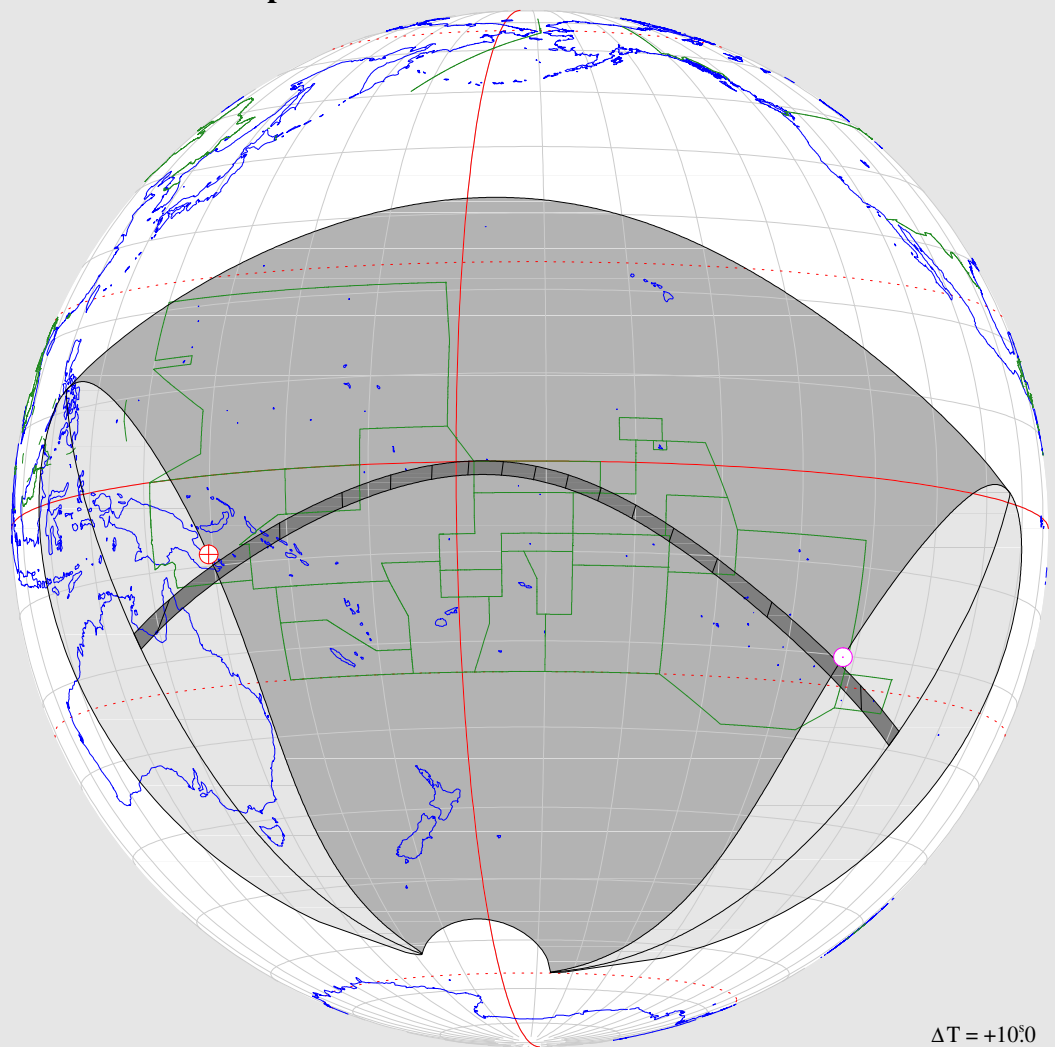


III. - Annular Eclipse of the Sun

1713 June 22-23



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$\Delta T = +10^{\circ}0$
Globe centred on W 171°8 and S 7°5

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	^o /	^o /
⊕ Eclipse begins; first contact with Earth	20 19.2	E 149 21.5	S 8 42.7
Beginning of northern limit of umbra	21 28.8	E 135 27.1	S 16 19.0
Beginning of centre line; central eclipse begins	21 29.2	E 135 45.7	S 17 12.8
Beginning of southern limit of umbra	21 29.7	E 136 04.3	S 18 06.8
Beginning of northern limit of penumbra	21 31.9	E 121 46.8	N 12 37.5
Beginning of southern limit of penumbra	22 53.3	E 161 50.2	S 62 01.3
Central eclipse at local apparent noon	23 20.9	W 169 52.5	S 1 38.5
End of southern limit of penumbra	23 37.3	W 166 08.3	S 66 19.8
End of northern limit of penumbra	0 59.0	W 103 55.6	N 1 07.2
End of southern limit of umbra	1 01.1	W 119 06.9	S 29 26.0
End of centre line; central eclipse ends	1 01.6	W 118 43.1	S 28 32.3
End of northern limit of umbra	1 02.1	W 118 19.6	S 27 38.9
⊙ Eclipse ends; last contact with Earth	2 11.7	W 131 46.0	S 20 09.8