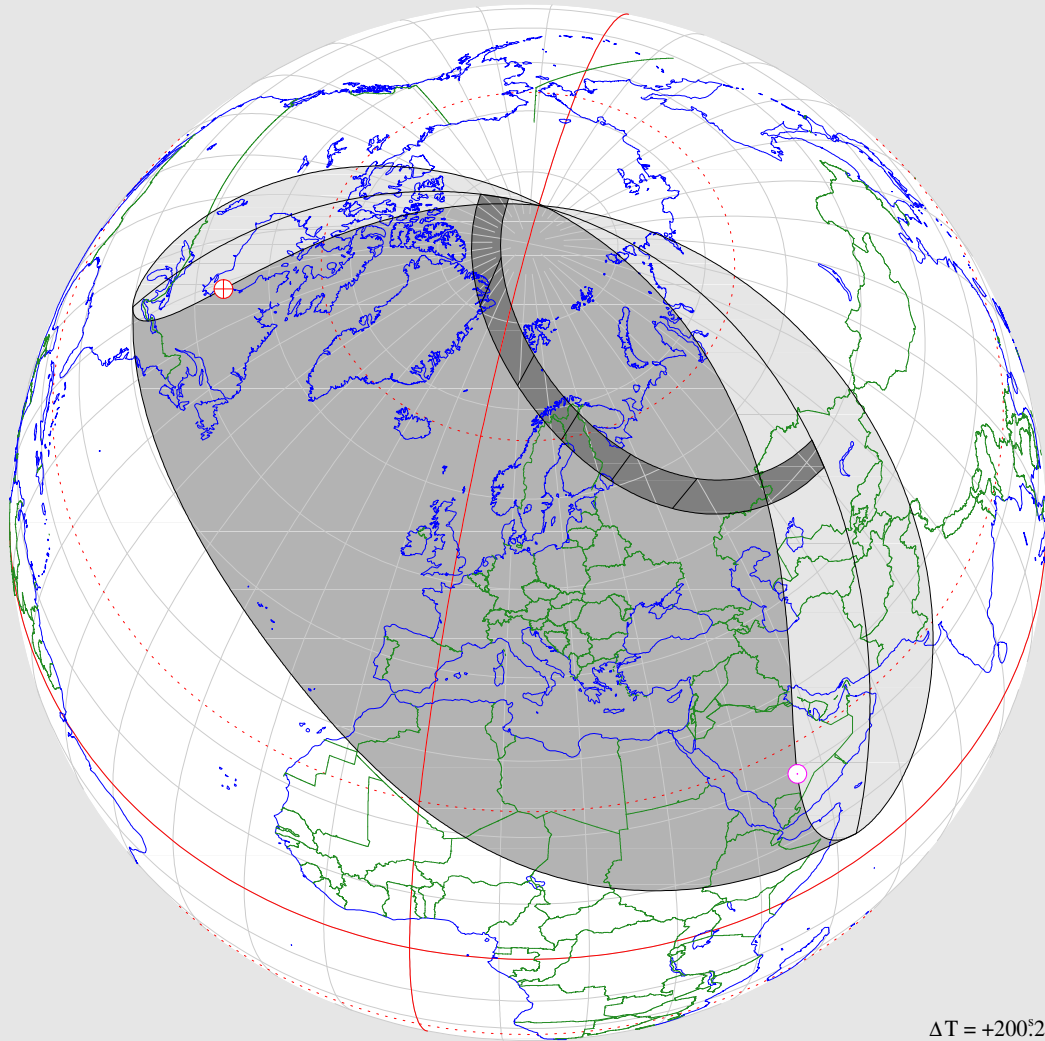


IV. - Total Eclipse of the Sun

1551 August 31



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$\Delta T = +200^s.2$
Globe centred on E 13°2' and N 57°4'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	10	41.8	W 78	30.6	N 54	00.6
Beginning of southern limit of penumbra	11	11.5	W 83	03.1	N 39	54.9
Beginning of southern limit of umbra	12	06.9	W 129	27.1	N 81	19.9
Beginning of centre line; central eclipse begins	12	09.4	W 136	56.6	N 82	27.7
Beginning of northern limit of umbra	12	12.1	W 147	23.8	N 83	30.3
Central eclipse at local apparent noon	12	19.7	W 5	42.3	N 80	13.2
End of northern limit of umbra	13	27.6	E 73	48.3	N 51	02.6
End of centre line; central eclipse ends	13	30.3	E 72	46.2	N 49	27.5
End of southern limit of umbra	13	32.8	E 71	49.7	N 47	58.2
End of southern limit of penumbra	14	27.9	E 52	41.7	N 5	07.5
⊙ Eclipse ends; last contact with Earth	14	57.6	E 46	37.7	N 19	21.6