Snake River Skies

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

Membership Meeting
March 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 President

MVAS Astro members and friends… Our meeting is scheduled for March 8th, and I look forward to seeing everyone. Our presentation will feature: Ryan Showers will be about Astronomy Before Telescopes. This month is unpredictable but better than last month in which to observe the night sky for extended periods of time but the forecast for Saturday is clear. March will be a busy astronomical month. Starting with the planet alinement and many other things.

March 8 - Mercury at Greatest Eastern Elongation. The planet Mercury reaches its greatest eastern elongation of 18.2 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the western sky just after sunset.

March 14 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 06:56 UTC. This full moon was known by early Native American tribes as the Worm Moon because this was the time of year when the ground would begin to soften, and the earthworms would reappear. This moon has also been known as the Crow Moon, the Crust Moon, the Sap Moon, and the Lenten Moon.

March 14 - Total Lunar Eclipse. A total lunar eclipse occurs when the Moon passes completely through the Earth's dark shadow, or umbra. During this type of eclipse, the Moon will gradually get darker and then take on a rusty or blood red color. The eclipse will be visible throughout all North America, Mexico, Central America, and South America. See page 3 and 4 of this newsletter and NASA Map and Eclipse Information.

March 20 - March Equinox. The March equinox occurs at 08:58 UTC. The Sun will shine directly on the equator and there will be equal amounts of day and night throughout the world. This is also the first day of spring (vernal equinox) in the Northern Hemisphere and the first day of fall (autumnal equinox) in the Southern Hemisphere.

March 29 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 11:00 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.

Visit our Website
www.mvastro.org

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Moon Phases for March 2025

Twin Falls, Idaho, United States

SUN	MON	TUE	WED	THU	FRI	SAT
						1 Waxing crescent 4.4% 2 days
2 Waxing crescent 10.8% 3 days	3 Waxing crescent 19.1% 4 days	4 Waxing crescent 29.1% 5 days	5 Waxing crescent 40.0% 6 days	6 First Quarter 9:33 A.M. 7 days	7 Waxing gibbous 62.0% 8 days	8 Waxing gibbous 72.1% 9 days
9 Waxing gibbous 80.5% 10 days	10 Waxing gibbous 88.1% 11 days	11 Waxing gibbous 93.8% 12 days	12 Waxing gibbous 97.7% 13 days	13 Waxing gibbous 99.7% 14 days	14 Full Worm Moon 12:55 A.M. 15 days	15 Waning gibbous 99.0% 16 days
16 Waning gibbous 94.5% 17 days	17 Waning gibbous 89.4% 18 days	18 Waning gibbous 82.9% 19 days	19 Waning gibbous 75.3% 20 days	20 Waning gibbous 66.6% 21 days	21 Waning gibbous 57.2% 22 days	22 Last Quarter 5:32 A.M. 23 days
23 Waning crescent 37.2% 24 days	24 Waning crescent 27.4% 25 days	25 Waning crescent 18.2% 26 days	26 Waning crescent 10.3% 27 days	27 Waning crescent 4.3% 28 days	28 Waning crescent 0.8% 29 days	29 New Moon 5:00 A.M. 0 days
30 Waxing crescent 2.6% 1 day	31 Waxing crescent 7.8% 2 days					

Source: The Old Farmer's Almanac,

March's full **Worm Moon** reaches peak illumination at 12:55 a.m. MST on Friday, March 14th. The name **Worm Moon**. For many years, we thought this name referred to the earthworms that appear as the soil warms in spring. This invites robins and other birds to feed—a true sign of spring!

However, more research revealed another explanation. In the 1760s, Captain Jonathan Carver visited the Naudowessie (Dakota) and other Native American tribes and wrote that the name Worm Moon refers to a different sort of "worm"—beetle larvae—which begin to emerge from the thawing bark of trees and other winter hideouts at this time.

2025 March Lunar Eclipse: The Blood Moon

Total Lunar Eclipse

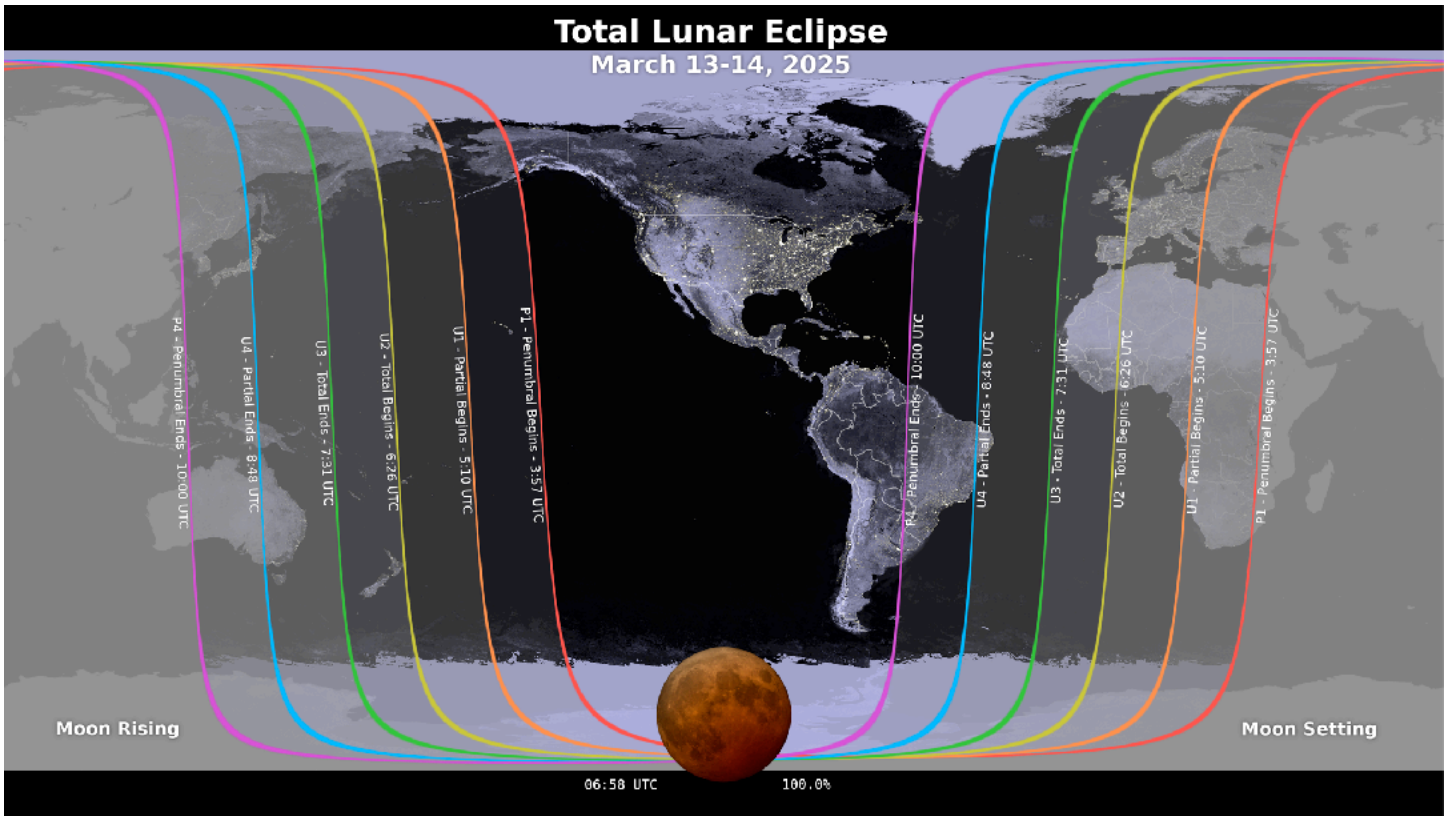
Join us in the Centennial Observatory for the last total lunar eclipse visible from start to finish in Idaho until 2033.

- 9:57 PM: The moon begins to enter Earth's partial (penumbral) shadow (unnoticeably)
- 10:15 PM: The Observatory opens for this FREE event. At this time the moon's bottom half will begin to look shaded.
- 11:10 PM: A dark "bite" begins growing from its lower edge as the moon begins to enter Earth's dark (umbral) shadow.
- 12:26 AM - 1:31 AM: Totality, with the moon fully immersed in dark (umbral) shadow and a dull red-orange
- 1:31 AM: A small, bright crescent starts growing from the moon's left side as it begins to emerge from the umbra
- 2:48 AM: The last bit of umbra slips off the moon's right edge, the end of the last partial phase.
- 3:00 AM: The Observatory closes.

*Observatory Events are weather dependent. Call the Centennial Observatory Star Line at 732-MOON(6666) for the latest on upcoming events.

Quick Facts About This Eclipse

Data	Value	Comments
Magnitude	1.178	Fraction of the Moon’s diameter covered by Earth’s umbra
Obscuration	100.0%	Percentage of the Moon's area covered by Earth's umbra
Penumbral magnitude	2.26	Fraction of the Moon's diameter covered by Earth's penumbra
Overall duration	6 hrs, 3 min.	Period between the beginning and end of all eclipse phases
Duration of totality	1 hr, 5 min.	Period between the beginning and end of the total phase
Duration of partial phases	2 hrs, 33 min.	Combined period of both partial phases
Duration of penumbral phases	2 hours, 24 minutes	Combined period of both penumbral phases



Eclipse calculations usually accurate to a few seconds. Source: NASA

An Eclipse Never Comes Alone!
A solar eclipse always occurs about two weeks before or after a lunar eclipse.
Usually, there are two eclipses in a row, but other times, there are three during the same eclipse season.
All eclipses 1900 — 2199

This is the first eclipse this season.

Second eclipse this season: March 29, 2025 — Partial Solar Eclipse Sadly not visible from Twin Falls, ID

Question of the Day? Why do cartoonists always portray an observatory with the telescope sticking out past the end of the dome? Below: Actual picture of the Dome at the Centennial Observatory, the Herrett Telescope is not visible.

The Sky This Month – March 2025

March begins with all seven major planets visible – barely – and six of them visible for sure during the first two weeks of the month. A total lunar eclipse arrives at the full moon, the first since 2022, visible in all of North America, western Europe, and western South America. After the 'planet parade' at the beginning of the month, Neptune and Saturn disappear into the Sun's glare and will soon reappear in the morning sky. And Venus remains astonishingly bright, its thin crescent a fine spectacle in a telescope before it disappears into the Sun's glare. Here's what to see in the night sky this month…

Saturn, Mercury, Venus, and the crescent Moon in the western sky after sunset on March 1. The cyan circle shows a 5° field of view.

1 March 2025. All seven major planets appear in the sky as March begins. Look for Mercury low in the west at evening twilight, bright enough at magnitude -0.9 to shine through the darkening sky. Saturn lies about 6° west of (below) Mercury – it's the most challenging planet to view and requires a telescope or good pair of binoculars and a clear view down to the western horizon. Neptune lies 2° to the southeast of Mercury and also calls for a telescope. About 15° above Mercury lies brilliant Venus which shines at magnitude -4.6 and reveals a thin crescent to telescopic observers. Tonight, a thin crescent Moon joins the show near Venus. Further up, Jupiter lies nearly overhead in Taurus, still bright at magnitude -2.3, while dimming Mars lingers to the east in Gemini. And Uranus lies in Aries within reach of modest binoculars. It's a challenge to see all seven, but give it a try!

5-6 March. Look for the Moon near the Pleiades star cluster on these two nights.

6 March. First Quarter Moon, 16:32 UT

8 March. Mercury reaches greatest eastern elongation about 18° from the Sun. The planet puts on its best evening apparition for northern-hemisphere observers in the first two weeks of March, reaching a peak brightness tonight of magnitude -0.5. It lies about 7° due south of Venus tonight in the constellation Pisces.

9 March. Daylight Saving Time begins today (Sunday), setting clocks ahead by one hour in much of North America and making all of us sleepier!

12 March. Saturn reaches conjunction with the Sun. It will reappear in the morning sky later in the month near the Pisces-Aquarius border.

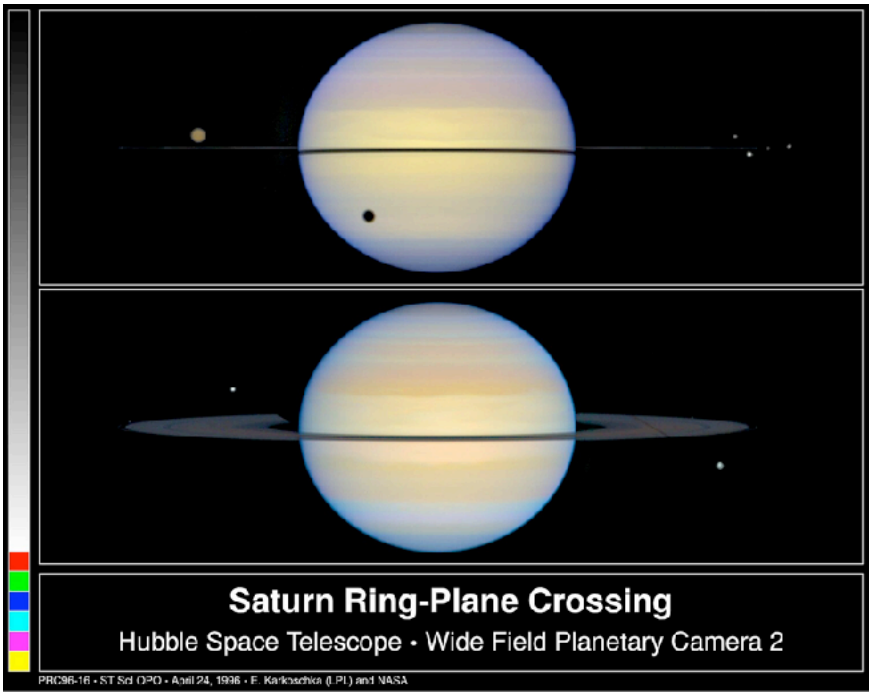
14 March. Full Moon, 06:55 UT (the full 'Worm Moon') A total lunar eclipse arrives with the March full 'Worm Moon' for observers in North America and the western South America, and in part in western Europe and Africa. The eclipse happens from 03:57 UTC to 10:00 UTC, with totality running 66 minutes from 06:26 UTC to 07:32 UTC. Peak eclipse arrives at 06:59 UTC. During this eclipse, the Moon lies at the northern edge of the umbra, the darkest part of the Earth's shadow, so it appears slightly brighter at its northern limb and darker towards its southern limb.

16 March. 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 March. Neptune lies in conjunction with the Sun. It will reappear in the morning sky in the coming weeks. The vernal equinox arrives at 9:01 UT as the Sun crosses the celestial equator moving north. This marks the beginning of spring in the northern hemisphere and autumn in the southern hemisphere.

22 March. Last Quarter Moon, 11:29 UT

23 March. Venus reaches inferior conjunction with the Sun and passes 8.4° north of it. This ends a spectacular apparition in the evening sky. It will soon reappear low in the morning sky for the rest of the year.



This is a Hubble Space Telescope snapshot of Saturn with its rings barely visible (at top). Normally, astronomers see Saturn with its rings tilted. Earth was almost in the plane of Saturn's rings, thus the rings appear edge-on. The bottom shows Saturn with its rings slightly tilted. The moon called Dione, on the lower right, is casting a long, thin shadow across the whole ring system due to the setting Sun on the ring plane. The moon on the upper left of Saturn is Tethys.

23 March. Earth passes through the ring plane of Saturn. If we could see the planet today, the thin Saturnian rings would essentially invisible. Over the next many years, the tilt of Saturn's rings will slowly increase relative to our point of view.

29 March. New Moon, 10:58 UT.

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March Night Sky Notes: Messier Madness

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 Kat Troche

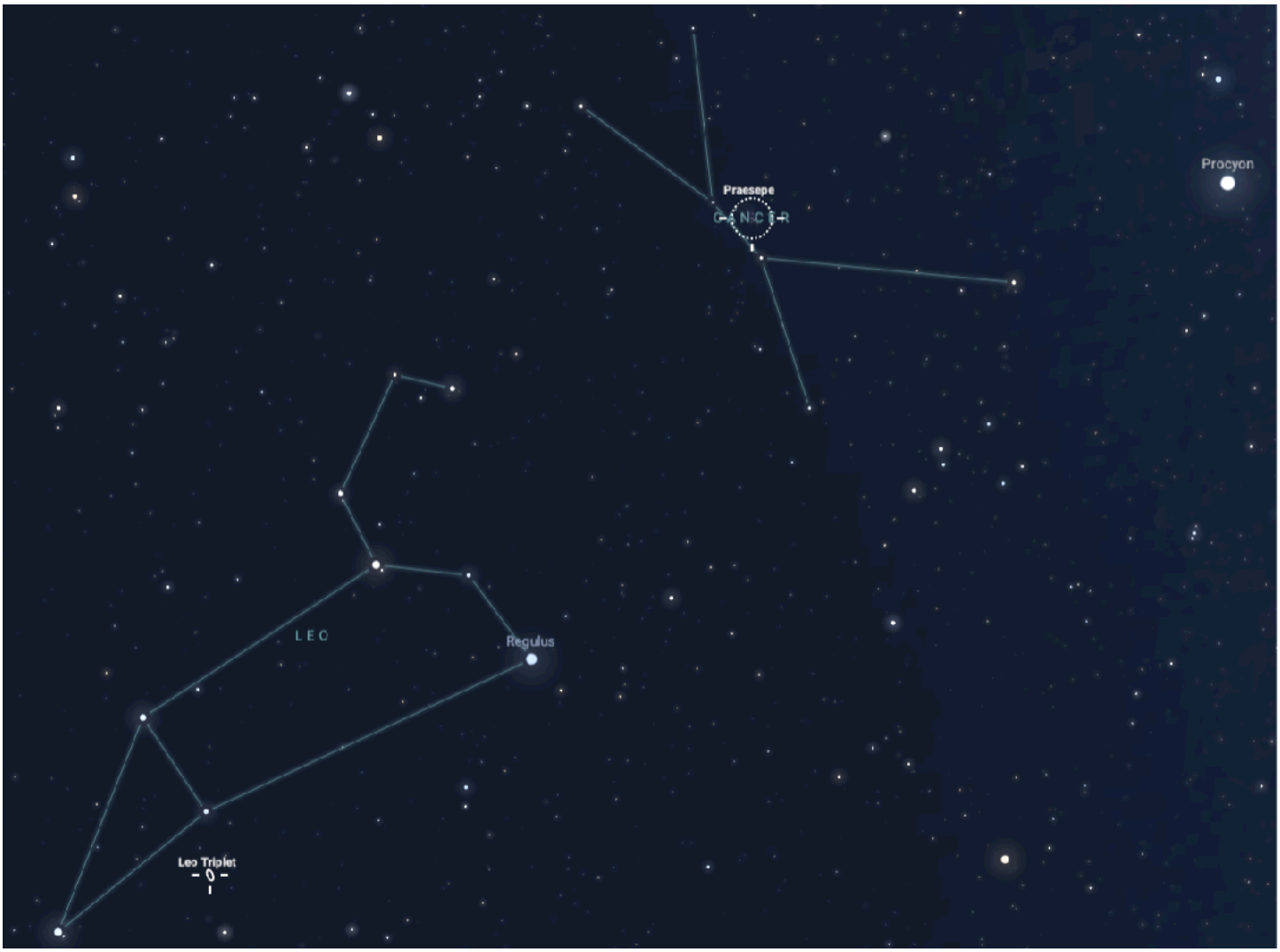
March is the start of spring in the Northern Hemisphere; with that, the hunt for Messier objects can begin!

Showing a large portion of M66, this Hubble photo is a composite of images obtained at visible and infrared wavelengths. The images have been combined to represent the real colors of the galaxy. NASA, ESA and the Hubble Heritage (STScI/AURA)-ESA/Hubble Collaboration; Acknowledgment: Davide De Martin and Robert Gendler

What Are Messier Objects?

During the 18th century, astronomer and comet hunter Charles Messier wanted to distinguish the 'faint fuzzies' he observed from any potential new comets. As a result, Messier cataloged 110 objects in the night sky, ranging from star clusters to galaxies to nebulae. These items are designated by the letter 'M' and a number. For example, the Orion Nebula is Messier 42 or M42, and the Pleiades are Messier 45 or M45. These are among the brightest 'faint fuzzies' we can see with modest backyard telescopes and some even with our eyes.

Stargazers can catalog these items on evenings closest to the new moon. Some even go as far as having "Messier Marathons," setting up their telescopes and binoculars in the darkest skies available to them, from sundown to sunrise, to catch as many as possible. Here are some items to look for this season:



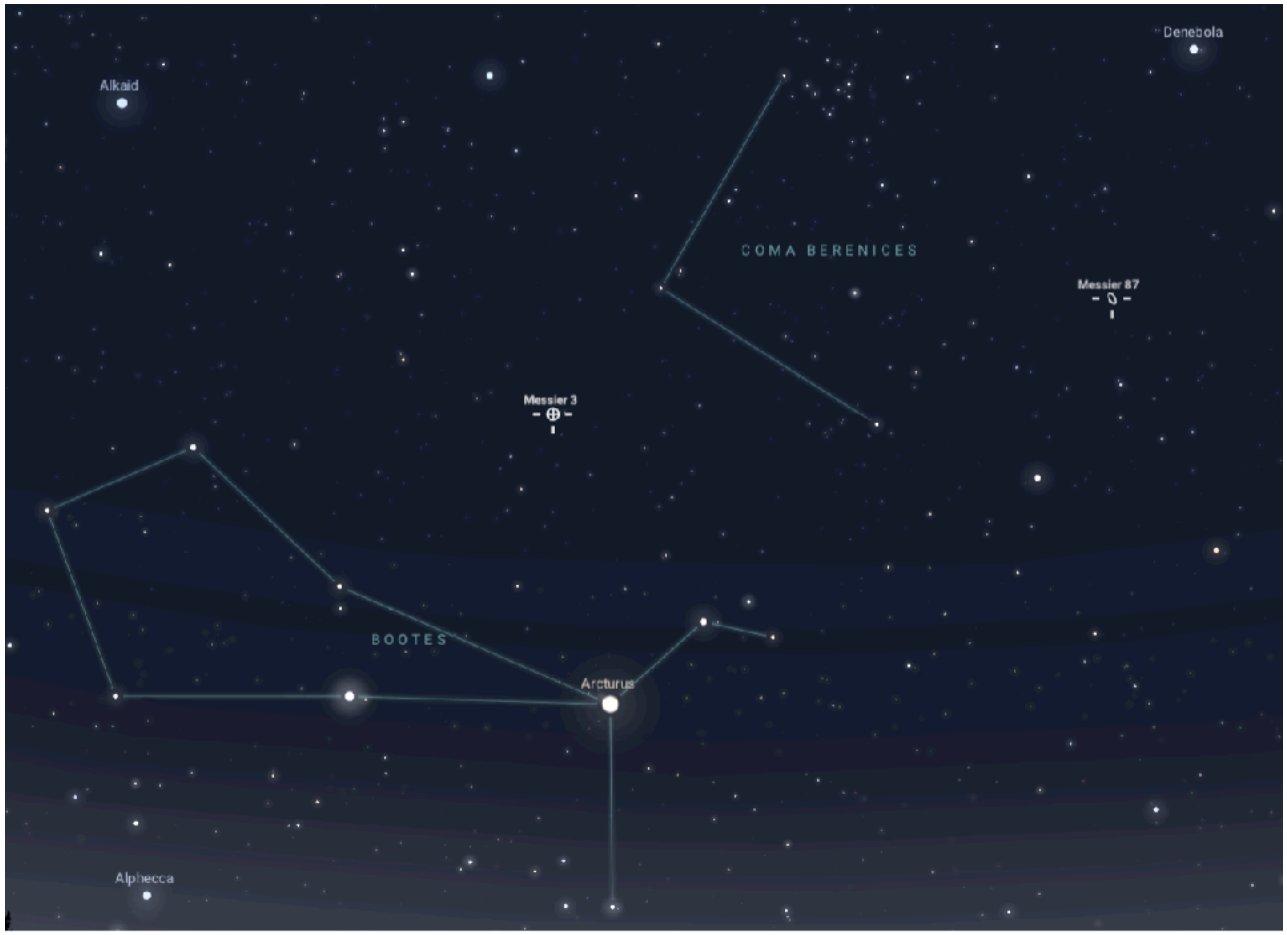
M44 in Cancer and M65 and 66 in Leo can be seen high in the evening sky 60 minutes after sunset. Credit: Stellarium Web.

Messier 44 in Cancer: The Beehive Cluster, also known as Praesepe, is an open star cluster in the heart of the Cancer constellation. Use Pollux in Gemini and Regulus in Leo as guide stars. A pair of binoculars is enough to view this and other open star clusters. If you have a telescope handy, pay a visit two of the three galaxies that form the Leo Triplet - M65 and M66. These items can be seen one hour after sunset in dark skies.

Messier 3 Canes Venatici: M3 is a globular cluster of 500,000 stars. Through a telescope, this object looks like a fuzzy sparkly ball. You can resolve this cluster in an 8-inch telescope in moderate dark skies. You can find this star cluster by using the star Arcturus in the Boötes constellation as a guide.

Messier 87 in Virgo: Located just outside of Markarian's Chain, M87 is an elliptical galaxy that can be spotted during the late evening hours. While it is not possible to view the supermassive black hole at the core of this galaxy, you can see M87 and several other Messier-labeled galaxies in the Virgo Cluster using a medium-sized telescope.

Next Page: Picture 1: Locate M3 and M87 rising in the east after midnight. Picture 2: Locate M76 and M31 setting in the west, 60 minutes after sunset. Credit: Stellarium Web


Denebola
Alkaid
COMA BERENICES
Messier 87
Messier 3
BOOTES
Arcturus
Alphecca


χ Persei
h Persei
Ruchbah
CASSIOPEIA
Messier 76
Almach
Shedar
Caph
Messier 31
Mirach

Messier 76 in Perseus: For a challenge, spot the Little Dumbbell Nebula, a planetary nebula between the Perseus and Cassiopeia constellations. With an apparent magnitude of 12.0, you will need a large telescope and dark skies. You can find both M76 and the famous Andromeda Galaxy (M31) one hour after sunset, but only for a limited time, as these objects disappear after April. They will reappear in the late-night sky by September.
Plan Ahead

When gearing up for a long stargazing session, there are several things to remember, such as equipment, location, and provisions:

- Do you have enough layers to be outdoors for several hours? You would be surprised how cold it can get when sitting or standing still behind a telescope!
- Are your batteries fully charged? If your telescope runs on power, be sure to charge everything before you leave home and pack any additional batteries for your cell phone. Most people use their mobile devices for astronomy apps, so their batteries may deplete faster. Cold weather can also impact battery life.
- Determine the apparent magnitude of what you are trying to see and the limiting magnitude of your night sky. You can learn more about apparent and limiting magnitudes with our Check Your Sky Quality with Orion article.
- When choosing a location to observe from, select an area you are familiar with and bring some friends! You can also connect with your local astronomy club to see if they are hosting any Messier Marathons. It's always great to share the stars!

You can see all 110 items and their locations with NASA's Explore the Night Sky interactive map and the Hubble Messier Catalog, objects that have been imaged by the Hubble Space Telescope.

If you haven't participated in a Messier Marathon, or if you want to refresh your memory, the good folks at Go-Astronomy.com-Messier have 'the' List. You can also read about Charles Messier and learn how 'the' list came about. The most fun for me is perusing the Messier objects as seen by Hubble – the image at RIGHT is M78 [credits: NASA, ESA, J. Muzerolle (Space Telescope Science Institute) and S. Megeath (University of Toledo)].

You might want to consider adding the following information from the Astronomical League website. https://www.astroleague.org/al/obsclubs/messier/mess.html the Messier list link is at the bottom of the page. There is also a history of the list and Charles Messier on the AL website.

Helpful links, but not required.
Official Website: https://donmachholz.com/messier-marathon/

- Messier Marathon History
- Interactive Messier Catalog Greenhawk Observatory
- The Messier Marathon, SEDS
- http://www.astras-stargate.com/holdm.htm
- Peoria Astronomical Society's tips for participating in a Messier Marathon. Includes tips for preparations as well as for difficult portions of the marathon.
- Clickable table of Messier objects
- Messier biography and history of the Messier Catalog, SEDS
- NASA Astronomy Picture of the Day: Iran Messier Marathon (19 April 2008)

Charles Messier

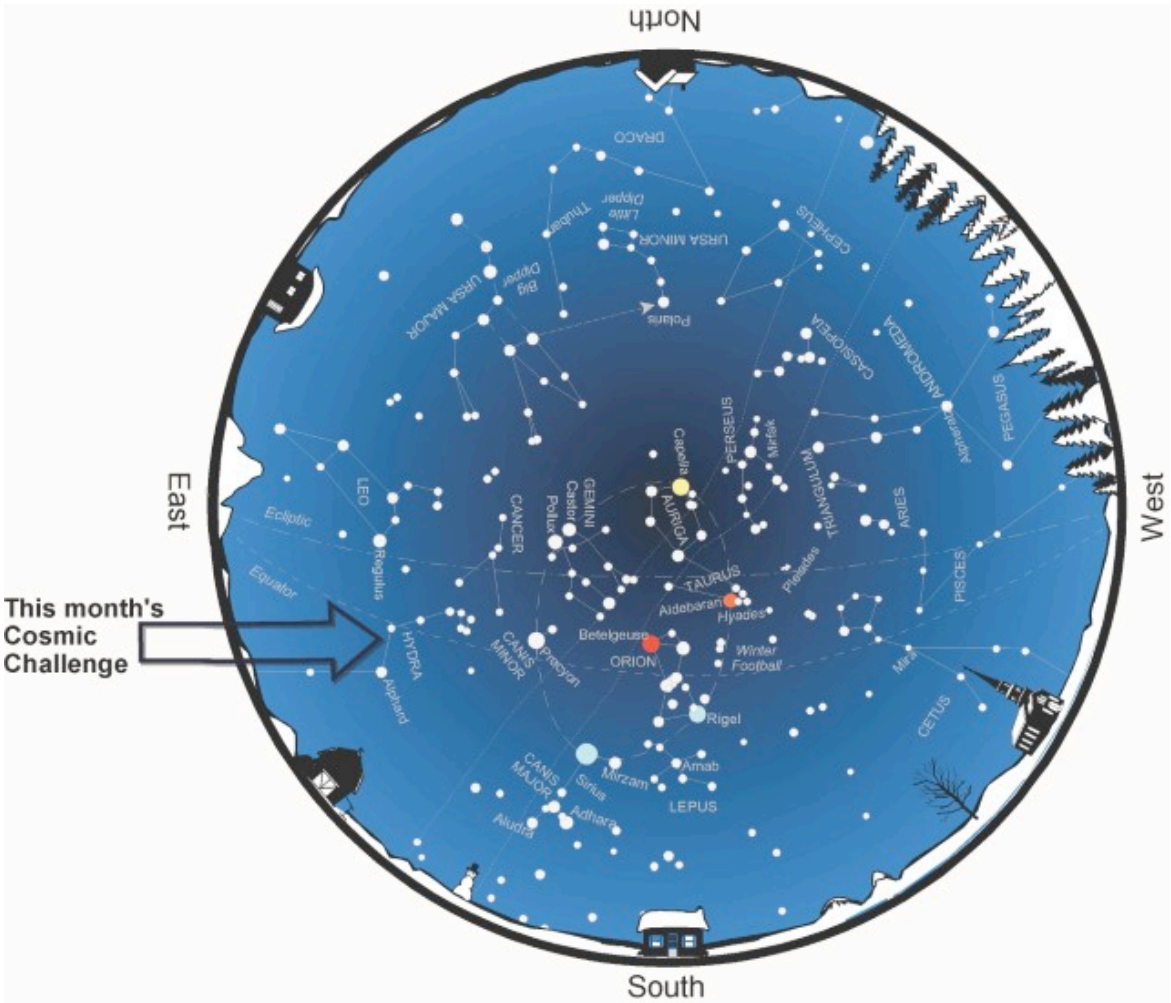
Phil Harrington's Cosmic Challenge

Hickson Compact Group 44 (HCG 44)

This month's suggested aperture range:
10-inch (25-cm) to 14-inch (36-cm) telescopes
Featured scope: Meade LX200 12”

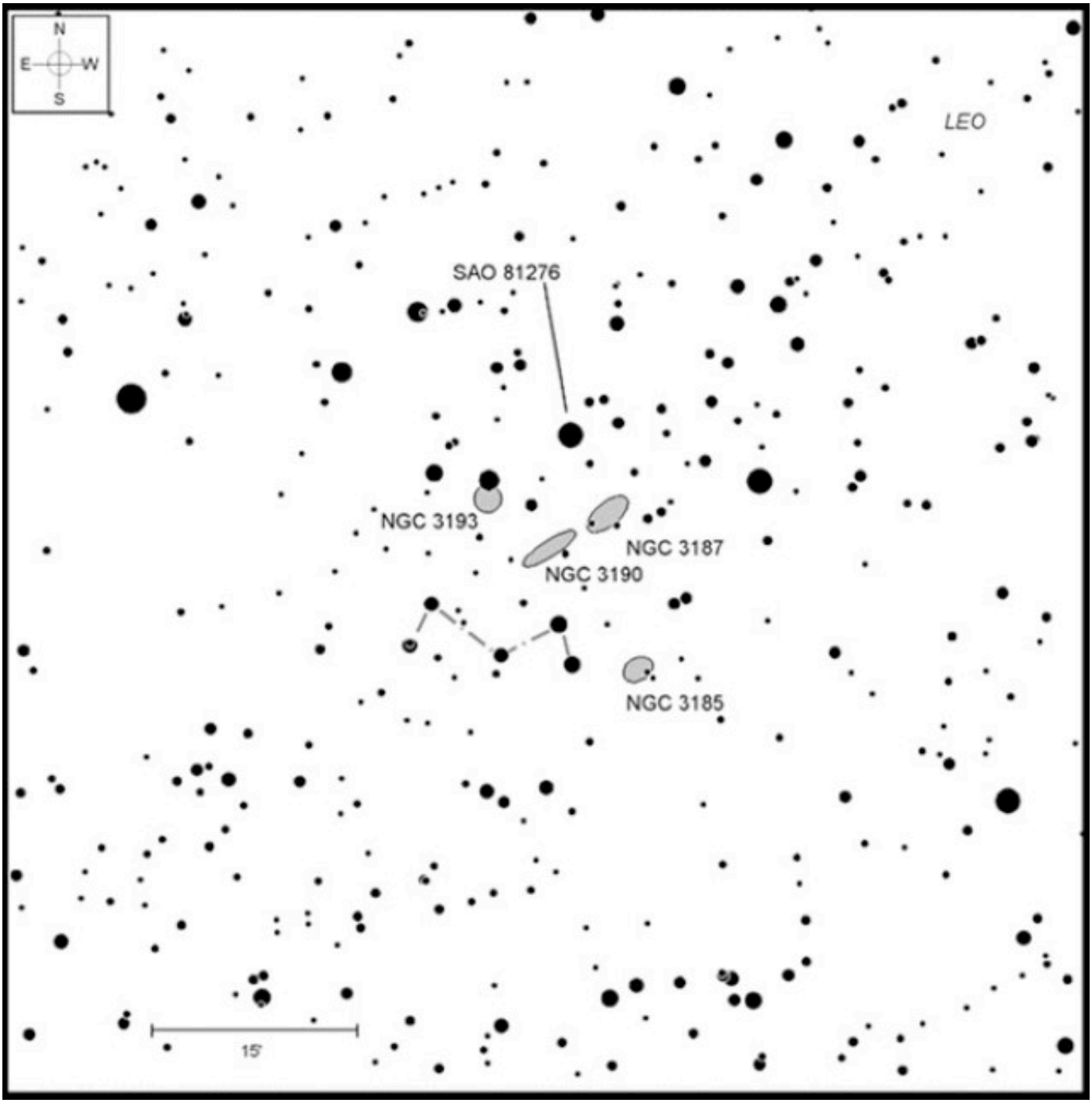
Target	Type	RA	DEC	Const.	Mag.	Size
Hickson Compact Group 44 (HCG 44)	Galaxy group	10h 39.2m	+21° 49.3'	Leo	various	16'

In 1982, astronomer Paul Hickson, professor of astronomy at the University of British Columbia , published a study of 100 compact galaxy groups scattered throughout the sky. In his paper "Systematic Properties of Compact Groups of Galaxies", Hickson defined a compact galaxy group as a small, relatively isolated collection of four or five individual systems that are set in close proximity to one another, and that differ in brightness by no more than 3 magnitudes. Further, so as to avoid including the central regions of dense galaxy clusters, Hickson stipulated an "isolation factor" requiring that there not be a non-member galaxy of similar magnitude within three radii of the group's center.



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

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



Credit: Chart adapted from Cosmic Challenge by Phil Harrington

Surveying the Palomar Observatory Sky Survey, Hickson created an inventory of 100 such groupings. The entries in the Hickson Compact Group, or HCG, catalog are ordered numerically according to increasing right ascension. The classic example of a compact galaxy group, and the first of the genre to be discovered, is Stephan's Quintet in Pegasus (October 2017 Cosmic Challenge), which Hickson cross-referenced as HCG 92.

Stephan's Quintet is probably the best-known example of a compact galaxy group, but it is by no means the brightest. That honor falls to HCG 44, nicknamed the Leo Quartet. HCG 44, itemized in the table below, is easily pinpointed a little less than halfway between the stars Adhafera [Zeta (ζ) Leonis] and Algieba [Gamma (γ) Leonis] along the sickle of Leo the Lion. If you center your finderscope on Adhafera (Zeta), you will see 6th-magnitude 39 Leonis just 20' to its south-southeast. Without moving the aim, look for two 7.6-magnitude stars closer to the southern edge of the finder field. See them? Good.

Members of Hickson Compact Group 44

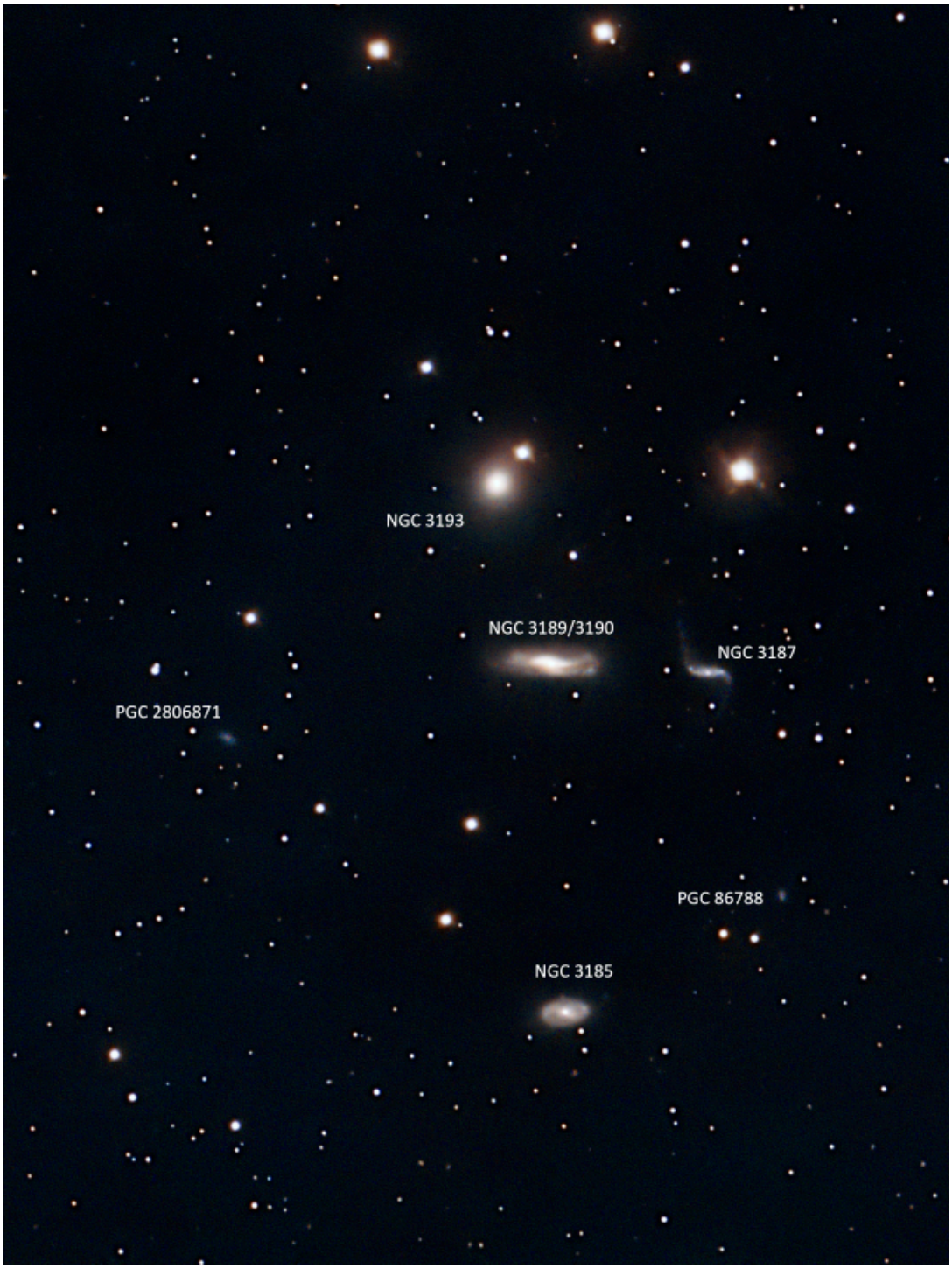
Object	RA	Dec	Magnitude	Size
NGC 3185	10 17.6	+21 41.3	12.2	2.3'x1.5'
NGC 3187	10 17.8	+21 52.4	13.4	3.6'x1.6'
NGC 3190	10 18.1	+21 50.0	11.1	4.4'x1.2'
NGC 3193	10 18.3	+21 53.6	10.9	2.0'x2.0'

Recenter your telescope on the western star in that pair, listed as SAO 81276 (aka HD 89224), insert a medium-power eyepiece, and take a look just to its south. Two faint blurs should be immediately visible. The smaller and easternmost of the two blurs is NGC 3193, found just 1' to the south of 9th-magnitude SAO 81279. My 10-inch scope at 106x reveals this E2 elliptical as a bright, round glow highlighted by a brighter core.

NGC 3193 plays second fiddle to the group's brightest member, the edge-on spiral NGC 3190. Its cigar-shaped disk appears elongated northwest-to-southeast and surrounds a faint stellar nucleus. Photographs reveal that, like many edge-on spirals, NGC 3190 is bisected by a lane of opaque dust that runs along its galactic plane south of the central core. I have failed to see the lane through my 10-inch under suburban skies, but others report success under darker conditions with the same aperture. Larger instruments show that the dark lane's western tip appears to curl northward slightly due to the tug of an external gravitation source.

Above: Digitized sketch of HCG 44 through the author's 10-inch (25-cm) reflector.

Below: HCG 44, as captured by the author's 6-inch (15-cm) Celestron Origin Home Observatory. North is toward the upper right corner. Click here for a full size image and exposure details on the author's Astrobin page.

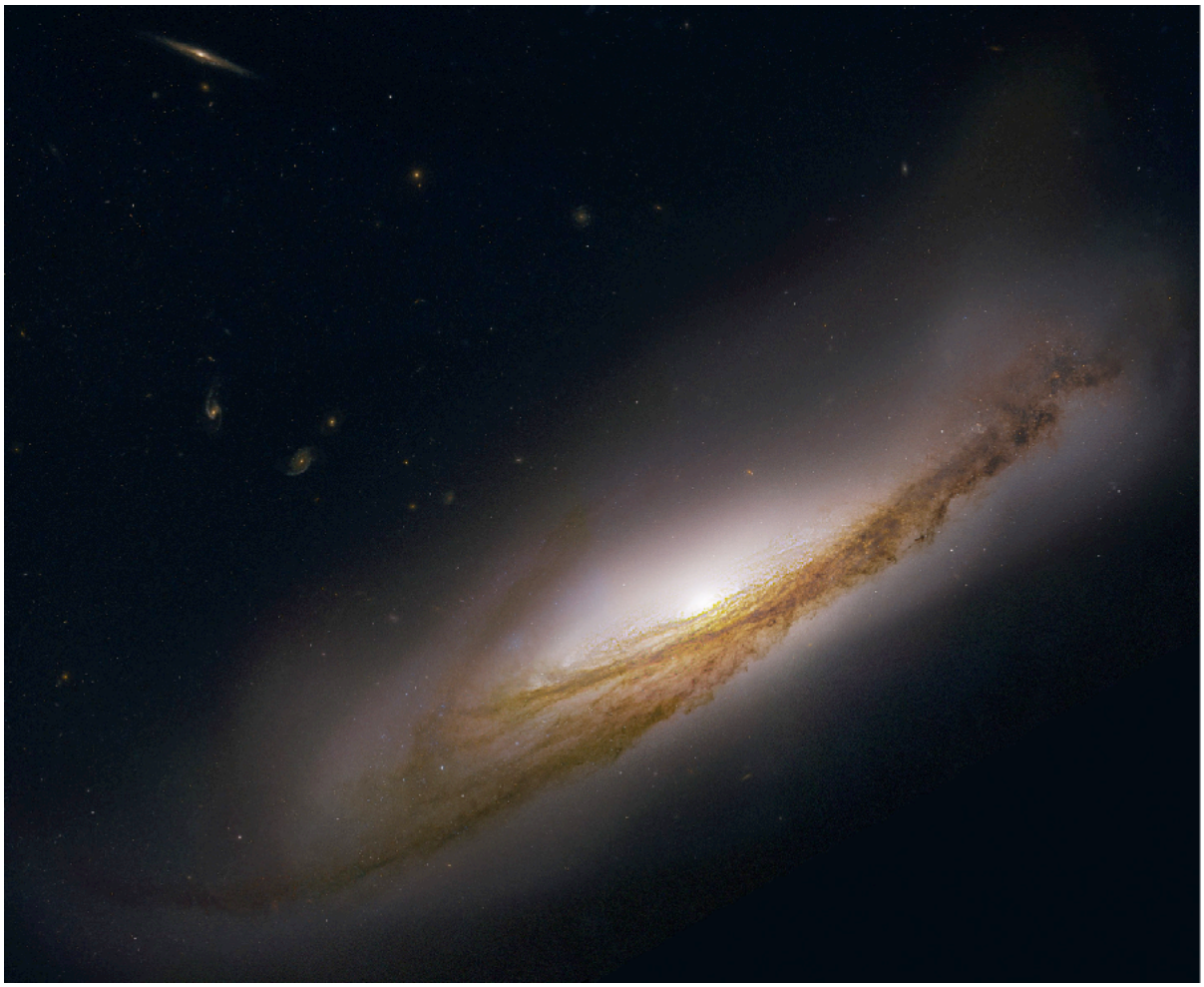


That source of gravity is most likely NGC 3187, a dim barred spiral just 5' to the northwest. Shining at magnitude 13.4 and spanning some 4'x2', NGC 3187 is the faintest of the group. Its inherent low surface brightness is easily overwhelmed by the light of nearby HD 89224, our finder star 6' to the northeast. Move the star out of the field and the galaxy's faint glow should pop into view with averted vision. Look for a dim, featureless smudge of grayish light that is oriented parallel to NGC 3190 and just 1' north of two 14th-magnitude field stars. Large instruments will also show two faint extensions of NGC 3187's spiral disk. The western end curls northward, while the eastern tip curls southward, forming a unique S-shape.

The final member of the four, NGC 3185. To find it, hop south from NGC 3190 to a pair of 10th-magnitude stars. Together with three similarly bright stars to their east, they form a distended "M". Look 5' due west of the southernmost star in the pair for NGC 3185.Its diffuse glow draws to a slightly brighter core and appears extended slightly northwest-southeast. With averted vision, the southwestern edge of the galaxy appears to just kiss a 14th-magnitude field star. That star is well within the Milky Way, however, so don't mistake it for an extragalactic supernova.

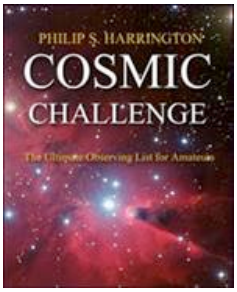
Larger apertures may also spot PGC 86788, is a dwarf spiral galaxy about 100 million light-years away. It appears isolated but might still be gravitationally linked to HCG 44.

Another galactic photo-bomber, PGC 2806871 is a faint dwarf spiral galaxy at around 250 million light years from the Milky Way. It has no physical association with the galaxy group.



Bonus Photo: Hubble Legacy Archive, ESA, NASA, Robert Gendler - Astrophotography by Robert Gendler

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 challenge. Contact me through my website or post to this month's discussion forum. 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. All rights reserved. No reproduction, in whole or in part, beyond single copies for use by an individual, is permitted without written permission of the copyright holder. This newsletter editor has received the authors permission to use this article.

What's Up, Doc? †

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.

Other Clubs (of the Solar System)

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

Ceres, Saturn 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 19:52 mid-month.
Moon - The Maria requirement can be done any time the moon is visible. Look before 3/22 and after 3/6 for the fullest views. The Highlands requirement can be done at the same time. The Crater Ages requirement is best done on 3/5 or 3/6. The Scarps requirement is best done on 3/7.
Lunar Key timings are indicated below:
New, 3/29 4 days, 3/3 7 days, 3/6 10 days, 3/9 14 days, 3/13 Old moon in new moon's arms – before 1745 on 3/2, ~10 % illuminated. (72 hr > New)
New moon in old moon's arms – after 0458 on 3/26, ~10 % illuminated. (72 hr < New) Waxing Crescent – before 1745 on 3/1, ~4 % illuminated. (48 hr > New)
Waning Crescent – after 0458 on 3/27, ~4 % illuminated. (48 hr < New)

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 Pisces and sets at 2103 mid-month.
Venus is in Pisces and sets at 2059 mid-month.
Mars is in Gemini and is up all evening mid-month.
Jupiter is in Taurus and is up all evening mid-month.
Uranus is in Taurus and is up all evening mid-month.
Neptune is in Pisces and sets at 2002 mid-month.

Major Astronomical Events:

3/1 – Lunar Perigee
3/2 – Venus begins Retrograde Motion 3/7 – Mercury at Dichotomy
3/8 – Mercury at Highest Altitude
3/8 – Mercury at Greatest Elongation East 3/12 – Saturn at Solar Conjunction
3/14 – Total Lunar Eclipse
3/15 – Mercury begine Retrograde Motion 3/17 – Lunar Apogee and Lunar Aphelion
3/19 – Neptune at Solar Conjunction 3/20 – Vernal Equinox
3/22 – Venus at Inferior Conjunction
3/23 – Saturn Ring Crossing
3/24 – Mercury at Inferior Conjunction 3/29 – Partial Solar Eclipse
3/29 – Lunar Apogee
3/31 – Makemake at Opposition

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.

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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
Monthly Free Star Party	Centennial Observatory	Saturday, March 8, 2025	6:30-9:00 p.m.	Free
Total Lunar Eclipse	Centennial Observatory	Thursday, March 13 to Friday, March 14, 2025	10:15 p.m.-3:00 a.m.	Free
"Earth Hour" Telescope Viewing	Centennial Observatory	Saturday, March 22, 2025	8:30-9:30 p.m.	Free

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