



## Market Square Day

### President's Message

I went to a presentation by Rob Teeter of Teeter's Telescopes. Rob had been invited by members of the North Shore Astronomy Club. There were members of the Amateur Telescope Makers of Boston there too.

The event made me realize that in the press of day-to-day events I often forget that "Astronomy" is not just the NHAS events—we have peers and potential friends around the world who share our interests. We should take advantage of this. For example, if you are travelling, you can look up the local astronomy club at the place you are going to and ask if you can join them for observing. I've done that. When my family went to Disneyworld, I got to observe through a 17-inch Tinsley classical Cassegrain and show constellations to some college students. In Texas, I went to the dark-sky site of the Austin club.

Astronomy is not just 140 people in New Hampshire. It's millions of people around the world!

★ John Bishop  
NHAS President 2011

### Astro Workshops

We are on track for providing regular Astro Workshops at YFOS. The first regular scheduled Astro 101 was Introduction to YFOS with six new members. The night was warm and humid. The sky completely clouded over and everyone was happy with the orientation of the site. Items covered: How to access the site, using the site log, how to open/close

the roof, location of the site resources, Titan mount log, how to use the 16" Dob, site etiquette, and what is in the local area.

★ Bill Steele

### Library Telescope Program Goes International

Yesterday, New Hampshire... Today Canada! Tomorrow... Saturday!

I received the following email from Katherine Peterson, who is organizing a library telescope program in Calgary, Canada.

Thanks to everyone who made this possible. What a great club!

"Hello Marc,

"I am very happy to report that my proposal to adopt your LTP has now been accepted. I will be focusing on the 2 rural libraries that have already expressed an interest as starters, and then expand if all goes well. Council even approved the club donating up to \$600. (\$300 for each library) for expenses. So I am very pleased. I will be meeting with the libraries next week to see if we can get the program rolling. I am pretty sure I will have at least 2 fellows that can do the modifications to the scopes; but will have to work on finding foster parents. I recommended that we follow your program to a tee, as it has been proven to work, and council agreed. We will use only the scope you have recommended. Although, we did have some discussions on that as some thought we should use go-to's but that was quickly determined not to be feasible.

*"It doesn't seem I will have to "sell" the program to the libraries; but if you know of any issues they raised with you I would appreciate knowing so that I can be prepared with reasonable answers. Also, do you go directly to Orion to purchase the scopes or through your regional representative?"*

*"Thank you so much for developing and passing along your program information. I am sure it will be of great benefit to astronomy, science and the public for generations to come and I am very happy to become a part of it."*

★ Marc Stowbridge

### Market Square Day, Portsmouth NH, 11 June 2011

The day started off cloudy but progressed through sprinkles to showers to steady rain. Attendance was good in the morning but dwindled during the day as the weather deteriorated. Nevertheless, NHAS was well represented and shared information with many people who stopped by. Attendees were **Don McDaniels, Chris White, David Speltz, Ken Charles, Ted Blank, and David Gilmore.** The temperature dropped into the high 50s by afternoon, necessitating several trips to The Works or Popovers for hot soup and beverages. However, members of the public did stop by right up until 4 PM even during the worst of the rainstorms.

**Tom Cocchiaro** again loaned us his pop-up tent, tables, chairs, and tablecloths. We were glad that his

tent was the only one which was tight enough to avoid accumulating water in “saggy” corners, as most of the tents around us did. Actually we probably got more water splashed up from our neighbors periodically dumping their accumulated roof water than we did from the rain directly. So it was a consensus view that we should insure we bring sides for our tent next year. Also, if we had a 3-foot or so extension off the front of the top of the tent to move the drip line out, that would help a lot. Many “customers” were getting pretty wet from the runoff as they stood talking to us in front of our booth, so some sort of overhang would really be nice and would keep people dry as they talked to us. Not that it will ever rain again on Market Square Day!



**The only sun we saw all day! (Ted Blank photos)**

**Bob Veilleux** also kindly loaned us several softball-sized iron meteorites as well as a poster and a box of smaller samples where people were encouraged to try to find twelve meteorites among rocks which were also terrestrial in origin. A magnet helped with the iron meteorites, and lots of kids had fun with this.

In addition to the banner on the front of our table, we put a second banner up high on the front of the tent this year, and it gave us more visibility. Ken suggested we should look into getting a tent with NHAS name and logo printed on it, similar to the one that the “Life Is Good” store had across the street.



**Ken Charles and Chris White setting up.**

David Speltz also arranged for the Portsmouth Library LTP scope to be on hand all day. This generated a lot of interest. He brought copies of the Portsmouth Library poster advertising the scope and many people took copies of that. Also, the librarian provide a copy of the QR code for the scope, so any Portsmouth resident could take a picture of the QR code on their cell phone and reserve the scope on the spot! Very cool!



**Waiting for the road race to begin.**



**Chris White sets up “Smoky Joe”, our cutaway Newtonian with laser beams and fogger to show the light path.**

We had power from extension cords that The Works graciously allowed us to plug in, so we were able to operate a laptop (in a cardboard box painted black inside) showing a loop of the huge solar flare from earlier this week. I think this was a bit too small, maybe we should use

a larger TV screen next year, which would be much brighter even out in the open.

Having power also let us use the theatrical smoke generator for the cutaway scope out in the street. Until we had to cover it to avoid the scope filling up with water, this attracted a lot of attention and educated many people on how scopes work. I'm sure a few came over wondering what we were cooking too.



**Ken Charles demonstrates how reflectors work.**

We handed out many reprints on Astronomy and the Moon, and many other pieces of literature. I put together a list of upcoming public observing events for the rest of 2011 for NHAS, UNH, ASNNE and NSAAC and many people took copies of this. (There were over 60 events listed.) We can put a copy of this on the web site for people to download.



**Saturn's marker on the Solar System Scavenger Hunt.**

Anticipating the rain, I made up a “Solar System Scavenger Hunt” based on the famous Thousand Yard Solar System invented by Guy Ottewell. Over the course of about three blocks we marked the locations of the planets, their relative sizes, and the distance from the Sun with waterproof Sharpie on white duct tape on the street. Before

the rain made writing on paper impossible, several families took our Scavenger Hunt forms and, by searching for each planet on the street and copying down information onto the form, earned stickers for their kids. (The sun was a 12" helium balloon on top of our booth, so all the planetary diameters were scaled to that size.) But surprisingly, quite a few people who came to our booth said they had followed the planets to us in reverse. So this little game seems to have some potential, and maybe we'll try it again next year.

★ Ted Blank

### Nashua High School North Science Program, 21 May 2011

Joe Derek and Joe Dechene went to the Nashua High School, Saturday May 21, for their science program. It started at 5:00 PM and lasted till almost 8:00 PM. We had set up in the main lobby of the gym and had plenty of exposure. They were hoping to do some observing after but it was canceled because of poor conditions. Attached are some pictures of the event.

★ Joe Derek



Set up and ready to go (Joe Derek photo)



The exhibit floor



Looking through Joe Dechene's dob



Now THAT's an equatorial mount!

### McAuliffe-Shepard Discovery Center Sky Watch, 3 June 2011

At the Discovery Center on the "first Friday" for June we had a big group of NHAS people and a small group of the public. There were some interesting people there: I met a Marine who had recently returned from Afganistan and a young man who was taking a break from through-hiking the Appalachian Trail (hiking north, he had already gotten to just south of the New Jersey border).

I had my OA-6.5 there on my equatorial platform. I mostly showed Saturn. Later I showed the Ring Nebula, Albireo, M3 and M51. Saturn was a big hit, as usual. Titan and Rhea were visible as was the shadow of the rings on the body of the planet. I didn't get more than faint hints of Cassini's Division, nor did I see Tethys due to the poor seeing.

NHAS had a good turnout: I recognized **Paul Winalski, Gardner Gerry, Mike Townsend, John Rose and David "Rags" Gilmore.**

★ John Bishop

### Rob Teeter Lecture, Merrimack College, 4 June 2011

Saturday I went to the Rob Teeter talk at Merrimack College. I think I was the only NHAS person there. The audience was small (around a dozen people). There were several members of the North Shore Astronomers, an astronomy teacher at Merrimack College, a soil scientist from the University of Maine in Orono who was there to pick up his new 12-inch f/5 Teeter telescope, Rob himself and his wife Heather and I think some members of ATMoB. It would have been nice if more people had been there.

Rob's talk was not as dynamic as I'd expected based on his lively non-presentation personality. There were some incidents that could have been quite funny if he'd told them better. For example, there was a customer who changed mirrors twice during the time Rob was building his structure. Each time the new mirror was a different size or weight, which meant that Rob had to start over again because the old structure wouldn't fit or balance. Luckily Rob was able to re-use the wrong-size parts in a "Leftovers" telescope. There was another customer who sent him specifications for the mirror box and rocker box which were given in hundredths of an inch!

Rob didn't go into the level of technical detail I had hoped for; it's clear from his tales that he has a way to calculate the balance point of a telescope structure based on the mirror size before he builds anything. He's also made a wide variety of telescopes, from long focal length "Planet Killers" to super-fast f/3 light buckets. I'd like to know more about his thoughts about those choices and about the optical implications of that aspect of his work.

★ John Bishop

## Rey Center Sky Watch, Waterville Valley, 4 June 2011

Saturday night brought the third clear night in a row to the area. NHAS member **John Bishop** was kind enough to also come and help. We had his 6" unobstructed Newtonian, my 14.5" Dobsonian, as well as the Rey Center's 8" Newtonian. We showed Rey Center member Jeremy Philips highlights of this late spring night sky. These highlights included sunrise on mountain peaks on the crescent Moon, Porrima, the new supernova in M51 which readily revealed spiral arms in the 14.5", an excellent Veil Nebula, and a comparison of the visual impression of granularity of different class globular clusters. We viewed M13 several times, from twilight in the 6" to dark sky in the 14.5", and interesting progression in what one can see. We packed up about 12:15 AM.



### Curious George Cottage (Andy Jaffe photo)

The Rey Center is next to the Waterville Valley Elementary School and is in the process of building an observatory. The scheduled sessions with NHAS are done, but Jeremy anticipates future invitations to club members for observing sessions.

★ Andy Jaffe

After the Rob Teeter talk ended at 5:00 PM, I drove up to Waterville Valley to see what our arrangement with the Rey Center was like. I got to the location in our calendar, the Curious George Cottage, at 7:30 PM. The cottage was locked and there was nobody there. I drove into the "Village" and found the actual Rey Center on the second floor. It was empty and locked. I then went to the condo check-in

center, which was open. A staffer there looked up the day's events and told me that the astronomy was scheduled for 9:00 PM to 11:00 PM at the cottage. I was surprised to find out that our sky watch is only a viewing session—there's no presentation beforehand.

Back at the cottage I met a Rey Center staffer named Jeremy who was watering the plants. Shortly afterwards **Andy Jaffe** of the NHAS and his son David showed up. Jeremy said that people usually set up in the Recreation Center parking lot which is next to the cottage. He apologized for having failed to get in touch with the Recreation Center in time to get them to adjust the timers on their lights. The lights went on about 9:00 PM and stayed on until about 11:00 PM. With the lights shining on us from one side, it wasn't so good. Once the lights went off, the actual darkness of the location was a bit more evident. There's still a lot of local illumination, so it's not as good as YFOS, but I think that if you got away from the local lights, it might be as good as YFOS or a bit better. As an example, after the parking lot lights went off I could see the Cygnus Star Cloud.

In my OA-6.5 only two moons of Saturn were visible; in Andy's 14-inch Juno (a Newtonian with integrated platform) you could see four. We looked at M51, M13, Albireo and the like. We showed Jeremy how to use the 8-inch Dob belonging to the Curious George Cottage. Once the lights went off we looked at M51. In Andy's telescope the spiral arms were clear and the supernova was visible, flashing in and out at the limit of vision. I left shortly afterwards as I had to drive a long way; the others stayed to do more observing because they were staying locally.

You may note that nowhere have I mentioned any members of the public. That's because there were none! We did try to get two parties of passers-by to come look at Saturn but got no takers. One man

mentioned that he was going to watch the Bruins game instead.

I think the lack of public interest is due to the fact that Waterville Valley wasn't really open for business yet; most of the village was closed up and I saw at least one "Opening June 22" sign. The July sky watch might have lots of customers but it's clear that the size of the crowd varies and we don't have a good handle on how it varies.

I think the lessons to learn here are: first, post the correct times; second, make sure people know the actual location; third, make sure that the parking lot lights and the building lights will be turned off by reminding the Rey Center people a day or two before.

Waterville Valley is ten miles from the highway and most of that is a two-lane road through the National Forest. On the way back I saw deer and an owl. If you go, watch out for moose!

★ John Bishop

## NHAS May 2011 Business Meeting

The May business meeting was held at the St. Anselm College on 20 May 2011, our President, **John Bishop**, presiding.

### President's Report

The Educational Outreach Committee may get substantial external funding for the library telescope program. Details to follow when they are finalized.

Rob Teeter, of Teeter's Telescopes, will be giving a talk, free and open to the public, at Cascia Hall, Merrimack College, at 3:00 PM on 4 June.

Aerospacefest 2011 was a success. Thanks to all who participated.

### Board of Directors

**John Rose** reports that the Board will have **Joe Derek** assess the condition of the buildings at YFOS.

The bungee cords for the club tent are worn; the tie-downs need overhaul. **Gardner Gerry** will check this out.

The sandwich boards look good. Do we need more of them? Could we use them at Sidewalk Astronomy in Portsmouth? **Ted Blank** will approach the Board with a plan.

The Board has authorized the purchase of motors for the Lunt scope's mount.

### Membership

**Bill Steele** is scheduling the Astro 101/201 workshops. They will be given at YFOS on coffee house nights.

### Webmaster

The conversion of the NHAS email lists from mv.com is done.

### Astrophotography

**Gardner Gerry** reports that several people are dabbling in planetary imaging. As always, see the "Pictures" forum on the website for amazing images.

### Aerospacefest 2011

**Ted Blank** reports that the event was very successful and ran smoothly. NHAS provided solar observing and an indoor educational booth and demos. We also presented the Astronomy Bowl winners with prizes. The NHAS volunteers were: **Patrick Adams, Matt Amar, John Bishop, Ted Blank, Don Byrne, Ken Charles, Joyce Icaza, Brian Icaza, Gardner Gerry, David Gilmore, Joel Harris, Marion Hochuli, John Pappas, Michael Pappas, Rich Schueller, Melinda Sanborn, Marc Stowbridge, Mike Townsend, Paul Winalski.**

Please post any ideas or suggestions for improvements to our participation in this event in the "Meetings" forum on the NHAS website.

### Educational Outreach

**Rich Schueller** reports that we have extended the schedule for sky watches at the Rey Center due to all the cancellations due to bad weather at the beginning of the year. We are looking for volunteers to take a slot for September, October, November, and December. Send Rich an email at the EOC contact on the web page

if interested. The NHAS assistant gets overnight accommodations at Waterville Valley paid for.

**Funding news:** An organization that provides money for astronomy outreach programs has chosen our Library Telescope Program to receive funding this year. We are working out the details. An organization called Cornerstones of Science operating in Maine would like to work with us and with Orion to put together a library telescope package. C of S wants to expand the program to all of New England.

**Marc Stowbridge** reports that we are working on the 25<sup>th</sup> library scope in New Hampshire. About ten different groups around the country are looking for info and guidance concerning the LTP. Celestron is sending us a couple of scopes to evaluate. Oceanside Photo and Telescope will be sending us laser collimators as soon as they come off back order.

### Miscellaneous Business

We still need speakers for the July, September, and November meetings.

### Gadget of the Month

**Paul Winalski** presented the Olympus V N-6200PC Digital Voice Recorder. This pocket-sized device can record 200+ hours of audio in 1000+ individually time-stamped MP3 files. Paul finds it ideal for dictating observing notes while at the telescope eyepiece. The device has a USB connection to allow the files to be downloaded later, and speech recognition software would let you produce a written transcript automatically. Much more convenient than having to leave the scope every minute or two to scribble notes on damp paper.

### Book of the Month

**Melinde Byrne** presented Exploring Ancient Skies (2005) by Kelly and Malone. The book is a cross-pollination of Archaeology and Astronomy. It gives the cultural backgrounds of constellations from numerous cultures worldwide. There are

drawings and illustrations from lots of different cultures.

### Public Observing

**Ed Ting** went to Alvirne High School in Hudson NH and taught seven periods of science class. He was also speaker at the recent Highland/Goffs Falls sky watch. The organizers of that event donated \$100 to NHAS.

### Scroll of the Month

**Ted Blank** presented a scroll depicting the data reduction from lunar graze occultations. During such an occultation, one can see a star blink in and out as it moves behind lunar mountains, and record the times of blinks in and out. One can draw an outline of the mountains on the lunar limb by plotting the resulting data points. Until modern lasers, this was the most accurate way to map the lunar limbs.

### Evening Presentation

**Paul Winalski** presented an Astro 201 workshop on Stellar Evolution.

### The Bottom Line

<b>Starting Balance:</b>	<b>\$7653.55</b>
<b>Deposits/Credits:</b>	
Membership:	150.00
Bank Interest:	1.47
Total :	151.47
<b>Accounts/Paid:</b>	
Rackspace Cloud	22.92
Pro Portsmouth (MSD)	185.00
Pro Portsmouth (deposit)	75.00
Total:	282.92
<b>Net Account Balance:</b>	<b>\$7522.10</b>
<b>Petty cash drawer:</b>	\$100.00
<b>Cash Balance:</b>	<b>\$7622.10</b>
<b>Membership:</b>	144

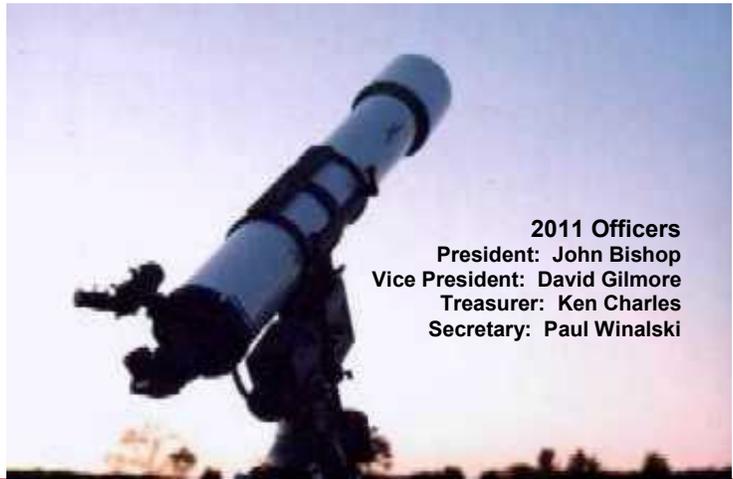
### Donations:

Friends of Rye Public Library (LTP)	75.00
<b>Kristy Tierney (EOC)</b>	5.00

### New Members:

**Sandra Davis**, Charlestown NH  
**Becky & Jason Dubrow**, Dunbarton NH  
**Kenneth McKenzie**, Eaton Center NH

★ Ken Charles  
 NHAS Treasurer 2011



**2011 Officers**  
**President: John Bishop**  
**Vice President: David Gilmore**  
**Treasurer: Ken Charles**  
**Secretary: Paul Winalski**

**DEADLINE July 2011 Issue: 5 PM July 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](mailto:info@nhastro.com)

**Use our web site:**

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

**This month's contributors:**

John Bishop, Bill Steele, Marc Stowbridge, Ted Blank, Joe Derek, Andy Jaffe, Ken Charles

**New Hampshire Astronomical Society**  
**P.O. Box 5823**  
**Manchester, NH 03108-5823**



**NHAS Upcoming Events**

<b>Event</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
NHAS Coffee House Night	June 24	5:00 PM	YFOS
Astro 101: Navigating the Night Sky	June 24	7:00 PM	YFOS
Discovery Center Sky Watch	July 1	7:00 PM	McAuliffe-Shepard Discovery Center
Educational Outreach Committee Meeting	July 7	6:30 PM	Manchester City Library, Manchester NH
Sidewalk Astronomy	July 9	7:00 PM	Market Square, Portsmouth NH
NHAS Business Meeting	July 15	7:30 PM	St. Anselm College, Manchester NH
Dunbarton Public Library Sky Watch	July 15	7:30 PM	Dunbarton Public Library, Dunbarton NH
Madbury Public Library Sky Watch	July 20	7:00 PM	Madbury Town Hall, Madbury NH
Stephenson Library Sky Watch	July 22	9:00 PM	761 Forest Road, Greenfield NH
Goffstown Public Library Sky Watch	July 27	7:30 PM	Village Water Precinct, Goffstown NH
Coffee House Night	July 29	5:00 PM	YFOS
Astro 201: Using the Titan Mount	July 29	6:30 PM	YFOS