I. EARTH CURRENTS

In the present, as in the previous reports of the Observatory, in particular in the report from the year 1967, (Geophysical Observatory Reports of the Geophysical Research Laboratory of the Hungarian Academy of Sciences Year 1967, Sopron, 1968) five kinds of tables are published in the section earth currents.

The coordinates of the Observatory are:

φ 47°38' λ 16°43'

Φ 47,2° $\wedge$ 98,3°

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

The tables published are the following:

I. The activity indices T (earlier K_1) 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 scales for K_1–K_5 are as follows:

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

All 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. 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 earthcurrent 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 recording. 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 means amplitude in the bands 0—1 and 1—2 min, and the estimated spectra for each two month period. 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.

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

Records were taken in the Observatory with three instruments of the types GMG T9/1956 and GMG 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, Á. 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.	42223324	22	3	0	5	3	4
2.	12377873	38	4	2	5	5	6
3.	31322001	12	3	0	4	2	1
4.	21112012	10	2	0	4	3	2
5.	51023223	18	3	0	4	2	4
6.	34232524	25	6	1	5	5	3
7.	22421211	15	5	2	5	2	1
8.	11021311	10	3	0	4	2	0
9.	00101111	5	3	0	4	0	0
10.	11111011	7	3	0	4	1	1
11.	00116473	22	5	2	5	3	2
12.	32163362	26	4	1	5	3	2
13.	11211102	9	3	0	4	2	1
14.	31111164	18	3	0	5	3	2
15.	11012123	11	3	0	4	2	2
16.	10111366	19	3	0	3	3	2
17.	22232232	18	5	0	4	2	2
18.	31333110	15	4	0	5	2	2
19.	01232624	20	6	1	4	3	4
20.	42244341	24	5	0	5	3	2
21.	12232212	15	5	1	5	2	2
22.	22123231	16	4	0	4	2	3
23.	13311124	16	4	0	5	3	1
24.	13223142	18	5	1	5	2	1
25.	11101112	8	3	0	4	1	0
26.	21021623	17	3	0	4	3	1
27.	22322122	16	4	0	5	3	2
28.	51011272	19	3	0	4	3	2
29.	42122032	16	3	0	4	3	3
30.	62131112	17	3	0	4	5	1
31.	12222100	10	5	0	5	2	1

Monthly averages:

T (N)	1,992
T (E)	1,322
K_1	3,80
K_2	0,35
K_3	4,42
K_4	2,58
K_5	1,94

February

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	11134122	15	3	0	4	2	2
2.	52134456	30	5	0	5	3	6
3.	51143533	25	5	0	5	3	4
4.	22395301	25	4	1	4	3	2
5.	00133227	18	4	0	4	0	3
6.	10011000	3	3	0	4	0	0
7.	00000023	5	3	0	5	1	0
8.	34342334	26	6	2	5	3	3
9.	25224113	20	3	0	4	3	4
10.	21124798	34	4	1	5	4	6
11.	79658238	48	5	2	5	6	6
12.	63122131	19	3	0	4	2	3
13.	01335631	22	4	0	4	3	5
14.	21123112	13	3	0	4	2	0
15.	23588492	41	5	3	6	5	5
16.	12245532	24	6	2	5	2	2
17.	31136239	28	6	3	4	3	6
18.	32456373	33	6	3	6	4	3
19.	73232100	18	5	2	5	2	2
20.	11669946	42	6	6	7	3	4
21.	43233346	28	7	3	5	3	6
22.	12443210	17	5	2	4	2	2
23.	01111111	7	3	0	4	1	1
24.	11221111	10	3	0	4	2	1
25.	01111131	9	3	0	4	1	1
26.	01000112	5	3	1	4	1	1
27.	31122144	18	4	1	4	3	2
28.	33235659	36	4	2	5	4	6
29.	52244321	23	3	0	4	3	3

Monthly averages:

T (N)	2,681
T (E)	1,884
K_1	4,28
K_2	1,17
K_3	4,55
K_4	2,55
K_5	3,07

March

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	31232320	16	3	0	3	3	2
2.	03322122	15	3	0	4	3	2
3.	21122293	22	3	1	4	5	3
4.	21232256	23	3	1	4	2	3
5.	23535252	27	3	1	5	4	4
6.	11122114	13	3	0	4	0	2
7.	00111111	6	3	0	4	2	0
8.	20011013	8	2	0	4	1	1
9.	01110001	4	3	0	4	1	0
10.	41213312	17	4	1	5	4	2
11.	11241113	14	5	2	4	1	3
12.	11122222	13	3	0	4	1	2
13.	11111012	8	4	0	4	1	2
14.	41259348	36	7	3	5	4	4
15.	52767377	44	7	3	5	6	5
16.	32337343	28	7	4	5	4	4
17.	22512111	15	5	1	6	3	1
18.	34233141	21	5	0	4	1	4
19.	22534341	24	6	2	4	4	2
20.	16236323	26	6	1	5	4	3
21.	42322120	16	4	0	4	1	2
22.	21222111	12	4	0	4	1	1
23.	00123446	20	4	0	4	2	2
24.	21563635	31	6	1	5	2	5
25.	31224244	22	5	0	4	3	4
26.	11123361	18	4	1	4	2	4
27.	22243234	22	4	1	4	1	3
28.	12113123	14	4	0	4	2	2
29.	12113224	16	3	1	4	2	2
30.	54634495	40	5	1	5	3	6
31.	22523346	27	7	2	5	2	3

Monthly averages:

T (N)	2,390
T (E)	1,707
K_1	4,38
K_2	0,87
K_3	4,32
K_4	2,42
K_5	2,65

April

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	54344544	32	5	0	4	3	6
2.	42212222	17	5	0	5	1	3
3.	12222301	13	3	0	4	1	2
4.	21101122	10	3	0	4	2	2
5.	11112499	28	5	1	5	3	6
6.	54876557	47	8	7	7	3	4
7.	15433202	20	6	2	5	2	1
8.	21112100	8	6	2	5	0	0
9.	10111123	10	5	1	4	1	2
10.	11122023	12	4	2	5	3	4
11.	23314333	22	4	0	6	5	4
12.	21332246	23	5	2	6	3	4
13.	46544459	41	9	1	7	2	6
14.	37435462	34	7	4	5	1	6
15.	31353432	24	7	4	5	3	2
16.	32422124	20	7	3	5	2	2
17.	31344232	22	5	1	5	2	2
18.	21121121	11	5	1	5	1	2
19.	21110101	7	4	0	4	1	0
20.	00110010	3	4	1	4	0	0
21.	00011012	5	2	0	4	1	0
22.	21211212	12	3	0	5	0	2
23.	42221231	17	5	0	4	1	3
24.	14111111	11	4	0	4	1	1
25.	00111105	9	4	0	4	2	1
26.	22224476	29	6	2	4	4	3
27.	52452352	28	8	3	5	3	3
28.	23421222	18	6	1	4	3	2
29.	31212113	14	4	0	5	2	2
30.	21112111	10	5	2	5	2	1

Monthly averages:

T (N)	2,203
T (E)	1,804
K_1	5,13
K_2	1,33
K_3	4,80
K_4	1,93
K_5	2,53

May

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	11111214	12	4	1	4	2	2
2.	72342221	23	6	3	4	3	2
3.	44533111	22	6	4	5	3	2
4.	22411101	12	6	2	5	2	1
5.	11111110	7	4	0	4	1	1
6.	12100121	8	5	1	4	1	1
7.	39949922	47	8	8	7	7	6
8.	43111112	14	6	3	5	3	1
9.	13214325	21	5	2	5	3	4
10.	12113453	20	5	2	6	3	3
11.	75443333	32	9	7	6	4	4
12.	73664323	34	9	7	7	5	3
13.	53143553	29	8	7	6	4	4
14.	44424131	23	7	7	6	4	3
15.	23531323	22	8	7	5	4	2
16.	33223211	17	7	5	5	4	2
17.	11113734	21	5	3	5	4	3
18.	22333443	24	7	3	5	3	4
19.	11222325	18	9	6	5	3	4
20.	54332225	26	9	6	6	4	4
21.	46445613	33	9	7	6	6	5
22.	24312123	18	5	1	4	2	4
23.	42112135	19	6	3	5	2	3
24.	74223121	22	7	4	5	3	5
25.	21011111	8	5	1	4	2	2
26.	11101000	4	4	0	5	0	0
27.	01111111	7	3	0	4	1	1
28.	21111221	11	5	2	4	2	1
29.	11122122	12	4	0	4	1	2
30.	12111313	13	5	3	4	2	2
31.	22122022	13	5	2	4	1	2

Monthly averages:

T (N)	2,241
T (E)	1,855
K_1	6,18
K_2	3,46
K_3	4,97
K_4	2,88
K_5	2,68

June

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	32153333	23	7	5	6	2	2
2.	34322332	22	7	3	4	2	3
3.	43233523	25	9	5	5	4	2
4.	33232132	19	8	5	5	2	2
5.	22221121	13	7	3	3	2	1
6.	01111211	8	5	0	4	1	1
7.	21243321	18	6	2	4	3	3
8.	22332452	23	9	6	5	3	3
9.	33221223	18	8	4	6	1	3
10.	33465439	37	8	4	5	3	5
11.	99999958	67	9	9	8	6	6
12.	75547786	49	8	7	7	7	6
13.	25436444	32	7	4	6	5	6
14.	23463523	28	7	4	5	5	4
15.	13322332	19	7	3	5	3	3
16.	11132134	16	7	3	4	2	3
17.	33642221	23	7	3	5	4	4
18.	13233442	22	5	2	5	3	2
19.	24322223	20	5	2	5	2	3
20.	11121242	14	4	0	5	3	2
21.	11111100	6	3	0	5	2	1
22.	11224212	15	5	2	5	3	2
23.	02111102	8	3	0	3	1	0
24.	11000011	4	5	2	4	1	0
25.	01000312	7	4	2	4	2	0
26.	74233323	27	6	3	5	3	3
27.	22434252	24	7	3	5	3	2
28.	31111211	11	5	2	4	1	1
29.	12201236	17	4	1	4	2	1
30.	25111122	15	4	1	4	2	2

Monthly averages:

T (N)	2,400
T (E)	2,167
K_1	6,20
K_2	3,00
K_3	4,83
K_4	2,77
K_5	2,53

July

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	32211110	13	4	0	4	3	2
2.	42112131	15	5	1	4	1	3
3.	33375532	31	6	3	5	3	3
4.	12123222	15	6	1	4	3	2
5.	22122211	13	6	1	4	2	2
6.	12251212	16	6	2	4	2	2
7.	12231311	14	6	3	4	3	2
8.	12131131	13	4	1	4	2	1
9.	01111112	8	3	1	4	1	0
10.	66326386	40	8	7	6	4	5
11.	42412132	19	7	3	4	1	4
12.	32112111	12	6	2	4	2	2
13.	12110767	25	4	2	4	1	3
14.	66213222	24	4	0	5	2	5
15.	12131122	13	6	2	4	2	0
16.	22112241	15	5	1	4	1	2
17.	11212112	11	6	2	5	1	2
18.	22112210	11	3	0	4	1	2
19.	11322215	17	6	2	4	2	2
20.	12001011	6	3	0	4	1	1
21.	11102232	12	3	1	5	1	1
22.	43243321	22	6	2	5	2	3
23.	22222211	14	6	2	4	2	2
24.	11111000	5	4	1	4	1	0
25.	01116211	13	3	2	5	3	2
26.	12323325	21	6	4	5	3	3
27.	32332111	16	5	2	4	2	2
28.	11111221	10	3	2	4	2	2
29.	21111100	7	5	1	5	1	0
30.	21112222	13	5	2	4	1	1
31.	21111111	9	4	2	4	1	1

Monthly averages:

T (N)	1,759
T (E)	1,456
K_1	4,97
K_2	1,77
K_3	4,32
K_4	1,84
K_5	2,00

August

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	01011010	4	3	1	4	1	0
2.	01000001	2	3	1	4	1	0
3.	14134451	23	5	4	6	3	2
4.	27321101	16	4	2	4	2	1
5.	22244433	24	5	3	5	2	2
6.	34346222	26	7	4	5	2	3
7.	44433322	25	6	2	4	3	3
8.	33532113	21	6	4	5	3	2
9.	23422232	20	5	2	4	2	2
10.	23221211	14	4	2	5	1	2
11.	11211110	8	4	0	4	1	1
12.	21121111	10	4	2	4	1	1
13.	02113243	16	6	2	5	2	2
14.	55545436	37	7	4	5	4	5
15.	43458434	35	7	5	4	3	4
16.	53535599	44	7	5	4	3	6
17.	84876945	51	8	6	5	4	5
18.	33245323	25	5	3	5	3	2
19.	24332421	21	5	0	4	3	2
20.	21243311	17	7	5	4	2	2
21.	21111001	7	3	0	4	0	2
22.	11111112	9	5	2	4	1	1
23.	12221234	17	3	0	5	2	2
24.	43744312	28	4	2	5	3	3
25.	11100122	8	2	0	4	0	0
26.	01111110	6	3	0	4	1	1
27.	11111120	8	3	1	4	1	0
28.	11110121	8	3	1	4	0	1
29.	01111001	5	4	2	4	0	0
30.	00100121	5	3	1	4	0	0
31.	11354252	23	3	1	4	2	4

Monthly averages:

T (N)	2,171
T (E)	1,742
K_1	4,64
K_2	2,16
K_3	4,39
K_4	1,82
K_5	1,97

September

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	32221111	13	3	0	4	2	2
2.	10135112	14	4	1	4	2	2
3.	34354535	32	6	4	5	4	5
4.	33344413	25	6	4	4	3	2
5.	11235233	23	7	4	6	2	4
6.	52411987	37	6	3	6	3	6
7.	73948215	39	5	3	6	5	4
8.	95664982	49	4	2	5	3	6
9.	52282521	27	6	2	5	1	2
10.	21123201	12	3	1	4	2	0
11.	11211000	6	5	1	4	2	0
12.	12225563	26	4	1	5	3	2
13.	83467486	46	7	3	6	5	4
14.	35454644	35	8	6	6	4	6
15.	65644672	40	8	6	6	3	6
16.	42243322	22	7	2	5	3	2
17.	21121110	9	5	2	4	2	1
18.	00110011	4	3	0	4	0	1
19.	43332111	18	4	1	4	3	2
20.	14011021	10	3	0	4	1	2
21.	11214412	16	5	0	5	3	1
22.	21124324	19	7	3	5	3	2
23.	45353620	28	6	1	5	3	2
24.	10121121	9	4	0	4	1	0
25.	10001110	4	3	1	4	0	0
26.	21111200	8	3	0	4	1	0
27.	00111010	4	3	0	4	0	0
28.	12134222	17	4	0	4	2	2
29.	21121113	12	4	1	4	2	1
30.	11001233	11	3	0	4	1	0

Monthly averages:

T (N)	2,445
T (E)	1,858
K_1	4,87
K_2	1,73
K_3	4,67
K_4	2,30
K_5	2,23

October

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	99122124	30	4	2	5	4	2
2.	78699544	52	5	1	6	3	5
3.	94542110	26	4	1	5	3	3
4.	00111220	7	2	0	5	1	1
5.	00121000	4	2	0	4	1	0
6.	00544132	19	6	3	6	2	3
7.	54700284	30	6	3	6	3	2
8.	31111132	13	4	0	4	0	0
9.	23111133	15	4	1	4	1	2
10.	20111000	5	3	0	4	0	0
11.	00111011	5	4	0	4	0	0
12.	64587597	51	7	3	7	3	7
13.	44556544	37	7	4	6	5	4
14.	43234334	26	7	3	5	3	3
15.	10122211	10	6	3	5	1	0
16.	00102221	8	3	0	4	0	1
17.	23332213	19	7	4	5	3	1
18.	22242011	14	5	3	4	1	2
19.	10143125	19	5	2	4	1	2
20.	41233110	15	4	0	4	2	2
21.	00121000	4	4	0	5	1	0
22.	00001001	2	2	0	4	1	0
23.	00011121	6	2	0	4	0	1
24.	10022231	11	3	0	5	1	1
25.	00132013	10	3	0	4	1	2
26.	10021142	11	3	1	4	2	1
27.	22222111	13	4	0	4	1	1
28.	10112013	9	4	1	4	1	0
29.	55289999	56	8	8	8	7	4
30.	23447564	35	7	2	7	3	4
31.	63699999	60	7	9	9	8	9

Monthly averages:

T (N)	2,391
T (E)	1,798
K_1	4,58
K_2	1,74
K_3	5,00
K_4	2,03
K_5	2,03

November

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	95679999	63	9	8	8	7	9
2.	99848998	64	9	6	7	8	8
3.	97858843	52	7	5	7	4	8
4.	21786639	42	5	3	6	4	4
5.	02121003	9	4	1	4	0	1
6.	01111131	9	5	2	4	2	1
7.	45435330	27	5	2	6	3	6
8.	11123522	17	4	0	4	1	2
9.	33434641	28	7	3	5	3	5
10.	13224422	20	4	1	4	2	2
11.	23133100	13	3	0	4	2	1
12.	10111010	5	4	0	4	0	1
13.	00032122	10	3	0	5	1	2
14.	00011113	7	7	2	4	0	1
15.	01110000	3	3	0	4	1	0
16.	11149943	32	7	5	7	4	0
17.	32533685	35	4	1	5	4	4
18.	94232244	30	4	0	4	3	2
19.	21121110	9	4	0	3	2	0
20.	11194552	28	4	2	5	4	2
21.	11111133	12	3	0	4	0	2
22.	11011112	8	3	0	4	2	1
23.	23321101	13	7	3	4	1	2
24.	21021411	12	4	0	4	2	1
25.	32123142	18	4	0	4	2	3
26.	11111131	10	3	0	4	2	1
27.	33233114	20	5	1	4	3	2
28.	11211032	11	3	0	4	1	2
29.	31121110	10	6	2	4	2	1
30.	00001011	3	1	0	4	0	0

Monthly averages:

T (N)	2,525
T (E)	1,867
K_1	4,70
K_2	1,57
K_3	4,67
K_4	2,33
K_5	2,47

December

Day	T	Sum	K_1	K_2	K_3	K_4	K_5
1.	12139231	15	2	0	4	1	2
2.	00121121	8	2	0	4	3	2
3.	12223575	32	3	1	5	3	3
4.	51243563	29	4	1	4	2	3
5.	22464352	28	4	2	5	3	2
6.	22211002	10	5	1	4	2	1
7.	10111130	8	3	0	4	0	1
8.	11111122	10	3	0	4	2	2
9.	11121211	10	3	0	4	1	2
10.	32322013	16	4	1	5	1	2
11.	11011331	11	3	0	4	2	1
12.	33021121	13	3	0	4	2	2
13.	11021152	13	3	0	4	2	1
14.	10111000	4	3	0	4	0	1
15.	11102112	9	2	0	4	1	1
16.	12112113	12	2	0	4	3	1
17.	21001010	5	1	0	4	0	1
18.	12111132	12	4	1	4	2	2
19.	33113123	17	5	1	5	3	2
20.	21121001	8	3	1	5	2	0
21.	22333343	23	5	1	4	4	1
22.	53133131	20	5	1	5	3	2
23.	11233345	22	4	1	5	3	2
24.	21212214	15	4	2	5	3	0
25.	59772223	37	6	6	6	3	2
26.	42122111	14	3	0	4	1	0
27.	12376221	24	3	1	5	2	1
28.	11122212	12	4	2	4	3	2
29.	11111426	17	3	0	5	1	3
30.	11012132	11	3	0	4	2	1
31.	31121125	16	4	0	4	3	1

Monthly averages:

T (N)	1,823
T (E)	1,328
K_1	3,42
K_2	0,74
K_3	4,39
K_4	2,03
K_5	1,52

II. *Average amplitudes for different periods*

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
											January	North
1.	8	8	6	5	4	9	11	18	17	15	12	16
2.	2	5	2	2	1	2	3	6	12	10	8	9
3.	34	35	37	37	35	37	37	40	37	38	38	39
4.	67	57	46	55	59	48	43	54	55	67	68	63
5.	84	64	67	52	44	34	41	24	26	32	35	60
6.	—1	0	—11	—20	—27	—21	—17	+17	+27	+2	—41	—84
												East
1.	9	6	4	5	4	9	12	17	19	17	16	19
2.	2	3	2	2	6	5	1	9	5	6	3	12
3.	34	34	34	32	39	35	35	36	34	35	34	34
4.	55	37	43	37	36	31	38	43	49	39	52	52
5.	57	50	32	43	31	35	30	23	24	27	24	27
6.	—3	0	+7	+3	+4	+5	—1	—20	+31	+49	+27	—3
											February	North
1.	7	6	9	7	9	12	14	20	23	18	17	20
2.	2	3	6	4	5	6	10	13	16	12	9	10
3.	32	35	32	35	37	39	39	36	42	41	37	39
4.	45	50	53	46	60	58	47	50	64	59	65	55
5.	92	93	79	60	41	35	27	34	27	60	86	83
6.	+2	—38	—41	—36	—44	—30	—23	—4	+33	+45	—7	—85
												East
1.	10	6	10	7	4	12	14	20	23	26	28	29
2.	6	3	3	1	0	7	5	10	10	10	8	11
3.	35	34	33	35	35	35	31	31	39	37	35	33
4.	50	37	30	27	45	37	34	41	50	35	59	63
5.	66	84	67	65	24	33	45	35	17	47	33	32
6.	+31	—7	+9	+4	+10	—4	—12	—7	+14	+25	+70	+62

and hourly means of earth current elements

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
14	17	13	13	14	9	7	8	8	8	6	6	10,5
13	4	2	5	6	8	4	3	5	6	3	3	5,2
37	35	35	38	37	36	37	34	37	36	35	32	36,4
58	65	62	39	53	43	52	39	56	47	49	67	54,7
53	45	23	31	35	118	46	75	78	68	77	55	52,8
—76	—21	+12	+33	+27	+11	—3	+45	+55	+44	+32	+17	
Component												
21	21	20	15	16	9	5	5	8	10	3	11	11,7
7	11	9	3	3	3	3	3	3	6	4	3	4,8
33	34	34	33	34	34	35	32	32	32	32	32	33,9
46	44	40	44	42	32	46	44	56	36	43	40	42,7
38	25	78	31	53	79	66	61	80	72	70	84	47,5
—18	—18	—1	+8	+10	—15	—10	—19	—15	—11	—8	—2	
Component												
17	19	14	16	12	12	6	9	9	10	6	7	12,5
17	17	13	13	5	7	6	3	8	10	7	6	8,7
51	53	44	37	38	37	34	35	35	37	39	36	38,3
63	89	58	48	49	42	37	63	45	35	64	42	53,9
125	82	68	58	73	93	126	83	93	148	107	133	79,4
—112	—81	—32	+68	+89	+77	+65	+57	+23	+25	+38	+9	
Component												
30	32	22	23	22	14	9	7	10	13	9	10	16,3
20	20	13	19	9	9	7	6	10	7	7	9	8,7
45	46	42	42	33	37	35	34	28	32	35	31	35,5
50	50	38	35	45	55	52	35	45	24	42	57	43,2
57	58	37	31	47	68	85	97	103	178	134	114	64,9
+20	+1	—21	+3	—18	—27	—37	—26	—3	—37	—24	—26	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												March No th
1.	7	10	6	10	12	15	19	23	21	17	10	10
2.	8	5	9	6	5	4	15	16	19	10	3	5
3.	33	34	37	33	34	37	48	40	37	36	36	39
4.	33	55	58	44	44	44	63	71	55	66	58	72
5.	82	67	48	63	54	37	28	41	63	43	49	88
6.	—16	0	—16	—15	—10	—9	+1	+46	+91	+29	—63	—147
												East
1.	12	11	5	10	8	13	16	26	27	23	23	25
2.	8	2	3	1	3	3	8	10	13	11	4	6
3.	31	31	35	33	35	35	37	37	37	32	35	38
4.	32	39	38	39	39	42	38	43	41	43	46	50
5.	97	56	62	37	45	37	32	32	41	49	34	52
6.	—2	+1	—11	—7	—20	—13	—27	—14	+30	+70	+67	+49
												April North
1.	10	8	8	13	16	18	25	28	26	24	23	20
2.	11	4	5	5	11	16	20	20	17	15	8	7
3.	33	36	37	37	38	37	46	46	47	45	49	38
4.	44	50	42	51	46	43	37	56	57	42	62	59
5.	80	74	50	62	71	61	40	32	24	34	29	80
6.	+3	+8	+13	+12	+14	+19	+37	+68	+54	—41	—106	—170
												East
1.	11	10	8	13	17	23	26	35	38	38	39	38
2.	8	7	5	2	7	7	11	20	10	16	5	12
3.	29	33	36	34	42	32	37	38	45	37	41	37
4.	43	49	39	38	40	31	23	42	39	38	38	50
5.	97	40	48	55	44	55	53	24	23	28	34	46
6.	—9	—13	—5	—6	—15	—26	+8	+35	+52	+48	+17	+9

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
15	12	12	14	8	10	10	9	10	5	8	15	12,0
12	7	4	10	5	2	3	8	7	4	9	12	7,8
40	38	38	37	36	34	34	32	37	36	35	35	36,5
67	55	66	46	45	42	35	62	59	53	49	60	54,3
64	70	62	56	51	39	62	120	128	83	99	116	67,2
—147	—100	—40	+36	+76	+55	+46	+64	+60	+44	+14	+1	
Component												
24	25	19	21	15	11	10	12	13	11	17	21	16,6
12	10	10	10	2	4	5	6	13	6	12	13	7,3
37	37	37	37	36	35	34	37	31	32	38	35	35,1
45	41	50	39	39	41	41	52	57	48	47	38	42,8
34	46	43	59	35	46	55	98	94	80	80	128	57,2
+31	+37	—1	—25	—24	—28	—50	—50	—34	—10	+7	+24	
Component												
17	16	16	13	11	9	6	9	8	7	8	10	14,5
11	12	11	10	4	6	4	12	10	6	7	10	10,1
45	47	41	41	37	35	35	37	40	35	37	39	39,9
69	58	44	49	47	31	37	42	52	62	56	53	49,5
71	57	60	83	80	68	65	96	88	72	114	120	67,1
—153	—59	—15	+50	+73	+45	+31	+51	+23	+18	+8	+17	
Component												
31	34	35	28	24	17	11	14	14	12	11	15	22,6
12	19	15	8	8	7	5	10	10	5	13	14	9,8
34	35	37	39	37	37	33	40	38	34	36	34	36,5
40	35	34	32	41	29	37	30	31	67	49	44	39,1
66	46	46	70	71	74	70	122	87	62	92	95	60,3
+1	0	+1	—10	+7	—38	—29	—18	+5	—11	—6	+3	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												May North
1.	16	27	24	24	28	32	38	32	31	26	23	24
2.	14	29	28	23	28	40	42	38	26	23	19	20
3.	37	38	43	40	38	46	44	40	40	39	41	46
4.	68	57	58	63	53	86	55	53	58	53	58	50
5.	57	128	89	73	53	31	50	68	51	43	58	71
6.	+15	—24	+2	+22	+66	+85	+104	+64	+3	—83	—168	—180
												East
1.	19	23	21	20	21	31	50	46	46	44	41	46
2.	17	22	19	20	16	28	32	47	26	27	24	33
3.	39	37	41	36	37	35	38	38	40	36	41	38
4.	69	58	46	41	46	40	27	42	44	49	48	49
5.	23	47	53	66	33	41	32	29	35	40	69	63
6.	+19	—5	—12	—2	—11	+15	+43	+55	+55	+42	+3	—21
												June North
1.	14	19	23	23	26	47	34	31	32	29	29	22
2.	14	16	18	19	23	40	37	26	19	22	23	20
3.	40	37	43	39	44	49	49	35	46	40	38	43
4.	62	54	53	64	60	52	73	68	66	60	77	56
5.	66	98	67	67	55	100	60	59	28	35	45	81
6.	+14	+12	+22	+35	+35	+89	+105	+88	+35	—70	—147	—176
												East
1.	17	22	28	24	29	48	48	41	49	51	44	53
2.	7	16	14	11	16	25	31	26	29	26	31	31
3.	38	37	32	31	36	38	43	34	39	31	41	47
4.	50	52	52	38	42	34	42	43	45	51	59	46
5.	50	55	64	58	42	75	28	43	54	54	60	82
6.	+21	+23	—5	—16	—8	+15	+61	+76	+57	+39	—10	—37

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
23	19	17	16	11	11	8	12	12	19	15	16	21,0
23	19	13	13	9	12	7	12	12	26	19	16	21,3
44	38	46	47	34	40	41	38	39	41	34	46	40,8
75	80	74	80	64	57	41	61	50	53	76	61	61,8
58	55	40	66	105	74	93	39	63	62	74	95	66,5
—130	—58	+17	+65	+84	+83	+41	+15	—22	—4	—3	+6	
Component												
45	39	30	32	27	24	13	14	10	21	24	23	29,6
24	24	22	26	21	18	11	10	12	25	28	21	23,0
41	40	37	48	35	35	36	34	35	37	37	40	38,0
48	62	59	42	40	51	43	47	51	46	53	55	48,2
51	64	26	70	130	77	125	63	66	70	70	79	59,2
—26	—10	—10	—5	—38	—29	—26	—23	—7	—6	—3	+3	
Component												
22	20	16	14	11	7	7	11	13	16	14	17	20,7
20	14	14	11	8	6	8	14	15	11	14	20	18,0
41	50	43	42	38	38	32	35	35	35	38	34	40,2
70	71	59	67	53	55	55	44	67	55	43	62	60,3
63	53	75	52	52	44	47	62	92	98	89	90	65,8
—153	—69	—11	+9	+70	+71	+46	+10	—14	0	—3	+3	
Component												
44	40	35	34	25	21	19	16	17	21	23	26	32,3
25	31	24	25	16	9	11	17	16	14	17	20	20,3
41	59	36	46	38	37	35	35	40	32	38	38	38,4
64	55	46	67	59	60	50	64	77	66	52	43	52,4
57	40	72	56	66	77	81	65	67	91	59	92	62,0
—33	—10	—28	—47	—39	—34	—31	—20	—3	+7	+26	—7	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
											July	North
1.	10	16	18	17	20	26	21	18	15	12	12	12
2.	13	11	18	13	20	22	18	15	12	9	8	9
3.	35	38	34	36	38	39	35	37	38	38	36	33
4.	42	46	38	37	42	63	46	57	50	50	48	44
5.	89	60	71	53	49	29	45	32	23	30	41	48
6.	+1	+15	—2	+28	+74	+112	+102	+104	+46	—47	—132	—176
												East
1.	14	17	17	17	20	24	24	26	27	25	27	23
2.	13	15	11	13	5	12	11	15	14	13	15	19
3.	35	32	35	37	34	38	38	31	36	37	38	35
4.	42	38	41	31	33	35	38	47	30	42	41	44
5.	44	41	42	48	30	30	16	17	35	37	49	30
6.	+10	—3	—1	—2	—5	+4	+47	+68	+73	+62	+28	—6
											August	North
1.	8	13	13	12	16	20	20	18	18	16	15	15
2.	12	13	20	16	13	20	22	22	16	17	15	11
3.	35	32	38	31	33	37	40	44	39	37	37	37
4.	44	41	47	48	40	45	57	48	51	43	53	49
5.	37	75	32	38	42	41	29	39	31	42	28	45
6.	+15	+2	+13	+25	+52	+81	+74	+62	+16	—75	—124	—183
												East
1.	9	12	12	13	14	18	23	24	31	26	27	28
2.	10	15	13	15	10	11	15	20	22	23	20	23
3.	36	31	35	34	37	34	35	33	35	35	36	37
4.	29	36	35	39	31	38	39	43	35	38	37	39
5.	61	48	38	30	34	33	26	27	35	38	38	41
6.	—6	+7	—11	+7	—14	+6	+64	+93	+105	+53	+24	—33

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
9	9	8	8	6	8	6	9	11	10	8	8	12,4
9	8	6	3	5	5	6	8	11	11	9	9	10,8
35	35	37	37	37	35	37	38	35	35	35	36	36,2
48	49	40	43	46	44	41	62	36	40	50	41	46,0
63	62	70	59	27	40	53	35	59	48	60	61	50,3
—149	—80	—34	+17	+59	+57	+28	+1	+1	+5	—28	—4	
Component												
25	27	28	18	17	17	15	16	13	13	10	12	19,7
21	15	16	9	8	10	9	14	13	12	11	12	12,8
33	39	34	36	38	37	39	34	33	32	35	33	35,4
37	46	33	36	30	44	46	43	29	39	48	34	38,6
52	50	62	56	41	62	53	50	70	48	39	61	44,3
—44	—24	—26	—36	—29	—28	—38	—24	—15	+2	—13	0	
Component												
12	9	10	11	5	8	7	12	14	12	8	9	12,5
13	8	6	7	4	4	7	18	19	13	10	9	13,1
37	36	35	33	37	35	35	44	39	40	35	35	36,7
53	43	50	57	43	52	53	51	47	32	43	45	47,3
63	54	53	51	55	52	58	86	60	84	104	55	52,3
—141	—69	+15	+67	+97	+82	+62	—48	—43	+4	+18	—1	
Component												
24	21	23	21	16	13	10	7	12	11	10	10	17,3
20	15	19	13	9	16	9	6	13	14	14	17	15,0
35	37	39	37	34	38	37	36	34	33	41	35	35,6
39	46	52	34	35	35	45	42	35	38	34	42	38,2
63	30	44	67	63	89	62	63	84	80	70	39	50,1
—51	—46	—22	—8	—20	—23	—18	—40	—38	—38	+8	+3	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
											September	North
1.	8	14	9	12	15	16	25	23	20	17	14	16
2.	10	15	10	13	14	16	17	19	19	19	12	16
3.	38	38	37	36	36	38	43	44	38	41	38	41
4.	36	54	49	46	47	61	49	66	52	58	71	57
5.	75	127	50	41	64	25	37	30	39	59	50	52
6.	0	+1	+25	+1	+9	+39	+61	+101	+60	—57	—123	—187
												East
1.	10	18	14	14	19	14	22	31	36	35	29	33
2.	10	12	6	7	7	8	15	15	16	20	22	21
3.	40	40	30	32	35	37	35	38	38	35	37	37
4.	26	43	42	29	42	47	44	47	42	43	49	33
5.	67	68	55	56	53	22	30	19	25	33	28	50
6.	—7	—5	+9	+17	—5	+15	+40	+69	+71	+39	+27	—27
											October	North
1.	11	10	9	9	10	14	16	21	17	12	16	19
2.	11	12	10	6	8	12	15	17	16	9	17	23
3.	35	34	40	39	40	39	38	58	49	41	54	54
4.	42	34	57	54	73	45	35	51	59	49	55	57
5.	60	80	45	50	14	38	52	28	20	53	72	82
6.	+4	+6	—8	+6	+4	+6	+51	+96	+122	+34	—74	—164
												East
1.	12	10	7	5	12	20	19	21	22	27	28	35
2.	8	10	5	6	9	7	16	17	20	12	20	26
3.	35	35	35	35	34	41	35	49	44	38	47	45
4.	40	37	45	49	46	31	34	34	45	30	55	39
5.	52	55	52	44	35	41	28	26	20	56	45	65
6.	0	+13	+7	+13	+35	+15	+6	+24	+67	+75	+55	—3

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
13	12	11	15	8	7	15	6	9	11	7	6	12,9
17	15	10	14	10	8	16	6	9	10	7	5	12,8
43	46	45	41	38	37	30	38	35	45	42	39	39,5
76	73	61	42	55	40	40	36	43	26	58	42	51,6
37	56	62	64	97	102	65	75	44	76	55	80	60,9
—122	—52	+18	+78	+113	+68	+30	+7	—39	—18	—6	—7	
Component												
33	29	28	25	25	13	9	7	8	13	10	5	20,0
18	16	17	18	15	8	9	7	8	13	8	8	12,7
35	41	44	38	37	37	39	37	39	37	35	43	37,3
56	52	42	43	44	28	60	43	43	34	41	32	41,9
33	37	48	58	70	73	42	50	36	59	79	88	49,1
—25	—36	—20	—5	+5	—15	—37	—39	—34	—21	—12	—4	
Component												
15	16	17	12	9	7	9	13	6	9	6	6	12,0
24	26	38	10	10	6	8	17	8	6	8	9	13,6
61	66	64	41	44	37	44	43	38	38	40	35	44,7
76	58	38	50	53	54	37	37	53	87	51	44	52,0
87	102	53	75	68	98	79	91	89	43	86	80	64,4
—154	—89	—2	+58	+22	0	+29	—39	+18	+16	—14	—6	
Component												
27	37	29	19	17	10	13	13	12	15	12	10	18,0
28	35	38	13	15	9	15	16	6	14	13	10	15,3
50	51	60	39	41	34	40	46	39	38	39	34	41,0
53	43	33	50	50	54	40	41	42	76	53	41	44,2
49	82	37	55	88	66	70	91	93	61	87	108	58,6
—41	—37	—23	—2	—19	—41	—19	—39	—10	—19	—36	—21	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
											November	North
1.	7	9	11	8	10	13	17	25	25	17	18	21
2.	5	5	10	10	7	8	13	26	24	12	16	20
3.	40	37	38	40	38	43	43	43	46	44	43	42
4.	39	58	42	56	50	33	69	56	57	71	71	55
5.	130	99	130	72	62	62	43	44	47	37	38	71
6.	—4	—7	—7	—18	—28	+8	+22	+33	+49	+14	—35	—64
												East
1.	11	9	11	7	11	14	27	35	28	23	28	29
2.	7	7	11	8	6	8	20	20	17	13	20	18
3.	35	31	36	41	38	39	37	33	32	36	44	38
4.	32	49	37	38	28	26	41	46	40	37	43	44
5.	119	70	77	57	59	65	53	37	34	35	41	31
6.	—6	+4	—18	—11	—8	—26	—5	+5	+45	+25	+20	+12
											December	North
1.	7	6	8	6	10	11	12	13	13	17	13	21
2.	9	6	6	4	7	4	8	7	15	20	11	20
3.	35	35	36	38	37	37	41	37	39	39	38	42
4.	52	53	30	48	50	51	44	49	39	47	50	53
5.	30	44	72	38	33	29	20	12	23	14	44	45
6.	+2	+2	—23	—19	—21	+3	+3	+12	—4	—16	—39	—56
												East
1.	7	5	3	3	6	5	9	14	13	17	15	19
2.	1	3	2	2	1	3	5	10	9	17	7	17
3.	34	36	34	38	35	34	39	34	38	37	37	36
4.	28	26	36	37	39	33	35	41	36	35	41	43
5.	55	48	49	37	39	47	30	15	20	32	26	19
6.	+4	—7	—10	—15	—15	—27	+4	+1	+41	+54	+27	—11

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
18	20	21	19	22	13	8	10	9	7	10	8	14,4
14	22	21	23	19	9	5	8	4	7	10	10	12,8
41	48	37	43	44	47	38	34	40	37	36	41	41,0
43	61	49	61	55	56	68	55	79	46	53	43	55,3
89	101	89	70	139	94	85	115	72	89	74	105	81,5
—62	—19	+4	+55	+32	+30	+59	+27	—42	—44	+4	—6	
Component												
31	32	32	31	27	12	7	9	7	13	14	10	19,1
20	17	25	25	17	10	10	7	5	13	13	8	13,5
31	41	34	43	37	40	36	32	49	31	34	36	36,8
47	34	28	47	46	36	61	47	61	44	47	37	41,5
34	106	96	76	140	98	53	98	71	72	80	125	72,0
—1	—7	+17	+13	—4	—2	+1	—8	—24	—26	+5	—1	
Component												
15	14	14	10	9	9	5	7	7	6	10	10	10,5
15	7	6	8	3	5	3	6	4	6	6	12	8,3
39	37	35	37	36	35	37	38	35	37	36	35	37,1
60	54	49	47	39	39	50	51	49	50	42	52	48,0
20	37	32	30	50	66	74	45	54	45	55	75	41,1
—31	+6	+7	+23	+7	+35	+47	+44	—5	+10	+6	+5	
Component												
17	24	16	14	12	10	6	5	6	8	5	12	10,5
10	7	5	8	4	4	0	5	3	4	4	12	6,0
34	30	36	42	35	35	34	37	37	34	36	35	35,7
47	32	23	32	25	36	46	36	34	38	37	59	36,5
27	47	44	32	57	50	52	54	55	66	61	54	42,3
—19	—3	—4	+12	+2	+12	—9	—14	—12	—9	—7	+1	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												Year 1968. North
1.	9	12	12	12	15	19	21	23	22	18	17	18
2.	9	10	11	10	12	16	18	19	17	15	12	14
3.	36	36	38	37	37	40	42	42	41	40	41	41
4.	48	51	48	51	52	52	52	57	55	55	61	56
5.	73	84	67	56	49	44	39	37	33	40	48	67
6.	+3	—2	—3	+2	+10	+32	+43	+57	+44	—22	—88	—139
												East
1.	12	12	12	12	14	19	24	28	30	29	29	32
2.	8	10	8	7	7	10	14	18	16	16	13	19
3.	35	34	35	35	37	36	37	36	38	36	39	38
4.	41	42	41	37	39	35	36	43	41	40	47	45
5.	66	55	53	50	39	43	34	27	30	40	40	45
6.	+4	+1	—3	—1	—4	—2	+19	+32	+53	+49	+30	—1
												Quiet days North
1.	5	8	9	10	9	15	14	15	13	8	10	12
2.	6	7	8	6	6	10	10	10	8	3	4	5
3.	35	35	35	34	34	36	35	35	37	35	35	36
4.	34	35	34	39	31	36	40	44	37	38	37	42
5.	30	28	23	19	24	19	22	17	20	25	26	33
6.	+1	+5	+2	+6	+20	+41	+52	+66	+59	—11	—131	—149
												East
1.	7	6	6	6	8	11	12	14	17	14	17	18
2.	6	6	6	3	2	4	7	7	6	5	7	11
3.	35	32	33	31	33	35	33	32	34	34	33	34
4.	32	29	27	28	28	28	28	32	28	32	31	35
5.	28	26	27	24	17	19	20	20	23	24	26	24
6.	+7	+3	—1	—1	—10	—4	+10	+28	+46	+38	+18	—7

12	13	14	15	16	17	18	19	20	21	22	23	Averages
Component												
16	16	14	13	10	9	8	10	10	10	9	10	13,9
16	13	12	11	8	7	6	10	9	10	9	10	11,8
43	45	42	39	38	37	36	37	37	38	37	37	39,0
63	63	54	52	50	46	46	50	53	49	53	51	52,8
66	65	57	58	69	74	71	77	77	76	83	89	62,5
—119	—58	—5	+47	+62	+51	+40	+26	+1	+10	+5	+3	
Component												
30	30	26	23	20	14	11	10	11	13	12	14	19,5
18	18	18	15	11	9	8	9	10	11	12	12	12,4
37	41	39	40	36	36	36	36	36	35	36	36	36,7
48	45	40	42	41	42	47	44	47	46	46	43	42,4
47	53	53	55	72	72	68	76	75	78	77	89	55,7
—17	—13	—12	—8	—14	—22	—25	—26	—16	—15	—5	—2	
Component												
9	9	10	8	5	5	4	5	6	5	3	6	8,5
7	7	5	5	4	3	2	2	6	5	4	7	5,8
36	37	35	35	35	34	33	36	34	35	35	33	35,0
37	39	32	51	35	32	35	34	36	30	41	33	35,9
32	24	28	26	20	32	26	19	34	35	21	34	25,7
—132	—64	+4	+50	+67	+44	+28	+3	+12	+9	+13	+6	
Component												
14	15	12	14	9	6	8	5	8	7	5	6	10,2
9	9	10	9	7	5	5	2	9	5	9	10	6,6
31	33	32	33	34	33	32	33	32	33	35	34	33,1
30	38	28	29	27	31	33	31	33	31	28	31	30,3
29	19	23	26	30	30	32	31	33	35	37	29	27,1
—28	—28	—15	—10	—12	—15	—14	—14	—11	—4	+8	+11	

Hour Parameter	0	1	2	3	4	5	6	7	8	9	10	11
												Disturbed days
1.	21	18	25	21	28	50	44	42	45	45	41	43
2.	23	24	31	24	30	44	50	50	39	41	47	49
3.	50	47	47	47	47	64	74	76	85	48	77	71
4.	68	95	93	103	77	63	108	77	82	95	109	93
5.	281	292	209	115	166	151	115	128	72	83	94	126
6.	0	0	—46	+32	—56	—3	+38	+47	+67	+27	—47	—90
												East
1.	29	25	29	26	35	59	55	62	62	62	59	71
2.	20	23	23	21	30	39	41	46	38	40	42	41
3.	43	39	41	46	54	58	57	59	72	42	68	65
4.	56	50	50	67	73	35	51	71	56	53	62	56
5.	220	202	180	104	94	148	115	67	58	95	94	112
6.	—9	—26	—49	+19	+3	+36	+47	+100	+95	+67	+23	+25

12	13	14	15	16	17	18	19	20	21	22	23	Averages
North Component												
36	38	35	25	33	18	11	18	16	15	12	16	29,0
45	55	69	32	29	16	13	24	12	13	14	13	32,8
79	115	86	51	44	51	36	37	50	41	43	49	58,9
141	137	87	90	88	91	83	56	119	125	107	59	93,5
148	266	164	212	281	284	248	250	230	176	281	236	192,0
—85	—32	—12	+28	+32	+37	+75	—31	+12	+36	—23	—7	
Component												
68	66	53	45	58	25	24	22	20	21	22	22	42,5
48	67	77	41	37	21	22	25	12	16	17	16	33,5
59	102	78	62	46	49	41	45	58	40	40	49	54,7
75	68	57	75	92	59	67	67	100	88	92	41	65,0
124	227	133	194	302	274	173	191	151	153	187	261	160,7
+4	+2	—10	—14	—51	—55	—19	—61	—45	—58	+17	—37	

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	29	143	20	244	21	129	23	309	5	107	3	78
February	39	167	42	251	40	83	21	245	8	115	1	219
March	37	125	61	259	40	94	29	298	5	146	10	73
April	43	109	59	286	42	119	22	308	5	181	5	129
May	41	102	85	304	49	143	3	60	7	194	2	73
June	49	85	79	296	44	130	11	27	8	242	6	339
July	48	70	82	291	42	134	6	2	2	194	11	47
August	39	97	77	308	53	129	8	228	9	232	10	329
September	25	105	72	302	59	121	17	337	11	250	2	127
October	28	75	59	269	48	110	37	322	13	132	5	149
November	6	199	29	287	31	97	7	14	11	162	9	246
December	20	162	18	281	12	125	10	44	8	160	5	300
Year	29	109	53	287	38	118	12	318	5	176	1	31
Q.	33	99	57	289	46	125	18	315	6	200	6	55
D.	10	128	37	265	33	100	14	325	8	224	7	350
						East Component						
January	11	336	3	162	11	57	13	252	7	105	4	353
February	24	323	17	109	14	351	6	201	11	46	8	131
March	27	316	34	121	6	39	10	222	6	176	7	358
April	18	309	15	170	10	103	12	312	2	247	6	226
May	25	2	15	205	17	129	9	352	4	125	0	270
June	30	22	23	204	19	135	14	15	3	273	8	349
July	34	0	24	202	17	99	9	323	0	72	1	332
August	38	357	24	227	32	102	8	326	5	220	8	228
September	32	354	14	210	21	100	8	285	6	282	3	184
October	34	353	11	211	17	49	17	273	12	94	4	52
November	13	290	6	151	12	78	4	291	6	166	4	203
December	11	296	10	184	17	77	8	275	5	145	4	0
Year	22	345	12	183	13	88	7	293	2	131	0	63
Q.	15	9	14	191	14	88	6	283	2	158	2	219
D.	53	335	19	203	15	139	3	14	12	198	6	190

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
1.	11.	13.45	11,0	21	+	+	+	—	13. 1.00
	26.	15.45	9,0	20	+	+	+	—	26. 20.00
2.	7.	18.15	3,5	10	+	+	+	—	9. 8.00
	10.	17.15	12,0	30	+	+	+	—	12. 5.00
	20.	8.00	~10,0	20	+	+	+	—	22. 0.00
	27.	20.30	6,5	50	—	+	+	+	29. 5.00(b?)
3.	23.	14.45	11,0	25	—	—	—	+	26. 1.00(si?)
4.	5.	14.30	3,5	12	+	+	+	—	6. 23.00(b?)
5.	7.	1.30	5,5	22	+	+	+	—	8. 2.00
6.	10.	22.45	>18,0	60	+	+	+	—	12. 23.00
	25.	17.15	6,5	28	+	+	+	—	28. 3.00(b?)
7.	9.	23.00	5,5	18	+	+	+	—	11. 4.00(b?)
	13.	17.15	~12,0	65	+	+	+	—	14. 21.00
9.	6.	15.30	22,0	26	+	+	+	—	7. 2.00
10.	6.	7.30	9,5	22	+	+	+	—	7. 9.00
	26.	19.30	7,0	26	+	+	+	—	27. 12.00(b?)
	28.	22.30	3,5	16	+	+	+	—	continued (si?)
	29.	10.15	>10,0	48	+	+	+	—	continued
	31.	10.00	?	58	?	?	+	+	11. 5 0.00(?)
11.	16.	10.15	7,0	32	+	+	+	—	continued
		14.15	>14,0	50	+	+	+	—	18. 12.00(?)
	20.	10.00	>13,0	40	+	+	+	—	20. 21.00
	24.	17.00	2,5	21	—	—	+	—	no storm (si?)
12.	5.	7.30	>7,0	32	+	—	+	—	6. 4.00
	11.	16.15	4,0	16	+	+	+	—	12. 7.00
	15.	14.15	3,5	12	—	—	+	O	(?)

			BAYS						Pt-s		
Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
1.	1.	21,15	6,0	30	—	+	+	+	2,0	+	+
	3.	23,30	3,5	17	+	+	+	0			
	4.	23,45	9,0	55	+	+	+	—	1,0	+	+
	5.	11,45	5,5	8	+	+	+	—			
	6.	21,30	8,0	40	+	+	+	+	tr		
	8.	16,30	4,5	30	—	+	+	+			
	11.	18,45	12,5	62	—	—	—	+			
	12.	19.00	8.0	45	—	+	+	+			
	14.	20.15	9,0	60	—	—	—	+			
		23.15	8,0	25	—	+	+	+	tr		
	15.	22.15	6,5	28	+	+	+	—	2,5	+	+
	16.	20.45	10,0	30	—	—	+	—			
		22.45	9,0	37	—	+	0	+			
		23.30	6,5	30	—	+	+	+	1,0	+	+
	17.	20.30	7,0	22	—	+	+	+			
	18.	1.15	8,0	40	+	+	+	—			
	19.	17.00	10,0	70	—	+	—	+			
		23.00	6,5	28	+	—	—	—	tr		
	20.	20.30	6,5	22	—	+	+	+	tr		
	21.	17.30	4,5	18	—	+	0	+			
		22.45							2,5	—	—
	23.	20.45	8,0	42	—	+	+	+	2,0	+	+
	24.	19.45	6,5	45	—	+	+	+	tr		
	25.	21.15							2,5	—	+
	27.	23.00	3,5	20	+	+	+	0	tr		
	28.	1.15	4,5	60	+	+	+	—			
		20.15	9,0	85	+	+	+	+	tr		
	29.	0.00	14,5	70	+	+	+	+	tr		
2.	2.	21.15	8,0	26	+	+	+	—			
	3.	1.00	10,0	50	—	+	+	+			
		17.15	8,0	50	—	+	—	+	tr		
	5.	21.15	12,5	70	+	+	+	—	tr		
		23.00	7,0	50	+	+	+	+			
	8.	19.45	6,5	22	+	+	+	—			
	9.	23.00	2,5	15	+	+	+	0	1,0	+	+
	10.	23.15	12,5	85	+	+	+	+	tr		

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
2.	11.	13.30	14,5	48	—	—	—	+			
		21.30	12,5	50	+	+	+	+			
	12.	2.15	9,0	65	+	+	+	—			
	13.	13.45	8,0	45	—	—	—	+	tr		
		17.15	10,0	90	—	—	—	+	tr		
	15.	18.15	15,5	130	+	+	+	+			
	16.	19.15	7,0	75	—	+	+	+	tr		
		20.45	4,0	15	+	+	+	0	2,5	+	+
	17.	21.15	11,0	80	+	+	+	+	2,5	+	+
	19.	1.30	9,0	50	+	+	+	—			
	25.	20.00	4,5	30	—	+	—	+	2,0	—	—
	26.	2.45							2,0	+	+
		23.30	5,0	0	+	+	0	0	2,5	+	+
	27.	0.30	4,5	0	+	+	0	0	3,5	+	+
	28.	2.15	4,0	45	+	+	+	—	tr		
		23.00	12,5	45	+	+					
		23.30	14,5	48	+	+					
3.	1.	0.30	4.5	0	+	+	0	0	1,0	+	+
	2.	4.15	6.5	30	+	+	+	—			
		21.00	4,5	15	—	+	+	+	2,0	+	+
	3.	19.00	11,0	65	+	+	+	—	tr		
	4.	19.00	8,0	50	—	+	+	+	1,0	—	+
		20.30	10.0	50	—	+	+	+	2,0	+	+
		23.00	6,5	60	+	+	+	+	2,5	+	+
	5.	20.15	8,0	40	—	+	+	+	2,5	—	+
	6.	21.45	5.5	26	+	+	+	—	1,0	+	+
	7.	20.45	2,5	0	—	+	0	0	2,5	—	+
	8.	1.30	3,0	16	+	+	+	+	2,0	+	+
		21.45	5.5	40	—	+	+	+	2,0	+	+
	9.	23.45							2,5	+	+
	10.	0.30	6,5	30	+	+	+	+			
	11.	22.15	5,5	20	—	+	+	+	tr		
		23.15	4.5	22	+	+	+	—	2,5	+	+
	13.	3.00	2,5	10	+	+	+	—	2,0	+	+
		21.00							3,5	+	+
		23.45							3,5	+	+
	14.	0.45	5,5	30	+	+	+	—	3,5	+	+

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
3.	15.	19.15	12,0	80	—	+	+	+			
	16.	13.30	10,5	50	—	—	—	0			
	18.	0.00	6,5	30	+	+	+	—			
		3.15	3,5	20	+	0	0	—			
		18.00	6.5	30	+	—	+	+	tr		
	19.	0.30							2,0	+	+
	20.	3.30	8.0	50	+	—	—	—	tr		
		23.15	5,5	30	+	+	+	+	3,5	—	+
	21.	0.15	5.5	30	+	+	+	—	tr		
	22.	2.15	3,0	12	+	+	+	—			
	23.	22.00	10,0	46	+	+	+	—	tr		
	24.	21.30	8.0	60	+	+	+	+	tr		
	25.	13.15	4,0	28	—	—	—	0			
		19.45	8,0	50	+	+	+	—	tr		
		23.00	4,0	35	+	+	+	0			
	26.	19.30	9,0	60	—	—	—	+			
	27.	20.15							2,5	—	+
		23.00	5,5	38	+	+	+	—			
	28.	22.30	6.5	40	+	+	+	+	2,5	+	+
	29.	19.15	5,5	20	—	—	—	+	tr		
		23.15	8,0	50	—	+	+	+			
	30.	1.45	7.0	42	+	+	+	—			
		20.00	12,5	80	+	+	+	+			
	31.	21.00	8,0	50	+	+	+	+			
4.	1.	18.45	5.5	50	—	+	—	+			
		21.30	8,0	45	—	+	+	+			
	2.	1.15	5.5	40	+	0	0	—	tr		
		15.15	4,5	18	+	+	+	+	1,0	—	+
	3.	4.45	3,5	30	+	+	+	—			
		23.15							2.5	+	+
	4.	0.15	4,0	25	+	+	+	—			
		18.00	4,5	12	—	—	—	+			
		23.00	4,0	22	—	+	+	+	1,0	—	—
	8.	1.00							2,5	+	+
	9.	1.00							2,0	+	+
	10.	18.45	?	30	?	?	+	+	tr		
	11.	4.00	6,5	14	+	+	—	—	tr		

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
4.	12.	7.00							5,5	+	+
		22.30	7,0	32	—	+	+	0	tr		
	13.	4.00	9,0	65	—	+	+	—			
		17.45	9,0	20	—	+	+	0			
		22.15	14,5	60	—	+	+	+			
	14.	19.30	15,5	40	—	+	+	+			
	15.	0.30	2,5	8	+	+	+	+	2,5	+	+
	16.	23.45	4,5	18	+	+	0	+	2,0	+	+
	17.	23.15	4,5	20	+	+	+	—			
	19.	22.45							2,5	+	+
	22.	1.00							3,5	+	+
	23.	1.15	6,5	55	+	+	+	—	tr		
		20.30	5,5	25	—	—	—	+	2,0	+	+
	24.	4.30	6,5	15	+	+	+	—	tr		
	25.	22.00	8,0	45	+	+	+	—	tr		
	27.	19.45	?	45	?	?	—	+			
		20.45							7,0	+	+
	28.	20.15							2,5	+	+
	29.	0.15							2,0	+	+
5.	1.	1.15							2,0	—	—
		22.45	8,0	50	+	+	+	—	tr		
	2.	1.15	5,5	20	+	+	+	—	tr		
	6.	23.15							2,0	+	+
	7.	13.00	9,0	65	+	+	+	—			
	9.	3.00	4,5	28	+	—	—	—	tr		
		21.00	7,0	48	+	+	+	+	2,0	+	+
	12.	1.15	10,0	54	+	+	+	—			
	13.	1.30	8,0	35	+	+	+	—	tr		
	14.	2.15	4,5	25	+	+	+	—	1,0	+	+
	15.	1.15							2,0	+	+
		23.00	3,0	20	—	+	+	+	2,0	+	+
	17.	16.00(Si?)	11,0	25	+	+	+	—			
		16.30	11,0	34	+	+	+	—			
		22.15	9,0	18	+	+	+	+	3,5	+	+
	19.	17.30	7,0	35	+	+	+	+	2,5	—	—
		21.45	7,0	35	+	+	+	—	4,5	+	+
	22.	23.15	4,5	17	+	+	+	—	2,0	+	+

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
5.	23.	0.45							2,5	+	+
		18.00	4,5	14	—	—	+	—			
		22.15	5,5	24	+	+	+	—	2,5	+	+
	24.	1.15	8,0	50	+	+	—	—			
		2.30	8,0	50	+	+	+	—			
	25.	0.30							2,5	+	+
	27.	20.15							2,5	—	+
		23.15							2,5	+	+
	28.	19.00	2,0	22	—	+	—	+	3,5	+	+
	30.	21.30	4,5	16	—	+	+	+	3,5	+	+
	31.	18.30	4,5	22	—	—	—	+	2,5	—	—
6.	1.	22.45	5,5	15	—	—	—	+			
		23.45	6,5	22	+	+	+	—	3,5	+	+
	3.	17.00	6,5	34	—	—	—	+			
	4.	22.15							2,5	+	+
		23.00	2,5	30	0	+	+	0			
	7.	0.00	4,5	14	+	+	+	—			
	10.	2.15	6,5	32	+	+	+	—			
	11.	1.15	14,5	110	+	—	—	—			
	15.	20.30	5,5	18	—	—	+	—	1,0	—	—
	16.	20.30	3,5	12	+	+	+	—	3,5	+	+
	17.	10.30	10,0	24	—	—	—	+			
	19.	21.15	7,0	36	+	+	+	+			
	23.	23.45							2,5	+	+
	24.	22.15							2,5	+	+
	26.	2.45	9,0	42	+	+	+	—	2,5	+	+
	30.	3.00	8,0	28	+	+	+	—	2,5	+	+
7.	2.	0.15	4,5	22	+	+	+	—	3,5	+	+
		2.30	8,0	38	+	+	+	—	1,5	+	+
		23.45	4,0	25	—	+	+	+	2,5	—	—
	3.	2.45	5,5	24	+	+	+	—	2,0	+	+
	6.	3.15							2,0	+	—
		10.45	7,0	28	—	—	—	+			
		15.15	5,5	18	—	—	—	+			
		21.15	2,5	8	—	+	+	+	2,0	+	+
	10.	19.15	10,0	30	+	+	+	—			
		23.00	11,0	50	—	+	+	+	tr		

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
7.	12.	17.15	2,5	22	—	—	—	0			
	13.	20.45	11,0	47	+	+	+	—	2,5	+	+
	14.	4.30	8,0	39	—	—	—	+			
	19.	22.00	6,5	32	—	+	+	+	2,0	—	+
	21.	22.45	4,5	22	—	+	+	+	2,0	—	—
	22.	2.00	7,0	40	+	0	0	—			
	25.	23.30							2,5	+	+
	28.	20.00	4.5	30	0	+	+	—			
	29.	0.00							3,5	—	—
	30.	16.00							3,5	+	+
		21.00							2,5	+	+
	31.	21.30							2,5	+	+
		22.45	4.5	5			+	0	2,5	+	+
		23.15							2,0	+	+
8.	3.	3.00	4.0	12	+	+	+	—	2,5	+	+
		5.15	4,0	20	0	+	+	0			
	5.	16.15	4,0	20	+	+	+	—			
		17.00	5,5	32	0	+	+	+			
		19.30	3,0	17	+	+	+	0			
	6.	3.45	7,0	37	+	+	+	—	2,0	—	—
	8.	1.15							5,5	+	+
	9.	0.15	2,0	22	0	+	+	—			
	11.	2.00	2,0	22	+	0	+	—			
	12.	2.00							2,5	+	+
	13.	20.15	9,0	22	+	—	—	0			
	14.	0.30	7,0	28	+	+	+	—	tr		
		12.00	8,0	36	+	+	+	—	tr		
		18.45	7,0	43	—	—	—	+			
	16.	21.45	18,0	100	+	+	+	—	tr		
	17.	1.00	8,0	52	+	+	+	—			
		17.15	14,5	90	+	+	+	+			
	18.	21.15	9,0	58	—	+	+	+			
	22.	1.00							2,5	+	+
		23.00	5,0	22	+	+	+	—	tr		
	23.	18.15	2,5	17	+	+	+	0			
		21.00	7.5	42	+	+	+	+	2,5	+	+

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
8.	24.	0.00	3,5	20	0	—	—	0			
		2.30	5,5	35	+	+	+	—	tr		
		5.30	12,0	62	+	—	—	+			
	25.	20.00	4,0	22	+	+	+	+			
	29.	2.30							2,0	+	+
		22.00							2,5	+	+
	31.	11.00	11,0	23	—	—	—	+			
		20.30	7,0	62	?	+	+	+	tr		
9.	1.	2.30	4.0	22	+	—	—	—			
	3.	21.30	9,0	50	+	+	+	—	tr		
	6.	1.15							3,5	—	+
	8.	1.30	14,5	68	+	+	+	—			
		16.45	25,0	100	+	+	+	+			
		18.15	16,0	58	+	+	+	+	tr		
	9.	1.15	10,0	35	+	+	+	—	tr		
	12.	18.45	8,0	45	+	+	+	—			
	13.	1.30	11,0	72	+	+	+	—			
		19.45	11,5	95	+	+	+	+			
		23.00	7,0	50	+	+	+	—	tr		
	14.	2.30	6,0	54	+	—	—	—			
	15.	1.15	9,0	50	+	+	+	—	tr		
		3.15	7,0	32	—	—	—	—			
		16.00	14,5	70	+	—	—	+			
		18.30	12,5	75	+	+	+	+			
	19.	0.45	6,5	22	+	+	+	—	2,5	+	+
	20.	4.15	6,5	36	+	+	+	—	tr		
	21.	16.30	6,5	40	—	+	+	+			
	22.	22.15	3,0	22	+	+	+	+	2,5	+	+
		23.00	6,5	42	—	+	+	+	7,0	+	+
	23.	16.15	6,0	28	+	—	—	—			
	28.	22.15	4,5	18	+	+	+	—	2,0	+	+
	29.	21.15	5,5	28	+	+	+	+	2,5	+	+
10.	1.	0.30	11,0	28	+	+	+	—			
		21.30	8,0	40	+	+	+	—	tr		
	2.	1.15	11,0	24	+	+	+	—			
		23.00	8,0	40	+	+	+	—	tr		

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
10.	3.	2.00	>12,0	65	+	+	+	—	3,5	+	+
	4.	17.45	3,0	20	—	+	+	+	2,0	+	+
	6.	20.15	?	22	—	—	—	+	2,5	—	+
		22.00							2,5	+	+
		22.30							6,0	+	+
	7.	0.45	2,5		—	0	0	0	3,5	+	+
		2.00							3,0	+	—
		19.30	12,5	?	—	+	?	?			
	8.	20.15	5,5	?	—	—	?	?	1,0	—	—
	9.	18.00	6,5	?	—	+	?	?	tr		
	12.	18.30	16,0	150	+	+	+	+			
	14.	22.30	7,0	35	+	+	+	+	tr		
	19.	20.30	8,0	42	—	+	+	+	2,5	+	+
	20.	0.00	6,5	27	+	+	+	+	tr		
	25.	22.30	4,0	22	—	+	+	+	2,0	+	+
		23.00	6,5	28	+	+	+	—	tr		
	26.	0.00							3,5	+	+
		18.30							1,0	+	+
	29.	13.15	?	84	?	?	+	—			
		17.30	>20,0	190	—	—	—	+			
		21.00	?	104	?	?	+	+			
11.	3.	16.30	16,0	112	—	+	+	+			
	4.	15.00	9,0	50	+	+	+	+			
		21.00	14,5	106	+	+	+	+	tr		
	5.	21.30	5,5	28	—	+	+	+	2,5	—	+
	6.	19.15	5,5	40	—	+	+	+			
	7.	2.45							2,5	+	+
		13.45	7,0	50	—	—	—	+			
	9.	17.15	8,0	50	+	+	+	+			
		20.00	8,0	50	+	+	+	+	tr		
	10.	12.30	7,0	36	—	—	—	+			
		16.30	7.0	55	—	+	+	+			
	12.	0.30	3,0	30	—	+	+	+	tr		
	14.	22.00	4,5	17	—	+	+	+	2,5	—	—
		23.00	3,5	15	—	+	+	+	2,5	—	+
	18.	1.45	11,0	60	+	+	+	—	tr		
		23.00	5,5	45	—	+	+	+	tr		

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy	E(mV/km)	Ex	Ey
11.	19.	2.15	3,5	?	—	+	?	?	2,0	—	+
	25.	20.00	7,0	45	—	+	+	+			
	27.	2.45	?	27	?	?	+	—			
	28.	19.00	5,5	40	—	+	—	0			
	30.	20.45	3,5	14	—	+	+	+	2,5	—	+
12.	1.	18.00	6,0	32	—	+	+	+	tr		
	3.	5.00	5,5	36	0	+	+	—			
		18.00	7,0	22	+	+	+	+			
		19.45	8,0	40	—	—	+	+	tr		
		23.15	9,0	42	—	+	+	+	tr		
	4.	17.00	9,0	58	—	—	—	+			
		19.45	12,5	68	—	+	+	+			
	5.	13.15	9,0	72	—	—	—	+			
	7.	18.00	4,0	28	+	—	+	+	tr		
	8.	23.00	5,5	28	—	+	+	+	2,0	—	+
	10.	21.45	6,0	22	—	+	+	+	3,5	+	+
	12.	2.15	6,0	22	+	+	+	—	tr		
	13.	18.45	10,0	42	—	+	+	+			
	16.	21.00	6,0	35	—	+	+	+	tr		
	19.	18.15	3,5	32	—	—	—	+			
		23.15	7,0	32	—	+	+	+	2,0	+	+
	21.	1.15	3,5	16	+	+	+	—	2,0	+	+
		17.00	9,0	45	—	—	—	+			
	24.	23.00	10,0	48	+	+	+	—			
	25.	23.15	6,0	28	+	+	+	—	3,5	+	+
	28.	22.30	3,5	20	+	+	+	0	2,5	+	+
	29.	17.30	7,0	36	—	+	—	+			
		22.30	9,0	52	+	+	+	—			
	31.	22.30	7,0	48	0	+	+	—			

Further pt-traces (earth currents)

Month	Day	CET
1.	1.	1.45
	5.	20.45
	16.	22.15
	18.	18.45
	21.	23.30
	28.	16.45
	31.	2.15
2.	3.	22.00
	13.	16.30
	15.	23.00
		23.30
	16.	15.30
	17.	23.45
	18.	13.15
	19.	8.15
	21.	17.30
	29.	23.45
3.	1.	1.30
	7.	20.00
		23.00
	17.	0.15
		23.15
	21.	2.30
	26.	7.15
4.	7.	22.00
		22.30
	9.	0.00
		17.15
		23.15
	10.	1.15
		18.15
		22.30
	27.	23.15
5.	5.	16.00
		16.30
	8.	18.45
		22.45
	14.	8.15
5.	19.	20.45
	20.	21.15
		21.45
	23.	1.30
		2.15
	24.	23.45
	29.	22.45
6.	2.	19.30
	8.	21.30
	9.	2.45
	14.	23.45
	19.	0.45
	23.	2.15
	30.	23.30
7.	3.	19.15
	6.	20.30
	8.	5.30
	13.	23.15
	15.	19.45
		21.00
	28.	1.45
	31.	1.00
8.	1.	23.30
	8.	1.30
	9.	2.45
		3.00
	11.	20.15
	20.	17.30
		17.45
	27.	20.45
	28.	18.45
		22.15
	30.	20.15
9.	1.	16.45
	4.	23.30
	12.	23.15
	13.	0.15
		0.30
9.	15.	23.45
	17.	2.30
		3.15
	19.	0.15
	20.	3.15
		20.45
		21.45
10.	6.	15.45
		21.30
	7.	1.30
	9.	0.45
11.	3.	21.30
	7.	21.00
		23.30
	18.	22.45
	27.	2.00
	28.	23.15
	29.	17.45
12.	4.	23.15
	20.	21.30
	26.	0.15
		1.30
	28.	1.45
		23.30
	30.	19.45

SI-s

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Ey	Hx	Hy
1.	6.	4.15	10,0	21	—	—	—	+
	21.	8.45	3,0	?	—	—		
	22.	9.45	3,0	7	—	—	—	+
		13.45	5,5	10	—	—	—	+
	24.	3.30	5,5	10	+	+	+	—
		5.30	4.5	10	+	+	—	+
2.	4.	13.30	6,5	12	—	—	—	+
	14.	2.00	4,5	10	—	—	—	+
		13.45	5,5	15	+	+	+	—
	15.	0.00	4,5	12	+	+	+	—
	16.	5.30	4,5	10	—	—	+	—
		8.00	8,0	16	—	—	—	+
	18.	5.15	4,5	12	—	—	—	+
	28.	6.00	4,5	11	—	—	—	+
3.	14.	9.45	8,0	18	+	—	—	+
	15.	2.45	8,0	13	—	—	—	+
	19.	14.30	8,0	12	+	+	+	—
	20.	14.45	9,0	15	+	+	+	—
	23.	10.45	5,5	10	+	+	+	—
	27.	9.15	6,5	12	+	—	—	—
	31.	7.30	8,5	17	+	—	+	—
4.	15.	2.00	6,0	15	+	+	+	—
	19.	10.30	2,0	6	+	+	+	—
	20.	10.30	2,5	6	+	+	+	—
	21.	20.30	3,5	10	—	—	—	+
	23.	16.00	3,5	8	—	—	—	+
5.	4.	3.30	3,0	8	+	+	+	—
		6.30	6,5	12	—	—	—	+
	10.	15.15	8,0	18	—	—	—	+
	14.	4.00	5,0	12	+	+	+	—
	17.	15.45	9,0	24	—	—	+	—
	21.	5.30	9,0	22	—	—	—	+
6	1.	2.00	5,5	13	+	+	+	—
	2.	8.45	6,5	12	—	+	+	+
	9.	4.15	6,5	13	+	+	+	—
	14.	4.45	4,5	7	—	—	—	+
		7.45	4,5	10	0	+	+	0
	15.	9.45	5,5	12	—	—	—	+
		17.15	5,5	15	+	+	+	—

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	H(gamma)	Ex	Fy	Hx	Hy	
6.	17.	6.00	11,0	20	+	+	+	—	
	19.	4.30	6,5	6	+	+	+	—	
	20.	20.15	6,5	21	+	+	+	—	
	22.	14.15	6,5	14	—	—	—	+	
	26.	4.00	9,0	15	—	—	—	+	
7.	3.	11.30	10,0	18	+	+	+	—	
		16.45	6,5	13	—	—	—	+	
	22.	5.30	5,5	10	—	—	—	+	
	26.	7.00	5,0	10	+	—	—	—	
	27.	8.30	5,5	7	—	+	+	+	
8.	1.	14.30	2,5	7	+	+	+	+	
	4.	3.15	4,5	12	—	—	+	—	
		3.45	10,0	22	—	—	—	+	
	10.	5.45	5,5	?	+	+	?	?	
	14.	3.15	7,0	13	—	—	—	+	
	19.	7.45	4,5	7	+	—	—	—	
		15.15	9,5	19	+	+	+	—	
	20.	2.30	5,0	11	—	+	+	+	
	24.	13.00	9,0	17	—	—	—	+	
9.	5.	9.15	4,5	13	+	+	+	—	
	6.	7.00	9,0	10	+	+	+	—	
		19.30	12,5	21	—	+	+	—	
	7.	12.15	8,0	19	—	—	—	+	
		13.45	11,0	28	—	—	—	+	(ssc?)
	9.	9.45	9,0	12	+	+	—	+	
		11.45	>10,0	26	+	+	+	—	
		15.15	11,0	25	+	+	—	+	
	15.	4.15	7,0	12	+	0	0	—	
		18.15	5,5	13	+	+	+	—	
	17.	18.00	2,5	7	+	+	+	—	
10.	2.	4.45	11,5	26	—	—	—	+	
	29.	4.45	6,5	16	—	—	+	—	
		7.45	10,0	21	+	+	+	—	(ssc?)
	30.	6.45	3,5	9	+	+	+	—	
11.	11.	11.45	3,0	8	+	+	+	—	
	23.	0.45	4,5	12	+	+	+	—	
12.	10.	6.45	6,5	13	—	—	—	+	
	25.	3.45	11,0	28	—	—	—	+	
	27.	11.45	11,0	50	0	—	—	—	(sfe)

„Needles"

Month	Day	CET (GMT+1 h)	Amplitude in E(mV/km)	Ex	Ey
1.	12.	9.45	6,5	+	—
	23.	14.45	2,5	—	—
2.	13.	18.45	3,0	—	+
	15.	7.45	4,5	—	—
	20.	21.15	4,0	+	+
3.	5.	8.30	3,0	—	—
	21.	5.45	2,5	—	+
4.	6.	4.30	6,5	—	—
	14.	11.45	7,0	—	—
	27.	16.15	5,5	+	+
5.	12.	19.30	4,5	0	+
	14.	20.15	2,5	+	+
	28.	2.00	2,5	+	—
6.	4.	18.30	5,5	—	+
	10.	10.00	7,0	—	—
	13.	12.30	8,0	—	—
	22.	8.45	3,5	+	+
7.	10.	22.45	6,5	—	—
	23.	16.45	3,5	—	—
8.	7.	17.15	3,5	+	+
	15.	14.15	5,5	+	+
9.	7.	7.00	14,5	—	—
	15.	5.15	5,5	—	+
		6.30	6,5	—	+
		13.30	5,5	+	+
		13.45	4,5	+	+
10.	13.	7.45	8,0	+	+
	19.	12.45	2,5	+	+
11.	1.	10.15	10,0	—	+
	3.	12.00	6,0	+	+
	8.	9.15	2,0	+	+
	17.	8.30	4,5	+	+
		9.15	2,5	+	+
	24.	16.45	9,0	+	—
12.	5.	14.45	2,5	—	—
	15.	14.15	3,5	—	—
	23.	14.30	7,0	—	—
	26.	8.30	5,5	+	+

V.

Results of rapid-run records (for explanations see pp. 6 and 59)

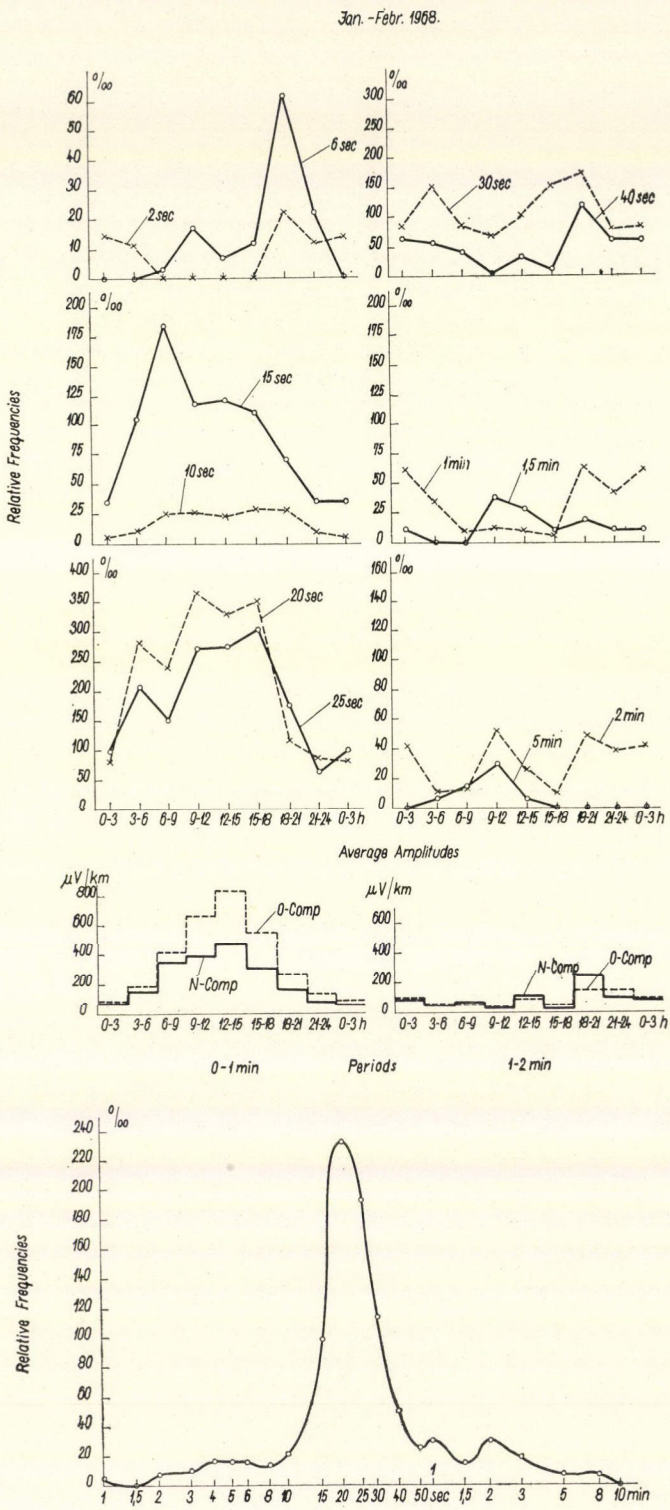

Jan.-Febr. 1968.
Relative Frequencies
‰
2 sec
6 sec
30 sec
40 sec
10 sec
15 sec
1 min
1,5 min
20 sec
25 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
0-Comp
N-Comp
0-1 min
Periods
1-2 min
Relative Frequencies
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1a.

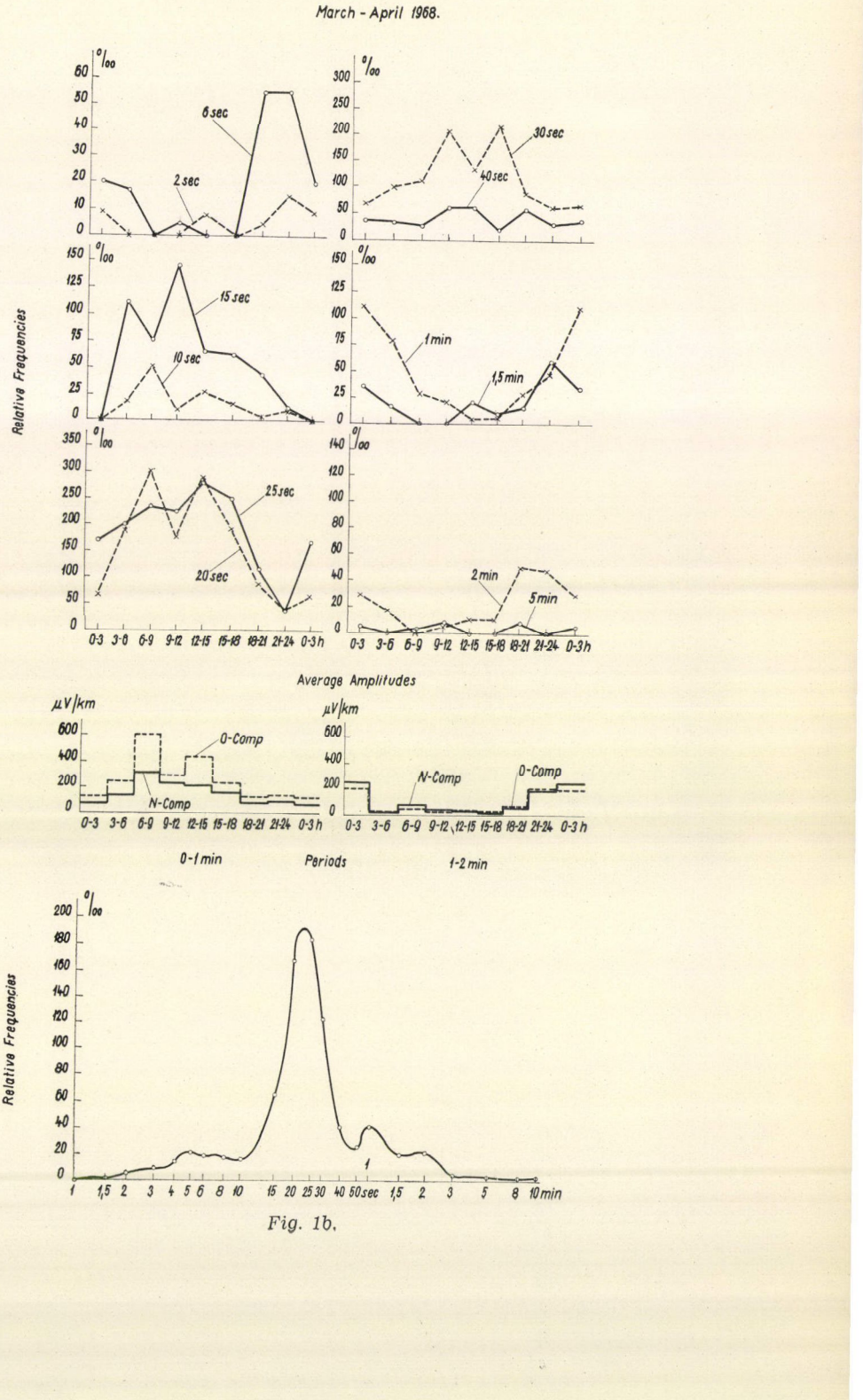

March - April 1968.
Relative Frequencies
‰
6 sec
2 sec
30 sec
40 sec
15 sec
10 sec
1 min
1,5 min
25 sec
20 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
0-Comp
N-Comp
0-1 min
Periods
1-2 min
Relative Frequencies
1
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 60 sec 1,5 2 3 5 8 10 min

Fig. 1b.

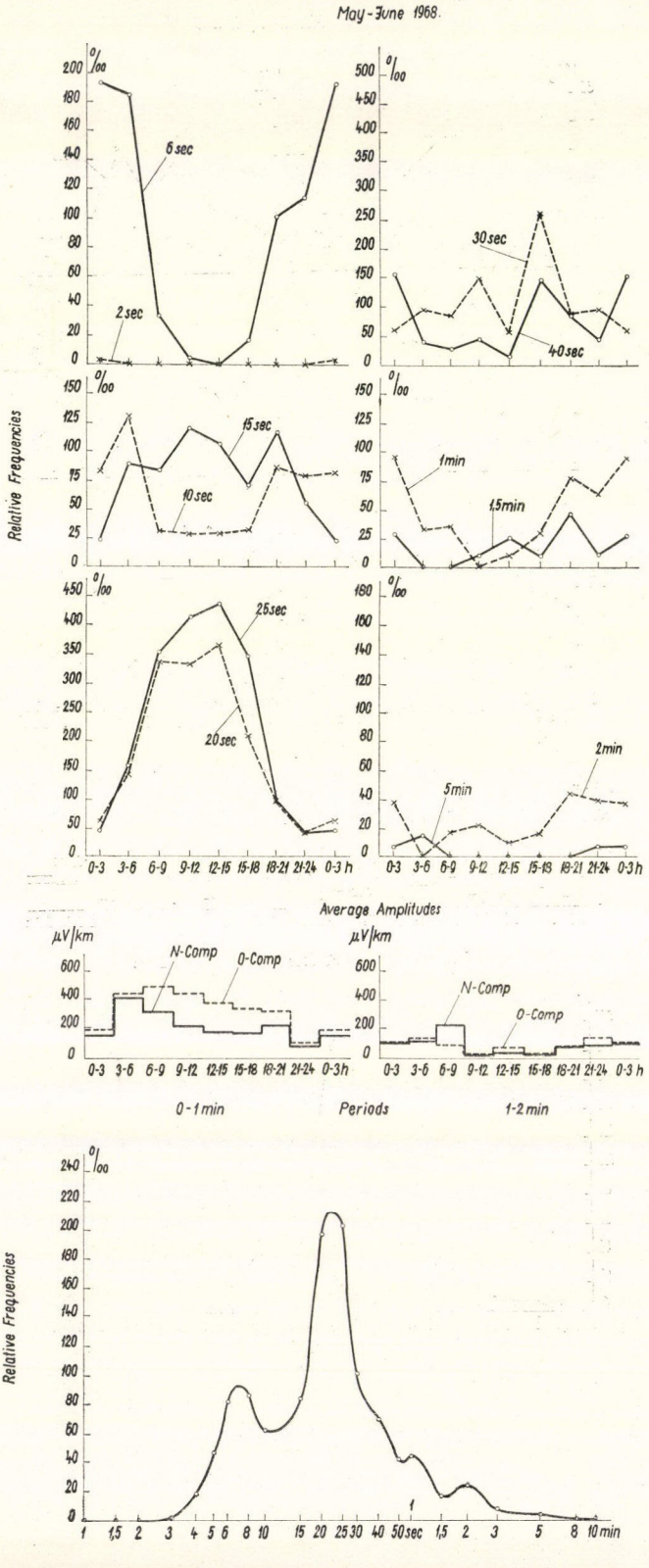

May - June 1968.
Relative Frequencies
‰
6 sec
2 sec
30 sec
40 sec
15 sec
10 sec
1 min
1,5 min
25 sec
20 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3 h
Average Amplitudes
μV/km
N-Comp
O-Comp
0-1 min
Periods
1-2 min
Relative Frequencies
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1c.

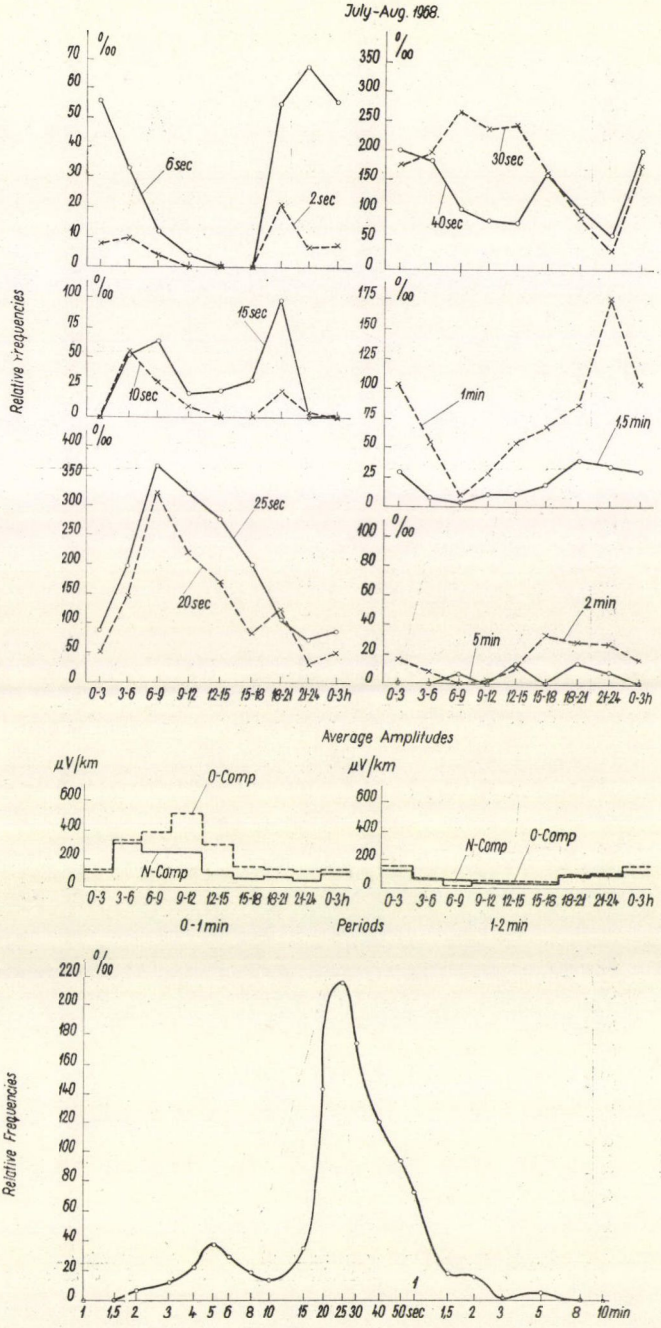

July-Aug. 1968.
Relative Frequencies
‰
6 sec
2 sec
30 sec
40 sec
15 sec
10 sec
1 min
1,5 min
25 sec
20 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3h
Average Amplitudes
μV/km
0-Comp
N-Comp
0-1 min
Periods
1-2 min
1
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50 sec 1,5 2 3 5 8 10 min

Fig. 1d.

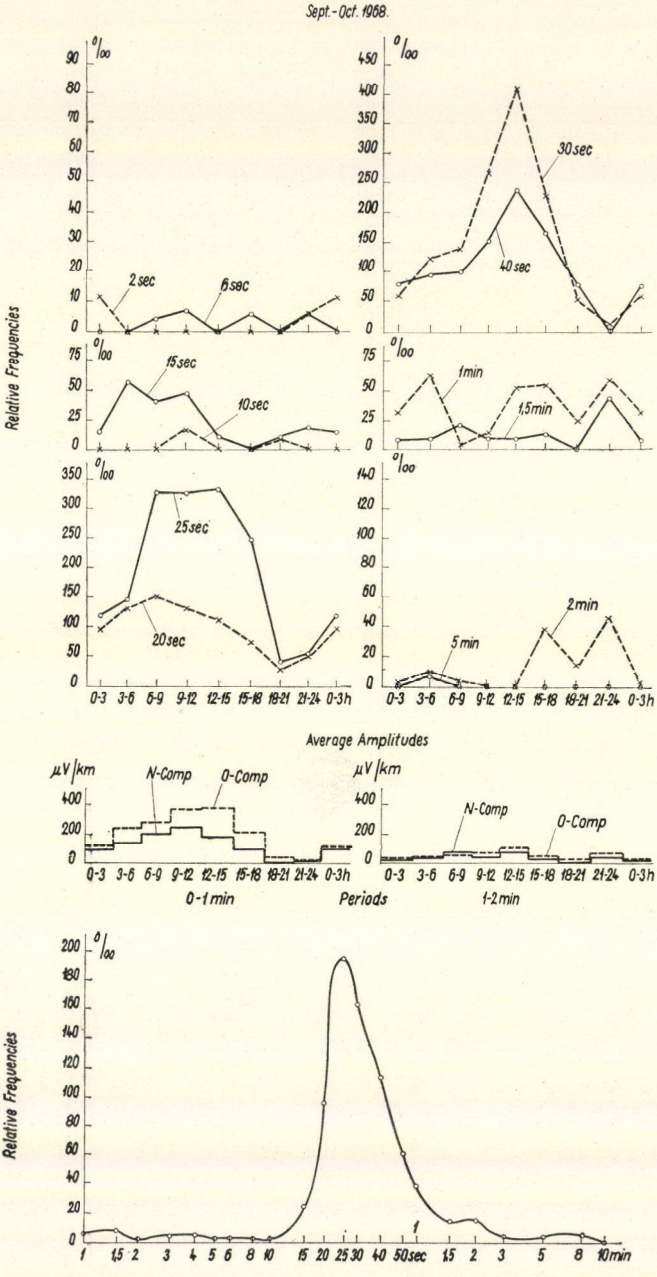
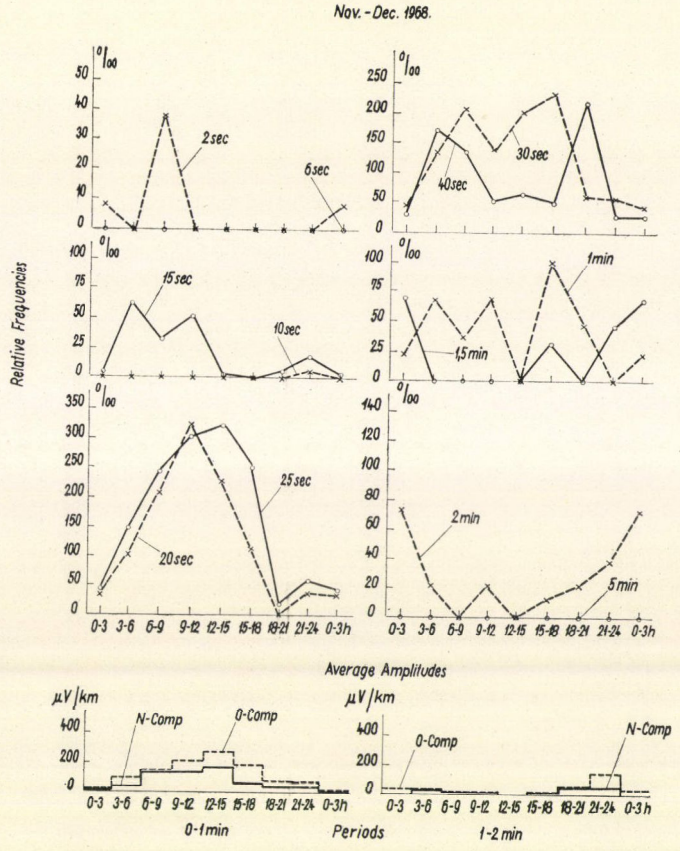

Sept.-Oct. 1968.
Relative Frequencies
‰
2 sec
6 sec
30 sec
40 sec
15 sec
10 sec
1 min
1,5 min
25 sec
20 sec
2 min
5 min
0-3 3-6 6-9 9-12 12-15 15-18 18-21 21-24 0-3h
Average Amplitudes
μV/km
N-Comp
O-Comp
0-1 min
Periods
1-2 min
1
1 1,5 2 3 4 5 6 8 10 15 20 25 30 40 50sec 1,5 2 3 5 8 10min

Fig. 1e.



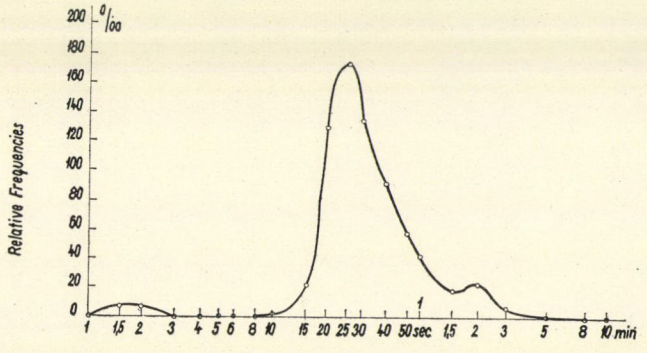


Fig. 1f.

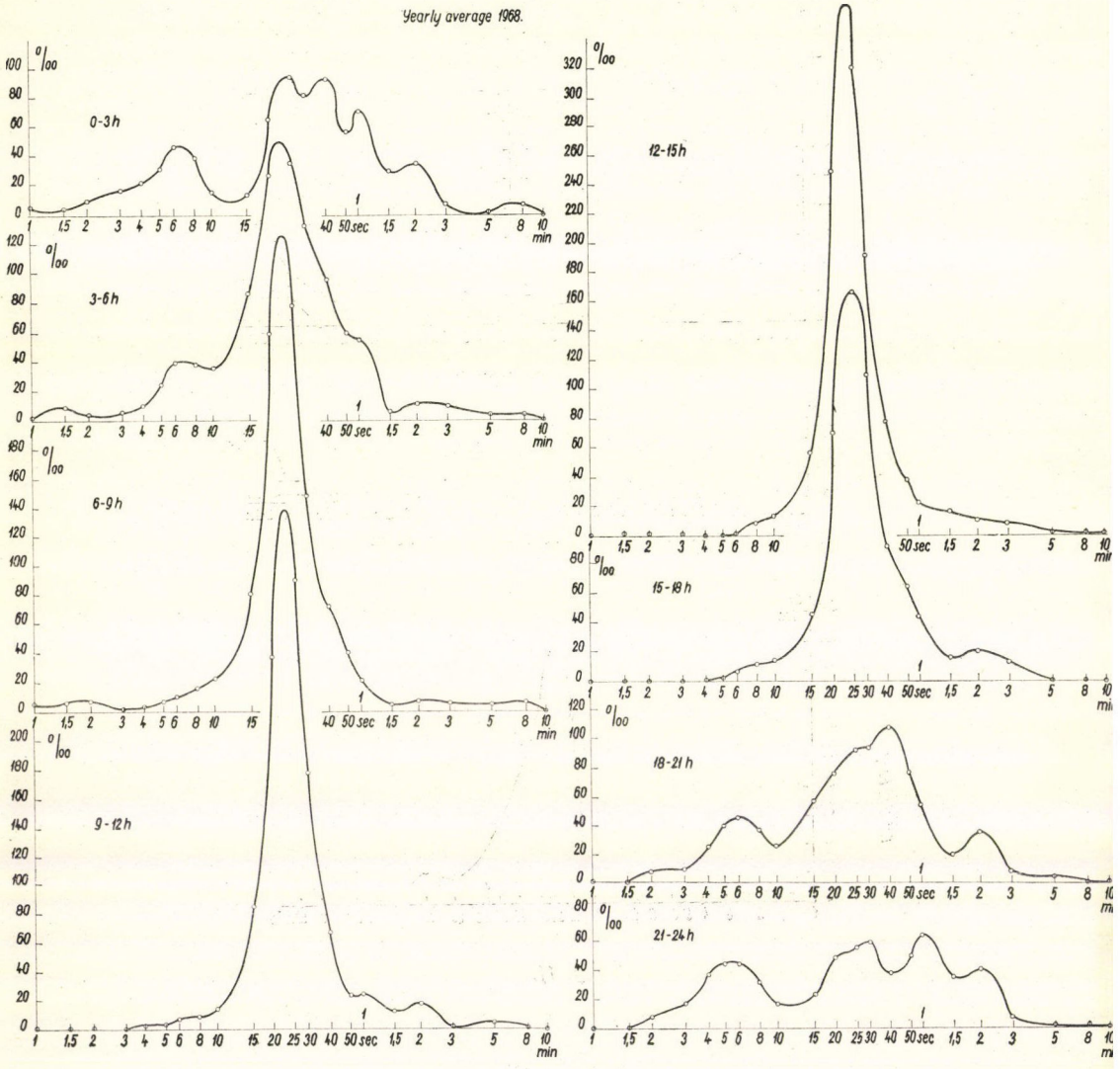

Yearly average 1968.
0-3 h
3-6 h
6-9 h
9-12 h
12-15 h
15-18 h
18-21 h
21-24 h
o/oo
min
sec

Fig. 1g.

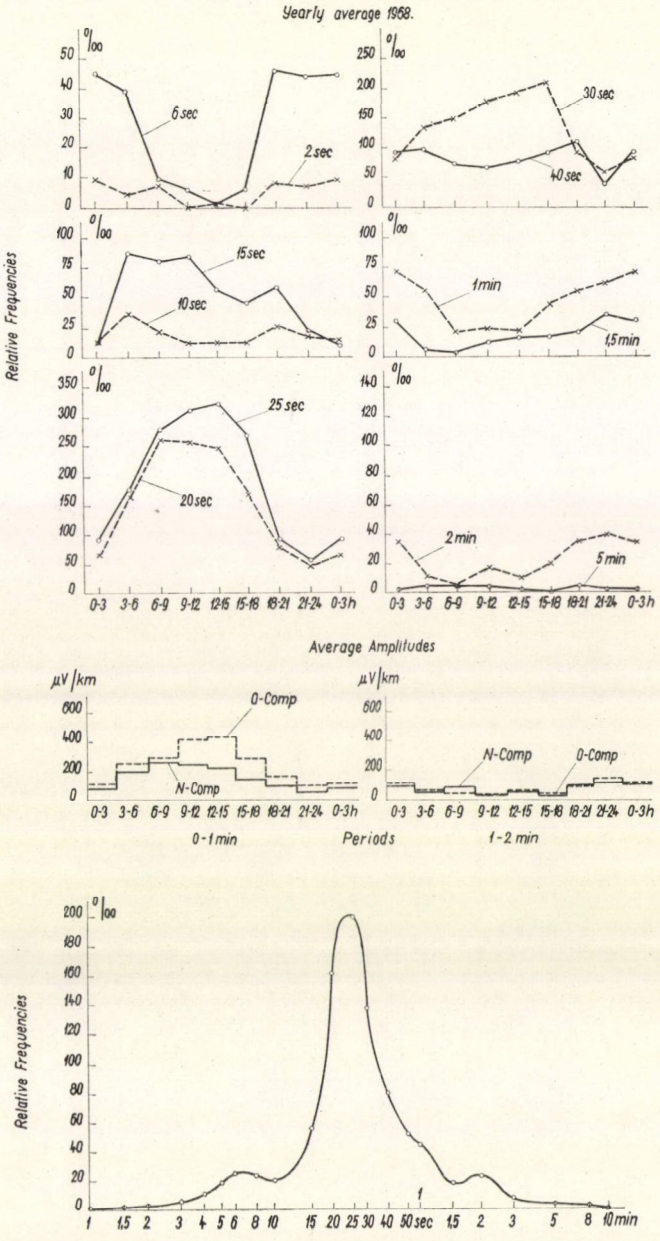


Fig. 1h.

Results of rapid-run records for the year 1968. 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.