



November 2024 Astronomy Report

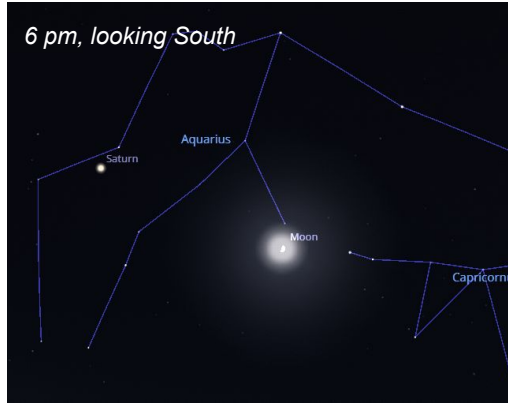


- **Moon:**
 - Phases
- **Planets:**
 - Evening sky
 - Mercury, Venus, Saturn, Neptune, Uranus, Jupiter
 - Morning sky
 - Mars, Jupiter, Uranus
- **Comets/Asteroids/Meteor Showers:**
 - Comet C/2023 A3 (Tsuchinshan-ATLAS); Comet C/2022 E2 (ATLAS)
 - Leonid meteor shower
- **Public Viewing:**
 - Cub Lake, November 9

Moon - Phases

November 1 - New Moon

November 9 - First Quarter (Aquarius)



November 15 - Full Moon (Taurus)



November 22 - Last Quarter (Leo)



Apogee (252K miles) - 26th
Perigee (224K miles) - 14th



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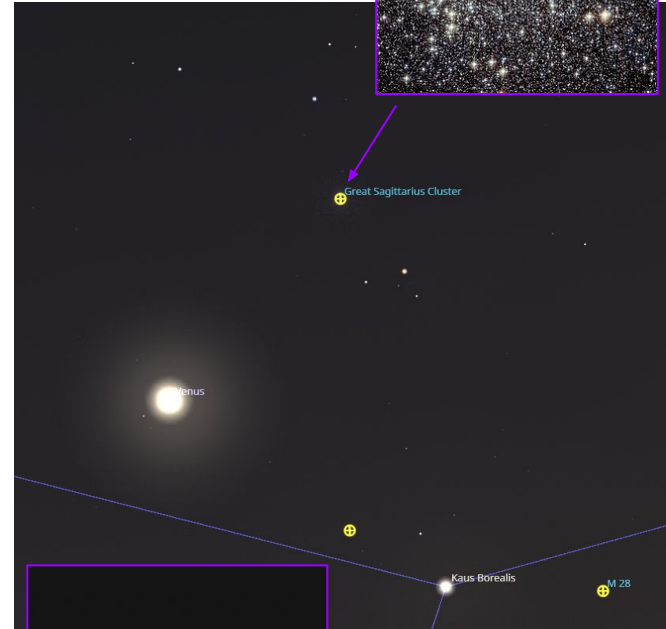
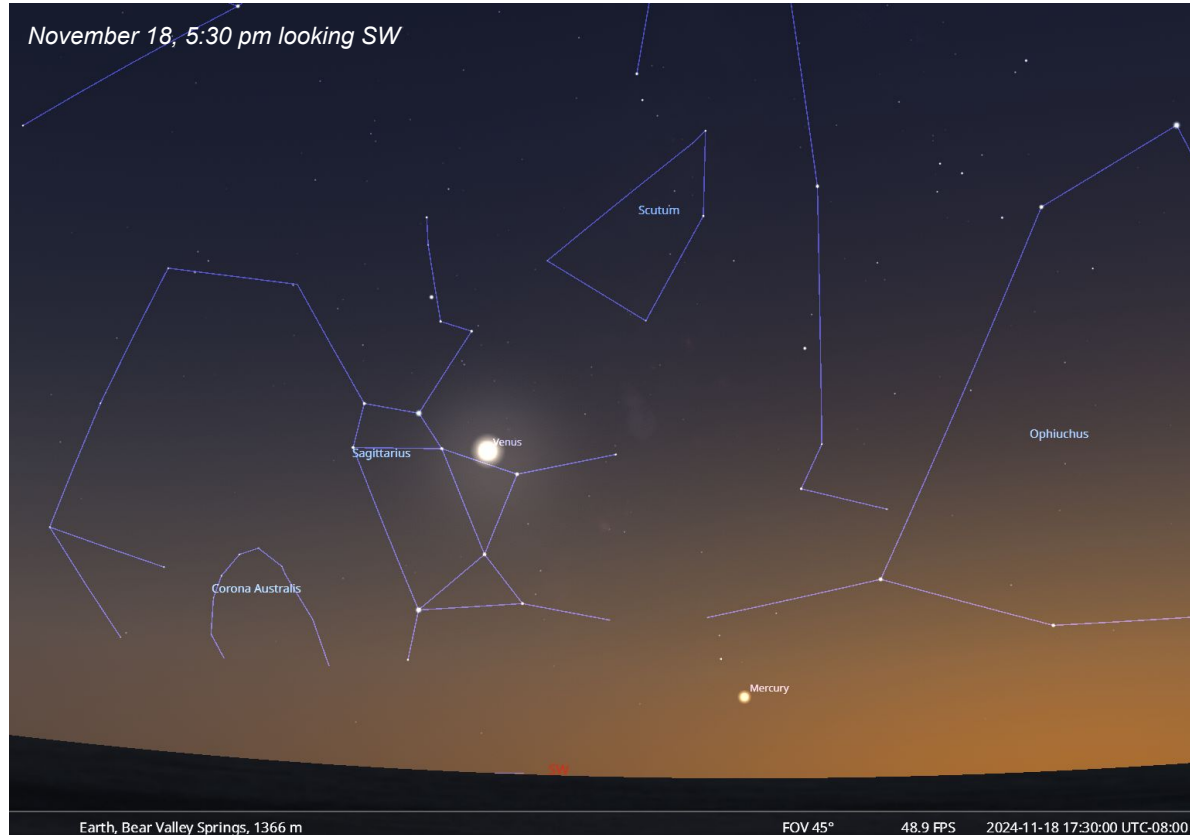


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Evening Planets: Venus - (Sagittarius)

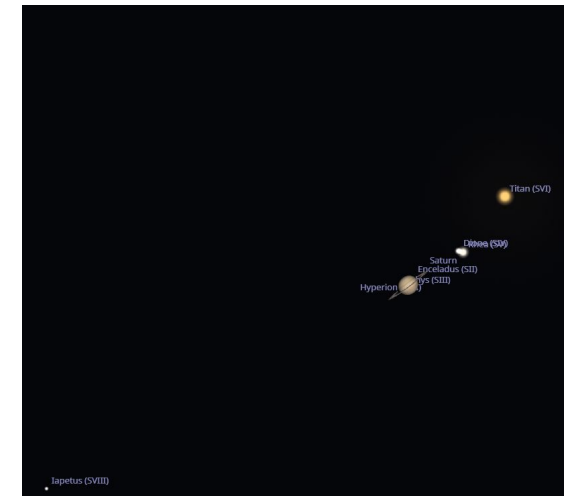
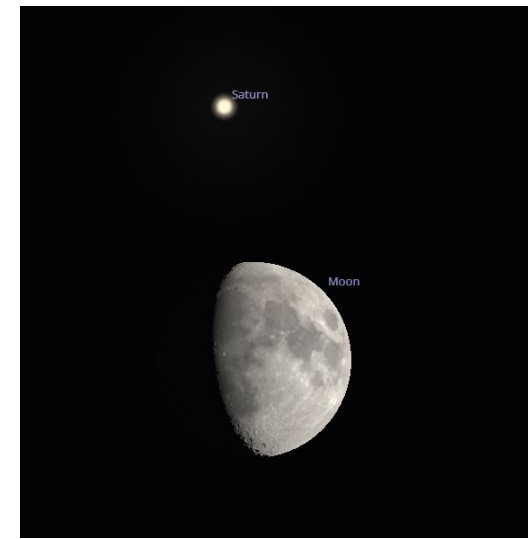
Venus easy to view soon after sunset, starts the month at -4 magnitude. On November 18th, adjacent to M22 (Great Sagittarius cluster - one of the brightest globular clusters). By end of November Venus remains visible for 3 hours after sunset. A telescope shows a 17" wide disk now 68 percent lit.

November 18, 5:30 pm looking SW

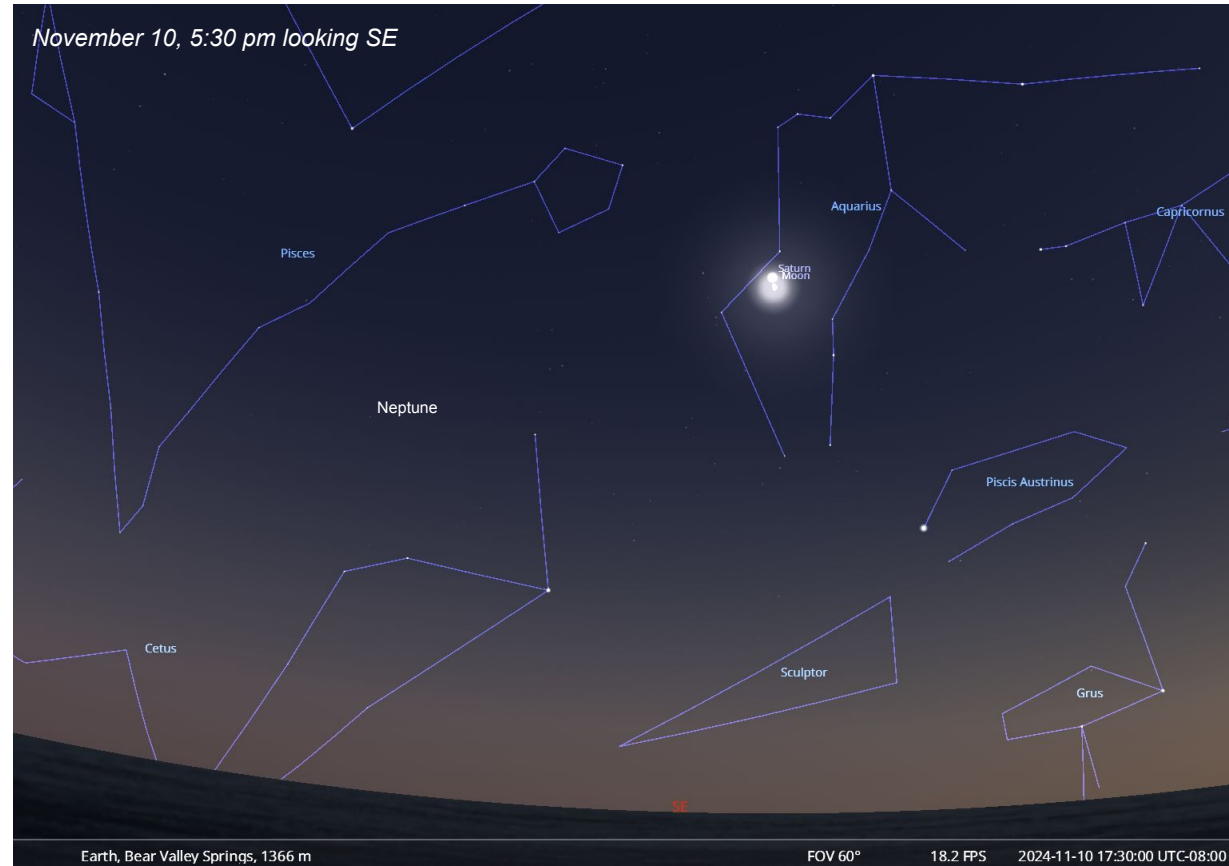


Evening Planets: Saturn - (Aquarius)

Saturn stands high in the SE sky at sunset, remaining above 35° altitude for a few hours. On November 10th, a 10-day old Moon wanders to 1° below Saturn (below). Titan (Saturn's largest moon) is an easy telescope target.



November 10, 5:30 pm looking SE



Earth, Bear Valley Springs, 1366 m

FOV 60°

18.2 FPS

2024-11-10 17:30:00 UTC-08:00

Evening Planets: Neptune - (Pisces)

Neptune is well placed for evening observing $\sim 14^\circ$ northeast of Saturn and near the Circllet asterism. Binoculars will show it forming a triangle with 20 and 24 Piscium. A telescope reveals a $2''$ -wide disk with a bluish hue. Neptune's motion over the month noted by its relative motion adjacent to a pair of 8th/9th mag stars.

November 7, 8 pm looking South



Evening Planets: Neptune - (Pisces)

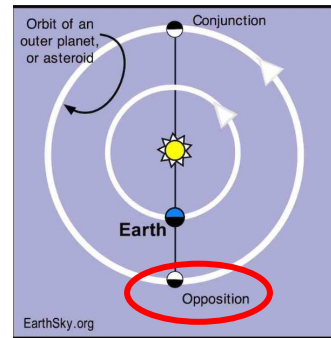
A telescope will be needed to watch the Moon hide Neptune in an occultation the evening of November 11. Best seen from the eastern half of the United States, twilight will interfere farther west. The International Occultation Timing Association provides local timing of the event at www.lunar-occultations.com.

November 11, 6 pm looking SE



Evening Planets: Uranus - (Taurus)

Uranus reaches opposition on November 16th and is visible all night. Binoculars required to view. The pre-dawn hours are a great time to view Uranus' 4"-wide disk with a telescope.



November 20, 9 pm looking East

Camelopardalis

Triangulum

Aries

Perseus

Cetus

Capella

Uranus

Auriga

Taurus

Jupiter

Lynx

NE

Gemini

Orion

Rigel

Lepus

Monoceros



Evening Planets: Jupiter - (Taurus)

Jupiter dominates the night sky - the best viewing conditions in the Northern Hemisphere in about a decade. Remains above the horizon for 15 hours, allowing time to watch a full rotation (just under 10 hours) in a single night. By the 30th (below), the disk spans 48". Any telescope will show the pair of dark equatorial belts straddling the equator.



Morning Planets: Mars - (Cancer)

Mars is growing in brilliance in the morning sky through November, heading toward opposition early next year. Its disk grows from 9" to 12" and increases from 89 to 93 lit by month's end. Best views in early morning when high in sky.





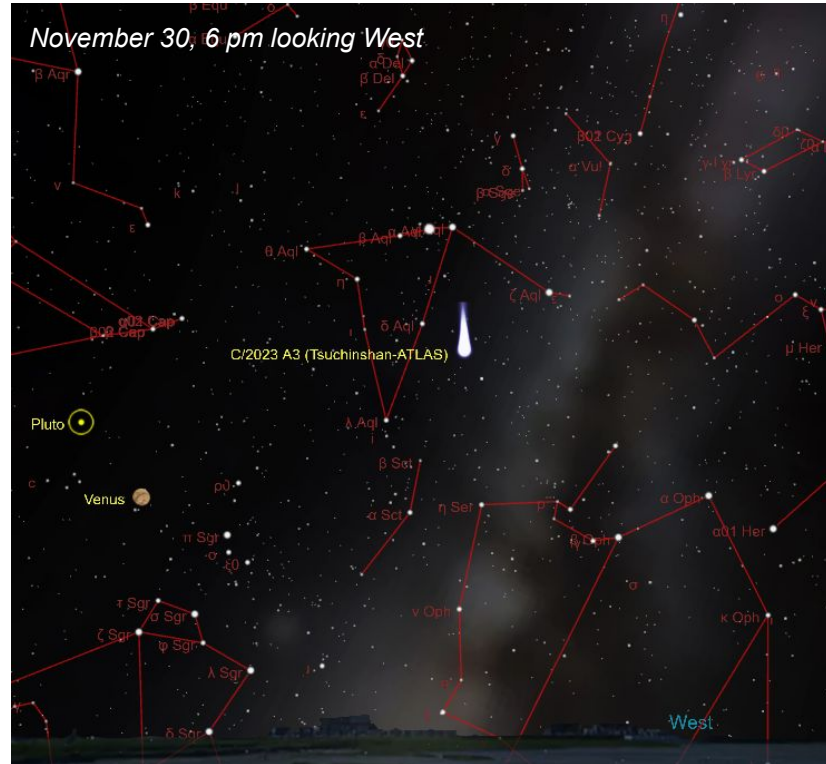
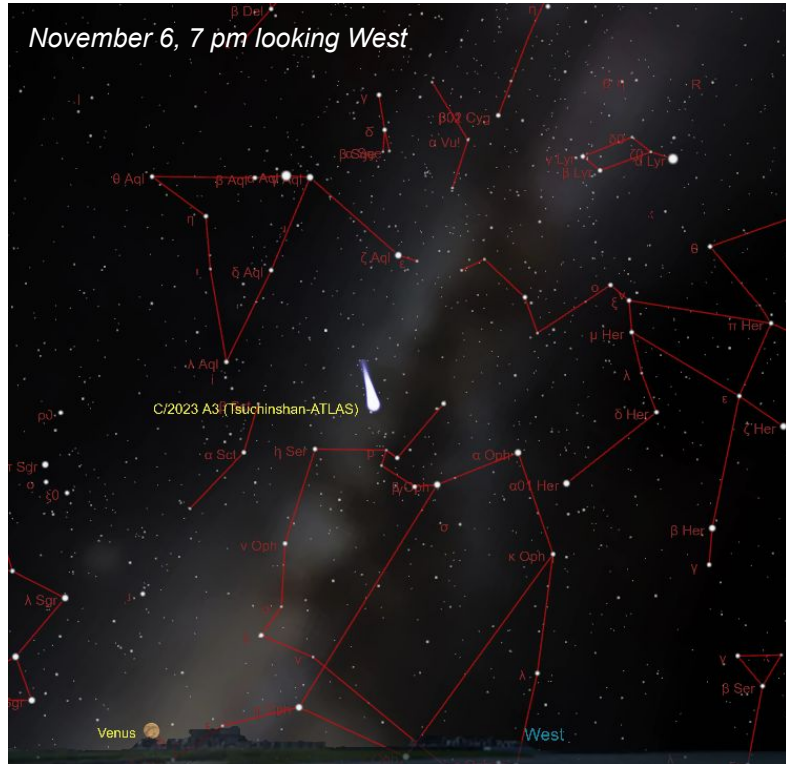
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Comet Search C/2023 A3 (Tsuchinshan-ATLAS)

Visible with binoculars or small telescope in the first half of November, but its increasing distance from the Sun and Earth combine to quickly fade it past 8th magnitude by month's end. :(



Meteor Shower Leonid

Associated with Comet 55P/Tempel-Tuttle

November 17, 5 am looking East



Leonids are active from November 6 - 30, with the peak occurring on November 17.

A Full Moon on the 15th will strongly affect the visibility of the shower at its peak, so observing in the week prior is recommended as the Moon will set earlier in the night and Leo rises near midnight.

The shower has a maximum rate of 10 meteors/hour.





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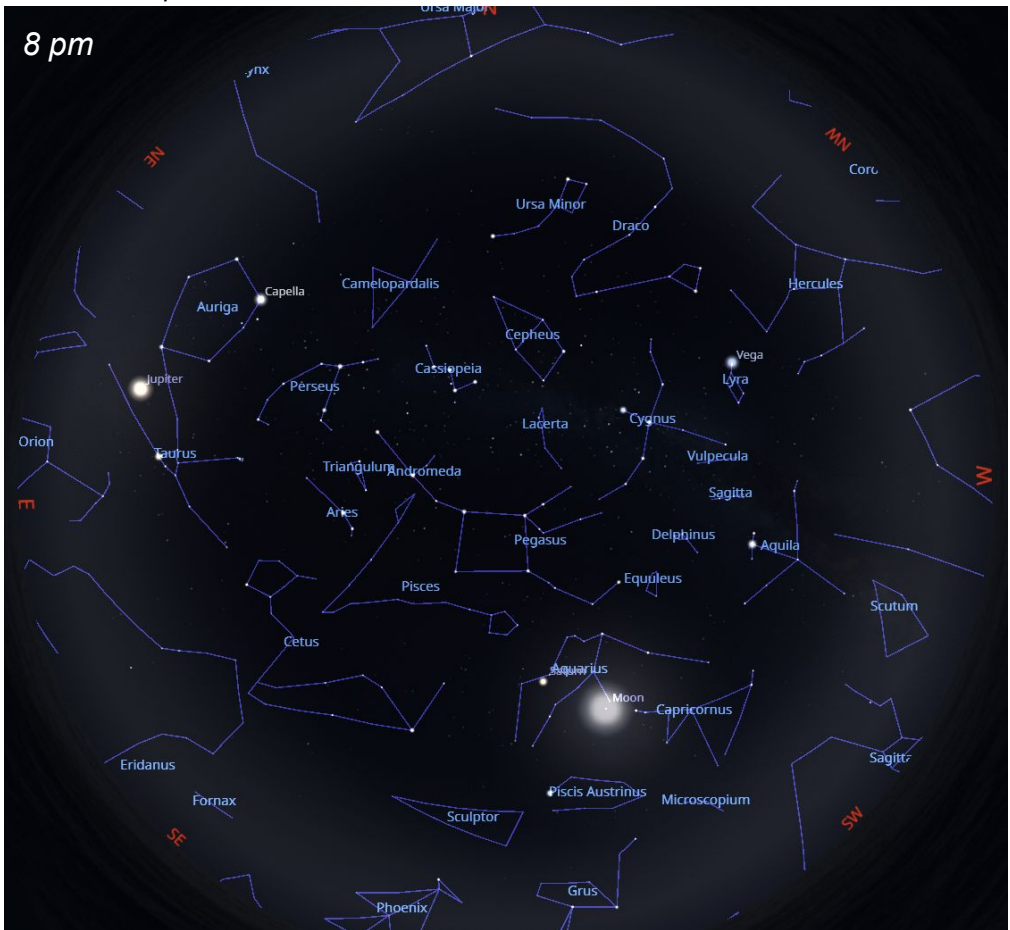
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Public Viewing Cub Lake, November 9

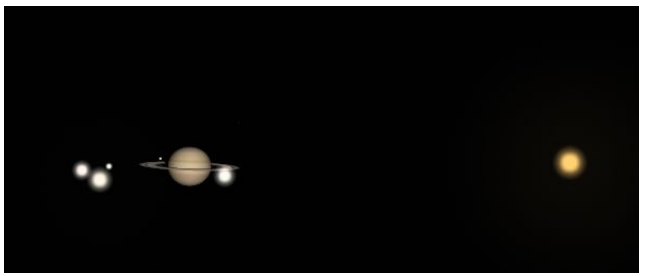
Sunset 4:51pm

Ps 19:2

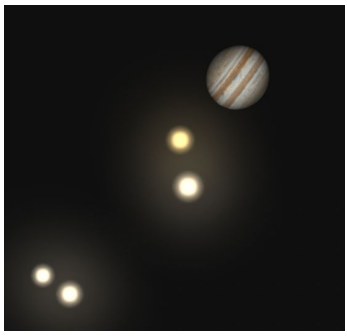
8 pm



1st Qtr Moon



Saturn & Jupiter at same magnification



November 2024 Viewing Chronology

- 1 - New Moon
- 6 - C/2022 E2 comet; TA comet (7 pm)
- 7 - Neptune (8 pm)
- 9 - Public Viewing; First Qtr Moon
- 10 - Saturn (5:30 pm)
- 11 - Neptune/Moon occultation (6 pm)
- 15 - Full Moon
- 16 - Mercury (5:30 pm)
- 17 - Leonid meteor shower peak (5 am)
- 18 - Venus (5:30 pm)
- 20 - Uranus (9 pm)
- 22 - Last Qtr Moon
- 30 - Mars (5 am); TA comet (6 pm); E2 comet (7 pm); Jupiter (9 pm)