

**NURMIJÄRVI GEOPHYSICAL
OBSERVATORY**

MAGNETIC RESULTS 2008

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<p>Abstract</p> <p>The magnetic yearbook of the magnetic recordings at the Nurmijärvi observatory contains tables, figures of hourly, monthly, and yearly means of the magnetic field components X, Y and Z as well as magnetic activity indices (K, Ak) in 2008. Magnetic isolines describing the distribution of geomagnetic field components in Finland 2009.0 are shown by a series of maps.</p>		
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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, 2008. The observatory is operated by the Finnish Meteorological Institute (FMI) and is part of the Observation Services Division of the institute. Data of one repeat station and information about the IMAGE magnetometer network are included in this report. 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°30.5'N	24°39.3'E
Geomagnetic	57°43.8'	113°28.8'
Corr.geomagnetic	56°49.2'	102°31.2'

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

L-value	3.3
Height	105m

The Nurmijärvi observatory is running two 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. 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. Helsinki University has the seismic station at the observatory. University of Leicester operates the radio transmitter for ionospheric research. The receiver is in United Kingdom. Nurmijärvi municipality needs the water level observations in the lake Sääksjärvi.

The Nurmijärvi observatory has a magnetic calibration and test laboratory for magnetometer and sight compass calibrations and for compass swing base measurements at airfields. FINAS (Finnish Accreditation Services) accredited the laboratory as the number K050 on 17th of August 2007.

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 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°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.).

The data gap on October, 9 - 10 was caused by an unknown software failure.

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. 2.

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 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 DVD 2007 was published in 2009 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. 1) consisted at the end of 2008 of 30 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.

Year	X[nT]	Y[nT]	Z[nT]	
1993.5	12971	1912	50591	
1994.5	12953	1935	50616	
1995.5	12951	1963	50642	
1996.5	12937	1994	50664	
1997.5	12926	2023	50701	
1998.5	12912	2051	50742	
1999.5	12902	2077	50780	
2000.5	12892	2108	50828	
2001.5	12889	2136	50867	
2002.5	12886	2168	50914	
2003.5	12870	2200	50961	
2004.5	12878	2228	50998	
2005.5	12867	2256	51035	
2006.5	12866	2283	51063	
New-old	-21	+19	+9	New absolute house
2007.5	12837	2333	51106	
2008.5	12831	2366	51139	

Table 1: Annual mean values at the Oulujärvi station.

At MAS, IVA, MUO and PEL the ISDN modems were replaced by ADSL connections. 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 1 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 ($64^{\circ}31'N$, $27^{\circ}14'E$).

7 Virolahti repeat station

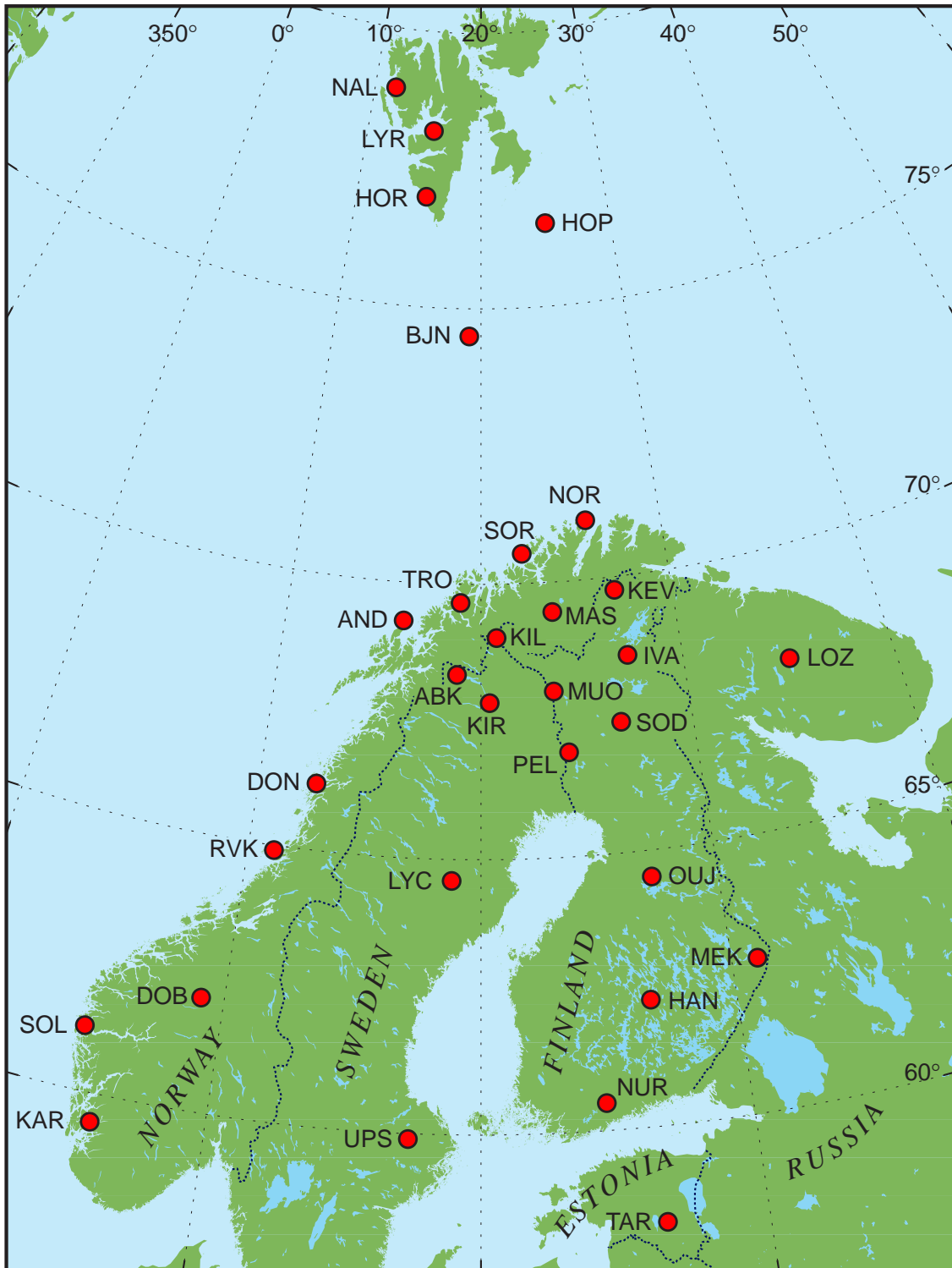
Virolahti ($60^{\circ}33.7'N$, $27^{\circ}33.4'E$) in the South-East Finland is one of the old repeat stations in Finland. The station was visited in 2008 and three measurements during one day were made. The Table 2 shows all the reduced results since 1947. The annual mean values of quiet days at the Numijärvi observatory were used to reduce the measurements at Virolahti.

Year	D[°]	H[nT]	Z[nT]
1947,5	4,518	14654	48108
1948,5	4,627	14641	48139
1949,5	4,760	14633	99999
1953,5	5,200	14637	48295
1955,5	5,465	14639	48382
1956,5	5,502	14645	48418
1958,5	5,547	14652	48490
1961,5	5,640	14665	48582
1962,5	5,668	14683	48607
1963,5	5,702	14695	48640
1964,5	5,717	14708	48646
1965,5	5,730	14714	48662
1966,5	5,735	14723	48683
1967,5	5,710	14733	48711
1969,5	5,645	14752	48757
1971,5	5,572	14778	48818
1972,5	5,532	14784	48853
1973,5	5,535	14801	48889
1974,5	5,558	14816	48929
1975,5	5,587	14818	48961
1978,5	5,767	14838	49069
1979,5	5,820	14831	49097
1979,5	5,815	14828	49097
1981,5	5,937	14808	49130
1982,5	6,052	14775	99999
1984,5	6,110	14753	49179
1986,5	6,297	14723	49201
1997,5	7,178	14590	49451
1998,5	7,312	14581	49492
2000,5	7,531	14578	49574
2002,5	7,763	14583	49655
2004,5	8,001	14580	49740
2005,5	8,118	14580	49778
2006,5	8,224	14583	49805
2007,5	8,357	14587	49839
2008,5	8,491	14596	49871

Table 2: Reduced results from the Virolahti repeat station.

8 IMAGE Magnetometer Network

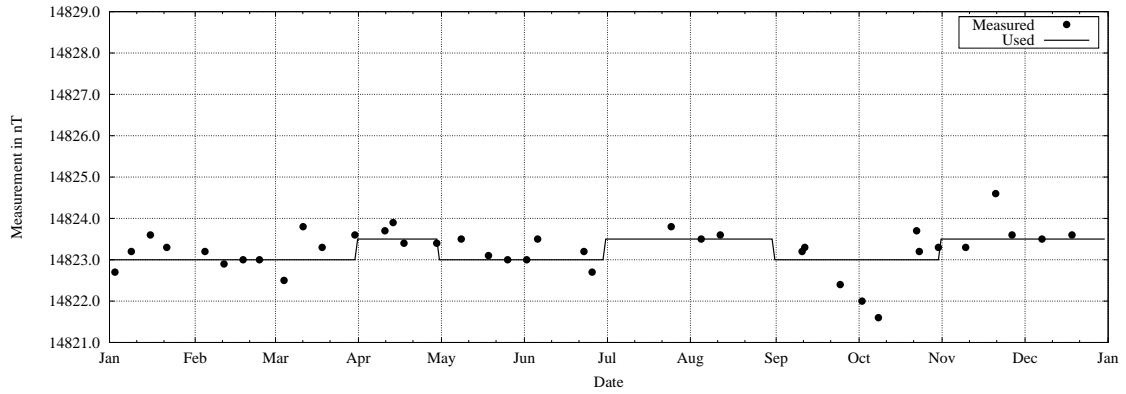
IMAGE Magnetometer Network



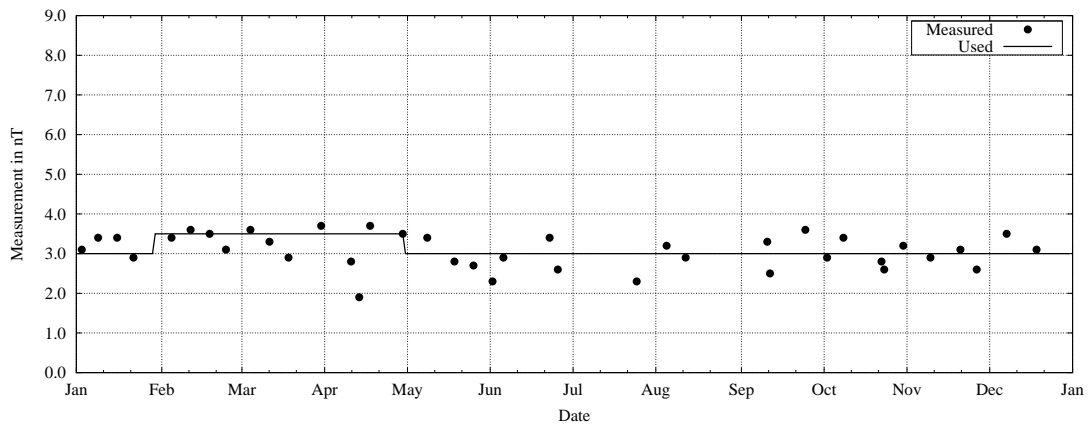
October 2009

Figure 1: Map of IMAGE magnetometer network

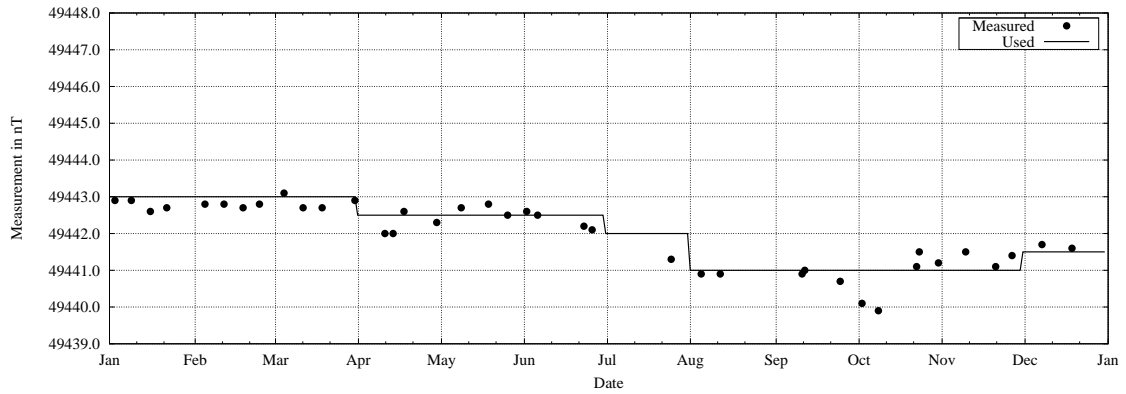
9 Baseline Measurements for FGE



(a) Baseline measurements for X component



(b) Baseline measurements for Y component



(c) Baseline measurements for Z component

Figure 2: Baseline measurements

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

Nurmijarvi Finland

January 2008 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		82	82	84	86	88	92	90	86	85	86	87	87	91	91	88	86	89	89	88	88	86	90	90	87	87	
2	Q	86	86	85	87	91	91	91	90	87	89	89	90	93	93	92	91	90	90	90	89	90	89	88	86	89	
3	Q	87	88	89	89	92	93	92	87	83	85	85	86	89	91	91	90	90	90	89	90	90	92	88	88	89	
4	Q	88	89	91	93	94	93	92	88	86	85	86	88	94	95	96	96	93	92	92	94	97	97	97	103	93	
5	D	96	89	89	88	96	94	102	100	79	72	82	85	82	67	53	59	74	79	82	99	79	65	59	87	82	
6	D	72	71	73	77	84	90	86	78	73	70	75	80	80	69	69	68	69	66	65	95	73	73	83	69	75	
7	D	70	63	74	86	81	78	86	81	75	76	75	66	65	76	86	83	81	83	84	77	78	79	82	79	78	
8	D	75	78	75	78	81	85	87	81	73	58	72	75	83	88	79	81	78	79	53	65	70	79	79	68	76	
9		76	87	72	73	77	80	81	73	78	79	77	78	79	79	81	82	83	80	79	81	79	84	84	83	79	
10		83	81	87	87	87	86	84	81	81	80	80	80	78	83	81	84	82	85	84	85	86	89	83	78	83	
11		88	82	82	81	83	83	85	86	88	86	82	85	87	85	85	84	86	85	85	79	81	85	85	85	84	
12		84	83	84	85	86	88	91	94	92	91	87	85	91	92	86	73	35	43	52	73	78	84	81	73	80	
13		62	77	83	86	85	83	83	88	88	87	83	83	84	64	57	61	60	54	44	57	77	72	73	72	73	
14	D	63	73	86	80	81	88	83	82	82	81	80	48	76	79	84	68	76	67	108	60	83	78	78	71	77	
15		80	78	69	76	85	84	81	84	86	86	83	78	70	78	75	74	83	80	82	83	80	85	89	79	80	
16		71	78	79	81	86	88	84	75	81	82	75	73	74	73	72	79	87	77	88	86	75	80	76	77	79	
17		54	73	81	84	87	86	85	80	82	83	82	88	65	68	81	76	80	78	85	80	83	84	78	62	78	
18		87	87	73	84	89	86	84	82	76	82	83	82	73	73	67	61	73	72	75	76	81	84	89	82	79	
19		79	83	85	87	85	87	85	78	75	82	78	65	76	77	78	75	80	80	79	76	79	83	83	83	80	
20		84	84	86	84	87	91	86	84	83	88	82	79	76	82	82	85	86	86	81	86	79	72	88	87	84	
21		84	83	85	85	84	88	91	90	86	81	78	78	82	80	86	83	78	73	79	85	84	80	92	84	83	
22	Q	80	83	85	87	85	87	86	83	80	78	78	81	84	85	87	86	86	85	87	85	85	85	84	84	84	
23		84	84	85	87	90	94	91	90	86	82	81	89	90	91	89	86	84	86	85	91	90	84	83	87	87	
24		85	84	84	88	88	89	90	86	79	76	75	76	77	77	79	80	72	71	76	81	96	84	88	86	82	
25		84	91	96	92	103	95	81	82	83	76	73	80	86	86	84	82	84	85	83	111	72	69	71	78	84	
26		82	84	83	86	86	81	81	80	84	81	77	78	76	80	84	83	78	79	84	86	87	86	91	86	83	
27		86	82	82	85	87	85	87	87	87	87	88	87	87	84	84	83	84	84	84	92	83	78	76	82	85	
28		81	81	82	85	88	89	86	88	88	86	83	78	80	83	86	87	86	86	82	85	85	83	100	85	85	
29		87	88	84	78	92	92	89	84	77	78	82	81	86	87	81	84	85	86	88	89	88	87	86	87	85	
30	Q	86	84	85	88	88	90	89	87	84	80	81	85	90	91	91	92	91	90	89	89	88	88	89	89	88	
31		88	88	89	89	90	91	90	89	85	82	82	82	88	94	98	103	106	102	99	69	79	86	87	89	91	90
All Quiet		86	86	87	89	90	91	90	87	84	84	84	86	90	91	91	91	90	90	90	90	90	90	90	89	90	88
Dist.		75	75	79	82	85	87	89	85	76	71	77	71	77	76	74	72	76	75	78	79	76	74	76	75	77	

January 2008 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		64	62	62	66	65	66	68	68	66	63	60	59	61	63	63	66	64	63	65	66	68	69	65	64	64
2	Q	64	66	65	64	63	64	65	67	66	62	59	56	56	59	61	61	62	64	70	75	68	69	67	66	64
3	Q	65	64	64	63	66	68	70	70	68	64	60	57	59	62	63	64	65	65	67	67	71	70	69	66	65
4	Q	65	64	64	63	64	65	67	70	70	65	62	59	57	59	62	61	63	64	65	68	71	70	66	63	64
5	D	65	68	67	64	68	71	66	66	70	51	54	54	50	49	57	59	54	65	67	110	105	108	139	104	72
6	D	76	69	72	65	50	65	65	68	62	66	63	63	57	56	76	55	104	85	76	87	96	80	75	88	72
7	D	75	65	41	69	66	52	55	68	63	69	63	63	72	68	67	66	66	68	69	75	82	82	76	72	67
8	D	70	69	65	69	71	77	73	71	64	59	58	58	66	64	65	73	81	121	103	87	88	69	82	85	75
9		54	63	78	64	72	73	73	71	75	68	60	61	61	67	66	65	68	69	76	79	75	73	72	64	69
10		68	57	64	66	68	68	70	71	69	67	64	61	64	67	69	72	67	67	67	69	73	79	76	74	68
11		85	79	77	71	71	70	69	70	70	65	64	62	63	63	65	65	66	66	72	75	71	70	70	70	70
12		69	68	67	68	68	69	70	68	66	63	62	61	60	60	62	65	89	82	70	72	71	71	74	88	69
13		91	77	78	66	59	60	54	61	66	70	69	65	62	67	67	81	90	103	124	134	106	81	78	78	79
14	D	67	51	65	64	61	60	56	60	68	68	63	66	61	60	62	94	92	77	101	91	76	77	89	61	70
15		66	71	62	58	60	63	66	69	69	68	65	61	68	59	77	75	62	65	68	81	75	73	78	83	68
16		69	68	66	63	57	46	49	66	73	63	62	66	58	64	66	67	99	72	83	90	86	83	81	67	69
17		56	46	64	67	67	68	68	70	66	63	62	61	61	59	79	57	59	65	73	78	92	75	81	64	67
18		64	69	69	51	62	63	66	65	64	65	60	56	57	68	80	90	85	67	80	75	71	79	76	71	69
19		71	66	63	63	62	63	66	71	69	69	62	72	66	60	73	59	102	96	88	81	78	74	69	61	71
20		64	60	59	60	46	56	63	68	70	68	63	57	58	63	66	65	66	66	68	89	93	72	64	68	66
21		72	67	65	65	64	66	67	69	74	76	71	63	63	67	65	64	83	89	87	83	68	72	78	80	72
22	Q	74	66	63	63	63	66	69	73	74	71	66	62	62	63	65	65	65	64	68	69	69	70	69	67	67
23		68	67	66	65	64	64	66	66	69	69	64	61	60	64	64	64	67	66	62	66	85	76	74	72	67
24		70	69	67	65	63	62	63	67	66	64	59	54	60	62	57	63	65	67	67	68	97	78	74	72	67
25		71	53	63	60	49	54	52	60	62	65	67	65	63	64	64	63	63	64	67	118	97	81	82	79	68
26		46	69	72	66	67	65	65	69	67	66	67	63	62	67	65	67	78	72	70	71	71	71	69	74	67
27		72	69	67	66	67	68	71	73	72	71	70	66	62	64	64	66	71	69	68	100	89	82	86	79	72
28		70	68	69	68	63	70	72	73	70	67	63	63	58	60	64	67	68	68	80						

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February 2008 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	78	78	77	80	88	88	83	93	89	87	78	75	87	90	92	91	86	72	65	51	66	78	23	33	76
2	D	61	68	51	65	66	82	85	82	74	74	73	75	76	56	65	76	75	80	77	106	75	72	76	72	73
3		73	71	84	79	80	80	79	78	69	58	63	60	69	79	78	59	77	79	84	68	77	79	68	64	73
4		75	69	74	77	80	80	77	73	69	53	58	68	72	76	78	79	82	78	79	78	84	84	73	71	74
5		75	79	75	81	83	83	80	78	77	78	78	79	79	81	80	76	76	73	71	67	75	78	81	81	78
6		83	83	84	86	84	83	80	76	76	74	76	79	85	86	86	80	80	80	77	67	62	60	60	69	77
7		70	70	80	77	83	82	79	74	71	72	72	76	81	84	83	83	76	75	84	86	88	88	88	88	80
8		97	74	76	82	84	82	82	84	84	85	84	85	85	85	84	84	88	84	82	73	75	76	82	83	83
9	Q	84	87	86	86	88	89	88	86	85	84	83	81	86	77	71	75	85	87	89	91	84	96	93	91	86
10	D	90	90	91	92	98	95	94	86	85	85	85	85	70	57	61	75	60	38	58	78	64	62	74	100	68
11		64	61	54	82	91	78	82	81	78	58	69	63	57	69	72	79	83	97	77	79	86	84	81	86	76
12		85	82	82	84	78	93	90	80	78	73	68	59	64	67	49	60	66	66	78	74	98	74	82	81	75
13		82	85	85	80	82	87	89	80	50	76	78	80	82	52	77	79	76	73	74	78	80	83	82	78	78
14		82	82	81	84	85	91	92	86	80	78	77	78	65	80	87	87	84	83	84	104	98	73	77	77	83
15		77	79	79	80	77	88	87	79	85	80	59	61	74	66	78	80	88	78	82	84	94	77	80	85	79
16		86	85	82	83	90	85	87	88	77	80	81	73	80	89	80	81	83	84	85	79	79	84	84	83	83
17		84	84	85	84	85	87	89	88	80	70	78	80	79	77	82	84	85	84	85	83	85	85	85	87	86
18		84	86	86	87	89	93	93	93	91	80	61	59	65	64	63	67	71	81	86	77	87	54	66	59	77
19		67	80	83	86	87	82	72	79	74	69	73	77	68	70	64	73	78	90	88	72	80	81	84	84	77
20		81	81	83	80	77	86	86	83	79	79	74	71	81	83	83	82	86	87	88	89	89	89	88	88	83
21		84	84	85	89	90	90	89	89	87	82	79	77	72	76	70	80	77	78	87	82	88	90	86	86	83
22	Q	84	85	85	86	86	85	88	86	87	83	83	84	85	80	79	83	86	87	88	89	88	88	86	84	85
23		86	83	84	86	87	86	86	85	82	83	87	89	87	87	87	73	80	84	87	99	93	86	86	88	86
24	Q	88	87	85	87	88	87	87	85	86	92	95	97	93	87	86	84	88	87	90	90	91	88	93	87	89
25	Q	87	85	88	84	88	90	83	78	71	77	78	84	86	89	89	88	87	85	87	89	89	89	89	89	85
26	Q	89	88	87	86	87	85	83	78	75	75	76	81	87	90	85	84	85	88	84	83	79	87	92	87	84
27		87	86	82	84	87	88	82	81	76	77	80	79	77	76	83	88	88	81	90	55	61	80	89	88	81
28	D	86	80	82	86	87	88	87	85	82	79	83	67	80	85	87	84	73	89	68	75	66	54	61	93	79
29	D	79	71	73	67	73	75	76	89	80	74	74	57	76	76	84	103	67	83	45	67	83	83	65	49	74
All Quiet		81	80	80	82	84	86	85	83	79	76	76	74	77	78	78	79	79	81	81	79	81	80	79	79	80
Dist.		79	78	75	78	82	85	87	85	80	79	69	75	73	81	83	68	77	67	73	70	72	65	63	76	

February 2008 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	105	84	81	82	76	79	69	69	74	61	60	56	56	57	58	57	53	85	144	124	115	141	148	140	86
2	D	92	87	56	39	55	49	73	69	71	72	69	60	51	57	68	63	70	78	74	94	76	88	89	68	70
3		75	78	57	71	72	71	68	68	77	76	64	56	57	57	62	89	79	66	110	88	83	84	97	88	75
4		69	73	62	70	71	73	76	78	73	62	55	59	62	63	67	78	70	69	74	76	77	79	86	76	71
5		77	72	74	72	73	70	72	74	74	72	67	61	62	63	66	71	68	71	73	81	81	86	72	71	71
6		71	72	70	69	70	72	73	75	73	68	64	58	58	61	64	64	71	67	83	104	105	111	106	96	76
7		97	77	67	78	72	73	74	74	75	70	64	59	61	66	68	68	68	59	63	70	72	74	72	76	71
8		74	81	73	73	73	72	74	75	75	71	67	58	57	60	65	67	67	65	70	73	73	78	84	76	71
9	Q	73	67	72	71	70	71	72	73	71	67	62	60	55	58	56	56	63	65	70	70	83	85	81	81	69
10	D	71	70	69	68	70	59	57	63	69	65	50	48	42	48	59	51	101	103	121	97	90	85	100	85	73
11		64	46	52	47	74	72	72	76	75	72	74	58	76	69	77	75	84	102	96	72	77	79	82	64	72
12		61	69	71	67	55	64	74	81	81	74	66	70	59	68	89	70	77	72	75	84	97	96	80	71	74
13		72	71	71	63	63	64	71	72	71	68	64	64	64	100	75	75	110	97	91	81	77	76	78	75	75
14		71	68	68	67	65	63	67	73	74	72	66	63	68	66	64	67	69	67	69	117	126	106	86	80	75
15		75	66	70	66	65	64	65	73	74	69	74	69	53	80	68	66	93	78	79	77	88	82	79	71	73
16		71	68	69	55	66	67	70	71	75	72	70	70	74	62	66	70	67	69	93	89	79	76	74	72	72
17		71	71	70	69	68	69	69	72	72	68	59	56	58	68	67	68	70	70	71	73	74	76	76	72	69
18		72	70	71	70	71	71	70	68	67	69	65	52	41	52	79	92	59	76	84	98	114	122	116	85	76
19		49	63	73	72	69	65	41	53	68	67	66	54	49	64	66	75	74	98	97	98	88	82	75	72	70
20		74	75	74	74	64	72	72	74	75	69	63	66	68	66	70	82	70	71	70	72	73	72	72	78	71
21		72	73	70	71	75	75	73	72	69	68	63	57	55	60	61	82	70	70	86	81	78	76	75	72	71
22	Q	72	69	71	71	71	72	71	71	67	66	67	66	66	64	68	65	67	70	73	71	72	72	72	72	70
23		71	71	72	74	74	75	77	76	72	68	62	63	64	66	71	84	72	68	70	75	83	78	74	65	72
24	Q	62	71	73	73	75	77	76	70	64	60	62	67	70	70	70	69	68	69	72	78	75	70	77	72	70
25	Q	71	66	70	72	74	78	80	76	63	54	58	58	60	61	67	72	72	74	71	72	72	71	71	70	69
26	Q	70	71	72	73	72	76	81	81	74	66	62	60	56	59	66	71	71	73	84	80	87	87	84	71	73
27		70	73	65	68	75	79	81	81	76	70	63	61	63	62	63	68	58	60	85	152	129	102	89	79	78
28	D	78	83	54	84	81	74	76	83	84	72	51	57	53	50	51	47	56	98	93	147	118	113	146	102	81
29	D	115	100	101	77	78	77	66	80	85	87	63	70	70	59	71	113	140	136	82	75	103	74	117	75	88
All Quiet		75	73	70	69	70	71	71	73	73	69	63	61	59	62	68	72	73	78	84	8					

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March 2008 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	85	61	57	75	63	75	77	68	61	58	57	63	71	80	65	68	76	84	89	75	79	80	78	77	72
2		83	80	75	75	78	82	84	69	72	72	68	77	76	81	84	75	70	71	78	78	80	103	85	86	78
3		77	73	74	78	82	73	77	78	72	67	73	82	83	85	82	79	73	76	82	84	80	82	80	79	78
4	Q	81	78	79	80	82	79	78	76	72	72	73	75	77	78	84	84	84	83	85	85	86	86	86	85	80
5		83	84	77	87	92	96	88	84	76	73	65	72	80	72	73	69	76	79	76	78	74	79	82	86	79
6	Q	84	83	82	81	83	83	82	78	75	72	75	78	83	86	86	84	81	86	83	82	83	84	80	88	82
7	Q	86	82	82	80	84	86	83	80	74	72	74	77	82	84	83	83	84	85	82	80	87	94	89	91	83
8		90	89	89	90	91	92	92	91	88	83	87	98	93	84	69	83	89	82	59	53	73	79	80	78	83
9	D	78	80	69	112	53	4	49	59	66	54	50	50	63	61	57	66	71	93	73	69	75	85	60	69	65
10		68	48	58	73	77	68	76	74	71	73	71	65	66	85	81	83	82	82	92	73	91	80	77	93	75
11		81	78	80	83	84	85	65	55	67	68	71	74	66	65	77	67	74	90	72	76	86	87	85	80	76
12		75	78	81	84	73	79	76	47	61	63	67	70	77	81	81	81	80	82	83	80	90	85	83	85	77
13		85	82	76	71	81	83	79	74	65	65	75	71	69	72	71	70	75	76	78	81	82	96	85	82	77
14		83	83	79	81	81	78	72	68	69	71	74	70	72	79	81	82	98	91	63	58	68	57	85	84	76
15		76	66	78	82	78	75	76	74	67	59	54	49	63	69	74	76	80	80	81	82	84	87	88	87	74
16		86	81	80	83	86	86	79	74	73	74	79	81	85	81	81	84	84	87	87	88	89	89	89	88	83
17		84	76	79	82	84	85	83	77	73	70	73	79	84	87	87	87	82	85	80	88	93	92	91	90	83
18		89	88	81	88	94	90	82	78	71	71	72	77	79	79	83	83	85	86	87	88	89	90	89	89	84
19		90	91	91	91	90	86	76	68	68	74	79	85	83	75	78	64	76	72	70	77	84	86	82	80	80
20		82	85	86	88	89	90	85	77	71	66	72	78	63	63	76	77	87	86	88	92	89	92	102	92	82
21		85	77	80	87	89	89	85	76	66	57	62	72	81	89	91	91	88	87	88	87	88	82	87	88	82
22		91	89	90	91	93	91	85	76	70	66	69	73	80	89	91	92	90	92	93	94	92	89	92	81	86
23		79	89	91	92	89	93	84	71	71	57	66	67	78	85	85	91	88	86	91	86	91	92	89	89	83
24	Q	89	90	92	90	91	91	87	80	72	69	71	76	82	86	89	86	88	90	91	90	92	89	90	90	86
25	Q	89	90	88	90	90	90	85	77	73	69	72	70	75	80	84	89	91	97	98	96	100	99	98	87	87
26	D	93	94	94	100	104	105	84	53	53	70	71	77	61	74	78	97	78	71	40	60	69	50	54	69	75
27	D	42	83	58	65	98	73	60	54	45	51	46	55	80	85	84	96	81	89	69	35	24	14	42	46	61
28	D	72	48	39	75	79	78	53	31	46	48	44	59	66	65	101	88	69	77	64	55	69	68	70	83	64
29		81	80	76	80	78	76	75	64	55	48	53	64	80	75	73	77	80	86	89	80	75	73	65	74	73
30		64	77	62	78	82	82	76	67	55	57	60	66	71	68	72	84	86	89	83	80	82	83	84	79	74
31		82	78	81	83	85	85	80	73	67	58	58	63	66	77	75	75	82	87	92	86	85	85	82	82	78
All		81	79	77	84	84	82	78	70	67	65	67	71	75	78	80	81	81	84	80	78	81	82	82	83	78
Quiet		86	84	85	84	86	86	83	78	73	71	73	75	80	83	85	85	86	88	88	86	89	91	89	90	83
Dist.		74	73	64	85	79	67	64	53	54	56	54	61	68	73	77	83	75	82	67	59	63	59	60	69	68

March 2008 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	82	100	85	74	69	64	60	72	71	65	68	63	61	68	86	95	87	82	92	96	67	85	80	69	77
2		74	82	76	78	74	74	72	77	72	73	69	61	64	70	70	87	77	78	71	80	76	79	81	83	75
3		89	85	81	81	82	82	80	73	73	64	66	60	64	68	70	73	75	73	74	77	76	77	76	76	75
4	Q	72	80	79	77	78	77	75	74	73	67	63	60	53	62	66	70	72	72	73	74	74	75	75	76	72
5		80	83	81	80	78	79	84	86	82	73	58	48	48	49	80	71	71	75	104	86	84	85	73	75	72
6	Q	75	74	78	76	76	75	76	78	77	73	65	60	62	65	67	69	70	70	79	74	75	80	78	84	73
7	Q	83	77	79	83	83	82	83	80	72	61	55	51	54	60	66	70	70	72	75	78	77	78	78	75	73
8		74	74	74	75	76	79	82	85	81	76	66	51	42	22	50	53	64	67	85	92	82	77	77	76	70
9	D	77	65	46	41	43	42	55	70	80	78	63	63	56	54	70	70	80	110	103	96	84	81	61	86	70
10		99	73	58	75	72	71	74	76	82	79	71	62	70	61	59	70	69	108	124	93	93	91	61	70	78
11		85	92	84	79	77	74	60	52	58	67	61	53	82	61	96	95	92	93	87	85	67	74	79	79	76
12		69	54	72	82	78	74	80	82	73	67	68	64	65	67	90	75	71	71	78	109	78	81	79	78	75
13		76	74	70	68	72	78	79	84	82	75	65	56	66	71	82	71	71	72	73	77	91	82	77	77	74
14		77	76	69	65	64	67	64	78	80	75	65	61	61	59	73	75	104	128	96	101	124	108	70	81	80
15		91	69	76	85	84	84	82	78	72	71	67	77	63	56	65	75	75	74	74	74	81	83	76	73	75
16		77	73	64	69	71	74	78	80	77	68	59	58	58	62	74	69	69	81	73	72	73	78	85	79	72
17		86	95	84	84	82	82	85	84	78	70	64	60	59	61	65	68	78	84	78	79	79	78	74	72	76
18		74	75	65	60	71	79	84	85	82	68	57	53	52	59	67	76	81	72	72	75	74	75	72	73	71
19		73	73	74	75	77	80	85	86	79	68	54	51	49	60	80	76	88	112	97	88	94	77	90	83	78
20		75	76	77	77	80	88	93	92	84	71	53	39	42	55	62	77	73	75	80	84	78	75	73	74	73
21		80	79	72	73	77	85	89	90	84	74	60	47	44	51	60	69	71	74	86	78	88	84	79	62	73
22		76	71	78	79	81	86	91	91	82	72	58	51	52	55	61	66	69	70	72	72	75	87	107	97	75
23		79	64	43	79	84	89	89	85	74	71	55	50	50	51	63	69	68	79	74	77	77	77	76	71	71
24	Q	76	75	75	76	76	82	86	86	81	69	57	50	51	55	63	69	72	71	73	75	77	74	73	75	71
25	Q	75	76	76	76	77	82	88	89	84	74	58	51	48	50	59	64	67	68	68	75	69	74	75	71	71
26	D	81	79	81	80	82	88	96	93	65	57	48	35	38	41	53	62	102	97	88	145	98	128	117	96	81
27	D	84	78	103	71	71	72	65	83	83	72	56	54	51	67	63	85	78	94	85	89	148				

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April 2008 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	Q	80	80	81	81	80	83	77	68	60	55	59	65	69	76	78	79	86	88	90	89	87	87	86	85	78	
2	Q	85	84	83	84	89	88	82	72	65	61	62	68	74	79	83	85	88	87	89	89	91	92	94	93	92	85
3	Q	87	88	88	92	92	90	84	74	66	63	65	72	80	88	90	89	91	92	94	93	94	93	92	92	85	
4		90	90	89	90	92	91	87	78	68	65	65	70	79	89	86	88	88	101	92	66	72	87	95	82	83	
5	D	86	86	86	84	84	82	78	70	63	58	62	59	71	82	79	100	123	57	67	83	93	97	94	70	80	
6	D	82	85	88	92	80	52	68	64	58	52	62	68	73	78	86	77	84	88	89	93	86	93	95	87	78	
7		81	64	75	70	80	69	77	65	60	62	68	78	86	90	83	94	109	82	81	94	87	90	77	90	80	
8		90	89	89	87	88	87	82	72	59	52	61	67	83	91	91	84	85	94	84	91	95	89	96	86	83	
9		77	77	79	80	79	74	71	55	62	59	59	53	75	80	87	91	86	88	93	97	93	92	98	92	79	
10		87	92	88	83	90	90	76	64	60	60	64	73	69	88	84	87	90	86	95	96	105	98	90	84	83	
11		87	86	87	86	87	87	82	75	68	67	67	63	72	72	82	84	85	86	88	89	91	92	93	91	82	
12		89	86	87	88	82	78	87	71	52	39	39	49	69	78	80	87	89	92	91	100	90	91	90	90	79	
13		92	91	91	90	90	86	87	79	70	66	65	63	77	91	73	85	96	90	84	92	93	89	88	84	84	
14	Q	87	84	82	83	84	86	85	81	74	68	69	70	72	79	83	86	88	90	92	90	90	89	88	90	83	
15		89	89	88	88	89	88	82	76	67	65	68	72	86	87	90	97	93	97	91	93	92	88	97	78	85	
16	D	71	79	82	82	84	82	75	62	57	64	68	79	97	83	80	85	86	95	90	74	56	70	83	82	78	
17		71	81	84	85	83	74	77	71	66	63	70	76	82	85	87	90	88	76	86	92	93	95	94	94	82	
18		91	88	90	91	91	84	81	76	68	68	67	79	91	94	93	82	84	88	93	92	94	97	97	90	86	
19		87	89	88	86	89	90	86	77	66	62	65	74	86	92	93	88	93	88	93	96	90	88	95	95	86	
20	Q	90	86	90	92	93	90	86	78	70	65	67	72	80	81	88	89	89	89	85	87	86	91	93	93	85	
21		92	88	88	90	90	89	87	79	68	61	63	69	82	90	92	93	91	88	91	91	92	92	94	92	86	
22		92	93	93	92	93	93	87	76	66	57	57	65	78	85	89	95	92	103	107	101	93	95	98	90	87	
23	D	87	78	95	107	113	81	78	73	32	38	38	70	75	67	71	122	101	68	33	55	46	55	72	64	72	
24	D	70	80	82	69	76	74	40	51	51	57	76	75	64	72	74	71	84	87	94	91	87	77	70	73		
25		79	67	66	74	84	79	69	65	53	46	49	59	71	80	87	81	87	93	101	99	86	80	85	82	76	
26		91	76	82	87	82	82	79	75	65	47	45	59	78	87	83	96	97	108	89	74	66	64	61	71	77	
27		82	82	79	78	69	74	68	59	59	56	68	74	75	78	87	94	91	95	87	92	94	94	91	92	80	
28		89	89	90	92	90	87	83	77	67	62	66	79	78	85	91	97	88	106	82	73	96	85	75	77	84	
29		70	81	76	78	79	73	68	68	69	70	68	78	87	79	75	81	85	83	87	90	94	87	83	85	79	
30		84	83	81	80	81	85	82	74	72	69	68	74	83	89	84	91	108	117	111	79	86	92	86	91	85	
All Quiet		84	84	85	85	86	82	78	71	63	59	62	69	78	83	84	89	91	90	89	88	87	87	88	86	81	
Dist.		79	82	87	87	87	74	83	75	67	62	64	69	75	81	84	86	88	89	90	90	89	90	90	89	82	76

April 2008 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	Q	89	91	92	89	81	93	96	92	85	74	60	51	53	60	70	74	77	85	78	74	74	76	77	78	78
2	Q	78	79	81	82	81	88	92	92	87	79	69	62	58	61	66	70	74	75	75	76	75	75	77	77	76
3	Q	78	78	81	82	81	85	88	88	83	74	63	52	48	52	61	68	70	70	71	73	76	76	76	75	73
4		78	79	81	81	81	86	90	90	89	77	64	55	53	56	66	63	64	73	87	110	122	84	92	81	79
5	D	80	83	86	88	89	91	92	91	84	75	56	49	53	54	60	102	152	113	89	85	79	76	74	63	82
6	D	67	82	86	85	68	52	63	79	78	70	65	57	63	74	75	74	70	76	97	97	83	72	69	58	73
7		70	71	66	85	77	85	86	91	86	77	64	52	55	63	69	77	105	97	87	84	88	83	84	66	78
8		78	81	81	84	85	88	93	91	79	67	56	54	49	53	81	67	72	84	85	93	96	76	100	91	78
9		72	66	75	77	75	78	81	90	86	72	57	58	54	56	71	78	74	77	79	99	93	81	74	76	75
10		54	74	81	73	81	86	87	84	82	73	65	51	54	60	60	76	78	73	76	81	88	82	86	77	74
11		60	74	84	85	85	87	87	86	83	77	62	51	47	58	59	67	78	89	76	75	75	76	77	76	74
12		73	63	81	84	79	78	82	80	78	66	62	46	59	60	57	65	71	75	87	99	78	74	64	70	72
13		82	84	84	84	82	84	82	82	79	74	58	50	51	55	65	81	104	91	78	79	76	77	78	74	76
14	Q	79	81	82	84	82	82	85	86	83	78	69	62	61	64	67	72	75	78	75	76	76	77	77	77	76
15		78	80	81	83	84	88	89	88	85	77	60	49	45	51	62	66	71	78	76	74	74	78	107	122	77
16	D	112	89	88	94	98	98	91	88	72	62	50	43	30	44	49	58	67	74	168	132	115	97	78	77	82
17		53	75	85	92	93	89	88	84	80	68	62	57	58	63	67	73	77	82	78	76	77	77	77	76	76
18		78	75	79	88	88	89	87	91	83	69	61	54	53	63	72	78	80	78	78	81	82	82	74	79	77
19		67	72	84	85	89	91	94	93	83	72	61	55	56	63	68	72	76	74	75	78	87	68	73	66	75
20	Q	77	72	80	84	86	90	93	93	85	76	65	53	49	55	64	73	89	85	94	88	83	78	78	76	78
21		79	80	88	87	87	81	84	86	83	74	63	56	54	58	62	66	71	75	80	78	77	78	79	80	75
22		79	80	81	83	84	87	93	96	90	81	68	53	47	50	56	60	63	66	82	100	94	87	83	82	77
23	D	87	78	70	89	95	101	96	97	90	54	62	52	41	49	65	114	117	102	102	99	87	100	90	69	84
24	D	83	97	94	98	95	92	91	76	76	62	68	57	59	61	63	72	73	76	82	86	90	89	69	79	79
25		84	78	73	77	87	90	88	80	77	74	69	64	61	66	71	74	76	78	88	93	87	80	81	86	78
26		75	94	95	100	99	97	95	88	83	76	65	58	55	53	59	79	77	89	85	105	109	133	109	100	87
27		89	86	88	91	92	94	96	91	80	73	62	51	53	56	60	63	84	90	82	76	74	78	82	84	78
28		86	89	94	93	95	96	97	92	82	67	66	54	59	63	80	88	69	101	90	85	88	86	86	82	83
29		78	88	92	85	96	92	87	84	78	70	65	61	60	64	67	70	75								

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May 2008 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	89	89	87	84	81	75	73	70	67	71	80	89	92	92	91	98	102	100	102	107	98	90	68	87
2		66	84	96	93	92	76	66	70	70	68	69	74	86	70	71	85	90	90	92	94	93	95	95	93	82
3	D	95	85	88	90	84	86	77	70	63	47	67	89	82	89	75	88	97	99	104	108	88	91	94	95	85
4		91	93	90	87	82	80	77	69	60	59	47	73	85	89	88	90	89	106	101	92	94	98	100	90	85
5	D	88	91	91	88	90	89	84	51	65	67	74	80	87	93	89	90	117	100	90	76	76	85	85	86	85
6		71	81	96	92	89	81	76	67	45	47	67	82	90	95	88	89	90	91	94	99	94	86	87	89	83
7		83	86	83	84	86	84	80	74	67	65	67	75	82	95	91	93	94	95	97	99	90	95	91	92	85
8		92	93	92	92	90	89	82	75	64	67	70	76	86	86	90	89	93	100	100	93	95	95	95	91	87
9	Q	91	92	90	94	93	90	86	75	65	60	59	67	80	88	90	93	95	97	99	99	98	100	97	97	87
10		96	98	99	98	98	95	91	83	75	66	65	72	82	90	94	95	97	98	99	101	103	104	102	106	92
11		101	100	99	97	95	89	84	79	72	65	64	67	72	88	91	97	102	105	104	100	96	92	95	97	90
12		97	98	96	93	92	90	87	81	75	70	70	73	81	85	89	92	97	98	103	102	96	101	97	99	90
13		96	95	92	89	87	90	87	80	75	69	68	72	78	79	86	89	100	96	97	97	93	94	95	95	87
14	Q	95	95	99	98	93	92	88	83	74	68	66	76	84	88	90	93	94	95	99	101	97	97	96	96	90
15	Q	93	96	98	98	95	90	88	84	77	73	72	76	87	87	97	101	103	104	99	99	101	105	104	103	93
16		97	99	98	92	89	88	85	80	75	73	77	97	84	88	104	90	99	102	101	96	95	95	93	89	91
17	Q	91	93	95	97	96	88	81	76	69	64	67	69	80	91	95	94	93	94	96	95	93	93	92	92	87
18	Q	93	94	95	93	88	82	78	77	73	72	76	78	87	91	95	95	99	101	100	102	102	100	99	91	91
19		99	93	95	94	96	94	86	85	79	80	80	74	88	89	78	95	107	100	101	97	95	96	96	96	91
20		93	86	92	96	90	85	78	70	76	75	67	68	85	95	95	90	91	100	101	106	104	107	89	92	89
21	D	99	80	76	69	79	69	76	71	68	62	59	61	81	87	94	92	105	112	99	95	97	95	96	89	84
22		85	82	77	81	81	81	79	73	67	64	62	68	78	81	93	106	115	126	103	102	92	92	89	84	86
23		85	82	85	84	86	85	83	75	66	63	65	67	87	85	98	86	94	95	104	101	101	90	82	84	85
24		95	84	88	89	88	86	79	66	53	49	60	67	91	106	91	93	96	88	96	96	94	92	95	86	84
25		83	81	82	71	83	87	81	69	66	64	68	76	86	84	95	96	99	99	95	95	92	94	86	84	84
26		85	84	87	85	85	87	86	77	68	60	63	70	79	88	90	93	96	98	97	97	93	91	91	86	85
27		84	88	90	89	89	89	85	74	64	64	71	83	89	97	93	92	99	99	102	102	101	100	105	97	89
28	D	95	93	104	113	113	103	103	87	69	61	64	67	76	88	83	78	98	93	90	95	92	92	92	91	89
29		89	83	83	84	92	88	71	64	69	69	73	74	86	85	81	94	114	116	106	99	97	96	99	100	88
30	D	96	84	93	91	89	84	79	70	59	53	53	72	72	94	95	85	100	110	97	97	96	91	89	92	85
31		94	92	93	93	88	71	63	62	65	64	79	77	81	96	85	94	104	101	109	99	92	93	96	96	87
All		90	90	91	90	90	86	81	73	68	64	67	74	84	89	90	92	99	100	99	98	95	95	94	92	87
Quiet		92	94	95	96	93	88	84	79	72	67	68	73	84	89	93	95	96	98	99	99	98	99	98	97	89
Dist.		95	86	90	90	91	86	81	66	63	59	64	76	82	89	86	90	102	102	97	94	90	91	91	91	85

May 2008 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		81	85	88	92	95	96	92	88	76	68	61	59	63	69	68	68	69	78	90	78	67	92	135	110	82
2		100	76	108	108	104	97	82	81	79	74	66	59	60	68	73	71	71	73	75	75	76	75	79	79	80
3	D	77	75	84	93	88	90	91	94	83	68	57	42	45	45	55	66	71	69	77	106	84	80	74	79	75
4		82	86	90	95	95	96	96	87	78	64	50	39	47	54	63	72	77	88	90	80	81	74	79	86	77
5	D	91	88	85	86	84	94	95	80	80	79	74	64	58	61	70	72	90	88	89	100	76	77	84	84	81
6		56	67	95	101	97	93	93	93	85	73	68	58	55	63	68	73	75	77	80	92	97	92	83	80	80
7		72	75	86	95	100	100	99	92	81	67	54	45	47	51	58	64	72	77	84	93	83	84	78	73	76
8		73	86	89	90	92	91	92	91	84	70	57	49	48	58	65	69	71	73	75	79	81	83	77	76	76
9	Q	75	82	86	88	90	91	94	91	85	75	65	60	58	59	64	69	71	71	72	73	76	79	80	81	76
10		82	85	89	95	92	92	94	93	87	77	60	46	41	48	58	67	73	74	77	75	76	82	79	78	76
11		83	85	90	92	94	96	100	96	87	80	71	60	58	56	59	63	67	69	75	83	85	87	83	83	79
12		83	84	88	96	100	100	98	94	87	76	65	55	53	55	56	58	64	70	77	79	78	80	83	77	76
13		85	87	86	88	84	88	92	92	86	76	62	54	51	57	64	70	76	75	75	75	76	78	78	78	76
14	Q	78	81	86	89	90	94	100	97	90	80	67	56	53	55	61	69	76	75	74	77	78	76	77	79	78
15	Q	81	84	89	93	96	102	105	102	92	77	65	58	56	59	61	66	71	74	76	75	77	75	77	77	79
16		82	86	90	98	99	97	98	94	82	67	55	44	46	48	55	61	68	75	78	79	82	80	80	80	76
17	Q	81	86	91	96	97	98	99	97	87	75	61	53	50	55	66	74	80	80	79	77	76	76	79	79	79
18	Q	81	84	90	98	105	107	105	97	82	69	61	59	62	64	67	67	72	76	78	78	79	78	76	72	80
19		74	72	92	102	104	104	101	94	84	67	49	43	43	40	46	55	64	89	89	78	77	77	78	79	75
20		77	80	90	104	108	103	100	89	83	73	64	57	51	57	56	66	68	66	70	72	88	100	85	76	78
21	D	88	82	74	86	99	105	104	104	94	81	64	52	43	44	52	67	67	89	93	89	76	80	79	76	76
22		72	71	94	100	104	101	102	98	89	77	64	54	45	47	71	72	76	78	95	93	81	81	76	93	81
23		71	93	99	100	99	99	98	97	85	73	58	47	50	65	64	76	74	73	72	74	76	80	82	83	79
24		90	81	85	85	84	96	100	101	91	79	68	61	55	55	57	66	77	80	79	77	77	79	80	83	79
26		85	91	93	94	95	99	102	98	86	69	58	53	52	54	65	73	79	83	86	81	79	81	83	85	80
27		86	89	95	100	107	107	102	91	81	72	57	47	49	54	60	66	68	70	73	74	75	76	93	88	78
28	D	82	86	93	111	119	107	108	96	76	72	60	47	41</												

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June 2008 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		95	96	90	84	82	80	74	70	68	63	61	68	86	87	95	104	115	100	104	99	93	96	93	90	87
2		90	93	91	87	80	73	69	63	54	51	57	67	76	89	97	92	91	95	98	98	95	91	90	92	83
3		95	98	99	94	85	82	78	75	71	70	76	82	87	92	86	102	90	94	102	110	101	100	98	95	90
4		90	99	100	98	93	84	75	66	62	59	61	70	79	83	93	93	94	97	97	99	97	97	95	95	87
5	Q	94	97	97	98	95	89	81	73	70	67	66	74	81	88	91	91	96	97	100	102	101	98	97	97	89
6		96	96	97	99	99	94	86	78	74	78	73	85	101	99	100	99	108	109	105	96	97	94	93	93	94
7	D	98	98	97	96	94	93	88	68	53	73	81	81	83	86	111	104	98	109	106	95	96	99	86	80	91
8		83	72	88	89	87	87	79	70	68	70	72	70	84	101	88	84	90	103	103	99	98	96	92	92	86
9		92	88	83	85	90	84	78	71	66	58	57	62	78	82	88	93	97	102	101	102	101	97	90	91	85
10	Q	90	94	94	93	91	86	78	70	65	58	63	73	84	91	100	93	95	98	102	102	100	97	96	97	88
11		98	98	98	97	95	94	91	81	69	64	71	80	75	88	94	98	98	97	98	101	102	99	98	94	91
12	Q	93	93	95	95	91	89	85	83	79	72	71	74	82	93	97	102	103	108	105	107	101	104	96	93	92
13		92	94	95	96	94	87	87	84	73	70	73	78	89	92	94	95	99	103	104	100	102	99	98	96	91
14	D	95	97	97	98	95	90	86	82	77	81	78	80	92	98	107	118	107	117	128	126	114	87	67	53	95
15	D	58	83	86	58	61	57	59	53	65	60	65	78	68	91	86	87	105	112	111	104	97	98	93	86	80
16	D	90	95	93	90	85	74	66	61	51	56	63	76	94	89	86	92	97	111	129	97	90	92	86	84	85
17		88	71	57	80	82	77	61	48	47	49	57	64	64	87	99	91	108	116	102	96	90	91	96	92	80
18		79	72	85	89	76	70	76	69	59	46	50	65	80	87	87	97	98	95	94	95	92	89	87	87	80
19		87	88	87	89	87	80	72	65	57	57	65	74	82	87	108	101	96	117	112	102	94	93	95	100	87
20		99	92	82	96	95	68	64	71	68	59	68	52	67	69	79	91	93	103	101	100	101	92	90	84	83
21		87	89	92	92	89	88	84	72	61	58	58	71	81	95	97	95	93	96	98	98	93	89	91	87	86
22	Q	89	86	89	89	87	83	73	65	60	56	51	62	76	88	93	92	91	94	95	96	95	94	92	92	83
23		91	93	93	91	88	83	78	73	69	67	69	76	80	86	92	95	94	93	95	95	93	92	92	91	86
24		91	92	91	88	86	81	76	72	66	60	58	68	79	85	93	98	97	99	101	99	107	102	99	103	87
25		93	98	96	91	90	87	79	70	58	58	61	64	71	84	87	92	112	106	107	109	114	106	104	100	90
26	D	102	101	84	106	99	87	84	85	71	52	66	65	75	93	83	94	100	102	109	107	104	100	100	98	90
27		88	76	90	92	85	75	78	72	71	69	85	85	83	83	95	111	101	107	98	95	93	93	94	93	88
28		93	93	91	91	86	82	78	75	77	72	69	71	80	86	85	88	95	96	106	100	94	93	90	89	87
29		93	89	86	90	90	84	78	68	59	49	69	81	84	84	104	86	99	101	103	99	85	64	81	84	84
30		89	92	90	89	83	77	68	63	66	71	80	86	93	92	92	91	101	96	94	94	94	92	93	92	87
All		91	91	90	91	88	82	77	70	65	62	66	73	81	89	94	96	98	102	103	101	98	95	92	91	87
Quiet		93	94	95	95	92	88	82	75	67	63	65	74	81	89	94	94	96	98	100	100	97	96	95	88	88
Dist.		89	95	92	90	87	80	77	70	63	64	71	76	82	92	95	99	102	110	116	106	100	95	86	80	88

June 2008 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		80	85	101	102	108	106	103	97	83	75	65	61	63	65	71	73	84	75	77	78	75	76	77	77	82
2		80	88	92	94	100	99	100	98	86	74	64	61	62	62	69	76	76	78	76	80	85	86	85	84	81
3		84	89	94	99	96	99	98	94	85	72	62	59	61	59	62	66	74	76	78	83	80	83	79	80	80
4		82	87	93	97	98	99	103	104	97	84	70	61	61	65	68	72	73	78	78	80	80	80	82	83	82
5	Q	85	87	91	95	98	101	103	99	87	71	58	54	56	61	65	72	76	77	76	77	77	80	82	83	80
6		86	89	92	97	103	105	104	96	87	77	68	63	60	62	64	69	70	73	73	80	78	80	81	92	81
7	D	95	94	94	92	94	100	102	96	75	57	42	36	41	46	58	66	72	73	92	80	88	111	98	98	79
8		90	68	90	101	103	106	108	104	95	83	67	58	55	56	60	71	77	83	81	75	77	81	86	79	81
9		86	89	86	88	93	99	104	102	99	88	71	60	59	61	64	73	76	77	79	84	76	78	81	83	81
10	Q	81	84	91	94	98	106	112	113	102	82	64	55	55	59	62	67	70	74	79	83	78	79	80	82	81
11		85	89	94	98	97	100	106	103	94	81	69	58	59	64	68	72	76	79	79	79	78	81	82	84	81
12		85	89	95	102	106	105	102	98	90	79	65	56	54	52	58	66	73	76	78	77	78	83	83	82	80
13	Q	84	88	96	102	104	102	102	99	90	77	65	59	60	66	70	74	79	77	76	78	79	79	80	82	82
14	D	86	89	93	99	103	102	101	95	88	77	66	58	48	43	47	55	57	58	69	72	69	124	129	146	82
15	D	115	91	110	108	83	65	88	86	91	81	66	53	55	67	68	71	70	85	80	75	81	86	63	89	80
16	D	90	94	101	98	99	102	103	97	88	70	51	45	40	44	59	67	72	91	112	93	84	96	84	89	82
17		85	87	83	93	103	112	115	111	105	88	74	59	58	61	69	73	77	87	84	86	82	85	84	79	85
18		93	65	93	106	105	101	105	102	100	92	85	70	60	60	67	68	71	76	77	79	82	83	83	85	84
19		88	94	100	99	103	104	109	107	96	84	65	50	49	57	62	67	70	74	78	81	79	81	81	82	82
20		85	91	92	112	113	100	108	96	99	95	83	75	66	65	72	75	78	79	84	81	82	82	86	83	87
21		86	91	95	97	99	97	94	95	90	83	75	68	65	63	67	74	78	79	82	84	86	92	82	84	83
22	Q	88	95	96	102	105	103	105	111	104	87	66	55	57	65	71	79	85	84	82	81	81	79	81	82	85
23		86	86	97	108	108	106	104	100	94	79	63	53	57	62	66	72	78	80	82	82	82	82	84	86	83
24		87	91	96	106	111	112	109	103	96	86	71	62	60	60	64	69	77	79	78	78	73	76	79	74	83
25		87	103	121	115	109	101	100	99	89	85	75	65	60	54	56	62	61	66	72	78	78	88	73	94	83
26	D	91	88	80	84	92	97	87	92	84	79	74	67	64	58	62	69	73	79	86	76	76	79	82	85	79
27		79	69	102	105	103	102	100	97	97	89	78	75	72	67	71	73	86	76	75	78	81	84	87	84	82
28		90	94																							

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July 2008 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		92	91	91	93	88	79	68	65	72	72	73	76	92	92	91	90	88	92	95	96	96	97	98	96	87	
2	Q	95	94	96	94	89	81	77	71	68	69	68	80	91	97	98	91	91	94	97	98	97	95	96	96	88	
3		97	101	103	100	96	87	79	72	66	68	73	82	92	98	104	103	99	99	98	98	98	99	99	98	92	
4		98	102	105	104	100	90	80	72	70	68	71	75	81	99	113	108	94	99	102	105	104	105	102	103	94	
5		99	105	109	108	100	90	87	83	77	72	69	86	80	105	81	90	103	102	103	109	99	96	94	103	94	
6		95	95	94	93	85	79	76	75	69	66	60	66	73	87	95	103	105	103	102	97	96	93	94	93	87	
7	Q	92	94	95	96	96	92	86	77	71	65	64	68	76	85	91	98	100	99	100	99	97	94	99	97	89	
8	Q	90	91	93	94	94	92	83	70	63	58	64	74	85	88	95	93	96	97	95	100	99	100	98	96	88	
9	Q	96	99	102	100	98	94	88	85	75	68	62	63	69	91	105	105	104	101	99	100	102	100	100	99	92	
10		99	96	97	99	101	94	89	83	78	74	74	80	71	89	101	100	105	102	98	99	97	94	89	89	92	
11		94	97	101	101	99	93	86	82	70	57	71	81	76	91	88	100	101	100	105	110	117	119	122	111	95	
12	D	109	109	111	82	74	64	71	62	68	76	65	75	69	69	88	89	94	100	93	92	94	83	84	83	83	
13	D	84	83	85	86	87	78	71	62	46	39	56	66	88	97	93	86	94	121	107	96	90	92	88	88	83	
14	D	77	77	81	80	79	74	67	59	54	53	73	75	90	91	112	109	94	110	92	91	93	92	84	83	83	
15		80	83	89	87	83	74	73	67	59	65	65	75	84	97	94	89	92	93	94	97	93	92	93	84	84	
16		87	86	85	78	81	81	76	73	70	69	67	67	70	81	93	109	107	105	100	98	91	96	91	85	85	
17		83	89	83	84	84	81	76	72	67	55	65	69	79	91	93	98	98	100	97	95	94	93	92	91	85	
18		89	88	89	86	81	71	64	55	61	64	73	79	85	88	87	90	91	91	95	94	95	92	89	88	83	
19	Q	89	90	92	91	88	80	74	71	67	60	56	67	78	91	93	89	90	91	92	95	95	93	94	89	84	
20		88	90	92	97	96	90	79	69	60	57	55	68	74	86	93	101	105	108	109	102	102	98	97	95	88	
21		93	97	104	103	94	87	83	71	63	54	60	68	72	90	99	102	100	99	101	107	101	99	103	94	89	
22	D	95	94	97	97	90	81	75	77	77	70	65	57	74	97	88	111	129	116	114	104	102	100	91	102	92	
23	D	103	95	99	98	76	80	75	74	68	63	57	60	83	105	121	94	111	97	94	97	96	92	89	81	88	
24		81	81	82	91	81	71	70	63	61	57	56	61	75	87	93	85	92	96	97	93	96	86	88	90	81	
25		90	89	90	88	78	68	67	66	65	56	54	65	78	88	91	89	92	96	98	97	95	93	95	96	83	
26		93	91	91	90	90	89	85	75	64	64	62	60	70	83	102	102	92	95	102	91	87	87	87	88	85	
27		88	89	91	90	85	83	79	69	60	57	56	65	73	82	86	89	92	91	99	99	103	95	79	84	83	
28		87	92	93	94	85	75	77	74	70	70	70	70	80	80	90	89	96	94	93	95	95	94	90	87	85	
29		86	86	88	87	84	82	78	72	63	54	53	71	92	96	96	96	93	94	94	97	99	98	97	96	92	85
30		90	93	94	89	91	94	90	78	67	63	65	79	87	92	96	99	97	99	98	101	97	97	95	93	89	
31		94	94	96	97	89	79	70	67	63	57	65	73	79	90	100	102	98	103	97	96	95	95	96	94	87	
All		92	94	95	95	93	88	81	75	69	64	63	70	80	90	96	95	96	96	96	98	99	98	97	95	92	87
Quiet		92	94	95	95	93	88	81	75	69	64	63	70	80	90	96	95	96	96	96	98	99	98	97	95	92	87
Dist.		94	91	94	88	81	75	71	67	63	60	63	67	81	92	101	98	104	109	100	96	95	92	87	87	86	

July 2008 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		86	85	94	102	109	109	107	104	97	86	71	59	56	58	60	68	74	76	79	80	79	81	82	78	83
2	Q	75	86	97	102	105	104	102	95	85	78	68	57	56	62	70	78	80	79	79	80	80	80	82	83	82
3		84	87	92	96	100	99	101	103	98	89	74	58	47	45	56	71	82	85	79	78	80	82	84	85	81
4		88	93	98	102	99	97	102	100	96	86	75	63	54	53	61	72	77	79	80	79	80	80	83	85	83
5		89	93	101	107	108	110	111	108	97	83	67	54	57	51	63	74	72	76	74	84	81	79	88	84	
6		100	100	104	107	111	105	101	101	91	80	69	60	57	56	60	66	73	78	81	79	78	80	83	84	83
7	Q	85	87	97	101	109	115	114	110	102	92	78	66	60	60	65	75	83	87	87	85	83	84	82	87	87
8		91	92	96	98	101	104	106	107	102	89	66	51	48	51	58	68	75	77	81	82	82	82	90	89	83
9	Q	90	92	98	101	104	110	112	113	108	100	81	64	54	54	60	68	76	80	82	81	83	86	85	86	86
10		91	94	97	96	95	97	105	105	100	88	76	64	57	58	65	69	75	82	86	82	82	87	89	81	84
11		87	94	95	97	102	107	110	112	97	83	63	54	47	40	53	66	73	76	75	74	74	78	83	92	80
12	D	91	92	81	66	90	83	96	96	108	85	78	71	58	62	67	68	80	84	81	100	103	89	89	84	84
13	D	91	93	94	99	109	116	116	115	106	94	78	60	49	64	71	79	79	95	103	87	89	83	81	87	89
14	D	88	84	94	101	108	110	111	110	101	86	75	69	63	71	75	90	82	89	88	80	83	84	78	82	88
15		79	83	95	101	109	103	103	100	94	82	67	55	63	68	73	77	78	82	90	86	85	83	87	88	85
16		90	98	107	105	107	103	108	112	104	85	74	68	65	63	66	74	85	83	82	81	78	84	88	85	87
17		77	92	106	102	103	102	101	99	93	83	70	63	62	65	72	77	82	85	84	79	80	82	85	86	85
18		88	88	94	104	107	108	107	102	95	78	66	61	64	70	72	74	80	84	86	87	87	85	88	90	86
19	Q	89	90	94	101	109	109	108	109	104	89	72	55	48	53	66	77	82	83	85	85	85	85	88	90	86
20		94	97	97	101	104	105	108	108	101	94	80	70	66	68	69	72	76	78	81	78	81	83	85	89	87
21		91	83	93	103	104	103	103	103	93	73	60	52	56	65	68	69	74	81	80	78	80	80	87	88	82
22	D	92	94	102	107	107	108	111	103	89	78	67	58	56	49	57	62	65	75	89	100	91	99	101	85	
23	D	102	105	99	96	85	74	104	113	105	88	73	63	53	72	69	72	92	85	80	83	100	85	84	80	86
24		81	107	99	108	109	113	106	99	104	96	85	76	71	71	75	81	85	84	85	85	89	92	88	89	91
25		91	93	96	101	108	105	109	106	98	84	72	62	60	64	67	75	80	80	80	82	84	81	82	84	85
26		88	86	93	100	103	106	108	108	103	97	82	68	61	64	70	78									

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August 2008 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	92	91	91	89	84	80	72	65	64	69	77	85	93	101	98	103	96	95	99	97	99	97	90	88
2	Q	90	90	93	93	87	82	79	73	67	67	69	73	79	87	100	102	99	99	101	98	95	93	89	89	87
3		90	92	95	93	87	79	70	64	62	62	62	67	76	84	88	97	104	103	97	98	93	96	100	95	86
4		90	92	93	92	87	87	86	77	70	60	56	65	74	81	89	91	97	99	101	99	95	95	92	88	86
5		88	93	93	95	91	82	69	61	60	61	68	75	86	89	89	98	98	100	103	104	105	104	103	101	88
6		100	99	100	99	95	85	74	67	61	57	64	73	79	84	96	103	105	102	99	94	95	98	95	98	88
7		93	90	89	86	82	82	80	74	67	60	57	65	78	86	93	100	97	90	99	93	93	95	97	91	85
8		92	93	93	92	89	89	85	74	67	66	71	79	88	93	93	94	101	102	100	97	98	100	96	98	90
9	D	107	110	110	112	118	110	106	93	80	79	67	75	89	90	87	113	121	96	95	96	108	103	54	63	95
10	D	86	80	76	81	75	44	58	63	59	48	54	65	75	77	85	84	101	99	91	91	79	89	78	80	76
11		81	69	85	88	85	77	70	63	63	56	63	78	82	84	96	97	95	93	93	94	94	89	90	81	82
12		82	84	75	80	84	80	75	68	65	62	66	77	76	87	80	92	91	93	91	92	97	93	93	85	82
13		82	71	85	88	88	83	80	72	63	61	65	72	83	89	93	87	88	87	91	93	93	91	91	93	83
14		93	87	77	79	88	82	76	69	62	54	55	60	70	78	84	91	93	94	93	91	89	87	88	90	80
15		86	85	86	87	81	83	80	69	58	57	63	71	84	93	96	91	88	89	93	91	91	91	89	89	83
16		91	91	93	92	88	83	73	68	67	63	66	74	85	91	92	87	88	94	99	100	96	100	101	110	87
17	D	87	83	81	91	92	88	78	68	57	55	61	69	64	76	82	93	95	86	86	89	96	99	96	92	81
18	D	90	86	88	91	75	83	83	73	62	51	69	65	63	83	77	91	82	94	117	100	97	90	87	84	82
19	D	85	79	74	83	78	68	67	58	58	51	61	65	81	84	89	84	83	98	91	87	89	87	85	78	78
20		84	77	82	84	84	78	70	64	58	53	57	65	75	83	90	98	94	90	91	91	89	88	87	87	80
21		87	87	87	88	87	84	76	68	57	56	55	62	75	83	90	86	87	88	88	90	91	89	91	91	81
22		89	89	89	87	84	75	66	60	56	52	54	64	73	76	84	87	90	90	92	95	95	94	93	92	80
23		91	90	89	88	85	80	69	55	49	53	62	75	84	85	84	91	92	94	98	100	99	97	99	94	83
24	Q	93	93	93	92	86	79	72	65	60	60	65	72	82	89	84	89	95	97	97	98	98	95	94	96	85
25	Q	92	91	91	90	85	78	70	61	60	58	63	72	78	85	84	84	87	91	94	96	95	95	95	93	83
26	Q	93	91	88	88	86	82	76	72	64	61	70	78	87	93	89	87	88	94	98	97	93	94	96	97	86
27		95	96	97	95	94	86	74	60	50	48	61	72	80	91	95	93	89	91	94	95	94	93	92	92	85
28		92	90	89	85	84	79	68	58	54	55	64	78	93	100	98	90	86	94	93	95	92	91	94	90	84
29		89	92	88	83	80	77	72	66	58	62	70	84	95	102	98	93	90	90	96	98	96	96	94	96	80
30	Q	93	90	87	86	82	73	66	62	60	64	76	87	98	98	95	89	88	89	93	95	96	95	94	93	85
31		94	93	91	90	85	77	72	70	70	66	81	89	93	89	92	96	96	91	97	98	101	96	94	90	88
All		90	89	89	89	86	81	75	67	62	59	64	72	81	87	90	93	94	94	96	95	95	94	92	91	84
Quiet		92	91	90	90	85	79	72	67	62	62	69	76	85	91	90	90	91	94	96	97	95	94	94	94	85
Dist.		91	88	86	91	88	79	78	71	63	56	60	68	74	82	84	93	96	94	96	93	94	94	80	81	82

August 2008 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		94	94	101	112	117	115	112	103	91	80	65	59	58	60	67	75	80	86	90	83	83	81	87	88	87
2	Q	91	96	99	102	101	99	103	104	94	80	65	50	45	54	68	80	88	89	86	84	84	89	91	91	85
3		93	94	95	99	103	105	108	97	80	65	56	50	51	58	68	78	82	88	88	90	88	86	91	96	84
4		92	97	99	102	103	108	109	102	96	86	70	55	52	55	67	78	87	92	91	88	86	89	93	87	87
5		92	93	98	102	108	110	107	101	95	87	74	61	56	62	67	73	80	81	80	81	82	84	88	89	85
6		90	91	93	100	105	105	106	100	93	78	64	55	59	67	69	72	76	80	85	85	84	84	90	95	84
7		96	95	98	107	112	114	116	112	101	84	72	65	60	64	70	77	84	84	83	87	87	83	91	97	89
8		94	96	96	100	101	102	105	102	98	92	79	70	65	65	68	72	77	82	85	85	85	86	89	91	87
9	D	93	97	103	115	114	117	111	104	90	73	64	57	57	63	67	71	83	107	86	95	120	145	117	72	93
10	D	95	103	116	110	107	94	92	110	99	88	78	69	65	69	74	81	85	87	86	91	97	96	105	92	91
11		96	92	92	107	111	113	111	104	93	81	75	70	68	80	84	89	85	84	86	86	86	91	95	90	80
12		94	93	88	88	100	107	104	106	96	84	73	61	61	65	72	80	95	89	84	84	88	88	85	87	86
13		85	70	80	99	106	110	110	103	94	83	72	60	62	71	76	83	87	89	88	91	92	90	88	88	87
14		92	95	86	99	98	99	101	102	94	85	79	70	66	70	79	83	87	87	88	92	93	91	91	91	88
15		84	79	90	102	105	106	107	101	88	73	57	52	51	59	73	86	94	92	88	91	89	89	90	90	85
16		90	90	94	102	106	107	105	102	87	73	65	59	64	72	80	83	84	87	88	84	84	85	88	93	86
17	D	102	108	97	101	111	113	108	101	88	73	61	52	49	59	73	85	91	91	86	86	88	98	89	84	87
18	D	89	94	100	121	112	107	108	102	91	76	61	43	49	57	68	78	113	90	113	98	111	111	94	92	91
19	D	88	87	84	105	110	112	109	100	93	78	67	69	75	78	82	89	92	108	104	90	91	86	91	93	91
20		90	79	80	88	101	111	111	111	104	94	82	72	67	71	78	86	94	90	87	86	88	90	92	87	89
21		91	93	96	102	107	110	110	106	96	84	71	64	66	71	77	84	89	90	87	93	87	88	87	87	89
22		85	89	96	102	111	120	123	115	98	84	70	62	58	65	74	84	89	87	86	85	86	87	91	89	89
23		89	93	97	101	107	112	111	104	93	82	69	60	61	68	76	83	84	83	83	85	87	91	88	90	87
24	Q	92	93	96	103	106	111	110	103	91	74	62	60	64	72	80	85	86	84	83	84	85	87	88	90	87
25	Q	93	95	98	103	105	107	107	100	91	80	71	66	70	74	81	84	85	86	87	87	88	88	91	92	89
26	Q	91	93	97	100	101	104	106	103	93	80	68	61	63	69	81	89	89	85	85	87	89	88	88	87	87
27		89	81	98	107	109																				

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September 2008 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		92	90	90	87	81	73	65	60	56	63	78	89	94	96	95	91	88	88	91	92	91	92	93	92	85
2		92	91	87	84	81	75	68	62	56	57	60	65	78	88	88	87	90	89	90	92	93	92	92	92	81
3		92	93	90	88	83	76	74	68	67	58	65	81	84	93	95	97	99	96	98	99	102	110	130	110	90
4	D	104	96	82	96	22	75	73	51	48	56	61	73	54	71	87	103	86	77	81	84	85	87	76	75	75
5		75	77	77	73	72	74	67	55	48	48	54	68	62	81	87	89	83	84	87	89	80	87	89	85	75
6		94	76	81	85	87	85	77	66	58	53	56	66	64	70	86	89	85	89	88	88	101	90	95	92	80
7	D	88	74	72	90	92	89	77	65	58	56	64	76	86	90	89	86	88	93	95	92	84	85	87	82	82
8	D	82	83	82	76	75	78	78	64	58	59	68	73	73	79	78	79	87	93	91	96	76	94	88	80	79
9		79	81	79	82	80	74	68	62	59	53	53	64	75	80	81	82	83	85	88	89	90	88	100	86	78
10		82	84	84	84	82	79	73	64	59	64	69	76	82	79	79	82	80	85	85	87	93	83	84	85	79
11		84	84	83	80	78	74	68	62	59	62	69	78	81	81	82	83	85	87	87	90	91	94	91	90	80
12	Q	83	81	81	80	81	78	73	69	63	62	71	78	82	83	82	82	83	85	86	87	86	86	86	86	80
13	Q	86	85	83	81	80	81	76	70	68	67	74	83	88	89	87	85	87	91	94	94	94	94	93	90	84
14		87	87	85	85	85	82	77	73	70	72	75	81	79	86	89	90	86	92	92	96	77	85	81	81	84
15	D	77	80	86	91	93	85	78	70	57	52	51	70	61	65	74	68	76	78	84	67	78	87	87	83	75
16	D	82	81	80	78	73	57	55	49	45	54	61	64	75	78	77	76	79	90	81	78	81	76	80	75	72
17		85	84	77	78	74	69	68	64	62	67	73	78	84	84	81	80	82	84	86	89	89	90	86	88	79
18		87	87	86	81	83	81	66	62	55	58	61	64	68	68	69	76	79	82	86	84	83	83	83	75	75
19		81	82	81	79	73	71	69	69	62	60	64	65	68	70	77	82	83	86	90	80	75	80	87	87	76
20		84	83	76	76	80	81	78	75	71	72	76	77	79	79	82	86	88	90	90	91	91	92	91	89	82
21	Q	89	86	86	84	83	81	79	78	76	74	70	72	70	76	85	89	86	87	88	85	87	89	84	76	82
22		77	87	87	80	79	80	75	69	65	64	66	70	77	80	81	83	85	89	89	90	90	89	87	86	80
23		88	83	84	85	86	85	82	74	61	62	66	70	70	75	77	83	87	90	90	87	84	83	86	80	84
24	Q	87	86	85	85	86	87	83	78	76	71	71	77	72	73	81	81	86	88	89	89	89	88	89	82	81
25		90	88	87	87	89	88	83	75	69	68	71	73	76	83	89	88	90	91	96	85	78	80	90	89	83
26		85	80	84	87	91	89	85	78	73	66	66	70	76	79	78	81	84	87	88	89	90	89	89	88	82
27		87	86	84	86	88	90	89	86	78	70	70	71	84	90	91	91	92	90	86	86	101	91	85	86	86
28		86	86	86	87	90	88	85	81	74	71	71	71	78	82	77	84	87	88	90	92	93	91	91	90	84
29	Q	89	89	89	89	84	77	65	63	64	71	79	79	89	81	82	83	86	87	87	86	86	83	82	81	81
30		82	84	85	86	86	86	83	76	70	69	73	76	82	86	90	92	87	87	93	96	96	94	87	82	84
All		86	84	83	84	81	80	75	68	63	62	67	73	76	80	83	84	85	87	89	88	88	88	89	87	80
Quiet		87	86	85	84	84	82	78	72	69	68	71	78	78	80	83	84	84	87	89	89	88	89	87	85	82
Dist.		87	83	80	86	71	77	72	60	53	56	61	71	70	77	81	82	83	86	86	83	80	86	84	80	76

September 2008 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		92	98	102	108	107	104	99	90	78	70	65	63	70	82	91	92	92	88	89	88	88	90	90	92	89
2		93	94	97	99	104	106	105	98	84	64	55	50	53	67	83	91	91	87	86	87	88	90	91	91	86
3		94	94	99	103	109	109	105	92	78	65	55	51	60	70	80	84	77	80	82	82	85	83	92	110	85
4	D	109	95	66	59	81	94	112	106	95	88	79	57	50	62	74	130	92	90	90	87	103	92	100	106	88
5		90	93	108	104	110	112	113	110	100	85	75	66	69	79	85	88	89	89	88	98	93	87	90	67	91
6		77	106	106	109	109	108	108	106	97	84	72	61	59	77	84	88	86	87	87	88	102	89	97	100	93
7	D	99	105	84	100	110	110	110	104	98	86	75	69	67	68	78	82	89	93	119	109	94	91	92	95	91
8	D	94	96	98	95	96	100	106	107	92	80	72	75	70	72	78	89	107	108	110	110	104	91	99	103	94
9		101	98	96	98	103	105	107	105	95	89	81	75	72	75	80	85	85	87	88	90	92	98	104	98	92
10		109	106	101	99	102	103	105	101	95	82	75	73	76	84	91	91	91	94	92	92	100	103	98	96	94
11		97	97	98	100	102	104	106	102	94	83	76	78	81	84	89	88	86	87	88	90	94	93	103	103	93
12	Q	100	98	99	100	103	105	105	101	92	82	74	71	75	83	88	91	90	90	92	93	93	93	93	92	90
13	Q	94	96	97	99	101	102	102	100	92	82	74	74	78	81	85	87	85	86	87	89	93	94	94	94	92
14		95	97	98	98	97	98	96	93	84	78	72	68	73	78	85	89	85	86	86	87	121	105	113	110	91
15	D	127	112	108	106	102	106	101	95	76	55	52	48	50	79	93	85	88	125	124	111	99	88	98	98	93
16	D	100	101	101	102	104	95	87	94	88	75	65	66	71	79	88	102	98	124	104	102	106	104	99	89	94
17		80	107	115	107	103	106	103	98	89	82	79	81	83	86	88	89	89	90	91	90	90	92	92	93	93
18		96	96	95	107	98	95	91	79	74	72	67	61	66	69	82	86	94	96	94	94	99	101	100	99	88
19		103	103	102	102	103	102	100	94	88	80	75	71	67	78	82	84	87	88	111	108	119	106	98	99	94
20		101	102	98	98	98	101	100	98	97	92	87	84	79	77	81	82	84	84	87	90	91	94	96	96	91
21	Q	96	97	97	97	98	100	100	98	92	84	75	71	72	75	79	81	83	83	91	92	101	107	123	91	91
22		118	126	134	107	104	104	105	103	96	91	84	77	74	76	81	85	86	87	88	89	92	94	97	100	96
23		99	106	101	99	99	99	101	100	99	93	85	76	76	79	87	89	90	90	91	93	103	96	97	93	93
24	Q	97	99	97	98	98	98	95	96	96	91	85	74	75	78	82	85	87	87	88	89	91	93	94	94	90
25		94	96	95	95	96	97	99	100	97	90	86	81	77	78	81	82	82	81	82	112	123	121	105	93	93
26		98	102	103	104	103	101	101	102	98	94	86	80	79	78	83	85	86	88	89	91	92	93	93	94	93
27		95	95	95	96	96	96	97	96	94	92	87	81	74	75	81	84	85	87	89	92	100	103	103	96	91
28																										

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October 2008 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		84	85	87	90	90	89	84	72	67	69	68	73	80	82	90	81	83	85	89	83	82	100	88	87	83	
2	D	91	86	85	88	93	87	79	77	69	57	49	47	58	68	78	75	74	76	88	94	72	72	76	70	75	
3	D	73	67	77	78	79	84	75	67	47	46	53	59	57	77	79	74	74	85	92	93	99	80	76	68	73	
4		77	80	80	83	71	89	84	68	61	58	56	56	70	79	81	76	82	77	79	81	81	84	83	80	76	
5		81	81	81	79	84	88	86	75	72	65	61	65	66	74	77	81	83	82	83	83	88	85	84	80	78	
6		83	82	80	75	84	89	87	79	67	60	59	64	73	80	83	83	83	85	86	86	86	85	86	85	80	
7		84	83	83	83	85	84	80	76	72	69	67	70	74	75	76	71	74	83	85	87	86	85	85	85	79	
8		81	83	83	83	84	87	84	81	75	70	71	75	79	83	85	86	87	89	90	90	90	89	87	87	83	
9	Q	86	85	85	87	89	91	89	80	70	63	62	66													(79)	
10								91	86	79	72	73	75	77	82	85	84	82	79	84	89	91	91	92	96	(84)	
11	D	89	91	88	90	90	90	95	91	64	47	46	54	59	89	61	38	44	86	29	58	60	76	73	63	70	
12		51	52	64	80	72	75	65	63	56	42	49	55	60	66	71	68	78	69	65	67	70	66	68	67	64	
13		75	74	72	72	79	85	83	73	52	39	50	59	70	76	78	76	75	77	78	84	76	79	83	78	73	
14		76	78	80	82	83	85	82	67	59	55	53	61	71	74	72	69	73	74	74	76	81	82	83	81	74	
15		81	86	81	84	92	84	83	69	54	49	47	58	64	68	72	73	71	73	80	80	85	81	80	86	74	
16		80	81	83	84	89	91	85	76	63	55	58	66	73	75	75	72	72	77	80	78	77	78	81	83	76	
17		82	82	83	83	86	85	80	73	65	60	60	66	73	75	80	79	81	82	85	86	85	84	84	88	78	
18	Q	84	83	85	86	87	87	81	71	64	64	72	79	84	87	87	88	88	89	88	85	86	88	88	86	83	
19		84	83	88	87	85	85	83	76	67	65	69	72	78	83	74	82	85	82	65	66	77	84	88	80	79	
20		73	77	80	83	82	82	83	74	64	62	64	69	76	79	82	83	84	84	84	84	86	79	86	81	78	
21		81	82	85	85	84	85	82	73	65	57	61	70	78	82	82	83	85	85	84	85	86	87	89	86	80	
22		85	85	84	85	87	86	80	73	70	71	75	80	80	80	86	81	69	55	78	81	83	89	87	80	80	
23		80	75	80	82	83	79	74	71	68	65	67	71	80	84	85	86	87	86	87	88	88	87	84	84	80	
24	Q	84	83	84	86	88	89	88	81	74	70	74	81	85	86	85	86	87	88	87	87	87	86	85	85	84	
25	Q	85	85	86	87	88	87	85	80	74	75	76	78	84	86	88	90	89	91	93	89	85	86	85	86	85	
26		86	86	85	89	103	100	87	83	76	73	79	85	86	84	80	79	81	84	84	84	84	84	84	84	88	85
27	Q	83	82	83	85	86	86	81	76	71	70	72	78	84	86	86	86	86	86	85	85	84	84	83	83	82	
28		84	84	84	85	89	90	91	90	79	81	85	88	94	92	92	86	88	86	84	75	89	88	85	87	86	
29	D	83	82	90	93	99	87	71	71	68	69	69	74	79	74	74	68	95	68	58	75	79	76	77	78		
30	D	75	68	78	81	84	85	81	76	71	64	59	59	69	76	73	66	74	54	66	69	87	86	78	80	73	
31		76	77	77	79	82	76	81	74	67	69	70	71	81	83	83	83	83	81	82	89	86	82	89	79	79	
All		81	80	82	84	86	86	83	76	67	62	64	68	75	79	80	78	79	81	79	82	83	83	83	82	78	
Quiet		84	84	85	86	88	88	85	78	71	68	71	76	84	86	87	87	87	88	88	86	86	86	85	85	83	
Dist.		82	79	83	86	89	87	80	76	64	56	55	59	64	77	73	66	67	79	69	78	78	76	72	74		

October 2008 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		99	99	97	96	98	98	102	100	93	86	78	71	64	65	65	70	81	83	100	105	97	90	109	93	89
2	D	90	101	107	102	107	101	102	101	95	79	65	55	59	68	106	81	87	101	133	140	117	100	88	81	94
3	D	86	88	93	94	91	89	84	95	91	88	77	69	66	80	94	106	91	98	104	110	107	124	110	89	93
4		93	104	102	91	79	92	101	103	100	89	79	69	71	75	83	90	91	96	93	95	99	98	94	95	91
5		99	99	99	96	93	96	98	102	100	97	87	80	72	74	82	89	91	91	94	95	96	94	98	96	92
6		97	99	99	92	96	100	102	104	104	97	91	82	75	75	82	90	91	92	93	93	94	96	96	98	93
7		96	97	96	96	97	101	106	110	109	104	95	88	81	80	83	90	89	89	92	100	96	97	96	97	95
8		96	96	99	99	99	99	100	103	101	94	89	84	82	82	85	87	88	89	91	93	94	95	96	96	93
9	Q	96	96	95	95	97	101	107	112	110	101	90	82													(98)
10								103	105	101	95	85	80	79	82	87	90	93	98	94	93	92	92	91	96	(92)
11	D	87	96	97	99	96	98	99	102	96	87	67	64	67	51	127	85	104	247	163	125	113	104	91	108	103
12		66	86	83	86	92	98	100	108	97	94	93	81	85	91	89	102	138	126	114	103	104	112	118	106	99
13		87	111	101	100	91	97	102	104	101	94	84	78	81	85	91	97	104	97	102	117	99	109	93	96	96
14		98	98	99	98	98	100	102	100	98	94	86	78	74	81	91	96	96	97	109	103	99	97	96	95	95
15		78	96	110	102	86	92	95	99	93	83	80	71	74	74	90	96	97	99	99	100	107	107	101	95	93
16		96	101	99	97	96	99	100	100	97	93	80	73	74	82	90	95	93	95	97	101	105	109	102	98	95
17		98	97	97	97	98	102	106	106	103	94	87	76	78	81	89	90	92	95	96	97	98	99	97	97	95
18	Q	97	97	96	96	97	98	101	101	97	87	81	79	82	87	91	92	92	92	94	95	96	95	95	97	93
19		98	97	95	100	100	99	102	103	96	86	74	71	75	81	82	85	84	87	126	119	108	108	119	140	97
20		125	105	98	97	99	101	103	104	103	96	87	80	79	85	88	87	89	91	93	97	105	106	104	101	97
21		103	100	100	104	98	99	102	104	98	93	84	80	79	85	90	92	94	95	96	100	97	101	97	98	95
22		97	96	96	96	96	98	101	103	103	94	85	79	76	77	83	86	87	112	130	109	103	98	104	104	96
23		103	107	104	100	100	102	102	102	97	91	84	82	83	89	93	92	91	92	94	94	99	101	99	98	96
24	Q	99	98	97	95	96	97	100	103	100	93	86	82	83	90	93	94	94	95	96	96	97	98	98	97	95
25	Q	97	96	95	95	97	99	103	106	104	96	89	86	85	89	91	91	92	92	91	97	96	99	98	96	95
26		96	97	96	93	87	92	99	103	96	88	76	73	78	82	85	95	91	92	95	97	98	101	103	107	93
27	Q	104	98	97	96	96	98	100	102	99	90	84	82	84	89	93	94	95	95							

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November 2008 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		80	81	80	82	84	85	83	75	66	63	69	74	80	84	85	86	87	86	85	85	89	85	84	83	81	
2		84	84	86	87	87	87	84	77	71	68	67	68	71	76	78	82	83	84	83	81	80	77	84	82	80	
3	Q	82	82	84	85	84	85	81	76	69	65	66	71	78	84	85	86	84	84	84	85	84	85	83	83	81	
4		83	80	82	83	84	85	84	79	73	69	70	74	79	83	84	85	85	86	86	85	85	85	86	83	82	
5		82	82	82	85	86	86	84	80	74	71	73	77	83	86	86	88	88	87	87	86	86	87	86	86	83	
6		85	85	85	85	87	87	87	87	84	80	77	77	79	84	88	90	91	92	92	91	87	83	86	91	86	
7		91	92	93	95	93	96	87	80	75	69	74	78	84	89	88	91	94	91	87	77	79	88	90	72	86	
8	D	72	66	58	77	91	82	77	64	60	63	57	57	63	56	61	55	61	68	85	80	73	79	75	76	69	
9		66	84	87	84	83	83	75	69	63	61	63	66	77	80	80	73	70	79	81	78	65	73	68	73	74	
10	D	75	76	77	75	81	85	82	74	66	64	67	71	73	76	77	73	75	76	79	82	83	83	82	82	76	
11		81	82	82	83	84	86	81	76	72	67	68	74	79	82	82	81	82	82	83	83	81	82	83	81	80	
12		81	82	82	85	88	91	89	82	72	73	72	77	80	81	78	81	82	82	84	85	85	83	83	84	82	
13		85	84	87	87	88	87	87	84	78	72	71	74	78	81	81	81	84	85	86	87	86	86	86	86	83	
14	Q	86	86	87	87	87	88	86	81	73	69	69	75	82	85	84	85	89	91	91	92	93	90	89	87	85	
15		86	84	82	84	85	85	84	78	72	68	68	74	82	85	84	85	91	95	94	95	94	88	90	83	84	
16	D	80	78	70	66	74	80	75	73	72	68	67	70	70	76	80	80	81	81	81	81	81	84	83	91	78	77
17		77	77	80	79	83	82	80	75	69	67	70	75	82	83	83	84	84	84	82	81	85	83	82	81	79	
18	Q	81	81	80	82	85	86	85	81	77	75	76	80	85	89	87	85	85	86	85	84	85	85	84	83	83	
19		83	83	84	85	86	88	86	82	77	72	72	78	84	88	88	87	82	76	77	83	83	83	83	83	82	
20		83	84	85	84	86	88	87	85	81	79	81	84	89	90	90	90	90	91	88	82	83	83	87	83	86	
21	Q	82	83	85	86	90	89	88	84	79	78	80	84	89	88	86	85	86	87	87	86	85	85	85	85	85	
22	Q	84	86	86	87	89	90	89	87	85	80	79	82	87	89	89	88	89	88	88	87	87	86	87	86	87	
23		86	86	85	87	87	84	86	83	80	75	74	80	85	86	84	84	85	85	85	82	82	82	83	83	83	
24		82	84	86	88	88	88	86	82	78	75	77	82	85	87	88	88	89	89	88	88	88	87	86	88	85	
25	D	93	80	100	99	96	89	95	98	95	85	82	81	83	74	78	80	77	75	77	78	81	75	83	89	85	
26	D	85	82	79	84	90	92	81	74	78	79	79	82	84	84	83	79	80	76	76	83	87	79	84	85	82	
27		84	78	74	82	86	80	82	77	72	71	76	80	78	75	78	81	79	83	79	80	86	72	78	79	79	
28		77	77	79	81	81	80	85	84	81	80	80	82	84	87	87	83	82	84	84	83	83	81	89	74	82	
29		80	81	82	82	84	85	84	80	78	77	73	77	83	84	84	83	83	82	84	84	83	84	84	88	82	
30		84	80	81	82	83	82	82	79	76	76	79	82	85	86	84	84	81	83	86	86	86	85	85	84	83	
All		82	82	82	84	86	86	84	79	75	72	72	76	81	83	83	83	83	84	84	84	84	83	84	83	82	
Quiet		83	83	84	86	87	88	86	82	77	73	74	78	84	87	87	86	86	87	87	87	87	86	86	85	84	
Dist.		79	78	79	82	87	85	80	76	73	71	69	71	75	74	76	73	74	76	80	80	78	80	80	80	77	

November 2008 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		95	99	98	98	97	98	102	104	101	95	88	85	86	90	93	94	94	94	94	96	99	101	99	98	96
2		98	96	95	95	96	97	99	103	102	96	86	82	84	90	91	95	97	98	98	101	109	109	99	99	97
3	Q	98	96	95	95	97	99	104	108	106	101	93	87	86	89	92	93	95	95	96	97	99	99	100	99	96
4		98	94	98	99	99	100	102	105	104	98	92	87	86	91	95	96	97	97	97	98	98	99	100	100	97
5		98	96	96	95	97	98	100	101	98	91	82	81	84	89	93	95	95	96	97	98	98	98	98	97	95
6		97	96	95	96	97	98	101	103	102	97	91	87	85	89	91	92	92	92	94	96	109	100	97	95	95
7		94	92	91	92	93	95	97	98	98	93	85	81	83	81	85	85	89	91	108	107	118	147	146	97	
8	D	110	92	63	71	87	87	97	91	98	87	90	99	95	90	83	99	99	107	120	110	109	103	108	98	96
9	D	78	94	103	95	97	93	98	100	101	95	95	88	88	91	93	92	104	97	99	122	123	138	118	111	101
10		98	102	100	98	97	98	103	103	103	100	93	89	92	96	96	108	103	101	99	99	100	100	100	99	99
11		98	97	97	96	95	101	104	107	103	98	91	88	91	95	96	97	98	99	99	101	101	99	99	98	98
12		96	96	99	100	99	99	99	100	96	92	87	83	85	88	93	92	95	97	101	101	100	102	101	89	96
13		93	96	96	96	97	98	101	105	105	102	95	88	87	91	92	94	95	96	97	98	99	99	99	99	97
14	Q	98	96	96	96	96	98	102	107	108	102	93	86	86	91	93	94	95	93	94	96	97	99	100	101	97
15		101	102	101	100	99	99	103	108	108	101	92	86	87	91	93	94	92	92	94	95	99	105	110	115	99
16	D	111	113	120	101	98	100	107	109	107	101	94	85	85	93	93	94	97	100	102	101	100	109	122	113	102
17		103	94	97	95	99	102	105	107	106	100	93	92	92	95	97	98	98	98	100	103	104	101	101	100	99
18	Q	100	99	99	98	100	101	102	104	101	95	91	90	91	93	96	96	97	98	100	98	99	99	98	99	98
19		98	97	97	96	98	98	100	102	101	95	89	86	88	93	94	94	95	98	99	99	100	100	100	99	97
20		98	98	97	97	94	97	100	101	100	96	89	88	89	92	93	95	95	96	96	102	107	101	113	107	97
21	Q	98	96	97	96	97	98	100	101	99	94	90	90	91	93	96	96	96	97	98	100	99	98	98	97	98
22	Q	97	97	96	96	97	97	98	99	100	97	91	89	90	93	94	95	95	95	96	97	97	98	98	98	96
23		93	98	97	97	97	100	97	98	100	92	87	86	89	93	96	97	98	98	101	101	103	101	99	97	96
24		96	95	96	96	97	98	99	100	99	95	91	88	90	93	95	96	97	98	98	99	99	99	98	96	96
25	D	96	82	93	105	104	103	101	100	97	91	88	90	86	82	89	92	94	106	103	126	122	113	111	111	99
26	D	97	97	98	77	92	93	97	96	98	101	93	90	91	92	95	96	97	102	103	111	106	125	110	113	99
27		119	100	90	97	95	97	98	101	100	98	92	88	87	92	96	96	105	105	101	104	132	118	104	104	101

Nurmijarvi Finland

December 2008 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	Q	83	83	83	85	84	85	83	81	79	78	80	83	85	86	86	86	86	86	87	86	84	83	83	83	84	
2	Q	83	84	84	86	87	87	86	84	82	82	81	83	87	87	86	88	88	89	89	89	89	89	89	88	87	86
3		86	85	87	91	92	94	90	86	83	84	89	94	100	98	89	77	80	84	85	83	80	76	78	81	86	
4	D	82	83	81	81	101	90	89	83	77	73	68	63	68	73	75	71	69	75	78	75	71	75	74	75	77	
5	D	79	81	81	87	86	88	85	76	67	65	50	58	74	74	72	59	42	41	65	76	79	74	73	62	71	
6	D	79	79	88	76	75	89	79	61	70	73	70	66	72	76	73	76	74	99	53	62	70	73	72	77	74	
7		79	76	76	79	83	81	85	81	76	75	69	59	70	68	78	70	82	76	76	77	81	83	82	78	77	
8		79	79	80	81	80	82	81	79	78	78	78	78	76	79	77	76	78	77	76	78	86	81	80	81	79	
9	Q	80	81	82	83	83	84	82	79	78	78	80	83	85	85	84	80	81	82	82	82	82	82	82	82	82	
10		82	82	84	85	87	88	88	87	87	87	86	87	87	84	83	79	75	71	68	69	78	81	82	85	82	
11		84	82	85	86	86	86	84	82	84	79	80	81	77	83	83	72	76	82	85	82	80	82	80	83	82	
12		84	81	81	81	82	84	86	83	80	78	79	79	82	81	82	84	86	86	84	86	81	82	84	81	82	
13		83	84	83	79	84	85	85	84	80	76	76	78	81	83	81	83	84	83	83	84	85	84	81	83	82	
14	Q	81	77	82	82	84	83	83	81	79	78	80	83	86	87	86	84	84	84	85	85	85	83	82	82	83	
15		82	82	82	84	89	91	90	87	83	82	83	88	90	89	88	88	87	84	82	84	86	83	88	83	86	
16		81	81	83	84	87	89	90	87	89	88	85	86	90	94	88	82	80	84	82	82	97	81	82	90	86	
17		85	87	86	85	81	73	74	73	72	74	77	82	86	84	80	65	73	73	76	76	79	78	80	80	78	
18		80	80	80	80	83	85	84	82	81	79	78	79	80	82	80	84	85	82	80	81	89	81	82	80	81	
19		79	81	84	86	86	87	86	85	80	76	81	84	83	79	77	75	72	67	74	78	80	81	76	80	80	
20		77	79	79	80	83	85	84	84	83	81	83	84	85	83	76	73	79	82	83	82	82	83	83	83	82	
21		82	82	82	85	85	87	83	79	79	79	78	80	81	81	82	80	82	81	81	81	82	82	82	82	81	82
22		82	83	84	86	88	88	87	85	83	83	87	92	96	96	95	93	62	66	80	82	83	76	78	84	84	
23	D	74	79	83	75	81	85	86	85	82	78	76	80	87	86	83	68	83	69	73	90	75	83	73	71	79	
24		69	72	72	75	78	81	82	81	79	72	76	80	84	85	83	73	78	80	76	86	88	77	80	77	78	
25		76	78	81	81	82	82	82	80	81	81	81	82	84	71	73	77	81	80	77	80	78	79	76	77	79	
26		80	78	78	80	82	82	80	77	76	77	81	84	86	86	85	85	85	84	82	82	84	83	80	78	81	
27		76	77	83	84	85	86	86	83	80	80	80	83	86	88	88	86	84	83	84	79	80	81	81	82	83	
28		85	81	83	84	85	86	87	86	81	78	79	83	87	85	84	83	85	85	85	85	86	84	83	84	84	
29	Q	82	80	81	82	85	87	87	86	84	81	79	86	90	89	87	84	84	85	85	84	85	85	82	83	84	
30		83	83	84	84	86	88	89	88	87	85	85	86	88	87	88	88	88	89	88	88	90	90	91	95	87	
31	D	92	86	92	88	105	97	88	90	88	83	64	72	85	84	80	81	72	70	72	77	86	76	76	82	81	
All Quiet		82	81	82	83	84	85	84	82	80	79	80	83	86	87	86	84	85	85	85	85	85	84	84	83	84	
Dist.		81	81	85	81	90	90	85	79	77	74	65	68	77	78	77	71	68	71	68	76	74	72	74	72	77	

December 2008 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	Q	100	99	98	99	99	100	100	101	100	96	93	90	91	94	96	97	98	99	100	101	102	103	102	101	98
2	Q	100	99	98	98	98	99	100	101	99	96	93	91	93	95	96	97	97	98	98	99	99	100	99	97	97
3		100	99	99	98	97	98	98	99	98	94	89	87	87	90	91	92	92	97	98	98	109	120	115	108	98
4	D	103	100	96	83	79	95	95	101	99	92	89	85	78	93	101	101	120	104	104	105	116	119	111	103	99
5	D	97	92	96	100	98	94	92	91	95	97	93	82	91	94	98	102	192	121	113	105	103	107	160	108	105
6	D	104	111	97	81	62	89	92	90	91	87	89	99	91	94	98	102	106	147	125	121	114	113	113	100	101
7		95	96	104	98	98	97	93	95	95	96	95	107	105	101	110	104	119	111	107	107	110	104	101	101	102
8		101	100	100	99	96	99	100	102	101	99	97	95	98	98	99	100	100	110	105	104	103	104	101	99	100
9	Q	100	99	98	98	98	100	101	101	99	97	96	95	97	99	100	100	101	100	101	102	103	103	102	102	100
10		100	99	98	98	98	99	100	101	99	95	93	92	94	96	96	95	101	110	108	114	115	115	107	101	101
11		102	94	99	99	98	100	100	101	98	96	98	98	92	94	93	94	96	98	101	108	108	103	104	103	98
12		99	101	104	101	98	99	101	103	102	100	92	91	90	93	93	94	98	96	100	105	106	107	105	102	99
13		105	102	105	98	99	101	102	102	102	99	92	90	92	97	99	101	101	102	102	105	107	104	104	102	101
14	Q	100	98	97	99	99	101	101	101	99	98	96	94	96	98	98	99	99	101	101	103	104	105	103	101	100
15		101	101	100	95	101	100	99	100	99	97	91	89	92	94	98	98	99	102	102	105	103	104	104	104	99
16		103	102	100	99	99	96	101	103	98	96	93	92	92	91	90	89	89	97	101	103	114	122	113	110	100
17		118	108	108	98	100	101	101	100	101	100	95	93	95	94	98	98	102	99	105	106	107	109	108	105	102
18		103	100	99	99	99	100	101	101	100	98	96	95	97	97	101	98	96	98	103	102	107	110	106	103	100
19		104	104	103	102	100	99	103	102	101	97	92	93	91	90	86	89	93	98	106	105	105	111	111	108	100
20		106	101	100	100	99	100	101	101	99	96	95	95	96	96	95	94	96	100	102	104	103	103	102	101	99
21		100	98	98	97	101	100	101	103	101	100	100	99	99	100	100	101	101	100	102	103	104	103	105	103	101
22		100	98	99	99	100	101	102	103	103	102	98	93	91	91	91	91	87	101	104	102	111	104	106	104	99
23	D	106	107	111	115	108	103	103	104	101	94	89	87	91	90	94	108	100	99	109	160	131	120	124	116	107
24		116	110	108	99	97	106	104	104	97	99	99	88	93	97	98	98	103	101	103	119	109	111	107	106	103
25		105	103	104	103	102	101	102	103	101	99	93	95	97	104	104	102	101	101	104	121	110	108	107	103	103
26		100	100	101	100	101	101	102	101	98	95	92	90	95	99	101	103	102	102	102	103	105	104	107	105	100
27		104	95	102	102	103																				

11 Hourly Means minus Monthly Means

11.1 All 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	-2	-1	0	2	5	5	4	2	0	-2	-2	-3	-1	0	-1	-2	-2	-3	-2	1	0	0	1	-1	14883
February	1	0	0	2	5	6	5	3	-1	-4	-4	-5	-3	-2	-2	-1	-1	1	1	-1	1	0	-1	-1	14880
March	3	1	0	6	6	4	0	-8	-11	-13	-11	-7	-3	0	2	3	3	6	2	0	3	4	4	5	14878
April	3	2	4	4	5	1	-3	-10	-19	-22	-19	-12	-3	2	3	8	10	9	8	7	6	6	7	4	14881
May	3	2	4	3	2	-1	-6	-14	-20	-23	-20	-13	-4	2	2	5	11	13	12	11	8	8	7	5	14887
June	4	4	4	4	1	-5	-10	-17	-22	-25	-20	-14	-6	2	7	9	11	15	17	14	11	8	5	4	14887
July	4	5	7	6	1	-5	-10	-16	-21	-25	-23	-16	-8	4	9	10	11	12	12	11	10	8	7	5	14887
August	6	4	4	5	2	-4	-10	-17	-23	-26	-21	-12	-3	3	6	8	10	10	11	11	10	10	7	6	14884
September	5	4	3	3	0	-1	-6	-12	-18	-18	-14	-7	-5	0	3	4	5	7	8	8	7	8	8	6	14880
October	2	2	4	5	8	8	4	-3	-11	-16	-15	-10	-4	1	1	0	1	3	1	3	4	5	5	3	14878
November	0	0	1	2	4	4	2	-2	-7	-10	-9	-5	-1	1	2	1	2	2	3	2	2	1	3	1	14882
December	-1	-1	1	1	4	5	3	1	-1	-3	-3	-2	2	2	1	-2	-2	-2	-3	0	1	0	-1	-1	14881
Winter	0	0	1	2	4	5	4	1	-2	-4	-5	-4	-1	0	0	-1	-1	0	0	0	1	0	1	0	14881
Equinox	4	2	2	5	5	3	-1	-8	-15	-17	-15	-9	-3	1	2	4	5	6	5	4	5	6	6	5	14879
Summer	4	4	5	4	2	-4	-9	-16	-21	-24	-21	-14	-5	2	6	8	11	13	13	12	10	9	7	5	14886
Year	3	2	3	4	4	1	-2	-8	-13	-15	-14	-9	-3	1	3	4	5	6	6	6	5	5	4	3	14882

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	-3	-3	-4	-5	-4	-3	0	0	-3	-6	-8	-8	-7	-3	-2	4	3	7	12	11	7	9	6	1769
February	1	-1	-4	-4	-3	-3	-3	0	0	-5	-10	-13	-14	-11	-6	-2	0	4	10	15	15	13	15	5	1773
March	6	4	0	1	1	3	5	7	3	-4	-14	-20	-19	-18	-6	-2	2	8	7	11	8	9	5	5	1775
April	0	3	6	8	9	10	11	10	5	-5	-15	-24	-25	-19	-12	-4	2	5	8	10	8	4	4	1	1777
May	3	4	11	17	20	21	20	16	6	-5	-17	-26	-27	-23	-17	-11	-5	-1	2	3	1	2	3	3	1778
June	5	5	12	17	19	19	20	18	10	-1	-14	-23	-24	-22	-18	-12	-9	-5	-3	-2	-2	3	2	4	1782
July	3	7	11	15	19	19	21	20	14	1	-13	-23	-27	-25	-19	-12	-6	-3	-2	-2	-1	-1	1	2	1785
August	4	5	8	15	19	21	20	15	5	-8	-20	-27	-27	-20	-12	-5	0	0	-1	0	2	3	3	3	1788
September	6	9	8	8	10	11	11	7	0	-9	-16	-21	-21	-15	-9	-3	-3	-1	1	2	6	5	7	6	1791
October	1	2	2	1	0	3	5	7	5	-3	-12	-18	-19	-15	-6	-4	1	8	9	9	7	6	5	4	1795
November	1	-1	-1	-2	-1	1	3	5	4	-1	-7	-10	-9	-6	-4	-2	-1	0	2	4	7	7	8	5	1798
December	2	0	0	-2	-3	-1	-1	0	-1	-4	-6	-8	-7	-5	-3	-3	3	3	3	7	8	8	8	3	1801
Winter	1	-1	-2	-3	-3	-2	-1	1	0	-3	-7	-10	-10	-7	-4	-2	1	3	5	10	10	9	10	5	1785
Equinox	3	4	4	4	5	7	8	8	3	-5	-14	-20	-21	-17	-8	-3	1	5	6	8	7	6	5	4	1785
Summer	4	5	11	16	19	20	20	17	9	-3	-16	-25	-26	-22	-16	-10	-5	-2	-1	-1	0	2	2	3	1783
Year	3	3	4	6	7	8	9	9	4	-4	-12	-18	-19	-16	-10	-5	-1	2	4	6	6	6	6	4	1784

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	-8	-7	-6	-4	-3	-2	-2	-1	-1	-1	-1	2	5	6	8	8	9	9	8	5	0	-5	-10	-10	49794
February	-11	-7	-7	-6	-4	-2	-2	-2	-2	-2	-1	2	7	10	12	13	14	10	9	3	-2	-7	-10	-14	49798
March	-15	-10	-12	-9	-6	-2	-1	0	-1	-2	-1	3	10	14	19	17	15	12	6	5	-3	-10	-15	-13	49801
April	-11	-6	-4	-2	-1	0	0	-1	-3	-4	-5	-2	4	9	11	14	14	12	10	3	-4	-8	-11	-13	49803
May	-6	-7	-3	-1	-2	-1	0	-1	-4	-7	-9	-6	0	4	8	10	11	11	8	5	1	-1	-4	-6	49803
June	-5	-5	-4	-3	-3	-1	-1	-2	-4	-5	-5	-2	2	4	7	10	9	9	7	6	3	-4	-7	-7	49806
July	-5	-2	0	0	-2	-3	-3	-4	-5	-7	-6	-3	1	5	8	10	10	9	6	4	1	-1	-4	-6	49810
August	-4	-3	-1	0	0	0	0	-2	-5	-7	-6	-3	3	6	7	8	8	6	3	2	0	-3	-3	-5	49811
September	-4	-4	-6	-4	-3	-1	0	-1	-2	-3	-3	0	3	8	8	7	4	4	4	1	0	-2	-3	-4	49813
October	-7	-6	-4	-4	-3	-2	-1	0	-1	-2	-1	0	5	9	10	8	8	6	3	2	-1	-5	-6	-7	49819
November	-6	-5	-5	-4	-2	-1	1	1	0	0	1	2	4	4	4	4	4	4	3	3	1	-2	-5	-5	49819
December	-5	-3	-3	-3	-3	-2	-1	-1	-1	-1	0	1	2	2	2	4	5	5	5	4	1	-1	-2	-3	49823
Winter	-7	-6	-5	-4	-3	-2	-1	-1	-1	-1	0	2	4	6	6	7	8	7	6	4	0	-4	-7	-8	49809
Equinox	-9	-7	-6	-5	-3	-1	0	0	-2	-3	-3	0	5	10	12	11	10	9	6	3	-2	-6	-9	-9	49809
Summer	-5	-4	-2	-1	-2	-1	-1	-2	-5	-6	-7	-4	1	5	7	9	10	9	6	4	1	-2	-4	-6	49808
Year	-7	-5	-4	-3	-3	-2	-1	-1	-3	-4	-3	0	4	7	9	9	9	8	6	4	0	-4	-7	-8	49808

11.2 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	-3	-3	-1	0	2	2	1	-2	-5	-5	-5	-3	1	3	3	2	2	1	1	1	1	2	1	1	14888
February	1	1	0	0	2	1	0	-3	-5	-4	-3	0	2	-1	-4	-3	0	1	2	3	0	4	5	2	14886
March	2	1	1	1	3	2	-1	-5	-10	-13	-11	-8	-4	-1	2	2	2	5	4	3	5	7	5	7	14883
April	3	2	2	4	5	5	1	-8	-15	-20	-18	-13	-7	-2	2	3	6	7	7	7	7	7	7	7	14882
May	3	4	6	7	3	-1	-5	-11	-18	-22	-22	-16	-6	0	4	6	7	9	9	10	9	10	8	8	14889
June	4	6	6	6	4	-1	-6	-14	-21	-25	-24	-15	-7	1	6	5	7	9	12	12	11	9	8	7	14888
July	4	5	7	7	5	0	-7	-14	-19	-24	-26	-18	-8	2	8	7	8	8	8	10	10	8	9	7	14888
August	7	6	5	5	0	-7	-13	-19	-23	-23	-17	-9	-1	5	5	5	6	9	11	12	10	9	8	9	14885
September	5	4	3	2	2	0	-4	-10	-13	-14	-11	-4	-4	-1	1	2	2	5	7	7	7	7	5	3	14882
October	1	1	2	3	5	5	2	-5	-12	-15	-12	-7	1	3	4	4	4	5	5	3	3	3	2	2	14883
November	-1	-1	0	2	3	4	2	-2	-7	-11	-10	-5	0	3	3	2	2	3	3	3	3	2	2	1	14884
December	-2	-3	-1	0	1	1	1	-1	-4	-4	-4	0	3	3	2	1	1	1	2	2	1	1	0	0	14884
Winter	-1	-1	0	0	2	2	1	-2	-5	-6	-5	-2	2	2	1	1	1	2	2	2	2	2	2	1	14885
Equinox	3	2	2	2	4	3	-1	-7	-13	-15	-13	-8	-4	0	2	3	4	5	6	5	5	6	5	5	14883
Summer	5	5	6	6	3	-2	-8	-14	-20	-24	-22	-14	-6	2	6	6	7	9	10	11	10	9	8	8	14888
Year	2	2	3	3	3	1	-3	-8	-13	-15	-13	-8	-3	1	3	3	4	5	6	6	6	6	5	4	14885

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	2	0	-1	-1	-1	1	3	5	4	0	-4	-7	-7	-4	-2	-2	-1	-1	2	4	4	4	3	1	1766
February	0	-1	1	2	2	5	6	4	-2	-7	-8	-8	-9	-8	-4	-4	-2	0	4	4	8	7	7	3	1770
March	4	4	5	6	6	8	10	10	7	-1	-11	-17	-19	-15	-9	-4	-2	-2	1	3	4	3	4	5	1772
April	4	4	7	8	6	11	15	14	9	0	-11	-20	-22	-18	-11	-5	1	2	2	1	0	0	1	0	1776
May	1	5	10	15	18	20	22	19	9	-3	-14	-21	-23	-20	-15	-9	-4	-3	-2	-2	-1	-1	-1	-1	1778
June	3	7	12	16	19	21	24	23	13	-2	-17	-26	-25	-20	-15	-10	-5	-4	-3	-2	-3	-2	-1	1	1782
July	1	5	12	16	21	24	24	22	16	5	-12	-26	-32	-29	-21	-11	-6	-3	-2	-2	-2	-1	1	2	1785
August	5	8	11	16	18	19	18	12	2	-12	-22	-27	-25	-17	-7	-1	1	-1	-2	-1	-1	1	3	3	1787
September	5	6	6	7	8	10	10	8	2	-4	-11	-17	-16	-12	-8	-5	-4	-4	-3	0	1	4	7	9	1791
October	3	2	1	1	2	4	7	10	7	-1	-9	-13	-11	-6	-3	-2	-2	-1	-1	2	2	2	2	2	1795
November	1	0	0	0	1	2	4	7	6	1	-5	-8	-8	-5	-3	-2	-1	-1	0	1	2	2	2	2	1797
December	1	0	-1	-1	0	1	2	2	0	-2	-4	-6	-5	-3	-2	-1	0	1	1	2	3	4	3	2	1799
Winter	1	0	0	0	1	2	4	5	2	-2	-5	-7	-7	-5	-3	-2	-1	0	2	3	4	4	4	2	1783
Equinox	5	4	5	6	6	9	11	11	7	-1	-10	-16	-18	-13	-8	-4	-2	-1	0	1	1	2	3	4	1783
Summer	2	6	11	15	19	21	22	19	10	-3	-16	-25	-26	-21	-15	-8	-4	-3	-2	-2	-2	-1	1	1	1783
Year	3	3	5	7	8	11	12	11	6	-2	-11	-16	-17	-13	-8	-5	-2	-1	0	1	1	2	2	3	1783

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	-2	-2	-1	-1	-1	0	0	0	-1	-2	-1	1	2	2	1	1	1	1	2	1	1	-1	-1	-1	49792
February	-1	-1	-1	0	0	0	-1	-3	-4	-4	-2	-1	0	2	4	5	4	3	3	2	3	-1	-3	-3	49798
March	-3	-2	-1	0	1	1	0	-1	-3	-6	-6	-3	0	2	5	4	3	3	4	4	3	0	-2	-4	49800
April	-3	-2	-1	-1	-1	1	1	0	-3	-7	-8	-7	-3	2	4	5	6	5	4	2	2	1	1	1	49803
May	2	4	5	4	2	2	1	-2	-6	-9	-11	-9	-5	-3	-1	2	5	6	5	3	2	1	2	1	49802
June	0	1	0	0	0	2	1	-4	-6	-7	-7	-4	-1	1	3	4	3	3	3	3	2	1	1	1	49806
July	-2	0	1	2	2	0	-1	-3	-5	-8	-8	-3	0	0	4	6	6	6	4	2	1	0	-1	-2	49809
August	-1	1	3	3	2	2	1	-2	-5	-6	-7	-3	1	5	5	3	1	0	0	0	0	0	-1	-1	49812
September	0	0	0	1	1	1	1	0	-2	-4	-5	-4	-3	-1	1	1	1	2	2	2	2	2	1	0	49814
October	-1	0	0	0	0	1	2	1	-1	-3	-2	-1	1	1	1	0	0	1	1	1	1	1	1	0	49819
November	-1	-1	-1	-1	0	0	0	0	-1	-2	-1	0	2	2	1	1	1	1	1	1	0	0	-1	-1	49820
December	-1	-1	-1	0	0	0	0	-1	-1	-1	0	1	1	1	1	1	1	1	1	1	0	0	-1	-1	49822
Winter	-1	-1	-1	-1	0	0	0	-1	-2	-2	-1	0	1	2	2	2	2	2	2	2	1	1	-1	-1	49808
Equinox	-2	-1	0	0	0	1	1	0	-2	-5	-5	-4	-1	1	2	3	3	2	2	2	2	1	0	-1	49809
Summer	0	1	2	2	1	2	1	-3	-6	-8	-8	-5	-1	1	3	4	4	3	3	2	1	1	0	0	49807
Year	-1	0	0	1	1	1	1	-1	-3	-5	-5	-3	0	1	2	3	3	2	2	2	1	0	0	-1	49808

11.3 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	-2	-3	2	4	7	9	11	7	-1	-6	-1	-7	0	-2	-4	-6	-2	-3	1	2	-1	-3	-1	-2	14877
February	3	2	-1	2	6	9	9	11	6	4	3	-7	-1	-3	5	7	-8	1	-9	-3	-5	-4	-11	-13	14876
March	6	6	-4	18	12	-1	-3	-15	-13	-11	-14	-7	1	6	9	15	8	15	-1	-9	-4	-8	-7	1	14868
April	3	5	11	10	11	-2	-8	-12	-24	-22	-15	-6	0	0	2	15	19	3	2	3	-3	2	7	0	14876
May	9	1	5	5	5	1	-5	-19	-23	-27	-22	-10	-3	4	1	5	17	17	12	8	4	5	5	6	14885
June	1	7	3	2	-1	-8	-12	-19	-25	-24	-18	-12	-6	3	6	11	13	22	28	18	12	7	-2	-8	14888
July	8	6	9	3	-5	-10	-14	-19	-23	-26	-23	-19	-5	6	15	12	19	23	14	10	9	6	2	2	14886
August	9	5	3	9	5	-4	-4	-12	-19	-26	-22	-15	-8	0	1	11	14	12	13	10	11	11	-3	-2	14882
September	10	6	4	10	-6	0	-4	-17	-23	-21	-16	-5	-7	0	4	6	7	10	10	7	4	9	7	3	14876
October	8	5	10	12	15	13	6	3	-10	-17	-19	-15	-9	3	-1	-8	-7	5	-5	3	5	5	2	-2	14874
November	2	1	1	5	10	8	3	-2	-4	-6	-8	-6	-2	-4	-1	-4	-3	-1	3	3	1	1	3	3	14877
December	5	5	9	5	13	13	9	2	0	-2	-11	-9	0	2	0	-6	-9	-6	-9	-1	-1	-1	-3	-5	14877
Winter	2	1	3	4	9	10	8	5	0	-3	-4	-7	-1	-2	0	-2	-6	-2	-4	0	-2	-2	-3	-4	14877
Equinox	7	6	5	13	8	3	-2	-10	-18	-18	-16	-8	-4	2	4	7	7	8	2	1	0	2	2	1	14873
Summer	7	5	5	4	1	-5	-9	-17	-22	-26	-21	-14	-6	3	6	10	16	18	17	12	9	7	1	0	14885
Year	5	4	4	7	6	2	-1	-8	-13	-15	-14	-10	-3	1	3	5	6	8	5	4	3	3	0	-1	14879

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	-7	-9	-5	-8	-6	-8	-5	-6	-9	-11	-10	-10	-12	-6	-2	8	12	12	19	18	12	21	11	1771
February	13	5	-7	-10	-8	-12	-11	-7	-3	-8	-21	-21	-25	-18	-13	5	20	23	28	21	21	40	14	14	1780
March	9	10	2	-7	-9	-10	-7	1	-5	-10	-20	-26	-24	-22	-7	2	8	18	11	25	18	25	7	11	1780
April	6	6	5	11	9	7	7	6	0	-15	-19	-28	-31	-24	-17	4	16	8	28	20	11	7	-4	-11	1780
May	4	2	6	15	22	21	21	16	5	-4	-16	-27	-28	-25	-18	-11	-1	3	4	9	1	-1	0	2	1778
June	15	11	15	15	14	13	15	13	5	-8	-21	-29	-31	-29	-22	-15	-12	-4	7	-1	-1	19	11	21	1781
July	6	7	8	8	14	12	21	21	16	0	-12	-22	-31	-23	-18	-12	-7	0	2	3	7	2	-2	1	1786
August	3	7	10	20	20	18	15	13	2	-13	-24	-33	-31	-25	-18	-10	3	6	4	1	11	17	8	-4	1791
September	13	10	-1	0	6	9	11	9	-3	-15	-24	-29	-30	-20	-10	5	3	16	17	12	9	1	5	6	1792
October	-7	-6	-3	-4	-3	-2	-3	0	-1	-11	-22	-29	-30	-26	3	-3	15	47	32	27	18	11	2	-4	1799
November	-1	-4	-4	-9	-4	-4	1	0	1	-4	-8	-9	-10	-10	-9	-5	-1	3	6	15	13	18	15	10	1799
December	0	-1	-3	-9	-15	-7	-8	-7	-6	-10	-11	-13	-13	-9	-5	-1	24	12	8	17	19	15	21	4	1803
Winter	3	-1	-6	-8	-9	-7	-7	-5	-3	-8	-13	-13	-15	-14	-9	-5	9	12	12	20	18	16	24	10	1788
Equinox	5	5	1	0	1	1	2	4	-2	-13	-21	-28	-29	-23	-8	2	10	22	22	21	14	11	2	0	1788
Summer	7	7	10	14	18	16	18	15	7	-6	-18	-28	-30	-26	-19	-12	-4	1	4	3	4	9	4	5	1784
Year	5	3	1	2	3	3	4	5	1	-9	-17	-23	-25	-21	-12	-5	5	12	13	14	12	12	10	5	1787

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	-7	-8	-13	-8	-5	-3	-4	-2	-2	1	2	5	11	12	16	18	18	15	10	10	-5	-15	-28	-20	49792
February	-25	-14	-15	-20	-10	-6	-3	-2	-2	0	6	15	17	16	30	43	29	21	13	2	-13	-29	-51	-49794	
March	-36	-23	-39	-32	-27	-11	-5	5	10	10	12	16	29	33	40	48	42	37	5	3	-12	-32	-44	-30	49794
April	-30	-14	-8	-5	-3	-4	-6	-4	-5	-2	-1	5	16	24	23	33	27	25	21	4	-13	-19	-25	-39	49802
May	-5	-12	-15	-15	-12	-8	-4	-4	-5	-7	-9	-6	1	8	15	21	24	21	15	8	0	-1	-2	-6	49804
June	-10	-1	0	-6	-10	-7	-2	-1	0	-1	2	9	12	16	19	15	17	14	7	5	-23	-31	-24	-49803	
July	-10	-5	-3	-4	-11	-10	-7	-7	-6	-3	-3	-1	6	17	17	20	21	18	10	8	-3	-8	-13	-23	49811
August	-18	-11	-6	-4	-6	-7	-4	-5	-6	-7	-4	1	13	15	17	22	27	21	7	4	-3	-19	-13	-15	49810
September	-8	-16	-30	-24	-21	-12	-4	-2	-1	-1	2	10	17	30	27	23	16	15	8	-5	-6	-10	-6	-2	49811
October	-12	-13	-8	-6	-6	-6	-4	-3	-3	-3	-1	6	17	34	36	25	26	14	-8	-6	-17	-23	-20	-18	49819
November	-19	-20	-22	-18	-10	-5	1	3	4	3	5	9	10	11	12	12	14	13	9	9	0	-8	-7	-7	49817
December	-12	-10	-10	-11	-12	-8	-4	-2	-1	0	3	8	8	8	8	11	16	10	9	8	2	-2	-9	-12	49822
Winter	-16	-13	-15	-14	-9	-5	-2	-1	0	1	2	7	11	12	13	18	23	17	12	10	0	-10	-18	-22	49806
Equinox	-22	-16	-21	-17	-14	-8	-5	-1	1	1	3	9	20	30	32	32	28	23	7	-1	-12	-21	-24	-22	49806
Summer	-11	-7	-6	-7	-10	-8	-4	-4	-4	-4	-4	-1	7	13	16	21	22	19	11	7	0	-13	-15	-17	49807
Year	-16	-12	-14	-13	-11	-7	-4	-2	-1	-1	0	5	13	19	20	23	24	20	10	5	-4	-15	-19	-21	49807

12 Monthly and Annual Means

All days

	Z	H	D	F	X	Y	I
January	49794	14987	6° 46.6'	52000	14883	1769	73° 14.9'
February	49798	14985	6° 47.8'	52004	14880	1773	73° 15.1'
March	49801	14983	6° 48.2'	52006	14878	1775	73° 15.3'
April	49803	14987	6° 48.7'	52009	14881	1777	73° 15.1'
May	49803	14993	6° 48.7'	52011	14887	1778	73° 14.7'
June	49806	14993	6° 49.6'	52014	14887	1782	73° 14.8'
July	49810	14994	6° 50.3'	52018	14887	1785	73° 14.8'
August	49811	14991	6° 50.9'	52018	14884	1788	73° 15.0'
September	49813	14988	6° 51.9'	52019	14880	1791	73° 15.3'
October	49819	14986	6° 52.8'	52024	14878	1795	73° 15.5'
November	49819	14990	6° 53.3'	52026	14882	1798	73° 15.3'
December	49823	14990	6° 53.9'	52029	14881	1801	73° 15.3'
Winter	49809	14988	6° 50.4'	52015	14881	1785	73° 15.2'
Equinox	49809	14986	6° 50.4'	52015	14879	1785	73° 15.3'
Summer	49808	14993	6° 49.9'	52015	14886	1783	73° 14.8'
Year	49808	14989	6° 50.2'	52015	14882	1784	73° 15.1'

5 Quiet days

	Z	H	D	F	X	Y	I
January	49792	14993	6° 45.8'	52000	14888	1766	73° 14.5'
February	49798	14991	6° 46.9'	52005	14886	1770	73° 14.8'
March	49800	14989	6° 47.4'	52007	14883	1772	73° 15.0'
April	49803	14988	6° 48.3'	52010	14882	1776	73° 15.1'
May	49802	14995	6° 48.6'	52010	14889	1778	73° 14.6'
June	49806	14995	6° 49.5'	52014	14888	1782	73° 14.7'
July	49809	14995	6° 50.1'	52017	14888	1785	73° 14.8'
August	49812	14992	6° 50.8'	52019	14885	1787	73° 15.0'
September	49814	14989	6° 51.7'	52021	14882	1791	73° 15.2'
October	49819	14991	6° 52.6'	52025	14883	1795	73° 15.2'
November	49820	14992	6° 53.0'	52027	14884	1797	73° 15.1'
December	49822	14992	6° 53.5'	52029	14884	1799	73° 15.2'
Winter	49808	14992	6° 49.8'	52015	14885	1783	73° 14.9'
Equinox	49809	14989	6° 49.9'	52015	14883	1783	73° 15.1'
Summer	49807	14994	6° 49.7'	52015	14888	1783	73° 14.8'
Year	49808	14992	6° 49.8'	52015	14885	1783	73° 14.9'

5 Disturbed days

	Z	H	D	F	X	Y	I
January	49792	14982	6° 47.3'	51998	14877	1771	73° 15.2'
February	49794	14982	6° 49.3'	52000	14876	1780	73° 15.3'
March	49794	14974	6° 49.6'	51996	14868	1780	73° 15.8'
April	49802	14982	6° 49.4'	52007	14876	1780	73° 15.4'
May	49804	14991	6° 48.7'	52011	14885	1778	73° 14.9'
June	49803	14994	6° 49.2'	52011	14888	1781	73° 14.7'
July	49811	14992	6° 50.6'	52018	14886	1786	73° 14.9'
August	49810	14990	6° 51.6'	52017	14882	1791	73° 15.1'
September	49811	14984	6° 52.2'	52015	14876	1792	73° 15.5'
October	49819	14982	6° 53.7'	52023	14874	1799	73° 15.7'
November	49817	14986	6° 53.7'	52022	14877	1799	73° 15.5'
December	49822	14985	6° 54.5'	52027	14877	1803	73° 15.6'
Winter	49806	14984	6° 51.2'	52012	14877	1788	73° 15.4'
Equinox	49806	14981	6° 51.2'	52011	14873	1788	73° 15.6'
Summer	49807	14992	6° 50.0'	52014	14885	1784	73° 14.9'
Year	49807	14985	6° 50.8'	52012	14879	1787	73° 15.3'

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

13.1 H-Component

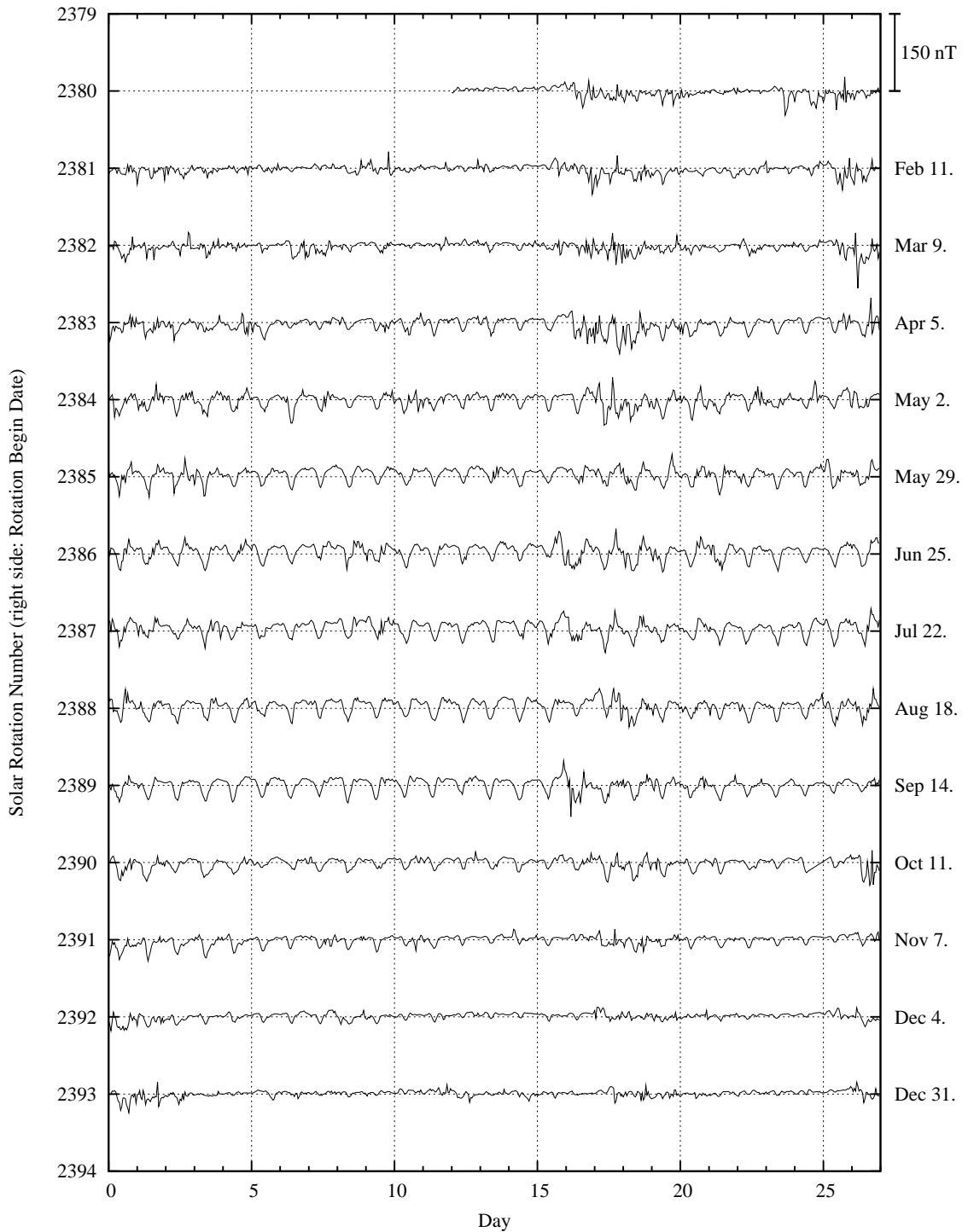


Figure 3: Hourly means of H sequenced in Bartels' solar rotation cycles.

13.2 D-Component

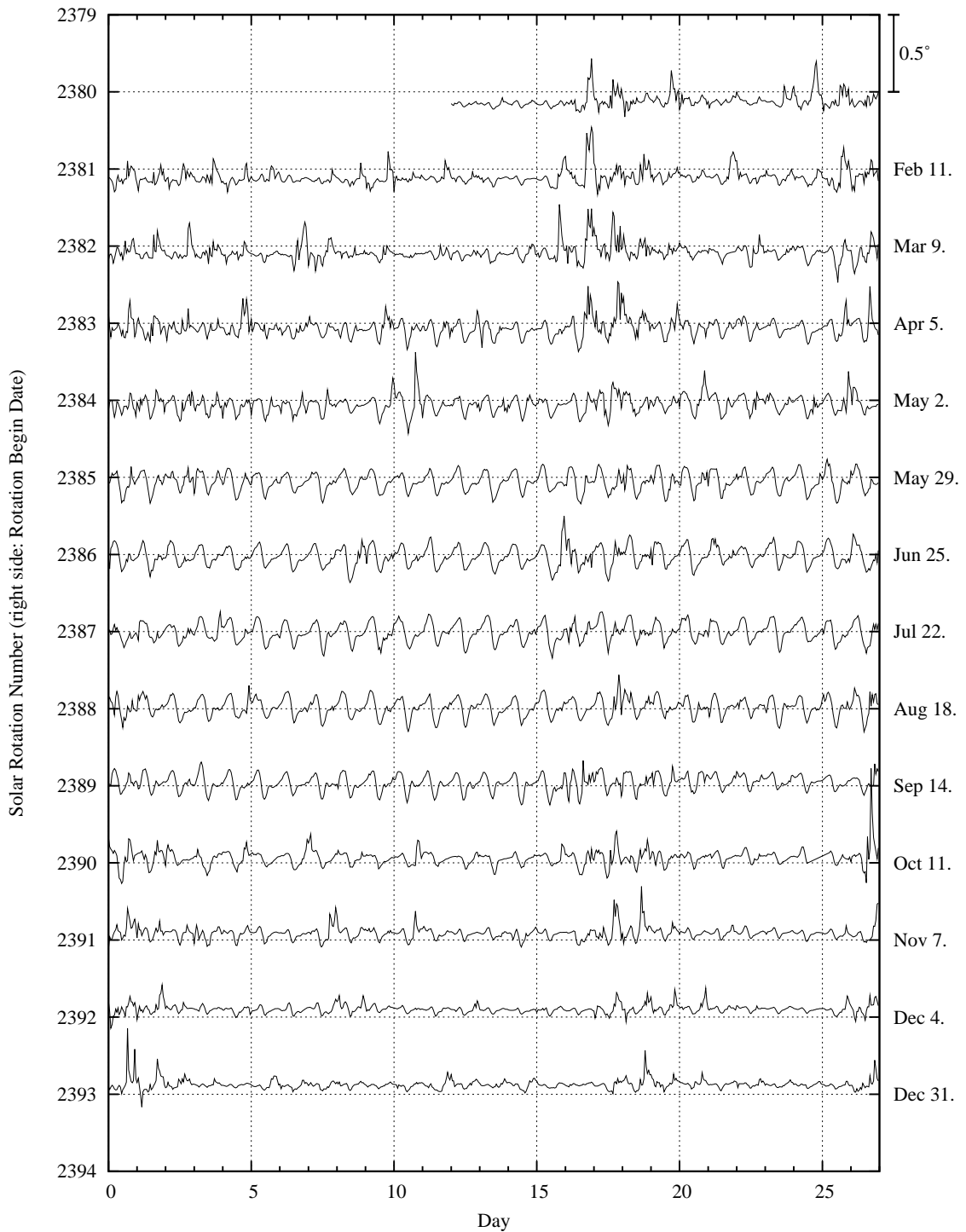


Figure 4: Hourly means of D sequenced in Bartels' solar rotation cycles.

13.3 Z-Component

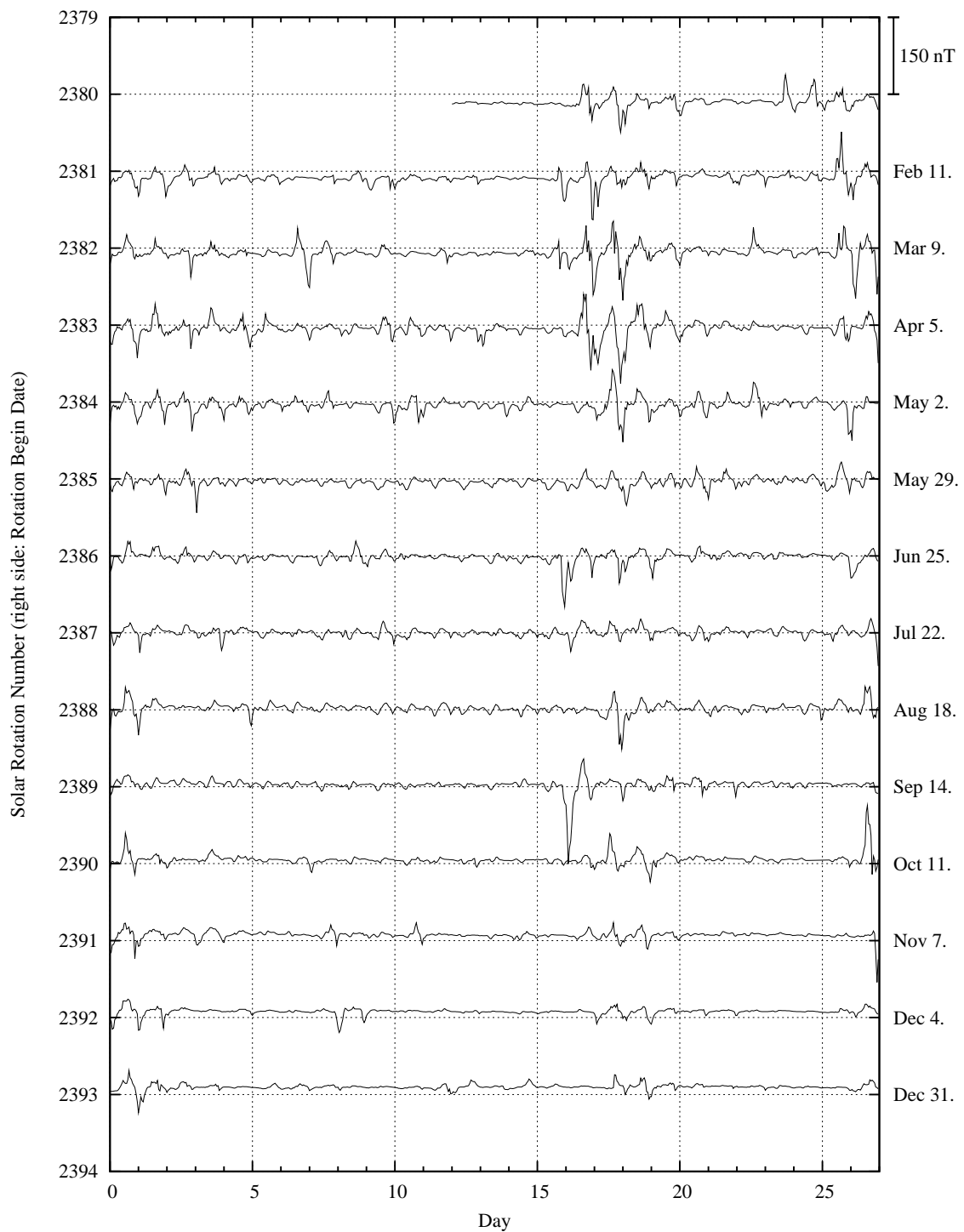


Figure 5: Hourly means of Z sequenced in Bartels' solar rotation cycles.

14 K-Indices

14.1 Monthly Tables of K-Indices

January				February				March											
Day	K			Ak	Day	K			Ak	Day	K			Ak					
1	1	1	0	1	2	1	3	2	2	2	1	3	5	5	19				
2	0	0	0	0	0	1	2	2	2	3	3	4	3	16					
3	0	0	0	0	0	0	1	2	1	3	2	2	3	15					
4	0	0	0	0	1	1	1	2	2	4	2	2	2	9					
5	1	2	3	3	3	3	5	4	18	5	1	1	0	2					
6	3	3	3	2	3	4	4	3	17	6	0	0	1	1	0	2	3	2	4
7	3	3	2	2	2	1	2	3	10	7	3	2	0	0	0	2	2	3	6
8	2	2	2	2	2	4	4	3	13	8	3	1	1	1	1	2	2	3	7
9	3	2	2	1	1	1	1	2	6	9	1	0	0	1	2	1	2	2	4
10	2	0	0	1	1	2	1	2	4	10	0	2	2	3	3	5	4	4	18
11	2	0	0	1	0	0	2	0	2	11	3	3	2	3	3	4	3	3	16
12	0	0	0	1	2	3	2	3	6	12	2	2	2	2	3	2	4	3	12
13	3	2	1	1	2	3	4	3	12	13	2	1	3	2	4	4	3	1	13
14	3	2	3	4	3	4	4	3	19	14	2	1	2	2	3	2	4	4	13
15	2	2	2	2	3	2	2	2	8	15	2	2	2	3	3	3	3	2	11
16	2	2	3	2	2	3	3	2	10	16	2	2	2	2	2	3	0	7	7
17	3	2	1	2	3	2	3	4	12	17	0	1	2	2	2	0	1	2	4
18	3	3	3	2	2	3	3	2	12	18	1	1	1	2	4	4	4	4	16
19	2	1	2	3	3	5	2	2	14	19	3	2	3	2	3	3	2	12	12
20	1	2	1	1	2	1	3	2	6	20	1	2	1	2	1	2	0	1	4
21	1	1	1	2	2	2	2	3	8	21	1	1	2	2	2	3	3	1	8
22	1	1	0	0	1	1	1	0	2	22	1	0	1	1	1	1	1	0	2
23	0	0	1	2	1	1	3	2	5	23	0	1	1	2	1	3	2	2	6
24	0	1	0	1	2	2	3	2	5	24	1	0	1	1	1	1	2	3	5
25	3	3	2	1	1	1	4	2	10	25	2	0	1	1	0	1	0	0	2
26	3	1	2	1	1	2	1	3	7	26	0	1	1	1	1	1	2	2	4
27	1	1	0	0	0	2	3	2	4	27	2	1	1	1	2	3	5	3	13
28	1	1	1	1	0	2	3	4	4	28	3	3	2	3	2	5	5	5	25
29	1	2	1	1	1	0	0	0	2	29	4	2	3	3	3	6	4	4	27
30	1	1	0	0	1	0	0	0	1										
31	0	0	0	1	2	2	3	3	6										
Mean				7.4	Mean				10.3	Mean				10.5					

April				May				June											
Day	K			Ak	Day	K			Ak	Day	K			Ak					
1	2	2	1	1	1	1	1	0	4	1	2	1	2	2	2	3	2	1	7
2	0	0	0	0	0	0	0	1	0	2	1	2	1	2	3	2	2	1	7
3	1	0	0	1	1	1	0	0	2	3	1	1	0	2	2	3	2	2	6
4	0	1	1	1	3	4	4	3	12	4	2	1	1	1	2	1	0	1	4
5	1	1	2	3	3	5	3	4	17	5	1	0	1	2	1	2	1	0	3
6	3	3	3	3	3	2	3	3	14	6	0	2	2	3	2	2	2	2	7
7	3	2	2	2	2	4	3	3	13	7	1	1	3	3	3	3	3	12	12
8	2	1	1	3	3	2	3	3	10	8	3	1	1	2	4	3	1	2	10
9	2	2	3	3	3	2	3	3	12	9	2	1	1	1	1	0	2	1	4
10	3	2	2	2	3	2	3	3	11	10	1	0	0	1	2	2	2	0	3
11	3	1	1	2	3	2	0	1	7	11	1	1	1	2	2	1	0	1	4
12	3	2	2	3	3	2	3	3	12	12	0	0	1	1	1	2	2	1	3
13	1	1	2	3	3	4	2	1	10	13	1	1	1	1	1	2	1	0	3
14	1	1	0	1	1	0	0	0	2	14	1	1	1	2	3	1	1	0	5
15	0	0	0	1	3	2	2	3	6	15	0	1	0	1	2	1	1	1	3
16	3	1	2	3	4	3	5	3	18	16	1	2	1	3	3	2	2	1	8
17	3	2	1	2	2	2	1	0	6	17	1	0	0	1	0	1	0	0	1
18	1	2	2	2	2	2	1	2	6	18	0	1	1	2	3	1	0	1	4
19	2	1	2	1	1	2	2	3	7	19	2	1	1	3	3	3	3	1	10
20	2	1	1	1	1	2	2	1	5	20	2	1	2	2	3	3	3	3	11
21	1	1	0	1	1	2	1	0	3	21	3	3	2	3	3	2	1	12	12
22	0	0	0	2	1	2	3	2	5	22	2	2	2	2	3	4	3	2	12
23	3	3	3	4	4	4	3	4	21	23	2	1	0	2	3	2	3	2	8
24	3	3	3	3	3	2	2	3	13	24	3	1	2	3	3	1	2	10	10
25	2	2	2	2	3	2	3	2	9	25	2	2	1	1	2	2	1	2	6
26	2	1	1	1	2	4	3	3	10	26	1	1	1	2	1	2	1	1	4
27	2	1	1	2	2	3	1	1	6	27	1	0	0	1	2	1	1	2	3
28	1	1	2	2	3	4	3	3	12	28	2	2	2	3	4	2	3	13	13
29	2	2	2	1	2	1	2	1	6	29	2	2	2	2	3	3	2	2	9
30	0	1	1	1	2	3	4	1	8	30	3	1	1	3	3	4	4	1	14
31										31	1	1	2	4	3	3	3	2	12
Mean				8.9	Mean				7.8	Mean				7.2					

July

Day	K	Ak
1	1 1 1 2	3 1 0 0 4
2	2 0 1 1	1 0 1 0 2
3	0 1 1 1	2 2 1 0 3
4	1 1 0 1	2 2 1 1 4
5	1 1 2 2	4 3 2 3 11
6	1 1 1 1	1 0 1 0 2
7	1 1 1 1	0 1 0 1 2
8	0 0 0 1	1 1 1 2 2
9	0 1 1 1	2 1 1 1 3
10	1 0 0 2	2 2 1 2 4
11	2 1 2 3	3 2 1 3 9
12	3 4 3 3	4 2 3 2 16
13	1 2 3 3	3 4 3 3 14
14	2 2 2 2	3 3 2 2 9
15	2 2 2 2	2 2 2 2 7
16	2 1 1 2	1 2 2 2 6
17	3 1 1 2	1 1 1 0 5
18	1 1 1 1	1 1 0 1 3
19	0 0 0 1	1 1 0 1 2
20	1 0 0 1	1 0 1 1 2
21	2 1 1 2	2 2 1 2 6
22	1 1 2 3	5 3 3 3 15
23	3 3 2 3	4 3 3 3 16
24	3 2 2 2	2 2 2 1 8
25	0 1 1 1	1 0 0 0 2
26	1 1 1 2	2 2 2 1 5
27	0 1 0 1	2 1 2 4 6
28	2 2 2 2	2 2 1 1 6
29	0 0 1 1	1 2 1 2 3
30	2 2 1 2	1 2 1 1 5
31	0 1 1 2	2 2 1 1 4
Mean		6.0

August

Day	K	Ak
1	0 1 1 1	2 2 2 1 4
2	0 0 0 1	1 1 1 1 2
3	0 0 1 1	2 2 1 2 4
4	1 1 1 1	1 0 1 1 3
5	0 0 0 1	2 1 0 0 2
6	1 1 1 2	1 2 2 2 5
7	1 0 0 1	1 2 2 2 4
8	0 0 0 0	1 2 1 2 3
9	2 3 2 3	3 4 4 5 20
10	3 3 3 2	2 4 3 2 14
11	2 1 1 3	3 2 1 2 8
12	2 2 2 2	2 2 1 1 6
13	2 1 0 2	1 1 1 1 4
14	2 2 1 1	2 1 1 0 4
15	2 1 1 1	1 1 1 0 3
16	0 1 1 1	1 2 2 3 5
17	3 1 0 2	3 2 2 2 8
18	2 2 2 4	4 3 3 3 15
19	3 2 2 2	3 3 3 1 11
20	2 2 1 2	2 1 0 0 4
21	0 0 1 1	2 1 2 1 3
22	1 1 1 1	2 0 0 1 3
23	1 0 0 0	2 1 1 1 2
24	0 0 0 1	2 0 0 1 2
25	0 0 0 0	1 0 0 1 1
26	0 0 0 1	1 2 1 0 2
27	2 1 1 1	1 0 0 0 2
28	0 1 0 1	2 2 2 2 4
29	1 1 1 1	1 2 1 1 4
30	0 1 2 1	1 0 0 0 2
31	0 0 2 2	3 2 2 1 6
Mean		5.2

September

Day	K	Ak
1	1 0 1 1	2 1 1 0 3
2	0 0 1 1	1 1 1 1 2
3	0 2 2 3	2 3 3 3 10
4	5 5 3 3	3 4 3 3 25
5	2 2 1 2	3 2 2 3 9
6	3 1 2 2	3 2 3 2 10
7	3 1 2 2	3 2 4 1 11
8	1 2 3 3	2 3 3 2 11
9	1 2 1 1	1 0 0 3 4
10	1 0 1 1	1 2 2 1 4
11	0 0 0 0	0 1 1 2 2
12	0 0 0 0	0 0 0 0 0
13	0 0 0 0	0 0 0 1 0
14	0 0 1 1	1 2 4 4 9
15	3 2 3 3	4 4 3 2 16
16	1 2 2 2	2 4 2 2 9
17	3 1 0 1	0 0 0 0 3
18	1 2 2 3	2 2 1 1 7
19	0 1 1 1	1 2 3 1 5
20	1 1 0 0	0 1 0 0 1
21	0 0 0 1	1 1 1 2 2
22	3 1 0 0	0 1 0 0 3
23	2 0 1 1	1 0 1 1 3
24	0 0 1 2	1 1 0 0 2
25	0 0 0 1	1 1 3 3 5
26	1 1 0 1	1 1 0 0 2
27	0 0 0 1	1 2 2 2 3
28	0 0 1 1	2 1 0 0 2
29	0 1 1 1	1 0 0 1 2
30	0 0 1 0	2 2 1 3 4
Mean		5.6

October

Day	K	Ak
1	2 1 2 2	3 2 2 3 9
2	3 2 2 3	4 3 3 2 14
3	2 2 2 2	3 3 3 3 11
4	2 3 2 3	2 2 1 2 9
5	2 2 1 1	1 0 1 1 4
6	1 1 1 1	0 0 0 1 2
7	0 0 0 0	1 1 2 0 2
8	1 1 0 0	0 0 0 0 1
9	0 0 0 1	
10	0 2	1 1 0 3 5
11	2 1 3 3	5 7 4 4 35
12	4 2 2 2	3 3 2 3 13
13	3 1 2 2	1 2 3 2 8
14	0 0 1 1	1 1 2 1 3
15	3 2 2 2	1 1 2 2 7
16	2 0 0 0	0 0 1 1 2
17	0 0 0 0	1 0 0 0 0
18	0 0 0 0	0 0 1 0 0
19	1 0 0 2	2 3 3 3 8
20	2 1 1 0	1 1 2 2 4
21	2 1 1 1	1 0 1 1 3
22	0 0 0 1	1 3 3 2 5
23	1 1 1 0	1 1 1 1 3
24	0 1 1 0	0 0 0 0 1
25	0 0 0 0	0 1 1 1 1
26	0 2 1 1	1 1 0 1 3
27	1 0 0 0	0 0 0 0 0
28	0 0 2 2	1 1 3 1 5
29	2 3 3 3	3 4 3 3 16
30	3 2 2 2	2 5 3 3 15
31	2 2 2 1	1 1 3 2 7
Mean		6.4

November

Day	K	Ak
1	1 0 1 0	0 0 2 1 2
2	0 0 0 1	1 0 2 2 3
3	0 0 0 0	0 0 0 0 0
4	1 0 0 0	0 0 0 1 1
5	0 0 0 0	0 0 0 0 0
6	0 0 0 0	1 0 2 1 2
7	0 1 1 2	2 2 2 4 8
8	3 2 2 3	3 2 3 2 11
9	3 2 1 1	2 2 3 3 9
10	1 1 0 1	1 2 0 0 2
11	0 1 0 0	0 0 0 0 0
12	1 0 1 0	0 1 1 2 2
13	0 0 0 0	0 0 0 0 0
14	0 0 0 0	1 1 0 0 1
15	1 1 0 0	0 1 2 2 3
16	3 2 2 2	1 1 2 3 8
17	1 1 2 0	0 0 2 1 3
18	0 0 0 0	0 0 1 0 0
19	0 0 0 0	0 1 1 0 1
20	0 0 0 0	0 0 1 2 1
21	1 0 0 0	0 0 1 0 1
22	0 0 0 0	0 0 0 0 0
23	1 0 1 0	0 0 1 0 1
24	0 0 0 0	0 0 0 3 2
25	3 3 2 3	3 2 3 2 12
26	3 3 2 1	2 2 2 3 10
27	3 2 1 2	2 2 3 3 10
28	1 1 1 1	0 1 3 3 6
29	1 1 1 1	0 1 2 2 4
30	1 0 0 1	0 2 0 0 2
Mean		3.5

December

Day	K	Ak
1	0 0 0 0	0 0 0 0 0
2	0 0 0 0	0 0 0 0 0
3	0 1 0 1	1 1 2 2 3
4	1 3 2 2	2 3 2 2 9
5	1 1 1 2	2 5 2 5 16
6	3 3 2 2	2 4 3 2 13
7	2 1 2 2	3 3 2 1 8
8	0 1 0 1	1 2 2 0 3
9	0 0 0 0	1 1 0 0 1
10	0 0 0 0	1 2 2 2 3
11	2 2 1 1	1 2 2 1 5
12	1 0 0 1	0 1 1 1 2
13	1 0 0 0	0 0 1 0 1
14	1 0 0 0	0 0 0 0 0
15	0 1 0 0	0 1 1 2 2
16	0 0 1 1	2 1 3 3 6
17	2 1 1 0	1 2 1 1 4
18	0 0 0 0	0 0 2 1 1
19	0 0 0 1	1 2 1 2 3
20	0 0 0 0	1 1 0 0 1
21	0 1 0 1	0 0 0 0 1
22	0 0 0 0	0 3 3 2 5
23	2 1 2 2	1 3 4 4 12
24	2 1 2 2	1 2 3 2 7
25	0 0 0 1	2 1 3 1 4
26	1 0 0 0	1 0 2 1 2
27	2 0 0 0	1 0 1 1 2
28	1 0 0 0	0 0 1 1 1
29	0 0 0 0	0 0 0 1 0
30	0 0 0 0	0 0 1 1 1
31	2 3 2 3	2 3 3 3 12
Mean		4.1

14.2 K-Indices Sequenced in Bartels Solar Rotation Number

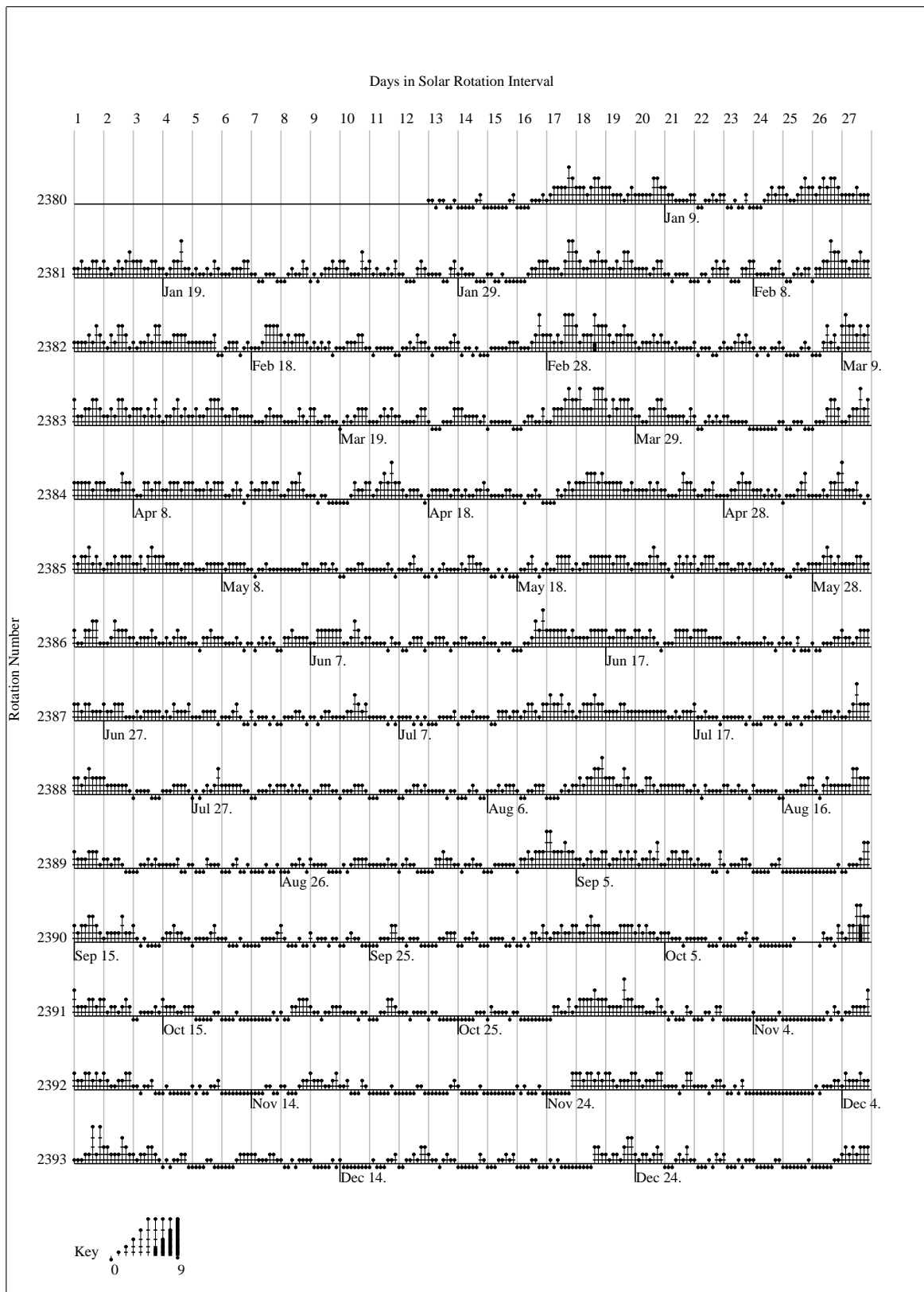


Figure 6: K-indices sequenced in Bartels solar rotation number

14.3 Ak-Indices

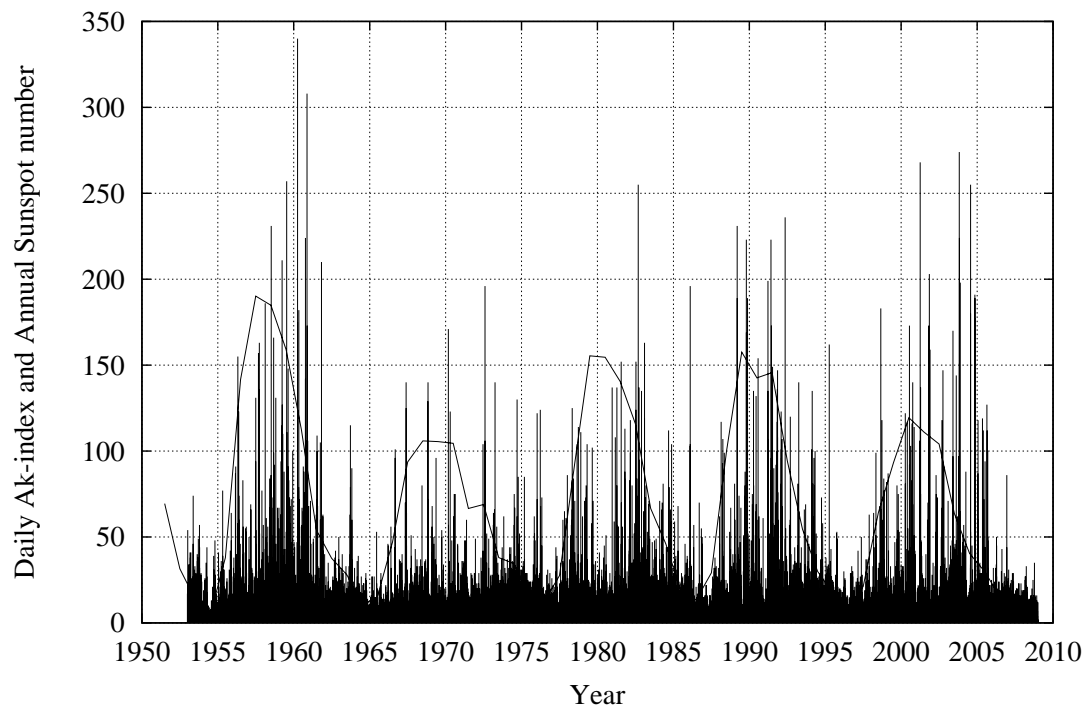


Figure 7: Daily Ak-indices (vertical lines) and sunspots (solid line)

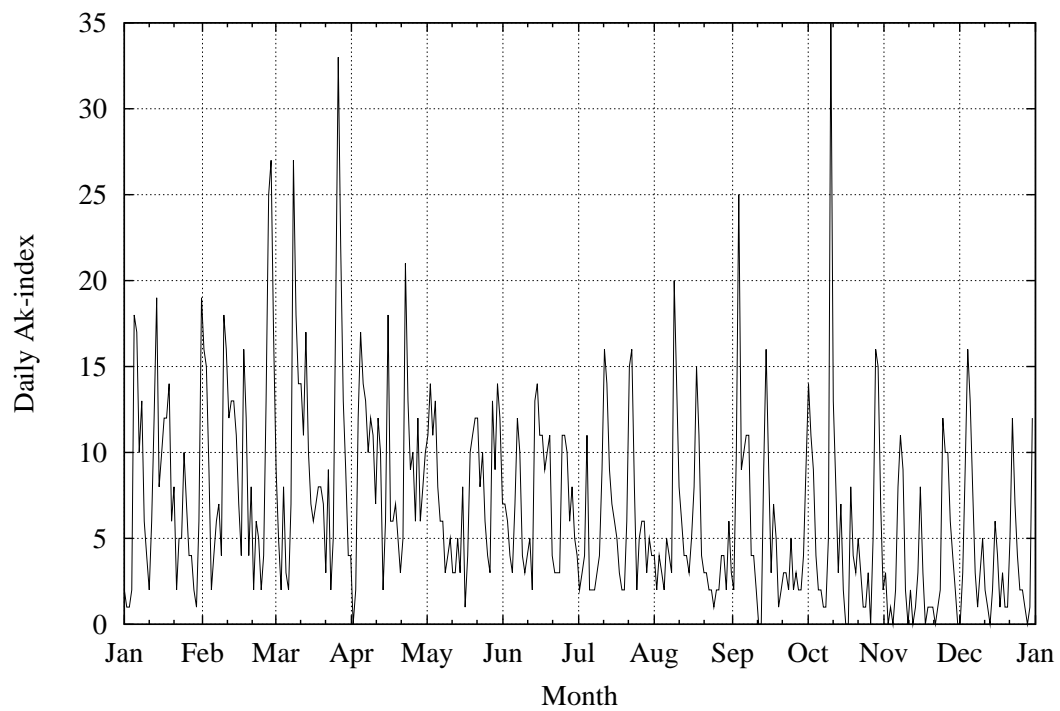


Figure 8: Daily Ak-indices

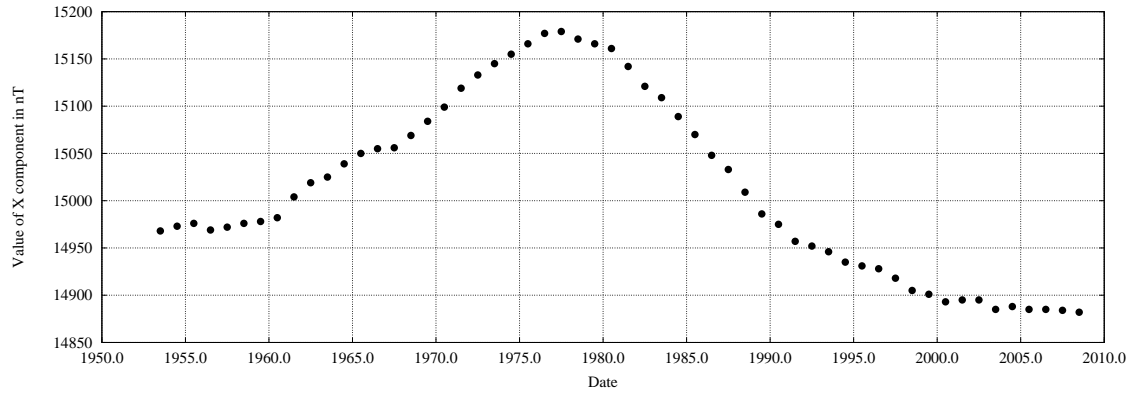
14.4 Table of Annual Ak-indices

m/M denotes sunspot minimum/maximum

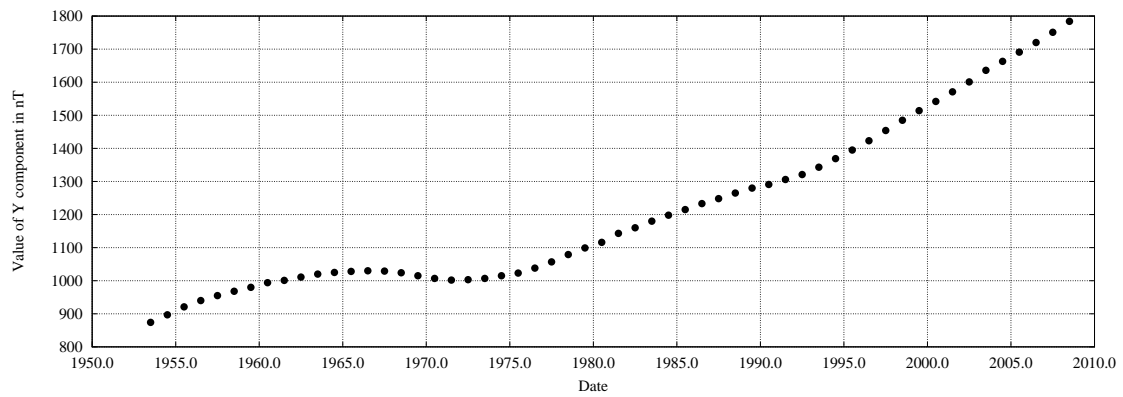
Year	Ak
1953	11
1954m	8
1955	9
1956	14
1957M	16
1958	18
1959	21
1960	22
1961	12
1962	10
1963	10
1964m	8
1965	6
1966	8
1967	10
1968M	11
1969	10
1970	10
1971	9
1972	10
1973	13
1974	15
1975	11
1976m	10
1977	9
1978	13
1979M	12
1980	9

Year	Ak
1981	13
1982	19
1983	15
1984	14
1985	10
1986m	10
1987	8
1988	11
1989M	16
1990	13
1991	21
1992	15
1993	13
1994	16
1995	11
1996m	9
1997	8
1998	12
1999	12
2000M	15
2001	14
2002	13
2003	22
2004	14
2005	14
2006	8
2007	7
2008m	7

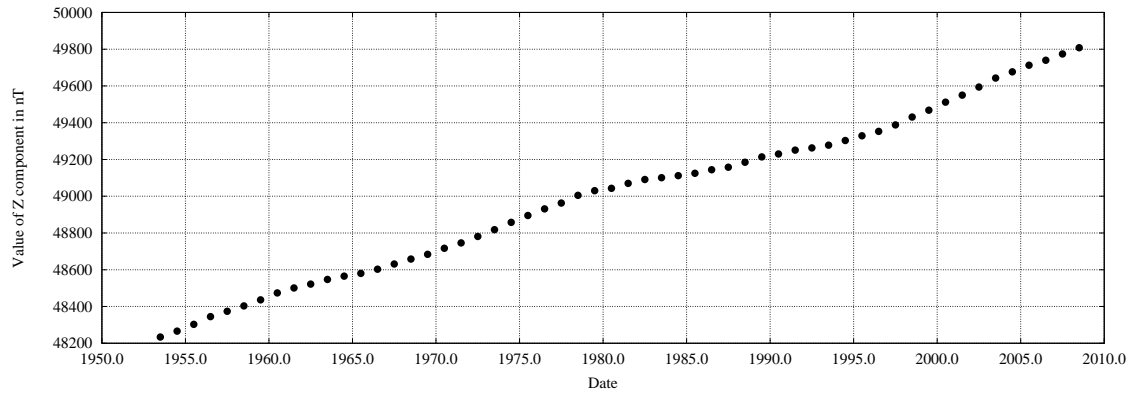
15 Annual Means



(a) Annual means for X component

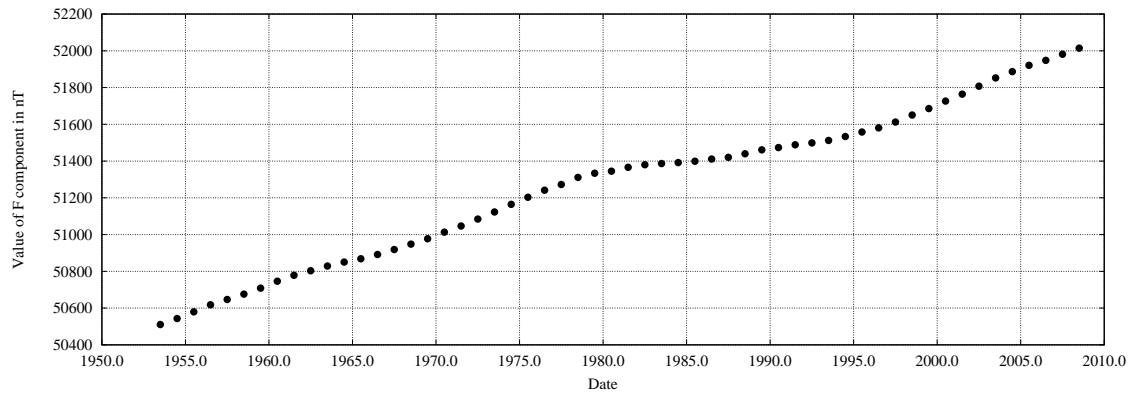


(b) Annual means for Y component

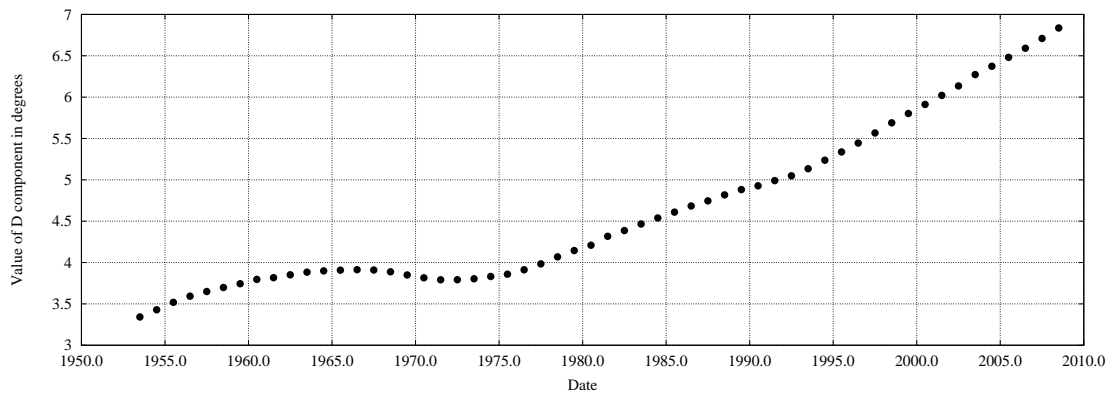


(c) Annual means for Z component

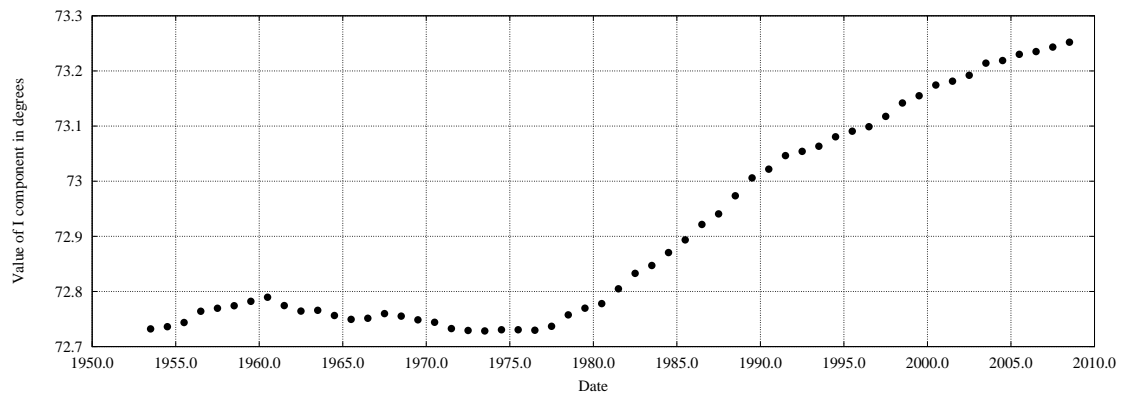
Figure 9: Figures of annual means of X, Y, and Z



(a) Annual means for F component



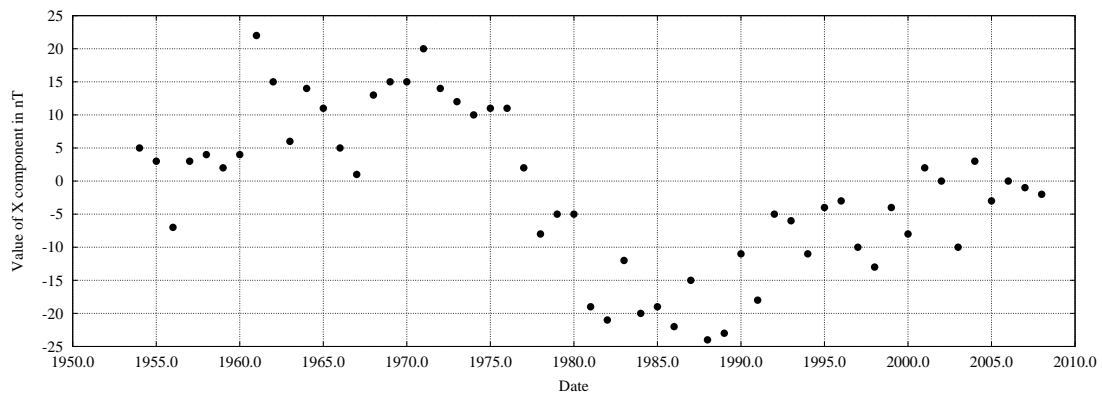
(b) Annual means for D component



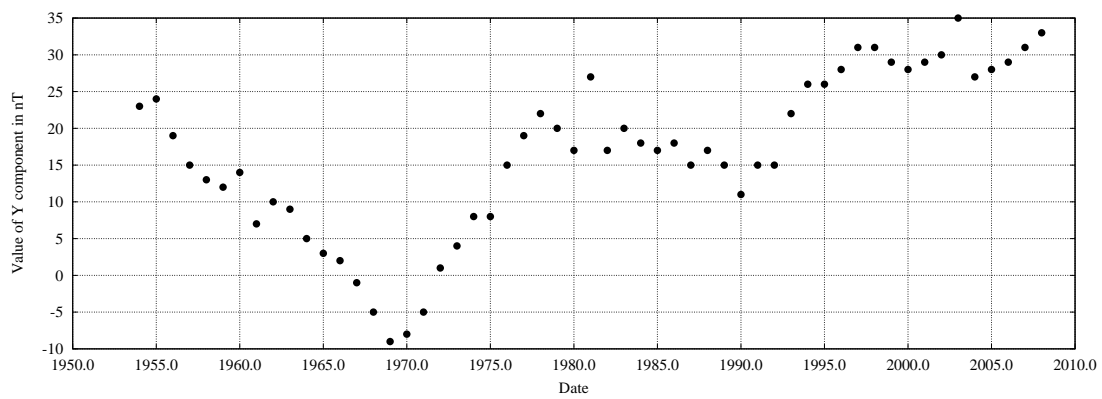
(c) Annual means for I component

Figure 10: Figures of annual means of F, D, and I

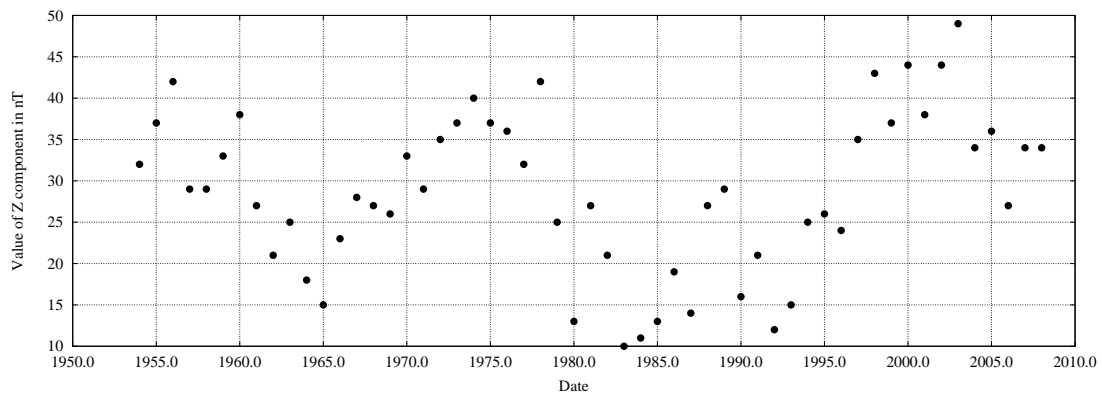
16 Secular Variation



(a) Annual change of X component

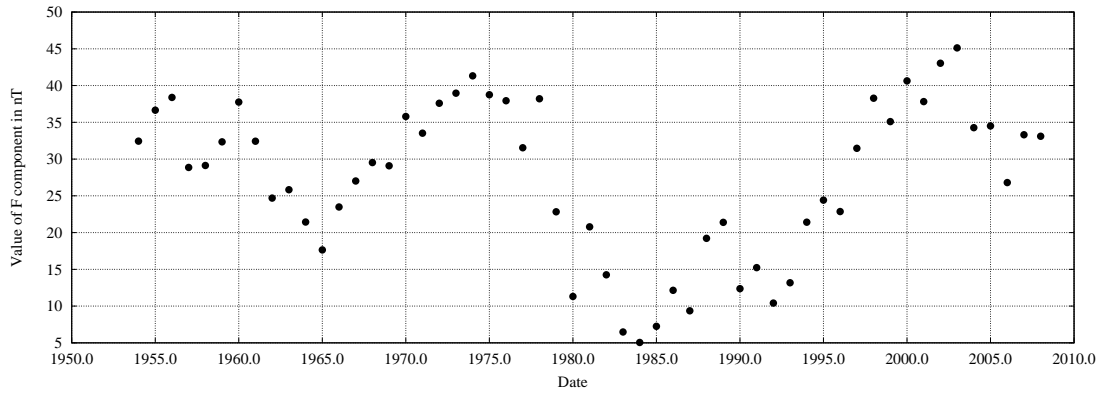


(b) Annual change of Y component

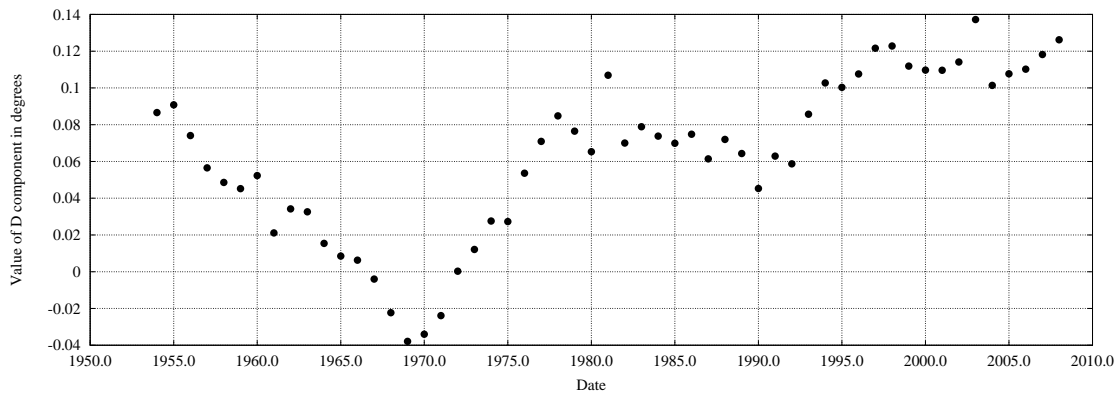


(c) Annual change of Z component

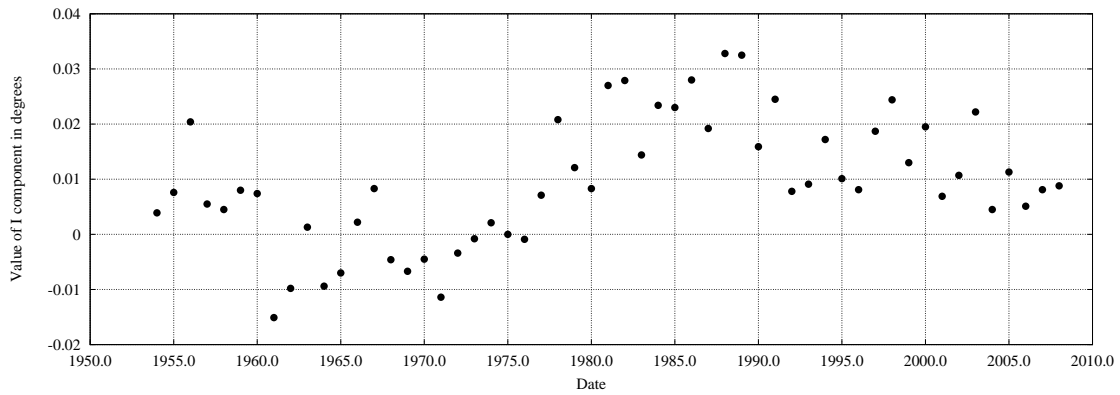
Figure 11: Annual change of components X, Y, and Z



(a) Annual change of F component



(b) Annual change of D component



(c) Annual change of I component

Figure 12: Annual change of components F, D, and I

17 Tables of Annual Means

17.1 All Days

Year	X	Y	Z	D	H	F	I
1953	14968	874	48234	3° 20.5'	14993	50511	72° 43.9'
1954	14973	897	48266	3° 25.7'	15000	50543	72° 44.2'
1955	14976	921	48303	3° 31.1'	15004	50580	72° 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° 54.6'	15091	50919	72° 45.6'
1968	15069	1024	48658	3° 53.3'	15104	50948	72° 45.3'
1969	15084	1015	48684	3° 51.0'	15118	50977	72° 44.9'
1970	15099	1007	48717	3° 48.9'	15133	51013	72° 44.6'
1971	15119	1002	48746	3° 47.5'	15152	51047	72° 44.0'
1972	15133	1003	48781	3° 47.5'	15166	51084	72° 43.8'
1973	15145	1007	48818	3° 48.2'	15178	51123	72° 43.7'
1974	15155	1015	48858	3° 49.9'	15189	51165	72° 43.8'
1975	15166	1023	48895	3° 51.5'	15200	51203	72° 43.8'
1976	15177	1038	48931	3° 54.8'	15212	51241	72° 43.8'
1977	15179	1057	48963	3° 59.0'	15216	51273	72° 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° 36.6'	15119	51399	72° 53.6'
1986	15048	1233	49144	4° 41.1'	15098	51411	72° 55.3'
1987	15033	1248	49158	4° 44.7'	15085	51420	72° 56.4'
1988	15009	1265	49185	4° 49.1'	15062	51440	72° 58.4'
1989	14986	1280	49214	4° 52.9'	15041	51461	73° 00.4'
1990	14975	1291	49230	4° 55.6'	15031	51473	73° 01.3'
1991	14957	1306	49251	4° 59.4'	15014	51489	73° 02.8'
1992	14952	1321	49263	5° 02.9'	15010	51499	73° 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° 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° 08.1'	14981	51807	73° 11.5'
2003	14885	1636	49643	6° 16.3'	14975	51852	73° 12.9'
2004	14888	1663	49677	6° 22.4'	14981	51887	73° 13.1'
2005	14885	1691	49713	6° 28.9'	14981	51921	73° 13.8'
2006	14885	1720	49740	6° 35.5'	14984	51948	73° 14.1'
2007	14884	1751	49774	6° 42.6'	14987	51981	73° 14.6'
2008	14882	1784	49808	6° 50.1'	14989	52014	73° 15.1'

17.2 Quiet Days

Year	X	Y	Z	D	H	F	I
1953	14975	872	48235	3° 20.0'	15000	50514	72° 43.5'
1954	14977	895	48266	3° 25.2'	15004	50544	72° 43.9'
1955	14980	919	48302	3° 30.6'	15008	50580	72° 44.4'
1956	14978	936	48343	3° 34.6'	15007	50619	72° 45.2'
1957	14978	951	48372	3° 38.0'	15008	50647	72° 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° 50.6'	15056	50805	72° 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'
1972	15139	1001	48780	3° 47.0'	15172	51085	72° 43.4'
1973	15151	1004	48819	3° 47.5'	15184	51126	72° 43.4'
1974	15162	1012	48859	3° 49.1'	15196	51167	72° 43.4'
1975	15171	1020	48896	3° 50.8'	15205	51206	72° 43.5'
1976	15182	1035	48930	3° 54.0'	15217	51242	72° 43.5'
1977	15184	1054	48963	3° 58.2'	15221	51274	72° 43.9'
1978	15178	1075	49003	4° 03.1'	15216	51311	72° 45.0'
1979	15171	1096	49028	4° 07.9'	15211	51333	72° 45.8'
1980	15163	1115	49042	4° 12.3'	15204	51345	72° 46.5'
1981	15148	1140	49067	4° 18.2'	15191	51365	72° 47.9'
1982	15128	1157	49090	4° 22.4'	15172	51381	72° 49.5'
1983	15115	1176	49101	4° 26.9'	15161	51388	72° 50.5'
1984	15095	1195	49113	4° 31.6'	15142	51394	72° 51.9'
1985	15076	1212	49125	4° 35.8'	15125	51401	72° 53.2'
1986	15055	1230	49144	4° 40.2'	15105	51413	72° 54.9'
1987	15037	1246	49158	4° 44.2'	15089	51422	72° 56.2'
1988	15014	1262	49182	4° 48.3'	15067	51438	72° 58.1'
1989	14995	1276	49213	4° 51.8'	15049	51463	72° 59.8'
1990	14982	1288	49227	4° 54.8'	15037	51472	73° 00.8'
1991	14965	1302	49248	4° 58.3'	15022	51488	73° 02.2'
1992	14959	1318	49261	5° 02.1'	15017	51499	73° 02.8'
1993	14952	1341	49277	5° 07.5'	15012	51513	73° 03.4'
1994	14944	1365	49304	5° 13.1'	15006	51537	73° 04.3'
1995	14937	1392	49328	5° 19.4'	15002	51559	73° 05.1'
1996	14934	1421	49353	5° 26.1'	15001	51583	73° 05.6'
1997	14923	1452	49388	5° 33.4'	14993	51614	73° 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° 21.6'	14986	51888	73° 12.8'
2005	14891	1689	49714	6° 28.3'	14986	51924	73° 13.5'
2006	14889	1718	49740	6° 34.9'	14988	51949	73° 13.9'
2007	14887	1749	49774	6° 42.0'	14989	51982	73° 14.4'
2008	14885	1783	49808	6° 49.8'	14991	52015	73° 14.9'

17.3 Disturbed Days

Year	X	Y	Z	D	H	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° 46.3'
1963	15014	1025	48543	3° 54.3'	15049	50822	72° 46.6'
1964	15035	1027	48564	3° 54.5'	15070	50848	72° 45.6'
1965	15044	1030	48580	3° 55.0'	15079	50866	72° 45.3'
1966	15046	1033	48602	3° 55.7'	15081	50888	72° 45.6'
1967	15042	1034	48630	3° 55.9'	15077	50914	72° 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	1011	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° 44.8'
1978	15158	1086	49006	4° 05.9'	15197	51308	72° 46.3'
1979	15158	1103	49031	4° 09.7'	15198	51332	72° 46.7'
1980	15153	1120	49046	4° 13.6'	15194	51346	72° 47.2'
1981	15133	1146	49073	4° 19.8'	15176	51366	72° 48.9'
1982	15106	1166	49089	4° 24.8'	15151	51374	72° 50.9'
1983	15099	1184	49099	4° 29.0'	15145	51382	72° 51.4'
1984	15078	1203	49108	4° 33.7'	15126	51385	72° 52.8'
1985	15061	1219	49124	4° 37.6'	15110	51395	72° 54.1'
1986	15037	1237	49141	4° 42.2'	15088	51405	72° 55.9'
1987	15027	1250	49161	4° 45.3'	15079	51422	72° 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° 42.6'	14967	51647	73° 09.3'
1999	14891	1517	49468	5° 49.0'	14968	51683	73° 09.9'
2000	14878	1547	49514	5° 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° 12.1'
2003	14866	1643	49641	6° 18.4'	14957	51845	73° 14.0'
2004	14875	1669	49675	6° 24.1'	14968	51881	73° 13.9'
2005	14879	1696	49711	6° 30.2'	14975	51918	73° 14.1'
2006	14878	1722	49738	6° 36.1'	14977	51944	73° 14.5'
2007	14880	1754	49773	6° 43.4'	14983	51979	73° 14.8'
2008	14879	1787	49807	6° 50.9'	14986	52013	73° 15.3'

18 Earth's Magnetic Field Maps of Finland 2009.0

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) 2009.0

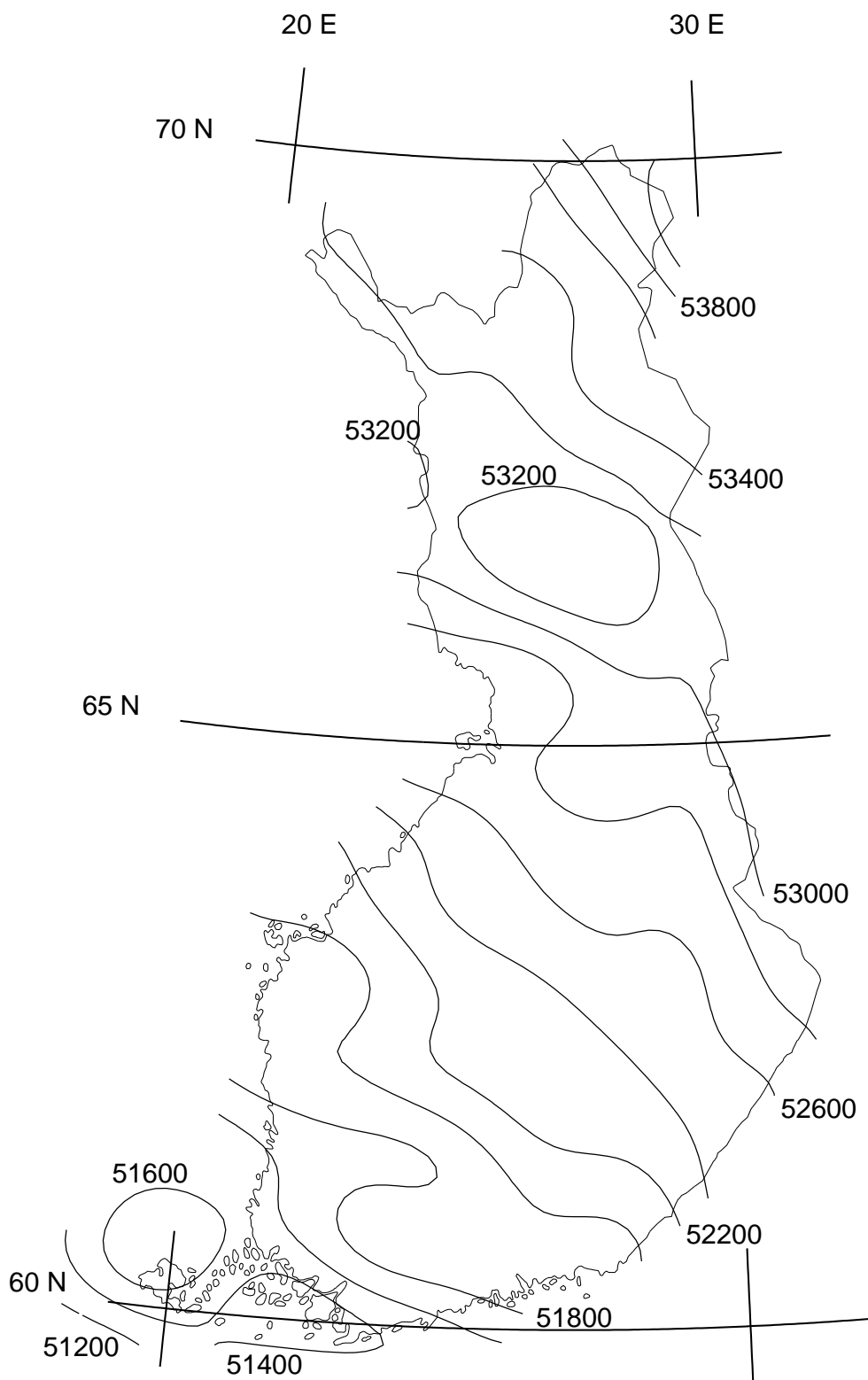


Figure 13: Total intensity F 2009.0 in nT

HORIZONTAL INTENSITY (H) 2009.0

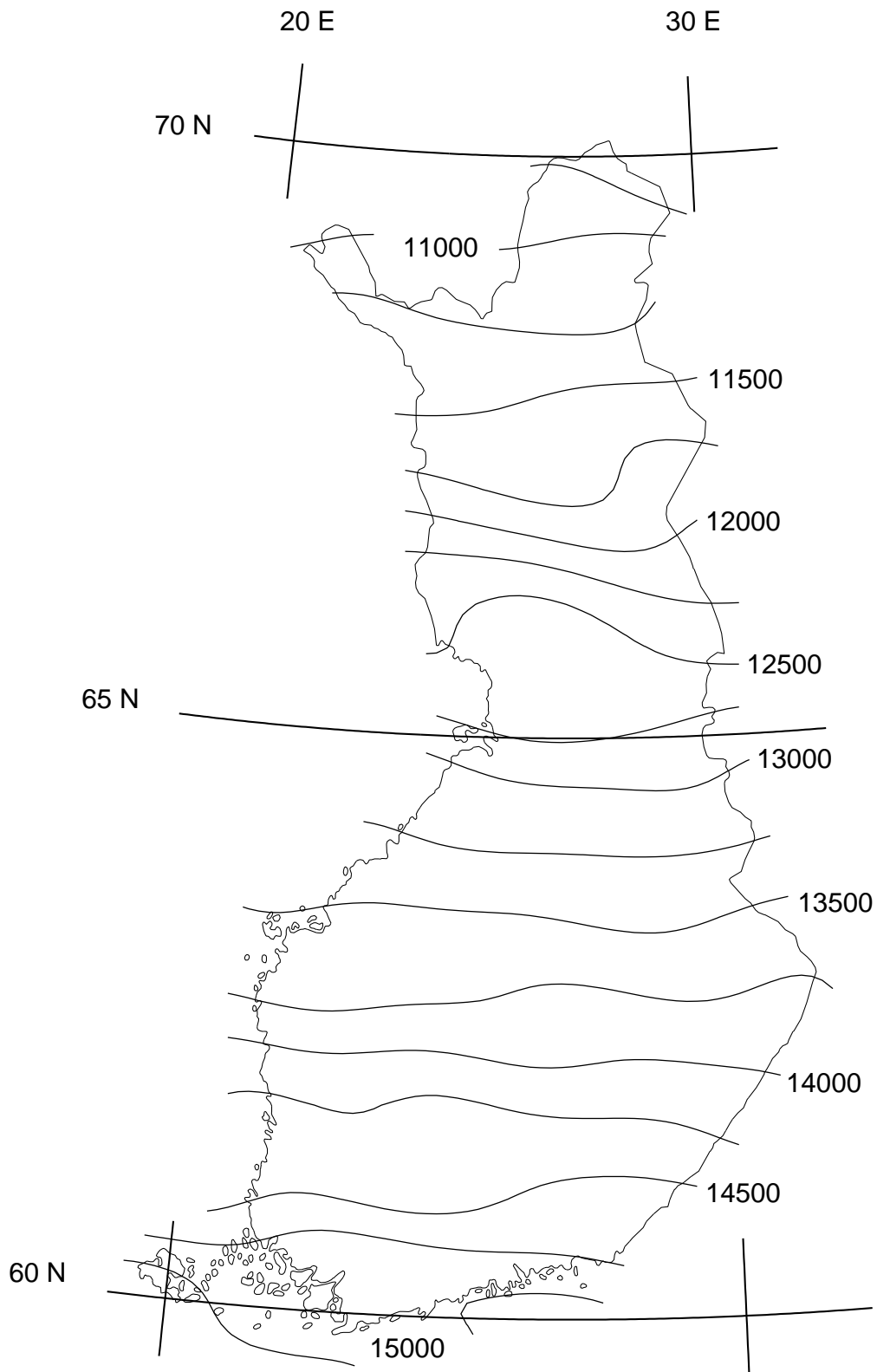


Figure 14: Horizontal intensity H 2009.0 in nT

DECLINATION (D) 2009.0

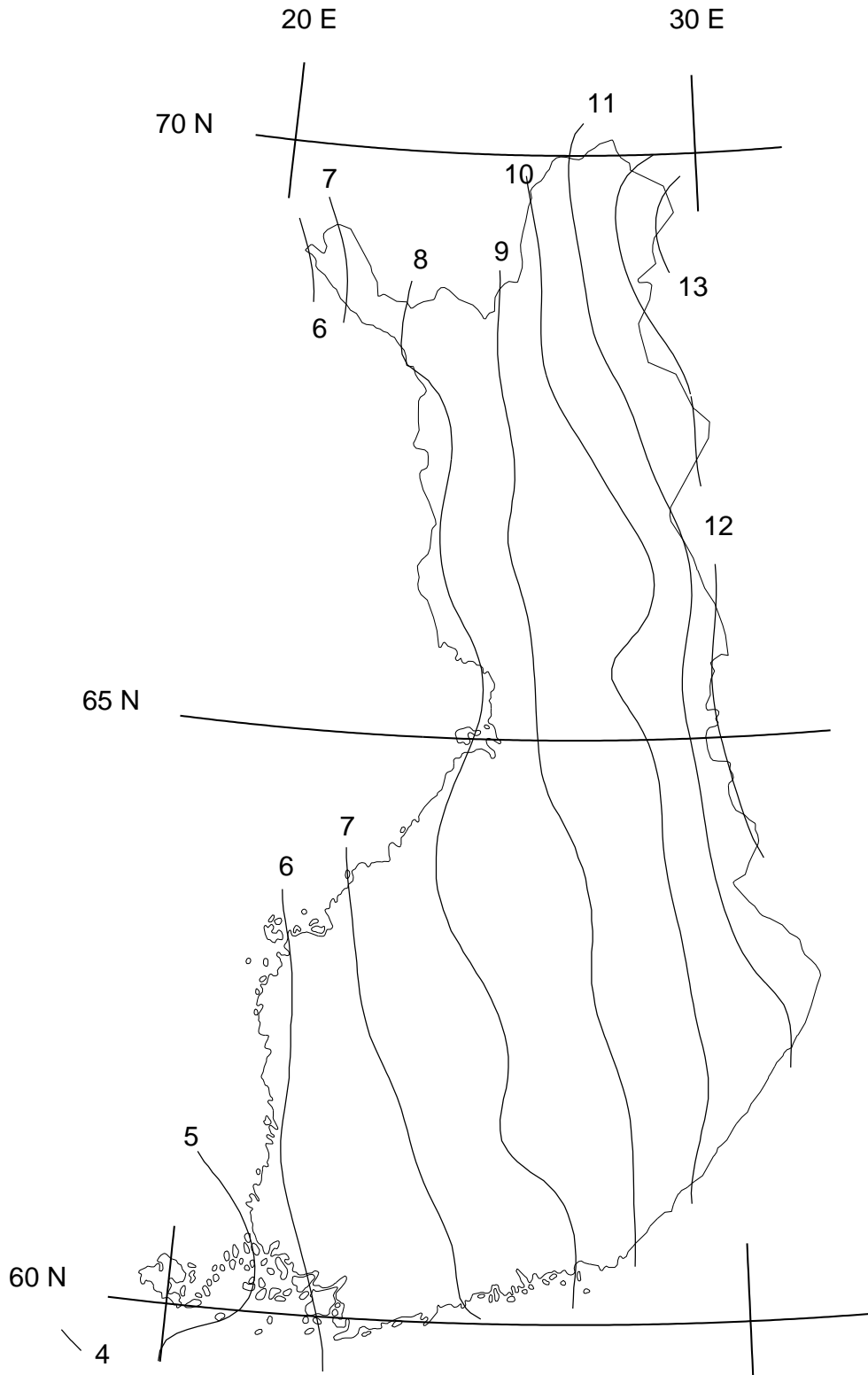


Figure 15: Declination D 2009.0 in degrees

INCLINATION (I) 2009.0

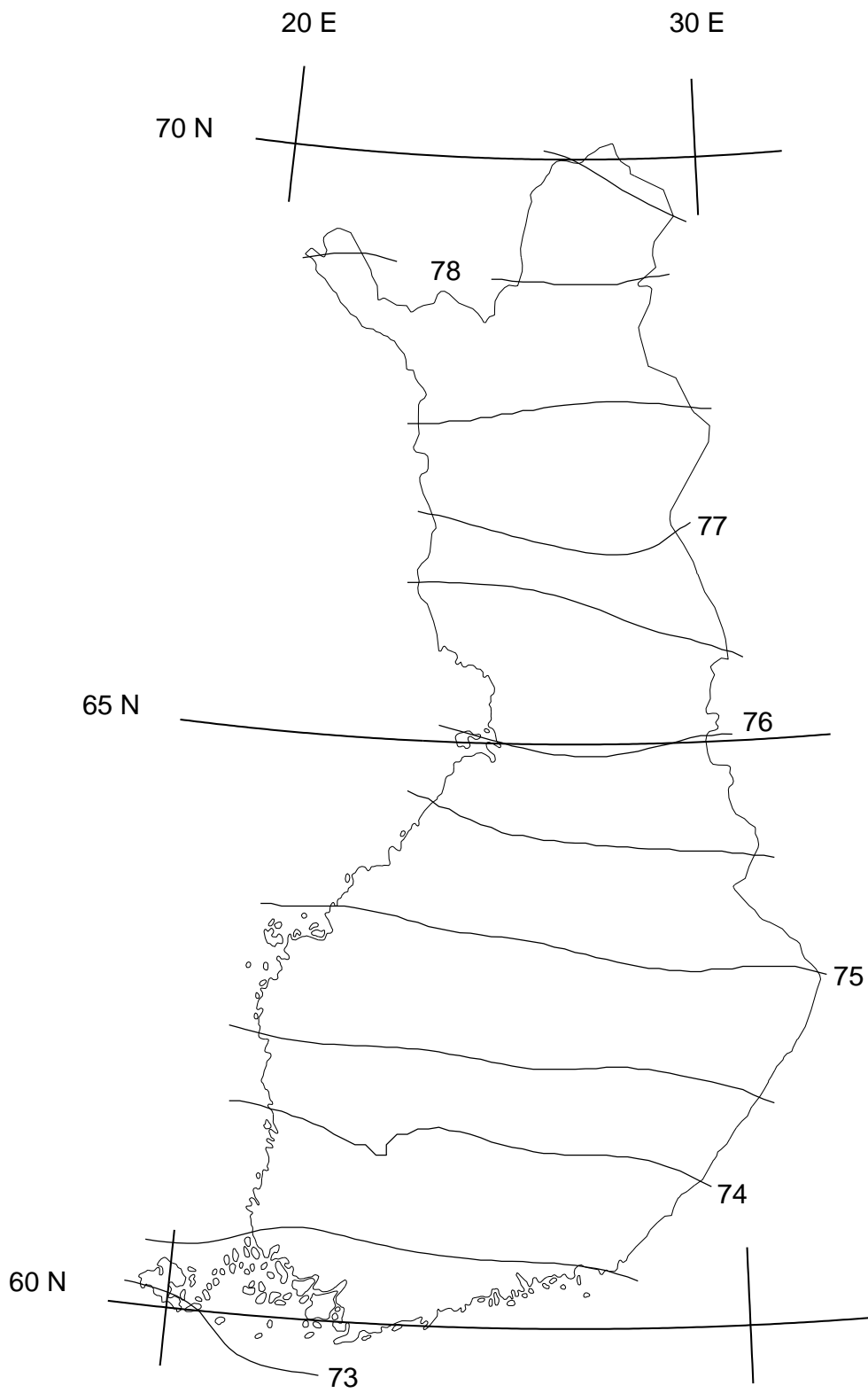


Figure 16: Inclination I 2009.0 in degrees

Magneettisia mittauksia — Magnetic Results

Nurmijärvi Geophysical Observatory

- Magneettisia mittauksia — Magnetic Results 1991. Helsinki 1992. 37 pp.
Magneettisia mittauksia — Magnetic Results 1992. Helsinki 1993. 36 pp.
Magneettisia mittauksia — Magnetic Results 1993. Helsinki 1994. 47 pp.
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Magneettisia mittauksia — Magnetic Results 2000. Helsinki 2002. 46 pp.
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Magneettisia mittauksia — Magnetic Results 2002. Helsinki 2003. 47 pp.

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

Reports

- Magnetic Results 2003, Helsinki 2006, 47 p.
Magnetic Results 2004, Helsinki 2006, 47 p.
Magnetic Results 2005, Helsinki 2006, 50 p.
Magnetic Results 2006, Helsinki 2007, 50 p.
Magnetic Results 2007, Helsinki 2008, 49 p.