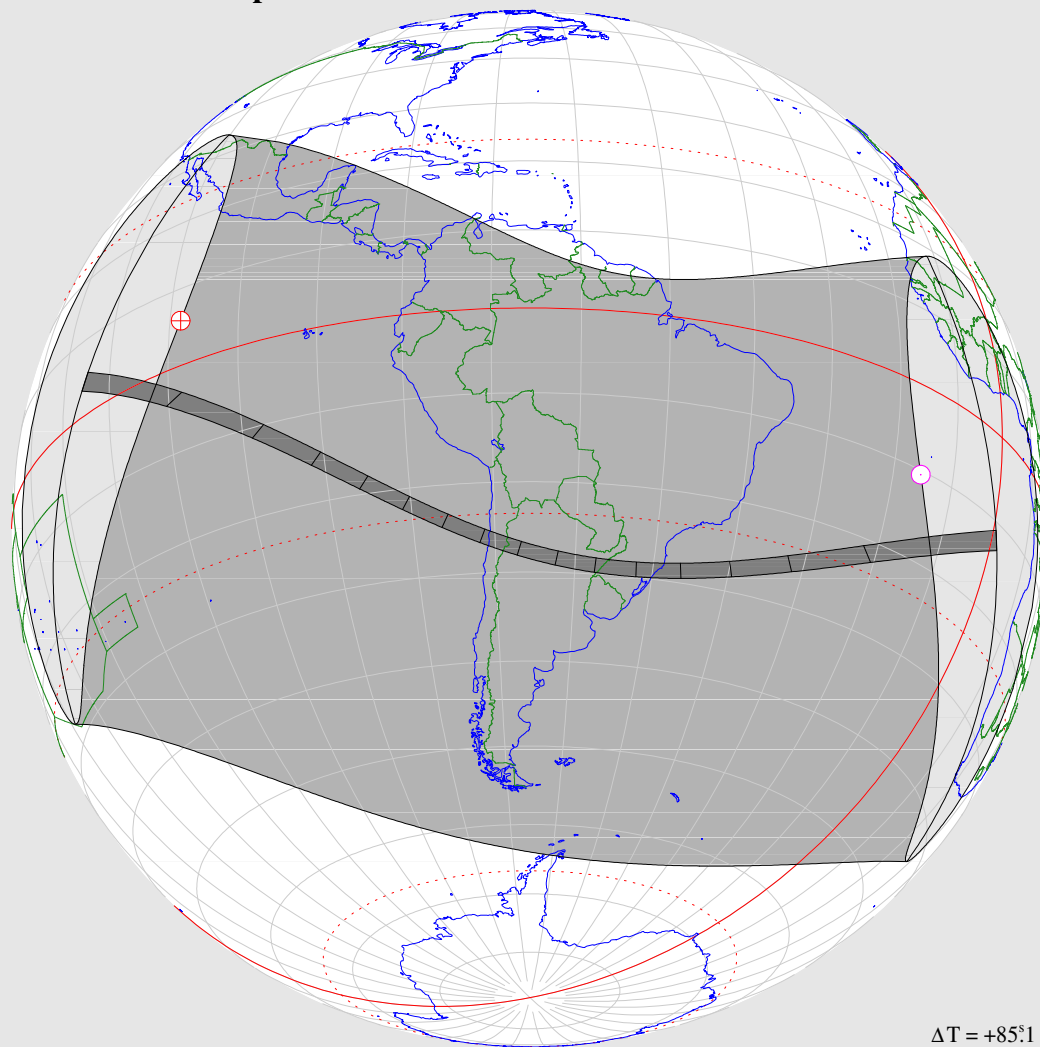


# V. - Annular Eclipse of the Sun

1629 December 14



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$\Delta T = +85^s.1$   
Globe centred on W 65°7' and S 25°2'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	13	18.9	W108	20.3	N 5	40.8
Beginning of northern limit of umbra	14	23.0	W124	34.6	N 5	13.3
Beginning of centre line; central eclipse begins	14	23.5	W125	07.2	N 4	16.5
Beginning of southern limit of umbra	14	24.1	W125	40.3	N 3	19.5
Beginning of northern limit of penumbra	14	25.3	W110	20.9	N34	14.8
Beginning of southern limit of penumbra	14	57.8	W148	41.5	S 27	53.3
Central eclipse at local apparent noon	16	19.0	W 65	48.4	S 27	40.8
End of southern limit of penumbra	17	37.4	E 28	27.5	S 43	13.3
End of northern limit of penumbra	18	10.2	W 11	54.4	N18	30.0
End of southern limit of umbra	18	11.2	E 1	46.6	S 12	51.3
End of centre line; central eclipse ends	18	11.8	E 1	11.6	S 11	53.3
End of northern limit of umbra	18	12.3	E 0	37.3	S 10	55.3
⊙ Eclipse ends; last contact with Earth	19	16.6	W 15	38.0	S 10	29.1