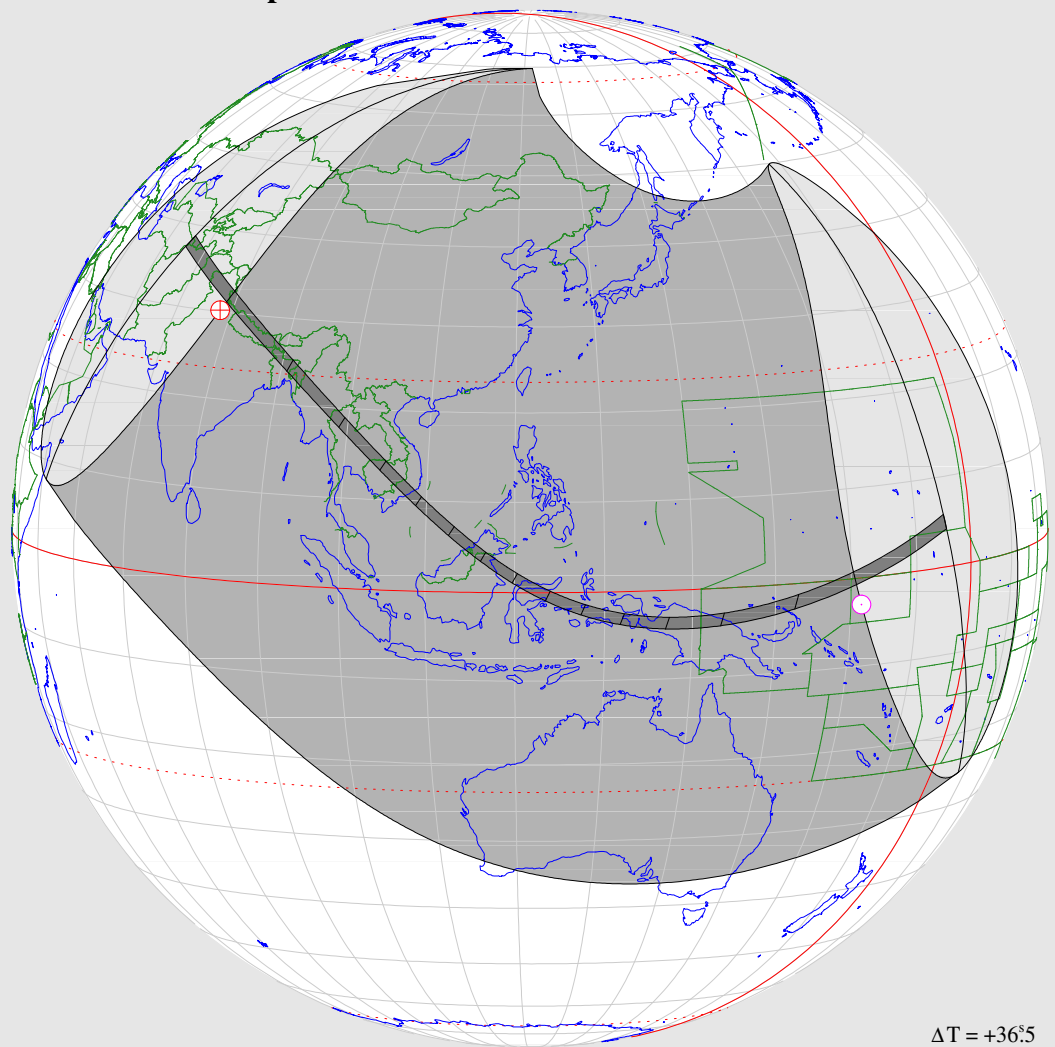


### III. - Annular Eclipse of the Sun

1965 November 23



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$\Delta T = +36^s.5$   
Globe centred on E 121°7 and N 7°1

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	1	24.0	E 77	58.3	N 30	09.8
Beginning of southern limit of umbra	2	30.2	E 65	17.2	N 37	08.3
Beginning of centre line; central eclipse begins	2	30.5	E 65	39.1	N 37	53.4
Beginning of northern limit of umbra	2	31.0	E 66	01.4	N 38	38.6
Beginning of southern limit of penumbra	2	33.1	E 51	15.0	N 7	53.7
Beginning of northern limit of penumbra	3	36.1	E 122	28.3	N 69	42.6
Central eclipse at local apparent noon	4	00.2	E 116	32.2	N 3	56.1
End of northern limit of penumbra	4	52.9	E 167	21.3	N 49	50.8
End of southern limit of penumbra	5	55.3	W 172	08.7	S 25	21.6
End of northern limit of umbra	5	57.7	E 175	00.3	N 5	49.9
End of centre line; central eclipse ends	5	58.1	E 175	12.4	N 5	01.1
End of southern limit of umbra	5	58.5	E 175	24.6	N 4	12.6
⊙ Eclipse ends; last contact with Earth	7	04.7	E 161	31.5	S 2	58.9