Snake River Skies

The Monthly Newsletter of the Magic Valley Astronomical Society. October 2024

Membership Meeting
Oct.. 12th 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

October Newsletter

Looking forward to cooler weather and less smoke so we can have some better skies to get back to some nighttime viewing, as it didn't happen in September. Hopefully we will get to have a star party in October.

Our meeting will be on the 12th of October at 7:00 pm. Our presentations will be by Jim Tubbs on title "Our nearest stellar neighbors" and Robert Mayer "Celtic Constellations. I hope to see everyone at the meeting. With the election of officers next month, we need to see who is running.

Oct. 2: An annular solar eclipse will be visible from parts of Argentina and Chile, and a partial solar eclipse will be visible from much of South America.

Oct. 2: New Moon

Oct. 5: A crescent Moon near Venus.

Oct. 10-12: Comet C/2023 A3 (Tsuchinshan-Atlas) is predicted to be at its brightest.

Oct. 13/14: The Moon is very near Saturn.

Oct. 17: Full Moon

Oct. 20/21: The Moon is near Jupiter.

Oct. 22/23: The Moon is near Mars.

Oct. 31: For those out on Halloween, grab a mug because a teapot (part of Sagittarius) will be pouring out hot Venus.

Visit our Website
www.mvastro.org

Moon Phases for October 2024

Twin Falls, Idaho, United States

October 2024

No.	Su	Mo	Tu	We	Th	Fr	Sa
40			1 1% Waning Crescent	2 New Moon 12:50 pm	3 1% Waxing Crescent	4 4% Waxing Crescent	5 9% Waxing Crescent
41	6 15% Waxing Crescent	7 23% Waxing Crescent	8 32% Waxing Crescent	9 42% Waxing Crescent	10 First Quarter 12:56 pm	11 63% Waxing Gibbous	12 73% Waxing Gibbous
42	13 83% Waxing Gibbous	14 91% Waxing Gibbous	15 96% Waxing Gibbous	16 99% Waxing Gibbous	17 Full Moon 05:27 am	18 96% Waning Gibbous	19 90% Waning Gibbous
43	20 82% Waning Gibbous	21 73% Waning Gibbous	22 63% Waning Gibbous	23 53% Waning Gibbous	24 Last Quarter 02:05 am	25 33% Waning Crescent	26 24% Waning Crescent
44	27 17% Waning Crescent	28 10% Waning Crescent	29 5% Waning Crescent	30 2% Waning Crescent	31 1% Waning Crescent		

https://www.mooninfo.org/world/united-states/100911/moon-calendar-october-2024-for-twin-falls.html | Moon Names: The Old Farmer's Almanac, October 2024

naa-mea' (rutting) Moon: Full Supermoon in October 2024 - Shoshone tribe name

Typical name: Hunter’s Moon. This is the month when the game is fattened up for winter. Now is the time for hunting and laying in a store of provisions for the long months ahead.

Trivia: How long has this newsletter editor been doing the newsletter? Anser following Phil Harrington’s Cosmic Challenge.

The Sky This Month – October 2024

Comet C/2023 A3 (Tsuchinshan-ATLAS) on Sept. 26, 2024 imaged by Michael Matti from Swan Hill, Victoria, Australia.

Overview for October 2024!

1. The Milky Way and northern summer stars linger in the southwestern October sky. The autumn constellations take the spotlight overhead, while the northern winter stars are starting to poke above the eastern horizon in the late evening. Saturn remains prominent in the evening sky, while Jupiter and Mars rise high enough in the morning hours, both now big enough for promising telescopic observation. Here's what to see in the Night Sky This Month...

2. Yes, it looks like Comet C/2023 A3 (Tsuchinshan-ATLAS) is living up to its billing according to photographers in the southern hemisphere. Our guide to the comet will help you see it as it swings around the Sun and gets closer to Earth in about 10 days. But what's this... yet another bright comet on the way this month? A few days ago, astronomers discovered a potentially "sungrazing" comet on the way into the inner solar system with an expected close approach to the Sun on October 28. The comet is so new that it only has a provisional name, A11bP7I. More details about this second potentially spectacular comet at this link. (Image at top of Comet C/2023 A3 (Tsuchinshan-ATLAS) courtesy of Michael Matti).

3. The redoubtable Alan Dyer captured some superb video of a surprise display of aurora borealis at the end of August. Enjoy the brief show here.

4. Have a look at the spectacular Elephant Trunk Nebula, a stunning 20-light-year-long tunnel of star formation in the constellation Cepheus.

5. Finally, enjoy this piece at Sky&Telescope about Helen Sawyer-Hogg, who over a long career as a writer and professional astronomer became "a gentle guide who swept her hand to the sky and promised that the stars are for everyone."

And the astronomy quote of the month: “Old men and comets have been reverenced for the same reason: their long beards, and pretences to foretell events.”- Jonathan Swift

(Looking for last month’s ‘Night Sky’? Find it at this link…)

This time of year, you can also get in a good night of stargazing without staying up too late. The Milky Way and northern summer stars linger in the southwestern October sky. The autumn constellations such as Pegasus and Andromeda dominate overhead, and the northern winter stars are starting to poke above the eastern horizon in the late evening. Saturn remains prominent in the evening sky, while Jupiter and Mars rise high enough in the morning hours, both now big enough for promising telescopic observation. And a bright comet – possibly a very bright comet – arrives in the evening sky. Here's what to see in the night sky this month…

1-15 October 2024. 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.

2 Oct. New Moon, 18:49 UT.

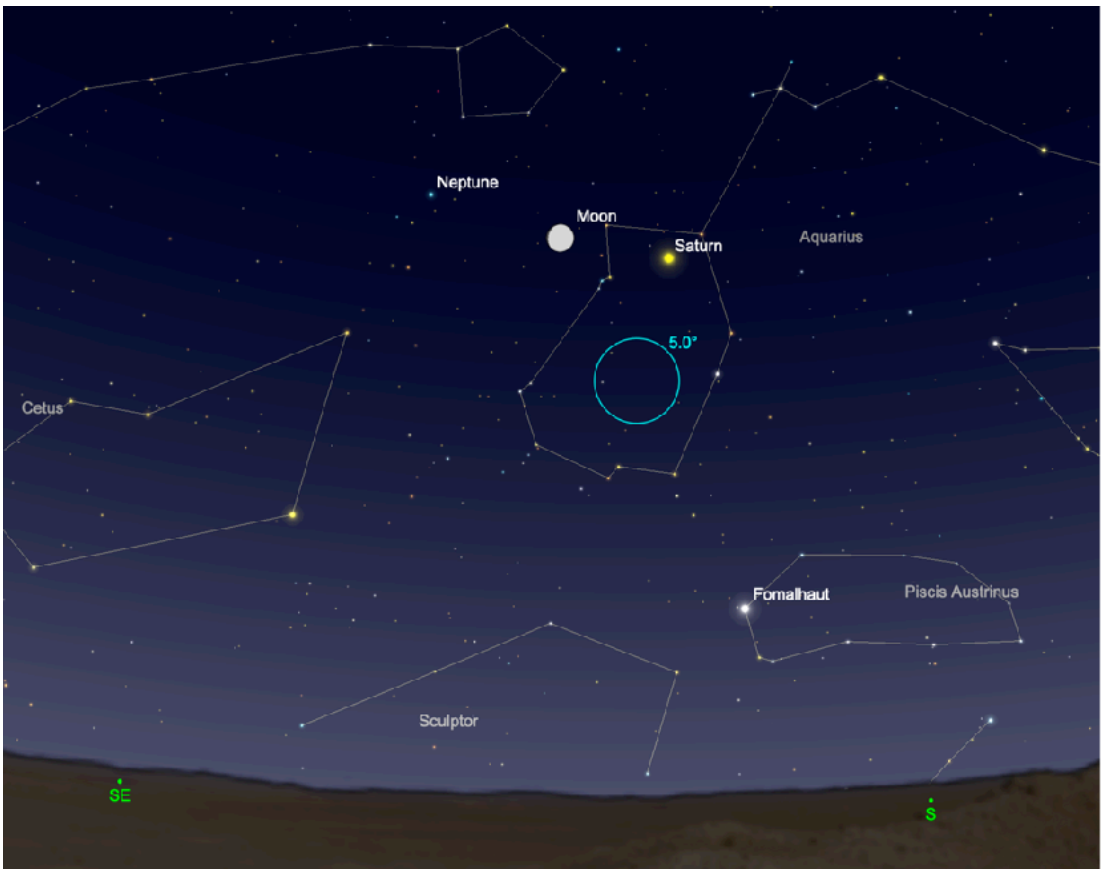
5 Oct. Look to the southwest to see a three-day-old Moon setting with Venus about 4º to the north. In the northern hemisphere, the pair lie low over the horizon after sunset; southern observers will see the pair at a higher elevation. Venus now shines at magnitude -4.0 and moves further south along the ecliptic during the month.

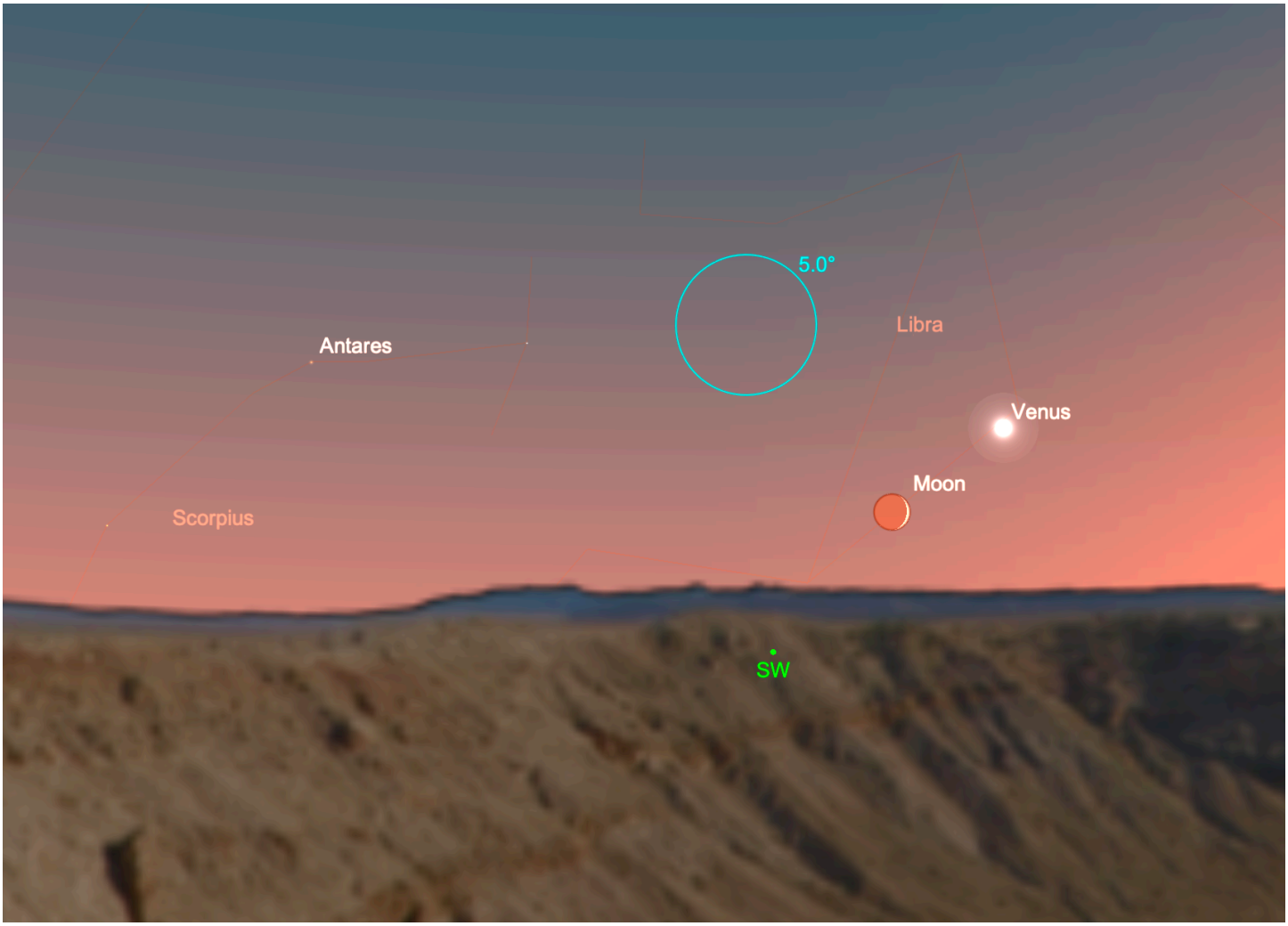
7 Oct. A fattening crescent Moon lies about 3o east of the bright red-orange star Antares in the southwestern sky after sunset.

9 Oct. Jupiter reaches its first stationary point as it appears between the horns of Taurus. It now begins moving westward in retrograde on its way to opposition in early December. The planet is nicely positioned for telescopic observation from now through February 2025. At mid October, the planet shines at an impressive magnitude -2.6, far brighter than any star, and spans about 44" in a telescope.

10 Oct. First Quarter Moon, 18:55 UT 11-31 Oct. Northern hemisphere observers can see – if all goes well – Comet C/2023 A3 (Tsuchinshan-ATLAS) in the evening sky after sunset starting around October 11 (or possibly even a few days before – if it's long enough, you may see the tail setting a few days before you can spot the comet's head). Comet watchers expect it to grow bright enough to see with the naked eye – and possibly bright enough to see in daylight! See an overview of the comet at this link.

The Moon and Saturn during the evening of Oct. 14, 2024.





A waxing crescent Moon and Venus in the southwestern sky after sunset on Oct. 5, 2024.

12 Oct. Comet C/2023 A3 (Tsuchinshan-ATLAS) comes nearest to Earth at a distance of 0.47 AU or about 70 million kilometers.

14 Oct. A fat gibbous Moon lies 6° northeast of Saturn in the constellation Aquarius. (Observers in southern Africa, Madagascar, and India see the Moon occult Saturn. Details on timing for various locations are at this link). A month past opposition, Saturn shines at magnitude +0.7 and its disk appears nearly 19" across. The rings remain tilted only a few degrees from edge on. Also, about 7° west of the Moon tonight lies 8th magnitude Neptune just over the border in Pisces.

17 Oct. Full Moon, 11:26 UT (the Full Hunter Moon). The Moon also reaches perigee today, its closest approach to Earth, at a distance of 357,174 km. It therefore appears about 7% larger than average – what the 'lay media' calls a super moon.

19-21 Oct. The waning gibbous Moon passes through Taurus. On the 19th it lies 5° east of the Pleiades. On the 20th you see it 5° north of Jupiter. 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 waning gibbous Moon gets in the way of the faintest meteors this year, but the brightest meteors still shine through. 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.

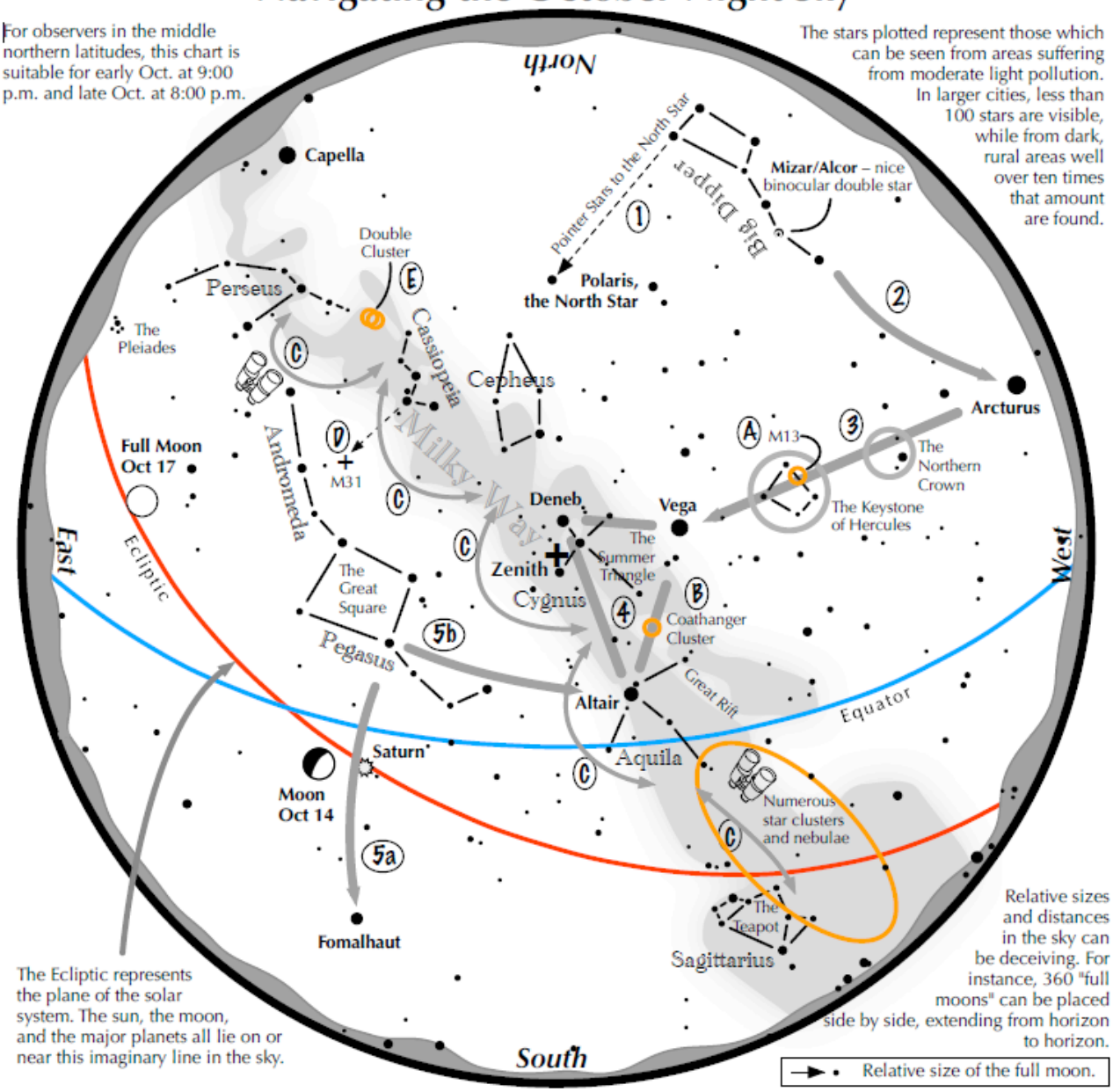
23 Oct. In the morning sky, look for the (nearly) last-quarter Moon making a triangle with Castor and Pollux. Brightening Mars lies about 6° southeast of the Moon. The red-orange planet shines at magnitude +0.2 and spans about 8.7" in a telescope. Oct. 30 the planet moves eastward from Gemini in to Cancer. It continues to brighten quickly now on its way to opposition early next year.

24 Oct. Last Quarter Moon, 08:03 UT

Navigating the October Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Oct. at 9:00 p.m. and late Oct. at 8:00 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 October 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 intersects Arcturus, the brightest star in the early October evening sky.
3. To the northeast of Arcturus shines another star of the same 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.
4. Nearly overhead lie the summer triangle stars of Vega, Altair, and Deneb.
5. High in the east are the four moderately bright stars of the Great Square. Its two southern stars point west to Altair. Its two western stars point south to Fomalhaut.

Binocular Highlights

A: On the western side of the Keystone glows the Great Hercules Cluster, a ball of 500,000 stars. **B:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger. **C:** Sweep along the Milky Way for an astounding number of fuzzy star clusters and nebulae amid many faint glows and dark bays, including the Great Rift. **D:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **E:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster.

Astronomical League *www.astroleague.org; duplication is allowed and encouraged for all free distribution.*

October's Night Sky Notes: Catch Andromeda Rising!

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.

Original Article by Dave Prosper
Updated by Kat Troche

If you're thinking of a galaxy, the image in your head is probably the Andromeda Galaxy! Studies of this massive neighboring galaxy, also called M31, have played an incredibly important role in shaping modern astronomy. As a bonus for stargazers, the Andromeda Galaxy is also a beautiful sight.

Spot the Andromeda Galaxy! M31's more common name comes from its parent constellation, which becomes prominent as autumn arrives in the Northern Hemisphere. Surprising amounts of detail can be observed with unaided eyes when seen from dark sky sites. Hints of it can even be made out from light polluted areas. Use the Great Square of Pegasus or the Cassiopeia constellation as guides to find it. Credit: Stellarium Web

Have you heard that all the stars you see at night are part of our Milky Way galaxy? While that is mostly true, one star-like object located near the border between the constellations of Andromeda and Cassiopeia appears fuzzy to unaided eyes. That's because it's not a star, but the Andromeda Galaxy, its trillion stars appearing to our eyes as a 3.4 magnitude patch of haze. Why so dim? Distance! It's outside our galaxy, around 2.5 million light years distant - so far away that the light you see left M31's stars when our earliest ancestors figured out stone tools. Binoculars show more detail: M31's bright core stands out, along with a bit of its wispy, saucer-shaped disc. Telescopes bring out greater detail but often can't view the entire galaxy at once. Depending on the quality of your skies and your magnification, you may be able to make out individual globular clusters, structure, and at least two of its orbiting dwarf galaxies: M110 and M32. Light pollution and thin clouds, smoke, or haze will severely hamper observing fainter detail, as they will for any "faint fuzzy." Surprisingly, persistent stargazers can still spot M31's core from areas of moderate light pollution as long as skies are otherwise clear.

Generated version of the Andromeda Galaxy and its companion galaxies M32 and M110. Credit: Stellarium Web

Modern astronomy was greatly shaped by studies of the Andromeda Galaxy. A hundred years ago, the idea that there were other galaxies beside our own was not widely accepted, and so M31 was called the "Andromeda Nebula." Increasingly detailed observations of M31 caused astronomers to question its place in our universe – was M31 its own "island universe," and not part of our Milky Way? Harlow Shapley and Heber Curtis engaged in the "Great Debate" of 1920 over its nature. Curtis argued forcefully from his observations of dimmer than expected nova, dust lanes, and other oddities that the "nebula" was in fact an entirely different galaxy from our own. A few years later, Edwin Hubble, building on Henrietta Leavitt's work on Cepheid variable stars as a "standard candle" for distance measurement, concluded that M31 was indeed another galaxy after he observed Cepheids in photos of Andromeda, and estimated M31's distance as far outside our galaxy's boundaries. And so, the Andromeda Nebula became known as the Andromeda Galaxy.

While M31's disc appears larger than you might expect (about 3 Moon widths wide), its "galactic halo" of scattered stars and gas is much, much larger – as you can see here. In fact, it is suspected that its halo is so huge that it may already mingle with our Milky Way's own halo, which makes sense since our galaxies are expected to merge sometime in the next few billion years! The dots are quasars, objects located behind the halo, which are the very energetic cores of distant galaxies powered by black holes at their center. The Hubble team studied the composition of M31's halo by measuring how the quasars' light was absorbed by the halo's material. Credits: NASA, ESA, and E. Wheatley (STScI)

These discoveries inspire astronomers to this day, who continue to observe M31 and many other galaxies for hints about the nature of our universe. One of the Hubble Space Telescope's longest-running observing campaigns was a study of M31: the Panchromatic Hubble Andromeda Treasury (PHAT). Dig into NASA's latest discoveries about the Andromeda Galaxy, on their Messier 31 page.

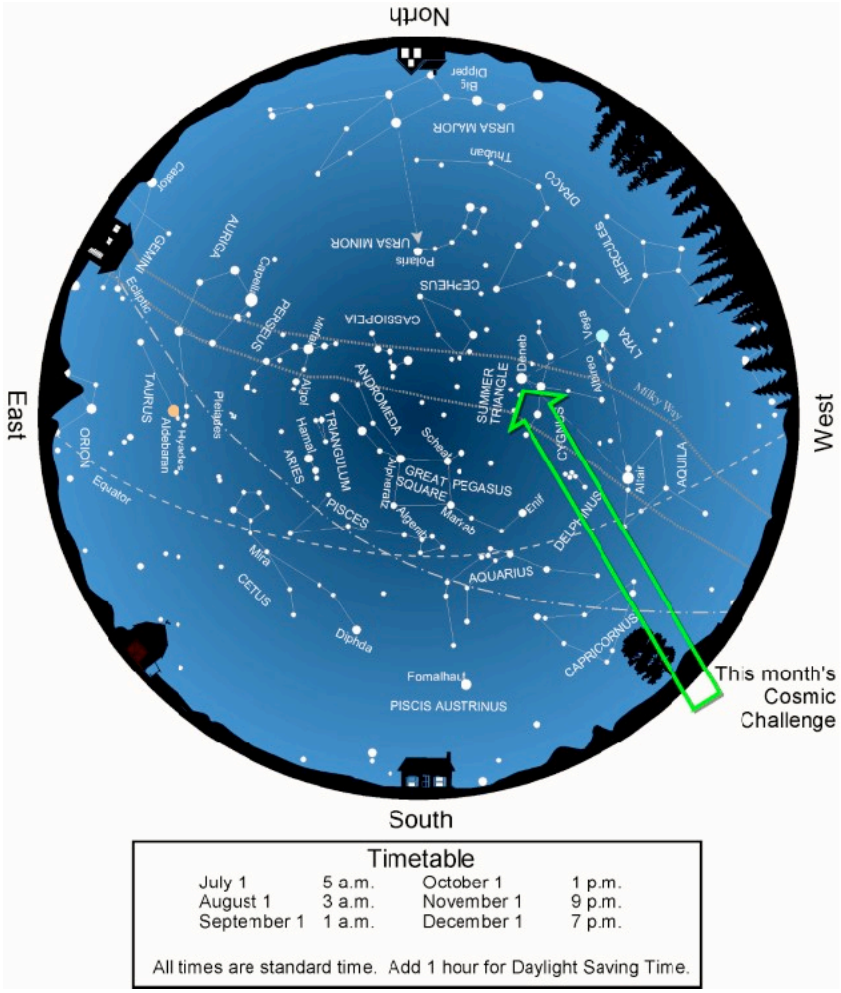
Originally posted by Dave Prosper: September 2021 | Last Updated by Kat Troche: September 2024

Phil Harrington's Cosmic Challenge

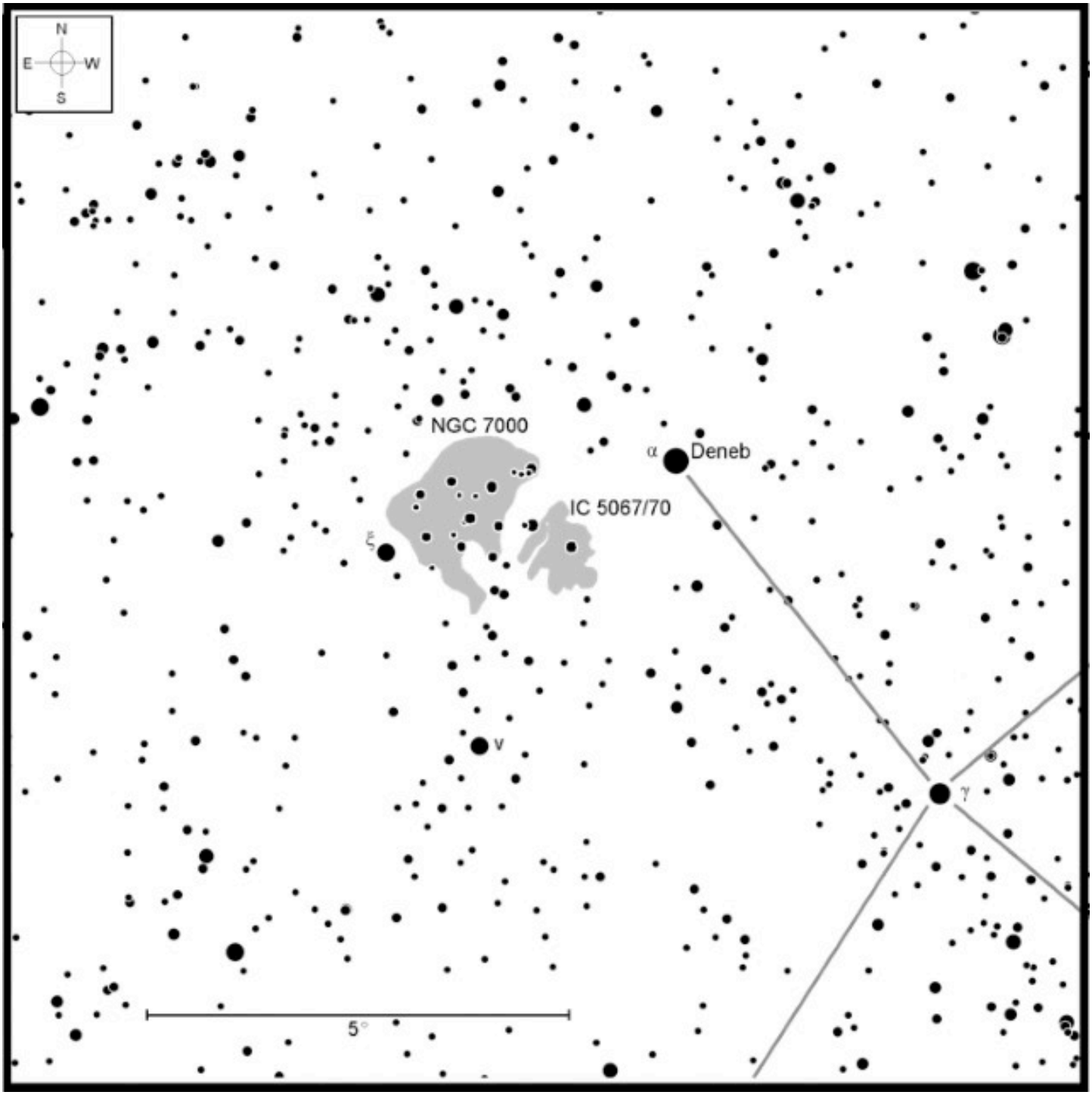
IC 5067 and IC 5070 Pelican Nebula	
	**This month's suggested aperture range:** Binocular's Featured Binocular: Oberwerk 20x70

Target	Type	RA	DEC	Constellation	Mag.	Size
Pelican Nebula	Emission Nebula	20h 51.0m	+44° 00'	Cygnus	8-ish	60'x50'

My September 2018 Cosmic Challenge dared you to see the North America Nebula without optical aid. How did you do? If you didn't see it back then, can you now? If you passed that trial, then pick up your binoculars and see how you do with this month's test. The North America Nebula is easy to see compared to spotting this month's challenge, the Pelican Nebula by binoculars.



Above: Summer star map showing the location of this month's Cosmic Challenge.



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

In reality, the Pelican and the North America nebulae are both part of the same huge complex of glowing hydrogen gas. An opaque cloud of interstellar dust that slices in front of the background emission nebula, which serves as the "Atlantic Ocean," gives the illusion that we are looking at two different entities. That absorption cloud is cataloged separately as Lynds 935, or LDN 935, its listing in the catalog of dark nebulae compiled by the astronomer Beverly T. Lynds and published in the Astrophysical Journal Supplement (vol. 7, p.1) in 1962.

The Pelican carries two catalog designations -- IC 5067 and IC 5070 -- that point to two portions of the nebula. The eastern edge of Lynds 935 carves out the outline of the North America Nebula's (terrestrial) east coast, while its western edge forms the long beak and pointy head of the celestial pelican, listed as IC 5070. Photographs of the region reveal two small, circular dark dust clouds marking the bird's eyes, while a brighter tuft to their northwest, IC 5067, suggests the curved shape of its head and neck.

One of the key features of the Pelican Nebula is its ionization front. This is the boundary where the ultraviolet radiation from young stars meets the cooler, denser gas, creating a sharp transition. The ionization front moves outward, sculpting the nebula and creating intricate shapes and patterns. This dynamic process is a hallmark of star-forming regions and is crucial for understanding the lifecycle of stars and the evolution of nebulae.

The Pelican Nebula also contains several Herbig-Haro objects, such as HH 555. These are jets of gas ejected by newly formed stars, which collide with the surrounding material, creating bright shock waves. These objects are important indicators of ongoing star formation and provide valuable insights into the early stages of stellar evolution.

Dark dust clouds are another significant feature of the Pelican Nebula. These clouds absorb and scatter light, creating dark regions that contrast with the bright emission of the ionized gas. The interplay between the dark dust clouds and the glowing gas adds to the nebula’s complex and beautiful appearance.

Above: The North America (left) and Pelican (right) nebulae.
Photo credit: Kevin Dixon, www.magnificentheavens.zenfolio.com Exposure details here.

The Pelican's ionized hydrogen is easy to record in photographs, but seeing any hint of it by eye is usually frustrated by its deep-red emission. Conditions have to be nearly perfect to see even the slightest hint. A good rule of thumb is set by the North America Nebula itself. If it is easily visible by eye, then the sky might be clear enough to see the Pelican through binoculars.

The most prominent part of the Pelican is its east-facing silhouette against Lynds 935. Use the star 57 Cygni as a further guide, as it is positioned just east of the "bill." From here, the bill slices diagonally southeastward toward the fainter field star HD 199373. The back of the Pelican's head curves westward toward the star 56 Cygni.

Interestingly, the North America/Pelican complex lies an estimated 1,800 light years away, which is “only” about 500 light years farther than the Orion Nebula. But while the Orion Nebula is an easy target to spot even under less-than-ideal conditions, this similar stellar nursery is far more difficult to study even under superior skies. My best view of the Pelican through binoculars came over a decade ago while attending a star party in New York's Catskill Mountains. There, with a naked-eye limiting magnitude exceeding 6.5, the Pelican's profile was distinct through my 10x50 binoculars.

Above: The North America Nebula (left) and the faintest hint of the Pelican Nebula (right) through the author's 10x50 binoculars at Stellafane 2024.

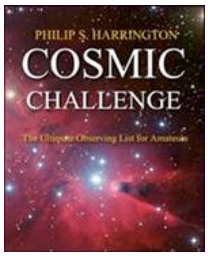
At Stellafane this past summer, I chose the Pelican as one of my “BOO” targets. BOO stands for Binocular Observing Olympics. Every year since 2018, I've compiled a list of 20 binocular targets for convention attendees to try spotting through their binoculars. Anyone who sees at least 15 qualifies for a pin proclaiming their victory. Some of the targets are easy, while others, like the Pelican, are tough. Unfortunately, partly cloudy skies obscured the bird some this year, but its faint outline was still visible through my same 10x50s (see sketch above).

The 2024 Binocular Observing Olympics pin commemorated the 100th anniversary of Stellafane's iconic pink clubhouse.

You can find this year’s BOO list as well as all previous lists on Stellafane’s website. There, you will also find Larry Mitchell’s great Telescope Observing Olympics lists. Why not give them a go?.

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 your suggestion in 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 2024 by Philip S. Harrington.

Trivia Answer: The newsletter editor, David Olsen, has been compiling the newsletter for the Magic Valley Astronomical Society for 17 years. WHEW!

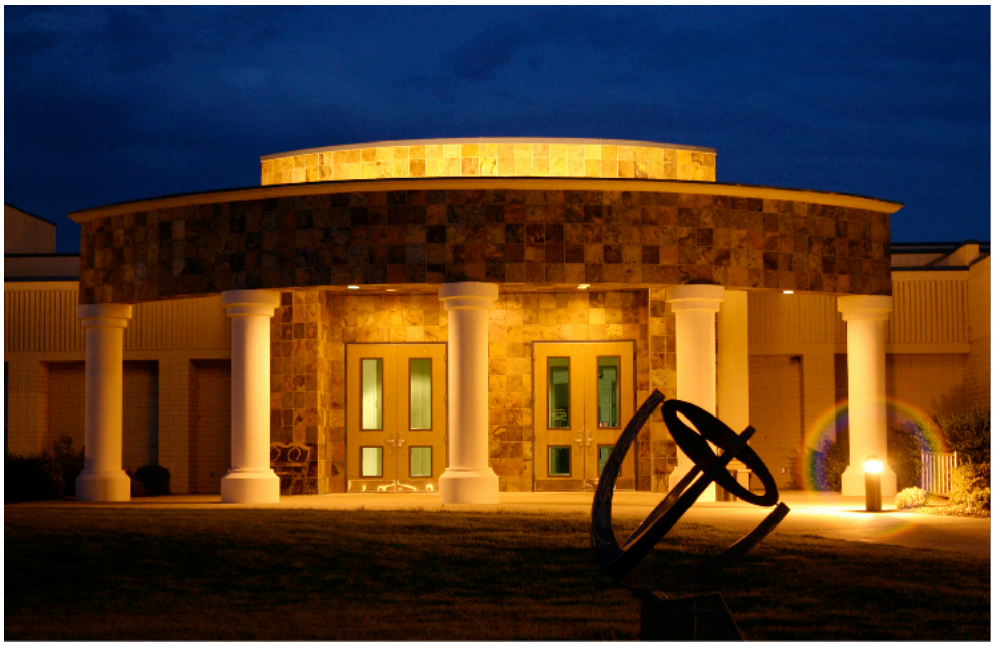
Centennial Observatory Upcoming Events
Special Note: All events are weather permitting.

Event	Place	Date	Time	Admission(s)
Monthly Free Star Party	Centennial Observatory	Saturday, October 12, 2024	7:30 - 9:30 PM	Free

What will be in the Sky? Waxing gibbous (74%) Moon, Saturn, Neptune, double stars, and star clusters.
What is a Star Party? Please check out our Star Party Q & A if you have any questions.

Faulkner Planetarium Shows
For the full schedule and current show times visit!

Now Showing!



You may also visit the Herrett Center Video Vault

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/download-view.cfm?Doc_ID=699

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, Twin Falls, ID, USA.