

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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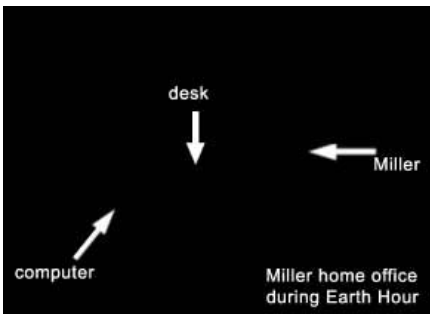
Volume 38

April 2009

Number 4

From the Director

I begin this April greeting at the beginning of the celebrated Earth Hour (March 28). My computer screen is powered off. So are all the lights in my home office. The processor and fan are still chugging in my desktop (I'm cheating—I guess I'm celebrating Earth 55 Minutes)—but these draw so little current, certainly I might be excused. Of course, I can't see what I'm writing, and I don't touch



type. There's going to be a ton of editing to do when Earth Hour has concluded. As proof of my Earth Hour support, please find the photo included of my office desk and me, looking very Hemingwayesque as I prolifical-

ly put misspelled words to screen (again, all unseen). Were many of you fellow amateur astronomers eagerly awaiting anticipated dark skies here in Central New Jersey? The moment has arrived! As thousands of businesses, homes, billboards and similar photon-gushers shut off, M31, M45, M44, maybe M81 & 82 jump into the naked eye realm. As if rheostat-controlled, the Milky Way appears brighter and brighter cascading through Monoceros, Gemini, Auriga and Cassiopeia. Glorious! Oh. No, scratch that. Just look out the window. It's cloudy, but, the clouds are uncharacteristically—dark.

The deadline for the May issue is:

Friday May 1, 2009

Send your submissions to:

editors@princetonastronomy.org

AAAP is looking for new volunteers to help with our outreach programs.

You don't need a telescope. Just bring your enthusiasm!!!

The upcoming programs are listed in the *Community Outreach* section.

For more info contact Jeff Bernardis at



Remember to mark each Friday starting April 4th as our Simpson Observatory Open House event. All AAAP members, their friends and family are always invited to these great get-togethers (of course AAAP members can ask to use the observatory at anytime). Observatory keyholders open the facility about 7:30 PM and both the 14" SCT and 6.25"

refractor are pointed throughout the evening at popular Messier, NGC and solar system objects. Bring a list of your favorite seasonal targets.

Members and guests also bring their own scopes to set up next to the observatory. Sometimes our astrophotographers set up their equipment to image—a great way to glean some tips to get into imaging. Directions and other information regarding a visit to the observatory can be found at the AAAP website www.princetonastronomy.org

Have you been following the events and progress of the IAU's International Year of Astronomy? There are a myriad of core websites describing this year-long celebration. From the U.S. site:

In the year 2009, the world will celebrate the International Year of Astronomy as it commemorates the 400th anniversary of Galileo's use of a telescope to study the skies, and Kepler's publication of

Astronomia Nova. 2009 is also the anniversary of many other historic events in science, including Huygen's 1659 publication of *Systema Saturnium*. This will be modern astronomy's quadricentennial, and the 2009 Year of Astronomy will be an international celebration of numerous astronomical and scientific milestones. Check out the central website: <http://www.astronomy2009.org> and the United States site: <http://astronomy2009.us>.

And April is the month to go a-neafing! What has evolved to the nation's largest amateur astronomer's convention, the Northeast Astronomy Forum & Telescope Show occurs April 18 and 19 at Rockland County Community College, Suffern, NY (about an hour north of Princeton). Besides being the equipment wonk's Nirvana (about 100 astro vendors), this convention brings together over a thousand astroenthusiasts and world-renowned speakers. Complete details are here: www.rocklandastronomy.com/neaf.htm

Cheers—John Miller, Director

Membership Meeting Minutes March 10, 2009

The meeting was called to order by Director John Miller

1. He announced that new member John Giles has agreed to serve as Chair of the Nominations Committee.
2. Program Chair Ludy D'Angelo was not able to attend the meeting but, John Miller announced that the speakers for April and May have switched. Neta Bachall will be the April speaker and Carles Badenas will be the May speaker. A discussion was held and a consensus reached that the June meeting will be held as a member picnic.
3. Treasurer Michael Mitrano was not in attendance. His report appears in another section of this month's Sidereal Times. John Miller announced that as of this meeting, we have 102 paid members. John Church raised a question of having an audit, since the club's by-laws state that it should be done every year. Treasurer Mitrano will be asked to perform one. Gene Ramsey raised the question of when the audit should be done, and suggested that it be done for the business meeting in May. John Church suggested that an audit is supposed to be presented in accordance with our fiscal year. John Miller pointed out that any board member or general member may ask for a summary statement of the club's financial status. John Church raised the issue that a "501 C 3" organization with gross receipts of less than \$25,000 is supposed to file an "E Postcard" with the IRS every year, in order to maintain their status.
4. Secretary Kane reported that he is still having trouble sending out the Sidereal Times with his email system. He and editor Ira Pollens are in discussion to remedy the problem. John Miller stated that when he sends out the newsletter it goes to a broader group than the AAAP membership. He thought that this was a benefit to the club, but was an additional responsibility on the Director/Webmaster.
5. Public Outreach Chair Jeff Bernardis recommended that the list of events be read at the beginning of the meeting. John Miller asked if Jeff could send out the call for event participants to the entire membership. Ira Polans suggested that he could make the list of events more prominent in the ST. Gene Ramsey sug-

gested that, even members who do not have telescopes be invited to participate. The group agreed that a much wider group of members should be invited. It was suggested that photos of these events be taken and posted in the ST. John Miller pointed out that the website has such a photo on the home page. Bill Murray advised that the International Year of Astronomy is being launched with "100 Hours of Astronomy" from April 2 to April 5, and our first open house at the Simpson observatory is April 3. We should take advantage of this with publicity and register it on the website of the International Year of Astronomy. Bill Murray will make that contact to have our event registered. John Miller pointed out that this shows the need for a publicity position in the club. Bill Murray also mentioned that a local kickoff event for the 100 Hours of Astronomy is the Franklin Institute's exhibit called "Galileo, the Medici and the Age of Astronomy". The exhibit has one of two remaining telescopes used by Galileo in 1609. (This is the first time the telescope has been out of Italy since Galileo's use—*Editors*). The exhibit will be held from April 4 to September 7, so it would be a good trip to be arranged for the club. John Miller noted that the Franklin Institute has sent out a request for volunteers. Ira Polans noted that he has volunteered and the Institute is recruiting a second batch of volunteers. Rex Parker suggested that we have a Messier Marathon on the last weekend in March. He also reported that the "Party House" that was to be built in Washington Crossing Park is now on hold since the local residents were all opposed to it. Michael raised the question of whether our club was working with the Night Sky Project. John Miller said that several of our members started with them, but did not have the time.

6. Observatory co-chair Gene Ramsey asked if we could have a replica of Galileo's telescope at the observatory. A discussion was held about the bids that we have received for the repair work. Larry Smith reported that Ron Russo of the UNCNJ. Wants to hold a symposium on Star Quest weekend and he would like to work with the AAAP.

Larry Kane, Secretary

Community Outreach

Well Mother Nature continues to interfere with our outreach efforts. The Star Party for Stuart Country Day School had to recently be cancelled for the fourth time. Additionally, rain prevented us from participating in the Earth Hour celebration for Plainsboro Township. The only bright spot for the month was that Ron Mittelstaedt, flying solo, was able to give Allentown Elementary school some nice views of Saturn. This was only the third successful event of our entire year so far.

Our year is currently winding down – only two upcoming events:

- Saturday April 25 is Super Science Day at the Trenton State Museum. This is a daytime solar observing event, and
- Sometime in May, dates to be announced, we will try for the fifth time to get to Stuart Country Day School

If you want to sign up for any of these events, please contact me at

Jeff Bernardis, Outreach Coordinator

Treasurer's Report

We are now three-quarters of the way through our fiscal year, and the AAAP remains in stronger financial shape than some major corporations.

Dues are about equal to their level last year at this time, representing roughly 100 members. Because there have been no major expenses so far during the fiscal year, our year-to-date surplus is strong at \$3,504. This will decrease when needed repairs are made to the observatory roof area.

The AAAP's cumulative surplus is \$18,447.

Michael Mitrano, Treasurer

From the Program Chair

On April 14th, our guest speaker will be Neta Bahcall. Her talk is titled "The Content of the Universe" or ("What is the Universe Made Of?").

Professor Bahcall received her B.S. in physics and mathematics at Hebrew University, an M.S. in physics from the Weizmann Institute of Science, and her Ph.D. in astrophysics from Tel Aviv University.



Professor Bahcall is best known for her work in cosmic cartography, divining the structure and properties of the universe on large scales from massive sets of data accumulated through deep surveys of the sky and with the Hubble Space Telescope. She has been a pioneer in developing innovative techniques to interpret astronomical data, including a statistical approach to understanding how giant clusters of galaxies are distributed in the universe.

Professor Bahcall has authored or co-authored nearly 300 scholarly papers during her career, and is the recipient of numerous honors and awards. Distinguished Research Chair, Perimeter Institute for Theoretical Physics, Ontario, Canada (2009–Current), Elected to the National Academy of Sciences in 1997, she was a Nobel Lecturer at the Nobel Symposium in Stockholm in 1998, Capital Science Lecturer at the Carnegie Institution of Washington in 2000–01, Century Lecturer of the American Astronomical Society from 1999 to 2004, and a Distinguished Research Chair, Perimeter Institute for Theoretical Physics, Ontario, Canada (2009–Current).

Dr. Bahcall is currently the Eugene Higgins Professor of Astrophysics in the Astrophysics department at Princeton University.

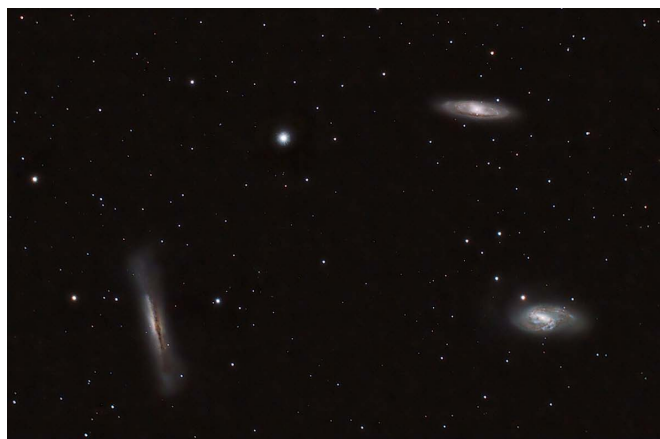
Please join us in Peyton Hall on April 14th.

Ludovicio D'Angelo, Program Chair

Picture This—Leo Trio

Here is a grouping of galaxies that can be seen from a dark sight as I have viewed them in an 8" Dob in NJ. Consisting of M65, M66 and NGC3628 these galaxies are located as the title says in the constellation Leo. All are normal spiral galaxies, but NGC 3628 is seen edge-on, with a prominent dust lane obscuring the central portion of the

galaxy. They are located some 35 million light years away. The image was taken through a Meade F6.3 SCT OTA from my home using my Canon DSLR and a 0.8x focal reducer/ field flattener for an effective focal length of 1000mm. Total time was 25 x 5 minutes sub exposures which were processed using ImagesPlus3 and Photoshop CS2.



Brian Van Liew

Interested in keyholder training?

Contact: **or by**
cell phone

Other News...

Stokes Star Party "New Jersey" and "dark skies" are not usually companions within the same sentence, but the Stokes Star Party has begun a tradition of taking advantage of the remaining dark skies in the Garden State. Nestled up in the far Northwest corner of the state is Stokes State Forest, inside of which is found the 240-acre abode of the New Jersey School of Conservation. Owned and operated by Montclair State University, this tract of land is preserved as an environmental extension station for the College of Science and Mathematics at MSU.

As such, this site has become an ideal setting for star-gazing under night skies that are the least obstructed by light pollution in the state.

With the coordination of John Miller Observatory, Gillette, NJ) for the Spring event and Ron Mittelstaedt (Princeton Astronomy Club) for the Fall event, and a handful of other dedicated observers, the Stokes Star Party has become a semi-annual event and a "right of passage" as both the first Northeast Star Party of the calendar year and one of the last. The spring event will be held April 24-26. Additional details at <http://www.teeter telescopes.com/stokes>.

Galileo, the Medicis and the Age of Astronomy The Franklin Institute will be hosting an exhibit from April 4 thru September 7, 2009. The exhibit marks the first time that one of two remaining telescopes built by Galileo has left Italy. In addition to the telescope the exhibit contains astrolabes, compasses, surveying tools, and sun dials.

There are galleries relating to optics and optics theory. There's even an opportunity to reproduce Galileo's observations and understand the limits of the telescope he designed.

20 Years Ago In Sidereal Times...

SIDEREAL TIMES

Newsletter of the Amateur Astronomers Association of Princeton, Inc.
 Director: Jay Albert April, 1989 Editor: Chip Yuill

AAAP CALENDAR

Fri. 4/7/89 - The second session of John Simpson's astrophotography course will be held at the AAAP Observatory at 8:00 pm. Rain Date will be 4/8/89.

Tues. 4/11/89 - Meeting at 8:00 pm at Peyton Hall. Members' night. Please contact Noah Levy if you'd like to tell the membership about any observing, telescope building or photography projects you've been busy with.

Fri. 4/28/89 - Special program at the Trenton Planetarium and AAAP Observatory for the "gifted and talented" children of the Ewing elementary school system. About 100 kids are expected and extra telescopes will be needed. Rain date is 5/5/89.

Fri. 5/5/89 - AAAP Star Party at the Observatory at 8:00 pm (cloud date 5/6). The Star Party will run concurrently, but will not interfere with, the last session of John Simpson's astrophotography course.

Tues. 5/9/89 - Meeting at 8:00 pm in Peyton Hall. Prof. Jill Knapp, one of the most engaging speakers we've had, will discuss galaxy formation and evolution. At the business portion of the meeting, we will elect new officers.

Tues. 6/13/89 - Meeting at 8:00 pm at the Trenton Planetarium, where Dick Peery will host another of his spectacular shows using the Planetarium's new projector.

Note: Pre-meeting dinners will be held at 5:45 pm at the Tiger's Tale Restaurant on Rte. 206 just north of Rte. 518 intersection.

FROM THE DIRECTOR

My message this month is both one of thanks and a call to try harder. Let me take care of the "thanks" first. As of the night of the March meeting, our fund drive had raised \$300, enough to keep us from insolvency when added to the dues coming in from membership renewals. In addition, the membership voted overwhelmingly for the dues increase proposed in the last issue of Sidereal Times. The new dues will be \$40 per year, except for students, who will be charged only \$30 per year. This should eliminate the need for another desperate fund drive next year. I continue to be impressed by the generosity of our membership. Whenever we needed money or volunteers for work at the Observatory, help has always been forthcoming.

We need, however, to do more to encourage our membership to be more active astronomically. Our call for sketches of the open cluster St 23 issued in February's newsletter failed to elicit a single response by the time of this writing. We know that many of you are observing out there, but we haven't yet figured out how to get you to let us know what you're doing, or trying to do but not succeeding. Our April meeting will be an ideal time to let us know what you're into and how we can help you. As a way of encouraging the sharing of observations, particularly via the Sidereal Times, I will present a brief talk on observing and sketching astronomical objects in general and galaxies in particular.

NEWS BITS

The Nominating Committee will present their proposed slate of officers at the April meeting. Additional nominations may be made from the floor. We now have our first Membership Chairperson. We would like to thank new member Blake Genzlinger for volunteering for this new position who will be assisted by Dave Brown, Assistant Director.

Roger Tuthill loaned the club his two videos for use by the members. Since we were not able to borrow video equipment from Princeton, these videos will circulate among our members until returned to Roger. The videos are on (1) basic amateur astronomy & telescope use and (2) astrophotography. If you would like to view either or both of these videos, contact Jay Albert.

Public observing sessions with Dick Peery of the NJ State Planetarium will be held on 4/14, 21, 28 and 5/5 beginning at 8:00 pm. Members are encouraged to visit the Observatory on those nights to help Dick and meet the people he brings.

BEEMERVILLE BLAST

The AAAP will hold a weekend star party at Beemerville 6/9-11. As the sky darkens, we'll have the last of the spring galaxies while later in the evening we'll have the glories of the summer Milky Way...not to mention Saturn! At an estimated \$40 for the weekend, it's a real bargain. Interested members should contact Dave or Larry Smith.

REVIEW OF SOLAR FILTERS AND SCREENS

By Ron Mittelstaedt

I became interested about observing the sun after reading *Sky and Tel* and *Astronomy* articles in the past months, one which addressed solar screens and filters. I started a quest for the best filter for the lowest cost.

There are pros and cons for both, but I'm looking for quality and price. After several calls to different dealers I found that the screen to fit my Celestron comet catcher would cost about \$75.00. I wanted to go less. A piece of mylar 7 inches square would cost \$35.00, but I would have to mount it myself on a frame to fit. This can be costly because mylar can wear or puncture, rendering it useless. Since the sun looks blue when viewing through mylar, add another \$15.00 for an orange lens filter for practical observing and photography.

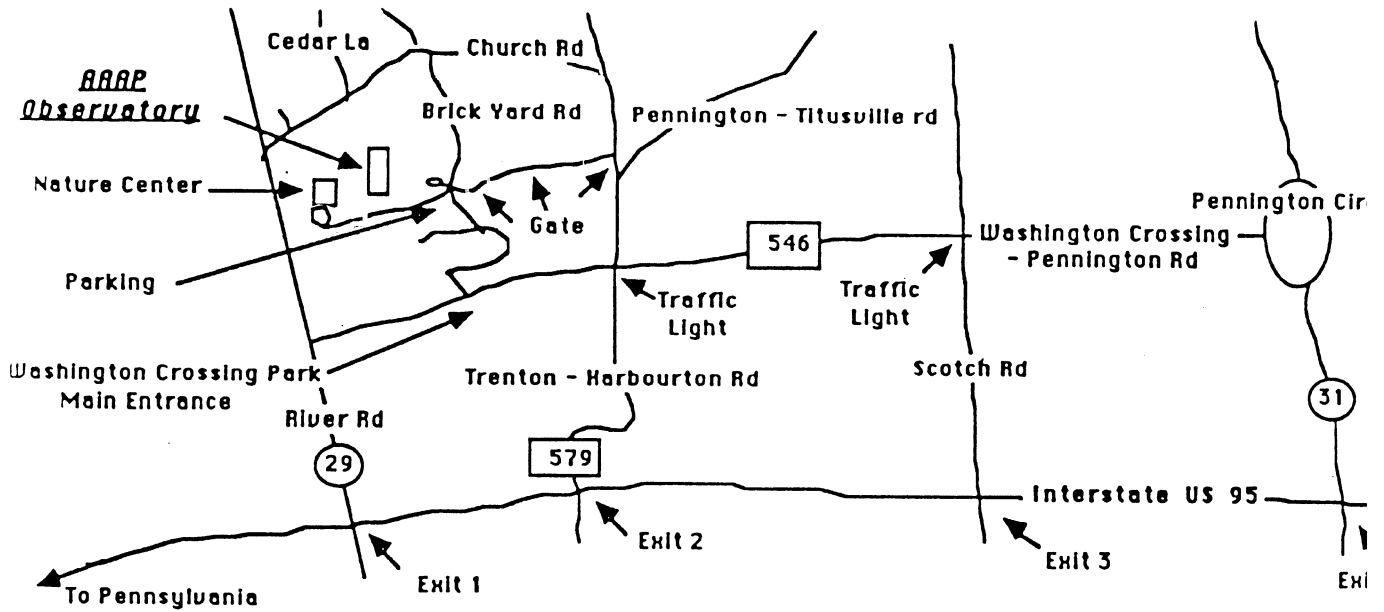
One of the places I called also sells solar filters. Their type 2 solar filter is glass with a nickel-chromium alloy with stainless steel coating for durability and I was sold. But the price was \$99.00 and still a bit too steep for me. I called back and asked if they ever have that type of filter that doesn't pass their quality control standards. The salesperson had one 6" type 2 like that. It had a scratched frame and touched-up coating but he assured me that it was as optically sound as their first quality filter and would sell it for half price - \$50.00. A modification was made to the filter to take out the extra felt cushion to fit my 6.25" diameter tube, and it was sent to me.

In about a week it arrived and I waited for a sunny day to fall on a weekend. The sun is too low to observe when I arrive home from work during the week. The sunny Saturday arrived and I was impressed with the results. The sunspots were very sharp with fragmented edges. I was so impressed that I ran back into the house and got my camera and mount and took some photographs. I had ASA 3200 loaded in my camera from feeble attempts of night astrophotography. I hope John Simpson's sessions will help in this area. My photos of the sun did not turn out badly as a first attempt.

In my opinion the solar filter had a slightly sharper image than the screen.

My advice is to read all you can about a product, make calls to the manufacturer and ask questions. You should make the salesman sell his product. Then compare to see which product is right for you. Then get a money back guarantee if the product does not perform to your satisfaction, particularly on "seconds" such as this. Let the dealer or manufacturer know how well the product performs since you may need a favor again some time.

Extra research and time can save you money and still bring quality.



The best way to get to the observatory is to take Interstate 95 South towards Pennsylvania. Then take Scotch road at Exit 3 and proceed north (this amounts to right). Then, at the third traffic light take a left onto the Washington Crossing-Pennington road (County Route 546). Take this road to the first traffic light and take a right onto Trenton-Harbourton road (County Route 579). Take this road to the first driveway on the left, this is the Phillips Farm/Soccer Field entrance to the park. There is a series of three gates with club combination locks. If the gates are not open, you will need the lock combination to open the gate or be accompanied by a Keyholder member. The Simpson (AAAP) Observatory's phone number is (609) 737-2575.

See us on the Web: www.princetonastronomy.org

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