

FIGURE 4

Total Solar Eclipse of 2012 Nov 13

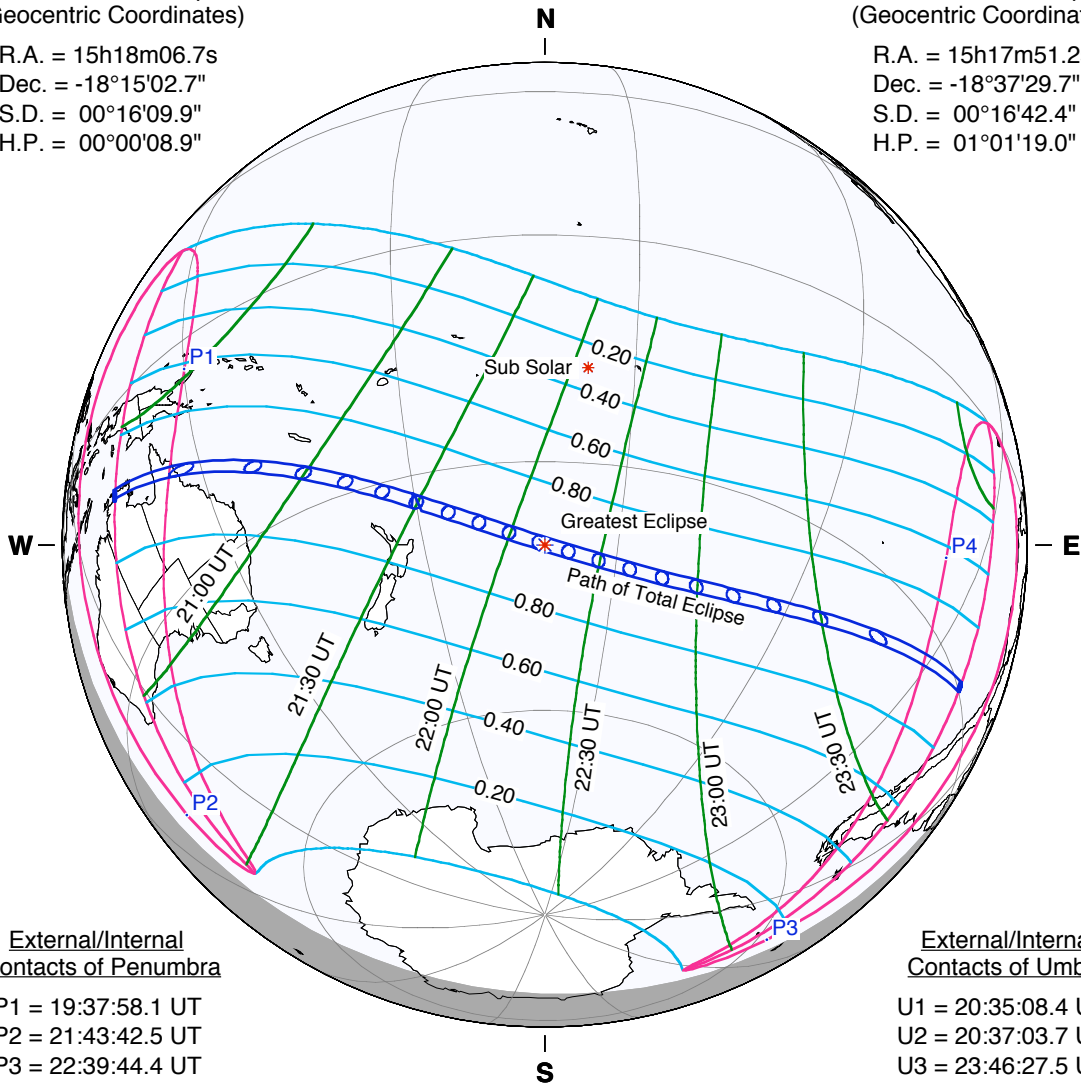
Ecliptic Conjunction = 22:09:06.6 TD (= 22:07:59.8 UT)
 Greatest Eclipse = 22:12:55.0 TD (= 22:11:48.2 UT)
 Eclipse Magnitude = 1.0500 Gamma = -0.3719
 Saros Series = 133 Member = 45 of 72

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 15h18m06.7s
 Dec. = -18°15'02.7"
 S.D. = 00°16'09.9"
 H.P. = 00°00'08.9"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 15h17m51.2s
 Dec. = -18°37'29.7"
 S.D. = 00°16'42.4"
 H.P. = 01°01'19.0"



External/Internal Contacts of Penumbra

P1 = 19:37:58.1 UT
 P2 = 21:43:42.5 UT
 P3 = 22:39:44.4 UT
 P4 = 00:45:34.1 UT

External/Internal Contacts of Umbra

U1 = 20:35:08.4 UT
 U2 = 20:37:03.7 UT
 U3 = 23:46:27.5 UT
 U4 = 23:48:24.1 UT

Constants & Ephemeris

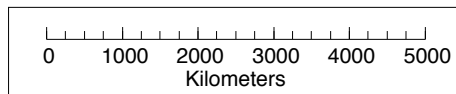
$\Delta T = 66.8$ s
 $k1 = 0.2724880$
 $k2 = 0.2722810$
 $\Delta b = 0.0''$ $\Delta l = 0.0''$
 Eph. = VSOP87/ELP2000-85

Local Circumstances at Greatest Eclipse

Lat. = 39°57.6'S Sun Alt. = 67.9°
 Long. = 161°20.2'W Sun Azm. = 11.4°
 Path Width = 179.0 km Duration = 04m02.2s

Geocentric Libration
(Optical + Physical)

$l = -0.97^\circ$
 $b = 0.52^\circ$
 $c = 16.49^\circ$



Brown Lun. No. = 1112

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eclipse.gsfc.nasa.gov/eclipse.html

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