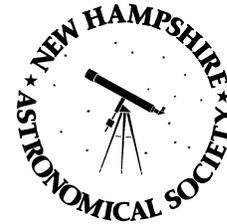


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Newsletter of the New Hampshire Astronomical Society

Volume 2004 No. 3

"All the news that fits in print"

March 2004

New Boston Marathon

President's Message

Spring is coming !

Snow is melting, grass is showing, and spring heavens are rising in the east. I am talking about the spring galaxies that await us. This part of the sky is devoid of galactic dust, so it is a window into the deep. There are areas on some maps that show more galaxies than stars. I get lost there.

Of course, the best time to see them really fast is at the **Messier Marathon**. So this 19th of March, you have chance to take your map and check them off. Of course, you can try to find the other M objects during that night. This time of the year gives you the opportunity to see all 109 Messier objects. This is a personal competition -- no judges looking over your shoulder in the dark. **Ed Ting** will explain the details at the March 12 meeting. **Larry** and **Linda Lopez** are hosting our event again this year at their house in New Boston. [Hey, it's the New Boston Marathon!-MAF]

You must realize that it is all training for **Astronomy Day**. You fill yourself with deep space dust, and then share your experience with the public. At the Christa McAuliffe Planetarium, we will set up all kinds of displays inside and out on the grounds. Scopes and other equipment surround them all. If it is clear in the evening, we show the heavens. I wonder if Comet Linear will be visible?

It is like a convention for us, a meeting of the minds. The Planetarium attracts 400 to 600 people that may pass through our area. The staff supplies tables and power to whomever needs it. I had e-mailed a request for volunteers. If you haven't responded by now,

repent! Otherwise, that asteroid that missed us last month could come back for you. In March, I will e-mail a list of unmanned spots on our regular exhibits.

I must say that Venus is so high in the western sky! A few weeks ago, I saw the moon to the left of it. I should have told you that it was coming. But don't forget the other great planets out there, Jupiter and Saturn. I have always been amused when Jupiter has a moon on its edge and it looks like a wart.

Clear skies,

* Joel Harris
NHAS President 2004

Public Observing Highlights

The Coffee House on 3/20 was clouded out. I spoke about astronomy to the regional Mensa gathering on 3/21. The audience was enthusiastic, but it was cool and drizzling outside, so we didn't get the skywatch in that night.

March is a busy month. The CMP skywatch in Concord is on Friday, March 5. The NHAS Messier Marathon is March 19 (March 20 is the backup date.) On Thursday March 23 we have a skywatch at East Derry Memorial School, and on March 20, we're at North Salem Elementary School. Details and directions will follow in e-mail.

* Ed Ting

Messier Marathon

The Messier Marathon will occur on Friday March 19, with a rain date of Saturday March 20. You should be practicing. Go out every clear night and look for them even if there is moonlight.

Since I don't do very well at Messier Marathons, I've been doing an

automated CCD Messier Marathon as penance every clear night.

As for food, do not bring donuts. So far, we have Beef Stew by Linda and Beef Tips by Jim. Send mail about to what you plan to bring and I will publish a list.

It should be noted that, in the event that both days are clouded out, we will have a Messier Marathon Party on Saturday March 20. [In that case, bring your laser pointers and we'll have our own light show in the clouds. -MAF]

Come directly from work. Pack your car the night before. Park pointing down hill. More info will follow via e-mail as we get closer to MM Night.

For more information about this event see <http://www.messiermarathon.com/> or <http://www.seds.org/> which stands for Students for the Exploration and Development of Space..

* Larry Lopez



Noteworthy News
Astro 201 in Progress.....Page 2

On the web at <http://www.nhastro.com/>

Web Uploads

A few members provided cool web links this month:

For satellite info **Brian Icaza** uses this: www.heavens-above.com

John Blackwell found this neat animation of a black hole:

<http://www.cnn.com/interactive/space/004/black.hole/frameset.exclude.html>

* Barbara O'Connell

Astro201

The next Astro 201 course will be held on Friday March 26th at 7:30 p.m. at the NHAS Dark Sky Site in the warming room. **Don Ware** is good to go on the topic of "What Makes a GOTO Telescope Go." This promises to be an informative and insightful presentation from a man that has mastered the GoTo telescope.

Last month, **John Bishop** delivered the first Astro 201 session with a discussion of "Tips and Tricks for Observing". He had a very well-prepared talk that was loaded with detail on tricks to enhance one's observing time. Much of the information was physiological, which was an excellent perspective.



Photo by Bob Sletten

The topics included:

- Tips on how to get your eyes and mind optimized for observing.
- The advantages of keeping a log book with sketches of objects observed.
- Best techniques for keeping the body tuned for observing, such as food, liquids, sleep, warmth, and other related topics.

- The effects of age, comfort, and proper preparation. It was perfect for bringing attendees to their next level of observing excellence.

His presentation was well documented and is available from NHAS at <http://www.nhastro.com/courses/Astro201-Feb2004.htm>.

* Bob Sletten

ATM True Grit

The ATMs had a meeting on Sunday February 22, 2004 from 2 to 3 p.m.

Yuval Gronen had an offer he could not refuse: a Meade ETX 90 goto scope. Sadly it wasn't causing the rays of light to converge thus making for a indistinct image (i.e., it wouldn't focus).

Don Ware demounted the tube and the tail piece and discovered that the focus screw was not engaging the mirror cell. He got the focuser screw to engage, reassembled it all, and the rays of light seemed to converge (i.e., it would focus). Since Don had a cold, we finished up at this point.

The most amazing part of this was that Don was able to fix the scope despite all the help !

* Larry Lopez

YFOS Observatory

The lock for the warming room was repaired on Feb. 22nd. The new propane tank really works well.

* Larry Lopez

Meteor News

A few of the smaller meteor showers are visible in March. The gamma Normids (GNO) reach a maximum on March 13th with a radiant at RA 16h 36m, Dec -51, about 24 degrees due south of the bright star Antares in Scorpius. The ZHR rate is about 8 meteors per hour. The Virginids (VIR) continue throughout March, and last until about April 15th. These are mostly slow meteors, at about 30 km per second. ZHR rate is about 5 meteors per hour. On Mar. 20, the radiant is RA 12h 48m Dec -3.

For in-depth meteor news, see the North American Meteor Network (NAMN) web site at

<http://www.nammeteors.org>.

* Lew Gramer

The Bottom Line

Cash Balance: 3678.20

Deposits: \$30.00

(memberships: (1) new, (1) renewal)

A/P: \$46.67 Monthly

Insurance Premium

Net Balance: 3678.20

Membership: 132

New Members:

Paul Winalski Merrimack, NH (has friend who is member and Taychert Tscope 14

Donations:

Tony Costanzo \$15.00

Thank you, Tony!

* Barbara O'Connell

Looking Back at Last Month

Opening. **Joel Harris** opened the meeting and reviewed items in the US mail. **Rick Hedrick** thanked NHAS for the telescopes donated to the Bow High School astronomy Club. **Michael Frascinella** distributed some NASA CDs and packs of Space Place playing cards.

Book of the Month. **John Blackwell** brought in the Herald Bobroff Star Atlas, published in Australia, mate. It included large sky charts and also small scale charts for finding faint objects.

Joel Harris circulated some magazines that described various components of the Mars Rovers.

Scope of the Month. **Joel Harris** brought in Gadgets of the Month: an old Kodak box camera circa 1949, and a folded Schmidt camera fixture used with earl televisions

New member **Sandra Hernandez** has the loaner scope.

Public Observing. **Ed Ting** stated the Eastman skywatch was canceled due to freezing cold but the Mensa skywatch was on for Feb. 21. **Larry Lopez** announced the Messier Marathon at his home on March 19 and asked for help if snow needed to be removed.

Jupiter Transmissions. **Bob Sletten** gave a recap of Radio Jove Jive and played a tape of his latest attempts to record Jupiter's radio signals which were lots of loud whooshes. Whoosh we could have been there!

(See Looking Back, p. 3)

Looking Back (from p. 2)

Committees. ATMs: **Larry Lopez** said the next meeting is TBA.

Membership: **Bob Sletten** said Astro 201 is ready to go with **John Bishop** teaching the first class on Feb. 20. Joel mentioned that **John Blackwell** was teaching astrophotography classes at CMP on Feb. 20 and 27. Photo: The next meeting was to be Feb. 21 at 1 p.m. at the Nashua Public Library.

YFOS. **Larry Lopez** said the site is still there and that the Freeze Your Bubs event was well attended despite freezing cold.

Evening Program. **John Blackwell** treated us to a planetarium sky entitled "Tonight's Sky." This included anything to do with what is up in the sky.

We experienced the good old stomach turning high speed sky rotation, then some warp drive to the other side of the galaxy and back,, toured the planets, had laser pointer battles, went crazy with the audience voting controls, and had a general good time.

John noted that there has been a noticeable increase in interest in Astronomy. Could last August's closest approach of Mars, and a few rovers scurrying about Mars have anything to do with that?

* Michael Frascinella

NASA Space Place

Deep Space Network 2-for-1 Sale!

By Patrick L. Barry

Call it a "buy one, get one free" sale for astronomers: Build a network of radio dishes for communicating with solar-system probes, get a world-class radio telescope with a resolution nearly as good as a telescope the size of Earth!

That's the incidental bonus that NASA's Deep Space Network (DSN) offers the astronomy community. Designed to maintain contact with distant spacecraft in spite of the Earth's rotation, the large, widely-spaced dishes of the DSN are ideal for performing a form of radio astronomy called "very long baseline interferometry" (VLBI).

VLBI produces very high resolution images of the cosmos by combining the output from two or more telescopes. The result is like having a giant



**Goldstone Tracking Station
Mojave Desert, California**

"virtual" telescope as large as the distance between the real dishes! Since bigger telescopes can produce higher resolution images than smaller ones, astronomers need to use dishes that are as far apart as possible.

That need dovetails nicely with the DSN's design. To maintain continuous contact with deep space missions, the DSN has tracking stations placed in California, Spain, and Australia. These locations are roughly equally spaced around the Earth, each about 120 degrees of longitude from the others so that at least one dish can always communicate with a probe regardless of Earth's rotation. That also means that the straight-line distance between any two of the stations is roughly 85 percent of Earth's diameter-or about 6,700 miles. That's almost as far apart as land-based telescopes can be.

"We often collaborate with other VLBI groups around the world, combining our dishes with theirs to produce even better images," says Michael J. Klein, manager of the DSN Science Office at NASA's Jet Propulsion Laboratory. "Since our 70-meter dish

in Canberra, Australia, is the largest dish in the southern hemisphere, adding that dish in particular makes a huge difference in the quality of a VLBI observation."

Even though only about one percent of the DSN's schedule is typically spared from probe-tracking duty and scheduled for radio astronomy, it manages to make some important contributions to radio astronomy. For example, the DSN is currently helping image the expanding remnant of supernova 1987A, and Dr.

Lincoln Greenhill of the Smithsonian Astrophysical Observatory is using the DSN dishes to explore a new way to measure the distances and velocities of galaxies.

And all this comes as a "bonus" from the dishes of the DSN.

To introduce kids to multi-wavelength astronomy, NASA's website for kids, The Space Place, has just added the interactive demo, "Cosmic Colors," at <http://spaceplace.nasa.gov/cosmic> .

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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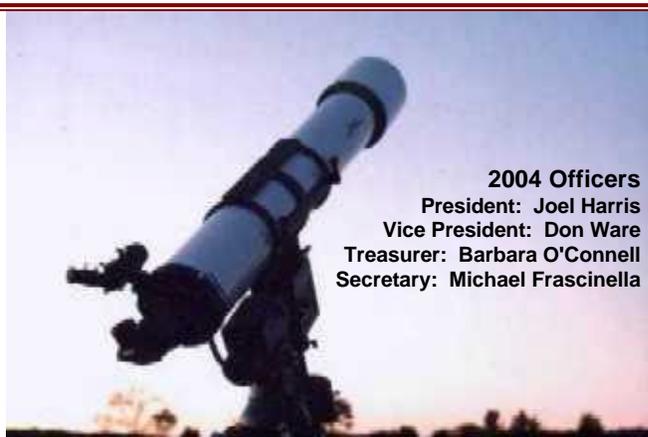
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This month's contributors:

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



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**New Hampshire Astronomical Society
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Manchester, NH 03108-5823**



Messier Marathon Prep, Mar. 12, St. Anselm

NHAS Upcoming Events

Event	Date	Time	Location
CMP Skywatch	Mar. 5	7:00 p.m.	Planetarium, Concord, NH
Mar. meeting	Mar. 12	7:30 p.m.	St. Anselm's College, Goffstown, NH
Messier Marathon	Mar. 19	all night	Lopez Mountain, New Boston, NH (Mar. 21 alternate date)
Coffee House	Mar. 19	5:00 p.m.	YFOS
Photography meeting	Mar. 20	1 p.m.	Nashua Public Library, Nashua, NH
East Derry Skywatch	Mar. 25	6:30 p.m.	East Derry Elem. School, East Derry, NH
Salem Elem. Skywatch	Mar. 30	6:30 p.m.	Salem Elem. School, Salem, NH
CMP Skywatch	Apr. 2	7:00 p.m.	Planetarium, Concord, NH
Newfields Skywatch	Apr. 7	7:30 p.m.	Newfields Elem. School, Newfields, NH
Apr. meeting	Apr. 9	7:30 p.m.	Planetarium, Concord, NH