

indicated in the Almanac. Thus, on the 25th of January, when the Sun is on the noon mark, the watch must be set 12 minutes and 38 seconds past twelve, which will be the true time. The practice of setting time-pieces by the rising or setting of the Sun or Moon, is not strictly correct; as the unevenness of the earth's surface and intervening objects, such as hills and forests, near the points of rising and setting, occasion a deviation, in every place, from the time expressed in the Almanac, which time is adapted to a smooth, level horizon. The only means of keeping correct time, is by the use of a noon-mark, or a meridian-line.

ASTRONOMICAL NOTES FOR 1855.

The Moon will run farthest south this year on the 16th of October, to the 6th degree of Sagittarius, having a declination of $27^{\circ} 59'$ min. 51.6 sec. S. It will run farthest north on the 29th of October, to the 6th degree of Gemini, having a declination of $28^{\circ} 0'$ min. 14 sec. N. This is the greatest declination the Moon has had, or will have in many years. The geocentric longitude of the Moon's descending Node in the middle of this year is $39^{\circ} 49'$ min. 9 sec.

The Sun will be north of the equator this tropical year, dating from the Solstice of Dec. 21st 1854, 186 days, 10 h. 52 m.; and south of it 178 days, 18 h. 56 m.; showing a difference of 7 days, 15 h. 56 m., which is caused by the slower motion of the earth when north of the equator, being then in or near its aphelion.

Distance of the Sun from the earth, January 1st, 93,505,607 miles; July 3rd, 96,605,200 miles; December 31st, 93,507,857 miles; mean distance, April 2nd and October 2nd, 95,103,000 miles.

Venus will be brightest on the 25th of August, at which time it will be a beautiful evening star, appearing in the west after sunset. Venus will be invisible for nearly two weeks before and after 1st of October, and it will be brightest again on the 6th of November, when it will show off splendidly in the east as morning star.

Mercury will be brightest about February 15th, June 11th; Oct. 8th; when it will be in a position as Evening Star in the west, that is favourable for visibility. It will be brightest again about April 5th, August 4th, and Nov. 22, when it will be Morning Star. In the east, and will probably be visible. The chance of seeing Mercury on the 8th of Oct. and Nov. 22nd is quite unfavourable.

Jupiter will be in Aquarius nearly all of the year. This planet is working toward the north. Saturn will be in Taurus the whole of the year. Uranus will be in Aries all of the year. Neptune will be in Aquarius.

The Rings of Saturn will be in a favourable position for visibility all of this year.

The southern surface of these rings are now visible from the earth. The maximum apparent diameter is obtained in December. Saturn will be invisible for about two weeks before and after June 10th. The opposition will take place on the 18th of December.

TABLE,

Shewing the Illuminated portion of the Discs of Venus and Mars.

The numbers given in this table represent the sizes of the illuminated portion of the Discs—the apparent diameters of the planets being considered as unity.

1855.	Venus.	Mars.	1855.	Venus.	Mars.
January 15	0.991	0.987	July 15	0.531	0.982
February 14	0.968	0.994	August 15	0.343	0.969
March 15	0.929	0.930	September 15	0.078	0.952
April 15	0.865	1.000	October 15	0.060	0.934
May 15	0.780	0.998	November 15	0.337	0.917
June 15	0.667	0.992	December 15	0.521	0.905

Star Table.

To ascertain when any star found in the following table will be on the meridian, *add* the numbers opposite in the left-hand column of figures to the preceding meridian transit of the north Star found in the calendar pages. For the rising of a star, *subtract* the number opposite in the right-hand column of figures from its meridian passage. For the setting of a star, *add* the number to its meridian passage. Those marked (.....) revolve in a circle of perpetual apparition, and do not rise or set north of the latitude of Toronto (Lat. $43^{\circ} 39'$ min. 35 sec. N.) for which latitude the semi-diurnal arcs are calculated and corrected. The civil day begins at the preceding midnight, and consequently 24 hours after midnight, or 12 hours from noon, is *morning* of the succeeding day; and 24 to 36 hours from noon, is *evening* of the next day. This table is arranged in the order of culmination.

Stars.	Constellation	In Mo R & S	Stars.	Constellation	In Mo R & S	Stars.	Constellation	In Mo R & S
Almaach	Andromeda	h. m. h. m.	*Pointers	Canis Minor	h. m. h. m.	Beta	Ursa Minor	h. m. h. m.
Alpha	Aries	0 48 9 50	Procyon	Canis Minor	6 24 6 20	Zubenelg	Libra	13 43
Bilra	The Whale	0 52 7 33	Pollux	Gemini	6 29 8 3	Alphacca	N. Crown	14 20 7 56
Monkar	The Whale	1 6 5 46	Aucubens	Cancer	6 51 2 31	Scorpio	Scorpio	15 12 4 8
Algol	Perseus	1 48 6 13	Naos	The Ship	7 47 6 48	Antares	Scorpio	15 59 6 56
Algenib	Perseus	1 52 9 36	Alphard	Hydra	8 1 5 28	Alpha	Uphiuehus	16 19 6 48
Alcyone	7 Stars	2 32 7 38	*Re ulus	Leo	8 53 6 48	Beta	Lyra	17 23 9 18
Aldebaran	Taurus	3 21 7 3	*Dubhe	Big Dipper	9 47	Gamma	Lyra	17 36 8 33
Capella	Auriga	3 59 11 16	Denebola	Big Dipper	9 47	Delta	Aquila	18 34 6 21
Rigel	Orion	4 1 5 27	Phad	Big Dipper	9 47	Epsilon	Cygnus	19 27 10 43
El Nath	Taurus	4 10 8 3	Alcorab	The Crow	1 14 4 57	Zosma	S. Fish	21 46 5 43
Bollatrix	Orion	4 10 6 23	Alloth	Big Dipper	1 39	Scheat	Pegasus	21 47 7 57
Mintaka	Orion	4 18 5 58	Spica	Virgo	2 9 5 19	Markab	Pegasus	21 48 6 56
Phat	The Dove	4 28 3 18	Mizar	Big Dipper	2 16	Yr. Equinox	Pisces	22 50 5 59
Petelgueso	Orion	4 40 6 27	Benetnasch	Big Dipper	2 34	Algenib	Pegasus	22 50 6 56
Sirus	Canis Minor	5 32 4 54	Areturus	Bootes	3 1 7 20	Schedir	Cassiopeia	23 22
Castor	Gemini	6 18 8 27	Mime	Bootes	3 39 7 50	Menech	Andromeda	23 53 8 45

Explanation of the Articles in the Calendar.

THESE PAGES are calculated for Toronto, and for a point midway between Montreal and Quebec, which point is about on the latitude of Three Rivers and Fredericton. They will serve very accurately for every City and Town in the British Provinces in North America.

THE SUN'S RISING and SETTING, is given in mean time; and for Toronto, it is corrected for a mean horizontal refraction of $36'$ 6.96 sec. of arc, and is also suited to the upper limb.