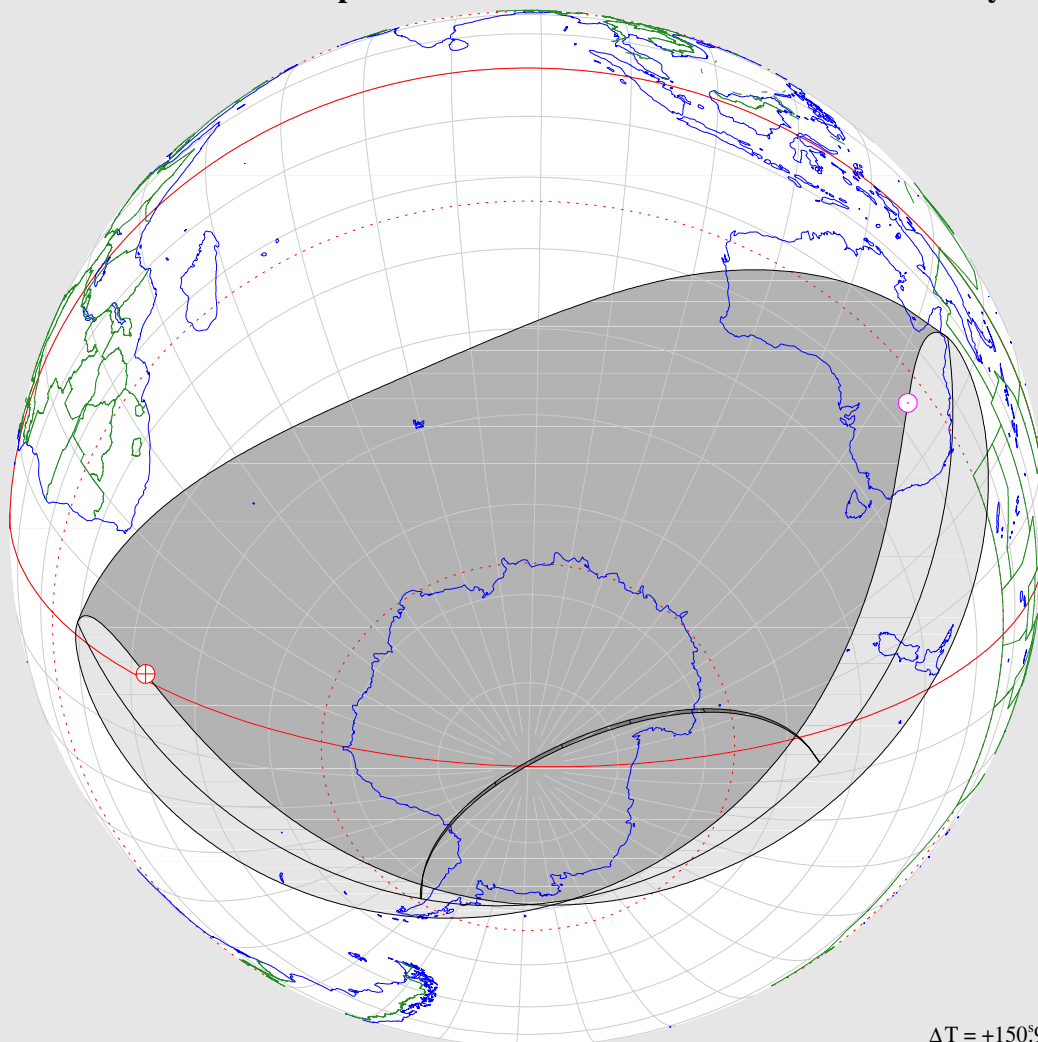


II. - Annular-Total Eclipse of the Sun

1591 January 25



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$\Delta T = +150^{\text{s}}.9$
Globe centred on E 88°5' and S 62°7'

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	[°] /	[°] /
⊕ Eclipse begins; first contact with Earth	4 55.3	E 1 01.8	S 42 24.5
Beginning of northern limit of penumbra	5 20.9	E 1 46.6	S 29 28.5
Beginning of northern limit of umbra	6 28.4	W 59 08.3	S 67 11.2
Beginning of centre line; central eclipse begins	6 28.4	W 59 14.9	S 67 12.5
Beginning of southern limit of umbra	6 28.5	W 59 21.5	S 67 13.9
Central eclipse at local apparent noon	6 52.2	E 80 14.8	S 89 39.9
End of centre line; central eclipse ends	7 45.4	W 173 04.6	S 55 19.0
End of southern limit of umbra	7 45.3	W 173 02.9	S 55 20.0
End of northern limit of umbra	7 45.4	W 173 06.4	S 55 18.0
End of northern limit of penumbra	8 52.8	E 144 55.7	S 13 41.1
⊙ Eclipse ends; last contact with Earth	9 18.4	E 143 49.0	S 26 58.4