

# Snake River Skies

The Monthly Newsletter of the Magic Valley Astronomical Society.

June 2026

## Membership Meeting

July 11th at the Herrett Center,  
College of Southern Idaho main  
campus at 6:00pm

## Centennial Observatory

See Inside for Details

## Faulkner Planetarium

See Inside for Details

## Club Officers

Andy Newbery - President

Dr. Jay Hartwell, Vice President  
[drhartwellod8@gmail.com](mailto:drhartwellod8@gmail.com)

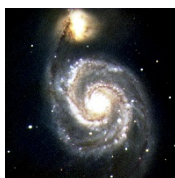
Rick Hull, Secretary  
[hull3hull3@yahoo.com](mailto:hull3hull3@yahoo.com)

Jim Tubbs, Treasurer / ALCOR  
[jtubbs015@msn.com](mailto:jtubbs015@msn.com)  
208-404-2999

David Olsen, Newsletter Editor  
[BoiseAstro@outlook.com](mailto:BoiseAstro@outlook.com)

Rick Widmer, Webmaster  
[rick@rickwidmer.com](mailto:rick@rickwidmer.com)

Magic Valley Astronomical Society  
is a member of the Astronomical  
League



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

Visit our Website  
[www.mvastro.org](http://www.mvastro.org)

## July 2026 Vice President's Message

Message from the Club Vice President






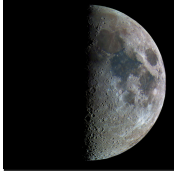

Greetings: Friends and Members.

Happy Summer everyone! First, a reminder our upcoming annual picnic July 11th at the Herrett Center. Cooking starts at 6:00pm. Again, we are asking all who attend to bring a side dish such as a salad or dessert or chips. We will manage the ice cream and some drinks. Then on the 17th and 18th will be our Castle Rocks Star Party. Hope to see many of you there. If you need a room or trailer parking area, let Chris Anderson know and he will reserve a spot for you. While our crazy spring offered only a few clear and calm nights, July will hopefully offer better weather and a chance to catch many fun objects.



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## Monthly Event Calendar - July 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		<p>On the 1st</p> <p><a href="#">Messier 22 is well placed</a></p> <p><a href="#">The cluster IC 4756 is well placed</a></p>	<p>1</p> <p>Canada Day</p>  <p><a href="#">Summer Solar Session #6</a></p>	2	3	<p>4</p> <p>Independence Day</p>  <p><a href="#">Conjunction of Mars and Uranus</a></p>
<p>5</p> <p>On the 7th Neptune enters retrograde motion</p> <p><a href="#">Conjunction of the Moon and Saturn</a></p>	6	<p>7</p> <p><a href="#">Moon at Last Quarter</a></p> 	<p>8</p> <p><a href="#">Summer Solar Session #7</a></p> 	9	<p>10</p> <p><a href="#">Close approach of the Moon and M45</a></p>	<p>11</p> <p>MVAS Picnic 6:00p at the Herrett Center.</p> <p>Centennial Observatory Star Party 9:45 - 11:45 pm</p>
<p>12</p> <p><a href="#">Mercury at inferior solar conjunction</a></p>	13	<p>14</p> <p><a href="#">New Moon</a> Lunation 1280</p> <p><a href="#">The Moon at perihelion</a></p> 	15	16	17	18
19	20	21	22	23	24	25
		<p><a href="#">Moon at First Quarter</a></p> 	<p><a href="#">Summer Solar Session #9</a></p> 		<p><a href="#">Peak Pluto in 2026</a></p> 	<p><a href="#">The Moon at apogee</a></p>
<p>26</p> <p><a href="#">Saturn enters retrograde motion</a></p> <p><a href="#">Asteroid 3 Juno at opposition</a></p>	27	28	29	30		
				<p>30</p> <p><a href="#">Jupiter at apogee</a></p> <p><a href="#">α-Capricornid meteor shower</a></p> <p><a href="#">Southern δ-Aquariid meteor shower 2026</a></p>	31	<p>On the 17th</p> <p><a href="#">Conjunction of the Moon and Venus</a></p>

## Night Sky this Month – July 2026

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The Milky Way and an expectant stargazer in late July 2018.

Venus appears in the evening sky, Saturn rises after midnight, and Mars emerges in Taurus in the eastern sky before sunrise. 'Milky Way season' gets fully underway as the thick band of our galaxy moves into view in the late evening hours. And a modest meteor shower arrives this month, running from the 15<sup>th</sup> until early August, foreshadowing the splendid Perseid meteor shower coming up next month. Here's what to see in the night sky this month...

Grab some optics and let's do a little summer stargazing with [a tour of the cluster IC 4665](#), a splendid and sprawling star group that looks like the word 'HI' etched into the summer night sky. Astronomy Now [reviews the latest iteration of the extremely useful pocket-sized binoculars](#) that enable sweeping views of entire constellations and the bright highlights of the Milky Way.

As a follow-up to last month's article on noctilucent clouds, here's a short guide on [how to capture an image of these icy wonders](#) with a smartphone.

The Vera Rubin telescope [begins its dazzling census of the cosmos](#) (gift link from the New York Times).

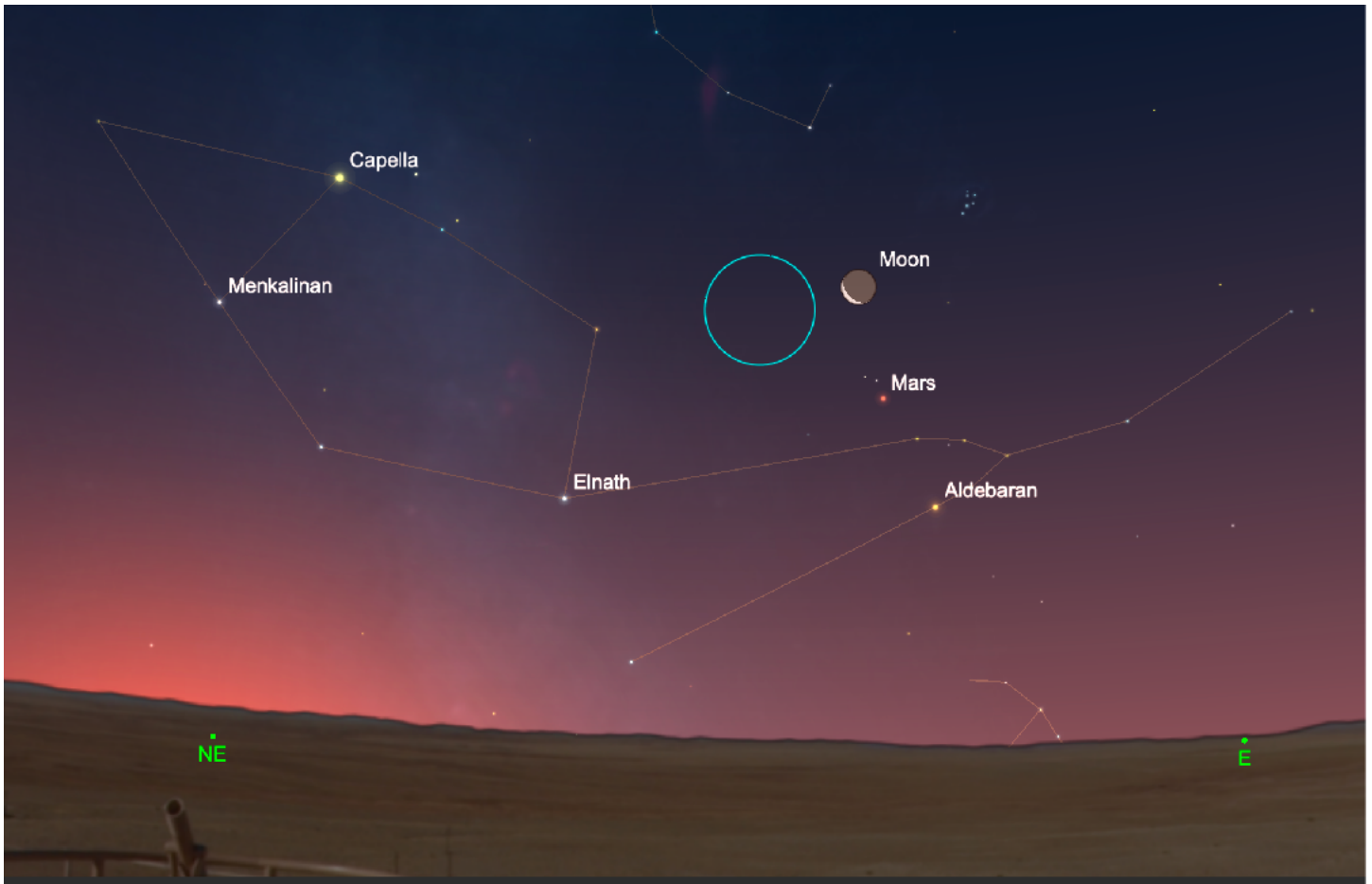
And the astronomy quote of the month: "We are like butterflies who flutter for a day and think it is forever." - Carl Sagan

**4 July.** If you have a telescope handy, look again to Mars to see the tiny disk of Uranus just 0.1° to the north.

**6 July.** Earth reaches aphelion, its furthest point from the Sun, at a distance of 152,087,774 km. That's 3.4% farther than at perihelion in early January.

**7 July.** Last Quarter Moon, 19:29 UT

**9 July.** Look westward at dusk to see Venus just one degree northeast of Regulus. The planet has brightened to magnitude -4.1 and appears in a telescope as a gibbous disk about 17" across.



Mars lies between the crescent Moon and Taurus in the eastern pre-dawn sky on July 11, 2026.

**11 July.** Back to the morning sky, look again eastward to see Mars between the Hyades cluster in Taurus and a waning crescent Moon. It's a lovely part of the sky to sweep with binoculars early on a northern summer morning.

**14 July.** New Moon, 09:44 UT

**16 July.** Look for a slender lunar crescent Moon about  $7^\circ$  west of Venus and just over  $1^\circ$  south of the star Regulus in the western evening sky after sunset. The Moon and Venus remain close on the 17<sup>th</sup> also.

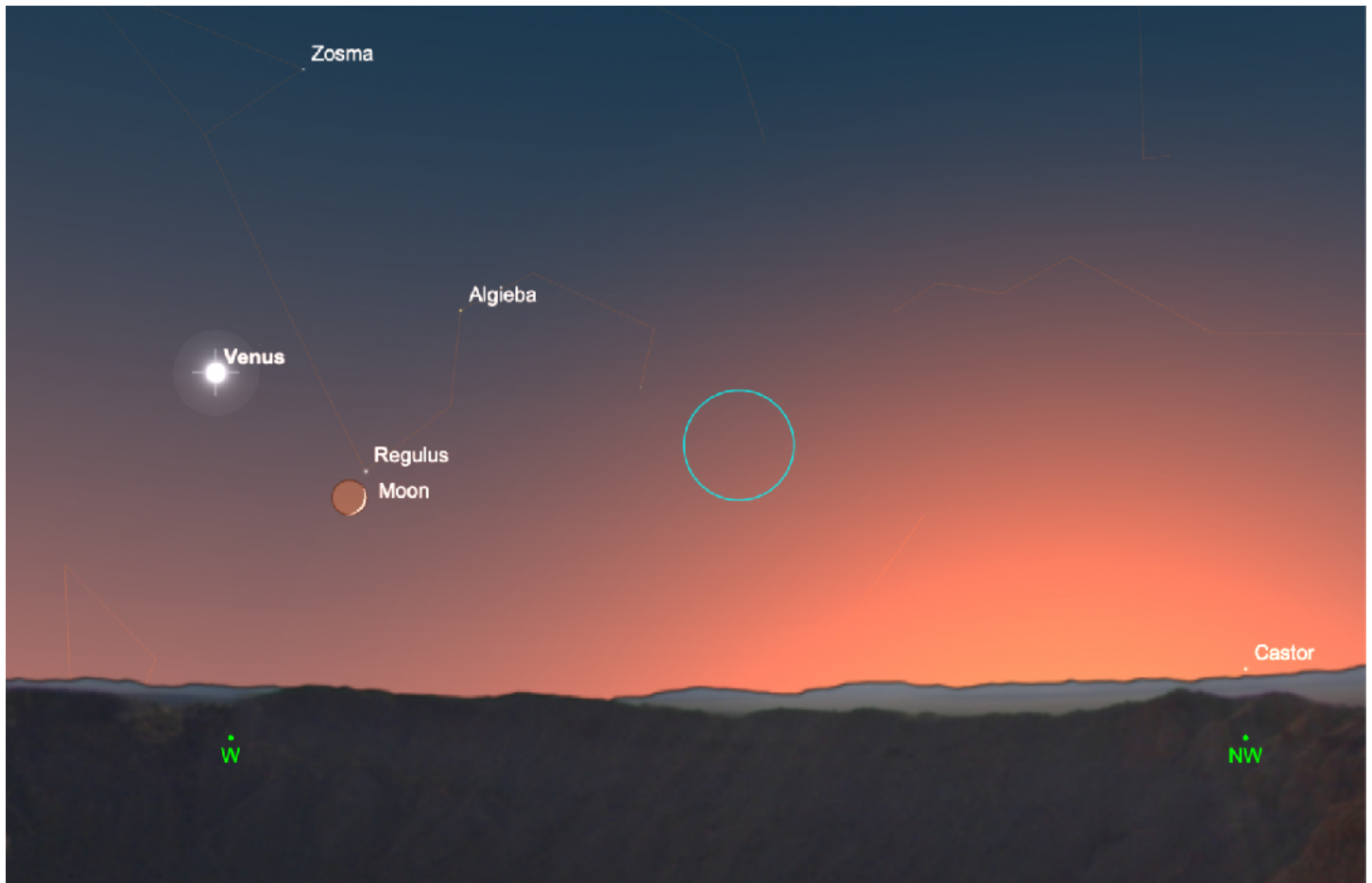
**20 July.** A nearly first-quarter Moon lies  $3^\circ$  southwest of Spica in the southwestern evening sky.

**21 July.** First Quarter Moon, 11:06 UT

**24 July.** The fattening gibbous Moon passes  $2.5^\circ$  southeast of the bright red supergiant Antares in the constellation Scorpius in the southern evening sky.

**27 July.** Saturn, which now rises near midnight local time, reaches its first stationary point. It now moves westward (in retrograde) against the background stars for the next 4.5 months. The planet now enters its best observing period over the next several months. It shines near magnitude +0.7 and its disk spans  $18''$ .

**29 July.** Full Moon, 14:36 UT (the full 'Buck Moon' or 'Berry Moon'). At this time, the antlers of bucks (male deer) are in full growth mode. This Native American name was noted by Captain Jonathan Carver during his travels in the 1760s. Other animal-related names include **Feather Moulting Moon** (Cree) and **Salmon Moon**, a Tlingit term indicating when fish returned to the area and were harvested. As far as the plant world, there was **Berry Moon** (Anishinaabe), **Moon When the Chokecherries are Ripe** (Dakota), **Month of the Ripe Corn Moon** (Cherokee), and **Raspberry Moon** (Algonquin, Ojibwe), among others. **Thunder Moon** (Western Abenaki) and **Halfway Summer Moon** (Anishinaabe) are other variants.



**29-31 July.** The Delta Aquariid meteor shower peaks. This annual event favors observers in the southern hemisphere and southerly latitudes in the northern hemisphere, though all observers can see some of these slow-moving meteors. The Delta Aquariids appear to radiate from a point near the star Skat (delta Aquarii) in the constellation Aquarius. The shower peaks around July 29-30, but unlike most meteor showers, the Delta Aquariids lack a sharp maximum which means meteors are visible from mid-July through early August. The maximum hourly rate can reach 15-20 meteors in dark sky.



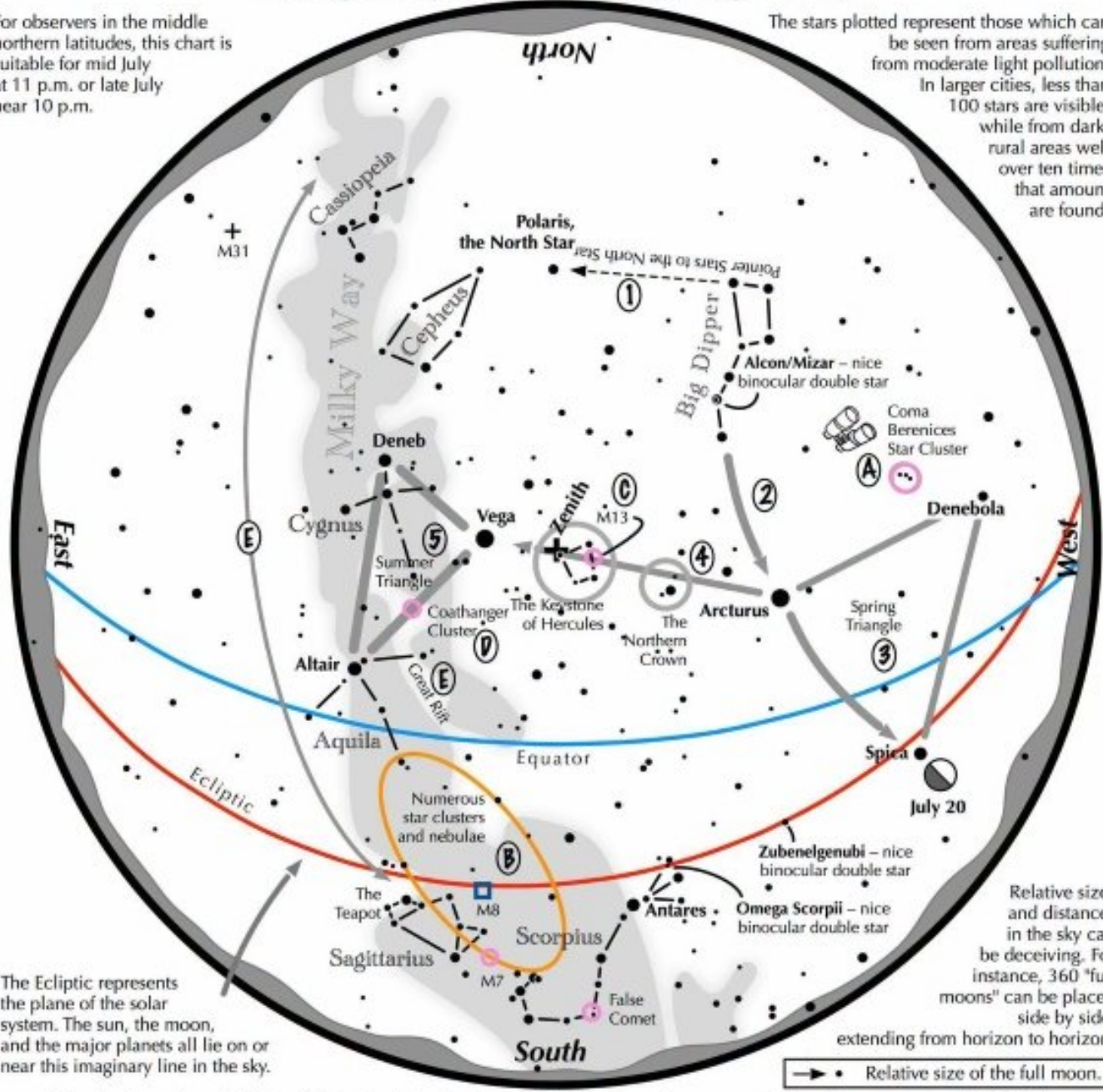
A delta Aquariid meteor in 2013. Image credit: Mike Lewinski at [flickr.com](https://www.flickr.com/photos/mikewlewin/)  
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# Navigating the mid July Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for mid July at 11 p.m. or late July near 10 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

## Navigating the mid July night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the July evening sky, then continues to Spica.
- 3 Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
- 4 To the northeast of Arcturus shines another star of similar brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 5 High in the East lies the Summer Triangle stars of Vega, Altair, and Deneb.

### Binocular Highlights

- A: Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
- B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
- C: On the western side of the Keystone glows the Great Hercules Cluster, containing nearly 1 million stars.
- D: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- E: Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.



# Herrett Center for Arts and Science

## Centennial Observatory



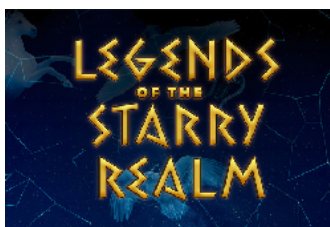
### Upcoming Events

All events are weather permitting

	Place	Date	Time	Admission(s)
<a href="#">Close Conjunction of Mars and Uranus</a>	Centennial Observatory	Saturday, July 4, 2026	5:00-5:30 a.m.	Free
<a href="#">Summer Solar Session #7</a>	Centennial Observatory	Wednesday, July 8, 2026	1:30-3:30 p.m.	Free
<a href="#">Monthly Free Star Party</a>	Centennial Observatory	Saturday, July 11, 2026	9:45-11:45 p.m.	Free
<a href="#">Summer Solar Session #8</a>	Centennial Observatory	Wednesday, July 15, 2026	1:30-3:30 p.m.	Free
Annual Castle Rocks Star Party solar viewing	Castle Rocks Visitor Center, Almo, Idaho	Friday, July 17 & Saturday, July 18, 2026	12:00-5:00 p.m.	Free
Annual Castle Rocks Star Party telescope viewing	The Lodge, Castle Rocks State Park	Friday, July 17 & Saturday, July 18, 2026	Starting at 9:30 p.m.	Free (park use fees apply)
<a href="#">Summer Solar Session #9</a>	Centennial Observatory	Wednesday, July 22, 2026	1:30-3:30 p.m.	Free
<a href="#">Peak Pluto in 2026</a>	Centennial Observatory	Friday, July 24, 2026	1:45-2:15 a.m.	Free
<a href="#">Summer Solar Session #10</a>	Centennial Observatory	Wednesday, July 29, 2026	1:30-3:30 p.m.	Free

## Faulkner Planetarium

[Now Showing](#)

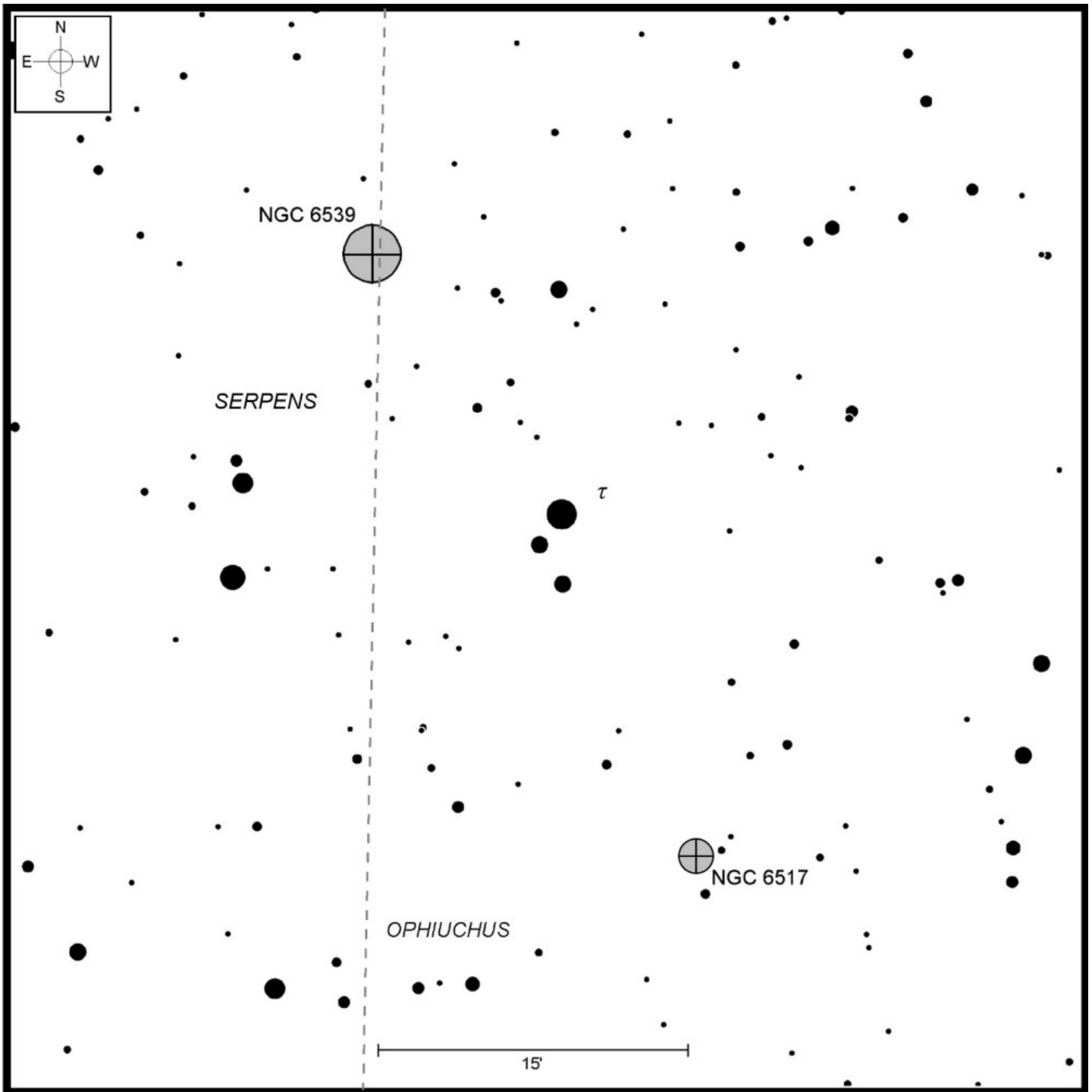


Find Current Shows following the link above. Admission: Adults (ages 18-59): \$7.50 Seniors (ages 60+): \$6.50 Children (ages 2-17): \$5.50 CSI students (w/ activity card): \$5.50 Children under age 2: FREE. Buy your [tickets](#) online.

\*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.





Above: Finder chart for this month's [Cosmic Challenge](#).

Discovered by William Herschel on June 16, 1784, NGC 6517 resides in a relatively star-poor region of eastern Ophiuchus. That is both a blessing and a curse. While the scarcity of surrounding stars helps the globular stand apart, this part of the Milky Way is also affected by substantial interstellar extinction. Dust along our line of sight blocks the light of more distant stars and dampens our view of the cluster itself.

Although its individual stars remain beyond the reach of most amateur telescopes, NGC 6517 has become an especially productive target for radio astronomers searching for pulsars. In the 2024 study [FAST Discovery of Eight Isolated Millisecond Pulsars in NGC 6517](#), astronomers using China's Five-hundred-meter Aperture Spherical Telescope, better known as FAST, radio telescope announced the discovery of eight isolated millisecond pulsars within the cluster (as opposed to members of binary systems). Millisecond pulsars are usually spun up by companion stars, so isolated examples offer important clues to the disruptive stellar encounters that reshape binary systems in dense globular clusters. Those discoveries raised the known population at the time to 17, of which 16 were isolated.

The researchers noted, With these discoveries, NGC 6517 is currently the GC with the most known pulsars in the FAST sky. The count has since grown. In the April 2026 study [The Stack Search Tests on FAST Data: Discovery of Six Faint Isolated Millisecond Pulsars in NGC 6517 and NGC 7078 \(M15\)](#), researchers reported four additional millisecond pulsars in NGC 6517, bringing its published population to 21. Current timing evidence indicates that all four newly discovered pulsars are isolated.



Above: NGC 6517. Below: NGC 6539

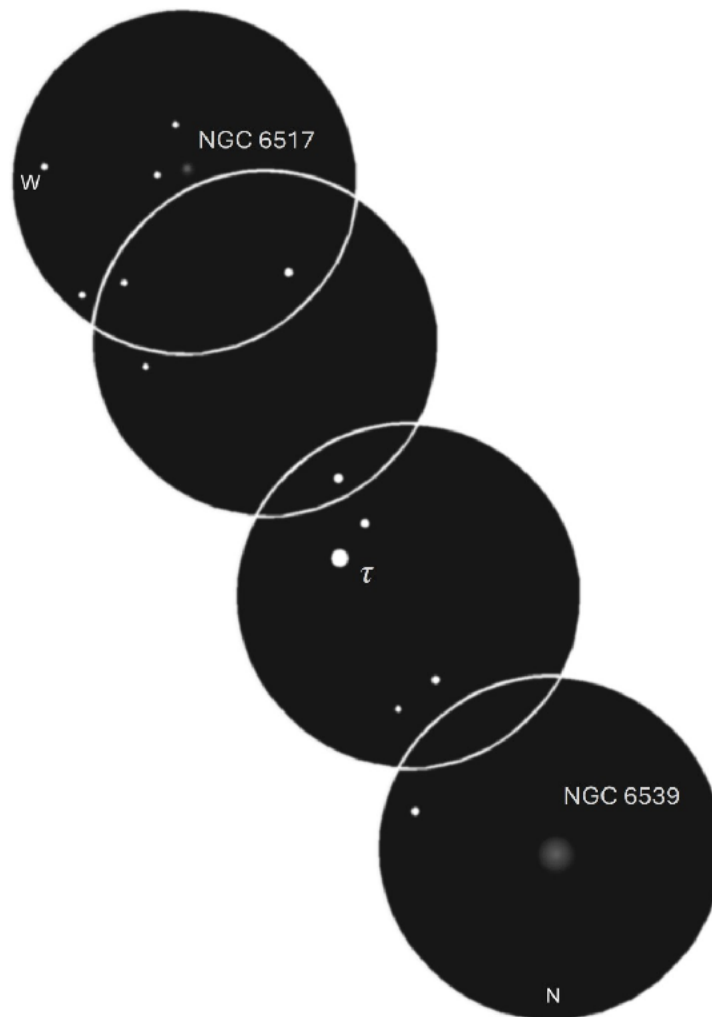
Both images were taken at the same scale by the author using a 6-inch (152mm) f/2.2 [Celestron Origin Home Observatory](#). Image specs can be found on the author's [Astrobin globular cluster gallery](#).



NGC 6517 is found between 3rd-magnitude Nu ( $\nu$ ) Ophiuchi and 5th-magnitude Tau ( $\tau$ ) Ophiuchi. Nu marks the eastern point of a large isosceles triangle formed with the stars Cebalrai [Beta ( $\beta$ ) Ophiuchi] and Sabik [Eta ( $\eta$ ) Ophiuchi] along the eastern side of the constellations large frame. Aim your finderscope halfway between Nu and Tau, and then take a look through your telescope. NGC 6517 should lie very close to the center of the eyepiece field, just north of a 10th-magnitude star and east of an 11th-magnitude point.

At 100x in my 8-inch (20.3 cm) reflector under a dark sky, NGC 6517 is seen as a faint smudge of light measuring no more than a few arcminutes across and elongated slightly northeast-southwest. A brighter center surrounded by a dimmer halo is evident, but there is no hope of seeing any of its very faint constituent stars. Doubling magnification does little to improve the view. In fact, even my 18 inch (45.7 cm) at 220x fails to resolve any of the cluster's stars, although a slight graininess at the edges begins to hint at its true nature. Few of us will ever resolve this distant target, since the brightest cluster stars shine at only a pitiable 16th magnitude.

If NGC 6517 proves a little too tough, then **NGC 6539** should be a bit easier. In reaching it, we leave Ophiuchus and cross a short distance into neighboring Serpens Cauda. Although assigned to another constellation, NGC 6539 occupies the same dust-riddled region toward the inner Milky Way. It lies approximately 27,000 light years away, shines at magnitude 9.6, and extends across approximately 6.9 arcminutes. Those figures make it sound like an easy catch, but foreground extinction and its diffuse outer regions ensure that it remains a challenging target.



Above: Digitized sketch of NGC 6517 and NGC 6539 as seen through the author's 8-inch (20-cm) f/7 Newtonian.

Although NGC 6539 is brighter than NGC 6517, William Herschel did not record it when he discovered its neighbor. The Danish astronomer [Theodor Brorsen](#) was the first known observer to identify NGC 6539, discovering it in September 1856.

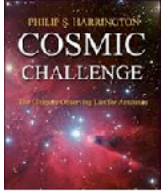
NGC 6539 has also drawn the attention of astronomers studying compact stellar remnants. In the 2020 study [The MAVERIC Survey: Chandra/ACIS Catalog of Faint X-ray Sources in 38 Galactic Globular Clusters](#), researchers examining observations from NASA's Chandra X-ray Observatory identified an unusual variable X-ray source within the cluster.

Its properties suggest that it may be either an accreting stellar mass black hole or a transitional millisecond pulsar, a neutron star capable of switching between an accretion powered X-ray state and a rotation powered radio pulsar state. Its identity has not yet been established conclusively.

To find NGC 6539, switch back to a low power eyepiece, center on Tau Ophiuchi, and then move your telescopes aim slowly toward the northeast. As Tau moves to the edge of the field, look along the opposite side for a dim smudge of light. That will be NGC 6539.

Through 6- to 9.25-inch (15 to 23.5 cm) telescopes, it appears as an unresolved blur of starlight punctuated by a brighter, round core. Larger scopes add a few faint points scattered across its face. Appearances aside, those stars are not necessarily true members of NGC 6539, but may instead be chance foreground objects. The brightest confirmed stars belonging to this distant globular shine at approximately 16th magnitude, much like those in NGC 6517.

#### About the Author:



Phil Harrington is a contributing editor to [Astronomy](https://www.astronomy.com) magazine and is the author of 9 books on astronomy. Visit [www.philharrington.net](http://www.philharrington.net) to learn more. [Phil Harrington's Cosmic Challenge](#) is copyright 2026 by Philip S. Harrington. All rights reserved. No reproduction, in whole or in part, beyond single copies for use by an individual, is permitted without written permission of the copyright holder. This newsletter editor has received the authors permission to use this article.



## Annual Castle Rocks Star Party

Friday, July 17 & Saturday, July 18, 2026

Solar Viewing from 12:00-5:00 p.m at the Visitor Center

3035 S Elba Almo Rd, Almo, ID 83312

Night Observing from 9:30 p.m. at the Lodge, Castle Rocks State Park  
The Lodge is located at N 42 7.493' W 113 39.581' Big Cove Ranch Rd.

## Websites and Other Helpful Astronomy Links.

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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...tfuture-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](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://telescopus.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/>

McDonald Observatory famous radio program stardate is now a podcast <https://stardate.org/podcast>

# Magic Valley Astronomical Society

550 Sparks St.  
Twin Falls, ID

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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](mailto: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