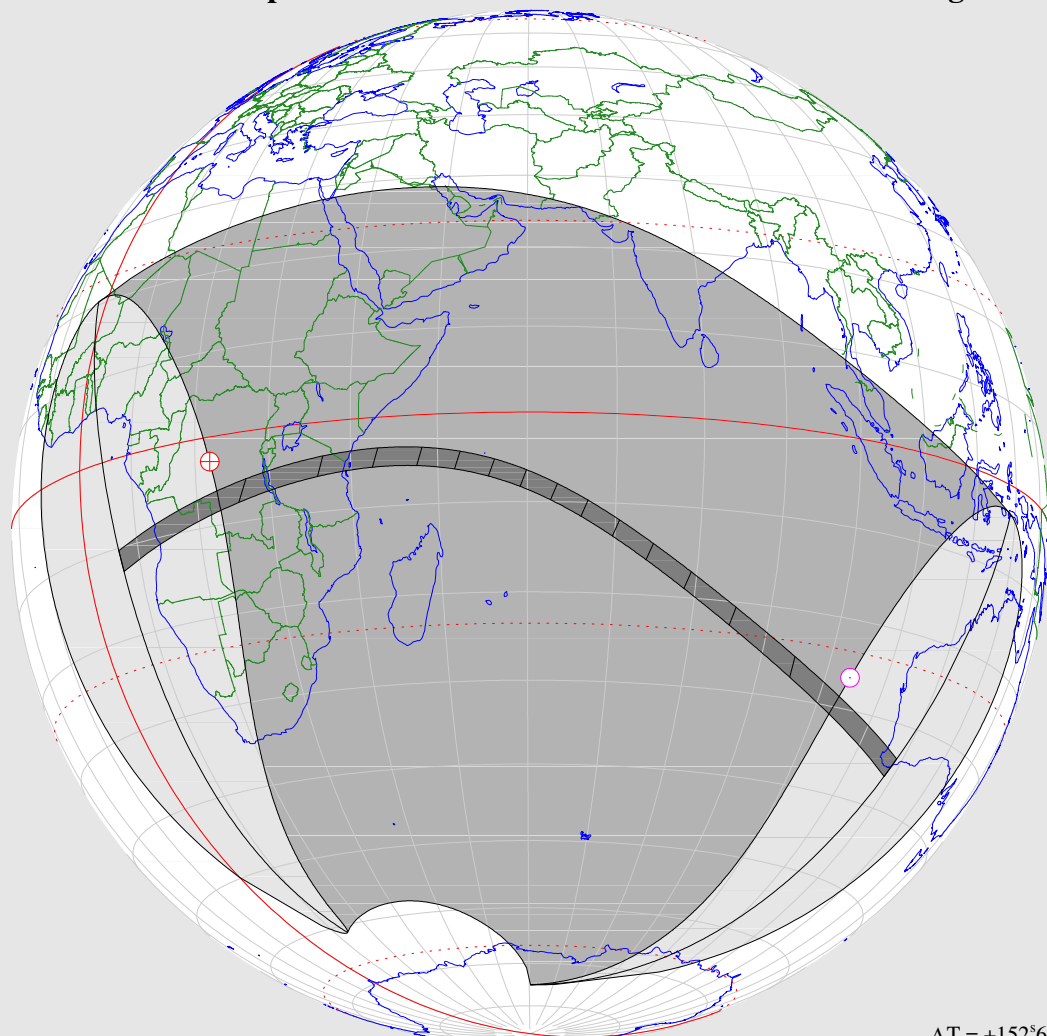


### III. - Annular Eclipse of the Sun

1589 August 11



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$\Delta T = +152^s.6$   
Globe centred on E 60°3' and S 13°0'

Circumstances	Time (UT)	Longitude	Latitude
	<sup>h</sup> <sup>m</sup>	<sup>o</sup> /	<sup>o</sup> /
⊕ Eclipse begins; first contact with Earth	4 39.3	E 22 05.2	S 2 46.8
Beginning of northern limit of umbra	5 49.6	E 6 35.8	S 10 16.1
Beginning of northern limit of penumbra	5 50.2	W 2 17.8	N 20 25.2
Beginning of centre line; central eclipse begins	5 50.3	E 6 45.6	S 11 27.6
Beginning of southern limit of umbra	5 51.0	E 6 55.0	S 12 39.8
Beginning of southern limit of penumbra	7 10.2	E 13 30.3	S 61 08.1
Central eclipse at local apparent noon	7 49.0	E 63 53.3	S 9 19.2
End of southern limit of penumbra	8 06.3	E 60 31.5	S 74 37.8
End of southern limit of umbra	9 25.8	E 118 06.1	S 36 09.3
End of centre line; central eclipse ends	9 26.6	E 118 24.4	S 34 58.8
End of northern limit of penumbra	9 26.9	E 128 30.3	S 3 16.3
End of northern limit of umbra	9 27.3	E 118 42.4	S 33 48.9
⊙ Eclipse ends; last contact with Earth	10 37.6	E 103 53.0	S 26 25.4