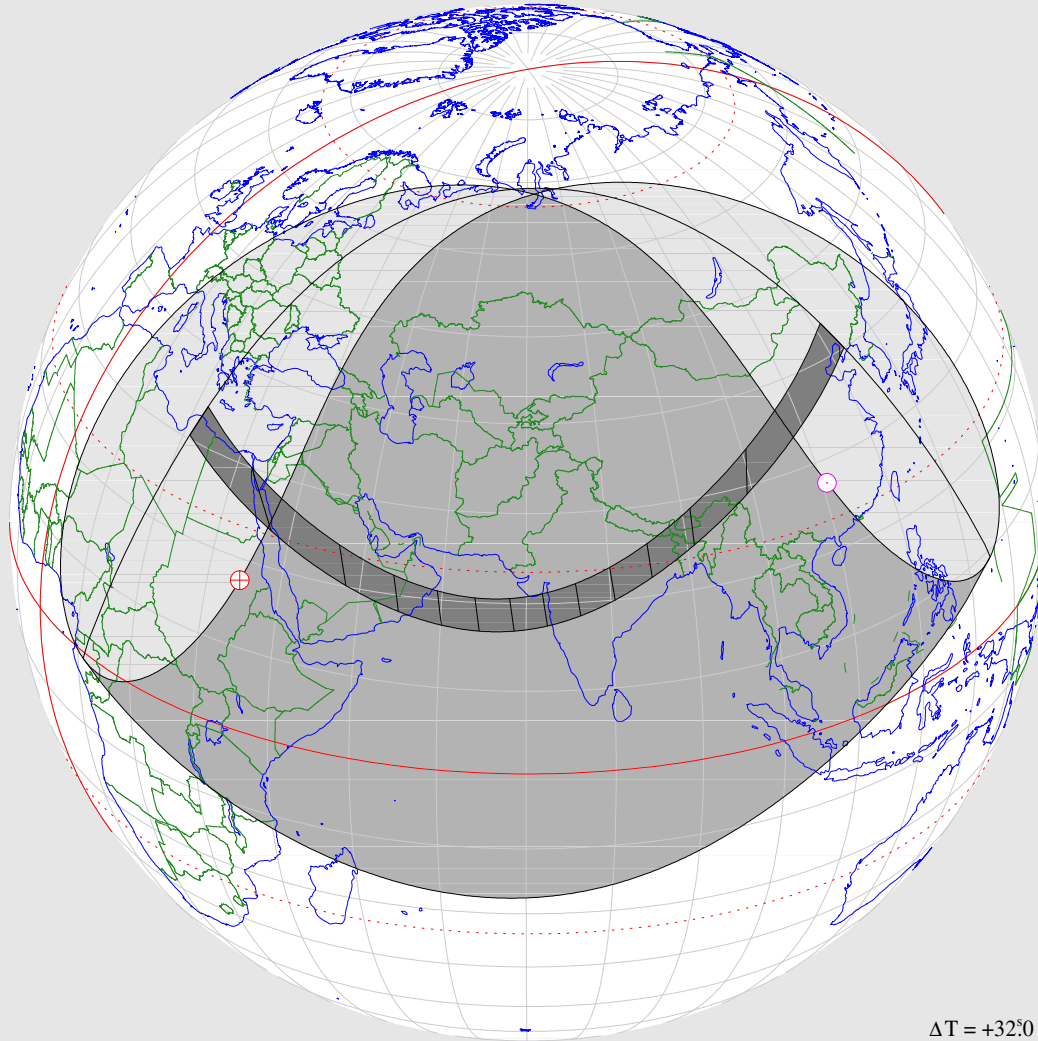


I. - Annular Eclipse of the Sun

1665 January 16



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$\Delta T = +32^{\text{s}}0$
Globe centred on E 70°2 and N 29°0

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	^o /	^o /
⊕ Eclipse begins; first contact with Earth	4 20.4	E 34 30.5	N 17 35.4
Beginning of southern limit of penumbra	5 25.2	E 11 03.9	S 0 50.5
Beginning of southern limit of umbra	5 38.2	E 21 03.0	N 30 23.6
Beginning of centre line; central eclipse begins	5 40.3	E 21 30.7	N 32 14.9
Beginning of northern limit of umbra	5 42.6	E 21 59.7	N 34 09.2
Central eclipse at local apparent noon	7 18.4	E 73 04.7	N 19 26.9
End of northern limit of umbra	8 39.9	E 121 25.5	N 43 40.9
End of centre line; central eclipse ends	8 42.2	E 122 13.6	N 41 50.1
End of southern limit of umbra	8 44.4	E 122 58.0	N 40 01.8
End of southern limit of penumbra	8 57.4	E 134 48.6	N 9 10.7
⊙ Eclipse ends; last contact with Earth	10 02.1	E 110 45.0	N 27 29.1