

# Penumbral Lunar Eclipse of 1998 Mar 13

Ecliptic Conjunction = 04:35:12.8 TD (= 04:34:09.8 UT)

Greatest Eclipse = 04:21:07.9 TD (= 04:20:04.8 UT)

Penumbral Magnitude = 0.7086

P. Radius = 1.1820°

Gamma = 1.1964

Umbral Magnitude = -0.3824

U. Radius = 0.6455°

Axis = 1.0794°

Saros Series = 142

Member = 17 of 74

## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 23h32m02.0s

Dec. = -03°01'14.6"

S.D. = 00°16'05.6"

H.P. = 00°00'08.8"

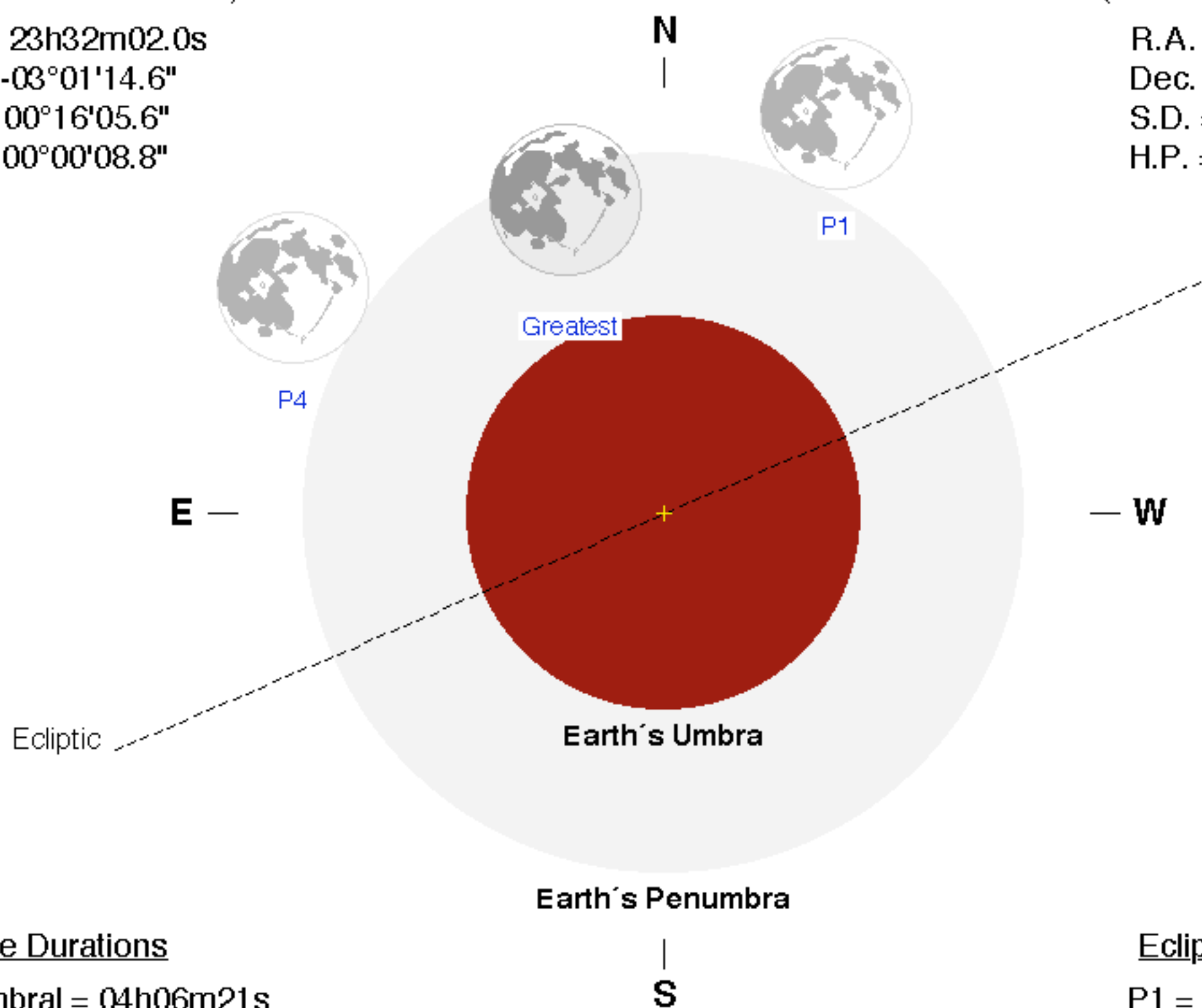
## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 11h33m20.5s

Dec. = +04°02'58.5"

S.D. = 00°14'45.0"

H.P. = 00°54'08.1"



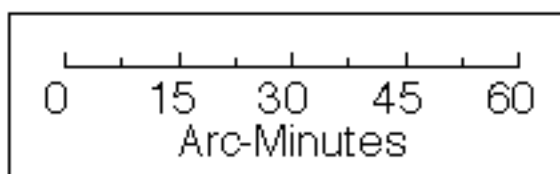
## Eclipse Durations

Penumbral = 04h06m21s

## Eclipse Contacts

P1 = 02:16:52 UT

P4 = 06:23:13 UT



$\Delta T = 63$  s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC

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

