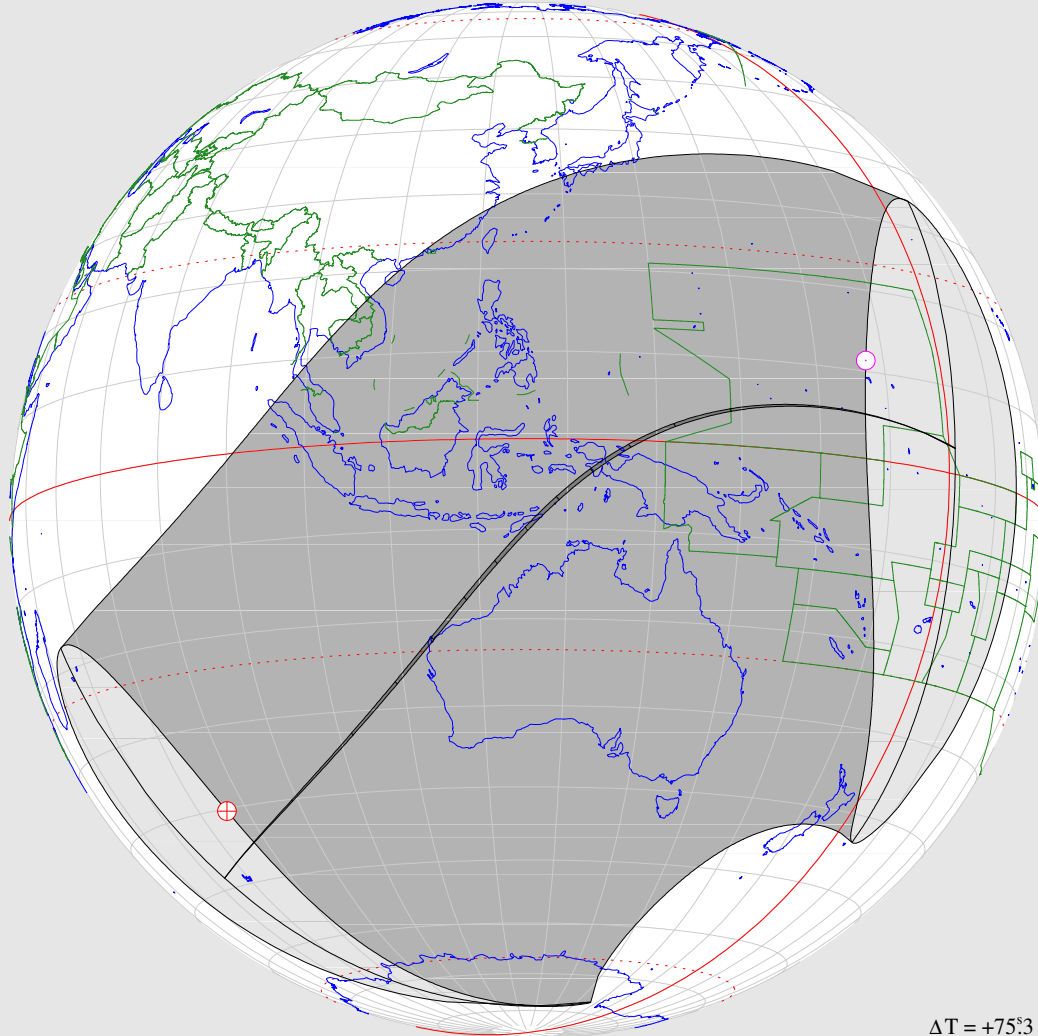


# I. - Annular-Total Eclipse of the Sun

2023 April 20



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$\Delta T = +75^s.3$   
Globe centred on E 125°6' and S 9°1'

Circumstances	Time (UT)	Longitude	Latitude
	<sup>h</sup> <sup>m</sup>	<sup>o</sup> /	<sup>o</sup> /
⊕ Eclipse begins; first contact with Earth	1 34.3	E 76 00.8	S 40 17.5
Beginning of northern limit of penumbra	2 34.5	E 54 45.4	S 17 25.5
Beginning of southern limit of umbra	2 37.0	E 63 39.1	S 48 28.3
Beginning of centre line; central eclipse begins	2 37.0	E 63 38.8	S 48 27.4
Beginning of northern limit of umbra	2 37.0	E 63 38.6	S 48 26.5
Beginning of southern limit of penumbra	3 39.2	E 157 04.1	S 76 36.2
Central eclipse at local apparent noon	3 55.5	E 120 53.4	S 14 50.4
End of southern limit of penumbra	4 54.8	W 174 59.2	S 43 26.4
End of southern limit of umbra	5 56.5	W 178 47.2	N 2 53.2
End of northern limit of umbra	5 56.5	W 178 47.0	N 2 57.8
End of centre line; central eclipse ends	5 56.5	W 178 47.1	N 2 55.5
End of northern limit of penumbra	5 58.7	W 172 00.6	N 34 14.2
⊙ Eclipse ends; last contact with Earth	6 59.3	E 167 14.9	N 11 16.6