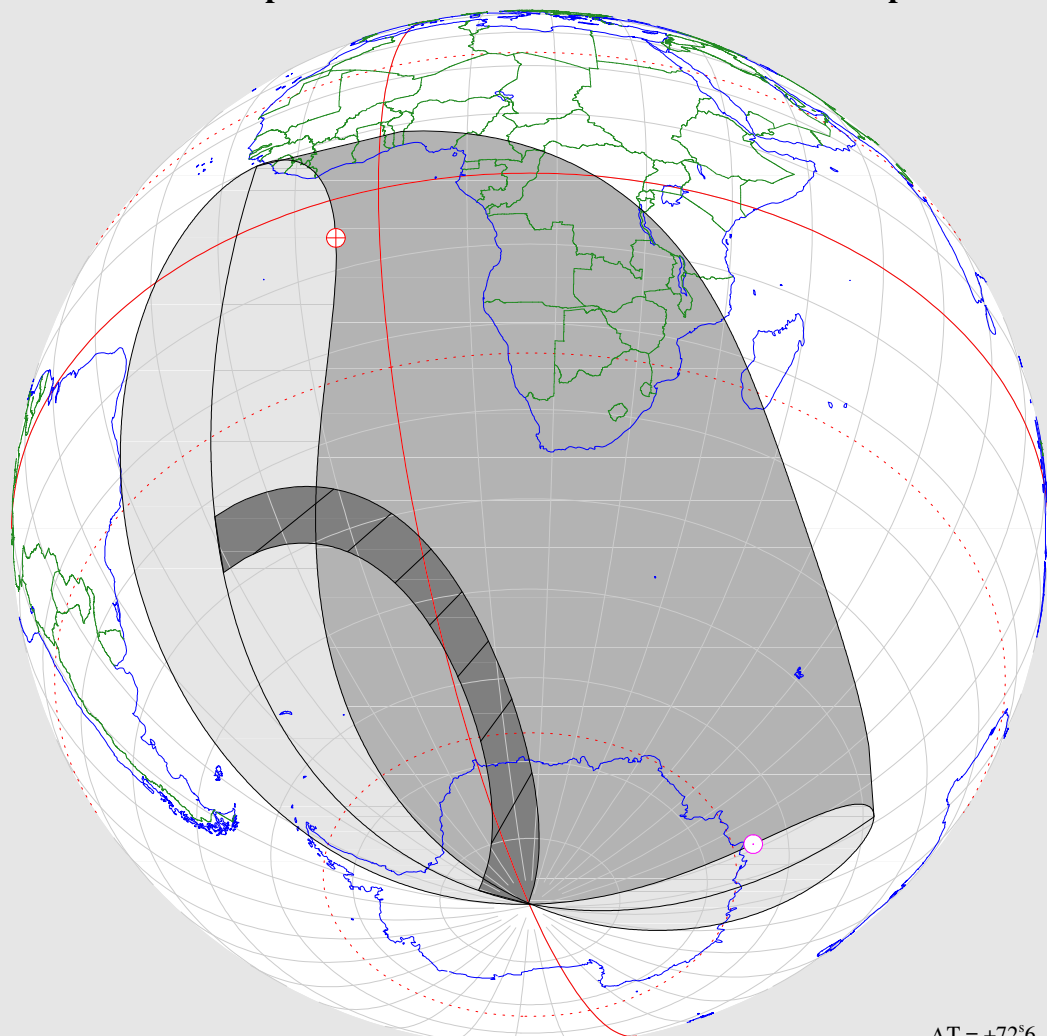


# IV. - Annular Eclipse of the Sun

1634 September 22



©HM Nautical Almanac Office

$\Delta T = +72^s.6$   
Globe centred on E 17°0 and S 43°3

Circumstances	Time (UT)	Longitude	Latitude
	h m	° /	° /
⊕ Eclipse begins; first contact with Earth	6 13.2	W 5 06.2	S 5 38.1
Beginning of northern limit of penumbra	6 53.9	W 15 22.5	N10 13.2
Beginning of northern limit of umbra	7 48.2	W 28 41.7	S 31 50.0
Beginning of centre line; central eclipse begins	7 53.2	W 29 56.7	S 34 37.0
Beginning of southern limit of umbra	7 59.0	W 31 21.8	S 37 42.2
End of southern limit of umbra	9 32.0	W 52 11.1	S 83 54.7
End of centre line; central eclipse ends	9 37.8	W 50 55.5	S 86 58.3
End of northern limit of umbra	9 42.9	W 9 22.2	S 89 37.2
End of northern limit of penumbra	10 37.5	E 108 27.0	S 48 24.9
⊙ Eclipse ends; last contact with Earth	11 18.1	E 98 04.9	S 64 09.3