Snake River Skies

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

Membership Meeting
Feb. 8th 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
editor@mvastro.org

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

Message from the Club ~~Vice~~ President

MVAS Astro members and friends… Our meeting scheduled for February is on the 8th and I look forward to seeing everyone. Our presentation will feature: Rick Hull will be about Observing Planetary Nebulae. This month is not the most comfortable month in which to observe the night sky for long periods of time but the forecast for Saturday is clear. It is, however, a good time to become an 'armchair astronomer'. At our January meeting we discussed events for the year.

Here are the thoughts by Rick Hull for us to talk about!

1) First star party Mar 28 (backup for weather 29th) for Messier marathon (or partial anyway), tentatively at my place in Glenn's Ferry if I can provide a warming area.

2) May 2 (backup 3rd) public outreach somewhere in Twin, CSI or a public park - not light up all over perhaps using club scopes, mostly the smaller ones which would be good starter or cheaper upgrade scopes, investigate if we could sell these cheaply? Encourage interested in attending the club meeting the following week and advertising this event club signs, banners, greeting table w/ flyers, perhaps coco/coffee.

2b) If we do this, in April we need a Sat/Sun workday, maybe 2, to clean up and tune scopes to be used (sold?)

2c) Who is our May speaker? We want a topic and speaker who will have broad appeal if we get interest from outreach

3) June club star party, suggest not too far, Jerome gun club or somewhere south of town. The reason to keep this close if we get any interest/new members from our May event

4) July is our annual Castle Rocks State Park star party.

5) Aug star party in/near Stanley? or maybe we do this in Sept

6) Sept is Craters of the Moon star party by the Pocatello club, should we see if we can join in?

7) The Idaho Star Party™is scheduled for Sept. 19th - 20th at Bruneau Dunes State Park near Mountain Home, Idaho. Registration will open in March. This event is open to all and MVAS may join and participate if desired.

8) There is a planned citizen's science camp for astronomers also in September at Boise State University, which is replacing their usual First Friday event. This event will be cosponsored by the Boise Astronomical Society, Boise State University and Unistellar Telescopes. More information will be forthcoming.

Visit our Website
www.mvastro.org

Moon Phases for February 2025

Twin Falls, Idaho, United States

SUN	MON	TUE	WED	THU	FRI	SAT
						1 Waxing crescent 13.5% 3 days
2 Waxing crescent 22.4% 4 days	3 Waxing crescent 32.7% 5 days	4 Waxing crescent 43.9% 6 days	5 First Quarter 1:03 A.M. 7 days	6 Waxing gibbous 65.2% 8 days	7 Waxing gibbous 76.2% 9 days	8 Waxing gibbous 84.8% 10 days
9 Waxing gibbous 91.7% 11 days	10 Waxing gibbous 96.6% 12 days	11 Waxing gibbous 99.3% 13 days	12 Full Snow Moon 6:54 A.M. 14 days	13 Waning gibbous 93.5% 15 days	14 Waning gibbous 95.2% 16 days	15 Waning gibbous 90.3% 17 days
16 Waning gibbous 83.9% 18 days	17 Waning gibbous 76.4% 19 days	18 Waning gibbous 68.0% 20 days	19 Waning gibbous 58.9% 21 days	20 Last Quarter 10:34 A.M. 22 days	21 Waning crescent 39.7% 23 days	22 Waning crescent 30.2% 24 days
23 Waning crescent 21.3% 25 days	24 Waning crescent 13.3% 26 days	25 Waning crescent 6.7% 27 days	26 Waning crescent 2.2% 28 days	27 New Moon 5:46 P.M. 0 days	28 Waxing crescent 0.8% 1 day	

Source: The Old Farmer's Almanac, February 2025

February's full **Snow Moon** reaches peak illumination at 6:53 a.m. MST on Wednesday, February 12. It will be below the horizon at this time, so for the best view of this Moon, look for it starting the night before or later on Wednesday; it will drift above the horizon in the east around sunset and reach its highest point in the sky around 12:45am (crosses the Meridian).

The explanation behind February's full Moon name is a fairly straightforward one: it's known as the Snow Moon due to the typically heavy snowfall that occurs in February. On average, February is the United States' snowiest month, according to data from the National Weather Service. In the 1760s, Captain Jonathan Carver, who had visited with the Naudowessie (Dakota), wrote that the name used for this period was the Snow Moon, "because more snow commonly falls during this month than any other in the winter."

The New Moon on the 27th will be Lunation 1264. A lunation, or lunar month, is the time it takes the Moon to pass through all of the Moon phases, measured from one new moon to the next New Moon. The astronomical term for a lunation is a synodic month, from the Greek term *synodos*, meaning meeting or conjunction. The synodic revolution of the Moon begins each time at new moon, when the Sun and Earth are aligned on opposite sides of the Moon, and stops at the next new moon. It lasts about 29.5 days. The exact length varies slightly, due to the elliptical shape of the Moon's orbit.

The Sky This Month – February 2025

A section of the Perseus Arm of the Milky Way looking overhead from the northern hemisphere in winter.

1. The constellations Orion, Canis Major, Taurus, Perseus, and Auriga dominate the northern sky this month, while southern observers see these same groups as well as Puppis, Carina, and Vela, constellations which harbor some of the best sights the night sky has to offer. There are plenty of planets to see in the evening sky. Venus is especially impressive this month as it reaches an incredible magnitude -4.9, as bright as it ever gets, with enough light to cast a shadow in dark locations. You also get a chance to glimpse the glow of the zodiacal light, the Sun's light reflected off tiny grains of dust left over from the formation of the solar system. Here's what to see in the Night Sky This Month...

2. At the beginning of January, Comet C/2024 G3 (ATLAS) held modest promise to grow bright enough to see with the unaided eye. Turns out it was bright, VERY bright, at least from the southern hemisphere, and some call it the Great Comet of 2025. Images abound online. But here's my personal favorite captured by Yuri Beletsky, from the ESO Paranal Observatory in northern Chile. I really wish I captured this image!

3. Let's bundle up, drag out our telescopes, and go see some reflection nebulae! In my latest article for Sky & Telescope I take you on a tour of these challenging but beautiful blisters of star formation where new stars emerge from their dusty cocoons...

4. And if it's too cold for hands-on observing, enjoy this artist's conception, based on data from the extremely productive Gaia space telescope, of the Milky Way that dazzles the eye and satisfies the mind.

5. Finally, here's a video (with audio) of a small meteorite smashing into the front walkway of a home as capture from a doorbell camera. It is the first-ever audio of a meteorite hitting the ground!

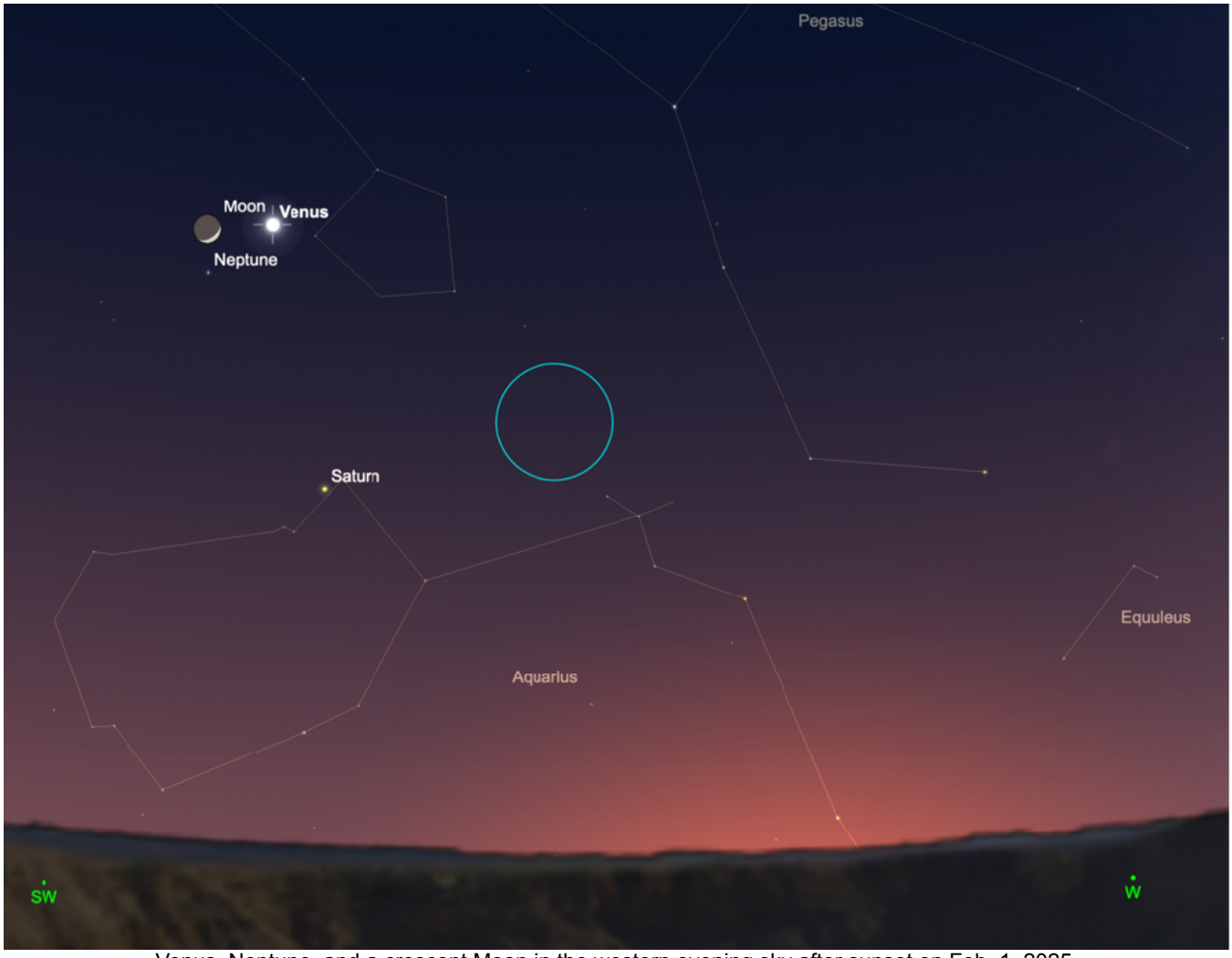
The constellations Orion, Canis Major, Taurus, Perseus, and Auriga dominate the northern sky this month, while southern observers see these same groups as well as Puppis, Carina, and Vela, constellations which harbor some of the best sights the night sky has to offer. There are plenty of planets to see in the evening sky. Venus is especially impressive this month as it reaches an incredible magnitude -4.9, as bright as it ever gets, with enough light to cast a shadow in dark locations. You also get a chance to glimpse the glow of the zodiacal light, the Sun's light reflected off tiny grains of dust left over from the formation of the solar system. Here's what to see in the night sky this month…

1 February 2025. A thin crescent Moon hovers about 2° from brilliant Venus in the southwestern sky as twilight falls. Follow the pair as the sky darkens and they move towards the horizon. Venus itself is a resplendent sight all month and tonight lies about 45° from the Sun, shining at magnitude -4.6 and shows a thick crescent about 37% illuminated and 32" wide. The planet appears to grow brighter, thinner, and bigger until mid-month. Also tonight, grab your binoculars or telescope to look just south of the Moon (a degree or two depending on your location) to spot tiny Neptune shining blue-green at magnitude 7.8.

4 Feb. Jupiter reaches its second stationary point and now begins its prograde motion to move eastward relative to the stars.

5 Feb. First Quarter Moon, 08:02 UT5 Feb. Look for the Moon, a little more than half lit, within a degree of the Pleiades star cluster in Taurus.

6 Feb. Jupiter hangs about 5° south of the waxing gibbous Moon in Taurus. Tonight, the planet shines at magnitude -2.5, far brighter than any star, and spans nearly 43". It's still a great time to observe the planet in a telescope to see its endlessly changing belts and zones and atmospheric cyclones.

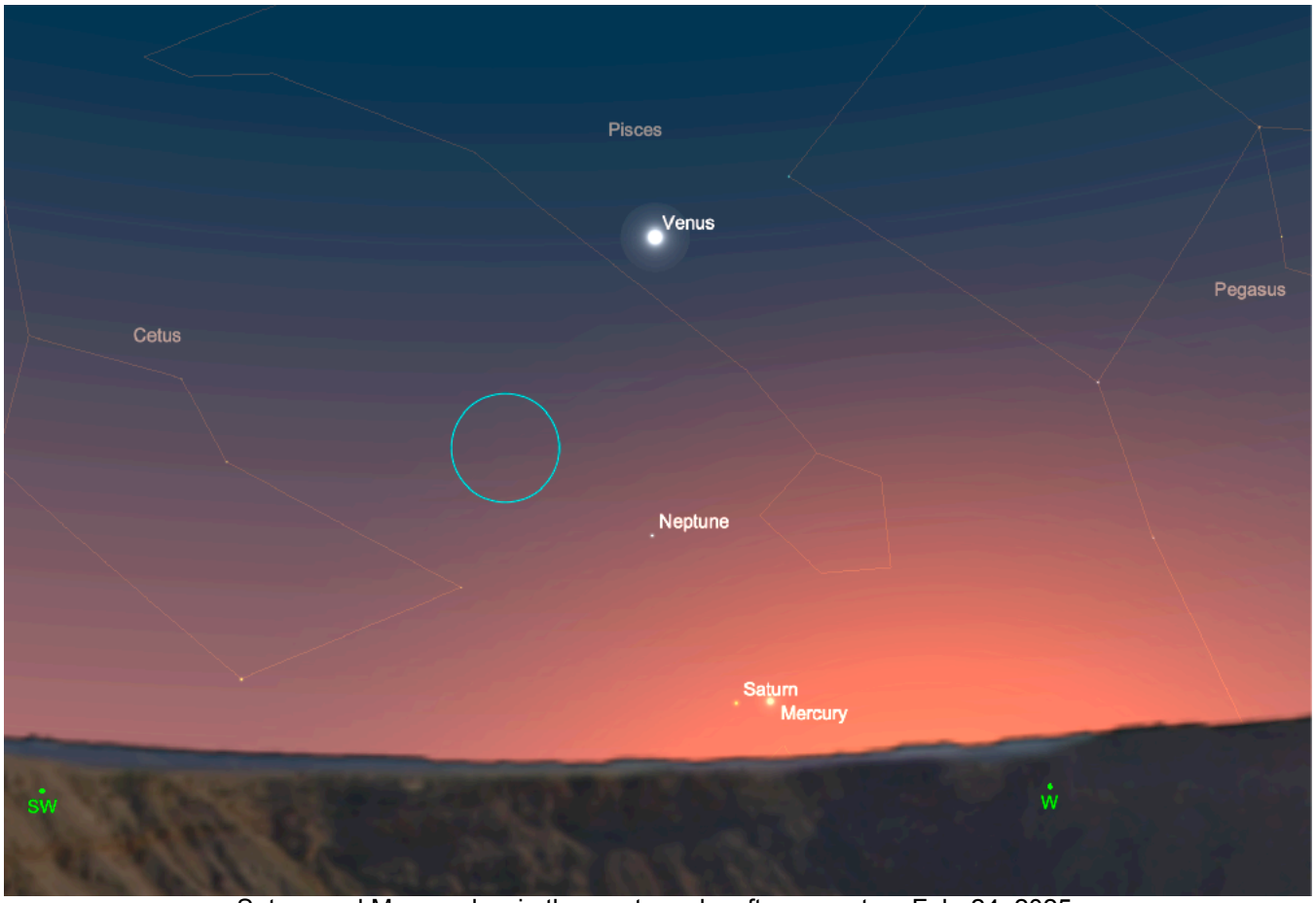


Venus, Neptune, and a crescent Moon in the western evening sky after sunset on Feb. 1, 2025.

9 Feb. Mars lies about 4° west of the Moon in Gemini, not far from the constellation's brightest stars Castor and Pollux. Mars is slowly fading and shrinking in apparent size, but tonight shines at a respectable magnitude -0.8 and spans almost 13". If you have steady air, crank up the magnification of your telescope to try to spot surface detail on the planet before it grows much smaller over the next few weeks.

12 Feb. Full Moon, 13:53 UT (the full "Snow Moon")

14 Feb. Venus reaches greatest illuminated extent and shines tonight at magnitude -4.9, essentially as bright as it ever gets. Through February, the planet continues to narrow into an increasingly slender crescent, reaches a phase on 14% illuminated by month's end, while growing to an apparent size of 48" by the 28th.



Saturn and Mercury low in the western sky after sunset on Feb. 24, 2025.

14-28 Feb. As the Moon moves out of the way in the evening sky, northern observers far from city lights can spot the zodiacal light in the western sky after sunset. This whitish wedge-shaped glow emerges at a steep angle to the western horizon this time of year. It's caused by sunlight reflected by fine dust grains along the plane of the solar system. The zodiacal light is brightest closer to the Sun, so look for it about half an hour after the end of evening twilight as it extends up from the horizon towards the constellation Taurus. 20 Feb. Last Quarter Moon, 17:33 UT

17 Feb. The waning gibbous Moon lies within one degree of Spica, the brightest star in Virgo, in the early morning sky.

21 Feb. Working its way eastward, a fat crescent Moon trails Antares by a degree in the southwestern sky as morning twilight arrives.

24 Feb. Mars reaches its second stationary point and now resumes its eastward motion against the background stars.

25 Feb. Look at dusk very low in the southwest to spot Mercury and Saturn within 1.5º of each other in the bright evening twilight. You need clear view of the west-southwestern horizon to see the pair, and a pair of binoculars wouldn't hurt. At magnitude -1.2, Mercury is the brighter of the two.

28 Feb. New Moon, 00:45 UT

February Night Sky Notes: How Can You Help Curb Light Pollution?

This article is distributed by the NASA Night Sky Network (NSN), a coalition of hundreds of astronomy clubs across the US dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, stargazing info and more.

By Dave Prosper
Updated by Kat Troche

Before and after pictures of replacement lighting at the 6th Street Bridge over the Los Angeles River. The second picture shows improvements in some aspects of light pollution, as light is not directed to the sides and upwards from the upgraded fixtures, reducing skyglow. However, it also shows the use of brighter, whiter LEDs, which is not generally ideal, along with increased light bounce back from the road. Image Credit: The City of Los Angeles

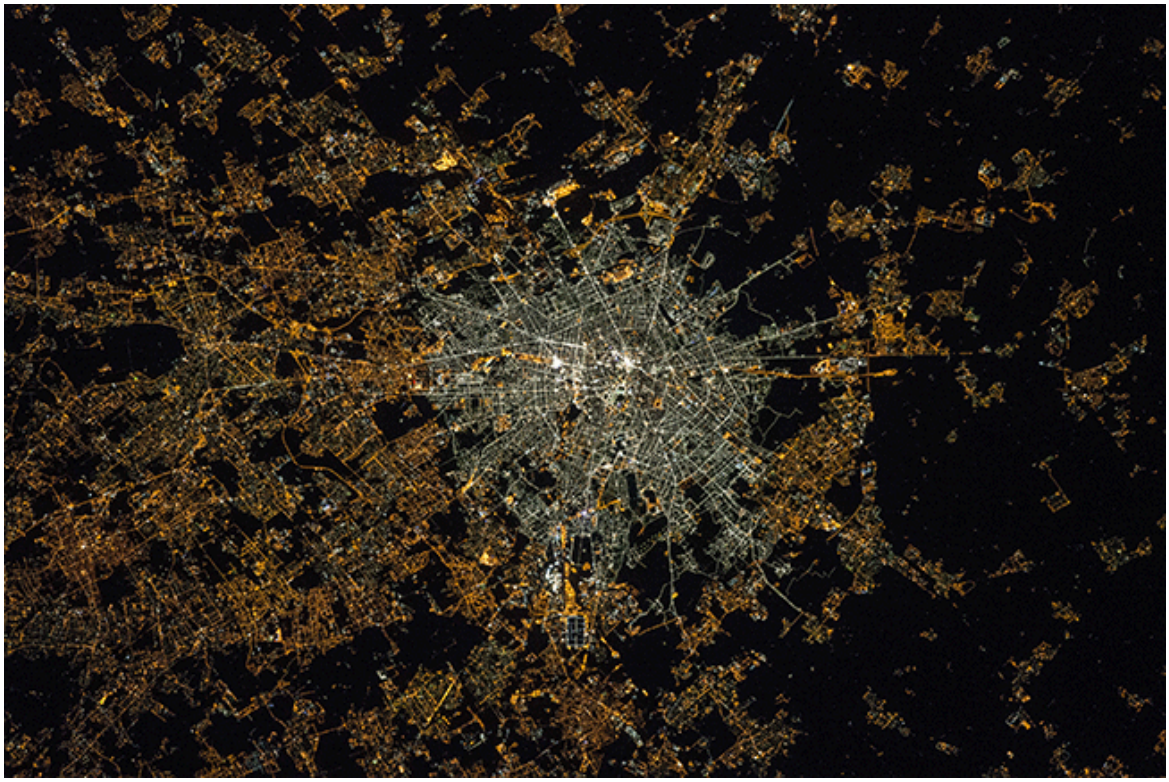
Light pollution has long troubled astronomers, who generally shy away from deep sky observing under full Moon skies. The natural light from a bright Moon floods the sky and hides views of the Milky Way, dim galaxies and nebula, and shooting stars. In recent years, human-made light pollution has dramatically surpassed the interference of even a bright full Moon, and its effects are now noticeable to a great many people outside of the astronomical community. Harsh, bright white LED streetlights, while often more efficient and long-lasting, often create unexpected problems for communities replacing their older street lamps. Some notable concerns are increased glare and light trespass, less restful sleep, and disturbed nocturnal wildlife patterns. There is increasing awareness of just how much light is too much light at night. You don't need to give in to despair over encroaching light pollution; you can join efforts to measure it, educate others, and even help stop or reduce the effects of light pollution in your community.

Amateur astronomers and potential citizen scientists around the globe are invited to participate in the Globe at Night (GaN) program to measure light pollution. Measurements are taken by volunteers on a few scheduled days every month and submitted to their database to help create a comprehensive map of light pollution and its change over time. GaN volunteers can take and submit measurements using multiple methods ranging from low-tech naked-eye observations to high-tech sensors and smartphone apps.

Globe at Night citizen scientists can use the following methods to measure light pollution and submit their results:

- Their own smartphone camera and dedicated app
- Manually measure light pollution using their own eyes and detailed charts of the constellations
- A dedicated light pollution measurement device called a Sky Quality Meter (SQM).
- The free GaN web app from any internet-connected device (which can also be used to submit their measurements from an SQM or printed-out star charts)

Night Sky Network members joined a telecon with Connie Walker of Globe at Night in 2014 and had a lively discussion about the program's history and how they can participate. The audio of the telecon, transcript, and links to additional resources can be found on their dedicated resource page.



Light pollution has been visible from space for a long time, but new LED lights are bright enough that they stand out from older streetlights, even from orbit. Astronaut Samantha Cristoforetti took the above photo from the ISS cupola in 2015. The newly installed white LED lights in the center of the city of Milan are noticeably brighter than the lights in the surrounding neighborhoods. Image Credit: NASA/ESA

The International Dark-Sky Association (IDA) has long been a champion in the fight against light pollution and a proponent of smart lighting design and policy. Their website provides many resources for amateur astronomers and other like-minded people to help communities understand the negative impacts of light pollution and how smart lighting policies can not only help bring the stars back to their night skies but also make their streets safer by using smarter lighting with less glare. Communities and individuals find that their nighttime lighting choices can help save considerable sums of money when they decide to light their streets and homes "smarter, not brighter" with shielded, directional lighting, motion detectors, timers, and even choosing the proper "temperature" of new LED light replacements to avoid the harsh "pure white" glare that many new street lamps possess. Their pages on community advocacy and on how to choose dark-sky-friendly lighting are extremely helpful and full of great information. There are even local chapters of the IDA in many communities made up of passionate advocates of dark skies.

The IDA has notably helped usher in "Dark Sky Places", areas around the world that are protected from light pollution. "Dark Sky Parks", in particular, provide visitors with incredible views of the Milky Way and are perfect places to spot the wonders of a meteor shower. These parks also perform a very important function, showing the public the wonders of a truly dark sky to many people who may have never before even seen a handful of stars in the sky, let alone the full glorious spread of the Milky Way.

More research into the negative effects of light pollution on the health of humans and the environment is being conducted than ever before. Watching the nighttime light slowly increase in your neighborhood, combined with reading so much bad news, can indeed be disheartening! However, as awareness of light pollution and its negative effects increases, more people are becoming aware of the problem and want to be part of the solution. There is even an episode of PBS Kid's SciGirls where the main characters help mitigate light pollution in their neighborhood!

Astronomy clubs are uniquely situated to help spread awareness of good lighting practices in their local communities to help mitigate light pollution. Take inspiration from Tucson, Arizona, and other dark sky-friendly communities that have adopted good lighting practices. Tucson even reduced its skyglow by 7% (as of 2018) after its own citywide lighting conversion, proof that communities can bring the stars back with smart lighting choices.

Originally posted by Dave Prosper: November 2018
Last Updated by Kat Troche: January 2025

Phil Harrington's Cosmic Challenge

NGC 2371-2372

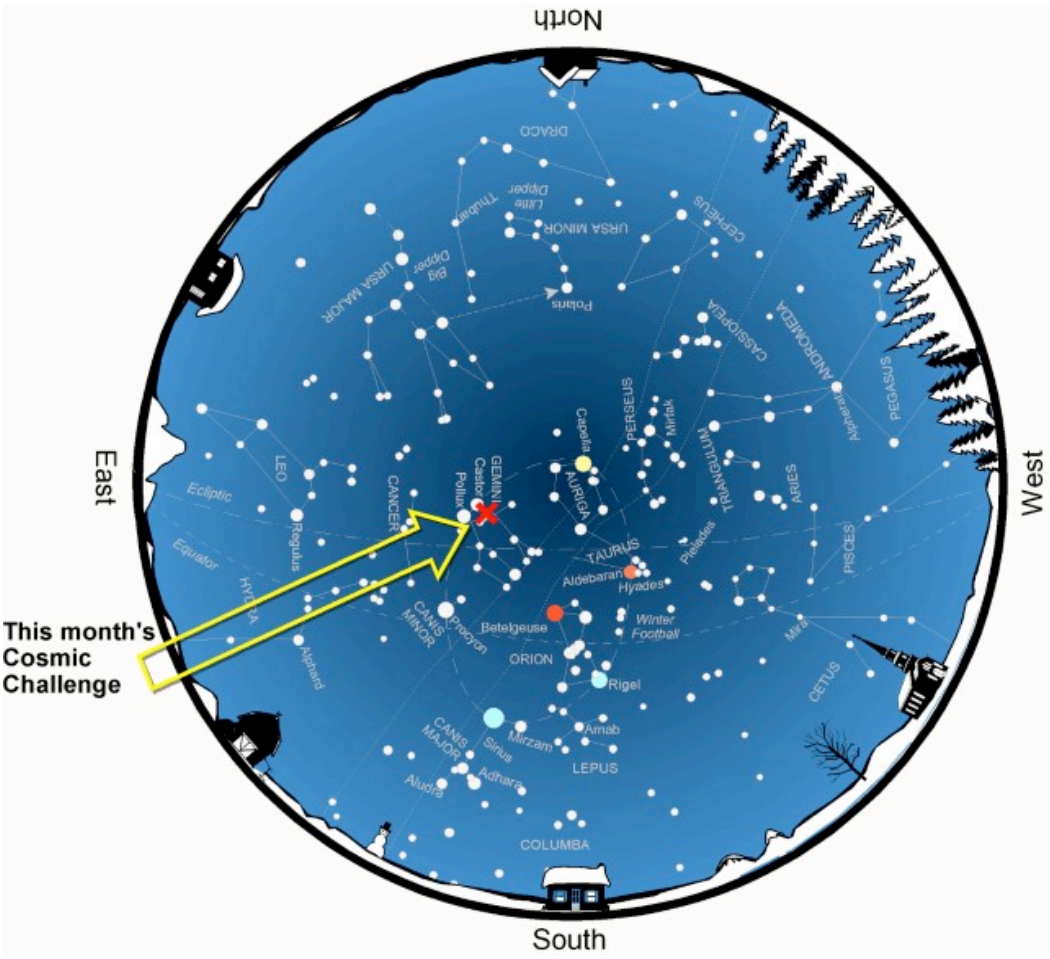
This month's suggested aperture range:
6- to 9.25-inch (15- to 23.5-cm) telescopes

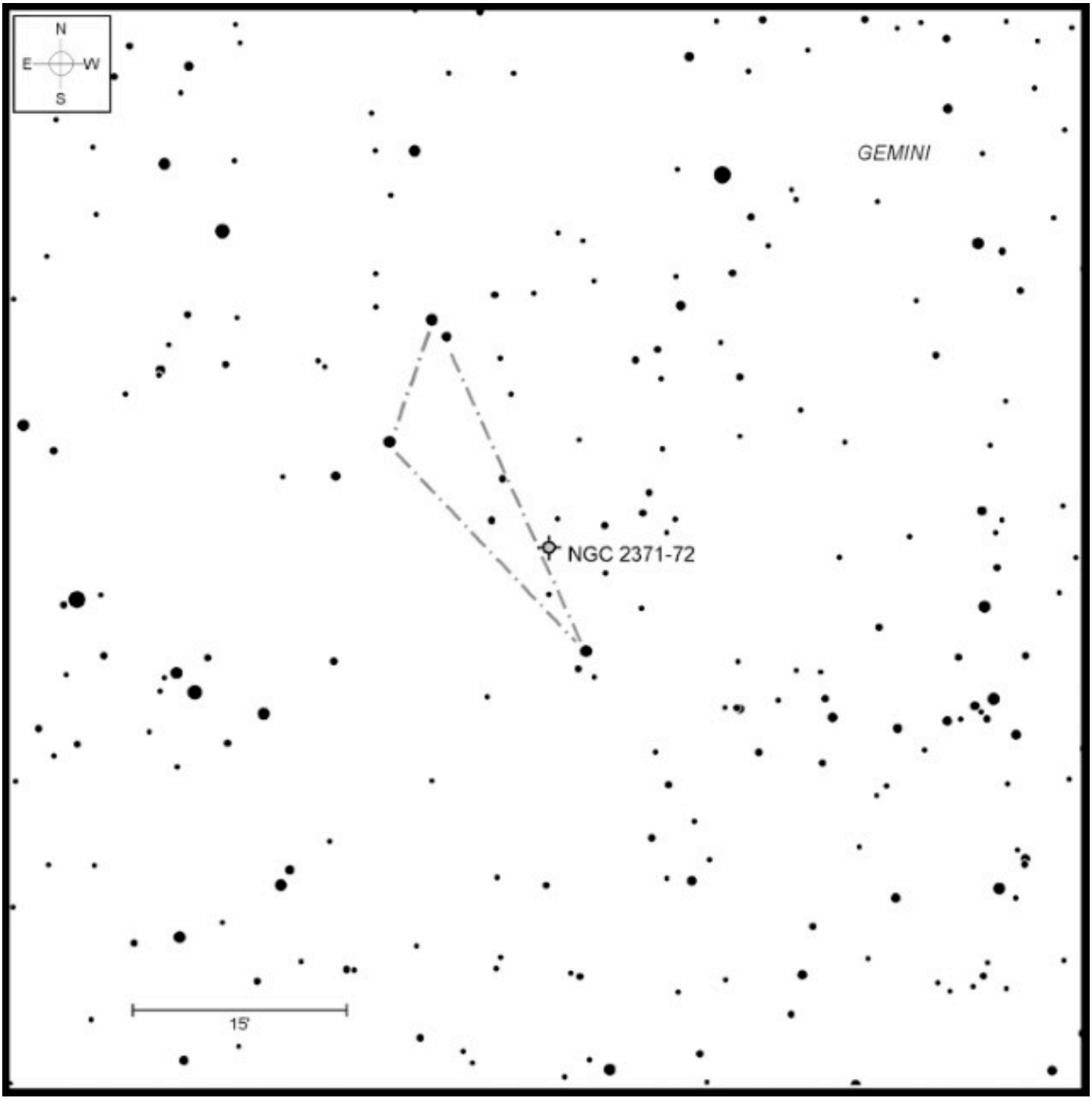
Target	Type	RA	DEC	Constellation	Mag	Size
NGC 2371-2372	Planetary nebula	07h 25.6m	+29° 29.4’	Gemini	13	55"

Gemini offers two intriguing planetary nebulae for stargazers: the well-known Eskimo Nebula (NGC 2392) and the lesser known but equally fascinating NGC 2371-2. While the Eskimo Nebula dazzles with its bright, structured halo resembling a face framed by a parka, NGC 2371-2372 (traditionally abbreviated NGC 2371-2) presents a more subtle, ghostly charm.

Many early observers mistakenly interpreted NGC 2371-2 as two separate objects. William Herschel, who discovered this two-faced object in 1785, described it as "two, faint of equal size, both small, within a minute [of arc] of each other; each has a seeming nucleus, and their apparent atmospheres run into each other." This led John Dreyer to list this planetary twice in his New General Catalog. Dreyer also listed M76, the Little Dumbbell in Perseus twice (NGC 650 and NGC 651) for much the same reason. Maybe we should christen NGC 2371-2 the "Littlest Dumbbell."

Actually, NGC 2371-2 already has a couple of nicknames: the Peanut Nebula for its double-lobed shape and the Double Bubble Nebula for its similarity to a piece of bubble gum still in its twisted wax paper wrapper. But to me, photos like that below that reveal faint extensions remind me of Darth Vader's TIE Advanced x1 Starfighter with its distinctively bent wing panels. Below: Evening star map. Credit: Map adapted from Star Watch by Phil Harrington





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

Today, we understand that NGC 2371-2 is a single object with bipolar tendencies. The nebula's estimated age is roughly 10,000 years, based on the expansion rate of its ionized gas shells. The angled view that we have of the planetary from Earth shows two bright lobes connected by a faint, equatorial ring. The lobes are composed of ionized hydrogen, oxygen, and nitrogen, giving the nebula a greenish-blue hue in optical images. Surrounding the main structure is a faint halo, remnants of earlier mass-loss episodes. Its central star, the incredibly hot remnant of a red giant, has a surface temperature estimated at 240,000° Fahrenheit. This star is in the final stages of its evolution, transitioning to become a white dwarf. It shines at 18th magnitude and likely only visible in the largest backyard telescopes.

Although I have read reports of it being seen through telescopes half the size, NGC 2371-2 always proves troublesome through my 8-inch (20-cm) scope from my suburban backyard. Observers with 3- to 5-inch (7.6- to 12.7-cm) telescopes might want to give it a go from dark (Bortle 1-3) skies.

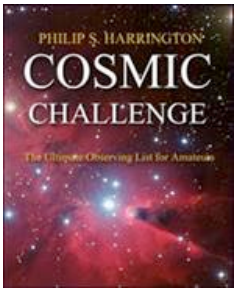
Above: NGC 2371-72 as taken by the author using a 6-inch (152mm) f/2.2 Celestron Origin Home Observatory. Details can be found on my Astrobin posting.

The nebula spans roughly 1.4 arcminutes across, which corresponds to a physical size of about 1.5 light-years. Its small apparent size also means that, once it is spotted, NGC 2371-2 is best seen at higher magnifications. By cranking up to at least 150x, and by using averted vision, the nebula's disk appears to have been severed in two (see my digitized sketch below). The two lobes are oriented northeast-southwest. The southwestern lobe (cataloged separately as NGC 2371) impresses me as slightly brighter than the other (NGC 2372).

Good luck with this month's Cosmic Challenge! And be sure to post your results in this column's discussion forum.

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

Continued on the next page.



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.

What's Up, Doc? †

February 2025

Dr. Aaron B. Clevenson, Observatory Director, Insperity Observatory

This document tells you what objects are visible this month for many of the Astronomical League Clubs. If you are working on one of the more advanced clubs, then I assume that you are also probably tracking where your objects are all the time. This concentrates on the more common and starter level clubs. All times are Mountain Time

Naked-Eye Clubs:

Meteors – any night, any time, anywhere, the darker the sky the better.

Shower	Duration	Maximum	Type
Aurigids	1/31 to 2/23	2/5 to 2/10	Minor
Alpha Centaurids	2/2 to 2/25	2/8 & 2/9	Minor
Beta Centaurids	2/2 to 2/25	2/8 & 2/9	Minor
Delta Leonids	2/5 to 3/19	2/22 & 2/23	Minor
Sigma Leonids	2/9 to 3/13	2/25 & 2/26	Minor
Capricornids-Sagittariids	1/13 to 2/28	1/30 to 2/3	DAYLIGHT
Chi Capricornids	1/29 to 2/28	2/13 & 2/14	DAYLIGHT

Constellations, Northern Skies – any night, any time, anywhere, the darker the sky the better.
Last Chance this cycle: Cepheus, Lacerta, Andromeda, Pisces, Cetus, Fornax. Transit Camelopardis, Auriga, Taurus, Orion, Lepus, Columba, Caelum.
New arrivals: Ursa Major, Leo Minor, Leo, Sextans, Pyxis, Puppis.

Binocular Clubs:

Binocular Messier – Monthly highlights include:
Easy –3, 34, 35, 36, 37, 38, 41, 42, 44, 45, 46, 47, 48, 50, 67, 93, 103.
Medium – 40, 49, 53, 63, 64, 78, 79, 81, 21, 94.
Hard – 1, 51, 65, 66, 68, 97, 101, 104, 106.
Big Binoculars – 58, 59, 60, 61, 84, 85, 86, 87, 88, 89, 90, 95, 96, 99, 100, 102, 105, 108, 109.

Deep Sky Binocular – Monthly highlights include:
3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42.

Other Clubs:

Messier In addition to those listed under Binocular Messier, check out: 43, 76, 91, 98.

Caldwell
1, 2, 3, 5, 6, 7, 8, 10, 13, 14, 21, 23, 24, 25, 26, 29, 31, 32, 35, 36, 38, 39, 40, 41, 45, 46, 48, 49, 50, 52, 53, 54, 58, 59, 60, 61, 64, 71, 74, 79.

Double Star
5, 8, 11, 14, 16, 17, 18, 20, 23, 25, 27, 28, 29, 32, 34, 35, 39, 40, 42, 43, 45, 51, 52, 53, 54, 55, 56, 57, 59, 65, 67, 68, 69, 70, 71, 73, 74, 75, 76, 78, 79, 80, 81, 82, 83, 85, 92, 95, 98, 99, 100.

Note: To use this guide and associated numbers visit https://www.astroleague.org/alphabeticobserving/ and select the observing program associated with the number.

Other Clubs (of the Solar System)

Planetary (Planets and Dwarf Planets) – These are the tasks that can be done this month:

Ceres, and **Pluto** will not be visible during the evening hours. They are morning stars or too close to the sun.
Sun – Any clear day is a good time to get those sunspots. And they are on the rise… The Sun sets at 1816 mid-month.

Moon:
The Maria requirement can be done any time the moon is visible. Look before 2/20 or after 2/5 for the fullest views.
The Highlands requirement can be done at the same time. The Crater Ages requirement is best done on 2/4 and 2/5. The Scarps requirement is best done on 2/6.
Occultations occur all the time, the bright ones can be found on the internet. Objects disappear on the East side of the moon.

Asteroids – Course Plotting and Measuring Movement requirements can be done at any time on any asteroid as long as it is visible in the nighttime sky.

Mercury is in Aquarius and sets at 1833 mid-month. Venus is in Pisces and set at 2144 mid-month.

Mars is in Gemini and is up all evening mid-month. Jupiter is in Taurus and is up all evening mid-month. Saturn is in Aquarius and sets at 1957 mid-month.

Uranus is in Aries and is up all evening mid-month. Neptune is in Pisces and sets at 2047 mid-month.

Lunar Key timings are indicated below (all times are Mountain Time):
New, 2/27 4 days, 2/2 7 days, 2/5 10 days, 2/8 14 days, 2/12
Old Moon in new moons arms – before 1300 on 2/1, ~10 % illuminated. (72 hr > New)
New moon in old moons arms – after 1745 on 2/24, ~10 % illuminated. (72 hr < New)
Waxing Crescent – before 1300 on 1/31 or before 1745 on 3/1, ~4 % illuminated. (48 hr > New) Waning Crescent – after 1745 on 2/25, ~4 % illuminated. (48 hr < New)

Major Astronomical Events:

2/1 – Lunar Perigee
2/4 – Jupiter returns to Prograde Motion
2/9 – Moon and Mars Conjunction (46')
2/15 – Ceres at Solar Conjunction
2/16 – Venus at Brightest Level
2/17 – Lunar Apogee
2/24 – Mars returns to Prograde Motion
2/28 – Moon and Mercury Conjunction (23')

Although many Astronomical League Observing Programs are not detailed in this **"What's Up Doc?"** handout, you can get information on many of their objects by using the **"What's Up Tonight, Doc?"** spreadsheet (version 4.1). To get your copy, talk to the Doc, Aaron Clevenson, by sending an email to aaron@clevenson.org. It is also available on the Astronomical League website: (https://www.astroleague.org/navigating-the-night-sky-guides/).

† - "What's Up Doc?" is used with permission from Warner Bros. Entertainment Inc.

Herrett Center for Arts and Science

Upcoming Events
All events are weather permitting.
https://herrett.csi.edu/observatory/faq.aspx

Event	Place	Date	Time	Admission(s)
Monthly Free Star Party	Centennial Observatory	Saturday, February 8th, 2025	6:45-9:00 PM	Free
Telescope Tuesday	Centennial Observatory	Tuesday, February 11th, 2025	6:30-9:00 PM	$1.50, ages 6 & under free, or free with planetarium admission
Telescope Tuesday	Centennial Observatory	Tuesday, February 25th, 2025	7:15-9:00 PM	$1.50, ages 6 & under free, or free with planetarium admission

Step into a world of wonder at our observatory, where the star of the show is the 24" (0.6 m) Norman Herrett Telescope. This impressive telescope offers an experience like no other, inviting everyone to explore the beauty of the cosmos. Thanks to accessible elevators, reaching the observing deck is a breeze, ensuring that even those with limited mobility can experience the magic of the skies like never before.

Faulkner Planetarium
Show Times

The Faulkner Planetarium has been serving the communities of southern Idaho since its opening in November 1995. Equipped with state-of-the-art planetarium technology, the 50-foot dome, Idaho's largest, virtually transports up to 144 guests to locales near and far. The Digistar 7 full-dome video system combined with Dolby 5.1 surround sound make for one incredible experience. Whether staying Earthbound or traveling to the far-flung reaches of the universe, the planetarium will give you an immersive experience you just won't find anywhere else.

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