

# Total Lunar Eclipse of 2083 Jul 29

Ecliptic Conjunction = 01:03:18.2 TD (= 01:00:33.5 UT)

Greatest Eclipse = 01:05:34.2 TD (= 01:02:49.5 UT)

Penumbral Magnitude = 2.4520

P. Radius = 1.2633°

Gamma = -0.2143

Umbral Magnitude = 1.4773

U. Radius = 0.7383°

Axis = 0.2118°

Saros Series = 130

Member = 38 of 72

## Sun at Greatest Eclipse (Geocentric Coordinates)

R.A. = 08h34m15.1s

Dec. = +18°43'08.7"

S.D. = 00°15'45.0"

H.P. = 00°00'08.7"

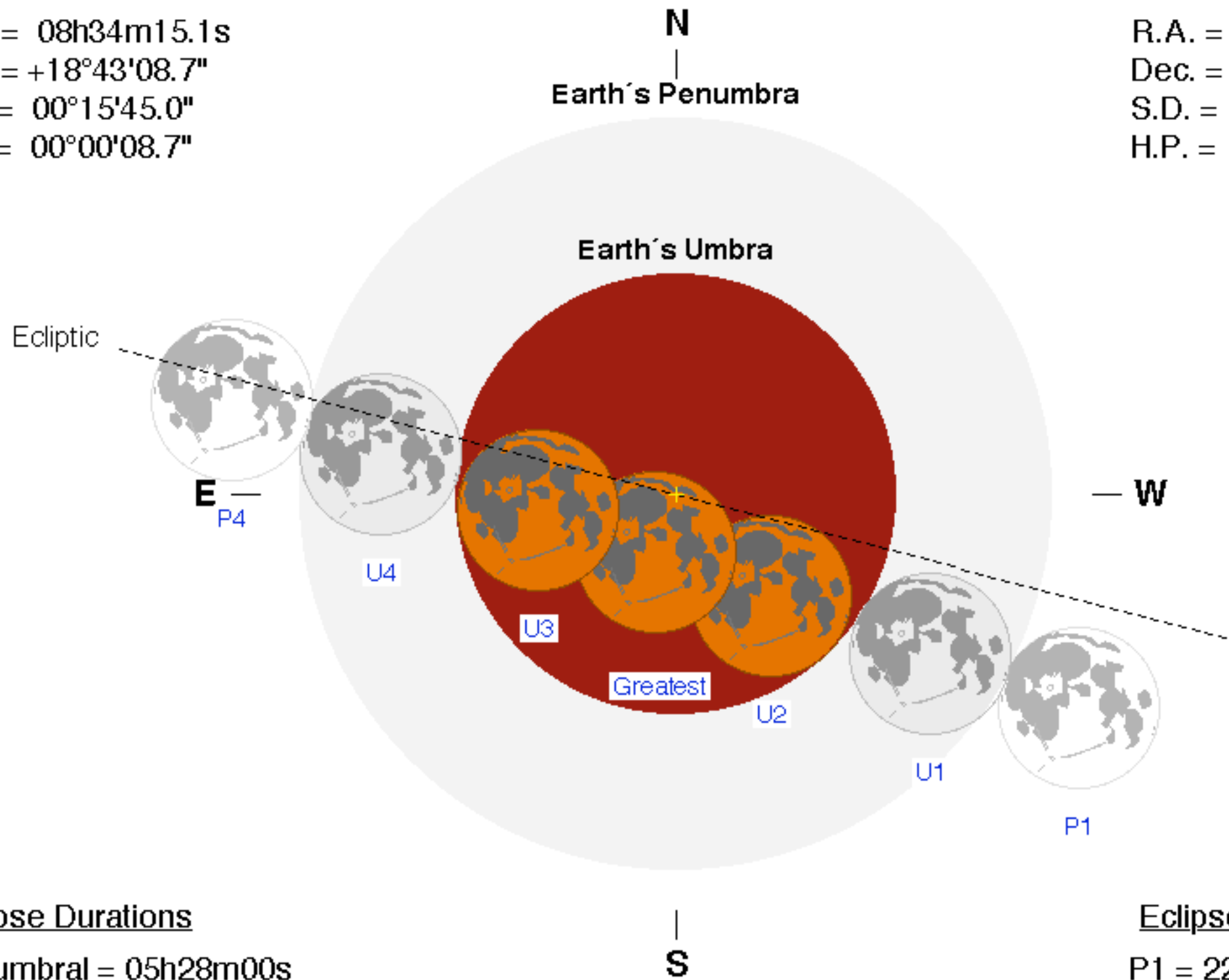
## Moon at Greatest Eclipse (Geocentric Coordinates)

R.A. = 20h34m33.5s

Dec. = -18°55'05.1"

S.D. = 00°16'09.6"

H.P. = 00°59'18.6"



## Eclipse Durations

Penumbral = 05h28m00s

Umbral = 03h32m53s

Total = 01h30m25s

$\Delta T = 165$  s

Rule = CdT (Danjon)

Eph. = VSOP87/ELP2000-85

## Eclipse Contacts

P1 = 22:18:52 UT

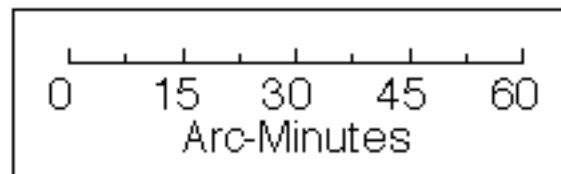
U1 = 23:16:22 UT

U2 = 00:17:36 UT

U3 = 01:48:01 UT

U4 = 02:49:15 UT

P4 = 03:46:52 UT



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

