

*The Warren Rupp Observatory*

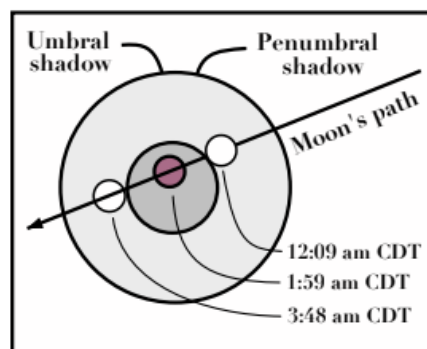
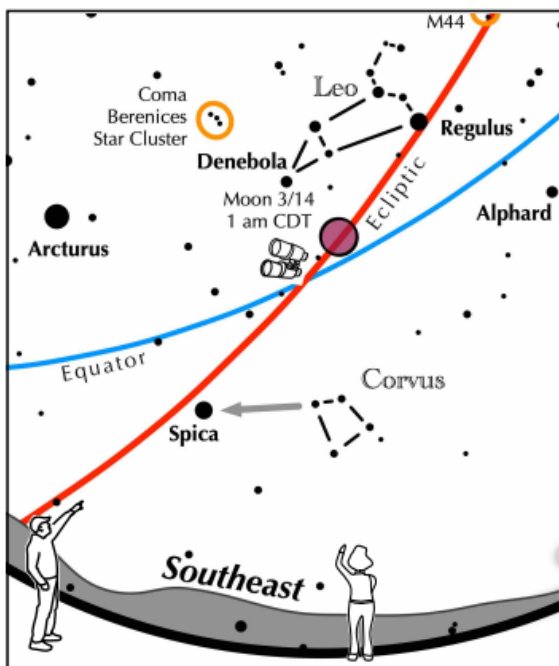
# March 2025

## March 2025

The newsletter of the Richland Astronomical Society and Warren Rupp Observatory

### Lunar Eclipse Early in the Morning – March 14, 2025

If you can observe only one celestial event in the evening this March, see this one.



#### The Moon slides through a total eclipse

In the hours just after midnight on March 14, the brilliant full moon slides into Earth's shadow.

- Even though the partial umbral eclipse begins at 12:09 am CDT, darkening might not be noticed for another 5 minutes.
- When totality is reached, the full moon's brilliance is gone, allowing the stars to appear. Can you see that the moon lies mid-way between Regulus to the upper right and Spica to the lower left?
- At mid eclipse, what color is the moon? How red is it?
- During the partial phases, can you notice that the shadow's edge is not straight, but curved?



View to the southeast  
on March 14  
at 1 am CDT



The Untold Life My Obsession Telescope  
By Mitch Luman

Last year's comet Tsuchinshan–ATLAS was a real treat for sky watchers, including myself, as it graced the western sky during twilight. It brought back memories of Comet Hale-Bopp, discovered thirty years ago in July of 1995, by amateur astronomer Thomas Bopp and professional astronomer Allan Hale. These days, comet discoveries are mostly left to automated systems like the Asteroid Terrestrial-impact Last Alert System (ATLAS) at the University of Hawai'i, but Hale-Bopp's story is unique because it involved visual observation with an Obsession telescope of which I am now the third owner.

In July 1995, at an informal star party south of Phoenix, Arizona, amateur astronomers Thomas Bopp, Jim Stevens and Kevin Gill were among the attendees. Bopp was using Stevens' home-made 17.5-inch telescope when he spotted a faint glow near the star cluster M-70 in Sagittarius. After confirming no object was located there, Bopp knew they might have found something special.

The closest telescope to the one Bopp was using was Gill's 20-inch Obsession #69. Bopp used this telescope to confirm his observation, which clearly showed an object moving, suggesting it was indeed a new comet. After an hour of observation, Bopp reported his findings to the International Astronomical Union (IAU). On the same night, Alan Hale, observing from his driveway in Cloudcroft, New Mexico, independently discovered the same comet. It was later named Comet Hale-Bopp or C/1995 O1.

One year before this event, Gill had bought Obsession #69 from my friend and observing partner Gregg Eubanks. In 1998, I then purchased Obsession #69 from Gill. This telescope, which helped confirm the discovery of Hale-Bopp, holds a special place in astronomy history, having been one of the first to gather photons from this famous comet.



**The Author and Obsession #69**

So, if you see me at the Observatory using my Obsession feel free to come over and ask to take a look. While it might look like an ordinary large Dobsonian, its history in comet discovery adds a fascinating layer to its legacy.

FOR MORE INFORMATION

<https://www.washingtonpost.com/archive/1997/02/12/how-hale-and-bopp-found-their-comet/51bacf14-7b70-4bf4-98aa-7ebeae49889e/>



### **Obsession # 69 Stats**

Original Purchase Date: 1992

Mirror Diameter: 20-Inches (0.5 meter)

Coating: 96% enhanced aluminum

Focal Length: 100 inches (2.5 meters)

Focal Ratio:  $f$  5.0


Maximum Eyepiece Height: (8 feet (2.4 meters))

Telescope Weight: 150 lbs (69 kg)

Mirror Weight :56 lbs (25 kg)


## **How to submit content and suggestions**

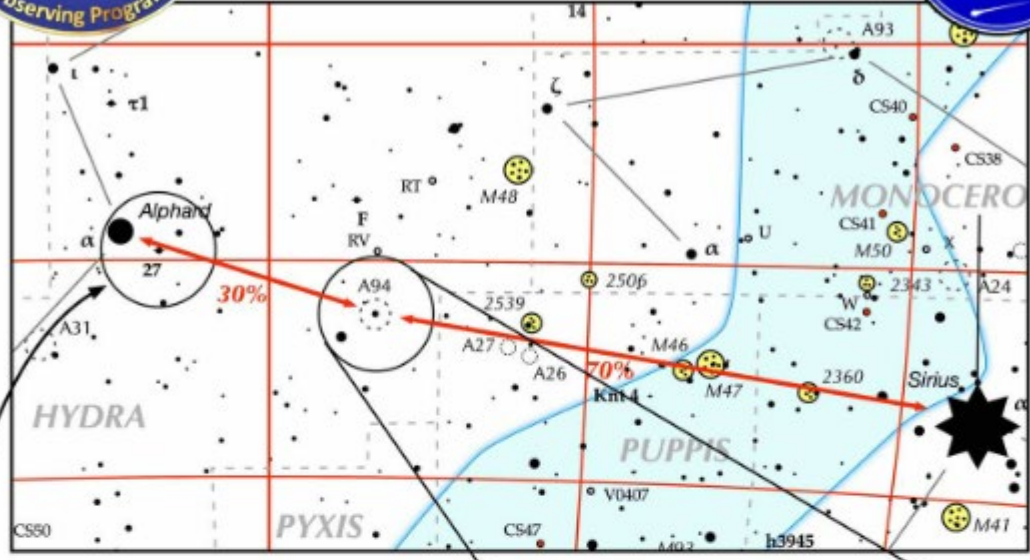
Please send any content submissions, questions, or suggestions to the RAS secretary at [secretary@wro.org](mailto:secretary@wro.org).



## The Umbrella, an asterism for binoculars

On the Astronomical League's Asterism list as no. 94

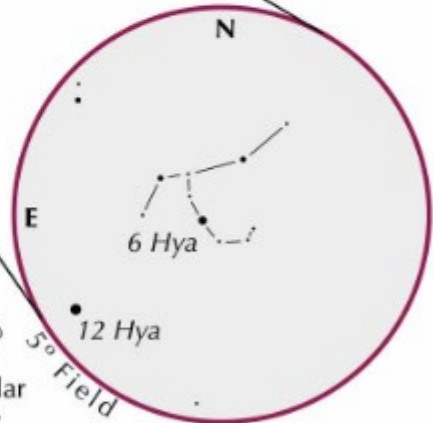




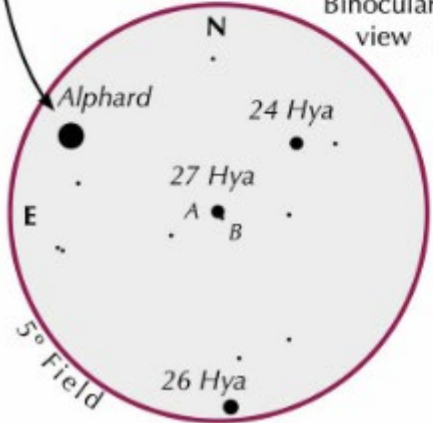
### How to find the Umbrella ...

1. Find Sirius (the brightest star in the night sky), and 2nd magnitude Alpha Hydrea, also known as Alphard.
2. Draw a line from Sirius to Alphard.
3. The Umbrella asterism (A94) lies about 70% along that line from Sirius.
4. 5.0 magnitude 6 Hydrea marks the center of the asterism. 4.3 magnitude 12 Hydrea lies in the southeastern edge of the binocular field.

**Can you trace the umbrella?**



Binocular view




Binocular view

### Since you are in the area ...

1. Place Alphard near the east-northeastern edge of the binocular field.
2. 4.8 magnitude 27 Hydrea lies in the center of the field.
3. 3.5 minutes to its west-southwest its 7.0 magnitude companion star.

**27 Hydrea**  
 Magnitudes: A 4.8; B 7.0  
 Separation: 3.5 arc minutes  
 PA: 195°



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### Mercury & Venus 40 minutes after sunset

Greatest Eastern Elongation: Mercury reaches its "half" phase higher in the darker twilight. It is relatively easy to see.

Mercury is relatively far and appears as a gibbous phase. It begins to climb out of the brightest twilight and appears as a bright point.

Venus nears Earth as it overtakes it, making it appear as a larger and thinner crescent each evening.

Mercury is relatively close to Earth, and appears in the bright twilight as a crescent. It is dim and difficult to spot.

Superior Conjunction (SC) Feb 9

Mar 23 Inferior Conjunction (IC)

## Venus meets Mercury! Mercury meets Venus!

Mercury appears about "1 fist width on a fully extended arm" above the true horizon forty minutes after sunset.

Mercury  
10°  
West

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ASTRONOMICAL LEAGUE NIGHT SKY TOOLS PROJECT  
ACTIVITIES - GUIDES - FILTERS

Mercury's orbit  
Earth  
Venus' orbit

### Mercury's best evening apparition of 2025!

From 40 to 60 minutes after sunset after March 1st, look to the west for bright Venus point shining low above the horizon.

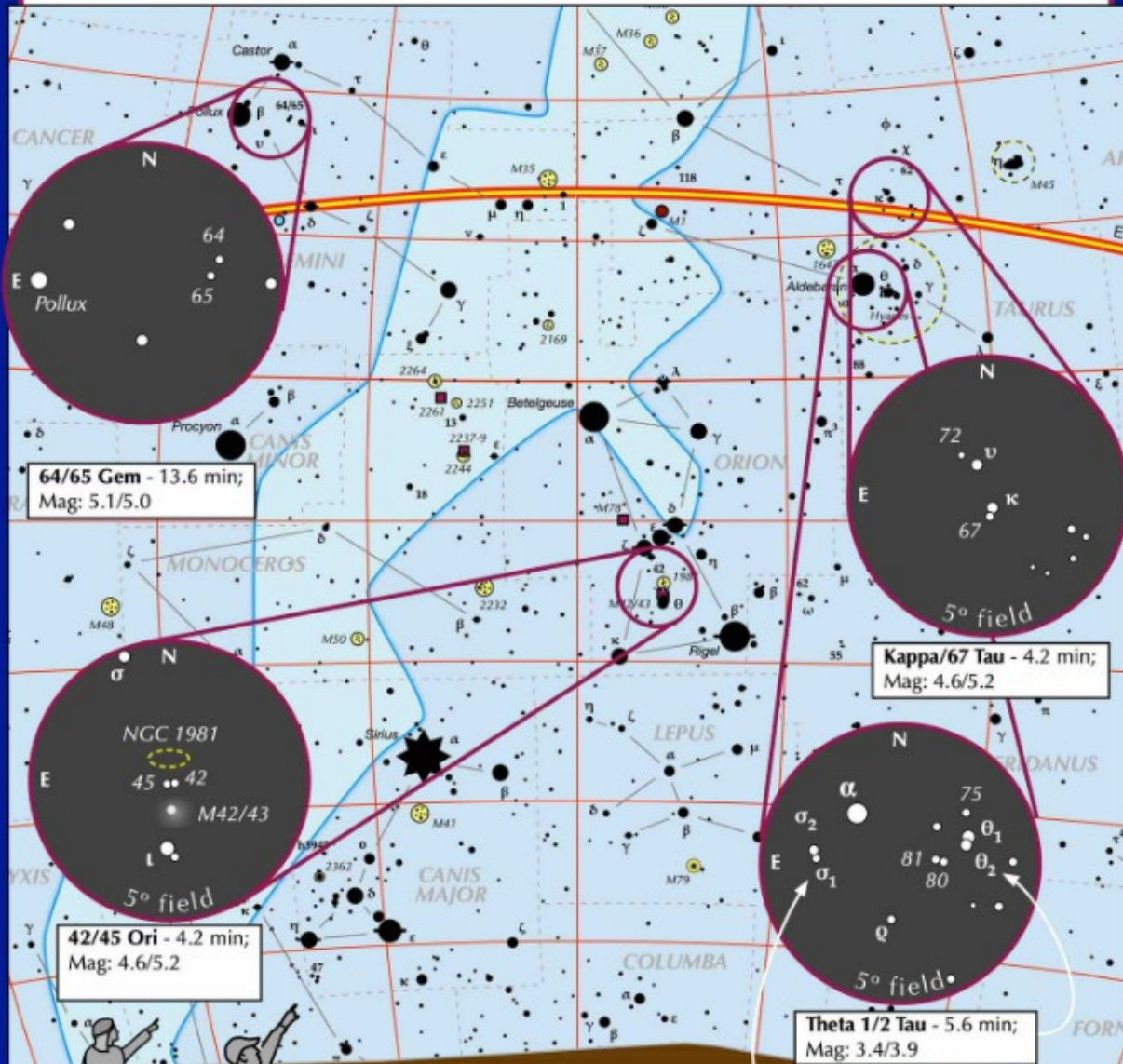
- Mercury will be below Venus, about mid way between it and the horizon.
- Outstretch your arm and make a fist. Place one side at the true horizon. At its other side should be Mercury.
- Over the next week, the little planet rises slightly higher each evening into the darker twilight while brightening, making it easier to spot. Venus, at the same time, will be dropping closer to Mercury.
- On the 12th, Mercury appears left of Venus. It will be difficult to spot so use Venus as a guide.



## Winter's Naked Eye Double Stars



Test your visual acuity. Observers with "20/20" vision should be able to split these doubles under dark skies.



Check your observations with binoculars.

- These 5 naked-eye doubles are included in the AL Binocular Double Star Observing Program.

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**This article is distributed by NASA's Night Sky Network (NSN).**

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## March's Night Sky Notes: Messier Madness

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. Credit: 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.

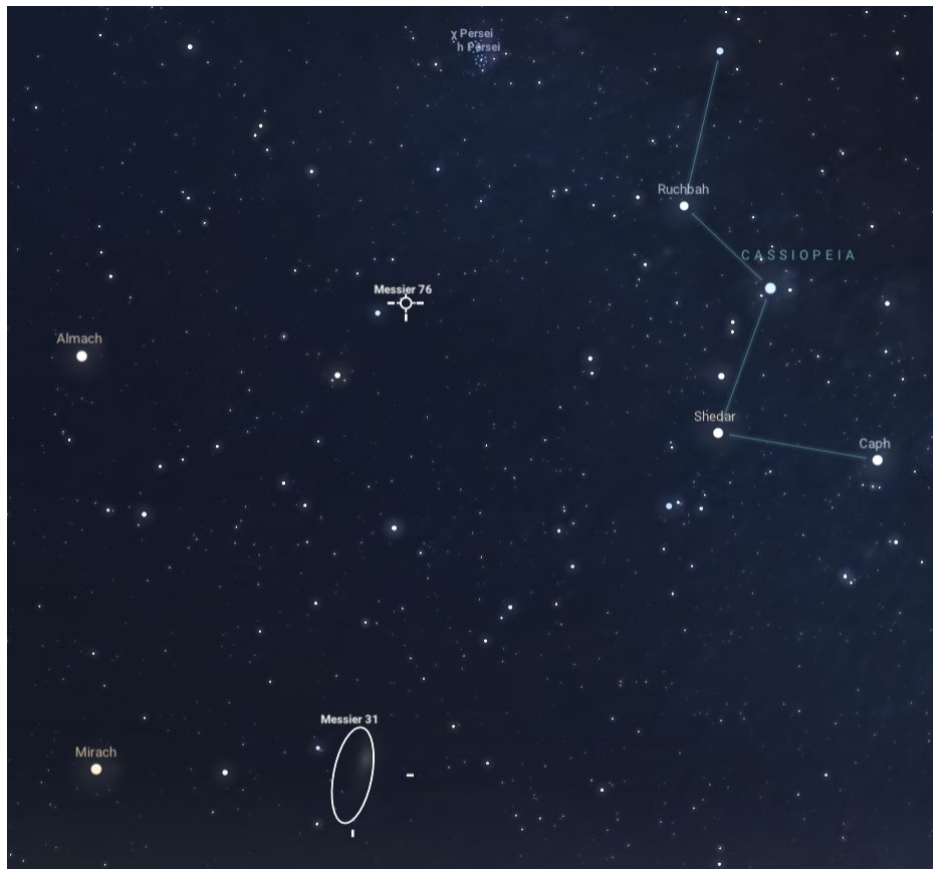




*Locate M3 and M87 rising in the east after midnight. Credit: Stellarium Web*

**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.



Locate M76 and M31 setting in the west, 60 minutes after sunset. Credit: Stellarium Web

**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.