

IV. - Annular Eclipse of the Sun

2093 July 23



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$\Delta T = +124^{\circ}0$
Globe centred on W 2°1' and N 43°7'

Circumstances	Time (UT)	Longitude	Latitude
	^h ^m	^o /	^o /
⊕ Eclipse begins; first contact with Earth	9 37.3	W 63 07.2	N26 42.1
Beginning of southern limit of penumbra	10 19.7	W 65 57.2	N 7 24.4
Beginning of southern limit of umbra	10 51.1	W 87 24.4	N37 53.4
Beginning of centre line; central eclipse begins	10 52.9	W 88 35.4	N39 04.3
Beginning of northern limit of umbra	10 54.8	W 89 49.7	N40 16.2
Central eclipse at local apparent noon	12 21.6	W 3 44.5	N55 15.4
End of northern limit of umbra	14 05.3	E 71 07.8	N27 25.7
End of centre line; central eclipse ends	14 07.1	E 70 05.5	N26 11.8
End of southern limit of umbra	14 09.0	E 69 05.4	N24 59.0
End of southern limit of penumbra	14 40.2	E 49 30.0	S 5 52.0
⊙ Eclipse ends; last contact with Earth	15 22.7	E 45 58.9	N13 34.0