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GEOFYSISK INSTITUTT, AVD. C

Nr. 5

GURO GJELLESTAD and HELGE DALSEIDE

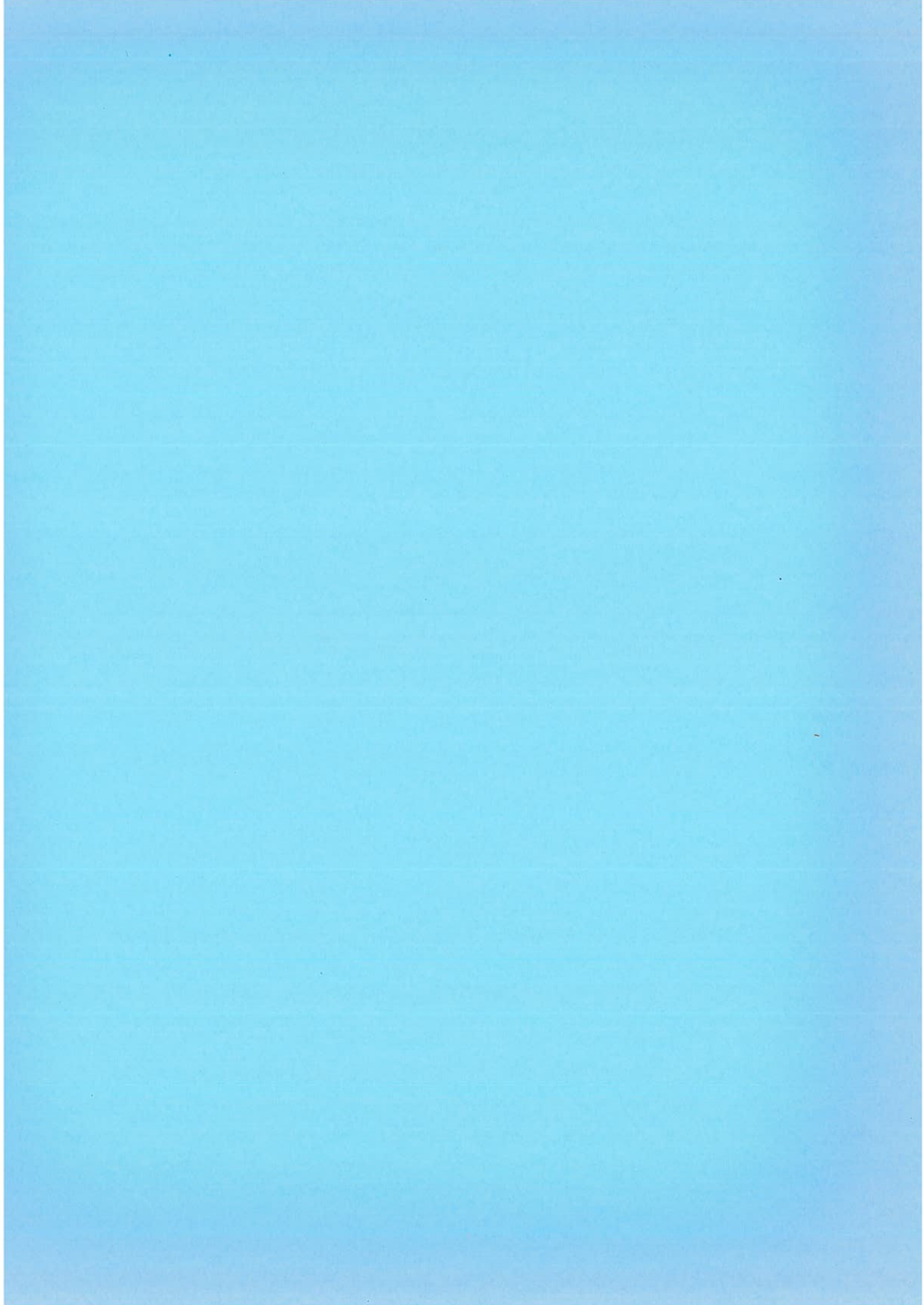
THE MAGNETIC STATION AT DOMBÅS

($\varphi = 62^{\circ}04'.4\text{N}$, $\lambda = 9^{\circ}07'.0\text{E Gr.}$)

OBSERVATIONS 1963

1965

A.S JOHN GRIEGS BOKTRYKKERI, BERGEN



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We refer to "Publikasjoner fra Det Norske Institutt for Kosmisk Fysikk" No. 39, Chap. 1, in which has been given general information on instruments and installations at the station, evaluation of the performance of the instruments and accuracy of observations.

At *Dombås* Mr. *Knut Einbu* supervised the instruments and made magnetic measurements. Scalings of the magnetograms for hourly mean values were undertaken by author II with the assistance of Miss *Britt Fosse*.

Adopted scale values are given in *Table 1*. In *Table 1* the scale value $9.60 \gamma/\text{mm}$ (for *D*) is equivalent to 2.4 minutes of arc per mm.

In *Tables 4—6* are given adopted base line values, while the diagram in *Figure 1* gives both observed and adopted base line values. In the diagram large dots represent points of greater weight than the average, while open circles represent points of less weight.

In the following are given tables of *absolute hourly mean values* in three elements, *D*, *H* and *Z* and *daily* and *hourly means* for all days and for the 5 international quiet and disturbed days. In *Table 2* are given *monthly* and *annual means* for 1963 for all days and for the 5 international quiet and disturbed days, and in *Table 3* annual means (all days) for the period 1952—1963.

Scaling of magnetograms for hourly mean values have been centered around half-hours, and Universal Time (GMT) has been used consistently in the tables. Calculations and printing of magnetic tables have been performed on punched card IBM machines at the Institute.

TABLE 1
ADOPTED SCALE VALUES 1963

Interval starting	Interval ending	D γ/mm	H γ/mm	Z γ/mm
Jan 1	Jan 31	9.60	8.85	7.01*)
...	...	9.60	8.85	*)
...	...	9.60	8.85	*)
Dec 1	Dec 31	9.60	8.85	7.45*)

TABLE 2
MONTHLY AND ANNUAL MEANS

1963	All days			Quiet days			Disturbed days		
	D	H	Z	D	H	Z	D	H	Z
Jan	4°28'.6 W	14000 γ	47803 γ	4°29'.5 W	14005 γ	47804 γ	4°27'.6 W	13994 γ	47797 γ
Feb	28.7	003	807	29.1	007	805	27.6	994	803
Mar	28.5	008	800	28.6	009	803	27.5	14002	790
Apr	28.3	010	802	27.6	009	806	29.1	013	799
May	27.2	008	801	27.4	011	807	27.1	001	795
Jun	26.4	011	807	26.2	014	810	25.2	13999	792
Jul	26.3	015	806	26.6	018	808	27.0	14015	803
Aug	26.5	007	808	26.8	015	812	25.1	13984	800
Sep	24.9	13988	813	26.3	008	812	21.2	935	795
Oct	25.0	994	825	26.0	005	830	21.7	949	820
Nov	25.4	14005	832	26.0	010	834	23.1	987	822
Dec	25.2	011	831	25.8	014	829	23.9	14003	827
Mean	4°26'.8 W	14005 γ	47811 γ	4°27'.2 W	14011 γ	47813 γ	4°25'.5 W	13989 γ	47804 γ

TABLE 3
ANNUAL MEANS OF THE MAGNETIC ELEMENTS 1952—63

Year	D	H	Z
1952	5°20'.8 W	13871 γ	47500 γ
53	12.9	890	532
54	06.8	902	556
55	01.9	911	591
56	4°55'.4	908	624
57	50.6	916	647
58	46.6	929	678
59	42.7	938	712
60	37.9	945	748
61	34.7	972	775
62	31.1	995	791
1963	4°26'.8 W	14005 γ	47811 γ

*) Scale values increase by approximately 0.04 γ /mm per month.

TABLE 4
ADOPTED BASE LINE VALUES
DECLINATION 1963

Interval starting	Interval starting
Jan 1 4°54'.0	Aug 1 4°55'.0

TABLE 5
ADOPTED BASE LINE VALUES
HORIZONTAL INTENSITY 1963

Interval starting	Interval starting
Jan 1 13698 γ	Apr 1 13701 γ
Feb 1 699	6 702
Mar 29 13700 γ	10 13703 γ

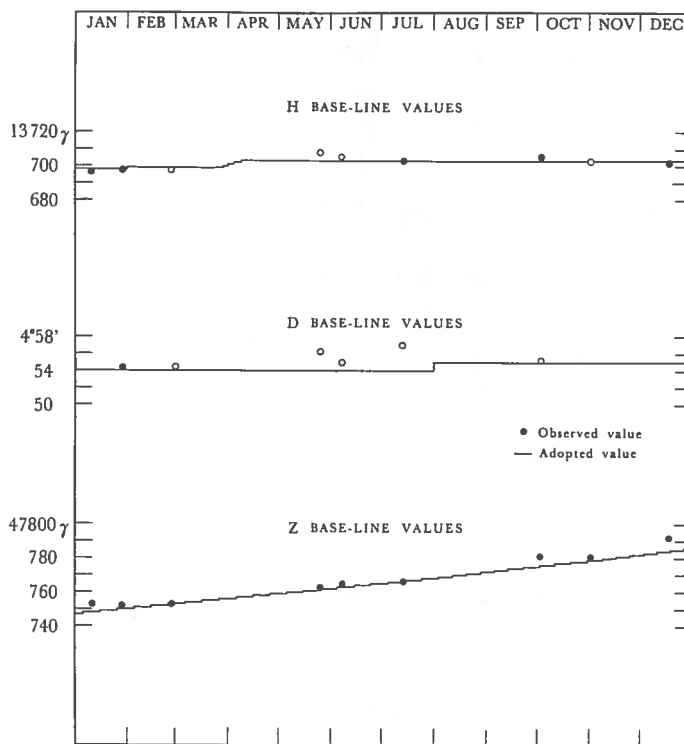


Fig. 1. Observed and adopted base-line values 1963

TABLE 6
ADOPTED BASE LINE VALUES
VERTICAL INTENSITY 1963

Interval starting	Interval starting	Interval starting	Interval starting	Interval starting
Jan 1 47747 γ	Mar 16 47755 γ	Jun 4 47763 γ	Aug 20 47771 γ	Oct 30 47779 γ
5 48	26 56	14 64	28 72	Nov 8 80
15 49	Apr 5 57	24 65	Sep 5 73	16 81
25 50	15 58	Jul 4 66	13 74	24 82
Feb 5 51	25 59	14 67	22 75	Dec 2 83
14 52	May 5 60	24 68	Oct 2 76	10 84
24 53	15 61	Aug 3 69	11 77	18 85
Mar 6 47754 γ	25 47762 γ	11 47770 γ	20 47778 γ	26 47786 γ

Dombås

Declination. D = 4° W + Tabular Values expressed in Tenths of Minutes.

Table for January 1963 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (0-31) and include sub-rows for specific times (e.g., 0.1, 0.2, etc.).

Table for February 1963 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (0-31) and include sub-rows for specific times (e.g., 0.1, 0.2, etc.).

Table for March 1963 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (0-31) and include sub-rows for specific times (e.g., 0.1, 0.2, etc.).

Dombås

Declination. D = 4° W + Tabular Values expressed in Tenths of Minutes.

Table for April 1963 showing hourly mean values for Dombås. Columns include Day (1-31), Hour (1-24), and Mean. Rows are labeled with day and hour (e.g., D 1, D 2, etc.).

Table for May 1963 showing hourly mean values for Dombås. Columns include Day (1-31), Hour (1-24), and Mean. Rows are labeled with day and hour (e.g., D 1, D 2, etc.).

Table for June 1963 showing hourly mean values for Dombås. Columns include Day (1-30), Hour (1-24), and Mean. Rows are labeled with day and hour (e.g., D 1, D 2, etc.).

Dombås

Declination. D = 4° W + Tabular Values expressed in Tenths of Minutes.

Table for July 1963 showing hourly mean values for declination. Columns include Day (1-31), Hourly Mean Values (1-24), and Mean. Rows are grouped by day (0-3, 6-9, 11-15, 16-20, 22-25, 26-31) and include sub-rows for M, MQ, MD.

AUGUST

Table for August 1963 showing hourly mean values for declination. Columns include Day (1-31), Hourly Mean Values (1-24), and Mean. Rows are grouped by day (1-5, 6-10, 11-15, 16-20, 21-25, 26-31) and include sub-rows for M, MQ, MD.

SEPTEMBER

Table for September 1963 showing hourly mean values for declination. Columns include Day (1-30), Hourly Mean Values (1-24), and Mean. Rows are grouped by day (1-5, 6-10, 11-15, 16-20, 21-25, 26-30) and include sub-rows for M, MQ, MD.

Dombås

Horizontal Intensity. H = 13300 γ + Tabular Values.

Table for January 1963 showing hourly mean values for days 1 through 31. Columns include day, hour (1-24), and mean values. Rows are categorized by day type (0, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31) and month type (M, MQ, MD).

Table for February showing hourly mean values for days 1 through 28. Columns include day, hour (1-24), and mean values. Rows are categorized by day type (0, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28) and month type (M, MQ, MD).

Table for March showing hourly mean values for days 1 through 31. Columns include day, hour (1-24), and mean values. Rows are categorized by day type (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) and month type (M, MQ, MD).

Dombås

Horizontal Intensity. H = 13300 γ + Tabular Values.

Table for July 1963 showing hourly mean values for days 1-31. Includes columns for Day, Hour (1-24), and Mean, with data for various magnetic declination angles (Q, D, M, MD).

Table for August 1963 showing hourly mean values for days 1-31. Includes columns for Day, Hour (1-24), and Mean, with data for various magnetic declination angles (Q, D, M, MD).

Table for September 1963 showing hourly mean values for days 1-30. Includes columns for Day, Hour (1-24), and Mean, with data for various magnetic declination angles (Q, D, M, MD).

Dombás

Horizontal Intensity. H = 13300 γ + Tabular Values.

OCTOBER 1963

HOURLY MEAN VALUES.

GMT

Table for October 1963 showing hourly mean values for days 1-31. Columns include DAY, 1-24, and MEAN. Rows include Q 1-10, D 11-15, 16-20, 21-25, 26-31, M, MQ, MD.

NOVEMBER

Table for November 1963 showing hourly mean values for days 1-30. Columns include DAY, 1-24, and MEAN. Rows include Q 1-5, D 6-10, 11-15, 16-20, 21-25, 26-30, M, MQ, MD.

DECEMBER

Table for December 1963 showing hourly mean values for days 1-31. Columns include DAY, 1-24, and MEAN. Rows include D 1-5, D 6-10, Q 11-15, 16-20, 21-25, 26-30, 31, M, MQ, MD.

Dombås

Vertical Intensity. Z = 47000 γ + Tabular Values.

HOURLY MEAN VALUES.

Table for January 1963 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and Mean. Rows are categorized by month (JANUARY 1963), day type (DAY, Q, O, G, M, MQ, MD), and hour.

Table for February 1963 showing hourly mean values for vertical intensity. Columns include Day (1-28), hours (1-24), and Mean. Rows are categorized by month (FEBRUARY), day type (DAY, Q, O, G, M, MQ, MD), and hour.

Table for March 1963 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-24), and Mean. Rows are categorized by month (MARCH), day type (DAY, Q, O, G, M, MQ, MD), and hour.

Dombás

Vertical Intensity. Z = 47000 γ + Tabular Values.

Table with columns: DAY, 1-28, MEAN. Rows include APR 1963, D 1-15, Q 10-15, 16-20, 21-25, 26-30, M, MQ, MD.

Table with columns: DAY, 1-28, MEAN. Rows include MAY, D 1-5, 6-10, 11-15, 16-20, 21-25, 26-31, M, MQ, MD.

Table with columns: DAY, 1-28, MEAN. Rows include JUNE, D 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, M, MQ, MD.

Dombås

Vertical Intensity. Z = 47000 γ + Tabular Values.

Table for July 1963 showing hourly mean values for vertical intensity. Columns include Day (1-28), Hour (1-24), and Mean. Rows are categorized by month (JULY) and magnetic declination (M, MQ, MD).

Table for August 1963 showing hourly mean values for vertical intensity. Columns include Day (1-23), Hour (1-24), and Mean. Rows are categorized by month (AUGUST) and magnetic declination (M, MQ, MD).

Table for September 1963 showing hourly mean values for vertical intensity. Columns include Day (1-30), Hour (1-24), and Mean. Rows are categorized by month (SEPTEMBER) and magnetic declination (M, MQ, MD).

Dombás

Vertical Intensity. Z = 47000 γ + Tabular Values.

OCTOBER 1963

HOURLY MEAN VALUES.

GMT

Table with columns for DAY (0-31), hours (1-24), and MEAN. Rows include hourly data for days 0-31 and summary rows M, MQ, MD.

NOVEMBER

Table with columns for DAY (1-30), hours (1-24), and MEAN. Rows include hourly data for days 1-30 and summary rows M, MQ, MD.

DECEMBER

Table with columns for DAY (1-31), hours (1-24), and MEAN. Rows include hourly data for days 1-31 and summary rows M, MQ, MD.

Magnetic data from the Magnetic Station at Dombås may also be found in "Publikasjoner fra det Norske Institutt for Kosmisk Fysikk", Nos.:

9. O. KROGNESS and K. F. WASSERFALL: "Results from the Magnetic Station at Dombås 1916—33." Det Magnetiske Byrå, 1936.
10. K. F. WASSERFALL: "Some of the most characteristic features in the variation of magnetic elements." Det Magnetiske Byrå, 1937.
13. B. TRUMPY and K. F. WASSERFALL: "Results at the Magnetic Station at Dombås 1934—36." — Det Magnetiske Byrå, 1938.
16. K. F. WASSERFALL: "Contribution to the study of the variation in magnetic elements." — Det Magnetiske Byrå, 1939.
18. B. TRUMPY and K. F. WASSERFALL: "Results from the Magnetic Station at Dombås 1937 and 1938." — Det Magnetiske Byrå, 1940.
20. — "Results from the Magnetic Station at Dombås 1939." — Det Magnetiske Byrå, 1941.
23. — "Results from the Magnetic Station at Dombås 1940 and 1941." — Det Magnetiske Byrå, 1944.
28. — "Results from the Magnetic Station at Dombås 1942—45." — Det Magnetiske Byrå, 1949.
35. K. F. WASSERFALL: "Results from the Magnetic Station at Dombås 1946, 1947 and 1948." — Det Magnetiske Byrå, 1953.
39. GURO GJELLESTAD, PER EINBU, HELGE DALSEIDE: "The Magnetic Station at Dombås. — Description of the new station and observations 1952." (Appendix: Storminess Values for 1949—1951). — Magnetisk Byrå, 1957.
42. GURO GJELLESTAD and HELGE DALSEIDE: "The Magnetic Station at Dombås. — Observations 1953." — Magnetisk Byrå, 1958.
43. — "The Magnetic Station at Dombås. — Observations 1954." — Magnetisk Byrå, 1958.
44. — "The Magnetic Station at Dombås. — Observations 1955." — Magnetisk Byrå, 1959.
47. — "The Magnetic Station at Dombås. — Observations 1956." — Magnetisk Byrå, 1960.
48. — "The Magnetic Station at Dombås. — Observations 1957." — Magnetisk Byrå, 1960.
49. — "The Magnetic Station at Dombås. — Observations 1958." — Magnetisk Byrå, 1960.

Magnetic data from Dombås continue in the present series.