

# Total Solar Eclipse of 2016 Mar 09

Greatest Eclipse = 01:58:19.5 TD (= 01:57:11.4 UT1)

Eclipse Magnitude = 1.0450

Saros Series = 130

Gamma = 0.2609

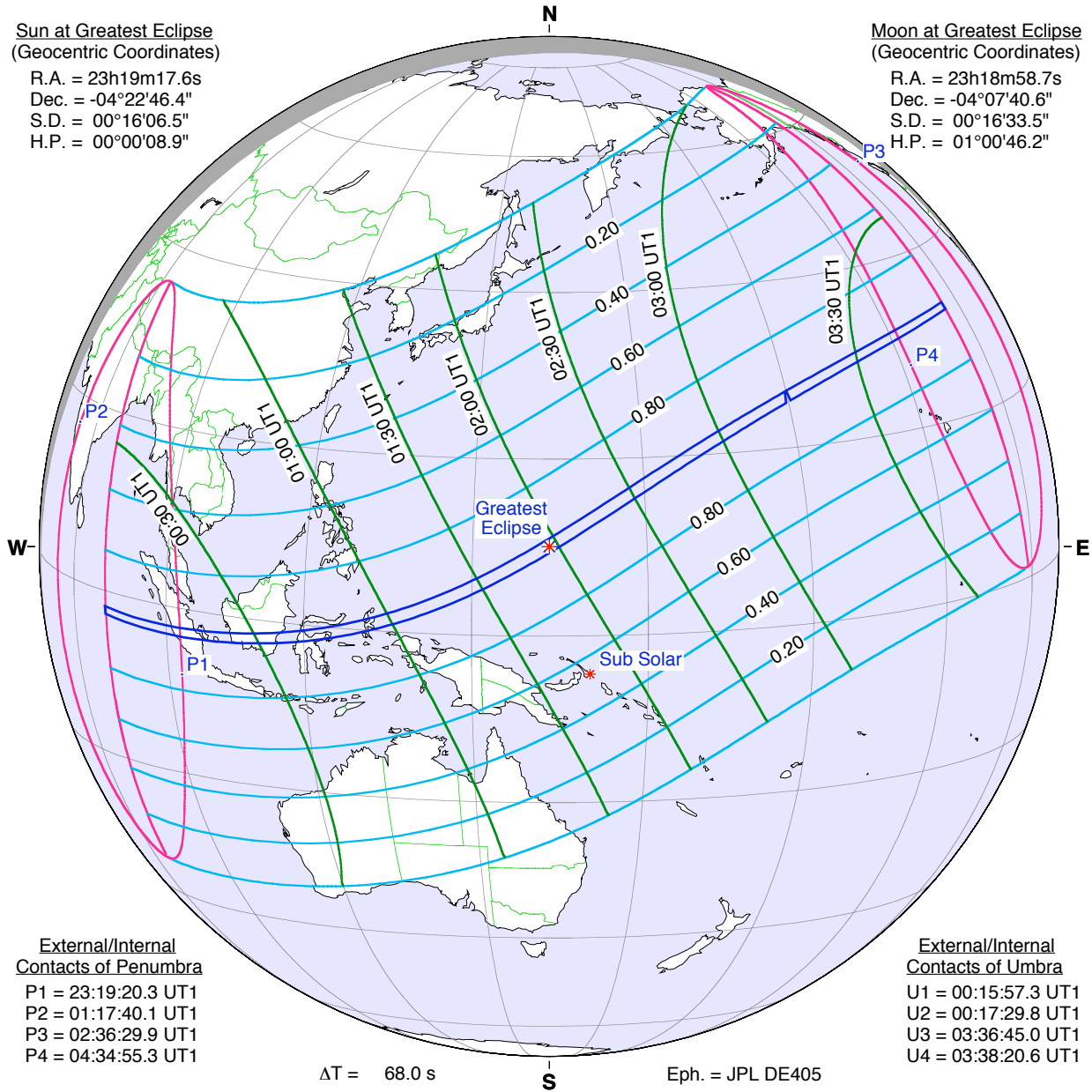
Saros Member = 52 of 73

**Sun at Greatest Eclipse**  
(Geocentric Coordinates)

R.A. = 23h19m17.6s  
Dec. = -04°22'46.4"  
S.D. = 00°16'06.5"  
H.P. = 00°00'08.9"

**Moon at Greatest Eclipse**  
(Geocentric Coordinates)

R.A. = 23h18m58.7s  
Dec. = -04°07'40.6"  
S.D. = 00°16'33.5"  
H.P. = 01°00'46.2"



**External/Internal**  
**Contacts of Penumbra**

P1 = 23:19:20.3 UT1  
P2 = 01:17:40.1 UT1  
P3 = 02:36:29.9 UT1  
P4 = 04:34:55.3 UT1

**External/Internal**  
**Contacts of Umbra**

U1 = 00:15:57.3 UT1  
U2 = 00:17:29.8 UT1  
U3 = 03:36:45.0 UT1  
U4 = 03:38:20.6 UT1

$\Delta T = 68.0$  s

Eph. = JPL DE405

**Circumstances at Greatest Eclipse: 01:57:11.4 UT1**

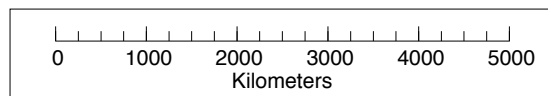
Lat. = 10°07.3'N  
Long. = 148°47.6'E  
Path Width = 155.1 km

Sun Alt. = 74.8°  
Sun Azm. = 162.5°  
Duration = 04m09.5s

**Circumstances at Greatest Duration: 01:56:51.9 UT1**

Lat. = 10°04.0'N  
Long. = 148°42.1'E  
Path Width = 155.1 km

Sun Alt. = 74.8°  
Sun Azm. = 161.8°  
Duration = 04m09.5s



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