

MAGNETIC OBSERVATIONS AT KEW, MAY 28-30, 1919.

By CHARLES CHREE, *Superintendent.*

[Table 1 has been derived from Dr. Chree's article in *Terr. Mag.* vol. 24, p. 170. Dr. Chree assigns the "magnetic character" figure, as judged from the *D* and *H* curves, zero to each of the three days, May 28, 29, 30, 1919. Tables 2 and 3 have been derived from data subsequently received. The *geographic coördinates* of the Kew Magnetic Observatory are: Latitude, 51° 28.1 W.; longitude, 0° 18'.8 or 1^m.3 W.—*Ed.*]

TABLE 1.—*Declination hourly values and diurnal variation.*

[*D* = W 14° 30' + tabular quantity; *N* = mean of May 28 and 30; 29 = May 29; *dD* = diurnal variation.]

Hour	<i>D</i>		<i>dD</i>		Hour	<i>D</i>		<i>dD</i>		Hour	<i>D</i>		<i>dD</i>	
	<i>N</i>	29	<i>N</i>	29		<i>N</i>	29	<i>N</i>	29		<i>N</i>	29	<i>N</i>	29
<i>h</i>	<i>'</i>	<i>'</i>	<i>'</i>	<i>'</i>	<i>h</i>	<i>'</i>	<i>'</i>	<i>'</i>	<i>'</i>	<i>h</i>	<i>'</i>	<i>'</i>	<i>'</i>	<i>'</i>
1	11.4	11.1	-0.5	+0.8	9	06.7	06.7	+4.2	+5.2	17	12.2	13.1	-1.3	-1.2
2	11.0	11.6	-0.1	+0.3	10	09.4	09.5	+1.5	+2.4	18	11.1	11.6	-0.2	+0.3
3	10.4	10.9	+0.5	+1.0	11	11.1	12.9	-0.2	-1.0	19	11.0	12.2	-0.1	-0.3
4	08.6	11.4	+2.3	+0.5	12	13.3	16.6	-2.4	-4.7	20	11.9	12.0	-1.0	-0.1
5	06.7	10.4	+4.2	+1.5	13	16.1	18.9	-5.2	-7.0	21	12.1	11.8	-1.2	+0.1
6	05.4	06.6	+5.5	+5.3	14	16.6	19.7	-5.7	-7.8	22	12.4	11.7	-1.5	+0.2
7	04.8	05.0	+6.1	+6.9	15	15.4	18.4	-4.5	-6.5	23	12.3	11.9	-1.4	0.0
8	05.2	04.9	+5.7	+7.0	16	14.0	15.6	-3.1	-3.7	24	11.4	11.8	-0.5	+0.1

Mean for *N* (May 28 and 30): 14° 40'.9 W. Mean for May 29: 14° 41'.9 W.

TABLE 2.—*Hourly values of horizontal intensity and diurnal variation.*

[*H* = 18400 γ + tabular quantity; *N* = mean of May 28 and 30; 29 = May 29; *dH* = diurnal variation.]

Hr.	<i>H</i>		<i>dH</i>		Hour	<i>H</i>		<i>dH</i>		Hour	<i>H</i>		<i>dH</i>	
	<i>N</i>	29	<i>N</i>	29		<i>N</i>	29	<i>N</i>	29		<i>N</i>	29	<i>N</i>	29
<i>h</i>	γ	γ	γ	γ	<i>h</i>	γ	γ	γ	γ	<i>h</i>	γ	γ	γ	γ
1	21	20	-2	-5	9	06	13	-17	-12	17	32	41	+9	+16
2	20	18	-3	-7	10	07	08	-16	-17	18	44	34	+21	+9
3	19	20	-4	-5	11	07	01	-16	-24	19	46	27	+23	+2
4	22	24	-1	-1	12	09	05	-14	-20	20	39	30	+16	+5
5	25	30	+2	+5	13	12	11	-11	-14	21	37	31	+14	+6
6	23	27	0	+2	14	11	24	-12	-1	22	36	35	+13	+10
7	18	27	-5	+2	15	23	38	0	+13	23	34	31	+11	+6
8	12	22	-11	-3	16	21	42	-2	+17	24	30	30	+7	+5

Mean *N* (May 28 and 30): 18423.3 γ . Mean for May 29: 18424.5 γ .

TABLE 3.—*Extreme values and ranges.*

Date 1919	Declination			Horizontal Intensity		
	Max. W.	Min. W.	Range	Maximum	Minimum	Range
May 28	14 46.9	14 35.4	11.5	18437	18392	45
29	14 50.4	14 35.0	15.4	18439	18392	47
30	14 48.4	14 33.7	14.7	18455	18395	60

The following extracts are taken from Dr. Chree's letter of November 6, 1920: "We have not given mean hourly values of vertical force for many years. On quiet days the uncertainties are too great when one goes to 1γ . The V absolute ranges of course are still more uncertain (unless there happens to come a storm with extreme values near midnight).

"Even as to D and H absolute ranges a caution is needed. We ceased getting these out and printing them some years ago, and the values given above cannot really claim accuracy to $0'.1$ in D or to 1γ in H . They really represent mean values during 10 minutes about the times of maximum and minimum. The days being comparatively quiet, there was little uncertainty as to the times of maximum and minimum. The traces at the busy hours of the day show incessant small oscillations and to take the extremity of one of these as a maximum or minimum would almost certainly be wrong. While the V -curves have too large artificial disturbances to justify hourly values on a quiet day, they indicate that in that element conditions were quiet for the three days."

MAGNETIC OBSERVATIONS AT AGINCOURT AND MEANOOK, MAY 29, 1919.

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[The data supplied for the Agincourt Magnetic Observatory, near Toronto, Canada, consisted of eye-reading values of magnetic declination (D), horizontal intensity (H), and vertical intensity (Z), for every minute, $9^h 58^m$ to $16^h 32^m$, Greenwich civil mean time, May 29, 1919. For the Meanook Magnetic Observatory similar data could be supplied only for D . Tables 1 and 2 contain the derived five-minute means. Furthermore, the mean diurnal variation for May 28 and 30, 1919, was transmitted (Table 3). Later were received also the hourly magnetograph values for May 28-30, 1919, from which Table 4 was derived. The *geographic coordinates* are: Agincourt (lat. $43^\circ 47'$ N.; long., $79^\circ 16'$ or $5^h 17^m$ W); Meanook (lat., $54^\circ 36'.9$ N.; long., $113^\circ 20'.5$ or $7^h 33.4^m$ W). —*Ed.*]