

Publikasjoner fra
DET NORSKE INSTITUTT FOR KOSMISK FYSIKK
Nr. 26

THE AURORAL OBSERVATORY AT TROMSØ

($\varphi = 69^{\circ} 39'.8$ N, $\lambda = 18^{\circ} 56'.9$ E. Gr.)

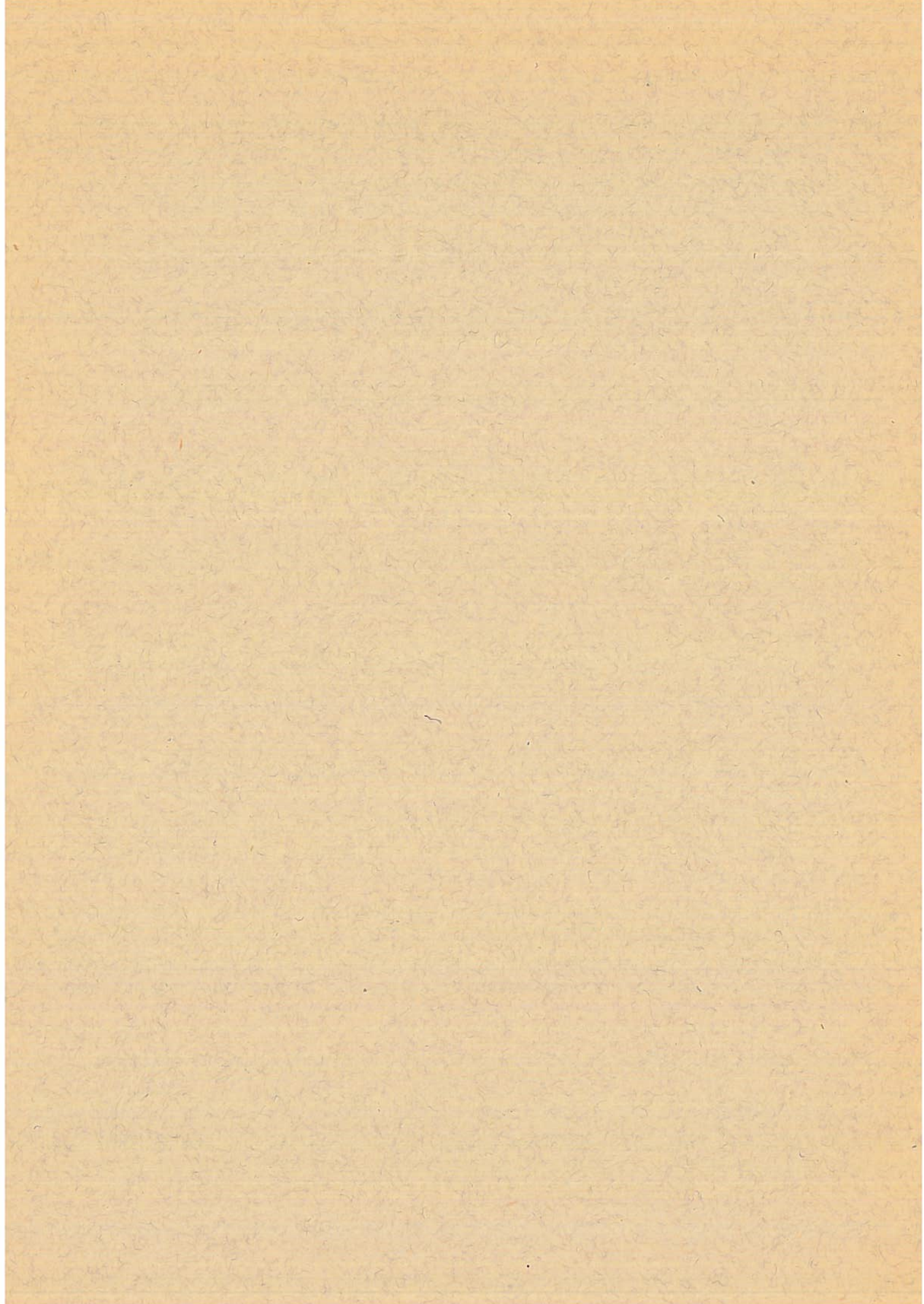
**RESULTS OF MAGNETIC OBSERVATIONS
FOR THE YEAR 1944**

BY

LEIV HARANG and E. TØNSBERG

1947

A.S JOHN GRIEGS BOKTRYKKERI, BERGEN



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GENERAL REMARKS.

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

The observations were taken by E. TØNSBERG. The reading of the hourly values and the calculation work were performed by the students J. BARSTAD, L. DAHL, B. FLADLAND, Ø. MERLI, A. OMHOLT and J. THEISEN.

SCALE VALUES.

The following scale-values were determined:

D-curves: 1'.45 or 4.74 γ per mm
H-curves: 5.10 γ per mm
V-curves: 6.80 γ per mm

BASE-LINE VALUES.

The absolute measurements of the Declination and Horizontal Intensity resulted in the table given below of observed and adopted base-line values. The Vertical Intensity base-line value — 50 220 γ — from the preceding years is still employed, as we are trusting more to the stability of the V-variometer than to the accuracy of the Inclination measurements. The mean Inclination value throughout the year was $77^{\circ} 27'.4$.

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 D AND H

Date	D observed	D adopted	H observed	H adopted
III 17	2° 2'.1 W	2° 2'.1 W	11 166 γ .	11 170 γ .
IV 26	2.0	.1	70	70
V 26	1.9	.1	70	70
VI 26	2.1	.1	71	70
VII 17	2.2	.1	72	70
IX 12	2.1	.1	70	70
X 31	2.2	.1	71	70

EXPLANATION OF THE 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 $O M$ 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 No. 2 and 4 in the presents series of publications. In the storminess tables the column headed M presents 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 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.

Definition $D = V + \text{Label Quantity expressed in Terms of Minutes}$

TABLE I

Label	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

TABLE II

Label	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

TABLE III

Label	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

TABLES

Tromsø.

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

Gr. M. T.

JANUARY 1944

HOURLY MEAN VALUES

Table for January 1944 showing hourly mean values for declination. Columns include Day, hours 1-24, M, and R.

FEBRUARY

Table for February showing hourly mean values for declination. Columns include Day, hours 1-24, M, and R.

MARCH

Table for March showing hourly mean values for declination. Columns include Day, hours 1-24, M, and R.

Tromsø.

Declination. Storminess (+ W). Unit Gamma.

Gr. M. T.

JANUARY 1944

HOURLY MEAN VALUES

Table for January 1944 showing magnetic observations (DAY 1-31) with columns for declination, storminess, and unit gamma, plus summary rows M, NPS, and NNS.

FEBRUARY

Table for February 1944 showing magnetic observations (DAY 1-29) with columns for declination, storminess, and unit gamma, plus summary rows M, NPS, and NNS.

MARCH

Table for March 1944 showing magnetic observations (DAY 1-31) with columns for declination, storminess, and unit gamma, plus summary rows M, NPS, and NNS.

Tromsø.
APRIL 1944.

Declination. Storminess (+ W). Unit Gamma.
HOURLY MEAN VALUES

Gr. M. T.

Table for April 1944 showing magnetic observations. Columns include DAY (1-30), 24 hourly values (1-24), and summary statistics (M, PS, NS, AS). Rows include daily data and monthly totals (M, MPS, MNS).

MAY

Table for May 1944 showing magnetic observations. Columns include DAY (1-31), 24 hourly values (1-24), and summary statistics (M, PS, NS, AS). Rows include daily data and monthly totals (M, MPS, MNS).

JUNE

Table for June 1944 showing magnetic observations. Columns include DAY (1-30), 24 hourly values (1-24), and summary statistics (M, PS, NS, AS). Rows include daily data and monthly totals (M, MPS, MNS).

Tromsø.
JULY 1944.

Declination. D = 1° W + Tabular Quantities expressed in Tenths of Minutes.
HOURLY MEAN VALUES

Gr. M. T.

Table for July 1944 with columns DAY (1-31), 1-25, M., R. Values range from 445 to 595.

AUGUST.

Table for August with columns DAY (1-31), 1-25, M., R. Values range from 430 to 595.

SEPTEMBER.

Table for September with columns DAY (1-30), 1-25, M., R. Values range from 420 to 595.

Tromsø.

Declination. Storminess (+ W). Unit Gamma.

Gr. M. T.

JULY 1944.

HOURLY MEAN VALUES

Table for July 1944 showing hourly mean values for declination and storminess. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS).

AUGUST

Table for August 1944 showing hourly mean values for declination and storminess. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS).

SEPTEMBER

Table for September 1944 showing hourly mean values for declination and storminess. Columns include Day (1-30), hours (1-24), and summary statistics (M, PS, NS, AS).

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

Table for October 1944 showing hourly mean values for declination. Columns include Day (1-31), hours (1-24), and summary rows (M., QM.).

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

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

Tromsø.
OCTOBER 1944

Declination. Storminess (+ W). Unit Gamma.
HOURLY MEAN VALUES

Gr. M. T.

Table for October 1944 showing magnetic observations. Columns include DAY (1-31), 24 numbered columns (1-24), M, PS, NS, AS. Rows contain numerical values for each day and column.

NOVEMBER

Table for November 1944 showing magnetic observations. Columns include DAY (1-30), 24 numbered columns (1-24), M, PS, NS, AS. Rows contain numerical values for each day and column.

DECEMBER

Table for December 1944 showing magnetic observations. Columns include DAY (1-31), 24 numbered columns (1-24), M, PS, NS, AS. Rows contain numerical values for each day and column.

Tromsø. Horizontal Intensity. H = 11200 + Tabular Quantities expressed in Gamma.

Gr. M. T.

JANUARY 1944. HOURLY MEAN VALUES. Table with columns DAY, 1-25, M., R. and rows for each day of the month.

FEBRUARY. Table with columns DAY, 1-25, M., R. and rows for each day of the month.

MARCH. Table with columns DAY, 1-31, M., R. and rows for each day of the month.

Tromsø.

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

Gr. M. T.

Table for JANUARY 1944 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).

Table for FEBRUARY showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-29), hours (1-24), and summary statistics (M, PS, NS, AS, CH).

Table for MARCH 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).

Tromsø.

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

Gr. M. T.

APRIL 1944.

HOURLY MEAN VALUES

Table for April 1944 showing hourly magnetic intensity and storminess data. Columns include Day (1-30), 25 intensity components (1-25), and summary statistics (M, PS, NS, AS, CH).

MAY

Table for May 1944 showing hourly magnetic intensity and storminess data. Columns include Day (1-31), 25 intensity components (1-25), and summary statistics (M, PS, NS, AS, CH).

JUNE

Table for June 1944 showing hourly magnetic intensity and storminess data. Columns include Day (1-30), 25 intensity components (1-25), and summary statistics (M, PS, NS, AS, CH).

Tromsø.

Horizontal Intensity. H = 11200 + Tabular Quantities expressed in Gamma.

Gr. M. T.

JULY 1944.

HOURLY MEAN VALUES

Table with columns DAY (1-25), M., and R. for July 1944. Rows contain numerical data for each day, with a summary row 'M.' and 'Q.M.' at the bottom.

AUGUST.

Table with columns DAY (1-25), M., and R. for August. Rows contain numerical data for each day, with a summary row 'M.' and 'Q.M.' at the bottom.

SEPTEMBER.

Table with columns DAY (1-30), M., and R. for September. Rows contain numerical data for each day, with a summary row 'M.' and 'Q.M.' at the bottom.

Tromsø.

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

Gr. M. T.

JULY 1944.

HOURLY MEAN VALUES

Table with columns: DAY, 1-25, M, PS, NS, AS, OH. Rows for July 1-31 and monthly totals (M, MFS, MNS).

AUGUST.

Table with columns: DAY, 1-25, M, PS, NS, AS, OH. Rows for August 1-31 and monthly totals (M, MFS, MNS).

SEPTEMBER

Table with columns: DAY, 1-25, M, PS, NS, AS, OH. Rows for September 1-30 and monthly totals (M, MFS, MNS).

Tromsø. Horizontal Intensity. H = 11200 + Tabular Quantities expressed in Gamma.

Gr. M. T.

OCTOBER 1944. HOURLY MEAN VALUES. Table with columns DAY (1-31), 1-25, M., R. Rows 1-31 and summary M, QM.

NOVEMBER. Table with columns DAY (1-30), 1-25, M., R. Rows 1-30 and summary M, QM.

DECEMBER. Table with columns DAY (1-31), 1-25, M., R. Rows 1-31 and summary M, QM.

Tromsø.

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

Gr. M. T.

OCTOBER 1944

HOURLY MEAN VALUES

Table for October 1944 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-31), M, PS, NS, AS, CH, and summary rows for M, PS, NS, AS, CH, MNS, and MNS.

NOVEMBER

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

DECEMBER

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

Tromsø.

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

Gr. M. T.

JANUARY 1944

HOURLY MEAN VALUES

Table for January 1944 showing magnetic observations. Columns include Day (1-31), 24-hour values, and summary statistics (M, PS, NS, AS).

FEBRUARY.

Table for February showing magnetic observations. Columns include Day (1-28), 24-hour values, and summary statistics (M, PS, NS, AS).

MARCH

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

Tromsø.

Vertical Intensity. V = 50400 + Tabular Quantities expressed in Gamma.

Gr. M. T.

APRIL 1944.

HOURLY MEAN VALUES

Table with columns DAY, 1-25, M, R for April 1944. Rows 1-30 and summary rows M, QM.

MAY.

Table with columns DAY, 1-25, M, R for May. Rows 1-31 and summary rows M, QM.

JUNE.

Table with columns DAY, 1-25, M, R for June. Rows 1-30 and summary rows M, QM.

Tromsø.

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

Gr. M. T.

Table for APRIL 1944 showing hourly mean values for magnetic intensity and storminess. Columns include DAY (1-30), 25 hourly values, and summary statistics (M, PS, NS, AS).

Table for MAY showing hourly mean values for magnetic intensity and storminess. Columns include DAY (1-31), 25 hourly values, and summary statistics (M, PS, NS, AS).

Table for JUNE showing hourly mean values for magnetic intensity and storminess. Columns include DAY (1-30), 25 hourly values, and summary statistics (M, PS, NS, AS).

Tromsø. Vertical Intensity. V = 50400 + Tabular Quantities expressed in Gamma.

Gr. M. T.

JULY 1944. HOURLY MEAN VALUES. Table with columns DAY, 1-23, M, R. Data rows for days 1-31.

AUGUST. Table with columns DAY, 1-23, M, R. Data rows for days 1-31.

SEPTEMBER. Table with columns DAY, 1-23, M, R. Data rows for days 1-30.

Tromsø.
JULY 1944.

Vertical Intensity. Storminess (+ Down). Unit Gamma.
HOURLY MEAN VALUES

Gr. M. T.

Table with columns: DAY, 1-23, M, PS, NS, AS. Contains hourly magnetic data for July 1944.

AUGUST.

Table with columns: DAY, 1-23, M, PS, NS, AS. Contains hourly magnetic data for August 1944.

SEPTEMBER.

Table with columns: DAY, 1-23, M, PS, NS, AS. Contains hourly magnetic data for September 1944.

Tromsø.

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

Gr. M. T.

OCTOBER 1944.

HOURLY MEAN VALUES

Table for October 1944 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-31), 24 hours of values, N, P5, NS, AS, and summary rows for M, NPS, and NWS.

NOVEMBER.

Table for November showing hourly mean values for vertical intensity and storminess. Columns include Day (1-30), 24 hours of values, N, P5, NS, AS, and summary rows for M, NPS, and NWS.

DECEMBER

Table for December showing hourly mean values for vertical intensity and storminess. Columns include Day (1-31), 24 hours of values, N, P5, NS, AS, and summary rows for M, NPS, and NWS.

Resuming Tables.

Storminess.

Tromsø.

Declination. Unit Gamma. + West.

1944.		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	2	6	1	1	2	5	5	4	2	2	1	1	2	1	3	3	10	6	5	4	2	4	2	1
FEB	MPS	4	0	1	1	2	5	5	4	2	1	2	1	1	5	2	3	3	5	5	5	8	4	1	0
MAR	MPS	0	0	0	0	2	3	3	5	4	3	3	4	7	7	6	4	5	7	6	10	3	4	1	2
APR	MPS	0	0	0	0	2	6	4	2	1	1	3	3	4	5	6	8	10	11	19	11	2	1	1	0
MAY	MPS	2	2	0	1	1	2	1	2	2	1	3	5	10	14	9	9	9	8	10	8	4	3	0	0
JUN	MPS	0	0	0	0	1	1	1	1	1	1	1	3	3	5	6	9	10	12	14	11	8	1	0	0
JUL	MPS	1	0	1	2	5	4	2	2	1	2	3	5	5	4	5	4	4	6	6	5	4	2	2	1
AUG	MPS	0	0	0	0	1	2	6	10	10	11	10	11	10	9	9	8	9	9	9	7	5	2	1	1
SEP	MPS	0	0	0	0	0	2	3	2	4	4	4	5	6	8	8	6	7	6	10	8	4	1	0	4
OCT	MPS	0	0	1	1	2	1	2	3	3	5	7	8	9	9	9	7	8	10	8	5	5	1	1	0
NOV	MPS	0	0	0	0	1	3	3	2	3	3	4	4	7	9	5	7	5	5	3	2	1	2	0	0
DEC	MPS	2	2	1	2	4	4	6	4	2	2	8	11	6	6	8	10	9	7	6	4	4	2	2	1
MEAN		1	1	0	1	2	3	3	3	3	3	4	5	7	7	7	6	8	8	8	7	4	2	1	1
JAN	MNS	24	20	11	7	4	1	0	0	0	1	1	1	1	3	9	11	9	19	10	12	15	12	27	24
FEB	MNS	21	30	14	8	7	2	1	1	1	1	0	1	4	4	9	7	7	7	18	14	15	15	28	
MAR	MNS	43	36	43	28	18	4	3	3	3	6	4	7	3	3	6	3	4	7	5	16	20	36	40	
APR	MNS	52	35	23	18	6	1	1	2	6	7	8	5	3	0	0	0	1	0	3	3	12	18	25	43
MAY	MNS	26	25	17	7	6	5	5	4	5	2	1	2	0	0	1	1	1	0	0	3	4	10	21	22
JUN	MNS	32	29	19	11	9	3	2	3	2	1	1	1	0	0	1	1	0	0	0	1	1	6	13	21
JUL	MNS	18	18	14	10	2	1	2	4	5	4	2	1	1	1	1	2	4	4	2	2	3	6	11	15
AUG	MNS	30	34	35	19	10	8	5	2	1	3	2	1	0	0	0	1	0	1	3	5	5	11	16	26
SEP	MNS	33	37	27	19	7	5	2	1	1	1	1	1	0	0	1	0	0	1	1	2	8	21	29	31
OCT	MNS	34	29	23	12	3	1	1	1	1	1	0	0	0	0	0	2	6	5	5	6	15	21	35	35
NOV	MNS	11	8	10	6	1	1	0	0	0	0	0	1	1	1	1	3	4	4	1	2	4	8	14	13
DEC	MNS	25	18	16	7	3	2	2	2	2	3	4	2	4	9	12	7	6	4	3	11	13	16	20	22
MEAN		29	27	22	13	6	3	2	2	2	3	2	2	2	2	3	4	3	4	4	5	9	14	22	26
JAN	MPS + MNS	-22	-14	-11	-6	-1	4	5	4	2	1	0	0	1	-1	-6	-8	0	-13	-5	-8	-14	-9	-25	-22
FEB	MPS + MNS	-17	-30	-13	-8	-5	3	4	3	2	0	0	1	0	1	-2	-5	-4	-2	-2	-7	-6	-11	-15	-22
MAR	MPS + MNS	-42	-36	-42	-28	-17	0	0	2	1	-3	-1	0	0	4	2	-2	2	3	-1	5	-13	-16	-36	-38
APR	MPS + MNS	-52	-35	-23	-18	-4	5	3	0	-5	-5	-2	1	5	6	8	9	11	16	8	-10	-16	-24	-43	
MAY	MPS + MNS	-24	-23	-17	-6	-5	-3	-2	-2	-1	2	5	10	14	8	8	8	8	7	10	5	0	-6	-21	-22
JUN	MPS + MNS	-32	-29	-19	-11	-8	-2	-1	-2	-1	0	1	2	3	5	5	8	10	12	13	10	6	-5	-12	-21
JUL	MPS + MNS	-17	-17	-14	-9	3	3	0	-2	-4	-2	0	3	5	3	3	2	0	2	5	4	1	-4	-9	-13
AUG	MPS + MNS	-30	-34	-33	-19	-9	-6	1	8	9	8	8	10	10	9	8	7	9	8	6	2	0	-9	-16	-25
SEP	MPS + MNS	-33	-37	-27	-18	-7	-3	2	2	4	3	3	5	6	7	6	7	6	9	6	-4	-19	-29	-27	
OCT	MPS + MNS	-34	-29	-22	-11	-2	0	0	2	2	4	7	8	9	9	9	5	2	4	3	-1	-11	-20	-34	-36
NOV	MPS + MNS	-10	-8	-10	-5	0	2	3	2	2	2	2	4	4	6	7	2	3	1	2	1	-2	-8	-12	-13
DEC	MPS + MNS	-23	-16	-14	-5	0	2	4	2	0	-1	4	8	2	-3	-4	2	3	3	2	-7	-9	-13	-18	-21
MEAN		-28	-26	-20	-12	-4	0	2	2	1	1	2	4	4	5	3	3	4	4	5	1	-5	-11	-21	-25

Horizontal Intensity. Unit Gamma.

1944.		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	3	3	2	6	8	4	5	7	11	8	14	19	24	42	52	48	29	15	5	3	1	0
FEB	MPS	1	0	3	1	1	2	2	2	4	6	13	9	20	29	26	25	23	24	26	15	17	4	0	3
MAR	MPS	1	1	1	2	1	4	7	6	9	13	28	30	38	41	49	45	43	42	17	8	5	2	1	0
APR	MPS	1	1	2	0	0	2	1	2	6	13	20	21	38	41	38	37	36	38	21	8	2	0	0	0
MAY	MPS	1	1	1	2	2	3	2	2	5	8	19	33	39	49	46	45	42	33	23	13	2	0	0	1
JUN	MPS	0	0	1	1	3	2	1	2	3	9	12	16	23	25	34	48	43	36	33	16	4	1	0	0
JUL	MPS	1	1	1	2	1	3	3	6	4	5	12	17	22	27	28	32	31	30	22	11	2	0	1	2
AUG	MPS	0	0	0	1	3	3	4	3	2	9	8	18	32	29	33	33	32	29	17	7	3	0	0	1
SEP	MPS	0	0	0	1	2	3	3	3	2	4	7	17	21	29	32	28	21	15	20	8	2	2	0	0
OCT	MPS	0	1	1	4	4	5	4	8	5	5	10	12	15	14	24	28	23	26	13	5	2	0	0	
NOV	MPS	1	1	0	0	2	3	2	1	2	2	4	7	13	21	29	26	21	17	11	4	1	1	1	1
DEC	MPS	1	2	1	3	5	6	7	2	6	8	11	16	18	13	15	18	24	27	22	13	5	1	0	0
MEAN		1	1	1	2	2	3	4	3	4	7	13	16	22	28	31	34	32	30	22	11	4	1	0	1
JAN	MNS	124	78	26	21	7	6	1	1	1	2	1	2	1	1	1	0	0	18	11	60	74	131	114	
FEB	MNS	80	70	45	19	10	5	5	5	2	2	1	2	2	1	0	0	0	1	11	37	64	97	76	72
MAR	MNS	188	126	98	64	44	15	11	5	2	1	1	0	0	0	0	1	1	3	28	57	91	107	155	138
APR	MNS	133	98	70	32	16	12	13	9	8	2	8	7	1	1	0	0	3	14	20	51	73	100	128	150
MAY	MNS	107	80	31	13	12	9	7	4	2	1	0	1	1	0	0	0	6	8	13	52	76	94	89	
JUN	MNS	100	72	38	24	20	11	5	3	2	0	0	0	0	1	3	1	2	0	0	2	21	62	83	103

JUL	MNS	53	44	30	20	15	9	5	1	2	2	2	1	0	0	1	0	0	1	1	8	26	42	58	61
AUG	MNS	97	97	70	39	19	11	9	8	5	1	4	3	2	0	0	0	0	1	4	22	35	55	77	99
SEP	MNS	108	102	50	20	6	6	2	1	3	3	3	1	1	0	0	0	0	1	4	29	49	97	115	125
OCT	MNS	95	68	46	24	8	2	1	0	1	1	1	1	1	0	0	0	0	0	6	30	76	134	165	136
NOV	MNS	52	29	23	16	7	4	2	2	3	2	0	1	1	0	0	0	3	1	5	4	15	34	55	38
DEC	MNS	91	54	30	17	15	16	6	5	3	1	1	0	0	2	21	15	21	13	14	49	58	67	81	85
MEAN		97	77	38	25	15	9	6	4	2	1	2	2	1	1	2	1	3	3	10	26	52	79	102	105
JAN	MPS + MNS	-124	-78	-23	-18	-5	0	7	2	4	5	10	6	13	18	23	42	51	48	11	4	-55	-71	-131	-113
FEB	MPS + MNS	-79	-69	-42	-18	-9	-3	-3	-3	2	4	12	8	19	28	26	25	23	23	15	-22	-47	-93	-75	-69
MAR	MPS + MNS	-158	-125	-97	-63	-43	-11	-4	1	7	12	27	29	38	41	48	44	43	39	-11	-49	-87	-105	-154	-187
APR	MPS + MNS	-135	-98	-69	-32	-16	-10	-12	-7	3	12	12	14	37	41	38	37	34	24	1	-44	-71	-99	-126	-160
MAY	MPS + MNS	-106	-79	-30	-12	-10	-6	-5	-1	3	7	19	32	38	49	46	45	42	28	15	-1	-50	-76	-93	-88
JUN	MPS + MNS	-99	-71	-37	-23	-17	-9	-4	-1	0	8	11	16	23	24	31	47	41	36	33	13	-18	-61	-85	-103
JUL	MPS + MNS	-52	-43	-29	-19	-14	-6	-2	4	2	3	9	16	22	27	27	32	31	29	21	3	-24	-42	-67	-69
AUG	MPS + MNS	-97	-97	-70	-38	-17	-7	-5	-5	-3	7	6	15	30	29	52	32	32	28	13	-14	-32	-54	-77	-98
SEP	MPS + MNS	-108	-102	-50	-19	-4	-3	1	2	-1	1	4	16	19	29	32	28	21	15	16	-21	-47	-95	-115	-124
OCT	MPS + MNS	-95	-87	-44	-21	-4	3	2	8	4	4	9	12	14	14	24	27	25	26	6	-25	-74	-132	-165	-136
NOV	MPS + MNS	-32	-28	-23	-16	-5	0	0	-1	0	0	3	7	12	20	29	26	18	16	11	7	-11	-36	-54	-37
DEC	MPS + MNS	-90	-52	-29	-13	-10	-10	0	-2	4	7	10	15	17	11	-6	3	2	13	8	-36	-53	-66	-81	-84
MEAN		-96	-76	-45	-24	-13	-5	-2	0	2	6	11	15	24	28	29	32	32	27	11	-15	-47	-78	-103	-104

Vertical Intensity. Unit Gamma.

1944.		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	19	5	0	1	1	1	4	5	9	10	9	10	14	13	16	16	18	16	16	10	22	22	26	19
FEB	MPS	5	3	4	3	4	4	4	6	8	9	13	16	15	13	13	17	14	12	19	23	12	23	25	22
MAR	MPS	29	21	14	7	0	0	3	6	8	10	9	11	20	16	16	13	11	10	12	19	23	21	31	27
APR	MPS	29	22	15	2	1	2	3	7	12	8	7	10	12	13	13	11	9	7	3	5	16	34	42	61
MAY	MPS	28	11	1	0	0	1	2	3	5	7	8	14	16	16	20	13	9	6	7	7	23	17	23	28
JUN	MPS	7	2	2	0	0	0	0	2	3	8	8	9	10	11	14	13	10	7	9	10	12	13	16	20
JUL	MPS	4	6	3	1	1	2	3	4	5	7	10	11	13	15	17	19	15	10	7	3	4	7	13	18
AUG	MPS	14	5	1	1	1	2	2	2	6	8	9	12	15	17	18	17	14	10	6	5	9	11	12	25
SEP	MPS	18	3	4	0	1	1	2	3	5	6	5	6	10	11	14	12	9	9	6	12	11	17	25	25
OCT	MPS	28	13	7	6	2	2	3	5	5	6	6	9	14	17	18	12	11	6	4	3	24	32	10	16
NOV	MPS	1	1	2	1	0	0	1	3	4	5	3	8	8	13	15	13	7	5	3	4	7	8	2	2
DEC	MPS	19	6	5	4	3	2	2	5	7	9	11	11	15	16	20	19	19	13	13	13	15	17	29	25
MEAN		15	6	5	2	1	1	2	4	6	8	8	10	14	14	16	15	13	9	8	9	14	15	22	23
JAN	MNS	23	27	25	21	22	11	4	2	1	1	1	0	0	0	4	9	19	25	11	17	21	28	18	28
FEB	MNS	16	16	14	18	18	13	8	4	1	1	0	0	0	3	8	0	0	4	9	10	15	15	15	14
MAR	MNS	24	29	27	36	41	27	14	7	3	2	2	3	3	1	6	10	7	18	36	22	18	16	24	20
APR	MNS	6	16	22	26	23	16	8	4	2	4	6	10	17	15	14	11	16	22	25	25	13	8	14	14
MAY	MNS	12	24	33	21	15	8	5	4	2	1	2	1	1	8	11	11	12	7	4	8	5	17	15	13
JUN	MNS	20	25	23	26	20	18	10	5	2	1	1	2	1	2	3	9	12	9	6	5	6	7	13	11
JUL	MNS	13	13	14	17	17	12	8	4	3	3	3	2	2	2	1	0	0	0	4	5	9	14	16	12
AUG	MNS	12	22	27	28	23	25	11	6	3	1	2	2	3	6	2	0	1	2	5	15	15	11	11	10
SEP	MNS	21	23	32	29	20	12	7	5	2	2	2	3	2	1	7	9	4	2	5	14	14	17	15	19
OCT	MNS	23	16	15	10	16	9	3	1	1	0	1	1	0	0	0	10	15	13	17	20	24	15	18	20
NOV	MNS	14	14	14	17	15	9	4	1	0	0	0	0	0	2	3	6	11	10	4	4	4	6	9	12
DEC	MNS	14	27	28	21	18	14	9	2	2	1	2	1	4	11	11	20	15	31	14	21	17	14	18	13
MEAN		17	21	23	23	21	15	8	4	2	1	2	2	3	4	6	6	9	12	12	14	13	14	16	15
JAN	MPS + MNS	-4	-22	-25	-20	-20	-10	0	3	8	9	8	9	14	12	12	7	-1	-9	5	-7	1	-6	8	-9
FEB	MPS + MNS	-11	-13	-11	-15	-15	-9	-3	2	6	9	13	16	15	11	6	17	14	8	9	13	-4	8	10	8
MAR	MPS + MNS	5	-9	-13	-29	-41	-27	-11	-2	5	8	8	8	18	15	10	4	3	-8	-23	-3	5	5	6	8
APR	MPS + MNS	22	6	-7	-24	-22	-14	-5	3	10	4	2	0	-5	-2	0	0	-6	-14	-22	-20	3	27	28	37
MAY	MPS + MNS	15	-13	-31	-21	-15	-7	-2	0	4	6	6	15	15	9	9	2	-3	-2	2	-1	17	0	12	14
JUN	MPS + MNS	-12	-23	-20	-26	-20	-18	-9	-3	1	7	7	7	9	9	11	4	-2	-2	3	5	6	7	4	10
JUL	MPS + MNS	-8	-7	-11	-16	-16	-10	-5	0	2	4	7	9	10	13	16	19	15	9	2	-2	-5	-6	-3	0
AUG	MPS + MNS	2	-17	-25	-27	-22	-25	-9	-4	3	6	7	11	12	12	16	17	13	8	1	-10	-6	0	1	15
SEP	MPS + MNS	-3	-20	-28	-29	-20	-11	-5	-1	2	4	3	3	8	10	7	4	6	7	0	-2	-3	0	10	6
OCT	MPS + MNS	5	-3	-7	-4	-14	-7	1	5	5	5	5	9	14	17	18	2	-5	-7	-15	-17	0	17	-8	-5
NOV	MPS + MNS	-13	-13	-11	-17	-16	-9	-4	0	4	4	5	4	3	7	9	10	2	-3	1	-1	0	1	-2	-11
DEC	MPS + MNS	5	-21	-24	-17	-15	-13	-7	3	5	8	9	10	11	6	9	-2	4	-17	-1	-8	-2	3	11	12
MEAN		0	-13	-18	-20	-19	-13	-5	0	5	6	7	8	11	10	10	7	3	-2	-3	-4	1	5	6	6

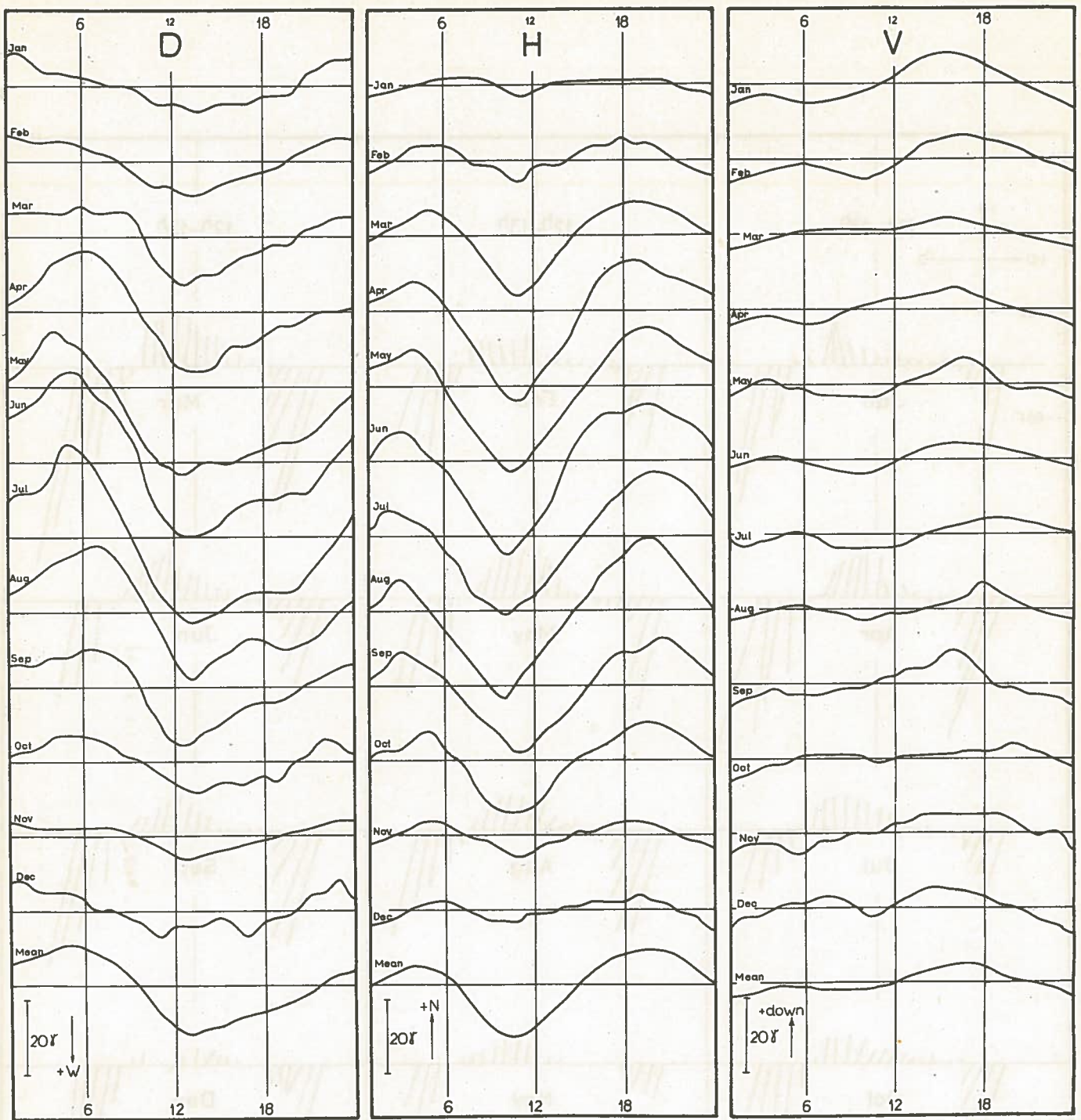


Fig. 1. The Quiet Diurnal Variation, smoothed Values.

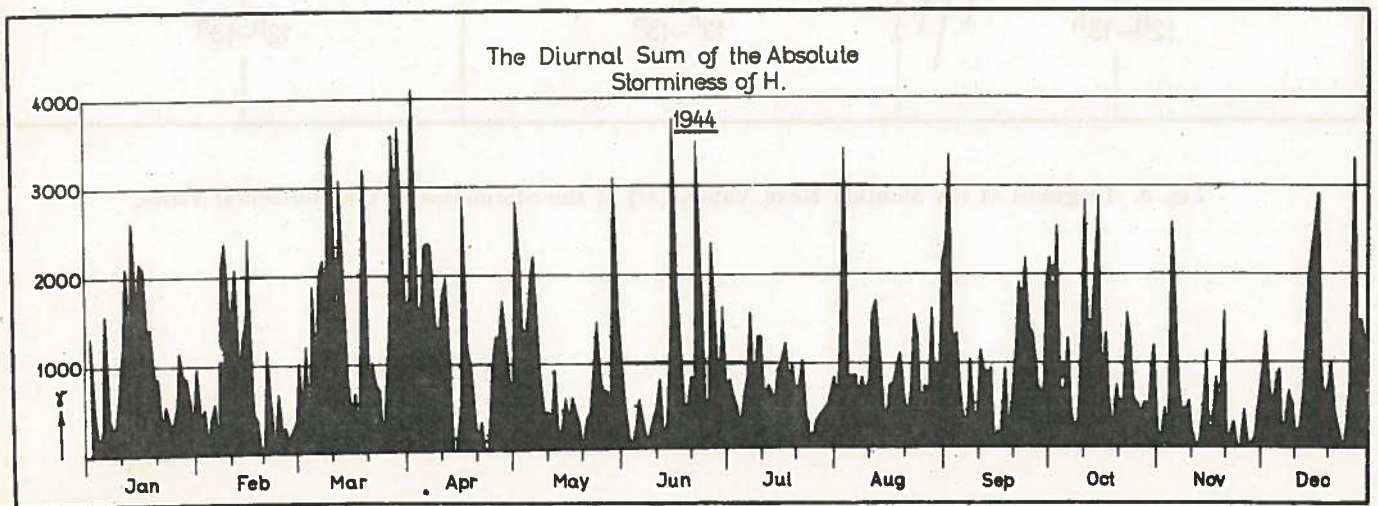


Fig. 2. The Diurnal Sum of the Absolute Storminess of H.

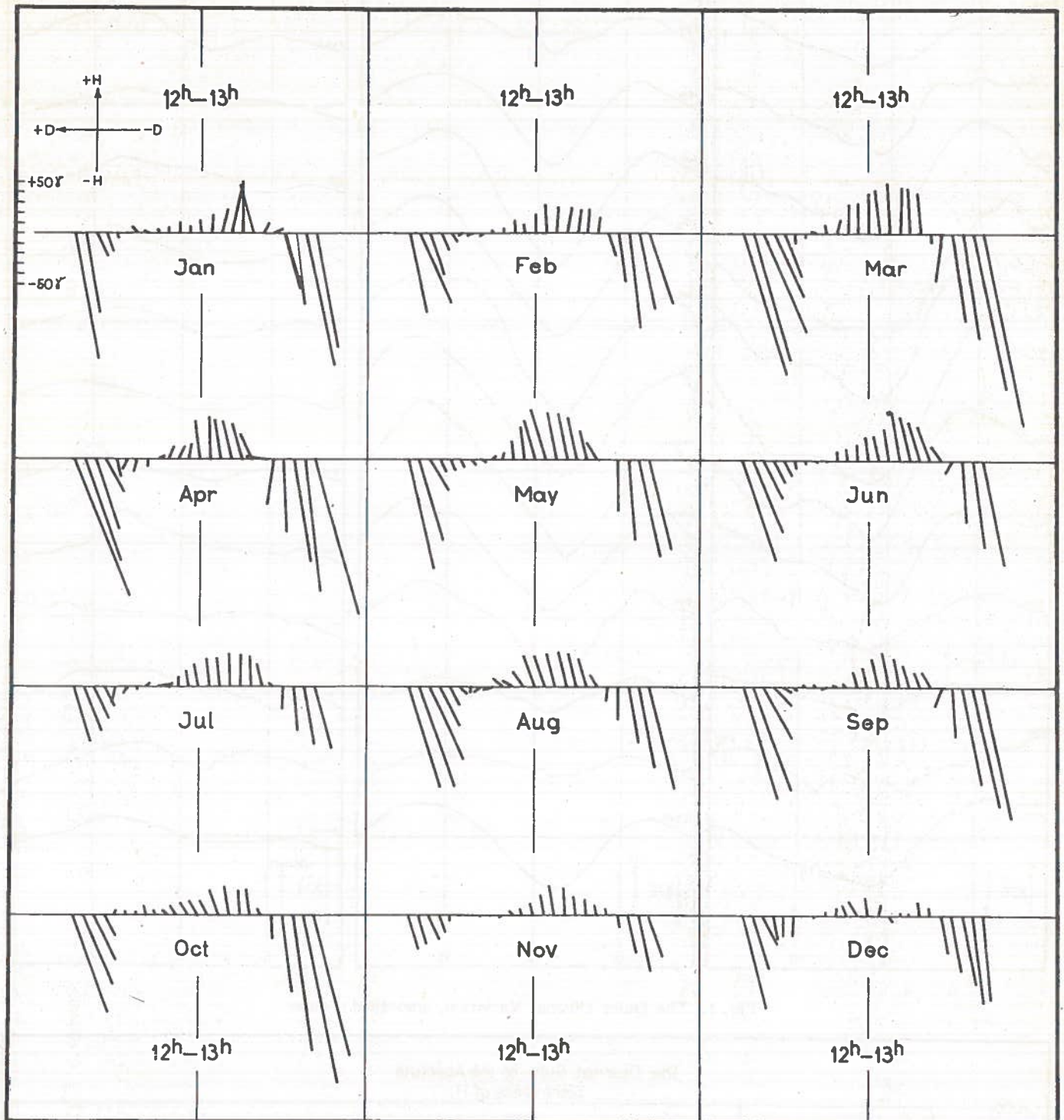


Fig. 3. Diagrams of the Monthly Mean Values (M) of the Storminess in the Horizontal Plane.

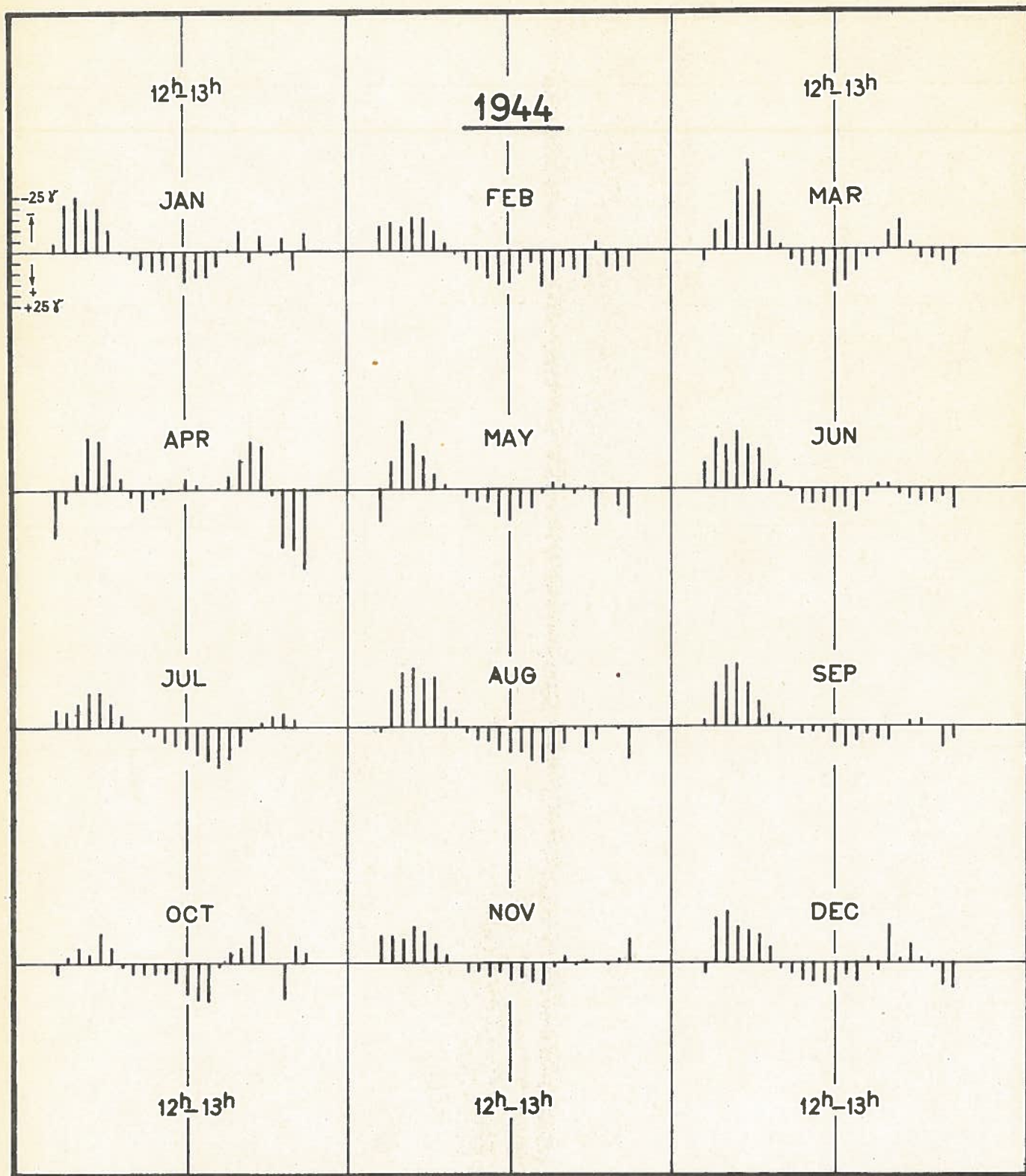


Fig. 4. Diagrams of the Monthly Mean Values (*M*) of the Storminess of the Vertical Intensity.

