



Astronomy Club of Tulsa

Observer

November 2014



Photo: Partial Solar Eclipse with Sunspot AR2192, October 23, 2014, by Tamara Green.

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EDITOR’S NOTE: DUE TO THE EARLIER DEADLINE FOR THE NEWSLETTER THIS MONTH (FOR THE ANNOUNCEMENT OF UPCOMING ELECTION OF OFFICERS AND BOARD FOR 2015), AND NASA’S SPACE PLACE NEWSLETTER NOT BEING POSTED ON THEIR WEBSITE YET, THIS MONTH’S EDITON WILL NOT FEATURE IT. HOWEVER, IT WILL BE POSTED IN NEXT MONTH’S EDITION OF THE OBSERVER.	

NOVEMBER 2014

DECEMBER 2014

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6 	7	8
9	10	11	12	13	14 	15
16	17	18	19	20	21	22 
23	24	25	26	27	28	29 
30						

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6 
7	8	9	10	11	12	13
14 	15	16	17	18	19	20
21 	22	23	24	25	26	27
28 	29	30	31			

UPCOMING EVENTS:

Daylight Saving Time Ends Sun, Nov 2

Dinner Meeting Fri, Nov 7 TASM 6:30 PM

(Please Note: This event is for Club members and their families only please)

Sidewalk Astronomy Sat, Nov 8 Bass Pro 6:00 PM

Public Star Party Sat, Nov 15 ACT Observatory 7:00 PM

Members' Night Fri, Nov 21 ACT Observatory 7:00 PM

Back-Up Night Sat, Nov 22 ACT Observatory 7:00 PM

Thanksgiving Day Thurs, Nov 27

General Meeting Fri, Dec 5 Jenks HS Planetarium 7:00 PM

Sidewalk Astronomy Sat, Dec 6 Bass Pro 6:00 PM

Public Star Party Sat, Dec 13 ACT Observatory 7:00 PM

Members' Night Fri, Dec 19 ACT Observatory 7:00 PM

Back-Up Night Sat, Dec 20 ACT Observatory 7:00 PM

WINTER SOLSTICE Sun, Dec 21 6:03 PM CST

Christmas Eve Wed, Dec 24

Christmas Day Thurs, Dec 25

New Year's Eve Wed, Dec 31

AN IMPORTANT ANNOUNCEMENT!!

It's almost time for the election of Officers and Board Members-At-Large for next year!

Elections will take place at the Annual Dinner Meeting, which will be on Friday, November 7, 2014 at the Tulsa Air and Space Museum Planetarium. Festivities will begin at 6:30 PM (please see flyer on next page).

So far, those who are running are as follows:

Richard Brady for President

Tamara Green for either Vice President or Secretary

Tim Davis for Treasurer

Mandy Nothnagel for Board

Skip Whitehurst for Board

Christopher Proctor for Board

James Taggart for Board

Ed Underhill for Board

John Land for Board

If you are interested in an Office or a Board position, or would like to nominate someone, please contact Secretary Tamara Green at astronomer.misstamara@yahoo.com and she will put your name (or your nominee's name) on the ballot.

PLEASE HAVE YOUR NAME OR NOMINEE'S NAME AND THE OFFICE OR BOARD POSITION THAT YOU OR YOUR NOMINEE ARE INTERESTED IN TO TAMARA BY NO LATER THAN TUESDAY NOV 4 SO SHE CAN HAVE THE BALLOT COMPLETED AND READY TO PRINT. Thank You!

The Astronomy Club of Tulsa Welcomes All Members and their Families to Our

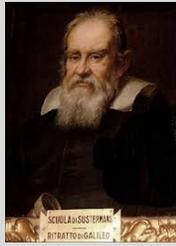
ANNUAL DINNER MEETING

Friday, November 7, 2014

6:30 PM

Tulsa Air and Space Museum Planetarium

Cost will be \$12 per person. Please RSVP with Treasurer Tim Davis



Festivities will include:

ELECTION OF OFFICERS AND BOARD MEMBERS-AT-LARGE FOR 2015

A fun Italian theme (much like last year's Greek theme), with presentations on Italian contributions to Astronomy and wonderful catered food! (Caterer To Be Announced)

A Silent Auction

Group Photo

And More!

We hope to see you there!





Vice President's Message

By Richard Brady

Hi everyone!

We had a great turnout for the solar eclipse viewing at Jenks planetarium last October 23. I was so busy showing off the eclipse I'm really not sure how many people showed up. We sold safe solar viewing glasses at the event. We started with 100 pairs and ended up with only around 15 left. So I'm guessing we had well over 100 guests. Thanks to everybody in the club for making this such a success. And thanks to Dan Zielinski of the Jenks planetarium for having us. I'm looking forward to that total solar eclipse in 2017! Road trip anyone?

I hope to see everyone at the annual club dinner on Friday, November 7 at 6:30 PM at Tulsa Air & Space Museum. We're having an Italian theme this year. If you can make it a little early to help set up, we can always use the help.

We will have elections at the dinner again this year. We have 6 people running for the board so far, but only 3 people running for the 4 officer positions. I am running for president, but if someone else wants the job, I will run for vice-president again. Tamara Green, our current secretary, would like to run for vice-president, but is willing to remain as secretary if needed. Tim Davis is running for treasurer again. If anyone wants to be an officer or board member, please let Tamara know within the next day or two, so she has time to get the ballots printed.

After the dinner we will have a planetarium show again. Currently TASM has 5 different shows running each week. Four of them, STARS, Two Small Pieces of Glass, Tales of the Maya Skies, and Black Holes: The Other Side of Infinity, are for all ages. The last one, Secret of the Cardboard Rocket, is for kids, so I wouldn't recommend it for the dinner (unless we've all started into our second childhood already. :-)) Instead of having a small group of us decide, I will be asking everyone what show we want to see. A description of each show is on the museum's website. Go to tulsamuseum.org, click on "Planetarium" on the left, then click on "Planetarium Shows" to read them.

See you Friday.

Clear Skies!
Richard Brady



Treasurer's and Membership Report

By Tim Davis

Astronomy Club of Tulsa: 135 members, including 48 new members in 2014.

Club Accounts as of Oct 26, 2014:

Checking: \$3,442.72; Savings: \$3,771.90; Investment accounts: \$18,503.74 (Value Fluctuates with Market); PayPal: \$0.00



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 <http://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 now. 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. Contact their websites for details.

Membership rates for 2014 are as follows:

Adults: \$45.00 per year, includes Astronomical League Membership.

Sr. Adult: \$35.00 per year for those 65 or older, includes Astronomical League Membership.

Students: \$30.00 with League membership; **Students: \$25.00** without League membership.

Additional Family membership: \$20.00 with voting rights and League membership, **\$15.00** 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. <http://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 \$34.00 for 1 year, or \$60.00 for 2 years. www.astronomy.com

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

Sky & Telescope is \$33.00 per year www.skyandtelescope.com

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

Note: You may renew your Sky & Telescope subscription directly by calling the number on the renewal form, be sure to ask for the club rate.

NEW SUBSCRIPTIONS must still be sent to the club.

Treasurer's and Membership Report, by Tim Davis, Ct'd.

The **Annual Astronomy Club Dinner** will be held at Tulsa Air & Space Museum, Friday Nov 7 starting at 6:30 PM.

Tickets are \$12.00 per person.

Spouses and Family of members welcome.

Please RSVP before Nov 3 so we can get a head count.

Go to <http://astrotulsa.com/Contact.aspx>, Click on Treasurer. In the comments section specify the number of people attending counting yourself.

2015 Wall Calendar

The 2015 Astronomy Magazine Wall Calendars are here and are now available. If you would like to reserve one, send me an email at act_tres@astrotulsa.com, or call me at 918-665-8134 and let me know how many you would like. Otherwise, they will be available on a first come, first served basis at our upcoming events. We have 50 available this year for \$10.00 each, cash, check or credit cards accepted. That is a 23% savings off the regular retail price.



Get yours while they last!

Tim Davis

ACT Treasurer



The Secretary's Stuff

By Tamara Green

ASTRONOMY CLUB OF TULSA—GENERAL MEETING—FRIDAY, OCTOBER 3, 2014

JENKS HIGH SCHOOL PLANETARIUM

PRESENT:

Richard Brady, VP

Tamara Green, Secretary

Stan Davis, Board

Skip Whitehurst, Board

John Land, Board

NOT PRESENT:

Mandy Nothnagel, President

Tim Davis, Treasurer

Christopher Proctor, Board

Lee Bickle, Board

Michael Blaylock, Board

James Taggart, Board

Program: Club members' pictures from Okie-Tex Star Party 2014

VP Richard called the meeting to order at 7:11 PM and welcomed members and guests.

He then discussed upcoming events, including the Annual Dinner Meeting at TASM, which will be on Friday, November 7 at 6:30 PM. After that, he announced that the Club has a chance to be Beta testers for the Jenks HS Planetarium programs, called "Compass Calendar Clock". It will be on Friday, December 7 at 7:00 PM. Richard then turned the floor over to Tamara, who gave a presentation on her Okie-Tex pictures.

Following Tamara's presentation, new members Roger and Anna shared their OTSP pictures.

Following that, John discussed the upcoming eclipses this month. The total lunar eclipse on Tuesday, October 8 begins at 4:15 AM, totality at 5:25 AM, totality ends at 6:24 AM. The partial solar eclipse on Thursday, October 23 begins at 4:43 PM, ends 6:49 PM. Maximum will be at 5:43 PM and sunset will be at 6:35 PM.

No other officers or staff reports were given.

Richard adjourned the meeting.

IN PICTURES: PARTIAL SOLAR ECLIPSE, OCTOBER 23, 2014

by Tamara Green

On the afternoon of Thursday, October 23, 2014, many Club members and guests got together at the Jenks High School Planetarium to witness a rare and wonderful treat in the form of a partial solar eclipse! We even got two news crews to come out, those being KOKI Fox 23 and KJRH Channel 2! Our own Owen Green gave Fox a really great interview, the link to which is here:

<http://www.fox23.com/videos/news/solar-eclipse-visible-over-tulsa/vCyYcj/>

For your further viewing enjoyment, here are some of my better photos from the event!





Those of us who came out for the viewing had a really memorable time. Thank you to all who came to celebrate this remarkable event with us. I look forward to the Total Solar Eclipse which will occur on August 21, 2017! Hope to observe it with you!

NITELOG - Norway InTErurban Local Observing Group

By Tom Hoffelder

Again, the goal of all the M's in 12 months and the H 400's in 24 has us running even further ahead of the sky, but the first objects listed can be observed at the end of twilight and the last ones are high enough by 11. M42, already?!!! Wow!!!

OBSERVING: For the Norway/South Paris area, the Twitchell Observatory, **Monday Nov 3rd, at 7:30**, if clear of course. Note: every Nov I like to do a rocks n stars thing at the scope, specifically, observing a galaxy ~ 200 million light years away (NGC 536 is one of the best options) while holding a rock which has a dinosaur footprint made about the same time the light left the galaxy. Can't do that on the 3rd, with the moon 90% illuminated, but maybe we'll be able to "schedule" an impromptu on 3rd quarter or new moon weekends, or both!

COMETS: Nada, none, zero, zilch - that meet my min mag requirement of 10, which is pretty much the opposite of last November when five were listed. Could be two or three next month, maybe.

PLANETS: Still none of the big five in the evening sky, except Mars which is too close to conjunction to bother about. Uranus and Neptune are still there tho: http://d366w3m5tf0813.cloudfront.net/wp-content/uploads/WEB_Uranus_Neptune_2014.pdf

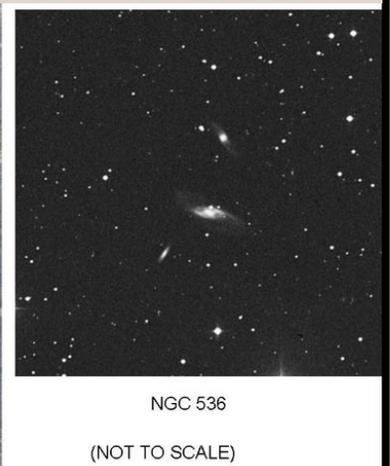
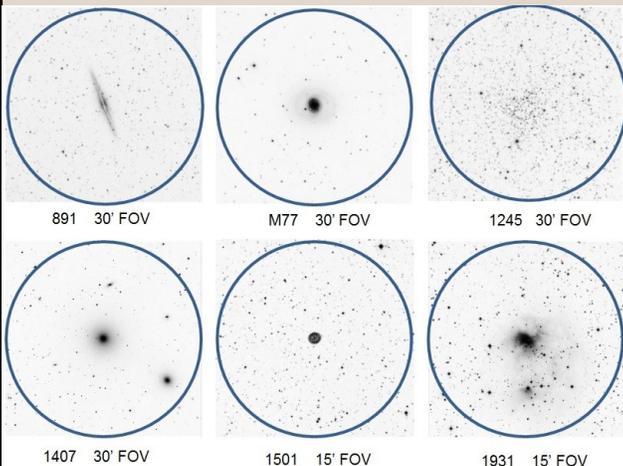
STARS: Two Carbons, five doubles (one of which involves one of the carbons!) and a quad, which will look like a triple at the lower power.

THE GOOD STUFF: All the objects (except the first one) are either Messier (4 OC's, 1 GC, 1 SNR, 2 DN's and 1 GX) or Herschel 400's (8 OC's, 1 PN, 2 DN's and 2 GX's). If you get to NGC 1502, check out the lovely Kemble's Cascade with binocs or a wide field scope which has at least a three degree field of view. And if you only do one of the Herschels, make it the galaxy NGC 891. It use to be my favorite object back in the early '90's, when many fall evenings were spent playing with a 30 inch scope on a 3000 foot coastal mountain in central California.

QUESTIONS: As always, questions and comments are welcome!

tom hoffelder
rocksnstars@gmail.com

"The strongest thing that's given us to see with's
A telescope. Someone in every town
Seems to me owes it to the town to keep one." ~ The Star-splitter, Robert Frost



11/15			(11/16)			11/22		
SS	CTE	NTE	ATE	MR	SS	CTE	NTE	MS
16:15	16:47	17:22	17:56	00:30	16:10	16:41	17:17	16:39

Object (Type)	RA	Dec	Star	N/S	E/W	Mag*/(# of Stars)	Size (')/ Sep ('')	Spect/ M# or H#	Dist (ly)	Urano I Page	Comment [B-V] {current mag} (opt x)
WZ Cas	00 01.3	+60 21	β Cas	1.2 N	1.0 W	7.5-10		N		35	[3.1] {7.8}
AQ And	00 27.5	+35 35	π And	1.9 N	1.9 W	6.9-8.2		N		90	[3.5] {8.0}
O $\Sigma\Sigma$ 254	00 01.3	+60 21	β Cas	1.2 N	1.0 W	7.5-10,8	58	N, A		35	(10)
Σ 3037	23 45.0	+60 30	prev	0.1 N	1.8 W	7, 8, 5, 9,	2.7, 29, 53			35 (ni)	(175/17)
26 And	00 18.7	+43 47	θ And	5.1 N	0.3 E	6.5, 10	6.2			35	(75)
Groombridge 34	00 18.3	+44 01	prev	0.2 N	0.1 W	8, 11	39	dM2, dM4	11.7	35	(12)
γ And	02 03.9	+42 20	-	-	-	2.5, 5	10	K2, A0	260	62	(50)
Σ 245	02 18.5	+40 15	prev	2.1 S	2.9 E	7, 8	11			62 (ni)	(50)
NGC 536 (SBb)	01 26.4	+34 42	β And	0.9 S	3.5 E	[13.7]	3.3x1.2	H171-3	200M	91	+531, 542
NGC 869 (OC)	02 19.0	+57 08	η Per	1.2 N	4.2 W	(350)	18	*H33-6	7300	37	Double Cluster
NGC 884 (OC)	02 22.3	+57 08	prv	-	0.4 E	(300)	18	*H34-6	7300	37	Double Cluster
NGC 891* (Sb)	02 22.5	+42 21	γ And	-	3.4 E	[13.1]	11x1.5	*H19-5	32M	62	
NGC 1039 (OC)	02 42.1	+42 46	γ And	0.4 N	6.9 E	(80)	25	M34	1440	62	
NGC 1068* (Sb/P)	02 42.7	-00 01	δ Cet	0.3 S	0.8 E	[12.8]	7.1x6.0	M77	40M	220	

NGC 1245* (OC)	03 14.7	+47 14	α Per	2.7 S	1.6 W	(40)	10	*H25-6	16K	63
NGC 1342 (OC)	03 31.6	+37 23	β Per	3.6 S	4.7 E	(40)	17	*H88-8	2700	94
NGC 1407* (E)	03 40.2	-18 35	τ^5 Eri	3.1 N	1.5 E	[13.0]	4.6x4.3	*H107-1	75M	312
Pleiades (OC)	03 47.0	+24 07	-	-	-	(130)	110	M45	380	132
NGC 1444 (OC)	03 49.4	+52 39	α Per	2.8 N	3.8 E	(15)	4.0	*H80-8	6500	39
NGC 1501* (PN)	04 07.0	+60 55	β Cam	0.4 N	6.9 W	11.5	0.9	*H53-4	14K	18
NGC 1502 (OC)	04 07.8	+62 20	prv	1.5 N	-	(15)	20	*H47-7	3750	18
NGC 1904 (GC)	05 24.2	-24 31	β Lep	3.8 S	0.9 W	7.7	9.6	M79	43K	315
NGC 1912 (OC)	05 28.7	+35 51	θ Aur	1.4 S	6.3 W	(100)	15	M38	3600	97
NGC 1907 (OC)	05 28.1	+35 20	prv	0.1 W	0.5 S	(40)	5.0	*H39-7	6800	97
NGC 1931* (OC/ DN)	05 31.4	+34 15	prv	1.1 S	0.8 E		6.0	*H261-1		97
NGC 1960 (OC)	05 36.3	+34 08	prv	0.1 S	1.0 E	(60)	10	M36	3800	97
NGC 1952 (SNR)	05 34.5	+22 01	ζ Tau	0.9 N	0.7 W	8.4	6.0x4.0	M1	6300	135
NGC 1976 (DN)	05 35.3	-05 23	θ Ori	-	-	4.0	60	M42	1700	270
NGC 1982 (DN)	05 35.5	-05 16	prv	0.1 N	-	9.0	20x15	M43	1700	270
NGC 1980 (DN)	05 35.4	-05 55	ι Ori	-	-		14	*H31-5	1700	270
NGC 1999 (DN)	05 36.4	-06 43	prv	0.9 S	0.3 E		2x2	*H33-4	1700	270

*[Surf
Brtnss
for GX's]

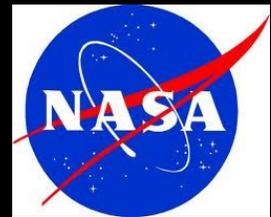
*DSS image

*H400

ni=shown but

-
mag per
square
arcmin

not
identi-
fied



And For The Young Stargazers:

Check out these fun websites from NASA!

<http://climate.nasa.gov/kids>

<http://scijinks.gov>

<http://spaceplace.nasa.gov>



Where We Meet:
JENKS HIGH SCHOOL PLANETARIUM
105 E. B St., Jenks, OK

From the West: (marked in red on maps below)

Take US 75 to the Main St. - Jenks exit
Follow Main St. approximately 2 miles and cross the railroad tracks
Turn left on 1st St.

From central part of Tulsa: (marked in green on the maps below)

Take Riverside Drive to the 96th Street bridge
Turn right and go over the river
Follow A St. approximately 7 blocks
Turn right on 1st St.

From the East: (marked in blue on the maps below)

Take the Creek Turnpike to S. Elm St. in Jenks
Follow Elm St. north to Main St.
Turn right on Main St. and cross the railroad tracks
Turn left on 1st St.

For Each:

Park in the lot at the end of 1st St.
Use the doors at the north side of the building
Go up the stairs to the 3rd floor (there is an elevator for those who need it)
Turn right and go down the hallway to either side of the planetarium

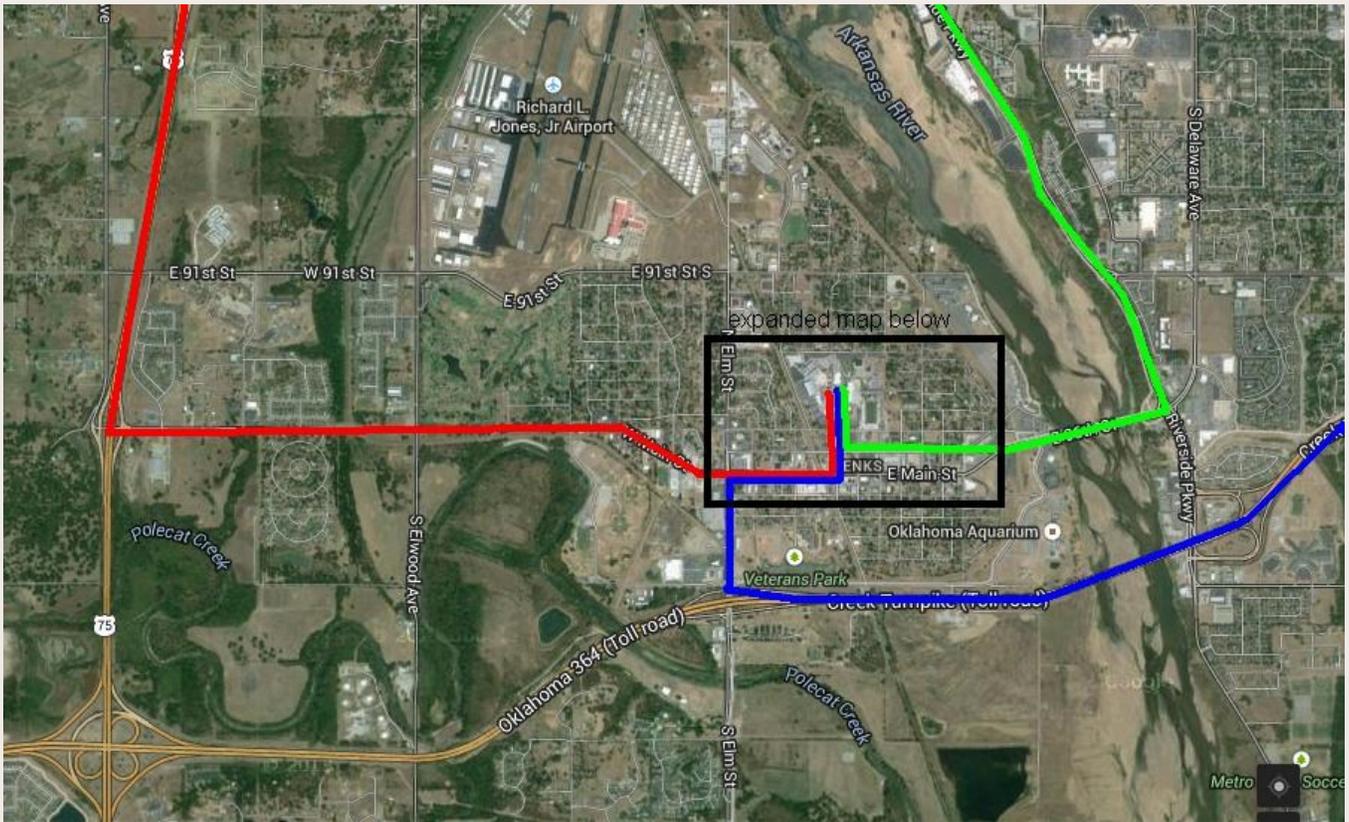
MAPS ON NEXT PAGE

The General Meetings are free and open to the public.

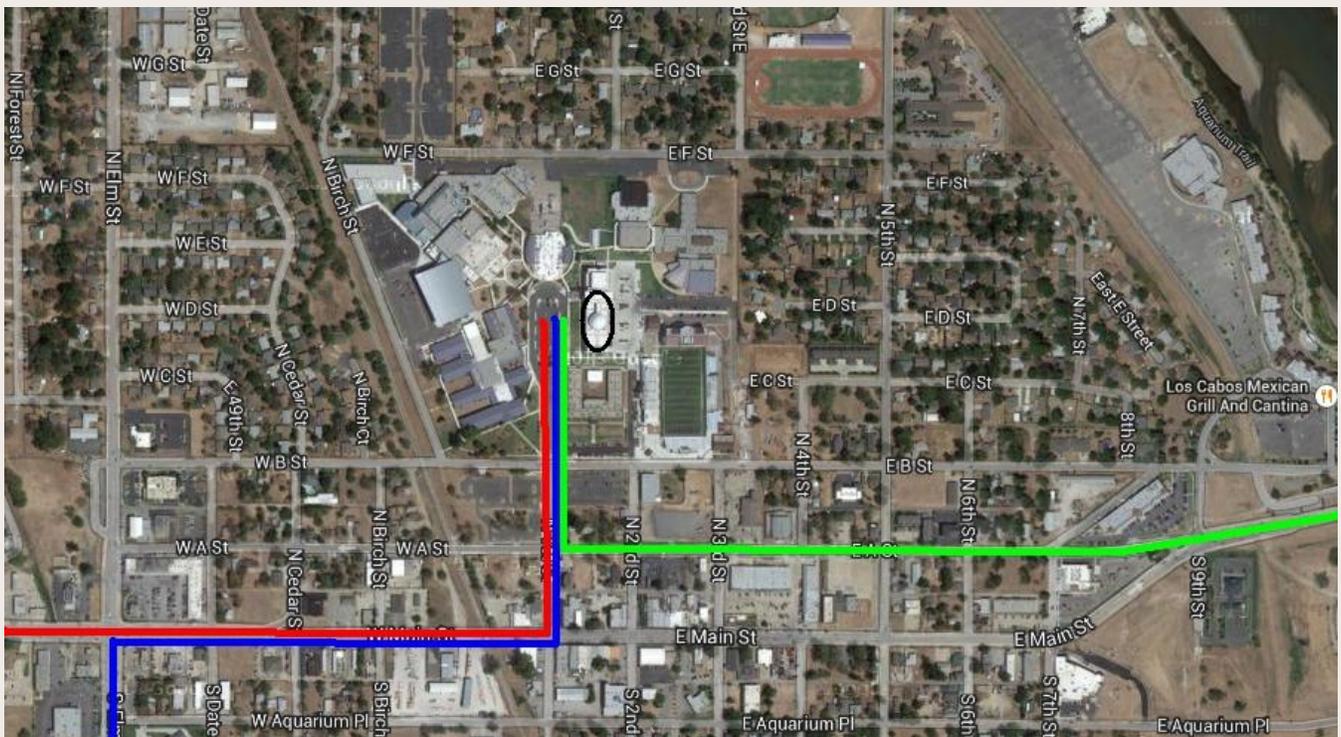
We hope to see you there!

Maps to Jenks High School Planetarium:

To get there via any of the three routes shown on previous page:



To get into planetarium parking lot:



CLUB OFFICERS

President	Mandy Nothnagel	act_pres@astrotulsa.com
Vice President	Richard Brady	act_vp@gmail.com
Secretary	Tamara Green	astronomer.misstamara@yahoo.com
Treasurer	Tim Davis	act_tres@astrotulsa.com

BOARD MEMBERS AT LARGE

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Michael Blaylock	mblaylock535@gmail.com
Stan Davis	stan.home@cox.net
John Land	astroclubbiz@windstream.net
Christopher Proctor	bishop@busoutoshi.net
James Taggart	act_maint@astrotulsa.com
Skip Whitehurst	skip.whitehurst@gmail.com

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Night Sky Network	Mandy Nothnagel	actgroupscheduling@gmail.com
Facilities Manager	James Taggart	act_maint@astrotulsa.com

MEMBERSHIP INFORMATION

MEMBERSHIP RATES FOR 2014 WILL BE AS FOLLOWS:

Adults - \$45 per year. Includes Astronomical League membership.

Senior Adults - \$35 per year. *For those aged 65 and older.* Includes Astronomical League membership.

Students - \$30 per year. Includes Astronomical League Membership.

Students - \$25 per year. *Does not include Astronomical League membership.*

The regular membership allows all members of the family to participate in Club events, but only ONE voting membership and ONE Astronomical League membership per family.

Additional Family Membership - \$15 with Astronomy Club of Tulsa voting rights, \$20 with Club voting rights *and* Astronomical League membership.

THOSE WISHING TO EARN ASTRONOMICAL LEAGUE OBSERVING CERTIFICATES NEED TO HAVE A LEAGUE MEMBERSHIP.

MAGAZINES:

Astronomy is \$34 for one year or \$60 for 2 years.

www.astronomy.com

Sky & Telescope is \$33 per year.

www.skyandtelescope.com

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

If you are an existing S&T subscriber, you can renew directly with S&T at the same Club rate. Both S&T and Astronomy now have digital issues for computers, iPads and smart phones.

ONLINE REGISTRATION

We now have an automated online registration form on the website for new memberships, membership renewals and magazine subscriptions. Just simply type in your information and hit "send" to submit the information. You can then print a copy of the form and mail it in with your check, or use our convenient PayPal option. .

Link: <http://www.astrotulsa.com/Club/join.asp>



Astronomy Club of Tulsa



Wishing you and yours a



Photo: Autumn Stars Rising Over the Eastern Ridge of Camp Billy Joe, Okie-Tex Star Party 2013, by Tamara Green.

THE ASTRONOMY CLUB OF TULSA INVITES YOU TO MAKE PLANS THIS FALL TO JOIN US AT A STAR PARTY!

OPEN TO THE PUBLIC

For more information please visit www.astrotulsa.com.

The Observer is a publication by the Astronomy Club of Tulsa. The Astronomy Club of Tulsa is a 501C 3 non-profit organization open to the public. The Club started in 1937 with the single mission to bring the joy and knowledge of astronomy to the community of Tulsa, OK and the surrounding area. Today our mission remains exactly the same. We travel to local schools, churches and many other venues with scopes and people to teach. Our observatory is located in Mounds and many public programs are offered there. To join the Astronomy Club of Tulsa please visit www.astrotulsa.com where you will find all the information necessary to become a member.

