

ECLIPSES FOR THE YEAR 1891.

IN the year 1891 there will be two Eclipses of the SUN and two of the MOON.

I.—A Total Eclipse of the MOON, May 23, 1891, partly visible as a Partial Eclipse at Greenwich.

The first contact with the Shadow occurs at 124 from the Northernmost point of the Moon's limb towards the East.

The last contact at 90° towards the West: in each case, for *direct* image.

II.—An Annular Eclipse of the SUN, June 6, 1891, visible as a Partial Eclipse at Greenwich.

Begins on the Earth generally, June 6, 2h., 3m., 4, Mean Time at Greenwich, in Longitude 132° 33' W. of Greenwich, and Latitude 25° 15' N.

Central Eclipse begins generally, June 6, 3h., 52m., 3, in Longitude 170° 37' E. of Greenwich, and Latitude 57° 37' N.

Central Eclipse at Noon, June 6, 4h., 38m., 0, in Longitude 110° 6' E. of Greenwich, and Latitude 71° 11' N.

Central Eclipse ends generally, June 6, 4h., 39m., 1, in Longitude 108° 21' E. of Greenwich, and Latitude 67° 27' N.

Ends on the Earth generally, June 6, 6h., 28m., 0, in Longitude 17° 54' E. of Greenwich, and Latitude 45° 50' N.

III.—A Total Eclipse of the MOON, November 15, 1891, visible at Greenwich.

The first contact with the Shadow occurs at 55 from the Northernmost point of the Moon's limb towards the East.

The last contact at 95° towards the West: in each case, for *direct* image.

IV.—A Partial Eclipse of the SUN, Nov. 30—Dec. 1, 1891, invisible at Greenwich.

Begins on the Earth generally, November 30, 21h., 44m., 2, Mean Time at Greenwich, in Longitude 75° 26' W. of Greenwich, and Latitude 35° 46' S.

Greatest Eclipse, November 30, 23h., 31m., 1 Mag. (Sun's diam. = 1) 0.534, in Longitude 140° 54' W. of Greenwich, and Latitude 64° 13' S.

Ends on the Earth generally, December 1, 1h., 18m., 1, in Longitude 109° 47' E. of Greenwich, and Latitude 59° 17' S.

A Transit of MERCURY across the SUN'S disc, May 9, 1891, partly visible at Greenwich.

23

95

87

105

22

87

26

105

92

90

88

22

74—85

26

85

6

33

87

102

90

33

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42

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25

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93—95

21

25

24

101

90

96

90

7