

Total Lunar Eclipse of 2028 Dec 31

Ecliptic Conjunction = 16:49:40.9 TD (= 16:48:24.0 UT)

Greatest Eclipse = 16:53:15.1 TD (= 16:51:58.2 UT)

Penumbral Magnitude = 2.2742

P. Radius = 1.2511°

Gamma = 0.3258

Umbral Magnitude = 1.2463

U. Radius = 0.7089°

Axis = 0.3153°

Saros Series = 125

Member = 49 of 72

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 18h45m53.7s

Dec. = -23°01'00.4"

S.D. = 00°16'15.9"

H.P. = 00°00'08.9"

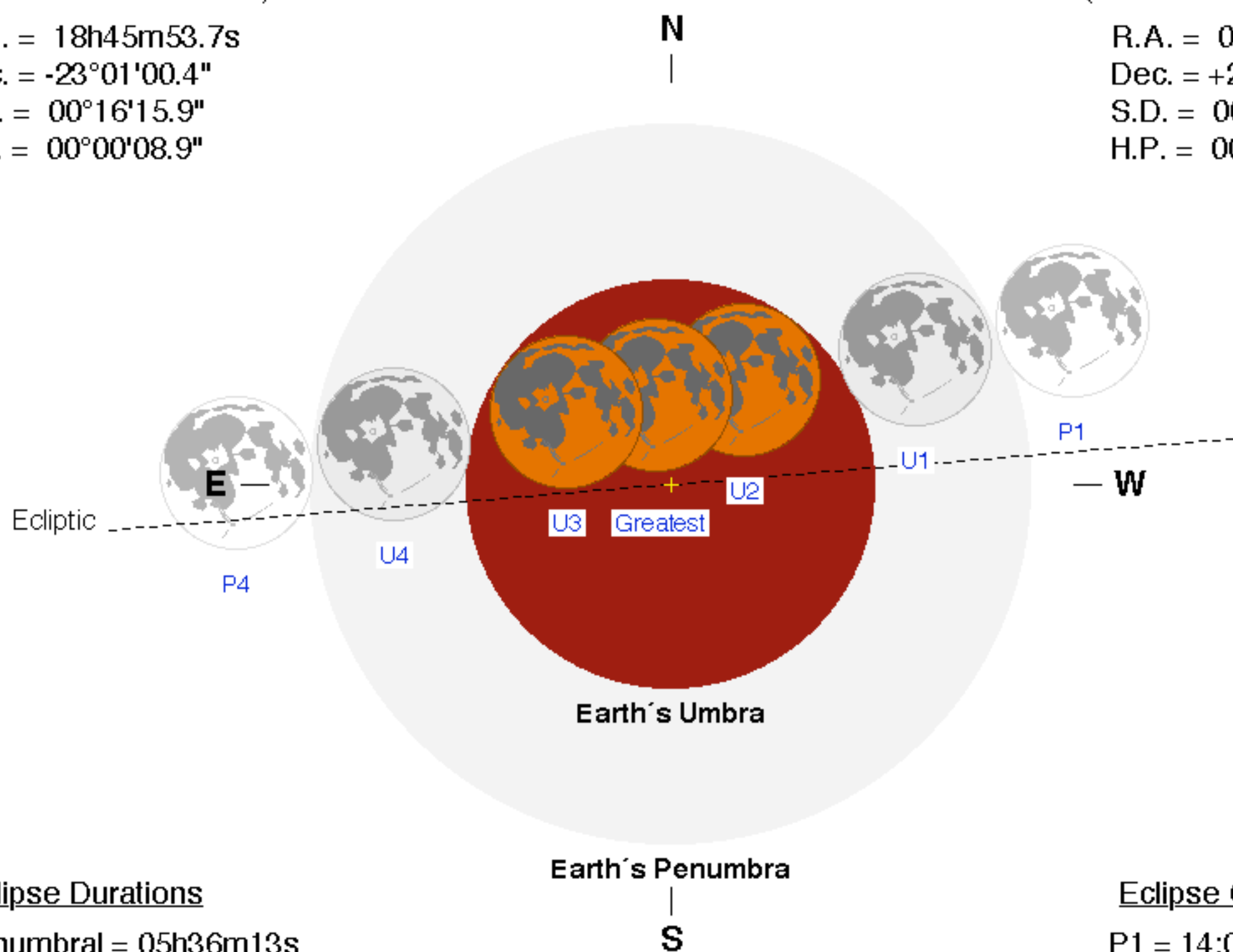
Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 06h46m08.4s

Dec. = +23°19'37.5"

S.D. = 00°15'49.4"

H.P. = 00°58'04.3"



Eclipse Durations

Penumbral = 05h36m13s

Umbral = 03h28m49s

Total = 01h11m20s

$\Delta T = 77$ s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

Eclipse Contacts

P1 = 14:03:49 UT

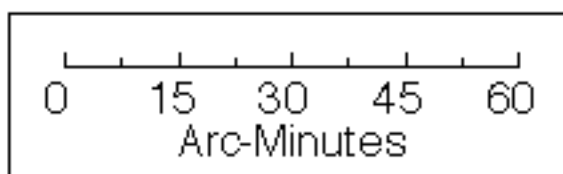
U1 = 15:07:35 UT

U2 = 16:16:19 UT

U3 = 17:27:40 UT

U4 = 18:36:24 UT

P4 = 19:40:02 UT



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

