

# Annular Solar Eclipse of -0423 Mar 21

Ecliptic Conjunction = 12:07:06.9 TD (= 07:43:29.9 UT)

Greatest Eclipse = 12:18:06.1 TD (= 07:54:29.1 UT)

Eclipse Magnitude = 0.9430      Gamma = 0.9433

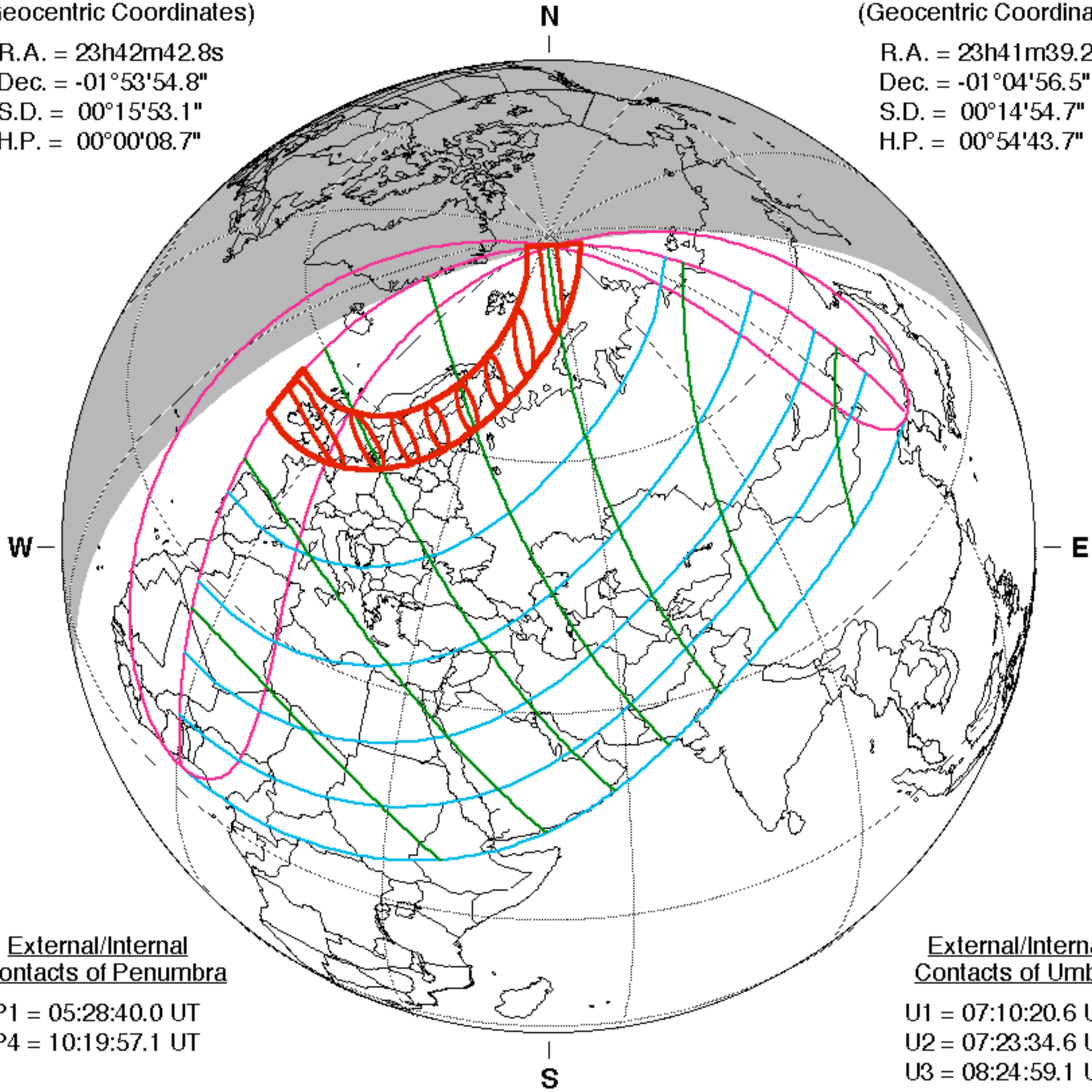
Saros Series = 42      Member = 65 of 72

Sun at Greatest Eclipse  
(Geocentric Coordinates)

R.A. = 23h42m42.8s  
Dec. = -01°53'54.8"  
S.D. = 00°15'53.1"  
H.P. = 00°00'08.7"

Moon at Greatest Eclipse  
(Geocentric Coordinates)

R.A. = 23h41m39.2s  
Dec. = -01°04'56.5"  
S.D. = 00°14'54.7"  
H.P. = 00°54'43.7"



External/Internal  
Contacts of Penumbra

P1 = 05:28:40.0 UT  
P4 = 10:19:57.1 UT

External/Internal  
Contacts of Umbra

U1 = 07:10:20.6 UT  
U2 = 07:23:34.6 UT  
U3 = 08:24:59.1 UT  
U4 = 08:38:09.7 UT

Local Circumstances at Greatest Eclipse

Lat. = 62°49.0'N      Sun Alt. = 18.8°  
Long. = 024°18.0'E      Sun Azm. = 137.8°

Path Width = 639.6 km      Duration = 04m39.3s

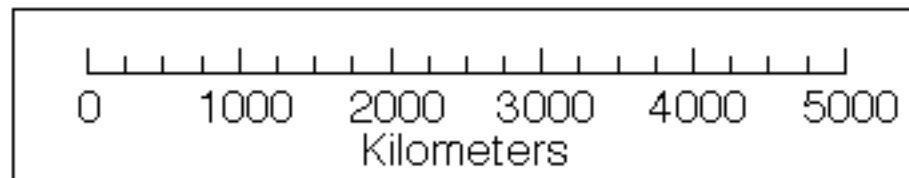
Constants & Ephemeris

$\Delta T = 15817.0$  s  
k1 = 0.2724880  
k2 = 0.2722810  
 $\Delta b = 0.0''$      $\Delta l = 0.0''$   
Eph. = VSOP87/ELP2000-82

Geocentric Libration  
(Optical + Physical)

l = -3.52°  
b = -1.12°  
c = -25.19°

Brown Lun. No. = -29013



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[eclipse.gsfc.nasa.gov/eclipse.html](http://eclipse.gsfc.nasa.gov/eclipse.html)