Penumbral Lunar Eclipse of 2038 Jul 16

Ecliptic Conjunction = 11:49:27.6 TD (= 11:48:04.1 UT)
Greatest Eclipse = 11:35:56.0 TD (= 11:34:32.5 UT)

Penumbral Magnitude = 0.4999 P. Radius = 1.2417° Gamma = -1.2837
Umbral Magnitude = -0.4952 U. Radius = 0.7171° Axis = 1.2417°

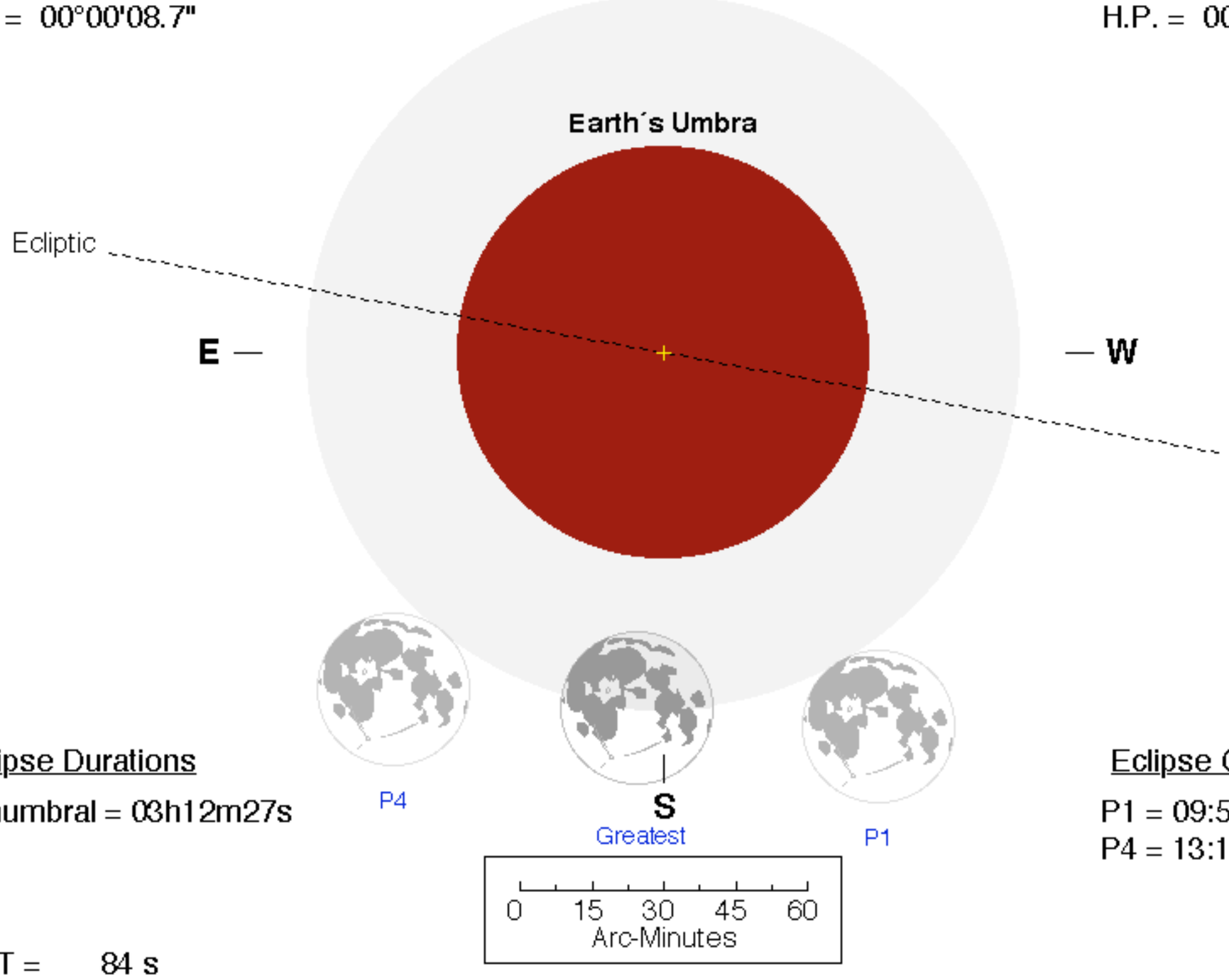
Saros Series = 149 Member = 4 of 72

<u>Sun at Greatest Eclipse</u>
(Geocentric Coordinates)

R.A. = 07h43m47.7s
Dec. = +21°17'34.6"
S.D. = 00°15'44.2"
H.P. = 00°00'08.7"

<u>Moon at Greatest Eclipse</u>
(Geocentric Coordinates)

R.A. = 19h44m13.1s
Dec. = -22°31'51.1"
S.D. = 00°15'48.9"
H.P. = 00°58'02.4"



<u>Eclipse Durations</u>

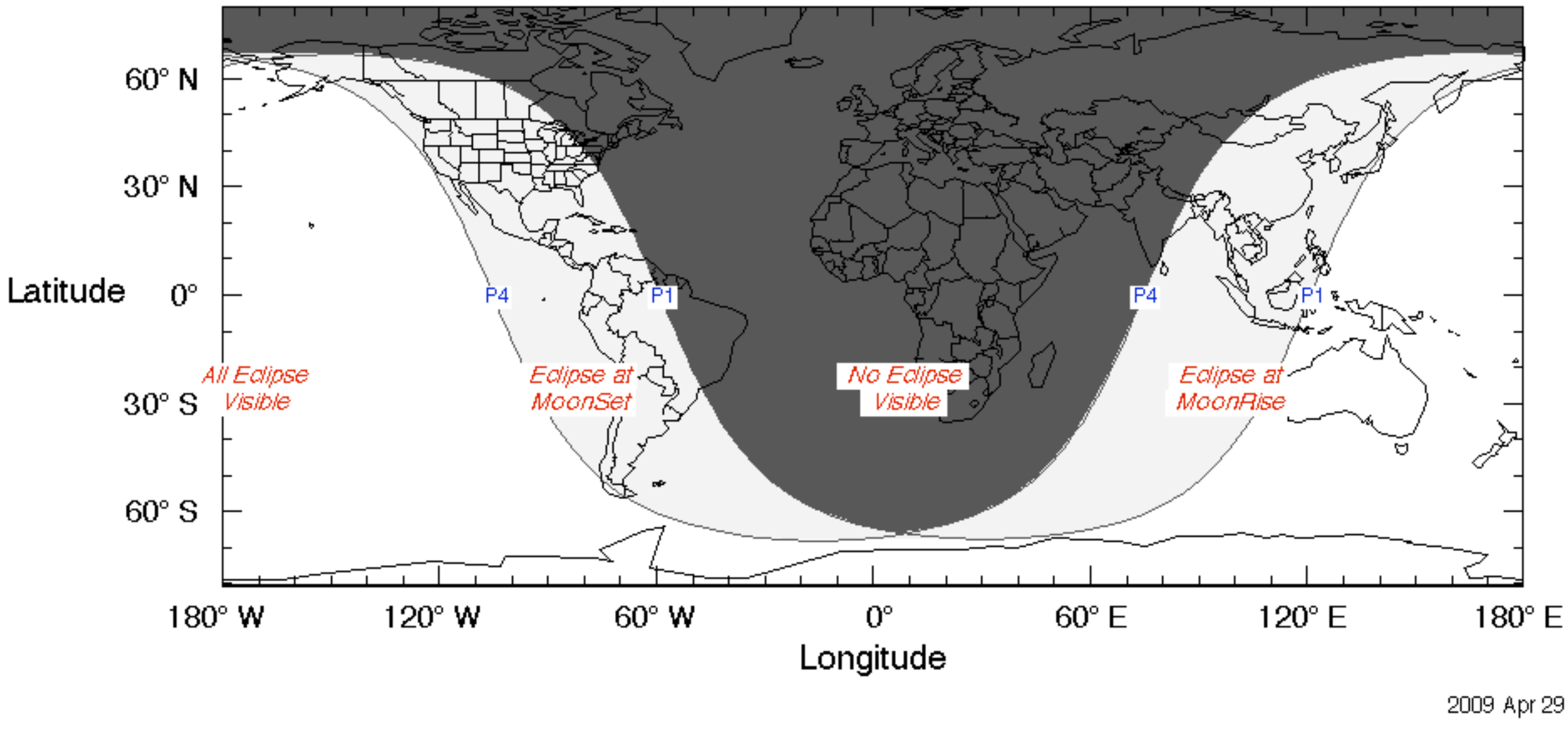
Penumbral = 03h12m27s

<u>Eclipse Contacts</u>

P1 = 09:58:13 UT
P4 = 13:10:40 UT

ΔT = 84 s
Rule = CdT (Danjon)
Eph. = VSOP87/ELP2000-85

F. Espenak, NASA's GSFC
eclipse.gsfc.nasa.gov/eclipse.html



2009 Apr 29