

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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From the Director

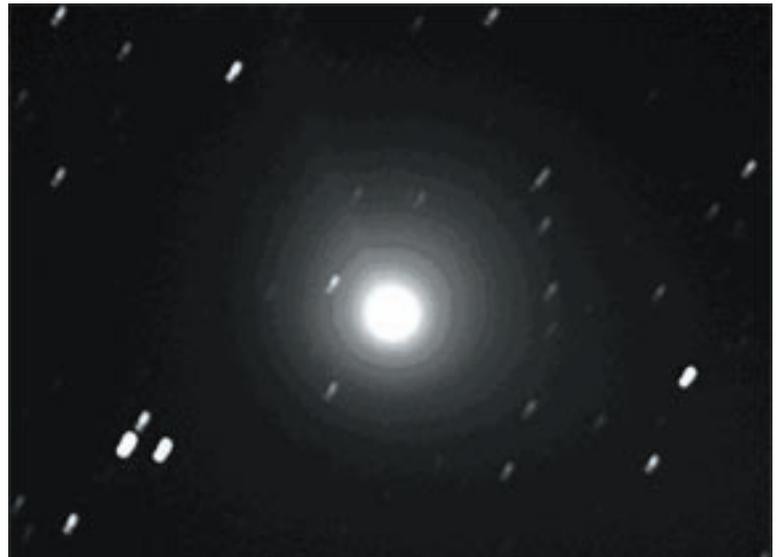
Jan 11, 2005 AAAP meeting Following last month's remarkable presentation on CCD imaging hardware design, we will turn our attention in January's AAAP meeting (8:00 PM at Peyton Hall) to a new and highly promising new approach to the use of CCDs and imaging technologies in the search for extrasolar planets. Program Chair Michele Novatsky has invited **Dr Robert Vanderbei** of Princeton University, who will discuss his innovative work in contrast pupil masks and related novel approaches to the **Search for Earth-Like Planets**. Bob is a faculty member in the Operations Research and Financial Engineering Dept at Princeton, with strong affiliations with the Mathematics and Computer Science Depts. He is an accomplished astrophotographer whose work with the Questar 3.5 inch telescope has provided some of the most inspiring small telescope imaging ever accomplished.

2004—A Year of Progress in AAAP The past year has witnessed further growth and development in the AAAP with significant contributions from many members, further solidifying our club. Among the year's accomplishments, the successful viewing of the Venus Transit in June, several improvements at the observatory, and multiple successes in public astronomy outreach stand out. Jane Lanahan stepped up to become membership chair and Larry Kane reorganized the Library/Archives, and both also joined the Observatory Keyholder ranks. Michele Novatsky rose to the challenge of Program Chair and Gene Ramsey and Brian Van Liew did a great job upgrading the observatory, with help from many others including John Church, Saul Moroz, and Ron Mittlestaedt. Jersey StarQuest was a strong success (with clear skies), and the Fall Picnic was a big hit. We successfully transitioned to a once-per-year dues structure. The Sidereal Times (thanks to Vic Belanger and Bryan Hubbard) and the AAAP website (John Miller's magic) continued to provide outstanding and timely communication to all members. Mark Jaworsky contributed wit and wisdom as secretary and astronomer extraordinaire, and Ron M. kept the bank account solvent. The astronomy lecture program at Peyton Hall maintained the highest level of excellence, continuing a long and storied tradition which

is a trademark of the AAAP. **THANKS to all** who have continued to make AAAP a viable and enjoyable path to astronomy, and one of the best amateur astronomy clubs not only in New Jersey but in the entire country.

AAAP Board of Trustees Meeting January 6, 2005 We will hold a quarterly Board Meeting at 7:00 on Jan 6 in Engineering Quad, E-415, located off Prospect St on the Princeton Campus. Board members and committee chairs are urged to attend, and all interested members are welcome to participate. A draft agenda will be circulated by e-mail before the meeting.

A Holiday Comet (Comet Machholz) Comet Machholz is a non-periodic comet discovered by a California amateur last summer, which is now making a grand appearance and quickly becoming a



must-show object for holiday get-togethers! I obtained this image (below) using my 3 inch Tak refractor and ST-10XME CCD camera on Dec 17, as the comet approached magnitude 5 and was located about 8 degrees west of Rigel. A very faint tail may be just barely visible in the image (at position angle 11:00); the tail is expected to intensify over the next month as the comet approaches the sun. The trailing of the stars in the image demonstrates the

Simpson Observatory (609) 737-2575

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rapid movement of the comet during the 5 minute total exposure tracking on the comet.

New Year's Resolutions and Goals for AAAP Reflecting on the past year brings a perspective for the New Year's promise. I challenge each member to again ask, and answer, these questions:

- What does the pursuit of astronomy mean to me personally?
- How can I inspire others to get involved in astronomy?
- How can I participate in AAAP to elevate my own interests and contribute in a way that helps advance the club and the future of amateur astronomy?

AAAP Goals for 2005: You may have additional goals that we would like to hear about. Here are a few goals from my list: (1) Further clarify key positions and roles and identify ways to improve the quality of AAAP; (2) Establish a viable succession plan for the Board of Trustees and other key positions in the club; (3) Further develop the Keyholder training program and graduate at least three new Keyholders in 2005; (4) Continue to provide excellence in lecture programs, observing activities, and public outreach efforts.

Happy New Year and Dark Skies! -- Rex

Minutes of the
General Membership Meeting
of the AAAP
December 14th, 2004

Director Rex Parker called the meeting to order at 8:05 PM. 50 club members, guests and general public were in attendance. Rex's club highlights were: 1) Rex mentioned that he just returned from a trip to northern New Mexico at an astronomy resort. If time permitted he would present a brief summary with photographs of the trip at the end of the meeting or at a future meeting; 2) Rex acknowledged that some of the core activities of the club are observing, hardware acquisitions and educational outreach. These activities require active member participation and that members should get involved as appropriate. Rex also acknowledged the presence of three visitors; 3) Rex also thanked members Ken Kremer and Manick Rajendran for organizing AAAP participation in recent public outreach opportunities. Ken at the Lawrence Library and Manick at the Plainsboro Preserve Winterfest; 4) Rex reminded the membership that dues are past due. All dues are payable now to Jane Lanahan. Measures to address members with dues in arrears may be taken and will be discussed at the upcoming Board meeting; 5) Rex announced that the next quarterly Board of Trustees meeting will take place at 7:00 PM on January 6th, 2005 on the 4th floor of the E building of the Engineering Quadrangle in Princeton University. All members are welcome to attend; 6) Rex then passed on a unique observing project from "Barlow" Bob Godfrey for members with narrow band nebula filters. Use them on your Christmas tree lights for an interesting effect; 7) Rex then mentioned that Comet C/2004 Q2 (Machholz) is making an appearance and should brighten to about magnitude 4 as it moves through Taurus in January.

Rex then introduced member Mark Jaworsky who gave a 10-minute talk on the comet making activity that he does frequently as part of his Project Astro Nova partnerships. Mark then proceeded

to make a sun-cleaved comet from water, dirt, ammonia, molasses and dry ice. The presentation was well received.

Rex then introduced the evening's keynote speaker, Michael Carr of Princeton University's Department of Astrophysics Technical Staff and CEO of Sci-in Tech. Mr. Carr presented a talk entitled "CCD Cameras and Hardware". Mr. Carr's talk included; a) a brief history of CCD development, including its genesis through the work of James Gunn and Jim Westphal, the first CCD image from 1976 severely limited by the rudimentary computing power of the day and its use on the 200" telescope at Mt Palomar; b) followed by in-depth discussion on the hardware and technical issues involved in state of the art CCD imagers; c) and finally some astronomical applications including the design of specialty pupil masks for the Terrestrial Planet Finder and building the Sloan Digital Sky Survey Camera. The talk was very well received.

Since the talk ran overtime Rex announced that the business portion will be covered at the quarterly board meeting and the meeting was adjourned at 10:05 PM.

After the meeting Mark Jaworsky led a binocular observing session for Comet Machholz. The comet was found using 10 X 50 binoculars in a line starting from Alnitak (ζ Orionis) through Rigel for two binocular field-of-views. The comet was just to the southwest of 53 Eridani.

Respectfully submitted,
Markian S. Jaworsky, Secretary

Science Night and Outreach

"Science and Discovery Night" at Lawrence Elementary School (LES) Scheduled for Friday, Jan 28, 2005, 6:30 PM to 9 PM. 40 Craven Lane, Lawrenceville, NJ. (609) 671-5570

Everyone is invited to attend this annual event which features about a dozen different presentations about nature and science by scientists and parents from the community. Over 200 kids and adults are expected at this very well attended local event. Last year, pictures were published in The Lawrence Ledger (smiling kids and telescope on Front Page).

My presentations will include "Mars in 3D" and "Titan Unveiled by the Huygens Probe". An added feature will be to have the kids make their own 3D glasses, in addition to lots of activity sheets. Telescope viewing courtesy AAAP members. For further details, please check either the school web site or email me at:

<http://www.ltps.org/PAGES/LES/LESHome.htm>

"Exploring Mars, Saturn and Beyond!" at the Plainsboro Preserve Winter Weekend Festival encore presentation by Ken Kremer of The Planetary Society and AAAP was held on Dec 3,4,5 2004. This beautiful 630 acre nature preserve is run by the NJ Audubon Society.

About 150 people of all ages attended my multiple presentations about the Martian Robots Spirit and Opportunity, Cassini at Saturn, the Sun, Hubble and more. There was lots of audience participation and interaction with the kids, families and adults who were eager to learn. 3D pictures of Mars were enjoyed by kids, charming ladies, couples, and even teenagers!!! Several parents

(Outreach, continued on page 3)

(Outreach, continued from page 2)

expressed their joyful wonderment at how much their kids knew and understood about astronomy and space exploration, as well as their desire to learn more. Day and Night time AAAP telescopes wowed the participants (courtesy John Miller, Brian Van Liew, Mark Jaworsky, Manick Rajendran) .

The Dec 2 issue of "The Lawrence Ledger" featured 3 large and beautiful photos (including one on the front page) from the original Lawrence Library Presentation of "Exploring Mars, Saturn and Beyond!" held on Nov 13, 2004. The photos were all of happy kids viewing 3D Mars, driving rovers on the Martian Rock Garden and looking at the sun with AAAP member telescopes.

Riverside Elementary School Star Party, Princeton Dec 17, 2004 Clear Skies finally prevailed after multiple weather delays. Over 75 3rd graders, siblings and adults were thrilled by a coordinated indoor/outdoor astronomy program organized by two wonderful 3rd grade teachers. It was standing room only at my rolling movie and slide presentations about Mars and viewing Mars in 3D. Awesome Telescope viewing of the Moon, Saturn, Orion and more was provided by AAAP members John Miller, Brian Van Liew, Larry Kane and Ludy D'Angelo. By the end of the night, my voice was giving out due to the non stop enthusiasm and questions from all who attended. An inspiring evening for all.

Robotic Mission Exploration Update As of this writing at Christmastime, Cassini is set to release Huygens for the first ever close look at Titan. The treasure trove of data from the Mars rovers continues to pile up. "Science" Magazine declared the rovers findings of water to be the "Scientific Breakthrough of the Year". Spirit continues to climb up the Columbia Hills while Opportunity treks to the etched plains of Meridiani. *Dates to watch and websites for daily updates/perspectives:*

Jan 3 1st Anniversary of Spirit Landing
Jan 12 Deep Impact Launch to Comet Temple 1
Jan 14 Huygens lands on Titan
Jan 25 1st Anniversary of Opportunity Landing

<http://marsrovers.jpl.nasa.gov/home/index.html>
<http://saturn.jpl.nasa.gov/home/index.cfm>
<http://www.planetary.org/>

Representing The Planetary Society and the AAAP

Ken Kremer

From the Treasurer

The treasury stands at \$9779.45. Our income is still below what is needed to run this organization. Less than half of the membership has paid their dues. Without these funds the AAAP will not be able to cover its expenses for the year. John Church is talking to State Farm Insurance about covering our club for liability and property loss. Our insurance from Travelers is running about \$1800 per year. It would be nice to lower the expense.

Ron

Happy New Year

2005 Events Calendar

- April 8 - 10** Delmarva Star Party
Tuckahoe State Park, Maryland
<http://www.delmarvastargazers.org>
- April 16 - 17** Neaf
Suffern, New York
<http://www.rocklandastronomy.com/neaf/>
- June 3 - 5** Jersey Starquest Star Party
Hope, New Jersey
<http://www.princetonastronomy.org>
- June 2 - 6** Cherry Springs Star Party
Cherry Springs Park, PA
http://www.astrohbg.org/public_observing.php
- June 11** Starconn
Wesleyan University, Middletown, CT
<http://www.asgh.org/>
- July 8 - 9** Rochester Fest
Rochester, NY
frankbov@rochester.rr.com
<http://www.rochesterastronomy.com>
- July 6 - 10** Mason Dixon Star Party
Shreveport Airport / Footlight Ranch
York County, PA
<http://www.masondixonstarparty.org/>
- July 29 - Aug 7** Rockland Summer Star Party
Savoy, Massachusetts
<http://www.rocklandastronomy.com/>
- August 5 - 6** Stellafane
Springfield, VT
<http://www.stellafane.com>
- August 26 - 28** The Conjunction
Northfield, MA
<http://www.philharrington.net/astroconjunction/>
- Sept 9 - 11** Black Forest Star Party
Cherry Springs State Park, Pennsylvania
<http://www.bfsp.org/starparty/index.cfm>
- Sept 9 - 11** Connecticut Star Party
Marlborough, Connecticut
<http://www.asnh.org/>
- Sept 30 - Oct 2** Delmarva Star Party
Tuckahoe State Park, Maryland
<http://www.delmarvastargazers.org>
- Sept 2 - 4** Arunah Hill Days
Cummington, MA
<http://www.arunah.org/calendar.htm>
- Oct 7 - 8** Astro Assembly
Skyscrapers, Inc
Amateur Astronomical Society
Of Rhode Island
<http://www.theskyscrapers.org/>

Barlow Bob

From the Editor

As I had mentioned in my column in the December issue, I would be on the road for the January newsletter and I am. The dress rehearsal was important as I was able to resolve some problems before they occurred where I could not do anything about them. I want to thank everyone for getting your inputs in to me on by the 27th. I was able to find a Kinkos where I could download my email in Chula Vista, CA where my son lives. I was not able to get into the same RV resort that I stayed in before Christmas and the one I am in now does not have a WIFI so it is not as convenient, however, Kinkos did have computers and scanners available that allowed me to get the letter from Wes Walton in electronic form.

The holiday season has been going well for me with family and extended family visits and it is also nice that we hear from some of our long time members that have moved away. You will find correspondence elsewhere in this issue from Jay Albert, who was Director in the late 80's and who's efforts at Super Science Weekend attracted me to the club. Also, you will find a greeting from Wes Walton whose tenure as Treasurer predated my joining the club but I know others will remember him and enjoy his letter. It is a blessing that past members have found our fellowship worth keeping active.

The RV resort where I stayed the week before Christmas was a beautiful park with a marina on the harbor in Chula Vista. I took the photo from the marina looking toward San Diego. The Coronado Bridge spans across a backdrop of the San Diego skyline and looks much better than the picture is able to capture.



I want to thank Barlow Bob Godfrey for his efforts to update us on astronomy events coming up in 2005 and I know many of you will be putting these on there own calendars

Those wishing to contribute to the February issue should have

their copy to me by Friday, January 28, 2005. I expect to be home by then but may not return in time to attend the January meeting. I hope everyone has had a pleasant holiday season and I wish you all a prosperous and healthy New Year.

Vic

Letter from Jay Albert

Well, I for one am glad to see the last of 2004. With the work, aggravation and frustration of selling our Boca house, building a new house in a senior community in nearby Lake Worth, moving our furniture and stuff into storage, moving it out of storage (with lots of damage) and enduring two major hurricanes with related power outages, this has been a year I'd rather forget than remember. We're still faced with a seemingly endless procession of workmen and contractors fixing things in the new house that should have been built right in the first place.

We are, however, beginning to enjoy our new community. Joan and I are playing lots of tennis. Joan is on one of the women's teams and I'm on one of the men's teams in the Palm Beach County senior league. Joan is also playing lots of bridge and I've joined the photography club and continue to be very active in astronomy. I've even had the surprise of seeing a drawing of Mars from one of my observing reports to the Association of Lunar and Planetary Observers included in a paper published in their journal. My telescope and I have also done some camping at a remote site used by our local astronomy club for dark sky observing. Once Joan and I are settled in and our house is closer to the way we want it, we plan to start traveling again.

Our kids continue to do well. Michael is a hydrology engineer in the San Fransisco Bay area and is working on some interesting projects. He's visiting us now with his girlfriend. Haylee is also

here with her husband and our granddaughter, Ashley. Watching Ashley grow through her first year has been one of the blessings of 2004.

I hope this finds you and your families all in good health and enjoying this holiday season. Best wishes for a better 2005.

Regards, Jay

[Jay Albert was Director in the late 80's and it was his efforts at Super Science Weekend that attracted me to the club. His employment moved him to Boca Raton, FL early in the 90's where he has resided ever since.-- ed]

**Deadline for the
February 2005 Issue
of Sidereal Times
January 28, 2005**



Greetings from the Waltons, Wesley Wills and Charlotte Mae as Christmas of 2004 Draws Near.

Right up front in the year of our Lord 2004 is the spectacular fact that Charlotte and Wes both are eighty-a-lot years of age. We are mightily impressed with both upsides and downsides wrapped up in that state of affairs. For example: We now have a daily ritual to check the eastern sky out of the morning-room window to catch the spectacular reds, pinks, oranges, and yellows just before the sun comes up. We would not like it if we happened to miss even one of those royal displays painting the early morning sky with glorious color; "Of the beauties of God's earth!"

Another on the plus side is learning of a magnificent restaurant on having taken a flyer on driving by an eatery we had not noticed before, or finding out how well they turn out lamb chops. We are happier naturally dwelling on the pluses but those downers have a way of getting our attention more often as time goes on Like, why does it get harder to make those legs do as they are supposed to, or to get something out from under the bed, and then standing up. Or why did that falling brick scrape the skin off my shin? Or why did that stone in the path jump over and trip me. Why have left hand turns become a challenge? Did finding the way to the table in a poorly lighted dining room used to be this hard? Well, I'm sure you get the idea!

And of course, the alternative is not attractive at all to ones who love life as much as we do. So we try to get old as gracefully as we can; but it is not easy. Charlotte is knitting beautiful shawls and mufflers that are pieces of art to behold, and prepares highly creative meals in a seemingly empty kitchen. And fully sets the table for four to match each season in the course of the year. Wes along with daughter Carolee Cameron are editing SPIRITUAL UNIVERSE, for publication, a coffee table book showing off how magnificent God's creation is as seen through the eyes of the Hubble Space Telescope.

Mega-pixel images returned by the Space Telescopes of NASA are MOVING SCIENCE FORWARD AT A SPECTACULARLY

RAPID CLIP, The astronomers are saying the way science is done even needs changing to keep pace with the advancements being made possible via the space telescopes. Creation. is much older and much more extensive than we ever thought. There even is some thought that both time and space are infinite. Mind boggling to say the least.

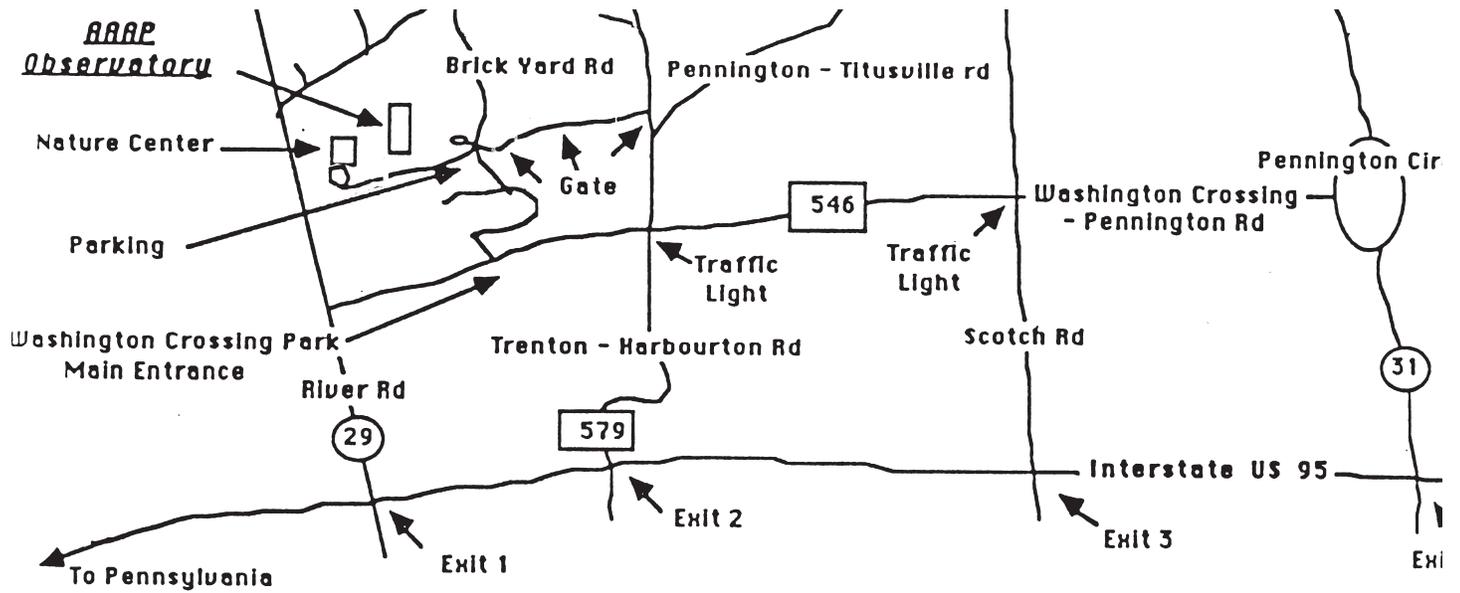
The three hurricanes that passed through just after we got down here were additive! The first did a little damage to The Blue Heron. The second did a little more. We were present and pretty shaken up what with torrential rains and 100 per hour winds blowing away shingles and siding, and sucking out soffits, etc. ., in the third that they claimed was not a hurricane Could have fooled me ! Get new roof and long list of internal redo's any day now from water damage inside. While at it we'll get some other stuff brought up to date.. Would you believe, we moved into this beautiful house which one neighbor called our ugly monstrosity in 1990. WOW!

The Eagle (M16) Foundation, Inc. received its Florida Charter on the first anniversary of 9/11, a real thrill for me to see come to fruition. Its first charitable effort is now in process. This is an educational program that puts on public view collections of pixel-rich, extra-large and magnificent images returned from space and taken via the Hubble Space Telescope, and more recently by the Spitzer Space Telescope. Thanks be to God for the beauties " beyond the Earth far-out, way back, and still mysterious. Several venues, mostly colleges and universities. Hope you find an opportunity to see these over the course of the next several years. What a blast! Merry Christmas to all and to all a good night.

Wes Walton

[Many club members will remember Wes as the club Treasurer for many years before he and his wife moved to Florida in the late eighties. He maintains his membership in the club and keeps in touch with us several times per year. -- ed]

A Happy, Healthy, Properous, New Year
To All



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.

See us on the Web: www.princetonastrometry.org

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 Association of Princeton
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