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THE NHAS OBSERVER

Newsletter of the New Hampshire Astronomical Society

"All the news that fits in print"



Volume 2002 No. 12

December 2002

Election Time, Time to Vote

President's Message

It's that time of year again to elect new club leaders! We've got some great candidates on the ballot, some new names, and some familiar names.

I have really enjoyed being President this year and, even though I am not running for re-election, I look forward to serving the club in many other ways. The reward is two-fold when volunteering for NHAS.

Candidates for 2003 Offices

Several members were nominated for office at the November meeting but some may be a little borderline. **Todd Miller** was nominated for President but has since declined. Here is the current list:

President - **Joe Derek**

VP - **Joe Derek, Barbara O'Connell**

Treasurer - **Jim Warenda**

Secretary - **Michael Frascinella**

Board (3 yr.) - **Don Ware, Linda**

Lopez, Steve Stefanik

See page 2 for specifics. Nominations will continue briefly at the December 13 meeting after which we will vote.

Please attend so you can participate in the election of your 2003 officers.

The M-31 Atlas Project

Also, I am pleased to present fellow member, **John Blackwell**, as our guest speaker at the December meeting, speaking about the M-31 Atlas Project.

Here is a summary in his own words: "By taking many high resolution images of M-31 (Andromeda Galaxy), an atlas is being prepared to allow identification and monitoring of globular clusters, open clusters, nebulous associations, and variable stars within that galaxy.

Though this has been done many times before by much larger telescopes, this project demonstrates the capability of amateur equipment to produce useful scientific information."

I hope you can join us for this exciting December 13th meeting. For more information about the elections, please visit this NHAS web page:

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

(see section IIB).

For more information about our speaker, please visit John Blackwell's web site: <http://www.regulusastro.com/>

Happy Holidays,

★ Barbara O'Connell
NHAS President 2002

Public Observing Highlights

After a terrific skywatch at Reed's Ferry in Merrimack on Oct. 23, NHAS Public Observing has had some awful luck with the weather. Four events in a row – Newton on Nov. 5, Mountain View on Nov. 13, Crotched Mountain on Nov. 17, and Wilkens School on Nov. 22 – were canceled due to poor weather. Most of these have been rescheduled after the New Year. The Washington St. School in Penacook decided to reschedule their Dec. 2nd event due to forecasted poor weather.

I did speak at the annual sleepover event at Wilkens School in Amherst on the 22nd. The kids loved my slide show and asked if we could come back on a clear night. Right now we are looking at Jan. 21st for this event.

★ Ed Ting

Membership Matters

The first session of the Astronomy 101 course was a resounding success. It was held on Nov. 8 at YFOS. Fifteen people attend a one-hour introductory

presentation on telescopes given by **Mike Townsend**. Afterwards the students joined the Coffee house observing session (already in progress) for some hands on telescope use.



Photo by Bob Sletten

The next class, entitled "Navigating the Night Sky" will be presented by former President **John Pappas**. If there are no major objections from the shareholders in attendance, then this class will be conducted at the Coffee House observing night on December 27.

There didn't seem to be any conflicts with the Coffee House even though the white lights in the warming room were lit for an hour (we have good shades). Parking was full but not problematic.

★ Bob Sletten

Feature Story

President's Award.....Page 2

President's Award

The surprise of the November meeting was the announcement of the President's Award for 2002. Well, it was at least a surprise to the recipient.



Photo by Jim Warena

This award is given by the club president to a member who has performed outstanding service to the club and to the cause of amateur astronomy. Barbara read praises and comments from several members and then presented the award to **Chase McNiss**.

Your editor remembers when Chase was President in 1999. He brought to the position a lot of good old common sense and dedication to NHAS and the cause of amateur astronomy. He projected a sense of authority but could also be humble as well as persistent. He possessed a knowledge of astronomy that he was always willing to share with someone in need.

Chase was also the driving force in the genesis of the Photography Committee and assisted many members in learning that aspect of astronomy.

Chase humbly received the award and members gave him a very hearty applause in appreciation for his service to the club.

AstroPhotons

A tally of Astrophoto committee members showed that many members would be travelling over the Thanksgiving holiday so we have moved the next meeting to Saturday, Dec. 7 at 3 p.m. with possible observing and photography after sunset.

I am prepared to give a presentation on types of cameras (SLR vs. CCD), astrophotography techniques such as piggy back, prime focus, and eyepiece projection rain or shine.

★ Mike Kertyzak

ATM True Grit

The next ATM meeting is at **Larry Lopez's** house in New Boston on Sunday, Dec. 15 at noon.

The topic – so timely – is about buying a telescope for Christmas [I hope the topic is about buying the gift for someone else, of course – Editor].

Please notify Larry if you plan to attend. RSVP to lopez@mv.mv.com.

YFOS

A meeting will take place on Saturday, Dec. 14 starting at 10 a.m. to clean the floor, load the propane tank, and chip ice in preparation for the Freeze Your Buns event. (No, we don't save the ice chips for iced coffee at the FYB event.) RSVP to **Larry Lopez** if you plan to attend.

Lights Out!

NHCRL has put out its latest newsletter on nighttime lighting issues. Now is the time for submitting local ordinances to your Town Meeting. Consideration of such items takes place in December.

Contact me for a copy of the newsletter or any questions on light pollution or light trespass.

★ Mike Pelletier

mikpel@hotmail.com

The Bottom Line

Current Balance: \$8,200
2003 membership is 115 and growing. There were no donations this month.

★ Jim Warena

Looking Back at Last Month

Opening. **Barbara O'Connell** started the meeting by opening the nominations for 2003. Nominees were:

President - **Joe Derek, Todd Miller**
VP - **Joe Derek, Barbara O'Connell**
Treasurer - **Jim Warena**
Secretary - **Michael Frascinella**
Board (3 yr.) - **Don Ware, Linda Lopez, Steve Stefanik**

President's Award: Went to **Chase McNiss** for outstanding service to NHAS and to Amateur Astronomy
Book of the Month. none this month.
Scope of the Month. none this month
Committees. **Web:** **Barbara** noted no updates but worked on some administrative problems. **Photo:** **Chase McNiss** said the next meeting was TBD. **Membership:** **Bob Sletten** reported via e-mail that the first class of Astronomy 101 was well attended and appreciated. **ATMs:** **Larry Lopez** said the next meeting would be Nov. 17 at noon at the New Boston Library.
YFOS. **Larry Lopez** said the new heater had been installed in the warming room, the porta-potty was winterized (salted), and winter plowing would be done as feasible.
Public Observing. **Ed Ting** noted that the Reed's Ferry Skywatch was busy for 3 hours dealing with about 350 people. Subsequent skywatches were canceled due to poor weather.
Treasury. **Jim Warena** reported 112 members and a bank balance of about \$8400 with all bills paid. He said this year we finally spent more money than we collected.

Evening Program. **Lew Gramer's** topic was, "Will the Lion Roar Again?"



Photo by Jim Warena

Looking Back (cont'd. from p.2)

Lew presented an informative slide show about meteors and the coming Leonid meteor shower.

He reviewed some basics, then presented some history on Comet Tempel-Tuttle and on famous meteor showers and storms.

Storm models from several researchers predicted a strong likelihood of storm along the east coast of the U.S.

The first predicted storm was to peak over western Europe. The second predicted storm was to peak over the eastern U.S. Both were due in the local pre-dawn hours. Earth grazers with long trails would also be likely.

Lew continued with a discussion of how to watch the Leonids, including proper clothing, equipment, and record taking techniques.

He stressed that amateur observers would provide the bulk of data that researchers would use to develop models for future meteor storms. He then gave details about how and what to record while observing the shower.

Lew gave references to web sites to check for further information and ended with some time-compressed videos of last year's meteor shower as witnessed from YFOS. On the audio track you could hear plenty of excited observers reacting to each meteor.

★ Michael Frascinella

NASA Space Place**Enlightened by the Darkness**

By Diane K. Fisher

On the clearest of nights, I may see a dozen stars from my suburban backyard near Los Angeles. Unfortunately, my studies of space and astronomy have been confined to books and the pictures taken by others. Seldom have I experienced for myself a truly dark, clear, moonless sky.

One of those rare times was a summer camping trip in Bryce Canyon, Utah. I lay on my sleeping bag in an open area away from trees. I saw millions of stars (so it seemed) and the cloud of the Milky Way streaking across the sky. Nothing of planet Earth was in my view. It was then I glimpsed my true situation in the universe, a speck of dust

clinging to a tiny stone hurtling through the darkness of a cold, infinite universe. I was awestruck by the beauty of the stars and the darkness – and terrified!

In the light of day and a more "down-to-Earth" state of mind, I wondered: With around 100 billion galaxies out there, why is it still so dark out there?

Until the 20th century, astronomers thought the universe was infinite. They were perplexed though, because in an infinite universe, no matter where you look in the night sky, you should see a star. Stars should overlap each other and the sky should be blazing with light and hot as the sun. This problem became known as "Olber's Paradox."

Astronomers now realize that the universe is not infinite. A finite universe – that is, a universe of limited size – even one with trillions of stars, just wouldn't have enough stars to light up all of space.

Although a finite universe is enough to explain the darkness, the expansion of the universe also contributes. As light travels from a distant galaxy to us, the space through which the light is traveling is expanding. Therefore, the amount of energy reaching us dwindles all the time, thus causing the color of the radiation to be "redshifted." (The wavelength is stretched out due to cosmic expansion.) The more distant the galaxy, the more redshifted the light.

The largest redshift astronomers have measured comes from radiation that was emitted when the Universe was only 300,000 years old. This radiation has taken over 12 billion years to reach us and, although it began as infrared radiation, it is now seen as the microwave background radiation.

GALEX (Galaxy Evolution Explorer) is a NASA space telescope that will survey the universe, including galaxies with redshifts that indicate their light has been traveling for up to 10 billion years (or 80% of the history of the universe).

Read about GALEX at this website: <http://www.galex.caltech.edu/>.



For budding astronomers, print out The Space Place New Millennium Program calendar at <http://spaceplace.nasa.gov/calendar.htm> to identify great sky watching opportunities.

Diane K. Fisher is the developer and writer for The Space Place web site.

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

CHANGE OF ADDRESS

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.

**Merry Christmas and
Happy New Year!**

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

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Attn: Treasurer

Send E-mail to:

Treasurer@nhastro.com

Use our web site:

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

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President:: Barbara O'Connell President@nhastro.com

Vice Pres.: Joe Derek VP@nhastro.com

Treasurer: Jim Warena Treasurer@nhastro.com

Secretary: Michael Frascinella Secretary@nhastro.com

**New Hampshire Astronomical Society
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Manchester, NH 03105-1001**

M-31 Atlas Project, CMP, Dec. 13**NHAS Upcoming Events**

Event	Date	Time	Location
Alton Skywatch	Dec. 12	7:00 p.m.	Alton Central School, Alton, NH
December meeting	Dec. 13	7:30 p.m.	Planetarium, Concord, NH
Newton Skywatch	Dec. 17	7:00 p.m.	Newton Memorial School, Newton, NH
Coffee House	Dec. 27	7:00 p.m.	YFOS
Crotched Mountain Skywatch	Jan. 10	7:00 p.m.	Crotched Mountain, Frankestown, NH
Cub Scout Skywatch	Jan. 15	7:30 p.m.	St Catherine's Church, Manchester, NH
Wilkins School Skywatch	Jan. 21	6:30 p.m.	Wilkins School, Amherst, NH
January 2003 meeting	Jan. 24	7:30 p.m.	St. Anselm's College, Goffstown, NH