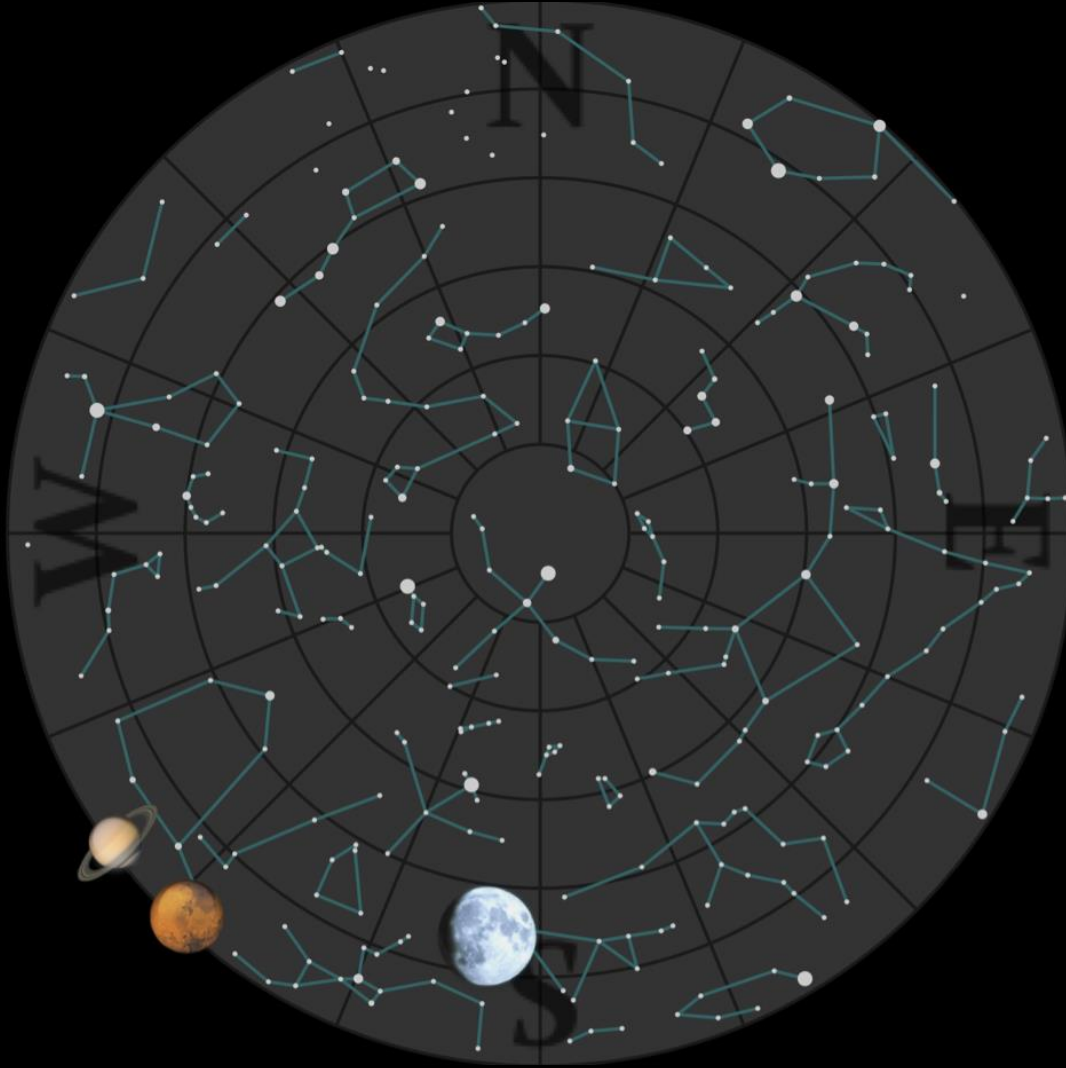


What's Up?

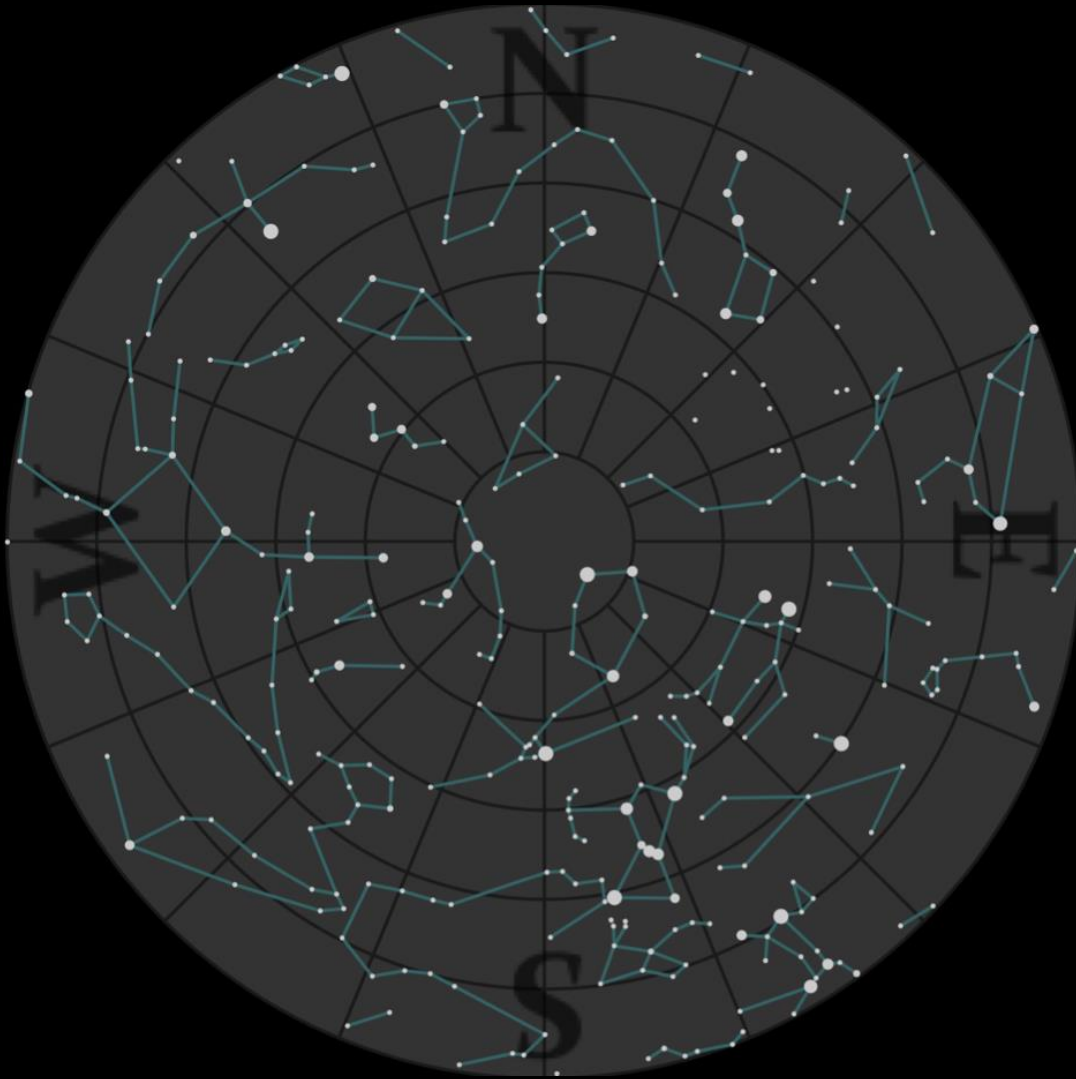
2016 September 12 to October 10

Bill Barton, FRAS

- The Sky 22:00 Tonight



- The Sky 06:00
Tomorrow Morning



Inner Solar System

- Sun
 - Heading South
 - Was eclipsed by the Moon on September 01 (only visible from Central Africa)
 - Autumn Equinox at 14:21UT on September 22
- Mercury
 - Inferior Conjunction on September 12 (our side of the Sun)
 - In the morning sky this period
 - Best seen from mid September till mid October
 - Greatest elongation West on September 28 (18°)
- Venus
 - In evening sky moving away from the Sun for the rest of this year
 - Getting increasingly easier to see

Earth

- Moon
 - Full, September 16 (Harvest Moon)
 - Last Quarter, September 23
 - New, October 01
 - First Quarter, October 09
 - Lunar Occultations, 10 this period, nine of which are dark limb reappearances
- Eclipses
 - Partial penumbral Lunar September 16 (eclipse at moonrise from UK)
- Meteors
 - Only minor activity this period

Penumbral Lunar Eclipse of 2016 Sep 16

Greatest Eclipse = 18:55:27.3 TD (= 18:54:17.5 UT1)

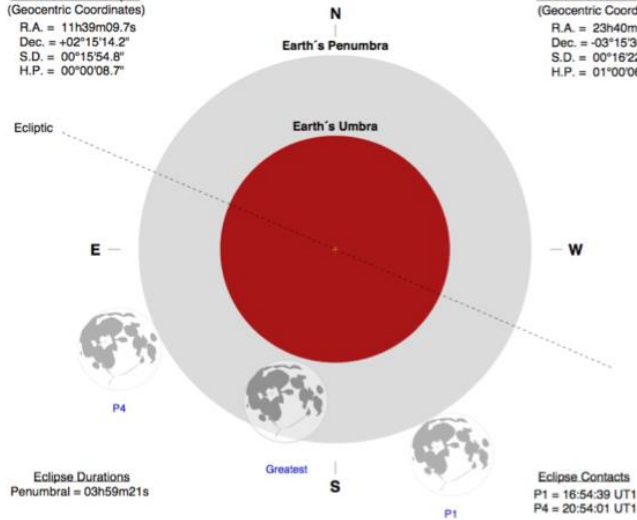
Penumbral Magnitude = 0.9080
Umbral Magnitude = -0.0635

Gamma = -1.0549
Axis = 1.0568°

Saros Series = 147
Saros Member = 9 of 71

Sun at Greatest Eclipse
(Geocentric Coordinates)
R.A. = 11h39m09.7s
Dec. = +02°15'14.2"
S.D. = 00°15'54.8"
H.P. = 00°00'08.7"

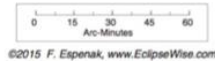
Moon at Greatest Eclipse
(Geocentric Coordinates)
R.A. = 23h40m27.3s
Dec. = -03°15'36.5"
S.D. = 00°16'22.8"
H.P. = 01°00'06.8"



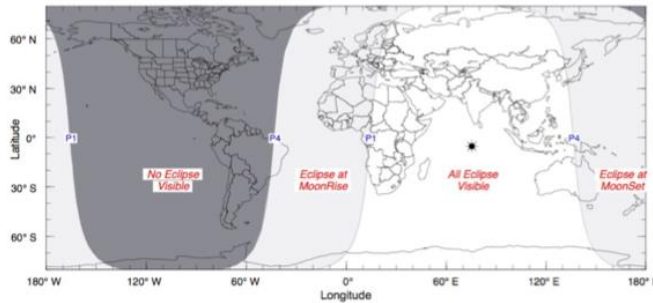
Eclipse Durations
Penumbral = 03h59m21s

Eclipse Contacts
P1 = 16:54:39 UT1
P4 = 20:54:01 UT1

Eph. = JPL DE405
Rule = Danjon
 $\Delta T = 70$ s



©2015 F. Espenak, www.EclipseWise.com



- September 16 Eclipse of the Moon

- 1st contact
16:54UT
(17:54BST)

- Moonrise 18:13UT
(19:13BST)

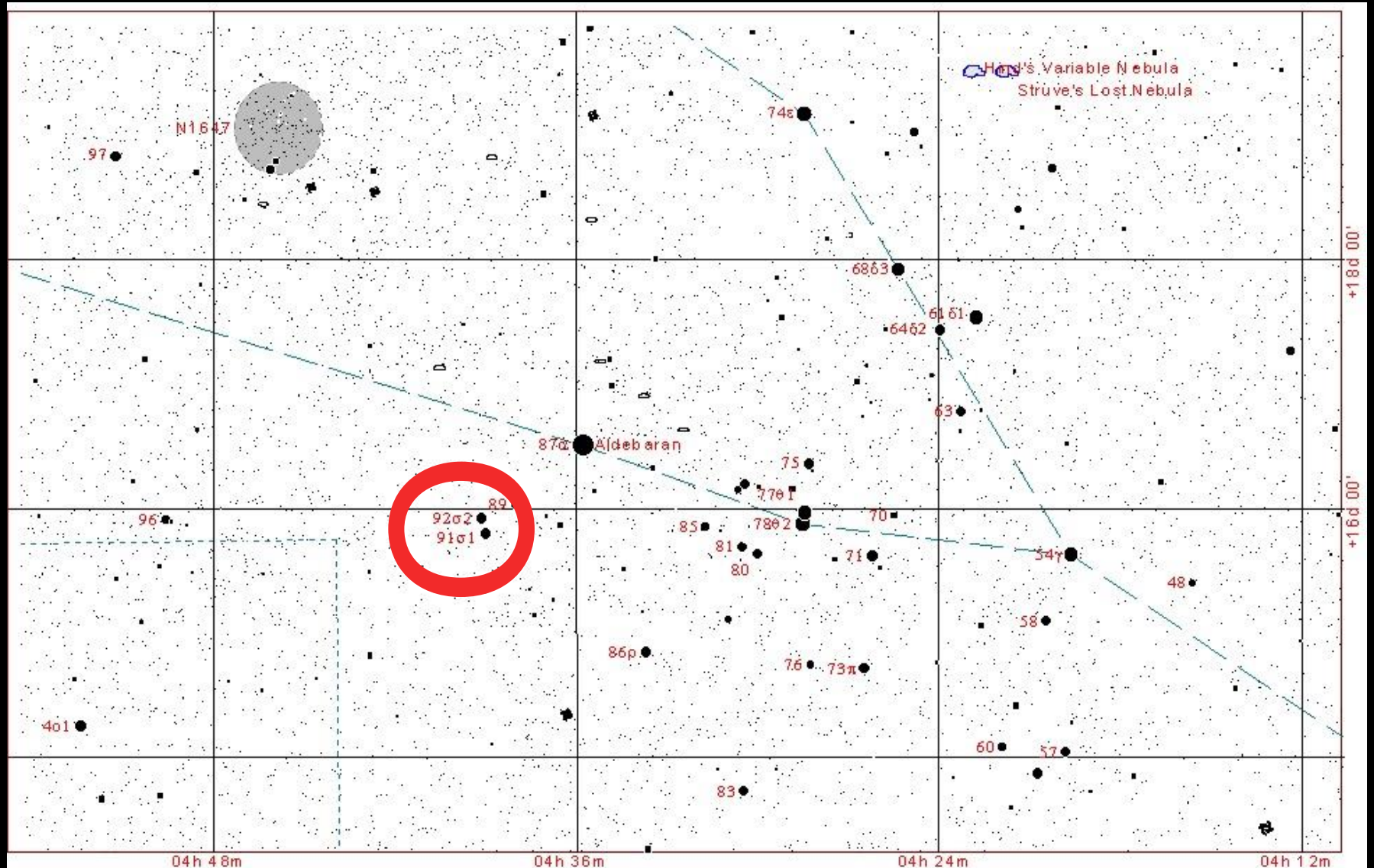
- 4th contact
20:54UT
(21:54BST)

Lunar Occultations

- Wednesday September 21st/Thursday 22nd
- Moon phase, five days past 'full' rising around 21:00UT (22:00BST)
- 89 Tauri (mag 5.8) dark limb reappearance at 22:56UT (23:56BST)
- σ^1 Tauri (mag 5.1) dark limb reappearance at 23:06UT (00:06BST)
- σ^2 Tauri (mag 4.7) dark limb reappearance at 23:19UT (00:19BST)

These stars are in the 'Hyades' cluster near Aldebaran

The Hyades Star Cluster



Outer Solar System

- Mars
 - In south-west at sunset, in Ophiuchus moving to Sagittarius
- Jupiter
 - Behind the Sun, conjunction September 26, in Virgo
- Saturn
 - In south-west at sunset, in Ophiuchus

OASI Events

- Field Trip
 - Monday September 19, 11:30pm, Grazing Lunar Occultation of 87 Ceti
- International Observe the Moon Night
 - Saturday October 08, 7:00pm, Nowton Park, Bury St. Edmunds

Other Events

- DASH
 - Lecture Meeting, Saturday September 17, 7:30pm, Westleton Village Hall
 - Reg and Oliver Hunt on "Astronomical Numbers"
 - Dr. Leonard Brundle TBA
 - Observing Meeting, Saturday October 01, 7:30pm, Westleton Heath
- Burlington House (home of the RAS)
 - Open as part of Open House London Weekend on September 17 (booking required)
- Kelling Heath
 - September 30 to October 02