

## II. - Annular Eclipse of the Sun

2049 May 31



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$\Delta T = +93^s.2$   
Globe centred on W 29°8' and N 15°0'

Circumstances	Time (UT)		Longitude		Latitude	
	h	m	°	'	°	'
⊕ Eclipse begins; first contact with Earth	10	57.5	W 72	18.4	S 6	24.6
Beginning of southern limit of umbra	12	02.9	W 87	24.1	S 9	27.1
Beginning of centre line; central eclipse begins	12	03.0	W 87	45.0	S 8	40.9
Beginning of northern limit of umbra	12	03.1	W 88	06.1	S 7	54.8
Beginning of southern limit of penumbra	12	22.1	W 75	31.5	S 40	57.5
Beginning of northern limit of penumbra	12	23.9	W 105	45.9	N 21	39.7
Central eclipse at local apparent noon	13	57.8	W 29	59.9	N 15	17.6
End of northern limit of penumbra	15	32.9	E 47	43.3	N 26	11.7
End of southern limit of penumbra	15	34.8	E 18	15.0	S 36	37.6
End of northern limit of umbra	15	53.7	E 29	41.3	S 3	17.9
End of centre line; central eclipse ends	15	53.8	E 29	20.1	S 4	05.1
End of southern limit of umbra	15	54.0	E 28	59.1	S 4	52.3
⊙ Eclipse ends; last contact with Earth	16	59.4	E 13	51.7	S 1	48.5