

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:

$$\begin{aligned} \varphi &= 47^{\circ}38' & \lambda &= 16^{\circ}43' \\ \psi &= 47,2^{\circ} & \Lambda &= 98,3^{\circ} \end{aligned}$$

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	204
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^{-5} V/km. Row 6 contains the hourly means of the earth current field intensity, corrected for long period variations (equally in 10^{-5} 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. 43 (1963), 101).

VI. Micropulsation indices for the year 1973. The indices have been determined from the occurrence 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 occurrence 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). 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.

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 (1972) 155).

Mrs. J. CZUCZOR, L. HOLLÓ, M. TÁTRALLYAY 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 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.	32152110	15	6	1	5	2	4
2.	00010000	1	5	2	4	0	1
3.	00010002	3	2	0	3	1	0
4.	32021223	15	3	0	4	3	2
5.	32121354	21	6	2	4	2	5
6.	53134125	24	7	2	5	3	4
7.	11111613	15	5	1	5	2	1
8.	22133932	25	5	1	4	2	3
9.	32131325	20	5	1	4	3	4
10.	75454283	38	7	2	5	5	5
11.	35546744	38	6	3	4	2	5
12.	53466562	37	6	2	5	2	5
13.	22346752	26	5	0	5	3	3
14.	32321201	14	5	2	3	2	1
15.	21211145	17	7	4	5	1	2
16.	22111123	13	6	2	3	2	3
17.	11112121	10	7	2	2	2	1
18.	01010101	4	5	1	1	0	1
19.	01121333	14	6	2	4	1	3
20.	95234136	33	6	2	4	3	4
21.	36331341	24	4	1	4	2	3
22.	11112112	10	7	2	4	3	1
23.	22155323	23	7	2	5	3	3
24.	22344536	29	8	2	4	3	4
25.	23223613	22	7	2	5	2	3
26.	43243148	29	6	2	4	3	4
27.	33759895	49	9	5	5	5	6
28.	74735774	44	7	3	5	4	5
29.	33332456	29	6	2	5	2	4
30.	53322221	20	5	1	4	2	2
31.	20110133	11	5	0	4	0	1

Monthly averages: T (N) 2,633
T (E) 1,830
 K_1 5,84
 K_2 1,74
 K_3 4,13
 K_4 2,23
 K_5 3,00

February

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	22212333	18	4	0	4	2	2
2.	12122543	20	4	1	4	2	2
3.	24334271	26	7	2	5	2	3
4.	10221133	13	5	1	4	1	2
5.	23311113	15	3	0	4	1	1
6.	21124732	22	6	2	5	3	3
7.	21232373	23	8	3	4	3	4
8.	33444347	32	7	3	5	3	3
9.	43543653	33	7	2	5	3	4
10.	11132127	18	6	2	5	3	2
11.	12121112	11	6	2	4	2	2
12.	11223121	13	5	1	4	1	1
13.	00111003	6	4	2	4	0	0
14.	11321011	10	5	2	5	1	1
15.	32112111	12	5	2	4	2	2
16.	00112134	12	5	2	4	2	3
17.	55122241	22	5	1	4	3	4
18.	11111154	15	4	1	4	2	3
19.	22012223	14	5	2	4	3	3
20.	20112233	14	6	1	4	1	3
21.	24122499	33	7	3	6	8	7
22.	71556599	47	5	2	6	4	7
23.	97765998	60	8	5	6	6	6
24.	64688999	59	7	4	7	6	6
25.	23654394	38	6	2	5	4	4
26.	65356445	38	7	4	6	3	6
27.	54345396	39	6	2	6	4	6
28.	72443221	25	7	3	5	2	4

Monthly averages: T (N) 3,009
 T (E) 2,125
 K₁ 5,71
 K₂ 2,04
 K₃ 4,75
 K₄ 2,75
 K₅ 3,36

March							
Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	22113597	30	7	2	4	3	6
2.	34344997	43	6	2	6	3	8
3.	24223211	17	6	2	5	1	4
4.	21211000	7	4	1	4	1	1
5.	10000113	6	4	2	5	1	1
6.	45355921	34	4	0	5	3	4
7.	12121211	11	4	1	4	2	2
8.	10122213	12	5	2	4	2	2
9.	12242212	16	7	2	4	3	2
10.	21222152	17	6	3	4	2	3
11.	11133231	15	6	2	4	2	3
12.	31222148	23	4	1	4	1	3
13.	00223103	11	3	0	4	1	1
14.	00121001	5	3	0	4	1	0
15.	00022110	6	3	0	4	2	0
16.	01233342	18	3	0	5	3	3
17.	21223022	14	3	0	4	1	2
18.	01113336	18	4	2	5	3	3
19.	52598999	56	7	4	5	3	8
20.	74698799	59	7	4	6	8	7
21.	53779999	58	6	3	5	8	8
22.	54599545	49	7	3	5	3	7
23.	54466696	46	6	2	6	4	6
24.	83448969	51	6	2	5	3	6
25.	66474858	48	7	3	5	4	6
26.	53333399	38	7	4	4	5	5
27.	32236753	31	5	2	4	2	5
28.	42333247	28	5	2	4	3	6
29.	42212128	22	4	1	4	3	5
30.	31234215	21	6	1	5	1	5
31.	12212399	29	6	1	5	2	6

Monthly averages: Γ (N) 3,306
 T (E) 2,512
 K₁ 5,19
 K₂ 1,74
 K₃ 4,58
 K₄ 2,71
 K₅ 4,13

April

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	62336999	47	6	4	6	9	6
2.	96455972	47	7	4	6	5	8
3.	35434242	27	4	1	4	1	4
4.	12324212	17	7	2	4	2	1
5.	11112100	7	4	1	4	0	0
6.	00110101	4	4	1	4	1	1
7.	10111100	5	5	0	4	0	1
8.	01121111	8	4	0	5	2	1
9.	22212001	10	6	1	4	0	1
10.	11111011	7	5	0	4	0	1
11.	62334312	24	4	0	5	3	3
12.	01102110	6	3	0	4	1	0
13.	26999932	49	8	7	8	7	3
14.	26988963	51	9	8	7	9	6
15.	42231112	16	5	1	5	3	2
16.	34599784	49	7	5	6	5	6
17.	65657466	45	7	6	6	4	6
18.	75568895	43	7	4	6	4	7
19.	63655499	47	7	4	6	4	7
20.	74444999	50	7	5	5	4	7
21.	55455585	42	7	4	6	5	5
22.	54645733	37	6	4	6	4	4
23.	63565711	34	6	4	5	3	5
24.	23322012	15	6	2	5	2	2
25.	13311134	17	4	0	4	2	2
26.	42424359	33	6	3	5	3	4
27.	33454413	27	7	4	5	3	3
28.	2123	(16)	6	2	5	3	2
29.	47559	(48)	9	6	7	3	6
30.	33643434	30	7	4	6	4	2

Monthly averages: T (N) 3,511
 T (E) 2,810
 K₁ 6,00
 K₂ 2,90
 K₃ 5,23
 K₄ 3,20
 K₅ 3,53

May

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	32321155	22	7	3	4	2	4
2.	54113139	23	6	2	5	4	1
3.	33491112	24	8	3	5	3	0
4.	12112102	10	5	2	4	1	2
5.	11001121	7	4	1	4	0	2
6.	02114356	22	5	1	5	3	4
7.	64644333	33	7	2	5	4	4
8.	22234562	26	6	1	5	2	5
9.	32113212	15	4	1	4	2	2
10.	23222220	16	7	2	5	2	2
11.	11210011	7	4	1	4	0	1
12.	10233011	11	4	0	4	1	3
13.	45221138	26	6	0	5	3	4
14.	99988767	63	8	7	7	6	7
15.	45555589	46	8	6	5	4	5
16.	53576525	38	7	3	5	3	4
17.	95466622	40	7	3	5	3	6
18.	33434327	29	7	3	5	3	4
19.	43644534	33	7	2	5	3	4
20.	32425333	25	6	2	4	3	4
21.	39798414	45	7	4	5	3	5
22.	56323524	30	6	1	4	3	4
23.	33434112	21	6	2	4	2	3
24.	11111100	6	3	0	4	0	1
25.	02213121	12	4	0	4	0	2
26.	32111111	11	5	2	4	2	2
27.	11200122	9	4	1	4	0	2
28.	23222212	16	4	0	4	2	3
29.	01111000	4	3	0	4	0	1
30.	00001000	1	3	0	4	0	1
31.	00010101	3	3	0	4	0	1

Monthly averages: T (N) 2,560
T (E) 2,190
K₁ 5,55
K₂ 1,77
K₃ 4,52
K₄ 2,06
K₅ 3,00

June

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	10110000	3	4	0	4	1	1
2.	13635442	28	5	1	5	3	4
3.	34563222	27	7	2	4	3	3
4.	33445544	32	6	2	4	4	2
5.	35334221	23	5	3	5	3	2
6.	12321210	12	5	1	4	2	1
7.	11110010	5	3	0	4	0	1
8.	11111112	9	3	0	4	1	2
9.	12011343	15	4	1	4	0	3
10.	12122479	27	4	1	4	2	6
11.	74757644	44	8	5	5	3	6
12.	45345664	37	7	3	5	4	6
13.	65464334	35	8	2	5	4	4
14.	33334323	24	6	1	4	2	4
15.	23522223	21	5	1	4	2	2
16.	21323335	22	6	1	4	2	2
17.	31223325	21	6	1	4	2	3
18.	66774263	41	7	4	6	4	6
19.	97665475	49	8	5	7	2	7
20.	33443242	25	6	1	5	3	4
21.	22311110	11	4	0	4	1	1
22.	11100001	4	3	0	4	0	1
23.	11124334	19	3	0	5	2	3
24.	44414542	28	4	0	5	4	4
25.	21111212	11	4	0	4	1	3
26.	11111010	6	4	0	4	2	1
27.	01111111	7	4	0	4	0	0
28.	43334226	27	3	1	5	3	2
29.	9556 854	(48)	8	2	7	5	8
30.	45778654	46	8	2	7	4	6

Monthly averages: T (N) 2,536
T (E) 2,423
K₁ 5,27
K₂ 1,33
K₃ 4,67
K₄ 2,30
K₅ 3,27

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July							
Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	55646551	37	8	3	7	3	5
2.	33332122	19	5	2	6	3	4
3.	23112211	13	4	0	5	3	2
4.	11221112	11	5	2	4	2	1
5.	11212110	9	5	1	4	1	0
6.	01111 0	(3)	3	1	4	0	0
7.	01110000	3	3	0	4	0	1
8.	12245313	21	5	2	4	2	3
9.	11222321	14	5	1	4	0	3
10.	41222111	14	6	2	4	0	1
11.	11211112	10	5	0	4	1	2
12.	11111222	11	4	0	4	0	1
13.	12132314	17	5	0	4	0	3
14.	11132222	14	5	0	4	2	2
15.	57463687	46	8	5	6	3	6
16.	74322132	24	5	0	4	2	2
17.	51311113	16	7	1	4	1	1
18.	22112221	13	5	0	4	2	2
19.	22453214	23	6	2	5	2	2
20.	22332221	17	6	1	5	1	1
21.	31211112	12	4	0	4	1	1
22.	32111131	13	6	2	4	0	1
23.	35354133	27	6	1	5	3	3
24.	12322111	13	5	0	4	2	1
25.	41212121	14	3	0	4	2	2
26.	13439856	39	6	1	5	4	4
27.	85545475	43	8	3	6	4	6
28.	54545455	37	7	4	5	3	2
29.	24544235	29	7	3	5	3	3
30.	42224443	25	7	2	5	3	4
31.	46953311	32	8	5	7	4	4

Monthly averages: T (N) 2,317
T (E) 1,928
K₁ 5,55
K₂ 1,42
K₃ 4,64
K₄ 1,84
K₅ 2,35

August

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	42322113	18	4	1	4	2	2
2.	33429931	34	6	3	7	3	3
3.	31112213	14	4	1	4	2	1
4.	22211213	14	4	0	4	2	1
5.	31013732	20	5	1	4	3	2
6.	24332410	19	5	1	4	2	2
7.	12132311	14	7	3	4	1	2
8.	31122114	15	6	1	4	2	2
9.	22111010	8	4	0	4	0	1
10.	11112111	9	4	1	4	0	1
11.	12111021	9	3	0	4	1	0
12.	10101014	8	3	1	4	1	1
13.	11223222	15	4	1	4	1	3
14.	42122322	16	7	2	4	2	2
15.	11221101	9	6	1	4	0	2
16.	20111011	7	5	0	4	0	1
17.	10001100	3	3	0	4	0	0
18.	11221100	8	3	0	4	1	1
19.	21112111	10	4	1	4	1	2
20.	01034112	12	4	1	4	1	3
21.	12222111	12	6	2	4	1	2
22.	11125456	25	5	2	4	3	3
23.	42323573	29	6	2	4	2	6
24.	96559634	47	7	5	6	3	7
25.	34565386	40	8	5	5	3	3
26.	32532432	24	7	2	5	3	3
27.	28554491	38	7	3	5	3	6
28.	42434675	35	7	3	5	3	6
29.	32444242	25	7	2	5	2	3
30.	22233222	18	8	2	4	1	2
31.	22314031	16	5	0	3	1	2

Monthly averages: T (N) 2,149
T (E) 1,762
K₁ 5,23
K₂ 1,52
K₃ 4,29
K₄ 1,61
K₅ 2,42

September

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	01211112	9	5	1	4	1	0
2.	21111222	12	7	2	4	2	1
3.	10012112	8	3	0	4	0	2
4.	11242215	18	3	0	4	2	3
5.	13111137	18	5	1	4	0	4
6.	11122110	9	2	0	4	1	1
7.	11123101	10	3	0	3	1	0
8.	01112213	11	4	1	4	1	0
9.	11134439	26	6	2	5	2	8
10.	71256593	38	4	2	4	3	4
11.	62212432	22	5	2	4	2	4
12.	21122321	14	8	2	3	2	2
13.	20114131	13	4	0	5	1	2
14.	11011001	5	3	0	4	0	0
15.	21124325	20	6	2	4	1	4
16.	53324211	21	6	2	4	3	2
17.	31221012	12	5	1	4	1	1
18.	11111111	8	4	1	4	1	1
19.	01110020	5	4	0	4	0	0
20.	21212225	17	5	2	4	4	2
21.	62122211	17	5	0	4	1	3
22.	11123347	22	6	2	5	4	4
23.	64459295	44	7	3	6	4	7
24.	34566694	43	7	3	4	1	7
25.	22224389	32	4	2	5	2	4
26.	34333511	23	5	0	4	2	2
27.	00223411	13	3	0	4	1	3
28.	10111102	7	4	0	4	1	1
29.	11111000	5	3	0	4	0	1
30.	11210111	8	3	2	4	0	1

Monthly averages: T (N) 2,062
T (E) 1,600
K₁ 4,63
K₂ 1,10
K₃ 4,13
K₄ 1,47
K₅ 2,47

October

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	11011011	6	3	0	4	0	1
2.	10334354	23	4	1	5	3	6
3.	85754644	43	6	2	5	3	8
4.	41321251	19	6	1	4	3	2
5.	10124148	21	7	2	4	1	5
6.	61110123	15	6	0	4	1	3
7.	50211100	10	6	1	4	0	2
8.	41011120	10	3	0	4	1	2
9.	10112125	13	4	0	4	3	1
10.	36545527	37	8	3	6	5	6
11.	32133323	20	6	2	5	1	3
12.	22333322	20	7	2	4	3	2
13.	93243275	35	7	4	4	1	6
14.	21232231	16	6	1	4	1	2
15.	31121000	8	6	1	4	0	1
16.	11657488	40	6	2	5	2	5
17.	54443562	33	6	1	5	3	6
18.	41126832	27	5	1	5	3	4
19.	33333124	22	5	2	4	2	3
20.	12337912	28	7	3	5	3	5
21.	53355587	41	7	4	4	3	7
22.	75333432	30	6	2	4	3	5
23.	11121211	10	4	1	4	2	1
24.	23112112	13	3	0	4	3	1
25.	11111011	7	4	0	4	1	1
26.	21110000	5	4	1	4	0	0
27.	00110330	8	4	2	4	1	0
28.	01335445	25	6	2	5	2	4
29.	95799999	66	9	8	8	7	8
30.	84532624	34	7	4	5	3	6
31.	35221011	15	3	0	4	3	3

Monthly averages: T (N) 2,701
T (E) 2,050
K₁ 5,48
K₂ 1,71
K₃ 4,48
K₄ 2,16
K₅ 3,52

November

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	00002121	6	3	1	4	1	1
2.	20001111	6	3	0	4	1	2
3.	10101001	4	3	1	4	1	1
4.	11014259	23	3	1	5	2	5
5.	12152147	23	7	2	4	3	4
6.	31121134	16	7	1	5	2	2
7.	23443377	33	7	3	5	3	6
8.	22243213	19	8	4	5	3	2
9.	21233221	16	8	2	4	3	3
10.	10 21111	(8)	6	1	5	1	2
11.	12111131	11	6	1	4	2	1
12.	10100002	4	5	1	4	0	1
13.	11011632	15	6	1	5	2	2
14.	11221153	16	6	2	4	1	2
15.	11123131	13	4	1	4	2	3
16.	11123042	14	5	1	4	3	2
17.	56322341	26	6	2	5	3	5
18.	32352142	22	7	3	5	3	5
19.	11110110	6	4	2	4	1	1
20.	10011022	7	4	2	4	1	1
21.	21231598	31	5	3	5	4	6
22.	32110100	8	2	0	5	2	1
23.	01011231	9	4	0	4	3	1
24.	00122798	27	6	3	6	4	6
25.	97539976	55	7	5	7	4	8
26.	33334431	24	5	3	6	5	4
27.	53223546	30	6	3	5	3	5
28.	11121112	10	5	1	4	2	2
29.	10011120	6	4	1	4	1	2
30.	00000112	4	4	1	4	1	1

Monthly averages: T (N) 1,996
T (E) 1,351
K₁ 5,20
K₂ 1,73
K₃ 4,60
K₄ 2,23
K₅ 2,90

December

Day	T	Sum	K ₁	K ₂	K ₃	K ₄	K ₅
1.	20000001	3	3	0	4	0	0
2.	10000000	1	3	0	4	0	0
3.	10000112	5	3	1	4	2	1
4.	12011359	22	5	1	5	3	6
5.	35110132	16	4	2	4	2	3
6.	62111106	18	3	1	5	2	3
7.	21111211	10	6	2	4	2	2
8.	21113103	12	5	2	5	1	1
9.	12167835	33	7	4	6	3	5
10.	23120001	9	5	2	4	1	1
11.	31011221	11	4	0	4	2	1
12.	01111100	5	6	1	4	0	1
13.	11111121	9	5	2	4	0	0
14.	00111132	9	5	2	4	0	1
15.	21112100	8	4	1	4	1	1
16.	20010101	5	4	1	4	0	1
17.	11111102	8	4	0	4	1	1
18.	00001010	2	4	0	4	0	0
19.	00012363	15	4	1	4	2	2
20.	23222597	32	6	1	4	3	6
21.	43438785	43	7	2	5	4	7
22.	54335344	31	6	2	5	3	5
23.	23322243	21	5	2	4	4	3
24.	20100000	3	3	0	4	1	1
25.	00000111	3	3	1	4	1	0
26.	00001111	4	3	0	4	1	0
27.	00111112	7	4	2	4	1	2
28.	31110143	14	5	0	5	3	3
29.	33132335	23	6	1	5	3	6
30.	52322142	21	7	2	5	3	5
31.	13322345	23	6	1	4	3	4

Monthly averages: T (N) 1,641
T (E) 1,202
K₁ 4,68
K₂ 1,19
K₃ 4,32
K₄ 1,68
K₅ 2,32

II. Average amplitudes for different periods

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	January North											
1.	13	15	16	10	12	19	17	29	33	26	23	27
2.	12	7	8	6	6	9	13	21	19	15	18	13
3.	34	35	35	34	34	36	35	30	36	37	41	40
4.	49	40	40	47	52	55	40	44	49	55	73	63
5.	115	105	91	72	80	68	74	49	41	37	44	47
6.	-24	-34	+8	-25	-43	-28	-5	+15	+41	+22	-1	-50
	January East											
1.	15	12	13	5	11	20	26	33	37	37	33	43
2.	9	9	6	4	4	5	11	12	15	18	13	17
3.	30	33	34	29	33	31	33	28	32	33	34	30
4.	37	36	34	44	38	41	33	35	42	40	42	47
5.	86	81	61	49	52	50	32	41	26	17	33	35
6.	-5	+10	-12	+8	+8	-8	-14	-14	+10	+26	+37	+25
	February North											
1.	10	10	10	16	14	14	18	32	32	32	26	26
2.	5	7	5	6	13	9	15	21	24	20	17	20
3.	35	39	39	37	39	38	41	36	45	43	43	42
4.	55	52	51	51	65	51	48	50	69	62	50	60
5.	82	87	102	89	39	53	33	40	37	52	57	77
6.	-25	-3	-2	-32	-17	-27	-29	-19	-8	-4	-18	-36
	February East											
1.	10	8	6	8	14	17	23	34	32	40	36	43
2.	6	5	3	5	7	7	10	18	17	21	19	21
3.	38	37	35	34	33	35	35	34	42	39	37	39
4.	33	60	49	40	41	41	39	32	37	41	43	48
5.	71	41	43	59	48	45	33	35	50	34	30	40
6.	-10	+3	-1	-11	-3	-21	-15	-6	+15	+21	+33	+21

and hourly means of earth current elements

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
27	23	22	19	18	17	16	16	11	13	15	19	18,9
22	13	15	13	14	15	13	12	9	7	9	10	12,6
36	35	33	35	34	37	35	33	30	37	33	35	34,9
57	56	60	42	59	46	44	52	42	42	40	61	50,0
41	50	33	66	67	82	79	122	96	95	117	59	72,0
-51	-10	+5	+19	+34	-7	+36	+40	+17	+56	-13	-2	
Component												
49	41	48	41	27	22	20	13	8	11	13	19	24,9
13	15	17	13	15	10	9	6	5	5	15	13	10,8
26	26	27	28	31	31	32	34	32	29	33	26	30,6
32	34	33	31	36	34	42	56	38	41	43	45	38,9
51	56	36	63	78	76	76	78	70	112	87	74	59,2
+21	-3	-15	+5	-13	-4	-3	-15	-6	-21	-19	0	
Component												
24	24	20	19	16	19	21	15	17	12	14	12	18,9
21	19	12	14	8	14	17	10	15	12	8	10	13,3
42	39	37	39	37	39	48	40	39	38	38	38	39,6
58	50	64	40	49	31	51	47	118	47	107	96	59,2
75	66	46	103	68	92	118	175	217	200	108	116	88,7
-50	-9	+6	+52	+22	+55	+24	+45	+33	+32	+22	-12	
Component												
42	40	39	39	33	24	19	12	15	12	17	13	24,0
24	18	15	19	14	12	9	7	14	12	14	6	12,6
32	37	28	32	32	30	36	39	35	42	31	41	35,5
39	51	41	37	35	32	50	48	68	60	42	57	44,3
50	47	49	80	77	104	102	145	141	140	118	134	71,5
-8	-13	0	+17	+16	+20	-3	-15	-3	-32	-10	+5	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	March North											
1.	11	9	10	8	13	15	23	26	23	21	21	18
2.	12	8	6	8	9	9	19	21	17	17	17	12
3.	36	37	33	35	35	37	38	34	39	34	39	39
4.	49	53	48	48	62	55	48	53	60	39	49	51
5.	153	128	63	93	45	42	57	56	49	74	81	103
6.	-7	+12	-7	-20	-11	-16	-8	+53	+10	+6	-61	-98
	March East											
1.	12	7	5	8	11	17	22	31	31	38	37	38
2.	9	4	3	5	6	9	8	17	14	23	22	19
3.	39	35	37	34	33	34	37	31	34	34	33	35
4.	39	51	40	44	39	31	26	19	33	39	39	46
5.	120	41	45	45	53	40	49	69	47	57	60	60
6.	+11	+25	+15	-5	-1	-17	-22	+25	-24	+20	+24	+27
	April North											
1.	14	17	15	18	16	22	29	30	29	28	23	25
2.	11	14	14	11	13	16	25	29	24	24	23	23
3.	39	40	36	36	38	40	46	51	47	45	40	48
4.	65	59	71	53	51	54	56	70	102	73	67	68
5.	179	84	78	80	76	76	91	72	50	64	74	98
6.	-5	+3	-9	-18	+9	+3	+25	+52	+7	-42	-111	-137
	April East											
1.	14	13	16	15	19	27	30	39	35	44	42	44
2.	12	11	10	7	13	17	24	24	21	26	25	48
3.	40	40	39	38	40	39	38	43	41	42	37	59
4.	42	58	46	48	32	37	30	43	73	61	64	66
5.	96	48	77	48	49	42	51	47	54	52	51	66
6.	-3	-2	+11	+5	+11	+9	+20	+28	+36	+41	-1	-22

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
20	19	19	18	16	15	13	12	13	10	13	8	15,6
15	17	15	16	11	12	11	12	10	11	9	8	12,6
39	45	39	37	39	35	33	40	41	41	36	39	37,6
69	88	76	59	67	36	41	62	114	81	80	60	60,3
123	64	88	104	95	117	170	200	193	239	132	220	112,1
-116	-57	+11	+85	+66	+63	+66	+35	+2	+21	-19	-10	

Component												
35	35	35	31	26	16	15	13	10	15	15	9	21,3
22	21	17	16	12	10	6	8	3	12	9	8	11,8
34	37	36	33	37	34	34	35	35	39	37	38	35,2
44	45	38	64	31	40	41	78	52	57	48	47	43,0
64	59	95	79	112	106	135	111	130	174	127	155	84,7
-9	+12	+24	+10	-3	+3	-24	-17	-3	-40	-12	-21	

Component												
26	23	22	19	13	11	13	17	16	12	13	10	19,3
30	21	17	35	13	9	12	14	17	15	10	9	18,0
59	43	44	45	42	37	39	42	42	46	41	36	42,7
108	74	91	64	48	64	68	83	69	96	75	69	70,7
45	68	127	55	127	91	86	142	147	100	115	111	93,1
-119	-32	+33	+71	+78	+65	+51	+38	+24	-12	-1	+27	

Component												
42	42	40	39	32	17	15	15	17	17	14	12	26,7
30	23	29	46	21	12	9	13	14	10	11	10	19,4
50	55	47	51	42	39	37	35	40	40	41	30	41,8
79	83	88	49	59	48	53	99	68	88	56	92	60,9
55	53	96	56	111	102	141	93	131	107	96	102	76,0
-6	-12	+5	+5	-34	-48	-28	-27	-5	-8	+6	-5	

OBSERVATORY REPORT NAGYCENK

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	May North											
1.	13	12	16	18	19	23	21	23	23	22	19	17
2.	12	9	13	12	17	18	17	18	18	16	12	13
3.	39	38	37	37	37	39	38	37	37	38	36	38
4.	44	44	63	49	36	51	46	44	51	48	46	45
5.	117	82	90	78	89	48	60	59	53	52	56	85
6.	+19	+17	+10	+15	+23	+81	+49	+38	-19	-77	-137	-166
	May East											
1.	17	13	23	19	20	26	31	41	38	39	34	34
2.	7	8	9	7	8	14	16	17	20	19	23	19
3.	39	36	34	42	37	38	33	32	38	36	34	38
4.	38	44	42	41	30	27	27	29	39	48	33	35
5.	74	66	53	59	68	38	51	46	53	47	68	92
6.	-5	+10	+13	-2	-4	+33	+42	+62	+56	+28	-4	-30
	June North											
1.	10	10	14	14	21	22	26	25	19	22	21	19
2.	7	8	6	14	13	16	18	15	12	10	12	11
3.	37	38	34	36	38	44	40	55	40	34	45	37
4.	56	47	44	35	50	55	66	48	56	44	61	53
5.	103	110	122	92	78	70	55	46	78	71	37	60
6.	+21	+21	-10	+21	+43	+69	+53	+35	-17	-87	-129	-146
	June East											
1.	12	15	14	17	20	28	31	34	32	32	39	36
2.	7	8	4	8	5	10	10	13	16	16	22	18
3.	37	34	37	38	34	37	35	40	31	35	44	37
4.	51	56	54	40	95	49	38	31	52	47	48	48
5.	94	75	52	88	51	37	37	37	43	52	45	42
6.	+17	+17	+12	+19	+4	+25	+63	+60	+60	+54	+19	-25

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
17	15	13	12	11	10	10	11	9	8	10	12	14,9
13	11	10	6	6	6	5	9	7	5	10	10	11,3
38	37	37	38	36	35	33	32	35	35	37	36	36,5
48	61	78	53	42	45	51	35	40	42	64	53	49,1
71	73	51	77	53	36	72	76	80	126	73	108	73,4
-135	-64	+14	+53	+69	+43	+39	+32	+35	+6	+42	+11	
Component												
32	35	28	23	21	19	16	12	9	10	16	18	23,9
16	19	12	13	9	10	6	7	6	7	11	7	12,1
37	32	33	35	38	35	37	35	34	34	38	31	35,7
40	30	67	48	47	39	46	42	40	36	38	52	39,9
79	76	54	69	46	65	70	77	65	90	88	92	66,1
-36	-5	+7	-18	-24	-51	-37	-22	-22	-10	+12	+6	
Component												
15	13	14	10	8	9	7	11	11	11	9	11	14,6
9	8	4	2	4	2	4	8	7	7	7	8	8,8
40	38	38	45	37	38	32	34	35	35	34	40	38,5
66	58	63	60	51	43	43	40	47	44	43	54	51,1
89	57	88	93	69	95	73	99	137	74	114	92	83,3
-133	-75	-32	+42	+69	+67	+61	+43	+33	+19	+6	+27	
Component												
30	32	26	32	17	20	17	17	14	18	14	14	23,4
12	19	13	12	10	10	9	8	5	13	10	8	11,1
40	35	35	40	37	41	33	35	37	34	38	38	36,7
50	47	44	47	26	56	54	30	52	50	47	56	47,4
71	56	93	107	121	92	73	99	137	74	110	100	74,4
-36	-24	-37	-50	-63	-42	-35	-42	-17	+4	+10	+6	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	July North											
1.	11	13	14	19	19	22	25	24	23	21	20	18
2.	7	9	12	11	11	12	17	20	16	12	14	7
3.	39	38	40	39	50	53	46	49	49	38	37	39
4.	44	48	42	42	38	46	49	54	42	44	43	53
5.	61	75	88	70	66	68	73	42	46	39	59	48
6.	+5	+27	-24	+9	+25	+45	+43	+32	-8	-65	-116	-135
	July East											
1.	13	13	16	21	23	24	34	37	41	38	42	41
2.	5	5	9	6	8	6	14	16	15	17	19	27
3.	38	35	41	37	41	34	45	41	37	38	38	37
4.	31	38	40	49	41	39	41	33	27	39	36	49
5.	53	52	41	24	35	30	37	35	42	34	65	35
6.	-9	+15	+9	+11	+11	+19	+55	+71	+82	+50	+15	+6
	August North											
1.	12	12	13	13	16	22	24	19	20	19	15	15
2.	10	9	12	10	10	12	21	17	13	9	13	9
3.	32	36	37	34	37	37	42	40	36	37	36	38
4.	40	41	34	31	36	45	44	57	45	41	45	45
5.	88	98	60	89	51	65	48	42	42	41	41	60
6.	+26	+12	+15	+12	+17	+61	+74	+60	-15	-87	-157	-181
	August East											
1.	16	19	13	13	19	20	31	29	34	34	35	31
2.	8	10	9	8	4	11	16	17	16	15	18	19
3.	35	35	32	34	34	31	38	33	29	37	35	35
4.	39	33	29	30	26	24	31	25	37	42	42	45
5.	42	55	60	48	48	46	40	45	33	21	33	53
6.	-9	-2	+8	+10	+30	+20	+44	+86	+73	+59	-1	-28

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
13	13	9	11	6	6	7	8	14	9	8	9	14,2
7	2	3	5	4	1	4	5	11	8	6	6	8,8
37	36	37	37	37	35	37	35	38	38	34	41	40,0
64	57	44	50	46	39	42	38	49	44	57	45	46,6
41	69	60	41	46	70	51	68	93	65	66	59	61,0
-134	-75	-35	+53	+59	+78	+64	+29	+31	+25	+40	+28	
Component												
33	31	22	24	18	16	16	11	13	11	12	15	23,5
12	13	10	9	9	3	9	7	9	5	6	9	10,3
38	37	34	37	35	37	35	39	35	34	34	35	37,2
58	51	46	45	50	32	47	37	49	42	34	44	31,6
35	44	58	54	49	102	55	58	75	56	65	53	49,5
-22	-22	-34	-35	-40	-41	-50	-54	-43	+4	-7	+10	
Component												
16	14	12	12	8	11	8	12	12	6	8	9	13,7
11	10	8	9	5	5	8	8	6	5	6	9	9,8
38	40	45	48	35	35	33	34	37	34	36	37	37,3
51	64	42	38	46	38	38	33	36	42	41	59	43,0
69	34	77	80	61	62	67	89	71	57	79	57	63,6
-137	-75	-11	+56	+58	+71	+39	+46	+21	+16	+20	+27	
Component												
33	33	33	30	20	16	10	10	11	10	10	15	21,9
23	16	16	18	13	9	9	5	7	6	8	8	12,0
35	37	45	50	37	38	35	34	35	32	37	34	35,7
41	61	51	27	44	36	35	44	39	36	42	49	37,8
65	33	53	89	78	106	117	66	70	63	55	55	57,2
-26	-41	-15	-10	-21	-46	-45	-24	-35	-13	+2	-13	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
September North												
1.	10	13	8	11	13	16	22	24	14	17	14	14
2.	10	9	5	8	8	9	18	13	10	10	11	7
3.	34	33	35	35	33	34	34	34	37	34	33	34
4.	43	41	40	37	43	38	43	43	31	34	40	53
5.	63	85	55	37	28	44	34	44	30	34	43	92
6.	+34	-7	+11	+6	+1	+27	+62	+60	-17	-79	-143	-172
September East												
1.	7	12	8	9	11	13	21	29	26	26	25	29
2.	7	7	5	5	5	7	8	11	9	7	10	14
3.	35	30	34	31	31	32	29	31	34	32	31	37
4.	34	37	28	29	35	29	21	28	33	31	39	35
5.	67	50	62	37	26	32	32	34	24	32	45	41
6.	+24	+6	+3	+5	+4	+7	+30	+67	+55	+50	+19	-3
October North												
1.	16	13	8	10	13	17	21	28	31	23	20	23
2.	13	8	8	9	10	7	14	28	19	17	18	15
3.	38	34	34	35	38	38	35	44	48	48	41	38
4.	42	50	42	40	38	55	45	53	48	54	48	73
5.	144	137	156	57	95	35	93	58	88	34	72	75
6.	-35	-6	-11	-15	-32	-17	+1	+52	+51	+44	-76	-102
October East												
1.	19	15	8	13	16	20	27	34	31	36	39	44
2.	12	10	6	6	8	10	11	20	18	15	16	23
3.	35	35	35	37	38	37	35	47	39	44	31	29
4.	31	49	30	42	33	40	33	27	34	47	48	55
5.	87	111	72	34	51	53	45	52	71	18	44	39
6.	-19	-8	+14	-6	+1	-2	+2	+23	+18	+60	+53	+15

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
15	16	11	9	8	8	10	13	10	10	14	13	13,0
11	10	5	4	7	7	6	8	8	7	10	11	8,8
35	35	34	36	36	37	32	34	34	34	35	37	34,5
48	55	53	56	46	33	41	32	44	36	46	46	42,6
64	35	62	61	71	82	80	112	80	135	140	143	68,9
-112	-44	+46	+42	+79	+38	+23	+57	+35	+15	+21	+20	
Component												
31	28	23	22	16	12	10	14	10	17	19	17	18,1
13	12	11	8	7	6	4	7	7	11	13	10	8,5
35	35	34	35	34	31	31	37	32	33	32	32	32,8
37	43	41	39	34	38	38	31	35	40	40	38	34,7
53	37	39	43	80	70	81	133	90	129	128	138	62,6
-11	-23	-18	-20	-8	-38	-48	-65	-3	-15	-2	-14	
Component												
16	20	16	13	10	13	14	10	11	10	8	11	15,6
18	12	12	13	10	15	10	8	8	10	6	9	12,4
39	39	46	34	37	36	36	32	37	40	33	34	38,1
46	54	45	42	27	55	60	81	36	51	42	42	48,7
66	63	56	94	148	91	125	102	178	114	107	177	98,5
-102	-57	+21	+69	+57	+37	+68	+39	+15	+9	+23	-34	
Component												
37	38	32	33	22	19	16	15	18	19	10	16	24,0
18	16	20	15	10	11	9	9	12	10	5	10	12,5
33	27	34	30	34	36	32	33	27	34	35	32	34,5
60	45	41	35	30	67	39	47	47	40	44	45	42,0
38	50	53	92	106	57	110	130	167	118	53	103	73,0
-12	-33	-15	-29	-7	+20	+13	-18	-11	-23	0	-35	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	November North											
1.	11	11	11	7	13	15	18	25	26	21	25	25
2.	12	8	8	7	7	12	11	19	20	15	17	20
3.	37	39	30	35	38	39	42	37	36	38	39	38
4.	55	61	45	41	46	47	47	37	46	51	53	50
5.	61	86	101	55	77	28	32	43	52	29	39	67
6.	-13	-38	-35	-14	-31	-6	-5	+26	+57	+36	-32	-72
	November East											
1.	7	8	7	11	14	15	19	24	26	29	34	30
2.	7	9	4	4	8	7	7	12	10	14	17	17
3.	35	38	32	34	37	35	35	33	32	34	32	33
4.	41	37	41	32	38	34	37	41	29	31	39	43
5.	68	52	41	55	26	35	27	33	39	34	32	47
6.	-5	0	-1	-3	-2	-24	-25	-15	+23	+42	+23	+21
	December North											
1.	10	8	10	11	10	12	18	20	21	19	20	19
2.	8	5	8	7	8	5	9	11	16	13	16	13
3.	34	35	35	34	36	34	38	36	34	37	40	37
4.	30	38	59	51	53	39	44	47	35	39	41	44
5.	120	120	50	61	35	70	28	20	39	26	30	51
6.	-25	-28	-38	-15	-17	-23	0	+6	+4	+1	-24	-46
	December East											
1.	11	11	6	13	15	13	21	20	27	21	24	30
2.	5	4	6	6	4	2	4	9	14	8	11	9
3.	34	31	33	33	33	37	33	35	36	37	35	33
4.	36	45	48	31	36	27	43	32	37	38	34	28
5.	82	51	45	52	38	52	38	16	17	12	26	35
6.	-5	+5	+2	-6	-10	-25	-19	-20	-10	+12	+15	+10

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
17	19	17	14	17	11	14	14	13	13	14	9	15,8
23	15	15	14	14	9	9	11	9	11	12	8	12,8
41	40	40	38	39	38	39	39	34	37	37	36	37,8
81	44	52	53	54	48	37	55	50	54	48	50	50,2
29	44	33	65	68	83	99	157	179	158	75	92	73,0
-64	-25	+30	+28	+16	+15	+44	+85	+31	-4	-9	-21	
Component												
32	35	32	29	24	19	12	12	17	17	15	13	20,0
14	20	13	28	20	17	11	13	12	10	10	8	12,2
35	34	33	28	34	35	38	35	35	32	38	38	34,4
48	32	37	41	51	38	60	50	38	39	45	50	40,5
31	40	43	70	46	70	50	98	148	136	121	57	58,3
+29	0	+11	+5	-3	-4	-3	-15	-13	-18	-31	+10	
Component												
20	18	19	17	16	16	13	13	11	9	11	13	14,8
20	16	11	11	12	8	8	10	6	10	8	9	10,3
33	38	38	37	34	35	35	38	38	34	37	35	35,9
39	41	35	37	50	41	51	67	45	42	48	64	45,0
63	33	71	70	42	93	100	57	80	117	97	91	65,2
-23	+11	+20	+25	+21	+34	+37	+18	+23	+12	+42	-14	
Component												
27	25	23	23	23	20	15	13	10	10	9	12	17,6
12	9	9	11	4	6	5	6	6	6	9	9	7,3
31	38	33	28	28	35	34	37	36	34	39	34	34,0
37	38	35	39	34	49	56	34	34	45	38	50	38,5
27	26	50	82	56	65	75	91	96	69	105	73	53,3
+3	+19	+8	-6	+9	+10	+6	+16	-10	+2	-16	+12	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
	Year 1973. North											
1.	12	12	12	13	15	18	22	25	24	23	21	21
2.	10	9	9	9	10	11	16	20	17	15	16	14
3.	36	37	35	36	38	39	39	40	40	39	39	39
4.	48	48	48	44	48	49	48	50	53	49	51	55
5.	107	100	88	73	63	55	57	48	50	46	53	72
6.	-2	-2	-8	-6	-3	+14	+22	+34	+7	-28	-84	-112
	Year 1973. East											
1.	13	12	12	13	16	20	26	32	33	35	35	37
2.	8	8	6	6	6	9	12	15	15	17	18	21
3.	36	35	35	35	35	35	36	36	36	37	35	37
4.	38	45	40	39	36	35	33	31	39	42	42	45
5.	78	60	54	50	45	42	39	41	42	34	44	49
6.	-2	+7	+6	+2	+4	+1	+14	+31	+33	+39	+20	-1
	Quiet days North											
1.	10	10	10	10	10	14	17	18	17	16	14	14
2.	9	5	6	6	7	7	11	12	10	9	10	6
3.	35	36	33	33	35	35	34	34	34	34	37	35
4.	30	36	30	32	36	30	40	35	32	30	34	41
5.	39	41	33	30	23	33	21	23	28	26	24	32
6.	+18	+7	+8	-3	+7	+20	+24	+29	+21	-29	-90	-122
	East											
1.	9	10	6	9	7	11	19	20	21	24	25	20
2.	6	8	5	4	3	3	6	7	5	9	9	9
3.	33	32	32	32	31	32	31	31	32	32	33	31
4.	30	27	24	23	23	22	21	21	26	26	25	30
5.	32	32	30	28	27	26	26	24	21	23	26	33
6.	+4	+3	+9	-4	-8	-3	+12	+23	+34	+33	+15	+2

12	13	14	15	16	17	18	19	20	21	22	23	Averages
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Component

19	18	16	14	12	12	12	13	12	10	12	11	15,8
17	13	10	12	9	9	9	10	10	9	8	9	11,7
40	39	39	39	37	37	36	36	37	37	36	37	37,8
61	59	59	50	49	43	49	52	58	52	58	58	51,6
64	55	66	75	76	83	93	117	129	123	101	110	79,3
-98	-43	+9	+50	+55	+47	+46	+42	+25	+16	+14	+4	

Component

35	35	32	30	23	18	15	13	13	14	14	14	22,5
17	17	15	17	12	10	8	8	8	9	10	9	11,7
36	36	35	36	35	35	34	36	34	35	36	34	35,4
47	47	47	42	40	42	47	51	47	48	43	52	42,4
52	48	60	74	80	85	91	98	110	106	96	95	65,5
-9	-10	-6	-10	-16	-18	-22	-25	-14	-14	-6	-3	

Component

12	13	10	8	7	7	7	9	8	8	7	7	11,0
9	8	4	3	5	4	5	5	6	7	6	7	7,0
34	31	34	35	32	33	34	34	33	33	34	32	33,9
39	41	37	33	36	30	27	32	36	27	33	40	34,0
31	24	26	25	22	27	28	29	31	35	30	33	28,9
-101	-51	+11	+40	+49	+40	+24	+21	+24	+19	+18	+18	

Component

21	23	18	16	12	12	10	7	8	11	8	9	14,0
6	6	6	4	5	6	6	6	8	9	17	6	6,2
32	32	31	33	31	32	32	33	32	32	34	32	32,0
36	28	33	26	30	31	28	28	29	27	18	35	27,4
26	28	29	31	23	33	32	30	36	44	31	36	29,5
-15	-15	-10	-11	-10	-20	-20	-19	-6	+1	0	+7	

12	13	14	15	16	17	18	19	20	21	22	23	Averages
North Component												
32	27	26	27	20	22	19	21	17	11	15	13	24,1
35	24	22	23	17	19	16	14	14	11	10	10	21,1
50	51	54	46	42	46	49	39	44	42	40	42	45,9
96	113	106	62	79	62	80	104	89	77	90	62	75,2
137	81	131	168	188	210	192	268	361	283	208	251	174,2
-104	-5	+9	+72	+75	+76	+72	+45	+21	+1	-12	-11	
Component												
57	49	50	52	35	34	25	28	24	20	18	15	36,4
32	32	31	26	22	17	9	13	8	13	13	9	22,3
42	46	45	38	38	40	38	38	37	43	39	36	42,1
72	71	64	77	51	72	70	97	92	78	57	52	64,1
90	95	123	178	188	192	191	244	251	208	110	155	130,8
-19	-3	+5	-34	-25	-54	-53	-54	-18	-30	-5	-7	

III.

Results of harmonical analysis of the daily variations

	A ₁	φ_1	A ₂	φ_2	A ₃	φ_3	A ₄	φ_4	A ₅	φ_5	A ₆	φ_6
North Component												
January	17	184	23	235	13	97	20	313	1	174	5	272
February	32	173	15	268	8	83	13	287	3	46	6	314
March	29	154	44	288	37	95	17	308	5	83	3	247
April	37	141	53	298	40	124	14	342	8	149	4	173
May	54	112	62	301	39	144	8	331	6	83	3	313
June	56	111	66	296	29	134	4	99	4	73	6	97
July	53	118	58	289	33	127	4	201	0	220	2	18
August	58	112	70	299	45	135	8	16	4	335	2	139
September	49	122	56	301	44	145	19	359	2	107	5	180
October	22	164	45	272	35	101	27	311	7	182	6	271
November	17	189	36	255	15	99	22	334	18	135	5	177
December	23	189	17	259	12	153	7	298	9	203	5	301
Year	33	134	43	283	28	124	11	325	3	132	1	242
Q	35	117	39	292	32	126	13	317	4	140	3	45
D	34	167	49	292	26	113	9	327	5	164	6	235
East Component												
January	12	309	8	113	11	358	5	197	4	106	3	102
February	11	271	3	109	14	48	8	219	3	61	3	175
March	11	302	13	61	9	39	4	337	7	40	3	245
April	21	357	6	159	10	163	13	320	6	154	2	325
May	30	9	10	216	19	143	12	340	2	156	6	278
June	44	17	20	194	12	119	7	343	3	208	8	315
July	45	2	17	191	15	117	6	311	8	270	2	331
August	40	2	17	233	18	122	13	306	4	216	4	157
September	34	357	12	179	16	111	8	301	6	327	7	78
October	18	325	14	215	19	22	8	224	2	271	10	303
November	15	287	11	105	11	24	4	270	6	154	5	97
December	10	216	7	93	8	5	0	30	3	152	2	312
Year	20	350	7	177	8	85	5	303	1	166	1	318
Q	14	1	11	174	9	92	6	297	1	343	1	278
D	37	355	12	121	3	96	7	259	8	75	4	316

IV.

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

Month	Day	CET (GMT+1 h)	Amplitude in		Ex	Ey	Hx	Hy	End of Storm
			E(mV/km)	H(gamma)					
02.	13.	22.15	6,5	15	+	+	+	-	no storm
	21.	19.45	12,5	42	+	+	+	-	02.22.2.00
03.	16.	7.30	5,5	22	+	+	+	+	03.17.1.00
	20.	20.30	18	80(?)	+	+	+	-	during storm
04.	13.	5.30	6,5	25	+	+	+	-	04.13.23.00
	14.	3.45	8	21	+	+	+	-	04.14.17.00
05.	01.	18.30	10	21	+	+	+	-	05.02 5.00
	02.	2.30	11	22(?)	+	+	+	-	during storm
	02.	22.30	16	40	+	+	+	-	no storm
	13.	18.30	3,5	14(?)	+	+	+	-	05.16. 4.00
	21.	3.45	12,5	35	-	-	+	-	05.21.17.00
07.	31.	6.45	14,5	10	+	+	+	-	07.31.18.00
08.	02.	13.45	14,5	25	+	+	+	-	08.02.19.00
	12.	22.45	11	27(?)	-	-	-	+	no storm
10.	10.	21.30	10	26(?)	+	+	+	-	no storm
11.	15.	11.45	?	18	+	+	+	-	no storm

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
01.	03.	22.15	3,5	12	+	+	+	— (ssc?)			
	04.	1.30	3,5	14	—	—	+	—	tr		
	05.	2.30	5,5	32	—	+	+	—	3,5	+	+
	06.	0.00	9	65	+	+	+	—	tr		
		23.15	5,5	22	+	+	+	—			
	07.	16.45	7	36	—	—	—	+	tr		
	08.	16.30	12,5	80	—	+	+	+		—	—
		21.45	5,5	18	—	+	+	+	2,5		
	09.	21.00	8	48	—	+	+	+	tr		
	10.	0.45	8	32	+	+	+	—	tr		
		1.45	8	30	+	—	?	—	tr		
		18.15	7	95	—	+	+	+	tr		
	12.	18.00	9	50	+	+	+	+			
		23.45	5,5	20	+	+	+	0			
	13.	19.30	8	25	+	+	+	—	tr		
	15.	19.15	4,5	22	—	+	+	+	2	—	+
		22.30	9	28	—	—	+	+	5,5	+	+
	16.	22.00							2,5	—	—
	19.	22.15		22			—	+	tr		
	21.	18.30		32			—	+			
	23.	0.45	3,5	12	+	+	+	—	2,5	+	+
	24.	22.00		30			+	+			

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.	25.	15.15	11,5	55	-	-	-	+	tr		
		21.30	5,5	30	+	+	+	+	tr		
	26.	1.15	5,5	30	+	+	+	-	tr		
		18.30	7	40	-	-	-	-			
		21.00	12,5	85	-	+	+	+	2	+	+
	28.	1.15	11	40	+	+	+	-	tr		
		16.00	12,5	65	+	+	+	+	tr		
		19.15	9	30	+	-	+	-	tr		
		22.15	8	30	+	+	+	-	tr		
	31.	20.45	6,5	22	+	+	+	-	tr		
02.	02.	18.30	10	55	-	-	-	+	tr		
		03.	19.15	14,5	75	-	+	+	+		
	04.	20.45	5,5	25	-	+	+	+	tr		
	05.	23.00	5,5	14	+	+	+	-	tr		
	06.	15.30	6,5	60	-	-	-	+	tr		
		07.	0.30	4,5	9	+	+	+	-		
		18.45	11	65	-	+	+	+	2,5	+	+
	08.	21.45	11	48	+	+	+	-	tr		
	10.	21.15	12,5	50	-	+	+	+	tr		
	11.	21.00	3,5	17	-	+	+	+	2,5	-	-
15.	0.15	4,5	25	+	+	+	-	2,5	+	+	
	3.15							3,5	+	+	
16.	23.30	9	3,5	+	+	+	-	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	
02.	17.	2.30	8	40	+	+	+	-	tr			
		20.30	5,5	12	+	+	+	-	tr			
	18.	18.30	9	46	-	+	+	+	5,5	+	+	
		22.30	8	40	-	+	+	+	3,5	+	+	
	19.	23.30	6,5	20	+	+	+	-				
	21.	2.45	9	40	+	+	+	-	tr			
	22.	20.00	22	160	-	+	+	+				
	25.	18.30	12,5	75	+	+	+	+				
	27.	18.30	18	100	-	+	+	+	tr			
		21.30	11	40	+	+	+	-	tr			
	28.	23.45	5,5	20	+	+	+	-	3,5	+	+	
	03.	02.	14.45	9	50	-	-	+	+			
			17.00	12,5	85	-	+	+	+			
			19.45	18	85	+	+	+	+	tr		
03.		3.15	6,5	25	+	-	-	-	tr			
05.		0.15	2,5	12	+	+	+	-	2	+	+	
06.		15.45	15,5	60	-	-	-	+				
07.		0.15							3,5	+	+	
08.		21.15	7	22	-	+	+	+	tr			
10.		19.30	8	38	-	+	+	+	2,5	+	+	
12.		21.00	14,5	55	-	+	+	+	tr			
13.		21.00	3,5	20	-	+	+	+	2,5	+	+	
16.		12.30							2	pg		
		23,15							3,5	pg		

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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.	17.	12.30	5,5	10	—	—	—	+			
		21.30								3,5	+
18.	23.00		9	55	+	+	+	—	tr		
19.	19.30		27	135	—	+	+	+	tr		
	23.15		18	95	—	+	+	+			
20.	19.00		23,5	95	+	+	+	—			
	23.45		8	65	+	+	+	+			
21.	7.00		10	45	—	—	—	+	tr		
23.	6.30		9	30	+	+	—	+			
	18.30		10	60	—	+	+	+			
24.	0.00		14,5	65	+	+	+	—	tr		
	22.00		16	45	+	+	+	—	tr		
25.	0.00		11	45	+	+	+	—			
	16.30		11	45	+	+	+	+	tr		
	21.15		11	40	+	+	+	—			
26.	18.30		9	25	—	—	—	+			
	20.30		12,5	50	+	+	+	—	tr		
	21.15		20	95	+	+	+	—			
28.	0.00		10	30	+	+	—	—	tr		
	23.00		7	35	+	+	+	—	2	+	+
29.	23.15		?	48	+	+	+	+	tr		
30.	22.00		6,5	22	+	+	+	—	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	
03.	31.	18.00	11	98	+	+	+	+				
		21.00	16	105	+	-	+	+		tr		
04.	01.	1.45	7	38	+	-	+	-		tr		
	03.	3.15	7	45	+	+	+	-				
	09.	1.15	12,5	15	+	+	+	-		tr		
	11.	23.45	4,5	14	-	-	-	+				
	14.	18.15	9	25	+	+	+	-				
	16.	12.00								pg		
	18.	17.30		18	60	-	-	+	+			
		20.15		14,5	35	-	-	+	+			
		23.30		11	50	+	+	+	-			
	19.	19.00		12,5	75	-	+	+	+		tr	
22.30			12,5	42	+	+	+	-				
20.	16.15		14,5	65	-	-	-	+		tr		
	19.15		16	45	+	+	+	-				
	20.45		16	65	-	-	+	+				
21.	17.15		9	45	+	+	+	0				
	19.30		8	30	-	+	+	+		tr		
22.	15.45		16	55	-	+	+	+				
23.	0.15		9	55	+	+	+	-				
	16.15		15,5	47	-	+	+	+		tr		
24.	23.15		3,5	6	+	+	+	-	3,5	+	+	
25.	23.15		8	30	-	+	+	+		tr		
26.	7,45		3,5	10	+	+	+	-				
	20.00		14,5	75	-	+	+	+		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
04.	29.	21.00	9	80	+	+	+	+			
05.	01.	21.30	7	55	-	+	+	+	tr		
	03.	21.45	3,5	12	+	+	+	-	2,5	+	+
		23.00	4,5	22	+	+	+	-			
	06.	23.00	7	42	-	-	+	+	tr		
	08.	19.00	11	38	+	+	+	+			
	10.	2.45	7	42	+	-	+	-	tr		
	14.	20.45	18	78	+	+	+	+			
	15.	21.00	18	60	+	+	+	+	tr		
	17.	0.00	18	70	+	+	+	-			
		16.45	9	38	+	+	+	-			
	18.	23.30	11	30	+	+	+	-			
	20.	20.30	7	30	-	+	+	+	tr		
	22.	4.30	11	48	+	+	+	-			
	23.	22.30	3,5	15	+	+	+	0	tr		
	25.	13.45	3,5	9	-	-	-	+			
	26.	1.30	4,5	30	+	+	+	-	2,5	-	-
	28.	4.30	6,5	12	-	-	-	+			
06.	02.	12.45	7	25	+	+	+	-			
	08.	21.45	5,5	20	-	+	+	+	2,5	-	+
	09.	17.30	7	22	+	+	+	-			
		19.00							2,5	+	+
		22.00	5,5	18	+	+	+	+	tr		

Bays		Pt-s										
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey	
			E(mV/km)	H(gamma)								
06.	10.	22.00	16	65	+	+	-	-				
	11.	17.00	14,5	60	-	+	+	+				
	12.	16.30	9	32	+	+	+	-				
	14.	3.30	4,5	18	+	-	-	-			tr	
	15.	23.30	5,5	28	+	+	+	-			tr	
	17.	22.15	5,5	18	-	-	-	+				
		23.30	6,5	22	-	-	-	+				
	18.	2.00	7	62	+	0	+	-				
		19.30	8	35	-	-	-	+			tr	
	19.	0.45	15,5	60	+	+	+	-			tr	
		10.15									9 pg	
		20.00	11,5	55	+	+	+	+			tr	
		21.30	9	50	+	+	+	+			tr	
	20.	19.15	5,5	32	-	+	+	+				
	22.	21.30								2,5	+	+
	23.	12.45	11	25	+	+	+	-				
	24.	8.00	8	6	-	-	+	+				
		15.30	8	36	-	-	-	+			tr	
		18,45	5,5	22	+	+	+	-				
	25.	23,15	4,5	14	-	+	+	+			tr	
	28.	2.15	11	17	-	-	-	+			tr	
		23.45		52			+	-				
	30.	4.00		30			-	-				
		19.30	11	30	+	+	+	-				

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.	30.	20.30	9	22	+	+	+	—			
07.	01.	19.15	6,5	28	+	+	+	+			
	05.	14.15							5,5 pg		
	10.	2.00	5,5	30	+	+	+	—	3,5	—	—
	13.	22.30	5,5	18	—	+	+	+	5,5	—	+
	14.	10.15	4,5	9	—	—	—	+	(si?)		
		23.45	4,5	12	+	+	+	—			
	15.	17.15	8	25	+	+	+	—			
		20.15	11,5	38	+	+	+	—	tr		
		23.45	7	42	+	+	+	—	tr		
	16.	2.30	11,5	42	+	—	—	—	tr		
		20.15	4,5	18	+	+	+	+	3,5	+	+
	17.	1.45	8	30	+	+	+	—			
		23.30	4,5	6	+	+	+	—	2,5	+	+
	19.	0.30							4,5	+	+
	21.	2.00	3,5	18	+	+	+	—	2,5	+	+
	22.	1.00	3,5	25	—	+	+	+	4,5	+	+
		18.15							3,5	+	+
		20.15							4,5	+	+
	23.	21.30	5,5	18	+	+	+	—	2	+	+
	25.	19.30	3,5	12	—	—	—	+	2	—	—
	27.	20.30	10	52	+	+	+	+	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
08.	01.	1.00	6,5	25	+	+	+	-			
		21.30	4,5	23	-	+	+	+			
	02.	12.00	6,5	13	+	+	+	-			
	03.	1.15	3,5	8	+	+	+	-	4,5	+	-
		23.00	3,5	22	+	+	+	+	3,5	+	+
	04.	21.15	3,5	14	+	+	+	-	2,5	+	+
		23.30	4,5	14	+	+	+	-	tr		
	06.	4.15	4,5	32	+	-	-	-			
	08.	14.15	5,5	14	+	+	+	-			
		23.45	4,5	15	+	+	+	-	4,5	+	+
	10.	1.30							2,5	+	+
	14.	22.30	3,5	18	+	+	+	-	2,5	+	+
	16.	0.00							2,5	+	+
	19.	1.15	3,5	18	+	+	+	-	2,5	+	+
	20.	11.00	5,5	14	+	+	+	-			
		22.30	2,5	8	0	+	+	0	2,5	+	+
	22.	12.45	8	25	+	+	-	+			
		22.45	9	30	+	+	+	-	2	+	+
	23.	2.00	6,5	32	+	+	+	-	2,5	+	+
	24.	1.00	14,5	55	+	+	+	-			
	25.	20.30	20	65	+	+	+	+	tr		
	26.	17.00	10	33	-	+	+	+			

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Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
09.	15.	0.30	3,5	7	+	+	+	-	3,5	+	+
		2.45							2,5	+	+
		23.00	12	42	+	+	+	-	tr		
	17.	1.00	3,5	12	+	+	+	-	2,5	+	+
	19.	19.15	3,5	20	-	+	+	+	2	+	+
	20.	1.00	3,5	15	+	+	+	-	4,5	+	+
		22.15	7	55	+	+	+	-	tr		
	21.	1.45	10	60	+	+	+	-	tr		
	22.	17.30	4,5	18	-	+	-	+			
		20.00	7	50	-	+	+	+	tr		
		23.00	13,5	72	+	+	+	-	tr		
	23.	2.30	11	55	+	+	+	-	tr		
		10.15	30,5	135	+	+	+	+	tr		
	24.	16.30	11	42	-	-	-	+			
		18.00	14,5	72	-	+	+	+			
25.	19.30	13,5	55	+	+	+	-	tr			
	21.15	14 (?)	95	+	+	+	-	tr			
27.	15.45	6,5	40	-	-	-	+				
10.	01.	2.45	3,5	10	+	+	0	-	2,5	+	+
		21.15							3,5	+	+
	02.	10.00	5,5	18	+	+	+	-			
	20.00	7	42	-	+	+	+	3,5	-	+	

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
08.	27.	3.00	12,5	38	+	+	+	—			
		18.30	23,5	105	—	+	+	+			
	28.	0.00	9	18	+	+	+	—	2,5	+	+
		15.00	12,5	42	—	—	—	+	tr		
		18.00	14,5	50	+	+	+	+			
	29.	10.30	5,5	18	—	—	—	+			
		19.45	8	38	—	+	+	+	tr		
	31.	18.45	5,5	22	—	+	+	+	tr		
		23.00	3,5	10	+	+	+	—			
	09.	01.	22.15							3,5	+
02.		23.30	3,5	8	—	—	—	+	2,5	+	+
03.		22.15	4,5	25	—	+	+	—	tr		
04.		16.00	4,5	11	+	+	—	+			
		21.00	11	35	+	+	+	—	2,5	+	+
05.		20.00	4,5	18	+	+	+	+	2,5	+	+
		21.00	15,5	55	+	+	+	+	2,5	+	+
08.		22.15							3,5	+	+
09.		15.30	10	22	+	+	+	— (si?)			
		22.15	25	120	+	+	+	—	tr		
		23.30	18	80	+	+	+	—			
10.		19.45	22	90	—	+	+	+	tr		
11.		0.45	9	48	+	+	+	—	tr		
13.	19.15	5,5	34	—	—	+	+	tr			

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
10.	03.	1.15	12,5	48	+	+	+	-	tr		
		15.00	12,5	55	-	+	-	+	tr		
		17.45	8	30	+	+	-	+			
		23.45	7	22	+	+	+	-	tr		
	04.	18.30	6,5	52	-	+	+	+	tr		
	05.	23.00	14,5	60	+	+	+	-	tr		
	06.	1.15	11	35	+	+	+	+			
		21.00	6,5	35	-	+	+	+	tr		
	07.	0.00	5,5	40	+	+	+	-	2	+	+
	08.	0.45	8	22	+	+	+	-	3,5	+	+
		2.00	4,5	18	+	+	+	-	2	+	+
	09.	21.15	9	60	-	-	-	+			
	10.	16.15	8	45	-	-	-	+			
	11.	21.00	5,5	22	+	+	+	-	tr		
	12.	23.30	14,5	50	+	+	+	-	3,5	+	+
	13.	19.15	14,5	55	-	+	+	+	5,5	?	?
		21.45	?	42	?	?	+	-	7	+	+
	14.	19.30	5,5	22	+	+	+	-	tr		
	16.	20.45	12,5	55	+	+	+	-	tr		
	17.	2.00	8	45	+	+	+	-			
		18.30	10	38	-	+	+	+	tr		
		20.30	9	28	+	+	+	-	tr		

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
10.	18.	0.30	7	42	+	-	+	-	2,5	+	+
		14.30	11,5	65	-	-	-	+			
	19.	5.15	6,5	16	-	-	-	+			
		21.30	3,5	22	+	+	+	+	2,5	+	+
	20.	9.15							4,5 pg		
		16.15	18	90	-	+	+	+			
	21.	1.00	6,5	28	+	+	-	-	25	+	+
		20.30	16	75	+	+	+	-	tr		
	22.	18.00	7	35	+	+	+	+	tr		
		21.30	3,5	12	+	+	+	-	2,5	+	+
	23.	3.30							2	+	+
		23.30							2	+	+
	24.	0.00	3,5	12	+	+	+	-	3,5	+	+
		22.15	7	18	+	+	+	-	tr		
	26.	0.15	2,5	8	-	+	+	+	2,5	+	+
	27.	3.00							2	+	+
		17.15							4,5	+	+
	28.	11.45	6,5	22	+	+	+	-			
		19.00	6,5	60	-	+	+	+	tr		
		23.15	11	52	-	+	+	+	tr		
	29.	1.45	12,5	70	+	-	-	-			
		14.45	23,5	165	+	+	-	+			

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
10.	29.	17.30	27	100	+	+	+	+			
		19.30	32,5	190	+	+	+	+	tr		
		23.00	20	70	+	+	+	-	tr		
	30.	1.00	12,5	65	+	+	+	-	tr		
		15.45	9	35	+	+	-	+	tr		
11.	02.	0.45	5,5	22	+	+	+	-	tr		
	04.	22.00	22	80	+	+	+	+	tr		
	05.	21.00	12,5	45	+	+	+	-	tr		
		22.45							3,5	+	+
		23.45		30			+	-			
	06.	23.00	6,5	22			+	-	tr		
	07.	20.15	12,5	65	+	+	+	+			
	08.	22.15	6,5	18	+	+	+	+	4,5	+	+
	11.	18.00	4,5	28	-	+	+	+	tr		
		23.00	3,5	5	+	+	+	-	2	+	+
	12.	0.15	3,5	12	+	+	+	-	2,5	+	+
	13.	16.45	7	22	+	+	+	+			
		17.45	8	26	+	+	+	-			
		23.00	3,5	14	+	+	+	-	2,5	+	+
	14.	19.00	8	38	-	+	-	+	tr		
		20.45	8	25	-	+	+	+	tr		

Bays		Pt-s									
Month	Day	CET (GMT+1h)	Amplitude in		Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
			E(mV/km)	H(gamma)							
11.	16.	19.30	6,5	30	—	+	+	+	tr		
	17.	2.30	9	45	+	+	+	—	2,5	+	+
	18.	20.30	8	32	—	+	+	+			
	20.	21.00	4,5	14	+	+	+	+	3,5	+	+
	21.	1.15	4,5	12	+	+	+	—	3,5	+	+
		20.45	18	68	+	+	+	—	tr		
	24.	16.30	16	50	—	—	—	—			
		19.45	16	90	+	+	+	+			
	25.	0.30	16	78	+	+	+	—	tr		
		13.30							9 pg		
		14.45	14,4	68	+	+	+	+			
		18.45	13,5	45	+	+	+	+	tr		
		21.00	12,5	60	+	+	+	—	tr		
	26.	23.30							2,5	+	+
	28.	22.00	3,5	22	—	+	+	+	tr		
	29.	20.15	4,5	14	+	+	+	+	2	+	+
	30.	23.15	3,5	10	—	—	—	+	tr		
12.	02.	1.00							2	+	+
	03.	1.45							3,5	+	+
		2.30							2,5	+	+
	04.	3.15	5,5	28	+	+	+	+	tr		
		17.30	7	42	+	+	—	—			
		22.15	17	110	—	+	+	+			
	05.	18.00	9	28	—	+	+	+			
	06.	0.00	9	42	+	+	+	—	tr		
		22.00	5,5	42	—	—	—	+	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
12.	08.	22.30	4,5	18	-	+	+	+	tr		
	09.	12.45							5,5 pg (ssc?)		
		17.15	17	65	-	-	+	+	tr		
		22.00	6,5	35	+	+	+	-	tr		
	11.	0.00	4,5	22	+	+	+	-	2,5	+	+
	13.	19.15	3,5	20	-	+	-	+	2,5	-	-
	16.	1.15	3,5	18	+	+	+	-	2,5	+	+
	17.	22.45	4,5	25	-	+	+	+	2	+	+
	19.	23.30	4,5	18	+	+	+	+	2,5	+	+
	20.	17.45	12,5	42	-	+	+	+			
		20.15	12,5	110	-	-	+	+			
	21.	22.30	12,5	55	+	+	+	-			
	22.	1.30	10	40	-	+	+	-			
		20.30	11	40	+	+	+	-			
	23.	18.45	9	42	-	+	+	+	tr		
	29.	1.15	7	40	+	+	+	-			
		20.45	11	56	+	+	+	-	tr		
	30.	0.00	9	42	+	+	+	-	tr		
	31.	18.00	11	30	-	+	+	+			

Further pt-traces (earth currents)

Month	Day	CET	Month	Day	CET	Month	Day	CET
01.	02.	2,45			02,45			19,30
		23,15			03,30			20,00
	05.	1,45			04,30	27.		02,00
	06.	22,30			04,45	28.		22,30
		23,00		16.	22,15			23,30
	07	22,45	02.	19.	01,00	29.		19,15
		23,45			01,15	30.		22,30
	08.	20,30			03,30	31.		20,45
	14.	0,30		22.	23,15			22,15
		1,30		24.	21,00	04.	06.	23,45
	15.	0,45			23,15		07.	00,15
		22,45		25.	20,15			01,00
		23,30		26.	20,15	08.		0,00
	16.	21,45		28.	20,15			20,00
		23,00	03.	01.	18,15	09.		19,45
	18.	0,45			20,30			20,15
	20.	1,45		02.	22,15	10.		20,30
		2,00		03.	21,45	13.		1,00
		21,45			22,45	16.		21,00
	21.	5,30		09.	21,45	17.		00,00
	22.	22,30			23,45			03,30
		23,30		10.	00,45	19.		19,45
	23.	3,15			01,00			20,15
		23,45			01,30			20,30
01.	24.	21,00		12.	00,15			23,30
	25.	0,00		14.	21,30	20.		00,15
	29.	1,45		15.	20,15	23.		22,00
		20,45		17.	18,45	24.		18,45
	31.	18,15		18.	3,45			20,45
02.	02.	17,30	03.	18.	21,30	01.		01,15
	03.	23,45			22,15	03.		22,15
	04.	20,00		19.	19,00	04.		16,45
		22,15			21,45			22,45
	05.	0,30		20.	20,30	05.		19,30
	11.	15,00		23.	19,45	05.	06.	22,15
		23,30			20,00		08.	0,15
	12.	21,45			20,45		09.	0,00
	13.	22,30			23,45			0,45
		22,45		24.	21,00	10.		0,15
	14.	03,45			21,30	11.		19,45
		19,00		25.	22,45	13.		22,30
	15.	00,45			23,45	15.		17,45
		01,00		26.	00,15			18,45

Month	Day	CET	Month	Day	CET	Month	Day	CET
		19,00		13.	22,00			22,00
		20,00		15.	1,45		16.	02,15
	16.	02,30		17.	02,00			13,15
	17.	21,15			02,15			21,30
	18.	01,45		18.	02,30		17.	17,15
		21,30			02,45		18.	00,30
	19.	22,30			03,00		19.	12,15
		23,45			23,45		23.	23,45
	20.	0,00		19.	00,45		26.	23,45
		23,30			22,00		28.	0,45
	21.	0,15			22,15		30.	21,15
	22.	22,15			23,00		09.	01.
	25.	18,15		20.	01,30		09.	01.
	26.	22,45			02,00		02.	18,00
	27.	4,45		21.	22,30			18,30
06.	02.	18,45		22.	02,30			19,30
	12.	22,30			19,15			20,30
	13.	21,15		23.	19,15			21,00
		21,30			20,00			21,15
	15.	01,30			20,45			22,45
		20,15			21,15		03.	21,15
	16.	19,15			22,00		05.	19,30
		23,15		24.	09,45		07.	00,45
		23,45		25.	00,30		11.	19,15
	17.	00,30			00,45			22,15
		1,30			01,45		12.	01,15
		20,30			21,30			01,30
	18.	21,15		29.	21,30			02,00
	19.	18,30	07.	30.	23,45		14.	04,30
	20.	21,30	08.	02.	01,45			23,45
		23,45			21,30		15.	21,45
	22.	00,00			23,15		16.	23,00
		01,00		03.	16,45		17.	22,30
	24.	1,00		04.	20,30		18.	03,15
	25.	22,15		05.	21,15			20,15
	27.	04,15		07.	04,15			20,30
07.	04.	21,45		08.	2,00		19.	18,30
	05.	1,15			21,15		20.	22,00
	07.	22,45		09.	19,20	09.	20.	22,45
	08.	22,45		11.	10,00		23.	19,30
	09.	20,45			19,30			22,30
	11.	21,45		13.	19,45			23,00
		22,30			20,30		27.	23,00
	12.	23,15		14.	01,15		28.	01,45
07.	12.	23,30			20,30			21,30

Month	Day	CET	Month	Day	CET	Month	Day	CET
	30.	0,00			23,45		26.	0,00
		0,30		23.	17,30			22,15
		19,45			18,15		27.	21,15
		20,30		26.	1,30			22,15
10.	01.	02,15			3,15		30.	1,30
	03.	00,15			18,45			21,00
		5,30			20,15	12.	02.	23,30
	04.	15,30		27.	18,15		03.	11,15
	05.	2,30		28.	01,15		05.	22,00
		21,15		31.	21,30		08.	0,00
	08.	00,00	11.	01.	23,30		09.	21,30
		19,30		02.	1,00		10.	00,30
	09.	07,00		03.	23,45		16.	23,15
	10.	22,45		07.	22,15			23,30
		23,15			23,45	12.	17.	23,15
	11.	23,45		09.	19,45		18.	18,45
	12.	0,15		12.	21,15		19.	18,30
	13.	22,00			22,15			23,45
	16.	00,45	11.	13.	20,30		20.	00,00
10.	16.	01,45			21,30			19,00
		21,30			21,45		21.	00,00
		23,00			22,15			00,15
	17.	23,45		17.	0,00		23.	22,45
	18.	00,00		18.	1,45		26.	18,30
		20,45		19.	21,15		27.	21,30
	19.	00,15			23,30			22,15
	20.	00,45		20.	20,30		29.	0,30

SI-s

Month	Day	CET (GMT+1 h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV/km)	H(gamma)				
01.	01.	7.30	3,5	8	-	-	+	-
	12.	6.30	6,5	15	+	-	-	-
	13.	11.45	6,5	10	-	+	+	+
	28.	12.15	11,5	22	-	-	-	+(?, double)
02.	05.	6.30	3,5	13	-	-	-	-(ssc?)
	09.	5.45	6,5	11	+	+	+	-
	16.	12.45	5,5	12	+	+	+	-
03.	06.	1.15	4,5	11	+	+	+	-
		5.00	9	18	-	-	-	+
	09.	10.15	5,5	8	-	-	-	+
	18.	17.30	5,5	8	+	+	+	-
04.	11.	13.30	3,5	6	+	+	+	-
	19.	14.45	6	8	-	-	-	+
	27.	21.45	3,5	6	+	+	+	-
	28.	0.00	5,5	12	+	+	+	-
	30.	2.15	4,5	10	+	+	+	-
05.	02.	3.00	5,5	11	+	+	+	-
	03.	3.15	4,5	10	+	+	+	-
		9.30	16	50	-	-	-	+(sfe)
	06.	5.30	2,5	10	-	0	+	+
		14.45	7	19	+	+	+	-(ssc?.b?)
	16.	17.15	8	14	+	+	+	-
	22.	15.30	9	18	+	+	+	-
25.	5.45	4,5	8	+	+	-	+	

		SI-s							
Month	Day	CET (GMT+1 h)	Amplitude in		Ex	Ey	Hx	Hy	
			E(mV/km)	H(gamma)					
06.	02.	4.00	5,5	10	+	+	+	-	
	05.	5.45	6,5	12	-	-	0	-	
	06.	7.45	4,5	8	+	+	+	-	
	11.	3.30	9	12	+	+	+	+	
		4.30	7	13	+	+	+	-	
	19.	3.30	8	15	+	+	+	-	
	21.	8.00	3,5	7	-	-	-	+	
	23.	15.30	6,5	11	-	-	-	+	
	07.	01.	2.30	11	15	+	+	+	-
		09.	7.30	3,5	6	-	-	-	+
10.		11.00	5,5	7	+	+	+	-	
16.		5.45	4,5	11	+	0	+	-	
18.		14.30	3,5	7	+	+	+	-	
23.		4.15	9	17	-	-	-	+	
30.		2.15	4,5	6	+	-	-	-	
08.	05.	1.45	8	13	-	-	-	+	
		15.45	12,5	25	-	-	-	+	
	10.	18.45	2	7	+	+	+	-	
	18.	12.45	3,5	7	+	+	+	-	
09.	09.	16.30	8	17	-	-	-	+	
	16.	5.45	7	10	-	-	-	+	
	26.	4.45	6,5	7	-	+	-	-	

SI-s

Month	Day	CET (GMT+1 h)	Amplitude in		Ex	Ey	Hx	Hy
			E(mV/km)	H(gamma)				
10.	04.	8.45	4,5	7	-	-	-	+
	20.	13.30	11	17	-	-	-	+
	22.	5.45	7	18	+	+	+	-
	24.	3.45	2,5	10	+	+	+	- (?)
	28.	8.45	5,5	8	+	+	+	-
11.	05.	5.30	4,5	7	-	-	-	+
	16.	23.00	3,5	8	-	-	-	+
	17.	11.30	5,5	9	-	-	-	+
	26.	14.45	5,5	7	+	-	+	-
12.	05.	3.15	2,5	8	-	+	+	-
	19.	17.45	5,5	14	-	-	-	+

„Needles”

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	Ex	Ey
01.	06.	7.15			
	14.	8.30	5,5	+	+
	18.	17.30	2	—	—
	26.	10.30	6,5	—	+
02.	08.	7.00	6,5	—	—
	09.	20.30	5,5	+	+
	26.	8.15	6,5	—	—
03.	17.	7.00	4,5	—	—
04.	01.	7.30	2,5	+	+
	04.	16.45	3,5	—	—
	12.	8.15	2,5	+	+
	19.	16.15	5,5	—	—
05.	07.	8.45	11	—	+
	10.	19.15	3,5	—	—
	19.	17.45	5,5	+	+
		18.15	4,5	+	+
06.	05.	2.45	4,5	—	—
	16.	19.45	3,5	+	+
07.	01.	14.45	12,5	+	+
		15.45	12,5	+	+
09.	01.	13.30	2,5	—	—
	25.	23.45	8	+	—
10.	23.	17.15	4,5	—	+
11.	04.	13.45	3,5	—	—
	26.	4.30	3,5	—	+

V.

Results of rapid-run records (for explanations see p 6 and caption of Fig. 1h)

JAN - FEBR. 1973.

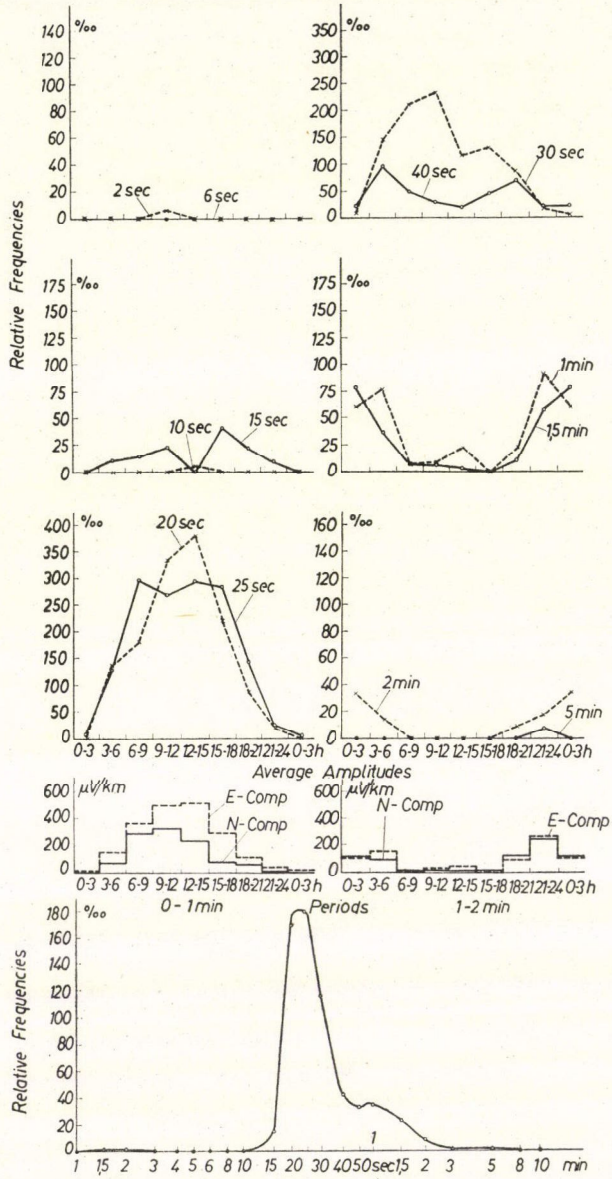


Fig. 1a.

MARCH-APRIL 1973

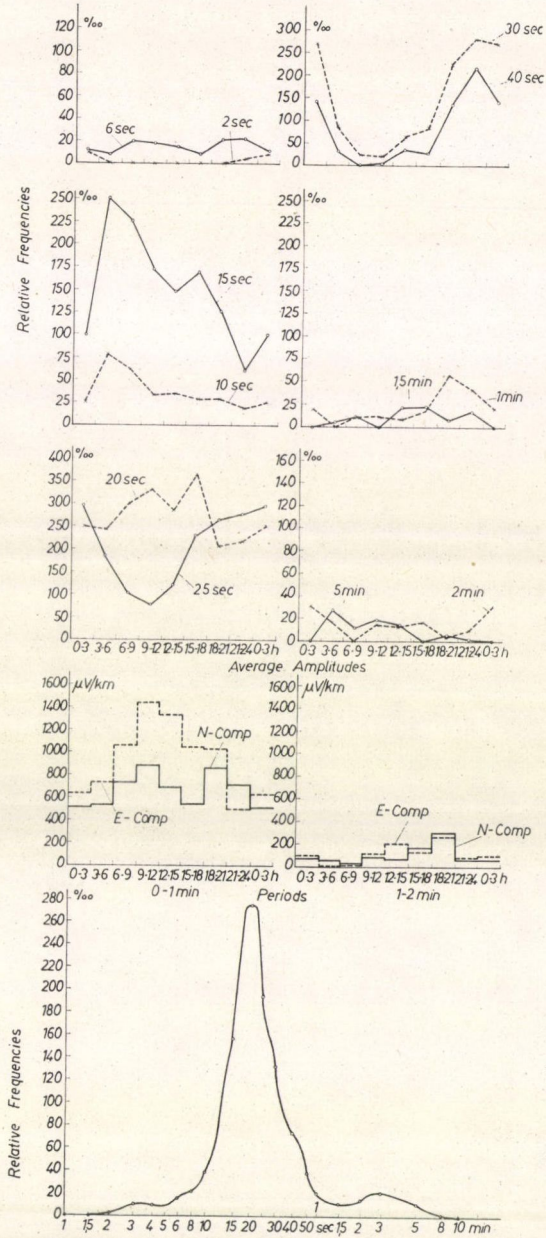


Fig. 1b.

MAY - JUNE 1973.

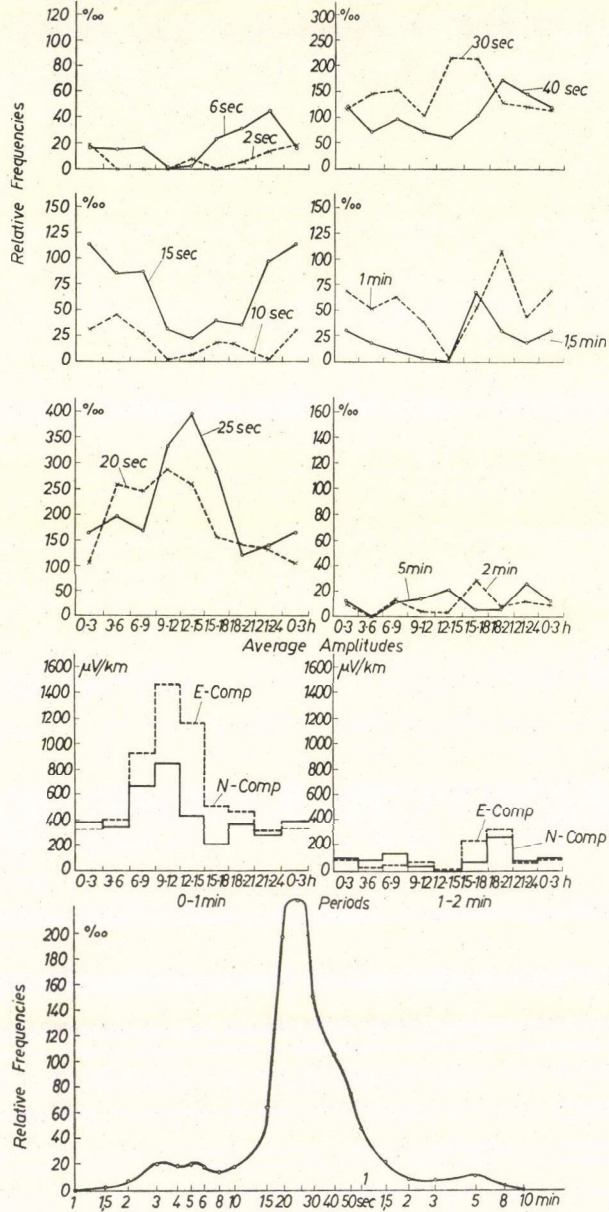


Fig. 1c.

JULY-AUG. 1973

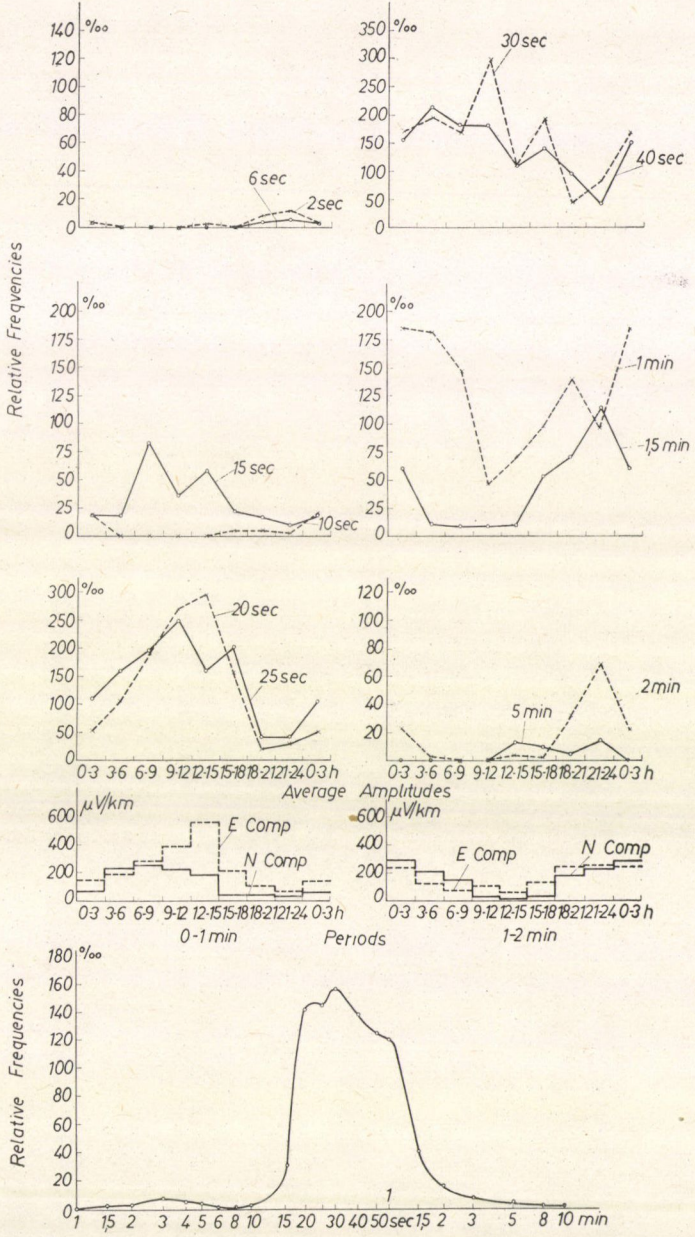


Fig. 1d.

SEPT. - OCT. 1973.

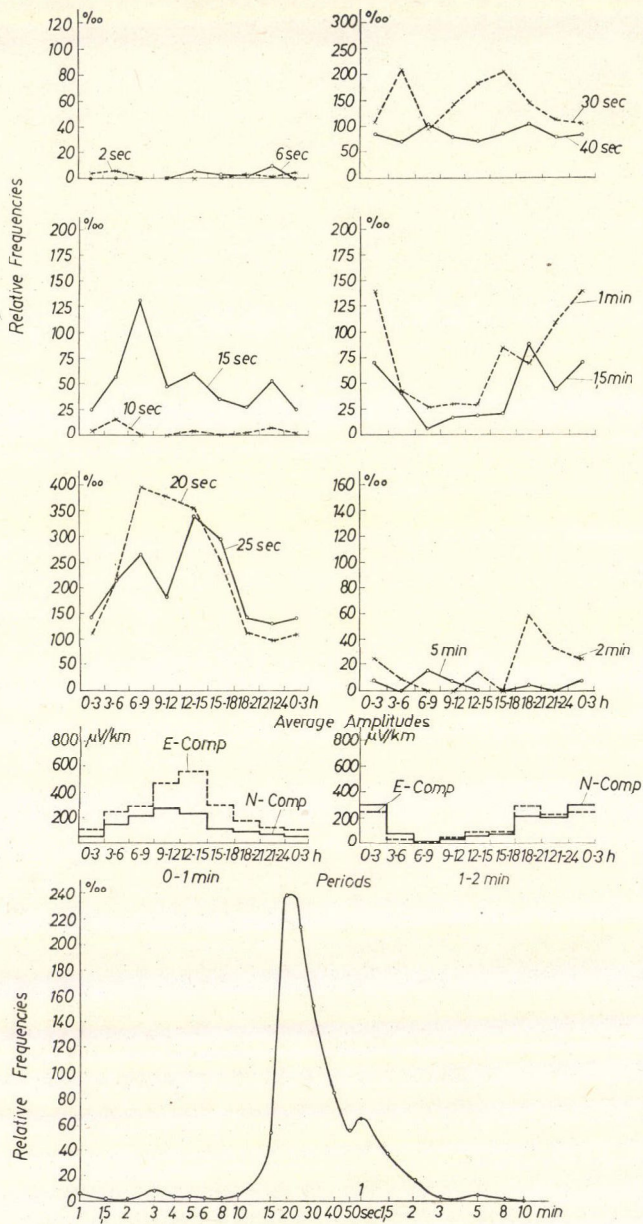


Fig. 1e.

NOV. - DEC. 1973

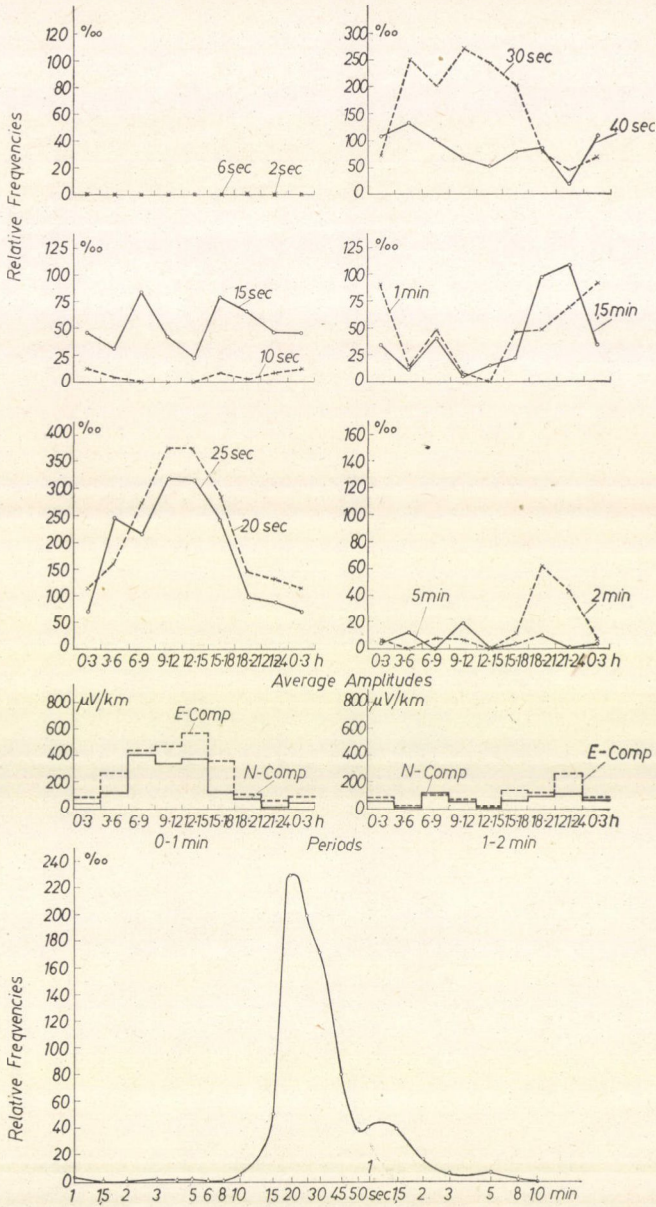


Fig. 1f.

YEARLY AVERAGE 1973

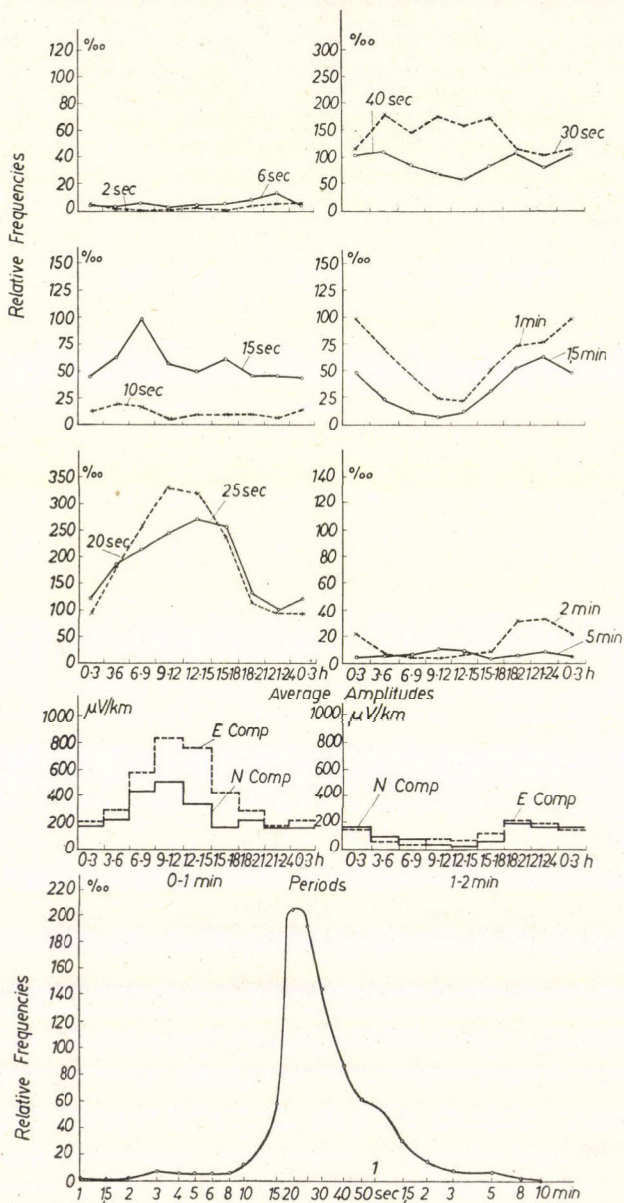


Fig. 1g.

YEARLY AVERAGE 1973

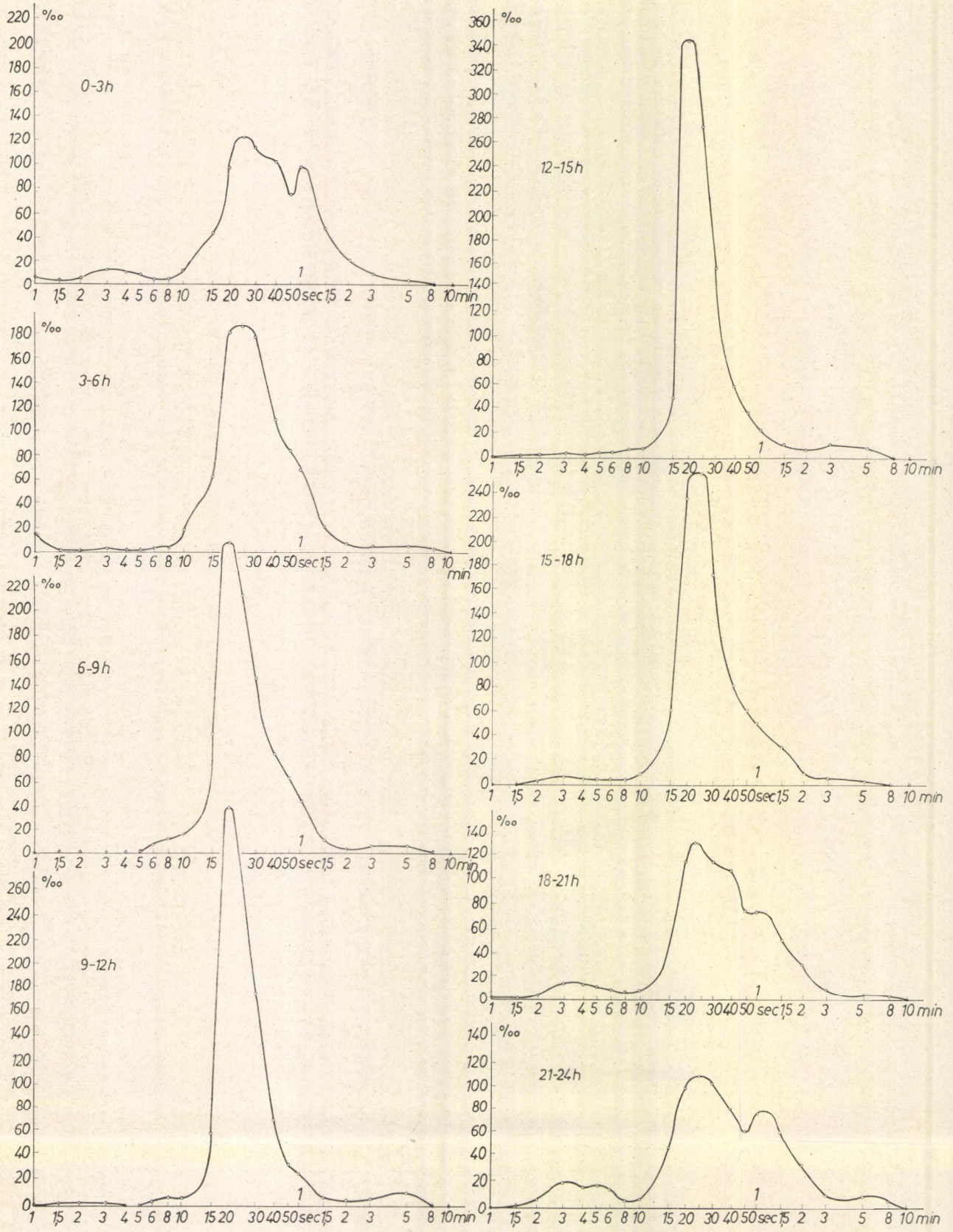


Fig. 1h.

Results of rapid-run records for the year 1973. The daily variations of the relative average occurrence frequencies of some selected pulsation periods are represented on the top of the figures 1a—1f in twomonth 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 1973

Activity indices for
(P1 to P12)

	January	February	March
1.	113453552122	133554322234	345554442112
2.	111112552421	134553332313	355554432124
3.	111132452411	124554222211	344345553421
4.	122551111542	114423542111	113323555123
5.	131541132531	124355332114	134143355541
6.	125355422143	122553121342	145511124345
7.	111335454211	112455224325	111555341233
8.	123155433112	113345424345	111455453215
9.	113555323315	131255532345	211455322312
10.	114555242144	111355234115	111555432112
11.	113554442353	112254532313	113355332224
12.	111455345354	111255433111	311235432112
13.	112545552234	111134553213	113334452124
14.	123235512331	111355513531	111125422311
15.	111223345311	111452125421	111124543421
16.	111222224111	333553242323	115433332245
17.	411342213111	131354134331	121442234353
18.	111221111111	224225455324	544553232434
19.	123443123323	122542353111	455433344332
20.	155442132455	123552132122	223554431122
21.	344443331451	355553343111	145543431142
22.	114434553312	255521242555	125553331145
23.	145552235331	155532232254	333544232343
24.	115545222444	355554424255	455543432354
25.	114454334311	245555232123	555534532454
26.	135552223221	155554432351	442555531345
27.	255541132345	155554232334	145545541142
28.	255545321145	135543532322	145543442122
29.	155445552124		125543432213
30.	124443322241		145513233214
31.	121335543321		251454454125

the micropulsations

Year 1973.

	April	May	June
1.	454531245355	452443552132	111135542242
2.	155533224155	213544322235	155511134554
3.	455541242351	141523555314	254543145335
4.	113554551144	242545442211	144543155455
5.	114521231445	141114555411	132333455453
6.	211122455221	154543332335	113411555331
7.	111124542441	155542134245	112411355431
8.	242144212355	243553225124	142314424531
9.	131145431413	142443334124	142541112552
10.	112245544513	123554442414	155531112455
11.	154321233555	241124434541	15555433455
12.	111521132151	131554134311	153345444355
13.	155444243555	452541112445	155554352455
14.	155452235455	353355222335	145543454155
15.	122522222445	552235541131	153533432145
16.	355443222443	555454311111	152551344123
17.	455553111154	543534443133	155543254234
18.		324445521133	144442111114
19.	333543431112	144552354245	454455321133
20.	454553442341	254554332134	133444554223
21.	355543433255	155423241453	111123455521
22.	255523441435	154542332454	211112145311
23.	225555432155	155443454324	111343314355
24.	114234442121	111321455312	155324445443
25.		111352234345	111442243313
26.	255454441133	352344135541	111314545311
27.	555442242125	112345212553	111225541221
28.	354211125555	211452111553	132343222455
29.	355452122155	111125433243	155522134345
30.	434551221355	111113412351	155543231355
31.		311122232542	

	July	August	September
1.	122544552355	132521355524	121353254213
2.	111543555344	143522134345	141432345335
3.	121533445344	121314443524	141312225324
4.	111213555211	121125554313	145411235132
5.	111113455532	132343344345	141153235111
6.	111111245121	113544312321	123344333442
7.	111111234551	112353414441	132343223442
8.	142532235551	142345453313	542144344534
9.	122543233552	122443232541	554543244235
10.	121553225522	113411255543	555542231355
11.	122315555511	111421245531	145355442213
12.	112431155231	111322133554	142544254235
13.	135521224534	321422212341	131421253344
14.	111555214314	323455425311	111311455311
15.	155555254145	112323555311	434541252444
16.	233213445344	111111355321	135543211135
17.	321124554112	111113342331	121245223413
18.	312432245212	121311144354	111223555513
19.	211322235553	112324311555	311234444411
20.	111431434542	111353124451	532332214531
21.	132323525421	111453225341	112434455431
22.	131345423511	132531345344	242543255343
23.	144552125534	145543143234	155445242155
24.	111445423134	115534345345	244545444225
25.	122411145531	152554442145	241323553154
26.	155442334445	143542344142	145521117455
27.	125531432335	153355233135	111411333545
28.	125533443155	153553553141	111335335432
29.	133555342235	455523433242	111322345421
30.	134523414424	343433544111	112212345551
31.	145533344555	442432345311	

	October	November	December
1.	212213115512	111314232211	111114311235
2.	144543223555	111111134534	111111253331
3.	154325444455	311342245112	11111112555
4.	131335444123	111451121452	542442133532
5.	134355343114	113431112141	112434453434
6.	124345542321	111554234111	132444125144
7.	113344555111	135424442344	113455122123
8.	511322455511	112455323113	111455342212
9.	5114225554*3	111553533411	134445454225
10.	145541133355	111445322211	111535555111
11.	125545454334		112345422124
12.	115553315131	111225543322	111555322311
13.	143554452142	1124335345*1	112421454411
14.	112454553212	211235554211	122241455543
15.	131454532111	112344332211	111543344511
16.	322543234422	111433313323	112333453521
17.	123454443221	111351122312	111134413421
18.	212453333111	131343542223	111333323211
19.	111454322111	111344211111	113434431432
20.			114551112233
21.		144121132555	113344144343
22.	111112345111	111211324345	121124555211
23.	111411134313	111334542114	111113542112
24.	111244233512	445532133344	111111551111
25.	111344344213	253543443553	111114532121
26.	112321333521	125344443453	111114532121
27.	111113434342	124435551111	111133545211
28.	444542253245	113335531311	113522214114
29.	555543434455	111122551311	113542252433
30.	213445433445	114111455531	113555121113
31.	125523332344		112355433112