

Penumbral Lunar Eclipse of 2089 Sep 19

Ecliptic Conjunction = 21:58:08.1 TD (= 21:55:09.5 UT)

Greatest Eclipse = 22:11:16.9 TD (= 22:08:18.3 UT)

Penumbral Magnitude = 0.7893

P. Radius = 1.1931°

Gamma = 1.1447

Umbral Magnitude = -0.2737

U. Radius = 0.6624°

Axis = 1.0487°

Saros Series = 119 Member = 66 of 83

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 11h51m38.3s

Dec. = +00°54'20.0"

S.D. = 00°15'55.3"

H.P. = 00°00'08.8"

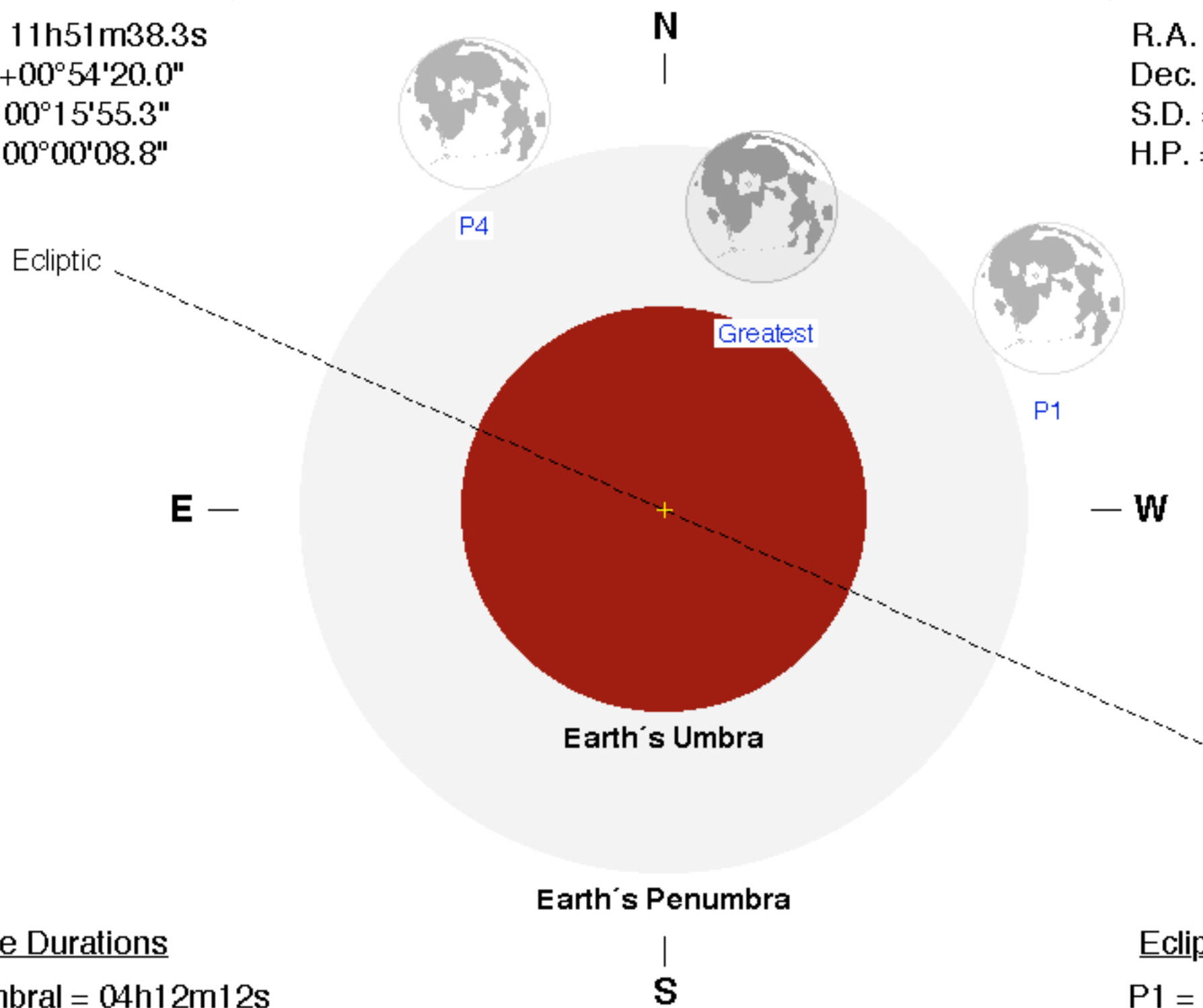
Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 23h50m21.4s

Dec. = +00°05'35.0"

S.D. = 00°14'58.7"

H.P. = 00°54'58.2"



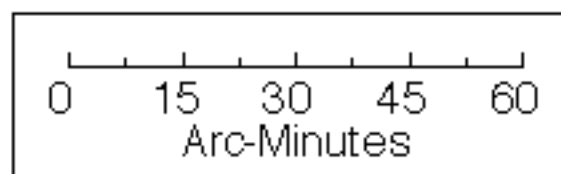
Eclipse Durations

Penumbral = 04h12m12s

Eclipse Contacts

P1 = 20:02:16 UT

P4 = 00:14:28 UT



$\Delta T = 179$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

eclipse.gsfc.nasa.gov/eclipse.html

