

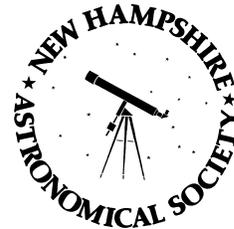
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THE NHAS OBSERVER

Newsletter of the New Hampshire Astronomical Society

"All the news that fits in print"



Volume 2002 No. 9

September 2002

Silicon Spaceships

Steve McDonald, creator of SiliconSpaceships (located at <http://www.SiliconSpaceships.com>) will present his freeware/software at the September meeting. The software consists of two major components.

GeoVirgil is a map program that directly reads in NASA's PDS format. With it, you can load hundreds of CDs from NASA and explore Venus, the Earth, our Moon, and Mars.

AstroVirgil enables you to analyze data from the space-based Chandra X-ray telescope. You can study supernovas, black holes and the center of galaxies.

President's Message

Fall is almost upon us. You know what that means, cool temperatures, longer evenings, school observing sessions, increased solar activity, in short, it means more opportunities for astronomy! The NHAS leadership team is always looking for ways to improve the member experience.

One suggestion that came up recently and was presented for "vote" at the August meeting was to purchase a truss mount for the club 16-inch scope currently stored at YFOS. The mount is produced by NightSkyScopes (see <http://www.nightskyscopes.com/> and Chase's write-up in the August newsletter). This mount would allow us to use the 16-inch scope inside or outside the observatory and even make it more portable if we needed to use it for a special event.

I would like each member to evaluate the pros and cons of purchasing such a mount and share their opinion via e-mail or regular mail. There will be no official vote, but I am polling the membership asking them to "vote" yes or no on the purchase. More informa-

tion will be available in an e-mail we are crafting to the members this week.

We plan to make a decision shortly after the September 20th meeting.

Note that If you don't have access to the Internet, please feel free to call or write any one of the officers for more information or ask one of us at the September meeting.

Let us know what you think.

Clear Skies,

★ Barbara O'Connell
NHAS President 2002

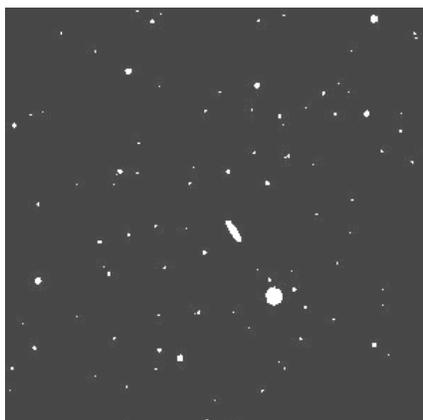
Public Observing Highlights

It's been pretty quite on the public observing front. Hope to see you at the CMP Skywatch in Concord on Sept. 6.

★ Ed Ting

AstroPhotons

Larry Lopez took this photo of asteroid 2002 NH40 (the streak) at its closest approach on the morning of Aug. 18. No, it didn't hit us!



NHCRL on Lighting

The New Hampshire Citizens for Responsible Lighting (NHCRL) have decided to work on a local level for the next several months. NHCRL has been told that many local Planning and

Zoning Boards are now looking closely at outdoor lighting.

This is a change from just four years ago when the topic of outdoor lighting was hardly ever mentioned at these boards.

NHCRL asks that all concerned people contact their local Planning and Zoning boards and request that outdoor lighting be considered for all new projects in their town/city.

For more information, the NHCRL phone number is now 603 497-3667 or you can view our web site at

<http://www.mv.com/users/lopez/nhcr/>

★ Mike Pelletier

Stellafane 2002

About 30 NHAS members and friends attended this year's Stellafane Convention. The featured speakers on Saturday night were David Levy and Carolyn Shoemaker who happened to be in this photo of NHAS member Roger Greenwood. David was seated on Roger's observing chair.

See page 2 for more Stellafane photos.



Feature Story

A Stellafane Sojourn.....Page 3

Stellafane Memories

Joe Derek provided the following photos taken around and about the Pink Clubhouse on the hill. We hope you enjoy them.

It was a great way to spend a weekend outdoors.

Be sure to visit the Stellafane website for full post-convention coverage, including photos of all the winning telescopes designs.



Web Uploads

Some difficulty was reported sending email to the treasurer@nhastro.com address. If you need to use this address, please also send a copy to president@nhastro.com or info@nhastro.com to be sure your email is read.



ATM True Grit

An ATM meeting was held at New Boston Library on Sunday Aug. 25.

Don Ware and **Larry Lopez** discussed telescope mounts. Don returned the P166 processors that were intended for the automatic Foucault tester.

If anyone wants to build a Bartel's style goto mount with steppers, Don Ware would be a good person to see.

★ Larry Lopez

YFOS

At the Aug. 24th work session **Chase McNiss** and **Larry Lopez** witnessed a new first for NHAS – Golf. **Bud** and **Brian** from Bedford had at it with a baseball bat and, when that wasn't effective, a golf club.

Chase brought polyurethane and did the observatory door and warming room table. The door was swelling on the bottom and it will need replacement in a few years.

Construction of a warming room deck was nixed by the club members at the business meeting the day before.

Larry tightened up the steps for the observatory and looked around for replacements. He is looking at building a ramp with the 2-inch lumber behind the observatory. The theory is that 2-inch decking will hold up much longer than 1-inch decking.

Larry had fun with his string trimmer. We cut grass but it wasn't very high.

★ Larry Lopez

Welcome New Members

NHAS welcomes the following people who recently joined the club:

Jeff Renk of Goffstown, NH.

The Bottom Line

The Treasurer' report was unavailable for this issue.

★ Jim Warend

A Stellafane Sojourn

Bright and early at 9:45 a.m. on Friday August 9th, the Stellafane Caravan, consisting of **Joel Harris** and **John Newhall**, arrived at Breezy Hill for the 67th Stellafane Convention. Well ahead of the 2,000 other attendees, they had first choice of campsites. Most other NHAS members arrived later that day.

Arriving about 10:30 p.m., I found one of the few remaining parking spaces. At the big tent, an amusing talk was in process about the restoration of the Parsons telescope in Ireland.

After finding the NHAS encampment, I observed with **Mike Townsend** and **Roger Greenwood**, doing mostly double stars and clusters. Clouds shut down observing at about 2 a.m. shortly after I retired to the bed of my truck.

After rolling out at 9:30 a.m. the next day, I spotted **Joe Derek** and **Mark Warend** having breakfast at the food pavilion. Joe remarked, "Did you just climb out of the back of that truck?"

After breakfast, with no real bathing facilities, I "roughed it" using a pail of water, a cup, shampoo, and a towel.

Upon visiting the Hill, I noted that the famous scripture (Psalm 19:1) on the historic clubhouse's gables had been painted over and was hard to see. A few Springfield ATMers told me there was ongoing debate of that issue.

The hill was not as full with telescopes as in past years, but several were notable, like the refractor with the Coronado hydrogen alpha filter system through which I saw black filaments on the disk and sizable ruddy prominences. I didn't get the owner's name.

I got a chuckle at the gummy telescope and eyepieces by **Alan Rifkin** of So. Hadley, Mass. The square tube, mahogany refractor by **Glenn Burke** of Newton, NJ was a beauty. Ingenious was **Dave Groski's** 60 mm corona-graph, which used a ferrule from a compression fitting to form an occulting disk.

At the NHAS cookout, about 30 members enjoyed the "groaning table" of foods set up by **Barbara O'Connell**, including homemade "Stella-brownies."

Joel Harris and **Bert Bingel** nimbly cooked burgers and hot dogs to everyone's satisfaction.

Sunshine, a soft breeze, and light conversation added to the enjoyment of the meal together.

"Protecting Your Right to the Night" was the last of the Saturday afternoon talks. **Cliff Haas** of Rocky Hill, Conn. presented a good review of light pollution issues and legislative successes. He coined a few notable phrases like "glare bombs" and "pollution on a stick" for some types of outdoor lighting fixtures. A key concept was that you should see the object being illuminated, and not the source of the illumination. He stressed that full cutoff lighting was the key to reducing light pollution.

Just before the Saturday evening talks, I caught up with **Dennis DiCicco** of S&T. We exchanged the latest family news and reminisced about the good old days with the South Shore Astronomical Society.

The raffle may have been for a worthy cause but, after one and one-half hours, it got tiring. The MC then gave out some statistics about attendees: over 50 clubs represented, over a dozen people from other countries, ages ranged from 10-month old babies to 86-year-old John Dobson, and scores of kids.

David Levy received a well-deserved award from the Astronomical League for his tireless work with young people. As Shadowgram speaker, he gave a compelling presentation on the unique role that Stellafane plays in motivating and mentoring future amateur telescope makers and astronomers.

The telescope awards reminded me of the Academy Awards in that they played a video (taped earlier) of each winner describing the highlights of the telescope or accessory. We thus were able to see and listen to each winner, which made it more personal.

(Cont'd. p. 4)

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The goofiest award went to **Alan Rifkin** for his edible telescope and gummy-worm eyepiece Popsicles.

By the time **Carolyn Shoemaker** was introduced at 10:30 p.m., most of NHAS had drifted back to the campsite to make up for lost observing time. The sky was a bit darker than on Friday night so I spent the next several hours with **Roger Greenwood** gazing at deep-sky objects through his 18-inch Obsession scope until succumbing to heavy eyelids.

On Sunday morning, I awoke just in time to attend the 9 a.m. Sunday Service under the big tent. It was a welcome epilogue to a memorable convention. The engraving on the pink clubhouse summed it up for me: "The heavens declare the glory of God."

★ Michael Frascinella

Looking Back at Last Month

Opening. **Barbara O'Connell** reviewed items in the mail. She asked members to sign a get well card for **Joe Malinowski**, who is recovering from a leg problem.

Book of the Month. none this month.
Scope of the Month. **Ed Ting** demonstrated his 16-inch scope (See below).

Public Observing. **Ed Ting** stated it has been really slow this summer but he recently got an request from Alton Bay for a skywatch in Sept. or October.

YFOS. A work session was slated for Sat. Aug. 24 at 9 a.m. for various maintenance tasks. **Larry Lopez** broached the subject of rebuilding the steps for the warming room and possibly a roof over the steps. Members did not approve the idea of a roof.

Committees. **Membership:** **Bob Sletten** discussed the proposed Astronomy Course at YFOS and was looking for instructors. We discussed the need to continue welcoming new members at the meetings. **Web:** **Barbara O'Connell** noted that the web site was OK. **ATMs:** **Larry Lopez** said the ATMs were still meeting in tandem with the Photo Comm.

Treasury. Report unavailable

Stellafane. Several members spoke of the enjoyable weekend and the fact that it did not rain.

Upgrade of 16-inch Dob. **Chase McNiss** recapped his proposal (see

August 2002 *Observer*). **Ed Ting** assembled his own 16-inch truss-mounted scope to show us what the mount looked like. For comparison, Ed said a new 16-inch Dob scope would cost over \$3000. Most members commented favorably on the proposal. **Barbara** said she would notify all members by e-mail and allow for more discussion before making a final decision.

Evening Program. "A Look at NHAS Committees"

Larry Lopez reviewed the activities of the ATM Committee and the hope of finishing the last of the 6-inch mirrors.

Richard Fleming spotlighted the Photo Committee and its latest exploits.

Larry rose again to talk about YFOS, the club's dark sky observing site with its warming room and roll-off-roof observatory.

Bob Sletten spoke earlier in the meeting about membership initiatives and the upcoming Astronomy Course under development. Bob is looking for members to volunteer as instructors.

Ed Ting reviewed the highlights of Public Observing and the rewards of showing off the night sky especially to school kids.

Barbara O'Connell reviewed the development of the NHAS web site and plans for future enhancements to be done after her time as president.

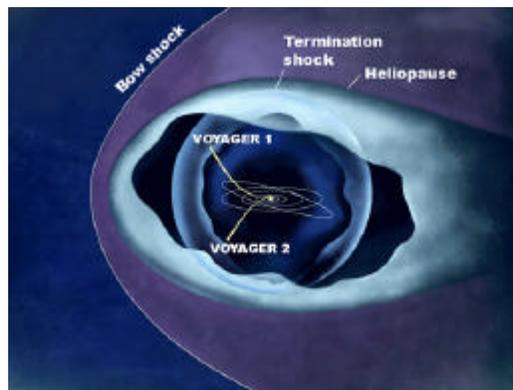
★ Michael Frascinella

Seeking the Edge of the Solar System

In September and August 2002, the Voyager 1 and 2 spacecraft will observe their 25th anniversaries in space, performing long after their original mission to visit Jupiter and Saturn. After Voyager 1's encounter with the two gas giants, it was aimed upward out of the plane of the ecliptic. Voyager 2, after its visit at Jupiter and Saturn, went to Uranus and Neptune. It completed its "grand tour" of the outer planets in 1989. It was then aimed downward out of the ecliptic plane. At about 85 AU, Voyager 1 is the most distant human-made object. Round-trip light time is 24 hours. Voyager 2 is at

about 68 AU. Their mission now is to study the heliosphere, the vast bubble of space within the Sun's influence, and the heliopause, the boundary of the solar system with interstellar space. At the heliopause, the outward pressure of the solar wind balances the inward pressure of the interstellar wind. The region where solar wind particles begin piling up against the heliopause is the termination shock, where the solar wind should drop from about 1,500,000 km (nearly 1,000,000 miles) per hour to 400,000 km (250,000 miles) per hour. Voyager 1 is already detecting a slowing of the solar wind. **Dr. Ed Stone**, Voyager Project Scientist since mission inception, estimates that the spacecraft could reach the termination shock within three years. Once there, Dr. Stone predicts it will still have about 5 to 8 billion km (3 to 5 billion miles) and 10 to 15 years to go before crossing the heliopause into interstellar space. Because the heliosphere expands and contracts with the level of solar activity and the inward pressure of the interstellar wind is uncertain, it is very difficult for scientists to estimate the actual extent of the heliosphere.

Read more about the Voyager mission to find the heliopause at <http://voyager.jpl.nasa.gov/>. For children, go to http://spaceplace.nasa.gov/vgr_fact1.htm to read about the Voyagers' grand tour of the outer planets and find out the secret code they use to send pictures back from space.



Voyagers 1 and 2 search for the heliopause

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with NASA.

DEADLINE October 2002 Issue: 5 PM Sept. 28

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

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New Hampshire Astronomical Society

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Silicon Spaceships, St. Anselm's

NHAS Upcoming Events

Event	Date	Time	Location
CMP Skywatch	Sept. 6	7:30 p.m.	Planetarium, Concord, NH
Coffee House	Sept. 13	7:30 p.m.	YFOS
Photo Comm.	Sept. 14	7:00 p.m.	YFOS
Sept. meeting	Sept. 20	7:30 p.m.	St. Anselm's College, Goffstown, NH
CMP Skywatch	Oct. 4	7:30 p.m.	Planetarium, Concord, NH
Coffee House	Oct. 11	7:00 p.m.	YFOS
October meeting	Oct. 18	7:30 p.m.	Planetarium, Concord, NH