

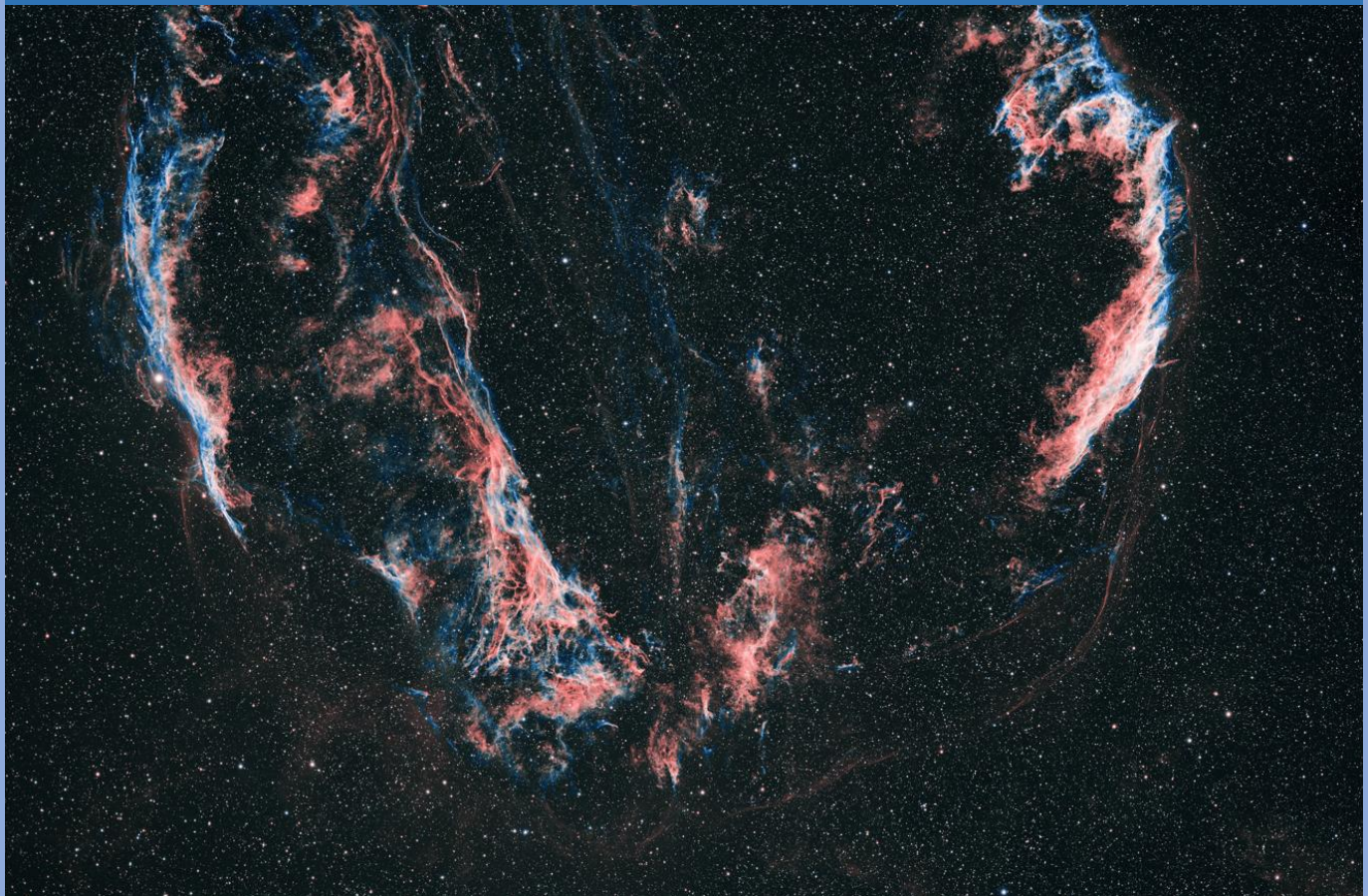


OBSERVER

NOVEMBER 2025

*Bringing Stars to the eyes of Tulsa
since 1937*

Editor – John Land



Veil Nebula by Don Bradford

Don took this image of the Veil Nebula at Okie-Tex Sept 2025.

His telescope is a Apertura 75Q (75mm) refractor with .75 reducer providing an effective focal length of 303 mm at f/4

ZWO ASI294MM camera on his ZWO AM5 mount and guided with 60mm guide scope and ZWO ASI290MM guide camera. Image taken with Ha and Oiii narrowband filters. Ten-minute exposures on 17 images for each filter. Processed with PixInsight post processing software

The Veil Nebula in Cygnus is the remnant of a supernova explosion that occurred 5,000 to 8,000 years ago. Its distance is not precisely known. Distance estimates range from 1,400 to 2,600 light years. The nebula spans an area of sky about six full moons across (3 degrees) The expanding shockwave of gasses is now about 110 light years across.

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Daylight Savings Time Ends NOV. 2nd - Sunrise 6:47 AM Sets 5:26 PM

If the misinformed politicians keep us on year-round Daylight Time the sun will not rise before 8:00 from Nov 16th to Feb 23rd . and after 8:30 from Dec 23 to Jan 21.

Kids will be walking to school or waiting on buses well before DAWN. And in the Okla panhandle the sun rises 26 mins later than Tulsa making sunrise close to 9:00 AM

Duh – It's not about Clocks – Its about the hours of Daylight

Sorry I had to get my annual Rant about DST out. Feel Better Now !



PUBLIC TELESCOPE VIEWING EVENTS

Volunteers needed to share your love of the stars

Keystone Ancient Forest Sat Oct 25 – 5:30 PM

Hunter Park Saturday Nov. 29th
5:00 PM to until park closing time

See event details and directions at <https://www.astrotulsa.com/events>

Stargazing Nights and Observatory Nights

Our GUESTS & Members nights are open to anyone. We do ask guests to try to RSVP.

Large groups need to make separate arrangements.

Members Only Nights are Open to members and their family

Details, Times and Direction Maps are posted on our Website

<https://www.astrotulsa.com/events>



Guest and member Observatory nights

Come enjoy an evening of star gazing at our observatory located in darker rural skies.

See details and directions on our [Website Events Page](#)

Guests are requested to RSVP

Saturday Nov 15 - 4:45 PM Guest & Members Observatory Night

Saturday Dec 13 - 4:30 PM Guest & Members Observatory Night



Astronomy Club Members Nights

Our members are invited to come work on their observing goals, do some Astro imaging and share ideas.

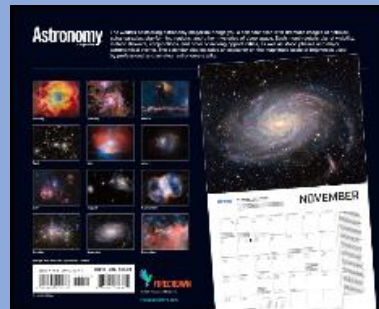
Saturday Nov 22 - 4:30 PM Members Observatory Night

Saturday Dec 20 - 4:30 PM Members Observatory Night

If a Friday event must be cancelled due to weather,
we will try on Saturday at the same time

- **Always check the website for event updates**

See full Event details and directions at <https://www.astrotulsa.com/events>



2026 Astronomy Calendars \$ 12 each

The 2026 Calendars have arrived. Each month has tips on sky events and historical highlights along with stunning monthly photo. They will be available while supplies last on a First Come basis at our fall club meetings. **Please bring exact cash**



Astronomy Club Window sticker \$ 1.00

Limited number available to Jenks meetings.



Join us Friday, December 5th at 7:00 PM at the
Jenks High school planetarium to hear

Dr. Graham Lau presents “The Panzoic Effect,” an exploration of Earth’s deep history, the evolution of life, and what it all means for our search for life beyond our planet.

Dr. Graham Lau is a renowned astrobiologist, geomicrobiologist, and gifted science communicator dedicated to sharing the wonders of space and life’s origins with audiences around the world. Many may recognize him as the host of “Ask an Astrobiologist,” the NASA-sponsored talk show that connects the public with scientists exploring one of humanity’s biggest questions

— are we alone in the universe?

Beyond the screen, Dr. Lau has worked tirelessly to make science engaging and accessible through public lectures, museum exhibits, blogs, and educational outreach. His enthusiasm for sharing knowledge has inspired countless people of all ages to explore the frontiers of space and the natural sciences."



Salutations all,

By the time you're reading this, you've (hopefully) set your clocks back and are enjoying the cool weather that's finally rolling in—along with those early 5:00 p.m. sunsets. Fall observing season is officially here!

October was a whirlwind, and I want to thank all our amazing volunteers who helped make it happen. From Discovery Lab for Space Week, hosted by the Tulsa Regional STEM Alliance, to our regular Guest Nights at the observatory—and everywhere in between—your passion and dedication continue to make our club one of the most active and engaging in the region. If you've been thinking about getting more involved, now's a great time! We're always looking for new volunteers to help during outreach events or at the observatory. Sharing your love for astronomy with others is one of the best parts of what we do.

Speaking of what's ahead, our Annual Club Banquet is right around the corner! It's always one of the highlights of the year—great food, great company, and a chance to reflect on what we've accomplished together. This year, we'll also be voting on several important items, including a proposal to approve an allocation of up to \$5,000 for upgrades to the observatory dome.

These upgrades will help modernize our operations, improve the performance of the dome telescope, and create a smoother, more seamless experience for our public sky tours. The observatory is one of our main touchpoints with the Tulsa community, so these improvements will have a lasting impact on our outreach and education efforts. A large portion of the proposed funds come from donations made in memory of Davis Taggart, Caroline "Lina" May, and Gerald Andries. Their families have generously contributed to the future of our club, and we're deeply grateful for their support.

Looking beyond the banquet, December 5th will bring our final meeting of the year, featuring **Dr. Graham Lau, a geomicrobiologist and passionate science communicator**. He'll be presenting "**The Panzoic Effect**," a fascinating talk exploring life, evolution, and our search for meaning among the stars. You won't want to miss it!

Thank you all for your continued support, enthusiasm, and encouragement. It's a true honor to serve as your President, and I look forward to another exciting year ahead for the Tulsa Astronomy Club.

Clear skies, *Jonathan Fussell - President*

Astronomy Club of Tulsa

"Bringing Stars to the Eyes of Tulsa since 1937"

2026 Astronomy Club Officer & Board Candidates

Our Astronomy Club of Tulsa is looking to another great year of activities and observing opportunities in 2026. It takes dedication and leadership to plan and coordinate these events as well as overseeing the financial needs of the club. These are our candidates for Officers and Board for the coming year. We are particularly pleased that three new enthusiastic people who have become candidates. Elections will be held at our club meeting on November 1st.

Officer Candidates

President – Jonathan Fussell, Secretary – Skip Whitehurst, Treasurer – Cathy Grounds

New Board Candidates

Gibson Brasel, Scott Bratt, Liam Yanulis

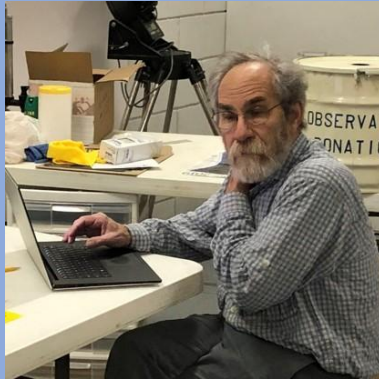
Returning Board Candidates

**Don Bradford – Dome Telescope & Events James Taggart – Observatory manager,
Brad Young – Observing Chair John Land – Newsletter Editor Jerry Cassity Jack Reeder,**

Astronomy Club Officers



**Jonathan Fussell
President**



**Skip Whitehurst
Secretary**



**Cathy Grounds
Treasurer**

New Board Candidates



Gibson Brasel



Scott Bratt



Liam Yanulis

Returning Board members



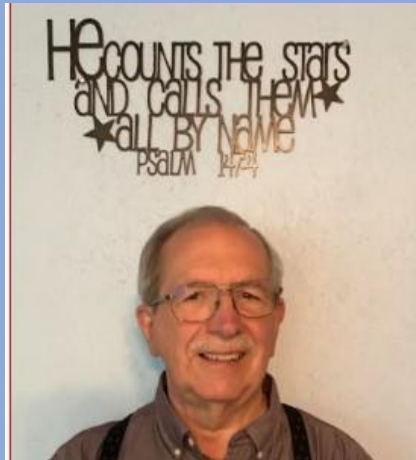
Don Bradford
Dome Telescope & Events



James Taggart
Observatory Manager



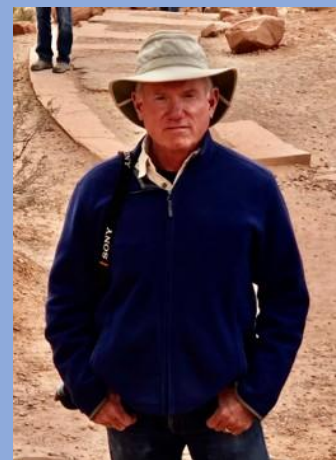
Brad Young
Observing Chairman



John Land
Newsletter Editor



Jerry Cassity



Jack Reeder

See Candidates application write ups on pages 16 to 20



Click on these images
to links on the Internet



GOT A NEW TELESCOPE? Here are some sites to help you get started with you telescope.

Getting Started with Your New Telescope

<https://skyandtelescope.org/astronomy-news/getting-started-with-your-new-telescope-2/>

Astronomy for Beginners | Night Sky Facts, FAQs & Resources

<https://skyandtelescope.org/astronomy-information/>

What to Know Before Buying a Telescope

<https://skyandtelescope.org/astronomy-news/what-to-know-before-buying-a-telescope/>

See [Website Observation Station](#) for a collection of [Interactive Sky Watching Tools](#)
Moon phases - Sun rise & Set - [Make your own custom interactive sky chart](#) and more
Great website for printable Finder Charts of Solar System objects <https://in-the-sky.org/>



Two Full “Super Moons” Weds Nov 5 and Thurs Dec 6

On these two dates the full moon occurs on the same day as the Moon’s Perigee (Closest to Earth) Thus the moon will appear slightly larger and brighter. These images show the difference in the moon’s apparent size at perigee and apogee. Apogee refers to when it is most distant from Earth. Media has popularized the term “Super Moon” to attract our attention. Since the Full

Moon rises at sunset its proximity to the horizon makes it appear especially large.

Moon’s distance on Nov 05: 221,817 miles (356,980 km) Dec 04: 221,965 miles (357,219 km)

Planets - **Saturn** and **Neptune** are still well placed for viewing all evening lying within 4 degrees of each other. Midmonth Saturn’s rings are seen again nearly edge on. **Jupiter** is in Gemini rises by 10:00 PM. It will reach opposition Jan 10th . **Uranus** is at opposition on Nov 21 lying between Pleiades and Hyades clusters in Taurus. Its distinctive greenish hue can be seen in smaller telescope and its disc at about 100X. On Nov 25 **Mercury** & **Venus** have a close conjunction a half hour before dawn low in the ESE. You’ll likely need binoculars to see Mercury.

Moon Phases - **Full** Weds Nov 5 - **3rd Q** Weds Nov 12 - **New** Thurs Nov 20 - **1st Q** Fri Nov 28

Lunar conjunctions –

Saturn & Neptune - Nov 1 - **Jupiter** - Nov 9 Moon & Spica Nov 17 **Venus** on Nov 18



Good year for the Leonid Meteor shower in the predawn hours of Nov 17th with only a thin waning crescent moon. Meteor showers occur when the Earth passes through a stream of particles left in orbit by a comet. As we pass through they seem to be coming for a common direction in the sky called its Radiant. A good analogy is to think of driving and night with your headlights on into falling snow. The snow seems to be coming toward your windshield. But if you stop you see that it is just falling down normally. It’s the car’s motion that makes it appear to be coming at you. The name

of the shower refers to the section of sky in which the radiant is located. In this case the constellation of Leo. See Tips How and when to view the Leonid Meteor shower in 2025

<https://www.timeanddate.com/astronomy/meteor-shower/leonids.html>

The Leonids occur when the Earth passes through the debris left by Comet Tempel-Tuttle. The comet takes around 33 years to make one orbit around the Sun. On normal years like 2025 you can expect to see a dozen or so meteors per hour. However, about every 33 years the Earth passes through the central core of the stream creating a meteor storm for a few hours with dozens of meteors per minute. In November 2001 a group of our astronomy club friends drove out near Amarillo, TX to get clear of the clouds in Tulsa. They counted over 2,000 meteors and likely missed that many more. The peak of the 1966 Leonid Storm over the US Midwest was estimated at 10,000 per hour.

One of my favorite quotes comes from Abraham Lincoln recounting seeing the Leonid Storm of Nov. 13, 1833, when talking to a group of bankers at a particularly low point in the Civil War.

See [Lincoln and the Leonid Meteor Shower](#)

"When I was a young man in Illinois, I boarded for a time with a Deacon of the Presbyterian Church. One night I was roused from my sleep by a rap at the door, & I heard the Deacon's voice exclaiming 'Arise, Abraham, the day of judgment has come!' I sprang from my bed & rushed to the window and saw the stars falling in great showers! But looking back of them in the heavens I saw all the grand old constellations with which I was so well acquainted, fixed and true in their places. Gentlemen, the world did not come to an end then, nor will the Union now."

November evening comet viewing challenges by John Land

Website of latest comet data - <https://astro.vanbuitenen.nl/comets>



[Comet C/2025 A6 \(Lemmon\)](#) made its nearest approach to Earth Oct 21 at 0.6 AU and reaches perihelion on Nov. 8th. At nearest approach to Earth Oct 21 at 0.6 AU shining at 4.6 mag – It reaches perihelion Nov. 8th just inside the orbit of Mercury. Its rapid motion elongates the coma as seen in my 5 minute exposure from Oct 16th. It is now an evening comet



[C/2025 R2 \(SWAN\)](#) -, made its closest pass of 0.26 AU from Earth on Oct 20 with a magnitude of 6.2. In dark sky it is visible in moderate sized telescopes. We were able to see its coma at the Oct 11 guest night using the club's 18x100 binoculars. I took this 3 minute exposure with my Seestat S50



Sadly, due to the Gov't Shut down - we have not seen images from Comet 3I/ATLAS flyby of Mars on Oct 3. Hopefully the armada of Mars spacecraft got some images and data.

OKIE-TEX TALES 2025 By Scott Bratt



Scott and Kit Bratt atop the Mesa overlooking the Okie-Tex area with Okie and Tex Flamingos

Kit and I arrived on Friday afternoon after the seven plus hour drive from Sand Springs and already found the campground to be about 90% full of RV's and tent campers. We found a spot nearby where we set up last year on the east side. Once the camper was set, we began the process of setting up the telescopes and making sure all was in good working order. Exploring the top of the ridge of Black Mesa about 2 ¼ miles to the north with my spotting scope I saw a herd of 5 Bighorn sheep grazing and milling around.

I looked for them every day afterwards and never saw them again. The skies were partly cloudy with mostly thin cirrus clouds and was beginning to clear the closer to dark it got. By about 8:30pm it looked like those clouds were almost evaporating and the stars were beginning to shine in clear and semi-stable air. I quickly aligned both the 6" and 10" SCT's and put both on the planet Saturn and visually watched it continue to rise higher into the sky and getting better and more stable as it rose. Next, I set up my Seestar S50 and Kit did the same with her Seestar S30. I remember there were so many targets available that she was having trouble deciding on which one she wanted to start with. We both started with M27 (Dumbbell Nebula) and got some pretty good images of it. She switched over to NGC 7000 (North American Nebula) and got some time on it and went to bed around 11 pm. I continued imaging another target, SH2-142 (Wizard Nebula) and got really good results. Then I switched and finished the evening with some time on NCG 7000 as well. The clouds started closing in about 12 am from the south and west and eventually shut down the night skies for any activities so I covered everything up and went to bed.

Saturday evening started out with some clearing but with the higher threat of thunderstorms and thick clouds. There were a few clearings and stars showing up but more of a light show from nearby thunderstorms to the east and northwest. The storm to the northwest put on a spectacular lightshow with almost constant flashes of light that lit up the entire campground enough that you could walk around without a flashlight and see perfectly well. As it got closer it got pretty ominous looking with a roll cloud and some wind then what appeared to be a small wall cloud in the worst part of the wind and heavy rain. There was some small hail as well but nothing larger than a small BB sized pellet. The winds were strong enough to tip over telescopes and wind breaks others had set up around their equipment. I went to offer assistance around my area and checked on one of our other ACT members who was nearby, and everyone was okay but there was some equipment damage. Richard Foster had his 8" dob covered and staked down but the winds lifted the tarp off and tipped over the telescope and dented the tube and broke the finder scope, plus the insides of the tube and mirrors were wet, and the bottom mounting screws pulled out of the bottom AZ plate. Another neighboring camper had the wind screen setup roll over and took a Takahashi 120mm, mount, and tripod (he said 135 pounds total weight of that rig!) to the ground. I helped get the lift the windscreen off of it and stood back up. I asked him if he thought it might have gotten damaged, and he replied that he was afraid to remove the cover to see. I checked with him again the next day around noon and he had still not removed the cover and said that he was afraid to look at it, but later in the day he finally did and found no damage.

Sunday morning was pretty much a cleanup and inspection day for many at the camp. I walked over to the area where some other ACT members were setup, and they said they weathered the storm without much incident. I did get a little water on my 10" SCT from a weak spot in the cover but it was a quick cleanup with some lens cleaner and soft duster. I did have to disassemble the 30mm finder scope as it had fogged over from the moisture. It dried out nicely without much change in view. I left my power box outside under the camper but the water running down the slope was just deep enough to get into the bottom switch area and it was shorting out the light switch and causing the light to stay on. I cleaned it up and let it air out and all was back to normal. The skies were clear, and Kit got her Lunt 50mm Solar Scope setup and was tracking the sun most of the day. There were some spectacular prominences on the sun that day and I believe we actually saw a bright flash on the surface that grew over the next few minutes, then slowly dimmed over the next several minutes. It produced a snake-like brown wispy line across the region where it erupted which also dissipated after about 45 minutes. Several people walking by our site were interested in looking through the solar scope and at one time there were 8-10 people at our site. We met a neighbor who had a new Skywatcher Heliostar 76mm solar scope who invited us to look through it. The views in this scope were amazing! It is expensive but one might be in our future plans. Sunday evening was cloudy with a thunderstorm off to the east that put on a good light show for a couple hours but we went to bed early and didn't do anything with the telescopes.

The rest of the week was pretty nice weather and a bit chilly in the night and morning hours, a wonderful change from the low 90's we were experiencing back home. Conditions were not as nice as last year at Okie-TEX but we did mostly get some very nice nights of clear skies. We hiked up to the flamingos, attended some forums, checked out the swap meet, went to the drawings on Wednesday and Friday night (didn't win anything), wandered around the campground and met people, and had dinner one evening with some new friends next door to our campsite. We did do more observing and imaging for the rest of the week, and Thursday night I pulled an all-nighter to attempt to catch comet C/2025 A6 (Lemmon) and get a glimpse at Jupiter and a few objects in Orion. I remember every evening looking up at Corona Borealis just to check and see if T CrB had gone nova yet and being disappointed that it had not. I also got some video of Saturn with my 6" SCT to process later when I got home. Kit set up her Lunt solar scope every day and saw more neat stuff on the sun and had more people stop by to take a look. I also made daily trips over to the other ACT club sites to visit and check in with everyone. One of my other neighbors had a 12" dob and invited us over to do some visual observations with them, mostly looking at galaxies and a couple of nebula. I now see the allure of owning a big Dobsonian for visual and may need to add one to my collection in the future. We are looking forward to attending this event again next year but be aware the date of this event has changed to early October which may compete with the Eldorado Star Party on the same dates. All in all, a wonderful trip to the wide open, clear skies of the Oklahoma panhandle.

Scott Bratt
Kit Bratt

Selection of Okie-Tex 2025 images shared by members



Skip Whitehurst & Don Bradford

Scott Bratt & Mike Grogan



Jerry & Wife Terri w Skip and Don



Astronomy "Duck and Cover Drill"

Photos below by Scott Bratt Seestar S 50

Wizard Nebula NGC 7380

Caldwell 5 – IC 342

Ghost Nebula IC 63



Okie-Tex Star party also has a Facebook page with images shared from other clubs.

Images by Mickey Smith with Seestar S 50

Mosaic Horsehead and Flame Nebula



Galaxies M 81 & M82

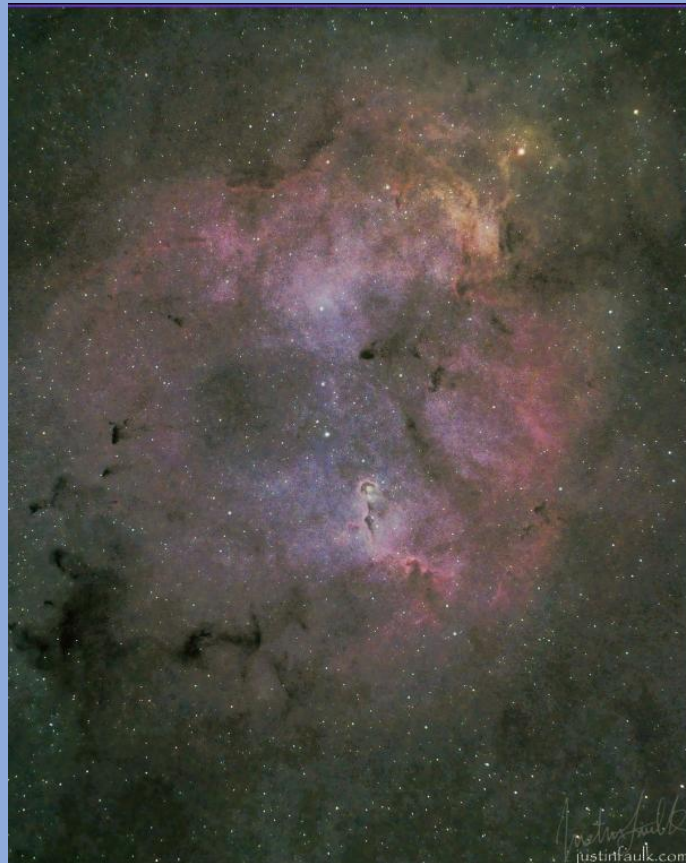


Images from Justin Faulk

Lagoon & Trifid Nebulas top

Bottom Elephant Nebula IC 1396

Images are 60 minutes total, 5-minute subs Equipment: Pentax K-1, Evostar 72ED w/Field
Flattener ASI120MM-Mini + Williams Optics 32mm Guide Scope ZWO AM5N
Mount + NINA/PHD2. Processing was done with Siril.



Telescopes for Sale



For Sale: Orion SkyQuest XT8 excellent condition. **\$425.**

Extras: carrying case, magnetic counterweights, dew/light shield; Svbony finder scope 8X50. Eye pieces: 1.25" 25mm and 10mm, Orion "Shorty" Barlow. Collimation cap.

Base upgrade: eyepiece rack and Apertura roller bearing kit, for smoother slewing.

Contact Sara Grossman

saragrossman100@gmail.com



FOR SALE: 13.2" F/4 Dobsonian – \$ 900 or best offer

The 13.2" Dobsonian mirror was reconfigured by John Hall Pegasus Optics. Secondary mirror enhanced. 2" reducer Starlite, 15mag ability. Fast set up and break down. Fits in the back seat.

Editor Note: I have personally enjoyed superbly sharp views in this scope.

Eyepieces for sale individually

\$ 20 - 5-inch Glass telescope filter \$ 40 Antares Laser collimator

Two Inch Eyepieces and some 1.25 inch eyepieces

\$ 205 Pentax XL eyepiece 5.2 mm

\$ 80 Victor XL 48 mm

\$ 50 University Optics Eyepieces – 6 mm Ortho

\$ 20 Meade 4 mm Ortho

Highly sought after Zeiss Wide angle 12.5 mm 90° field

Comparisons show it superior to Televue Ethos

Make an offer.

Contact details - kclobrecht@yahoo.com



Celestron NexStar 8SE Computerized Telescope – 8-Inch Schmidt-Cassegrain Optical Tube – Fully Automated GoTo Mount with SkyAlign – Ideal for Beginners and Advanced Users – 40,000+ Object Database

Includes a number of eyepieces and accessories not shown here

. Used only a few months \$1,200 Retail \$ 1,800 plus

Contact John Land for details

Tulsaastrobiz@gmail.com

Treasurer Report Cathy Grounds



As of Sept 16, 2025, we have **171** members and **40** new members so far this year!
Please welcome our newest members Stephen Lassiter, Steve Ellis, Ryan Clark,
Don Chappel and Michael Schultz!

2026 Deep Space Mysteries Calendar will be on sale for \$12.00 each
at our Sept. 5th Jenks HS meeting Please bring exact CASH

Don't forget these easy methods to join or renew your membership:
<https://www.astrotulsa.com/join> – see the “join” tab at the upper right

FAQ: How do I know when to pay my dues? You will receive a notice by email that it is time to renew your membership. Look for it on or around the 1st of the month in which your membership expires. If you are not sure you are always welcome to check with the treasurer.

1. PayPal (click “join/renew” on the website) and follow the prompts, there is small fee.
(You can use any major credit card - you don't need a PayPal account)
2. Mail in a check or money order to Astronomy Club of Tulsa,
PO Box 470611, Tulsa, OK 74147.
3. Direct your bank's bill pay service to send payment to our PO Box address above.
4. Pay cash at any club event or swipe a credit card (there is roughly a 3% service charge).

As always if you have any questions or concerns or if your email, phone, or postal address has changed please email me at: AstroTulsa.Tres@gmail.com

Membership rates for 2024 - 2025 are as follows:

All include an Astronomical League Membership, and you will receive their magazine *The Reflector* each quarter.

Adults: \$ 50 per year

Sr Adult: \$ 40 per year (65 or older)

Students: \$ 40 per year

Additional Family membership: \$ 30 includes voting rights

The regular membership allows all members in the family to participate in club events but only ONE Voting Membership and one Astronomical League membership.

Magazine Subscriptions- You can see subscription info on the “Join” tab at www.astrotulsa.com.

You can get a discount rate as an Astronomy Club member. You will need to do so directly using their web links below to make your subscription

To learn about [Sky and Telescope magazine](#) see their home page

Digital \$ 37.05 Print & Digital \$ 45.75 includes a \$ 10 club discount

Use this [Sky & Telescope Subscription Link](#)

To learn about [Astronomy magazine](#) see their home page

Use this [Astronomy Subscription Link](#) Digital \$ 39.95 Print & Digital \$ 49.95 no club discount

Our 2026 Astronomy Club Officer & Board Candidates

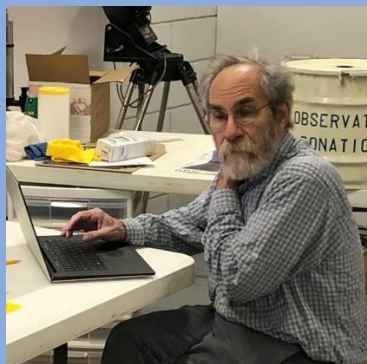


Jonathan Fussell - President

I'm honored to announce my candidacy for re-election as President of the Astronomy Club of Tulsa. Over the past few years, I've had the privilege of serving first as Vice President and this past year as President, and it's been a true joy leading and growing alongside this incredible community of stargazers, educators, and explorers.

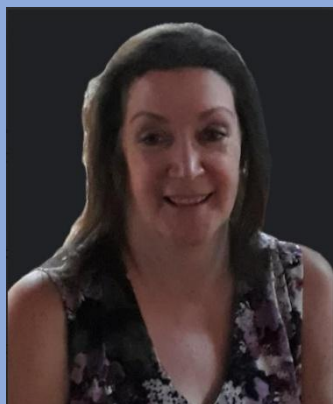
A bit about my background — I hold a bachelor's degree in Molecular Biology and Biochemistry, and I've had the opportunity to work as a Research Associate with the Blue Marble Space Institute of Science, where I focused on meteorite data and astrobiology. I've also served on NASA's Science Analysis Group #25, contributing to discussions on future exploration and planetary science. In 2026, I plan to begin my Master's in Space Operations at Embry-Riddle Aeronautical University, continuing my pursuit of planetary science and space systems development.

Serving as President has allowed me to bring that same passion for science and discovery into our club — from public outreach and observatory nights to growing our membership and strengthening our presence in the Tulsa community. Working alongside the board and our dedicated volunteers has been an incredible experience, and I'd love the opportunity to continue that work into the next year.



Skip Whitehurst – Secretary

I have been a lifelong astronomy enthusiast. My interests are primarily in transient events like eclipses, occultations, satellite tracking, satellite transits of the sun and moon, visual observing and dabbling in planetary and deep sky astrophotography. I have volunteered for public nights, outreach, "Telescopes 101", hands-on teaching, maintenance of the observatory, operation improvements to the club's 14" dome telescope and the observatory dome. I have been a board member since 2014 and club secretary since 2022.



Cathy Grounds – Treasurer

I have served as treasurer for the past two years and was on the board a few times in the past. I joined the club when my now grown children were in grade school. I enjoy handling the administrative end of things and spending time keeping up with the club finances and membership records.

I recently jumped on the Seestar S50 telescope bandwagon and am having fun learning the astrophotography features. I hope to start earning some observing certificates this year.

New Board Candidates



Gibson Brasel

I'm writing to you today to inform you all that I'm interested in running for a position on the board of the Astronomy Club. Jonathan has already offered me the position of social media manager which I plan to accept, and I believe that I could also be of great service on the board.

I have been an on and off member of the club since 2021, and in this last year I have been to nearly every observing night in mounds. The club has been incredibly welcoming, and I've learned a lot in this last year, and now I'd like a chance to apply it. I want to be able to assist in decision making for the club, especially on the subject of outreach. With the numbers we have been seeing recently at the club, there is a clear public interest in astronomy, and I think now is

the time to begin filling this niche.

A little bit about me, I have been studying astronomy for fun since around the beginning of quarantine. I think being cooped up in my house and watching the world becoming increasingly more uncertain allowed me to appreciate all the things that are not on this planet. I got my first telescope in June of 2020 for my birthday, a Meade 90mm refractor, and I spent the entire night looking at Jupiter and Saturn.

My love for astronomy continued over the years, and the more I studied and observed the more I found that this is something I could do for the rest of my life. I'm currently enrolled in Tulsa Community College for physics, and I plan to transfer to the University of Oklahoma to begin my formal study of astrophysics. From supermassive black holes to quantum fluctuations within the vacuum, I have developed a hunger for knowledge about the cosmos.

I'm excited to be able to begin applying this knowledge that I have accumulated, and I think a position on this board could be a fantastic next step. Thank you for your time and your consideration.



Scott Bratt

I am a relatively new member to the Astronomy Club of Tulsa and am interested in being active in the club and can bring some experience with social media activities and as a webmaster for the organization's presence on the internet. I currently manage or am an administrator on a couple of Facebook pages for different organizations and designed and maintain the Green Country Volunteer Fire Department's website <https://gcfidok.org/>. I also have begun the journey into creating video content for my personal YouTube channel and for my astronomy pursuits with my YouTube channel "The Astronomy Bratt".

I am retired (late 2021) and still very active in social clubs and hobbies, along with my wife, who is beginning to get involved in the hobby of astronomy. I have a few different careers as most people do over their lifetimes but the main highlights are 14 years in aviation as an instrument/avionics technician, and 15 years as a

process controls technician in an oil refinery. I have been an active licensed ham radio operator since 1987 and have my "Extra Class" license, plus my FCC issued General Radiotelephone Operators License that I used in aviation and at the refinery. I have also been a "computer guy" since the days of MS DOS 2.0 and have been building or upgrading all of my desktop computer systems since before the Y2K scare. I am not an IT guy but am skilled in troubleshooting/repairing/building personal computers.

My astronomy adventure has been something I've tinkered in with various inexpensive telescopes throughout the years since my twenties. I never could justify spending the money for the better-quality stuff and didn't really understand the big picture of astronomy until about the last 10 years, with a much accelerated learning experience since retirement when I had more money available to be able to purchase better equipment and dedicate more time to the hobby. My current telescopes are a Seestar S50, a Celestron 6" Nextstar 6SE, and a 10" Meade LX50 SCT. I hope to be able to use some of my skills to help the Astronomy Club of Tulsa grow and continue the pursuits of public interactions with the community.



Liam Yanulis

I have a deep passion for astronomy that covers a broad range from undergraduate X-ray research to astrophotography and sketching. I have a track record of astronomy public outreach and leadership from my time working as an astronomy tour guide in Utah and as former president of the Five Colleges Astronomy Club in Amherst Massachusetts. I want to serve on the board to get more involved and support the behind-the-scenes work that makes the club's events such a success. In particular, I would love to help develop additional event opportunities such as movie nights and trivia nights.

Returning Board Candidates

DON BRADFORD



It has been my great pleasure and opportunity to serve on the Board since 2019, and as President for 2023/24. I hope I have contributed to the enthusiasm and positive momentum of this club that has propelled its growth and good works since 1937. My enthusiasm for club activities has only increased over time. I am therefore offering my candidacy for Board Member for the coming year, and I will continue to work hard to promote the club's founding purpose: to promote and facilitate the love and practice of astronomy to club members and the general public. I look forward to working with each of you to fulfill that purpose. Your vote

for me will be appreciated.

Don operates the observatory dome telescope on guest nights. Don has also been helping arrange public observing events in our city parks.



James Taggart – Observatory Manager

During day job I am the Principal IT Architect for Helmerich and Payne. I have been the Observatory Manager for several years. I would very much like to be on the board again. One of the large goals for 2026 will be to introduce more technology during our public nights. This will include improving our digital imaging capabilities for the dome's primary telescope. If anyone wants to volunteer to help with building and land maintenance, please email. I am also looking for IT people to help modernize our facilities. If there is something that you need changed or added at the observatory, please let me know.

James does an outstanding job of keeping our observatory grounds mowed and its equipment running smoothly. He is also involved in modernizing the operations of our dome



Brad Young – Observing Chairman

My interest in astronomy includes membership in club off and on since 1980, Platinum Level Observer (Astronomical League), author of two books on astronomy, many citizen science projects, admin of Two Astronomical League Observing Programs, Observing Chairman for Tulsa Club, much more described on my website hafsnt.com Brad regularly contributes interesting articles for our newsletter. He is nearing his goal of observing all 7,840 objects in the NGC catalog of celestial objects.



Jerry Cassidy

In 2014, I attended a Astronomy of Tulsa Guest Night. I was treated to views of Nebula, Galaxies and the planet Saturn. I was shown how to find Andromeda Galaxy and that I could see it through a pair of binoculars. When I got home, I took out my binoculars and found Andromeda. I was hooked. I have been a member of the ACT since 2014. I have served as Vice President, Secretary and Board Member. My favorite part of ACT is our Public Events. I love showing people the night sky. Jerry always has a line of people waiting to look in his telescope on guest nights.



Jack Reeder

My interests in astronomy are for outreach and staying abreast of technical developments in astronomy gear and space exploration. Jack has served on the board the past two years and been a member for 5 years. He is a regular at our public events and guest observatory nights

I'm currently learning how to use a Revolution Imager, a rudimentary electronic eyepiece. Once it's mastered, it should be appealing to outreach attendees as it allows very faint objects to appear much brighter than they appear through optical eyepieces.

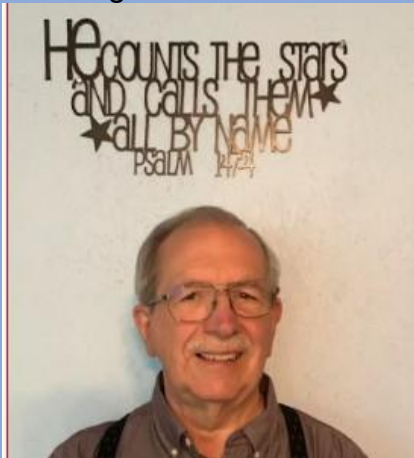
I've got my eye on developments in this Electronically Assisted Astronomy field, and I hope to soon add the capability to bring up images on outreach attendees' phones and tablets via local WiFi.

I think we're all learning at some level. My level is still around learning the night sky and introducing others to the vastness of the universe. On the Board, I feel like I represent the newer members' and visitors' viewpoints.

John Land - Newsletter Editor

I have always been fascinated with space. I was blessed to have a mother with a keen scientific mind who encouraged my curiosity about the many wonders of God's creations.

Our Astronomy Club of Tulsa began in the summer of 1937 and will celebrate its 90th birthday in 2027. Lord willing, I will have been a part of its proud history for 50 years by then. I discovered the Tulsa Club in the spring of 1977 and used to drive 70 miles to attend their meetings. I had some great mentors who took the time to guide me on my journey of knowledge discovering the



hidden treasures of the night sky. I enjoy passing on that legacy to new generations of astronomy enthusiasts. I am most encouraged to see several younger people actively involved in our club as well as our experienced members sharing their ideas.

I have served on the ACT board and various officer positions over those years. Currently I am our Newsletter editor. I would encourage all our members to share their enthusiasm for astronomy by writing short articles or sharing their images in the newsletter. We would all be encouraged to read what others are discovering the night skies. What parts of astronomy do you enjoy the most? What are your observing goals? What have been some of your favorite adventures exploring the stars?



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

The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Catch Andromeda Rising by David Prosper

This article originally appeared in Sept 2021 - Due to Gov't funding cuts New articles are not available -

If you're thinking of a galaxy, the image in your head is probably the Andromeda Galaxy! Studies of this massive neighboring galaxy, also called M 31, have played an incredibly important role in shaping modern astronomy. As a bonus for stargazers, the Andromeda Galaxy is also a beautiful sight.

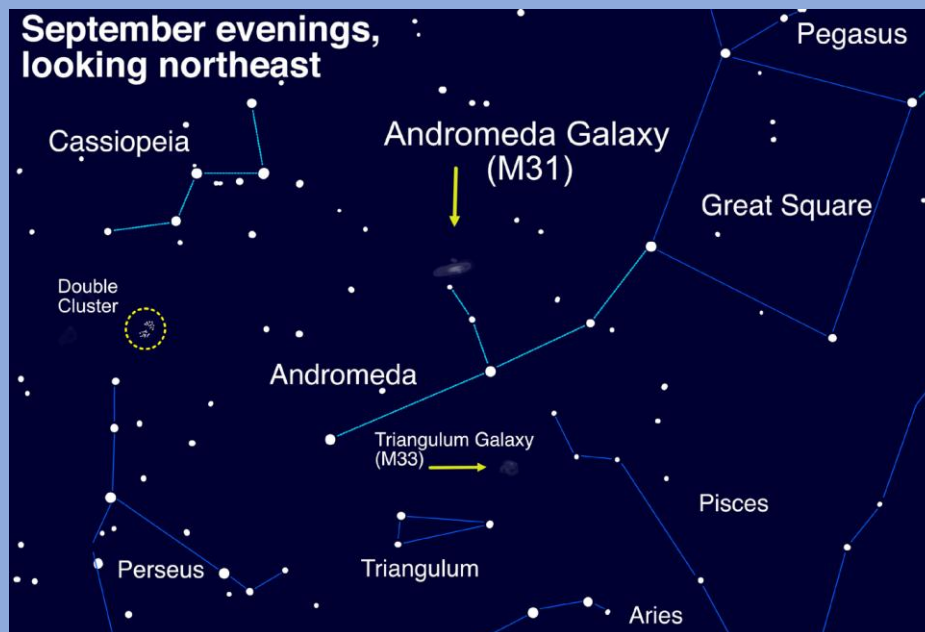
Have you heard that all the stars you see at night are part of our Milky Way galaxy? While that is mostly true, one star-like object located near the border between the constellations of Andromeda and Cassiopeia appears fuzzy to unaided eyes. That's because it's not a star, but the Andromeda Galaxy, its trillion stars appearing to our eyes as a 3.4 magnitude patch of haze. Why so dim? Distance! It's outside our galaxy, around 2.5 million light years distant - so far away that the light you see left M 31's stars when our earliest ancestors figured out stone tools. Binoculars show more detail: M 31's bright core stands out, along with a bit of its wispy, saucer-shaped disc. Telescopes bring out greater detail but often can't view the entire galaxy at once. Depending on the quality of your skies and your magnification, you may be able to make out individual globular clusters, structure, and at least two of its orbiting dwarf galaxies: M 110 and M 32. Light pollution and thin clouds, smoke, or haze will severely hamper observing fainter detail, as they will for any "faint fuzzy." Surprisingly, persistent stargazers can still spot M 31's core from areas of moderate light pollution as long as skies are otherwise clear.

Modern astronomy was greatly shaped by studies of the Andromeda Galaxy. A hundred years ago, the idea that there were other galaxies beside our own was not widely accepted, and so M31 was called the "Andromeda Nebula." Increasingly detailed observations of M31 caused astronomers to question its place in our universe – was M31 its own "island universe," and not part of our Milky Way? Harlow Shapley and Heber Curtis engaged in the "Great Debate" of 1920 over its nature. Curtis argued forcefully from his observations of dimmer than expected nova, dust lanes, and other oddities that the "nebula" was in fact an entirely different galaxy from our own. A few years later, Edwin Hubble, building on Henrietta Leavitt's work on Cepheid variable stars as a "standard candle" for distance measurement, concluded that M31 was indeed another galaxy after he observed Cepheids in photos of Andromeda, and estimated M31's distance as far outside our galaxy's boundaries. And so, the Andromeda Nebula became known as the Andromeda Galaxy. These discoveries inspire astronomers to this day, who continue to observe M31 and many other galaxies for hints about the nature of our universe.

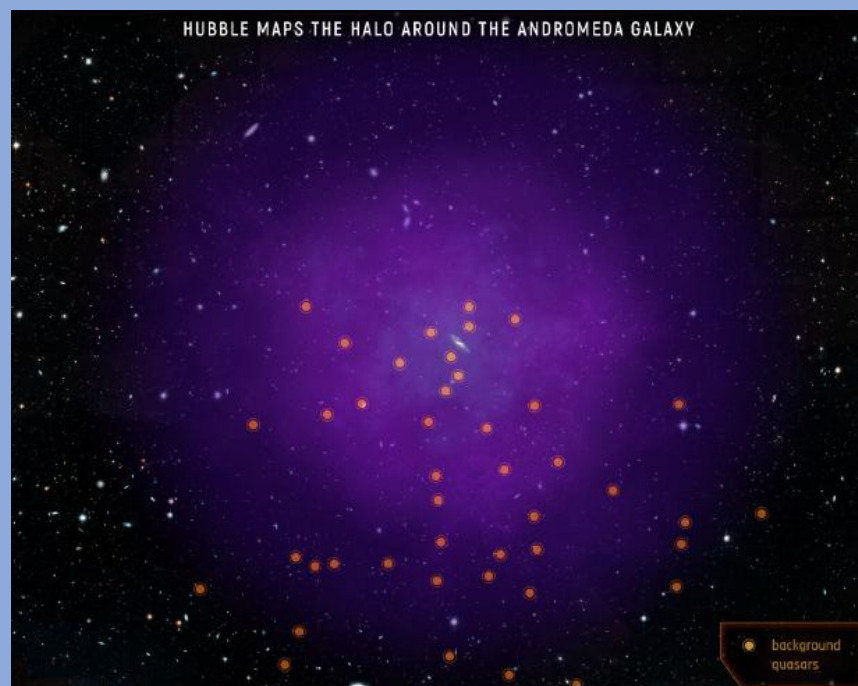
One of the Hubble Space Telescope's longest-running observing campaigns was a study of M31: the Panchromatic Hubble Andromeda Treasury (PHAT):

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubble-messier-catalog/messier-31/>





Spot the Andromeda Galaxy! M31's more common name comes from its parent constellation, which becomes prominent as autumn arrives in the Northern Hemisphere. Surprising amounts of detail can be observed with unaided eyes from dark sky sites. Hints of it can even be made out from light polluted areas. *Image created with assistance from Stellarium*



While M31's disc appears larger than you might expect (about 3 Moon widths wide), its "galactic halo" is much, much larger – as you can see here. In fact, it is suspected that its halo is so huge that it may already mingle with our Milky Way's own halo, which makes sense since our galaxies are expected to merge sometime in the next few billion years! The dots are quasars, objects located behind the halo, which are the very energetic cores of distant galaxies powered by black holes at their center. The Hubble team studied the composition of M31's halo by measuring how the quasars' light was absorbed by the halo's material. *Credits: NASA, ESA, and E. Wheatley (STScI)* Source: <https://bit.ly/m31halo>

**You are invited to come join us to learn more about
Astronomy and view the wonderful sights in the night sky.
Check the EVENTS section at <https://www.astrotulsa.com/>**



During the school year our club holds a
**Monthly General Club meetings at
Jenks Public Schools Planetarium
205 East B St, Jenks, OK
Located North of the intersection of
1st and B St**

Meetings begin at 7:00 PM

**When you enter the building lobby,
take the elevator to the 3rd floor.**

[Click for Google Map Link](#)



ASTRONOMY CLUB OBSERVATORY

Located on a hilltop about 25 miles SW of Tulsa
Features: classroom, restroom, dome with 14-inch telescope
and an acre to set up your telescopes.

Weather permitting, we host two types of observing nights.

GUEST OBSERVING NIGHT – RSVP requested

This event is open to our Guests – both individuals and
families as well as our regular members. Several of our club
members set up telescopes for public viewing.

* Groups need to make separate arrangements.

MEMBERS OBSERVING NIGHT usually on a Friday near new moon
Reserved for club members and their families to allow them to pursue observing projects.
The Observatory is ONLY OPEN for SCHEDULED EVENTS.

Check the EVENTS section at <https://www.astrotulsa.com/>

Follow our map directions DO NOT USE GPS

Two Options for travel to the observatory

[MOSTLY PAVED ROADS](#) – Hwy 75 to 201st St S – through Mounds OK

Most [DIRECT ROUTE](#) – Hwy 75 to 241st St S – some coarse gravel & dirt roads

ASTRONOMY CLUB OFFICERS:

PRESIDENT – JONATHAN FUSSELL
astrotulsa.pres@gmail.com

SECRETARY – SKIP WHITEHURST
astrotulsa.secy@gmail.com

TREASURER – CATHY GROUNDS
astrotulsa.tres@gmail.com

You may also contact club officers or board members using the CONTACT tab on our website

BOARD MEMBERS-AT-LARGE:

DON BRADFORD
JERRY CASSITY
BRYAN KYLE
JOHN LAND
JACK REEDER
JAMES TAGGART
BRAD YOUNG

STAFF:

FACILITIES MANAGER –
JAMES TAGGART
astrotulsa.obs@gmail.com
NEWSLETTER EDITOR - JOHN LAND
tulsaastrobiz@gmail.com

Public Facebook Page Coordinator

– Cathy Grounds

OBSERVING CHAIR - BRAD YOUNG
hafsnt1@gmail.com

SIDEWALK ASTRONOMY – TIM GILLILAND

PR AND OUTREACH – **Open Position**
GROUP DIRECTOR – **Open Position**

NIGHT SKY NETWORK – Jonathan Fussell

Enjoy at Planetarium Show at Jenks High School

JENKS PLANETARIUM



Jenks High School Campus
205 East B Street, Jenks

TICKETS are \$7

See our Current Shows
Schedule and ticket purchase
links at

[Shows and Ticket Link](#)

Shows take place on Tuesday evenings
or Saturday mornings

Must purchase tickets online in advance

[Shows and Ticket Link](#)

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