I. EARTH CURRENTS

In the present report of the Observatory, six kinds of tables are published in the section earth currents.

The coordinates of the Observatory are:

φ 47°38' λ 16°43'
ψ 47,2° $\wedge$ 98,3°

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

The tables published 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 scale corresponds 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	24	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 these 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^{-3} V/km. Row 6 contains the hourly means of the earth current field intensity, corrected for long period variations (equally in 10^{-3} V/km).

III. Results of harmonical analysis from monthly means of the earth current field intensity.

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

V. Results of rapid-run recoring on world days. The figures show the daily frequency distribution of periods 2; 6; 10; 15; 20; 30; 40 sec and 1; 1,5; 2,5 min, the mean amplitudes in the bands 0—1 and 1—2 min, and the estimated spectra for each two month period on world days. In the yearly average the spectra for each three-hour period of the day are given, too. The frequencies are expressed in per mille, the amplitudes in 10^{-6} V/km. For details of the processing see. J. VERŐ: Die abgeänderte Methode zur Bearbeitung der tellurischen Schnellregistrierungen, von 1960 an, im Observatorium bei Nagycenk (Acta Technica Hung. 1963. T. 43. 101.)

VI. Micropulsation indices for the yeaar 1972, and supplements to earlier years. The indices have been determined from the occurence frequency of different period micropulsations, striving at a possibly uniform distribution of days in each of the five possible indices (1—5).

The determination of these indices can be shortly explained as follows: The days are arranged according to the occurence frequency of each band. Index 1 is attributed to the days with 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 of days). G indicates days when the indices have been determined from 20 mm/min records, on all other days from 6 mm/min records. It must be reminded that mainly in the lowest and highest 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 Geodaetica, Geophysica et Montanistica Hungarica, 7 pp. 155–166. 1972.)

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

Records were taken in the Observatory with three instruments of the types GMG T9/1956 and GMG T/14. 1961, 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. ÁDÁM, 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.	11111123	11	6	0	5	1	3
2.	12111281	17	4	0	4	1	3
3.	00121010	5	5	0	5	2	2
4.	21312111	12	6	2	4	2	2
5.	11112210	9	5	2	4	1	1
6.	01110000	3	3	0	4	1	0
7.	01001032	7	4	1	4	0	2
8.	10000011	3	3	0	4	1	1
9.	11100011	5	2	0	4	2	0
10.	11000122	7	2	0	4	1	1
11.	34122211	16	3	0	4	1	3
12.	31000101	6	3	0	4	0	2
13.	11001001	4	4	0	4	1	0
14.	02000010	3	2	0	4	1	1
15.	10214451	18	3	0	4	3	3
16.	22243947	33	4	1	4	4	6
17.	33233672	29	6	2	5	4	4
18.	23444641	28	6	2	6	3	5
19.	32133611	20	5	3	5	2	4
20.	11111321	11	5	1	4	2	2
21.	10115920	19	6	2	6	6	4
22.	39312673	34	2	0	5	5	6
23.	55451316	30	3	1	4	4	7
24.	11121052	13	4	0	4	2	2
25.	111?3424	18	5	1	4	3	4
26.	31245236	26	6	2	5	2	5
27.	21132322	16	6	1	5	3	3
28.	11132599	31	5	1	5	4	5
29.	12223432	19	4	1	5	3	4
30.	32112113	14	4	0	4	2	2
31.	11011430	11	3	1	4	1	2

Monthly averages:

T (N)	1.891
T (E)	1.278
K_1	4.19
K_2	0.77
K_3	4.42
K_4	2.19
K_5	2.87

February

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	01023212	11	4	1	4	1	2
2.	23132251	19	5	1	5	3	3
3.	21012420	12	4	0	4	2	2
4.	21111101	8	2	0	4	0	2
5.	00011021	5	3	0	4	1	0
6.	00011032	7	3	1	5	2	2
7.	11120125	13	3	1	4	1	3
8.	41121001	10	2	0	5	2	1
9.	00000012	3	3	0	5	1	1
10.	23222123	17	3	1	5	3	2
11.	10153111	13	7	2	5	3	2
12.	01110000	3	4	0	4	1	0
13.	01135474	25	6	2	5	2	4
14.	51323223	21	6	3	5	3	2
15.	32323113	18	6	2	4	2	3
16.	21132110	11	5	1	5	3	2
17.	11124594	28	4	1	6	3	6
18.	11220002	8	2	0	5	2	2
19.	91213221	21	3	0	6	3	4
20.	14212101	12	3	0	5	2	3
21.	11122320	12	3	0	4	2	2
22.	00123211	10	5	1	4	1	2
23.	10112122	10	5	2	5	2	2
24.	12446739	36	5	1	6	6	5
25.	32233343	23	3	1	5	3	5
26.	31111110	9	4	1	5	1	2
27.	00022023	9	4	2	5	2	2
28.	10111001	5	1	0	5	1	1
29.	10110100	4	2	0	4	1	0

Monthly averages:

T (N)	1.572
T (E)	1.073
K_1	3.80
K_2	0.80
K_3	4.76
K_4	2.19
K_5	2.32

March

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	00123114	12	4	1	5	2	3
2.	11011212	9	3	0	4	3	1
3.	31232541	21	5	1	5	2	4
4.	11221122	12	5	1	5	2	2
5.	10150041	12	4	0	5	1	2
6.	21111009	15	6	2	5	3	3
7.	99699244	52	8	7	7	6	3
8.	42224640	24	5	1	5	4	4
9.	23231121	15	5	2	5	2	2
10.	10000002	3	2	0	4	1	0
11.	22100041	10	2	0	4	1	0
12.	00011111	5	3	0	4	1	1
13.	21122002	10	4	1	4	2	2
14.	10011000	3	4	0	4	2	0
15.	10121221	10	5	1	4	2	1
16.	74244312	27	5	1	5	4	5
17.	22325226	24	4	1	5	5	3
18.	41222111	14	5	0	4	2	3
19.	11111001	6	4	1	4	1	1
20.	20111001	6	4	0	4	1	2
21.	10011112	7	4	0	4	1	2
22.	22113223	16	5	1	5	2	2
23.	20122123	13	5	1	5	2	2
24.	34312235	23	5	1	5	3	4
25.	21121121	11	4	0	4	3	2
26.	11122151	14	2	0	4	1	3
27.	32322165	24	6	1	5	3	6
28.	73132100	17	2	0	4	1	4
29.	11235355	25	6	1	5	3	5
30.	56223433	28	4	1	5	4	6
31.	11221194	21	6	2	5	2	5

Monthly averages:

T (N)	1.891
T (E)	1.399
K_1	4.39
K_2	0.90
K_3	4.61
K_4	2.32
K_5	2.68

April

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	11222136	18	6	2	4	2	4
2.	52211002	13	5	2	4	2	1
3.	00111014	8	6	1	4	1	1
4.	23221342	19	7	1	5	2	3
5.	42334111	19	5	1	4	2	2
6.	00122210	8	4	0	4	1	2
7.	00222112	10	3	1	4	3	2
8.	10011131	8	4	0	4	1	1
9.	21000000	3	5	0	4	0	1
10.	01111011	6	3	0	4	2	1
11.	01111011	6	3	0	4	0	1
12.	01112223	12	4	1	4	1	3
13.	21111211	10	3	1	4	3	2
14.	11111101	7	3	0	4	1	1
15.	10111112	8	3	0	5	1	1
16.	01011010	4	2	0	4	0	1
17.	31110011	8	4	0	4	1	2
18.	5422 333	25	3	1	5	4	5
19.	21233400	15	3	0	5	2	3
20.	00132133	13	3	1	4	1	2
21.	51212210	14	4	0	4	2	5
22.	00012224	11	5	2	4	1	2
23.	11022113	11	3	0	4	2	2
24.	10012200	6	3	1	4	1	1
25.	10011100	4	3	0	4	1	0
26.	11000102	5	3	2	4	0	0
27.	11001331	10	3	1	4	2	2
28.	21133451	20	3	0	4	3	3
29.	15235639	34	4	2	4	5	6
30.	42122214	18	3	1	4	2	4

Monthly averages:

T (N)	1.354
T (E)	1.104
K_1	3.77
K_2	0.70
K_3	4.13
K_4	1.63
K_5	2.13

May

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	33432223	22	5	1	5	3	5
2.	22232223	18	6	2	4	1	3
3.	21112211	11	5	1	5	2	2
4.	11112101	8	4	1	4	0	0
5.	11111122	10	7	4	4	1	2
6.	21132221	14	4	1	4	2	2
7.	00001001	2	3	1	4	0	1
8.	11000121	6	3	1	4	1	2
9.	00322146	18	4	2	5	1	4
10.	13311232	16	4	0	4	1	2
11.	11112111	9	3	0	4	2	1
12.	12222101	11	2	0	4	1	2
13.	21110021	8	4	1	4	1	1
14.	21111101	8	3	0	4	0	1
15.	00011199	21	7	8	8	6	1
16.	84254312	29	3	1	5	3	4
17.	33423201	18	3	1	4	2	2
18.	25243111	19	5	1	4	1	2
19.	00010000	1	3	0	4	0	0
20.	30001001	5	3	1	3	0	1
21.	11100010	4	3	0	4	1	0
22.	01001002	4	3	0	4	0	0
23.	10001311	7	3	0	4	0	1
24.	12100000	4	3	0	4	0	1
25.	00110112	6	2	0	4	0	1
26.	21110111	8	2	0	4	0	1
27.	20001223	10	3	0	4	0	2
28.	22247643	30	6	2	4	3	5
29.	22332221	17	7	2	4	2	2
30.	22122634	22	8	3	4	3	4
31.	24212213	17	6	2	3	2	3

Monthly averages:

T (N)	1.399
T (E)	1.198
K_1	4.10
K_2	1.16
K_3	4.19
K_4	1.26
K_5	1.87

June

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	31110111	9	6	1	4	1	2
2.	12122311	13	6	3	4	1	1
3.	23016531	21	5	4	5	3	3
4.	42223232	20	5	1	4	2	3
5.	131 211	[12]	3	0	4	2	2
6.	1000 523	13	3	0	4	2	2
7.	121 112	[11]	3	1	4	1	1
8.	02201012	8	3	0	4	1	1
9.	1101 000	3	2	0	4	0	0
10.	11110112	8	5	2	5	1	0
11.	111 1010	6	4	1	4	1	0
12.	11015000	8	3	0	4	0	0
13.	21001121	8	3	1	4	2	1
14.	21111222	12	3	0	5	3	2
15.	15211311	15	4	0	4	3	3
16.	111 112	[8]	3	0	5	3	2
17.	31339998	45	7	1	6	3	6
18.	99999986	68	9	8	7	8	9
19.	54321110	17	4	1	7	4	3
20.	41211111	12	4	0	5	2	2
21.	11101011	6	3	0	4	1	0
22.	11112114	12	2	1	4	1	4
23.	32112121	13	3	1	4	2	2
24.	21112854	24	5	1	5	4	3
25.	11011311	9	4	0	4	2	2
26.	02112212	11	4	0	5	3	2
27.	12221335	19	5	1	5	3	5
28.	24222230	17	5	1	5	3	3
29.	12121311	12	5	0	4	2	3
30.	01110000	3	3	0	4	1	0

Monthly averages:

T (N)	1.696
T (E)	1.576
K_1	4.13
K_2	0.97
K_3	4.57
K_4	2.17
K_5	2,17

July

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	00001110	3	3	0	4	0	2
2.	11001223	10	3	0	5	2	3
3.	23411211	15	5	2	4	4	1
4.	02100112	7	2	1	4	0	1
5.	00000101	2	3	1	4	0	0
6.	11101001	5	2	0	4	0	1
7.	21111222	12	1	0	4	1	3
8.	21210110	8	2	0	4	1	1
9.	11101111	7	3	0	4	0	3
10.	22211101	10	7	1	4	1	3
11.	10211023	10	4	0	4	2	2
12.	11112001	7	2	0	5	2	1
13.	00000100	1	0	0	3	0	1
14.	00100001	2	3	0	3	0	0
15.	12001013	8	2	0	4	1	1
16.	11111123	11	3	0	4	2	3
17.	21211114	13	5	0	4	2	2
18.	211101	[8]	5	0	4	0	1
19.	10112	[8]	3	0	4	2	2
20.	10011110	5	1	0	3	1	1
21.	10100011	4	3	0	3	0	1
22.	10001356	16	3	0	5	2	2
23.	12121220	11	4	0	4	1	2
24.	00012146	14	3	1	4	0	4
25.	74644724	38	7	2	5	4	8
26.	52434424	28	7	0	5	4	5
27.	12222121	13	7	0	5	3	2
28.	11101100	5	2	0	4	1	1
29.	20011010	5	3	0	4	0	1
30.	00001111	4	3	0	4	0	1
31.	11111113	10	3	2	3	0	2

Monthly averages:

T (N)	1.062
T (E)	0.967
K_1	3.35
K_2	0.32
K_3	4.03
K_4	1.16
K_5	1.97

August

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	33111112	13	2	0	4	1	2
2.	12111000	6	3	0	3	1	1
3.	01002100	4	2	0	4	0	2
4.	99977749	61	9	9	9	9	8
5.	99999999	72	9	9	9	6	3
6.	99999994	67	9	9	9	8	5
7.	72233211	21	5	2	5	4	4
8.	11002221	9	4	2	5	3	1
9.	99995433	51	9	9	8	8	6
10.	21126424	22	7	4	7	5	3
11.	42224425	25	6	2	5	4	3
12.	22011221	11	6	2	4	3	2
13.	21111020	8	4	1	4	1	2
14.	11113212	12	4	2	4	1	3
15.	11231111	11	5	1	4	2	2
16.	112211 0	9	5	1	4	1	0
17.	21 100	[6]	3	1	4	2	2
18.	11022243	15	4	1	4	2	3
19.	33212431	19	5	1	4	4	3
20.	21122212	13	5	2	5	2	2
21.	11 22123	[14]	5	3	5	3	3
22.	21222211	13	5	2	5	2	2
23.	00110000	2	4	2	4	0	0
24.	00010100	2	2	0	4	0	1
25.	10011000	3	1	0	4	1	1
26.	46311123	21	3	0	5	3	2
27.	34723100	20	3	0	5	2	2
28.	10014121	10	5	0	5	2	1
29.	11212211	11	4	1	4	1	2
30.	20022001	7	3	0	4	2	1
31.	11111010	6	4	0	4	2	1

Monthly averages:

T (E)	2.231
T (N)	1.905
K_1	4.68
K_2	2.13
K_3	4.94
K_4	2.74
K_5	2.35

September

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	10111001	5	5	0	4	1	2
2.	00002122	7	3	0	4	1	1
3.	10000022	5	4	0	4	1	0
4.	02100021	6	2	0	4	1	2
5.	20111121	9	4	0	4	2	0
6.	12223313	17	6	2	5	3	3
7.	01112101	7	2	0	4	1	1
8.	23432112	18	4	1	5	3	2
9.	20224003	13	4	1	4	1	2
10.	11318648	32	5	0	5	3	6
11.	11222113	13	4	2	4	2	2
12.	01111011	6	4	0	4	0	1
13.	00119999	38	6	3	7	4	6
14.	69611486	41	4	0	5	6	7
15.	32352121	19	5	1	5	3	4
16.	51121164	21	5	0	4	1	6
17.	54433343	29	7	2	5	2	5
18.	72562112	26	6	3	6	2	5
19.	20111100	6	3	0	4	1	0
20.	01121001	6	4	1	4	2	0
21.	10101000	3	2	0	4	0	1
22.	00112121	8	3	0	4	2	1
23.	11138234	23	5	1	5	4	3
24.	21333515	23	6	1	4	2	4
25.	11221000	7	4	0	4	1	2
26.	21124111	13	3	1	4	0	3
27.	21122120	11	3	1	5	1	3
28.	11131004	11	4	1	4	2	3
29.	13214386	28	4	1	4	4	6
30.	21110011	7	3	0	4	1	1

Monthly averages:

T (N)	1.812
T (E)	1.354
K_1	4.13
K_2	0.73
K_3	4.43
K_4	1.90
K_5	2.73

October

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	32111111	11	3	0	4	2	2
2.	11011123	10	4	0	4	0	2
3.	11111001	6	3	0	4	1	1
4.	21221010	9	5	0	4	1	1
5.	00000020	2	4	0	4	0	0
6.	00011013	6	4	0	4	0	0
7.	00061044	15	4	1	5	2	1
8.	30000111	6	4	0	4	1	0
9.	00000132	6	3	0	4	1	1
10.	11121111	9	4	0	4	2	2
11.	22332211	16	3	1	4	2	3
12.	11135667	30	4	1	4	3	4
13.	52232364	27	6	2	5	3	3
14.	52553522	29	6	2	5	3	3
15.	00011133	9	5	2	5	1	2
16.	12222310	13	5	1	4	1	3
17.	10011001	4	3	0	3	0	0
18.	00111066	15	2	0	5	1	0
19.	86459254	43	4	1	6	3	6
20.	11123162	17	6	1	4	1	4
21.	11233293	24	4	0	5	2	5
22.	20124453	21	5	2	6	3	3
23.	24222323	20	6	1	4	3	4
24.	31221133	16	5	1	4	3	3
25.	00143102	11	4	0	4	2	2
26.	10322012	11	4	0	4	3	2
27.	40011111	9	6	2	5	2	3
28.	13332012	15	5	1	5	2	3
29.	21422313	18	4	1	6	2	3
30.	51228212	23	4	1	4	3	4
31.	21112999	28	7	3	5	2	4

Monthly averages:

T (N)	1.855
T (E)	1.375
K_1	4.29
K_2	0.77
K_3	4.45
K_4	1.77
K_5	2.39

November

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	99997377	60	7	4	6	8	6
2.	86653799	53	7	4	7	8	8
3.	73431101	20	5	2	5	4	3
4.	11012112	9	3	0	4	1	1
5.	21001001	5	3	0	4	0	1
6.	00033112	10	7	1	4	2	2
7.	00121113	9	4	1	4	2	1
8.	11112114	12	4	0	4	1	2
9.	30011113	10	4	0	4	2	2
10.	10101000	3	3	0	4	1	1
11.	22102121	11	4	1	4	0	2
12.	10111100	5	3	1	4	1	2
13.	10011002	5	5	2	4	0	1
14.	00001110	3	3	0	4	0	1
15.	22112533	19	4	1	4	2	3
16.	76435437	39	7	2	4	4	7
17.	61112524	22	4	0	4	2	6
18.	21221231	14	4	0	4	2	2
19.	22121113	13	5	0	4	1	4
20.	45142494	33	4	1	4	2	5
21.	32210011	10	5	2	4	2	3
22.	21112892	27	5	2	5	3	6
23.	21212422	16	5	2	5	2	4
24.	22111000	7	3	1	4	1	2
25.	11123115	15	5	1	5	2	2
26.	42242121	18	5	2	5	4	3
27.	11121343	16	6	2	4	3	4
28.	32113422	18	6	2	4	4	3
29.	22111221	12	6	0	4	3	3
30.	10011025	10	4	0	4	1	2

Monthly averages:

T (N)	2.021
T (E)	1.371
K_1	4.67
K_2	1.00
K_3	4.33
K_4	2.27
K_5	3.00

December

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	12100110	6	5	0	3	0	2
2.	01010120	5	6	1	3	0	2
3.	12101102	8	4	0	4	0	3
4.	11100010	4	4	0	4	0	1
5.	00000002	2	4	1	4	0	1
6.	00000031	4	6	2	3	0	2
7.	11133150	15	4	0	4	1	2
8.	01122122	11	6	2	5	2	2
9.	10000101	3	4	0	4	0	1
10.	10000011	3	4	1	4	0	0
11.	01011011	5	5	0	4	0	1
12.	00101116	10	4	2	5	0	2
13.	94433695	43	7	2	5	2	7
14.	32222211	15	5	1	4	2	2
15.	02144229	24	4	1	5	4	6
16.	35353494	36	6	2	5	3	4
17.	43244231	23	6	2	4	2	3
18.	12112312	13	4	1	4	2	2
19.	10111223	11	5	1	4	2	2
20.	00110001	3	4	0	4	1	2
21.	00011000	2	4	0	4	1	0
22.	00024346	19	4	1	5	2	5
23.	66514394	38	5	0	4	3	7
24.	64331000	17	5	0	5	2	3
25.	10011113	8	5	1	4	0	2
26.	00112101	6	5	2	4	1	1
27.	00100000	1	4	0	3	0	1
28.	00001110	3	3	0	4	1	2
29.	23221333	19	4	0	4	2	4
30.	33243226	25	5	2	5	3	4
31.	13242123	18	7	2	4	2	3

Monthly averages:

T (N)	1.532
T (E)	1.149
K_1	4.77
K_2	0.87
K_3	4.13
K_4	1.23
K_5	2.55

II. *Average amplitudes for different periods*

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												January North
1.	6	5	9	9	11	10	12	17	22	18	12	16
2.	4	3	6	8	6	4	5	10	16	16	7	12
3.	31	32	34	34	35	35	35	37	37	37	37	41
4.	43	55	46	47	49	52	34	42	52	69	53	59
5.	78	77	74	87	44	39	50	58	35	29	49	53
6.	—8	—3	—28	—35	—23	—5	—4	+10	+40	+13	—23	—47
												East
1.	5	5	3	6	8	13	15	20	25	20	21	21
2.	3	5	2	1	3	3	1	10	8	12	10	10
3.	31	29	37	35	33	37	35	34	37	37	39	37
4.	36	51	51	51	37	41	30	36	45	44	41	31
5.	68	42	50	43	37	38	44	34	15	27	26	47
6.	—2	—19	—	—	—1	—	—4	+5	+8	+42	+35	+31
												February North
1.	6	6	4	7	8	13	12	21	21	10	10	11
2.	3	4	4	4	6	5	5	16	20	12	10	9
3.	37	33	36	40	36	37	38	38	39	36	40	42
4.	43	40	35	45	35	46	45	53	71	57	59	66
5.	69	89	67	58	63	43	27	32	29	57	63	48
6.	+23	—17	—21	—18	—14	—16	—21	+21	+54	+19	—37	—76
												East
1.	7	6	4	4	7	9	10	21	22	15	19	19
2.	1	4	—	1	1	3	3	9	7	6	3	6
3.	37	35	37	35	32	35	37	35	33	34	37	39
4.	41	33	37	32	42	36	31	43	40	45	46	42
5.	48	58	41	45	29	35	36	20	31	32	27	45
6.	+5	+12	—3	—7	—6	—16	—38	—30	+7	+42	+62	+42

and hourly means of earth current elements

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
18	17	13	12	13	8	6	10	11	9	7	6	11,5
15	14	10	9	7	6	7	8	8	7	8	5	8,3
40	38	35	36	34	37	33	31	36	38	38	37	35,6
44	51	63	33	53	81	47	40	56	61	45	60	51,5
59	58	38	109	125	93	87	139	151	88	79	56	73,3
—67	—35	—5	—35	—59	—29	—12	—32	—37	—9	+23	+2	
Component												
23	25	23	21	17	15	12	9	13	12	11	8	14,6
9	7	8	3	6	4	2	6	7	7	9	4	5,8
38	38	39	35	35	37	28	37	34	31	33	34	34,9
34	52	38	37	39	47	35	38	31	48	46	41	41,4
41	20	48	67	99	107	74	94	146	121	70	49	58,5
+9	+7	—12	+8	+6	—7	—4	—23	—30	—32	—37	—17	
Component												
15	12	10	12	10	6	7	9	9	9	9	8	10,3
13	14	6	8	7	5	5	7	6	9	7	6	8,1
40	42	46	39	38	35	34	40	38	37	37	35	38,0
59	55	68	54	43	37	37	35	50	45	61	60	49,3
69	57	40	36	62	82	102	96	42	71	55	88	60,1
—81	—55	—14	+30	+25	+26	+21	+23	+30	+41	+44	+15	
Component												
24	20	22	19	18	10	11	8	7	8	12	12	13,1
8	11	7	7	6	3	4	5	3	6	7	6	4,9
40	37	38	35	35	37	37	37	37	33	36	36	36,0
51	42	54	47	44	39	23	53	39	38	50	33	42,3
30	37	33	43	42	60	125	68	69	89	53	103	50,0
+43	+24	—6	—10	—8	—8	—24	—7	—19	—20	—17	—18	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												March North
1.	12	13	6	9	10	13	16	17	16	13	10	13
2.	10	8	8	5	7	8	8	12	11	10	8	10
3.	37	38	41	38	37	41	38	37	41	41	35	38
4.	42	35	45	56	48	47	47	52	62	62	53	74
5.	145	112	48	54	39	37	47	43	44	44	49	56
6.	+13	+3	+9	+2	—9	—18	+13	+42	+37	—41	—113	—142
												East
1.	15	16	6	9	6	11	14	15	17	19	19	21
2.	8	8	2	5	2	5	6	8	7	8	10	9
3.	33	37	39	35	37	39	35	35	34	37	37	39
4.	60	36	39	40	38	37	35	38	30	41	46	53
5.	81	90	64	46	40	41	24	35	44	44	31	45
6.	+5	+6	+17	+8	+2	—	+6	+13	+28	+35	+27	+20
												April North
1.	10	10	8	10	12	14	18	16	11	14	12	13
2.	8	8	5	5	10	10	13	11	9	8	5	10
3.	36	34	36	35	35	36	36	37	37	36	37	37
4.	34	38	47	35	38	35	55	47	43	42	41	45
5.	70	74	50	44	41	38	36	36	31	42	46	55
6.	+9	—4	+6	+8	+6	+8	+48	+56	+37	—58	—121	—199
												East
1.	8	10	3	6	7	13	14	22	19	19	20	20
2.	9	11	3	5	3	5	9	10	6	9	9	14
3.	37	34	36	34	36	36	33	33	34	33	33	32
4.	32	33	34	27	40	30	32	34	32	35	44	42
5.	45	44	37	32	26	29	31	31	40	36	36	45
6.	+10	—	+8	—2	—10	—10	—3	+17	+55	+53	+43	+3

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
15	15	15	11	11	6	7	12	12	10	6	12	11,7
13	14	8	8	9	3	5	6	9	9	5	10	8,6
41	39	38	37	36	35	35	38	36	36	40	41	38,2
50	57	35	52	46	47	53	56	40	39	70	46	50,6
86	49	83	53	61	53	46	82	98	84	92	96	66,8
—127	—51	—8	+59	+81	+47	+23	+53	+52	+16	+37	+21	
Component												
25	28	26	17	13	11	12	16	16	12	12	16	15,5
14	12	10	8	5	5	5	9	7	11	8	10	7,6
39	41	36	31	34	36	38	35	36	37	41	34	36,4
38	46	41	40	29	39	48	39	53	50	46	59	42,7
48	32	37	46	69	42	53	77	93	76	68	60	53,6
+7	—15	—19	—3	+6	—11	—37	—41	—19	—18	—12	—7	
Component												
10	9	8	8	7	6	7	5	5	8	8	9	9,9
8	8	4	4	4	2	4	4	5	8	8	8	7,0
37	35	35	35	35	35	35	36	34	33	35	35	35,5
50	51	44	37	52	44	35	34	37	63	44	52	43,4
41	61	52	55	47	56	35	50	77	58	113	77	53,6
—156	—79	+7	+63	+90	+78	+58	+41	+36	+21	+25	+21	
Component												
22	17	17	13	11	10	7	6	8	8	10	12	12,6
14	9	7	7	7	5	4	4	5	9	10	11	7,7
37	36	36	34	35	35	37	36	33	35	33	35	34,7
39	38	42	38	39	46	41	38	43	49	32	47	37,8
48	54	49	50	64	59	51	41	69	74	133	66	49,5
+7	+3	—2	—16	—25	—16	—16	—28	—25	—16	—26	—1	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												May North
1.	6	9	12	14	15	16	15	14	13	12	10	13
2.	6	11	9	10	11	13	12	11	10	9	7	10
3.	35	38	37	33	34	39	35	35	34	34	34	35
4.	36	44	36	33	46	40	51	44	46	35	42	46
5.	64	46	44	53	35	42	30	31	27	37	45	32
6.	+6	+15	+14	+5	+34	+64	+45	+20	—32	—100	—166	—165
												East
1.	5	6	6	9	12	14	17	21	24	19	20	24
2.	5	8	6	7	7	6	6	12	13	9	12	12
3.	35	38	36	33	36	30	31	28	33	31	33	33
4.	27	39	38	21	24	19	30	30	34	31	33	37
5.	49	41	31	50	35	32	26	27	35	35	52	49
6.	+8	+3	+17	+2	—11	+6	+34	+45	+51	+38	—21	—39
												June North
1.	7	11	16	16	19	18	19	16	20	13	9	11
2.	7	7	13	10	17	13	12	13	14	12	7	5
3.	43	42	33	35	38	38	37	37	38	50	35	41
4.	42	51	43	58	52	72	61	45	46	41	47	37
5.	51	104	122	74	62	73	44	52	21	22	41	44
6.	+25	—5	—8	—4	+43	+70	+59	+31	—17	—80	—140	—153
												East
1.	8	7	12	11	10	14	22	26	32	26	21	22
2.	7	10	12	5	5	5	9	12	24	21	10	10
3.	40	47	33	31	35	36	32	32	35	37	35	37
4.	46	44	40	43	38	32	31	35	37	40	47	35
5.	44	95	106	64	36	44	43	36	30	33	41	45
6.	+15	—3	—1	—4	—7	+25	+66	+80	+77	+61	+4	—24

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
10	9	8	8	6	7	3	9	10	13	9	11	10,6
9	5	3	5	3	3	2	8	17	15	23	13	9,4
38	35	36	35	37	36	32	37	43	48	49	39	36,9
38	30	42	29	45	33	37	34	51	51	43	39	40,5
45	55	56	56	51	42	35	52	58	52	85	58	47,2
—126	—40	+29	+65	+83	+90	+37	+22	+39	+26	+12	+21	
Component												
23	26	21	16	10	13	6	10	14	13	13	11	14,6
11	12	10	10	9	6	8	9	19	16	19	10	10,1
33	32	34	30	34	30	36	32	49	50	43	44	35,1
34	31	33	48	31	30	35	38	45	66	48	37	34,9
41	49	41	38	82	61	45	61	52	52	56	37	45,0
—25	+6	+1	—18	—28	—10	—6	—30	—28	—12	+13	+7	
Component												
8	7	6	5	6	4	2	7	7	10	8	8	10,6
5	4	4	4	6	4	—	5	8	8	8	8	8,1
36	42	38	36	34	38	37	34	38	35	38	38	38,0
50	61	73	61	66	65	35	37	52	46	49	57	52,0
40	42	74	62	71	80	98	56	77	77	74	65	63,7
—114	—63	—15	+45	+62	+73	+77	+22	+8	+35	+35	+15	
Component												
20	22	19	19	20	10	6	8	8	11	10	12	15,7
9	12	12	8	13	5	6	7	11	10	10	8	10,1
39	51	38	32	35	35	36	30	35	33	37	38	36,2
40	53	59	55	68	59	34	59	52	42	43	45	44,8
39	38	84	85	111	136	110	73	100	92	79	83	68,6
—28	—25	—41	—34	—48	—21	—18	—42	—25	—12	+4	—1	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												July North
1.	5	8	10	10	12	16	14	13	9	9	9	6
2.	7	8	8	8	7	13	9	7	5	5	3	2
3.	36	34	34	31	36	41	37	39	36	34	37	34
4.	40	31	40	35	38	47	53	48	37	33	39	34
5.	64	64	50	26	40	32	43	49	47	31	22	49
6.	+33	+5	+7	+19	+44	+72	+62	+39	—4	—67	—120	—144
												East
1.	6	8	11	6	7	8	16	21	21	19	20	14
2.	9	8	7	5	2	2	1	8	7	5	5	3
3.	34	34	32	34	34	31	32	26	29	30	32	33
4.	26	34	29	24	21	16	26	32	30	38	39	35
5.	51	51	43	30	35	49	33	38	28	26	27	46
6.	+11	+4	+9	+4	—9	+5	+57	+67	+59	+40	+18	+1
												August North
1.	12	15	19	17	25	39	52	48	35	22	29	20
2.	23	45	22	65	32	31	70	55	63	29	37	41
3.	84	88	80	92	85	90	102	143	128	78	102	95
4.	49	71	77	74	70	52	50	45	61	50	62	71
5.	65	59	82	55	91	78	76	25	13	40	69	86
6.	+5	+6	+8	+4	+13	+31	+64	+81	+78	+47	+17	—2
												East
1.	16	22	20	23	31	46	67	82	57	37	57	54
2.	20	45	26	62	27	32	62	52	62	45	52	53
3.	81	93	91	91	88	90	98	132	129	78	104	91
4.	45	63	66	69	63	27	32	26	40	47	53	65
5.	69	48	36	43	37	83	69	30	18	28	50	69
6.	+6	+19	+20	—4	+40	+54	+58	+77	+11	—80	—129	—147

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
3	2	3	4	1	1	1	3	7	8	7	11	7,2
2	2	3	3	2	1	1	5	7	9	6	10	5,4
33	32	35	31	35	34	35	32	35	33	32	30	34,4
34	32	37	39	36	31	30	31	37	31	43	55	38,0
47	57	50	61	34	44	31	41	63	70	88	76	49,1
—126	—91	—43	+27	+66	+64	+51	+14	+16	+38	+11	+26	
Component												
13	11	16	13	5	6	5	4	7	8	14	12	11,3
4	3	5	2	5	4	7	5	5	7	7	12	5,4
34	29	30	32	36	31	32	36	41	30	35	40	32.8
27	39	37	27	31	33	26	31	28	55	30	48	31,9
57	52	59	71	44	60	54	49	81	73	79	85	50,8
—8	—26	—25	—40	—32	—45	—36	—30	—21	—8	+7	—1	
Component												
15	14	15	23	15	9	9	13	10	9	10	19	20,5
40	27	21	45	17	7	11	19	16	9	21	21	32,0
83	75	58	74	68	37	44	41	53	42	80	36	77,4
44	69	64	52	53	65	56	65	64	66	73	109	63,0
80	55	62	50	55	77	77	104	76	49	63	34	63,4
—35	—36	—40	—45	—45	—36	—38	—37	—22	—8	—10	+1	
Component												
32	31	30	45	28	14	9	21	8	6	13	22	32,2
46	42	28	51	19	14	17	19	14	9	24	20	34,9
78	88	81	92	77	42	57	49	55	38	78	35	80,6
50	69	63	50	52	60	75	52	84	57	74	87	57,1
49	41	36	49	74	82	89	92	57	66	89	67	56,9
—131	—66	+7	+53	+90	+75	+22	+12	—3	+2	+8	+8	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												September North
1.	10	12	9	12	13	19	23	18	13	15	12	15
2.	8	7	4	8	8	13	15	11	10	5	7	7
3.	36	34	32	37	35	37	42	38	40	35	35	37
4.	32	32	38	47	53	54	59	64	60	38	41	54
5.	107	91	66	75	60	46	41	37	22	48	82	95
6.	+12	−9	—	−5	−16	—	+33	+69	+23	−60	−140	−152
												East
1.	11	7	5	10	13	17	21	22	17	19	23	25
2.	7	7	2	9	5	4	4	4	8	8	10	5
3.	37	34	31	34	35	35	31	33	31	35	36	37
4.	25	41	35	35	34	38	36	36	38	37	34	40
5.	71	40	41	52	56	43	58	42	53	39	52	54
6.	−2	+19	+4	+26	+4	+35	+34	+58	+85	+70	+19	−8
												October North
1.	8	6	6	5	6	13	17	23	20	16	13	15
2.	8	3	3	3	3	5	10	14	13	8	9	10
3.	38	37	37	31	36	33	36	38	39	41	39	36
4.	38	37	36	46	49	42	30	43	44	64	52	55
5.	77	83	95	64	44	31	45	34	52	52	54	59
6.	+4	−10	+11	−12	−7	−3	+19	+78	+98	+22	−79	−150
												East
1.	8	4	4	6	5	9	22	26	25	25	24	28
2.	3	5	3	1	—	3	2	3	9	5	6	13
3.	35	33	34	31	35	32	33	31	35	31	36	33
4.	35	34	29	34	37	27	30	33	27	41	38	43
5.	61	84	57	39	30	35	37	38	35	38	46	40
6.	−3	+1	+1	−5	−19	−17	−3	+17	+45	+105	+71	+18

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
9	11	12	7	8	7	4	8	10	7	7	14	11,3
8	8	7	4	4	2	5	7	8	7	5	10	7,4
43	38	37	38	49	36	35	37	38	38	36	35	37,4
87	61	63	47	33	33	37	31	43	60	55	52	49,0
41	69	47	60	52	65	84	83	106	136	92	106	71,3
—109	—33	+24	+73	+82	+53	+37	+39	+30	+42	+10	—6	
Component												
19	19	19	20	12	8	5	6	12	13	8	14	14,4
7	9	12	6	2	5	2	2	13	7	8	15	6,7
39	36	34	34	38	32	38	34	35	37	32	37	34,7
65	40	38	46	39	32	38	44	41	43	41	43	39,2
31	54	55	56	49	83	58	71	88	115	73	85	59,0
—20	—39	—50	—26	—23	—46	—41	—36	—16	—14	—4	—26	
Component												
15	14	14	10	9	9	8	8	13	9	9	13	11,5
13	13	8	4	8	6	8	8	13	8	8	16	8,5
49	41	36	34	31	35	32	33	42	37	35	36	36,7
54	49	38	50	39	35	41	32	43	37	56	54	44,3
62	60	64	49	64	60	81	71	86	71	66	85	63,4
—151	—66	—8	—45	+36	+27	+7	+38	+43	+36	+7	+16	
Component												
30	28	27	18	13	11	10	12	15	11	12	15	16,2
10	15	8	8	8	5	6	7	11	10	10	15	6,8
36	31	27	30	31	31	30	35	37	32	34	31	32,8
45	40	37	41	39	26	39	33	37	34	46	40	36,0
35	45	53	52	57	73	76	90	88	87	57	89	56.0
—12	—14	—17	—25	—10	—37	—35	—35	—5	+6	—14	—14	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												November North
1.	10	10	11	13	10	14	16	24	25	17	17	18
2.	11	6	8	8	4	11	7	13	18	11	8	11
3.	37	46	40	41	36	43	34	35	38	46	38	38
4.	49	62	70	64	52	45	61	70	58	62	47	61
5.	131	88	84	81	92	90	54	25	29	47	58	58
6.	—3	+4	—13	—33	—10	—16	+12	+28	+46	+8	—47	—59
												East
1.	14	9	10	8	13	17	22	26	26	25	19	25
2.	11	4	5	4	4	2	9	13	13	10	8	9
3.	30	34	34	37	31	34	34	33	35	37	37	33
4.	56	53	55	59	51	46	37	52	34	56	48	40
5.	81	61	62	67	84	52	50	29	47	26	38	46
6.	—23	+14	+13	—4	—14	+2	—11	—8	+38	+47	+49	+36
												December North
1.	9	7	10	12	13	13	16	19	25	20	18	19
2.	6	6	2	2	6	6	5	8	16	12	8	12
3.	36	34	34	33	34	30	34	35	36	37	36	36
4.	29	33	35	38	37	39	42	29	44	50	46	52
5.	52	92	89	68	57	69	51	50	38	33	49	55
6.	—9	—12	—34	—9	—12	—18	—6	—5	+21	+23	—13	—35
												East
1.	5	5	11	10	10	15	17	16	24	19	20	25
2.	6	2	3	3	4	4	4	6	9	8	9	12
3.	32	34	33	32	33	34	32	37	33	35	35	32
4.	28	28	34	31	34	31	31	30	38	35	40	30
5.	51	55	56	52	39	38	46	28	28	28	40	52
6.	+4	+7	—14	—17	—7	—22	—22	—6	+10	+39	+52	+29

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
19	16	16	13	13	9	12	13	15	17	12	8	14,4
14	9	8	7	8	5	10	11	14	15	9	7	9,7
37	37	33	35	35	36	35	33	33	33	34	38	37,1
61	55	45	28	49	44	32	46	56	79	62	65	55,1
70	43	62	67	128	90	122	82	93	119	88	90	78,7
—58	—8	+16	+26	+52	+25	+6	+3	+33	—1	—5	—7	
Component												
28	23	21	17	20	9	11	10	17	22	9	12	17,3
10	10	8	9	7	2	4	5	13	14	8	8	7,9
32	35	36	33	33	32	33	34	34	35	35	35	33,7
40	47	34	41	43	33	37	39	29	26	44	50	43,7
52	41	49	46	95	104	81	76	124	167	106	62	67,0
+15	—6	—1	+8	+3	—17	—43	—8	—32	—43	—8	—7	
Component												
19	21	18	13	15	11	16	10	12	10	10	15	14,6
16	15	8	8	6	8	8	9	6	9	6	12	8,3
37	36	37	34	34	32	34	31	34	38	36	32	34,6
41	41	53	41	38	34	37	31	33	40	52	47	40,0
64	51	50	44	56	84	88	111	107	78	72	109	67,3
—54	—9	—	+16	+28	+4	+24	+11	+15	+42	+23	+14	
Component												
35	35	31	24	12	9	10	8	10	11	12	19	16,4
13	15	15	8	4	4	9	6	9	16	10	15	7,9
27	30	30	30	34	33	33	31	36	33	32	35	32,8
32	29	34	35	35	31	42	33	34	39	40	28	33,5
46	53	47	40	60	47	59	92	93	76	94	115	55,6
+7	+4	—	—1	—13	+3	+6	—9	—14	—19	—2	—14	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												Year 1972. North
1.	8	9	10	11	13	16	19	21	19	15	14	14
2.	9	10	8	11	10	11	14	15	17	11	10	12
3.	41	41	39	40	40	42	42	46	45	42	42	42
4.	40	44	46	48	47	48	49	48	52	49	49	55
5.	81	84	73	62	56	51	45	39	32	40	52	57
6.	+9	—3	—4	—6	+4	+14	+27	+39	+32	—23	—82	—110
												East
1.	9	9	8	9	11	15	21	26	26	22	24	25
2.	8	10	6	9	5	6	10	12	14	12	12	13
3.	38	40	39	38	39	39	39	41	41	38	41	39
4.	38	41	41	39	38	32	32	35	35	41	42	41
5.	60	59	52	47	40	43	41	31	34	33	39	49
6.	+3	+8	+6	—	—3	+5	+14	+28	+40	+41	+19	—3
												Quiet days North
1.	8	8	8	10	9	13	14	15	13	11	8	10
2.	7	6	6	7	6	8	7	8	8	6	7	6
3.	35	33	34	33	34	33	36	36	35	36	35	35
4.	37	34	35	34	39	36	37	38	39	33	40	41
5.	39	40	36	37	26	31	30	26	19	25	32	31
6.	+7	+5	+10	—5	+11	+30	+32	+42	+15	—48	—110	—139
												East
1.	6	6	4	6	6	9	11	15	17	12	12	15
2.	6	4	4	4	3	3	2	5	4	5	5	5
3.	33	32	33	32	34	33	31	31	32	34	34	34
4.	28	27	29	26	29	24	24	29	26	30	35	31
5.	35	35	33	29	24	28	28	24	27	21	22	30
6.	+2	—2	—4	—6	—14	—4	+10	+24	+42	+37	+19	—4

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
13	12	12	10	10	7	7	9	10	10	8	11	12,1
13	11	7	9	7	4	6	8	10	10	10	10	10,1
41	41	39	39	39	35	35	35	38	37	41	36	40,0
51	51	52	44	46	46	40	41	47	51	54	56	48,1
62	57	57	59	67	69	74	81	86	79	81	78	63,4
−100	−47	−5	+37	+52	+40	+26	+22	+26	+23	+18	+12	
Component												
24	24	23	21	15	10	9	10	11	11	11	14	16,2
13	13	11	11	8	5	6	7	10	10	11	11	9,7
39	40	38	37	38	34	36	35	39	35	39	36	38,3
41	44	42	42	41	41	40	41	43	45	45	46	39,6
46	46	49	54	71	76	73	74	88	91	80	75	56,2
−11	−12	−14	−9	−7	−12	−19	−23	−20	−15	−7	−8	
Component												
11	10	8	7	6	5	5	7	6	8	7	7	8,8
7	6	4	3	3	2	4	7	6	8	6	7	6,0
36	35	34	34	34	33	33	33	33	34	35	34	34,4
32	40	32	30	33	32	29	29	33	27	39	41	35,0
45	26	35	30	28	26	29	36	33	41	32	39	32,2
−112	−38	+20	+47	+61	+31	+34	+23	+20	+27	+18	+18	
Component												
13	15	14	10	9	8	5	5	7	8	8	9	9,5
5	6	6	4	4	5	4	5	7	8	8	10	5,0
34	33	34	32	32	33	32	32	32	32	33	35	32,9
28	34	32	31	30	30	31	27	27	32	30	32	29,2
32	25	25	28	30	34	37	41	42	41	47	43	31,7
−13	−18	−20	−15	−13	−14	−15	−10	−6	+5	+8	+11	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
											Disturbed	days
1.	20	29	29	32	47	72	99	101	79	45	56	45
2.	47	97	45	146	76	74	148	115	151	76	85	99
3.	158	180	166	182	166	184	193	281	245	149	166	191
4.	65	202	166	212	157	74	131	76	92	90	81	164
5.	218	362	239	81	214	331	85	27	49	45	148	94
6.	+68	+79	+88	—87	—6	—18	—10	+59	+113	+3	—186	—36
												East
1.	27	43	43	63	76	99	157	171	126	63	112	110
2.	38	99	63	148	61	85	162	124	173	94	110	130
3.	160	175	175	176	162	185	193	284	265	157	198	182
4.	176	94	166	160	158	49	34	58	45	99	63	126
5.	97	297	149	124	142	220	166	22	54	18	58	92
6.	—13	—8	+41	+3	+5	+95	+80	+35	+46	+14	+39	+75

12	13	14	15	16	17	18	19	20	21	22	23	Averages
North Component												
32	32	23	45	34	18	14	14	29	22	16	34	40,3
104	79	40	99	41	14	22	14	40	20	45	38	71,5
164	135	94	153	119	45	54	45	52	40	137	40	139,0
112	81	130	47	113	99	72	61	92	166	212	193	120,1
81	86	115	175	104	331	333	216	295	131	212	178	173,0
—117	—45	—11	—4	+28	+35	+30	—71	—11	+1	+70	+28	
Component												
72	58	50	83	52	23	25	50	27	18	20	36	66,8
112	94	54	110	32	25	40	31	40	20	45	32	79,9
153	157	140	167	124	49	90	61	101	47	144	47	149,6
68	110	68	65	160	113	128	117	128	76	128	180	107,1
76	49	124	149	122	328	270	214	185	221	236	153	148,5
+10	—22	—46	—69	—26	—71	—53	—60	—2	—46	—26	—5	

III.

Results of harmonical analysis of the daily variations

	A_1	1	A_2	2	A_3	3	A_4	4	A_5	5	A_6	6
						North Component						
January	18	167	25	255	23	102	10	283	6	73	5	96
February	26	131	27	238	27	108	17	282	7	165	5	87
March	47	128	45	285	39	119	23	318	4	232	10	133
April	52	123	67	289	49	120	19	317	6	200	2	182
May	56	125	69	310	40	148	7	342	1	337	8	21
June	52	116	64	296	36	144	6	126	5	196	6	359
July	54	102	61	292	32	130	6	174	2	328	6	57
August	40	106	66	302	45	129	6	342	7	307	2	80
September	42	137	54	294	44	135	24	339	7	272	5	112
October	31	102	50	263	45	114	35	314	8	158	6	93
November	11	169	22	275	25	116	15	328	1	52	9	59
December	16	160	16	230	13	122	13	269	6	155	3	352
Year	31	119	40	282	31	124	12	312	2	193	4	77
Q	38	119	46	296	37	136	15	328	3	165	2	355
D	41	91	11	286	58	106	21	7	23	257	16	30
						East Component						
January	21	312	6	72	14	29	3	173	5	53	2	26
February	20	290	21	107	17	350	4	208	4	95	7	37
March	21	342	7	111	10	58	7	237	6	328	4	82
April	23	331	13	146	13	55	6	323	6	164	3	11
May	20	12	7	225	18	120	11	359	12	208	8	312
June	39	5	24	213	20	112	7	26	6	227	5	329
July	35	3	19	187	12	116	7	9	6	295	4	224
August	45	7	22	212	14	110	5	2	3	294	1	286
September	42	2	19	210	13	80	11	299	3	315	6	61
October	27	331	25	162	16	44	17	274	5	64	7	355
November	24	314	12	110	13	36	8	252	4	51	2	211
December	14	283	13	136	13	22	4	202	6	112	4	312
Year	20	348	7	192	12	78	4	299	0	231	3	6
Q	13	1	16	185	10	90	4	286	2	214	0	360
D	54	356	11	181	9	267	13	125	17	358	2	221

IV.

Special phenomena
(magnetic and earth current date)
SSC-s

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	End of Storm
02.	24.	7.45	9	20	+	+	+	—	02.25. 01.00
03.	06.	22.00	18	105	+	+	+	—	03.07. 13.30
05.	09.	6.15	7	7	—	+	+	+	05.09. 23.30
	15.	19.45	27	95	+	+	+	—	05.17. 0.00
06.	17.	14.15	14,5	70	—	—	+	—	06.19. 05.00
08.	04.	2.30	12,5	40	—	+	+	—	continued
		3.30		80			+	—	continued
		21.45	22	120	+	+	+	—	08.07. 05.00
	09.	0.45	18	45	+	+	+	—	continued
		1.30	13	50	+	+	+	—	08.10. 04.00
	26.	0.00	7	30	+	+	+	—	08.27. 18.00
09.	10.	16.15	6,5	30	—	—	—	+	09.11. 00.00
		18.00	5,5	15	+	+	+	—	(?)
	13.	13.45	18	80	+	+	+	—	09.14. 09.00
	23.	12.00	8	15	—	—	—	+	09.24. 00.03
10.	07.	11.30	10	30	+	+	+	—	no storm
	18.	18.45	9	40	+	+	+	—	10.19. 22 00
	31.	17.45	15	45	+	+	+	—	11.03. 05.00
12.	12.	22.45	5	12	+	+	+	—	12.13. 23.00

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
01.	01.	22.15	6,5	25	+	+	+	—	tr		
	02.	19.30	11	65	—	+	+	+	tr		
	04.	1.45							2,5	—	—
		21.00							2,5	+	+
		23.00	2,5	20	+	+	+	—	2,5	+	+
	07.	20.30	5,5	45	—	+	+	+	3,5	+	+
	09.	20.00	3,5	15	—	+	+	+	2	—	+
		23.45							2,5	+	+
	11.	15.00	5,5	22	+	—	—	—			
		23.30	3,5	22	—	+	+	+	tr		
	13.	21.30							2	+	+
	14.	3.15	4.5	15	+	+	+	—	tr		
	15.	0.15							2,5	—	—
		20.00	8	30	—	—	+	—			
	16.	2.15	4,5	30	+	+	+	+	3,5	+	+
		16.00	16	105	—	+	+	+			
		20.45	10	60	+	+	+	+			
	17.	16.45	9	65	—	+	+	+	tr		
		19.00	11	85	—	+	+	+			
	18.	16.45	11	60	+	+	+	+	tr		
	19.	1.45	6,5	18	+	+	+	—	2	+	+
		16.00	11	40	—	+	—	+			
		23.45	2,5	12	+	+	+	—	2,5	+	+
	20.	22.45	3,5	22	—	+	+	+	2,5	+	+
	22.	22.30	7	40	—	+	+	+			
	23.	0.00	8	40	+	+	+	—			
		21.15	9	50	+	+	+	—	2,5	+	+
	24.	20.15	10	55	—	+	+	+	tr		
	26.	0.00	4,5	35	+	+	+	—			
		11.45	8	35	—	—	—	+	tr		
		16.45	9	45	+	+	+	—			
		21.00	8	40	+	+	+	+	tr		

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
01.	28.	17.15	7	60	—	+	+	+			
		20.00	22,5	90	—	+	+	+			
		21.30	16	75	+	+	+	—	tr		
	30.	22.15	6,5	30	+	+	+	—	tr		
	31.	17.00	6,5	35	—	+	+	+			
		19.30	5,5	25	—	+	+	+			
02.	01.	23.45	3,5	18	+	+	+	—	2,5	+	+
	02.	9.15	5,5	18	+	+	+	—	tr		
		18.30	8	18	—	—	—	+			
		22.00							2	+	+
	03.	17.30	9	50	—	+	+	+	tr		
	06.	19.15	6.5	25	—	+	—	+	2,5	+	—
	07.	22.30	6,5	45	+	+	+	—	2,5	+	+
	10.	2.15	2.5	25	+	+	+	—	tr		
	13.	18.15	11.5	80	—	+	+	+	tr		
		23.30	6,5	35	+	+	+	+	tr		
	14.	20.30	6,5	35	—	+	+	+	tr		
	15.	23.15	4,5	18	+	+	—	—	2,5	+	+
	16.	23.00							2,5	+	+
	17.	18.45	14.5	85	—	—	—	+			
	18.	22.00	5 5	22	+	—	+	+	tr		
	19.	0.30	10	40	+	+	+	—	(ssc?)		
	20.	3.15	6.5	40	+	+	+	—			
	21.	11.30	4.5	18	+	+	+	—			
		15.45	5,5	15	+	+	+	—			
	23.	19.00	5,5	18	—	—	—	+			
		23.00	3,5	15	+	+	+	—	2	+	+
	24.	21.15	16	60	+	+	+	—			
	25.	18.00	9	45	—	+	+	+	tr		
		21.00	4,5	35	—	+	+	+			
	26.	1.30	6,5	35	+	+	+	—	tr		
		19.45	2,5	18	—	+	+	+	2	+	+

		Bays							*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
02.	27.	22.45	5,5	38	—	+	+	+	tr		
	28.	23.00							3,5	+	+
03.	01.	20.30							3,5	—	+
		21.30	5,5	22	—	+	+	+	2,5	+	+
	02.	23.00							3,5	+	+
	03.	16.00	8	50	—	—	—	+	tr		
		19.45	6,5	35	—	+	+	+	2	+	+
	04.	18.30	3,5	15	—	—	—	+	tr		
		23.15	3,5	12	+	+	+	—	4,5	+	+
	05.	0.15	3,5	12	+	+	+	—	2,5	+	+
		19.30	3,5	16	—	+	+	+	2,5	+	+
	06.	0.30	3.5	22	+	+	+	—	2,5	+	+
		21.00	4,5	15	—	+	+	+	2,5	+	+
	07.	18.00	6,5	40	—	+	+	+			
	08.	16.45	12	60	—	—	—	+			
	11.	19.45	7	28	—	+	+	+	2	+	+
	13.	0.00	3.5	18	+	+	+	—	2,5	+	+
		10.00	3.5	12	—	+	+	—			
		22.15	2,5	15	—	+	+	+			
	15.	19.15	3,5	25	—	+	+	+	tr		
	16.	0.30	12,5	45	+	+	+	—	2	+	+
	18.	1.30	8	35	+	+	+	—	2	+	+
	21.	0.15	3,5	25	+	+	+	—	tr		
	22.	12.30	4	12	+	+	+	—	tr		
	23.	20.00							2,5	+	+
	24.	18.00	5,5	25	—	—	—	+	2	+	+
		20.45	8	45	+	+	+	+	2,5	+	+
	25.	1.00	3,5	12	+	+	+	—	2,5	+	+
	26.	20.00	9	40	—	—	—	+	2,5	—	—
	27.	20.00	8	32	+	+	+	—			
		21.00	10	60	+	+	+	+			

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
03.	28.	2.15	12,5	80	+	+	—	—			
	29.	20.45	9	70	+	+	+	—	3,5	+	+
	30.	0.00	11	35	+	+	+	—	tr		
		3.45	9	30	+	+	+	—			
		15.45	7	30	—	—	—	+	tr		
	31.	19.15	12,5	65	—	+	+	+	tr		
		23.00	6,5	35	—	+	+	+	2	+	+
04.	01.	23.00	11	45	+	+	+	—	2	+	+
	03.	22.30	9	30	+	+	+	—	3,5	+	+
	07.	23.15	4,5	20	+	+	+	—	2,5	+	+
	08.	18.45	6,5	25	—	—	—	+	2	—	—
	09.	1.15	5,5	24	+	—	+	—	tr		
	11.	1.00							2,5	+	+
		21.30	3,5	12	+	+	+	+	2	+	+
	12.	20.45	7	22	—	+	+	+	2,5	+	+
	15.	21.00	2,5	12	—	+	+	+	2	+	+
		22.15	3,5	18	+	+	+	+	2,5	+	+
	17.	0.15	6,5	30	+	+	+	—	tr		
		19.00							2,5	+	+
	18.	2.30	8	22	—	—	—	+			
		23.30	5,5	28	+	+	+	—	2	+	+
	20.	20.30	5,5	12	+	+	+	—	3,5	+	+
		23.15	4,5	25	+	+	+	—	tr		
	21.	17.00	5,5	20	—	—	—	+	tr		
	22.	22.00	9	50	+	+	+	+	tr		
	23.	23.30	4,5	22	—	+	+	+	tr		
	24.	15.00							3,5	+	+
	26.	0.15							4,5	+	+
		1.00							3,5	+	+
		23.30	5,5	15	+	+	+	—	4,5	+	+
	27.	3.30							3,5	+	+
		17.30	7	25	+	+	—	+	tr		
		18.15							2		(pg)

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
04.	29.	16.00	10	50	—	+	+	+			
		21.15	18	65	+	+	+	—	tr		
		22.15	12,5	90	+	+	+	—			
	30.	2.00	9	60	+	+	+	—	tr		
		22.00	6,5	25	+	—	+	—	tr		
05.	01.	21.15	6,5	30	+	+	+	+	tr		
	05.	1.30							2,5	+	+
		22.45	6,5	30	—	+	+	+			
	06.	19.30	4,5	18	—	+	+	+	tr		
	08.	19.00	3,5	15	+	+	+	+	2,5	+	+
	09.	19.30	6.5	28	—	+	+	+	3,5	+	+
		22.00	8	35	+	+	+	—	4,5	+	+
	10.	20.30	7	30	—	+	+	+	2,5	—	+
	13.	1.15	3,5	18	+	+	+	—	tr		
	15.	14.30	2,5	7	+	+	+	—			
	20.	0.15	4.5	15	+	+	0	+	2,5	—	—
		22.45	4,5	10	+	+	+	—			
	22.	21.30							5,5	+	+
	23.	16.00	5.5	35	+	+	+	—	tr		
	24.	4.00	?	22	?	?	+	—			
	26.	0.45	4 5	14	0	+	+	+	3,5	+	+
	28.	14.15	11	30	+	+	+	—	tr		
	30.	15.15	9	25	+	+	+	—	(ssc?)		
		16.00	10	30	+	+	+	—	tr		
06.	02.	1.00							2.5	+	+
	03.	13.45	8	38	+	+	+	—	(ssc?)		
	04.	2.15	7	18	+	+	+	—	tr(si?)		
		19.30	5.5	30	—	+	+	+	tr		
	06.	23.15	5.5	15	+	+	+	—	tr		
	07.	22.00	4,5	16	+	+	+	+	3,5	+	+
	10.	22.00							3,5	+	+
	11.	20.15							2,5	+	+
	12.	14.30	6,5	25	+	+	+	—			

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
06.	13.	0.30	3,5	10	—	—	—	+			
		2.00							4,5	+	0
	14.	1.30	4,5	12	+	+	+	—	3,5	+	+
	15.	4.00	7	35	+	+	+	—	tr		
	16.	22.30	3,5	10	—	—	—	0	3,5	+	+
	18.	1.00	27	180	+	+	+	—	2	+	+
		17.00	36	150	+	+	+	+			
		10.45	14,5	85	+	+	+	—			
		23.45							8		(pg)
	20.	2.00	9	40	+	+	+	—	2	+	+
		23.30	2,5	10	+	+	+	0	2	+	+
	22.	22.30							3,5	+	—
	23.	19.30	5,5	18	—	—	+	+	3,5	—	+
	24.	16.30	9	30	+	+	+	—	(ssc?)		
		23.00	3,5	18	+	+	+	—	3,5	+	+
	26.	23.45	4,5	8	+	+	+	—	2,5	—	—
	27.	2.00							6,5		(pg)
		21.15	10	45	+	+	+	—	tr		
	28.	19.45	6,5	30	—	+	+	+			
07.	01.	13.15	4,5	18	+	+	+	—			
		23.00							2	+	+
	02.	17.30	5,5	22	+	+	+	—			
		23.45	3,5	15	0	+	+	0	4.5	+	+
	04.	18.45							3,5	0	—
	06.	3.15							3,5	+	+
	07.	22.00	5,5	12	+	+	+	—			
	09.	3.15	3,5	6	—	—	—	+	(si?)		
	11.	21.30	5,5	18	—	—	—	+			
	15.	22.30	3,5	22	+	+	+	—	2	+	+
		23.30	5,5	15	—	—	—	+			
	16.	20.45	6,5	25	—	+	+	+	3,5	+	+
	17.	23.00	7	25	—	+	+	+	2,5	+	+
	19.	21.15	4,5	?	+	+	?	?	2	+	+
	21.	1.30							2	—	—

		Bays							*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
07.	22.	21.30	6.5	30	—	+	+	+	tr		
		23.30	7	25	+	+	+	—			
	24.	20.00	6.5	30	+	+	+	—	(ssc?)		
		22.00	9	32	+	+	—	—	tr		
	25.	1.30	9	45	+	+	+	—	tr		
		14.45	14,5	75	+	+	—	+	tr		
		23.00	9	45	+	+	+	+			
	26.	22.30	3.5	18	+	+	+	+			
	29.	0.15							3,5	+	+
	31.	23.30	6,5	18	—	—	—	+	tr		
08.	01.	20.15	2	8	+	+	+	—			
		21.45	2,5	12	—	—	—	+			
	05.	20.45	18	75	—	—	—	+			
	0.6	16.30	10	45	—	+	+	+			
		19.00	18	120	—	—	+	+	(ssc?)		
	07.	2.15	13.5	45	+	+	+	—			
	11.	17.15	6,5	30	—	—	—	+			
		22.00	9	40	+	+	+	—	tr		
	13.	0.00	4.5	16	+	+	+	—	3,5	+	+
		18.15	4,5	22	—	—	—	+	tr		
	15.	20.30							2,5	+	+
	18.	0.45	3.5	12	+	+	+	—	2,5	+	+
		19.15	7	35	—	—	—	+			
		23.00	5.5	16	+	+	—	+	tr		
	19.	0.30	3,5	12	+	+	+	—	2	+	+
	19.	16.30	6,5	25	—	—	—	0			
	21.	22.45	6.5	35	+	+	+	+	tr		
	25.	2.15	3.5	12	+	+	+	—	3,5	+	+
	31.	2.15	3.5	18	+	+	+	—	tr		
09.	02.	20.00	3.5	25	—	—	—	+	tr		
	04.	8.00	3,5	22	+	+	+	+			
	05.	0.30	3.5	12	—	+	+	+	3,5	+	+
	06.	1.20							2,5	+	+
		15.00	6.5	18	+	+	+	—			
		21.45	3,5	12	+	+	+	+	4,5	—	—

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
09.	09.	11.30	3,5	25	+	+	+	—			
		23.00	7	24	—	+	+	+	2	+	+
	10.	21.15	18	35	+	+	+	—			
	11.	21.30	3,5	20	+	+	+	+	2,5	+	+
	12.	4.00	3,5	7	+	+	+	—	3,5	+	+
	14.	3.45	14.5	75	+	—	—	—	tr		
		17.15	7	40	+	+	+	+	tr		
		20.00	12	50	+	—	+	+	tr		
		23.30	11	40	+	+	+	—	tr		
	15.	10.45	6,5	30	+	+	+	—			
		23.30	3.5	8	+	+	+	—	3,5	+	+
	16.	0.15	10	35	+	+	+	—	tr		
		18.30	7	45	—	—	—	+	2,5	—	—
		23.45	5.5	60	—	+	+	+			
	17.	2.30	5.5	55	+	+	+	+			
	18.	0.00	12,5	55	+	+	+	—			
		21.00	4,5	22	—	+	+	+	tr		
	23.	23.00	6.5	25	+	+	+	—	tr		
	24.	16.45	11	40	—	—	—	+			
		21.15	4,5	38	—	+	+	+	tr		
		23.15	3,5	35	+	+	+	—	2,5	+	+
	26.	0.00	4,5	15	+	+	+	—	2,5	+	+
	28.	2.00	2,5	12	+	+	+	—	2,5	+	+
		21.15	6,5	40	—	+	+	+	tr		
	29.	12.30	6,5	15	+	+	+	—			
		17.00	6,5	30	—	—	—	+	tr		
		20.15	10	45	+	+	+	—	tr		
10.	01.	0.30	5,5	18	+	+	+	—	2,5	+	+
	02.	23.30	3,5	15	+	+	+	—	3,5	+	+
	05.	20.30	3.5	12	+	+	+	+	2	+	+
	06.	23.00							3,5	+	+
	07.	22.00	6,5	18	—	—	—	+			
	09.	19.45	5,5	30	—	+	+	+	tr		
	11.	1.30	5,5	35	+	+	+	—	tr		
	12.	17.00	11	60	—	+	+	+	tr		
		19.30	9	60	—	+	+	+	tr		

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
10.	13.	20.15	9	35	+	+	+	+			
	14.	8.45	12,5	18	—	+	—	+ (si?)			
		17.15	8	25	—	+	+	+			
	15.	20.15	6,5	35	—	+	+	+	tr		
	16.	16.00	6,5	35	—	+	+	+			
	19.	2.15	11	70	—	—	+	—	2,5	—	—
	20.	19.00	13.5	55	—	+	+	+			
		23.15	3,5	12	+	+	+	—	2,5	+	+
	21.	18.30	3,5	60	—	+	+	+	3,5	+	+
	22.	17.30	9	45	—	+	—	+	tr		
	23.	2.45	7	40	+	—	—	—			
		20.30	4,5	30	0	+	+	+	tr		
	24.	0.30	3,5	30	+	+	+	—	tr		
		18.15	7	30	—	+	—	+	tr		
		22.30	3,5	25	+	+	+	+	3,5	+	+
	25.	23.15	3,5	18	+	+	+	—	2,5	+	+
	26.	23.30	4,5	7	+	+	+	0	2,5	+	+
	27.	0.30	11,5	30	+	+	+	—	tr		
	28.	23.15	5,5	25	+	+	+	—	3,5	+	+
	29.	16.00	6,5	35	+	+	+	+	tr		
		23.30	5,5	15	+	+	+	—	2,5	+	+
	30.	0.45	6,5	45	+	+	+	—			
		23.15	3,5	12	+	+	+	—	3,5	+	+
	31.	0.15	4,5	18	+	+	+	—	3,5	+	+
11.	02.	17.30	9	40	—	—	—	+	tr		
		18.00	13,5	100	—	+	+	+			
	05.	0.15	5,5	30	—	—	+	+			
	06.	11.15	5,5	12	—	—	—	+			
		12.45	5,5	18	+	+	+	—			
		20.30	3,5	8	—	+	+	+	2,5	+	+
		21.15	4,5	13	—	+	+	+	tr		
	07.	21.00	3,5	25	—	+	+	+	3,5	+	+
	08.	23.45	6,5	30	+	+	+	+	3,5	+	+
	09.	21.00	5,5	22	—	+	+	+	2,5	+	+
	11.	0.30	3,5	8	+	+	+	0	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
11.	11.	2.45	3,5	12	+	—	—	—	2,5	+	+
		3.15	3,5	10	+	—	0	—	2,5	—	—
		20.00	4,5	25	—	+	+	+	2,5	—	—
	13.	21.30	4,5	7	+	+	+	+	3.5	+	+
	15.	0.00	3,5	22	+	+	+	—	2,5	+	+
		15.30	9	45	—	—	—	+	tr		
	16.	0.00	11	60	+	+	+	—			
		23.30	12,5	50	+	+	+	—	tr		
	17.	16.30	7	40	—	+	+	+			
		21.00	6,5	35	+	+	+	—	tr		
	20.	2.00	8	60	+	+	+	—	2,5	+	+
		16.15	6,5	22	—	—	—	—			
		19.15	9	65	—	+	—	+	tr		
	21.	1.15							2	+	+
		21.15	3,5	15	—	+	+	+	2,5	+	+
	22.	0.30	4,5	12	+	+	+	—	3,5	+	+
		16.00	10	70	—	+	+	+	tr		
	25.	21.00	5,5	25	+	+	+	+	2,5	+	+
	27.	20.30	4,5	28	+	+	+	+	3,5	+	+
		22.45	6,5	15	+	+	+	+	3,5	+	+
	28.	1.45	6,5	22	+	+	+	—	3,5	—	—
	29.	0.45	4,5	18	+	+	+	—	tr		
		16.45	3,5	16	—	—	—	+			
	30.	20.45	6,5	35	+	+	+	—	4,5	+	+
12.	01.	3.00	3,5	15	+	+	+	—	tr		
	02.	18.00	3,5	18	—	+	—	+	3,5	+	+
	03.	21.00	3,5	12	—	+	+	+	2	+	+
	05.	23.15	3,5	8	+	+	+	0	3,5	+	+
	06.	20.15							3,5	+	+
		23.15	3,5	5	+	+	+	0	2,5	+	+
	07.	18.30	6,5	25	+	+	+	—	tr		
	08.	20.15	5,5	18	—	+	+	+	tr		
		23.15	4,5	15	+	+	+	—	3,5	+	+

			Bays						*Pt-s*		
Month	Day	CET (GMT+1h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
12.	10.	20.30							2,5	+	+
	11.	23.00	4,5	8	+	+	+	0	3,5	+	+
	12.	21.00	4.5	20	—	+	+	+	3.5	+	+
	13.	1.00	9	75	+	+	+	+	tr		
		16.15	9	75	—	+	+	+	tr		
		18.15	14.5	95	+	+	+	+			
	15.	21.30	11	60	+	+	+	+	2	+	+
		22.30	29	190	+	+	+	—	tr		
	16.	2.45	5.5	25	—	+	+	+			
		19.30	16	85	+	+	+	+			
		23.15	8	35	+	+	+	+	tr		
	17.	0.00	9	38	+	+	+	—			
	18.	21.30	3.5	18	+	+	+	—	2,5	+	+
	19.	17.30	4.5	16	—	—	—	+	2,5	+	+
		23.00	5,5	25	+	+	+	—	tr		
	20.	21.00	3,5	10	+	—	—	—	2,5	+	+
	22.	23.30	10	60	—	+	+	+	tr		
	23.	2.30	9	60	+	+	+	+	tr		
		20.00	15.5	100	+	+	+	+	tr		
	24.	2.15	5.5	22	+	+	+	—	tr		
	25.	23.00	4.5	25	—	+	+	+	2.5	—	+
	29.	5.00	5,5	22	+	—	—	—	tr		
		17.45	6,5	30	—	0	—	—			
		22.00	4,5	25	0	+	+	+	tr		
	30.	21.30	7	45	—	+	+	+			
	31.	23.45	7	38	+	+	+	—	tr		

Further pt-traces (earth currents)

Month	Day	CET
01.	04.	22.00
		23.30
	05.	19.45
		20.15
	06.	22.00
	07.	21.30
	09.	01.15
	11,	20.15
	13.	22.15
	14.	19.15
	19.	22.45
	21.	2.30
	27.	2.30
	29.	22.30
02.	01.	11.15
	04.	21.00
	08.	23.15
	09.	21.30
	11.	22.30
	12.	4.45
	13.	21.45
	17.	1.15
	21.	0.15
	23.	23.30
	27.	19.00
		19.30
03.	04.	19.00
		21.30
	06.	9.30
	09.	20.15
	12.	23.30
	16.	21.30
	19.	22.30
03.	20.	0.45
		21.30
	22.	0.15
		1.30
		13.15
		16.30
		16.45
		22.30
	23.	8.45
	28.	9.45
	30.	21.15
		21.30
		21.45
04.	02.	21.45
	03.	19.45
		20.45
	09.	0.45
	10.	19.30
	12.	4.15
		21.30
	13.	20.00
	14.	3.30
		3.45
	15.	20.30
	16.	20.00
	17.	23.00
	21.	16.45
	22.	21.30
	23.	22.45
	24.	21.00
	25.	0.00
		3.15
		13.15
04.	25.	13.15
		23.45
	26.	3.30
		5.30
		6.15
		7.15
		23.30
	27.	12.15
	30.	22.45
05.	01.	1.00
	02.	19.00
	03.	19.30
	04.	4.45
		23.00
	05.	3.15
		19.30
		20.00
	07.	0.30
		19.30
		21.30
		22.15
	08.	4.30
		8.00
	10.	19.45
		21.30
	11.	21.30
	13.	0.45
	14.	0.30
		17.45
		20.15
	17.	22.45
	19.	23.45
	21.	2.15
		18.00
	22.	3.30
05.	23.	1.00
	26.	23.30
	27.	20.00
	30.	21.00
	31.	1.45
06.	01.	22.45
		23.30
	03.	0.45
		2.15
		19.30
	04.	19.15
		22.15
	06.	22.45
	07.	18.00
	08.	21.15
		21.45
	10.	6.45
	11.	4.15
	16.	21.15
	19.	1.15
	22.	21.15
	24.	0.45
		2.00
		23.30
	28.	2.45
	29.	2.15
07.	03.	19.15
		22.00
	04.	21.45
		22.00
	05.	21.15
		22.30
	06.	21.30
	07.	0.00
		4.15

Month	Day	CET
07.	08.	06.30
	09.	20.45
	10.	2.45
	11.	20.15
		20.45
	14.	21.30
		22.15
	16.	4.30
	17.	2.15
		19.30
		23.30
	19.	9.45
	21.	0.45
		21.15
		21.45
		23.30
	22.	0.45
	23.	23.45
	24.	0.15
		2.15
		22.45
	25.	20.30
	28.	1.00
		1.45
	29.	5.15
	30.	0.15
08.	01.	23.45
	02.	22.45
	07.	20.00
	10.	21.15
	12.	0.45
	13.	23.45
	17.	2.00
		2.30
		3.00
08.	19.	0.15
		1.00
		3.45
		22.00
	20.	1.30
	26.	22.00
		22.45
	28.	0.00
		19.15

Month	Day	CET
	28.	1.00
		16.00
		19.45
	30.	0.45
09.	02.	23.45
	03.	0.00
		20.15
	04.	19.30
		23.45
	11.	21.15
	12.	3.30
		20.45
		22.30
	13.	22.30
	17.	21.30
	21.	2.15
	22.	20.15
	27.	0.45
	29.	21.30
10.	01.	17.45
		20.00
	06.	20.15
	11.	22.45
	12.	21.30
	13.	21.30
		22.15
10.	13.	22.45
	14.	21.45
	15.	23.00
		23.30
	18.	23.00
		23.45
	21.	20.45
		21.00
		21.30
	22.	19.30
		22.15
	28.	22.45
11.	02.	20 15
	05.	23.15
	06.	19.15
		23.30
	09.	9.15
	10.	23.45

Month	Day	CET
	11.	2.15
	13.	22.45
	14.	4.15
		23.15
	16.	21.30
		22.30
	18.	2.15
	20.	20.15
		20.30
	21.	18.45
		20.45
	22.	22.00
	25.	12.00
		21.30
	26.	0.00
		18.15
		23.45
11.	27.	21.00
	28.	0.45
	29.	22.30
12.	02.	3.45
		4.15
		17.30
		19.15
	04.	19.30
		22.45
	05.	22.30
	06.	18.45
		19.45
		21.00
		21.30
		22.00
	08.	23.00
	09.	17.45
		22.30
	11.	18.00
	12.	17.30
	17.	20.15
	19.	15.15
	21.	23 45
	25.	22.30
	26.	23.15

SI-s

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	
01.	22.	3.45	12,5	35	—	—	—	+	
	23.	11.45	6	13	+	+	+	—	
03.	05.	9.15	13,5	16	—	—	—	+	
	27.	19.00	8	23	—	—	—	+	
	31.	8.45	3,5	12	—	—	+	+	
04.	04.	3,45	6,5	8	—	—	—	+	
	20.	11.45	6,5	15	+	+	+	—	(ssc?)
	29.	5.30	9	10	—	—	—	+	
05.	01.	21,5	6,5	20	—	—	—	+	
	06.	11.45	8	15	+	+	+	—	
	16.	13.30	6,5	15	+	+	+	—	
	31.	4.45	5,5	12	—	+	+	—	
06.	03.	4.30	3,5	12	—	—	—	+	
		17.15	8	14	+	+	+	—	
	06.	15.45	10	22	+	+	+	—	(ssc?)
	27.	23.00	4,5	5	—	—	—	+	
	28.	17.45	4,5	12	+	+	+	—	
07.	15.	13.30	2	6	—	—	—	+	
	16.	14.00	2	6	—	—	—	+	
	22.	20.00	7	18	—	—	—	+	
	25.	4.15	7	16	—	—	—	+	(b?)
		12.30	8	12	—	—	—	+	
	27.	21.15	3	7	—	+	+	+	
	31.	12.30	2	5	—	—	—	+	
08.	07.	14.00	4,5	12	—	—	—	+	
	08.	14.45	6,5	12	+	+	+	—	
09.	03.	22.15	3,5	6	—	—	—	+	
	04.	4.15	4,5	9	—	—	—	—	
	10.	7.30	5,5	12	—	—	—	+	
		12.30	12,5	28	—	—	—	+	
		13.30	9	18	—	—	+	—	

SI-s

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy
09.	22.	13.30	4.5	6	—	—	—	+
10.	09.	15.30	4,5	8	+	+	+	—
	29.	21.15	3,5	8	—	+	—	+
11.	02.	5.15	9	18	+	+	+	—
	12.	11.15	3,5	10	—	—	—	+
	18.	8.00	3,5	10	—	—	+	—
	23.	6.15	4,5	10	—	—	—	+
12.	16.	6.45	5,5	8	—	—	—	+
		7.30	5,5	9	—	—	—	+
	30.	10.30	3,5	12	+	+	+	—

„Needles"

Month	Day	CET (GMT+1 H)	Amplitude in E(mV/km)	Ex	Ey
01.	28.	8.15	3,5	+	+
02.	10.	19.30	2,5	—	0
	13.	10.30	?	?	?
	14.	6.30	6,5	—	—
03.	01.	12.45	2,5	—	—
		14.30	2,5	+	+
	03.	12.45	4,5	—	—
04.	20.	17.45	2,5	—	—
	23.	9.15	4,5	0	+
05.	05.	18.45	2,5	+	+
	13.	18.15	2,5	+	+
		18.30	3,5	—	—
06.	02.	16.30	4,5	—	—
07.	31.	1.15	3,5	+	—
08.	01.	23.45	3,5	+	+
	10.	21.15	6,5	+	+
	11.	18.15	3,5	—	+
	12.	23.15	3,5	+	—
	13.	18.15	2	+	+
	17.	16.15	2	—	+
	27.	6.00	11	+	+ (ssc?)
10.	19.	11.30	12,5	—	—
	25.	12.30	3,5	+	—
	26.	7.45	5,5	—	—
	31.	14.45	2,5	—	—
12.	22.	11.30	2,5	—	—
		13.45	4,5	—	—

V.

Results of rapid-run records (for explanations see pp. and)

JAN – FEBR.1972.

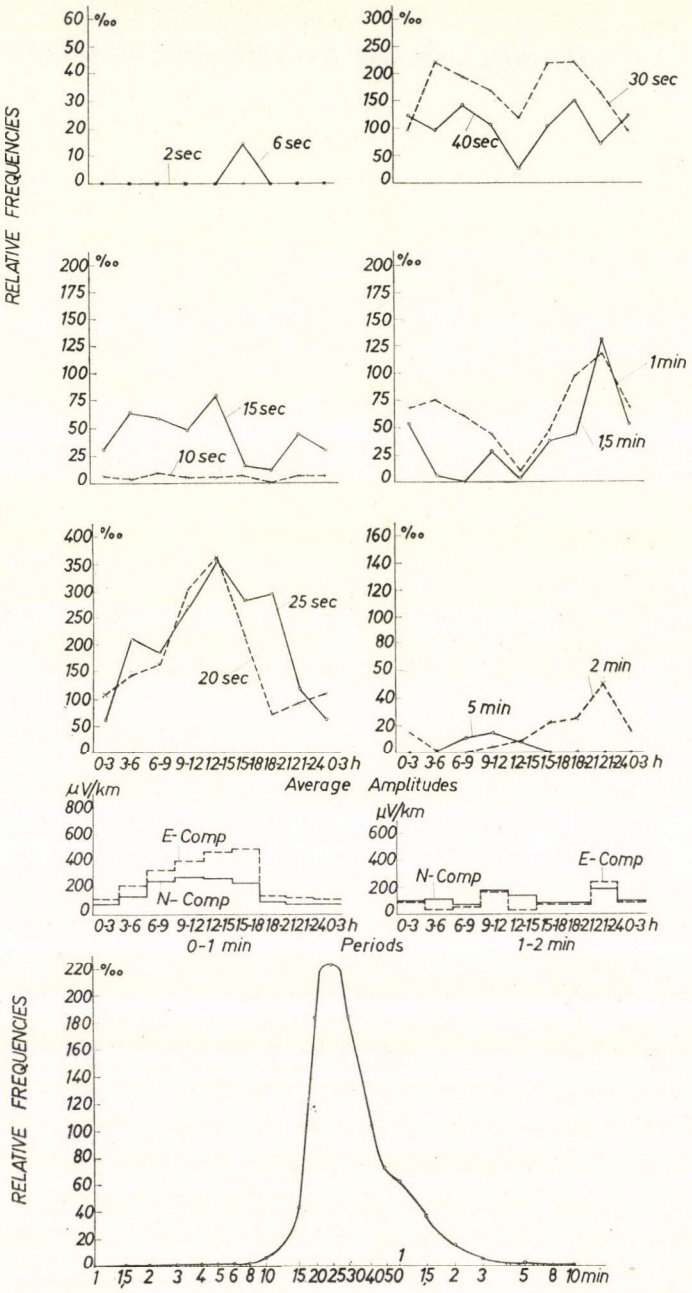

Fig. 1a.

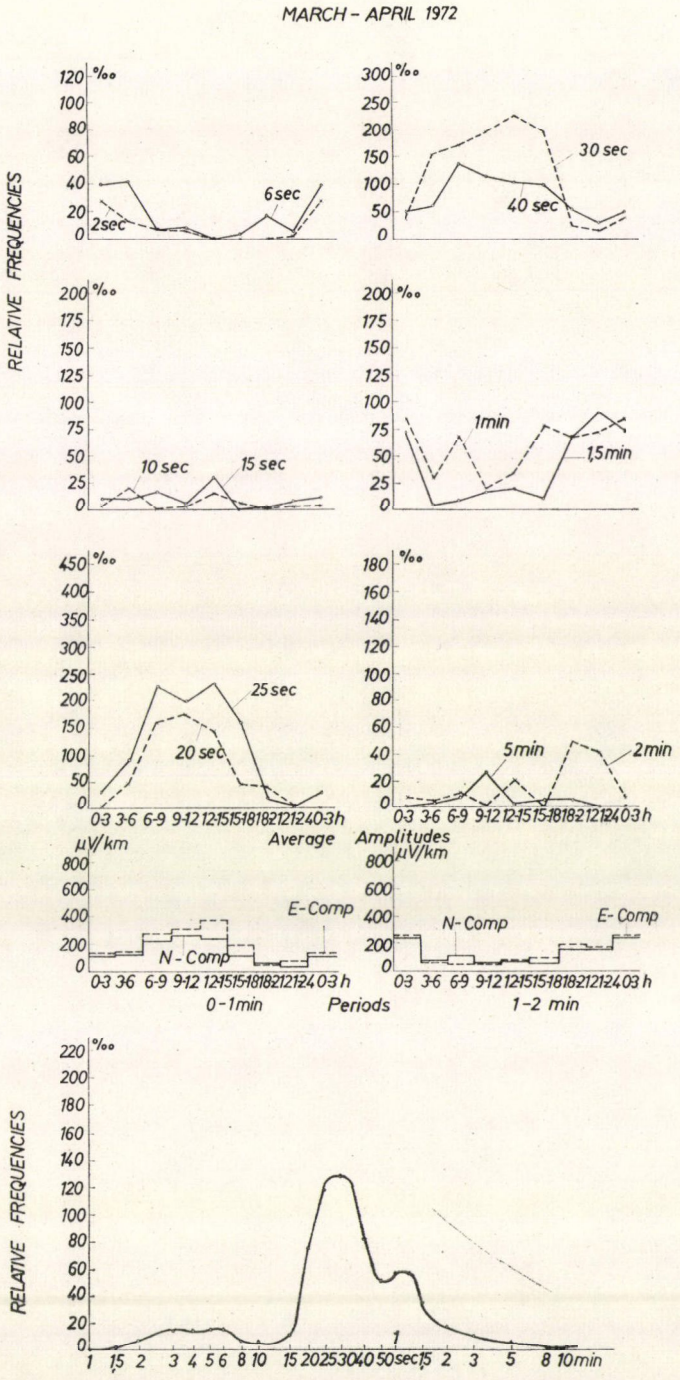
MARCH - APRIL 1972
RELATIVE FREQUENCIES
‰
2sec
6sec
30 sec
40 sec
10 sec
15 sec
1min
1,5min
25 sec
20 sec
5min
2min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
E-Comp
N-Comp
0-1min
Periods
1-2 min
RELATIVE FREQUENCIES
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1b.

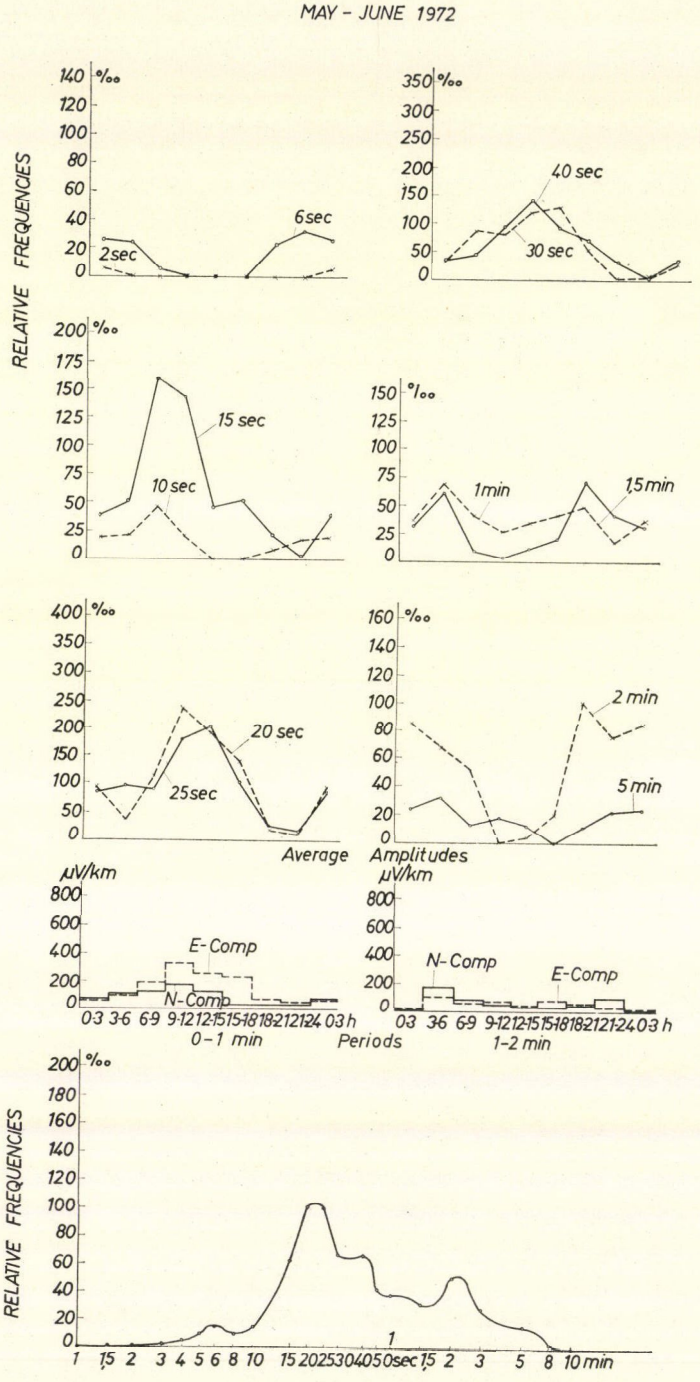
MAY - JUNE 1972
RELATIVE FREQUENCIES
‰
2sec
6sec
40 sec
30 sec
15 sec
10 sec
1min
1,5min
20 sec
25sec
2 min
5 min
Average
Amplitudes
μV/km
E-Comp
N-Comp
0-1 min
1-2 min
Periods
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
1
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1c.

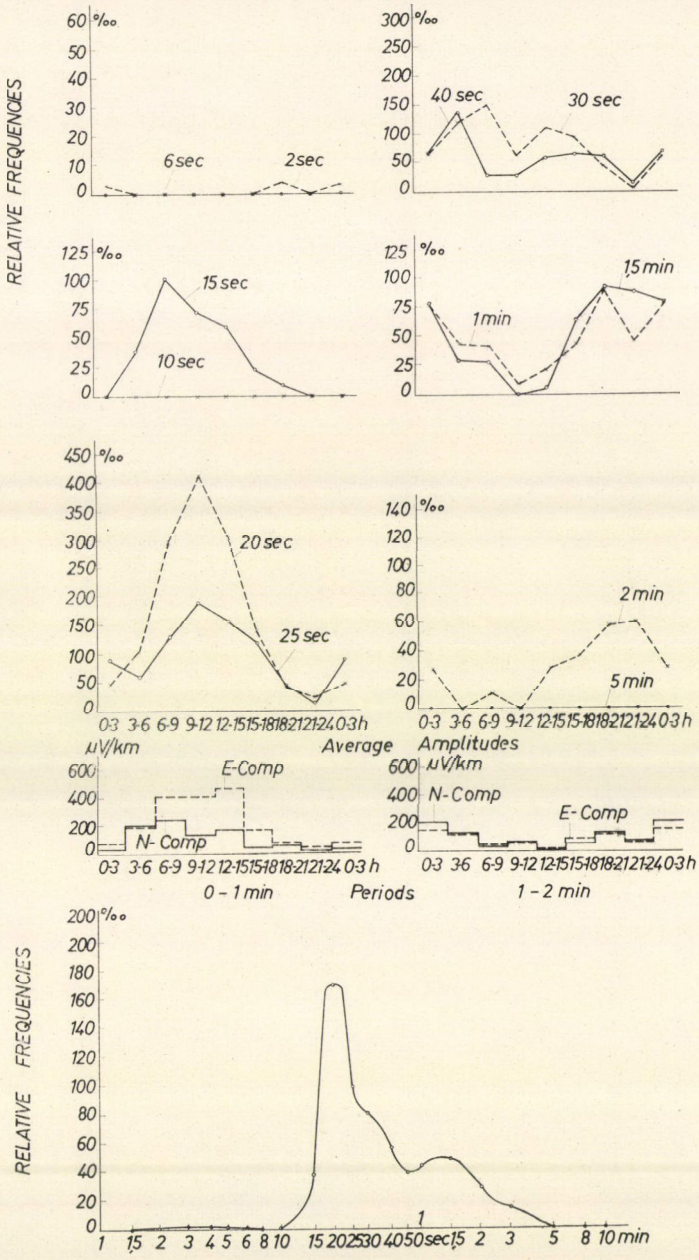
JULY – AUG 1972.
RELATIVE FREQUENCIES
60 ‰
6 sec
2 sec
300 ‰
40 sec
30 sec
125 ‰
15 sec
10 sec
125 ‰
1 min
1·5 min
450 ‰
20 sec
25 sec
140 ‰
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
μV/km
Average Amplitudes
E-Comp
N-Comp
0 – 1 min
Periods
1 – 2 min
RELATIVE FREQUENCIES
200 ‰
1
1 1·5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1·5 2 3 5 8 10 min

Fig. 1d.

SEPT - OCT 1972.

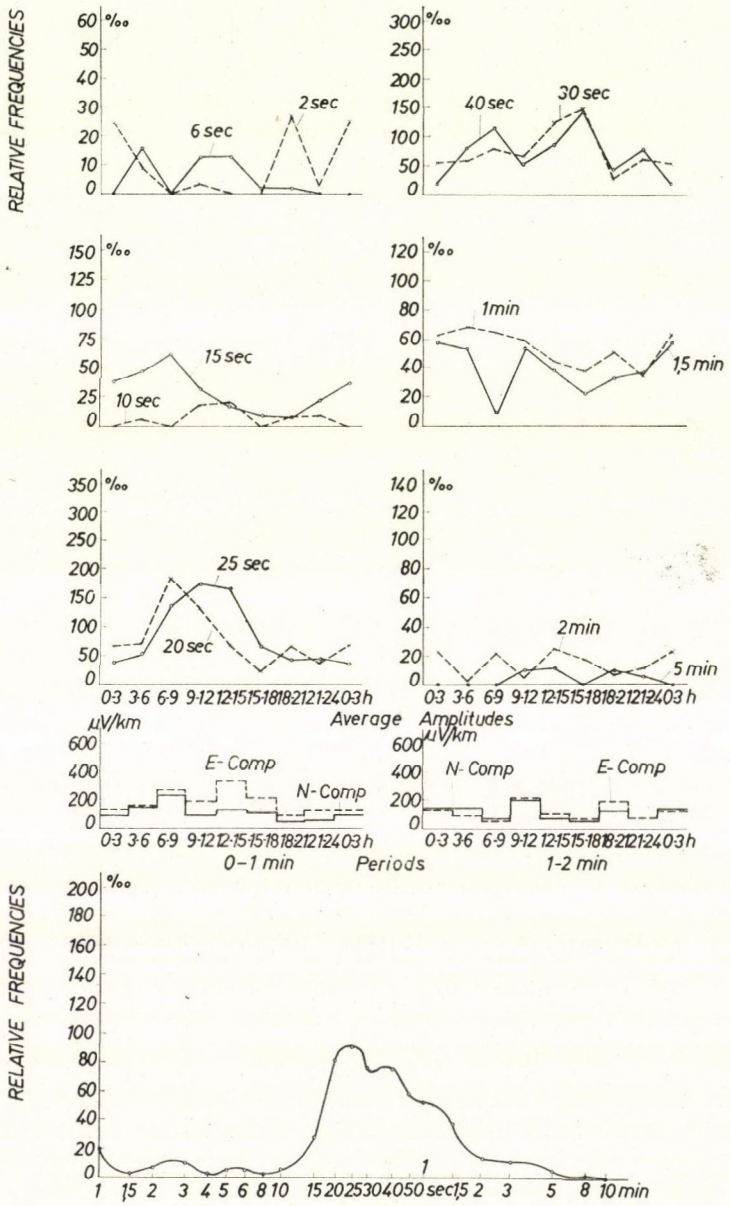

Fig. 1e.

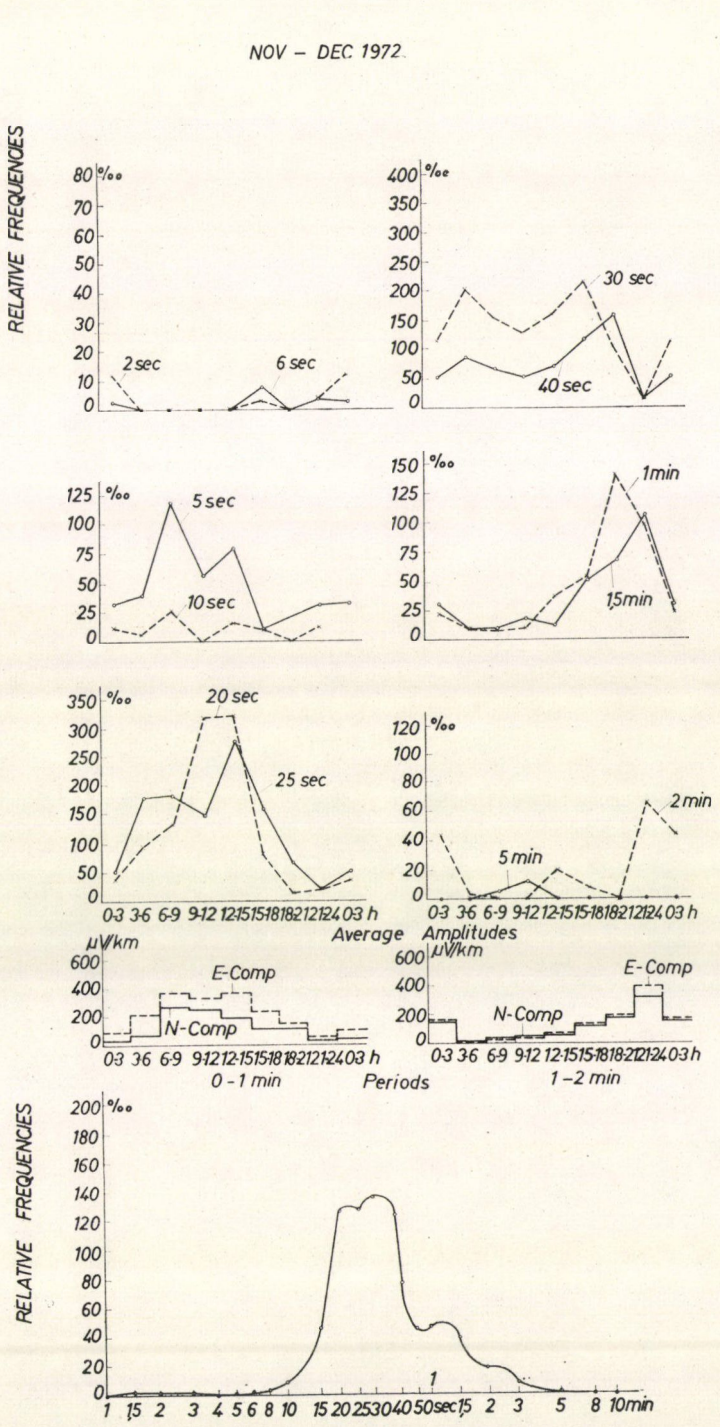
NOV – DEC 1972
RELATIVE FREQUENCIES
‰
2 sec
6 sec
30 sec
40 sec
5 sec
10 sec
1 min
1,5 min
20 sec
25 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
E-Comp
N-Comp
0 - 1 min
Periods
1 - 2 min
1
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1f.

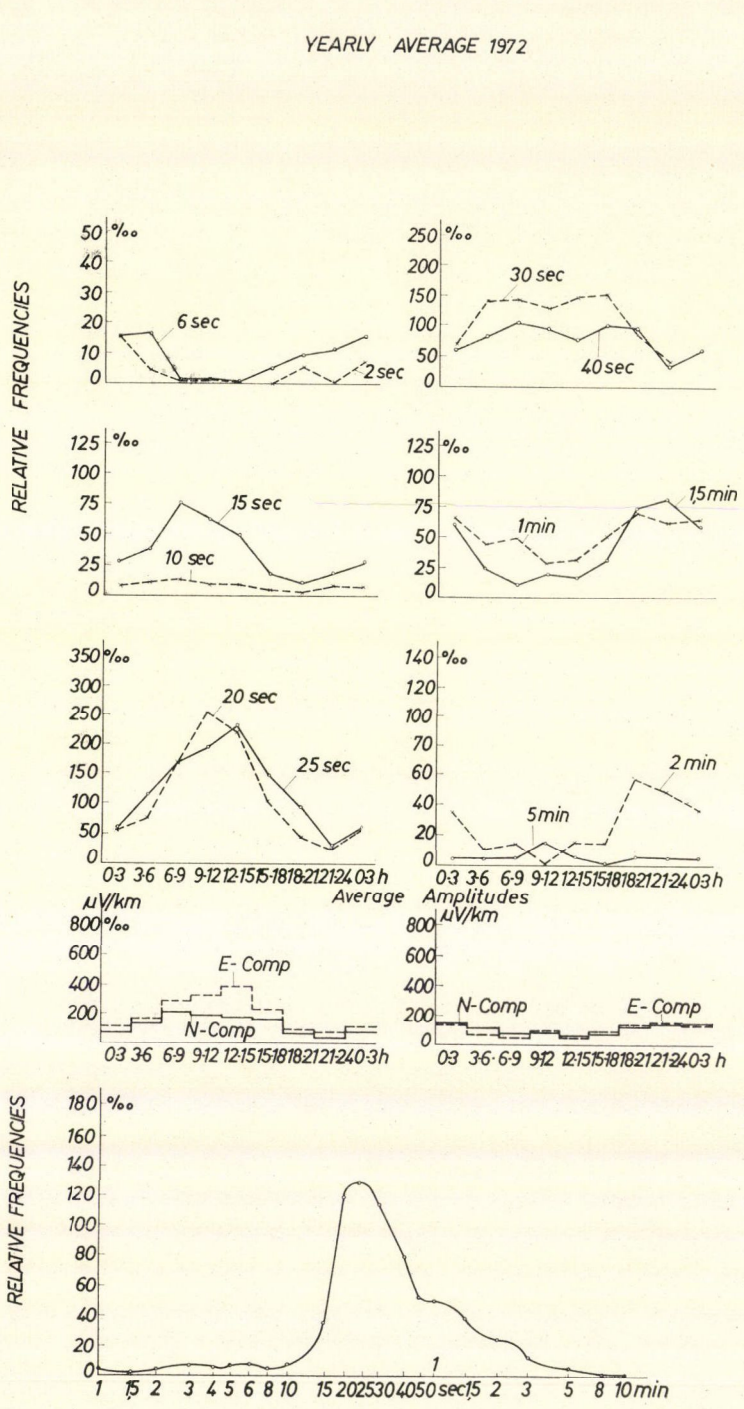
YEARLY AVERAGE 1972
RELATIVE FREQUENCIES
‰
6 sec
2 sec
30 sec
40 sec
15 sec
10 sec
1 min
15 min
20 sec
25 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
E- Comp
N-Comp
RELATIVE FREQUENCIES
1 1.5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1.5 2 3 5 8 10 min

Fig. 1g.

YEARLY AVERAGE 1972.

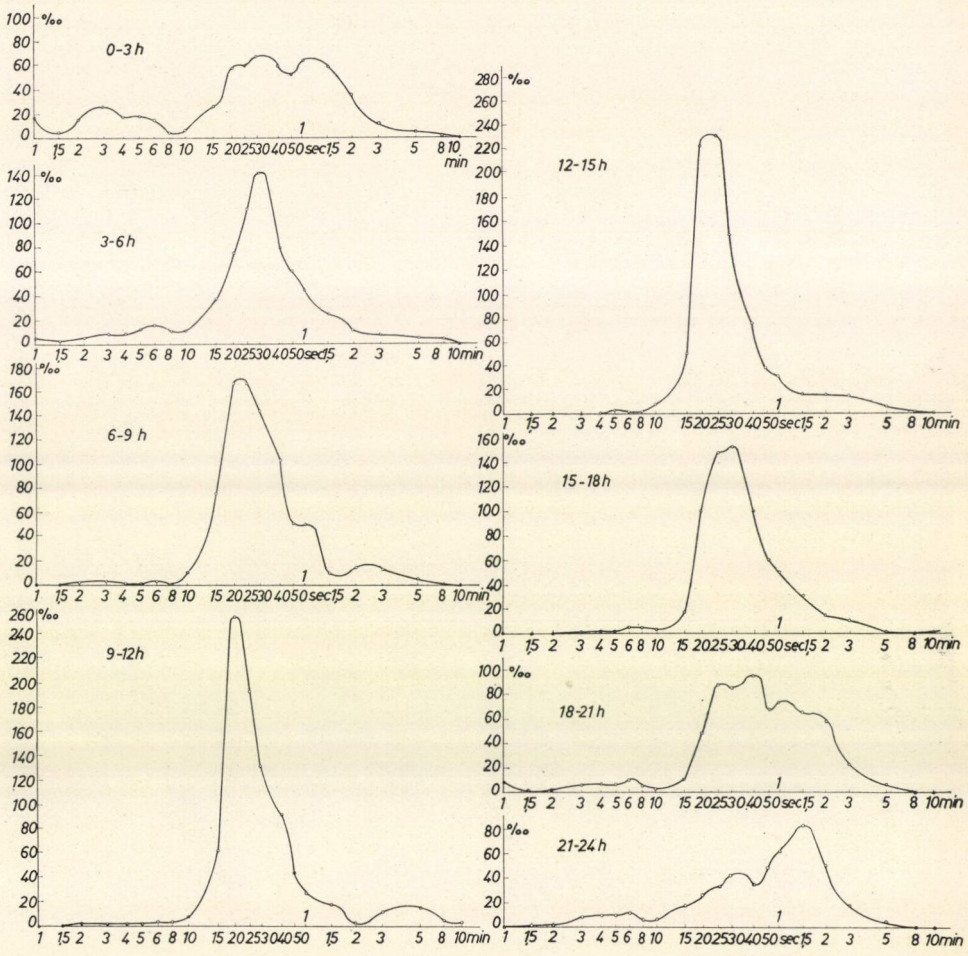

Fig. 1h.

Results of rapid-run records for the year 1972. The daily variations of the relative average occurence frequencies of some selected pulsation periods are represented on the top of the figures 1a—1f in two-month intervals, and of figure 1 h in the whole year; at the middle of these figures the daily variations of the amplitudes in the bands 0—1 and 1—2 min are drawn, at the bottom the approximate spectra for the same intervals. For the whole year, the spectra for each 3 hour interval of the day is given at fig. 1g.

VI.

Micropulsation indices for the year 1972
and supplements to previous years.

Activity indices for
(P1 to P12)

	January	February	March
1.	112455543212	113444543321	113542224553
2.	112455542321	124543213453	312543114453
3.	111443232442	111245542222	112325444355
4.	113434544433	111323444543	131124433354
5.	111333555331	111322544444	111111345541
6.	111113555331	112533113343	123334335344
7.	111325553431	113321245541	155554121345
8.	121334442441	113541113453	112555311135
9.	111224433551	112111455552	112444245551
10.	111345314541	112545412252	111111113455
11.	112432224552	111554112133	121122224432
12.	111223555231	111455422131	111112434231
13.	111444224431	124542234255	111113533533
14.	111123433531	114544323332	111134524421
15.	114421113554	113454554321	112223554231
16.	115543332245	111145555432	553222235334
17.	113344222112	143242224521	432334554222
18.	114554344223	111355312253	351124544311
19.	111244334432	143542212455	111222442322
20.	111135544311	111334543355	111335332233
21.	322344422333	111124553221	211145224231
22.	111322322355	111213555511	234334235323
23.	125321243542	211331355241	111345444435
24.	121335532251	554423544441	323555343231
25.	112555212134	233554513243	212232554221
26.	115555543224	212443554111	121322145542
27.	211455543232	221321555531	352554225321
28.	313433343254	111322222355	242333233551
29.	112455322341	111553113321	235533221253
30.	112544444344		531433342251
31.	114424545421		335555311142

the micropulsations

Year 1972.

April	May	June
535554542235	145521243114	111245433421
434544554333	355532352112	111333553452
124533555313	115543113313	111234315445
215532131435	122454435112	141354112324
111324541155	222115555431	141333554121
311115542441	122344455535	142331543315
222124545521	211112554231	132141225444
221125551114	121311245533	
421345543311	151522332553	
212445554544	331455545423	121222442331
511345415554	114522424543	111222444541
244352245411	131432334444	111122321131
132345453523	131345233431	111111224531
135313554523	141123114531	133522112551
123311454532	152232333232	132531123441
222113535311	344211121355	121223222123
121232135411	111111451145	155423235454
553212335541	124333232223	155433345454
521232123211	111111432421	255422142155
431121323343	141125532411	143423422124
232321244323	111323335522	111113551333
134544435524	131113232543	142324333144
222533344544	133342111552	131332435441
211434125514	131123324511	143422444135
212411244324	112533211144	111355422112
432323214532	435311114552	133552232331
111322244452	131133213531	143552115433
435521155555	125512214324	214544331243
355432243255	112454244214	141311454231
155523544313	155354143314	111111554341
	115533434534	

	July	August	September
1.	111211454354	141341114343	121135422341
2.	121113532554	111145321351	121132113552
3.	131531334551	111122431343	222244434411
4.	112132432542	155423435555	222251112444
5.	111112254431	155443445555	122243321453
6.	121113451442	155414555555	123452121455
7.	142111114554	154321554242	111353111155
8.	143111115344	131111551443	121133234555
9.	134531223234	155411255555	221254324531
10.	121342113112	111434542454	135442222335
11.	321332432531	142453432243	112452333452
12.	111321134311	115434553321	112432454411
13.	111111111141	111435532311	354332354551
14.	111113454431	112422334531	155342244354
15.	111111111555	221551113521	245523223233
16.	123352223142	111432145521	143452332513
17.	142553213512	112112334511	544541444221
18.	121545522411	231113444421	423334532121
19.	111353132443	132531132243	512111134411
20.	111421234224	111542211313	521122245331
21.	111111254541		312111124321
22.	121111452355	111542444344	321331241331
23.	113531111431	111211254512	155541224342
24.	141441235541	111111145452	124552324231
25.	155453243144	114311234355	111245312211
26.	145444444321	145314431525	111223333551
27.	133444432214	145321244555	135343413411
28.	131121442142	121145442231	
29.	121211452542	122335344321	151233245421
30.	111311453452	121255213311	112235241123
31.	111111454455	143134443132	

October	November	December
112323132142	155311355555	112233453331
122145213331	145511225355	111145333311
113552111121	133442412135	112553114321
	111433322311	111245411411
	111343312321	112213453511
	111333534144	112423554411
	111113553114	115323433425
111344435421		113355432424
121311121453		313145543311
114332313243	111323335341	111115543411
214322444533	111341245521	112124552141
113533353325	111324333314	112321232551
113145432212	123213444521	335542334455
125344242132	111221244321	133445443142
123331454121	333442115441	245544454253
131133554112	324432235323	133554113155
112323215311	1113554?2111	122355122312
312222443423	111345432214	111224542211
544422234243	111145441112	312?44544411
212541222231	112354345122	111224541111
111155311111	112335551111	11122?245321
112254331121	111433454541	112342222432
111314432121	111355422225	135522232544
112155331321	111453312323	114455111112
112225412213	113553322142	111144441125
111324435341	124345332324	112135543131
112452122414	121325334332	111114541341
114554123?32	124543444321	111135432441
113344334342	114455331112	114555113332
114345235331	112225541211	111553232123
144345522134		111553132321

Supplement to previous years

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Year	Month	Day	
1967.	April	20.	331144232443
		21.	121113224541
		24.	155444333155
		25.	111132553311
		26.	111111355125
		28.	111111145551
		29.	121123121345
		30.	111323111153
1967.	May	6.	121111233542
		7.	155343112155
		8.	113411245554
		26.	111111145555
		27.	145531245554
		30.	145511234545
		31.	111111122354
1967.	June	5.	252523342355
		7.	151344442345
		25.	155511134455
		26.	254344452355
	July	16.	111111244421
		17.	111123432451
	December	9.	112135454555
		10.	111325542344
		11.	112111553311
		29.	141111553151
		30.	111343155555
		31.	155211255555
1968.	January	13.	111111435552
		14.	111212344553
		15.	111112324455
		29.	232114234355
		30.	121115442255
	February	20.	135345555555