

THE OBSERVER

OF THE TWIN CITY AMATEUR ASTRONOMERS



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January 2014

Inside this issue:

President's Message.....	1
54 th Annual Meeting February 1 st	2
Call for Nominations.....	2
Editor's Choice: Image of the Month.....	3
E/PO Events for December.....	3
Calendar of Celestial Events.....	4
New and Renewing Members.....	4
Dues Blues.....	4
Astrobits.....	4
Seeking Back Issues of <i>The OBSERVER</i>	5
A Look at 2014.....	6
Observing Southern Stars.....	7
How Time Flies.....	7
Subscribing to the TCAA's Email List.....	8
Ask the Editor.....	8
AL Observing Program Standings.....	9
December 2013 Treasurer's Report.....	10



The TCAA's Prairie Sky Observatory with Sugar Grove Observatory in the background. 9/24/2013, cjw.

A NOTE FROM PRESIDENT TOM WEILAND

I trust this finds you all recovered from the hectic month of December. I certainly hope that all of you had an opportunity to enjoy time with family and friends however you chose to celebrate the holiday season.

January always brings with it a chance to look back at the past year and forward to the next year. TCAA had an exciting year with the construction of our newest observatory, the Prairie Sky Observatory. This facility has greatly increased our capacity for both photographic and visual astronomy as well as providing another venue for our Public Observation Sessions (POS). I hope all TCAA members will join in as we prepare for another exciting year of activities that will allow us to share our "hobby" with others. A great opportunity to become more active as a member is available next month at the TCAA annual meeting on Saturday, February 1, 2014. More information is included in this issue of *The Observer*, but I want to again remind you of this date so that you can make sure it is on your calendar. This is our annual business meeting with dinner and an invited guest speaker. This year's guest is Dr. Linda French, a professor of Physics at Illinois Wesleyan University. Her research, funded by the National Science Foundation, concerns the study of shapes and surfaces of asteroids and comets. All TCAA members are encouraged to attend.

Finally, I want to thank every member who helped to make 2013 such a memorable year for Twin City Amateur Astronomers. Thanks to all those who participated in our public observing sessions and many other outreach activities. Thanks to *The Observer* editor and contributors. Thanks to those who helped with the construction of the new observatory. Thanks to our donors! Thanks to our officers, minor officers, and directors for maintaining our equipment and facilities and helping to steer the TCAA through 2013. And thanks to ALL our members for their support through membership in TCAA. Clear Skies!!

54TH ANNUAL MEETING FEBRUARY 1ST

The 54th annual business meeting and banquet of the Twin City Amateur Astronomers will take place on Saturday, February 1st, at the Normal Township Hall, 304 E. Mulberry Street in Normal. Participants should arrive at 6:00 p.m., and the banquet begins at 6:15 p.m. Free parking is available in back of the building and on the adjacent street. There is also a small parking lot across the street. You need to be traveling westward on Mulberry St. (a one-way street) in order to gain access to the location. The purpose of the Annual Meeting is to elect this year's Board of Directors, listen to officer reports, witness award presentations, and hear a guest speaker.

Our guest speaker this year will be Dr. Linda French from Illinois Wesleyan University. Dr. French who is an astronomer is currently the chairperson of the IWU Physics Department in Bloomington. She is a frequent guest observer at Lowell Observatory in Arizona and at Cerro Tololo Interamerican Observatory in Chile.

This year, like last year, we will have a buffet-style banquet meal provided by Rick McCormick of Redbird Catering. The menu consists of the following: fried chicken, baked potato with butter and sour cream, rolls and butter, sliced carrots, fruit salad, and iced tea and coffee. Cake will be served for dessert. Plates, plastic utensils, cups, and napkins will be provided.

Reservations for the banquet are due online at <http://tcaa.us/AnnualMeeting2014.aspx> by Thursday evening, January 23rd. The cost of the banquet is \$20 per adult and \$10 per child; payment must be made at the door. If for any reason you make reservations but are not able to attend, please cancel your reservations with Lee Green tcaa@tcaa.us not less than three days in advance of the event. Failure to cancel reservations in a timely manner might result in billing for the cost of the banquet.

TCAA members are invited to attend both the business meeting and the follow-up talk starting around 7 p.m. even if not attending the banquet. No reservations are required for the business meeting, only the banquet. Many thanks to Vice-President Dave Osenga for making arrangements for the hall and the catering and to Lee Green for managing reservations.



Dr. Linda French

CALL FOR NOMINATIONS

Each year at the club's Annual Meeting the membership elects a Board of Directors to serve for the next 12 months, and members are recognized for their service to the club. This coming February it will be no different.

Nominations are now being accepted for the Board. The TCAA membership is hereby reminded that nominations are needed for the 2014-2015 Board of Directors. An election for the next Board will be held at the club's Annual Meeting on February 1st. As an incorporated entity operating under the laws of Illinois, a Board of Directors (consisting of 5 members) manages the operations of the club. When elected, these 5 individuals select from among themselves the next president and vice president of the club. The group then appoints or re-appoints major officers (secretary and treasurer) and minor officers (ALCor, official registered agent, historian, property manager, newsletter editor, etc.)

Nominations are now being accepted for the John and Bertha Kieviet Founders Award. This award is conferred upon a TCAA member to recognize demonstrated leadership to the club. Those so recognized need not have been a president of the club. If leadership is interpreted in terms of service to the membership, this is as close as the TCAA comes to having a distinguished service citation. There was no recipient last year.

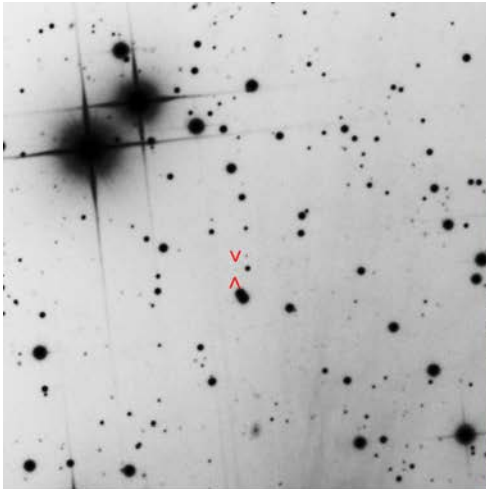
Nominations are now being accepted for the Eugene and Donna Miller Family Award. This award acknowledges the strong efforts by a family to participate in the club as a unit. One or more parents are recognized for their efforts to instill within their children interest in and dedication to amateur astronomy. There was no recipient last year.

Nominations are now being accepted for Lifelong Honorary Membership. This designation is reserved for those TCAA members who have provided exceptional meritorious services to the club in terms of contributions of time and resources. This signal honor has been conferred only five times in the 50-year history of the TCAA. There was no recipient last year.

Please e-mail your nomination(s) for Board membership and awards to President Tom Weiland at tomcea52@yahoo.com. If recommending candidates for the Kieviet, Miller, or lifelong membership awards, a short description explaining why you feel the nominee(s) deserve(s) the award(s) is required. The current Board of Directors and appointed officers will make decisions about the awards during their January 14th Board meeting, so be certain to get your nominations in at least a day before.

EDITOR'S CHOICE – IMAGE OF THE MONTH

Because a number of TCAA'ers actively image using the equipment of our observatories, they often share astronomical images with the membership and with each other. For the first Image of the Month I'm choosing a photograph by Tim Stone. There are many fine images captured each month and selecting images is a bit difficult considering the work of our members.

**MHObd2 Brown Dwarf**

The bracketed faint star is a brown dwarf, a star with barely enough mass to sustain nuclear fusion. By the direction and magnitude of its proper motion, we know it is a field star, not a cluster member.

Source: Stauffer, et. al. 1998ApJ...504..805S

**E/PO EVENTS FOR DECEMBER**

Education and public outreach events drop off precipitously during the holiday season each year. Nonetheless, the TCAA was involved in one significant such event at the Challenger Learning Center on the evening of December 6th. CLC Director Stacey Shrewsbury invited the club to participate in one of her activities for the general public.

The evening started with Stacey introducing light and the electromagnetic spectrum during a one-hour presentation. She had a mixed group of a dozen children and adults conduct a stations lab that everyone learned about filters as a function of wavelength – infrared, visible light, and ultraviolet. Carl Wenning then gave a 15-minute talk about telescope types and how telescopes and cameras work. Both Stacey's and Carl's talks were perfect segues to a 30-minute talk about astronomical imaging by Craig Prost. Unfortunately, the bitter cold wind chill and brilliant lights of the parking lot prevented follow-up astronomical viewing. (The sky was so bright we all thought that it was overcast until driving away from the Heartland Community College campus at which time Jupiter and the crescent moon will clearly evident!) All this followed on the heels of a pizza party beginning at 6:00 p.m.

Also in attendance from the TCAA were Colby Prost (Craig's son), Mark and Nataya Boulware, new members Jade and Wendy Bates, as well as Dave Osenga and Lee Green.

CALENDAR OF CELESTIAL EVENTS – JANUARY 2014(Gleaned from [Sea and Sky](#))

January 1 - New Moon. The Moon will pass roughly between the Earth and the Sun and will not be visible from Earth. This phase occurs at 11:14 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

January 2, 3 - Quadrantids Meteor Shower. The Quadrantids is an above average shower, with up to 40 meteors per hour at its peak. It is thought to be produced by dust grains left behind by an extinct comet known as 2003 EH1, which was discovered in 2003. The shower runs annually from January 1-5. It peaks this year on the night of the 2nd and morning of the 3rd. The thin crescent moon will set early in the evening leaving dark skies for what could be an excellent show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Boötes, but can appear anywhere in the sky.

January 5 - Jupiter at Opposition. The giant planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. This is the best time to view and photograph Jupiter and its moons. A medium-sized telescope should be able to show some of the details in Jupiter's cloud bands. A good pair of binoculars should allow observers to see Jupiter's four largest moons, appearing as bright dots on either side of the planet.

January 16 - Full Moon. The Moon will be roughly opposite the Earth from the Sun and will be fully illuminated as seen from Earth. This phase occurs at 04:52 UTC. This full moon was known by early Native American tribes as the Wolf Moon because this was the time of year when hungry wolf packs howled outside their camps. This moon has also been known as the Old Moon and the Moon After Yule.

January 30 - New Moon. The Moon will be roughly between the Earth and the Sun and will not be visible from Earth. This phase occurs at 21:38 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

NEW AND RENEWING MEMBERS

The following individuals have paid dues for new or renewing memberships as of December 31, 2013. (Others who paid after that date will appear in the February 2014 issue of *The OBSERVER*.)

New Members:

Jessica Kalkwarf

Renewing Members:

Troy Berg
Duane Yockey
Jeff Michaels
John Werner

DUES BLUES

Members whose dues payment are in arrears include:

Mark Cabaj
Dan Miller
Tim Stone
Allan Timke

Members whose memberships will expire at the end of February:

Brian Barling
William Carney
Don Cooper
Lee Green
Larry Leetzow
Dave Osenga
Michael Starasta

Many members pay dues at the Annual Meeting, and we encourage you to take advantage of the opportunity to do so again this year. We will be receiving dues payments at the Annual Meeting along with payments for the banquet.

ASTROBITS

- ★ TCAAers Jim Meeker, Craig Prost, and Carl Wenning took advantage of the opportunity to attend a talk by Mr. Sung-Jin Oh, a South Korean visiting scholar at ISU's School of Teaching and Learning. He gave a presentation titled "Astronomical Phenomena That You Should See Before You Die" on December 2nd. He focused the audience's attention on solar eclipses, meteor storms, and auroras. Sung-Jin is a high school earth science teacher as well as an accomplished amateur astronomer with a good cache of equipment – much of which he brought with him to the USA. He runs Butterstar

Observatory at Dongducheon High School in Dongducheon, South Korea, and has several professional publications dealing with solar observations. Club members attending his talk were surprised to learn that Sung-Jin is also the vice president of the Korean version of our own Astronomical League. An invitation was extended to Mr. Oh, as well as his US sponsor Dr. Do-Yong Park, to view with us at SGNC anytime between now and mid January when Sung-Gin returns to South Korea where he both lives and observes outside of Seoul.

- ★ Tim Stone and Bob Finnigan successfully mounted the three video monitors on the walls inside the control room of Prairie Sky Observatory on Monday, December 23rd.
- ★ The WMBD-WYZZ television interview with Jacob Peklo scheduled for December 23rd had to be postponed indefinitely due to a developing news story east of Peoria that day. Jacob noted that he will contact us again soon for another opportunity to talk about the TCAA.
- ★ The recently recovered January 2004 issue of *The OBSERVER* has been scanned and uploaded to the TCAA website. Thanks for Duane Yockey for recovering this issue of the newsletter from his cache.
- ★ Have you heard that the University of Illinois' historic campus observatory has been refurbished? With the help of several generous individuals (at least one of which is a member of the TCAA), the 12-inch refractor was removed and completely rebuilt during the past several months. The restored telescope can be seen in the image to the right.
- ★ The next meeting of the TCAA Board of Directors will take place on Tuesday, January 14th, at 6:30 p.m. in the offices of Lewis, Yockey & Brown in downtown Bloomington. The meeting is open to the membership.



SEEKING BACK ISSUES OF *THE OBSERVER*

Recent sleuthing by Lee Green resulted in him finding out that several published issue of *The OBSERVER* were missing from the online archive: September 1999, January 2002, March 2002, December 2003, January 2004, February 2004, April 2004, May 2004, September 2004, October 2004, and December 2004. Fortunately, Historian Carl Wenning has eight of these issues in his repository. They will be scanned soon and uploaded to *The OBSERVER* archive. The following issues are still missing:

September 1999
 March 2002
 February 2003
 December 2003

If you might have one or more of these issues, please check. If found, please contact Historian Carl Wenning. He would like to borrow your issue for scanning. Loaned issues will be returned. These four are the only issues of *The OBSERVER* known to be missing. *The OBSERVER* was published monthly from 1961-1965, and almost continuously (with the exception of only a few months between newsletter editors) since 1975. It is on this record that the 139-page history of the club was published in 2010.

A LOOK AT 2014

~ by CUAS President Dave Leake ~

Comet ISON sort of let us down a bit in 2013 (though its demise wasn't totally unexpected), but there are several events in 2014 that should delight the astronomical pallet. From the standpoint of space missions, the European Space Agency's Rosetta probe arrives at Comet Churyumov-Gerasimenko in May. Later on in the year (about November), the Philae lander will detach from Rosetta and attempt to land on the comet. MAVEN will reach Mars on September 22, 2014 to explore the Martian upper atmosphere. The Moon will also be in the news as China's remote-control rover continues its trek and LADEE will study the lunar atmosphere and the dust environment. The Dawn mission is still on its way to Ceres (February, 2015 arrival) and New Horizons is closing in on Pluto (July, 2015 arrival). The NASA launch schedule can be found at: <http://www.nasa.gov/missions/schedule/index.html#.UrMQQ1dZ92A>.

From our backyards, we can hope to watch a couple of eclipses this year. First on the list is a total lunar eclipse on the morning of April 15. The downside is that the eclipse begins at 12:58am with totality starting just after 2am. By 2:45am, the Moon will be as far into the Earth's shadow as it will get (just south of dead center). Totality ends at 3:24am and we'll have a full Moon again by 4:33am. An annular eclipse on April 29 will only be visible to those in Australia. There's another total lunar eclipse on October 8, again in the morning, and the Moon will set before the eclipse is over. That one starts at 4:14am with totality starting at 5:25am. The Moon will be just south of west and only 17 degrees high. Totality ends at 6:24am and the Moon will set for us just before 7am. There is a partial solar eclipse on Thursday, October 23 that we'll catch a glimpse of near sunset. The Moon encroaches on the Sun at 4:38pm with the pair only being about 14 degrees high. At maximum eclipse, roughly 50% of the Sun will be covered but this occurs at 5:45pm, just before sunset. Find a lower western horizon for this one!

You want to catch an inner planet when its separation from the Sun is at a maximum and, for Mercury, this usually happens several times during the year. Not all views are favorable, though, depending on the angle of Mercury's orbit with our horizon. Mercury has a good outing early in the year, beginning about mid-January. Furthest separation occurs January 30 when it sets about 90 minutes after the Sun. Look just south of west and about a fist high. The best evening view will start early in May and finish in early June. Here Mercury sets nearly two hours after the Sun. Look for it to the lower right of Jupiter. For the early risers, look during the month of July and again at the end of October. In July, Venus will be your guide as Mercury is less than a fist's width to the lower left.

Venus has been a part of our lives since last summer (in the evening anyway), but that changes early in the year. Venus passes between the Sun and the Earth on January 11 and ventures into the morning sky. It rises quickly in January, when it stands nearly five fists from the Sun on March 22, rising two hours before sunrise. In fact, Venus's rise time doesn't change all that much until mid-August when headed sunward. Its azimuth during this time moves northward along the horizon. Of course, having a crescent Moon next to a bright planet like Venus is beautiful, and there will be plenty of opportunity for this in 2014. The outer planets are best seen near their "opposition point," when they are opposite the Sun. Here, we are closest to them (which means a large, detailed image through the telescope) and they rise as the Sun sets and are visible all night. In 2014, Jupiter's opposition comes quick – on January 5 in the constellation of Gemini. Mars follows on April 8. Mars has an opposition every 26 months and this one is a little better (closer) than 2012, though still not great. For comparison's sake, we were 57.4 million miles from Mars at the last opposition. This April, we'll be 34.7 million miles. You'll have to wait until 2018 for a super-close approach! Still, you should see some detail on the Martian surface this spring as Mars plays tag with the star Spica. Saturn's opposition occurs on May 10 in the non-descript constellation of Libra. Any planet is best seen high in the sky when you're looking through less air, but Saturn is getting lower each year as the ecliptic dips into Scorpius and Sagittarius. Neptune's opposition is August 28 in Aquarius and Uranus follows on October 7 in Pisces.

It's always a fun sight when the planets come apparently close to each other in the sky. Mars and Spica are 1.3° apart in our early evening sky on July 13. Then Mars scoots just below Saturn (coming to within 3.5°) on August 28. A crescent Moon joins the pair three days later. In the morning hours, Neptune and Venus come to 0.7° separation on the morning of April 12. Neptune may be hard to spot to the lower right of Venus due to Venus' brilliance. The highlight may be a gathering of Venus and Jupiter on the morning of August 18. The two are 0.3° apart but rise only 1.5 hours before sunrise. Look low on the horizon just north of east. A very thin Moon scurries by five days later.

It's always fun to watch meteor showers as long as the Moon doesn't brighten the sky. The big showers are in the later summer and fall. The Moon will interfere for the April Lyrids but will have set for the May 4-7 Eta Aquarids and the July 30-31 Delta Aquarids. The Perseid max is during full Moon (not good) and the October (20-21) Orionids share a waning crescent Moon. The December Geminids occur during a last quarter Moon. Bottom line . . . it's not a great year for meteor showers!

OBSERVING SOUTHERN STARS

~ by Carl Wenning ~

On my recent 11-day cruise to South and Central America (December 28-January 8), I had an opportunity to view the sky from 12 degrees north latitude for several days. I was able to view the stars from my ship's port side balcony room to great advantage as I was far enough forward to escape the ever-present deck lighting. Despite the fact that I was viewing from sea level, I was impressed by the incredible darkness of the sky to the south – comparable to what I observed from 17,000 feet altitude in Bolivia back in 1994.

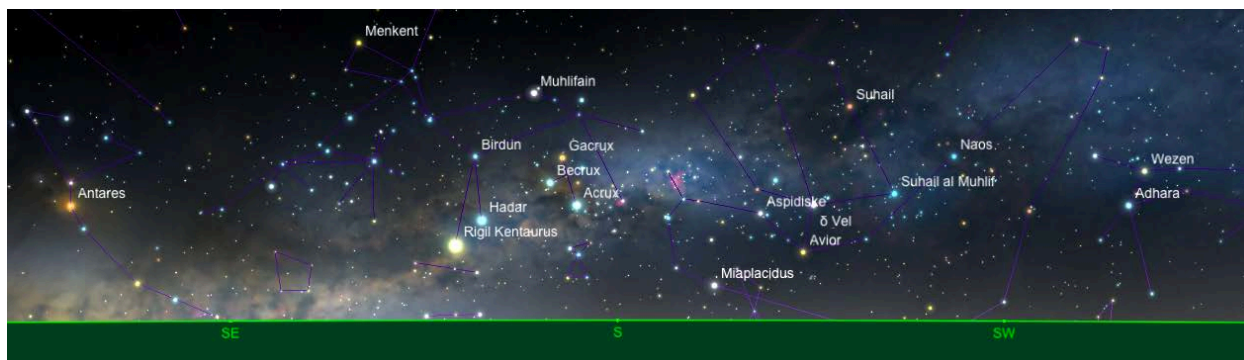
I viewed the constellations both with my eyes and binoculars. During the evening hours I was able to view the scene shown in the image below. Sirius and Orion were unusually high in the sky, and a chain of three bright stars – Canopus (the second brightest star in the sky), Achernar, and Fomalhaut dominated the southern sky. While shown in the accompanying image, the Magellanic Clouds were not visible due to their closeness to the horizon.



Evening Sky from 12 degrees north latitude.

The morning sky was much more rewarding despite the fact that I had to begin my observations at around 3 a.m. each day. Alpha and Beta Centauri (Rigel Kentaurus and Hadar respectively) dominated the southern sky as shown in the image below. To the upper right of this pair was Crux, the Southern Cross. Despite the darkness of the night, the dark Coal Sack nebula that serves as background to Crux was not visible even with binoculars due to its low elevation. On the mornings of January 3rd and 4th I used binoculars to view C71 (Caldwell 71) in Puppis, C80 (Omega Centauri) in Centaurus, C84 (a globular cluster) in Centaurus, C85 (Omicron Velorum cluster) in Vela, C91 (an open cluster) in Carina, C92 (the Keyhole Nebula) in Carina, C98 (an open cluster) in Crux, C94 (the Jewel Box cluster) in Crux, C97 (the Pearl Cluster) in Centaurus, C100 (the Running Chicken nebula) in Centaurus, and C102 (the Southern Pleiades) in Carina. Assisting me with this endeavor was *Sky Safari 4.0*, application I normally use to control my CPC 11-inch "goto" telescope.

Despite the lack of complete darkness, I was able to get quite a view of the sky and refresh my old relationships with the friendly stars of the south. It has been more than six months since I last observed the southern sky from Indonesia, and now I'm feeling a growing desire to return to the southern hemisphere yet another time to view more such celestial wonders.



Morning Sky from 12 degrees north latitude.

HOW TIME FLIES

TCAA Historian Carl Wenning provides monthly updates about the history of the club going back to intervals of 50, 25, and 10 years. Details about all mentioned events will be found in either the [Twin City Amateur Astronomers: 1960-2010](#) or in [The OBSERVER archive](#) found on the [TCAA website](#).

50 Years Ago

January 1964 – Club meetings are being held twice monthly at IWU’s Scherf Hall of Science, and the topics were recent observations of meteors and December lunar eclipse. Behr Observatory is opened up each evening after the club meetings if the sky is clear. Progress is being made on the club’s roll-off-roof observatory but the work has been halted recently due to cold weather. Weldon Schuette is now posting predictions for satellite passes using an analog computer that he designed and built. Plans have been made for a field trip to the Lakeview Museum Planetarium in Peoria.

25 Years Ago

January 1989 – Efforts are underway by three club members to set up a site on Garth Bock’s Prairie Bulletin Board System (BBS) – an electronic dialup that was the forerunner of today’s Internet. Jim Moncher is assisting Garth with set up and providing weekly listings of what to observe in the sky; Carl Wenning is posting daily visibility reports for passing satellites. As usual, the club is having difficulty getting nominations for elections coming up in February.

10 Years Ago

January 2004 – The club is making plans for the 44th Annual Meeting to be held at Sugar Grove Nature Center. Barry Beaman, former member and recent president of the Astronomical League, will be giving the keynote address dealing with “Education and Public Outreach”. The club is holding wintertime public observing sessions at SGNC with the January event scheduled for the 24th. Dan Miller and Mike Rogers are working hard on getting the 20” telescope at Millikin University’s Requarth Observatory ready for observations.

SUBSCRIBING TO THE TCAA’S E-MAIL LIST

Subscribing to a group's mailing list means that subscribers will receive email messages from the group so one won't have access to the group's web features (like photos, files, links, polls, calendar, etc.) unless members [activate it later](#).

1. Send a blank email to TCAA-subscribe@yahoogroups.com Note: You'll be sent a confirmation email from the group.
2. Reply to the confirmation email to activate your subscription.

Once members join the group, they can [manage group and subscription settings](#) whenever it is desired to customize the group experience.

ASK THE EDITOR

With this issue, the Editor (who is also the club’s historian) will answer questions posed by club members. If you have a question about something of interest to you – either about the present day TCAA or its past, please send your question to carlwenning@gmail.com.

Question: *I see that some members of the club post images online demonstrating their recent work, but does the club have active observers (as opposed to photographers). If so, how can I get involved with them?*

Answer: The club has several individuals who are very active with astronomical imaging, and their images often grace the TCAA yahoo listserv as noted. The fact of the matter is on almost any clear evening one or more of them can be found at one of the TCAA’s observatories at Sugar Grove Nature Center working late into the night. With our world class amateur observatories including telescopes and cameras, some members have had made and shared many marvelous images of the night sky.

Our club's visual observers, on the other hand, are generally dedicated to directly viewing objects and this takes place on a much more private basis. It's not that visual observers don't want to share what they observe. It's just much harder to share (and probably less interesting to read) written observations that often include object identification, celestial coordinates, viewing site, magnification used, seeing, transparency, date, and time of observation, and so forth. Rest assured that there are active visual observers in the club. (See the next article about Astronomical League viewing programs for evidence.) They often can be found observing at SGNC on dark moonless nights as their viewing is negatively impacted by the presence of the moon in ways that narrow-band astronomical photography is not.

Some of our visual observers are rather solitary in their viewing habits. When dedicated to viewing faint objects on a lengthy observing program list, it's not always easy to spend lots of time with – let alone impress – casual observers who might show up only to see some very faint celestial objects such as planetary nebulas and galaxies that are part of the observing lists. In the past visual observers have asked club members to join them for an open evening of viewing, only to be disappointed repeatedly when no one showed up. (Trust me, I'm one of those.) After asking several times with no club members showing up, it's understandable why visual observers stop extending open invitations. Still, I'm sure that many of our visual observers would be happy to spend the evening with other club members with an interest.

If you'd like to do some telescopic viewing, then my advice is this – merely ask! When I go out I'm happy to share views of the heavens for an hour or so, even if I'm working on an observing program. I can continue my observing program after visitors have left. If I'm not planning to go out observing, I just might do so simply because a club member has asked. To take advantage of this opportunity to view through club member telescopes, send an inquiry through the club's listserv.

AL OBSERVING PROGRAM STANDINGS – QUARTERLY REPORT

Below is a listing of the status of active TCAA observers pursuing Astronomical League (AL) observing programs reported as of December 31st. But first, here is a summary of some of some recent observing successes:

- ★ Carl W. finished his 110-object Planetary Nebula observing program on December 16th after more than five years of work. Carl considers this his most challenging – and most rewarding – observing program to date. He has now completed 13 Astronomical League (AL) observing programs.
- ★ William Carney has filed for his AL Outreach Award.
- ★ Despite a temperature in the upper teens and a wind from the north, on November 24th Carl W. made 43 additional observations for the AL "Stellar Evolution" observing program. This brings his current total count to 70.
- ★ Carl W. has completed additional Caldwell object observations as noted in the article Observing Southern Stars, but his numbers for this program have not yet been updated.

If you would like to have your information included in next April's listing, be certain to forward your observing totals to Carl by the end of March. Be certain to get your completed observing records to our ALCor, Duane Yockey, as soon as an observing program is complete so that you might be appropriately recognized on a timely basis. The next opportunity for AL observing award presentations will be at the club's summer picnic.

Astronomical League Observing Club	Brian Barling	William Carney	Lee Green	Dave Osenga	Carl Wenning	Duane Yockey
Asteroid Club 25/100		(65)*				
Binocular Double Star 120		(120)				
Binocular Messier 50		(100)	(72)	(59)	(78)	54*
Caldwell 70/109					34	
Carbon Star 100					100*	
Comet 12/30		(31)			4	
Dark Nebula Imaging 70			63			
Deep Sky Binocular 60		(60)	(60)		(60)	
Double Star 100	29	(100)	(100)		(100)	
Galileo 13		2				
Globular Cluster 50			(55)		(65)	
Herschel 400	389	(400)	(400)		(400)	

Herschel II 400		17			400*	
Lunar Club 100	(100)	(100)	(100)	(100)	(100)	
Lunar II 100		85				
Open Cluster 100/25//125/50			(125)		2	
Planetary Nebula 60/110		1			(110)*	
Stellar Evolution 100					70	
S. Skies Binocular 50		9		25	(50)	(50)
S. Sky Telescope 50					(52)	(50)
Telescope Messier 70/110	(110)	(110)	(110)	(110)	(110)	71*
Master Observer 10	2	10	10	4	(12)	3
Urban Club 100		(100)	(100)		(100)	
Outreach Award 10/60/160			(***)		(***)	

- Program or first award level now complete. ** Second award level now complete. *** Third award level now complete. AL recognition (certificate and/or pin) will be given at the next general membership meeting if available. Numbers in parentheses (#) indicate that the associated pin and/or certificate has been conferred on the recipient. Awards are conferred during the February Annual Meeting and sometimes the club's summer picnic.

TCAA TREASURER'S REPORT – DECEMBER 2013

OPERATING FUND BALANCE – November 30, 2013 - \$ 1,963.14

Income

Jessica Kalkwarf (Dues) -	\$ 41.00
Troy Berg (Dues) -	\$ 41.00
Jeff Michels (Dues) -	\$ 41.00
John Werner (Sen. Dues) -	\$ 25.00
Duane Yockey (Sen. Dues) -	\$ 25.00

Expenses

LYB Inc. (Observer copies & postage) -	\$ 33.88
PayPal (Jessica Kalkwarf) -	\$ 1.20
PayPal (Troy Berg) -	\$ 1.20
PayPal (Jeff Michels) -	\$ 1.20

OPERATING FUND BALANCE – December 31, 2013 - \$ 2,098.66

OBSERVATORY FUND BALANCE – November 30, 2013 - \$ 3,614.94

Income*

Donation (John Werner) -	\$ 15.00
Donation (State Farm Foundation) -	\$ 500.00

* Dues payments made after December 31st will be included in the January Treasurer's Report.

Expenses

None -	\$ 0.00
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OBSERVATORY FUND BALANCE – December 31, 2013 - \$ 4,129.94

INSURANCE ESCROW BALANCE – November 30, 2013 - \$ 5,274.00

Income

None - \$ 0.00

Expenses

None - \$ 0.00

INSURANCE ESCROW BALANCE – December 31, 2013 - \$ 5,274.00

TOTAL TCAA FUNDS – December 31, 2013 - \$ 11,502.60

Respectfully submitted,
L. Duane Yockey, Treasurer

EDITOR SEEKING INPUT

So, how is this first issue of the new editor? Are things working out well or would you like to see changes? Please send your comments to Editor Carl Wenning at carlwenning@gmail.com to help improve this publication.