

Total Solar Eclipse of 0418 Jul 19

Ecliptic Conjunction = 12:43:25.6 TD (= 10:55:21.1 UT)

Greatest Eclipse = 12:39:47.5 TD (= 10:51:43.0 UT)

Eclipse Magnitude = 1.0459 Gamma = 0.3481

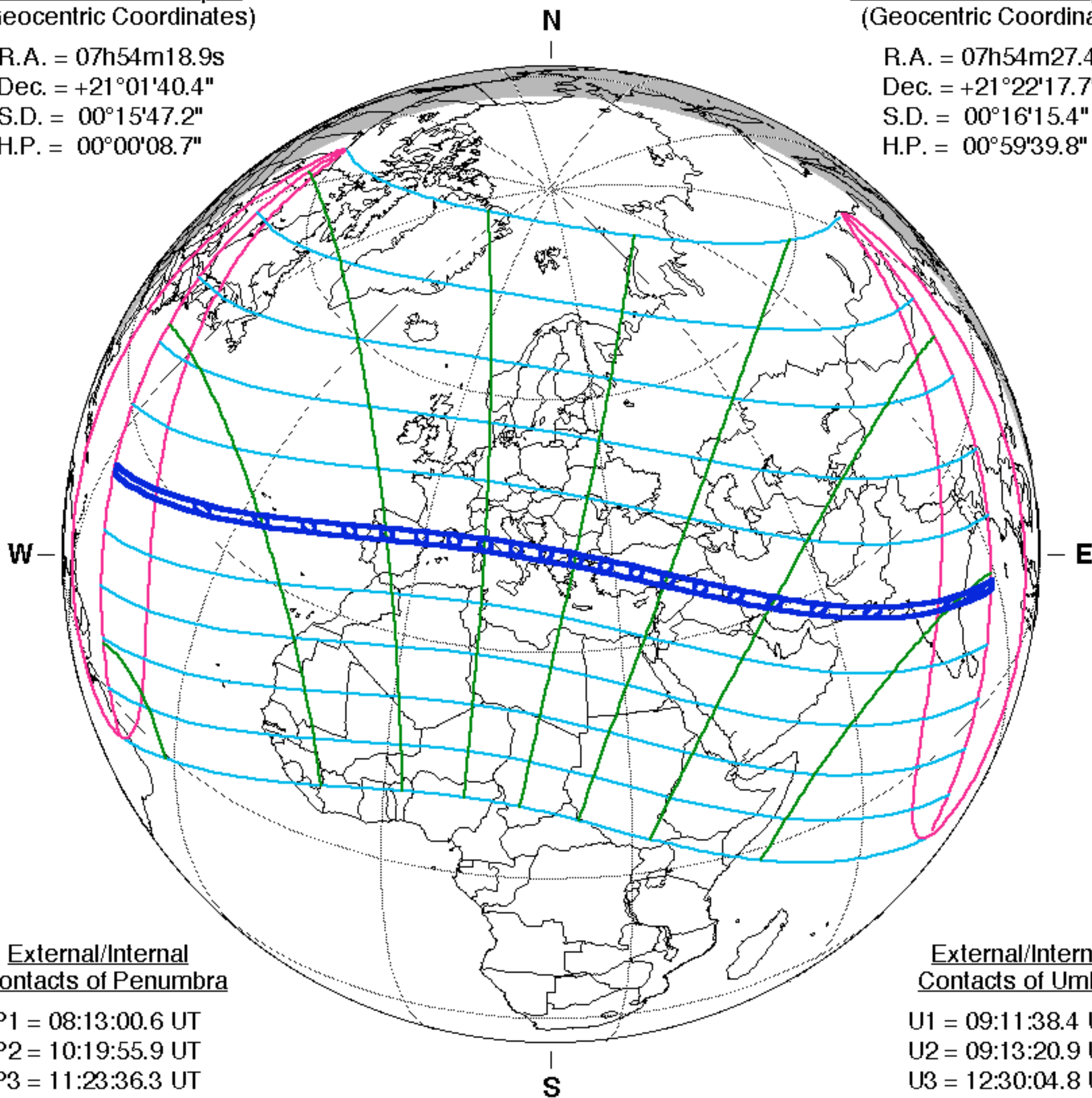
Saros Series = 91 Member = 33 of 75

Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 07h54m18.9s
Dec. = +21°01'40.4"
S.D. = 00°15'47.2"
H.P. = 00°00'08.7"

Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 07h54m27.4s
Dec. = +21°22'17.7"
S.D. = 00°16'15.4"
H.P. = 00°59'39.8"



External/Internal Contacts of Penumbra

P1 = 08:13:00.6 UT
P2 = 10:19:55.9 UT
P3 = 11:23:36.3 UT
P4 = 13:30:22.3 UT

External/Internal Contacts of Umbra

U1 = 09:11:38.4 UT
U2 = 09:13:20.9 UT
U3 = 12:30:04.8 UT
U4 = 12:31:51.7 UT

Constants & Ephemeris

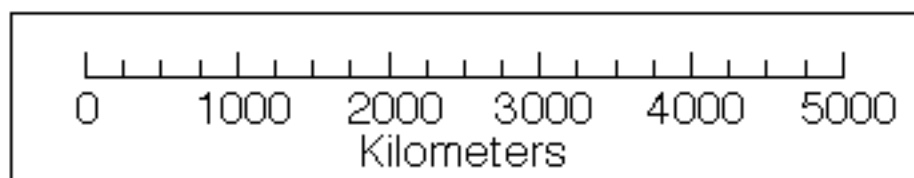
$\Delta T = 6484.5$ s
 $k1 = 0.2724880$
 $k2 = 0.2722810$
 $\Delta b = 0.0''$ $\Delta l = 0.0''$
Eph. = VSOP87/ELP2000-82

Local Circumstances at Greatest Eclipse

Lat. = 41°30.4'N Sun Alt. = 69.4°
Long. = 020°23.4'E Sun Azm. = 186.7°
Path Width = 163.3 km Duration = 03m51.7s

Geocentric Libration (Optical + Physical)

$l = -3.88^\circ$
 $b = -0.41^\circ$
 $c = 12.59^\circ$



Brown Lun. No. = -18607

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eclipse.gsfc.nasa.gov/eclipse.html