
OBSERVER

The Astronomy Club of Tulsa's Official Newsletter

November 2010

President's Message

-Owen Green ACT President

Greetings fellow Stargazers,

My name is Owen Green and I am the newly elected president of the Astronomy Club of Tulsa.

I would like to thank Tom McDonough our past President, Ann Bruun our past Vice President. Also Steve Chapman, Richard Alford, Teresa Kincannon, Denny Mishler and Chris Proctor for their service as our Board Members at Large. We had a tough year with all the drama we had, it would not be inappropriate to thank this group of people when you see them.

The skies are a precious gift that we are blessed with and being able to share that with other astronomers or complete novices is an awesome experience that we should treasure for a lifetime. Whether these are at general star parties, private star parties, sidewalk events or, as I learned recently, my next door neighbor is not only an avid astronomer, but he has been to club meetings and the observatory. The knowledge that we have can change ways of thinking and perhaps spark an interest that will make someone want to spend more time in our hobby. Do you know how many people do not know that they can see the International Space Station as it fly's over? I also am thanking each and every member for their interest and participation in our club and promotion of astronomy to the masses.

Dr. Aaron Coyner

Guest Speaker for December General Meeting

Dr. Coyner obtained his B.S. degree in Engineering Physics in 2003 at the University of Tulsa. He participated with a team studying the affects of particle collisions in zero gravity. His team tested some of their experiments on NASA's famous zero gravity training plane dubbed the "Vomit comet". He earned his M.S. and Ph.D. from Rice University, defending his thesis on the multi-wavelength analysis of solar transient phenomena in July, 2008. He is presently a post-doc working at NASA Goddard Space Flight Center by way of Catholic University of America near Washington DC. His solar physics research interests include the determination of temporal and spatial relationships between solar flare emission in X-ray and ultraviolet wavelengths as well as the analysis of UV spectral line widths to observationally constrain line broadening due potentially to coronal heating mechanisms. He is a long time resident of the Tulsa area, specifically Broken Arrow, and was an active participant in ACT for many years. In his time with ACT, he served multiple stints on the board and one year as the club secretary. Aaron was active in the Tulsa club during high school and college years. Aaron was a significant contributor to ACT's successful hosting of the 2003 MSRAL convention.

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ACT General Meeting Time and Place



Club Christmas Goodies Night: On Tuesday Dec 21st Bring some of your favorite recipes of Christmas cookies or candies. The club will provide the plates and drinks and we can enjoy a time of visiting after Dr. Coyner's presentation.

TUESDAY Dec 21st 7:00 PM *Guest Speaker* – **Solar Physicist Dr. Aaron J Coyner**
TCC NE CAMPUS - 3727 E Apache St - room 1603 *SE corner of Enterprise Bldg.*

To get to **TCC NE** take the Harvard exit off Hwy 11 (Gilcrease expressway)
Go South about 1/2 mile to the campus located at the corner of N Harvard and Apache

Backyard Astronomy

By Ann Bruun – ACT Observing Chairperson

There are all kinds of reasons why you might not be able to attend the monthly star parties; other commitments, the weather, or after a long week at work, you just don't have the energy to load up all your gear and take a drive away from the city lights. But if you still have the desire to get out under the stars on a clear night, don't discount the possibility of observing from your own back yard.

It is true you will not be able to see faint deep sky objects in the city, but with the right set-up you may be surprised at what you can see. Many open clusters can easily be spotted along with double stars, globular clusters and bright deep sky objects like the Ring Nebula and M31. To make your backyard observing truly enjoyable and productive you need to make a few preparations.

The number one thing you must do is get all the street lights and porch lights out of your eyes. Unless you are only observing the moon, these lights will rob you of the ability to find your way around the sky. Select the location for your scope very carefully so as many lights as possible are blocked by natural objects like trees, fences and houses. Once you have your location set create barriers to block the lights you can still see. I have used tarps, cardboard and even a patio umbrella. If you want to get really fancy, there are instructions for building cheap light shields online. The first time you set up your make-shift observatory it might take awhile to collect all the pieces and figure out how to block all the lights but you only have to figure it out once, the next time you set up it is much easier.

Once you are inside your homemade dark zone you will be amazed how many more stars you can see naked eye. As your eyes adapt you may start to notice a "secondary" light source, the lights reflecting off trees and houses. Sometimes there is nothing you can do to block reflected light and it does not hinder your night vision like direct light does. The fact that it becomes annoying at all is a testament to the darkness of your observing area. Also the later you stay out the better the sky should become as more businesses shut down for the night.

Of course observing in the city you are never going to see as many stars as you can in the country. Navigating through a brighter sky is much easier if you use a finder scope. With a finder scope you will be able to see the stars indicated on your charts and star hop to the objects you are looking for. I have a dot finder I use to aim my scope at a bright star then I use my 9 X 50 correct image finder to move to the area I need to be in. "Correct image" means what I see through the finder will match my chart which makes it much easier to star hop. I have logged nearly all the A. L. list doubles, several Messier's and even a few Herschel's from my back yard.

When you set up your observing area, be sure and bring all the equipment you need to be comfortable, just as if you were going out to the dark site. If you normally use an observing chair bring it out, if you like a table for your charts bring that too. You can almost forget you are in the city once you start finding objects. With the proper set up, a night observing in your own back yard can be very satisfying.

Tips for your Telescope

by John Land



With colder nights coming on you need to set your telescope out for an hour or so to cool down to the outside temperatures. Until they cool down, the images dance around as the air in the telescope and the glass itself cools down. If your yard is secure you can just set it outside at about sunset and then observe later, but you need to cover it to keep the dew off. I discovered a cheap but effective telescope cover at Lowes. In the Barbeque section they sell covers for your outdoor grill. I found a 53" cover with a draw string for about \$ 10. They also have 68" covers. (You'll have

to look on the lower shelf below the high priced ones.)

If you don't have a secure yard, you can put your scope in the car with the windows cracked a bit to allow it to cool down. Be sure to take the scope in before day light . Take a lesson from this "Exploding Telescope".

<http://www.skyandtelescope.com/news/105515108.html>

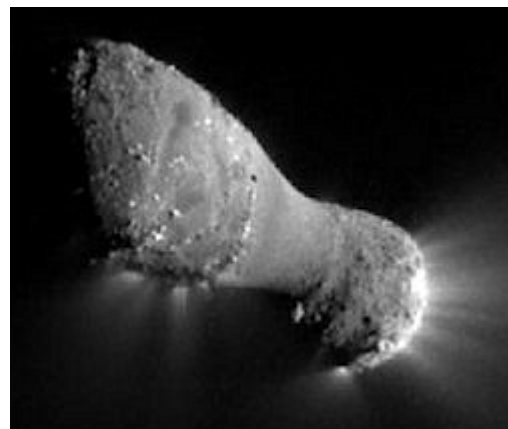
Comet Close Encounter

On Nov. 4th, NASA's Deep Impact ([EPOXI](#)) probe flew past Comet Hartley 2 only 435 miles from the comet's active nucleus. Soon after the encounter, the spacecraft turned its high-gain antenna toward Earth and began transmitting close-up images to Earth. The view was spectacular:

<http://spaceweather.com/archive.php?view=1&day=05&month=11&year=2010>

Most of you have seen the fabulous images of comet nucleus.

I got to listen to the NASA press conference after it close encounter on Nov 4, 2010 This Spacecraft was traveling 27,000 miles per hour relative to the comet and had only 200 seconds to take its five close up images. Since its launch in 2004 this spacecraft has traveled 2.8 billion miles in space. By careful calculations the mission controllers were able to come within 700 km of the nucleus. They only missed their mark by just 3 kilometers (1.5 miles) and their time line by 2 seconds! For images of its first comet encounter July 4, 2005 go to <http://solarsystem.nasa.gov/deepimpact/index.cfm>



Total Lunar eclipse - Tuesday Morning Dec 21st 12:34 AM to 4:00 AM
Anyone can observe this from the comfort of your own yard.



Astronomy Stocking Stuffers - Looking for something out of this world to give for Christmas?

The 2011 Calendars from Astronomy magazine are in for \$ 10 each while supplies last. and will have some at the Star Party (please bring correct change)

2011 Canadian Observer's Handbook \$ 23 Orders need to be prepaid by Nov 18th
Guy Ottewell's 2011 Astronomical Calendar and Astronomical Companion.

Special price \$ 20 each. You can order these directly from the Astronomical League
<http://astroleague.org/content/guy-ottewells-2011-astronomical-calendar>

Club Logo Merchandise – Shirts, Jackets Mugs and more <http://www.cafepress.com/astrotulsa>

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<http://www.skyandtelescope.com/news/106975863.html>

Sky this Month

STAR DOME PLUS

STAR ATLAS

Tony Hallas Bob Berman Glenn Chaple

Stephen James O'Meara David H. Levy

EXPERT COLUMNISTS

Take advantage of all the online features
***Astronomy* has to offer!**

Astronomy magazine also has section where subscribers to their printed version can get additional Information and access to selected articles online by entering their subscription number.

Buying a First Telescope

by John Land

The club often gets inquiries about buying telescopes near the holidays. Before you buy, do some research on telescopes. Avoid department store specials! These scopes show up during the holiday season and are almost always way over priced low or poor quality scopes. One repeating comment I hear from Adults returning to astronomy is: "I got this telescope when I was a kid but could never find anything in it" If you talk to different club members you'll get a good perspective on telescopes. Below is my perspective on the topic.

When its time to buy a telescope, **DO YOUR HOMEWORK** and then ask questions of several experienced astronomers. My personal bias is to buy a good quality telescope but don't spend a huge amount of money until you've had time to observe at least two years. By that time you'll know how much time and effort you have to do observing. The new computerized "GoTo" Telescopes are tempting but getting started with them can be complicated and frustrating. The computer does not let you see objects any better. They are getting better but Just to start using one you will already have to know a number of bright stars to align the telescope. It can be a frustrating experience for a first time observer. The optical components of a good telescope should last you a lifetime. Most computerized gadgets are obsolete or not working in less 10 years? Personally for the beginning observer I recommend staying with a simple telescope you can move on your own. Your brain and a good \$ 20 star chart can do everything the computers can for free. You can always upgrade in the future. These are my opinions, you have to make your own.

When you finally decide to invest in a telescope its objective diameter (aperture) is the primary factor determining its light gathering ability. A small 60 mm refractor collect 73 times more light that the human eye while a 6 inch (150 mm) telescopes collects 473 times more light. In addition to more light grasp, the larger diameter will allow you to see details more clearly – a term astronomers call resolution.

Don't take my word on it. Read the experts!

Choosing Your First Telescope -One Page article

<http://www.skyandtelescope.com/equipment/basics/12511616.html>

Choosing Your First Telescope -Five Page article

<http://www.skyandtelescope.com/equipment/basics/3303926.html>

Also a great set of articles on How to Pick a Telescope are found at Astronomics in Norman.

<http://www.astronomics.com/> Select the section How to select a Telescope and

Juggling the five "P"s of Performance, Purpose, Portability, Light Pollution, and Price.

Don't be tricked by false advertising. Magnification is not the most important factor in choosing a telescope. **NO TELESCOPE** can perform more than about 50 power per inch or 2 power per mm. A 60 mm telescope can do no more magnification than 120 power despite much overrated ads of 300 to 400 power common in department stores. Atmospheric turbulence seldom allows magnification powers more than 200 power with even a large telescope. The advantage of a larger telescope is more light grasp to let you see faint objects more clearly not magnification.

Read my article at <http://www.astrotulsa.com/Learn/Telescope/Telescope.htm>

Note: I wrote this article in 2000 so the links at the end may have expired



DARKER SKIES-

Jerry Mullennix

I think you will find this interesting but over the last 3 or 4 months I have been evaluating the light pollution at the observatory and last night Steve and Jim Miller confirmed what I suspected. There is no doubt that the economic down turn in the economy has had a dramatic effect on the skies at the observatory and in dark sky grades it is at least one maybe two grades better than this time last year. The entire little dipper (in Ursa Minor) is now present and not with a struggle but clearly defined. I'm sure you are aware that over the last 4 or 5 years finding Polaris meant locating Ursa Major to confirm the correct star because Polaris stood alone. (this is no longer necessary

because it is the bright star at the bottom of the handle) and at 2am directly north you could see a few stars at 10 degrees above the horizon just to the left of downtown.

These views are not just an effect of the quality of the seeing because my experiments have been conducted over several months and last night was a good night but seeing was only average to good as the bands on Jupiter waded in and out with the transparency in my 5" and 250 power overpowered the planet. Additional confirmation for me came when Steve, Jim and Mike found it impossible to find more than four stars in the trapezium in Mike's 14". You know on exceptional nights scopes that size can achieve 5 and six with little effort. The only plausible explanation is the light pollution is diminishing.

I suspect that it is not just our local cities that have reduced lighting on streets and city owned areas but populous being very aware of expense and reducing unnecessary expenditures. I also doubt this is a phenomenon exclusive to Tulsa but if a study was done we would find that other clubs are experiencing the same effect and where the economy was hit harder the effect is greater.



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!

For those who have not visited the club's new Facebook page, go there now!

www.facebook.com/astronomycluboftulsa
Facebook is an excellent tool for sharing and staying "real time" up to speed on what's going on with the ACT. Don't forget to click "like".

Land's Tid Bits for November, 2010

– by John Land

Our membership rates for 2010 – 2011 will be as follows.

Adults - \$ 45 per year includes Astronomical League Membership

Sr. Adult - discount \$35 per year for those 65 or older includes Astronomical League Membership

Students - \$ 25 without League membership.

Students - \$ 30 with League membership.

The regular membership allows all members in the family to participate in club events but only ONE voting membership and one Astronomical League membership.

Magazine 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 / yr
www.skyandtelescope.com

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

Note: You may renew your **Sky & Telescope subscription** directly online 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.astrotulsa.com/Club/join.asp>

You can then **print a copy of the form and mail it with your check.**

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 and filling 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

Contact Chris to volunteer to help with observatory projects

act_maint@astrotulsa.com

The Astronomy Club of Tulsa is made of about 150 members who share a common love of astronomy. Unfortunately, most of us live under light polluted skies. Our Observatory gives us a retreat to gather under darker skies, but we can only continue to enjoy its use if we VOLUNTEER OUR TIME AND EFFORTS TO MAINTAIN THE BUILDING AND ITS GROUNDS. Often, we need some SWEAT EQUITY to keep the observatory and grounds in good shape. If you are willing to volunteer to help with general maintenance or with mowing and trimming, let Chris know

Club Officers

| | | |
|-----------------------|------------------|---------------------|
| President | Owen Green | 918.851.8171 |
| Vice-President | Teresa Kincannon | 918.637.1477 |
| Treasurer | John Land | 918.357.1759 |
| Secretary | Tamara Green | 918.851.1213 |

Board Members at Large

| | |
|----------------------|---------------------|
| Bill Goswick | |
| Allen Martin | 918.407.9706 |
| Tim Davis | |
| Chris Proctor | 918.810.6210 |

Appointed Staff

| | | |
|---|------------------|---------------------|
| Facility Manager | Chris Proctor | 918.810.6210 |
| Membership Chair | John Land | 918.357.1759 |
| Observing Chair | Ann Bruun | 918.834.0757 |
| New Members | Owen Green | 918.851.8171 |
| Group Director | Teresa Kincannon | 918.637.1477 |
| Webmaster | Jennifer Jones | |
| Newsletter Editor | Allen Martin | 918.407.9706 |
| Night Sky Network Program Director | Teresa Kincannon | 918.637.1477 |
| | Vacant | |

MEMBERSHIP INFORMATION

Astronomy Club of Tulsa membership (\$45/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



Night Sky Network

Astronomy Clubs bringing the wonders of the universe to the public



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

ASTRONOMY CLUB OF TULSA – MINUTES - GENERAL MEETING FRI OCT 22, 2010 ELECTIONS FOR 2011

PRESENT:

Tom McDonough, President
Ann Bruun, Vice President
Tamara Green, Secretary
Teresa Kincannon, Board
Steve Chapman, Board
Christopher Proctor, Board
Denny Mishler, Board

NOT PRESENT:

Richard Alford, Board

President Tom McDonough called the meeting to order at 7:14. There were 32 people in attendance, 30 voting. He talked about the vote for officers and board and then introduced the candidates.

During the voting, Teresa talked about the Tulsa Town Hall presentation, the Neil DeGrasse Tyson talk. Judy Lieser talked for a bit about her experience with Okie-Tex. Christopher Proctor gave a report on how the observatory and star parties are going. He also announced the Annual Dinner Meeting for Thursday evening, Nov 28 at Jamil's. There will be a \$15 preset menu.

Tom recognized Ann Bruun for her service as Vice President and Observing Chairperson. She was presented with a gift certificate to Astronemics.

Owen announced the Sidewalk Astronomy event at Bass Pro, to be held on Sat, Oct 23.

John Land gave his treasurer's report.

ELECTION OF OFFICERS AND BOARD

The following persons have been nominated and were on the ballot: Owen Green, President; Teresa Kincannon, Vice President; Tamara Green, Secretary; John Land, Treasurer; Bill Goswick, Allen Martin, Tim Davis, Christopher Proctor, Board.

The ballots were tallied by Tamara Green, Tom McDonough, and Clark Hayes. Tom made the announcement regarding the elections:

The new officers and board for 2011 are: Owen Green, President, Teresa Kincannon, VP; Tamara Green, Secretary; John Land, Treasurer; Bill Goswick, Allen Martin, Tim Davis, Christopher Proctor, board.

REDUCTION OF THE NUMBER OF BOARD MEMBERS FROM NINE (9) TO SIX (6) – Passed. 29 voted yes, 1 voted no.

MEMBERSHIP DUES INCREASE BY \$10 PER ITEM

This will raise the price of the different levels of membership as follows: Adult, \$45, includes AL membership; Sr. Adult (age 65+), \$35, includes AL membership; Student w/AL membership, \$30; Student w/o AL membership, \$25. Passed. 26 voted yes, 4 voted no.

Tom then turned the reins over to the new president Owen Green. Owen made an announcement about Sidewalk Astronomy and adjourned the meeting at 7:50, with the invitation for all who wanted to join him and Tamara at Hideaway Pizza to come and join them.