Snake River Skies

The Monthly Newsletter of the Magic Valley Astronomical Society. August 2025

Membership Meeting
August 9th at the Herrett Center
CSI main campus at 7:00pm

Centennial Observatory
See Inside for Details

Faulkner Planetarium
See Inside for Details

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Magic Valley Astronomical Society is a member of the Astronomical League

M-51 imaged by
Rick Widmer & Ken Thomason
Herrett Telescope - Shotwell Camera

August President's Message

Hi everyone: Hope some of you were able to enjoy our annual Castle Rocks star party. As August is now upon us, we have several nighttime events upcoming we can all enjoy. The Perseids Meteor shower runs from July 11-August 13th, with the peak on August 12th. Unfortunately, a full Moon dims the party on the 12th, but a few days prior to maximum should help. On August 10, 2025, a large planetary alignment will be visible in the early morning sky, with Mercury, Venus, Jupiter, Saturn, Uranus, and Neptune appearing to line up. Our August meeting on the 9th will feature David Olsen talking about Charles Messier and his Not a Comet catalog. That's 7pm at the Herrett Center Library. See you there!

~~Vice~~ President Jay Hartwell

Calendar Quick Review

August 9 - **Full Moon.** The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 07:56 UTC. This full moon was known by early Native American tribes as the Sturgeon Moon because the large sturgeon fish of the Great Lakes and other major lakes were more easily caught at this time of year. This moon has also been known as the Green Corn Moon and the Grain Moon.

August 12, 13 - **Perseids Meteor Shower.** The Perseids is one of the best meteor showers to observe, producing up to 60 meteors per hour at its peak. It is produced by comet Swift-Tuttle, which was discovered in 1862. The Perseids are famous for producing a large number of bright meteors. The shower runs annually from July 17 to August 24. It peaks this year on the night of August 12 and the morning of August 13. The waning gibbous moon will block out all but the brightest meteors this year. But if you are patient, you may still be able to catch quite a few good ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Perseus, but can appear anywhere in the sky.

August 19 - **Mercury at Greatest Western Elongation.** The planet Mercury reaches greatest western elongation of 18.6 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky just before sunrise.

August 23 - **New Moon.** The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 06:08 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

Visit our Website
www.mvastro.org

Moon Phases for August 2025

SUN	MON	TUE	WED	THU	FRI	SAT
					1  First Quarter 6:41 A.M. 8 days	2  Waxing gibbous 61.6% 9 days
3  Waxing gibbous 70.6% 10 days	4  Waxing gibbous 79.0% 11 days	5  Waxing gibbous 86.4% 12 days	6  Waxing gibbous 92.6% 13 days	7  Waxing gibbous 97.1% 14 days	8  Waxing gibbous 99.6% 15 days	9  Full Sturgeon Moon 1:57 A.M. 16 days
10  Waning gibbous 97.6% 17 days	11  Waning gibbous 92.8% 18 days	12  Waning gibbous 85.8% 19 days	13  Waning gibbous 76.9% 20 days	14  Waning gibbous 66.5% 21 days	15  Last Quarter 11:14 P.M. 22 days	16  Waning crescent 43.9% 23 days
17  Waning crescent 32.8% 24 days	18  Waning crescent 22.7% 25 days	19  Waning crescent 14.0% 26 days	20  Waning crescent 7.2% 27 days	21  Waning crescent 2.6% 28 days	22  Waning crescent 0.3% 29 days	23  New Moon 12:07 A.M. 0 days
24  Waxing crescent 2.4% 1 day	25  Waxing crescent 6.4% 2 days	26  Waxing crescent 12.1% 3 days	27  Waxing crescent 19.1% 4 days	28  Waxing crescent 27.1% 5 days	29  Waxing crescent 35.9% 6 days	30  Waxing crescent 45.2% 7 days
31  First Quarter 12:25 A.M. 8 days						

Twin Falls, Idaho, United States
Source: The Old Farmer's Almanac

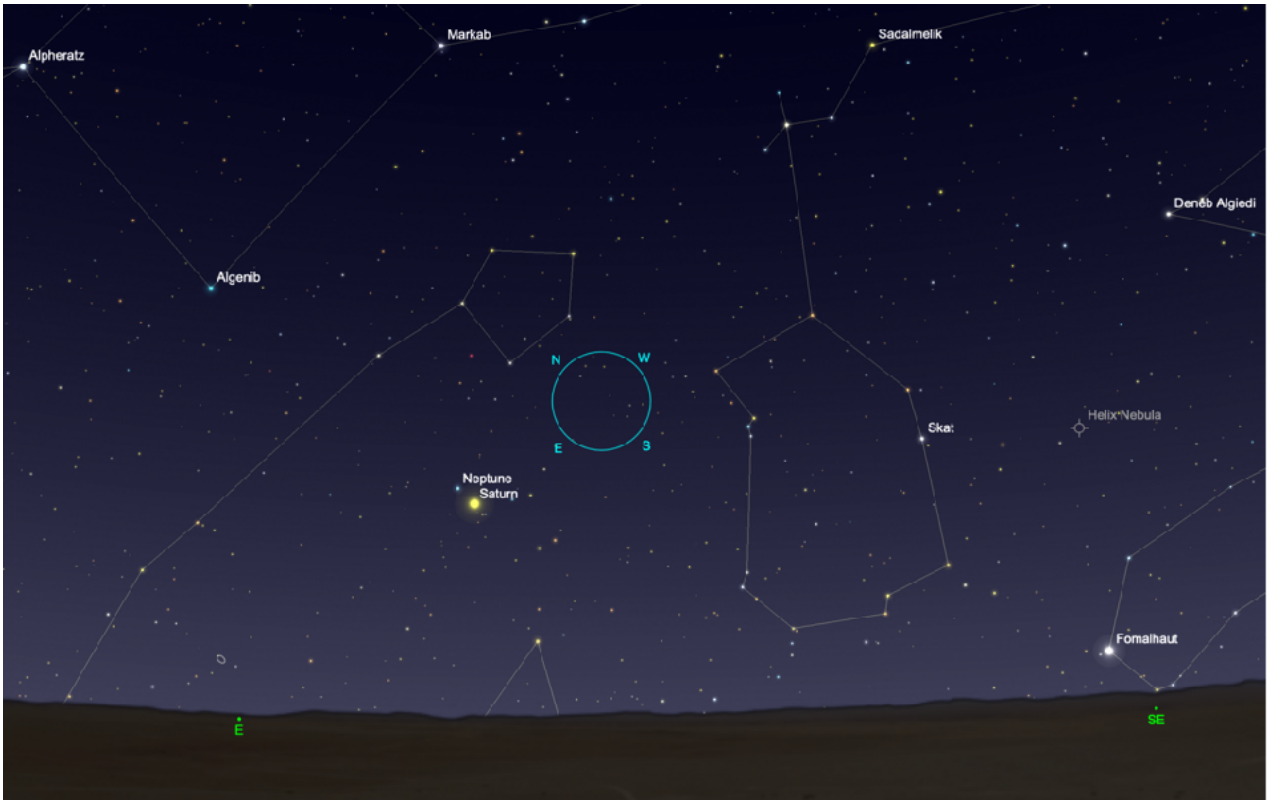
August's Full Sturgeon Moon will peak on **Saturday, August 9.** Other Moon names: **Flying Up Moon** is a Cree term describing the time when young birds are finally ready to take the leap and learn to fly. **Corn Moon** (Algonquin, Ojibwe), **Harvest Moon** (Dakota), and **Ricing Moon** (Anishinaabe) signify that this is the time to gather maturing crops. Along the same vein, the Assiniboine people named this period **Black Cherries Moon**, referring to when chokecherries become ripe. The Tlingit people of the Pacific Northwest traditionally called this time of the season the **Mountain Shadows Moon**. The Shoshone called the August Moon guuteyai-mea' or hot.

The Sky this Month - August 2025

The 2012 Perseids Meteor Shower over the Snowy Range in Wyoming (credit: David Kingham)

August brings some lovely planetary alignments and conjunctions with Venus, Jupiter, and Mercury playing tag with each other, the Moon, and a pair of star clusters in the eastern morning sky before sunrise. Mars lingers – barely – in the west before it eases itself out of the evening sky, while Saturn and Neptune move into view together in the late evening hours. The reliable Perseid meteor shower peaks on August 12-13 with the waning gibbous Moon obscuring the faintest meteors but leaving the brightest plainly visible. Moon or not, it's the best meteor shower of the year. Here's what to see in the night sky this month…

1 August 2025. First Quarter Moon, 12:41 UT. Look for the half-lit Moon just a degree south of the red supergiant star Antares in Scorpius over the southern horizon.

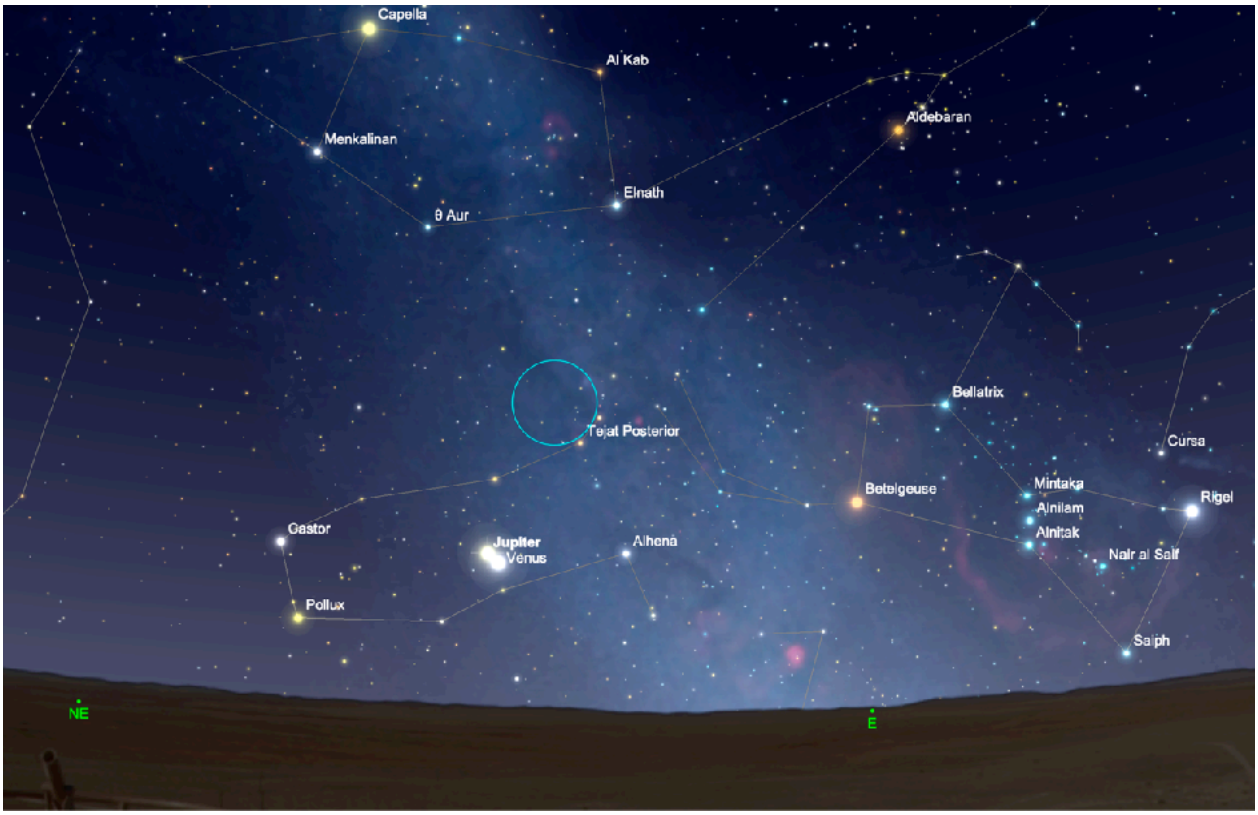


Saturn and Neptune in conjunction the night of August 6, 2025. The cyan circle shows a 5 degree field of view. Below: Venus and Jupiter lie in conjunction in Gemini before dawn in the eastern sky on August 12, 2025. The cyan circle shows a 5 degree field of view.

6 August. Saturn lies 1.1º south of Neptune tonight south of the Circlet of Pisces. Saturn's disk spans nearly 19" in a telescope and shows the southern face of its rings inclined at a small angle from edge-on. Neptune shines with a blue-green light be offers little detail on its tiny 2.4"-wide disk. But seeing both planets in a single field of view is a rare delight.

9 August. Full Moon, 07:55 UT (the 'Full Sturgeon Moon')

11 August. A waning gibbous Moon rises together in the east with Saturn.

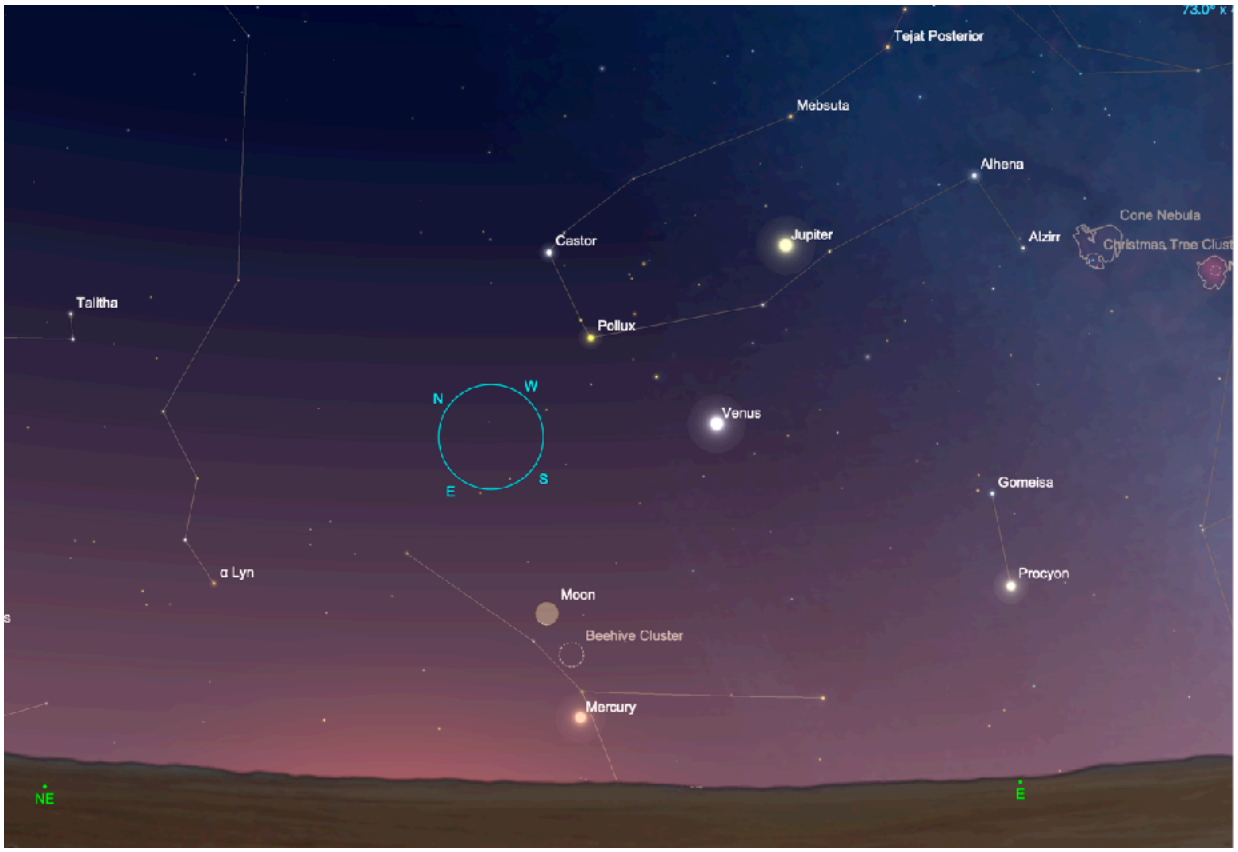


12 August. Look east-northeastward at dawn to see the two brightest planets, Venus and Jupiter, rising less than one degree apart in Gemini. Venus, now receding from Earth, shines at magnitude -4.0 and appears more than ¾ illuminated with a disk almost 14” wide. Jupiter, more than twice as large in apparent size, shines at magnitude -1.9. The pair look spectacular with or without optical aid. If the weather cooperates, go have a look at this spectacular conjunction.

12 August. The Perseids meteor shower peaks. This is the finest meteor shower of the year for northern stargazers, with 40-60 meteors per hour visible at the peak in the hours before dawn on August 12-13. Once called the Tears of St. Lawrence, this meteor shower occurs as the Earth moves through a stream of debris left by Comet Swift-Tuttle. Unfortunately, this year the light from the waning gibbous Moon gets in the way of the faintest meteors. Current predictions put the peak at about 20h UT on August 12, but take a look on the night and morning of August 11-12 and 12-13 for the best chance to see meteors. Stay away from city lights, if you can, and you will be rewarded with a bright meteor every minute or two.

16 August. Last Quarter Moon, 05:12 UT. Look for the half-lit Moon north of the Pleiades star cluster in the pre-dawn sky.

19 August. Mercury reaches greatest western elongation 19º west of the Sun. Venus and Jupiter are further apart in the morning sky, but the slender crescent Moon joins them over the east-northeastern horizon before sunrise along with the stars Castor and Pollux in Gemini.



The Moon and Mercury lie low in the eastern sky before sunrise on August 21, 2025. The Beehive Star Cluster lies between the two.

21 August. The planet parade continues in the morning sky before sunset as Mercury lies about 5º southeast of the very thin Moon in the east-northeastern sky. Grab a pair of binoculars and try to see the Beehive star cluster (Messier 34) between the two. Venus and Jupiter continue to shine further west.

23 August. New Moon, 06:07 UT.

26 August. The crescent Moon, now just a few days old, hangs about 6º southeast of Mars in the west-southwestern sky after sunset. **27 August.** The crescent Moon lies near Spica low in the west after sunset.

31 August. First Quarter Moon, 06:25 UT. The month ends as it began with the first-quarter Moon near Antares over the southern horizon.

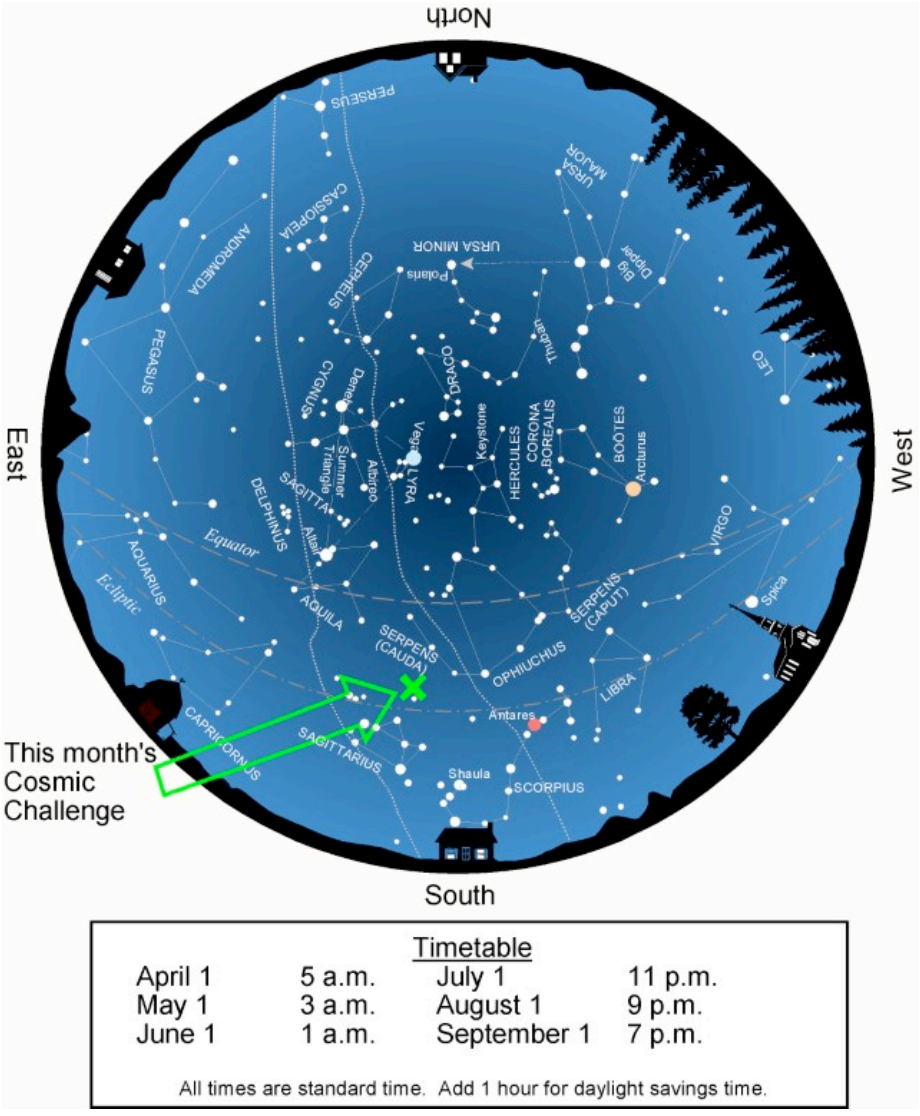
Phil Harrington's Cosmic Challenge

Cosmic Challenge:

<u>This month's suggested aperture range</u>:
10- to 14-inch (25-36cm) telescopes
Featured scope Meade LX200 14”

Target	Type	RA	DEC	Constellation	Magnitude	Size
NGC 6578	Planetary Nebula	18h 16.3m	-20° 27.1’	Sagittarius	13.0	8"×6"

This month’s challenge is NGC 6578, a planetary nebula buried in central Sagittarius, one of the sky’s richest regions. With so many stars crowding the field, it’s easy to overlook this tiny, stellar puff of gas. No wonder the Herschels missed it when compiling their General Catalog. It went unseen until August 18, 1882, when Edward Charles Pickering spotted it using the Harvard 15-inch (38cm) refractor.

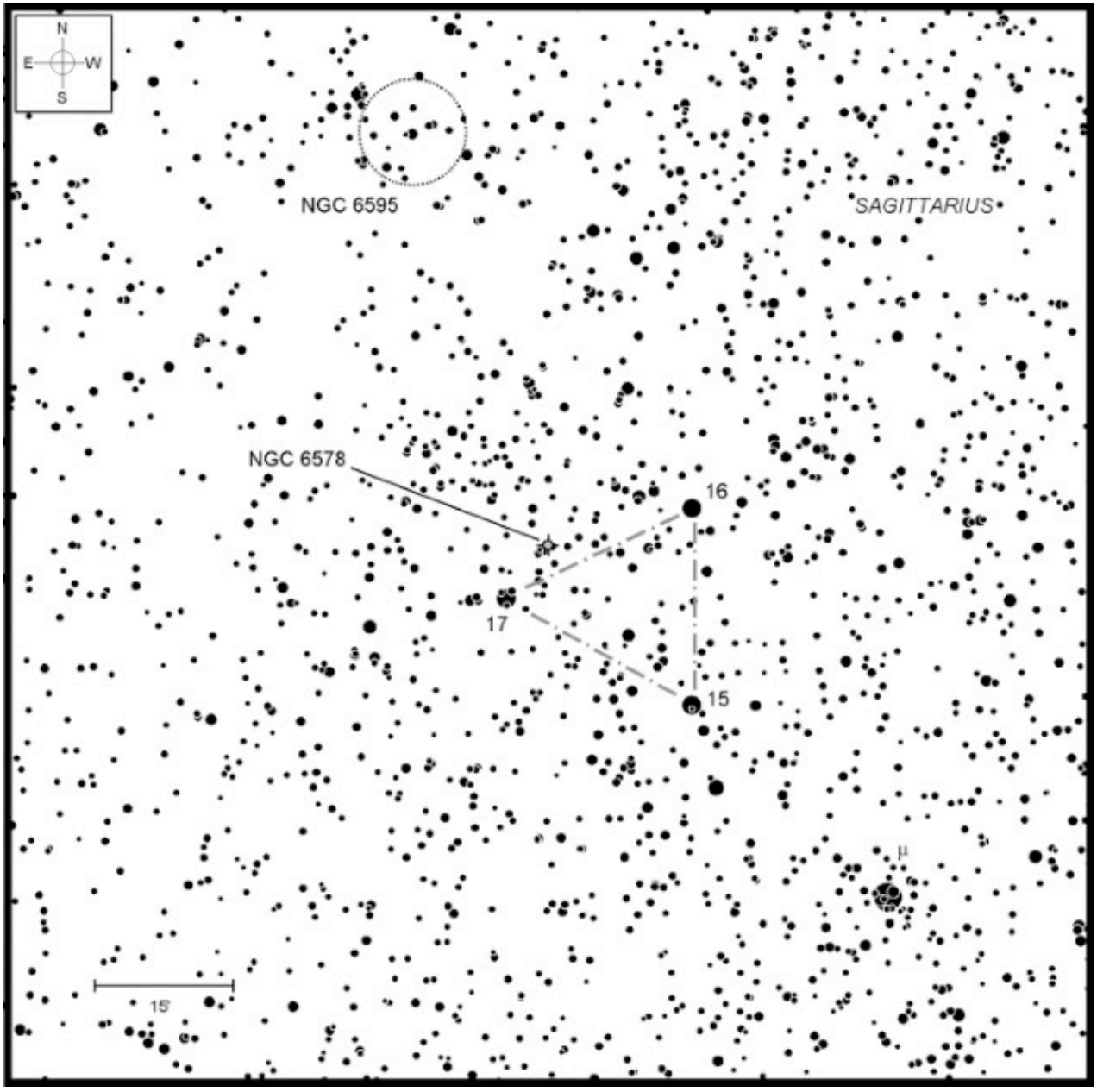


Timetable

April 1	5 a.m.	July 1	11 p.m.
May 1	3 a.m.	August 1	9 p.m.
June 1	1 a.m.	September 1	7 p.m.

All times are standard time. Add 1 hour for daylight savings time.

Above: Evening star map. Credit: Map adapted from Star Watch by Phil Harrington



Above: Finder chart for this month's Cosmic Challenge.

NGC 6578 is north-northwest of Kaus Borealis [Lambda (λ) Sagittarii] at the top of the teapot asterism. Look about 6° to the star's north for 4th-magnitude Mu (μ) Sagittarii and an equilateral triangle fashioned by 6th-magnitude 15, 16, and 17 Sagittarii, about 45' further northeast. NGC 6578 lies 7' northwest of 17 Sagittarii, the triangle's eastern tip. (Incidentally, if you are star-hopping your way to our challenge, be aware that it is plotted incorrectly on older printings of Sky Atlas 2000.0.)

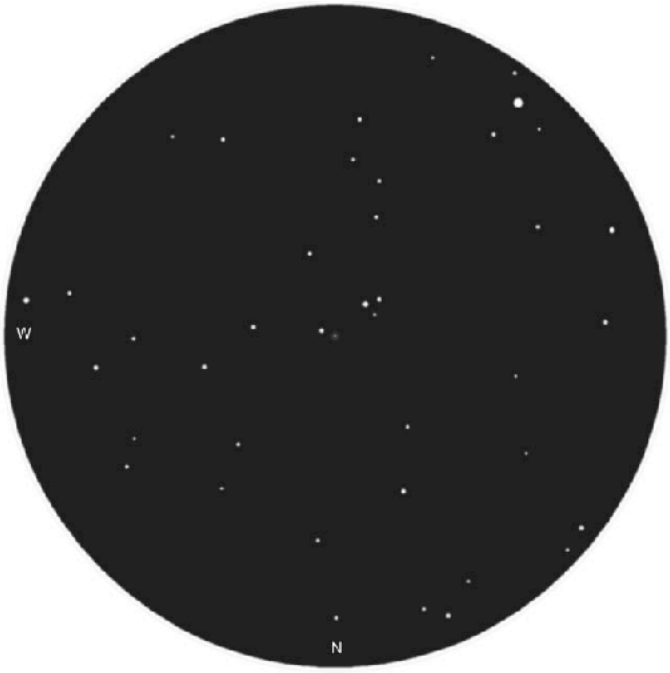
Start at a magnification of about 150x to locate NGC 6578. While it's easy enough to locate, it is not so easy to identify thanks to an 11th-magnitude star just 20" to the west and a small clump of 9th- to 11th-magnitude stars to the east.

After you zero in on the planetary, try your highest usable magnification to limit the onslaught of stars in the field, and then take a look. An O-III filter will help dim that 11th-magnitude star while also accenting the planetary. "Blinking" the nebula with the filter should help to pull it out from the crowd. When the filter is in place, the nebula brightens perceptibly, standing out from the surrounding stars. Remove the filter, and most stars return to prominence while the nebula dims significantly.

Increase the magnification to between 250× and 350× to begin resolving the nebula's subtle shape. With averted vision, you should notice that NGC 6578 has a round, slightly mottled disk. If the sky is steady, try pushing to 400× or higher with a 10-inch (25 cm) or larger telescope for an even better view.

At these magnifications, the nebula begins to show its soft, oval outline and hints of inner structure. The bright inner shell, about 6” across, appears as a softly glowing oval. Surrounding it is a thin halo extending out to 8” or 9”. This view recalls early accounts by astronomers, including Lick Observatory’s John Curtis, who in 1918 described it as “*a nucleus almost stellar; mag 15. Disk nearly round, 8.5" in diameter; no ansae or structural details discernible*.” Hubble Space Telescope images reveal a delicate double shell structure with expanding inner filaments.

Above: NGC 6578 looks just like another star in this image taken through the author's 6-inch (15cm) f/2.2 Celestron Origin Home Observatory. North is up. Visit the author's Astrobin galley for a larger image.

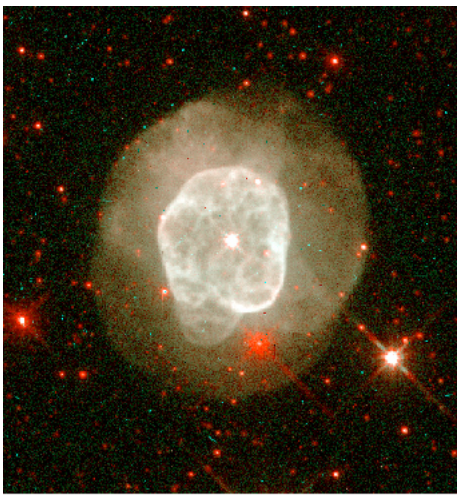


Above: Digitized sketch of NGC 6578 through the author's 10-inch (25cm) Newtonian. South is up.

Can you spot the uneven texture that shows up so clearly in images taken through the Hubble? HST's images also reveal a pair of what University of Washington astronomers Stacy Palen and Bruce Balick describe as "blowout bulbs" passing near the nebula's magnitude-15.5 central star. In their paper Hubble Space Telescope Expansion Parallaxes of the Planetary Nebulae NGC 6578, NGC 6884, NGC 6891, and IC 2448, the authors note that "*The inner core has a bright rim and a blotchy inner appearance, reminiscent of a heap of soapsuds, with faint regions surrounded by bright rims.*"

On very steady nights, with no filter and high magnification, the central star can occasionally be seen. It appears as a faint pinpoint just off center. The central star has always escaped my eye, but you might have better luck spotting it. More recently, a 2021 study entitled Planetary Nebulae in Gaia EDR3: Central Star identification, properties and binarity by González Santamaría and colleagues used data from Gaia's third early data release to identify the central star of NGC 6578 with greater confidence. This improved the accuracy of its position, distance, and evolutionary state.

Good luck with this month's Cosmic Challenge! Below: NGC 6578 through the Hubble Space Telescope.



Until next month, remember that half of the fun is the thrill of the chase. Game on!

About the Author:

Phil Harrington is a contributing editor to Astronomy magazine and is the author of 9 books on astronomy. Visit www.philharrington.net to learn more.

Herrett Center for Arts and Science

Upcoming Events
All events are weather permitting.

Event	Place	Date	Time	Admission
Summer Solar Session #11	Centennial Observatory	Wednesday, August 6, 2025	1:30-3:30 p.m.	Free
Monthly Free Star Party	Centennial Observatory	Saturday, August 9, 2025	9:45-11:45 p.m.	Free
Summer Solar Session #12	Centennial Observatory	Wednesday, August 13, 2025	1:30-3:30 p.m.	Free
Mercury at Greatest Western Elongation	Centennial Observatory	Wednesday, August 20, 2025	6:45-7:15 a.m.	Free
Summer Solar Session #13	Centennial Observatory	Wednesday, August 20, 2025	1:30-3:30 p.m.	Free
Summer Solar Session #14	Centennial Observatory	Wednesday, August 27, 2025	1:30-3:30 p.m.	Free

Faulkner Planetarium
Now Showing

Show times (through September 1st)

Tuesdays at 1:30 p.m., 2:30 p.m., 3:30 p.m., 7:00 p.m., & 8:00 p.m.
Wednesdays at 1:30 p.m., 2:30 p.m., & 3:30 p.m.
Thursdays at 1:30 p.m., 2:30 p.m., & 3:30 p.m.
Fridays at 1:30 p.m., 2:30 p.m., 3:30 p.m., 7:00 p.m. & 8:00 p.m.
Saturdays 1:30 p.m., 2:30 p.m., 3:30 p.m., 6:00 p.m., 7:00 p.m., & 8:00 p.m.

Find Current Shows following the link above. Admission: Adults (ages 18-59): $7.50 Seniors (ages 60+): $6.50 Children (ages 2-17): $5.50 CSI students (w/ activity card): $5.50 Children under age 2: FREE

*50% discount for Planetary Society members and families.

- Assistive listening devices available upon request.
- Open captioning available upon request for some shows.
- No food, drink, or late entry.
- Dark conditions and audio/visual effects may be too intense for younger children.

Websites and Other Helpful Astronomy Links.

Information on passes of the ISS, the USAF's X-37B, the HST, the BlueWalker 3, and other satellites can be found at http://www.heavens-above.com/

Visit https://saberdoesthe...does-the-stars/ for tips on spotting extreme crescent Moons and https://curtrenz.com/moon.html for Full Moon and other lunar data.

Go to https://skyandtelesc...ads/MoonMap.pdf and https://celestron-si...RReeves-web.pdf and https://nightsky.jpl...ObserveMoon.pdf for simple lunar maps. Click on https://astrostrona.pl/moon-map/ for an excellent online lunar map. Visit http://www.ap-i.net/avl/en/start to download the free Virtual Moon Atlas. Consult http://time.unitariu...moon/where.html for current information on the Moon and https://www.fourmila.../lunarform.html for information on various lunar features. See https://svs.gsfc.nasa.gov/4955 a lunar phase and libration calculator and https://svs.gsfc.nasa.gov/5187/

The Lunar Reconnaissance Orbiter Camera (LROC) quick map. https://www.universa...ise-and-sunset/

For more on the planets and how to locate them, browse http://www.nakedeyeplanets.com/

Summaries on the planets for each month can be found at https://earthsky.org/astronomy-essentials/

The graphic at https://www.timeandd...lanets/distance displays the apparent and comparative sizes of the planets, along with their magnitudes and distances, for a given date and time.

The rise and set times and locations of the planets can be determined by clicking on https://www.timeandd...stronomy/night/

Click on https://www.curtrenz.../asteroids.html for information on asteroid occultations taking place this month.

Visit http://cometchasing.skyhound.com/ and http://www.aerith.ne...t/future-n.html and https://cobs.si/ for additional information on comets visible this month.

A list of the closest approaches of comets to the Earth is posted at http://www.cometogra.../nearcomet.html

A wealth of current information on solar system celestial bodies is posted at http://www.curtrenz.com/astronomy.html and http://nineplanets.org/

Information on the celestial events transpiring each week can be found at https://stardate.org/nightsky and http://astronomy.com/skythisweek and http://www.skyandtel...ky-at-a-glance/

Free star maps for any month may be downloaded at http://www.skymaps.com/downloads.html and https://www.telescop...thly-Star-Chart and http://www.kenpress.com/index.html

Data on current supernovae can be found at http://www.rochester...y.org/snimages/

Finder charts for the Messier objects and other deep-sky objects are posted at https://freestarcharts.com/messier and https://freestarcharts.com/ngc-ic and http://www.cambridge..._april-june.htm

Telrad finder charts for the Messier Catalog are posted at http://www.custerobs...cs/messier2.pdf and http://www.star-shin...ssierTelrad.htm

Telrad finder charts for the SAC's 110 Best of the NGC are available at https://www.saguaroa...k110BestNGC.pdf

Information pertaining to observing some of the more prominent Messier galaxies can be found at http://www.cloudynig...ur-astronomers/

Author Phil Harrington offers an excellent freeware planetarium program for binocular observers known as TUBA (Touring the Universe through Binoculars Atlas), which also includes information on purchasing binoculars, at http://www.philharrington.net/tuba.htm

Stellarium and Cartes du Ciel are two excellent freeware planetarium programs that are available at http://stellarium.org/ and https://www.ap-i.net/skychart/en/start

Deep-sky object list generators can be found at http://www.virtualcolony.com/sac/ and https://telescopius.com/ and http://tonightssky.com/MainPage.php

Freeware sky atlases can be downloaded at http://www.deepskywa...-atlas-full.pdf and https://www.cloudyni...ar-charts-r1021 and https://allans-stuff.com/triatlas/

For current sky charts visit the NASA Night Sky Network https://nightsky.jpl.nasa.gov/news/212/

Magic Valley Astronomical Society
550 Sparks St.
Twin Falls, ID

The Magic Valley Astronomical Society (MVAS) was founded in 1976. The Society is a non-profit [501(c) 3] educational and scientific organization dedicated to bringing together people with an interest in astronomy.

In partnership with the Centennial Observatory, Herrett Center, College of Southern Idaho - Twin Falls; we hold regularly scheduled monthly meetings and observation sessions, at which we share information on current astronomical events, tools and techniques for observation, astrophotography, astronomical computer software, and other topics concerning general astronomy. Members enthusiastically share their telescopes and knowledge of the night sky with all who are interested. In addition to our monthly public star parties we hold members only star parties at various locations throughout the Magic Valley.

MVAS promotes the education of astronomy and the exploration of the night sky along with safe solar observing through our public outreach programs. We provide two types of outreach; public star parties and events open to anyone interested in astronomy, and outreach programs for individual groups and organizations (e.g. schools, churches, scout troops, company events, etc.), setting up at your location. All of our outreach programs are provided by MVAS volunteers at no cost. However, MVAS will gladly accept donations. Donations enable us to continue and improve our public outreach programs.

Membership is not just about personal benefits. Your membership dues support the work that the Magic Valley Astronomical Society does in the community to promote the enjoyment and science of astronomy. Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.

Annual Membership dues will be:
$20.00 for individuals, families, and $10.00 for students.
Contact Treasurer Jim Tubbs for dues information via e-mail: jtubbs015@msn.com

Donations to our club are always welcome and are even tax deductible. Please contact a board member for details.
Lending Telescopes: The society currently has three telescopes for loan and would gladly accept others please contact President Robert Mayer, for more information on these and other benefits.

Telescopes are an individual thing and not practical for public use. However, everyone should have the experience of a good look at the Moon for at least 5 minutes in their life time. It is a dimension and feeling that is unexplainable. Pictures or TV can't give this feeling, awareness, or experience of true dimension. A person will not forget seeing our closest neighbor, the Moon.

Norman Herrett in a letter to Dr. J. L. Taylor, president of the College of Southern Idaho