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PRESIDENT'S MESSAGE

It's back to business as usual. Well, that is if we can define what usual is for this group! NCRAL is now done and it was a good event. There was a lot to learn, many good discussions and presentations, and the event went smoothly. Again, thanks to the team who got that ready and for those who helped make it a success. There is more about this in the meeting minutes for May.

One of the big topics of discussion in our board meeting was the consideration of the future of the TCAA. We talked about equipment, observing locations, member activities, money, and the advances in amateur astronomy equipment. We reviewed a document that lists our five year goals and saw that we have already reached several of them. We will continue to review these and work toward fulfilling those that are left, as well as considering new goals. Your input is strongly needed. Let any of the board members know of your thoughts. We will make an electronic version of this document available on our Web site in the near future.

Our public observing sessions are in full swing and all we need now is clear skies, lots of members operating lots of scopes, plenty of guests, and did I mention clear skies! The schedule is on our Web site if you need to get it or print copies to hand out. Again, come on out with whatever equipment you have, especially binoculars, and friends and family. I've had several people tell me that they have a telescope, but don't know how to use it or what to look at. We would really like to help them as much as we can.

We should have some awesome things to see together!

NCRAL 2010 SUCCESSFUL



As part of the club's 50th anniversary celebration, the TCAA hosted the NCRAL 2010 regional meeting on April 16-17, 2010 at the Holiday Inn & Suites across from the Central Illinois Regional Airport in Bloomington. The theme of the meeting was *Generations: Past, Present and Future of the Telescope*.

Participants learned about the beginning and evolution of telescopes – hearing about the people and their scientific instruments that have expanded our understanding of the universe. The gathering provided a peek at the future of modern astronomy by unveiling current and planned developments in space science. The meeting featured a number of excellent invited speakers external to the TCAA: Charles D. (Tony) Keyes, Space Telescope Science Institute, Baltimore, MD; Jim Simek, NASA-Glenn Research Center, Cleveland, OH; Michael E. Bakich, Astronomy magazine, Milwaukee, WI; and Daniel Holland, ISU Physics Department, Normal, IL. Talks were also provided by TCAAers Carl Wenning, Dan Miller, Bobby Arn, and John Werner.

The unique resources offered by our location offered a variety of activities. Our local Challenger Learning Center generously offered to run a mission for our meeting that enlightened participant to the complexities of space exploration. On April 20th, NCRAL 2010 Chairman Carl Wenning released the following open letter to the TCAA membership to acknowledge contributions:

(Continued on page 2)

TCAA ANNUAL POTLUCK SLATED FOR JUNE 12TH

Each year since the mid 1960s – starting with the grant opening of the club's "Beehive Observatory" at the Fissel farm to the northeast of Normal – the TCAA has usually held a club picnic during the summer – usually June. This has become an annual tradition. This year the traditional will continue on Saturday, June 12th. A potluck picnic for members and their guests only will be linked to the members-only observing session that is scheduled for that evening. Dan and Paulette Miller have most graciously agreed to host this year's event in their rural home several miles east of Heyworth, IL. The picnic will begin with arrival around 6:30 p.m. The club will provide a lighted grill that will be ready by 6:45 p.m. and dinner will be served at 7 p.m. As also has been the tradition, the TCAA will provide the charcoal and lighter fluid for the grill, as well as a variety of refreshments in 2-liter bottles. This year members are also asked to bring small tables and chairs as the tradi-

(Continued on page 3)

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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Submission deadline is the first of each month.

Membership Dues

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

To join the TCAA, send your name, contact info and dues payment to

Duane Yockey
508 Normal Avenue
Normal, IL 61761

NCRAL 2010 SUCCESSFUL (CONT.)

(Continued from page 1)

TCAAers –

It is most appropriate that I let all TCAAers know how wonderfully our planning team members did in preparing and presenting the NCRAL 2010 meeting. In a phrase, MOST EXCELLENT! If you were not present at this gala event, you missed one of the seminal moments in TCAA's 50-year history.

To those who were in attendance, I was quite honest in my comments upon receiving the wonderful framed embroidery of the NCRAL 2010 logo at the Saturday evening banquet. I said then, and I'll say it again, that the planning team was just superb. Every one of the team members excelled in every area of work to which they put their hands. I received this honor in humility and on behalf of all the NCRAL 2010 planning team members who made this event possible. Thanks so very much for making this evening especially memorable for me.

Our friend Barry Beaman wrote me in the days immediately prior to the meeting telling me to "breathe." In response I wrote, "I've hosted lots meetings over the years, and this one is a breeze. I have an excellent planning team and we have very carefully coordinated our work. As Chair, registrar, and speaker coordinator, I've done a good job of delegating duties and my team has been excellent in the execution." The only reason I could say as much was because of your tireless efforts on behalf of the club and those who attended the meeting. Once again, thanks so very much.

I'd like to personally and publicly thank the following team members who attended the 17 planning meetings, and managed much of the work on the days of the event:

- Lee Green – web site manager and co-registrar
- Dave Osenga – public address, projection, backdrop
- John Werner – promotion and marketing, astrophotography contest
- William Carney – door prize manager
- Duane Yockey – treasurer, accountant, and hotel liaison
- Dan Miller – public address, projection, assistance with astrophotography contest

I want to publicly acknowledge the presentations of Dan Miller, Bobby Arn, and John Werner who gave excellent mini talks dealing with a wide variety to topics. I also want to acknowledge assistance provided by others from time to time and at the meeting: Brian Barling, Ed Duran, Paul Pouliot, and Tom Wieland who, along with others, worked the registration desk. I'd also want to thank Bobby Arn for serving as official photographer of this event. Thanks to other club members who attended this event as participants.

As historian, I truly feel that NCRAL 2010 was one of only a very few crowning achievements of 50 years of TCAA history. I do feel that our founders, John and Bertha Kieviet, would be quite proud of your service and accomplishment. I know that I am. :-)

Carl J. Wenning, NCRAL Chair and TCAA Historian



Official photograph of NCRAL 2010 meeting participants. Image by Bobby Arn.

TCAA ANNUAL POTLUCK SLATED FOR JUNE 12TH (CONT.)

(Continued from page 1)

tional picnic tables will be available.

As this is a potluck dinner, please bring a dish to share. Be creative, and avoid the urge to bring that bag of potato chips! ☺ Also bring your own entrée (fish, steaks, burgers, hotdogs) and table service (cups, plates, utensils, napkins, condiments). We have plenty of tablecloths, so no need to bring those. Bring along some games to play as we wait for sunset (8:27 p.m.) and the beginning of dusk.

The picnic and follow-up events will be held cloudy or clear. An entertaining program will be held beginning at 8:30 p.m., and viewing will begin at 9:00 p.m. if the sky is clear. If the sky is overcast, we'll end the picnic with the program, the making of "s'mores" and the telling of star stories around a campfire. This picnic will be a great time for the whole family, and TCAAers will not want to miss it. Should you have any questions, don't hesitate to contact the event's coordinator, Carl Wenning, at (309) 830-4085 (cell).

DIRECTIONS: South from Bloomington on US 51 to Heyworth. Take exit US 136 east through town and continue 2-3 miles to county road 1700N. Turn left. Dan and Paulette's house is at the intersection of 1700N and 325E, northwest corner. To enter the driveway, turn left (west) on 325E. The house is a bit secluded and won't be visible until you reach the driveway about 100 feet to the west of the intersection.

MINUTES OF THE MAY 4, 2010, BOARD MEETING

The meeting of the TCAA Board, held at Duane Yockey's office in Bloomington, was called to order at 6:34pm by President Dave Osenga. Also present were Brian Barling, William Carney, Lee Green Carl Wenning and Duane Yockey. The minutes of the previous meeting were unanimously approved.

Duane distributed the Treasurer's report and submitted the completed the annual state tax report which Dave signed for submission. Duane also noted that AL dues will soon be due and that billing for the liability insurance policy carried by the club had not yet arrived, although it has been expected. He will look into this to ensure that we continue carrying the policy.

Discussions turn to condition of the Sugar Grove Observatory. William noted that recent planned repairs are still needed and should be performed this year, including addressing the gaps in the building's sidings, repainting the dome, painting inside and out, repainting the door which is starting to rust, and repairing or replacing of some of the floor linoleum. While the advisability of putting much money into the building was questioned in light of its limited use during our outreach activities, the idea of having a "SGO Spring Cleaning" at the June 12 MOOS/picnic was suggested as a way to address immediate maintenance issues.

Discussions moved to the club's LX-200 telescope and it was noted that the electronics were not functioning reliably although the OTA was still usable. We reviewed the repair history of the unit, the advisability of undertaking additional repairs, and the need for a club-owned telescope given the quality and quantity of member owned scopes. The possibility that sale of OTA was discussed an alternate way to resolve the LX-200 questions, although no formal action was taken. William agreed to investigate the cost of a replacement mount.

Lee noted that the club web site had been interrupted due to a firewall failure, but that the site was returned to operation. He suggested that additional improvements could and should be added to the club site. Lee reported that he spoke at NCRAL with Khshal Bhatt, who offered to assist. Dave suggested using Facebook and Twitter accounts as a way of recruiting young new members. Lee will formalize suggested improvements and submit them to the Board.

Discussion turned to a review of the NCRAL conference. All agreed that the conference was very successful and that its smooth operation was due to the performance and professionalism shown by each and every member of the NCRAL committee. Duane handed out detailed financial reporting that showed that the club lost \$695.12 on the conference but had a small profit from the Challenger mission and the sale of shirts. All agreed that this was a good result given that we had budgeted for 100-125 attendees and we had only 68 paid registrations. Duane will submit the report to NCRAL after he receives the final receipts. The Board approved the forgiveness of Bobby Arn's registration fees in light of his role as a speaker. Lee agreed to coordinate with John Werner on one outstanding issue with the NCRAL shirts and to deliver expense checks to John Werner and DK Designs.

Discussion turned to our monthly Members-Only Observing Sessions with the goals of observing from alternate sites and involving additional members. William noted the increase of sky glow at the Nature Center over that last several years and offered some of his recent photos documenting this for inclusion on the club web site. It was noted that non-member Brett Knight had offered to allow us to observe from a darker-sky site near Cornell, and that Dan Miller's recent hosting of an impromptu observing session had remarkably dark skies. Alternate sites including Comlara Park (which now has a lighted sports field nearby), Lilly Nature Preserve and Olympia High School (near Stanford), were suggested and were well received as good alternative viewing locations. Other MOOS options were discussed that included the common desire to have increased social interactions with club members.

The schedule of upcoming Public Observing Sessions was reviewed. Carl suggested that as we talk with people, the inevitable question of "How much does your telescope cost?" be considered to be a question about the cost of entry into our hobby. It was noted that by highlighting lower-cost alternatives such as binoculars and Dobsonian scopes, we might reach more people. We discussed the availability and need of brochures and schedules, as well as observing guides and other materials, to better the market the club to the public.

Dave passed out copies of the club's previous 5 year plan. It was noted that while many of the items had been completed, members were asked to review the plan and make suggestions at the next Board meeting.

The meeting adjourned at 8:16pm.

Respectfully submitted,

Lee Green
Secretary

HISTORIAN MEETS WITH FOUNDING MEMBER

On Tuesday, April 20th, TCAA Historian Carl Wenning had the distinct pleasure of meeting over lunch with one of the club's founding members – Sue Remsburg Bassett. Sue was in town for the month of April disposing of her mother's estate when she came across the TCAA website. She contacted Lee Green, and Lee – with Sue's permission – notified Carl of her presence in town. Carl met with her a week later.

Sue is a dedicated solar eclipse chaser as shown in the picture below. Active in the TCAA until she started work as a college student at Illinois State University, she left town in 1967 after earning a BS degree in Biology. Several years later, after she married and moved to Maryland with her husband who was in the military, she earned an MS in computer science from Johns Hopkins University. Shortly thereafter she was hired to work as a computer programmer for NASA Goddard Space Flight Center. Her work there continued from 1984 through 1990. While working at Goddard SFC, she was president of the Center's astronomy club. At this writing (April 20, 2010) she is retired but remains actively involved in two astronomy clubs – the Astronomical Society of Greenbelt (MD) and the National Capitol Astronomers. During her time in the club, Sue was a good friend of Karen Mischler who eventually earned a Ph.D. and moved to Moscow, Idaho, where she lives to this day.



Sue Remsburg Bassett

TCAAerS MAKE BOLIDE OBSERVATION

On the evening of Wednesday, April 14, several TCAAers observed a brilliant bolide streaking low across the northwestern to northern sky around 10 p.m. Paul Pouliot observing from Pontiac reported via facebook, "Saw the most amazing fireball while putting the scope in the van. Low in the NW, bright green, a long tail and then ending with a flash that lit up the countryside. Just awesome! Paul later provided this comment, "Footage from Iowa of last night's bolide along with radar image of the trail it left in the sky.

<http://kstp.com/news/stories/S1514008.shtml?cat=1>"

From Tony Cellini, observing from Sugar Grove Nature Center with Lee Green, reported, "Lee and I saw this fireball from SGO last night. Incredible sight... Only lasted about 10 seconds from down here. Only about 10 deg. above north horizon." Lee later reported, "It was bright green with an orange tail."

Later press reports in the *Pantagraph* indicated that the meteor fragmented in an explosion, and several fragments were recovered in southern Wisconsin.

MAY SKY GUIDE

03 Asteroid Pallas is at opposition, 11 P.M.



Venus passes 6° north of Aldebaran, 11 P.M.



06 Eta Aquarid meteor shower peaks



07 The Moon passes 4° north of Neptune, 5 A.M.



09 The Moon passes 7° north of Jupiter, 1 P.M.



The Moon passes 6° north of Uranus, 8 P.M.



12 The Moon passes 8° north of Mercury, noon



16 The Moon passes 0.08° north of Venus, 5 A.M.



20 The Moon passes 5° south of Mars, 7 A.M.



23 The Moon passes 8° south of Saturn, midnight



25 Mercury is at greatest western elongation (25°), 9 P.M.



2010 PUBLIC OBSERVING SESSIONS

From March through October each year, the TCAA holds monthly public observing sessions on the Saturday typically nearest the first quarter moon. All programs are free of charge and open to the public. The sessions are held at Sugar Grove Nature Center. In 2010, we will hold the observing sessions on the dates and time listed below. Each session will focus on a particular celestial phenomenon, though additional prominent sky objects such as planets, nebulae, star clusters, and galaxies are viewed when visible. A typical public observing session includes the following components:

- ☆ *Lecture about the featured object.* This 20-30 min. presentation, held in the SGNC picnic shelter, includes images of and details about the featured sky object as well as information on other interesting celestial objects that might be viewed that evening.
- ☆ *Sky tour using a laser pointer.* We step out under the stars to point out the major constellations and planets, and to designate the location of the featured celestial object for the evening.
- ☆ *Telescope observing session.* We use telescopes at ground level to observe the featured objects and other wonders of the heavens.

Date	Featured Object	Time	Coordinator(s)
May 22	Variable Stars	9:00pm - 11:00pm	Lee Green
June 19	Virgo Cluster of Galaxies	9:00pm - 11:00pm	Duane Yockey & David Osenga (?)
July 17	Globular Star Clusters	9:00pm - 11:00pm	Duane Yockey & David Osenga (?)
August 14	Planets and the Zodiac	8:30pm - 10:30pm	Carl Wenning
September 11	Stars of Red, White and Blue	7:30pm - 9:30pm	Dan Miller
October 16	Perseus double star Cluster	7:00pm - 9:00pm	John Werner

A detailed brochure dealing with the 2010 public observing sessions can be downloaded from the TCAA website at www.tcaa.us.

Members-only observing sessions usually are held on the Saturday nearest the full moon and are typically held one week prior to public sky viewings. MOOS programs are held throughout the year, but only if the temperature isn't too low and the wind too high during the winter. Because the TCAA Board has agreed to dispense with coordinators for the members-only events, TCAAs should pay attention to monthly reminders that will be distributed electronically through the club's listserv.

CONSTELLATION OF THE MONTH: LEO—THE LION

Leo is a prominent constellation that is visible in the early evening during the spring months. As one of the zodiac constellations, the Sun passes through Leo from August 10 through September 16.

A recognizable asterism in Leo is a group of stars called the Sickle which is shaped like a backwards question mark. The upper stars loop around the mane of the lion and are punctuated at the bottom with the bright star Regulus.

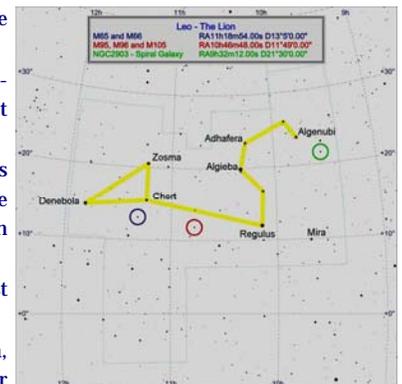
In Mythology, Leo represents the Nemean lion which was said to live on the Moon. Coming to the Earth as a shooting star, the lion ransacked Corinth. As the first of his 12 Labors, Hercules was challenged to slay the monster. Hercules failed using clubs and arrows, but strangled the lion with his bare hands and returned with the dead lion draped over his shoulders. Jupiter placed the lion back among the star from whence he came.

Astronomically, Leo is the 12th largest constellation covering 947 square degrees. It is the 16th brightest constellation.

Among the named stars in Leo are the alpha star Regulus, four stars in the Sickle, Algieba, Adhafera, Rasalas and Algenubi. The hind quarter of the lion include three stars named Zosma, Chort and Denebola, or the Tail of the Lion.

Gamma-Leonis, Algieba, is a striking binary star where the two stars are closely spaced. Another star, called Mira, is a variable red-giant star that oscillates in brightness from 4th to 11th magnitude in a period of 312 days. This large swing in magnitude and its long period has been seen in other of these Long Period Variable (LPV) stars and Mira is the archetype of that class.

Leo is rich in deep space objects including a large number of bright galaxies and five Messier objects. M65 and M66 are two bright, closely spaced spiral galaxies with nearby NGC3628 forming beautiful trio lying just south of Chort. M95 and M96 are a pair of barred spiral galaxies that are only 40 arcminutes apart. M105 is an elliptical galaxy that is only 15 arcminutes from NGC3384 and NGC3389. This trio is easily viewed together in a telescope. NGC2903 is another bright spiral galaxy that is easily viewed in a modest telescope.



CHASING THE ROSETTE NEBULA

By Lee Green

I had a chance recently to do some imaging on April 14 at Sugar Grove. My big goal for the year is to use my Hyperstar adapter to see what kind of images I can take. The Hyperstar is a secondary optical element that takes the center, front position on my Schmitt-Cassegraine tube. It dramatically shortens the focal length from 4000mm to 675mm, or from f/11 to f/1.9! This means that magnification is reduced and the resulting image is much brighter.

So my camera's field of view using the Hyperstar is a field about $1^{\circ} \times 1.5^{\circ}$ in size. The other benefit to shooting such a large field is that drift is reduced along with magnification, so it is easier to take longer unguided exposures.

I chose the Rosette Nebula because it is large and has a notoriously low surface brightness. Although the Rosette (in Monoceros) is already starting to set in the west, it is still high enough to stay above the turbulent horizon.

Almost as an afterthought, I decided to shoot the Orion nebula "in the dirt" just before they dipped behind the trees. I got the exposure time just about right. With 2 second filtered exposures, the red channel was just saturating but not blooming. My Luminance channel was a bit short at 0.2s because the image was less than 50% as bright as it might have been. I took a set of ten exposures and after processing, I was pleased with the result. There was good detail visible for a total exposure time of 62 seconds. To the left is the hint of the Running Man nebula.

Then I moved on to the Rosette and ran a few test shots to determine the amount of signal I was getting with the Ha filter and found that exposures of 20 seconds produced too dim an image. I found that by 60 seconds, I was starting to see a bit of drift due to my



polar misalignment. So I took a set using 60 seconds for Ha and 20 seconds for the RGB filters. The result is shown here. It's a composite of ten HaRGB images.

If I had this to do over again, I would perform a more careful polar alignment so I could run the RGB exposures using at least 60 seconds and extend the Ha filter to two minutes or more. Also, since the target is clearly larger than my camera's field of view, I would need to take several sets to capture the full extent of the object and combine them as a mosaic.

While this was going on, Tony Cellini was doing some binocular observing. As we were chatting, he first saw a remarkably bright green fireball meteor in the North and alerted me to it. We enjoyed watching as it grew a tail and trailed orange sparks as it slowly descended! What a spectacular addition to any evening!

TCAAer ATTENDS CLC GRAND OPENING

On April 8, 2010, Carl Wenning attended the grand opening of the Jonathan M. Astroth Community Education Center at Heartland Community College. The CEC includes the Challenger Learning Center (CLC) that had during the previous January been moved there from its original location at the former terminal building of the Central Illinois Regional Airport.

TCAA Treasurer's Report – April 2010

OPERATING FUND BALANCE – March 31, 2010 - \$ 5,170.21 *

Income

Dave Osenga (dues) - \$ 40.00
James Ryan (dues) - \$ 40.00
Diane Dean (dues) - \$ 40.00
NCRAL Registrations - \$ 2087.04
Heartland Comm. College (class) - \$ 180.00
Challenger Learning Center Mission - \$ 320.00
Polo Shirt orders - \$ 236.00

Expenses

LYB Inc. (April Observer) - \$ 33.88
Carl Wenning (NCRAL expense) - \$ 1038.42
Duane Yockey (Convention Center) - \$ 2942.32
NCRAL 2010 honorariums - \$ 850.00
Dave Osenga (NCRAL expenses) - \$ 27.00
Speaker Expenses (Michael Bakich) - \$ 330.43

OPERATING FUND BALANCE – April 30, 2010 - \$ 2,891.20

OBSERVATORY FUND BALANCE – March 31, 2010 - \$ 2,545.61

Income

Donation (James Ryan) - \$ 10.00
Keyholder Fee (Dave Osenga) - \$ 5.00

Expenses

None - \$ 0.00

OBSERVATORY FUND BALANCE – April 30, 2010 - \$ 2,560.61

TOTAL TCAA FUNDS – April 30, 2010 - \$ 5,451.81

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 2009)
Dan Miller (renewed through 2009)
Lee Green (renewed through 2009)

HISTORICAL SCRAPBOOKS FOUND

Most fortunately, Dan Miller found the two historical scrapbook albums in his possession on Easter morning, April 4, 2010. (Historian's supplemental comment, *Halleluia!*) It turns out that Sandy McNamara had handed off the albums to Michael Rogers in the summer of 2004 as she was preparing to move to Indiana. Michael handed off a box of TCAA materials to Dan Miller when he was preparing to depart town in the summer of 2009. Dan had not looked in the boxes given to him by Michael until nearly a year after he had received them. The scrapbooks are in good condition, and have provided additional information relating to the *History of the Twin City Amateur Astronomer: 1960-2010*.

On Thursday, April 15, Carl met with Kora Searcy, the daughter of John and Bertha Kieviet. She loaned a formal portrait to Carl that was taken in 1980 during their daughter Valeria's wedding. This image will grace the frontispiece of the *History of the Twin City Amateur Astronomers: 1960-2010* when it is published later this summer. The historical record will be dedicated to the memory of the Kieviets.

CENTENARY YEAR OF HALLEY'S COMET

A century ago, on April 20, 1910, Halley's Comet rounded the sun and once again entered history. One of the club's future members, Aubrey Johnson, would later observe the Comet. He would do so again some 76 years later and become the only Comet Halley Two Timer in TCAA history.

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. Unsubscribing is just as easy. To unsubscribe, just send a blank email to 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. It has been recently updated to include an extended sky calendar of events as well as additional space weather and satellite viewing links.

The OBSERVER

Newsletter of the TCAA, Inc.

Erin Estabrook, Editor
314 Covey Court
Normal, IL 61761

Are your dues due?



The Dues Blues?

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

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