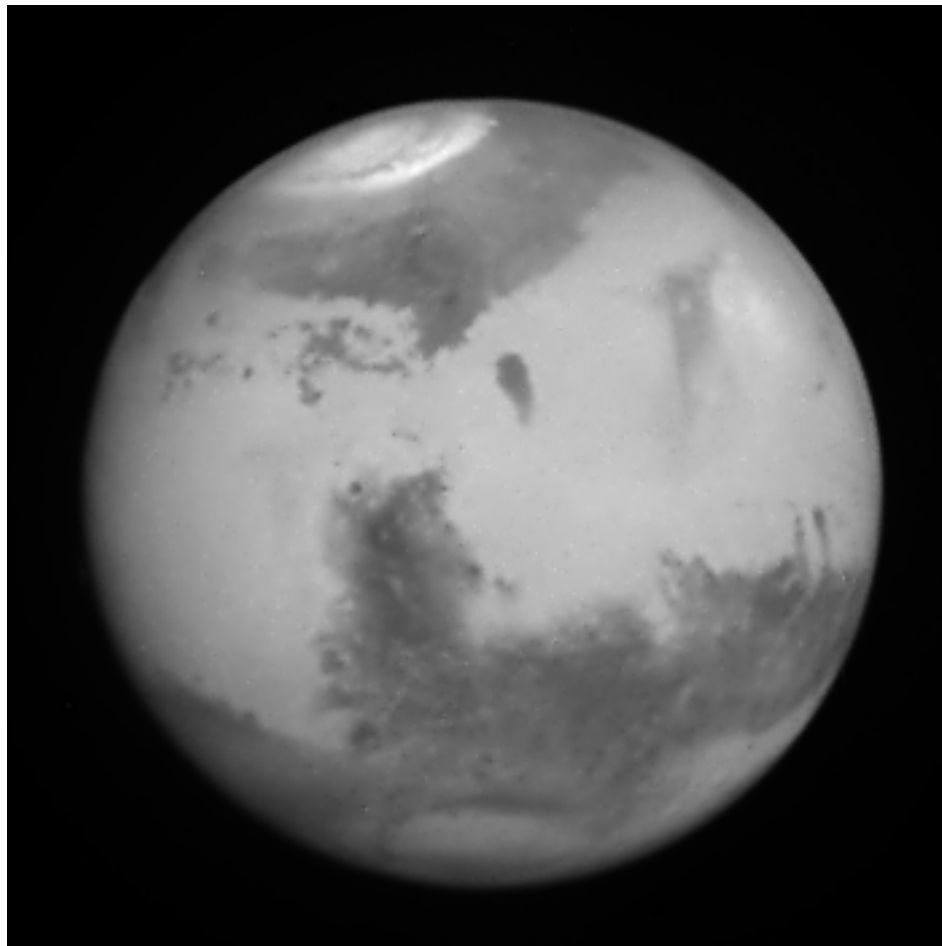




Astronomy Club of Tulsa Observer



January 2010



Mars near Opposition – HST 1995

This year's opposition of Mars on January 29th will be similar to the February, 1995 event (although I doubt ACT's optics have advanced to HST grade...)

Inside This Issue:

President's Message ----- p3	Land's Tidbits ----- p6
Secretary's Report ----- p3	AWB ----- p7
Word Puzzles ----- p4	ATM – 6" Dob ----- p7
January Stars ----- p5	Observing Pages -- pp 10 - 13

Important ACT Upcoming Dates:

Public Star Party	Fri, Jan. 08, 2010 (p14)
Member Only Night	Fri, Jan. 15, 2010
ACT Meeting at TCC	Fri, Jan. 29, 2010 (p 2)
Sidewalk Astronomy	Sat, Jan. 30, 2010

January Meeting Speaker

The Astronomy Club of Tulsa is excited to announce that our January 29th meeting at TCC Metro Campus will have Tulsa's Channel 2 KJRH Meteorologist George Flickinger as our featured speaker. The title of his presentation will be, "How to use Computer Models to Forecast Weather".

When: Friday, January 29, 2010 7:00 PM

Where: TCC Metro Campus - Philips Auditorium - Located in Building 2 at the corner of 9th and Cincinnati. Park on NORTH side in Lot 5 on 9th and Boston Ave. From the BA Expressway – take the Detroit Exit and go north to 9th St and then turn left. The meeting room is on the NE corner of the buildings

[Map](#)

[Directions](#)



George has won "Best Weathercast" awards in Oklahoma and Texas, including a First Place Award for "Best Weathercast in Oklahoma" from the Oklahoma SPJ. He received the AMS "Seal of Approval" after his first year on TV.

George graduated from Texas A&M University in 1996 and has worked in Oklahoma, Arkansas and Texas. Before coming across town to Channel 2, he worked for KOKI-TV in Tulsa and served as Chief Meteorologist for five years at the ABC affiliate in Abilene, Texas. But George gave up his "cushy" Chief job on purpose because of his love for weather-- after the May 3, 1999 tornado outbreak, he wanted to make Oklahoma home to study the weather...at very close range.

The Flickinger family isn't exactly typical married life--George and his wife storm chase the Plains (sometimes they bring one of their zillion dogs too). Their pictures and video have shown up on national TV (CNN, The Weather Channel, Fox News, NBC Evening News, PBS). You can view their storm adventures and pictures at www.flickingerweather.com and the Channel 2 weather blog.

- - -

Meeting Date	Scheduled Speaker
Friday, January 29, 2010	George Flickinger - KJRH Channel 2
Friday, February 26, 2010	Dr. Eddie Baron – OU
Friday, March 26, 2010	Neta Apple - Former ACT Member
April 2010 – Exact Date TBD	John Dobson - Sidewalk Astronomer (Don't Miss This!!)
Friday, May 28, 2010	To Be Determined
Friday, June 04, 2010	* <i>Summer Series</i> - Speaker TBD
Friday, July 02, 2010	* <i>Summer Series</i> - John Land
Friday, August 13, 2010	* <i>Summer Series</i> - Rod Gallagher
Friday, September 24, 2010	Dr. Peter Shull - OSU
Friday, October 22, 2010	Tom McDonough - Club Elections
Friday, November 19, 2010	2011 Club President - Dinner Meeting
Friday, December 17, 2010	Dr. Aaron Coyner - Goddard Space Center

President's Message - January 2010

Just a short note this month, the club is getting off to a rocky start to the new decade. Due to various circumstances several board members have resigned and Rod has decided he won't be able to head up the imaging group. If anyone else wants to lead this group please let me know. Also, the club is involved in a lawsuit relating to an accident; see the special notice below.

On the up side, we have redefined the Observatory Director position to Group Director to make the title more in line with the duties Teresa has performed for many years. Things are also looking good financially, the calendar sales are going very well and board member Catherine Kahbi has submitted materials to the Astronomy.com Outreach Award \$2500 contest. To further boost our bottom line we have decided to discontinue Internet service at the observatory, especially in light of the ongoing equipment problems that have greatly limited its availability.

Keep Looking Up!

Tom McDonough / President, ACT

SPECIAL NOTICE

The Astronomy Club of Tulsa has been named in a lawsuit stemming from an accident which occurred at the observatory in August 2007. Our insurance company has retained legal counsel and will defend the club in this matter. No member, past or present, or anyone else with knowledge of this event should communicate in any fashion to anyone about the incident. All inquiries should be referred to the President, Tom McDonough.

Secretary's Report

ASTRONOMY CLUB OF TULSA – MINUTES - GENERAL MEETING FRI, DEC 4 2009

LOCATION: TCC METRO CAMPUS, PHILLIPS BUILDING AUDITORIUM - 55 attendees, including speaker.

PRESENT, OFFICERS: Tom McDonough, President; Ann Bruun, Vice President; Tamara Green, Secretary. PRESENT, BOARD: Teresa Kincannon, Denny Mishler, Dennis Karcher, Rod Gallagher, Rick Walker, Peggy Walker, Catherine Kahbi, Steve Chapman.

NOT PRESENT: John Land, Treasurer, Chris Proctor, Board

PROGRAM: Dr. Gordon Emslie, Oklahoma State University, [Solar Flares-Probing Particle Acceleration Processes in the Universe](#)

ASTRONOMY 101 TOPIC: Rod Gallagher, How To Find and Observe Asteroids

President Tom McDonough called the meeting to order at 7:01 PM. He then welcomed everyone and welcomed everyone to the meeting. He explained the change in format of the general meetings, where the main speaker would give his or her presentation first, then club business. He then gave a brief introduction of our speaker and turned the floor over to him.

The guest speaker was Dr. Gordon Emslie from OSU, who gave a presentation that was both informative and fun.

Following the presentation, Tom announced the upcoming club events. These included: Public star party, Fri Dec 11, with Sat, Dec 12 as the back up night. The presentation will be on Extrasolar Planets. M.O.O.N. (Members Only Observing Night), Fri, Dec 18, with Sat, Dec 19 as the back up night. General Meeting, Fri, Jan 29, 2010. Program will be George Flickinger, meteorologist, KJRH Channel 2. His presentation will be on weather and how it relates to astronomical observing.

Then Tom asked for Department Reports. They were as follows:

Treasurer- Absent. Denny Mishler substituted for John Land. He announced that he would be available to take membership renewals, memberships, magazine subscriptions, etc. following the meeting.

Secretary – Tamara Green gave a synopsis of the minutes from the last general meeting, which was the dinner meeting at Islamorada Fish Co. on Nov 6.

Facilities Manager – Chris Proctor absent. Rod Gallagher hopes to repair the RCX next Fri (Dec 11) following the presentation. He has materials to (hopefully) fix it.

Observing Chairperson- Ann Bruun made some announcements, which included: Stan Davis finished his Messier Club. We have observing lists in the Astronomical League website. She explained about observing clubs. One may also earn an Outreach Club award through the AL, and she explained about that, one's service during IYA would count towards it. Then Tom announced that Rod Gallagher completed his Herschel 400 Club.

Programs- Rick Walker made some announcements about upcoming events. These included: January's guest speaker will be George Flickinger, meteorologist from Channel 2, February's guest speaker will be Dr. Eddie Baron from OU, and John Dobson will be here in April. For the April meeting, we will schedule the meeting date for whenever is convenient for Mr. Dobson. Dr. Aaron Coyner from Goddard Space Center will be coming sometime this year. There was some kind of mix-up on the original date. That presentation will be announced at a later time. Plus, we will have 101 topics.

Public Relations- Owen Green jokingly announced that if, after the meeting, anyone had any questions that our guest speaker could not handle, to come and see him in the lobby after the meeting.

Fundraising- Peggy Walker announced that we have the calendars, and showed one to the attendees, going through it to show off the artwork, photos, information, etc. found in them. Denny Mishler then added that the calendars are unique to us, to our club, to our area, and would be a very good way to raise extra money for the club. He also mentioned that the price of the calendars is tax deductible.

Groups- Teresa Kincannon announced that she wanted to hold a drawing among the visitors to give away a calendar, but the visitors left after the presentation. It was decided that the drawing will be held at the next public star party.

Following everyone's reports, Rod Gallagher did his presentation on asteroid observing. Tom adjourned the meeting at 8:51 PM.

Wishing you all Clear Skies, Miss Tamara

ACT Word Puzzles – by Rick & Peg Walker **Five Edwin Hubble Quotes Cryptograms**

#1

JF FLE GJIF AZH LDBZCDO, TE IEJBUL JHDOK KLDIFGV EBBDBI DR DYIEBNJFZDOI RDB GJOAHJBXI FLJF JBE IUJBUEGV HDDBE IWYIFJOFZJG. FLE IEJBUL TZGG UDOFZOWE. FLE WBKE ZI DGAEB FLJO LZIFDBV. ZF ZI ODF IJFZIRZEA JOA ZF TZGG ODF YE DSSBEIIEA.

#2

EQWZSSEA TZFL LZI RZNE IEOIEI, HJO EPSGDDBEI FLE WOZNEBIE JBDWOA LZH JOA UJGGI FLE JANEOWFBE IUZEOWE.

#3

FLE LZIFDBV DR JIFBDODHV ZI J LZIFDBV DR BEUEAZOK LDBZCDOI.

#4

FLE WOZNEBIE ZI WORDGAZOK JI ZF ILDWGA.

#5

DYIEBNJFZDOI JGTJVI ZONDGNE FLEDBV.

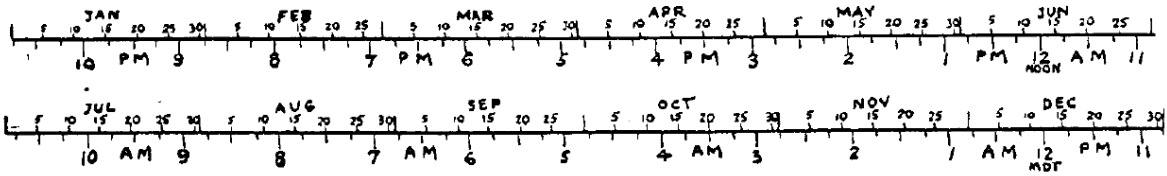
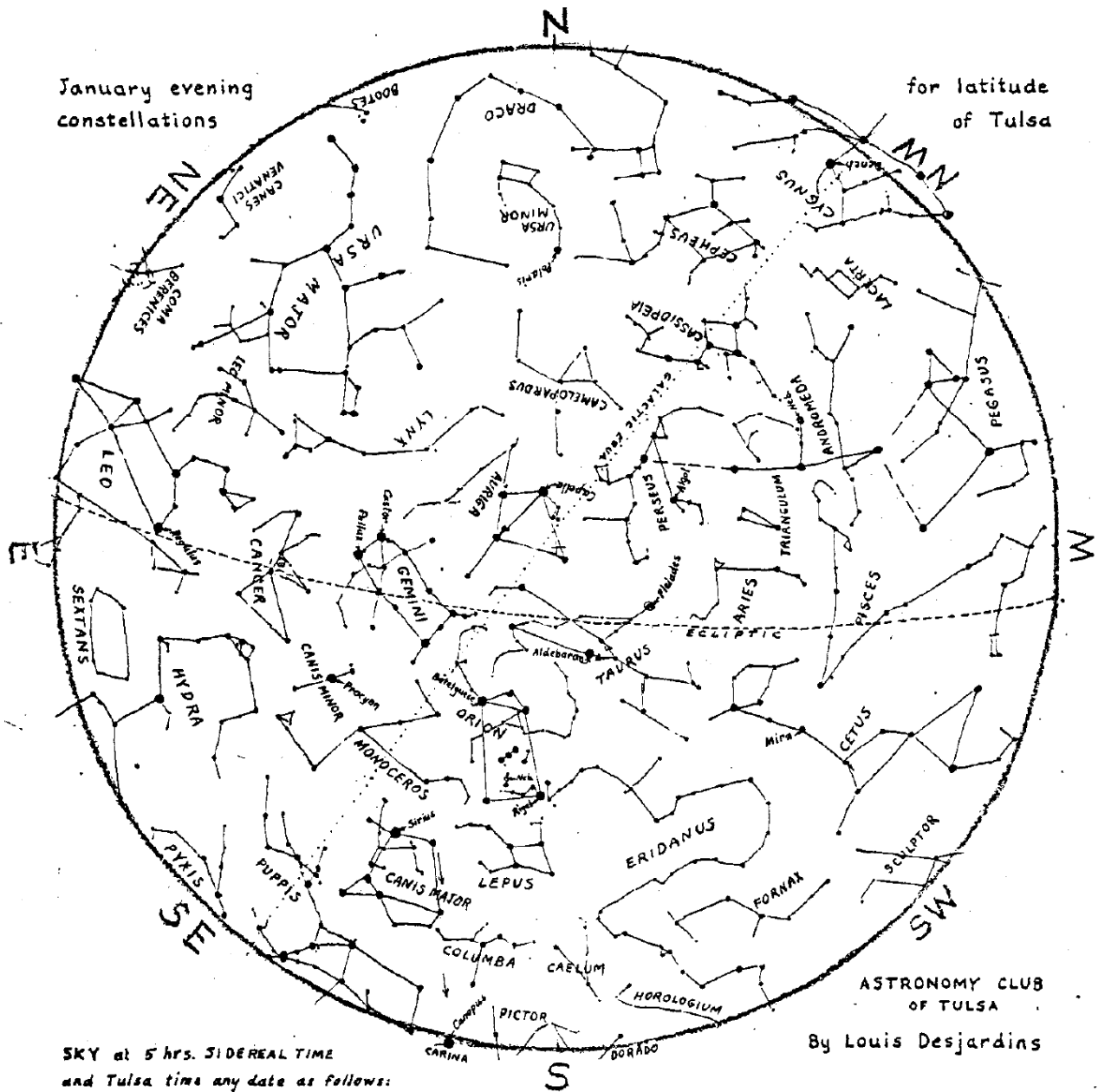
(Answers on Page 9)

Telescope and Accessories for Sale Odyssey 10.1 inch Dobsonian Reflector



w/rocker mount, Telrad mount, EZ viewer mount plus 20mm 1¼" Meade Wide Angle Eyepiece, 32mm 2" University Konig Eyepiece, 10mm Sirius 1¼" Plossl Eyepiece, Orion 2" Skyglow filter, Orion EZ Finder II all for \$350 or best offer

Contact David Stine dstine@exposquare.com Cell (918) 810-2243 Work (918) 834-1310



Last Quarter..... January 7th
 New Moon..... January 15th
 First Quarter..... January 23rd
 Full Moon..... January 30th

January 3rd – Quadrantid Meteor Shower peaks
 January 11th – Venus Superior Conjunction
 January 26th – Mercury Gr. Elong. West (25°)
 January 29th – Mars at Opposition
 Evening – Mars & Jupiter / Morning – Mercury

Lands Tidbits – by *John Land*

For January, 2010

Welcome Recent New Members: **BARRY SIERRA, JOHN (JOHNNIE) JOHNSON, ALAN WOODCOCK, SAMI RAMSEY AND JAMES BENEDICT.**

2009 WAS A VERY GOOD YEAR FOR THE CLUB: WE FINISHED THE YEAR WITH 151 MEMBERS - THE HIGHEST NUMBER SINCE 2002. (98 LONG TERM MEMBERS AND 53 NEW MEMBERS.)

Our membership rates for 2009 – 2010 will be as follows:

Adults - \$35 per year (includes Astronomical League Membership)

Sr. Adult - discount \$25 per year for those 65 or older (includes Astronomical League Membership)

Students - \$15 (without Astronomical League membership)

Students - \$20 (with Astronomical 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. If an additional member of the family would like to join with voting rights the additional cost is \$15, and/or additional Astronomical League memberships within a family are \$5 each.

Magazine Subscriptions: If your magazines are coming up for renewal, try to save the mailing label or renewal form you get in the mail. Do NOT mail renewals back to the magazine! To get the club discount you must go through the club group rate.

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

Sky & Telescope is \$33 / year. www.skyandtelescope.com (Sky and Telescope also offers a 10% discount on their products.)

Note: You may renew your Sky & Telescope subscription directly with out having to mail in the subscriptions to the club.

NEW SUBSCRIPTIONS must still be sent to the club treasurer. Forms are available on the website.

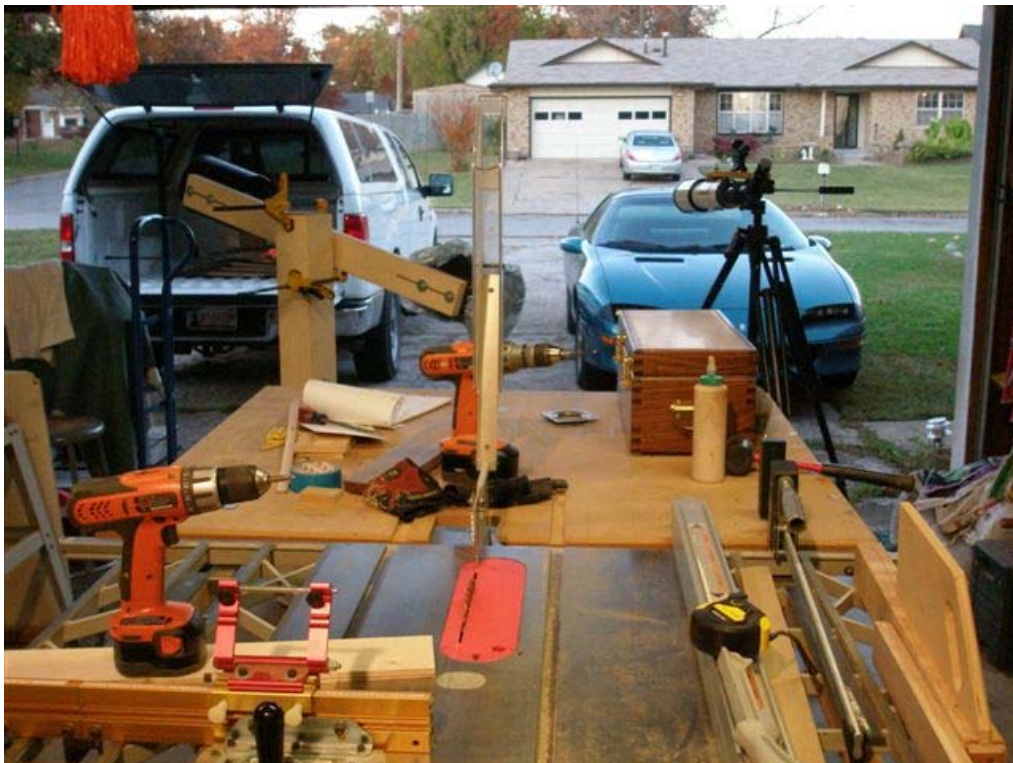
We now have an automated on line registration form on the website for new AND renewal memberships plus magazine subscriptions. You simply type in your information and hit send to submit the information. "<http://www.astroutulsa.com/Club/join.asp>"

You can then print a copy of the form and mail in your check to:

**Astronomy Club of Tulsa
25209 E 62nd St
Broken Arrow, OK 74014**

Address Corrections- Email changes – Questions:

You may forward questions to the club by going to our club website (<http://www.astroutulsa.com/>) and fill out an online form or just click on John Land and send an email. Please leave a clear subject line and message with your name, phone number, your question – along with email.



Workshop of a Mad Amateur Telescope Maker

Predicted MAXIMA of long period variables - January 2010 North of -55° Declination ~ Tulsa, OK Viewing Limit (Predicted Maxima > 8.0 - Easy Binocular Range)				
Designation	Name	Code	Range	Est Max Date
0010-32	S Scl	#	<6.7-12.9>	Jan 1
2338-15	R Aqr		<6.5-10.3>	Jan 4
1621-12	V Oph		<7.5-10.2>	Jan 8
1546+39	V CrB		<7.5-11.0>	Jan 14
0455-14	R Lep		<6.8-9.6>	Jan 14
0939+34	R LMi		<7.1-12.6>	Jan 16
1336 33	T Cen		<5.5 9.0>	Jan 18
2108+68	T Cep		<6.0-10.3>	Jan 24
0017+55	T Cas		<7.9-11.9>	Jan 25
2016+47	U Cyg		<7.2-10.7>	Jan 25
1717+23	RS Her		<7.9-12.5>	Jan 28
1940+48	RT Cyg		<7.3-11.8>	Jan 29

Codes:
- needs more observations
& - needs more observations urgently
@ - needs more observations very urgently
% - has good CCDV or multicolor photometry, but more visual observations are needed (usually more visual observations are needed very urgently)

Source: AAVSO Bulletin 71

ASTRONOMERS WITHOUT BORDERS

On the Astronomers Without Borders website, they have on their home page a narrative on their purpose. This is a new endeavor and their belief is that, "We all share the same heavens and these heavens are a common meeting ground for all Earth's inhabitants. The heavens transcend political, ethnic and religious differences". AMEN to that!

I can attest to that, at the beginning of this year, a man came into my store and he took an IYA flyer and we started to talk. I could tell he was from the Middle East and he talked about being a child in Iran. The summer is so hot, people sleep on the roofs under the stars. He and his brothers would not be able to fall asleep because of how vibrant the Milky Way was.

Astronomers Without Borders have key projects they are embarking on and they are:

Global Astronomy Month 2010: which is like 100 Hours of Astronomy only for the whole month of April. It will also have the International Sidewalk Astronomers Night included and their motto for this celebration is "One People – One Sky".

The World at Night: or TWAN: features photos or time lapsed videos of beautiful skies, and historic sites, against the background of stars, planets or celestial events. They are collecting these into one exhibition that will be travelling internationally. They will be able to be viewed on the virtual exhibition on the TWAN website.

Seasons Without Borders: was developed by affiliates from Brazil, India, and Iraq and host star parties based on the solstice and equinox. At the solstice party, they document and monitor the suns position in the sky at the northern most point. The Equinox would be when the Sun is directly over the equator and those parties in the Fall and Spring will measure the shadows on the ground.

Tour of the Universe: is actually all the events that feature children from all over the world from this past year's International Year of Astronomy. It is a free download off the AWB website.

Remote Observing: is where groups control remote telescopes on-line, share their sessions with other groups and collaborate on observing projects.

And the last one is. **Sharing Telescopes And Resources – STAR:** and this is in the pilot stages right now and they would like to take surplus telescopes and materials and pass them on to organizations where it is difficult to acquire these resources. Once the pilot program is completed, it will spark clubs to raise funds and ship items to astronomers a broad, with the help of AWB making the connections for the club/organizations. (I am personally interested in this program)

I would love to see A.C.T. go global..... This list of affiliates will also be handy when you travel internationally and you want to meet fellow astronomers or attend one of their meetings or star parties while in town.

On the AWB's website, they have affiliate groups and I submitted the Astronomy Club of Tulsa as an affiliate. They currently only take organizations which is pretty cool. If you would like to see our name go to astronomerswithoutborders.org, select **Affiliates**, do **Search Affiliates**, and type in **The Astronomy Club of Tulsa** and the list will appear below. Scroll down until you see our logo and click on our name, and see our brief summary on the club.

I will keep you posted on AWB events and happenings.

- Peg Walker -

ATM SIG Report

- or -

Rick's attempt at a Six inch f/8 SonoTube Dobsonian telescope.

This is the Amateur Telescope Making (ATM) version of the USS Minnow and it's "Three Hour Tour". If you want to be spared the island experience of this story, the summary is... A few years back I bought a telescope kit that included a six inch f/8 primary mirror, with aluminum mirror cell, the appropriate secondary mirror with spider, two inch rack and pinion focuser and a spotting scope. The kit cost me \$300. The plans I used came from Ray Cash <http://www.raycash.us/sfsidewalk/intro.htm> that he slightly modified from the plans *The Sidewalk Astronomers* have been sending to interested parties. The woodworking skills are very basic and the base and mount went together very easily. The most difficult part was drilling holes in the right place based on the true focal length. It took me three different attempts with revisions in each and two plus years to get a scope I could use.

The long version of the story starts back in March of '07. Peg and I had been exposed to astronomy for a whopping three months and realized we knew nothing and couldn't find anything smaller than the moon with our 4 inch Orion Dob we bought on a whim at the Lowell Observatory while

driving home from CHRISTmas in California. As the frustration started taking its toll and thoughts of giving up astronomy crept into our conversations; I discovered an Astronomy 101 class offered by San Francisco State University in California at its field campus above Lake Tahoe on the California side.

After deciding to attend the class and paying for the tuition, room and board we came to the conclusion that one scope was not enough for both of us to get the most out of our class (see you guys who leave your significant others at home have it soooooo cheap!) and we need to get another scope. With all those woodworking tools sitting in my garage, making a scope seemed to be the most cost efficient way to go... LOL

After searching the internet for an affordable way to go I came across a website Anttlers optics ran by Scott Anttlers. This website is out of business today and come to find out many people experienced the same frustrations I mention below, search forums like Cloudy Nights if interested. Similar kits can be seen here: <http://www.e-scopes.cc> . I have experience with this vendor so, buyer beware.

I placed my order on March 30th 2007. After waiting for six weeks and not receiving anything for the \$300 I sent via PayPal, frustration started to set in. Our Class was in July and I was running out of time to make the scope. Multiple calls to Scott had garnered nothing but empty and broken promises of "you will have it by the end of the week". In June I finally got him on the phone (since he rarely responded to my emails) and canceled my order asking for a refund to my PayPal account.

I immediately went online and ordered our Celestron ten inch Starhopper. Two days later, UPS delivers this nice, giant (to us at that time any way) telescope. The very next day UPS delivers a six inch kit.. for which I have already received my refund! Now the dilemma, what do I send back, or do I stiff the guy for all of my pains and frustration and keep the kit? Hmmmm, well those of you that know me, I can't steal and I can't give up toys, damn! I sent back the \$300.

So construction starts. Our club does not have an ATM SIG (special interest group) at this time, and knowing so few of you in the club left me on my own. As I mentioned above the woodworking portion of this project was pretty simple and didn't take me too long. A little Baltic Birch plywood, glue, screws and the sweet sound of power tools yielded my rocker box and mount.

Channeling Gilligan with, "I can't just follow directions" approach to projects, causes me to improve the tube and make it more dew resistant, so out I go and pick up about \$75 worth of fiberglass and black colored epoxy, then spend a week trying to learn how to wrap the tube. When done I have an awesome tube, painted black inside and wrapped with black fiberglass. It looks awesome!

Now time to mount the hardware and cut holes in the tube. ARRRGGGGHHHH! Measure, check, measure, check, adjust, measure, check, sweat bullets, measure, check, worry about destroying a \$80 fiberglass wrapped SonoTube, measure, check, procrastinate, whine, measure, check, get tools ready, choke, measure, check, swear, plug in the tools and cut. Ok, that doesn't look so bad. Slide the tube into the rocker box, mount all of the hardware. Looking good. Fumble through a feeble attempt to collimate, and head out to the back yard for first light. Crap! Can't focus, I have to pull the eyepiece just out of the focuser to get close. Oops, miscalculated the focal length and installed the focuser to short.



Hell may not have fury like a woman scorned but enemas have no effect compared to inserting your own boot in your rear while kicking it. Disgusted with the whole thing I shelved the project.

In June 2008, I get to attend the Grand Canyon Star Party with my binoculars. In the mix of all the scopes I see what I call a "bucket" scope, made with two 5 gallon buckets mounted to a single steel truss. Hey! There is an idea, so I come back and cut the middle out of my \$80 SonoTube and make a laminated single truss out of some more plywood. I even make the mounts adjustable so I can just tweak the distance between the mirrors until I match the focal length and get focus. Wow! What a genius! Now, just make a new base and mount and away we go!

Hmmm, balance...difficult. How am I going to get this to work? Think, ponder, play, think, ponder, play, swear and shelve it. Fast forward to August of 2009. We now have the beginnings of an ATM SIG and a wonderful tinkerer in Michael Blaylock (playing the part of the Professor). We get together on a couple of Saturdays and toss ideas around. I come home and think, ponder, play, think, ponder, play, swear and give up on the bucket design.

Back to Lowes to buy a new SonoTube. After learning my lesson before, I do not invest in more fiberglass; I measure, check, get tools ready, choke, measure, check, swear, plug

in the tools and cut. Oops, put the spider in backwards, re-drill (that's ok, only \$7 invested in this SonoTube) and re-mount. Take it down to RMCC for the second first light and WHAM! In focus! Not bad but very ugly views.

Get it back to our next ATM SIG meeting and work through a better collimation effort and I take it home. After sunset I set it out in the front yard and YAHOO! Wonderful views. I have since taken it apart and added some improvements and still need to collimate again. I do hope to have this done and ready for John Dobson's visit in April, just in case we get an opportunity to observe with him.

So, now that the rescue from the deserted island has occurred and you have the whole story, I hope to see you at our next ATM SIG meeting. Oh and by the way, we never did get to the astronomy class in California, my work was recommending me for a job in England for the same time so we called and canceled the class and then of course my employer canceled the trip overseas... UGH!



- Rick Walker -

Cryptogram Answers from Page 4

#1 - At the last dim horizon, we search among ghostly errors of observations for landmarks that are scarcely more substantial. The search will continue. The urge is older than history. It is not satisfied and it will not be oppressed.

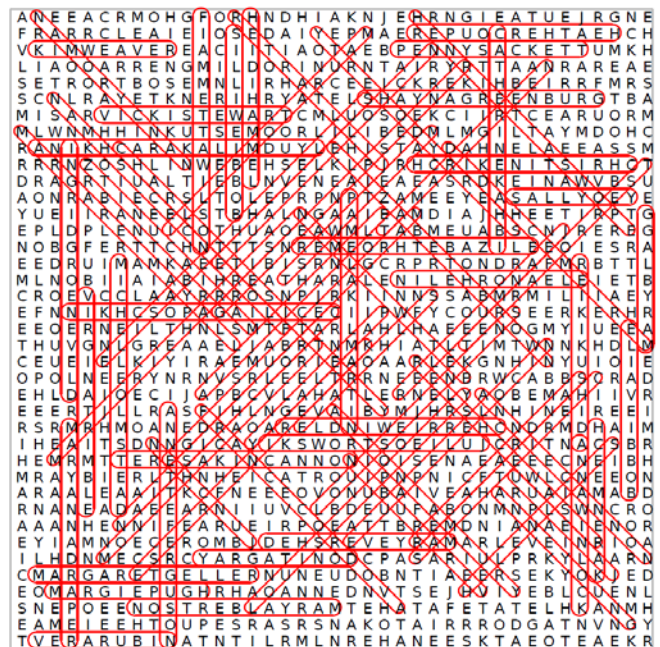
#2 - Equipped with his five senses, man explores the universe around him and calls the adventure Science.

#3 - The history of astronomy is a history of receding horizons.

#4 - The universe is unfolding as it should.

#5 - Observations always involve theory.

Notable Female Astronomers Part 2
Astronomy Club of Tulsa



Answers for December 2009 Word Search



Garrett Optical® stocks over 50 astronomy binoculars from six different manufacturers, and we're based right here in south Tulsa.

Visit our websites
www.GarrettOptical.com
www.AstronomyBinoculars.com
for more information!

Observing Pages

Information Exchange

The Astronomy Club of Tulsa maintains a Yahoo Group for the club. For those of you unfamiliar with Yahoo groups, it is a forum that allows for messages, photos and files that can be shared among the group's members. As stated in the group's description, "This group is for the members of the Astronomy Club of Tulsa to ask questions, share ideas, get information, plan observing sessions, or just communicate in general. Informal club business communications may also be announced here." This group can be found on the web at <http://tech.groups.yahoo.com/group/AstroTulsa/>. It is open to all club members, so be sure to check it out! Tom McDonough, our Club President, and Anne Bruun, our Vice-President and Observing Chairperson, are the group's moderators.

January 2010 Observing List

	Stars			Galaxy	Star Clusters		Nebula		
	Multiple	Variable	Asterisms		Globular	Open	Bright	Planetary	Dark
1	Theta Orionis	T Orionis	NGC2063	M31	NGC1049	M45	Sh2-276	NGC1360	Horsehead
2	Alpha Fornacis		NGC2180	M33		NGC1662	IC 434		
3				NGC1316		NGC1708	M42		
4				NGC1317		NGC2169	NGC604		
5				NGC1318		NGC2184	NGC2024		
6				NGC1365		NGC2251	NGC2261		
7						NGC7394			
8						NGC869			
9						NGC884			
10									

Details of this list are located in the folder, "ACT Observing Lists" in the AstroTulsa Yahoo group's files section. This list contains too many objects to "observe" in one evening, but we will recognize anyone who observes 20 or more of these objects. The reason there are many objects is to give the observer a variety of objects that can also be used for completion of an Astronomical League (AL) Observing Club. For more information on the Astronomical League and the observing clubs, check them out at <http://www.astroleague.org/observing.html>.

Most of the objects cross the meridian between 8 PM and midnight. For this month, we are continuing with a new list of objects. These objects are based on the book, "Deep-Sky Wonders" by Walter Scott Houston. For those who may not know, Walter Scott Houston had the monthly column "Deep-Sky Wonders" in Sky and Telescope. This book is adapted from his many years of information contained within that column. It is a great book and I highly recommend it for those who want to find out more information about these objects, how to find them and especially how to observe them. Sue French authors the present column in Sky & Telescope. For more information about this book, check out the review in the October Newsletter on page 7.

For the month of January, there are many bright objects that are real showcase objects. These include the Double Cluster in Perseus (NGC 869/884), Orion Nebula (M42), Andromeda Galaxy (M31) and the Pinwheel Galaxy (M33). A couple of these objects are very faint and can only be seen visually under very dark skies. These include Barnard's Loop (Sh2-276) and the Horsehead Nebula which is a dark nebula in front of the bright nebula IC434.

Although the Horsehead Nebula is a very challenging visual object, it is one of the most recognizable imaged objects. Here's an image of the Horsehead Nebula that I took at the 2007 Okie-Tex Star Party.



Please provide feedback on this observing list to either Ann Bruun or Rod Gallagher. Also, please provide a copy of your observing logs to Ann Bruun.

Rod Gallagher

Asteroid Observing List

For those of you that may have missed it, the December 2009 Astronomy 101 topic was “Finding and Observing Asteroids.” For future reference, I placed a PDF copy of this presentation in the Files section and several web links in the Links section of the AstroTulsa Yahoo group. Several members mentioned after the meeting that they would like to pursue asteroid observation. As I demonstrated in the presentation, you need to:

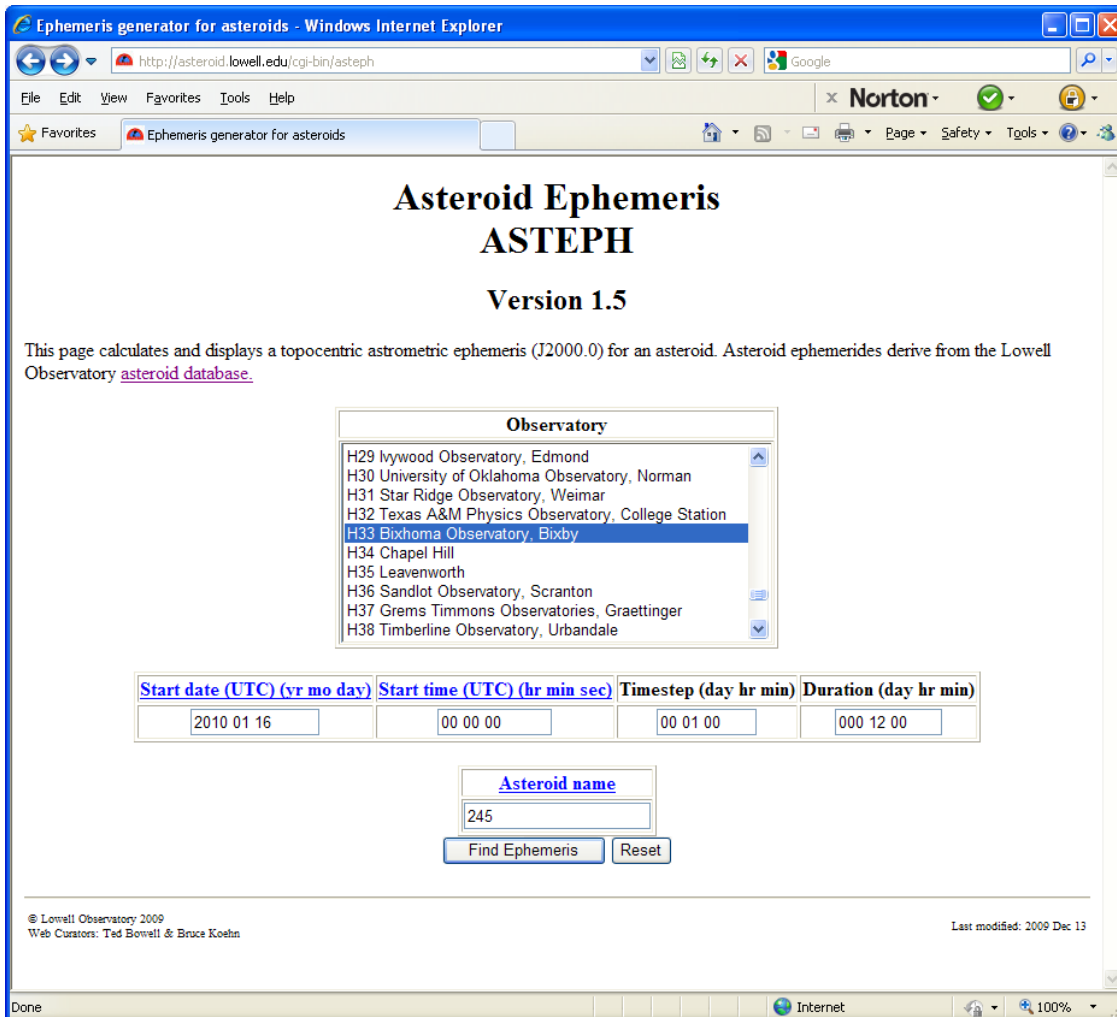
- Identify the Asteroids that are Viewable
- Locate the Asteroids
- Visually Observe and Log the Initial Observation
- Make a Second Observation for Verification

Over the next several months, I will provide a list of asteroids that will be observable during the month. These asteroids will be near opposition and should be observable throughout most of the evening. This will allow for multiple observations during the same evening. Although there are thousands of asteroids at opposition during the month, I plan to limit the list to those that are brighter than magnitude 13. This will allow most of observations to be made with 6-8” or larger scopes.

Here's the list of Asteroids for January 2010.

Num	Name	Mag	Opp Date
245	Vera	12.0	12/22/2009
234	Barbara	12.9	12/23/2009
151	Abundantia	12.9	01/02/2010
130	Elektra	11.5	01/04/2010
71	Niobe	11.7	01/06/2010
702	Alauda	11.9	01/08/2010
306	Unitas	12.5	01/14/2010
43	Ariadne	11.2	01/15/2010
352	Gisela	12.3	01/15/2010
196	Philomela	11.0	01/17/2010
568	Cheruskia	12.9	01/17/2010
35	Leukothea	12.6	01/18/2010
133	Cyrene	12.7	01/18/2010
195	Eurukleia	12.8	01/19/2010

The second thing you need to do is to locate the asteroid. This can be accomplished in a couple of different ways. First there are several websites where you can have the location calculated. One of the easiest to use is the Lowell Observatory site (<http://asteroid.lowell.edu/cgi-bin/asteph>). By entering a few parameters, you can generate the Asteroid Ephemeris. Here's an example of one I generated for Asteroid 245 Vera for the next Members Only Star Party scheduled for Friday, January 15. Note: The date/time for this application is using UTC which is 6 hours ahead of Central Standard Time.



After clicking the “Find Ephemeris” button this is generated.

**Asteroid Ephemeris
(245) Vera**

Date (UTC)	Time (UTC)	RA (hr)	Decl (deg)	RA Motion ("/hr)	Decl. Motion ("/hr)	RA uncert. (")	Decl. uncert. (")	V mag	Solar Elong. (deg)	Gal. Lat. (deg)
2010 Jan 16	00:00:00	06 13 46.782	+28 18 48.18	-25.3	2.1	0.5E-01	0.2E-02	12.0	156.9	5.1
2010 Jan 16	01:00:00	06 13 44.856	+28 18 50.31	-25.5	2.1	0.5E-01	0.2E-02	12.0	156.9	5.0
2010 Jan 16	02:00:00	06 13 42.915	+28 18 52.36	-25.7	2.0	0.5E-01	0.2E-02	12.0	156.8	5.0
2010 Jan 16	03:00:00	06 13 40.963	+28 18 54.32	-25.9	1.9	0.5E-01	0.2E-02	12.0	156.8	5.0
2010 Jan 16	04:00:00	06 13 39.003	+28 18 56.16	-25.9	1.8	0.5E-01	0.2E-02	12.0	156.8	5.0
2010 Jan 16	05:00:00	06 13 37.041	+28 18 57.88	-25.9	1.7	0.5E-01	0.2E-02	12.0	156.7	5.0
2010 Jan 16	06:00:00	06 13 35.081	+28 18 59.46	-25.9	1.5	0.5E-01	0.2E-02	12.0	156.7	5.0
2010 Jan 16	07:00:00	06 13 33.129	+28 19 00.92	-25.7	1.4	0.5E-01	0.2E-02	12.0	156.6	5.0
2010 Jan 16	08:00:00	06 13 31.190	+28 19 02.27	-25.5	1.3	0.5E-01	0.2E-02	12.0	156.6	5.0
2010 Jan 16	09:00:00	06 13 29.267	+28 19 03.52	-25.3	1.2	0.5E-01	0.2E-02	12.0	156.5	5.0
2010 Jan 16	10:00:00	06 13 27.363	+28 19 04.71	-25.0	1.2	0.5E-01	0.2E-02	12.0	156.5	5.0
2010 Jan 16	11:00:00	06 13 25.481	+28 19 05.86	-24.7	1.2	0.5E-01	0.2E-02	12.0	156.4	5.0
2010 Jan 16	12:00:00	06 13 23.621	+28 19 07.01	-24.4	1.2	0.5E-01	0.2E-02	12.0	156.4	5.0

Note: The reported values of RA Motion and RA Uncertainty reflect sky-plane distances, not equatorial coordinate distances.

© Lowell Observatory 2009
Web Curators: Ted Bowell & Bruce Koehn
Last modified: 2009 Dec 13

Another way you can locate asteroids is by using one of the Planetarium type programs that support asteroids. Some of these include Cartes du Ciel Sky Charts, Starry Night and TheSky. Just remember that the asteroid orbits change frequently so use the latest orbital elements.

Once the asteroid is located, you need a star map with stars shown to at least the same magnitude as the asteroid. Again, you can use a planetarium program or one of the web services such as the Asteroid Plot from Lowell Observatory (<http://asteroid.lowell.edu/cgi-bin/astplot>).

A simple sketch with at least the brighter stars and the suspected asteroid shown should be included in your observation log. A second observation at a later time needs to occur to verify the asteroid in the original observation. After 25 observations for a regular certificate or 100 observations for a gold certificate and you can submit the observations to the Astronomical League for the Asteroid Certificate.

Please provide feedback on observing asteroids to me. If you have any questions concerning observing asteroids, you can use the AstroTulsa Yahoo group. I will try and get back to you within a couple of days. Also, please provide a copy of your observing logs to Ann Bruun.

Rod Gallagher

ASTRONOMY CLUB STAR PUBLIC PARTY

FRIDAY JANUARY 8TH - ALTERNATE DATE WILL BE SATURDAY JANUARY 9TH IF SKY IS CLOUDY ON FRIDAY.

GATES OPEN AT ~5:00 PM / SUNSET - 5:26 P.M. / END CIVIL TWILIGHT - 5:54 P.M.

PHASE OF THE MOON ON 8 JANUARY: WANING CRESCENT WITH 36% OF THE MOON'S VISIBLE DISK ILLUMINATED.

LAST QUARTER MOON ON 7 JANUARY 2010 AT 4:41 A.M. CENTRAL STANDARD TIME.

Due to the uncertain weather reports, always check your local weather reports for sky conditions. Our club has excellent resources for predictions of cloud cover on the observe section of our website <http://www.astrotulsa.com/Observe/observe.asp>, or check the AstroTulsa Yahoo Page <http://tech.groups.yahoo.com/group/AstroTulsa/> for cancellations if weather is uncertain! Since night-time temperatures can dip to the mid 30's or colder you should plan to bring a jacket or heavier coat. **Note – The wind chill on the observatory hill can be brutally cold!!**

- Beginners Telescope Set Up on Center Pad: Several of our new members and guests have new telescopes they are trying to learn how to use. We would like to invite you to set up your equipment near the center concrete observing pad. Members let's all take time to meet these novice astronomers and help them get a good start with their equipment.
- Wireless Internet now available at the Observatory: For laptop users - Rod Gallagher has made arrangements for wireless Internet to be broadcast on the observing field. Details for log on are available at the observatory. This is available for members to use for astronomy, observing and weather information and should not be abused for other types of browsing and gaming.
- Things to bring to a star party: Of course a telescope or binoculars are great for observing but you don't have to have one to enjoy the evening. You don't have to own a telescope to enjoy an observing night. Our members are eager to share their views with others. There will be plenty of people willing to share the view if you just ask. Also bring a red colored or covered flashlight to see your way around. We have plenty of folding chairs and a clean restroom.
- Children are always welcome but must be supervised and must stay on observatory grounds. It's always wise to have an alternate activity such as a favorite book or tapes for younger children who may tire early. Closed toed shoes are preferred and a light jacket as needed.
- We would like to encourage our new members and guests to join us
- Plan to arrive before dark. We have plenty of chairs and a classroom area.
- We have a microwave and you can bring your own snacks. You need to bring your own drinking water!

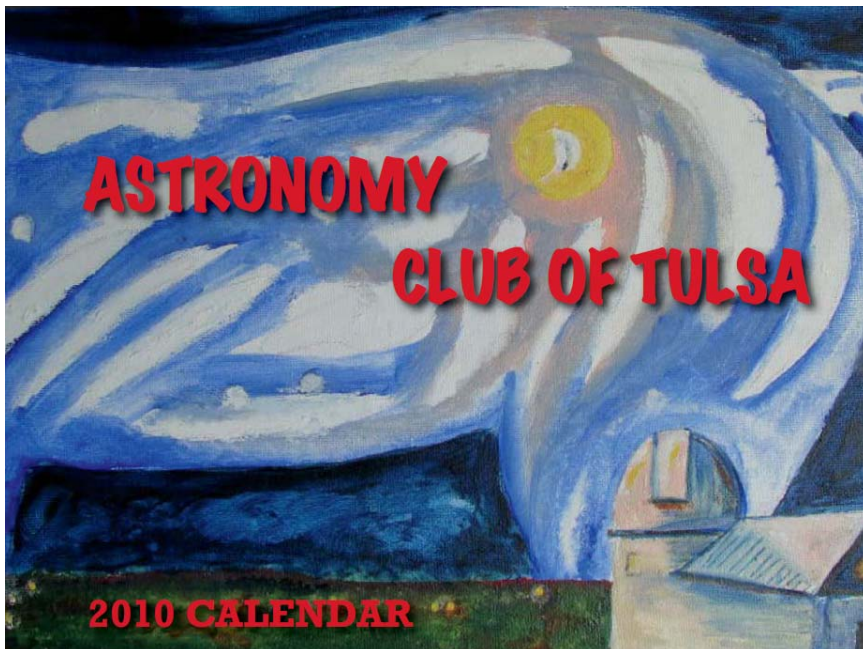
PARKING MAY BE AT A PREMIUM. Reserve Parking is available next door in old ATT lot for those without equipment or planning to leave early. PLEASE DO NOT PARK VEHICLES near the center-observing pad blocking the view and traffic access.

SAFETY ISSUE: When large groups are present it is better to turn on your park lights or headlights on low beam rather than to try driving in or out without lights... especially if those groups include children. Just warn everyone when you are getting ready to leave.

NEVER try driving down the hill without lights.

A donation of \$2.00 per guest would be appreciated to help us maintain the observatory.

2010 Astronomy Club of Tulsa - Wall Calendars - Update



Calendar sales are off to a great start! We are in the profit zone with over \$500 dollars so far with more money to be collected. There is no rule stating calendars must be purchased by January 1st so if we all as a club work together selling just two or three of the remaining 200 or so, we can really make an impact on our club income. This will enable us to invest in to our 2011 ACT Calendar already in the works and make a dent in some of our much needed repairs at our observatory.

CLUB OFFICERS

POSITION	NAME	PHONE
President	Tom McDonough	918-851-2653
Vice-President	Ann Bruun	918-834-0757
Treasurer	John Land	918-357-1759
Secretary	Tamara Green	918-851-1213

BOARD MEMBERS AT LARGE

NAME	PHONE
Steve Chapman	918-342-1643
Catherine Kahbi	918-409-1867
Teresa Kincannon	918-637-1477
Denny Mishler	918-274-4772
Chris Proctor	918-810-6210

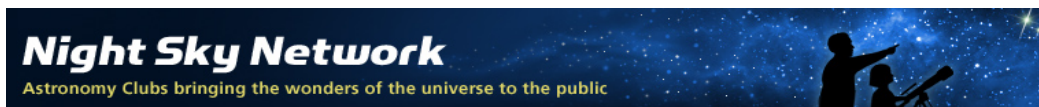
APPOINTED STAFF

POSITION	NAME	PHONE
RMCC Facility Manager	Chris Proctor	918-810-6210
Membership Chairman	John Land	918-357-1759
Observing Chairman	Ann Bruun	918-834-0757
New Members	Owen Green	918-851-1213
Group Director	Teresa Kincannon	918-637-1477
Webmaster	Tom McDonough	918-851-2653
Newsletter Editor	Vacant	
Night Sky Network	Peggy Walker	918-640-0832
Program Director	Vacant	

MEMBERSHIP INFORMATION

Astronomy Club of Tulsa membership (\$35/year) includes membership in the Astronomical League and subscription to ACT's "Observer" and AL's "Reflector". "Astronomy" (\$34/year) and "Sky and Telescope" (\$33/year) are also available through the club. For more information contact John Land at 918-357-1759. Permission is hereby granted to reprint from this publication provided credit is given to the original author and the Astronomy Club of Tulsa Observer is identified as the source.

The Astronomy Club of Tulsa is a proud member of the Astronomical League and the Night Sky Network



<http://www.astroleague.org>

<http://nightsky.jpl.nasa.gov>

ACT welcomes your questions, suggestions, comments and submissions for publication.
Please send all inquiries to act_pm@astrotulsa.com