

**IN THIS ISSUE:**

A NOTE FROM PRESIDENT TOM WEILAND	1
MINUTES FROM MAY 7 <sup>TH</sup> BOARD MEETING	1
FOURTH 2013 POS JUNE 8 <sup>TH</sup>	1
PROFILES IN AMATEUR ASTRONOMY: CRAIG PROST	3
HISTORIC U OF I TELESCOPE REMOVED FROM OBSERVATORY FOR RESTORATION	3
EDUCATION/PUBLIC OUTREACH REPORT FOR MAY	4
PSO AND MEO UPDATES	4
JOHN MORI'S LUNAR DRAWINGS	5
ASTROBITS	6
CONSTELLATION OF THE MONTH: LUPUS— THE WOLF	6
TREASURER'S REPORT	7
HOW TIME FLIES	7

## A NOTE FROM PRESIDENT TOM WEILAND

As with any organization we gain members and we lose members. We lose members for a variety of reasons; interest wanes, people move, health or family issues intervene and unfortunately members pass away.

One of my goals as president, and of our group as a whole, has been to increase our membership. Economics figure into this to a certain extent...it's difficult to maintain a club without some income, especially one that has an observatory to maintain (and soon a second observatory!). We have had generous donors over the years who have helped out financially. We've also had generous donors who have provided the club with exceptional equipment. Everyone we interact with benefits from this generosity. Our Public Observation Sessions (POS) are a perfect example of how these benefits are shared with interested guests and members.

Economics isn't the primary reason for our desire to grow our club's membership. I know our core group strongly believes that the "hobby" we share is not only interesting but important. The significance of science in our daily lives and an understanding of our place in the larger scheme of things are invaluable to us as a society. To share that knowledge and interest with others is our primary goal and to be able to do that takes individuals who are willing to spread the word. As members and friends of TCAA you can help by making others aware of our group and our goals. Invite friends, neighbors, co-workers and relatives to attend a POS with you. It can be a great social event as well as an educational one!

**Speaking of social events, the TCAA summer picnic is scheduled for August 24th at the Weiland home in rural Heyworth.....more details later! Please add this date to your calendar.**

Hope to see many of you at the remaining observation sessions, and if you are new member make sure you introduce yourself. Clear Skies!

## MINUTES FROM MAY 7<sup>TH</sup> BOARD MEETING

The TCAA Board met on May 7, 2013 at the Coffee Hound in Normal. At the meeting were Board members Tom Weiland, Dave Osenga, Paul Pouliot and Lee Green, and members Bob Finnigan, Dan Miller, Tim Stone and Carl Wenning. The meeting was called to order at 6:37pm.

The minutes of the previous meeting and the Treasurer's report were approved unanimously. Dave commended members for their recent activities. Lee reported that an initial inventory had been completed and forwarded to Duane and Tom for use in preparing our annual tax statement. Tom indicated that he had met with Duane to complete our filing.

In a report from Duane, current liabilities including tax filings and AL dues are due in June, a small filing fee would be required in our state tax filing due to our increased inventory, and Dave noted that charges for catering at the annual meeting had not yet been received.

*(Continued on page 2)*

## FOURTH 2013 POS JUNE 8<sup>TH</sup>

The following is a list of public observing programs for this year. The next event is on Saturday evening, June 8<sup>th</sup>. The event will be held cloudy or clear, and will be cancelled only in the event of active rain. For detailed information about these family friendly sky viewing session, download the program brochure at [http://www.tcaa.us/Download/POS\\_2013.pdf](http://www.tcaa.us/Download/POS_2013.pdf)

Date	Time	Topic	Coordinator
June 8	9:00 pm – 11:00 pm	<i>Astronomical Curiosities of Saturn</i>	Tom Weiland
July 6	9:00 pm – 11:00 pm	<i>The World's Great Telescopes</i>	Tom Weiland
Aug 10	8:30 pm – 10:30 pm	<i>Meteors, Space Rocks, and Comets</i>	Carl Wenning
Sep 7	8:00 pm – 10:00 pm	<i>Births and Deaths of Stars</i>	Lee Green
Oct 5	7:00 pm – 9:00 pm	<i>Our Galaxy, the Milky Way</i>	Lee Green

The *OBSERVER* is a monthly publication of the Twin City Amateur Astronomers, Inc., a registered 501 (c) (3) non-profit educational organization of amateur astronomers interested in studying astronomy and sharing their hobby with the public.

### **TCAA OFFICERS**

President	Tom Weiland 309-830-0167 tomcea52@yahoo.com
Vice-President	Dave Osenga 309-287-0789 DaveOsenga@msn.com
Secretary	Lee Green 309-454-7349 lee@starlightsoftware.com
Treasurer/ ALCor/RA	Duane Yockey 309-452-3936 duane@lybinc.com
3rd Director	Paul Pouliot 815-844-7065 ppouliot2@mchsi.com
4th Director	Tony Cellini 309-829-9269 drksky1056@comcast.net
Historian	Carl Wenning 309-830-4085 carlwenning@gmail.com
Webmaster	Lee Green 309-454-7349 lee@starlightsoftware.com
Property Manager	Tim Stone

### **The Observer Editor**

Erin Estabrook  
314 Covey Court  
Normal, IL 61761  
309-454-6894  
erin@lybinc.com

Submission deadline is the first of each month.

### **Membership Dues**

Individual Adult/Family \$40  
Full-time Student/Senior \$25  
Electronic Newsletter \$25

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

## **MINUTES FROM MAY 7<sup>TH</sup> BOARD MEETING (CONT.)**

*(Continued from page 1)*

Lee has been tasked with entering the names we have received from our Telescope Giveaway but that he had not provided means for entering those names into the web site. Several members offered to assist when those means became available.

Tim has been organizing, sorting and cleaning up the observatory. He suggested that a good approach to improving our organization would be to take pictures of all our equipment. Tim said he was "having a ball" going through everything and was commended for his enthusiasm and effectiveness. He noted that the combination to the lock on the storage area was not generally known and those present were reminded of it and it was agreed that all core members should be made aware of the combination. Tim noted that evidence of a raccoon's presence in the storage area was detected and he offered to look into reducing the likely access points.

Turning to the new observatory, Tom has been in communication with Linda from the Funk's Grove Cemetery Association. He indicated that a counteroffer concerning the duration and renewal of the lease agreement that set the initial term to 15 years with 5 year extension periods would likely be acceptable to the FGCA Board. The donors seemed receptive to these terms and a modification of the agreement was approved by the Board, and Tom agreed to provide a new version of the Agreement to FGCA. The donors reported that the architect, concrete contactors and builders were recently contacted to get final quotes for their services and to prepare the way for groundbreaking activities. The question about the approval of the Site Plan was raised, and Tom reported that Angela had this item well on its way towards resolution. All parties are anxious to begin that project and it is anticipated that construction is likely to commence soon after all final approvals are obtained.

Lee reported that the ISU Family Science Day was a great success. Over 400 people stopped by our booth in the ISU Redbird Arena to view a poster of the Sun, Jupiter and Earth that was mounted high in the facility. William reported that over 300 people had viewed the Sun through his telescope which was set up outside. Tom noted that we receive an additional 135 names in our Giveaway program. Tim reported that he had visited the planetarium at Peoria's riverfront facility. Lee noted that while he had been in contact with the Peoria Astronomical Society's Rich Tennis, a firm date for a visit from them had not been scheduled. Carl reported that Vivian Hoette would be willing to give a talk to our members and that since her son is now living in the Twin Cities, such contact should be easy to arrange.

Discussion about comet ISON was table with Carl noting that the comet had not brightened to the extent hoped. Tim agreed to identify items in our inventory that could be disposed of, and Lee thanked Tim for taking on this responsibility. Also tabled was a discussion about the refurbishment of the 6" refractor.

Tim presented an outline of a possible program to educate people in using our equipment for photography.

Dan reported that the March 21 session at Millikin was a large success and that Lee had assisted with the approximately 100 physics student from around the country who attended. He reported that a possible grant that encourages science education might be available and that to apply a plan must be submitted.

Turning to new business, a proposal to increase the visibility of the SGO observatory was raised. Several members noted that a small sign exists and that raising the profile of the observatory might bring added concerns about security.

Tim and Bob noted the excitement shown by our youngest member Bryce Heiniger when he and other young astronomer were able to use the equipment in the observatory to take astrophotos. Bob noted that a printer had been made available at the observatory so that other budding astrophotographers might be able to take immediate prints from their activities, and suggested that putting stickers on the back of prints would be a simple way to "brand" our services. Carl suggested that instead of attempting to make such service a formal program, we might instead offer the service this year informally as a trial.

Tom volunteered to host a summer picnic for the club at his home. August 3 was discussed as a possible date. Additional details will be determined for discussion at our next meeting.

Carl noted that he will be travelling in the coming weeks and Dave agreed to lead the effort to solicit material for The Observer in the coming issues. He also noted that there appears to be a problem in the drive of the Giveaway telescope. He suggested that making repair could be difficult and solicited suggestions on how this might be handled. The Board gave him approval to attempt to remedy the issues by opening the device, recognizing that such an operation might render the unit as unsuitable for use in our program.

Lee brought a C8 telescope that was recently donated to the club by Dan Irvin, and it was inspected after the meeting. Tim took the scope to SGO. Carl asked for volunteers to address the Champaign-Urbana astronomy club and Lee agreed to contact David Leavy.

Our next meetings were scheduled for July 9 and September 17. The meeting adjourned at 7:45pm.

Respectfully submitted,

Lee Green, TCAA Secretary

## PROFILES IN AMATEUR ASTRONOMY: CRAIG PROST

*A new member of the astronomy club, Craig Prost, is making lots of progress with astrophotography – so much so that it is time to feature him in a brief article as a means of introducing him to the rest of the club. Craig recently submitted responses to a number of questions from the club historian, and these were assembled into the article that follows.*

Craig Prost grew up in the small town of Cape Girardeau, Missouri, the hometown of Rush Limbaugh. While he was accustomed to very dark skies, viewing of the heavens there was frequently hampered by high humidity. He first became interested in astronomy as a boy when his grandfather took him to the St. Louis Planetarium. He later became more involved in astronomy while in college and performing undergraduate work for the South East Missouri State University Physics Department. There he helped with astronomy labs and conducted a "night lab" where he would set up a Celestron 11" XLT on the roof of the science building and show the wonders of the universe. While light pollution reportedly was horrible, it was his first time to see Jupiter, Saturn, the Orion nebula, and the Andromeda galaxy through a telescope. As he noted, "I was as amazed as the students."

I received my teaching degree and continued to borrow the physics department's orange tube 6" Celestron for star parties while he taught in South East Missouri. It was during this period (late 90's) that Craig got his first exposure to astrophotography. As he mentioned, "I remember being amazed by how much better Orion appeared through an 8-inch scope with a minute exposure compared to visually though the 11-inch".

After leaving teaching for greener (as in more money) pastures, Craig joined the nuclear Navy. After serving as a nuclear submarine officer on board the USS Pasadena (SSN 752), he moved to Bloomington following a job offer at the Clinton nuclear power plant. After moving to a house with a relatively dark backyard in January 2012, he bought his very own 11" XLT with an Orion Atlas mount. He has become progressively more involved in astronomy ever since.

Due to his growing interest in amateur astronomy, Craig now owns a Takahashi FSQ-106ED, a Celestron 11 XLT, an AP Mach One GTO, QHY9M and QHY5L-II astronomical cameras, a QHY motorized filter wheel, and a full set of Baader 2" color and narrow band filters.

Craig learned about the TCAA through Mark Honzell with whom he works. According to Craig, "He was the one who pointed me to the website and yahoo user group." Craig's first experience with the TCAA was at SGNC when he and his son attended public observing sessions during the summer of 2012. According to Craig, "He was five and got a big kick out of the events, but I didn't learn about all the equipment until I volunteered to help at the science fair at Redbird Arena. While I was there I started talking to Bob Finnigan and was enticed by the high-end equipment available to club members. I have been out to SGO at least 2-3 times a week ever since."

Craig provides the following advice for armchair amateur astronomers, "Any club member has an outstanding opportunity to access equipment that 99% of amateur astronomers will never get a chance to use. Stick around and talk to members at SGO at the next POS or come out any clear, moonless night. I'm sure someone will be out there."

Craig's short-term goal as an amateur astronomer is improve upon his efforts as an astrophotographer. As he mentioned, "So far I have found every type of target comes with it's own challenges. This summer I really want to improve on my narrow-band ability. Long term I would like to purchase some property in New Mexico and set up a permanent observatory." Wouldn't we all?

Craig is currently studying to obtain his Senior Reactor Operator license. After he earns that license, he will be responsible for the day-to-day supervision of the Clinton Nuclear Power Station's reactor operation.



## HISTORIC U OF I TELESCOPE REMOVED FROM OBSERVATORY FOR RESTORATION

The 117-year-old, 12-inch telescope in the University of Illinois Observatory were removed by crane by Facilities & Services personnel through the dome of the observatory May 22 in preparation for transport to Ray Museum Studios in Swarthmore, Pa. The telescope will be renovated by the studios, which will restore the telescope tube, mount and pier, as well as make mechanical repairs to gears and motors, and restore the telescope's appearance. The restoration will be the first since 1954 and will keep the telescope serving as a significant educational and outreach tool.

The renovation is supported by the Friends of the University of Illinois Observatory, a group formed in 2011 by alumni to support the preservation of the campus Observatory, and the Chancellor's Fund, a campus-wide gift fund supported by hundreds of alumni and friends of the university. In 2012, the FUIO committed itself to raising \$50,000 before the 2013 Homecoming for the renovation of the telescope. After a successful beginning to the fundraising effort by the FUIO that raised several thousand dollars (including more than \$1,000 from TCAAers), Chancellor Phyllis Wise directed the Chancellor's Fund to invest in this project to allow the restoration of the telescope to proceed this year. The telescope will return to campus in late August 2013 and be ready for this year's Homecoming Observatory Open House on Oct. 25. For more information, about the observatory, visit <http://observatory.astro.illinois.edu/>.

## EDUCATION/PUBLIC OUTREACH REPORT FOR MAY

The breezy and unseasonably cool evening provided our environment for a fabulous installment of our public observing session on May 11<sup>th</sup>. The early partial clouds did not prevent us from showing a daylight preview of Jupiter and a thin, one day old crescent Moon. John Werner provided a fascinating talk about the various cosmologies that shaped our understanding of the world around us. He talked about how the observations of Ptolemy, Copernicus, and Hubble enlightened and enhanced the theories of the universe, and his demonstration of the expansion of space using balloons was quite effective. Lee Green followed up with a laser-guided sky tour. Members brought eight telescopes and two binocular mounts that provided ample viewing opportunities for the 40 people who joined us for this very successful event.

**Future E/PO events**, in addition to those already scheduled as part of public observing sessions, include the following:

- Saturday, June 1 - SGNC - Heyworth High School Alumni Reunion
- Tuesday, June 11, Gridley Library, Astronomy for Everyone, 7:30 - 9:30 pm
- Friday June 28 – Lake Bloomington - Girl Scout Camporee
- Saturday June 29 – SGNC – Great American Campout
- Tuesday July 23 – Timber Pointe - Association of Horizon
- Friday, October 4 – Dickson Mounds – Master Naturalist Observing Session
- Saturday October 12 - Penny Frehan's Church Group

Lee Green is most graciously coordinating all these events, and assistance is needed by club members to help out. Please put these events in you calendar so that you can assist when Lee calls for help.

## PSO AND MEO UPDATES

On May 6<sup>th</sup>, Bob Finnigan and Carl Wenning spoke with Angela Funk and foundation board member Craig Anderson about moving ahead with the contracts for the construction and lease of the club's two observatories. On that same day, Tom Weiland spoke twice with Linda Bristow. Shortly thereafter Angela Funk gave the "go ahead" to get the architectural plans formally redrawn and sealed. On May 9<sup>th</sup>, Tom Weiland sent the latest versions of the RORO construction contract and lease agreement to Linda Bristow. On May 20<sup>th</sup>, Carl Wenning and Bob Finnigan met with Russell Arbuckle, architect, to go over the latest versions of the observatory plans. Carl noted a need for a few changes, and asked for a list of differences between the Backyard Observatory plans and the drawings made by Mr. Arbuckle. Carl communicated these differences to Backyard Observatories construction leader and asked for an updated quote.

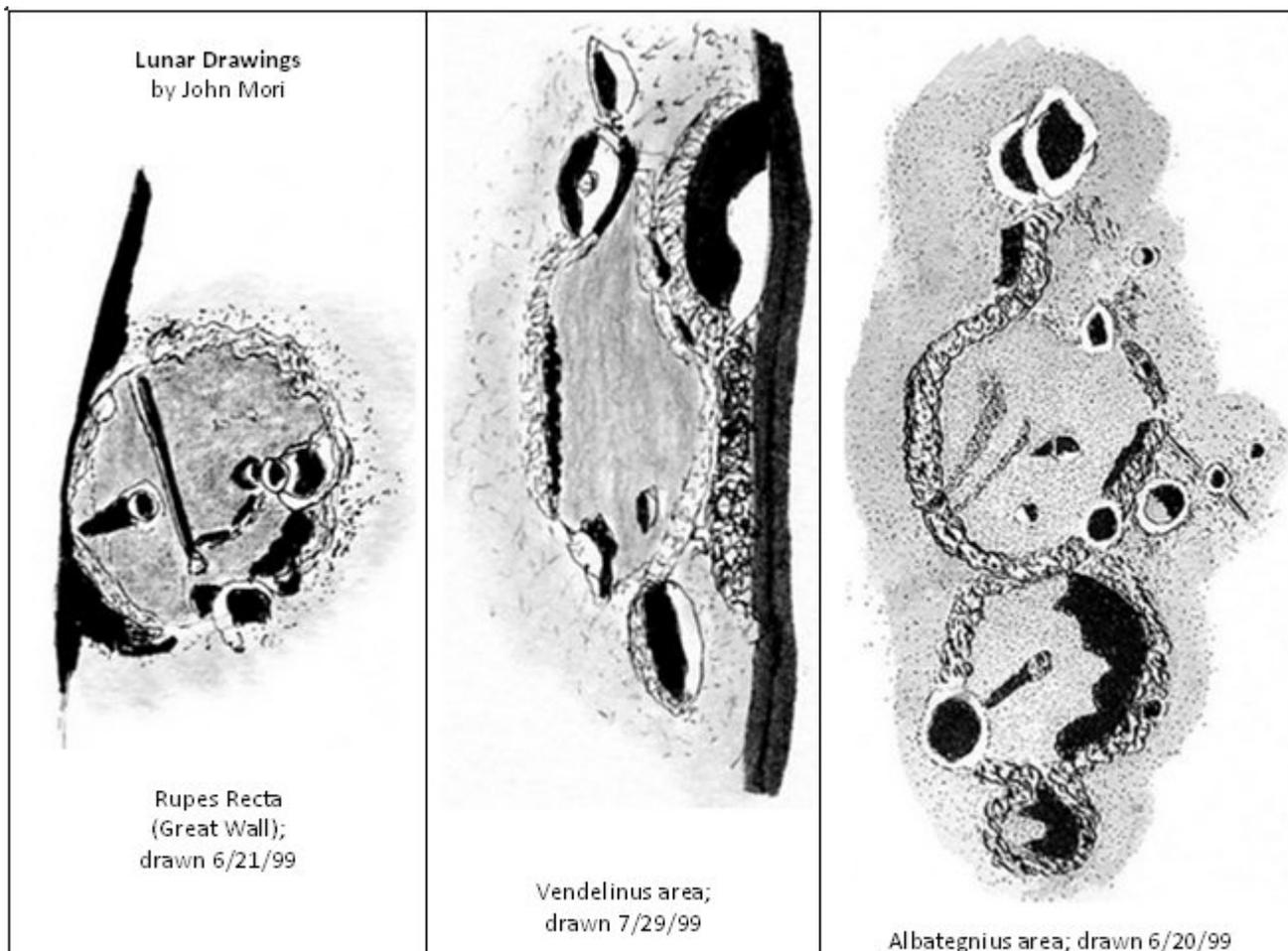
Pursuing the construction permit in anticipation of a signed construction contract and lease, the final drawings for the new RORO were approved and sealed on May 22<sup>nd</sup>, and approved by County Zoning the same day. Waivers subsequently were received from the county for road use, health, and water reclamation. The construction permit was issued by McLean County on May 23<sup>rd</sup>.

Following another brief go around with the lease agreements for the SGNC observatories, a final version of the lease approved by the TCAA Board was sent to Linda Bristow on May 26<sup>th</sup> with the indication that we need to sign the contract by May 31<sup>st</sup>. On May 29<sup>th</sup> President Tom Weiland reported, "Linda has acknowledged receipt of the documents and has indicated she will make copies and begin the signing process. Hopefully those documents will be forwarded to us for our signatures ASAP. It sounds like we have finally reached an agreement that is mutually acceptable to all parties. Great news!"

On Sunday, May 4<sup>th</sup>, Tony Cellini and Bob Finnigan met at Mark Evans Observatory on the IWU campus to provide the third – perhaps fourth – training session. In attendance were Linda French, Lew Detweiler, and one student. They photographed M3 in Boötes to demonstrate the workings of the QSI 8-megapixel-color camera along with the Maxim DL computer program for controlling photographic operations.

## JOHN MORI'S LUNAR DRAWINGS

Another new TCAAer, John Mori, has impressed a number of club members recently with his amazing hand-drawn images of lunar features – some of which are shown below. John notes, “The drawings were made with a Celestron 4" refractor with no drives. This made my drawings a wee bit more difficult to create! Only a few dollars in pencils and pens are necessary.”



Following a renewed interest in astronomy, John has decided to return to lunar sketching. If you would like to see more of his work, visit: [www.flickr.com/photos/lunar1/](http://www.flickr.com/photos/lunar1/). If you click on any photo, you will be able to see the label for the drawing and the date. It turns out that 1999 must have been a very good year for John as most of my drawings were completed during that summer.

John tells us, “Remember that these are just sketches and not refined drawings to scale. Most take 20 minutes or so to complete and require just a few pencils and pens. Drawing teaches me to truly see what is in the eyepiece and benefits me when viewing other objects. The drawings are also done under white light. One needs the light in order to get the correct values of light and dark. Because the moon is so bright white light drawing does not degrade your vision.”

Thanks, John, for your marvelous contributions to the newsletter and amateur astronomy.

## ASTROBITS

- ★ On March 25<sup>th</sup> former TCAA member Darren Drake paid a visit to Carl Wenning. Darren was an active student member during the 1980s. Today he lives in Indian Head Park and is a very active amateur astronomer who works at the Cernan Space Center and runs an astronomy camp for kids up in Michigan during the summer.



- ★ On May 17<sup>th</sup>, Carl paid a visit to former TCAA president Avo Vill who now resides in West Lafayette, Indiana. Avo left the club in 2001 when he transferred to an automotive plant in West Lafayette. He is now retired at 62 years of age. Avo has had back problems for the past few years making it impossible for him to observe though he remains current by reading articles on the Internet.



- ★ TCAAers intent on having their Astronomical League observing club totals updated should contact Carl Wenning via email <carlwenning@gmail.com> with updates by June 30<sup>th</sup>. After returning from

Indonesia, he will try to get these updates to the newsletter editor if he has sufficient time.

- ★ This “star” serves as a reminder that members will need to provide content to our editor if the July issue of *The OBSERVER* is to have much content. Our regular writer will be out of town or otherwise tied up for much of June. Please get your contributions to Erin Estabrook by the end of June.
- ★ Carl Wenning is working with Veyra Software to develop a commercial aurora detector using magnetometers present in cell phones and tablet devices. Carl is looking for an early release of this program. Let Carl know if you would like to be a beta tester for this software. He and programmer Chrystian Veyra were able to detect the impact of a coronal mass ejection with the Earth’s magnetosphere on the evening of May 31<sup>st</sup>.
- ★ Carl observed a blue-white, two-part bolide that reached a magnitude of about -5 on his drive home from Lincoln, IL, on Thursday, May 23<sup>rd</sup>. He was approaching McLean from the south-southwest at 8:51 PM when the double meteor appeared in the northeastern sky moving from south to north. The bolide was visible even though bright twilight was still present.
- ★ The AstroPhysics mount for the club’s optical telescope to be housed in Prairie Sky Observatory (the soon-to-be-built roll-off-roof observatory) arrived on May 28<sup>th</sup>.
- ★ Tim Stone, using Aladin 6.0, has been able to show that the SGO imaging system has been able to record a galaxy at magnitude 22.1! This was using only a 10-minute exposure and binning of 2. What else the current system can reveal? It wasn’t all that long ago that the 200” Hale Telescope at Mount Palomar – then the largest telescope in the world – was able to do the same thing. Simply amazing!

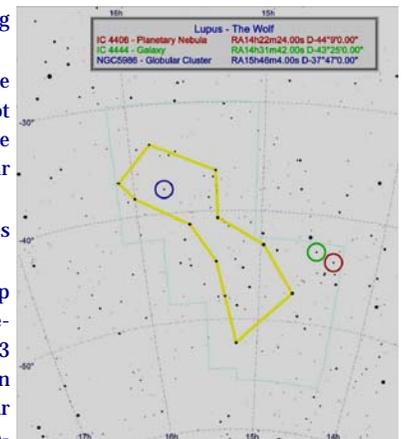
## CONSTELLATION OF THE MONTH: LUPUS—THE WOLF

Lupus is located to the east of Centarus and south of Libra. Lupus is located along the edge of the Milky Way and contains a number of moderately bright stars.

There is little specific mythology about Lupus. The stars in the constellation were always considered to be a beast, such as a lion, panther or leopard, but they were not given the form of a wolf until later. The constellation is most often pictured with the animal bound on a pole being brought by the Centaur for sacrifice on the sacred altar Ara, which is located just to the east.

Astronomically, Lupus is the 46<sup>th</sup> largest constellation covering 334 square degrees and is the 29<sup>th</sup> brightest. Lupus reaches opposition on May 11.

Since Lupus is located at the edge of the Milky Way, it contains a variety of deep space objects. Galaxies are found on the western side of the constellation and are represented by IC 4444, NGC 5643. There are planetary nebulae such as IC 4406, NGC 5873 and NGC 6026, as well as the Dark Nebula Barnard 228. Several globular clusters can also be found such as NGC 5824, NGC 5927 and NGC 5986. Just west of the delta star is an eclipsing binary star dubbed GG-Lupi. Also found is star GH-Lupi which is a Cepheid variable.



# TCAA Treasurer's Report – May 2013

---

OPERATING FUND BALANCE – April 30, 2013 - \$ 2,007.91

Income

Mark Boulware (Dues) - \$ 40.00

Randy Gleason (Dues) - \$ 41.00

Patrick Murphy (Dues) - \$ 41.00

Expenses

LYB Inc. (Observer copies & postage) - \$ 27.08

IL Charity Bureau Fund (state tax return) - \$ 15.00

Redbird Catering (Annual Dinner) - \$ 292.48

PayPal (Randy Gleason) \$ 1.20

PayPal (Patrick Murphy) \$ 1.20

OPERATING FUND BALANCE – May 31, 2013 - \$ 1,792.95

---

OBSERVATORY FUND BALANCE – April 30, 2013 - \$ 4,114.52

Income

None - \$ 0.00

Expenses

None - \$ 0.00

OBSERVATORY FUND BALANCE – May 31, 2013 - \$ 4,114.52

---

TOTAL TCAA FUNDS – May 31, 2013 - \$ 5,907.47

---

Respectfully submitted,

L. Duane Yockey, Treasurer

## 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 club history (<http://www.tcaa.us/History.aspx>) or in **The OBSERVER** archive found on the club's web site (<http://www.tcaa.us/Observer.aspx>).

### 50 Years Ago

June 1963 – Hank Janecek and David Williams held an observing session for some 60 Girl Scouts at Colfax, IL. They used John Kieviet's homebuilt 6-inch reflector and a pair of binoculars. John and Hank were interviewed on the hour-long WJBC *Morning Show* on the June 24<sup>th</sup>. The focus was the July 20<sup>th</sup> solar eclipse.

### 25 Years Ago

June 1988 – Purchasing its first official telescope, the club received an 80mm refractor on June 24<sup>th</sup>. Funding for the telescope became available after plans for building a public observatory at Lake Evergreen were scrapped due to the County Board's unwillingness to allow club use of the facility after 10 PM without advance notification.

### 10 Years Ago

June 2003 – Carl Wenning gave a talk to the club about the soon-to-open Challenger Learning Center in the former terminal building of the Central Illinois Regional Airport. Jim Swindler continues to write feature articles relating to history in his series *Through the Looking Glass*. This month he focused on Kepler's kinematics.

## MISSING OUT ON TCAA ACTIVITIES & EVENTS?

If you are missing out on club activities or celestial events, be certain to join the TCAA listserv. Many activities are planned at the last minute, and announced only hours in advance through the club's listserv. Reminders about celestial events are also broadcast to the membership through the club's listserv. To join this free service by Yahoo, send a blank email to [TCAA-subscribe@yahoogroups.com](mailto:TCAA-subscribe@yahoogroups.com). Unsubscribing is just as easy. To unsubscribe, just send a blank email to [TCAA-unsubscribe@yahoogroups.com](mailto:TCAA-unsubscribe@yahoogroups.com).

To keep up to date on celestial events not described in *The OBSERVER* or addressed in the listserv, visit Carl Wenning's observing page at [www.phy.ilstu.edu/~wenning/observing\\_page.htm](http://www.phy.ilstu.edu/~wenning/observing_page.htm). It has been recently updated to include an extended sky calendar of events as well as additional space weather and satellite viewing links.

---

### The OBSERVER

Newsletter of the TCAA, Inc.

Erin Estabrook, Editor  
314 Covey Court  
Normal, IL 61761

Are your dues due?



### The Dues Blues?

**If you see a check in the box above, it means your dues are due. To retain membership, please send your dues renewal to our esteemed Treasurer:**

**Duane Yockey  
508 Normal Avenue  
Normal, IL 61761**