

# THE OBSERVER

OF THE TWIN CITY AMATEUR ASTRONOMERS

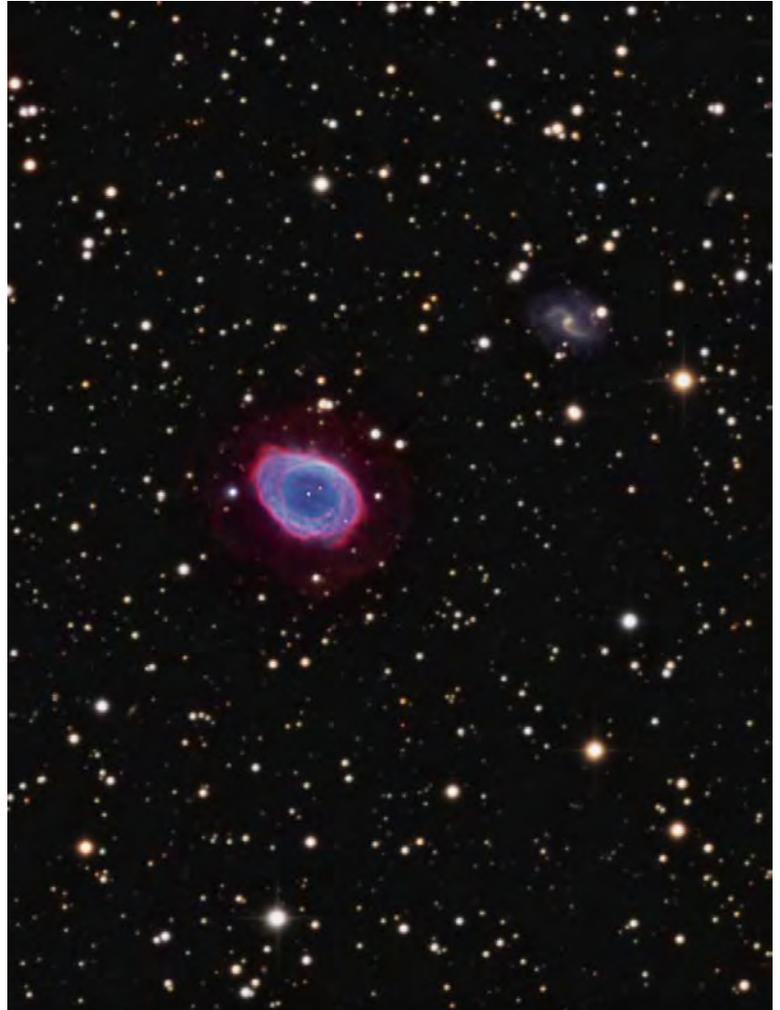


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## EDITOR'S CHOICE: IMAGE OF THE MONTH

This month's Image of the Month is by Tim Stone. The most obvious feature in this image is Messier 57, the Ring Nebula. To the upper right of M57 is the barred spiral IC1296. A careful inspection of the image will show a number of smaller, fainter background galaxies. The un-cropped image, found on page 12 of this issue of *The OBSERVER*, shows a much wider field of view. Also on page 12, readers will find Tim's detailed commentary about the objects found in that broader image as well as technical details relating to the image's creation. Congratulations, Tim, for submitting another winning Editor's Choice: Image of the Month!



The TCAA is an affiliate of the [Astronomical League](#). For more information about the TCAA, be certain to visit our [club website](#).

*The OBSERVER* is the monthly electronic publication of the Twin City Amateur Astronomers, Inc., a registered 501(c)(3) not-for-profit educational organization of amateur astronomers interested in studying astronomy and sharing their hobby with the public.

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Submission deadline is the end of each month.

#### Membership Dues

Individual Adult/Family \$40  
 Full-time Student/Senior \$25  
 (senior status equals ages 60+)

To join, send your name, contact info and dues payment to Duane Yockey, TCAA Treasurer, 508 Normal Avenue, Normal, IL 61761

## A NOTE FROM PRESIDENT WEILAND

The summer solstice is upon us and public viewing at Sugar Grove Nature Center is in full swing. The fourth Public Observation Session is scheduled for this evening as I write this. That means we are half way through this year's public viewing seasons. We've had a very good turnout of both guests and members at the last two sessions and hopefully that trend will continue. As TCAA President I am also club cheerleader, which means I regularly encourage member attendance and participation at these and other TCAA events. In this regard I will mention a couple of larger events being planned which you have read about (and will continue to read about) here in *The OBSERVER*.

The TCAA is inviting members of central Illinois astronomy clubs and selected others to attend a mini conference at SGNC on Saturday, August 23, 2014. This is a great opportunity to meet and visit with TCAA members as well as members from other clubs. Mark your calendar now so *you* won't miss it.

Somewhat farther in the future is the combined NCRAL-MSRAL (North Central Region and Mid States Region of the Astronomical League) 2016 conference. This event, which has tentatively been set for April 29/30, will be great opportunity to share TCAA's facilities and location with other Astronomical League members from the Midwest. It will require the help of many club members to make this a successful event. As an FYI, the last time TCAA hosted this conference was the first time I helped with a planned TCAA event. After attending several public observing sessions I made the commitment to become more involved and have found it to be very rewarding.... You might too! If you would be interested in assisting with this effort, please contact me at [tomcea@yahoo.com](mailto:tomcea@yahoo.com) or NCRAL-MSRAL committee chair Carl Wenning at [carlwenning@gmail.com](mailto:carlwenning@gmail.com).

I hope to see many of you at our remaining events this summer. Clear Skies!

Tom Weiland  
 TCAA President

## NEXT PUBLIC OBSERVING SESSION JULY 26<sup>TH</sup>

The 2014 public observing sessions are continuing. Recall that these events will be held cloudy or clear. Only in the case of active rain will the events be cancelled. The July 26<sup>th</sup> program runs from 8:45 to 10:45 p.m. July's program, to be led by Tim Stone, is titled *Star Death*. Tim's presentation has been described as follows, "Stars are born, live out their lives, and then die. The largest, most massive stars explode violently to become neutron stars or black holes. Tonight we examine their remnants." The POS brochure with additional information can be found on the [TCAA public events webpage](#).

The year's remaining dates (all Saturdays), topics, and speakers are as follows:

Date	Topic	Coordinator
August 30	<i>From Earth to the Edge of the Universe</i>	John Mori
September 27	<i>Globular Clusters</i>	Tom Weiland
October 25	<i>The Andromeda Galaxy</i>	Kevin Brown

Once again in 2014, the club will be collecting email addresses in exchange for a chance to win a basic telescope during an October POS free drawing. This year the telescope will be a Meade ETX-125AT (f/15) Maksutov-Cassegrain telescope recently donated to the club. TCAA members *are* eligible for the drawing.

## CALENDAR OF CELESTIAL EVENTS – JULY 2014

**MORNING STARS (7/15): MERCURY, VENUS, URANUS, NEPTUNE**

**EVENING STARS (7/15): MARS, JUPITER, SATURN**

**Question:** I have seen all the major planets but for Mercury. Why is this planet so difficult to observe? (See the answer below.)

**04 Aphelion** – Earth reaches its greatest distance from the sun at 2:00 UT, at a distance of 152,098,232 kilometers.

**05 First Quarter Moon** – The moon sets at midnight and rises at midday.

**12 Mercury's Greatest Elongation** – The planet is 20.9° west of the Sun, shining at magnitude +0.4 in the eastern pre-sunrise sky.

**12 Full Moon** – The moon rises at sunset and sets at sunrise. This phase occurs at 11:25 UTC. This full moon was known by early Native American tribes as the Full Buck Moon because the male buck deer would begin to grow their new antlers at this time of year.

**19 Third Quarter Moon** – The moon rises at midnight and sets at midday.

**26 New Moon** – The moon rises and sets with the sun and is not visible. This phase occurs at 22:42 UTC.

**28 Delta Aquarids Meteor Shower.** The Delta Aquarids is an average shower that can produce up to 20 meteors per hour at its peak. The shower runs annually from July 12 to August 23. It peaks this year on the night of July 28 and morning of July 29. This should be a great year for this shower because the thin crescent moon will set early in the evening leaving dark skies for what should be a good show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.

**Answer:** Mercury, like Venus, is an “inferior” planet. That is, its orbit lay inside that of Earth’s orbit. As a result, the planet can never appear far from the sun. Consequently, the speedy little planet can be observed only after sunset in the west or before sunrise in the east. Mercury never gets far from the sun in terms of angular separation or “elongation”. Mercury’s greatest elongation is only about 28°, and many times it is much less than this (as little as 18°) due to its rather elliptical orbit around the sun. Because the planet is always located close to the sun in the sky, it is best observed during spring evenings and autumn mornings when the angle that the ecliptic makes with the horizon is at its greatest. At other times, even though Mercury might have an elongation of as much as 28°, this places the planet nearly to the left of the sun during autumn evenings and right of the sun during spring mornings when the angle between the ecliptic and the horizon is at its minimum.

## NEW & RENEWING MEMBERS

The following individuals have paid dues for new or renewed memberships as of June 30<sup>th</sup>, 2014. (Others who paid after that date will appear in the August 2014 issue of *The OBSERVER*.)

(None)

## DUES BLUES

If you have received a “your dues are due” statement along with the email that brought you this issue of *The OBSERVER*, please remit your dues to Mr. Duane Yockey, TCAA Treasurer, 508 Normal Avenue, Normal, IL 61761. Current dues are \$25 for senior (60 years of age and over) and \$40 regular.

## SUBSCRIBING TO OUR E-MAIL LISTS

By subscribing to a group’s mailing list you will receive email messages from the group so you won’t have access to the group’s web features (like photos, files, links, polls, calendar, etc.) unless members [activate it later](#). The club now has two email listservs. The main email listserv is known as the **TCAA** listserv. It will be used to share announcements and reminders about astronomical and club events. To join this main listserv you must do the following:

1. Subscribe: Send a blank email to [TCAA-subscribe@yahogroups.com](mailto:TCAA-subscribe@yahogroups.com) Note: You’ll be sent a confirmation email from the group. Reply to the confirmation email to activate your subscription.
2. Unsubscribe: [tcaa-unsubscribe@yahogroups.com](mailto:tcaa-unsubscribe@yahogroups.com)
3. To post a message: [tcaa@yahogroups.com](mailto:tcaa@yahogroups.com)

A second listserv – **TCAA-imaging** – is for club astrophotographers as well as those who want to view their images and follow their discussions. It is an easy way to keep up with all the stuff we’re doing at the observatories.

1. Subscribe: [tcaa-imaging-subscribe@yahogroups.com](mailto:tcaa-imaging-subscribe@yahogroups.com)
2. Unsubscribe: [tcaa-imaging-unsubscribe@yahogroups.com](mailto:tcaa-imaging-unsubscribe@yahogroups.com)
3. To post a message: [tcaa-imaging@yahogroups.com](mailto:tcaa-imaging@yahogroups.com)

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

## THIS MONTH'S PHASES OF THE MOON



First Quarter  
July 5



Full Moon  
July 12



Third Quarter  
July 19



New Moon  
July 26

All moon phase dates are given for Central Daylight Time. Additional moon phases can be found for the 2014 calendar year by clicking [here](#). These four images were provided by J.K. Howell of the Champaign-Urbana Astronomical Society and are used with permission.

## REPORT FROM THE INSIDE OUT ARTS FAIR

~ by Kevin Brown ~

On Saturday, June 21<sup>st</sup>, Sugar Grove Nature Center hosted the first ever Inside Out Arts Fair. The fair had displays of local arts and crafts, as well as demonstrations ranging from Blacksmithing to mock medieval combat courtesy of the Society for Creative Anachronism. The Twin City Amateur Astronomers hosted an open house from noon to 2:00pm at both the Prairie Sky Observatory as well as the Sugar Grove Observatory. Tom Weiland, Tim Stone and myself gave tours to interested fair attendees, and distributed several club handouts.

The center of activities for the event was from the picnic shelter west, so traffic through our facilities was somewhat light. Assuming that this event will be an annual fair, there is room for improvement in attracting people to our wonderful observatories. Many of the members of the public that met with us were interested in nature photography, and perhaps this could be emphasized next time. I can think of no better examples of the beauty and complexity of nature than the amazing digital images that our members are routinely producing with the help of our new facilities! All in all, a wonderful (if a bit hot) afternoon spent introducing the TCAA to the general public.

## FORMER TCAAERS VISIT



Mark Castleman

Friday, June 20<sup>th</sup> was an auspicious day in that two former TCAA members chose to visit the Twin Cities. Both took the time out to renew old acquaintances with club members.

Mark Castleman was in town for his 30<sup>th</sup> anniversary high school reunion. Mark graduated from high school in 1984 and then went to ISU to earn a degree in physics. Following a move to Colorado and a short stint in a physics-related career, Mark chose to attend the University of Colorado – Denver to earn an MA teaching degree. He has since been working as a physics teacher at Boulder High School. Mark was visiting his Alma Mater when he just happened to run into Carl Wenning. The two had a nice conversation.

Bill Zaffiri joined Bob Finnigan, Carl Wenning, Tim Stone, and Brian Barling at SGNC that evening. He



Bill Zaffiri

mentioned that it had been 25 years since last seeing any TCAA members. Bill moved to Florida along with Carol his wife in 1985 where he became a woodshop teacher. Today he teaches at Countryside High School, Pinellas County, Florida. Bill was quite impressed by what he saw at SGNC and spent the evening watching Tim and Bob doing photography and working with Carl and Brian to view through the SGO 11" visual telescope. Viewing with Bill began near the end of evening twilight and lasted until around 10:30 p.m.

Bill took the opportunity driving out to and back from SGNC with Carl to reminisce about the early days of the club. Bill was a member several years before Carl, and he spoke about John and Bertha Kieviet and Weldon Schuette, and about using the Club's roll-off-roof observatory at the Fred Fissel farm north-northeast of Normal – just north of what became I-55. Bill promised to write up his impressions about the early years of the club for inclusion in the club's 60<sup>th</sup> anniversary history.

## GET READY FOR CENTRAL ILLINOIS MINI CONFAB

The TCAA is inviting members of central Illinois astronomy clubs (TCAA, CUAS, PAS, SAS, DAAC) and selected others to attend a mini conference at SGNC on Saturday, August 23, 2014. Mark your calendar now so **you** won't miss it.

**Tentative program:** The anticipated program is as follows and is subject to change:

4:00 p.m. Open House at the TCAA's Observatories  
 4:30 p.m. Welcome and introductions  
 4:45 p.m. Contributed 15-minute talks  
 6:00 p.m. Break (open house continues)  
 7:00 p.m. Free Star-B-Q dinner  
 8:00 p.m. Keynote speaker (TBD)  
 9:00 p.m. Evening observing session

**Call for presentations:** The TCAA is now soliciting 15-minute contributed presentations that will consist of a 10-12 minute talk followed by 3-5 minutes for questions and answers. The number of such talks will be limited, and not all who offer to present will necessarily be given an opportunity to do so. You may request to present a talk by completing the [Talk Request Form](#). It would be ideal if each participating astronomy club would contribute one talk to the program. A screen, video projector, and a laptop computer will be available for use, but presenters are free to use their own computers so long as they have a direct VGA output (PCs) or a dongle providing a VGA output (Macs).

**Invited speaker:** The TCAA will have an invited speaker to give the keynote talk at 8:00 p.m. The speaker and the topic are to be determined.

**Evening Star-B-Q:** This FREE event will feature a selection of brats, hamburgers, and a choice of sides. Refreshments also will be provided. This Star-B-Q is being made possible courtesy of the TCAA and will be available only to those who have preregistered by the deadline.

**FREE registration:** Due to a need to have sufficient food and other resources available at this event, pre-registration will be required for all who wish to attend. [Online registration](#) will open on July 23 and will close on August 16 – one week prior to the event. *No on-site registration will be permitted.*

**Rain date:** There is no rain date for this event. Because we have access to a large picnic shelter and a nature center, the event will be held rain or shine, cloudy or clear...

**Camping:** Should you wish to camp out during the night of August 23/24, you may do so. SGNC Director Angela Funk has given permission to do so. However, there will be a \$5 per person fee for doing so that will be collected on site.

**Why attend?** There are numerous reasons for doing so:

★ Visit two of this country's most **advanced amateur observatories:**

- *Prairie Sky Observatory*, a 16' x 24' roll-off-roof observatory, was constructed during the summer of 2013 and houses some of the best amateur telescopes, mounts, cameras, filters, and computer systems. Our telescopes include apertures of 10", 11", 20", and very soon a 16".
  - *Sugar Grove Observatory*, a 10' domed observatory, was opened in the spring of 2000 and was recently updated with a new telescope - a 17"-aperture instrument augmented by one of the best mounts, cameras, and filter sets.
- ★ Watch TCAAers use our observatories' telescopes for **astronomical imaging**; you'll be amazed at what we can accomplish with so little effort.
- ★ Bring your **observing equipment** along to speak about and share with others, and to view the night sky from our location.
- ★ Learn what others have been doing as you listen to **contributed talks**, and hear what our **keynote speaker** (likely a professional astronomer) has to say.
- ★ Experience the **camaraderie** of fellow amateur astronomers. Camaraderie is one of the main reasons why clubs for amateur astronomers exist. This event will provide a great opportunity to establish and grow your network of like-minded individuals within central Illinois.
- ★ Learn about the joint **NCRAL-MSRAL meeting** to be hosted by the TCAA in spring 2016 (and maybe learn a bit about the **total solar eclipse** that will be occurring during August 2017 right here in Illinois).

Mark your calendar now for this event so you won't miss it. Final reminders will appear in the August issue of this newsletter, *The OBSERVER*.

## Minutes of NCRAL-MSRAL 2016 PLANNING MEETING #1, May 27, 2014

In attendance at LYB, Inc. were Tom Weiland, Duane Yockey, Carl Wenning, Tim Stone, and Dave Osenga. Bob Finnigan was unable to attend. The meeting was called to order at 6:29 p.m. The following points were made:

**Lessons learned from NCRAL 2010:** (a) Cost (registration and hotel) is critically important to conference attendance; (b) Effective promotion is similarly important; (c) We really need to boost attendance if we want to keep the registration fee low; (d) We need better buy-in by state astronomy clubs to improve the bottom line.

**Date:** (a) April 29/30, 2016, appears to be best despite the 3<sup>rd</sup> quarter moon. (b) The May 6/7 weekend is graduation at ISU and Mother's Day on Sunday and hotel accommodations will be at a premium.

**Venue:** Duane will check with Holiday Inn Express as well as other possible venues, and will put a tentative, non-binding hold on the best venue for April 29/30 if possible. He also will check about the availability of free rooms for speakers or hospitality, as well about using the hallway for dealers. Carl will check with Heartland Community College and possible co-sponsorship with the Challenger Learning Center located there.

**Theme:** Preparing for the 2017 total solar eclipse, though other topics will be included.

### Invited speakers:

- Carl Wenning agreed to talk about the eclipse of August 2017 (including information about 2023 and 2024 as well) to address the material published in his solar observing booklet published twice in recent years (30 minute talk)
- Tim Stone agreed to talk about astronomical imaging in general and solar photography in particular (30 minute talk)
- Carl will contact Mike Bakich about presenting a 60-minute travelogue about all his total solar eclipse expeditions and speak about his experiences and impressions (keynote speaker following banquet)
- Other possible speakers include Mark Cabaj (web cam or solar imaging), Linda French (asteroid work), Audrey Fischer (light pollution), Bob Holmes (asteroid work), Libby Norcross (CLC), and possibly NASA reps (Lee Green and Dan Holland). Carl will contact all of these to determine their interest in presenting.
- Other talk ideas included the "The Twin City Astronomy Connection" – IWU, TCAA, CLC, ISU, SGNC – some sort of round robin.
- It was agreed that the planning committee would control the program and determine all speakers and topics; talks

generally will not be available to advertisers as has been requested in the past.

#### Tentative Schedule:

##### *Friday*

Open house at CLC  
Open house at SGNC  
Other?

##### *Saturday*

9:00 a.m. Welcome and introductions  
9:15 a.m. Invited speaker #1  
9:45 a.m. Invited speaker #2  
10:15 a.m. Morning break  
10:45 a.m. Invited speaker #3  
11:15 a.m. Invited speaker #4  
11:45 a.m. Lunch break (own their own)  
1:00 p.m. Invited speaker #5  
1:30 p.m. TCAA speaker #6 (about observatories and club)  
2:00 p.m. Afternoon break  
2:15 p.m. Parallel NCRAL and MSRAL business meetings  
3:15 p.m. Board buses for trip to SGNC  
4:00 p.m. Tour of SGNC facilities  
4:30 p.m. Board busses for return to hotel  
5:00 p.m. Break  
6:00 p.m. Banquet dinner  
7:00 p.m. Keynote address  
8:00 p.m. End of formal proceedings  
8:30 p.m. Beginning of optional observing session at SGNC

#### Field trips:

- Challenger Learning Center and SGNC Open House with observing on Friday evening
- Bus trip to SGNC late on Saturday afternoon (Carl was able to get a school bus seating 52 for less than \$200 for a recent conference I hosted at HCC.)

#### Leadership assignments:

- Executive Function (Carl)
- Facilities/Banquet/Accommodations/Budgeting (Duane)
- Speakers (Carl)
- Program (Carl)
- Promotion (Tom and Dave)
- Audio/visual/screen (Dan Miller? – Tom will contact Dan about serving in this capacity)
- Astro imaging competition (Tim Stone – Tim will contact Dan Miller for display stands)
- Dealer displays and door prizes (Dave and Tom)
- Web page and online registration (Lee Green? – Carl will contact Lee about his willingness to assist)
- Coordination (Tom will contact Angela Funk about open house and Saturday field trip)
- Registration table (Dave, Duane, Carl, and others as their schedules permit)
- Conference packet (TBD)

#### Sponsorships:

- Sponsorships might include eclipse booklet, program, advertising in same, breaks, etc.

- *whiteboardsUSA.com* will publish at no cost an informational and activity guide for the August 23, 2017 total solar eclipse – might include advertising from other sponsors
- Duane will contact *AmerinIP* about possible sponsorship.
- Bob Finnigan might be asked to contact *Woodland Hills* and *Astro Physics* about possible sponsorship and even participation; we should talk about the details before doing so however.

**Miscellaneous topics:**

- We might want to engage central Illinois astronomy clubs (SAS, CUAS, PAS) in planning and work in an effort to increase their buy-in and participation.
- It was agreed that talks to other clubs (CUAS and PAS) last time proved ineffectual in getting increased attendance from these groups.
- We might want to consider giving a talk, however, at the TCAA-sponsored August 23<sup>rd</sup> Mini Conference and the SAS-sponsored Illinois Dark-Sky Star Party (Duane?)
- We might want to produce a video; it was suggested that Tony Cellini might have the necessary expertise. Carl will contact Tony about the possibility.
- We might consider 15-minute talks as well if appropriate.

Carl J. Wenning  
Recorder

## E/PO for June 2014

In addition to the many informal opportunities to introduce visitors at SGNC to amateur astronomy through visits to our observatories, there were only a few formal events during June.

On June 14<sup>th</sup>, several members of the Master Naturalists visited SGNC an introductory meeting for the class. Bob Finnigan provided an extended tour of the PSO and explained the photographic process. Darren Erickson, Dave Osenga, and Lee Green brought their telescopes and had a nice observing session with the 12 members of the class.

The public observing session on the evening of the 21<sup>st</sup> was plagued by a mostly cloudy sky and roving thunderstorms. Despite this fact, some 38 individuals were present for the June event. Dave Osenga did a masterful job of describing five ringed wonders of the solar system – Jupiter, Saturn, Uranus, Neptune, and an asteroid! Careful sleuthing by Dave in preparation for his meeting resulted in a comprehensive treatment of all these ringed phenomena. Dave's presentation was disrupted 10 minutes after the start when the clouds to the south parted just long enough for everyone to see the ringed wonder Saturn. Following this important interlude, Dave concluded his talk after an additional 20 or so minutes. One couple won a nice book as a door prize. The observatories were then thrown open for public inspection. In attendance from the TCAA were the following: Mark Cabaj, Lee Green, Dave Osenga, Bob Finnigan, Tim Stone, Tom & Carolyn Weiland, Dave Peters, Darren Erickson, Jeff Benway, Brian Barling, Carl Wenning, Duane Yockey, and Kevin Brown. After all the observers departed, Darren remained on site until approximately 1 a.m. viewing the dark clear sky visible through growing gaps in the clouds.

The Great American Campout at SGNC was an overwhelming success this year. When TCAAers arrived to open SGO to the campers, there was hardly a parking spot available in the lot. Bob Finnigan arrived at 8 p.m. and opened the roll-off-roof observatory for viewing Saturn with the 11" Celestron. Carl Wenning and Tony Cellini arrived shortly after 9 p.m. only to find a throng of guests flooding into the facility. Despite the slightly overcast conditions and patchy clouds, all three of our members remained to provide explanations to campers and this lasted until shortly after 10 p.m. Bob used the 20" to image a few items in the western sky, and Carl ran the 11" showing typical globular and open clusters as well as galaxies. There was a constant flow of visitors, and conservative estimates are that at least 75 people visited the observatory.

"The Sun, with all the planets revolving around it, and depending on it, can still ripen a bunch of grapes as though it had nothing else in the Universe to do."

Galileo Galilei

## ASTROBITS

- ★ Announcement for the TCAA's public observing sessions are nicely displayed in the *Pantagraph's Guide to Summer Fun* for summer 2014. This information also appears monthly in the appropriate issue of the GO! section of the newspaper. Kudos to who ever it was that got this information published.
- ★ New member Lisa Wentzel has donated a SkyScout to the TCAA on May 31<sup>st</sup>. She intends for use to use its as a door prize or in any other way the club sees fit. Thanks very much Lisa for this donation. New units cost \$399 on Amazon.com according to President Tom Weiland.
- ★ Tom's Letter to the Editor of the *Pantagraph* dealing with light pollution appeared in print on Sunday, June 1<sup>st</sup>. The letter was titled, "Light pollution impacts us, environment." It hopefully can still be found on the *Pantagraph* [Letters to the Editor website](#).
- ★ There will be a private gathering at the U of I Observatory for Friends and members of the Astronomical Society to socialize and observe starting at 7:00 p.m. on Friday, October 24<sup>th</sup> after the pep rally. A public open house will begin at 8:00 p.m. Hope you can attend! Board meeting on Saturday is open to Friends. Observatory Friend Carl Wenning will be going. Let him know if you'd like to join him as a guest.
- ★ If you might be interested in helping support the U of I Observatory in terms of building and telescope preservation, please know that your assistance is greatly needed. This year the Friends of the Observatory has set a fund raising goal of \$20,000 and we are more than 75% of the way there. Gifts can be made through the Illinois Foundation. To learn how to contribute, please visit the web site below for details: <http://observatory.astro.illinois.edu/friends/donate/>
- ★ William Carney was recognized in the June 2014 issue of the Astronomical Leagues quarterly magazine *Reflector*. William was recognized for having achieved the master's level of the Outreach Award. This confirms that William has documented not less than 160 hours of outreach in amateur astronomy.
- ★ There was a bit of "excitement" following the June 21<sup>st</sup> POS. After the 10:30 p.m. close of the event, one couple in attendance – Chuck and Amy – found out that they had a flat tire on their truck. After working for an hour to remove the stuck wheel, AAA was called and they promised to send someone within an hour. Carl W. remained behind with them at SGNC until they received a phone call at 12:30 a.m. indicating that help was not forthcoming. Carl drove them to Normal where their son



Tom and Carolyn hard at work.

picked them up. Dave O. is shown here "showcasing" Chuck and Amy's flat tire. It's ironic that in helping out by providing light, Dave's battery was drained and he had to jump start his own vehicle. When dropped off in north Normal at 1:00 a.m. Chuck and Amy expressed deep appreciation for the TCAA's assistance and support in the matter.

★ Roy Lawry reports, "Earlier this month I was contacted by the new Lincoln Boy Scout troop leader here in Lincoln. It is a newly formed troop and is just starting out. I have made arrangements to donate a new six-inch Orion Dobsonian telescope and some eyepieces. At the troop meeting we had a half-hour discussion about science topics and basic astronomy. A number of Hubble's best pictures from the Internet were viewed and discussed. Handouts of TCAA website information and a list of a variety of astronomical websites were circulated. I mentioned the club as a resource. They hope to come to one of the TCAA public observing sessions soon." Thanks, Roy, for promoting the TCAA and its events!

★ The next TCAA Board of Directors meeting has been rescheduled for July 8<sup>th</sup> at 6:30 p.m. Board members and officers will meet at Lewis, Yockey and Brown, Inc., in downtown Bloomington. Following the Board meeting, there will be a brief (10 minutes?) gathering of the NCRAL-MSRAL 2016 planning committee to review recent fact-finding accomplishments. Both meetings are open to the TCAA membership.



Dave O. "showcasing" flat tire.



Prairie Sky Observatory sporting its newly stained look.

hunters” who did the installation last year.” Thanks Tom and Carolyn for all this work, especially under hot and humid conditions!

★ As a result of contacts made during IDNR’s Conservation Congress, Carl W. will be conducting his own “POS” at Lincoln Trail State Park (near Marshall, IL) and Walnut Point State Park (near Oakland, IL) on Friday/Saturday, July 18/19. The “POS” will consist of a presentation, a sky lecture, and observing session. If anyone would like to join Carl, please drop him an email at [carlwenning@gmail.com](mailto:carlwenning@gmail.com).

★ On June 27<sup>th</sup> President Tom Weiland reported on work at Prairie Sky Observatory, “The observatory and roll off roof supports have received a second coat of stain. Carolyn and I accomplished this in about 8 hours spread over 2 days. The result is a much more uniform appearance. Prior to staining I also drilled a couple hundred stainless steel screws where siding had not been complexly secured by the SGNC “deer

### ASK THE EDITOR

The editor is now answering questions about the club posed by members. If you have a question about something of interest to you – either about the present day TCAA or its past – please send it to Carl Wenning at [carlwenning@gmail.com](mailto:carlwenning@gmail.com).

**Question:** I’m concerned that the TCAA today appeals mostly to older white males – much like the history of astronomy in general. What gives?

**Answer:** I have seen this phenomenon myself and share your concern – as do many others. Having thought about this *cause celebre* for some time, I think that the following comments are in order...

1. While this might appear to be the case in astronomy in general and the TCAA in particular, it has not always been so and is not entirely accurate. The club has had several very active female members over the years and up to the present (Bertha Kieviet, Carolyn Weiland, Sandy McNamara, Carolyn Wenning, Sharon MacDonald, Ayne VandenBrook, and others) as well as younger members (Amber, Eve, Bryce, Nataya, and the Berg brothers most recently). While most do not spend significant amounts of time observing at SGNC, they are often present at public observing sessions and view from home at other times. Professionally speaking, there have been a large number of female astronomers in the past despite the fact that they do not always receive the credit that they deserve – Annie Jump Cannon, Henrietta Swan Leavitt, Caroline Herschel, Carolyn S. Shoemaker, Williamina Flemming, Cecilia Payne-Gaposchkin, Maria Mitchell, Margaret Burbidge, Vera Rubin to name but a few.
2. In general, though, your perception does have *some* merit. When members of the general public attend our public observing sessions, they do tend to see older males with costly observing equipment to the near exclusion of young people with simple telescopes and mounts. (Who can forget Amber and Eve who are present for nearly every session with their small reflector?) When members of the general public view through advanced “goto” telescopes, they often ask about the cost and are discouraged by the apparent expense to enter the world of amateur astronomy. What I often point out is that I did not acquire my 11” CPC telescope until I was in my 50s, and that the cost of my telescope is about the same as “a good bass boat”. I often encourage novices to start out simply with a set of good binoculars and membership in the TCAA to gain access to some useful observing equipment. Unfortunately, few take up the offer. If they do become members, they often remain at the margins of the club participating in public observing sessions and enjoying the newsletter.
3. This latter point is also of concern to me as a long-time member. It’s rare that casual observers become members of the club. It seems to me that observers with a habit of viewing are the ones who tend to join the club as recent evidence among new members continues to suggest. Despite being a welcoming group, I sometimes think that we are bit intimidating as “professional observers” despite our friendly personas and demeanors. Perhaps this is something that we as a club might want to discuss. It would be great to hear from new members and those who thought about membership but chose not to join.

## 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 June 30<sup>th</sup>. Here is a summary of some of some recent observing successes that have occurred since the last report in April:

- ★ Dave Osenga has pretty much finished the Analemma observing project and hopes to submit soon.
- ★ Carl Wenning continues to make progress on his Stellar Evolution observing project. He recently completed 17 observations and has but 13 more to go before completing this 100-object observing program.

If you would like to have your information included in next July's listing, be certain to forward your observing totals to Carl by the end of June. 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	Kevin Brown	William Carney	Lee Green	Dave Osenga	Carl Wenning	Duane Yockey
Analemma Club							
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	48		(100)	(100)		(100)	
Galileo 13			2				
Globular Cluster 50				(55)		(65)	
Herschel 400	(400)		(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						87	
S. Skies Binocular 50			9		25	(50)	(50)
S. Sky Telescope 50						(52)	(50)
Telescope Messier 70/110	(110)		(110)	(110)	(110)	(110)	71*
Urban Club 100			(100)	(100)		(100)	
Observing Clubs: Master 10	3		10*	10*	4	(13)	3
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 usually are conferred during the February Annual Meeting but can be presented at the club's summer picnic.

To learn more about the Astronomical League's numerous observing programs, visit the [AL observing programs web page](#).

**EDITOR'S CHOICE: IMAGE OF THE MONTH**

~ Commentary by Tim Stone ~



While the sky is full of planetary nebulae, few are as striking as M57, The Ring Nebula in Lyra. At a distance of 2300 light years, it is close enough to be easily viewed in small telescopes, as well as photographed in great detail by advanced amateurs and professionals. It's invariably where I start my visual sessions in the summer. Easy to find, situated between Sulafat and Sheliak at the end of Lyra opposite Vega, it makes a great object for sharing with casual observers as well. We've all heard gasps from someone as they exclaim, "It looks like a doughnut!"

M57 is not only visually interesting, but it's scientifically important as well. The bright portion of the planetary nebula is about one light year in diameter, and its proximity has made it a prime subject of stellar evolution [research](#). Studies have shown that when observing M57, we are probably actually looking down the length of a cylindrical structure, rather than the doughnut shape it appears to have in the eyepiece. It has considerable internal structure, including vaguely spiral lanes of red-glowing gasses contrasted with the beautiful blue and cyan gasses in the cylinder's center. [High-resolution images](#) show even more structure, including dark globules and radial spokes emanating from the beautiful example of a white dwarf directly in the center of it all.

The famous ring-shaped nebulosity is surrounded by a much [fainter envelope](#) of older planetary gasses. This envelope is difficult to photograph. This image shows a good deal of it, but not all of it, and not in much detail. Though M57 is near the plane of the Milky Way, the field contains plenty of galaxies, including the beautiful barred spiral IC 1296 and a number of fainter background galaxies. This photograph is the result of 4.2 hours of imaging on the PlaneWave 20" on two of the few nights in June 2014 with clear skies.

## 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: July 1964** – Barry Beaman and Ray Wilson are refurbishing the Behr Observatory at Illinois Wesleyan University. Six club members are actively observing variable stars. Bob Mayo continues to machine new parts to update the Beehive Observatory at the Fred Fissel farm northeast of Normal.

**25 Years Ago: July 1989** – Club observing sessions have moved to Ewing Park III in Bloomington for the summer. Four club members and two guests visited the old U of I radio observatory site near Danville. They also viewed the U of I Observatory. Dave Leake, now president of the CUAS, hosted the visit.

**10 Years Ago: July 2004** – Following the resignation of President Dan Meyer, Carl Wenning and Duane Yockey met with representatives of SGNC over a meal at Dixie Truck Stop to firm up the club's relationship. The club's hosted a telescope workshop, but only three members of the general public attended.

## Google Doodles – Astronomy

Recently, your editor, while researching information about astronomer Maria Mitchell, stumbled across some Google Doodles. He thought that you'd like to see what he found and so here they are...



### TCAA TREASURER'S REPORT – JUNE 2014

OPERATING FUND BALANCE – May 31, 2014 -	\$ 2,411.29
<u>Income</u>	
None -	\$ 0.00
<u>Expenses</u>	
Astronomical League (dues) -	\$ 220.00
OPERATING FUND BALANCE – June 30, 2014 -	\$ 2,191.29
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OBSERVATORY FUND BALANCE – May 31, 2014 -	\$ 4,381.02
<u>Income</u>	
None -	\$ 0.00
<u>Expenses</u>	
None -	\$ 0.00
OBSERVATORY FUND BALANCE – June 30, 2014 -	\$ 4,381.02
<hr/>	
INSURANCE ESCROW BALANCE – May 31, 2014 -	\$ 5,274.00
<u>Income</u>	
None -	\$ 0.00
<u>Expenses</u>	
None -	\$ 0.00
INSURANCE ESCROW BALANCE – June 30, 2014 -	\$ 5,274.00
<hr/>	
TOTAL TCAA FUNDS – June 30, 2014 -	\$ 11,846.31
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Respectfully submitted,  
L. Duane Yockey, Treasurer