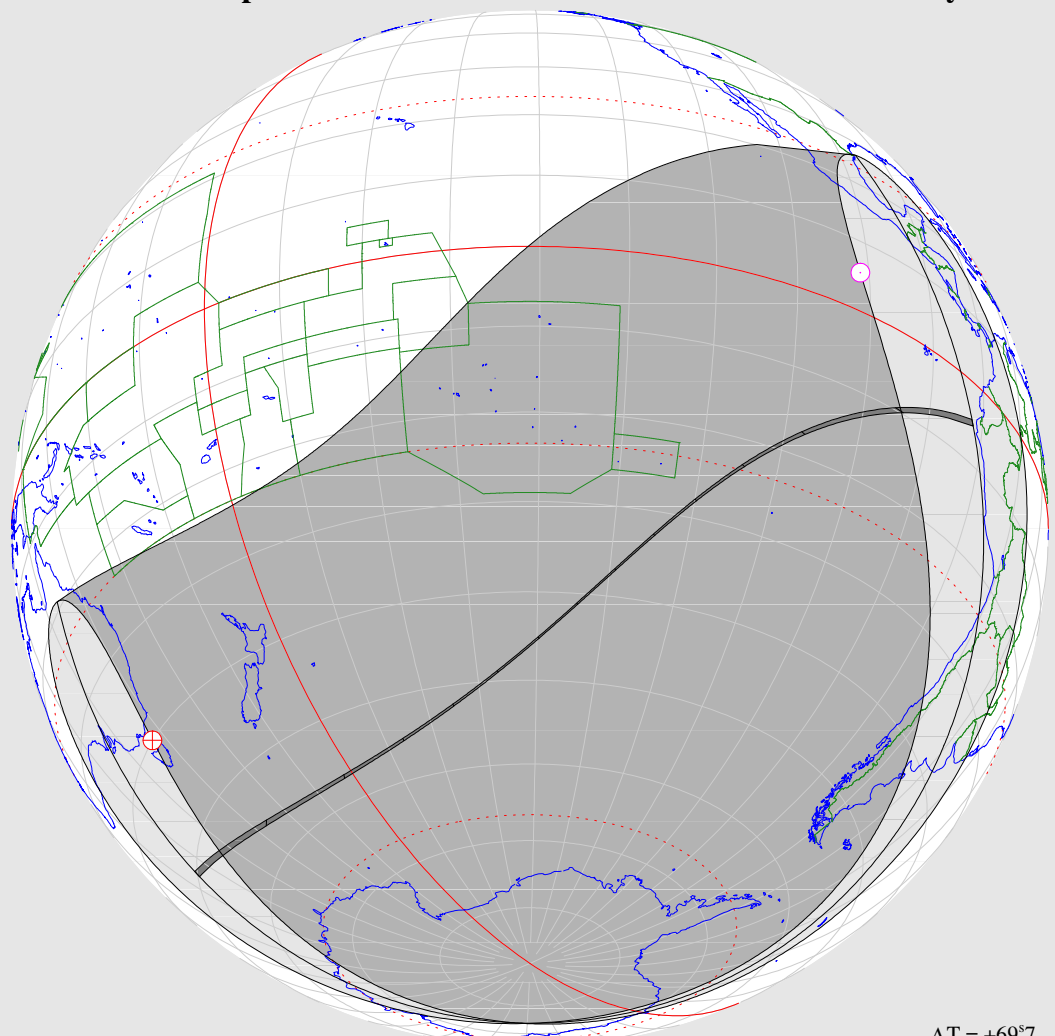


I. - Annular Eclipse of the Sun

1636 February 06-07



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$\Delta T = +69^m 7^s$
Globe centred on W 141°1' and S 33°0'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	19	32.6	E 147	03.6	S 39	57.3
Beginning of northern limit of penumbra	20	16.7	E 143	58.6	S 19	08.9
Beginning of northern limit of umbra	20	37.7	E 125	11.9	S 49	36.3
Beginning of centre line; central eclipse begins	20	38.1	E 124	51.7	S 49	56.3
Beginning of southern limit of umbra	20	38.5	E 124	31.2	S 50	16.4
Central eclipse at local apparent noon	21	50.4	W 143	54.1	S 47	33.1
End of southern limit of umbra	23	48.5	W 81	53.6	S 5	27.9
End of centre line; central eclipse ends	23	48.9	W 82	04.8	S 5	08.0
End of northern limit of umbra	23	49.2	W 82	15.9	S 4	48.2
End of northern limit of penumbra	0	09.9	W 96	39.1	N 26	19.8
⊙ Eclipse ends; last contact with Earth	0	54.2	W 101	18.1	N 5	17.1