

# Penumbral Lunar Eclipse of 2030 Dec 09

Ecliptic Conjunction = 22:41:37.5 TD (= 22:40:19.4 UT)

Greatest Eclipse = 22:28:51.1 TD (= 22:27:32.9 UT)

Penumbral Magnitude = 0.9416

P. Radius = 1.1816°

Gamma = -1.0731

Umbral Magnitude = -0.1628

U. Radius = 0.6403°

Axis = 0.9652°

Saros Series = 145 Member = 12 of 71

## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 17h07m21.3s

Dec. = -22°52'57.8"

S.D. = 00°16'14.4"

H.P. = 00°00'08.9"

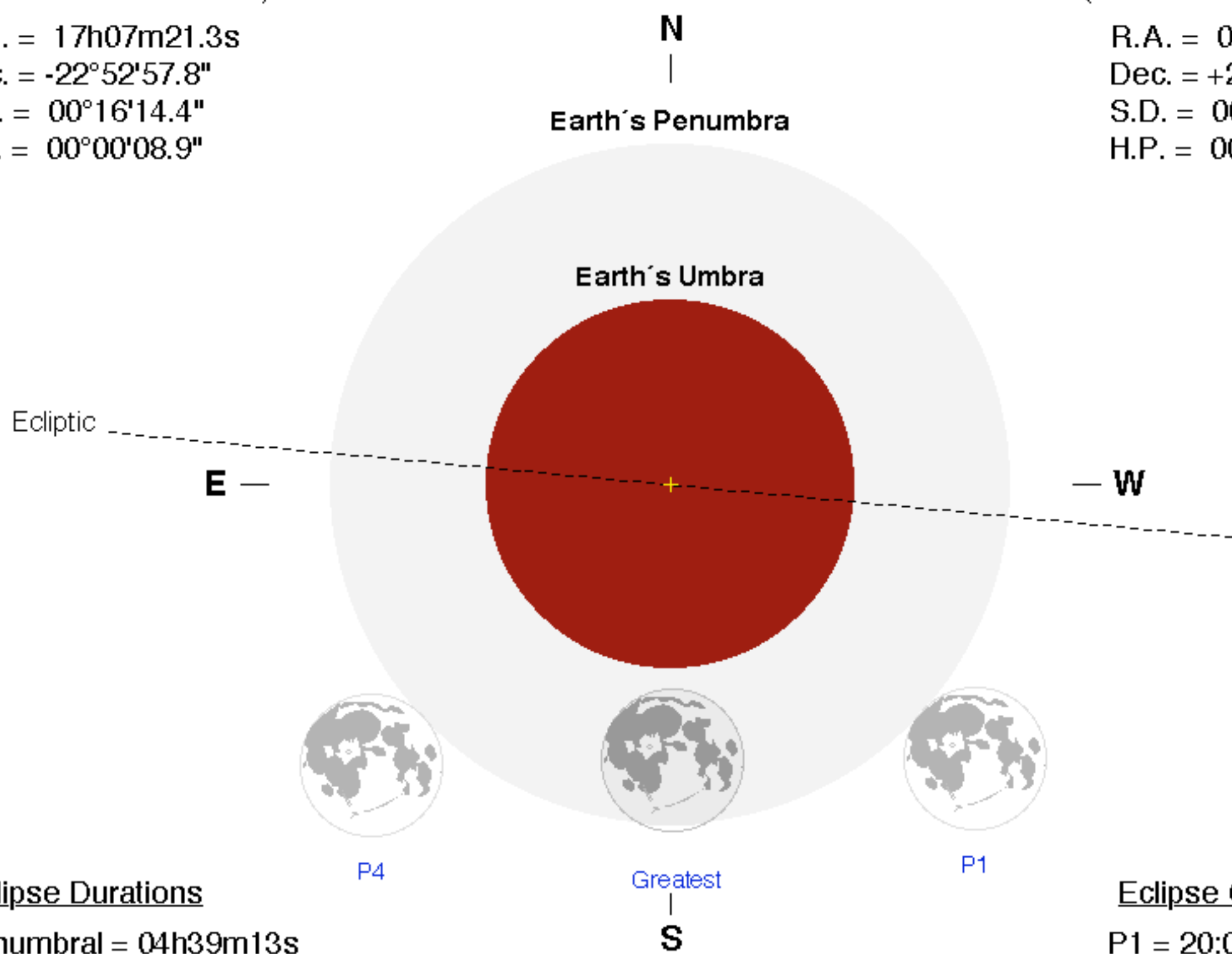
## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 05h07m19.2s

Dec. = +21°55'03.1"

S.D. = 00°14'42.3"

H.P. = 00°53'58.2"



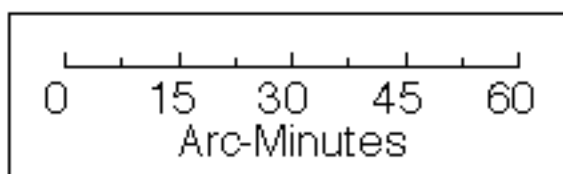
## Eclipse Durations

Penumbral = 04h39m13s

## Eclipse Contacts

P1 = 20:07:56 UT

P4 = 00:47:09 UT



$\Delta T = 78$  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)

