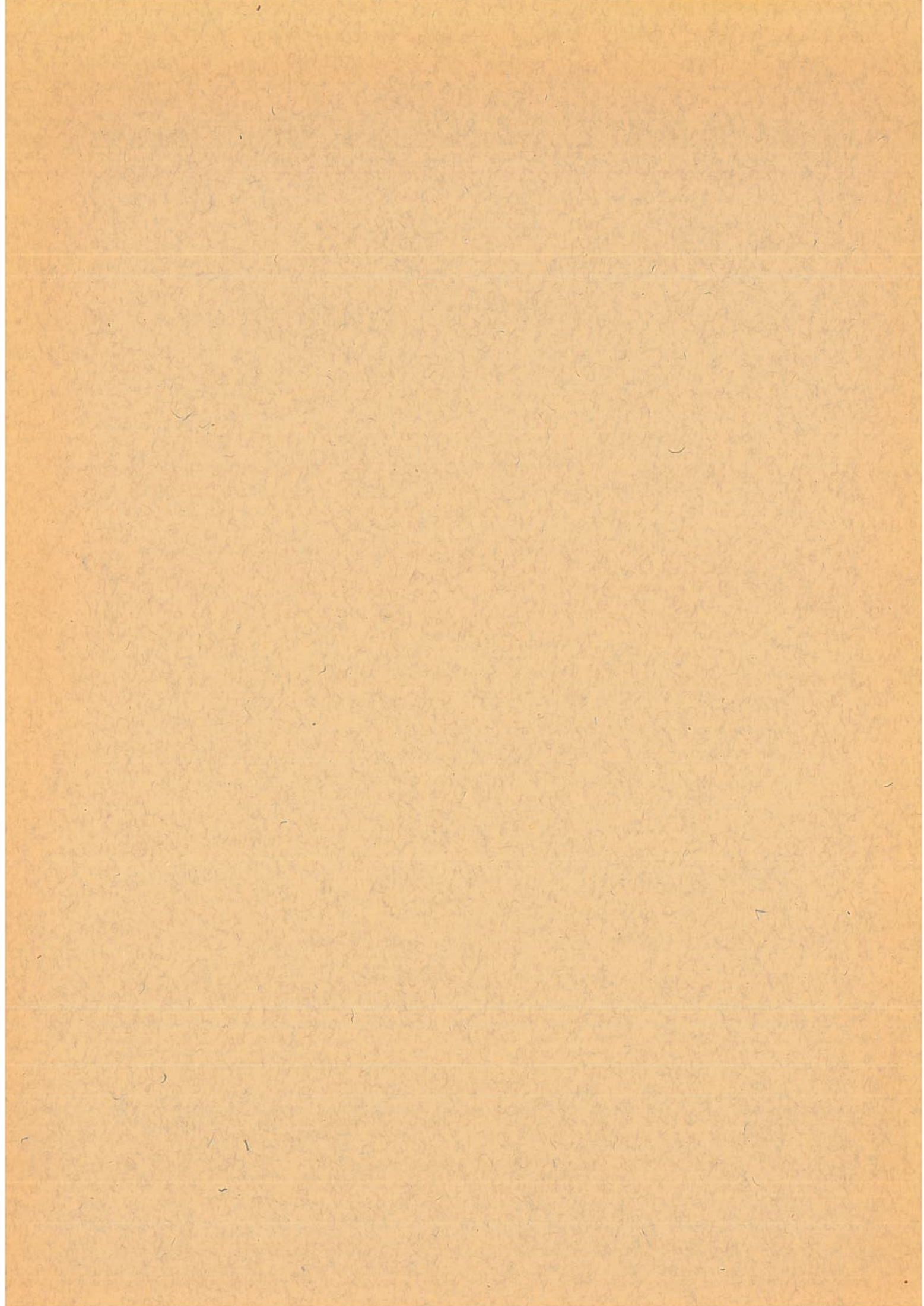


Publikasjoner fra
DET NORSKE INSTITUTT FOR KOSMISK FYSIKK
Nr. 31

THE AURORAL OBSERVATORY AT TROMSØ
($\varphi = 69^{\circ} 39'.8$ N, $\lambda = 18^{\circ} 56'.9$ E. Gr.)
RESULTS OF MAGNETIC OBSERVATIONS
FOR THE YEAR 1948

1950

A.S JOHN GRIEGS BOKTRYKKERI, BERGEN



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RESULTS OF MAGNETIC OBSERVATIONS FOR THE YEAR 1948

GENERAL REMARKS.

The instrumental equipment used for the magnetic measurements is the same as that previously used, a description of which is given in No. 1 of the present series of publications.

The observations have been made by E. TØNSBERG. The reading of the hourly values and the calculation work have been performed by student STEINAR BERGER, and amanuensis J. PRØSHAUG.

SCALE VALUES.

The following scale-values have been determined:

D-curves: 1'.45 or 4.72 γ per mm
H-curves - 5.13 γ per mm
V-curves - 6.80 γ per mm

BASE-LINE VALUES.

The absolute measurements of Declination and Horizontal Intensity resulted in the table given below of observed and adopted base-line values. The Vertical Intensity base-line value from the preceding years is still employed. The quiet mean Inclination value for the year was calculated to $77^\circ 32'.2$.

The temperature coefficient for the H-variometer is 7.3 γ per degree Celsius, and for the V-variometer — 1.3 γ per degree Celsius.

OBSERVED AND ADOPTED BASE-LINE VALUES FOR H AND D .

Date	D observed	D adopted	Date	H observed	H adopted
I 29	1° 31'.8 W	1° 31'.6 W	I 29	11208 γ	11205 γ
II 28	31.8	.6	III 23	00	05
III 23	31.5	.6	IV 6	04	06
IV 6	31.2	.6	V 27	07	05
V 27	32.3	.6	VI 4	03	05
31	32.2	.6	22	04	05
VI 22	30.8	.6	VII 7	05	05
VII 7	32.0	.6	VIII 15	06	05
VIII 15	31.1	.6	X 13	05	05
X 13	31.1	.6	XII 17	06	05

EXPLANATION OF TABLES.

For each of the components D , H , and V two series of tables are given. One series gives, in the usual way, the hourly mean values centered at half hours Gr. M. T. In these tables the column headed M gives the ordinary diurnal means. R designates the range, i. e. the difference between the maximum and minimum value measured on the magnetogram. The horizontal line marked M gives the monthly means of the hourly values, and the line marked QM gives the monthly means of the *quiet* hourly values. The second series of tables gives the hourly values of the Storminess («average perturbing force» or «activity»). As to the definition of the storminess and the method for separating it, we refer to Nos. 2 and 4 in the present series of publications. In the storminess tables the column headed M gives the diurnal means. The columns headed PS , NS and AS give the diurnal sum of the positive, negative and absolute storminess, respectively. The column headed CH gives the magnetic character numbers. We consider the diurnal sum of the absolute storminess as the best expression for the magnetic activity during a day, and we will use that quantity for defining the character numbers. Only the strongest perturbed component, the Horizontal Intensity, is used in characterisation. Character number 0 comprises diurnal sum of absolute storminess (AS) up to 400 γ , character number 1 from 400 γ to 1200 γ , and character number 2 greater than 1200 γ . The horizontal line marked M contains the monthly means of the hourly values, and the two lines marked MPS and MNS give the monthly means of the positive and the negative storminess respectively.

In D the storminess is reckoned positive towards magnetic west, in H positive towards magnetic north, and in V positive downwards.

In addition to the main tables resuming tables, figures, and vector diagrams are given at the end of the year-book.

E. Tonsberg.

Tromsø. Declination. D = 1° W + Tabular Quantities expressed in Tenths of Minutes.

Gr. M. T.

JANUARY 1948. HOURLY MEAN VALUES. Table with columns for DAY (1-31), 1-23, M, R. Contains hourly declination data for January 1948.

FEBRUARY 1948. Table with columns for DAY (1-29), 1-23, M, R. Contains hourly declination data for February 1948.

MARCH. Table with columns for DAY (1-31), 1-23, M, R. Contains hourly declination data for March 1948.

Tromsø.

Declination. Storminess. (+ W) Unit Gamma.

Gr. M. T.

JANUARY 1948.

HOURLY MEAN VALUES

Table for January 1948 showing magnetic observations (DAY 1-31) with columns for declination, storminess, and unit gamma, plus summary rows (M, MPS, MNS).

FEBRUARY.

Table for February 1948 showing magnetic observations (DAY 1-29) with columns for declination, storminess, and unit gamma, plus summary rows (M, MPS, MNS).

MARCH.

Table for March 1948 showing magnetic observations (DAY 1-31) with columns for declination, storminess, and unit gamma, plus summary rows (M, MPS, MNS).

EINAR TØNSBERG and STEINAR BERGER

Tromsø. Declination. D = 1° W + Tabular Quantities expressed in Tenths of Minutes. G. M. T.

Table for APRIL 1948. Hourly Mean Values. Columns: DAY (1-30), 1-24, M, R. Rows: 1-30. Values range from approximately -354 to 300.

Table for MAY. Hourly Mean Values. Columns: DAY (1-31), 1-24, M, R. Rows: 1-31. Values range from approximately -462 to 300.

Table for JUNE. Hourly Mean Values. Columns: DAY (1-30), 1-24, M, R. Rows: 1-30. Values range from approximately -370 to 300.

Tromsø.

Declination. Storminess. (+ W) Unit Gamma.

Gr. M. T.

APRIL 1948.

HOURLY MEAN VALUES

Table for April 1948 showing magnetic observations (DAY, 1-23, M, PS, NS, AS) and monthly means (MPS, MNS).

MAY

Table for May 1948 showing magnetic observations (DAY, 1-31, M, PS, NS, AS) and monthly means (MPS, MNS).

JUNE

Table for June 1948 showing magnetic observations (DAY, 1-30, M, PS, NS, AS) and monthly means (MPS, MNS).

Tromsø. Declination. D = 1° W + Tabular Quantities expressed in Tenths of Minutes. Gr. M. T.

JULY 1948.

HOURLY MEAN VALUES

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	R		
1	190	-15	-154	-140	102	117	117	130	114	163	200	253	268	262	237	246	283	314	400	395	293	246	123	52	176	853	
2	37	9	-9	-37	0	52	114	154	190	14	246	277	333	314	256	262	240	262	323	348	345	302	165	68	188	477	
3	46	37	-6	-6	37	55	114	170	210	200	240	300	317	345	410	400	400	370	353	314	308	270	240	210	222	477	
4	117	77	77	108	117	132	148	170	210	240	277	323	360	293	253	302	314	400	400	365	416	123	246	210	230	1766	
5	-230	-462	-262	0	68	117	160	163	200	216	230	270	340	323	323	340	370	370	253	262	270	253	16	46	157	1475	
6	-92	-230	22	92	100	117	77	154	160	216	190	216	216	240	262	246	323	283	308	302	230	200	185	160	166	910	
7	140	108	92	77	83	102	117	140	170	194	270	262	293	308	317	340	348	302	317	270	277	230	194	160	213	364	
8	123	30	-108	9	77	86	102	123	114	117	200	246	293	350	340	364	360	317	300	267	246	240	210	163	190	710	
9	145	130	86	62	77	62	100	108	154	170	170	237	300	308	300	283	270	246	240	267	277	308	308	194	200	462	
10	180	163	130	117	140	154	132	185	132	140	216	246	267	308	300	370	564	410	308	314	293	230	200	200	230	434	
11	170	140	123	123	77	77	102	117	160	210	237	262	283	308	308	293	314	323	340	340	340	262	170	-62	210	607	
12	-62	-216	-92	-46	62	83	77	86	148	154	194	240	263	308	268	256	237	257	256	270	277	262	253	225	254	798	
13	132	86	83	40	83	102	132	123	154	163	200	253	266	277	293	293	270	300	302	323	323	253	262	206	434		
14	237	-216	-240	30	68	40	40	92	132	140	200	253	267	302	385	376	300	270	293	333	323	277	216	62	176	1824	
15	0	-108	-92	55	123	102	92	130	170	216	240	246	253	283	267	277	263	300	302	293	262	262	145	154	160	622	
16	30	-25	-46	62	68	25	0	83	86	262	262	293	348	354	262	348	354	333	354	317	348	317	225	170	200	810	
17	148	132	-183	-163	-30	77	163	154	140	216	222	262	263	262	253	268	256	302	365	323	283	246	216	154	185	1166	
18	55	108	92	6	25	102	92	108	163	230	268	314	317	300	300	268	277	330	317	317	314	256	222	170	210	450	
19	102	0	55	70	70	55	68	108	170	194	222	262	293	283	230	206	200	230	230	246	268	222	206	194	176	407	
20	102	40	62	92	108	102	92	114	160	206	262	300	317	293	246	210	222	277	300	323	317	283	216	108	197	364	
21	52	-9	25	70	77	68	62	114	130	200	246	302	293	270	240	222	225	262	308	267	222	140	140	40	166	536	
22	-15	30	9	68	86	77	86	154	200	170	216	267	302	287	253	262	246	308	270	256	268	246	225	190	420	210	
23	194	140	145	108	83	77	103	140	154	230	267	293	267	256	262	270	246	246	262	270	263	270	283	270	237	194	246
24	55	-55	15	30	77	77	83	102	160	194	262	283	300	262	222	190	155	200	230	253	256	230	230	225	170	505	
25	194	170	185	92	70	100	102	132	160	222	240	293	308	268	225	246	246	353	260	252	246	262	277	253	216	333	
26	140	100	114	86	108	123	148	170	148	170	186	246	293	314	333	262	293	317	283	270	283	194	108	203	317	317	
27	102	92	92	108	30	77	70	130	163	200	230	270	277	246	240	287	283	287	302	270	237	210	180	140	188	348	
28	114	108	123	102	102	92	123	140	160	210	246	283	293	267	256	222	222	277	262	246	253	246	154	30	190	520	
29	-77	15	108	0	-92	154	77	108	163	148	92	92	277	370	364	293	323	410	348	323	270	185	140	185	1130		
30	154	117	83	92	130	140	163	170	200	230	240	253	253	283	277	246	277	314	293	416	246	262	262	185	222	782	
31	-62	-400	-185	-15	-15	117	148	160	154	253	163	30	277	302	317	354	462	354	340	370	283	262	145	176	1593		
M	86	3	12	43	68	92	105	130	157	197	225	256	290	296	283	287	290	302	305	305	287	253	213	150	194	715	
QM	145	130	114	100	86	92	102	123	160	200	230	262	277	268	250	230	225	237	246	253	237	200	170	190			

AUGUST.

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	R	
1	37	-46	86	77	130	170	163	117	190	185	180	283	253	240	230	230	246	240	308	365	323	262	200	15	188	670
2	62	55	-55	62	92	154	108	190	185	200	225	246	317	200	222	230	240	293	287	267	277	323	206	185	190	680
3	132	123	108	132	117	170	185	160	277	246	253	287	262	270	308	300	246	277	340	293	348	185	200	210	225	392
4	140	154	15	-62	62	92	108	123	190	200	40	154	225	270	293	277	293	395	365	500	340	323	222	180	206	678
5	140	100	55	-10	25	92	92	132	163	206	253	263	277	240	210	230	246	240	237	222	206	190	180	176	176	376
6	170	154	140	130	83	86	123	140	190	253	268	283	270	302	416	493	370	262	253	262	246	240	216	185	230	696
7	180	154	148	194	246	230	225	270	246	253	225	262	270	293	206	194	170	194	216	225	253	317	293	123	225	564
8	92	154	-293	-92	-62	-123	-185	-524	-555	-308	-370	123	216	924	524	678	308	348	370	585	262	400	-123	140	105	3404
9	-123	-370	-508	-308	-230	55	100	68	117	102	200	268	308	400	370	400	423	194	493	584	524	493	185	108	166	2370
10	-108	-200	-108	-62	30	-108	-216	-370	-400	170	253	246	364													
11										237	246	283	287	240	230	267	262	293	370	293	200	308	210	114		
12	62	-30	-62	123	140	140	46	-108	92	176	185	287	308	283	400	370	364	364	364	416	216	222	0	-92	180	1390
13	-555	-308	30	-154	-170	-15	100	108	86	148	216	240	246	246	262	216	206	194	240	246	230	176	114	117	92	1506
14	117	130	123	92	100	86	100	108	170	200	230	314	287	253	268	300	287	314	317	308	314	225	190	92	166	622
15	-22	0	108	170	154	132	102	123	160	180	200	216	225	262	253	270	246	256	246	268	246	200	185	92	180	536
16	37	55	37	55	86	100	108	123	140	185	216	246	262	246	222	206	200	200	206	210	200	200	185	170	163	434
17	140	102	123	140	117	102	108	132	160	185	246	293	268	262	230	216	240	262	270	246	246	246	77	62	188	552
18	83	70	77	92	92	83	86	86	108	185	237	262	277	277	246	230	237	246	253	277	230	195	130	166	262	
19	117	108	92	83	77	83	92	117	160	200	246	277	302	293	262	230	240	246	240	256	253	300	123	77	188	524
20	92	-30	-185	-123	-340	262	62	200	222	262	283	295	446	524	446	514	263	302	277	262	340	160	170	190	200	1710
21	30	-85	-15	-100	-25	-6	37	148	123	185	230	246	314	310	493	647	348	270	246	246	246	246	70	55	182	1346
22	68	123	114	102	46	92	200	140	130	180	206	246	268	287	270	253	262	253	240	253	216	190	0	40		

Tromsø.

Declination. Storminess. (+ W) Unit Gamma.

Gr. M. T.

JULY 1948.

Table with columns: DAY, 1-25, M, PS, NS, AS. Contains magnetic observation data for July 1948.

AUGUST.

Table with columns: DAY, 1-25, M, PS, NS, AS. Contains magnetic observation data for August 1948.

SEPTEMBER.

Table with columns: DAY, 1-25, M, PS, NS, AS. Contains magnetic observation data for September 1948.

Tromsø. Declination. D = 1° W + Tabular Quantities expressed in Tenths of Minutes.

Gr. M. T.

Table for October 1948. HOURLY MEAN VALUES. Columns: DAY, 1-23, M, R. Rows: 1-31. Values range from -200 to 300.

NOVEMBER.

Table for November. Columns: DAY, 1-23, M, R. Rows: 1-30. Values range from -100 to 300.

DECEMBER.

Table for December. Columns: DAY, 1-23, M, R. Rows: 1-31. Values range from -25 to 300.

Tromsø.

Declination. Storminess. (+ W) Unit Gamma.

Gr. M. T.

OCTOBER 1949.

HOURLY MEAN VALUES

Table for October 1949 showing magnetic observations (DAY, 1-23, M, PS, NS, AS) and summary statistics (MPS, MNS).

NOVEMBER.

Table for November showing magnetic observations (DAY, 1-30, M, PS, NS, AS) and summary statistics (MPS, MNS).

DECEMBER.

Table for December showing magnetic observations (DAY, 1-31, M, PS, NS, AS) and summary statistics (MPS, MNS).

Tromsø. Horizontal Intensity. H = 11100 + Tabular Quantities expressed in Gamma.

Gr. M. T.

Table for JANUARY 1948. HOURLY MEAN VALUES. Columns: DAY, 1-25, M, R. Rows: 1-31. Includes summary rows M and QM.

Table for FEBRUARY. HOURLY MEAN VALUES. Columns: DAY, 1-23, M, R. Rows: 1-29. Includes summary rows M and QM.

Table for MARCH. HOURLY MEAN VALUES. Columns: DAY, 1-23, M, R. Rows: 1-31. Includes summary rows M and QM.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

JANUARY 1948.

HOURLY MEAN VALUES

Table with columns: DAY, 1-25, M, PS, NS, AS, CH. Rows for January 1948, including summary rows M, MPS, and MNS.

FEBRUARY.

Table with columns: DAY, 1-25, M, PS, NS, AS, CH. Rows for February 1948, including summary rows M, MPS, and MNS.

MARCH.

Table with columns: DAY, 1-25, M, PS, NS, AS, CH. Rows for March 1948, including summary rows M, MPS, and MNS.

Tromsø. Horizontal Intensity. H = 11100 + Tabular Quantities expressed in Gamma. APRIL 1948. HOURLY MEAN VALUES

Gr. M. T.

Table for April 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-30), hours (1-24), and monthly totals (M, R). Values range from -580 to 350.

MAY

Table for May 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-31), hours (1-24), and monthly totals (M, R). Values range from -330 to 350.

JUNE

Table for June 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-30), hours (1-24), and monthly totals (M, R). Values range from -265 to 350.

Tromsø.

Horizontal Intensity, Storminess (+ N). Unit Gamma.

Gr. M. T.

APRIL 1948.

HOURLY MEAN VALUES

Table for April 1948 showing magnetic observations. Columns include Day (1-30), 25 hourly values (1-25), M, PS, NS, AS, CH. Summary row M: -100 -106 -72 -55 -38 -8 -8 2 5 16 25 31 34 44 57 67 65 56 41 -5 -36 -40 -59 -92. Summary row MPS: 101 107 72 56 41 12 13 4 7 16 25 31 34 44 57 67 66 57 41 16 7 1 1 0. Summary row MNS: 101 107 72 56 41 12 13 4 7 16 25 31 34 44 57 67 66 57 41 16 7 1 1 0.

MAY

Table for May showing magnetic observations. Columns include Day (1-31), 25 hourly values (1-25), M, PS, NS, AS, CH. Summary row M: -150 -149 -126 -96 -65 -44 -11 -4 9 28 47 75 116 107 119 128 113 92 60 14 -42 -59 -105 -151. Summary row MPS: 151 149 128 98 67 49 19 10 3 2 0 0 0 0 0 0 0 0 0 2 13 53 62 106 162. Summary row MNS: 151 149 128 98 67 49 19 10 3 2 0 0 0 0 0 0 0 0 0 2 13 53 62 106 162.

JUNE

Table for June showing magnetic observations. Columns include Day (1-30), 25 hourly values (1-25), M, PS, NS, AS, CH. Summary row M: -80 -105 -96 -57 -31 -23 -8 6 11 18 28 36 54 58 84 97 82 75 50 31 -12 -43 -70 -69. Summary row MPS: 83 107 97 59 35 25 12 5 0 0 0 1 0 1 0 1 0 0 2 5 20 45 73 73. Summary row MNS: 83 107 97 59 35 25 12 5 0 0 0 1 0 1 0 1 0 0 2 5 20 45 73 73.

Tromsø. Horizontal Intensity. H = 11100 + Tabular Quantities expressed in Gamma. Gr. M: T.

JULY 1948. HOURLY MEAN VALUES

Table for July 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-31), hours (1-24), and summary rows M and QM.

AUGUST.

Table for August showing hourly mean values for horizontal intensity. Columns include Day (1-31), hours (1-24), and summary rows M and QM.

SEPTEMBER.

Table for September showing hourly mean values for horizontal intensity. Columns include Day (1-30), hours (1-24), and summary rows M and QM.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

JULY 1948.

HOURLY MEAN VALUES

Table for July 1948 showing magnetic observations. Columns include DAY (1-31), 25 numbered columns for hourly values, and summary columns M, PS, NS, AS, CH. Includes sub-rows for MPS and MNS.

AUGUST.

Table for August 1948 showing magnetic observations. Columns include DAY (1-31), 25 numbered columns for hourly values, and summary columns M, PS, NS, AS, CH. Includes sub-rows for MPS and MNS.

SEPTEMBER.

Table for September 1948 showing magnetic observations. Columns include DAY (1-30), 25 numbered columns for hourly values, and summary columns M, PS, NS, AS, CH. Includes sub-rows for MPS and MNS.

Tromsø. Horizontal Intensity. H = 11100 + Tabular Quantities expressed in Gamma.

Gr. M. T.

OCTOBER 1948.

HOURLY MEAN VALUES

Table for October 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-31), hours (1-24), and summary rows M and QM.

NOVEMBER.

Table for November 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-30), hours (1-24), and summary rows M and QM.

DECEMBER.

Table for December 1948 showing hourly mean values for horizontal intensity. Columns include Day (1-31), hours (1-24), and summary rows M and QM.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. I.

OCTOBER 1948.

HOURLY MEAN VALUES

Table for October 1948 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Summary values: M -155, PS 683, NS 1517, AS 1859, CH 1.5.

NOVEMBER.

Table for November 1948 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-30), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Summary values: M -110, PS 413, NS 635, AS 1248, CH 1.3.

DECEMBER.

Table for December 1948 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Summary values: M -64, PS 315, NS 668, AS 983, CH 1.2.

Tromsø. Vertical Intensity. V = 50500 + Tabular Quantities expressed in Gamma.

Gr. M. T.

JANUARY 1948.

HOURLY MEAN VALUES

Table for January 1948 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and monthly totals (M, R). Values range from approximately 60 to 180 Gamma.

FEBRUARY.

Table for February showing hourly mean values for vertical intensity. Columns include Day (1-29), hours (1-24), and monthly totals (M, R). Values range from approximately 40 to 180 Gamma.

MARCH.

Table for March showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and monthly totals (M, R). Values range from approximately 100 to 350 Gamma.

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. I.

JANUARY 1948.

HOURLY MEAN VALUES

Table for January 1948 showing magnetic observations. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS).

FEBRUARY.

Table for February 1948 showing magnetic observations. Columns include Day (1-29), hours (1-24), and summary statistics (M, PS, NS, AS).

MARCH.

Table for March 1948 showing magnetic observations. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS).

Tromsø. Vertical Intensity. V = 50500 + Tabular Quantities expressed in Gamma.

Gr. M. T.

APRIL 1948.

HOURLY MEAN VALUES

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	R	
1	220	70	-40	-25	30	18	60	95	108	188	112	100	100	100	98	115	102	85	72	80	120	130	220	180	95	598
2	15	40	53	65	52	55	58	68	85	82	120	90	98	95	110	110	102	82	90	90	70	82	100	160	82	326
3	210	220	85	-15	-5	65	80	92	95	118	120	122	100	98	95	92	80	90	95	90	70	82	100	80	95	360
4	87	88	88	82	78	72	82	90	112	105	115	122	138	117	122	125	128	108	108	95	90	85	78	82	99	95
5	87	88	88	82	85	85	82	82	82	88	88	90	95	100	105	110	88	82	80	72	72	72	72	82	86	48
6	80	80	82	82	72	68	72	80	90	92	93	82	88	98	108	132	120	60	68	80	210	80	110	110	93	435
7	82	82	80	75	82	78	85	90	90	85	80	82	90	98	102	100	103	110	98	90	150	110	110	93	313	
8	65	70	80	92	88	88	90	95	98	95	90	80	85	90	95	95	92	90	90	88	82	72	80	78	87	68
9	92	80	83	83	85	87	88	90	98	90	88	90	88	80	90	97	102	95	80	80	98	95	100	89	122	89
10	55	18	5	40	72	80	88	92	90	92	92	87	80	90	122	130	62	63	115	115	98	85	110	80	82	347
11	10	30	60	47	40	48	60	80	90	88	80	85	90	92	103	118	105	107	90	60	65	78	78	73	184	
12	78	130	30	15	27	35	48	65	77	85	118	107	130	148	95	0	50	93	90	75	88	97	145	172	83	286
13	190	142	145	100	18	30	58	72	80	85	92	102	105	112	128	142	140	120	50	140	130	130	140	93	106	299
14	220	280	-30	120	30	40	72	80	85	88	90	92	122	128	107	103	90	123	107	100	98	90	80	60	99	612
15	80	87	90	80	33	30	40	92	102	103	97	88	85	118	120	10	-20	65	70	103	110	170	125	90	83	333
16	98	100	103	108	108	105	92	88	87	92	100	102	102	142	135	125	110	105	103	85	90	95	90	100	103	61
17	83	80	65	80	90	90	88	82	80	87	87	80	80	88	92	85	83	82	75	78	75	80	78	72	82	54
18	75	82	90	90	88	82	85	88	95	95	110	107	108	110	118	118	110	102	98	87	92	88	88	90	96	48
19	85	85	89	88	85	85	86	91	90	89	87	92	113	152	160	138	122	112	92	82	88	80	75	72	98	102
20	150	120	53	75	73	70	72	80	92	95	110	155	162	120	108	115	130	115	95	93	80	110	140	320	114	476
21	300	180	50	98	58	60	60	85	103	95	98	102	102	100	108	108	103	100	95	72	95	68	68	82	100	952
22	175	280	170	210	310	285	140	60	120	100	100	82	-170	-200	-30	80	50	38	38	70	140	140	140	130	103	762
23	110	40	60	90	100	95	95	98	93	90	90	92	122	125	153	140	118	103	98	92	97	96	90	90	99	231
24	95	110	108	102	60	60	72	78	92	98	92	107	117	133	150	140	138	122	100	88	93	87	100	300	110	354
25	2	15	93	100	63	65	88	90	80	93	92	110	130	165	128	130	97	88	70	130	110	110	100	150	96	286
26	110	95	105	105	100	98	98	102	100	102	110	155	120	98	110	58	32	65	90	90	95	38	102	118	96	265
27	200	185	85	42	35	63	82	108	93	105	100	100	98	108	110	110	110	103	88	60	48	73	85	82	95	258
28	83	90	92	82	45	43	72	90	98	95	92	83	108	102	100	100	120	95	95	85	75	100	0	42	83	204
29	15	42	70	85	93	92	110	110	70	82	90	88	87	105	142	105	110	110	107	90	82	50	30	50	83	170
30	68	93	95	88	80	90	95	95	100	115	135	135	118	103	115	108	103	110	88	50	110	103	108	98	100	197
M	107	103	76	79	73	75	81	87	92	94	99	100	97	100	110	104	97	94	88	88	95	94	97	111	83	295
QM	81	82	83	85	84	83	83	84	85	86	87	88	89	90	89	88	87	86	85	84	83	82	81	80	85	

MAY.

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	R	
1	85	80	75	88	85	85	85	93	92	93	98	95	98	100	110	115	103	87	30	55	90	90	35	35	83	170
2	65	70	57	70	70	80	80	92	108	105	90	85	132	95	140	100	98	40	-3	113	93	102	87	87	258	
3	160	110	70	-10	-10	35	47	70	82	95	103	82	110	120	108	110	85	30	130	230	100	115	102	91	381	
4	108	128	120	75	75	80	85	92	93	93	92	102	104	107	98	110	82	72	18	85	118	170	180	98	367	
5	110	72	97	100	98	90	85	81	85	88	85	88	90	100	102	107	105	95	97	42	40	58	70	105	87	381
6	130	180	0	-5	42	60	48	45	68	110	115	113	118	145	105	55	63	70	70	85	78	145	220	90	90	401
7	150	240	22	-18	60	80	210	150	55	62	65	-80	-40	50	122	155	118	55	55	58	62	70	280	120	87	605
8	100	95	108	103	100	90	118	128	92	105	107	150	125	112	162	140	115	120	100	78	72	115	130	135	113	129
9	112	92	108	102	100	102	105	140	150	180	250	260	270	210	150	170	80	100	145	130	120	150	168	170	144	388
10	130	115	105	105	100	70	85	113	120	105	87	120	132	110	135	110	80	15	-15	70	82	100	110	93	95	238
11	160	110	57	88	92	90	93	102	115	142	140	128	113	100	118	122	100	70	50	80	170	110	98	280	114	299
12	80	87	90	100	102	115	100	92	102	122	110	108	130	140	140	110	112	92	90	80	65	110	145	110	106	163
13	140	430	240	270	350	110	92	100	120	145	175	135	150	172	142	128	110	105	102	97	98	107	107	105	156	483
14	102	100	98	90	92	93	95	95	90	88	82	80	83	85	92	90	103	113	85	113	112	100	85	98	94	95
15	115	-20	140	160	42	68	110	130	90	135	160	110	145	140	145	125	122	110	107	100	135	140	160	235	121	558
16	210	245	500	550	500	450	500	130	110	150	125	130	120	135	120	-30	155	125	80	140	160	175	240	280	213	1088
17	125	110	105	98	102	95	95	93	95	102	102	115	107	100	110	118	112	85	70	93	102	105	145	220	109	136
18	150	130	55	19	40	53	68	80	90	105	88	92	108	105	110	112	105	95	35	92	103	100	50	135	88	333
19	120	95	102	108	105	103	98	92	92	100	98	110	110	142	132	118	102	95	90	85	88	90	82	90	102	95
20	85	80	85	80	82	70	70	72	72	83	90	88	98	110	120	120	120	110	100	95	105	170	200	200	104	164
21	240	250	150	80	60	-70	50	65	82	105	100	135	-70	-170	-160	-95	-100	-140	40	230	440	280	240	400	89	877
22	360	380	155	60	150	90	80	130	170	160	130	100	102	70	138	80	-110	35	65	90	130	180	175	240	132	748
23	240	240	130	-29	70	30	22	70	85	97	100	113	122	118	105	130	140	125	92	110	90	60	120	240	110	503
24	345	380	-50	25	65	58	70	98	100	110	145	210	180	140	150	128	128	118	115	118	105	120	160	260	156	694
25	185	120	210	50	13	38	72	98	120	122	120	122	35	100	145	172	150	130	135	130	132	145	185	250	124	490
26																										

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

APRIL 1948.

HOURLY MEAN VALUES

Table with columns DAY, 1-25, M, PS, NS, AS for April 1948. Contains hourly mean values for vertical intensity and storminess.

MAY.

Table with columns DAY, 1-25, M, PS, NS, AS for May 1948. Contains hourly mean values for vertical intensity and storminess.

JUNE.

Table with columns DAY, 1-25, M, PS, NS, AS for June 1948. Contains hourly mean values for vertical intensity and storminess.

Tromsø. Vertical Intensity. V = 50500 + Tabular Quantities expressed in Gamma.

Gr. M. T.

Table for July 1948 showing hourly mean values for vertical intensity. Columns include Day (1-23), M, and R. Values range from approximately 50 to 350.

Table for August showing hourly mean values for vertical intensity. Columns include Day (1-23), M, and R. Values range from approximately 50 to 350.

Table for September showing hourly mean values for vertical intensity. Columns include Day (1-23), M, and R. Values range from approximately 50 to 350.

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

JULY 1948.

HOURLY MEAN VALUES

Table for July 1948 showing magnetic observations. Columns: DAY (1-25), 1-25, M, PS, NS, AS. Rows: 1-31, M, MPS, MNS.

AUGUST.

Table for August 1948 showing magnetic observations. Columns: DAY (1-25), 1-25, M, PS, NS, AS. Rows: 1-31, M, MPS, MNS.

SEPTEMBER.

Table for September 1948 showing magnetic observations. Columns: DAY (1-25), 1-25, M, PS, NS, AS. Rows: 1-30, M, MPS, MNS.

Tromsø. Vertical Intensity. V = 50500 + Tabular Quantities expressed in Gamma. Gr. M. T.

OCTOBER 1948. HOURLY MEAN VALUES

Table for October 1948 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and monthly totals (M, R). Values range from approximately 50 to 250 Gamma.

NOVEMBER.

Table for November showing hourly mean values for vertical intensity. Columns include Day (1-30), hours (1-24), and monthly totals (M, R). Values range from approximately 50 to 250 Gamma.

DECEMBER.

Table for December showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and monthly totals (M, R). Values range from approximately 50 to 250 Gamma.

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

OCTOBER 1948.

HOURLY MEAN VALUES

Table for October 1948 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-31), M, PS, NS, AS.

NOVEMBER.

Table for November showing hourly mean values for vertical intensity and storminess. Columns include Day (1-30), M, PS, NS, AS.

DECEMBER.

Table for December showing hourly mean values for vertical intensity and storminess. Columns include Day (1-31), M, PS, NS, AS.

Resuming Tables.

Diurnal Variation.
QUIET VALUES.

Tromsø.

Declination. Unit Gamma. + West.

1948	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
JAN	-1	-1	-2	-3	-4	-5	-4	-3	-2	-1	1	3	5	7	9	7	5	3	2	1	0	-1	-2	-3
FEB	-1	-2	-3	-4	-5	-6	-7	-6	-5	-4	-2	0	2	4	5	6	6	5	4	3	2	1	0	0
MAR	-3	-5	-7	-9	-11	-13	-14	-14	-11	-3	6	12	16	14	11	9	8	7	6	5	4	2	0	-1
APR	-2	-5	-7	-9	-13	-17	-20	-22	-17	-7	5	13	18	20	16	13	10	8	7	6	5	4	3	1
MAY	-12	-17	-22	-27	-32	-30	-27	-22	-10	1	11	21	26	28	26	23	20	17	14	11	8	5	1	-5
JUN	-9	-16	-21	-26	-31	-33	-31	-21	-11	1	14	21	24	22	20	19	18	17	16	14	12	7	2	-3
JUL	-15	-20	-25	-30	-34	-32	-29	-22	-10	3	13	23	28	25	17	13	11	15	18	20	15	11	3	-7
AUG	-13	-18	-23	-28	-31	-33	-28	-18	-8	2	12	19	26	29	24	19	14	16	17	16	12	7	-1	-3
SEP	-8	-11	-15	-18	-20	-18	-15	-10	-5	2	9	15	22	17	12	7	4	5	6	7	5	2	0	-5
OCT	-8	-10	-12	-13	-12	-10	-8	-6	-3	1	5	9	12	10	7	8	9	10	9	5	1	-1	-3	-6
NOV	-3	-4	-5	-6	-7	-7	-6	-5	-3	-1	2	6	9	11	11	10	9	7	5	2	-1	-3	-5	-4
DEC	-3	-4	-5	-6	-5	-4	-3	-2	-1	1	3	5	7	6	5	4	3	2	1	0	0	-1	-1	-2
MEAN	-7	-9	-12	-15	-17	-17	-16	-13	-7	-1	7	12	15	16	14	12	10	9	9	8	5	3	0	-4

Horizontal Intensity. Unit Gamma.

JAN	-1	0	1	2	3	2	1	-1	-4	6	-7	-5	-2	0	1	2	3	3	2	1	0	-1	-2	-2
FEB	1	2	3	4	4	3	2	0	-3	-6	-10	-9	-8	-6	-3	0	2	4	4	3	2	1	0	0
MAR	3	3	5	6	6	4	1	-4	-12	-19	-24	-21	-14	-6	1	5	7	8	8	8	8	7	6	4
APR	11	12	13	14	11	6	-1	-11	-21	-28	-31	-26	-17	-8	-3	1	4	7	9	11	12	11	10	10
MAY	11	12	13	13	10	5	-2	-10	-20	-26	-30	-25	-17	-10	-3	1	5	8	10	12	11	10	9	10
JUN	10	11	12	11	9	4	-8	-20	-31	-36	-38	-28	-16	-4	4	10	14	16	15	14	13	12	11	10
JUL	10	11	12	11	8	2	-7	-19	-30	-35	-37	-27	-15	-5	3	10	14	16	15	14	13	12	11	10
AUG	13	12	11	9	6	3	-7	-19	-24	-27	-29	-24	-14	-4	1	6	9	11	12	13	13	12	12	11
SEP	8	9	10	11	8	4	-1	-7	-14	-21	-24	-21	-16	-9	-2	3	6	8	10	11	10	9	8	6
OCT	7	8	9	10	9	8	5	-3	-10	-20	-25	-20	-15	-10	-5	0	4	7	9	10	9	7	5	6
NOV	-5	-3	-1	1	2	2	0	-2	-5	-8	-11	-8	-5	0	4	6	7	8	7	6	4	2	-1	-3
DEC	-1	1	2	3	4	3	2	1	-1	-3	-4	-3	-2	-1	0	1	2	3	2	1	0	-1	-2	-3
MEAN	6	7	8	8	7	4	-1	-8	-15	-20	-22	-18	-12	-5	0	4	6	8	9	9	8	7	6	6

Vertical Intensity. Unit Gamma.

JAN	0	0	-1	-1	-2	-3	-4	-3	-2	0	2	4	5	6	5	4	3	2	1	0	-1	-2	-2	-1
FEB	-3	-4	-5	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	5	4	3	2	1	0	-1	-1	-2
MAR	0	-1	-2	-3	-3	-2	-1	0	1	2	3	4	5	4	3	2	1	0	-1	-2	-3	-2	-1	
APR	-4	-3	-2	0	-1	-2	-2	-1	0	1	2	3	4	5	4	3	2	1	0	-1	-2	-3	-4	-5
MAY	0	0	-1	-2	-3	-4	-3	-2	-1	0	1	2	3	4	5	5	4	3	2	1	0	-1	-2	-1
JUN	-2	-3	-4	-5	-6	-7	-6	-5	-4	-2	0	2	4	6	7	7	6	5	4	3	2	1	0	-1
JUL	-1	-2	-3	-4	-5	-6	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	5	4	3	2	1	0
AUG	0	0	-1	-2	-3	-4	-4	-3	-2	-1	0	1	2	3	4	5	4	3	2	2	1	1	0	0
SEP	-2	-3	-3	-2	-1	0	1	2	1	0	0	1	2	3	4	3	2	1	0	0	-1	-1	-2	-2
OCT	-2	-3	-4	-5	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	5	4	3	2	1	0	-1	-2
NOV	0	-1	-2	-3	-4	-5	-5	-4	-3	-2	-1	0	1	2	3	4	5	4	3	2	1	0	0	0
DEC	0	-1	-2	-3	-4	-5	-6	-5	-3	0	3	6	5	4	3	3	2	2	2	1	1	1	0	0
MEAN	-1	-2	-3	-3	-4	-4	-4	-3	-2	0	1	2	3	4	4	4	4	3	2	1	0	0	-1	-1

Monthly Means.

DECLINATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
Direct Values D = 1° W +	22.2	21.0	19.4	20.3	19.7	21.3	19.4	18.0	17.3	13.6	14.5	14.5	18.4
Quiet Values D = 1° W +	22.0	21.6	22.0	20.6	19.0	20.3	19.0	18.8	18.0	16.3	16.3	15.7	19.1
Range (Unit Minutes)	73	76	95	77	111	66	72	91	84	128	92	85	87
Quiet Range	4	4	9	13	19	18	19	19	13	8	6	4	11
Storminess, Mean (Unit γ)	0	-2	-6	-1	2	1	1	-3	-2	-8	-6	-4	-3
Diurnal Sum PS (Unit γ)	155	170	119	180	272	209	191	191	176	150	126	123	172
NS	145	214	321	210	233	148	173	270	221	349	278	209	231
AS	299	384	440	389	505	357	364	461	397	499	404	332	403
HORIZONTAL INTENSITY													
Direct Values H = 11100 +	48	43	40	65	66	73	77	64	57	32	50	51	56
Quiet Values H = 11100 +	57	53	64	71	70	71	70	69	64	65	68	66	66
Range	414	349	470	414	649	432	449	568	513	678	517	453	492
Quiet Range	10	14	32	45	43	54	53	42	35	35	19	8	33
Storminess, Mean (Unit γ)	-8	-9	-24	-7	-4	2	7	-5	-8	-33	-18	-15	-10
Diurnal Sum PS (Unit γ)	304	346	386	490	971	683	769	817	645	523	413	315	555
NS	506	564	952	666	1065	645	605	942	843	1317	835	668	801
AS	810	910	1338	1156	2036	1328	1374	1759	1488	1839	1248	983	1356
VERTICAL INTENSITY													
Direct Values V = 50500 +	76	78	90	93	110	95	90	104	99	107	96	94	94
Quiet Values V = 50500 +	81	82	83	85	87	90	88	90	94	98	100	100	90
Range	307	314	337	295	395	239	253	305	345	517	395	387	342
Quiet Range	10	11	8	10	9	14	11	9	7	11	10	12	10
Storminess, Mean (Unit γ)	-5	-3	7	8	22	5	3	14	5	8	-6	-7	4
Diurnal Sum PS (Unit γ)	212	238	455	378	771	334	324	612	401	628	303	222	407
NS	332	313	295	179	242	214	249	275	279	429	445	398	304
AS	544	552	750	557	1013	548	573	887	680	1057	748	621	711

Resuming Tables.

Storminess.

Tromsø.

Declination. Unit Gamma. + West.

1948	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
JAN MPS	0	0	0	1	2	4	6	4	2	3	5	9	13	10	8	14	23	17	15	9	4	3	2	0
FEB MPS	1	0	0	1	1	2	5	5	3	5	8	13	16	14	17	19	19	13	9	7	5	2	0	0
MAR MPS	0	0	0	0	6	1	2	4	3	3	3	7	9	11	12	11	14	12	10	7	4	1	0	0
APR MPS	1	1	0	0	1	3	4	6	7	7	5	10	11	10	11	15	20	16	16	20	8	5	3	1
MAY MPS	4	2	1	1	1	2	3	4	2	4	5	6	5	11	14	18	20	32	38	35	29	18	9	7
JUN MPS	1	1	0	1	0	1	3	3	4	2	5	8	11	11	12	19	18	21	20	23	22	15	6	2
JUL MPS	2	1	1	0	2	4	4	4	2	4	5	7	6	8	12	18	21	21	19	16	15	10	5	4
AUG MPS	0	1	1	3	5	10	4	4	4	3	3	6	7	13	16	21	16	11	15	20	13	12	3	1
SEP MPS	1	1	1	2	2	2	4	3	2	4	6	7	6	11	20	19	21	19	20	15	8	2	1	1
OCT MPS	0	0	1	3	2	3	5	6	3	4	6	8	8	11	10	14	18	24	11	6	3	1	1	1
NOV MPS	0	0	1	0	1	6	6	4	2	1	5	4	5	4	8	13	15	16	14	9	5	3	2	0
DEC MPS	0	0	1	1	.2	2	3	2	1	1	1	4	5	6	10	11	14	23	19	10	3	1	3	0
MEAN	1	1	1	1	2	3	4	4	3	3	5	7	9	10	13	16	18	19	17	15	10	6	3	1
JAN MNS	21	26	13	8	3	1	1	1	1	1	0	0	1	2	1	1	2	1	9	7	10	18	19	
FEB MNS	30	29	27	16	11	4	1	1	2	0	0	0	0	0	1	4	5	1	1	3	8	13	29	29
MAR MNS	44	34	33	30	12	13	10	9	9	9	8	3	2	1	1	4	5	6	3	3	9	20	22	30
APR MNS	20	36	31	24	19	11	7	4	3	3	2	0	0	1	1	2	2	1	0	0	2	5	13	24
MAY MNS	28	37	28	31	19	18	13	7	5	4	3	2	4	1	1	1	0	0	0	0	0	5	8	19
JUN MNS	19	31	35	26	17	10	8	5	3	2	1	0	0	0	0	1	1	1	1	0	0	0	5	14
JUL MNS	22	41	34	18	8	4	4	2	3	5	5	4	2	0	0	0	0	0	0	0	0	0	0	0
AUG MNS	32	33	31	28	19	8	9	17	18	8	10	2	2	3	2	2	1	2	0	0	2	4	15	23
SEP MNS	34	31	27	24	15	5	1	1	5	3	2	1	1	0	1	0	0	0	0	2	2	8	18	43
OCT MNS	44	48	34	25	17	13	10	6	8	6	3	2	2	2	3	4	3	1	5	9	20	26	22	43
NOV MNS	43	40	27	19	10	2	3	1	2	3	1	1	2	5	2	7	3	4	3	9	17	18	20	35
DEC MNS	25	25	17	13	7	5	1	2	3	4	3	1	1	1	3	2	1	2	2	2	12	21	25	34
MEAN	30	32	28	22	13	8	6	5	5	4	3	1	1	1	1	2	2	2	1	3	7	11	17	27
JAN MPS + MNS	-21	-26	-13	-7	0	3	5	4	1	3	4	9	13	9	6	14	22	15	13	0	-3	-7	-16	-18
FEB MPS + MNS	-30	-29	-27	-15	-10	-2	4	4	0	5	8	13	16	14	17	15	14	12	8	4	-3	-11	-29	-29
MAR MPS + MNS	-44	-34	-33	-30	-7	-12	-7	-5	-6	-6	-5	4	7	10	11	7	8	6	7	4	-5	-19	-22	-30
APR MPS + MNS	-19	-35	-31	-23	-18	-8	-2	1	4	4	3	10	10	9	10	12	18	15	16	20	6	-1	-10	-22
MAY MPS + MNS	-24	-35	-27	-30	-17	-16	-10	-3	-3	0	2	5	1	10	13	18	19	32	38	35	29	13	2	-12
JUN MPS + MNS	-18	-30	-35	-25	-16	-9	-5	2	1	1	4	8	11	11	12	18	17	20	19	23	22	14	1	-12
JUL MPS + MNS	-20	-40	-35	-18	-6	0	0	2	-1	-1	0	2	3	8	12	18	21	21	19	16	15	9	2	-8
AUG MPS + MNS	-32	-32	-31	-25	-14	2	-4	-13	-14	-5	-7	3	5	10	13	19	14	9	14	19	12	9	-12	-21
SEP MPS + MNS	-33	-30	-26	-22	-12	-3	2	1	-3	1	4	6	5	11	19	19	20	19	19	13	6	-6	-17	-43
OCT MPS + MNS	-44	-48	-33	-22	-16	-11	-5	0	-6	-2	3	6	7	9	7	10	15	23	6	-3	-17	-25	-21	-39
NOV MPS + MNS	-43	-40	-26	-18	-9	3	3	3	-1	-1	4	3	3	0	5	6	12	11	10	0	-12	-15	-18	-35
DEC MPS + MNS	-25	-25	-16	-13	-5	-3	2	1	-1	-3	-2	4	4	5	7	9	13	21	17	8	-8	-20	-22	-34
MEAN	-29	-34	-28	-21	-11	-5	-1	0	-2	0	2	6	7	9	11	14	16	17	16	12	2	-5	-14	-25

Horizontal Intensity. Unit Gamma.

1948	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
JAN MPS	1	0	1	0	1	2	4	5	3	4	6	12	18	24	41	42	43	36	26	18	9	4	1	2
FEB MPS	0	0	1	1	1	2	1	2	3	9	14	17	27	39	46	54	58	42	18	9	1	0	0	0
MAR MPS	1	1	1	4	3	5	5	4	5	6	20	28	37	41	60	60	45	26	17	9	3	2	1	1
APR MPS	0	0	0	1	2	3	6	6	7	16	25	31	34	44	57	67	66	57	41	16	7	1	1	0
MAY MPS	0	0	2	2	2	5	8	6	12	29	48	76	116	107	119	128	113	92	62	27	11	3	1	1
JUN MPS	3	2	2	3	4	2	4	11	11	18	29	37	55	58	84	98	82	75	52	35	8	3	4	4
JUL MPS	2	3	5	7	7	7	9	10	17	19	40	54	59	69	82	100	87	73	60	39	15	4	1	1
AUG MPS	0	1	2	2	1	1	4	8	12	36	50	79	89	101	106	103	87	59	43	15	7	5	2	0
SEP MPS	2	3	5	7	5	8	7	8	15	29	38	49	64	71	92	90	66	47	29	15	7	4	2	0
OCT MPS	0	2	1	1	1	4	4	3	16	21	41	61	73	70	81	67	38	23	11	3	1	1	4	1
NOV MPS	0	1	4	1	4	6	6	6	16	24	23	25	28	47	38	54	61	27	14	13	7	4	0	1
DEC MPS	4	4	2	2	2	3	3	10	3	7	11	11	20	23	36	51	37	22	25	21	10	3	1	3
MEAN	1	1	2	3	3	4	5	7	10	18	29	40	52	58	70	76	65	48	33	18	7	3	2	1
JAN MNS	61	67	32	24	26	13	4	0	1	1	0	0	0	0	1	4	9	9	20	23	30	55	65	59
FEB MNS	82	76	54	29	13	5	5	4	1	2	1	1	1	0	0	0	1	2	3	17	41	58	82	87
MAR MNS	130	100	75	61	58	30	13	8	7	4	4	1	1	2	1	2	6	17	15	35	74	100	105	102
APR MNS	101	107	72	56	41	12	13	4	1	0	0	0	1	0	0	0	1	0	0	21	42	41	60	92
MAY MNS	151	149	128	98	67	49	19	10	3	2	0	0	0	0	0	0	0	0	2	13	53	82	106	152
JUN MNS	83	107	97	59	35	25	12	5	0	0	0	1	0	1	0	1	0	0	2	5	20	45	73	73

JUL MNS	106	116	85	48	26	11	3	2	1	0	0	0	0	0	0	0	0	0	7	26	40	58	77	
AUG MNS	120	107	102	96	69	35	17	16	7	2	0	0	0	0	0	1	0	0	1	25	56	69	117	109
SEP. MNS	97	89	87	77	36	29	15	5	3	0	0	0	1	0	0	0	0	2	10	22	53	88	96	112
OCT MNS	135	124	87	66	40	47	31	9	2	2	0	1	1	0	0	3	24	29	52	95	121	143	137	159
NOV MNS	110	78	62	48	24	8	4	2	1	0	0	0	0	0	5	8	8	20	17	48	75	103	97	122
DEC MNS	68	64	29	27	30	10	3	1	2	0	1	1	0	0	0	2	14	9	12	34	71	93	92	103
MEAN	104	99	76	57	38	23	12	6	2	1	1	0	0	0	1	2	5	7	11	29	55	75	91	104
JAN MPS + MNS	-60	-66	-31	-24	-25	-11	0	5	3	3	6	11	18	24	40	37	34	27	7	-6	-21	-51	-64	-57
FEB MPS + MNS	-82	-76	-52	-28	-12	-3	-4	-2	2	8	14	16	25	39	45	54	57	40	15	-8	-39	-58	-82	-87
MAR MPS + MNS	-129	-99	-74	-57	-55	-25	-8	-4	-2	2	16	27	36	39	59	57	39	10	3	-26	-72	-99	-104	-101
APR MPS + MNS	-100	-108	-72	-55	-38	-8	-8	2	5	16	25	31	34	44	57	67	65	56	41	-5	-36	-40	-59	-92
MAY MPS + MNS	-150	-149	-126	-96	-65	-44	-11	-4	9	28	47	75	116	107	119	128	113	92	60	14	-42	-59	-105	-151
JUN MPS + MNS	-80	-105	-96	-57	-31	-23	-8	6	11	18	28	36	54	58	84	97	82	75	50	31	-12	-43	-70	-69
JUL MPS + MNS	-104	-114	-78	-41	-20	-4	7	7	16	19	40	54	69	69	82	100	87	73	60	32	-11	-36	-57	-76
AUG MPS + MNS	-120	-107	-100	-94	-67	-34	-13	-8	5	34	50	79	89	101	106	102	87	58	42	-10	-48	-64	-115	-109
SEP MPS + MNS	-95	-85	-82	-71	-31	-21	-9	2	11	29	38	49	64	70	92	90	65	44	19	-7	-46	-84	-94	-112
OCT MPS + MNS	-135	-122	-85	-65	-39	-44	-27	-6	13	22	40	60	72	70	81	64	14	-7	-40	-93	-120	-142	-134	-158
NOV MPS + MNS	-110	-78	-58	-46	-21	-2	4	16	23	23	25	28	47	34	46	52	7	-3	-35	-68	-100	-96	-122	
DEC MPS + MNS	-64	-60	-26	-25	-28	-7	0	8	1	6	10	10	19	23	36	50	23	12	12	-14	-61	-90	-91	-100
MEAN	-102	-97	-73	-55	-36	-19	-7	1	8	17	28	39	51	58	70	74	60	41	22	-11	-48	-72	-89	-103

Vertical Intensity. Unit Gamma.

1948	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
JAN MPS	20	15	2	1	1	1	1	4	6	7	8	7	10	12	16	14	8	7	6	3	11	13	23	17
FEB MPS	17	9	3	3	1	0	1	1	5	7	9	10	10	13	20	18	12	10	10	11	6	17	17	28
MAR MPS	37	31	10	3	19	10	10	9	11	9	10	12	14	20	21	23	22	17	14	19	24	30	43	37
APR MPS	37	32	9	9	10	9	5	5	8	9	1	14	17	20	24	23	19	14	8	8	15	16	22	34
MAY MPS	66	71	42	27	27	17	13	16	18	24	25	27	31	27	30	25	22	14	8	16	38	38	60	89
JUN MPS	40	35	14	5	4	1	0	2	4	9	13	12	14	28	22	19	12	9	6	3	10	13	23	36
JUL MPS	23	15	14	0	1	1	3	6	11	10	12	19	25	29	30	19	18	11	6	7	12	21	25	
AUG MPS	54	54	29	17	13	15	18	26	16	11	16	16	20	23	22	24	17	12	8	15	29	37	61	62
SEP MPS	39	38	15	7	1	1	2	2	8	9	10	11	14	16	15	15	14	7	7	13	26	41	46	42
OCT MPS	57	46	24	26	21	20	19	18	13	15	16	13	16	18	15	10	7	7	20	26	64	52	52	61
NOV MPS	38	17	17	3	0	1	3	6	8	10	10	9	10	11	11	6	5	8	7	6	17	27	34	38
DEC MPS	18	16	2	4	1	2	2	3	3	7	6	6	5	10	13	10	9	6	2	13	17	23	25	19
MEAN	37	31	15	9	8	7	6	8	9	11	11	13	17	19	20	17	14	10	9	12	22	27	36	41
JAN MNS	18	17	24	21	19	17	9	3	1	0	1	1	3	13	19	16	25	28	28	20	13	10	12	13
FEB MNS	15	22	23	21	16	15	14	6	2	1	1	4	9	17	11	13	21	11	11	16	15	17	19	14
MAR MNS	12	15	15	26	22	15	10	4	2	2	10	15	15	21	12	10	16	13	5	7	14	18	12	5
APR MNS	11	11	18	15	22	17	7	3	1	0	0	1	10	10	4	7	9	5	5	3	4	5	9	
MAY MNS	1	10	18	24	16	16	8	3	2	1	1	6	11	11	20	19	15	19	19	9	6	2	3	2
JUN MNS	9	12	23	25	24	14	7	7	5	4	4	3	2	0	0	10	7	12	7	13	9	5	6	5
JUL MNS	4	14	42	46	33	20	9	3	1	3	2	2	1	0	1	2	3	9	12	12	13	6	5	5
AUG MNS	8	5	13	22	22	23	8	3	3	8	12	11	16	24	20	16	13	7	9	8	10	4	5	3
SEP MNS	12	5	16	28	28	19	18	10	3	2	3	4	8	14	15	24	19	13	12	7	3	3	4	8
OCT MNS	11	9	19	28	25	14	10	7	4	5	7	14	31	40	34	52	50	29	9	7	6	8	6	9
NOV MNS	32	22	14	18	27	18	7	4	3	2	2	6	15	25	27	28	29	34	29	21	33	18	20	21
DEC MNS	32	21	22	20	21	16	8	3	2	1	2	1	1	10	33	39	42	28	15	25	19	20	17	
MEAN	14	14	21	25	23	17	10	5	2	2	4	6	10	15	14	19	21	19	15	12	13	10	10	9
JAN MPS + MNS	2	-4	-22	-20	-17	-16	-8	1	5	7	7	6	7	-1	-3	-3	-17	-22	-22	-17	-1	3	11	4
FEB MPS + MNS	2	-14	-20	-18	-15	-14	-13	-5	3	5	9	6	1	-4	9	5	-9	-1	-1	-5	-8	1	-1	14
MAR MPS + MNS	25	16	-5	-23	-3	-6	-1	5	10	7	0	-3	0	-1	9	13	6	4	9	12	10	13	31	32
APR MPS + MNS	26	21	-9	-6	-13	-8	-3	1	7	9	12	12	7	10	20	16	10	9	3	3	12	12	17	30
MAY MPS + MNS	65	60	25	3	11	1	5	13	16	23	25	21	19	16	10	6	8	-5	-10	7	30	36	57	87
JUN MPS + MNS	31	23	-9	-20	-13	-7	-5	-1	5	9	9	12	28	22	9	5	-3	-2	-10	1	8	16	31	
JUL MPS + MNS	19	1	-28	-46	-31	-19	-6	3	10	8	10	18	24	29	28	16	15	2	-7	-5	-5	-6	15	20
AUG MPS + MNS	46	48	16	-6	-8	-9	10	23	12	3	4	5	4	-1	2	7	4	6	-1	6	20	33	56	59
SEP MPS + MNS	27	32	-1	-22	-27	-18	-16	-8	4	7	7	7	7	2	0	-9	-5	-6	-5	6	23	38	41	34
OCT MPS + MNS	46	37	5	-3	-5	6	9	11	9	10	9	-1	-15	-22	-19	-42	-43	-22	11	19	58	44	45	52
NOV MPS + MNS	15	-5	4	-15	-27	-17	-4	3	5	9	8	3	-5	-14	-16	-22	-24	-27	-23	-15	-16	9	15	17
DEC MPS + MNS	-14	-6	-20	-16	-20	-13	-7	0	2	6	4	5	4	10	2	-23	-30	-36	-26	-3	-9	3	5	2
MEAN	24	17	-5	-16	-15	-11	-3	4	7	8	9	7	6	4	6	-2	-7	-8	-6	0	10	16	26	32

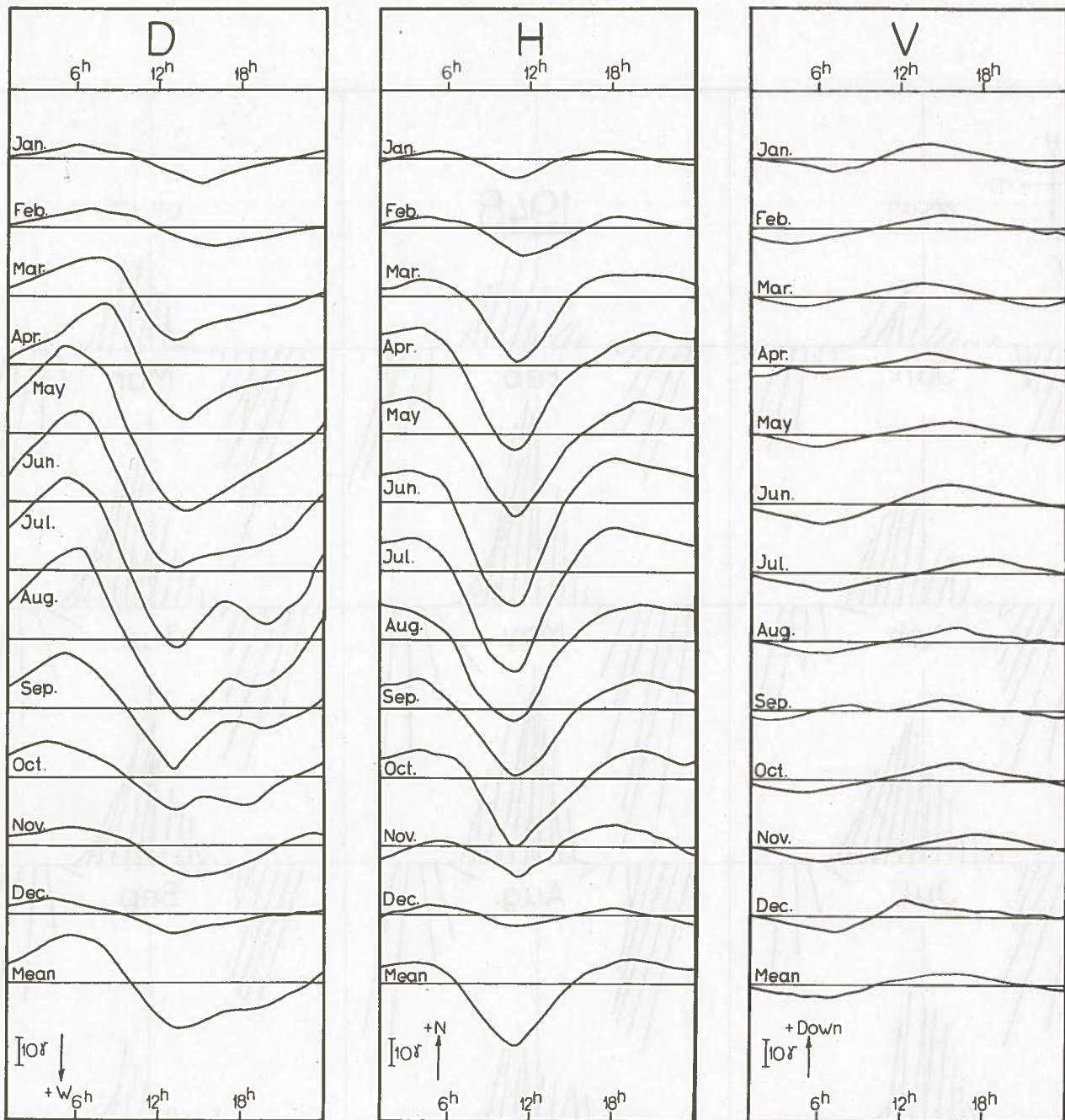


Fig. 1. The Quiet Diurnal Variation, smoothed Values.

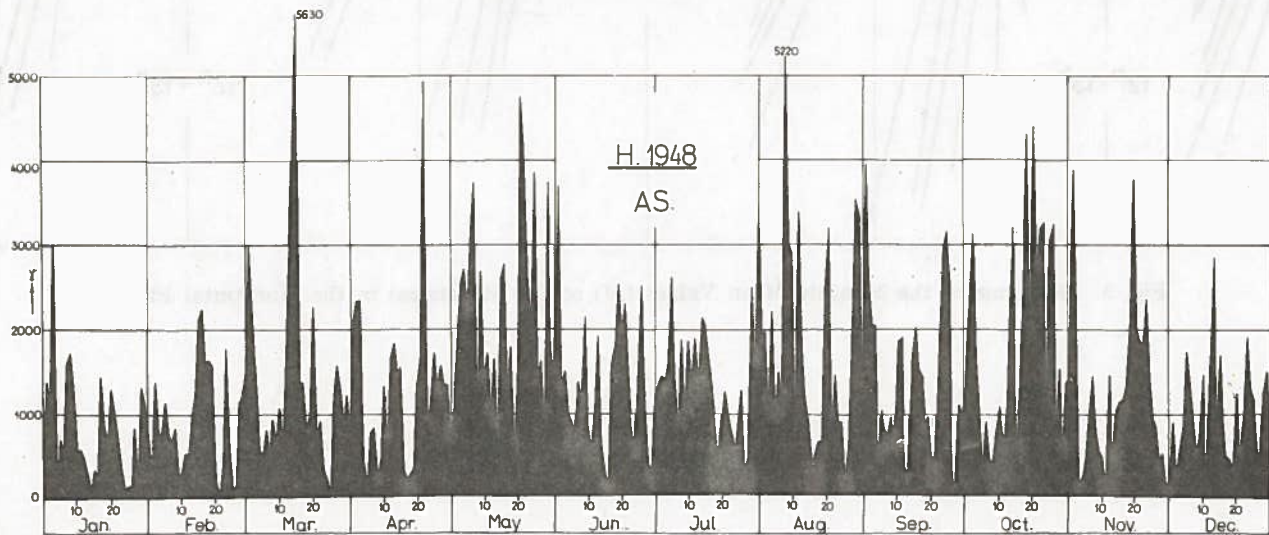


Fig. 2. The Diurnal Sum of the Absolute Storminess of H.

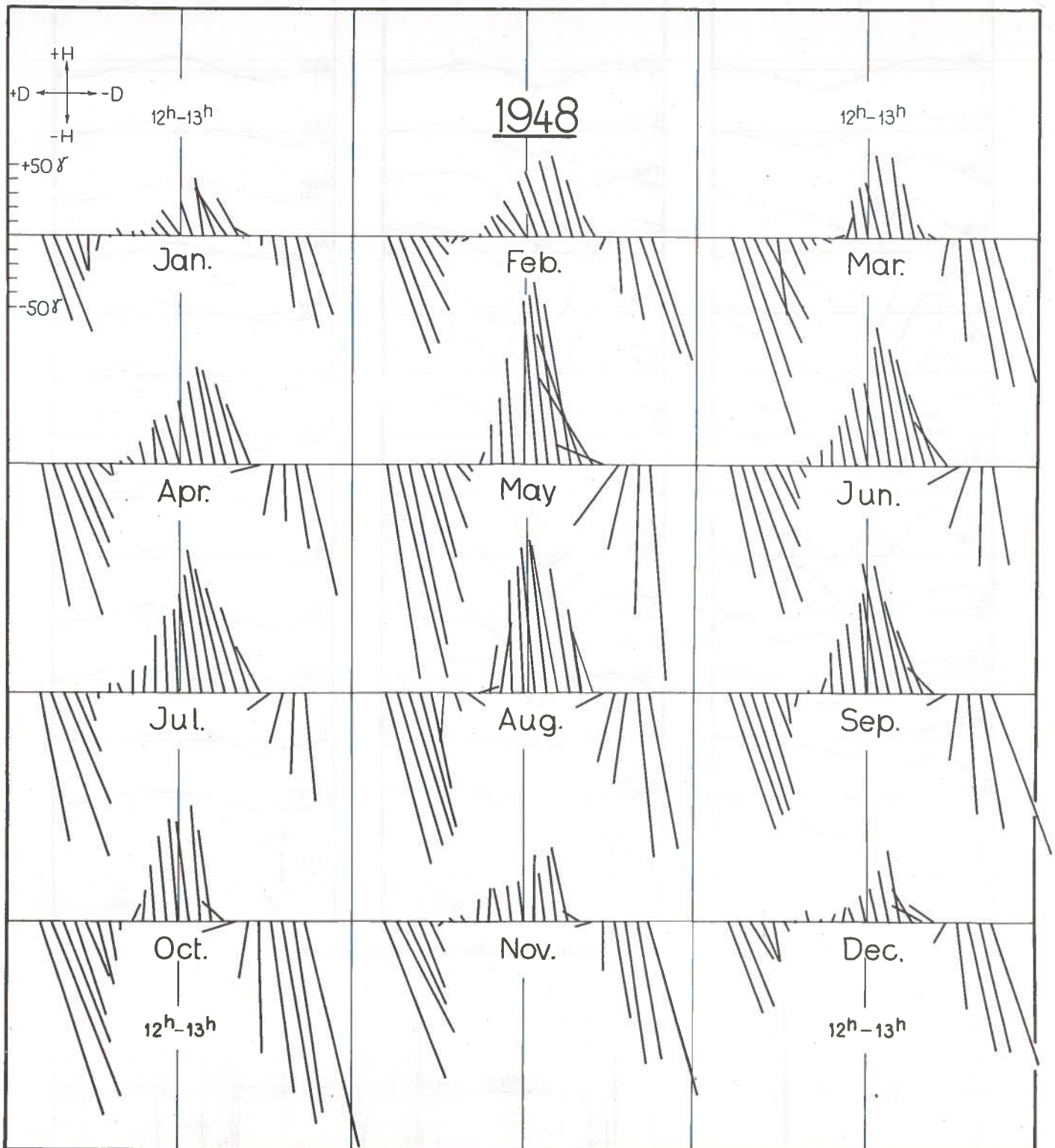


Fig. 3. Diagrams of the Monthly Mean Values (M) of the Storminess in the Horizontal Plane.

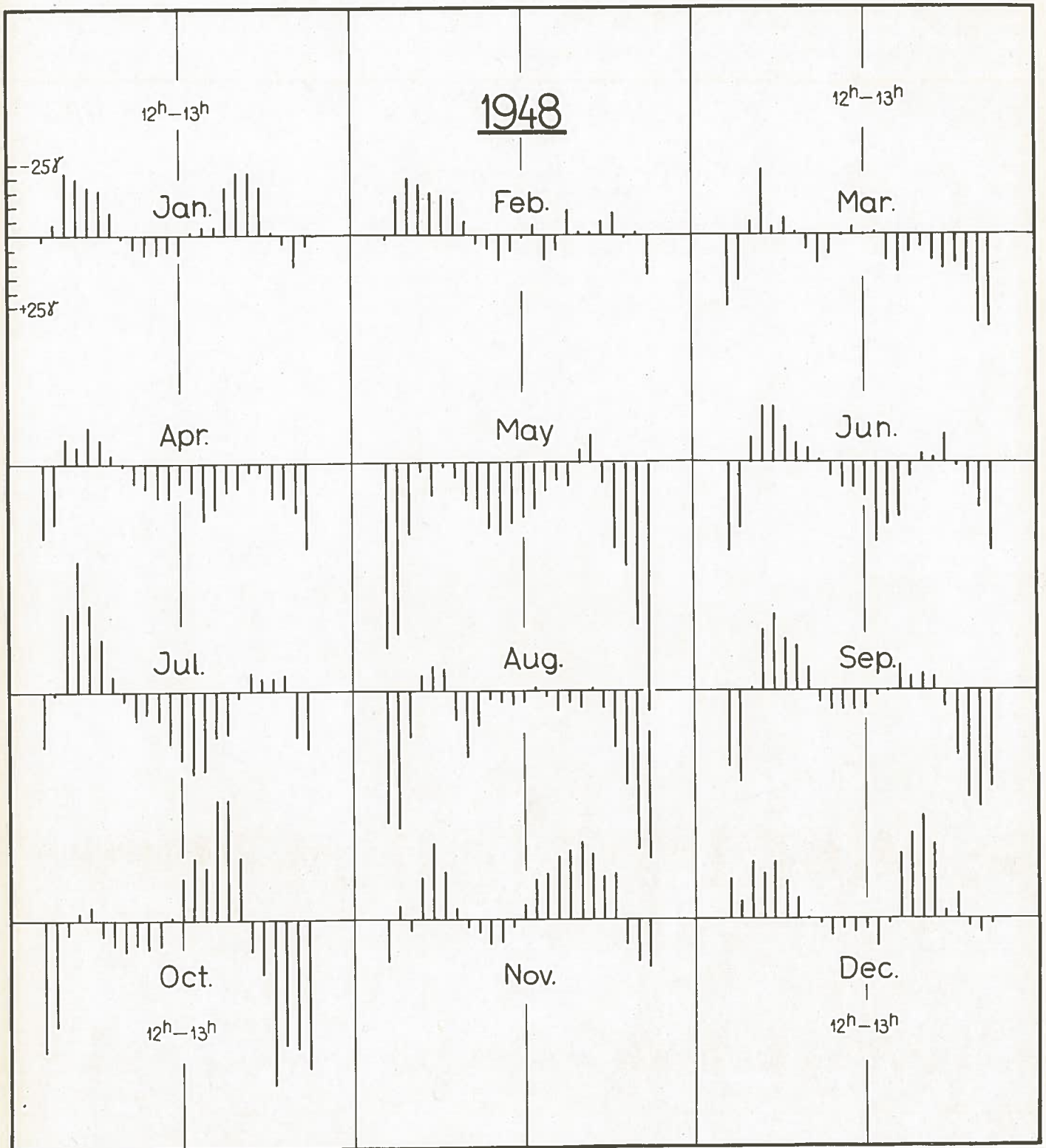


Fig. 4. Diagrams of the Monthly Mean Values (M) of the Storminess of the Vertical Intensity.

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