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PRESIDENT'S MESSAGE: 2010 IS COMING

By Lee Green

Time flies when you're having fun! Did you know that the TCAA was established in 1960? Nearly 50 years have passed and we're still here serving the community and sharing our love of astronomy.

With our 50 year anniversary just a few years away, we have volunteered to host the 2010 meeting of the North Central Region of the Astronomical League. This will be a big event in celebration of our club anniversary and is a fitting tribute to all past and current members who have contributed so much to the club. While this seems like a long way off, it's not too soon to start preliminary planning on the event so we will have ample time to promote it as we approach that date.

One way we are planning is by considering an update of the most visible symbol of our club - our logo. We use the logo on our letterhead, newsletter and web site to provide recognizable identification, telling at a glance who we are and what we do. While the logo we have is very nice, we felt that a new logo might offer a more modern and compelling symbol. While we have not made a decision to change the logo, we felt that we should consider the idea and would welcome all members' comments.

This is an opportunity you to get involved with your club in a new and creative way by helping in the quest for a new image. If you have any ideas or thoughts about a new symbol for the club, please post them on the message board or send them to your favorite board member. This could be a suggestion, an idea, a sketch or a complete logo design.

The club needs your help and I would ask each member to consider this and make any suggestions you can. Together we can make a difference.

PERSEID METEOR SHOWER OBSERVING SESSION SLATED

Each August 11th Weldon Springs State Recreation Area just southeast of Clinton, IL, holds an all-night public observing session for the Perseid meteor shower. TCAA members Sameer and Meghana Deshpande, Kent Ferguson, Carl Wenning, and Sheri Rodgers along with her sons Brent and Blake were in attendance at this event last year, and joined approximately 30 other observers from the general public. They enjoyed treats provided by SRA's naturalist Carol Thompson, and took pleasure showing attendees celestial objects using a C-8 telescope that Carl had brought along. Unfortunately, the moon was near full phase that night, and few meteors and other celestial objects were observed. A small campfire was burning for those who wanted to make S'mores.

The 2007 event promises to be much more rewarding. If the sky is clear, a 2007 Perseid meteor watch will take place on Saturday night, August 11th, beginning at 10 p.m., in the Meadowview Picnic Area on the east side of the park. The moon is just before new phase at this time, meaning that the possibility of an all-night observing session is real. The 29-day-old moon won't rise until 4:20 a.m., which is about 1.75 hours before sunrise and essentially the beginning of morning twilight. Sunrise on August 12th occurs at 6:04 a.m.

By agreement of the TCAA Board of Directors, the August 11th MOOS has been supplanted by this event. TCAA members can still make telescope observations and watch meteors with their unaided eyes at SGNC on August 11th on their own, but the

formal TCAA event for that evening has been shifted to Weldon Springs SRA.

As with last year, a car caravan will depart from the Sale Barn just west of US 51 on the south side of Bloomington at 9:00 p.m. sharp. Please plan on arriving at the Sale Barn by 8:45 p.m. For those who do not know the location of Weldon Springs SRA, and especially the Meadowview Picnic Area within the park, it would be best to join the car caravan. You might not otherwise find the observing area. In the event of an overcast sky, the event will be rescheduled for Sunday evening, August 12th. For more information, contact the field trip coordinator, Carl Wenning, at (309) 830-4085 (cell phone) which he will have with him on the night of the meteor shower and deep sky observing session.

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HISTORY OF THE TCAA: PART 4

By Carl J. Wenning

Historian's note: Beginning with the article, "The Origin of the Twin City Amateur Astronomers" in the May 2007 issue of The OBSERVER, TCAA Historian Carl Wenning began chronicling the history of the club. He will continue this series, culminating with the 50th anniversary of the club in 2010.

With the passing of the years, TCAA members kept up their chosen mandate of being an entity dedicated to public service. Numerous star parties were held for Scouts and also for the general public. Membership swelled to a high in 1963 with 53 persons comprising the club, and many of these members undertook observing projects on their own. On July 20, 1963, a partial solar eclipse observing session at the home of Hank Janecek was attended by some 15 club members. Robert Courtney went to Maine to observe the total phase of the eclipse, while Dan Hovis (a traveling salesman from Belvidere, Illinois who happened to be in the Twin Cities every Thursday evening for club activities) went to Canada. Weldon Schuette also attempted traveling to Canada but was prevented from doing so by car trouble. He observed a partial eclipse from Indiana.

Observing the sky was an obsession for some, especially with the younger members. On the night of July 29, 1963, Lyle Rich and three other club members observed the Delta Aquarid meteor shower. Lyle observed and recorded 106 meteors alone. The observations formed the basis of a short article that appeared in the September 1963 issue of *Sky & Telescope* magazine. Beyond meteor observations, numerous magnitude estimates continued as part of an ongoing observing program. Beta Lyrae was the subject of 66 observations completed by David Williams, Mike Ryder, Hank Janecek, Warren Light, Bill Blunk, and Lyle Rich. The observations and the club's observing project were the subject of an article prepared for *Review of Popular As-*

tronomy in the July 1964 issue. Observations were also made of comets Alcock, Humason, Ikeya-Seki, and Nova Herculis.

There were numerous opportunities to observe the heavens. Besides the observatory equipment in Peoria, club members obtained access to Illinois Wesleyan University's Behr Observatory (on the current site of the Mark Evans Observatory). After a professor at IWU by the name of Paul F. Brace departed in 1961, astronomy classes at that institution were discontinued. As a result, the Behr Observatory, which contained a 6.25-inch refractor, fell into disuse for several years.

With the arrival of a new instructor of astronomy, Dr. Ray Wilson, in October 1963, things began to change. Under the auspices of Dr. Wilson, Barry Beaman (future president of the Astronomical League, 1997) and David Williams (future president of the AAVSO, 2006-2007) refurbished the aging equipment. These efforts were rewarded by a chance to observe a lunar eclipse from the observatory shortly thereafter.

By the summer of 1964, the club had its observatory. With Bob Mayo as "prime mover," the first club observatory was built on the Fred Fissel farm on the top of the ridge just northeast of Normal. Mr. Fissel, Bob's friend, "loaned" a plot of land for the observatory on the condition that the club membership maintain it and the surrounding area. The membership agreed to do this. Using scrap wood from an abandoned barn, club members worked from late 1963 through the summer of 1964 to build a roll-off-roof observatory. It housed an 8-inch home-built reflecting telescope put on loan by Mr. Mayo. The observatory was officially opened on the evening of June 12, 1964, and was preceded by a picnic that subsequently has become an annual tradition.

CLAUDIO PÉREZ VISITS SGNC

Unfortunately, Saturday, June 30th, was a poor one for observing, so I hope that no TCAAer went to SGNC to wait for observing with Claudio Pérez from Chile. If anyone did show up and was disappointed, I apologize. With a poor sky during the day and early evening, we decided on another activity while driving outside central Illinois.

Upon returning to McLean County at about 10:30 p.m., we decided to detour to SGNC. We reached SGNC at about 11:00 p.m. and took a quick tour. We did see very poor views of Jupiter and the Moon through passing clouds. Nonetheless, Claudio was very much interested in viewing the heavens, and was quite impressed with our observatory. He then told me that he will soon have access to a Meade 14" "goto" telescope at UMCE in Santiago, Chile. The observatory has just been constructed and the telescope will be installed very soon. While the telescope is located in the middle of a city of 6 million, very good views of the night sky are visible from town due to the fact that Chileans do not illuminate the night sky with exterior lighting the way Americans do.



MINUTES OF THE JULY 18TH BOARD MEETING

President Lee Green called the Board meeting to order at 6:35 p.m. in the offices of LYB, Inc. Also in attendance were Terry Wright, William Carney, Carl Wenning, Dave Osenga, Mike Rogers, and Duane Yockey. Arriving later were John Werner and Brian Barling. The following old business matters were first addressed:

- Lee thanked Duane and Carl for securing the NCRAL 2010 conference confirmation for the TCAA.
- Mike gave a quick review of recent education and public outreach events at Pontiac and Bloomington. (Details are provided elsewhere in this issue of *The OBSERVER*.) He also noted that the Odell Public Library presentation will be on July 23rd at the ball diamond at 9:30 p.m. if the sky is clear, or in the Library if the sky is overcast – perhaps earlier in the evening.
- Lee summarized the completion of recent shelving improvements at SGO, and provided Duane with a bill for materials.
- The Meade service contract has been taken care of for the SGO 12-inch telescope, costing \$304.98 which includes one year of “Sky Assurance” and 3-way shipping for the return of the telescope. A discussion then ensued about the advisability of returning the telescope for repair at this time. William noted inaccuracies in pointing and tracking due to slippage in the altitude gearing; Carl pointed out the danger associated with the “China syndrome” and remarked that the hand controller was hard to use and was in need of replacement. Dave moved and William seconded that the LX200 be returned at this time, and that a new hand controller be purchased if necessary. The motion passed unanimously. William, with the assistance of Lee, will ship the telescope back to Meade as soon as the shipping crate from Meade arrives.
- Carl asked about the disposition of the “monstrous” Millikin University video projector that appears to be unwanted and clutters the SGO storage room. Lee will ask Dan Miller about removing it, as well as the television set sitting atop the C14 case at the top of the stairs in the observatory.
- Mike summarized advancements on the membership card and sought additional input from the assembled members. In the end it was agreed to wait on the membership card until a new “21st century” TCAA is developed (see below).
- Duane will contact the Bloomington and Normal Parks & Recreation Departments about updating TCAA information in their annual publications.
- Mike will contact Karen Moen at Bloomington Public Library about formalizing presentations for October (How to buy a telescope) and January (How to use a telescope).
- Carl reported that Mike Miller had requested regular public observing sessions at Lincoln College in north Normal, but that Mike had not provided required information. Despite this, Carl, at the suggestion of Mike Rogers, will pursue astronomical events worthy of public in-town observing sessions between now and the next few months where TCAA “sidewalk amateur astronomy” events might take place.
- Carl reported that he has arranged a 4-part, adults-only course in amateur astronomy through Heartland Community College at the prompting of SGNC. The January course will cost \$60 per person with \$15 going to HCC for promotion, registration, room use, etc. Profits will be turned over to the TCAA. Trips to the ISU Planetarium and SGO will be included.
- For the record, Carl noted that the V. M. Slipher Fund no longer exists.

The following new business was then addressed:

- The 2010 NCRAL meeting needs to be planned; Dave noted that an ad hoc planning committee should be established. It was agreed. Carl, Duane, Dave, and William will serve on this committee, with Carl as chair. Lee charged the committee to “develop a plan for the conference, a statement of intent, a vision, a list of tasks...” for conducting the meeting. (John noted that he as a friend associated with the Hubble Space Telescope, and this person might be able to provide a talk.) It was agreed that a web page and publications need to be prepared, for earliest distribution at the 2008 NCRAL meeting.
- Carl asked those assembled to contribute to Profiles in Amateur Astronomy. He noted that Duane and William have been featured to date, and that Brian and Lee will be featured next.
- Carl noted that potential exists for club trips to Chile (December 2007 to observe the southern sky) and China (August 2008 to view the total solar eclipse), and that he is hoping to travel to both with TCAAers possibly joining in. Details will be provided as plans are worked out.
- It was agreed that the August MOOS planned for SGNC will be transferred to the Perseid Meteor shower observing session at Weldon Springs SRA on August 11th. (See details elsewhere in this issue of *The OBSERVER*.)
- Lee brought up a draft outline of a 5-year plan for the TCAA addressing four topics: (1) improving membership services, (2) improving club identity and presence, (3) expanding our web site with additional features, and (4) improving fund raising. With respect to several of these points Terry pointed out it would be nice to have a new logo and make it available on all sorts of things available from T-shirts, to jackets, to flags. Carl noted that it would be good to have club patches generated rather than just print media. John suggested that we call the membership to provide new ideas for the logo. William noted that the IWU Bookstore has some older generic sweatshirts, polo shirts, and T-shirts that might be donated to the TCAA as they have been unsold for at least seven years. He will investigate this. Carl will talk with Tom Willmitch at the ISU Planetarium about donating similar unsold T-shirts in the planetarium’s gift shop. Mike asked about the goal for fund raising, and it was agreed that fund raising could help underwrite the 2010 NCRAL meeting at a very minimum, and that it might also be used to pave the way to a new observatory. John mentioned that field trips such as his recent trip with Mike and Dan Miller to New Mexico might also be used for fund raising. It was agreed that Mike, Dave, and Lee will work on a new vision for the TCAA website. Terry suggested that a booth at next year’s 4-H fair might also be considered as a way to get the word out about the TCAA.

It was noted that the next meeting of the Board will be on September 12th. The meeting was then adjourned at 8:22 p.m.

Respectfully submitted,
Carl J. Wenning, Secretary

OBSERVERS' LOGBOOK

AUGUST SKY GUIDE

01	Mercury passes 6° south of Pollux, 2 P.M.	
	The Moon passes 2° north of Uranus, 9 P.M.	
02	Venus passes 6° south of Regulus, 11 P.M.	
06	The Moon passes 6° north of Mars, 11 P.M.	
13	Perseid meteor shower peaks	
	Neptune is at opposition, 1 P.M.	
15	Mercury is in superior conjunction, 3 P.M.	
17	Venus is in inferior conjunction, 11 P.M.	
21	Saturn is in conjunction with the Sun, 6 P.M.	
	The Moon passes 0.7° south of Antares, 8 P.M.	
	The Moon passes 6° south of Jupiter, 10 P.M.	
23	Mars passes 5° north of Aldebaran, 7 P.M.	
27	The Moon passes 1.4° south of Neptune, 4 A.M.	
28	Total lunar eclipse, 6 A.M.	
29	The Moon passes 2° north of Uranus, 4 A.M.	

On the evening of Saturday, July 14th, the MOOS appeared from Normal to be threatened by clouds and possible thunderstorms over the SGNC site. Nonetheless, nine intrepid TCAA members attended that evening. The weather was partly cloudy with a threatening thunder storm in the vicinity. Lee Green noted, "We gathered for discussions while we watched clouds in hopes of clearing. We took a brief tour of the observatory as a short rain shower dampened our hopes. But that turned out to be the only rain of the evening, and afterwards we decided to set up our scopes for some viewing. While intermittent thin clouds and distant lightning persisted, Brian Barling and I set up scopes. We had a successful session and viewed a variety of heavenly bodies. We wrapped up around 11:30 with some good viewing and happy memories. It was very nice to meet a returning member, whose name escapes me, and her daughter. I hope to see you again soon. Thanks to Brian for hosting our event and to members Josh and Sarah Lindsey, Dan Miller, Andrew Morrison, and Terry Wright for joining in."

As a result of the threatening weather that evening, Carl Wenning headed to Carlock to spend a few hours observing with Sharon MacDonald who hasn't been out for much observing in recent years. After throwing down a few mixed drinks, the dynamic duo was still able to get in two hours of observing without falling from the ladder used to observe using Sharon's 16-inch, f/4.5 Starmaster telescope (built by Rick Singmaster using a Pegasus Optics mirror). Despite the presence of a number of tall trees that have grown up in recent years, the observers were still able to view Jupiter, Messier objects 13, 27, 57, 23, 25, 17, 20, 31, 32, 11, and NGC 7000. Observations lasted until after midnight while lightning danced along the southern horizon.

Sandy MacNamara-Wolford reported that the observing session at Jim Edgar Panther Creek State Park on Friday/Saturday, July 13/14, was a success with 24 people showing up from central Illinois and southern Indiana. They were there to share a weekend of observing. Sandy stated, "Although Saturday night brought rain and clouds, TCAA's Brian Barling & family dropped by to visit during the day. Friday night had absolutely beautiful skies. I added several more Arp galaxies (my current project for the few times I'm treated to really dark skies) to my observing notes. Smaller star parties are such fun. Where else can you have a 22-inch and 24-inch telescope right next door run by friends who are *always* willing to put an object in their eyepiece so I can verify something I think I see in my 12.5-in? There was a 30-in there also, but it was 100 yards away. Dan Mitchell from just east of B/N was able to catch the central star of the Ring Nebula in his 24-inch Starmaster; I was able to see it flicker in several times with averted vision when he



called for volunteers to verify its presence."

TCAA President Lee Green has been out a several times during June and July for observing. He recently made two attempts to image Jupiter, but the results were less than he had hoped for. Attached is the best of these attempts, which he rates as mediocre. Despite what Lee thinks, the achievement is commendable! Besides imaging, he has also made very significant progress on his Herschel observing program. On June 19 and 20 when he found a total of 85 objects while working the Virgo and Coma/Canis Venatici regions. On June 20th, Andrew Morrison joined him along with neighbors of Michael Rogers whose names Lee couldn't remember. Regardless of this fact, his was able to recall that they observed the passage of the ISS soon after the Space Shuttle orbiter undocked from their recent mission. About 15° behind the ISS, in the exact same orbit, they saw the orbiter following – all traveling from the northwest to the southeast. As the ISS reach about 45° altitude in the southeast, Lee reports that it blinked out. They then watched more closely as the orbiter also blinked out as it too passed into the shadow of the Earth.

Lee Green, Carl Wenning, and Roy and Diane Lawry went observing on Friday, July 20th, at SGNC. There they encountered a Cub Scout troop, a 6-day old moon, and a sky criss-crossed with jet contrails. Despite these factors, some good observations were accomplished. Diane observed a number of Messier objects; Lee captured another 15 or so NGC objects; Carl captured 49 NGC objects. Carl has now completed 160 of the required 400 observations for the AL's Herschel 400 Award.

William Carney did manage to find Comet Linear (C/2006 VZ 13) after about two hours of searching on July 24th. William noted, "It was about 10th magnitude and small, but had a distinct coma. It is past perihelion and receding, so it will only get dimmer. The Moon did not help by any means, making it very difficult to spot. I thought I had briefly spotted it at Odell, but wanted to confirm it."

Coordinators are needed still for several of the 2007 Public and Members Only Observing Sessions at Sugar Grove Nature Center. Additional POS coordinators are needed; two per session are preferred. Please sign up by contacting one of the Board members if you are willing to host or co-host one of these sessions.

Members Only Observing Sessions occur one week earlier than the above POS. Coordinators (who should be SGNC key holders unless they have their own telescope) are still needed for nearly all of these sessions. Please sign up by contacting one of the Board members if you are willing to coordinate one of these events.

MOOS 2007 Date	MOOS Coordinator(s)
August 11	1. Lee Green 2.
September 8	1. Duane Yockey 2.
October 6	1. 2.

2007 Date	POS Topic(s)	POS Coordinator(s)
August 18	Planetary Nebulas M27 and M57	1. Carl Wenning 2. Michael Rogers
September 15	The Milky Way Galaxy	1. Carl Wenning 2. Dave Osenga
October 13	Double Cluster in Perseus	1. Lee Green 2.

JULY POS—DELIGHTFUL

by Lee Green

We had a delightful session at the July Public Observing Session on July 21.

With at least 34 members of the public attending as well as 10 club members, 7 telescopes and a variety of binoculars, we had the largest turnout so far this year.

Lee started off the activities at 9PM with a presentation about Jupiter and its structure, Moons and place in the solar system. John Werner followed with a presentation about the Moon pointing out a variety of interesting features found there. He demonstrated the phases of the Moon with the help of several of our younger audience members.

We then adjourned to the "bullpen" where we had 7 scopes set up for viewing and photography. One of the scopes was the club's 12" Meade which was removed from the observatory and is being returned for service. We made good use of these for several hours and wrapped up our activities around midnight.

Many thanks to all who joined in to make this another successful club event.

PROPERTY MANAGER'S REPORT

by William Carney

The Meade 12" telescope was removed from the Sugar Grove Observatory on Saturday afternoon, July 21st, and set up outside for use that evening during the public observing session. It is now at my house (as of July 22nd) awaiting shipment for service. I did install the 10" Meade SCT in place of the 12", but I am not sure if the drives are working, and I did not do a polar alignment. Nonetheless, it is installed and usable in at least the manual mode. For those that are interested in photography, the 10" SCT has a tele-extender, off-axis guider with illuminated reticle, camera cord and adapters to mention a few things. I believe it also has an adapter for Pentax and Canon SLR cameras.

TCAA EDUCATION AND PUBLIC OUTREACH

Mike Rogers reported that more than 30 people were present at the Pontiac Library on Monday, July 9th, for a TCAA presentation about objects of the current night sky and might be thought of as the answer to the question "What's up, doc?" It lasted for about 40 minutes, but the projector Mike had intended to use didn't work properly.

Things went much better at the Bloomington Public Library on Tuesday, July 17th. Some 15 people were present for this 40-minute presentation, but this time the video projector worked properly. The title of this topic might best be described as "88 constellations in 15 minutes." Mike used a radio show/sketch format where he related constellation myths. His children Benjamin, Jonathan, and Sarah helped out. Both presentations were geared for younger astronomers, and included the telling of constellation stories. Both presentations, according to Mike, included "several extremely bad puns and some (veggie) ham acting."

On July 19th Carl Wenning gave an "impromptu" planetarium presentation as part of Normal Public Library's summer reading program. Approximately 70 individuals attended the presentation, and the audience consisted mostly families with small children. The focus of the program was on constellations, the motions of the heavens, and legends of the night.

The July 21st public observing session was held at SGNC under clear skies. The topics of a multimedia presentation were Jupiter and the first-quarter Moon. Lee Green started off activities at 9:00 PM with a presentation about Jupiter and its structure, moons, and place in the solar system. John Werner followed with a presentation about the Moon pointing out a variety of interesting features found there. He demonstrated the phases of the Moon with the help of several of the younger members of the audience. Ten members were present with 7 telescopes and several sets of binoculars. Observers made good use of these items for several hours and activities wrapped up around midnight. This was the largest turnout this year, with 34 members of the general public were in attendance.

On July 23rd Mike Rogers, Duane Yockey, and William Carney traveled to Odell, IL, to hold an observing session. According to Mike, "Eric Colclasure, our host from the Odell Public Library, did a fine job of publicity. We had at least 40 people show up for our observing session on a clear, but dewy night. Everyone seemed to have a wonderful time, as far as I could tell. Thanks ever so much to Lee, William and Duane, without whom it would've been a disaster."

PROFILES IN AMATEUR ASTRONOMY: BRIAN BARLING

By Carl Wenning

Historian's note: Over the next few months I will focus the membership's attention on the TCAA's premiere observers with their help. The intention is to introduce our membership to one another and to provide opportunities to further develop relationships within our association.

Anyone who has been involved with the TCAA for any reasonable amount of time usually has gotten to know Brian Barling. While Brian is one of our more active observers who rarely misses a public or a members-only observing session, he is one of the "quieter" members of the club. One could spend an entire evening observing the heavens right next to Brian and hardly know of his presence. While Brian is a man of few words, this masks his considerable observing prowess. Brian has been a dedicated amateur sky watcher for the past twenty or so years.

Like many of today's amateur astronomers, Brian became interested in space flight during the years of the Apollo program that culminated with the manned lunar landings. These historic events piqued his interest in space. One of his most interesting memories comes from this time, "After a Saturn V lifted off to the Moon, I just happened to walk outside and noticed a long bright orange streak heading up in the southeast. It could have been the Apollo rocket." Such observations were indeed possible, and Brian evidently observed such an historic event.

Before he purchased his first telescope a few years later, he started locating some of the more prominent star patterns such as Orion, the Big Dipper, and Sagittarius. He spent much of his time reading newspaper and magazine articles about space exploration. As the years passed, he moved up from naked-eye observations to using binoculars. He became fascinated with deep space objects when he started using binoculars to observe the Milky Way from a relative's farm south of Bloomington. In the late 1980's he purchased his first telescope. The opposition of Mars and its closest approach to Earth motivated him. With this small telescope he saw the Martian polar ice cap and dark topographic features on the Red Planet's surface.

Brian's first telescope was a Jason 3-inch refractor. With this very modest instrument he began an observing program that included the moon and planets, as well as deep space objects. He recalls the eagerness of his earliest observations, "I'd have the telescope set up and would wait about for the moon to rise." Shortly after joining the TCAA in 1989, he started the Astronomical League's Messier observing award program. He earned the provisional certificate in February 1993, and just under two years later earned the coveted honorary certificate – having observed all 110 Messier objects on

the AL's list. Brian soon moved upward telescopically speaking. "I next bought a larger telescope, an eight-inch Celestron reflector with a German equatorial



mount. I recently purchased a Meade Light Bridge twelve-inch Dobsonian telescope." The picture accompanying this article shows Brian with this telescope.

Brian is currently working on the goal of obtaining the Astronomical League's coveted Herschel 400 award. He has spent many lonely nights at the SGNC by himself working on this program, finding objects "the old fashioned way" – star hopping. Brian has made considerable progress toward attaining the goal, and hopes to complete the program later this year. Brian also is currently involved in the AL's Lunar Observing and Double Star programs.

Because Brian is a careful and methodic observer of the heavens – and because finding celestial objects without the use of "goto" capacity is comparatively difficult – he savors each of his finds. He enjoys examining the details of the nuclei and disks of distant galaxies. He enjoys the differences between and among open and globular clusters. He basks in the glow of planets, as well as the moons of Jupiter and Saturn. While he is a confirmed telescopist, Brian has never lost his passion for "low power" views of the heavens. He's just as happy scanning the sky with his eyes and binoculars as with a telescope.

Brian's fondest astronomical memories are of the club's members and the many events he has attended over the years. While his is a rather quiet and self-effacing individual, he really does enjoy meeting and learning new things from other amateur astronomers. Brian has a goal in addition to earning observing awards, and that is to improve his observing skills. TCAAers should rest assured that Brian is already a very skilled observer, having observed more than half of all Herschel 400 objects, and having found them by hand – no mean task, and one that has been achieved by only one other TCAA observer over the years – Sandy MacNamara-Wolford.

A native Bloomingtonian, Brian does enjoy a good conversation just as much as the next person. The next time you see him behind the eyepiece of his telescope, be certain to say hello and ask a question or two. You might be surprised at the response.

SOLAR OBSERVING

By Terry Lee Wright

As an amateur astronomer, I love to observe the traditional night-time astronomical targets; however, I also get great enjoyment in observing the Sun. The Sun provides easy observing hours and it's warmer and more comfortable than cold nights.

The one great aspect about the Sun is, it's never the same from day to day, changes will occur from minute to minute and that makes it the most interesting object in our sky.

The most important issue in solar observing is SAFETY. Solar observing will give you enjoyment and you'll develop a great fascination for it. But you must do it with safety in mind. It is the most dangerous aspect of astronomy.

If you see the Sun through binoculars or a telescope that does not have proper filtration, you can suffer permanent blindness in less than a second. Always practice safe solar observing methods. Many observers don't use filters. They project the Sun's image onto a white card using a telescope and eyepiece, same as using a slide projector. But again this is only safe with some telescopes – refractors and some reflectors. Sometimes the internal components can catch fire from such extreme heat.

Solar filters are available from several companies. Some observers use a filter made with Baader Astrosolar material and the cost is very small. I prefer the coated glass filters, because some provide a view of the sun in orange, while other film filters show a white-light view. Whichever you choose, be sure you're buying from a reputable manufacturer or dealer

and follow the instruction carefully. I myself called several well advertised dealers about a new filter for my 8" scope and about new binoculars. I was told many different things by these dealers. On one pair of binoculars, some told me I would get a white view of the Sun, others told me, "No, it would be orange." So it appears that some dealers or their employees don't checkout their products or just want to sell what's in stock. So be careful what others tell you. Always do your own investigation into your studies. It's your eyesight in the area of astronomy. Be safe or keep with the dark skies.

While in Arizona, I observed a man setting up his 12" scope with a full aperture filter. He then went back to his auto while a young man approached his scope and looked into the finder scope. He then grabbed his eyes and fell to the ground. This was not good. Never take off your finder scopes end cap. It must always remain covered and never in solar observing let anyone get near your scope if you're not present. I find it safer to just take off the finder scope altogether. It's not needed in solar observing. I also drop down to a 26-mm eyepiece for viewing the Sun. You won't need any powerful eyepieces here. And make sure your filter fits tight on the front of your scope. If your cover should get damaged or have a hole in it, have it replaced.

If you get the bug for solar observing – be safe. Solar observing is a recreational pastime for some, but for myself, it's a way to explore the universe in all its splendor. And once you see this brightest star of ours, you'll want more.

A NEW TCAA MEMBER

By Limin Wright



I'm writing about my husband, Terry L. Wright, one of the newest TCAA members, pictured here with our son Travis, one year old, and our 8" Meade SCT scope with a solar filter.

Also known as Terry Lee through out China and Southeast Asia and the martial art world, Terry is a three-time full contact Grand Champion and Grandmaster in the martial arts. He started his training at five in Hong Kong and has taught all over the world. He's also a former private investigator and international bodyguard; a martial art teacher to Charles Bronson and Steve McQueen and other stars. Terry has traveled the world, meeting many interesting people.

Terry is also a magazine cartoonist, professional magician, former State Archery Champion, expert in weapons and has done Archeology diggings, finding hundreds of arrowheads and civil war collectibles. He did prospecting out west and too many things to list.

He's always been interested in the Moon, since age 5 in Hong Kong and now it's carried him to this..... My husband not only stays up all night to observe the sky, (and I mean all night), he has now started to observe the solar Sun. He started with solar observing in Arizona in 1990 with

some of his students and now he's getting more interested in our closest star.

When I say he's up all night, I mean it. He doesn't sleep much, his mind seldom shuts down. He doesn't require as much sleep as the rest of us do. The Ever-Ready Bunny has nothing on this guy. So Astronomy is the perfect hobby for him, of course, he'd not say "hobby", he takes everything too serious. Space, the universe and the future of our son are all important issues to him. And Travis, well, anything Daddy does, he's already showing at age one, kicking and other martial art strengths and talents. And he thinks the scope is his already. I mean how many one year olds like to flip through magazines rather than toys.

Terry loves his membership in the TCAA and always tells me what a great group of people they are. He loves to study and learn and does so with a serious attitude.

Now I must say, watch out, he is aggressive – he will have you buying bigger scopes, taking more trips and wanting to sign up for a NASA space flight if you're not careful.

I myself have become more interested in space and the stars. But I need my sleep. Many times he'll wake me, "Honey, come see the Milky Way, come see the Saturn, come see the Moon..." Hey, it's 1 am, 2 am,.... But I'm always awed by what I see. But I still need my sleep.

While in China, he'd say, "come on, let's go see this or that". And I'd say, "baby, I was born here". Then I realize, I hadn't seen many these places before – all the mountain climbing was great, the Buddhist temple, etc. And I do love to travel. So now we have all these observatories and roofs of the world to go to see. But I refuse to fly to the Moon – I saw the movie Appollo 13.

ASTRONOMY ADULT ED AT HEARTLAND COMMUNITY COLLEGE

Night Sky Watch is the title of an adult education course to be taught by Carl Wenning during January 2008 through Heartland Community College. The HCC announcement describes the course:

Learn about the denizens of the night sky - moon, planets, comets, asteroids, stars, nebulas, clusters, and galaxies - and how to find and observe them using binoculars and telescopes. One class will be held at the ISU Planetarium, and an optional observing session will be held at Sugar Grove Nature Center. Supplemental in-town telescope observing sessions will take place following each class if the sky is clear. Audience: adults only (min 7, max 24). Fee: \$60, includes materials (but not transportation).

The course will consist of two HCC classroom sessions, a planetarium visit, and an optional trip to SGNC. The event will be held on Saturdays from 7-9 p.m., January 5th through 19th, 2008. Registration information will be made available through this newsletter as soon as it becomes available. While this is not a "for profit" course, income in excess of costs will be turned over to the TCAA.

APOLLO'S LUNAR IMAGES GO DIGITAL

Courtesy of Astronomy Magazine at astronomy.com

Nearly 40 years after man first walked on the Moon, the complete lunar photographic record from the Apollo project will be accessible to both researchers and the general public online. A new digital archive — created through a collaboration between Arizona State University and NASA's Johnson Space Center in Houston — is making available high-resolution scans of original Apollo flight films.

The digital scans are detailed enough to reveal photographic grain. Created from original flight films transported back to Earth from the Moon, the archive includes photos taken from lunar orbit as well as from the lunar surface. This is the first project to make digital scans of all the original lunar photographs from NASA's Apollo missions.

"This project fulfills a long-held wish of mine. It'll give everyone a chance to see this unique collection of images as clearly as when they were taken," says Mark Robinson, professor of geological sciences in ASU's School of Earth and Space Exploration, part of the College of Liberal Arts and Sciences.

Robinson leads the ASU side of the Apollo image digitizing project. Separately, he is the principal investigator for the Lunar Reconnaissance Orbiter Camera (LROC) — a suite of three separate, high-resolution imagers on board NASA's Lunar Reconnaissance Orbiter, due for launch in October 2008.

The reason the original Apollo images have been so seldom accessed is that they are literally irreplaceable. Between 1968 and 1972, NASA made sets of duplicate images after each Moon mission came back to Earth, placing the duplicate sets in various scientific libraries and research facilities around the world.

As a result, these second-generation copies (and subsequent copies of copies) are what scientists and the public have seen. The copied images are fuzzy and overly-contrasted compared to the originals, which have remained in deep-freeze storage at the Johnson Space Center. Even many lunar scientists have not seen or worked with them.

The Apollo digitizing project goes back to the original flight films and scans them in high-resolution detail to reveal their subtleties.

"We worked with the scanner's manufacturer, Leica Geosystems, to improve the brightness range that the scans record," Robinson explains. In technical terms, a normal 12-bit scan was increased to 14-bit, resulting in digital images that record more than 16,000 shades of gray.

"Similarly," says Robinson, "to get all the details captured by the film, we are scanning at a scale of 200 pixels per millimeter." This means, he says, the grain of the original film is visible when scans are fully enlarged. The most detailed images from lunar orbit show rocks and other surface features about 40 inches (1 meter) wide.

Combining high resolution and wide brightness range produces very large raw image files, notes Robinson. For example, in raw form, the scans of the Apollo mapping (metric) camera frames, each 4.7 square inches, are 1.3 gigabytes in size.

"That's bigger than most people want to look at with a browser," says Robinson, "even if their browser and internet connection are up to the job." So the Web site uses a Flash-based application called Zoomify, which lets users dive deep into a giant image by loading only the portion being examined. Links are available at the site for downloading images in several sizes, up to the full raw scan.

The project will take about three years to complete and will scan some 36,000 images. These include about 600 frames in 35 mm, roughly 20,000 Hasselblad 60 mm frames (color and black and white), more than 10,000 mapping camera frames, and about 4,600 panoramic camera frames.

"These photos have great scientific value, despite being taken decades ago," says Robinson.

He adds, "I think they also give everybody a beautiful look at this small, ancient world next door to us."

TCAA Treasurer's Report – July 2007

OPERATING FUND BALANCE – June 30, 2007 - \$ 2,504.48 *

Income

Sheri Rodgers (Elect. Dues Renewal) - \$ 25.00
Nancy Osterman (senior dues) - \$ 25.00
Michael Rogers (dues renewal) - \$ 40.00

Expenses

LYB Inc. (July Observer) - \$ 15.48
Lee Green (SGO materials) - \$ 139.18

OPERATING FUND BALANCE – July 31, 2007 - \$ 2,439.82

OBSERVATORY FUND BALANCE – June 30, 2007 - \$ 1,147.86

Income

Interest (April - June) - \$ 1.77

Expenses

None - \$ 0.00

OBSERVATORY FUND BALANCE – July 31, 2007 - \$ 1,149.63

TOTAL TCAA FUNDS – July 31, 2007 - \$ 3,589.45

Respectfully submitted,
L. Duane Yockey, Treasurer

Sugar Grove Observatory

Listing of Official Keyholders (Paid \$10 deposit/\$5 renewal)

Duane Yockey (renewed through 2007)
Michael Rogers (renewed through 2006)
William Carney (renewed through 2007)
Carl Wenning (renewed through 2007)
Brian Barling (renewed through 2007)
Christopher Franklin (renewed through 2007)
David Osenga (renewed through 2007)
Gerry Schroeder (renewed through 2007)
Josh Lindsey (renewed through 2007)
Andrew Morrison (February 2007)
Dan Miller (renewed through 2007)
Lee Green (April 2007, renewed through 2008)



UPCOMING EVENTS

August 11— MOOS

Perseid Meteor Shower
Observing Session

August 18—POS



Welcome New Member

Nancy J. Osterman

The OBSERVER

Newletter 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**

Visit the Twin City Amateur Astronomers
on the web at
www.twincityamateurastronomers.org/