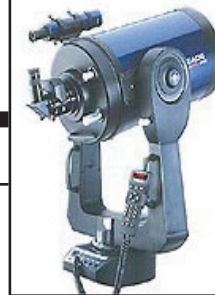


The OBSERVER

The Newsletter of the Twin City Amateur Astronomers, Inc.

June 2005 Volume 30, Number 6



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Raffle Tickets Available for Telescope

by CW

As you might recall from last month's issue of *The Observer*, a high quality 6-inch Mac-Newtonian telescope is being raffled off on behalf of the ISU Planetarium. An anonymous donor, a good Friend of the ISU Planetarium, has donated a new Argonaut 6-inch Maksutov-Newtonian OTA (optical tube assembly) for the purpose of a raffle to benefit the planetarium. The telescope was purchased from Orion Telescopes and Binoculars (item 09068) by the original purchaser about five years ago and has never been used. The OTA, to be raffled without a pier (the original purchaser did not buy one), lists at \$1,799. This particular telescope is generally perceived to be of superior quality with optical characteristics on the level of apochromatic refractors of the same diameter. The telescope has a Crayford-type 2-inch eyepiece drawtube that is very smooth in operation. An adapter (not included) is required in order to use 1 1/4"

eyepieces.

Because the winner of the telescope would have to provide his or her own mount for the telescope, as well as eyepieces and adapters, this might cause some members to shy away from purchasing raffle tickets. Don't let this be the case. Consider the fact that you might win the telescope. You could then donate the telescope to the TCAA taking advantage of a tax deductible contribution to the TCAA which is a 501(c)3 not-profit corporation. A donor could there convert a single winning \$20 ticket into a \$1,799 tax deduction that could have an actual cash value to the donor of 15% to 33% of the full value of the telescope.

If you are interested in vying for this valuable telescope to help support the ISU Planetarium, you should know that raffle tickets are now available. Only 50 tickets will be sold in total; 15 tickets have been sold to date. Each ticket will be sold

TCAA Calendar of Events

- June 11: Public Observing Session at Sugar Grove Nature Center,
9:00 p.m. "Globular Cluster M3"
Coordinators: 1. ?, 2. ?
- July 2: Members-Only Observing Session at Sugar Grove Nature Center
9:30 p.m., "Jupiter and its Moons"
Coordinators: 1. ?, 2. ?
- July 9: Public Observing Session at Sugar Grove Nature Center,
9:00 p.m., "Emission Nebula M8"
Coordinators: 1. ?, 2. ?

The Observer

Newsletter of the TCAA, Inc.

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

TCAA Officers

President	Lyle Rich 309-862-4417 lylerich@hotmail.com
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Treasurer	Duane Yockey 309-452-3936 duane@lybinc.com
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Observer Editor/ TCAA Education Coordinator

Rebecca Wenning 21 Grandview Dr. Normal, IL 61761 309-454-4164 rwennin@ilstu.edu	Submissions must be received by the 1st of each month.
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Membership Dues

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

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

Duane Yockey
508 Normal Avenue
Normal, IL 61761

to astronomy club members for a price of \$20 each, thereby raising \$1,000 for the ISU Planetarium. The drawing for the telescope will occur only after all 50 raffle tickets have been sold. If all 50 tickets cannot be sold to the TCAA membership (or the TCAA itself, Board members take note!), then additional tickets will be sold to other amateur astronomers in the area.

Raffle tickets will be sold through mail order only, and will be sold on a first-come, first-served basis prioritized by postmark date. To purchase your numbered ticket(s), send \$20 per ticket to Carl Wenning. Please do not send cash, and be certain to make your check payable to Illinois State University Foundation/Planetarium. Send your request for tickets (along with your return address) to Carl Wenning at 21 Grandview Drive, Normal, IL 61761-4071. If you would like to arrange to see the telescope before purchasing your raffle ticket(s), feel free to contact Carl by phone at (309) 454-4164 or via e-mail at wenning@phy.ilstu.edu.

MAY MOOS/POS REPORTS

While the sky was partly cloudy, covered with a thin layer of patchy clouds, seven members and guests of the TCAA met at SGO on Saturday, May 7, to the Members Only Observing Session. Staying long enough to observe just a few celestial objects were William Carney, Carl Wenning, Bob, Dan Miller and son, and former member Kevin Brown. Also making a cameo appearance but not staying for observing was Sheri Rodgers.

Because spring is the best time for viewing galaxies (despite the

often hazy sky), the power of the 12-inch LX200 telescope was used to observe perhaps 8-10 galaxies in Ursa Major, Leo, Coma Berenices, and Virgo. The observing session ran from 9:30 p.m. until about 10:50 p.m. by which time the sky had become too overcast with high cirrus clouds to continue observing.

The Public Observing Session held on Saturday, May 14, was attended by approximately 20 TCAAers and members of the general public. The clear sky earlier in the day gave way to partly cloudy skies near sunset. Despite the passing clouds, the air was quite transparent, and twinkling was readily notable, especially near the horizon. Brian Barling gave a 15-minute presentation dealing with Jupiter and the Galilean moons using printed pictures. Carl Wenning follow-up with an impromptu sky lecture pointing out key constellations and explaining such things as star color and twinkling. With telescopes provided by Mike Rogers, William Carney, Duane Yockey, and a few others, good views of the moon, Saturn and Jupiter were obtained. At least one new club member, Chris Franklin, also joined us at this session.

Thanks to the TCAA members who work to make these members-only and public events possible. A special word of thanks to the coordinators of these events, too! It should be noted that coordinators are needed for several of the upcoming summer MOOS and POS events. Please contact a board member if you'd like to help out. Contact information is found on page 2, first column, of this edition of *The Observer*.

OTHER REPORTS OF NOTE

Former TCAA member Dr. Shaukat Goderya, the only "official" Ph.D. astronomer at Illinois State University, has reported that he will be departing ISU. He has taken a tenure-track faculty job as astronomer at the

ISU Planetarium Director Tom Willmitch has recently had a bout with health problems that landed him in the hospital for a few days during the first week of May. Following a four-day visit, Tom was allowed to return home. Two days later he was back at work.

ANNUAL MEETING SPEAKER ARRANGED

Mike Rogers is pleased to announce that we have a speaker for the Annual Banquet to be held on February 11, 2006. Our speaker will be Dr. Roger Phillips http://geodynamics.wustl.edu/phillips/rjp_home/phillips.html who serves as director of the McDonnell Center for the Space Sciences. He has been intimately involved in current exploration on Mars and Venus, and is going to be heavily involved in the MESSENGER mission to Mercury. Dr. Phillips will be coming to us from St. Louis.

BPL PRESENTATION WELL RECEIVED

~ by Jean Memken ~

On May 26, TCAAer Mike Rogers gave a stellar presentation at the Bloomington Public Library dealing with what NASA has been up to lately. It was a multimedia extravaganza with pictures, movies, Starry Night software, and links to various pages of the nasa.gov web site. An enthusiastic audience

numbering around 55 asked many interesting questions and seemed to really enjoy the talk.

If the weather is good, we probably can plan on having quite a few people show up at the June public observing session, as Mike put a plug for it in his presentation, and many people after the presentation asked me how to get to SGO. Former TCAA member Karen Moen of the Bloomington Public Library organized the event and provided great refreshments. A good time was had by all!

JUNE 4th PICNIC SUCCESSFUL

The traditional TCAA June picnic was a fun event. The potluck dinner was held at SGNC picnic shelter, and was attended by some 15 TCAA members and guests. Carl Wenning provided the grill, William Carney the refreshments, and everyone contributed a dish to pass. William provided telescopic views of Jupiter and Saturn, but the sky was not clear enough for additional viewing. In attendance were the Brian Barling family (3), Sheri Rodgers family (3), Michael Rogers family (3), Carl Wenning family (3), Duane Yockey, Kevin Brown, and William Carney.

Coordinators for the event were Carl Wenning and William Carney. Unfortunately, word about the picnic did not make it out to the membership via *The Observer* newsletter. Carl and newsletter editor Rebecca Wenning were in Mexico presenting teacher workshops from May 25 thorough June 1, and didn't return in time to assemble and disseminate this issue

of *The Observer*. TCAAers who are subscribed to the member listserv did, however, receive the information in a timely fashion. If you want to be kept up-to-date on TCAA events in circumstances such as these, now would be a good time to subscribe to the TCAA listserv. To subscribe, send a blank e-mail message to TCAA-subscribe@yahoo.com. Our listserv manager, Al Timke, will then add you to our mailing list.

OBSERVING FROM 38,000 FEET

~ by Carl Wenning ~

On the morning of June 1, on the way back from Morelia, which is located in the state of Michoacan in central Mexico, I had a sleepless night -- typical for me when flying. Rebecca, Chrystian Vieyra (Rebecca's boy friend who you'll undoubtedly see around this summer if you attend TCAA events) and I departed Morelia at 1:30 a.m. for our 3.5-hour flight to Chicago. We encountered clear skies most of the way home, which is something one usually encounters when flying at 38,000 feet.

Somewhere over Texas we passed through high cirrus clouds when eventually I saw what was a glow of white light off the tip of the right wing. I just assumed that it



was a running light reflecting off the water vapor through which we were passing. Only after the sky began to clear did I realize that I was seeing the moon through the thin clouds. As the sky continued to clear, I was able to observe not only the Moon, but Mars and a number of bright stars as well – all within a few degrees of the horizon. It was easy to glimpse the brighter stars of Aries all within 10 degrees of the horizon. The sky was inky black. Only my lack of dark adaptation and the interior glow of the airplane prevented me from seeing all the stars.

Perhaps the most amazing thing at 38,000 feet was to be able to get a perfect view of “rosy-fingered dawn.” It was amazing how early this orange-red glow could be seen – probably only a few minutes after the beginning of astronomical twilight where the sun’s center is 18 degrees below the horizon – and how thin the glow of dawn appeared to be. It hugged the horizon because at the earth’s visible limb several hundred miles away, it probably didn’t extend more than a few degrees above the visible horizon. It reminded me of the photographs

that astronauts take when they are in earth orbit. While I’ll never get much higher than about 40,000 feet, this view gave me a little taste of what astronauts encounter 16 times a day when orbiting planet earth.

PLANETARIUM PRESENTS COSMIC CATASTROPHES

The Illinois State University Planetarium is proud to offer Cosmic Catastrophes, premiering on June 15 and running through July 22. Show times are Wednesday and Friday evenings at 7:30 PM. In a sci-fi setting, Cosmic Catastrophes explores many potential threats to the Earth. These dangers range from the effects of manmade pollution to the threat of huge asteroids wielding past the Earth.

Admission to the ISU Planetarium’s public programs is \$3 for adults, \$2 for children ages 5-12 and seniors, and \$1.50 for children ages 3-4. Planetarium members are admitted free of charge. Tickets may be purchased in the Planetarium Gift Shop, next to the Planetarium, beginning 20 minutes before each show. For more information about the planetarium, visit the planetarium’s web page at <http://www.phy.ilstu.edu/planet.html>.

SKYLINE FOR JUNE 2005

TCAAers should be aware that Planetarium Director Tom Willmitch does a really nice job of providing Skyline, a monthly update of astronomical events. This information is available on the planetarium’s web page, and also via phone at 438-5007. Here is what Tom has written for June 2005:

The arrival of June means clear sparkling nights. Just after dark, a

few scattered stars of late winter hug the western horizon. Meanwhile the proud stars of spring parade majestically overhead. Finally the bright stars of summer crowd the eastern horizon.

The new moon occurs at 4:55 PM CDT on June 6. Gracing the afternoon and evening sky, the first-quarter moon occurs at 8:22 PM on June 14. Rising at sunset and setting at sunrise, June’s full or strawberry moon occurs at 11:14 PM on the 21st. Finally, gracing the morning sky, the last-quarter moon takes occurs at 1:23 PM on June 28.

Unmistakably bright Jupiter can be found to the southwest as darkness falls. Located in the constellation of Virgo the Maiden, the King of the Planets is visible from late twilight until it sets after shortly after midnight. Saturn shines bright to the west among the stars of Gemini the Twins. The Ringed Planet forms a ragged line with the bright stars Castor and Pollux that mark the heads of the Twins. Saturn sets about two hours after the Sun. Venus can be found to the west-northwest in evening twilight. Early in June the Evening Star is located just above the western horizon. However Venus climbs higher in the sky from night to night, setting 1-1/2 hours after the Sun by mid-month. Meanwhile Mercury rapidly climbs into June’s evening sky. By mid-month this fleet-footed planet is located just below and to the right of much brighter Venus.

By June 20 the planets Saturn, Venus, and Mercury are separated by only a few degrees. The three planets are clustered within 1-1/2 degrees of one another on the evening of June 26. Afterwards they will

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begin to move apart – with Saturn swinging to the right of Venus and Mercury passing below and to the left of the Evening Star. Finally, by the end of June Mars rises at about the same time as Jupiter sets. The Red Planet is growing brighter from night to night and is located on the border between the constellations of Pisces the Fishes and Cetus the Sea Monster. This summer Mars will put on a show rivaled only by the red planet's appearance in 2003.

Summer in the northern hemisphere begins at 1:46 AM on June 21. This marks the summer solstice, the longest day of the year and time that the Sun passes through its northernmost point in the sky. The earliest sunrise of 2005 occurs a few days before the solstice, with the sun cresting the horizon at 5:35 AM on the morning of June 14. The latest sunset of 2005 occurs a few days after the solstice, with the sun slipping from view at 8:31 PM on the evening of June 27. These dates vary from the summer solstice because of the geometric relationship that exists between the ecliptic or Sun's annual path among the stars and the horizon.

THE 2005 APPARITION OF MARS

~ by Carl Wenning ~

Following David Levy's April 25th visit, I decided to spend a few minutes researching his comment that the 2005 opposition of Mars could be the best for northern hemisphere observers in the past 60,000 years. Above is what I found using my desktop planetarium program Voyager:

Opposition Date	Constellation	Opposition Distance	Maximum Ang. Diam.	Transit Altitude	Apparent Magnitude
Nov 07, 2005	Aries	0.471 AU	19.88"	65 degrees	-2.3
Aug 28, 2003	Aquarius	0.373 AU	25.12"	34 degrees	-2.9

While there is some truth that this opposition will be better in 2005 than in 2003 due to the higher transit altitude (thereby allowing for less atmospheric turbulence and better seeing) and the more transparent skies of late autumn as compared to late summer, there are significant downsides as far as time of year (it's getting colder for observers but brisk, not freezing), the opposition distance will be greater (26% more distant in 2005 than in 2003), maximum angular diameter will be smaller, (the 2005 value is only 79% of 2003 value), and the apparent brightness significantly less (0.6 magnitudes dimmer in 2005 as compared to 2003).

So, how does the 2005 opposition of Mars stack up to other oppositions in recent years? Previous to 2003, the best opposition I can remember occurred on September 28, 1988 at which time the red planet's opposition distance was 0.397 AU; it was located in Cetus, had a transit altitude of 47 degrees, and an apparent opposition magnitude of -2.8. Hence, the opposition of 2005 in many ways is more like the event of 1988 than it was in 2003 when "the best apparition in 60,000 years" occurred. Will the 2005 apparition of Mars be the best in 60,000 years for northern hemisphere observers? I'd say not, but it will be a good apparition nonetheless.

VOLUNTEER OP'S

~by Rebecca Wenning~

For those who enjoy sharing their knowledge about the night sky with others, here are some opportunities for you!

The Christian East Bay Camp would like an amateur astronomer to come by at least once during the following three camp sessions, to do a bit of naked eye and telescope observing: June 12-23, July 17-22, and July 24-29. If you are available to help, please contact Deb Townsend: 309-365-7531 (work), 309-287-9552 (cell), or at deb@eastbaycamp.org.

The Girl Scouts are also in want of an amateur astronomer to visit Camp Peairs for observation at least once during each of the following sets of dates: June 13/14, June 20/21, June 27/28, July 11/12, July 18/19. If you are available to help, please contact Jennifer Sublett at the Girl Scout Office: 309-662-5384 or outdoorscout@jmail.com.

Even if you can help out with only one of the requested evenings, your assistance will be much appreciated! Please contact Deb or Jennifer directly, and also please drop me a message (309-454-4164 or rwennin@ilstu.edu), letting me know when you will be volunteering. This is an opportunity to serve our fellow citizens and to help youth appreciate and better understand the night sky that we all love!

TCAA Treasurer's Report – May 2005

OPERATING FUND BALANCE – April 30, 2005 - \$ 1,815.22

Income

Chris Franklin (Dues) -	\$ 40.00
Roy Lawry (Sr. Dues Renewal) -	\$ 25.00
Kevin Brown (Dues) -	\$ 40.00
Tim Henning (Dues Renewal) -	\$ 40.00
Steve & Patti Blair (Dues Renewal) -	\$ 40.00

Expenses

Van Gundy (Liability Insurance) -	\$ 275.00
Carl Wenning (April & May Observer) -	\$ 33.45

OPERATING FUND BALANCE – May 31, 2005 - \$ 1,691.77

OBSERVATORY FUND BALANCE – April 30, 2005 - \$ 947.54

Income

Keyholder Fee (Kevin Brown) -	\$ 10.00
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Expenses

None -	\$ 0.00
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OBSERVATORY FUND BALANCE – May 31, 2005 - \$ 957.54

TOTAL TCAA FUNDS – May 31, 2005 - \$ 2,649.31

Respectfully submitted,
L. Duane Yockey, Treasurer

Sugar Grove Observatory

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

Duane Yockey (April 2001, renewed through 2005)	Lenore Trainor (December 2004, renewed through 2005)
Michael Rogers (August 2001, renewed through 2005)	Lyle Rich, renewed through 2005
William Carney (March 2002, renewed through 2005)	Kevin Brown (May 2005)
Carl Wenning (January 2004, renewed through 2005)	
Brian Barling (February 2004), renewed through 2005	

**Announcing New
TCAA Members**



Chris Franklin
Renewal Date: 200605

Welcome!



The OBSERVER

Newsletter of the TCAA, Inc.

Rebecca Wenning, Editor
21 Grandview Drive
Normal, IL 61761-4071

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