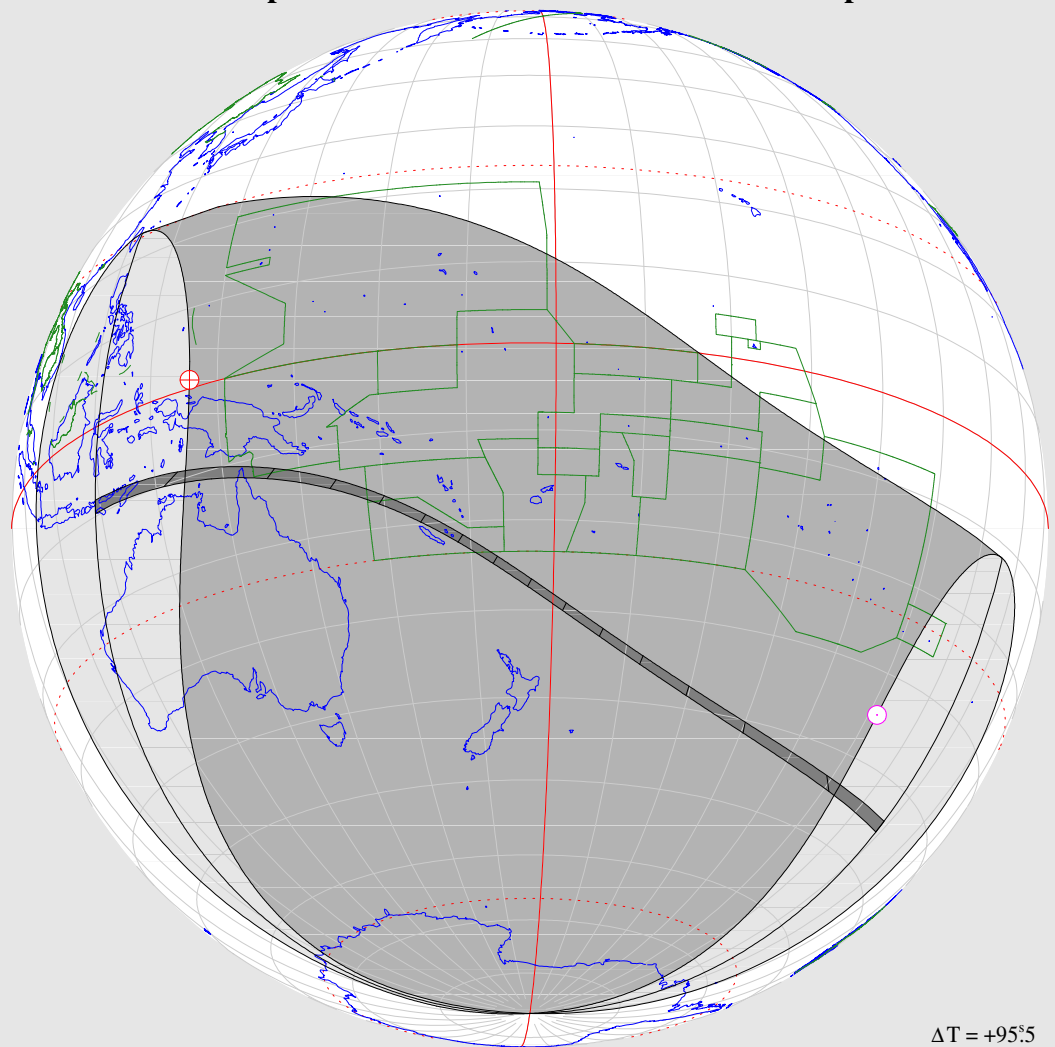


III. - Annular Eclipse of the Sun

2052 September 22-23



$\Delta T = +95^s.5$

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Globe centred on E 177°1 and S 21°0

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	^o /	^o /
⊕ Eclipse begins; first contact with Earth	20 48.3	E 136 01.9	N 1 02.2
Beginning of northern limit of penumbra	21 44.5	E 122 03.3	N 24 10.8
Beginning of northern limit of umbra	21 55.5	E 119 11.1	S 8 13.1
Beginning of centre line; central eclipse begins	21 56.1	E 119 01.4	S 8 56.2
Beginning of southern limit of umbra	21 56.7	E 118 51.5	S 9 39.5
Central eclipse at local apparent noon	23 53.8	E 179 37.1	S 28 31.3
End of southern limit of umbra	1 18.1	W 111 10.4	S 45 20.9
End of centre line; central eclipse ends	1 18.8	W 111 21.0	S 44 36.2
End of northern limit of umbra	1 19.5	W 111 31.3	S 43 51.8
End of northern limit of penumbra	1 30.7	W 114 32.6	S 11 30.4
⊙ Eclipse ends; last contact with Earth	2 26.8	W 128 25.9	S 34 38.7