

ASTRONOMICAL PHENOMENA FOR THE YEAR 1853 **BEING THE FIRST AFTER LEAP YEAR.**

CHRONOLOGICAL CYCLES.

Dominical Letter	B.	Solar Cycle	14
Golden Number or Lunar Cycle	11	Roman Indiction	11
Epact	20	Julian Period	6566

ECLIPSES.

There will be two Eclipses of the Sun, and one of the Moon, this year.

I.—An Annular Eclipse of the Sun on Monday, June 6, invisible in this Island.

Begins on the Earth generally at 35m. past 1 p. m. in Longitude $156^{\circ} 48'$ W., and Latitude $23^{\circ} 23'$ S.

Ends on the Earth generally at 35m. past 7 p. m. in Longitude $77^{\circ} 52'$ W., and Latitude $1^{\circ} 42'$ S.

II.—A Partial Eclipse of the Moon on Tuesday, June 21, visible in this Island.

First Contact with Shadow 1 hour 41 min., a. m.

Middle of Eclipse..... 2 " 29 " "

Last Contact with Shadow..... 3 " 17 " "

At these times respectively the Moon will be in the Zenith of the places whose positions are :—

In Longitude $78^{\circ} 32'$ Latitude $24^{\circ} 29'$

90 6 24 32

101 39 24 34

The apparent position of the Moon with regard to an observer in St. John's will be identical with that of the sun at half-past two p. m., on the same day.—Magnitude of the Eclipse, 1-5th of the Moon's Disc on the Northern limb. The first contact with the shadow occurs at 33° from the Northernmost point of the Moon's limb towards the East. Last contact at 21° towards the West.

III.—A Total Eclipse of the Sun on Wednesday, November 30, invisible in this Island.

Begins on the Earth generally, November 30th, at 5m. past 12, (noon), in Longitude $153^{\circ} 56'$ W. Latitude $19^{\circ} 47'$ N.

Ends on the Earth generally, November 30, at 20m. past 6 p. m., in Longitude $57^{\circ} 49'$ W. Latitude $7^{\circ} 35'$ S.

This Eclipse will be central and total on the Meridian, in Longitude $110^{\circ} 18'$ West, and Latitude $11^{\circ} 20'$ South, at 3h. 38m. in the evening.

EQUINOXES AND SOLSTICES FOR 1853.

Spring Equinox (Sun crosses the line) March 20d. 0h. 53m. p. m.

Summer Solstice (Sun farthest North) June 21d. 9h. 51m. a. m.

Autumn Equinox (Sun re-crosses the line) Sept. 23d. 0h. 4m. a. m.

Winter Solstice (Sun farthest South) Dec. 21d. 5h. 40m. p. m.

The above is given in St John's mean (civil) time, and the Longitudes are all reckoned from Greenwich.