



OBSERVER

SEPTEMBER 2020

Bringing Stars to the eyes of Tulsa since 1937

Editor - John Land



M8 - Lagoon Nebula
Bi-Color Ha, OIII
Mike Blaylock - 2020.

Member Mike Blaylock took this image of M 8 – the Lagoon Nebula
M 8 is a popular observing target in Sagittarius
It is visible in binoculars and small telescopes and even naked eye in dark skies.
The camera picks up the glowing colors of hydrogen and oxygen gases
in this rich star formation region of space

Photo details: M8 – Lagoon Nebula with narrow band filters bi-color
Imaged at ACT observatory Losmandy G11 Mount
Williams Optics GT102 SBIG 3300m Camera with OAG
StarlightExpress Lodestar X2 guide camera
Astrotech Field Flatteners
Images of Ha - 20 subs at 10min each OIII - 18 subs at 10min each

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Astronomy Club Events

All Public SUMMER Events are suspended til further notice

Plans may change based on how the current Health situation evolves.
Check our website www.AstroTulsa.com events section for updates

Members ONLY Events with Social Distancing Guidelines in Effect

Member ONLY Observing Nights
Friday, Sept 11, 7:00 PM
Saturday, Sept 12, 7:45 PM (backup)

Member ONLY Observing Nights
Friday, Oct 9, 6:30 PM
Saturday, Oct 10, 6:30 PM (backup)

Friday, Sept 18, 7:00 PM
Saturday, Sept 19, 7:00 PM (backup)

Friday, Oct 16, 6:30 PM
Saturday, Oct 17, 6:30 PM (backup)

Check our website www.AstroTulsa.com events section for updates

Guidelines for Members Only Observing Night

No guests – other than immediate family – no large family groups.
Additional details will be sent via membership emails

This will be a phased in effort in order to protect our members while also enjoying observing

Looking for Virtual Sky Events !!

Lowell Observatory – Flagstaff, AZ live and recorded streaming events.
Try the Videos and Facebook Live sessions from Chabot Space & Science Center

https://www.facebook.com/pg/ChabotSpace/videos/?ref=page_internal

Lowell Observatory – Flagstaff, AZ live and recorded streaming events.
<https://lowell.edu/giovale-open-deck-observatory/>

OFFICER & BOARD ELECTIONS are coming up this fall.

Our Astronomy Club of Tulsa is made up of people from many different backgrounds who all share a common love and interest in astronomy. The responsibility of keeping things running smoothly is handled by our Officers and Board members. These are made up of people who volunteer their time and talents to make the club better. **If you want to become more involved to ensure the future of the club, send you name and a short paragraph about yourself and why you want to be a nominee for Board or Officer. To astrotulsa.pres@gmail.com & astrotulsa.tres@gmail.com**

For more information contact one of our officers on the contact page at the end of the newsletter.

PRESIDENT'S MESSAGE

BY TAMARA GREEN



Hey Y'all,

Sorry to have to give you all another boring President's Message, but there haven't been many things to report on lately!

I hope that you all got a chance to see the meteor shower and the comet! I barely got to see it, because I was still fighting Corona virus and its after-effects at the time. I did get to see it through binoculars in my driveway, but it was just barely there. I unfortunately did not get to see any meteors.

Our elections are coming up in October. If you would like to volunteer to serve in an office or board position or nominate a worthy member. Please contact me, as president, Jerry Cassity, secretary, or John Newton, treasurer. Our Secretary will be putting the ballot together. Any fully-paid member in good standing who has been in the club for a minimum of one year is eligible. Since Jenks schools are not currently holding in person gatherings, we will be exploring alternate ways of voting. I am running again for President, as I really did not get to be a President this year.

I would really like to encourage any newer members to consider an office or a board position.

Qualifications for the elected position of officer shall be:

- A. The nominee shall be an eligible member in good standing for at least one (1) year.
- B. The nominee must be the minimum legal age

If you have been in the club for less than one year, and you are interested in helping out, there are many volunteer opportunities available to you! Serving the club in one capacity or another can help build friendships and create lasting memories and a sense of being part of something really great!

We are looking for a Night Sky Network Coordinator. The NSN Coordinator puts our events on the Night Sky Network calendar and notifies our members about upcoming webinars, etc. We also get NSN kits for use at public and group events to teach people about our wonderful hobby. This would be a good teaching opportunity!

Are you a Tech Savy person? Enjoy sharing astronomy with others? We need creative ideas to help us do astronomy with Virtual Media. We also need an astronomy enthusiast who is well versed in social media and would love to help us update our club's FaceBook page and post interesting current astronomy news and events.

If interested, or if you are interested in volunteering in any other way, or if you desire an office or board position, please contact me at astrotulsa.pres@gmail.com

I hope to see all of you soon!

Clear Skies, Tamara Green



Alternate Constellations Observing Program

By Brad Young

The Astronomical League votes each year on new observing programs to add to their lists. This year, they approved five new ones, including one that I developed called Alternate Constellations Observing Program. The focus of this program is to observe, sketch, and investigate the origin of several constellations that are not part of the official list of 88.

The program is split into two parts:

Part 1 consists of many of the now obsolete constellations that were developed in the Western world to fill in the gaps left by the ancient ones, but that did make the modern official list of 88 that we use today.

Part 2 is a review of star groupings as seen by indigenous peoples all around the globe. This includes examples from Native Americans, East Asia, Africa, Meso America, Oceania, and many more.

In all cases, there are many interpretations what the patterns look like and stand for. You can find all kinds of good information on the internet, library resources and astronomy texts. Any reasonable resource is acceptable (even Wikipedia!). I developed the program using only these sources.

Even from a city location you can usually trace out the constellations using only your eyes or maybe adding a small pair of binoculars. You will not have to travel to a dark sky site and the only cost will be the binoculars and maybe some books if you choose to buy them. I purposefully tried to make this program easy and inexpensive after attending a talk at the Okie-Tex Star Party last year on the AL Observing Programs. Several observers indicated their frustration with recent programs that require expensive equipment, very dark skies, and a large investment in time. It just so happened that by the time the program was published, these concerns became even more important due to the pandemic.

Another goal of this program is to expose people not only to the obsolete Eurocentric alternate constellations, but also ones from the other cultures around the world. There is both amazing variety and surprising commonality to star patterns throughout history and geography. Admittedly, the technical challenges of observing many of these groups is not large. But the intent is more to foster understanding of why constellations developed and how important they have been to us in the past and still are today.

If you have any questions, be sure and contact me. A few people already have, and I know that there are some rough spots that need to be ironed out. Note that if you are a member of the Tulsa club or any recognized astronomy club, you are already a member of the Astronomical League and can do the program without any further dues.

Link to Program Website:

<https://www.astroleague.org/content/alternate-constellation-observing-program> See all the

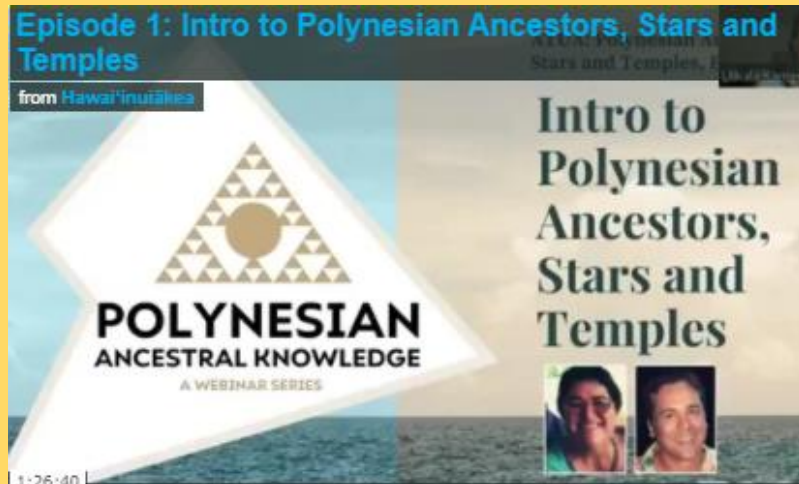
League Observing Programs at <https://www.astroleague.org/>

Wanting to learn more about how other cultures view the stars. The Polynesian island peoples were highly skilled at navigating large distances over open seas using clues from the winds, sky and stars. Below are links to a couple of programs about some of their knowledge.

Portions of the dialogue are in French and Hawaiian as well as English. Those of you familiar geography and history will know that the French colonized that portion of the world.

Below find video links to two episodes

Polynesian Ancestors, Stars and Temples and Measuring Polohiwa-a-Kane: Summer Solstice
<https://manoa.hawaii.edu/hshk/kamakakuokalani/gladys-brandt-chair/>



Editor Note: If you are new to astronomy, I recommend you also learn to recognize the officially named constellations patterns used in charting the sky. Doing so will give you a lifetime of familiarity with the sky. A resource I recommend is the book, *“The Stars, A New Way to See Them”* by H.A. Rey which represents the constellations in stick figure patterns that are easy to relate to their names. Many of the astronomy Apps have an option in tier settings to display these patterns usually under the choice or Modern Lines. By John Land

The Astronomical League also has a constellation identification certificate for them.
<https://www.astroleague.org/al/obsclubs/consthunt/const.html>



Thanks to K.C. Lobrecht for sending this gem from 1998

What's Going on in the Night Sky this month? By John Land



Our friends from the Bartlesville Astronomical Society passed along this great resource night to night things to see and even a video link.

<https://www.beckstromobservatory.com/whats-up-in-tonights-sky-2/>

Also Sky and Telescope has an audio podcast you can listen to while under the night sky. <https://skyandtelescope.org/observing/sky-tour-astronomy-podcast/>

Both websites renew information each month

September nights bring earlier sunsets and cooler temperatures to enjoy an evening of observing. Milky Way and Summer Triangle of stars are high overhead just at dusk as the evening begins. The bright pairs of stars in the south are the planets **Jupiter** and **Saturn**. They remain visible until well after midnight when they finally set in the SW. Both planets end their retrograde motion, Jupiter on the 12th and Saturn on the 29th. Don't miss this opportunity to view these two fall celestial showpieces. **Mercury** also makes an appearance in the twilight of the western evening skies. Due to its increasing southern declination it hugs the horizon less than 10 degrees up at sunset and sets within an hour of the sun. The thin crescent moon passes it 5 degrees to the upper right on Sept 18th.

September mornings give us a preview of Christmas evening skies. Orion is well up in the SE by 4:30 AM Venus is blazing away in the eastern dawn as leaves Gemini, races through Cancer and reaches Leo by the end of the month. Venus passes near M44 the Beehive cluster – Oct 12-14 and the Moon on the 14th. It has a close conjunction with Regulus on Oct 2nd and 3rd.

Readers who have been paying attention so far will recognize that I have ignored the Autumn star of the planetary show thus far. **MARS** takes center stage through the months of September and October. You'll not have a better opportunity to view Mars surface details until **Sept 2035** !

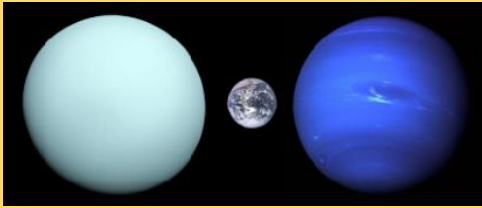


Starting off Sept. at magnitude -1.8 Mars already outshines the night's brightest star, Sirius. By month's end it will outshine even Jupiter as a ruddy orange beacon of -2.5 magnitude! Its apparent viewing size swells from 19.1" to 22.4" as its distance shrinks to only 0.42 AU. It will be closest to Earth on Oct. 6 and at opposition with the Sun on Oct 13th. To get your best views of Mars review the **Tips for Observing Planets** in our August newsletter.

https://www.astrotulsa.com/CMS_Files/08-2020.pdf

Observe it on several nights and make sketches of what you see. To see different regions of Mars surface, observe at different hours of the evening as Mars and Earth's rotation periods of fairly close together.

For a Detailed preview of the *THE 2020-2021 PERIHELIC APPARITION OF MARS* see the article by Jeffrey D. Beish http://www.alpo-astronomy.org/jbeish/2020_MARS.htm



Adventures Tracking the Ice Giants

By John Land

Many people enjoy the challenge of hunting game in forests or fields. One of my favorite things is finding the small hidden treasures of the night sky. I have a special affinity for the ice giant planets in the far regions of our solar system. I enjoyed astronomy as a child and youth but didn't discover the Astronomy Club of Tulsa until the spring of 1977. My very first issue of *Sky and Telescope* magazine was all about the discovery of a ring system around the planet Uranus. It was discovered by the Kuiper flying observatory while observing the planet pass in front of a star. The star unexpectedly disappeared several times before and after the planet occulted it revealing that multiple rings surrounded the planet.

That summer I bought an Edmond Scientific 6" F8 reflector and began searching for the Messier objects. (*I still have that telescope and it is by far my best scope for viewing planets. Which I reaffirmed recently while observing Mars at 1:00 AM in the morning.*) At the time I was teaching school in the small town of Okemah with a population of about 2500 or so. We would time our trips to visit my wife's mother in Tulsa to correspond to astronomy club weekends.

My yard in Okemah, just a block off main street, was a good place to observe but to find the dimmer M objects I was looking for darker skies. I finally found an abandoned oil rig site two miles out of town that had a concrete pad just large enough to set up on. It was sort of an eerie place in a pasture of black angus cattle. I couldn't see them when the moon wasn't up but could hear them wandering about. If I shined a light over the pasture, I saw their green glowing eyes scattered about. HOW DARK WAS IT? I could see Uranus at mag +5.6 fairly easily with the naked eye. In the spring of 1978, Uranus had just passed the double star Alpha Libra in April. Then did its retrograde motion back to the west and returned to pass directly between the pair in October. In my telescope it was easy to identify by its pale green color and disk when magnified. Uranus was one of my regular observing stops when it was up. Since Uranus is visible in binoculars, I enjoyed showing newbies how to find it in binoculars.

My first experience with Neptune is particularly special to me. Not sure of the exact date, but it was sometime in the summer of 1978. I was still a green novice when it came to knowing the sky. I was blessed to have the mentorship of some seasoned observers who knew the sky like an old-time friend. One of them was a brilliant man named *Louis DesJardin*. Louie, as we knew him, had made custom hand drawn monthly star charts specifically for the latitude of Tulsa. He would plot the positions of the planets on the maps and note other events that would appear in our newsletter.

At one of our summer observing nights Louie offered to guide me to find 8th mag Neptune in my binoculars. By that time in his life his eyesight was failing but he knew the sky like a well-read book. Neptune was in a rich star field of Ophiuchus the time. He directed me to look toward a particular star, then move my view toward the left- find a pair of stars – then nearby was Neptune! Later that evening we confirmed it by magnifying its tiny steel blue disk in a telescope.

Later Louie asked me to take over the task of making the monthly planet positions on copies of monthly star charts. He carefully explained how to find their positions. There were no computer programs or phone apps to provide that information. We had a book called Norton's Star Atlas with large fold out charts plotted to 6th mag. The Naval Observatory published ephemeris positions of planets in an annual book. To plot a planet for a particular date you had to extrapolate between the dates given to figure out where the planet should be on the charts. Then translate that location to our own charts.

In February 1619 Galileo unknowingly plotted Neptune twice as Jupiter passed it. To celebrate the 400th anniversary of the telescope in 2009 the Astronomical League created the Galileo certificate. To complete it I had to repeat his great discoveries using a scope of no more than 20 power. While completing it I had the privilege of observing Neptune over a period of time as it made its retrograde loop in Aquarius.

FYI – Jupiter – Neptune conjunction within 6' arcmins dawn on April 12, 2022 and even more Spectacular Jupiter - Venus conjunction of April 30, 2020 a mere 7' arcmins apart

Interested in “discovering” and observing the Ice Giants?

Turn OFF your GoTo Telescopes and *Let’s Go “Hunting”* the trials of starlight. Along the way you’ll enjoy “Star Hopping” as you travel the pathways of the night.

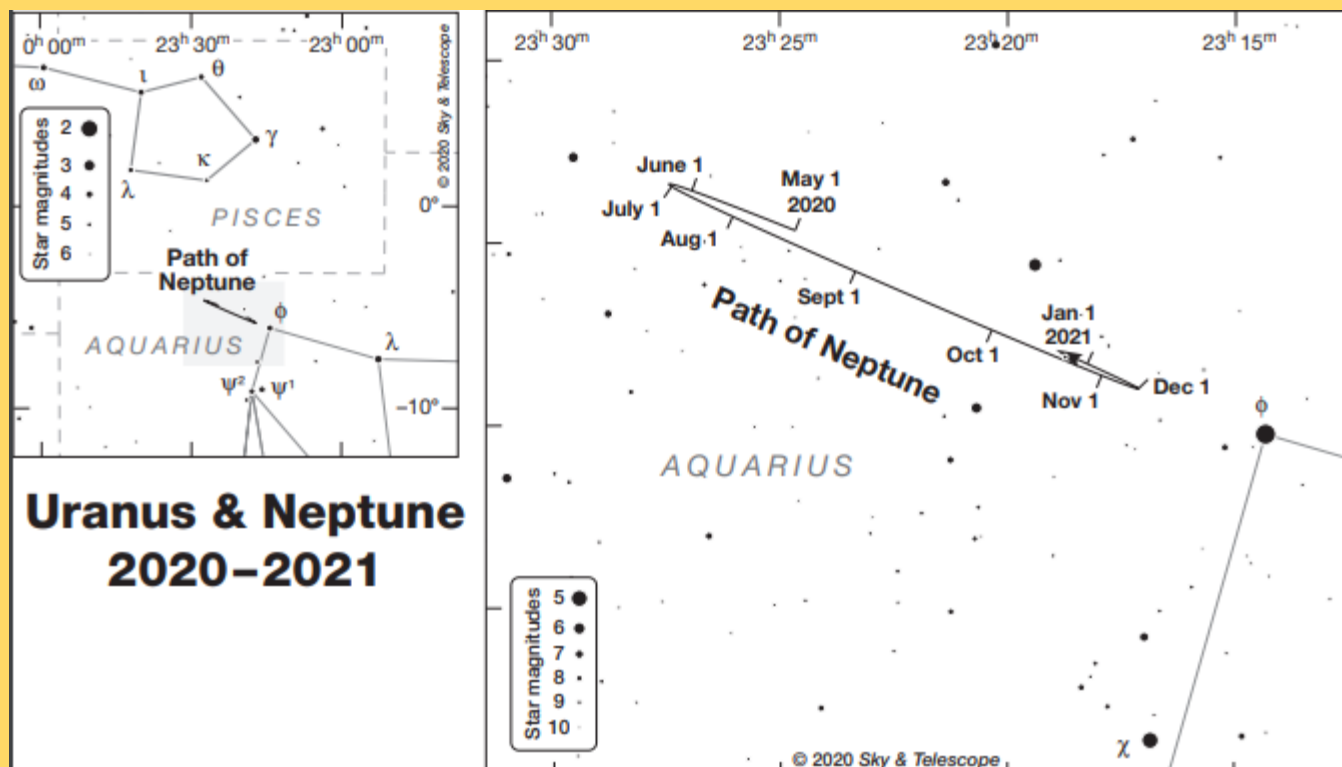
Uranus, mag 5.7, lies about 12 degrees east of Mars in Aries above the circlet of the tail of Cetus. Since there are few bright stars nearby it is the harder region to locate. It reaches opposition Oct 31st.

Neptune, Mag 7.8, is easily to locate as it lies just off the top of the water jug in Aquarius. It reaches opposition September 11th, so this is a great month to observe it.

You’ll find detailed finder charts at <https://skyandtelescope.org/observing/ice-giants-neptune-and-uranus/>

The equipment you’ll need are a good pair of binoculars or a small telescope. A star chart such as the one shown from the links below. “(Most good phone apps or computer programs can show you where to look). A pencil and paper to make sketches of your observation star fields over a period of nights. The best way to confirm you have located the correct “star” is to make a sketch of the suspected star field in a low power. Then return to that same field a night or two later and see which object has changed position and make another sketch. If you continue that quest over a period of weeks, you’ll learn how planets move among the stars.

Once you think you have identified the planet take a look at it with magnifications of 80 to 100x. Uranus should look like a tiny blue-green disk. There aren’t any green stars so it’s easy to identify. Stars don’t get larger with magnification, but a planet will (except for Pluto of course) Neptune is a bit more of a challenge. To me it looks like and tiny steel blue disk. Reminds me of my “Steely shooter” marble I had in grade school.



TREASURER'S and MEMBERSHIP Report

BY JOHN NEWTON



As of August 24th, we have added **13** new members bringing the total to **183** members.

We welcome our newest members since my report from last month including **Jeff Hill, Nancy Page, James Barnes, Teresa Ravenscroft, Chermara Wharry, Jeana Noorzaie, Kevin Norton, Joseph Jenks, Tracy Burrow, Janaki Kandukuri, Ryan Orman, Jere Iwata and Skyler Hensley**. Hello and welcome to ACT! We look forward to seeing you all at our meetings, even if virtual, and at club events throughout the year when they resume. We also recognize all our long-term members who continue to be the foundation of the club.

Accounts as of August 24, 2020

Checking: \$ 6,273.80

Savings: \$ 7,784.53

Investments: \$ 25,337.26 (Value tends to fluctuate with markets).

The club now has **PayPal** available for you to start or renew memberships and subscriptions using your credit or debit cards. Fill out the registration form at <https://astrotulsa.com/page.aspx?pageid=16> **Click Submit** and you will be given the choice of either **mailing in your dues** with a check **or using PayPal** which accepts most major credit cards. A modest processing fee is added to PayPal transactions.

You may also renew your membership or join at one of our club events using your credit card by seeing one of our officers. We can take payments with the Square card reader. A small fee is also added on to these transactions.

ALSO NOTE: For our current members who are renewing their memberships, you can now go to a new link on the website to start your renewal process. On the home page, hover over the "Member" tab on the ribbon menu near the top of the page. Then select the "Membership Renewal" link and this will take to a page to fill out your information. Fill this out, submit it, then pay your dues by whatever method you choose.

NEWS NOTE: Both Sky & Telescope and Astronomy have free Digital subscriptions available with print subscriptions, or Digital subscriptions may be purchased separately. Details - Contact their websites

Membership rates for **2020** 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.

Join Online – Add or renew magazine subscriptions.

<https://www.astrotulsa.com/page.aspx?pageid=16>

Magazine Subscriptions: If your magazines are coming up for renewal, try to save the mailing label or renewal form you get in the mail. Forms are available on the club website.

Astronomy is \$ 34 for 1 year, or \$ 60 for 2 years. www.astronomy.com

To get the club discount you must go through the club group rate.

Sky & Telescope is \$ 33 per year <https://skyandtelescope.org/>

Sky & Telescope also offers a 10% discount on their products.

You may renew Sky & Telescope subscriptions directly by calling their number -**be sure to ask for the club rate.**

You are invited to come join us to learn more about Astronomy and view the wonderful sights in the night sky.

Check our Events Page of Dates [Link to Events Page](#)



During the school year our club holds a **We are working on plans for virtual meetings for our membership. Since Jenks schools are closed due to pandemic**

Monthly General Club meetings at Jenks Public Schools Planetarium
105 East B St, Jenks, OK
Located North of the intersection of 1st and B St

Meetings begin at 7:00 PM

Take the elevator to the 3rd floor.

[Click for Google Map Link](#)

2020 See the [Fall Planetarium Show Schedule](#)

Then click the Date Column to sort them by show date



Sidewalk Astronomy Night

East side of Bass Pro in Broken Arrow near the lake.

101 Bass Pro Drive, Broken Arrow, OK

[Click Map Link here](#)

SIDEWALK ASTRONOMY is SUSPENDED due to pandemic

On a Saturday evening near the 1st Quarter moon Astronomy Club volunteers set up telescopes to share views of the moon, planets and other bright objects. It's a come and go event where shoppers and restaurant goers get a chance to experience glimpses of the universe with their own eyes.



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.

MEMBERS ONLY OBSERVING NIGHT are plan twice a month Friday DATE TBA via email

Reserved for club members and their families to allow them to pursue observing projects.

PUBLIC OBSERVING NIGHT on a Saturday

SUSPENDED for now due to pandemic

This event is open to individuals and families.

Club members set up telescope for public viewing.

The Observatory is ONLY OPEN for SCHEDULED EVENTS. [Link to Events Page](#)

[Click for Observatory Map](#)

CAUTION: **DO NOT** use GPS it will likely send you on some nearly impassible back roads.

ASTRONOMY CLUB OFFICERS:

PRESIDENT – TAMARA GREEN
astrotulsa.pres@gmail.com

VICE PRESIDENT – DANIEL SMITH
astrotulsa.vp@gmail.com

SECRETARY – JERRY CASSITY
astrotulsa.secy@gmail.com

TREASURER – JOHN NEWTON
astrotulsa.tres@gmail.com

BOARD MEMBERS-AT-LARGE:

MIKE BLAYLOCK
RICHARD BRADY
JOHN LAND
JAMES TAGGART
SKIP WHITEHURST

STAFF:

FACILITIES MANAGER –
JAMES TAGGART
astrotulsa.obs@gmail.com

EDITOR - JOHN LAND
astrotulsa.editor@gmail.com

MEMBERSHIP CHAIR - JOHN LAND
tulsaastrobiz@gmail.com

OBSERVING CHAIRS
OWEN AND TAMARA GREEN
darthnewo@yahoo.com
astrotulsa.pres@gmail.com

SIDEWALK ASTRONOMY –
OWEN GREEN
darthnewo@yahoo.com
PR AND OUTREACH –

GROUP DIRECTOR – Open Position
Astrotulsa.outreach@gmail.com

NIGHT SKY NETWORK –
Open Position

WEBMASTER JENNIFER JONES

Thanks to KC for this month's cartoon

**Would love to see some of
your original Creations too.**

**Create a Cartoon or Funny line
with an Astronomy theme
and Send in your Best Ones !**

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