

SIDEREAL TIMES

*The Official Publication of the
Amateur Astronomers Association of Princeton*

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Bill Murray

Treasurer

Michael Mitrano

Program Chairman

OPEN

Assistant Director

John Church

Secretary

Larry Kane

Editors

Bryan Hubbard and Ira Polans

Volume 38

October

Number 10

From the Director

My run of observing luck continued this month when I attended the Black Forest Star Party in Cherry Springs State Park, PA for the first time. This event, hosted by the Central Pennsylvania Observers, was held on the weekend of Sept. 18th-20th. For those who don't know Cherry Springs is PA's first official dark sky preserve. Located on the top of a 2300' mountain in the middle of the Susquehannock State Forrest it is regarded by many as the best dark sky site left in the NE United States. I've been hearing about the fantastic skies at Cherry Springs for several years now but this was the first time I had a chance to go there.

All the hype is true. We had clear skies both Friday and Saturday nights and through my 15" f/4.2 Dobsonian the views were fantastic. I was able to pick out the members of Stephan's Quintet, view the ring shaped structure in the Helix Nebula (check out Brian Van-Liew's photo of the Helix on our website, taken on the same night) and view the star cloud NGC 206 in the Andromeda Galaxy. The Milky Way was visible horizon to horizon. The speakers on Saturday afternoon included Terrence Dickinson (author of *Night Watch*) who spoke about a trip he took to the best observing site for amateur astronomers in the world, the Atacama Lodge in Chile. If you get a chance to go observing at Cherry Springs take it, I highly recommend it. However, if you go in the fall bring warm clothes, it was freezing at night and not too much better during the day.

The next club meeting is Oct. 13th at 8 PM at Peyton Hall. This will be a member's night, so if you have a desire to tell the club about what you've been doing in astronomy bring a presentation and we will give you some time to talk.

**Annual Membership Dues (\$40) Are Payable
Now—Please Mail or Bring Your Check to the
September Meeting**

The Simpson Observatory back wall repair is complete. Total cost was \$1735.55. Thanks to John Church for the work he put in on this

much needed repair project this summer. However, we now need to complete the repairs on the AAAP Observatory at Jenny Jump. Larry Smith has purchased a new door and we will have a work party to install it and paint the observatory on Saturday, Oct. 10th starting at 10 AM. Contact me for further details.

The deadline for the November issue is:

Friday October 30, 2009

Send your submissions to:

editors@princetonastronomy.org

The repair project at the observatory this summer and the difficulties we faced trying to allocate funds to pay for it engendered a discussion among the board members as to ways we could change our constitution and bylaws to make emergency repairs easier to accomplish. The result was a revision of the constitution and bylaws, authored by Mike Mitrano, that was proposed at the September meeting. According to our current bylaws these changes need to be published so that the membership can read them and then voted on at the next club meeting. The exact revisions are available to read on our website: www.princetonastronomy.org. Also see my article below for a summary of the revisions and an absentee ballot to cast your vote if you can't attend the Oct. meeting.

Bill Murray, Director

Proposed Bylaws/Constitution Changes (Vote on October 13)

The adventures we had this Spring and Summer attempting to finance the emergency repairs that the observatory needed engendered a discussion among the board members about how we could change our constitution to make funding repairs of this sort more flexible. Mike Mitrano, our Treasurer, agreed to have a look at the current constitution and propose to the board changes to expedite the allocation of

funds in case of an emergency. While he was reviewing the constitution Mike noticed several sections that were antiquated and made changes to them as well. In addition he added a couple of changes to bring us into the 21st century, like e-mail voting.

His proposed amendments were presented to the board at the board meeting on August 20th and with some revisions were presented to the general membership at the meeting on September 8th.

Here is a summary of the proposed change to the constitution:

Article V: The procedure to end the constitution is changed in that an amendment may be proposed by the board as well as by the general membership; the amendment(s) must be discussed at a regularly scheduled meeting and the membership may cast a vote by e-mail (as well as regular mail or voting in person)

Here is a summary of the proposed changes to the bylaws:

- 1) **Section 1.D–Duties of the Treasurer:** The treasurer will no longer notify members when their dues are due (This has been standardized: all dues are due in October)
- 2) **Section 2.A–Nominating Committee:** The nominating committee is no longer required to have exactly four members.
- 3) **Section 5.C–General Membership:** a quorum for voting purposes is defined as 15% of the membership. The requirements for voting on expenditures are struck from this section
- 4) **Section 6.C–Permitted Expenditure Purposes:** meeting (speaker) and event (Starquest) expenses are added to the list of permitted expenditures
- 5) **Section 6.D–Expenditure Authority:** Here is the new expenditure authority provision quoted in full:
 - a. **The Director and any officer other than the Treasurer, together with the Treasurer, may authorize expenditure for any permitted purpose other than equipment or observatory improvement of up to \$1000, or for e equipment or observatory improvement up to \$200**
 - b. **The Board of Trustees may authorize expenditure for any permitted purpose of up to \$1000, and may authorize in any amount an emergency expenditure that it deems necessary to preserve the property of the AAAP or the health and safety of members or the public.**
 - c. **Any other expenditure in excess of \$1000 must be recommended by the Board of Trustees and the recommendation must be published in AAAP's monthly newsletter together with the meeting date on which the expenditure will be voted. The expenditure must then be approved by a majority of the votes cast and not less than 30% of the paid membership. Members not attending the meeting may vote by mailed or e-mailed ballot provided that their ballot is received by the Secretary within 40 days of the meeting.**

The vote on these changes will occur at the meeting on October 13th before the general meeting. Our current constitution requires that a majority of 40% of our membership vote in favor of the amendments in order for them to be enacted. Votes may either be cast in person or by mail in ballot. If you can't attend the October meeting I request that you use the mail in ballot to record your vote (see below).

A redline version of the proposed changes (along with the sections of the constitution that they are replacing) is available to read on our website: <http://www.princetonastronomy.org> (click on the dropdown site map and go to "Constitution & Bylaws (pdf)").

If you have any questions regarding this issue you can e-mail me at _____ and I will be happy to answer them.

Bill Murray, Director

Vote to authorize the changes to the AAAP Constitution and By-laws. (Proposed: September 8, 2009)

Name _____

Approve _____

Disapprove _____

Mail to:

Amateur Astronomers Association of Princeton
c/o Larry Kane, Secretary
P.O. Box 2017
Princeton, NJ 08543

Membership Meeting Minutes September 8, 2009

New key holder, John Giles was presented his key to the observatory following the successful completion of his training.

Prior to the Business meeting, a membership vote was held on a motion to approve the expenditures of funds for repairs to the observatory, up to and including twenty five hundred dollars. The motion to expend the funds carried.

The business meeting was called to order by Director Bill Murray

1. **Director's Report:** Bill Murray reported the passage of the motion and noted that the present by-laws require a voted of forty percent of the membership for such an approval of expenditures. He also announced the opening of the new State Planetarium and the event that highlights and celebrates it. Bill is still on the staff at the planetarium and we can hold our June meeting there. A request was made for our members to be there for the opening. The Director thought that this would be a good occasion to lobby against the building of the 30 bed campers house at campsites "C" and "D" in W/C Park
2. **Treasurer's Report:** Michael Mitrano provided the report that appears in another section of the Sidereal Times
3. **Secretary's Report:** Larry Kane reported that he updated the membership roster to show those members who expressed an interest in key-holder training and/or public outreach, and provided it to Gene Ramsey.
4. **Observatory Committee Report:** Gene Ramsey gave the floor to Assistant Director John Church who reported on the repairs that were made to the observatory.
5. **Outreach Report:** Jeff Bernardis reported that the season has not yet begun, and only two events in September are planned, including the opening of the State Planetarium for which a request for solar telescopes was made. Jeff also reported that he had to reformat his computer and lost some contact information, including the names of those who had volunteered previously.
6. **The Sidereal Times** editors were not at the meeting, but Bill Murray reported that the deadline for the next edition is October 2.

7. Bill Murray reported that we are in desperate need of a Program Chair and we do not have a speaker for the October meeting. John Church suggested that we have a members' night, perhaps a seminar on astrophotography. Larry Smith suggested asking member Bob Vanderbei be offered the position. Rex Parker suggested that the officers form a program committee, as this could be successful because it builds on strong commitments to the club. A group that can identify possible speakers might be able to do the job if it is spread out among several people. This committee could then give suggestions to the Program Chair for a final choice.
8. **Jenny Jump:** Larry Smith reported that he bought a door for the observatory, but a work team is needed to install it and repaint the observatory. October 10 was set for the work party date.
9. **Star Quest 2009:** We will be working with the UNCNJ who will be providing speakers at their event at Jenny Jump. Ron Mittelstaedt reported that the event is on the Astronomy and Sky and Telescope websites. Ludy requested assistance in the kitchen
10. **New Business:** Revision of the By-laws to make large expenditures procedurally easier. In accordance with the existing by-laws, Bill Murray brought up the revision. This will be followed by a mailing to the entire membership. Rex Parker moved and it was seconded to begin the process to revise the by-laws.
John Church reported that he discovered the gate with our lock dangling in an open position. A discussion was held concerning the Park Personnel putting another lock on the gate chain to have a two lock system again. Kane moved that we buy a lock for the park. Ron Mittelstaedt will buy the lock and Gene Ramsey will give it to the Park Rangers.

The meeting was adjourned by the Director.

Larry Kane, Secretary

Community Outreach

So we start our new outreach year. We're off to an inauspicious beginning, as many of you already know, because I lost the mailing list I used all of last year to a computer virus. I'm starting to rebuild it, though, and have already had a good start – within the first day of sending out an email, I have already received 3 new names—Mike Kozic, Bob Cava, and Victor Davis have recently been added to the ranks. If you want to get notification of upcoming events, please let me know, either by email at jbernardis@princeton.edu or at

This is especially important for those of you that were on the list last year—if you want to be on it again, please let me know.

One of our regular customers has already reserved time for a star party. Riverside Elementary School in Princeton has asked to have an event on Wednesday December 9th; the rain dates are December 10th and 11th. If you would like to help out, please let me know.

Currently, this is the only event on our calendar, but I'm sure others will come up. Email remains the main tool for me to notify everyone, but one of these days I'll figure out the twitter thing

Jeff Bernardis, Outreach Coordinator

Interested in keyholder training?

or

cell phone

Treasurer's Report

There has again been little financial activity during the last month. Our surplus since July 1, 2008, is about \$3,200 or \$900 higher than budget mainly because spending on the observatory so far has been low.

The AAAP's cumulative surplus remains slightly over \$18,000.

Michael Mitrano, Treasurer

NASA's LRO & LCROSS Lunar Robotic Duo

"LRO & LCROSS: America Returns to the Moon" On September 8, 2009 I was invited to present the season opening lecture at the AAAP. The topic was NASA's newest lunar missions, LRO & LCROSS, which I visited up close and personal in the "clean room" with top NASA scientists shortly before blastoff from the Kennedy Space Center. Read the lecture announcement here at the NASA LCROSS website: <http://lcross.arc.nasa.gov/news.htm>



The Lunar Reconnaissance Orbiter and the Lunar Crater Observation and Sensing Satellite will provide a totally comprehensive view of the moon with 7 powerful science instruments. LCROSS is set to deliberately smash into the lunar south pole on 9 October 2009 at 7:30 AM EDT. The purpose is to search for frozen water ice inside the permanently shadowed Cabeus crater target. LRO officially began its 1 year long Primary Science mission on September 15 after entering a polar circular orbit 30 miles above the lunar surface.

Learn more in my feature article titled "LRO and LCROSS put US on Lunar trajectory" in the November 2009 issue of *Spaceflight Magazine*. Read my eyewitness reports online at *The Planetary Society* and collected at my website below.

At the October 14 meeting of the Rittenhouse Astronomical Society (RAS) at the Franklin Institute in Philadelphia (8 PM), I present a status report on the missions titled "*LRO & LCROSS Post Impact Update*". Details at the RAS website: <http://www.rittenhouseastronomicalsociety.org/>

At the Starquest/AAAP/UACNJ Astronomy Symposium on October 18, I will present my eyewitness account of the final Shuttle mission to upgrade The Hubble Space Telescope. Website: <http://www.uacnj.org/> and <http://www.uacnj.org/pages/2009%20Symposium%20Tri-fold.pdf>

Please contact me by email for more info or science outreach presentations Ken Kremer Email: ken@drkremer.com The Planetary Society Website: <http://www.rittenhouseastronomicalsociety.org/Dr.Kremer/K.htm>

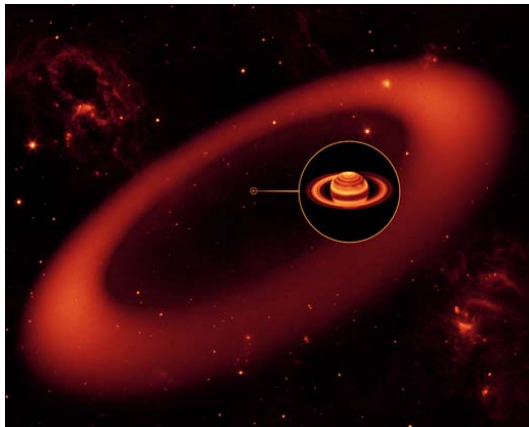
Other News...

Spitzer Discovers Saturn's Largest Ring

October 7, 2009: NASA's Spitzer Space Telescope has discovered an enormous and previously unknown infrared ring around Saturn.

"This is one supersized ring," says Anne Verbiscer, an astronomer at the University of Virginia, Charlottesville. "If you could see the ring in the night sky, it would span the width of two full Moons."

Verbiscer is co-author of a paper about the discovery to be published online tomorrow by the journal *Nature*. The other authors are Douglas Hamilton of the University of Maryland and Michael Skrutskie of the University of Virginia.



An artist's concept of the newly-discovered infrared ring around Saturn.

The new belt lies at the far reaches of the Saturnian system, with an orbit tilted 27 degrees from the main ring plane. The bulk of its material starts about six million kilometers (3.7 million miles) away from the planet and extends outward roughly another 12 million kilometers (7.4 million miles). It would take about one billion Earths stacked together to fill the voluminous ring. One of Saturn's farthest moons, Phoebe, circles within the newfound ring, and is likely the source of its material.

The ring is tenuous, consisting of widely-dispersed particles of ice and dust. Spitzer's infrared eyes were able to spot the glow of the

cool dust, which has a temperature of only about 80 Kelvin (minus 316 degrees Fahrenheit).

The discovery may help solve an age-old riddle of one of Saturn's moons. Iapetus has a strange appearance — one side is bright and the other is really dark, in a pattern that resembles the yin-yang symbol. The astronomer Giovanni Cassini first spotted the moon in 1671, and years later figured out it has a dark side, now named Cassini Regio in his honor.

Saturn's supersized ring could explain how Cassini Regio came to be so dark. The ring is circling in the same direction as Phoebe, while Iapetus, the other rings and most of Saturn's moons are all going the opposite way. According to the scientists, some of the dark and dusty material from the outer ring moves inward toward Iapetus, slamming the icy moon like bugs on a windshield.

"Astronomers have long suspected that there is a connection between Saturn's outer moon Phoebe and the dark material on Iapetus," said Hamilton. "This new ring provides [the missing link]."



Saturn's moon Iapetus. One side of the moon is darkened as the moon plows through the dust of Saturn's newly-discovered infrared ring.

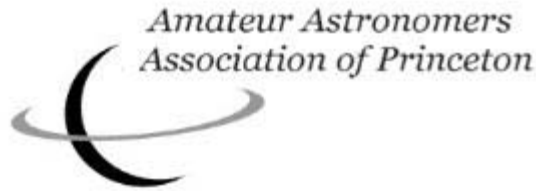
Verbiscer and colleagues used Spitzer's longer-wavelength infrared camera, called the multiband imaging photometer, to scan through a patch of sky far from Saturn and a bit inside Phoebe's orbit. The astronomers had a hunch that Phoebe might be circling around in a belt of dust and, sure enough, when the scientists took a first look at their Spitzer data, a band of dust jumped out.

The ring would be difficult to see with visible-light telescopes. The relatively small numbers of particles in the ring wouldn't reflect much visible light, especially out at Saturn where sunlight is weak.

"The particles are so far apart that if you were to stand in the ring, you wouldn't even know it," said Verbiscer. "By focusing on the glow of the ring's cool dust, Spitzer made it easy to find."

For additional images relating to the ring discovery and more information about Spitzer, visit <http://www.spitzer.caltech.edu>. Editor: [Dr. Tony Phillips](mailto:Dr.TonyPhillips@NASA.gov) | Credit: [Science@NASA](mailto:Science@NASA.gov)

Submitted by Bryan Hubbard



PRESENTS THE 20TH ANNUAL JERSEY STARQUEST

Held at the Hope Conference and Renewal Center, Hope, NJ
Beginning at 5 PM Friday, **Oct. 16th**, 2009 and running through 12 PM Sunday, **Oct. 18th**
Please note: This event will take place regardless of the weather.

Featuring

Stargazing at a star-filled, dark sky location
DOZENS OF ASTRONOMICAL TELESCOPES IN OPERATION
AAAP-sponsored "Deep Sky Observing" contest
Free space available for astronomical campfires
Heated cabin accommodations (most with private bath, first come, first served)
Ample space for camping & RV's, firewood for all
Saturday full meals
Spectacular Raffle & Draw prizes

Other Planned Activities include

Solar Observing (Alpha)
Astrophotography Presentation, Tutorials, and CCD Demo's
Field Trip to AAAP Observatory Facility at Jenny Jump State Park
Workshop: Learning to Use Your New Telescope

Plus

Fishing, Volleyball, Basketball, Hiking, Game room
Kayaking/canoeing (bring your own) on two lakes and nearby Pequest and Paulins Kill Rivers

Registration Fees

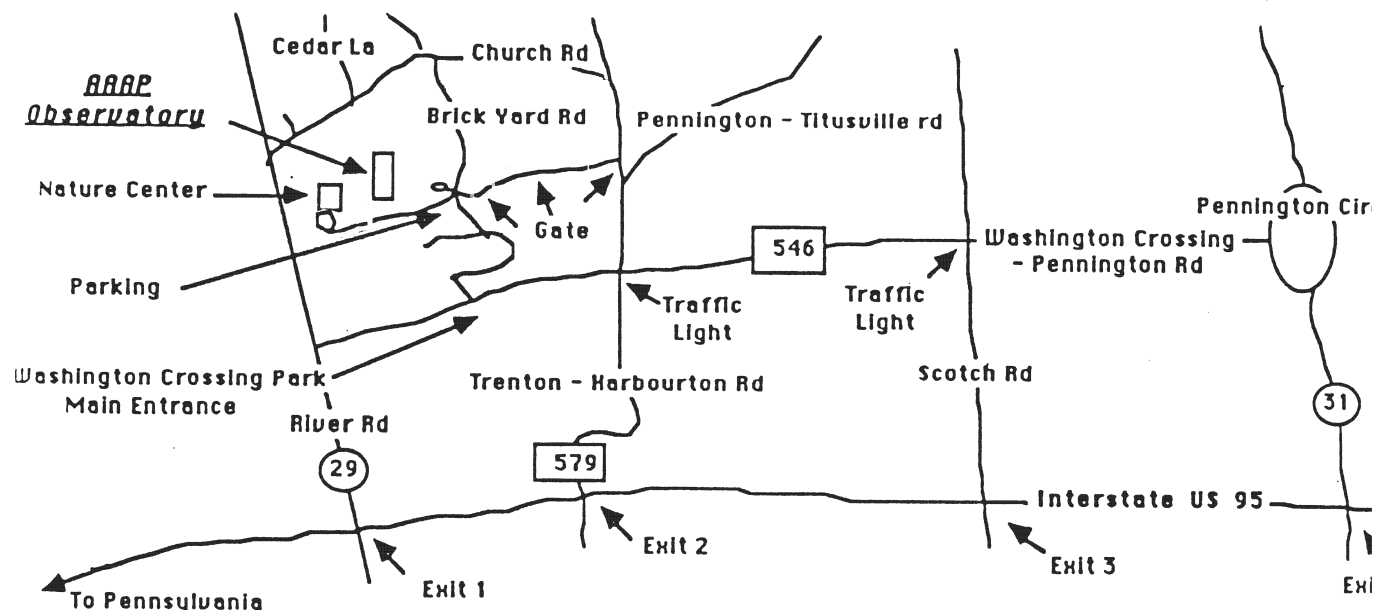
Camping and RV -- \$40.00 per person (\$45 after October 2), children (6-12yrs.) \$25
Bunkhouse -- \$45.00 per person (\$55 after October 2), children (6-12yrs.) \$35
Children under 6 years of age -- Free

Meals

Scrumptious Food Catered by AAAP Chefs, for Saturday ONLY
Volunteers needed to help the Chefs
Saturday brunch, and dinner: Adult -- 30.00 per person
Child (ages 6 -- 12) -- \$20.00 per person ; Children under 6 years of age -- Free

Please send registration form and your check or money order (payable to AAAP) to:

**Amateur Astronomers Association of Princeton
Jersey Star Quest 2009 Registration
P.O. Box 2017
Princeton, NJ 08543**



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

Amateur Astronomers
Association of Princeton
PO Box 2017
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