

SIDEREAL TIMES

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

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Ludy D'Angelo

Treasurer

Michael Mitrano

Program Chairman

John Church

Assistant Director

Jeff Bernardis

Secretary

Larry Kane

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Bryan Hubbard and Michael Wright

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Number 7

From the Director

It's been a hot summer so far, and I hope everyone is staying cool. Unfortunately, while the days are fairly clear of clouds, the evenings are full of them (at least when I want to go outside). For the times that it hasn't been cloudy, or partly cloudy on Friday nights, we have had very well attended public nights out at Washington Crossing. This is the club's main activity during the summer break and the time the observatory is most used. It is a time when we, as amateur astronomers, can adjust the perceptions of the public as to how we observe from earth the goings on in the night sky. What I mean here is that for most, the perception of the universe is through the TV at home, with cable channels providing multiple, excellent, science-based programming, and coupled with internet access, all the high-resolution, beautiful, false-color photos are a click away. It is a wonder that anyone comes out at all. But they do, and they are just as amazed when actually looking through a telescope and seeing a planet, or a globular cluster, or a double star. The real experience of observation still cannot be substituted, and keeps the young and old interested in their universe. So I encourage everyone to make a trip to your local observatory.

At the last meeting of the year in June, we were gathered at the State Museum Planetarium in Trenton. We had not been there for several years since it was under renovation. Bill Murray gave us a tour of the newly renovated planetarium and its new digital projector. It was really wonderful to see the completed complex. Bill presented one of the programs and a tour of the night sky as we see it here in the local area.

Thanks to Bill and the Planetarium, for continuing to provide the club with this special night.

As I am writing this, it has dawned on me that our Starquest event (October 8-10, 2010) is rapidly approaching. I am also realizing that planning needs to be done by the next AAAP meeting in September since Starquest is before our meeting in October. The website will be updated soon with current info. The fees will be the same as last year. We do need volunteers to help with the kitchen (cooking and clean up), and also some volunteers to organize door and raffle prizes, and be involved with providing general support for the event. Anyone wanting to help please contact me. This year I am hoping for some clear weather and a successful event.

Have a great summer and get ready for another great season of AAAP lectures. John Church emailed earlier this past month that he has lined up several speakers to start with our September meeting; so I'll see all of you on September 14th at 8 PM in Peyton Hall.

Ludovico D'Angelo, Director

The deadline for the September issue is:

Friday, September 3, 2010

Send your submissions to:

editors@princetonastronomy.org

Board of Director's Meeting Minutes May 27, 2010

The meeting was called to order by Director Ludy D'Angelo

Starquest 2010

It will begin on October 8. There was a consensus that registration fees should remain as they were last year. It was noted that Star Quest should not be held solely on the basis of raising funds. A discussion was held on whether or not to have speakers. An inventory will be taken of the raffle items that were left over from prior year(s). Ludy suggested that he has an eight inch reflector that could be given away as a grand prize. Larry Kane noted that he had some items from the previous year. Some members of the Board will be in contact with the Hope Center to try to establish a cancellation policy for inclement weather.

Observatory Report

Washington Crossing Park now has a Regional Manager who will be responsible for more than one park. The Park Rangers requested that they be given the combinations to our locks. We, again, have a lock on each gate. The combinations will be changed and the new number will be given to each of the observing team leaders. Gene Ramsey offered to buy some light-weight parking cones to put on the edge of the road in order to prevent guests from parking on the grass. Gene also noted that he was given new emergency phone numbers by the Rangers. They are to be used in case there is an accident on a public night. These numbers will be given to the observing teams and placed in the observatory. It was noted that there are nails protruding through the roof of the observatory. Michael Mitrano offered to cut them off. Gene Ramsey suggested that we replace the doors on the computer room and the lavatory. The work party that was to get together to paint the interior of the observatory walls will do so in the fall of this year.

Treasurer's Report

As of this meeting date, we have eighty nine paid members. The Treasurer's report appears in another section of this newsletter.

Board Vacancies

The positions of Outreach Coordinator and Membership Chair need to be filled. Ludy will urge people to work on committees such as these and the Program committee. He also suggested that we do outreach with other groups and community events such as Princeton's "Communiversity Day." We also need a list of people to follow-up as potential speakers. John Miller suggested that we do some research to determine who is in the astronomy news. The Membership committee should be there to meet and greet new and potential members. Two members want to serve on the committee but it still needs a chairperson.

A discussion was held concerning the procedure for processing a new membership application. It was decided

that the application and check should go to the Secretary. If that person is not available, then they should go to the Treasurer. Once the Secretary has the application, the information on it should be entered into the membership roster and forwarded to the Director or Assistant Director who will send out a letter of greetings from the club to the new member. The roster should be sent to the Webmaster with copies forwarded to the Director and Assistant Director.

The Director adjourned the meeting.

Larry Kane, Secretary

Treasurer's Report

The AAAP's fiscal year ended on June 30. An income statement is provided on page 4 that covers the year that has just ended and compares it with the previous fiscal year. You will also see balance sheets showing our financial condition at the start and end of the year. The AAAP's income statement is broken down into four components: the lecture program, the observatory expenses, Starquest, and everything else (referred to as General Operations and including Outreach.)

The Association had a very small surplus of \$143 this past year – essentially breaking even. The AAAP remained in solid condition at year-end with a cumulative surplus of \$18,337 because we had a strong cumulative surplus at the beginning of the year. Membership and associated dues decreased sharply by 15 members from FY 2009. We ended FY 2010 with 89 members. Because of the last Starquest's weather cancellation, we had expenses in FY 2010 for this event of \$106 compared with the \$741 surplus generated in the previous year. Finally, the observatory roof expenses early in the fiscal year caused observatory expenses to nearly double from FY 2009 to FY 2010. Given the confluence of these factors, I am pleased that we broke even. With these repairs behind us and a strong program shaping up for the fall, I am optimistic for our finances in the coming year. Please feel free to contact me if you have any question about the Association's finances.

Michael Mitrano, Treasurer

Membership Meeting Minutes June 8, 2010

The meeting was called to order by Director Ludy D'Angelo. As this was the last meeting of the season, it was held at the newly re-opened planetarium of the New Jersey State Museum. The business meeting was abbreviated.

Ludy summarized the AAAP Board meeting that was held on May 27, 2010. Minutes of that meeting appear in this issue

of Sidereal Times. He also announced that Ira Polans is temporarily stepping down as an editor of the Sidereal Times. The appreciation for his work on our newsletter was shown by all in attendance. Ludy requested that anyone who wanted to work on the newsletter should let him know.

The Director adjourned the business meeting so those in attendance could enjoy the planetarium show presented by former Director, Bill Murray.

Larry Kane, Secretary

From the Program Chair

This has been a busy Spring and early Summer for me so far, with trips to Paris and California with my wife. In the meantime, however, the duties of the Program Chair have not been forgotten. Speakers have been arranged for September and October, with a further speaker tentatively signed up for February.

For September 14th, we will have Joel Groves from Schlumberger, who will talk to us about X-ray spectrometers for spacecraft with particular attention to the subject of detecting sub-surface water on Mars. Then for October, we will have Suzanne Staggs from the Physics Department at Princeton who will give us a talk on cosmology. I was fortunate to have heard her speak on this subject at the Medina Seminars in Princeton in June. She gave an excellent talk indeed, which I am sure will be well received at our October 12th meeting.

Further details on the above talks and announcements of pre-meeting dinners will follow in the September and October issues of Sidereal Times and on our website.

I thank Program Committee members John Giles and Ira Polans for their assistance in lining up our September and tentative February speakers.

John Church, Program Chair

Community Outreach

As is usual for this time of year, things are quiet on the outreach front. Other than our weekly observatory openings, there have been no planned activities.

This marks the end of my third year as Outreach Coordinator; I think it is time for me to move on. We are still looking for a volunteer to take over the position. If you are interested in taking this role, please let me know and I will discuss your desire with Ludy.

Finally, if you would like to be added to the list to receive notification about outreach events, just let me know. I can be reached at (note the new address) or at

Jeff Bernardis, Outreach Coordinator

SnipiTs

This is a new column devoted to news articles associated with astronomy. These "Snipits" will give you an introduction to an article, and the link, should you wish to read the complete report.

Meet the Titans: Dust Disk Found Around Massive Star

A new discovery has the potential to answer the long-standing question of how massive stars are born and hints at the possibility that planets could form around the galaxy's biggest bodies. "Astronomers have long been unclear about how the most massive stars form," said Stefan Kraus, a NASA Sagan Exoplanet Fellow and astronomer at the University of Michigan, Ann Arbor. "Because they tend to be at very large distances and surrounded by dusty envelopes, it's very hard to separate and closely observe them."

To get a better look, Kraus' team used the Very Large Telescope Interferometer of the European Southern Observatory in Chile to focus on IRAS 13481-6124, a star located 10,000 light-years away in the constellation Centaurus, and about 20 times more massive than our sun. "We were able to get a very sharp view into the innermost regions around this star by combining the light of separate telescopes," Kraus said, "basically mimicking the resolving power of a telescope with an incredible 85-meter [280-foot] mirror."

The team's observations yielded a jackpot result: the discovery of a massive disk of dust and gas encircling the giant young star. "It's the first time something like this has been observed," Kraus said. "The disk very much resembles what we see around young stars that are much smaller, except everything is scaled up and more massive." The presence of the disk is strong evidence that even the very largest stars in the galaxy form by the same process as smaller ones -- growing out of the dense accumulation of vast quantities of gas and dust, rather than the merging of smaller stars, as had been previously suggested by some scientists. The results were confirmed by NASA's Spitzer Space Telescope. "We looked at archival images of the star taken by Spitzer, and confirmed that the star is flinging disk material outward from its polar regions, just as we see with smaller stars and their dust disks," Kraus said.

Pictures and the full article can be found at:
<http://www.jpl.nasa.gov/news/news.cfm?release=2010-235>

Bryan Hubbard, Editor

REVENUES AND EXPENSES

BALANCE SHEETS

	TOTAL			General Operations			Lectures			Observatories			StarQuest		
	Jul '09 Jun 10	Jul '08 Jun 09	Inc- rease	Jul '09 Jun 10	Jul '08 Jun 09	Inc- rease	Jul '09 Jun 10	Jul '08 Jun 09	Inc- rease	Jul '09 Jun 10	Jul '08 Jun 09	Inc- rease	Jul '09 Jun 10	Jul '08 Jun 09	Inc- rease
Ordinary Income/Expense															
Income															
Contribution Income	60	158	(98)				60	158	(98)						
Member Dues	3,560	4,147	(587)				3,560	4,147	(587)						
Outreach Contributions	150	250	(100)				150	250	(100)						
Sale of Equipment	107	125	(18)				107	125	(18)						
Sales of AAP & Astro Items	126	523	(397)				126	303	(177)						
StarQuest Attendance		1,710	(1,710)												
Total Income	4,003	6,913	(2,910)				4,003	4,983	(980)				0	0	0
Expense															
Astronomy Calendars	159	159					159	159							
Bank Service Charges	33		33				33		33						
Books and Publications		34	(34)												
Business License & Fees	25	25					25	25							
Dues and Subscriptions	87	123	(36)				87	123	(36)						
Electricity	62	41	21												
Equipment		89	(89)												
Food	88	491	(403)				88		88						
Improvement, Maint & Repair	1,690	37	1,653												
Insurance	1,004	1,023	(19)												
Location Rental		520	(520)												
Meeting Expenses		81	(81)												
Miscellaneous	5	110	(105)												
Post Office Box	60	58	2				60	58	2						
Postage and Delivery	106	120	(14)				0	49	(49)						
Printing, Reproduction, Folding		88	(88)				0	10	(10)						
Rent	1	2	(1)												
Speaker Honorarium	53	197	(144)												
Speaker Transp & Meal Exps	82	80	2												
Telephone	388	316	72												
Telescope & Equipment Upgrade		164	(164)												
Web Site Expenses	36	155	(119)				36	155	(119)						
Total Expense	3,879	3,832	47				488	594	(106)				135	377	(242)
Net Ordinary Income	124	3,081	(2,957)				3,515	4,389	(874)				(135)	(377)	242
Other Income															
Dividend Income	15	224	(209)				15	224	(209)						
Interest Income	4	25	(21)				4	25	(21)						
Total Other Income	19	249	(230)				19	249	(230)						
Net Income	143	3,330	(3,187)				3,534	4,638	(1,104)				(135)	(377)	242
													(106)	741	(847)

ASSETS			Jun 30, 09	Jun 30, 10
Current Assets				
Checking/Savings				
Third Federal Checking			698	1,544
Vanguard Money Market			17,338	16,753
Total Checking/Savings			18,036	18,297
Other Current Assets				
Facility Deposit			200	200
Prepaid expenses			159	0
Total Other Current Assets			359	200
Total Current Assets			18,395	18,497
TOTAL ASSETS			18,395	18,497
LIABILITIES & EQUITY				
Liabilities				
Deferred Dues Revenue			200	160
Total Liabilities			200	160
Equity				
Retained Surplus			14,943	18,194
Net Income			3,252	143
Total Equity			18,195	18,337
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20 Years Ago In Sidereal Times

NOTES FROM THE OBSERVATORY CHAIRMAN

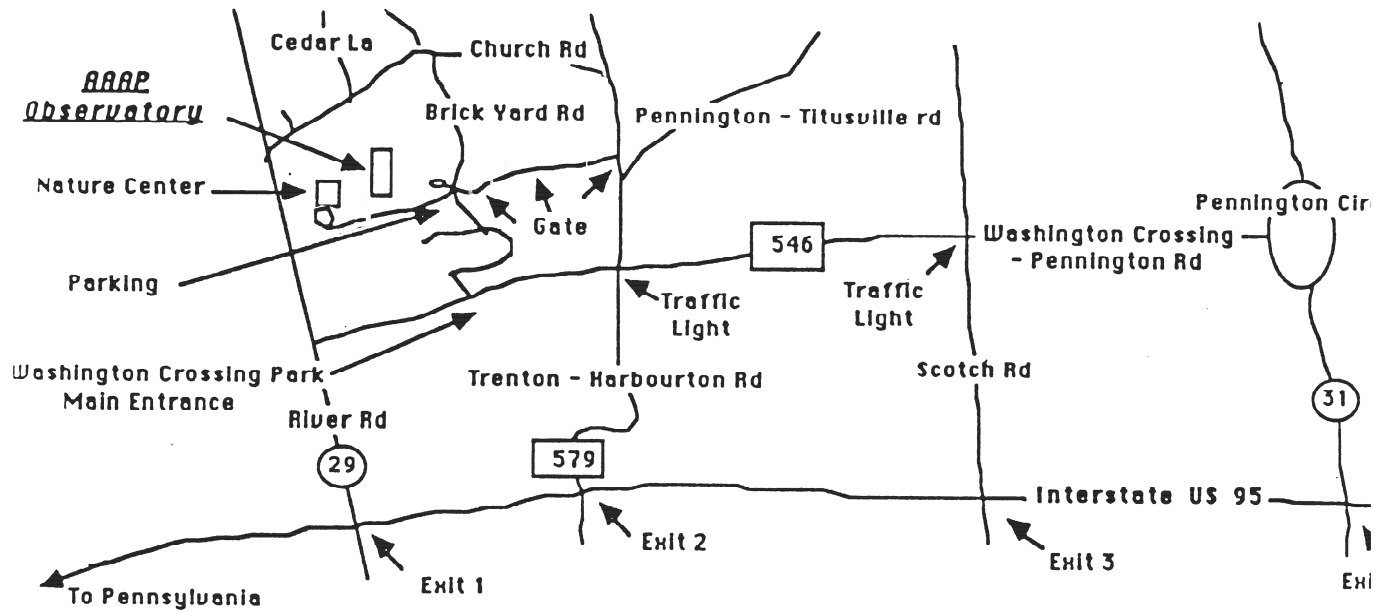
I have decided that the best digital setting circles for the 12.5" reflector are the models made by Lumicon. The optical encoders on these models have twice the accuracy of any other models on the market. Lumicon makes there models of setting circles. The Lumicon Sky Vector is a straight digital setting circle with no built-in catalog and costs \$498.00. The Lumicon Sky Vector II is a combination digital setting circle and catalog (with the 1000 best deep-sky objects from the Messier, NGC, and IC catalogs as well as double stars) costing \$589.00. The Lumicon NGC Sky Vector is also a combination digital setting circle and catalog (with all 7730 NGC objects) costing \$750.00.

At the September meeting I would like to take a vote as to which one of these models we should get. My recommendation is for the Sky Vector II. It is reasonably priced and the catalog will aid club members who are not adept at star hopping (a large majority of the club including myself falls into this category) in finding deep-sky objects. Once a model is chosen I will order it and John Simpson and I will install it on the 12.5".

I would also like to get several new eyepieces (2" Naglers and Wide-Fields) for the club scopes. Eventually I would like to replace all the club's eyepieces with 2" eyepieces. This will also be discussed at the September meeting.

-Bill Murray

Directions to Simpson Observatory



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 (right). At the third traffic light, make a left onto the Washington Crossing-Pennington Road (County Route 546). Take CR546 to the first traffic light and make a right onto Trenton-Harbourton Road (County Route 579). Take CR579 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

Midsummer 2010

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