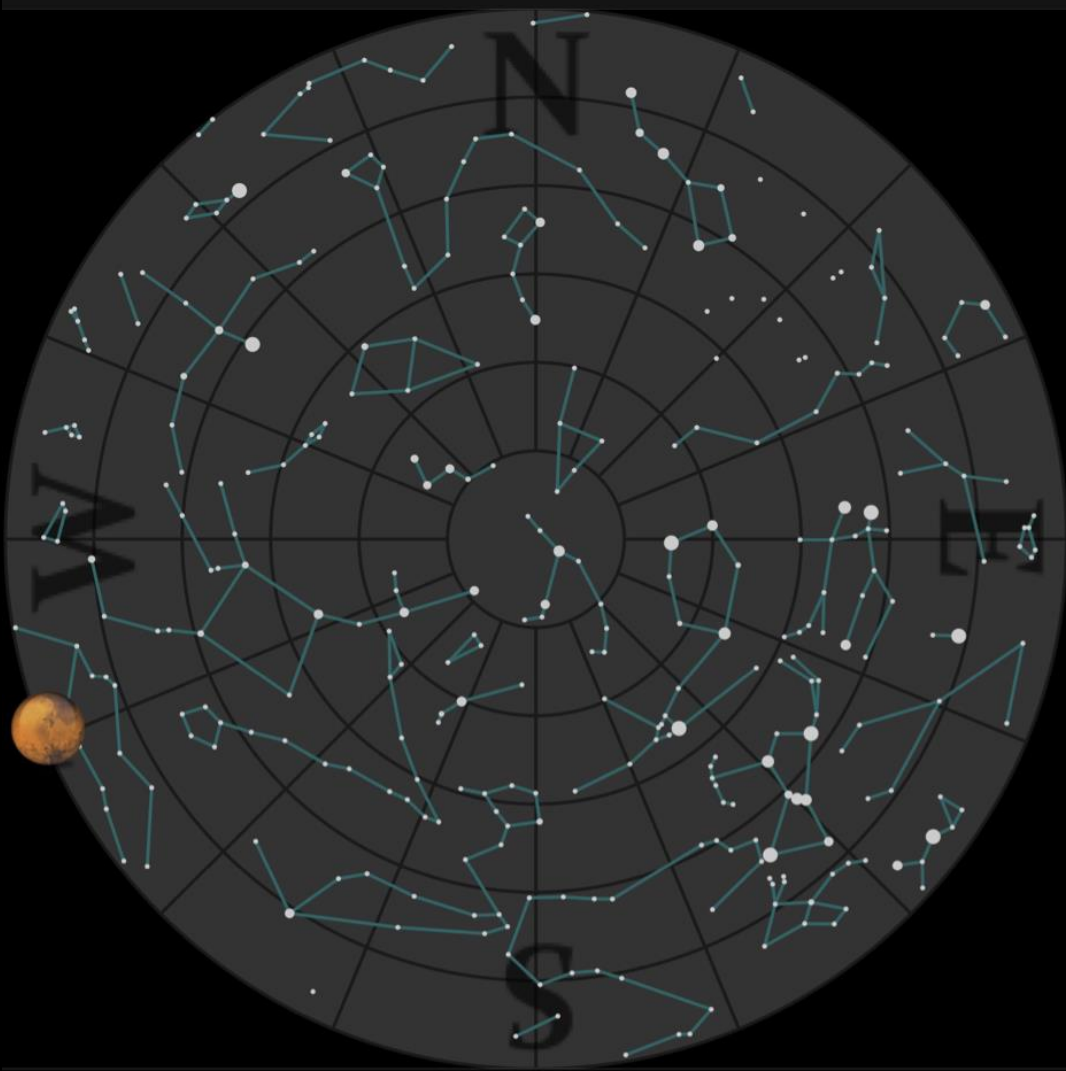


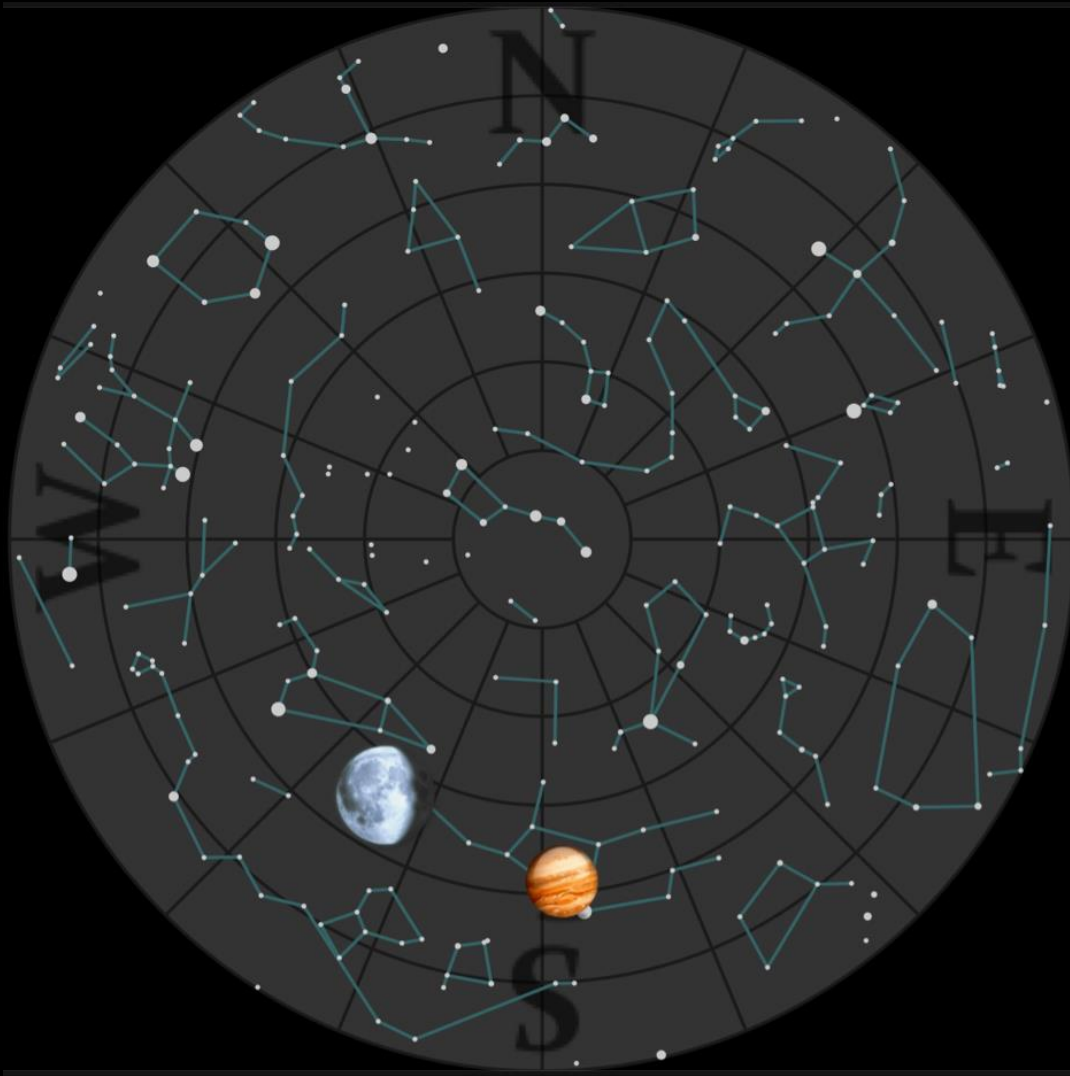
# What's Up?

2016 December 19 to 2017 January 30

Bill Barton, FRAS

- The Sky 22:00  
Tonight





- The Sky 08:00  
Tomorrow Morning

# Inner Solar System

- Sun
  - Solstice on December 21, in Ophiuchus
  - Perihelion on January 04 (Super Sun?)
- Mercury
  - In the evening sky at the beginning of this period, in Sagittarius
  - Inferior conjunction on December 28
  - Then in morning sky
  - Maximum western elongation on January 19 ( $24^{\circ}$ )
- Venus
  - In evening sky, in Capricornus, phase reducing
  - Maximum eastern elongation (theoretical dichotomy) on January 12 ( $47^{\circ}$ )

# The Schröter Effect

- Venus
  - Shows phases like our Moon
  - New Venus, at inferior conjunction (between us and the Sun)
  - Full Venus, at superior conjunction (far-side of Sun)
  - 'Quarters' at greatest elongations, western elongation occurs in morning sky, eastern for evening sky
  - But dichotomy (half-Venus) varies by around three days from theoretical date due to sunlight scattering in Venus' atmosphere
  - Terminator appears with a concave curve
  - Blue light affected more than red, so visibility of effect depends on your colour perception
  - This is known as the "Schröter Effect"

# Earth

- Moon
  - Last Quarter, December 21, January 19
  - New, December 29, January 28
  - First Quarter, January 05
  - Full, January 12 (Old Moon)
- Eclipses
  - None this period
- Meteors
  - Quadrantids, January 01-06, ZHR 80+ (parent body, 2003 EH<sub>1</sub>)
- Leap Second
  - A leap second will be added to 23:59 on December 31 2016 to keep UTC in line with Mean Solar Time



# Outer Solar System

- Mars
  - In south-west at sunset, setting around 9pm, four hours after the Sun. In Sagittarius
- Jupiter
  - Visible in morning sky, rising about 2am. In Virgo
- Saturn
  - In the morning sky, rising around 6am. In Ophiuchus



# Society Events

- Grazing Lunar Occultation
  - 22 December, HIP 63099
- Annual General Meeting
  - 21 January 7:30pm, Methodist Church Hall, Blackhorse Lane, Ipswich.

# Other Events

- DASH
  - 'Stargazing Live' Meeting, Friday/Saturday January 27-28, Minsmere
- BAA Meeting
  - Saturday January 21, 2:00pm to 6:00pm, Burlington House, Piccadilly, London.

# 2017 Highlights

- Eclipses
  - Penumbral Lunar February 11 (visible from UK)
  - Annular Solar February 26 (South Atlantic)
  - Partial Lunar August 07 (Central Asia)
  - Total Solar August 21 (United States of America)
- Lunar Occultations
  - Aldebaran five times (Apr, Jun, Aug, Nov, & Dec)
  - Regulus once (Dec)
  - Mercury (July 25, 07:33-07:53UT), Moon two days old, rises at 06:43UT. Mercury +0.3 mag, greatest eastern elongation on July 30, ( $27^\circ$ )
- Planetary Conjunction
  - Mercury-Mars (September 16, 18:00UT)  $0.06^\circ$ . 3.6' arc ~ 1/10 Moons diameter.