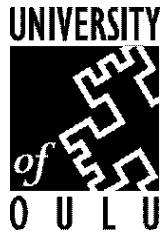


**SODANKYLÄ GEOPHYSICAL OBSERVATORY
PUBLICATIONS**



No. 99

MAGNETIC RESULTS

SODANKYLÄ 2005

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TERO RAITA

OULU 2006

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SODANKYLÄ GEOPHYSICAL OBSERVATORY
MAGNETIC RESULTS 2005

The Sodankylä Geophysical Observatory was established in 1913; 1914 was the first year of magnetic recordings. The observatory is situated on the east bank of the river Kitinen, ca. 5 km south of Sodankylä village. Until 31.07.1997 it belonged to the Finnish Academy of Science and Letters. Since 01.08.1997 it has been the independent observatory of the University of Oulu. Its coordinates are:

	Lat.	Long.	
Geographic	67°22'09"N	26 37'47"E	h = 178 m
		1 ^h 46 ^m 31.1 ^s	
Geomagn.(dip.)	63.67°	120.44°	Ψ = -26.28°
Corr.geomagn.	63.4°	108.9°	L = 5.2

VARIOMETERS

Three sets of variometers are used:

- FG (Danish) Fluxgate magnetometer
- PSM (Polish) Photoelectric Torsion Magnetometer
- RM (Russian) Photoelectric Torsion Magnetometer

The sampling rate and the adopted scale values of the variometers were:

	X	Y	Z	sampling
FG (nT/digit)	0.005708	0.005720	0.005720	2 Hz
PSM	0.003072	0.003072	0.003075	2 Hz
RM	0.009750	0.009354	0.009544	2 Hz

ABSOLUTE AND BASE-LINE MEASUREMENTS

The base-line values of variometers were determined weekly with the following instruments:

- Overhauser magnetometer GSM-90
- Fluxgate declinometer&inclinometer ("DI-flux") Elsec type 810

Observations during the year 2005 were made by Johannes Kultima and Tero Raita.

The adopted base-line values for FG were as follows:

East intensity Y

01.01.-31.03.	1807.0 nT
01.04.-04.06.	06.5
05.06.-11.07.	07.0
12.07.-15.08.	07.5
16.08.-04.11.	08.0
05.11.-17.12.	07.5
18.12.-31.12.	07.0

North intensity X

01.01.-02.03.	11415.0 nT
03.03.-05.05.	14.5
06.05.-22.06.	15.0
23.06.-01.07.	15.5
02.07.-22.07.	16.0
23.07.-16.08.	16.5
17.08.-10.09.	16.0
11.09.-25.11.	16.5
26.11.-18.12.	16.0
19.12.-31.12.	15.5

Vertical intensity Z

01.01.-20.05.	51154.3 nT
21.05.-18.07.	54.0
19.07.-09.11.	53.7
10.11.-31.12.	54.0

TREATMENT OF RECORDINGS

The components recorded are X, Y and Z. The tabulated components are X, Y, Z, and the tabulations are based on FG digital recording. D (and Y) is positive eastwards, X northwards and Z downwards. The tabular unit of intensity components is 1 nT, that of D is 0.1'. Time used throughout is UT; hourly values are centred at half-hours.

The values were controlled by comparing them with the other digital (PSM, RM) recordings. Monthly and annual tables were computed at the Observatory using a Macintosh computer.

The K- and Ak-indices on the page 15 are determined from all components (HDZ) for historical reasons. The Bartels musical diagram on the page 37 is calculated using only components H and D.

To calculate the variations of other field components than tabulated, the following differential formulas can be used:

$$\begin{aligned} \Delta X &= 0.986 \Delta H - 0.556 \Delta D & \Delta H &= 0.986 \Delta X + 0.165 \Delta Y \\ \Delta Y &= 0.165 \Delta H + 3.324 \Delta D & \Delta D &= 0.293 \Delta Y - 0.049 \Delta X \\ \Delta F &= 0.221 \Delta H + 0.975 \Delta Z & \Delta I &= 0.0144 \Delta Z - 0.0638 \Delta H \\ &= 0.218 \Delta X + 0.036 \Delta Y + 0.975 \Delta Z \end{aligned}$$

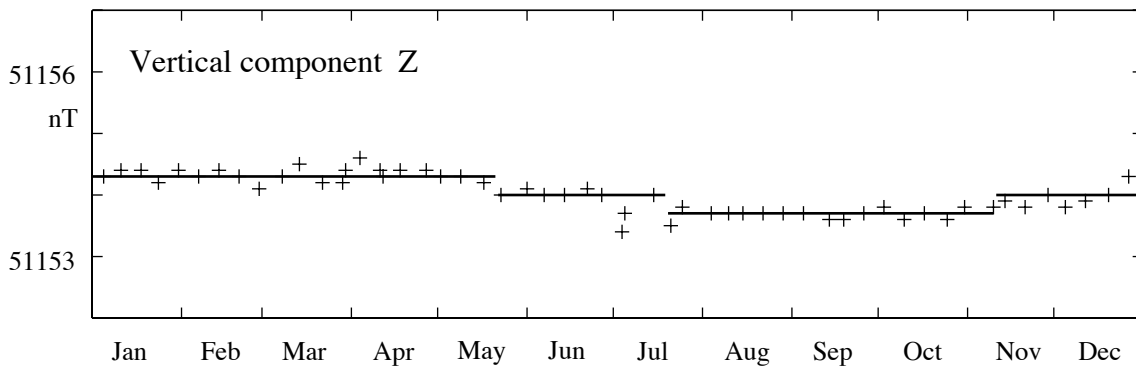
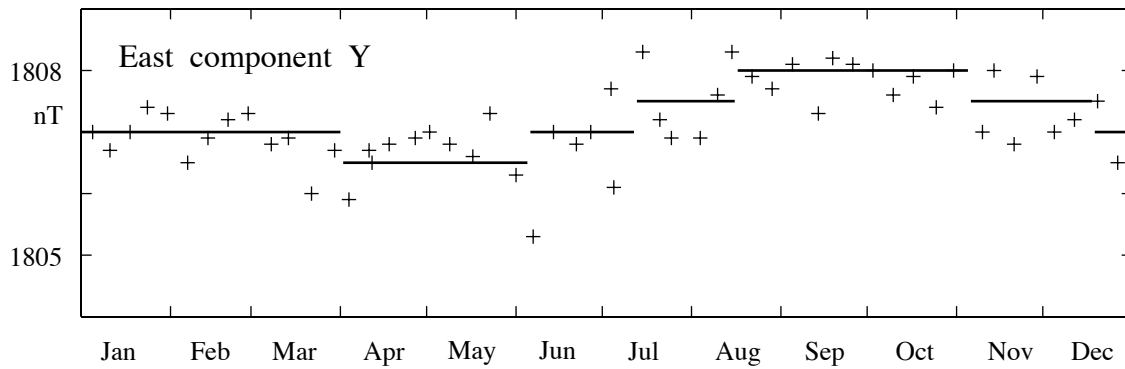
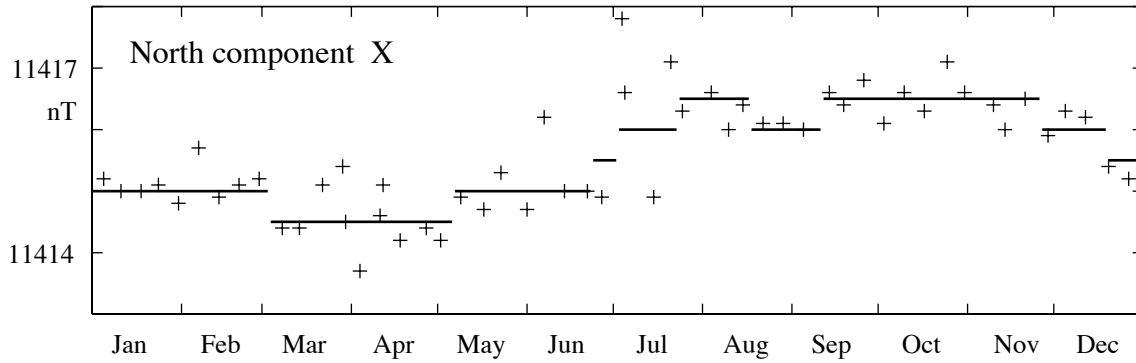
where X, Y, H, Z, F are expressed in nT and D, I in arc minutes.

In 1945 new absolute and variation rooms were built on a new site, ca 250 m WNW from the original location of the absolute house. In tables of annual means the values for years 1914-1944 are reduced to the new site, using the following values of site differences (as determined in 1946): (old minus new)

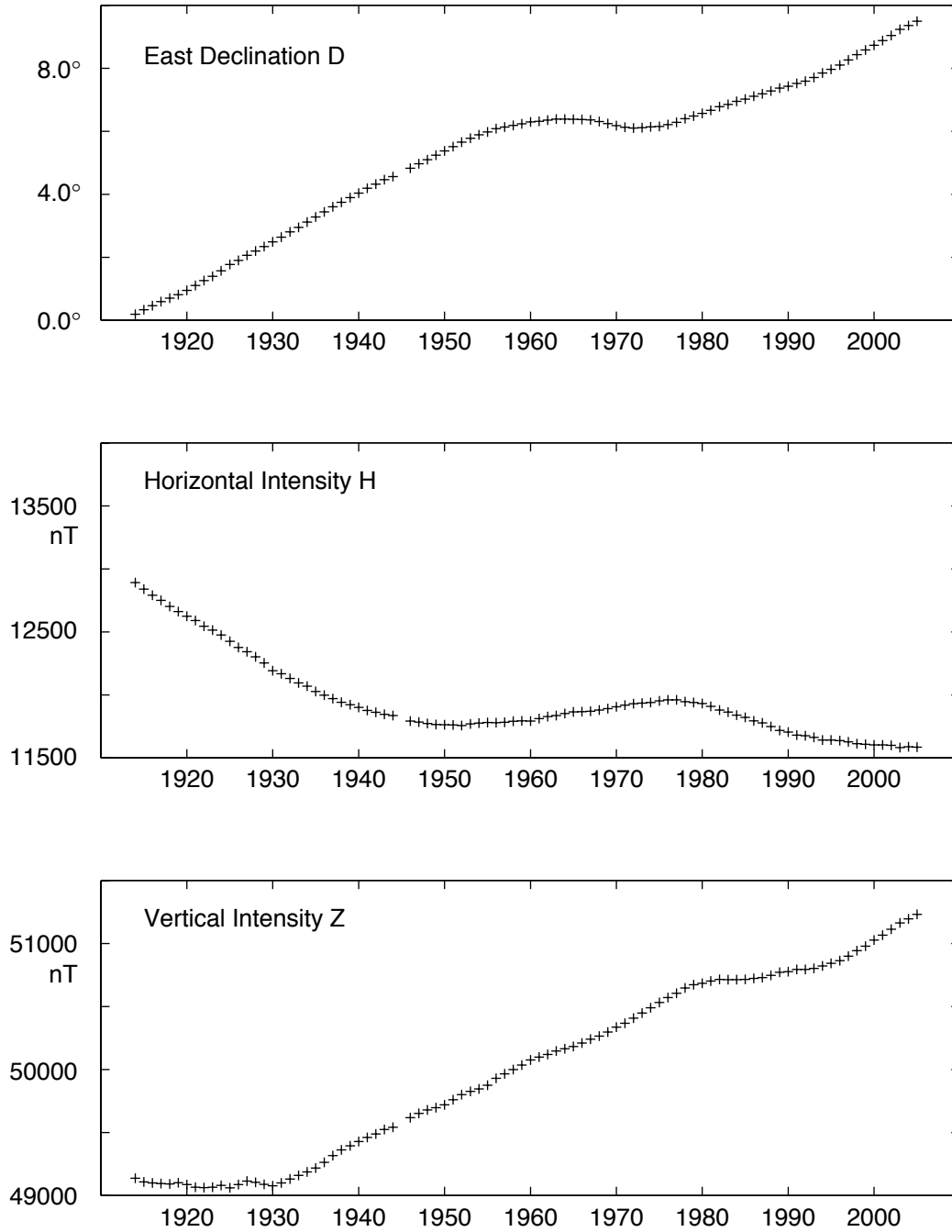
$$\begin{aligned} \Delta D &= + 7.0' & \Delta Y &= + 25 \text{ nT} \\ \Delta H &= + 15 \text{ nT} & \Delta X &= + 12 \text{ nT} \\ \Delta Z &= +124 \text{ nT} & \Delta F &= +124 \text{ nT} \\ & & \Delta I &= + 0.9' \end{aligned}$$

Like the preceding yearbooks, the activity indices K and Ak are given. For continuity, as K the largest value derived from components H, D, Z is given, otherwise that is the present usage. The statistical difference to the standard procedure is rather small, in monthly mean of Ak normally less than 1 unit. The minimum range for K = 9 is 1500 nT.

The analog recording of magnetic variometer was finished at the end of 1995 after having been continued 82 years.

MEASURED AND ADOPTED BASELINES FOR 2005

ANNUAL MEANS FOR 1914 -2005



ANNUAL MEANS. all days

Year	Z	H	D	F	X	Y	I
1914	49136 nT	12890 nT	0°11.3'	50799 nT	12890 nT	42 nT	75°18.0'
15	108	839	20.1	759	839	75	20.9
16	100	791	27.7	739	791	103	23.9
17	094	750	35.4	723	749	131	26.5
18	(092)	(702)	(42.3)	(709)	(701)	(156)	(29.6)
19	101	661	48.9	707	660	180	32.5
20	087	624	56.9	684	622	209	34.6
21	065	590	1 06.4	655	588	243	36.5
22	063	545	15.4	641	542	275	39.4
23	066	514	23.6	637	510	304	41.5
24	080	475	34.2	641	470	342	44.3
25	060	425	46.3	609	419	384	47.3
26	086	377	53.9	622	370	410	50.9
27	114	342	2 03.6	641	334	444	53.6
28	104	302	11.9	622	293	472	56.1
29	088	254	20.4	594	244	500	59.0
30	077	192	29.5	569	180	530	76 02.9
31	100	167	38.1	585	154	559	04.9
32	130	130	48.5	605	115	594	07.9
33	160	095	56.9	626	079	622	10.7
34	187	068	3 06.8	646	050	655	12.9
35	218	027	16.7	666	007	688	16.1
36	263	11997	26.4	703	11975	720	18.8
37	316	970	36.2	748	946	752	21.4
38	361	941	44.8	785	915	780	24.0
39	394	921	53.7	812	893	810	25.9
40	428	901	4 02.2	841	871	838	27.7
41	460	876	11.5	866	844	868	29.9
42	488	862	19.2	890	828	894	31.2
43	524	845	27.6	921	809	921	32.9
44	(542)	(836)	(33.6)	(939)	(799)	(941)	(33.8)
45	—	—	—	—	—	—	—
46	618	792	49.6	51000	750	992	37.9
47	652	784	58.0	031	740	1020	38.9
48	678	772	5 05.7	054	725	1045	40.1
49	697	764	14.4	070	715	1074	40.9
50	720	763	22.5	093	711	1102	41.4
51	760	762	30.8	131	708	1130	42.1
52	800	757	39.1	169	700	1158	43.0
53	(826)	(770)	(46.5)	(197)	(710)	(1184)	(42.5)
54	846	776	53.1	218	714	1207	42.5
55	875	781	58.6	248	717	1227	42.6
56	930	779	6 04.9	301	713	1248	43.6
57	966	782	08.0	336	715	1259	43.9
58	999	790	11.2	370	721	1271	43.9
59	50034	793	14.3	405	723	1281	44.2
60	076	792	17.6	446	721	1293	45.0

ANNUAL MEANS. all days (cont)

Year	Z	H	D	F	X	Y	I
1961	50098 nT	11811 nT	6°18.8'	51471 nT	11739 nT	1299 nT	76°44.1'
62	119	827	21.0	496	754	1308	43.3
63	146	836	23.0	524	763	1316	43.2
64	164	852	23.1	545	778	1318	42.4
65	182	865	22.9	566	791	1319	41.8
66	210	866	22.4	593	793	1317	42.2
67	240	870	21.4	623	797	1314	42.4
68	265	880	18.6	650	808	1306	42.1
69	297	891	14.6	684	820	1293	41.9
70	336	905	10.5	724	836	1281	41.6
71	366	918	07.4	757	850	1271	41.1
72	407	930	06.0	800	862	1268	41.1
73	447	934	06.7	839	866	1271	41.4
74	490	939	08.5	882	870	1277	41.8
75	532	953	09.3	926	884	1282	41.5
76	570	960	12.7	965	890	1294	41.6
77	605	960	16.9	998	888	1309	42.1
78	647	946	23.8	52036	872	1331	43.7
79	673	940	29.1	061	863	1348	44.5
80	683	932	34.1	068	853	1364	45.1
81	702	909	39.9	082	829	1382	46.9
82	714	880	46.7	087	797	1402	48.9
83	712	864	51.1	081	780	1415	49.9
84	713	839	56.9	077	752	1432	51.6
85	715	822	7 01.2	075	733	1445	52.7
86	723	794	06.7	076	703	1460	54.6
87	729	777	11.3	078	684	1473	55.8
88	746	749	16.7	088	654	1488	57.8
89	771	718	22.2	106	621	1503	77 00.2
90	776	704	25.8	107	605	1514	01.2
91	793	681	30.9	119	581	1528	02.9
92	793	675	35.3	118	572	1542	03.3
93	801	662	42.3	122	557	1563	04.3
94	821	642	51.0	137	533	1590	05.8
95	842	642	57.9	158	530	1613	06.1
96	864	636	8 06.2	178	520	1640	06.8
97	899	627	15.7	210	506	1671	07.9
98	942	612	25.7	248	486	1702	09.6
99	978	607	34.6	282	477	1731	10.4
2000	51026	602	43.7	328	467	1761	11.4
01	066	602	52.5	367	463	1790	12.0
02	113	599	9 02.3	413	455	1822	12.9
03	163	581	9 13.9	457	431	1858	14.7
04	195	588	9 21.3	490	433	1884	14.8
05	231	585	9 29.7	524	426	1911	15.5

ANNUAL MEANS. quiet days

Year	Z	H	D	F	X	Y	I
1914	49138 nT	12893 nT	0°11.1'	50801 nT	12893 nT	42 nT	75°17.9'
15	113	845	19.7	765	845	74	20.6
16	106	801	26.9	747	801	100	23.4
17	097	758	34.4	728	757	128	26.0
18	(097)	(713)	(41.4)	(716)	(712)	(153)	(29.0)
19	105	674	48.4	714	673	178	31.7
20	091	633	56.6	690	631	208	34.1
21	068	596	1 05.9	659	594	241	36.2
22	070	553	14.8	650	550	273	39.0
23	068	518	23.3	640	514	303	41.3
24	083	478	34.0	644	473	341	44.2
25	062	432	46.0	613	426	383	46.9
26	091	388	53.3	630	381	408	50.2
27	119	349	2 03.0	648	341	442	53.3
28	106	308	11.4	625	299	470	55.8
29	093	264	19.6	602	254	498	58.4
30	085	211	27.6	581	200	524	76 01.8
31	106	174	37.3	593	161	557	04.6
32	138	140	47.6	615	126	592	07.3
33	166	102	56.2	634	086	620	10.3
34	191	073	3 06.2	651	055	654	12.6
35	223	034	16.0	673	014	686	15.7
36	266	003	25.8	707	11981	718	18.4
37	315	11978	35.3	749	955	750	20.9
38	361	952	43.7	787	927	777	23.3
39	395	935	52.0	816	908	805	25.0
40	431	914	4 00.7	847	885	833	26.9
41	464	891	09.9	873	860	864	29.0
42	494	874	18.0	898	841	890	30.6
43	531	859	26.0	931	824	917	32.1
44	(547)	(844)	(32.7)	(943)	(807)	(939)	(33.4)
45	—	—	—	—	—	—	—
46	621	806	48.4	51006	764	989	37.0
47	650	795	57.0	032	751	1018	38.2
48	680	781	5 04.8	058	735	1043	39.6
49	697	775	13.1	073	726	1071	40.2
50	723	778	20.8	099	727	1097	40.4
51	763	777	29.0	138	723	1125	41.1
52	807	778	36.8	181	722	1152	41.7
53	(832)	(783)	(44.6)	(206)	(724)	(1179)	(41.8)
54	850	785	52.1	224	723	1205	41.9
55	877	790	57.7	252	726	1225	42.0
56	926	792	6 03.1	300	726	1243	42.7
57	966	794	06.8	339	727	1256	43.1
58	994	801	09.8	368	733	1267	43.1
59	50031	806	12.7	405	737	1277	43.4
60	073	811	15.1	447	741	1286	43.7

ANNUAL MEANS. quiet days (cont)

Year	Z	H	D	F	X	Y	I
1961	50100 nT	11823 nT	6°17.4'	51476 nT	11752 nT	1295 nT	76°43.3'
62	125	837	19.9	504	765	1305	42.8
63	150	845	21.9	530	772	1313	42.6
64	168	858	22.5	550	785	1317	42.1
65	186	868	22.6	570	795	1318	41.7
66	213	873	21.8	598	800	1316	41.8
67	241	880	20.4	627	807	1312	41.8
68	270	889	17.6	657	817	1303	41.6
69	299	899	13.7	687	828	1291	41.5
70	336	912	09.5	726	843	1278	41.2
71	370	928	06.4	763	860	1269	40.7
72	409	938	05.0	803	871	1265	40.6
73	452	949	04.9	848	881	1266	40.6
74	497	957	06.3	894	890	1272	40.7
75	539	965	07.6	936	897	1277	40.8
76	576	971	11.3	974	901	1290	41.0
77	608	970	15.6	52004	899	1305	41.6
78	650	960	21.7	043	886	1325	42.9
79	673	949	27.9	063	873	1345	43.9
80	684	937	33.7	071	858	1364	44.9
81	701	919	38.7	083	839	1379	46.3
82	716	898	44.8	093	816	1397	47.8
83	717	881	49.1	090	797	1410	48.9
84	717	855	54.9	084	769	1427	50.6
85	719	833	59.7	081	744	1441	52.1
86	727	806	7 05.1	083	716	1456	53.9
87	732	783	10.4	082	690	1471	55.5
88	747	758	15.4	092	664	1485	57.3
89	770	735	20.6	108	638	1500	59.1
90	774	715	24.3	108	618	1510	77 00.4
91	788	696	29.2	118	596	1524	01.9
92	793	686	33.9	120	584	1539	02.6
93	803	675	40.6	128	571	1560	03.4
94	826	663	48.4	147	555	1584	04.5
95	846	654	56.5	165	542	1610	05.4
96	868	645	8 05.0	184	529	1638	06.3
97	900	635	14.7	213	514	1669	07.5
98	943	622	24.6	252	497	1700	08.9
99	981	618	33.5	288	488	1729	09.8
2000	51024	612	42.5	328	478	1758	10.8
01	065	611	51.6	369	472	1788	11.4
02	112	610	9 01.1	414	466	1820	12.2
03	164	603	9 11.3	463	454	1853	13.3
04	199	602	9 19.5	497	449	1880	13.9
05	236	599	9 28.1	533	441	1908	14.7

ANNUAL MEANS. disturbed days

Year	Z	H	D	F	X	Y	I
1914	49133 nT	12883 nT	0°11.8'	50794 nT	12883 nT	44 nT	75°18.4'
15	097	823	21.1	744	823	79	21.8
16	091	764	29.8	723	764	111	25.5
17	091	734	35.9	716	733	133	27.5
18	(085)	(683)	(43.7)	(697)	(682)	(161)	(30.7)
19	094	638	49.5	695	637	182	33.8
20	082	602	58.1	674	600	213	36.0
21	066	581	1 07.4	653	579	247	37.1
22	052	532	16.5	628	529	279	40.1
23	059	496	24.8	625	492	308	42.6
24	072	464	34.7	630	459	343	44.9
25	054	403	47.6	598	397	388	48.6
26	084	347	55.0	613	340	413	52.8
27	109	328	2 04.3	633	320	446	54.5
28	102	287	12.5	616	278	473	57.1
29	083	230	21.5	584	220	503	76 00.5
30	067	159	32.3	551	147	538	04.9
31	088	150	39.7	569	137	564	05.9
32	120	108	50.3	590	093	600	09.2
33	149	079	58.1	612	063	625	11.5
34	180	057	3 07.7	636	039	658	13.5
35	211	012	18.1	656	11992	692	17.0
36	262	11986	26.8	699	964	721	19.5
37	318	948	38.2	745	924	758	22.9
38	360	919	46.5	779	893	785	25.5
39	394	898	56.8	807	870	819	27.4
40	422	877	4 04.8	829	847	845	29.2
41	449	837	14.8	846	805	877	32.3
42	481	841	21.3	878	807	899	32.5
43	515	821	30.4	906	784	929	34.4
44	(530)	(815)	(35.9)	(920)	(777)	(947)	(35.0)
45	—	—	—	—	—	—	—
46	607	768	51.4	984	726	996	39.3
47	656	766	59.9	51031	721	1025	40.2
48	677	749	5 08.2	047	702	1052	41.6
49	702	737	17.6	069	687	1083	42.8
50	722	727	25.9	086	674	1110	43.8
51	754	736	33.2	119	681	1136	43.7
52	789	725	43.0	151	667	1168	44.9
53	(812)	(741)	(50.1)	(177)	(680)	(1194)	(44.2)
54	839	759	55.1	207	696	1212	43.5
55	867	761	6 01.0	235	696	1233	43.8
56	938	748	09.2	301	680	1259	45.7
57	968	757	11.3	333	688	1267	45.6
58	50008	767	14.1	374	697	1278	45.5
59	038	765	17.8	402	694	1290	46.1
60	080	750	22.5	440	677	1305	47.8

ANNUAL MEANS. disturbed days (cont)

Year	Z	H	D	F	X	Y	I
1961	50093 nT	11783 nT	6°21.9'	51460 nT	11710 nT	1306 nT	76°45.8'
62	111	812	22.8	484	739	1313	44.2
63	138	810	26.0	510	736	1323	44.7
64	154	840	24.5	533	766	1322	43.0
65	176	850	24.4	556	776	1322	42.7
66	207	851	23.7	587	777	1320	43.1
67	240	846	24.3	618	772	1321	43.9
68	257	862	21.0	638	789	1312	43.2
69	293	873	16.8	675	802	1299	43.0
70	335	892	13.0	721	822	1288	42.5
71	360	898	09.4	747	829	1276	42.4
72	407	908	08.6	794	839	1274	42.5
73	439	903	10.2	825	834	1279	43.3
74	484	915	11.6	871	846	1285	43.2
75	519	932	12.1	909	862	1289	42.7
76	560	940	15.3	951	869	1301	42.8
77	600	940	19.5	989	868	1315	43.4
78	641	918	28.5	52025	842	1344	45.4
79	669	924	31.5	053	847	1355	45.4
80	682	917	35.7	064	839	1368	46.1
81	703	898	41.3	080	817	1385	47.6
82	709	851	50.3	076	767	1411	50.7
83	705	836	53.9	068	751	1421	51.6
84	707	808	7 00.6	063	720	1441	53.5
85	707	801	04.1	062	711	1452	53.9
86	714	765	09.8	061	673	1467	56.3
87	725	768	12.4	072	675	1476	56.3
88	740	728	18.8	077	633	1493	59.1
89	778	681	26.1	104	583	1512	77 02.7
90	775	686	28.4	102	587	1520	02.4
91	800	662	33.4	122	561	1534	04.2
92	790	654	37.5	110	551	1546	04.6
93	793	635	45.8	109	528	1572	05.9
94	813	614	54.6	124	504	1598	07.5
95	833	622	8 00.2	145	509	1618	07.3
96	856	618	08.3	166	501	1645	07.9
97	896	612	17.5	204	491	1675	08.9
98	940	585	28.8	241	459	1709	11.2
99	971	586	36.8	272	456	1735	11.6
2000	51030	580	46.5	327	445	1767	12.9
01	070	579	55.0	366	439	1795	13.5
02	114	579	9 04.3	409	434	1826	14.2
03	166	546	18.6	453	394	1868	17.0
04	190	555	25.1	478	399	1891	16.8
05	219	559	9 32.4	508	399	1916	17.0

SODANKYLÄ	MONTHLY AND ANNUAL MEANS						ALL DAYS 2005	
	Z	H	D	F	X	Y	I	
JANUARY	51214	11578	9 28.3	52506	11420	1905	77 15.7	
FEBRUARY	51223	11592	9 26.1	52518	11435	1900	77 14.9	
MARCH	51216	11583	9 27.0	52510	11426	1902	77 15.4	
APRIL	51222	11585	9 27.2	52516	11428	1903	77 15.3	
MAY	51223	11576	9 28.7	52515	11418	1906	77 15.9	
JUNE	51233	11585	9 29.3	52527	11427	1910	77 15.5	
JULY	51230	11584	9 30.2	52523	11425	1912	77 15.5	
AUGUST	51228	11587	9 30.2	52522	11428	1913	77 15.3	
SEPTEMBER	51244	11577	9 32.6	52535	11417	1919	77 16.2	
OCTOBER	51245	11589	9 31.5	52539	11430	1918	77 15.4	
NOVEMBER	51245	11590	9 32.3	52539	11430	1920	77 15.3	
DECEMBER	51245	11591	9 32.8	52539	11431	1922	77 15.3	
WINTER	51232	11588	9 29.9	52526	11429	1912	77 15.3	
EQUINOX	51232	11584	9 29.6	52525	11425	1910	77 15.6	
SUMMER	51228	11583	9 29.6	52522	11425	1910	77 15.5	
YEAR	51231	11585	9 29.7	52524	11426	1911	77 15.5	

SODANKYLÄ	MONTHLY AND ANNUAL MEANS						5 QUIET DAYS 2005	
	Z	H	D	F	X	Y	I	
JANUARY	51229	11599	9 25.0	52526	11442	1898	77 14.6	
FEBRUARY	51223	11601	9 24.6	52521	11445	1897	77 14.4	
MARCH	51225	11599	9 25.1	52522	11443	1898	77 14.5	
APRIL	51226	11602	9 26.0	52524	11445	1901	77 14.3	
MAY	51233	11601	9 26.8	52530	11444	1904	77 14.5	
JUNE	51235	11603	9 27.8	52533	11446	1908	77 14.4	
JULY	51230	11602	9 28.1	52527	11444	1909	77 14.4	
AUGUST	51237	11592	9 30.2	52532	11433	1914	77 15.1	
SEPTEMBER	51250	11593	9 30.3	52545	11433	1914	77 15.3	
OCTOBER	51247	11596	9 30.8	52543	11436	1916	77 15.0	
NOVEMBER	51248	11597	9 31.4	52544	11437	1919	77 14.9	
DECEMBER	51250	11599	9 31.6	52546	11439	1920	77 14.8	
WINTER	51238	11599	9 28.1	52534	11441	1908	77 14.7	
EQUINOX	51237	11597	9 28.0	52533	11439	1908	77 14.8	
SUMMER	51234	11600	9 28.2	52530	11442	1909	77 14.6	
YEAR	51236	11599	9 28.1	52533	11441	1908	77 14.7	

SODANKYLÄ	MONTHLY AND ANNUAL MEANS						5 DISTURBED DAYS 2005	
	Z	H	D	F	X	Y	I	
JANUARY	51205	11538	9 33.0	52488	11378	1914	77 18.1	
FEBRUARY	51217	11562	9 31.0	52506	11403	1911	77 16.7	
MARCH	51197	11538	9 30.4	52481	11379	1906	77 18.0	
APRIL	51219	11535	9 33.1	52502	11375	1914	77 18.5	
MAY	51194	11540	9 29.8	52479	11381	1904	77 17.8	
JUNE	51243	11554	9 31.1	52530	11395	1911	77 17.6	
JULY	51223	11590	9 29.4	52518	11432	1911	77 15.0	
AUGUST	51207	11569	9 31.4	52498	11409	1914	77 16.2	
SEPTEMBER	51222	11538	9 39.5	52505	11374	1936	77 18.3	
OCTOBER	51245	11581	9 31.3	52537	11422	1916	77 15.9	
NOVEMBER	51233	11585	9 33.5	52526	11424	1923	77 15.5	
DECEMBER	51230	11577	9 35.0	52522	11415	1927	77 16.0	
WINTER	51221	11565	9 33.1	52510	11405	1919	77 16.6	
EQUINOX	51221	11548	9 33.6	52506	11388	1918	77 17.7	
SUMMER	51217	11563	9 30.4	52506	11404	1910	77 16.7	
YEAR	51219	11559	9 32.4	52508	11399	1916	77 17.0	

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

NORTH COMPONENT X IN NT

JULY 2005

X = 11000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows 1-31. Includes various observations like '1 460 444 429...' and '6 Q 429 446...'.

MEANS

Summary table with columns: ALL, QUIET, DIST. and values for each day.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

NORTH COMPONENT X IN NT

AUGUST 2005

X = 11000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows 1-31. Includes various observations like '1 253 258 378...' and '6 D 167 179...'.

MEANS

Summary table with columns: ALL, QUIET, DIST. and values for each day.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

NORTH COMPONENT X IN NT SEPTEMBER 2005 X = 11000 + TABULAR VALUES

Table with 25 columns: DAY/ UT, 1-24, MEAN. Rows 1-30 containing numerical data for September 2005.

MEANS ALL QUIET DIST. 344 427 129 328 416 115 350 420 214 378 433 251 396 438 297 410 433 367 408 426 341 423 411 426 417 420 411 426 417 420 429 509 468 421 416 509 478 435 618 503 437 660 512 444 588 497 446 541 484 449 298 430 446 172 379 442 123 354 444 229 363 444 223 347 439 334 434 374 417 433 374

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

NORTH COMPONENT X IN NT OCTOBER 2005 X = 11000 + TABULAR VALUES

Table with 25 columns: DAY/ UT, 1-24, MEAN. Rows 1-31 containing numerical data for October 2005.

MEANS ALL QUIET DIST. 401 429 365 413 437 358 426 439 381 435 439 440 419 442 443 442 438 430 425 428 431 425 432 425 419 418 424 431 436 439 441 467 463 475 453 445 371 426 412 393 386 395 430 436 422

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

EAST COMPONENT Y IN NT SEPTEMBER 2005 Y = 1000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows 1-30 containing numerical data for September 2005.

MEANS

Summary table with columns: ALL, QUIET, DIST. and rows for various mean values.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

EAST COMPONENT Y IN NT OCTOBER 2005 Y = 1000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows 1-31 containing numerical data for October 2005.

MEANS

Summary table with columns: ALL, QUIET, DIST. and rows for various mean values for October.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

VERTICAL COMPONENT Z IN NT

MAY 2005

Z = 51000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows include data for days 1-31, MEANS ALL, QUIET, and DIST. values.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

VERTICAL COMPONENT Z IN NT

JUNE 2005

Z = 51000 + TABULAR VALUES

Table with columns: DAY/ UT, 1-24, MEAN. Rows include data for days 1-30, MEANS ALL, QUIET, and DIST. values.

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

VERTICAL COMPONENT Z IN NT

NOVEMBER 2005

Z = 51000 + TABULAR VALUES

DAY/ UT	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	302	236	230	249	261	258	260	264	264	266	272	274	281	292	290	275	292	250	260	270	248	250	197	162	259	
2	220	235	238	246	254	255	253	252	250	252	254	254	254	255	254	253	254	259	256	268	171	175	260	286	246	
3	D 258	223	212	208	195	196	223	239	244	252	255	286	296	306	309	307	262	130	154	89	130	250	197	156	224	
4	D 219	229	258	251	237	224	242	250	250	253	264	285	301	277	275	292	267	264	145	149	235	226	178	164	239	
5	205	218	248	260	269	248	254	272	263	258	260	259	258	259	278	284	262	264	258	263	236	208	226	172	249	
6	D 151	128	140	171	214	238	248	256	260	264	268	270	265	257	267	281	295	268	247	247	219	132	99	139	222	
7	181	186	219	246	250	250	252	254	259	261	260	255	258	259	262	256	257	262	254	239	250	213	215	228	243	
8	Q 243	251	251	252	254	253	252	252	252	253	254	253	252	252	252	255	255	254	260	257	249	225	221	250	250	
9	219	211	233	244	247	246	249	251	251	251	251	251	251	250	250	250	252	253	257	253	246	240	239	240	245	
10	Q 245	247	248	248	248	248	248	250	251	251	250	249	250	250	250	250	250	253	269	280	241	231	228	249	249	
11	255	253	250	247	248	248	247	246	248	251	253	256	257	259	261	277	281	298	284	264	245	227	233	215	254	
12	146	191	233	234	241	249	246	250	256	264	276	287	312	317	271	266	309	282	293	275	221	133	189	216	248	
13	D 219	203	192	184	196	217	243	254	261	272	283	308	317	334	316	260	277	304	295	273	238	105	64	139	240	
14	207	205	183	201	205	227	241	248	258	262	267	262	266	281	290	280	273	268	264	260	195	204	188	199	239	
15	240	255	257	258	250	253	249	252	255	261	266	263	266	272	273	274	261	256	255	258	247	225	210	230	254	
16	Q 247	248	250	251	249	250	248	249	251	254	255	254	254	254	259	257	259	255	250	250	241	237	205	249	249	
17	Q 221	241	244	245	247	246	245	246	244	249	249	252	253	252	252	251	250	250	250	249	248	247	243	241	247	
18	246	247	246	246	246	247	246	245	244	246	247	248	251	252	252	261	265	269	276	258	249	247	246	244	251	
19	244	243	246	248	247	246	246	247	246	246	247	247	246	245	244	261	231	278	308	271	115	136	183	225	237	
20	261	267	262	255	250	247	249	256	269	260	261	276	258	257	257	263	289	270	273	241	191	227	184	253	253	
21	205	248	246	239	234	240	253	252	252	251	251	257	259	262	267	273	285	284	261	247	243	242	218	251	264	
22	221	238	244	245	244	245	244	245	249	252	255	258	274	320	344	352	343	267	278	287	264	224	212	229	264	
23	238	257	251	242	249	242	235	244	253	269	272	273	291	325	315	271	268	270	263	229	222	172	138	121	246	
24	111	153	208	231	237	238	240	244	250	255	258	267	265	293	325	338	329	297	217	163	153	156	61	50	222	
25	97	150	171	182	223	232	250	253	267	274	271	270	276	282	264	289	257	263	268	248	225	151	198	188	231	
26	212	233	247	253	251	249	249	251	253	254	255	266	275	270	264	265	290	283	272	265	250	247	219	217	254	
27	Q 247	251	251	248	249	247	248	249	249	251	250	249	251	252	252	252	252	252	258	264	254	252	202	233	247	
28	242	245	248	247	247	245	244	244	238	252	252	260	302	305	286	262	262	253	250	254	265	262	219	173	252	
29	198	239	245	248	249	249	248	247	247	245	247	250	252	251	251	252	252	256	266	271	279	294	238	95	245	
30	D 220	235	234	237	246	243	243	243	247	268	281	284	284	288	276	260	260	260	260	252	238	149	121	99	238	
MEANS																										
ALL	217	226	233	237	241	242	247	250	253	256	259	264	269	274	274	272	270	263	258	248	229	208	198	191	245	
QUIET	241	248	249	249	249	249	249	249	249	251	252	252	252	252	252	253	253	255	260	258	250	234	227	230	248	
DIST.	213	204	207	210	218	224	240	248	252	258	268	286	292	292	291	283	272	245	220	202	212	172	132	139	233	

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E

VERTICAL COMPONENT Z IN NT

DECEMBER 2005

Z = 51000 + TABULAR VALUES

DAY/ UT	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 106	199	230	233	234	242	251	247	246	245	248	255	259	268	275	266	269	272	269	267	245	204	168	112	234
2	147	227	235	239	239	233	264	249	256	255	257	263	279	268	261	263	256	263	260	228	253	168	158	208	239
3	199	171	192	242	262	263	265	257	253	250	252	261	263	275	268	272	244	271	246	244	212	232	187	205	241
4	243	251	250	247	248	247	246	246	250	250	253	256	262	254	259	272	258	252	154	192	243	241	236	244	244
5	245	256	253	249	250	252	252	246	251	250	249	251	252	252	252	251	252	251	252	251	252	249	248	249	251
6	Q 248	249	248	248	247	247	247	248	249	251	253	257	263	256	253	251	256	264	264	260	239	247	250	252	252
7	Q 251	253	251	249	248	248	248	248	248	249	250	251	250	249	249	249	249	249	250	250	244	242	245	249	249
8	Q 247	247	247	247	247	248	248	249	249	249	250	251	250	249	248	247	246	248	258	262	267	262	254	243	250
9	241	248	247	250	249	248	246	247	248	249	250	250	251	254	254	252	248	247	247	245	245	222	213	210	244
10	206	204	158	172	167	199	224	233	242	249	251	257	263	266	263	273	285	264	232	145	190	207	260	103	221
11	D 173	200	196	184	181	202	221	236	252	260	312	274	264	268	283	285	192	181	217	204	213	207	184	200	225
12	219	219	232	233	226	248	251	257	258	255	259	263	262	268	292	292	330	290	281	202	228	234	152	182	247
13	237	247	248	250	254	256	256	257	258	257	256	259	268	288	272	260	255	253	255	263	233	209	247	252	254
14	255	254	253	252	250	251	250	252	254	254	254	257	258	256	255	254	254	256	256	253	251	250	249	249	253
15	Q 247	241	246	247	247	249	250	250	249	250	249	251	252	252	251	252	251	251	251	251	251	249	239	245	249
16	244	245	242	239	215	227	236	238	243	247	250	251	256	269	269	269	290	267	269	257	260	236	234	240	250
17	246	247	246	247	247	247	246	245	246	247	254	268	261	256	254	253	263	253	252	251	247	244	240	250	250
18	225	218	229	240	246	247	248	248	246	245	248	248	247	248	249	249	251	250	250	252	253	245	244	245	245
19	245	245	242	242	246	248	248	246	245	244	246	246	251	251	255	257	250	260	268	125	194	234	206	130	234
20	D 134	193	150	130	171	228	243	256	258	256	258	260	281	284	268	273	290	298	271	216	93	186	223	216	226
21	239	244	246	248	249	247	247	244	249	253	260	260	279	303	269	340	313</								

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E HOURLY MEANS MINUS MONTHLY MEANS ON ALL DAYS 2005

VERTICAL COMPONENT Z IN NT

MONTH	0	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	-38	-10	-44	-29	-16	1	10	17	19	29	29	31	34	37	31	26	12	-4	-5	-10	-18	-26	-33	-42	51214	
FEBRUARY	-22	-32	-22	-16	-13	-8	-4	2	6	7	10	14	16	22	26	24	23	17	12	1	-6	-14	-21	-22	51223	
MARCH	-32	-24	-23	-16	-11	-7	0	6	12	15	18	22	24	27	31	26	21	17	3	-12	-10	-12	-39	-39	51216	
APRIL	-22	-20	-28	-14	-13	-8	-2	4	8	12	12	16	22	23	30	30	20	15	7	-8	-3	-16	-37	-27	51222	
MAY	-26	-32	-29	-40	-27	-3	11	16	26	21	18	14	8	5	14	14	23	17	8	3	-3	-5	-17	-14	51223	
JUNE	-29	-21	-35	-34	-15	-10	-5	1	6	8	10	18	20	25	27	26	22	13	2	-5	-3	-3	-4	-17	51233	
JULY	-6	-34	-39	-13	-10	-14	-4	4	7	12	17	24	28	22	-1	13	22	13	11	3	0	1	-26	-31	51230	
AUGUST	-51	-32	-22	-12	-7	2	8	11	15	20	18	7	19	24	26	13	20	23	11	14	4	-14	-47	-49	51228	
SEPTEMBER	-39	-34	-31	-25	-22	-13	-1	8	20	26	26	29	29	15	33	29	20	12	0	9	-10	-19	-23	-41	51244	
OCTOBER	-29	-16	-12	-14	-10	-4	-1	3	7	10	12	14	19	24	29	27	20	11	7	-9	-9	-17	-30	-31	51245	
NOVEMBER	-28	-19	-12	-8	-4	-2	2	5	8	11	14	19	24	29	29	27	25	18	13	3	-16	-37	-47	-54	51245	
DECEMBER	-31	-12	-11	-9	-6	-1	4	5	6	7	10	11	15	20	19	24	23	18	7	-11	-8	-17	-32	-33	51245	
WINTER	-29	-18	-22	-15	-10	-3	3	7	10	14	16	19	22	27	26	25	21	13	7	-4	-12	-24	-34	-38	51232	
EQUINOX	-30	-24	-24	-17	-14	-8	-1	6	12	16	17	20	23	22	31	28	20	13	4	-5	-8	-16	-32	-34	51232	
SUMMER	-28	-30	-31	-25	-15	-6	3	8	14	15	16	16	19	19	16	16	22	16	8	4	0	-5	-24	-28	51228	
YEAR	-29	-24	-26	-19	-13	-6	2	7	12	15	16	18	21	23	24	23	21	14	6	-2	-7	-15	-30	-33	51231	

EAST COMPONENT Y IN NT

MONTH	0	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	15	22	12	-1	-8	-8	-9	0	-5	-3	-8	-11	-10	-8	-6	-1	0	-1	-5	-2	2	11	9	14	1905	
FEBRUARY	10	12	13	9	1	-1	0	0	-5	-10	-15	-17	-17	-13	-11	-9	-1	2	16	5	9	7	13	1900		
MARCH	15	20	16	11	8	5	5	1	-2	-7	-16	-22	-23	-21	-16	-7	2	2	-3	3	1	9	6	11	1902	
APRIL	8	11	23	22	15	14	12	8	2	-7	-17	-26	-25	-24	-18	-11	-6	-7	-4	-3	-4	3	17	15	1903	
MAY	23	28	23	22	18	23	24	17	4	-7	-15	-19	-20	-29	-30	-23	-21	-20	-19	-11	-4	7	12	15	1906	
JUNE	22	27	28	27	25	21	21	17	5	-6	-18	-27	-25	-24	-19	-14	-14	-17	-16	-11	-9	-6	2	11	1910	
JULY	30	44	34	32	28	17	18	12	6	-3	-15	-23	-27	-22	-25	-31	-25	-20	-20	-14	-15	-4	7	18	1912	
AUGUST	17	23	21	22	20	20	16	10	2	-5	-3	-22	-28	-22	-17	-23	-21	-17	-9	-10	-3	4	11	14	1913	
SEPTEMBER	15	17	19	17	15	9	8	3	-1	-4	-11	-14	-17	-17	-11	-10	-11	-7	-15	-8	-2	10	8	8	1919	
OCTOBER	13	6	5	3	4	5	4	3	0	-6	-12	-16	-18	-16	-10	-7	-4	-3	3	9	8	8	9	12	1918	
NOVEMBER	7	4	3	3	1	-3	-3	-4	-6	-7	-11	-12	-14	-11	-10	-7	-1	6	8	8	13	17	14	7	1920	
DECEMBER	3	3	1	1	-2	-3	-3	-4	-5	-7	-8	-10	-10	-7	-7	-3	0	0	4	12	7	11	17	9	1922	
WINTER	9	10	8	3	-2	-3	-4	-2	-4	-5	-9	-12	-13	-11	-9	-6	-2	1	2	8	7	12	12	11	1912	
EQUINOX	13	14	16	13	10	8	7	4	0	-6	-14	-20	-21	-19	-14	-9	-5	-4	-5	0	1	8	10	11	1910	
SUMMER	23	30	26	26	23	20	20	14	4	-5	-13	-23	-25	-25	-23	-23	-20	-19	-16	-12	-8	0	8	15	1910	
YEAR	15	18	17	14	10	8	8	5	0	-6	-12	-18	-19	-18	-15	-12	-9	-7	-6	-1	0	7	10	12	1911	

NORTH COMPONENT X IN NT

MONTH	0	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	-99	-99	-74	-51	-22	12	22	29	20	33	34	47	51	56	59	74	66	61	43	7	1	-59	-106	-103	11420	
FEBRUARY	-54	-47	-20	-14	-1	9	8	7	6	1	1	5	12	24	33	43	39	44	25	11	1	-35	-55	-43	11435	
MARCH	-55	-46	-27	-9	10	14	13	10	5	3	8	17	23	39	39	41	48	50	30	7	-29	-42	-74	-74	11426	
APRIL	-39	-30	-30	-8	1	5	5	0	-5	-3	1	13	33	39	46	51	54	44	30	7	-25	-51	-67	-73	11428	
MAY	-90	-94	-64	-44	-19	-24	-11	-4	8	16	24	43	61	71	84	88	76	70	51	-3	-27	-63	-72	-79	11418	
JUNE	-66	-59	-45	-33	-9	-4	-4	-5	-6	-2	4	18	38	43	52	57	61	55	38	2	-7	-31	-42	-55	11427	
JULY	-102	-102	-57	-40	-34	-10	-2	3	0	2	10	26	62	100	100	90	85	73	52	12	-19	-50	-91	-105	11425	
AUGUST	-59	-45	-24	-7	-2	2	0	-6	-9	-7	-8	11	38	59	65	66	50	47	28	10	-21	-66	-75	-46	11428	
SEPTEMBER	-72	-89	-66	-38	-20	-7	-9	6	10	21	29	51	61	87	95	88	80	68	13	-37	-63	-54	-70	-83	11417	
OCTOBER	-29	-17	-3	6	9	13	8	0	-5	-7	-4	1	8	15	31	37	33	23	15	-3	-18	-36	-44	-35	11430	
NOVEMBER	-23	-20	-8	0	6	10	10	5	1	2	5	10	14	18	23	23	31	29	14	4	-13	-43	-48	-50	11430	
DECEMBER	-34	-19	-10	1	7	10	9	9	7	6	9	11	11	12	12	20	18	15	6	3	4	-18	-36	-55	11431	
WINTER	-52	-46	-28	-16	-3	10	12	13	9	11	12	18	22	27	32	40	38	37	22	6	-2	-39	-61	-63	11429	
EQUINOX	-49	-45	-32	-12	0	6	4	4	1	4	9	21	31	45	53	54	54	46	22	-6	-34	-46	-64	-66	11425	
SUMMER	-79	-75	-47	-31	-16	-9	-4	-3	-2	2	7	24	50	68	75	75	68	61	42	5	-18	-52	-70	-71	11425	
YEAR	-60	-56	-36	-20	-6	2	4	5	3	5	9	21	34	47	53	56	54	48	29	2	-18	-46	-65	-67	11426	

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E HOURLY MEANS MINUS MONTHLY MEANS ON QUIET DAYS 2005

VERTICAL COMPONENT Z IN NT

MONTH	0	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	-18	-5	0	2	2	0	0	-1	-1	0	1	2	2	3	3	6	6	8	14	-6	-5	-4	-6	-6	51229	
FEBRUARY	-5	-8	-6	-2	-1	1	2	2	1	1	2	4	4	5	5	6	6	7	13	-1	-7	-15	-8	-6	51223	
MARCH	-4	-2	-1	-1	-1	0	0	0	0	0	1	2	5	8	8	6	8	13	13	1	-7	-20	-16	-14	51225	
APRIL	-10	-3	2	3	1	-1	-1	-1	-1	-3	-3	-2	0	3	9	11	9	6	3	1	-6	-8	-4	-3	51226	
MAY	-10	-1	1	1	-3	-5	-6	-4	-3	-1	-1	1	2	8	12	10	8	8	9	5	1	0	0	-6	-16	51233
JUNE	-3	-1	2	1	-1	-2	-2	-2	-2	-5	-4	-2	3	9	10	8	8	8	7	4	-10	-14	-8	-4	51235	
JULY	-14	-6	-5	0	1	2	1	-1	-2	-3	-3	-1	2	5	6	7	11	12	11	6	3	-1	-13	-22	51230	
AUGUST	-15	-15	-7	-1	2	5	4	3	4	6	6	6	8	11	10	9	8	7	7	7	9	-7	-22	-45	51237	
SEPTEMBER	-18	-29	-27	-12	-5	-2	-3	-1	1	3	5	6	13	17	15	14	18	16	13	1	-6	-5	-7	-9	51250	
OCTOBER	-14	-6	-1	-1	-3	-1	0	0	1	1	3	4	5	5	5	4	4	4	2	2	0	-3	-6	-6	51247	
NOVEMBER	-7	-1	0	1	1	0	0	1	1	3	3	3	4	4	4	5	5	6	11	10	1	-14	-21	-18	51248	
DECEMBER	-1	-2	-2	-2	-2	-2	-1	-1	-1	-1	0	1	2	3	1	0	-1	1	5	6	6	-1	-3	-3	51250	
WINTER	-8	-4	-2	0	0	0	0	0	0	1	1	2	3	4	3	4	4	6	11	2	-1	-9	-10	-8	51238	
EQUINOX	-11	-10	-7	-3	-2	-1	-1	0	0	0	2	3	6	8	9	9	10	10	8	1	-5	-9	-8	-8	51237	
SUMMER	-10	-6	-2	0	0	0	-1	-1	-1	-1	-1	1	4	8	9	9	9	9	7	5	0	-5	-12	-22	51234	
YEAR	-10	-6	-4	-1	-1	0	-1	0	0	0	1	2	4	7	7	7	8	8	9	3	-2	-8	-10	-13	51236	

EAST COMPONENT Y IN NT

MONTH	0	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	1	0	2	3	3	4	2	0	-3	-5	-8	-8	-6	-8	-7	-4	-5	-1	11	14	9	3	-1	1898	
FEBRUARY	2	1	1	4	5	6	7	6	5	0	-6	-10	-11	-10	-7	-4	-4	-3	2	7	4	5	2	1	1897	
MARCH	2	3	6	7	10	13	14	13	7	-2	-10	-17	-18	-16	-11	-7	-5	-4	-3	-2	6	6	6	5	1898	
APRIL	3	4	9	14	16	17	16	12	6	-2	-14	-23	-24	-19	-11	-3	0	1	-1	-1	4	0	-1	-1	1901	
MAY	5	14	21	25	27	25	19	10	-1	-12	-22	-27	-26	-20	-13	-6	-3	-2	-3	-6	-5	-4	-1	3	1904	
JUNE	10	16	19	21	22	23	24	19	8	-3	-16	-25	-26	-21	-13	-9	-7	-8	-8	-9	-7	-6	-3	-2	1908	
JULY	10	17	24	26	26	26	27	20	10	-2	-15	-25	-28	-25	-20	-16	-12	-12	-10	-9	-11	-6	1	5	1909	
AUGUST	8	14	19	21	19	20	18	12	4	-6	-18	-25	-25	-21	-17	-11	-9	-9	-8	-6	-4	4	7	13	1914	
SEPTEMBER	3	5	12	16	16	14	10	4	-1	-6	-13	-19	-17	-13	-7	-3	-1	-3	-3	1	3	-1	0	2	1914	
OCTOBER	3	3	5	6	7	8	10	9	5	-2	-9	-14	-14	-10	-6	-4	-3	-2	-1	0	1	3	1	2	1916	
NOVEMBER	3	2	3	3	2	3	3	1	-3	-5	-8	-8	-8	-5	-2	-2	-1	0	8	4	1	4	6	8	1	1919
DECEMBER	1	1	2	2	2	2	1	-1	-3	-7	-8	-8	-6	-2	0	0	0	0	4	2	2	7	8	3	1920	
WINTER	2	1	2	3	3	3	4	2	-1	-4	-7	-9	-8	-6	-4	-3	-3	-2	2	5	6	7	5	1	1908	
EQUINOX	3	4	8	11	12	13	12	9	4	-3	-12	-18	-18	-14	-9	-4	-2	-2	-2	0	4	2	2	2	1908	
SUMMER	8	15	21	23	24	24	22	15	5	-6	-18	-25	-26	-22	-16	-11	-8	-7	-7	-7	-7	-3	1	5	1909	
YEAR	4	7	10	12	13	13	13	9	3	-4	-12	-17	-18	-14	-10	-6	-4	-4	-2	-1	1	2	3	3	1908	

NORTH COMPONENT X IN NT

MONTH	0	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	-4	-3	0	1	1	0	-1	-4	-6	-5	-3	0	2	4	2	1	3	5	5	6	3	2	0	11442	
FEBRUARY	-3	-5	-3	0	3	3	2	-1	-5	-10	-10	-8	-4	2	4	5	5	5	6	5	2	2	3	2	11445	
MARCH	1	1	0	3	3	1	-4	-11	-18	-21	-19	-10	-2	3	6	7	10	18	26	19	0	-11	-5	3	11443	
APRIL	-7	2	7	9	7	3	-4	-12	-19	-24	-26	-21	-12	-3	4	7	11	14	14	13	11	8	9	9	11445	
MAY	-2	7	8	7	3	-4	-11	-19	-28	-33	-24	-19	-12	3	5	9	20	23	22	17	12	8	7	2	11444	
JUNE	0	0	5	2	-1	-5	-10	-18	-24	-28	-26	-14	-10	0	1	10	16	21	26	25	15	7	6	3	11446	
JULY	-10	-5	-3	0	1	-3	-13	-20	-26	-28	-26	-17	-5	3	10	18	22	29	27	23	17	12	2	-10	11444	
AUGUST	-9	-8	-3	5	4	-1	-6	-13	-20	-21	-16	-9	5	11	15	17	16	15	19	23	18	2	-9	-33	11433	
SEPTEMBER	-7	-18	-13	0	4	-1	-7	-12	-17	-16	-14	-5	1	4	10	12	15	16	14	13	8	5	5	1	11433	
OCTOBER	-7	0	3	4	6	7	4	-4	-12	-17	-18	-13	-5	0	3	3	5	6	7	7	6	7	5	5	11436	
NOVEMBER	-2	-1	0	3	4	5	3	-3	-6	-5	-4	-1	2	3	3	3	4	4	4	6	-2	-5	-7	-5	11437	
DECEMBER	-3	-4	-3	-2	0	1	0	-1	-3	-3	0	3	3	2	3	2	2	2	1	1	2	1	-1	-3	11439	
WINTER	-4	-4	-2	0	2	2	1	-2	-5	-6	-5	-2	0	2	3	3	3	4	4	4	2	0	0	-2	11441	
EQUINOX	-5	-4	-1	4	5	3	-3	-10	-17	-20	-19	-12	-4	1	6	7	10	13	15	13	6	2	3	4	11439	
SUMMER	-5	-2	2	3	2	-3	-10	-18	-25	-28	-23	-15	-6	4	8	13	19	22	23	22	15	7	2	-9	11442	
YEAR	-5	-3	0	3	3	1	-4	-10	-15	-18	-16	-10	-3	2	6	8	11	13	14	13	8	3	1	-2	11441	

SODANKYLÄ FINLAND LAT = 67 22.1'N LONG = 26 37.8'E HOURLY MEANS MINUS MONTHLY MEANS ON DIST. DAYS 2005

VERTICAL COMPONENT Z IN NT

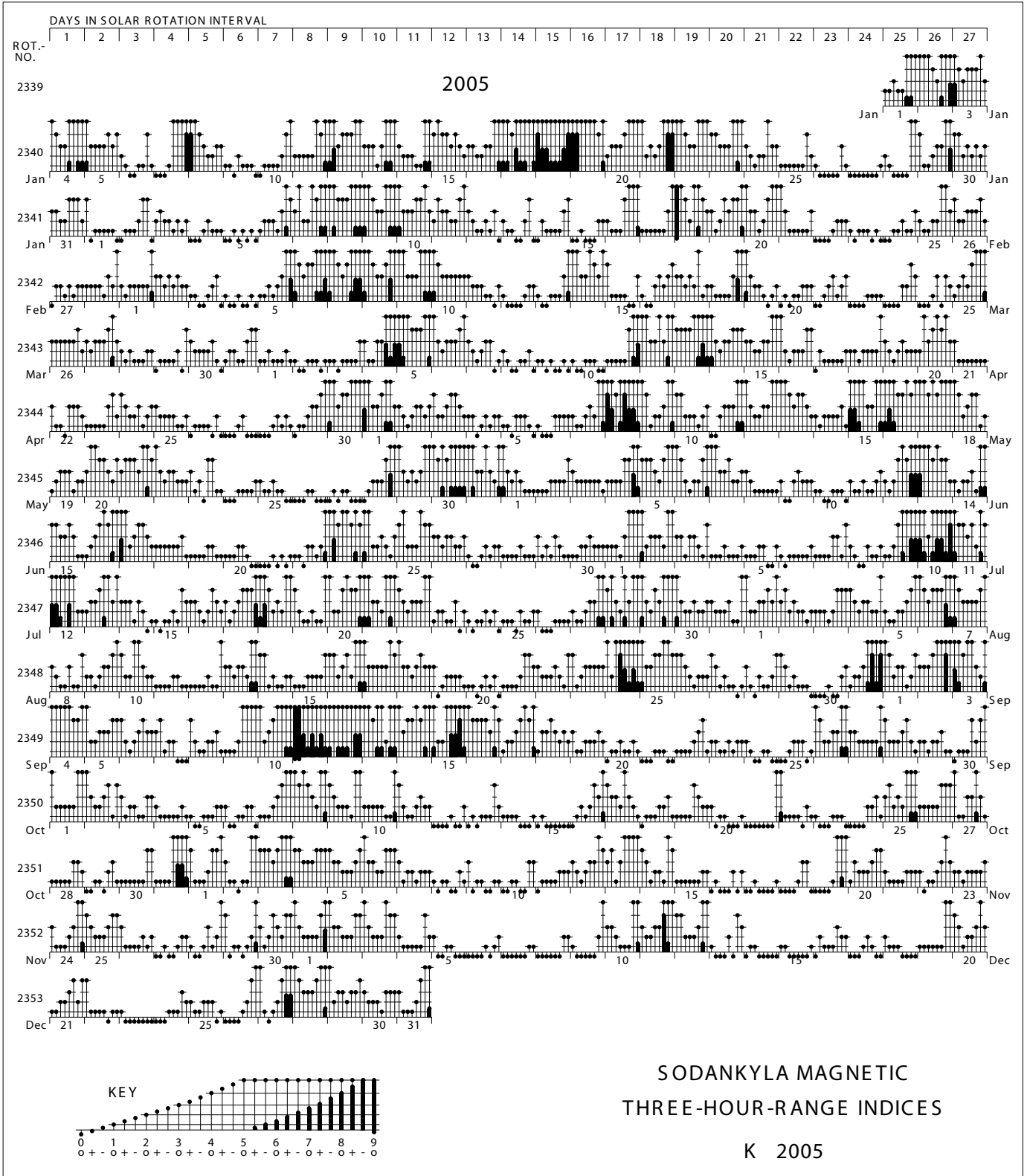
MONTH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
JANUARY	29	57	-204	-102	-43	5	31	48	31	73	60	55	57	54	8	-13	-45	-99	-63	-16	13	-14	9	70	51205	
FEBRUARY	-4	-106	-70	-35	-40	-20	-7	6	16	20	28	32	36	52	64	30	48	8	-21	-21	-5	-30	25	-6	51217	
MARCH	33	-26	-64	-50	-38	-26	1	22	37	40	44	55	59	62	77	42	13	6	-42	-88	-51	12	-67	-49	51197	
APRIL	24	-3	-76	-41	-39	-36	-11	1	11	32	32	30	50	41	53	53	7	-8	-26	-46	19	12	-92	12	51219	
MAY	-17	-22	-22	-81	-38	42	80	84	107	63	48	7	-74	-114	-87	-86	-6	-6	0	34	72	63	-45	-4	51194	
JUNE	-7	18	-72	-74	-41	-47	-41	-17	-2	1	13	36	27	36	44	34	24	6	-29	-50	5	44	50	42	51243	
JULY	33	-66	-100	-32	7	-41	-19	6	16	30	48	77	97	23	-149	-78	-23	-2	4	21	80	83	-21	7	51223	
AUGUST	-108	-50	-11	3	6	19	31	46	50	63	31	-46	-15	-14	-9	-82	-28	18	1	57	48	46	-16	-39	51207	
SEPTEMBER	-85	-98	-81	-36	-37	-18	16	34	69	83	59	50	17	-86	-1	-25	-3	12	-1	87	52	23	26	-57	51222	
OCTOBER	-35	-9	-32	-55	-41	-19	-4	4	12	22	27	26	34	59	57	39	11	-18	11	-15	20	2	-52	-41	51245	
NOVEMBER	-19	-29	-25	-22	-15	-9	7	16	19	25	35	53	60	59	59	51	40	13	-12	-31	-20	-60	-101	-93	51233	
DECEMBER	-82	-17	-23	-28	-16	3	17	24	25	26	38	31	35	45	41	47	28	10	-13	-19	-17	-22	-91	-44	51230	
WINTER	-19	-24	-80	-47	-28	-5	12	23	23	36	40	43	47	53	43	29	18	-17	-27	-22	-7	-31	-39	-18	51221	
EQUINOX	-16	-34	-63	-46	-39	-25	0	15	32	44	41	40	40	19	46	27	7	-2	-15	-15	10	12	-46	-34	51221	
SUMMER	-25	-30	-51	-46	-16	-7	13	30	43	39	35	19	9	-17	-50	-53	-8	4	-6	15	51	59	-8	1	51217	
YEAR	-20	-29	-65	-46	-28	-12	8	23	33	40	39	34	32	18	13	1	5	-5	-16	-7	18	13	-31	-17	51219	

EAST COMPONENT Y IN NT

MONTH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
JANUARY	-9	53	45	-3	-13	-6	-8	35	4	17	2	-2	-3	-11	-6	-9	-24	8	-12	-41	-44	21	-10	14	1914	
FEBRUARY	43	55	57	27	-1	-8	-14	-17	-13	-15	-18	-25	-33	-29	-19	-34	-18	-9	-10	48	0	15	-8	28	1911	
MARCH	14	53	55	23	12	-6	-9	-20	-24	-18	-21	-28	-26	-30	-29	-9	25	5	-3	19	1	26	-15	3	1906	
APRIL	22	27	65	60	12	2	-2	-9	-14	-18	-25	-41	-31	-37	-35	-35	-21	-19	0	-1	-34	0	73	63	1914	
MAY	49	59	31	33	24	41	62	61	37	14	6	8	-12	-81	-103	-81	-77	-71	-61	-19	-8	31	38	20	1904	
JUNE	50	62	33	24	34	15	6	20	-3	-7	-15	-29	-22	-32	-38	-27	-36	-46	-38	-11	-6	3	27	36	1911	
JULY	49	62	21	46	37	1	18	10	15	3	-7	-4	-7	12	-29	-92	-74	-33	-30	-29	-23	9	14	30	1911	
AUGUST	39	62	33	23	22	22	17	9	-5	-1	66	-11	-27	-22	-24	-69	-89	-71	-34	-31	0	15	32	46	1914	
SEPTEMBER	36	42	39	45	28	12	17	1	8	16	6	0	-11	-22	-23	-28	-38	-32	-65	-38	-22	-4	21	10	1936	
OCTOBER	33	13	6	-5	5	5	4	-1	1	-6	-12	-16	-19	-19	-12	-11	0	-21	-7	13	4	18	14	16	1916	
NOVEMBER	11	14	10	2	-1	-12	-8	-8	-8	-6	-15	-17	-19	-17	-19	-14	2	23	25	10	18	16	5	9	1923	
DECEMBER	19	9	4	4	-3	-9	-8	-9	-9	-8	-12	-16	-16	-11	-12	-7	-4	-5	-11	6	10	29	45	12	1927	
WINTER	16	33	29	7	-4	-9	-10	0	-7	-3	-11	-15	-18	-17	-14	-16	-11	4	-2	6	-4	20	8	16	1919	
EQUINOX	26	33	41	31	14	3	2	-7	-7	-6	-13	-21	-22	-27	-25	-20	-8	-17	-19	-2	-13	10	23	23	1918	
SUMMER	46	61	29	31	29	20	26	25	11	2	12	-9	-17	-31	-48	-67	-69	-55	-41	-22	-9	15	28	33	1910	
YEAR	30	42	33	23	13	5	6	6	-1	-2	-4	-15	-19	-25	-29	-34	-29	-23	-20	-6	-9	15	20	24	1916	

NORTH COMPONENT X IN NT

MONTH	0	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	-211	-378	-299	-164	-118	23	59	104	60	132	138	203	196	190	171	223	173	150	92	-71	-46	-217	-272	-139	11378	
FEBRUARY	-178	-193	-91	-64	-3	33	27	36	46	37	40	50	66	93	127	158	103	116	43	1	7	-135	-205	-115	11403	
MARCH	-143	-209	-91	-50	28	41	45	55	61	62	71	90	87	118	120	156	181	143	22	-43	-128	-165	-230	-220	11379	
APRIL	-122	-118	-129	-72	-16	24	42	48	54	68	78	106	162	150	166	183	195	104	38	-36	-150	-240	-274	-262	11375	
MAY	-187	-287	-220	-167	-61	-101	-38	2	62	96	145	175	212	166	205	181	115	128	59	-77	-18	-158	-144	-89	11381	
JUNE	-155	-96	-61	-101	-63	-39	-17	-5	8	37	50	84	154	132	174	179	168	154	45	-137	-91	-107	-119	-195	11395	
JULY	-153	-167	-113	-155	-180	-107	-25	8	9	2	29	75	204	371	366	279	190	121	38	-103	-85	-136	-270	-197	11432	
AUGUST	-100	-111	-14	1	6	14	13	8	11	28	-28	44	127	197	195	211	120	89	-4	-42	-167	-243	-244	-110	11409	
SEPTEMBER	-245	-259	-161	-124	-77	-8	-34	37	67	134	147	210	244	304	286	214	166	145	-77	-203	-252	-145	-151	-219	11374	
OCTOBER	-57	-64	-41	-3	6	20	13	3	6	10	21	24	28	55	119	136	116	53	25	-51	-106	-142	-118	-54	11422	
NOVEMBER	-32	-61	-29	-19	-4	6	21	17	7	9	17	33	37	50	80	79	68	47	3	-14	-28	-82	-128	-79	11424	
DECEMBER	-68	-44	-40	10	27	28	25	28	24	21	34	32	32	34	34	57	53	25	-36	-18	28	-32	-89	-163	11415	
WINTER	-123	-169	-115	-59	-25	23	33	46	34	50	57	80	83	92	103	129	99	85	26	-26	-10	-116	-173	-124	11405	
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