

FIGURE 4

Penumbral Lunar Eclipse of 2013 Oct 18

Ecliptic Conjunction = 23:38:46.7 TD (= 23:37:39.6 UT)
 Greatest Eclipse = 23:51:24.5 TD (= 23:50:17.4 UT)

Penumbral Magnitude = 0.7649 P. Radius = 1.2270° Gamma = 1.1508
 Umbral Magnitude = -0.2718 U. Radius = 0.6917° Axis = 1.0902°

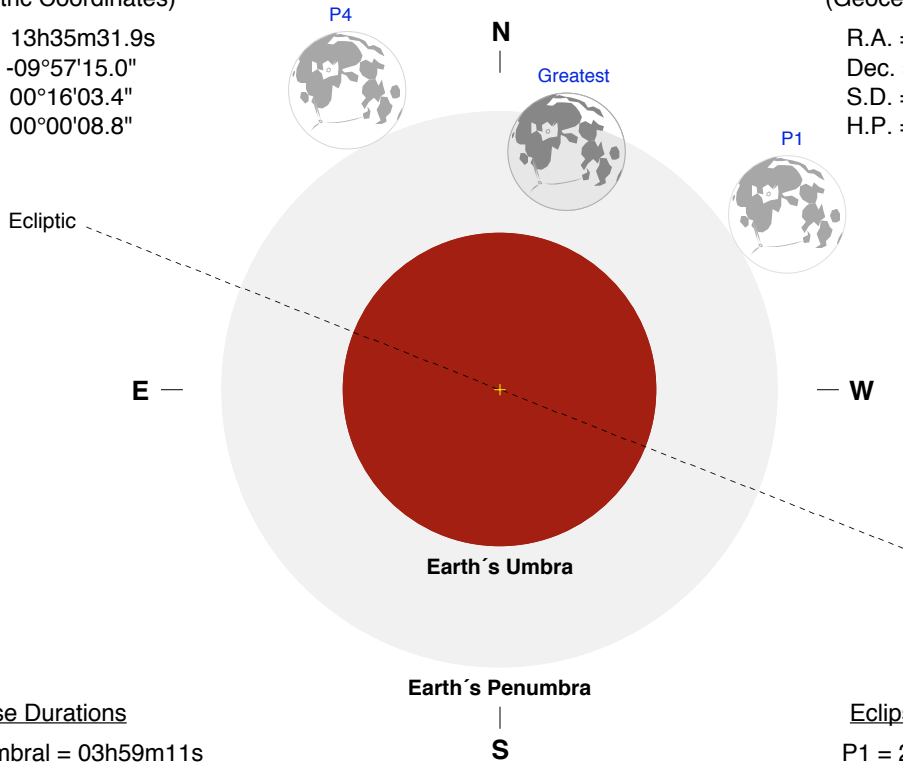
Saros Series = 117 Member = 52 of 72

Sun at Greatest Eclipse
 (Geocentric Coordinates)

R.A. = 13h35m31.9s
 Dec. = -09°57'15.0"
 S.D. = 00°16'03.4"
 H.P. = 00°00'08.8"

Moon at Greatest Eclipse
 (Geocentric Coordinates)

R.A. = 01h34m19.6s
 Dec. = +11°00'12.2"
 S.D. = 00°15'29.3"
 H.P. = 00°56'50.7"

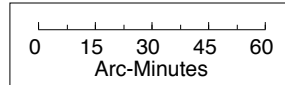


Eclipse Durations

Penumbral = 03h59m11s

Eclipse Contacts

P1 = 21:50:38 UT
 P4 = 01:49:49 UT



$\Delta T = 67$ s
 Rule = CdT (Danjon)
 Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC
eclipse.gsfc.nasa.gov/eclipse.html

