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THE NHAS OBSERVER AND RADIO JOVE JIVE



Newsletter of the New Hampshire Astronomical Society

Volume 2003 No. N

"All the news that fits in print"

October 2003

Planetary Talk Radio

President's Message

Welcome to the cooler season of the year with colder weather coming. This season does happen to be my favorite time of the year because the flies and mosquitoes are gone and the air is crisp and somewhat clearer.

Mars is slowly receding and becoming smaller and smaller, while Saturn and Jupiter are slowly making their way into winter prime-time observing.

We are also entering that time of year when elections take place for new officers. Anyone who is interested in a position or who would like to nominate someone for a position, now is your opportunity. Positions to be filled include President, Vice-President, Secretary, Treasurer, Board member.

During the second half of this month's meeting, we will have a presentation by veteran members [VPWs or Veterans of Photon Wars] on Radio Astronomy.

By the way, get your 2004 Astronomy Calendars while your still can! They have great photos and observing schedules.

Lastly, the Treasurer will remind you at the next meeting (and later in this issue) that – as of Oct. 1 – most of you are no longer members! But never fear, for a measly \$15.00, you can renew your membership for another year and therefore become eligible to run for one of the aforementioned club offices. Such a deal!

Regards,
★ Joe Derek
NHAS President 2003

Public Observing Highlights

Half a dozen NHAS members showed up for the CMP skywatch on Friday, Oct 3rd. It was the first cold skywatch of the season, and yours truly didn't bring enough warm clothes and had to leave early. Thanks to the rest of the guys who dressed intelligently and were able to stay!

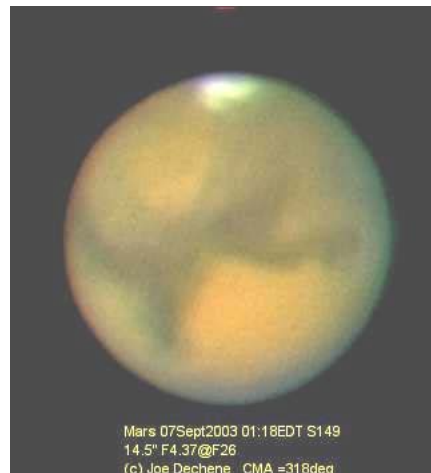
Our largest school skywatches all happen within the next two months. After Woodman Elementary in Dover on Oct 15th, they start happening in rapid succession.

Mountain View Middle School (Goffstown) is on Oct 20th, Reed's Ferry School in Merrimack (our largest) is on the 29th, Rundlett School (Concord) is on Nov. 10, and Loudon Elementary School is on Nov 19th. Directions will go out in e-mail.

★ Ed Ting

Before the Planet Fades

Joe Dechene sent this photo recently, taken with a 14.5 inch scope and a Philips ToUCam Pro Webcam.



Mars 07Sept2003 01:18EDT S149
14.5" F4.37@F26
(c) Joe Dechene CMA =318deg

NHAS Goes to Mass.

No, NHAS is not attending church together. NHAS member **Mike Townsend** has generously agreed to lead an observing session for the North Shore (Mass.) Amateur Astronomy Club (NSAAC). His topic will be double star observing equipment and techniques. It will held on Friday, October 17th (cloud date October 24th) at the club's observing site at Veasey Memorial Park in Groveland, MA.

Set up will start around 7 p.m. and the session starts at 8 p.m. This event is one of the monthly observing sessions organized by NSAAC around specific themes. Past events included Mars and Moon nights. NSAAC would welcome participation in this event by its fellow observers in the NHAS.

Please contact Lew Gramer [lew@upstream.net] or Art Schneiderman [art@schneiderman.com] for more details if you are interested in attending.

Directions to Veasey Memorial Park, 201 Washington Street, Groveland, Ma. Take Rte. 95 south to exit 54B, Rt. 133 to Georgetown. Go straight through the lights at Georgetown center, (you are now on Rt. 97). Turn left on Salem Street (Tea Garden Restaurant @ intersection). Turn left onto Washington Street. The Park entrance is a short way down on the right, between the two field stone pillars.

The parking lot/observing area is on the right before the top of the hill. Please dim your lights before entering the main parking area.

Noteworthy News
NHAS Goes to Mass.....Page 1

AstroPhotons

There was a meeting of the Photo Committee at YFOS on Sept. 27.

On the agenda was an open forum to discuss and demonstrate image stacking software and planetary imaging.

Four to six people showed up at various times of the evening. **Herb Bubert** demonstrated his skills in using Registax and shed some light on the mystery of using wavelet filters for image enhancement. I ended up working on the Titan/Gemini system with **Joel Harris** and did not participate much at the meeting.

In attendance was **Jim McCarthy** who also show some videos of Mars and the Sun. **Nils Wygant** was also on site and benefited the most from Herb's tutorage. A new member, **Dave Weaver**, showed up later and also worked with Herb on image processing and stacking. No future meeting was scheduled.

★ Chase McNiss

ATM True Grit

There was no recent ATM meeting. Plans will be discussed at the next club meeting.

★ Larry Lopez

The Bottom Line

Balance: \$ 3,300

2004 members: 61

There are no unpaid balances due.

The annual club insurance premiums and other annual costs (like P.O. Box and annual awards) will be coming due this quarter.

★ Jim Warend

New Members

While we are scrambling to remember to renew our memberships, let take time to welcome the following new members to the club.

Richard Elliott Wilton, NH

Chuck Evans Westford, MA

Michael Fitterman Harvard, MA

Bill Marrs Cornish, NH

Bill, that's a great surname you have there, so planetary!

★ Jim Warend

Web Uploads

The web committee has conducted minor maintenance but reminds you to check there for the latest news on public observing dates. Also take advantage of the sky clock to see how much clear sky is available.

★ Barbara O'Connell

Looking Back at Last Month

Opening. **Joe Derek** reminded us of the Sept. 20 star party in Kennebunkport, Maine. He also touted the Deep Sky calendars that were for sale.

Committees. ATMs: **Larry Lopez** said there had been no meetings lately and they are still thinking about projects.

Photo: members have posted many photos on the NHAS newsgroup.

Web: The web site has undergone minor updates and club e-mail is now routing through the new codemeta server. Generic NHAS addresses are still to be worked on. There was a brief flurry of talk about a web page devoted to tools and resources. Membership: **Bob Sletten** spoke on the Astro 201 course as having six topics. He asked for volunteer instructors and some members blurted out names, mostly **Mike Townsend** over and over, but eventually other members took on assignments.

Public Observing. Great skywatches were held at CMP and Pelham, NH. We are getting into the Fall skywatch season with one planned for Dover on Oct. 1 and the big one at Reed's Ferry School in Merrimack on Oct. 28.

YFOS. Our benefactor will no longer be plowing the observatory parking field. We may have to bite the snowball to pay for plowing. The observatory pier has been reinstalled. The truss mount for the 16-inch scope should be arriving soon.

Treasury. Club balance is about \$3,000 and all bills are paid. There would be 177 members until Sept. 30, the end of the dues year. 2004 membership dues are payable as of Oct. 1.

Winter Star Party. Feb. 16-21 - Marathon Keys, Florida. **Chase McNiss** was there three years ago and remarked that the seeing was fabulous and steady. He mentioned an auto train he was considering. For a fee, it would transport your car from Lorden, Virginia to Orlando, Florida.

Evening Events. The Losmandy-Titan-Gemini Mount was presented by **Chase McNiss**. He reviewed the story of how the pier was designed, fabricated, and installed. The Titan mount was fastened in place and the Lopez C14 was added. (This scope was generously donated by **Larry and Linda Lopez**.)



Much work was recently done aligning the pier and developing procedures for operating the scope and Gemini control system. Training will be mandatory before anyone is allowed to operate this system.

Mars Photos. We enjoyed seeing photos taken by several members. **Herb Bubert** showed off lots of planet and deep sky photos and some showing great details on Mars. **Rich DiMidio** displayed a few good Mars images. **Chase McNiss** displayed several good photos of the red planet, and **Nils Wygant** brought in a print of one of his Mars images.

★ Michael Frascinella

NASA Space Place

(Un)Fasten Your Seatbelts

by Patrick Barry and Tony Phillips

The "fasten seatbelts" light turns off, and you get up to ask the stewardess for a pillow; it's going to be a long flight. Only a kilometer ahead in the cloudless sky, a downward draft of sheering winds looms. When the plane hits these winds, the "turbulence" will shake the cabin violently and you could be seriously hurt.

You don't know about those winds, of course, and neither does the pilot. Today's weather satellites can't see winds in clear skies: they rely on the motion of clouds to infer which way the winds are blowing.

"Believe it or not, their best indication of wind sheer right now is warnings from aircraft that have gone through it ahead of them," says Bill Smith of NASA's Langley Research Center.

But a new satellite technology being pioneered by NASA and NOAA could improve this shaky situation. It's called GIFTS, short for Geosynchronous Imaging Fourier Transform Spectrometer. GIFTS is an infra-red sensor that can detect winds in cloudless skies by watching the motions of atmospheric water vapor. Water vapor is mostly invisible to the human eye, but it reveals itself to GIFTS by the infrared radiation it absorbs.

Smith is the lead scientist for EO-3, a satellite designed to test out this new technology. Slated for launch in 2005 or 2006, EO-3 will carry GIFTS to Earth orbit where it can produce 3-dimensional movies of winds in the atmosphere below.

These wind data will not only improve safety, but also help the airlines save money. Knowing the winds along a flight route allows airlines to adjust the plane's fuel load accordingly, thus reducing the weight that the engines must lift. Saved fuel means saved money and less pollution.

GIFTS can help planes avoid another potentially lethal problem, too: ice forming on their wings. If a cloud contains "supercooled" water droplets whose temperature is below freezing, those droplets will form ice on the

wings of planes that pass through it. By looking at about 1700 different frequencies of the light coming from clouds, GIFTS can measure the temperature of the cloud top and determine whether it contains water droplets that could cause aircraft icing. With information from GIFTS in hand, pilots can simply avoid clouds that appear dangerous.

Once EO-3 demonstrates the accuracy of GIFTS, airlines will be able to capitalize on this potential to make flying a cheaper and safer experience.

Learn more about the GIFTS instrument and other advanced technologies being tested on the EO-3 mission at <http://nmp.jpl.nasa.gov/eo3>. Kids can go to The Space Place to play a data compression game related to EO-3 at this web site: http://spaceplace.nasa.gov/eo3_compression.htm.



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

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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.

This months' contributors:

Joe Derek, Ed Ting, Larry Lopez, Bob Sletten, Jim Warenda, Chase McNiss, Barbara O'Connell, Larry Lopez

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

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2003 Officers

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New Hampshire Astronomical Society

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Radio Astronomy, Oct. 17, CMP

NHAS Upcoming Events

Event	Date	Time	Location
Dover Skywatch	Oct. 15	7:00 p.m.	Woodman Elementary School, Dover, NH
Oct. meeting	Oct. 17	7:30 p.m.	Planetarium, Concord, NH
Goffstown Skywatch	Oct. 20	6:45 p.m.	Mountain View Middle School, Goffstown, NH (Rain date: 21st)
Coffee House	Oct. 24	6:00 p.m.	YFOS
Reed's Ferry Skywatch	Oct. 29	6:30 p.m.	Reed's Ferry School, Merrimack, NH (Rain date: Oct. 30th)
CMP Skywatch	Nov. 7	7:00 p.m.?	Planetarium, Concord, NH
Concord Skywatch	Nov. 10	7:00 p.m.	Rundlett Middle School, Concord, NH
Nov. meeting	Nov. 14	7:30 p.m.	St. Anselm's College, Goffstown, NH