

IV. - Annular Eclipse of the Sun

2038 July 02



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$\Delta T = +85^s.5$
Globe centred on W 21°8' and N 23°3'

Circumstances	Time (UT)	Longitude	Latitude
	h m	° /	° /
⊕ Eclipse begins; first contact with Earth	10 36.2	W 68 08.6	N 0 19.6
Beginning of southern limit of umbra	11 38.5	W 83 54.0	N 0 43.8
Beginning of centre line; central eclipse begins	11 38.7	W 84 05.9	N 1 05.6
Beginning of northern limit of umbra	11 38.9	W 84 17.9	N 1 27.4
Beginning of southern limit of penumbra	11 42.7	W 71 08.0	S 28 47.5
Beginning of northern limit of penumbra	12 08.9	W 106 32.1	N 31 57.9
Central eclipse at local apparent noon	13 31.6	W 21 51.1	N 25 25.2
End of northern limit of penumbra	14 54.1	E 64 02.3	N 33 50.0
End of southern limit of penumbra	15 20.3	E 28 33.5	S 26 51.7
End of northern limit of umbra	15 24.1	E 41 27.8	N 3 24.0
End of centre line; central eclipse ends	15 24.3	E 41 16.5	N 3 03.5
End of southern limit of umbra	15 24.4	E 41 05.3	N 2 43.0
⊙ Eclipse ends; last contact with Earth	16 26.7	E 25 20.6	N 2 17.6