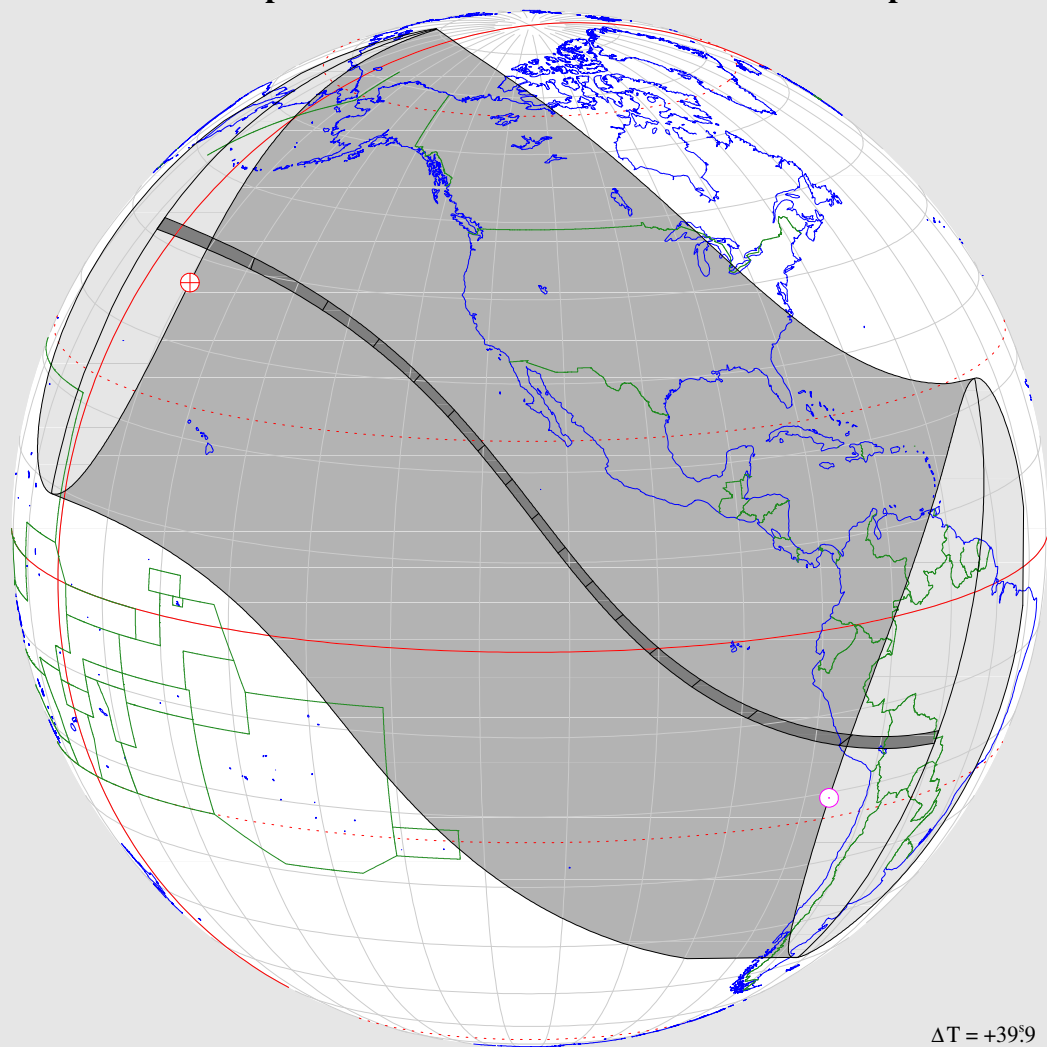


# IV. - Annular Eclipse of the Sun

1969 September 11



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$\Delta T = +39^s.9$   
Globe centred on W 114<sup>o</sup>.4 and N 13<sup>o</sup>.8

Circumstances	Time (UT)	Longitude	Latitude
	h m	o /	o /
⊕ Eclipse begins; first contact with Earth	17 01.5	W169 34.7	N36 56.5
Beginning of southern limit of umbra	18 06.3	E 173 44.3	N40 46.5
Beginning of centre line; central eclipse begins	18 06.7	E 173 32.0	N41 32.7
Beginning of northern limit of umbra	18 07.1	E 173 19.4	N42 19.0
Beginning of southern limit of penumbra	18 08.0	E 176 26.4	N 8 58.9
Beginning of northern limit of penumbra	18 48.6	E 142 46.9	N79 20.4
Central eclipse at local apparent noon	19 44.5	W116 58.8	N19 04.0
End of northern limit of penumbra	21 08.6	W 46 12.9	N22 30.7
End of southern limit of penumbra	21 48.3	W 62 55.4	S 48 37.6
End of northern limit of umbra	21 49.6	W 59 29.5	S 15 22.2
End of centre line; central eclipse ends	21 50.0	W 59 39.1	S 16 07.4
End of southern limit of umbra	21 50.4	W 59 48.5	S 16 52.5
⊙ Eclipse ends; last contact with Earth	22 55.1	W 76 18.5	S 20 44.2