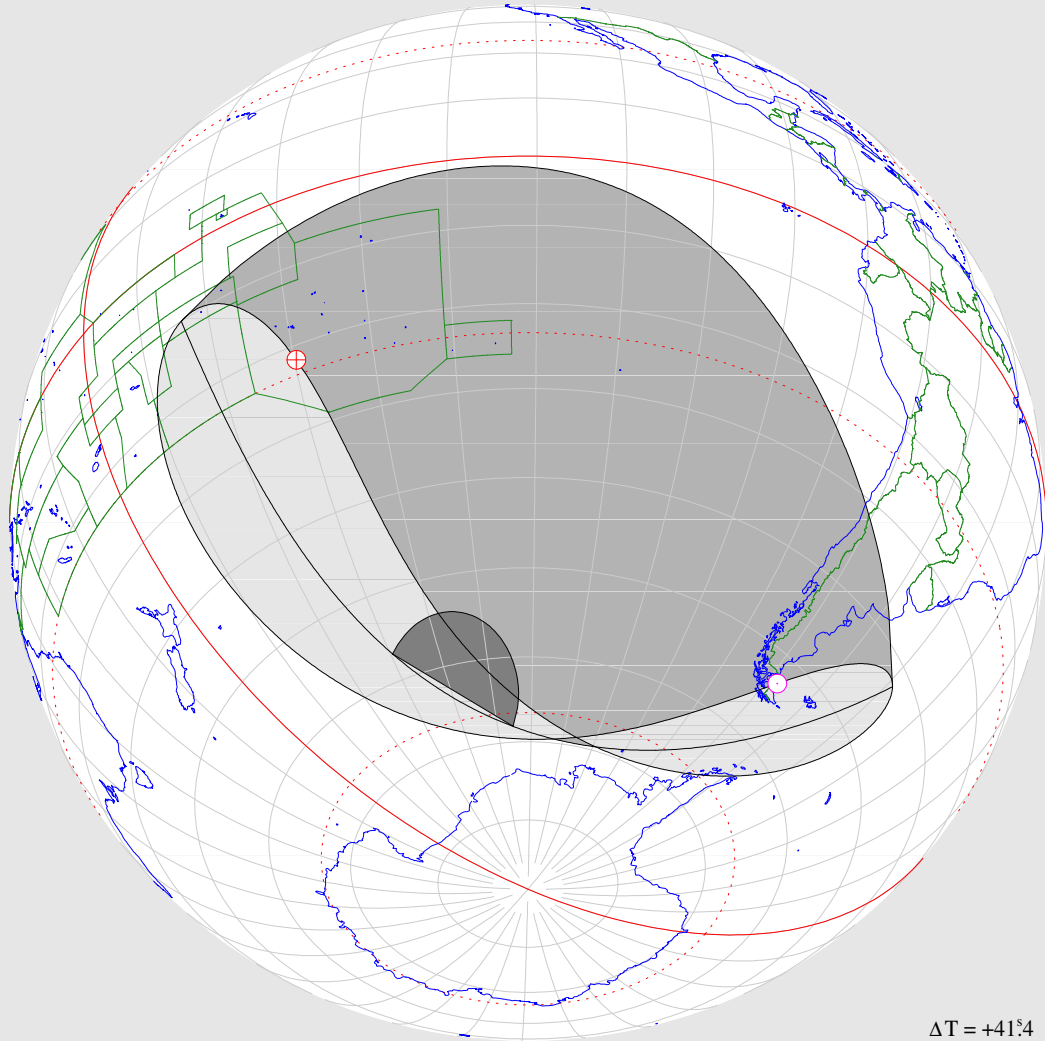


# IV. - Total Eclipse of the Sun

1656 July 21



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$\Delta T = +41^s.4$   
Globe centred on W 121°0 and S 45°0

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	16	38.7	W149	44.9	S 21	43.5
Beginning of northern limit of penumbra	17	15.8	W163	46.7	S 9	59.1
Beginning of northern limit of umbra	18	22.4	W149	34.7	S 56	53.6
End of northern limit of umbra	18	55.4	W125	25.9	S 68	05.6
End of northern limit of penumbra	20	02.2	W 48	50.1	S 42	21.9
○ Eclipse ends; last contact with Earth	20	39.2	W 67	50.6	S 53	03.6