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# OBSERVER

The Astronomy Club of Tulsa's Official Newsletter

August 2010

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## Ready for Club Elections

*-A letter from the editor*

It is that time of year again. The time to start nominations for Club Officers and Board members and thinking about where YOU stand when it comes to club operations and planning for a successful year. There have been vacancies in the board throughout most of 2010. The club has been without a Program Director for a while now and a new fundraising committee is being planned that will require additional leadership and support from the club's membership. The club NEEDS its membership to step up to the plate. Some of you volunteer at observatory workdays. Some of you have donated monies to assist with the increased operations cost. Some of you have served the club in its leadership in the recent past or are currently serving and, for all of this, we thank you. But we are in dire need of additional members willing to sacrifice a bit of their time to help the club function. You, as a club member, can no longer be content with letting others handle the day to day operational aspects and expecting that these few people will not be overwhelmed. The more involved the membership gets, the easier it is for everyone. See page 2 for more information regarding current election nominations.

## Let's Share an observing session with a youth group

*Teresa Kincannon -Groups Director*

We are planning an event for a church youth group to bring 20- 30 students and 10-12 adults to the observatory on:

**Friday, September 17th, 2010.** We will work out details as the date gets closer. This will be a fun one and may be a nice observing evening for those that can come and stay late after the group leaves. Plan on this opportunity for Astronomy Club of Tulsa members to share ideas of what to do with groups, observe and watch these young ones as they view some objects for the first time and become amazed. That is always a wonderful feeling to know that we can share wonders they may not have even known existed until this night. When they leave, the moon should be lower in the west and we can continue as long as the weather holds.

If you have questions on how to become a volunteer to work with groups, please contact Teresa Kincannon @ 637-1477.

## INSIDE THIS ISSUE

2	<i>Current Nominations and Election Information</i>	7	<i>New Member Spot Light Globs In and out of the Teapot from Ann Bruun</i>
3	<i>Job Descriptions</i>	9	<i>Spreading the Joy -Allen Martin</i>
6	<i>Upcoming Club Events</i>	10	<i>Make No Mistake --Sheldon Padamer</i>
		14	<i>Space Cadets!</i>



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## Election Information and Current Nominees

*Tom McDonough –ACT President*

It is time to begin nominations for the 2011 ACT Officers and Board. A significant number of positions are vacant and we are counting on the membership to step up and usher in a major change in leadership. Here are the current Officer and Board Nominees.

<b>Office</b>	<b>Current Nominees</b>
President	Owen Green
Vice President	<b>None</b>
Secretary	Tamara Green
Treasurer	John Land
Board 1	Chris Proctor
Board 2	Allen Martin
Board 3	Bill Goswick
Board 4	<b>None</b>
Board 5	<b>None</b>
Board 6	<b>None</b>
Board 7	<b>None</b>
Board 8	<b>None</b>
Board 9	<b>None</b>

### **The following appointed positions also need to be filled:**

*Program Director*

*Webmaster*

*Fundraising Coordinator*

Nominations can be made by sending an email to:

[act\\_board@astrotulsa.com](mailto:act_board@astrotulsa.com),  
[act\\_pres@astrotulsa.com](mailto:act_pres@astrotulsa.com), or  
[act\\_vp@astrotulsa.com](mailto:act_vp@astrotulsa.com) .

You may also contact any staff member by phone as listed in the newsletter or in person at the September general meeting. All nominations must be received before 11:59pm on the Sunday following the

September meeting.

## Fundraising Committee

A fundraising committee is also being formed to find creative ways to generate revenue to help cover our increased insurance and operating costs. This would be preferable to raising dues or having a separate fee for observatory use. If you would like to volunteer, please contact any staff member.

## Annual Election Procedure

### August

- Nominations will start being accepted
- Nominations will be accepted in writing, verbally, and electronically
- Verbal nominations must be documented in writing
- All nominations are to be kept anonymous
- Nominations for President are to be submitted to the Vice President or Secretary only
- Nominations for Vice President are to be submitted to the President or Secretary only
- All other nominations are to be submitted to the President, Vice President, or Secretary
- Nominations and/or volunteers for appointed positions will also be accepted
- President, Vice President, and Secretary will contact the nominees to confirm they accept

### September

- Nominations from the floor will be accepted during the September meeting
- All nominations will close at 11:59PM on the Sunday following the September meeting
- The board will hold a meeting prior to the election to determine all appointed positions
- The Secretary will prepare ballots for the election.

### October Meeting

- Meeting will open with a review of candidates
- Membership will cast ballots
- The votes will be counted by the Secretary, one current officer (President, Vice President, Treasurer), and one randomly chosen eligible voting member
- Election results and appointed positions will be announced just prior to adjournment of the meeting

### General

- All election records (nominations, cast ballots, etc.) are to be kept for thirty (30) days following the election
- All election records are to be made available to any eligible voting member for inspection during this period
- All election records may be destroyed after the retention period

# Job Descriptions for Officers, Board, and Appointed Staff

## ELECTED POSITIONS

### Position: President

#### Summary:

Act as chief spokesperson of the corporation.

#### Responsibilities:

- Preside over all general meetings.
- Act as chief spokesperson for the club.
- Preside over Board of Directors.
- Appoint members to non-elected positions.
- Perform financial duties as stated in the bylaws.
- Perform all other duties as stated in the bylaws.

#### Requirements:

Must be a member in good standing for at least one year and be of legal age. Must have good English language and public speaking skills. Willingness to spend the time to organize and prepare for conducting monthly club meetings is required.

### Position: Treasurer

#### Summary:

Manage and report on the corporation's finances.

#### Responsibilities:

- Keep accurate records of the club accounts and investments.
- Disburse funds.
- Prepare and maintain a yearly budget.
- Be available during club events for transactions by members. If unavailable, must delegate this to another staff member.
- Record all financial transactions including, but not limited to, dues, sales, and donations.
- Prepare and distribute financial reports and membership information to the board, membership, and Astronomical League.
- File all required tax forms.

#### Requirements:

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills. Must be legally eligible for bonding if required. Background in accounting desirable.

### Position: Vice President

#### Summary:

Backs up President

#### Responsibilities:

- Perform all duties of president during absence of president.
- Club liaison for Astronomical League (ALCOR).
- Perform any duties assigned by the board or President.

#### Requirements:

Must be a member in good standing for at least one year and be of legal age. Must have good English language and public speaking skills.

### Position: Secretary

#### Summary:

Attends all meetings, both membership and board, and records and maintains all minutes thereof.

#### Responsibilities:

- Records all motions, seconds of motions, votes, and all proceedings.
- Distributes or delegates notices of all meetings of the membership and board.
- Performs other duties as may be required under law or statute, or prescribed by the President or the Board.
- Attests and signs documents, and keeps all correspondence of the Board and officers, or any individual in as much as it may concern representation of the club.
- Maintains a current list of the membership and all eligible voters.

#### Requirements:

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills. Must be available to record all official club business.

## **Position: Board Member at Large**

### **Summary:**

Regularly attends board meetings and important related meetings.

### **Responsibilities:**

- Involvement in the workings of the club by leading/coordinating/helping on any project that is undertaken by the club.
- Foster a teamwork attitude.
- Conduct themselves in a respectful manner at board meetings.
- Be responsive to communication so as to not hinder the decision making process or data collection for current projects.
- Immediately alert board if any conflicts of interest arise.
- Notify the board if unable to participate in any current business.
- State intent to run or be nominated by membership yearly to serve on the board.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills.

## **Appointed Positions**

### **Position: Group Director**

#### **Summary:**

Coordinate events for groups that contact the club for observing astronomy.

#### **Responsibilities:**

- Point of contact for all groups.
- Schedules all group events.
- Solicits volunteer staffing from membership.
- Document events for club records.

#### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills.

### **Position: Observing Chairperson**

#### **Summary:**

Coordinates and communicates all aspects of observational astronomy.

#### **Responsibilities:**

- Alerts membership to current sky events of interest.
- Monitors weather conditions along with other staff to determine cancellation of events.
- Offers advice, support and encouragement about observing to the membership.

### *Appointed -continued*

- Verifies and submits observing logs for Astronomical League certificates.
- Contributes articles to the newsletter.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills. Thorough knowledge of the sky is a plus.

## **Position: Observatory Facilities**

### **Manager**

#### **Summary:**

Provide a single point of contact and coordination of resources for the operation, maintenance, and safety of the Mounds Observatory.

#### **Responsibilities:**

- Available to accept all communication concerning maintenance and emergency needs of the observatory. The manager will ensure a back-up contact is available if absent or unavailable.
- Operate and maintain observatory in a manner consistent with local/state/federal mandates governing such facilities
- Set and prioritize tasks for club work days and work to drive participation.
- Ensure that the observatory, grounds and related equipment are kept in a ready-to-use condition that balances immediate needs of the membership with the long-term goals for the facility. Examples of equipment would include the dome, RCX, mower, computer, safety equipment and materials (including a MSDS book)
- At observatory public events the manager (or designee) will deliver a short speech at the beginning of the event concerning safety while on the property.
- Communicate with the board through attendance of board meetings and email to the directorship concerning immediate needs of the facility and long term planning. This includes the keeping of an accurate electronic ledger of all facilities expenditures.
- Communicate with the general membership through an article in the club newsletter

#### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills. Must be physically fit enough for yard work, heat/cold tolerance, climbing/height, and lifting significant weight (25+ lbs.).

## **Position: Public Relations Coordinator**

### **Summary:**

Communicates and coordinates with the media, general public and external organizations.

### **Responsibilities:**

- Respond to inquiries about the club.
- Refer inquiries to proper staff member.
- Distribute standardized club information in email or paper format.
- Send notices of club meeting and events.
- Coordinate public outreach events.
- Convey a positive friendly image to the public.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good interpersonal, English language, and written communication skills.

## **Position: Webmaster**

### **Summary:**

Implements web pages, maintains content, and oversees day-to-day management of the club website.

### **Responsibilities:**

- Post content changes in a timely manner.
- Work with board to implement changes and additions.
- Responsible for managing hosting, email, and domain name services.
- Retain and maintain data of all events and newsletters.
- Maintain backup of entire site.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills. Must be competent in the following:

- HTML/Web programming
- Databases/Microsoft Access
- Classic ASP programming
- Graphics
- FTP
- Web site hosting

## **Position: Newsletter Editor**

### **Summary:**

Compiles, publishes, and distributes the Astronomy Club of Tulsa's monthly newsletter, "The Observer".

### **Responsibilities:**

- Publicize important upcoming dates and events for club activities.
- Solicit newsworthy articles from club members and external sources.

## *Appointed –continued*

- Compile information and pictures with suitable word processing or publishing software into newsletter format.
- Review content for correct spelling and grammar and organize articles and pictures in newsletter to provide pleasing visual layout.
- Output newsletter to "pdf" format and post to ACT website.
- Notify all club members and appropriate "guests" of newsletter posting via email.
- Provide paper copies of newsletter via U.S. Mail to members without email access.
- Maintain records of postage and consumables cost.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language, written communication, and word-processing skills. Willingness to spend time each month to organize, edit and distribute newsletter is required. Moderate knowledge of astronomy and willingness to research subject matter is a plus.

## **Position: Program Director**

### **Summary:**

Procures guest speakers and develops content for club meetings.

### **Responsibilities:**

- Plans, organizes, staffs, directs, and evaluates program activities.
- Provides oversight of program management activities and assists with financial management and public relations.
- Maintain contact list of speakers and presenters.
- Develop and maintain relationships with local, regional and national Colleges and Universities Science and Physics departments for educational topics and speakers.
- Arranges for speaker travel, lodging, and compensation.

### **Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good interpersonal, English language, and written communication skills.

## **Position: Night Sky Network Club Coordinator**

### **Summary:**

Promotes and maintains the club's membership in NASA's Night Sky Network.

### **Responsibilities:**

- Schedule and log kits monthly.
- Organize and prepare kits for presenters.
- Participate in Night Sky Network's monthly conference calls.

*Appointed –continued*

- Encourage club members to take part in presenting kits.
- Maintain kits and order/replace items if necessary.
- Submit monthly newsletter article.
- Develop and maintain a topic list.

**Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills.

**Position: Fundraising Coordinator**

**Summary:**

Researches, plans, and implements club funding strategies.

**Responsibilities:**

- Proactively plans and executes strategies to identify sources of donors and grantors to ensure that the club has sufficient prospects to meet fundraising goals.
- Helps prepare and manage approved annual fundraising budgets and timelines.
- Keeps committees and solicitors organized and updated.
- Provides donors with proper receipts and documentation.
- Evaluate completed projects for effectiveness.
- Keeps accounting of revenue, expenditures, and receipts from each project.
- Works with Public Relations Coordinator to advertise fundraising events.
- Must seek board approval for all events.

**Requirements:**

Must be a member in good standing for at least one year and be of legal age. Must have good English language and written communication skills.

The background image at right was sent to us by Stan Davis. The image is of the August Planetary conjunction taken from North Central Texas on Aug 10, 2010 at 7:25 PM. Shot at ISO 400, 25 second @ F.4.5 on a Canon EOS Rebel.

Submit any photos you would like to see used in the newsletter to:  
ACT\_PM@astrotulsa.com

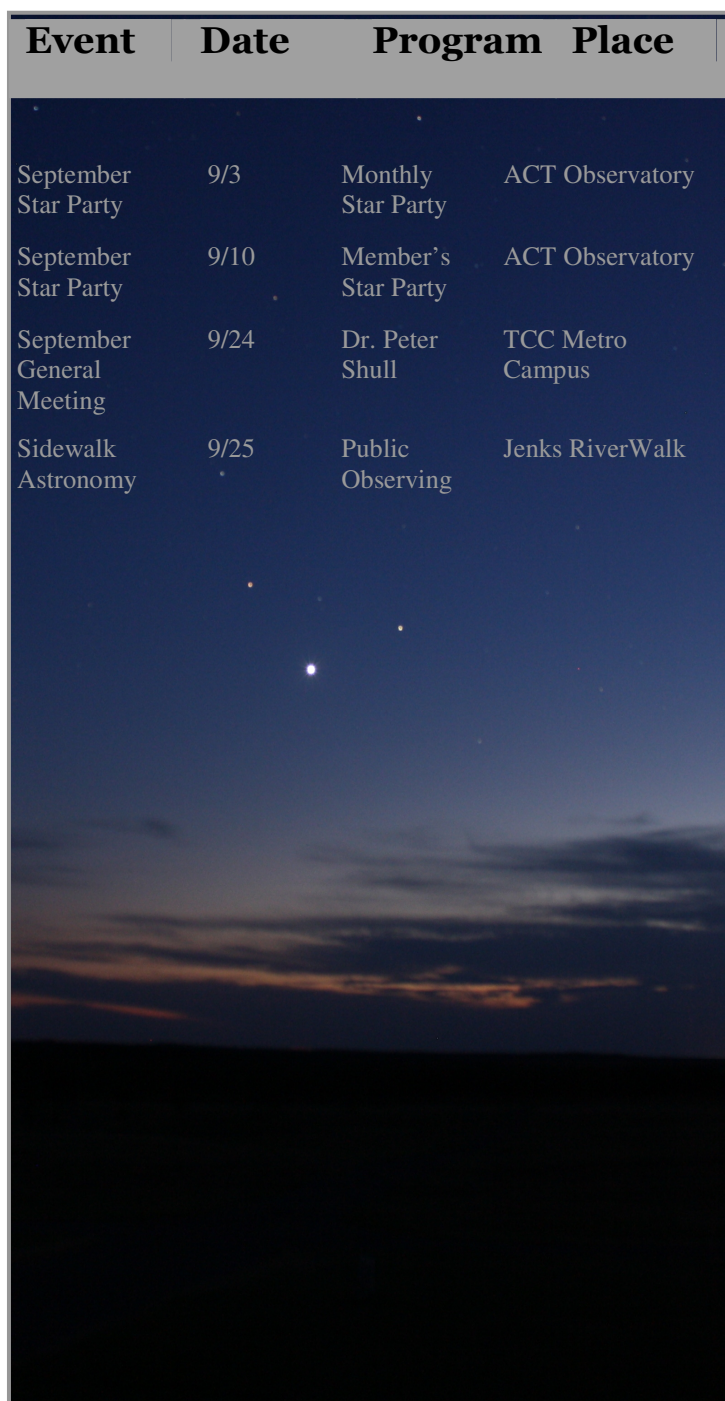
For those who have not visited the club’s new Facebook page, go there now!

[www.facebook.com/astronomycluboftulsa](http://www.facebook.com/astronomycluboftulsa)

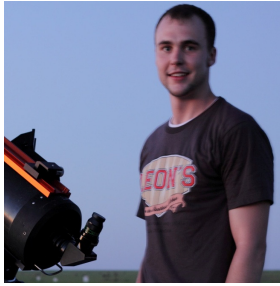
Facebook is an excellent tool for sharing and staying “real time” up to speed on what’s going on with the ACT. Don’t forget to click “like”.

## Upcoming Club Events

Event	Date	Program	Place
September Star Party	9/3	Monthly Star Party	ACT Observatory
September Star Party	9/10	Member’s Star Party	ACT Observatory
September General Meeting	9/24	Dr. Peter Shull	TCC Metro Campus
Sidewalk Astronomy	9/25	Public Observing	Jenks RiverWalk



# New Member Spot Light

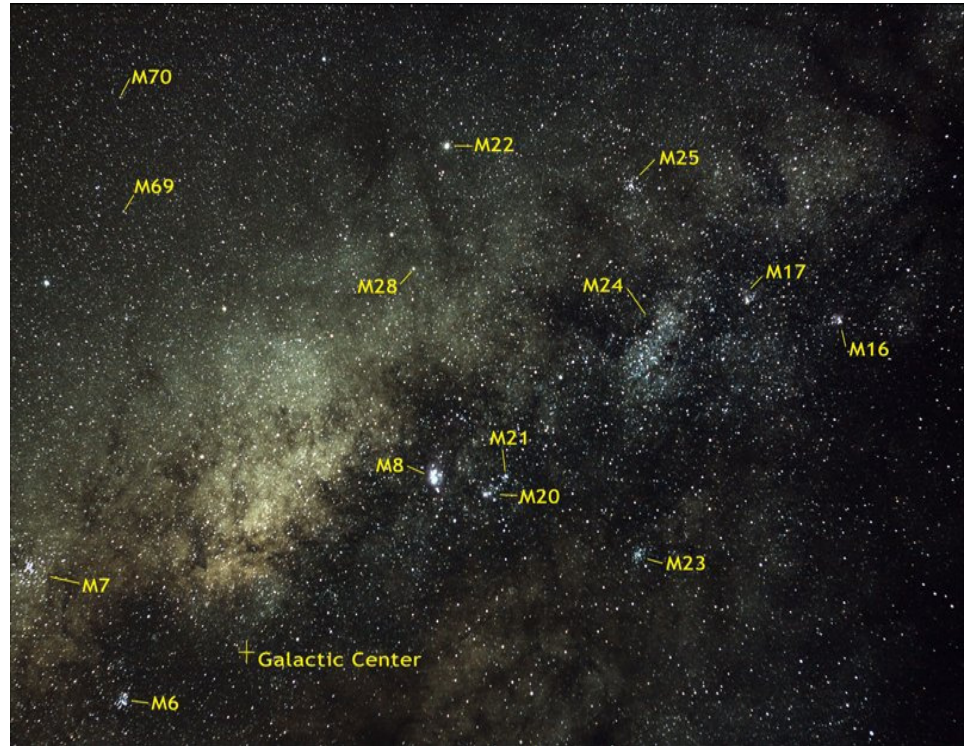


Hello my name is Jared Seay. I am one of the newest members of the astronomy club. I have attached a picture that I took at Adam's Ranch on Friday night (early Sat morning). One of the pictures is annotated showing various messier objects as well as the galactic center. The picture is a wide field Sagittarius photo taken with a Canon 50D and a 50mm lens at f/4. It is a stack of 30, 25 second exposures. I piggybacked the camera on my Celestron 8" Schmidt Cassegrain and all sat atop an Atlas EQ-G mount.

I had an amazing time at

Adam's Ranch and the skies were truly wonderful. Friday night made for the best night of observing that I have experienced since I really got into astronomy about 3 years ago. The other members were very welcoming and I had a great time meeting everyone and observing with them.

About me: I am 23 years old and was born and raised in Tulsa. I was always intrigued by the stars as a kid but didn't get serious about astronomy until 3 years ago. I enjoy visual observing, of course, and I have been trying my hand at astrophotography. I still have quite a lot to learn, but I'm getting better every time the skies are clear. I am excited to be back in Tulsa (from school in Norman), and I'm glad to be a member of the club so that I can share my passion for astronomy with others.



## Globs In and Out of the Tea Pot *from Ann Bruun VP*

One of the things I love about summer observing is that the sky is full of globular clusters. They are especially thick around the galactic center in Sagittarius. Careful observation also reveals they are all different. Some are not quite round, some are very tight, almost stellar, and some are so loose they look like open clusters. How close the stars appear is one way globs are classified. It is called "concentration class" and it is a scale from 1 to 12. 1 is a very tight cluster while 12 is an extremely loose cluster. It is good practice to try and guess the concentration class while observing globs. You can find out the "official" concentration class in many astronomy books or on line but keep in mind the different sources don't always agree. Trying to guess the concentration class really just helps add more detail to your observation.



Following is a quick tour of a few globs in Sagittarius starting with one of my favorites, M22.

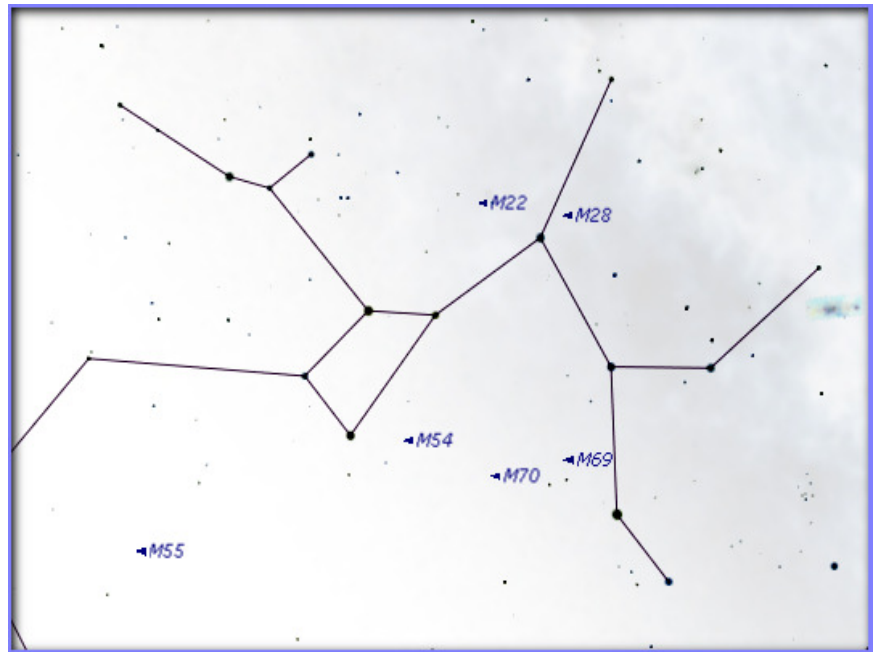
M22 - Just to the left of the top of the teapot, a very bright glob. It is bright enough to sometimes see in the city. It is a good cluster to start with because it is big and has a medium concentration of stars. It is listed as a class 5 to 7. It can also be easily resolved, which helps with the concentration class estimate.

M28 - Just above the top of the teapot. It is smaller and fainter than M22 but still resolvable. The class is listed as a 4.

M69 - Inside the teapot near the bottom right corner. A bit smaller than M28, but still bright and resolvable. Another medium concentration, class 5.

M70 - Closer to the bottom center of the teapot. This cluster is small and may be a challenge to resolve depending on the size of your scope. It is still a class 5. So now we have seen all different sizes of medium concentration class globs. Our next two globs will move closer to the extremes.

M54 - Near the bottom left corner inside the teapot. This is a very dense glob with a bright core. You will need a fairly large scope to resolve any stars. It is a class 3. Next we swing to the other end of the scale.



Last is

M55 - Outside and down to the left of the bottom of the teapot 8°. Nearly the same magnitude as M54, but much larger and spread out. It is easily resolved and be sure to notice the stars spreading out loosely around the center. This cluster is classified as an 11. With high magnification it starts to resemble an open cluster.

## Happy Birthday Owen Green August 29th



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[www.AstronomyBinoculars.com](http://www.AstronomyBinoculars.com)  
for more information!



# Spreading the Joy *—from Allen Martin with input from many members*

I enjoy showing people the universe and I try to make it to every Monthly Star Party. Everyone reading this has heard that "Oh, WoW!" you get from someone who has never peered through a decent telescope or the "I SEE IT!, I SEE IT!" from a child viewing Saturn for the first time. Taylor and I frequently go to Sidewalk Astronomy nights at Bass Pro and Jenks RiverWalk but, with a toddler who is seemingly related to the superhero "the Flash", babysitters are a requirement and not always readily available.

I set my scope up in my front yard recently to try and work out some tracking problems I have been having with it and ended up having an unexpected result, I spent most of the evening having an impromptu public star party on my front lawn. It started with 1 neighborhood kid on a bicycle as I was trying to complete an alignment.

"What can you see through that thing?", he asked. "What do you want to see?", I replied. I stopped the alignment process and manually swung the scope around to Saturn. "IT LOOKS JUST LIKE IN THE SCIENCE BOOK AT SCHOOL!", he shouted.

Why he felt that the American educational system had been lying to him for all of his, at most, 13 years I cannot be certain, but I WAS the first to show him Saturn's rings outside of TV or school books. He hopped back on his bicycle and took off screaming "I'll be right back!" so, I went back to the alignment process. About 20 minutes passed and he returned in a pack of about 6. The parents of those 6 started to dwindle in and we all experienced the Ring Nebula, Saturn again, and a few globs before the clouds made further observing impossible. I don't know how profoundly impacted anyone was that night by the experience, but I always remember Jack Horkheimer and his reminder to "Keep looking up!" and how it changed my life.

My realization that Sidewalk Astronomy and Public Star Parties weren't the only venue for public outreach prompted me to ask the membership examples of how they enjoy spreading their love of astronomy and what objects they most enjoy sharing. Here's what they said.

*"My favorite outreach are the special events like Woolaroc and Oxley. I like to show Mizar and Alcor in the Big Dipper's handle. This multiple sun system never fails to impress the public and since they can also see the star with their own eyes even from the city, it gives them a sense of what a telescope can do. I've been observing for 38 years, 35 of it with the club. I am definitely an over-seasoned observer!"*

-President Tom McDonough

*"Working nights these past few months has one advantage: quick access to the night sky when someone shows an interest. Last week I had a friend at work ask me about Spica. He had read about it in a Sci-Fi book and wondered if he could see it. I had been dragging people outside all week to see the Mars, Venus and Saturn display and I realized Spica was just left of the planets. It was visible even through the lights on Brookside. I brought my friend outside and first showed him the planets to get him oriented (and because they are beautiful and everyone should see them) then I had him find the next bright star to the left – Spica! He was excited to get to see this star he had been reading about and I was thrilled to get to show it to him."*

-Vice-President Ann Bruun

*"My favorite way to reach out to others is big public events like Mohawk Park and TASM back in 2007. My husband and I attended one of these big public events at Mohawk in 2004 and joined that night! We have both been hooked ever since...I also enjoy sharing the night sky with Boy and Girl Scout groups. I don't have just one favorite object to show people, I have my Top 5 List. These are, not in any particular order, the Great Nebula in Orion, The Double Cluster in Perseus, the Great Globular Cluster in Hercules, the beautiful Andromeda Galaxy and the Butterfly Cluster in Scorpius."*

-Secretary Tamara Green

*"I enjoy talking to people about astronomy. If there is a kid around, I like to let them look through a telescope and ask them what they see. Sometimes the kid will stick around and I'll show them how to point the telescope and discover things for themselves. I often set my telescope up on my driveway and occasionally a neighbor will stop, but most are used to the "strange guy" down the block standing out in his driveway at odd hours in the dark. My favorite thing to show someone is how to find Uranus or Neptune using Binoculars or their own telescope. Most are not aware they can be seen in a finder scope or binoculars. One of my earliest experiences in the Tulsa Club is back in 1977."*

- Continued on page 10

*An older gentleman verbally guiding me to find Neptune even though he could no longer see it himself due to poor vision. My other favorite thing is pointing out the constellations to guests at the observatory. I have been observing since about age 13 when I got a Sears 50 mm Refractor (still have it). I was into anything "Space" and tried to learn what I could about the sky, but had limited access to astronomy books or information. My Mom and I used to stand outdoors waiting for THE SATELLITE to go over. There was only one satellite visible then called Echo I, a giant 10 story tall balloon used to bounce radio signals across the Atlantic."*

-Treasurer John Land

*"I've been observing for over 50 years. I've belonged to ACT since I moved to Tulsa in 1997, but joined my first Astronomy club in 1956 when I joined the St. Joseph Valley Astronomical Society (South Bend, IN). I have also belonged to the Buffalo Astronomical Society, the Baltimore Astronomical Society and the Westminster (Maryland) Astronomical Society. As an observer, I am still learning and always will be. I've helped with groups at the observatory and public events ACT has held over the years and used to be the New Membership Coordinator. I served as President in the early 2000's. Favorite show objects are double star Albeiro, ring nebula M57, globular clusters M13 and M92 and, of course, the Orion nebula M42."*

- Board member Denny Mishler

All of the Favorite items listed above are great examples of things most people don't even know are out there and to certain individuals, especially children, seeing these things can be life changing. I began writing this article before Jack Horkheimer passed away last week. I remember watching him, perched on Saturn's rings, telling me all about Halley's Comet back in 1986 when I was 9 years old and how much of an impact it made on me to actually see it myself. I have never been the same. The world has lost a great teacher and astronomy has lost one of its greatest advocates. At the end of this newsletter is a new section written especially for kids entitled "Space Cadets". Its first edition is dedicated in loving memory of the "Star Hustler".



**Foley Arthur Horkheimer**  
June 11, 1938 – August 20, 2010

## **GoTo German Equatorial Mounts - Make no Mistake...**

-From Sheldon Padawer

The Meade LXD75 and Celestron ASGT emerged as the workhorse German Equatorial mounts of the past decade. Based on the long proven CG/EQ-5 design, these \$700 mounts were designed for up to 7kg (15.4lbs) imaging packages and 11kg (24.25lbs) visual. Within their capacities, both return amazing performance for the dollar. Both companies; however, chose to overburden these mounts with excess size and mass (11" SCTs, 10" Schmidt/Newts, and 6" Refractors). Ultimately, either excessive weight or polar moment is the limiting factor. Telescopes have high polar moment because the weighty components are at the extreme ends. Larger diameter optics equate to larger cross sectional areas. OTA's become oscillating "sails" when the wind blows - the burden being very detrimental. The manufacturers don't mention this in their specs or advertising.

From an engineering standpoint, assemblies designed to be rigid begin to flex. Meshing and rotating parts wear quickly; GoTo and tracking accuracy suffers and components can fail from overheating due to excessive amperage draw as motors and circuits fight loads beyond their capability. Metal fatigue can cause structural failure.

The Celestron CGE and Losmandy G11, with nearly three times the capacity, 22kg (48.5lbs) imaging - 30kg (66lbs) visual, of the CG/EQ-5 became dominant as photographic and rock solid visual platforms during this same era, but the price of admission was closer to \$3,000.00 - four times the cost of the \$750.00 CG/EQ 5 based units. All the while, both companies were facing financial problems while Orion, never a real contender in the Go To market, was contemplating a golden opportunity.

- Continued on page 11

The big break for amateurs came with the Orion Atlas (EQ-6) - a GoTo GEM that could easily handle a 13+kg (28.7lbs) imaging setup and 19 kg (42lbs) visual. Finally, there was a muscular mount that was less than double the price of the CG/EQ-5 designs, half that of the CGE and G-11 - or about \$1500. Along with the Atlas, Orion introduced an EQ5.5 model dubbed "Sirius" which is supposedly a slightly beefier answer to the Celestron/Meade GoTo mounts for a few more \$\$\$. Celestron has recently introduced a new CGE-M, a 2 year newer iteration of the EQ-6. With a similar price to the Atlas, the CGE-M serves "weighty" applications in which the ASGT languished.

There are owners of every mount mentioned here in our club. You may wish to solicit their opinions. I traded my beloved Atlas for a CGE when I decided to use a side by side (more mass) imaging/visual setup. I used my LX75 last night, however, and quickly saw how perfectly it performs with my small 4" ED refractor.

Meade still has yet to hint of marketing a mount that can compete with the EQ-6 variants of Celestron and Orion. It is risky, by virtue, of huge front end costs to bring a new mount to the market, so it is easy to understand why the industry has been slow in doing so. Meade moved manufacturing to Mexico just in time to avoid imploding financially; hopefully their EQ-6 derivative is in the works.

Today we see a plenitude of second hand mounts and scopes typically for 50% to 65% of the cost of new. Too little mount has only two solutions: smaller scope or bigger mount. In other words - make no mistake; save a bit longer and start with a winning combination.

## Land's Tidbits *for AUG 2010*

– by John Land

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 League membership.

**Students** - \$ 20 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. If an **additional member of the family** would like to join with voting rights, the additional cost is \$15. Additional 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](http://www.astronomy.com)

**Sky & Telescope** is \$33 / yr

[www.skyandtelescope.com](http://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.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 OFFICERS

President: Tom McDonough 918-851-2653

Vice-President: Ann Bruun 918-231-0301

New Members: Owen Green 918-851-8171

Observing Chairman: Ann Bruun 918-231-0301

Membership questions: John Land 918-695-3195

Secretary Tamara Green 918.851.1213

Observatory Caretaker: Chris Proctor 918-810-6210

**Contact Chris to volunteer to help with observatory projects**

[act\\_maint@astrotulsa.com](mailto: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 this summer let Chris know.

# Breaking News

## ACT member Brad Young Makes International News!



Back in April, The U.S. Air Force launched the unmanned X-37B Orbital vehicle atop an Atlas V rocket in what was reported as a “flawless launch”. The Air Force is being tight lipped as to what its plans for this vehicle are exactly other than stating, *“This launch helps ensure that our warfighters will be provided the capabilities they need in the future,”* said Col. Andre Lovett, vice commander of the 45th Space Wing according to CSMonitor.com.

Since its launch, the X-37B has been tracked in its orbit by satellite trackers until it failed to make an appearance on August 14 when Greg Roberts of Cape Town, South Africa, went looking for it by the last known orbit. After searching for several nights, Roberts located the X-37B again on Aug. 19, in a new higher orbit. Here’s where Brad comes in. According to Space.com’s Leonard David

*“That detective work led to other sky-sleuthing detections by Alberto Rango in Rome and Brad Young in Tulsa, Okla. Their sharp-eyed skills were essential in refining the calculation of the space planes new orbit and confidently determining the circumstances of the orbit-raising maneuvers”*

In addition to the story being covered on KOTV, The story is making national and international headlines. Here’s a link to more information on MSNBC website.

<http://www.msnbc.msn.com/id/38831416>

### **Congratulations Brad!**

How about a satellite spotting tour of the sky some night at the observatory?

## Club Officers

<b>President</b>	Tom McDonough	<b>918.851.2653</b>
<b>Vice-President</b>	Ann Bruun	<b>918.834.0757</b>
<b>Treasurer</b>	John Land	<b>918.357.1759</b>
<b>Secretary</b>	Tamara Green	<b>918.851.1213</b>

## Board Members at Large

<b>Steve Chapman</b>	<b>918.342.1643</b>
<b>Richard Alford</b>	<b>918.855.9986</b>
<b>Teresa Kincannon</b>	<b>918.637.1477</b>
<b>Denny Mishler</b>	<b>918.274.4772</b>
<b>Chris Proctor</b>	<b>918.810.6210</b>

## Appointed Staff

<b>Facility Manager</b>	Chris Proctor	<b>918.810.6210</b>
<b>Membership Chair</b>	John Land	<b>918.357.1759</b>
<b>Observing Chair</b>	Ann Bruun	<b>918.834.0757</b>
<b>New Members</b>	Owen Green	<b>918.851.1213</b>
<b>Group Director</b>	Teresa Kincannon	<b>918.637.1477</b>
<b>Webmaster</b>	Tom McDonough	<b>918.851.2653</b>
<b>Newsletter Editor</b>	Allen Martin	<b>918.407.9706</b>
<b>Night Sky Network Program Director</b>	Peggy Walker	<b>918.640.0832</b>
	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



[www.astroleague.org](http://www.astroleague.org)

**Night Sky Network**

Astronomy Clubs bringing the wonders of the universe to the public



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

**ACT welcomes your questions, suggestions, comments and submissions for publication. Please send all inquiries to [act\\_pm@astrotulsa.com](mailto:act_pm@astrotulsa.com)**



## **Astronomy for Kids!**

**Constellations are patterns in the night sky formed by stars. A long time ago, people saw these patterns and played “connect the dots” and gave them names. There are 88 of them all together, but you can’t see them all every night. In fact, you would have to go to Australia or South America to see some of them!**

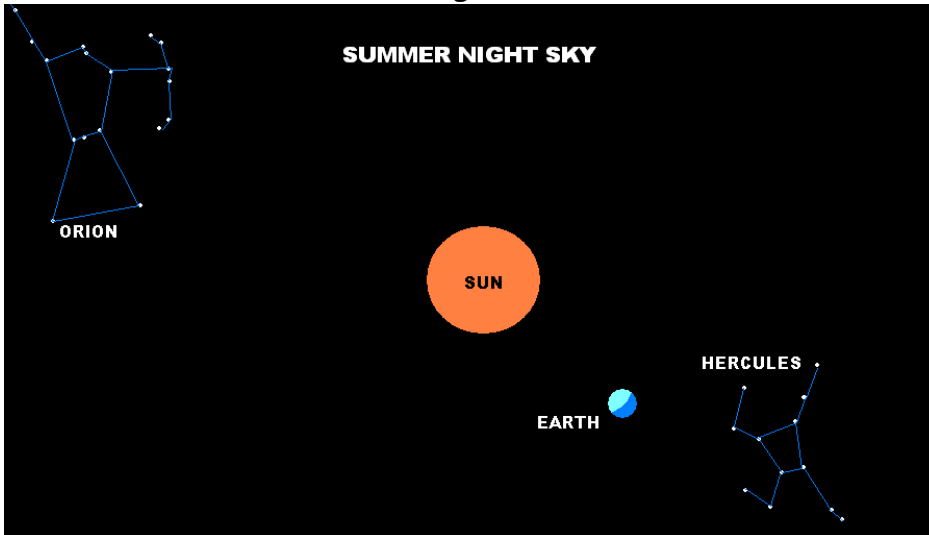


**Why are constellations important? Well, a long time ago, sailors relied on the stars to help them know where they were when sailing the open ocean.**

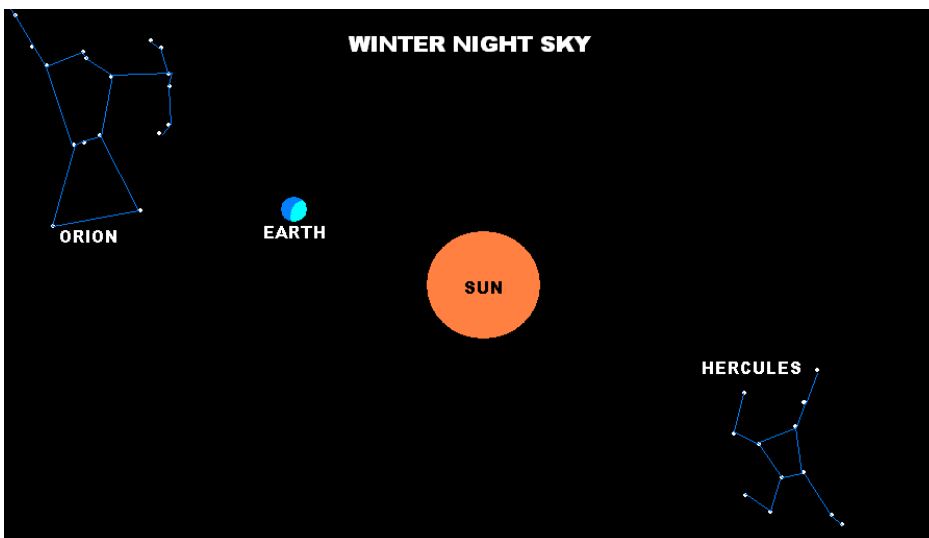
**Also, because some constellations appear only certain times of year, farmers knew when to plant or harvest their crops. Today, Astronomers use them to map things in the sky. If someone tells you, for example, that a certain star is in the constellation of Orion, it is much easier to find it.**

**So, why do some constellations only appear at certain times of year? Because the Earth takes 365 days to make 1 trip around the Sun. That means that every 6 months (or about 183 days) we are on the other side!**

**The first picture shows an example of why we cannot see the Orion constellation in the summer months. The sun is too bright! The side of Earth facing Orion can't see the stars because it's daytime!**

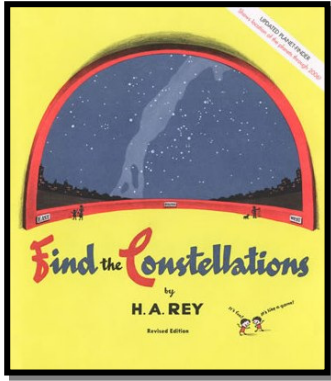


**This Picture shows an example of the winter months where we can see Orion but NOT Hercules.**



**Do you think you can figure out why some constellations can only be seen from places south of Earth's equator like Australia or South America?**

**Make sure to check next month to see if you are correct!**



## Recommended book for August

Each month we will recommend a new book for the smaller astronomer

From the creator of “Curious George”, “Find the Constellations” is one of the most beloved astronomy books for children. H. A. Rey helps kids recognize some of the more predominant constellations, as well as, explaining things like star magnitude in a way every kid can easily understand. Recommended for children up to about age 10. Available at many bookstores and online at Amazon.com.

Here is a really neat NASA website that your child, grades K-4, can visit to learn and play about all things Space!

<http://www.nasa.gov/audience/forstudents/k-4/index.html>

## Constellation of the Month

**Ask your Parents if you can go outside after dark some night this month and try to find this constellation. Do you think it looks like a Swan?**

