Total Lunar Eclipse of 2019 Jan 21

Ecliptic Conjunction = 05:17:14.0 TD (= 05:16:03.0 UT)
Greatest Eclipse = 05:13:27.1 TD (= 05:12:16.0 UT)

Penumbral Magnitude = 2.1684 P. Radius = 1.3052° Gamma = 0.3684
Umbral Magnitude = 1.1953 U. Radius = 0.7634° Axis = 0.3763°

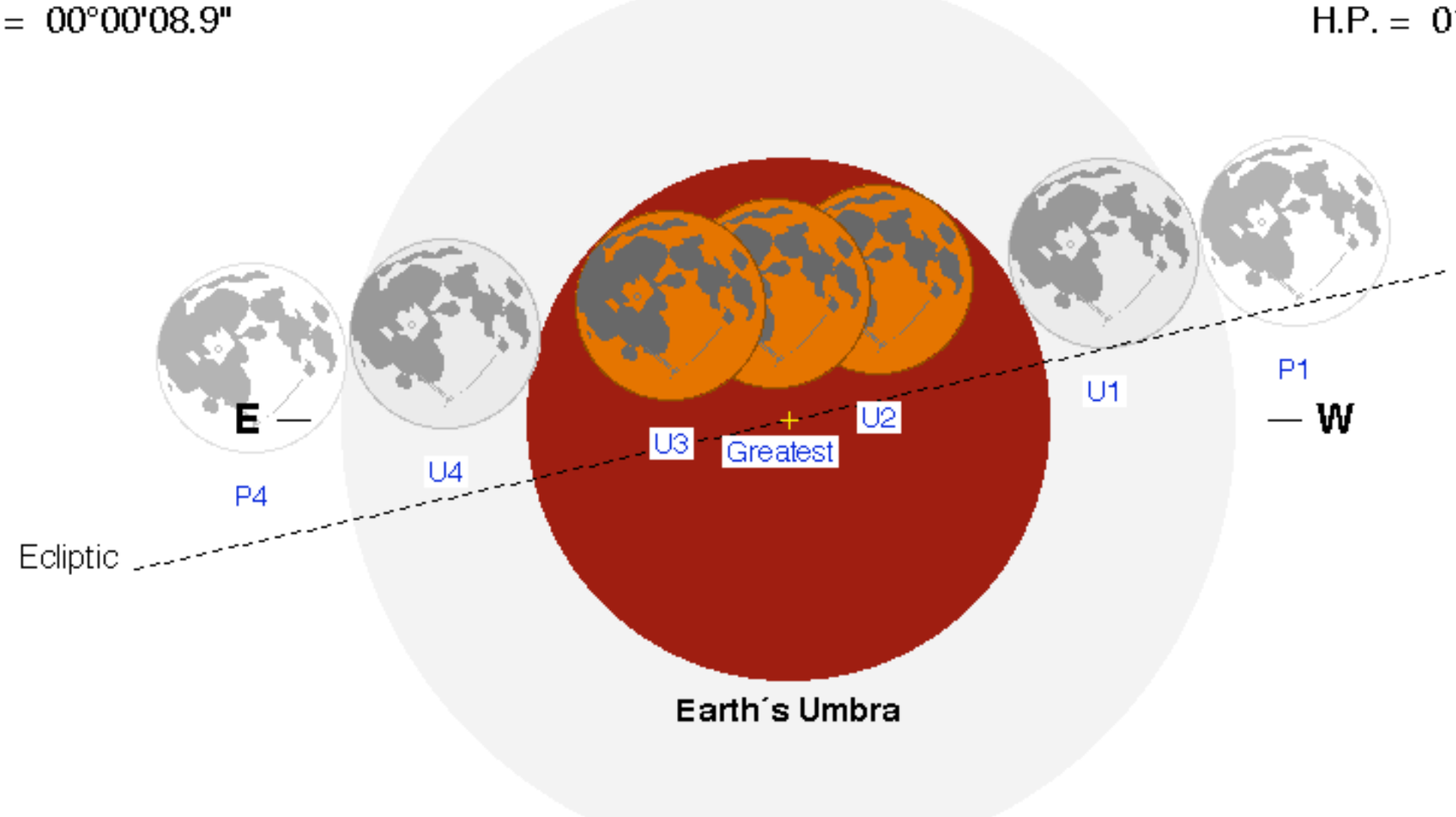
Saros Series = 134 Member = 27 of 73

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

R.A. = 20h12m17.2s
Dec. = -19°57'48.0"
S.D. = 00°16'15.2"
H.P. = 00°00'08.9"

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

R.A. = 08h12m28.7s
Dec. = +20°20'13.1"
S.D. = 00°16'42.1"
H.P. = 01°01'17.9"



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

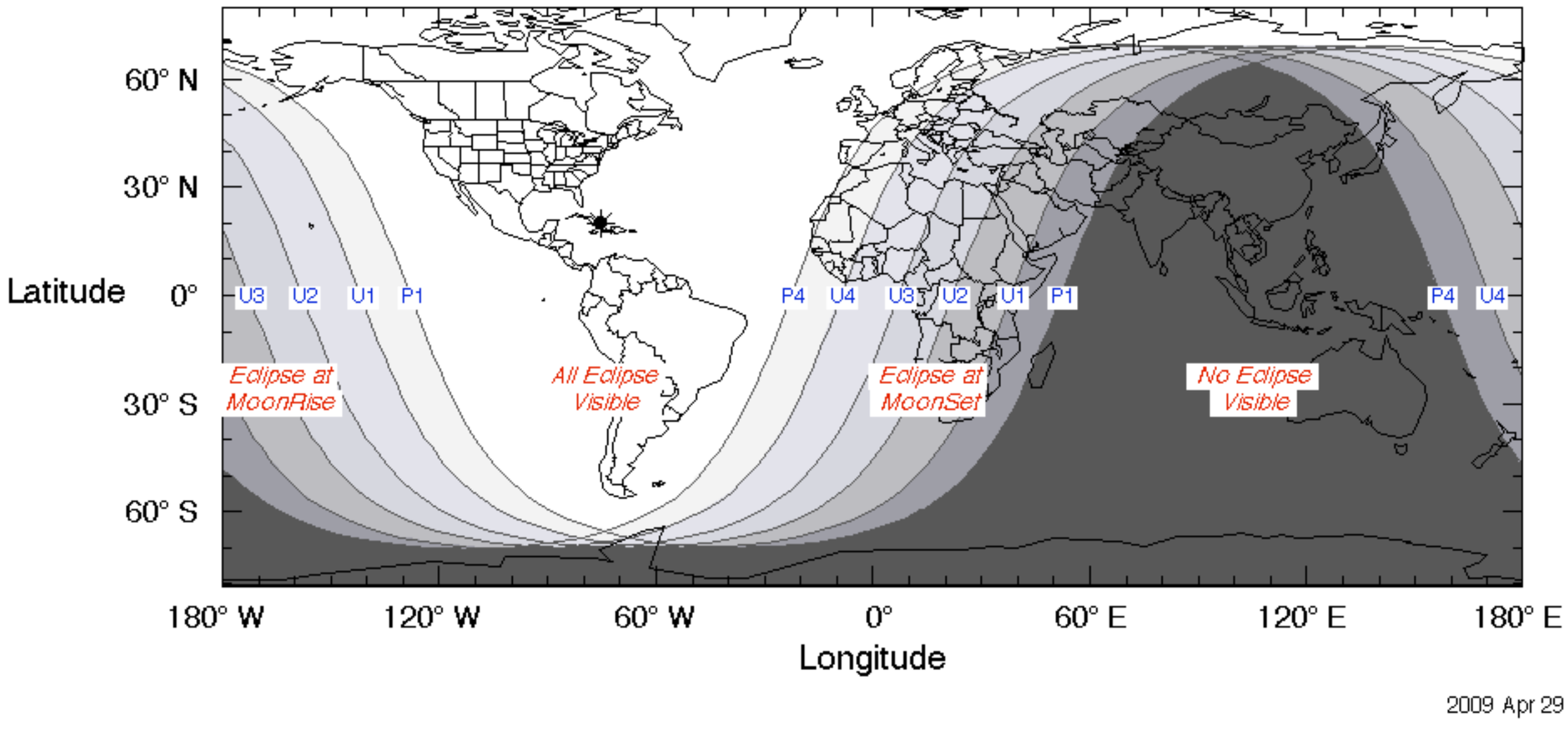
<u>Eclipse Durations</u>

Penumbral = 05h11m30s
Umbral = 03h16m45s
Total = 01h01m59s

ΔT = 71 s
Rule = CdT (Danjon)
Eph. = VSOP87/ELP2000-85

<u>Eclipse Contacts</u>

P1 = 02:36:30 UT	9:37 p.m. 20th
U1 = 03:33:54 UT	10:34 p.m. 20th
U2 = 04:41:17 UT	11:41 p.m. 20th
U3 = 05:43:16 UT	12:43 a.m. 21st
U4 = 06:50:39 UT	1:51 a.m. 21st
P4 = 07:48:00 UT	2:48 a.m. 21st



2009 Apr 29