



President's Message

When I was a teen, I read books and articles about life on other planets. One consistent comment was that we would never be able to see a planet of another star. Perhaps careful astrometry could detect one or two giant planets of the few very close stars (Barnard's star was often proposed as a good candidate and for a few years it was thought that a planet there had been detected by astrometry).

I recently looked at a slide set for the Kepler mission (<http://kepler.nasa.gov/Mission/discoversies/> and download "Bill Borucki's Media Telcon Slides"). The Kepler mission has found 1,235 candidate planets by observing transits. The total number of confirmed planets from Kepler and other missions is 528.

Of the planets Kepler has found, fifty-four planets are in the habitable zone of the parent star. Five of those are Earth-sized.

We are living in amazing times.

★ John Bishop
NHAS President 2011

Highlights for This Month

Poor weather made this a rather quiet month regarding public sky watch events. Our second Rey Center event was clouded out, but we did have a successful sky watch at the McAuliffe-Shepard Discovery Center.

A successful Astro 201 workshop on using the Titan mount was held at YFOS.

★ Paul Winalski
NHAS Secretary 2011

Astro 201: Titan Mount, 28 January, YFOS

Thanks to **Herb Bubert** and **Gardner Gerry**—A great class. They stayed pretty late in less than ideal conditions (cold and snowing)!

We were shown the basics on the controls and as a bonus how to mount the C14. I think the class more than met my expectations. We all got a chance for "hands on", which I think was the most beneficial. There were only a few of us there which I think would be best for future workshops on this topic. This way we were able to look over someone's shoulder plus get a chance to try it ourselves.

Only thing I would change—the weather. I think my feet might thaw by Monday! ...And yes I would attend another workshop. This was my second (other one was Intro to Astrophotography with Gardner) and each class I am learning a little bit more—which was the point of joining NHAS.

★ Steven Tosi

Monthly Sky Watch, 4 February, McAuliffe-Shepard Discovery Center

The sky wasn't particularly clear, but there were periods of exceptional seeing. I was getting trivially easy splits of some difficult double stars, including Rigel. A reasonably good crowd showed up for the event, including a group of Boy Scouts in pursuit of their Astronomy merit badge (see **John Bishop's** report).

After a long and cloudy winter, it was good to be out observing, and

showing off the night sky wonders to the public.

★ Paul Winalski

About eight Boy Scouts showed up at MSDC for our First Friday on February 4th. They were working on their "Astronomy" merit badges. In particular, they wanted to make progress on the badge requirements which need a clear night sky.

I stepped away from my telescope and spent about three-quarters of an hour with them. I showed them ten constellations and then had them tell me their names as I pointed at them (thanks to **Bill Steele** who lent me his green laser pointer!). I showed them several bright named stars. I posed two of and walked around one to show how the "inferior" planets show phases and the "superior" planets don't. I explained how the sky moved and why Polaris is special. Along the way I answered the usual questions: Why is Pluto not a planet anymore? What is "Dark Matter"? What is "Dark Energy"? Do you believe in aliens?

I think I managed to have answers which helped and I'll pass them on here.

I pointed out that Pluto was "demoted" because we found a lot of other objects which would have deserved to be called "planets" if Pluto were a planet, and that the definition of "planet" is like the definition of "adult" vs. "child"—it's a human-made distinction for our convenience in putting things into categories. The US changed the definition of "adult" from 21 to 18 in my lifetime but the 19-year-olds of that time didn't change when the law did.

I talked about the velocity/radius curves for spiral galaxies as

evidence for more mass than we could see shining. Maybe gravity is different over large distances but “Dark Matter” is an explanation that we prefer right now. More evidence might change that preference. What kind of matter is unknown. It can’t be dust because we’d see that in infrared. It could be weird sub-atomic particles.

“Dark Energy” is even more of a mystery. Students often feel that all of science is known because so much of what goes on in school is learning what’s known. But there’s an edge to what we know, and “Dark Energy” is at an edge. We have some data on distant supernovas which makes sense only if the Universe’s expansion is speeding up. Our current models say that would happen if there were large amounts of energy in empty space. Maybe there is, and it’s “Dark Energy”. Maybe our models are incomplete and something else is going on. We really don’t know, so we’re looking for more evidence and constructing new theories—that’s what real science is like.

At the end of the teaching session I encouraged them to go look through the telescopes and see for themselves.

I got a thank-you email from the organizer. He said, “They all thoroughly enjoyed it and spoke about it endlessly on the way back home”. He also promised to make them practice what they had learned at MSDC!

★ John Bishop

Sidewalk Astronomy, 13 February, Portsmouth NH

The February, 2011 Portsmouth Sidewalk sky watch was held on February 13th, the Saturday closest to first quarter Moon. This time **Gardner Gerry, Herb Bubert, Tom Cocchiaro** and **Ted Blank** took advantage of a nice break in a weekend of otherwise cloudy weather to share Jupiter, the Moon, M42 and the Pleiades with hundreds of visitors, some from as far away as the wilds of New Jersey but also many from Russia and Ukraine. It happened to also be the evening of

the Seacoast Father-Daughter Valentine Dance, so many of the “couples” stopped by on their way back to the city parking garage to have a look through a telescope or two. A member of Portsmouth’s Finest also stopped by for a look and was suitably impressed.

Jupiter set early but the atmosphere was marvelously still and the Moon very high in the sky, so the details of craters, wrinkle ridges, domes and many other features were incredibly clear. I usually urge everyone to adjust the focus for their own vision to get the most out of the experience. One guy resisted, afraid he might damage the scope or something but when I insisted he finally gave the focus knob a few tweaks, then suddenly stopped and said, “Oh man, now I got the HD view!” As we all know, sometimes that last sixteenth of a turn can make all the difference!

Snow banks intruded a bit onto our usual setup area but there was plenty of room for everyone. The coffee shop across the street, Breaking New Grounds, provided free hot chocolate—a tradition I hope they continue to maintain since their concoction is deliciously rich. The “donation” scope brought in \$75 for the club, a record amount. These events are open to all NHAS members, so mark your calendars for Saturday, March 12th when in addition to the first quarter Moon, stunning Saturn should be visible to us by about 9:30 PM. By April we will have Saturn in the sky for the entire evening, an enjoyable situation which will last right through the summer and fall.

★ Ted Blank

NHAS January 2011 Business Meeting

The January business meeting was held at St. Anselm College on 21 January, our President, **John Bisnop**, presiding.

President’s Report

John Bishop outlined his goals for 2011:

- Keep up the good work!

- Improve our infrastructure regarding loaner scopes and outreach support
- Extend our outreach efforts (e.g., the new program with the Rey Center)

Our 2011 Strategic initiatives:

- Revitalize our program of loaner telescopes for NHAS members (the Board of Directors will be driving this)
- Expand the Library Telescope Program
- Involve more members in NHAS activities
- Astro 101/201 workshops: the demand-driven approach to holding these didn’t work; we will be going to a schedule-driven approach

Educational Outreach

(Input from **Rich Schueller**) **Ted Blank** is coordinating our involvement in the McAuliffe-Shepard Discovery Center’s AeroSpaceFest 2011. The event will be only two days (Friday night/Saturday daytime) this year. We will just be a vendor with indoor and outdoor activities; we will not be expending funds for advertising as we have done in the past.

We are planning our own Astronomy Day event for the fall, at a location yet to be determined (Phillips-Exeter Academy and UNH as possible venues). **Tom Cocchiaro** is investigating for us.

The first Rey Center event was cancelled due to bad weather.

Board of Directors

John Rose reports that we got back one of the missing loaner scopes, and he is hoping to hear about the other loaner scope. The Board is working on a better procedure for handling loaner scopes, with a member personally responsible as caretaker for each scope.

Ted Blank has donated a scope (10” Odyssey dob) that needs a bit of refurbishing.

Membership

Bill Steele reported that an Astro 201 workshop on the Titan Mount will be presented at YFOS this

month, and **John Blackwell** is scheduled to present an advanced workshop of Stellar Evolution. About six people have committed to presenting Astro 101/201 workshops.

Miscellaneous Business

There was a major discussion regarding using PayPal for online payment of NHAS dues. This is a decision for the officers, but they are soliciting input from the membership.

Key points from the officer's meetings are that the payment procedure must be easy for the Treasurer and must not place NHAS at risk. It has been observed that the business side of PayPal is not as easy as the customer side. We *do* want to make things easy for the members.

PayPal would charge about \$0.89 per \$30 membership fee.

It was pointed out that PayPal is a symptom—prospective members want to pay over the Internet, maybe using a credit card. Another question is why members join but then do not participate. We need to weigh the benefits of a large, but inactive group, versus a smaller but more active organization.

If the Treasurer considers PayPal too much of a burden, perhaps an assistant to the Treasurer could be appointed to deal with PayPal.

Tom Cocchiaro will do further research on the mechanics of paying dues via PayPal.

Book of the Month

Rich DeMidio presented What's Out There. This is "Astronomy for those with a short attention span", and gives little vignettes with lots of pictures from Hubble, Spitzer, and other high-res image sources.

Scope of the Month

Herb Bubert presented the TeleVue 101 refractor. This is a 5th generation TeleVue Petzold design with two doublets. It has a wide, sharp, clear field and comes with a 2" rack-and-pinion focuser.

Evening Presentation

Gardner Gerry gave us the presentation on introductory Astrophotography he'd done earlier as one of the evening presentations at the McAuliffe-Shepard Discovery Center.

The Bottom Line

Starting Balance:	\$8419.90
Deposits/Credits:	
Membership:	390.00
Donations:	538.15
Bank Interest:	1.60
Calendars:	49.00
Total :	978.75
Accounts/Paid:	
Cynric Company (plowing):	116.05
Total:	116.05
Net Account Balance:	\$9278.60
Petty cash drawer:	\$100.00
Cash Balance:	\$9378.60

Membership: 122

Donations:

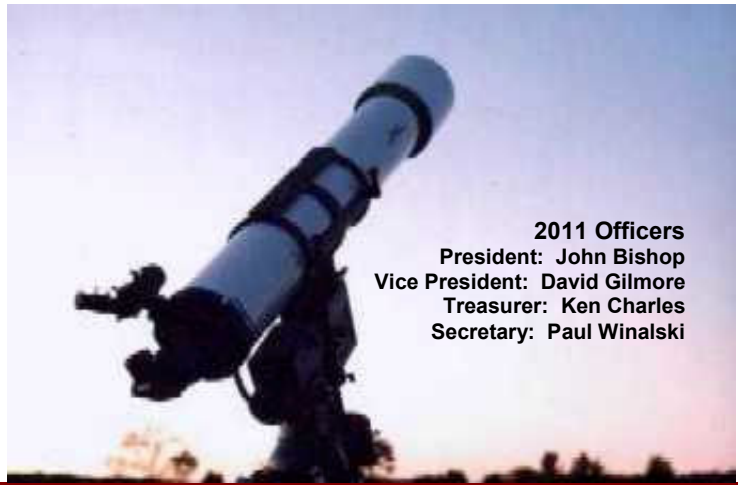
The Meyer Foundation (EOC)	400.00
Portsmouth Sky Watches (EOC)	63.15
Andy Jaffe (LTP)	75.00
Total:	538.15

New Members:

Eldon Burkinshaw, Londonderry NH
Chip Taylor, Derry NH
Jim Poulette, Westmoreland NH
Michael Morell, Exeter NH
Ralph Shaver III, Nashua NH
Kaleb Jacob, New Boston NH

★ Ken Charles

NHAS Treasurer 2011



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

DEADLINE March 2011 Issue: 5 PM March 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:

Rich DeMidio, Ken Charles, Ted Blank

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NHAS Upcoming Events

Event	Date	Time	Location
Goffstown Library Sky Watch	February 23	6:00 PM	Goffstown Public Library, Goffstown NH
Coffee House Night	February 25	5:00 PM	YFOS
Discovery Center Sky Watch	March 4	7:00 PM	McAuliffe-Shepard Discovery Center, Concord NH
Rey Center Sky Watch	March 5	6:30 PM	Curious George Cottage, Waterville Valley NH
North Hampton School Sky Watch	March 10	6:30 PM	North Hampton School, North Hampton NH
Educational Outreach Committee Meeting	March 11	6:30 PM	Ralph Pill Building, Concord NH
Bedford High School Sky Watch	March 11	7:00 PM	Benedictine Park, Bedford NH
Astro 201: Stellar Evolution	March 11	7:00 PM	Phillips-Exeter Academy, Exeter NH
Sidewalk Astronomy	March 12	6:00 PM	Market Square, Portsmouth NH
NHAS Business Meeting	March 18	7:30 PM	St. Anselm College, Manchester NH
Sandwich Central School Sky Watch	March 23	7:00 PM	Sandwich Central School, Sandwich NH
Chichester Globe at Night and Sky Watch	March 23	7:00 PM	Chichester NH