

ASTROGATOR



May 2025

Grand Strand Astronomers

An Astronomical Journal of the Grand Strand Astronomers
of the Greater Myrtle Beach Area
GSA Founded on September 24, 2020

Grand Strand Astronomer's Monthly Events:

General Membership Meeting:

Thursday May 8, 2025 @ 7:00 pm

Meeting: VIA Zoom.

Please see email or Facebook for link

Observing Sessions:

Saturday May 24, 2025

Location: Hampton Plantation

Gates open @ 6:00 pm



HH 49: Interstellar Jet from Webb

Image Credit: NASA, ESA, CSA, STScI, JWST

Grand Strand Astronomer's Social Media

[Grand Strand Astronomer's Website](#)



[Grand Strand Astronomer's Facebook](#)



GSA Leadership



**Executive
Officer**
Ian Hewitt

Treasurer
John Defreitas

Photograph
not available
a this time



Secretary
Gerald Drake

**Social Media
Coordinator**
Denise Wright

Photograph
not available
a this time



**Newsletter
Coordinator**
Tim Kelly

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Picture of the Month

NASA

Herbig-Haro 49/50 (HH 49/50) is a visually striking and scientifically rich Herbig-Haro object located approximately 625 light-years from Earth within the Chamaeleon I molecular cloud.

Call For Volunteers

Tim Kelly

Grand Strand Astronomers are looking for volunteers to help with the social media platforms such as Facebook, YouTube and Twitter if the need arises. Presently Facebook needs a new face lift and be brought up to present time activities. Our website can also use some TLC and someone responsible to keep it updated with club activities and astronomy related items. If anyone would like to help in these categories, please contact Ian Hewitt at the email address below.

We are looking for new and older club members to help contribute articles for the GSA Newsletter. You can be a novice level, medium level, or a experienced level astronomer. Knowledge such as types and location of numerous stars, nebula or galaxies to share with other club members. GSA would like to provide topics for all level of members and non-members that are both hands-on projects and educational sharing. You can either write you own or use one already written and published. See previous articles on older issues for contributions for self written articles. See Tim's contributions for an example of non-written subject matter or from an article written from another person. Please provide the title, name of the originator and website link that the original article can be found. You will not be required to submit articles every month, however every second or third month would be nice and a benefit to all members and non-members. Please send articles to t.m.kelly349@outlook.com

GSA Telescope Loaner Program

Gerald Drake

Did you know our club has telescopes available for loan? They are Dobsonians that were donated to the club when we first started. These are available for club members to use at no charge. All you have to do is take care of them and return them if someone else wants to borrow one. The first one is an Orion XT 8. It's in great shape. It gives beautiful views of the moon, planets, and galaxies. Comes with accessories that include a 2X Barlow, 25mm eyepiece, 9mm eyepiece, and laser collimator tool. The other one is an Orion Skyquest XT 10 with Orion's IntelliScope computerized object locator. It includes more than 14,000 objects in its database so you'll be able to locate those dim galaxies. Should be hours of fun. Accessories are included. Both of these are begging to be used. Send us an email if you're interested in borrowing one.

GSA Monthly Newsletter Articles

Tim Kelly

This is our club and our newsletter. Lets help each topic to continue to grow.

Grand Strand Astronomer's is looking for individuals who would like to participate in submitting newsletter articles dealing with anything astronomy. We can not rely on the same four (4) members to write and send in articles month after month. New thoughts and ideas make for good reading and beneficial growth for the club and the public of the Greater Myrtle Beach area.

One member's simple advancement could just be what a newbie is looking for to get over a hurdle that has been impeding their progress forward. The expertise by many members can be a form of mentoring.

Grand Strand Astronomers - Membership

Grand Strand Astronomer's membership did not pick up any new members for February.

Grand Strand Astronomers October Meeting Recap

There was no Membership Meeting for the month of March. Please see front page for the next Membership Meeting and Hampton Plantation Observation dates and times.

Grand Strand Astronomers Meeting Recap– April 10, 2025

Ian welcomed all the to the April meeting of the Grand Strand Astronomers. The meeting was lightly attended. It was live streamed via YouTube. Here is the link if you would like to view it: <https://youtu.be/PTAr5VKCbJl>

We are now into the second quarter. We have not had good weather for our outdoor viewing sessions. The next observing session is April 26 at Hampton Plantation State Park. This will be a public event, meaning the park will be advertising this for the public to participate. In the past, we've had good turnouts for these. If conditions are only marginal, we'll still hold the event since the public is coming. Bring your telescopes!

Aynor Middle School is planning an astronomy night for Monday, May 5; and are asking for some club members to come and share their telescopes with them. Is anyone interested? Ian will send out an email with more information. It probably would not be a late night being a school night. Our May 8 meeting will include a guest speaker, Dr. Patricia Craig. The topic will be updates on the Mars. See bio: <https://www.lpi.usra.edu/science/staff/craig/>

Dr. Craig spoke to our club two years ago and was excellent and informative. Be sure to join us.

Ken Legal gave a presentation on the upcoming astronomical events for April. Briefly, they are as follows:

- Venus swings into the AM, rising just after twilight. On April 27 it will be brilliant. Its elongation is on June 1. Venus will stay in the morning sky for the rest of the year.
- A new comet is discovered: **C/2025 F2 (SWAN)** is a comet that was discovered from images taken by [https://en.wikipedia.org/wiki/Solar_and_Heliospheric_Observatory's SWAN instrument](https://en.wikipedia.org/wiki/Solar_and_Heliospheric_Observatory's_SWAN_instrument). It is expected to reach its peak magnitude of 5.0 by May 2025. Moving out of Pegasus and slowing moving down in a path through Andromeda. Still visible for another week or two. It is better viewed in the southern hemisphere in the eastern horizon.
- The lunar eclipse last month was interesting. The rim of the moon was white with a bluish ozone tinge. It is amazing that the last three lunar eclipses occurred with clear skies.
- It is galaxy season and a good time to look for the Leo Triplet. They are a small group of galaxies about 35 million light-years away in the constellation Leo. This galaxy group consists of the spiral galaxies M65, M66, and NGC 3628. Clear sky and a big aperture will help you see them.
- Also look for the Sombrero Galaxy (also known as Messier Object 104, or NGC 4594). A galaxy in the constellation borders of Virgo and Corvus.
- A challenging one to find is Omega Centauri (NGC 5139). It is a globular cluster in the constellation Centaurus and below Spica. It is 9-degree altitude and you'll need a good clear southern horizon. It will be bright, so you may get to image it. (Note: Hampton Plantation does not have a clear southern horizon). Myrtle Beach State Park is a good place to see it since it faces southeast. Ken will check with them to see if we can view it from there.

Ian shared images he shot of the lunar eclipse with his new <https://www.seestar.com/> smart telescope. The images were really good. He pulled a few out to process with excellent results. Note that they now have an equatorial mode, but Ian shot in alt-az mode. He found a locator star then told the SeeStar to find the moon and it tracked it through the evening surprisingly well. It is very automated and controls with an iPhone or iPad. It may have trouble imaging comets that are not in the same spot. SeeStar is coming out with updated sensor which may cause used ones to become available at a lower price. The SeeStar will stack images, but will also let you stack with a separate program. It does not do well with planetary imaging due to its short focal length. It is very light weight. Made by ZWO.

Further discussion about the Swan comet. It is best seen in the morning under clear skies at around 5:30 AM. It is only magnitude 8. It was discovered a couple of weeks ago by amateurs looking at data on line.

Meeting adjourned.

Gerald

HH 49: Interstellar Jet from Webb

Image Credit: NASA, ESA, CSA, STScI, JWST

What's at the tip of this interstellar jet? First let's consider the jet: it is being expelled by a star system just forming and is cataloged as Herbig-Haro 49 (HH 49). The star system expelling this jet is not visible -- it is off to the lower right. The complex conical structure featured in this infrared image by the James Webb Space Telescope also includes another jet cataloged as HH 50. The fast jet particles impact the surrounding interstellar gas and form shock waves that glow prominently in infrared light -- shown here as reddish-brown ridges. This JWST image also resolved the mystery of the unusual object at HH 49's tip: it is a spiral galaxy far in the distance. The blue center is therefore not one star but many, and the surrounding circular rings are actually spiral arms.

Herbig-Haro 49/50 (HH 49/50): A Glimpse into Stellar Birth

NASA

Overview

Herbig-Haro 49/50 (HH 49/50) is a visually striking and scientifically rich Herbig-Haro object located approximately 625 light-years from Earth within the Chamaeleon I molecular cloud. This region, one of the nearest active star-forming regions in the Milky Way, is a fertile environment for the birth of low-mass stars, similar in mass and properties to our Sun.

Structure and Composition HH 49/50 is formed by energetic outflows emitted by a still-forming (protostellar) object. These outflows collide with surrounding gas and dust at high velocities, producing shock waves that heat the material. As a result, the surrounding region emits bright visible and infrared radiation, making it observable by various telescopes. The shock waves shape complex, filamentary structures that act as physical records of the interactions occurring during the early phases of star development.

Observations and Discoveries

Spitzer Space Telescope (2006):

NASA's infrared observatory captured the region, revealing a dramatic, twisted outflow that resembled a "Cosmic Tornado". At that time, the identity of a fuzzy object at the end of the outflow remained uncertain.

James Webb Space Telescope (Post-Launch):

The advent of JWST brought unprecedented resolution and sensitivity, revealing intricate details of the shocked regions and clarifying that the fuzzy object seen by Spitzer was actually a distant spiral galaxy, serendipitously aligned behind HH 49/50. This finding created a visually stunning and scientifically intriguing alignment between local star-forming activity and a background galactic structure.

Scientific Significance

HH 49/50 serves as a natural laboratory for studying the formation of solar-type stars. The detailed observation of jet activity, shock fronts, and gas dynamics helps researchers unravel the stellar births of new stars.

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Scientific Significance

HH 49/50 serves as a natural laboratory for studying the formation of solar-type stars. The detailed observation of jet activity, shock fronts, and gas dynamics helps researchers unravel:

- How protostellar jets interact with their environment,
- The role of accretion and ejection processes in young stellar objects (YSOs),
- The impact of such outflows on surrounding molecular clouds, which can either trigger or suppress further star formation.

These insights are crucial for building accurate models of stellar evolution and understanding the early environment of the Sun.

Future Research Directions

With current and upcoming instruments, particularly those aboard space-based infrared and radio observatories, researchers aim to:

- Map the chemical composition of the outflows,
- Track velocity changes in the jets over time,
- Monitor variability in protostellar activity,

Compare HH 49/50 with other Herbig-Haro objects to establish common patterns in stellar birth. Continued observation will deepen our understanding of the complex interplay between young stars and their natal environments.

Conclusion

HH 49/50 stands as a vivid and informative snapshot of a star in its formative years. From its swirling "tornado" of gas to the distant galaxy shining through, it offers both aesthetic wonder and astrophysical value, serving as a bridge between human curiosity and cosmic origins.

What’s Up, Doc? †

May 2025

Dr. Aaron B. Clevenson, Director, Insperity Observatory

This information is based on 9 PM Eastern Time.

Naked-Eye Clubs:

Meteors – any night, any time, anywhere, the darker the sky the better.

<u>Showers</u>	<u>Duration</u>	<u>Maximum</u>	
Eta Aquarids (ETA)	4/21 to 5/12	5/6 0300	MAJOR
Epsilon Aquilids	5/4 to 5/27	5/17 & 5/18	minor
May Librids	5/1 to 5/9	5/6 & 5/7	minor
Eta Lyrids	5/3 to 5/12	5/8 to 5/10	minor
Northern May Ophiuchids	4/8 to 6/16	5/18 & 5/19	minor
Southern May Ophiuchids	4/21 to 6/4	5/13 to 5/18	minor
Epsilon Arietids	4/25 to 5/27	5/9 & 5/10	Daylight
May Arietids	5/4 to 6/6	5/16 & 5/17	Daylight
Omicron Cetids	5/7 to 6/9	5/ 14 to 5/25	Daylight
May Piscids	5/4 to 5/27	5/12 & 5/13	Daylight

Constellations: Northern Skies – any night, any time, anywhere, the darker the sky the better.

Last Chance this cycle: Auriga. Monoceros, Pyxis, Vela (Orion, Taurus, Canis Major).

Transit Ursa Major, Leo Minor, Leo, Hydra, Sextans, Crater, Corvus, Antlia.
New arrivals: Draco, Corona Borealis, Libra.

Binocular Clubs:

Binocular Messier – Monthly highlights include:

- Easy – 3, 5, 13, 35, 36, 37, 38, 44, 46, 47, 48, 50, 67, 92, 93.
- Medium – 40, 49, 53, 63, 64, 81, 82, 83, 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 (by Astronomical League numbers): 5, 13, 14, 17, 18, 20, 26, 27, 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: 91, 98.

Caldwell

- 1, 2, 3, 4, 5, 6, 7, 21, 25, 26, 29, 31, 32, 35, 36, 38, 39, 40, 45, 46, 48, 49, 50, 52, 53, 54, 58, 59, 60, 61, 64, 66, 74, 77, 79.

Double Star (by Astronomical League numbers):

- 5, 9, 11, 14, 15, 16, 17, 18, 20, 23, 25, 26, 27, 29, 32, 34, 35, 37, 39, 40, 41, 42, 43, 45, 51, 52, 54, 55, 56, 57, 58, 59, 65, 67, 68, 69, 70, 71, 74, 82, 91, 92, 98, 100.

Other Clubs (of the Solar System)

Planetary: These are the tasks that can be done this month:

The Sun is in Taurus and sets at **2014** mid-month. Any clear day is a good time to get sunspots.

Mercury, Venus, Ceres, Saturn, Neptune, and Pluto will not be visible during the evening hours.

Moon:

- The Maria requirement can be done any time the moon is visible. Look before 5/19 and after 5/4 for the fullest views.
- The Highlands requirement can be done at the same time.
- The Crater Ages requirement is best done on 5/3 or 5/4. The Scarps requirement is best done on 5/5.
- Occultations occur all the time, the bright ones can be found on the internet. Objects disappear on the East side of the moon.
- Mars is in Cancer and is up all evening mid-month.
- Jupiter is in Taurus and sets at **2227** mid-month.
- Uranus is in Taurus and sets at **2016** mid-month.
- Asteroids – Course Plotting and Measuring Movement requirements can be done at any time on any asteroid. See above to identify the bright ones this month.

Lunar:

Key timings are indicated below:

New, 5/26 4 days, 5/1 & 5/30 7 days, 5/4 10 days, 5/7
14 days, 5/11

Old moon in new moons arms: before **2302** on 5/29, ~10 % illuminated. (72 hr > New)

New moon in old moons arms – after **2302** on 5/23, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before **2302** on 5/28, ~4 % illuminated. (40 hr > New)

Waning Crescent – after **2302** on 5/24, ~4 % illuminated. (48 hr < New)

Special Events this Month:

- 5-4 Pluto begins retrograde motion • 5-6 Eta Aquarids Meteor Shower
- 5-8 Eta Lyrid Meteor Shower
- 5-10 Lunar Apogee • 5-17 Uranus at Solar Conjunction
- 5-25 Lunar Perigee
- 5-25 Lunar Perihelion
- 5-29 Mercury at Superior Conjunction
- 5-31 Venus at Greatest Elongation West *

Although many 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.

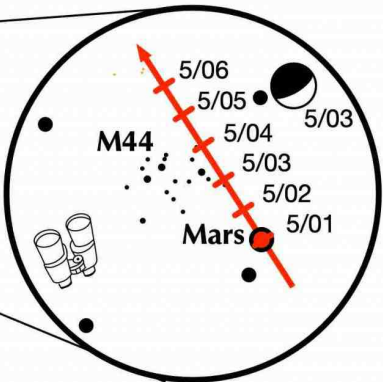
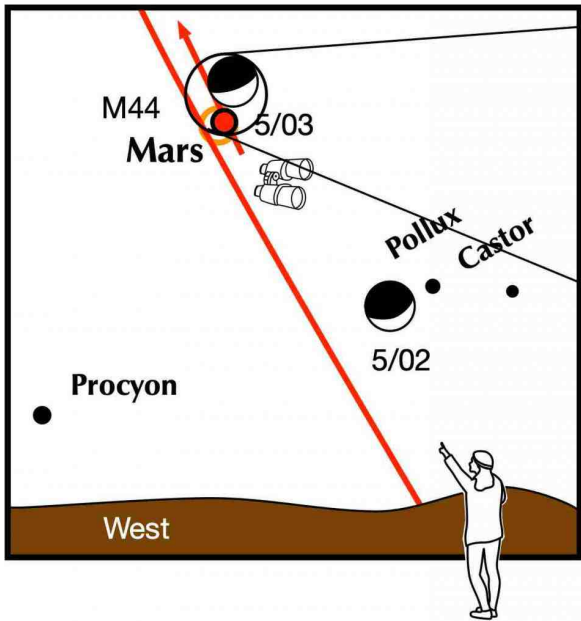
† - “What’s Up Doc?” is used with permission from Warner Bros. Entertainment Inc.

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Astrological League: May2025-Moon-Mars-M44



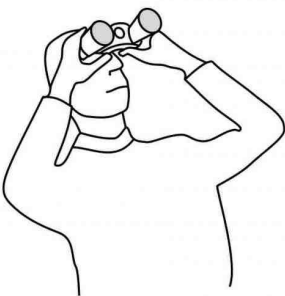
If you can see only one celestial event this month, see this one.



**View through
10x50 binoculars**



Beginning on May 1, look to the west-northwest 90 minutes after sunset.

- The twin stars of Gemini, Castor and Pollux, will be found forming a horizontal bar low above the horizon.
- On the following evening, the crescent moon moves near Pollux, almost forming a straight line with it and Castor.



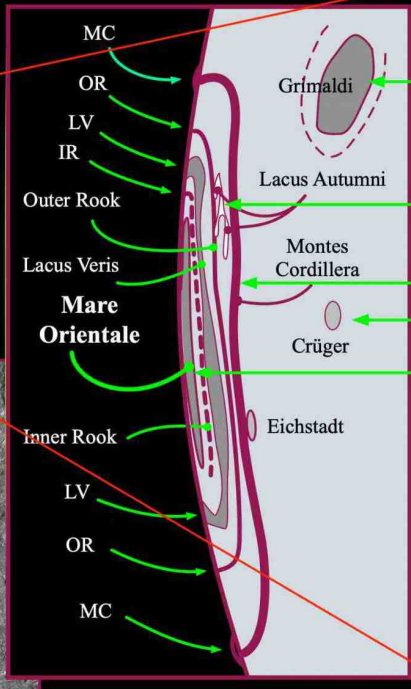
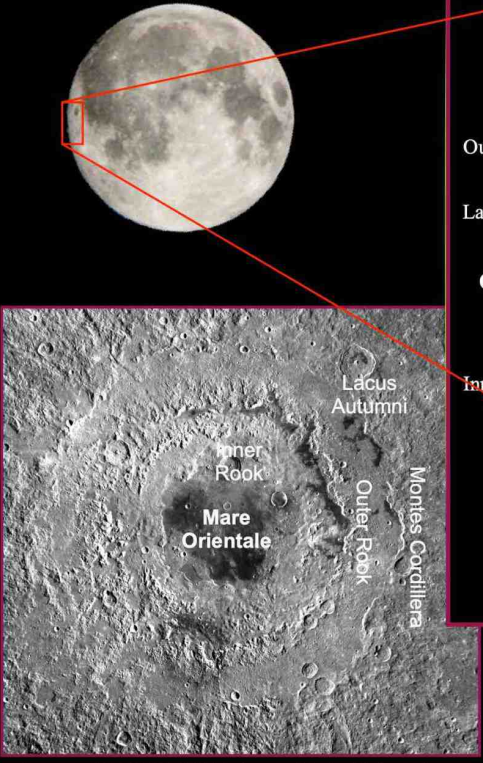
- Red Mars slides toward M44, aka the Beehive Star cluster. Use binoculars to find Mars inching closer to the many stellar bees.
- On May 3, the thick crescent moon joins Mars sitting to the upper left of the red planet and above the bees.
- Over the next few evenings, the Red Planet moves past M44, leaving it on May 5.

Astrological League: May 2025 Mare-Orientale



Mare Orientale

... this most astounding impact basin is only partially seen



Mare Orientale
Best seen in 2025
the mornings around May 18, June 18, and July 16

image: NASA/GSFC/ Arizona State University

A good viewing of Mare Orientale requires that the Moon be at or near maximum western libration. This happens on three, four, or five days in some, but not all months. Of course, it should not hide in the lunar night, which immediately eliminates fifteen days each month. The three mornings leading up to new Moon are also poor times because the waning thin crescent lies too close to the horizon to give a sharp enough image for a clear, meaningful view.

As a result, opportunities for studying Mare Orientale are infrequent, occurring on fewer than twenty days each year. Generally, four months running present three, four, or five good opportunities each, followed by a string of nine or ten months that present no suitable occasions for viewing it. And then there is the weather!

Identifying Orientale's fascinating features demands steady seeing and moderate magnification.

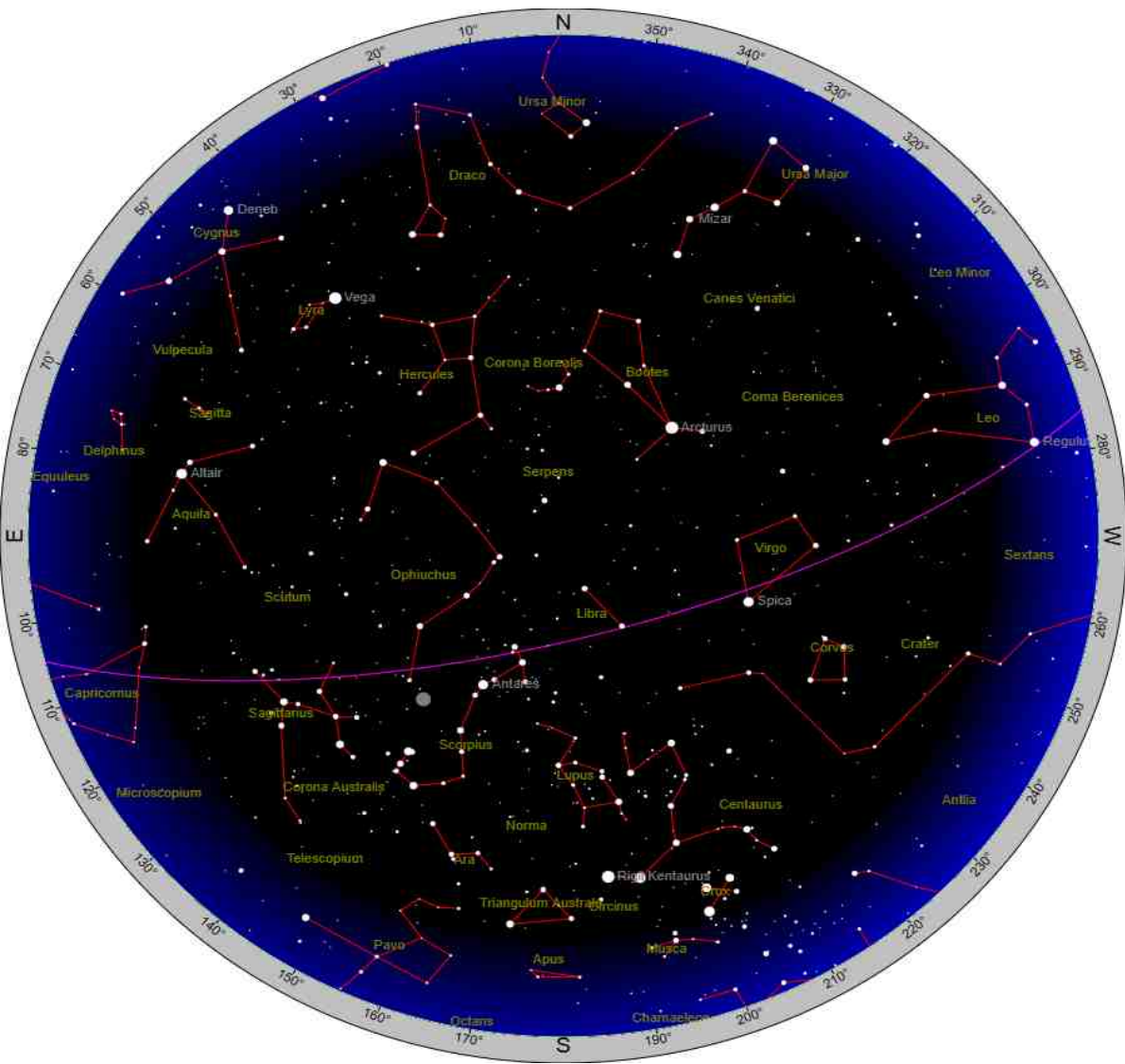
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[Interactive sky chart](#) [Home](#)

Year: 2025 Month: May Day: 15 Hour: 00 Minute: 00



Until next Month

Remember to always look up!