

# Partial Solar Eclipse of 2011 Jan 04

Ecliptic Conjunction = 09:03:42.7 TD (= 09:02:35.6 UT)

Greatest Eclipse = 08:51:42.0 TD (= 08:50:34.9 UT)

Eclipse Magnitude = 0.8576      Gamma = 1.0626

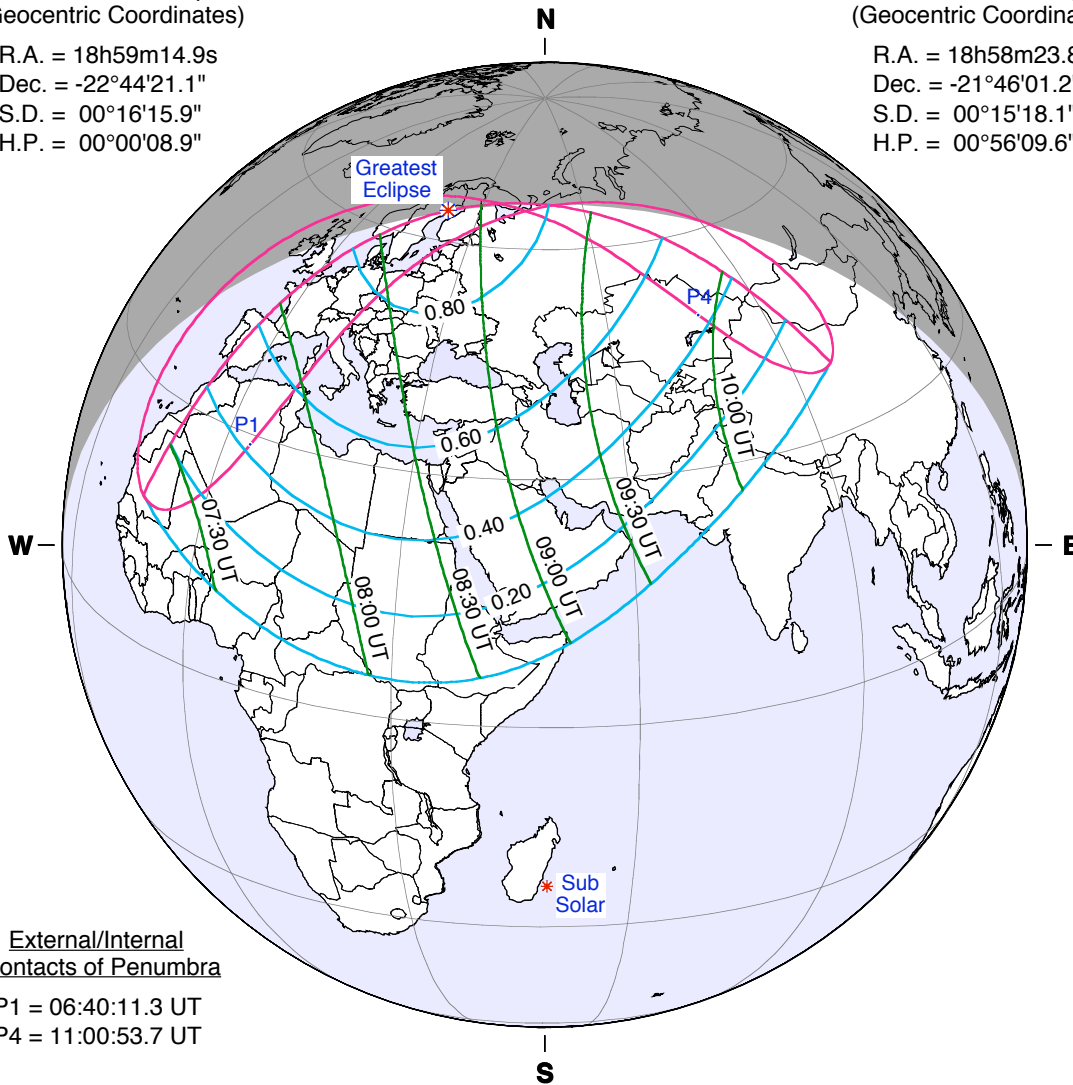
Saros Series = 151      Member = 14 of 72

Sun at Greatest Eclipse  
(Geocentric Coordinates)

R.A. = 18h59m14.9s  
Dec. = -22°44'21.1"  
S.D. = 00°16'15.9"  
H.P. = 00°00'08.9"

Moon at Greatest Eclipse  
(Geocentric Coordinates)

R.A. = 18h58m23.8s  
Dec. = -21°46'01.2"  
S.D. = 00°15'18.1"  
H.P. = 00°56'09.6"

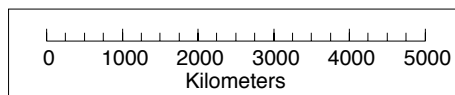


External/Internal  
Contacts of Penumbra

P1 = 06:40:11.3 UT  
P4 = 11:00:53.7 UT

Constants & Ephemeris

$\Delta T = 67.1$  s  
 $k1 = 0.2724880$   
 $k2 = 0.2722810$   
 $\Delta b = 0.0''$      $\Delta l = 0.0''$   
Eph. = VSOP87/ELP2000-85



F. Espenak, NASA's GSFC  
[eclipse.gsfc.nasa.gov/eclipse.html](http://eclipse.gsfc.nasa.gov/eclipse.html)

Geocentric Libration  
(Optical + Physical)

$l = 4.63^\circ$   
 $b = -1.30^\circ$   
 $c = -4.24^\circ$   
Brown Lun. No. = 1089