

Penumbral Lunar Eclipse of 2049 Nov 09

Ecliptic Conjunction = 15:39:09.7 TD (= 15:37:36.9 UT)

Greatest Eclipse = 15:52:11.3 TD (= 15:50:38.5 UT)

Penumbral Magnitude = 0.6808

P. Radius = 1.2344°

Gamma = 1.1964

Umbral Magnitude = -0.3553

U. Radius = 0.6961°

Axis = 1.1404°

Saros Series = 117 Member = 54 of 72

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 15h00m53.5s

Dec. = -17°06'00.7"

S.D. = 00°16'08.8"

H.P. = 00°00'08.9"

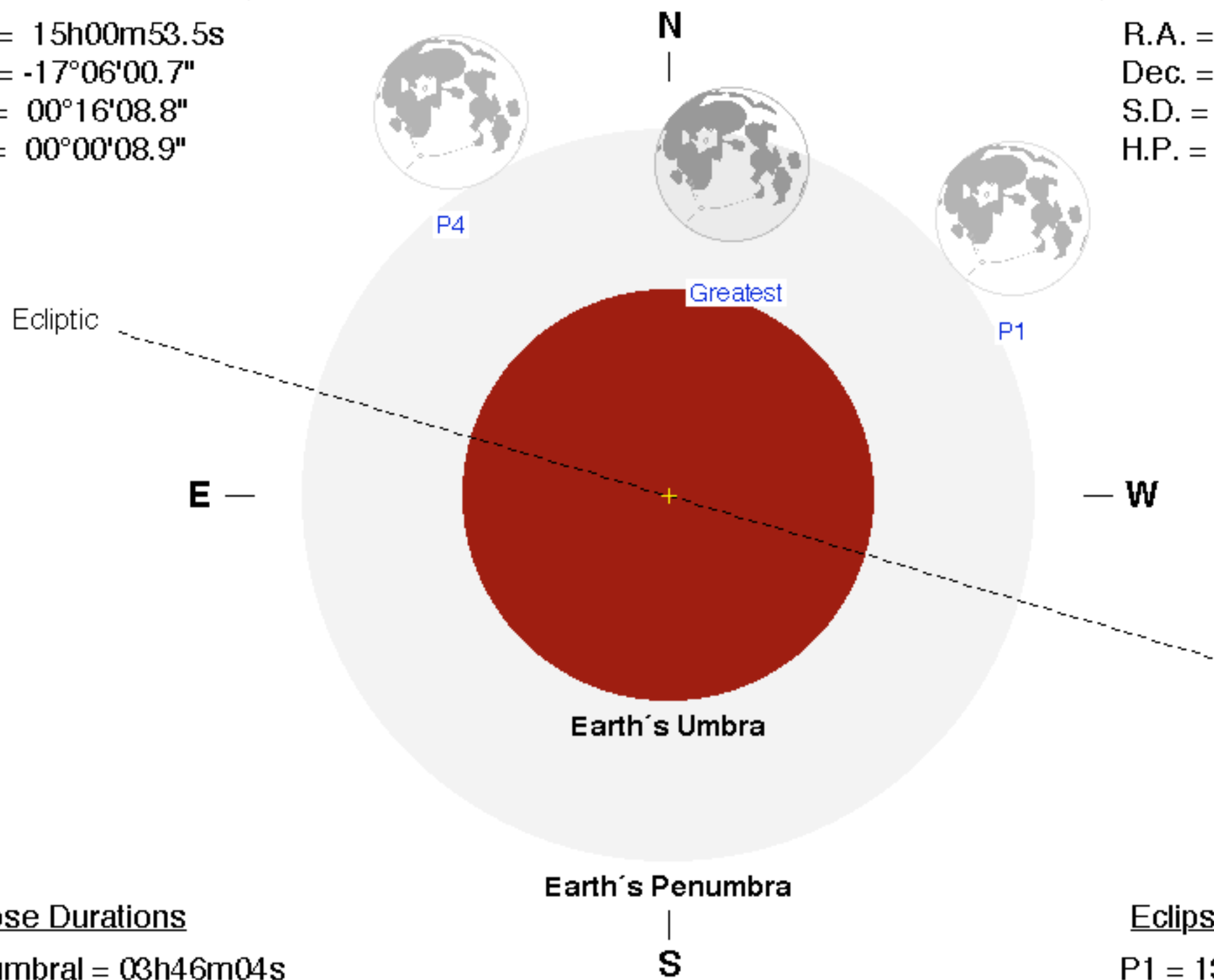
Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 03h00m00.0s

Dec. = +18°13'14.7"

S.D. = 00°15'35.1"

H.P. = 00°57'11.7"



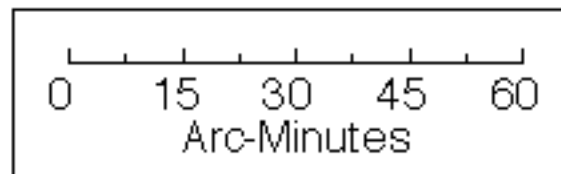
Eclipse Durations

Penumbral = 03h46m04s

Eclipse Contacts

P1 = 13:57:32 UT

P4 = 17:43:36 UT



$\Delta T = 93$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

eclipse.gsfc.nasa.gov/eclipse.html

