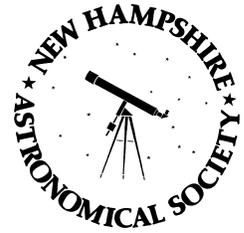


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Ting, Larry Lopez, Jim
Warena

THE NHAS OBSERVER



Newsletter of the New Hampshire Astronomical Society

Volume 2002 No. 7

"All the news that fits in print"

July 2002

SKY & TELESCOPE Guest Speaker



President's Message

The summer solstice occurred on the morning of June 21st. From here on out, the days get shorter and that means more time for observing – if it is clear. Astronomy, however, is more than just observing these days, it includes computer programming, advanced photography, machining, networking, and other fields. How do we keep up with it all?



Photo courtesy Sky & Telescope

Well, we have a special guest for our July meeting who will explain one way that we can stay current with

the changes in Amateur and Professional Astronomy – by reading *Sky & Telescope* magazine. **Rick Fienberg**, Editor-In-Chief of *Sky & Telescope* magazine, will be our guest at the July 19th NHAS business meeting. Mr. Fienberg will talk about S&T and the changes he has seen in Astronomy. Please join us!

Here is some background from the *Sky & Telescope* web site. Note that he has to go to New Hampshire to do real observing.

"He has an astronomer's "three-degree background," having earned his B.A. in Physics from Rice University in 1978 and his M.A. and Ph.D. in Astronomy

from Harvard in 1980 and 1985, respectively. His thesis research took him to Arizona and Hawaii to capture infrared images of planetary nebulae, active galaxies, and the center of the Milky Way.

"Rick joined *Sky & Telescope's* editorial staff in 1986. He coordinated the magazine's coverage of astrophysics and space-science news for several years, and in 1990 his reporting on the Hubble Space Telescope's star-crossed science mission won a citation from the National Space Club. In 1991 he was named President/Publisher and "kicked upstairs" into management. In October 2000 he returned to the editorial staff to assume his new role.

"Although trained as a professional astronomer, Rick remains an amateur at heart. From his home just outside Boston he uses a Tele Vue 85 refractor to observe the Sun, Moon, planets, and star clusters. On weekends he drives 100 miles north to the dark skies of southern New Hampshire, where he observes galaxies and nebulae using a Meade 12-inch LX200 Schmidt-Cassegrain telescope mounted permanently in a roll-off-roof observatory that he built himself."

Astronomy Quote:

*Many a night I saw the Pleiades, rising thro' the mellow shade,
Glitter like a swarm of fire-flies tangled in a silver braid.*

– Locksley Hall, Alfred Lord Tennyson, English Poet

★ Barbara O'Connell
NHAS President 2002

Public Observing Highlights

On May 31st, NHAS visited the Wilkens School in Amherst, NH.

Electric power was restored just as they were getting ready to turn people away. This was the annual 4th grade sleepover night, and the kids were all ready to sit down at 7 p.m. and learn about astronomy for one hour (yeah, right!). Actually, everyone was great. We had lots of questions, and they appreciated the scopes brought by **Joe Derek**, **Chase McNiss**, and **Mike Townsend**. Afterwards, I received this kind letter of appreciation:

"Thank you!! Michelle and I send our deepest appreciation to your and your fellow members of the NHAS for showing up for our sleepover event last Friday. Despite the storm and the power outage, you came through and rallied with us!

"Unfortunately, you and your friends are never within earshot to hear the rave reviews from parents and kids. Isn't it great that you can give them such valuable information about the heavens and they just think they're at a party?"

"Awed and thrilled are apt descriptors of the kids' reaction to the telescopes and their experiences with you. Everyone in your group had a wonderful manner with these children, especially since their level of excitement was at a peak. That you all volunteer your time to broaden and enrich the learning experiences of the children certainly awes me.

"Michelle and I are so very grateful for your contribution to our sleep over event and for the opportunities you have given our students. When we

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Feature Story
Stellafane.....Page 2

Public Observing (from p. 1)

count the stars in the sky, you and your group are among the brightest. Thanks so much,
Jan Scagnelli and Michelle Emmond"

On June 7th, I gave a talk at CMP on buying your first telescope. This coincided nicely with our monthly CMP skywatch, which turned out to be one of the darkest, clearest nights I've seen so far this year. Even under CMP's bright sodium streetlights, I could make out most of the members of the Virgo Cluster with 6-inch and 8-inch Dobs.

★ Ed Ting

Web Uploads

In June, we had some difficulty with the event listings on the NHAS home page. We believe that problem is resolved. You will now see more event listings in addition to Coffee House, Skywatch, and NHAS Meeting.

Sometimes the same event will be listed multiple times, but at least the event information will be there. Please report any future problems to webmaster@nhastro.com.

★ Barbara O'Connell

Stellafane Convention

Every year NHAS members go to Stellafane to get parts like tripods, mirrors, and eyepieces, to meet old friends, to observe at a somewhat dark site, to hear

lectures in astronomy, to win eyepieces at raffles, to have their homemade telescopes judged, to examine new and old telescope innovations, to examine other people's telescopes, and to camp.

If you need your astronomy enthusiasm recharged once a year, this might do it.

I go up Thursday night, stay at a hotel, and camp Friday and Saturday night. If you want to go to the swap table, it is probably a good idea to camp out Friday night.

It is primitive camping, although food is sold there. No commercial exhibitors are permitted, but rain often is.

It usually takes people a few years of hearing about it before they decide to go to Stellafane and often they are then hooked on it.

Stellafane this year is Friday evening, August 9 to Sunday morning, August 11. See the following web site and click on the CONVENTION INFO link in the lower frame:

<http://www.stellafane.com>

★ Larry Lopez

ATM True Grit

ATMers met at **Don Ware's** site in Hollis, NH on June 19. **Don, Ed Dougherty, Larry Lopez** and **Barbara O'Connell** attended.

Don's automated Foucault tester was wonderful. It used stepper motors to move an XY stage, used a frame capture card to pull in images, and incorporated some features from Ed's work such as motor-driven mirror positioners.

Barbara's mirror was not testable because the outer zone wasn't sufficiently polished. Ronchi tests, however, showed straight lines on the polished part.

ATMs will have an information meeting after the Photo Committee meetings. We will have meetings for grinding, polishing, and testing as needed.

★ Larry Lopez

Welcome New Members

NHAS welcomes the following people into our ranks. We look forward to seeing you at one of the next club events.

Liz Ahl, Plymouth

Alfred Godbout, Manchester

Patrik Henriksson, Merrimack

Randy Hill, Nashua

Rob Shelsky, Nashua

Jessica Shelsky, Nashua

Allen Simoneaux, Seabrook

Roger Tessier, Concord

YFOS Update

The grass/hay/whatever had been mowed as of the end of June. Frequent mowing will be needed until the summer heat slows the grass down. One mower needs repairs. The porta-

potty has finally been emptied. Weather has been lousy but will hopefully improve by the time of the July 12th Coffee House.

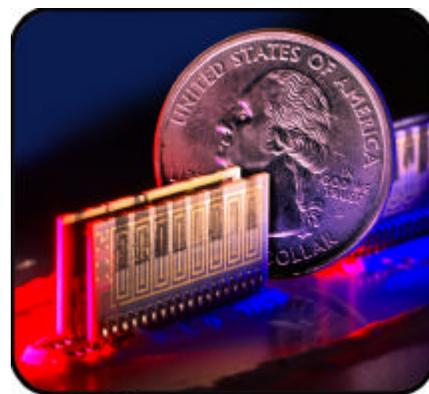
AstroPhotons

No news at press time.

E-Nose is E-Nose is E-Nose

It is very important to keep a "nose" on the air during space missions. Odors from dangerous chemicals in the air must be detected early and fast. One possible danger is hydrazine, the rocket fuel carried on board spaceships. If it leaked into the cabin area, it could do a lot of damage before anyone knew it was there. The job calls for a "super nose" that can detect faint smells far beyond the ability of human beings.

Scientists at Caltech studied the way human and animal noses worked. They thought it might be possible to make a super-nose. NASA thought this was a good idea, so scientists and engineers at the Jet Propulsion Laboratory in Pasadena developed an electronic nose, or "E-Nose." This nose can sniff using a pump, smell using polymer sensors, and decide what's in the air using a mini-computer. E-Nose was developed to monitor the air that the crew in the International Space Station will breathe. It was tried out on the Space Shuttle, and it worked just fine.

**Sensor array**

E-Nose will also have many uses here on Earth. It can monitor the air inside submarines and in factories to warn people very early if something is making the air unsafe to breathe. It can be used in processing food to tell if food is beginning to spoil. And someday it may be used on another

(Cont'd. p. 3)

planet or moon to sniff out what's "cooking" up there.

You can find out more about E-Nose and have fun testing your own nose at the Space Place Web site, spaceplace.nasa.gov/enose_do1.htm. The Space Place has fun and educational activities for parents, children, and teachers -- and lots of facts related to many of NASA's space missions.

This article was provided by NASA's Jet Propulsion Laboratory, managed by Caltech in Pasadena.

The Bottom Line

Balance: \$8900

2002 members: 143

NHAS offers its thanks those who joined or renewed this month and for the following donations:

Allen Simoneaux \$5.00
Cub Scout Troop 104 \$20.00
Rivers Camera Digital setting circles
 ★ Jim Warend

Looking Back at Last Month

Opening. **Barbara O'Connell** welcomed all to the meeting. We were contacted by JPL to run educational material in the newsletter. She also was featured on the front page of the June 1 issue of the Nashua Telegraph.

Book of the Month. Two books were purchased for the Library: *The Invention That Changed the World* and *Wide Field Astrophotography*.

Scope of the Month. There is only one loaner scope available, **Larry Lopez** has one that is not loaned.

Committees. Web: **Barbara** noted that Astronomy Day photos are now on the web site. A problem with "Next Event" was fixed and the Sky Clock was well received. Photo: No report this month. ATMs: **Larry Lopez** said the next meeting would be at **Don Ware's** home on June 23rd. They may combine the ATM and Photo meetings until people resume mirror grinding. Membership: The action items from last month are still in process.

YFOS. An eyepiece case, laser collimator, and Cheshire eyepiece were purchased for use at YFOS. **Larry Lopez** mowed the grass on June 22 (in

the rain). **Chase McNiss** returned on June 29, mowed "the hay," and mopped the floor of the warming room.

Rivers Camera donated a digital setting circle system circa 1980. **Larry Lopez** volunteered to mount it to the 14-inch Schmidt-Cassegrain scope at YFOS.

We could have a second computer at YFOS if someone donated a monitor

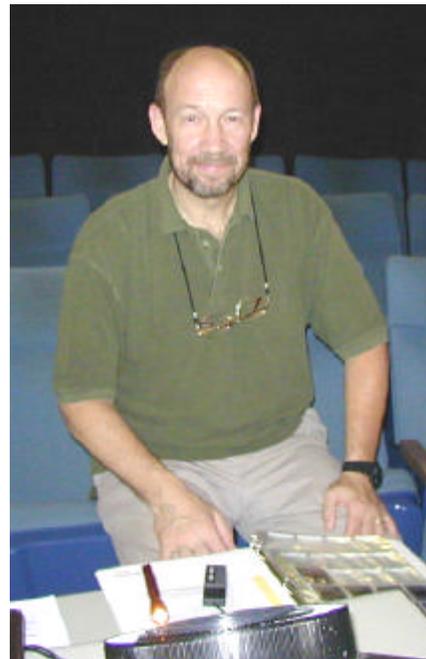
Public Observing. **Ed Ting** reviewed recent events. The double CMP Skywatch was a success and will likely be repeated in the fall.

Stellafane. **Barbara O'Connell**, this year's coordinator, passed around the information packet. Register by July 10! Other events included star parties in Mass. on July 12 and Aug. 2 and the September solar eclipse.

Treasury. **Jim Warend** reported \$8900 in the bank, 141 members for 2002 and 4 memberships for 2003. Club T-shirts were available.

A memorial card for Lou Kachavos was circulated.

Evening Program. **Chase McNiss** presented the NHAS Slide Show, which was developed in 1999-2000 and later dedicated to Lou Kachavos. The astrophotographs, taken by club members, were mostly film-based photos of common sky objects like the sun, moon, nebulas, comets, and auroras. They used both piggyback and prime focus methods. Some frames were taken from videotape and digital photos. It represented some of the best amateur astrophotography the club members have done.



(Photo courtesy of Bob Sletten)

Contributors included:

Ed Dougherty
Lou Kachavos
Larry Lopez
Joe Malinowski
Jim McCarthy
Chase McNiss
Tim Printy
Steve Stefanik

The meeting adjourned at 9:06 p.m.

★ Michael Frascinella
 (With assistance from Bob Sletten)

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DEADLINE August 2002 Issue: 5 PM Aug. 2

E-mail your articles to the Editor. Phone if you have a late submission.

CHANGE OF ADDRESS

Notify the Treasurer. Include your full name and new street address. If changing an e-mail address, specify whether you want to add, modify, or delete an e-mail address.

How to Join N.H.A.S.**Write to us:**

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PO Box 1001
Manchester, NH 03105-1001
Attn: Treasurer

Send E-mail to:

Treasurer@nhastro.com

Use our web site:

<http://www.nhastro.com/>

2002 Officers

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Vice Pres.: Joe Derek VP@nhastro.com

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Secretary: Michael Frascinella Secretary@nhastro.com

New Hampshire Astronomical Society

P.O. Box 1001

Manchester, NH 03105-1001

Rick Fienberg, Sky & Tel., at St. Anselm

NHAS Upcoming Events

Event	Date	Time	Location
CMP Skywatch	July 5	9:00 p.m.	Planetarium, Concord, NH
Goffstown Library Skywatch	July 10	7:30 p.m.	Goffstown Library, Goffstown, NH
Coffee House	July 12	8:00 p.m.	YFOS
July meeting	July 19	7:30 p.m.	St. Anselm's College, Goffstown, NH
CMP Skywatch	Aug. 2	9:00 p.m.	Planetarium, Concord, NH
Coffee House	Aug. 9	8:00 p.m.	YFOS
Stellafane Convention	Aug. 9, 10	weekend	Breezy Hill, Springfield, Vermont
August meeting	Aug. 23	7:30 p.m.	Planetarium, Concord, NH