

# Total Lunar Eclipse of 2010 Dec 21

Ecliptic Conjunction = 08:14:33.5 TD (= 08:13:26.5 UT)

Greatest Eclipse = 08:18:04.2 TD (= 08:16:57.1 UT)

Penumbral Magnitude = 2.2807

P. Radius = 1.2538°

Gamma = 0.3214

Umbral Magnitude = 1.2561

U. Radius = 0.7118°

Axis = 0.3119°

Saros Series = 125

Member = 48 of 72

## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 17h57m09.6s

Dec. = -23°26'09.9"

S.D. = 00°16'15.5"

H.P. = 00°00'08.9"

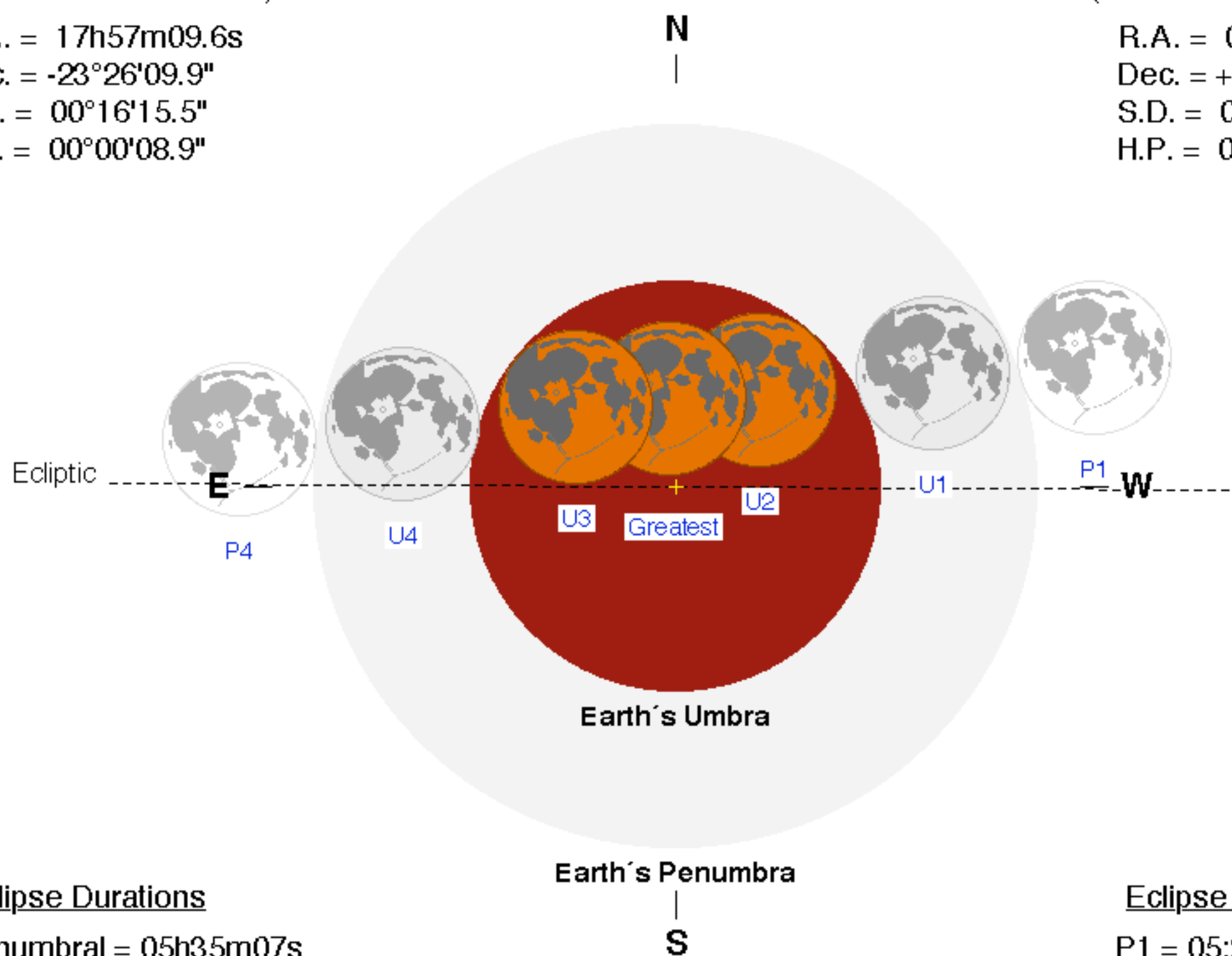
## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 05h57m17.3s

Dec. = +23°44'47.8"

S.D. = 00°15'52.1"

H.P. = 00°58'14.2"



## Eclipse Durations

Penumbral = 05h35m07s

Umbral = 03h28m41s

Total = 01h12m21s

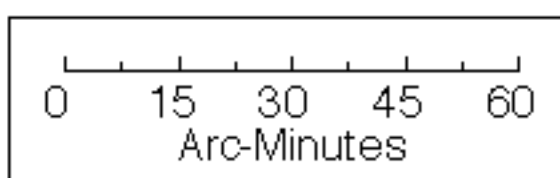
$\Delta T = 67$  s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

## Earth's Penumbra

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F. Espenak, NASA's GSFC

[eclipse.gsfc.nasa.gov/eclipse.html](http://eclipse.gsfc.nasa.gov/eclipse.html)

## Eclipse Contacts

P1 = 05:29:21 UT

U1 = 06:32:38 UT

U2 = 07:40:48 UT

U3 = 08:53:09 UT

U4 = 10:01:19 UT

P4 = 11:04:28 UT

