

from the times of the upper transit of the Pole Star may be derived, with the aid of the following table, the times of culmination, and of the rising and setting of the principal fixed stars that appear above the horizon of Toronto.

Star Table.

To ascertain when any star found in the following table will be on the meridian, add the number in the left-hand column of figures to the preceding meridian transit of the pole star given in the calendar. To find the time of rising of a star, subtract the number opposite to it in the right-hand column of figures from the time of its meridian passage. The setting of a star, add the same number to the time of its meridian passage. Those stars marked (.....) revolve in circles of perpetual apparition, and do not rise or set at places to the north of Toronto.

NAME OF STAR.	On Merid'n		Rises and Sets		NAME OF STAR.	On Merid'n		Rises and Sets	
	<i>h</i>	<i>m</i>	<i>h</i>	<i>m</i>		<i>h</i>	<i>m</i>	<i>h</i>	<i>m</i>
Andromedæ	22	50	8	3	γ Leonis	9	3	7	22
Pegasi (Algenib)	23	55	6	56	α Ursæ Majoris	9	46	.....	.....
Cassiopeæ	23	21	.....	.....	β Leonis	10	33	0	59
Ceti	23	25	4	43	β Corvi	11	18	4	26
Ursa Minoris (Polaris) .....	.....	.....	.....	.....	α Virginis (Spica)	12	9	5	19
Arietis	0	40	7	21	η Ursæ Majoris	12	33	.....	.....
Arietis	0	52	7	33	α Bootis (Arcturus)	13	0	7	20
Ceti	1	47	6	12	β Ursæ Minoris	13	42	.....	.....
Persei	2	7	.....	.....	β Libræ	14	0	5	25
Auri (Aldebaran)	3	20	7	5	α Coronæ Borealis	14	19	7	57
Argus (Capella)	3	58	11	15	α Serpentis	14	23	6	24
Orionis (Rigel)	4	0	5	27	β Scorpil	14	48	4	40
Auri	4	9	8	4	α Scorpil (Antares)	15	11	4	7
Orionis	4	17	5	57	α Herculis	15	58	6	56
Orionis	4	21	5	54	β Draconis	16	17	.....	.....
Plumbæ	4	27	3	18	γ Draconis	16	43	.....	.....
Orionis	4	40	6	26	α Lyræ (Vega)	17	22	0	17
Orionis Majoris (Sirius)	5	31	4	53	α Aquilæ (Altair)	18	27	6	32
Orionis Majoris	5	45	3	53	α Cygni	18	34	.....	.....
Orionis Minor (Castor)	6	17	8	27	α Cephei	20	5	10	43
Orionis Minoris (Procyon)	6	24	6	20	β Aquarii	20	14	5	35
Orionis Minor (Pollux)	6	28	8	3	α Aquarii	20	48	5	55
Orionis	8	12	5	23	α Pis. Aus. (Fomalhaut)	21	39	3	43
Orionis (Regulus)	8	52	6	49	α Pegasi (Markab)	21	47	6	55

TABLE.

Showing the Illuminated Portion of the Discs of Venus and Mars.

The numbers given in this table represent the width of the illuminated portion of the Disc measured along the line that divides the illuminated portion symmetrically—the apparent diameters being considered as unity.

1858.	Venus.	Mars.	1858.	Venus.	Mars.
January 15.	0.994	0.904	July 15.	0.800	0.890
February 14.	0.998	0.900	August 15.	0.700	0.855
March 15.	0.998	0.915	September 15.	0.578	0.843
April 15.	0.980	0.962	October 15.	0.426	0.856
May 15.	0.943	1.000	November 15.	0.195	0.873
June 15.	0.881	0.995	December 15.	0.001	0.894

Eclipses.

In the year 1858 there will be two Eclipses of the Sun, and two of the Moon.

—A partial Eclipse of the Moon, Feb. 27, visible in British North America.

—An annular Eclipse of the Sun, March 14-15, visible (as a partial one) throughout British North America.

1.—A partial Eclipse of the Moon, Aug. 23-24, invisible in Canada.

7.—A Total Eclipse of the Sun, Sept. 6-7, invisible in Canada.

I.—PARTIAL ECLIPSE OF THE MOON, FEB. 27.

The magnitude of the Eclipse will be 0.333 on the southern limb (the Moon's diameter being =1).

The middle of the Eclipse occurs at 10h. 13.6m. Greenwich mean time, and before the Moon rises in British North America. Hence when the Moon rises its obscuration will be decreasing. The last contact of the shadow will be seen point on the Moon's disc 117° W. from its northern point.

The following Table shows the hour and minute, mean local time, at which the end of the Eclipse takes place at various stations.

	Halifax.	Quebec.	Montreal.	Kingston.	Toronto.	London.	Detroit.
End of last contact	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
End of shadow	7 2.6	7 32.4	6 22.6	6 11.1	5 59.7	5 52.0	5 45.1