GEOPHYSICAL OBSERVATORY
REPORTS

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

YEAR

1990–1991

OBSERVATORY OF NAGYCENK

SOPRON

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Preface

The Reports of the Nagycenk Geophysical Observatory have been started in 1957 with earth current data. Later, from 1961 on, geomagnetic, from 1962 on, atmospheric electricity and from 1967 on, ionospheric data have been included, too. The present report for the years 1990–1991 has been compressed with respect to the earlier ones. Data series which proved to be of great value for any type of study have been preserved, others were dropped or reduced. In order to minimize delay in publication, the present volume contains data for two consecutive years.

As the railway line Sopron-Győr near to the Observatory has been electrified in the year 1987, the recording of Pc1 pulsations had to be stopped since than due to severe noise in this frequency range. The noise level in other frequency range did not disturb strongly the other types of recordings, thus the series of reports will be continued.

The compilation of atmospheric electric and ionospheric data remained unchanged.

Exchange copies of these Reports can be obtained from the Geodetic and Geophysical Research Institute of the Hungarian Academy of Sciences (H–9401 Sopron, Pf. 5, Hungary).

Sopron, February 1995

P. Varga
Director

ELECTROMAGNETIC FIELD OF THE EARTH

The coordinates of the Geophysical Observatory Nagycenk are the following:

$$\varphi = 47°38'$$
$$\phi = 47.2°$$
$$L = 1.9$$

$$\lambda = 16°43'$$
$$\Lambda = 98.3°$$

Times are given in CET (i.e. UT + 1 h), nearly corresponding to LT (–7 min)
Tables published in this part are the following:

1. 3-hour geoelectromagnetic activity indices T-M, corresponding to the greatest
   of five indices:

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

   The magnetic activity indices M for the components D, H and Z have also a
   linear scale with a step of 7 nT in the same range. The electric and magnetic
   scales are determined so, that the averages are the same in a basic interval.

   The indices K_1 and K_5 refer to complete days and express the activities in the
   period ranges 0–2 min (pulsations) and 24–60 min (substorms). The scales of
   K_1 and K_5 are as follows:

	Limits between K-values								
Period range	0–1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9
K_1	2	4	7	13	18	23	29	41	54
K_5	29	43	67	88	110	131	191	234	339

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

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

   Pulsation indices P1–P12. The indices have been determined from occurrence
   frequency of different period pulsations, striving at a possibly uniform distri-
   bution of days in each of the five possible indices (1–5) in a basic interval.

The determination of these indices can be shortly explained as follows. The days were arranged in a basic interval according to the occurrence frequency of each band. Index 1 is attributed to the days with the lowest fifth of occurrence frequencies (0 to 20 percent) index 2 to days with occurrence frequencies in the second lowest fifth (20 to 40 percent) etc., index 5 to days with highest occurrence frequencies (80 to 100 percent). It must be reminded that mainly in the lowest and highest period bands the uniform distribution could not be achieved due to insufficient occurrence of these bands of the records.

The bands are the following:

P1	0	to	5 sec
P2	5	to	15 sec
P3	10	to	15 sec
P4	15	to	20 sec
P5	20	to	25 sec
P6	25	to	30 sec
P7	30	to	40 sec
P8	40	to	60 sec
P9	60	to	90 sec
P10	90	to	120 sec
P11	2	to	5 min
P12	5	to	10 min

(P1 has always the value 1 due to the railway disturbances.)

For a detailed description of the method of determination of these indices, see:

Holló L, Tátrallyay M, Verő J: Experimental results with the characterization of geomagnetic micropulsations (*Acta Geod. Geoph. Mont. Hung.*, 7(1972)15).

2. The list of disturbed (D) and quite (Q) days selected by the following rule: A day is taken as disturbed on the basis of all magnetic and earth current activity indices, if the greatest of the simultaneous character figures decreases only in one of the three hour intervals to 3, in the other intervals they are greater. A day is taken as quiet, if the greatest of all activity indices has not

reached 3. Five activity indices (two of the earth currents and three of the magnetism) are always taken into account.

3. Daily variation of the three geomagnetic elements as monthly average. Values are differences in nT between the actual hourly average and the corresponding monthly mean. The monthly averages are given in absolute values.

4. Yearly means of the geomagnetic elements 1961 to 1991 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.

5. List of special events, common table from magnetic and earth current records. Tables are given for SSC-s, SI-s, bays (substorms), Pi2 and Pg (giant) pulsations.

A detailed description of the processing and compilation is found in the Report of the Observatory for 1966 in German and Ádám 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).

1. Electromagnetic activity indices
1990

Date	T-M	Sum	K1	K5	P1-12
900101	11142494	26	4	4	115523444243
900102	72153126	27	4	6	125512432454
900103	93322341	27	4	5	115533455544
900104	13143312	18	5	4	115521225225
900105	42224569	34	6	6	115545545422
900106	42222111	15	5	2	115554455222
900107	31211000	8	6	1	115555444112
900108	00011944	19	4	1	115544435551
900109	53224113	21	3	2	115532345524
900110	61132333	22	3	2	115422335453
900111	22344544	28	4	5	115544425454
900112	31244236	25	4	3	115444555543
900113	31133121	15	6	2	115534543542
900114	01113201	9	4	1	115545423521
900115	22122341	17	4	1	115434555324
900116	01141348	22	5	3	115533545522
900117	11122122	12	4	2	115531135443
900118	21123212	14	4	2	115533334532
900119	11012013	9	5	0	115455534424
900120	22353364	28	3	4	115511225555
900121	62236332	27	3	3	115422344552
900122	35364245	32	6	5	115533545244
900123	43355335	31	5	6	115522542345
900124	64555398	45	7	6	115543345335
900125	84344321	29	6	5	115434555243
900126	21142331	17	5	3	115325525523
900127	11100110	5	2	0	225523535222
900128	00113227	16	3	2	115523425533
900129	42634438	34	4	6	115422345555
900130	96354598	49	4	6	115522335554
900131	56257551	36	5	8	115544245335
900201	11346494	32	5	8	115542235432
900202	44434595	38	6	8	115533335344
900203	31123231	16	5	2	115534543223
900204	23125599	36	5	6	115432455425
900205	47667463	43	6	5	115545314254
900206	34210111	13	2	1	115544345242
900207	01145399	32	4	6	115412555541
900208	53121000	12	4	2	115533542411
900209	01122210	9	4	0	115532225321
900210	10112412	12	6	0	115543555431

Date	T-M	Sum	K1	K5	P1-12
900211	01222344	18	6	2	115542235534
900212	21111000	6	4	2	115545432321
900213	00012163	13	6	1	115525545421
900214	97883212	40	3	5	115411245555
900215	10466399	38	4	6	115512443255
900216	99663669	54	5	9	115422555554
900217	85543637	41	4	8	115533555524
900218	44355376	37	4	6	115532355443
900219	73637899	52	4	6	115533554553
900220	95558899	58	6	9	115543334545
900221	72535272	33	5	4	115453455545
900222	11224499	32	5	6	115533434142
900223	83479887	54	5	8	115523434555
900224	67636667	47	5	7	115533555544
900225	63654376	40	4	6	115435545255
900226	42235235	26	3	4	115533424354
900227	63767424	39	3	6	125522424555
900228	38547386	44	4	7	115323555545
900301	62235626	32	5	6	115435555544
900302	53233234	25	4	4	115535544123
900303	22324234	22	5	5	115545433134
900304	01131111	9	4	1	115531333213
900305	22123111	13	4	2	115542245333
900306	74433331	28	6	6	115554345222
900307	11222211	12	5	2	115533323244
900308	31232311	16	4	2	115512335443
900309	11232111	12	5	2	115531125233
900310	11223211	13	6	3	115555324513
900311	26234522	26	6	4	115553245421
900312	12332949	33	6	0	115544424354
900313	97353279	45	4	6	115321355554
900314	94566622	40	5	6	115534455254
900315	32122132	16	6	2	115555442243
900316	51112113	15	5	1	115522243221
900317	10111100	5	6	0	115555341111
900318	01467949	40	5	6	115512423354
900319	94222211	23	5	4	115553224245
900320	43233439	31	7	5	115533344445
900321	99996996	66	7	9	115413455555
900322	63356879	47	5	6	115225555255
900323	54366393	39	5	6	115214555545
900324	33334244	26	6	5	115445315545
900325	45256968	45	5	7	115423234455

Date	T-M	Sum	K1	K5	P1-12
900326	96345994	49	6	8	115434325455
900327	45754489	46	6	6	115215545345
900328	23542436	29	4	4	115125555444
900329	31144652	26	4	6	115434455524
900330	95999961	57	7	8	115531325555
900331	22112213	14	3	2	115512535535
900401	21212122	13	6	1	115435555341
900402	11325323	20	7	4	115535535443
900403	11246432	23	4	2	115433445544
900404	41222240	17	4	2	115543225122
900405	11134210	13	4	2	115553334343
900406	11123101	10	5	2	115545333244
900407	21121111	10	6	2	115555223524
900408	21122111	11	7	2	115535425521
900409	11297947	40	7	5	115523425555
900410	68699999	65	6	9	115323555553
900411	96658994	56	5	9	115523555554
900412	59969599	61	9	8	115533544255
900413	83744357	41	7	8	115522355451
900414	33666966	45	6	7	115543344145
900415	44434221	24	5	6	115425555443
900416	21323112	15	4	3	115534554242
900417	51697579	49	7	8	115522245353
900418	86224323	30	7	6	115535415544
900419	21112134	15	5	4	115542225431
900420	51333268	31	7	6	115535512144
900421	93221111	20	6	2	115555235553
900422	12323326	22	5	3	115535434254
900423	99944945	53	5	6	115434545155
900424	32664225	30	5	6	115444245555
900425	24343222	22	6	4	115555344321
900426	66622202	26	6	4	115434555441
900427	24232512	21	4	1	115544455541
900428	62237253	30	4	5	115522555354
900429	43461268	34	4	6	115522555522
900430	93211113	21	4	6	115512435453
900501	43121121	15	5	1	115531324224
900502	11133212	14	5	1	115531225324
900503	11233224	18	4	4	115521245435
900504	32124411	18	7	2	115531135215
900505	12241221	15	7	2	115543434324
900506	11121111	9	5	1	115545554222
900507	11112320	11	4	1	115543335411

Date	T-M	Sum	K1	K5	P1-12
900508	11222212	13	6	2	115521234455
900509	32233136	23	5	5	115522455145
900510	65964352	40	6	6	115533455155
900511	36615211	25	4	5	115522555551
900512	22212011	11	2	1	115311213121
900513	01022443	16	3	2	115532345521
900514	10101100	4	5	0	115534455521
900515	01113210	9	4	1	115533414322
900516	01101100	4	3	1	115532211143
900517	01111111	7	4	1	115535334244
900518	11538997	43	4	6	115533315554
900519	35322244	25	6	4	115554344522
900520	33122377	28	3	6	115425555544
900521	62123449	31	5	6	115535535434
900522	56555365	40	6	6	115523335355
900523	33211321	16	3	2	115424555451
900524	01111112	8	3	0	115345445532
900525	34235443	28	4	6	115421455555
900526	33339539	37	6	4	115522345354
900527	99993483	54	8	6	115522455454
900528	11221211	11	6	0	115544455322
900529	22343323	22	7	1	115541325332
900530	43146384	33	5	4	115521545345
900531	24333112	19	6	2	115543455243
900601	13222322	17	5	2	115544555421
900602	21212210	11	4	0	115553555532
900603	01102111	7	3	1	115542555553
900604	02211111	9	3	0	115532545342
900605	12112201	10	5	1	115533445421
900606	21222233	17	5	2	115532245441
900607	37533331	28	6	4	115335555232
900608	22243336	25	6	3	115522445551
900609	14854322	29	6	5	115534555244
900610	64142223	24	8	5	115545541124
900611	22223223	18	5	1	115544445235
900612	42389999	53	8	7	115522545453
900613	99695996	62	8	8	115424534155
900614	99689973	60	9	8	115412435555
900615	28422120	21	6	2	115552555534
900616	31111110	9	6	1	115424555311
900617	00101010	3	3	0	115435545351
900618	02122363	19	4	3	115542245524
900619	21111101	9	3	2	115533535322

Date	T-M	Sum	K1	K5	P1-12
900620	00101000	2	3	0	115223555531
900621	00101111	5	2	0	115522135552
900622	21221201	11	2	1	115521145541
900623	11122411	13	3	2	115512335344
900624	12221311	13	5	3	115511114455
900625	11222222	14	4	2	115543345435
900626	21122111	12	4	2	115544554523
900627	11122225	16	5	2	115534435245
900628	41222110	13	6	2	115532345544
900629	02411220	12	5	2	115542355243
900630	11111101	7	4	0	115523335521
900701	11111012	8	4	0	115413555521
900702	23111201	11	6	2	115551145222
900703	22221011	11	6	2	115554135335
900704	21022434	18	3	4	115532333254
900705	23221224	18	4	2	115522335553
900706	01311121	10	4	2	115542345342
900707	11111123	11	6	1	115545435411
900708	11312321	14	3	3	115522455534
900709	21211210	10	3	1	115532245532
900710	07929621	36	4	5	115511123455
900711	23212133	17	5	1	115543224155
900712	03211101	9	3	3	115523534443
900713	24521331	21	4	4	115321335522
900714	21134343	21	4	2	115512345335
900715	22211111	11	4	2	115532455224
900716	21112142	14	3	1	115543334444
900717	12111113	11	4	1	115532355344
900718	22111120	10	5	1	115543555421
900719	22245833	29	5	3	115522335354
900720	43344322	25	6	6	115532445245
900721	13211224	16	5	1	115555345512
900722	21122112	12	5	0	115533545431
900723	12111111	9	4	0	115555545222
900724	12211110	9	3	0	115544554222
900725	11122011	9	3	0	115424445551
900726	01112359	22	4	1	115531124445
900727	43231334	23	4	3	115521255354
900728	59999999	68	8	8	115521135455
900729	99969956	62	8	8	115434542445
900730	12642326	26	8	2	115532334255
900731	42222101	14	7	0	115553213124
900801	11737855	37	6	5	115532245345

Date	T-M	Sum	K1	K5	P1-12
900802	53312001	15	3	2	115523433541
900803	11113222	13	3	2	115435545531
900804	51222110	14	4	1	115545544421
900805	01111111	7	3	1	115534455231
900806	21222235	19	5	3	115532455322
900807	12222221	14	6	2	115544555312
900808	13212221	14	4	0	115455544211
900809	22111220	11	4	2	115531354424
900810	11122131	12	5	1	115553344311
900811	51223112	17	5	2	115542323534
900812	22222111	13	4	1	115353455514
900813	12453541	25	5	3	115541345432
900814	23453213	23	7	2	115533455545
900815	23447874	39	9	6	115533335355
900816	54556932	39	8	5	115554544245
900817	55413333	27	8	5	115555444222
900818	33442321	22	8	2	115553342244
900819	63523223	26	7	5	115554555312
900820	27323351	26	6	4	115545345135
900821	21446998	43	6	7	115534345255
900822	56936954	47	5	6	115421455455
900823	96689994	60	5	9	115423555555
900824	47644320	30	6	5	115425545345
900825	11112112	10	6	1	115554544122
900826	21999996	54	7	6	115522235554
900827	78437532	39	5	3	115532224355
900828	22244101	16	6	1	115324555254
900829	01129246	25	4	1	115534425555
900830	22228994	38	5	6	115435455353
900831	56343311	26	7	3	115554424125
900901	22159750	31	7	4	115544421424
900902	10011000	3	3	0	115311212212
900903	00012101	5	2	0	115433345343
900904	01122121	10	4	2	115424455552
900905	22333412	20	7	3	115522345323
900906	42353222	23	5	3	115533145355
900907	13243421	20	3	4	115433455555
900908	11122115	14	4	2	115553255523
900909	11222212	13	5	2	115554555521
900910	31101114	12	3	2	115542445333
900911	42575449	40	4	6	115521434155
900912	34754236	34	7	6	115555455344
900913	84244433	32	6	5	115554444223

Date	T-M	Sum	K1	K5	P1-12
900914	53344343	29	7	5	115445554425
900915	25447642	34	6	5	115555555424
900916	33475421	29	6	2	115535334435
900917	23545134	27	6	3	115544555424
900918	11243539	28	5	5	115533445524
900919	64322342	26	6	2	115555455222
900920	72112139	26	7	6	113455555311
900921	42332324	23	4	4	115554445321
900922	33431426	26	5	4	115545554224
900923	44231311	19	4	1	115555334122
900924	11322453	21	3	3	115532553233
900925	36221125	22	6	3	115541354135
900926	22243442	23	6	3	115553534124
900927	12223102	13	6	1	115554544413
900928	13134111	15	7	1	115554335321
900929	21121011	9	4	2	115555444213
900930	31111002	9	6	0	115532145411
901001	01011000	3	2	0	115421245421
901002	00012121	7	3	0	115531335535
901003	11123233	16	4	5	115531134553
901004	32354392	31	6	5	115553155445
901005	32233312	19	7	4	115555553122
901006	12334222	19	5	3	115555335534
901007	11322323	17	6	1	115455555512
901008	11111101	7	6	1	115541545511
901009	00025766	26	5	4	115543435554
901010	79667644	49	5	7	115423545555
901011	94655799	54	7	9	115534434145
901012	96855465	48	7	6	115555545343
901013	34432329	30	5	4	115445554224
901014	36243256	31	6	6	115545555312
901015	44357467	40	5	6	115545534244
901016	12242126	20	6	2	115555535421
901017	21221001	9	5	1	115555533121
901018	00222121	10	3	0	115535555111
901019	14123103	15	4	2	115545455111
901020	12344999	41	4	6	115522555442
901021	42333112	19	3	3	115555345313
901022	34232320	19	5	3	115544433211
901023	11223119	20	5	5	115552444223
901024	75966451	43	5	3	115433545553
901025	43222101	15	4	1	115542445112
901026	20119532	23	5	3	115543145223

Date	T-M	Sum	K1	K5	P1-12
901027	12112231	13	3	1	115522355224
901028	20210000	5	2	0	115421333211
901029	00133129	19	3	2	115222555534
901030	69222132	27	3	3	115433555455
901031	44344567	37	6	8	115554454125
901101	22233113	17	7	3	114455545312
901102	32322115	19	7	3	113345544113
901103	11133111	12	7	1	115553435113
901104	11121000	6	5	0	115445555212
901105	00021001	4	4	0	115544535321
901106	00011001	3	3	0	115433425443
901107	00132111	9	3	1	115434555324
901108	10122133	13	3	1	115523555541
901109	23132141	17	5	2	115535545222
901110	33132564	27	4	4	115324555542
901111	21233411	17	4	2	115535555231
901112	12121111	10	6	0	115435555512
901113	21121100	8	6	0	114225555521
901114	10001000	2	4	0	115434535511
901115	00022010	5	4	0	115314554323
901116	13423745	29	2	2	115411434555
901117	12135473	26	3	2	115334445551
901118	72116562	30	3	4	115445335545
901119	62231222	20	6	4	115345554422
901120	02221111	10	5	0	115555325223
901121	13122112	12	3	3	115523435541
901122	20111020	7	4	0	115535534221
901123	00011211	6	3	0	115434533441
901124	10001000	2	2	0	115424434311
901125	10012002	6	2	1	115324455521
901126	12122100	9	3	2	115422554531
901127	88246995	51	5	8	115432355555
901128	34431192	27	5	6	115553445545
901129	11111002	7	4	0	115544554222
901130	11022611	14	3	2	115543535442
901201	11001100	4	3	0	115424444311
901202	00013130	8	4	1	123345531532
901203	10101122	8	4	1	115522435554
901204	34135322	23	6	5	155434555244
901205	41333371	25	5	2	115425554421
901206	11232110	11	3	2	115554555531
901207	11211010	7	5	1	115445545441
901208	00111412	10	4	2	115235555251

Date	T-M	Sum	K1	K5	P1-12
901209	11012110	7	3	1	115435535324
901210	00011010	3	2	0	115514455321
901211	00011020	4	2	0	115522445411
901212	00011131	7	2	0	115433444542
901213	83242010	20	3	5	115412355345
901214	12122230	13	4	1	115535445532
901215	11121021	9	4	1	115225555521
901216	11124221	14	2	1	115544345542
901217	13311111	12	4	1	115335542343
901218	11011100	5	2	0	115434555422
901219	00011100	3	1	0	115511125521
901220	00112342	13	4	2	115211155541
901221	00000021	3	2	0	115433433422
901222	01110001	4	3	0	115442344113
901223	00241104	12	3	1	115423323553
901224	42124395	30	2	6	115312355544
901225	21122141	14	2	3	115313355543
901226	10010100	3	2	0	115452123421
901227	03012100	7	4	1	115545541121
901228	11011010	5	3	0	115544524531
901229	00002120	5	4	1	115425533331
901230	23341132	19	2	2	115423445554
901231	00022321	10	3	3	115523234543

Electromagnetic activity indices
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Date	T-M	Sum	K1	K5	P1-12
910101	46111000	13	2	2	115311334112
910102	04112111	11	3	1	115532433421
910103	11122101	9	3	1	115522135541
910104	12111002	8	3	2	115542245543
910105	21113101	10	3	1	115533421442
910106	00121000	4	4	0	115435555321
910107	10001000	2	2	0	115522345111
910108	11113113	12	2	1	115422455233
910109	01111103	8	4	0	115542135421
910110	51121213	16	5	1	115554435312
910111	20122211	11	3	0	115533433323
910112	45832241	29	4	2	115432455344
910113	31222151	17	4	1	115553245121
910114	11011010	5	2	0	115522444512
910115	22123043	17	2	2	115531555411
910116	10122113	11	3	1	115434555231
910117	21123522	18	4	3	115434555432
910118	31112344	19	3	2	115523555221
910119	21011120	8	3	0	115444545111
910120	10011230	8	3	0	115522455121
910121	01011001	4	3	0	115524445511
910122	21010001	5	2	0	115534235543
910123	01021003	7	3	0	115422435544
910124	72253283	32	6	4	115413455555
910125	31332294	27	6	2	115513324545
910126	24221114	17	4	1	115335455535
910127	01112114	11	3	1	115534555214
910128	01112010	6	4	1	115444555223
910129	20121001	7	2	0	115423523441
910130	10011110	5	3	0	115323545222
910131	12232425	21	3	3	115412345555
910201	21554399	38	6	6	115432455355
910202	97231200	24	2	2	115411135555
910203	10122100	7	2	0	115523545353
910204	10011104	8	3	0	115522445325
910205	32132112	15	4	2	115433555555
910206	11211111	9	4	0	115542342523
910207	11122324	16	7	2	115554345124
910208	32243252	23	4	2	115531445444
910209	42234294	30	5	3	115533554533
910210	31322011	13	3	1	115532245541

EM ACTIVITY INDICES

Date	T-M	Sum	K1	K5	P1-12
910211	24273549	36	5	4	115521445322
910212	55234220	23	4	3	115532124112
910213	22134313	19	5	2	115533445111
910214	12221122	13	4	2	115532555211
910215	50122115	17	3	3	115544542112
910216	00012010	4	3	0	115445533111
910217	10111000	4	3	0	115424355311
910218	10011012	6	3	0	115531145521
910219	10012522	13	4	1	115545445531
910220	10111142	11	3	0	115511433242
910221	33231011	14	5	1	115421234344
910222	11355218	26	5	3	115521335354
910223	12546447	33	4	3	115523555354
910224	13411131	15	3	1	115435555235
910225	31144211	17	4	3	115545445342
910226	11232111	12	6	2	115335544312
910227	00134112	12	5	2	115424545443
910228	43354222	25	4	6	115324555552
910301	42223244	23	4	6	115514535523
910302	51232212	18	4	2	115543455322
910303	21111121	10	4	1	115435544221
910304	11112343	16	4	2	115444534343
910305	22256723	29	3	5	115431445352
910306	21454569	36	5	6	115532555323
910307	42756399	45	9	7	115535455242
910308	34243446	30	7	6	115534344145
910309	54348339	39	5	3	115513455542
910310	99534111	33	3	6	115525325554
910311	00213111	9	5	1	115544445522
910312	11444227	25	3	2	115534442551
910313	95864310	36	5	6	115425524354
910314	12431100	12	2	1	115413345533
910315	10121200	7	2	0	115431234444
910316	00011173	13	3	0	115434224244
910317	12332115	18	7	3	115422555535
910318	53231000	14	5	1	115425555421
910319	01132464	21	5	3	115524555311
910320	38434011	24	6	3	115512114245
910321	01369923	33	5	4	115421434555
910322	32764218	33	6	5	115335534345
910323	44134110	18	6	2	115543455412
910324	49999599	63	9	2	
910325	99979999	70	9	6	135222455555

Date	T-M	Sum	K1	K5	P1-12
910326	99999989	71	9	6	
910327	76436634	39	4	4	115321455452
910328	45433321	25	3	2	115212455232
910329	01211002	7	3	0	115553224421
910330	11345848	34	3	2	115311355541
910331	21021012	9	3	0	115522133324
910401	94456236	39	6	4	115533434253
910402	63434425	31	6	3	115543345133
910403	23376685	35	7	4	115523344255
910404	54449999	55	8	6	115543444245
910405	54434323	28	7	3	115555522245
910406	23221442	20	7	2	115545545121
910407	23232111	15	6	1	115535534222
910408	10112111	8	7	0	115435535211
910409	21211134	15	4	2	115454535531
910410	10212202	10	5	1	115544225322
910411	10112113	10	6	0	115523523242
910412	12235400	17	6	1	115533522244
910413	00122111	8	4	1	115535512344
910414	01213121	11	3	0	115444424253
910415	11122211	11	3	0	115545512122
910416	00022121	8	5	0	115435513144
910417	01133342	17	4	2	115511235235
910418	11235225	21	5	4	115552234424
910419	23385113	26	4	1	115513331355
910420	10112111	8	4	0	115555212111
910421	11143111	13	5	0	115512212243
910422	12213110	11	3	1	115525422215
910423	01132442	17	3	0	115533435523
910424	21212029	19	5	0	115523445541
910425	65532413	29	5	2	115225555444
910426	24511125	21	4	1	115522335455
910427	55412225	26	4	3	115522555532
910428	25227656	35	4	2	115521345343
910429	98549978	59	7	5	115524545253
910430	47543565	39	6	6	115454544144
910501	73344527	35	7	4	115554424133
910502	65556785	47	8	5	115522455244
910503	33382232	26	6	2	115554424223
910504	21112222	13	5	2	115543445121
910505	10111110	6	5	0	115545445311
910506	11111101	7	4	0	115524315411
910507	21222110	11	2	0	115551232352

Date	T-M	Sum	K1	K5	P1-12
910508	21322121	14	5	1	115545212153
910509	12221334	18	4	2	115535125445
910510	01213122	12	4	1	115554325532
910511	10111100	5	5	0	115555235321
910512	01111111	7	4	0	115545543321
910513	11279543	32	5	3	115533244254
910514	13567577	41	5	4	115511325555
910515	42233100	15	4	1	115521224243
910516	01312259	23	6	2	115511324245
910517	96872511	39	4	4	115431114255
910518	01101000	3		0	115531211122
910519	01101121	7	2	0	115422555553
910520	12211100	8	2	0	115513445143
910521	01015221	12	3	0	115534313154
910522	65552223	30	4	1	115411335555
910523	43334525	29	4	2	115335555545
910524	34524765	36	7	3	115522255235
910525	59746443	42	7	4	115542135254
910526	34535974	40	7	2	115553245224
910527	44435325	30	7	3	115554424223
910528	74545668	45	7	4	115442555255
910529	96333362	35	5	2	115544525554
910530	21332332	19	7	0	115533554353
910531	24389997	51	6	1	115532545543
910601	87999953	59	8	0	115522424255
910602	46945999	55	6	4	115541324155
910603	21521175	24	6	1	115553434221
910604	39233999	47	7	2	115551344144
910605	99999999	72	7	9	115411334455
910606	99676312	43	7	7	115552334344
910607	45464348	38	7	2	115554313155
910608	43323866	35	7	2	115551423334
910609	99957995	62	7	2	115533132554
910610	65999999	65	6	1	115522244555
910611	99996999	69	7	3	115433555453
910612	86598999	63	8	2	115412345554
910613	99999999	72	7	1	115513455155
910614	64554211	28	8	0	115545524244
910615	11493432	27	7	0	115552213133
910616	11111111	8	5	0	115534455244
910617	21199999	49	6	2	115521333255
910618	96331376	38	6	1	115541235155
910619	42495564	39	5	1	115432545155

Date	T-M	Sum	K1	K5	P1-12
910620	35332232	23	7	1	115552323345
910621	52643622	30	7	2	115521224345
910622	32333333	23	6	2	115521245245
910623	43487969	50	6	8	115521444545
910624	66733524	36	6	7	115542224125
910625	25434633	30	7	2	115551243342
910626	44334564	33	7	3	115542235354
910627	31222212	15	7	0	115553344223
910628	23221211	14	4	0	115344545542
910629	11111221	10	5	0	115445545341
910630	64337434	34	5	6	115552234155
910701	84223332	27	7	4	115541245423
910702	13352438	29	6	6	115532224553
910703	57477957	51	6	6	115532345445
910704	75323311	25	7	4	115533455244
910705	11111120	8	4	0	115523355323
910706	11122514	17	6	1	115545445532
910707	11201122	10	4	1	115552224542
910708	12754997	44	7	3	115531125555
910709	88999997	68	6	5	115421255255
910710	95532211	28	7	3	115533455534
910711	32239413	27	6	3	115544445434
910712	22296563	35	8	3	115531125255
910713	38699999	62	7	4	115421555554
910714	99784935	54	6	7	115421455555
910715	62140111	16	2	4	115522335543
910716	12110693	23	3	2	115531245542
910717	59443336	37	5	6	115523455342
910718	62211539	29	5	6	115532445225
910719	64445699	47	7	8	115521235345
910720	44554545	36	6	6	115542125345
910721	46645535	38	6	5	115542544245
910722	33333533	26	7	4	115531233153
910723	73332461	29	7	5	115545444223
910724	11222111	11	6	2	115554545211
910725	11323521	18	6	3	115532334431
910726	01011100	4	3	0	115523554422
910727	21011125	13	4	2	115532425542
910728	21221001	9	4	1	115521124312
910729	32222111	14	5	1	115553335124
910730	11521121	14	7	1	115543535411
910731	11221112	11	4	1	115455445533
910801	61132995	36	5	4	115522245543

EM ACTIVITY INDICES

Date	T-M	Sum	K1	K5	P1-12
910802	73989955	55	6	7	115521245355
910803	53596976	50	7	6	115521245455
910804	97652595	48	7	7	115424435555
910805	47635317	36	6	5	115542324154
910806	99473422	40	6	6	115531545555
910807	29322124	25	5	4	115532343355
910808	14422112	17	6	2	115553333332
910809	13233434	23	4	3	115424555355
910810	12233110	13	5	2	115531345432
910811	17536631	32	7	6	115531455525
910812	32347999	46	6	7	115431455545
910813	92252121	24	4	2	115532355444
910814	11122346	20	7	5	115531234121
910815	85746663	45	8	7	115433335255
910816	75545423	35	7	4	115335434145
910817	32254473	30	8	4	115555432235
910818	93332499	42	8	6	115454435545
910819	58999452	51	7	5	115423445355
910820	34499997	54	7	6	115524335555
910821	79987523	50	8	5	115424554145
910822	69955333	43	8	5	115423555155
910823	54422111	20	5	3	115543455433
910824	53311332	21	7	3	115435335555
910825	21321111	12	6	2	115555444223
910826	11222122	13	5	2	115555335323
910827	22222899	36	7	6	115553445541
910828	43211428	25	6	4	115532235252
910829	10123256	20	7	4	115554135333
910830	22237799	41	7	7	115531145454
910831	22688899	52	7	6	115532454325
910901	99435369	48	7	7	115543455355
910902	64543412	29	6	3	115531555554
910903	01243228	22	4	2	115544335344
910904	41222211	15	5	1	115551545211
910905	68324133	30	5	3	115521455541
910906	24313321	19	5	2	115541455223
910907	33133211	17	6	2	115553433111
910908	24234392	29	7	4	115532325324
910909	52647479	45	6	7	115533455344
910910	97923344	41	5	5	115511555544
910911	82345275	36	7	6	115553333255
910912	12333222	18	8	4	115552422124
910913	12223225	19	7	3	115554335223

Date	T-M	Sum	K1	K5	P1-12
910914	84453662	38	6	4	115454554443
910915	54232112	20	5	3	115555454112
910916	11122111	10	5	1	115545544122
910917	10111212	9	4	1	115555135121
910918	00012202	7	4	1	115545545421
910919	43223111	17	4	4	115432325535
910920	33222100	13	5	2	115455345212
910921	20111001	6	4	1	115555314511
910922	11133201	12	3	3	115524445434
910923	10111110	6	2	0	115531245551
910924	12011111	8	2	2	115542134351
910925	47328999	51	5	7	115212245552
910926	85675697	53	5	6	115423544545
910927	59566997	56	4	6	115324555555
910928	45457399	46	4	6	115545435545
910929	61215336	27	6	2	115555225444
910930	73344586	40	5	5	115534435245
911001	42546499	43	5	6	115542342343
911002	99689945	59	5	7	115431455545
911003	42343224	24	5	3	115555124211
911004	34232699	38	5	3	115532344225
911005	93654131	32	6	3	115532435415
911006	11135795	32	3	4	115521345453
911007	98786434	49	4	6	115521323255
911008	52355794	40	5	7	115542555142
911009	35254212	24	7	3	115553234145
911010	28735843	40	4	6	115432455255
911011	12343152	21	5	6	115554544245
911012	21231112	13	6	1	115525545214
911013	11413111	13	4	2	115553535521
911014	11312262	18	5	2	115555434421
911015	11212111	10	4	1	115554423123
911016	11122001	8	7	0	115435555513
911017	00013411	10	2	0	115545524444
911018	43223422	22	3	3	115534355445
911019	14233326	24	3	3	115424455245
911020	53259321	30	3	3	115523555252
911021	12243799	37	4	6	115511455541
911022	94334361	33	4	6	115433455542
911023	32242159	28	6	4	115524445434
911024	73343334	30	4	5	115422445555
911025	77366686	49	6	6	115432345554
911026	34335874	39	4	6	115534545545

Date	T-M	Sum	K1	K5	P1-12
911027	89754499	55	5	6	115542454355
911028	69569999	62	6	6	115432321454
911029	99999999	72	6	7	115423555555
911030	11335799	38	4	6	115324555545
911031	92399899	58	7	8	115434555555
911101	94449999	57	6	9	115421355455
911102	99724412	38	4	6	115423545545
911103	31477222	28	7	5	115533335345
911104	42368499	45	6	7	115532445245
911105	95454351	36	6	3	115555455545
911106	22543322	23	4	3	115542244223
911107	42223222	19	4	2	111155424353
911108	12469999	49	6	2	115433534353
911109	99999899	71	5	6	115111455542
911110	52875237	39	5	2	115534455345
911111	51132499	34	6	2	115534545225
911112	61331111	17	5	0	115525555432
911113	20243721	21	3	0	115545425155
911114	55331414	26	4	1	115522444255
911115	63465992	44	5	4	115524454155
911116	43237537	34	4	3	115424555522
911117	32146462	28	3	2	115312555452
911118	44223499	37	3	5	115411555523
911119	95644999	55	3	6	115312555555
911120	22333295	29	3	3	115543433135
911121	33457999	49	4	5	115521444555
911122	99999921	57	4	5	115445345355
911123	44555839	43	5	3	115533344145
911124	23121353	20	4	3	113545444544
911125	62221153	22	4	2	115534543121
911126	02121111	9	5	1	115555544124
911127	01101231	9	4	1	115545545311
911128	20011217	14	4	1	115535134441
911129	54112521	21	5	2	115521124444
911130	92122119	26	5	2	115541124245
911201	72133132	22	6	3	115541432135
911202	51255453	30	3	5	115532535345
911203	12224331	18	3	3	115534314455
911204	62233262	26	4	2	115554355124
911205	22221123	15	5	1	115545533313
911206	11121101	8	5	0	115555442212
911207	11112015	12	4	0	115554434321
911208	11122210	10	4	1	115521454532

Date	T-M	Sum	K1	K5	P1-12
911209	01152134	17	3	2	115523443452
911210	23332156	25	4	4	115522455245
911210	23332156	25	4	4	115522455245
911211	53222214	21	4	3	115545555325
911212	34123144	22	4	3	113445555323
911213	31227633	27	5	3	115435555114
911214	21233683	28	4	3	115555435223
911215	61122100	13	6	2	115555555111
911216	00126958	31	3	3	115445555531
911217	99447983	53	5	5	115512555535
911218	31231322	17	4	1	115455555324
911219	00142341	15	2	2	115421555432
911220	00210632	14	2	1	
911221	56576434	40	5	3	115544555343
911222	21110000	5	3	0	115521314352
911223	32321236	22	3	3	115334355454
911224	41142210	15	2	1	115424345543
911225	00123122	11	2	0	115553535521
911226	22111224	15	2	0	115511245154
911227	73256899	49	3	4	115532444345
911228	62224667	35	4	3	115533555445
911229	27623499	42	4	4	115541233545
911230	93112423	25	4	1	115532422345
911231	20011322	11	3	1	115543345224

2. Disturbed and quiet days for 1990–1991

Disturbed days	
Date	Date
900124	910528
900130	910601
900202	910602
900205	910605
900216	910607
900220	910609
900223	910610
900224	910611
900321	910612
900326	910613
900327	910623
900410	910703
900411	910709
900412	910713
900423	910714
900522	910719
900613	910720
900614	910721
900728	910802
900729	910803
900822	910815
900823	910926
901010	910927
901011	910928
901012	911002
901015	911007
901031	911027
910324	911028
910325	911029
910326	911101
910404	911109
910429	911119
910430	911123
910502	911217
910525	911221

Quiet days			
Date	Date	Date	Date
900117	900812	901228	910629
900127	900825	901229	910705
900209	900902	910103	910707
900212	900903	910104	910724
900307	900904	910106	910726
900317	900909	910107	910728
900401	900929	910111	910731
900407	901001	910114	910826
900408	901002	910119	910916
900506	901008	910121	910917
900508	901017	910122	910918
900514	901018	910128	910921
900516	901028	910129	910923
900517	901104	910130	910924
900524	901105	910203	911015
900528	901106	910206	911016
900602	901112	910214	911126
900603	901113	910216	911206
900604	901114	910217	911208
900605	901115	910218	911222
900617	901120	910303	
900619	901122	910315	
900620	901123	910331	
900621	901124	910408	
900622	901125	910410	
900625	901126	910413	
900630	901129	910415	
900701	901201	910416	
900703	901203	910420	
900709	901207	910504	
900715	901209	910505	
900718	901210	910506	
900722	901211	910507	
900723	901215	910511	
900724	901218	910512	
900725	901219	910518	
900805	901221	910519	
900807	901222	910520	
900809	901226	910616	

Date	00	01	02	03	04	05	06	07	08	09	10	11
9001 H	−1.1	−0.1	+0.5	+1.2	+0.7	+2.4	+6.4	+12.1	+16.3	+11.4	+4.1	−0.2
D	+19.8	+17.9	+13.1	+5.4	+1.6	−0.2	+0.4	+1.2	+6.5	+8.9	+5.0	−2.1
Z	+4.7	+3.8	+2.7	+1.6	+0.8	+0.5	+0.3	−1.0	−1.3	−5.4	−7.5	−9.3
9002 H	+6.3	+3.7	+2.2	+5.3	+7.9	+8.2	+10.0	+10.6	+7.9	+3.3	−3.8	−9.3
D	+14.8	+14.2	+13.1	+7.6	+8.2	+7.0	+3.8	+5.0	+10.3	+9.5	+0.6	−10.5
Z	+0.3	−0.9	−1.7	−2.6	−3.8	−4.0	−3.8	−2.3	−0.9	−3.1	−5.1	−5.2
9003 H	+4.0	+6.3	+5.7	+7.2	+8.4	+9.9	+10.9	+7.6	+4.1	−3.8	−8.9	−14.8
D	+15.4	+12.8	+13.4	+9.4	+6.9	+2.6	+4.8	+14.9	+25.8	+25.1	+11.7	−9.5
Z	+1.4	−0.4	−1.4	−2.2	−2.0	−2.2	−0.3	+2.3	+2.7	−1.7	−7.5	−10.9
9004 H	+10.9	+12.2	+11.3	+12.0	+14.1	+16.6	+13.2	+6.3	−4.8	−15.0	−19.4	−16.6
D	+10.2	+11.7	+11.2	+11.4	+8.2	+8.9	+16.5	+26.9	+33.6	+28.5	+12.2	−10.1
Z	+3.5	+1.8	+0.1	−0.7	−1.4	−2.6	−0.3	+1.3	−0.7	−5.0	−10.8	−17.8
9005 H	+2.9	+4.6	+4.0	+4.8	+6.1	+5.6	−1.0	−6.8	−12.1	−13.1	−8.4	−3.1
D	+6.7	+6.9	+7.4	+10.1	+12.5	+20.4	+29.5	+34.4	+29.0	+16.9	−0.2	−18.3
Z	+5.2	+4.7	+4.2	+4.9	+5.7	+6.4	+6.7	+4.4	−0.5	−6.9	−13.7	−19.3
9006 H	+2.8	+1.9	+5.4	+7.4	+11.6	+8.0	+0.8	−8.8	−16.8	−19.4	−15.0	−8.9
D	+2.8	+5.3	+6.2	+9.9	+17.8	+28.6	+38.9	+39.5	+36.4	+21.2	+2.7	−15.9
Z	+3.4	+3.4	+1.9	+2.1	+3.5	+4.6	+4.0	+3.8	−0.1	−5.6	−12.2	−16.1

elements (H,D,Z) for 1990

12	13	14	15	16	17	18	19	20	21	22	23	Averages
−1.8	−5.4	−6.4	−4.4	−4.5	−6.7	−6.4	−6.4	−4.4	−3.1	−2.4	−1.8	21040 nT
−11.5	−19.4	−19.6	−18.0	−16.7	−15.0	−10.3	−8.4	+1.4	+9.4	+14.1	+16.5	558 nT E
−12.3	−9.2	−4.5	−1.2	+0.2	+1.4	+3.9	+6.0	+7.1	+7.4	+6.1	+5.2	42777 nT
−10.3	−8.2	−8.8	−9.0	−7.1	−3.9	−5.4	−7.3	−0.7	+1.7	+1.0	+5.7	21038 nT
−20.7	−28.1	−27.2	−20.1	−14.1	−13.6	−7.1	+0.5	+6.0	+13.3	+15.0	+12.5	576 nT E
−4.7	−3.8	−1.0	+1.7	+3.1	+3.8	+5.6	+7.4	+7.1	+6.0	+4.8	+3.1	42776 nT
−12.6	−6.4	−5.8	−4.4	−8.8	−7.5	−2.1	+3.3	+4.2	+0.6	+1.6	+1.3	21048 nT
−27.3	−39.3	−40.2	−32.2	−17.9	−8.3	−5.3	−1.9	+2.2	+7.8	+13.6	+15.5	588 nT E
−11.3	−10.5	−6.7	−0.3	+6.0	+7.8	+8.2	+7.4	+6.6	+5.9	+4.9	+4.2	42777 nT
−13.4	−14.1	−17.5	−15.9	−11.5	−4.9	−1.6	+2.5	+6.5	+8.7	+9.7	+10.7	21039 nT
−33.3	−45.3	−44.0	−35.6	−23.5	−11.4	−2.4	+3.1	+6.4	+5.5	+3.9	+7.4	589 nT E
−20.4	−14.9	−7.0	+1.0	+6.9	+11.5	+12.5	+12.4	+11.0	+8.5	+6.3	+4.8	42781 nT
+4.3	+3.3	−0.9	−1.7	−2.5	−2.0	−2.3	+2.0	+5.9	+2.6	+2.8	+5.0	21053 nT
−32.2	−39.9	−36.9	−28.6	−18.6	−7.3	+0.5	+0.5	+0.5	+2.4	+1.0	+3.3	582 nT E
−23.1	−19.9	−13.1	−5.3	+2.8	+7.9	+8.9	+9.1	+9.2	+8.4	+7.3	+6.0	42781 nT
−4.9	−0.9	−2.9	−0.7	+3.7	+2.2	+2.2	+5.4	+8.5	+9.5	+4.4	+4.5	21052 nT
−28.9	−37.2	−36.3	−31.8	−23.0	−14.0	−6.8	−3.9	−6.1	−4.4	−2.1	+1.1	583 nT E
−17.6	−15.6	−8.7	−1.2	+5.3	+8.4	+7.0	+8.1	+7.0	+5.4	+5.2	+4.0	42780 nT

Date	00	01	02	03	04	05	06	07	08	09	10	11
9007 H	+6.6	+4.7	+5.7	+7.5	+9.1	+6.6	−0.4	−8.1	−18.1	−21.2	−16.4	−9.5
D	+2.0	+7.6	+9.6	+12.8	+15.9	+30.4	+37.1	+37.8	+33.7	+20.2	+3.6	−16.0
Z	+2.7	+3.1	+3.5	+4.1	+6.3	+7.8	+5.9	+3.9	+0.4	−4.8	−11.1	−15.7
9008 H	+11.9	+11.3	+9.8	+10.3	+10.6	+11.1	+1.6	−11.2	−23.5	−30.7	−26.4	−18.7
D	+2.5	+3.7	+8.9	+10.5	+12.5	+22.3	+33.6	+41.8	+35.8	+20.5	−2.6	−23.0
Z	+1.2	−0.1	−0.4	−0.1	+2.0	+3.7	+3.9	+3.4	+1.2	−3.2	−8.8	−13.5
9009 H	+9.7	+11.1	+11.2	+9.9	+9.3	+9.1	+4.8	−4.6	−16.6	−25.0	−23.8	−18.5
D	+5.9	+6.4	+7.7	+9.7	+9.4	+13.0	+21.7	+29.7	+29.7	+19.3	−0.5	−19.7
Z	+2.6	+1.7	+0.6	+0.2	+0.2	+1.9	+3.8	+5.4	+4.0	−0.1	−5.9	−11.0
9010 H	+10.6	+9.0	+8.1	+7.6	+9.5	+10.5	+10.5	+4.8	−1.9	−9.1	−17.1	−18.9
D	+7.7	+7.4	+9.0	+5.2	+4.1	+2.8	+5.1	+13.9	+23.7	+23.9	+11.1	−10.1
Z	+1.2	+0.6	+0.1	−0.3	−1.0	−0.6	+1.5	+4.6	+5.5	+1.5	−5.2	−9.5
9011 H	+5.6	+5.3	+4.8	+6.7	+7.9	+9.9	+10.9	+10.0	+6.6	−0.4	−8.0	−13.8
D	+7.8	+3.7	+2.8	+2.7	+0.2	+0.7	+2.9	+7.2	+16.6	+19.9	+11.7	−6.1
Z	+1.1	+0.3	−0.2	−0.3	−0.5	−0.7	−0.7	+0.3	+1.9	−0.7	−5.8	−9.2
9012 H	+2.9	+2.7	+2.2	+3.3	+5.8	+7.7	+9.3	+10.0	+6.8	−0.7	−8.6	−12.8
D	+6.9	+5.1	+3.1	+0.3	−0.1	−0.1	+2.1	+5.3	+11.1	+13.3	+6.8	−3.3
Z	+0.8	+0.3	+0.2	−0.1	−0.3	−0.7	−0.5	−1.0	+0.1	−1.8	−4.0	−4.3

1990 yearly

	00	01	02	03	04	05	06	07	08	09	10	11
H	+6.1	+6.1	+5.9	+6.9	+8.4	+8.8	+6.4	+1.8	−4.3	−10.3	−12.6	−12.1
D	+8.5	+8.6	+8.8	+7.9	+8.1	+11.4	+16.4	+21.5	+24.5	+18.9	+5.2	−12.1
Z	+2.3	+1.5	+0.8	+0.6	+0.8	+1.2	+1.7	+2.1	+1.0	−3.1	−8.1	−11.8

12	13	14	15	16	17	18	19	20	21	22	23	Averages
−3.4	−7.0	−2.5	−3.9	−0.9	+1.6	+4.8	+10.4	+10.7	+11.3	+6.6	+5.8	21056 nT
−31.3	−37.4	−38.7	−32.2	−22.8	−12.1	−6.3	−6.3	−3.7	−2.7	−1.9	+0.7	580 nT E
−18.0	−17.6	−13.2	−4.6	+3.3	+6.5	+7.6	+6.7	+6.6	+6.0	+5.5	+5.1	42777 nT
−8.5	−2.2	−1.8	+0.1	+1.3	+2.0	+1.6	+7.5	+10.0	+11.3	+10.5	+12.1	21036 nT
−38.0	−45.7	−41.1	−30.8	−16.2	−3.6	+2.2	+1.9	+0.8	+0.3	+1.6	+2.1	584 nT E
−14.4	−11.8	−7.5	−0.6	+6.3	+8.6	+7.5	+6.5	+5.5	+4.6	+3.3	+2.7	42786 nT
−10.4	−4.1	+0.9	+0.8	−2.9	−2.0	+0.9	+4.4	+7.3	+8.5	+10.0	+10.0	21043 nT
−33.5	−35.3	−32.0	−23.5	−12.2	−5.8	−4.7	−2.9	+1.3	+7.6	+4.9	+3.8	583 nT E
−12.4	−10.2	−6.9	−2.6	+1.4	+3.5	+4.1	+5.0	+4.4	+4.2	+3.5	+2.6	42785 nT
−14.7	−7.5	−5.4	−7.4	−8.3	−3.9	−1.1	+1.2	+4.0	+5.0	+6.2	+8.3	21037 nT
−23.7	−31.3	−28.5	−20.7	−14.0	−10.9	−4.8	+0.8	+3.3	+8.5	+8.6	+8.9	591 nT E
−10.3	−8.2	−4.2	−0.4	+1.8	+3.3	+4.2	+4.2	+4.0	+3.4	+2.1	+1.7	42787 nT
−13.7	−10.4	−7.0	−5.2	−5.4	−6.4	−5.4	−3.1	+1.0	+2.1	+3.2	+4.8	21043 nT
−20.6	−25.6	−21.4	−16.4	−13.2	−6.7	−0.4	+2.6	+6.1	+5.9	+9.0	+10.6	590 nT E
−8.7	−4.5	−0.8	+1.2	+2.3	+3.7	+4.3	+4.4	+4.2	+3.5	+3.0	+1.9	42785 nT
−10.9	−7.6	−4.3	−3.7	−4.3	−4.7	−2.7	−1.1	+0.3	+2.8	+4.4	+3.2	21047 nT
−12.3	−16.1	−15.7	−12.8	−8.1	−6.1	−3.4	+0.5	+3.0	+5.9	+7.2	+7.4	589 nT E
−4.6	−3.2	−0.7	+1.2	+2.1	+2.6	+2.7	+2.9	+3.0	+2.5	+1.8	+1.0	42786 nT

means

12	13	14	15	16	17	18	19	20	21	22	23	Averages
−8.4	−5.9	−5.2	−4.6	−4.3	−3.0	−1.5	+1.6	+4.5	+5.1	+4.8	+5.8	21044 nT
−26.1	−33.4	−31.7	−25.2	−16.7	−9.6	−4.5	−1.1	+1.8	+5.0	+6.3	+7.5	583 nT E
−13.2	−10.8	−6.2	−0.9	+3.5	+5.7	+6.4	+6.7	+6.3	+5.5	+4.5	+3.5	42782 nT

Date	00	01	02	03	04	05	06	07	08	09	10	11
9101 H	+0.7	+1.3	+1.2	+2.6	+4.6	+6.5	+9.4	+11.3	+10.7	+1.9	−6.6	−11.2
D	+6.5	+6.1	+4.9	+2.4	+0.3	+0.3	+2.7	+4.4	+9.8	+12.0	+6.0	−0.6
Z	+1.8	+1.2	+1.0	+0.6	+0.2	−0.1	−0.1	−0.4	+0.7	−0.2	−1.2	−2.1
9102 H	+0.6	+2.3	+0.8	+1.3	+3.4	+4.8	+7.3	+8.4	+7.0	+1.1	−4.3	−5.7
D	+10.6	+9.6	+8.4	+6.6	+5.3	+5.9	+7.5	+10.6	+16.3	+17.3	+6.2	−6.8
Z	+3.4	+2.6	+2.6	+2.5	+1.9	+1.5	+1.9	+2.0	+2.7	−0.6	−5.5	−8.1
9103 H	+6.3	+3.6	+7.6	+6.6	+9.0	+5.6	+9.1	+5.3	+0.1	−9.6	−16.6	−20.4
D	+12.2	+13.8	+15.0	+12.1	+11.7	+3.7	+13.1	+22.0	+31.9	+29.8	+13.1	−11.3
Z	+1.7	+2.2	+1.1	+0.1	−1.6	−1.5	+0.5	+3.6	+4.6	−0.1	−7.6	−12.7
9104 H	+9.5	+8.5	+8.8	+10.6	+11.4	+9.1	+7.4	+1.6	−8.3	−18.6	−21.8	−17.9
D	+6.6	+8.5	+8.5	+7.9	+11.4	+17.6	+27.6	+41.6	+44.8	+34.7	+12.0	−16.3
Z	+5.2	+4.7	+3.9	+2.8	+2.4	+5.1	+7.1	+6.9	+3.2	−4.1	−14.2	−24.5
9105 H	+7.4	+6.2	+7.8	+6.3	+5.7	+5.4	−4.9	−12.4	−18.5	−18.3	−11.0	−4.0
D	+2.9	+6.2	+6.3	+12.2	+18.9	+30.0	+40.9	+40.6	+35.1	+19.2	−3.3	−25.0
Z	+4.8	+4.3	+3.3	+2.7	+4.4	+6.9	+6.8	+6.0	+0.4	−7.3	−15.2	−21.9
9106 H	+10.5	+10.1	+15.1	+10.8	+8.0	+4.0	−4.8	−13.8	−21.3	−24.2	−21.9	−17.0
D	+4.1	+6.0	+8.5	+15.1	+25.2	+34.2	+41.5	+44.1	+36.6	+25.5	+3.5	−17.4
Z	+1.8	+0.6	−1.5	−1.9	+0.4	+1.1	−1.0	−3.1	−4.3	−9.7	−13.6	−19.1

elements (H, D, Z) for 1991

12	13	14	15	16	17	18	19	20	21	22	23	Averages
−8.3	−5.9	−4.9	−3.5	−2.1	−2.3	−2.5	−1.0	−0.6	−0.9	+0.1	−0.5	21046 nT
−9.9	−13.7	−13.1	−10.1	−8.5	−7.8	−4.5	−2.0	−0.6	+3.4	+5.1	+6.9	575 nT E
−5.7	−5.0	−3.1	−1.4	−0.6	−0.1	+1.2	+2.6	+2.7	+3.1	+2.5	+2.4	42785 nT
−4.5	−3.0	−1.6	−1.3	−3.1	−4.7	−7.2	−4.5	−2.3	−0.1	+3.2	+2.1	21041 nT
−17.4	−22.1	−20.0	−15.0	−13.2	−13.4	−8.5	−5.9	−1.5	+2.4	+6.7	+10.4	577 nT E
−9.5	−9.2	−6.5	−4.7	−3.3	−0.8	+2.2	+4.5	+5.2	+5.6	+5.2	+4.4	42793 nT
−15.7	−7.9	−3.0	−3.3	−5.8	−2.5	+1.8	+3.0	+5.8	+5.9	+6.2	+8.9	21021 nT
−30.8	−42.7	−42.9	−32.6	−17.1	−11.8	−8.2	−3.0	+1.0	+4.7	+5.3	+11.0	584 nT E
−14.2	−13.6	−8.8	−1.1	+4.6	+5.4	+5.8	+7.4	+7.6	+7.2	+6.0	+3.4	42804 nT
−10.7	−9.4	−4.4	−4.4	−4.7	−3.1	+0.3	+4.6	+7.7	+7.1	+7.0	+9.7	21039 nT
−42.9	−52.8	−49.9	−35.5	−19.6	−6.5	−3.2	−2.2	−0.7	+1.3	+2.5	+4.6	581 nT E
−27.4	−21.8	−11.9	−1.9	+5.2	+9.8	+8.5	+8.4	+8.8	+8.3	+8.2	+7.3	42801 nT
+0.5	−0.2	−0.2	−3.0	−1.8	−1.5	+0.1	+4.9	+8.1	+7.5	+7.1	+8.8	21040 nT
−39.0	−45.3	−41.9	−31.5	−19.1	−7.0	−0.2	+0.1	+1.0	−1.4	+0.4	−0.1	583 nT E
−24.5	−21.9	−13.2	−2.9	+6.0	+9.9	+10.5	+9.7	+9.1	+8.3	+7.6	+6.2	42806 nT
−9.6	−9.0	−8.1	−2.7	+2.0	+8.9	+12.0	+7.0	+12.4	+13.1	+6.9	+11.6	21023 nT
−29.8	−43.6	−46.8	−42.7	−29.9	−19.7	−7.4	−3.0	−1.9	−3.3	−0.2	+1.4	592 nT E
−20.4	−16.2	−10.5	−0.4	+10.2	+16.4	+19.8	+18.2	+14.0	+9.0	+6.3	+3.9	42818 nT

Date	00	01	02	03	04	05	06	07	08	09	10	11
9107 H	+9.0	+9.4	+7.5	+10.1	+11.0	+8.7	+0.5	−11.6	−23.0	−30.6	−28.8	−20.2
D	+4.7	+7.8	+10.5	+10.8	+17.8	+27.2	+33.9	+37.0	+33.5	+21.9	+7.4	−12.4
Z	+1.4	+0.1	−0.6	−0.1	+1.0	+2.7	+1.7	−0.9	−4.5	−7.8	−12.4	−14.4
9108 H	+14.1	+11.3	+11.7	+14.4	+17.5	+16.0	+6.8	−10.4	−23.9	−31.4	−25.6	−17.1
D	+6.2	+10.7	+9.0	+10.4	+14.5	+24.6	+32.7	+37.5	+32.5	+19.3	−2.8	−21.9
Z	+0.8	−0.7	−1.7	−1.6	−0.8	+0.7	+1.7	+0.3	−2.1	−5.6	−10.8	−15.4
9109 H	+13.2	+13.5	+10.5	+11.9	+13.7	+12.3	+5.6	−2.4	−15.1	−20.9	−17.6	−13.5
D	+11.1	+12.1	+11.6	+8.3	+9.6	+12.0	+18.9	+26.3	+27.9	+17.8	−1.7	−21.2
Z	+2.1	+0.8	+0.6	−0.4	−1.1	+0.3	+2.7	+3.2	+1.7	−2.0	−8.4	−13.8
9110 H	+7.8	+10.6	+12.5	+15.6	+14.1	+11.5	+12.9	+7.4	−0.1	−7.3	−10.9	−11.3
D	+14.5	+13.9	+14.3	+7.5	+5.3	+1.7	+3.6	+14.5	+23.1	+22.3	+7.9	−12.5
Z	+2.7	+0.4	−1.6	−3.8	−4.8	−3.7	−1.9	+1.2	−0.3	−3.4	−11.2	−14.0
9111 H	+4.2	+0.1	+1.7	+8.7	+9.2	+12.5	+17.7	+16.6	+12.4	+3.7	−6.9	−12.2
D	+27.1	+17.5	+10.7	+5.1	−6.1	−7.4	−7.8	−1.6	+9.6	+11.7	+5.6	−8.5
Z	−1.5	−3.0	−3.5	−3.9	−3.6	−3.3	−2.7	−0.5	−0.6	−4.8	−9.8	−10.4
9112 H	+3.0	+2.2	+1.9	+2.8	+4.8	+6.1	+11.2	+13.2	+13.0	+5.9	−1.5	−3.4
D	+10.2	+7.5	+3.5	+2.2	−1.4	−3.6	−3.3	−1.1	+5.7	+9.3	+4.1	−4.0
Z	+1.3	+0.4	−0.4	−1.2	−1.1	−0.8	−1.1	−1.9	−1.9	−3.9	−5.4	−5.9

1991 yearly

	00	01	02	03	04	05	06	07	08	09	10	11
H	+7.2	+6.6	+7.3	+8.5	+9.4	+8.5	+6.5	+1.1	−5.6	−12.4	−14.5	−12.8
D	+9.8	+10.0	+9.3	+8.4	+9.4	+11.4	+17.6	+23.0	+25.6	+20.1	+4.9	−13.1
Z	+2.1	+1.1	+0.2	−0.4	−0.3	+0.7	+1.3	+1.4	−0.3	−4.2	−9.6	−13.6

12	13	14	15	16	17	18	19	20	21	22	23	Averages
−14.9	−9.1	−7.3	+0.7	+3.5	+10.4	+14.7	+14.5	+12.7	+14.2	+11.1	+7.5	21029 nT
−27.9	−36.7	−39.9	−38.3	−24.6	−11.5	−7.5	−5.9	−5.3	−6.8	+1.1	+3.2	590 nT E
−15.5	−12.5	−6.7	+2.9	+10.6	+11.7	+11.4	+10.1	+8.2	+6.2	+4.5	+2.9	42829 nT
−9.1	−6.8	−6.4	−7.4	−3.6	−4.0	−1.1	+7.0	+12.0	+11.1	+11.7	+13.2	21018 nT
−38.0	−45.5	−43.2	−33.1	−20.0	−6.0	+1.2	+3.2	+1.0	+0.5	+3.5	+3.7	590 nT E
−16.8	−11.9	−5.3	+2.5	+9.0	+12.8	+11.3	+9.8	+8.4	+6.5	+5.3	+3.6	42830 nT
−9.6	−7.0	−6.1	−8.0	−8.1	−7.8	−2.4	+6.6	+4.8	+7.2	+7.3	+11.9	21025 nT
−36.3	−40.0	−35.0	−24.7	−17.9	−10.3	−3.3	+2.5	+3.3	+9.6	+9.8	+9.6	590 nT E
−13.1	−10.8	−6.7	−1.0	+3.9	+6.7	+7.4	+7.1	+6.9	+5.8	+4.8	+3.3	42824 nT
−10.8	−9.6	−10.7	−12.4	−12.5	−10.1	−5.9	−3.1	+0.5	+3.4	+3.7	+4.7	21014 nT
−26.5	−35.3	−34.9	−25.5	−18.7	−17.4	−7.7	−2.2	+3.7	+12.6	+17.5	+18.3	597 nT E
−12.4	−10.2	−5.1	+2.7	+7.3	+9.5	+10.6	+10.1	+9.5	+7.8	+6.1	+4.5	42830 nT
−14.4	−14.2	−8.9	−14.4	−9.7	−5.1	−2.5	−3.9	−1.1	+6.0	+0.9	−0.4	21001 nT
−20.8	−24.5	−30.0	−27.2	−16.4	−15.3	−3.1	+5.7	+12.7	+18.5	+23.5	+21.0	601 nT E
−8.1	−3.6	+0.4	+4.5	+6.7	+8.7	+8.7	+9.1	+9.1	+6.4	+4.8	+0.9	42838 nT
−3.2	−5.7	−7.5	−5.2	−6.1	−7.1	−6.8	−4.7	−4.7	−4.1	−4.5	+0.4	21031 nT
−12.6	−16.8	−17.3	−13.0	−7.8	−7.7	−5.1	−1.0	+6.0	+12.6	+16.2	+17.4	591 nT E
−6.6	−4.5	−1.3	+1.4	+2.2	+3.1	+3.9	+5.1	+5.6	+5.3	+4.6	+3.1	42834 nT

means

12	13	14	15	16	17	18	19	20	21	22	23	
−9.2	−7.3	−5.8	−5.4	−4.3	−2.4	+0.1	+2.5	+4.6	+5.8	+5.1	+6.5	21027 nT
−27.6	−34.9	−34.5	−27.4	−17.7	−11.2	−4.7	−1.1	+1.6	+4.5	+7.6	+9.0	587 nT E
−14.5	−11.0	−6.6	+0.1	+5.1	+7.8	+8.4	+8.5	+7.9	+6.6	+5.5	+3.8	42816 nT

4. Yearly means of geomagnetic elements

Year	D	H	Z	I	X	Y	Z
		nT	nT		nT	nT	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

5. Special phenomena
(magnetic and earth current data)
SSC-s
1990–1991

Date	CET (UT+1h)	Ampl. in H(nT)	Hx	Hy		End of storm	
900102	0130	45	+	−		900102	0500
900108	1530	25	+	−		900109	0200
900213	1815	40	+	−		900214	1100
900312	1600	60	+	−		900313	0600
900320	2345	55	+	−		900321	2200
900330	0815	80	−	+		900330	2000
900409	0945	25	+	+		900409	2200
900412	0430	105	+	−		900412	2300
900417	0815	28	+	+		900417	2000
900518	0845	28	+	+		900518	1900
900526	2030	90	+	−		900527	1100
900612	0915	38	−	+		900613	0500
900613	1515	108	+	−		900614	2100
900614	0415	82	+	−		instrm	
900710	0545	35	+	−		900710	1600
900710	1215	25	−	+		instrm	
900716	1900	22	+	−		nostrm	
900728	0215	25	+	−		900729	2330
900728	0430	45	+	−		instrm	
900801	0845	38	+	−		900801	1900
900826	0645	35	+	−		900827	0400
900829	1230	55	+	−		900829	2300
900830	1200	15	−	+		900830	2000
900901	1130	25	+	−		900901	1830
900901	1345	100	+	−		instrm	
901026	1230	38	+	−		901026	2200
901029	2115	38	+	−		901030	0500
901127	0030	38	+	−		901127	0800
901208	1530	14	+	−		nostrm	
910112	0245	32	+	−		910112	0400
910201	1945	60	+	−		910202	0500
910304	1715	20	+	−		nostrm	
910309	2345	55	+	−		910310	0600
910312	0545	7	+	−	(?)	910312	1500
910316	1700	10	+	−	(?)	nostrm	
910321	0700	18	+	−		910321	1600
910324	0245	18	+	−		nostrm	

Date	CET (UT+1h)	Ampl. in H(nT)	Hx	Hy		End of storm	
910324	0445	400	+	−		910327	0000
910404	1215	120	+	−		910404	2300
910419	1200	50	+	−		nostrm	
910423	1445	25	+	−	(?)	nostrm	
910424	2145	38	+	−		910428	0700
910513	1000	38	+	+		910513	2200
910516	2145	85	+	+		910517	1200
910521	1330	25	+	−		910521	1900
910522	0115	48	+	−		910522	1200
910604	0430	72	+	+		nostrm	
910607	2330	55	+	−		nostrm	
910609	0130	180	+	−		910611	1800
910610	1815	135	+	−		instrm	
910612	1115	50	+	−		910613	2400
910617	1115	50	+	−		910618	0100
910617	2030	145	+	−		instrm	
910630	0215	40	+	−		nostrm	
910706	1630	28	+	−	(?)	nostrm	
910708	1730	225	+	−		910710	0300
910712	1030	58	+	+		910712	2000
910716	1700	16	+	−	(?)	910716	2100
910719	2000	25	+	−	(?)	910719	2300
910730	0700	18	+	−		nostrm	
910802	0630	18	+	−		910802	1900
910805	2145	42	+	−		910806	0500
910811	0345	60	+	−.		910811	1700
910818	1930	62	+	−		910819	2000
910820	0900	45	+	+	(?)	910821	2000
910827	1615	60	+	+		910828	0300
911001	1915	50	+	−		911002	0500
911017	1430	25	+	−		911017	1600
911019	0445	16	+	−	(?)	911019	1600
911108	0745	28	+	+		911109	2200
911108	1415	62	+	−		instrm	
911111	1845	30	+	−		911112	0100
911119	0515	28	−	−		911119	2300

Abbreviations:
nostrm = no storm
instrm = in storm

Special phenomena
SI-s

Date	CET (UT+1h)	Ampl. in H(nT)	Date	Time (UT+1h)	Ampl. in H(nT)	
900110	0930	12	901202	1200	12	
900115	0200	8	901221	1830	10	
900116	1045	23	901223	1100	25	
900120	1345	14	901230	1130	25	
900128	1815	12	910123	2130	14	
900128	2245	22	910202	0415	30	
900214	0415	25	910204	2315	28	(SSC?)
900214	1045	25	910304	1500	15	
900227	0430	12	910305	1615	28	
900314	1045	38	910307	0845	30	
900329	1100	6	910310	0845	18	
900331	0315	14	910313	1345	18	
900402	2345	15	910322	0130	15	
900416	0730	10	910326	1415	230	
900427	0030	7	910330	1515	25	
900428	1400	40	910411	1215	10	
900522	1830	28	910531	2130	45	
900525	1830	18	910705	1830	10	
900625	0900	12	910719	0900	14	
900629	0445	8	910720	1345	18	
900703	0200	10	910723	1530	32	
900706	0315	7	910808	0650	16	
900726	2000	25	910809	2215	28	
900730	2215	28	910814	1545	14	
900813	1130	18	910901	1445	16	
900818	1100	18	910910	0745	70	
900827	1300	45	910911	0230	50	
900903	2145	8	910929	1330	22	
900918	1545	25	911020	1230	48	
900929	1045	12	911110	1445	32	
901008	1645	25	911114	1545	28	
901107	1145	18	911205	1030	10	
901114	1230	18	911229	0315	75	
901118	0100	25				

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Special phenomena
Bays and Pi2-s
1990

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
900102	2315	35	+	900210	0200		+
900103	0015	65	+	900210	2130		+
900105	1715	45		900210	2300		+
900105	2145		+	900211	0045		+
900105	2215	42	+	900211	0200		+
900109	2330		+	900211	0330		+
900110	2230	28	+	900211	1945		+
900111	1730	30	+	900212	0015		+
900111	2030		+	900213	0215		+
900111	2115		+	900213	2330		+
900112	2045	58	+	900216	2130	60	+
900113	2315		+	900217	2115	25	+
900115	0030		+	900217	2230	35	+
900115	0245		+	900218	0245		+
900115	0315		+	900218	2245		+
900115	1745	38		900219	0215		+
900116	2115	50	+	900219	2315		+
900118	2300		+	900220	1815	42	+
900121	2030		+	900220	2015	130	+
900122	0030	18	+	900220	2245		+
900122	0300		+	900221	1945	35	+
900122	2130		+	900221	2330		+
900124	1930	50	+	900222	2345		+
900124	2215	42	+	900223	1200	70	
900126	1815	22		900223	1800	62	+
900126	2115		+	900224	0045		+
900127	1900		+	900224	2330		+
900130	2145		+	900225	2015	60	
900130	2315		+	900226	0130		+
900131	1945		+	900227	0200		+
900131	2000		+	900227	1100	45	
900201	1830	75		900228	2030	70	+
900202	0030		+	900301	0110	40	+
900202	0115		+	900301	2145	42	+
900204	1815	105	+	900301	2245		+
900204	2115	95	+	900301	2330	42	+
900206	0315	25		900303	2030		+
900207	2100	65		900303	2045		+
900207	2245	78	+	900303	2130	50	+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
900306	0030		+	900409	2100	70	+
900306	0145	72	+	900411	0130		+
900308	2200		+	900411	2000	105	+
900309	0030		+	900412	2115	130	+
900310	0115		+	900413	2045	50	+
900311	0230		+	900414	1645	68	+
900311	0330	42	+	900415	2045		+
900312	0315		+	900416	2015		+
900313	1800	50	+	900417	0045	40	
900314	0115	92	+	900417	2215	65	+
900314	1745		+	900418	2245	25	+
900314	2315		+	900419	2030	38	+
900315	1915		+	900420	0030	15	+
900316	0015		+	900420	1900		+
900316	2200		+	900420	2045		+
900316	2300		+	900420	2115		+
900318	0330		+	900421	0045	70	+
900318	2115	82	+	900422	2245		+
900319	0145	75	+	900422	2330		+
900320	0015		+	900423	1645	70	+
900320	0045		+	900423	2215		+
900320	0130		+	900423	2330		+
900323	1845	58	+	900426	2115		+
900326	0130	82	+	900426	2230		+
900326	1915	65	+	900426	2245		+
900326	2145		+	900427	0230		+
900327	2130	80	+	900427	1545		+
900327	2315	50	+	900427	2215		+
900328	1900		+	900427	2330		+
900328	2130		+	900428	0030	38	+
900328	2215	45	+	900429	0030		+
900329	1800		+	900429	0045		+
900330	0015	82	+	900429	2015	55	+
900331	2300		+	900430	2345		+
900401	2045		+	900503	2330	30	+
900401	2130	15	+	900504	2015		+
900402	0145		+	900504	2330		+
900404	0100	22	+	900506	2215		+
900404	1930	38	+	900506	2300		+
900405	0145		+	900507	0530		+
900406	2315		+	900508	0115		+
900408	2345		+	900508	2315		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
900509	2315	45	+	900623	2300		+
900510	1115	58		900624	2130		+
900510	2015		+	900625	2015		+
900512	0115		+	900625	2030		+
900513	2230		+	900625	2115		+
900515	0030		+	900625	2130		+
900515	1400	30		900626	0415		+
900518	0045		+	900630	0200		+
900518	0115		+	900630	0245		+
900518	2315	65	+	900630	1430		+
900519	2245		+	900630	1445		+
900520	1930	45	+	900630	2300		+
900520	2100		+	900630	2345		+
900521	0100	50	+	900701	0015		+
900524	2145		+	900701	2200		+
900525	0100	16	+	900701	2230		+
900525	0315		+	900702	0300		+
900525	2115		+	900702	0330		+
900526	1230	25		900704	0130		+
900526	2030		+	900705	0015		+
900527	1800	70	+	900705	2145	25	
900529	2345		+	900706	2030		+
900530	2015	72	+	900707	2245	18	+
900530	2315		+	900709	0015	22	+
900531	2145		+	900711	2100	35	+
900601	2045	25	+	900712	0030	15	+
900603	2200		+	900713	2000		+
900604	2145		+	900714	2000		+
900606	2315		+	900717	2330		+
900607	2130		+	900717	2345		+
900608	2230	52	+	900718	0015		+
900610	2230		+	900718	1845		+
900610	2315		+	900721	2315		+
900617	2045		+	900721	2345		+
900617	2200		+	900722	0115		+
900618	2200		+	900722	2215		+
900618	2230	25	+	900724	2030		+
900618	2315		+	900725	2100		+
900620	2315		+	900727	2200		+
900621	2100		+	900730	2230		+
900622	1630		+	900730	2315		+
900622	2200		+	900731	2230		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
900801	2100		+	900910	2330	42	+
900802	0015	28	+	900911	2245	85	+
900803	0030		+	900912	2115	45	+
900804	0015	32	+	900913	0230	55	
900805	0045		+	900914	0000		+
900805	2345		+	900914	0100	50	+
900806	0015		+	900914	2030		+
900806	2115		+	900917	1545		+
900806	2330		+	900917	1845	35	+
900809	0015		+	900917	2215		+
900809	0030		+	900917	2300		+
900809	0115		+	900918	2115	60	+
900810	2000		+	900919	0100	38	+
900811	0045		+	900919	2145		+
900811	2345		+	900920	2200	100	+
900814	0015		+	900921	2315	30	+
900814	0145		+	900922	0045		+
900814	2115		+	900922	2130	38	+
900815	2245		+	900924	0200		+
900816	1645	70		900924	1730		+
900817	0015		+	900925	0300	60	+
900819	0115	45	+	900925	2045		+
900819	2215		+	900925	2115		+
900819	2300		+	900925	2130	35	+
900821	0200		+	900926	0030		+
900821	1930	105		900926	1945		+
900823	0000	75	+	900926	2030		+
900823	1915	120	+	900927	2030		+
900825	2300		+	900927	2130		+
900831	0245		+	900927	2215		+
900901	0100		+	900928	0000		+
900904	2330		+	900928	0315		+
900905	0015		+	900928	1915		+
900906	0145	32	+	900928	2230		+
900906	2100		+	900928	2245		+
900908	2130	45	+	900929	0015		+
900908	2145		+	900929	0115		+
900908	2215		+	900929	2015		+
900909	0715		+	900929	2045		+
900909	2130		+	900929	2315		+
900910	0130		+	900930	0015	35	+
900910	2130		+	900930	2130		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
901003	2330		+	901101	2130		+
901004	0100		+	901101	2145		+
901004	0130		+	901102	2115		+
901004	1930	95	+	901102	2215	48	+
901004	2230		+	901103	1945		+
901005	2245		+	901103	2015		+
901006	2215		+	901104	2030		+
901006	2245		+	901105	2315		+
901007	2330		+	901105	2330		+
901009	2230		+	901105	2345		+
901009	2330		+	901106	2200		+
901010	0330	105	+	901106	2230		+
901011	0115	100	+	901106	2245		+
901011	1915	85	+	901107	2245		+
901011	2245		+	901107	2300		+
901012	2200		+	901109	1715	25	+
901013	2115	50	+	901110	1730	32	+
901014	0245	40	+	901110	2000	40	
901014	2300		+	901113	0100		+
901015	2045		+	901114	0145		+
901016	2115	30	+	901116	2300	50	+
901016	2145	45	+	901118	0015		+
901017	2230		+	901118	2200		+
901017	2345		+	901119	0015	50	+
901018	0100		+	901119	2215		+
901019	0215		+	901119	2245		+
901019	0315	42	+	901119	2330		+
901019	2130		+	901120	0330		+
901020	1600	95		901120	2030		+
901020	2000	72	+	901120	2115		+
901020	2245	65	+	901121	0345		+
901021	2045		+	901121	2245		+
901022	0115		+	901121	2300		+
901023	2100	45	+	901122	0115		+
901023	2145		+	901122	1915		+
901023	2200	50	+	901123	2245		+
901025	0030		+	901124	0100		+
901026	0015		+	901124	2200		+
901026	2330		+	901126	0115		+
901027	1815		+	901128	1945	105	+
901030	2315		+	901129	2130		+
901031	2045	60	+	901201	1630		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
901202	1830		+	901216	0045		+
901202	2345		+	901216	2045		+
901203	1630		+	901220	2230		+
901204	2315		+	901221	2015		+
901205	1830	50	+	901223	2300	32	+
901207	0030		+	901224	2330	35	+
901210	1930		+	901225	1930	32	+
901211	1845		+	901227	0330		+
901213	0100	32	+	901227	0430	28	+
901214	1800	20		901231	2045		+
901215	0215		+				

Special phenomena
Bays and Pi2-s
1991

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
910102	0330		+	910208	1745	50	+
910104	2315	14	+	910208	2345		+
910108	2100	22	+	910209	0045		+
910109	2330	45	+	910209	1830	85	+
910110	0030		+	910211	2200		+
910110	2345	35	+	910211	2215		+
910111	2330		+	910211	2315	62	+
910112	0300	30	+	910213	0030		+
910112	1800	42		910213	2130		+
910113	0015		+	910214	0030		+
910113	1915	35	+	910214	0045		+
910114	1415		+	910214	2315		+
910115	0130		+	910215	0045	42	+
910115	2000		+	910215	2145	45	+
910115	2030		+	910215	2200		+
910115	2315		+	910218	2230	12	+
910117	1700	35		910221	0030		+
910117	2130		+	910222	2300	50	
910118	0030	25	+	910223	2100	50	+
910118	2230		+	910225	2330		+
910120	1645		+	910301	0015	28	+
910120	1800		+	910301	2015		+
910121	2230		+	910301	2030		+
910121	2330		+	910301	2130		+
910121	2345		+	910301	2145		+
910122	2145		+	910303	0145	22	+
910122	2245		+	910304	0015		+
910124	0130	50	+	910305	2230		+
910124	1745	55	+	910306	2100	85	+
910125	1915	85	+	910308	2045		+
910126	2230	35	+	910308	2115		+
910127	2200	35	+	910308	2245		+
910129	0015		+	910312	0130		+
910129	2345		+	910312	2130	72	+
910206	0115		+	910313	0130	120	+
910206	2345		+	910317	2115		+
910207	2300		+	910317	2215	42	+
910208	0015		+	910317	2315		+
910208	0030	15	+	910318	0215	58	+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
910318	0945		+	910501	0115		+
910320	0000	45	+	910501	0200	48	+
910321	2315		+	910501	2230	45	+
910322	2315	65	+	910502	1845	55	+
910324	2230	360	+	910502	2230		+
910325	0030		+	910503	0030		+
910325	0145	170	+	910504	2215		+
910325	2245		+	910506	0030		+
910325	2315		+	910506	0045		+
910326	0315	105	+	910506	2200		+
910326	2145		+	910506	2315		+
910326	2230		+	910507	0015		+
910327	0130	48	+	910509	2145		+
910327	1930		+	910510	2215		+
910327	2115		+	910510	2330		+
910329	2315		+	910512	2000		+
910330	2215	60	+	910512	2100		+
910401	0015		+	910513	2315		+
910401	2300	62	+	910514	2315		+
910402	2215		+	910517	0145	100	+
910402	2300		+	910517	1115	42	
910403	1915	80	+	910517	1445		+
910404	0030		+	910523	0115		+
910406	0115		+	910523	2230		+
910406	0200		+	910523	2245		+
910406	2000		+	910526	1630	62	+
910406	2315		+	910526	1945		+
910409	2045	42	+	910526	2000		+
910411	2245		+	910528	0145	52	+
910413	2145		+	910528	1730	58	+
910414	1915		+	910529	2015	45	+
910416	2045		+	910530	1730		+
910417	2000	42	+	910531	2115		+
910418	2145	38	+	910602	0015		+
910419	2200		+	910602	0045		+
910419	2215		+	910602	1830	60	+
910425	0130		+	910602	2200	125	+
910427	2200		+	910603	2000	48	+
910427	2215		+	910603	2315	32	+
910429	0130	68	+	910606	2230		+
910429	2315	50	+	910607	0115		+
910430	1815		+	910611	1945		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
910611	2300		+	910727	2315		+
910615	0915	85		910728	2230		+
910616	0015		+	910730	1915		+
910617	0145		+	910801	0130	55	+
910617	0200		+	910801	1815	85	+
910618	2000		+	910802	0030		+
910618	2045		+	910804	0200	90	+
910619	1345	35		910804	1930	85	+
910620	2330		+	910805	0315	35	
910622	2230		+	910806	0230	80	+
910623	2245		+	910807	0430	60	+
910624	1745		+	910807	2200		+
910627	2330		+	910811	0030		+
910629	2015		+	910811	2030		+
910701	0015	35	+	910812	0115	30	+
910702	2145	55	+	910812	0215		+
910703	2115		+	910812	2030	195	+
910704	0300	35	+	910813	1115		+
910706	0045		+	910813	2030		+
910706	2145		+	910814	2230	65	+
910706	2215		+	910817	1900	40	
910706	2230		+	910817	2315		+
910707	2215		+	910824	0145	42	+
910708	0200		+	910824	2245		+
910708	0830	45		910825	2330		+
910711	1145	60		910825	2345		+
910711	1545		+	910827	0245		+
910713	1700	285	+	910828	2045		+
910714	0100	95	+	910828	2315	48	+
910714	1500	65	+	910829	2315	38	+
910716	2230		+	910830	2230	85	
910717	0330	72	+	910831	2330	95	+
910717	2315	45	+	910901	0200	70	+
910718	2130	55		910901	1800		+
910719	0030		+	910901	2045	120	+
910719	2100	120	+	910901	2315	55	+
910722	2330		+	910903	2330	60	+
910723	0015	65	+	910905	0015		+
910724	2300		+	910905	0315	35	
910724	2330		+	910907	2015		+
910727	0015		+	910907	2300		+
910727	2200	30	+	910908	0030		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
910908	1915	70	+	911011	2230		+
910909	0100		+	911014	2030	35	+
910909	1900	65	+	911015	0030		+
910909	1945		+	911015	0045		+
910909	2130	70	+	911016	2230		+
910909	2245	185	+	911017	0115		+
910910	2300		+	911017	0215		+
910911	1945		+	911017	2200		+
910911	2030	50	+	911017	2230		+
910913	2215	35	+	911018	0015		+
910916	2100		+	911019	2330		+
910917	0000		+	911020	0100		+
910917	0045		+	911021	1845		+
910917	0115		+	911021	1900	60	+
910919	2345		+	911021	2315	65	+
910921	0045		+	911022	1930	40	+
910921	2345		+	911022	2345		+
910922	0045		+	911023	0100		+
910922	0115		+	911023	2145	82	+
910923	0030		+	911024	0230	50	+
910925	0230		+	911025	0215		+
910925	2315	100	+	911025	2145		+
910926	1900	72	+	911025	2215		+
910928	2130		+	911025	2315		+
910929	0030	50	+	911027	0030		+
910929	2345	45	+	911027	0300	70	+
910930	1945	72	+	911029	2130	95	+
910930	2230		+	911030	2330	80	+
910930	2345		+	911031	0200	60	+
911002	0030	72	+	911101	2130		+
911002	1430	70		911106	0045		+
911003	1915		+	911106	2345		+
911003	2015		+	911110	2130	42	+
911003	2130		+	911110	2245		+
911004	0030		+	911110	2345		+
911006	0115		+	911112	1845		+
911006	1830	60	+	911112	2145		+
911006	2330		+	911112	2345		+
911008	1930	180	+	911113	0015		+
911009	0030		+	911115	0015		+
911010	0200		+	911115	0045		+
911011	2215		+	911115	2330		+

Date	CET (UT+1h)	Ampl. in H(nT)	Pi	Date	CET (UT+1h)	Ampl. in H(nT)	Pi
911116	0015	28	+	911216	2045	65	+
911117	1915		+	911221	2315	35	+
911118	1900	65	+	911223	0215	25	+
911119	1800		+	911223	2200	45	+
911119	2030		+	911224	0215		+
911119	2130		+	911226	0000		+
911120	1845	55	+	911227	2230	165	+
911121	1800	225	+	911229	2200		+
911123	0030		+	911229	2330	105	+
911123	1730	50	+	911230	0145		+
911123	2130	45	+	911230	0215		+
911124	2000	30	+	911231	2245		+
911125	1945		+				
911127	0330		+				
911127	2230		+				
911127	2245		+				
911127	2330		+				
911128	0030		+				
911128	0145		+				
911128	2130		+				
911128	2315		+				
911128	2330		+				
911128	2345		+				
911129	2330		+				
911129	2345	45	+				
911130	2330	75	+				
911202	0030	35	+				
911202	1945	25	+				
911202	2330		+				
911203	0030		+				
911204	0015	35	+				
911206	2315		+				
911207	2200	30	+				
911210	2245	35	+				
911212	0015		+				
911212	2245		+				
911212	2330		+				
911213	2215		+				
911213	2245		+				
911214	0015		+				
911214	1830	55	+				
911215	0015	30	+				

Special phenomena
Pg-s (Giant pulsations)
1990–1991

Date	CET (UT+1h)
900122	1000
900215	0800
900328	0730
901217	0500
910224	0600
910320	0530
910423	1700
910720	0300
910807	0530
911007	1500
911011	1215
911016	0445
911027	0800
911123	0400

ATMOSPHERIC ELECTRICITY

Atmospheric electricity data have been published since 1962. Table 1 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.

Table 2 gives the hourly means of quantities of positive and negative charges transported by point-discharge for each month. The values are expressed in 10^{-6} Asec/hour.

All 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).

Date	00	01	02	03	04	05	06	07	08	09	10	11
900101	−10	−20	−10	10	10	−10	10	10	0	−10	−10	[−20]
900102	10	20	10	30	30	30	30	[40]	−	40	20	40
900103	−10	−10	−10	0	0	10	20	20	30	40	30	[40]
900104	40	40	30	20	30	30	40	30	30	20	[0]	50
900105	−10	10	−10	−30	−40	−40	−20	−60	−60	−50	[−60]	−50
900106	10	10	−40	−50	−10	−10	10	20	20	30	20	[30]
900107	10	0	20	40	40	50	60	50	50	40	−10	−20
900108	90	120	70	60	50	30	40	[10]	(0)	0	20	20
900109	50	20	50	40	20	50	30	50	60	60	60	[50]
900110	100	80	80	80	60	70	70	70	80	70	[80]	90
900111	50	50	50	40	60	70	110	70	90	70	50	[30]
900112	50	40	40	30	30	20	40	50	60	60	[40]	50
900113	20	10	10	10	20	20	30	30	30	30	[40]	10
900114	30	30	30	20	30	50	40	40	20	10	[10]	30
900115	30	10	20	30	30	30	20	(10)	−	−30	−10	−20
900116	−20	−10	−10	0	30	30	30	70	60	50	[60]	70
900117	40	30	20	20	20	20	40	80	70	80	[80]	60
900118	20	10	20	30	30	40	40	60	80	[100]	120	90
900119	50	40	40	30	50	50	50	50	50	50	[50]	50
900120	30	30	40	40	50	50	50	50	70	80	70	[70]
900121	−10	20	10	10	20	40	30	40	50	70	−	20
900122	40	30	40	40	40	40	50	[70]	−	110	100	80
900123	40	70	60	60	50	70	80	200	130	120	[80]	90
900124	40	70	30	40	20	30	30	−70	−10	30	50	[110]
900125	100	−40	−20	10	10	−10	30	20	10	30	[40]	40
900126	30	30	30	30	30	40	40	40	20	30	−	−S
900127	10	10	10	10	10	20	20	30	30	40	50	60
900128	30	30	20	0	10	20	20	20	10	20	−	30
900129	−20	−30	−40	20	10	20	30	[−10]	[−10]	−10	20	40
900130	0	0	0	0	0	0	0	0	0	20	−	50
900131	10	0	0	10	20	10	30	20	20	20	[0]	30

potential gradient

12	13	14	15	16	17	18	19	20	21	22	23	Means
−10	−20	−20	−10	40	20	40	30	40	40	20	0	5
50	50	50	50	20	30	30	30	20	30	0	0	29
60	60	60	60	70	70	80	70	60	60	40	40	37
50	50	50	40	30	40	10	10	−10	−10	−10	−10	25
−20	20	−20	−40	20	−60	−40	−40	−10	0	0	10	25
50	50	40	40	40	50	60	60	50	40	40	0	23
−10	30	50	40	40	60	70	120	70	100	130	130	48
−30	−20	40	20	20	−20	30	60	50	50	60	50	36
[60]	60	60	90	80	70	70	100	100	100	90	80	63
110	120	120	120	120	130	70	50	50	60	100	70	85
50	50	50	60	50	50	50	50	40	20	20	50	53
30	20	20	30	30	30	30	30	40	30	30	20	35
20	30	10	10	10	30	20	50	60	70	40	20	26
40	50	50	60	70	40	40	30	30	40	30	50	36
0	10	0	0	10	−10	−10	−30	−20	20	−10	−20	−
70	70	70	70	100	80	70	40	50	40	50	40	46
60	70	70	70	90	70	40	80	70	70	60	20	55
90	90	90	80	80	90	80	70	60	60	50	50	64
50	50	50	50	60	70	90	80	60	40	40	40	52
70	100	70	70	60	30	90	90	70	30	−10	−20	53
−	−	20	−	−	20	30	50	40	20	20	30	−
90	80	110	80	120	100	90	100	70	40	40	30	69
70	80	80	80	80	90	90	70	60	40	30	40	73
130	140	130	130	110	90	70	90	OBS	80	110	120	68
40	50	30	40	40	20	30	30	40	40	20	10	25
OBS	OBS	OBS	OBS	OBS	OBS	OBS	40	40	30	30	20	−
[60]	70	70	60	60	60	40	60	50	30	10	20	37
50	50	60	60	60	60	50	40	40	30	30	−20	31
60	50	50	50	70	80	80	50	40	40	40	10	27
20	30	50	30	10	30	50	30	50	30	30	10	19
30	30	20	10	0	0	0	0	0	0	0	0	11

Date	00	01	02	03	04	05	06	07	08	09	10	11
900201	0	0	0	0	0	0	0	0	0	10	[30]	40
900202	50	60	30	20	10	−10	−10	−10	−10	0	30	[40]
900203	10	10	0	0	0	0	0	0	20	30	30	[30]
900204	10	10	0	10	20	30	30	30	−	30	40	40
900205	30	30	40	60	60	60	50	[60]	(60)	70	70	60
900206	60	70	70	50	50	50	40	70	70	60	40	60
900207	−10	−10	−10	0	10	10	−20	−10	30	30	[30]	40
900208	0	0	−10	−10	20	−10	−10	−20	(−10)	0	[50]	60
900209	20	−S	OBS	30	40	50	50	60	60	60	[50]	50
900210	50	50	50	50	50	50	60	60	80	80	80	80
900211	−20	−20	0	0	0	0	10	20	−10	−10	−	−
900212	70	50	40	20	30	−80	−60	−20	−40	−40	−20	−10
900213	120	130	90	90	70	50	40	50	60	70	[50]	60
900214	40	40	−20	OBS	+S	−30	−20	−10	−30	−30	[30]	50
900215	30	40	40	40	50	50	−10	20	10	30	[40]	50
900216	50	30	40	30	40	40	50	50	60	70	80	[70]
900217	50	40	50	50	50	50	70	90	90	80	[70]	70
900218	10	40	40	50	60	80	90	100	100	70	70	−
900219	60	50	50	60	40	60	110	(90)	−	130	100	70
900220	90	80	110	120	130	100	130	120	80	150	[120]	120
900221	0	70	120	+S	100	+S	+S	40	40	40	[60]	70
900222	50	70	40	40	30	30	40	60	70	[90]	90	90
900223	70	60	60	70	80	80	70	80	100	120	[130]	140
900224	40	70	70	50	60	50	80	70	100	70	80	60
900225	80	90	80	90	80	90	80	90	120	110	−	110
900226	50	40	60	60	50	40	30	[50]	−	50	50	50
900227	30	20	20	20	30	30	OBS	−S	40	30	[30]	30
900228	30	20	20	20	30	20	20	30	20	20	[20]	30

12	13	14	15	16	17	18	19	20	21	22	23	Means
(40)	(30)	30	40	30	40	40	40	30	50	50	30	–
[60]	60	70	60	50	80	80	60	40	40	10	0	34
30	30	30	30	10	0	0	0	0	0	10	10	12
50	60	60	70	60	70	80	70	60	60	60	40	43
70	100	70	110	170	130	120	120	90	110	120	70	81
60	[60]	[80]	70	60	40	30	30	30	20	0	-10	48
40	30	50	30	10	-10	0	10	0	10	10	10	12
60	80	90	80	70	90	100	100	70	40	40	40	40
50	50	60	60	50	50	50	50	60	50	50	50	–
60	[50]	50	60	50	30	20	10	10	-10	-10	0	44
OBS	+S	-30	-10	-10	-20	10	60	40	40	40	70	–
[20]	OBS	+S	30	30	40	60	60	80	110	120	120	–
60	60	40	40	30	40	50	60	40	50	40	50	60
70	60	OBS	-S	20	50	50	50	40	40	50	30	–
OBS	OBS	+S	60	–	–	(–40)	40	30	40	-S	+S	–
60	50	60	50	50	70	70	60	40	50	40	OBS	–
60	60	50	50	40	40	50	40	30	30	20	10	52
–	90	80	70	50	50	60	70	60	60	70	80	66
60	70	80	90	100	120	130	70	120	80	90	80	–
110	120	110	100	90	80	100	100	110	80	70	30	102
70	50	40	30	30	40	40	80	100	110	100	80	–
110	90	100	110	120	90	90	100	80	80	80	80	78
100	80	40	30	50	50	20	30	50	30	20	40	67
[70]	70	80	80	80	90	90	70	50	70	60	50	69
80	80	70	80	80	50	50	80	70	60	80	50	80
60	50	40	30	-20	-20	30	30	OBS	OBS	+S	-S	–
50	20	OBS	20	40	70	+S	30	40	40	30	30	–
30	30	50	40	40	30	40	30	0	-100	-10	30	20

Date	00	01	02	03	04	05	06	07	08	09	10	11
900301	30	40	40	40	40	OBS	40	20	40	−20	20	20
900302	30	30	30	30	50	30	40	50	40	30	[30]	30
900303	40	OBS	OBS	60	30	30	30	50	50	50	50	50
900304	30	40	30	20	30	30	30	−	−	50	50	40
900305	20	30	30	30	30	40	60	(60)	−	70	60	60
900306	70	50	40	30	30	20	50	70	[80]	80	20	20
900307	30	30	30	30	30	20	40	30	40	30	[30]	30
900308	20	20	20	20	10	20	50	70	60	70	[80]	100
900309	40	50	20	20	10	20	20	30	[50]	50	40	30
900310	+S	−S	OBS	0	−10	OBS	OBS	OBS	+S	+S	+S	+S
900311	−30	−10	10	0	0	10	10	0	10	30	−	50
900312	30	40	30	30	40	40	60	[50]	(70)	70	80	70
900313	40	30	30	30	30	30	(50)	−	−	(50)	70	70
900314	30	30	20	10	10	20	(0)	−10	10	30	[30]	30
900315	10	20	10	20	30	30	70	70	[80]	50	40	40
900316	20	30	20	30	20	20	40	60	70	50	30	30
900317	20	20	20	30	10	10	30	30	30	30	40	50
900318	10	10	10	10	10	10	20	20	20	20	30	40
900319	10	20	30	20	10	10	30	40	−	[60]	70	70
900320	20	10	0	0	10	20	30	40	40	50	[50]	60
900321	30	20	30	20	10	20	30	30	20	30	[20]	30
900322	20	20	30	20	20	30	40	70	50	[40]	40	40
900323	10	0	0	0	10	−40	20	60	50	60	[70]	30
900324	40	30	20	30	20	30	40	30	[10]	20	30	50
900325	40	50	50	40	10	30	30	OBS	OBS	30	[40]	OBS
900326	10	10	10	20	20	30	[50]	−	70	60	70	80
900327	30	30	30	10	−30	−30	−40	−30	0	[20]	50	50
900328	(20)	−S	OBS	OBS	10	0	OBS	OBS	OBS	[30]	30	50
900329	30	40	30	30	20	30	30	20	10	[10]	30	30
900330	20	10	10	10	0	−10	−10	−10	−10	[−10]	0	0
900331	−60	−30	−10	0	−30	−10	20	30	60	[70]	[80]	90

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	40	30	30	20	20	OBS	OBS	20	20	30	30	−
30	20	−20	0	30	40	−S	−S	50	30	+S	30	−
60	[50]	40	20	40	40	30	20	20	30	OBS	30	−
40	40	70	70	70	70	70	60	50	60	30	20	−
40	50	40	40	50	50	50	60	70	70	80	80	51
40	30	30	40	60	80	70	50	30	30	30	30	45
40	30	40	70	80	80	90	80	70	50	30	20	44
120	90	80	80	50	40	80	80	40	50	50	30	55
40	40	40	20	30	40	30	OBS	OBS	−S	OBS	OBS	−
OBS	+S	30	0	−S	−S	−S	−S	−S	−S	−50	−30	−
60	60	70	70	80	80	100	80	50	40	40	40	37
40	60	60	60	60	70	60	50	50	50	60	70	54
60	50	50	40	40	40	40	50	40	30	20	20	−
40	30	30	20	10	20	40	40	40	30	30	40	25
60	60	70	80	80	70	70	60	50	50	40	40	50
40	40	40	40	30	40	40	30	20	10	20	20	33
50	[50]	[40]	40	40	40	40	30	40	40	20	20	32
−	60	60	60	40	50	50	40	40	40	30	20	30
60	60	60	50	60	60	60	50	40	30	30	20	41
70	60	60	50	50	40	50	40	50	40	30	30	38
30	30	20	30	30	30	30	40	30	40	40	30	28
40	40	40	40	30	40	40	40	30	30	20	10	34
50	−10	−30	−60	30	70	70	50	50	60	70	60	28
40	40	40	40	30	30	30	20	30	30	30	30	31
OBS	−50	−20	−20	−10	0	10	20	20	20	10	10	−
100	90	100	100	90	90	50	50	40	30	30	40	54
30	50	40	30	30	−10	OBS	−30	−30	0	30	(OBS)	−
70	60	70	60	50	50	60	50	40	30	40	30	−
30	30	30	30	40	30	10	10	10	10	−20	20	23
20	0	0	10	−10	−20	−10	−30	−60	−50	−70	−50	−11
110	110	70	70	70	60	90	50	50	10	−10	−10	37

Date	00	01	02	03	04	05	06	07	08	09	10	11
900401	0	−10	−10	30	30	50	50	70	−	50	50	50
900402	30	30	30	20	10	−20	(30)	[30]	70	80	100	80
900403	30	30	30	30	30	30	30	[30]	−	40	60	50
900404	20	30	20	10	10	10	40	40	30	[10]	50	10
900405	20	20	20	10	20	30	30	50	40	[30]	70	30
900406	40	30	20	10	20	30	10	−10	−10	[30]	20	30
900407	30	40	50	50	80	90	70	40	40	[40]	−30	0
900408	−20	−20	−30	050	−90	−50	−30	−50	−50	−70	−	−20
900409	80	80	80	90	70	90	[80]	−	70	70	60	60
900410	10	20	30	30	30	40	30	40	30	[30]	40	40
900411	30	30	30	30	30	30	50	40	(40)	(40)	−20	30
900412	30	30	30	30	30	30	40	30	40	[30]	40	30
900413	20	20	20	10	10	(10)	−	−	−	−	−	−
900414	20	20	20	20	30	30	30	30	30	40	40	30
900415	10	20	30	30	20	30	30	−	[30]	30	30	30
900416	30	30	30	30	30	30	30	40	[50]	40	30	30
900417	30	30	30	30	30	30	30	−	50	60	60	70
900418	40	30	20	20	30	30	30	20	[30]	30	30	10
900419	−10	−10	OBS	OBS	+S	−20	−60	30	30	OBS	OBS	−
900420	70	60	80	70	70	30	30	40	60	80	[−S]	+S
900421	60	50	80	100	80	50	20	30	[60]	0	−40	+S
900422	30	30	30	20	10	10	10	20	−	30	40	30
900423	−10	−10	10	0	−30	−30	[−10]	10	30	0	−40	OBS
900424	−10	−50	30	40	30	40	50	[40]	50	40	−S	OBS
900425	−	−	−	−	−	−	−	(10)	40	OBS	OBS	−S
900426	20	20	20	20	20	30	[30]	[40]	40	40	40	30
900427	10	10	20	20	20	30	(40)	[40]	40	40	40	40
900428	OBS	−S	10	30	30	40	80	80	[50]	40	30	30
900429	30	30	20	20	20	40	60	80	80	−	60	60
900430	40	30	30	20	30	40	60	50	60	[70]	80	80

12	13	14	15	16	17	18	19	20	21	22	23	Means
60	70	70	50	60	60	30	20	0	20	10	10	36
100	70	60	50	50	50	30	50	50	30	30	30	46
40	30	40	40	40	50	50	60	60	40	40	40	40
40	40	50	40	40	30	60	60	50	30	30	30	33
30	30	40	30	20	20	50	40	30	30	40	40	32
30	30	40	20	−50	−40	−30	30	30	−60	−70	80	10
−30	−50	−40	−50	−90	−90	40	−20	−10	0	−10	−10	6
10	30	50	60	80	80	110	100	70	30	50	80	12
30	30	30	30	30	30	30	30	20	20	20	20	51
40	40	50	30	30	40	40	40	40	30	30	30	34
30	30	30	30	+S	+S	30	40	60	30	40	30	−
30	40	40	30	40	30	30	30	30	30	30	30	33
−	30	40	40	30	30	30	30	30	30	30	30	−
30	30	30	30	30	20	20	30	20	20	10	10	26
30	30	30	30	30	30	30	−20	−S	+S	30	30	−
30	30	40	30	30	30	30	40	40	30	30	30	33
70	60	60	60	60	50	50	60	50	40	30	30	47
30	30	50	OBS	0	30	30	40	40	20	−10	−10	25
−	−	−	−	−	−	(−40)	80	60	60	60	80	−
+S	OBS	OBS	OBS	+S	−10	0	0	−10	10	30	30	−
OBS	30	30	10	10	−40	−10	10	−30	10	0	10	24
30	40	30	60	20	30	20	30	30	20	10	0	25
20	30	20	30	30	30	40	40	50	60	30	20	14
OBS	−	−	−	−	−	−	−	−	−	−	−	−
+S	50	30	30	40	40	50	30	20	10	10	10	−
40	20	30	20	20	OBS	20	20	30	30	30	10	27
40	10	20	40	40	50	50	60	30	OBS	−S	30	−
40	40	40	30	30	40	40	50	50	40	30	20	−
70	80	70	80	80	90	80	90	80	60	40	40	59
80	90	80	80	70	70	60	30	20	30	10	0	50

Date	00	01	02	03	04	05	06	07	08	09	10	11
900501	20	20	30	10	0	0	10	20	20	30	[20]	−
900502	10	0	0	0	0	0	20	[30]	60	70	80	70
900503	20	20	20	20	20	30	30	40	[40]	50	60	50
900504	30	30	20	30	30	30	70	[50]	50	60	60	70
900505	0	0	0	20	20	40	50	50	70	[60]	60	70
900506	0	0	0	0	10	10	20	20	30	−	20	40
900507	−10	−10	10	0	0	OBS	−S	20	20	−	[40]	40
900508	20	30	30	30	30	40	40	30	30	40	[50]	50
900509	0	0	0	10	20	40	40	40	50	[60]	60	40
900510	OBS	OBS	OBS	OBS	30	30	OBS	30	40	[40]	40	80
900511	0	0	20	30	40	40	40	[40]	[50]	40	60	60
900512	30	20	20	20	20	30	30	[30]	20	10	30	−10
900513	40	30	40	30	30	30	30	50	50	60	−	[50]
900514	30	30	30	30	30	40	(40)	(40)	50	50	50	50
900515	30	20	20	20	30	30	40	40	40	50	60	OBS
900516	20	10	20	20	30	30	40	30	50	[40]	40	90
900517	0	0	20	10	20	30	30	[30]	[40]	40	+S	OBS
900518	20	30	30	30	20	40	80	[40]	60	70	+S	70
900519	30	40	30	20	30	40	50	50	50	[50]	50	50
900520	30	30	20	20	20	30	10	−	10	20	20	20
900521	30	30	30	30	30	20	(30)	(20)	20	20	20	30
900522	20	20	20	20	20	30	20	[20]	20	20	20	20
900523	20	20	10	10	20	50	80	[120]	60	30	30	20
900524	10	10	10	10	20	20	20	[30]	20	20	30	20
900525	20	20	10	20	10	−S	OBS	−	−	−	−	20
900526	−20	−10	0	0	20	30	50	[60]	70	60	40	40
900527	20	20	20	20	20	20	30	30	30	30	[40]	−
900528	20	20	20	20	20	30	20	(30)	(40)	40	40	−S
900529	−10	−20	10	10	30	[30]	(40)	−	(60)	50	50	40
900530	20	10	10	10	20	20	40	40	50	50	[50]	40
900531	0	0	0	10	10	20	20	30	40	30	30	[−S]

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	40	40	50	40	70	60	40	50	70	30	20	31
70	60	60	50	60	60	70	50	50	50	50	40	42
50	60	60	60	50	50	30	40	40	40	40	50	40
70	60	70	70	50	20	20	20	10	20	0	0	39
50	50	50	50	40	40	20	20	20	+S	10	0	34
0	70	OBS	+S	10	20	0	0	−10	−10	−10	0	−
40	0	OBS	OBS	OBS	OBS	40	40	30	30	30	20	−
30	40	50	40	40	30	20	20	20	20	0	0	30
30	20	30	40	30	20	30	+S	OBS	OBS	OBS	OBS	−
90	40	40	30	20	40	30	30	20	10	10	0	−
70	60	50	40	40	40	30	30	30	30	20	20	37
30	30	40	40	40	30	30	30	30	30	30	30	27
40	50	50	60	60	40	40	40	30	30	40	30	41
50	OBS	OBS	(+S)	30	30	20	30	40	40	40	30	−
OBS	90	60	50	50	50	50	40	30	30	20	30	40
50	30	30	40	30	30	30	30	30	10	10	10	31
OBS	−S	OBS	+S	OBS	40	40	40	30	40	40	30	−
50	50	50	50	40	40	50	50	40	40	30	30	44
60	50	50	50	50	50	40	30	30	30	40	30	42
20	30	30	30	30	30	30	20	30	30	20	30	24
30	30	30	30	20	20	30	30	20	20	20	20	25
20	40	50	50	40	−S	OBS	+S	20	20	0	10	−
20	30	30	20	30	(30)	(20)	30	20	20	20	20	32
20	20	20	20	20	20	20	20	10	20	10	20	18
−50	−S	OBS	OBS	20	−10	−30	OBS	−20	−20	−20	−20	−
30	40	40	30	40	40	40	40	30	20	20	20	30
40	30	30	40	40	30	40	30	20	20	20	20	28
OBS	OBS	OBS	−S	OBS	+S	+S	−S	20	10	10	10	−
40	40	40	40	50	40	30	30	10	20	30	20	28
+S	40	40	50	50	50	50	0	30	10	0	0	30
OBS	OBS	40	30	40	40	30	10	10	0	0	−10	−

Date	00	01	02	03	04	05	06	07	08	09	10	11
900601	−10	0	0	0	10	20	20	[20]	10	−50	10	20
900602	10	20	20	20	10	40	30	20	10	30	[30]	30
900603	−S	10	0	10	20	30	100	120	120	−	50	20
900604	10	20	10	20	20	30	(40)	(30)	30	30	30	40
900605	20	10	−70	10	20	30	80	130	[80]	30	20	10
900606	30	30	30	20	30	30	30	40	[30]	40	40	40
900607	30	30	40	30	30	80	(120)	−	−	[90]	70	50
900608	20	20	20	30	50	40	20	60	30	[20]	10	0
900609	−30	−40	−20	−50	30	70	100	[120]	80	70	40	40
900610	OBS	OBS	−S	30	80	−S	−50	10	−	40	80	40
900611	40	40	30	20	30	−S	0	(10)	20	70	30	40
900612	20	20	10	20	20	30	30	50	[60]	[60]	40	30
900613	20	30	−20	−10	−10	0	20	[30]	100	30	−70	+S
900614	20	20	20	20	20	30	[30]	[20]	40	50	50	50
900615	20	10	10	20	20	30	[20]	[20]	20	30	30	30
900616	0	20	20	30	60	90	90	70	[70]	60	40	30
900617	20	20	10	20	20	20	20	−	40	40	30	30
900618	10	20	20	20	30	20	20	−	30	40	40	50
900619	20	20	10	10	20	30	30	[30]	30	40	40	40
900620	30	30	40	30	30	40	30	[40]	40	30	30	30
900621	20	20	20	30	30	30	[30]	20	40	OBS	−S	+S
900622	20	20	20	20	30	20	10	[20]	20	30	30	30
900623	−20	20	10	40	0	10	30	[70]	80	30	20	10
900624	20	10	10	20	30	40	80	70	[60]	−	40	40
900625	20	20	30	30	30	40	[40]	−	60	70	60	50
900626	20	20	20	30	30	30	30	[30]	40	50	60	70
900627	30	30	30	30	30	[50]	30	30	30	30	30	30
900628	0	0	0	−10	0	10	20	30	30	30	[30]	30
900629	OBS	10	0	0	20	30	[70]	100	80	70	50	40
900630	10	0	0	10	20	30	30	30	30	[30]	50	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
20	−S	30	40	50	30	20	20	10	20	10	0	13
30	30	30	30	30	20	20	0	OBS	OBS	+S	−20	−
10	OBS	10	20	20	30	30	30	20	30	20	20	−
40	40	40	40	50	30	−S	OBS	OBS	10	30	30	−
20	20	30	30	30	40	30	30	30	30	30	30	30
40	50	70	30	−10	−10	10	20	−30	−10	50	30	26
50	60	50	50	40	40	50	50	40	40	30	20	−
0	20	30	40	50	−S	OBS	OBS	OBS	+S	20	30	−
30	40	40	40	50	40	−S	OBS	OBS	OBS	OBS	OBS	−
20	30	50	40	30	30	30	30	30	40	40	50	−
60	30	30	20	20	20	20	20	20	20	20	20	28
30	30	20	20	30	OBS	OBS	0	−10	OBS	OBS	10	−
+S	70	40	40	40	30	30	30	20	20	20	20	22
50	40	OBS	OBS	20	OBS	OBS	OBS	+S	10	10	10	−
30	50	70	−S	OBS	+S	OBS	OBS	30	20	0	−10	−
50	40	40	20	30	30	30	30	30	30	20	20	40
30	30	30	30	20	20	20	20	20	20	20	10	24
+S	+S	+S	−S	OBS	OBS	OBS	30	30	20	20	20	−
40	40	40	40	40	40	50	40	40	30	30	30	33
30	30	30	30	30	30	30	20	20	10	10	0	28
+S	80	40	50	50	60	50	60	60	60	30	30	−
40	40	40	40	40	40	40	30	30	40	OBS	OBS	−
−10	30	30	20	−30	30	30	40	50	40	30	30	25
30	40	50	50	40	30	40	40	40	30	30	20	37
40	40	50	50	50	40	30	30	30	20	20	20	38
60	60	60	50	60	60	30	30	30	30	30	30	40
30	30	30	30	30	20	20	10	10	0	−10	0	24
30	30	30	30	30	30	20	30	OBS	−S	−S	OBS	−
50	40	40	40	30	30	30	30	20	0	0	0	34
60	60	40	(30)	30	40	40	30	30	30	30	30	31

Date	00	01	02	03	04	05	06	07	08	09	10	11
900701	30	30	30	30	30	30	30	30	–	30	+S	OBS
900702	30	30	30	10	30	10	30	20	0	0	[60]	50
900703	40	30	30	30	40	70	70	(70)	70	70	70	80
900704	+S	OBS	OBS	50	70	40	30	[50]	60	50	40	40
900705	20	20	30	30	30	40	40	[40]	40	40	40	40
900706	30	20	20	–10	–10	–10	[–30]	0	30	20	50	40
900707	30	30	30	30	30	30	[30]	[40]	50	50	40	30
900708	10	20	10	40	80	60	30	–	20	30	50	40
900709	10	10	40	40	40	50	60	–	50	50	50	50
900710	–S	–S	40	30	30	+S	OBS	OBS	OBS	OBS	OBS	OBS
900711	10	10	20	30	50	120	[150]	150	130	110	70	70
900712	30	40	40	30	40	[50]	[50]	50	60	70	70	80
900713	40	30	30	20	30	50	60	[80]	90	110	110	120
900714	10	10	0	20	10	10	30	[40]	40	40	50	50
900715	20	20	20	20	20	40	40	40	[40]	–	60	60
900716	30	30	30	30	40	60	60	(60)	70	60	40	40
900717	10	20	10	10	10	30	30	[30]	30	50	30	50
900718	30	30	30	30	30	30	30	60	50	[40]	30	30
900719	40	30	30	30	30	30	40	[50]	[70]	40	30	40
900720	30	20	20	20	30	30	50	60	[60]	80	60	50
900721	20	20	30	30	30	30	30	[50]	50	60	30	30
900722	–	–	–	–	–	–	–	–	40	40	50	50
900723	30	30	30	30	30	40	40	–	[50]	60	70	60
900724	30	20	10	10	20	30	30	40	[50]	60	60	50
900725	20	30	10	10	10	30	30	[60]	[10]	[50]	60	60
900726	10	20	10	20	20	20	[30]	30	40	40	50	40
900727	10	10	20	10	20	20	[20]	30	30	30	30	30
900728	20	20	20	20	30	[30]	30	30	40	50	60	50
900729	20	10	10	20	20	30	30	–	30	30	30	30
900730	20	20	20	10	20	30	30	(30)	[40]	50	60	60
900731	20	10	10	0	0	0	20	30	[40]	[60]	60	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
OBS	OBS	OBS	90	50	30	30	30	30	30	30	30	−
60	30	OBS	0	20	30	30	30	40	40	30	40	28
50	50	50	50	30	40	40	30	30	30	30	20	46
60	30	10	10	70	20	30	40	30	40	30	20	−
40	40	50	50	50	40	50	40	30	40	40	50	39
50	60	40	40	40	40	40	40	30	40	30	40	27
30	40	40	40	50	50	50	40	40	30	30	10	36
30	40	30	30	20	20	30	20	20	20	20	20	30
50	50	50	50	50	50	50	50	60	OBS	OBS	OBS	−
OBS	OBS	50	OBS	OBS	OBS	−S	10	20	20	−20	0	−
50	50	50	50	40	50	50	50	50	40	40	30	61
80	80	90	90	80	80	80	70	60	50	40	40	60
100	100	110	120	110	90	60	50	50	40	30	30	66
50	50	50	50	50	50	50	40	40	20	10	10	33
60	50	50	50	50	40	30	20	20	30	30	20	36
40	30	30	30	30	30	30	30	30	30	20	20	37
30	30	OBS	+S	10	−S	+S	−S	OBS	10	30	30	−
40	30	30	40	40	30	40	40	30	40	40	30	36
30	50	50	50	50	60	70	70	70	70	50	40	47
(60)	(60)	60	50	60	50	40	30	30	30	20	20	−
30	30	30	30	30	40	30	30	30	30	30	20	32
40	30	30	30	30	30	30	30	30	30	30	30	−
60	40	30	30	30	30	30	30	20	20	30	30	37
50	40	30	50	50	50	40	30	30	30	20	20	35
40	40	40	30	50	40	30	30	20	20	20	20	32
40	50	40	40	30	30	20	20	10	10	20	10	27
30	30	40	40	30	30	30	30	30	30	20	20	26
50	60	60	60	50	30	30	20	20	30	10	20	35
50	50	60	70	60	30	30	30	30	30	20	20	32
60	60	70	60	60	40	30	30	30	30	30	30	39
40	40	40	40	40	50	50	40	30	30	30	10	30

Date	00	01	02	03	04	05	06	07	08	09	10	11
900801	10	10	10	10	20	30	[40]	60	50	70	50	70
900802	20	20	20	20	20	30	[30]	40	50	70	60	60
900803	50	40	40	40	40	40	[60]	80	70	70	70	60
900804	20	30	30	30	30	40	[60]	60	50	50	40	40
900805	20	20	20	10	10	30	30	0	–	[−30]	20	20
900806	20	10	10	20	20	30	(30)	(40)	40	50	60	60
900807	70	30	40	20	20	−20	[−10]	[70]	110	90	70	90
900808	10	0	20	40	30	30	[30]	30	50	50	40	40
900809	30	20	20	20	20	40	[50]	[40]	50	50	50	50
900810	10	10	20	20	20	30	30	40	50	[50]	50	50
900811	30	70	30	20	20	20	30	30	[60]	60	50	50
900812	10	10	10	20	20	30	40	40	[40]	50	50	50
900813	30	20	10	10	20	30	–	–	[20]	20	20	30
900814	20	20	20	20	20	20	30	30	[40]	50	50	40
900815	20	20	20	20	20	20	20	30	[30]	30	30	30
900816	20	10	10	20	20	30	50	[70]	40	40	30	30
900817	30	30	30	20	20	20	30	[50]	50	30	20	0
900818	10	10	20	20	20	20	30	60	[70]	50	60	50
900819	20	20	20	20	20	20	30	–	20	20	30	20
900820	10	10	10	10	10	20	20	30	(30)	40	30	40
900821	30	30	30	70	30	30	30	[OBS]	OBS	OBS	OBS	−S
900822	20	10	20	10	10	20	20	20	30	40	30	[30]
900823	30	20	30	30	30	40	40	[50]	[60]	50	50	40
900824	30	50	40	30	30	40	50	70	50	[70]	70	70
900825	30	30	30	30	30	30	40	40	[40]	40	40	50
900826	20	30	30	30	20	30	30	30	40	[40]	–	50
900827	20	20	10	10	10	20	30	30	(40)	–	–	[50]
900828	20	30	30	20	30	30	30	[30]	20	30	30	40
900829	30	20	20	20	20	30	[30]	30	30	30	30	30
900830	20	20	20	20	20	30	40	[40]	30	0	20	30
900831	30	30	30	30	30	40	30	30	[0]	−10	0	10

12	13	14	15	16	17	18	19	20	21	22	23	Means
80	70	70	60	50	60	40	30	30	30	20	10	41
60	60	60	60	50	40	40	50	50	60	60	50	45
40	40	40	40	40	40	30	30	40	40	30	30	46
50	50	50	70	60	40	30	30	30	30	20	30	40
30	30	40	40	30	30	30	30	20	30	20	20	22
−S	OBS	0	OBS	−S	OBS	OBS	OBS	OBS	40	40	70	−
110	70	80	50	40	50	60	40	30	30	30	20	50
40	40	30	30	30	40	40	40	40	30	30	30	33
50	40	40	30	30	30	30	30	30	20	20	20	34
50	50	50	50	50	30	30	30	30	40	50	20	36
50	50	50	50	50	40	30	30	20	20	10	10	37
50	60	50	50	40	40	40	40	40	40	30	30	37
30	30	30	40	30	30	40	20	40	30	20	20	−
40	30	40	30	20	30	30	30	40	40	30	30	31
30	20	20	20	20	20	40	+S	OBS	0	10	10	−
30	40	30	30	20	30	30	40	40	30	20	20	30
−20	0	−20	OBS	OBS	−20	20	20	20	20	10	10	−
30	40	40	40	30	30	30	30	20	20	20	20	32
10	−30	20	40	30	30	20	20	20	20	20	10	20
40	40	50	40	30	40	OBS	50	70	50	30	30	32
−S	30	30	30	30	30	40	30	30	30	20	20	−
30	30	30	20	10	0	OBS	10	30	30	30	30	22
40	40	40	40	30	30	30	30	50	50	20	10	37
70	70	70	70	50	50	30	30	30	30	30	40	49
50	50	50	50	40	40	40	40	40	40	30	20	38
50	50	60	50	50	40	40	40	30	30	20	20	36
60	60	60	60	60	50	40	30	20	20	10	10	−
50	50	60	50	50	40	40	40	30	20	30	30	35
30	40	40	30	30	30	30	30	30	30	30	20	29
30	40	40	50	50	50	50	40	40	40	40	30	33
20	30	40	30	40	30	30	40	30	30	40	30	27

Date	00	01	02	03	04	05	06	07	08	09	10	11
900901	20	10	10	10	10	20	30	30	30	40	40	50
900902	−10	30	30	30	30	70	100	140	100	70	−	40
900903	30	30	20	20	30	40	50	−	50	50	−S	40
900904	0	10	10	30	30	40	[80]	150	120	100	50	40
900905	30	30	30	30	20	40	[+S]	[80]	30	40	30	30
900906	30	20	10	20	20	30	40	[40]	40	40	40	40
900907	30	10	10	30	30	40	[50]	[30]	80	30	20	30
900908	−50	−20	−60	0	30	20	10	30	[70]	80	50	−20
900909	30	30	30	30	30	30	40	50	50	40	40	40
900910	30	30	0	OBS	+S	40	60	−	[40]	30	30	20
900911	20	20	20	20	20	20	30	[60]	50	30	20	20
900912	0	20	20	20	OBS	30	[60]	[30]	20	20	30	+S
900913	30	20	20	20	30	40	40	40	40	[50]	50	50
900914	20	10	10	20	30	30	40	[50]	50	50	60	70
900915	20	20	20	20	30	20	30	30	[30]	40	50	50
900916	20	20	20	20	20	20	30	−	50	60	60	40
900917	20	20	10	10	10	20	20	(40)	[40]	40	(40)	(50)
900918	40	+S	70	+S	0	10	[30]	[40]	70	70	40	30
900919	30	20	20	20	30	30	20	30	[20]	30	40	30
900920	50	50	40	30	40	30	[40]	[40]	40	40	30	40
900921	−	−	−	−	−	−	−	10	30	10	10	30
900922	30	20	20	10	20	30	30	40	40	30	20	[40]
900923	60	60	60	50	50	40	50	50	−	50	50	50
900924	OBS	40	30	40	30	OBS	OBS	+S	OBS	OBS	20	70
900925	40	30	20	30	30	30	40	40	50	(40)	30	30
900926	30	30	30	30	30	30	30	[50]	40	0	−10	10
900927	10	10	20	20	20	20	30	30	40	[60]	60	50
900928	30	20	20	30	30	30	40	60	60	70	70	[60]
900929	20	30	30	30	30	40	70	[40]	60	60	60	60
900930	40	30	40	40	40	50	60	60	40	30	40	−

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	[40]	40	OBS	OBS	OBS	-60	10	-20	-30	30	20	-
50	50	40	50	50	50	50	50	40	50	40	30	51
30	OBS	OBS	OBS	10	30	30	30	20	20	10	10	-
40	50	40	30	80	50	60	70	80	60	40	40	54
20	30	30	OBS	20	20	30	40	40	30	30	30	-
40	20	30	30	30	30	30	40	40	40	30	30	32
30	30	0	+S	OBS	0	-30	-S	OBS	OBS	-S	-50	-
20	0	40	40	30	40	40	40	40	40	40	40	23
-	40	40	30	50	40	30	40	40	30	30	40	37
30	20	20	20	30	40	50	50	40	30	30	20	-
20	20	20	20	-S	-S	20	20	20	20	20	20	-
OBS	OBS	OBS	OBS	-S	30	40	60	40	30	30	30	-
50	60	30	0	20	30	20	30	30	20	20	20	32
60	50	40	40	30	40	30	30	20	20	20	20	35
60	50	60	70	70	60	40	30	30	30	30	20	38
50	40	40	30	30	20	30	30	20	20	20	20	31
40	40	40	40	40	40	30	30	30	30	40	30	30
40	40	50	50	OBS	-S	30	30	30	30	30	30	-
30	40	50	50	40	40	40	40	50	50	40	50	35
30	+S	OBS	-	-	-	-	-	-	-	-	-	-
50	50	50	50	60	40	-S	60	OBS	50	40	40	-
50	40	50	40	50	40	60	60	60	50	50	60	39
50	50	60	60	50	50	50	50	60	60	OBS	OBS	-
70	50	+S	OBS	OBS	OBS	30	40	40	30	40	40	-
40	40	30	40	50	40	50	40	50	50	30	40	38
20	30	30	20	30	30	60	30	30	20	0	10	25
50	40	30	30	30	30	50	40	30	30	30	30	33
60	70	70	60	40	70	50	40	40	30	30	20	46
60	70	40	40	30	30	30	10	30	30	30	30	40
50	50	40	40	40	30	30	30	40	60	50	50	43

Date	00	01	02	03	04	05	06	07	08	09	10	11
901001	40	40	30	30	40	50	70	90	(70)	(50)	60	60
901002	−S	30	20	20	−S	−S	−10	50	190	[130]	90	70
901003	20	30	20	30	30	80	60	40	[30]	30	40	40
901004	30	30	20	30	10	20	0	10	[30]	30	20	20
901005	20	20	30	20	40	30	40	60	50	[50]	20	40
901006	40	40	30	30	20	50	80	[70]	[60]	60	50	40
901007	30	30	10	30	40	70	130	130	70	[40]	−	70
901008	30	30	30	20	−30	10	20	[0]	[0]	−20	10	−10
901009	50	50	40	40	40	50	60	70	80	100	(110)	60
901010	30	40	40	30	20	30	50	50	50	[60]	60	50
901011	30	40	50	50	70	140	110	70	70	50	[50]	50
901012	70	120	110	70	40	30	40	30	40	60	[70]	70
901013	150	150	140	130	120	160	150	90	50	40	40	[50]
901014	60	70	60	50	60	40	50	60	60	70	−	70
901015	70	70	80	80	70	60	30	(30)	[30]	40	50	50
901016	30	30	30	40	30	30	30	[20]	20	30	40	40
901017	20	20	20	40	40	30	70	90	[50]	40	50	70
901018	30	20	20	30	20	30	0	−20	0	[0]	0	20
901019	50	70	50	70	70	50	20	50	60	60	[40]	50
901020	40	60	60	50	40	40	50	20	30	−10	0	[−20]
901021	0	0	−10	10	20	30	40	60	70	70	−	70
901022	40	40	40	30	30	70	70	90	−	70	60	50
901023	30	20	30	30	10	0	−30	−30	−10	20	30	[40]
901024	−10	0	20	10	0	−10	−10	−20	−20	[0]	40	50
901025	30	40	40	40	40	60	50	40	30	0	30	[40]
901026	30	30	20	40	50	50	50	50	50	30	[30]	50
901027	20	0	10	30	20	30	40	30	30	+S	[−30]	−10
901028	−10	30	30	50	40	50	50	50	50	40	−	40
901029	0	−10	0	−10	30	40	30	30	−	−10	−60	−30
901030	20	30	20	0	−S	30	40	−S	80	70	[50]	30
901031	40	30	30	30	40	50	70	50	30	40	[40]	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
60	80	70	30	50	40	60	40	30	40	40	OBS	50
60	60	60	50	50	50	70	70	60	50	40	30	–
50	50	40	40	40	40	40	30	40	40	30	20	38
20	20	20	30	20	30	30	30	40	20	20	20	23
0	30	40	50	40	50	40	30	30	30	40	30	35
40	50	50	40	10	20	20	30	20	30	10	10	38
60	60	60	60	50	60	60	50	50	60	30	30	57
70	30	40	80	OBS	20	40	60	50	50	50	50	27
60	50	60	70	70	80	60	50	50	40	40	40	57
60	60	50	60	50	50	40	30	50	50	40	40	45
50	50	40	40	50	30	40	50	30	30	50	60	54
50	60	70	60	60	50	50	50	40	50	90	100	62
[50]	50	50	50	40	40	40	40	30	30	20	50	73
70	80	80	70	70	70	60	60	70	60	80	90	66
60	60	70	60	60	50	50	40	60	60	50	40	56
50	60	60	50	60	50	40	60	50	40	30	20	39
70	70	60	50	60	40	50	50	50	60	50	40	50
30	20	30	30	40	50	50	30	40	20	30	70	25
40	50	70	80	70	70	60	60	60	30	30	30	54
–40	–50	–60	–40	–10	10	20	20	10	10	–10	–10	8
70	70	70	80	70	60	60	70	80	70	60	50	51
50	50	60	50	50	70	60	70	50	40	40	30	53
50	60	50	50	50	50	60	40	30	10	20	10	26
50	50	50	40	40	30	40	20	20	30	40	40	21
40	40	50	50	50	30	40	40	40	40	40	30	39
50	50	50	50	50	40	30	40	30	30	30	30	40
0	20	–10	0	10	0	–10	–40	0	–40	–80	0	1
40	50	40	40	50	50	50	40	20	0	–10	–20	34
–80	–60	–40	OBS	OBS	OBS	OBS	70	60	20	20	10	–
40	40	30	70	80	80	80	80	70	70	60	50	–
30	30	50	–60	–10	40	60	70	50	–20	–80	+S	28

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
901101	OBS	OBS	OBS	OBS	OBS	OBS	−20		−S	OBS	+S	+S	OBS
901102	30	30	30	30	30	50	80	80	60	60	70	[60]
901103	30	30	40	40	50	60	70	80	60	60	[40]	OBS
901104	30	40	40	50	50	50	60	60	80	80	40	−
901105	60	60	40	30	40	50	60	[80]	(80)	80	60	50
901106	30	30	20	30	30	40	40	40	30	10	[10]	30
901107	20	30	30	20	30	40	40	−10	10	20	[30]	40
901108	0	10	10	20	30	40	50	50	70	60	50	50
901109	10	0	20	20	30	40	40	50	[60]	60	50	50
901110	−10	−10	−10	−10	−10	−10	−10	0	0	[−10]	20	40
901111	−10	−10	−10	−10	−10	−10	−10	−10	−	−20	−20	−20
901112	0	10	20	30	30	30	30	[30]	30	20	10	20
901113	10	0	10	20	30	20	0	0	0	10	[20]	80
901114	−10	0	0	0	0	0	0	0	−10	−10	[−10]	−20
901115	20	20	30	30	30	30	30	30	30	30	40	50
901116	20	30	30	30	40	40	50	70	70	(60)	60	60
901117	30	30	30	40	50	50	60	80	120	80	90	80
901118	30	20	20	10	30	70	50	50	40	50	60	−
901119	10	20	20	20	30	30	40	70	80	(80)	(40)	+S
901120	10	10	−10	−30	−10	−10	−10	−20	−20	−20	0	10
901121	10	0	10	0	−10	−10	30	20	+S	−	−	−
901122	−20	−10	−10	−10	0	20	30	40	40	60	50	40
901123	30	30	40	60	70	110	80	60	80	[70]	70	40
901124	30	20	20	30	30	30	30	40	50	60	[50]	40
901125	70	80	80	90	90	110	80	10	10	30	−	50
901126	40	50	40	30	20	40	50	(50)	(40)	40	50	40
901127	−	−	−20	10	30	30	30	50	50	20	20	−
901128	30	20	20	30	40	40	50	60	70	40	30	[40]
901129	30	30	40	40	50	60	70	70	70	50	[60]	70
901130	30	30	40	20	30	40	40	40	30	[40]	(30)	20

12	13	14	15	16	17	18	19	20	21	22	23	Means
OBS	OBS	30	50	60	50	50	60	60	60	50	40	–
60	60	50	50	40	30	30	40	10	OBS	OBS	30	–
-S	-110	-90	-80	-30	30	-10	40	50	40	40	40	22
50	50	60	50	40	70	70	80	90	60	40	40	56
-S	OBS	OBS	+S	60	60	50	50	40	60	50	40	–
30	40	30	30	20	30	30	40	30	20	40	30	30
30	60	60	60	60	50	50	60	60	30	30	20	36
[50]	50	40	30	30	20	40	30	30	20	0	-10	32
50	50	40	40	30	10	0	0	0	0	0	-10	27
50	50	0	-10	-10	-10	-10	0	0	0	0	-10	1
-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	0	-11
30	30	30	40	30	30	30	30	40	30	20	10	25
60	50	40	40	30	20	20	10	10	10	0	0	20
-30	-20	0	10	10	10	20	30	40	30	30	20	4
40	50	30	40	30	30	20	30	20	30	20	20	30
70	70	60	60	50	40	30	20	30	20	20	20	43
60	60	50	50	40	40	60	40	50	70	80	30	57
50	60	70	80	70	30	-30	40	50	20	0	10	38
-20	0	-10	-10	10	40	70	30	40	20	20	0	–
0	-10	-10	-10	0	10	0	-10	-10	-20	-10	-10	-8
–	–	–	–	–	–	-30	-20	-20	-20	-20	-40	–
[30]	30	50	70	70	60	60	60	50	50	30	20	34
30	60	50	10	10	10	30	40	-S	-S	20	30	–
40	40	40	40	40	50	50	40	40	50	50	40	40
50	60	80	70	80	80	70	50	30	40	40	40	60
60	70	40	40	60	70	90	80	70	90	70	0	–
0	30	-10	-20	20	40	40	10	20	40	50	30	–
50	40	30	30	50	50	50	50	40	40	30	30	40
60	70	60	50	50	50	70	60	50	50	60	40	55
10	-20	40	20	40	50	40	20	-40	-40	-30	-10	19

Date	00	01	02	03	04	05	06	07	08	09	10	11
901201	−10	−10	−40	−30	10	30	40	[40]	[70]	80	70	70
901202	30	40	40	30	30	40	40	[60]	80	210	70	−
901203	0	−20	−	−	−	−	−	−	−	130	110	130
901204	90	70	90	70	50	40	50	60	50	50	[60]	80
901205	20	20	0	0	30	OBS	OBS	OBS	30	50	[30]	30
901206	0	10	−10	−10	−10	0	20	20	50	60	70	[70]
901207	20	20	20	10	20	30	60	70	50	20	[20]	−10
901208	−	−	−	−	−	−	−	−	−	−	−	−
901209	−	−	−	−	−	−	−	−	−180	−60	10	−20
901210	−	−	−	−	−	−	−	−	−	−	−	20
901211	10	20	30	30	30	30	50	70	100	70	−	90
901212	60	40	30	40	30	20	10	40	60	70	80	[80]
901213	70	60	60	50	40	40	40	60	60	[60]	60	60
901214	0	10	0	0	−10	−10	−20	10	20	30	[40]	40
901215	10	−10	−10	−10	0	0	0	0	−20	−40	−40	[−20]
901216	−40	−40	−40	−50	10	0	10	20	20	30	−	30
901217	10	0	20	30	20	40	20	−	20	10	20	30
901218	60	60	80	30	40	70	70	90	100	100	110	[100]
901219	20	10	−20	−10	−10	−30	−30	−10	−50	−40	[−10]	[−20]
901220	60	10	10	20	20	30	70	80	30	70	[60]	40
901221	30	40	30	30	30	70	90	10	30	20	[30]	40
901222	90	40	60	40	30	30	20	30	80	[100]	120	90
901223	−30	60	100	20	30	40	90	80	70	90	100	−
901224	−20	−10	0	10	0	10	−20	−30	−40	−40	−10	−
901225	−10	0	−10	0	0	10	10	−10	−10	−10	[−20]	[−10]
901226	−30	−30	−40	−60	−50	−40	−50	−60	−50	−50	[−70]	−40
901227	−80	−50	−30	−40	−20	−10	−10	0	20	30	[50]	70
901228	+S	140	160	130	80	60	50	60	80	160	[120]	90
901229	30	30	20	20	40	80	80	70	70	60	[50]	20
901230	70	90	80	80	100	90	100	90	100	100	−	110
901231	80	70	80	80	70	80	110	80	70	80	(70)	[70]

12	13	14	15	16	17	18	19	20	21	22	23	Means
60	50	60	70	80	80	70	60	50	40	40	40	43
160	−60	−200	−60	−60	30	60	80	100	90	70	−10	38
120	110	110	100	110	110	140	80	70	100	150	90	−
130	OBS	−30	70	50	30	20	40	50	40	30	20	53
20	20	20	20	50	40	40	40	60	70	40	20	−
70	70	80	70	70	60	60	70	50	40	30	20	40
10	0	−20	−S	+S	OBS	−70	−50	20	30	−	−	−
−	−	−	−	−	−	−	−	−	−	−	−	−
−50	−20	−20	20	30	20	60	90	140	100	−	−	−
−10	30	70	40	−10	20	OBS	OBS	−10	0	−10	0	−
100	80	80	60	20	30	30	70	70	−10	−S	+S	−
70	90	80	80	70	30	−10	70	80	90	90	80	58
70	60	50	50	50	60	60	50	40	40	40	20	52
30	50	70	60	80	80	60	60	70	70	50	30	34
−20	−30	−50	−40	−30	−40	−40	−40	−30	−30	−20	−20	−22
30	40	30	30	30	20	30	20	10	10	−10	10	9
40	60	60	60	40	40	70	60	80	70	60	70	40
110	90	OBS	OBS	120	10	0	20	90	+S	+S	40	70
0	−20	−10	−30	0	10	70	100	90	80	20	70	8
20	40	40	40	80	60	70	40	30	40	30	20	42
30	−S	40	40	70	90	110	100	60	40	80	80	52
80	110	140	90	80	70	30	10	−60	−210	−20	−100	40
130	120	110	90	80	10	−20	−20	−30	−40	−40	−30	50
30	20	−10	30	−40	−30	−30	0	0	10	0	−10	−10
−20	−10	−20	−20	−10	−10	0	2	0	−30	−30	−30	−9
−40	−60	−40	−40	−60	−40	−80	−70	−60	−30	−60	−50	−50
90	100	80	70	80	90	−30	40	110	80	90	130	36
90	100	130	130	140	130	120	70	60	60	40	40	97
20	40	40	30	30	40	50	30	40	60	60	60	45
130	130	100	110	100	140	130	110	120	130	120	80	105
80	80	80	80	60	50	20	10	−10	−40	−20	−10	54

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
910101	−10	−20	−30	30	80	40	30	−	−	−	−	10
910102	50	40	40	40	50	60	70	[80]	(80)	100	100	100
910103	−10	10	0	10	30	40	70	100	100	110	[110]	120
910104	70	70	60	50	50	100	90	80	80	90	[110]	100
910105	30	10	−10	−10	10	10	20	40	40	40	[50]	50
910106	40	40	30	40	40	40	40	40	30	40	−	60
910107	60	40	20	30	20	30	10	−	−	−	−	−
910108	−	−	−	−	−	−	−	−	−	−	−	−
910109	−	−	−	−	−	−	−	−	−	−	−	−
910110	−	−	−	−	−	−	−	−	−	−	−	−
910111	−	−	−	−	−	−	−	−	−	−	−	−
910112	−	−	−	−	−	−	−	−	−	−	−	−
910113	−	−	−	−	−	−	−	−	−	−	−	−
910114	−	−	−	−	−	−	−	−	−	−	−	−
910115	−	−	−	−	−	−	−	−	−	−	−	−
910116	−	−	−	−	−	−	−	−	−	−	−	−
910117	−	−	−	−	−	−	−	−	−	−	−	−
910118	−	−	−	−	−	−	−	−	−	110	[130]	150
910119	60	50	40	40	50	50	70	80	80	70	90	[90]
910120	40	100	60	60	70	80	120	110	80	70	−	30
910121	0	20	20	−50	70	30	80	−	−	50	10	−10
910122	20	30	40	80	90	80	−	−	−	−	−	−
910123	30	30	40	30	30	40	30	30	60	60	[30]	60
910124	60	40	40	40	40	50	50	70	80	70	[80]	80
910125	30	20	0	0	30	30	70	80	100	[80]	[80]	70
910126	40	40	40	40	70	70	60	50	80	80	[90]	110
910127	20	10	0	10	10	0	−10	−20	−10	0	−	10
910128	50	70	70	50	40	30	10	[20]	(70)	80	90	90
910129	40	50	30	40	30	20	20	10	20	30	[40]	70
910130	50	50	50	60	40	40	20	−10	70	[70]	110	100
910131	80	70	60	50	60	70	80	90	100	70	[90]	100

potential gradient

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	70	80	110	130	50	60	70	80	90	80	60	–
80	90	100	100	110	90	100	100	70	60	70	-50	72
90	100	80	50	80	100	80	90	110	100	80	70	72
120	120	90	100	40	60	80	80	70	80	40	30	78
50	60	50	80	80	60	50	50	40	20	30	40	37
80	80	30	30	40	80	70	90	80	70	70	80	54
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	.	–	–	
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
160	170	170	170	190	150	120	100	90	90–	80	60	–
[80]	110	100	80	80	110	130	130	100	80	40	30	77
30	50	40	50	60	80	80	70	30	70	90	30	65
-10	0	30	0	-10	0	-10	0	0	-10	-10	10	–
–	–	90	80	80	80	90	90	70	40	50	40	–
80	90	100	100	80	100	140	100	90	100	90	80	68
80	70	50	60	50	60	30	10	40	30	30	30	52
60	50	50	50	60	50	30	60	30	60	60	50	50
110	130	140	160	90	60	60	50	50	40	30	20	71
20	40	50	50	50	50	40	40	50	50	50	50	24
80	70	50	80	90	80	60	60	70	60	40	40	60
60	70	60	60	60	50	60	60	70	80	60	40	47
100	80	80	90	110	120	170	170	150	130	120	120	87
110	120	110	110	100	90	100	90	90	80	80	70	87

POTENTIAL GRADIENT

Date	00	01	02	03	04	05	06	07	08	09	10	11
910201	50	50	30	30	30	30	30	40	80	70	[80]	80
910202	70	70	60	50	60	70	70	70	80	90	[100]	110
910203	50	60	70	80	80	70	70	80	100	–	90	90
910204	90	80	70	90	80	60	60	70	(80)	(70)	(70)	70
910205	70	70	60	80	70	50	60	50	50	60	[70]	30
910206	−60	−50	−40	−30	10	−10	30	30	50	50	[60]	70
910207	OBS	OBS	OBS	+S	OBS	−30	−20	−30	[50]	0	−40	−30
910208	−120	−60	−80	−100	−110	−60	−60	+S	OBS	70	[+S]	40
910209	40	40	30	20	30	10	10	−30	−30	−50	[30]	40
910210	60	50	−100	−40	−40	−70	−30	10	50	60	–	70
910211	40	30	50	−10	−10	−20	−30	[50]	–	60	80	70
910212	50	50	60	50	50	60	70	60	70	70	[90]	80
910213	30	30	20	10	0	10	10	20	40	50	[50]	50
910214	20	−60	30	50	50	30	20	40	[50]	60	50	50
910215	40	40	30	50	50	50	40	40	60	60	[50]	60
910216	50	−40	−60	−30	−40	−30	−10	50	60	70	70	[80]
910217	−30	−60	−70	−60	−40	−20	−10	30	40	60	–	70
910218	70	80	70	70	80	60	70	70	(80)	110	100	100
910219	40	40	50	50	60	30	70	70	70	[60]	[80]	80
910220	80	110	100	80	40	70	90	130	130	130	90	[100]
910221	−40	−80	−70	−30	20	20	0	60	50	60	[80]	80
910222	−10	−20	−50	10	40	30	0	−40	20	80	[80]	80
910223	50	40	40	30	40	40	60	70	80	80	70	80
910224	30	40	60	30	40	30	30	80	80	[80]	[80]	80
910225	30	40	110	120	150	200	170	–	–	140	80	50
910226	40	80	80	110	100	30	40	40	40	60	[70]	70
910227	70	50	40	40	40	30	40	90	100	80	[80]	70
910228	50	40	30	30	30	30	20	20	40	50	[50]	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
80	90	90	50	40	80	80	80	40	50	50	50	58
100	100	100	100	80	80	80	80	90	90	70	60	80
100	100	90	70	70	60	80	110	90	90	90	100	82
80	90	80	70	60	100	90	110	150	80	70	60	–
70	70	100	90	90	100	90	60	70	50	–30	–60	59
80	70	90	110	90	60	10	–80	–170	–100	–130	–160	–1
0	–10	–10	–10	10	0	–20	20	–20	–90	–90	–180	–
110	40	–10	–10	10	–80	–20	50	0	60	40	40	–
50	60	70	70	40	0	–20	10	20	–10	–20	50	20
60	100	120	150	70	50	50	40	20	30	40	40]	34
60	60	70	60	80	70	80	90	110	110	90	50	54
70	50	30	30	30	20	50	40	20	10	30	30	49
60	50	60	60	70	60	70	80	70	50	50	40	43
50	60	70	70	60	70	80	70	70	70	60	60	49
60	60	70	70	60	60	70	60	60	60	60	60	55
[90]	70	90	80	90	OBS	OBS	OBS	–20	–20	–50	–30	–
70	60	70	70	70	10	–30	10	30	50	50	20	17
100	100	90	80	80	120	80	90	110	50	40	50	81
60	70	80	70	30	20	–10	–70	–90	70	70	80	45
[90]	100	90	100	90	80	80	90	70	70	–50	–60	79
100	70	70	50	60	50	40	30	–10	10	–10	–10	25
60	70	80	80	80	80	50	0	40	80	70	60	41
90	90	70	[70]	80	80	70	50	80	80	30	30	63
70	80	80	60	60	70	40	30	0	0	10	40	50
50	80	100	140	140	110	80	10	–40	–80	–50	10	–
–	90	90	100	90	120	80	70	70	70	50	40	71
70	70	70	70	60	80	90	100	80	70	70	60	68
20	10	20	30	10	20	10	0	10	0	0	–50	21

Date	00	01	02	03	04	05	06	07	08	09	10	11
910301	−30	−60	−60	−50	−40	−40	−20	−20	−40	[−10]	10	30
910302	0	−30	−10	−10	−20	−30	−20	−30	−40	−20	[−50]	−10
910303	30	30	30	30	20	30	30	20	−20	20	−	−30
910304	−10	0	20	−10	−20	−10	−20	[−30]	(−40)	−40	−20	−30
910305	−10	−30	−30	−40	−40	−30	−10	30	0	10	[30]	30
910306	60	50	60	60	70	70	30	20	30	[30]	[40]	20
910307	20	10	0	20	10	−10	10	120	10	−20	[0]	−10
910308	10	0	0	10	−10	−20	−40	−50	−40	[−20]	−10	10
910309	30	40	30	30	10	30	30	40	[40]	[50]	50	50
910310	40	50	50	50	80	80	100	70	[60]	50	40	50
910311	50	−10	−10	−10	0	0	−10	[−10]	−	10	−30	−20
910312	30	30 .	30	20	40	40	30	30	20	40	−	[50]
910313	−10	10	−10	30	20	20	−10	40	30	50	[70]	70
910314	10	10	10	10	20	20	30	40	40	30	[40]	50
910315	10	30	20	0	10	30	30	50	50	60	[60]	60
910316	30	30	30	30	30	30	40	50	60	[50]	40	50
910317	10	0	10	30	30	20	30	30	30	30	−	30
910318	30	20	20	30	20	0	30	40	−	50	40	60
910319	20	20	10	20	30	30	20	30	30	[20]	−20	−10
910320	−50	10	−10	−60	10	0	−10	−10	20	[50]	50	40
910321	−30	0	20	10	20	30	30	50	50	50	[70]	70
910322	40	40	30	10	30	30	40	40	40	50	50	[40]
910323	20	10	20	20	20	30	20	0	10	20	[10]	30
910324	−	−	−	−	−	−	−	−	−	−	50	80
910325	50	50	40	20	−40	−50	−10	0	10	−	10	10
910326	−10	10	OBS	OBS	+S	0	−10	20	20	30	[40]	60
910327	10	10	30	50	50	50	50	30	20	20	[50]	20
910328	40	50	40	30	20	30	20	50	50	60	[70]	−
910329	20	20	10	10	20	20	30	30	30	30	10	−30
910330	−20	−20	−10	−30	−50	−20	−20	−40	−40	−60	−20	−10
910331	30	0	0	0	30	40	40	30	50	−	50	60

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	60	40	50	30	30	30	30	30	20	0	−10	1
−10	0	0	0	40	50	40	40	40	50	40	40	3
0	30	40	50	60	80	60	40	0	0	−20	−30	22
0	−30	−10	0	20	10	−10	10	−10	0	−10	−10	9
40	80	110	90	90	60	40	50	50	50	40	50	28
30	30	30	50	40	50	60	40	50	40	30	40	43
−10	0	20	30	10	30	70	90	50	10	30	10	16
20	10	10	−30	20	30	40	40	50	40	10	20	4
40	40	40	30	50	30	30	20	40	40	30	20	35
70	70	60	40	30	0	0	20	30	10	−10	20	44
−10	20	10	20	40	50	80	60	60	70	80	70	22
50	50	50	50	50	50	50	50	50	30	40	30	38
70	70	60	60	50	50	50	50	40	30	20	10	36
50	50	50	50	50	40	40	30	20	30	30	−10	31
50	40	40	40	40	50	50	50	40	40	30	20	38
60	70	70	60	50	40	30	40	40	40	30	30	43
40	40	40	30	30	40	50	30	40	30	30	30	30
70	60	50	50	50	50	50	40	30	40	40	30	39
−20	−10	−10	0	0	−30	−30	−20	−20	−30	−40	−50	−3
70	60	70	70	60	50	40	40	40	40	40	30	27
70	70	80	80	50	50	50	60	60	60	50	40	45
30	30	40	40	50	50	40	40	30	40	40	30	38
60	70	80	80	70	60	40	70	60	40	50	−	39
70	70	80	80	70	50	50	40	40	50	40	50	−
10	10	10	0	−10	−20	−30	−40	−	−60	−10	−10	−3
40	30	40	40	40	30	30	40	30	50	20	−10	−
20	30	50	−10	−100	20	30	30	40	50	50	40	27
30	30	40	50	50	50	50	50	40	30	20	30	40
−40	−10	0	10	30	30	0	−10	10	0	0	−20	8
[−40]	20	40	50	40	40	50	50	40	30	40	40	1
50	60	60	50	50	40	40	40	30	40	40	50	38

Date	00	01	02	03	04	05	06	07	08	09	10	11
910401	30	30	40	40	50	50	60	70	70	[80]	80	80
910402	20	30	10	10	30	40	(50)	(40)	40	50	50	40
910403	30	20	0	−20	−10	−10	10	−10	−20	−10	30	70
910404	10	−40	−60	−20	−50	10	20	30	40	[40]	40	40
910405	10	−10	10	20	40	30	30	50	60	[50]	50	50
910406	OBS	30	30	20	30	30	30	50	50	30	[40]	30
910407	20	20	20	30	20	30	30	40	40	[40]	[50]	60
910408	50	30	40	30	40	40	30	−	[40]	40	40	40
910409	30	30	30	30	30	40	50	50	40	[30]	30	30
910410	30	30	30	30	40	50	70	70	−	50	[50]	[50]
910411	30	20	20	20	10	10	30	40	60	[60]	50	50
910412	−20	−20	−30	−10	−10	10	30	40	50	[50]	50	50
910413	OBS	60	10	10	20	20	30	30	30	[40]	50	50
910414	20	10	20	20	20	20	30	30	−	50	50	OBS
910415	30	20	30	30	30	40	[40]	(40)	60	50	50	60
910416	30	20	20	20	20	20	30	40	[40]	40	40	40
910417	0	−10	+S	OBS	OBS	OBS	OBS	OBS	0	0	−10	0
910418	0	20	30	40	40	40	−20	−50	140	[80]	−20	30
910419	−10	−10	−30	−20	−20	−20	−10	−50	[80]	100	80	60
910420	20	20	20	30	20	30	[40]	[40]	40	40	30	20
910421	20	20	20	20	20	30	40	60	60	−	50	70
910422	30	30	30	20	20	30	[30]	(30)	30	0	20	40
910423	20	30	40	40	30	40	50	50	40	[40]	30	20
910424	20	20	20	10	−20	−10	−10	[10]	[10]	20	30	40
910425	−10	10	10	0	0	0	−30	−10	[20]	70	40	80
910426	0	−10	0	0	10	10	10	[−10]	−30	10	30	40
910427	30	30	30	20	20	40	60	50	40	[50]	40	40
910428	0	−10	20	40	30	40	80	60	(50)	50	60	70
910429	20	20	20	20	30	30	[30]	(30)	40	50	50	50
910430	10	10	10	30	30	40	50	[40]	50	50	50	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
80	70	70	80	70	40	50	50	40	30	20	20	54
40	40	40	40	50	40	30	0	0	−10	0	30	−
80	60	20	40	40	50	50	70	30	0	−50	−20	19
50	60	50	50	40	50	40	30	10	10	−10	−10	18
30	40	50	60	60	50	50	50	40	40	40	40	39
40	60	60	40	40	40	40	40	30	30	30	20	37
70	70	70	70	80	80	60	60	60	50	40	40	48
30	50	30	50	50	50	50	50	50	40	30	30	40
30	40	50	30	30	OBS	30	40	40	40	30	30	35
50	40	50	60	80	50	70	60	60	70	60	60	53
50	60	50	50	40	10	30	10	30	−10	−30	−20	28
60	−10	OBS	OBS	70	40	40	40	50	30	20	30	−
−10	OBS	+S	40	30	40	40	40	40	30	30	20	−
+S	50	30	40	30	40	50	50	30	30	20	20	−
60	50	50	70	60	50	40	40	50	40	30	30	44
30	30	30	30	30	40	40	70	0	−50	−10	40	27
10	10	10	20	20	30	20	−10	−10	0	−20	+S	−
0	−30	0	−10	−10	−10	−20	−10	−10	−10	−10	−20	8
50	50	30	40	40	50	50	50	40	30	30	20	26
OBS	+S	+S	OBS	40	30	30	OBS	−S	30	20	30	−
70	60	60	50	50	50	40	40	40	40	30	30	42
30	+S	30	30	30	30	40	40	40	30	40	30	−
40	50	50	40	40	60	70	60	40	40	40	30	41
60	OBS	OBS	70	20	10	0	−10	−10	−20	−40	−40	−
70	50	60	60	50	40	30	40	20	10	10	10	26
50	40	40	50	40	40	60	50	40	40	30	30	24
40	50	30	30	40	40	30	30	40	30	40	20	36
70	50	40	30	30	30	20	30	40	40	30	20	38
50	50	50	40	30	+S	60	40	30	20	10	10	−
40	40	30	40	30	30	30	30	20	30	20	30	33

Date	00	01	02	03	04	05	06	07	08	09	10	11
910501	30	20	30	40	40	40	50	[60]	50	50	40	40
910502	20	20	10	10	30	30	70	[60]	[50]	30	(40)	–
910503	30	40	+S	-20	-50	30	30	40	40	[20]	OBS	-100
910504	20	0	20	10	20	-10	-10	50	[60]	50	40	30
910505	30	30	30	30	40	40	40	–	40	40	40	40
910506	30	30	20	30	20	30	30	(30)	(40)	40	20	30
910507	30	30	30	20	20	30	40	40	[50]	50	40	50
910508	60	40	40	40	40	50	[60]	60	60	50	40	40
910509	0	10	0	0	-10	0	10	10	30	30	40	[40]
910510	20	10	-10	+S	-30	30	50	[20]	-30	-S	+S	40
910511	OBS	OBS	OBS	OBS	OBS	-80	-20	10	20	20	[40]	70
910512	30	20	30	30	30	40	40	–	80	80	80	60
910513	-10	0	-10	-10	0	-10	-10	–	10	(10)	30	30
910514	10	10	10	10	20	30	30	40	[50]	60	50	50
910515	-20	-10	-20	-10	-10	10	20	40	50	[50]	50	40
910516	30	40	40	40	40	(50)	–	–	(60)	60	60	70
910517	-50	-20	0	OBS	-S	OBS	-S	-20	-10	[-20]	0	-10
910518	0	10	0	0	10	-10	[-10]	-20	-30	-40	-20	-30
910519	-30	-20	0	20	-30	-20	–	–	–	–	–	–
910520	50	50	40	50	60	70	{80]	(80)	80	60	50	40
910521	30	20	10	-30	10	10	30	30	[20]	[30]	30	40
910522	30	20	20	30	20	20	20	[30]	40	30	40	30
910523	OBS	OBS	30	40	30	40	50	50	50	50	[50]	50
910524	30	30	40	30	40	40	50	60	50	[-S]	20	–
910525	30	30	30	30	40	40	50	40	30	40	–	–
910526	–	–	–	–	–	–	–	–	–	–	–	30
910527	OBS	OBS	OBS	-20	10	30	[30]	(50)	50	40	30	40
910528	40	40	30	30	40	–	–	–	–	–	–	–
910529	30	40	30	40	50	60	[60]	70	70	70	70	70
910530	30	30	40	40	50	40	40	30	40	60	[50]	30
910531	30	20	10	20	20	10	30	40	(50)	40	40	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	+S	OBS	OBS	+S	−S	−10	OBs	−40	20	10	0	−
−S	50	−S	50	40	50	50	50	40	40	40	40	−
−80	−70	−60	−40	−30	−50	−10	−10	0	−10	10	OBS	−
30	40	40	50	50	60	60	50	40	40	30	30	33
40	40	40	40	50	50	50	50	40	40	30	30	39
30	40	50	40	30	30	40	30	30	30	20	20	31
60	60	50	50	60	50	50	40	40	40	30	60	43
40	50	50	50	50	40	40	40	30	20	10	0	42
50	40	30	40	30	20	20	30	40	30	30	20	23
10	30	40	10	20	30	20	10	20	+S	OBS	20	−
40	50	40	40	40	40	40	40	40	40	50	40	−
50	30	20	20	20	30	40	40	10	C	−10	−10	33
60	60	40	40	390	40	40	30	20	20	10	10	−
50	50	40	30	30	30	30	20	30	30	30	20	24
40	50	40	40	30	40	40	50	400	30	30	30	27
60	50	50	50	60	30	10	−20	−10	0	−90	−110	−
−10	−10	−10	−10	0	−10	10	0	10	10	10	0	−
0	10	20	−10	−60	−90	−20	−20	−70	−30	−20	−30	19
20	50	60	70	70	60	60	70	70	80	70	80	−
40	50	50	50	50	50	50	40	40	30	30	40	50
40	30	20	30	30	30	30	30	40	40	40	30	26
30	40	40	40	40	30	40	30	30	20	+S	−30	28
50	50	40	40	40	50	50	OBS	+S	20	10	OBS	−
−	−	+S	OBS	OBS	OBS	30	20	30	20	30	30	−
−	−	−	−	−	−	−	−	−	−	−	−	−
40	OBS	40	30	0	OBS	30	30	30	30	30	−30	−
50	40	40	40	40	40	40	40	30	30	40	40	−
−	40	50	40	40	30	50	50	70	70	60	40	−
60	60	70	70	60	60	70	60	40	40	30	30	55
50	40	40	40	30	30	30	30	40	40	30	30	38
30	40	30	30	30	20	20	30	20	10	0	0	24

Date	00	01	02	03	04	05	06	07	08	09	10	11
910601	0	0	0	0	0	10	20	20	30	[30]	30	30
910602	–	–	–	–	–	–	–	(30)	40	[40]	[50]	50
910603	30	30	20	30	10	0	–10	(10)	10	(30)	(−30)	80
910604	20	20	10	20	20	50	50	OBS	30	[–30]	0	20
910605	10	10	10	10	20	30	50	90	[70]	60	50	40
910606	10	20	10	(10)	30	30	40	40	40	[20]	0	10
910607	20	20	20	10	10	10	30	[60]	40	40	40	20
910608	20	20	30	30	30	20	10	[30]	30	30	30	30
910609	10	0	0	0	0	10	30	[40]	–	40	50	40
910610	10	10	10	10	10	10	20	(20)	[40]	40	40	30
910611	50	OBS	–10	0	0	0	80	40	80	[40]	30	30
910612	10	10	20	20	20	30	30	40	[40]	40	30	30
910613	10	10	0	0	10	30	30	[30]	[40]	50	50	50
910614	10	0	0	0	10	0	+S	–20	+S	[+S]	–20	–50
910615	–10	0	–10	–10	30	0	0	[10]	30	30	30	20
910616	–10	–10	0	10	10	0	10	–	40	50	50	60
910617	30	30	20	30	40	30	(30)	(40)	50	50	40	40
910618	20	10	10	OBS	30	OBS	–S	[30]	40	40	30	20
910619	30	30	30	20	10	10	OBS	OBS	OBS	[OBS]	–30	–40
910620	20	20	10	10	10	50	100	[90]	80	70	40	40
910621	40	–30	0	40	40	60	50	[40]	40	40	40	40
910622	30	10	10	20	30	40	[40]	40	40	50	60	60
910623	10	30	20	20	30	30	30	–	50	60	70	60
910624	20	30	30	30	30	40	[40]	–	40	30	40	50
910625	0	20	10	–10	10	20	30	20	70	30	[60]	50
910626	–50	–20	10	10	–10	20	(–10)	(–10)	–10	0	10	20
910627	0	10	0	10	10	20	[90]	120	70	70	50	50
910628	OBS	–	–	–	–	–	–	–	–	–	–	–
910629	–	–	–	–	–	–	–	–	–	–	30	30
910630	30	20	30	40	50	50	40	40	(60)	–	50	50

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	40	40	40	30	80	40	20	(40)	–	0	0	–
60	60	60	50	40	30	30	30	30	30	30	30	–
+S	OBS	OBS	–30	0	–30	20	20	0	0	10	10	–
20	–20	–40	–10	–20	–20	30	20	30	30	40	30	13
40	40	30	30	10	10	20	20	10	10	10	0	28
10	20	30	30	20	20	30	20	10	10	20	0	20
30	30	30	20	20	30	30	30	30	20	10	10	25
30	40	40	40	20	30	20	20	30	10	10	10	25
30	40	50	50	50	40	30	30	30	20	10	10	27
30	40	40	40	30	10	0	–10	OBS	30	10	OBS	–
20	30	–S	–S	30	20	30	20	10	10	10	10	25
40	40	40	40	30	30	30	30	20	10	0	0	26
40	40	40	30	30	20	10	10	10	–10	10	10	23
–20	–10	–10	–20	–20	0	–10	–30	–10	–10	–20	–10	–
20	30	30	40	40	40	20	20	20	10	0	–10	16
60	60	60	50	40	40	50	60	50	50	40	30	35
30	20	40	50	50	50	50	40	40	40	40	30	–
120	80	60	50	50	40	70	60	50	50	40	30	44
–20	–30	30	–20	–10	0	30	50	50	20	10	10	9
40	40	40	40	40	40	40	40	50	50	40	40	43
50	80	60	60	60	60	70	70	60	60	40	30	46
60	70	70	70	60	50	40	50	50	40	30	10	43
60	60	60	70	60	50	40	30	30	30	30	30	42
40	+S	0	20	30	10	30	30	40	20	10	10	28
60	60	50	50	50	40	30	30	30	10	–40	–40	27
OBS	+S	OBS	OBS	OBS	–S	30	–10	–10	–20	20	0	–
40	50	30	30	+S	30	–20	–80	0	20	–70	OBS	–
–	–	–	–	–	–	–	–	–	–	–	–	–
20	20	30	30	30	30	40	30	20	30	30	30	–
50	50	50	50	50	50	50	50	50	40	40	30	–

Date	00	01	02	03	04	05	06	07	08	09	10	11
910701	20	30	10	10	(20)	–	–	–	–	–	50	50
910702	50	50	40	30	30	40	[40]	[50]	50	50	50	50
910703	40	30	20	20	30	40	50	[40]	(30)	30	30	30
910704	0	0	0	0	10	–	–	–	–	–	–	–
910705	10	0	20	20	30	30	30	[40]	40	60	60	60
910706	30	20	30	30	30	30	40	[50]	60	60	70	60
910707	20	20	20	10	20	30	30	30	30	30	–	30
910708	10	0	10	10	20	30	30	–	[30]	30	30	40
910709	0	0	0	0	0	0	10	20	20	30	[40]	70
910710	0	0	10	10	10	10	20	30	40	50	[50]	[60]
910711	10	10	10	10	10	20	10	20	[30]	[40]	40	30
910712	10	20	20	20	30	30	40	[40]	50	50	60	60
910713	10	–10	10	10	10	20	20	30	30	[40]	[40]	70
910714	0	10	10	0	0	30	50	70	50	20	–	[40]
910715	0	–10	–10	0	0	0	(10)	[20]	30	40	40	50
910716	10	10	10	0	10	10	30	30	40	50	–	40
910717	40	40	50	40	40	40	40	50	50	OBS	30	40
910718	–10	0	0	–10	0	20	40	80	100	[100]	80	50
910719	0	–10	0	10	10	20	[30]	40	40	50	50	60
910720	10	10	10	10	30	30	30	100	[30]	50	20	20
910721	OBS	10	20	30	20	50	100	–	70	+S	OBS	OBS
910722	30	30	30	30	40	50	[80]	–	[110]	90	60	70
910723	20	10	20	20	20	30	30	40	40	40	40	[40]
910724	20	20	10	10	10	30	30	30	30	[40]	40	40
910725	0	0	0	–10	–10	0	–10	20	[30]	40	100	100
910726	30	30	30	20	20	30	10	20	[40]	10	20	(50)
910727	10	20	30	30	20	30	[30]	50	50	40	30	30
910728	20	50	0	–10	–20	0	0	20	20	20	10	20
910729	30	40	40	30	40	+S	OBS	10	50	–	100	80
910730	10	20	10	10	20	40	110	80	100	100	80	[60]
910731	20	30	30	30	30	20	[30]	30	40	40	50	60

12	13	14	15	16	17	18	19	20	21	22	23	Means
50	50	50	50	50	50	70	60	70	100	70	60	–
50	50	50	40	50	50	50	50	50	50	60	40	47
30	30	30	20	20	10	10	20	20	10	−10	0	24
80	OBS	OBS	30	20	0	10	10	10	30	20	20	–
50	0	OBS	+S	80	70	80	60	50	50	30	30	–
60	50	50	60	60	60	50	40	30	30	30	20	44
30	40	40	40	30	30	20	30	20	10	10	10	25
40	50	50	50	30	10	10	0	0	0	0	0	21
0	40	30	40	+S	40	50	50	30	20	10	10	22
60	70	70	70	50	40	30	20	20	30	20	20	33
40	50	50	50	50	40	40	30	30	20	10	10	28
70	70	70	50	30	30	30	20	10	10	20	10	35
OBS	OBS	OBS	OBS	OBS	−S	−S	−20	0	30	10	0	–
30	OBS	OBS	OBS	OBS	OBS	+S	OBS	OBS	20	0	0	–
30	50	50	40	40	40	40	30	20	30	30	20	25
40	50	50	60	40	30	30	40	40	30	30	30	31
50	50	50	50	OBS	(OBS)	–	–	–	–	–	−10	–
50	40	40	30	30	40	40	40	30	30	20	10	35
60	80	70	50	40	30	20	20	30	40	20	20	33
20	30	30	70	OBS	30	10	10	20	10	−30	OBS	–
OBS	OBS	OBS	−S	OBS	+S	10	10	30	40	40	50	–
60	40	60	70	60	50	50	40	30	20	20	30	50
30	40	40	40	40	50	40	30	20	30	40	30	33
40	100	+S	40	+S	OBS	OBS	0	0	(0)	(−10)	(−10)	–
40	80	80	80	80	OBS	OBS	OBS	40	30	10	30	–
50	40	50	40	30	30	30	20	30	50	40	30	30
−S	0	30	30	20	20	−20	10	OBS	−S	10	10	–
20	50	50	60	50	60	80	90	50	40	40	40	32
70	50	50	40	OBS	OBS	10	20	20	30	20	10	–
60	50	50	50	40	20	20	20	10	20	20	10	42
60	60	60	70	60	60	60	50	50	60	40	30	45

Date	00	01	02	03	04	05	06	07	08	09	10	11
910801	30	20	20	30	30	40	30	[40]	40	40	OBS	−S
910802	0	−10	−10	0	10	10	OBS	−10	20	0	10	−10
910803	−10	−10	−10	−10	−10	10	0	20	30	10	20	30
910804	0	10	20	10	20	30	30	40	−	30	50	70
910805	30	30	20	30	40	40	[40]	[40]	30	30	20	30
910806	30	20	30	20	30	40	40	40	[60]	70	60	70
910807	10	0	10	20	40	40	70	[50]	40	40	40	40
910808	20	20	30	30	30	40	40	50	50	[40]	40	40
910809	20	20	10	10	20	40	50	[40]	40	50	60	60
910810	−	−	−	−	−	−	−	80	[80]	[70]	60	60
910811	20	20	20	10	10	10	30	30	30	[30]	[40]	40
910812	30	40	30	30	40	40	(50)	(30)	20	30	40	40
910813	30	30	70	40	60	60	80	[130]	80	80	40	20
910814	30	30	40	OBS	OBS	70	70	60	[60]	60	60	70
910815	20	10	20	30	20	(30)	−	(30)	40	[50]	50	50
910816	0	10	0	0	10	20	40	40	30	50	[60]	70
910817	30	20	20	30	30	30	40	30	30	[40]	30	30
910818	10	20	30	30	20	+S	OBS	−	OBS	OBS	10	OBS
910819	10	20	10	10	30	40	60	(100)	(60)	60	40	40
910820	30	20	30	20	10	20	30 ·	30	40	40	[30]	30
910821	20	10	−10	10	20	30	40	[40]	50	40	40	40
910822	20	30	30	20	10	30	40	[40]	50	50	60	50
910823	20	20	20	20	20	10	30	10	10	[10]	30	40
910824	10	0	0	10	10	20	40	20	30	30	30	[40]
910825	10	20	30	20	10	20	50	60	80	70	−	70
910826	30	20	30	30	40	40	70	(50)	[40]	60	70	60
910827	20	20	20	30	40	50	40	50	[50]	[60]	60	40
910828	30	30	20	30	30	30	60	60	[60]	60	80	80
910829	30	20	30	40	40	60	70	[80]	[80]	60	50	70
910830	30	30	30	40	30	40	40	50	[60]	70	70	70
910831	20	10	10	10	10	20	30	50	80	110	120	[80]

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	70	60	30	20	10	20	30	500	40	20	10	–
20	10	20	10	OBS	–20	–20	30	–10	–10	–10	–10	1
[40]	60	40	50	40	40	30	40	40	–S	40	20	22
40	40	50	40	30	40	30	20	20	20	30	30	30
30	30	40	40	40	40	40	50	40	40	40	30	35
80	90	80	80	70	50	40	40	40	30	20	10	48
40	40	40	50	40	40	50	40	30	40	40	30	37
40	50	40	30	30	40	30	40	30	30	20	10	34
–	–	–	–	–	–	–	–	–	–	–	–	–
50	50	60	60	70	70	50	40	20	10	20	30	–
40	40	50	40	30	40	–	20	30	40	30	30	30
40	40	0	OBS	20	20	10	–S	+S	OBS	+S	OBS	–
50	60	70	60	40	30	30	20	10	10	20	20	48
80	80	80	40	30	30	30	(10)	–	–	(10)	20	–
40	50	30	30	40	40	40	30	30	20	20	10	–
60	70	60	50	40	30	20	20	20	10	20	20	31
30	30	40	30	20	10	20	0	30	30	10	20	26
OBS	0	60	OBS	–S	10	10	10	20	20	10	10	–
40	50	50	50	40	30	40	60	40	40	40	40	–
30	40	40	40	30	30	30	30	30	40	40	40	31
50	50	60	50	30	30	30	40	30	20	30	30	33
40	40	50	50	40	40	40	30	40	30	20	20	36
30	40	50	50	50	40	30	30	20	10	10	10	25
40	40	40	40	40	30	–S	OBS	+S	10	10	10	–
70	70	70	80	60	50	40	30	30	40	40	40	46
60	50	50	50	60	50	60	70	50	50	40	30	48
20	50	40	50	50	40	50	50	60	40	40	40	42
70	70	OBS	OBS	+S	OBS	–S	10	30	30	30	30	–
60	50	60	50	50	50	50	50	50	40	40	30	50
70	60	60	50	50	30	40	40	40	30	30	30	45
50	50	50	50	50	40	40	50	60	50	40	40	47

Date	00	01	02	03	04	05	06	07	08	09	10	11
910901	30	30	30	30	30	30	60	50	–	30	30	40
910902	0	0	–10	0	0	0	10	–	30	30	60	50
910903	30	20	30	20	30	30	50	30	50	50	[40	30
910904	10	20	20	20	20	30	30	50	[60]	[60]	60	60
910905	10	10	10	20	20	390	40	[40]	40	40	60	50
910906	30	30	30	20	20	20	30	60	[40]	20	10	30
910907	20	30	10	30	30	40	40	30	30	10	10	30
910908	OBS	10	20	10	10	20	.20	30	40	50	–	30
910909	20	20	30	30	30	30	[30]	–	(40)	40	30	40
910910	10	10	0	20	20	30	40	30	50	[50]	50	50
910911	30	30	30	20	10	20	30	30	30	50	[60]	50
910912	40	30	20	30	20	30	70	70	30	0	[30]	10
910913	30	10	30	50	40	30	40	40	40	80	70	20
910914	30	40	30	20	30	30	30	30	30	[40]	30	30
910915	20	30	OBS	OBS	–S	30	20	+S	+S	–	30	40
910916	10	20	10	10	10	10	[20]	[80]	(40)	70	50	40
910917	0	10	20	10	10	30	40	60	70	40	[40]	0
910918	20	20	30	30	20	30	50	70	50	[30]	50	40
910919	30	40	30	30	30	40	40	[40]	(50)	–	–	–
910920	20	30	30	40	40	40	100	[80]	50	40	30	40
910921	10	30	50	40	60	50	[50]	[140]	120	80	80	60
910922	0	10	0	20	40	40	[50]	[60]	50	30	40	40
910923	40	50	30	20	30	50	[30]	(20)	–S	OBS	–30	OBS
910924	30	30	20	30	20	30	40	70	60	[60]	50	60
910925	20	0	10	30	40	40	40	–	50	40	40	50
910926	10	0	10	10	20	20	30	30	10	[30]	[40]	50
910927	40	20	10	20	30	40	50	40	30	[40]	50	50
910928	–S	OBS	OBS	OBS	OBS	OBS	20	30	40	[50]	40	40
910929	20	20	30	30	40	40	50	–	30	30	40	40
910930	30	30	30	30	30	30	30	[30]	(30)	30	40	40

12	13	14	15	16	17	18	19	20	21	22	23	Means
40	40	30	30	30	20	20	20	10	0	0	0	27
30	40	40	40	40	30	30	30	30	20	30	30	24
40	40	30	30	30	20	20	30	20	20	10	20	30
50	30	30	30	30	30	30	30	20	20	10	10	32
60	60	70	60	40	30	30	20	20	30	20	30	35
40	30	20	30	30	30	30	30	30	40	30	20	29
30	30	30	30	30	20	30	30	30	30	10	−S	27
30	30	30	30	30	30	0	30	30	10	20	20	−
30	40	40	30	20	20	20	20	20	30	20	10	−
60	60	50	40	50	40	40	40	40	40	40	40	38
50	40	40	−S	−S	40	30	50	OBS	OBS	30	50	−
10	40	50	40	30	50	30	30	30	30	20	20	34
30	50	60	30	40	50	50	50	40	40	30	40	41
30	30	40	40	40	30	20	30	40	40	40	30	33
40	50	60	60	70	+S	OBS	OBS	OBS	0	0	0	−
80	50	40	40	30	30	30	30	20	−10	0	0	−
30	20	40	40	30	30	30	30	OBS	0	0	20	26
40	40	30	50	60	40	50	50	50	50	40	40	41
70	80	60	50	30	30	40	40	30	30	20	30	40
60	50	40	OBS	OBS	−10	−20	−10	−20	−20	−20	−10	−
60	50	40	40	30	20	20	10	10	20	0	0	45
40	40	50	50	60	40	40	40	50	60	40	30	38
30	70	−S	20	40	60	50	50	40	40	40	30	−
50	50	(60)	(70)	60	30	30	20	20	30	40	30	−
50	40	50	40	30	30	0	−10	−10	−20	0	0	24
40	40	30	30	10	0	0	20	20	30	30	30	23
40	40	50	40	30	30	30	30	20	20	OBS	OBS	−
40	40	40	40	30	30	30	40	40	30	20	10	−
40	40	50	40	40	50	70	40	40	30	10	20	37
40	40	30	40	40	OBS	OBS	−10	0	OBS	20	0	−

Date	00	01	02	03	04	05	06	07	08	09	10	11
911001	10	0	10	+S	OBS	OBS	–S	–20	70	0	0	20
911002	30	20	–S	20	30	30	40	+S	–S	OBS	[40]	50
911003	50	50	60	50	50	60	60	60	[80]	70	50	60
911004	20	20	30	40	40	50	50	60	50	60	60	[80]
911005	30	20	40	30	40	60	80	30	30	[40]	60	60
911006	30	30	30	30	20	30	30	20	20	30	–	40
911007	40	30	40	70	120	50	60	[70]	(50)	40	40	40
911008	50	40	40	50	50	50	70	80	[50]	50	40	20
911009	–40	OBS	10	20	30	20	20	[20]	10	30	40	30
911010	30	30	40	40	60	50	40	[40]	70	50	70	50
911011	40	40	50	40	40	50	20	[30]	30	20	30	–10
911012	10	10	–10	–40	0	–10	–10	–10	10	30	20	[40]
911013	40	40	40	40	40	40	40	30	30	30	30	(40)
911014	30	30	20	40	50	40	40	[50]	–	[60]	60	60
911015	30	30	30	10	20	0	0	30	30	60	50	50
911016	40	30	30	40	50	60	60	60	70	50	[40]	40
911017	20	40	100	40	50	70	80	120	[130]	[50]	70	60
911018	30	40	80	30	20	10	10	[0]	–90	–S	OBS	OBS
911019	20	20	20	20	10	20	30	20	30	30	[0]	30
911020	30	30	30	20	30	40	50	40	40	40	40	(50)
911021	30	20	20	30	30	40	30	(40)	(60)	60	60	80
911022	30	30	10	30	30	30	40	50	30	40	[50]	50
911023	40	30	30	30	30	30	30	30	30	30	[–10]	0
911024	40	20	20	30	30	40	50	60	70	50	[70]	70
911025	0	–10	–10	OBS	OBS	20	20	40	50	90	80	[60]
911026	50	50	50	50	50	60	60	60	50	50	[50]	50
911027	30	20	20	10	10	30	30	30	30	40	(40)	50
911028	40	40	40	40	50	50	60	50	[50]	–	60	70
911029	50	50	40	50	50	50	60	50	60	60	[50]	70
911030	30	20	20	30	30	40	30	20	–20	0	[20]	40
911031	20	20	10	10	20	20	20	30	20	[20]	20	30

12	13	14	15	16	17	18	19	20	21	22	23	Means
[40]	50	40	40	30	30	30	30	40	40	30	30	−
50	60	50	50	60	70	70	60	80	70	60	OBS	−
60	70	70	90	80	60	60	60	50	40	30	30	58
80	90	80	70	80	60	60	40	40	30	50	40	53
70	60	60	70	60	30	20	40	40	30	20	30	44
40	60	50	40	40	40	40	60	50	60	50	40	38
40	40	30	40	50	70	70	60	60	60	50	40	52
20	30	10	0	−20	0	30	20	40	−S	OBS	20	−
40	30	40	40	50	50	40	−30	20	30	30	40	25
50	60	50	60	50	50	70	80	80	80	60	50	55
−10	0	−10	10	−10	10	−10	−30	−60	−40	−20	10	9
[30]	20	20	50	50	50	50	10	30	40	50	50	20
[40]	30	30	40	40	40	50	50	40	40	40	30	38
60	60	50	40	30	30	20	30	40	30	50	40	42
[50]	60	60	40	−10	−40	10	30	20	30	30	40	28
40	30	10	10	10	20	20	0	20	30	30	35	35
60	60	60	60	60	60	80	70	80	90	120	70	71
+S	80	OBS	OBS	OBS	OBS	OBS	20	30	0	−S	−40	−
10	30	10	40	80	90	120	100	50	50	50	40	38
40	40	50	40	50	60	60	60	60	40	40	30	42
90	90	90	90	80	80	80	70	40	40	50	30	−
50	50	50	60	60	50	50	50	50	50	40	40	43
−10	20	40	50	50	50	50	50	40	40	30	30	31
+S	+S	50	60	20	40	40	20	−10	10	−60	−10	−
100	90	90	80	90	60	60	70	70	90	80	80	−
50	40	40	50	50	50	60	50	50	50	40	30	50
50	50	40	50	40	40	40	40	40	50	40	30	35
60	60	50	40	80	+S	70	70	70	70	80	70	−
70	70	70	70	60	70	60	40	30	30	30	40	53
40	40	50	40	50	50	30	20	20	20	30	20	28
30	40	30	30	50	50	30	40	30	30	30	20	27

Date	00	01	02	03	04	05	06	07	08	09	10	11
911101	20	20	20	20	20	20	0	−10	−10	20	[30]	30
911102	−40	−50	−40	−50	−50	−40	−40	−50	−40	[−10]	0	10
911103	20	20	30	30	40	30	20	10	0	0	−10	−
911104	−60	−40	−50	−80	−70	−80	−60	[−50]	−	10	20	10
911105	OBS	OBS	+S	20	30	30	30	40	30	[40]	50	40
911106	40	40	30	20	30	10	10	30	40	50	[40]	40
911107	30	40	30	40	40	40	50	50	50	50	[50]	50
911108	10	−10	20	20	30	30	50	40	70	80	90	100
911109	40	50	50	60	50	50	40	50	60	50	[50]	50
911110	20	30	20	30	30	30	40	50	40	50	[40]	−
911111	40	40	30	30	40	40	50	[50]	(60)	50	70	70
911112	30	50	50	40	40	60	70	70	70	60	[80]	70
911113	20	20	10	10	30	−10	10	20	30	40	[40]	40
911114	0	0	−10	0	0	30	30	20	30	[−10]	30	30
911115	40	30	30	40	40	50	50	50	40	50	[40]	40
911116	30	20	10	−90	−70	−100	−70	−20	−80	−60	0	[30]
911117	20	30	10	20	20	(30)	−	−	−	−	−	−
911118	10	20	30	40	40	40	50	50	−	50	60	60
911119	30	20	10	0	−10	20	30	40	[40]	60	20	60
911120	−80	−70	0	20	30	10	10	−60	[−S]	OBS	40	50
911121	120	20	10	60	70	110	90	[70]	50	50	+S	−S
911122	40	30	0	0	0	−40	−30	−	−	−70	0	40
911123	30	30	30	30	30	10	10	20	[30]	50	30	10
911124	30	30	60	50	50	50	50	70	[70]	50	30	0
911125	40	−20	−70	0	10	20	20	20	−	50	60	50
911126	50	40	50	60	60	50	30	30	[60]	40	30	40
911127	10	10	10	20	30	30	30	20	10	10	[0]	10
911128	20	30	20	30	20	30	30	[20]	20	20	30	40
911129	40	40	40	40	40	40	[40]	[60]	50	40	60	60
911130	20	30	30	30	20	30	20	30	[30]	20	0	10

12	13	14	15	16	17	18	19	20	21	22	23	Means
30	40	50	50	20	0	−10	−10	−30	−20	−20	−30	10
20	50	30	30	10	10	10	10	20	20	20	20	−6
10	30	20	0	−10	20	20	10	−20	−30	−40	−40	7
−10	−20	−50	−10	20	40	30	−80	+S	OBS	OBS	OBS	−
50	50	50	60	70	50	50	70	60	70	60	50	−
40	40	40	50	40	50	50	50	50	40	50	40	38
50	60	60	50	70	40	0	−10	−10	−10	0	10	35
70	70	80	80	70	80	80	70	50	70	60	50	55
50	70	70	40	50	+S	10	−20	−10	10	10	20	39
50	50	50	50	70	110	100	80	70	80	60	40	52
60	70	80	80	70	50	50	50	60	50	50	60	54
70	60	50	80	50	50	50	40	30	50	20	30	53
40	40	30	30	40	10	0	0	20	30	0	10	19
20	40	50	20	10	−S	OBS	+S	50	OBS	40	70	−
50	40	50	40	20	10	20	20	40	30	40	40	38
−50	−10	−40	−30	−30	−40	30	−10	20	−40	0	20	−4
−	+S	OBS	30	50	30	20	40	30	30	20	20	−
70	70	70	60	120	130	110	100	50	30	30	20	57
80	100	70	90	110	130	130	120	120	100	90	50	63
60	70	50	OBS	−20	−10	40	OBS	OBS	70	60	150	−
40	50	40	10	10	30	30	20	−10	−10	10	30	−
30	30	40	50	50	40	40	50	50	40	30	30	−
20	30	10	30	30	50	50	50	40	40	40	30	30
30	10	20	−50	20	20	20	−70	−30	10	20	0	23
50	70	80	80	80	80	90	40	40	70	70	60	43
40	30	30	40	30	20	50	40	30	30	30	20	39
20	30	20	20	20	30	40	40	40	60	30	30	24
50	40	50	30	40	60	60	70	70	50	50	40	38
60	50	50	60	60	50	50	40	40	40	30	30	46
30	30	30	30	30	30	30	40	40	30	30	20	27

Date	00	01	02	03	04	05	06	07	08	09	10	11
911201	20	20	30	40	30	40	40	30	[30]	50	40	60
911202	40	40	40	30	20	20	20	20	0	20	40	50
911203	10	10	20	20	30	30	30	[30]	50	(60)	(30)	40
911204	30	30	30	10	0	0	[20]	30	30	20	20	20
911205	40	30	40	40	30	30	40	[50]	60	40	20	−10
911206	OBS	−10	−20	−10	20	0	30	−S	40	50	40	+S
911207	−50	−60	−50	−80	−80	−70	−20	10	[50]	90	80	80
911208	+S	80	110	110	80	100	110	90	90	[100]	80	80
911209	−	−	−	−	−	−	−	−	−	60	80	80
911210	20	10	−10	−20	−60	10	40	[70]	70	90	100	120
911211	60	60	70	60	40	60	40	70	[60]	90	100	120
911212	70	70	80	40	70	130	+S	[110]	110	80	130	130
911213	170	120	150	70	80	100	90	[100]	160	110	120	110
911214	170	140	90	110	80	100	70	90	[120]	130	120	140
911215	90	80	60	60	50	70	80	50	[90]	90	70	70
911216	70	60	90	80	60	20	50	40	−	70	70	50
911217	60	90	50	30	0	40	20	[10]	20	−30	0	−30
911218	−80	−60	−40	−40	−20	−10	[−30]	−20	−30	−20	−30	−30
911219	50	40	40	40	50	50	[60]	70	70	70	80	80
911220	30	50	50	50	60	70	[70]	110	−S	OBS	−50	30
911221	60	50	50	50	50	50	50	70	[80]	[60]	60	60
911222	−40	−20	−10	−20	0	−20	−10	0	[30]	50	60	30
911223	−10	−10	−30	−10	10	20	10	−	10	20	30	60
911224	30	−S	−S	−20	20	30	30	70	OBS	30	+S	OBS
911225	−50	10	40	40	50	50	50	−S	[+S]	70	70	60
911226	50	50	70	40	30	20	40	40	[40]	50	50	50
911227	−40	0	40	40	30	50	40	[50]	[50]	60	50	−50
911228	20	+S	−10	0	−10	0	OBS	50	50	[50]	50	40
911229	50	60	80	70	60	60	50	60	60	[70]	70	110
911230	70	60	50	50	40	40	50	30	−	50	50	50
911231	50	40	40	40	30	30	30	40	[40]	40	10	20

12	13	14	15	16	17	18	19	20	21	22	23	Means
90	70	50	60	50	60	50	40	40	30	40	40	44
60	60	50	30	30	30	10	30	30	10	20	10	31
50	70	70	40	40	50	60	60	50	50	40	40	–
30	30	30	–10	–10	20	30	40	40	40	40	40	23
–20	–20	–30	–10	–10	0	30	40	40	40	50	40	23
OBS	OBS	80	50	–20	60	50	50	60	70	30	–40	–
70	40	50	20	OBS	OBS	OBS	–20	OBS	OBS	OBS	–S	–
80	90	100	100	90	110	100	80	70	–	–	–	–
90	90	70	60	90	120	100	80	90	90	40	20	–
140	160	140	120	110	100	120	120	80	60	40	60	70
130	120	130	160	150	170	130	30	60	80	80	80	90
130	140	150	190	110	–100	+S	+S	130	+S	150	170	–
100	150	150	100	140	+S	130	120	100	120	110	140	119
140	140	80	90	140	140	140	120	120	100	90	100	115
90	80	60	80	90	120	120	120	120	80	90	70	83
–10	70	70	80	60	10	40	90	110	70	30	60	58
40	–30	–40	–70	–30	–10	50	50	–50	–40	–40	–50	2
–30	0	60	50	10	40	60	60	50	50	50	40	1
80	30	30	60	–30	+S	–20	0	–10	–40	–50	–10	32
60	80	70	60	70	90	90	80	80	100	90	80	–
50	60	60	+S	80	70	90	100	80	60	0	–70	55
40	70	60	110	80	50	50	70	120	70	20	10	33
70	110	90	30	20	20	20	40	40	50	+S	110	–
–10	80	50	60	50	50	50	50	50	40	OBS	OBS	–
60	70	70	60	50	60	40	50	50	50	50	40	–
50	50	50	50	30	30	30	–20	–10	40	10	30	36
–90	–30	–20	–10	–20	10	0	10	0	10	20	30	10
50	70	50	60	70	60	70	90	100	90	80	70	–
120	130	120	100	90	110	120	130	120	120	100	70	89
50	50	60	60	50	60	60	50	40	40	40	40	50
20	20	30	30	30	30	70	70	70	80	70	60	39

2. Hourly means of the quantities of positive and negative
1990

Month		00	01	02	03	04	05	06	07	08	09	10	11
9001	+	0	0	0	0	0	0	0	0	0	0	2	15
9001	−	0	0	0	0	0	0	0	0	0	0	1	19
9002	+	0	0	7	3	0	0	0	0	8	1	0	0
9002	−	0	0	0	0	0	0	4	0	3	2	0	0
9003	+	1	7	9	2	0	13	2	9	0	0	0	0
9003	−	10	9	11	3	0	9	5	2	1	0	0	0
9004	+	8	1	2	6	0	0	0	2	0	0	21	20
9004	−	2	0	0	7	0	0	0	4	0	2	18	10
9005	+	6	4	0	0	0	0	5	0	0	0	0	16
9005	−	5	0	0	0	0	2	9	0	0	0	0	24
9006	+	32	36	0	0	0	0	0	0	0	1	0	0
9006	−	11	26	0	0	0	0	0	0	0	4	10	0
9007	+	0	1	1	0	0	2	22	6	16	40	13	14
9007	−	1	1	0	0	0	0	13	20	0	3	0	38
9008	+	0	0	0	0	0	0	0	0	18	13	11	0
9008	−	0	0	0	0	0	0	0	0	0	16	19	1
9009	+	0	0	0	0	4	0	16	2	6	12	0	0
9009	−	0	0	0	1	0	2	9	0	17	9	0	0
9010	+	0	0	0	0	1	0	1	1	0	0	0	0
9010	−	0	0	0	0	11	10	0	0	0	0	0	0
9011	+	0	2	0	2	10	0	0	12	2	12	31	3
9011	−	1	1	0	0	9	0	0	1	2	0	0	25
9012	+	1	0	0	0	14	14	11	5	1	0	0	0
9012	−	0	0	0	0	0	2	3	9	0	0	0	0

charges transported by point-discharge for each month

12	13	14	15	16	17	18	19	20	21	22	23	Means
9	14	16	8	15	7	0	0	4	0	0	0	3.8
25	7	18	10	4	9	0	0	1	0	0	0	3.9
12	4	22	0	0	0	0	0	6	19	1	2	3.5
12	5	1	1	0	0	0	0	0	37	0	6	3.0
4	0	0	0	0	0	22	3	0	0	10	14	4.0
0	0	0	0	0	0	29	6	0	0	6	11	4.3
0	14	13	9	0	9	9	0	0	1	1	0	4.8
5	20	10	8	0	0	1	0	0	0	1	0	3.7
42	43	54	16	36	4	4	11	14	22	18	17	13.0
1	44	91	14	13	8	2	0	2	20	11	20	11.1
1	15	5	2	3	23	31	62	53	30	6	23	13.5
0	1	1	1	10	22	58	23	36	42	15	22	11.8
32	23	24	5	1	20	0	0	1	2	8	9	10.0
30	29	35	0	0	32	6	1	3	0	14	19	10.2
0	19	0	1	0	4	12	34	6	0	0	0	4.9
1	2	0	0	0	22	26	8	8	0	0	0	4.3
10	37	2	61	51	12	0	0	23	22	1	0	10.8
17	14	9	65	49	11	0	0	19	20	2	0	10.2
0	0	0	1	9	8	0	0	0	0	0	0	0.9
0	0	1	0	11	1	1	0	0	0	0	1	1.4
11	15	0	0	0	1	1	0	0	4	6	0	4.7
12	16	10	0	0	0	2	0	0	0	3	0	3.4
0	0	0	0	0	0	0	0	0	1	0	1	2.0
0	0	0	0	0	0	0	1	0	0	0	0	0.6

Hourly means of the quantities of positive and negative
1991

Month		00	01	02	03	04	05	06	07	08	09	10	11
9101	+	1	1	1	0	0	0	1	1	0	1	1	1
9101	−	0	0	0	0	0	0	0	0	0	0	0	0
9102	+	4	6	19	8	0	0	1	0	1	0	4	0
9102	−	2	7	11	0	0	0	0	0	0	0	0	0
9103	+	0	0	10	7	0	0	0	0	0	0	0	0
9103	−	0	0	0	2	0	0	0	0	0	0	0	0
9104	+	0	0	0	0	0	0	0	0	0	0	0	6
9104	−	3	0	0	0	0	0	0	0	0	0	0	6
9105	+	20	11	21	18	1	4	0	11	25	13	37	30
9105	−	28	11	20	15	36	4	38	32	20	71	6	45
9106	+	0	0	0	0	0	6	1	0	0	0	0	0
9106	−	2	0	0	0	0	7	0	0	0	0	0	0
9107	+	13	12	7	1	2	7	0	0	0	2	0	11
9107	−	0	0	5	0	9	0	2	0	0	0	0	17
9108	+	0	0	0	1	1	0	8	0	2	0	0	0
9108	−	0	0	0	0	0	0	21	0	4	0	0	0
9109	+	0	6	0	1	2	5	0	0	0	14	0	2
9109	−	2	2	12	4	1	5	0	0	5	2	0	0
9110	+	0	0	0	5	7	1	0	0	0	4	0	0
9110	−	0	0	0	10	9	1	18	0	6	27	0	0
9111	+	17	0	0	0	0	0	0	0	0	0	0	0
9111	−	28	1	0	0	0	0	0	0	0	0	0	0
9112	+	0	6	20	3	4	0	2	5	7	4	0	13
9112	−	0	0	6	4	0	0	3	6	4	5	0	22

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	1	1	0	1	0	0	1	0	0.5
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	5	5	1	0	0	0	0	2.3
0	0	0	0	0	0	8	0	4	0	0	0	1.3
0	0	0	0	0	0	0	0	0	0	0	0	0.7
0	0	0	0	0	0	0	0	0	0	0	0	0.1
25	30	6	3	0	2	0	0	0	0	0	0	3.0
4	9	0	10	0	0	0	0	0	0	0	0	1.3
32	3	0	9	35	6	9	8	0	0	0	12	12.7
25	34	10	14	28	18	0	30	0	0	0	12	20.7
5	20	31	12	9	10	8	5	42	103	0	57	12.9
0	0	27	40	42	71	25	111	83	30	72	21	22.1
6	23	42	43	58	10	9	49	6	0	12	11	13.5
10	39	48	50	71	23	8	7	11	0	10	31	14.2
1	0	0	10	0	4	0	13	0	2	0	1	1.8
3	0	0	18	0	1	0	5	0	2	0	0	2.3
0	0	0	4	7	9	10	3	6	16	0	0	3.5
0	0	0	5	8	18	14	0	5	13	0	1	4.0
0	0	2	7	11	10	2	0	0	0	2	2	2.2
0	0	1	11	5	7	0	0	0	0	1	1	4.0
0	0	0	5	0	1	0	1	0	4	30	11	2.9
0	0	0	8	0	0	0	2	0	27	22	27	4.8
3	1	0	0	0	0	1	0	0	1	0	0	2.9
21	5	0	0	0	0	0	0	0	3	0	21	4.2

IONOSPHERE

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 $\chi = 90°$. Night values have been determined by taking the periods ranging from $\chi = 100°$ to 23 00 GMT. The date column gives year, month, day (e.g. 900101 indicates 1990 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 ().

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 Geophsikalischen 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
1990

Date	SS	Night	SR
900101	33.2	24.4	35.2
900102	30.3	24.4	28.2
900103	41.2	24.4	30.3
900104	37.7	22.7	37.7
900105	37.7	25.7	31.7
900106	41.2	21.4	27.2
900107	37.7	23.8	28.2
900108	30.3	27.2	33.2
900109	30.3	24.4	37.7
900110	41.2	31.7	41.2
900111	37.7	27.2	35.2
900112	41.2	29.2	35.2
900113		26.4	37.7
900114	37.7	29.2	26.4
900115	41.2	26.4	25.0
900116	41.2	24.4	37.7
900117	37.7	19.5	25.0
900118	41.2	23.8	30.3
900119	37.7	26.4	30.3
900120	35.2	19.5	26.4
900121	30.3	23.8	33.2
900122	28.2	25.7	30.3
900123	41.2	23.2	
900124	41.2	26.4	31.7
900125	31.7	24.4	28.2
900126	35.2	22.7	31.7
900127	26.4	23.2	30.3
900128	37.7	24.4	30.3
900129	30.3	24.4	26.4
900130	35.2	23.2	24.4
900131	35.2	25.0	25.7
900201	33.2	21.8	26.4
900202	31.7	23.2	
900203	28.2	21.8	25.7
900204	37.7	22.2	25.0
900205	28.2	19.9	23.2
900206	30.3	22.7	21.4
900207	29.2	24.4	23.2
900208	24.4	21.8	30.3

Date	SS	Night	SR
900209	27.2	21.8	24.4
900210	23.2	19.2	27.2
900211	33.2	22.2	23.2
900212	23.8	20.6	28.2
900213	21.4	20.2	21.0
900214	27.2	21.8	27.2
900215	31.7	27.2	31.7
900216	29.2	24.4	23.2
900217	28.2	21.0	25.0
900218	27.2	18.9	27.2
900219	35.2	25.7	30.3
900220	25.7	23.2	25.0
900221	30.3	21.8	23.8
900222	20.6	23.8	21.8
900223	29.2	19.9	28.2
900224	33.2	23.2	27.2
900225	26.4	19.5	21.4
900226	24.4	19.5	27.2
900227	23.8	18.6	
900228	26.4	17.6	37.7
900301	29.2	19.5	31.7
900302	31.7	21.8	30.3
900303	35.2	18.6	33.2
900304	23.2	21.4	27.2
900305	21.4	20.2	26.4
900306	30.4	23.8	26.4
900307			
900308	30.3	18.6	18.2
900309	24.4	25.7	29.2
900310	25.7	23.2	24.4
900311	28.2	21.8	30.3
900312	31.7	21.8	27.2
900313	37.7	24.4	24.4
900314	23.2	15.9	23.8
900315	31.7	19.5	27.2
900316	23.2	19.9	22.2
900317	41.2	23.8	24.4
900318	33.2	18.9	35.2
900319	30.3	18.1	24.4
900320	28.2	19.9	26.4
900321	30.3	20.6	21.0
900322	31.7	21.4	31.7
900323	27.2	23.2	25.0

Date	SS	Night	SR
900324	29.2	21.8	26.4
900325	31.7	24.4	25.0
900326	27.2	26.4	30.3
900327	29.2	23.8	
900328	33.2	21.4	29.2
900329	35.2	23.8	29.2
900330	33.2	19.5	30.3
900331	30.3	23.8	25.0
900401	30.3	18.1	26.4
900402	28.2	21.8	28.2
900403	41.2	20.6	24.4
900404	27.2	17.1	21.4
900405	21.8	16.5	23.2
900406	21.4	21.4	23.2
900407	22.7	21.0	28.2
900408	19.2	24.4	31.7
900409	28.2	21.4	24.4
900410	27.2	22.7	24.4
900411	26.4	19.2	19.9
900412	21.8	19.9	26.4
900413	26.4	25.0	21.4
900414	19.5	17.8	28.2
900415	26.4	21.0	18.6
900416	24.4	18.1	21.4
900417	35.2	19.9	21.4
900418	30.3	20.6	23.2
900419	28.2	18.9	33.2
900420	25.7	21.0	23.8
900421	28.2	(19.2)	
900422	25.7	20.6	35.2
900423	30.3	27.2	28.2
900424	29.2	23.2	37.7
900425	28.2	22.7	26.4
900426	26.4	22.7	21.8
900427	26.4	23.2	25.7
900428	25.0	23.2	27.2
900429	41.2	25.7	30.3
900430	21.8	18.1	21.0
900501			
900502			
900503			
900504	29.2	17.6	26.4
900505	30.3	18.9	29.2

Date	SS	Night	SR
900506	30.3	21.0	24.4
900507	29.2	17.3	22.7
900508	19.5	16.5	29.2
900509	26.4	23.8	22.7
900510	27.2	25.0	26.4
900511	31.7	26.4	21.8
900512			
900513	37.7	23.2	21.8
900514	29.2	26.4	27.2
900515	33.2	22.7	29.2
900516			
900517	30.3	19.9	23.8
900518	31.7	20.2	35.2
900519	28.2	25.7	
900520	22.2	26.4	28.2
900521	37.7	24.4	41.2
900522	37.7	31.7	
900523		21.0	21.8
900524	31.7	22.7	27.2
900525	27.2	21.8	29.2
900526	30.3	24.4	28.2
900527	30.3	23.2	26.4
900528	29.2	22.7	27.2
900529	30.3	24.4	29.2
900530	33.2	30.3	25.0
900531	26.4	29.2	33.2
900601	31.7	25.7	28.2
900602	24.4	24.4	26.4
900603	35.2	27.2	28.2
900604			
900605	29.2	24.4	26.4
900606	35.2	22.7	25.7
900607	23.8	23.2	23.8
900608	28.2	19.5	29.2
900609	35.2	22.7	29.2
900610	27.2	21.8	25.0
900611	28.2	25.0	27.2
900612	33.2	24.4	31.7
900613	25.7	20.2	25.0
900614	26.4	24.4	29.2
900615	28.2		27.2
900616	23.8	23.8	31.7
900617	23.2	22.2	24.4

Date	SS	Night	SR
900618	30.3	24.4	25.7
900619	21.8	23.8	26.4
900620	35.2	20.6	23.2
900621	41.2	20.6	27.2
900622	24.4	27.2	24.4
900623	26.4	24.4	26.4
900624	29.2	22.2	31.7
900625	26.4	23.8	27.2
900626			
900627	33.2	21.4	31.7
900628	30.3	21.8	25.7
900629	23.2	20.6	25.0
900630	29.2	23.8	37.7
900701	26.4	25.7	28.2
900702	29.2	21.8	26.4
900703	28.2	19.5	23.8
900704	31.7	21.8	27.2
900705	21.4	23.8	30.3
900706	31.7	25.0	26.4
900707	27.2	22.2	35.2
900708	27.2	24.4	25.0
900709	26.4	21.0	27.2
900710	19.5	22.2	24.4
900711	28.1	22.2	21.0
900712	20.6	19.5	21.4
900713	26.4	24.4	24.4
900714	27.2	23.8	29.2
900715	27.2	26.4	23.8
900716	30.3	21.8	26.4
900717	29.2	21.4	27.2
900718	24.4	22.2	26.4
900719	26.4	20.6	30.3
900720	31.7	24.4	29.2
900721	37.7	25.7	27.2
900722	24.4	23.8	23.2
900723	35.2	24.4	25.0
900724	31.7	23.2	30.3
900725	24.4	24.4	29.2
900726	41.2	18.1	25.7
900727	26.4	23.2	31.7
900728	27.2	27.2	24.4
900729	25.0	21.4	23.2
900730	28.2	21.0	23.2

Date	SS	Night	SR
900731	28.2	19.5	26.4
900801	33.2		21.4
900802	27.2	24.4	23.2
900803	27.2	23.2	25.7
900804			
900805	25.7	24.4	25.7
900806	26.4	22.2	37.7
900807	29.2	24.4	26.4
900808	31.7	16.9	27.2
900809	35.2	28.2	30.3
900810	41.2	24.4	30.3
900811	29.2	27.2	28.2
900812	21.0	19.9	26.4
900813	23.2	19.2	28.2
900814	32.2	17.6	26.4
900815	23.8	25.7	25.0
900816	23.2	21.0	25.7
900817	31.7	21.0	30.3
900818	19.2	24.4	26.4
900819	31.7	20.2	25.0
900820	28.2	25.7	31.7
900821	33.2	23.2	
900822	22.2	20.6	31.7
900823	29.2	20.2	33.2
900824	33.2	21.0	27.2
900825	26.4	21.4	26.4
900826	28.2	17.6	28.2
900827	26.4	22.7	33.2
900828	24.4	16.3	29.2
900829	27.2	18.1	29.2
900830	29.2	18.6	28.2
900831	23.8	16.5	27.2
900901	27.2	21.4	28.2
900902	25.7	20.2	28.2
900903	30.3	18.6	26.4
900904	33.2	·21.0	37.7
900905	31.7	22.2	30.3
900906	31.7	21.0	26.4
900907	30.3	18.6	26.4
900908	21.4	18.3	23.8
900909	27.2	21.8	25.0
900910	30.3	23.8	23.8
900911	30.3	16.1	31.7

Date	SS	Night	SR
900912	20.2	14.8	28.2
900913	27.2	21.0	33.2
900914	31.7	21.0	28.2
900915	29.2	17.8	33.2
900916	29.2	17.8	
900917			
900918			
900919			
900920			
900921			
900922	24.4	19.9	28.2
900923	26.4	19.5	31.7
900924	31.7	19.5	27.2
900925			
900926	22.7	23.2	24.4
900927	23.8	18.3	21.0
900928	28.2	17.3	23.8
900929	27.2	19.2	26.4
900930	31.7	17.8	24.4
901001	30.3	17.3	25.0
901002	25.0	16.3	22.7
901003	25.7	20.2	30.3
901004	19.2	19.5	27.2
901005	23.8	21.4	23.2
901006	20.6	16.7	29.2
901007	19.9	18.9	29.2
901008	19.5	16.9	18.6
901009	21.0	20.2	18.6
901010	25.0	14.8	25.7
901011	25.7	22.2	23.2
901012	27.2	18.6	23.2
901013	28.2	17.6	22.2
901014	23.2	20.6	23.2
901015	23.8	16.9	25.7
901016	23.8	20.2	25.7
901017			
901018	21.0	18.6	26.4
901019	29.2	21.4	23.2
901020	28.2	19.5	18.6
901021	23.2	16.9	26.4
901022	33.2	21.8	23.2
901023	35.2	21.4	
901024	23.2	19.5	30.3

Date	SS	Night	SR
901025	26.4	(20.6)	
901026	27.2	18.9	21.8
901027	25.0	19.5	22.2
901028	23.2	16.9	21.8
901029	25.7	21.0	22.2
901030	23.8	16.5	18.3
901031	23.2	19.5	24.4
901101	23.2	18.9	26.4
901102	27.2	17.1	23.2
901103	30.3	17.1	22.2
901104	20.6	22.7	25.7
901105	28.2	16.3	25.7
901106	31.7	16.7	
901107	24.4	18.3	
901108	22.7		
901109	22.2	18.6	21.4
901110	22.7	18.9	22.7
901111	25.0	21.4	20.6
901112	31.7	14.0	23.2
901113	31.7	18.1	23.8
901114	22.2	14.6	23.8
901115	35.2	18.3	31.7
901116			
901117			
901118	30.3	17.6	24.4
901119	21.4	20.2	24.4
901120			
901121	30.3	19.2	29.2
901122	29.2	23.2	27.2
901123	33.2	23.2	31.7
901124	30.3	20.2	25.7
901125	31.7	21.4	35.2
901126	37.7	21.4	35.2
901127	29.2	23.2	
901128	33.2	23.8	28.2
901129	33.2	20.2	26.4
901130	37.7	(21.4)	
901201			
901202			
901203			
901204	29.2	23.8	
901205	30.3	22.2	23.8
901206			

Date	SS	Night	SR
901207	29.2	27.2	30.3
901208	37.7	22.2	30.3
901209	33.2	19.9	33.2
901210	33.2	23.2	30.3
901211	27.2	20.6	30.3
901212	35.2	21.8	35.2
901213	35.2	26.4	31.7
901214	37.7	22.7	41.2
901215	33.2	27.2	30.3
901216	35.2	21.4	35.2
901217	37.7	21.8	28.2
901218	31.7	25.0	31.7
901219	33.2	18.3	26.4
901220	31.7		
901221	28.2	21.4	23.8
901222	37.7	21.4	25.0
901223	30.3	21.0	24.4
901224	27.2	21.8	20.6
901225	41.2	19.5	29.2
901226	30.3	23.2	33.2
901227	41.2	23.2	37.7
901228	41.2	27.2	37.7
901229	41.2	21.8	29.2
901230	28.2	19.5	30.3
901231	33.2	22.2	37.7

Mean ionospheric absorption L′ (dB) at oblique incidence (A3)
$$f = 270 \text{ kHz}$$
1991

Date	SS	Night	SR
910101	41.2	18.3	35.2
910102	19.5	16.1	25.7
910103	25.0	21.8	26.4
910104	27.2	20.6	28.2
910105	25.7	21.4	21.8
910106	41.2	27.2	24.4
910107	23.2	21.8	30.3
910108	31.7	18.9	33.2
910109	31.7	23.8	30.3
910110	30.3	24.4	20.2
910111	33.2	19.9	30.3
910112	35.2	19.9	28.2
910113	27.2	23.8	35.2
910114	41.2	23.8	29.2
910115	35.2	21.0	28.2
910116	41.2	30.3	35.2
910117	47.2	31.7	47.2
910118	47.2	37.7	35.2
910119	41.2	22.2	31.7
910120	41.2	26.4	35.2
910121	41.2	27.2	33.2
910122	41.2	28.2	33.2
910123	47.2	24.4	35.2
910124	41.2	21.4	37.7
910125	26.4	18.1	23.8
910126	26.4	21.4	23.2
910127	41.2	18.6	26.4
910128	29.2	19.5	25.0
910129	29.2	25.0	20.2
910130	29.2	17.6	23.2
910131	30.3	21.8	20.2
910201	25.0	22.2	27.2
910202	37.7	21.4	25.7
910203	30.3	25.0	28.2
910204	47.2	27.2	41.2
910205	35.2	22.2	25.0
910206	41.2	21.4	27.2
910207	29.2	18.9	27.2
910208	41.2	19.2	20.6

Date	SS	Night	SR
910209	33.2	21.0	22.2
910210	37.7	21.0	28.2
910211	27.2	18.9	23.2
910212	18.1	20.6	21.0
910213			
910214	23.2	19.9	20.6
910215			
910216	26.4	22.7	26.4
910217	30.3	20.6	29.2
910218	23.8	21.4	33.2
910219	27.2	19.2	24.4
910220	23.8	22.7	30.3
910221	31.7	19.2	22.7
910222	25.0	17.8	26.4
910223	26.4	19.2	28.2
910224	30.3	17.1	21.8
910225	28.2	23.8	27.2
910226	37.7	26.4	26.4
910227	20.6	16.1	20.6
910228	25.7	19.5	21.4
910301	35.2	16.1	24.4
910302	26.4	25.7	20.6
910303	25.7	19.9	28.2
910304	37.7	23.2	21.0
910305	41.2	21.0	19.2
910306	31.7	16.7	20.2
910307	37.7	18.1	22.7
910308	37.7	19.2	22.2
910309	27.2	23.8	22.7
910310			
910311	31.7	19.9	19.5
910312	25.0	18.6	
910313	30.3	18.1	23.8
910314	29.2	19.9	21.0
910315	37.7	16.1	23.2
910316	25.0	21.0	24.4
910317	30.3	18.1	26.4
910318	25.0	22.7	22.7
910319	31.7	19.2	18.9
910320	28.2	19.9	27.2
910321	26.4	19.5	24.4
910322	30.3	21.4	25.0
910323	29.2	19.5	22.7

Date	SS	Night	SR
910324	35.2	19.5	23.2
910325	33.2	23.8	35.2
910326	41.2	25.0	27.2
910327	41.2	18.6	29.2
910328	41.2	17.6	30.3
910329	33.2	17.6	22.7
910330	31.7	22.2	19.2
910331	37.7	17.6	25.7
910401	24.4	19.2	21.8
910402	30.3	18.9	25.7
910403	47.2	21.8	23.8
910404	27.2	22.2	24.4
910405	27.2	19.5	25.7
910406	28.2	18.3	27.2
910407	28.2	19.2	25.0
910408	33.2	19.2	22.2
910409	31.7	17.1	19.9
910410	25.0	21.0	25.0
910411	23.2	22.7	25.0
910412	29.2	23.2	22.2
910413	27.2	28.2	27.2
910414	33.2	21.8	25.7
910415	27.2	22.2	23.8
910416	24.4	23.2	30.3
910417	33.2	19.5	22.7
910418	29.2	19.5	19.9
910419	18.9	19.5	(15.9)
910420	28.2	20.6	21.0
910421	26.4	19.2	19.5
910422	21.0	16.7	21.8
910423			
910424	20.6	19.5	19.9
910425	25.7	14.8	20.6
910426	24.4	17.6	24.4
910427	35.2	18.3	21.4
910428	31.7	23.8	
910429	31.7	24.4	
910430	33.2	19.5	24.4
910501	22.2	24.4	29.2
910502	35.2	25.7	28.2
910503	25.0	18.9	24.4
910504	21.8	25.7	25.0
910505	23.8	24.4	28.2

Date	SS	Night	SR
910506	33.2	19.2	28.2
910507	22.7	23.2	29.2
910508	27.2	29.2	30.3
910509	37.7	30.3	22.7
910510	33.2	22.7	30.3
910511	27.2	18.1	33.2
910512	31.7	18.9	30.3
910513	31.7	24.4	23.8
910514	33.2	19.5	22.7
910515	33.2	20.2	23.2
910516	33.2	21.4	28.2
910517	28.2	27.2	26.4
910518	33.2	20.2	33.2
910519	30.3	28.2	28.2
910520			
910521	33.2	26.4	25.0
910522	35.2	21.8	25.0
910523	29.2	23.2	25.0
910524	28.2	23.2	35.2
910525	25.0	25.0	31.7
910526	35.2	26.4	23.2
910527	25.0	18.9	26.4
910528	25.0	29.2	25.7
910529	30.3	19.5	23.2
910530	31.7	21.8	23.2
910531	30.3	26.4	23.8
910601	41.2	23.8	30.3
910602			
910603			
910604			
910605	30.3	23.2	31.7
910606	28.2	22.7	25.0
910607	25.7	21.4	23.2
910608	27.2	22.7	33.2
910609	28.2	23.2	24.4
910610	24.4	25.7	37.7
910611	29.2	28.2	29.2
910612	33.2	23.2	23.8
910613	31.7		
910614			
910615			
910616			
910617	29.2	29.2	33.2

Date	SS	Night	SR
910618	29.2	28.2	26.4
910619			
910620	23.8		
910621			
910622	22.2	25.0	27.2
910623	25.0	25.0	25.7
910624		(22.2)	29.2
910625	33.2	29.2	25.0
910626	22.7	25.7	29.2
910627	26.4	25.0	27.2
910628	26.4		
910629	23.8	21.4	33.2
910630	28.2	26.4	29.2
910701	30.3	25.0	29.2
910702	23.8	23.8	30.3
910703	30.3	28.2	25.7
910704		31.7	33.2
910705	33.2	25.7	25.0
910706	37.7	25.7	37.7
910707	27.2	23.8	31.7
910708	31.7	·30.3	29.2
910709			28.2
910710	33.2	23.8	25.7
910711	25.7	23.8	25.7
910712	37.7	31.7	30.3
910713	27.2	31.7	30.3
910714	33.2	27.2	33.2
910715	35.2	25.0	24.4
910716	27.2	24.4	27.2
910717	33.2	28.2	
910718	22.7	23.8	28.2
910719	31.7	24.4	35.2
910720	31.7	20.2	28.2
910721	26.4	23.8	25.0
910722	26.4	18.3	14.4
910723	30.3	30.3	33.2
910724	27.2	28.2	28.2
910725	41.2	28.2	35.2
910726	27.2	23.8	29.2
910727	31.7	23.8	35.2
910728	31.7	23.2	24.4
910729	31.7	27.2	25.0
910730	26.4	.20.2	27.2

Date	SS	Night	SR
910731	29.2	18.9	31.7
910801	37.7	26.4	35.2
910802	31.7	27.2	33.2
910803	33.2	23.2	35.2
910804	25.7	23.8	28.2
910805	26.4	23.2	27.2
910806	33.2	23.8	30.3
910807	21.4	19.9	22.2
910808	30.3	21.4	31.7
910809			
910810	28.2	18.9	30.3
910811	26.4	23.8	25.0
910812	31.7	23.8	33.2
910813	30.3	25.0	25.0
910814	19.5	21.8	29.2
910815	26.4	26.4	28.2
910816	30.3	23.2	31.7
910817	30.3	25.7	37.7
910818	30.3	25.7	33.2
910819	41.2	26.4	26.4
910820	31.7	23.2	28.2
910821	21.4	24.4	35.2
910822	28.2	23.8	31.7
910823	33.2	25.7	29.2
910824	26.4	22.7	27.2
910825	28.2	17.6	28.2
910826	28.2	21.0	31.7
910827	25.0	25.7	41.2
910828	25.7	21.0	31.7
910829	28.2	23.8	37.7
910830	30.3	25.7	29.2
910831	21.4	23.2	26.4
910901	26.4	23.8	35.2
910902	29.2	22.2	27.2
910903	33.2	21.4	35.2
910904	35.2	23.8	41.2
910905	30.3	19.5	29.2
910906	24.4	21.4	26.4
910907	23.2	21.4	28.2
910908	27.2	23.8	
910909			
910910			
910911			
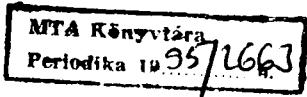
Date	SS	Night	SR
910912			
910913			
910914			
910915			
910916			
910917			
910918			
910919	24.4	19.5	27.2
910920			
910921			
910922			
910923			
910924	21.8	20.6	
910925	21.8	23.8	30.3
910926	24.4	19.5	37.7
910927	30.3	23.2	27.2
910928	27.2	22.2	23.8
910929	28.2	19.5	26.4
910930	23.8	21.0	24.4
911001	31.7	19.5	25.0
911002	26.4	27.2	24.4
911003	28.2	20.2	27.2
911004	25.0	17.8	21.8
911005	23.2	21.4	24.4
911006	23.2	19.2	21.8
911007	27.2	20.2	19.9
911008	18.1	24.4	
911009	19.9	19.9	24.4
911010	23.8	21.0	24.4
911011	21.0	18.6	29.2
911012	27.2	21.8	21.0
911013	22.2	17.3	22.2
911014	25.0	17.6	22.7
911015	21.4	18.3	23.2
911016	27.2	17.8	18.1
911017	28.2	16.9	25.7
911018			
911019	21.8	25.0	22.2
911020	29.2	18.6	21.8
911021	21.0	21.0	28.2
911022	27.2	17.6	25.0
911023	16.9	13.3	28.2
911024	28.2	18.3	20.6

Date	SS	Night	SR
911025	19.5	21.4	29.2
911026	19.9	18.9	25.0
911027	19.9	23.2	23.2
911028	27.2	23.8	29.2
911029	19.9	24.4	23.2
911030	29.2	(21.8)	
911031	20.6	19.5	21.8
911101	21.4	27.2	20.2
911102	21.0	21.8	27.2
911103	21.4	18.1	21.8
911104	26.4	19.2	29.2
911105	27.2		
911106			
911107	22.7	18.9	29.2
911108	21.4	19.9	29.2
911109	23.8	23.8	33.2
911110	27.2	21.4	26.4
911111	21.8	25.7	37.7
911112	21.0	21.4	37.7
911113	33.2	20.6	33.2
911114	23.2	23.8	25.7
911115	26.4	21.4	31.7
911116			
911117		(30.3)	37.7
911118	35.2	24.4	41.2
911119	25.7	33.2	
911120	37.7	25.0	41.2
911121			
911122	35.2	28.2	37.7
911123	41.2	22.7	31.7
911124	35.2	21.4	26.4
911125	24.4	20.2	26.4
911126	30.3	19.5	30.3
911127	41.2	21.4	31.7
911128	31.7	19.5	
911129	25.7	18.9	31.7
911130	31.7	22.7	33.2
911201	28.2	19.5	24.4
911202	31.7	19.5	25.0
911203	35.2	21.8	27.2
911204	30.3	22.7	33.2
911205	37.7	21.8	33.2
911206	37.7	18.9	31.7

Date	SS	Night	SR
911207	35.2	22.2	
911208	33.2	22.7	25.0
911209	35.2	19.5	37.7
911210	35.2	33.2	41.2
911211	31.7	31.7	41.2
911212	41.2	30.3	
911213	41.2	30.3	26.4
911214	41.2	21.4	
911215	31.7	19.5	
911216	28.2	23.2	
911217	26.4	23.8	24.4
911218	25.0	17.8	
911219	25.7	23.2	
911220			23.2
911221		25.0	31.7
911222	31.7	23.8	41.2
911223	37.7	23.2	
911224	41.2	23.8	
911225	35.2	26.4	35.2
911226	33.2	26.4	
911227	28.2	21.8	
911228	28.2	25.0	
911229	25.0	25.0	
911230	31.7	22.7	24.4
911231	19.5	23.8	26.4