

# ASTROGATOR



## November 2024



### 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 November 14, 2024 @ 7:00 pm  
Meeting: VIA Zoom.

Please see email or Facebook for link

Observing Sessions:

Saturday November 2, 2024  
Location: Hampton Plantation  
Gates open @ 6:00 pm



**AURORA**  
Mike Issac

#### Grand Strand Astronomer's Social Media

Grand Strand Astronomers' Website



Grand Strand Astronomers' 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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## Aurora

**Photographer:** Mike Issac

**Place:** Myrtle Beach, SC

The northern lights photos were taken with an iPhone 14 camera.

The camera was set to night mode and set to max exposure, which I believe is 10 seconds.

The location was on North Litchfield Beach.

The photos were taken on Oct 10, 2024 between 10:00 and 10:30 p.m.

## 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](mailto: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 had three new members for the month of October. GSA provides a large welcome to Rosa Gouls, Christopher Benitto and Tim Sheilds. We hope you enjoy our club, which is in it's infancy We have lots to learn and lots to teach.

### **Grand Strand Astronomers October Meeting Recap**

By Gerald Drake using ChatGPT to convert notes

The GSA meeting on October 24, 2024, took place via Zoom from 7:00 PM to 8:30 PM, with Ian welcoming participants to a lightly attended session. He highlighted the recent good weather following a challenging year and mentioned the recent aurora on October 10 and a comet sighting the previous week.

Upcoming events include an observing session on November 2 at Hampton Plantation and an indoor meeting on November 14, strategically planned to avoid holiday conflicts. The group also discussed potential outings at Brookgreen Gardens or Huntington Beach State Park.

Members shared their experiences with the recent aurora, noting that while it was difficult to see, some captured impressive photographs. Ian and Mike Isaac showcased their photos of the comet, with Mike detailing his use of an iPhone 14 in night mode to capture images that revealed a pink glow invisible to the naked eye. Ian also shared a striking picture of the comet alongside the Milky Way and discussed post-processing techniques that enhanced his images.

Ian demonstrated Stellarium as a tool for tracking celestial events, highlighting its utility in planning for future observations. He confirmed that the comet is still expected to be visible during the next outing at Hampton Plantation.

The meeting also featured notable contributions from photographers Johnny Horne and Joe Pedit, who shared exceptional images and time-lapse videos, respectively. Their work can be found on Facebook.

Using Stellarium, Ian demonstrated that Mars will be in opposition on January 16, 2025, along with excellent views of the Moon, Jupiter, and Orion Nebula. This will provide an excellent opportunity for photography and/or public observing. Ian also noted a decent lunar eclipse is occurring on March 14, 2025. It will be around 2:00 AM.

Ian shared that NINA, an astrophotography sequencing suite, can now use Stellarium horizon files for better planning of astrophotography sessions.

The group concluded with discussions about the Huntington Beach State Park sleepover event on November 9, where telescopes are welcome. Ian will check with the park for details. Gerald will reach out to Playcard Environmental Learning Center to see if they want to plan something for the Mars opposition.

The meeting wrapped up with a focus on the benefits of observing planets in light-polluted areas and plans for future activities.

See view the presentation of the Zoom meeting, see the following link:

<https://www.youtube.com/watch?v=vbSfYkU3AD4>

## **Comet C/2024 S1 (Atlas)**

Space.com

Tim Kelly

On Monday (Oct. 28), the comet evaporated as it was heading toward perihelion, the closest point to the sun in its orbit. There were earlier hopes that the comet, officially designated C/2024 S1 (ATLAS), could become a "Halloween treat" visible to the naked eye, but these were ultimately just wishful thinking; astronomers had already begun observing the cosmic snowball beginning to disintegrate earlier this month.

Now, thanks to the Solar and Heliospheric Observatory (SOHO), a spacecraft jointly operated by NASA and the European Space Agency, we know for sure how and when comet ATLAS met its demise.

Comet C/2024 S1 (ATLAS) passed its closest point to Earth on Oct. 23, reaching a magnitude of 8.7, far too dim to be seen with the naked eye. Still, telescopes were able to catch a glimpse of the icy visitor from the outer solar system.

After that approach, the comet began flying toward the sun, making it difficult to see by anything other than specialized instruments designed for solar observations.

Comet ATLAS was first discovered only last month, on Sept. 27, by the Asteroid Terrestrial-impact Last Alert System (ATLAS) project in Hawaii. The comet belongs to a family known as Kreutz sungrazers, comets that all follow a similar orbit that takes them very close to the sun every 500 to 800 years, depending on each one's individual orbit.

Kreutz sungrazers are believed to be fragments of a single comet that broke up at some point in the distant past. The earliest sungrazer may have been observed as far back as 317 BC, according to the European Space Agency.

Like all comets, C/2024 S1 (ATLAS) was essentially a "dirty snowball," a frozen body composed of gases, rocks and dust left over from the earliest days of our solar system some 4.6 billion years ago.

Some comets can take up to hundreds of thousands or millions of years to orbit the sun, although some can orbit on much shorter timescales. Halley's Comet, one of the most well-known comets, orbits about every 75 years. Comet Encke, meanwhile, orbits the sun every 3.3 years.

Another comet, known as C/2023 A3 (Tsuchinshan-ATLAS), survived its closest approach to the sun on Sept. 27 and put on quite a show for observers worldwide, becoming visible to the naked eye throughout much of October.

## **Comet A3 Is The Brightest Comet In 27 Years! Don't Miss It**

EarthSky.org

Tim Kelly

### **Brightest comet in 27 years!!**

In case you haven't heard Comet C/2023 A3 (Tsuchinshan-ATLAS) aka Comet A3 is in the evening sky! And it's the brightest comet in 27 years, the brightest since Hale-Bopp in 1997. Look to the upper right of the bright planet Venus for Comet A3 and its long wispy tail.

Our charts are mostly set for the northern half of Earth. To see a precise view and time from your location, try Stellarium which is free on line to download and use. <https://stellarium.org/>.

### **Comet A3 and its anti-tail, October 13-15**

Comet A3 has an anti-tail! Can you see it? An ordinary comet tail always points away from the sun. That's because comet tails are created by the pressure of solar radiation and by the solar wind streaming from our star. But during the period around October 13 to October 15, as we cross the plane of the comet orbit Comet A3 is exhibiting a rare anti-tail as well. The anti-tail points toward the sun.

### **We might have 2 comets**

Stay tuned, because we might have another bright comet towards the end of October.

### **Look west after sunset for Comet A3**

In September and early October for Southern Hemisphere observers with dark skies and good optical aid Comet C/2023 A3 (Tsuchinshan ATLAS) put on a fantastic show in the morning sky. Amazing images of A3 in the morning were taken. Then A3 was lost in the sun's glare for a few days. Now it is back, quite low along the western horizon as soon as the Sun disappears.

Every evening now, Comet A3 will appear a bit higher from the western horizon, in the hour or so after sunset. Its perihelion (closest point to the sun) was September 27. And its closest point to Earth was October 12. So it's now moving away from us, and thereby getting fainter. And yet, in the days ahead, the comet should be easier to see than it was for its morning appearance last month. That's because many comets are brighter after perihelion. And it's because the comet will be farther each evening from the sun's glare.

### **How bright? How easy to see?**

Comets are unpredictable. And Comet A3 is not going to be a Comet of the Century. But if it continues to perform well, it might be the brightest comet of the year except for one other possibility.

There is a second comet in Earth skies that might become bright, if it does not disintegrate. The ATLAS telescope also discovered Comet C/2024 S1 (ATLAS). It was first known as a sungrazer. It was first given the designation of A11bP7L, but now it's officially C/2024 S1 (ATLAS) or Comet S1 for short. Predictions for the comet had it reaching as bright as around October 28. But on October 8, astronomers reported it might be breaking up.

### Helpful tips to spot a comet

- 1. Be sure you're looking at the correct direction and time.** Comet A3 will be visible low in the west after sunset beginning around October 14. Comet S1, if it holds together, will be visible in late October to early November, low in the east before sunrise.
- 2. You need a dark, unobstructed sky.** Start looking when the sky is dark, but close to sunrise or sunset. Make sure there are not any hills, trees or buildings blocking your view.
- 3. If you can see the comet with your eye, try your phone.** Most cell phone cameras provide a night or low-light mode. But capturing an image of the comet will require that you hold the camera firmly or lean against a fixed object like a tree to avoid shaky or blurred images. Try taking a few pictures facing west after sunset (for Comet A3) or east before sunrise (for Comet S1). These images accumulate the light for a few seconds, so you might be able to catch the comet in your images, even if you can see it with the eye.

**4. AFTER you've located the comet, use binoculars or your eyes to sweep** in that area in the sky. You might discover that, in fact, you can see both the comet and its tail with your eye alone.

**5. If you see it,** try taking your own measurements of the comet tail. For example, if you take a good look through a pair of binoculars that has a 5-degree field of view, and you can see the tail extending about 3/5 of that field, you're seeing around 3 degrees of the tail. And that means you are seeing,

## **Orionids Meteor Showers May Offer A Treat for Stargazers**

Wayne Smith – NASA  
Tim Kelly

From a total solar eclipse in April to a partial lunar eclipse of September's Harvest Moon, 2024 has been sweet for skywatchers – professionals and amateurs alike. And just in time for Halloween, stargazers can anticipate another treat in the pre-dawn hours of Oct. 20 and 21 thanks to the Orionids Meteor Showers. That is unless the Moon or cloudy skies don't provide too many tricks.

The Orionids, which peak during mid-October each year, are considered to be one of the most beautiful meteor showers of the year. Orionid meteors are known for their brightness and for their speed. Of course, the ability to see them will depend on clear evening skies. And a bright waning gibbous Moon – where it moves between full and last quarter phases – will outshine fainter meteors, greatly reducing the number of meteors visible to skywatchers.

Still, a few Orionids should hopefully be viewable in both the Northern and Southern Hemispheres during the hours after midnight through before dawn on the mornings of Sunday, Oct. 20, and Monday, Oct. 21.

The Orionids are also framed by some of the brightest stars in the night sky, which lend a spectacular backdrop for these showy meteors.

“Find an area well away from the city or street lights,” said Bill Cooke, who leads NASA's Meteoroid Environment Office at the agency's Marshall Space Flight Center in Huntsville, Alabama. “Come prepared with a blanket. Lie flat on your back and look up, taking in as much of the sky as possible. In less than 30 minutes in the dark, your eyes will adapt and you will begin to see meteors.”

Aside from potentially producing spectacular fireballs, the Orionids reflect quite a legacy. Their parent comet is the most famous one of them all – Halley's Comet. Each time that Halley returns to the inner solar system its nucleus sheds ice and rocky dust into space. These dust grains eventually become the Orionids in October and the Eta Aquarids in May if they collide with Earth's atmosphere.



Comet Halley takes about 76 years to orbit the Sun once. The last time comet Halley was seen by casual observers was in 1986 and it will not enter the inner solar system again until 2061. The comet is named for Edmond Halley, who discovered in 1705 that three previous comets seemed to return every 76 years or so and suggested that these sightings were in fact all the same comet. The comet returned as he predicted, and so it was named in Halley's honor. So, while it'll take another 37 years to see Halley's Comet, the Orionids offer a glimpse of its past.

The Orionids start winding down what has been an eventful calendar year for skywatching events. There was the total solar eclipse across most of North America on April 8 – the alignment of the Sun, Moon, and Earth – creating a total solar eclipse lasting 4 minutes and 12 seconds. The Perseids brought night sky fireworks in August. And the partial lunar eclipse of a full supermoon – the Harvest Moon – welcomed fall and provided some spectacular images. Other skywatching events for 2024 include the Geminid and Ursid meteor showers in December.

## **The Sky Alive**

Tim Kelly

While surfing the internet for astronomical articles for our newsletter I came across the below website. The website's title is: "The Sky Alive" and has just about every tool you would need for a good night of observation. Below is just a touch of what the website has to offer.

### **About**

This site aims to provide accurate real time data and finder charts for the most interesting Solar System objects. Currently we are tracking 483 objects, including comets, planets, asteroids and spacecrafts.

### **Ephemeris**

The ephemeris provided by this site (which include coordinates, distances from Earth and Sun, estimated magnitude and, for comets, time to perihelion) are obtained from the [JPL Horizons](#) service. In order to compute real time data, we are using interpolation of the Horizons sampled data, which provides a quite good accuracy. If you need very accurate and latest up-to-date data, please use the Horizons service directly.

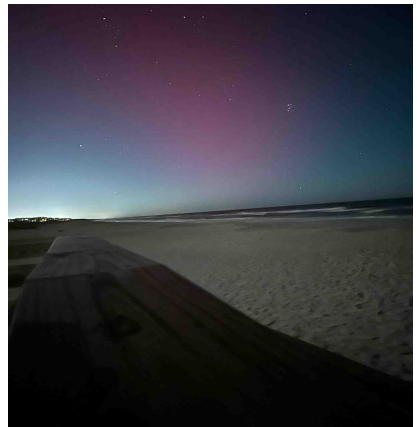
### **Finder Charts and Catalogs**

Our Finder Charts are created using the [Digitized Sky Survey](#) imagery. For each object, we acquire a 60'x40' DSS image in the red channel and we add overlays to represent the observed object, plus informative labels about the stars and deep sky objects represented in the chart. The position of the overlays is dynamic, this means that in case of fast moving objects (e.g. fast moving comets) it should be possible to see the live movement of the object on the chart.

## Aurora

Mike Issac

On October 10<sup>th</sup> Mike Issac took a trip to Litchfield Beach. Litchfield Beach is located half way between Murrells Inlet and Pawleys Island. Mike was able to take several photographs of the auroras. As mentioned on page 3, Mike used his everyday iPhone 14 to capture the northern lights. Which goes to show what great cameras today's cell phone have. The following are some of the photographs take by Mike.

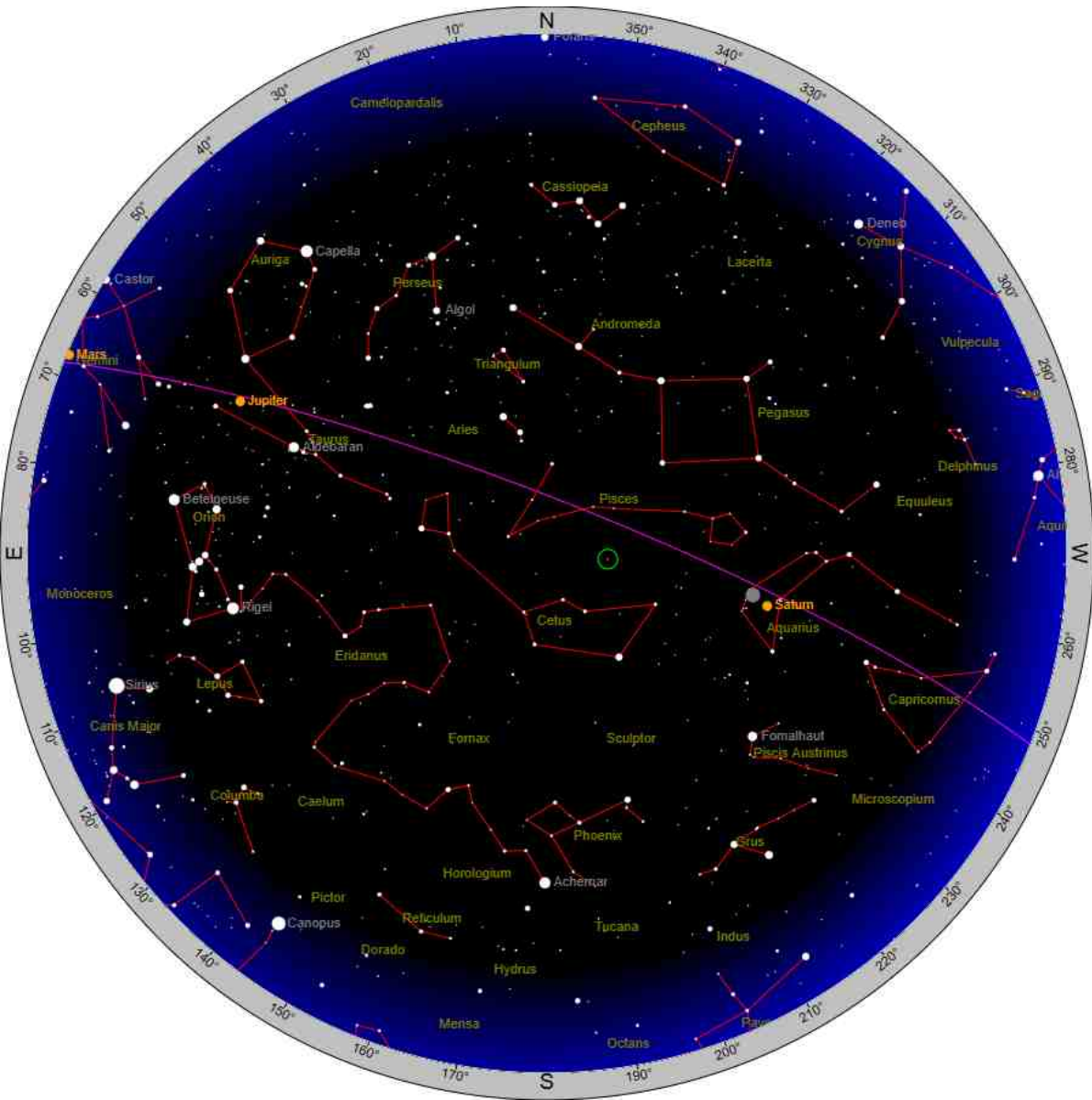


Thank you Mike for sharing your  
northern light photographs





Year      Month      Day      Hour      Minute  
 2024      November      15      00:00      0:0



Until next Month

Remember to always look up!