

FIGURE 1: ORTHOGRAPHIC PROJECTION MAP OF THE ECLIPSE PATH

Total Solar Eclipse of 2009 Jul 22

Ecliptic Conjunction = 02:35:41.9 TD (= 02:34:36.0 UT)

Greatest Eclipse = 02:36:24.4 TD (= 02:35:18.5 UT)

Eclipse Magnitude = 1.0799 Gamma = 0.0698

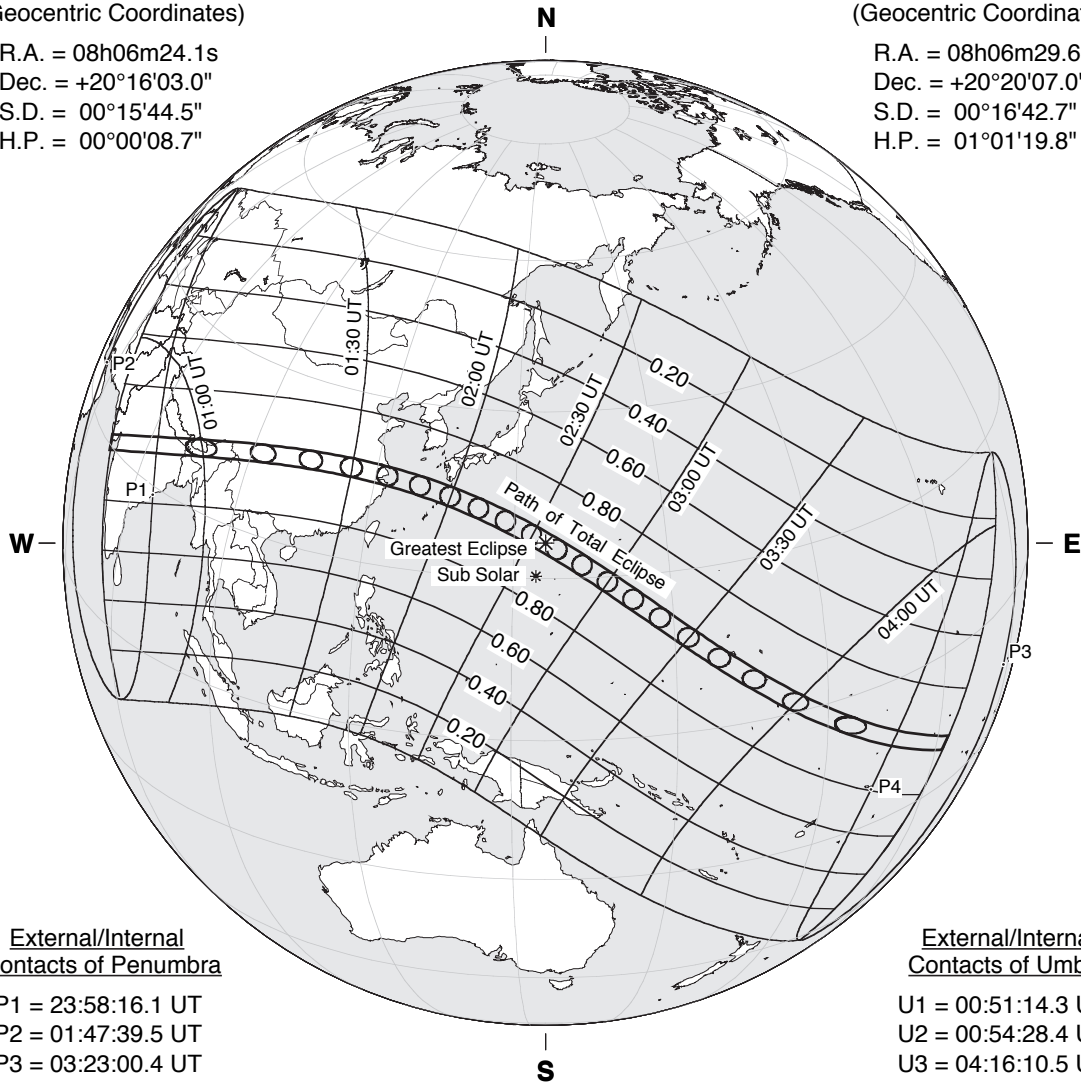
Saros Series = 136 Member = 37 of 71

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 08h06m24.1s
Dec. = +20°16'03.0"
S.D. = 00°15'44.5"
H.P. = 00°00'08.7"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 08h06m29.6s
Dec. = +20°20'07.0"
S.D. = 00°16'42.7"
H.P. = 01°01'19.8"



External/Internal
Contacts of Penumbra

P1 = 23:58:16.1 UT
P2 = 01:47:39.5 UT
P3 = 03:23:00.4 UT
P4 = 05:12:22.6 UT

External/Internal
Contacts of Umbra

U1 = 00:51:14.3 UT
U2 = 00:54:28.4 UT
U3 = 04:16:10.5 UT
U4 = 04:19:23.9 UT

Constants & Ephemeris

$\Delta T = 65.9$ s
k1 = 0.2725076
k2 = 0.2722810
 $\Delta b = 0.0''$ $\Delta l = 0.0''$
Eph. = DE200/LE200

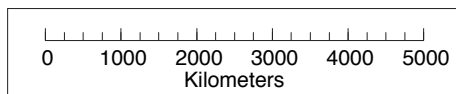
Local Circumstances at Greatest Eclipse

Lat. = 24°13.2'N Sun Alt. = 85.9°
Long. = 144°07.0'E Sun Azm. = 197.6°
Path Width = 258.4 km Duration = 06m38.8s

Geocentric Libration
(Optical + Physical)

l = 0.67°
b = -0.09°
c = 10.53°

Brown Lun. No. = 1071



NASA 2009 Eclipse Bulletin, Espenak & Anderson