



OBSERVER

FEBRUARY 2025

*Bringing Stars to the eyes of Tulsa
since 1937*

Editor - John Land



Melotte 15 (IC 1805) by Tim Gilliland Dec. 1 & 2, 2024

This region in the center of the Heart Nebula shows clouds sculpted by stellar winds and radiation from massive hot stars in the nebula's newborn star cluster. The Heart Nebula is 7,500 light years distance in the constellation of Cassiopeia

Imaging Telescope Celestron EdgeHD 11"

Imaging Camera SBIG ST-8300M

Mount Astro-Physics 1100GTO

Filters - Astrodon H-alpha 5nm 36 mm · Astrodon OIII 3nm 36 mm

· Astrodon SII 3nm 36 mm

Accessories - Celestron 0.7X Reducer EdgeHD1100 (94241)

Software - Pleiades Astrophoto PixInsight

- 2 February 21 Guest Speaker – Dr. Graham Lau
- 3 Astronomy Club Observing Events and In Town Meetings
- 4 *President's Message* - by Jonathan Fussell
- 5 What's up in January Skies
- 6 *Messier Marathon Warmup* by John Land
- 7-10 *Fighting the Winter Blues* by Brad Young
- 11 *Astronomy in the News*
- 12 Treasurer and New member report – by Cathy Grounds
- 13 2024 Astronomy Club Budget Summary - by Cathy Grounds
- 14-16 *How Can YOU Help Curb Light Pollution*
NSN by article David Prosper - Update Kat Troche
- 17 Map Links to *Where We Meet* * Choice of TWO Routes to the Observatory
- 18 Club Contacts information --- Jenks Planetarium Public shows

Special Events - Preregistrations required

Friday Feb 7 - 6:30 [Dancing under the Stars](#) Enjoy a planetarium show then sweep your partner onto the dance floor as dance instructors Trisha and Dan Zielinski guide you through the sultry rhythms of Rumba and lively Swing.

Saturday Mar 8 - 10:30 to 2:00 [Telescope 101 Workshop](#)

Do you have a New Telescope ? (Or an older one gathering dust) Want some help learning to use your telescope more affectively? Bring your telescope and let one of our astronomy club members assist you in a 30 min individualized hands-on help session.

Friday February 21 - Club Meeting - 7:00 PM

Jenks High School Planetarium [105 East B St, Jenks, OK](#)



Our February 21 guest presenter will be Astrobiologist **Dr. Graham Lau**, science communicator, and host of NASA's [Ask an Astrobiologist](#). Dr. Lau is a leading voice in exploring the origins and possibilities of life in the universe. He is the Director of Communications and Marketing for Blue Marble Space and a Research Investigator with the [Blue Marble Space Institute](#) of Science.

Dr. Lau also serves as the Director of Logistics for the University Rover Challenge and contributes to cutting-edge research as the Research Community Coordinator for the Life Detection Forum and Knowledge Base. As an Affiliate Member of NASA's Network for Life Detection (NfoLD), he collaborates with researchers around the globe to advance the search for life beyond Earth.

Join us Friday, February 21st as Dr. Lau will be speaking to our club via Zoom about *The Panzoic Effect*, exploring how the potential for a universe teeming with life provides a transformative perspective on our place in the cosmos and influences how we view others and our own lives.

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

Saturday Feb 22 - 5:40 PM Guest & Members Observatory Night

Saturday Mar 22 - 7:00 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 Feb 28 - 5:45 PM Members Observatory Night

Friday Mar 29 - 5:45 PM to Dawn

Our annual Messier Object Marathon - See Details Page 6

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 Feb 21 - 7:00 PM Jenks High School Planetarium

Friday Mar 7 - 7:00 PM Jenks High School Planetarium

Located at [105 East B St, Jenks, OK](#)

DAYLIGHT SAVINGS TIME BEGINS SUNDAY MARCH 9

We lose an hour of evening observing.



President's Message

Jonathan Fussell



Salutations Astronomy Club Members,

As we bid farewell to January and welcome February, I encourage you all to step outside and enjoy the final days of the *parade of planets* in our skies this. Starting in the southwest, you'll see Venus shining brightly as our evening star, often appearing as the "first star" of the evening shortly after sunset. Moving slightly higher and to the east, Saturn will be visible. Venus and Saturn will pass within 3 degrees of each other. Turning your gaze high in the east, you'll find Jupiter, shining brilliantly. Finally, in the northeast, you'll spot reddish Mars, which is closest to Earth this January, making it an ideal time for viewing.

Looking ahead to February, I'm excited to announce that our next club meeting will be on Friday, February 21st. Zooming in to speak with our club is science communicator and astrobiologist Dr. Graham Lau. Dr. Lau, the host of NASA's *Ask an Astrobiologist*, Dr. Lau will deliver a presentation titled *The Panzoic Effect*, exploring how the potential for a life-filled universe changes our perspective on ourselves and the cosmos. Having had the privilege of interacting with and getting to know Dr. Lau during my internship with Blue Marble Space Institute, I can assure you this is a meeting you won't want to miss!

In March, we have two exciting events planned. The first is a Telescope Workshop on March 8th at the Tulsa Air and Space Museum, with details and sign-ups coming soon. Later in the month, on March 29th, we'll host our annual Messier Marathon at the observatory. This is a wonderful opportunity to connect with fellow club members, practice your telescope skills, and compete to locate all 110 Messier objects. If you're interested in helping with setup or coordination for this event, please don't hesitate to reach out—volunteers are always needed. We'll have more information on food and logistics as the date approaches.

Thank you all for your passion and enthusiasm for astronomy, and I look forward to seeing you soon!

Clear skies!

Astronomy Club of Tulsa

"Bringing Stars to the Eyes of Tulsa since 1937"

Jonathan Fussell - President



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/

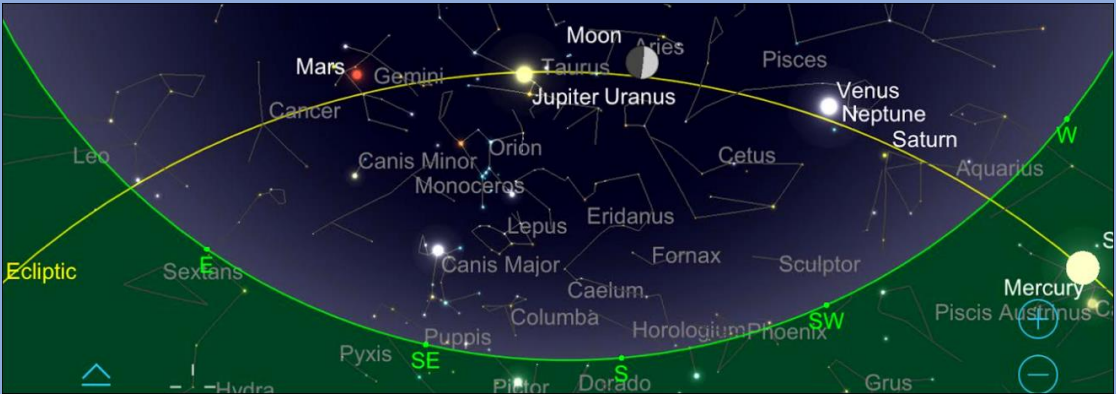
What to Know Before Buying a Telescope
https://skyandtelescope.org/astronomy-news/what-to-know-before-buying-a-telescope/

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/

October - Moon Phases - -
1st Q Weds Feb 5 -- Full Weds Feb 12 -- 3rd Q -- Thurs Feb 20 -- New Thurs Feb 27
Mark your calendar for a Total Lunar Eclipse night of March 13-14

Lunar conjunctions – Saturn Jan 31, Venus Feb 1, Jupiter Feb 6 Mars Feb 9

February 2025 Parade of Planets



All the planets except for Mercury will be visible in the February evening skies. The yellow ECLIPTIC line marks the path of the Sun as we view it from Earth. (a reflection of our own orbital revolution around the sun). The Solar system planets also orbit near this same ecliptic plane.

VENUS and SATURN can be seen in the western evening sky. This is the last month to see SATURN in the evening sky for late September. Continuing eastward along the ecliptic you can find the telescopic planets NEPTUNE and URANUS. High in the SE you will find bright JUPITER and MARS will be midway up in the East. MERCURY enters the evening sky about Feb 14, It has a nice conjunction with Saturn on Feb 24, 25. The MOON also travels near the Ecliptic moving further eastward about 13 degrees per day playing "Tag" with the planets as it passes each of them. This is the last month to see SATURN in the evening sky for late September

See Astronomy 2025 sky events YouTube video link in the Astronomy in the News section.

Messier Marathon Warm Up by John Land

Our astronomy club will be observing its annual **Messier Marathon on Saturday March 29th**. Each year near the Spring Equinox it is possible to observe almost all of the 110 Messier objects in a single all night observing marathon. Amateur astronomers all over the world gather to test their skills and endurance to find and log each object. The Messier Objects are a collection of deep space objects from a catalogue compiled by a famous French astronomer Charles Messier in the late 1700's. Since all the objects are accessible in moderate sized telescopes, they are popular sights for amateur astronomers. You may wish to work on the Astronomical League [Messier Certificate program](#)

Each year thousands of runners train for weeks or months to run one of the many Marathons events across the globe. As Astronomers we can beef up our observing skills by doing some mini-marathon observing. Practice setting up your scope and aligning the finder scopes. Determining the Field of View of your eyepieces. Learning to read a Star Chart or Locate the objects on a phone App. Training your eye to recognize the dimmer objects. Etc.

Basically, just run through a couple of practice sessions to hone your skills.

Winter Observing Tips in our January 2025 Newsletter under website ABOUT Tab

Below is a spreadsheet of the first 14 objects on the search list. In March these objects set early and are sometimes hard to find in the twilight. However, in February they are still up until nearly 10:00 PM. I had hoped to include the predawn object but they are already too close to the sun.

The chart comes from a website with list and charts arranged in a sequence to optimize your search. **Seq** = Sequence # **Cht** = chart page (I have forgotten what PMC is)

Messier Catalogue Number **NGC** = New General Catalogue #

Constellation **Type** **SG** Spiral Galaxy **EG** Elliptical Galaxy **OC** Open Star Cluster

PN Planetary Nebula **DN** Diffuse Nebula **GC** Globular Cluster

RA & Dec are the positions of objects on star charts **Mag** = Magnitude

See the Full Charts at <https://okmcd.com/pub/MessierMarathonCharts.pdf>

You can Find more details on Messier Marathons and links to additional resources at

<https://www.astrotulsa.com/files/Messier-Marathon-Any-year-web-doc-2.fhyq91g0r6375mc7.pdf>

Messier Marathon Early Evening List											
Seq	Cht	PMC	M#	NGC#	Con	Type	RA	Dec	Mag	Time	Date
1	1	2	M77	1068	Cet	SG	02 42.7	-00 01	8.9	:	
2	1	1	M74	628	Psc	SG	01 36.7	+15 47	9.4	:	
3	1	4	M33	598	Tri	SG	01 33.9	+30 39	5.7	:	
4	2	3	M31	224	And	SG	00 42.7	+41 16	3.4	:	
5	2	3	M32	221	And	EG	00 42.7	+40 52	8.1	:	
6	2	3	M110	205	And	EG	00 40.4	+41 41	8.5	:	
7	2	10	M52	7654	Cas	OC	23 24.2	+61 35	7.3	:	
8	2	10	M103	581	Cas	OC	01 33.2	+60 42	7.4	:	
9	2	5	M76	650	Per	PN	01 42.4	+51 34	10.1	:	
10	2	5	M34	1039	Per	OC	02 42.0	+42 47	5.5	:	
11	3	11	M45	none	Tau	OC	03 47.0	+24 07	1.6	:	
12	3	6	M79	1904	Lep	GC	05 24.5	-24 33	7.7	:	
13	3	7	M42	1976	Ori	DN	05 35.4	-05 27	4	:	
14	3	7	M43	1982	Ori	DN	05 35.6	-05 16	9	:	

Observing Chairman Brad Young



Fighting the Winter Blues

“Winter is coming, and when the Long Night falls, only the Night’s Watch will stand between the realm and the darkness that sweeps from the North.” – G.R.R. Martin

I've written before about the difficulties of observing in winter and so have many other authors. No one seems to have come up with a solution to cold, windy, often cloudy weather, lasting weeks on end, when it seems you'll never see stars again. But on rare occasions when it is clear enough to see anything, I find that even a few minutes outside with binoculars or even just my eyes can suffice to give me a little boost.

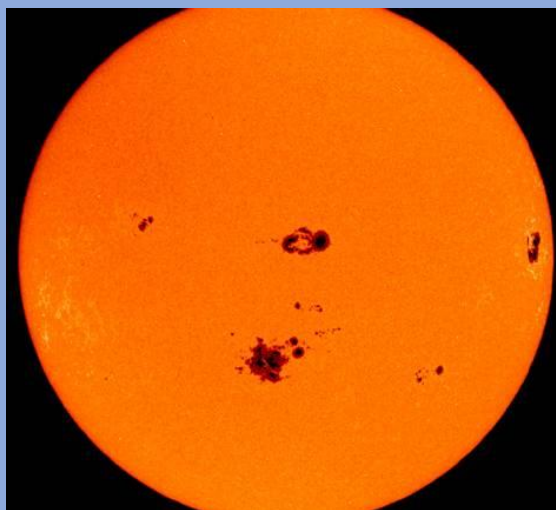
Sometimes, even in winter when it is clear, not moony and not too frigid, I do observe with my telescope. But that's not the norm at all. Instead, often we must make do with a glance at a few stars peeking out behind clouds, or a clear night with vicious wind howling from the north. On those nights, I try to get outside for as long as I can stand it and just absorb star light. We all know that seasonal affective disorder (SAD) can be caused by lack of sunlight, and I think for amateur astronomers the same can be said for lack of starlight. If you can get a few minutes to observe, using binoculars will often be enough to see several items. Of course, the first thing that comes to mind are the planets, since they are usually bright and this year, we are treated to a nice lineup in the evening sky of most of them.



Stargazers can substitute the brilliant stars of winter at night

A lot of times when I think about where the planets are, I begin at the Sun and work my way around the sky. So, considering that, Pluto, formerly known as a planet, is pretty much in solar conjunction right now. From there you move quite a way out almost to the southern direction at dusk to spot Venus. Venus was at easternmost elongation on January 10th 47° east of the Sun. The planet of love will be her brightest on Valentine's night February 14th. She is in the middle of a magnificent winter apparition which will culminate with her passing between us and the sun right around the spring equinox, as I described in last month's article. Saturn begins the month almost

lost in the sunset and will soon be gone, along with Neptune. Further along over into eastern Aries is Uranus, which will also need at least binoculars now as it's past opposition by a few months. And then the hard to miss Jupiter spends most of the month near Aldebaran, the eye of the bull in Taurus. It may be the second star you see each night after Venus appears, but he's way over about halfway up in the eastern sky. Mars is just past opposition and will be moving to the west all month before coming to a halt. So, we're lucky enough to have all the available planets in the evening sky right now, except for Mercury. But even he will make an appearance at the end of the month if it starts its evening apparition low in the west, soon to meet with Venus early next month.



Don't ignore the sun in winter, either. It's obviously visible at the warmest times of day and it is not scorchingly hot and high as in summer. We are just past solar max for this cycle, so now is a great time to drag out your solar filter from the eclipse, or a H-alpha scope and check on our nearest star. Meanwhile, you'll be out in the sun and fighting SAD and making vitamin D.

Beyond the planets, there are several wide double stars you can see in binoculars. The Astronomical League has an observation program dedicated to exactly this kind of object. The website for the program includes a list of double stars suitable for binoculars, many of which are visible in the winter sky. With a little planning, you can probably catch three or four of them and one trip outside and then run back in for some hot cocoa. Here are few wide, easy ones from that list:

Constellation	Designation	R. A. (J2000)	Dec. (J2000)	Magnitudes: A, B	Separation (") <i>Rho</i>	Position Angle (°) <i>Theta</i>
Canis Major	η	07 24	- 29 18	2.5, 6.8	177	287
Gemini	ν	06 29	+ 20 13	4.1, 8.0	113	330
Gemini	ζ	07 04	+ 20 34	4.1, 7.7	102	347
Lepus	γ	05 44	- 22 27	3.6, 6.3	96	349
Pegasus	ε	21 44	+ 09 53	2.5, 8.7	144	318
Taurus	κ 1 & 2 (65 & 67)	04 25	+ 22 18	4.2, 5.3	339	174
Taurus	θ 2 & 1	04 28	+ 15 52	3.4, 3.9	337	347

Note: kappa Tau also forms a nice asterism with epsilon and 72 Tau.

The same can be said for a few deep sky objects. Everyone knows the Orion Nebula is a fantastic object in a telescope, but have you ever seen it in your binoculars? There are several Messier objects visible in binoculars. Again, there is an Astronomical League observation program for those. A few winter sights from that list include:

Messier	Name	R.A.		Dec.		Mag.	Typ	Con	Size
31	Andromeda Galaxy	0	43	41	16	4.5	Gal	And	178'
34	Perseus Cluster	2	42	42	47	6	OCL	Per	35.0'
45	Pleiades	3	47	24	7	1.4	OCL	Tau	110.0'
37	Salt & Pepper Cluster	5	52	32	33	6	OCL	Aur	24.0'
42	Orion Nebula	5	35	-5	23	5	DfN	Ori	85' X 60'
35	Shoebuckle Cluster	6	8.9	24	20	5.5	OCL	Gem	28.0'
41	Little Beehive	6	47	-20	44	5	OCL	CMa	38.0'
47		7	37	-14	30	4.5	OCL	Pup	30.0'

Of course, there are non-Messier objects like the Double Cluster, the Hyades, and the (Big) Beehive to look at in binoculars, too. It's been interesting to watch Mars run up to the Beehive, only to retrograde back under Castor and Pollux, while Jupiter has looped from Messier 1 (the Crab Nebula), back to the Hyades.

"Look at the stars – see how they shine for you" – Coldplay

But besides doing programs, just standing outside for a few minutes and gazing at whatever stars and objects you can see may help to dispel the winter blues. You don't have to be out there long, if you just let yourself enjoy what you can see and stop worrying about how if it was a little warmer or a little clearer you might be able to see more with your telescope. Whatever part of the sky is clear is like a little secret area for you to explore and see what you can remember about how the constellations are laid out.

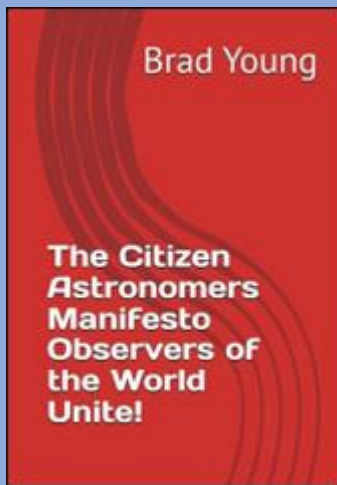


Then there is a worse scenario of all, the weeks and weeks of overcast skies that sometimes plague us during winter. I don't have a good solution for that, unless you have access to remote imaging telescopes where the weather is clearer. But this might be a great time to take care of some maintenance items on your equipment or do some planning for the next night you do get to

observe, so you'll be better prepared to use the small amount of time you'll have and not fumble around in the cold trying to figure out what to look at.

*There's a fire in the corner slowly dying; sometimes I just don't feel like goin' on
And yet I know it's more than worth the waiting for another chance to see the summer sun – John Denver*

Of course, the only real solution for the winter blues is spring. And I promise you, no matter how bleak the weather is right now, spring will come sometime later in the year. But there's no reason to sit and wait for it if there's a clear sky outside or at least a few stars are visible. Go outside and enjoy what you can see and imagine all the wonderful objects you will see when the weather gets a little better.



Shameless plug –

My second book is available on Amazon now, \$5 paperback, \$4 Kindle. It is more a monograph on one subject this time, shorter and more concise. It also includes four articles from last year.

<https://www.amazon.com/dp/B0DT4H3Y9Z>

Editor Note: I enjoyed reading Brad's previous book

"Take What the Night Gives You" on the airplane during my autumn vacation. It included several memories from our astronomy club.

Astronomy in the News

This is a selection of astronomy related news articles that come to my attention in recent weeks. I tried to select ones that seem credible but cannot vouch for complete accuracy.

(Not responsible for any Ads that pop up in some of the links)

Astronomy Calendar 2025...Why It's Going to Be an Epic Year! – YouTube

<https://www.youtube.com/watch?v=r4cv5T9BbUo>

The dates in the video are in Universal Time. Some of the events are the evening before in Oklahoma.



Comet ATLAS (C/2024 G3) passed only 0.09 AU (8.4 million miles) from the sun on Jan. 13th. Its nucleus began to disintegrate producing a spectacular tail visible in the southern hemisphere. [See numerous stunning images](#)

See the breakup in [Multiday movie](#)
[Perihelion movie from Solar Satellites](#)
[Comet C/2024 G3 from ISS](#)

Image Credit: <https://apod.nasa.gov/apod/ap250124.html>

Voyager's Farewell: The Legendary Probes Near Their Last Frontier | AI News

<https://opentools.ai/news/voyagers-farewell-the-legendary-probes-near-their-last-frontier>

Hubble Unveils the Supernova That Illuminated a Galaxy

<https://scitechdaily.com/hubble-unveils-the-supernova-that-illuminated-a-galaxy/>

JWT Space telescope images Saturn's moon Titan

<https://www.msn.com/en-us/news/technology/saturn-s-moon-titan-captured-by-the-james-webb-space-telescope/vi-AA1wKXPM>

JWT Space telescope images Uranus

<https://www.msn.com/en-us/news/technology/uranus-in-4k-james-webb-space-telescope-sees-the-planet-rings-and-moons/vi-AA1wUGj6?ocid=hpmsn>

New Measurements Taken By The James Webb Space Telescope Seem To Confirm That We Don't Know How Fast The Universe Is Really Expanding » TwistedSifter

<https://twistedifter.com/2025/01/new-measurements-taken-by-the-james-webb-space-telescope-seem-to-confirm-that-we-dont-know-how-fast-the-universe-is-really-expanding/>

Parker Solar Probe reports back - sets record speeds as it skims through the Sun's Corona

<https://blogs.nasa.gov/parkersolarprobe/>

Nancy Roman Space Telescope looks searches for rogue planets

<https://www.msn.com/en-us/news/technology/how-to-find-rogue-planets-nancy-grace-roman-space-telescope/vi-AA1wHluc?ocid=hpmsn>

What temperature is the moon? Plus an interest short video --| Live Science

<https://www.livescience.com/space/the-moon/what-temperature-is-the-moon>

Astronomers "Astonished" as Citizen Scientists Reveal Jupiter's Clouds Are Not What We Thought

<https://scitechdaily.com/astronomers-astonished-as-citizen-scientists-reveal-jupiters-clouds-are-not-what-we-thought/>

Treasurer Report Cathy Grounds



As of Jan 20, 2025, we have **174** members with **6** new members so far this year! Please welcome our newest members Hayden Scheibe, James Heavin, Neil Geyer, Ammon Olvera, Allan Harkness and June Keeter. The club has had **14** guest website contacts.

Accounts as of Jan. 20, 2024:

Checking: \$ 3,091.40

Savings: \$ 5,612.83

Investments: \$38,872.00 (fluctuates with markets).

Don't forget these EASY METHODS of Joining or Renewing your membership:

ONLINE - JOIN or RENEW memberships using ANY MAJOR CREDIT CARD

Transactions are processed through PayPal, but you DO NOT need a PayPal account.

A modest processing fee is added to online transactions.

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 (there is roughly a 3% card service charge).

To start click the JOIN / RENEW TAB - <https://www.astrotulsa.com/join> and fill out the registration forms. Submit them online, mail them in or bring them in person.

Membership rates are as follows: All memberships include Astronomical League Membership.

REGULAR: \$ 50 per year

SENIOR: \$ 40 per year - 65 or older

See Full Description of Membership types at

STUDENT: \$ 40 per year

[ACT Membership Bylaws](#)

Additional Family membership \$ 30 per year

As always if you have any questions or concerns or if your contact information

(Email, Phone or Postal address) has changed please email me: AstroTulsa.Tres@gmail.com

MAGAZINE SUBSCRIPTION RATES 2024 updates

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

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

Use the links below to make your subscription

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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

Astronomy Club of Tulsa			
2024 ANNUAL REPORT			
by ACT Treasurer Cathy Grounds			
INCOME:		MISC & SPECIAL PROJECTS	
DUES	\$ 5,729.94	Seed Technology Web Updates	\$ 375.00
REGULAR DONATIONS	\$ 929.93	TASM Sign	\$ 300.00
MEMORIAL DONATIONS	\$ 2,884.76	Dome Equipment & Upgrades	\$ 499.00
DINNER PAYMENTS	\$ 1,076.98	Gate Locks	\$ 62.64
SOLAR VIEWERS	\$ 249.27	Calendar Order	\$ 236.39
CALENDARS	\$ 276.00	Solar Viewers Cost	\$ 65.00
TOTAL INCOME	\$ 11,146.88	2024 TOTAL Misc & Projects	\$ 1,538.03
MEMORIAL DONATIONS	\$ (2,884.76)		
Transferred to savings		TOTAL EXPENSES	\$ 6,964.53
TOTAL REGULAR INCOME	\$ 8,262.12		
2024 EXPENSES			
Astronomy League Dues	\$ 1,078.00	TOTAL INCOME	\$ 8,262.12
Club Dinner-cost to club	\$ 220.62	TOTAL EXPENSES	\$ 6,964.53
Club picnic	\$ 292.99	NET INCOME to CLUB	\$ 1,297.59
Insurance	\$ 1,904.00		
Messier Marathon	\$ 144.60	ACCOUNTS AS OF 12/31/2024	
PO Box	\$ 256.00	Bank Checking Account	\$ 3,040.24
Printing/signage	\$ 158.17	Bank Savings Account	\$ 5,442.83
Property Tax	\$ 34.95	Investment Account	\$ 38,195.81
Quick Books	\$ 71.88		
Safe Deposit Box	\$ 45.00		
Supplies for building	\$ -		
Utilities	\$ 1,092.37		
Zoom Subscription	\$ 127.92		
2024 TOTAL OPERATING COSTS	\$ 5,426.50		



This article is distributed by NASA's Night Sky Network (NSN). February 2025

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!

February Night Sky Notes: How Can You Help Curb Light Pollution?

By Dave Prosper Updated by Kat Troche



Before and after pictures of replacement lighting at the 6th Street Bridge over the Los Angeles River. The second picture shows improvements in some aspects of light pollution, as light is not directed to the sides and upwards from the upgraded fixtures, reducing skyglow. However, it also shows the use of brighter, whiter LEDs, which is not generally ideal, along with increased light bounce back from the road.

Image Credit: [The City of Los Angeles](https://www.cityoflosangeles.com)

Light pollution has long troubled astronomers, who generally shy away from deep sky observing under full Moon skies. The natural light from a bright Moon floods the sky and hides views of the Milky Way, dim galaxies and nebula, and shooting stars. In recent years, human-made light pollution has dramatically surpassed the interference of even a bright full Moon, and its effects are now noticeable to a great many people outside of the astronomical community. Harsh, bright white LED streetlights, while often more efficient and long-lasting, often create unexpected problems for communities replacing their older streetlamps. Some notable concerns are increased glare and light trespass, less restful sleep, and disturbed nocturnal wildlife patterns. There is increasing awareness of just how much light is too much light at night. You don't need to give in to despair over encroaching light pollution; you can join efforts to measure it, educate others, and even help stop or reduce the effects of light pollution in your community.

Amateur astronomers and potential citizen scientists around the globe are invited to participate in the [Globe at Night \(GaN\)](https://www.globeatnight.org) program to measure light pollution. Measurements are taken by volunteers on a few scheduled days every month and submitted to their database to help create a comprehensive map of light pollution and its change over time. GaN volunteers can take and submit measurements using multiple methods ranging from low-tech naked-eye observations to high-tech sensors and smartphone apps.

Globe at Night citizen scientists can use the following methods to measure light pollution and submit their results:

- Their own smartphone camera and dedicated app
- Manually measure light pollution using their own eyes and detailed charts of the constellations
- A dedicated light pollution measurement device called a Sky Quality Meter (SQM).
- The free GaN [web app](#) from any internet-connected device (which can also be used to submit their measurements from an SQM or printed-out star charts)

Night Sky Network members joined a telecon with Connie Walker of Globe at Night in 2014 and had a lively discussion about the program's history and how they can participate. The audio of the telecon, transcript, and links to additional resources can be found on their [dedicated resource page](#).



Light pollution has been visible from space for a long time, but new LED lights are bright enough that they stand out from older streetlights, even from orbit. Astronaut Samantha Cristoforetti took the above photo from the ISS cupola in 2015. The newly installed white LED lights in the center of the city of Milan are noticeably brighter than the lights in the surrounding neighborhoods.

Image Credit: [NASA/ESA](#)

The [International Dark-Sky Association \(IDA\)](#) has long been a champion in the fight against light pollution and a proponent of smart lighting design and policy. Their website provides many resources for amateur astronomers and other like-minded people to help communities understand the negative impacts of light pollution and how smart lighting policies can not only help bring the stars back to their night skies but also make their streets safer by using smarter lighting with less glare. Communities and individuals find that their nighttime lighting choices can help save considerable sums of money when they decide to light their streets and homes "smarter, not brighter" with shielded, directional lighting, motion detectors, timers, and even choosing the proper "temperature" of new LED light replacements to avoid the harsh "pure white" glare that many new streetlamps possess. Their pages on [community advocacy](#) and on [how to choose dark-sky-friendly lighting](#) are extremely helpful and full of great information. There are even [local chapters of the IDA](#) in many communities made up of passionate advocates of dark skies.

The IDA has notably helped usher in "[Dark Sky Places](#)", areas around the world that are protected from light pollution. "[Dark Sky Parks](#)", in particular, provide visitors with incredible views of the Milky Way and are perfect places to spot the wonders of a meteor shower. These parks also perform a very important function, showing the public the wonders of a truly dark sky to many people who may have never before even seen a handful of stars in the sky, let alone the full glorious spread of the Milky Way.

More research into the negative effects of light pollution on the [health of humans](#) and the [environment](#) is being conducted than ever before. Watching the nighttime light slowly increase in your neighborhood, combined with reading so much bad news, can indeed be disheartening! However, as awareness of light pollution and its negative effects increases, more people are becoming aware of the problem and want to be part of the solution. There is even an episode of PBS Kid's [SciGirls](#) where the main characters help mitigate light pollution in their neighborhood!

Astronomy clubs are uniquely situated to help spread awareness of good lighting practices in their local communities to help mitigate light pollution. Take inspiration from [Tucson, Arizona](#), and other dark sky-friendly communities that have adopted good lighting practices. Tucson even reduced its skyglow by 7% (as of 2018) after its own [citywide lighting conversion](#), proof that communities can bring the stars back with smart lighting choices.

Originally posted by Dave Prosper: November 2018

Last Updated by Kat Troche: January 2025

**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

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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