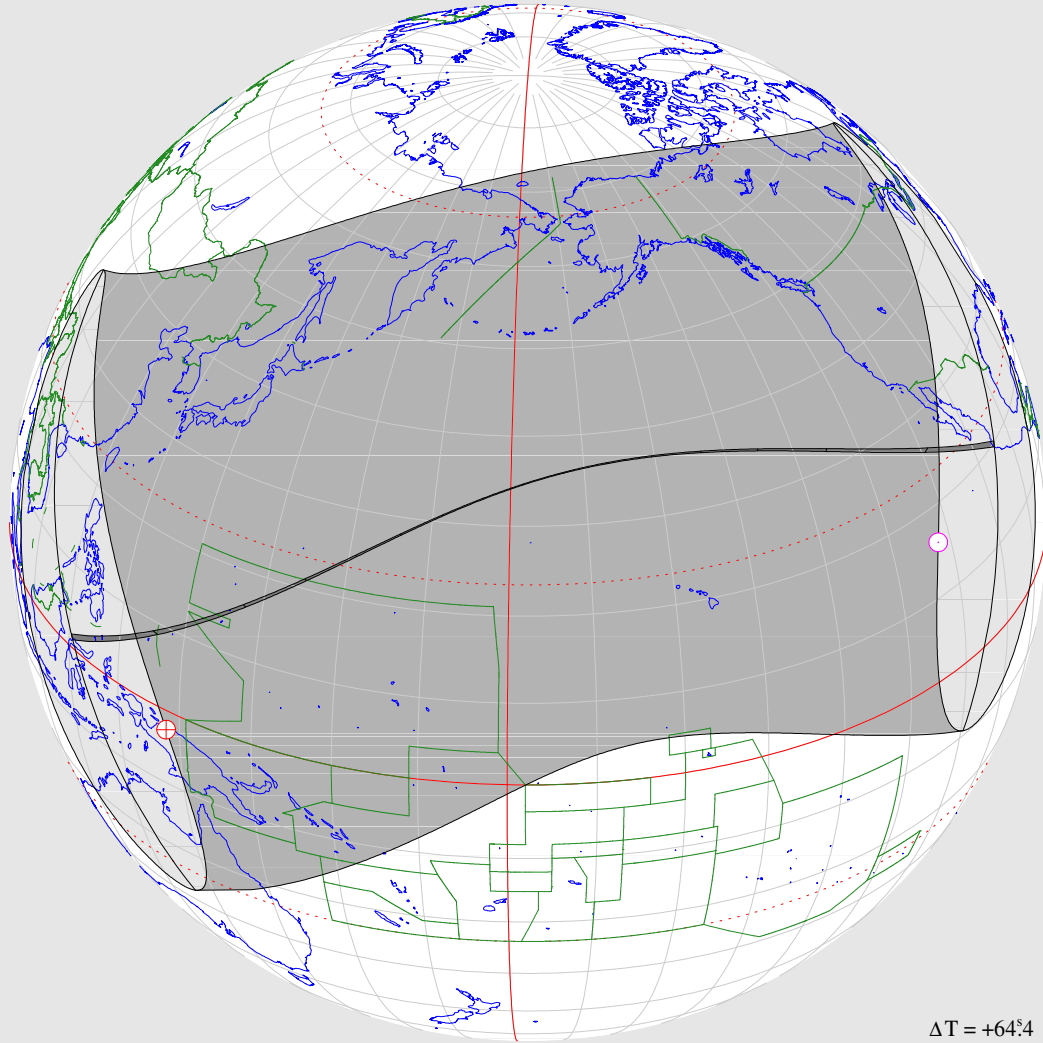


II. - Annular Eclipse of the Sun

2002 June 10-11



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$\Delta T = +64^s.4$
Globe centred on W 177°7 and N 30°4

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	^o /	^o /
⊕ Eclipse begins; first contact with Earth	20 51.8	E 137 58.5	S 2 30.0
Beginning of southern limit of penumbra	21 47.3	E 135 54.6	S 27 36.7
Beginning of southern limit of umbra	21 54.2	E 120 51.8	N 1 02.0
Beginning of centre line; central eclipse begins	21 54.5	E 120 40.8	N 1 19.5
Beginning of northern limit of umbra	21 54.7	E 120 29.9	N 1 37.0
Beginning of northern limit of penumbra	22 36.8	E 93 18.9	N 35 01.0
Central eclipse at local apparent noon	23 48.2	W 177 11.4	N 34 55.3
End of northern limit of penumbra	0 51.6	W 70 16.8	N 51 48.0
End of northern limit of umbra	1 33.8	W 104 38.2	N 20 04.1
End of centre line; central eclipse ends	1 34.0	W 104 49.2	N 19 48.1
End of southern limit of umbra	1 34.2	W 105 00.2	N 19 32.2
End of southern limit of penumbra	1 41.4	W 119 27.0	S 9 15.1
⊙ Eclipse ends; last contact with Earth	2 36.6	W 122 15.8	N 16 01.0