

Penumbral Lunar Eclipse of 1999 Jan 31

Ecliptic Conjunction = 16:07:34.5 TD (= 16:06:31.0 UT)

Greatest Eclipse = 16:18:34.6 TD (= 16:17:31.1 UT)

Penumbral Magnitude = 1.0027

P. Radius = 1.2481°

Gamma = -1.0189

Umbral Magnitude = -0.0258

U. Radius = 0.7070°

Axis = 0.9837°

Saros Series = 114 Member = 58 of 71

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 20h55m10.7s

Dec. = -17°22'33.9"

S.D. = 00°16'14.0"

H.P. = 00°00'08.9"

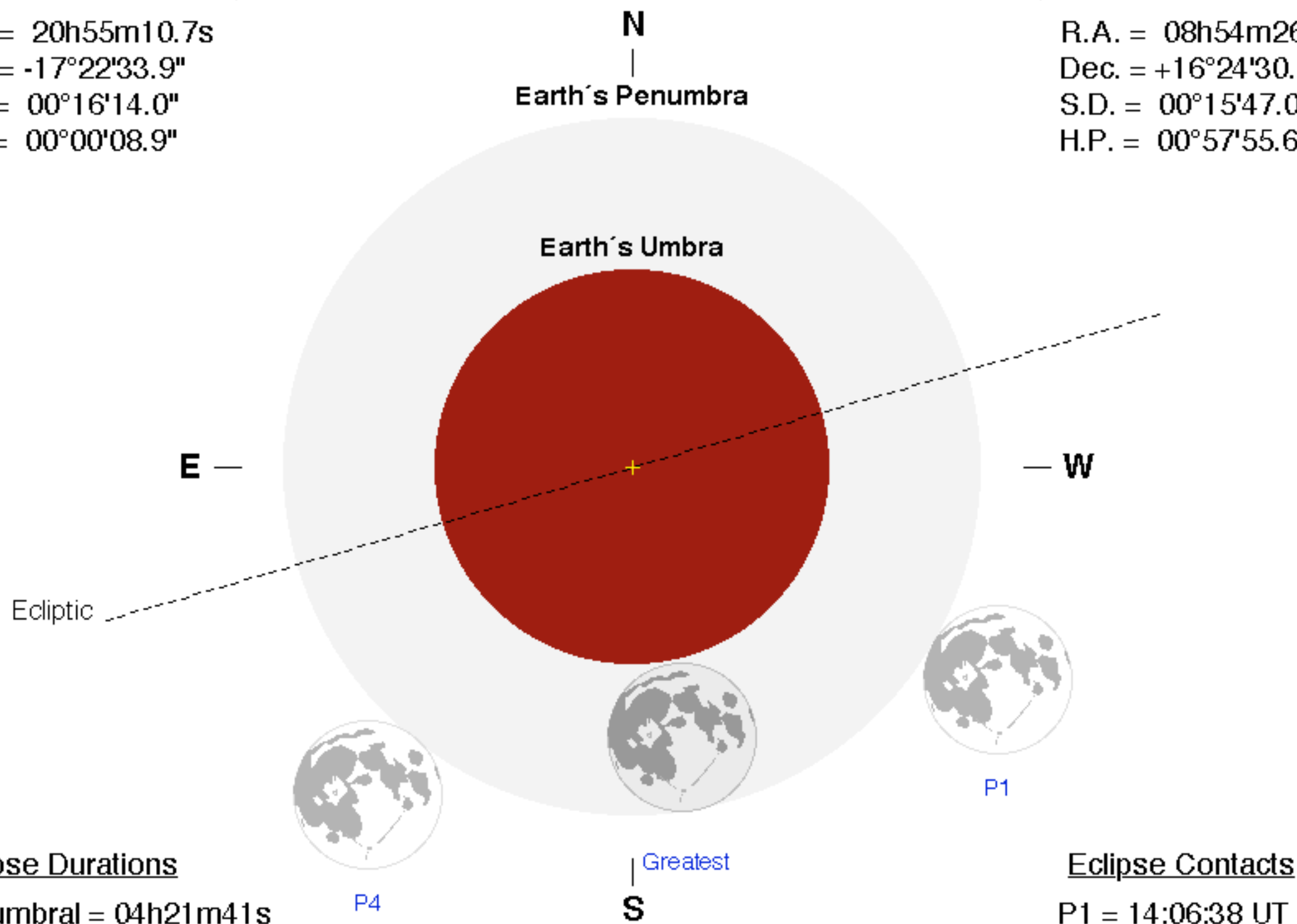
Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 08h54m26.3s

Dec. = +16°24'30.2"

S.D. = 00°15'47.0"

H.P. = 00°57'55.6"



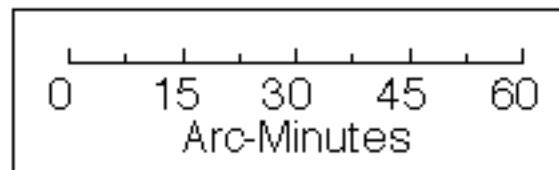
Eclipse Durations

Penumbral = 04h21m41s

Eclipse Contacts

P1 = 14:06:38 UT

P4 = 18:28:20 UT



$\Delta T = 63$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

eclipse.gsfc.nasa.gov/eclipse.html

