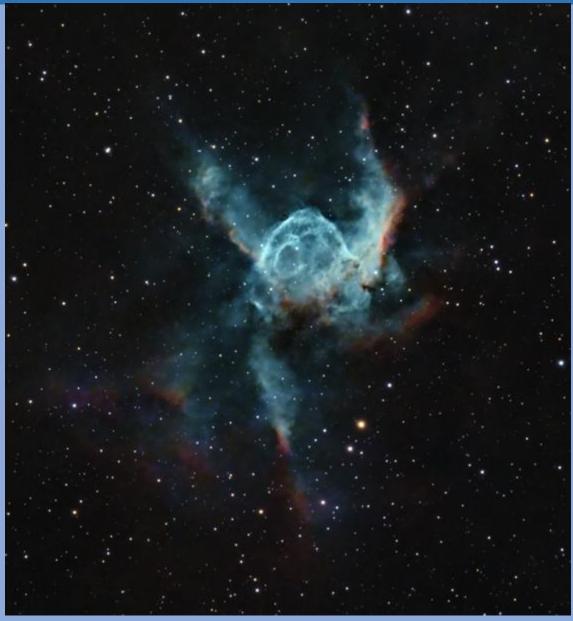


# **OBSERVER**

### **APRIL 2025**

Bringing Stars to the eyes of Tulsa since 1937 Editor – John Land





Member Liam Yanulis shares his image of NGC 2359 Thor's Hammer Nebula

Thor's Helmet is about 30 light-years across located about 15,000 light-years away in Canis Major This interstellar bubble is created gases surrounding by a super-hot central Wolf-Rayet star.

William Optics Zenithstar 73 telescope with an ASI533MC Pro camera and a ZWO 2" UVIR cut filter on a Skywatcher HEQ5 mount

- 1 Image Thor's Helmet NGC 2359 by Liam Yanulis
- 2 Newsletter Articles & Special Events
- 3 Astronomy Club Observing Events and In Town Meetings
- 4 Spring & Summer Astronomy Conferences
- 5 President's Message by Jonathan Fussell
- 6 Photos from our Feb 22 Telescope 101 Workshop
- 7 What's up in April Skies
- 8 Much about the Moon
- 9-11 If it's Tuesday, It must be Belgium? by Brad Young
- 12 Treasurer and New member report by Cathy Grounds
- 13-15 March's Night Sky Notes: Messier Madness NSN by Kat Troche
- 16 Map Links to Where We Meet \*Choice of TWO Routes to the Observatory
- 17 Club Contacts information --- Jenks Planetarium Public shows

### **Special Free Public Events -**

### **Saturday April 5 - 7:15 to 10:00 PM**

### **Hunter Park Public astronomy night.**

Hunter Park is located off 91st Street between Yale and Sheridan. (5804 E 91st ST)



### Saturday May 3 - 7:30 to 10:00 PM



# **Case Community Center Astronomy Night**

Sand Springs Case Community Center

1050 W Wekiwa Rd, Sand Springs

Come help us celebrate International Astronomy

### **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 dark rural skies SW of Tulsa
See details and directions on our Website Events Page
Guests are requested to RSVP

Friday April 18 - 7:30 PM Guest & Members Observatory Night
Friday May 16 - 7:50 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.

Friday Apr 25 - 7:30 PM Members Observatory Night
Friday May 23 - 8:00 PM Members Observatory Night

If a Friday event must be cancelled due to weather, we will try on Saturday 30 minutes before sunset - Always check the website for event updates



## In Town Astronomy Club meetings at Jenks High School planetarium

**Open to Guests and Members** 

Friday April 4 – 7:00 PM Jenks High School Planetarium Friday May 9 – 7:00 PM Jenks High School Planetarium

Located at 105 East B St, Jenks, OK

### **2025 ASTRONOMY CONFERENCES and STAR PARTIES**

Are you looking for a way to combine a bit of vacation time and enjoy learning more about astronomy? A regional of national astronomy conference may be just the thing for you. You can make friends with likeminded astronomy enthusiast and also get to hear some interesting presentations on a variety of topics. The door prize give aways are also an extra little bonus.

#### 2025 MidStates Regional Astronomy Conference June 13 to 15

The 2025 MSRAL Conference will be on the Little Rock University of Arkansas campus. This year's host is the Central Arkansas Astronomical Society. Our Tulsa club hosted the June 2023 MSRAL Conference. They already have an impressive lineup of 15 speakers and activities posted on their website. The Friday evening "Pisces Fry" meal is going to be held at their River Ridge Observatory along with some observing. The Saturday and Sunday presentations and workshops will be on the U of AR campus. I corresponded with their treasurer who told me registration and lodging information will be posted to the website soon. <a href="https://msral2025.caasastro.org/index.php">https://msral2025.caasastro.org/index.php</a>

### 2025 National Astronomical League convention June 25 to 28

The ALCON 2025 will be located in the scenic Bryce Canyon National Park of Utah.

The convention is taking place during the new moon so guests can enjoy the incredible dark skies of Bryce Canyon. In addition to the dark skies Bryce Canyon is noted for its beautiful unique geological landscape features. They have a several notable speakers lined up as well as some interesting workshops. Several astronomy equipment vendors will likely have displays set up.

Check out the details at <a href="https://astrocon2025.org/">https://astrocon2025.org/</a> Reservation space is limited.

Most recent posting indicates 150 reservation slots still available

### Texas Star Party April 20 – 27 <a href="https://texasstarparty.org/">https://texasstarparty.org/</a>

Texas Star Party is located on the <a href="Prude Guest Ranch">Prude Guest Ranch</a> in far SW Texas near Fort Davis.

Located at 31 degrees south its dark bortle 2 skies give observers a chance to see some southern target like Omega Centauri not visible from Tulsa. Its location in the dry semi-desert mountains give incredible views. Also, since it is held in April observers can enjoy tracking down the many spring sky galaxies. I've been there a couple of times and it's amazing to see stars shining clearly down to the horizon. You also have the option to schedule a trip to visit the nearby <a href="McDonald Observatory">McDonald Observatory</a> and the <a href="Hobby-Eberly">Hobby-Eberly</a> 433-inch multimirror telescope. Registration is limited to 550 participants. On site accommodations are available on a first come first served basis. It's about 750 miles drive one way.

### Okie-Tex Star Party Sept 19 – 27 <a href="https://www.okie-tex.com/index.php">https://www.okie-tex.com/index.php</a>

Several of our Tulsa area astronomers enjoy going to the Okie-Tex Star Party in the autumn. Each year about 500 astronomers arrive from all over the nation for a week-long feast of starlight. The Okie-Tex is held on a spacious observing area just west of the Black Mesa State Park at the far western end of the Oklahoma Panhandle. Its bortle 1 dark skies are acclaimed as some of the darkest on the planet. Each time I go I am overwhelmed by the late summer Milky Way flowing overhead like a river of stars engulfing the sky. You need to register and reserve your meal choices by August 31, 2025

### President's Message Jonathan Fussell



#### Salutations all,

2025 is beginning to fly by, as March seemed like a blip on my radar. As we begin stepping into April, I'm excited for some of our upcoming events like our meeting on April 4<sup>th</sup> at the Jenks planetarium and our public outreach night at Hunter Park on April 5<sup>th</sup> the following evening. Our last event at Hunter Park was a major success and I highly encourage anyone with a telescope to come out and volunteer your time and talent!

More highlights include your generous contributions of time and talent at the Tulsa Air and Space Museum for our Telescope Workshop, which was a major hit! It was incredible to see so many members come together to share their knowledge and passion for observational astronomy. Another standout moment was the fascinating presentation by our own Liam Yanulis on X-ray Astronomy, shedding light on the high-energy universe and how we observe the cosmos beyond the visible spectrum.

On a more reflective note, I'd like to take a moment to reminisce. This time last year, we were deep in preparations for the 2024 Total Solar Eclipse, an event that brought thousands of Oklahomans together under the shadow of the Moon. The excitement, the anticipation, and the shared experience of witnessing totality reaffirmed something special that I truly believe—Tulsa has a real drive and passion for astronomy. It's been incredible to see that momentum continue, and as we move forward, we're excited to keep fostering that curiosity and wonder through our events, outreach, and club gatherings.

Clear skies!

Astronomy Club of Tulsa "Bringing Stars to the Eyes of Tulsa since 1937" Jonathan Fussell - President

### **Telescope 101 Workshop**

On Saturday March 8 our Astronomy Club hosted our Telescope 101 Workshop at the Tulsa Air & Space Museum planetarium. Club volunteers helped several people learn how to set up their telescope encourage them to begin observing.





### Click on these images to links on the Internet

\*\*\* The **CLEAR OUTSIDE** icon above is a link to an extensive site showing cloud cover %,



Seeing, Transparency, Moon Phase, Temp in O C and many other useful tools

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

March - Moon Phases - 1st Q Fri April 4 - - Full Sat April 12 - 3rd Q Sun April 20 - - New Sun April 27

Lunar conjunctions – Jupiter April 2, Mars April 5 Quadruple conjunction before Dawn April 25 Venus, Saturn, Neptune & Mercury

### **Morning Planets**

VENUS and Mercury have passed inferior conjunction between Earth and the Sun. Venus on March 23 and Mercury on March 24. Look for them now in the predawn sky. Mercury has its greatest morning elongation on April 21. This year's Venus conjunction was very favorable for observers to see the thin crescent Venus both at



Sunset and the next morning at Sunrise. Brad Young shares his own observations in his section of the newsletter. SpaceWeather.com has an extensive <u>photo gallery of Venus images</u>. Here are my two favorite images <u>Thin Crescents</u> <u>Venus Phase cycle</u>

**SATURN** has also moved to the morning sky, but we'll have to wait until early May for it be far enough for the solar glare for good viewing.

Evening Planets JUPITER will continue to be well placed for observation throughout April as it continues its eastward track through Taurus. As April begins MARS forms a nice line with the Gemini stars Pollux and Castor. It will continue to drift eastward toward the constellation of Cancer. On May 4 you use a wide field eyepiece to see it skim past M 44 the Beehive cluster.



The Lyrid Meteor shower peaks in the late night ours of April 22 - 23. The radiant it easy to identify near the bright stars Vega in Lyra. On a typical year 10 to 20 meteors can been seen in dark skies. This is one of the oldest know meteor showers dating back to Chinese records from 687 BC. The meteors come from long period Comet C/1861 G1 Thatcher which has a 415 year orbit period.

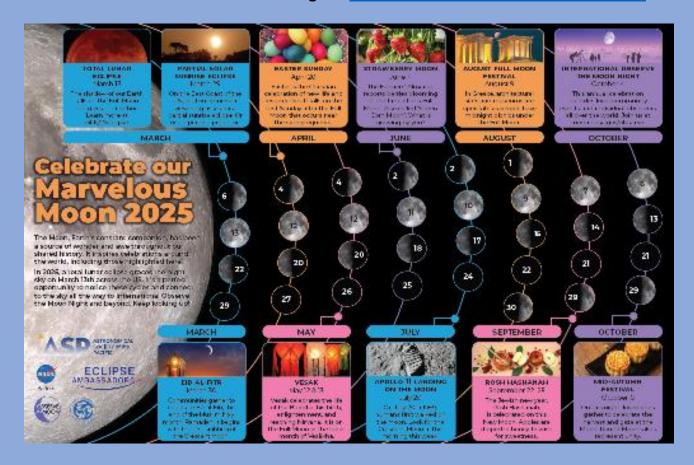


A Total Lunar Eclipse took place just on the night of March 13 / 14. Many of our members anxiously prayer for the clouds to clear so that we could stay up to observe it. Tim Gilliland made this <u>Great Time</u> <u>Lapse Video</u> of the Lunar eclipse with his SeeStar S50 telescope.

While the media likes to use hyperbolic terms like "The Blood Moon"
This month's eclipse was more of a muted brownish orange to the
naked eye. This year I learned to watch of a blue or turquoise band
along the limb of the moon just as it enters totality. These images from
March 25 Astronomy Picture of the Day illustrate it well.

In many cultures festivals and religious celebrations are tied to the phases of the moon. Long before we had clocks to fill our lives obsessing on schedules the phases of the moon served as a natural time piece in the sky to organize the cycles of life.

At our Feb 28 members night Liam Yanulis took this image of a barely one day old crescent moon. The Muslim Holy month of Ramdan began with the first sighting of the thin crescent moon and runs until March 30. In 2025 Easter is unusually late, occurring on Sunday April 20th. Easter in turn is linked to the Passover Celebration in the Jewish calendar. The Roman Catholic rule for the date of Easter is the first Sunday after the Full Moon occurring on or after March 21st. Easter can occur as early as March 22 or as late as April 25. The Chinese New Year begins with the New Moon closest to the beginning of Spring (Lichun) This can fall between Jan 21 and February 20 on our calendar. 2025 is the year of the Snake. The Chinese also celebrate an autumn harvest moon festival at the full moon. The chart below tells of other celebrations linked to the moon. You can see a full resolution image at https://nightsky.jpl.nasa.gov/news/430/



### Observing Chairman Brad Young



### If It's Tuesday, This Must Be Belgium?

"And you may find yourself living in a shotgun shack
And you may find yourself in another part of the world
And you may find yourself behind the wheel of a large automobile
And you may find yourself in a beautiful house, with a beautiful wife
And you may ask yourself, "Well, how did I get here?"

" – Talking Heads
Title from a song of the same name by Bojoura

I recently moved less than a mile from my former address, but that makes enough difference to some observations (e.g. artificial satellites, asteroid occultations) that I have applied for a new location ID. The former spot, which I called TULSA1 was COSPAR 8336. This got me reminiscing about all my observing

sites over the years.

My first observing site was the backyard of my parents' home in east Tulsa. It was still dark along Garnett Road then in the early 80s, and I was able to do quite a lot with my Green Stamps telescope. But it was always too tempting to hop the fence and go over to my friend's house where we sat and listened to Dark Side of the Moon all night. His mom worked the swing shift, so it was just my friend, his little brother and I till midnight. I didn't always get all my observing done, and it was embarrassing if I slunk home, and it had gotten cloudy.

"I got friends in low places..." [Garth Brooks] - best when sung by 50 drunk teens at a dam.

When I could drive, I started going out to Jewell Lake at the water treatment plant. I didn't like going there due to the odor and soon moved on to the end of 81st Street where it leads to a lock and dam on the Verdigris river. This ended up being a favorite spot for at least a decade. Not only was it much darker and less smelly, but the high school kids would also go there to party and so I always had some company either partying about the win or drinking their loss away.



I tried a spot over the river in Hulbert but got a speeding ticket one time on my birthday. Another time, a deer scared the crap out of me another night. It got right behind me, and I never noticed until I looked

up from the eyepiece and it was close enough to pet. I jumped in the air and screamed like a little girl. I took these as signs, and after that I went back to the Verdigris.

For quite some time, I had to observe from home which was right across the street from Skelly Stadium. This led to fun times such as showing the TU football fans Shoemaker Levy 9 hitting Jupiter. It also led to the second telescope I had gone missing, when I popped into the house for just a minute and came back out to nothing. Scopes 1 and 3 also disappeared from that house on Garnett, but 17 years apart. I used the insurance from the first loss to pay for my first wedding. The third scope "flew away" while I was moving to marry again. There must be something about weddings.



Note – not the actual location

The new house was downtown, and I had to hide behind dumpsters to get any chance of observing with a bright freeway interchange a block away. Luckily, I had rejoined the Astronomy Club of Tulsa and by then it had the observatory built near Mounds. Finally, dark skies to observe in! For a while, we had a very nice deal with a ranch near Foraker OK, with a bunkhouse and an airstrip to set up on. I went there with club members and even went on trips alone for a few days. Unfortunately, on a trip I didn't attend, a member broke the rules, and we lost the ability to use the site.

I had enjoyed the ranch but dreaded going to star parties. Eventually I took a chance and went to Okie Tex Star Party in Western Oklahoma and have gone ever since. Then, on to star parties in Australia at two different locations. All three are Bortle 2 skies, and I'm still enjoying returning to them when I can.

Along the way, I have observed, at least with binoculars, in several hotel parking lots, national parks and sometimes just at the side of the road. I was lucky enough to be assigned to an area near Chaco Canyon in New Mexico and would visit it to observe under its pristine skies when I was there to work. I also managed to observe on other work trips, such as Rotterdam and Kuala Lumpur Malaysia. I was in Rotterdam in June and July so there wasn't much night to work with. Malaysia was my first taste of southern skies, but it was cloudy most of the time or there were fires in Sumatra that made the sky smoky. I certainly know how that works, living in Oklahoma.

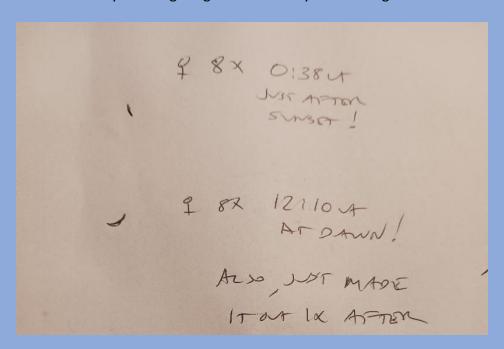
So, what's the point of all this? Just to list of all the strange places I've seen stars? In a way that is the point. Even if you travel or are stuck in the middle of the city, there's always a place to shield yourself from the light, or perhaps a nearby spot that will give you somewhat dark skies. But no matter where you are, if the sky is clear and you can find a dumpster to hide behind, you may be able to absorb more starlight than you think. You must be careful though; hiding behind a dumpster can lead to trouble. Once, when I lived in Houston and couldn't go out to the Fort Bend Astronomy Club site, I was looking

through my scope behind a dumpster in the apartment complex when a guy started yelling at me. He thought I was using the telescope to peep on his wife, I guess. I would have liked to explain to him that she would be upside down and nearly impossible to focus on, but it seemed like a better idea to just gather my things and get in my apartment.

"Wherever you go, there you are" – Buckaroo Bonzai

PS: I was able to see Venus at both sunset on the 21<sup>st</sup> and sunrise on the 22<sup>nd</sup>. An amazing sight, visible when Venus passes through inferior conjunction, as described in an earlier article <u>Moon Hides Mars Venus Rides Pegasus</u>. Hoping to see it tomorrow when it is "in" Pegasus. My scribbles below show the scenes. It reads 8x [my 8 x 40 binoculars], just after sunset. The crescent was so small I could barely make out horns at the edges. The next dawn, it was easier in still air. I was even able to make it out, just barely, as a "non-star" with naked eye.

On another note, the last quarter Moon was in the south, as low as it gets, at nearly -30° declination. This is because we are at the point in the Moon's orbit that brings its farthest slant versus the ecliptic (6 degrees) as it appears in the stars of Sagittarius, the most southern of the zodiacal constellations. The effect is larger the more northern your location. Another thing I've noticed in my travels; your latitude can make quite a difference in your stargazing. There is always something to look at!



Our observing chairman Brad Young has published a couple of books you might interested in reading — Both are available on Amazon.

### The Citizen Astronomers Manifesto Observers of the World Unite

An overview of Citizen Science and what the amateurs should know to make their experience positive.

### "Take What the Night Gives You"

An anthology of several of Brad's astronomy articles appearing in several magazines and newsletters. It includes several memories of our astronomy club events.

# Treasurer Report Cathy Grounds

As of March 20, 2025, we have 174 members with 15 new members so far this year! Please welcome our newest members Caitlin Dixon, Beverly Forester, Senthil Nachimuthu, Ronald Dunn, Aliosha Hand, Jerry Johnston, and David Ballard.

The club recently received a very generous donation in memory of Davis Taggart, in the amount of \$2,000. This has been placed into the club's savings account for future use.

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 1<sup>st</sup> of the month in which your membership expires. If you are not sure you are always welcome to check with the treasurer.

Accounts as of March 20th, 2025:

Checking: \$ 3,959.76 Savings: \$ 7,692.83

**Investments:** \$38,942.93 (fluctuates with markets).

Don't forget these easy methods to join or renew your membership: <a href="https://www.astrotulsa.com/join - see the "join" tab at the upper right">https://www.astrotulsa.com/join - see the "join" tab at the upper right</a>

- 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: <a href="mailto:AstroTulsa.Tres@gmail.com">AstroTulsa.Tres@gmail.com</a>

Membership rates for 2024 - 2025 are as follows:

Adults: \$ 50 per year includes Astronomical League Membership.

Sr Adult: \$ 40 per year for those 65 or older, includes Astro League Membership.

Students: \$ 40 per year includes Astronomical League Membership.

Additional Family membership: \$ 30 with voting rights and Astro League membership.

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 <a href="www.astrotulsa.com">www.astrotulsa.com</a>. 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 <u>Astronomy magazine</u> see their home page
Use this <u>Astronomy Subscription Link</u> <u>Digital</u> \$ 39.95 Print & <u>Digital</u> \$ 49.95 no club discount



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

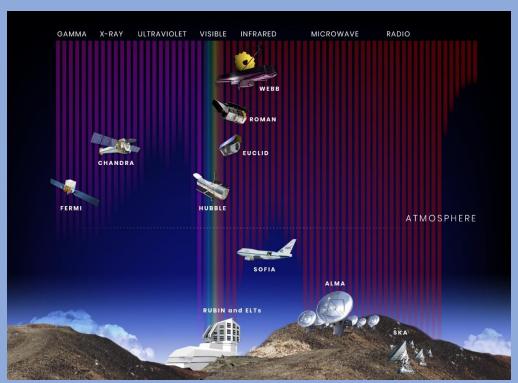
The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit <a href="mailto:nightsky.jpl.nasa.gov">nightsky.jpl.nasa.gov</a> to find local clubs, events, and more!

### April's Night Sky Notes: Catch the Waves!

By Kat Troche

### The Electromagnetic Spectrum

If you've ever heard the term "radio waves," used a microwave or a television remote, or had an X-ray, you have experienced a broad range of the electromagnetic spectrum! But what is the electromagnetic spectrum? According to Merriam-Webster, this spectrum is "the entire range of wavelengths or frequencies of electromagnetic radiation extending from gamma rays to the longest radio waves and including visible light." But what does that mean? Scientists think of the entire electromagnetic spectrum as many types of light, only some that we can see with our eyes. We can detect others with our bodies, like infrared light, which we feel as heat, and ultraviolet light, which can give us sunburns. Astronomers have created many detectors that can "see" in the full spectrum of wavelengths.



This illustration shows the wavelength sensitivity of a number of current and future space- and ground-based observatories, along with their position relative to the ground and to Earth's atmosphere. The wavelength bands are arranged from shortest (gamma rays) to longest (radio waves). The vertical color bars show the relative penetration of each band of light through Earth's atmosphere.

Credit: NASA, STScI

### **Telescope Types**

While multiple types of telescopes operate across the electromagnetic spectrum, here are some of the largest, based on the wavelength they primarily work in:

- Radio: probably the most famous radio telescope observatory would be the Very Large Array (VLA) in Socorro County, New Mexico. This set of 25-meter radio telescopes was featured in the 1997 movie Contact. Astronomers use these telescopes to observe protoplanetary disks and black holes. Another famous set of radio telescopes would be the Atacama Large Millimeter Array (ALMA) located in the Atacama Desert in Chile. ALMA was one of eight radio observatories that helped produce the first image of supermassive black holes at the center of M87 and Sagittarius A\* at the center of our galaxy. Radio telescopes have also been used to study the microwave portion of the electromagnetic spectrum.
- Infrared: The James Webb Space Telescope (JWST) operates in the infrared, allowing astronomers to see some of the earliest galaxies formed nearly 300 million years after the Big Bang. Infrared light allows astronomers to study galaxies and nebulae, which dense dust clouds would otherwise obscure. An excellent example is the <a href="Pillars of Creation">Pillars of Creation</a> located in the <a href="Eagle Nebula">Eagle Nebula</a>. With the side-by-side image comparison below, you can see the differences between what JWST, and the Hubble Space Telescope (HST) were able to capture with their respective instruments.



NASA's Hubble Telescope captured the Pillars of Creation in 1995 and revisited them in 2014 with a sharper view. Webb's infrared image reveals more stars by penetrating dust. Hubble highlights thick dust layers, while Webb shows hydrogen atoms and emerging stars. You can find this and other parts of the Eagle Nebula in the Serpens constellation. Credit: NASA, ESA, CSA, STScI, Hubble Heritage Project (STScI, AURA)

• **Visible:** While it does have some near-infrared and ultraviolet capabilities, the Hubble Space Telescope (HST) has primarily operated in the visible light spectrum for the last 35 years. With over 1.6 million observations made, HST has played an integral role in how we view the universe. **Review Hubble's Highlights here**.



The Crab Nebula, located in the Taurus constellation, is the result of a bright supernova explosion in the year 1054, 6,500 light-years from Earth. Credit: X-ray: NASA/CXC/SAO; Optical: NASA/STScl; Infrared: NASA/JPL/Caltech; Radio: NSF/NRAO/VLA; Ultraviolet: ESA/XMM-Newton

• X-ray: Chandra X-ray Observatory was designed to detect emissions from the hottest parts of our universe, like exploding stars. X-rays help us better understand the composition of deep space objects, highlighting areas unseen by visible light and infrared telescopes. This image of the Crab Nebula combines data from five different telescopes: The VLA (radio) in red; Spitzer Space Telescope (infrared) in yellow; Hubble Space Telescope (visible) in green; XMM-Newton (ultraviolet) in blue; and Chandra X-ray Observatory (X-ray) in purple. You can view the breakdown of this multiwavelength image here.

### Try This At Home

Even though we can't see these other wavelengths with our eyes, learn how to create multiwavelength images with the <u>Cosmic Coloring Compositor</u> activity and explore how astronomers use representational color to show light that our eyes cannot see with our <u>Clues to the Cosmos</u> activity.

,

### 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 <a href="https://www.astrotulsa.com/">https://www.astrotulsa.com/</a>



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 <a href="https://www.astrotulsa.com/">https://www.astrotulsa.com/</a>
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 <u>DIRECT ROUTE</u> – 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:**

MIKE BLAYLOCK 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

OBSERIVING 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

PERMISION TO REPRINT ANYTHING FROM THIS NEWSLETTER IS GRANTED, PROVIDED THAT CREDIT IS GIVEN TO THE ORIGINAL AUTHOR AND THAT THE ASTRONOMY CLUB OF TULSA "OBSERVER" IS LISTED AS THE ORIGINAL SOURCE. FOR ORIGINAL CONTENT CREDITED TO OTHERS AND SO NOTED IN THIS PUBLICATION, YOU SHOULD OBTAIN PERMISSION FROM THAT RESPECTIVE SOURCE PRIOR TO REPRINTING. THANK YOU VERY MUCH FOR YOUR COOPERATION. PLEASE ENJOY THIS EDITION OF THE OBSERVER.