

SIDEREAL TIMES

The Official Publication of the
Amateur Astronomers Association of Princeton

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From the Director

When the skies just won't clear... I was hoping this month to report that I had once again returned to extensive observing activities now that Spring has come and the skies have cleared. Hmm, well once again it has been necessary to be creative and to apply my astronomy interests in other directions. Let me then report on two books I have picked up in the past month in hopes of passing on some thoughts that can help you, too, keep up your astronomical inclinations.

The first book is *about observing* – really a great “how to” guide designed to make one aware of all that can be fine tuned with respect to observing skills. This is the book entitled Observing The Moon by Peter T. Wlasuk. It begins with an introduction to the moon, the different kinds of lunar formations and, as the author calls it, “A Crash Course in Lunar Geology.” This is followed by a quadrant by quadrant annotated listing of lunar features...but one that is written by an observer for an observer. Wlasuk describes each feature and talks about what he has seen himself and how to interpret it with respect to the geology. Then Wlasuk delves further into the art of observing. He teaches one how to really look...and if you are so inclined to get even further into your observing by learning to *draw* lunar features to help you understand them and remember them. Finally the book discusses lunar photography and even includes a CDROM with lunar observing forms, an Atlas of 102 images compiled by an amateur astronomer using a video camera.

This is indeed a book to help you plan what you can actually do yourself once the skies open up again!

The second book I want to mention is simply a delight to read. For any of you who attended Bill Murray's excellent talk at our March meeting this is a “must read.” The book is Parallax by Alan W. Hirshfeld (once at Princeton University.) It will take you back and re-introduce you to the various personalities that Bill mentioned (Aristarchus, Ptolemy, Copernicus...) and fill in a myriad more details about the history and the evolution of astronomical understanding. Best of all, however, is that it is presented as a captivating tale (much like Bill did) that will keep you reading on

and on even if you take it to bed with you at night (remember those cloudy nights?) It is a wonderful mix of real science and great reading that I can recommend highly.

So with that let's hope that there will be the opportunity to get back to our own hunts through the deep sky. Be sure to reserve the June 27 – 29 weekend for our Jersey StarQuest star party and I hope to see you at Washington Crossing or Jenny Jump in the near future.

Clear Skies (Again, Please!)
Kirk

From The Program Chairman

How old is the stardust that comprises all living beings on this earth? How old is the universe we, and most likely other sentient beings inhabit? If you have ever asked yourself these kinds of questions, then you must attend this month's meeting for the answers. We are truly fortunate to be able to mark the conclusion of the 2002 – 2003 series of meetings at Peyton Hall by having as a guest speaker, Dr David N. Spergel of Princeton University's Department of Astrophysical Sciences. Dr. Spergel, who was recently selected by CNN/TIME as being one of America's best scientists and received the prestigious MacArthur Fellowship in 2001, will be speaking to us about the data that has been collected so far by the Wilkinson Microwave Anisotropy Probe (Wilkinson-MAP). In addition to being a member of the Wilkinson Microwave Anisotropy Probe science team, Dr. Spergel is also a part of the Space Interferometry Mission galaxy key project, the National Optical Astronomy Observatory Deep Lensing Survey key project; and a member of the Terrestrial Planet Finder science-working group. (NASA JPL Website)

Dr. Spergel was born in Rochester, New York. He received his undergraduate degree from Princeton in 1982 and his Ph.D. from Harvard in 1985. After two years as a long-term member at the Institute for Advanced Study in Princeton, New Jersey, he joined the Princeton faculty in 1987. He has held visiting faculty positions at the University of Maryland and the IAS. (NASA JPL Biography)

Dr. Spergel is currently associate chair and director of graduate
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Simpson Observatory (609) 737-2575

(Program, continued from page 1)

studies in the Department of Astrophysical Sciences. He also holds an associate faculty appointment in the Department of Mechanical and Aerospace Engineering. Dr. Spergel is currently president of the International Astronomical Union Commission on the Galaxy. He has served as Chair of the Institute for Theoretical Physics board and on numerous NASA and National Academy of Sciences committees. (NASA JPL Biography)

Besides being awarded the coveted MacArthur Foundation Fellowship in 2001, Dr. Spergel has also the Helen P. Warner Prize and the Bart Bok Prize. He is also an Alfred P. Sloan Research Fellow, a National Science Foundation Presidential Young Investigator, and an American Astronomical Society Century Lecturer.

The following is a reprint from the CNN/TIME website that named Dr. Spergel as one of America's best scientists:

Mr. Universe

His restless intellect has taken David Spergel to the beginning of time and the edge of space — and back again

By Michael D. Lemonick

(TIME) -- David Spergel watched with particular interest one balmy afternoon this past June when a Delta rocket roared into space from Cape Canaveral, carrying an 1,800-pound satellite on a mission to probe the outer edges of the universe. Not only did the 40-year-old Princeton astrophysicist expect to spend the next few months deciphering the data that the Microwave Anisotropy Probe (MAP) beams back from space but he was also part of the team that dreamed up the mission and designed the satellite that would carry it out.

Theoretical astrophysicists don't usually get involved in the nitty-gritty of spacecraft design, but Spergel is not your typical theorist. Even in a field in which the most brilliant minds are inevitably compared with Albert Einstein, Spergel stands out. Beginning as an undergraduate at Princeton in the early 1980s, he has navigated from one knotty problem to another — not as a dilettante academic dabbling at the edges but as a key player making important contributions at every turn.

He started out studying the Milky Way and, along with Leo Blitz of the University of Maryland, discovered that our home galaxy is not just a simple spiral of stars and gas but rather a complex construction with warped edges and a bar of stars across the middle. Then he began thinking about dark matter, the invisible stuff that makes up most of the mass of the universe, and realized that Earth should feel a "wind" of particles as it orbits the galaxy — an idea that dark-matter hunters are now testing

He next took on the mystery of cosmic structure, why galaxies clump together in huge clusters rather than spread uniformly throughout space. He and a colleague suggested that the reason was knots of warped space-time called "topological defects." The idea was brilliant, but observations proved it quite wrong. Many scientists would have fought to save their pet theory. Spergel cheerfully declared it dead and moved on.

It was that display of intellectual honesty, Spergel suspects, that earned him an invitation to work on the microwave satellite. And once having tasted the pleasures of actual rocket science, he could hardly resist an invitation to help design a second spacecraft. The goal of this new mission is to find Earthlike planets orbiting other stars, and it requires solving optical problems that astronomers have never before confronted.

As usual, Spergel knew very little when he began. So, he says, "I got a book and taught myself optics." The result: a revolutionary idea for a telescope that could spot a dim planet in the glare of a bright star, potentially saving NASA billions of dollars and advancing the search for undiscovered planets as much as a decade. "I love exploring the frontiers of science," says Spergel. "I try to choose projects where the answers will be exciting not only for my colleagues but also for everybody else."

Another excellent article about our guest speaker and his work with the Wilkinson-MAP Project appears in the *Discover Dialogue*, on page 18 of the May 2003 edition of *Discover Magazine*. It is very informative and it will also give you more insight about the type of scientist Dr. Spergel is and why, I believe, he has become one of America's top astrophysicists. An extended version of the article is available at <http://www.discover.com>

As I am, sure you all know by now, this will be an excellent talk about a topic that is on the forefront of scientific research. The answers as to the beginnings of the universe we inhabit intrigues all who are sentient beings. Therefore, you should make very effort to make this meeting and it will surely be to your benefit to attend the pre-meeting dinner. So please attend. You can reach me by email at mal455@earthlink.net or you can telephone me at 609-393-2565 if you would like to meet Dr. Spergel one on one at the pre-meeting dinner. As you all know by now, the meeting is at 8:00 PM on Tuesday May 13 at Peyton Hall and the dinner is at 6:00 PM at The Annex Restaurant, 128 ½ Nassau St. on the corner of Nassau and South Tulane Streets. Please come. I guarantee you will not be disappointed. I look forward to seeing you there.

Mark Lopez

From the Treasurer

The treasury balance is \$XXXX.XX which includes \$XXX.00 from StarQuest patrons. There are 125 paid members.

Note: Michele, our publisher, will continue putting the dues renewal date on the upper right corner of each Sidereal Times address label. This 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 get 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 chairmen will be notified

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and you will be asked to return the key.

The dues structure is as follows:

- \$30 basic membership.
- \$60 for membership and subscription to Astronomy or Sky and Telescope magazine.
- \$90 if both magazines are desired with membership.

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

You may send the dues directly to me at: Ron Mittelstaedt-Treasurer, 149 Palmer Lane, Ewing, NJ 08618-3207

Ron Mittelstaedt

Minutes of the
Regular meeting of the AAAP
April 8, 2003

Director Kirk Alexander called the meeting to order at 8:00 PM.

The evening's speaker was Dr. Robert Gendler, who is a leading astro-imager and avid amateur astronomer. The title of his talk was "Advances in Aesthetic CCD Imaging". After describing the general technique of CCD imaging including many advances made in the last decade, he led us through a fantastic library of images that he has created of nebulas, supernova remnants, globular clusters, and galaxies.

Kirk led the club in nominations for officers. The slate nominated:

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|--------------------|------------------|
| Director | Kirk Alexander |
| Assistant Director | John Miller |
| Treasurer | Ron Mittelstaedt |
| Secretary | Mark Jaworsky |
| Program Chair | Mark Lopez |

Elections on this slate of officers will be held at the next meeting on May 13. Other club volunteers who agreed to continue in their positions were: Saul Moroz (Membership) and Vic Belanger (Editor of Sidereal Times).

Treasurer Ron Mittelstaedt reported that the club balance stands at \$XXXX.XX.

Saul Moroz reported that there is a buyer for the Paramount at Washington Crossing.

Sidereal Times Editor Vic Belanger said the deadline for the next issue is April 18 due to the Texas Star Party which he and Bill Murray will be attending.

Assistant Director and Webmaster John Miller mentioned that information on StarQuest is available from our Web site. Issues of Sidereal Times are also available by clicking on the Earth/Mars section. John reminded everyone that the Fitz Randolph observatory will be having an Open House on the Princeton Campus on Saturday, April 12 from 7:30pm onward. Rain date is Sunday, April 13.

Don Monticello said that the flyer with information about StarQuest was sent out to about 200 past attendees and 80 astronomy clubs in

the area. Ideas for door prizes were discussed.

The AAAP will hold a Board Meeting on Thursday, May 22 at 7:30pm in 228 Frist on campus.

Assistant Observatory Chair Gene Ramsey reported that the observatory roof is now open. However, a bracket that holds the crank is out of alignment so that sometimes the chain jumps the sprocket. If this should happen, there are tools in the restroom to realign the bracket. There was some discussion of a probable software glitch that prevents the user from parking the telescope on the first try. Work-arounds were discussed as was the possibility of reloading the Sky software.

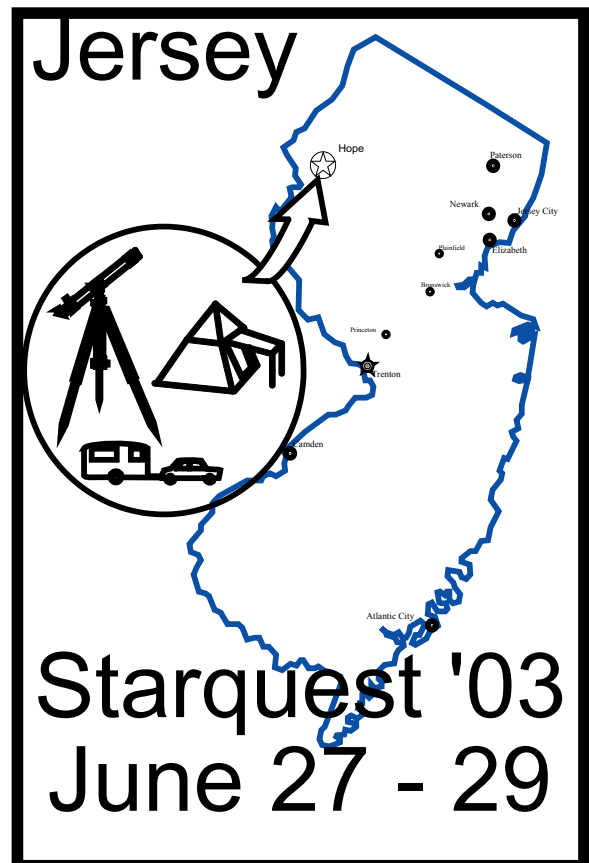
The last Keyholder training session was held on Friday, March 28 despite cloudy weather. Mechanics of opening the observatory were covered. It was requested that trainees keep a card with a record of training experiences.

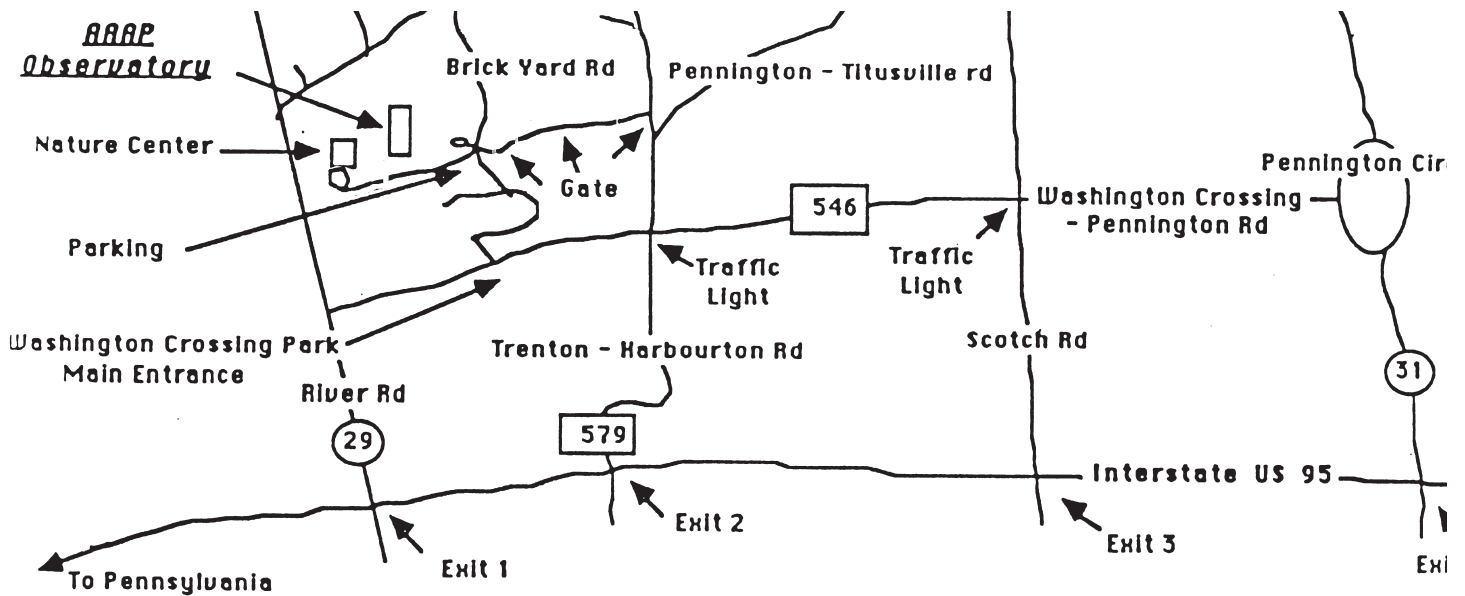
Gene also mentioned that on Friday, May 9, there was an opportunity to volunteer at a ceremony to dedicate a historic house and cemetery in Lawrenceville held by the Girl Scouts. There would be 150 scouts and parents as well as the Mayor of Lawrenceville in attendance. Gene was interested in volunteering but had a conflict as he was scheduled to have Keyholder duty that night. Kirk and other members of his observing team offered to cover for Gene to allow him to attend the dedication ceremony.

Two of our club members have volunteered as part of the Family Astronova. Brian Van Liew has volunteered to assist with the Montgomery Township schools and Mark Jaworsky has volunteered locally.

The meeting was adjourned at 10:10 PM.

Lisa I. Yeh, Secretary





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.

May 2003

Amateur Astronomers'
 Association of Princeton
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