Snake River Skies

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

Membership Meeting
Jan. 11th 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

Message from the Club ~~Vice~~ President

MVAS Astro members and friends…Hope you all had a Merry Christmas and Happy New Year. Our scheduled meeting is on January 11th will feature Rob Mayer – How to setup and use your new telescope. So, if you received a telescope for Christmas or have a new telescope you will learn how to set it up and learn how to use it. If you have a friend or family member and they have a new telescope invite them as well.

I will also mention that January is the time we all need to get caught up on your dues. Jim Tubbs will gladly accept your annual dues, which are still $20 / member. Quite the bargain with everything rising.

Chris Anderson let us know about our star party for July 25-26 at Castle Rock State Park.

January Events:

• Jan. 3: The Quadrantids meteor shower peaks. The Moon will be a slightly illuminated crescent and should not interfere much with the display.

• Jan. 16: Mars at opposition. Mars will be at its brightest and most visible for the entire year, making this the best time to try to see the red planet. More information covered in the NASA Night Sky Notes.

• Jan. 21: Mars, Jupiter, Uranus, Venus, Neptune, and Saturn will be visible together in January 2025, with Jan. 21 being a good time to look in the evening. That is when the moon reaches its Last Quarter phase, rising at 1:32pm.

Did You Know: Space itself is a vacuum, so you can't smell anything directly in space. However, astronauts have reported that after spacewalks, their suits carry back odors that resemble burnt metal, gunpowder, and even BBQ.

Be Safe – Get Out There – Explore Your Universe

Visit our Website
www.mvastro.org

Moon Phases for January 2025

Twin Falls, Idaho, United States

SUN	MON	TUE	WED	THU	FRI	SAT
			1 Waxing crescent 3.9% 2 days	2 Waxing crescent 9.3% 3 days	3 Waxing crescent 16.8% 4 days	4 Waxing crescent 26.0% 5 days
5 Waxing crescent 36.5% 6 days	6 First Quarter 4:57 P.M. 7 days	7 Waxing gibbous 59.1% 8 days	8 Waxing gibbous 70.0% 9 days	9 Waxing gibbous 79.9% 10 days	10 Waxing gibbous 88.2% 11 days	11 Waxing gibbous 94.5% 12 days
12 Waxing gibbous 98.4% 13 days	13 Full Wolf Moon 3:27 P.M. 14 days	14 Waning gibbous 99.2% 15 days	15 Waning gibbous 96.2% 16 days	16 Waning gibbous 91.3% 17 days	17 Waning gibbous 85.0% 18 days	18 Waning gibbous 77.4% 19 days
19 Waning gibbous 69.0% 20 days	20 Waning gibbous 59.9% 21 days	21 Last Quarter 1:32 P.M. 22 days	22 Waning crescent 41.2% 23 days	23 Waning crescent 32.0% 24 days	24 Waning crescent 23.3% 25 days	25 Waning crescent 15.4% 26 days
26 Waning crescent 8.8% 27 days	27 Waning crescent 3.7% 28 days	28 Waning crescent 0.7% 29 days	29 New Moon 5:37 A.M. 0 days	30 Waxing crescent 2.0% 1 day	31 Waxing crescent 6.6% 2 days	

Source: The Old Farmer's Almanac, January 2025

The first full Moon of 2025 (Lunation 1250) occurs on the night of Monday, January 13. It's thought that January's full Moon came to be known as the **Wolf Moon** because wolves were more likely to be heard howling at this time. It was traditionally believed that wolves howled due to hunger during winter, but we know today that isn't accurate.

Other traditional names for the January Moon emphasize the harsh coldness of the season: Cold Moon (Cree), Frost Exploding Moon (Cree), Freeze Up Moon (Algonquin), and Severe Moon (Dakota). Hard Moon (Dakota) highlights the phenomenon of the fallen snow developing a hard crust. Canada Goose Moon (Tlingit), Great Moon (Cree), Greetings Moon (Western Abenaki), and Spirit Moon (Ojibwe) have also been recorded as Moon names for this month.

A bright first Moon promises rain and a bountiful harvest; a red-tinted Moon means a dry year.

The Sky This Month – January 2025

The center of the Milky Way rises over the desert of northern Chile.

Happy New Year! The year 2025 arrives with a promising but brief meteor shower, and four bright planets putting on a show in the evening sky. Jupiter still shines impressively bright in Taurus at magnitude -2.6 and presents a nice fat disk for telescopic observation. Venus is far brighter in the southwest and continues to brighten during the month. And at mid-month comes the Mars show as the planet grows biggest and brightest as it reaches opposition. Observers in North America see Mars occulted by the full Moon – a truly spectacular event. Here's what to see in the night sky this month!

1. The year 2025 arrives with a promising but brief meteor shower, and four bright planets putting on a show in the evening sky. Jupiter still shines impressively bright in Taurus at magnitude -2.6 and presents a nice fat disk for telescopic observation. Venus is far brighter in the southwest and continues to brighten during the month. And at mid-month comes the Mars show as the planet grows biggest and brightest as it reaches opposition. Observers in North America see Mars occulted by the full Moon – a truly spectacular event. Here's what to see in the Night Sky This Month...

2. As Mars reaches opposition, our detailed Mars Observing Guide helps you find what to see on and around this arid and frigid world with a telescope.

3. From the archives - the always insightful Joe Bergeron meditates on his many years of observing the Red Planet.

4. I spent a fair bit of time under the stars this year. Here's a brief look at some of my favorite image captures from 2024.

5. And finally, in this video Ed Ting reviews his take on 10 telescopes that changed amateur astronomy forever.

2-3 January 2025. The brief but sometimes intense Quadrantid meteor shower peaks. The Quadrantids average about 25-40 meteors in dark sky. The predicted time of the peak of the shower is 15h Universal Time on January 3, a time which favors observers in the western Americas. But look anytime on the early morning of the 3rd, especially in the morning when the radiant is higher in the sky. The Quadrantids take their name from the defunct northern constellation Quadrans Muralis. They can appear anywhere in the sky, but the radiant lies just north of the bright star Arcturus in the northeastern sky in the pre-dawn hours or just over the north-northwestern horizon after evening twilight. This year, a waxing crescent Moon mostly stays out of the way. The Quadrantids strongly favor northern-hemisphere observers.

3 Jan. Venus perches itself about three degrees north of a thickening crescent Moon in the southwest. The planet puts on an excellent show in the first months of 2025. Tonight, it shines at a brilliant magnitude -4.4 and spans about 23". A telescope shows its disk a little more than half illuminated. As the month progresses, the planet's disk becomes crescent-shaped but larger in apparent diameter, and grows in brightness to an impressive magnitude -4.6.

4 Jan. At 13:00 UT, the Earth reaches perihelion, the point in its orbit where it lies closest to the Sun at a distance of 147,103,686 km. That's about 3% closer than at aphelion in early July.

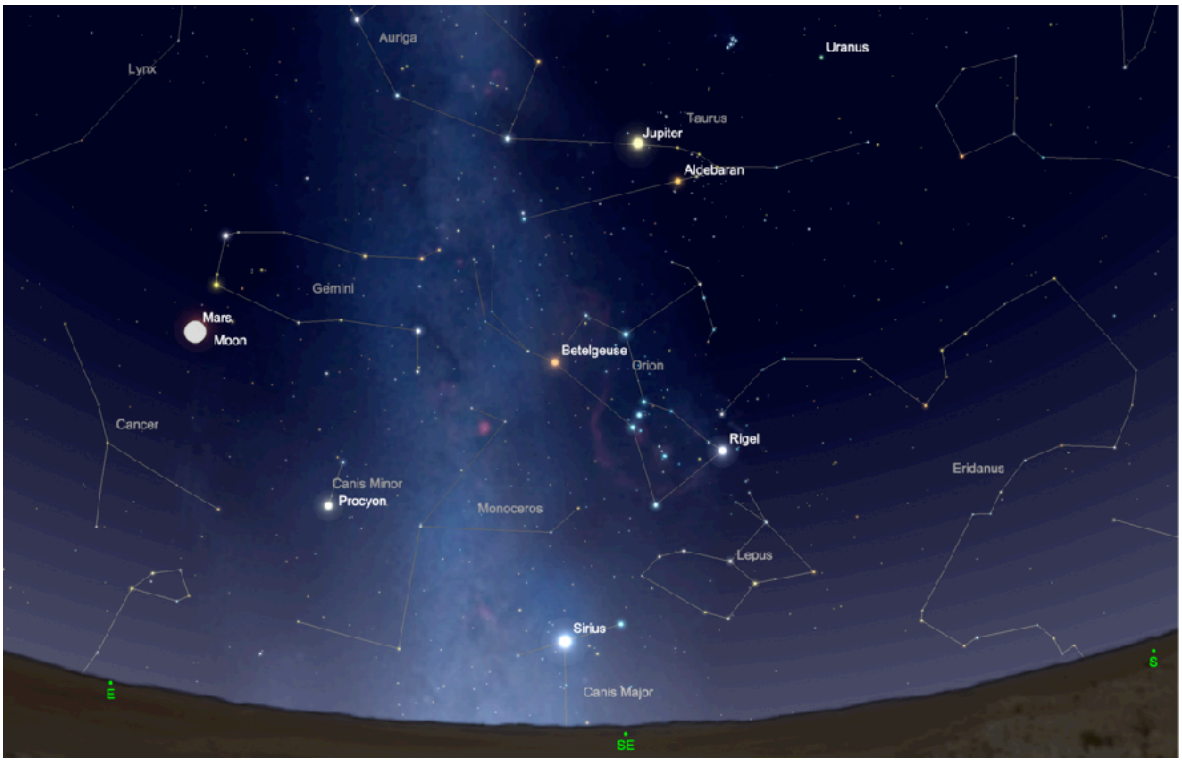
4 Jan. Tonight the Moon lies about 3° north of Saturn in the southwestern sky after sunset. Saturn is working its way west each day on its way to conjunction with the Sun on March 12. Its rings appear nearly edge on now and will seem to disappear in late March from our point of view before reappearing slowly through the rest of the year.

6 Jan. First Quarter Moon, 23:56 UT

9 Jan. The waxing gibbous Moon passes through the Pleiades star cluster in Taurus. Grab a pair of binoculars to see this glorious sight!

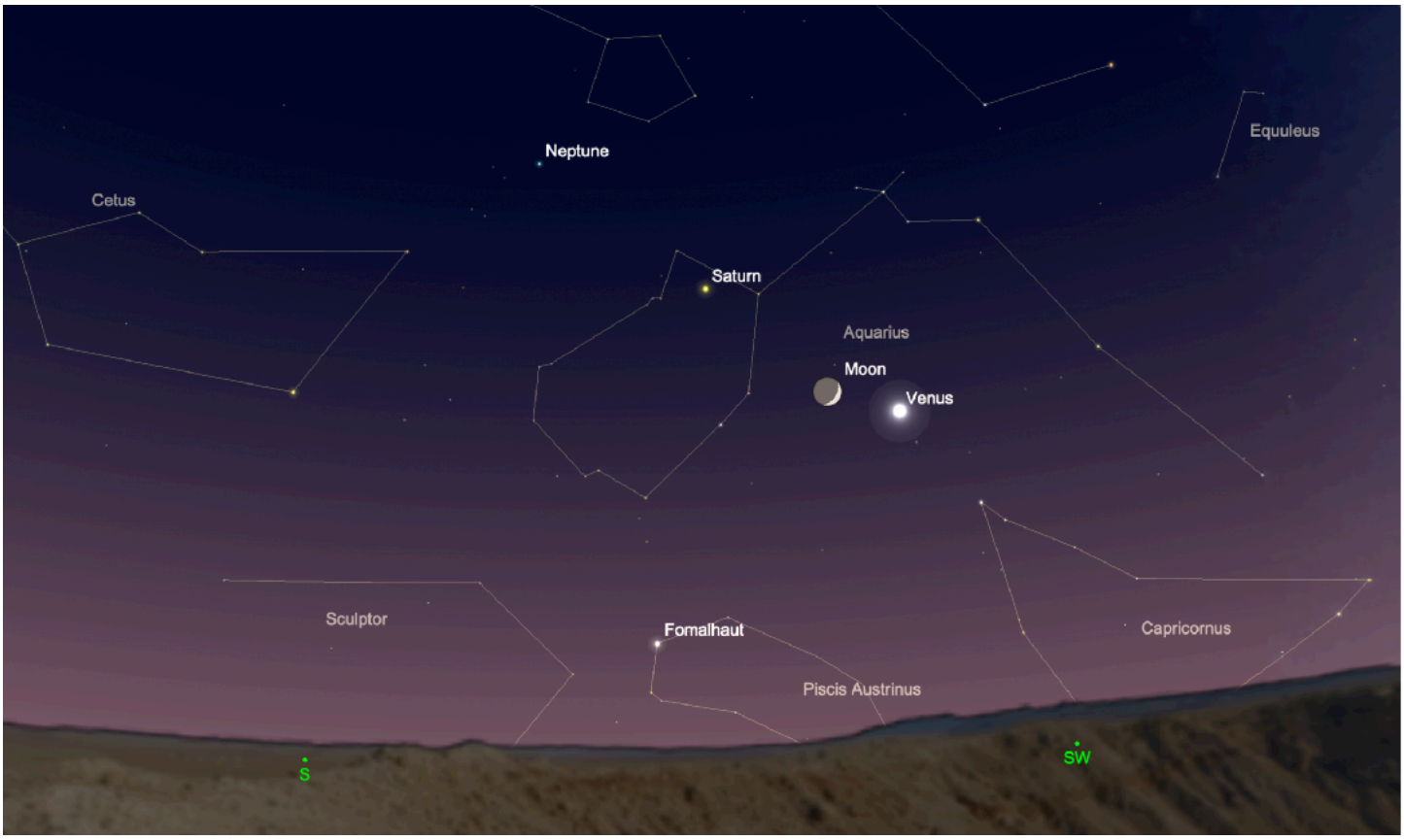
10 Jan. Venus reaches greatest eastern elongation at an angular distance of 47° from the Sun.

12 Jan. Mars makes its closest approach to Earth this cycle at a distance of 96,041,800 km. The planet shines a magnitude -1.4 with a ruddy orange hue and spans 14.6" in a telescope. It reaches opposition not now but in four days as a consequence of its asymmetric orbit.



A crescent Moon and Venus in the southwest after sunset on Jan. 3, 2025.

13-14 Jan. The full Moon occults Mars for observers in all but the northwestern parts of North America. This will be a spectacular event since Mars is near its closest to Earth and well worth observing in a telescope, binoculars, or simply with your unaided eye! Detailed timing for many cities and towns at this link.



The Moon makes a close approach to Mars on Jan. 13, 2025. For observers in North America, the Moon occults the planets on that night.

15-16 Jan. Mars reaches opposition for the first time in 26 months. The planet shines at magnitude -1.3 in the constellation Gemini and spans about 14.6”. That’s not as large as the past few oppositions, but it’s still impressive. The planet lies along the northern reaches of the ecliptic which favors northern observers who see it high in the sky at culmination, but southern-hemisphere observers see it also. All this month and next presents the best time (if a chilly one, for northern observers) to observe the planet in the evening hours. Read more about how to observe Mars here.

18-20 Jan. Look again to Venus in the southwest to see it within about 2° of Saturn.

21 Jan. Last Quarter Moon, 20:31 UT

25 Jan. Antares grazes the waning crescent Moon in the southeast.

29 Jan. New Moon, 12:36 UT

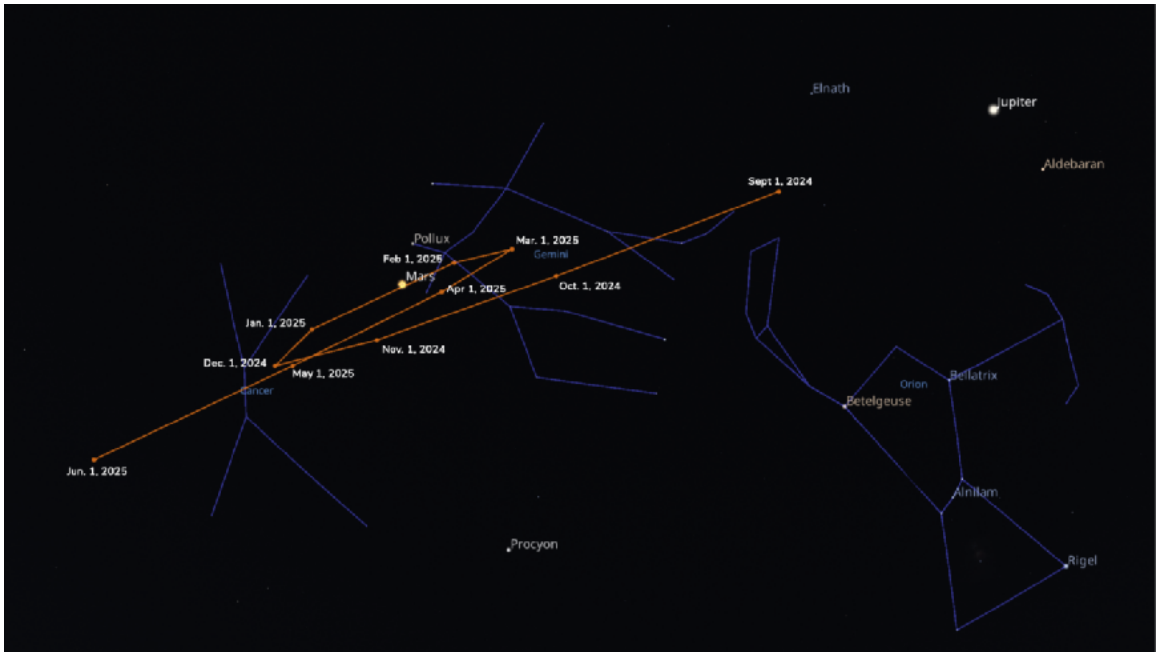
January Night Sky Notes: The Red Planet

This article is distributed by the NASA Night Sky Network, 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 Kat Troche

Have you looked up at the night sky this season and noticed a bright object sporting a reddish hue to the left of Orion? This is none other than the planet Mars! January will be an excellent opportunity to spot this planet and some of its details with a medium-sized telescope. Be sure to catch these three events this month.

Martian Retrograde: Mars entered retrograde (or backward movement relative to its usual direction) on December 7, 2024, and will continue throughout January into February 23, 2025. You can track the planet's progress by sketching or photographing Mars' position relative to nearby stars. Be consistent with your observations, taking them every few nights or so as the weather permits. You can use free software like Stellarium or Stellarium Web (the browser version) to help you navigate the night as Mars treks around the sky. You can find Mars above the eastern horizon after 8:00 PM local time.



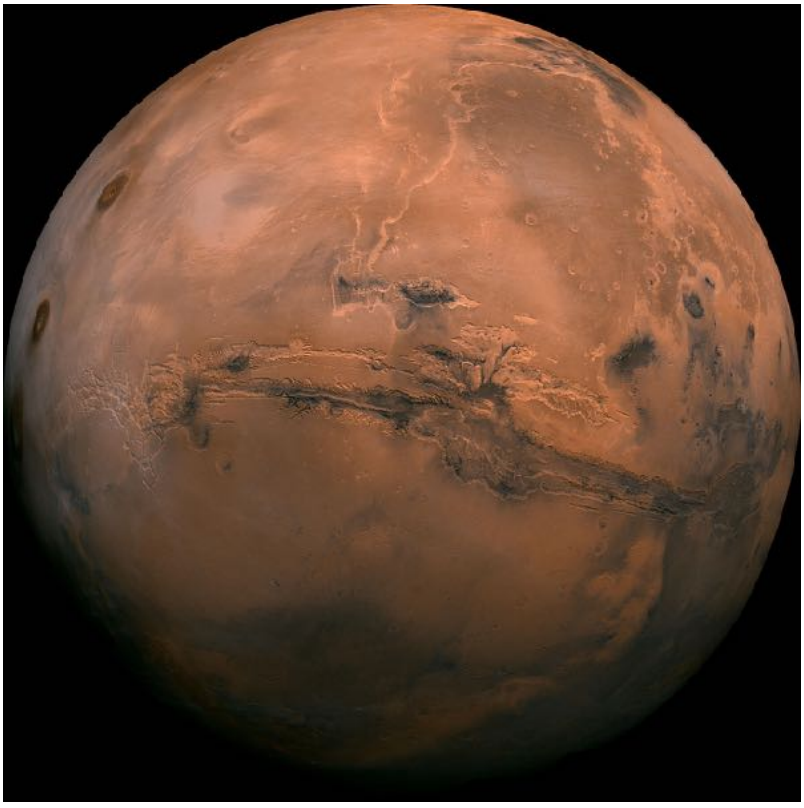
This mid-January chart shows the path of Mars from September 2024 to June 2025 as it enters and then exits in retrograde motion. Mars appears to change its direction of motion in the sky because Earth is passing the slower-moving Mars in its orbit. Credit: Stellarium

Hide and Seek: On the night of January 13th, you can watch Mars 'disappear' behind the Moon during an occultation. An occultation is when one celestial object passes directly in front of another, hiding the background object from view. This can happen with planets and stars in our night sky, depending on the orbit of an object and where you are on Earth, similar to eclipses. **Note:** From 7:45pm to 8:00pm you may observe this event at the **Centennial Observatory** as the Red Planet emerges from behind the full moon. This experience is best viewed through a telescope, and will be free to view. *Observatory Events are weather dependent. Call the Centennial Observatory Star Line at 732-MOON(6666) for the latest on upcoming events.

Depending on where you are within the contiguous United States, you can watch this event with the naked eye, binoculars, or a small telescope. The occultation will happen for over an hour in some parts of the US. You can use websites like Stellarium Web or the Astronomical League's 'Moon Occults Mars' chart to calculate the best time to see this event.

Closer and Closer: As you observe Mars this month to track its retrograde movement, you will notice that it will increase in brightness. This is because Mars will reach opposition by the evening of January 18th. Opposition happens when a planet is directly opposite the Sun, as seen from Earth. You don't need to be in any specific city to observe this event; you only need clear skies to observe that it gets brighter. It's also when Mars is closest to Earth, so you'll see more details in a telescope.

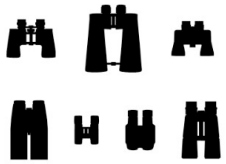
A simulated view of the Moon as Mars begins its occultation on January 13, 2025. Credit: Stellarium



A mosaic of the Valles Marineris hemisphere of Mars projected into point perspective, a view similar to that which one would see from a spacecraft. The mosaic is composed of 102 Viking Orbiter images of Mars. Credit: NASA/JPL-Caltech

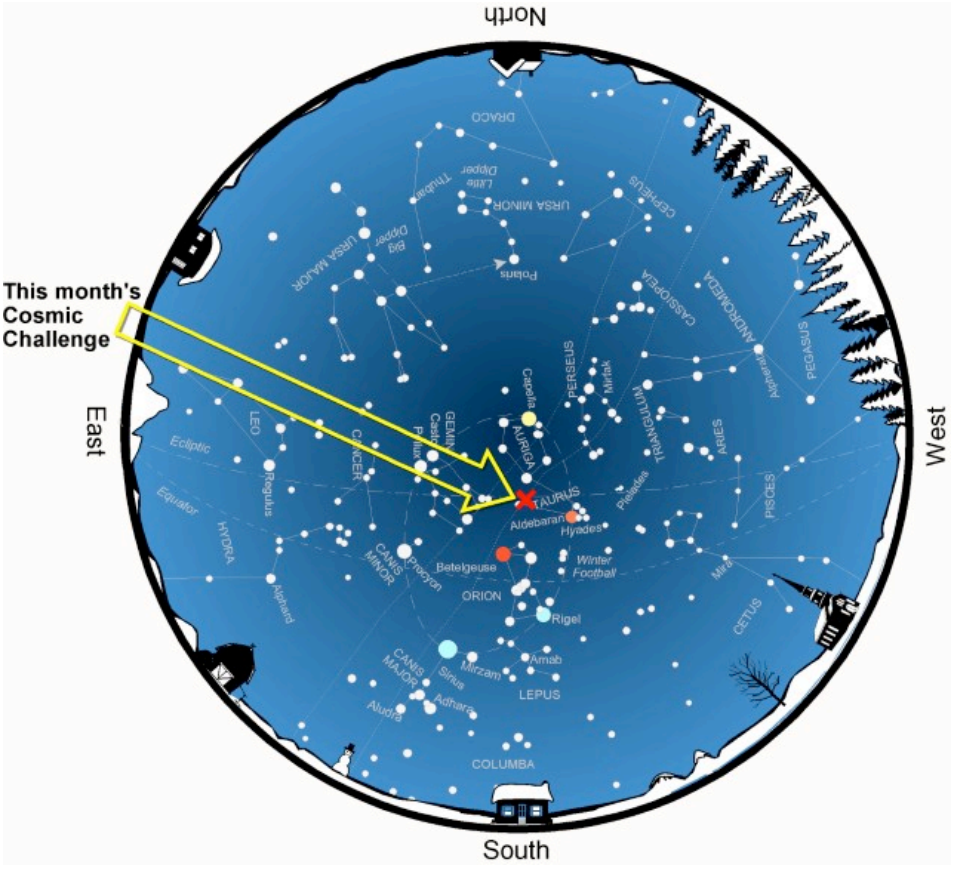
Mars has fascinated humanity for centuries, with its earliest recorded observations dating back to the Bronze Age. By the 17th century, astronomers were able to identify features of the Martian surface, such as its ice caps and darker regions. Since the 1960s, exploration of the Red Planet has intensified with robotic missions from various space organizations. Currently, NASA has five active missions, including rovers and orbiters, with the future focused on human exploration and habitation. Mars will always fill us with a sense of wonder and adventure as we reach for its soil through initiatives such as the Moon to Mars Architecture and the Mars Sample Return campaign.

Phil Harrington's Cosmic Challenge

M1, the Crab Nebula	
	**This month's suggested aperture range:** 7x to 10x Binoculars

Target	Type	RA	DEC	Constellation	Mag	Size
M1	Supernova remnant	05h 34.5m	+22° 01.0’	Taurus	8.4	6'x4'

The universe changed on August 28, 1758. Early that morning, as he scanned the predawn sky for Halley's Comet on its predicted return, the French comet hunter Charles Messier found something he had never seen before through his telescope. The mysterious object, lying just off the southern "horn" of Taurus, the Bull, looked just like a comet through his small refractor. Returning over the course of the next two weeks, Messier realized that what he had found could not be a comet, since there was no telltale indication of orbital motion. Instead, it remained anchored in place. Messier noted the position of his unexpected discovery, and was later to include it as the first entry in a catalog of annoyances that might fool him and his fellow comet hunters into thinking they too had found a new comet. The rest, as they say, is history. (To be correct, Messier was not the first person to see M1. That distinction belongs to London physician and amateur astronomer John Bevis, who discovered it 27 years earlier.)



Above: Evening star map. Credit: Map adapted from Star Watch by Phil Harrington
Finder chart for this month's Cosmic Challenge.

The story of M1, of how it is the expanding remnant of a massive star that detonated in a huge supernova explosion, is well known to most. That explosion was witnessed by ancient Chinese and Anasazi Native American stargazers in July 1054 AD. Although half a world away from each other, both recorded the exploding star's sudden appearance. At its peak, the supernova may have shone as brightly as magnitude -6 and was visible in broad daylight for nearly a month.

Today, when we look toward the site of the supernova explosion, all we see is the expanding cloud of debris that we call the Crab Nebula. The nebula got its nickname in 1844 when British astronomer William Parsons, the Third Earl of Rosse, observed it through his telescope and sketched its appearance. He noted that its intricate, filamentary structure resembled the legs and body of a crab. Although modern observations reveal a far more complex and dynamic structure, the name "Crab Nebula" has persisted, serving as a historical nod to Parsons' interpretation of its appearance during the early days of astronomical study.

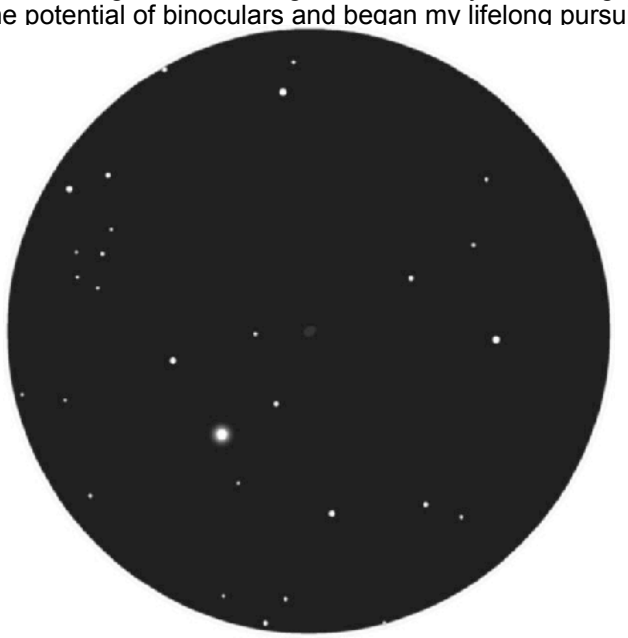
Above: Anasazi (Ancestral Puebloans) supernova petrographs at Chaco Canyon showing the 1054 supernova. Three objects are shown drawn on a nearly flat, vertical stone: a star on the lower left, a crescent moon on the lower right, and a human hand above the moon. Source: Alex Marentes, CC BY-SA 2.0, via Wikimedia Commons.

Above: M1 as taken by Cloudy Nights user David Raphael in Lakeway, TX, using a GSO 12" f/8 Ritchey-Chrétien. Details can be found on his Astrobin posting. Below: M1 is shown here at a similar scale as seen through binoculars. Photo taken by the author using a Dwarf 3 astrograph (50 minute total integration, dual-band filter in place)

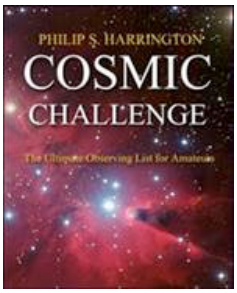
The nebula's elaborate structure seen in photographs consists of expanding filaments of ionized gas, primarily hydrogen, helium, and heavier elements like oxygen and carbon, traveling at 1,500 km/second. Its synchrotron radiation, generated by high-energy electrons spiraling in magnetic fields, makes the Crab Nebula a strong emitter across the radio to gamma-ray spectrum. At its core lies the Crab Pulsar, a rapidly spinning neutron star emitting powerful beams of radiation.

On a personal level, the universe changed for me in January 1972, and M1 was the reason. It was a cold winter night, with snow on the ground and crystal clear skies overhead. Outside in my backyard, I had my new 8-inch reflector, my trusty Skalnate Pleso Atlas of the Heavens, and a pair of 7x35 binoculars. Wearing a heavy parka to insulate me from the cold, I laid back against a pile of snow, enjoying the sky with the binoculars as I waited for my telescope's optics to acclimate to the cold temperature. As I made my way past many winter favorites, I happened to scan along the southern horn of Taurus. Third-magnitude Zeta (ζ) Tauri marks the tip of the horn.

Through the binoculars, I could also see nearby 6th- and 7th-magnitude stars that, with Zeta, formed a small trapezoid that I had used in the past to find M1 through my reflector. Looking more closely at the field, I thought I could see the dimmest smudge of light nearby. Sure enough, I was seeing, ever so faintly, M1 through the binoculars. That one observation convinced me about the potential of binoculars and began my lifelong pursuit of pushing them to their limits, which I enjoy doing to this day.



With 10x and lower-power binoculars, M1 looks like a rounded rectangle of grayish light (as illustrated above). That's an unusual shape in a universe of round and oval nebulae. Like many smaller deep-sky objects, M1 benefits from magnification and smaller exit pupils. Under dark skies, it appears much more obvious through a pair of quality 16x50 binoculars than through similar 10x50s, and even more so than through 7x50 binoculars. The secret to seeing it is to brace the binoculars against something, whether that something is a tripod, a fence post, or, yes, even lying in a pile of snow. 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. 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.

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

Event	Place	Date	Time	Admission(s)
Cabin Fever Day Solar Telescope Viewing	Centennial Observatory	Saturday, January 4,	11:00 AM-2:00 PM	Free
Monthly Free Star Party & Closest Approach of Mars in 2025	Centennial Observatory	Saturday, January 11,	6:30 to 9:00 PM	Free
Lunar Occultation of Mars	Centennial Observatory	Monday, January 13,	7:45-8:00 PM	Free
Telescope Tuesday	Centennial Observatory	Tuesday, January 14,	6:00 to 9:00 PM	$1.50, ages 6 & under free, or free with planetarium admission
Telescope Tuesday	Centennial Observatory	Tuesday, January 28,	6:15 to 9:00 PM	$1.50, ages 6 & under free, or free with planetarium admission

Coming to the Centennial Observatory in the winter may sound chilly - and it is - but it's also an excellent time for cozy stargazing. Here are our top reasons to brave the cold.

1. Clearer Air: Cold air doesn't hold as much moisture as warm air can. This means stars appear crisper and brighter than in the summertime. Bonus: We help students with observing for their astronomy class.

2. Longer Nights: An earlier sunset means you don't have to say up late to see constellations, planets, and galaxies. It also means we are able to start star parties much earlier. See times in the schedule above.

3. Iconic Constellations: Winter skies feature some of the most well-known constellations, including Orion the Hunter, Gemini, various planets (Venus, Saturn, Mars, etc.) the Moon (on certain nights), Double / Multiple stars, Star Clusters and much, much more.

4. Getting Cozy: Snuggles and stars are a winning combination. We recommend bringing a warm blanket to share with a loved one, cushions to sit on, hand warmers, etc.

Faulkner Planetarium Shows
Visit the link for current shows and times

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/

Seeing and Transparency Guide

Seeing and Transparency are values that an observer uses to compare the quality of the sky from night to night. The values are very specific to an individual observer's visual acuity. Seeing is a measure of how stable the sky is. Transparency is a measure of how clear the sky is. Most of the Astronomical League's Observing Programs require the observer to evaluate these conditions for each observation and to record them in their observation log.

Here are two scales that are acceptable for all Observing Programs. They are simple to use and require no special equipment. Both of these values can be done very formally using special equipment, but for the AL Observing Programs this level of effort is not required.

Seeing: How stable is the sky?

- E (excellent) – The brighter stars are not twinkling at all.
- VG (very good) – The stars are twinkling slightly, but the brighter planets are not twinkling.
- G (good) – The brighter planets are twinkling slightly.
- F (fair) – The brighter planets are obviously twinkling.
- P (poor) – The atmosphere is turbulent. all objects are twinkling to the points where observation is not practical.

Transparency: How clear is the sky?
Transparency is a measure of what you can see in the nighttime sky in spite of dust, smoke, haze, humidity, or light pollution. An easy way to measure this is to use the magnitude of the faintest star you can see. Ideally, this would be looking straight up at zenith.

But, in the northern hemisphere, to make life simpler, you can use the Little Dipper (Ursa Minor) if you can see it. Here is the scale:

1. None	Magnitude 1 skies	
2. Only Polaris	Magnitude 2 skies	α UMi
3. … plus Kochab or Pherkad	Magnitude 3 skies	β UMi, γ UMi
4. … plus any stars in the tail	Magnitude 4 skies	δ UMi (Yildun), ε UMi
5. … plus another bowl star	Magnitude 5 skies	ζ UMi
6. All 7 stars	Magnitude 6 skies	η UMi
7. More than 7 stars visible	Magnitude 7 skies	…

Although atmospheric extinction will vary from season to season, and from latitude to latitude, using the Little Dipper is a simple and reasonable solution.

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