



Highlights for This Month

We have reports from several sky watches, and also an observing report on a 100mm classic long focal length refractor.

Also—it's election time. At November's and December's meetings the floor will be open for nominations. The voting will take place at December's meeting. The four officer positions (President, Vice President, Secretary, Treasurer) are for one-year terms. The Director position is for three years. Due to the term limit provision in our by-laws, our current President and Vice President are not for election to a third term in those positions.

* Paul Winalski
NHAS Secretary 2012

Bedford High School Sky Watch, Bedford NH, 25 October 2012

Herb Bubert, Gardner Gerry, John Pappas, Steve Rand, and Ed Ting were there from NHAS.

* Paul Winalski

I was there, showing the moon on my laptop/ETX/Imaging Source rig. I taught the kids how to find Clavius and Copernicus.

* Ed Ting

Salem High School Sky Watch, Salem NH, 25 October 2012

John Bishop and I gave this sky watch in the library courtyard at Salem High School for **Gary Duranko** and his Astronomy class. Gary had the Salem library telescope, John had his 9" off-axis

reflector, and I had the 14" TScope reflector. John and Gary concentrated on helping the students with their assignment to sketch the Moon. I concentrated on double stars and deep-sky objects.

* Paul Winalski

Tracy Memorial Library Sky Watch, New London NH, 26 October 2012

Gardner Gerry and I were there from NHAS. About twenty-five people showed up. Sky conditions were clear but somewhat hazy. Seeing was not too good. The gibbous Moon lit up the haze. The site (New London Outing Club fields) is easily accessible and free from artificial lighting except for one sodium lamp on a building, which we can cover over next time. I showed M13, M57, NGC 457, M31 and M32, the Perseus double cluster, T Lyrae, V Aquilae, WZ Cassiopeiae, 61 Cygni, and Mizar.

* Paul Winalski

I also showed M13 at about 216X with the 11 T6 Nagler in the C9.25 which showed it nicely and got a lot of wows. Later I tried the Double Double without success as the seeing was not cooperating as Paul already mentioned. And I showed an up close view of Crater Aristarchus and surrounding terrain which was a really nice view with the terminator just beyond the crater, nearby mountains showing nice long shadows and the floor of the crater still in darkness. Our customers really appreciated these views.

* Gardner Gerry

Auburn Village School Sky Watch, Auburn NH, 6 November 2012

The sky watch took place under very clear, dark, and steady skies. The skies are as dark as one can get that close to Manchester. The darkness was marred only by cars entering and leaving, and by the red lights (a lot of them way too bright) that the students were using so that they could record what they were seeing on their worksheets. Perhaps next time we could arrange for a place away from the telescopes for the students to record their notes.

There was a BIG crowd (124 students and family members), and, fortunately, many NHAS members participating: **Pat Adams, Ted Blank, Herb Bubert, Gardner Gerry, Ed Ting, Bob Veilleux, Paul Winalski**

I personally showed: M31/M32, 61 Cygni, Gamma Arietis, M13, M15, the Perseus double cluster, NGC 457, M57, M27, Gamma Delphinus, the Pleiades, T Lyrae, the Great Cygnus Star Cloud, and Jupiter.

* Paul Winalski

Overheard at the Auburn, NH skywatch:

Kid #1: So what are we going to do?

Kid #2: We're supposed to find some old guy and ask questions.

Kid #1 (excited): There's one!!! (pointing at me.) ☺

* Ed Ting

NHAS received this note of thanks from Wendy Smith, the science teacher at Auburn Village School:

"A HUGE thank you to all who braved the freezing temperatures last night to show the students from Auburn Village School some awesome sky watching! We had 124 students come for the experience and they're still buzzing about it this morning! Despite the cold they all learned new things and have a new appreciation for astronomy.

"Thank you for all you do!"

✧ Paul Winalski

Starlight 100mm f/13 Achromat, Nashua NH, 11 November 2012

I finally had both a free evening and a clear sky, so I set up my new Skylight 4-inch f/13 on my IOptron mount in a little park near my in-town house. I have a light-polluted sky but one that still shows stars to magnitude 3. On unusually clear nights I can see the Cygnus Star Cloud if it's overhead; lower down there's a lot more sky-glow! It was a pretty clear night but the seeing was only fair.

I wanted to see what the Skylight could do, so I looked at a variety of objects: some doubles, some opens, some globulars and three planets.

I'm not a sophisticated star-tester, but I did put Vega in the field of view at high magnification with a green filter to see what the star image looked like in and out of focus. Vega made a circular pattern. At best focus it was a round dot. Later on, with other stars, I saw flashes of the first diffraction ring, but not with Vega. Inside and outside of focus patterns looked the same. So that's good!

Uranus was a little yellow-ish disc. Neptune focused to a little disc as well, of an odd color—not the dark blue I'm used to in other telescopes, but a lighter, yellower blue (but not green!). This was with an 8mm eyepiece (162X).

Jupiter was low to the horizon, just out from behind the trees. So the image wiggled due to seeing, but it was a nice image: not only the two big bands, but other bands were visible as were some darker spots

on the big bands and four moons of different brightness. I noticed that the moons seemed to focus to dots of different sizes rather than points. Is that just the diffraction blur or can the Galilean moons be resolved by a 4-inch? I tried 12mm, 9mm, 8mm and 7mm eyepieces with Jupiter. The nicest view was with the 12mm (108X). On either side of focus I could see a mild colored rim (green or red) but at focus I didn't see extra color. In shorter refractors I've seen a dim purple ring around Jupiter; here I didn't. A quick look with CalSKY shows that I missed seeing a transit of Europa's shadow by a few minutes. That would have been a good test of my ability to see detail!

Low against the light sky, M11 was more of a blur than an open cluster. M34 showed the brighter stars. M45 was a nice view. M2 and M15 stood out well but didn't resolve at the medium power I was using (24mm, 54X). People complain that long-focus telescopes don't let you see a lot of sky, but with a 50mm Plössl at 26X, the true field of view is almost two degrees in diameter! M32 was like a small globular, M31 was poorly placed: I couldn't point to it because the tripod legs were where the telescope wanted to be. M76 was just barely visible (no surprise).

Albireo was in great: sharp focus (here's where I saw flashes of the arcs), good color. Almach (gamma Andromedae) was good as well. It's another yellow-blue pair but not as bright. The Double-double resolved to four stars at 144X (9mm).

I noted that the Baader focuser is ok but no where near as smooth as a Feathertouch. It was hard to get a good focus but some of that was the mount: the IOptron found and tracked well but the Skylight is really too big and heavy for the IOptron and the long telescope would wiggle every time I tried to adjust the focus or change an eyepiece. The IOptron altitude clutch couldn't be hand-tightened enough to prevent accidental jostling of the eyepiece end of the

telescope from moving the telescope in altitude.

I'm still learning how to use the Skylight but I can already see that my worries that it was too small an aperture to give good views were unfounded.

✧ John Bishop

Philbrick-James Library Sky Watch, Deerfield NH, 14 November 2012

This was a very successful event. The skies were very dark and clear, except for a light dome to the south and west from Manchester. There was very little interference from artificial lighting on the observing field. We're talking M31 and the Perseus double cluster easily naked-eye visible, and M33 trivially visible in a 9x50 spotter scope. NGC 404 (the Ghost of Mirak) was easily visible; this is an object that requires dark sky contrast to be visible at all, even in a 14" scope.

There were about twenty-five members of the public to enjoy the sights. NHAS members participating: **John Bishop, Ted Blank, Herb Bubert, Gardner Gerry, Bob Veilleux, Paul Winalski**. Good venue, and excellent conditions early on (it started to get hazy later on).

✧ Paul Winalski

My last visitor was the dad of a little girl who had been there all night, I think his name was Will. He wanted to see and learn all about Andromeda. With question after question he began to see the relative size and scale of the two galaxies, and slowly began to understand how we were looking at Andromeda through the close stars of our own Milky Way. He said several times that his head hurt. I consider that a good sign!

✧ Ted Blank

NHAS October 2012 Business Meeting

The October business meeting was held at the McAuliffe-Shepard Discovery Center on 19 October

2012, our President, **John Bishop**, presiding.

President's Report

Election of officers and a director for 2013 takes place at the December meeting. It's time to think about nominations for President, Vice President, Secretary, Treasurer, and a Director. The officers serve a one-year term. The Director serves a three-year term. Our current President and Vice President have served two consecutive terms and thus by our club's by-laws are not eligible for election to those offices in 2013.

There is an Astronomy Panel on Tuesday 13 November 7-9 PM in Concord that needs an amateur and a professional astronomer. Experience in the issue of light pollution would be great. Contact Dave McDonald if you're interested in being a panelist.

Officer's Meeting report:

The officers have funded repairs to YFOS.

Member burnout is an issue, and we discussed ways to fix it: divide up tasks among more people; encourage less active members to do "one more thing"; wait a bit before taking on any new tasks.

The EOC is training librarians to be library telescope maintainers.

We discussed organizing a bus or van-pooling to popular events such as NEAF.

Board of Directors

Gardner Gerry reports that he has heard back from **Joe Derek** concerning YFOS repairs. Joe would like volunteer hands to help out. There is no timeline yet for the repairs.

We made \$125 from sale of the extra eyepieces from the library telescopes.

A Beswick Engineering 10" dob was donated to the club.

The Board is looking for new caretakers for the loaner scopes.

Educational Outreach

Rich Schueller reports that the Rey Center events are a great success. We need volunteers for 2013. **Matt**

Amar is managing our Rey Center program.

NHAS on Facebook: The LTP has a Facebook page. EOC will be putting together instructional videos on the LTP and posting them on Facebook.

EOC needs more members!

LTP update: We are looking for someone to manage the LTP—to handle requests for info and to authorize purchases. Bob Britton of ASE will be working on instructional videos for maintaining LTP scopes so that librarians can self-train. This includes replacement of batteries, alignment of the finder, and checking collimation with a Cheshire eyepiece.

Update on a zoned support structure for LTP: If twenty core people in the club check on three telescopes each, we can handle sixty libraries. We're running out of foster parents. We would like to get the libraries organized into zones with groups of members who can be called on in rotation, in order to cut down on the work for each individual member in the program.

Rich Schueller will make a Wikipedia page on LTP.

Pubic Observing

Paul Winalski reports that the policy of scheduling no more than two sky watches in any particular week seems to be working to keep the schedule manageable. We currently are holding sky watch events in conjunction with three high schools (Bedford, Goffstown, Salem).

Members are encouraged to volunteer to help run the sky watches as either Coordinator, Lecturer, or Designated Astronomer. The role of Designated Astronomer is very easy—all you have to do is commit to showing up with a scope for the event.

Membership

Bill Steele reports that we need volunteers to present workshops, and he solicits requests from members on workshops. New

member **Curtis Rude** was present at the meeting.

Astrophotography

Gardner encourages members to visit the Pictures forum on the website to see new images posted there.

Treasurer's Report

Ken Charles announced that we have the "Deep Space Mysteries" calendar from *Astronomy* magazine for sale at \$7 each. We also have *Discover* magazine's "Wonders of Science" calendar for sale.

NHAS finished our 2012 year with 148 members.

Miscellaneous Business

We have some speakers lined up for 2013 but we don't have all twelve yet. Help us find more speakers.

We still need a Scope of the Month and Book of the Month for every month.

Dave McDonald reports that the State of New Hampshire has stopped funding the McAuliffe-Shepard Discovery Center. MSDC will become a private non-profit. 25% of its funding was from the state. First Friday night will continue. Second Friday night will be teen night. Other Fridays the Center will be closed to the public, but available for private parties. MSDC will still be open for NHAS meetings.

Book of the Month

Scott McCarthy presented [Building a Roll-off Observatory, a Complete Guide for Design and Construction](#) by John Hicks. It has a CD with suggested plans.

Evening Presentation

Douglas Arion, Professor of Entrepreneurial Studies and Professor of Physics and Astronomy at Carthage College, presented "Planetary Nebulae: (Deathly) Beautiful", based on his work on the morphology of planetary nebulae.

In addition to his research work, for the International Year of Astronomy-2009 in partnership with the International Astronomical Union, he founded a new company, Galileoscope LLC, to develop,

manufacture, and distribute high quality low cost telescopes for worldwide promotion of science education and outreach. Over 200,000 telescopes have been distributed, including 7000 donated to developing nations.

The Bottom Line

Starting Balance:	\$10124.86
Deposits/Credits:	
Membership:	930.00
Donations:	480.00
Sales at Stellafane:	125.00
Bank interest:	0.38
Total :	1535.38
Accounts/Paid:	
Rackspace Cloud:	22.54
Kalmbach Publishing (Calendars)	233.10
Sir Speedy Printing (Brochures)	309.00
Total:	564.64
Net Account Balance:	\$11095.60
Petty cash drawer:	\$100.00
Cash Balance:	\$11195.60

EOC Share: 5728.57

Membership:

Year ending Sep 30 2012:	148
Current:	43

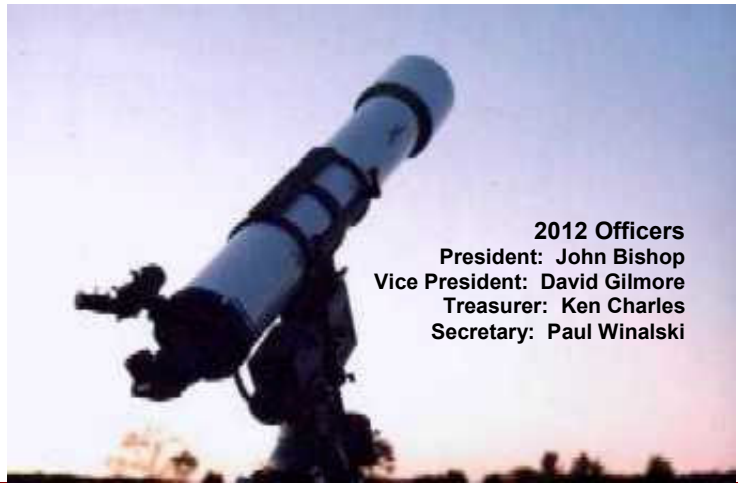
New Members:

Curtiss Rude, Concord NH

Donations:

Friends of Tracy Memorial Library	100.00
Friends of Derry Public Library	250.00 LTP
Vincent Quartararo	20.00 EOC
Mike Miller	30.00
John Shonle	10.00
Andy Jaffe	25.00 EOC
Mike O'Shaughnessy	5.00
John Bishop	20.00
Eugene Solod	20.00

* Ken Charles
NHAS Treasurer 2012



2012 Officers
President: John Bishop
Vice President: David Gilmore
Treasurer: Ken Charles
Secretary: Paul Winalski

DEADLINE December 2012 Issue: 5 December 13

E-mail articles to the Editor.

CHANGE OF ADDRESS – Notify the Treasurer of changes to postal or e-mail address.

How to Join N.H.A.S.

Write to us:

NHAS
P.O. Box 5823
Manchester, NH 03108-5823
Attn: Treasurer

Send E-mail to:

info@nhastro.com

Use our web site:

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

This month's contributors:

Ed Ting, Gardner Gerry, John Bishop, Ted Blank, Ken Charles

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NHAS Upcoming Events

Event	Date	Time	Location
Cub Scout Pack 210 Sky Watch	November 17	6:00 PM	Simpson Mill Road, Pelham NH
Campbell High School Sky Watch	November 19	7:00 PM	1 Highlander Court, Litchfield NH
Nashua Winter Holiday Stroll	November 24	5:00 PM	Main Street, Nashua NH
Sidewalk Astronomy	November 24	6:00 PM	Market Square, Portsmouth NH
Cub Scout Pack 11 Sky Watch	November 29	6:15 PM	Litchfield Middle School, Litchfield NH
Goffstown High School Sky Watch	December 3	5:30 PM	Goffstown High School, Goffstown NH
Educational Outreach Committee Meeting	December 6	6:30 PM	Manchester City Library, Manchester NH
Discovery Center Sky Watch	December 7	7:00 PM	McAuliffe-Shepard Discovery Center, Concord NH
Lincoln-Akerman School Sky Watch	December 11	6:30 PM	8 Exeter Road, Hampton Falls, NH
Bedford High School Sky Watch	December 13	7:00 PM	Benedictine Park, Wallace Road, Bedford NH
Salem High School Sky Watch	December 13	7:00 PM	44 Geremonty Drive, Salem NH
NHAS Business Meeting	December 14	7:30 PM	McAuliffe-Shepard Discovery Center, Concord NH
Rey Center Sky Watch	December 15	6:30 PM	Curious George Cottage, Waterville Valley NH