BEGINNING AND LENGTH OF THE SEASONS.

Winter begins Dec. 21, 1851, at 11h 24m A. mean time.
Spring begins March 20, 1852, at 6h 28m M. "
Summer begins June 21, 1852, at 3h 15m A. "
Autumn begins Sept. 22, 1852, at 5h 27m M. "
Winter begins Dec. 21, 1852, at 10h 59m M. "

Length of the Winter of 1851–2, 89d 1h 17m.
" " Spring of 1852, 92d 20h 44m.
" " Summer of 1852, 93d 14h 10m.
" " Autumn of 1852, 89d 17h 38m.

Length of the Tropical Year, commencing at the Winter solstice, 1851, and terminating at the Winter solstice, 1852, 365d 5h 49m.

Mean, or average length of the Tropical year, 365d 5h $48\frac{19}{20}$m.

ECLIPSES OF THE SUN AND MOON.

The greatest number of eclipses which can happen in any year is seven. In the present year there will be six; namely, three of the sun, and three of the moon.

I. A total eclipse of the Moon, Jan. 6th—7th, visible as follows:—

First contact with the penumbra at	11h 8m p. m.
First contact with the shadow,	0h 8m a. m.
Disappearance, -	1h 8m
Middle of the eclipse, -	1h 58m
Re-appearance, -	2h 47m
Last contact with the shadow,	3h 47m
Last contact with the penumbra,	4h 47m

Magnitude of the eclipse (Moon's diameter equal to 1) 1.667 on the northern limb.

II. A partial eclipse of the Sun, Jan. 21st, invisible in North America, but visible in New Zealand, Van Dieman's Land, and the Antarctic Ocean.

III. A partial eclipse of the Sun, June 17th, invisible in North America, but visible in South America, and in the Southern Ocean.

IV. A total eclipse of the Moon, July 1st, invisible in P. E. Island. The middle of the eclipse occurring about 13 minutes past 11 a. m., the Moon being below the horizon.