

The OBSERVER

The Newsletter of the Twin City Amateur Astronomers, Inc.

March 2005 Volume 30, Number 3



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DAVID LEVY TO OBSERVE WITH TCAA

~ Jean Memken ~

David Levy, world-renowned comet discoverer and science editor for *Parade* magazine, will be coming to Bloomington-Normal next month, and hopes to participate in an observing session with our club on April 25. He will also make a public speech as part of Illinois State University's Science and Technology Week festivities on April 26 at 7:30 p.m. in Braden Auditorium on the ISU campus. Levy's appearance is being sponsored by the College of Applied Science and Technology at Illinois State.

Levy is probably best known among amateur astronomers for his discovery of Comet Shoemaker-Levy 9, which hit Jupiter in July 1994. Since his first comet sighting from his Arizona home in 1984, Levy has become one of history's most successful comet hunters, with 21 discoveries to his credit. He has written 30 books on science and astronomy – including *Skywatching*, *Impact Jupiter*, and his latest book *Cosmic Discoveries: The Wonder of Astronomy*, co-written with his wife, Wendee. He has also appeared frequently on national TV, including *The Today Show* and *Good Morning America*.

In 1996, Levy became the science editor for *Parade*. He has written 26 articles for the publication, including five cover stories. With a Master's degree in English Literature, Levy brings a unique perspective to science and astronomy, covering such topics as "Five Scientific Discoveries that Changed Us Forever," "How to Make Sense Out of Science," and "Are

you Ready for the Genome Miracle?"

After agreeing to become the keynote speaker for Science and Technology week, David Levy inquired about holding an observing session with local amateur astronomers. He is anxious to meet with the TCAA and do what we all love to do – share the night sky with each other and the public. I hope that everyone in the club will want to be involved in the observing session. No doubt we will have a quite a crowd coming, and so we will need as many members as possible helping. Please consult the TCAA listserv for updates, but plan now to come out to SGO on April 25th to meet David Levy and do some observing with him (weather permitting, of course).

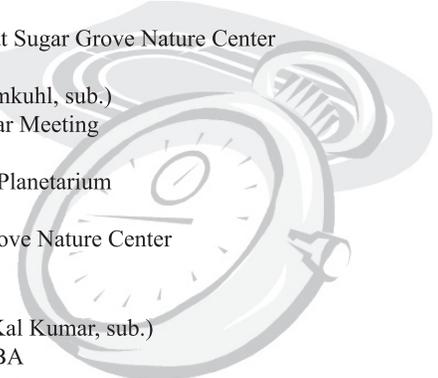
I also hope you will plan to go to David Levy's lecture on April 26. In his presentations, Levy uses videos, slides, poetry and music, transforming astronomy into a personal adventure story accessible to people of all ages. An educator at heart, Levy is strongly committed to increasing the interest of our nation's children in the wonders of science and discovery. It should be a great program that I think you and your friends and family will enjoy very much.

PRESIDENT'S MESSAGE

I would like to thank the Board for selecting me to serve as president for 2005. I hope that this year will bring the club to new heights. This year the focus will be on the membership and ways to make the club more relevant for the members.

TCAA Calendar of Events

- April 9: TCAA Members-Only Observing Session at Sugar Grove Nature Center
8:30p.m.-Dawn
Coordinator: Michael Rogers (Neale Lehmkuhl, sub.)
- April 16: Astronomy Day/Planetarium Show/Regular Meeting
Astronomy Day at Eastland Mall
Planetarium Show "Ring Worlds" at ISU Planetarium
4:30p.m.
TCAA Regular Meeting/POS at Sugar Grove Nature Center
Presentation: Moon & Saturn
8:00p.m.-10:00p.m.
Coordinator: William Carney (Kal Kumar, sub.)
- April 25: David Levy/TCAA Observing Session, TBA
- April 26: David Levy presentation at ISU Braden Auditorium, 7:30p.m.



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
Vice President	Kal Kumar 309-661-3542 kal@centralil.net
Secretary	Michael Rogers 309-862-5529 mprogers@mac.com
Treasurer	Duane Yockey 309-452-3936 duane@lybinc.com
5th Director	William Carney 309-829-7748 willcarney@aol.com

Property Manager

William Carney	309-829-7748 willcarney@aol.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 10th 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

This does not mean that our outreach activities will stop, but the emphasis for 2005 will be the improvement of the club. I hope all members will take time to participate in the activities of the club. We will also try to have presentations in town, making them more accessible for the members and the public.

The 12" is back and the observatory will be re-keyed next week. Once the re-keying is complete, key holder refresher training will be given to all key holders before they receive a new key. William Carney has developed training material for key holders.

On the scientific front: Spirit and Opportunity have completed their first year of work. Spirit has spent the last 70 sols (Mars days) climbing up the "Columbia Hills" to reach "Larry's Lookout," a point on "Cumberland Ridge." Having accomplished the trek up to Larry's Lookout, Spirit is getting into position to shoot a panorama of the "Tennessee Valley" located below. Spirit is still in excellent health.

Opportunity received a software tune-up that should improve its mobility capabilities. With the new load on board, Opportunity booted into it and began an initial checkout. After a short test drive with promising results, there remains more checkout to do before blessing the load and having the rover's sister craft, Spirit, boot up the new software. Atmospheric opacity has been stable, with tau around 0.9. Solar power is still relatively plentiful, and Opportunity continues to be in excellent health.

At Saturn, Cassini completed its third fly-by of Titan. A giant crater about the size of the Netherlands was spotted on Titan by the NASA/ESA/ASI Cassini spacecraft as it made another planned fly-by on 15th February 2005. The huge impact crater on Titan was seen by the Cassini radar instrument as the spacecraft flew within 1577 kilometers of the moon's surface. This is the third close Titan fly-by of the mission and only the second time the radar instrument has examined Titan. It is the first time that the areas covered by Cassini's radar and the imaging camera overlapped. This overlap in coverage should be able to provide more information about the surface features than either technique alone.

The crater identified by the radar has an outer diameter of 440 kilometers and was seen before with Cassini's imaging cameras, but not in this detail. It resembles a large crater or part of a ringed basin, either of which could be formed when a comet or asteroid tens of kilometers in size crashed into Titan.

~Lyle Rich



William Carney receives both an induction into the prestigious Schuette Society, as well as an award for Binocular Messier observations.

ANNUAL MEETING MINUTES

Thirty-one TCAA members and guests attended the Annual Meeting held in ISU's Turner Hall, room 104. Among some of the more notable attendees were David B. Williams and his mother Marie, as well as Bill and Marie Blunk – both founding members of the TCAA. Mike Miller and Lyle Rich, two other members from the earliest years of the TCAA, were also in attendance. Following a brief social, President Lyle Rich welcomed everyone and invited them to banquet beginning at 7:15 p.m. At 8:16, the annual business meeting was called to order.

Following a moment of silence in commemoration of deceased members of the TCAA, including most recently Donna Miller, Lyle provided a brief "state of the club" report. He mentioned that the past 12 months had indeed been exciting. He noted the unexpected resignation of president Dan Meyer this past summer, special public programs such as Stonehenge, Cassini, and others, and how the public activities of the club had been well received. He mentioned the recent CLC mission, and pointed ahead to the GSA/BSA merit badge workshops in cooperation with the CLC and the ISU Planetarium slated for later this spring. Lyle indicated that the coming year will likely include a renewed focus on services to the membership in an effort to encourage less involved members to become more active. Four major in-town public events will be planned for in-town locations, having been separated from the public observing sessions at SGNC.

Lyle then passed around a sign-up sheet for SGO key holders to coordinate both MOOS and POS activities during the coming year. He noted that the 12-inch LX200 had just returned from repairs by Meade, and that William Carney would conduct a series of update events for current key holders, and training for prospective key holders both during the month of March. Duane Yockey then provided a brief

Treasurer's report, indicating that the TCAA is today in slightly better financial position than it was at this same time last year. He noted that the club's operating fund balance went from \$1,197.21 at the end of 2003 to \$1,351.07 at the end of 2004; he noted that the observatory fund balance went from \$870.31 at the end of 2003 to \$911.87 at the end of 2004. Carl Wenning, in a brief Historian's report, lamented his inability to locate the club's two missing historical scrapbooks, and encouraged the membership to contribute to the search. He then read a short note from Bertha Kieviet that she wrote for the 25th anniversary of the TCAA.

At this point in the program, President Lyle Rich inducted William Carney into the G. Weldon Schuette Society of Outstanding Amateur Astronomers. William is only the eighth member of the TCAA to be so honored since the inception of the award in 1987. ALCOR Duane Yockey then presented William with his pin for earning the Astronomical League's Binocular Messier Certificate.

Following a brief round of introductions requested by Sheri Rodgers, nominations were taken for the five positions on the TCAA Board of Directors. Duane Yockey, Kal Kumar, Mike Rogers, and Lyle Rich were re-nominated. Two additional nominations were taken from the floor – those of Dan Miller and William Carney. Following a brief discussion, Dan rescinded his acceptance of the nomination so that there were only five nominees for the Board positions. The nominations then being closed, the membership unanimously agreed to elect the five remaining nominees to the Board for 2005-2006.

Jean Memken then took the opportunity to wow the assembled membership with the announcement that noted amateur astronomer and comet hunter David Levy has agreed to present a special talk at ISU on April 26th. He has asked for a public observing session with the TCAA on April 25th. This session will be held at SGNC, clear sky prevailing. The group then adjourned to room 116 where the keynote speaker for the evening gave his presentation.

David B. Williams, another amateur astronomer of considerable note, then presented his address dealing with what astronomers can learn from the study of binary stars. He started off presentation by providing a bit of early

history of the TCAA (which the historian duly noted and has used to update the club's historical record). He then pointed to the valuable work that amateurs have contributed to the study of binary stars – especially eclipsing binary stars – and showed some of the very significant findings that have resulted from many years of dedicated effort.

Following David's talk, Carl, at the behest of Lyle, announced that the Board had recently agreed to establish the Eugene and Donna Miller Family Award in recognition of their early contributions to the TCAA, and the way that they had worked to include their son Mike in the activities of the club. Carl noted that award was made possible to recent anonymous donations to the TCAA, and that guidelines for the award would be published shortly. Sharon MacDonald, official registered agent for the TCAA, announced as required by law her contact information: 8292 Edgewater Drive, Carlock, IL 61725-9512; phone 309-376-5021. The meeting was adjourned at 10:28 p.m.

Respectfully submitted,
Carl J. Wenning, 2004-2005 Secretary

BOARD MEETING MINUTES

The newly elected TCAA Board of Directors (BOD) met on 21 February, 2005, at 6:00 PM, at the offices of Lewis, Yockey and Brown. In attendance were board members Lyle Rich, Kal K., William Carney, Duane Yockey, Michael Rogers, and former board member Carl Wenning. The first order of business was the election of officers:

- President — Lyle Rich
- Vice-President — Kal Kumar
- Treasurer — Duane Yockey
- Secretary — Michael Rogers
- 5th Director — William Carney
- Property Manager — William Carney
- Newsletter Editor — Rebecca Wenning
- Historian — Carl Wenning
- Planetarium Liason — Carl Wenning
- Educational Coordinator — Rebecca Wenning
- Webmaster — Michael Rogers
- Registered Agent — Sharon MacDonald.

The calendar of events for the upcoming year, prepared by Carl, was discussed. It was decided that Michael would investigate the possibility of hosting additional talks at the Bloomington Public Library, including the equivalent of "Telescopes for Dummies," and "NASA Update."

Duane will investigate dates for Astronomy Day.

It was noted that the picnics could and should be tied with Members Only Observing Sessions.

The question of promoting Public Observing Sessions (POSS) arose. Kal, as Vice-President,

is responsible for promotion, and Michael offered to help. Brochures need to be distributed to a number of venues, including the CLC, Bloomington and Normal Public Libraries. Carl created the brochure for the upcoming year, and after modifying it, will either check with Ron Smith Printing, or possibly arrange for Duane (or other BOD members) to print it out.

The TCAA letterhead was examined, and will be updated by Carl. Specifically, street addresses will be removed, as e-mail addresses and phone numbers were felt to be sufficient.

Carl inquired whether the updated TCAA bylaws were posted to the website. Michael suggested that they were, unless the webmaster had been remiss.

Carl announced that the TCAA was now sponsoring Sky Clock, thanks to an anonymous donation.

Carl reminded us of the need for articles for *The Observer*, which would be mailed earlier than usual in March.

A discussion of the ISU Planetarium's financial difficulties ensued. Carl asked about permission to send an e-mail to the membership, asking for funding. He was told to send the letter-of-solicitation to the Board, that would review it first.

The *Guidelines for MOOS and POS Session Coordinators* were deemed fine, and will be published, with changes, in the next issue of *The Observer*.

Duane pointed out that membership was down, for a number of reasons. A discussion of what to do about this ensued, to be carried on at the next meeting. One possibility was to hold adult-ed sessions in the Fall, as well as hold more meetings at the Bloomington Public Library and/or Challenger Learning Center. Michael will check on available dates.

Each BOD member committed to bringing 3 other TCAAers to the first MOOS.

The question of insurance at the SGO arose, and Duane will check with Eric Funk to see if he can find us a better rate.

At future meetings, we will consider details of the Miller Award, the possibility of building a warming room at the SGO, and constructing a building case there. The meeting adjourned at 7:30 PM.

Respectfully submitted,
Michael Rogers, Secretary

TCAA GUIDELINES FOR OBSERVING SESSION COORDINATORS

The TCAA Board of Directors reviewed and approved this slightly modified set of observing session guidelines on February 21, 2005. Observing session coordinators are encouraged to adhere to these updated guidelines as closely as possible.



Founding TCAA member David Williams presents talk about binary stars.

Coordinating Public Observing Sessions:

- There should be two coordinators for each POS.
- Coordinators should make plans for an observing session days or weeks in advance, assuming clear skies.
- Coordinators should coordinate their actions so that work isn't at cross-purpose.
- Availability and use of the Sugar Grove Observatory should be ensured -- at least one of the two coordinators should be an SGO key holder.
- Coordinators need not be presenters, they merely must arrange for the two presentations that evening, and ensure that sufficient numbers of telescopes and telescopes are available for the observing session.
- Coordinators are welcome to give either of the presentations and manage a telescope.
- Coordinators should be familiar with the location of all needed materials (projectors, screen, slides, ladder, extension cord, laser pointer, and light switches).
- Coordinators should be aware that lap top computers and video projectors that have been used in the past are private property and might not always be available.
- If there is a question about the clarity of the sky and the possible cancellation of the POS, coordinators should contact one of the two duly authorized "go to" people outlined in the POS brochure (Carl Wenning or Mike Rogers).
- Coordinators should arrive on site at least 45 minutes (60 minutes is better) prior to the scheduled start of the POS. During this time coordinators should:
 - bring out A/V materials and electrical extension cord
 - set up the screen, slide projector, computer, and/or video projector
 - open the SGO, start, and align the

telescope so that it is immediately ready for service after the laser-mediated sky lecture

- make certain that the green laser pointer is available

- set out club membership forms of POS schedules and another other free materials that we have for dissemination

- should turn off the bright outside lamp over the door of the Nature Center before the talk begins (and turn it back on after the session is over)

• Coordinators should start the public events by:

- pointing out the location of restrooms cautioning them about "pitfalls"

- noting the location of the observatory and private telescopes

- telling a bit about the TCAA and pass out membership brochures

- explaining the plan of activities for the evening

- explaining the need to use parking lights/filtered flashlights

- explaining that there are two talks followed by viewing

- introducing the speaker for the evening and give the title of the talk

• Each POS will consist of the following activities:

- a 15-20 minute (maximum) slide show or computer presentation focusing in considerable detail on the subject(s) for that evening.

Coordinators should remind presenters to strictly adhere to the time limit, to include lots of visuals, and to not have more than 10-20 words maximum per PowerPoint slide.

- a 10-15 minute laser-mediated sky lecture

- an observing session using the SGO and ground-based telescopes.

- Coordinators should make a thorough count of the number of people in attendance.

• Coordinators should make certain that the presentations of the speakers are not disrupted by others speaking loudly in the vicinity of the presenters.

- Coordinators should encourage everyone in attendance to listen to the talks, including our own members.

• Coordinators should secure the site after the final departure of visitors.

- Coordinators should work to ensure the safety of all club members, guests, and telescopic and observatory equipment.

Coordinating Member-Only Observing Sessions

- There should be two coordinators for each MOOS.

• Coordinators should coordinate their actions so that work isn't at cross-purpose.

- Availability and use of the Sugar Grove Observatory must be ensured -- both of the

coordinators should be SGO key holders.

- Coordinators should be willing and able to use the SGO telescope for conducted observing session.

• Coordinators should have an observing plan that can be used to showcase relatively bright celestial objects during the first hour of the session at a minimum.

- During warmer evenings, coordinators should open the dome slit of the SGO early to allow the telescope to come to thermal equilibrium with the surrounding air.

• Coordinators should use the finding power of the SGO telescope to locate and exhibit a wide range of showcase celestial objects including one of each of the following if possible: open cluster, globular cluster, galaxy, bright nebula, planetary nebula, crescent moon, quasar, comet, and all visible planets including Uranus and Neptune.

- Coordinators are encouraged to give members an opportunity to suggest and find celestial objects using the LX200 control panel.

• If a the attendance is more than the SGO can comfortably handle, a second telescope (if available) should be set out and employed at ground level.

- Following the session, coordinators should ensure that the telescope is powered down, the dome closed, the telescope covered, and the building secured.

• Coordinators should work to ensure the safety of all club members, guests, and telescopic and observatory equipment.

A copy of these guidelines will be posted on the Sugar Grove Observatory bulletin board. Coordinators: please refer to these guidelines when conducting either a Public Observing Session or a Members-Only Observing Session.

TCAA E/PO CONTINUES

On Sunday, February 20th, Rebecca and Carl Wenning represented the TCAA in activities for Girl Scouts at the Challenger Learning Center. Some 25 Girl Scouts, along with about half a dozen parents, toured the Center, and participated in four sets of 15-minute astronomical activities. CLC Lead Flight Director Janet Moore gave a sky lecture and explained how to use a star map under the Briefing Room's starry canopy that just happened to show the February evening sky; Rebecca taught lessons having to do with light and how astronomers use it to learn about stars; Carl gave two presentations dealing with the working of telescopes and how astronomers can use color and luminosity to figure out a star's size. The latter exercise was completed with the use of analogy for heights and weights in humans being used to predict body types. The event was well received and everyone shared in a round of punch and cake.

Make a date with

StarDate

on

WGLT, 89.1 FM

Weekdays @ 6:58 AM & 6:58 PM

Sponsored by the TCAA

Partners in Astronomy Education
with the ISU Planetarium

@

309-438-5007

SCOUT MERIT BADGE SERIES

The Prairie Aviation Museum with its Challenger Learning Center, the Illinois State University Planetarium, and the Twin City Amateur Astronomers, are joining forces to offer a series of three merit badge workshops for Girl Scouts and Boy Scouts this spring. Reservations must be made at least two weeks prior to workshop date.

Workshop 1, offered by Tom Willmitch, will allow scouts to earn the following merit badges: Boy Scouts *Astronomy*, Junior Girl Scouts *Sky Search*, and Cadette/Senior Girl Scouts *Space Exploration*. Carl Wenning will teach Workshop 2 and will assist scouts to earn the following merit badges: Boy Scouts *Space Exploration*, Junior Girl Scouts *Rocketry**, and Cadette/Senior Girl Scouts *Rocketry**. Janet Moore will teach a third workshop that helps scouts to earn the following merit badges: Boy Scouts *Aviation*, Junior Girl Scouts *Aerospace*, and Cadette/Senior Girl Scouts *Aviation**. (*) These badges are officially approved by the Centrilio Girl Scout Council, and are only available through these workshops.

If you wish to find out more about these April workshops and the May follow-up merit badge ceremony, call or visit the Challenger Learning Center at Prairie Aviation Museum, 2901 East Empire Street, Bloomington, Illinois, 61704. Phone: (309) 661-1621. Payment is due at time of reservation – please have credit card available when you call.

SGO TELESCOPE

RETURNED FROM MEADE

The 12-inch LX200 Meade telescope normally housed in the SGO returned from extended warranty repairs on Friday, February 11th. It was transported back to the SGO on Sunday, February 13th. The telescope was shipped to California for repairs by Property Manager William Carney on Thursday, January 20th. It was returned to Meade for repair/replacement of the elevation motor and gear chain that begin to “grind” during later summer.

William reports that the telescope has now been reinstalled and that the missing part inadvertently retained by Meade has been returned. The telescope is now fully functional, and is operating within manufacturer specification. Key holders are hereby forewarned that as this issue of *The Observer* goes to press, the door locks at SGO are expected to be re-keyed very shortly. Please contact William about a re-orientation and obtaining a new key. See additional information in the following story.

TO ALL KEY HOLDERS

~ Property Manager William Carney ~

The scope is back and in place at the observatory. The door is or soon will be re-

keyed. All key holders must have a short refresher training or orientation before receiving a new key. Your key holder fee must be paid up. This orientation/refresher training will be short and clear skies will not be needed. There will not be any scheduled day or time for this session and will be during the first part of March. Just call or e-mail the Property Manager, William Carney, to set up a time and date, with a preference for evenings during the week. The refresher sessions should not take too long since most should be familiar with operations and procedures. Other members that are not key holders and are interested in key holder training for the first time are asked to contact William in the later two weeks of March.

Again, no one will be issued a key unless they have had a refresher or new training. This is needed because of changes and updates that need to be addressed with the scope and the operations at Sugar Grove. To arrange refresher training or an orientation session, call me at 309-829-7748 (evenings/weekends) or e-mail either of these willcarney@aol.com or wcarney@titan.iwu.edu.

OF HISTORICAL NOTE

During his presentation at the Annual Meeting, co-founding TCAA member David B. Williams shed a bit of light on the earliest days of the club. He noted that during the first year of the club, there were only three notable telescopes among the membership – a 6-inch homebuilt reflector by John Kieviet, a 3-inch refractor owned by Robert Courtney, and a 3-inch Newtonian reflector owned by himself. Armed with such devices as these, a major TCAA event was the observation of the midday transit of Mercury across the face of the sun on November 7, 1960.

With the club's second year, members Hank Janecek and Mike Ryder had obtained 4-inch reflectors, and Bob Mayo had obtained an 8-inch reflector. It was this reflector that was eventually installed in the Fissel Farm Observatory northeast of Normal.

David further noted that because there were no “light buckets” in those days, that the moon and planets, the Orion Nebula, the Andromeda Galaxy, and double and variable stars were the objects most frequently observed. The study of variable stars resulted in David writing for the *Review of Popular Astronomy*, and which led to his first job in 1967 when he became assistant editor of the *Review* based in St. Louis, MO

NASA SPIN OFFS – Part III

~ by William Carney ~

Besides spin offs from the space programs, NASA research into flight and aircraft have led to many items now used in today's aviation industry. These include methods and machines to spot corrosion and fatigue cracks, noise

reduction in aircraft engines, to many others. Fire detection and suppression technologies have been developed by NASA for aircraft improvement as well as for reducing toxic engine exhaust in aircraft. Improved golf balls? Yes, some of the modern golf balls are directly designed with software from the aerospace development research by NASA. Even software like “The Sky” has benefited from NASA in imaging and database development and use. And that did not even get into more recent discoveries and technologies developed during the design and building of the International Space Station.

While some people have said that spending money on NASA and the manned space program is a waste of resources, you really have to look at the whole picture. Usually those same people can't even tell you how much we spend on our current NASA budget. They often think that it's like the Department of Defense with hundreds of billions or trillion's of dollars, and they would rather spend the money on more welfare programs.

Well, NASA's current budget for 2005 is about 16 billion, which even this is in doubt, since senators want to cut it even more. The 2004 budget was about 15.3 billion -- that's about what the FAA had for it's budget during the same time. The Federal Highway or FHWA's budget is about 34 billion, or twice NASA's. The nay-sayers constantly complain about the over budget and highly costly space programs without doing the research. The space program was always full of politics. NASA originally wanted a fully reusable space shuttle, but President Nixon and Congress said it would cost too much, which made NASA design the current vehicle which turned out to be even higher in development and operational costs. The current over budget of the space station is more to blame on President Clinton and Congress than NASA. The contractors were already building some station modules when they were told that Space Station Freedom, as it was called, was to be cancelled or redesigned with Russian components to make it cheaper -- which actually made it more expensive and took longer to build; remember, they were already building some components when they had to be re-designed and modified or totally rebuilt. One of the most important modules, the Habitat module, was cancelled while it was being built.

That is a problem right now because the food, oxygen generation, sleeping, and so on, is done on the Russian module and if it fails there is no back up. If the Russians decide to pull out of the space station later we will have no module to eat, sleep or just to “live” in. From the point of safety and backup, we should have a habitat module for the space station. This would also increase the number of potential people on orbit doing experiments. Again, Congress is

TCAA Treasurer's Report – February 2005

OPERATING FUND BALANCE – January 31, 2004 - \$ 1,491.50

Income	
Michael Miller (Dues) -	\$ 40.00
Roger Eggleton (Dues) -	\$ 40.00
Brian Barling (Dues Renewal) -	\$ 40.00
Lyle Rich (Dues Renewal) -	\$ 40.00
Michael Rogers (Dues Renewal) -	\$ 40.00
William Carney (Dues Renewal) -	\$ 40.00
Rebecca Wenning (Student Dues Renewal) -	\$ 25.00
Anonomous Donation -	\$ 117.00
Sky Clock Donation -	\$ 50.00
Banquet Donations -	\$ 397.50
Expenses	
Carl Wenning (postage) -	\$ 37.00
Carl Wenning (Observer) -	\$ 37.45
David Williams (mileage) -	\$ 190.00
David Williams (honorarium) -	\$ 50.00
Kal Kumar (annual meeting reimb.) -	\$ 21.88
FND Club (annual meeting dinner) -	\$ 310.00
Sky Clock (contribution) -	\$ 50.00

OPERATING FUND BALANCE – February 28, 2005 - \$ 1,624.67

OBSERVATORY FUND BALANCE – January 31, 2005 - \$ 916.87

Income	
Keyholder Renewal (William Carney) -	\$ 5.00
Keyholder Renewal (Brian Barling) -	\$ 5.00
Keyholder Renewal (Lyle Rich) -	\$ 5.00
Keyholder Renewal (Michael Rogers) -	\$ 5.00
Expenses	
None -	\$ 0.00

OBSERVATORY FUND BALANCE – February 28, 2005 - \$ 936.87

TOTAL TCAA FUNDS – February 28, 2005 - \$ 2,561.54

Respectfully submitted,
L. Duane Yockey, Treasurer

Sugar Grove Observatory

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

Jim Swindler (April 2001, renewed through 2004)
Duane Yockey (April 2001, renewed through 2005)
Sandy McNamara (June 2001, renewed through 2004)
Dan Miller (August 2001, renewed through 2004)
Michael Rogers (August 2001, renewed through 2005)
William Carney (March 2002, renewed through 2005)
Vic Connor (August 2002, renewed through 2004)
Neale Lehmkuhl (May 2003, renewed through 2004)
Carl Wenning (January 2004, renewed through 2005)

Brian Barling (February 2004), renewed through 2005
Lenore Trainor (December 2004, renewed through 2005)
Jim Baker
Lyle Rich

very unwilling to spend more money.

NASA's budget is less than one-tenth of one percent of the current Gross National Product. During the height of the Apollo years and funding, we spent ten percent of the GNP per year on the space program. So, in the last twenty to thirty years the funding has dropped from ten percent to less than one percent of the GNP and we still have build the Space Shuttle, the Space Station, send probes to Jupiter and Saturn, and build a Space Telescope, not to mention the various spin-offs -- education and outreach programs and research funding, despite all the negative nay-sayers. In my opinion, that's a pretty good "bang for your bucks" despite any setbacks.

So, if you're looking to cut NASA's budget, look elsewhere first. If you're looking to lay blame on NASA for some of its problems, look to the politics behind them. Sure, they have not always been right, but most of the problems for which they are blamed are a result of the politicians in charge at the White House or Congress, and not at NASA. The facts above can be found at various web sites and publications free of charge by NASA.

TCAA SPONSORS SGO CLEAR SKY CLOCK

~ by Carl Wenning ~

Last month I wrote briefly about the SGO Clear Sky Clock. Once again, the Clear Sky Clock (<http://www.cleardarksky.com/c/SGOILkey.html>) shows an image that can be used to determine when SGO will have suitable weather for astronomical observing. An hour-by-hour astronomical observing forecast for two days in advance comes from the Canadian Meteorological Center. CMC's forecast is just for SGO and a surrounding distance of about 10 miles. Since that article was published in *The Observer*, the TCAA received a \$50 anonymous donation directed toward sponsoring the Clear Sky Clock. The sponsorship will last 365 days (until February 20, 2006), and will allow the TCAA logo to appear to the website during the sponsorship period. The sponsorship helps offset the approximately \$0.13 per day cost of maintaining the website.

TCAAers are reminded that the Clear Sky Clock logo and hyperlink can be found on the TCAA website <http://twincityamateurastronomers.org/>. Atilla Danko, originator of the Clear Sky Clock, has updated the website with the precise GPS coordinates of the Sugar Grove Observatory. Two special sponsored features, Clear Sky Clock for Cell Phones and Forecast History/Climate, have also been added to the website. Be certain to click the image control option that will provide an explanation of color and details when you mouse over the various blocks for cloud cover, transparency, seeing, darkness, wind, humidity, and temperature.

Of special note is the Forecast History/Climate feature. This is an amazing summary of weather data for the SGO. A study of the information found in this link shows that SGO has on the average 34% of its nights over the course of the year are completely clear! Did you know that only 23% of March's nights are clear and that this percentage rises to an amazing 60% during September? September also has the most clear nights with the greatest transparency as well. What is the worst month for viewing? January. Did you realize that 28% of the nights throughout the year are best for planetary viewing, that 11% of the nights are most suitable for deep sky viewing, and that only 8% of the nights are suitable for viewing of both? These are just some of the amazing facts that you will find on the SGO Clear Sky Clock and made available as a result of the TCAA sponsorship of this site. Check it out.

TCAAers AWARDED \$50k SPACE TELESCOPE SCIENCE INSTITUTE GRANT

TCAAers Shaukat Goderya and Carl Wenning were just awarded a \$49,962 grant from the Space Telescope Science Institute to work with the Challenger Learning Centers of Central Illinois and Northwest Indiana to prepare de facto national curricula for two mission simulations: *Rendezvous with a Comet* and *Voyage to Mars*. Goderya and Wenning will be working with Bloomington CLC Lead Flight Director Janet Moore and 1999 Illinois Teacher of the Year Cathy Bissoondial among others. The two-year project will result in two teachers' manuals for the mission simulations. Some 50 institutions across the US applied for funding; only 15 received it.

ILLINOIS DARK SKIES STAR PARTY

October 6 - 9, 2005

The Fourth Annual Illinois Dark Skies Star Party will be held October 6 - 9, 2005 at the Jim Edgar Panther Creek State Fish and Wildlife Area (JEPC). If you wish to attend, mark your calendar now and bookmark the official website. JEPC is located about 25 miles northwest of Springfield, Illinois in eastern Cass County. JEPC is easily accessible from Illinois Routes 78, 95 and 125. The area boasts some of Illinois' darkest skies. Plans for star party events include guest speakers, presentations, and an astrophotography contest.

The park has lots of daytime activities including hiking, biking, fishing, horseback riding and hunting. JEPC is just 30 minutes from historic Lincoln sites such as Lincoln's Tomb at Oak Ridge Cemetery, Springfield; Lincoln's Home and Law Office, Springfield; Lincoln Homestead at New Salem State Park, Petersburg; and the new Abraham Lincoln Presidential Library, Springfield.

The Illinois Dark Skies Star Party is sponsored by the Sangamon Astronomical Society in cooperation with the St. Louis Astronomical Society. Drop by the SAS website at <http://www.sas-sky.org/> for registration and other information.

ISU PLANETARIUM "Good Will Presentation"

~ by Carl J. Wenning ~

On Saturday, April 16, as part of nationwide Astronomy Day activities, the ISU Planetarium will offer a "good will presentation" to members of the Twin City Amateur Astronomers and the general public. Tom Willmitch, Planetarium Director, will present "Ring Worlds." The program will begin at 4:30 p.m., and is free of charge. It will tie in very nicely with the public observing session slated at SGNC that evening which features the moon and Saturn. TCAA members in attendance are further invited to participate in a small pizza party at Tobin's Pizza in Bloomington prior to heading out to SGO.

This encore presentation was first shown last summer, and is arguably the best planetarium program I have seen at ISU since I arrived in 1978. The show focuses on the ring systems of planets within our solar system and contains some rather amazing video clips. Tom has fully integrated the computer automation capabilities of the planetarium to provide an amazingly complex, refined, and awe-inspiring presentation. The TCAA has not seen this program as a group, and I strongly urge our membership to attend this special presentation as part of Astronomy Day activities.

In addition, it is at this presentation that the amount of money raised in support of the ISU Planetarium from TCAA members and other ISU Planetarium Friends will be announced.



**Announcing New
TCAA Members**



Roger Eggleton
Renewal Date: 200602

Michael Miller
Renewal Date: 200602



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