# Snake River Skies

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

**Membership Meeting**
October 11th at the Herrett Center CSI main campus at 7:00pm

Centennial Observatory
See Inside for Details

Faulkner Planetarium
See Inside for Details

**Club Officers**

Dr. Jay Hartwell, Vice President
drhartwellod8@gmail.com

Rick Hull, Secretary
hull3hull3@yahoo.com

Jim Tubbs, Treasurer / ALCOR
jtubbs015@msn.com
208-404-2999

David Olsen, Newsletter Editor
BoiseAstro@outlook.com

Rick Widmer, Webmaster
rick@developersdesk.com

Magic Valley Astronomical Society is a member of the Astronomical League






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

## September President's Message

Message from the Club ~~Vice~~ President:

Looking forward to cooler weather and less smoke so we can have some better skies to get back to some nighttime viewing, as it did not happen in September. Our meeting will be on the 11th of October at 7:00 pm. Our presentations will be by Ken Thomason on - Can you still find Objects without a goto telescope. I hope to see everyone at the meeting. With the election of officers next month, we need to see who is running.

~~Vice~~ President Jay Hartwell

## Calendar Quick Review

**October 6** - Full Moon, Supermoon. 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 9:48pm This full moon was known by early Native American tribes as the Hunters Moon because at this time of year the leaves are falling, and the game is fat and ready to hunt. This Moon though is known this month as the Harvest Moon.

**October 7** - Draconids Meteor Shower. Draconids is a minor meteor shower producing only about ten meteors per hour. It is produced by dust grains left behind by comet 21P Giacobini-Zinner, which was first discovered in 1900.

**October 21** - 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 12:26 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.

**October 21, 22** - Orionids Meteor Shower. The Orionids are an average shower producing up to twenty meteors per hour at their peak. It is produced by dust grains left behind by comet Halley, which has been known and observed since ancient times. The shower runs annually from October 2 to November 7. It peaks this year on the night of October 21 and the morning of October 22. This is an excellent year for the Orionids. The moon will be absent all night long,

**October 29** - Mercury at Greatest Eastern Elongation. The planet Mercury reaches greatest eastern elongation of 23.9 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 evening sky. Look for the planet low in the western sky just after sunset.

Visit our Website
www.mvastro.org

# **Monthly Calendar** for **October 2025**

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6<br>  <br>Full Harvest Moon 9:48pm<br>Visible: 100% | 7 | 8 | 9 | 10 | 11<br>MVAS General Meeting<br>Herrett Center CSI 7:00pm<br><br>Centennial Observatory Monthly Star Party |
| 12 | 13<br>Indigenous People Day<br>Thanksgiving Day - Canada<br><br>Last Quarter Moon | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21<br>  <br>New Moon<br>Visible: 1% ↓<br>Age: 29.52 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29<br>  <br>First quarter<br>Visible: 49% ↑<br>Age: 7.2 days | 30 | 31<br>  <br>Halloween | |

Twin Falls, Idaho, United States

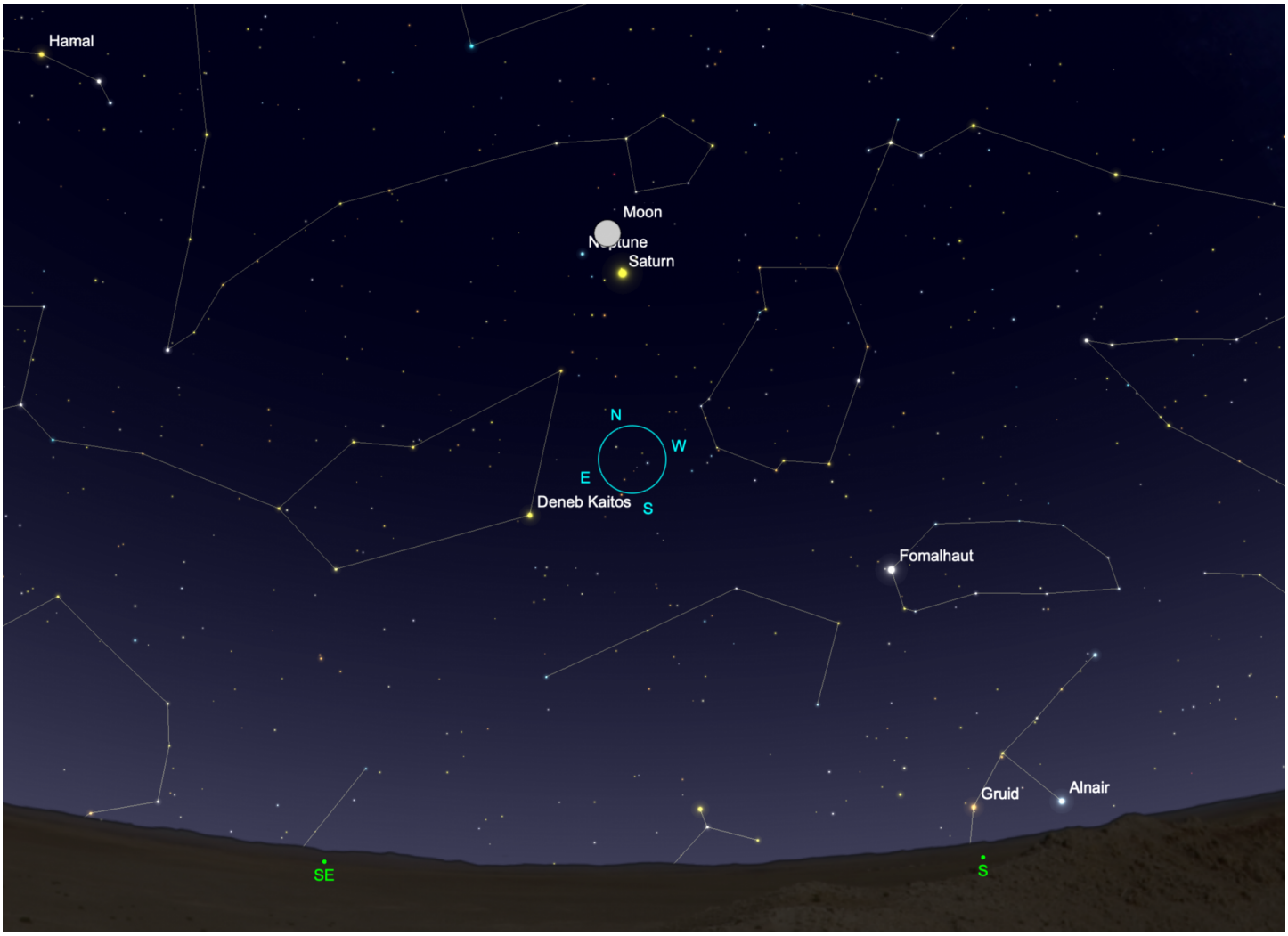
New feature allows you to click a link for more info.

# The Night Sky This Month – October 2025

C/2025 A6 (Lemmon) on October 3, 2025 (Image credit: Dimitrios Katevainis under Creative Commons License).
(Looking for last month's 'Night Sky'? Find it at this link…)

October offers the best stargazing of the year for observers both north and south. The Milky Way lingers in the southwestern sky while Pegasus and Andromeda dominate overhead and the bright stars of Taurus, Auriga, and Orion emerge above the eastern horizon after midnight. Saturn remains prominent in the evening sky this month while Jupiter and Venus shine brightly in the morning. This October also brings a series of double shadow transits on Jupiter that reward telescopic observation (check your favorite ephemeris or try this link to see the particular timing of these events).

We may also get a chance to see two new comets this month! Discovered by a Ukrainian amateur astronomer from publicly available images from the Solar Wind Anisotropies (SWAN) instrument on the orbiting Solar and Heliospheric Observatory (SOHO), the newly catalogued Comet C/2025 R2 (SWAN) brightened to 7$^{th}$ magnitude and revealed a 2$^{o}$ long tail in mid-September and may reach naked-eye brightness in by the second week of October. And a second comet discovered in January 2025, Comet C/2025 A6 (Lemmon), may grow even brighter as it sails under the Big Dipper through October. Bob King at Sky & Telescope has an update on the position and visibility of these two promising comets.



The Moon, Saturn, and Neptune congregate on the night of October 5, 2025.

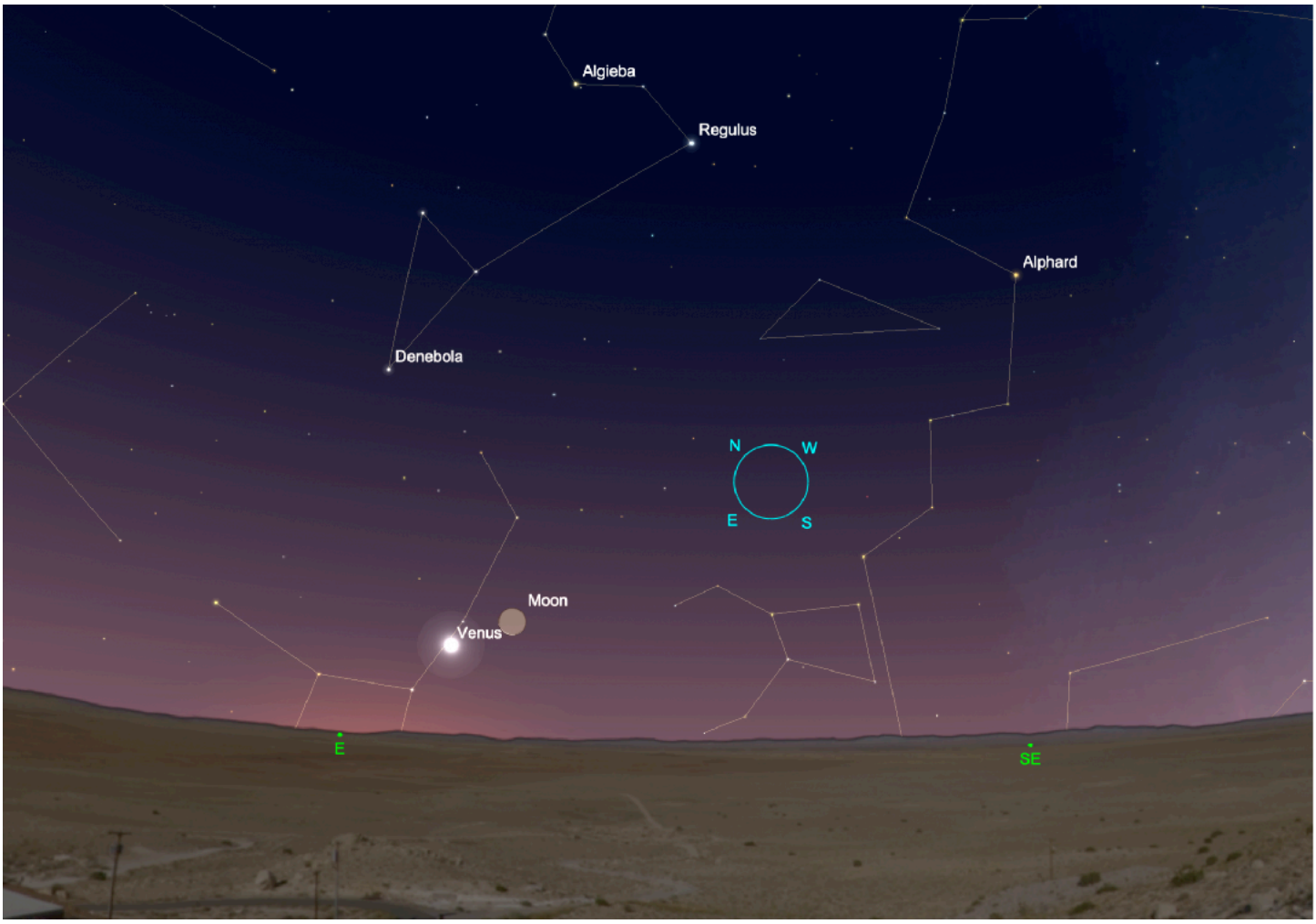
**5 October 2025.** Saturn lies about 2.5° south of the waxing gibbous Moon tonight. The planet lies just over the border in Aquarius while the Moon lies in Pisces. Just past opposition last month, Saturn remains in a prime viewing position as it shines at magnitude +0.7. Its rings continue to appear nearly edge-on. Eighth-magnitude Neptune sits about 2° east of the Moon tonight and presents its blue-green hue at moderate magnifications in a telescope.

**Oct. 7.** Full Moon, 03:48 UT (the full 'Harvest Moon'). This full Moon falls near perigee which means it appears about 7% larger than average.

**13 Oct.** Last Quarter Moon, 18:13 UT

**14 Oct.** The Moon, just past last quarter, make a small equilateral triangle with Jupiter and Pollux in the early-morning sky. The bright and dazzling stars of Orion, Taurus, and Auriga lie further west.

**16 Oct.** A waning crescent Moon rises about 4° west of the bright star Regulus in the early morning sky.




Venus and a slender crescent Moon in the eastern sky on the morning of October 19, 2025.

**19 Oct.** Look for a thin crescent Moon low in the eastern sky before sunrise along with brilliant Venus about 4° to the east-northeast. Venus has dimmed and shrunk a little as seen from Earth, shining now at magnitude -3.9. Its featureless and nearly full disk has an apparent size of 10.6".

**19-31 Oct.** Over the next two weeks, northern-hemisphere observers with very dark sky can see the zodiacal light in the east about 90-120 minutes before sunrise. This whitish wedge of light appears to thrust upward from the horizon towards the constellations Gemini and Cancer. The zodiacal light is simply sunlight reflected off tiny dust particles in the inner solar system.

**20-21 Oct.** The Orionids, one of the best meteor showers of the year, peak in the early morning hours today. They usually show as many as 20-40 fast-moving meteors per hour in dark sky. These meteors can appear anywhere in the sky and trace their paths back to the radiant near the top of the club of Orion. Maximum activity usually occurs between midnight and dawn. The new Moon offers ideal conditions to see the faintest meteors this year. Like the Eta Aquariids in May, the Orionids are tiny pieces of Comet 1/P Halley that strike the upper atmosphere as the Earth passes through the famous comet's debris field. **21 Oct.** New Moon, 12:25 UT

**23 Oct.** Mercury makes its best evening apparition of the year in the southern hemisphere. Look for the little planet along with Mars and a slender waxing crescent Moon in the western sky after sunset. The trio make a tight triangle about 5° long. Binoculars help you pull this vista out of the evening twilight. The scene is more challenging for northern-hemisphere observers as the planets lie closer to the western horizon.

**24 Oct.** Look to the southwest after sunset to see the crescent Moon near the red supergiant star Antares in Scorpius. Observers in Australia and New Zealand see the Moon occult the star – detailed timing at this link.

**29 Oct.** First Quarter Moon, 16:21 UT

# Phil Harrington's Cosmic Challenge

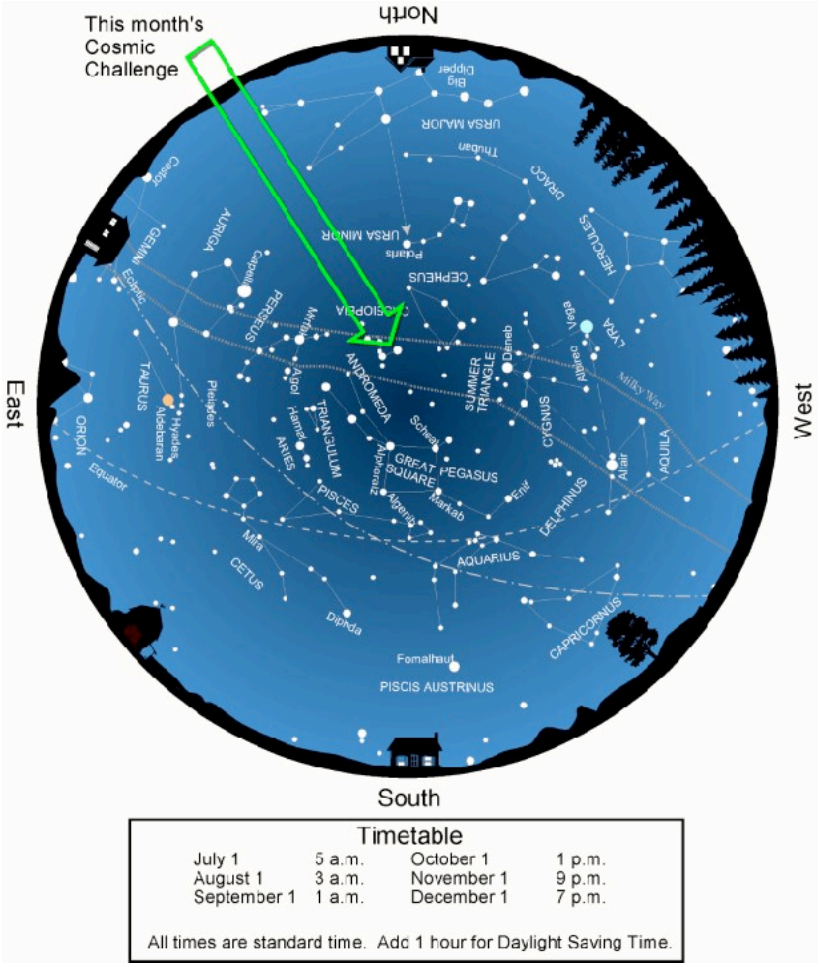
## IC-10

**This month's suggested aperture range:**
6- to 9.25-inch (15- to 24-cm) telescopes
Featured Telescope: Cave Astrola 8” Deluxe

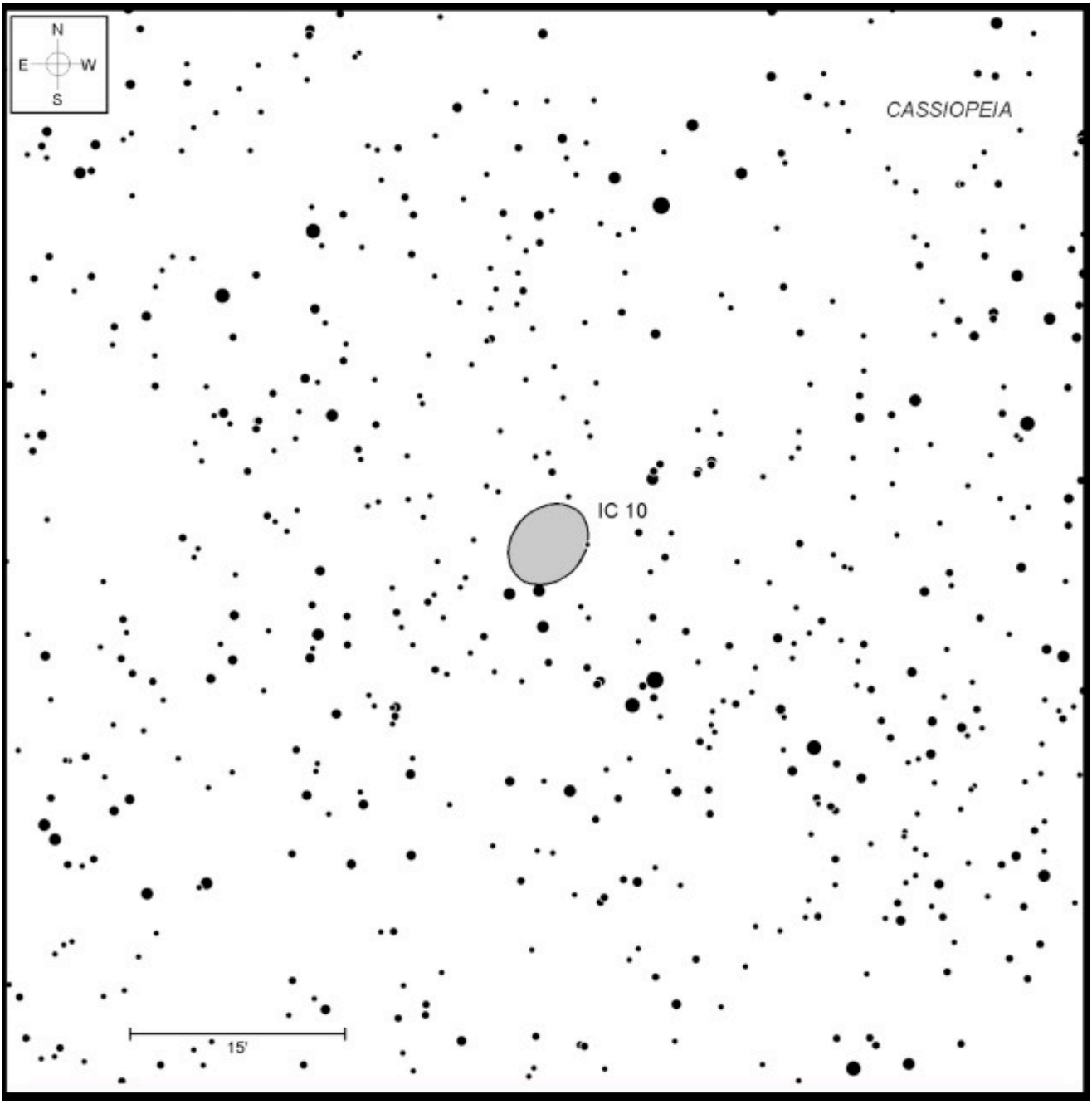
| Target | Type | RA | DEC | Constellation | Magnitude | Size |
|---|---|---|---|---|---|---|
| IC 10 | Galaxy | 00h 20.3m | +59° 18.1' | Cassiopeia | 10.4 | 6.8' × 5.9' |

Ready to test of your galaxy-hunting skills? This month's challenge takes us to Cassiopeia, where a faint smudge hides in plain sight among the Milky Way's starry clutter.

IC 10, an outlying member of our Local Group of galaxies at about 2.2 million light years away, takes an especially dark, transparent sky regardless of aperture. It isn't bright, it isn't big, and it isn't easy. But it is one of the most fascinating galaxies you'll ever track down. Astronomers know it as the closest starburst galaxy, busy cranking out new suns at a furious pace.




Above: Autumn star map showing the location of this month's Cosmic Challenge.
Credit: Map adapted from Star Watch by Phil Harrington.




Above: Finder chart for this month's Cosmic Challenge.
Credit: Chart adapted from Cosmic Challenge by Phil Harrington

Despite its prominent position within the constellation Cassiopeia, IC 10 was missed by Messier, Méchain, and the Herschels. Instead, American astronomer Lewis Swift, famous more for his comet observations than uncovering new deep-sky objects, discovered IC 10 from Warner Observatory in Rochester, New York, in 1889. That was a year too late to be added in John Dreyer's New General Catalog, but he subsequently included it in the first supplement to the NGC, vol. 1 of the Index Catalog. Its portrayal in the Index Catalog, however, was incorrect. IC 10 was described there as a "faint star involved in extremely faint and very large nebula."

Forty years would pass before IC 10's suspected extragalactic nature came to light. Edwin Hubble, who once described IC 10 as "one of the most curious objects in the sky," later proposed that it might be a member of the Local Group, along with the Milky Way and the Andromeda Galaxy. It would be another three decades before Hubble's suspicions could be confirmed. We now know that IC 10 is a dwarf irregular galaxy about 5,000 light-years across. It resembles in many ways the Milky Way's Large Magellanic Cloud. Unlike the Large Magellanic Cloud, however, IC 10 may belong to the M31 subgroup of galaxies. Closer studies also show that IC 10 has more Wolf-Rayet stars than all other dwarf galaxies in the Local Group combined. Wolf-Rayet stars are extremely hot, blue stars that are losing mass at a furious rate. Why IC 10 contains such a disproportional number of these rare stars is a question that remains unanswered.

Above: IC 10, as imaged through the author's Celestron Origin astrograph. For full tech specs, visit the author's Astrobin page.

IC 10 lies 1.4° due east of star Caph [Beta (β) Cassiopeiae], the westernmost point in the Cassiopeia W and the same starting point as the last challenge. Scanning there, look for a small right triangle of three 10th-magnitude stars. IC 10 is just north of the triangle's right angle.


Above: IC 10, as sketched through the author's Criterion RV-8 8-inch (20 cm) f/7 reflector at 84x

Once you are aimed its way, be sure to use a moderately low power eyepiece, say, between 75x and 100x. One problem with spotting IC 10 is its surroundings. Remember, we're looking through the plane of the Milky Way when we strain to see IC 10. There are an awful lot of stars to push through before IC 10 comes into view.

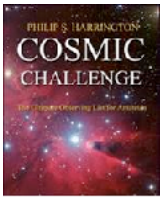
The galaxy's low surface brightness, about magnitude 15.8 per square arc-minute, only compounds the problem. After viewing it from under very dark skies through my 8-inch (20 cm) reflector at 84x, I described the IC 10 as "extremely faint, visible weakly only with averted vision; surprisingly large, but with soft edges that make it difficult to tell where the galaxy ends and the background sky takes over; slightly oval, oriented approximately east-west." The sketch above reflects that observation. Again, sky conditions are critical. Notes made through my 18-inch (45.7-cm) reflector under 5th-magnitude suburban skies recall simply "a dim undefined glow just above the background" at 121x.

If you manage to snare IC 10, give yourself a pat on the back you've nailed one of the tougher catches in Cassiopeia. Most galaxies prefer to stand apart from the Milky Way's glare, but this one hides right in the thick of it, daring you to pick it out from the crowd. Whether it shows itself as a faint patch or just the barest whisper of mist, the reward is knowing you've tracked down a rare and remarkable neighbor.

Have a favorite challenge object of your own? I'd love to hear about it, as well as how you did with this month's test. Contact me through my website or post to this month's discussion forum.

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. Phil Harrington's Cosmic Challenge is copyright 2025 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.

# Herrett Center for Arts and Science

**Upcoming Events**
All events are weather permitting.

| Event | Place | Date | Time | Admission(s) |
|---|---|---|---|---|
| Monthly Free Star Party | Centennial Observatory | Saturday, October 11, 2025 | 8:00-10:00 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.

# 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