



May 2024 Astronomy Report



- **Moon:**
 - Phases
 - Rheita Valley

- **Planets:**
 - Morning planets
 - best view of morning planets in a long time
 - Mercury, Neptune, Mars & Saturn
 - Evening planet
 - Jupiter has very limited visibility, disappears after 1st week
 - Uranus & Venus too close to the Sun for observation

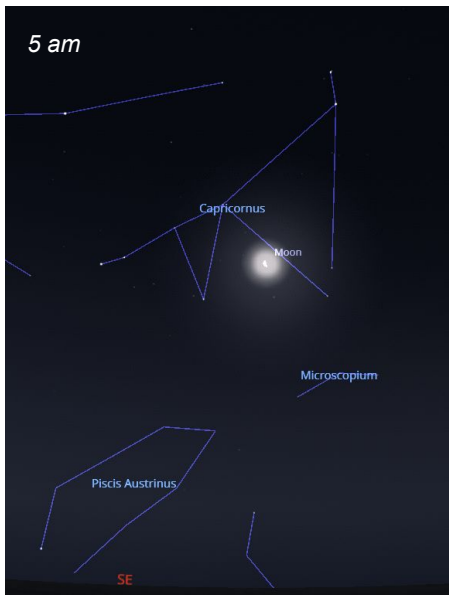
- **Comets/Asteroids/Meteor Showers:**
 - 13P / Olbers
 - Vesta
 - Eta Aquariids

- **New Moon Star Party:**
 - Location - TBD, May 4

- **Public Viewing:**
 - Cub Lake, May 11

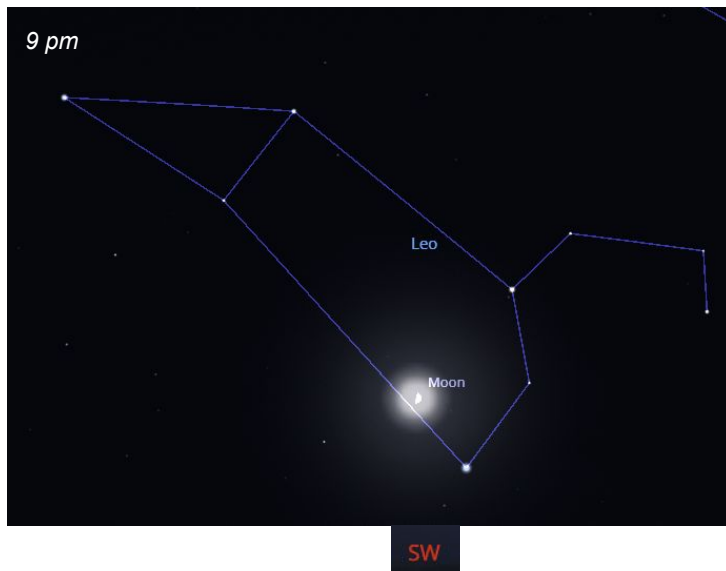
Moon - Phases

May 1 - Last Quarter (Capricornus)

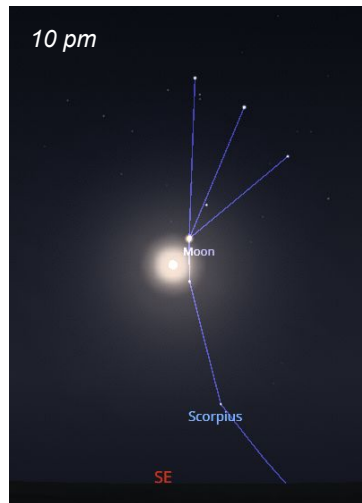


May 7 - New Moon

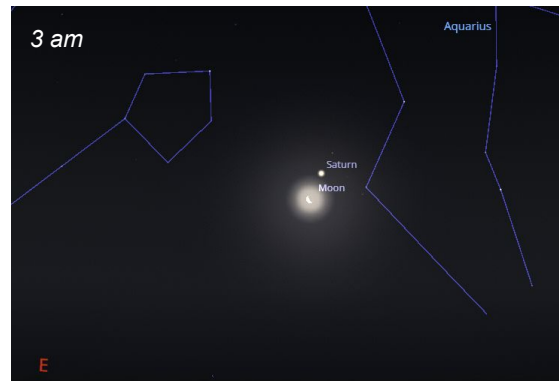
May 15 - First Quarter (Leo)



May 23 - Full Moon (Scorpius)



May 31 - Last Quarter (Aquarius)



Apogee (251K miles) - 17th
Perigee (226K miles) - 5th

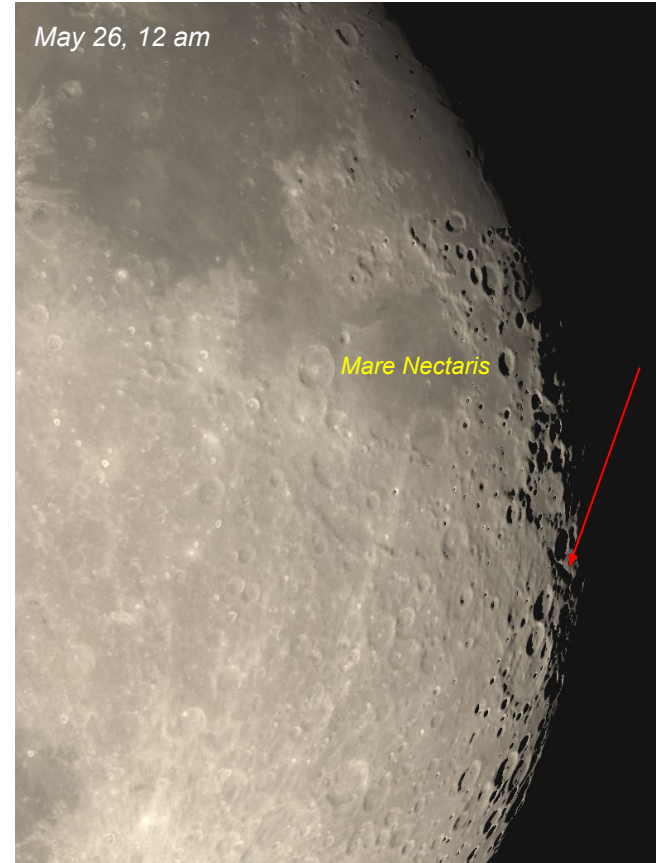
Moon - Rheita Valley

Longest distinct valley on the Moon - made up of series of interlocking craters which aligns with its point of origin Mare Nectaris. When the Nectaris basin was blasted out 3.9 billion years ago, more than a dozen mountain-size chunks of debris took flight in a curiously straight line and when they landed it created the 240-mile long Rheita Valley.

Credit: andrewplanck.com

The Rheita Valley is as long and as wide as the Grand Canyon. The difference is that the Grand Canyon took millions of years to form. The Rheita Valley was blasted out in a matter of seconds!

Sky and Telescope's *Field Map of the Moon*, the "very finest Moon map available for use at the telescope"





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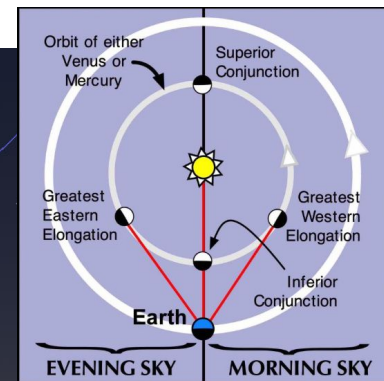
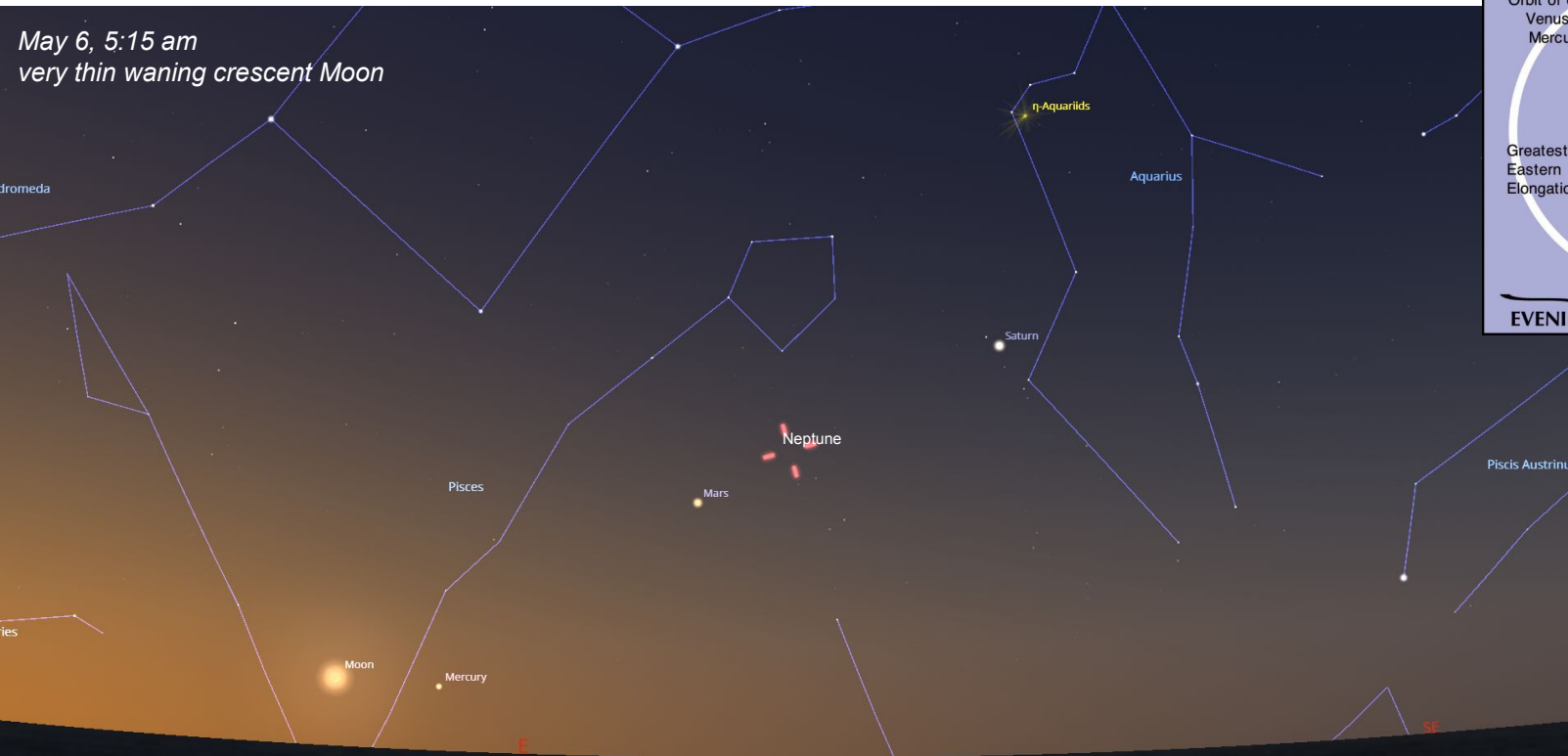
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Morning: Mercury/Mars/Neptune/Saturn - (Pisces, Aquarius)

Saturn first to rise, climbs higher before dawn as the month progresses

Mercury reaches greatest western elongation from the Sun on May 9th

May 6, 5:15 am
very thin waning crescent Moon



Morning: Neptune - (*Pisces*)

Neptune about 5 degrees northeast of the waning crescent moon on May 4th



May 4, 5:15 am

Morning: Saturn - (Aquarius)

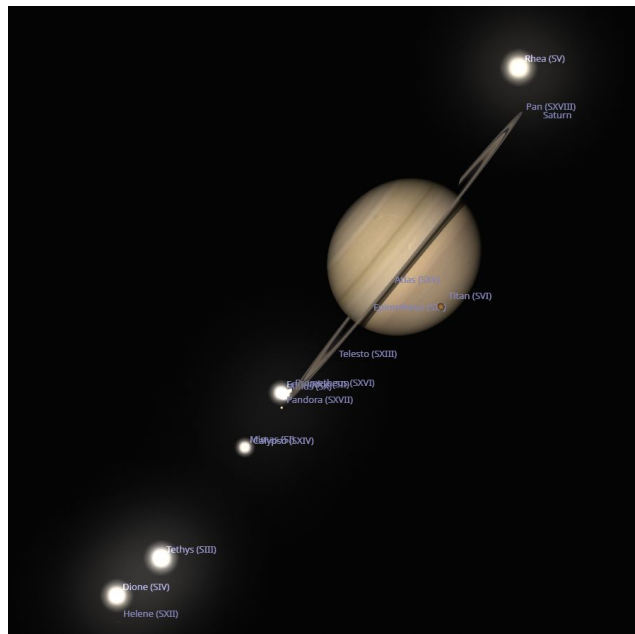
*With Saturn's tilt shrinking, transits and occultations of its moons are common
2024 is the last year before the ring-plane crossing, so the rings appear very slender*

May 29, 4:15 am

Saturn

Aquarius

Sculptor SE



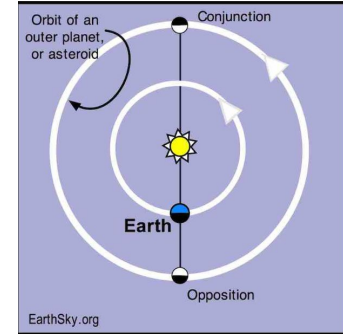
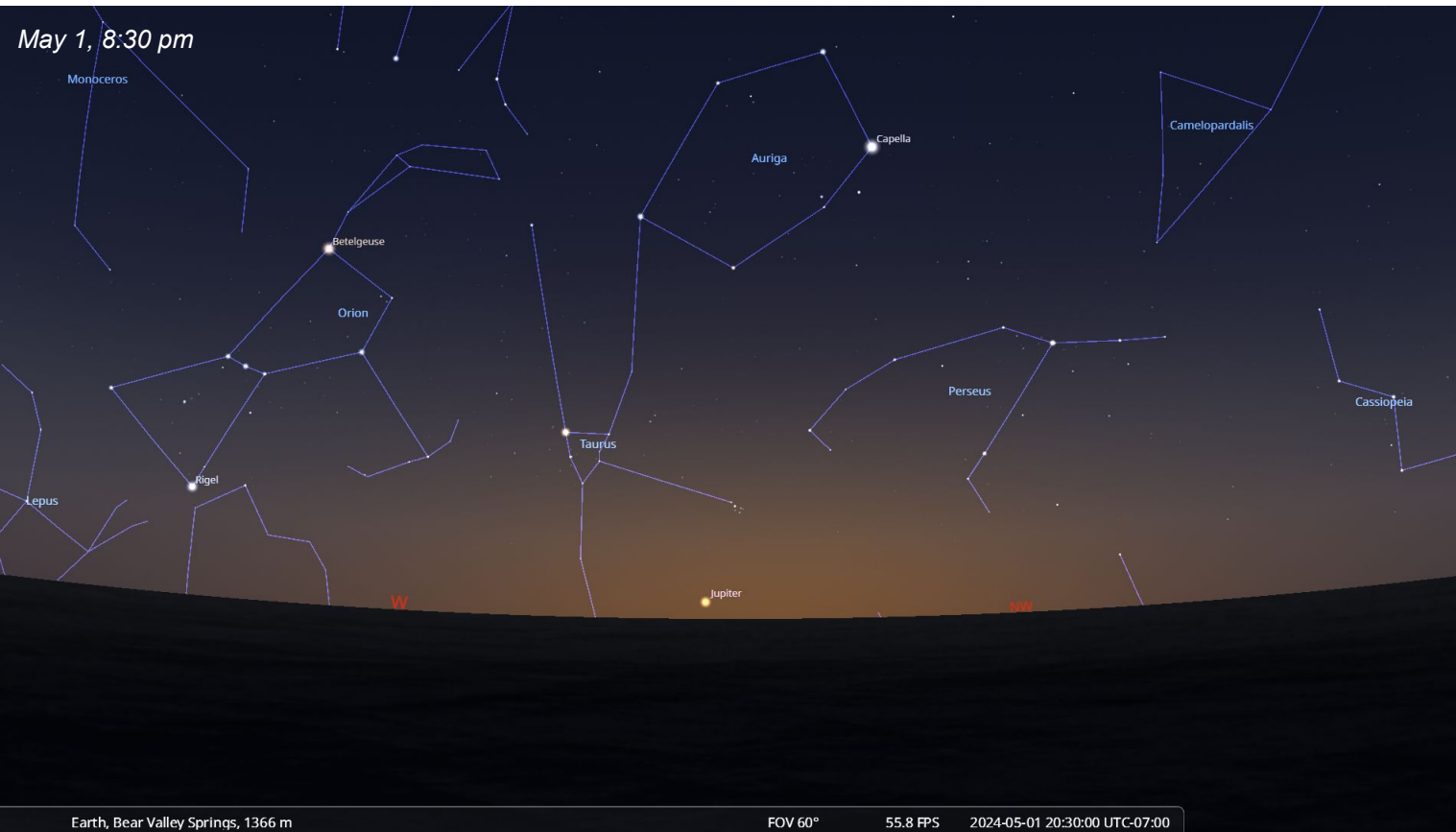
May 31, 4:15 am
waning crescent Moon

Saturn
Moon

Aquarius

Evening: Jupiter (Taurus)

Jupiter has very limited visibility, sets within an hour of the Sun on May 1st and earlier each successive evening - reaches conjunction with the Sun on May 18





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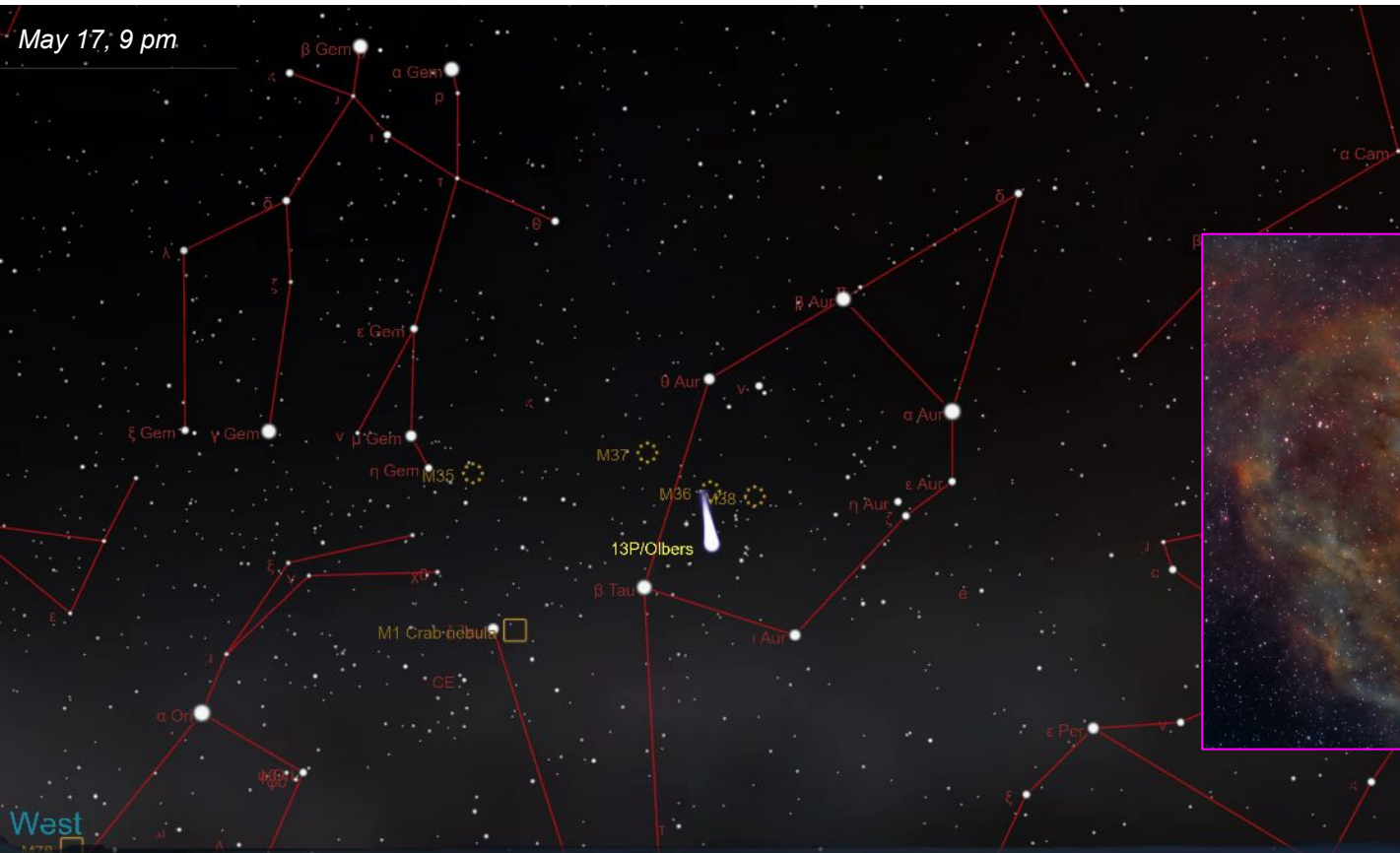
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Comet Search 13P/Olbers

Discovered in 1815, has an orbital period of 69 years, never gets closer to the Sun than Earth

May 17, 9 pm



"Imagers will delight in the comet's diatomic carbon-green halo as Olbers courses past the hydrogen-red Tadpoles Nebula (IC 410) from the 16th to the 18th."



On the evenings of the 20th to the 22nd, it will be less than 1 degree from M36

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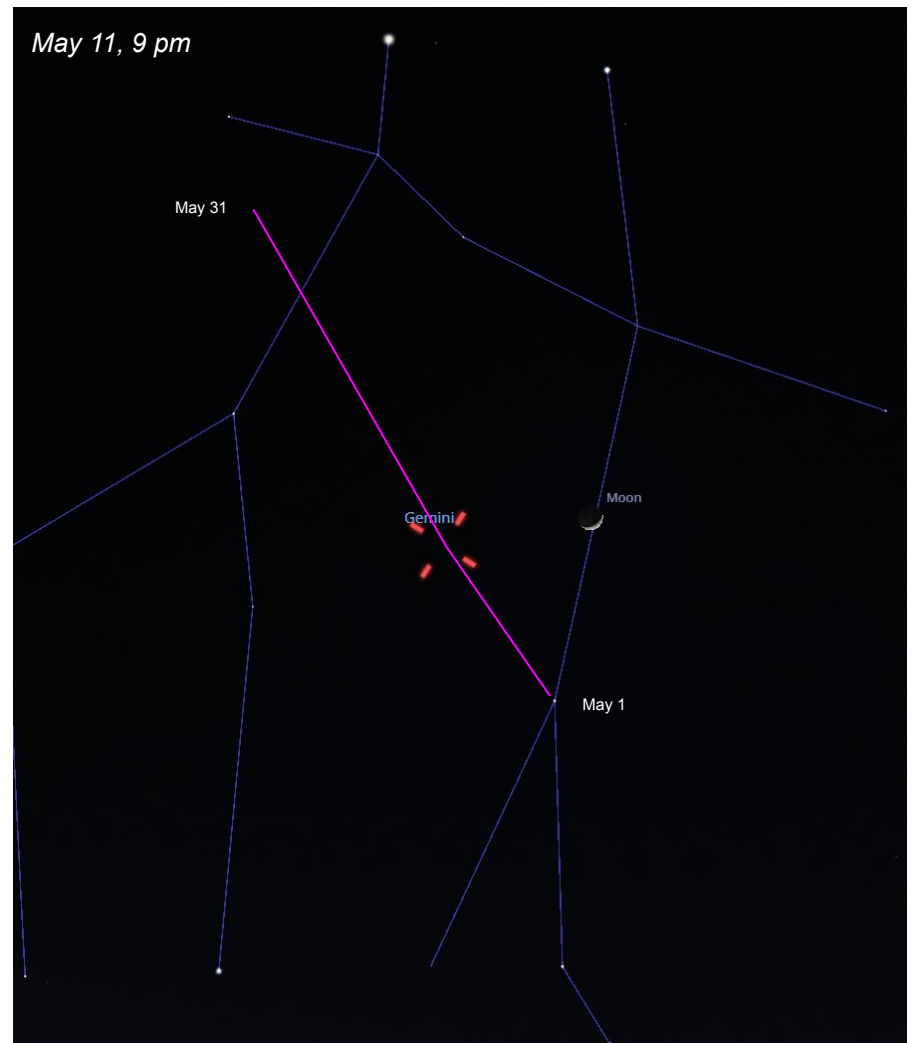
17 May 2024 21 00 ✕

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Source: theskylive.com

Asteroid Search Vesta

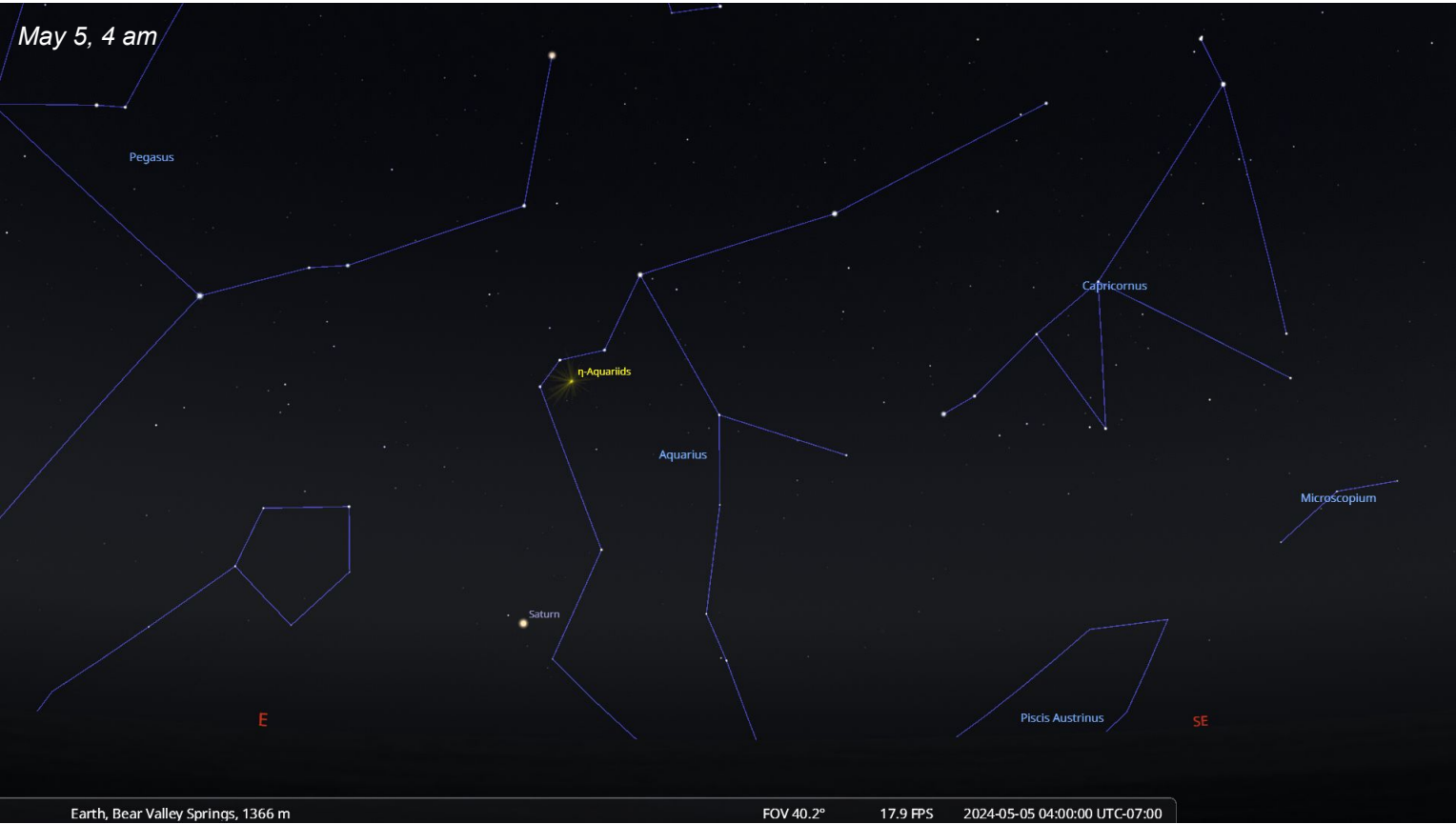
Gemini moves closer to western horizon through the month



Meteor Watch

Eta Aquariids

Ejected from Halley's Comet 3000 years ago
Active April 19 - May 28; peak date May 5 (waning crescent Moon)
Maximum rate at peak: 50 meteors/hour





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May New Moon Star Party

Location TBD, May 4

Ps 19:2

1 - M63 (Sunflower Galaxy)



37MM light years from Earth
Binoculars - hazy patch, >8" telescope - spiral arms

2 - M51 (Whirlpool Galaxy)



23MM light years from Earth
One of the easiest Messier objects to find, near Big Dipper
Brightest example of interacting galaxies

3 - M104 (Sombrero Galaxy)



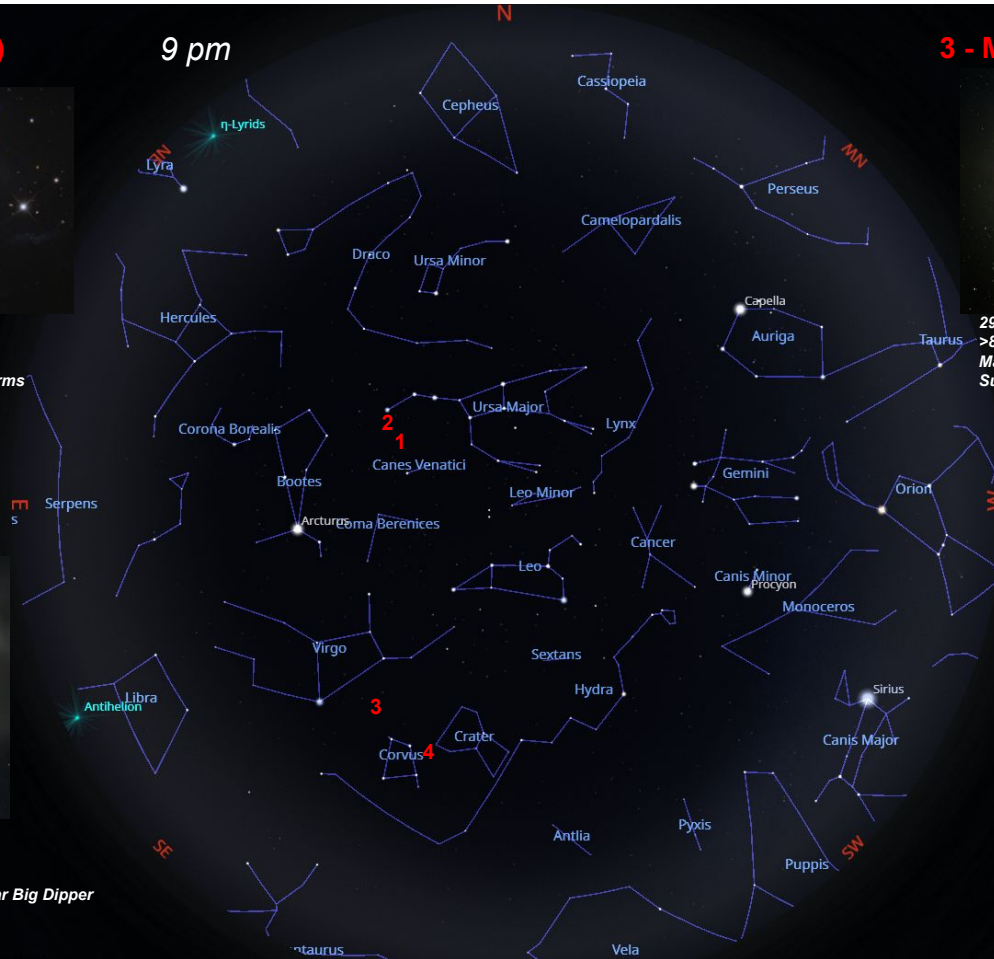
29MM light years from Earth
>8" telescope - bulge & disk visible
Mass of black hole at center 1 billion times greater than Sun

4 - Antennae Galaxies



Colliding galaxies
45 - 65MM light years from Earth

9 pm





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May Public Viewing

Cub Lake, May 11

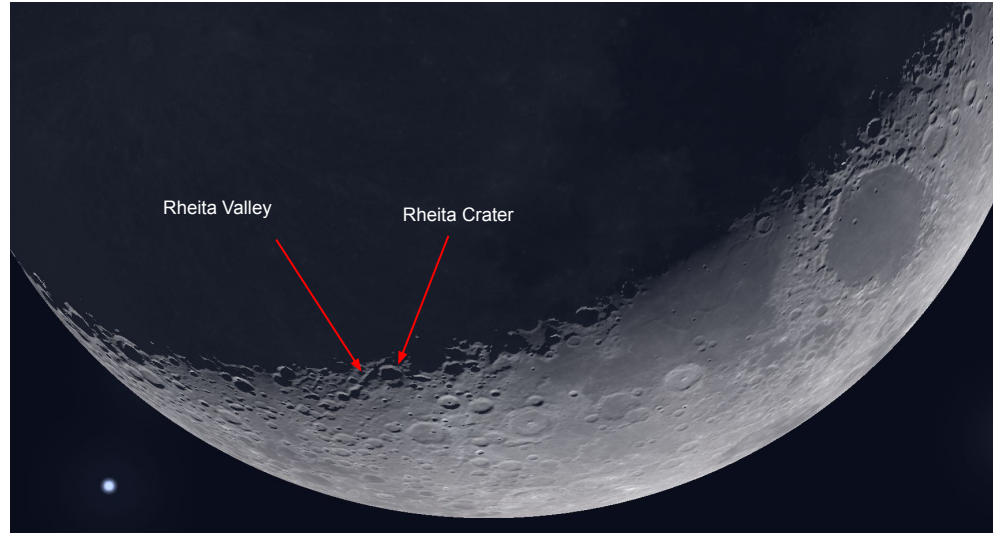
Sun sets ~7:45 pm

Ps 19:2

9 pm



Waxing First Quarter Moon



May Viewing Chronology

- 1 - Jupiter (*8:30 pm*)
- 2 - Last quarter Moon
- 4 - New Moon Star Party
- 5 - Eta-Aquariids peak (*4 am*)
- 6 - Moon, Mercury, Mars, Neptune, Saturn, E-A meteor (*5:15 am*)
- 7 - New Moon
- 11 - Public Viewing (Rheita Valley, Moon; Vesta)
- 16 thru 18 - Comet 13P/Olbers (*9 pm*)
- 20 thru 22 - Comet 13P/Olbers (*9 pm*)
- 23 - Full Moon
- 26 - Rheita Valley, Moon (*12 am*)
- 29 - Saturn, Titan transit (*4:15 am*)
- 31 - Last quarter Moon, Saturn (*4:15 am*)