

North Jersey Astronomical Group

The Dark Sky Observer

A Publication of the North Jersey Astronomical Group

April 1999

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Letter from the Editor

Dear NJAG Members:
Apologies for the delay in publishing a newsletter this year! Last year we did very well in getting the Dark Sky Observer out to the membership. This year I've been involved in starting an astronomy column for the Star-Ledger in Newark. I've been so busy I just haven't been able to sit down and get this stuff together! Anyway I hope to get the newsletter back on track . . . everyone can help by sending me book reviews, observing reports, photographs, and other items at the address below.

Thanks for your patience!

Regards,
Kevin Conod
Vice President

The Dark Sky Observer

is a publication of the North Jersey Astronomical Group (NJAG), whose purpose is to promote the study and knowledge of the science of astronomy. The Dark Sky Observer is produced monthly for NJAG members by NJAG members.

FROM THE EDITOR: Remember the Dark Sky Observer needs your input! Letters, comments, suggestions, and articles are welcomed and encouraged. Contact the editor at a meeting, at (201) 778 - 3038 or at this address:

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APRIL SKIES

April will be an excellent time for looking at Mars.

This little red planet is visible in the southeast all month

To find Mars, go outside at 10:00 p.m. and face southeast. Mars appears as a reddish or orange colored point of light. It will be brighter than any of the other stars in the southeast sky. It is near the bright star Spica and the little constellation Corvus which is shaped like a kite.

It reaches opposition on Saturday, April 24. At opposition, Mars is opposite the Sun. As such it rises as the Sun sets and stays in the sky all night. If the weather is clear and the air nice and steady, a small telescope may show you one of the ice caps. Not much else is usually visible in a small telescope because the planet is so tiny.

As you gaze at the planet with the naked eye, a spacecraft called Mars Global Surveyor is in orbit getting a close-up view. Two more spacecraft will be exploring Mars by the end of the year.

For more information about these spacecraft, visit JPL's Mars Missions page at:

<http://www.jpl.nasa.gov/marsnews/>

PLANETWATCH SUCCESS!

Our Planet Watch at Riker Hill on March 19 was a success. About 50 to 60 people braved the windy weather to look at the conjunction of Venus, Saturn, and the Moon. It was a clear night and we got a spectacular view of this celestial trio in the western sky! Mike also had a fantastic sight of the Orion nebula (M-42) in his 10-inch Meade, Kevin had a great view of the razor thin crescent Moon in his 4-inch refractor, while Joe picked off a couple of nice galaxies with his 10-inch Meade. Thanks to all our volunteers including John, Joe, Mike, Mary Lou, Jim, Juliann, and Ken!

NJAG ANNUAL DINNER

The NJAG's Annual Dinner will be held Friday, April 30, at 7:30 p.m. at the Russian Hall in Little Falls. It's always a good time,

with an excellent dinner, a first-rate speaker, and lots of great raffle prizes.

Directions are on the back cover of this newsletter. Don't miss it!

“And he that strives to touche a starre
Oft stumbles at a strawe.”

--Edmund Spenser • The Shepheardes Calendar

Northeast Astronomy Forum & Telescope Show

Sunday, May 16, 1999
9:00AM to 6:00PM
Holiday Inn Conference Center
Suffern, NY
Exit 14B on the NY Thruway (I-87)

Program Schedule includes:

- Joe Rao -
"Leonid Meteor Storm Prospects
for 1999"
- Dr. Douglas Duncan, President, AAS -
"Cosmic Origins - From the Big
Bang to Us"
- Richard Berry, former editor of
Astronomy Magazine
- Todd Gross -
"Planning an observing session
based on weather, light pollution
and the Moon"
- Leif Robinson, Sky & Telescope -
"Frontiers of Amateur Astronomy"
- Carolyn Shoemaker -
"Comets and Craters -
the Beginning and the End"

For more information see:

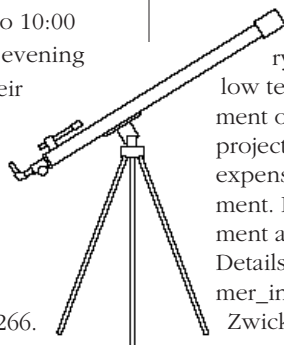
[http://www.erols.com/njastro/orgs/
neaf99.htm](http://www.erols.com/njastro/orgs/neaf99.htm)

or contact:

DON URBAN
73 HARING STREET
CLOSTER, NJ 07624-1709
DonaldUrban@Juno.com
201-768-6575 (after 6:00PM)

Open House at Columbia High School

There will be an Open House at
Columbia High School's observato-
ry on April 28 from 6:30 to 10:00
p.m. The highlight of the evening
will be observing with their
antique 5" Brashea
r refractor (!).
Columbia High School
is on 17 Parker Avenue
in Maplewood.
Call for more information
and directions: 973-378-5266.



NASA PLANS AN EARLY SERVICING MISSION TO HUBBLE SPACE TELESCOPE

Don Savage, Jennifer McCarter & Nancy Neal

NASA will launch a Space Shuttle mission to the Hubble Space Telescope in October 1999 so astronauts can replace portions of the spacecraft's pointing system, which has begun to fail.

Hubble is operating normally and continuing to conduct its scientific observations, but only 3 of its six gyroscopes—which allow the telescope to point at stars, planets and other targets—are working properly. Two have failed and another is acting abnormally. If fewer than three gyroscopes are operating, Hubble cannot continue its science mission and automatically places itself in a protective "safe mode."

"The Hubble Space Telescope is the crown jewel of NASA's space observatories, and we need to do everything within reason to maintain the scientific output of this national treasure," said Dr. Edward Weiler, Associate Administrator for the Office of Space Science, NASA Headquarters, Washington, DC.

A team of veteran astronauts had already begun training to install the new instruments and upgrade the telescope's systems. In addition to replacing all six gyroscopes on the October flight, the crew will replace a guidance sensor and the spacecraft's computer. The new computer will reduce the burden of flight software maintenance and significantly lower costs. A voltage/temperature kit will be installed to protect spacecraft batteries from overcharging and overheating when the spacecraft goes into safe mode. A new transmitter will replace a failed spare currently aboard the spacecraft, and a spare solid state recorder will be installed to allow efficient handling of high-volume data. Both missions will replace telescope insulation that has degraded. The insulation is necessary to control the internal temperature on the Hubble.



HELPING PARENTS GROW THEIR LITTLE SCIENTISTS

National Science Teachers Association (NSTA) offers a new brochure entitled, "Help Your Child Explore Science." The brochure provides guidance for parents on how to foster scientific thinking among young learners and how families can incorporate the skills of science into everyday life. The brochure also offers guidelines on how to become more aware and supportive of children's science education at school. This valuable resource is built on the philosophy that parents can promote a scientific approach and encourage curiosity and investigation even if they themselves do not have much experience in science or have no scientific resources at home. For a free copy of this brochure, write to Parent Information, NSTA, 1840 Wilson Blvd., Arlington, VA 22201 or go to <http://www.nsta.org/parents/>.

CREATING EVEN MORE STARS IN THE CLASSROOM

Princeton University's Plasma Physics Laboratory announces the 1999 Plasma Physics and Fusion Energy Institute for High School Physics Teachers, July 19-30. Participants in this intensive, residential workshop spend the majority of their time in the laboratory, studying the basic properties of plasmas, and collaborating with scientists and fellow teachers from the 1998 Institute. This experience is used as the focus for the development of new plasma-based investigations, classroom demonstrations, and advanced student projects. Selection is limited and highly competitive. Participants receive a stipend of \$600, expenses for travel, housing, a partial meal plan and some laboratory/classroom equipment. Further, post-Institute awards of up to \$3,000 are available for continued development and dissemination of the new curricula. The application deadline is April 30, 1999. Details and application forms are available on-line at http://ippex.pppl.gov/ippex/summer_institute/. Questions and requests for applications should be directed to Andrew Post-Zwicker at 609-243-2150 or azwicker@pppl.gov.

April Meeting

The April business meeting will feature Vic Palm of the Brookdale School in Verona. He will speak about his involvement in Project Astro. The meeting will take place at 8:00 p.m. on Wednesday, April 14 in Richardson Hall, room 226 on the campus of Montclair State University.

Schedule of Speakers

May 12: Dennis Barlow
Chemistry in the Cosmos

June 9: Christine Burgess
Space Law

July 14: Kevin Conod
Cartoon Astronomy
(postponed from March)

An Announcement from the Dreyfuss Planetarium and the Star-Ledger

The Newark Museum's Dreyfuss Planetarium is proud to announce that The Star-Ledger has begun a column about astronomy. Written by Kevin Conod, astronomer for the Dreyfuss Planetarium and Vice President of NJAG, the column will feature star maps and basic astronomy information. Look for it every week on the Nature page in the Accent section of the Sunday Star-Ledger.

NAME THE MARS PROBES!

Miniature probes will soon streak through the sky of planet Mars. The mission is called Deep Space 2. The probes have taken almost a year to travel this far, hitching a ride on another spacecraft that will also land on Mars. However, the two probes won't land gently using retro-rockets or parachutes to slow them down. They will crash ... hard!

The "aeroshell" that protects the probes during their fall through the Martian atmosphere will shatter and part of each probe will plunge into the ground. The part that gets buried--called the "forebody"--will send out a tiny drill to collect a sample of the soil of Mars. Inside the forebody an instrument will test the soil sample to see if it contains any frozen water. A transmitter and antenna in the part of the probe that stays on the surface--called the "aftbody"--will send the information back to Earth by way of another spacecraft already orbiting around Mars.

The National Aeronautics and Space Administration (NASA) invites YOU to enter a contest to pick the best names for the two miniature probes!

When you have picked two good names, write an essay of about 100 words (no more, please) explaining why they are good names. Here are some questions to ask yourself when you are thinking about what to write:

If they are names of people, how did they help the cause of space science, astronomy, or exploration?

How to Enter the Contest

First, read about the contest rules: http://spaceplace.jpl.nasa.gov/ds2_cnst_rules.htm

Then, you may send your entry using the electronic form at: http://spaceplace.jpl.nasa.gov/ds2_contest_form.htm or you may write out your entry and send it by regular mail to:

Deep Space 2 Naming Contest
Jet Propulsion Laboratory
4800 Oak Grove Drive
Mail Stop 301-235
Pasadena, CA 91109-8099

How do the names stand for the exploration of the universe?

What do these names have to do with the mission of the Mars miniature probes?

You may print the electronic form to fill out and mail. Or, on a plain piece of paper include your name, telephone number, address, the name of your school (if you are a student), age (if under 18) and the name of your local newspaper with your entry.

AWARDS: Through the generosity of Lockheed Martin, Boeing, and CompUSA, the grand-prize winner of the contest will receive a \$4,000 gift certificate for computer equipment and/or supplies redeemable at any CompUSA store or through any CompUSA catalog. Please note that employees of NASA, JPL, ITEA, Lockheed Martin, Boeing, and CompUSA are eligible to enter the contest, but they will not be eligible to collect this grand prize.

Twenty-five finalists will receive a beautiful Deep Space 2 poster signed by the project team.

Picking A Pair of Names

Here are some things to think about in picking a pair of names:

If you name the probes after people, the people must be no longer living. They can be people from history, mythology, or fiction (stories).

Or, you can name the probes after places or things that are related to each other.

Or, you can name the probes for a combination of these, such as a person and an associated place.

The names should make you think of the spirit of exploration . . . of going where no one has gone before, or doing something very dangerous in order to discover new things.

NASA is not interested in names of super heroes, like Batman and Robin, or in names with abbreviations (like "NASA").

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P.O. Box 1472
Clifton, NJ 07015-1472

ANNUAL DINNER

Where:

Russian Hall
4-6 Woodhull Ave.
Little Falls, NJ 07424

When:

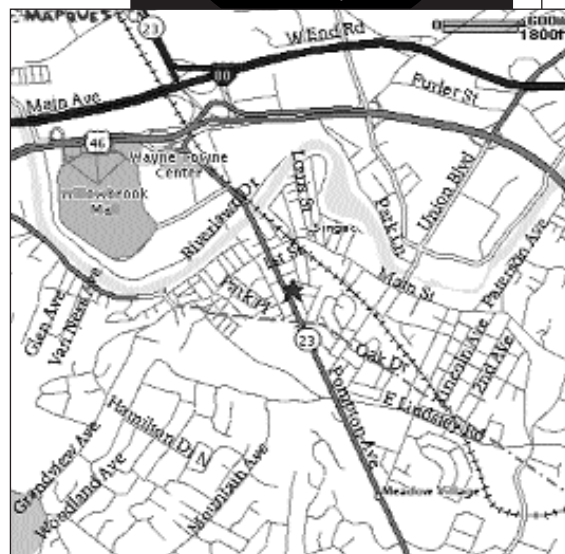
Friday, April 30
7:30 - 10:00 p.m.

I hope you all have your calendars marked for our annual dinner at the Russian Hall in Little Falls. The date is Friday April 30 and the cost is \$25.00 per person.

For those of you who are new, we have a buffet dinner, a speaker and the astrophotography contest, door prizes and just a night of fun. Our guest speaker will be Dr. Fred Hess. For those of you who have never heard of Dr. Fred Hess, he was the voice of the Hayden Planetarium when they did live shows.

For more information, come to the next meeting, or send me email (dkoenig@advanix.net), or phone at 973-340-4640.

Ruth Koenig



Directions:

Take Rt. 46 West. Keep to the left at the fork and take the first right.

Take Rt 23 South into Little Falls.

Several blocks past the Willowbrook Mall you'll see a 7-11 store on the left.

Make a left at the 7-11 onto Woodhull Avenue The Russian Hall is at 4-6 Woodhull Ave.