The mean value of the variation of the compass or magnetic declination at Toronto, for the year 1864, will be *probably* about 2° 23′ W. The magnet has a general westerly movement, of which the mean monthly value is at present 0′ 27 nearly, and by aid of which the mean value of the declination for each month may be obtained.

The magnet attains its greatest easterly elongation in the diurnal period about 8 a.m., and its extreme westerly elongation from 1 p.m. to 2 p.m. The positions of the magnet at the hours of extreme elongation on the average of the year are distant about 5′ from the position, but are more widely apart in summer than in winter.

The hours in which the disturbances which affect the declination are commonly less than the average are from 10 a.m. to 7 p.m.; the three most tranquil hours being 1 p.m., 2 p.m. and 3 p.m.

Sun's Declination at Toronto, apparent noon, for the year 1864.

Date	January	Febru'y	March.	April.	May.	June.	July.	August	Septem.	October	Novem.	Decem.	Date
	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	
1	23 01 48	17 09 17	7 16 47	4 50 26	15 18 19	22 09 40	23 04 32	17 51 11	8 01 39	3 28 26	14 41 02	21 56 26	1
2	22 56 42	16 52 08	6 53 51	5 13 28	15 36 08	22 17 22	23 00 00	17 35 43	7 39 42	3 51 45	15 00 06	22 05 08	2
3	22 51 09	16 34 37	6 30 54	5 36 24	15 53 43	22 24 30	22 55 07	17 19 59	7 17 37	4 14 56	15 18 42	22 13 30	3
4	22 45 07	16 16 55	6 07 43	5 59 16	16 11 03	22 31 33	22 49 47	17 03 56	6 55 26	4 38 07	15 37 11	22 21 27	4
5	22 38 38	15 58 46	5 44 31	6 22 00	16 28 05	22 38 04	22 44 04	16 47 37	6 33 08	5 01 14	15 55 22	22 28 58	5
6	22 31 42	15 40 20	5 21 16	6 44 37	16 44 46	22 44 11	22 37 58	16 31 00	6 10 43	5 24 17	16 13 10	22 0 0.	6
7	22 24 20	15 21 54	4 57 55	7 07 08	17 01 22	22 49 54	22 31 30	16 14 12	5 48 12	5 47 16	16 30 59	22 42 39	7
8	22 16 30	15 03 03	4 34 30	7 29 32	17 17 34	22 55 14	22 24 35	15 57 00	5 25 36	6 10 11	16 48 22	22 48 49	8
9	22 08 15	14 43 56	4 11 01	7 51 48	17 33 20	23 00 09	22 17 19	15 39 44	5 02 54	6 33 00	17 05 27	22 54 33	9
10	21 59 35	14 24 33	3 47 31	8 13 55	17 49 08	23 04 39	22 09 40	15 22 08	4 40 07	6 55 45	17 22 16	22 59 56	10
11	21 50 28	14 05 01	3 23 56	8 35 56	18 04 28	23 08 46	22 01 37	15 04 17	4 17 15	7 18 23	17 38 46	23 04 38	11
12	21 40 55	13 45 13	3 00 20	8 57 47	18 19 20	23 12 28	21 53 11	14 46 10	3 53 29	7 40 10	17 54 58	23 09 06	12
13	21 30 59	13 25 16	2 36 42	9 19 28	18 34 15	23 15 45	21 44 25	14 27 50	3 31 19	8 03 22	18 10 51	23 12 54	13
14	21 20 35	13 04 55	2 13 02	9 41 01	18 48 38	23 18 38	21 35 15	14 09 16	3 08 15	8 25 41	18 26 25	23 16 20	14
15	21 09 49	12 44 27	1 49 21	10 02 24	19 02 43	23 21 07	21 25 43	13 50 28	2 45 08	8 47 53	18 41 40	23 19 18	15
16	20 58 39	12 23 47	1 25 40	10 23 37	19 16 29	23 23 11	21 15 50	13 31 26	2 21 57	9 09 58	18 56 34	23 21 49	16
17	20 47 04	12 02 55	1 01 58	10 44 41	19 29 55	23 24 49	21 05 35	13 12 17	1 58 43	9 31 55	19 11 09	23 23 51	17
18	20 35 05	11 41 51	0 38 16	11 05 32	19 43 04	23 26 02	20 54 58	12 52 51	1 35 27	9 53 43	19 25 22	23 25 25	18
19	20 22 43	11 20 36	S 14 34	11 26 14	19 55 49	23 27 51	20 44 00	12 33 12	1 12 08	10 15 24	19 39 15	23 26 31	19
20	20 09 58	10 59 11	N 09 07	11 46 44	20 08 15	23 27 17	20 32 42	12 13 23	0 48 48	10 36 52	19 52 47	23 27 08	20
21	19 56 51	10 37 37	0 32 40	12 07 02	20 20 21	23 27 21	20 21 00	11 53 21	0 25 26	10 58 17	20 05 56	23 27 17	21
22	19 43 21	10 15 52	0 56 25	12 27 08	20 32 06	23 26 50	20 09 00	11 33 08	0 02 03	11 19 29	20 18 44	23 26 58	22
23	19 29 29	9 53 58	1 20 03	12 47 02	20 43 30	23 26 00	19 56 43	11 12 48	S 21 22	11 40 30	20 31 09	23 26 10	23
24	19 15 16	9 31 55	1 43 37	13 06 44	20 54 32	23 24 45	19 44 00	10 52 07	0 44 46	12 01 22	20 43 11	23 24 54	24
25	19 00 44	9 09 43	2 07 10	13 26 13	21 05 12	23 23 00	19 31 00	10 31 21	1 08 11	12 22 03	20 54 50	23 23 10	25
26	18 45 46	8 47 22	2 30 40	13 45 29	21 15 34	23 21 00	19 17 43	10 10 27	1 31 36	12 42 31	21 06 00	23 20 58	26
27	18 30 30	8 24 55	2 54 08	14 04 31	21 25 30	23 18 33	19 04 03	9 49 22	1 55 01	13 02 49	21 16 58	23 18 17	27
28	18 14 55	8 02 19	3 17 31	14 23 19	21 35 05	23 15 40	18 50 06	9 28 07	2 18 24	13 23 54	21 27 26	23 15 18	28
29	17 58 58	7 39 37	3 40 51	14 41 54	21 44 19	23 12 22	18 35 49	9 06 43	2 41 46	13 42 46	21 37 28	23 11 31	29
30	17 42 43	.....	4 04 07	15 00 13	21 53 08	23 08 39	18 21 15	8 45 10	3 00 57	14 02 25	21 47 07	23 07 27	30
31	17 26 09	.....	4 27 19	.....	22 01 36	.....	18 06 22	8 23 29	.....	14 21 50	.....	23 02 54	31

Table of Semi-Diurnal Arcs.

Decl.	Toronto. N. 43° 39′.4.		Kingston. N. 44°. 13′.2.		Halifax, N. S. N. 44° 39′.3.		Montreal. N. 45° 31′.		Fredericton. N. 46° 30′.		Quebec. N. 46° 49′.2.	
	North.	South.	North.	South.	North.	South.	North.	South.	North.	South.	North.	South.
°	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	6 3.8	5 56.2	6 3.9	5 56.1	6 3.9	5 56.1	6 4.1	5 55.9	6 4.2	5 55.8	6 4.3	5 55.7
2	6 7.7	5 52.3	6 7.8	5 52.2	6 7.9	5 52.1	6 8.1	5 51.9	6 8.3	5 51.7	6 8.5	5 47.2
3	6 11.5	5 48.5	6 11.6	5 48.4	6 11.9	5 48.1	6 12.2	5 47.8	6 12.5	5 47.5	6 12.8	5 51.5
4	6 15.3	5 44.7	6 15.6	5 44.4	6 15.9	5 44.1	6 16.3	5 43.7	6 16.6	5 43.4	6 17.1	5 42.9
5	6 19.1	5 40.9	6 19.5	5 40.5	6 19.8	5 40.2	6 20.4	5 39.6	6 20.8	5 39.2	6 21.4	5 38.6
6	6 23.0	5 37.0	6 23.4	5 36.6	6 23.8	5 36.2	6 24.6	5 35.4	6 25.0	5 35.0	6 25.7	5 34.3
7	6 26.9	5 33.1	6 27.4	5 32.6	6 27.9	5 32.1	6 28.7	5 31.3	6 29.3	5 30.7	6 30.1	5 29.9
8	6 30.9	5 29.1	6 31.4	5 28.6	6 31.9	5 28.1	6 32.9	5 27.1	6 33.5	5 26.5	6 34.5	5 25.5
9	6 34.8	5 25.2	6 35.4	5 24.6	6 36.0	5 24.0	6 37.1	5 22.9	6 37.8	5 22.2	6 38.9	5 21.1
10	6 38.7	5 21.3	6 39.4	5 20.6	6 40.1	5 19.9	6 41.4	5 18.6	6 42.2	5 17.8	6 43.3	5 16.7
11	6 42.7	5 17.3	6 43.5	5 16.5	6 44.3	5 15.7	6 45.7	5 14.3	6 46.5	5 13.5	6 47.8	5 12.2
12	6 46.8	5 13.2	6 47.6	5 12.4	6 48.5	5 11.5	6 50.0	5 10.0	6 50.9	5 9.1	6 52.4	5 7.6
13	6 50.9	5 9.1	6 51.8	5 8.2	6 52.7	5 7.3	6 54.4	5 5.6	6 55.4	5 4.6	6 57.0	5 3.0
14	6 55.0	5 5.0	6 56.0	5 4.0	6 57.0	5 3.0	6 58 8	5 1.2	6 59.9	5 0.1	7 1.6	4 58 4
15	6 59.3	5 0.7	7 0.3	4 59.7	7 1.4	4 58.6	7 3.3	4 56.7	7 4.6	4 55.4	7 6.4	4 53.6
16	7 3.5	4 56.5	7 4.6	4 55.4	7 5.8	4 54.2	7 7.9	4 52.1	7 9.2	4 50.8	7 11.2	4 48.8
17	7 7.9	4 52.1	7 9.0	4 51.0	7 10.3	4 49.7	7 12.6	4 47.4	7 14.0	4 46.0	7 16.0	4 44.0
18	7 12.3	4 47.7	7 13.5	4 46.5	7 14.9	4 45.1	7 17.3	4 42.7	7 18.8	4 41.2	7 21.0	4 39.0
19	7 16.7	4 43.3	7 18.1	4 41.9	7 19.5	4 40.5	7 22.1	4 37.9	7 23.7	4 36.3	7 26.1	4 33.9
20	7 21.3	4 38.7	7 22 7	4 37.3	7 24.3	4 35.7	7 27.0	4 33.0	7 28.7	4 31.3	7 31.3	4 28.7
21	7 25.9	4 34.1	7 27.5	4 32.5	7 29.1	4 30.9	7 32.0	4 28.0	7 33.9	4 26.1	7 36.6	4 23.4
22	7 30.7	4 29.3	7 32.3	4 27.7	7 34.1	4 25.9	7 37.2	4 22.8	7 39.1	4 20.9	7 42.0	4 18.0
23	7 35 5	4 24.5	7 37.3	4 22.7	7 39.2	4 20.8	7 42.4	4 17.6	7 44.5	4 15.5	7 47.6	4 12.4
24	7 40.5	4 19.5	7 42.4	4 17.6	7 44.4	4 15.6	7 47.8	4 12.2	7 50.0	4 10.0	7 53.3	4 6.7

Provincial Observatory, Toronto.

Latitude, 43°. 39′.4 North. Longitude, 79°. 23′.2 West, or 5 hours, 17 minutes, 33 seconds Slow of Greenwich Time. Elevation above Lake Ontario, 198 feet. Approximate Elevation above the Sea, 342 feet.

The Provincial Observatory is now attached to the University of Toronto, and is in the charge of Prof. Kingston, and three Assistants.