Snake River Skies

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

Membership Meeting
June 8th 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

Greetings: Friends and Members. A reminder of our upcoming MVAS meeting on Saturday, June 8th, our former president, Gary Leavitt, will address us. Gary has prepared what will be an excellent presentation. It's entitled: Back to the Moon – what is next for Artemis." As the month of June is upon us, hopefully it signals a time when we can get out to observe and promote our great hobby. Warmer weather and hopefully clearer skies will make that possible. May hasn't been great weather for observing. In the many years that I have been associated with MVAS, one of my favorite summertime activities has been to meet with friends and other good people at many of our public outreach events such as Castle Rocks,

I would like to have a board meeting at 6:30 before the meeting to talk about future star party locations.

Just a remember our summer picnic is scheduled for July 13th at the CSI Herrett Center back patio. MVAS will supply hamburgers and hotdogs, buns and beverages. Members are asked to supply sides, such as salads, desserts, chips, etc. We would like to get started at 6:30pm.

June Events

- June 6 - New Moon. The Moon will located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 12:39 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.
- June 20 - June Solstice. The June solstice occurs at 20:46 UTC. The North Pole of the earth will be tilted toward the Sun, which will have reached its northernmost position in the sky and will be directly over the Tropic of Cancer at 23.44 degrees north latitude. This is the first day of summer (summer solstice) in the Northern Hemisphere and the first day of winter (winter solstice) in the Southern Hemisphere.
- June 22 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be will be fully illuminated. This phase occurs at 01:09 UTC. This full moon was known by early Native American tribes as the Strawberry Moon because it signaled the time of year to gather ripening fruit. It also coincides with the peak of the strawberry harvesting season. This moon has also been known as the Rose Moon and the Honey Moon.

Until next time
Clear Skies
Dr. Jay Hartwell

Visit our Website
www.mvastro.org

Moon Phases for June 2024

Twin Falls, Idaho, United States

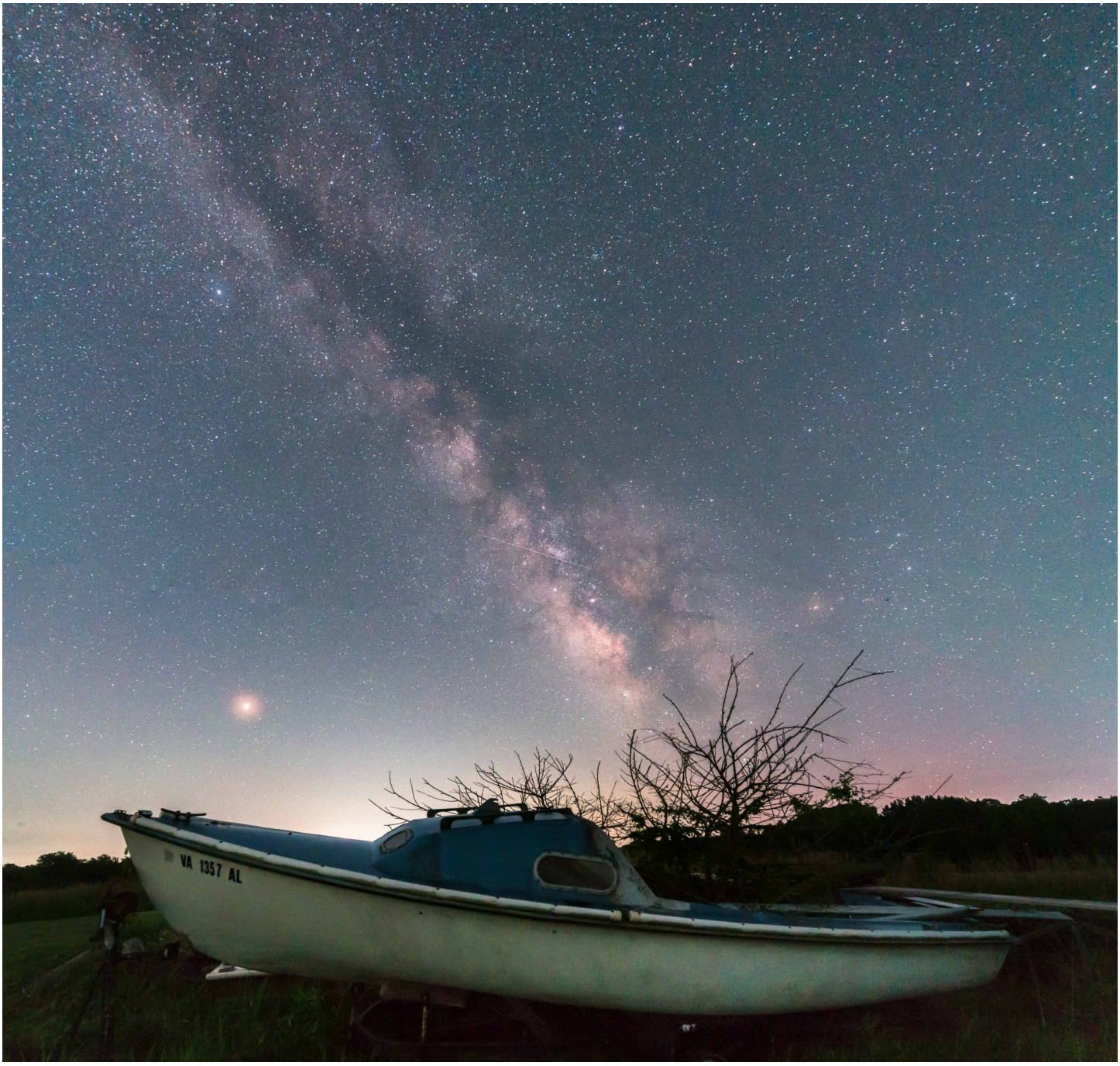
June 2024							
No.	Su	Mo	Tu	We	Th	Fr	Sa
22							1  24% Waning Crescent
23	2  15% Waning Crescent	3  7% Waning Crescent	4  2% Waning Crescent	5  1% Waning Crescent	6  New Moon 06:40 am	7  2% Waxing Crescent	8  7% Waxing Crescent
24	9  13% Waxing Crescent	10  21% Waxing Crescent	11  29% Waxing Crescent	12  38% Waxing Crescent	13  First Quarter 11:19 pm	14  57% Waxing Gibbous	15  66% Waxing Gibbous
25	16  75% Waxing Gibbous	17  83% Waxing Gibbous	18  90% Waxing Gibbous	19  95% Waxing Gibbous	20  98% Waxing Gibbous	21  Full Moon 07:10 pm	22  98% Waning Gibbous
26	23  95% Waning Gibbous	24  88% Waning Gibbous	25  80% Waning Gibbous	26  70% Waning Gibbous	27  59% Waning Gibbous	28  Last Quarter 03:55 pm	29  37% Waning Crescent
27	30  26% Waning Crescent						

https://www.mooninfo.org/moon-calendar/june-2024.html | Moon Names: The Old Farmer's Almanac, May 2024

In the Northern Hemisphere, the June solstice (aka summer solstice) occurs when the Sun travels along its northernmost path in the sky. This marks the astronomical start of summer in the northern half of the globe. (In the Southern Hemisphere, it's the opposite: the June solstice marks the astronomical start of winter when the Sun is at its lowest point in the sky.)

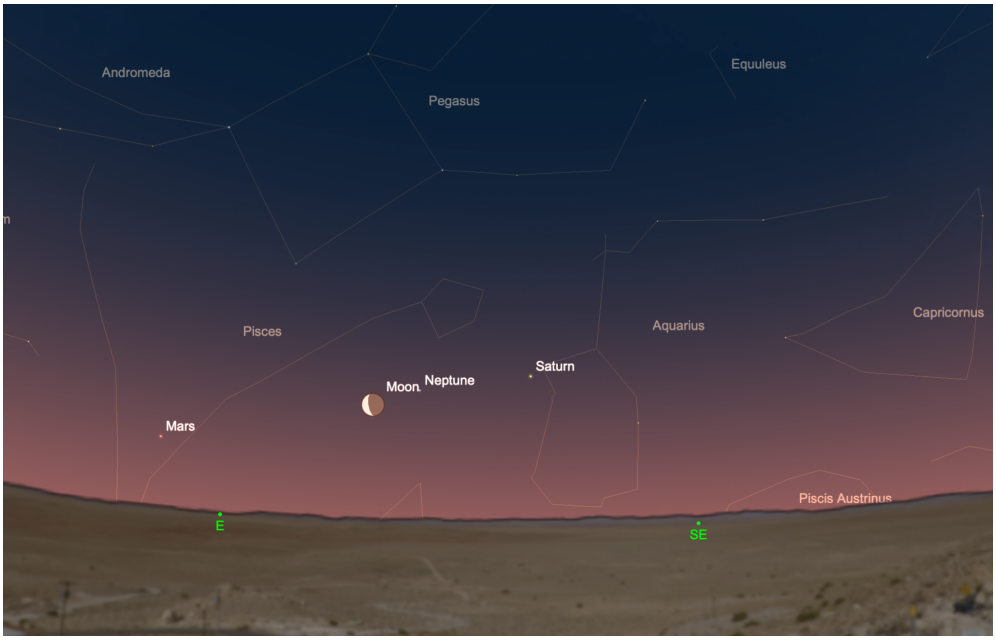
The full Moon for June is the "Strawberry Moon." This name has been used by Native American Algonquian tribes that live in the northeastern United States as well as the Ojibwe, Dakota, and Lakota peoples to mark the ripening of "June-bearing" strawberries that are ready to be gathered. The Haida term Berries Ripen Moon reflects this as well.

The Sky This Month – June 2024



The northern summer Milky Way.

(Looking for last month's 'Night Sky'? Find it at this link…) The June solstice arrives at last as stargazers in the southern hemisphere enjoy long nights and cooler temperatures, while we northerners enjoy some heat but much shorter nights – or very little night at all. Mars and Saturn grace the eastern sky before sunrise making some photogenic conjunctions during the month. Jupiter returns to the morning sky also and makes a close – if hard to observe – conjunction with Neptune. In a spectacular event that will be seen by absolutely nobody, the Sun occults Venus as the planet reaches superior conjunction. 'Milky Way season' also gets underway as the thickest and brightest part of our galaxy emerges over the southern horizon through Scorpius and Sagittarius. Here's what to see in the night sky this month…



Mars, the waning crescent Moon, and Saturn in the eastern sky before sunrise on June 1, 2024.

1 June 2024. Before sunrise, wander outside and look eastward to see a Mars, a waning crescent Moon, and Saturn in a 35º-long arc. Mars, now in Pisces, shines at magnitude +1.1 and spans a paltry 5.2" revealing little detail in a telescope. The Moon passes about 2º north of the planet on June 2-3. Saturn, just a hair brighter, spans about 17" and gets larger and slightly brighter on its way to opposition in September. The planet presents an odd sight this year. The alignment of its orbit and rotation plane means its rings are slowly appearing closer to edge-on and appear prominent but less striking that when they appear at a great angular tilt. Next March, the rings will appear entirely edge-on and will not be visible in a small telescope.

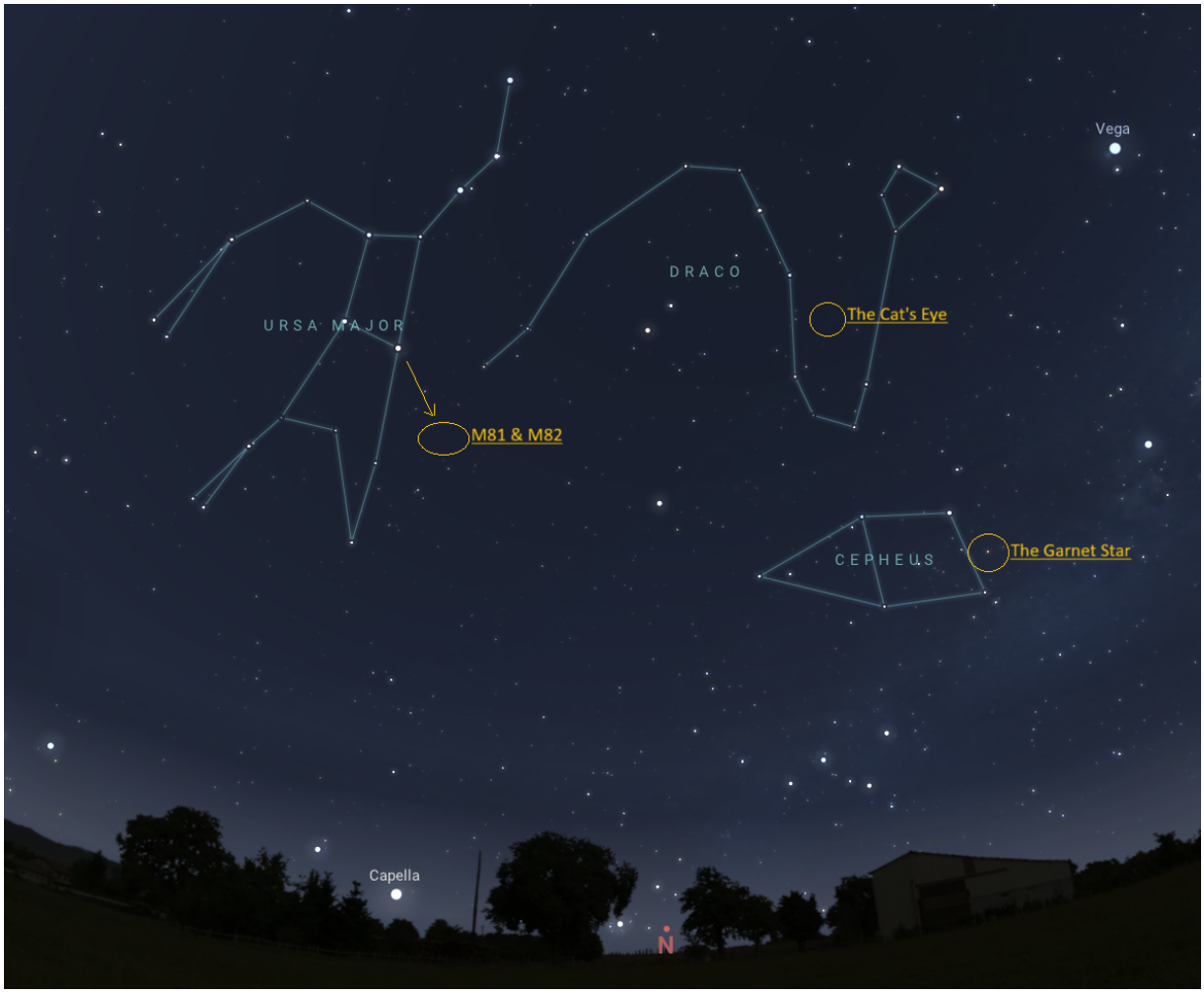
Jupiter and Mercury make a close conjunction in the eastern sky on the morning of June 4, 2024.
4 June. Here's a tough one to see – Mercury and Jupiter lie as close as 0.1º from each other in the eastern sky before sunrise. Both planets shine at approximately magnitude -1.1, but they are very hard to spot in the bright morning twilight as they lie only 12º west of the Sun. Binoculars, or even a telescope, are required to see them, and a telescope is surely needed to see their disks. If you attempt this observation, do so before the Sun rises to make sure you don't accidentally aim your scope towards it. On June 5, the planets move further apart but an extremely thin Moon lies about 5º to the northwest. Jupiter emerges higher in the morning sky in the coming weeks on its way to opposition in December.
4 June. Venus reaches superior conjunction with the Sun. The planet lies on the far side of the Sun and is in fact occulted by it, an event that is essentially unobservable but nonetheless modestly spectacular in concept. Such occultations have been occurring in eight-year intervals since 1976 and will continue to do so until 2048. After today, the planet slowly moves into the evening sky.
6 June. New Moon, 12:38 UT As Gemini sets in the northwestern sky, the crescent Moon forms a triangle about 6 degrees across with the stars Castor and Pollux.
8 June. The constellation Gemini sets in the west at sunset this time of year, but tonight you see its bright stars Castor and Pollux and a slender lunar crescent form a triangle less than 6º across in the northwestern sky. The Moon continues its path eastward along the ecliptic and passes about 3º from Regulus on June 11 and as close as 1.2º from Spica on June 16.
14 June. First Quarter Moon, 05:18 UT
19 June. The fattening gibbous Moon passes as close as 0.3º from the red supergiant star Antares low in the southern sky.
20 June. The Sun reaches its northernmost point on the ecliptic at 20:51 UT. This solstice marks the beginning of summer in the northern hemisphere and winter in the southern hemisphere, and the longest and shortest days of the year, respectively.
22 June. Full Moon, 01:08 UT
27 June. Saturn comes as close as 0.08º from the gibbous Moon in the pre-dawn sky. The pair appear closest in Asia and the south Pacific, and observers in northern New Zealand and western Australia will see the moon occult the planet (timing and details here).
28 June. As the month winds down, a waning lunar crescent passes as close as 0.3º north of Neptune in the eastern sky before sunrise. At magnitude +7.8, Neptune makes for a challenging observation in the morning twilight sky.
28 June. Last Quarter Moon, 21:53 UT
30 June. Saturn reaches its first stationary point and now begins retrograde motion, moving westward against the background stars.

NASA Night Sky Network

Constant Companions: Circumpolar Constellations, Part III

By Kat Troche

In our final installment of the stars around the North Star, we look ahead to the summer months, where depending on your latitude, the items in these circumpolar constellations are nice and high. Today, we'll discuss Cepheus, Draco, and Ursa Major. These objects can all be spotted with a medium to large-sized telescope under dark skies.



From left to right: Ursa Major, Draco, and Cepheus. Credit: Stellarium Web.

- Herschel's Garnet Star: Mu Cephei is a deep-red hyper-giant known as The Garnet Star, or Erakis. While the star is not part of the constellation pattern, it sits within the constellation boundary of Cepheus, and is more than 1,000 times the size of our Sun. Like its neighbor Delta Cephei, this star is variable, but is not a reliable Cepheid variable. Rather, its brightness can vary anywhere between 3.4 to 5.1 in visible magnitude, over the course of 2-12 years.

This composite of data from NASA's Chandra X-ray Observatory and Hubble Space Telescope gives astronomers a new look for NGC 6543, better known as the Cat's Eye nebula. This planetary nebula represents a phase of stellar evolution that our sun may well experience several billion years from now. Credit: X-ray: NASA/CXC/SAO; Optical: NASA/STScI

- The Cat’s Eye Nebula: Labeled a planetary nebula, there are no planets to be found at the center of this object. Observations taken with NASA's Chandra X-ray Observatory and Hubble Space Telescopes give astronomers a better understanding of this complex, potential binary star, and how its core ejected enough mass to produce the rings of dust. When searching for this object, look towards the ‘belly’ of Draco with a medium-sized telescope.

The Cigar Galaxy. Credit: NASA, ESA, CXC, and JPL-Caltech

- Bode's Galaxy and the Cigar Galaxy: Using the arrow on the star map, look diagonal from the star Dubhe in Ursa Major. There you will find Bode's Galaxy (Messier 81) and the Cigar Galaxy (Messier 82). Sometimes referred to as Bode's Nebula, these two galaxies can be spotted with a small to medium-sized telescope. Bode's Galaxy is a classic spiral shape, similar to our own Milky Way galaxy and our neighbor, Andromeda. The Cigar Galaxy, however, is known as a starburst galaxy type, known to have a high star formation rate and incredible shapes. This image composite from 2006 combines the power of three great observatories: the Hubble Space Telescope imaged hydrogen in orange, and visible light in yellow green; Chandra X-Ray Observatory portrayed X-ray in blue; Spitzer Space Telescope captured infrared light in red.

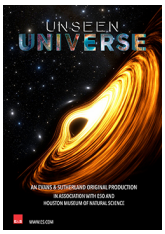
Up next, we celebrate the solstice with our upcoming mid-month article on the Night Sky Network page through NASA's website.

Centennial Observatory Upcoming Events
All events are weather permitting.

Event	Place	Date	Time	Admission
Summer Solar Session #3	Centennial Observatory	Wednesday, June 12th, 2024	1:30 to 3:30 PM	FREE
Summer Solar Session #4	Centennial Observatory	Wednesday, June 19th, 2024	1:30 to 3:30 PM	FREE
Summer Solar Session #5	Centennial Observatory	Wednesday, June 26th, 2024	1:30 to 3:30 PM	FREE

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

Now Showing!



You may also visit the Herrett Center Video Vault

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.