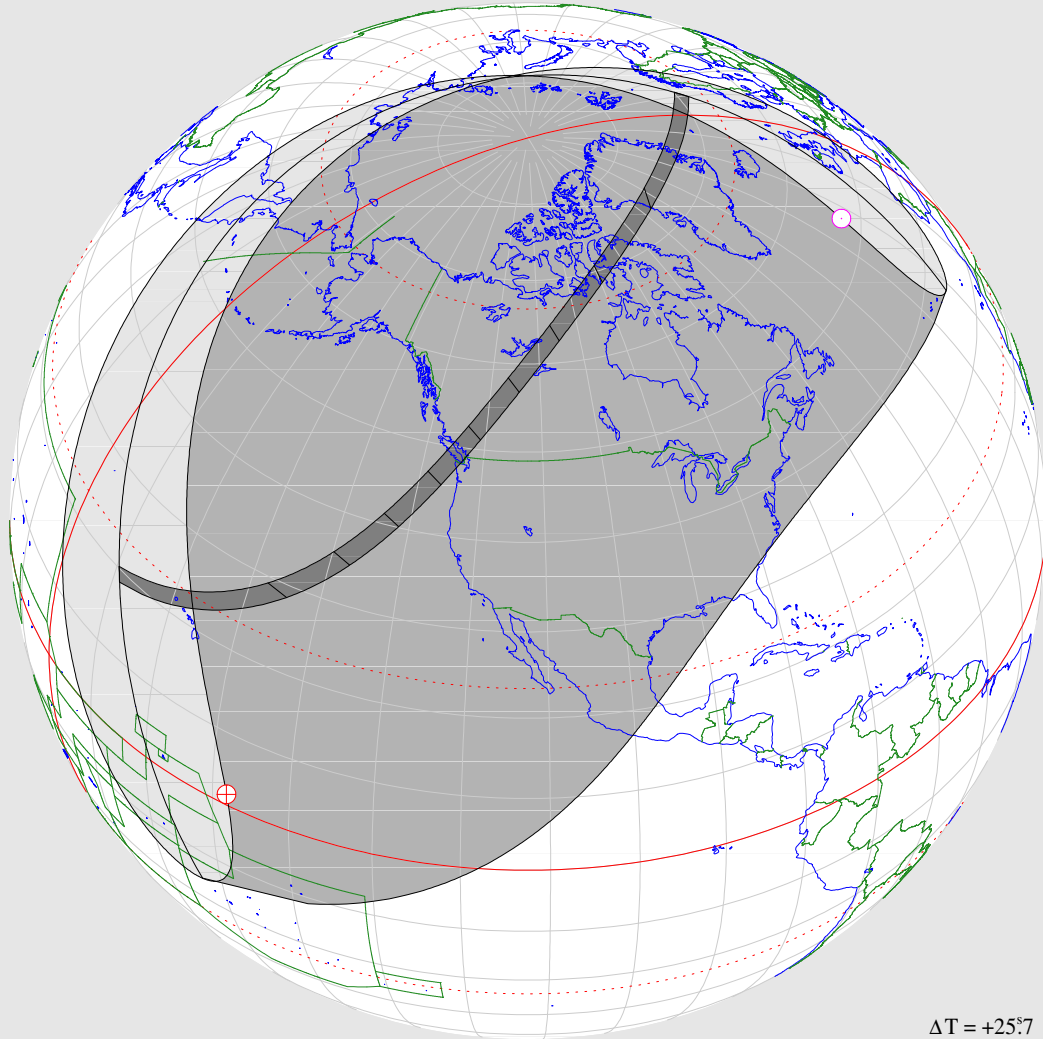


## II. - Total Eclipse of the Sun

1670 April 19



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$\Delta T = +25:7$   
Globe centred on W 112°5 and N 42°4

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	15	49.9	W148	04.6	N 1	34.7
Beginning of southern limit of penumbra	16	24.1	W153	07.8	S 15	26.4
Beginning of southern limit of umbra	16	58.2	W168	45.3	N18	39.0
Beginning of centre line; central eclipse begins	16	59.3	W169	11.9	N19	25.0
Beginning of northern limit of umbra	17	00.4	W169	39.2	N20	11.7
Central eclipse at local apparent noon	18	49.0	W102	33.0	N65	06.7
End of northern limit of umbra	19	23.0	E 12	25.6	N69	49.7
End of centre line; central eclipse ends	19	24.1	E 10	53.7	N69	11.3
End of southern limit of umbra	19	25.2	E 9	27.5	N68	32.9
End of southern limit of penumbra	19	59.6	W 21	39.9	N36	11.5
⊙ Eclipse ends; last contact with Earth	20	33.7	W 23	14.1	N52	47.1