

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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Number 5

From the Directors

AAAP Meeting May 10 (8:00 Peyton Hall). May 10 is the Annual Meeting of the AAAP. This is when (according to our constitution) we hold the election of the Board of Trustees who will steer the club's future over the next year. As reported by the nominations committee, the Board candidate slate for the next season is a mix of incumbents and new leaders: Rex Parker, PhD, Director; John Miller, Asst. Director; Ludy D'Angelo, Secretary; Ken Kremer, PhD, Program Chair; and Ron Mittlestaedt, Treasurer. Other nominations will be accepted at the meeting. We will also be voting for important new **proposed changes to the club's By-Laws (described below) and we need your attendance and vote in order to make the necessary quorum.**

The program for May 10 will also be **Members' Night**. The club has a tradition of well-developed interests of members in both observational and theoretical astronomy and astrophysics. This meeting will be a venue for new and older members to get to know each other and discuss what's happening in the club. We'll take time for members to share experiences with astronomy, in the form of a **series of 10 minute talks. Please think about what you can contribute for the May 10 meeting**, and join in the discussion-- show or tell us your favorite new astronomy observing hardware, hot new book, event you attended (NEAF review; Star Parties visited?), latest astrophotos, your telescope.

REGISTER for JERSEY STARQUEST June 3-5. Our annual astro-convention and "star party" is the pinnacle of observing in the entire state, hosted by the AAAP. We are seeking strong club attendance at this signature event, not to be missed. And it's family friendly with excellent outdoors activities and clean comfortable quarters for overnight stay at a reasonable price. The details and registration form can be found in this issue or on the AAAP website (princetonastronomy.org).

Senator replies to AAAP petition for Hubble repair.

(Director, continued on page 2)

Simpson Observatory (609) 737-2575



AAAP Recognized

New Jersey Division of Parks and Forestry recognized the volunteer efforts of the AAAP and hundreds of other volunteers that work at state parks throughout the State. The festivities were held in a luncheon April 16, 2005 at the McGuire AFB Enlisted Club.

Washington Crossing State Park Superintendent David Donnelly presented a certificate recognizing outstanding volunteer efforts by the members of the Amateur Astronomers' Association of Princeton to Vic Belanger and Gene Ramsey representing the organization at the annual activity.

In his remarks, Jose L. Fernandez, Director of Parks and Forestry, talked about the 1,922,484 hours of efforts by 68,816 volunteers since the Division began keeping records in 1993. They value this effort at well over \$16 Million and that is at a modest hourly rate of \$8.54 per hour. Last year alone for Washington Crossing State Park, they recognize 9,908 hours by 685 volunteers, a very respectable effort.

I would like to point out that statistics are a very important

(Presentation, continued on page 2)

(Presentation, continued from page 1)

consideration to the bureaucracy in State government when it comes to divvying up the resources during the annual budget review process. It is very helpful to the paid park staff and in turn to us as users of the park for the numbers to be tallied and turned in on a regular basis. Keep this in mind when making your entries in our observatory log though we realize it can be a little burdensome to fill it out at the end of your observing sessions. Knowing the number of volunteers present and a count of the visitors served helps us all to get our fair share of the State budget.

Editor

(Director, continued from page 1)

I received a letter from US Senator Frank Lautenberg in reply to the petition circulated for signatures at the Feb meeting. We had requested that Congress take measures to provide funding and guidance to NASA to seek alternatives repair the Hubble Space Telescope. In his reply, Senator Lautenberg pointed out that he had co-sponsored the Natl. Space Commission Act in 2003 to study the future of US activities in space, which has unfortunately expired. He stated that a thorough examination of our space programs is critical to maintaining funding. While acknowledging the safety risks, the Senator recognized the scientific contributions from HST and promised to keep our views in mind as this issue is debated before the Senate.

Proposed amendments to the AAAP By-Laws.

Like the Hubble, the club's constitution and by-laws are also in need of repair. As discussed at the recent quarterly Board meeting, the by-laws were written in the early 70's when the club was founded. Changes since then in functions and finances lead us to propose a few amendments to strengthen the operation of the club. The revised language in the by-laws will facilitate keeping our astronomy speaker programs and observatory equipment and facility going strong. A motion was introduced at the April regular meeting to enable this amendment process. The revisions proposed in the bylaws are indicated in John Church's article elsewhere in this issue. Please take a moment to review them and come to the meeting May 10 to vote for the changes. Adoption requires a majority vote of the total membership (equal to 52 of the 102 members as of April). A cumulative vote tally will be conducted over the next few meetings.

Observatory Events.

Congratulations to Michael Mitrano and Ludy D'Angelo, our newest Keyholders who passed the test last month! If you would like to enter training for the observatory please contact co-chair Brian Van Liew. There will be a lot of action over the next 6 Friday nights at Washington Crossing as we go into full public season mode. Check out the website for duty roster listings. Also put on your calendar -- **Observatory Work Party May 14 at 10 AM.** Contact co-chair Gene Ramsey for more information.

Dark skies! -- Rex

Deadline for the
June 2005 Issue
May 27, 2005

Amateur Astronomers Association of Princeton, Incorporated Constitution & By-Laws

(Revisions as authorized at the monthly meeting of April 12, 2005. Obsolete material is in bold face with strike-throughs; new material is in bold face.)

Article I: Name

The name of this organization shall be Amateur Astronomers Association of Princeton, Incorporated (**hereinafter abbreviated as AAAP**).

Article II: Purpose

The purpose of ~~this organization~~ **the AAAP** shall be as follows:

1. To gather knowledge of the universe about us by observation and research.
2. To disseminate this knowledge to our associates.
3. To further an interest in astronomy in others.

Article III: Officers and Terms of Office

The officers of ~~this Association~~ **the AAAP** shall be as follows: Director, Assistant Director, Secretary, Treasurer, and Program **Chairman**. They shall collectively constitute the Board of Trustees. Their term of office shall be one year.

Article IV: Membership

General membership shall be open to any person paying dues ~~without age restriction~~, **with the proviso that any member under the age of 18 must be accompanied by a responsible adult while at any AAAP meeting, other function, or observatory.**

Article V: Amendments

Amendments to the Constitution and By-Laws of ~~this Association~~ **the AAAP** may be proposed by a majority vote of the general membership at any regular business meeting, together with a majority vote of the Board of Trustees, provided that a quorum is present as provided for in the By-Laws. Before any amendment shall be adopted, a written notice of the proposed amendment shall be distributed to all members, together with a ballot. No amendment shall take effect unless it receives a majority vote of the total membership. Voting by mail is permitted.

Article VI: Dissolution (Adopted November 21, 1975)

Upon dissolution of ~~this Association~~ **the AAAP**, the Board of Trustees shall, after paying all debts outstanding, dispose of all assets of ~~the Association~~ **the AAAP** to a non-profit organization qualifying as exempt under Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Revenue Law).

By-Laws

Section 1: Duties of the Officers

A. Director. The Director shall preside at all meetings of the Board of Trustees and at all general membership meetings. He shall appoint such committees as may be necessary to further the operations of the ~~Association~~ **AAAP**. He shall be

(By-Laws, continued on page 3)

eligible to vote on all items of business that may be transacted at any meeting.

B. Assistant Director. The Assistant Director shall assist the Director in his duties and shall act in his place in his absence.

C. Secretary. The Secretary shall maintain minutes of all meetings of the Board of Trustees and of the general membership, shall keep a record of the membership, and shall notify members of meeting dates. **The Secretary may delegate such of these duties as may be appropriate, in consultation with the Director.**

D. Treasurer. The Treasurer shall keep a record of all financial transactions of the ~~Association~~ AAAP. He shall be responsible for the handling, safekeeping, and disbursal of all funds. He shall notify members when their dues become payable. In case of absence of the Treasurer, the Director shall act in the foregoing capacities.

E. Program Chairman. The Program Chairman shall select a Program Committee, over which he shall preside. The Program Committee shall be responsible for arranging suitable astronomy-related programs at general meetings.

Section 2: Nominations and Elections

A. Nominating Committee. At the March general membership meeting, the Director shall appoint a Chairman of the Nominating Committee, who shall then select four other Committee members. No member of the Board of Trustees shall serve on the Nominating Committee. The Committee shall report its nominations for officers at the April general membership meeting.

B. Election of Officers. Officers shall be elected at the Annual Meeting of the ~~Association~~ AAAP in May. Subject to the quorum requirement of Section 5, Subsection C, a simple majority of votes cast shall be sufficient for election. Newly elected officers shall assume office at the end of the Annual Meeting.

C. Vacancies. If the office of Director shall become vacant, the Assistant Director shall become Director. If any other office shall become vacant, it shall be filled by a majority vote of the Board of Trustees.

Section 3: Removal from Office

Any officer may be removed from office for improper performance of duties by a two-thirds vote of the members present at a general meeting, **subject to the quorum requirement of Section 5, Subsection C**, provided that at least three weeks written notice of the proposed action has been given to all members. Any member may initiate such action.

Section 4: Expulsion of Members

For reasons of objectionable conduct, any member may be expelled from the ~~Association~~ AAAP by a two-thirds vote of the members present at a general meeting, provided that at least three weeks written notice of the proposed action has been given to all members. Any member may initiate such action.

Section 5: Meetings

A. Board of Trustees. The Board of Trustees shall meet at any

time so designated by the Director or a majority of the Board, upon seventy-two hours notice to the members of the Board. Three member of the Board shall constitute a quorum to transact the business of the Board.

B. Committees. Committees shall meet at any time so designated by the Chairman or a majority of the Committee, upon seventy-two hours notice to the members of the Committee.

C. General Membership. Meetings of the general membership shall be held monthly at a time and place designated by the Board of Trustees. There shall be an Annual Meeting in May at a time and place announced by the Board of Trustees at least two weeks prior thereto. Robert's Rules of Order shall govern all business proceedings. For quorum purposes, the total membership of the ~~Association~~ AAAP shall be the sum of all ~~regular, student, and family~~ members who are not in arrears for dues. ~~A maximum of two people are included in a family membership.~~ Fifteen percent of the membership being physically present shall constitute a quorum for conducting ~~Association~~ AAAP business at a regularly scheduled meeting, including authority to appropriate or expend up to ~~\$500.00~~ ~~\$250.00~~ of ~~Association~~ AAAP funds per meeting. For expenditures or appropriations between ~~\$500.00~~ ~~\$250.00~~ and ~~\$1,000.00~~ ~~\$500.00~~ per meeting, a quorum of 25% of the membership shall be required; up to 10% of the membership may be represented by written and signed absentee ballot on an expenditure question that has been previously published in the ~~Association's~~ AAAP's monthly newsletter. For expenditures or appropriations in excess of ~~\$1,000.00~~ ~~\$500.00~~ per meeting, a quorum of 40% of the membership shall be required; up to 25% of the membership may be represented by written and signed absentee ballot on an expenditure question that has been previously published in the ~~Association's~~ AAAP's monthly newsletter.

Section 6: Finance

A. Dues. Annual dues shall be decided by members voting upon a resolution proposed by the Board of Trustees. ~~Dues shall include a subscription to Sky & Telescope magazine, as well as any other publications or newsletters which the Association shall participate in or underwrite. If two or more members of the same family are members of the Association, they shall not be required to receive more than one subscription to Sky & Telescope, and an appropriate dues adjustment shall be made in such cases.~~

B. Bank Deposits. The Treasurer shall deposit all funds not required for operating expenses in interest-bearing ~~savings~~ accounts in the name of the ~~Association~~ AAAP. ~~Gifts designated by the giver for long-term capital use, as for the construction of an Association Observatory or other similar project, shall be kept in a separate account. At intervals, the Board of Trustees may direct that additional Association funds be placed in the latter account. No withdrawal may be made from this account except by approval of both the Board of Trustees and a majority of the members present at a general meeting.~~ If banks shall require that more than one person shall be listed as custodian of the various accounts, then the Director and other officers shall act in this capacity.

(By-Laws, continued from page 3)

C. Expenditure. No monies shall be expended for any purpose other than equipment, construction and maintenance of any Observatory, publications, stationery, and related supplies, books, expenses related to speakers, and legal fees. No monies shall be borrowed for any purpose, nor shall purchases be made on installment, credit or mortgage basis. The Board of Trustees shall have authority to authorize routine expenditures of up to ~~\$300.00~~ ~~\$100.00~~ without membership approval. Expenditures in excess of this amount shall require approval at a general meeting. ~~Expenses for Association publications and newsletters shall not exceed 50% of net Association dues income after deduction of subscription charges for Sky & Telescope.~~

D. Treasurer's Report. At each monthly meeting, the Treasurer shall summarize the financial status of the ~~Association~~ AAAP and shall be prepared to report all monetary receipts and expenditures if requested. An audit report of the Treasurer's books shall be presented at the Annual Meeting. The auditor shall be appointed by the Director.

Section 7: ~~Association~~ AAAP Property

~~Telescopes. Telescopes owned by the Association shall be placed in the custody of such member or members as the Board of Trustees may designate, until such time as an Observatory to house them may be constructed. They shall be kept in good condition and shall be made available for use by members and their guests.~~ Association AAAP books, publications, and other written materials not located at observatories shall be placed in the custody of a Librarian appointed by the Director, who may also assign other members to care for other miscellaneous property.

Section 8: ~~Observatory~~ Observatories

~~A. The observatory~~ Observatories owned and operated by the ~~Association~~ AAAP shall be available for the use of members and their guests. ~~This building is~~ Observatories are located in Washington Crossing State Park (New Jersey) near the ~~Nature Interpretive Center and in Jenny Jump State Park.~~

B. Keyholders. Any member who passes a test covering the operation of the telescopes and the safe use of the equipment in a particular observatory and the facility itself shall be given a key to that observatory. The test shall be administered to any member requesting it, by members appointed by the Director. Operation of the telescopes must be supervised by a keyholder at all times. Every keyholder agrees as a condition of receiving his key to provide a number of nights of duty at the observatory as designated by the Board. Any member may have his key taken away if he abuses the equipment, fails to follow the rules for use of the observatory, or fails to use good judgment to protect the equipment and the facility. This action may be taken by a majority vote of the Board members.

C. Other Members. Other members shall have access to ~~the~~ either observatory at any time a keyholder is available to operate that observatory, or at times designated by the Board.

D. Maintenance. The Board or their appointees shall have responsibilities for maintaining the ~~observatory~~ observatories and their related equipment.

2005 NEAF Solar Starparty

I took an odd road to the NEAF Solar Starparty as a Staff member this year via Rome, Italy. I had retired from my job as of 2/26/05 and started an Internet correspondence with various international amateur solar astronomers such as myself. There were Eric from Mexico City and a fellow from Norway and good old Marcello Lugi from Rome. Marcello has spent many years inventing and perfecting his own type of .5 Angstrom bandpass H-alpha filter called a CromixSun and I asked him to fly to New Jersey and show it off. Well he agreed and I picked him up on Thursday at Newark Airport and we went to NEAF on Friday to help set the place up. After breakfast on Saturday morning we went to the College at 6:30 am to set up my 152 mm f8 Astrophysics refractor with Marcello's CromixSun filter and his own homemade eyepiece.

This had to be the best Solar Star Party ever with a great selection of diverse equipment in attendance. First was our own AAAP club member Barlow Bob Godfrey with his dual Etalon .5 Angstrom custom Televue 102ti Binoscope with twin 16mm Type 5 Nagler eyepieces, surely the best H-alpha view that I have ever had in any telescope. Fellow club member Ron Mittlestaedt brought his famous \$120.00 Televue 102 refractor with a .45 Angstrom Daystar T-Scanner on a Vixen mount. Yet another stalwart AAAP member George Walker helped the cause with his Questar and white light Solar Filter.

There were two good friends of mine there. Paul Handyman with a 100 mm Astrophysics Traveler set up with dual stacked 90mm Coronado filters for .5 Angstrom bandpass and Greg Piepol showed up with his fine son Zack with two scopes a 155mm Astrophysics Starfire with a Solar Spectrum brand .2 Angstrom (yes .2A no mistake) and piggybacking his new custom dual Etalon .5 Angstrom Coronado SolarMax telescope. A nice touch was the custom gold anodized motofocuser to match the rest of the scope.

Bill Dean of Coronado brought many of his company's products for people to peek through including a 70mm dedicated Calcium K-line Telescope. I was very surprised to see a visual image in this scope as I always thought you needed a CCD or film image to see the "purple Sun" we set it up with an Astrovid camera and a laptop and then all the surface features were visible in all their purple glory. I looked thru both a PST and a double Stacked PST set up for .5 Angstrom viewing and I was so impressed with the small but very detailed image that I have decided to order one for myself before the sale runs out on April 30th, it does not seem like a bad deal at all for \$1,300.00 compared with the many thousands for a Daystar which is 40 year old technology at best.

I did not count the number of people that came through the group on Saturday or Sunday but it sure seemed like a lot. Everyone had a great time and we all went to a Solar Observers dinner arranged by Barlow Bob on Saturday night that lasted until 11 PM. Bill Dean of Coronado wants to extend the annual HOTS Solar Convention held in Arizona every October to Next Years NEAF Solar Starparty with lectures and talks - sounds good to me.

Ralph G. Marantino

**Don't Forget your StarQuest
Registration**

From the Treasurer

The treasury balance stands at \$XXXX. There is an additional amount of \$XXXX of prepaid Starquest attendees.

Ron

Science Outreach and Exploration Update

"NEAF: NorthEast Astronomy Forum: April 16/17, 2005, Suffern, NY. The organizers of NEAF very generously donated an exhibition table to *The Planetary Society*. This wonderful opportunity allowed me to display pictures and highlights from the Mars Rover and Cassini/Huygens missions on behalf of *The Planetary Society, AAAP and JPL*. The organizers also invited me to present a Sunday afternoon lecture titled *"Exploring Mars"* in the exhibit hall. They enjoyed it enough to request me to return next year !!

Super Science Weekend: NJ State Museum, Trenton, May 21/22, 2005. The premier science fair in New Jersey celebrates its 25th Anniversary with a weekend full of science fun and activities. All are welcome to visit my display on *"Mars, Saturn and Comets"* which will include 3D pictures, Deep Impact spacecraft model, activity sheets, handouts and more. On Sunday at 3 PM, I will be presenting *"Exploring Mars and the Search for Life"*, as part of the Science Forum lectures. Tickets are free and on a first come, first serve basis.

Volunteers are welcome and encouraged to please contact me at :

AAAP members will be on hand too with telescopes and astronomical expertise at the AAAP exhibit area.

Jersey Starquest: June 3-5, 2005. All are welcome to attend my daytime presentations on "Deep Impact at Comet Temple 1" and "Mars and Saturn in 3D"; AAAP will provide 3D glasses to attendees.

The Planetary Society: 50% off New Membership

Discount offer until 30 Sep 2005: includes free nebula poster. Email: .org

Please contact me for school or community groups interested in science outreach presentations.

Robotic Mission Exploration Update

Hubble Space Telescope: The new NASA Administrator, Mike Griffin, is reevaluating whether to send the Space Shuttle to rescue the venerable telescope, now celebrating its 15th anniversary. This previously cancelled servicing

Keyholder Duty Roster and Schedule (* Team Leader) 2005 season

Team 1	Team 2	Team 3
Gene Ramsey*	Victor Belanger*	Bill Murray*
		v
	n	
Larry Kane		

Team 4	Team 5	Team 6
Mark Jaworsky*	Ron Mittelstaedt*	Rex Parker*
		an
Don Monticello	o	Bill Fesio
		Mike Mitrano

TEAM	Spring	Summer	Fall	
1	4-1-05	6-3-05	9-2-05	10-28-05
2	4-29-05	6-24-05	9-30-05	.
3	5-6-05	7-1-05	10-7-05	.
4	5-13-05	7-29-05	10-7-05	.
5	5-20-05	8-5-05	10-14-05	.
6	5-27-05	8-26-05	10-21-05	.

Observatory phone: 609.737.2575

We welcome our new Keyholders, Mike Mitrano and Ludy D'Angelo, and are happy to see the return of Ralph Marantino. Ralph has been added to Team 5, Ludy to Team 2, and Mike to Team 6. New phone numbers will be posted as they become available. Everyone should be aware that our public season has started again with public welcome every Friday in May and the first and fourth Fridays in June, July, and August.

Though we've scheduled for only the first and fourth Friday in September, it should be noted that our Introduction to Amateur Astronomy course will be running on the Fridays in September at the Nature Center and we will be asking for coverage on clear Friday evenings for use by those attending the course. The Planetarium has asked for the Observatory to be available for their use on Fridays in October.

mission would extend the life of Hubble by replacing gyroscopes and batteries and installing 2 already built instruments to upgrade the science capabilities. Everything is dependent on a safe return to flight of the Space Shuttle, just delayed from May to July.

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Spirit and Opportunity on Mars: Mission Extended another 18 Months by NASA!!! The magnificent science output continues unabated. This extension is longer than the entire mission has lasted to date, now over 16 months!!!

Spirit may have discovered **bedrock** at a rock dubbed “Methuselah” at “Larry’s Lookout” ridge, which overlooks the plains of Gusev Crater. Detailed science has just started at this extensively layered rock outcrop. Luckily, the recent dust devil induced boost in power output on Spirit (>800 watt-hours/day) continues to permit much longer daily operations as it ascends the slopes of the Columbia Hills toward the Husband Hill summit. Due to the very rocky terrain and soil slippage, Spirit is climbing in a zigzag fashion instead of a direct ascent up the steep slope.

Spirit has also been specially programmed to spot the now frequent dust devils. JPL released a dramatic new dust devil movie; view it at the JPL website or my Super Science Weekend presentation on May 21/22.

Meanwhile, Opportunity finally entered the “etched terrain” and continued its trek across the Meridiani sand dunes and past several small craters. By late April, she was nearing Erebus crater when all 6 wheels sank into a dune ripple. The team is optimistic that the rover can egress safely and continue on to Victoria crater, having traveled 3.3 miles so far.

Cassini/Huygens: The Titan-5 flyby (at 638 mi) on April 16, photographed an entirely new hemisphere of the intriguing moon which included the so-called sideways H feature. In an exciting discovery, an array of complex nitrogen containing organic molecules with up to 7 carbons were detected in the upper atmosphere. These data are important for determining the origin

of organic material and the building blocks of life in our solar system. The next Titan flyby is August 22. Meanwhile, the overall orbital tour is being tweaked to get much closer observations of Eneceidus, Tethys and Hyperion in the months ahead.

Mars Express (ESA): The complex deployment of the 3 long MARSIS radar experiment booms is scheduled to start in May. These are the first antennae designed to examine the subsurface terrain of Mars, including the search for underground water.

Deep Impact: On April 25, the spacecraft successfully acquired the first image of its quarry, Comet Temple 1, at a distance of 39.7 million miles. This confirms that the trajectory is on target for the July 4 encounter to smash a projectile into the comet. *The Planetary Society* is sponsoring a contest to guess the size of the resulting impact crater:

http://www.planetary.org/deepimpact/contest_enter.html

Websites for daily updates/perspectives:

<http://marsrovers.jpl.nasa.gov/home/index.html>

http://www.esa.int/export/SPECIALS/Mars_Express/index.html

<http://saturn.jpl.nasa.gov/home/index.cfm>

<http://www.esa.int/SPECIALS/Cassini-Huygens/>

<http://deepimpact.jpl.nasa.gov/>

<http://www.planetary.org/>

Email:

Volunteer for The Planetary Society, AAAP and JPL

Ken Kremer

See us on the Web: www.princetonastrometry.org

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