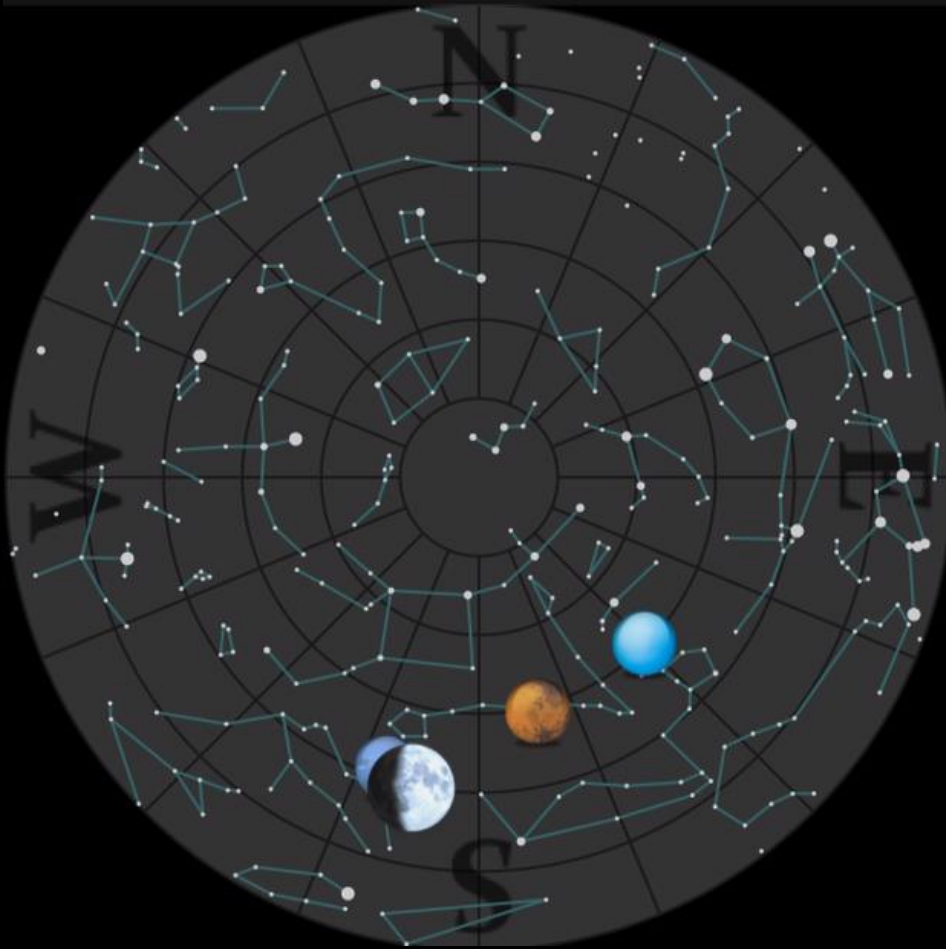


What's Up?

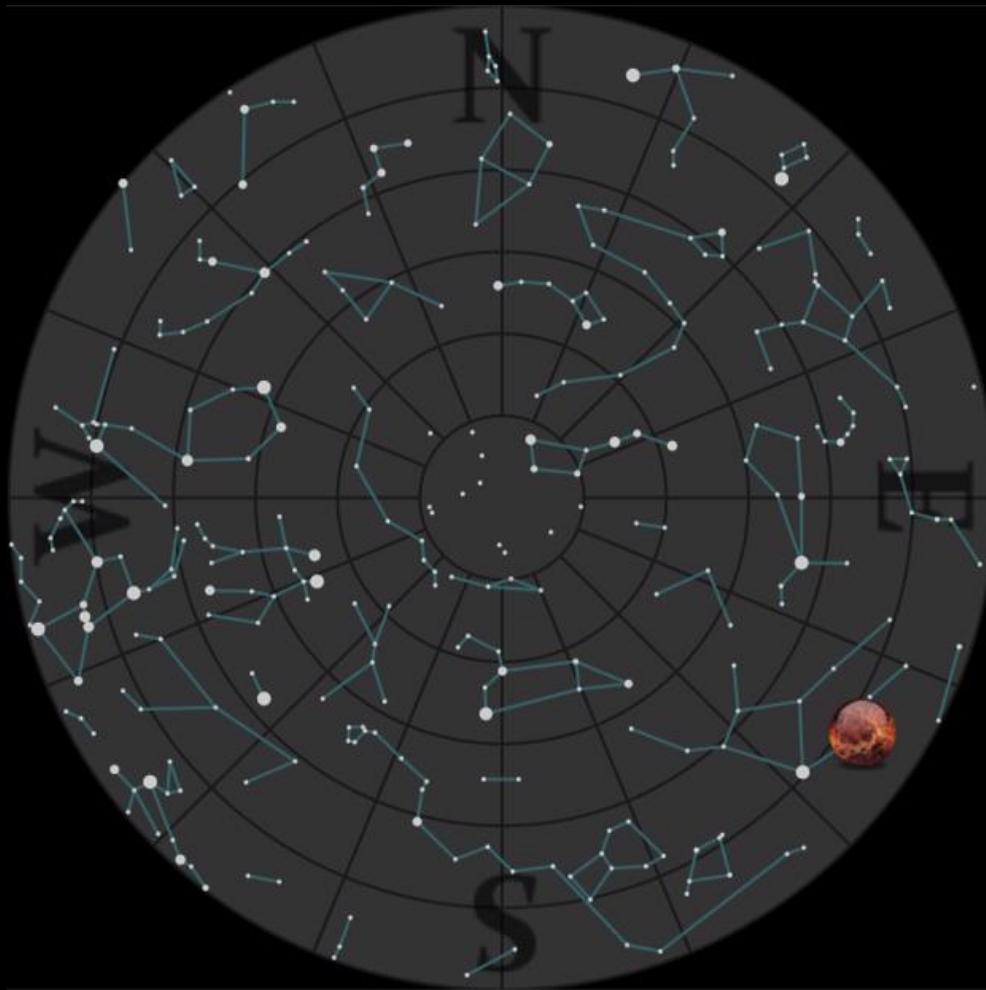
2020 November 23 to December 28

Bill Barton, FRAS

•The Sky 20:00
Tonight







•The Sky 06:00
Tomorrow



Inner Solar System

- Sun
 - Declination decreasing, solstice December 21, perihelion 2021 January 02
- Mercury
 - In morning sky, greatest western elongation November 10 (19°)
 - Superior conjunction on December 20
 - Today, rise 06:00, transit 10:40, set 15:25
- Venus
 - In morning sky, greatest western elongation August 13 (46°)
 - Superior conjunction 2021 March 26
 - Today, rise 04:35, transit 09:45, set 14:55

Earth

- Time
 - 00:00UT \approx 04:10ST today
 - Today, sunrise 07:30, transit 11:40, sunset 15:50
 - End of period, sunrise 08:05, transit 11:55, sunset 15:45
- Moon
 -  Full, 30 (Beaver or Frost Moon)
 -  Last Quarter, 08
 -  New, 14
 -  First Quarter, 21
- Meteors
 - Geminids, ZHR = 100+, December 04-17, peak 13th

Eclipses

- Penumbral Lunar
 - November 30, 07:32-11:53
 - UK Moonset, 07:18
- Total Solar
 - December 14, 13:33-18:52
 - Maximum 16:14, 2m 10s duration
 - Track of totality crosses South America

Occultations

- Lunar
 - β Scorpio, mag 2.6, RD, December 13, 07:29

Outer Solar System

- Mars
 - Opposition October 13, solar conjunction 2021 October 8. Today, rise 14:10, transit 20:40, set 03:20
- Jupiter
 - Opposition July 14, solar conjunction 2021 January 29. Today, rise 11:25, transit 15:30, set 19:30
- Saturn
 - Opposition July 20, solar conjunction 2021 January 24. Today, rise 11:35, transit 15:40, set 19:50
- Uranus
 - Opposition October 31. Today, rise 14:50, transit 22:00, set 05:25
- Neptune
 - Opposition September 11. Today, rise 13:30, transit 19:00, set 00:40

Great Conjunction

- December 21
 - 17:00 Jupiter & Saturn within 6' (0.1°) of each other
 - Average every 19.6 years
 - Closest since 1623 (year, not time!)
- Sun set, 15:41
- Civil twilight ends, 16:26
- Jupiter set, 18:12
- Saturn set, 18:13

OASI Events

- Virtual Committee Meeting
 - 8:00pm, 27 November
- Rearranged online webinar
 - "20th Century Cosmology"
 - Dr. Matt Bothwell
 - 7:30pm, 4 December

Societies Events

- Physical Events Cancelled or Postponed due to Coronavirus
- Virtual Meetings or Webinars