

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Contents

- 01: Club Announcements
- 02: Upcoming Events
- 03: Membership
- 04: New Members
- 05: July Meeting Recap
- 06: Pre-Dawn Six Planet Alignment
- 07: Night Sky Events for August 2026
- 08: Welcome to Sidewalk Stargazing
- 09: The Easiest Way to Learn the Summer Night Sky Starts with These 3 Stars
- 10: August 2026 Lunar Eclipse: When are Where to See
- 11: A Guide to Observing Deep-Sky Objects with Binoculars, Telescopes and More
- 12: Auriga (constellation)
- 13: August Night Sky Chart

Grand Strand Astronomers Leadership

Ian Hewitt – Executive Officer
John DeFreitas – Treasurer
Gerald Drake – Secretary
Tim Kelly – Newsletter Co-Editor

Club Announcements

Club Social Media

Grand Strand Astronomers:
<https://www.gsastro.org/>

Grand Strand Amateur Astronomy Club:
<https://www.facebook.com/groups/gsatro/>

Upcoming Club Events

Hampton Dark Sky Observing: August 8, 2026

Indoor Zoom Meeting: August 27, 2026

Dark sky observing session at Hampton State Historic Site starting time is 8:00pm – 11:00 pm.

Our regularly scheduled indoor meeting of the Grand Strand Astronomers is held online. Starting time is 7:00 PM. Check for Zoom meeting link on our Facebook page.

Membership

Our membership runs from January to December of each year, so now it is time to pay dues for 2026. Membership in the Grand Strand Astronomers is only \$25.00 per year. Part of this goes toward your Astronomical League's membership and Reflector Magazine. The rest goes toward our minimal operating expenses. So, please rejoin if you haven't already. You can pay online by going to <https://www.gsastro.org/joinrenew/>.

As of June 2026, we have 21 dues paying members.

You can also mail in a check to:

Grand Strand Astronomers
1771 Alford Rd
Conway, SC 29526.

New Members

Grand Strand Astronomers would like to welcome the following new member: Kristen Scapellato.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Board of Directors Meeting Recap

Submitted by: Gerald Drake

Our regularly scheduled monthly meeting was unfortunately canceled in July; however, the Board of Directors for the Club did meet. Here are the highlights of that meeting.

A Board of Directors meeting for the Grand Strand Astronomers was held on July 7, 2026. The Directors include Ian Hewitt, John DeFraitas, and Gerald Drake. The meeting was called to order by Ian. Ian also recorded the meeting minutes.

Google has canceled the club's email and denied our appeal without clear reason. Financial services such as PayPal and our bank were not tied to this address so, was no effect there. Meeting minutes and other records were stored on Google Docs, but these were copies and the secretary has copies on his computer and hard copies in a binder. The web hosting service itself was linked to the Google account, but we can change this. The login for the web hosting service (control panel) is tied to the Google account, and we cannot access the provider hosting accounts. The board will take the following steps going forward. The web hosting service has been contacted and said they can restore access to GSA. Ian is working with the hosting provider and will get them the required notarized documentation. GSA will sign up with the Microsoft non-profit program to obtain a Microsoft email address and services at no cost. Ian will pursue this.

John provided a financial report indicating the club is in good financial shape with a positive cash flow.

The board discussed the need to have all key club information passwords shared with at least two of the board members. This includes financial accounts and services like web hosting and Microsoft services.

The board discussed liability insurance and decided to pursue getting this for the club and Directors.

This is offered through the Astronomical League. Gerald will contact AL to see how to proceed with this.

Recently, we were contacted by someone under the age of eighteen that wanted to join the club. Our bylaws stipulate that while minors are allowed to come to events/meetings, members must be eighteen or older. The board discussed changing this but decided that the current rule will not be changed. We will continue to welcome families but will not be responsible for minors.

Fall is prime public observing season. The board discussed contacting Playcard to schedule something. Ian also mentioned that CCU will be scheduling a large public observing session, hopefully including their portable planetarium. Gerald will contact Playcard and Ian will coordinate with CCU.

The board discussed the dues amount and decided to hold them at \$25 for the foreseeable future.

The board discussed the newsletter and wanted to recognize the great work that Tim Kelly has been putting into this.

One of our new members is on staff at Carolina Forest High School. At a recent meeting, he indicated that they wanted to start an astronomy club. He offered to host some GSA meetings at CFH. The board agreed to look into this and try to have some in-person meetings in the fall.

The GSA is behind on the election schedule due to travel and other unforeseeable circumstances. Ian will put out a call for nominations and start the process. All the current board members have agreed to run again, but we will always accept nominations from any other members wanting to run.

Meeting adjourned.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Pre-Dawn Six Planet Alignment

Facebook

Submitted by: Tim Kelly



PEACEFUL

MARK YOUR CALENDARS

AUGUST 12, 2026

SIX-PLANET ALIGNMENT

Mercury, Venus, Jupiter, Saturn, Uranus, and Neptune
will be visible together in the morning sky
Don't miss this rare sky show next month!

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Night Sky Events for August 2026

Submitted by: Tim Kelly

The August 2026 night sky features the Perseid meteor shower peak, a partial lunar eclipse, and brilliant summer constellations.

Major Celestial Events

- **Perseid Meteor Shower (August 12–13):** Reaches its peak on the night of August 12 into the morning of August 13. Because it coincides with a new moon, dark skies will allow for up to 90 or more meteors per hour before dawn.
- **Total/Partial Solar Eclipse (August 12):** A daytime total solar eclipse crosses parts of the Arctic and Spain, while a partial eclipse is visible in parts of northeastern North America, Greenland, and Iceland earlier in the day.
- **Lunar Eclipse (August 27–28):** A partial lunar eclipse takes place on the evening of August 27 for North America, reaching a maximum at 12:12 a.m. EDT on Friday, August 28.

Planets and Constellations

- **Venus Greatest Eastern Elongation (August 15):** Shines brightly as a brilliant evening object in the western sky after sunset.
- **Milky Way Core:** Visible high in the southern skies during evening hours, with the Sagittarius "teapot" asterism pointing directly toward the glowing galactic center.

- **Planet Conjunction (August 15):** A close morning pairing of Mercury and Jupiter low in the eastern dawn twilight.
- **Milky Way:** Late summer provides deep, dark night skies ideal for viewing the bright central band of the Milky Way stretching across the southern horizon.
- **Venus and Mars:** Venus shines brightly in the western sky just after sunset early in the month, while a faint, reddish Mars appears as a morning object in the eastern sky before dawn (with a close pass by the moon on August 9).
- **Bright Summer Stars:** Prominent summer triangle stars like Altair (in Aquila), Deneb (in Cygnus), and Arcturus (in Boötes) remain high and clear.
- **Perseid Peak (August 12–13):** Matches a new moon for pitch-dark skies, delivering 50 to 100 meteors per hour.

Welcome to Sidewalk Stargazing

By Jamie Carter
Submitted by: Tim Kelly

Being aware of the night sky even as you walk, even through a city, can give you a grounding in learning bright stars, constellations and how the night sky changes.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Being aware of the night sky even as
you walk, even through a city,
can give you a grounding
In learning bright stars, constellations
and how the night sky changes.
(Image credit: Roberto Machado Noa via
Getty Images)

Serious stargazing requires planning, right? A dark-sky site, a heavy telescope, a warm jacket. A long drive home. It really doesn't have to be this way. Sure, [light pollution maps](#), [Dark Sky Places](#) and [Dark Sky Discovery Sites](#) are a stargazer's friend, but don't let a desire for ultimate darkness stop you from connecting with the night sky from anywhere you happen to be.

My favorite places to stargaze aren't necessarily my usual observing spots. If you only wait until you're under a truly dark sky to go stargazing, and you'll likely be hopelessly disoriented and unprepared. However, if you've been topping up your knowledge with micro-sessions — even if it's just the position of the [brightest stars](#) and constellations — you'll already recognize its structure. When you finally get a dark sky, you'll be ready to go deeper.

The best preparation is to disorient yourself as much as possible and figure out what you're looking at. Being without the familiar landmarks and usual sightlines of your backyard means working out where everything is. The night sky

can be navigated and known, but only by those who don't waste any opportunity to look up.

What's happening and when to look

This week is ideal for a sidewalk stargazing session with the solar system. Any dusk this week — perhaps when you're on the way to or from a yoga class, a restaurant or out walking the dog — look west after sunset for a trio of easy sights.

The simplest is [the moon](#), high in the south. In the west, [Jupiter](#), and below it, slightly to the north, Venus. These three worlds will be hard to miss, even from a city (planets and the moon are practically light pollution-proof). What you're looking at is, of course, the ecliptic — an imaginary line in the sky from east to west that's the same as the path of the sun through the daytime sky. The planets follow the ecliptic, and so does the moon, more or less (when the moon crosses the ecliptic, it can cause an eclipse — hence the name). The ecliptic is the plane of the solar system; all planets orbit [the sun](#) along it. I always think of the [solar system](#) as a fried egg, with the sun as the yolk and the planets orbiting around it in the white.

Standing on a sidewalk looking at [Venus](#), Jupiter, and the moon gives you something to work with; by joining the dots and heading east, you can draw the ecliptic through the sky.

How and when I do sidewalk stargazing

My own plan this week is deliberately modest. I'll step outside for ten minutes at roughly the same time each evening — around an hour after sunset — and do a quick scan. No equipment, no apps unless I get stuck. I'll start with the moon and note where it sits night by night. Then I'll find Leo in the southeast, using its bright star Regulus as an anchor. From Leo, I'll head to the [Big Dipper](#)/The Plow in the north. That's it. If clouds

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026

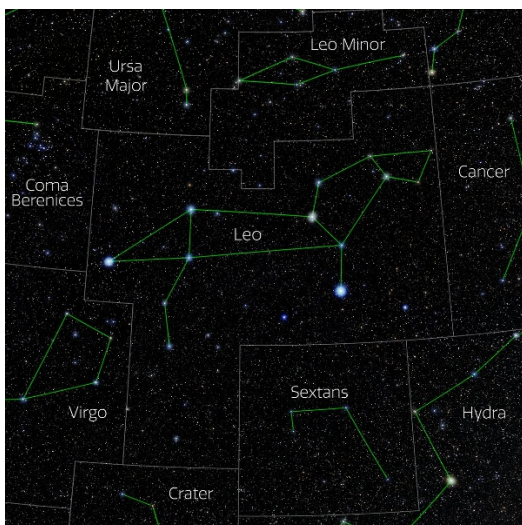


roll in, I'll stop. If I'm tired, I'll stop. The trick is regularity, not endurance.

The biggest misconception is that you need a perfectly dark sky. You don't. You need a consistent routine and a willingness to look up even when conditions are average. In fact, observing from different spots — a sidewalk, a car park, a dimly lit path — forces you to relearn the sky each time. Short, repeated looks at the night sky — even a light-polluted urban sky — reveal that better than any single long session.

Unless you live under Bortle 2 skies, sidewalk stargazing is probably the only way to get to know how the night sky changes from season to season. So next time you're walking home from a pub or restaurant, or taking the dog out before bed, take a minute to stand on the sidewalk and look up — it's a habit that takes you from beginner to recognizing every bright star you can see in an urban sky.

Constellation of the week: Leo



The Leo constellation is an anchor of the naked eye night sky. (Image credit: E. Slawik/NOIRLab/NSF/AURA/M. Zamani)

Leo is one of the few constellations that actually looks like something without much imagination. After dark, face south and look for a backward question mark of stars — this is the Lion's head, with Regulus at its base. It's also known as the Sickle of Leo. From there, a triangle stretches eastward to form the lion's hindquarters.

Leo is a seasonal marker. When it's high in the south after sunset, it's spring in the Northern Hemisphere. It also sits along the ecliptic, so it often welcomes the moon and planets. Practice finding Leo, and you'll have one of the anchors of the spring night sky as a powerful reference point forevermore.

My latest stargazing obsession: Ursa Major's feet



Can you find Talitha and Alkaphrah, Alula Borealis and Australis and Tania Borealis and Australis?

(Image credit: E. Slawik/NOIRLab/NSF/AURA/M. Zamani)

"Spring up, fall down" is how to remember where the most famous stars in the night sky are right now, as seen from the Northern Hemisphere. I'm talking, of course, about the Big Dipper, called the

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Plough in the U.K. On April nights, it hangs at the zenith, the point in the sky directly above an observer. The word comes from the Arabic for "path above the head." Its seven stars — Alkaid, Mizar, Alioth, Megrez, Phecda, Merak and Dubhe, all between 58 and 124 light-years away — form a ladle shape, though it's actually part of the constellation Ursa Major, "The Great Bear," which is a much more satisfying shape to find — particularly its three feet all marked by wide double stars (Talitha and Alkaphrah, Alula Borealis and Australis and Tania Borealis and Australis from front to back).

The tail (or handle) of four stars — Megrez, Alioth, Mizar and Alkaid — is home to a circular arc of ultraviolet emission that stretches 30 degrees across the northern sky. Astronomers now think that this Ursa Major Arc may be a shock wave from an explosion or a supernova that happened over 100,000 years ago.

The Easiest Way to Learn the Summer Night Sky - Starts with These 3 Stars

By Jamie Carter
Submitted by: Tim Kelly

How to use the Summer Triangle stars — Vega, Deneb and Altair — as a key to unlock your understanding of the night sky.



The Summer Triangle stars are a signpost to the Milky Way.

(Image credit: Alan Dyer/VW Pics/UiG via Getty Images)

There is a particular moment every July when the night sky makes perfect sense to me. Every time I step outside at night, I instinctively look overhead for the Summer Triangle. Not because it's the most spectacular sight in the sky. In fact, the vast asterism is almost suspiciously simple: three bright stars, large enough to cut through twilight and light pollution without much effort.

Experienced stargazers quietly depend on the Summer Triangle more than we admit. People imagine astronomy involves memorizing the entire sky at once, knowing exactly where each star is and what it's called. Everyone navigates differently, but we all rely on familiar anchor points because the night sky changes quickly with the seasons.

The Summer Triangle is one of the best anchors because it appears exactly when the northern sky can otherwise feel vague and washed out during late twilight. Once those three stars appear, I immediately know where everything else is. The Milky Way becomes easier to trace. The darker regions of the sky reveal themselves. Constellations stop looking random. Suddenly, I know where the Perseids will emerge later in the night and where to point the binoculars to find

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



summer's dense star fields without even thinking about it.

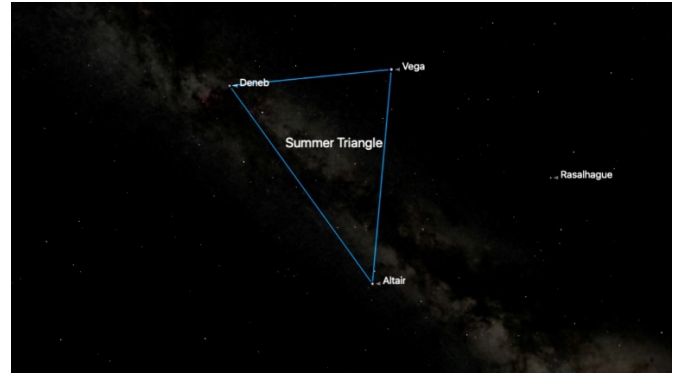
The Summer Triangle also teaches you how to see the night sky. To the untrained eye, the night sky appears as a flat backdrop of stars — hence the "blanket of stars" saying. Every time I hear that cliché, I wince. There is no blanket! The night sky has incredible depth, and there's nowhere better to learn how to appreciate that than when gazing at the Summer Triangle.

Take Altair, the lowest star. It's relatively nearby at about 17 light-years away. It shines brightly because it is close to us. Vega lies slightly farther away at roughly 25 light-years, but it is intrinsically far more luminous. It once served as Earth's North Star thousands of years ago and, thanks to our planet's slow axial wobble, will become the North Star again many millennia from now. So far, so locally we're in the sun's backyard with these two stars. The light from both of them began its journey to us this century.

Then there's Deneb. Deneb is so distant — roughly 2,600 light-years away — that the fact it appears this bright at all becomes genuinely difficult to process. Its light began traveling toward Earth while the Roman Empire was still in existence. The only reason it remains prominent in our sky is that Deneb is an enormously luminous supergiant radiating tens of thousands of times more energy than the sun.

Knowing this about Deneb transforms the Summer Triangle into a three-dimensional shape. Here are three stars that appear neatly connected overhead, but in reality, one is separated by an incomprehensible distance. So next time you look at the Summer Triangle, keep Altair and Vega at the front and push Deneb way, way back. It's not a triangle anymore — it's an arrow pointing far into the distance, thousands of light-years away into the star fields of the distant Milky Way.

What's happening and when to look



Deneb is vastly farther from the sun than Altair and Vega.

(Image credit: Starry Night)

This week is the perfect time to reacquaint yourself with the Summer Triangle using just your naked eyes. Around 11 p.m. local time at mid-latitudes of the Northern Hemisphere, look high in the southeast. Vega is usually the first to appear, high and brilliant with a slightly blue-white color. To its lower left sits Deneb. Farther south is Altair. By midnight, the entire Summer Triangle stands high overhead and remains one of the defining features of the northern summer sky through October.

Stretching directly through it is our view into the Orion Arm of the Milky Way — the spiral arm of the galaxy containing the solar system itself — while farther south, the glowing river of starlight continues toward the galactic core near the constellations Sagittarius and Scorpius, low on the horizon. Under dark skies, the Milky Way visibly streams behind Deneb and through Altair like a river of stars.

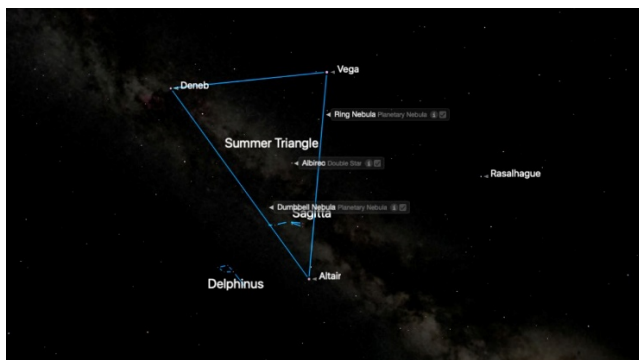
The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



How and when I'm watching it



There are many wonders within the Summer Triangle.
(Image credit: Starry Night)

Once I start slowly sweeping binoculars through the Summer Triangle, I usually lose all sense of structure and planning. Dense star clouds spill into view everywhere. Dark lanes slice through the Milky Way. Tiny clusters appear almost accidentally. The region between Deneb and Altair may be my favorite casual binocular territory in the entire sky.

What to read next

Inside the Summer Triangle itself lies the Cygnus Star Cloud, one of the richest naked-eye sections of the Milky Way visible from northern latitudes. Nearby are the Ring Nebula and the Dumbbell Nebula. The beautiful double star Albireo — one bright yellow and the other a fainter blue — sits at the beak of Cygnus, the Swan.

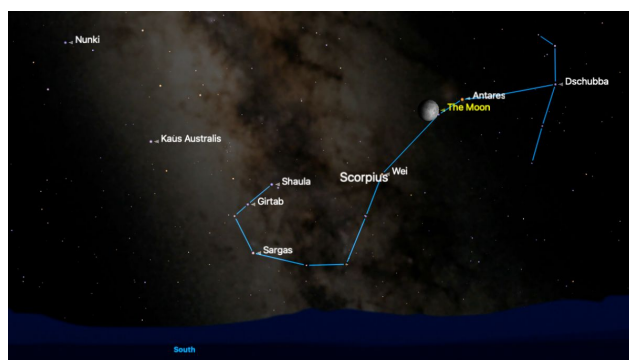
I'll also look for a couple of smaller constellations within and around the Summer Triangle — Delphinus, the Dolphin, hovers to the left of Altair, while tiny Sagitta, the Arrow, hangs above Altair, looking improbably compact.

That's another thing the Summer Triangle taught me — astronomy improves dramatically once you stop hunting objects individually and start

exploring regions instead. It's armchair travel of the grandest kind.

If you're looking for a telescope or binoculars to observe the night sky, our guides for the [best binocular deals](#) and the [best telescope deals](#) can help. Our [best cameras for astrophotography](#) and [best lenses for astrophotography](#) can help you get ready to capture the next stunning skywatching event.

Stargazer's corner: July 24-31, 2026



See the moon and Antares on July 24.
(Image credit: Starry Night)

[The moon](#) will move beneath the Summer Triangle this week, appearing as an 81%-illuminated waxing gibbous moon as it shines close to supergiant star [Antares](#) in the constellation Scorpius, on Friday, July 24. By now, the moon is dominating the night sky, albeit low on the horizon, and on Wednesday, July 29 — the night before the full Buck Moon — the Summer Triangle will appear to point straight at it. Late July also marks the gradual strengthening of the Perseid meteor shower, with occasional early meteors now appearing after midnight. The Southern Delta Aquariids and Alpha Capricornids peak around Thursday-Friday, July 30-31, though the [full moon](#) will reduce visibility of fainter meteors considerably.

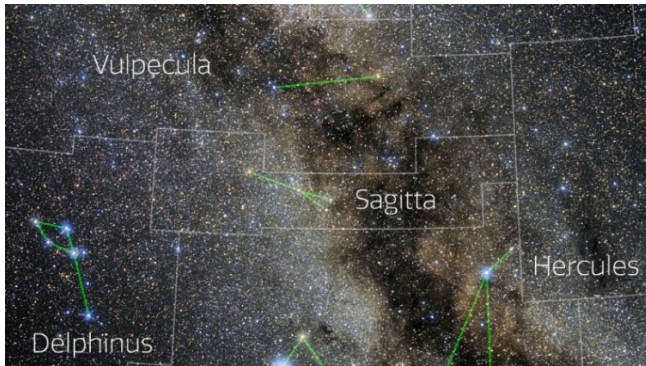
The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Constellation of the week: Sagitta



The tiny constellation Sagitta.
(Image credit: E. Slawik/NOIRLab/NSF/AURA/M. Zamani)

Sagitta, the Arrow, is one of the smallest constellations, but also one of the easiest to recognize once you've found it. It appears as a short line of five stars — all between 450-650 light-years distant — with an arrowhead, shaft and two stars as the fletchings. It's between Cygnus and Aquila.

It's not bright, but it's well-defined, and once you spot it, it becomes a reliable reference point. Learning these smaller constellations helps fill in the gaps between the more obvious patterns.

August 2026 Lunar Eclipse: When and Where to See It

Written By: Catherine Boeckmann
Submitted by: Tim Kelly



Photo by Maria Rao

Mark your calendars: On August 27, 2026, a partial lunar eclipse will leave the Moon nearly swallowed by Earth's shadow, with only a narrow bright sliver remaining—like a red-orange Japanese lantern glowing in the night sky. Here's when and where to watch.

This partial lunar eclipse is especially deep, with 96% of the Moon's face covered. It's not quite total—but it may look close enough to take your breath away.

August 2026 Lunar Eclipse at a Glance

Date: The night of August 27–28, 2026

Type: Deep partial lunar eclipse

Maximum eclipse: 12:12 a.m. EDT on August 28; 11:12 p.m. CDT, 10:12 p.m. MDT, and 9:12 p.m. PDT on August 27

What you may see: Nearly the entire Moon darkened, possibly glowing orange, copper, or red

Visibility: Most of North America, with viewing circumstances varying by location

Equipment: None required; binoculars will make the view even more striking

Eye protection: No special eclipse glasses needed

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



What Time Does Lunar Eclipse Start?

For most of North America, the lunar eclipse takes place on the evening of **Thursday, August 27, 2026**. In the Eastern Time Zone, maximum eclipse comes just after midnight on **Friday, August 28**.

NOTE: The days (Thursday August 28th and Friday August 27th) differ because of the close timeline shared at midnight.

The eclipse reaches maximum at:

12:12 a.m. EDT on Friday, August 28
11:12 p.m. CDT on Thursday, August 27
10:12 p.m. MDT on Thursday, August 27
9:12 p.m. PDT on Thursday, August 27

The entire eclipse lasts more than 5 hours, but the obvious partial phase—when Earth's dark inner shadow crosses the Moon—lasts about 3 hours and 18 minutes. The first and last penumbral stages are much more subtle.

Early stages may occur before moonrise in parts of western North America. Check your [local moonrise time](#) for August 27 to see what will be above the horizon from your location.



Only 3.8% of the Moon's face will remain outside Earth's dark shadow—pretty darn close to totality!
Illustration by Joe Rao using SkySafari.

Where Will the Eclipse Be Visible?

United States and Canada: Across much of the central and eastern United States and Canada, the Moon will be well above the horizon during the deepest part of the eclipse, offering an excellent view. Viewing circumstances will differ farther west:

- **Western Canada and the West Coast:** In parts of western Canada, Washington, Oregon, and northern California, the partial eclipse will already be underway when the Moon rises around sunset. Find a location with an unobstructed view toward the eastern horizon.



In the Pacific Northwest and northern California, the rising Moon will look as though a "bite" has been taken from its lower-left edge.

Illustration by Joe Rao using SkySafari.

- **Hawaii:** The Moon will rise about two-thirds covered. Maximum eclipse will already have passed, and the Moon will be slowly slipping out of Earth's shadow.

The Astrogator

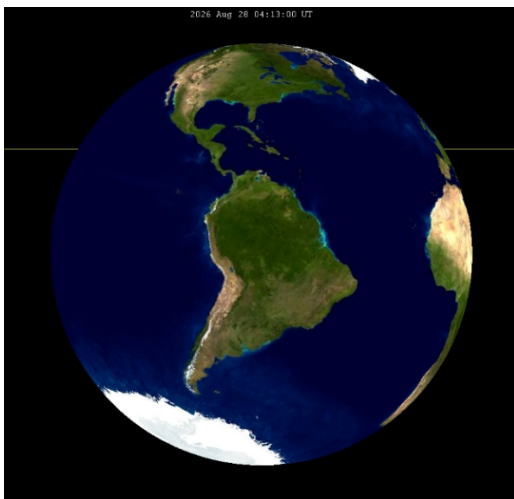
Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



- **Europe and Africa:** Across many of these regions, the Moon will set during the early hours of August 28 while it is still passing through Earth's shadow.

The diagram below shows how the Moon will travel through Earth's shadow and which parts of the world will face the Moon at maximum eclipse.



At maximum eclipse, most of North America will be in the viewing zone—except northwestern Canada and Alaska.

because the Moon may rise while the eclipse is already underway.

How the Lunar Eclipse Unfolds

A lunar eclipse happens when Earth passes between the Sun and the Full Moon, casting its shadow across the lunar surface.

The eclipse begins quietly as the Moon enters the **penumbra**, the pale outer fringe of Earth's shadow.

At first, the shading is so faint that casual observers may notice nothing at all. Only when the Moon's leading edge is nearly three-quarters of the way through the penumbra should a delicate gray veil begin to creep across its lower-left edge.

From there, the shadow steadily deepens.

The real drama begins when the Moon's edge enters the **umbra**, Earth's dark inner shadow. This marks the start of the partial eclipse, which lasts about 3 hours and 18 minutes as the Moon moves through the northern part of Earth's shadow.

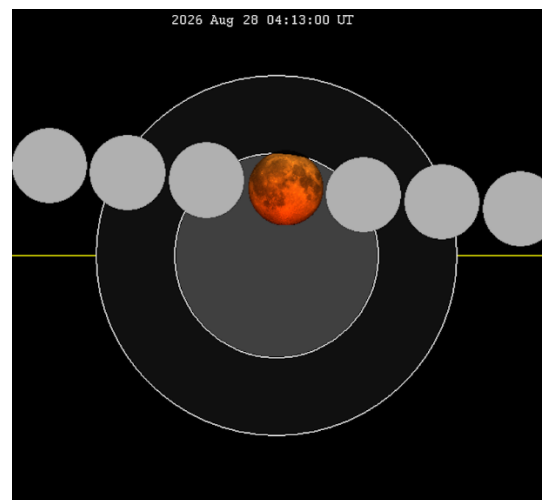
How to Watch the Eclipse

A lunar eclipse is completely safe to watch with your eyes alone. Unlike a solar eclipse, it does not require special eclipse glasses.

You do not need a telescope, either. Simply step outside at the appropriate time and look for the Full Moon.

Binoculars or a small telescope can make the colors and contrasts appear even more striking, but your unaided eyes are all you need to enjoy the show.

If you live on the West Coast, choose a location with a clear view toward the eastern horizon



It may seem as though Earth's shadow is creeping across the Moon. But it's the Moon

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



doing the creeping - moving right to left into Earth's shadow.

Unlike the penumbra, the umbra is much darker and more sharply defined. At first, the Moon's edge may seem to vanish. Deeper in, it should begin to glow faintly, like the coils of an electric stove just beginning to heat.

Will It Look Like a Blood Moon?

Although the term "Blood Moon" most often refers to a total lunar eclipse, this deep partial eclipse may look much the same near maximum, when nearly the entire Moon is inside Earth's dark shadow.

But the Moon does not always blush red.

Its color depends on volcanic activity, atmospheric dust, and other conditions around the globe. The eclipsed disk may glow orange yellow, burn coppery red, deepen to chocolate brown, or fade to ashen gray.

Near maximum eclipse, the Moon glows reddish orange. I describe it as a Japanese lantern because it appears as a pale sunlit cap above a darker red or orange disk. It's the same effect that paints sunrises and sunsets red: Longer red wavelengths pass through Earth's atmosphere and fall onto the lunar surface.

Some observers may even notice a narrow blue or turquoise band near the shadow's edge. This can appear when sunlight filters through ozone high in Earth's atmosphere. However, it appears in binoculars should make the view even more striking.

When Is the Next Lunar Eclipse?

If clouds interfere, the next partial lunar eclipse visible from North America will occur on the evening of January 11, 2028. It will be much smaller, with Earth's shadow taking only a small bite - about 7% of the Moon's width.

There will also be subtle penumbral lunar eclipses before then, but they can be difficult to notice because the Moon does not enter Earth's dark inner shadow.

- **A total lunar eclipse occurs on December 31, 2028**, but the total phase will not be broadly visible across North America.
- **The next total lunar eclipse** widely visible across North America will arrive on the evening of June 25, 2029. That event will favor eastern observers. In parts of the Mountain and Pacific Time Zones, the Moon will rise while the eclipse is already underway.

Frequently Asked Questions

What is a lunar eclipse?

A lunar eclipse happens when Earth passes between the Sun and the Full Moon, casting its shadow across the lunar surface.

What time is the August 2026 lunar eclipse?

Maximum eclipse occurs at 12:12 a.m. EDT on August 28; 11:12 p.m. CDT, 10:12 p.m. MDT, and 9:12 p.m. PDT on August 27.

What will the Moon look like during the eclipse?

The Moon may glow orange-yellow, coppery red, chocolate brown, or even ashen gray. Its exact color will depend on atmospheric dust, volcanic activity, and other conditions around the globe.

Is this a total lunar eclipse?

No. It is a very deep partial lunar eclipse. At maximum eclipse, Earth's dark shadow will cover about 96% of the Moon's visible surface, leaving only a narrow bright sliver.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Will the lunar eclipse look like a Blood Moon?

It may. Although this is officially a partial lunar eclipse, nearly the entire Moon will be inside Earth's shadow and could take on an orange, copper, or reddish glow.

A Guide to Observing Deep-Sky Objects with Binoculars, Telescopes and More

By Jamie Carter

Submitted by: Tim Kelly

The most distant and rewarding sights in the night sky are also the faintest. Here's what deep-space objects are, what optics you'll need to see them and how to plan your observing.

When you purchase through links on our site, we may earn an affiliate commission. [Here's how it works.](#)



Spotting deep-sky gems is very rewarding and can be done with a range of optics.
(Image credit: Tony Rowell/Getty Images)

You've studied Saturn, watched the Big Dipper wind its way around the North Star and you can find Orion's Belt with your eyes closed. Now what? Once you've learned how to navigate the night sky, it's time for some magnification, not to get stars in close up, but to

glimpse galaxies, nebulae and distant clusters of stars. These are the so-called deep space objects, or DSOs, which are not points of light like single planets or stars, but vast structures far beyond the solar system. We're talking about objects with subtle shapes, a faint and diffuse glow spread over a large area and hard-to-discern details. Each will be difficult to spot at first but will reveal not only the reward for patience but also a unique story about the universe's formation and evolution.

For objects like the Orion Nebula, Bode's Galaxy and the Great Globular Cluster in Hercules, optics such as telescopes, smart telescopes and binoculars are essential — and so is patience and, for the best views, dark skies. Here's everything a Northern Hemisphere observer needs to know about deep-sky objects — what they are, how to see them and how to plan your observing.

What is a deep-sky object?



The Andromeda Galaxy (M31) is one of the largest deep-sky objects.
(Image credit: Getty Images)

For now, forget about telescopes and targets, and consider what a deep-sky object is. These celestial targets beyond the solar system fall into three main categories:

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Galaxies: Vast systems containing billions of stars, like our own Milky Way, are sometimes seen face-on and sometimes side-on.

Nebulas: These mighty interstellar clouds of dust and gas come in various flavors according to their origin and how they interact with light, from emission, reflection and dark nebulae to planetary nebulae and supernova remnants.

There are three kinds of optics for observing galaxies, nebulae and star clusters, from affordable binoculars to the latest and greatest telescopes.

Binoculars: There's a reason why all astronomers advise moving from naked-eye stargazing to a pair of binoculars, not a telescope. Blessed with wide fields of view, binoculars reveal the night sky beyond the reach of the naked eye, able to give excellent views of large and bright deep-sky objects — including star clusters and nebulae and the occasional galaxy (as well as the star-fields in the arc of the Milky Way). However, forget pocket-sized binoculars; you'll need about 10x magnification and 42mm or 50mm objective lenses for decent views, making 10x42 and 10x50 models the most popular for amateur astronomers. Although binoculars offer terrific value, they can also be costly, with image-stabilized models the top choice for detailed views.

Smart telescopes: A relatively new phenomenon, smart telescopes eschew an eyepiece for an image processing chip — much as Hubble and Webb do — so instead of dealing in photons, they deal in images. Combining telescope optics with cameras and image processing, smart telescopes take short exposures and layer them, which produces a cleaner signal. They're ideally suited to urban skies, where they're able to filter out light pollution and reveal deep-sky objects in color straight to a smartphone or tablet.

Traditional telescopes: Alt-azimuth or equatorial? Refractor or reflector? The world of telescopes can be baffling to a beginner, so here is a rule of thumb for observing deep-sky objects — you want a reflector telescope with as large an aperture (the diameter of the primary mirror or lens) as you can afford. They come in all shapes and sizes, with compact, portable Newtonians being the most popular. However, large, good-value Dobsonians offer the best value for large apertures at a lower cost.

How to observe star clusters



The Pleiades star cluster.
(Image credit: Westend61 via Getty Images)

No image can match the view of a distant open star cluster (open meaning loose) through binoculars or an optical telescope. Yet, these collections of gravitationally bound stars are surprisingly easy to observe — and there are hundreds to choose from. What you see depends on how bright and how distant they are, but there are plenty of open clusters that are best seen with binoculars (such as the Pleiades) or a small telescope (the Double Cluster in Perseus). More distant open clusters — and all of the 150+ globular clusters in the Milky Way — will require at least a small telescope. Some star clusters will fill the field of view, while others will be small and faint, but most can be glimpsed from light-polluted urban skies.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Here are some of the most popular star clusters in the Northern Hemisphere, with their colloquial name and catalogue designation:

- The Pleiades (M45) open cluster in Taurus
- The Double Cluster (NGC 869 and NGC 884) open clusters in Perseus
- Beehive Cluster (M44) is an open cluster in Cancer
- M35 open cluster in Gemini
- Great Globular Cluster (M13) in Hercules
- M22 globular cluster in Sagittarius

How to observe galaxies



Bode's Galaxy, a spiral galaxy in Ursa Major.
(Image credit: Getty Images)

Seeing distant galaxies with your own eyes can be a challenge, particularly from urban areas. Since galaxies are many millions of light-years away, their surface brightness is such that inky black night skies, moonless nights and a large aperture are required (i.e., a large telescope) for most. There are some exceptions, with the most obvious being the Andromeda Galaxy, which is technically visible to the naked eye under dark skies. The Whirlpool Galaxy, Bode's Galaxy and the Cigar Galaxy are also relatively easy to spot with moderate equipment and medium magnification (a Dobsonian telescope is an excellent choice for galaxies). There are, however, two skills to remember: let your eyes adapt to the dark before you go galaxy-hunting and, when you have a galaxy in the telescope's

crosshairs, look slightly to the side of it, allowing your more light-sensitive peripheral vision to kick in.

Here are some of the most popular galaxies in the Northern Hemisphere:

- Bode's Galaxy (M81) and the Cigar Galaxy (M82).
- Whirlpool Galaxy (M51).
- Andromeda Galaxy (M31).
- Triangulum Galaxy (M33).
- Pinwheel Galaxy (M101).
- Leo Triplet (M65, M66 and NGC 3628).

How to observe nebulas



The Orion Nebula.
(Image credit: Getty Images)

There are many types of nebulas, and most disappoint the beginner. The Orion Nebula, a showpiece easily visible in small scopes or binoculars below Orion's Belt, is a bright eyepiece-filling gem. So too is the Carina Nebula seen from the Southern Hemisphere. However, most others require a lowering of expectations and full use of something that almost all humans lack — patience. For a glimpse of the spectacular structure and texture of nebula — albeit in black and white — requires a dark sky (though filters like UHC and O-III can help block light pollution and enhance contrast) and repeated observations. However, even modest

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



equipment can produce stunning results under dark skies — and for those in urban areas, smart telescopes work wonders with nebulas.

Here are some of the most popular nebulas in the Northern Hemisphere:

- Orion Nebula (M42) is a diffuse nebula in Orion.
- Horsehead Nebula (Barnard 33 and IC 434) is a dark nebula in Orion.
- Cat's Eye Nebula (NGC 6543) is a planetary nebula in Draco.
- Ring Nebula (M57) is a planetary nebula in Lyra.
- Dumbbell Nebula (M27) is a planetary nebula in Vulpecula.
- Lagoon Nebula (M8) is an emission nebula in Sagittarius.

Observing on a budget

You don't need to dive into expensive astronomy gear to come face to face with deep-sky objects. Modest gear is fine; 10x50 binoculars and a 4-inch-aperture reflector telescope are enough to keep you entertained. However, after you've gobbled up the globulars, galaxies and clusters visible in small optics, there may be a temptation to go large. One way to go straight into awe-inspiring views without spending big is a budget smart telescope, which you can leave imaging a faint nebula for many hours, and will give you great results, albeit only as an image. Wherever your journey into amateur astronomy takes you, remember that a dark sky site can offer more improvement than an expensive telescope — and that a second-hand Dobsonian telescope (if you can stand the size) will always be good value.

Planning when to observe

Knowing the best time to view a particular deep-sky object takes time to learn. Everything in the night sky is seasonal, so there will be a particular time of year when a specific object is at its highest in the night sky, in the middle of the night, where you are located. This is an object's culmination, when it is

as close to the zenith — the region of the night sky directly above you, where it's darkest — as it ever gets. This is where Earth's atmosphere interferes least.

If you have a GoTo or a smart telescope, the associated software or apps will tell you what objects are best for the time and place you're observing, with stargazing apps and software like Stellarium, Starry Night and SkySafari doing something similar. Choose one, get to know it and use it to create a short observation list to work through when you're outside at night. That way, you'll stay focused and make the most of your time under the stars.

Auriga

Google
Submitted by: Tim Kelly

Auriga is a constellation in the northern celestial hemisphere. It is one of the 88 modern constellations; it was among the 48 constellations listed by the 2nd-century astronomer Ptolemy. Its name is Latin for '(the) charioteer', associating it with various mythological beings, including Erichthonius and Myrtilus. Auriga is most prominent during winter evenings in the northern Hemisphere, as are five other constellations that have stars in the Winter Hexagon asterism. Because of its northern declination, Auriga is only visible in its entirety as far south as -34° ; for observers farther south it lies partially or fully below the horizon. A large constellation, with an area of 657 square degrees, it is half the size of the largest, Hydra.

Its brightest star, Capella, is an unusual multiple star system and amongst the brightest stars in the night sky. Beta Aurigae is an interesting variable star in the

The Astrogator

Grand Strand Astronomers Club Newsletter

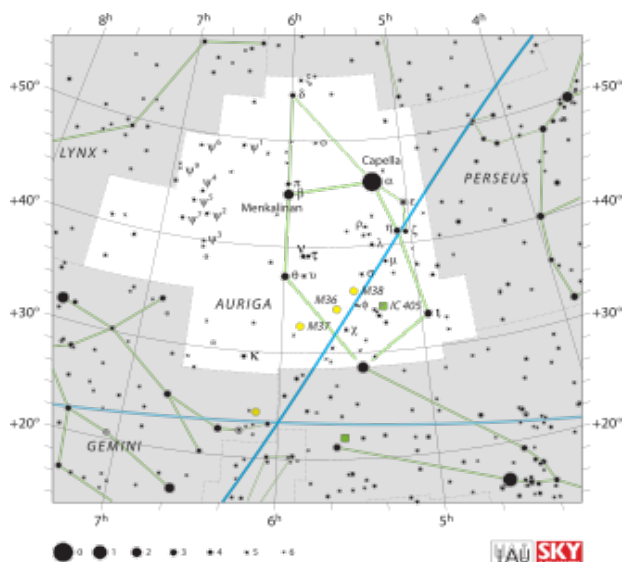
Volume #4, Issue #6
August 1, 2026



constellation; Epsilon Aurigae, a nearby eclipsing binary with an unusually long period, has been studied intensively. Because of its position near the winter Milky Way, Auriga has many bright open clusters in its borders, including M36, M37, and M38, popular targets for amateur astronomers. In addition, it has one prominent nebula, the Flaming Star Nebula, associated with the variable star AE Aurigae.

In Chinese mythology, Auriga's stars were incorporated into several constellations, including the celestial emperors' chariots, made up of the modern constellation's brightest stars. Auriga is home to the radiant for the Aurigids, Zeta Aurigids, Delta Aurigids, and the hypothesized Iota Aurigids.

Auriga, or "The Charioteer," is a prominent northern hemisphere constellation visible during winter. Easily recognizable by its distinct pentagon shape, its brightest star is Capella—the sixth-brightest star in the sky. Auriga is renowned for its rich open star clusters and lies just north of Taurus. [1, 2, 3, 4, 5]



How to Find Auriga

Auriga dominates the evening sky during the winter months in the Northern Hemisphere. Look high overhead and to the northeast of the constellation Orion. You can also find it by locating Taurus's V-shaped head and following the line of its horns. [1, 2, 3, 4]

Auriga is famous for its pentagonal asterism, anchored by its brightest star, **Capella**. [1, 2]

Key Stars in Auriga

- **Capella (α Aurigae):** The crown jewel of Auriga, this is the third-brightest star in the Northern Hemisphere. It shines a distinct yellow color and is actually a quadruple star system (two yellow giants and two red dwarfs) located about 42 light-years away. [1, 2]
- **Menkalinan (β Aurigae):** The second-brightest star, shining at magnitude 1.90. It is a binary star system located roughly 81 light-years away. [1, 2, 3, 4, 5]

Notable Deep-Sky Objects

Because Auriga borders the winter Milky Way, it is packed with beautiful cosmic sights, particularly open star clusters. [1]

- **Messier 36 (M36):** A stunning, loose open cluster often called the "Pinwheel Cluster."
- **Messier 37 (M37):** The farthest and visually the richest of the Auriga open clusters, packed with hundreds of stars.
- **Messier 38 (M38):** A large, bright cluster arranged in an X-like shape.

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



- **The Flaming Star Nebula:** A beautiful emission and reflection nebula powered by the runaway blue star AE Aurigae. [1, 2, 3, 4, 5]

Mythology & History

Though its Latin name translates to "The Charioteer," the constellation's mythology is a mash-up of ancient tales. The Greeks often associated it with Erichthonius, the legendary Athenian king who invented the four-horse chariot. Curiously, ancient depictions almost always portray this charioteer holding a mother goat (Capella) and her kids. This stems from even older Babylonian traditions that depicted these stars as a shepherd with a flock of goats. [1,

History and mythology

The first record of Auriga's stars was in Mesopotamia as a constellation called GAM, representing a scimitar or crook. However, this may have represented just Capella (Alpha Aurigae) or the modern constellation as a whole; this figure was alternatively called Gamlum or MUL.GAM in the MUL.APIN. The crook of Auriga stood for a goat-herd or shepherd. It was formed from most of the stars of the modern constellation; all of the bright stars were included except for Elnath, traditionally assigned to both Taurus and Auriga. Later, Bedouin astronomers created constellations that were groups of animals, where each star represented one animal. The stars of Auriga comprised a herd of goats, an association also present in Greek mythology.^[8] The association with goats carried into the Greek astronomical tradition, though it later became associated with a charioteer along with the shepherd.^[9]

In Greek mythology, Auriga is often identified as the hero Erichthonius of Athens, the chthonic son of Hephaestus who was raised by the

goddess Athena. Erichthonius was generally credited to be the inventor of the quadriga, the four-horse chariot, which he used in the battle against the usurper Amphictyon, the event that made Erichthonius the king of Athens.^{[10][11]} His chariot was created in the image of the Sun's chariot, the reason Zeus placed him in the heavens.^[12] The Athenian hero then dedicated himself to Athena and, soon after, Zeus raised him into the night sky in honor of his ingenuity and heroic deeds.^[13]



A painting by Peter Paul Rubens entitled Finding of Erichthonius; Erichthonius and Auriga are often associated.

Auriga, however, is sometimes described as Myrtilus, who was Hermes's son and the charioteer of Oenomaus.^[11] The association of Auriga and Myrtilus is supported by depictions of the constellation, which rarely show a chariot. Myrtilus's chariot was destroyed in a race intended for suitors to win the heart of Oenomaus's daughter Hippodamia. Myrtilus earned his position in the sky when Hippodamia's successful suitor, Pelops, killed him, despite his complicity in helping Pelops win her hand. After his death, Myrtilus's father Hermes placed him in the sky. Yet

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



another mythological association of Auriga is Theseus's son Hippolytus. He was ejected from Athens after he refused the romantic advances of his stepmother Phaedra, who committed suicide as a result. He was killed when his chariot was wrecked, but revived by Asclepius.^{[12][14]}

In late antiquity two Latin poets, Claudian and Nonnus, identified Auriga as Phaethon in their works.^[15] In the common version of the myth, Phaethon, the son of the sun Helios, attempted to drive his father's chariot for a day. Unable to control the chariot, Phaethon veered off course, causing chaos on the earth below. In order to avert further disaster, Zeus killed Phaethon with a thunderbolt and his burned remains fell to the earth, landing in a river.^[16] Claudian and Nonnus add to this story that Helios then placed Phaethon in the sky as the constellation Auriga.^[15] Regardless of Auriga's specific representation, it is possible that the constellation was created by the ancient Greeks to commemorate the importance of the chariot in their society.^[17]

An incidental appearance of Auriga in Greek mythology is as the limbs of Medea's brother. In the myth of Jason and the Argonauts, as they journeyed home, Medea killed her brother and dismembered him, flinging the parts of his body into the sea, represented by the Milky Way. Each individual star represents a different limb.^[18]

Capella is associated with the mythological she-goat Amalthea, who breast-fed the infant Zeus. It forms an asterism with the stars Epsilon Aurigae, Zeta Aurigae, and Eta Aurigae, the latter two of which are known as the *Haedi* (the Kids).^[19] Though most often associated with Amalthea, Capella has sometimes been associated with Amalthea's owner, a nymph. The myth of the nymph says that the goat's hideous appearance, resembling a Gorgon, was partially responsible for the Titans' defeat, because Zeus

skinned the goat and wore it as his aegis.^[12] The asterism containing the goat and kids had been a separate constellation; however, Ptolemy merged the Charioteer and the Goats in the 2nd-century Almagest.^[17] Before that, Capella was sometimes seen as its own constellation—by Pliny the Elder and Manilius—called *Capra*, *Caper*, or *Hircus*, all of which relate to its status as the "goat star".^[20] Zeta Aurigae and Eta Aurigae were first called the "Kids" by Cleostratus, an ancient Greek astronomer.^[12]



Auriga carrying the goat and kids as depicted in *Urania's Mirror*, a set of constellation cards illustrated by Sidney Hall, London c. 1825.

Traditionally, illustrations of Auriga represent it as a chariot and its driver. The charioteer holds a goat over his left shoulder and has two kids under his left arm; he holds the reins to the chariot in his right hand.^[2] However, depictions of Auriga have been inconsistent over the years. The reins in his right hand have also been drawn as a whip, though. Capella is almost always over his left shoulder and

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



the Kids under his left arm. The 1488 atlas Hyginus deviated from this typical depiction by showing a four-wheeled cart driven by Auriga, who holds the reins of two oxen, a horse, and a zebra. Jacob Micyllus depicted Auriga in his Hyginus of 1535 as a charioteer with a two-wheeled cart, powered by two horses and two oxen. Arabic and Turkish depictions of Auriga varied wildly from those of the European Renaissance; one Turkish atlas depicted the stars of Auriga as a mule, called Mulus clitellatus by Johann Bayer.^[20] One unusual representation of Auriga, from 17th-century France, showed Auriga as Adam kneeling on the Milky Way, with a goat wrapped around his shoulders.^[21]

Occasionally, Auriga is seen not as the Charioteer but as Bellerophon, the mortal rider of Pegasus who dared to approach Mount Olympus. In this version of the tale, Jupiter pitied Bellerophon for his foolishness and placed him in the stars.^[22]

Oxford research finds it likely the group was equally named Agitator in about the 15th century and provides a quotation as late as 1623, from a Gerard de Malynes multi-topic work.^[23] Some of the stars of Auriga were incorporated into a now-defunct constellation called Telescopium Herschelii.

This constellation was introduced by **Maximilian Hell** to honor **William Herschel's** discovery of **Uranus**. Originally, it included two constellations, Tubus Hershelii Major [**sic**], in **Gemini**, **Lynx**, and Auriga, and Tubus Hershelii Minor [**sic**] in **Orion** and **Taurus**; both represented Herschel's telescopes. **Johann Bode** combined Hell's constellations into Telescopium Herschelii in 1801, located mostly in Auriga.^[24]

Since the time of Ptolemy, Auriga has remained a constellation and is officially recognized by the **International Astronomical Union**, although like all modern constellations, it is now defined as a specific region of the sky that includes both the ancient pattern and the surrounding stars.^{[25][26]}

In 1922, the IAU designated its recommended three-letter abbreviation, "Aur".^[27] The official boundaries of Auriga were created in 1930 by Belgian astronomer **Eugène Delporte** as a polygon of 20 segments. Its **right ascension** is between 4h 37.5m and 7h 30.5m and its **declination** between 27.9° and 56.2° in the **equatorial coordinate system**.^[3]

The Astrogorator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



Astronomy on the Internet (Sales, Observatories, Organizations & More)

Submitted by: Tim Kelly

The next two charts are from the astronomy club I belonged to back in Pittsburgh, PA. I hope that some or all can be used by GSA Club members and supporters.

ASTRONOMY ON THE INTERNET

ASTRONOMY - EQUIPMENT SALES & VENDORS

Anacortes Telescope & Wild Birds	http://www.BuyTelescopes.com
Astronomics	http://www.astronomics.com
Astrocards	http://www.rahul.net/Astro-Mall/astro-cards.html
AstroMart	http://www.astromart.com
Astronomy Mall (assorted vendors)	http://www.rahul.net/resource/Astronomy-Mall/
Eagle Optics	http://store.yahoo.com/eagleoptics/index.html
Kendrick Astro Instrument	http://www.kendrick-ai.com
Meade Instruments Corporation	http://www.meade.com
Oceanside Photo & Telescope	http://www.optcorp.com
Orion Telescope and Binocular Center	http://www.telescope.com/default.asp
Pocono Mountain Optics	http://www.pocmntop.com/
TeleVue Optics	http://www.TeleVue.com

ASTRONOMY GENERAL INFORMATION

Astronomical Data Center	http://adc.gsfc.nasa.gov/adc.html
Astronomical Museum of Bologna	http://boas3.bo.astro.it/dip/Museum/MuseumHome.html
AstroWeb	http://msowww.anu.edu.au/~anton/astroweb/
Auroral Activity	http://www.pfrr.alaska.edu/~pfrr/AURORA/INDEX.HTM
Canadian Astronomical Data Centre	http://cadwww.dao.nrc.ca/CADC-homepage.html
Comet Home Page	http://encke.jpl.nasa.gov/
Expanding Universe	http://www.tpl.toronto.on.ca/TRL/astronomy/index.html
HEASARC General Astronomy Information	http://heasarc.gsfc.nasa.gov/docs/www_info/webstars.html
Hubble Telescope 1990-1995 Photos	http://oposite.stsci.edu/pubinfo/BestOfHST95.html
Mars Exploration Program	http://mpfwww.jpl.nasa.gov/
Mars Meteorites	http://www.jpl.nasa.gov/snc/
NASA Homepage	http://www.nasa.gov/
Nine Planets - Multimedia Tour	http://seds.lpl.arizona.edu/billa/tnp/nineplanets.html
Pittsburgh Astronomy	http://trfn.clpgh.org/Education/K12/homework/pghastron.html
Solar Images	http://umbra.nascom.nasa.gov/images/latest.html
Solar System Live	http://www.fourmilab.ch/solar/solar.html
Venus	http://www.eps.mcgill.ca/~bud/craters/FaceOfVenus.html

ASTRONOMY - JOURNALS AND BOOKS

Astrograph	http://www.erols.com/astrogph/
Astronomy Hypertext Book	http://zebu.uoregon.edu/text.html
Astronomy Magazine	http://www.kalmbach.com/astro/astronomy.html
Sky & Telescope Magazine	http://www.skypub.com
StarDate Online	http://pio.as.utexas.edu/
Willmann-Bell Publishers	http://www.willbell.com/

ASTRONOMY - OBSERVATORIES

Allegheny Observatory	http://isi9.mtwilson.edu/~david/AO/ao.html
Big Bear Solar Observatory	http://www.bbso.njit.edu/
Compton Gamma Ray Observatory	http://coss.gsfc.nasa.gov/coss/coss.html
Hubble Space Telescope	http://spacelink.msfc.nasa.gov/NASA/Projects/Space.Science/Origins/Hubble.Space.Telescope
Keck Observatory	http://www2.keck.hawaii.edu:3636/
Kitt Peak	http://claret.kpno.noao.edu/
Lowell Observatory	http://www.lowell.edu/
McDonald Observatory	http://www.as.utexas.edu/mcdonald/mcdonald.html
Mt Palomar Observatory	http://astro.caltech.edu/observatories/palomar/
Mt Wilson Observatory	http://www.astro.ucla.edu/~obs/cur_drw.html
National Radio Astronomy Observatory	http://www.nrao.edu/

The Astrogator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



ASTRONOMY - ORGANIZATIONS

AAAP (Amateur Astronomers Assn of Pgh)	http://trfn.clpgh.org/aaap/
Amateur Radio Astronomy HomePage	http://www.skognet.com/~awl/wc9c/ras/ras.htm
ARAC (Allegheny Region Astronomical Assn.)	http://members.aol.com/astrocln
Association of Variable Star Observers	http://www.aavso.org/
American Astronomical Society	http://www.aas.org/
Astronomical League	http://www.astroleague.org/
Carnegie Science Center	http://www.csc.clpgh.org/
International Astronomical Union	http://www.iau.org/
IAU-Center for Astronomical Telegrams	http://cfa-www.harvard.edu/cfa/ps/Headlines.html
International Dark Sky Assn	http://www.darksky.org/~ida/index.html
NASA Homepage	http://www.nasa.gov/
North American Meteor Network	http://web.infoave.net/~meteorobs/
North York (Ontario) Astron Assn	http://www.interlog.com/~nyaa/
Ohio Turnpike Astronomers Assn	http://www.en.com/users/cygnus/whatis.htm
Project CLEA	http://www.gettysburg.edu/project/physics/clea/CLEAhome.html
Regional Clubs, Museums, Observatories	http://www.access.digex.net/~stargzer/OtherClubs.html
Royal Astronomical Society	http://www.ras.org.uk/ras/
Royal Astronomical Society of Canada	http://apwww.stmarys.ca/~rascwww/nat/rasc.html

ASTRONOMY - VACATIONS

Astroblast	http://www.oras.org/astrb1st.htm
SkyWatchers Inn (Arizona)	http://www.communiverse.com/skywatcher/
Starfest (Mt. Forest, Ontario, Canada)	http://www.interlog.com/~nyaa/starfest/toc.html
Stellafane (Springfield, Vermont)	http://www.stellafane.com/
Texas Star Party (Ft. Davis, Texas)	http://fohnix.metronet.com/~tsp/index1.html

ASTRONOMY - WEATHER

Accuweather	http://www.accuweather.com/weatherf/index Corp
Intellicast	http://www.intellicast.com/
WeatherNet - U of Michigan	http://cirrus.spri.umich.edu/wxnet/

INTERNET SEARCH ENGINES

AltaVista	http://altavista.digital.com/
Google	http://www.google.com/
Lycos	http://www.lycos.com/
Northern Light	http://www.northernlight.com/
Webcrawler	http://www.webcrawler.com/
Webferret Internet Search Software	http://www.ferretsoft.com/netferret/index.html
Yahoo	http://www.yahoo.com/

INTERNET BOOK SEARCH ENGINES

Amazon Books	http://www.amazon.com/exec/obidos/ats-query-page
Barnes & Noble	http://www.barnesandnoble.com/

INTERNET SOFTWARE SEARCH ENGINES

Download.com	http://www.download.com
Shareware.com	http://shareware.cnet.com/
ZDNet Software Library	http://www.zdnet.com/swlib/

INTERNET TELEPHONE NUMBER SEARCH ENGINES

Switchboard	http://www.switchboard.com/
-------------	---

INTERNET URL MINDER

Email Notifications of Web Site Changes	http://www.netmind.com/URL-minder/new/register.html
---	---

The Astrogorator

Grand Strand Astronomers Club Newsletter

Volume #4, Issue #6
August 1, 2026



The August Night Sky Chart

Year: **2026** Month: **August** Day: **15** Hour: **22.00** Minute: **00:00** Second: **00:00**

Heavens Above

