

February Is for Frozen Observers

President's Message

Hi all,

The "Freeze Your Buns" observing session held at YFOS was great! I wish you all could have made it, but then we would have had a parking problem. It was definitely cold with some wind, and anyone that was there knows what I mean.

There were a few clouds at first, but it got better as the night enveloped us. Even though the sky was turbulent, we still saw great planetary views. It was my best personal view of Saturn I have ever seen.

In the next couple of months, Saturn, with Jupiter following behind her, will be out there. You must show your neighbors them, or help out one of our many public observing sessions. If you pick the end of the month, the first quarter moon will there too.

As for our Mars buggies, WUN DER BAR! You got to see the funny intro movie at JPL's web. You need bandwidth to see it.
http://marsrovers.jpl.nasa.gov/gallery/video/movies/mer_roversnav_240.mov
Those machines remind me of two mischievous boys, playing in a sand dune.

I would like to invite all members to see if they have something to share in our "Member Moment" at our future meetings. This is 1/2 to 2 minute talk of an enlightening personal experience in astronomy.

Think warm and clear skies,

★ Joel Harris
NHAS President 2004

Public Observing Highlights

Fifteen NHAS members braved subzero temperatures at the annual Freeze Your Buns event on Friday Jan. 23. Frozen observers stayed all the way to 12:30 a.m. For a more detailed account, see the YFOS Log Book on page 2.

The skywatch at Eastman, NH on Jan. 24 will be rescheduled. The CMP Skywatch on Feb. 6 was drenched with snow, sleet, and freezing rain.

Don't forget, our annual skywatch for Mensa will take place on Feb. 21. This year it is being held at the Holiday Inn/Center of NH in Manchester.

★ Ed Ting

Tribute to Fallen Astronauts

Last Thursday in January



CAPE CANAVERAL, Fla. - For the first anniversary of the Columbia tragedy, NASA employees throughout the country paused Thursday Jan. 29 to remember the 17 astronauts who lost their lives over the years "because we failed."

NASA Administrator Sean O'Keefe declared that the last Thursday in every January be set aside as a Day of Remembrance within the space agency to honor the memory of the crews of Columbia (Feb. 1, 2003), Challenger (Jan. 28, 1986), and Apollo 1 (Jan. 27, 1967).

Space exploration is dangerous enough, and accidents should never be the consequence of "complacency, indifference, a failure to attend to detail," O'Keefe told employees in a televised address. "This should be everyone's solemn pledge," he said.

Standing alone on an auditorium stage at NASA headquarters in Washington, O'Keefe choked up as he read the roll of the dead.

"They are not with us today because when it mattered most, we failed. And so it is incumbent upon us to remember not just today, not once a year, not on the anniversaries, but every day, every single day that the consequences of us not getting it right are catastrophic, and each of those families will live with this consequence for the rest of their lives."

(See Tribute, page 2)

Noteworthy News
A Busy Month at YFOS.....Page 2

Tribute (from p. 1)

The Apollo 1 spacecraft fire on the launch pad occurred Jan. 27, 1967. The Challenger launch explosion occurred Jan. 28, 1986. The Columbia disintegrated during re-entry on Feb. 1, 2003, killing seven astronauts.

At Kennedy Space Center in Florida, a minute of silence was observed at noon and flags flew at half-staff. Later in the day, Kennedy officials and some who helped in the Columbia debris recovery effort gathered in the giant Vehicle Assembly Building to dedicate the new resting place for the crated wreckage.

NASA workers were asked to also remember the two men who died in a helicopter crash in Texas last March while searching for Columbia debris, and all the early aviation pioneers who were killed pushing the limits.

O'Keefe noted that three peaks on Mars seen from the first of the two newly arrived rovers would be named Grissom Hill, White Hill, and Chaffee Hill after the Apollo 1 astronauts. The space agency named the rover landing sites after the Challenger and Columbia crews.

The widow of Challenger commander Dick Scobee told NASA's spaceflight chief, William Readdy, that she knew her late husband would be proud.

In a new book entitled *High Calling*, Evelyn Husband shares her husband Rick's journey from his childhood dreams of being an astronaut, advancing through the American space program and his walk of faith in God. "In our lifetimes, people will walk on the surface of Mars and they will see that tribute to the Challenger crew," Readdy quoted June Scobee Rodgers as saying.

(Parts of this report courtesy of Associated Press)

★ Michael Frascinella

Astro 201 Course

We are finally ready to kick-off our Astro 201 course. The first of five course modules will be given in February. It is entitled "Elements of Observing" and the instructor is **John Bishop**, an experienced observer.

The class date is Friday, February 20th and is held at the NHAS dark sky observing site in the warming room.

Start time is 7:30 p.m. with a duration of about one hour.

The event is open to all members. There are no prerequisites. No RSVP is required. Question or comments should be directed to Membership.2004@nhaastro.com.

The class will be held even if cloudy.

Look for e-mail for class updates or storm cancellation. This is the same night as the Coffee House so astronomers may be observing at class time.

★ Bob Sletten

YFOS Log Book**A Busy Month**

Saturday, December 20. **David Weaver** donated and delivered a full propane tank to the Observatory.

Friday, January 9. **Larry Lopez** moved the tank from the observatory to the warming room and prepared the propane tank. Larry donated a wrench for the propane tank.

Sunday, January 11. Larry and **Bob Sletten** installed a newly donated by Larry 6-amp 15-volt metered power supply. They also installed the donated 100-pound propane tank and brought the heater up.

Currently **Chase McNiss** has the new 20-pound propane tank and the old tanks are in Larry's barn (awaiting shipment to the transfer station) and connected to the catalytic heater (empty, awaiting the same fate).

Sunday, January 18. **Larry, Chase, Gardner Gerry, and Mark Duckworth** chipped, shoveled, and plowed in preparation for the Freeze Your Buns event.

Thursday, January 22. Larry traded his F350 plow truck in for a lowly 2000 Tacoma 4x4. Larry was reliving his youth -- again.

Friday, January 23. Freeze Your Buns Coffee House. Larry arrived for inspection at 4:30 p.m. and found three people already there. He wandered around and left his 3-inch Brandon for inspection by Bob. He left at 5:10 p.m. to go to Raymond for Aikido, and arrived back at 10:00 p.m. or so and stayed until midnight.

Gardner was the last to go. **Joel Harris, Larry, Gardner, Bob Sletten, Alan Shirey, Mike Townsend, Joe**

Derek, and more were there. All were gone by midnight.

The Titan was said to be pointing better with the new power supply. The Observatory did not show any frost inside so the vapor barrier and runoff fix seems to be working. The C14 images of Saturn were said to be excellent. It was a dandy night, but cold (something like 2 deg. F).

★ Larry Lopez

ATM True Grit

The ATM meeting occurred on Sunday January 26 at Don Ware's house.

James Moffatt, Don Ware, and Larry attended. Jim had purchased an RV6 from eBay and was wondering about its quality. Larry has a 10-inch Cave F6 OTA that he has cherished for a long time and he was wondering if it was as wonderful as he remembers.

The verdict: the RV6 is wonderful; The 10-inch Cave so-so.

Don has an automated optics testing facility and this is a wonderful thing. Larry, Don, and Jim carvorted optically for some time and exchanged many subsequent e-mails.

★ Larry Lopez

The Bottom Line

The Treasurer reports the following financial information:

Cash Balance: 3689.14

Deposits: 105.00

Memberships: (2) new, (2) renewal, (1) \$15 donation

A/P: \$46.47 Insurance

Net Balance: 689.14

Membership: 128

New Members

Anthony Costanza, Plaistow, NH (Astronomy Shoppe business)

Pete Allen, Bedford, NH (has Lomo 6-inch Mak on Equatorial Mount)

Donations

David Weaver 100 lb. Propane Tank and smoke detector

Thanks David for donating the tank that keeps the warming room warm.

★ Barbara O'Connell

Looking Back at Last Month

Opening. President **Joel Harris** related his history with the club. 1979 was its start. Someone placed an ad in the Concord Monitor to invite people to start an Astronomy Club. He and three others founded the Concord Astronomy Club. NHAS was a name change that occurred in the 1980s. NHAS incorporated in 1985 for the coming of Halley's Club, anticipating that the public would show more interest. Joel gave update on the Mars Spirit rover and brought 3D pictures and 3D glasses to view.

Public Observing. **Ed Ting** stated it has been too cold, many skywatches cancelled. Upcoming skywatches are Eastman Recreational Center (off I-89) on Sat. Jan. 24 and Mensa skywatch.

Committees. **Web:** **Barbara O'Connell** noted club e-mail addresses for officers were updated and tested.

ATMs: **Larry Lopez** said there was to be a meeting on Sunday Jan. 25.

Membership Comm.: Astro 201 will start in February (Coffee House night) instead of January. The collimation class was dropped.

Photography Comm.: Meeting Sat. Jan. 17 at Nashua Library. Re-org and CCD imaging to be topic of meeting.

YFOS. Clean-up on Sun. Jan. 18 scheduled to prepare for January Coffee House night Fri. Jan. 23. Mount has vibration problem with R.A. Should do Gemini mount training again in Feb.

Treasury. **Barbara O'Connell** reported a balance of \$3881.63, and three new members; **Dan Phillips** of Cambridge, MA attended.

Club Loan-a-scope was available.

Member Moment. (A new agenda item that Joel will add each month)

- Any member can present a 2-4 minute tale of an astronomy-related "wow" moment
- Joel demonstrated by describing his experience at the 1979 solar eclipse in North Dakota.

Other Business. Are we doing anything for Venus Transit in June? **Marion Hochuli** asked. Not yet, but CMP might have something, but so far no members have planned anything.

★ Barbara O'Connell

NASA Space Place

Flying in Formation

By Patrick L. Barry

You can almost see the tabloid headlines now: "Midwest farmer spies UFO squadron flying in formation!"

If only this fictional farmer had been keeping up with NASA's Space Place column, he would have known that the string of white dots moving in formation across the pre-dawn sky were satellites, not alien spaceships.

Beginning next year, a series of challenging, high-precision launches will insert four satellites into orbits with just the right altitude, position, and orbital inclination to follow in lock-step behind NASA's Aqua satellite (launched in May 2002). Scientists have dubbed this squadron of satellites the "A-Train." Along with Aqua, the celestial parade will include Cloudsat, CALIPSO, PARASOL, and Aura.

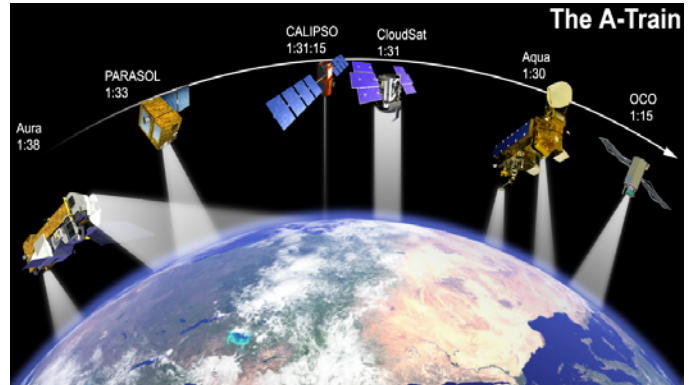
In April 2004, NASA will launch CloudSat, an Earth-observing satellite with unique cloud-measurement abilities. These measurements will fill an important role in our understanding of global climate change, making long-term climate change scenarios more accurate and dependable.

So why bother flying in formation? By passing over the same swath of land within seconds or minutes of each other, the satellites will give scientists snapshots of essentially the same scene using a total of 14 different measuring instruments.

CloudSat alone carries only one: a millimeter-wavelength radar sounder.

This sounder--the first of its kind put into orbit--lets scientists see a vertical "slice" of the atmosphere

that shows clouds, water, and ice between the ground and 30 km in altitude, with a vertical resolution of 0.5 km. By itself, this instrument would provide an important and unique view



of Earth's atmosphere, since the accurate portrayal of clouds is one of the glaring weaknesses with current simulations of climate change.

But this cloud data is even more valuable when combined with measurements from the other satellites in the A-Train. Scientists can then see connections between, say, temperature and the behavior of clouds. A better understanding of these connections is one of the most sought-after goals of climate research. Changes to global cloud cover would, in turn, have a feedback effect on global temperatures.

Learn about CloudSat and the A-Train at <http://cloudsat.atmos.colostate.edu>. Kids (and grownups) can do interactive cloud picture scrambles and learn "Cloudspeak" (the names of different kinds of clouds) at The Space Place, http://spaceplace.nasa.gov/cloudsat_puz.htm.

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

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This month's contributors:

Joel Harris, Ed Ting, Larry Lopez, Bob Sletten,
Barbara O'Connell



2004 Officers
President: Joel Harris
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New Hampshire Astronomical Society
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Meeting, Feb. 13, CMP

NHAS Upcoming Events

Event	Date	Time	Location
Feb. meeting	Feb. 13	7:30 p.m.	Planetarium, Concord, NH
Coffee House	Feb. 20	7:00 p.m.	YFOS
MENSA Skywatch	Feb. 21	6:30 p.m.	Center of NH, Manchester, NH
CMP Skywatch	Mar. 5	7:00 p.m.	Planetarium, Concord, NH
March meeting	Mar. 12	7:30 p.m.	St. Anselm's College, Goffstown, NH
Messier Marathon	Mar. 19	All night	Lopez Mt. And YFOS