

## Eclipses, 1883.

In the year 1883 there will be two Eclipses of the Sun, and two of the Moon.

I.—A Partial Eclipse of the Moon, April 21–22, 1883, invisible at Greenwich.

The first contact with the Shadow occurs at  $32^{\circ}$  from the Northernmost point of the Moon's limb towards the East.

The last contact at  $3^{\circ}$  towards the West; in each case, for *direct* image.

II.—A Total Eclipse of the Sun, May 6, 1883, invisible at Greenwich.

Begins on the Earth generally, May 6, 7h. 21m. 3s., Mean Time at Greenwich, in Longitude  $167^{\circ} 11'$  E. of Greenwich, and Latitude  $26^{\circ} 10'$  S.

Central Eclipse begins generally, May 6, 8h. 20m. 3s., in Longitude  $155^{\circ} 56'$  E. of Greenwich, and Latitude  $34^{\circ} 47'$  S.

Central Eclipse at Noon, May 6, 9h. 45m. 2s., in Longitude  $146^{\circ} 12'$  W. of Greenwich, and Latitude  $9^{\circ} 11'$  S.

Central Eclipse ends generally, May 6, 11h. 27m. 5s., in Longitude  $86^{\circ} 53'$  W. of Greenwich, and Latitude  $13^{\circ} 35'$  S.

Ends on the Earth generally, May 6, 12h. 26m. 6s., in Longitude  $98^{\circ} 58'$  W. of Greenwich, and Latitude  $4^{\circ} 48'$  S.

III.—A Partial Eclipse of the Moon, October 15, 1883, partly visible at Greenwich.

The first contact with the Shadow occurs at  $132^{\circ}$  from the Northernmost point of the Moon's limb towards the East.

The last contact at  $165^{\circ}$  towards the West; in each case for *direct* image.

At Greenwich the Moon will set at 18<sup>h</sup>. 25m.

IV.—An Annular Eclipse of the Sun, October 30, 1883, invisible at Greenwich.

Begins on the Earth generally, October 30, 8h. 53m. 4s., Mean Time at Greenwich, in Longitude  $141^{\circ} 7'$  E. of Greenwich, and Latitude  $31^{\circ} 4'$  N.

Central Eclipse begins generally, October 30, 10h. 8m. 2s., in Longitude  $126^{\circ} 47'$  E. of Greenwich, and Latitude  $42^{\circ} 9'$  N.

Central Eclipse at Noon, October 30, 11h. 36m. 8s., in Longitude  $178^{\circ} 15'$  W. of Greenwich, and Latitude  $17^{\circ} 21'$  N.

Central Eclipse ends generally, October 30, 13h. 33m. 7s., in Longitude  $121^{\circ} 41'$  W. of Greenwich, and Latitude  $16^{\circ} 32'$  N.

Ends on the Earth generally, October 30, 14h. 48m. 5s., in Longitude  $137^{\circ} 28'$  W. of Greenwich, and Latitude  $5^{\circ} 14'$  N.