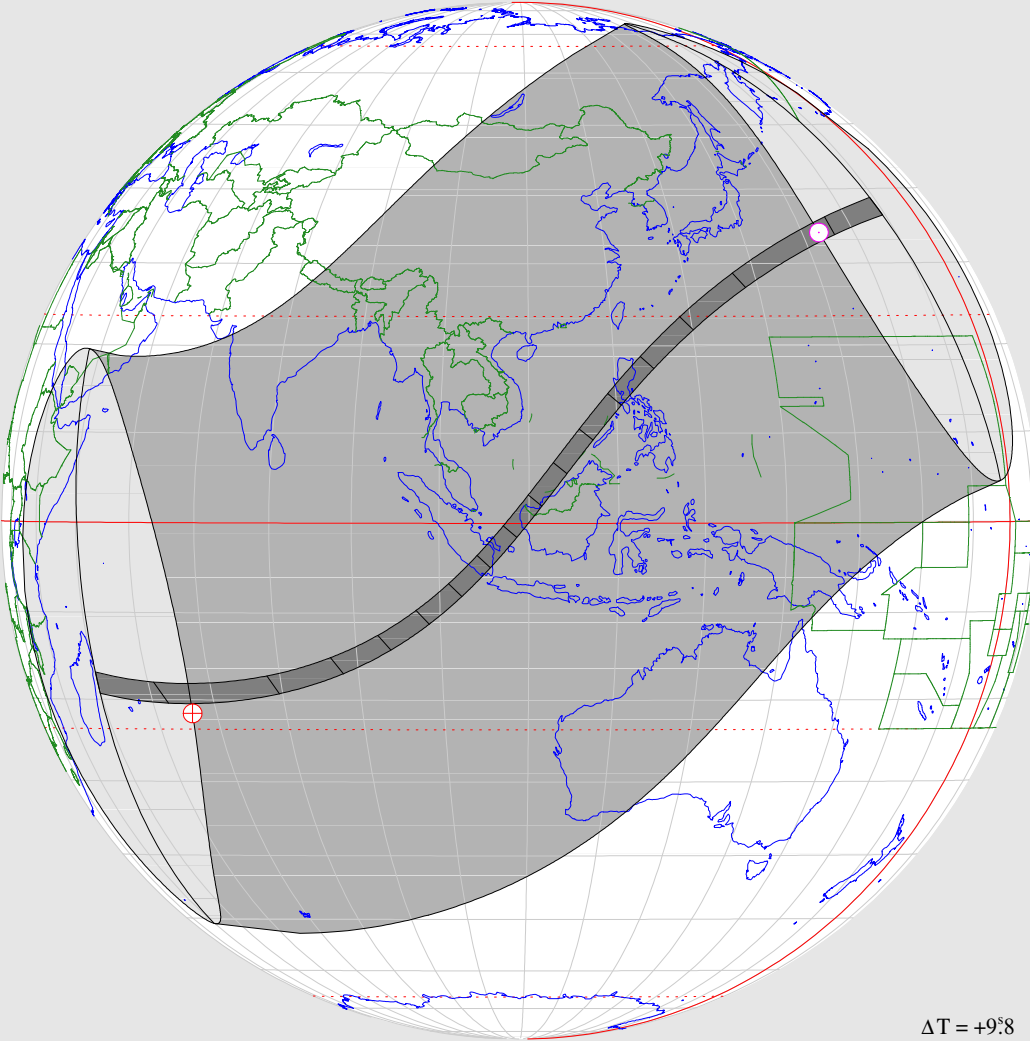


II. - Annular Eclipse of the Sun

1691 February 28



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$\Delta T = +9^s.8$
Globe centred on E 109°0 and N 0°3

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	1	35.5	E 66	12.7	S 21	36.6
Beginning of southern limit of umbra	2	42.2	E 49	53.9	S 19	18.6
Beginning of centre line; central eclipse begins	2	42.5	E 50	02.0	S 18	04.2
Beginning of northern limit of umbra	2	42.7	E 50	09.3	S 16	49.5
Beginning of southern limit of penumbra	2	54.6	E 39	45.1	S 50	52.2
Beginning of northern limit of penumbra	3	15.2	E 47	16.4	N 19	30.7
Central eclipse at local apparent noon	4	48.0	E 111	14.1	N 3	13.8
End of northern limit of penumbra	5	59.2	E 155	10.5	N 73	43.8
End of southern limit of penumbra	6	20.7	E 177	26.0	N 4	33.8
End of northern limit of umbra	6	32.1	E 168	50.8	N 38	43.9
End of centre line; central eclipse ends	6	32.4	E 169	02.9	N 37	30.9
End of southern limit of umbra	6	32.7	E 169	15.1	N 36	18.0
⊙ Eclipse ends; last contact with Earth	7	39.3	E 153	04.1	N 33	59.6