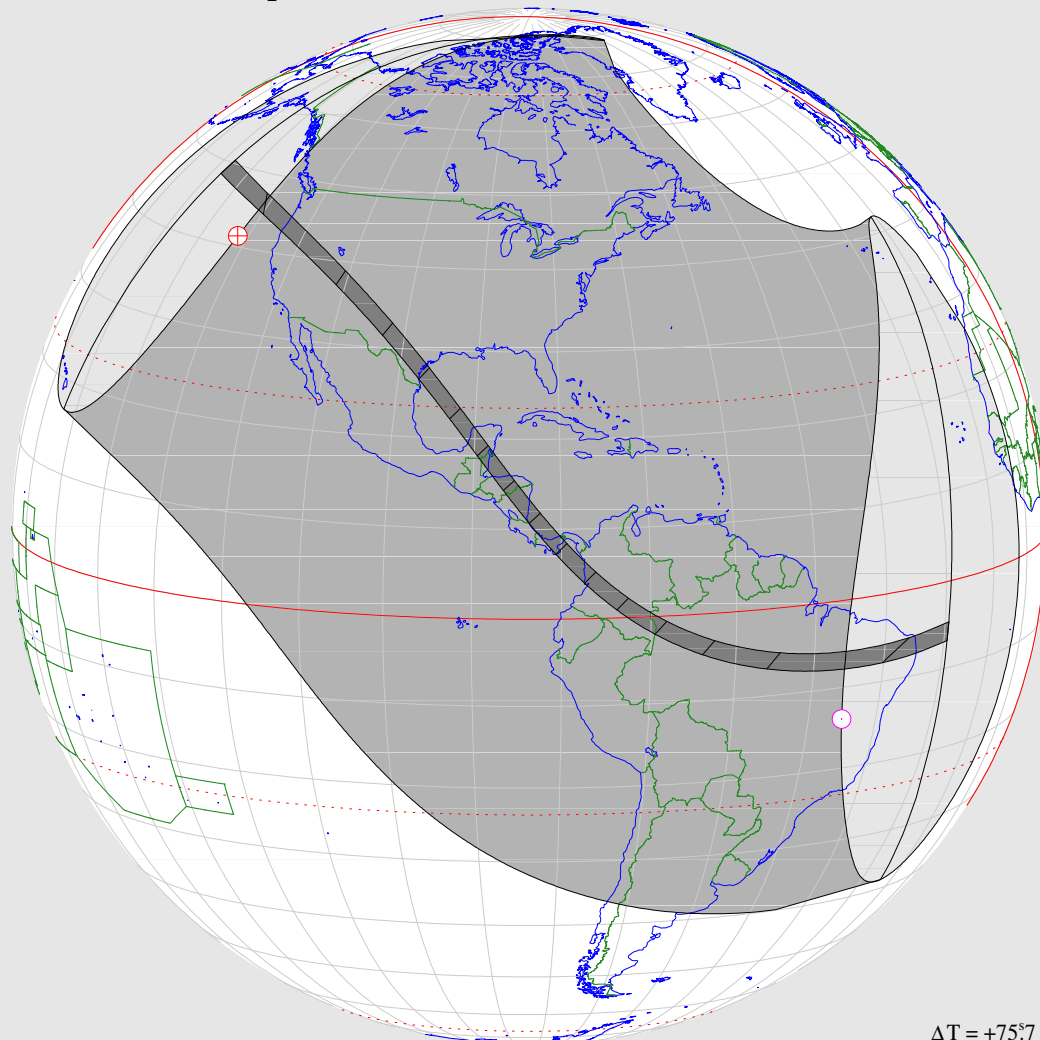


III. - Annular Eclipse of the Sun

2023 October 14



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$\Delta T = +75^s.7$
Globe centred on W 83°5 and N 10°3

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	15	03.7	W132	07.9	N41	19.7
Beginning of southern limit of penumbra	16	10.1	W153	31.0	N16	51.6
Beginning of southern limit of umbra	16	11.6	W147	05.1	N48	15.7
Beginning of centre line; central eclipse begins	16	12.3	W146	53.5	N49	20.5
Beginning of northern limit of umbra	16	13.0	W146	41.4	N50	25.8
Beginning of northern limit of penumbra	17	19.1	W 38	09.1	N78	24.4
Central eclipse at local apparent noon	17	36.5	W 87	37.8	N16	58.2
End of northern limit of penumbra	18	40.4	W 21	08.1	N42	03.7
End of northern limit of umbra	19	46.0	W 29	20.3	S 4	36.0
End of centre line; central eclipse ends	19	46.7	W 29	21.3	S 5	41.3
End of southern limit of umbra	19	47.4	W 29	21.7	S 6	46.2
End of southern limit of penumbra	19	48.5	W 24	02.3	S 38	17.0
⊙ Eclipse ends; last contact with Earth	20	55.2	W 45	15.1	S 13	48.2