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## A NOTE FROM PRESIDENT TOM WEILAND

Carolyn and I were in St. Louis recently had took the opportunity to visit the Saint Louis Science Center. It was a Saturday and quite busy with many families enjoying the facility and its exhibits. I was intent on visiting the James S. McDonnell Planetarium which is celebrating its 50<sup>th</sup> anniversary. Originally constructed in 1963, it temporarily closed in late 1983 to prepare for a merger with the Museum of Science and Natural History then located in Oak Knoll Park. In July 1985, the renewed facility opened as the Saint Louis Science Center

Since the James S. McDonnell Planetarium's doors opened on April 16, 1963, more than 18.5 million people have experienced a connection with astronomy, space exploration and aviation through a visit to this iconic structure. That sounds like a lot of people (and it is), but on the day we were there the live astronomer program we attended was viewed by 70 people in a space that would accommodate over 200. In comparison the five-story OMNIMAX theatre, which was showing a program on mummies, was at its capacity.

The lesson here is that the interest in astronomy still exists, our challenge is to draw people to our events by making them interesting and exciting, and by utilizing all the "gizmos" available in our astronomical arsenal. I believe we are on the right track....we just need to keep spreading the word.

On a related note, while monitoring the concrete framing at the RORO site, one of the concrete workers asked if we had a spare extension cord they could use. As we looked through the observatory for a cord he said "So you've got a big telescope up there?" That was an opening I couldn't resist. A quick tour, a look at some of the pictures on the walls, and a POS brochure placed in hand on the way out. Another visitor to a POS some night.....Perhaps!

Clear skies!!

## ROLL-OFF ROOF OBSERVATORY DOCUMENT SIGNING AND "GROUNDBREAKING"

A members-only document signing and "groundbreaking" ceremony was held prior to the June 8, 2013 Public Observation Session. This event marked the culmination of many months of negotiation and clarification with the Funks Grove Cemetery Association. With these documents in place construction of the Roll Off Roof Observatory (RORO) were ready to begin in earnest.

President Tom Weiland signed off on the Lease Agreement as the representative for Twin City Amateur Astronomers (TCAA). This agreement will cover both the Sugar Grove Observatory (our current structure) and the Prairie Sky Observatory (the new RORO). This new agreement will be in place for 15 years and will automatically renew for 5 year periods thereafter unless notified by Sugar Grove Foundation that they intend not to renew.

The Construction Contract was signed by major donor Carl Wenning. This document covers the details regarding the construction methods and materials of the RORO. This document will terminate upon completion of construction and the approval and acceptance by those involved in the agreement as well as the appropriate governmental authorities. This document was also signed by President Weiland as a representative of TCAA.

Several photos were taken to commemorate the signing. Although no ground was actually broken, a group photo of members holding a golden shovel provided an opportunity to mark a momentous moment in TCAA history.

Members Tom and Carolyn Weiland provided cookies and punch to celebrate the historic occasion. This event was attended by a nice representation of both long time and new members.



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.

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### **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

## **PROFILES IN AMATEUR ASTRONOMY: JOHN MORI**

John Mori is a new TCAA member living in Morton, Illinois. For the 17 years prior to his retirement he was employed by West Virginia University as the Director of the National Environmental Services Center (NESC). NESC is a national (and international) clearinghouse, technical assistance, and training center (funded by EPA and USDA) which assisted small communities regarding clean water issues. Prior to his retirement, the center had a staff of 50 with approximately 30 graduate students.

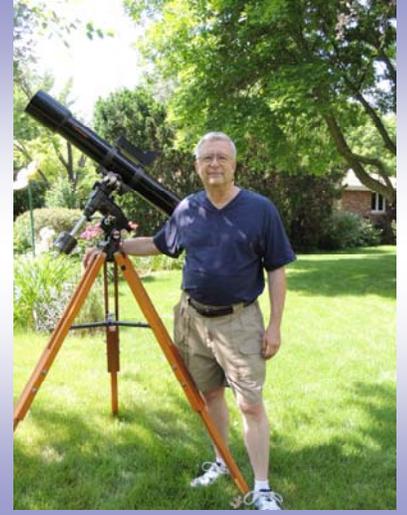
After John and his wife moved to Morton about 8 years ago, John belonged to the Peoria Astronomy Society for a year or so, but began to be less interested in deep sky observation. He continued observing solar and lunar phenomenon from his yard, but recently began to miss the companionship of fellow astronomers. He knew of the TCAA's existence, and decided to join the club. A Google search provided all the information. Helping along was the fact that John sold his Meade 8" LX200 to Tom Weiland and they discussed the TCAA at that time. As John noted later, "I appreciate that the TCAA is primarily an observing organization with a strong commitment to community education."

John had a few early experiences that pushed him toward astronomy. As a child, "I remember frequently sitting on my back porch and looking at a full moon. We were also taught some of the constellations in grade school and I remember very well picking out Cassiopeia on a winter's eve and proudly showing it to my parents. In high school we made a field trip to the Field Museum and I remember buying a book on radio astronomy (much over my head). During high school I read every issue of *Scientific American* that our library had from cover to cover, and it frequently had articles on astronomy." John believes that his biggest reason for becoming an amateur astronomer was curiosity. "There was a lot of breaking news some 20 plus years ago regarding cosmology yet I had stayed away from astronomy because of its apparent difficulty. I finally just decided I would do what it took to learn as much as I could about astronomy. All it required was determination."

As an adult, John once again became interested in amateur astronomy. "My keen interest in astronomy developed while working at West Virginia University. I began with the 4-inch Celestron, but moved quickly to an 8-inch Meade SCT. My interest in lunar and solar observing and sketching began then, but I spent a lot of time learning the sky and observing open clusters. I also spent a lot of time with my IT Director on the side of a mountain looking at what I call "sky candy" and just searching and learning the sky. He used a 12" Newtonian. Boy, did we have fun!"

John considers himself first and foremost a visual astronomer. "I find that drawing and sketching makes me a better observer and I have stayed away from astrophotography for that reason. I do love the astrophotos and I admire all who pursue that aspect of the hobby but it is just not for me. I have five instruments, each of which reflects my current interests and approach. The most recent purchase is an f/8 Celestron six-inch achromat. A six-inch scope is considered nearly ideal for lunar work (at my level) given that larger scopes increase the chance of cells of air disturbance. The second is an older four-inch Celestron f/10 achromat made by Vixen, and the third is a Coronado SolarMax 40mm H $\alpha$  scope. I have a retired old Unitron f/12 refractor that I still use occasionally for white light solar viewing. Its long focal length really brings out those sunspots. With this cycle it is really enjoying its retirement! My last instrument is a fine pair of Fujinon 16x70 binoculars. Their wonderful flat field views provide glimpses of the universe that a telescope cannot. It is a wintertime favorite instrument because it is so easy to set up and use. But there are fine views in Perseus and Sagittarius and other areas of the sky as well throughout the year."

John's primary interests are lunar and solar astronomy. He has never had to leave his yard to pursue these interests (even in a terribly light polluted Morton). He noted, "This is important as I continue to age." He also noted, "My first and foremost goal is to continuously learn how to 'see' better. That is why sketching is such an aid. My second goal is to continue to strive to understand what I see-its origin and evolution. And my third goal is to continue to appreciate it all. In terms of narrower aspirations, I want to immerse myself further in lunar work. Studying the moon is a perfect way to keep my aging mind active by mastering detailed information. It is a fine subject for sketching and seeing. I try to view solar activity each day and I again sketch in white light and H $\alpha$ . I am now looking into double stars as another possible interest that would allow more dark sky viewing and I will continue to seek out and enjoy open clusters. But I have no formal goals for these interests right now. You do need to have alternatives when the moon is hiding!"



# AL OBSERVING PROGRAM STANDINGS— QUARTERLY REPORT

Below is a listing of the status of active TCAA observers pursuing AL observing programs reported as of June 30<sup>th</sup>. But first, here is a summary of some of some recent observing successes:

- ★ Carl W. commenced work on the AL's Carbon Star observing program on April 1. By April 3 he had observed 48 of the required 100 stars.
- ★ William C. has been adding to his asteroid count..
- ★ Dave O. has been working on the Analemma Project. According Dave, "I had to restart because I miscalculated the observing time, so it will be next spring before this is done." All observing projects are learning exercises, so we are all bound to make a mistake from time to time. Thanks, Dave, for not giving up.
- ★ Illinois Governor Pat Quinn has signed a proclamation marking August 11-17 as the first ever *Starlight Week*. See <http://www.gadboisproductions.com/cas/audrey/audrey.html>
- ★ Brian Barling reported on June 6<sup>th</sup> that he has now observed 389 of the required objects for the Herschel 400 Club. This is 26 more objects than reported two months earlier.
- ★ Carl W. was recognized in the June issue of the AL *Reflector* for having earned the only Herschel II award during the past three months (certificate number 82-DA). He will receive his certificate and pin at the TCAA's August picnic.

If you would like to have your information included in next October's listing, be certain to forward your observing totals to Carl by the end of September. 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. Our next AL observing award presentation will be at the summer picnic held this year in August.

<b>Astronomical League Observing Club</b>	Brian Barling	William	Lee	Dave	Carl	Duane
Asteroid Club 25/100		(60)*				
Binocular Double Star 120		(120)				
Binocular Messier 50		(100)	(72)	(59)	(78)	54*
Caldwell 70/109					34	
Carbon Star 100					48	
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					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			(107)*	
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			(***)		(***)	

(Continued on page 6)

## EDUCATION/PUBLIC OUTREACH REPORT FOR JUNE

June was a good month for the club with several opportunities to talk with people and share with them our love of astronomy. Saturday June 1, we visited the Heyworth High School Reunion that was being held at the Nature Center. While there we dozens of people present at the event, the skies did not cooperate. Lee and William were prepared to show some sights, but the clouds prevented us from being effective.

We had a little better luck at the June POS when Tom Weiland gave our presentation on Astronomical Curiosities of Saturn. We had nearly 40 visitors and 15 members present. With spotty clouds, Lee set up the solar telescope for some early viewing and switched to visual later. William also had his scope set up and we made a good show of it with limited clear spots between the clouds.

Tuesday June 11, William and Lee travelled to Gridley to assist with a program held by the Public Library. Dr. Kevin Manning, a former consultant to NASA, brought his Look Up to the Stars program to the library. Telescope viewing was provided courtesy of the TCAA. Over 40 people enjoyed the program and we were gratified by having the clouds clear enough to show Saturn in all its glory.

On Thursday June 13, Lee hosted the 4-H Family Astronomy Night at the Nature Center. He presented an introduction to astronomy for the 4-H Youth Development program at the University of Illinois Extension. There were 50 people in attendance with many kids for the presentation, telescope viewing, a sky tour and a tour of the observatory. William was manning the second telescope for viewing, while Bob and Tim were working in the observatory.

On Friday June 14, overcast skies hung heavy over the event at the Kentuckiana Kampground (a beautiful setting with capacity for 1300 motorhomes) near Hopedale, Illinois. But the clouds were light and we were able to see the Moon and all were surprised by the amount of detail visible. Lee set up the planet walk as our alternative activity. As we were preparing to depart from the terrestrial planets, Saturn shined through the clouds, so we viewed it while the opportunity presented itself. With many brightly decorated golf carts, we were able to follow through the whole solar system and he spoke at each point about the planet. Several of the kids were well informed and kept him on his toes.

Friday June 28, Lee spoke at the Girl Scout Camp-o-ree held at Camp Peairs at Lake Bloomington. 70 people attended the weekend event. William joined Lee and two telescopes were used to view Saturn and other celestial objects.

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

- Tuesday July 23 – Timber Pointe - Association of Horizon
- Friday, October 4 – Dickson Mounds – Master Naturalist Observing Session
- Friday, October 4 – PSO and SGO Open Houses – meeting of the Illinois Section of AAPT.
- 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.

## JUNE 8, 2013, PUBLIC OBERVING SESSION

The evening looked like it might be a washout for viewing with an afternoon full of cloudy skies, but Lee and William were optimistic and set up their scopes anticipating some clearing later in the evening. About 40 guests were in attendance for Tom Weiland's presentation on "The Astronomical Curiosities of Saturn." Based on comments from several guests, Tom's presentation was well received. The skies, although occasionally hazy from a thin passing layer of clouds, did clear enough to allow everyone to see Saturn and a few other deep sky objects through the two scopes that were set up. Lee and Dave also provided laser guided information about some of the constellations that were visible.

Tim and Bob were in the observatory giving tours of the facility, showing guests the 17 inch Planewave, and providing 9 young people with the opportunity to drive the scope and take pictures of deep sky objects. Those objects included M13, M51, M57, and M101. (See accompanying examples of these budding astrophotographers.) The pictures were formatted so that the images could be sent to them for printing at home. This has been a well received addition to our Public Observation Sessions.

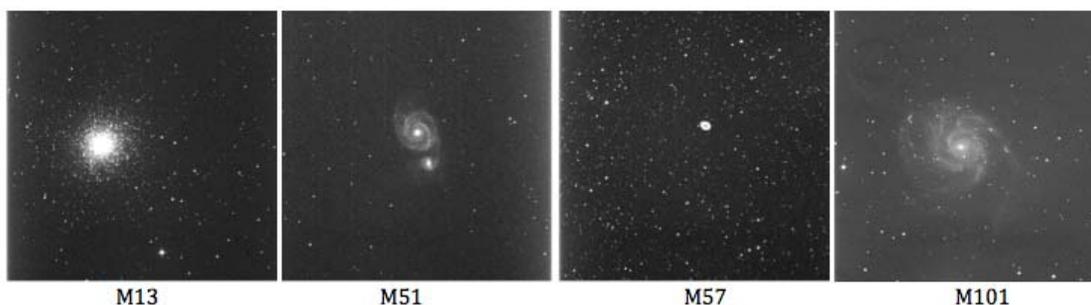
Prior to the observing session, a members-only document signing and "groundbreaking" were conducted to celebrate finalizing the Construction Contract and new Lease Agreement for the Roll Off Roof Observatory. An article elsewhere in the Observer covers this event.

We received assurance from many in attendance that they would return hoping for clearer skies and would bring others along. As always, thanks to everyone who made the evening so successful.

## A NOVEL (AND SUCCESSFUL) IDEA FOR MEMBER RECRUITMENT

The June issue of the Astronomical League's *Reflector* had a series of articles about how best to recruit new members into what some see as the "aging" hobby of amateur astronomy. Now, one of our members has come up with a great idea that seems to have resulted in recruiting several new TCAA members including families with youngsters. It is so revolutionary, that the TCAA should contribute an article to the *Reflector*.

Starting with the April 2013 public observing session, Tim Stone put into action an idea that he had about increasing public interest in the offerings of the TCAA. During that public session, he invited several youngsters – including our own Bryce Heineger – to sit down at the computer controller of the 17" SGO telescope and take photographs. Bryce was just bubbling over with enthusiasm after it was all over, having taken his first picture of M51, the Whirlpool Galaxy. Now this new project has taken on a life of its own, and includes both children and adults. At the June POS, 10 photographs were taken by children and a few adults. The images (examples shown below) were emailed to those new "citizen scientists" following the observing session.



What a novel idea! It develops a burst of enthusiasm among prospective members, and helps them to see that the process of astrophotography isn't all that difficult at all (it's the post processing that really takes the effort). Considering the fact that even as children they can have access to equipment that that vast majority of amateur astronomers can only dream about, the potential for gaining new memberships through this avenue is substantial. With such an enthusiastic response from children and adults alike to this very simple idea, the concept of holding formal classes to introduce the public to astrophotography seems better than ever.

## FIFTH 2013 POS JULY 6<sup>TH</sup>

The following is a list of public observing programs for this year. The next event is on Saturday evening, July 6<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 sessions, 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
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

## PSO AND MEO UPDATES

The re-drawn and modified architectural plans for the RORO were signed and sealed on June 1<sup>st</sup>. The cost for doing so, amounted to \$965.25 and was paid on June 3<sup>rd</sup>. Craig Anderson of FGCA and Linda Bristow of SGNC Foundation signed off on the club's construction contract and lease agreement on June 3<sup>rd</sup>. President Tom Weiland picked them up from Linda on June 4<sup>th</sup>. On June 7<sup>th</sup>, Tom, Bob, and Carl met with Angela to work out a construction schedule, confirm proper insurance coverage, materials placement, and so forth. The club held a signing and ground breaking ceremony immediately prior to the POS on June 8<sup>th</sup> (See related article on page 1). Bob and Carl met on June 10<sup>th</sup> to discuss needs for data and electrical conduits beneath the concrete work, and then purchased the required materials and delivered them to the observatory site.

## ASTROBITS

- ★ On Thursday, June 6<sup>th</sup>, Troy and Logan Berg, Bob F. and Carl W. attended an astronomy colloquium at Illinois Wesleyan University. They watched as Dr. Todd Henry from Georgia State University spoke about finding planets and low mass stars within 25 parsecs (about 80 light years) of the solar system. His study group has been using a 0.9-meter telescope at Cerro Tololo Interamerican Observatory in Chile. They have been quite successful, especially with finding red dwarf stars. Their work has increased the number of nearby red dwarf stars dramatically.
- ★ Vieriyssoftware's aurora alert app for cellphones and tablets (in development) detected a coronal mass ejection (CME) impact on the evening of June 7<sup>th</sup>. At that time, Earth passed through a region of south-pointing magnetism in the solar wind. This triggered a G2-class (Kp=6) geomagnetic storm. Auroras were visible as far south as Kansas that night.

## CONSTELLATION OF THE MONTH: DRACO—THE DRAGON

Draco is a large northern constellation that winds itself around the pole. Draco passes between Ursa Major and Ursa Minor, around to Cepheus before turning to nip at the heels of Hercules. Draco is best viewed in the summer months.

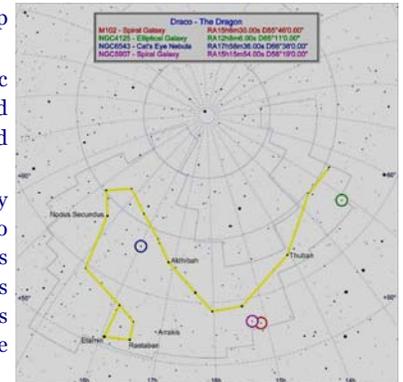
In mythology, the dragon was one of the Titans who waged war on the Olympic gods. Minerva, goddess of wisdom, fought the dragon and grabbed it by its tail and hurled it into the heavens. The dragon became tangled in the spinning pole region and froze there.

Another story concerned Hercules labor to retrieve the Apples of Hesperides. Only the giant Atlas could retrieve the apples which were guarded by a fearsome dragon, so Hercules bore the weight of the world while Atlas retrieved the apples. When Atlas returned, he intended to leave the world on Hercules shoulders. Hercules asked Atlas to take the world back so that Hercules could put a cushion on his shoulders. Atlas agreed, but Hercules reneged on his promise and left Atlas with his burden, taking the apples.

Draco is the 8<sup>th</sup> largest constellation covering 1083 square degrees. It is the 25<sup>th</sup> brightest constellation and reaches opposition on June 10.

The stars at the head of Draco are among the brightest in the constellation. Several of these are named. Rastaban and Eltanin are the head. Thuban lies along the body between Ursa Major and Ursa Minor. Readers of Frank Herbert's Dune books will recognize mu-draconis which is called Arrakis.

Draco lies away from the Milky Way and contains a large number of bright and interesting galaxies. NGC5866 is thought to be one of the missing Messier objects and is often referred to as M102. NGC4125 is a bright elliptical galaxy with a dim, nearby companion, NGC4121. NGC5907 is an edge-on spiral galaxy with a visible dust lane. NGC6543 is a planetary nebula called the Cat's Eye Nebula that has a very complex structure.



## AL OBSERVING PROGRAM STANDINGS—QUARTERLY REPORT (CONT.)

*(Continued from page 3)*

\* 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 summer picnic and the February Annual Meeting.

# TCAA Treasurer's Report – June 2013

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

Income

Libby Norcross (Dues) - \$ 26.00

James Meeker (Dues) - \$ 41.00

Expenses

LYB Inc. (Observer copies & postage) - \$ 43.64

Astronomical League (annual dues) - \$ 200.00

PayPal (Libby Norcross) - \$ 0.83

PayPal (James Meeker) - \$ 1.20

OPERATING FUND BALANCE – June 30, 2013 - \$ 1,614.24

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

Income

None - \$ 0.00

Expenses

None - \$ 0.00

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

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TOTAL TCAA FUNDS – June 30, 2013 - \$ 5,728.76

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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

July 1963 – The club help a private viewing session at the home of Hank Janecek on July 20 to view a partial solar eclipse. Six telescopes were set up, and a “whose who” of early club members attended. Weldon Schuette had left town to view totality from Quebec, but had car troubles along the way. He viewed the eclipse from Indiana.

### 25 Years Ago

July 1988 – The club's monthly meeting held on the 16<sup>th</sup> featured the talk, “Enjoying Meteor Showers.” Using the equipment of the ISU Planetarium, Don Johnson showed how to trace several meteor paths backward in order to determine the radiant. Rebecca Wenning reported that “Saturn looked like a pickle last week.” The meeting was interrupted by a lunar occultation of Regular at 9:04:30 PM which members were able to observe.

### 10 Years Ago

July 2003 – On the 26<sup>th</sup>, the TCAA hosted an SGO Alignment and Collimation Clinic. The clinic, presented by Sandy McNamara, addressed techniques in the care and management of telescopes.

## 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@yahogroups.com](mailto:TCAA-subscribe@yahogroups.com). Unsubscribing is just as easy. To unsubscribe, just send a blank email to [TCAA-unsubscribe@yahogroups.com](mailto:TCAA-unsubscribe@yahogroups.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.

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### 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**