

### III. - Total Eclipse of the Sun

1621 November 13



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$\Delta T = +115^s.5$   
Globe centred on W 44°2' and S 42°9'

Circumstances	Time (UT)	Longitude	Latitude
	<sup>h</sup> <sup>m</sup>	<sup>°</sup> /	<sup>°</sup> /
⊕ Eclipse begins; first contact with Earth	11 51.3	W 96 05.4	S 13 25.0
Beginning of northern limit of penumbra	12 27.4	W 99 03.9	N 4 45.5
Beginning of northern limit of umbra	12 57.9	W 117 56.8	S 27 09.8
Beginning of centre line; central eclipse begins	12 58.1	W 118 02.7	S 27 17.6
Beginning of southern limit of umbra	12 58.3	W 118 08.7	S 27 25.4
Central eclipse at local apparent noon	14 32.3	W 41 51.5	S 57 18.6
End of southern limit of umbra	15 44.2	E 49 20.4	S 45 00.5
End of centre line; central eclipse ends	15 44.3	E 49 13.7	S 44 54.2
End of northern limit of umbra	15 44.5	E 49 07.1	S 44 47.9
End of northern limit of penumbra	16 15.2	E 26 54.4	S 13 25.9
⊙ Eclipse ends; last contact with Earth	16 51.2	E 24 58.7	S 31 25.2