ECLIPSES DURING 2023

By Fred Espenak

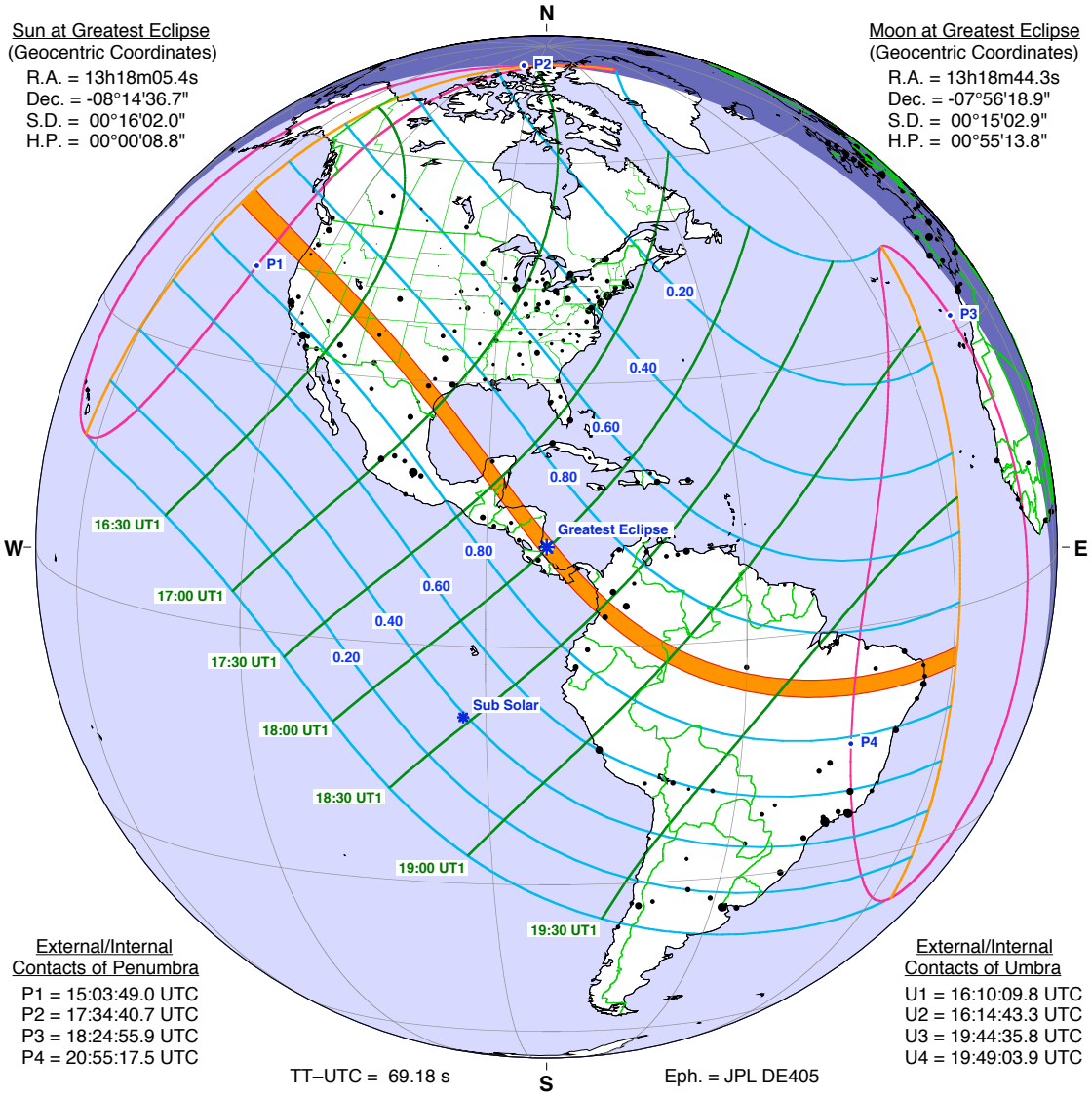
Figure 4

Annular Solar Eclipse of 2023 Oct 14

Greatest Eclipse = 18:00:40.6 TT (= 17:59:31.4 UTC)

Eclipse Magnitude = 0.9520 Saros Series = 134

Gamma = 0.3753 Saros Member = 44 of 71



Sun at Greatest Eclipse
(Geocentric Coordinates)
R.A. = 13h18m05.4s
Dec. = -08°14'36.7"
S.D. = 00°16'02.0"
H.P. = 00°00'08.8"

Moon at Greatest Eclipse
(Geocentric Coordinates)
R.A. = 13h18m44.3s
Dec. = -07°56'18.9"
S.D. = 00°15'02.9"
H.P. = 00°55'13.8"

External/Internal Contacts of Penumbra
P1 = 15:03:49.0 UTC
P2 = 17:34:40.7 UTC
P3 = 18:24:55.9 UTC
P4 = 20:55:17.5 UTC

External/Internal Contacts of Umbra
U1 = 16:10:09.8 UTC
U2 = 16:14:43.3 UTC
U3 = 19:44:35.8 UTC
U4 = 19:49:03.9 UTC

TT–UTC = 69.18 s

Eph. = JPL DE405

Circumstances at Greatest Eclipse: 17:59:31.4 UTC

Lat. = 11°22.1'N Sun Alt. = 67.9°

Long. = 083°06.1'W Sun Azm. = 208.0°

Path Width = 187.4 km Duration = 05m17.2s

Circumstances at Greatest Duration: 18:13:11.0 UTC

Lat. = 08°14.6'N Sun Alt. = 66.8°

Long. = 080°24.1'W Sun Azm. = 225.1°

Path Width = 191.1 km Duration = 05m17.8s

0 1000 2000 3000 4000 5000
Kilometers

Adapted from ***21st Century Canon of Solar Eclipses,*** Fred Espenak, 2016.