

Penumbral Lunar Eclipse of 2099 Sep 29

Ecliptic Conjunction = 10:48:40.5 TD (= 10:45:18.6 UT)

Greatest Eclipse = 10:36:38.3 TD (= 10:33:16.4 UT)

Penumbral Magnitude = 1.0340

P. Radius = 1.1772°

Gamma = 1.0174

Umbral Magnitude = -0.0512

U. Radius = 0.6451°

Axis = 0.9154°

Saros Series = 148 Member = 8 of 71

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 12h24m20.2s

Dec. = -02°37'46.4"

S.D. = 00°15'57.7"

H.P. = 00°00'08.8"

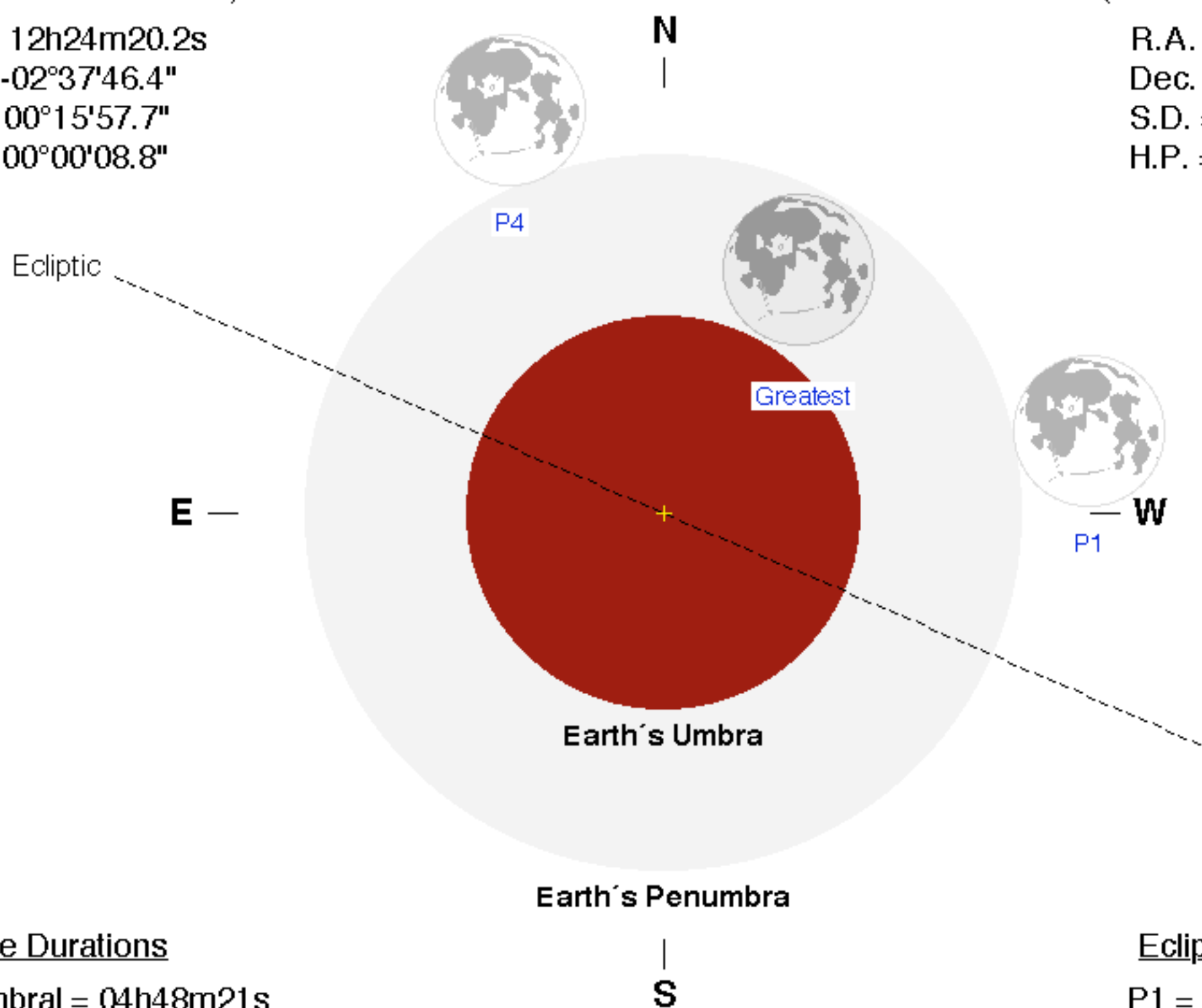
Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 00h22m33.6s

Dec. = +03°25'49.5"

S.D. = 00°14'42.6"

H.P. = 00°53'59.0"



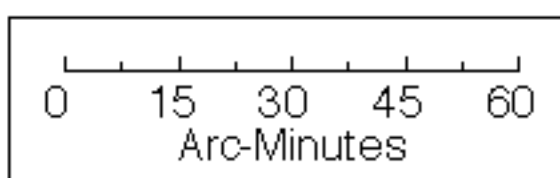
Eclipse Durations

Penumbral = 04h48m21s

Eclipse Contacts

P1 = 08:09:07 UT

P4 = 12:57:28 UT



$\Delta T = 202$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

eclipse.gsfc.nasa.gov/eclipse.html

