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GEOPHYSICAL OBSERVATORY REPORTS

1992/1993

OF THE GEODETIC AND GEOPHYSICAL
RESEARCH INSTITUTE OF THE HUNGARIAN
ACADEMY OF SCIENCES

YEAR

1992-1993

NAGYCENK GEOPHYSICAL OBSERVATORY



SOPRON

1997



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1997

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TUDOMÁNYOS AKADÉMIA
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Preface

Nagycekk Geophysical Observatory has been supplying data since 1957. The present volume continues the series and contains results of measurement carried out in 1992 and in 1993.

Reports comprise earth current data from 1957 on, geomagnetic data from 1961 on, atmospheric electricity from 1962 on, and ionospheric data from 1967 on. Reports from years 1986–1987 have been compressed with respect to the earlier ones but all data series which proved to be of great value have been kept.

Although the early nineties are to be considered a transition period in the observatory, the presentation of the data remained still unchanged.

Exchange copies of Nagycekk Geophysical Observatory Reports can be obtained from the Geodetic and Geophysical Institute of the Hungarian Academy of Sciences.

Sopron, February 1997

V Wesztergom

The coordinates of the observatory:

$$\begin{array}{ll} \varphi = 47^{\circ}38' & \lambda = 16^{\circ}43' \\ \phi = 47.2^{\circ} & \Lambda = 98.3^{\circ} \\ L = 1.9 & \end{array}$$

I. EARTH CURRENTS, PULSATIONS

Electric activity indices

The 3-hour electric activity indices T for the E_x and E_y component, have a linear scale with a step of 1.8 mV/Km. The range of values is 0 to 9.

The index K_1 refers to complete days and expresses the activities in the period range 0-2 min (pulsations).

Limits between K1-values								
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
2	4	7	13	18	23	29	41	54

These values are given in units of 10^{-5} V/km.

Values in brackets mean extrapolated data, where the lacking intervals were substituted by the average of recorded intervals.

Times are given in CET (i.e. UT + 1 h), nearly corresponding to LT (-7 min)

A detailed description of the processing and compilation is found in the Report of the Observatory for 1966 in German and \acute{A} dám A, Verő J, Cz. Miletits J, Holló L, Wallner Á: The geophysical observatory near Nagycenk. I. Electromagnetic measurements and processing of data (*Acta Geod. Geoph. Mont. Hung.*, 16, 1981, 333).

Electric activity indices
1992

Date	T	Sum	K1	Date	T	Sum	K1
920101	10111423	13	3	920211	21121110	9	6
920102	64392330	30	3	920212	23222201	14	6
920103	13153123	19	3	920213	21232001	11	4
920104	22232122	16	3	920214	01121102	8	5
920105	42121220	14	4	920215	00102100	4	4
920106	11213102	11	5	920216	01111001	5	3
920107	01021121	8	3	920217	10256222	20	3
920108	03122221	13	4	920218	23121111	12	4
920109	00101003	5	5	920219	22131211	13	5
920110	23022243	18	4	920220	45335656	37	5
920111	12133573	25	5	920221	45765222	33	5
920112	35353352	29	4	920222	44343104	23	3
920113	25233252	24	5	920223	22111116	15	4
920114	31324444	25	6	920224	12353458	31	5
920115	22337423	26	5	920225	76667324	41	5
920116	12142139	23	7	920226	32345298	36	6
920117	22121122	13	4	920227	77685674	50	3
920118	11111000	5	4	920228	21123101	11	4
920119	01111000	4	3	920229	11188855	37	6
920120	11123321	14	4	920301	32422112	17	4
920121	10011113	8	3	920302	12242130	15	3
920122	31012100	8	4	920303	11112020	8	4
920123	01000000	1	3	920304	11122332	15	4
920124	10010001	3	4	920305	11221131	12	6
920125	11011001	5	4	920306	21120101	8	5
920126	00001642	13	3	920307	11211112	10	2
920127	35332225	25	3	920308	21114211	13	4
920128	43222121	17	4	920309	32354471	29	4
920129	11113123	13	4	920310	23234324	23	7
920130	22243432	22	3	920311	34336241	26	7
920131	22122121	13	4	920312	12224201	14	7
920201	14553335	29	5	920313	01221100	7	6
920202	76337299	46	7	920314	00110011	4	4
920203	99968799	66	7	920315	00322211	11	6
920204	26443298	38	4	920316	01323214	16	3
920205	40111100	8	4	920317	11165676	33	6
920206	00112101	6	4	920318	73644211	28	4
920207	21123211	13	4	920319	00100020	3	4
920208	11622986	35	4	920320	00101100	3	3
920209	68786894	56	4	920321	10354323	21	5
920210	45357731	35	6	920322	31233112	16	7

ELECTRIC ACTIVITY INDICES

7

Date	T	Sum	K1	Date	T	Sum	K1
920323	33332142	21	5	920505	01201101	6	5
920324	22222327	22	3	920506	10011023	8	6
920325	34212112	16	4	920507	14317236	27	5
920326	01112126	14	3	920508	21423643	25	5
920327	11211215	14	4	920509	31013699	32	6
920328	21211102	10	5	920510	99999999	72	9
920329	11112343	16	4	920511	98643534	42	6
920330	21113021	11	3	920512	23101220	11	4
920331	31011153	15	5	920513	12124411	16	5
920401	21233113	16	4	920514	11001000	3	6
920402	11110031	8	5	920515	01011121	7	5
920403	01337572	28	4	920516	01100001	3	6
920404	12222121	13	5	920517	01010011	4	4
920405	12233114	17	7	920518	11000105	8	5
920406	33422111	17	4	920519	43211232	18	6
920407	13553221	22	6	920520	11111111	8	5
920408	33322261	22	7	920521	11111022	9	7
920409	11111112	9	6	920522	25458775	43	5
920410	11101110	6	5	920523	12223393	25	4
920411	10000000	1	6	920524	22211010	9	7
920412	00110110	4	4	920525	12212231	14	7
920413	01111001	5	2	920526	10114112	11	6
920414	11111004	9	3	920527	21232221	15	7
920415	23121211	13	4	920528	12323214	18	7
920416	21111100	7	2	920529	22224534	24	7
920417	00000202	4	3	920530	23523222	21	7
920418	22254515	26	3	920531	22121121	12	7
920419	31211221	13	5	920601	12121100	8	5
920420	32112211	13	5	920602	10100112	6	3
920421	21011100	6	6	920603	21111210	9	3
920422	11112113	11	4	920604	00000011	2	3
920423	20011212	9	7	920605	20013321	12	3
920424	12222211	13	6	920606	00111111	6	3
920425	11222103	12	6	920607	01111132	10	4
920426	11111021	8	7	920608	97423535	38	4
920427	10111111	7	6	920609	61212112	16	4
920428	11113002	9	4	920610	15764442	33	5
920429	12111011	8	5	920611	34112268	27	5
920430	22123011	12	5	920612	94357563	42	5
920501	11221263	18	5	920613	25101242	17	5
920502	22412121	15	4	920614	20111112	9	4
920503	12311211	12	5	920615	21111221	11	6
920504	23112111	12	4	920616	01111100	5	5

ELECTRIC ACTIVITY INDICES

Date	T	Sum	K1	Date	T	Sum	K1
920617	01110111	6	4	920730	21112223	14	5
920618	11118477	30	6	920731	22122312	15	7
920619	42223342	22	4	920801	32222101	13	5
920620	12122200	10	7	920802	11110111	7	4
920621	52101211	13	6	920803	00111111	6	5
920622	33124201	16	6	920804	22111655	23	5
920623	22121233	16	6	920805	55433133	27	4
920624	25734533	32	6	920806	16422212	20	4
920625	23222322	18	6	920807	34224221	20	6
920626	11122222	13	6	920808	12221222	14	5
920627	12122224	16	6	920809	41222221	16	7
920628	23443312	22	7	920810	11112111	9	5
920629	25212965	32	5	920811	11212223	14	4
920630	68332111	25	4	920812	11111000	5	3
920701	42222446	26	6	920813	00002722	13	4
920702	34432101	18	6	920814	31212320	14	4
920703	12121110	9	5	920815	11112132	12	7
920704	01100011	4	5	920816	22222212	15	6
920705	23313112	16	3	920817	11001011	5	6
920706	11111110	7	4	920818	21112212	12	5
920707	00011211	6	4	920819	11112134	14	5
920708	00120221	8	3	920820	38555321	32	4
920709	11101101	6	2	920821	12124471	22	6
920710	11101020	6	3	920822	12654579	39	7
920711	10100001	3	4	920823	99877932	54	5
920712	32223232	19	3	920824	11211113	11	6
920713	22232335	22	6	920825	11112111	9	6
920714	43322121	18	7	920826	32233111	16	4
920715	21111000	6	5	920827	12123133	16	5
920716	01122114	12	4	920828	11111011	7	6
920717	30001100	5	5	920829	54221113	19	6
920718	01111100	5	5	920830	11212111	10	5
920719	10000012	4	3	920831	01011110	5	4
920720	11011232	11	3	920901	10110000	3	4
920721	01112331	12	4	920902	01157655	30	5
920722	12245354	26	6	920903	33676764	42	6
920723	43332141	21	7	920904	53443226	29	5
920724	11111211	9	4	920905	92443226	32	6
920725	11022652	19	5	920906	21222143	17	6
920726	11111111	8	4	920907	22223351	20	4
920727	00111111	6	4	920908	32233241	20	2
920728	55612213	25	4	920909	98999894	65	5
920729	11111111	8	7	920910	83454999	51	6

ELECTRIC ACTIVITY INDICES

9

Date	T	Sum	K1	Date	T	Sum	K1
920911	72232453	28	3	921024	10011100	4	5
920912	20100111	6	4	921025	20113112	11	5
920913	00111122	8	4	921026	43332113	20	6
920914	01121243	14	6	921027	35234791	34	5
920915	11122211	11	4	921028	32122112	14	3
920916	11111153	14	4	921029	13222374	24	4
920917	14875479	45	7	921030	11224313	17	5
920918	53565333	33	7	921031	11112111	9	3
920919	42245241	24	7	921101	10111119	15	5
920920	11244213	18	6	921102	63222112	19	6
920921	11221013	11	5	921103	42221013	15	3
920922	35223124	22	7	921104	12125523	21	3
920923	22231111	13	3	921105	71231331	21	5
920924	00011012	5	4	921106	11312411	14	2
920925	21124144	19	7	921107	31122213	15	5
920926	22211210	11	5	921108	22112223	15	6
920927	00011110	4	4	921109	23476537	37	3
920928	00113246	17	6	921110	42314122	19	5
920929	46676683	46	7	921111	24655332	30	6
920930	33433875	36		921112	32335324	25	7
921001	43333461	27	3	921113	22334332	22	7
921002	22121211	12	2	921114	21233122	16	5
921003	00111011	5	2	921115	21223525	22	6
921004	12221000	8	3	921116	31221114	15	5
921005	01111111	7	4	921117	11211121	10	3
921006	22011110	8	4	921118	21112131	12	6
921007	01121121	9	4	921119	01132100	8	5
921008	21110143	13	4	921120	00010011	3	3
921009	33192464	32	3	921121	21100000	4	3
921010	21253112	17	4	921122	21434124	21	3
921011	11136353	23	5	921123	34362934	34	4
921012	22237722	27	4	921124	21122141	14	3
921013	21435522	24	7	921125	11132012	11	1
921014	34645126	31	7	921126	11121101	8	3
921015	85764433	40	7	921127	11213101	10	3
921016	53243232	24	7	921128	00011001	3	3
921017	32234433	24	7	921129	11122110	9	3
921018	11113314	15	6	921130	00022272	15	3
921019	42155531	26	6	921201	41123423	20	2
921020	43123101	15	6	921202	31111121	11	5
921021	11211112	10	6	921203	11111243	14	3
921022	22115211	15	6	921204	12111122	11	3
921023	11211001	7	7	921205	41100100	7	3

ELECTRIC ACTIVITY INDICES

Date	T	Sum	K1
921206	10000210	4	4
921207	11223114	15	3
921208	54346245	33	6
921209	22336533	27	5
921210	22142954	29	5
921211	21122221	13	7
921212	11112121	10	7
921213	12312111	12	6
921214	31111223	14	4
921215	24323313	21	6
921216	01111101	6	6
921217	00534473	26	3
921218	11132244	18	3
921219	11112154	16	5
921220	21222141	15	4
921221	01132281	18	4
921222	21123120	12	7
921223	01122220	10	5
921224	01112140	10	2
921225	00101122	7	3
921226	10010101	4	3
921227	00000036	9	2
921228	41122469	29	3
921229	64233692	35	4
921230	21122120	11	4
921231	31123210	13	4

Electric activity indices
1993

Date	T	Sum	K1	Date	T	Sum	K1
930101	14242112	17	7	930211	43223442	24	7
930102	23245455	30	6	930212	61212311	17	7
930103	44355544	34	7	930213	41112112	13	6
930104	84337445	38	7	930214	11111120	8	5
930105	53344232	26	7	930215	00021010	4	4
930106	12234332	20	7	930216	01112000	5	4
930107	12244527	27	7	930217	09259730	35	4
930108	13142344	22	7	930218	11123134	16	5
930109	42212322	18	5	930219	21111122	11	6
930110	23587621	34	6	930220	13436534	29	6
930111	11225433	21	5	930221	43556555	38	7
930112	43221221	17	6	930222	25366444	34	7
930113	11011324	13	6	930223	31121121	12	5
930114	44434333	28	7	930224	02133111	12	7
930115	23233223	20	7	930225	01101111	6	3
930116	12112221	12	5	930226	00111111	6	4
930117	21222111	12	3	930227	00011002	4	3
930118	11311216	16	4	930228	44223221	20	4
930119	43256176	34	5	930301	31237322	23	4
930120	41343300	18	4	930302	22225344	24	5
930121	12101111	8	5	930303	43233259	31	5
930122	00011012	5	6	930304	34421141	20	5
930123	20000001	3	4	930305	21120000	6	6
930124	11121141	12	3	930306	10122121	10	4
930125	00137584	28	5	930307	13322116	19	5
930126	52234332	24	7	930308	22222449	27	5
930127	11111232	12	4	930309	78764437	46	7
930128	01122111	9	5	930310	53114301	18	5
930129	10011012	6	6	930311	11439999	45	4
930130	22212132	15	4	930312	64412246	29	7
930131	35458589	47	7	930313	33533482	31	8
930201	55373833	37	6	930314	32355353	29	8
930202	44323433	26	7	930315	41456366	35	5
930203	11122142	14	6	930316	43455391	34	5
930204	31001112	9	5	930317	22134336	24	6
930205	10011112	7	6	930318	72324112	22	6
930206	00112012	7	6	930319	11222321	14	7
930207	02331286	25	5	930320	11433221	17	5
930208	56454659	44	7	930321	33355642	31	7
930209	44254533	30	7	930322	32444254	28	7
930210	11142382	22	6	930323	21233119	22	6

ELECTRIC ACTIVITY INDICES

Date	T	Sum	K1	Date	T	Sum	K1
930324	44666456	41	7	930506	21212322	15	3
930325	21232221	15	5	930507	11222223	15	4
930326	01221113	11	6	930508	65534437	37	6
930327	21213421	16	6	930509	48954475	46	7
930328	31111135	16	3	930510	5754421	(32)	6
930329	43110002	11	2	930511	110111	(7)	4
930330	20223331	16	3	930512	12123223	16	4
930331	51111112	13	4	930513	51001113	12	4
930401	01111112	8	5	930514	12234321	18	5
930402	00001102	4	4	930515	22222131	15	5
930403	10010102	5	5	930516	23213312	17	6
930404	00002999	29	4	930517	23122224	18	6
930405	97534795	49	4	930518	01122212	11	4
930406	12333117	21	4	930519	12122321	14	7
930407	11111114	11	5	930520	12311110	10	6
930408	23235392	29	5	930521	01101000	3	4
930409	22121284	22	6	930522	01111111	7	3
930410	42413222	20	5	930523	00001020	3	3
930411	11112111	9	4	930524	00110011	4	3
930412	55222111	19	4	930525	11000000	2	2
930413	02444342	23	6	930526	00100111	4	3
930414	12122143	16	6	930527	36424133	26	5
930415	32321136	21	5	930528	35455452	33	6
930416	12322222	16	7	930529	33332111	17	6
930417	21111151	13	6	930530	11211010	7	3
930418	23443221	21	6	930531	11012110	7	4
930419	22211121	12	3	930601	02111000	5	3
930420	24433422	24	6	930602	11111121	9	3
930421	34332654	30	6	930603	11123321	14	3
930422	33223367	29	6	930604	38987555	50	8
930423	21122261	17	4	930605	65744351	35	6
930424	31323320	17	6	930606	23333323	22	7
930425	12231213	15	5	930607	32334435	27	6
930426	10112111	8	3	930608	33633241	25	7
930427	10010101	4	4	930609	11110111	7	4
930428	10112121	9	3	930610	11111159	20	4
930429	00113324	14	3	930611	92112111	18	3
930430	55323233	26	6	930612	12344224	22	5
930501	12142000	10	3	930613	22343113	19	7
930502	00011122	7	2	930614	11121211	10	5
930503	20112201	9	3	930615	12110100	6	3
930504	00111110	5	6	930616	01101000	3	3
930505	01122000	6	4	930617	01112112	9	3

ELECTRIC ACTIVITY INDICES

13

Date	T	Sum	K1	Date	T	Sum	K1
930618	01001100	3	3	930731	21132111	12	7
930619	11101111	7	2	930801	20000110	4	5
930620	01111120	7	2	930802	11100001	4	4
930621	00000000	0	1	930803	10121211	9	3
930622	11110112	8	3	930804	11214653	23	3
930623	21126253	22	4	930805	86521121	26	3
930624	35544422	29	7	930806	11223221	14	5
930625	23334331	22	7	930807	13221116	17	5
930626	12222211	13	5	930808	21111100	7	5
930627	11012110	7	3	930809	11222221	13	5
930628	02011010	5	5	930810	11121111	9	5
930629	15334311	21	2	930811	22111000	7	6
930630	12211331	14	4	930812	21111101	8	3
930701	34224216	24	4	930813	11111111	8	5
930702	33245269	34	7	930814	00000000	0	4
930703	73624341	30	4	930815	00011329	16	4
930704	44121111	15	5	930816	54686999	56	7
930705	12100011	6	5	930817	74213111	20	4
930706	00030111	6	3	930818	22223233	19	4
930707	42211121	14	4	930819	12212114	14	4
930708	12534434	26	4	930820	11211110	8	5
930709	13112622	18	6	930821	11211010	7	5
930710	12133333	19	6	930822	01121012	8	5
930711	24342211	19	5	930823	10000000	1	4
930712	11221211	11	6	930824	00121101	6	3
930713	12121111	10	4	930825	10011102	6	3
930714	11100010	4	5	930826	11111112	9	3
930715	10111121	8	3	930827	20124584	26	3
930716	11111110	7	5	930828	21133122	15	3
930717	11110010	5	4	930829	23212111	13	5
930718	21012111	9	3	930830	20101000	4	3
930719	11011111	7	3	930831	11111111	8	5
930720	11244144	21	4	930901	00000010	1	4
930721	22324322	20	5	930902	01113011	8	3
930722	21221211	12	5	930903	12125293	25	4
930723	13211101	10	4	930904	95443613	35	7
930724	10011110	5	4	930905	32222312	17	6
930725	21000100	4	3	930906	31112113	13	5
930726	11001110	5	3	930907	11111102	8	5
930727	11126422	19	3	930908	31112112	12	5
930728	22111111	10	4	930909	40001001	6	4
930729	11012332	13	5	930910	11111010	6	3
930730	22211101	10	7	930911	20011011	6	3

ELECTRIC ACTIVITY INDICES

Date	T	Sum	K1	Date	T	Sum	K1
930912	10111239	18	4	931025	21245793	33	4
930913	59488995	57	5	931026	41121655	25	4
930914	53233544	29	6	931027	43234695	36	6
930915	22222221	15	6	931028	23444224	25	7
930916	11112121	10	5	931028	31112211	12	5
930917	00111101	5	5	931029	10011101	5	5
930918	00110010	3	4	931030	00011121	6	3
930919	11011102	7	3	931101	12023222	14	5
930920	00132336	18	4	931102	21111100	7	5
930921	71100124	16	4	931103	00001134	9	3
930922	11111111	8	3	931104	96778896	60	6
930923	10016324	17	4	931105	32564896	43	7
930924	61433345	29	4	931106	22254475	31	5
930925	51233122	19	4	931107	31244454	27	6
930926	11232111	12	6	931108	42222561	24	5
930927	41112221	14	5	931109	21222122	14	7
930928	01122343	16	5	931110	22222121	14	3
930929	31234883	32	6	931111	02011100	5	5
930930	42212017	19	6	931112	00111001	4	4
931001	62342422	25	4	931113	01112121	9	3
931002	10212241	13	5	931114	11122523	17	4
931003	00011141	8	4	931115	11111145	15	3
931004	00111121	7	5	931116	21111132	12	4
931005	11011122	9	3	931117	10000023	6	3
931006	12111012	9	3	931118	10105998	33	5
931007	11002000	4	1	931119	56442465	36	6
931008	01224212	14	4	931120	22321111	13	6
931009	34766357	41	5	931121	11221111	10	6
931010	34555536	36	6	931122	21111011	8	6
931011	23123653	25	5	931123	11111120	8	5
931012	42335531	26	6	931124	11011101	6	5
931013	22211122	13	6	931125	01111111	7	4
931014	11112120	9	6	931126	21222271	19	7
931015	10110200	5	5	931127	21110112	9	6
931016	01021102	7	4	931128	00111111	6	5
931017	12101121	9	3	931129	22121231	14	3
931018	12010100	5	2	931130	21001000	4	4
931019	21011012	8	3	931201	11126729	29	5
931020	10000111	4	3	931202	45565769	47	6
931021	11112001	7	4	931203	83552156	35	4
931022	14122433	20	4	931204	11122114	13	5
931023	21322212	15	5	931205	01133432	17	6
931024	32222121	15	7	931206	11211111	9	6

ELECTRIC ACTIVITY INDICES

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Date	T	Sum	K1
931207	21105349	25	4
931208	86325930	36	3
931209	00000001	1	4
931210	10011121	7	4
931211	31010110	7	3
931212	10010111	5	3
931213	10000000	1	3
931214	21010001	5	2
931215	02122101	9	3
931216	11444426	26	5
931217	23344435	28	6
931218	23233352	23	7
931219	32112230	14	7
931220	43112222	17	6
931221	22243444	25	7
931222	32223112	16	7
931223	21121125	15	5
931224	21222222	15	6
931225	12213103	13	5
931226	11111215	13	4
931227	11101120	7	3
931228	00000110	2	3
931229	11000010	3	5
931230	11010000	3	3
931231	11332223	17	3

II. GEOMAGNETISM

1. Geomagnetic activity indices: K-index

The K-index is determined from the amplitude ranges of H and D components for each three-hour Universal Time interval. Limit for K=9 is 350 nT in Nagycenk.

2. Daily mean values of H, D, Z and F

Daily mean values are calculated from hourly mean values. Hourly means are derived from corrected using absolute observations. The units of the elements are 0.1 nT, Declination is also scaled to 0.1 nT. Minute means of F are calculated from H and Z. F values are checked by comparing them with proton magnetometer readings taken at every 10 minutes.

3. Yearly means of geomagnetic elements

Table contains yearly means of the geomagnetic elements 1961 to 1993 in nT. These values are the results of a reevaluation of previously published data, including corrections eliminating disturbances caused by construction works in the observatory. Corrected values are noted by asterisk.

4. Special phenomena

List of special events is based on both magnetic and earth current records. Tables are given for SSC-s and sfe.

Times in this section are given in UT!

1. Geomagnetic activity indices: K-index
1992

Date	K	Sum	Date	K	Sum
920101	11222433	18	920210	34345632	30
920102	54353330	26	920211	21322221	15
920103	32234144	23	920212	32223203	17
920104	23342134	22	920213	32231011	13
920105	43222431	21	920214	11232332	17
920106	22223334	21	920215	01112100	6
920107	21132241	16	920216	11112112	10
920108	22323343	22	920217	13355223	24
920109	12101013	9	920218	43221323	20
920110	42132224	20	920219	32233233	21
920111	33244554	30	920220	55445576	41
920112	42343343	26	920221	55565233	34
920113	45344524	31	920222	44333343	27
920114	32333454	27	920223	33312235	22
920115	33335242	25	920224	21443456	29
920116	13343365	28	920225	65445345	36
920117	32222333	20	920226	33444676	37
920118	31220000	8	920227	64664653	40
920119	02121200	8	920228	21233013	15
920120	32333523	24	920229	22155653	29
920121	10102124	11	920301	23321223	18
920122	10123000	7	920302	23333141	20
920123	01000010	2	920303	22221322	16
920124	10010102	5	920304	11232542	20
920125	11122001	8	920305	22121323	16
920126	00013333	13	920306	31211002	10
920127	44332234	25	920307	21321335	20
920128	43223233	22	920308	22224223	19
920129	33333143	23	920309	33353462	29
920130	44333344	28	920310	23233334	23
920131	33333242	23	920311	33344341	25
920201	22344446	29	920312	22233310	16
920202	65354377	40	920313	01221100	7
920203	76654577	47	920314	00211112	8
920204	35323265	29	920315	11332332	18
920205	31122101	11	920316	11333244	21
920206	01122112	10	920317	22144454	26
920207	22334211	18	920318	43334212	22
920208	33336744	33	920319	10111201	7
920209	65555554	40	920320	00100111	4

MAGNETIC ACTIVITY INDICES

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Date	K	Sum	Date	K	Sum
920321	21345444	27	920502	34412212	19
920322	43232133	21	920503	22113132	15
920323	43333354	28	920504	33122201	14
920324	33233556	30	920505	02023122	12
920325	43233331	22	920506	00112233	12
920326	12133252	19	920507	23324354	26
920327	31212245	20	920508	22335544	28
920328	32223123	18	920509	30123575	26
920329	32223443	23	920510	55677776	50
920330	23122233	18	920511	65535443	35
920331	41132444	23	920512	32112332	17
920401	23232223	19	920513	23244213	21
920402	11110031	8	920514	12020001	6
920403	01334632	22	920515	01011210	6
920404	22232232	18	920516	12021110	8
920405	31233225	21	920517	01100011	4
920406	44532321	24	920518	21112245	18
920407	23333332	22	920519	42102442	19
920408	43333251	24	920520	21123223	16
920409	11102113	10	920521	20121234	15
920410	21100100	5	920522	24445774	37
920411	11000000	2	920523	23213552	23
920412	00111211	7	920524	42221102	14
920413	01222012	10	920525	22222432	19
920414	10111132	10	920526	00113223	12
920415	32221322	17	920527	31233331	19
920416	11112201	9	920528	22334323	22
920417	01000203	6	920529	22324543	25
920418	22235224	22	920530	23323432	22
920419	33323344	25	920531	33110311	13
920420	43223324	23	920601	11112100	7
920421	33122100	12	920602	10010013	6
920422	21131233	16	920603	11222320	13
920423	21112323	15	920604	00011122	7
920424	32231222	17	920605	31124422	19
920425	22222103	14	920606	01112210	8
920426	11121041	11	920607	02221333	16
920427	30101221	10	920608	63434535	33
920428	21133022	14	920609	41233233	21
920429	23100222	12	920610	13454331	24
920430	33033213	18	920611	23133355	25
920501	12222352	19	920612	62434532	29

MAGNETIC ACTIVITY INDICES

Date	K	Sum	Date	K	Sum
920613	23213243	20	920725	21024442	19
920614	21122222	14	920726	21111110	8
920615	31112332	16	920727	00110224	10
920616	01012110	6	920728	45223323	24
920617	10002311	8	920729	01111101	6
920618	11124555	24	920730	30122233	16
920619	41123342	20	920731	21232414	19
920620	23123312	17	920801	32222112	15
920621	32101212	12	920802	11010112	7
920622	33133202	17	920803	00121221	9
920623	32133444	24	920804	31124454	24
920624	34343443	28	920805	54444233	29
920625	32223433	22	920806	13334422	22
920626	21312222	15	920807	43344332	26
920627	22132333	19	920808	23333243	23
920628	22333313	20	920809	42232231	19
920629	45324554	32	920810	21023132	14
920630	65431323	27	920811	32222423	20
920701	33333444	27	920812	21211000	7
920702	24323202	18	920813	00103534	16
920703	11102210	8	920814	33233510	20
920704	01001122	7	920815	21120133	13
920705	22023113	14	920816	12332212	16
920706	12012210	9	920817	22000101	6
920707	00011210	5	920818	01222231	13
920708	11022322	13	920819	02002333	13
920709	21011211	9	920820	45344222	26
920710	12101131	10	920821	12133661	23
920711	10112011	7	920822	12234656	29
920712	33234433	25	920823	66635343	36
920713	23333434	25	920824	11231234	17
920714	43223231	20	920825	11012112	9
920715	20111011	7	920826	31223122	16
920716	01233343	19	920827	12124341	18
920717	31022200	10	920828	22000000	4
920718	22112101	10	920829	43220023	16
920719	20000121	6	920830	10012021	7
920720	00012333	12	920831	01010110	4
920721	02123342	17	920901	10000000	1
920722	32234454	27	920902	01244545	25
920723	33232143	21	920903	34345665	36
920724	21022321	13	920904	43433336	29

Date	K	Sum	Date	K	Sum
920905	63344244	30	921017	42133332	21
920906	31232343	21	921018	30014223	15
920907	32344453	28	921019	42233433	24
920908	43423342	25	921020	34221101	14
920909	55575465	42	921021	01111213	10
920910	54544676	41	921022	22113221	14
920911	53422533	27	921023	11112011	8
920912	20100112	7	921024	10000003	4
920913	00101022	6	921025	40120122	12
920914	01131233	14	921026	33222233	20
920915	13222221	15	921027	43244633	29
920916	11223253	19	921028	31232334	21
920917	45654465	39	921029	43233455	29
920918	44444344	31	921030	22224414	21
920920	11232134	17	921031	21123211	13
920921	11111114	11	921101	11011326	15
920922	44222133	21	921102	44133032	20
920923	22121121	12	921103	43220034	18
920924	00010022	5	921104	22124534	23
920925	21233243	20	921105	42333332	23
920926	32111320	13	921106	31113323	17
920927	00011111	5	921107	32111323	16
920928	01123365	21	921108	01112244	15
920929	23132240	17	921109	33554435	32
920929	35544664	37	921110	31231433	20
920930	43343554	31	921111	33343423	25
921001	44233451	26	921112	33223235	23
921002	41122223	17	921113	21232343	20
921003	01011031	7	921114	32123332	19
921004	23111010	9	921115	22123535	23
921005	01111122	9	921116	42110244	18
921006	33122210	14	921117	23110132	13
921007	11122031	11	921118	30120040	10
921008	32100133	13	921119	00133000	7
921009	32353643	29	921120	00000032	5
921010	11332103	14	921121	32000001	6
921011	02134454	23	921122	02333344	22
921012	34335533	29	921123	44333644	31
921013	32113464	24	921124	11333343	21
921014	34333255	28	921125	32233223	20
921015	44344444	31	921126	23132011	13
921016	43232424	24	921127	01213102	10

MAGNETIC ACTIVITY INDICES

Date	K	Sum
921128	00010022	5
921129	01212200	8
921130	00023453	17
921201	41133433	22
921202	42012231	15
921203	33132533	23
921204	33203344	22
921205	32100200	8
921206	10000311	6
921207	00025024	13
921208	53233555	31
921209	33234434	26
921210	22231654	25
921211	21111232	13
921212	11103232	13
921213	22121121	12
921214	31110342	15
921215	43222242	21
921216	11121001	7
921217	03334652	26
921218	21130243	16
921219	10113253	16
921220	22332420	18
921221	12131524	19
921222	21131330	14
921223	12123220	13
921224	01122241	13
921225	00001233	9
921226	11020102	7
921227	00000015	6
921228	40223466	27
921229	75333463	34
921230	32223131	17
921231	31024330	16

Geomagnetic activity indices: K-index
1993

Date	K	Sum	Date	K	Sum
930101	23232213	18	930210	21323262	21
930102	34143445	28	930211	42123445	25
930103	55333544	32	930212	42222113	17
930104	53335444	31	930213	42022223	17
930105	43333233	24	930214	13011031	10
930106	23223333	21	930215	01012001	5
930107	34342566	33	930216	00122000	5
930108	42123445	25	930217	24447610	28
930109	42233433	24	930218	01233344	20
930110	33444311	23	930219	21101020	7
930111	12135445	25	930220	34344236	29
930112	42221332	19	930221	22345553	29
930113	21012525	18	930222	33544344	30
930114	44234344	28	930223	23122320	15
930115	33122334	21	930224	22122011	11
930116	23212233	18	930225	02001110	5
930117	32332221	18	930226	00111212	8
930118	12111325	16	930227	10011003	6
930119	43242265	28	930228	43334321	23
930120	41333410	19	930301	32344334	26
930121	23001112	10	930302	13332454	25
930122	01011143	11	930303	32234565	30
930123	20001011	5	930304	44331311	20
930124	12121251	15	930305	32221002	12
930125	00236464	25	930306	10122242	14
930126	43333442	26	930307	44302244	23
930127	13212332	17	930308	33322536	27
930128	03222021	12	930309	55543345	34
930129	00010123	7	930310	53014313	20
930130	33221234	20	930311	11245666	31
930131	54354566	38	930312	63223454	29
930201	54433634	32	930313	44333553	30
930202	43232452	25	930314	32344445	29
930203	01121044	13	930315	53345355	33
930204	3100222	10	930316	43443653	32
930205	10110113	8	930317	33143344	25
930206	01110022	7	930318	43333122	21
930207	03232555	25	930319	10232442	18
930208	55344665	38	930320	22343324	23
930209	44344553	32	930321	33344343	27

MAGNETIC ACTIVITY INDICES

Date	K	Sum	Date	K	Sum
930322	32343555	30	930503	20123211	12
930323	21233125	19	930504	01002210	6
930324	44555546	38	930505	11227001	14
930325	22133331	18	930506	21222331	16
930326	11121142	13	930507	02234444	23
930327	31103434	19	930508	55444455	36
930328	31001336	17	930509	45433465	34
930329	35300113	16	930510	45443322	27
930330	31334531	23	930511	12111011	8
930331	40112123	14	930512	23133334	22
930401	11210233	13	930513	41001243	15
930402	10110011	5	930514	23234312	20
930403	21000012	6	930515	31223342	20
930404	10015567	25	930516	33123123	18
930405	55544564	38	930517	23122354	22
930406	23233235	23	930518	01122223	13
930407	21121334	17	930519	13023231	15
930408	13225353	24	930520	12212120	11
930409	21221645	23	930521	10010110	4
930410	42213343	22	930522	00011220	6
930411	11122123	13	930523	00000010	1
930412	55222122	21	930524	00000100	1
930413	15343352	26	930525	00000100	1
930414	33231444	24	930526	01000113	6
930415	33331155	24	930527	34344333	27
930416	34232433	24	930528	33143543	26
930417	11110442	14	930529	32100110	8
930418	33243331	22	930530	12232212	15
930419	20021322	12	930531	11122121	11
930420	34234322	23	930601	02101100	5
930421	43333544	29	930602	10012120	7
930422	32213555	26	930603	10143432	18
930423	22021354	19	930604	45454454	35
930424	21233331	18	930605	44333453	29
930425	12222123	15	930606	32222343	21
930426	00112110	6	930607	32234334	24
930427	00001102	4	930608	38123340	19
930428	00002222	8	930609	10110212	8
930429	10123334	17	930610	02120355	18
930430	43322332	22	930611	42212221	16
930501	33131001	12	930612	12243224	20
930502	01212131	11	930613	32232233	20

MAGNETIC ACTIVITY INDICES

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Date	K	Sum	Date	K	Sum
930614	01132221	12	930726	11010210	6
930615	12021101	8	930727	11134433	20
930616	00001000	1	930728	32021202	12
930617	01002122	8	930729	11024553	21
930618	10001202	6	930730	33111111	12
930619	01010212	7	930731	01121110	7
930620	01002110	5	930801	20000211	6
930621	00001001	2	930802	01000012	4
930622	00000113	5	930803	10031322	12
930623	31034354	23	930804	22134555	27
930624	44434433	29	930805	54320232	21
930625	33333323	23	930806	01324442	20
930626	32211212	14	930807	33232235	23
930627	21032210	11	930808	21231201	12
930628	01111100	5	930809	23132242	19
930629	23244222	21	930810	10021222	10
930630	22202442	18	930811	22011001	7
930701	34253234	26	930812	00122102	8
930702	33244346	29	930813	11021100	6
930703	54423333	27	930814	00001100	2
930704	33121312	16	930815	00011435	14
930705	12001110	6	930816	44455666	40
930706	01040122	10	930817	54213222	21
930707	33122231	17	930818	32234343	24
930708	14333432	23	930819	22221243	18
930709	32224513	22	930820	21220220	11
930710	12223233	18	930821	11110011	6
930711	34332320	20	930822	00120012	6
930712	12212322	15	930823	11100100	4
930713	21213222	15	930824	00221012	8
930714	01000001	2	930825	20011012	7
930715	01001122	7	930826	10111223	11
930716	01011301	7	930827	21034644	24
930717	11000101	4	930828	31233333	21
930718	10112112	9	930829	33223103	17
930719	10021101	6	930830	11010011	5
930720	11242334	20	930831	20101121	8
930721	33233323	22	930901	00000100	1
930722	21132223	16	930902	00123031	10
930723	13111101	9	930903	22235565	30
930724	10001211	6	930904	34333523	26
930725	31000000	4	930905	42223223	20

MAGNETIC ACTIVITY INDICES

Date	K	Sum	Date	K	Sum
930906	31032232	16	931018	23100110	8
930907	11202203	11	931019	32010022	10
930908	41121114	15	931020	00000112	4
930909	10000021	4	931021	10120001	5
930910	00000101	2	931022	41022343	19
930911	20012022	9	931023	22222122	15
930912	00012336	15	931024	32110320	12
930913	66556664	44	931025	21256633	28
930914	42233543	26	931026	01112545	19
930915	42223132	19	931027	44335464	33
930916	10112230	10	931028	32333234	23
930917	00001012	4	931029	31113213	15
930918	00010001	2	931030	10000001	2
930920	01043435	20	931031	00111430	10
930921	51003342	18	931101	32133432	21
930922	21110212	10	931102	22110010	7
930923	00024245	17	931103	00011345	14
930924	41323354	25	931104	64455564	39
930925	31232233	19	931105	33445555	34
930926	23222012	14	931106	32334455	29
930927	40102232	14	931107	32334454	28
930928	01023343	16	931108	32132453	23
930929	10000001	2	931109	22111133	14
930929	21243653	26	931110	32222320	16
930930	43221125	20	931111	03111000	6
931001	53341432	25	931112	00000011	2
931002	00122241	12	931113	11212232	14
931003	00001232	8	931114	21132533	20
931004	00100241	8	931115	32122245	21
931005	10010233	10	931116	31021333	16
931006	43101013	13	931117	20000043	9
931007	11002100	5	931118	21005664	24
931008	12334123	19	931119	45225455	32
931009	35463346	34	931120	22221112	13
931010	45345244	31	931121	31121023	13
931011	42244534	28	931122	20100122	8
931012	33214432	22	931123	20111212	10
931013	23221032	15	931124	11000111	5
931014	30212200	10	931125	01111223	11
931015	00110000	2	931126	32212663	25
931016	01010222	8	931127	31100222	11
931017	33101223	15	931128	00001112	5

Date	K	Sum
931129	42122343	21
931130	20000001	3
931201	21234557	29
931202	44334567	36
931203	54332252	26
931204	10110143	11
931205	10033431	15
931206	11102121	9
931207	31104456	24
931208	65344530	30
931209	00000001	1
931210	30023231	14
931211	41102220	12
931212	21021201	9
931213	00010002	3
931214	11000021	5
931215	31232120	14
931216	23434455	30
931217	34233454	28
931218	33233554	28
931219	43222332	21
931220	42222343	22
931221	32333544	27
931222	32232023	17
931223	30011325	15
931224	32222333	20
931225	23122044	18
931226	21222334	19
931227	10002200	5
931228	12120111	9
931229	01010000	2
931230	20011000	4
931231	12332324	20

2. Daily mean values of H, D, Z and F
1992

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
920101	210363	005893	428294	477167
920102	210338	005954	428229	477098
920103	210288	005923	428270	477112
920104	210282	005948	428298	477135
920105	210288	005960	428311	477149
920106	210367	005923	428319	477191
920107	210325	005905	428319	477173
920108	210224	005880	428325	477134
920109	210331	005941	428314	477171
920110	210289	005954	428279	477121
920111	210019	006021	428379	477092
920112	210199	005929	428343	477139
920113	210074	005954	428387	477123
920114	210251	005954	428338	477157
920115	210221	005960	428345	477150
920116	210342	005941	428303	477166
920117	210290	005948	428300	477140
920118	210383	005874	428259	477144
920119	210437	005905	428241	477152
920120	210298	005911	428273	477119
920121	210394	005935	428236	477129
920122	210361	005899	428194	477076
920123	210489	005874	428127	477073
920124	210590	005850	428093	477087
920125	210471	005887	428100	477041
920126	210566	005819	428075	477060
920127	210377	005874	428104	477003
920128	210271	005929	428157	477003
920129	210293	005935	428142	477000
920130	210288	005948	428164	477017
920131	210267	005911	428167	477011
9201 mean	210322	005921	428248	477108

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920201	210159	005972	428255	477042
920202	209942	006100	428306	476992
920203	209763	006185	428321	476927
920204	209868	006009	428391	477036
920205	210125	005917	428295	477063
920206	210264	005868	428264	477096
920207	210202	005844	428326	477125
920208	210064	005850	428457	477182
920209	209383	006088	428636	477043
920210	209825	006033	428567	477175
920211	210225	005899	428430	477228
920212	210279	005856	428395	477221
920213	210317	005856	428365	477210
920214	210369	005844	428388	477254
920215	210390	005838	428337	477217
920216	210439	005819	428322	477226
920217	210460	005783	428301	477216
920218	210227	005844	428273	477088
920219	210369	005838	428201	477086
920220	210871	005960	428428	477511
920221	209656	006057	428427	476975
920222	209956	005984	428386	477070
920223	210101	005893	428353	477105
920224	210133	005868	428358	477123
920225	209718	006076	428396	476975
920226	209835	005948	428479	477101
920227	209618	006033	428694	477198
920228	210012	005911	428511	477207
920229	209903	005844	428658	477291
9202 mean	210085	005932	428397	477137

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920301	210025	005948	428651	477339
920302	210233	005868	428556	477345
920303	210308	005844	428530	477355
920304	210409	005826	428502	477374
920305	210359	005826	428519	477367
920306	210406	005813	428506	477376
920307	210409	005807	428500	477372
920308	210459	005758	428450	477349
920309	210402	005771	428460	477333
920310	210347	005829	428441	477292
920311	210359	005838	428436	477293
920312	210364	005795	428368	477234
920313	210443	005801	428294	477202
920314	210515	005740	428288	477229
920315	210708	005746	428237	477268
920316	210382	005838	428299	477180
920317	210405	005789	428289	477181
920318	210333	005868	428285	477146
920319	210415	005817	428263	477162
920320	210515	005783	428244	477189
920321	210342	005795	428304	477167
920322	210193	005893	428347	477140
920323	210234	005923	428368	477177
920324	210251	005868	428367	477183
920325	210280	005844	428399	477225
920326	210315	005874	428412	477252
920327	210331	005893	428367	477218
920328	210326	005874	428370	477219
920329	210339	005880	428368	477223
920330	210291	005935	428339	477176
920331	210409	005893	428365	477251
9203 mean	210358	005838	428391	477252

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
920401	210408	005850	428277	477172
920402	210435	005819	428285	477191
920403	210127	005813	428474	477225
920404	210153	005868	428431	477197
920405	210382	005832	428374	477247
920406	210359	005899	428343	477209
920407	210363	005856	428299	477171
920408	210437	005862	428207	477122
920409	210490	005838	428203	477141
920410	210593	005832	428142	477132
920411	210565	005850	428143	477121
920412	210639	005856	428128	477140
920413	210593	005783	428174	477161
920414	210625	005832	428182	477182
920415	210640	005880	428183	477190
920416	210612	005807	428171	477166
920417	210610	005844	428155	477151
920418	210591	005765	428128	477119
920419	210383	005960	428170	477065
920420	210345	005899	428184	477060
920421	210463	005911	428132	477066
920422	210484	005911	428155	477096
920423	210512	005850	428145	477099
920424	210480	005880	428151	477090
920425	210484	005893	428165	477105
920426	210517	005911	428178	477131
920427	210512	005880	428195	477144
920428	210532	005868	428227	477181
920429	210628	005887	428206	477205
920430	210639	005856	428155	477164
9204 mean	210487	005860	428212	477148

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920501	210639	005856	428119	477132
920502	210592	005856	428126	477117
920503	210604	005856	428131	477127
920504	210527	005856	428151	477111
920505	210629	005935	428138	477144
920506	210676	005868	428054	477090
920507	210716	005856	428079	477130
920508	210356	005905	428226	477103
920509	210496	005893	428178	477122
920510	209590	006228	428716	477206
920511	209830	006179	428411	477037
920512	210192	006106	428385	477173
920513	210163	006070	428392	477167
920514	210291	006039	428274	477117
920515	210432	005984	428321	477222
920516	210491	005984	428314	477241
920517	210511	005984	428290	477229
920518	210548	005984	428237	477197
920519	210438	005948	428250	477161
920520	210484	006021	428286	477213
920521	210538	006027	428214	477172
920522	210269	005972	428415	477234
920523	210299	006051	428360	477198
920524	210460	006021	428306	477221
920525	210550	005976	428258	477217
920526	210596	005954	428179	477167
920527	210602	005948	428224	477210
920528	210665	005935	428223	477237
920529	210563	005905	428254	477219
920530	210569	005966	428256	477224
920531	210682	005893	428209	477231
9205 mean	210452	005970	428257	477173

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920601	210651	005899	428188	477199
920602	210673	005911	428209	477227
920603	210748	005880	428217	477268
920604	210684	005899	428198	477222
920605	210749	005905	428189	477243
920606	210722	005893	428230	477268
920607	210761	005923	428228	477283
920608	210272	006112	428421	477241
920609	210451	006002	428339	477246
920610	210639	005972	428304	477298
920611	210602	005978	428296	477274
920612	210541	005899	428356	477301
920613	210509	005996	428306	477242
920614	210551	005929	428253	477213
920615	210626	005887	428244	477238
920616	210634	005911	428255	477252
920617	210693	005905	428207	477235
920618	210628	005935	428248	477243
920619	210515	005960	428321	477258
920620	210603	005929	428290	477269
920621	210678	005917	428279	477292
920622	210688	005917	428237	477259
920623	210622	005948	428283	477271
920624	210622	005941	428268	477258
920625	210610	005935	428300	477281
920626	210601	005941	428261	477242
920627	210657	005935	428240	477248
920628	210665	005923	428239	477251
920629	210445	005984	428362	477264
920630	210355	005954	428273	477145
9206 mean	210607	005937	428268	477251

DAILY MEAN VALUES OF H, D, Z AND F

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
920701	210538	005917	428338	477284
920702	210449	005954	428329	477236
920703	210525	005960	428319	477261
920704	210594	005935	428292	477267
920705	210634	005911	428280	477274
920706	210646	005905	428253	477255
920707	210668	005954	428260	477271
920708	210707	005874	428211	477244
920709	210724	005917	428180	477224
920710	210662	005948	428190	477206
920711	210703	005899	428175	477210
920712	210670	005929	428236	477250
920713	210534	005960	428275	477225
920714	210478	005954	428299	477222
920715	210532	005960	428267	477217
920716	210448	006027	428334	477240
920717	210458	005966	428301	477215
920718	210609	005996	428265	477249
920719	210614	005948	428219	477210
920720	210591	005984	428238	477217
920721	210565	005893	428286	477249
920722	210329	006015	428386	477235
920723	210317	006063	428343	477191
920724	210436	006002	428333	477234
920725	210462	005966	428287	477204
920726	210495	006015	428278	477211
920727	210632	005917	428236	477234
920728	210432	006002	428301	477204
920729	210471	005990	428278	477200
920730	210588	005972	428233	477211
920731	210548	005960	428235	477196
9207 mean	210550	005958	428273	477231

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920801	210484	005917	428246	477177
920802	210466	005917	428278	477198
920803	210487	005948	428264	477195
920804	210644	005893	428223	477227
920805	210280	006015	428257	477097
920806	210341	006063	428286	477150
920807	210247	006045	428368	477182
920808	210229	006076	428388	477192
920809	210316	006009	428366	477211
920810	210341	006002	428400	477252
920811	210357	006009	428380	477242
920812	210323	006039	428354	477203
920813	210395	005954	428360	477240
920814	210315	005990	428377	477220
920815	210392	005996	428342	477223
920816	210443	005966	428332	477236
920817	210480	005996	428279	477205
920818	210542	005929	428260	477215
920819	210512	005954	428299	477237
920820	210460	005996	428311	477225
920821	210430	006027	428360	477256
920822	210398	006100	428398	477276
920823	210149	006228	428368	477139
920824	210270	006094	428384	477207
920825	210347	006002	428375	477233
920826	210375	006033	428400	477267
920827	210360	006045	428381	477244
920828	210430	006027	428368	477263
920829	210421	006021	428378	477268
920830	210409	005996	428350	477238
920831	210494	005978	428332	477259
9208 mean	210392	006009	428338	477219

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
920901	210480	005990	428323	477245
920902	210557	005996	428319	477275
920903	210202	006094	428416	477206
920904	210202	006082	428423	477212
920905	210242	006143	428414	477221
920906	210302	006131	428414	477248
920907	210346	006100	428387	477243
920908	210279	006063	428382	477209
920909	210040	006070	428424	477141
920910	209764	006210	428499	477087
920911	209979	006253	428535	477214
920912	210274	006057	428500	477313
920913	210444	006021	428420	477316
920914	210514	006002	428389	477319
920915	210424	006033	428399	477288
920916	210396	006063	428416	477291
920917	209936	006082	428576	481715
920918	210115	006137	428537	477276
920919	210275	006063	428470	477286
920920	210377	006039	428421	477287
920921	210400	006057	428418	477295
920922	210315	006124	428388	477230
920923	210375	006021	428401	477268
920924	210481	006033	428370	477287
920925	210504	005990	428368	477296
920926	210443	006027	428362	477263
920927	210509	005996	428323	477257
920928	210460	006051	428308	477222
920929	209967	006015	428434	477118
920930	210157	006210	428463	477228
9209 mean	210292	006072	428417	477395

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
921001	210192	006137	428448	477230
921002	210226	006100	428419	477219
921003	210289	006106	428424	477251
921004	210330	006057	428366	477217
921005	210370	006039	428324	477197
921006	210339	006039	428373	477227
921007	210366	006039	428358	477226
921008	210449	006033	428313	477222
921009	210230	006045	428394	477198
921010	210264	006057	428350	477174
921011	210165	006094	428396	477171
921012	210120	006063	428455	477204
921013	210248	006137	428348	477165
921014	210380	006076	428298	477178
921015	210297	006124	428238	477088
921016	210327	006094	428237	477100
921017	210331	006076	428241	477105
921018	210369	006106	428260	477139
921019	210321	006082	428243	477103
921020	210407	006082	428260	477156
921021	210476	006051	428289	477212
921022	210450	006051	428251	477167
921023	210461	006027	428216	477140
921024	210471	006045	428231	477158
921025	210499	006033	428208	477150
921026	210500	006106	428202	477145
921027	210212	006112	428271	477080
921028	210143	006167	428363	477132
921029	210156	006112	428384	477157
921030	210196	006137	428394	477183
921031	210252	006106	428364	477181
9210 mean	210317	006082	428320	477170

DAILY MEAN VALUES OF H, D, Z AND F

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
921101	210427	006076	428325	477223
921102	210282	006161	428318	477153
921103	210177	006131	428416	477195
921104	210083	006137	428469	477201
921105	210146	006173	428455	477216
921106	210167	006118	428475	477243
921107	210222	006112	428456	477250
921108	210369	006124	428402	477267
921109	210016	006149	428508	477206
921110	210202	006131	428515	477294
921111	210319	006082	428484	477318
921112	210367	006094	428464	477321
921113	210323	006088	428461	477299
921114	210353	006094	428461	477312
921115	210292	006118	428476	477299
921116	210333	006131	428455	477298
921117	210390	006076	428427	477298
921118	210397	006070	428447	477319
921119	210378	006063	428448	477312
921120	210437	006082	428436	477327
921121	210368	006124	428457	477316
921122	210305	006106	428468	477298
921123	210153	006179	428503	477262
921124	210220	006155	428548	477332
921125	210260	006131	428517	477322
921126	210309	006118	428474	477305
921127	210401	006063	428443	477317
921128	210369	006100	428445	477305
921129	210356	006070	428427	477283
921130	210275	006124	428425	477246
9211 mean	210290	006113	428454	477278

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
921201	210179	006124	428421	477200
921202	210329	006124	428396	477244
921203	210231	006137	428440	477240
921204	210277	006100	428483	477299
921205	210350	006100	428485	477333
921206	210380	006100	428472	477334
921207	210432	006106	428469	477354
921208	210333	006112	428462	477305
921209	210331	006131	428469	477310
921210	210324	006149	428452	477292
921211	210407	006106	428436	477314
921212	210432	006100	428394	477287
921213	210461	006100	428375	477283
921214	210393	006137	428430	477302
921215	210383	006118	428407	477277
921216	210403	006118	428392	477273
921217	210249	006143	428450	477257
921218	210145	006198	428514	477268
921219	210302	006143	428468	477296
921220	210276	006155	428451	477270
921221	210316	006149	428434	477272
921222	210342	006143	428547	477385
921223	210382	006124	428550	477405
921224	210350	006143	428547	477388
921225	210374	006124	428503	477359
921226	210408	006124	428478	477352
921227	210546	006082	428415	477356
921228	210086	006192	428532	477259
921229	209781	006307	428624	477207
921230	210151	006210	428592	477341
921231	210282	006143	428547	477358
9212 mean	210311	006137	428472	477304
1992				
yearly mean	210372	005986	428337	477222

Daily mean values of H, D, Z and F
1993

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
930101	210473	006090	428477	477338
930102	210307	006177	428507	477292
930103	210335	006197	428483	477287
930104	210345	006179	428501	477303
930105	211222	006137	428517	477307
930106	210390	006137	428495	477318
930107	210380	006152	428500	477317
930108	210346	006131	428505	477307
930109	210348	006143	428513	477315
930110	210376	006112	428496	477312
930111	210231	006168	428565	477309
930112	210283	006159	428522	477293
930113	210365	006200	428513	477321
930114	210332	006206	428509	477303
930115	210353	006180	428521	477323
930116	210423	006129	428497	477333
930117	210384	006154	428504	477322
930118	210384	006154	428504	477322
930119	210371	006205	428509	477320
930120	210341	006091	428513	477310
930121	210339	006177	428492	477302
930122	210391	006170	428487	477322
930123	210408	006146	428462	477307
930124	210401	006139	428474	477313
930125	210357	006182	428484	477303
930126	210242	006245	428492	477260
930127	210313	006162	428502	477300
930128	210359	006149	428490	477310
930129	210424	006153	428482	477323
930130	210451	006116	428474	477328
930131	210153	006322	428523	477240
9301 mean	210382	006163	428500	477308

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
930201	210125	006265	428552	477254
930202	210316	006223	428515	477305
930203	210327	006204	428517	477312
930204	210340	006173	428524	477324
930205	210409	006128	428510	477342
930206	210472	006086	428471	477335
930207	210382	006170	428483	477306
930208	210253	006258	428516	477279
930209	210254	006215	428531	477293
930210	210289	006119	428523	477302
930211	210334	006167	428511	477311
930212	210345	006068	428501	477313
930213	210366	006082	428502	477323
930214	210391	006058	428505	477336
930215	210405	006059	428496	477335
930216	210443	006010	428472	477330
930217	210224	006042	428561	477314
930218	210120	006176	428570	477276
930219	210300	006093	428525	477315
930220	210319	006126	428528	477325
930221	210275	006133	428538	477315
930222	210238	006113	428566	477325
930223	210277	006092	428533	477312
930224	210443	006127	428507	477327
930225	210478	006114	428480	477317
930226	210458	006164	428468	477324
930227	210479	006162	428459	477326
930228	210296	006138	428495	477278
9302 mean	210334	006134	428513	477313

DAILY MEAN VALUES OF H, D, Z AND F

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
930301	210316	006188	428535	477322
930302	210284	006192	428552	477323
930303	210192	006286	428558	477288
930304	210290	006230	428529	477305
930305	210368	006130	428525	477328
930306	210402	006116	428538	477355
930307	210293	006157	428539	477308
930308	210289	006144	428566	477330
930309	210048	006248	428627	477279
930310	210202	006180	428566	477292
930311	210068	006237	428706	477359
930312	210060	006248	428653	477321
930313	210187	006274	428617	477345
930314	210248	006226	428621	477374
930315	209951	006229	428688	477304
930316	210123	006271	428635	477332
930317	210255	006219	428636	477391
930318	210232	006218	428603	477351
930319	210296	006172	428591	477369
930320	210262	006181	428579	477343
930321	210331	006178	428579	477373
930322	210260	006211	428576	477347
930323	210378	006201	428528	477357
930324	210175	006188	428568	477303
930325	210131	006234	428618	477328
930326	210337	006157	428556	477353
930327	210310	006201	428569	477353
930328	210205	006247	428633	477365
930329	210312	006175	428578	477362
930330	210234	006210	428609	477355
930331	210309	006201	428544	477368
9303 mean	210237	006205	428588	477338

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
930401	210365	006188	428546	477356
930402	210397	006159	428543	477359
930403	210457	006140	428518	477363
930404	210233	006209	428665	477397
930405	209641	006298	428802	477260
930406	210181	006203	428659	477368
930407	210215	006220	428628	477355
930408	210242	006236	428634	477372
930409	210273	006263	428625	477387
930410	210190	006195	428636	477369
930411	210338	006199	428565	477383
930412	210404	006161	428531	477382
930413	210203	006171	428594	477352
930414	210226	006237	428589	477357
930415	210187	006253	428583	477335
930416	210316	006278	428563	477355
930417	210396	006174	428568	477395
930418	210354	006216	428563	477372
930419	210371	006201	428546	477364
930420	210378	006191	428529	477352
930421	210375	006290	428561	477379
930422	210432	006223	428515	477363
930423	210467	006226	428515	477381
930424	210519	006168	428474	477367
930425	210516	006198	428486	477376
930426	210519	006160	428489	477380
930427	210521	006154	428489	477374
930428	210534	006171	428410	477347
930429	210595	006208	428418	477381
930430	210510	006196	428424	477348
9304 mean	210345	006206	428556	477364

DAILY MEAN VALUES OF H, D, Z AND F

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
930501	210449	006224	428463	477364
930502	210536	006183	428464	477413
930503	210483	006193	428474	477398
930504	210515	006221	428440	477382
930505	210529	006226	428425	477374
930506	210495	006204	428438	477370
930507	210476	006190	428447	477370
930508	210280	006272	428440	477278
930509	210312	006260	428411	477266
930510	209994	006251	428345	477050
930511	210307	006214	428440	477273
930512	210270	006312	428488	477300
930513	210269	006356	428423	477241
930514	210359	006274	428408	477267
930515	210380	006299	428433	477298
930516	210396	006261	428417	477291
930517	210390	006330	428416	477289
930518	210457	006269	428485	477380
930519	210403	006251	428487	477358
930520	210407	006220	428518	477387
930521	210473	006220	428497	477398
930522	210526	006220	428485	477410
930523	210488	006238	428511	477417
930524	210468	006244	428453	477356
930525	210585	006220	428445	477400
930526	210622	006175	428445	477405
930527	210561	006232	428528	477464
930528	210473	006223	428529	477415
930529	210407	006198	428483	477345
930530	210516	006228	428498	477406
930531	210508	006251	428497	477413
9305 mean	210430	006241	428459	477348

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
930601	210468	006243	428431	477330
930602	210486	006253	428407	477330
930603	210469	006258	428408	477322
930604	210260	006352	428460	477271
930605	210203	006384	428456	477243
930606	210240	006426	428477	477275
930607	210336	006263	428548	477383
930608	210330	006221	428496	477339
930609	210323	006307	428467	477301
930610	210433	006277	428462	477343
930611	210323	006336	428534	477356
930612	210420	006300	428504	477367
930613	210410	006307	428507	477358
930614	210461	006317	428504	477381
930615	210469	006294	428482	477361
930616	210501	006329	428467	477370
930617	210492	006301	428441	477341
930618	210473	006334	428442	477335
930619	210452	006345	428472	477347
930620	210384	006308	428442	477313
930621	210556	006287	428452	477394
930622	210540	006274	428463	477396
930623	210645	006276	428426	477410
930624	210417	006344	428515	477389
930625	210365	006337	428505	477357
930626	210408	006329	428500	477372
930627	210430	006360	428459	477344
930628	210532	006230	428478	477407
930629	210612	006278	428418	477389
930630	210496	006282	428443	477360
9306 mean	210431	006305	428469	477349

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
930701	210447	006316	428444	477338
930702	210366	006340	428518	477369
930703	210415	006351	428479	477356
930704	210407	006347	428500	477370
930705	210415	006319	428438	477337
930706	210517	006310	428452	477376
930707	210485	006334	428426	477339
930708	210541	006288	428463	477397
930709	210436	006226	428540	477425
930710	210486	006261	428521	477431
930711	210368	006275	428529	477386
930712	210390	006286	428532	477398
930713	210409	006270	428550	477422
930714	210449	006285	428506	477401
930715	210525	006253	428528	477454
930716	210501	006272	428502	477416
930717	210550	006299	428468	477408
930718	210588	006242	428486	477441
930719	210553	006256	428483	477422
930720	210509	006244	428507	477424
930721	210363	006296	428563	477410
930722	210449	006305	428515	477405
930723	210488	006262	428525	477431
930724	210478	006274	428530	477431
930725	210520	006330	428528	477446
930726	210542	006299	428538	477465
930727	210641	006293	428457	477436
930728	210551	006308	428484	477428
930729	210511	006253	428519	477442
930730	210507	006306	428542	477453
930731	210513	006318	428497	477423
9307 mean	210481	006291	428502	477409

Date	H 0.1 nT	D 0.1 nT	Z 0.1 nT	F 0.1 nT
930801	210557	006277	428423	477409
930802	210573	006272	428431	477424
930803	210571	006251	428417	477411
930804	210396	006280	428522	477432
930805	210263	006418	428527	477371
930806	210321	006299	428596	477433
930807	210322	006344	428582	477414
930808	210422	006314	428530	477412
930809	210434	006324	428523	477411
930810	210472	006337	428506	477412
930811	210477	006323	428485	477428
930812	210482	006287	428488	477433
930813	210491	006331	428468	477419
930814	210574	006283	428441	477431
930815	210599	006299	428407	477372
930816	210307	006422	428415	477251
930817	210242	006416	428488	477327
930818	210339	006306	428450	477296
930819	210372	006373	428533	477385
930820	210377	006332	428513	477393
930821	210409	006293	428515	477410
930822	210465	006325	428514	477434
930823	210471	006324	428470	477373
930824	210528	006314	428433	477392
930825	210505	006293	428467	477385
930826	210518	006285	428478	477418
930827	210253	006287	428624	477432
930828	210297	006294	428572	477404
930829	210398	006311	428537	477417
930830	210437	006293	428517	477416
930831	210507	006287	428476	477410
9308 mean	210430	006316	428496	477399

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
930901	210502	006298	428485	477422
930902	210531	006279	428449	477402
930903	210359	006339	428503	477375
930904	210266	006357	428551	477376
930905	210303	006372	428531	477391
930906	210309	006384	428573	477417
930907	210353	006344	428526	477394
930908	210404	006356	428528	477419
930909	210409	006324	428516	477411
930910	210506	006324	428512	477426
930911	210525	006318	428503	477426
930912	210388	006397	428554	477411
930913	209806	006440	428712	477297
930914	210097	006426	428647	477396
930915	210252	006334	428587	477381
930916	210342	006308	428564	477400
930917	210384	006257	428528	477386
930918	210426	006198	428512	477391
930919	210433	006200	428509	477391
930920	210286	006385	428640	477444
930921	210353	006224	428524	477369
930922	210468	006144	428484	477430
930923	210581	006100	428442	477443
930924	210462	006187	428504	477446
930925	210481	006156	428488	477440
930926	210439	006342	428617	477490
930927	210490	006318	428579	477479
930928	210458	006385	428539	477429
930929	210357	006319	428542	477403
930930	210398	006304	428519	477399
9309 mean	210379	006304	428539	477409

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
931001	210354	006370	428533	477397
931002	210406	006366	428558	477423
931003	210436	006343	428537	477437
931004	210532	006295	428505	477451
931005	210491	006298	428498	477406
931006	210441	006434	428513	477398
931007	210487	006342	428517	477422
931008	210352	006385	428533	477377
931009	210256	006422	428609	477403
931010	210256	006483	428566	477364
931011	210336	006391	428583	477415
931012	210339	006373	428581	477436
931013	210359	006301	428559	477425
931014	210329	006382	429025	477809
931015	210364	006337	428540	477427
931016	210408	006336	428514	477423
931017	210449	006335	428518	477437
931018	210357	006312	428560	477422
931019	210446	006346	428539	477443
931020	210455	006338	428530	477439
931021	210435	006348	428497	477381
931022	210507	006361	428475	477393
931023	210435	006308	428515	477417
931024	210426	006374	428537	477433
931025	210221	006357	428596	477395
931026	210219	006430	428628	477421
931027	210132	006430	428653	477410
931028	210303	006464	428616	477430
931029	210296	006377	428608	477438
931030	210406	006380	428584	477465
931031	210352	006376	428588	477445
9310 mean	210374	006368	428568	477432

DAILY MEAN VALUES OF H, D, Z AND F

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
931101	210440	006359	428569	477466
931102	210462	006354	428559	477466
931103	210556	006355	428511	477464
931104	209912	006596	428673	477327
931105	210153	006465	428659	477420
931106	210174	006450	428653	477424
931107	210290	006475	428632	477456
931108	210297	006446	428623	477451
931109	210358	006387	428614	477469
931110	210340	006382	428610	477457
931111	210421	006379	428603	477486
931112	210435	006364	428590	477481
931113	210391	006409	428588	477443
931114	210313	006477	428590	477411
931115	210445	006420	428578	477475
931116	210362	006427	428593	477452
931117	210472	006392	428554	477465
931118	210270	006423	428657	477469
931119	210312	006381	428640	477472
931120	210399	006401	428604	477478
931121	210486	006377	428577	477492
931122	210508	006366	428555	477482
931123	210559	006356	428551	477500
931124	210589	006350	428518	477484
931125	210580	006337	428537	477498
931126	210477	006382	428540	477455
931127	210483	006384	428551	477467
931128	210547	006356	428537	477483
931129	210489	006389	428545	477465
931130	210490	006358	428555	477457
9311 mean	210400	006400	428586	477461

Date	H	D	Z	F
	0.1 nT	0.1 nT	0.1 nT	0.1 nT
931201	210344	006428	428603	477453
931202	210132	006604	428636	477389
931203	210031	006580	428612	477306
931204	210336	006415	428646	477488
931205	210311	006433	428639	477471
931206	210385	006409	428628	477494
931207	210235	006472	428675	477470
931208	210028	006530	428700	477406
931209	210296	006430	428681	477502
931210	210370	006424	428664	477519
931211	210380	006408	428636	477499
931212	210422	006394	428621	477504
931213	210445	006396	428609	477502
931214	210483	006371	428590	477502
931215	210529	006323	428573	477508
931216	210410	006400	428617	477495
931217	210405	006477	428610	477469
931218	210398	006414	428614	477486
931219	210417	006387	428602	477484
931220	210481	006396	428604	477514
931221	210372	006400	428630	477490
931222	210412	006364	428620	477497
931223	210421	006395	428628	477509
931224	210403	006374	428637	477492
931225	210397	006364	428643	477512
931226	210391	006428	428594	477449
931227	210402	006452	428595	477454
931228	210525	006403	428557	477474
931229	210503	006409	428565	477472
931230	210642	006409	428563	477531
931231	210324	006477	428583	477409
9312 mean	210375	006425	428619	477476
1993				
yearly mean	210383	006280	428533	477384

3. Yearly means of geomagnetic elements

Year	D	H nT	Z nT	I	X nT	Y nT	F nT
1961	-0°23.6'	20816	42077	63°40.7'	20816	-143	46944
1962	-0°19.6'	20827	42093	63°40.5'	20827	-119	46964
1963	-0°14.3'	20839	42116	63°40.4'	20839	-87	46990
1964	-0°10.5'	20845	42126	63°40.4'	20845	-64	47001
1965	-0°08.1'	20877	42137	63°38.6'	20877	-49	47025
1966	-0°06.8'	20888	42156	63°38.5'	20888	-41	47047
1967	-0°06.0'	20903	42179	63°38.3'	20903	-36	47074
1968	-0°03.0'	20921	42196	63°37.7'	20921	-18	47098
1969	0°00.2'	20942	42214	63°36.9'	20942	1	47123
1970	0°02.8'	20964	42235	63°36.1'	20964	17	47152
1971	0°04.3'	20992	42262	63°35.2'	20992	26	47188
1972	0°06.5'	21011	42286	63°34.7'	21011	40	47218
1973	0°10.2'	21028	42317	63°34.6'	21028	62	47254
1974	0°13.6'	21046	42350	63°34.5'	21046	83	47291
1975	0°18.5'	21072	42380	63°33.8'	21072	113	47330
1976	0°23.8'	21084	42413	63°34.0'	21084	146	47365
1977	0°28.8'	21106	42443*	63°33.6**	21105	177	47401*
1978	0°34.6'	21108	42473*	63°34.4**	21107	212	47429*
1979	0°41.4'	21113*	42496*	63°34.8**	21112*	254	47452*
1980	0°46.3'	21107*	42512*	63°35.8**	21105*	284	47463*
1981	0°52.4'	21097*	42530*	63°37.0**	21095*	322	47475*
1982	0°57.5'	21078	42549	63°38.8'	21075	353	47484
1983	1°02.7'	21078	42581	63°39.8'	21074	384	47512
1984	1°08.1'	21075	42601	63°40.7'	21071	417	47529
1985	1°12.7'	21073	42625	63°41.7'	21068	446	47550
1986	1°17.8'	21065	42660	63°43.1'	21060	477	47577
1987	1°21.9'	21067	42689	63°44.0'	21061	502	47604
1988	1°26.6'	21052	42723	63°46.0'	21045	530	47628
1989	1°31.3'	21041	42761	63°48.0'	21034	559	47657
1990	1°35.5'	21044	42782	63°48.3'	21036	584	47678
1991	1°36.3'	21027	42816	63°50.4'	21019	589	47701
1992	1°38.1'	21037	42834	63°50.4'	21028	600	47721
1993	1°43.2'	21039	42853	63°51.0'	21030	631	47739

4. Special phenomena
(magnetic and earth current data)
 SSC-s

Date	CET (UT+1h)	Ampl. in H(nT)	Hx	Hy	End of storm	
920101	1645	55	+	-	920102	1100
920108	0343	20	+	-	nostrm	
920109	2152	28	+	-	920110	0300
920126	1459	35	+	-	920126	2000
920201	0608	22	+	-	920202	0430
920202	1154	70	+	-	920203	2300
920208	1432	75	+	-	920210	0030
920219	0110	45	+	-	920221	1430
920224	1627	25	+	-	920225	1400
920226	1657	90	+	-	920227	2110
920229	0920	45	+	-	920229	2100
920317	0950	48	+	-	920318	0100
920321	0821	15	-	+	920322	0300
920414	2024	25	+	-	nostrm	
920509	1557	35	+	-	920511	0800
920509	1956	140	+	-	instrm	
920518	2019	50	+	-	920519	0300
920522	0414	25	+	-	920522	2300
920610	0403	21	+	-	920610	1300
920618	1352	52	+	-	920619	0100
920627	2035	35	+	-	nostrm	
920804	1408	40	+	-	920805	0500
920813	1514	47	+	-	920813	1800
920909	0139	57	+	-	920911	0200
921008	1838	27	+	-	921009	0400
921009	0912	67	-	+	921009	2400
921101	2145	110	+	-	921102	0300
921217	0541	15	+	-	921217	2200
921227	2101	18	+	-	921228	0200
930217	0301	62	+	-	930217	1800
930220	0029	14	+	-	930220	1300
930227	2219	25	+	-	930228	0900
930308	2138	65	+	-	930309	1600
930311	0640	14	+	-	930312	0300
930315	0527	20	+	-	930315	1600
930323	2155	65	+	-	930324	2230

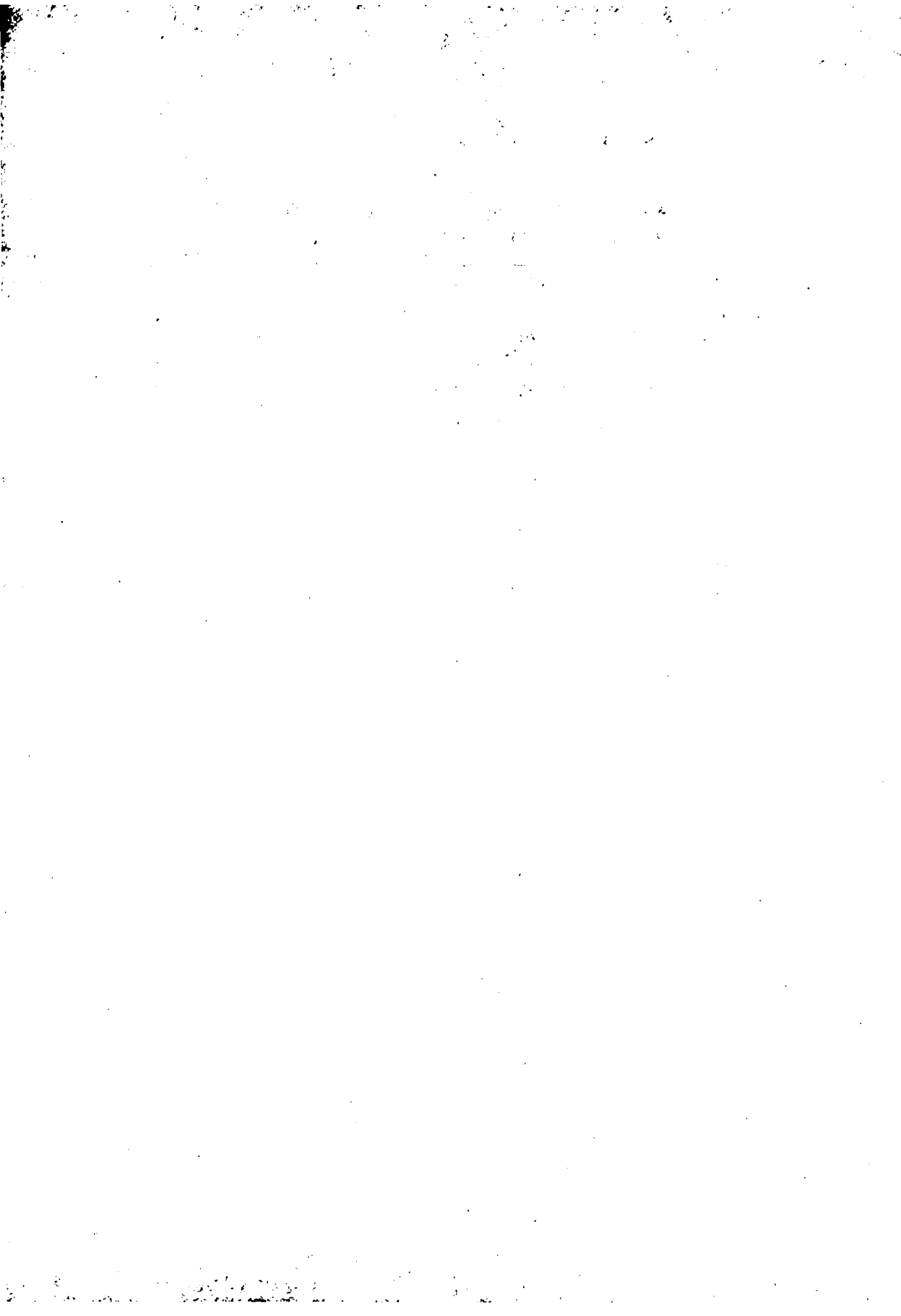
Date	CET (UT+1h)	Ampl. in H(nT)	Hx	H _y	End of storm	
930404	1435	70	+	-	930405	2330
930610	1728	23	+	-	930611	0300
930923	1331	30	+	-	930923	0200
931103	1755	20	+	-	931105	2300
931118	1211	30	+	-	931119	0500
931207	1201	15	+	-	931208	1900

Abbreviations:

s.next = see next item
 nostrm = no storm
 instrm = in storm
 cont'd = continued
 durstr = during storm

Special phenomena
sfe

Date	Beginning GMT	Maximum GMT	End GMT	Ampl. nT	Sign	
					H _x	H _y
920318	1223	1228	1236	30	-	+
920330	1104	1111	1118	12	+	-
920608	0658	0701	0706	45	-	+
920613	0445	0448	0452	28	-	+
920622	1252	1257	1301	28	-	+
920708	0945	0950	0957	12	-	+
920921	1204	1209	1214	18	-	+
921207	1346	1350	1355	54	-	+
930301	0104	0107	0112	16	-	+
930417	1902	1909	1920	35	-	+
930706	1026	1037	1047	33	-	+
931220	0818	0821	0825	17	-	+



III. ATMOSPHERIC ELECTRICITY

1. Hourly means of the potential gradient

Atmospheric electricity data have been published since 1962. This table contains the hourly average values of the potential gradient expressed in V/m. The date column gives year, month, day. Hourly averages have been taken only from hours having a recording period of 30 minutes or more. If values were available only for part of an hour the average is entered in square brackets []. These data have been used in the determination of the daily means. Values uncertain for some reason are entered in round brackets () and have not been used in calculating daily means. Daily means of each day with 24 hours of recording are entered. However, loss of a maximum of one hour's data out of twelve (for example, on account of instrument maintenance or calibration) has not precluded entering this mean value. In hours marked by S the value of the potential gradient exceeded permanently or several times the measuring limits of the equipment making the determination of an hourly average impossible. The direction of the deviations is marked by signs. OBS indicates that the potential gradient exceeded the measuring limits of the equipment both in positive and negative directions. Gaps of some days are generally due to missing records. Data are presented in universal time (GMT).

2. Hourly means of quantities of positive and negative charges transported by point-discharge for each month

In this table the values are expressed in 10^{-6} Asec/hour. The measurements were interrupted between August 11 and November 1, 1993 because of renovation works in the measuring area. Data are presented in universal time (GMT).

Both the equipments and methods of measurements of potential gradient and point discharge have been described in the paper by BENCZE P and MÄRCZ F: "Atmosphärisch-elektrische und ionosphärische Messungen im Observatorium bei Nagycenk". *Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966*, Sopron, 1967. Further information is given by BENCZE P and MÄRCZ F: "The Geophysical Observatory near Nagycenk. II. Atmospheric electricity and ionospheric measurements" (*Acta Geod. Geoph. Mont. Hung.*, 16, 1981, 353-357).

*1. Hourly means of the
1992*

Date	00	01	02	03	04	05	06	07	08	09	10	11
920101	60	60	50	30	30	30	40	[50]	60	60	70	60
920102	110	100	70	60	50	50	70	100	[100]	[100]	110	100
920103	80	50	50	40	50	60	70	110	[120]	130	150	140
920104	70	90	70	60	60	50	50	80	[90]	110	70	60
920105	60	60	-S	-20	20	20	30	10	[-20]	[20]	10	0
920106	30	0	30	40	40	40	40	(50)	-	90	110	80
920107	40	50	90	70	70	90	80	[90]	130	90	100	80
920108	20	120	150	130	100	120	[140]	130	150	180	130	80
920109	40	40	30	50	60	70	[80]	30	20	30	70	60
920110	-10	-10	0	0	10	20	[20]	20	30	30	10	0
920111	40	10	-10	10	-10	30	20	30	[30]	40	50	70
920112	60	70	60	40	20	40	40	30	[40]	[50]	50	50
920113	40	30	40	30	40	40	40	-	-	80	90	100
920114	60	50	50	70	50	50	60	40	[30]	60	70	60
920115	30	20	20	20	30	40	40	20	[10]	10	20	40
920116	40	40	40	40	30	30	40	[40]	40	60	50	40
920117	50	50	20	30	30	40	40	60	[50]	50	40	40
920118	40	20	20	20	20	20	10	10	[20]	20	40	40
920119	50	50	40	50	40	50	50	40	30	[-10]	20	30
920120	40	30	-10	-60	-10	30	20	[30]	-	-30	-30	10
920121	-20	0	-10	-30	-40	-30	-40	[-30]	30	60	30	90
920122	60	20	0	10	20	40	50	-	60	60	60	60
920123	0	-20	-30	-10	-60	-20	[-30]	-40	-20	-10	10	20
920124	10	0	0	20	-10	30	[40]	[80]	50	20	20	30
920125	10	30	0	30	0	-30	90	80	[80]	40	40	30
920126	100	90	120	90	40	70	60	80	90	[70]	30	40
920127	20	0	-20	-10	-20	-10	20	-	(20)	30	10	30
920128	40	40	50	50	60	60	60	[80]	60	50	40	50
920129	50	60	60	60	30	-10	0	70	[100]	100	100	130
920130	70	40	20	0	0	10	20	[40]	70	90	90	100
920131	40	40	40	40	50	60	60	[60]	80	90	80	90

potential gradient

12	13	14	15	16	17	18	19	20	21	22	23	Means
70	80	80	80	80	90	120	150	130	130	120	110	77
110	130	100	100	90	120	110	130	120	80	80	80	95
130	120	120	150	150	140	+S	150	150	150	100	100	109
40	30	50	20	40	60	50	60	60	50	50	50	59
-50	-80	-70	-S	-80	40	50	80	60	50	30	30	11
70	80	70	70	50	40	60	80	90	80	80	80	-
70	90	100	110	90	110	100	80	90	150	130	80	91
100	110	80	70	90	120	120	80	100	80	80	40	105
50	40	60	40	70	70	80	40	30	30	0	-10	45
0	-10	-10	-10	-30	10	-30	-20	-110	-30	-10	10	-5
60	40	30	30	30	40	40	40	50	60	50	70	35
60	50	70	70	80	70	60	40	20	20	40	30	48
80	80	60	60	50	60	60	70	70	60	70	80	-
30	30	50	60	60	60	20	30	40	50	40	30	48
50	70	70	70	50	50	60	60	50	40	40	30	39
60	70	70	80	50	70	60	70	60	60	50	50	52
50	40	50	50	40	30	30	40	30	10	30	40	39
40	60	70	60	40	50	60	60	50	30	40	50	37
20	60	60	80	80	60	60	50	70	80	40	40	48
50	60	70	40	70	90	120	130	40	30	0	10	32
90	80	80	20	20	20	30	0	-60	20	80	+S	17
60	70	80	70	50	50	40	50	50	30	30	20	45
30	20	-10	-50	-40	-10	-10	0	-10	-10	-10	0	-13
40	20	10	0	-40	-20	-10	0	-50	-10	-10	-50	7
40	0	0	50	-60	-50	-40	10	30	100	+S	+S	-
40	50	60	40	40	20	20	0	20	40	30	20	53
50	40	70	70	70	40	40	50	50	60	60	30	-
50	80	70	90	90	40	70	10	0	30	50	60	53
140	140	160	140	140	140	130	120	100	80	80	70	91
130	130	110	100	70	70	90	90	80	70	50	40	66
90	80	70	90	100	100	100	110	90	70	0	30	69

Date	00	01	02	03	04	05	06	07	08	09	10	11
920201	40	40	50	40	30	50	40	50	60	60	[50]	60
920202	10	40	40	70	90	70	70	110	90	[90]	90	80
920203	40	30	20	10	30	20	30	-	[100]	90	90	120
920204	50	50	40	40	50	40	-	[80]	90	80	80	70
920205	OBS	OBS	OBS	OBS	OBS	30	60	70	100	[90]	90	80
920206	-10	-10	-10	0	10	10	10	40	[50]	50	-	-
920207	40	40	30	30	30	40	50	40	[50]	50	60	60
920208	70	70	50	50	60	50	60	70	[80]	80	70	60
920209	70	40	20	20	20	30	40	70	[80]	90	80	0
920210	120	160	80	-10	-30	0	0	20	-	30	30	40
920211	30	40	30	30	30	40	[40]	-	80	70	60	60
920212	70	80	80	60	70	60	70	70	[90]	70	70	60
920213	120	100	100	+S	+S	80	180	120	[80]	80	90	90
920214	-20	20	40	20	10	0	10	30	[30]	40	30	40
920215	40	40	30	30	30	40	40	10	[40]	70	80	100
920216	40	0	-20	-10	-30	-70	30	[50]	[40]	40	40	40
920217	-	-	-	-	-	-	-	-	-	30	30	30
920218	30	30	30	30	20	20	40	50	[50]	50	30	40
920219	10	20	30	30	40	40	50	50	[50]	50	60	60
920220	50	50	40	30	40	40	50	-10	[20]	40	40	50
920221	50	50	50	50	30	40	50	30	[-20]	-30	0	30
920222	20	30	30	0	-10	30	70	160	[130]	80	50	60
920223	50	30	40	30	40	40	0	40	[40]	50	50	50
920224	-	-	-	50	50	50	50	60	-	[80]	80	90
920225	80	50	50	50	50	50	50	[80]	70	50	50	(40)
920226	40	40	40	40	30	40	40	50	(40)	50	(50)	50
920227	50	50	50	50	60	70	50	[70]	[100]	110	120	90
920228	50	40	20	0	0	0	0	40	[50]	60	70	80
920229	50	40	40	40	40	30	30	30	[40]	40	40	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	60	80	90	90	80	50	30	30	10	0	-10	47
70	90	80	70	80	70	70	90	80	60	50	40	71
100	70	70	40	40	30	10	20	30	50	60	50	50
60	50	50	50	60	40	60	50	40	30	30	40	54
80	80	+S	OBS	OBS	OBS	-S	80	80	30	30	0	-
0	30	0	30	-20	-60	30	60	80	70	60	40	-
60	50	50	40	40	60	70	70	70	60	50	70	50
70	60	50	60	70	90	140	110	90	90	80	70	73
-30	10	40	40	60	60	90	+S	120	90	60	80	51
40	20	30	40	40	40	30	40	60	60	30	20	39
50	70	70	60	60	60	70	70	80	70	80	70	57
70	80	70	80	90	90	100	120	90	90	110	120	82
90	90	80	60	60	50	40	40	60	60	50	30	-
50	50	50	50	50	50	60	40	40	50	40	50	35
80	70	80	30	60	50	60	80	80	60	70	80	56
40	50	40	50	50	50	40	40	40	30	30	30	27
30	30	20	OBS	OBS	OBS	20	40	40	40	40	30	-
30	40	50	40	40	40	40	50	50	30	20	10	36
60	60	60	50	60	60	70	70	50	50	50	50	49
50	50	60	20	-10	0	10	30	40	50	50	50	33
40	30	0	-40	-70	-10	0	10	20	40	30	30	17
60	50	50	50	20	-30	-20	0	20	50	80	60	43
-40	-S	-S	-50	-60	20	-	-	-	-	-	-	-
80	90	90	90	80	80	110	120	120	110	80	90	-
(40)	60	50	50	50	50	50	50	50	50	50	40	54
60	60	60	70	60	70	70	70	60	70	70	60	-
100	100	110	100	100	90	110	70	60	50	40	40	77
90	100	100	80	80	70	60	60	60	50	50	50	53
50	50	50	50	40	50	60	40	30	30	20	10	40

Date	00	01	02	03	04	05	06	07	08	09	10	11
920301	20	20	20	10	30	30	30	30	[50]	50	50	60
920302	10	10	10	30	30	30	40	50	-	(60)	(50)	70
920303	OBS	10	20	30	20	30	20	30	[30]	40	30	30
920304	40	40	40	40	30	40	50	50	[40]	50	50	50
920305	40	40	40	40	20	20	30	40	[60]	60	70	70
920306	20	10	10	30	30	30	30	40	[30]	40	40	40
920307	0	10	10	10	10	10	10	(-50)	(-30)	-40	-	-
920308	-	-	-	-	-	-	-	-	-	-	-	-
920309	-	-	-	-	-	-	-	-	-	60	40	50
920310	20	20	20	20	30	30	30	30	[30]	(40)	40	50
920311	10	20	30	0	-20	-20	30	40	[30]	30	30	40
920312	10	10	20	20	20	30	40	40	[40]	30	30	20
920313	30	30	20	20	0	20	20	30	[20]	30	30	30
920314	30	30	20	-	-	-	-	-	-	-	-	-
920315	-	-	-	-	-	-	-	-	-	-	-	-
920316	-	-	-	-	-	-	-	-	-	50	40	40
920317	50	50	40	40	50	50	[70]	80	70	60	70	70
920318	60	40	40	30	30	40	50	50	[60]	50	60	60
920319	10	0	30	30	40	50	70	90	[90]	90	90	70
920320	50	50	50	50	50	60	40	60	[20]	30	40	60
920321	-10	-10	-10	-10	-10	-20	-10	-10	[-10]	-10	-20	-40
920322	10	20	-20	10	20	30	40	50	[50]	40	40	+S
920323	30	30	30	OBS	20	30	50	50	-	(40)	30	30
920324	30	40	30	20	10	30	40	50	[40]	40	40	40
920325	10	10	10	10	-10	-40	-10	0	[0]	0	-10	0
920326	30	30	30	30	20	30	[20]	0	OBS	OBS	OBS	OBS
920327	-80	0	30	20	0	-50	-40	0	0	40	70	60
920328	60	60	40	30	40	50	60	50	[50]	50	50	30
920329	40	40	40	40	40	40	60	[60]	50	OBS	OBS	40
920330	50	40	20	30	40	50	-	-	60	60	60	50
920331	30	30	30	30	20	30	30	[40]	40	(50)	-	-

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	40	40	40	50	40	40	40	30	30	20	10	35
70	60	40	40	60	50	60	50	50	-50	OBS	OBS	-
30	40	40	40	50	50	70	60	50	50	40	0	35
50	60	60	60	70	60	80	70	70	60	50	50	53
70	70	50	50	50	40	30	50	50	30	30	20	45
40	40	40	30	20	10	-70	-20	-10	0	0	-40	16
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
50	60	60	50	60	80	70	70	50	40	30	20	-
60	70	60	50	60	70	60	60	50	50	30	0	41
40	40	40	40	60	50	80	80	60	40	30	20	33
20	20	30	40	40	40	40	40	50	40	40	30	31
30	50	40	40	30	30	20	20	40	40	30	40	29
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
50	30	OBS	OBS	OBS	-10	OBS	OBS	50	50	50	50	-
60	60	70	70	70	70	80	60	60	70	70	70	63
60	60	70	70	60	40	0	0	10	20	30	20	42
60	80	80	70	70	70	70	70	70	60	40	50	60
60	60	50	-10	-10	-100	-100	-50	-10	-10	-10	0	18
-10	20	20	-10	-10	-30	-10	-10	-20	-20	10	10	-10
-S	-20	-S	50	40	30	10	-10	-40	10	30	20	-
+S	OBS	30	30	40	30	30	40	OBS	10	10	20	-
40	30	40	-30	30	50	40	50	30	20	-30	10	29
20	20	50	40	40	50	60	40	50	40	40	50	20
0	-140	-70	-90	20	-20	0	0	10	30	OBS	0	-
60	60	-10	OBS	30	50	70	40	40	50	50	50	24
+S	OBS	-S	30	40	40	60	70	60	50	50	40	-
30	50	50	50	60	60	70	70	70	60	50	50	-
50	50	50	50	40	40	40	50	50	40	30	30	-
-	-	-	-	-	50	60	50	50	40	40	30	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
920401	30	30	30	30	40	30	40	[20]	-20	40	30	30
920402	30	30	30	20	40	30	30	[50]	60	60	60	50
920403	10	30	30	30	30	40	70	[70]	60	60	70	50
920404	20	30	30	30	30	40	50	40	[40]	60	50	50
920405	50	40	30	30	30	30	30	[30]	30	30	30	+S
920406	40	30	20	30	30	20	[10]	-	40	50	50	50
920407	40	50	50	40	50	50	50	[90]	80	70	70	60
920408	40	50	40	40	40	30	40	[50]	50	50	50	60
920409	30	40	40	40	40	30	40	[40]	50	50	50	40
920410	50	40	40	50	50	60	70	[60]	60	60	50	60
920411	40	30	10	20	20	20	40	70	[70]	80	90	90
920412	40	30	30	40	40	30	[30]	40	50	50	60	50
920413	10	10	10	10	10	10	[20]	-	30	-30	10	20
920414	10	10	10	20	30	30	50	[40]	40	30	30	30
920415	30	10	10	10	20	10	0	[20]	30	30	30	-30
920416	-S	-S	-10	-S	-60	OBS	30	10	30	30	30	30
920417	30	30	30	30	20	[30]	10	30	40	30	30	30
920418	30	30	40	40	40	50	[50]	[60]	70	60	(60)	60
920419	20	30	30	50	30	40	30	[30]	30	20	30	30
920420	40	40	40	40	50	60	70	[30]	40	40	50	40
920421	30	30	30	30	40	40	-	[50]	60	60	50	50
920422	30	30	30	40	50	50	[50]	50	50	50	50	40
920423	20	20	30	OBS	OBS	30	[50]	40	50	40	50	30
920424	40	30	30	30	30	[40]	50	50	50	40	40	20
920425	40	30	30	20	30	40	40	40	50	50	[50]	50
920426	50	40	40	30	30	40	40	[50]	50	50	50	40
920427	10	10	10	10	20	30	[40]	-	[30]	30	30	OBS
920428	20	30	30	30	30	30	[50]	60	40	60	40	40
920429	20	-S	20	30	30	20	[30]	20	20	20	30	30
920430	0	0	OBS	-S	0	[-10]	-10	0	(10)	(0)	0	10

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	40	40	30	40	40	40	50	40	50	40	30	34
50	50	30	10	30	30	20	20	30	20	10	10	33
40	40	30	30	40	40	40	30	30	30	30	20	40
50	60	50	50	70	60	50	50	50	60	50	50	47
OBS	50	60	70	-S	30	50	70	70	60	50	50	-
60	70	70	80	80	80	70	100	80	60	50	50	53
70	70	60	50	60	60	70	60	50	50	40	40	58
50	50	50	50	60	50	50	50	40	50	40	20	46
50	50	60	50	50	50	40	40	30	40	40	40	43
60	60	80	90	80	80	80	110	70	50	50	50	63
80	90	80	70	70	70	50	40	40	40	40	30	53
60	60	60	70	50	40	40	40	30	30	20	10	42
10	30	30	30	20	-40	OBS	OBS	OBS	-10	+S	20	-
30	30	30	30	30	30	30	40	30	30	30	20	29
-S	-50	-10	10	20	30	30	30	20	10	+S	+S	-
30	30	40	40	30	40	40	40	30	10	30	30	-
30	30	30	30	40	40	40	30	40	40	30	30	31
50	60	50	50	60	50	50	60	60	60	60	60	52
20	30	30	-S	30	OBS	10	-S	30	60	60	50	-
40	40	30	40	40	70	70	60	50	40	40	30	45
50	50	40	40	40	30	30	30	30	40	30	30	40
30	-S	OBS	OBS	OBS	20	20	20	50	40	30	-S	-
40	+S	-30	10	40	30	30	30	30	30	30	30	-
20	30	30	30	30	30	40	40	40	30	20	20	34
40	40	30	30	30	40	40	30	30	40	40	40	38
50	40	OBS	-S	+S	20	20	30	30	20	20	10	-
OBS	OBS	OBS	OBS	30	30	OBS	OBS	OBS	0	20	30	-
30	30	40	40	30	40	30	30	30	30	30	30	35
30	30	30	30	30	20	OBS	OBS	-20	0	20	-50	-
10	0	10	30	30	30	30	30	30	40	-S	30	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
920501	40	OBS	+S	30	20	60	[10]	20	50	30	30	20
920502	30	10	0	20	30	20	20	10	[30]	30	30	30
920503	30	30	30	30	20	40	[40]	40	60	50	40	40
920504	0	10	0	10	0	-10	10	-	[30]	30	30	30
920505	30	30	30	30	30	30	[30]	40	50	60	70	70
920506	-10	-10	10	10	20	[10]	-	50	50	(60)	(60)	60
920507	0	0	0	10	0	[20]	30	20	30	30	40	40
920508	30	30	30	30	30	[30]	(60)	40	30	30	30	30
920509	30	30	30	30	30	30	[30]	[40]	30	30	30	OBS
920510	10	0	10	10	OBS	30	[30]	OBS	-10	40	30	30
920511	0	10	10	10	20	10	-	-	[30]	20	30	20
920512	30	30	30	30	40	[50]	50	50	40	50	40	50
920513	30	20	30	30	30	[40]	50	40	50	50	50	50
920514	10	20	20	20	20	[60]	80	50	50	50	50	50
920515	10	20	30	20	30	[50]	50	40	50	40	40	40
920516	10	30	30	10	10	50	40	40	[50]	50	50	60
920517	10	10	20	30	30	10	30	30	[40]	[60]	50	50
920518	50	40	40	30	50	50	[60]	-	50	50	60	70
920519	60	70	70	60	50	[60]	70	70	60	50	50	40
920520	10	10	10	20	20	[30]	20	10	10	10	20	30
920521	20	10	20	10	20	+S	OBS	-10	30	30	30	20
920522	20	20	20	30	40	[40]	40	40	40	40	40	40
920523	20	10	20	20	30	30	30	30	[30]	40	30	30
920524	20	20	10	10	20	40	50	50	50	[50]	40	40
920525	20	20	30	30	40	40	40	-	40	40	30	30
920526	30	20	30	20	30	40	40	[30]	40	40	40	50
920527	10	10	10	20	30	40	40	[40]	50	60	60	50
920528	20	20	20	-60	30	40	50	[50]	50	50	50	50
920529	20	20	20	30	20	[10]	20	20	30	30	40	30
920530	20	10	10	20	10	30	30	[40]	50	50	50	50
920531	20	10	20	10	10	40	[40]	50	50	50	50	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	30	30	20	0	0	0	-10	20	20	20	20	-
30	30	30	30	30	30	30	30	30	30	30	30	26
50	60	50	50	30	30	30	10	10	10	10	0	33
50	50	40	60	50	50	50	30	30	30	30	30	28
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40	40	50	40	30	30	30	30	30	30	30	30	26
30	30	30	30	30	30	30	30	30	30	30	30	30
OBS	OBS	-S	20	10	10	30	30	10	20	OBS	0	-
OBS	0	30	+S	+S	OBS	-S	20	20	10	0	10	-
30	40	+S	OBS	OBS	OBS	OBS	OBS	-S	30	30	30	-
50	50	40	50	40	40	30	30	30	40	30	30	40
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50	50	90	80	90	70	60	70	70	70	60	50	49
70	60	60	50	50	50	70	70	70	60	70	20	54
40	40	30	10	20	40	30	20	-10	10	10	10	40
50	50	40	40	30	30	20	20	30	20	10	20	23
30	30	40	40	40	40	40	40	30	30	20	20	-
40	50	50	40	40	40	30	30	20	30	20	10	34
OBS	OBS	-S	50	OBS	-S	40	50	OBS	10	20	20	-
40	40	50	50	40	40	30	40	40	30	20	20	35
40	50	50	50	40	40	30	40	30	30	40	30	36
40	40	40	40	40	30	30	30	30	30	30	10	33
50	50	50	50	50	50	50	70	40	30	30	20	40
40	50	40	40	40	50	50	40	40	30	30	30	35
20	30	50	50	50	50	50	40	40	30	40	40	33
40	40	40	50	40	40	40	30	30	30	40	30	34
50	50	50	50	40	30	40	30	30	30	20	20	35

Date	00	01	02	03	04	05	06	07	08	09	10	11
920601	10	20	10	10	20	20	20	-	10	0	-20	+S
920602	30	30	10	10	20	[-10]	10	0	0	10	10	10
920603	30	30	20	30	30	[30]	[30]	0	30	20	30	20
920604	-10	-10	-10	0	20	[10]	30	70	60	110	30	50
920605	10	10	10	30	-S	OBS	+S	30	20	20	30	60
920606	30	30	30	30	30	30	[30]	80	30	10	60	+S
920607	0	10	0	10	10	20	30	[40]	30	40	30	10
920608	10	0	0	10	10	20	-	(30)	40	0	10	20
920609	50	20	30	30	-20	[-20]	OBS	OBS	-70	-30	-80	20
920610	20	10	10	10	20	[30]	40	30	+S	OBS	OBS	OBS
920611	30	10	20	20	30	20	20	20	[30]	30	30	20
920612	20	30	30	-10	-10	[-20]	[30]	40	80	70	-S	OBS
920613	20	30	20	60	40	30	[-10]	[-20]	10	80	150	100
920614	10	10	10	10	20	30	[40]	[40]	50	40	40	40
920615	30	40	40	50	60	60	-	-	50	70	70	70
920616	30	30	30	30	40	[50]	40	50	40	50	50	60
920617	0	-10	-10	-10	0	[10]	30	50	50	60	70	60
920618	30	20	20	30	30	[40]	50	50	60	60	60	60
920619	20	20	20	20	40	[50]	50	60	50	50	50	50
920620	30	30	30	30	40	40	[40]	[50]	40	50	70	60
920621	0	10	10	20	20	30	30	30	[40]	50	50	50
920622	10	10	20	20	20	30	20	-	40	50	60	50
920623	10	20	10	10	10	[30]	40	30	40	10	-10	-20
920624	20	10	10	30	30	[30]	40	40	40	50	50	50
920625	40	50	40	20	40	[60]	70	40	40	50	40	60
920626	30	20	10	20	20	[30]	40	40	50	80	60	70
920627	50	40	40	40	40	50	70	60	[70]	[40]	40	40
920628	30	40	40	30	30	20	[40]	[50]	70	80	50	50
920629	20	30	20	30	20	30	40	-	40	40	60	50
920630	10	10	20	10	10	[20]	[30]	30	30	40	40	30

12	13	14	15	16	17	18	19	20	21	22	23	Means
-30	10	30	0	10	20	20	30	30	30	50	40	-
10	10	20	30	30	30	30	30	30	20	30	30	18
30	50	+S	OBS	OBS	OBS	+S	OBS	20	-10	-20	-40	-
40	30	40	50	50	30	30	30	20	20	0	10	29
OBS	+S	OBS	OBS	OBS	10	30	30	30	30	30	20	-
OBS	OBS	+S	OBS	OBS	-10	-20	-100	30	10	20	0	-
-20	-S	-S	10	30	+S	-10	0	20	10	20	10	-
30	10	+S	-60	OBS	OBS	-60	70	60	80	80	60	-
30	70	60	60	30	20	20	10	10	10	0	20	-
30	30	40	50	40	40	30	30	30	30	40	30	-
20	30	10	50	OBS	OBS	0	0	0	10	-10	10	-
+S	40	40	20	20	30	40	60	50	40	20	OBS	-
80	OBS	OBS	OBS	30	30	20	10	20	20	20	10	-
30	-S	OBS	30	50	50	40	40	40	20	10	30	-
70	80	70	60	50	50	50	50	50	50	30	30	-
50	50	50	50	50	50	40	30	30	30	30	20	41
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60	60	60	60	60	70	70	50	40	30	20	20	46
50	50	50	50	50	50	50	OBS	+S	30	50	40	-
50	50	60	40	20	30	40	20	10	10	10	10	36
50	50	50	50	40	40	30	20	20	30	30	20	32
50	40	30	30	30	40	40	30	30	20	30	20	31
-20	0	-10	10	0	30	30	30	30	40	40	30	16
-S	-S	60	80	10	+S	OBS	OBS	30	70	60	30	-
70	70	70	70	80	60	50	40	40	30	20	30	49
60	70	70	80	80	80	80	90	80	90	80	80	59
40	40	30	40	40	50	40	30	40	40	40	40	44
60	70	60	60	50	40	30	40	40	30	30	30	45
50	50	60	60	50	40	40	40	30	30	20	20	38
40	50	50	50	40	40	40	30	30	20	20	10	29

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
920701	10	20	30	20	30	[30]	30	40	40	30	30	30
920702	20	10	10	20	30	[40]	50	40	60	60	60	40
920703	40	30	20	20	30	[40]	30	30	30	50	60	70
920704	0	0	10	10	20	30	20	20	[30]	[20]	30	30
920705	30	20	20	20	30	30	[30]	30	20	30	40	40
920706	30	40	30	30	30	-20	-	-	20	40	40	40
920707	30	20	30	30	30	[40]	50	50	50	50	70	70
920708	20	30	30	30	40	[40]	-	-	30	30	40	40
920709	20	20	20	20	40	[70]	40	30	40	40	30	40
920710	20	20	20	20	30	[20]	30	30	40	40	30	30
920711	0	10	20	30	40	[60]	40	40	40	40	40	40
920712	50	20	20	20	30	20	50	[50]	10	50	70	50
920713	40	40	70	60	50	40	-	-	50	30	90	50
920714	30	30	30	40	40	[50]	50	60	60	60	60	60
920715	30	40	40	30	30	40	[50]	[OBS]	-S	120	OBS	+S
920716	20	20	30	30	40	60	70	[90]	80	60	60	60
920717	10	20	10	20	30	[40]	30	30	30	40	50	50
920718	30	20	20	30	[30]	40	30	-S	-S	50	50	50
920719	50	40	30	30	[30]	30	40	40	60	50	60	50
920720	0	0	10	10	10	30	-	-	30	40	40	40
920721	30	20	20	30	40	40	[30]	30	30	30	40	30
920722	40	40	30	60	60	[60]	40	40	40	40	40	50
920723	30	20	10	10	20	[20]	20	30	40	40	40	40
920724	40	30	40	40	40	[40]	70	80	80	90	80	70
920725	30	30	30	40	40	60	[70]	[70]	80	70	80	80
920726	10	20	10	20	20	30	40	40	[50]	50	60	70
920727	20	20	10	10	10	20	-	-	50	60	60	70
920728	30	30	30	30	20	30	[-10]	50	70	60	50	60
920729	30	30	30	30	30	[40]	[40]	60	40	40	40	30
920730	20	10	10	10	10	[20]	30	-S	OBS	-60	-60	-30
920731	30	30	30	30	30	40	40	50	[50]	30	50	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	30	40	40	40	40	50	40	30	30	20	20	31
50	50	60	60	50	40	50	50	50	50	40	40	43
70	70	70	80	OBS	OBS	-10	30	10	20	20	10	-
30	30	30	30	30	40	40	40	30	30	30	20	25
40	40	40	40	40	50	40	40	40	30	20	30	33
40	40	40	40	20	30	50	40	30	30	30	30	-
OBS	OBS	OBS	OBS	OBS	40	40	30	30	30	20	30	-
40	20	30	30	30	40	40	50	40	40	30	30	-
40	40	40	40	50	50	40	40	40	30	30	30	37
40	40	30	30	40	60	-S	OBS	30	40	20	30	-
40	40	40	50	40	OBS	OBS	50	+S	OBS	OBS	OBS	-
60	70	60	50	60	50	40	40	40	30	40	40	43
30	20	20	10	10	20	30	40	50	40	30	30	-
60	70	70	70	60	60	60	60	50	50	40	40	53
OBS	OBS	-S	50	50	50	40	40	30	20	10	10	-
60	60	70	50	60	40	40	40	40	40	30	20	49
40	40	50	60	50	40	30	30	30	30	30	30	34
50	50	40	40	60	50	40	50	40	50	40	50	-
40	40	50	50	50	40	50	50	40	20	10	0	40
40	40	50	60	50	40	40	30	30	40	30	20	-
30	30	40	50	40	40	50	50	50	40	50	50	37
50	50	40	50	40	50	40	40	40	50	40	20	44
40	40	40	40	40	40	40	50	60	60	60	40	36
80	80	70	80	80	70	60	50	50	40	40	30	60
90	90	80	70	60	50	40	40	30	30	20	10	54
70	60	50	50	50	40	30	20	20	30	20	20	37
50	40	50	50	50	50	40	50	40	40	40	30	-
60	50	60	60	60	60	50	40	40	30	40	40	43
20	20	30	20	20	40	40	30	40	40	30	30	33
10	60	30	30	30	30	40	30	30	30	40	40	-
0	20	30	30	OBS	OBS	OBS	30	30	30	30	60	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
920801	OBS	OBS	OBS	10	20	40	[50]	60	60	40	40	40
920802	OBS	OBS	-20	10	[10]	[10]	10	20	40	70	60	50
920803	30	20	20	10	30	-	(40)	40	50	50	50	50
920804	20	10	20	10	20	30	[40]	[40]	40	-	-	-
920805	-	-	-	-	-	-	-	-	-	-	70	60
920806	20	20	20	30	30	[40]	50	60	60	30	40	40
920807	30	40	40	30	30	[40]	60	50	50	50	50	40
920808	0	0	0	10	10	10	30	30	[20]	[30]	40	50
920809	20	20	20	20	20	30	40	40	40	[40]	30	30
920810	30	30	30	20	30	-	[40]	50	40	40	30	30
920811	30	40	40	40	40	[40]	50	50	50	50	50	50
920812	30	30	20	20	20	[20]	OBS	OBS	OBS	50	50	50
920813	20	10	10	20	20	40	[50]	30	30	30	40	30
920814	30	30	30	20	20	30	[30]	40	50	50	50	30
920815	30	30	20	10	30	40	40	40	[40]	40	40	50
920816	10	10	20	10	20	30	[40]	50	50	60	70	50
920817	30	30	30	30	30	30	-	-	50	50	50	40
920818	20	20	30	30	20	[30]	[40]	-S	40	50	50	50
920819	40	30	30	30	30	[40]	50	-S	40	30	20	30
920820	20	10	10	10	20	30	[30]	40	40	50	50	40
920821	40	30	30	20	30	20	30	30	30	30	[40]	40
920822	10	10	10	10	10	20	20	30	[30]	40	40	40
920823	30	20	20	30	20	20	30	30	[40]	40	OBS	OBS
920824	40	30	30	30	20	30	[50]	-	50	50	50	50
920825	30	30	20	20	20	[30]	[40]	40	40	30	40	40
920826	30	30	20	20	30	[40]	30	40	50	40	50	50
920827	30	30	30	30	20	[30]	[30]	40	40	40	40	50
920828	20	10	10	20	30	[30]	40	40	40	30	30	40
920829	30	30	30	30	40	40	[40]	50	40	30	20	20
920830	30	30	30	20	20	20	[30]	30	30	20	10	0
920831	30	30	40	40	30	30	-	-	60	40	50	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	50	50	-S	-S	OBS	OBS	OBS	+S	+S	70	OBS	-
40	60	60	60	50	30	40	40	40	30	30	30	-
50	50	50	60	40	40	40	40	40	30	40	30	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	70	70	70	60	50	50	50	40	40	40	30	-
50	60	60	70	60	50	40	40	50	40	30	30	43
40	50	50	60	50	40	20	30	30	10	10	10	38
40	40	50	40	40	40	40	40	40	40	30	30	29
30	40	40	40	40	40	60	50	50	40	40	40	36
30	30	30	30	30	40	40	40	60	30	+S	30	35
50	50	50	50	50	40	50	50	40	30	30	30	44
50	50	50	50	40	40	30	40	40	30	30	30	-
40	40	40	50	40	40	40	30	40	30	40	30	33
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50	50	50	50	40	40	30	40	40	30	30	30	37
30	40	50	50	40	30	30	30	20	20	10	20	32
40	40	40	40	40	40	40	40	40	50	40	40	35
40	50	50	40	30	20	20	20	20	20	20	20	30
40	30	30	40	40	40	40	30	30	30	30	30	28
40	30	30	40	40	40	40	30	40	40	40	40	-
40	30	30	30	30	40	40	50	50	40	30	20	37
40	40	50	50	40	40	40	40	30	40	40	30	36
40	40	40	40	40	40	40	30	40	40	40	40	38
50	60	50	50	50	30	40	40	40	30	30	20	38
40	40	40	40	40	50	50	50	50	40	40	40	36
20	30	30	20	30	30	40	40	40	40	30	30	33
20	20	30	30	30	30	30	40	40	40	30	30	27
20	-10	10	20	30	40	50	50	50	-	-	-	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
920901	-	-	30	10	0	-10	OBS	OBS	OBS	OBS	OBS	OBS
920902	40	40	40	40	40	[50]	50	50	40	50	40	40
920903	40	30	30	30	30	[40]	50	60	60	50	50	50
920904	40	30	40	30	20	[0]	0	-30	-40	-10	-100	-S
920905	10	0	-90	0	20	20	[40]	40	40	40	60	50
920906	50	50	50	50	40	50	50	40	[50]	50	50	(40)
920907	30	30	40	30	40	40	40	-	-	50	50	50
920908	30	30	30	40	30	[40]	50	40	40	50	40	50
920909	20	30	30	20	10	[-30]	-20	20	50	50	50	50
920910	30	20	30	20	30	[30]	40	40	30	30	40	40
920911	30	20	10	20	30	[40]	40	40	40	40	50	50
920912	40	30	40	40	30	20	30	40	[40]	40	50	50
920913	30	20	30	30	30	[40]	50	50	50	50	50	50
920914	20	10	20	20	30	30	[30]	-	30	40	50	50
920915	20	20	30	30	40	[40]	70	70	70	70	60	50
920916	40	30	40	40	40	[40]	50	60	50	50	50	50
920917	20	20	30	30	30	[30]	40	50	50	50	60	60
920918	40	40	30	20	40	[50]	60	70	80	80	80	80
920919	40	40	40	30	40	40	[50]	50	50	50	50	50
920920	30	20	20	30	50	[40]	50	50	30	30	40	50
920921	20	20	30	30	20	30	[30]	-	40	40	40	30
920922	30	30	30	30	30	30	[40]	(40)	40	40	40	(40)
920923	40	30	30	40	30	30	[40]	40	30	40	40	40
920924	50	50	40	30	30	[30]	40	50	50	40	40	40
920925	40	40	40	30	30	40	50	[40]	30	30	0	20
920926	30	30	20	30	40	30	40	30	[30]	[30]	30	20
920927	30	20	30	30	40	40	40	40	[50]	40	60	50
920928	30	40	40	40	50	40	30	-	[30]	40	40	50
920929	10	20	20	20	10	20	30	[40]	40	40	30	40
920930	10	10	0	20	20	40	[50]	60	50	60	60	60

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	60	50	30	40	40	40	40	40	40	40	40	-
40	40	40	30	30	30	40	40	30	40	50	50	41
50	50	50	50	50	40	40	40	30	30	30	40	43
OBS	OBS	OBS	-20	50	50	20	10	10	20	0	0	-
50	50	50	50	50	50	50	30	OBS	OBS	50	50	-
40	40	40	40	40	30	-S	40	40	40	30	40	43
(50)	50	50	40	40	50	50	50	50	50	40	30	-
50	40	50	50	50	50	50	40	40	40	30	20	41
50	60	60	50	50	50	60	50	50	50	40	40	37
40	30	40	40	40	40	40	30	30	30	30	30	33
50	50	50	50	50	50	50	70	50	50	40	40	42
50	50	40	40	40	30	30	40	40	40	30	30	38
40	40	40	40	40	40	40	40	40	40	30	20	39
40	30	OBS	-S	-	-	-	10	10	20	30	30	-
50	50	50	40	50	40	40	50	40	40	40	30	45
50	50	50	50	50	50	50	60	70	80	50	30	49
70	60	60	50	50	60	50	50	50	50	40	40	46
90	90	90	70	60	60	60	50	50	60	50	40	60
50	50	50	60	50	50	50	40	40	40	50	40	46
50	50	50	40	40	40	40	40	30	30	30	20	38
30	20	30	40	40	40	50	60	50	50	40	40	36
40	40	30	40	40	40	40	60	50	50	40	40	-
40	40	30	40	40	40	40	40	50	50	40	40	38
30	20	20	30	20	20	30	30	40	40	30	40	35
30	40	40	40	40	40	50	40	40	40	30	30	35
30	30	30	40	40	40	40	50	40	40	40	40	34
60	70	50	40	30	30	40	40	30	40	40	30	40
(40)	40	40	40	50	50	50	40	40	40	40	30	41
30	70	OBS	OBS	+S	50	+S	OBS	OBS	OBS	10	20	-
60	70	70	70	60	40	50	40	40	30	30	40	43

Date	00	01	02	03	04	05	06	07	08	09	10	11
921001	20	30	30	30	40	40	[30]	30	40	40	40	40
921002	10	10	10	OBS	-S	20	[40]	40	40	40	40	40
921003	30	30	30	20	30	30	30	40	30	20	30	40
921004	10	-S	-20	-60	30	40	80	[70]	100	50	60	50
921005	0	0	10	20	10	10	30	40	-	50	80	60
921006	0	10	10	10	10	10	0	10	[10]	40	50	50
921007	40	40	30	30	30	30	30	40	[40]	40	40	30
921008	10	0	10	20	30	20	20	30	[30]	30	40	40
921009	40	50	50	50	40	40	70	80	[70]	40	40	30
921010	40	30	20	20	20	40	30	20	-10	-10	-40	-30
921011	40	10	20	20	30	20	30	[20]	[20]	60	90	70
921012	40	30	40	40	30	30	50	-	-	-	50	50
921013	50	40	40	40	40	50	[50]	50	40	40	50	50
921014	20	10	0	0	10	0	[20]	30	40	40	50	50
921015	30	20	10	30	50	50	[0]	10	30	30	30	30
921016	30	40	30	60	100	90	60	70	[50]	40	30	0
921017	50	40	40	40	40	40	30	[50]	10	20	+S	20
921018	10	-20	-80	-40	-10	-10	-10	[0]	40	70	60	50
921019	30	30	30	20	30	30	30	40	-	40	40	50
921020	0	-20	-10	0	10	0	[20]	30	40	40	50	50
921021	50	40	50	60	70	70	[70]	60	50	40	40	40
921022	20	0	70	10	0	30	40	[50]	60	50	40	30
921023	30	20	30	20	20	30	40	60	50	[50]	50	40
921024	50	50	40	50	50	40	50	[50]	[40]	40	OBS	OBS
921025	40	30	20	0	20	30	40	[40]	50	50	50	50
921026	40	50	10	10	0	40	40	-	-	(50)	40	40
921027	20	20	30	30	30	20	[30]	[40]	50	50	50	40
921028	30	40	40	50	60	70	70	[40]	[40]	10	-10	20
921029	30	10	20	70	40	-10	OBS	OBS	OBS	OBS	OBS	OBS
921030	30	40	40	30	50	40	30	10	10	-30	-100	-100
921031	-10	-20	-10	-0	-0	10	20	20	30	50	50	100

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	50	40	40	40	30	20	20	10	20	20	10	31
50	40	30	30	30	20	30	40	30	30	30	20	-
30	[20]	40	30	40	40	20	10	20	10	20	20	28
40	50	20	20	-10	10	20	20	20	20	20	20	25
50	50	40	50	OBS	OBS	-	-	-	-	-	10	-
50	50	50	50	50	50	50	50	40	40	40	40	32
40	40	30	30	20	30	40	40	30	20	20	0	32
50	60	60	60	50	50	60	50	50	40	30	40	37
30	30	40	50	40	40	40	40	40	40	40	50	45
-20	0	10	20	20	10	30	20	10	20	30	20	13
90	70	90	80	70	60	70	60	50	50	40	40	50
40	50	50	60	60	70	90	90	70	50	50	50	-
50	50	50	50	40	50	40	40	30	20	20	10	41
50	50	50	50	50	40	30	30	20	-10	20	30	28
50	40	50	40	40	40	50	20	30	40	30	40	33
-10	-70	-40	-10	20	10	20	-10	10	20	30	40	25
-10	-40	10	40	90	100	+S	-20	OBS	OBS	10	10	-
40	30	30	40	50	50	50	60	50	40	40	30	24
50	50	50	50	50	50	50	40	30	30	20	10	37
30	40	10	30	30	0	-30	20	40	20	0	30	18
40	20	20	-10	30	-20	30	0	+S	-30	20	20	33
30	40	50	50	50	60	70	60	60	50	50	40	42
50	40	50	50	50	50	40	30	40	40	30	40	40
OBS	OBS	0	30	40	50	50	50	50	40	50	40	-
60	50	50	40	40	40	40	40	50	40	30	40	39
40	30	+S	20	OBS	OBS	OBS	+S	+S	30	30	30	-
40	40	40	50	40	30	30	40	30	20	10	20	33
30	40	40	40	40	50	50	40	40	50	50	70	42
30	50	30	-S	0	40	50	50	40	40	40	30	-
-40	20	0	30	20	30	20	30	40	0	0	-30	7
70	20	-20	-30	-20	10	30	40	40	30	40	40	20

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
921101	40	30	30	40	40	30	40	[50]	40	60	60	50
921102	0	10	10	-10	-10	0	-10	-10	-	10	-10	0
921103	0	-10	-10	30	10	30	[40]	60	40	30	+S	40
921104	+S	10	20	30	30	40	40	[40]	60	40	30	30
921105	20	30	30	30	30	30	40	[60]	80	70	60	40
921106	10	10	10	10	30	30	40	[60]	40	40	40	40
921107	70	80	70	80	70	90	120	90	80	[40]	[80]	70
921108	30	30	60	60	70	40	60	[40]	40	30	40	60
921109	40	40	30	30	40	80	90	110	-	50	40	40
921110	30	30	30	20	30	30	20	10	[10]	20	30	30
921111	50	50	60	80	80	60	50	70	[40]	70	60	60
921112	-	-	-	-	-	-	-	-	-	-	-	-
921113	-	-	-	-	-	-	-	-	-	-	40	40
921114	50	50	40	30	-	30	40	50	[50]	40	40	40
921115	40	40	40	40	40	30	40	50	[60]	60	60	60
921116	100	80	70	60	50	50	50	[60]	-	70	60	40
921117	0	20	40	80	90	90	60	50	[80]	130	90	30
921118	10	10	10	20	30	30	40	50	[70]	70	60	50
921119	50	40	60	60	70	60	80	70	[60]	60	60	40
921120	40	50	40	40	50	60	-	-	-	-	-	-
921121	60	60	70	70	60	60	80	90	[70]	80	100	60
921122	60	20	-40	-10	-100	+S	OBS	-40	-50	-20	-40	OBS
921123	20	0	10	30	0	-30	-50	-40	-	-10	-10	40
921124	170	120	130	110	160	160	-	0	10	50	30	40
921125	30	40	70	20	30	[40]	[20]	30	60	80	60	80
921126	30	30	20	30	30	60	60	70	[70]	80	70	60
921127	30	30	20	30	40	40	70	60	[50]	60	50	40
921128	40	50	40	40	60	50	50	[40]	30	-30	-80	-70
921129	-20	0	10	10	10	30	70	[80]	100	90	90	80
921130	30	40	50	40	40	40	40	[30]	-	40	60	70

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	50	50	50	30	30	40	30	20	20	20	10	38
10	30	10	20	20	0	-10	0	0	-10	0	0	2
20	-20	-30	-40	-60	-70	10	OBS	OBS	OBS	0	OBS	-
40	60	40	60	10	0	60	60	70	30	20	30	37
40	10	30	70	40	20	-10	-10	10	10	30	20	33
40	60	70	70	90	100	90	80	70	70	70	70	52
70	40	30	20	30	90	100	130	190	220	+S	+S	-
40	30	60	80	80	80	70	30	70	70	70	80	57
50	60	60	50	30	30	10	10	10	10	20	20	41
30	20	20	30	40	60	80	90	80	60	30	50	37
50	40	30	10	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
40	50	60	60	70	90	90	110	70	20	10	40	-
30	0	20	40	70	80	70	70	60	60	50	40	46
40	50	50	40	40	60	70	80	100	120	110	110	60
30	20	70	OBS	-S	OBS	+S	-10	-20	-10	-10	+S	-
70	60	40	30	+S	-S	-70	-10	20	20	10	10	-
50	50	40	50	50	50	60	70	70	80	80	60	48
0	6	10	-S	20	80	80	60	60	60	40	40	53
-	60	100	80	100	100	100	100	80	70	70	60	-
30	30	30	40	70	100	100	100	90	70	30	30	66
-20	-10	50	+S	0	20	0	20	30	-20	40	30	-
40	80	30	40	10	20	30	90	90	90	120	130	32
-10	100	50	30	30	80	90	30	90	30	40	30	68
60	70	70	80	80	90	70	40	20	40	50	40	53
80	80	90	40	0	60	60	80	60	30	30	40	53
40	40	50	70	70	90	90	90	80	80	90	60	57
-40	-50	-40	-30	-20	-30	-20	-30	-30	0	0	10	-3
70	70	70	50	50	40	50	70	60	60	40	40	47
60	30	20	20	20	10	10	0	0	0	-10	-10	27

Date	00	01	02	03	04	05	06	07	08	09	10	11
921201	-10	-10	-10	-10	-10	0	0	10	[20]	30	40	40
921202	30	0	0	10	10	0	0	0	0	0	0	0
921203	0	20	40	40	40	40	50	[50]	(70)	60	60	60
921204	40	30	-10	+S	OBS	OBS	60	40	[20]	50	50	50
921205	40	40	50	40	40	30	30	40	[40]	40	40	-20
921206	-10	0	0	0	10	-10	-10	-10	-10	-10	-20	-10
921207	10	20	30	40	50	50	50	(60)	(80)	80	70	70
921208	40	40	20	40	40	10	30	30	40	50	50	80
921209	90	90	80	90	80	80	50	60	50	50	[30]	30
921210	10	10	10	0	0	0	0	0	10	[0]	30	30
921211	30	30	40	30	30	30	40	40	50	60	50	[70]
921212	10	20	30	70	60	50	50	-S	-70	-110	-80	30
921213	40	40	40	40	40	40	50	70	[70]	60	60	50
921214	50	50	40	40	60	30	+S	+S	-	-30	-10	-20
921215	70	80	70	80	60	40	60	60	90	[100]	100	110
921216	40	20	20	40	0	-30	10	10	[10]	0	-10	20
921217	-10	0	20	0	30	80	30	30	10	[10]	[10]	0
921218	30	30	30	20	30	30	30	10	40	[30]	[30]	30
921219	10	20	-10	-20	-10	10	10	-10	-10	[0]	20	20
921220	30	10	20	0	30	30	20	20	[20]	[30]	40	40
921221	20	20	30	40	40	40	40	30	-	-	20	30
921222	10	20	-40	-10	30	30	50	30	[20]	10	0	-50
921223	60	50	30	20	-10	0	20	30	50	[50]	60	80
921224	50	50	50	50	40	50	30	30	[30]	[30]	30	30
921225	30	30	30	30	30	30	30	40	[30]	40	30	40
921226	10	20	30	30	30	30	30	30	30	[30]	30	40
921227	40	50	40	30	40	30	10	30	60	40	[30]	50
921228	30	30	0	10	20	20	30	-	40	60	70	80
921229	50	40	30	50	60	50	50	70	90	[120]	130	130
921230	70	70	80	70	60	60	60	50	[80]	[90]	90	110
921231	70	60	40	60	60	50	30	30	[40]	40	70	70

POTENTIAL GRADIENT

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	40	40	20	20	40	40	40	30	20	20	20	20
0	30	40	20	0	0	0	10	20	30	20	20	10
70	60	50	50	60	40	50	50	50	60	50	40	47
50	50	60	70	70	50	60	70	70	60	50	40	-
-30	20	-10	0	20	-10	-20	10	-20	-20	-20	-20	13
-10	-10	-10	-10	0	0	0	-10	-10	-10	0	10	-6
70	70	60	70	70	60	40	50	40	30	40	40	-
70	90	90	80	70	80	100	110	100	100	100	90	65
60	30	40	20	30	40	60	20	10	20	30	20	48
20	10	20	0	10	0	-10	0	10	10	-20	30	8
90	90	90	90	100	150	120	100	80	70	70	0	65
30	40	30	60	70	60	70	70	60	40	50	40	30
60	50	-S	50	50	70	80	50	50	50	50	50	53
30	50	70	120	110	80	70	40	70	60	70	70	-
100	100	120	130	120	100	110	100	130	120	80	40	90
10	20	20	30	0	30	30	20	30	10	30	10	15
-10	10	30	60	60	80	40	70	40	30	30	50	29
30	30	30	20	20	10	20	40	20	-20	-20	20	23
30	30	40	30	30	40	50	70	40	40	40	40	21
30	30	50	70	40	40	40	40	40	30	10	10	30
30	30	30	60	50	100	60	60	40	30	-10	30	-
10	20	30	30	30	20	30	50	60	50	50	40	22
70	70	70	80	90	80	100	100	90	70	60	40	57
60	50	40	40	30	70	70	60	40	60	50	50	45
40	40	40	40	40	40	40	30	30	30	30	30	34
30	40	30	40	50	50	50	60	60	50	50	50	38
40	50	50	20	10	0	30	-10	30	-10	0	30	29
80	90	90	70	60	60	60	70	70	60	60	50	53
130	120	100	90	80	100	120	120	140	170	140	90	95
130	140	120	130	100	80	80	130	100	110	80	70	90
70	70	80	90	50	50	40	30	30	30	20	10	50

*Hourly means of the
1993*

Date	00	01	02	03	04	05	06	07	08	09	10	11
930101	10	20	10	10	40	40	80	80	[80]	80	70	60
930102	30	20	10	10	10	0	20	20	40	90	[100]	100
930103	-30	-40	-30	-10	-10	-10	20	30	60	[70]	90	90
930104	70	60	60	70	80	80	70	70	-	80	70	50
930105	-10	-20	-60	-60	-20	-60	-70	[-30]	-10	50	60	60
930106	20	-10	-20	-30	-40	-40	40	[70]	[100]	80	80	80
930107	70	50	50	60	60	50	40	0	40	[-10]	40	30
930108	60	50	60	60	50	30	30	0	-60	[-10]	-20	-80
930109	0	30	40	50	50	50	50	60	[70]	70	70	80
930110	110	120	120	90	90	100	120	+S	[120]	110	120	110
930111	160	130	150	170	140	140	150	80	-	[110]	120	110
930112	70	80	80	90	70	110	110	120	[120]	90	90	90
930113	40	30	30	30	30	50	50	50	[50]	50	50	20
930114	-20	0	10	50	60	70	100	[150]	[110]	100	90	70
930115	20	10	20	30	40	60	70	70	80	[60]	60	50
930116	50	60	50	70	50	50	70	60	70	[60]	50	50
930117	80	50	50	50	50	50	50	60	[70]	80	70	100
930118	50	60	100	60	90	70	110	[110]	-	170	+S	130
930119	40	40	40	40	40	40	40	30	[50]	50	50	40
930120	60	50	40	40	40	50	50	60	[100]	+S	100	80
930121	70	50	50	40	40	40	40	70	[80]	80	70	50
930122	60	70	60	50	50	50	70	70	[70]	80	80	120
930123	30	20	30	30	30	30	30	40	[20]	30	10	-60
930124	0	30	30	40	40	50	50	50	50	[50]	60	80
930125	-S	-70	-20	-10	0	10	-10	10	-	-	-	-
930126	-	-	-	-	-	-	-	-	-	-	-	-
930127	-	-	-	-	-	-	-	-	-	-	-	-
930128	-	-	-	-	-	-	-	-	-	-	-	OBS
930129	20	-30	70	30	70	50	50	40	[40]	70	100	+S
930130	30	20	20	30	20	40	40	40	[50]	50	50	60
930131	10	-20	0	30	30	40	20	0	[30]	0	30	70

potential gradient

12	13	14	15	16	17	18	19	20	21	22	23	Means
60	60	60	70	50	50	40	40	40	30	20	20	47
110	100	80	80	60	40	30	30	30	40	-30	-70	40
110	120	100	100	120	110	110	110	100	80	70	60	60
50	50	50	50	50	40	30	20	-10	-30	-20	-10	45
70	70	70	80	70	60	80	80	70	50	20	30	24
80	90	80	70	90	80	90	70	50	60	50	40	49
-S	20	30	50	40	40	60	70	90	100	80	60	49
-20	40	50	60	0	30	-10	20	50	40	0	0	18
80	90	70	50	40	30	-20	50	120	120	150	120	63
100	90	70	60	70	90	80	70	120	130	150	160	104
110	90	100	80	70	80	80	80	100	110	140	140	115
100	90	90	90	70	70	70	50	40	40	40	40	80
30	30	30	40	50	60	80	60	60	50	30	10	42
50	30	30	40	40	50	50	30	50	50	30	30	53
60	60	50	70	70	80	80	80	80	60	60	50	57
50	50	50	50	70	100	110	120	110	100	80	70	69
100	110	90	90	110	130	130	120	110	120	110	90	86
110	90	70	70	60	60	70	70	50	40	30	40	-
40	50	50	50	60	80	80	90	80	100	80	70	55
80	80	70	90	120	110	90	120	100	80	80	70	77
50	50	60	60	80	100	110	60	50	60	50	50	61
120	130	110	80	50	90	60	60	110	120	120	60	81
-50	+S	30	50	60	60	50	50	40	20	0	20	25
80	80	80	50	50	80	50	50	50	20	OBS	-30	47
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
+S	60	20	10	-10	60	40	-10	-10	OBS	OBS	-110	
+S	+S	+S	OBS	+S	50	+S	50	80	80	50	40	-
80	90	70	60	80	50	80	0	-10	30	20	0	42
50	60	70	70	0	10	50	70	60	60	-10	-40	29

Date	00	01	02	03	04	05	06	07	08	09	10	11
930201	-10	-40	-10	10	30	-30	0	70	-	30	10	70
930202	80	60	60	70	60	70	90	80	[80]	120	150	120
930203	120	120	100	110	110	110	100	80	60	[80]	120	100
930204	80	110	100	80	120	140	140	110	[120]	70	60	40
930205	90	80	60	80	90	100	70	70	[80]	90	100	110
930206	80	80	70	80	50	40	40	40	50	70	100	100
930207	-20	0	0	10	20	20	30	40	[30]	[30]	40	60
930208	70	50	60	30	-40	-50	-50	-30	-	[-10]	20	30
930209	10	30	20	20	40	40	30	40	[60]	20	40	40
930210	40	80	80	100	70	30	70	20	[80]	120	140	110
930211	60	70	30	10	30	80	70	60	-	10	20	40
930212	90	80	80	80	90	-20	90	90	[70]	60	-10	10
930213	10	30	10	-30	40	70	130	90	80	[40]	30	30
930214	20	40	40	60	40	60	20	10	[0]	-10	10	20
930215	40	30	20	-10	10	20	10	20	-	40	100	90
930216	70	70	70	60	60	70	70	[70]	[70]	70	40	50
930217	20	40	40	30	40	30	40	40	[60]	60	30	OBS
930218	OBS	OBS	0	0	10	40	60	70	[100]	(100)	100	110
930219	70	60	50	60	60	70	70	60	[70]	70	60	50
930220	40	50	50	50	50	50	50	[60]	[70]	40	70	OBS
930221	20	10	20	30	40	30	40	[50]	[60]	50	40	50
930222	40	40	40	40	50	40	40	60	-	80	90	70
930223	60	60	50	60	70	70	80	90	[80]	60	50	40
930224	-70	-90	-90	-70	-120	100	-250	[-100]	[0]	100	-100	-40
930225	-30	-70	-100	-100	-230	-130	-100	[-60]	[-40]	-150	-30	30
930226	-10	0	0	10	10	40	60	70	[60]	60	50	-60
930227	20	40	10	0	-10	20	50	[70]	60	90	100	100
930228	30	20	0	-10	0	30	50	[60]	80	80	70	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
120	140	150	140	120	90	90	100	90	80	110	100	64
120	130	200	150	130	130	130	140	140	120	150	120	113
100	100	120	110	100	100	100	120	150	110	130	80	105
50	60	90	80	80	90	80	70	70	70	80	90	86
110	140	160	120	90	100	120	90	70	90	70	80	94
100	80	70	80	100	90	80	90	90	70	30	0	70
70	60	70	70	90	100	100	100	100	100	90	90	54
40	20	30	40	30	20	0	10	20	10	10	10	14
60	40	40	40	30	40	40	30	60	80	60	40	40
100	80	80	80	90	100	80	90	90	100	70	60	82
-10	0	0	80	70	-50	-10	70	120	40	90	90	42
0	40	40	60	40	10	-40	-30	-50	-40	-40	-30	31
80	90	90	120	100	100	110	70	70	40	60	30	62
40	60	80	80	40	40	30	40	40	20	20	10	34
90	100	110	110	100	100	90	80	80	110	100	80	66
50	60	60	60	70	80	70	40	60	60	30	-20	58
-S	OBS	OBS	-10	-10	10	40	60	30	10	0	-10	28
100	100	100	100	90	100	100	80	80	90	80	70	75
90	90	80	70	80	70	100	100	100	+S	OBS	20	71
80	70	60	60	60	70	80	70	70	50	30	20	57
50	40	50	60	60	60	60	+S	50	-50	40	40	44
70	20	50	30	60	60	60	70	80	70	60	70	56
50	40	50	50	50	40	50	40	0	-110	-80	50	42
10	0	30	20	20	10	-10	-30	30	30	30	-10	-33
30	30	30	40	30	30	30	0	-20	-60	-20	10	-37
10	50	70	80	80	80	40	50	10	20	0	40	34
100	100	100	100	80	70	70	60	50	60	50	40	56
50	60	70	60	60	70	80	100	100	90	80	70	56

Date	00	01	02	03	04	05	06	07	08	09	10	11
930301	70	60	50	50	50	60	70	80	90	-	70	70
930302	60	50	50	50	40	20	40	50	[60]	60	50	30
930303	50	50	30	20	10	-10	90	70	[30]	70	70	40
930304	0	-10	-30	-30	-10	20	30	20	[40]	40	30	30
930305	-50	-20	-90	-90	-80	-70	-90	-50	[-10]	-30	10	30
930306	30	30	40	30	30	20	20	OBS	OBS	-10	40	30
930307	30	30	OBS	+S	10	20	40	[60]	[50]	60	40	50
930308	50	50	40	50	60	60	60	[60]	-	70	80	80
930309	70	50	50	40	50	30	40	60	[70]	70	70	80
930310	30	0	10	40	50	40	70	90	[80]	70	50	50
930311	50	40	30	20	20	30	20	[20]	[40]	40	OBS	-20
930312	30	40	40	40	50	60	50	70	[90]	80	90	90
930313	70	60	40	30	110	110	120	130	100	[90]	90	90
930314	10	10	10	20	10	20	30	50	[50]	50	50	50
930315	40	30	30	20	30	60	80	110	100	[120]	80	80
930316	30	OBS	+S	10	20	20	[30]	-	50	40	40	50
930317	20	20	20	20	20	10	[10]	-60	-80	-40	-10	-30
930318	30	10	20	20	0	20	40	[50]	[70]	70	50	50
930319	60	50	50	30	20	20	50	50	[40]	30	30	40
930320	30	40	30	30	20	30	30	[40]	40	50	60	60
930321	20	20	30	30	50	50	70	[90]	90	80	80	80
930322	20	20	30	30	30	40	40	60	-	-	60	60
930323	30	30	OBS	10	30	40	80	60	[50]	50	40	40
930324	0	10	10	20	40	40	60	70	[70]	60	40	40
930325	20	0	10	-10	0	-10	-10	20	[20]	30	50	60
930326	10	20	30	30	40	40	40	40	[40]	30	70	30
930327	-10	-10	-10	-10	-10	-10	-20	[30]	[40]	50	80	90
930328	-	-	-50	-10	-30	-	-	-	-	-	-	-
930329	70	50	50	40	40	50	[50]	-	[90]	80	90	90
930330	20	20	30	30	40	40	50	[60]	50	40	40	50
930331	20	10	20	30	40	40	50	[60]	50	60	60	60

12	13	14	15	16	17	18	19	20	21	22	23	Means
70	60	70	100	100	70	90	110	110	80	70	60	74
60	50	30	-40	-30	50	70	130	200	120	90	70	57
20	70	160	120	130	70	70	30	40	0	-10	-10	50
40	50	50	30	-30	-S	50	50	10	0	-40	-40	13
50	50	60	50	50	50	40	30	20	20	30	30	-3
OBS	OBS	20	50	30	30	50	40	50	40	40	30	32
110	110	70	70	40	50	80	70	80	70	50	50	-
80	90	90	90	80	90	90	100	100	70	70	70	73
100	110	100	100	90	80	90	90	80	70	50	50	70
50	60	70	80	80	70	70	100	90	60	60	60	60
OBS	+S	30	40	50	50	50	40	40	50	40	30	34
80	80	80	70	60	60	60	60	50	50	60	50	62
80	60	60	50	50	20	30	40	30	30	20	10	63
50	50	50	50	40	50	50	40	30	40	30	30	29
80	70	70	70	50	50	60	30	40	50	40	30	59
50	60	60	70	50	50	70	60	40	30	20	10	-
20	50	30	30	0	-10	0	30	60	50	30	30	6
50	50	50	60	70	70	60	70	60	70	90	70	50
40	30	40	50	50	50	60	50	40	40	30	30	41
60	70	60	70	60	80	90	120	70	70	30	30	53
60	50	50	40	40	70	50	50	60	40	40	30	53
50	60	60	60	50	60	80	70	60	60	30	30	-
40	30	20	50	70	70	70	70	80	60	-20	20	44
30	50	60	40	40	(40)	50	50	20	20	10	-10	36
60	-S	OBS	-20	20	40	OBS	20	20	20	20	20	-
60	OBS	-S	OBS	OBS	-10	-10	0	0	-10	0	-10	-
90	90	80	70	70	70	80	60	40	30	30	-10	38
-	-	-	-	-	-	-	-	-	-	-	-	-
80	70	-S	40	50	40	40	40	40	50	40	30	56
30	50	40	-S	40	40	40	40	30	30	20	20	34
60	70	60	40	30	30	40	50	60	60	60	50	46

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
930401	50	40	40	40	60	50	50	[60]	60	50	50	60
930402	10	10	10	10	10	10	30	[30]	20	20	30	40
930403	50	40	30	30	40	40	[40]	70	80	100	110	80
930404	20	0	10	30	30	-10	[10]	[40]	40	60	40	40
930405	30	20	40	30	20	10	-	-	40	40	40	40
930406	20	10	30	40	50	70	80	[60]	70	70	40	30
930407	40	20	30	30	40	10	40	[50]	40	40	40	30
930408	50	40	50	40	40	40	50	[50]	+S	OBS	50	OBS
930409	30	30	20	30	30	20	50	[50]	50	50	60	70
930410	40	40	50	40	30	50	[50]	[50]	50	50	70	80
930411	30	30	40	50	40	40	30	50	[-S]	-S	100	OBS
930412	-160	-50	0	50	-210	-220	[-200]	-150	-100	10	10	40
930413	40	40	30	-90	-40	50	60	-	60	50	60	(70)
930414	50	50	20	-10	40	30	50	[50]	80	80	80	60
930415	40	40	30	50	50	70	50	[70]	80	70	50	80
930416	50	60	60	60	50	50	60	[60]	70	50	60	60
930417	40	30	30	30	30	30	40	[50]	50	40	50	60
930418	20	20	20	20	10	20	40	[40]	40	0	20	-10
930419	30	30	30	20	20	40	-	[50]	70	60	30	40
930420	10	0	-20	-50	0	30	30	[50]	50	20	10	0
930421	20	20	20	20	10	20	30	[30]	30	40	40	50
930422	30	30	30	30	30	40	50	[50]	50	40	30	40
930423	30	30	20	20	20	30	30	[30]	40	50	50	50
930424	20	30	30	20	30	30	[30]	[30]	30	30	30	30
930425	10	20	20	20	20	20	[30]	30	30	30	30	30
930426	30	30	30	20	20	20	[20]	-	[30]	30	30	30
930427	-90	OBS	OBS	10	0	20	[30]	30	30	30	30	30
930428	0	0	10	0	0	10	30	[30]	30	30	30	+S
930429	10	10	10	10	10	20	30	[30]	40	40	40	30
930430	20	20	10	10	10	20	20	10	[20]	[30]	20	20

Date	00	01	02	03	04	05	06	07	08	09	10	11
930501	30	30	20	20	20	30	30	[30]	30	40	30	30
930502	20	20	20	30	20	20	30	[30]	30	30	30	30
930503	20	20	30	30	30	30	-	([30])	30	40	50	40
930504	20	20	0	0	0	0	[0]	20	20	20	20	10
930505	20	20	10	-10	10	-S	-30	[-110]	-40	20	0	0
930506	-10	20	20	20	10	-10	10	[OBS]	-S	70	60	60
930507	30	20	20	20	30	40	70	[50]	40	60	70	+S
930508	-	-	-	-	-	-	-	60	70	70	60	60
930509	20	20	20	20	20	OBS	[+S]	[70]	50	50	40	30
930510	20	20	20	20	20	30	20	-	-	-	-	30
930511	30	30	10	20	20	30	40	[40]	40	40	40	30
930512	20	20	30	40	30	40	40	[40]	40	40	30	30
930513	10	10	10	10	20	30	40	[40]	50	40	30	30
930514	30	30	30	20	20	40	[40]	[40]	50	40	30	-S
930515	10	10	10	10	10	30	30	[30]	40	40	40	40
930516	20	20	20	10	80	30	[70]	[40]	40	30	40	30
930517	10	10	0	10	0	30	[30]	-	[50]	50	50	50
930518	20	20	20	20	20	20	[20]	[20]	30	30	20	20
930519	20	20	20	20	20	20	[20]	20	20	20	20	20
930520	20	10	20	20	20	30	30	[20]	20	30	30	30
930521	30	20	20	20	20	30	40	[40]	30	30	40	30
930522	20	20	20	20	20	[30]	20	30	20	30	20	10
930523	20	10	10	10	10	[10]	10	0	-10	10	20	20
930524	30	20	30	20	30	30	-	-	50	50	50	50
930525	10	20	20	30	20	40	40	[40]	50	60	50	50
930526	20	20	10	20	30	40	40	[40]	50	40	50	40
930527	20	20	20	10	-10	-10	30	[40]	40	40	-10	0
930528	20	30	0	10	10	20	-	-	40	30	50	OBS
930529	10	20	20	20	30	40	[60]	[60]	50	40	40	40
930530	30	40	20	30	30	30	[30]	40	40	50	50	50
930531	20	30	30	50	[-S]	40	30	30	30	30	30	30

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	30	30	30	30	30	30	30	30	20	20	20	28
30	30	30	-S	0	-S	OBS	-20	40	50	20	30	-
20	20	30	+S	20	30	30	30	30	20	20	20	-
10	10	0	-10	-10	-10	0	0	20	20	20	20	8
0	-10	-10	0	-10	0	-30	-40	-10	20	20	-20	-9
70	+S	OBS	OBS	OBS	OBS	OBS	OBS	0	30	30	30	-
OBS	+S	OBS	+S	20	OBS	OBS	OBS	-	-	-	-	-
50	20	-S	20	20	OBS	OBS	20	30	30	20	20	-
20	-10	OBS	-S	10	20	10	0	10	10	20	20	-
30	40	40	40	40	40	50	40	30	30	30	30	-
30	30	30	40	30	30	30	30	30	30	30	20	30
30	40	30	30	30	20	30	20	20	10	10	10	28
30	30	30	40	30	30	40	40	40	30	40	30	30
OBS	OBS	-S	20	20	30	30	30	20	10	10	10	-
0	-S	+S	30	30	30	30	40	30	30	30	20	-
30	30	30	40	30	20	30	30	20	20	20	10	31
40	50	50	50	30	40	30	20	20	20	10	20	29
20	20	20	30	20	30	30	20	20	20	20	20	22
20	20	20	30	20	20	20	20	20	20	20	-60	17
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30	30	30	30	20	20	20	10	20	20	20	20	26
20	20	20	30	30	50	40	40	50	20	20	20	26
30	20	30	20	0	20	10	10	10	20	20	20	14
50	50	50	50	50	50	40	40	30	30	20	20	-
60	50	60	60	50	50	40	40	30	20	20	20	39
40	40	40	30	OBS	-S	30	30	30	30	20	30	-
30	30	30	30	30	30	20	30	30	40	30	20	23
OBS	OBS	OBS	20	-20	+S	0	30	10	30	0	10	-
40	40	40	40	40	30	20	30	30	20	20	20	33
60	50	30	-S	20	30	20	20	20	30	20	10	33
40	30	30	40	30	40	40	30	30	30	20	20	32

Date	00	01	02	03	04	05	06	07	08	09	10	11
930601	20	20	20	30	40	40	-	[40]	40	50	40	40
930602	20	20	10	10	20	30	[30]	30	30	30	30	30
930603	30	20	10	20	20	20	[30]	20	30	20	10	30
930604	OBS	OBS	OBS	30	0	30	60	[30]	-10	OBS	70	80
930605	30	10	20	20	30	30	[30]	[40]	40	50	50	50
930606	10	10	10	10	20	30	40	[50]	50	60	50	50
930607	10	10	10	10	20	30	-	[30]	40	40	20	40
930608	20	10	30	30	50	70	[90]	[100]	90	100	80	60
930609	20	20	10	20	30	40	30	[20]	30	30	30	30
930610	10	10	10	10	20	30	30	[40]	30	30	30	40
930611	10	30	20	40	40	50	[40]	40	50	60	60	-S
930612	20	20	20	20	10	20	20	[30]	OBS	+S	30	40
930613	20	20	30	10	10	30	30	[40]	40	30	30	30
930614	30	30	30	30	40	40	40	-	30	30	30	30
930615	20	20	20	20	10	10	[30]	[30]	30	30	30	30
930616	10	20	30	30	50	70	70	[70]	60	60	50	50
930617	30	70	30	10	OBS	(0)	-60	[-S]	-20	-70	+S	+S
930618	30	30	30	20	20	30	[70]	90	70	60	30	30
930619	30	30	30	30	30	30	[40]	[30]	40	40	30	30
930620	30	20	20	20	10	30	[30]	30	30	50	60	-S
930621	20	30	20	10	30	60	[70]	-	40	40	40	40
930622	30	30	30	50	50	50	[50]	(50)	(50)	50	50	60
930623	30	20	10	20	10	20	10	[30]	40	50	50	50
930624	OBS	-20	-10	0	0	0	[-10]	30	40	20	10	10
930625	20	20	10	30	30	30	[50]	70	80	70	40	30
930626	20	10	10	20	20	-10	[30]	[30]	30	10	-50	-60
930627	20	30	30	20	10	10	[-10]	[10]	0	-10	10	-20
930628	0	-10	OBS	OBS	+S	OBS	OBS	-	OBS	130	OBS	10
930629	20	30	40	30	40	-	-	-	-	-	-	-
930630	30	20	30	20	30	[30]	[30]	40	50	50	40	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	30	30	40	40	30	20	20	30	20	10	20	31
30	40	40	40	30	40	40	30	30	30	20	20	28
30	20	30	20	20	10	-30	OBS	-S	10	0	0	-
70	60	60	60	50	-S	90	40	50	40	40	40	-
50	50	50	60	60	50	40	30	20	20	20	20	36
50	30	50	30	30	30	30	20	30	20	20	10	31
60	-S	OBS	OBS	OBS	(OBS)	20	30	20	20	20	20	-
70	60	60	50	50	50	50	40	40	30	20	20	53
30	40	30	40	40	40	30	30	30	20	20	20	28
30	30	40	30	40	40	40	40	40	20	10	0	27
-S	OBS	OBS	40	40	40	40	40	30	40	30	20	-
110	60	OBS	40	30	10	30	40	40	30	20	20	-
40	+S	20	30	40	40	40	30	+S	20	30	30	-
30	30	30	30	30	30	30	30	30	30	20	20	30
30	30	30	30	30	+S	+S	OBS	30	30	30	20	-
50	50	60	70	70	70	50	50	40	40	30	30	49
OBS	OBS	+S	20	30	10	30	40	40	30	30	30	-
30	20	30	30	30	30	30	(30)	30	30	30	30	36
30	30	30	30	30	30	30	20	30	20	20	20	30
OBS	OBS	OBS	OBS	OBS	OBS	OBS	OBS	10	20	10	10	-
40	40	30	30	40	20	OBS	-S	30	40	40	40	-
50	40	50	40	50	40	30	30	20	20	20	20	-
40	30	0	OBS	OBS	OBS	OBS	OBS	OBS	OBS	OBS	OBS	-
50	10	50	20	20	20	-10	-20	20	20	20	20	13
30	20	30	30	30	30	40	40	40	30	30	30	36
-90	0	20	50	40	40	40	40	40	40	30	20	14
-10	30	20	20	40	OBS	-S	30	-S	OBS	OBS	-S	-
50	50	50	OBS	50	OBS	OBS	30	30	40	20	20	-
60	50	50	40	50	40	30	30	30	20	20	30	-
40	40	50	50	50	40	30	30	30	30	30	20	35

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
930701	20	20	30	50	60	50	[50]	[50]	70	70	60	60
930702	10	10	20	30	30	30	[30]	[30]	30	30	30	30
930703	30	30	30	20	30	30	[30]	[30]	40	40	40	40
930704	20	20	20	30	20	20	[30]	30	30	30	30	30
930705	20	60	OBS	OBS	OBS	20	30	-	([50])	50	50	50
930706	40	30	30	30	30	50	[30]	OBS	0	OBS	OBS	OBS
930707	40	30	30	40	40	40	[40]	[30]	30	30	30	20
930708	20	30	30	20	30	40	[60]	50	60	50	50	50
930709	20	20	30	30	30	30	30	[30]	30	30	30	30
930710	20	20	20	10	20	20	[20]	30	40	50	40	40
930711	40	40	50	40	40	20	-S	[20]	40	30	20	OBS
930712	30	20	20	10	20	40	40	-	[30]	30	30	30
930713	20	20	20	20	10	20	[30]	[30]	30	10	30	30
930714	30	30	30	30	30	30	20	[20]	30	30	30	40
930715	60	10	30	20	20	30	30	[30]	60	30	50	30
930716	20	20	10	20	30	+S	-10	[30]	30	40	40	40
930717	0	10	10	0	30	30	[30]	30	30	30	30	30
930718	10	-40	20	30	OBS	OBS	OBS	30	60	100	60	40
930719	0	0	0	10	20	30	40	-	-	50	50	40
930720	10	20	10	-10	OBS	OBS	OBS	[40]	90	40	60	60
930721	50	40	20	10	20	40	60	[50]	80	70	40	50
930722	50	40	40	40	40	40	[40]	50	70	70	80	70
930723	10	20	20	20	20	40	40	[50]	30	20	OBS	40
930724	20	10	20	50	70	+S	[20]	70	80	60	50	40
930725	20	30	10	30	40	50	[40]	[40]	50	60	70	60
930726	20	40	30	20	-S	-S	-	OBS	OBS	20	30	40
930727	20	20	20	20	20	40	40	[40]	50	50	40	40
930728	-S	10	-20	+S	-10	-10	-S	[-S]	60	70	60	60
930729	0	10	10	20	30	50	-	-	-	40	40	40
930730	20	20	20	30	30	40	20	[30]	30	40	20	30
930731	40	30	40	40	40	40	[40]	[40]	40	40	50	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
60	70	70	70	60	60	40	30	30	20	20	10	47
30	40	40	40	30	30	30	30	30	30	30	30	29
60	70	50	40	30	30	30	30	30	30	30	20	35
30	30	30	50	50	40	40	40	30	30	30	20	30
50	50	50	60	OBS	OBS	-S	30	30	+S	OBS	+S	-
OBS	50	50	40	40	50	50	50	50	50	50	50	-
30	30	20	20	20	20	30	30	30	20	20	10	28
50	50	50	60	50	40	40	40	30	30	20	20	40
30	30	30	30	30	30	30	30	30	20	20	20	28
40	30	30	30	20	30	40	40	40	40	40	40	31
OBS	50	40	OBS	OBS	20	OBS	OBS	OBS	+S	40	40	-
30	30	OBS	OBS	30	30	30	30	30	30	30	30	-
30	30	30	30	30	30	30	30	30	30	30	30	26
30	30	30	40	30	30	30	30	20	0	10	+S	27
60	40	OBS	OBS	20	30	30	30	30	30	30	20	-
30	20	OBS	OBS	OBS	30	30	30	30	10	10	0	-
-S	OBS	30	30	20	20	+S	60	30	30	20	20	-
30	30	40	-S	OBS	-S	20	30	OBS	OBS	OBS	-S	-
40	30	30	90	-S	OBS	-S	20	40	40	20	20	-
20	20	10	20	10	10	OBS	OBS	-S	20	40	50	-
50	40	40	40	50	40	50	50	40	60	60	50	46
60	50	40	20	OBS	+S	20	20	20	10	10	0	-
20	20	40	40	40	30	30	40	30	30	20	20	29
50	50	60	60	50	50	50	40	60	40	30	20	46
70	70	70	60	-	-	-	30	10	OBS	-20	10	-
-	(40)	40	40	40	40	50	50	40	40	40	30	-
40	40	50	50	50	30	50	40	40	20	20	OBS	36
40	20	30	30	50	30	10	30	40	30	10	10	-
(30)	(40)	50	50	40	40	40	40	30	30	30	20	-
30	30	40	40	40	40	40	40	40	40	30	30	32
30	0	-S	OBS	+S	-S	OBS	0	-S	30	+S	10	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
930801	10	0	10	20	20	20	30	40	50	50	50	[40]
930802	10	10	10	10	10	20	[30]	-	[30]	40	30	30
930803	10	10	0	0	10	10	20	[30]	30	30	40	40
930804	10	20	20	10	10	20	20	[20]	40	50	40	40
930805	10	10	10	10	20	30	30	[30]	40	50	50	50
930806	10	20	20	30	30	30	80	[80]	60	40	20	10
930807	20	20	10	10	20	30	30	[40]	[50]	60	60	50
930808	20	30	30	30	30	30	40	[40]	50	50	40	50
930809	20	30	30	30	30	40	+S	-	[(80)]	0	-S	-S
930810	30	30	30	30	30	40	[40]	-	70	50	50	50
930811	10	10	20	20	30	50	[70]	[80]	40	40	40	40
930812	40	30	20	20	40	40	[50]	[40]	40	50	40	40
930813	40	30	30	40	40	40	[40]	40	40	50	50	50
930814	20	30	30	30	40	40	[50]	[40]	40	40	30	40
930815	10	10	10	10	20	30	[40]	(30)	(40)	40	40	40
930816	30	20	10	20	20	30	[30]	-	50	40	30	30
930817	10	10	10	10	10	20	40	[30]	30	30	40	40
930818	40	30	20	30	40	40	40	[50]	50	60	50	40
930819	20	20	20	10	10	20	[30]	[40]	30	40	50	40
930820	20	10	20	10	20	20	[30]	[30]	30	40	40	40
930821	10	20	20	10	20	20	[30]	40	30	40	40	40
930822	10	10	10	20	20	30	[30]	[40]	30	40	40	50
930823	40	30	40	30	20	40	[(40)]	[(30)]	30	40	40	50
930824	20	20	20	20	30	10	10	[40]	40	40	40	10
930825	+S	OBS	OBS	OBS	OBS	50	OBS	[70]	90	120	70	40
930826	30	20	20	20	40	40	[40]	[50]	60	140	50	40
930827	30	30	40	30	20	40	50	[40]	40	40	40	30
930828	20	-10	10	10	30	OBS	[-10]	60	60	50	50	40
930829	10	10	20	20	30	40	[40]	[40]	-S	-S	50	OBS
930830	30	30	30	40	40	50	50	[(50)]	-	60	50	50
930831	+S	+S	-S	OBS	OBS	OBS	[-50]	[0]	60	-S	+S	OBS

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	50	50	50	50	40	40	40	20	10	10	10	32
40	40	40	40	30	30	40	30	40	30	20	10	27
40	50	60	60	50	30	20	20	30	30	20	20	28
40	40	50	50	40	40	30	30	20	20	20	10	29
60	110	+S	OBS	20	-10	-S	OBS	OBS	OBS	+S	20	-
20	OBS	OBS	10	20	10	10	10	20	20	30	40	-
50	50	60	60	50	40	40	40	30	20	20	20	37
50	50	50	60	50	30	20	20	30	20	20	20	36
OBS	80	110	80	50	40	40	40	30	20	30	40	-
40	20	50	50	OBS	OBS	-S	10	30	30	30	10	-
40	40	40	40	50	50	50	40	50	40	40	30	40
40	40	40	40	40	40	40	40	40	30	30	40	38
50	50	50	50	50	50	40	50	40	40	30	20	42
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40	50	50	50	40	40	40	30	30	20	20	20	-
30	40	40	40	30	20	20	20	20	10	10	10	26
50	50	40	-10	OBS	30	30	40	50	50	50	40	30
50	50	40	50	40	30	40	30	30	20	30	20	38
60	50	60	50	40	50	40	20	30	40	30	20	35
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40	40	50	40	40	30	30	30	20	20	20	20	29
50	50	40	40	40	40	40	40	50	50	40	40	36
50	50	50	40	30	20	20	-S	OBS	20	20	20	-
50	30	10	20	20	30	110	20	30	+S	+S	70	-
30	40	40	50	OBS	-S	50	40	30	40	50	40	-
30	10	40	40	40	40	40	50	50	50	40	30	41
40	40	30	30	20	0	0	30	40	40	30	30	32
50	40	30	30	20	30	30	30	40	40	30	30	31
OBS	+S	OBS	50	50	40	50	50	50	40	40	30	-
40	40	40	40	30	30	40	40	40	40	40	40	-
OBS	30	30	OBS	OBS	10	30	OBS	+S	10	20	10	-

Date	00	01	02	03	04	05	06	07	08	09	10	11
930901	0	0	0	OBS	OBS	OBS	30	[110]	80	20	-S	30
930902	30	30	(20)	(30)	30	40	40	[50]	60	60	80	60
930903	20	10	10	-30	0	10	40	[30]	30	30	40	50
930904	30	30	40	20	10	10	[10]	60	70	30	40	20
930905	40	30	30	30	30	30	[40]	[50]	50	40	40	OBS
930906	20	20	30	20	30	50	([60])	-	80	80	80	60
930907	30	40	30	40	40	40	[60]	[50]	50	60	60	60
930908	40	40	40	40	60	110	[130]	[90]	40	40	40	30
930909	30	30	20	20	20	20	[30]	40	40	40	40	30
930910	40	40	40	30	40	40	40	-	-	(60)	70	OBS
930911	10	10	10	10	20	20	[60]	[80]	80	60	40	40
930912	20	20	30	20	30	40	[40]	30	OBS	OBS	30	40
930913	20	20	30	20	30	30	[40]	-	[50]	70	60	50
930914	20	20	20	20	30	30	[30]	30	30	20	20	30
930915	OBS	20	10	10	20	40	50	[40]	40	40	40	40
930916	30	30	40	30	40	40	50	[50]	40	40	40	40
930917	10	-10	10	10	10	20	30	[90]	50	40	40	40
930918	-20	0	10	10	10	20	30	[90]	100	100	80	80
930919	30	20	40	40	40	40	40	[50]	30	30	20	20
930920	10	0	10	20	20	-	-	-	-	20	20	30
930921	20	10	10	20	30	30	40	[40]	40	50	50	40
930922	10	20	30	30	20	30	30	[40]	50	50	50	40
930923	40	30	30	20	30	30	20	[20]	40	40	50	40
930924	10	30	30	30	30	30	50	[40]	60	60	50	50
930925	30	20	20	20	30	30	[40]	40	30	30	30	20
930926	20	10	-30	-20	OBS	+S	+S	0	+S	-30	-20	30
930927	10	10	10	10	10	10	20	[30]	-	30	30	30
930928	30	30	20	30	30	30	40	50	[70]	60	50	40
930929	60	50	30	30	+S	OBS	0	[30]	[50]	20	OBS	[OBS]
930930	50	70	60	40	40	60	70	[110]	100	80	70	80

12	13	14	15	16	17	18	19	20	21	22	23	Means
OBS	OBS	OBS	+S	-S	20	40	40	30	30	40	40	-
40	40	60	60	50	40	40	50	40	40	30	20	-
OBS	OBS	OBS	-S	40	40	+S	30	60	60	40	30	-
20	+S	OBS	OBS	10	30	40	40	40	40	30	40	-
40	OBS	10	OBS	40	40	20	20	30	30	30	20	-
50	40	40	30	30	20	30	40	40	40	30	30	-
60	70	50	60	60	50	50	50	50	40	30	40	49
30	40	30	30	40	40	30	30	30	30	20	30	45
40	40	30	30	40	30	30	30	30	40	40	40	33
OBS	30	20	30	40	30	+S	OBS	OBS	+S	20	20	-
40	30	40	30	40	40	40	40	30	30	30	40	36
50	50	60	60	50	40	50	40	40	40	30	20	-
50	40	30	30	40	40	40	40	30	20	30	30	37
30	40	40	40	30	30	40	40	40	30	-S	-S	-
30	20	20	30	30	30	30	30	20	30	30	30	30
20	OBS	20	30	20	20	30	-10	10	10	20	40	30
40	40	40	40	40	40	40	40	30	-S	OBS	OBS	-
80	60	40	40	30	20	10	20	30	30	30	30	39
30	40	40	30	30	20	40	40	30	30	-10	20	31
30	40	40	30	30	40	30	30	30	20	30	20	-
40	50	50	40	40	40	30	20	30	40	20	20	33
50	50	50	40	50	50	50	50	50	60	40	40	41
40	50	40	40	50	50	60	50	30	30	20	0	35
50	50	40	40	40	50	50	40	40	30	30	30	40
20	10	10	10	20	40	30	40	30	20	20	30	26
70	40	10	10	10	10	30	30	30	30	20	10	-
30	30	30	30	30	30	30	30	30	30	30	30	24
40	30	40	30	30	40	60	60	70	80	80	70	46
OBS	-S	-S	-10	-70	-10	0	20	60	90	70	50	-
70	80	70	60	50	50	40	40	30	30	30	20	58

Date	00	01	02	03	04	05	06	07	08	09	10	11
931001	10	10	10	10	-10	0	0	10	[20]	20	20	30
931002	20	10	0	10	30	30	30	[20]	40	40	(40)	40
931003	-S	OBS	-S	OBS	10	0	0	[0]	20	30	30	30
931004	-90	10	30	-30	-100	-50	-40	[-120]	-	-S	-80	10
931005	30	30	20	20	20	30	50	70	[50]	50	50	60
931006	0	10	10	10	10	30	40	[50]	30	-	-	-
931007	30	30	20	20	30	30	[30]	50	30	30	30	20
931008	20	20	20	20	30	30	30	0	[0]	10	20	30
931009	10	0	20	30	30	30	30	[40]	30	30	20	OBS
931010	20	30	30	30	50	100	100	[70]	70	80	60	40
931011	130	120	110	100	110	100	100	100	-	-	-	-
931012	70	70	80	80	70	60	70	70	-	40	50	40
931013	30	30	20	20	20	30	30	40	[40]	40	30	30
931014	20	20	20	-20	-20	-10	-10	[-10]	30	30	40	30
931015	20	20	10	20	20	30	40	40	[40]	40	60	40
931016	-20	20	30	30	10	10	30	[40]	[40]	40	40	40
931017	20	20	30	30	40	40	40	[40]	[60]	40	30	50
931018	10	30	30	30	30	30	20	-	-	[40]	40	30
931019	10	0	10	20	-20	-S	OBS	OBS	[-50]	OBS	-S	20
931020	10	-10	10	10	-10	20	30	50	[50]	50	+S	40
931021	0	10	0	10	10	10	20	-10	0	[-10]	-10	10
931022	20	30	60	60	60	30	30	10	[0]	10	10	20
931023	20	20	10	0	20	30	50	70	70	[80]	70	70
931024	30	40	50	50	40	40	50	[40]	[40]	40	50	40
931025	40	40	50	50	40	50	50	[60]	-	40	40	50
931026	50	40	30	40	40	50	[50]	50	60	50	50	50
931027	50	30	30	40	40	40	[40]	40	40	30	40	40
931028	10	10	20	20	40	50	[50]	50	-	(30)	70	70
931029	80	110	90	70	60	40	[50]	[40]	60	40	30	60
931030	10	20	10	10	30	40	40	[50]	[40]	30	0	-10
931031	0	-10	-10	-10	-10	-10	0	[-10]	-10	-20	-30	-10

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	30	30	30	30	30	40	30	30	30	30	30	21
50	60	50	50	50	50	40	20	-40	-80	OBS	20	25
30	30	30	30	30	70	-20	30	40	20	0	-30	-
30	40	50	50	50	50	30	50	60	40	30	30	-
60	60	50	40	30	30	30	20	20	20	30	20	37
-	-	-	-	-	-	70	40	30	30	30	30	-
20	20	0	0	0	10	10	20	30	10	20	20	21
30	40	50	50	50	50	60	40	30	30	20	30	30
+S	OBS	OBS	-S	30	50	70	30	40	30	20	20	-
30	30	30	10	10	10	0	20	50	80	80	110	48
-	-	-	-	-	-	30	70	70	70	70	70	-
50	50	60	60	60	50	40	40	60	30	40	30	55
40	40	50	50	40	30	30	20	10	30	40	30	32
20	OBS	OBS	10	40	40	60	60	50	40	30	20	-
30	40	OBS	OBS	+S	30	OBS	OBS	-10	10	-10	0	-
30	20	40	20	20	30	30	30	30	30	30	20	27
50	50	40	40	10	0	-10	10	-10	0	10	10	27
40	30	20	30	20	10	-10	-20	-10	-130	-40	10	-
20	10	-10	-20	10	20	50	30	0	20	10	0	-
20	30	30	20	40	30	30	20	20	30	10	0	23
-10	-10	20	30	30	30	-10	40	30	+S	20	0	7
10	10	10	10	10	-10	10	-10	0	10	20	30	18
40	40	40	40	50	40	40	OBS	OBS	OBS	OBS	20	-
40	40	40	50	50	50	60	50	50	50	40	40	45
40	50	50	60	70	60	60	50	40	20	10	50	47
50	50	50	50	60	60	60	60	60	60	50	50	51
40	50	50	60	80	70	50	40	30	30	20	20	42
70	60	60	50	50	50	40	50	50	40	40	50	-
70	50	50	40	0	0	10	20	30	30	10	20	44
0	40	40	10	20	0	20	20	-10	-10	-10	-10	16
-10	0	10	0	0	-10	-10	-20	-20	-10	-10	-20	-10

Date	00	01	02	03	04	05	06	07	08	09	10	11
931101	-30	-20	-10	-20	-10	-10	-10	0	[-10]	-10	-10	-10
931102	-10	-10	-10	-10	0	0	0	0	0	0	0	0
931103	-10	-10	0	-10	0	20	30	40	-	10	10	0
931104	-10	-10	0	20	40	50	40	[60]	[60]	60	50	50
931105	30	40	30	10	20	30	10	[-10]	[0]	30	30	30
931106	0	10	10	0	-10	[10]	-20	20	30	30	30	30
931107	40	30	30	50	40	40	30	[40]	60	40	40	50
931108	40	70	80	100	80	30	-	[10]	40	70	50	40
931109	10	10	20	30	30	30	40	40	-	60	40	60
931110	30	40	30	30	40	30	60	[70]	70	70	40	60
931111	30	0	0	10	10	20	10	20	[30]	[30]	20	10
931112	0	-10	0	0	0	0	0	0	-10	0	0	[0]
931113	20	30	40	30	0	0	10	-10	0	10	-	-
931114	60	60	40	40	40	60	70	40	[10]	0	-10	0
931115	OBS	-S	40	20	60	90	30	-10	40	-	-	-
931116	-	-	-	-	-	-	-	-	-	-	-	-
931117	-	-	-	-	-	-	-	-	-	-	-	-
931118	-	-	-	-	-	-	-	-	-	-	-	-
931119	-	-	-	-	-	-	-	-	-	-	-	-
931120	-	-	-	-	-	-	-	-	-	-	-	-
931121	-	-	-	-	-	-	-	-	-	-	-	-
931122	-	-	-	-	-	-	-	-	-	-	+S	OBS
931123	180	170	130	80	60	30	50	40	[50]	-40	-50	10
931124	-40	-60	-50	-20	-10	20	0	-80	[-60]	-60	-90	-110
931125	-20	-50	-20	-30	-10	0	10	[20]	10	-10	-10	0
931126	20	10	40	30	50	30	0	-30	10	0	[-10]	10
931127	10	-10	-100	-30	0	0	30	-50	-50	-30	-40	-20
931128	-40	10	10	-20	-20	-30	-20	-10	-20	[10]	10	20
931129	70	OBS	OBS	70	30	30	20	40	-	OBS	OBS	OBS
931130	-100	-80	-90	-110	-130	-120	-70	-50	10	[10]	30	30

	12	13	14	15	16	17	18	19	20	21	22	23	Means
	-10	-10	-10	-10	-10	0	-10	-10	0	-10	-10	-10	-10
	0	-10	0	-10	-30	-30	-30	-40	-20	-20	0	-10	-10
	0	0	0	0	0	-20	0	10	30	10	-10	0	4
	40	50	50	60	60	60	70	90	110	110	70	40	51
	30	40	50	50	30	40	40	40	40	30	30	10	28
	30	20	20	30	20	20	70	20	20	10	20	50	19
	80	40	30	20	20	30	40	50	40	20	10	10	37
	40	0	-10	-60	-70	-30	10	20	30	30	30	20	27
	70	60	60	60	40	60	60	70	60	40	40	30	44
	70	80	80	60	60	80	90	80	90	80	30	20	58
	0	0	-10	-10	10	0	-10	-30	-40	-10	-20	-10	3
	10	0	0	10	0	0	10	-10	30	10	20	30	4
	20	10	10	10	20	10	10	20	40	60	40	40	-
	-10	-20	-40	-30	-10	-10	-50	30	-10	+S	+S	OBS	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
OBS	-S	20	60	80	80	90	120	110	50	50	90	130	-
	10	-50	-90	-70	-90	-50	-40	-30	-20	-20	-20	-50	8
	-50	-50	-70	-100	-90	-100	-70	-90	-80	-70	-100	-70	-63
	-10	0	40	60	40	50	60	30	10	0	20	30	9
	-10	-10	30	20	-20	-30	-10	-20	-50	-50	-50	-50	-4
	-20	10	0	0	-10	-20	-30	-20	-20	-40	-60	-60	-24
	30	-10	30	30	180	120	70	60	170	90	50	60	33
OBS	20	80	90	90	30	20	-60	-70	-70	-90	-90	-100	-
	30	50	70	30	20	-30	-50	-10	-40	-100	-120	-110	-39

Date	00	01	02	03	04	05	06	07	08	09	10	11
931201	-90	-80	-80	-90	-80	-90	-70	-50	[-20]	[-10]	-20	-20
931202	0	10	10	30	20	-20	30	30	[10]	[20]	30	20
931203	70	70	90	90	100	100	100	100	[110]	80	90	90
931204	10	10	10	10	10	10	30	[30]	0	10	40	60
931205	130	180	180	110	120	130	110	[100]	[30]	70	70	50
931206	40	50	50	40	50	30	30	[30]	-	60	70	100
931207	0	0	-10	-10	-20	-50	-50	-10	[-10]	-20	-10	-20
931208	-10	-20	-10	20	30	0	20	60	[50]	70	90	80
931209	-60	-50	-50	-30	10	-10	-20	-10	[30]	30	100	100
931210	70	50	50	50	50	50	40	50	[30]	70	110	80
931211	-80	-50	-40	-20	30	50	50	30	-S	OBS	-S	-40
931212	40	30	20	20	20	20	40	40	[40]	10	20	40
931213	40	50	50	30	50	50	40	30	-	[30]	30	30
931214	50	50	50	40	-10	-10	10	0	[40]	40	50	80
931215	-10	-10	-20	10	0	0	150	170	[120]	110	50	40
931216	30	30	30	30	50	50	50	50	[60]	50	-10	30
931217	40	30	40	40	40	40	40	([60])	50	40	40	50
931218	30	-40	-50	-30	[-10]	-30	-50	+S	[0]	[10]	30	40
931219	60	50	30	30	50	50	110	110	[120]	130	110	130
931220	20	30	30	10	10	10	60	[90]	-	40	10	40
931221	40	40	40	60	90	40	40	40	70	[30]	-S	40
931222	40	30	20	20	30	40	40	[40]	[40]	40	40	40
931223	50	40	40	20	40	40	40	50	[50]	50	40	50
931224	40	30	30	30	10	0	-50	-40	-40	[-10]	10	10
931225	0	10	10	30	20	30	20	50	30	50	-S	OBS
931226	60	50	50	40	30	30	40	40	0	50	10	40
931227	-	-	-	-	-	-	-	-	-	-	-	-
931228	20	20	30	20	10	20	20	30	30	40	10	30
931229	30	30	40	40	40	50	40	30	40	[40]	40	50
931230	50	30	-20	-10	-20	60	20	-S	-80	10	20	60
931231	60	40	-10	-30	-30	-10	-20	10	30	0	30	[80]

12	13	14	15	16	17	18	19	20	21	22	23	Means
-30	-10	0	-30	-30	-50	-40	-30	0	-10	10	-10	-39
10	-10	20	-20	30	10	0	-50	-60	-10	60	70	10
100	100	100	100	90	90	70	70	80	60	40	10	83
30	30	70	90	100	100	130	150	100	+S	130	+S	-
10	20	30	60	100	80	80	90	70	40	30	30	80
110	110	110	90	60	50	50	60	60	40	30	-10	57
-20	0	0	-10	-10	-10	-10	-20	-20	-20	-20	-10	-15
110	110	70	60	0	-20	-30	-10	-30	-40	-40	-50	21
120	110	100	70	50	60	110	130	110	90	70	70	47
60	50	30	40	50	50	10	-10	-10	-50	-70	-80	34
0	-S	50	50	40	50	60	60	50	40	40	30	-
40	50	50	60	50	50	50	50	50	50	40	40	38
50	70	110	90	100	90	80	80	70	60	50	50	58
70	70	70	50	30	40	30	-50	-140	-40	-10	30	23
50	50	50	20	-10	20	40	30	40	40	30	20	41
10	-20	70	50	50	50	50	30	30	30	30	30	36
(50)	60	50	40	40	-30	-10	40	40	40	60	30	37
60	80	80	90	90	90	110	120	90	100	80	60	41
130	150	60	40	40	70	70	70	40	-10	30	30	71
40	70	80	110	130	130	60	100	80	100	90	50	60
40	30	10	40	10	-20	OBS	OBS	OBS	-S	30	10	-
40	40	50	50	50	50	60	60	60	60	60	50	44
50	30	-S	60	70	100	80	70	70	70	50	50	53
30	40	10	30	OBS	-S	OBS	-S	OBS	+S	-60	-40	-
+S	-10	10	10	0	20	10	30	40	60	40	50	-
-20	80	OBS	OBS	10	50	100	80	90	30	10	30	-
-	-	10	10	20	10	30	10	20	20	20	20	-
-	[40]	40	40	40	40	40	30	30	40	40	40	30
60	80	100	90	60	70	70	70	80	70	60	70	56
80	110	110	70	50	120	100	170	+S	220	160	80	63
70	90	80	80	90	90	30	80	-10	-40	-30	-40	27

2. Hourly means of quantities of positive and negative
1992

Month		00	01	02	03	04	05	06	07	08	09	10	11
9201	+	0	0	0	0	0	0	0	0	0	0	0	0
9201	-	0	0	0	0	0	0	0	0	0	0	0	0
9202	+	2	4	0	2	1	0	0	2	6	0	0	0
9202	-	4	6	1	2	0	0	0	0	0	0	0	0
9203	+	0	0	3	6	2	3	0	2	0	0	0	24
9203	-	0	0	5	7	3	20	4	4	0	0	0	0
9204	+	0	0	5	0	1	2	0	0	0	0	0	0
9204	-	0	0	3	4	1	2	0	0	0	0	0	0
9205	+	0	4	0	0	0	0	0	0	0	0	0	0
9205	-	0	3	0	0	0	0	0	1	0	0	0	0
9206	+	0	0	0	1	5	4	4	11	1	1	1	6
9206	-	0	0	0	0	4	0	0	7	0	0	2	9
9207	+	0	0	0	0	0	0	0	2	4	0	2	0
9207	-	0	0	0	0	0	0	0	5	30	0	0	0
9208	+	9	8	5	0	0	0	15	0	0	0	2	0
9208	-	21	64	9	0	0	0	0	4	0	0	0	0
9209	+	0	0	0	0	0	0	6	12	3	1	34	1
9209	-	0	0	0	0	0	0	7	39	28	28	28	11
9210	+	0	0	0	0	0	0	9	8	13	2	23	8
9210	-	0	0	0	0	0	0	13	4	27	20	18	20
9211	+	2	0	0	0	3	7	4	0	0	0	0	1
9211	-	3	0	0	0	1	7	7	0	0	0	0	2
9212	+	0	0	0	5	1	14	0	0	0	0	0	0
9212	-	0	0	2	0	0	7	0	0	0	0	0	0

Hourly means of quantities of positive and negative
1993

Month		00	01	02	03	04	05	06	07	08	09	10	11
9301	+	0	0	1	1	0	0	0	0	0	0	0	1
9301	-	0	0	0	0	0	0	0	1	0	0	0	6
9302	+	0	1	0	0	0	0	0	0	0	1	1	0
9302	-	5	4	0	0	0	0	0	0	0	0	0	5
9303	+	0	0	15	2	0	0	0	1	8	9	9	1
9303	-	0	0	5	5	0	0	0	0	0	0	0	0
9304	+	0	0	1	0	0	0	0	0	2	3	0	2
9304	-	0	0	2	0	0	0	0	0	0	6	0	0
9305	+	0	0	0	0	0	0	0	7	0	0	0	17
9305	-	0	0	0	0	18	0	0	11	0	0	0	12
9306	+	3	4	0	0	2	0	0	4	23	9	1	0
9306	-	9	10	0	0	0	0	0	18	0	4	0	3
9307	+	0	0	14	22	17	19	17	12	0	62	25	27
9307	-	0	0	6	25	38	17	21	20	0	48	32	22
9308	+	0	0	0	0	0	0	0	2	0	0	0	0
9308	-	0	0	0	0	0	0	0	0	0	0	0	0
9309													
9310													
9311	+	0	0	0	0	0	0	0	0	0	5	0	0
9311	-	0	0	0	0	0	0	0	0	0	3	0	0
9312	+	0	0	0	0	0	0	0	0	0	6	0	0
9312	-	0	0	0	0	0	0	0	0	0	3	0	0

charges transported by point-discharge for each month

12	13	14	15	16	17	18	19	20	21	22	23	Means
1	0	0	0	0	0	0	0	0	0	1	0	0.2
8	0	0	0	0	0	0	0	0	0	0	0	0.6
0	0	0	0	0	0	0	0	0	8	6	0	0.7
0	0	2	0	0	0	0	0	0	0	0	0	0.7
3	2	1	1	0	0	0	0	0	0	0	0	2.2
4	1	0	0	0	0	0	0	0	0	0	0	0.6
3	0	0	0	0	6	0	4	0	0	8	1	1.3
6	0	0	0	0	6	0	6	0	0	19	16	2.5
82	35	51	4	0	40	25	12	18	0	0	0	12.1
45	55	65	6	1	21	4	6	1	0	0	0	10.2
3	0	18	27	19	32	31	22	2	3	0	4	8.6
2	11	50	41	28	23	71	44	2	15	2	0	13.9
5	15	33	33	50	69	37	31	4	2	6	0	20.8
41	8	17	22	71	54	53	28	8	0	67	0	24.9
0	0	78	32	4	9	0	4	57	1	0	0	7.8
0	0	7	96	9	39	66	214	229	62	0	0	30.1
0	0	0	0	0	0	0	0	0	0	0	0	0.2
0	0	0	0	0	0	0	0	0	0	0	0	0.1
0	0	0	1	0	0	1	6	4	0	0	0	0.8
0	0	0	0	0	0	0	5	15	0	0	0	1.0

IV. IONOSPHERE

Mean ionospheric absorption L' (dB) at oblique incidence (A3)

$$f = 270 \text{ kHz}$$

The following tables give the values of mean ionospheric absorption at oblique incidence (A3) for certain zenith distances of the Sun (χ) expressed in decibels (dB). Values for ground sunset (SS) and ground (SR) are given for periods of 20 minutes centered on the times of $\chi = 90^\circ$. Night values have been determined by taking the periods ranging from $\chi = 100^\circ$ to 23 00 GMT. The date column gives year, month, day (e.g. 920101 indicates 1992 January 1). SS and Night values in actual row are valid for the actual day, however, the SR values always for the next day's dawn. Values uncertain for some reason are entered in round brackets (). Some gaps are due to missing records.

The sky wave of the transmitter Československo ($f = 272 \text{ kHz}$) has been recorded since January 1967. The geographical coordinates of the reflection point are 48.4° N , 17.1° E . Because of reconstruction works on the transmitter Československo, the absorption measurement at 272 kHz and the publication of data were suspended from April 1975 till September 1978. (At present the transmitter frequency is 270 kHz.)

The equipment and the method have been described in the papers by BENCZE P and MÄRCZ F: "Atmosphärisch-elektrische und ionosphärische Messungen im Observatorium bei Nagycenk". *Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967*, as well as by BENCZE P, HORVÁTH J, MÄRCZ F: "A new equipment for the measurement of ionospheric absorption" *Geophysical Observatory Report of the Geodetic and Geophysical Research Institute of the Hungarian Academy of Sciences, Year 1975. Observatory of Nagycenk, Sopron, 1976*. Further information is given by BENCZE P and MÄRCZ F: "The Geophysical Observatory near Nagycenk II. Atmospheric electric and ionospheric measurements" (*Acta Geod. Geoph. Mont. Hung.*, 16, 1981, 353-357).

Mean ionospheric absorption L' (dB) at oblique incidence (A3)
f = 270 kHz
 1992

Date	SS	Night	SR
920101	33.2	18.1	25.7
920102	28.2	24.4	30.3
920103	31.7	21.4	33.2
920104	33.2	20.2	
920105	29.2	19.5	31.7
920106	35.2	25.7	41.2
920107	33.2	21.4	37.7
920108	28.2	21.4	
920109	33.2	25.7	31.7
920110	41.2	30.3	33.2
920111	35.2	27.2	30.3
920112	41.2	27.2	29.2
920113	35.2	23.8	24.4
920114	35.2	27.2	
920115	26.4	24.4	41.2
920116	33.2	30.3	41.2
920117	41.2	25.0	35.2
920118	35.2	27.2	30.3
920119	31.7	21.8	29.2
920120	30.3	23.2	30.3
920121	28.2	25.7	
920122	30.3	22.2	27.2
920123	28.2	23.8	37.7
920124	33.2	25.7	37.7
920125	31.7	23.8	35.2
920126	41.2	22.2	35.2
920127	35.2	28.2	33.2
920128	31.7	21.4	27.2
920129	35.2	23.8	22.2
920130	37.7	19.9	28.2
920131	31.7	17.3	31.7
920201	31.7	23.8	25.7
920202	37.7	20.6	30.3
920203	27.2	20.6	22.7
920204	41.2	19.9	30.3
920205	33.2	19.2	23.2
920206	33.2	17.6	30.9
920207	30.3	21.4	23.2
920208	23.8	23.2	26.4

Date	SS	Night	SR
920209	29.2	23.8	23.8
920210	25.0	19.5	25.7
920211	28.2	19.9	23.2
920212	31.7	22.2	22.7
920213	21.8	20.2	24.4
920214	31.7	19.5	27.2
920215			
920216	41.2	23.8	29.2
920217	33.2	21.0	28.2
920218	37.7	21.4	31.7
920219	33.2	21.0	26.4
920220	33.2	25.7	27.2
920221			
920222			
920223	35.2	19.5	30.3
920224	37.7	19.5	31.7
920225	35.2	20.6	26.4
920226	30.3	27.2	27.2
920227	33.2	23.8	35.2
920228	37.7	29.2	33.2
920229	41.2	26.4	41.2
920301	30.3	26.4	27.2
920302	33.2	21.4	31.7
920303	31.7	18.3	28.2
920304	27.7	18.9	22.7
920305	30.3	20.6	26.4
920306			
920307			
920308	23.8	21.4	26.4
920309	37.7	23.8	30.3
920310	33.2	25.0	31.7
920311	33.2	20.2	30.3
920312	26.4	15.9	26.4
920313	26.4	20.6	23.8
920314	27.7	18.9	22.7
920315	37.7	(19.5)	
920316	30.3	24.4	25.7
920317	28.2	26.4	(28.2)
920318	26.4	17.6	24.4
920319	27.2	17.6	24.4
920320	25.0	25.7	24.4
920321	28.2	18.9	26.4
920322	19.2	17.8	27.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920323	29.2	21.4	26.4
920324	22.7	20.2	23.2
920325	21.4	17.8	27.2
920326	25.0	19.9	24.4
920327	22.7	21.8	33.2
920328	26.4	21.0	30.3
920329	35.2	23.8	30.3
920330	31.7	23.2	21.4
920330			19.9
920401	20.2	25.7	17.8
920402	23.8	17.3	22.2
920403	19.9	23.8	19.5
920404	26.4	18.1	28.2
920405	28.2	16.7	22.7
920406	27.2	20.2	13.2
920407	17.3	20.2	18.3
920408	21.0	20.6	16.7
920409	27.2	18.1	21.4
920410	21.4	19.2	16.1
920411	23.8	22.2	20.2
920412	27.2	19.5	21.0
920413	19.5	17.6	18.1
920414	29.2	17.6	20.6
920415	25.0	14.9	23.8
920416	19.2	23.2	22.2
920417	31.7	21.4	24.4
920418	25.7	(17.1)	
920419	29.2	21.8	25.0
920420	27.2	18.1	21.0
920421	27.2	18.1	23.8
920422	18.3	20.6	21.4
920423	30.3	21.4	25.7
920424	27.2	30.2	31.7
920425	35.2	25.0	23.2
920426	25.7	19.5	28.2
920427	31.7	19.2	26.4
920428	28.2	19.2	28.2
920429	31.7	21.8	29.2
920430	31.7	27.2	27.2
920501	33.2	22.2	25.0
920502	25.0	23.8	25.7
920503	30.3	25.0	33.2
920504	30.3	31.7	31.7

Date	SS	Night	SR
920505	28.2	21.0	28.2
920506	35.2	17.3	21.0
920507	21.8	19.5	33.2
920508	30.3	31.7	31.7
920509	37.7	23.8	27.2
920510	29.2	26.4	31.7
920511	30.3	24.4	35.2
920512	35.2	25.7	21.4
920513	20.2	22.2	23.2
920514	26.4	28.2	27.2
920515	33.2	26.4	26.4
920516	24.4	22.7	30.3
920517	30.3	19.9	35.2
920518	37.7	19.5	26.4
920519	30.3	24.4	27.2
920520	31.7	20.2	28.2
920521	33.2	21.8	28.2
920522	35.2	28.2	25.7
920523	31.7	22.7	26.4
920524	30.3	23.2	26.4
920525	37.7	20.2	25.7
920526	25.0	25.0	30.3
920527	27.2	20.6	28.2
920528	29.2	23.2	33.2
920529	35.2	23.2	23.8
920530	28.2	23.2	28.2
920531	37.7	27.2	30.3
920601	31.7	20.6	28.2
920602	25.0	21.4	21.8
920603	33.2	25.7	30.3
920604	26.4	21.0	25.7
920605	33.2	21.4	24.4
920606	28.2	24.4	26.4
920607	35.2	27.2	25.7
920608	41.2	23.8	23.2
920609	20.6	29.2	30.3
920610	27.2	25.7	25.7
920611	33.2	30.3	29.2
920612	28.2	23.2	28.2
920613	41.2	25.0	31.7
920614	31.7	21.8	21.8
920615	33.2	22.7	21.8
920616	28.2	22.2	19.5

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920617	33.2	21.4	24.4
920618	27.2	27.2	23.2
920619	31.7	23.8	25.7
920620	33.2	25.7	28.2
920621	28.2	25.7	24.4
920622	27.2	22.7	24.4
920623	35.2	21.4	22.2
920624	27.2	23.8	33.2
920625	29.2	28.2	35.2
920626	27.2	24.4	23.8
920627	23.8	24.4	29.2
920628	27.2	17.6	27.2
920629	28.2	23.2	35.2
920630	28.2	25.0	24.4
920701	29.2	25.0	30.3
920702	28.2	25.0	26.4
920703	30.3	24.4	26.4
920704	21.0	24.4	33.2
920705	28.2	24.4	33.2
920706	30.3	27.2	21.0
920707	25.7	22.7	25.0
920708	28.2	21.4	25.0
920709	24.4	23.2	26.4
920710	27.2	20.6	27.2
920711	26.4	20.2	22.2
920712	27.2	21.8	25.7
920713	30.3	24.4	25.0
920714	24.4	23.8	26.4
920715	21.8	22.2	29.2
920716	35.2	24.4	27.2
920717	26.4	24.4	25.0
920718	37.7	21.8	27.2
920719	30.3	21.4	31.7
920720	28.2	20.2	27.2
920721	27.2	21.4	26.4
920722	28.2	25.7	23.8
920723	33.2	22.2	23.2
920724	31.7	21.4	33.2
920725	23.2	21.8	26.4
920726	31.7	21.8	25.7
920727	26.4	25.7	31.7
920728	26.4	21.8	23.2
920729	26.4	14.4	25.0

Date	SS	Night	SR
920730	28.2	23.8	29.2
920731	33.2	23.8	31.7
920801	35.2		
920802	27.2	19.2	23.8
920803	41.2	37.7	33.2
920804	35.2	33.2	41.2
920805	41.2	37.7	35.2
920806	41.2	37.7	37.7
920807	23.8	18.3	26.4
920808	31.7	22.7	30.3
920809	30.3	23.2	22.7
920810	(24.4)		
920811	27.2	21.4	20.6
920812	25.7	20.6	20.2
920813	23.8	17.6	25.0
920814	26.4	16.3	18.9
920815	21.4	19.5	23.8
920816	21.4	25.0	19.2
920817	27.2	17.6	27.2
920818	26.4	18.6	17.8
920819	25.0	16.3	23.8
920820	28.2	20.6	25.0
920821	21.4	18.1	24.4
920822	30.3	23.2	26.4
920823	23.8	19.5	20.6
920824	29.2	23.2	26.4
920825	29.2	21.8	28.2
920826	28.2	19.9	25.7
920827	22.7	23.8	21.4
920828	26.4	23.8	25.0
920829	24.4	22.7	23.8
920830	25.7	21.0	27.2
920831	26.4	19.2	
920901	27.2	20.2	
920902			
920903	23.8	24.4	23.8
920904	21.8	19.9	25.7
920905	22.2	20.2	24.4
920906			
920907	26.4	18.9	27.2
920908	30.3	22.2	22.2
920909	27.2	23.8	26.4
920910	29.2	29.2	23.8

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920911	26.4	26.4	31.7
920912	25.7	24.4	31.7
920913	27.2	19.2	25.0
920914		20.2	30.3
920915	27.2	25.0	30.3
920916	25.7	18.3	33.2
920917	28.2	23.2	25.7
920918	30.3	18.6	31.7
920919	20.6	18.6	21.4
920920	23.2	15.5	21.8
920921			
920922	21.8	21.8	26.4
920923	21.0	17.1	27.2
920924	28.2	19.2	20.2
920925	19.9	16.9	26.4
920926	23.2	16.9	23.8
920927	24.4	16.9	26.4
920928	18.6	17.1	31.7
920929	21.4	18.1	18.1
920930	18.6	18.6	20.6
921001	23.2	18.9	21.8
921002	18.9	18.3	27.2
921003	23.8	17.1	22.2
921004	21.4	17.6	25.7
921005	25.0	17.3	21.8
921006	26.4	16.7	30.3
921007	18.1	19.9	18.6
921008	22.2	16.3	18.6
921009	24.4	17.8	24.4
921010	18.1	18.9	18.6
921011	19.5	20.6	23.2
921012	21.4	19.9	19.5
921013	30.3	19.5	
921014	25.0	17.8	30.3
921015	22.7	21.0	23.2
921016	25.0	18.6	21.4
921017	22.7	20.2	26.4
921018	16.9	20.6	26.4
921019	25.7	15.9	35.2
921020	22.7	21.0	21.4
921021	22.2	14.4	25.7
921022	19.5	17.1	23.2
921023	20.6	18.9	24.4

Date	SS	Night	SR
921024	33.2	18.3	27.2
921025	23.2	17.6	26.4
921026	31.7	15.5	25.0
921027	16.9	17.8	30.3
921028	27.2	16.9	24.4
921029	23.2	16.9	27.2
921030	29.2	18.1	27.2
921031	25.7	18.3	28.2
921101	30.3	19.5	35.2
921102	30.3	18.9	29.2
921103	33.2	18.3	23.2
921104	23.2	22.2	23.8
921105	25.7	17.6	23.2
921106	21.8	18.3	23.8
921107	27.2	18.9	22.7
921108	23.2	18.3	29.2
921109	20.2	21.4	30.3
921110	24.4	23.8	29.2
921111	22.7	16.7	29.2
921112	28.2	20.6	26.4
921113	24.4	18.1	23.2
921114	28.2	18.6	30.3
921115	31.7	21.4	21.0
921116	28.2	19.5	26.4
921117	31.7	21.0	27.2
921118	23.8	29.5	22.2
921119	28.2	20.6	23.2
921120	28.2	18.9	23.8
921121	30.3	18.6	26.4
921122	30.3	21.8	31.7
921123	25.7	22.2	31.7
921124	41.2	22.2	
921125	33.2	22.2	27.2
921126	31.7	21.8	30.3
921127	35.2	21.0	26.4
921128	31.7	19.5	24.4
921129	33.2	19.2	25.0
921130	37.7	19.2	28.2
921201	26.4	22.2	31.7
921202	33.2	19.9	27.2
921203	28.2	21.0	28.2
921204	27.2	20.6	41.2
921205	30.3	22.7	28.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
921206	27.2	23.2	35.2
921207	30.3	21.4	30.3
921208	31.7	19.9	33.2
921209	22.7	19.9	21.0
921210			
921211	26.4	23.8	41.2
921212	29.2	20.2	33.2
921213	35.2	23.8	33.2
921214	30.3	26.4	28.2
921215	37.7	23.2	33.2
921216	29.2	25.0	29.2
921217	31.7	29.2	28.2
921218	31.7	21.8	33.2
921219	37.7	30.3	37.7
921220	37.7	23.8	41.2
921221	37.7	23.2	41.2
921222	41.2	21.4	
921223	35.2	20.2	41.2
921224	41.2	25.7	37.7
921225	41.2	22.2	31.7
921226	35.2	22.2	24.4
921227	29.2	21.0	31.7
921228	37.7	25.0	35.2
921229	35.2	23.8	31.1
921230	41.2	21.8	33.2
921231	35.2	21.8	29.2

Mean ionospheric absorption L'_m (dB) at oblique incidence (A3)
 $f = 2.70$ kHz
 1993

Date	SS	Night	SR
930101	37.7	19.5	33.2
930102	37.7	29.2	28.2
930103	35.2		
930104	28.2	27.2	30.3
930105	26.4	26.4	33.2
930106	41.2	25.0	28.2
930107	33.2	23.8	29.2
930108	23.8	21.8	29.2
930109	41.2	24.4	30.3
930110	35.2	24.4	27.2
930111	37.7	25.0	31.7
930112	41.2	23.2	29.2
930113	31.7	20.6	41.2
930114	35.2	24.4	41.2
930115	35.2	27.2	35.2
930116	29.2	26.4	35.2
930117	41.2	25.7	47.2
930118	31.7	26.4	37.7
930119	41.2	22.2	41.2
930120	33.2	30.3	33.2
930121	37.7	24.4	23.8
930122	47.2	25.7	35.2
930123	47.2	28.2	
930124		28.2	30.3
930125	33.2	37.7	28.2
930126	35.2	22.7	
930127	41.2	23.2	31.7
930128	37.7	23.2	26.4
930129	35.2	19.5	26.4
930130	33.2	21.4	21.8
930131	37.7	30.3	33.2
930201	35.2	23.8	29.2
930202	41.2	24.4	22.7
930203	44.2	21.4	35.2
930204	41.2	23.8	35.2
930205	31.7	23.8	24.4
930206	41.2	23.2	22.7
930207	24.4	23.8	26.4
930208	35.2	22.7	21.0

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930209	26.4	19.2	22.7
930210	29.2	18.9	27.2
930211	33.2	22.7	27.2
930212	23.8	20.6	21.4
930213	37.7	25.0	22.7
930214	33.2	18.3	28.2
930215	28.2	18.1	23.2
930216	33.2	21.4	25.0
930217	26.4	19.9	27.2
930218			
930219	33.2	21.8	30.3
930220	41.2	22.2	33.2
930221	37.7	25.0	35.2
930222	33.2	17.3	29.2
930223	33.2	26.4	
930224	33.2	19.9	28.2
930225	41.2	26.4	30.3
930226	35.2	20.6	28.2
930227	31.7	21.8	26.4
930228	31.7	28.2	30.3
930301	31.7	23.8	26.4
930302	26.4	21.0	33.2
930303	28.2	20.2	30.3
930304	31.7	16.9	31.7
930305	33.2	20.6	29.2
930306	26.4	21.0	25.0
930307	37.7	19.5	23.8
930308	33.2	19.9	29.2
930309	25.7	18.1	28.2
930310	35.2	23.2	22.7
930311	23.2	23.2	33.2
930312	28.2	19.5	28.2
930313	33.2	20.6	30.3
930314	33.2	20.2	22.7
930315	37.7	19.5	23.2
930316	23.8	18.1	29.2
930317	21.4	17.6	22.7
930318	24.4	14.1	25.0
930319	22.7	16.5	21.8
930320	28.2	18.9	23.8
930321	35.2	19.9	23.8
930322	26.4	19.2	25.0
930323	28.2	20.6	33.2

Date	SS	Night	SR
930324	23.8	18.1	27.2
930325	28.2	19.9	25.7
930326	27.2	19.2	24.4
930327	29.2	24.4	31.7
930328	31.7	21.0	20.6
930329	30.3	23.8	
930330	24.4	18.1	20.2
930331	31.7	21.4	
930401	22.2	18.1	18.6
930402	26.4	16.3	16.9
930403	25.7	20.6	26.4
930404	29.2	24.4	25.7
930405	30.3	19.2	30.3
930406	18.6	23.8	27.2
930407	26.4	16.9	28.2
930408	22.7	25.0	17.3
930409	21.8	16.7	22.7
930410	31.7	16.9	19.5
930411	24.4	17.8	25.7
930412	27.2	23.8	21.0
930413	21.8	18.1	23.8
930414	28.2	19.5	19.9
930415	25.7	17.6	21.0
930416	26.4	25.7	17.6
930417	24.4	18.1	19.2
930418	30.3	21.4	21.4
930419	33.2	16.5	25.0
930420	23.2	18.1	19.9
930421	25.7	19.5	16.3
930422	21.8	18.9	21.0
930423	27.2	19.5	19.9
930424	27.2	21.8	23.8
930425	23.8	18.9	24.4
930426	23.8	17.8	28.2
930427	22.2	19.9	21.4
930428	21.4	18.3	
930429	31.7	19.5	21.0
930430	30.3	21.0	23.8
930501	26.4	19.5	24.4
930502	23.8	23.8	25.0
930503	31.7	21.0	24.4
930504	31.7	21.8	37.7
930505	28.2	21.4	27.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930506	27.2	19.5	26.4
930507	27.2	21.0	22.7
930508	18.9	24.4	30.3
930509	35.2	27.2	26.4
930510	27.2	23.2	30.3
930511	31.7	20.6	27.2
930512	31.7	25.0	24.4
930513	25.0	17.8	26.4
930514	18.6	23.2	26.4
930515	28.2	16.9	27.2
930516	29.2	20.6	22.7
930517	33.2	25.0	29.2
930518	41.2	25.7	23.8
930519	30.3	21.8	23.2
930520	31.7	23.2	26.4
930521	35.2	21.4	31.7
930522	29.2	17.8	24.4
930523	25.0	17.8	30.3
930524	37.7	18.3	25.7
930525	27.2	18.3	21.8
930526	31.7	23.8	
930527	35.2	21.4	25.0
930528	27.2	25.0	23.8
930529	29.2	23.2	29.2
930530	31.7	22.2	22.2
930530	26.4	21.4	27.2
930601	29.2	27.2	28.2
930602	31.7	24.4	25.7
930603	27.2	23.8	33.2
930604	35.2	23.2	30.3
930605	30.3	23.8	23.8
930606	27.2	23.8	23.2
930607	28.2	22.7	25.7
930608	28.2	22.2	28.2
930609	33.2	18.9	23.8
930610	23.2	23.2	24.4
930611	21.8	23.2	25.0
930612	25.0	25.0	27.2
930613	21.4	20.6	21.8
930614	26.4	21.4	27.2
930615	26.4	21.8	25.7
930616	25.7	21.4	23.2
930617	19.2	18.9	27.2

Date	SS	Night	SR
930618	22.2	23.2	23.8
930619	22.7	23.8	22.2
930620	25.0	22.7	21.4
930621	26.4	22.4	26.4
930622	26.4	23.8	22.7
930623	23.8	22.2	26.4
930624	23.2	24.4	21.8
930625	25.0	21.8	24.4
930626	30.3	22.2	28.2
930627	23.2	21.8	21.4
930628	26.4	23.2	25.0
930629	28.2	21.0	23.8
930630	26.4	23.2	
930701	24.4	22.7	22.7
930702	22.7	21.8	26.4
930703	25.7	20.6	21.0
930704	21.0	18.1	29.2
930705	22.2	21.8	26.4
930706	27.2	24.4	23.2
930707	27.2	22.2	23.8
930708	28.2	23.2	25.7
930709	21.4	(21.4)	30.3
930710	23.8	21.8	27.2
930711	26.4	23.2	25.7
930712	24.4	23.2	25.0
930713	23.8	21.4	22.2
930714	27.2	22.2	23.2
930715	25.0	21.0	25.7
930716	25.0	26.4	21.4
930717	24.4	21.0	27.2
930718	28.2	25.7	25.0
930719	26.4	21.0	21.0
930720	29.2	23.8	21.8
930721	23.2	21.8	33.2
930722	25.7	25.0	22.2
930723	28.2	21.0	29.2
930724	22.7	21.0	23.8
930725	21.0	23.2	22.7
930726	27.2	21.0	20.6
930727	21.4	29.2	23.2
930728	21.4	23.2	
930729	20.2	21.4	22.7
930730	25.0	21.4	23.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930731	20.2	20.6	21.8
930801	27.2	18.6	23.2
930802	27.2	19.9	22.7
930803	22.2	21.0	28.2
930804	26.4	25.0	22.2
930805	25.7	20.2	21.0
930806	22.7	19.5	31.7
930807	27.2	18.9	26.4
930808	31.7	21.4	25.7
930809	27.2	23.2	30.3
930810	25.7	22.2	23.2
930811	23.2	21.8	24.4
930812	25.0	19.5	23.8
930813	27.2	18.6	27.2
930814	29.2	20.2	23.8
930815	23.8	21.4	33.2
930816	29.2	23.2	(28.2)
...			
931011			20.6
931012	18.1	18.6	26.4
931013	24.4	18.1	20.6
931014	25.0	15.4	19.5
931015	22.7	16.7	23.2
931016	19.9	17.1	19.9
931017	19.5	16.9	23.2
931018	21.0	17.6	21.8
931019	16.1	15.9	18.1
931020	17.3	19.2	
931021	24.4	19.5	20.2
931022	22.7	16.3	19.2
931023	18.3	16.1	18.1
931024	21.8	17.6	21.8
931025	20.6	(18.3)	
931026	21.8	19.5	23.2
931027	19.2	16.9	25.0
931028	27.2	19.5	23.2
931029	21.4	19.9	21.4
931030	22.2	15.9	22.7
931031	22.7	18.9	23.2
931101	27.2	17.3	22.2
931102	19.5	18.1	20.6
931103	24.4	18.3	22.2
931104	27.2	18.3	25.0

Date	SS	Night	SR
931105	19.5	19.2	27.2
931106	20.6	18.1	29.2
931107	21.0	17.8	27.2
931108	22.7	18.3	23.2
931109	18.6	21.4	23.2
931110	19.9	21.4	23.2
931111	19.2	16.9	21.4
931112	20.2	22.7	25.0
931113	21.4	21.0	26.4
931114	25.0	20.6	23.8
931115	22.2	19.5	27.2
931116	21.0	19.5	27.2
931117	27.2	16.7	25.0
931118	23.2	23.2	26.4
931119	28.2	19.5	27.2
931120	26.4	21.0	27.2
931121	23.8	20.0	23.8
931122	30.3	19.5	27.2
931123	27.2	21.0	28.2
931124	29.2	19.5	
931125	27.2	18.1	26.4
931126	23.2	19.2	27.2
931127	22.2	21.4	25.0
931128	26.4	21.8	27.2
931129	25.7	25.7	27.2
931130	41.2	19.9	29.2
931201	26.4	20.6	29.2
931202	29.2	33.2	31.7
931203	31.7	31.7	30.3
931204	41.2	21.8	25.7
931205	41.2	24.4	31.7
931206	35.2	23.8	33.2
931207	41.2	21.8	31.7
931208	37.7	23.2	33.2
931209	35.2	25.0	33.2
931210	37.7	23.2	27.2
931211	29.2	23.2	35.2
931212	35.2	25.0	28.2
931213	31.7	21.0	27.2
931214	33.2	22.2	31.7
931215	30.3	27.2	25.0
931216	25.7	22.2	35.2
931217	35.2	26.4	41.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
931218	33.2	25.7	35.2
931219	30.3	26.4	37.7
931220	25.7	26.4	37.7
931221	37.7	21.8	30.3
931222	29.2	24.2	31.7
931223	37.7	21.0	29.2
931224	25.0	19.5	25.0
931225	30.3	24.4	23.2
931226	29.2	27.2	30.3
931227	35.2	25.0	29.2
931228	37.7	24.4	35.2
931229	30.3	21.8	27.2
931230	30.3	21.4	25.0
931231	33.2	27.2	31.7

