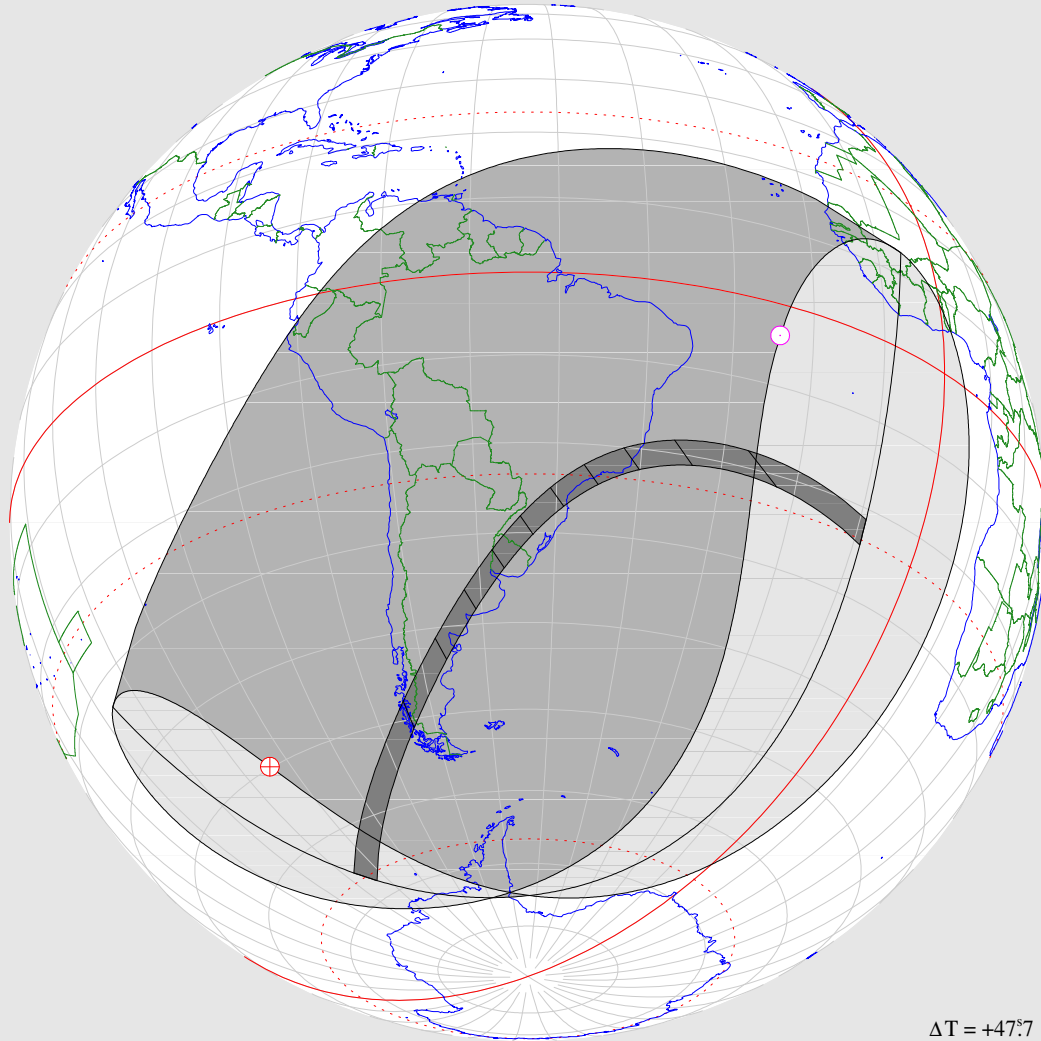


I - Annular Eclipse of the Sun

1650 April 30



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$\Delta T = +47^m.7$
Globe centred on W 53°5' and S 28°9'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	14	06.5	W104	01.5	S 49	49.7
Beginning of northern limit of penumbra	15	01.4	W126	10.4	S 32	59.3
Beginning of northern limit of umbra	15	27.0	W107	05.5	S 65	18.8
Beginning of centre line; central eclipse begins	15	29.0	W105	18.8	S 66	27.4
Beginning of southern limit of umbra	15	31.1	W103	16.5	S 67	35.8
Central eclipse at local apparent noon	16	09.6	W 63	12.8	S 38	54.0
End of southern limit of umbra	18	05.3	W 8	58.9	S 24	05.3
End of centre line; central eclipse ends	18	07.4	W 9	02.5	S 22	36.7
End of northern limit of umbra	18	09.4	W 9	05.8	S 21	10.5
End of northern limit of penumbra	18	34.7	W 5	48.5	N 13	30.3
⊙ Eclipse ends; last contact with Earth	19	29.8	W 24	18.8	S 3	54.7