

November 2024

Meetings at Highland Road Park Observatory and online through YouTube and Jitsi

<https://meet.jit.si/brasmeet>

Calendar:

- **30 October, 7PM:** Astronomy on Tap at the Varsity
- **5 November, 6PM:** Sidewalk Astronomy at Perkins Rowe
- **6 November, 6PM:** Sidewalk Astronomy at Ascension Parish Library, Gonzales
- **8 November:** Sidewalk Astronomy at Lutcher Library
- **11 November:**
 - 6PM: Light Pollution Committee Meeting
 - 7PM: BRAS General Meeting at HRPO
- **29 November, 5PM:** BRAS star party at HRPO—weather permitting.
- **10 December:** Sidewalk Astronomy at Perkins Rowe

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President's Message

Yesterday (October 24th) I received a call from Ben asking me if I knew anything about the role of astronomy during the Civil War. He was preparing for a school day outreach program at Port Hudson State Historic Park and was trying to find a way to tie astronomy to the 1863 siege at the site. I have to say, I had never really given the matter much thought. I decided to dig into the question a little deeper.

The first thing to understand is that the vast majority of people in those days knew almost nothing about astronomy, at least not in a scientific way. Of course, people whose lives revolved around farming had a keen sense of the relationship between the stars and the Sun and the seasons. But for many folks in those days, astronomy was more akin to astrology. They didn't know that comets were essentially dirty snowball hurling through space. They didn't know that auroras were the result of charged particles ejected from the Sun impacting our upper atmosphere. What they did believe, however, is such seeming unpredictable occurrences could only be the harbinger of unimaginable consequences. This was the world that the soldiers of the Civil War, both in the North and in the South, were born into.

So, as I explored their world a bit, I came across some interesting astronomical events that were inevitably linked by the soldiers and the public to what was happening on battlefields throughout the land. Here are a few coincidences that I found interesting:

On April 7th, 1861, an unusually bright zodiacal light could be seen from Eastern cities. This was less than a month after Lincoln's inauguration and less than a week before Confederate forces bombarded Fort Sumpter.

On June 30th, 1861, a bright comet, Comet Tebbutt, became visible. By July 2nd, it was at magnitude 0 and had a tail that extended 97 degrees. It became known as the "Great Comet of 1861". Less than three weeks later, the first major battle of the war occurred. The First Battle of Manassas (or Bull Run) resulted in a Confederate victory and a rout of Federal forces. Citizens on both sides realized for the first time that the war was not going to be over quickly.

An unusually bright Aurora Borealis was seen across Northern Virginia on the night of August 30th, 1862. Seventeen days later, in neighboring Maryland, the Battle of Antietam was fought. This was the bloodiest single day of battle in US history.

In mid-December, 1862, the Battle of Fredericksburg was another decisive Confederate victory. During the night following the battle, December 14th, the Virginia sky was ablaze with red streaks of the Aurora Borealis. The Southerners interpreted the lights as Heaven's celebration of a great win. Northerners saw it as a tribute to the many brave souls they lost. As recorded in the diary of General Lawrence Chamberlain, Commander of the 20th Maine Infantry, "They planned a burial of their fallen comrades lighted only by the stars, but nature, in a rare display for those latitudes, cooperated to make, as it had for Viking warriors, a more sublime illumination".

As 1862 came to a close, the end of the war, unknown at the time, was still two and a half years in the future. More comets were to be seen, more battles were to be fought, more lives were to be lost. The heavens would continue, in the minds of the people, unabated with the portents of doom.

Vice President's Word

Hi Everyone,

As you will have seen above, our next general meeting will be on Monday, November 11th at 7pm at the Highland Road Park Observatory. This month we'll be hosting Caleb Robinson, a student in the Department of Physics and Astronomy at LSU. We met Caleb at a recent Astronomy on Tap event where he gave a presentation on accretion disks. If you're not exactly sure what that is, be sure to join us at the meeting as we'll be getting an encore presentation!

Our last meeting was an excellent presentation from Dr. Robert Hynes and I for one learned a lot about X-Ray astronomy and the Chandra X-Ray Observatory. We're very lucky to have such a strong Astronomy Department at nearby LSU and extremely lucky to have professors and students willing to come share their knowledge with our club. Just a word about what's coming the rest of the year (only December left if you can believe that!) The December meeting will be our annual pot-luck holiday feast. All are invited to bring a dish to share and the club will provide an entree. We'll also vote for the 2025 officers. Our current slate are all up for reelection and will be on the "ballot", but let us know if you have an interest/desire to step into one of the roles.

Finally, I'll continue working on programming for upcoming meetings. If you have any topics you'd like to see covered or activities you think would be fun for the club, please let me know. I'm always looking for new ideas!

Clear Skies,

Ben Toman

Vice President

Outreach Report

Hi Everyone,

Whew! We made it through October!! That was a super busy month especially coming on the heels of the slow Summer. We had 2 Sidewalk Astronomy events and 4 other events around the community. At each event we were fortunate to have beautiful weather and very happy attendees.

None of these Outreach events would have been possible without the help of our volunteers. A huge thank you to Chad J., David P., Roz R., Scott C., Annette and Chris R., John N., Don W., Chris K., Coy W., Steven T. and Ben T.

Hopefully, we'll be adding our very own Seestar S50 to our Outreach arsenal for upcoming events. That little device should allow us to show excellent, almost real-time images of objects that would otherwise be invisible to us without visiting a dark sky. We also had the BRAS laptop out at an Outreach event for the first time at our Oak Grove Primary event. We simply used it to show a slide show of club astrophotos, but it was very well received and is definitely a valuable Outreach tool for us.

The big back-to-school Fall rush seems to be over, but we still have our Sidewalk Astronomy events for November and December and it would be great to see some new faces out there with scopes. (Or just popping by to say Hi!) Be sure to check out the list below for dates, times and locations.

We'd love to continue building our volunteer corps (we've added a couple new faces over the past months) so please, if you have any curiosity or desire to come help out, just let us know. We'd love to have you join us no matter your level of experience!

Clear Skies,

Ben Toman

Outreach Chairperson

Upcoming Events (so Scott knows where to go!)

Tuesday, Nov 5th

6pm-9pm

Sidewalk Astronomy at Perkins Rowe

Wednesday, November 6th

6pm-7:30pm

Sidewalk Astronomy at Ascension Parish Library in Gonzales

Friday, November 8th

7:30pm-?

Sidewalk Astronomy at Lucher Library

Tuesday, December 10th

6pm-9p Sidewalk Astronomy at Perkins Rowe

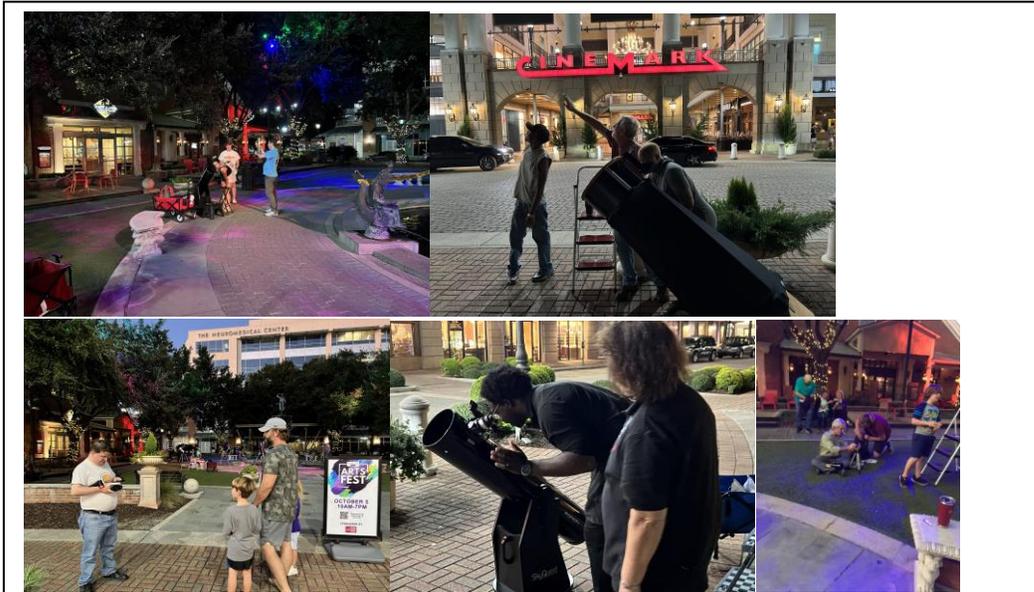


Maker's Faire: David and Scott do some solar viewing, Ben and John help people navigate the Solar System, Chad helps explain our celestial globe, and Chris bails on us, again, to go hang out with the Rock people. Come back to us Chris—seriously man, we have your wife...



Annette, the model member, explaining the scale of the solar system with the rest of BRAS.

NIGHT VISIONS



Sidewalk Astronomy Returns! Top: Coy shows off Saturn, Don shows patrons what they're looking at in the scope.

Bottom: Chris hands out information, Roz shows off Saturn, and Scott, well, what *is* he doing with that kid's telescope?



Port Hudson: Top: Chris and Annette (together again!), Ben (out of uniform), Don (in a completely different kind of uniform), Roz, and Scott setting up for a School Daze event at Port Hudson. Ben and Chris introduce the cub, Chris talks about the solar system, and Ben and Roz show off our models.

Bottom: Roz and the models, Chris and Scott doing solar viewing, Annette walks the solar system, and Don dons his best to show off the moon.

NIGHT VISIONS



West Baton Rouge Parish Museum Halloween Event: Ben and Roz show off Saturn while Scott talks about Venus.



Scenes from the Ascencion Parish Library Sidewalk Astronomy, Featuring, Ben, Don, and Chad.



Left: Roz and Ben take a break while waiting for the trick or treaters to arrive at Oak Grove Primary's Inaugural Trunk-or-Treat event. Middle: the horde: Scott tries not to get overrun by ghouls during the event. Right: Roz spoils the children.

Secretary's Summary

- October Meeting: 24 people in attendance.
- Don Welcomed back to the modern world.
- John announced he will no longer be leading the Light Pollution Committee after the November Sky Conference. Don stated that if no new head can be found, the light pollution committee may need to be absorbed back into the club until we can get a new head. If you want to save the committee, contact Don.
- Another round of club shirts will be made: people wanting a shirt should let Ben know: once we have enough, we will be making another order.
- Ben spoke about upcoming outreaches.
- Members talked about their attempts to see Comet 2023 A3.
- Dr. Rob Hynes of LSU was introduced as this month's speaker: he talked about 25 years of the Chandra X-Ray telescope.
- Members were rescued from what was obviously certain death, but which turned out to be a brief fainting episode.
- Cookies and Coffee were had.

Observatory Notes

{HRPO is closed to the public on 28 and 29 November.}

FRIDAY NIGHT LECTURE SERIES

7:30pm / for ages fourteen and older / no admission fee

1 November = “The Future is Ours” As we approach the midpoint of 2024’s Autumn, this once-only discussion will outline the many different ways the upcoming four to five years will see incredible growth locally and beyond in skygazing and other STEM-based hobbies. The possibilities are as endless as the opportunities.

15 November = “Apollo 12 55th Anniversary” The Apollo anniversary overall has been quite fun...and also introspective. Tom Northrop will be opening one of the older history books at HRPO to discuss the flight of Charles Conrad, Alan Bean and Richard Gordon.

EVENING SKY VIEWING

for ages six and older / no admission fee

Fridays (1 and 15 November) from 8:30pm to 10pm

Saturdays (2, 9, 23 and 30 November) from 7:30pm to 10pm

HRPO houses a 50-cm reflector, a 40-cm reflector and several smaller telescopes to bring the majesty of the night sky to the public. Trained operators, sharing duties via a rotating roster, work throughout the year in shifts. Each operator has a pre-planned list of objects to highlight. However, requests will be taken if there is time and if all present have viewed the previous target.

SCIENCE ACADEMY

Saturdays from 10am to 12pm.

for Cadets aged eight to twelve / \$5 per Cadet per week (\$6 if out-of-parish)

advanced registration via [WebTrac](#) strongly recommended

[activity #531990] / parents may stay with or leave Cadet

Four Cadet minimum and sixteen Cadets maximum per session.

2 November = “Hot Air Balloons and Gliders”

9 November = “Uranus and Neptune”

16 November = “Just Add Water”

23 November = “Jupiter”

THE EDGE OF NIGHT (Fall Session)

Friday 8 November from 4:45pm to 6:45pm

for ages six and older / no admission fee / binoculars recommended

It’s not light, it’s not dark. It’s that special time called twilight, and HRPO wants to introduce you to it! Are all sections of the sky the same shade of blue? Which stars are seen first? Are Mercury and Venus or the Moon out? Is that moving object a plane, a satellite or space debris? There is no other time like twilight. Bring it into your life!

SOLAR VIEWING SPECIAL SESSION

Monday 11 November from 10:45am to 12:45pm

for ages six and older / no admission fee

Weather permitting, viewing of the Sun’s image in three different manners—transferred onto a white surface, directly with safely-filtered optical light, and directly in safely-filtered hydrogen-alpha wavelength—will take place for two hours. Protective clothing and sunscreen are recommended.

LIGHT POLLUTION COMMITTEE

Monday 11 November from 6pm to 7pm

for ages fourteen and older / no admission fee

BATON ROUGE ASTRONOMICAL SOCIETY MEETING

Monday 11 November from 7pm to 9pm

for ages fourteen and older / no admission fee

MERCURIAN ELONGATION

Saturday 16 October from 4:30pm to 6pm at the Burbank Soccer Complex

for ages six and older / no admission fee

Periodically Mercury reaches its greatest angular separation in the sky (elongation) from the Sun. This is the safest way to view Mercury by amateurs. Come join us! The planet will appear as a “half-Mercury”. Venus and Saturn will also be seen.

PLUS NIGHT: “The Uranian Opposition”

Saturday 16 November from 7pm to 10pm

for ages six and older / no admission fee / binocular recommended

During Plus Nights and extra features are available to the public...

- *The well-known marshmallow roast takes place at the campfire ring (weather-dependng).
- *Seven to ten of HRPO’s collection of over fifty physical science demonstrations will be on hand to perplex and amaze. Which demos will it be?
- *An unaided eye sky tour takes place, showing the public major features of the sky for that month.
- *Filters are inserted into the viewing mechanisms, to show patrons “hidden” details of the Moon, Mars and Jupiter (when they are available).
- *Reveal your age, and be shown any “birth stars” in the sky at that time.

NATURAL SKY CONFERENCE

Friday 22 November from 4:30pm to 8:30pm

for ages fourteen and older / no admission fee

Quite possibly the most important three hours a stakeholder will spend at HRPO this year will be this networking conference allowing HRPO parents, BRAS members and LSU physics professors and students talk to those organizations in the area who have the greatest ability to curb light pollution.

FALL SPACE EXPLORATION CAMP

Monday 25 November and Tuesday 26 November (8am to 5pm daily)

for ages nine to thirteen / \$55 per Camper for both days (\$66 if from outside EBR Parish) / registration via WebTrac [activity #531180]

Campers will build and fly a single-stage chemical rocket, while learning about the latest upcoming missions and space news! All materials are supplied; campers will need a sack lunch

and drink that does not require refrigeration. Explorers will also need to bring a hat and sunscreen.

SOLAR VIEWING

Saturday 30 November from 11:30am to 2:30pm

for ages six and older / no admission fee

Weather permitting, viewing of the Sun's image in three different manners—transferred onto a white surface, directly with safely-filtered optical light, and directly in safely-filtered hydrogen-alpha wavelength—will take place for two hours. Protective clothing and sunscreen are recommended.

STEM EXPANSION: “Planetary Speedsters”

Saturday 30 November from 2:30pm to 6:30pm

for ages twelve to sixteen. / \$15 each per in-parish registrant; \$18 each per out-of-parish registrant. Advanced registration via [WebTrac](#) required [activity #531993].

This program offers advanced topics, topic extensions and all-new games and activities to an older crowd. Certificates will be earned, and a section of archived experiments, some not seen in over fifteen years (and some *never* performed on site) take place. There are also giveaways and door prizes.

AMATEUR ASTRONOMY COURSES

Saturdays from 3:30pm to 7:30pm / registration in progress

Registrants must be aged eighteen or older / \$15 per in-parish registrant; \$18 per out-of-parish registrant

These exciting one-day classes are tailor-made to instruct the patron in the use of a personal telescope or binocular for skygazing, or the basics of the unaided-eye Baton Rouge sky. Sign up for one or more!

Learn Your Sky [21 December]

This class is an introduction to the unaided-eye Baton Rouge sky. We'll even go outside for some practice, weather permitting. Also included will be an overview of all major sky events for the next twelve months. This one-day course focuses specifically on the unaided-eye Baton Rouge sky. Limit thirty registrants. All registrants must be over eighteen; children are not allowed.

Three adults needed for registration by 18 December.

Learn Your Binocular [4 January]

This class is a hands-on introduction to the operations of your personal binocular. We'll even take it outside for some practice, weather permitting. Also included will be an overview of all major sky events for the next twelve months. Up to four household members over the age of eight are encouraged to attend, though the registrant for this course must be over eighteen. Please bring all parts and accessories belonging to the binocular, including the instruction manual. This one-day course focuses specifically on binocular views of the Baton Rouge sky. Limit twenty registrants. Limit one binocular per registrant. *Deadline for registration is 1 January; two households needed.*

Learn Your Telescope [11 January]

This class is a hands-on introduction to the operations of your personal telescope. We'll even take it outside for some practice with the waxing gibbous Moon, weather permitting. Also included will be an overview of all major sky events for the next twelve months. Up to four household members over the age of eight are encouraged to attend, though the registrant for this course must be over eighteen. Please bring all parts and accessories belonging to the telescope, including the instruction manual. This one-day course focuses specifically on telescopic views of the Baton Rouge sky. Limit ten registrants. Limit one telescope per registrant. *Deadline for registration is 8 January.*

Sky Map



Chart centered on 10PM for 15 November 2024 in Baton Rouge.

For an interactive sky map, go to <https://in-the-sky.org>

Quick Picks—Events for November 2024

- Fri 1 [New Moon](#)
- Sun 3 [Mercury](#) 2.1°N of [Moon](#)
- Sun 3 Antares 0.1°N of [Moon](#)
- Mon 4 [Venus](#) 3.1°N of [Moon](#)
- Tue 5 South Taurid Meteor Shower
- Fri 8 [First Quarter Moon](#)
- Sat 9 [Mercury](#) 2.0°N of Antares
- Sun 10 Occultation of [Saturn](#) by the Moon
- Tue Taurid Meteor Shower
- Thu 14 [Moon](#) Perigee at 360,110 km.
- Fri 15 [Full Moon](#)
- Sat 16 Pleiades 0.1°S of [Moon](#)
- Sat 16 [Mercury](#) at Greatest Eastern Elongation - 22.50°
- Sat 16 [Uranus](#) at Opposition
- Sun 17 Leonid Meteor Shower
- Sun 17 [Jupiter](#) 5.6°S of [Moon](#)
- Tue 19 Pollux 1.9°N of [Moon](#)
- Wed 20 [Mars](#) 2.4°S of [Moon](#)
- Wed 20 Beehive 2.9°S of [Moon](#)
- Fri 22 Regulus 2.7°S of [Moon](#)
- Fri 22 [Last Quarter Moon](#)
- Tue 26 [Moon](#) Apogee at 405,315 km.
- Wed 27 Spica 0.4°S of [Moon](#)

(Check Stellarium for exact times and distances from your location.)

Looking up



November's Night Sky Notes: Snowballs from Space

By Kat Troche

If you spotted comet C/2023 A3 (Tsuchinshan-ATLAS) in person, or seen photos online this October, you might have been inspired to learn more about these visitors from the outer Solar System. Get ready for the next comet and find out how comets are connected to some of our favorite annual astronomy events.

Comet Composition

A comet is defined as an icy body that is small in size and can develop a 'tail' of gas as it approaches the Sun from the outer Solar System. The key traits of a comet are its **nucleus**, **coma**, and **tail**.

The **nucleus** of the comet is comprised of ice, gas, dust, and rock. This central structure can be up to 80 miles wide in some instances, as [recorded by the Hubble Space Telescope in 2022](#) – large for a comet but too small to see with a telescope. As the comet reaches the inner Solar System, the ice from the nucleus starts to vaporize, converting into gas. The gas cloud that forms around the comet as it approaches the Sun is called the **coma**. This helps give the comet its glow. But beware: much like Icarus, sometimes these bodies don't survive their journey around the Sun and can fall apart the closer it gets.

The most prominent feature is the **tail** of the comet. Under moderately dark skies, the brightest comets show a dust tail, pointed away from the Sun. When photographing comets, you can sometimes resolve the *second* tail, made of ionized gases that have been electronically charged by solar radiation. These ion tails can appear bluish, in comparison to the white color of the dust tail. The ion tail is also always pointed away from the Sun. In 2007, NASA's STEREO mission [captured images of C/2006 P1 McNaught and its dust tail](#), stretching over 100 million miles.

Studies of those images revealed that solar wind influenced both the ion and dust tail, creating striations – bands – giving both tails a feather appearance in the night sky.



Comet McNaught over the Pacific Ocean. Image taken from Paranal Observatory in January 2007. Credits: ESO/Sebastian Deiries

Coming and Going

Comets appear from beyond Uranus, in the Kuiper Belt, and may even come from as far as the Oort Cloud. These visitors can be **short-period** comets like Halley's Comet, returning every 76 years. This may seem long to us, but **long-period** comets like Comet Hale-Bopp, observed from 1996-1997 won't return to the inner Solar System until the year 4385. Other types include **non-periodic** comets like NEOWISE, which only pass through our Solar System once.

But our experiences of these comets are not limited to the occasional fluffy snowball. As comets orbit the Sun, they can leave a trail of rocky debris in its

orbital path. When Earth finds itself passing through one of these debris fields, we experience meteor showers! The most well-known of these is the Perseid meteor shower, caused by Comet 109P/Swift-Tuttle. While this meteor shower happens every August in the northern hemisphere, we won't see Comet Swift-Tuttle again until the year 2126.



A view of the 2023 Perseid meteor shower from the southernmost part of Sequoia National Forest, near Piute Peak. Debris from comet Swift-Tuttle creates the Perseids. Credit: NASA/Preston Dyches

See how many comets (and asteroids!) have been discovered on [NASA's Comets page](#), learn how you can [cook up a comet](#), and check out our mid-month article where we'll provide tips on how to take astrophotos with your smartphone!

A Wild Astronomer



Roz and Scott chasing down Aurorae in South Louisiana during the October Solar event.



Top: Comet C/2023A3 from the BRAS dark site and from HRPO.

Bottom: Roz looks over the scopes set up for the BREC public viewing (night 1 of 5) and club members go out to the Dark site to see the comet.

Posted

- The Outreach team is looking for new faces to help bolster our crew: contact Ben if interested.
- The Light Pollution committee is in need of a new head: if interested, contact Don.
- December will see elections for club Officers for the next year: all officers are currently willing to serve, but if you want to do it in there stead, contact Don to let him know what position you'd like to take.

Contact Information

President-----Don Weinell president.brastro@gmail.com

Vice-President-----Ben Toman outreach.brastro@gmail.com

Secretary-----Scott Cadwallader secretary.brastro@gmail.com

Treasurer-----Trey Anding treasurer.brastro@gmail.com

Web: <http://www.brastro.org>

YouTube: <https://www.youtube.com/channel/UCS3Xkk1t7C9IRnB8GKrt9MQ>

Facebook: <https://www.facebook.com/Baton-Rouge-Astronomical-Society-122591151112271/>

Reddit: <https://www.reddit.com/r/BRAstro/>

Highland Road Park Observatory

13800 Highland Road

Baton Rouge, LA 70810

(225)-768-9948 // observatory@brec.org

