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## MINUTES OF TCAA BOARD MEETING—JULY 6, 2010

At 6:30pm at the office Of Duane Yockey, President Dave Osenga called the meeting of the Board meeting to order. In attendance were Brian Barling, Carl Wenning, Dan Miller, Dave Osenga, Duane Yockey, John Werner, Lee Green and William Carney. The minutes of the previous meeting were unanimously approved.

Lee reported that he had completed scanning the past copies of The Observer that Carl had lent him and that those are now available on the TCAA web site. He delivered a DVD of those issues to Carl for inclusion in the club history. Lee also reported that he had established a Facebook page for the club and that he would be continuing to expand the club’s online presence. He promised to write an article for an upcoming Observer to describe how to access the page. Lee also delivered his completed Globular Cluster note for submission to the Astronomical League.

Duane submitted the current Treasurer’s report and that was unanimously approved. He reported that recent reimbursements for observatory repairs were being paid from the Operating Fund. Duane distributed the final accounting for the NCRAL meeting which showed the modest loss of \$688.44 for the event. He will submit the report to NCRAL. He also reported that there were several Astronomical League awards that he is holding that would have been presented at the summer picnic but for the limited turnout. It was agreed that he would hold these until the next appropriate meeting.

William presented a Powerpoint presentation that detailed of all of his recent work on the observatory. A partial list of his repairs include fixing the vinyl floors and molding, painting walls and stairs, repairing the top landing, caulking and painting the inside of the dome, sanding and painting the door, replacing the rock near the door to improve drainage, scraping algae from the exterior of the dome, painting the dome, replacing mulch around the building, removing the siding from the building, sanding and repairing the siding and replacing it inside out for a better seal, re-staining the siding and replacing those pieces which were bad. He reported that he had spent over 140 hours over the course of 35 days. The Board unanimously approved to reimburse him \$200 for the cost of his travel during these efforts as well as all the material costs he incurred. It was requested and he agreed to write an article for the Observer to better detail his efforts. William received keys back from Chris Franklin and Gary Schroeder.

Dave read a “thank you” card from Valerie Blue, the winner of the NCRAL grand prize telescope. Carl noted that he had a lens tray for her and John would provide her address to him. Dave thanked Dan for hosting the summer picnic and several members expressed their appreciation for the wonderful time they enjoyed there. Dave then noted the recent article about the TCAA that was published in the Pantagraph and was well received. He reminded us that the August 7 MOOS was scheduled to be held with the Peoria Astronomy Society in Peoria and Lee promised to send an announcement to the members after details of the event were confirmed.

Lee agreed to conduct the July Public Observing Session on Globular Clusters and Dan and John switched as hosts for their planned POS presentations for August and September.

Discussion than turned to the telescope in the observatory with the question of what should be put into the observatory and to what purpose. With the LX-200 inoperable, William has installed a 10” telescope for the time being. William installed dovetail mounting bracket on the 12” OTA and several members thought it could be maintain for useful purposes. It was agreed that we try to dispose of the faulty LX-200 mount, tripod, power supply and hand controller on an astronomy auction site. William agreed to post these items for sale. We discussed the inevitable vibration associated with a three story pier and the heavy-duty mount. The no-cost options including removing the mount and temporarily placing the 10” scope on its tripod to achieve greater room. Another low-cost option discussed was to place a member’s scope in the dome temporarily, such as Carl’s CPC-11. Dan suggested that placing a wider field instrument equipped with a laser pointer would serve as an effective outreach instrument and would be less susceptible to vibration. We reviewed the requirements for a scope located in the dome and agreed that most outreach activities could be served with modest equipment. After these discussions, the consensus was that we would investigate all these alternatives and report back.

Carl related that he had visited the Chestnut-Beason Park located between Clinton and Lincoln for three nights recently and that he met the park superintendent, Paul Hashman, and observed with him and several other friendly area residents. He reports that the site has skies about 1 magnitude darker than Sugar Grove and that the area seemed secure and offered some interesting observing opportunities.

John raised the subject of submissions to the Observer and suggested a new column for kids, perhaps with “Sky Lab” as a

*(Continued on page 2)*

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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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

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## **MINUTES OF TCAA BOARD MEETING—JULY 6, 2010 (CONT.)**

*(Continued from page 1)*

theme, including simple experiments that kids can perform. Carl was enthusiastic and mentioned that some material might be available to assist this effort.

Dan reported that the Millikin telescope was nearly completely automated and passed around several images that were taken through the instrument. He suggested that an STV-type device that could integrate images and display them on a monitor would be an effective way to share a telescope between many people.

Dave noted that the club's 5-year plan needed updating. It was agreed that we would not discuss this in detail at the current meeting, but that our goal should be to have this available to present at the annual meeting early next year.

The meeting was adjourned at 8:10pm.

Respectfully submitted,

Lee Green  
Secretary

## **PERSEID METEOR SHOWER AUGUST 12-13**

The annual Perseid meteor shower will peak during a waxing crescent moon phase in 2010, so we are in luck if the weather holds out. The shower will be at its best on the pre-dawn hours of both August 12 and 13. The Perseid meteors increase in number as night goes on, and typically most meteors are seen in the wee hours before dawn.

Perseid meteors are typically fast and bright, and radiate from a point in the constellation Perseus the Hero. But you don't need to know Perseus to watch the shower, and optical assistance is not needed. Just turn your eyes to the heavens. The meteors appear in all parts of the sky, but emanate from the northeast, especially after midnight when Perseus is rising. The only thing you really need to view the meteor shower is a dark sky. Viewing meteors from in town is a waste of time; travel to the countryside if you want to get in on the action.

These meteors frequently leave persistent trains, so you might want to use binoculars to better view meteor trails if they persist. During the pre-dawn hours of August 12 and 13, watch the Perseid meteors streak across this sky after midnight until dawn. Lie back and watch meteors until rosy-fingered dawn touches the eastern sky. The morning of August 11 should be good, too. In fact, this shower tends to rise gradually to a peak for about a week. Then it's known to drop off rapidly after the peak mornings.

The Perseids are considered by many people to be the year's best shower, and often peak at 50 or more meteors per hour. 2010 will be a great year for the Perseids. This year, the thin waxing crescent moon will set (along with a beautiful trio of Venus, Saturn and Mars) at early evening, leaving a dark sky for this year's Perseid show. Pay close attention to the TCAA listserv to see if any last-minute group observations will be scheduled.

## **ILLINOIS DARK SKY STAR PARTY SEPTEMBER 9-12**

The autumn IDSSP will soon be upon us once again. For the past several years TCAAers have been in attendance at this event to share in all night viewing, attend talks, and meet other amateur astronomers from around the Midwest.

As in previous years, this year's IDSSP will take place at Jim Edgar Panther Creek State Fish & Wildlife Area about 30 miles to the northwest of Springfield. The 2010 edition of the Illinois Dark Skies Star Party will have great food, great talks, and great camaraderie. You may register online today at [www.sas-sky.org](http://www.sas-sky.org) (click on the Star Party 2010 link) if you want to take advantage of onsite meals and clothing with insignia.

Pre-registration fees (same level as 2003) are due by the August 13, 2010 deadline to ensure availability of meals and t-shirt/hooded sweatshirt orders. Because the weather is uncertain, many will pay registration fees onsite. (In such cases, meals and apparel cannot be assured – still, they do seem to plan for “walk ins”.) As always, the weather is unpredictable (the event was clouded out the entire time last year) so you are taking your chances by pre-registering. No refunds are made in the event of cloudy skies, but the talks and meals will continue despite any poor weather.

## OBSERVING FROM CHESTNUT-BEASON PARK

By Carl Wenning

On July 1, I traveled about 18 miles south-southeast of SGNC to observe for the first time from an entirely new “dark sky” location. I observed from Chestnut-Beason Park (CBP) about 3 miles south and just a bit east of Beason, IL. I chose this location between Lincoln and Clinton by following suggestions from the website Dark Sky Finder. While this observing site is not perfect, I was pleased with the results.

Not knowing what to expect, I arrived at CBP around 7:45 p.m. – 45 minutes before sunset – to scope out the site. I was a bit wary as I drove into the Park seeing a sign stating that the park was closed from sunset to sunrise. I drove around the park looking for a good observing location with a southern exposure. As I completed the park loop, I came across what looked like a site manager’s house. I drove up the house and site superintendent Paul Hashman emerged from the garage. I explained what I wanted to do, and being quite friendly he quickly agreed. I invited him to join me after sunset. He introduced me to his cats Blackie (who immediately climbed into my truck) and Midnight, and offered me some bug spray that he said I would need. He was right because the Park surrounds a small lake and there are plenty of mosquitoes around sunset.

I put up my telescope at the west end of the pond and waited for sundown. Shortly thereafter Paul arrived on his “mule” and we started observing Venus, Saturn, and Mars. He had never looked through a telescope before and was greatly impressed by what he saw. He noted that he had invited some friends of his, Mike and Pat, who lived near the CBP entrance to join us. They did about 30 minutes later.

The next 90 minutes of my observing session (9:00 to 10:30 p.m.) was spent very fruitfully giving everyone a tour of the heavens, and even I was impressed by what I saw. The limiting magnitude is about 1 greater than that available at SGNC on most nights. While this is not a major gain, I was able to see things that reminded me of why I got started in amateur astronomy in the first place: spiral structure could easily be seen in galaxies M101 and M51; the Owl Nebula (M97) actually had “eyes”; M81 and M82 were extremely evident against a dark background. Knowing that I was talking a bit and wearing my voice down, Paul went to his house and brought out a round of refreshments for everyone. How very accommodating!

Bidding my new friends a fond farewell, I continued to observe until just before midnight when the moon, reflecting beautifully on the still pond, finally rose putting an end to my observing work related to the AL’s planetary nebula program. I was able to observe another 8 objects in the course of the last hour, several of which were not visible previously from SGNC the night before.

Blackie the cat – who stayed with me all night long – entranced me. He would follow me back and forth to my truck about 20 feet away from my telescope and would roll around on the ground near my feet as I observed. As I took down my telescope just before midnight I could see Blackie’s deep red eyes glowing in the distance as he forlornly watched me prepare to depart. This sight was almost “demonic” and certainly haunting in some sense. His presence was also reassuring, just like the constant “plop” of bullfrogs and the splashes of fishes emanating from the pond of the evening.

The next two nights I returned. On Friday evening Duane Yockey joined me (as did two others from Lincoln that had heard about us earlier in the day from Paul), and on Saturday evening my son-in-law Chrystian Vieyra joined me. Friday night was as good as Thursday, but Saturday night not as good. Still, all three nights provided golden opportunities for viewing.

I’ll certainly be using CBP again during future observing sessions despite some minor drawbacks (mosquitoes, limited observing space, a prominent night light to the north that can be hidden behind trees) with the site. I’m sure that other TCAAers will be welcome to do the same. Just be certain to clear your stay in advance with Paul (park phone: 217-447-3420). When Paul left my side the first night to go back to his house, he told me that he had had a great time, bid me a fond farewell, and told me to come back any time. I plan to do just that.

## TCAA HISTORY UPDATE

By Carl Wenning, Historian

The 50<sup>th</sup> anniversary historical volume of the club is nearing completion and will likely go to the printer by the middle part of August. I will have about 7-10 copies printed and bound. These volumes will be available at a cost of approximately \$40 each. Each book will be on the order of 110 pages, and will include a limited number of photographs. Associated with each hard copy will be a DVD record of the club, including dozens of photographs, scans of minutes and news paper articles, and much more. The DVDs will be available separately on an “at cost” basis. Copies will be available to members, and additional copies will be deposited in the TCAA library at SGO and with the McLean County Historical Society.

I want to again acknowledge the hard work of Lee Green who scanned some 280 issues of *The OBSERVER* and made them available through the TCAA website. He also gathered the remaining extant electronic versions. What is neat about this project, is that search engines have picked up Lee’s website and have somehow done optical character recognition of the pdf pages. As a result, one can now conduct an Internet search and get results from Lee’s website. For instance, a search on the terms “**John Kieviet**” [site:twincityamateurastronomers.org](http://twincityamateurastronomers.org) results in 15 “hits” from as early as November 1978 – and the number of hits will likely increase as the latest additions (the earliest copies of the newsletter) are picked up by search engines. Pretty amazing.

This is the final call for members to pre-order hard copies of *History of the Twin City Amateur Astronomers 1960-2010*. If interested, please confirm your order (2 have pre-ordered) and place a new order with me by emailing me at [wenning@phy.ilstu.edu](mailto:wenning@phy.ilstu.edu). More information about the DVDs will be available soon.

## AUGUST SKY GUIDE

01	Mars passes 1.9° south of Saturn, 3 P.M.	
06	Mercury is at greatest eastern elongation (27°), 8 P.M.	
09	Venus passes 3° south of Saturn, 9 P.M.	
11	The Moon passes 2° south of Mercury, 9 P.M.	
12	Perseid meteor shower peaks	
13	The Moon passes 8° south of Saturn, 2 A.M.	
	The Moon passes 5° south of Venus, 7 A.M.	
	The Moon passes 6° south of Mars, noon	
19	Venus is at greatest eastern elongation (46°), 11 P.M.	
20	Neptune is at opposition, 5 A.M.	
23	Venus passes 2° south of Mars, 4 P.M.	
24	The Moon passes 5° north of Neptune, 7 A.M.	
27	The Moon passes 6° north of Uranus, 2 A.M.	
	The Moon passes 7° north of Jupiter, 7 A.M.	

## PUBLIC OBSERVING SESSION AUGUST 14

The club's next public observing session will be held on Saturday, August 14, at SCNC. Events begin shortly after 8:30 p.m. This month's theme is *Planets and the Zodiac*, and Carl Wenning is the scheduled speaker. Clustering in the evening sky will be the crescent moon, Venus, Mars, Saturn, and Neptune. Uranus and Jupiter will rise around 9 p.m. and should be readily viewed by the end of the session at 10:30 p.m.

## TCAA OUTREACH EVENTS

On Thursday, July 22nd the Night Sky Network hosted a teleconference with two speakers. Lunar and Planetary scientist Dr. Catherine Neish presented "Radar Love: Using the LRO Mini-RF, a synthetic aperture radar on board NASA's Lunar Reconnaissance Orbiter for exploration". Mike Simmons shared with us his insight on International Observe the Moon Night (InOMN). Mike was Co-chair of the hugely successful high-profile IYA 2009 100 Hours of Astronomy and has been an amateur astronomer for more than 35 years. The International Observe the Moon Night will be on September 18 and is the first annual public outreach event dedicated to engaging the lunar science and education community, amateur astronomers, space enthusiasts and the general public in a lunar observing campaign that share the excitement of lunar science and exploration. Please visit [www.observe-themoonnight.org](http://www.observe-themoonnight.org) for more information.

On the evening of Thursday July 29, two TCAA members brought their telescopes the Ecology Action Center event at the Sugar Grove Nature Center. Attendees participated in a variety of activities throughout the day and got a chance to view several celestial objects at night and enjoy an impromptu laser guided sky tour. Carl and Lee also engaged another group of young people that were present. In all, we shared the sky with 32 people.

For August, we have two events scheduled. Our MOOS will be held in conjunction with the Peoria club as detailed in a separate article. Our August Public Observing Session will be on August 14 and will look at The Planets and The Zodiac.

## SPECIAL MOOS IN PEORIA

This month, on August 7, we will be having a special Member-Only Observing Session that will be held with our friends at the Peoria Astronomical Society (PAS). All TCAA members are invited to join us for this event which is also a Public Viewing hosted by PAS. This will give us a chance to meet members of the Peoria club and to observe from their dark sky site. Rich Tennis from the PAS suggests, "The skies are pretty dark there. It is a picnic area, so if you want to have a picnic supper before the sky gets dark, come early".

The event will be held at the Decker-Grebner-Van Zandt Observatory, otherwise known as "Jubilee" observatory, which was built on the grounds of Jubilee State Park.

Directions to the site are as follows: Take I-74 west from Bloomington. At Peoria, you may either stay on I-74 or take the I-474 bypass around the city, rejoining I-74 west. Take exit 82 and turn right onto N Kickapoo-Edwards Rd. Proceed north for 1 mile to the US-150 intersection and turn left. Follow US-150 west for 3.7 miles to the entrance to the Park. When you enter the main entrance, travel until you find the first right turn (past the ranger's house on left) to Quail Meadow and then to Prairie Lane. For a detailed map, please visit <http://dnr.state.il.us/lands/landmgt/PDF%27s/jubilee.pdf>.

## JULY POS VERY SUCCESSFUL

July's POS held on the 17<sup>th</sup> was unusually successful. Not only did 53 members and guests show up at SGNC; we had an all-time-high of 10 TCAA (and friend) telescopes in operation. The following were accompanied by their telescopes: William Carney, Lee Green, Dan Miller, John Werner, Eve & Paul Pouliot, Tony Cellini, Carl Wenning, Randy Byland, and non-TCAAer Sean Lance. In addition, John Littlefield was there with binoculars, and Carl was there with his historian's camera. (See the snapshots elsewhere in this issue.) The only regular observers missing were Dave Osenga and Duane Yockey.

Lee began the evening at 9:20 p.m. with an excellent talk about globular clusters. He used resources provided to him as a NASA Solar System Ambassador to deliver a PowerPoint presentation. By all accounts, the 30-minute presentation was outstanding. Carl followed on with a 10-minute sky lecture pointing out constellations using a laser pointer. Observing through telescopes ensued and continued unabated until around 11 p.m. when clouds began to hide the stars.

## JULY 17, 2010, PUBLIC OBSERVING SESSION AT SGNC



William Carney with Celestron 8 inch SCT



Sean Lance with Meade 10 inch



Randal Byland with CPC1100



Tony Cellini with 8-in Astro-Tech Ritchey-Chrétien



Dan Miller and guest with C14 classic SCT



Paul Pouliot, Amber & Eve with 10-inch Odyssey and Orion 3-inch telescope

More Photos on Page 6

## JULY 17, 2010, PUBLIC OBSERVING SESSION AT SGNC



John Werner (right) with friends and refractor



Carl Wenning with CPC1100



Lee Green with Celestron 14 SCT



John Littlefield and Linda with binoculars

## LAGRANGE POINTS

Several NASA and ESA missions use the Lagrange points as their location during their operational phases. The SOHO and Wind missions currently orbit L1. WMAP, Herschel and Planck orbit L2, as will the future Webb Space Telescope. Examples of objects in L4 and L5 orbits include the “Greek” and “Trojan” asteroids that are synchronous with Jupiter. The following is a brief explanation of Lagrange points.

Wikipedia tells us:

*In 1772, the Italian-French mathematician Joseph Louis Lagrange was working on the famous three-body problem when he discovered an interesting quirk. Using the technique of subtracting the potential energy from the kinetic energy, Lagrange re-formulated the classical Newtonian mechanics to give rise to Lagrangian mechanics. With his new system of calculations, Lagrange's work led him to hypothesize how a third body of negligible mass would orbit around two larger bodies which were already in a near-circular orbit. In a frame of reference that rotates with the larger bodies, he found five specific fixed points where the third body experiences zero net force as it follows the circular orbit of its host bodies (planets). These points were named “Lagrangian points” in Lagrange's honor. It took over a hundred years before his mathematical theory was observed with the discovery of the Trojan asteroids at the Lagrange points of the Sun–Jupiter system in 1906.*

The five Lagrangian points are labeled and defined as shown:

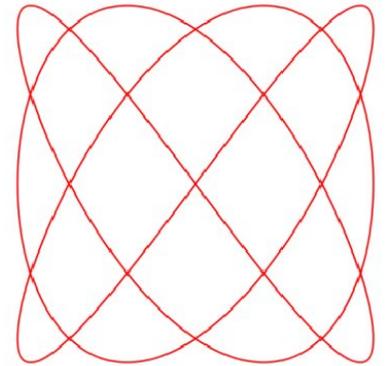
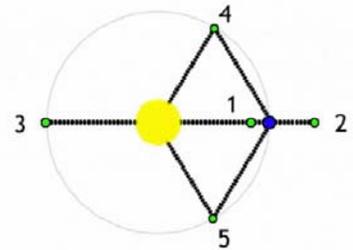
The **L<sub>1</sub>** point lies on the line defined by the two large masses  $M_1$  and  $M_2$ , and between them.

The **L<sub>2</sub>** point lies on the line defined by the two large masses, beyond the smaller of the two.

The **L<sub>3</sub>** point lies on the line defined by the two large masses, beyond the larger of the two.

The **L<sub>4</sub>** and **L<sub>5</sub>** points lie at the third corners of the two equilateral triangles in the plane of orbit whose common base is the line between the centers of the two masses, such that the point lies behind (**L<sub>5</sub>**) or ahead (**L<sub>4</sub>**) the smaller mass with regard to its orbit around the larger mass.

Although the L1, L2, and L3 points are nominally unstable, it turns out that it is possible to find stable periodic orbits around these points, at least in the restricted three-body problem. These perfectly periodic orbits, referred to as “halo” orbits, do not exist in a full n-body dynamical system such as the solar system. However, quasi-periodic (i.e. bounded but not precisely repeating) orbits following Lissajous curve trajectories do exist in the n-body system. These quasi-periodic Lissajous orbits are what most of Lagrangian point missions to date have used. Although they are not perfectly stable, a relatively modest effort at station keeping can allow a spacecraft to stay in a desired Lissajous orbit for an extended period of time. It also turns out that, at least in the case of Sun–Earth L1 missions, it is actually preferable to place the spacecraft in a large amplitude (100,000–200,000 km/62,000–120,000 mi) Lissajous orbit, instead of having it sit at the Lagrangian point, because this keeps the spacecraft off the direct Sun–Earth line, thereby reducing the impact of solar interference on the Earth–spacecraft communications links



## REMOTELY CONTROLLED TELESCOPES

By Carl Wenning

During a recent visit to SGNC, Dan Miller introduced me to the concept of using an iPad along with *SkyFi* to remotely control a GoTo telescope. *SkyFi* is Carinasoft's patent-pending WiFi-to-serial adapter, designed for wireless telescope control. If one has a computer-controlled GoTo telescope, *SkyFi* can use the WiFi capabilities built into laptop computers, iPhones, iPods, or iPads to control the telescope with the touch of a button.

*SkyFi* provides a standard DB-9 serial adapter to interface with one's telescope. *SkyFi* can wirelessly enable almost any RS-232 interface - to GPS receivers, industrial monitoring and control equipment, routers and switches, and many more. Hence, a telescope can be remotely controlled to operate off the Internet from a remote location. While this is not my intention, I do desire to operate my CPC1100 telescope wirelessly in an up-close and personal fashion.

I already have the Voyager 4.5 application on my iPad, as well as a serial cable for my Celestron (needed to attach the *SkyFi*), so I was almost ready to roll. The only thing missing was a *SkyFi* unit itself. On July 23, I ordered *SkyFi* from Carinasoft. The cost was \$149.95 plus shipping. The *SkyFi* will arrive soon and I look forward to no longer have to drag an expensive laptop computer into the field. I will now be able to use my much less expensive – and literally handier – iPad or iPod Touch to control my telescope.

## “FINDINGS” FROM MY INDIANA FIELD TRIP

By Carl J. Wenning

On the evening of Saturday, July 10, I spent the evening with about 30 amateur astronomers from the Evansville (Indiana) and Louisville (Kentucky) Astronomical Societies. We met at Lake Patoka beach in south central Indiana to host the 20<sup>th</sup> annual joint star party and observing session for the local citizens and tourists visiting or camping in the park. During the afternoon there were informational activities oriented mostly for children. During the evening, we hosted a 3-hour public observing session for about 400 people from just before sunset (Venus) until around 11:30 p.m. I was there with my Oberworks 22x100 binoculars and with my friend Mitch Luman of the Evansville Museum with his 20-inch Obsession f/4.5 telescope. We had a good evening of observing that lasted until around 2 a.m. when clouds intruded on our rather dark summer sky.

Binocular observing – I really used my Oberworks binoculars on its tripod for the first time. While the binoculars provided great landscape views during the day, I was not impressed with the quality of the view of Venus. The right monocular is pretty good, but the left monocular is not optically perfect – I could not focus either to produce a crisp image of Venus, the left monocular less so. When it got dark however, the binoculars really performed well. I literally let out a yelp when I saw M8 and M20 in the same field for the first time. Stunning! Low magnifying power and large light-gathering power produced an exceptional view. I went on to observe literally dozens of clusters, nebulae, and galaxies throughout the evening and was really impressed with the “show.” While not optically perfect, I’m quite satisfied with these binoculars as “deep space viewers.” The optical flaws were not at all noticeable when looking at deep space objects – just like with “light bucket” telescopes. The other lesson that I learned is that I’ll not want to use these binoculars at a public observing session; the height consideration is problematical even with a step stool, and people seem to “bump into” the binoculars much more frequently than they do with my CPC1100.

Observing with Mitch’s 20-inch Obsession telescope after the public left was quite rewarding. We waited until around midnight to begin our serious viewing. The first thing Mitch introduced me to was the SkyMaster encoder system and how easily it can be used to find things (similar to the Argo Navis system now available on newer versions of Obsession telescopes). The first thing I observed was M27 – the Dumbell nebula. Its appearance was quite different from what I was used to. It was much more spherical, brighter, extensive, and even tiny “knots” of light could be seen from within it. The background field was rich with stars. Stunning! We observed globular clusters in M31, and so on as the night went on. Following Mitch’s advice that the 18-inch really provides nearly identical views for much less cost, I left Indiana the next day with the opinion that I should order an 18-inch Obsession “classic” f/4.5 for myself. On Monday morning, I did just that. The telescope arrived on Wednesday, July 28. Now, I anxiously await “first light”.

## CONSTELLATION OF THE MONTH: CYGNUS—THE SWAN

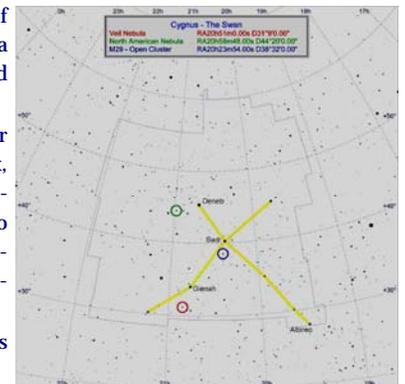
Cygnus is located in a rich region of the Milky Way which runs the complete length of the constellation. Cygnus is bordered by Lyra on the west, Lacerta on the East, Vulpecula on the South and Cepheus on the North. Its shape depicts a flying swan or a cross and Cygnus is often called the “Northern Cross.”

In mythology, Cygnus is seen as the swan that disguised Jupiter during the love affair with Queen Leda of Sparta. This union produced an egg that hatched Castor and Pollux, the famous twins of Gemini, and Helen whose abduction sparked the Trojan War. Another story saw Cygnus as Cynus, the faithful friend of Phaethon, the son of Apollo who drove the chariot of the Sun across the sky. When Phaethon was lost control of the chariot and was destroyed, Cynus gathered his friend’s burnt remains from the river Eridanus for proper burial and was turned into the heavenly swan in reward for his devotion.

Astronomically, Cygnus is the 16<sup>th</sup> largest constellation covering 804 square degrees and is the 11<sup>th</sup> brightest. Cygnus reaches opposition on July 28.

Cygnus contains several named stars including Deneb, the Tail, Gienah, the Wing, Sadr, the Heart, and Albireo at the head. Albireo is a beautiful gold and blue double star whose distinct color variance makes it a showcase binary star.

Cygnus lies in the direction where we look forward through our spiral arm of the galaxy, so we see a profusion of stars and many interesting features. The Great Rift of the Milky Way, long patches of dark areas due to the obscuring dust in the galactic plane, starts in Cygnus and extends south to Crux. Among the many emission and reflection nebulae in Cygnus are the Veil, Cocoon, Crescent and North American Nebulae. There are many open clusters including Messier 29 and 38 as well as several planetary nebulae. However, very few galaxies are visible here.



## TCAA Treasurer's Report – July 2010

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OPERATING FUND BALANCE – June 30, 2010 - \$ 1,900.77

Income

None - \$ 0.00

Expenses

LYB Inc. (July Observer) - \$ 29.36

William Carney (SGO repairs) - \$ 263.84

William Carney (mileage) - \$ 200.00

OPERATING FUND BALANCE – July 31, 2010 - \$ 1,407.57

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OBSERVATORY FUND BALANCE – June 30, 2010 - \$ 3,175.61

Income

Interest (April – June) - \$ 0.52

Expenses

None - \$ 0.00

OBSERVATORY FUND BALANCE – July 31, 2010 - \$ 3,176.13

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TOTAL TCAA FUNDS – July 31, 2010 - \$ 4,583.70

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Respectfully submitted, L. Duane Yockey, Treasurer

### Sugar Grove Observatory

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

Duane Yockey (renewed through 2009)

William Carney (renewed through 2010)

Carl Wenning (renewed through 2009)

Brian Barling (renewed through 2010)

David Osenga (renewed through 2010)

Josh Lindsey (renewed through 2010)

Dan Miller (renewed through 2009)

Lee Green (renewed through 2009)

## 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.

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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**