

culated to within a tenth of that quantity. In these Equations the fractional parts of minutes in the differences, are retained for the convenience of interpolation.

The fourth and fifth columns of this page contain, respectively, the mean times of the southing, and the rising or setting of the Moon. The Moon's southing being frequently useful for the approximate determination of mean or apparent time, is computed to the nearest *tenth* of a minute. The times of the rising or setting are only given to the nearest minute, for the reasons mentioned above in respect to the Sun; and, in like manner, the computations are made for the rising of the Western, and setting of the Eastern Limb, corrections being applied on account of horizontal parallax and refraction, and the Moon's semidiameter.

The sixth column contains the Moon's place in the signs of the Zodiac.

The seventh column contains the true mean time to the nearest second, of the *upper* transit of the Polar Star (*Polaris*) across the meridian of Montreal for each day of the year. If the time of its lower transit be required for any day, it may be found by simply subtracting 11h 58m 2s from the tabular time of the upper transit (increased by 12 hours if necessary) which will always give the time of the preceding lower transit; or, which is more concise and is the same in effect, to the tabular time of the upper transit add 1m 58s of time. The sum, taken in the preceding 12 hours, according to the common divisions of civil time, will be the time of lower transit required.

For example:—let the time of the lower transit of *Polaris* for the 15th May be required :

	H. M. S.
Tabular time of upper transit, (increased by 12 hours).....	21 29 20
Subtract.....	11 58 2
Remains, time required,.....	<u>9 31 18</u>

OR, BY THE SECOND PROCESS.

Tabular time of upper transit, (P. M.).....	9 29 20
Add.....	0 1 58
Sum = Time of lower transit as before, (A. M.).....	<u>9 31 18</u>

The eighth column contains the true mean time, to the nearest second, each day, of the southing of some well known fixed Star of the first magnitude; for this purpose a Star has been always selected which comes to the meridian between sunset and midnight, during the given period of its transit.

O. W.

Explanation of Astronomical Symbols & Abbreviations.

☉ The Sun.	♁ In Opposition.	♈ Aries,..... <i>The Ram.</i>
☾ The Moon.	♊ Ascending Node.	♉ Taurus,..... <i>The Bull.</i>
☿ Mercury.	♋ Descending Node.	♊ Gemini,..... <i>The Twins.</i>
♀ Venus.	N. North. S. South.	♌ Cancer,..... <i>The Crab.</i>
♁ or ♀ the Earth.	E. East. W. West.	♍ Leo,..... <i>The Lion.</i>
♂ Mars.	° Degrees } of Arc.	♎ Virgo,..... <i>The Virgin.</i>
♃ Jupiter.	' Minutes }	♏ Libra,..... <i>The Balance.</i>
♄ Saturn.	" Seconds }	♐ Scorpio,..... <i>The Scorpion.</i>
♃ The Georgian;	d. Days } of Time	♑ Sagittarius, <i>The Archer.</i>
or Herschel.	h. Hours. }	♒ Capricornus, <i>The Goat.</i>
♌ In Conjunction.	m. Minutes }	♓ Aquarius,..... <i>The Waterman</i>
☐ In Quadrature.	s Seconds }	♈ Pisces,..... <i>The Fishes.</i>