

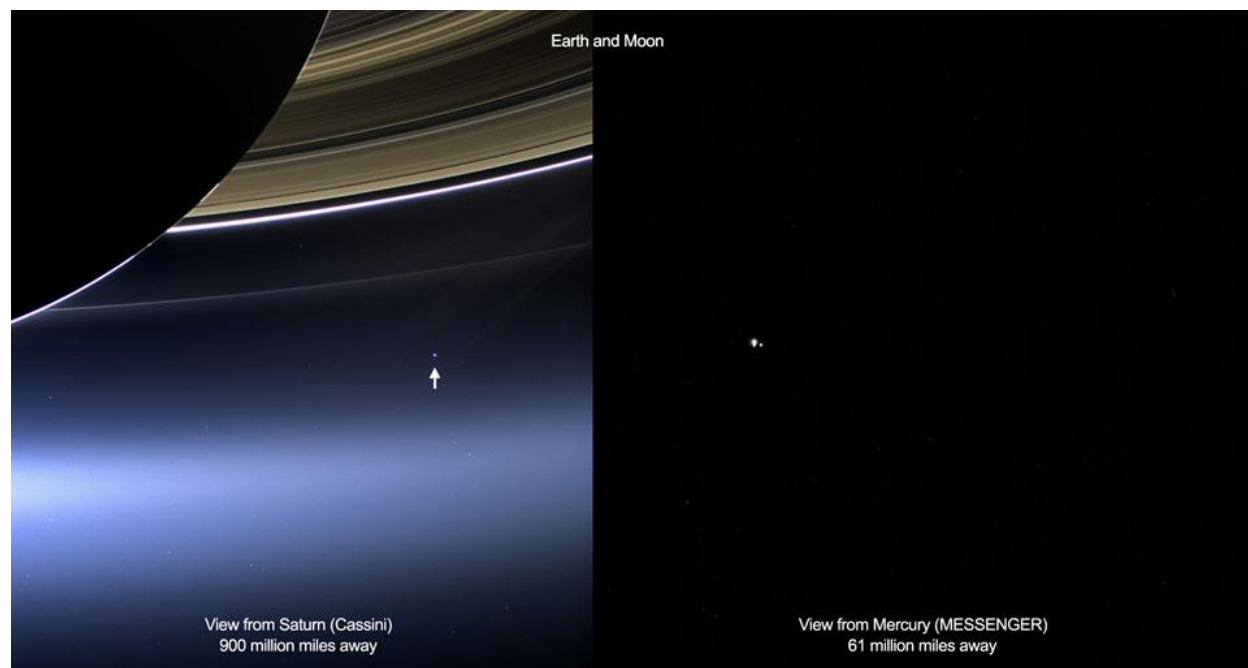


Vol. 2013, No. 7

Newsletter of the New Hampshire Astronomical Society

July 2013

Images of the Month



On July 19, NASA urged Earthlings to wave at Saturn from 5:27pm EDT as Cassini imaged the Earth-Moon system from about 900 million miles away (this had been done before, shown above left). That same day, another view of planet Earth was captured from the vicinity of the innermost planet Mercury. MESSENGER took an overexposed image in which the Earth and the Moon not only shone in bright sunlight, but were properly resolved! A much closer look at the duo is thanks to the venerable Voyager 1 soon after its launch (see page 3). (Credits: NASA/ESA/JPL/Cassini Imaging Team & JHUAPL)

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We had a great first half of the year with the delivery of several out-reach programs, and more importantly, several “In Reach” efforts in line with our plan for the year. I wish to thank everyone who participated with particular emphasis on the “In Reach” efforts. Some examples are:

“Astronomer is In” sessions
 Revamped Messier Marathon
 Astrophotography workshops
 Benedictine Park Events
 Revamped Coffee House Nights

Regarding the Coffee House Nights, unfortunately the weather did not cooperate much but they may change in the second half of the year. We will continue to look for using this as a forum for enablement for the club. On the web conferencing front, I have a free solution available to use and thanks to the efforts of some members, several options now for audio capability. I now feel that we can roll-out a first cut solution in Q3. Once complete, that will allow us to conduct more frequent enablement activities for our membership.

We have had a good mix of both outside and inside speakers for our business meetings. I have only the September and October slots to fill for the remainder of 2013. I'll be looking to 2014 soon after.

Stellafane is approaching (August 8th – 11th) and this year, I need your help. Our long time coordinator Joel Harris has a conflict and will be unable to attend. I am asking for a volunteer to transport our tent. In addition, we need someone who is willing to organize the annual cook-out on Saturday the 10th. This involves shopping and bringing a grill for the cook-out. Joel can answer some questions if needed to help in the planning. Larry Lopez also is very familiar with the process.

The New England Fall Astronomy Festival (NEFAF) is not very far away in September. NHAS has a huge role in this event, so look for messages for the ways to

contribute. People might think that they do not have value to add, but every little bit helps and matters. There will be more about this in the near future.

Regarding the portable planetarium proposal, EOC has developed a strategy much like the way we started off with the Library Telescope Program (LTP). This process allows us to effectively address the potential cost of ownership to NHAS. EOC has chosen to invest \$300.00 to get things started. Let me emphasize that the real challenge here is not funding but non-monetary issues involving the cost of ownership to NHAS. It will require commitment from a number of members in order to make this a reality. The Officers will meet on July 27th with this as the first item on the agenda.

You may have recently noticed some increased usage of our Facebook page. That is because the officers, board, and committee chairs now all have access to make postings. This way we can further serve the public and our membership. If you have not already done so, please like our page located at:

<https://www.facebook.com/nhastro>

We also plan to start posting pictures to FB of various events. Before implementing this, we will send correspondence to the membership allowing individuals to “opt out.” NHAS will maintain this list to comply with any membership privacy concerns. The membership package will also be updated so that new members will be able to opt-out.

In closing, I wish to thank the membership for all of your support, passion, and enthusiasm. We had a great first half of the year and there is a lot to look forward to the second half of the year. I am proud to be your president and honored to be a part of this wonderful organization.

Clear Skies,

Rich DeMidio
NHAS President

YMCA of Greater Nashua Solar Observing, Merrimack NH, July 17

We had clear skies (for a change!) for this event. There were about 60 children present, equally divided between the grades 1-3 and grades 4-6 age groups, all very patient and well-behaved. Pete Smith set up his 8" dob for white-light solar observing and I set up a Coronado PST to give the H-alpha view. We had a very good time!

- **Paul Winalski**

Weare Public Library, Weare NH, July 29

On only the second decent night of a thoroughly miserable July, we managed to hold a skywatch! NHAS members John Bishop, Pete Smith, Steve Rand, Stu May, Paul Winalski and I showed off the summer night sky behind Weare Middle School.

The parking lot lights were switched off before we observed with about 50 members of the public. Also in the mix was a reporter from the *Concord Monitor*, Sarah Palermo, with a photographer. We may see them again on First Fridays at MSDC.

- **Gardner Gerry**

[Gardner and Paul made the front page of the Concord Monitor of August 5. An inside page featured an [excellent article by Sarah Palermo](#). –Ed.]

North Hampton Public Library, North Hampton, NH, July 31

Sky conditions looked iffy, but given that we had had only one successful night-time sky watch in a month, we decided to call this one a GO. Ted Blank gave the indoor presentation. Ted, Gardner, and I were there for the sky watch proper. It was almost completely overcast.

Gardner managed to align on Arcturus and get his Gemini go-to system to find and track Saturn for him, although it wasn't visible naked-eye. I couldn't track it.

I didn't bother to set up the 14" reflector. I went with the 85mm TeleVue refractor instead. Very disappointing – I was only able to show Arcturus and Vega, with Epsilon Lyrae in the same field of view (skies were not clear enough to try to split the double-double). Everyone was gone by the time skies started to clear up enough to show anything else (like Mizar). Still, people got to marvel at Saturn's rings. It wasn't a complete loss, and I made a point of telling everyone that they could check out of the library a telescope with views equal, if not better than, the ones I was showing. I hope the North Hampton Library has us back again in the fall, when the skies are clearer.

- **Paul Winalski**

Earth and Moon (continued)



Looks Back by Voyager and Galileo. (Credit for both images: NASA/JPL)

On September 18, 1977, from a distance of 7.25 million miles, *Voyager 1* turned its camera back on Earth and took 3 images. These were combined into [a single view of the Earth and the Moon](#) (far left), the very first time both bodies had been pictured together. Fifteen years on, in December 1992, *Galileo* captured the duo in one shot from 3.9 million miles during a flyby (left).

In February 1990, *Voyager 1* was once again commissioned to take a look back, this time at the whole solar system. From 3.77 billion miles away at its vantage point 'above' the ecliptic, it shot 60 frames in the next 4 months. From 640,000 pixels' worth

of image data beamed slowly back to Earth, [a mosaic of six planets](#) was constructed – Mercury and Mars were lost to the glare of the Sun, and Pluto was much too faint to be image. In this portrait, Earth shows up as a [Pale Blue Dot](#), not even a pixel in size (more like 0.12 pixel). It was the iconic farewell portrait produced by an intrepid spacecraft.

NHAS July 2013 Business Meeting Report

The monthly business meeting was held at St. Anselm College, Manchester NH on July 26th, with our President **Rich DeMidio** presiding. The Treasurer's report by "**Rags**" follows (next page).

President's Report

Review of the first half year:

An iteration of social networking has been implemented and we have held in-reach events. A webcast solution has been identified.

Focus of the second half-year:

Increase use of social media, hold more members-only events and implement the webcasting solution.

We have expanded the use of Facebook, and all Officers, Board members and Committee Chairs can post to the FB account.

Regarding the Crotched Mountain variance, we are working with IDA to educate the town board, in hopes that the zoning board will deny the variance and force CM to adhere to current lighting guidelines.

The Officers' Q3 meeting:

Tomorrow we'll vote on the policy for posting pictures to Facebook. We'll also finalize steps to allow use of PayPal for donations and all renewals. NEFAF planning is underway, as well as plans for liaising with Maine astronomy clubs. The Annual financial review is likely to be pushed to Q4.

Stellafane is just round the corner, and with Joel Harris unable to come or organize our participation, we need volunteers to transport the NHAS tent, get supplies and organize the Saturday cookout. The Board will approve the costs.

Rex Gallagher has organized a private meteor shower watching event, and opened it up to NHAS

members. He will lead a party to the summit of Mt. Major in the white mountains on the night of August 11-12 to see the **Perseids**. Participants will meet at the Mt. Major Trail head at about 5pm, sign a release & waiver of liability agreement and proceed.

The agenda will include watching the sunset, talks by astronomers, a sky watch with a scope, observing the Perseids from 2am to 4am, watching the sunrise and descending by 6am.

Rex gave a talk on preparations for the hike and the 10 basic items to bring ([see hikesafe.com](http://see.hikesafe.com)).

EOC Activities

Emma Lowe had discussed her vision of a **Portable planetarium** and EOC was placed in charge of defining a proposal for NHAS involvement. EOC has now come up with an incremental plan for adoption by funding \$300 to start the effort with an iOptron sky projector onto the inside of a pop-up tent.

The project is being modelled after the LTP, which started small and scaled up. Potential funding sources are being looked at as the cost could be in 5 figures. The cost of ownership is an issue, given the storage and transportation requirements, and with members having to commit to deliver the sessions.

Astronomy Shorts

Rich DeMidio: got a chuckle from an *S&T* article on how exoplanets are not planets by the definition set forth by IAU (when they demoted Pluto).



Gardner Gerry: gets daily updates from CalSky on ISS events and with Rich Schueller's help, captured an [ISS transit of the Sun on July 21](#). **Melinde Byrne**: visited International Dark Sky Park in Geauga County OH. **John Shonle**: put a red-dot finder on big binoculars for ease of use. **Rich Schueller**: Pete Smith thanks everyone at the LTP Mod party; placed the first Library scope in Massachusetts and Aldrich Astro. Society will start LTP up in MA.

The Evening Presentation

On the topic of "**Gamma Ray Bursts – the most powerful explosions in the universe,**" the presentation was by Tanmoy Laskar, a Ph.D. candidate at Harvard, who has worked on theoretical and observational astronomy from stars to supernovae, using observations in X-ray, optical, infra-red and radio wavelengths.

First noticed at the height of the Cold War as random flashes of light of unknown origin (their existence declassified only in 1973), GRBs are the most energetic explosions occurring anywhere in the Universe. For a few hours they are visible at greater distances and further back in time than any star or galaxy; all known examples are beyond the Milky Way.

NHAS Treasurer's Report
(as of July 24, 2013)

Starting Checking Balance: \$10,603.03

Deposits:
 Membership 180.00
 Donations 558.00
 Interest 0.86
Total: \$738.86

Expenses Paid:
 Rackspace Cloud (Web site) 21.65
 Rackspace Cloud (Web site) 22.54
 Jameco Electronics 15.88
 Pete Smith 252.43
Total: \$312.50

Current Checking Balance: \$11,029.39
Petty Cash: \$100.00
Current Cash Balance: \$11,129.39

EOC Share: \$6,128.23

Membership: 134

Renewals: 0x30.00 0.00
 New Members: 6x30.00 180.00
Total: 6 \$180.00
Current Members: 140

New Members:
 Michael Deneen Boxford MA
 Todd Bubar Hollis NH
 David Getman Portsmouth NH
 Mark Siebert Hollis NH
 Jeffrey Dionne Penacook NH
 Brett Pisinski Durham NH

Donations:
 Bartlett Public Library LTP 325.00
 Middle School at Parkside GEN 50.00
 Brett Pisinski YFOS 20.00
 Portsmouth Sidewalk GEN 163.00
 Astronomy
Total: \$558.00

Contact Information

How to join NHAS

Write to us: **NHAS**
P. O. Box 5823
Manchester, NH 03108-5823

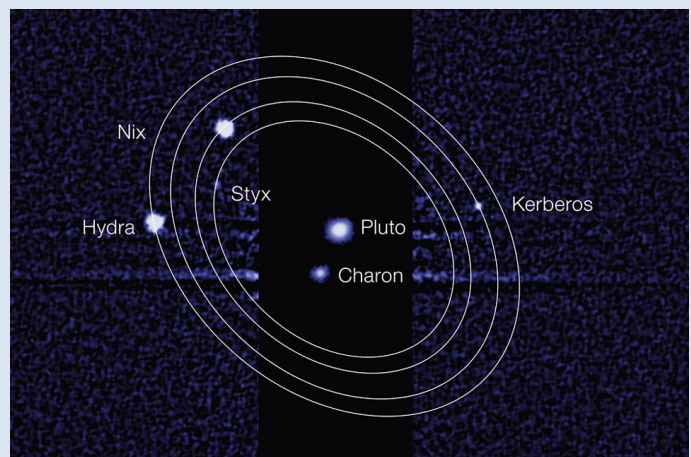
Send Email to: info@nhastro.com

Visit our web site: <http://www.nhastro.com>

How to contribute to the Observer

Email articles and snapshots to the Editor:

ramax.astro@yahoo.com



Pluto's newly named moons await the arrival of the New Horizons spacecraft in July 2015. (Credit: NASA/ESA/Mark Showalter/SETI)

Event	Date	Time	Location
First Friday Skywatch for MSDC	Friday, August 2	7:00pm	MSDC, Concord NH
Coffee House Night at YFOS	Saturday, August 3	5:00pm	YFOS
Rey Center Skywatch	Saturday, August 3	9:00pm	Waterville Valley NH
Pease Public Library Skywatch	Monday, August 5	7:30pm	1 Russell Street, Plymouth NH
Madison Old Home Week Skywatch	Tuesday, August 6	8:00pm	1381 Village Rd, Silver Lake, NH
Pease Public Library Skywatch (backup date)	Wednesday, August 7	7:30pm	1 Russell Street, Plymouth NH
Madison Old Home Week Skywatch (backup date)	Thursday, August 8	8:00pm	1381 Village Rd, Silver Lake, NH
NHAS Business Meeting	Friday, August 9	9:00am	MSDC, Concord NH
Stargazing at Green Hills Preserve	Saturday, August 10	7:00pm	Hurricane Mountain Rd, North Conway
Naval Sea Cadet Skywatch	Sunday, August 11	8:00pm	Austin Cate, Center Strafford NH
Naval Sea Cadet Skywatch (backup)	Monday, August 12	8:00pm	Austin Cate, Center Strafford NH
Naval Sea Cadet Skywatch (backup)	Tuesday, August 13	8:00pm	Austin Cate, Center Strafford NH
YMCA of Greater Nashua Solar Observing	Wednesday, August 14	10:00am	YMCA of Nashua, Merrimack NH
NHAS EOC Meeting	Thursday, August 15	6:30pm	City Library, Manchester NH
Goffstown Public Library Skywatch	Friday, August 16	8:30pm	180 North Mast Rd, Goffstown NH
Sidewalk Astronomy Skywatch	Saturday, August 17	6:00pm	Market Square, Portsmouth NH
Stargazing at Green Hills Preserve (backup date)	Saturday, August 17	7:00pm	Hurricane Mountain Rd, North Conway
Community Roots Skywatch	Saturday, August 17	8:00pm	118 North River Road, Lee, NH
PixInsight Workshop	Friday, August 23	7:00pm	St. Anselm, Manchester NH
Meredith Public Library Skywatch	Tuesday, August 27	7:30pm	91 Main Street, Meredith, NH
First Friday Skywatch for MSDC	Friday, September 6	7:00pm	MSDC, Concord NH
Rey Center Skywatch	Saturday, September 7	8:00pm	Waterville Valley NH
Owls Landing Campground Skywatch	Saturday, September 7	7:00pm	245 US 3, Holderness NH
Concord High School Solar Observing	Wednesday, September 11	8:30am	140 Warren Street, Concord NH
Concord High School Solar Observing (backup date)	Friday, September 13	8:30am	140 Warren Street, Concord NH
NEFAF	Friday, September 13	6:00pm	UNH Observatory, Spinney Ln, Dover NH
NEFAF	Saturday, September 14	10:00am	UNH Observatory, Spinney Ln, Dover NH
Sidewalk Astronomy Skywatch	Saturday, September 14	6:00pm	Market Square, Portsmouth NH
Owls Landing Campground Skywatch	Saturday, September 14	7:00pm	245 US 3, Holderness NH
NHAS Business Meeting	Friday, September 20	7:30pm	St. Anselm, Manchester NH

Credits

Contributors to this month's **Observer**:

- Rich DeMidio, Gardner Gerry, "Rags" Gilmore and Paul Winalski.