

September Sightings - 2022

- Moon Shots: First qtr - 3rd; Full Moon - 9th; Last qtr - 17th; New moon - 25th
 - Full Moon - Harvest Moon
 - Copernicus Crater on terminator - 19th
- Planetary views:
 - Evening sky - Jupiter, Saturn, Uranus, Neptune
 - Morning - Venus (barely), Mars (improving)
 - Neptune opposition - 16th
 - Jupiter opposition - 26th; good viewing opportunities, several moon transits
- Autumnal equinox: September 22nd, 6:04 pm PDT
 - where Sun rises and sets, marks locations of due east and west, respectively
- Comet search: C/2017 K2
- Constellations:
 - featured DSOs in Cygnus & Cepheus
-

Moon Shots - September 9, Harvest Moon

Closest to Autumnal Equinox

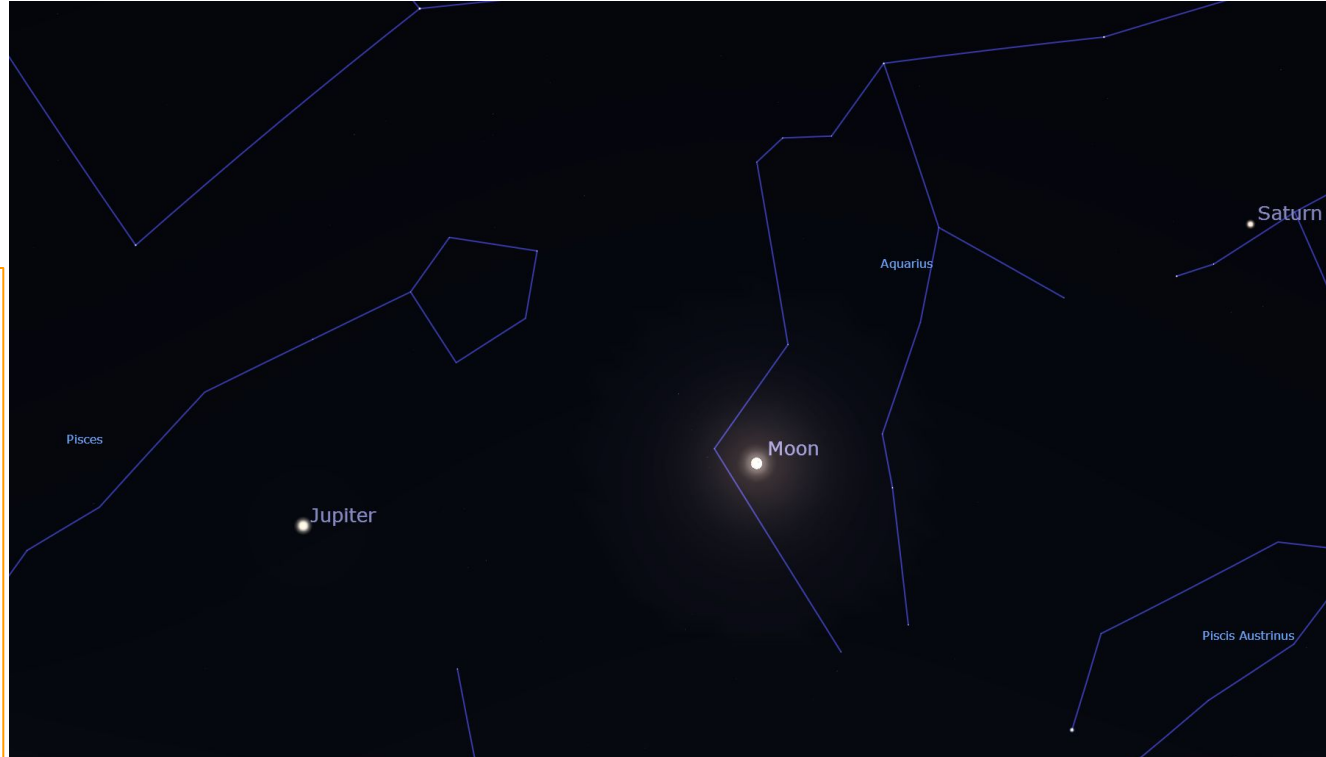
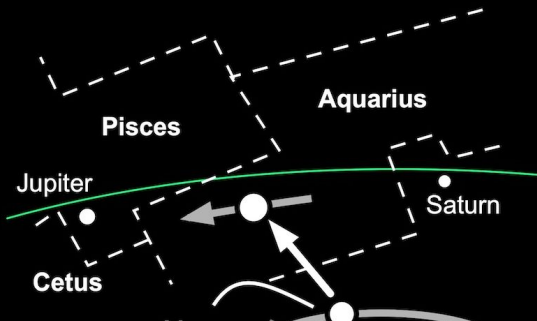
rises shortly after sunset to provide extra light for farmers to gather their harvest in the fall before darkness settles



September full moon in Aquarius

The September Harvest full moon usually lies in front of one of two constellations of the zodiac. Most years, it lies in Pisces. But every few years, it occurs in Aquarius, as it does this year. Very infrequently - once in every 20 years - it falls in the constellation Cetus, the whale.

September 2022 Full Moon

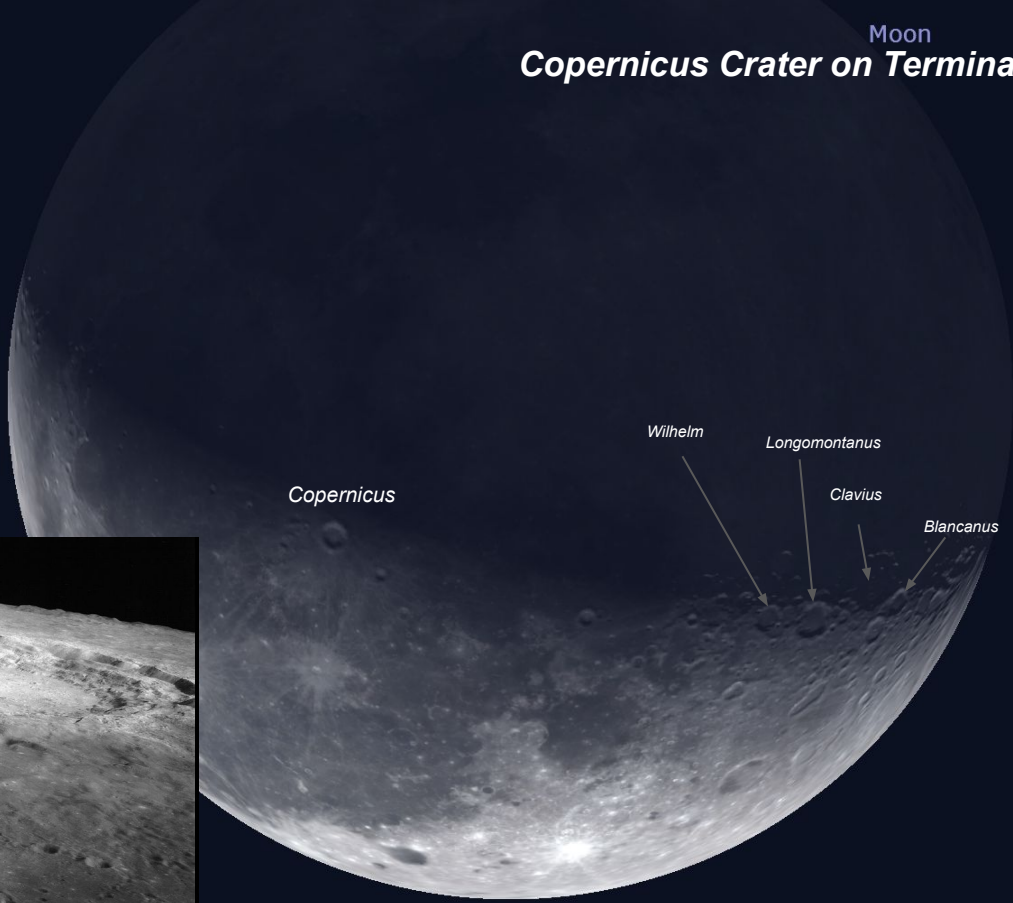


Moon Shots - September 19, Copernicus Crater

5 am

Moon
Copernicus Crater on Terminator

Copernicus taken from Apollo 12



Earth, Bear Valley Springs, 1366 m

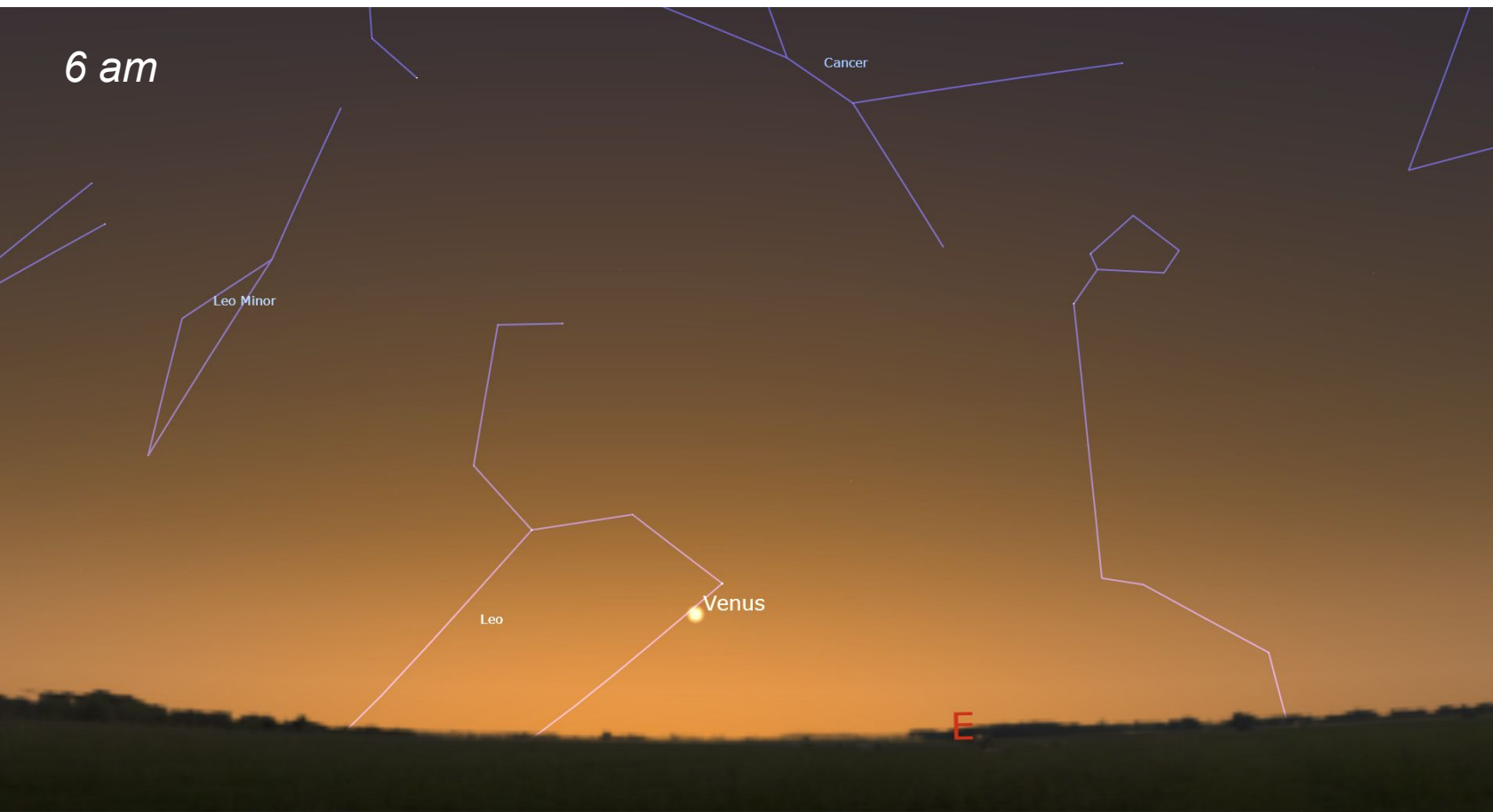
FOV 0.482°

20.6 FPS

2022-09-19 05:00:00 UTC-07:00

Planet Views - Venus, September 6

*Elongation from Sun diminishing,
down to 9 deg by the 18th*



Planet Views - Saturn, September 8

visible with small telescope, looking S/SW

12 am

Jupiter

Altair

Moon

Saturn

SE

S

Titan

Rhea

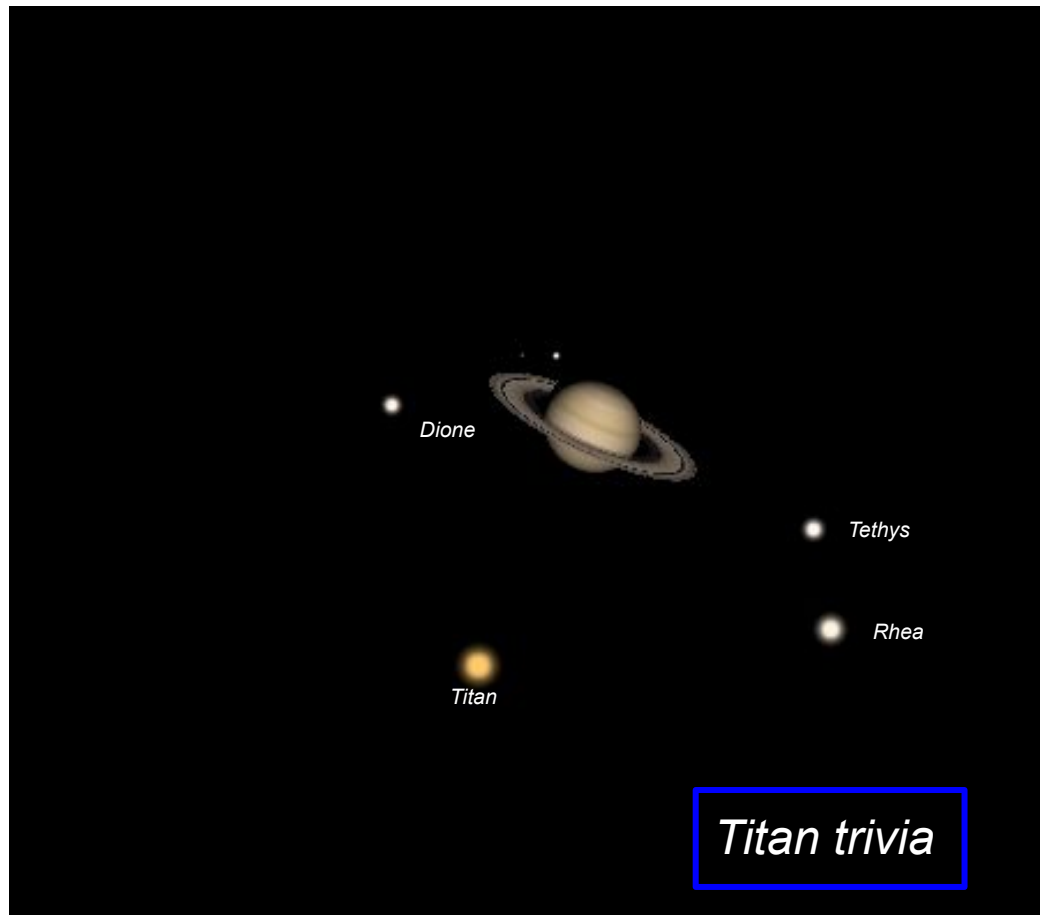
Dione



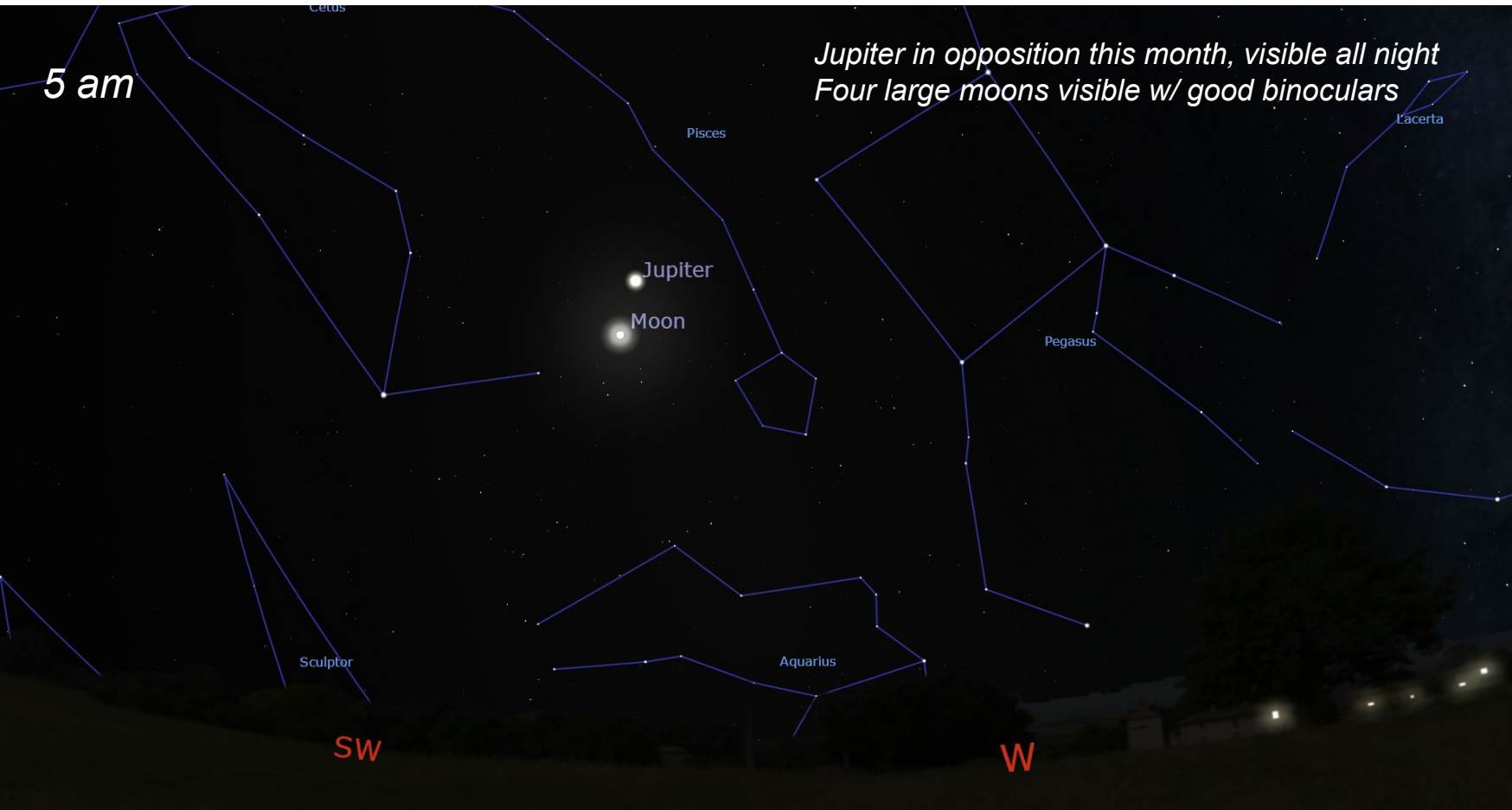
Tethys

Planet Views - Saturn, September 30

*Tilt of the rings increases throughout month
Rings will appear edge-on by 2025
Titan easy target for small scopes, mag 8.5*



Planet Views - Jupiter & Moon, September 11



5 am

*Jupiter in opposition this month, visible all night
Four large moons visible w/ good binoculars*

Sculptor

SW

Aquarius

W

Planet Views - Jupiter & Neptune, September 16

10 pm

ω Psc

*Neptune reaches opposition
Mag 7.7 visible with telescope (bluish disk)
Between Circlet of Pisces asterism & Aquarius
Az 125 / Alt 35*

(3) Ju

Hyd

Neptune

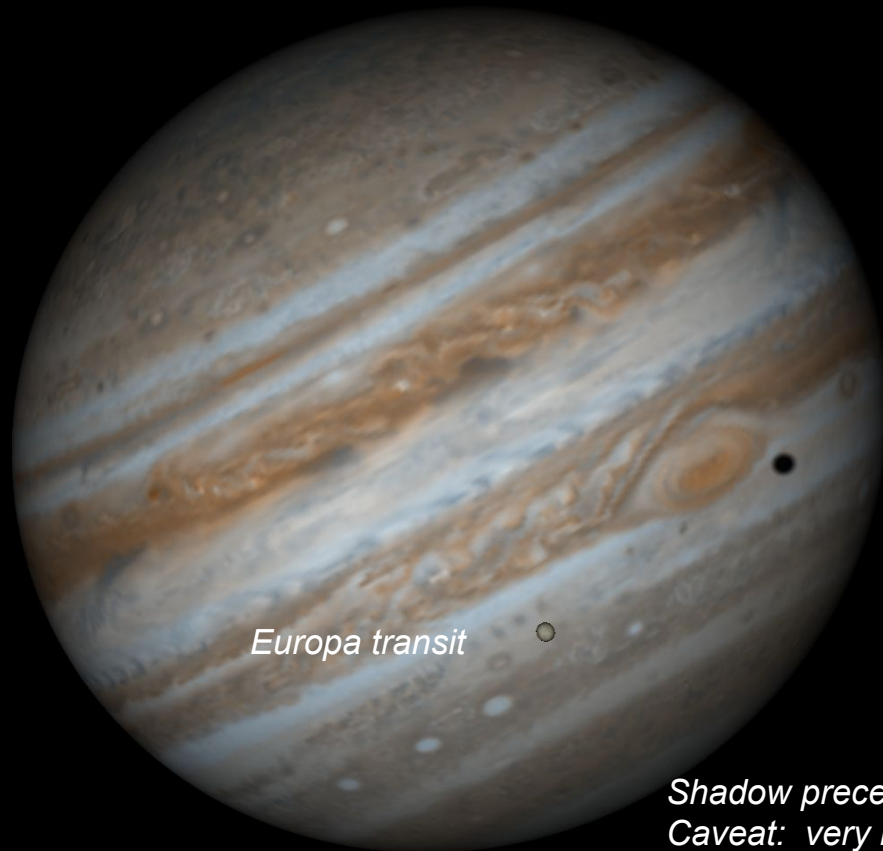
Neptune

Jupiter

20 Psc

Planet Views - Jupiter & Europa, September 6

9 pm



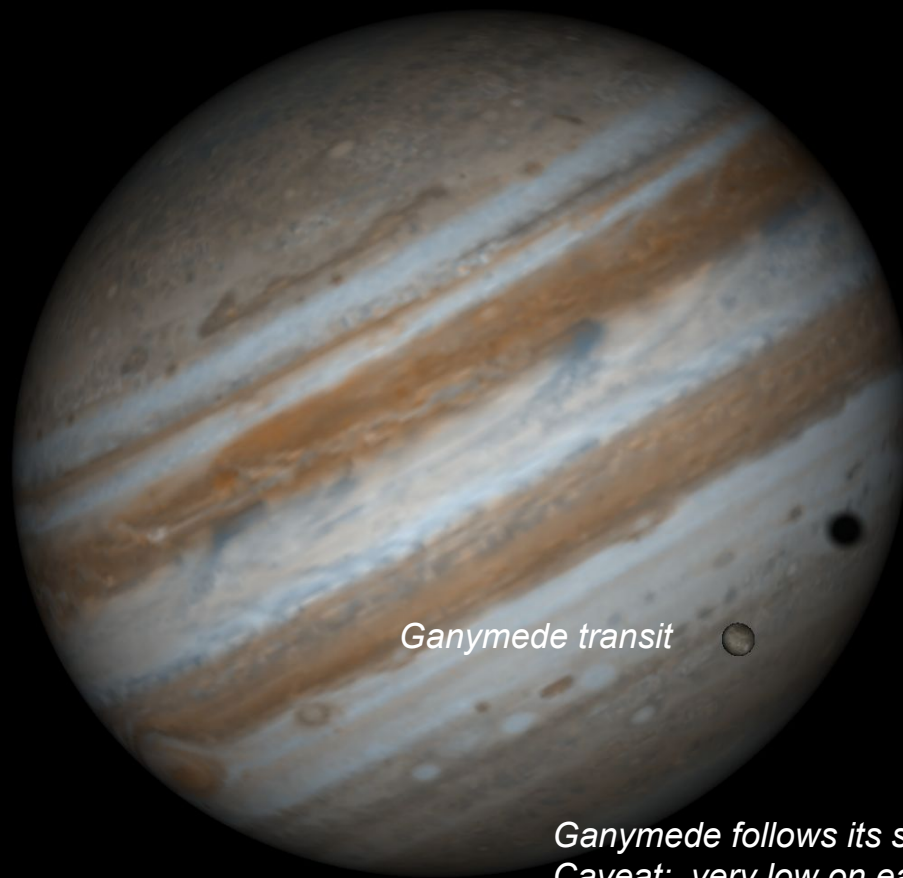
*NASA
spacecraft*

Europa transit

*Shadow precedes the moon by ~ 1 hour
Caveat: very low on eastern horizon, 10 deg*

Planet Views - Jupiter & Ganymede, September 20

7:45 pm



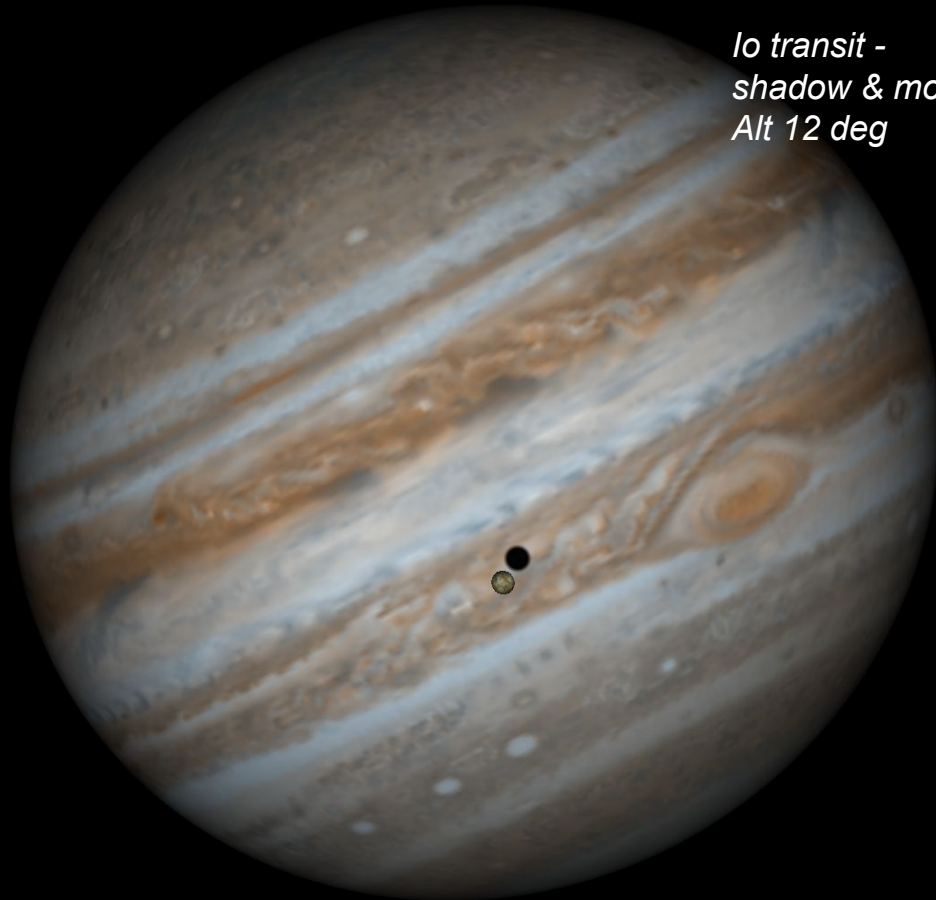
Ganymede transit

*Ganymede follows its shadow ~30 minutes
Caveat: very low on eastern horizon, 6 deg*

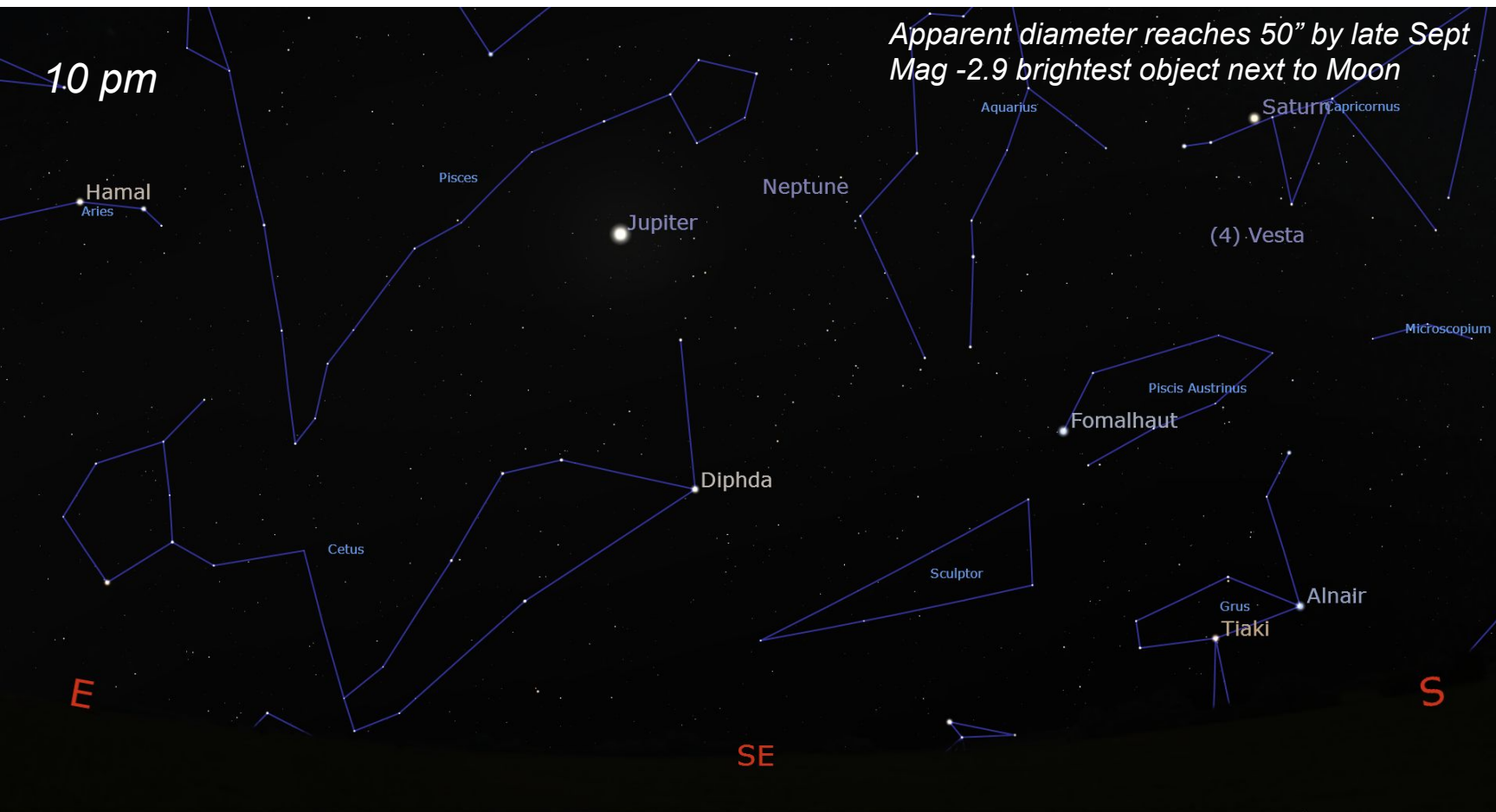
Planet Views - Jupiter & Io, September 23

8 pm

*Io transit -
shadow & moon only 5 minutes apart
Alt 12 deg*



Planet Views - Jupiter in opposition, September 26



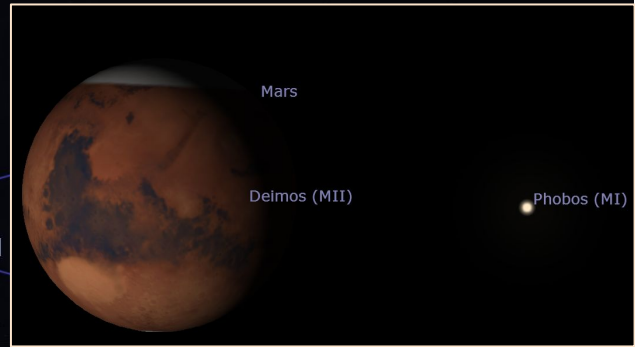
Planet Views - Uranus, September 26

visible with good binoculars, looking E



Planet Views - Mars, September 30

looking S, alt 75; good telescope opportunities



Earth, Bear Valley Springs, 1366 m

FOV 52°

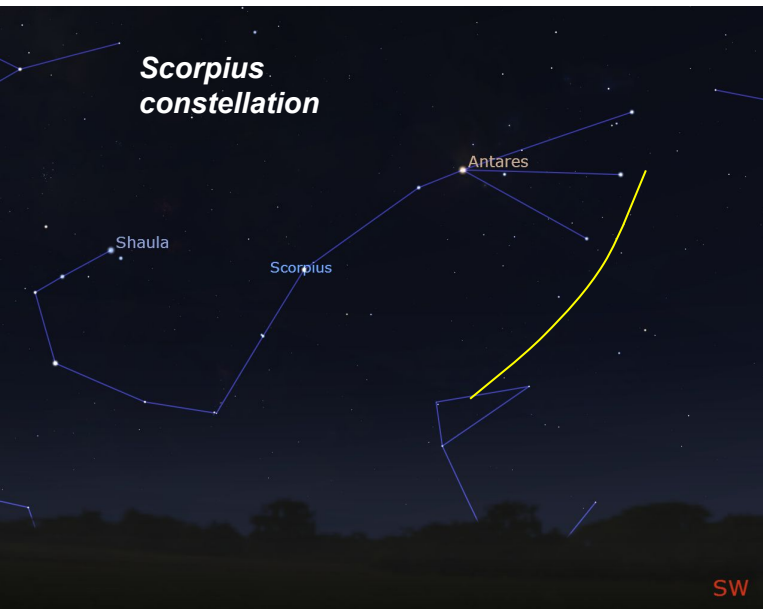
28.7 FPS

2022-09-30 05:00:00 UTC-07:00

Comet Search

C/2017 K2 (PanSTARRS)

- *Nucleus 25 miles diameter*
- *4x wider than Halley's Comet*
- *Binoculars in dark skies or small telescope*
 - *15 minutes after nautical twilight, sinks quickly before full darkness*
 - *Below horizon by end of month after sunset*



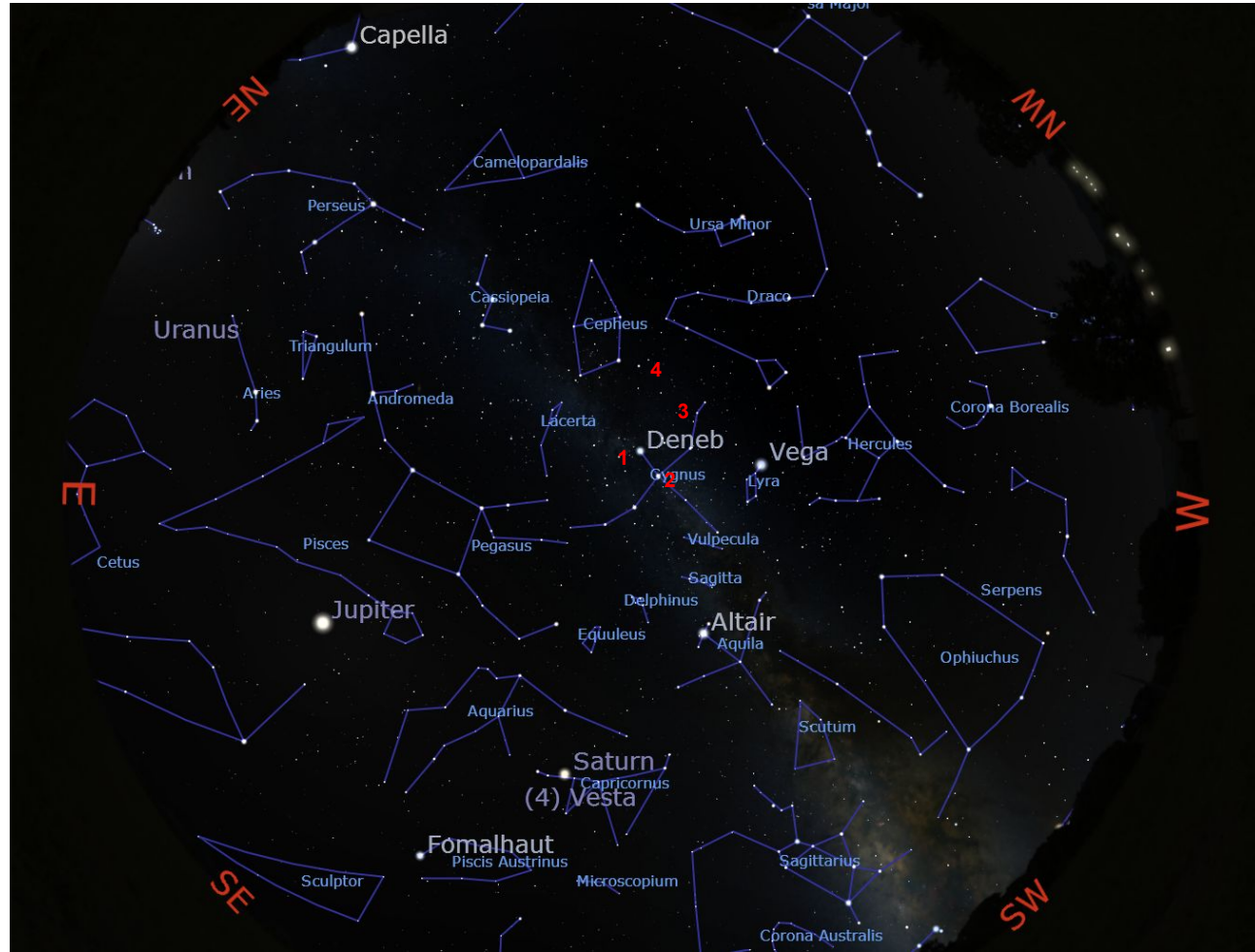
September constellations

Sept 15 - 10 pm

Cygnus, Vulpecula, Delphinus, Equuleus

September Deep Sky Objects

- 1 - NGC 7000 (North American Nebula)
- 2 - NGC 6888 (Crescent Nebula)
- 3 - NGC 6826 (Blinking Planetary Nebula)
- 4 - NGC 6946 (Fireworks Galaxy)



NGC 6826 “Blinking Planetary Nebula”



The Blinking Planetary Nebula, image: Judy Schmidt (CC BY 2.0)

2000 light years from Earth

NGC 7000 “North American Nebula”

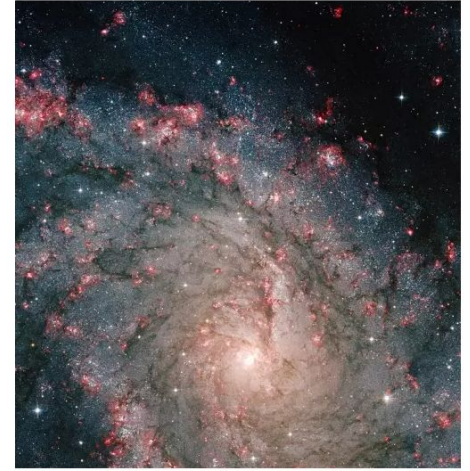


North America Nebula (NGC 7000), image: NASA

Adjacent to Deneb
Visible with binoculars/small scope
2000 light years from Earth

5000 light years from Earth

NGC 6946 “Fireworks Galaxy”



The Fireworks Galaxy (NGC 6946), image: NASA (the Hubble Space Telescope)
Hosted more supernovae than any other known galaxy
25 MM light years distant

NGC 6888 “Crescent Nebula”



Crescent Nebula, image: Patrick Hsieh (CC BY-SA 4.0)