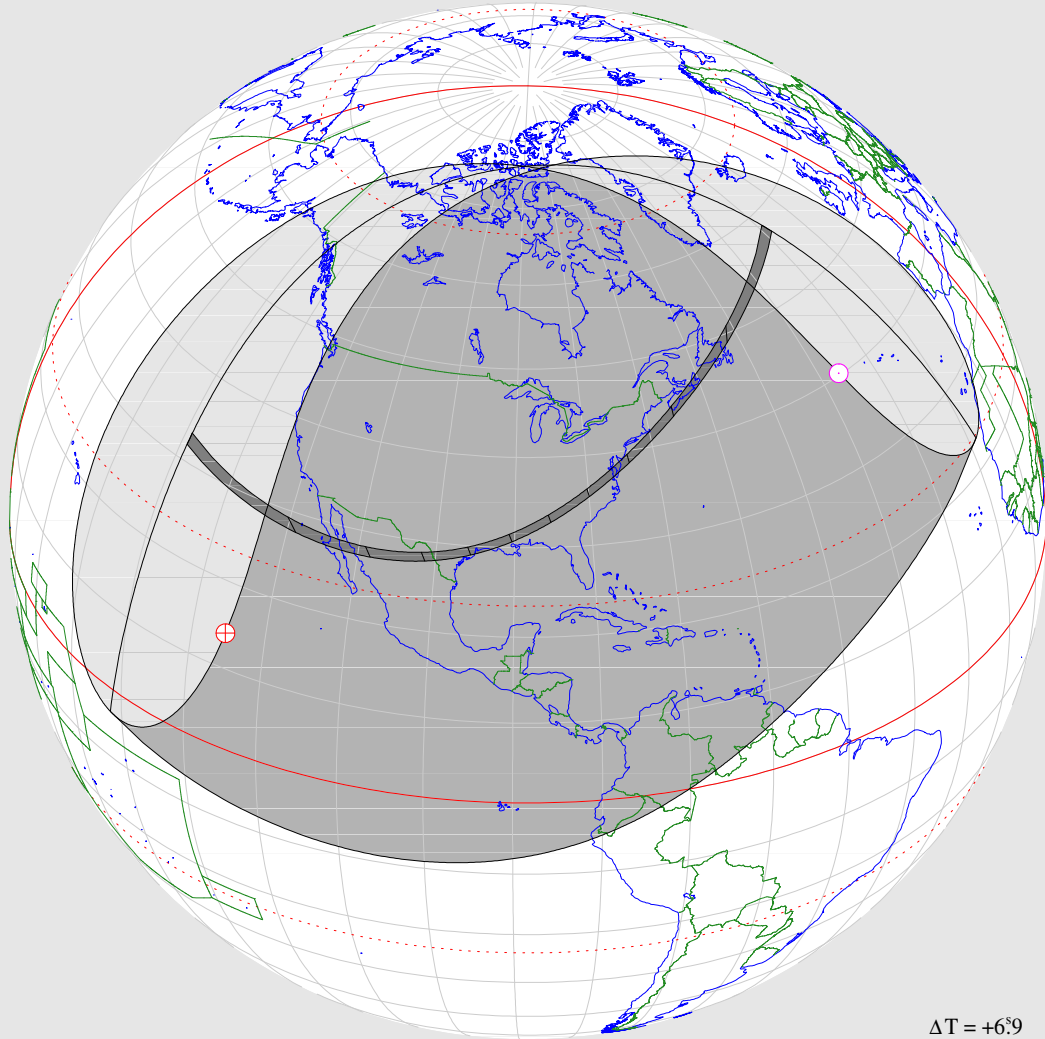


# I. - Annular Eclipse of the Sun

1831 February 12



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$\Delta T = +6^s.9$   
Globe centred on W 88°3 and N 33°0

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	14	50.0	W125	18.2	N14	07.6
Beginning of southern limit of penumbra	15	39.8	W142	06.2	S 3	12.1
Beginning of southern limit of umbra	16	05.3	W138	56.5	N31	45.0
Beginning of centre line; central eclipse begins	16	06.2	W138	56.1	N32	25.9
Beginning of northern limit of umbra	16	07.1	W138	55.6	N33	07.3
Central eclipse at local apparent noon	17	40.9	W 81	35.3	N35	02.4
End of northern limit of umbra	18	35.9	W 28	46.8	N58	25.1
End of centre line; central eclipse ends	18	36.8	W 28	25.0	N57	48.0
End of southern limit of umbra	18	37.7	W 28	04.6	N57	11.3
End of southern limit of penumbra	19	03.3	W 18	11.2	N23	09.7
⊙ Eclipse ends; last contact with Earth	19	53.0	W 36	32.4	N40	14.3