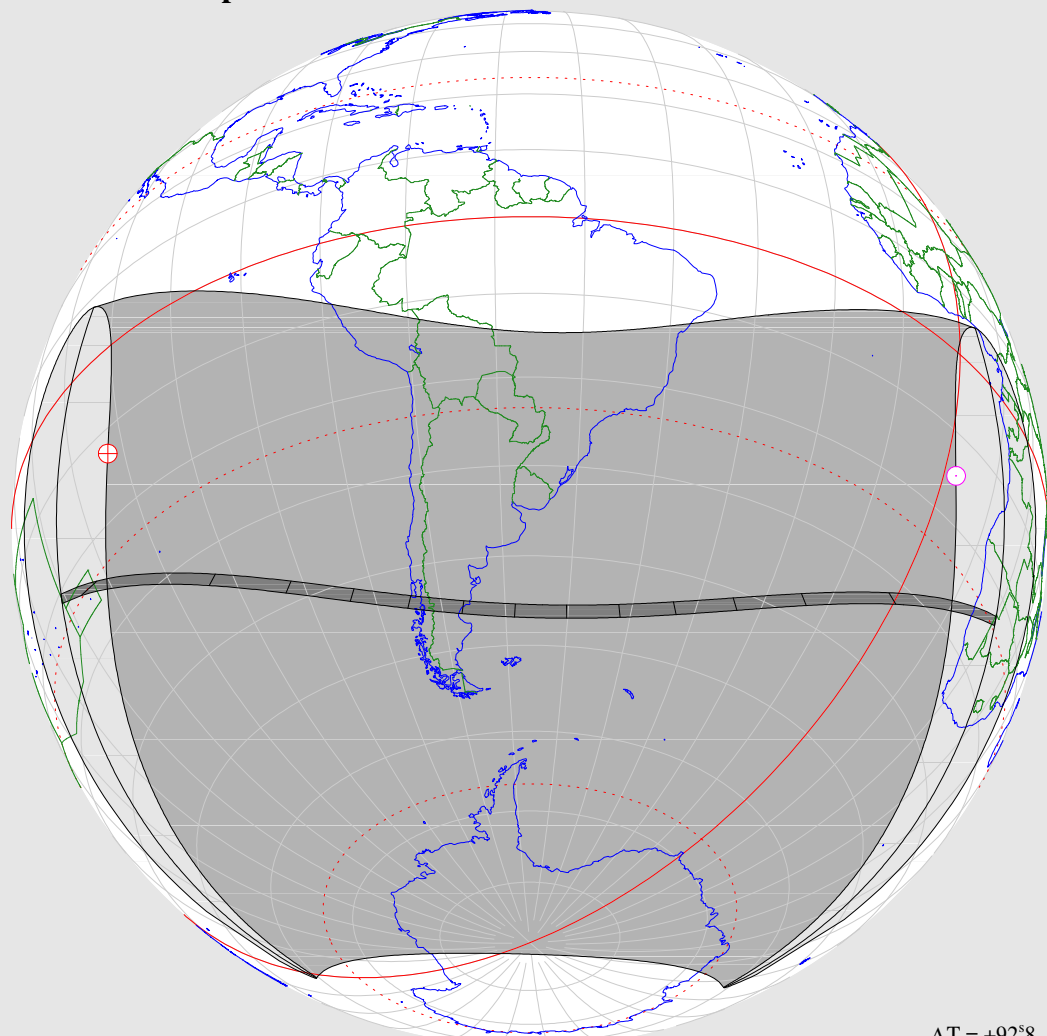


IV. - Total Eclipse of the Sun

2048 December 05



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ΔT = +92:8
Globe centred on W 56°1 and S 37°0

Circumstances	Time (UT)	Longitude	Latitude
	h m	° /	° /
⊕ Eclipse begins; first contact with Earth	13 00.2	W112 45.7	S 12 50.7
Beginning of northern limit of penumbra	13 41.7	W114 19.4	N 8 08.6
Beginning of northern limit of umbra	13 58.7	W130 43.5	S 20 13.9
Beginning of centre line; central eclipse begins	13 59.1	W131 02.0	S 20 39.0
Beginning of southern limit of umbra	13 59.5	W131 20.7	S 21 04.1
Beginning of southern limit of penumbra	15 01.0	E 177 57.8	S 59 26.1
Central eclipse at local apparent noon	15 34.7	W 55 56.6	S 46 08.8
End of southern limit of penumbra	16 06.8	E 73 50.5	S 60 47.9
End of southern limit of umbra	17 08.2	E 20 49.0	S 23 02.1
End of centre line; central eclipse ends	17 08.7	E 20 29.6	S 22 36.6
End of northern limit of umbra	17 09.1	E 20 10.5	S 22 11.2
End of northern limit of penumbra	17 26.0	E 3 39.6	N 6 08.8
⊙ Eclipse ends; last contact with Earth	18 07.5	E 2 09.0	S 14 49.4