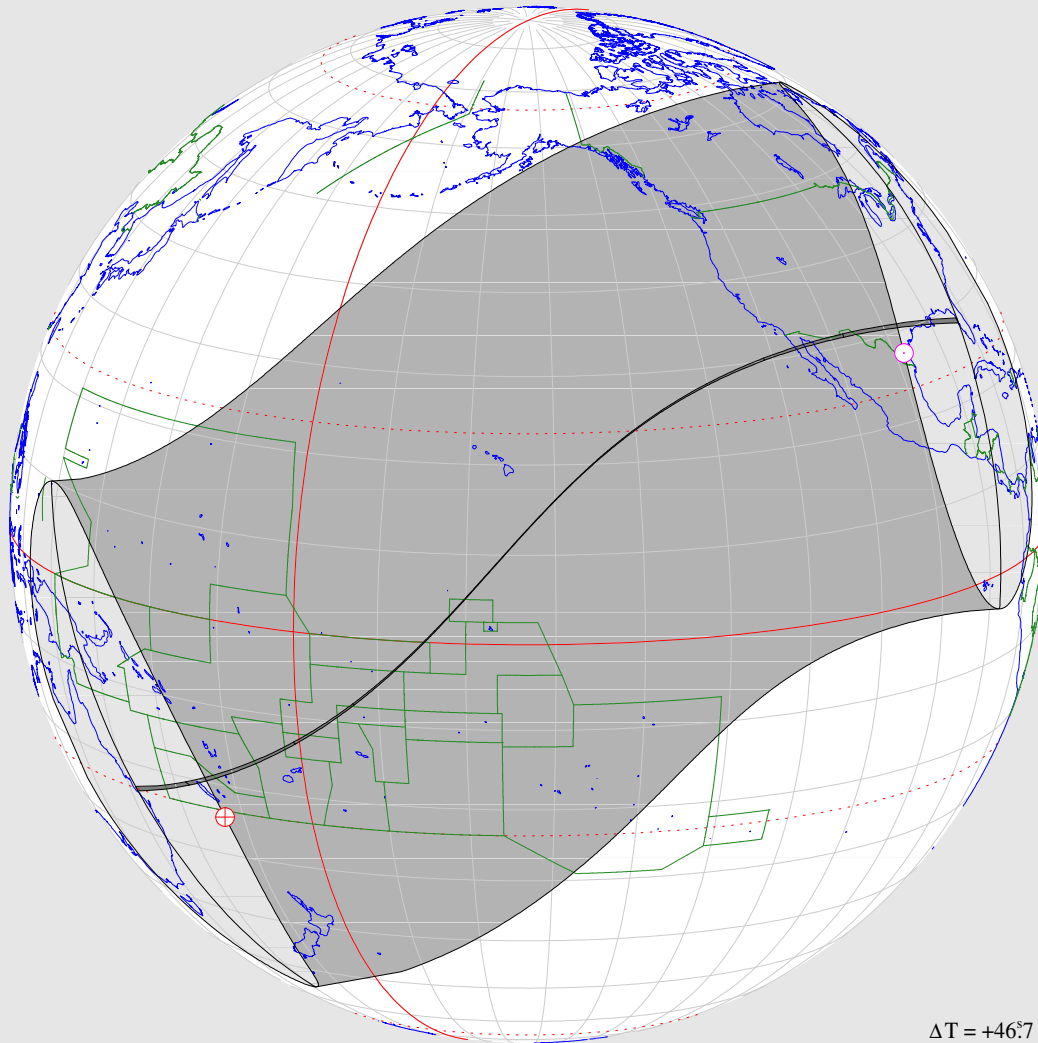


II. - Annular Eclipse of the Sun

1651 April 19-20



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$\Delta T = +46^m 7^s$
Globe centred on W 153°1' and N 13°4'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	19	11.9	E 166	58.4	S 24	26.1
Beginning of southern limit of umbra	20	13.0	E 151	33.4	S 23	49.9
Beginning of centre line; central eclipse begins	20	13.0	E 151	28.4	S 23	33.7
Beginning of northern limit of umbra	20	13.1	E 151	23.5	S 23	17.6
Beginning of southern limit of penumbra	20	23.1	E 160	48.7	S 55	21.1
Beginning of northern limit of penumbra	20	38.8	E 138	00.6	N 9	51.0
Central eclipse at local apparent noon	22	06.2	W 151	50.2	N 14	13.3
End of northern limit of penumbra	23	28.4	W 61	11.2	N 60	53.8
End of southern limit of penumbra	23	44.9	W 87	19.9	S 3	59.1
End of northern limit of umbra	23	54.5	W 82	35.5	N 28	40.6
End of centre line; central eclipse ends	23	54.6	W 82	41.3	N 28	23.1
End of southern limit of umbra	23	54.6	W 82	47.1	N 28	05.5
⊙ Eclipse ends; last contact with Earth	0	55.8	W 98	13.7	N 27	30.8