

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

Director:
Rex Parker

Treasurer:
Ron Mittlestaedt

Program Chairman:
Mark Lopez

Assistant Director:
John Miller

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Mark Jaworsky

Editor:
Victor Belanger

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From the Director

Jan 13 AAAP meeting Members with interests in deep space and astrophysics shouldn't miss the next meeting in Peyton Hall (8:00 PM on Jan 13). Program Chair Mark Lopez has invited Dr Gillian Knapp from Princeton Astrophysics to be our guest speaker. Well known to AAAP from her significant role with the Sloan Digital Sky Survey in which Princeton is a key player, Dr. Knapp will speak to us about her research on Brown Dwarfs. These objects, too large to be planets but too small to be stars, were only theoretical until their discovery in 1995, yet are now thought to be as numerous as stars. For more information please see elsewhere in this issue, and visit the AAAP website (www.princetonastronomy.org) with links to Dr. Knapp's site.

2003 – A Year of Progress in AAAP Reflecting back over the past year, I am struck by the contributions of many members which continue to solidify our club. Among these, the acquisition (for a competitive price) and installation of the new Paramount ME mount (including the sale of the old Paramount) for the Celestron C14 at WC Observatory stands out. Significant improvements to the structure of the observatory were also made. Observatory keyholder training continued and the use of the telescopes and observatory facility reached new highs. Jersey Starquest was another success (including clear skies), and the Mars observing sessions and the picnic held by the club in late summer were big hits. We waved farewell to former Director Kirk Alexander who relocated to CA, even as several members stepped up to fill in his able footsteps in leading the club. The AAAP website was expanded in important ways, and Sidereal Times continued to provide outstanding and timely communication to all members. The astronomy lecture program at Peyton Hall maintained the very 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 in the country.

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 ask and answer these questions:

- What does astronomy really 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 2004: You may have additional goals that I and fellow Board members would like to hear about. Here are a few goals from my list: (1) Revise and clarify the responsibilities and committee structure of the club and establish a viable succession plan for the Board of Trustees; (2) Transition to a once-per-year dues/membership renewal system; (3) Further organize and establish the public outreach and observing programs; (4) Expand the Keyholder training program and graduate at least three new Keyholders; (5) Continue to provide excellence in lecture programs, observing activities, and public outreach efforts.

Light Pollution Update On Dec 4, the Hopewell Township Committee (Mercer Co.) unanimously approved and adopted a new Lighting Ordinance. This ordinance revised the previous code, putting more stringent specifications into place to reduce glare and skyglow which threaten our night environment. This includes a requirement for full-cutoff luminaires. The introduction to the ordinance reads: *Purpose. The governing body of Hopewell Township does herein find that regulation of site lighting is necessary to prevent negative impacts caused by misdirected or excessive illuminance, inappropriate or misaligned light fixtures, glare, light trespass, and skyglow. Such regulation is necessary to encourage conservation of energy and to prevent destructive light pollution.* This language proves that local officials can be educated and understand the value of dark skies. Through personal participation I have seen that we have the power to make a difference. You too can work with your township Environmental Commission, Planning Board, and other groups to initiate a lighting ordinance or a more stringent revision of existing ordinance in your area. Please feel free to contact me if you'd like to get involved.

Dark Skies, Rex

Simpson Observatory (609) 737-2575

From The Program Chairman

I can think of no better way to start off the 2004 season of business meetings than by having as our first guest speaker of the New Year Dr Gillian Knapp of Princeton University's Department of Astrophysical Sciences. Dr. Knapp will enlighten us all on Tuesday evening by sharing her knowledge of a topic that I find intriguing in both name and subject matter, that is, stars known as Brown Dwarfs. Below you will find an abstract of her talk. It was sent to me by Dr. Knapp in order to better explain her upcoming talk.

The last ten years have seen a breakthrough in a very old problem: The discovery and characterization of brown dwarfs. These objects, sometimes called "failed stars", were predicted a long time ago from the theory of how stars work. Very massive objects, like our Sun, exert such enormous gravitational pressure on their centers that nuclear fusion (of hydrogen to helium) takes place - this is how the Sun shines - but lower mass objects (like the planets in the Solar System) don't. Where's the dividing line, and what are the objects like that are too low mass to be stars, but too high mass to be planets?

These are the brown dwarfs, and they have only been discovered recently because they are so faint that searches of large regions of the sky to faint levels are needed. Thanks to the Two Micron All Sky Survey and The Sloan Digital Sky Survey, large numbers of brown dwarfs have been found. The talk will discuss how these objects are found and what are their physical properties.

If you seek more enlightenment about our guest speaker or the subject of Brown Dwarfs, just surf on over to the clubs website at www.princetonastronomy.org. Click on guest speakers and then click on Dr. Knapp's name or Brown Dwarfs and you will become enlightened.

Don't forget about the first pre-meeting dinner of the New Year either. It will be held at The Annex Restaurant, 128 1/2 Nassau St. at 6:00 PM on the night of the meeting, which is Tuesday, January 13. I will be contacting you all by email about one week before the meeting date about the dinner. Please be sure to let me know as soon as possible if you do not receive an email notice from me.

In February, we will have the pleasure of hosting Dr. Dale E. Gary, Professor of Physics, New Jersey Institute of Technology. He is the Director of the Owens Valley Solar Array Radio Telescope in Big Pines, California. The titles of his talk will be "Turning Into The Sun: New Developments In Solar Radio Science". Don't miss this one either.

Mark Lopez

**Deadline for the February Issue
of the Sidereal Times
January 30, 2004**

From the Treasurer

The treasury balance is \$XXXX after paying the club insurance of \$XXXX. There are 127 paid members.

Michele, our publisher, will continue putting the dues renewal date on the upper right corner of each Sidereal Times address label. This is the date that your renewal membership is due with the AAAP. Those with club magazine subscriptions to Astronomy or Sky and Telescope or both would want their subscriptions renewed about three months prior to the date of your club renewal. Please act accordingly, for if you wait until your club dues are due to pay for your magazine subscription you may miss one or two issues.

I am not going to send out renewal notices to members who receive magazines; they get enough notices from their respective publishers. If I don't receive you renewal on the date indicated on your address label you will be dropped from the roster. If you are a keyholder, the respective observatory chairman will be notified and you will be asked to return your key.

Note! The dues structure is as follows: \$30 basic membership.\$60 for membership and subscription to Astronomy magazine.*\$63 for membership and subscription to Sky and Telescope magazine.\$93 if both magazines are desired with membership.*Recent Increase of Sky and Telescope magazine.

If you have a Sky and Tel subscription please send the subscription notice and the postage paid envelope when renewing your membership.

Ron Mittelstaedt

Letters to the Editor

[I received this holiday letter from our Past Director, Jay Albert -- ed]

It's a trite observation, but each year really does seem to go faster than the last. This New Year's Eve, however, will be different for Joan and I because it is the last in our Boca Raton house. After 12 years, Joan has insisted that we move to a senior (over age 55) gated community. We'll be moving to Valencia Shores (they should call it Viagra Shores) in Lake Worth, about 20 minutes north of Boca. The house will be a bit smaller than our home now, but this community of 1,100 homes will have a social clubhouse, a large fitness center, heated swimming pools, tennis courts and all the social and other activities our current community lacks. This will also put us that much closer to my daughter in the Orlando area and brings me to the highlight of our 2003: the birth of our granddaughter Ashley Marie O'Dowd. She's now just over 2 months old and starting to smile, laugh and interact with people. She's a living doll!

Other highlights of 2003 included trips to Hilton Head, SC, New York City, Philadelphia and the Jersey Shore, San Francisco (to visit our son, Michael, who is now working a real job as a hydrology engineer designing and overseeing the construction of water collection, treatment and distribution facilities). Our biggest trip was a land and sea excursion to Alaska in July. We had a

(Letters, continued on page 4)

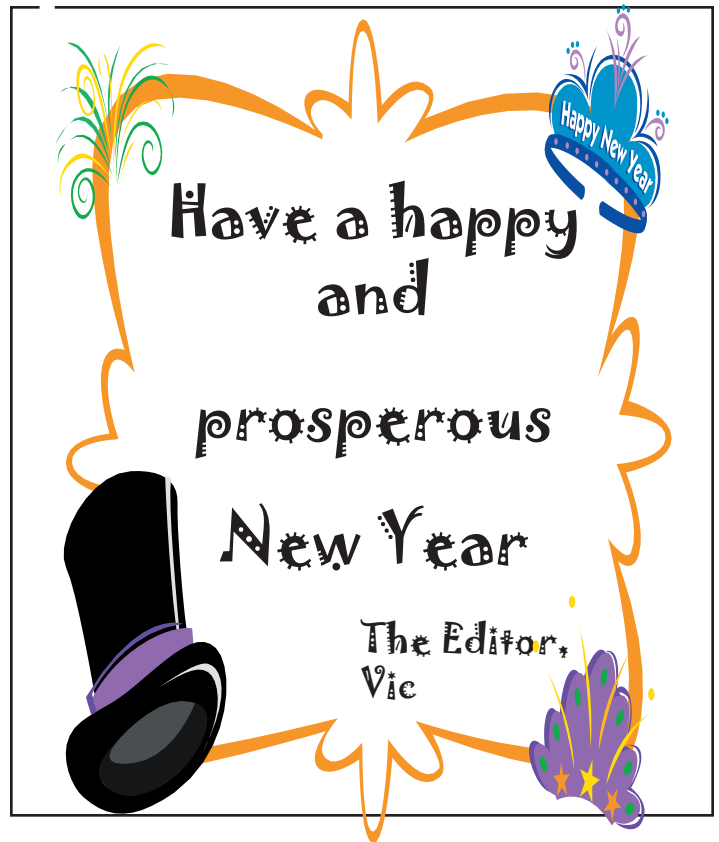
(Letters, continued from page 2)

sunny day in Anchorage but hit a snow storm in Denali National Park and rain almost everywhere else. The best parts of the trip were a helicopter ride to and hike on the top of a glacier and our extended visit to sunny, warm Vancouver, British Columbia.

For me, additional 2003 highlights included Joan's and my 35th anniversary, observing the closest apparition of Mars in 60,000 years through my new 11" (28cm) computer guided telescope, observing 2 lunar eclipses and some great deep sky observing at remote, dark sites, including one in the Big Cypress Swamp deep in the Everglades. This site is only practical in the coolest part of the winter. At other times, the mosquitoes would carry you away, if the alligators and panthers didn't eat you first! In sports, my tennis game has very slightly improved, the Florida Marlins beat the New York Yankees in baseball's World Series and my other home team, the Philadelphia Eagles, are a top seed in the football playoffs.

We hope 2004 brings you and your families health, happiness and prosperity.

Regards, Jay



January 2004

Amateur Astronomers'
Association of Princeton
PO Box 2017
Princeton, NJ 08543

Visit us online: www.princetonastronomy.org