



OBSERVER

AUGUST 2024

*Bringing Stars to the eyes of Tulsa
since 1937*

Editor – John Land



NGC 6960 - the Western Veil Nebula

Photo by Tim Gilliland taken June 13 and 24, 2002

Note the star 52 Cygni "surfing" the wave

Stellarvue SVX 127 D telescope – SBIG ST-8300M camera

Filters – Astrodon OIII 3nm & H-alpha 5nm

Frames:

Astrodon H-alpha 5nm: 12×1800"(6h) -5°C bin 1×1

Astrodon OIII 3nm: 12×1800"(6h) -5°C bin 1×1

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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>

TWO Public Sidewalk Telescope viewing nights

Case Community Center [1050 W Wekiwa Rd, Sand Springs](https://www.astrotulsa.com/events)

Bring your family and friends to enjoy an evening viewing the moon, planets and stars in this spacious park

SATURDAY Aug 10 - 7:30 to 10 PM in Sand Springs



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 a [Website Events Page](#)

Guests are requested to RSVP

Friday July 26 - 7:45 PM Guest & Members Observatory Night

Friday Aug 23 - 7:15 PM Guest & Members Observatory Night

Friday Sept 6 - 7:15 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 August 3 - 6:30 PM ANNUAL CLUB PICNIC
and observing night - see details in website events

Friday Aug 30 - 7:30 PM

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

- Always check the website for event updates





OKIE-TEX STAR PARTY 41 is coming !! <http://www.okie-tex.com>
Friday Sept 27 to Saturday Oct 5 Registration Deadline Sept 7

Get your registrations in by Sept 7 Meals must be prepaid by Sept 7 !!
 Nearest café is 34 miles away !!

Each fall amateur astronomers from all over the country gather in the western Oklahoma Panhandle to enjoy a weeklong “Star Feast” under some of the darkest Bortle 1 sky on the planet. It’s a memory you will cherish for a lifetime and yearn to go again. See Okie-Tex pages in [Oct 2022 Newsletter](#)



Reserve your 2025 Astronomy Wall Calendar for \$ 12 each

Each month has a stunning image along with information about astronomy events that month and interesting bits of astronomy history. There is ample space for you to write in your notes. The club will be ordering a LIMITED NUMBER. You may pick them up at our fall Jenks Meetings. To reserve yours contact our club treasurer with your name, email and number ordered.

Email astrotulsa.tres@gmail.com by September 5th

President's Message

Don Bradford



I hope everyone is having a good summer. In addition to regular club events, we are considering another Equipment Help SIG event in the next two months. We have had two such events, one at Whiteside Park and the most recent at Reed Park that I discussed last month. Continuing to review other locations, we have looked at Hunter Park near 91st and Yale. Of course, all parks in the metropolitan area suffer from light pollution but offer convenience for these events and an opportunity for members to bring equipment to test and get help if needed. Please give me your comments/suggestions on these sites as well as others you may know about. I will notify members by email as soon as a site and date are selected.

In the meantime, be aware of Guests and Members Night on July 26; Members Night and club picnic on August 3; Sidewalk Astronomy on August 10; Guests and Members Night on August 23; and Members Night on August 30. The Perseid Meteor Shower peaks the night of August 11 (Sunday), so if you want us to open the Observatory for that, let me know and we will seek volunteers to open the gates and stay late for that. As usual communicate with me by using the "CONTACTS" feature on the club website. And be sure to check the website for details on these events including possible cancellation due to weather conditions.

It is time to begin thinking about the election of officers and directors for next year. Elections will be held at the annual members meeting in October. Qualifications for board members and officers are the same: a nominee must be a club member for at least one year and must be at least the minimum legal age for the purpose of signing legal contracts and documents. If you are interested in participating in club governance by serving on the Board of Directors or as an officer, let us know and we will advise you of the process to place your name on the ballot.

Please continue to give us your feedback and suggestions. They are vital to our serving the needs of the club and the community. I look forward to seeing you at one or more of the club events this summer.

"Bringing Stars to the Eyes of Tulsa since 1937"

Don Bradford - President

Vice President Message *Jonathan Fussell*



Rocks on the Brain

As a long-time student of astrobiology, I've always been captivated by the potential of life beyond Earth. This passion has driven me to explore the mysteries of the universe and the fundamental building blocks of life. As of late, I've been fulfilling this passion by securing an internship at the Blue Marble Space Institute as a research associate. This opportunity has allowed me to dive deep into astrobiology, working alongside an international team of researchers, and professors as we turn over every rock in the solar system as we work on this groundbreaking research.

While I must keep the specifics of my project confidential, I can reveal that we are revisiting a chronological consensus of amino acids. My role involves extensive data analysis from meteorite samples as we search for extraterrestrial amino acids that could illuminate the origins of life. This work is both challenging and exhilarating, as each piece of data holds the potential to reshape our understanding of life's beginnings.

In the midst of this exciting research, I want to remind all Astronomy Club members about another celestial event that never fails to inspire awe—the **Perseid meteor shower**! This annual event is a favorite among stargazers, offering a spectacular display of meteors each summer.

The Perseids are the most popular meteor shower, peaking on warm August nights and providing a stunning show for observers in the northern hemisphere. This year, the Perseids are active from July 14 to September 1, reaching a strong maximum on August 11 and 12. From Bortle 1 locations, you can expect to see 50-75 meteors per hour at peak activity!

The Perseids are particles released from comet 109P/Swift-Tuttle during its numerous returns to the inner solar system. They are named after the constellation Perseus, from which they appear to radiate when at maximum activity. In 2024, viewing conditions are particularly favorable. The half-illuminated moon will set around 1 AM local daylight-saving time, coinciding with the peak activity period for the shower. This timing offers an excellent opportunity to enjoy the meteor shower in the pre-dawn darkness.

So, as I immerse myself in the data analysis of meteorite samples and hunt for extraterrestrial amino acids across the solar system, I invite all of you to look up and enjoy the wonders of the night sky. Mark your calendars and prepare for a night of breathtaking meteor displays. Whether you're an experienced astronomer or just beginning your journey, the Perseid meteor shower promises an unforgettable experience.

Clear skies and Godspeed. Jonathan Fussell

Waiting for T Corona Borealis to go Nova !

By John Land

Professional and Amateur astronomers alike are eagerly awaiting the star **T CrB** (pronounced “tee core bore) to become a Nova. Our [July 2024 Astronomy Club Newsletter](#) had an extensive article detailing why astronomers believe this Recurrent Nova star will soon blaze again. Expectations are that this 10th magnitude star will brighten by a factor of 4000 times overnight reaching as bright as 2nd magnitude. (As bright as the stars of the big Dipper)

You don't need a telescope to monitor the star's location each night. This summer it is high overhead in late evening. Most of you are familiar with the bright orange star Arcturus in Boötes. To find it just follow the curve of the Big Dippers handle to “Arc to Arcturus” Once you have located Arcturus look for the 2.5 mag star Izar and then curve onward to 2.2 mag Alpha Corona Borealis (Alphecca) The two stars are about 10 degrees apart. (*10 degrees is about the width of your fist held at arm's length*) When T CrB erupts it will be about as bright as Alpha illustrated by the red dot in the diagram below. Just keep monitoring that location on clear nights until a new star (NOVA T CrB) shows up nearby. Arcturus and the two 2nd mag stars can be seen from most suburban locations if you move away from a direct bright light. You may want to take a couple of images now before it erupts to compare when the Nova appears.

The Astronomical League is offering an Observing Challenge Award certificate for observing T CrB. See requirements here

<https://www.astroleague.org/al-observing-challenge-special-observing-award/>

See complete details on T CrB in our [July 2024 Astronomy Club Newsletter](#)





Click on these images
to links on the Internet

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

Seeing, Transparency, Moon Phase, Temp in ° 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 [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/>

August - Moon Phases - -

New Sun Aug 4 - - **1st Q** Mon Aug 12 - - **Full** Mon Aug 19 - - **3rd Q** - - Mon Aug 26

AUGUST PLANETS – **Venus** is returning as our evening star. **Saturn** rises at 10:00 PM early in the month and at 8:30 by month's end. It reaches opposition on Sept 7th . Saturn's rings appear thin this fall. They will "disappear" briefly next spring as we see them edge on March 24, 2025

Jupiter is still a morning planet. Aug 1 it rises at 2:30 AM but Aug 31 12:43 AM. Jupiter and Mars have a close conjunction ($1/3^\circ$) on the morning of August 14

Lunar conjunctions



In the predawn hours of July 30, look to the East for the crescent Moon, Mars and Jupiter forming a nice triangle near the Hyades cluster in Taurus and return again August 27.

On Aug 5 use binoculars to scan the horizon just north of west to find a thin 1.5-day old moon near to Venus and Mercury 6 degrees to the lower left.



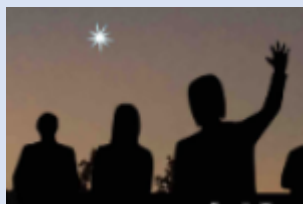
On Tues Aug 20 look for the Saturn rising $1/4$ degree above the full moon a bit after 9:00 PM Saturn reaches opposition on Sept 7th



Two Meteor Showers are under way. The Delta Aquarids peaked on July 28 at 20 / hr. The Members of the Perseid Shower have already begun to appear. The shower reaches its peak activity the night of August 11/12 best seen after midnight in the NE. It peaks at 100 per hour but that is under super dark skies. Expect to a couple of dozen per hour in suburban skies. Plan to observe at least 30 minutes.

See - [The Perseid meteor shower 2024: How to watch](#)

Comet 13P/Olbers is still visible in medium size telescopes. The 8.5 magnitude comet is drifting through the constellation of Coma Berenices during August. It has some nice photo opportunities on - Aug 18 near NGC 4565 - Aug 24 & 25 near M 64 & Aug 30 near M 53



New Astronomical League Observing Certificate designed for people with no equipment at all but their eyes.

Would you enjoy learning the patterns of the constellations, learning to identify and name the brighter stars? Observe the phases of the moon and its motion about the stars, watch the planets as they wander among the stars or enjoy observing meteors or satellites?

Many of the AL Observing programs have naked eye objects included, and some others have been adapted to include naked eye portions in support of a new certificate rewarding those who, even without optical equipment, have done 8 of the 11 programs available to choose from in the new program.

See details at: <https://www.astroleague.org/observing-program-division-announcements-naked-eye-observing-options/>

I also found this while working on this section of the newsletter. It has lots of links to night sky adventures. **Naked Eye Astronomy Guide**

<https://www.eyebuydirect.com/naked-eye-astronomy-guide>

Note: it's associated with an eyeglasses company.

Take What the Night Gives You book signing

Our observing chairman, Brad Young, has been a regular contributor of articles to our astronomy club newsletter for several years. He is publishing an anthology of the articles he has had in the newsletter, some that were in other publications, and some new material. You will enjoy his insights reflecting his many years as a Platinum Observer of the night skies along with some of his witty asides.

Brad Young will be signing books at **Gardner's Used Books - 4421 S Mingo Rd** on **Saturday August 24th** from **10:00 AM** until **4:00** or until the books run out.

The book is titled ***Take What the Night Gives You***

If you are interested in buying a copy, let Brad know so that he can gauge how many **hard back** copies to bring. Contact him with any questions at allenb_young@yahoo.com. The final price is not known yet, but it will be \$3 over my cost, probably about \$20 for hardback, and we can look at **paperback** or **eBook**. It will be fulfilled by **Kindle** (Amazon).

If you have any images, you'd like to give Brad and have appear in the book, please send them by August 1. The images will be under a general use license, but no payment is available

The Mystery of the Eclipse Monument

By Brad Young

"Mystery is my mistress – I must heed her sweet call" - Velma from "Scooby-Doo 2"

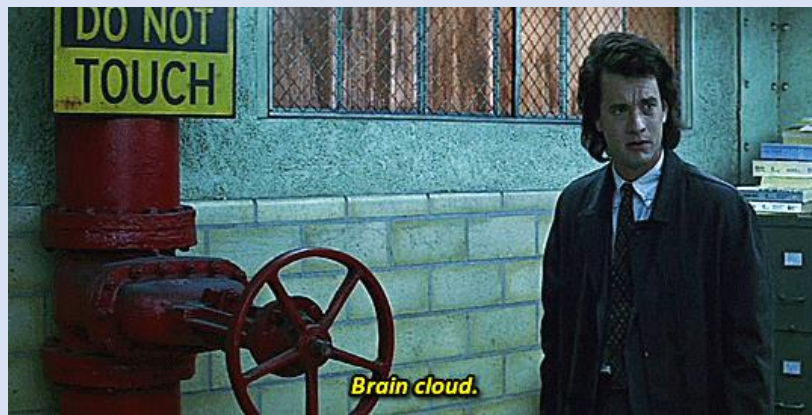
Along our dog walk a few years ago, my wife and I (and I guess, you could say, the dogs) came across a strange metal plate embedded in the sidewalk near 17th and Boulder Ave in Tulsa. It looked like it was a surveyor's monument, the kind you may have seen as a marker at the corner of your property. Those are usually round, but who knows? One glance though showed this was certainly not a boundary marker as it was right in the middle of a sidewalk alongside a large parking lot.



Even more peculiar was that the plate read "Total Eclipse St. Louis". It was not dated; however the sidewalk was relatively new compared to the ragged downtown sidewalks nearby, and we thought we remembered that it may have been poured around 2017. For those of you familiar with downtown, this is catty corner from the "Darth Vader" building that used to house Mapco and Williams, and across the street from the old [Abundant Life Building](#), raised in 1958 as the world headquarters for Oral Roberts ministries. The windowless "modern style" building is unique in a variety of ways but was long ago abandoned and is quite decayed.



Oral ran his fundraising campaigns from here, so the lack of windows seems fitting. It was said that with modern appurtenances like AC and lighting fixtures it was quite comfortable, but I must think it was more like the office Tom Hanks endures (with the first of three characters by Meg Ryan) in "Joe vs. the Volcano":



SAVE OUR (?) MONUMENT !

Fun fact: the previous total solar eclipse in St. Louis (before 2017) was in 1442

But where did the marker come from and who put it there? Why would someone commemorate the total eclipse that did indeed pass over St. Louis but wasn't total here in Tulsa? And, unless you gaze at your shoes when you walk, you might never see this marker; why not put it on the fence or on a stand (foreshadowing alert...).

Perhaps it was to describe how both the 2017 and 2024 eclipses were visible from St. Louis. That would explain the lack of a date. There were an awful lot of oddities about the little 2x3 plate in the ground, but I knew I had to find out what the story was, and make sure other astronomy enthusiasts did too. When people came to Tulsa, we could show them the strange little marker, a sort of oddity to match any along Route 66. After all, St. Louis is on the Mother Road too.



17th and Boulder - Very Original Name for new office building

"It's always something" – Roseanne Rosannadanna (Gilda Radner)

I continued searching for information. When I looked up the address and recent news, I found that a [new three-story building designed by 1Architecture](#) will be built where the parking lot is now. According to their website, "17th and Boulder is a 3-story mixed-use building...(that) will house 360 Engineering's new headquarters." And it also mentions "the project will have a strong presence along the street to support and engage urban pedestrian life."

This was not good. That might mean they would relocate or even destroy the plate! And there might not be much time to act, because, according to their website, the new building was to have been completed in 2023. I have not seen any activity so far, but it could be coming very soon. I considered checking daily when the crews start to show up, with my only hope that when construction begins, I can talk them into either keeping the plate or let me have it so I can save it. Or perhaps I could reach the City, after all, they are responsible for the sidewalks. And shouldn't they already know about this? Isn't this, as small as it is and easy to miss, still kind of a thing?

REALLY?!?!? “Oh! Never mind” – Emily Litella (Gilda Radner)

Then, another search and I found I'm [not the only person](#) to have discovered this and thought it was a relic of some import. It was not a marker put in the sidewalk to commemorate the eclipse, it is a *hydrant* that is placed there so you can wash the sidewalk and surrounding area with a garden hose!



Notice the stand I suggested earlier

The device itself is called a box hydrant and this website describes another person's wonderful discovery that turns out to be a piece of plumbing. I don't know how it works, since the plate is cemented in (just like the one in the comments of the article I found); perhaps it is a different device. There's other plumbing nearby, so who knows?

Even if it has nothing at all to do with it, this strange little item reminds me of a spectacular experience personally, as the 2017 event was my first total eclipse and I watched it in St Louis. I would prefer that they leave it installed so everyone can see it. Then, they can either be pleased to erroneously believe they see the eclipse memorialized or do some digging and find out a funny bit of trivia that has fooled at least a few people.

This article brought to you by Total Eclipse brand Yard Hydrants:

Yard Hydrants

Total Eclipse #36 Street Washer

Permanent Box Hydrant for All Climates

The Total Eclipse #36 Street Washer is designed and engineered for wash down and filling needs. The Total Eclipse #36 provides a point to retrieve water to wash down sidewalks and streets or used to water gardens and lawn areas. The Total Eclipse #36 sits flush with the ground saving space in walking areas. The cast iron box and lid is not traffic rated.

The Total Eclipse #36 comes standard with all brass principle working parts, available nozzle and inlet sizes are 1/2" or 3/4" compression type self draining non-freezing drain, cast iron box and lid. The Total Eclipse model #36 is fully serviceable from above ground.

Standard Features

- 3/4" Bury or less
- Cast Iron Box
- 1/2" or 3/4" MIP Inlet
- All Brass Principle Working Parts
- Key Operated

Additional Options and Accessories

- Any Depths of Bury Over 3'
- Locking Lid
- Brass Box & Lid
- Deep Box
- 1/2" Pressure Breaker with Deep Box
- 1" Check Valve with Deep Box
- Galvanized, Brass or Stainless Steel Pipe
- #159 Key (upside)

Approx. shipping weight for 1/2" 20 lbs. + 2 lbs for every 6"

Approx. shipping weight for 1" 22 lbs. + 3 lbs. for every 6"

TOTAL ECLIPSE

Approx. shipping weight for 1/2" 20 lbs. + 2 lbs for every 6"

Approx. shipping weight for 1" 22 lbs. + 3 lbs. for every 6"

TOTAL ECLIPSE ST LOUIS

Specification sheets and additional resources are available at www.hydrants.com

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1-800-231-3990 / www.hydrants.com

MORE PERSONAL CONSTELLATIONS

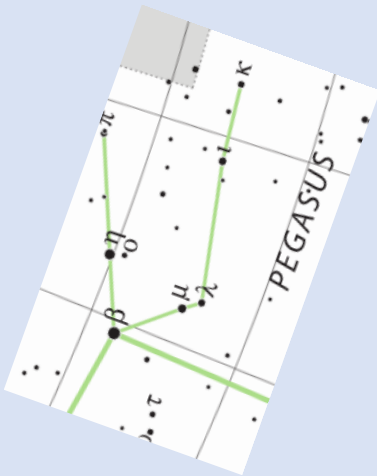
The Alternate Constellations Observing Program has been around for four years now, with little response from the Tulsa Club (**hint hint**). Part of it is to include a sketch or description of any “alternative” constellations you enjoy personally, one not recognized on the official list of 88. I know of one Tulsa member who has invented an **Elephant near Camelopardalis**, and I received some quite interesting ones with the submittals for the observing program.



One was a reimagining of the markings of the Moon. In this case, the observer saw a child with a ball playing soccer:



My version – the Little Box, is part of a defunct constellation Testudo the Tortoise as I discussed in an [earlier article](#) on unique star patterns.



My wife sees an old-fashioned TV “rabbit ears” antenna in the NW corner of the Square of Pegasus, as it rises:

If you have any to add, please send them to me at allenb_young@yahoo.com.

Images by author unless attributed below.

Sources:

<https://www.atlasobscura.com/places/abundant-life-building>

<https://www.1architecture.com/project/17th-and-boulder>

<https://www.nightwise.org/single-post/2018/04/02/the-eclipse-marker-that-really-wasnt>

<https://reasonandfaithinharmony.tumblr.com/post/190841345932/joe-versus-the-volcano-1990>

<https://funny.allwomenstalk.com/wry-observations-of-life-at-work-by-dilbert/amp>

<https://www.newyorker.com/tech/annals-of-technology/st-louiss-first-total-solar-eclipse-since-1442>

<https://www.flickr.com/photos/gsf/5836482263>

https://upload.wikimedia.org/wikipedia/commons/f/f4/Pegasus_IAU.svg

Treasurer Report Cathy Grounds



As of July 17th, 2024, we have **173 members**, with **20** new members so far this year. Let's welcome our newest members –

Ethan Morgan, Arthur Wing, Amanda Bustos and Keith Millslagle!

The PayPal link is working great so feel free to use it to join or renew!

Don't forget you can always mail in a check or money order to Astronomy Club of Tulsa, PO Box 470611, Tulsa, Ok 74147, pay cash at any club event or swipe a credit card at our any of our meetings, for which there is a roughly 3% service charge.

Please note that if you are renewing your membership late, you will still be credited a full 12 months going forward from the date you renew!

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

Accounts as of July 17th, 2024

Checking: \$ 1,700.36* < *This is a drop from last month as we have just paid
Savings: \$ 2,797.66 our largest annual expenses of Insurance and Astro League Dues.
Investments: \$ 37,341.02 (Value fluctuates with markets).

You can JOIN or RENEW memberships ONLINE using ANY MAJOR CREDIT CARD or MAILING in your dues with a check. The transactions are processed through PayPal, but you DO NOT need a PayPal account. A modest processing fee is added to online transactions.

Fill out the registration form at <https://www.astrotulsa.com/join>

Membership rates for **2024** are as follows:

Adults: \$ 45 per year, includes Astronomical League Membership.

Sr. Adult: \$ 35 per year for those 65 or older, includes Astro League Membership.

Students: \$ 30 with League membership; **Students:** \$ 25 without League membership.

Additional Family membership: \$ 20 with voting rights and League membership.

\$ 15 with voting rights but without 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 SUBSCRIPTION RATES 2024 updates

A monthly astronomy magazine subscription is a great way to learn more about many aspects of our hobby. -

Scientific articles, sky events, equipment reviews, imaging techniques and more

Use the links below to make your subscription

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

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

Lunar Occultation of Spica

One July 13, 2024 the First Quarter moon slipped in front to the bright star Spica in Virgo
Images below taken with a [SeeStar S50 ZWO](#) smart telescope. Moon over exposed to show star better. I took a video too but couldn't figure out how to shrink its 10-meg size.

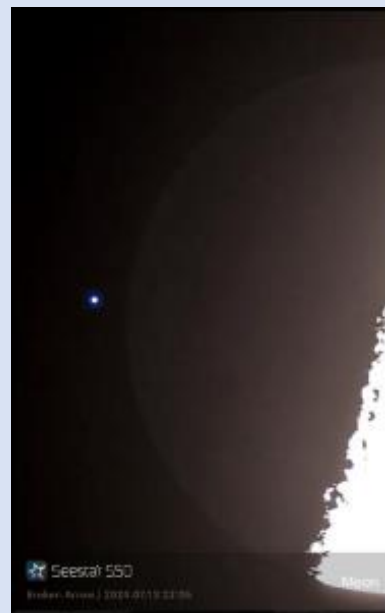
9:50 PM



9:55 PM



10:05 PM



Telescope Equipment



FREE BASE for a 12-inch
Meade LIGHTBRIDGE telescope.
In excellent condition.

Similar to the one in our observatory.

Contact Lina at 918-231-0393



**Orion 10-inch Sky Quest XT 10
Dobsonian Telescope**

**Diameter 250 mm Focal
Length 1250 mm f 5**

**2" rack & pinion focuser with
1.25 adapter**

**Eyepieces and Finder scope
not included in price**

\$ 225 Contact John at tulsaastrobiz@gmail.com



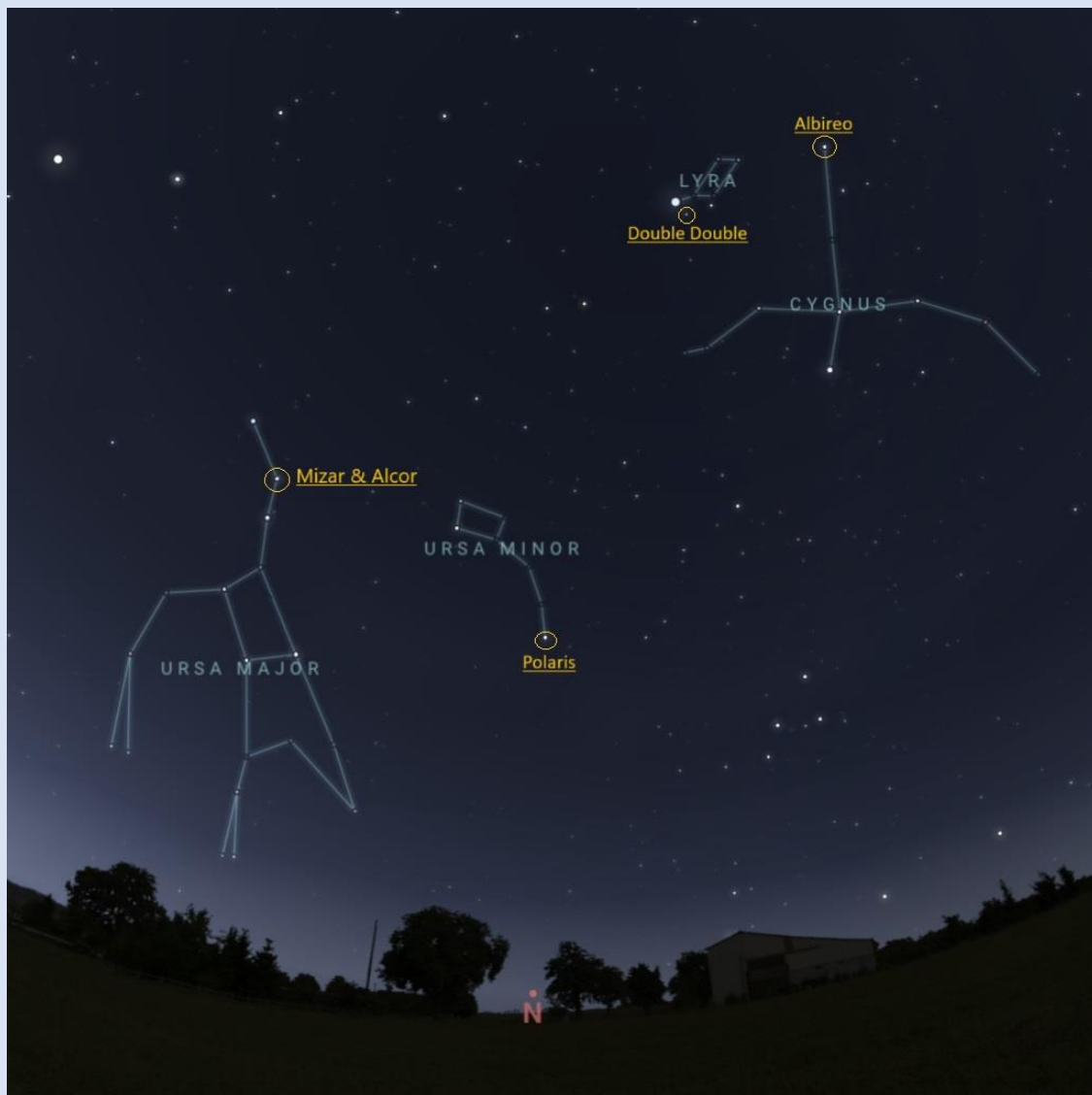


This article is distributed by NASA's Night Sky Network (NSN).
The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

August Night Sky Notes: Seeing Double

By Kat Troche

During the summer months, we tend to miss the views of Saturn, Jupiter and other heavenly bodies. But it can be a great time to look for other items, like globular star clusters such as Messier 13, open star clusters such as the Coma Star Cluster (Melotte 111), but also [double stars](#)!

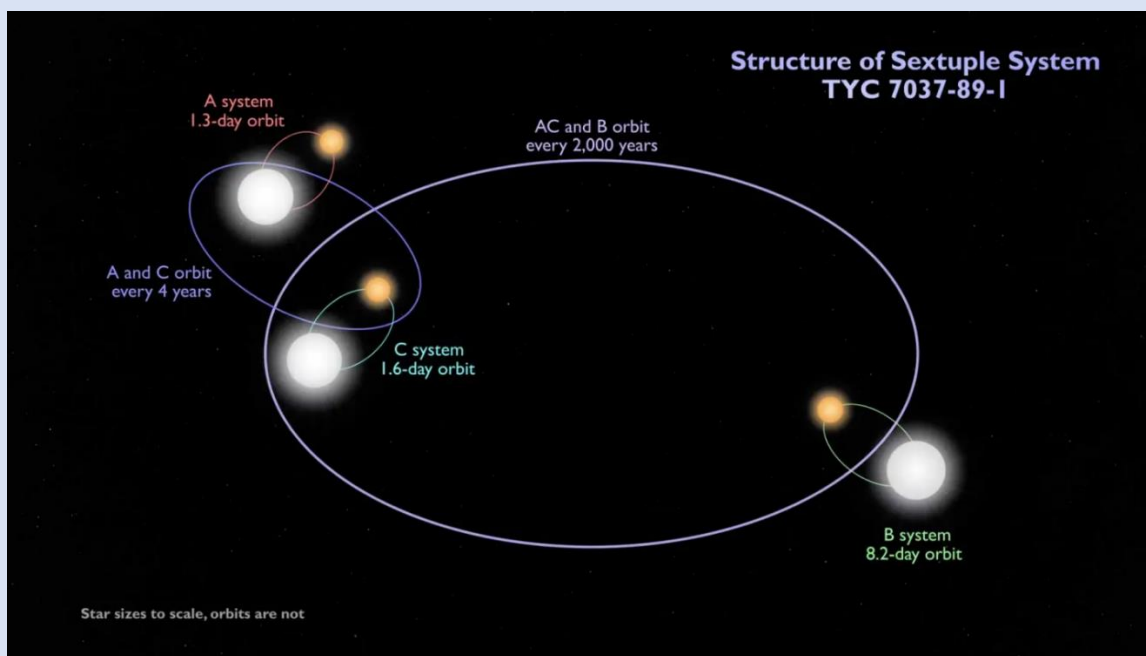


Mid-August night sky constellations with the following multiple star systems highlighted: the Double Double in Lyra, Albireo in Cygnus, Polaris in Ursa Minor, Mizar and Alcor in Ursa Major.
Credit: Stellarium Web

What Are Double Stars?

If you have seen any movies or read any books that refer to having two suns in the sky, that would be a *double star system*. These star systems typically come in two types – binary and optical doubles. Binary stars are two stars that are gravitationally bound and orbit each other, and optical double stars only *appear* to be close together when viewed from Earth, but in reality, are extremely far apart from another, and are not affected by each other's gravity. With a small telescope, in moderately light polluted skies, summer offers great views of these stellar groupings from the Northern Hemisphere:

- **Double Double:** also known by its technical name, Epsilon Lyrae, this multiple star system appears as one star with naked eye observing. But with a small telescope, it can be split into 'two' stars. A large telescope reveals Epsilon Lyrae's secret – what looks like a single star is actually a *quadruple* star system!
- **Albireo:** a gorgeous double star set – one blue, one yellow – in the constellation Cygnus.
- **Polaris:** while technically a multiple star system, our North Star can easily be separated from one star to two with a modest telescope.
- **Mizar and Alcor:** located in the handle of the Big Dipper, this pair can be seen with the naked eye.



This schematic shows the configuration of the sextuple star system TYC 7037-89-1. The inner quadruple is composed of two binaries, A and C, which orbit each other every four years or so. An outer binary, B, orbits the quadruple roughly every 2,000 years. All three pairs are eclipsing binaries. The orbits shown are not to scale. Credit: NASA's Goddard Space Flight Center

Aside from looking incredible in a telescope or binoculars, double stars help astronomers learn about measuring the mass of stars, and about stellar evolution. Some stars orbit each other a little too closely, and [things can become disastrous](#), but overall, these celestial bodies make for excellent targets and are simple crowd pleasers.

Up next, learn about the Summer Triangle's hidden treasures on our mid-month article on the [Night Sky Network](#) page.

**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 – DON BRADFORD

astrotulsa.pres@gmail.com

VICE PRESIDENT – JONATHAN FUSSELL

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SECRETARY – SKIP WHITEHURST

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TREASURER – CATHY GROUNDS

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

BOARD MEMBERS-AT-LARGE:

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JERRY CASSITY

BRYAN KYLE

JOHN LAND

JACK REEDER

JAMES TAGGART

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– Cathy Grounds

OBSERVING CHAIR - BRAD YOUNG

allenb_young@yahoo.com

SIDEWALK ASTRONOMY – TIM GILLILAND

PR AND OUTREACH – **Open Position**

GROUP DIRECTOR – **Open Position**

Enjoy at Planetarium Show at Jenks High School

JENKS PLANETARIUM



Jenks High School Campus
205 East B Street, Jenks

TICKETS are \$7

See our 2024 Spring 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

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