

# Annular Solar Eclipse of 1879 Jan 22

Ecliptic Conjunction = 11:51:05.6 TD (= 11:51:10.4 UT)

Greatest Eclipse = 11:53:08.1 TD (= 11:53:13.0 UT)

Eclipse Magnitude = 0.9700      Gamma = -0.1824

Saros Series = 129      Member = 44 of 80

## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 20h17m38.6s

Dec. = -19°41'46.4"

S.D. = 00°16'14.9"

H.P. = 00°00'08.9"

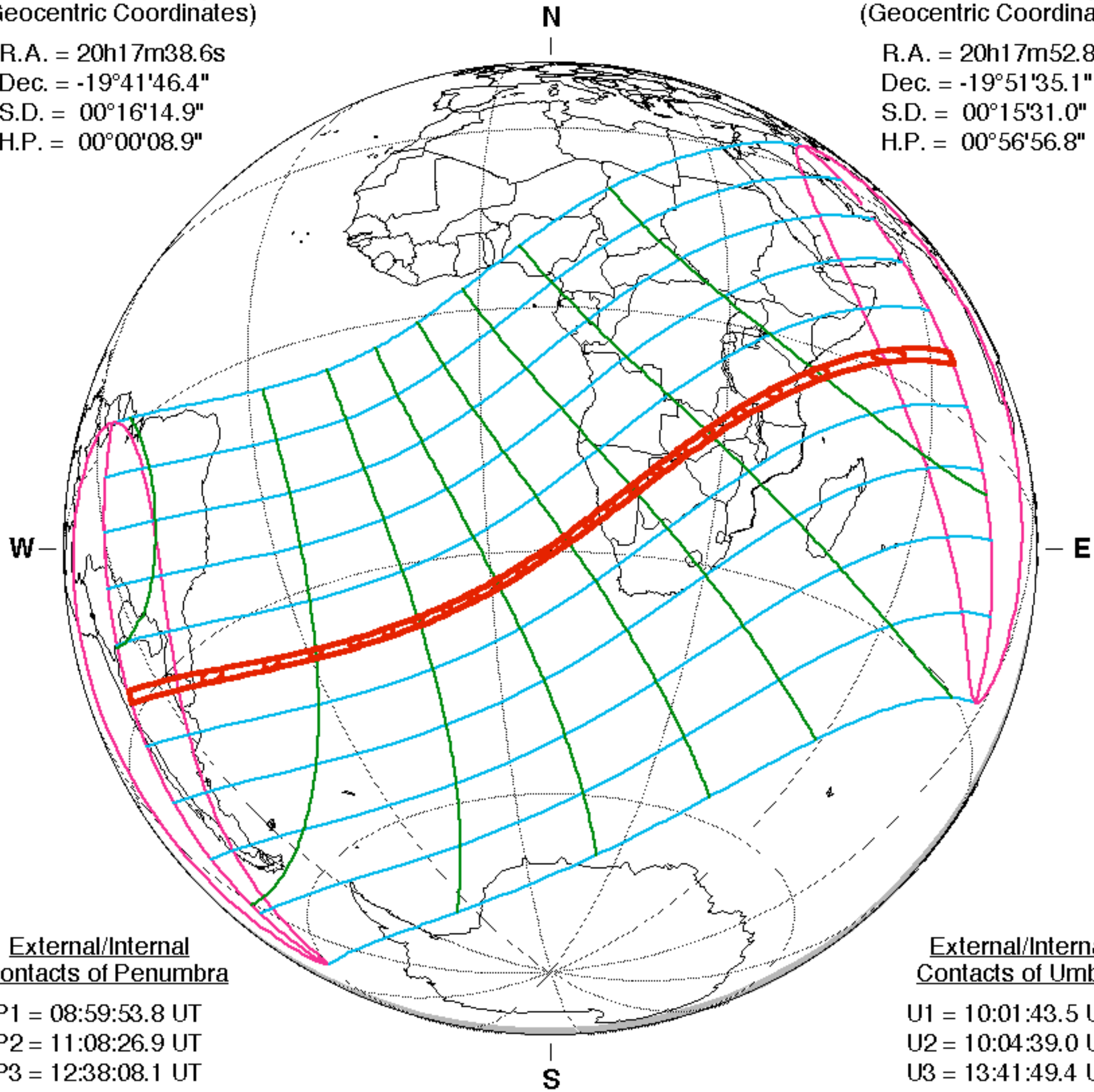
## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 20h17m52.8s

Dec. = -19°51'35.1"

S.D. = 00°15'31.0"

H.P. = 00°56'56.8"



## External/Internal Contacts of Penumbra

P1 = 08:59:53.8 UT

P2 = 11:08:26.9 UT

P3 = 12:38:08.1 UT

P4 = 14:46:41.7 UT

## External/Internal Contacts of Umbra

U1 = 10:01:43.5 UT

U2 = 10:04:39.0 UT

U3 = 13:41:49.4 UT

U4 = 13:44:50.7 UT

## Local Circumstances at Greatest Eclipse

Lat. = 29°46.8'S

Sun Alt. = 79.3°

Long. = 008°30.6'E

Sun Azm. = 340.0°

Path Width = 109.5 km      Duration = 03m03.2s

## Constants & Ephemeris

$\Delta T = -4.9$  s

$k_1 = 0.2724880$

$k_2 = 0.2722810$

$\Delta b = 0.0''$        $\Delta l = 0.0''$

Eph. = VSOP87/ELP2000-82

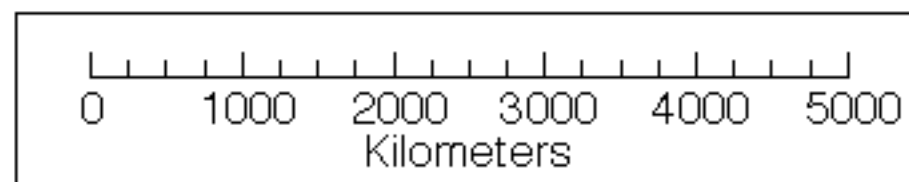
## Geocentric Libration (Optical + Physical)

$l = 4.88^\circ$

$b = 0.22^\circ$

$c = -11.48^\circ$

Brown Lun. No. = -543



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