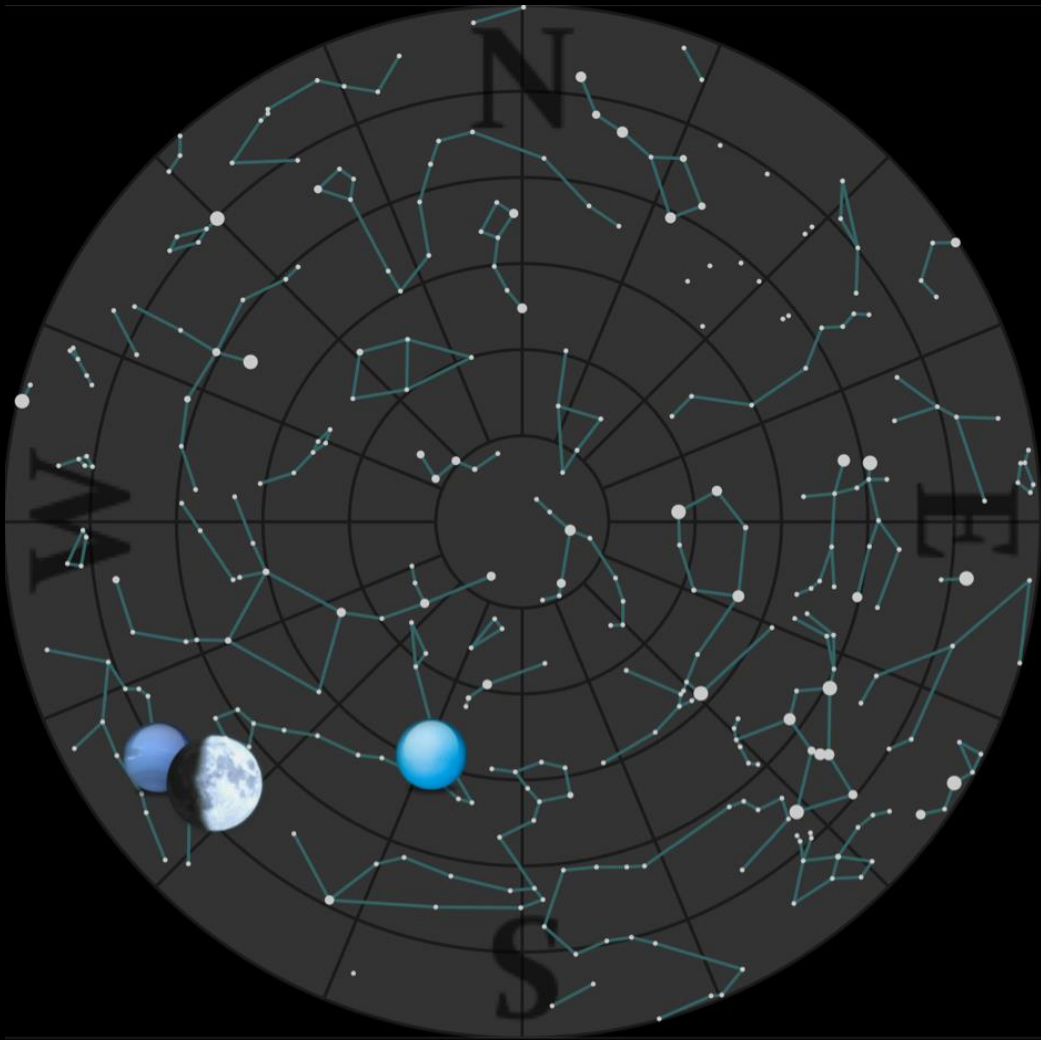


# What's Up?

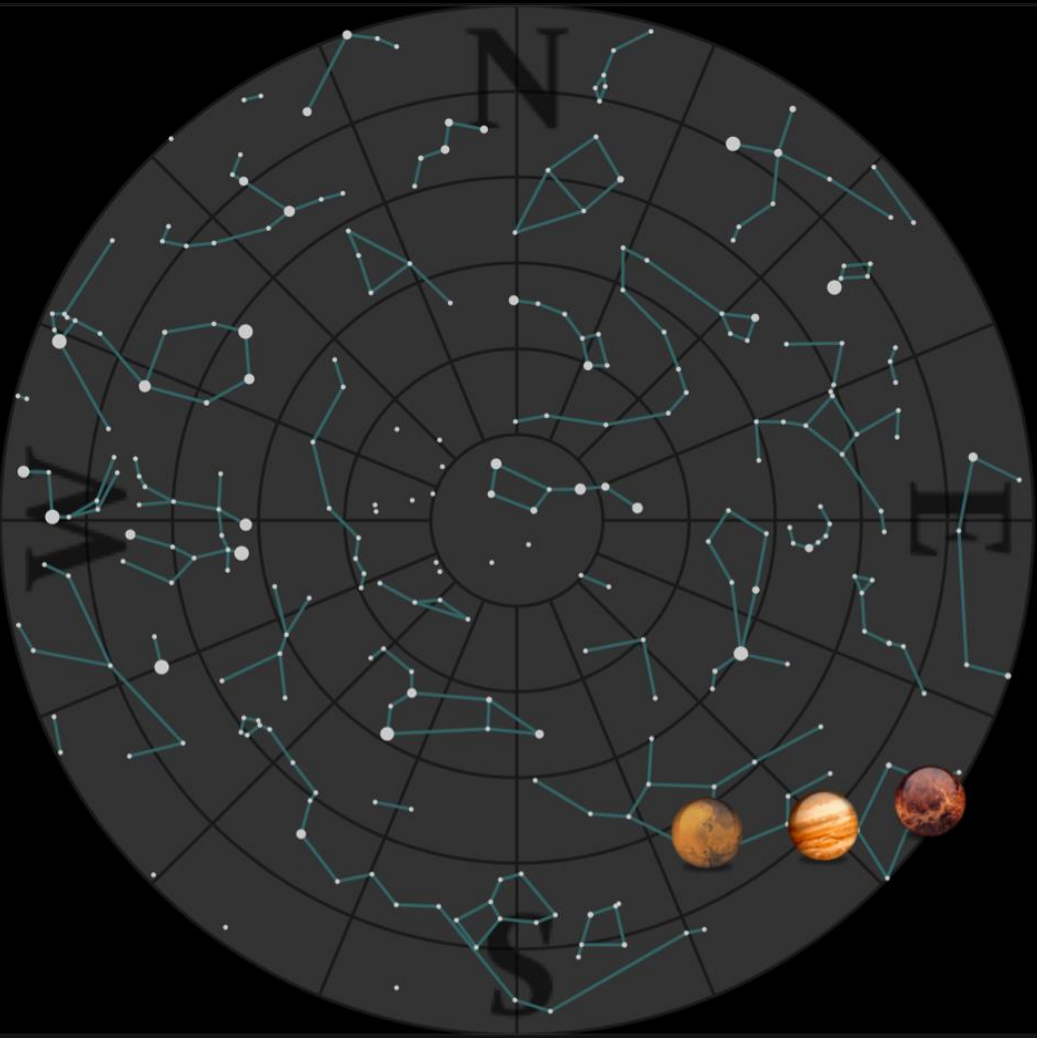
November 27 to January 15

Bill Barton, FRAS

•The Sky 22:00  
Tonight



•The Sky 07:00  
Tomorrow Morning



# Inner Solar System

- Sun
  - Declination decreasing (Solstice December 21, Perihelion January 3) then increasing
- Mercury
  - In the evening sky at the beginning of this period
  - Inferior conjunction (our side of the Sun) on December 13
  - Then in morning sky and favourable for observation
- Venus
  - In morning sky
  - Superior conjunction with the Sun (far side) on January 9
  - Then in evening sky
  - Elongation increasing and phase decreasing

# Earth

- Moon
  - Full, December 3 (Cold Moon), January 2 (Long Night Moon)
  - Last Quarter, 10, January 8
  - New, 18
  - First Quarter, 26 (Boxing Day)
- Eclipses
  - None this period
- Meteors
  - Geminid stream, December 8-15, ZHR = 100+
  - Quadrantid stream, January 1-6, ZHR = 80+

# Lunar Occultations

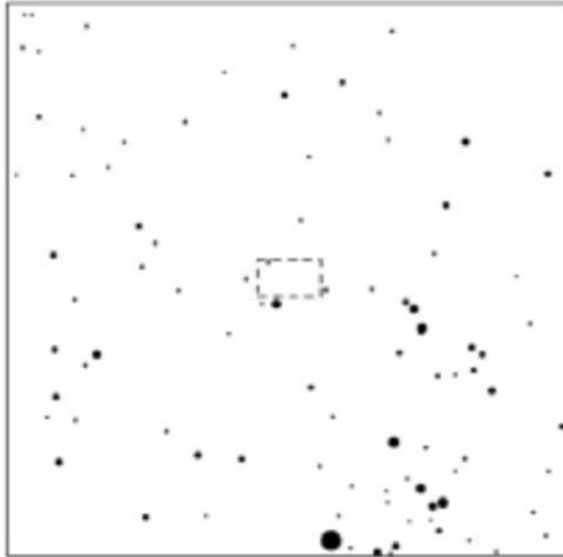
- Three notable events this period
  - $\alpha$  Leonis (Regulus)
    - December 8, 22:13, dark limb reappearance
  - $\alpha$  Tauri (Aldebaran)
    - December 31, 01:14, dark limb disappearance
    - December 31, 01:59, bright limb reappearance
  - $\alpha$  Leonis (Regulus)
    - January 5, 08:24, bright limb disappearance
    - January 5, 09:19, dark limb reappearance

# TNO HIGHLIGHT

## 1998WV31 & HSOY 523706083

2018 Jan 3 0<sup>h</sup>55.0<sup>m</sup> U.T.

<b>Planet:</b>	a = 39.25, e = 0.27	<b>Star:</b>	Source cat. HSOY
V. mag. = 23.40	Diam. = 131.8 km = 0.00"	$\alpha = 4^{\text{h}}40^{\text{m}}43.296^{\text{s}}$	$\delta = +23^{\circ}38'01.34''$
$\mu = 2.84''/\text{h}$	$\pi = 0.24''$ Ref. = MPO339366	Vmag = 12.74	Bmag = 15.29
$\Delta m = 10.7$	Max. dur. = 6.2s	Sun : 149°	Moon : 44° , 99%

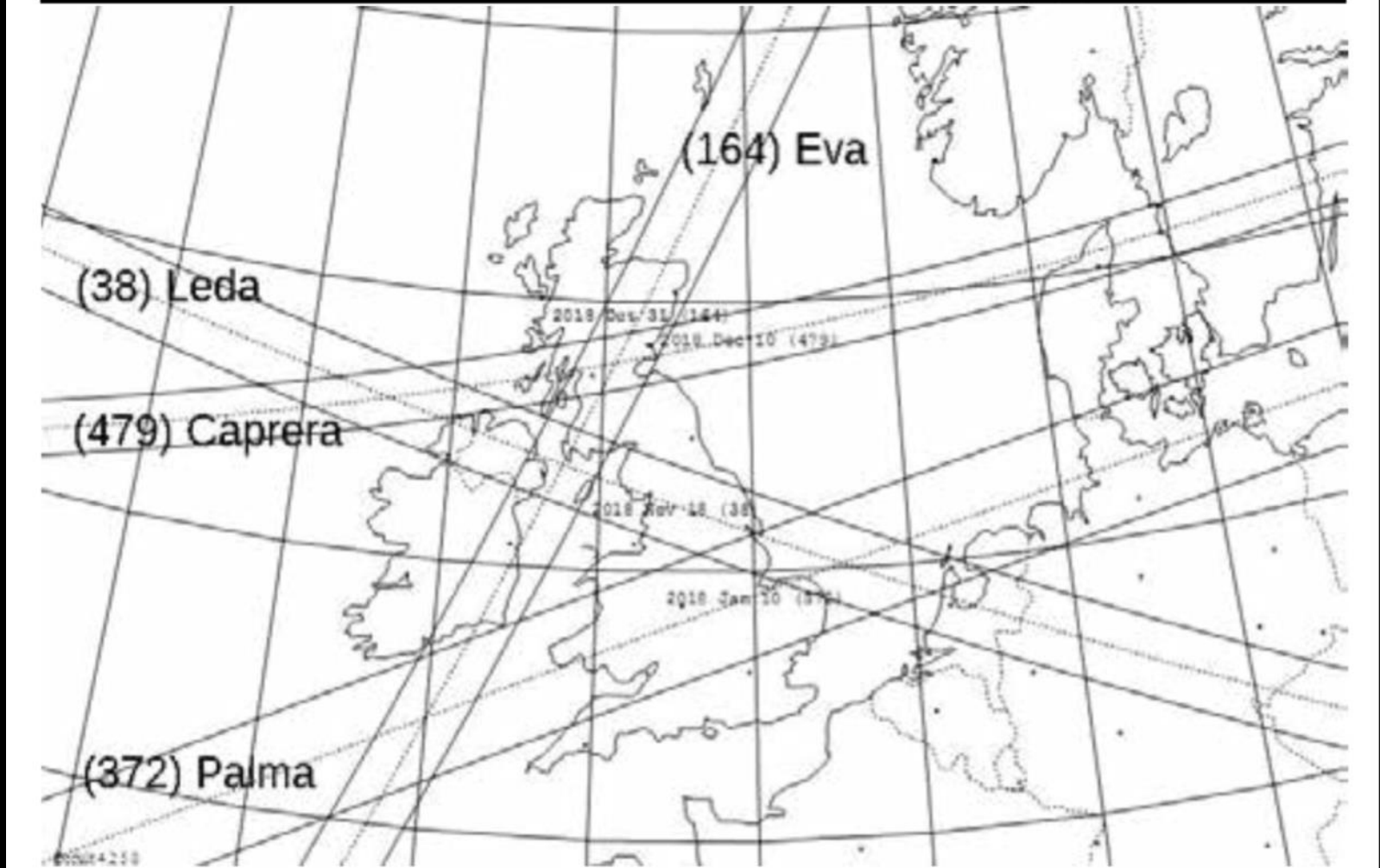


TNO 1998WV31

00:55, 3 January 2018

Magnitude +12.7 star will drop 10.7 mag, 6 sec

# ASTEROID OCCULTATIONS



Asteroid 372 Palma

01:09, 10 January 2018

Magnitude +9.1 star will drop 1.8 mag, 15.8 sec



# Outer Solar System

- Mars
  - In morning sky moving away from the Sun
  - Opposition July 27
- Jupiter
  - In morning sky moving away from the Sun
  - Opposition May 9
- Saturn
  - Conjunction December 21. Opposition June 27, 2018
  - Only just in the evening sky, then.....
- Uranus
  - Opposition on October 24, 2018
- Neptune
  - Opposition on September 7, 2018

# Society Events

- Saturday December 9
  - Field Trip to Observe Grazing Lunar Occultation of ZC1522, 5:30am
- Monday December 11
  - NOGS, Newbourne Village Hall, 7:00pm
- Wednesday December 13
  - OASI Christmas Meal, The Fox, Newbourne (Observatory closed)
- Saturday January 20
  - AGM, Methodist Church Hall, Black Horse Lane, Ipswich, 7:30pm

# Other Events I

- DASH
  - Discussion Meeting, Saturday January 7, 7:30pm, Westleton Village Hall, Prof. Michael Rowen-Robinson 'Shakespeare's Astronomy'
  - Observing Meeting, Saturday January 21, 7:30pm, Westleton Heath.
- LYRA
  - AGM, TBA, Wednesday January 10, Coach House Room, Parkhill Hotel, Oulton.
  - Observing Meeting, 7:30pm, Wednesday January 24, Barn Car Park, Parkhill Hotel.

# Other Events II

- Athenæum Astronomical Association
  - Observing Meetings, Nowton Park, Thursday 7 December, 4 and 18 January from 7:30pm.
- British Astronomical Association
  - Christmas Meeting, Kings College, Strand, London, Saturday December 9 2:00pm to 6:00pm.

# 2018 Highlights I

- Planetary Conjunctions
  - January 7, Mars  $0.2^{\circ}$  south Jupiter
  - March 29, Venus  $0.07^{\circ}$  south Uranus
  - December 7, Neptune  $0.04^{\circ}$  south Mars
  - [cf. 2017 November 13, Jupiter  $0.3^{\circ}$  south Venus]
- Bright Comets
  - Giacobini-Zinner 21/P, early September 2018, mag. +3.6
  - Wirtenan 46/P, mid December 2018, mag +2.9, 30x Moon distance, 7.5 million miles

# 2018 Highlights II

- Friday 27 July
  - Mars at Opposition (05:00UT, 24.2" (94% max), mag -2.4 (brighter than Jupiter),  $-25^{\circ}$  declination)
  - Lunar eclipse at Sunset/Moonrise
  - Beginning of eclipse 18:24UT (19:24BST)
  - Moonrise 19:50UT (20:50BST)
  - Sunset 19:53UT (20:53BST)
  - Greatest eclipse 20:22UT (21:22BST)
  - End of Totality 21:13UT (22:13BST)
  - End of Civil Twilight 21:36UT (22:36BST)
  - End of eclipse 22:19UT (23:19BST)