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THE NHAS OBSERVER AND ECLIPSE ENQUIRER



Newsletter of the New Hampshire Astronomical Society

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"All the news that fits in print"

May 2003

It's the Month of AstronoMay

May is a month full of special Astronomy-related events. As with any May in New Hampshire, we hope and pray that the weather is clear on these special days.

May 7 – Mercury transits the Sun. We started the month 0 for 1 due to thick fog on the morning of this event.

May 10 – Astronomy Day. This event is covered elsewhere in the newsletter.

May 14 – Jupiter's 4th moon Callisto casts its shadow onto Jupiter from 7:11 to 11:55 p.m.

May 15-16 – Total Lunar Eclipse from 11:14 p.m.-12:06 a.m. with partial phases lasting from 9:30 p.m.-1:50 a.m.

May 17-18 – NorthEast Astro Forum in Suffern, NY

Mars at magnitude -0.2 in Capricornus is brighter than Saturn at $+0.1$ in Taurus

President's Message

By the time our next business meeting takes a place, Astronomy Day will be a thing of the past. **Barbara O'Connell**, along with **David McDonald** - who by the way is a new NHAS member and also the Director of Education at CMP - have worked on all the logistics for the past few months.

I just want commend Barbara for her efforts and for taking time of out her busy schedule to coordinate all the activities regarding Astronomy Day. I would also like to thank all the participants from the club for the important part they play in the education of the public as it pertains to the science of Astronomy.

Efforts are under way to begin rebuilding the pier for the new mount at the observatory. Members are currently pulling materials together in order to

fabricate a more solid steel pier that will minimize vibrations. The C-14 telescope is also in the process of being refurbished. Club members will soon have the use of a professional-grade telescope in the observatory.

At this month's meeting, the program will feature "Yours Truly" doing a special astronomy-related slide show. Also, if anyone has a book that they would like to feature at the May meeting, bring it along to pass around.

★ Joe Derek
NHAS President 2003

Public Observing Highlights

The first graders at Newfields Elementary on Apr. 15 expressed much gratitude toward the club members who came and showed Saturn and Jupiter to them. We even got some Thank You cards!

I counted twenty-four cars at the Coffee House on Apr. 25! Some of these people no doubt showed up for the Astro 101 class, but who were the rest of the diehards who showed up in cloudy weather?

Anyway I set up my scope and observed for about an hour through the holes in the clouds before the heavy cloud cover finally came in for good.

On May 3rd, NHAS returned to the Crotched Mountain Rehabilitation Center in Greenfield, NH. They appreciated us the first time we were there, but it was zero degrees back then! The guys had been bugging me to go back, due to the excellent, mountaintop observing location, and the excellent hospitality shown to us by director **Caralyn Menne**.

This time the temperatures were milder, and they served us soft drinks and freshly popped popcorn. A good time was had by all.

As the skywatch broke up, I showed my nonconformist nature by being the ONLY member who did NOT head out to YFOS afterwards.

★ Ed Ting

Astronomy Day

Countdown

Date and Time: May 10th 1-9 p.m.

Location: Christa McAuliffe Planetarium

Thanks to all those who have volunteered! If you are volunteering, please arrive between 11 a.m.-noon and meet at the NHAS Information Table for check-in. If you are just visiting for the day, we'll see you there!

Some of the NHAS exhibits will include

- Astrophotography
- Solar Observing
- Night Observing
- Telescope Making
- Archaeo-Astronomy
- Radio Astronomy, and
- Light Pollution.

Please visit

<http://www.nhastro.com/aday/aday2003.html> for more details and directions.

★ Barbara O'Connell
Astronomy Day Coordinator

Noteworthy News
Messier Marathon of One Page 2

Messier Marathon of One

I ended up going to YFOS Sunday night, April 6th. It was a pleasant change from all the clouds lately.

I had an awesome night. I got there early and started on a mini-marathon. I had no luck with the first few objects due to the trees so I went to Cassiopeia. At about 11:15 p.m., I was at the other horizon looking at M13 in Hercules.

Total objects was somewhere around 50. I could not count anything in the Virgo cluster, as I still could not identify what I was looking at in that mess. What a huge group of galaxies. When I got past M13, I got to the point where you would go and take a break for an hour or so. I didn't want to hang out alone that late so I packed it up and called it a success.

I love YFOS! Nice dark skies really make finding those objects a lot easier. That night goes down as the best night of observing yet for me.

One last thing: Saturn and M1 were in the same field through my 27 Pan. WOW, that was a very cool sight! It was unbelievable to fathom the great distances between them.

★ Nils Wygant

AstroPhotons

New Online Group

There is a new Yahoo Group being formed by NHAS members. It is entitled NHAS_Photo-Comm and it is dedicated to the discussion and sharing of information related to Astrophotography.

This group will work in conjunction with the NHAS Photo Committee to promote the hobby of Astronomy for NHAS members. It is open to NHAS members only. Members interested in joining this group can do so by going to http://groups.yahoo.com/NHAS_Photo-Comm.

★ Chase McNiss
Group Moderator

Web Uploads

A pre-Astronomy Day web page is online but all effort has been focused on getting ready for Astronomy Day.

★ Barbara O'Connell

ATM True Grit

Don Ware, Jim McCarthy, Ernest Lopez, and Larry Lopez held an ATM meeting on April 27, 2003.

Don and Larry discussed some aspects of the pier design for the new telescope mount that NHAS has ordered. The C14 (which will ended up being the initial telescope on the mount) was brought to John Blackwell on April 25. Larry got a gander at John's Observatory. It was cool.

Jim presented a very interesting 10-inch telescope that he owns. He was thinking of converting it to a DOB. Ernie talked to Don about grinding machines. After the meeting Larry and Ernie put up the Radio Jove antenna for the Astronomy Day demo.

Larry and Ernie did some CCD work afterward using his observatory. Larry actually got the tracking chip to work. Finally. A new software load and adjustment of the gears seemed to have helped a lot.

★ Larry Lopez

Telescope Located

The missing 16-inch Dob thought to be lost was borrowed after all.

I just forgot the loan offer and the borrower forgot to tell me they borrowed it.

★ Larry Lopez

The Bottom Line

NHAS offers its thanks to Taylor Cole for his \$25.00 donation in honor of Joe Derek's birthday.

2002-2003 Membership: 159

Club Financial Status:

Current Cash Balance: \$5,712
30-60 day accounts payable: \$3,712
(this includes truss mount, Titan mount and accessories)

Net Balance: \$2,000

New Member

NHAS welcomes Lawrence Jasper of Gilford, NH.

★ Jim Warendata

Looking Back at Last Month

Opening. President Joe Derek welcomed new members and mentioned the Northeast Astronomy Form in New York on May 17-18.

Book of the Month. none this month.

Scope of the Month. None this month

Committees. ATM Comm - Larry Lopez said the first meeting of the year was to be on Apr. 27 at 2 p.m. at his home. A possible project was putting together telescope kits for use by members wanting the experience of building a telescope. Web Comm.: Barbara O'Connell noted that web members met prior to the general meeting and hoped to have a new web design running in June. A Pre-Astronomy Day web page is now available. She also asked if anyone was not getting club e-mail. Member Comm - Bob Sletten noted that tonight's meeting would feature the third Astronomy 101 session.

Public Observing. Ed Ting bemoaned the continuing lousy weather. At a skywatch at Newfield, NH, about 70 first graders really appreciated NHAS. Future events included May 3 at Crotched Mt. Rehabilitation Center, May 10 - Astronomy Day at CMP, and May 15 - Lunar Eclipse at CMP.

YFOS. Larry Lopez warned that the ground was still squishy with some standing water. Hopefully it would firm up in a few weeks. He brought up the topic of smoking policy and asked for suggestions.

Treasury. Jim Warendata reported a balance of \$5700 with \$3600 of accounts payable and 157 members. He would be taking orders for Astronomy Day t-shirts tonight - to be delivered at the event.

Astronomy Day. Barbara O'Connell said the May 10 event would run from 1-9 p.m. and handed out an hourly schedule, information for volunteers, and a list of exhibits. She reviewed many of the exhibits to be staffed by NHAS members, then spoke of the events to be sponsored by CMP. While a sign-up sheet circulated, she displayed sample t-shirt colors.

(Cont'd. on p. 3)

Looking Back (from p. 2)

Rick Hedrick presented his fine artwork of the Gemini North telescope for the t-shirt design chosen by the officers. Lastly, there was a box of 2002 t-shirts on sale for \$6 each.

Special Event. There was a brief discussion about the May 7 transit of Mercury taking place at sunrise local time.

Evening Program. John Pappas of NHAS and **Dave MacDonald** of CMP presented a dome show called "Navigating the Night Sky." First Dave took us on a warp drive journey through space with a lot of twists and turns. Fortunately, barf bags were not needed. John then took over with a classic lights-out question: "How many people are beginner star gazers? Raise your hands."



From there John took us to the North Star and the Big Dipper, a good starting point for learning your way around the night sky, then on to other major constellations. Next came a series of drawings and explanations of terms related to the three-dimensional celestial sphere. A Q&A session concluded the presentation.

★ Michael Frascinella

NASA Space Place

Eggs in the Air

By Patrick L. Barry

The sky will be filled with flying eggs on May 10, 2003, when a thousand students converge on The Plains, Virginia, for the first-ever national high school rocketry competition.

Called the Team America Rocketry Challenge

(<http://www.rocketcontest.org>), the competition sets the goal of flying a custom-built, two-stage rocket carrying

two raw eggs to a height of exactly 1,500 feet, and then returning the eggs to the ground unbroken. The team that comes closest to 1,500 feet without breaking their eggs will win the national title.

The competition is being organized by the Aerospace Industries Association and the National Association of Rocketry (NAR). NASA administrator Sean O'Keefe will attend the final event.

"The idea is to get kids interested in the world of aerospace," says Trip Barber, director of the competition and vice-president of the NAR. "And they will learn some important lessons about the power of math and science-and cooperation and teamwork-along the way."

To develop their designs, the students first used computer simulator software provided by NAR. Then they had to apply old-fashioned ingenuity and craftsmanship to bring the design to life and flight test it to refine it.

Students constructed rocket bodies using a combination of hobby-store rocket kit parts and custom materials. A typical rocket might consist of cardboard tubes from paper-towel or wrapping-paper rolls, a pre-made nose cone, rocket-kit body segments cut to size, and lightweight, balsa wood fins. But the greatest challenge for many was designing the compartment for the eggs.

Some used plastic Easter eggs as casings, padding the inside with bubble wrap, foam peanuts, or even gelatin. Others decided not to "reinvent the wheel," making a cradle from the egg-crate material used for shipping eggs. Some chose to make larger, more powerful rockets big enough to carry the eggs inside, while others made smaller, more efficient rockets that

have a bulging egg compartment mounted on top.

A hundred unique designs will be put to the test in Virginia. Only one will win. But for the students, the real prize has already been won:

Learning an approach to problem-solving that works,

whether you're launching eggs over a field or sending astronauts to Mars.

In the end, it's all about the future: Future technologies and the kids who will grow up to create them. Many advanced technologies are being developed now by NASA's New Millennium Program (<http://nmp.nasa.gov>). Who will do that work in the future? Perhaps some kids who spent their weekends launching eggs in the air.

Would you like to build your own rocket? Visit NASA's Space Place and learn to make a bubble-powered rocket! (<http://spaceplace.jpl.nasa.gov/rocket.htm>) It won't take you to Mars, but it's a good way to get started.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



A Boeing Delta II (7326) rocket launched the New Millennium Program Deep Space 1 spacecraft on October 24, 1998.

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**Slide Show, May 16, St. Anselm****NHAS Upcoming Events**

Event	Date	Time	Location
Astronomy Day	May 10	1-9 p.m.	Planetarium, Concord, NH
CMP Skywatch	May 10	7:30 p.m.	Planetarium, Concord, NH
Lunar Eclipse	May 15	7:30 p.m.	Planetarium, Concord, NH
May meeting	May 16	7:30 p.m.	St. Anselm, Goffstown, NH
Coffee House	May 30	7:00 p.m.	YFOS
CMP Skywatch	June 6	7:30 p.m.	Planetarium, Concord, NH
June meeting	June 13	7:30 p.m.	Planetarium, Concord, NH