

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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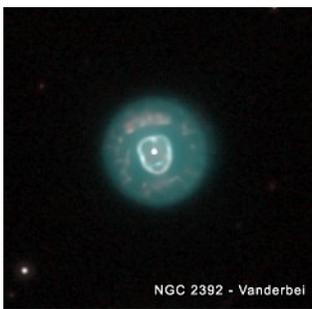
January 2008

Number 1

From the Director

Well, here we are. 2008 Were your holiday gift wishes fulfilled? Was that water-cooled SBIG ST 7MXE under the tree? Or, if you were *really* good, maybe you found a TMB 152mm f/7.9 next to the fireplace. I'm still trying to figure out how a lump of coal fits into an astronomical accessory array; at least it matches my Orion XT 8.

Thanks to the hard work of our current Program Chair, Ludy D'Angelo, we continue to host great guest speakers for our monthly Peyton Hall gatherings. This month, we welcome the renowned Greg Olsen. Greg, an adventurer, entrepreneur and research scientist, is one of only three private citizens to orbit the Earth on the International Space Station. Now President of GHO Ventures, Princeton, he received a BS Physics (1966), a BSEE and MS Physics (1968) from Fairleigh Dickinson University, then was awarded a Ph.D. in Materials Science from the University of Virginia (1971). His talk will relate experiences aboard the ISS. This is certainly one not to miss!



NGC 2392 - Vanderbei

Speaking of looking at the universe—who among you patient readers has caught B33 (The Horsehead Nebula) and the associated IC 434 (curtain of gas stretched behind B33) visually? You astroimagers put down your hands please (you know who you are), we're talking live photons. Impossible in New Jersey, probably, but let us know.

Much easier is NGC 2392 (The Eskimo Nebula) now riding high in Gemini. This tenth magnitude planetary is roughly five degrees east of Delta Geminorum (Wasat). Bring a photo with you (like this one produced by member Bob Vanderbei) and see if you can detect some of the structure while at the eyepiece. Estimated distance is ~3000 LY.

Mars, of course, beckons like a headlight in Gemini. When you're done traversing Syrtis Major, swing your scope over to Castor. Although I've visited Castor countless times since pointing my Tasco to it as a kid, this system still is beautiful to examine, and a fair double star test for small scopes. Castor is actually a system of six gravitationally-related stars, but it's A & B (mag. 1.9 and 2.9 respectively), currently separated by ~4.0 seconds of arc that does the visual split.

If New Jersey clouds prevent you from enjoying planetaries, binaries, and the constellation Aries, there's always astro entertainment via the web and your PC. For example, take a look at a terrific PC-based planetarium software product called Stellarium. This open source (read "free") product is a beauty. The graphics are really impressive, the sky is mouse-moveable, the object database is extensive, and the system is highly intuitive. Find it for download at: <http://www.stellarium.org>

Another site well worth the visit (and bookmark) is the Universe Today site, hosted by Fraser Cain. The site is linked to the AAAP site (home page "latest astronomy and space news"). The site is enormous, but very professionally designed and indexed. Of particular interest are Cain's pod casts. For those of you not yet in the Web 2.0 world, pod casts are really nothing more than streaming audio feeds. His show topics are really interesting, ranging from "what does it require to become a professional astronomer" (hint: lots and lots of calculus), to "questions about inflation." Catch it at: www.universetoday.com

Cheers—John Miller,
Director

The deadline for the February issue is:

February 1, 2008

Send your submissions to:

editors@princetonastronomy.org

Membership Meeting Minutes December 11, 2007

The meeting was started at 8:01 PM with a short announcement by a representative of Project Astronova.

Following the Astronova presentation Professor Edwin Turner gave a lecture entitled "Detecting Extrasolar Planets, Plants, and Beaches."

After a short recess, the membership meeting convened at 9:48pm.

Treasury report: Treasury stands at \$15,036.00. The insurance premium due in December, was less than last year and included all the previous coverage we required. Several other members reported they also received dividends refunds from our insurance provider, State Farm. The AAAP has 87 paid members.

Observatory: Gene Ramsey and John Church winterized the restroom at the Simpson observatory.

Gene made a motion to acquire new cabinets in the observatory and dispose of the present furniture donated by members in the past. His proposal consist of a cabinet to house various tools to maintain the observatory and a bench with drawers to replace the aging dresser previously used. Gene will have samples and prices for further discussion at the next board meeting in January.

Ron Mittelstaedt brought up the discussion unresolved from the last meeting about the purchasing of a Televue 13mm 100° field of view eyepiece. Ludy DeAngelo also added that we should take an inventory of all eyepieces owned by the AAAP to see if there are other eyepieces we wish to replace. The 22mm Nagler has a rattle and should be sent back to Televue for repairs. The eyepieces now owned by the AAAP will be made available at the next board meeting.

Larry Kane will be setting up a key holder training schedule.

Bill Murray has had AAAP property which he would like to get out of his house. The Simpson cold camera and the film hypering equipment. A suggestion has been made to put this equipment for sale on Astromart. This will be discussed further during the board meeting.

For the 2008 public observing season it was passed that again the observatory open every Friday starting April 1st.

Additional discussion on the size of the container and where donations will be collected at the observatory. Nothing resolved on this issue.

Sidereal Times: Editor Ira Polans ask that only non-copyrighted articles be sent in for publication in the Times.

We received notification from the United Astronomy Clubs of NJ for the annual renewal dues. The census was that only one person uses the facility and further discussion on our future present at Jenny Jump will be discussed at the board meeting.

There will also discussion at the board meeting on the usage of the newly clear land on the east side of the observatory. One idea was to lay concrete pads for piers so members could easily set up their optical tube assemblies. Another motion was to remove the observatory at Jenny Jump with the Simpson Newtonian and relocate it on the cleared land.

Meeting adjourned at 10:23pm.

Ron Mittelstaedt, Secretary

Treasurer's Report

There have been no further dues received since the end of November. The AAAP has received \$3,440 in dues payments for the current fiscal year.

With few expenses during the month and the receipt of an outreach contribution, our fiscal year to date surplus has increased slightly. The Association's cumulative surplus at is \$16,163.

Michael Mitrano, Treasurer

From the Program Chair

I hope you all enjoyed the lecture by Ed Turner at our last meeting who gave a very informative overview of how to detect extra solar planets. He included the methodology on how to find if those planets have forests, plants, and beaches.



On January 8th, our next meeting will feature Greg Olsen, The title of his talk is "Voyage to the International Space Station". Greg Olsen was the third private citizen to orbit the earth on the International Space Station (ISS). After training for five months (900 hours) at the Yuri Gagarin Cosmonaut Training Center in Moscow, he launched on a Russian Soyuz rocket TMA-7 on October 1, 2005 with Cosmonaut Valeri Tokarev and Astronaut Bill McArthur (Expedition 12).

After an illustrious career as a research scientist and entrepreneur, Greg is now president of GHO Ventures in Princeton, NJ where he manages his "angel" investments, South African winery, Montana ranch, and performs numerous speaking engagements to encourage children – especially minorities and females- to consider careers in science and engineering. He is active in the New Jersey Technology Counsel (NJTC), NJTC Venture Fund, Institute of Electronics and Electrical Engineers (IEEE) and the NJ Commission on Science and Technology.

Greg received a BS in Physics (1966), a BSEE and MS in Physics (1968) from Fairleigh Dickinson University, then was awarded a Ph.D. in Materials Science from the University of Virginia (1971). He performed post-doctoral studies at the University of Port Elizabeth (South Africa), taught elementary physics classes, and then worked as a research scientist at RCA Labs (Sarnoff Center) from 1972 to 1983. He developed vapor phase epitaxial crystal growth of optoelectronic devices, including laser diodes and photo detectors for fiber optic applications based on the material indium gallium arsenide (InGaAs). He has been awarded 12 patents, written more than 100 technical papers, co-authored several book chapters and has given numerous invited lectures to both technical and trade journal audiences. Greg is an IEEE LEOS Fellow and the first recipient of the prestigious IEEE Aron Kressel Award.

Greg is active in many civic organizations including Trenton Big Brothers and Sisters, Trenton Boys and Girls Club, Trenton Soup Kitchen, Princeton Historical Society, Custer Battlefield Preservation Committee and Fairleigh Dickinson University and University of Virginia Alumni Associations. In his spare time he enjoys golf, country and western music and dancing, opera and horseback riding.

I hope that all of you have had a pleasant holiday. Please join us in Peyton Hall on January 8th. Prior to the meeting, as always, there will be a pre-meeting dinner at Sotto's Restaurant. Please contact me to reserve a spot and as always send any comments and suggestions to me at

Ludovico D'Angelo, Program Chair

Picture This—The Pleiades



Also known as M45, Subaru and the Seven Sisters, this open cluster is one of the closest and brightest to us. It is an easy naked eye target (six to nine stars depending on your skies) located in Taurus and consists of some 3000 stars, 13 ly across and 400 ly from earth.

This open cluster is best viewed through a finder scope or binoculars to really appreciate its beauty. It is up this time of year as soon as it gets dark. As shown in the picture the stars are passing by a gas cloud that reflects their light causing a reflection nebula. Unfortunately this nebulae is only seen when taken long exposure images and cannot be seen by our eyes.

The image shown was taken using a Starlight Express camera through an Orion ED80 Refractor. The sub exposures were 5 minutes in length (LRGB 9;3;3;9).

Brian Van Liew

Keyholder Training

Four members recently expressed interest in keyholder training. It was initially scheduled for December 19. However the weather did not cooperate. Training will be rescheduled for after the holidays.

Interested in keyholder training?

Contact: _____ or by
cell phone _____

Community Outreach

We had just one event on our calendar for this past month – On December 7th we hosted a star party for Riverside Elementary School in Princeton. Dave Letcher, John Miller, Larry Kane, and Brian Van Liew were there with their telescopes; I showed up later with my laser pointer. I would estimate about 40 students and their parents were present. It was cold that night, and there were some clouds, but we still got to see the usual suspects: Mars, M45, NGC 457 (The E.T. Cluster) and some double stars (Almach among them). M42 was there too, but it was washed out by some pretty bright lights on the side of the school building. As always, though, it was a great night; the kids were very enthusiastic, the parents asked a lot of questions, and the experience was very rewarding.

You can experience the reward yourselves by helping us out at an upcoming event. Our calendar currently only has 1 such event:

- January 25, 6:30PM to 8:30PM at the Lawrenceville Elementary School. This is their annual Science and Discovery night.

As other events are scheduled, you can find out about them here, and on the calendar that is on our web site.

If you think this is something you want to do, please contact me at

Jeff Bernardis

Science Outreach and Exploration Update

“Italy Unveils Cosmic Masterpieces: Italian Contributions to Space Exploration” was the topic of my Sunday, Dec 2 presentation at the Dorothea’s House of the Italian Cultural Society in Princeton, NJ. My talk highlighted Italy’s key roles in construction of the International Space Station, Cassini/Huygens mission to Saturn, Dawn Asteroid Orbiter, Rosetta Comet lander and the exploration of Mars and was attended by a standing room only crowd including several AAAP members.



NASA’s Jet Propulsion Lab (JPL) sent me several new 3-D display posters including the “Spirit” rover landing and traverse site at the Columbia Hills on Mars.



3-D posters of Saturn’s moon’s Hyperion, Iapetus and Dione and the McMurdo panorama from Spirit enjoyed by lovers of Italy and Italian culture in Princeton on Dec 2.

Riverside Elementary School: Princeton, NJ, Dec 6. At this annual astronomy night, all of the 3rd grade students and their families enjoyed my presentations on “Twin Robots Exploring Mars”, shortly before Mars at Opposition. This year we were relocated to the more comfortable environs of the library with a newly installed projector. Thanks to rare clear weather, all were treated to AAAP outdoor telescope viewing of nebulas and even a few meteor streaks.



Princeton area families "On Mars in 3-D" as Spirit and Opportunity celebrate 4 years of roving on the Red planet

Please contact me for more info or science outreach presentations. [Email:](#)

My upcoming Astronomy talks include:

Rittenhouse Astronomical Society (RAS) at the Franklin Institute: Philadelphia, PA, Wed, Feb 20, 8 PM. "Lunar, Solar and Martian Eclipses". Website: <http://www.rittenhouseastronomicalsociety.org>

Astronomical Society of Long Island (ASLI): Old Westbury, LI, NY, Wed, Mar 26, 8:30 PM. "Exploring Mars and Asteroids (in 3-D)". Website: <http://www.asliclub.org>

Raritan Valley Community College Planetarium: Somerville, NJ, Wed, Apr 2, 7:30 PM. "Launching DAWN (and Phoenix): From Behind the Scenes at Kennedy Space Center". Website: <http://www.raritanval.edu/planetarium>

Washington Crossing Nature Center: Titusville, NJ, April 12, 1 PM. "Mars, Saturn, Asteroids and Beyond"

Ken Kremer

20 Years Ago In Sidereal Times...

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Newsletter of the Amateur Astronomers Association of Princeton, Inc.
(Address: P. O. Box 2017, Princeton NJ 08540)

EDITOR: Art Esposito

JANUARY 1988

DIRECTOR: Art Esposito

AAAP CALENDAR

January 12-----Meeting at 8PM, Peyton Hall, Princeton University. The speaker will be Dr. Wolf Heintz, Chairman of the Astronomy Dept. at Swarthmore College and the topic will be "Binary Stars, Nuisances & Gold Mines."

January 16, 17--Super Science Weekend at the New Jersey State Museum. Hours will be 9-5 on the 16th (Saturday) and 12-5 on the 17th (Sunday). We will have a table, as in the past, and volunteers can call Jay Albert. It should be noted that this is the first year that I can recall that this event does not conflict with the Super Bowl.

February 9-----Meeting at 8PM, Peyton Hall, Princeton University. The speaker will be Dave Weinberg and the topic will be "Meatballs, Swiss Cheese, & Sponges" (A.K.A. The Formation of Galaxies).

May 10-----This meeting will be Members Nite and the business meeting that follows will include the election of new officers for 1988-89.

June 14-----Our annual meeting at the NJ State Planetarium in Trenton, hosted by Dick Peery. This will be our first Planetarium meeting that features the new Minolta sky projector.

NOTE-----All premeeting dinners will be held at 545PM at the TIGERS TALE restaurant, near the junction of Routes 206 and 518 in Rocky Hill.

FROM THE DIRECTOR

Things have been rather quiet for the last few months, probably because this is the first year in a while that we do not have a payment for the 12-inch scope hanging over our heads. However, maintenance of the scopes and of the Observatory costs money, so Don Monticelli has mailed out a club letter asking for Holiday donations. Hopefully, some money will come in to our coffers as a result of this mailing.

There is a correction that should be made pertaining to George Briggs and his telescope. He did win FIRST PRIZE in Mechanical Design at the 1987 Stella-fane and he was our lecturer at the November meeting with his scope on display.

Dave Brown has made our annual Beemerville reservations for August 19-21, 1988. This has always been a great weekend and it was even better this year because it was in late August. The gathering is held at the Rutgers 4-H Camp near Beemerville, NJ and close to High Point and Stokes Forest State Parks.

There are still a few unsold tee shirts now in the custody of Jay Albert. Call him for availability and send your payments to Wes Walton if you decide to purchase one.

OBSERVATORY NEWS & DUTY ROSTER

December 25----CLOSED/CHRISTMAS DAY
January 1-----CLOSED/NEW YEARS DAY
January 8-----Don Monticello/Helen Marrotte
January 15-----William Murray/Roxanne Peery
January 22-----Dick Sivel/Larry Smith
January 29-----Wes Walton/Doug Wurzler
February 5-----Al Zampirri/Dave Brown
February 12-----Will Ashton/Chuck Divine
February 19-----John Ewald/Pat Colestock
February 26-----John Church/Jim Lautenbach
March 5-----Joe & Kevin Mooney/Louisa Lockette
March 12-----Art Esposito/Kurt Goepfert
March 19-----Dennis Hicks/Lee Geiger
March 26-----Pat Kane/Don Monticello

If you cannot make your assigned date, it is your responsibility to find a replacement. Do not call the Director or the Observatory Chairman to perform that task for you.

Noah Levy has agreed to take over the reins as Observatory Chairman. He will be responsible for the duty roster, training sessions for prospective key-holders, and work parties (maintenance).

John Church has located a source for a replacement oscillator on the 6-inch refractor. The purchase will be made in the spring, after the insurance is paid. Also, a few members will be getting together to design a new ladder that can be used on the 12-inch Simpson scope.

The road is still in good shape, however, if there is a lot of snow on the ground, it would be wise not to try and go to the Observatory. If you have a 4-wheel drive vehicle, it might be possible to reach the building. If you do not, good luck! It will cost at least \$50 for a tow truck to come and get you out.

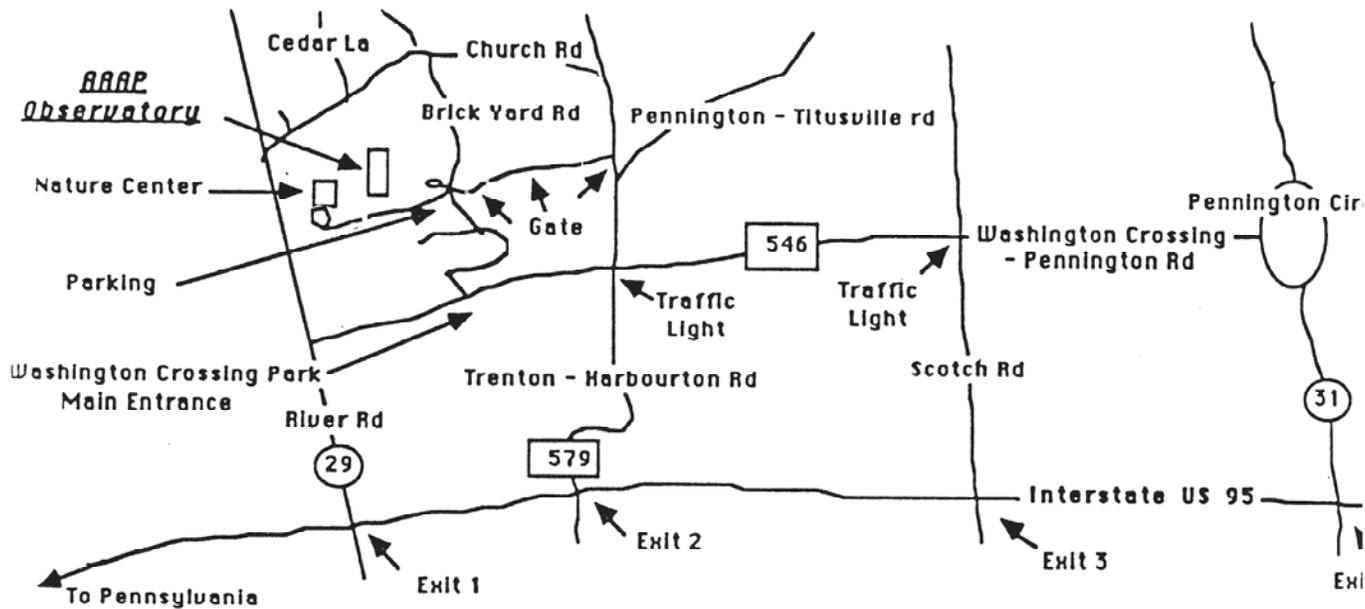
MAPS

Over the last few months, you might have noticed copies of maps depicting the routes to and from the Observatory at Washington's Crossing State Park, to Peyton Hall at Princeton University, to the State Museum and Planetarium in Trenton, to the Rutgers 4-H Club in Beemerville, and to Camp Onas in Ottsville PA, along with a new club roster. If you need any extra copies, please contact me at home

DUES STRUCTURE

FAMILY---\$35 STUDENT---\$21 SENIOR CITIZEN---\$21 SINGLE---\$30

No increase is foreseen over the next 6 months (the duration of my term as Director).



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
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