

UNIVERSITETET I BERGEN

Publikasjoner fra
GEOFYSISK INSTITUTT, AVD. C

Nr. 3

GURO GJELLESTAD and HELGE DALSEIDE

THE MAGNETIC STATION AT DOMBÅS

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

OBSERVATIONS 1961

1963

A.S JOHN GRIEGS BOKTRYKKERI, BERGEN

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• INTRODUCTORY REMARKS

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 Mr. J. Breistein.

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 1961 for all days and for the 5 international quiet and disturbed days, and in *Table 3* annual means (all days) for the period 1952–1961.

Scalings 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.

Geofysisk institutt, avd. C, co-operates with the international central institute at De Bilt and with the Committee on Rapid Variations and Earth Currents of IAGA regarding K-indices and C-data for activity, sudden commencements, solar flare effects, etc., and for those data we refer to the IAGA Bulletin.

TABLE 1
ADOPTED SCALE VALUES 1961

D γ/mm	H γ/mm	Z γ/mm
9.60	8.85	6.45

TABLE 2
MONTHLY AND ANNUAL MEANS

1961	All days			Quiet days			Disturbed days		
	D	H	Z	D	H	Z	D	H	Z
Jan	4°37'.1 W	13964 γ	47773 γ	4°37'.6 W	13966 γ	47772 γ	4°35'.6 W	13963 γ	47780 γ
Feb	36.0	961	770	37.2	971	767	33.0	943	763
Mar	36.3	965	768	36.8	973	768	35.4	949	761
Apr	35.5	967	767	36.2	968	772	34.2	945	765
May	35.7	978	765	35.9	978	769	36.5	981	767
Jun	35.2	979	769	35.7	984	771	34.4	956	763
Jul	34.2	971	769	34.8	977	781	33.0	973	756
Aug	34.9	979	777	34.8	979	777	34.1	970	765
Sep	34.2	975	775	34.8	983	776	33.5	961	765
Oct	32.5	962	781	34.0	982	782	29.7	900	759
Nov	32.8	977	792	33.2	985	792	31.2	963	788
Dec	32.5	982	791	33.3	989	790	30.1	956	776
Mean	4°34'.7 W	13972 γ	47775 γ	4°35'.4 W	13978 γ	47776 γ	4°33'.4 W	13955 γ	47766 γ

TABLE 3
ANNUAL MEANS OF THE MAGNETIC ELEMENTS 1952-61

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
1961	4°34'.7 W	13972 γ	47775 γ

TABLE 4
ADOPTED BASE LINE VALUES
DECLINATION 1961

Jan 1—Dec 31	4°54'.0
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TABLE 5
ADOPTED BASE LINE VALUES
HORIZONTAL INTENSITY 1961

Interval starting	Interval starting
Jan 1 13701 γ	Jan 2 13700 γ

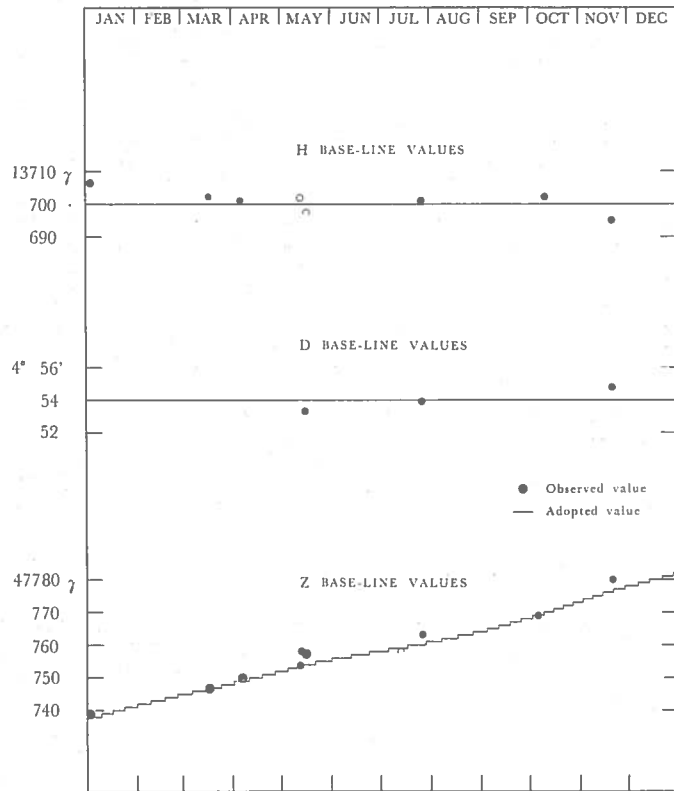


Fig. 1. Observed and adopted base-line values 1961

TABLE 6
ADOPTED BASE LINE VALUES
VERTICAL INTENSITY 1961

Interval starting	Interval starting	Interval starting	Interval starting	Interval starting
Jan 1 47738 γ	Mar 15 47747 γ	Jun 1 47756 γ	Sep 5 47765 γ	Nov 3 47774 γ
10 739	25 748	13 757	12 766	9 775
17 740	Apr 2 749	24 758	19 767	15 776
24 741	11 750	Jul 6 759	26 768	22 777
Feb 1 742	19 751	18 760	Oct 3 769	29 778
9 743	27 752	29 761	10 770	Dec 7 779
18 744	May 5 753	Aug 8 762	16 771	14 780
26 745	13 754	18 763	22 772	22 781
Mar 7 47746 γ	22 47755 γ	27 47764 γ	28 47773 γ	29 47782 γ

Dombås

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

JANUARY 1961

HOURLY MEAN VALUES.

GMT

Table for January 1961 showing hourly mean values for Dombås. Columns include Day, Hour, and Mean values. Rows are grouped by day (1-31) and include sub-rows for specific hours (Q 1, Q 2, D 1, D 2, etc.).

FEBRUARY

Table for February 1961 showing hourly mean values for Dombås. Columns include Day, Hour, and Mean values. Rows are grouped by day (1-28) and include sub-rows for specific hours (Q 1, Q 2, D 1, D 2, etc.).

MARCH

Table for March 1961 showing hourly mean values for Dombås. Columns include Day, Hour, and Mean values. Rows are grouped by day (1-31) and include sub-rows for specific hours (Q 1, Q 2, D 1, D 2, etc.).

Dombås

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

APRIL 1961

HOURLY MEAN VALUES.

GMT

Table for April 1961 showing hourly mean values for Dombås. Columns include Day (1-30), hours (1-24), and Mean. Rows are categorized by month (U, D, M, MQ, MD).

MAY

Table for May 1961 showing hourly mean values for Dombås. Columns include Day (1-31), hours (1-24), and Mean. Rows are categorized by month (U, D, M, MQ, MD).

JUNE

Table for June 1961 showing hourly mean values for Dombås. Columns include Day (1-30), hours (1-24), and Mean. Rows are categorized by month (U, D, M, MQ, MD).

Dombås

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

Table for July 1961 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (1-31) and include sub-rows for specific hours (e.g., 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).

AUGUST

Table for August 1961 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (1-31) and include sub-rows for specific hours (e.g., 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).

SEPTEMBER

Table for September 1961 showing hourly mean values for Dombås. Columns include Day, Hour (1-24), and Mean. Rows are grouped by day (1-30) and include sub-rows for specific hours (e.g., 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).

Dombás

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

OCTOBER 1961

HOURLY MEAN VALUES.

GMT

Table for October 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include D, 1-31, M, MQ, MD.

NOVEMBER

Table for November 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include D, 1-31, M, MQ, MD.

DECEMBER

Table for December 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include D, 1-31, M, MQ, MD.

Dombås

Horizontal Intensity. H = 13000 γ + Tabular Values.

JANUARY 1961

HOURLY MEAN VALUES.

GMT

Table for January 1961 showing hourly mean values for days 1-31. Columns include Day, Hour, and Mean. Rows are grouped by day (1-31) and include sub-rows for specific hours (e.g., 1, 2, 3, 4, 5 for day 1).

FEBRUARY

Table for February showing hourly mean values for days 1-28. Columns include Day, Hour, and Mean. Rows are grouped by day (1-28) and include sub-rows for specific hours.

MARCH

Table for March showing hourly mean values for days 1-31. Columns include Day, Hour, and Mean. Rows are grouped by day (1-31) and include sub-rows for specific hours.

Dombás

Horizontal Intensity. H = 13000 γ + Tabular Values.

JULY 1961

HOURLY MEAN VALUES.

GMT

Table for July 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include D, U, M, MQ, MD.

AUGUST

Table for August 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include U, M, MQ, MD.

SEPTEMBER

Table for September 1961 showing hourly mean values for Dombás. Columns include DAY, 1-28, and MEAN. Rows include U, M, MQ, MD.

Dombás

Horizontal Intensity. H = 13000 γ + Tabular Values.

OCTOBER 1961

HOURLY MEAN VALUES.

GMT

Table for October 1961 showing hourly mean values for days 1-31. Columns include DAY, 1-24, and MEAN. Rows include D, U, D26, D27, D28, D29, D30, D31, M, MQ, MD.

NOVEMBER

Table for November 1961 showing hourly mean values for days 1-30. Columns include DAY, 1-24, and MEAN. Rows include D, U, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, M, MQ, MD.

DECEMBER

Table for December 1961 showing hourly mean values for days 1-31. Columns include DAY, 1-24, and MEAN. Rows include D, U, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, M, MQ, MD.

Dombås

Vertical Intensity. Z = 47000 γ + Tabular Values.

JANUARY 1961

HOURLY MEAN VALUES.

GMT

Table for January 1961 showing hourly mean values for vertical intensity. Columns represent hours from 1 to 24, and rows represent days from 1 to 31. Values range from approximately 650 to 950.

FEBRUARY

Table for February 1961 showing hourly mean values for vertical intensity. Columns represent hours from 1 to 24, and rows represent days from 1 to 28. Values range from approximately 650 to 950.

MARCH

Table for March 1961 showing hourly mean values for vertical intensity. Columns represent hours from 1 to 24, and rows represent days from 1 to 31. Values range from approximately 650 to 950.

Dombås

Vertical Intensity. Z = 47000 γ -Tabular Values.

JULY 1961

HOURLY MEAN VALUES.

GMT

Table for July 1961 showing hourly mean values for vertical intensity. Columns represent hours (1-24) and rows represent days (1-31). Includes summary rows for M, MQ, and MD.

AUGUST

Table for August showing hourly mean values for vertical intensity. Columns represent hours (1-24) and rows represent days (1-31). Includes summary rows for M, MQ, and MD.

SEPTEMBER

Table for September showing hourly mean values for vertical intensity. Columns represent hours (1-24) and rows represent days (1-30). Includes summary rows for M, MQ, and MD.

Dombás

Vertical Intensity. Z = 47000 γ + Tabular Values.

OCTOBER 1961

HOURLY MEAN VALUES.

GMT

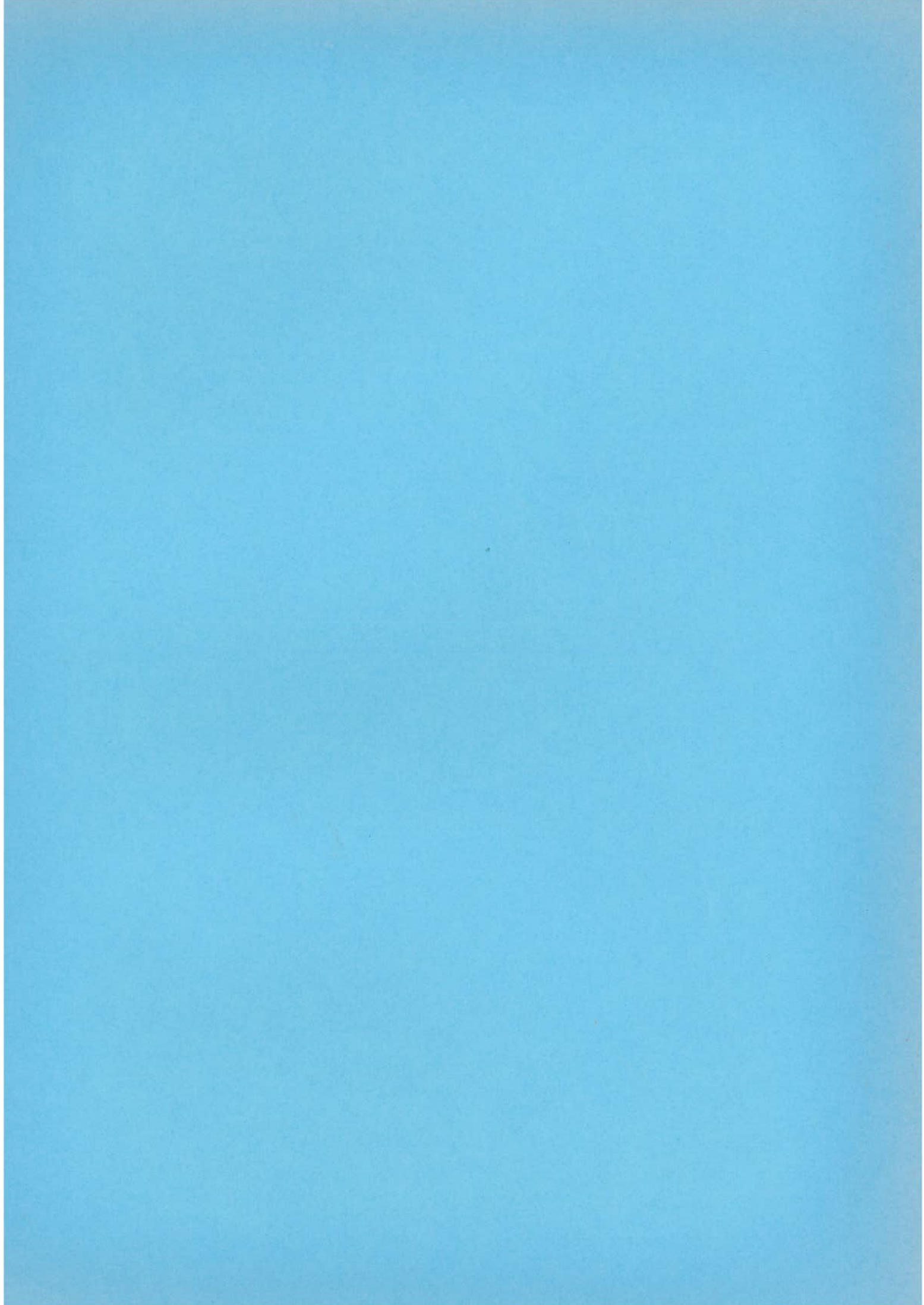
Table for October 1961 showing vertical intensity data. Columns include DAY, hours 1-24, and MEAN. Rows are grouped by day (0-31) and include sub-rows for M, MQ, MD.

NOVEMBER

Table for November 1961 showing vertical intensity data. Columns include DAY, hours 1-24, and MEAN. Rows are grouped by day (1-30) and include sub-rows for M, MQ, MD.

DECEMBER

Table for December 1961 showing vertical intensity data. Columns include DAY, hours 1-24, and MEAN. Rows are grouped by day (0-31) and include sub-rows for 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.