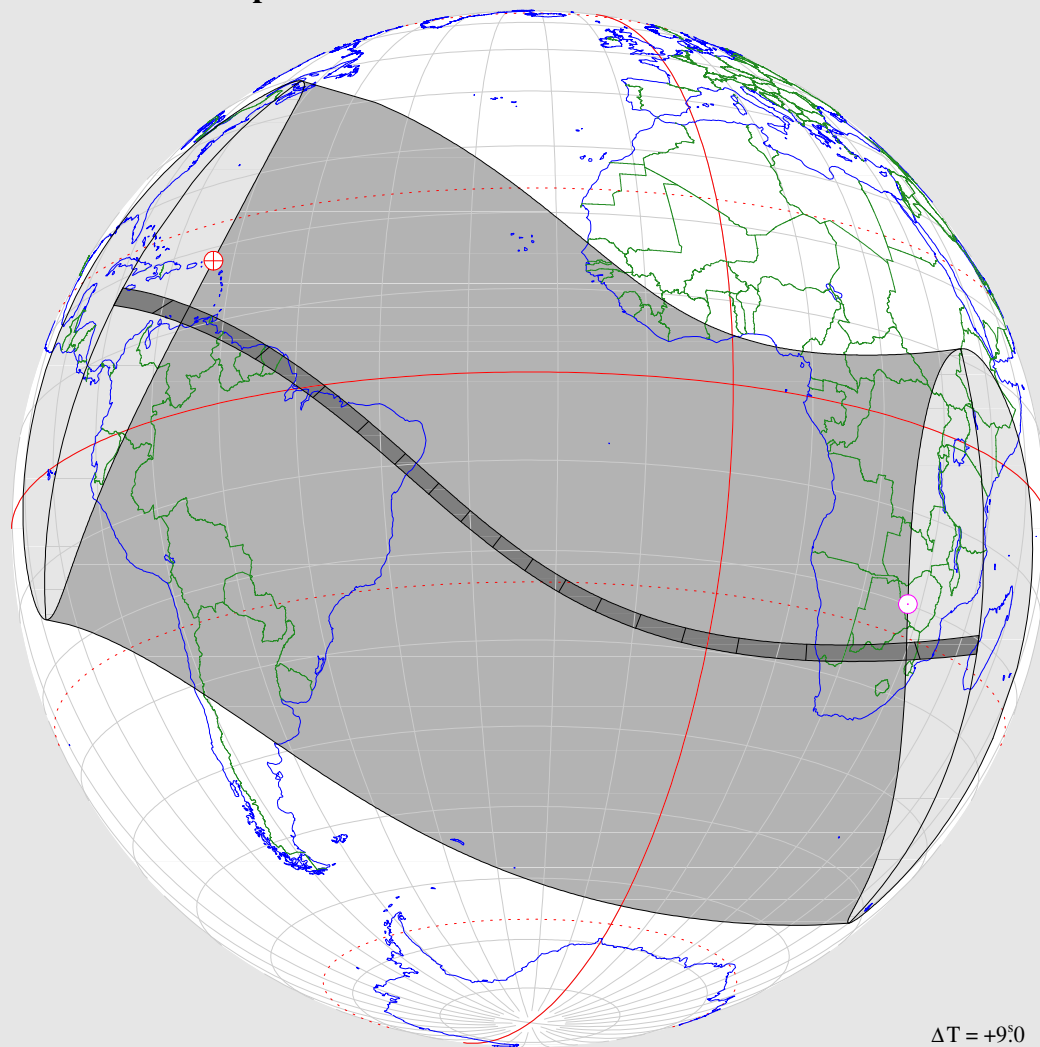


V. - Annular Eclipse of the Sun

1705 November 16



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$\Delta T = +9^s 0$
Globe centred on W 23°1' and S 17°6'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	10	23.1	W 63	05.1	N 18	08.6
Beginning of northern limit of umbra	11	27.7	W 79	03.5	N 18	35.5
Beginning of centre line; central eclipse begins	11	28.1	W 79	31.8	N 17	35.8
Beginning of southern limit of umbra	11	28.5	W 80	00.4	N 16	36.0
Beginning of northern limit of penumbra	11	36.1	W 65	00.9	N 48	36.6
Beginning of southern limit of penumbra	11	57.6	W 98	24.9	S 15	11.5
Central eclipse at local apparent noon	13	24.1	W 24	43.2	S 20	36.0
End of southern limit of penumbra	14	47.9	E 70	07.8	S 51	56.2
End of northern limit of penumbra	15	10.1	E 34	48.8	N 11	28.4
End of southern limit of umbra	15	17.3	E 44	40.1	S 21	27.2
End of centre line; central eclipse ends	15	17.7	E 44	10.9	S 20	28.9
End of northern limit of umbra	15	18.1	E 43	42.5	S 19	30.5
⊙ Eclipse ends; last contact with Earth	16	22.6	E 27	45.2	S 19	56.2