

Penumbral Lunar Eclipse of 2031 Oct 30

Ecliptic Conjunction = 07:33:52.2 TD (= 07:32:33.4 UT)

Greatest Eclipse = 07:46:44.9 TD (= 07:45:26.1 UT)

Penumbral Magnitude = 0.7161

P. Radius = 1.2307°

Gamma = 1.1773

Umbral Magnitude = -0.3204

U. Radius = 0.6939°

Axis = 1.1188°

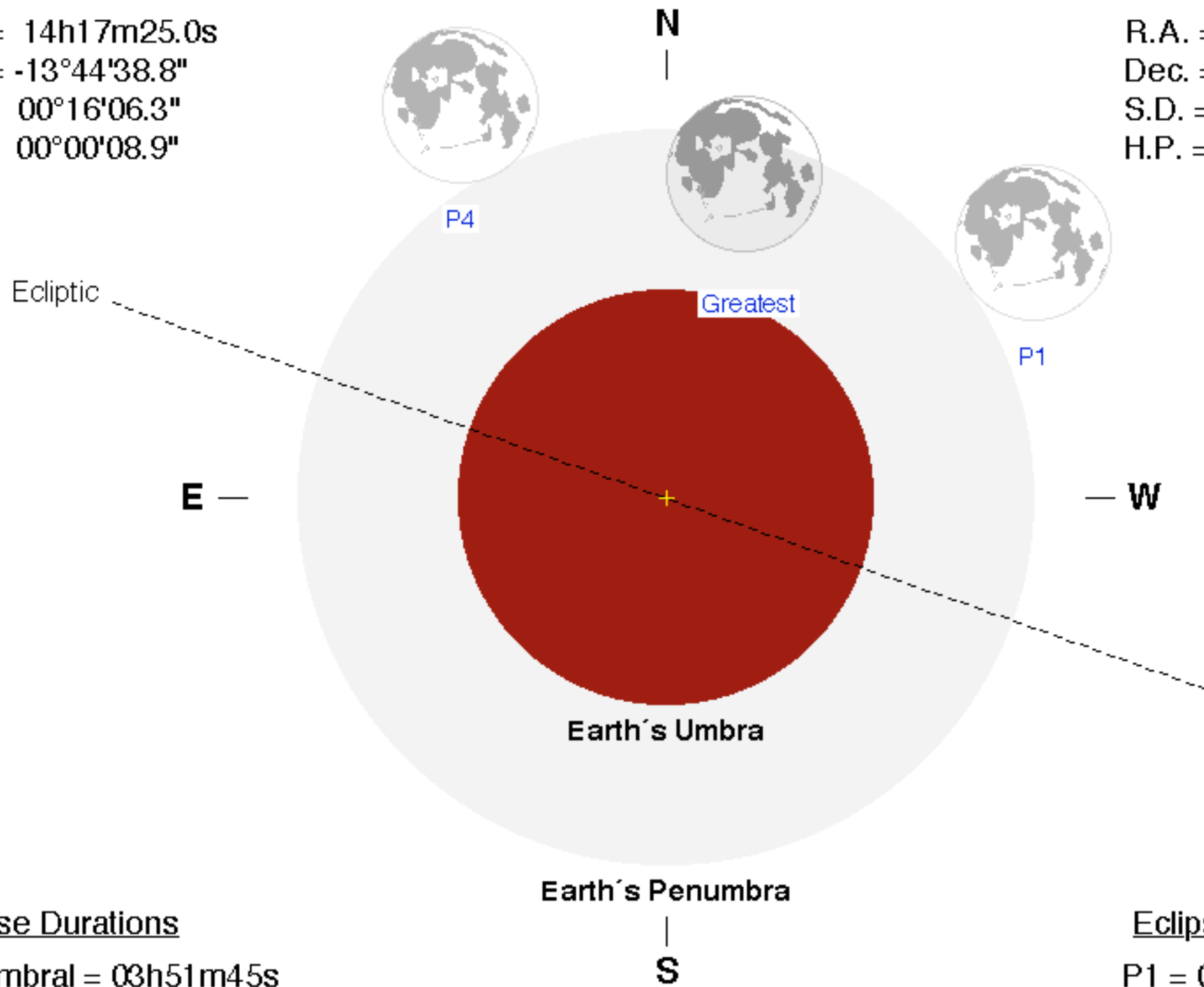
Saros Series = 117 Member = 53 of 72

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 14h17m25.0s
Dec. = -13°44'38.8"
S.D. = 00°16'06.3"
H.P. = 00°00'08.9"

Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 02h16m19.8s
Dec. = +14°49'53.4"
S.D. = 00°15'32.2"
H.P. = 00°57'01.3"



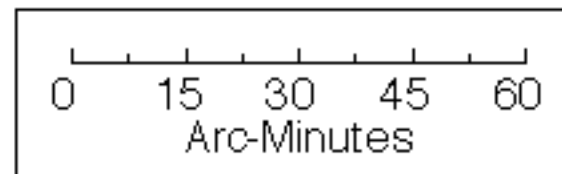
Eclipse Durations

Penumbral = 03h51m45s

Eclipse Contacts

P1 = 05:49:29 UT

P4 = 09:41:15 UT



$\Delta T = 79$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

eclipse.gsfc.nasa.gov/eclipse.html

