



Observing Galore in 2004

President's Message

Last Year

Whew! We made it through 2003!
What a busy year!

We offered some Astronomy 101 classes for learners. It was great that we had formal instructions on the heavens and equipment. Thanks to **Bob Sletten** and his crew for that!

Ed Ting, our public observing man for several years, has been very busy this last year. This guy and his helpers go all over the state to open the eyes of the public. I use the word "enlightenment" to explain why they do this.

This year, Mars almost hit the earth! Well, sort of – closer than normal. I had brought my Yogis to YFOS to see it up close this past Fall. It was great to have our brother planet right next door. Then those auroras in late October! With an intensity I haven't seen for years! I guess the sun wanted to end this solar maximum with a colorful bang.

Then we lost a grand old astronomer, **Ed Dougherty**, one of our senior members. He had helped so many of us in our projects and his view of things kept us on our toes.

Thanks to the work of people in two NHAS committees, we now have more equipment upgraded.

At YFOS, the club's 16-inch Dobsonian scope received a new truss and dob mount. Now the 16-inch scope is portable. A telescope is useless if it is not used. The original standard tube and dob mount had problems. A senior optical designer, **James G. Baker**, had originally donated this commercial scope. By the way, our library started because he would only donate an optics book if we had a club library. Funny

thing, that book has never been circulated; so I will bring it to the meeting.

The Celestron 14-inch telescope that **Larry Lopez** donated last year has a new mount. We bought a Gemini Titan mount from Losmandy through Rivers Camera in Dover, NH.

Starting from the pier, our new VP, **Don Ware**, drew up and found materials for a new steel post. I cut the material and welded it together. It wasn't easy to pick up a 300 lb. pipe. An aluminum adapter was machined to connect the mount to that post.

The Gemini mount was ordered and picked up by **Chase McNiss**. The mount and its brain had some issues for us to figure out, but now it is running fine and installed in the observatory building. We also have several astronomers that are now trained on it. I want to thank Chase and Don for their work on these projects.

This Year

During this coming year, we have plenty of things to see. The upcoming events up there and down here, just for us are:

Jan. (now) – Saturn, max. tilt and at opposition.

Jan. to Mar. – Rover on Mars and is working.

Jan. 23 – Freeze Your Buns Winter Observing?

Mar 19 – Messier Marathon

May 1 – Astronomy Day at CMP planetarium (Apr. 24 at Boston)

Mid-May – Comet Linear, mag. 3-4

Late May – Comet NEAT, 3rd mag.

May 21 – Daytime lunar occultation of Venus.

June 8 – Transit of Venus on Tuesday, not since 1882.

Aug. 13-14 – Stellafane in Springfield, VT

Oct. 27-28 – Lunar eclipse.

Nov. 5 – Conjunction of Jupiter and Venus, morning sky.

Nov. 9 – Daytime lunar occultation of Jupiter.

Dec. 7 – Lunar occultation of Jupiter.

Sources:

http://skyandtelescope.com/observing/highlights/article_1135_1.asp

<http://marsrovers.jpl.nasa.gov/home/index.html>

These events are not just for us to see or do, but to whet the appetites of the public. You never know if a surprise object will appear, so keep looking out there. Hang on to your telescope, the solar or cosmic rays may blow your mind.

I hope to see you at our meetings or events.

★ President Joel Harris

Public Observing Highlights

The 2003 Public Observing recognition award goes to club member **Gardner Gerry**. NHAS is organized as a non-profit organization as an educational entity, so I view Public Observing as being vital towards our charter.

As with last years' recipient(s), Gardner is a behind-the-scenes individual, supporting the club and its efforts with his telescope and knowledge of the night skies. Congrats, Gardner!

★ Ed Ting

Noteworthy News
Solar System Buzz.....Page 2

Solar System Buzz

A great many noteworthy events have happened within our solar system in the past month. Maybe the planets are glad to see that our economy is improving and we'll be able to visit more often.

In a story appearing in Spaceflight Now (www.spaceflightnow.com) on Jan. 2, "The Stardust probe flew through at least two significant jets of debris during its approach to comet Wild 2 today and captured a stunning image of the comet's icy heart showing overlapping pits and depressions where material boiled off in the past."

The Beagle 2, a British space probe, sent to the surface of Mars to look for evidence of past life has remained silent since its planned Christmas Day touchdown. Designed and developed on a wing and a prayer by lead scientist **Prof. Colin Pillinger**, it had a free ride from the European Space Agency's Mars Express orbiter that arrived in Mars orbit in mid-December. The Brits missed a golden opportunity to announce, "The Beagle has landed."

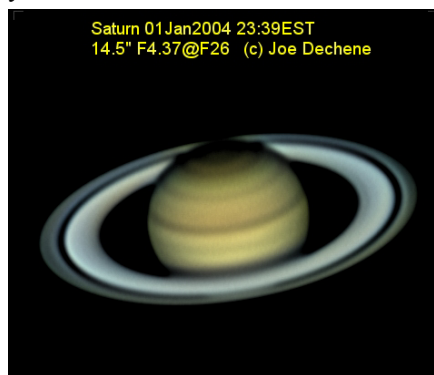
The big news was the successful landing of NASA's Mars Rover Spirit on the night of Jan.4-5 and the stream of excellent photos that have been beaming back to Earth since then.

Not one to ignore a good thing coming, **President Bush** will announce this week his plans to rekindle exploration of the Moon. After 30 years, it has become boring just orbit the planet.

★ Michael Frascinella

Saturn in Sight

Member Joe Dechene used his 14.5-inch telescope and a Philips ToUCam pro webcam to take this photo in his yard in Nashua.



2004 Election Results

Ha! Fooled you! These are not the Presidential election results, but your club election held last month. The Secretary ran a hotly uncontested election but won anyway.

Joel Harris, President
Don Ware, Vice President
Barbara O'Connell, Treasurer
Mike Frascinella, Secretary
John Blackwell, Board

AstroPhotons

The January Photography meeting will be held at the Nashua Public Library, Saturday, Jan. 17 at 1:00 p.m. Please be advised that we will meet at the main library (Court St. *not* Chandler). Direction can be obtained from

http://www.nashua.lib.nh.us/npl_main.shtml

The format will be open discussion. We will establish dates, topics for review, and format for future 2004 meetings.

Also, Richard Flemming will share some of what he learned during a multi day image processing class taught by Ron Wadoski. Look forward to seeing you there.

★ Mike Kertyzak

ATM True Grit

An ATM meeting will be held at 2 p.m. on the Sunday following the NHAS business meeting (Jan. 18). It will take place at the Whipple Free Library in New Boston. Please RSVP me.

ATM is amateur telescope making, so if you have a new telescope and need help you might consider making the trip.

★ Larry Lopez

YFOS

David S. Weaver donated a 100-pound propane tank and delivered the same to YFOS. Thank you very much, Dave. We really appreciate it (especially in this frigid weather).

★ Larry Lopez

The Bottom Line

Cash balance was \$3,852.48
 Deposits: \$30.00 (1 new, 1 renewed membership)
 A/P: \$12.95 (for checks)
 Net Balance: \$3852.48
 Membership: 122

New Member

Robert Larkin of Bedford, NH (has Meade 8-in. LX90 SCT)

Donations

NHAS thanks the following members for their generous donations.

Dave Weaver 100 lb. propane tank for YFOS

Chase McNiss case for transporting the 14-inch observatory scope

★ Barbara O'Connell

Web Uploads

The 2004 web calendar is being updated with dates for events as we confirm them. Check the web site weekly for the latest news about NHAS events.

★ Barbara O'Connell

Looking Back at Last Month

Opening. VP **Todd Miller** opened the meeting and noted that the 2004 calendars were sold out.

Scope of the Month. **John Bishop** brought a 4.25-inch reflector from Stargazer Steve. At only 13 pounds, it featured a solid wood tripod, a Rigel Quickfinder, and 17 mm eyepiece.



Photo by Chase McNiss

The mirror cell was well ventilated and easy to collimate. It had a decent rack and pinion focuser and cost less than \$300. Club scope was with Joe Derek for cleaning.

Committees. ATM Comm. – **Larry Lopez** noted that there would be no meetings until mid January.

Photo Comm. – **Chase McNiss** said they needed to regroup and identify a group leader for the coming year.

(See Looking Back, p. 3)

Looking Back (from p. 2)

Web Comm. – **Barbara O'Connell** noted that new 2004 events have been posted as they develop. Membership Comm. – **Bob Sletten** said the Astro 201 course was outlined and will be start in January or February.

Public Observing. **Ed Ting** reported on not many skywatches this month and a few for next month. He honored **Gardner Gerry** for public observing support beyond the cal of duty in 2003, showing up early, staying late, and attending even in poor weather.



Photos by Chase McNiss

Gardner said he just wanted to give something back, especially to the kids.

Elections: Final nominations were accepted. The nominees were: President: **Joel Harris, Todd Miller**; VP: **Don Ware, Alan Shirey, Nils Wygant**; Treasurer: **Barbara O'Connell, Roger Goun**; Secretary **Michael Frascinella**; Board: **Joel Harris, Joe Derek, John Blackwell**. Ballots were distributed and then tallied. The winners were announced: **Michael Frascinella** for Secretary, **Barbara O'Connell** for Treasurer, **Don Ware** for Vice President, and **Joel Harris** for President.



(Don was absent for the photo)

YFOS. A local contractor plowed the parking field recently.

Treasury. **Jim Warendt** noted that liability insurance would increase 18%. He has requested a quote for property insurance based on an estimate of \$47,000 for the buildings, scopes, and accessories. Current membership was at 119 and bank balance was \$4150.

Evening Program. An Astronomy Social followed the meeting, with many tasty treats, even a platter of shrimp!



★ Michael Frascinella

NASA Space Place

So Little Time, So Many Galaxies

By Dr. Tony Phillips

Fourteen billion years ago, just after the Big Bang, the universe was an expanding fireball, white hot and nearly uniform. All of space was filled with elementary particles and radiation.

Today the universe is completely different. It's still expanding—even accelerating—but there the resemblance ends. The universe we live in now is "lumpy." Great cold voids are sprinkled with glowing galaxies and stars. Around stars, there are planets. On one planet, at least, there is life. How we got from there to here is a mystery.

Finding out is the goal the Galaxy Evolution Explorer, (GALEX), a small NASA spacecraft launched into Earth orbit April 28, 2003. GALEX carries

an ultraviolet (UV) telescope for studying galaxies as far away as 10 billion light-years.

Caltech astronomer Peter Friedman says "GALEX is a time machine investigating the evolution of galaxies

over 80% of the history of our universe. While the Hubble Telescope can see faraway galaxies, GALEX is surveying the entire sky, cataloging millions of galaxies during its 2-year mission.

GALEX is a UV mission for a reason. Friedman explains: "UV radiation is a telltale sign of star birth." Stars are born when knots of gas condense in interstellar clouds. The ones we see best are the big ones—massive stars that burn hot and emit lots of UV radiation. "These stars are short-lived, so they trace recent star formation."

Understanding star formation is crucial to studies of galaxy evolution. When galaxies collide, star formation surges. When galaxies run out of interstellar gas, star formation wanes. In galaxies like the Milky Way, star-forming clouds outline spiral arms. The shapes of galaxies, their history, and fate are all connected by star formation.

Even life hinges on star formation, because stars make heavy elements for planets and organic molecules.

"Our measurements of UV radiation will tell us both the rate at which stars are forming in galaxies and the distances of the galaxies," says Friedman.

How did we get here? GALEX will show the way.

Find out more about GALEX at <http://www.galex.caltech.edu>. For children, visit The Space Place at http://spaceplace.nasa.gov/galex_make1.htm and make a beautiful galactic mobile while learning about some of the different shapes galaxies can take.

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Use our web site:

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

This month's contributors:

Joel Harris, Ed Ting, Larry Lopez, Barbara O'Connell, Joe Dechene, Chase McNiss, Mike Kertyzak



2004 Officers
President: Joel Harris
Vice President: Don Ware
Treasurer: Barbara O'Connell
Secretary: Michael Frascinella

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Cold Weather Observing, Jan. 16, St. Anselm

NHAS Upcoming Events

Event	Date	Time	Location
Wilkins School Skywatch	Jan. 12	6-8 p.m.	Wilkins Elementary School, Amherst, NH
Jan. meeting	Jan. 16	7:30 p.m.	St. Anselm's College, Goffstown, NH
Freeze Your Buns Coffee House	Jan. 23	dusk	YFOS – Annual mid-Winter Observing Party
Eastman Skywatch	Jan. 24	6:00-7:30 p.m.	South Cove Activity Center, Eastman, Exit 13 off Rte 89
CMP Skywatch	Feb. 6	7:00 p.m.	Planetarium, Concord, NH
Feb. meeting	Feb. 13	7:30 p.m.	Planetarium, Concord, NH