

I. EARTH CURRENTS

The coordinates of the Observatory are:

$$\begin{aligned} \varphi &= 47^{\circ}38' & \lambda &= 16^{\circ}43' \\ \Phi &= 47.2^{\circ} & A &= 98.3^{\circ} \end{aligned}$$

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

The tables published in this part are the following:

I. The activity indices T of the general activity for each three hour interval of the local day, as well as the character figures of single frequency bands for whole days K_1 — K_5 .

The T-scale is linear; its steps correspond to 1.8 mV/km. The monthly mean T-values are separately given for the North-South and East-West components. The scales for K_1 — K_5 are as follows:

Frequency band	limits between K-values								
	0—1	1—2	2—3	3—4	4—5	5—6	6—7	7—8	8—9
1. Period 0— 2 min	2	4	7	13	18	23	29	41	54
2. Period 2— 6 min	9	13	18	23	29	34	41	56	90
3. Period 6—12 min	16	22	25	32	38	45	56	83	120
4. Period 12—24 min	34	43	54	70	85	101	124	151	202
5. Period 24—60 min	29	43	67	88	110	131	191	234	339

All values are given in the table in units of 10^{-5} V km.

Values in brackets mean extrapolated ones from incomplete material, where the lacking hours have been substituted by the average of recorded hours.

II. Monthly and yearly means, and means for disturbed and quiet days of the amplitudes of the former frequency bands and of the earth current field intensity. D and Q days are the same as in section Geomagnetism. The rows 1—5 contain the average amplitudes of the five bands in 10^{-5} V/km. Row 6 contains the hourly means of the earth current scalar intensity corrected for long period variation (equally in 10^{-5} V km).

III. Results of harmonical analyses from monthly means of the earth current scalar intensity.

IV. Time of special events (common table from magnetic and earth current records).

The catalogue of Pc 1 events contains occurrence times, amplitudes and quality. Typical cases for the A, B and C events can be seen in the 1976 Observatory Report.

V. Average amplitudes in 12 pulsation bands. Here numerical data are presented on the average amplitudes of pulsations for (nearly complete) months. Averages are derived from manually processed earth current records (6 mm min) for three-hour intervals of the day. Such averages (expressed in $\mu\text{V}/\text{km}$) are published for each month and for the years. As the bands where amplitudes are determined have different bandwidth, amplitudes are comparable in different bands only after a correction for band width. Data for the same band are, however, directly comparable. Basic data are estimated amplitudes in halfhour intervals.

VI. Micropulsation indices for the year 1981. The indices have been determined from occurrence frequency of different period micropulsations, striving at a possibly uniform distribution 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 are arranged 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 per cent) index 2 to days with occurrence frequencies in the second lowest fifth (20 to 40 per cent) etc., index 5 to days with highest occurrence frequencies (80 to 100 per cent). 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 on the records.

The bands are the following:

P1	0	to	5 sec
P2	5	to	10 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

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

L. HOLLÓ, M. TÁTRALLYAY and J. VERŐ: Experimental results with the characterization of geomagnetic micropulsations (*Acta Geod., Geoph. Mont. Hung.* 7:1972/15), and A. ADAM, J. VERŐ, J. CZ. MILETITS, L. HOLLÓ and Á. WALLNER: The geophysical observatory near Nagycenk. I. Electromagnetic measurement and processing of data (*Acta Geod., Geoph. Mont. Hung.* 16:1981/333).

Daily Pc 1 indices are determined on the basis of the duration of the events. The scale of the indices is the following:

- 0 no record
- 1 no Pc activity
- 2 Pc 1 activity during 1—40 minutes
- 3 Pc 1 activity during 41—100 minutes
- 4 Pc 1 activity during 101—160 minutes
- 5 Pc 1 activity during more than 160 minutes

Mrs. J. CZUCZOR, L. HOLLÓ and J. VERŐ took part in the processing and compilation of the data.

Records were taken in the Observatory with three instruments of the types GMG T9 1956 and GMG T14 1962, with small modifications in order to meet the demands of the use in the observatory. A general description of the processing and compilation is found in the report of the Observatory from 1966 in German by A. ADAM, J. VERŐ, A. WALLNER: Tellurische und erdmagnetische Messungen im Observatorium bei Nagycenk. Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967.

I. Activity indices T and K_1-K_5

January

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	11122511	14	4	0	4	1	1
2.	10112442	15	3	0	4	2	4
3.	22141765	28	3	0	4	3	4
4.	52032212	17	4	1	4	2	2
5.	11121900	6	5	1	4	1	0
6.	22111132	13	2	0	4	1	2
7.	12224332	19	3	1	4	2	3
8.	22231142	17	4	0	4	2	3
9.	11010010	4	2	0	4	1	0
10.	10000001	2	2	0	4	0	0
11.	01000000	1	1	0	4	1	0
12.	10000001	2	4	0	4	0	0
13.	02110110	6	3	0	3	1	0
14.	00112012	7	4	1	3	1	0
15.	13123323	17	4	1	4	3	3
16.	01123393	22	5	1	4	2	4
17.	32012211	12	5	1	5	1	2
18.	11211186	21	6	2	4	1	3
19.	10001000	2	2	0	4	0	0
20.	21111121	10	4	1	4	1	0
21.	01286394	38	3	1	5	3	3
22.	35385299	44	6	3	5	5	6
23.	33235244	26	6	3	5	4	5
24.	53444354	32	6	3	5	4	3
25.	31532211	16	6	2	5	2	1
26.	10122123	12	6	3	5	2	2
27.	31214217	21	4	2	4	3	3
28.	34384311	27	4	1	5	4	3
29.	00212293	19	5	2	4	2	1
30.	47885311	37	5	3	5	5	3
31.	44559952	43	6	4	6	4	4

Monthly averages: T (N) 2.109

T (E) 1.424

 K_1 4.09 K_2 1.19 K_3 4.29 K_4 2.06 K_5 2.09

February

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	02119599	36	5	2	5	5	5
2.	58999924	55	8	8	8	6	4
3.	48669936	51	5	3	6	4	2
4.	57569758	52	5	4	6	6	7
5.	99243965	47	7	4	6	4	7
6.	33657495	42	4	3	6	5	4
7.	93162225	30	3	1	5	6	3
8.	51143158	28	4	1	5	3	4
9.	21223112	14	3	1	4	3	2
10.	12378853	37	6	3	6	7	5
11.	67548949	52	7	4	6	6	7
12.	95169999	57	4	2	6	5	7
13.	97445899	55	5	3	6	9	6
14.	23445396	36	4	2	5	5	6
15.	43343400	21	4	0	5	4	4
16.	12114110	11	5	2	4	3	2
17.	01398667	40	7	4	6	5	7
18.	45799475	50	8	6	8	7	6
19.	67779573	51	8	7	7	6	7
20.	32664436	34	7	3	6	4	5
21.	31343134	22	6	3	5	4	2
22.	23176999	46	5	4	6	6	7
23.	94223884	40	3	1	4	3	4
24.	73323426	30	6	2	5	3	4
25.	54695492	44	5	3	5	4	5
26.	39996229	49	7	3	6	4	8
27.	42366122	26	7	3	4	5	3
28.	11223234	18	8	4	5	3	3

Monthly averages: T (N) 4.728

T (E) 3.344

K₁ 5.57

K₂ 3.07

K₃ 5.57

K₄ 4.82

K₅ 4.85

March

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	12339969	42	8	8	8	6	4
2.	99999897	69	8	8	8	9	7
3.	61155322	25	5	1	6	3	2
4.	31654321	25	6	3	5	3	2
5.	32573100	21	6	2	5	3	2
6.	00100100	2	6	3	4	0	0
7.	00000000	0	2	0	4	0	0
8.	20122124	14	4	2	4	2	2
9.	51136424	26	6	3	3	5	2
10.	34232112	18	6	2	4	3	2
11.	11311122	12	3	1	4	1	2
12.	00111232	10	4	0	4	2	2
13.	26322111	18	7	2	5	1	4
14.	11222251	16	5	2	5	2	3
15.	13110001	7	3	0	4	1	2
16.	11101111	7	3	0	4	1	1
17.	10317767	32	4	2	6	6	5
18.	53585422	34	8	4	7	5	3
19.	43421002	16	6	3	5	3	2
20.	11443312	19	6	2	5	3	1
21.	22434373	26	7	3	5	3	3
22.	77563622	38	8	3	6	3	4
23.	13324100	14	3	0	5	3	2
24.	11253443	23	6	3	5	3	4
25.	45655233	33	9	5	5	3	3
26.	22232222	17	9	4	4	2	2
27.	23222100	12	7	2	5	2	2
28.	11211001	7	6	2	4	2	1
29.	01312133	14	3	0	4	3	2
30.	22223211	15	5	2	5	3	3
31.	32224223	20	4	3	4	2	4

Monthly averages: T (N) 2.496

T (E) 1.706

K₁ 5.54

K₂ 2.41

K₃ 4.90

K₄ 2.83

K₅ 2.51

April

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	21226417	25	7	3	5	3	3
2.	85444997	50	7	3	6	3	6
3.	55433365	34	6	3	5	4	6
4.	42333223	22	5	2	5	3	5
5.	32222135	20	7	4	5	2	2
6.	21343232	20	6	4	6	3	2
7.	21111101	8	7	3	4	2	1
8.	01223215	16	7	2	4	2	2
9.	12012111	9	4	0	4	1	2
10.	22237869	39	5	2	5	5	6
11.	93433227	33	7	3	5	3	6
12.	11325112	16	7	2	4	2	3
13.	32321002	13	7	2	5	2	2
14.	30112111	10	6	1	4	2	1
15.	11222111	11	7	2	4	1	2
16.	22211184	21	8	4	4	3	2
17.	46642321	28	5	2	5	4	2
18.	11313333	18	5	2	5	2	3
19.	11211213	12	6	2	4	2	2
20.	44335112	23	6	3	5	3	4
21.	34336485	36	8	4	6	4	6
22.	75832211	29	8	4	6	6	4
23.	12244222	19	7	3	5	3	2
24.	21121209	13	5	1	4	3	2
25.	69999731	53	7	4	6	5	5
26.	21111113	11	5	2	4	2	2
27.	01213485	24	7	3	5	4	2
28.	54233122	22	7	5	6	3	4
29.	53525257	34	7	4	5	3	6
30.	45453533	32	7	3	5	4	4

Monthly averages: T (N) 2.842

T (E) 2.071

K₁ 6.43

K₂ 2.73

K₃ 4.86

K₄ 2.96

K₅ 3.30

May

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	33332532	24	7	4	4	3	5
2.	14535244	28	6	3	5	2	6
3.	33455652	33	7	4	6	5	6
4.	63464412	30	7	4	4	3	6
5.	22534243	25	8	4	5	3	3
6.	11222101	10	7	2	5	2	1
7.	10011000	3	5	2	4	0	1
8.	11000100	3	3	1	4	1	1
9.	32112101	11	6	3	4	3	1
10.	22101111	9	6	2	4	2	1
11.	22221112	13	5	3	4	2	2
12.	11121111	9	4	2	4	2	0
13.	12111112	10	4	2	4	1	1
14.	11013111	9	3	0	4	1	2
15.	23224331	20	5	3	4	3	4
16.	22233321	18	7	4	5	3	2
17.	22122223	16	6	4	4	2	4
18.	33355234	28	6	4	5	4	3
19.	25133221	22	7	3	5	3	1
20.	23213111	14	6	3	5	2	2
21.	12233111	14	6	4	5	3	2
22.	21211110	9	6	4	4	1	1
23.	11100010	4	6	2	3	0	0
24.	11111101	7	3	1	4	1	1
25.	11111222	11	4	0	4	1	2
26.	51124954	31	8	4	5	4	5
27.	45566987	50	9	6	7	5	6
28.	57757549	49	9	6	6	6	8
29.	96754446	45	9	7	6	5	6
30.	33434465	32	9	6	7	3	6
31.	54646544	38	9	7	7	6	4

Monthly averages: T (N) 2.368

T (E) 1.928

K₁ 6.22

K₂ 3.35

K₃ 4.74

K₄ 2.64

K₅ 3.00

June

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	44633333	29	9	6	6	3	3
2.	58433222	29	8	4	5	4	2
3.	21222112	13	8	4	6	3	1
4.	31127612	(23)	7	3	5	3	2
5.	21212211	12	7	3	4	1	1
6.	18522211	22	8	4	5	3	3
7.	25242211	19	6	2	5	2	4
8.	22122333	18	7	2	5	3	1
9.	98533211	32	8	4	5	3	2
10.	37747522	37	8	4	5	6	6
11.	45434246	32	9	5	5	5	6
12.	95322979	46	9	5	7	6	7
13.	79777779	60	9	6	7	7	6
14.	65844343	37	9	5	6	4	4
15.	24554472	33	8	5	6	4	4
16.	41222211	15	8	4	4	2	2
17.	11112100	7	7	3	4	2	2
18.	12221131	13	7	5	4	2	1
19.	12133336	24	7	4	5	3	6
20.	44222323	22	7	3	4	3	4
21.	22233201	15	6	1	5	2	3
22.	01115444	20	5	2	4	3	3
23.	34322214	21	7	3	5	2	3
24.	41221129	22	6	3	4	2	3
25.	43232110	16	4	2	5	3	1
26.	02111324	14	5	1	4	1	2
27.	65323134	27	6	2	5	2	5
28.	33432334	25	7	4	5	3	4
29.	43223242	22	7	5	6	4	4
30.	45843122	29	8	5	5	4	3

Monthly averages: T(N) 2.858

T (E) 2.347

K₁ 7.23

K₂ 3.63

K₃ 5.03

K₄ 3.16

K₅ 3.28

July

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	62435324	29	7	5	5	4	3
2.	21322222	16	8	5	5	3	3
3.	22112111	11	8	4	5	2	2
4.	11011001	5	4	2	4	1	0
5.	01002111	6	4	2	4	1	0
6.	41132454	24	5	3	4	3	4
7.	56545452	36	8	5	5	4	5
8.	23323434	24	7	4	5	4	3
9.	43521111	18	8	6	5	3	2
10.	42222221	17	6	3	4	3	3
11.	12298954	40	7	5	5	4	6
12.	23237743	31	7	4	5	4	5
13.	34754999	50	9	8	9	8	5
14.	99979996	67	9	9	9	9	7
15.	64343326	31	7	4	6	6	5
16.	42452939	38	7	5	8	7	6
17.	96599102	41	9	7	7	6	6
18.	52245342	27	7	3	5	3	3
19.	34367922	36	7	4	5	4	6
20.	56432011	22	6	2	5	4	4
21.	12311236	19	7	3	5	3	3
22.	32124521	20	7	4	5	3	4
23.	43222321	19	7	3	4	4	3
24.	23 47993	(37)	7	3	5	4	8
25.	954	(18)	7	3	6	6	8
26.	323	(8)	6	2	4	4	4
27.	44653523	32	7	4	7	5	2
28.	42264372	30	7	4	6	4	3
29.	42535422	27	7	4	6	3	3
30.	32333654	29	7	4	5	4	3
31.	34932322	28	7	5	6	3	3

Monthly averages: T (N) 3.273

T (E) 3.962

K₁: 6.97

K₂: 4.16

K₃: 5.45

K₄: 4.06

K₅: 3.94

August

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	22112123	14	7	3	4	2	3
2.	93266769	48	7	5	5	3	7
3.	46745452	37	7	5	6	5	5
4.	33333434	25	8	5	4	2	3
5.	33434442	27	7	4	4	3	3
6.	23223397	31	7	4	4	4	6
7.	96999952	58	7	7	7	6	6
8.	01122321	12	6	3	3	2	1
9.	22341643	25	7	4	5	3	4
10.	44653643	35	7	4	5	3	4
11.	32243692	31	8	3	5	3	6
12.	23253423	24	5	2	4	2	4
13.	33222112	16	4	1	3	1	1
14.	21211121	11	5	2	4	1	1
15.	11011121	8	5	1	2	0	0
16.	11101124	11	7	3	2	0	2
17.	22212114	15	4	2	4	1	2
18.	43324325	26	6	3	5	3	5
19.	22323133	19	7	3	3	1	2
20.	32224223	20	8	4	4	1	2
21.	34233222	21	7	4	5	1	3
22.	23136447	30	6	4	5	2	4
23.	34544323	28	8	5	6	3	4
24.	54535332	30	7	5	6	3	3
25.	33433226	26	7	4	6	4	4
26.	33435334	28	8	4	5	4	4
27.	42454322	26	9	5	6	3	2
28.	21122156	20	6	3	5	2	3
29.	33666655	40	8	4	6	5	6
30.	45643345	34	7	4	6	4	6
31.	33334323	24	7	4	5	3	2

Monthly averages: T (N) 3.044

T (E) 2.580

K₁ 6.74

K₂ 3.68

K₃ 4.65

K₄ 2.58

K₅ 3.40

September							
Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	31235211	18	8	4	5	2	1
2.	32222223	13	7	3	3	1	2
3.	44244322	25	7	4	5	1	6
4.	23444436	30	7	4	5	2	6
5.	53637329	38	7	3	5	4	6
6.	99999999	72	9	9	9	9	9
7.	99689593	58	6	5	7	7	8
8.	43343434	28	7	4	6	3	3
9.	99999999	72	9	9	9	8	4
10.	33222221	17	7	4	6	3	2
11.	22233243	21	7	4	5	2	3
12.	32232122	17	6	3	5	1	3
13.	62133313	22	6	3	4	1	4
14.	22122256	22	5	3	5	2	3
15.	01223223	15	6	4	4	3	3
16.	31255233	24	7	4	5	2	4
17.	22333211	17	4	2	5	2	3
18.	43245446	32	6	2	4	3	6
19.	64466555	41	7	5	6	6	6
20.	24777435	39	9	6	6	4	6
21.	69999989	68	9	8	9	8	4
22.	99999998	71	8	8	8	8	8
23.	54546544	37	6	3	4	3	5
24.	35663514	33	6	3	5	2	5
25.	21133277	26	7	4	4	3	4
26.	44399999	56	6	4	6	6	7
27.	95643993	48	7	5	6	4	6
28.	32332115	20	6	3	6	2	2
29.	12232121	14	4	2	4	2	2
30.	00136324	21	4	3	4	2	5

Monthly averages: T (N) 4.082

T (E) 3.456

K₁ 6.06

K₂ 4.27

K₃ 5.50

K₄ 3.53

K₅ 4.53

October

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	12322369	23	5	2	5	2	6
2.	62355133	28	4	1	5	3	5
3.	41122113	15	4	2	4	1	1
4.	11121120	9	4	1	4	1	2
5.	12231011	11	6	1	4	2	1
6.	32233365	27	4	2	4	3	4
7.	74544432	33	5	2	5	3	3
8.	43231457	29	7	3	5	3	5
9.	11211102	9	6	3	4	1	1
10.	52176326	32	6	3	5	2	5
11.	32226335	26	7	4	6	3	4
12.	32362235	26	7	4	4	3	5
13.	14123799	36	4	2	5	5	7
14.	67343424	33	6	3	5	3	3
15.	11234121	15	4	1	4	2	2
16.	11344634	26	7	4	5	3	3
17.	24468335	35	7	3	5	3	4
18.	44557652	38	7	4	5	3	5
19.	33252345	27	7	4	5	2	3
20.	53476311	30	8	5	5	3	3
21.	33342134	23	8	3	5	2	3
22.	14121311	14	9	5	5	1	0
23.	00113212	10	8	3	4	1	1
24.	01111210	7	3	0	4	0	1
25.	11213331	15	3	1	4	2	2
26.	95589352	46	6	3	6	5	6
27.	11274525	27	6	3	5	3	5
28.	21123134	21	7	3	5	2	2
29.	39967637	50	7	4	6	8	6
30.	73466585	44	6	3	5	5	6
31.	24227596	37	7	4	5	3	3

Monthly averages: T (N) 3.123

T (E) 2.262

K₁ 5.97

K₂ 2.77

K₃ 4.77

K₄ 2.68

K₅ 3.45

November

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	96746987	56	5	3	6	4	6
2.	63446999	50	4	3	5	6	6
3.	63464100	24	4	2	5	3	4
4.	00221242	13	4	2	4	1	0
5.	20133251	17	7	3	4	2	2
6.	12244210	13	4	1	4	1	2
7.	11111001	6	3	2	4	1	0
8.	01022654	20	3	2	6	3	2
9.	32423212	19	2	1	4	1	1
10.	32124233	20	4	2	5	2	1
11.	23345432	26	6	3	5	3	2
12.	53366242	31	7	3	7	4	5
13.	53253244	28	6	3	5	5	3
14.	32368223	29	6	4	5	4	2
15.	12142323	18	5	1	5	3	2
16.	11231103	12	5	2	4	1	1
17.	10111213	10	5	2	5	1	2
18.	32223323	20	4	2	4	2	2
19.	31112135	17	4	1	5	2	3
20.	01031021	8	2	0	4	1	1
21.	54338455	37	4	3	5	3	6
22.	58321010	20	5	2	5	2	4
23.	00195999	42	6	4	6	5	5
24.	94399999	61	7	7	8	9	7
25.	95699995	61	7	7	8	8	4
26.	24344916	33	5	3	6	3	6
27.	11246782	31	7	4	5	2	5
28.	95484473	44	8	5	7	6	6
29.	41236999	43	6	3	5	4	6
30.	53226310	22	5	3	6	3	3

Monthly averages: T (N) 3.321

T (E) 2.525

K₁ 5.00

K₂ 2.77

K₃ 5.23

K₄ 3.17

K₅ 3.30

December

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	10010000	2	2	0	4	1	1
2.	00002111	5	4	2	4	1	0
3.	11122312	13	4	2	4	1	1
4.	33111116	17	4	0	4	2	1
5.	32111111	11	3	1	4	2	2
6.	01111000	4	2	0	4	1	0
7.	04635485	35	5	3	5	3	4
8.	44355663	36	5	3	5	3	6
9.	12249622	28	5	3	5	3	4
10.	22999993	52	6	4	6	5	6
11.	53132377	31	4	2	5	2	6
12.	22123341	18	3	1	4	2	2
13.	11121113	11	3	0	4	1	2
14.	11111005	10	3	0	4	1	2
15.	32252110	17	4	2	4	1	2
16.	01223338	22	4	2	4	3	4
17.	44399577	49	5	4	6	5	8
18.	56798873	53	7	5	6	3	6
19.	29899435	49	7	6	8	6	4
20.	95666799	57	7	6	7	8	6
21.	34456499	44	4	3	6	5	7
22.	99322912	37	6	4	6	6	6
23.	22126563	27	5	2	5	3	3
24.	44245344	30	5	2	6	3	5
25.	21244621	22	5	2	5	3	3
26.	13123210	13	4	2	5	2	2
27.	11754226	28	6	3	5	3	3
28.	24333348	30	6	3	4	2	5
29.	55232333	26	5	2	5	3	4
30.	33442241	23	5	1	4	3	2
31.	21111012	9	3	0	4	1	1

Monthly averages: T (N) 3.169

T (E) 2.339

K₁ 4.55

K₂ 3.23

K₃ 4.90

K₄ 2.84

K₅ 3.48

II. Average amplitudes for different periods

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	January North											
1.	5	5	7	6	8	10	12	15	21	19	12	19
2.	4	7	5	6	5	11	11	10	19	15	10	14
3.	35	36	24	34	35	39	37	37	39	41	37	38
4.	42	44	35	49	48	48	51	60	50	56	57	71
5.	44	45	61	52	45	44	32	31	43	19	45	56
6.	-5	-17	-16	-13	-33	-26	+12	+20	+45	+13	-19	-57
	January East											
1.	6	6	7	8	7	12	15	19	24	20	19	27
2.	9	3	6	5	3	13	10	11	12	12	12	13
3.	34	33	34	35	35	38	35	35	38	38	38	38
4.	42	40	37	39	29	38	39	39	41	30	40	50
5.	35	33	28	31	34	34	27	26	16	28	23	48
6.	-4	-3	-11	-1	-6	-5	-14	-15	+7	+57	+59	+24
	February North											
1.	11	10	12	7	12	16	19	26	30	24	21	23
2.	13	10	9	9	15	15	17	34	32	33	26	26
3.	39	39	39	38	41	40	41	48	62	73	53	50
4.	114	64	91	83	60	69	63	77	84	93	119	115
5.	174	131	117	177	123	118	68	44	68	86	98	100
6.	-21	-2	-7	-39	-38	-39	-13	+22	+42	+20	-35	-80
	February East											
1.	15	11	14	12	10	17	24	32	41	41	39	37
2.	16	11	10	14	12	15	17	30	28	33	33	30
3.	38	37	34	35	42	40	39	50	49	66	45	44
4.	76	68	73	68	60	49	55	45	50	74	86	80
5.	215	62	80	61	64	86	44	37	59	56	80	67
6.	-19	+3	+2	-15	+1	-29	+1	-1	-1	+42	+36	+44

and hourly means of earth current elements

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
19	20	16	16	12	8	7	5	9	6	8	6	11.3
16	13	12	9	6	4	3	7	6	5	6	7	8.8
38	37	37	34	33	35	34	31	37	30	35	35	35.8
62	51	40	44	43	44	67	38	45	39	48	48	49.1
56	56	66	51	68	76	70	70	110	79	80	81	57.6
-64	-28	-3	+33	+10	+2	-2	-41	+44	+47	+20	-7	
Component												
28	28	27	21	15	10	6	8	10	8	10	10	14.6
15	18	17	17	8	8	5	5	7	7	6	10	10.1
36	38	30	35	53	37	34	35	35	34	35	34	34.0
49	34	46	49	39	32	36	41	56	37	39	46	40.5
28	39	37	45	47	76	64	71	73	66	75	69	43.9
+4	+9	+2	-1	+17	-28	-33	-8	-12	-10	-11	-16	
Component												
24	23	17	22	15	15	12	11	11	14	12	12	16.6
32	26	23	21	19	10	11	7	11	12	12	10	18.0
58	51	51	49	57	44	40	38	39	44	41	42	46.4
74	113	108	116	95	71	77	96	69	88	93	83	88.2
159	161	144	105	86	117	121	161	256	198	188	153	131.4
-63	-63	-30	+27	+32	+23	+27	+76	+60	+55	+33	+12	
Component												
46	48	38	39	29	21	19	15	14	15	15	14	25.2
34	24	23	28	19	15	14	13	13	15	17	15	20.0
47	45	43	51	36	41	41	39	43	43	42	40	43.0
64	77	84	100	95	71	73	76	86	98	111	79	74.9
84	82	93	62	86	120	80	152	159	125	98	126	90.7
+54	+23	+10	-16	-29	-41	-10	-9	-26	-27	-6	+8	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	March North											
1.	10	8	10	14	12	16	20	22	16	17	20	17
2.	8	8	12	10	10	10	13	20	19	16	17	17
3.	37	39	39	37	42	39	41	46	46	49	52	43
4.	34	67	42	44	56	53	51	62	64	65	64	86
5.	124	70	75	110	44	52	70	27	37	32	49	66
6.	-1	-11	0	-15	+9	-15	+17	+71	+85	+39	-47	-154
	March East											
1.	11	15	12	16	21	29	30	37	38	37	51	53
2.	8	10	8	15	12	18	18	23	23	23	30	28
3.	36	30	33	33	29	34	29	28	25	31	38	36
4.	38	60	34	37	49	49	43	49	41	57	53	56
5.	80	79	56	75	54	45	52	28	56	37	50	48
6.	-5	-11	-1	-10	+5	-8	-31	-14	+20	+43	+52	+30
	April North											
1.	14	9	15	13	17	22	24	27	26	23	22	20
2.	12	9	11	13	10	19	19	22	23	22	15	15
3.	37	41	40	40	40	44	46	50	49	42	39	40
4.	52	50	51	58	47	72	81	72	64	62	53	67
5.	124	89	112	74	84	67	50	55	55	59	76	77
6.	+15	+10	-2	+32	+1	+32	+60	+121	+54	-45	-154	-214
	April East											
1.	14	7	13	11	19	33	47	46	49	50	46	51
2.	14	10	10	12	13	20	26	32	27	29	24	28
3.	33	37	35	32	35	33	36	34	33	37	35	35
4.	54	60	46	47	52	42	49	42	44	51	70	59
5.	89	77	86	56	59	53	42	52	47	54	38	49
6.	-23	-5	+1	+4	-9	+3	+3	+57	+60	+74	+59	-6

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
22	20	17	12	13	8	9	6	8	8	6	8	13.3
13	20	20	8	15	6	5	2	3	3	4	6	11.3
39	45	57	39	52	46	35	41	34	37	48	38	42.7
92	63	85	60	58	64	48	66	43	52	65	46	59.8
67	57	52	95	43	57	82	35	83	62	56	70	63.2
-156	-107	-33	+52	+101	+67	+27	+15	+28	+10	+16	+1	
Component												
51	51	39	32	29	24	19	9	11	11	7	12	26.8
31	28	28	17	27	13	13	8	7	11	12	7	17.8
38	43	40	28	46	38	33	40	33	38	29	30	34.2
64	60	57	44	49	62	47	59	37	52	49	45	49.7
49	42	59	46	35	83	65	52	63	68	68	82	57.1
+17	+9	-3	+2	+10	+5	-36	-23	-20	-23	-5	-2	
Component												
20	21	19	15	14	10	10	10	9	7	13	12	16.2
19	16	15	11	7	6	10	8	6	6	10	11	13.1
48	41	38	36	31	33	36	37	35	36	38	40	40.0
61	51	71	62	47	50	48	68	46	62	59	101	60.7
100	76	128	97	59	97	105	65	92	98	91	94	84.4
-169	-97	0	+82	+89	+94	+55	+23	+10	-7	+21	-8	
Component												
47	46	43	35	32	26	19	14	13	11	18	17	29.5
28	28	26	21	16	17	13	9	9	7	15	15	18.7
39	35	34	35	28	28	32	31	32	33	30	31	33.5
54	46	69	58	44	37	50	39	51	66	48	76	52.4
86	65	69	60	53	88	79	75	68	77	92	96	67.1
-8	-21	-9	-14	-32	-39	-45	-8	+7	-7	-31	-11	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	May North											
1.	11	13	15	20	23	25	25	24	25	27	25	22
2.	13	15	17	17	18	23	25	25	23	20	21	24
3.	41	37	41	40	43	43	46	47	42	46	41	48
4.	53	66	59	41	48	78	68	69	56	55	67	57
5.	99	54	89	102	91	49	100	70	56	48	54	78
6.	+5	0	+8	-6	+57	+84	+105	+94	-7	-91	-166	-162
	May East											
1.	16	17	20	24	24	37	47	48	50	54	47	53
2.	16	16	13	18	22	24	31	28	34	38	35	42
3.	32	36	36	28	30	30	32	39	31	36	42	37
4.	54	52	53	43	43	48	52	49	54	55	56	45
5.	81	53	45	64	41	41	28	38	39	61	46	79
6.	-5	+	+4	-13	-17	-3	+47	+63	+63	+47	-1	-6
	June North											
1.	15	12	16	22	22	24	24	26	26	24	24	20
2.	15	11	13	17	21	22	26	25	27	23	20	18
3.	41	41	44	38	44	59	57	50	46	44	43	42
4.	77	70	64	73	62	87	67	85	59	71	53	65
5.	104	87	73	131	101	80	79	56	85	50	69	47
6.	-6	+35	+10	+12	+58	+90	+116	+75	+10	-83	-199	-202
	June East											
1.	23	14	22	28	33	45	56	66	69	59	64	60
2.	17	15	19	19	22	25	32	37	35	32	35	34
3.	35	35	31	29	32	41	35	37	37	40	37	33
4.	51	67	67	49	49	53	49	47	60	55	51	58
5.	82	51	58	81	65	47	55	65	53	64	65	53
6.	-7	-5	-12	-10	-7	+41	+88	+76	+94	+47	+1	-31

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
19	14	13	14	10	10	7	7	7	7	7	9	15.8
21	13	13	12	10	9	6	7	12	9	5	10	15.1
43	40	49	41	37	39	33	38	37	38	36	38	40.9
56	53	50	57	54	66	46	54	61	53	55	70	58.0
99	111	109	108	101	68	106	72	79	78	89	79	82.8
-140	-78	+11	+56	+63	+100	+28	+16	+7	-6	+8	+14	
Component												
50	43	42	33	32	27	20	14	12	13	16	14	31.5
34	28	27	21	23	21	17	10	12	10	14	15	23.2
44	28	31	32	32	34	32	37	31	35	35	32	33.8
57	50	63	58	45	70	37	49	43	53	55	57	51.3
79	97	71	133	111	74	103	63	74	53	49	57	65.9
-19	-29	-5	-28	-20	-20	-29	-5	-8	+9	-7	-22	
Component												
18	17	19	12	14	12	9	8	8	11	11	15	17.1
17	13	10	8	6	6	5	5	4	13	14	11	14.6
40	39	37	37	37	36	36	38	36	37	40	39	41.6
60	54	67	53	73	57	31	44	56	53	61	62	62.6
71	75	77	82	56	58	89	71	74	122	106	100	81.0
-159	-107	-33	+40	+64	+92	+63	+30	+35	+5	+16	+40	
Component												
51	56	49	46	40	39	25	19	13	17	18	22	38.9
31	28	25	25	22	26	17	13	17	15	19	15	23.9
34	34	31	31	34	25	29	23	33	33	41	37	34.0
48	50	55	60	58	59	39	47	51	44	58	44	52.7
81	74	76	58	90	82	148	80	64	67	91	114	73.4
-288	-39	-15	-27	-63	-48	-56	-26	-14	+3	+15	+21	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	July North											
1.	19	22	23	23	28	30	28	28	33	27	24	22
2.	23	24	24	19	22	29	33	28	34	24	27	25
3.	49	57	54	45	56	74	63	68	53	50	55	44
4.	70	94	77	77	74	87	103	78	73	72	76	97
5.	110	122	100	72	74	67	62	83	63	50	66	112
6.	+34	+20	+40	+33	+45	+107	+118	+81	-17	-72	-142	-187
	July East											
1.	25	28	29	33	30	42	47	52	60	60	61	59
2.	28	29	29	27	29	32	37	33	46	39	35	35
3.	52	52	56	46	47	42	44	50	58	37	43	40
4.	71	75	94	58	55	79	66	66	51	58	82	78
5.	92	149	58	83	55	60	44	61	55	77	45	118
6.	+10	+5	+25	-27	-8	+21	+42	+67	+62	+54	+14	-44
	August North											
1.	11	15	19	16	22	27	27	26	25	24	24	23
2.	15	21	16	15	15	25	24	31	23	27	21	23
3.	32	37	35	37	38	45	44	41	48	40	34	35
4.	51	61	43	41	49	65	60	64	60	44	55	65
5.	106	86	138	93	54	60	74	52	59	59	64	93
6.	+33	+29	+7	+17	+41	+85	+101	+61	-25	-109	-177	-192
	August East											
1.	16	21	23	20	24	36	49	51	54	52	49	49
2.	16	18	19	19	16	23	31	35	30	31	31	33
3.	35	38	40	34	32	42	33	48	39	34	38	38
4.	55	49	51	43	49	41	52	48	45	59	54	49
5.	68	50	46	60	42	42	47	21	50	42	59	81
6.	+3	+8	-7	-9	-8	+2	+35	+79	+73	+44	+5	-35

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
20	19	19	17	14	18	15	16	11	13	15	16	20.7
24	19	17	17	12	17	17	19	10	11	13	17	21.1
45	46	47	42	40	63	56	49	49	50	55	49	52.6
73	77	72	75	73	63	59	63	71	51	76	100	76.3
94	74	111	103	104	84	167	100	64	97	131	85	92.3
-155	-83	-66	+32	+90	+60	+72	+12	-49	+1	+8	+21	
Component												
51	49	49	42	35	34	33	25	19	18	25	24	38.9
35	30	33	31	26	29	29	27	16	16	24	26	30.1
39	41	46	37	49	55	48	50	60	46	40	53	47.3
82	64	62	68	73	64	59	74	72	47	72	67	68.2
97	99	114	128	143	133	181	65	72	108	80	87	92.7
-39	-29	-48	-22	-37	-43	-17	+6	+13	+8	+3	-17	
Component												
21	21	19	17	16	14	11	11	12	13	10	13	18.2
24	21	16	18	16	13	10	14	14	13	13	14	18.5
43	42	35	32	39	32	30	32	31	32	35	32	36.7
66	86	62	55	71	50	38	55	48	45	42	50	56.0
68	65	91	130	53	70	99	105	100	121	128	104	86.2
-148	-85	-10	+59	+111	+83	+27	+7	-7	+27	+21	+43	
Component												
52	48	42	40	39	30	25	21	20	20	20	20	34.0
37	31	29	28	25	22	18	13	15	20	17	18	23.9
45	34	34	32	36	39	27	34	27	39	32	30	35.8
55	59	46	42	57	37	44	36	55	55	50	52	49.1
52	92	73	115	70	81	81	136	94	73	95	138	71.1
-38	-44	-30	-23	-9	+2	-6	0	-23	0	-1	-20	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	September North											
1.	14	11	15	17	18	26	26	28	33	33	31	32
2.	24	17	28	33	42	34	37	47	39	41	40	56
3.	42	46	46	56	56	58	58	69	66	83	67	76
4.	73	65	112	78	113	76	97	89	67	93	83	76
5.	149	135	112	122	90	94	53	102	65	67	161	124
6.	+45	+23	-36	-35	-12	+35	+68	+108	+37	-36	-135	-184
	September East											
1.	22	13	21	18	23	37	39	41	50	51	54	52
2.	22	17	29	35	31	32	38	54	44	46	41	51
3.	44	41	50	78	58	59	59	65	55	75	64	80
4.	55	64	49	76	70	76	67	83	59	66	95	96
5.	166	65	96	53	84	64	83	65	78	62	148	107
6.	-8	+51	+34	+1	+11	-9	+16	+86	+95	+67	+37	-14
	October North											
1.	5	7	9	9	6	13	16	21	17	17	19	14
2.	6	10	9	11	11	10	16	20	20	17	16	17
3.	37	39	42	37	41	40	39	43	45	41	40	43
4.	46	39	43	64	61	63	71	78	70	64	81	75
5.	78	102	91	75	43	46	45	31	48	48	57	46
6.	-20	-24	+12	-44	-6	-13	+60	+96	+123	+16	-108	-181
	October East											
1.	13	17	16	17	15	25	27	32	35	38	44	41
2.	10	11	10	12	34	20	21	25	23	24	24	26
3.	32	31	30	37	34	23	30	31	31	30	32	34
4.	34	48	49	55	43	44	40	35	39	44	49	54
5.	66	72	78	48	47	64	60	59	47	43	59	82
6.	+3	-16	-19	+14	-1	-12	+9	+33	-69	+92	+67	+24

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
30	27	24	22	19	14	15	13	10	8	17	14	20.7
62	44	32	29	20	23	13	17	14	14	21	15	31.1
78	84	74	55	41	41	41	40	41	38	45	38	55.8
90	98	69	78	56	77	85	76	47	58	72	55	78.5
104	105	179	115	127	91	125	135	177	170	173	137	121.5
-166	-126	-31	+107	+68	+72	+52	+42	+39	+7	+23	+33	

Component												
52	49	49	46	35	30	23	18	15	17	19	20	33.1
64	46	42	49	35	26	22	15	19	17	28	22	34.4
69	74	63	62	54	51	43	53	37	36	43	34	56.2
83	96	86	73	73	71	85	62	44	50	52	57	69.7
85	75	102	119	85	75	115	125	155	184	136	108	101.3
-33	-52	-49	-13	-31	-16	-60	-16	-6	-31	-46	-13	

Component												
17	15	17	16	13	6	7	8	7	9	11	6	11.9
18	17	13	13	14	7	7	10	7	8	13	9	12.4
43	41	40	38	39	36	34	34	37	37	39	33	39.1
51	85	56	60	49	40	62	42	47	45	59	76	59.4
145	63	88	40	66	36	143	76	85	114	142	155	77.6
-152	-108	-31	+54	+44	+38	+44	+63	+35	+15	+44	+42	

Component												
38	41	40	39	35	27	25	20	17	21	20	15	27.5
25	24	24	21	21	15	12	16	11	16	15	16	18.9
28	31	28	32	31	28	27	20	32	30	33	27	30.4
54	43	43	45	53	40	35	53	42	41	42	43	44.5
62	66	87	84	60	76	117	56	77	139	113	146	75.8
-12	-16	-23	-11	-28	-36	-37	+5	-38	-37	-15	-15	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	November North											
1.	5	10	5	10	9	10	12	21	21	15	18	20
2.	12	13	8	14	12	17	11	22	25	19	20	31
3.	38	37	38	46	40	44	40	47	48	42	62	63
4.	57	62	43	56	54	58	54	60	59	73	87	82
5.	103	65	140	62	52	55	53	33	38	56	63	71
6.	-5	-24	-14	-33	-33	-25	+4	+30	+77	+33	-52	-94
	November East											
1.	12	14	11	12	15	20	25	26	28	24	30	34
2.	10	13	11	13	14	16	18	21	28	20	24	22
3.	38	38	37	45	41	40	36	41	41	39	51	60
4.	48	54	47	41	41	51	48	47	49	48	79	65
5.	106	55	104	63	47	37	28	18	28	43	26	43
6.	+3	-2	-18	-12	-8	-21	-18	-9	+27	+71	+78	+51
	December North											
1.	6	9	9	9	7	10	12	17	24	25	19	21
2.	10	9	6	8	9	11	13	14	22	23	19	22
3.	47	37	37	37	39	39	42	41	39	50	48	45
4.	57	51	48	48	61	55	50	57	59	66	57	82
5.	82	99	76	109	74	59	68	48	47	39	94	113
6.	+6	+24	-2	-19	-17	-1	+8	+12	+34	+46	-16	-41
	December East											
1.	10	9	12	10	14	16	20	21	24	29	28	26
2.	12	7	13	9	10	10	16	17	18	27	24	23
3.	43	39	37	35	39	38	44	42	39	44	43	42
4.	49	53	44	52	61	49	48	42	55	64	65	61
5.	64	52	66	81	51	43	47	57	39	43	51	49
6.	-21	0	-8	-7	-14	-13	-21	-33	-24	+73	+35	+15

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
18	20	17	13	10	10	6	9	7	10	6	8	12.1
26	17	20	14	13	12	9	14	12	11	6	11	15.5
50	49	53	41	40	38	38	41	38	40	38	40	43.7
96	78	66	82	76	47	96	64	46	55	51	69	65.5
91	73	44	47	113	109	130	156	123	137	156	68	84.1
-122	-60	+3	+28	+34	+47	+19	+75	+47	+35	+32	-2	
Component												
32	31	31	25	19	18	13	14	14	14	10	14	20.2
27	24	26	20	14	20	15	13	14	13	11	13	17.5
42	49	48	47	40	38	38	45	39	44	39	40	42.3
49	48	56	65	62	60	112	89	70	64	53	54	58.7
53	51	32	74	95	109	106	122	98	50	41	75	62.6
-8	+8	+3	-10	-12	+3	-21	-25	-1	-21	-21	-32	
Component												
19	18	16	14	10	7	10	9	6	9	10	7	12.6
26	20	19	14	13	11	11	9	7	9	9	9	13.5
43	46	39	38	34	37	39	38	35	37	38	39	40.0
73	62	50	57	56	48	67	73	53	49	60	84	59.2
113	85	111	78	75	138	67	140	116	176	176	99	93.8
-43	-37	+5	+1	-16	+8	+6	+5	+39	-3	+3	-2	
Component												
28	24	25	20	17	13	10	12	12	12	12	12	17.3
26	23	21	20	13	15	13	13	10	12	12	12	15.5
42	42	41	39	43	38	39	42	39	39	39	38	40.7
50	44	51	59	43	68	73	58	50	50	68	48	54.4
85	45	67	65	94	109	61	116	104	105	99	80	69.8
+45	+34	+35	+7	+3	-8	-42	+1	-19	-32	-8	0	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	Year 1982 North											
1.	10	11	13	14	15	19	21	23	25	23	22	21
2.	13	13	13	14	16	19	20	25	25	23	21	24
3.	40	41	41	40	43	47	46	49	48	50	48	48
4.	60	61	54	59	61	68	68	71	63	69	71	78
5.	107	90	98	98	72	66	63	52	55	51	75	82
6.	+7	+6	+1	-9	+7	+25	+55	+67	+40	-21	-102	-138
	Year 1982 East											
1.	14	14	17	17	39	43	35	39	43	43	44	45
2.	15	13	15	24	29	29	24	29	29	29	29	31
3.	37	37	38	38	41	38	38	41	39	42	43	43
4.	52	57	50	51	51	51	50	49	49	54	65	62
5.	94	66	66	63	53	53	46	44	47	51	57	69
6.	-6	+2	-2	-8	-5	-4	+13	+31	+45	+54	+37	-5

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
21	20	18	16	14	11	10	9	9	9	11	10	15.5
25	20	17	14	13	10	9	10	9	10	11	11	16.0
47	43	46	40	40	40	38	38	37	38	41	38	42.7
71	73	66	66	62	56	60	61	53	54	61	70	64.1
97	83	100	87	79	83	108	98	114	120	121	102	87.7
-127	-31	-17	+34	+59	+58	+35	+33	+24	+15	+19	+10	

Component												
44	43	39	35	30	25	20	16	14	15	16	16	29.3
32	28	27	25	21	19	16	13	12	13	16	15	22.1
42	41	39	38	38	38	35	39	36	38	37	35	38.9
59	56	60	60	57	56	57	57	55	54	57	55	55.3
70	69	73	76	89	92	103	94	91	93	86	62	72.4
-5	-10	-11	-12	-18	-21	-32	-8	-12	-1	-11	9	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	Quite days North											
1.	6	10	11	11	9	13	14	16	16	13	13	13
2.	7	11	11	9	8	12	8	14	15	10	10	11
3.	35	34	32	32	33	33	33	37	37	32	33	35
4.	34	37	35	32	25	40	37	38	36	44	37	35
5.	20	26	36	37	39	26	24	15	16	21	23	31
6.	+11	+14	+5	+1	+19	+35	+52	+68	+48	-21	-91	-133
	Quiet days East											
1.	8	12	13	11	11	20	23	22	26	23	26	32
2.	6	10	10	11	9	11	13	16	16	17	14	17
3.	28	28	29	26	25	30	26	24	26	24	26	29
4.	27	34	28	28	25	27	31	28	29	32	35	30
5.	29	21	26	29	28	26	22	23	20	31	22	31
6.	0	-7	-3	-2	-18	-9	-3	-1	+22	+34	+24	+5
	Disturbed days North											
1.	21	26	23	21	24	32	32	36	44	34	34	34
2.	30	23	33	36	42	39	44	60	51	50	50	61
3.	59	55	62	63	55	70	73	79	78	96	87	93
4.	129	102	78	99	107	115	116	136	93	105	118	114
5.	202	181	259	201	156	107	117	100	98	90	72	152
6.	+23	-11	-47	-34	-23	+36	+58	+54	+41	-4	-86	-108
	Disturbed days East											
1.	25	24	32	31	34	43	48	53	60	59	57	57
2.	32	27	35	39	38	39	44	60	54	53	51	59
3.	58	55	65	80	66	65	67	78	75	88	84	95
4.	96	105	101	93	93	99	95	103	80	88	117	101
5.	209	84	140	102	104	105	86	57	70	80	97	131
6.	-14	+34	-11	-17	+38	+16	+24	+49	+56	+68	+55	-7

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
14	13	12	8	6	5	6	5	6	5	4	6	9.8
11	5	5	6	3	2	5	3	6	5	4	10	8.0
35	35	37	32	28	33	31	33	35	32	33	33	33.5
43	37	34	35	37	35	36	35	32	37	38	35	36.4
20	19	34	22	19	19	15	24	25	20	30	29	24.6
-127	-61	-1	+33	+44	+35	+19	+5	+9	+14	+10	+11	
Component												
33	29	24	17	13	11	8	5	7	5	5	8	16.3
17	17	15	11	7	10	7	4	8	8	8	9	11.3
31	29	27	32	28	23	29	29	31	32	32	32	28.4
31	29	35	35	34	31	25	28	31	39	33	29	30.6
24	24	24	26	22	26	31	26	26	15	29	30	25.5
-10	-1	-6	-1	-11	-11	-10	-5	+3	+12	-1	0	
Component												
31	30	27	26	21	23	19	20	15	12	14	16	25.4
54	47	35	32	28	30	28	25	18	15	18	17	36.1
77	78	79	58	48	63	53	53	52	55	47	45	65.8
144	101	98	123	103	97	123	131	87	76	129	104	109.5
140	156	191	176	154	202	237	223	201	255	227	172	169.5
-115	-83	-17	+105	+41	+80	+61	+49	+2	-47	-2	+33	
Component												
55	51	51	46	41	35	33	28	30	24	24	24	40.2
62	44	44	45	34	37	35	30	24	20	28	25	40.0
72	66	66	66	62	67	58	78	59	48	53	45	67.3
111	108	112	120	113	96	148	113	82	77	96	85	101.3
83	109	125	192	111	152	151	199	177	211	160	122	127.4
+14	-7	-13	-32	-36	-46	-59	+13	-23	-41	-54	-5	

III.

Results of harmonical analysis of the daily variations
North Component

	A_1	φ_1	A_2	φ_2	A_3	φ_3	A_4	φ_4	A_5	φ_5	A_6	φ_6
January	16	145	26	232	17	125	21	311	4	50	2	159
February	34	144	35	231	21	94	19	315	2	25	5	112
March	27	112	58	269	54	96	29	280	3	184	7	82
April	45	109	83	291	61	118	22	327	11	238	4	174
May	45	101	81	299	49	142	8	61	5	304	1	258
June	67	99	88	293	48	135	10	48	4	258	4	43
July	57	86	84	299	43	126	10	119	8	279	10	289
August	60	106	81	304	55	140	3	147	10	313	3	5
September	48	116	74	278	62	120	12	335	8	37	8	165
Octóber	40	106	67	259	58	114	27	324	12	187	9	168
November	28	143	44	247	32	103	26	310	8	139	1	80
December	8	85	17	230	14	87	14	329	8	93	7	355
Year	37	108	56	279	39	118	12	325	2	263	1	67
Q	32	91	49	285	39	125	15	319	2	188	3	358
D	23	141	57	280	48	110	5	72	13	106	11	191

East Component

January	18	301	13	125	8	16	12	247	10	72	3	26
February	20	308	23	112	7	326	6	75	4	145	4	224
March	19	297	14	110	10	31	12	221	3	129	5	60
April	30	341	21	184	10	60	16	311	7	83	4	113
May	23	355	20	211	13	107	14	350	6	320	2	336
June	42	9	28	207	26	147	9	353	2	132	3	264
July	28	13	29	216	12	102	16	343	4	35	5	332
August	22	6	27	232	21	90	9	346	5	258	2	357
September	41	2	17	208	28	61	19	329	7	359	9	101
Octóber	36	331	21	178	17	45	10	275	11	131	6	174
November	26	298	17	146	17	17	10	247	9	80	6	356
December	21	275	21	90	5	356	5	251	11	113	6	360
Year	21	340	15	181	9	77	8	307	3	88	3	20
Q	6	316	12	167	5	56	7	283	2	98	2	326
D	40	345	13	178	8	43	10	9	15	96	9	78

IV.

Special phenomena
(magnetic and earth current data)

SSC-s

Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	End of storm
			E(mV/km)	H(gamma)					
02.	01.	12.00	7	42	+	+	+	-	02.02.18.00
	03.	02.30	7	18	+	+	+	-	02.03.17.00
	05.	17.15	9	30	+	+	+	- (?)	in storm
	11.	14.15	30	30	+	+	+	-	02.12.03.00
	22.	10.30	9	35	+	+	+	-	02.23.03.00
03.	01.	12.30	>16	80	+	+	+	-	03.03.02.00
04.	01.	14.00	12,5	32	+	+	+	-	04.01.16.00
	16.	18.00	12	45	+	+	+	-	04.17.04.00
	24.	21.15.	18	70	+	+	+	-	04.25.20.00
06.	06.	03.45	18	60	+	+	+	-	06.06.09.00
	09.	01.45	20	80	+	+	+	-	06.09.08.00
	10.	03.00	5,5	14	+	+	+	-	06.10.19.00
	12.	15.45	>18	70	+	+	+	-	06.14.01.00
07.	11.	10.45	12,5	22	+	+	+	-	07.11.20.00
	13.	17.15	>12,5	150	+	+	+	-	07.15.02.00
	16.	16.15	14,5	95	+	+	+	-	07.17.12.00
		22.00	>18	90	+	+	+	-	in storm
	30.	15.30	7	18	+	+	+	-	07.30.20.00
08.	06.	19.30	16	55	+	+	+	-	08.07.18.00
09.	05.	23.45	23,5	11	+	+	+	-	09.07.21.00
	06.	12.45	>18	130	+	+	+	-	in storm
	09.	02.00	20	115	+	+	+	-	09.09.23.00
	21.	04.30	?	70	+	+	+	-	09.23.01.00
	23.	10.45	11	28	+	+	+	-	09.23.17.00
	25.	18.00	3,5	28	+	+	+	-	09.27.22.00
		21.30	10	28	+	+	+	-	in storm
	26.	11.30	>16	100	+	+	+	-	in storm

SSC-s

Month	Day	CET (GMT+1h)	Amplitude in E (nV km)	H H(gamma)	Ex	Ey	Hx	Hy	End of storm
10.	13.	16.00	9	30	+	+	+	--(?)	10.14.17.00
	26.	01.30	>18	70	+	+	+	—	10.26.14.00
	31.	14.30	12	45	+	+	+	—	11.01.22.00
11.	20.	19.45	3.5	12	+	+	+	—	11.22.07.00
	23.	10.15	9	30	—	+	+	+	11.24.04.00
	24.	09.45	10	30	+	+	+	—(b?)	see next item
		10.30	18	50	+	+	+	—	11.26.20.00
	30.	13.15	16	22	+	+	+	—	11.30.17.00
12.	07.	04.30	6.5	18	+	+	+	—	12.08.04.00
	10.	08.15	11	30	—	—	—	+	12.10.23.00
		15.15	18	52	+	+	+	—	in storm
	17.	09.00	8	42	—	—	—	+	12.18.21.00
	19.	03.45	12	40	+	+	+	—	12.19.15.30
	27.	08.15	11	22	+	+	+	—	12.27.19.00

		Bays			Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H(gamma)		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
01.	01.	16.30	9	60	-	+	-	+	tr		
	02.	19.00	9	35	+	+	+	-			
	03.	17.00	11	42	+	+	+	-	tr		
		20.30	11	80	-	+	+	+			
	04.	00.15	8	30	-	-	+	-	tr		
	06.	02.15	3.5	20	+	0	0	-	3.5	+	+
		20.45	8	35	+	+	+	-			
	08.	20.30	8	32	+	+	+	-	tr		
	14.	21.45							3.5	+	+
	15.	04.00	6	32	+	+	+	-	tr		
		22.30	4.5	20	-	+	+	+	tr		
	16.	19.30	17	105	+	+	+	+	tr		
	18.	19.30	12	75	-	-	-	+			
		22.00	7	65	+	+	+	+	tr		
	20.	02.00	35	14	+	+	+	-	2.5	+	+
		19.30									
		20.15	3.5	18	-	+	+	+	tr		
	21.	11.15	13.5	45	+	+	+	-(si?)			
		18.30	14.5	40	-	-	-	+(si?)			
	22.	18.00	12.5	70	-	+	+	+	tr		
		22.30	16	70	+	+	+	+	tr		
	23.	21.00	9	50	-	+	+	+	tr		
	24.	20.30	6.5	32	-	+	+	+	tr		
		23.30	8	45	+	+	+	+	tr		
	25.	21.00	3.5	15	-	+	+	+	2	+	+
	26.	21.30	5.5	35	-	+	+	+			
	27.	23.30	12.5	70	-	+	+	+	tr		
	28.	04.00	6.5	40	+	-	-	-			
	31.	14.30	18	72	+	+	+	-	tr		
		19.15	11	35	-	-	-	-			
	02.	02.	23.00	4.5	22	-	+	+	+	tr	

		Bays				Pi-s					
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV km)	Ex	Ey
			E(mV km)	H(gamma)							
02.	05.	02.00	10	55	-	+	+	+	tr		
	06.	18.45	10	80	-	+	+	+	tr		
	07.	00.15	20	90	+	+	+	-	tr		
		02.00	11	50	+	+	+	-	tr		
	07.	10.30	7	35	-	-	-	+			
		21.30	9	30	-	+	+	+	tr		
	08.	00.45	6.5	35	+	+	+	-	tr		
		19.15	7	22	0	-	-	+			
		20.45	9	50	-	-	-	+	tr		
	10.	10.00						pg	6		
		20.30	8	30	+	-	-	-			
	11.	04.30	11	60	+	+	+	-	tr		
		22.00	15	95	-	+	+	+	tr		
	12.	00.15	18	100	+	+	+	-			
		20.00	12.5	72	-	+	+	+	tr		
		23.00	11	60	+	+	+	-	tr		
	13.	02.45	12.5	52	-	+	+	+	tr		
		18.30	27	170	-	+	-	+	tr		
		22.15	34	120	+	+	+	-	tr		
	14.	20.30	16	85	-	+	+	+			
	17.	21.30	80	70	-	+	+	+	tr		
	18.	03.30						pg	5.5		
		19.45	14.5	80	-	+	+	+			
		23.45	9	60	+	+	+	-	tr		
	19.	06.30						pg	9		
		19.45	12.5	90	+	+	+	-	tr		
	23.	17.15	12.5	72	+	+	+	+	tr		
		19.00	11	60	-	+	+	+	tr		
	24.	00.15	8	32	+	+	+	-	2.5	+	+
		23.30	8	45	+	+	+	-	tr		
	25.	05.00	10	70	+	+	+	-	tr		

		Bays			Pi-s							
Month	Day	CET (GMT+1h)	Amplitude E(mV/km)	in H(gamma)	Ex	Ey	Hx	Hy	E(mV km)	Ex	Ey	
02.	25.	19.15	13.5	80	-	-	-	+	tr			
	26.	21.30	10	105	-	+	+	+	tr			
		23.15	13.5	45	+	+	+	-	tr			
	28.	20.30	7	55	-	+	+	+	tr			
03.	01.	23.30	30	270	+	+	+	-	tr			
	02.	18.30	12.5	45	-	+	+	+	tr			
		20.45	13.5	65	-	+	+	+	tr			
	05.	09.15	13.5	35	+	+	+	-				
	08.	01.00							2.5	+	+	
	09.	00.45	13.5	55	+	+	+	-	tr			
	11.	18.00	3.5	25	-	+	+	+	tr			
	13.	03.00	10	45	+	+	+	-	tr			
	14.	19.30	9	42	-	+	+	+	tr			
	17.	00.15								2.5	+	+
		14.30	13.5	30	-	-	-	+				
	19.	00.45	6.5	25	+	+	+	-	2	+	+	
		06.00							pg 4.5			
	20.	23.30	4.5	18	+	+	+	-	tr			
	21.	20.15	11	75	-	+	+	+	tr			
	22.	01.00	10	60	+	+	+	-				
		05.15							pg 3.5			
17.00		9	22	-	+	-	+					
23.	03.00	4.5	22	+	+	+	-					
	04.30							pg 4.5				
25.	18.30	4.5	25	-	+	+	+					
26.	22.45	4.5	22	+	+	+	-	2.5	+	+		
28.	22.15	2.5	10	+	+	+	-					
04.	01.	21.45	12.5	75	-	+	+	+	tr			
	02.	00.15	14.5	80	-	+	+	+	tr			
		17.15	12.5	80	-	+	+	+	tr			
		22.45	8	42	+	+	+	-	3.5	+	+	

		Bays				Pi-s					
Month	Day	CET (GMT+1h)	Amplitude in E(mV.km) H(gamma)		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
04.	03.	00.00	11	40	-	+	+	+	tr		
		18.00	12.5	60	+	+	+	-	tr		
	04.	21.45	6.5	42	-	+	+	+	tr		
	05.	22.45	11	55	-	+	+	+	tr		
	08.	21.45	9	55	+	+	+	-	tr		
	10.	14.45	11	50	-	+	+	+	tr		
		23.00	20	80	+	+	+	-	tr		
	11.	01.30	14.5	105	-	+	+	+	tr		
		21.30	13.5	55	+	+	+	-	tr		
	14.	00.00	4.5	18	-	+	+	+	3.5	±	+
	20.	12.00	8	32	+	+	+	-			
	21.	00.15	4.5	42	-	+	+	+	2.5	+	+
		20.00	16	60	-	+	+	+	tr		
	23.	14.00	7	18	+	+	+	-			
	25.	15.45	11	32	-	-	-	+			
	26.	22.30	3.5	8	+	+	+	-	2.5	+	+
		23.00	6.5	25	+	+	+	-	tr		
	27.	18.45	15	68	+	+	+	-	tr		
	29.	02.00	4.5	30	+	+	+	-	tr		
	30.	22.15	4.5	32	+	+	+	-	2.5	+	+
05.	01.	17.15	10	55	-	+	-	+	tr		
		22.00							2.5	+	+
	02.	03.00	7	42	+	-	-	-			
	03.	13.45	9	35	-	-	-	+			
	04.	00.00	10	11	+	+	+	+	tr		
		11.15	12	35	-	-	-	+			
	05.	20.30	8	30	+	+	+	-	tr		
	06.	02.15							2.5	+	+
	08.	01.15	2.5	20	+	+	+	-	tr		
	09.	02.15	4.5	30	+	+	+	-	2.5	+	+
10.	02.30							2.5	+	+	

		Bays				Pi-s					
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
05.	11.	01.15							2.5	+	+
	13.	03.15							2	+	+
		17.15							2.5	+	+
		20.45	3.5	18	+	+	+	-	2	+	+
	15.	17.15	4.5	30	+	+	+	0			
		19.45	5.5	35	+	+	-	+	3.5	+	+
	18.	10.45	7.5	65	-	-	-	+			
		22.45	6	38	+	+	+	-	2	+	+
	21.	04.00	6	14	-	-	-	+			
	22.	06.30	3.5	12	-	-	+	-			
	23.	01.30							3	+	+
		02.00							2.5	+	+
		19.15							2	+	+
	24.	01.00							2	+	+
		22.15							2.5	-	-
	25.	15.30	3.5	15	+	+	+	-			
	26.	00.15	6	35	+	+	+	-	5.5	+	+
	26.	16.15	14.4	55	-	-	-	+			
	27.	15.15	18	80	+	+	+	+	tr		
		17.45	11	42	-	+	+	+	2.5	+	+
	28.	20.45	12.5	60	-	+	-	+	tr		
	29.	22.15	8	35	-	-	-	+			
	30.	18.15	9	40	+	+	+	+	tr		
	23.00	11	50	+	+	+	-	tr			
06.	01.	16.15						pg	4.5		
	02.	03.15	6	45	+	+	+	-	tr		
		13.30							pg	3.5	
	03.	21.45	3.5	16	-	+	+	0	2.5	+	+
	04.	01.45	7	22	+	+	+	-	tr		
		14.30	11	45	+	+	+	-sfe			
		15.30	11	35	+	+	+	-sfe			

		Bays				Pi-s					
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
06.	04.	23.15	4.5	18	+	+	+	-	3.5	+	+
	06.	11.30	4.5	18	+	+	+	-			
	09.	04.00	14	45	+	+	+	-			
	10.	04.00	9	50	+	+	+	-			
		12.30	14.5	65	-	-	-	+			
		17.15	10	60	-	+	+	+	tr		
	11.	06.00	9	30	-	-	-	+			
		19.15	5.5	30	+	+	+	-	tr		
		21.15	10	35	-	-	-	+	tr		
	12.	00.45	21.5	85	+	+	+	-	tr		
	13.	03.00	18	80	+	+	+	-	tr		
		15.00	12.5	65	-	-	-	-			
		16.45	9	30	-	-	-	+			
		21.15	16	60	+	+	+	-			
	15.	05.00						pg	5		
		18.00	12.5	70	+	+	+	+	tr		
	16.	00.30	5.5	45	+	+	+	-	tr		
		14.15	5.5	10	-	-	-	+			
	18.	15.00	2.5	12	-	-	-	+			
		20.30	4	18	-	+	+	+	5.5	+	+
	19.	23.15	18	85	-	+	+	+	tr		
	20.	02.45	5.5	40	+	+	+	-	tr		
		16.30	6	30	-	-	-	0			
		21.00	7	30	-	+	-	+	3.5	+	+
	22.	14.30	12.5	35	+	+	+	-(ssc?)			
		19.15	5.5	25	-	-	-	+			
	23.	21.45	5.5	30	+	+	+	-	2.5	+	+
	24.	22.00	12.5	100	-	+	+	+	2.5	+	+
	26.	22.30	6.5	50	-	+	+	+	tr		
	29.	00.15	9	50	-	+	+	+	tr		
07.	01.	00.45	7	40	+	+	+	-	tr		

		Bays			Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H (gamma)		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
07.	01.	20.00	4.5	25	+	+	+	-	2.5	+	+
	03.	23.30							2	+	+
	04.	22.00							2.5	+	+
	06.	18.00	11	75	-	-	-	+	tr		
	07.	18.15	6	55	-	-	-	+	tr		
	08.	16.15	7	25	+	+	+	-	tr		
		17.45	6	28	+	+	+	+	tr		
	10.	01.30	6.5	28	+	+	+	-	2.5	+	+
	11.	01.30							2	+	+
	12.	22.15	5.5	35	-	+	+	+	2.5	+	+
	15.	21.15	7	45	+	+	+	+	tr		
		23.45	12	55	-	-	-	+	tr		
	17.	01.00	24	110	+	-	-	+	tr		
	18.	01.30	6	50	+	+	+	-	tr		
	19.	16.00	11	60	-	-	-	+	tr		
	20.	00.15	10	45	+	+	+	-	tr		
	21.	21.15	7	28	-	+	+	+	2.5	+	+
	22.	14.30	11	35	+	+	+	-	tr		
	25.	00.45	12.5	45	+	+	+	-	tr		
	27.	16.30	7	35	-	-	-	+	tr		
29.	01.00	5.5	32	+	+	+	-	tr			
	16.00	6.5	50	-	+	+	+				
08.	01.	22.30	4.5	10	+	+	+	-	2.5	+	+
	02.	01.15	13.5	90	+	+	+	-	tr		
		17.00	12	65	+	+	+	-			
	02.	21.45	20	75	+	+	+	-	tr		
	03.	15.00	8	30	-	-	-	+	tr		
	05.	17.45	6.5	45	-	-	-	+			
	06.	03.00	6.5	30	+	+	+	-	2.5	+	+
	07.	01.45	25	95	+	+	+	-			
20.00		7	28	+	+	+	-				

		Bays				Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H (gamma)		Ex	Ey	Hx	Hy	E(mV km)	Ex	Ey	
08.	07.	20.45	6	25	-	-	-	+				
	11.	19.00	14.5	60	-	-	-	+	tr			
	12.	15.00	11	40	+	+	+	-	tr			
	13.	22.00	3.5	20	+	+	+	+	2	+	+	
	14.	01.15							2	-	-	
	15.	23.20							2	+	+	
	16.	22.15	6.5	22	-	+	-	+	tr			
	17.	23.30	9	45	-	+	+	+	tr			
	18.	22.00	12	55	-	+	+	+	tr			
	20.	01.30	5.5	35	+	+	+	-	2	+	+	
	21.	20.45	4.5	25	-	-	-	+	tr			
	22.	21.45	10	60	-	+	+	+	tr			
	23.	00.30	6.5	18	+	+	+	-				
	24.	01.30	6.5	45	+	+	+	-	tr			
		20.30	6.5	35	-	+	+	+	tr			
	25.	23.30	12	70	+	+	+	-	tr			
	26.	23.45	9	32	+	+	+	-	3.5	+	+	
	28.	22.45	12.5	50	-	+	+	-	tr			
	30.	23.30	13.5	45	+	+	+	-	tr			
	09.	01.	12.30	9	15	+	+	+	-(si?)			
			23.45							2.5	+	+
		02.	00.30							4.5	+	+
			16.30	2.5	10	-	-	-	+			
		03.	00.00	7	30	+	+	+	-	2	+	+
			10.15	8	25	+	+	+	-			
			20.15	5.5	22	+	+	+	-			
		04.	01.45	5.5	10	-	-	-	+			
			21.15	9	35	+	+	+	-	tr		
			22.00	11	42	+	+	+	-	tr		
			23.20	14.5	65	+	+	+	-	tr		
05.		22.15	11	50	+	+	+	-	tr			

		Bays			Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H(gamma)		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
09.	06.	20 30	25	85	+	+	+	-	tr		
	07.	13.15	17	60	-	-	+	-	tr		
		19.30	25	130	+	+	+	-	tr		
		23.45	11	45	+	+	+	-	tr		
	08.	04.15							pg (9 min)		
		10.30	7	32	+	+	+	-			
	09.	18.45	12.5	60	+	+	+	+	tr		
		21.00	27	110	-	+	+	+	tr		
	11.	18.00	6.5	35	-	-	-	+	tr		
		23.45	6.5	35	+	+	+	-	2.5	+	+
	12.	20.45	7	45	-	-	-	+	2	+	+
	13.	16.00	4.5	35	-	-	-	+	tr		
		22.00	5.5	25	-	+	+	+	4.5	+	+
	14.	00.15	4.5	28	+	+	+	-	2	+	+
		19.30	7	55	-	+	+	+	3.5	+	+
		21.30	12	58	+	+	+	-	tr		
	15.	22.45	7	18	+	+	+	-	tr		
	18.	02.00	7	35	+	+	+	-	5.5	+	+
		22.00	11	50	+	+	+	-	tr		
	20.	22.15	12	50	-	+	+	+	tr		
	22.	18.15	24	75	+	-	-	-	tr		
		22.30	12.5	45	+	+	+	-	tr		
	23.	17.45	9	50	-	-	-	+			
		20.15	6.5	42	-	+	+	+	tr		
	24.	23.30		30	+	+	+	-	3.5	+	+
	27.	02.00	16	95	+	+	+	-	tr		
		17.15	7.5	130	-	+	+	+	tr		
	28.	07.30							pg (7 min)		
		21.30							pg (12 min)		
	30.	13.00	12.5	35	-	-	-	+			
10.	01.	23.00	17	115	+	+	+	-	tr		

		Bays				Pi-s					
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H (γ)							
10.	02.	01.30	12.5	75	+	+	+	-	tr		
		18.00	7	40	+	+	+	-			
	03.	01.45	6	35	+	+	+	-	tr		
		22.30	5.5	35	-	+	+	+	tr		
	05.	10.00	6	25	+	+	+	-			
		13.45	2.5	8	-	-	-	+			
	06.	01.15	7	35	+	+	+	-	tr		
		19.30	6.5	55	-	-	-	+	tr		
		23.30	8	40	-	+	+	+	tr		
	07.	02.00	11	50	+	+	+	-	tr		
		16.30	6.5	15	-	+	-	-			
		17.00	5.5	22	-	+	-	-			
	08.	01.15	7	35	-	+	+	+	2	+	+
		04.45	6.5	35	+	-	-	-			
		21.45	12.5	70	-	+	+	+	2.5	+	+
	09.	23.45							4.5	+	+
	10.	00.30	6.5	35	-	+	+	+	3.5	+	+
		11.30	13.5	50	-	-	-	+			
		21.45	5.5	45	-	+	+	+	tr		
	11.	02.15							pg (6 min)		
		12.30	8	35	+	+	+	-			
		15.30	7	22	-	-	-	+			
		20.30	11	50	-	+	+	+	3.5	-	-
	12.	11.15	12.5	30	-	-	-	+	tr		
		20.15	7	50	-	+	+	+	4.5	+	+
	13.	18.15	25	100	-	+	+	+	tr		
		22.45	16	115	+	+	+	-	tr		
	14.	22.30	5.5	35	-	+	+	+	3.5	+	+
	18.	17.15	12.5	45	+	+	+	+	tr		
	19.	22.30	11	50	+	+	+	+	tr		
	20.	01.15	9	30	+	+	+	-	tr		

Bays					Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H (gamma)		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
10.	21.	21.30	8	22	+	+	+	—			
	22.	03.00	6.5	32	+	+	+	—	2.5	+	+
		21.15							3.5	+	+
	24.	16.00	4.5	12	+	+	+	—			
	26.	00.30	7	30	—	—	—	+			
		17.45	7	35	+	+	+	—			
	27.	23.15	6.5	35	+	+	+	—	tr		
	28.	19.45	6.5	30	+	+	+	—	tr		
		21.00	5.5	25	+	+	+	—			
	29.	22.45	11	40	+	+	+	+	tr		
	30.	00.30	10	30	—	—	—	+	tr		
		18.00	14.5	70	—	+	+	+	tr		
	31.	03.30	8	35	+	+	+	—			
		09.45	5.5	12	+	+	+	—			
11.	01.	01.45	12.5	70	+	+	+	—	tr		
		16.00	20	70	+	+	+	—	tr		
		19.15	13.5	60	—	—	+	—	tr		
		20.45	11	75			+	—	tr		
	02.	17.45	14.5	65	+	+	+	—	tr		
		21.15	12	55	—	+	+	+	tr		
		23.00	10	75	+	+	+	—	tr		
	03.	11.30	12	50	+	+	+	—			
	04.	20.00	7	45	—	+	+	+	tr		
	05.	01.00	4.5	18	+	+	+	—	3.5	+	+
		19.00	6	50	—	+	+	+	tr		
	06.	01.15	3.5	15	+	+	+	—	tr		
		12.45	12	22	+	+	+	—			
	08.	17.00	6	35	+	+	+	—(ssc?)			
		19.00	11	30	+	+	+	—			
	12.	02.00	7	40	+	+	+	—	tr		
		13.30	7	22	—	—	—	—	tr		

		Bays			Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV km)	Ex	Ey
			E(nV/km)	H (gamma)							
11.	12.	20.00	11	30	+	+	+	-	tr		
	13.	01.45	11	50	+	+	+	-	3.5	+	+
	14.	13.00	11	42	+	+	+	-	tr		
		23.15	8	32	+	+	+	+	tr		
	15.	21.00	6.5	38	-	+	+	+	tr		
	16.	23.00	5.5	17	+	+	+	-	3.5	+	+
	17.	21.30	6.5	22	-	-	-	+	tr		
	18.	22.45	5.5	30	-	+	+	+	3.5	+	+
	19.	00.00	3.5	16	+	+	+	-	2.5	+	+
		21.45	11	52	+	+	+	+	2	+	+
	20.	03.00	3.5	8	-	-	-	+			
		10.45	4.5	12	-	-	-	+			
	21.	00.30	11	45	+	+	+	-	tr		
		12.15	12	30	+	+	+	-	tr		
		13.30	11	25	-	-	-	+			
	21.	18.00	7	22	+	-	-	-			
		20.45	8	22	+	-	-	-			
	22.	03.30	16	85	+	+	+	-	tr		
	23.	17.30	20	180	-	-	-	+	tr		
		23.45	18	70	-	+	+	+	tr		
	25.	15.00	25	95	-	+	-	+	tr		
		18.15	15	65	-	+	+	+	tr		
		19.30	9	38	-	-	-	+			
		22.45	8	32	-	+	+	+	tr		
	26.	15.30	14.5	120	-	-	-	+	tr		
		22.15	12.5	70	-	+	+	+	tr		
	27.	19.15	18	72	-	+	+	+	tr		
	28.	01.45	18	125	+	+	±	-	tr		
	29.	21.15	30	140	+	+	+	-	tr		
12.	03.	23.45	2.5	28	-	+	+	+	2.5	+	±
	04.	02.15							2.5	+	+

		Bays			Pi-s						
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km) H (gamma)		Ex	Ey	Hx	Hy	E(mV km)	Ex	Ey
12.	04.	21.00	4.5	16	+	+	+	-			
		23.15	9	42	-	+	+	+	tr		
08.	14.45	12.5	65		-	+	+	+	tr		
		20.15	12.5	45	+	+	+	-	tr		
09.	12.30	10	30		+	+	+	-	tr		
		14.00	9	90	-	-	-	+			
11.	19.15	16	50		-	-	-	-	tr		
		21.30	15.5	50	-	+	+	+	tr		
12.	17.30	7	40		-	+	+	+	2	+	+
13.	22.15	5.5	22		-	+	+	+	2	+	+
14.	21.30	8	45		-	+	+	+	3.5	+	+
16.	23.15	12.5	70		-	+	+	+	tr		
18.	00.15								2.5	+	+
		02.00	6.5	45	+	+	+	-	5.5	+	+
21.	18.30	22.5	110		-	+	+	+	tr		
		22.15	18	55	-	+	-	-	tr		
22.	00.45	16	85		+	+	+	-(ssc?)			
		15.45	12.5	52	-	+	-	+	tr		
24.	00.15	5.5	35		-	+	+	+	tr		
		19.45	6.5	30	-	+	+	+	tr		
		20.30	5.5	35	+	+	+	-	tr		
25.	17.15	11	60		-	+	+	+	tr		
26.	03.00	5.5	22		+	+	+	-	tr		
27.	22.15	6.5	50		-	+	+	+	tr		
28.	21.15	6.5	18		+	+	+	-	2.5	+	+
29.	00.15	4.5	35				+	-	2	+	+

Further Pi-traces

Month	Day	CET	Month	Day	CET	Month	Day	CET
01.	04.	21.15	04.	04.	20.15	05.	09.	01.15
		23.15		06.	23.15			17.00
	06.	14.00		07.	16.00		10.	03.15
	07.	08.30		08.	21.15			23.45
		11.45		09.	20.30		12.	22.30
		21.30		11.	00.30			23.45
	10.	02.45		12.	20.15		13.	01.30
	11.	02.15		13.	01.30		16.	16.00
		03.30			02.15			23.15
		21.30			03.30		17.	21.30
	12.	00.45			23.15		18.	21.30
		23.45		15.	00.30		21.	22.30
	16.	22.00			16.30			23.00
		23.30		18.	20.30			23.15
	20.	22.30		20.	15.30		22.	00.15
		23.00		21.	23.15		23.	00.45
	25.	21.00		22.	20.45			03.30
	27.	00.00		23.	13.30			18.15
		01.00			16.15		26.	22.45
02.	06.	19.15		24.	02.45			23.45
	08.	00.30			06.30		27.	00.15
	09.	22.15			11.15		31.	21.15
	11.	07.45			12.00			23.45
	16.	02.30			14.30	06.	01.	09.45
		18.45		05.	01.			14.15
	21.	07.00			22.00		02.	02.45
	28.	00.00		02.	16.15			23.30
03.	07.	23.30		03.	18.15		03.	15.00
	10.	22.00			19.30		05.	00.00
	12.	21.00		05.	05.30			16.15
	16.	23.45		06.	02.30		08.	19.15
	17.	00.45			16.45			19.30
	26.	17.30		07.	01.00			22.30
	27.	15.15			01.30		15.	23.15
	29.	23.30			23.30		16.	19.45
	30.	21.00		08.	00.15		19.	22.00
	31.	21.45			03.45		20.	17.45

Month	Day	CET	Month	Day	CET	Month	Day	CET
06	21.	21.00	08.	05.	23.00	10.	04.	20.30
	22.	21.45		06.	02.30		05.	22.45
	23.	21.00		09.	20.30			23.30
		21.15		16.	01.30		06.	00.00
		21.45			02.00		07.	21.15
	24.	21.30			04.15		19.	01.30
	26.	21.30		17.	23.00			13.15
07.	01.	22.15		18.	21.30		20.	22.15
		22.30		19.	20.30			22.30
		22.45		20.	21.00			23.00
	02.	23.30		22.	01.45		23.	20.45
	03.	00.15		23.	01.30			21.00
		03.30			02.15			21.30
		08.15		24.	11.30		27.	21.15
		20.00		25.	17.30			21.30
	04.	00.30		26.	21.30			22.15
		22.30			22.15		28.	23.00
		23.45		28.	09.00			23.30
	05.	00.15			21.00		29.	00.15
		05.30		30.	19.45			00.45
	07.	21.30			20.30	11.	04	23.15
	09.	20.45		31.	22.45			23.45
	10.	18.00	09.	01.	08.15		05.	18.30
	22.	04.15			09.30			18.45
	24.	01.15		02.	02.00		06.	08.45
	26.	22.45			21.15		07.	02.45
	28.	19.00		11.	00.30			21.30
	29.	21.15		13.	23.45		08.	05.15
	31.	02.00		14.	18.15		09.	16.30
		02.30		15.	16.30		10.	01.00
		14.30		18.	01.45		13.	16.45
		21.15			21.15		14.	17.15
		21.45			21.30		15.	03.45
		23.30		19.	16.15		16.	13.30
08.	01.	00.30		29.	20.45		17.	17.15
		19.15	10.	02.	21.30		18.	21.45
	02.	12.30		04.	19.45		19.	20.45

Month	Day	CET
11.	20.	21.30
	22.	05.30
		23.00
	27.	05.30
	28.	21.15
	29.	00.45
12.	01.	07.15
	02.	02.30
		02.45
		13.45
		22.45
	03.	02.15
		22.30
	04.	01.45
		22.45
	09.	21.45
	11.	18.45
		21.45
	12.	22.45
	13.	21.45
	23.	01.00
	24.	23.45
	26.	01.30
		02.45
	27.	23.15
	28.	22.00
	31.	22.45

SI-s

Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV, kΩ)	H(gamma)				
01.	07.	11.30	2.5	12	+	+	+	-
	13.	05.15	4.5	12	+	+	+	-
	21.	21.15	5.5	12	-	-	+	-
	22.	00.30	5.5	14	+	+	+	-
		11.30	13.5	40	+	+	+	-
	24.	03.15	8	14	+	+	-	+
	25.	20.30	3.5	7	+	+	+	-
	28.	11.00	14.5	35	-	-	-	+
		17.45	6.5	14	-	-	-	+
	29.	18.45	18	35	-	-	-	+(ssc?)
21.30		4.5	8	0	-	-	+	
02.	02.	21.35	5.5	18	-	-	-	+
	03.	13.30	11	30	+	+	+	-
	06.	07.45	6	18	-	-	-	+
	10.	14.30	15	45	-	-	-	+
	12.	03.30	7	14	-	-	-	+
		04.15	5.5	12	-	-	-	+
		14.30	18	45	+	+	+	-
	23.	12.00	3.5	12	+	+	+	-
	25.	10.15	9	18	+	-	-	+
	27.	13.30	9	18	+	+	+	-
03.	04.	00.45	4.5	12	+	+	+	-
	09.	09.15	4.5	10	-	+	+	+
		13.45	7	12	-	-	-	+
	17.	17.00	11	22	-	-	-	+
		19.30	8	22	-	-	-	+
	18.	01.15	9	25	-	-	-	+
		15.30	6.5	14	+	+	+	-
	22.	16.00	11	25	-	-	-	+
		16.45	4.5	13	-	-	-	+
	25.	21.00	7	14	+	+	+	-
26.	01.45	2.5	8	-	-	-	+	
27.	05.45	5.5	12	-	-	-	+	
04.	02.	10.00	4.5	10	-	-	-	+
	12.	06.45	3.5	8	-	-	-	+

SI-s

Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV km)	H(gamma)				
04.	17.	03.30	6	18	—	—	—	+
	20.	21.30	3.5	8	—	+	+	+
	23.	01.30	3.5	8	+	+	—	+
	28.	02.15	9	25	—	—	—	+
	30.	04.15	6.5	18	—	—	—	+
05.	02.	06.30	4.5	16	—	—	—	+
	03.	14.45	10	24	—	—	—	+
	05.	02.30	3.5	5	+	+	+	—
	09.	13.30	5.5	12	+	+	+	—
	15.	04.00	4.5	12	+	+	+	—
	16.	17.15	5.5	13	+	+	+	—
	18.	02.45	5.5	10	+	+	+	—
	25.	11.30	2.5	8	+	+	+	—
	27.	05.30	8	22	+	—	+	—
	30.	21.00	9	14	+	+	+	—
06.	02.	21.15	5.5	12	—	—	—	+
	05.	06.00	3.5	7	+	—	—	—
	06.	17.30	4.5	10	+	+	—	—
	07.	05.00	10	22	—	—	—	+
	08.	10.15	5.5	14	+	+	—	+
	11.	03.15	5.5	12	+	—	—	—
	14.	02.15	4.5	8	—	—	—	+
		05.15	9	22	—	—	—	+
	15.	19.30	4.5	10	+	+	+	—
		23.45	5.5	8	+	+	+	0
	16.	17.45	2.5	7	—	—	—	+
	18.	03.00	2	6	+	—	—	—
	28.	06.30	8	18	—	—	—	+
07.	02.	08.45	5.5	18	—	—	—	—
	06.	01.45	10	25	—	—	—	+
	07.	05.15	10	16	—	—	—	+
	09.	04.00	6.5	12	+	—	—	—
		08.00	4.5	10	—	—	—	+
	13.	10.45	7	18	+	+	+	—
	17.	12.00	25	50	—	—	—	+(at end of storm)

SI-s

Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV km)	H(gamma)				
07.	19.	03.00	7	15	-	-	-	+
	20.	13.45	2.5	8	+	-	+	-
	21.	23.15	8	22	+	+	+	-
	23.	01.15	9	18	+	+	+	-
	30.	01.00	6	14	+	+	+	+
08.	01.	08.00	2.5	6	-	-	-	+
	04.	01.00	3.5	6	+	+	+	-
		04.45	4.5	10	+	+	+	-
	08.	15.15	4.5	10	-	-	-	+
	09.	00.45	3.5	12	-	-	-	+
		16.15	8	20	+	+	+	-
	22.	05.15	5.5	12	-	-	-	+
		23.15	6.5	12	+	+	+	-
	25.	09.15	3.5	10	-	-	-	+
	27.	07.15	9	12	+	+	+	-
	31.	01.30	6	15	+	+	+	-
09.	02.	11.30	3.5	8	+	+	+	-
	04.	08.45	7	18	+	-	-	-
	08.	16.45	6.5	12	+	+	+	-
	13.	10.45	4.5	?	-	-	?	?
	19.	02.30	8	20	+	+	+	-
	23.	07.45	9	16	+	+	+	-
	28.	22.30	9	30	+	+	+	-
10.	17.	04.30	7	12	+	-	-	-
		18.30	6.5	12	-	-	-	+
	20.	02.30	4.5	10	+	+	+	-
	24.	11.30	3.5	7	-	-	-	+
	26.	11.45	11	22	-	-	-	+
	27.	05.45	4.5	7	-	-	-	+
	29.	03.30	12.5	55	-	-	-	+
11.	09.	01.30	5.5	17	+	+	+	-
	11.	06.30	4.5	12	-	-	-	+
		07.00	4.5	12	-	-	-	+

SI-s

Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV/km)	H(gamma)				
11.	13.	05.45	4.5	7	-	-	-	+
		11.30	11	20	-	-	-	+
	21.	06.30	4.5	10	-	-	-	+
	24.	03.30	10	24	+	+	+	-
	28.	10.15	14.5	24	-	-	-	+
	30.	01.30	11	30	+	+	+	-
		12.30	3	3	-	-	-	+
12.	07.	09.15	5.5	12	-	-	-	+
	10.	05.15	4.5	10	+	+	+	-
	15.	02.15	5.5	10	+	+	+	-
	16.	03.15	3.5	7	-	-	-	+
	18.	05.45	7	22	+	+	+	-
	19.	23.15	11	42	+	+	+	-
	20.	20.00	12	38	+	+	+	-
	26.	11.45	3.5	10	-	-	-	+

Needles

Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	Ex	Ey
01.	19.	14.30	2	—	—
02.	21.	08.30	3.5	+	+
03.	02.	14.15	9	—	—
	24.	04.45	2.5	+	+
04.	02.	07.15	8	+	+
	21.	16.45	4.5	—	—
	22.	03.45	5.5	+	—
05.	02.	10.45	3.5	+	+
	16.	13.45	3.5	—	—
	18.	08.15	6	—	—
	21.	10.45	3.5	0	+
	26.	11.45	3.5	—	—(ssc?)
	28.	20.45	6	—	—
	29.	07.30	12.5	+	—
	31.	17.15	4.5	—	—
06.	05.	13.15	2.5	+	—
	09.	11.30	3.5	0	+
		12.30	2.5	0	+
	19.	08.45	2.5	—	—
		09.45	3.5	+	+
	20.	16 00	2.5	—	—
	25.	18.15	2	—	—
07.	08.	02.45	2.5	—	—
	10.	09.30	3.5	+	+
	11.	08.15	4.5	+	+
		10.30	4.5	—	—
	16.	09.45	9	+	+(ssc?)
	21.	08.15	2	—	—
	30.	04.45	2.5	+	+
08.	06.	17.30	6.5	+	+
	10.	09.45	3.5	—	+
	16.	15.45	2	—	—

Month	Day	CET (GMT+1h)	Amplitude in E(mV km)	Ex	Ey
08.	24.	05.30	6.5	—	—
	27.	11.15	10.	+	+
	28.	18.45	3.5	—	—
	30.	05.15	6.5	—	—
09.	11.	09.30	2.5	—	+
10.	10.	12.30	8	+	+(ssc?)
	11.	14.45	4.8	—	—
	12.	15.45	3.5	—	—
	23.	14.15	4.5	—	—
11.	03.	17.45	4.5	—	—
	09.	07.30	10	+	+
	13.	09.30	6.5	—	—
	30.	00.45	5.5	—	—
12.		02.30	5.5	—	+
	07.	07.00	11	+	+
	08.	04.15	5.5	+	—
	15.	10.45	2.5	+	+
		11.45	2.5	—	+
	18.	03.00	8	+	+
	20.	14.15	10	—	—
	30.	16.30	3.5	—	—

1982

Pc 1-events

Month	Day	Duration		Quality
		hour min	hour min	
3.	13.	1829—	1847	C
4.	11.	2029—	2050	C
	13.	1952—	2001	C
	17.	614—	650	C
5.	9.	640—	711	C
	16.	219—	251	C
6.	6.	400—	429	C
7.	13.	1716—	2000	C
	14.	000—	300	B
	21.	2325—	2337	C
	22.	151—	213	B
		255—	304	C
		323—	335	C
		611—	642	C
	23.	2108—	2132	C
		2305—	2322	C
	24.	102—	218	C
		152—	215	C
		402—	411	B
		422—	454	C
	26.	2110—	2129	C
	27.	158—	203	C
		243—	300	C
		408—	449	C
		517—	530	C
		553—	606	C
8.	3.	120—	142	B
	9.	329—	422	C
9.	8.	428—	454	C
		2200—	2240	C
	12	414—	425	C
	14.	355—	414	C
		2312—	2331	C
	25.	214—	224	C
		316—	343	C

Month	Day	Duration		Quality
		hour min	hour min	
9.		1636—	1653	C
		2312—	2331	C
	29.	512—	539	C
10.	1.	225—	721	C
	9.	2007—	2100	C
	12.	257—	724	B
11.	24.	1900—	2056	B
	27.	150—	232	C
		440—	702	C
		2217—	2224	C
	29.	445—	748	B
12.	3.	331—	338	C
		400—	409	C
		510—	515	C
		530—	634	B
		717—	822	C
	4.	403—	408	C
	7.	737—	743	C
		803—	809	C
		2013—	2146	B
	15.	600—	753	B
	16.	1944—	1947	C
	26.	518—	648	C

V.

Average amplitudes in 12 pulsation bands
(monthly averages for 3 hour intervals in $\mu\text{V.km}$)

January												
CET	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0— 3	0	16	35	23	16	7	30	44	75	35	95	140
3— 6	0	12	41	40	33	18	34	14	30	33	262	185
6— 9	0	14	28	59	51	54	69	55	24	47	205	190
9—12	0	27	70	56	60	90	38	36	43	15	305	54
12—15	0	8	24	53	99	102	78	121	19	7	183	73
15—18	0	20	43	42	60	92	43	39	25	15	213	155
18—21	0	22	20	35	19	22	28	63	77	31	129	195
21—24	0	23	31	29	12	24	21	152	135	50	111	101
Average	0	18	38	42	44	61	53	66	54	29	188	138

February												
0— 3	20	65	17	14	8	11	66	158	77	50	282	296
3— 6	14	48	47	37	22	21	30	46	40	66	452	467
6— 9	5	37	52	98	103	87	46	46	33	41	667	174
9—12	1	33	63	102	77	127	49	62	66	37	630	557
12—15	0	37	62	141	94	238	20	24	54	71	569	309
15—18	1	39	42	61	116	117	60	45	45	43	704	275
18—21	9	61	37	41	21	14	36	85	46	70	341	365
21—24	28	57	20	20	13	20	23	120	166	62	299	518
Average	10	47	43	64	57	87	41	73	66	55	493	370

March

CET	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0—3	8	30	13	18	15	27	35	121	77	35	157	152
3—6	4	17	27	57	47	67	76	42	27	17	297	174
6—9	0	9	49	65	207	214	46	33	21	25	281	142
9—12	0	24	19	52	90	331	133	49	41	21	278	194
12—15	0	8	31	23	98	320	47	27	49	21	366	144
15—18	2	17	33	43	87	71	39	41	23	27	346	180
18—21	4	27	30	37	21	13	27	47	67	37	100	335
21—24	10	32	16	10	10	15	33	143	121	58	113	206
Average	4	21	27	39	72	132	58	65	53	30	242	191

April

0—3	17	46	25	23	15	12	28	124	74	79	144	276
3—6	3	27	59	163	46	9	2	27	14	17	178	245
6—9	0	6	30	222	333	145	8	16	26	26	220	78
9—12	0	3	16	252	364	238	29	17	27	7	116	184
12—15	2	3	30	223	290	189	37	33	27	50	91	210
15—18	0	16	42	76	139	75	50	89	12	61	173	136
18—21	0	41	43	24	20	19	26	69	57	83	160	192
21—24	8	60	32	6	8	20	32	195	150	63	273	191
Average	4	25	35	136	152	88	27	71	48	48	169	188

May												
CE1'	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0— 3	6	38	32	21	15	22	34	59	116	113	186	191
3— 6	2	19	65	172	29	48	33	30	37	20	251	205
6— 9	0	6	33	415	119	114	38	52	34	15	245	151
9—12	0	5	15	355	354	175	82	50	14	25	169	85
12—15	0	3	34	331	185	114	76	70	39	28	277	112
15—18	2	18	38	106	94	75	56	102	105	35	266	115
18—21	1	41	33	24	18	27	38	93	71	85	173	175
21—24	6	40	20	10	5	17	42	150	92	102	157	147
Average	2	21	34	179	102	74	50	76	64	53	216	148

June												
0— 3	8	48	47	26	17	18	30	128	99	44	111	412
3— 6	3	28	153	106	26	13	36	82	32	32	254	338
6— 9	0	15	109	495	237	63	58	43	64	58	331	144
9—12	0	3	43	551	269	67	47	35	30	41	246	234
12—15	0	2	26	326	243	161	56	56	40	37	288	191
15—18	0	12	64	161	78	59	68	71	58	48	121	239
18—21	3	40	35	29	19	30	35	71	55	106	219	121
21—24	7	52	30	18	12	11	32	235	127	85	127	181
Average	3	25	63	214	113	53	45	90	63	56	212	233

July

CET	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0—3	21	61	23	20	8	9	57	121	135	137	209	302
3—6	3	53	90	133	30	17	55	75	52	64	342	170
6—9	0	16	126	445	181	15	37	50	88	42	384	182
9—12	0	25	20	399	390	193	46	56	66	36	286	478
12—15	0	6	69	309	298	83	21	45	81	37	453	200
15—18	1	30	48	177	64	38	69	118	137	86	628	221
18—21	7	47	46	37	10	20	108	111	82	60	212	209
21—24	22	64	24	16	12	9	35	181	212	70	177	270
Average	7	38	56	192	124	48	54	95	107	67	337	254

August

0—3	6	25	61	32	3	13	52	93	117	2	84	389
3—6	0	21	167	149	38	4	40	15	31	9	264	218
6—9	0	5	145	594	254	34	41	7	7	0	205	63
9—12	0	17	56	614	250	79	30	22	20	18	240	237
12—15	0	12	21	484	317	49	50	58	90	12	130	148
15—18	0	12	43	191	133	31	104	89	75	12	152	185
18—21	5	37	57	21	12	18	63	102	145	43	185	122
21—24	12	37	19	9	6	19	137	136	140	49	51	121
Average	3	21	69	262	127	31	65	65	78	18	164	185

September

CET	Periods											
	1-5	5-10	10-15	15-20	20-25	25-30	30-40	40-60	60-90	90-120	120-300	300-600 sec
0-3	8	34	35	72	12	13	26	95	117	110	330	283
3-6	2	29	145	184	38	26	11	70	34	75	407	217
6-9	2	74	57	381	218	105	56	78	24	31	416	367
9-12	0	31	59	294	326	232	138	73	38	104	326	242
12-15	0	115	51	244	368	103	104	51	54	55	417	154
15-18	0	20	65	180	165	125	75	85	44	34	346	246
18-21	3	27	58	33	23	40	120	146	163	47	235	321
21-24	8	29	22	19	20	13	78	248	129	103	159	381
Average	3	45	62	176	146	82	76	106	75	70	331	276

October

0-3	12	15	25	38	11	28	53	138	67	58	81	60
3-6	4	16	36	103	81	16	4	39	40	19	177	144
6-9	0	16	23	84	134	238	29	65	21	14	200	108
9-12	0	23	32	62	227	194	82	114	23	35	118	119
12-15	0	13	34	78	303	123	87	48	28	13	198	48
15-18	1	19	45	55	127	108	108	37	63	37	165	175
18-21	3	19	24	43	31	47	37	149	110	26	133	144
21-24	26	19	20	6	17	37	78	70	137	78	89	87
Average	6	18	30	59	116	99	60	83	61	35	145	111

November

CET	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0—3	15	19	20	27	19	23	37	83	110	44	272	170
3—6	2	17	27	84	64	34	32	31	64	33	122	202
6—9	0	9	31	77	132	105	66	48	50	11	209	142
9—12	0	12	32	61	168	168	33	49	28	61	257	341
12—15	0	29	41	71	167	178	28	79	31	45	352	150
15—18	0	28	24	81	105	64	46	75	35	31	160	171
18—21	11	17	37	32	33	60	52	72	61	35	109	173
21—24	5	21	22	22	28	38	67	110	132	9	97	210
Average	4	19	29	57	89	84	45	68	64	34	197	195

December

0—3	13	16	16	17	8	24	40	153	69	39	117	111
3—6	2	12	27	43	67	57	19	26	15	33	146	293
6—9	3	17	30	51	68	63	36	62	29	13	321	136
9—12	2	56	40	43	74	76	18	62	79	134	634	198
12—15	0	19	46	45	156	109	25	43	71	7	446	163
15—18	0	12	25	57	75	54	38	56	56	38	300	96
18—21	4	19	17	34	19	49	24	60	78	34	91	87
21—24	5	22	20	17	8	18	27	112	174	62	175	120
Average	4	22	28	39	59	56	29	72	71	45	279	151

Yearly average

CET	Periods											
	1—5	5—10	10—15	15—20	20—25	25—30	30—40	40—60	60—90	90—120	120—300	300—600 sec
0—3	10	35	29	26	13	17	41	110	94	62	172	232
3—6	3	25	72	106	43	28	31	41	35	35	263	238
6—9	1	19	59	257	170	103	44	46	35	27	307	156
9—12	0	22	39	237	222	164	60	57	40	45	300	252
12—15	0	20	39	194	218	154	53	55	49	32	314	159
15—18	0	19	42	121	111	84	65	68	51	38	299	174
18—21	4	33	36	33	21	30	50	89	84	55	174	203
21—24	12	38	23	15	13	20	50	154	143	66	152	211
Average	4	26	42	124	101	75	49	78	66	62	248	203

V.

Micropulsation indices for the year

1982

*Activity indices for the micropulsations
(P1 or P12)*

1982. January—December

	January	February	March	April
1.	124334235331	355211444355	455333124155	555343114532
2.	115443112152	355311223555	155311135555	555124144553
3.	155325224245	555412235555	222533445144	455321444551
4.	155533242233	555222145555	235434215255	555235333244
5.	115435423131	554322244355	245432523155	151245241112
6.	135221233352	555211145555	133322455321	234552233224
7.	155512135551	555421244152	145334111441	135253121121
8.	134434215224	555511134155	455423154531	154453243142
9.	112325521111	555521333254	255412135452	255431254424
10.	125411345111	455411154245	554433245211	455321245554
11.	125411421111	455114344354	132442145142	255511145354
12.	145444224321	555311245555	155433244321	135542123134
13.	115511425312	555211445553	155442332351	355541123122
14.	115422534142	455412114455	233255325532	215541123231
15.	155511334254	33532212245	133433425421	255552124444
16.	145411251345	113543323221	211431245222	155451114424
17.	125443322232	255211112255	355421125455	255322124555
18.	135324525421	455423234355	255224324555	155531144444
19.	115432432122	555542123555	145435422144	155541111442
20.	125223525421	545433442155	155334244324	155521114154
21.	155421114355	255441322255	555333344455	155511243255
22.	155443235155	355322225155	355424132355	355245222354
23.	155412143355	555322235253	155421124355	245452133134
24.	155431215355	355525223455	115422212355	155544143243
25.	145323435244	355211135554	152115533124	155211145555
26.	114535225125	155511133255	352235344132	155442341324
27.	155322254521	235535133225	221435431132	155452133424
28.	155311235555	143235244142	113135533421	255255222345
29.	155223334355		255431223144	455521131354
30.	155412433255		445325114251	132455211145
31.	155211135554		353135445344	

	May	June	July	August
1.	155552342344	255532113355	545531244425	355531543123
2.	355511133355	155421354135	143211212133	155411243255
3.	255442122255	142111223311	225441135212	145443323144
4.	145522144235	155433144521	144213444311	355521234245
5.	132534434232	135522325551	255421224554	145511214123
6.	134334542222	145521131244	555411135555	555521215255
7.	235343323311	155431233454	255331244155	155111125255
8.	225421245521	255521225454	255511334155	124411111134
9.	455421145521	255411134555	544533245245	115531111133
10.	255521124214	155313334455	345511244123	145522112142
11.	355511244521	155552124255	555311145552	254551435312
12.	145522124112	155522224355	355311245354	255511245244
13.	355411255241	155511143555	53252125455	122432345344
14.	145511121553	155532114345	355122255355	144531144421
15.	355431125555	325433333125	255431242253	145531334211
16.	155531124333	155541334211	355411134255	155531135321
17.	255541133455	123541132223	355454215442	155411115351
18.	355521245155	155552222442	155521225452	225511112121
19.	155521123354	255532333554	355421242355	125531213123
20.	151343245521	155511144441	155322254455	254551545112
21.	255423224551	445512334441	355521214555	145511224212
22.	123413455411	455511145554	455531324554	355511125154
23.	142314534521	55532255251	252521134333	145521124153
24.	155212434551	255511124542	355321345444	135522224135
25.	155311234253	155431445344	155211112144	135431334142
26.	355411325544	144311355351	151511133242	255531334155
27.	255412155355	255221344552	155511232455	113531344124
28.	155531121555	155541132355	355532225334	245311435422
29.	155443252355	155511144155	355511145154	255421222555
30.	155521134155	155412335555	155311224541	555521234255
31.	255423354355		255531254152	135553334124

	September	October	November	December
1.	21554244225	545442523231	154233435551	115524142321
2.	155343255213	355323354323	355434124342	135432444431
3.	145531433324	315433134311	555423222542	154333335442
4.	135333244455	255432433221	135323254241	155331135444
5.	255551225254	315333345412	223554122312	425542414241
6.	455311135554	435422335343	125452345122	145424132221
7.	555112154555	45522454534	113445343211	555111245254
8.	155511111355	355441244224	155432311235	455211145551
9.	155431123355	215455122222	125421424455	125423245254
10.	125551122242	355421124555	125442144255	355311234555
11.	135552344322	255553124355	355231244254	355422345154
12.	115551124124	355434344444	325433134145	124434234231
13.	155422241543	552421543342	235321335243	125344412123
14.	155532153524	535223255542	145542245143	143552232121
15.	135521244112	135532124422	114442245131	155431134255
16.	245521332124	255321124355	122143354111	255223225555
17.	155521123541	155441243155	112553125422	555223143453
18.	355523315542	245353234354	245421145355	255222254355
19.	255511243155	124445143144	125425323111	455322244455
20.	115533332145	315453233244	135532332211	155112124355
21.	455312112355	125354334122	155311455354	255233245355
22.	255121553555	155112555521	555321335142	545432144554
23.	125542233253	135425345221	155123145555	134321221142
24.	155432124455	115433323111	455212235555	145543124255
25.	343333424434	145321355222	355322235355	115211111111
26.	355211224455	355121333555	134533332144	112225253524
27.	555343415145	255223354544	135452321125	155323133453
28.	255513223245	322343434112	355225233145	135232135331
29.	125431242412	355411333255	555331124355	125531234453
30.	115521422531	555233343254	255334244154	145333253351
31.		255235222455		125433224224

Pc 1 indices 1982

	January	February	March	April	May	June	July	August	September	October	November	December
1.	1	1	1	1	1	1	1	1	1	5	1	1
2.	1	1	1	1	1	1	1	1	1	1	1	1
3.	1	1	1	1	1	1	1	2	1	1	1	4
4.	1	1	1	1	1	1	1	1	1	1	1	2
5.	1		1	1	1	1	1	1	1	1	1	1
6.	1	1	1	1	1	2	1	1	1	1	1	1
7.	1	1	1	1	1	1	1	1	1	1	1	4
8.	1	1	1	1	1	1	1	1	3	1	1	1
9.	1	1	1	1	2	1	1	3	1	3	1	1
10.	1	1	1	1	1	1	1	1	1	1	1	1
11.	1	1	1	2	0	1	1	1	1	1	1	1
12.	1	1	1	1	1	1	1	1	2	5	1	1
13.	1	1	2	2	1	1	5	1	1	1	1	1
14.	1	1	1	1	1	1	5	1	2	1	1	1
15.	1	1	1	1	1	1	1	1	2	1	1	4
16.	1	1	1	1	2	1	1	1	1	1	1	2
17.	1	1	1	2	1	1	1	1	1	1	1	1
18.	1	1	1	1	1	1	1	1	1	1	1	1
19.	1	1	1	1	1	1	1	1	1	1	1	1
20.	1	1	1	1	1	1	1	1	1	1	1	1
21.	1	1	1	1	1	1	2	1	1	1	1	1
22.	1	1	1	1	1	1	3	1	1	1	1	1
23.	1	1	1	1	1	0	3	1	1	1	1	1
24.	1	1	1	1	1	1	4	1	1	1	4	1
25.	1	1	1	1	1	1	1	1	3	1	1	1
26.	1	1	1	1	1	1	2	1	1	1	1	3
27.	1	1	1	1	1	1	3	1	1	1	5	1
28.	1	1	1	1	1	1	1	1	1	1	1	1
29.	1		1	1	1	1	1	1	2	1	5	1
30.	1		1	1	1	1	1	1	1	1	1	1
31.	1		1		1		1	1		1		1

0 = no record