

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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Treasurer:
Brian VanLiew

Program Chairman:
Ken Kremer

Assistant Director:
John Miller

Secretary:
Ludy D'Angelo

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From the Director

Mid-Summer Astronomy in the AAAP. Summer vacation is here for AAAP, as we drop back and relax with the temperatures heating up and vacations becoming obsessions to get away from it all! Our AAAP regular season program concluded with Jersey StarQuest in late June (see below). Among trips to the Jersey shore, baseball, barbeques, and gardening, perhaps your summer plans include a getaway to dark sky environs where you'll have a chance to apply your astronomy know-how. Don't forget to pack your binoculars or telescope and a star chart.

With summer in full force our telescopes often turn to Scorpio and Sagittarius, two major constellations brimming with deep sky objects above the southern horizon in New Jersey. While Saturn and Mars dive into the sunset we have nearly perfect positioning of Jupiter in the early evening sky. So for planets or for deep sky, now is a great time to visit the **AAAP Observatory** at Washington Crossing State Park and observe through the club's computer controlled Celestron C14/ Paramount as well as the fine 6.25 inch planetary refractor on Losmandy G11 mount. Remember that public nights at the AAAP Observatory are the first and last Fridays each month, but members are welcome on any evening that Keyholders have opened the observatory (generally any clear Fri or Sat night). It's best to phone in advance to be sure (609-737-2575).

Among the deep sky objects you'll be able to observe visually through the club's telescopes, the Dumbbell Nebula, M27, is one of my favorites. The photograph of M27 below was taken in June with my C11 at f/6.3 and SBIG ST-10XME CCD camera. This planetary nebula is a remnant of the late stage of evolution of a massive star which ejected much of its outer layers of gases about 3000 years ago. M27 is about 1000 light years distant and shines by fluorescence from the central star's core-- strikingly beautiful by eyepiece using OIII or deep sky filters at medium magnification.



Jersey StarQuest 2006. The AAAP hosted the region's premier summer astronomy weekend and star party at our hills, forest, and pond venue at the Hope Conference Center in Hope, NJ over the weekend of June 24. Unfortunately the weather prevented us from even setting up telescopes, as the rains that fell that weekend were the start of the serious flooding in the Delaware valley at the end of June. Yet here the efforts of the StarQuest organizers paid off, and those who participated (est. 25-30 attendees) were treated to some outstanding astronomy presentations by our professional speakers and by AAAP members. **I would especially like to thank Dr Rus Belikov** of Princeton Univ (MAE Dept) and a AAAP member who presented "The Search for New Earths" about the terrestrial planet finder research at Princeton, and **Dr Andrew Youdin** of Princeton Univ (Astrophysics Dept) who presented "Protoplanetary Disc Formation". These outstanding and relevant talks were met with enthusiastic audience participation. With additional fine presentations by AAAP members **Ken Kremer** (NASA exploration), **Rob Teeter** (crafting large reflecting telescopes), myself (astrophotography), and presentations of the Sagan/Universe and Dobson/Astronomer DVD's, and of course the various telescope eyepieces, books, and accessories that participants acquired as doorprizes/raffle items, the weekend was
(Director, continued on page 2)

Simpson Observatory (609) 737-2575

(Director, continued from page 1)

an intensive and enjoyable astronomy getaway for all involved.

In addition to the presenters (above), I'd like to thank **StarQuest co-chair Don Monticello** for his excellent leadership and organizing work in putting StarQuest together this year. Thanks also go to members **Ludy D'Angelo, John Miller, Bill Murray, Larry Smith,** and **Brian Van Liew** for their key roles and leadership in helping make this year's StarQuest succeed.

Announcing Stokes Star Party in Sept. The telescope intensive Stokes event featuring dark skies and serious observing is on again this fall at Stokes State Forest for the weekend of Sept 30. Contact **Ron Mittelstaedt** of AAAP for more details (also see the club website).

Have a great summer, everybody. I look forward to seeing you at WC Observatory!

Dark skies! -- Rex

Minutes of the
Board of Directors
Amateur Astronomers Association of Princeton
June 1, 2006

Director Rex Parker called meeting to order at 7:30 PM at his home.

Officers present were Rex Parker (Director), John Miller (Assistant Director), Brian VanLiew (Treasurer), Ludovico D'Angelo (Secretary), and Ken Kremer (Program Chair).

Other members present were: Vic Belanger, Ron Mittelstaedt, John Church, Gene Ramsey, Bill Nagle, Don Monticello, Jeff Bernardis, and a few others.

Starquest: Much discussion was made as to the lack of registrations from club members as of this meeting. The primary reason was that the weekend of Starquest fell on a weekend where there were graduations, weddings, pre-planned business trips etc. Bill Murray will take the registrations. As of today, 34 registrations have been received. John Miller suggested that Don use the online roster to communicate to club members. Highpoint donated a focuser; Burgess sent a binoviewer, filters, and 2" diagonal. Sky and Telescope sent Sue French's new book. John Miller has made some purchases at NEAF to make up the slack. There is a lack of donations this year; some are expected to still come. The general opinion was not to be too concerned about raffle prices since participation may be low. There will be a schedule of events for the weekend and will be handed out and posted at the front door. Contingencies were discussed if it ends up raining. There will be two main lectures on Saturday, and several science dvd's on hand to show to fill the time. The pool will be open on Saturday afternoon. A trip to Jenny Jump will be in the event list. Ludy D'Angelo will bring the coffee and milk to be provided in the upper lodge. Bill Murray will run a deep sky observing contest again.

No extra tee shirts will be made. The AAAP shirts will be available for sale.

Programs: There will be several speakers drawn from Princeton University. September or October will be Jim Gunn and November will be Al Nagler of Televue optics

A discussion of the next year's budget was discussed. In order for

Ken to plan for the next year, he requested that the board approve a preliminary budget for programs 2006-2007. There was a heated discussion as to how the monies were expended for the last season (2005-2006).

Rex Parker (Director) proposed the following motion:

Motion: That the AAAP Board approve a tentative program budget of \$1000 for September 2006 to June 2007 season. And that there would be a written request (email or regular mail) from the future program speaker to the Program Chair for proposed travel or other expenses. This is done in order for an audit (paper) trail of those expenses when the AAAP provides reimbursement for those expenditures. The budget is subject to change after membership renewals in October and after a proposed final budget for 2006-2007 is reviewed.

Seconded by John Miller (Assistant Director)

Vote: The board voted unanimously to pass the expenditure.

Ken will be having the speaker dinners at different restaurant locations in Princeton in the next season.

Brian VanLiew (Treasurer) discussed some of the Starquest expenditures and a general discussion ensued about possible fund raising other than Starquest.

Gene Ramsey reviewed the State Park rules for possible modification of the natural area of the proposed tree cutting for Washington Crossing. A proposal will be made in the future to the state to see what can be done. Gene Ramsey and John Church will lead this effort.

Observatory: Gene Ramsey and Ron Mittelstaedt reported that The Washington Crossing State Park would cut the lawn around the observatory in the future. We will be responsible for trim around the observatory. The Park has fixed the observatory gate that had been damaged. We need a new finder scope for the refractor, and a new brass counterweight for balance on the refractor. A work party needs to be organized to fix the roof and other issues at the Simpson Observatory.

Jeff Bernardis (Public Outreach) discussed issues about public outreach and future plans for indoor/outdoor programs. We also discussed tentative plans for cloudy night alternatives. Contacting organizations that we've done parties for and getting them on a schedule for the next year. Try to get a more organized teams and advance planning for the star parties Also, the question was raised if we should charge a set amount for the star parties we provide when the club is asked to give one. Some amounts discussed were \$150 - \$200 per event, which was determined to be reasonable. There will be more proactive effort to contact new members who marked that they were interested in public outreach on their membership forms.

A further discussion about an audit of the financial sheets was brought up by Don Monticello. There will be a search for an appropriate person.

AAAP will participate in the Stokes star party organized by Ron Mittelstaedt by providing food and support. Ludy D'Angelo will consider grilling dinner and breakfast.

Meeting was adjourned at 10:10 PM.

Submitted by;
Ludovico D'Angelo, Secretary

Yerkes Observatory Update

[As I had written in the January issue of *Sidereal Times*, I said that I would keep the membership abreast of developments in University of Chicago's plans for disposing of the Yerkes Observatory. The following article was published in the *Aurora Beacon News*, Aurora Illinois, last month. As an alumnus of Aurora University and an amateur astronomer, I was saddened by this development.-- ed]

AU loses bid for telescope in Wisconsin

By [David Garbe](#)
staff writer

The University of Chicago has rejected Aurora University's bid to purchase the historic Yerkes Observatory next door to AU's campus in Lake Geneva, Wis..

The property instead will be sold to a private developer who offered to pay nearly twice AU's bid, as well as promised to preserve the observatory for educational purposes, the University of Chicago announced Tuesday.

Last September, AU offered \$4.5 million for the stargazing facility and its 80 acres of tree-filled grounds. The University of Chicago considered only one other offer, a \$8 million bid from New York-based Mirbeau Company.

AU's vision was to sell a few of those acres as single-family home lots and incorporate the remainder into its existing William's Bay satellite campus. AU would have then used the Yerkes observatory building as a teaching tool and outreach center.

Mirbeau, a company that operates a resort and spa in Skaneateles, N.Y., plans to develop about 45 acres of Yerkes' land into a 100-room hotel and 72 small homes, according to a University of Chicago statement.

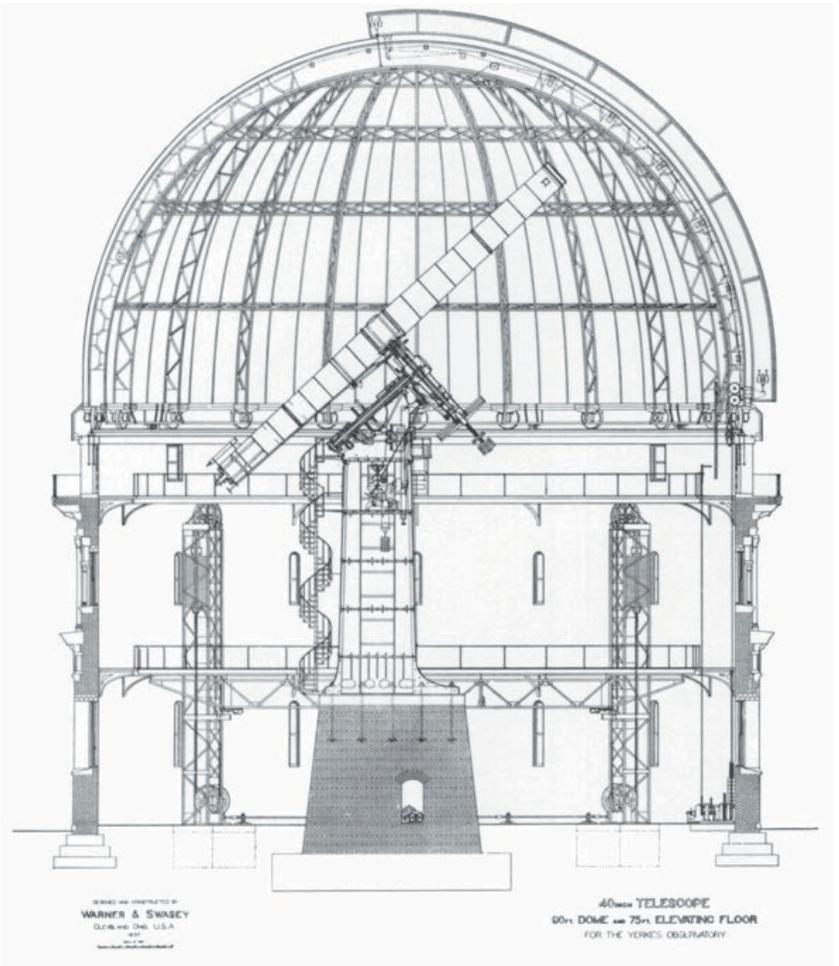
The observatory building and 30 acres surrounding it would be given to an independent foundation that would continue to operate the site as a center for teaching visitors and students about astronomy. The foundation would be funded by a \$400,000 annual tax on Mirbeau.

"This new plan meets all three of our goals for Yerkes," said University of Chicago President Don Randel. "It provides a secure funding stream to preserve it as an outreach facility, it provides resources for future research in astronomy, and it proposes high-quality and environmentally sensitive development."

The observatory was built by the University of Chicago in 1897 and became famous as the site of many profound astronomical discoveries in the 20th century.

Light pollution and new technologies have rendered Yerkes' telescopes scientifically irrelevant over the past several decades, so the university decided to sell the facility and its valuable grounds to raise funds for modern research elsewhere.

A University of Chicago spokesman said the school's astronomy faculty will continue to serve as advisers for Yerkes along with academic leaders from around the Midwest. AU would be welcome



to participate in that advisory board, the spokesman said.

AU offered no comment beyond a brief public statement.

"We are disappointed that our proposal was not selected," AU Vice President for Advancement Ted Parge said.

"We believe our proposal provided a viable option that was environmentally sensitive, preserved the historic observatory as a working science education center and offered a fair price."

Parge stressed that AU's commitment to the Lake Geneva area and to its William's Bay campus, a former YWCA camp that surrounds the Yerkes property, remains as strong as ever.

The University of Chicago said the sale to Mirbeau is not final until the preservation of the observatory is assured, a process that could take as long as a year.

06/08/06

Deadline for the
September 2006 Issue
of the *Sidereal Times*
August 25, 2006

Minutes of the
General Membership Meeting
Amateur Astronomers Association of Princeton
June 13th, 2006

The meeting started at 8 PM and was held at the New Jersey State Planetarium in Trenton, New Jersey.

Bill Murray presented the latest planetarium show "Hubble Vision" to those in attendance.

After the show, there were final discussions about StarQuest. Both speakers for the event were confirmed. Other raffle items had been received. All we need now is good weather.

On June 24th, The State Park Awards will be given. AAAP will receive one. A volunteer was asked to participate. Larry Kane may be able to do this.

The Stokes Star Party will be September 22nd-24th at Stokes State Forest in North Jersey. This is a no frills observing party. AAAP will participate by providing food and support. Contact Ron Mittlestaedt for more information.

The next general meeting will be September 12, 2006 at Peyton Hall, Princeton University.

Meeting adjourned at 9:45PM

Submitted by;
Ludovico D'Angelo, Secretary

Barlow Bob's Corner

THE THIRD STAR

By David Levy

It's dusk on a Saturday in ancient Jerusalem. A man stands outside the temple, anxiously looking upward. He sees a bright star rising in the east and a second one overhead. This man knows the sky well, and as he turns to the northwest, he sees Capella in the gathering darkness. "That's it!" he thinks. Three stars have appeared, signaling the end of a Sabbath more than two thousand years ago.

Although the Jewish tradition of sighting stars is no longer generally practiced, it dates back to the dawn of sky-watching. On cloudy nights, the observer would look at two strings, one blue and one white. He would judge the Sabbath over; when he could no longer tell their colors apart. This sense of space and time, deeply rooted to the observing of the sky, is one of the hallmarks of Judaism.

For many of us, the meaning of the night sky goes beyond mathematical equations. Our interest in the heavens has a strong spiritual component. I realized this many years ago during Kol Nidre, on the eve of Yom Kippur. While walking home as a youngster after one of these services, I noticed the bright 10-day-old gibbous Moon dominating the evening sky. I realized that the Moon displays the same phase every Kol Nidre night, as it is through the ages.

The first seder or ceremonial dinner of Passover always occurs, on the night of the Full Moon, since the Jewish and Muslim religious holidays are tied to the movements of the Moon.

Many years ago, I told David Levy's story to a Hassidic Jewish father and his son at a Cub Scout astronomy program. The father told me that Jewish men have a blue and white string sewn into their pants. In the morning, when they can tell their colors apart, they recite their prayers.

I attach a blue and white piece of yarn, to my step ladder for the vertically-challenged. At sunset, while amateur astronomers are eagerly awaiting the night sky, I tell children of all ages that half of them will look for the first three stars in the sky and the other half will look at the colors of the blue and white strings, to determine sunset. This has evolved into a challenge and emotional experience.

Barlow Bob

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**Click on NEAF and NEAF_SOLAR_STAR_PARTY
Barlow Bob**

**Criticism
is the
Lowest Form
of
Creativity**

Science Outreach and Exploration Update

“World Space Week” at The Franklin Institute Science Museum: Philadelphia, Pa, Sep 30, 2006, 10 AM to 3 PM. This annual UN sponsored event celebrates the achievements of astronomy and space exploration on behalf of all humankind. In connection with screenings of the new “*Roving Mars*” IMAX film, I will present “*Mars Rovers: Where are they Today*”.

Washington Crossing State Park, Nature Center: Titusville, NJ. A September weekend afternoon: Date TBD. All are welcome to attend my presentation on “*A Tour of Our New Solar System*” to experience the beautiful and amazing new discoveries in our Solar System. Solar viewing included. Website :

<http://www.state.nj.us/dep/parksandforests/parks/washcross.html>

Amateur Astronomers, Inc: Cranford, NJ. Fri, Oct 20 at 8 PM. AAI is one of the largest astronomy clubs in the US with over 300 members and has invited me to present a comprehensive Mars Exploration lecture, including a 3-D solar system tour. Open to the public and located on the campus of Union County College.

Website: <http://www.asterism.org/>

Orchard Hill Elementary School: Skillman, NJ. June 5, 6 and 12 at 6:15 PM to 9:30 PM. This 3 night extravaganza of “Family Astro Nights” with an array of 5 astronomy stations was organized by the 2nd grade teachers. Each evening, enthusiastic crowds of over 80 kids and family members enjoyed multiple presentations of my interactive talks on “*Twin Robots Exploring Mars*” and “*Mars, Saturn and Comets in 3-D*”. All were thrilled to witness the real images from the surface of the red planet and handle the full scale model of the RAT, the rock drill built by Honeybee Robotics (see photos below). Other astronomy stations included making and using a star finder and learning the constellations in a Digitarium. Brian van Liew and John Miller were also on hand with an indoor telescope display and AAAP booth adjacent to the astronomy stations.



Future Martian explorer plans a command sequence for the RAT Science Drill on Mars: 12 Jun 2006 at Orchard Hill Elementary

astronomy lectures. The search for and formation of Extrasolar Planets was presented by the 2 keynote speakers from Princeton University: Dr. Rus Belikov and Dr. Andrew Youdin. Rob Teeter discussed telescope construction, Rex Parker described CCD imaging and my talk reviewed the latest highlights on NASA’s Solar System Exploration and the recent AAAP field trip to Honeybee Robotics.

“*Spirit*” panoramic cover for Spaceflight magazine (British Interplanetary Society): April 2006 issue. The image was derived by an international team of Mars enthusiasts including AAAP Program Chair Ken Kremer (US), Marco Di Lorenzo (Italy), Doug Ellison (UK) and Bernhard Braun (Germany). An alternate version was published on the 14 November 2005 cover of Aviation Week and Space Technology magazine in collaboration with senior editor Craig Covault.

As this newsletter goes to press, *Spirit* has achieved another major milestone by exceeding 900 Sols of continuous science operations, over 10 times the expected lifetime. *Opportunity* is on a fast track to the giant, ½ mile Victoria Crater. The crater rim is now clearly visible and less than 0.4 miles distant. Arrival is expected sometime in August and will afford a spectacular view back into the ancient geologic mysteries of Mars.

Space Shuttle Return to Flight: The space shuttle *Discovery* (Outreach, continued on page 6)



Kids of all Ages enjoy the solar system in 3-D at “Family Astro Night”: Orchard Hill Elementary on 6 Jun 2006

Starquest: Hope Conference Center, NJ, June 23-25. Although observing was washed out by rain at the 17th annual AAAP star party, the attendees were treated to a feast of wide ranging

(Outreach, continued from page 5)



roared into space with 7 astronauts for a first of its kind July 4 liftoff. The STS-121 mission is scheduled to last 13 days, will include 3 spacewalks to upgrade the International Space Station

(ISS) capabilities and also carried German astronaut Thomas Reiter on board. Reiter will remain on the ISS to return the permanent crew complement to 3 persons.

For science outreach presentations please contact me at Email:

Ken Kremer
AAAP Program/Lecture Chairman

From the Program Chair:

2006-2007 AAAP Lecture Season

On tap so far for the new season are:

Nov 14: Al Nagler of TeleVue Optics will speak on Optics, Eyepieces and the Apollo Project in a talk titled "*Giant Eyepieces that Swallow Spacecraft*".

Dec 12: Prof. Jim Bell of Cornell University is the lead scientist for the panoramic cameras on the Mars Rovers. He will present "*Stargazing from Mars*" and will be autographing his new book "*Postcards from Mars*", scheduled to appear in mid-November.

Jim Bell is featured on the cover of the current issue of Sky and Telescope (August 2006). Please read his full length article on p. 40 titled "Backyard Astronomy from Mars" for insights prior to his upcoming AAAP lecture.

Jan 9: Prof. Jim Gunn from the Astrophysics Dept. of Princeton University will discuss the *Sloan Digital Sky Survey*.

March 13: Prof. Edger Choueiri from the Mechanical and Aerospace Engineering Dept. of Princeton University will discuss *Plasma Propulsion*.

Please send me your suggestions for speakers, with contact/topic information.

Email:

Ken Kremer
AAAP Program Chairman

See us on the Web: www.princetonastronomy.org

January 2006

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