

Cloudy Messier Marathon

President's Message

"Everyone complains about the weather, no one does anything about it." After a Winter of poor weather and cancelled events we are now having a Spring with more cancelled events and even worse weather. Yet somehow we remain hopeful... "maybe tonight the skies will clear" ... "can I get set up in time to observe through that sucker hole?" ... "how much would it really cost to get into radio astronomy?".

But even Mother Nature can't stop Astronomers from talking about astronomy.

Come to CMP on April 20th at 6:00PM for part two of our Astro 101 course and hear Paul Winalski present "Navigating the Night Sky". This will be just prior to our next NHAS business meeting at CMP on 7:30 that same evening.

Our scheduled speaker for the business meeting will be Dr. Rudy Schild, a member of the Optical and Infrared Astronomy division of the Harvard Smithsonian Center for Astrophysics. Dr. Schild will be discussing gravitational lenses and the nature of dark matter. And let's not forget the Northeast Astronomy Forum (NEAF) at Rockland Community College, Suffern, NY is coming up on April 28th and 29th where you can rub shoulders with hundreds of amateurs from around the country and see the latest astro gear from more than 80 vendors.

So even though we can't make the clouds go away, we can talk about astronomy plenty! See you there!

,, Gardner Gerry
NHAS President 2007

Highlights for this Month

Overcast skies meant limited observing, but the Messier Marathon night at **Larry and Linda Lopez's** did finally take place.

A couple of sky watches did take place.

A proposed amendment to the Club Bylaws was moved and seconded last month. The amendment will be debated at this month's NHAS business meeting.

As Gardner mentioned, NEAF is coming up at the end of this month. Held along with NEAF is the Northeast Astro-imaging Conference (NEAIC).

Our annual Astronomy Day event is also coming up.

,, Paul Winalski
NHAS Secretary 2007

Messier Marathon and ATM Committee Meeting

Attendees: **David Weaver, Alan Shirey, Brian & Joyce Icaza, Gardner Gerry, Chase McNiss, Herb Bubert, Mike Miller, Ed Los, Linda and Larry Lopez.**

The day started early when we arrived home at 11 PM on Friday April 13.

It was clearer. My worst fears had been realized—we had already cancelled MM for Friday.

Well, to make the best of a bad situation (and possibly have the highest MM score for the weekend) we decided to observe. Linda observed M44 in her new (used) cloud hole creating TV102 Gibraltar telescope. Conditions got worse so we came in and we went to bed.

Saturday Morning we woke up and prepared for the main event by

producing a large pot of stew and a large pot of beans.

Alan brought an Espresso Machine which in the best ATM tradition we thoroughly tested. (I'm going to get one and use it on my mount to prevent dew). Herb brought shrimp, Chase brought chili, and Joyce brought some tasty flavored crackers. I might have missed some things in here.

Gardner brought his Nikon lens collection with him so Larry could look at them.

The 8" Meade OTA went to Chase to be converted into a dob. The 8" Meade mount Larry is going to try to fix.

We have a dob also that needs a secondary which we wish to loan out for the purpose.

Things shut down early at something like 11:30PM Saturday night.

We spent the evening going through various things, just hanging around, showing Larry's observatory, and playing with Larry's magnet collection.

Sunday morning when I woke I found that Astromart had an image of Herb's as the picture of the day

http://www.buytelescopes.com/gallery/view_photo.asp?pid=12381

Chase tells me that people got 9 objects. It was cloudy with occasional openings.

It was a very good Marathon. I was able to lose some the Meade 8" OTA to Chase, and to clean up the house.

,, Larry Lopez

Membership and Astro 101

We have three new Members since last meeting:

Elizabeth M. Wood: Concord, NH

David Gilmor: Greenfield, NH

Mary Brezezanski: Derry, NH

Please welcome them when you see them at club events.

Our Astro 101 Series continues with Navigating the Night Sky scheduled for April 20th at 6:00PM in the CMP Dome. This class is presented by our own **Paul Winalski** with Planetarium effects provided by Dave McDonald of CMP.

Our May course offering is on May 25th at 7:30PM. Introduction to Photography will be presented by **John Blackwell** at the Phillips Exeter Academy Grainger Observatory. Attendance is by pre-registration only. We have 20 seats total and 14 are already spoken for.

Please look on the NHAS Website in the Resource section for realtime information on Astro 101.

,, Alan Shirey

Moultonboro Sky Watch

I decided to make the long drive to assist **Marc Stowbridge** with this sky watch. **Mike O'Shaughnessy** also attended. It was an 85 mile drive from my house and took a little less than two hours. Was a beautiful drive and I really enjoyed the scenery on the way.



The sky watch was very well organized by the school teacher Dan. The school had purchased several telescope kits that the kids did as a project. They were refractors with about a 1 inch objective lens. He also has been teaching them astronomy and it very much showed. We also saw the Pipehenge which a cool device. It represents a learning tool for basic astronomy. A place to see the

North Star, and the path of the sun during equinox and solstice.



The attendance was much greater than I had expected. I would estimate about 15 kids and parent pairs visited my station. One parent had a autistic teenager which I immediately recognized because of my own son. We hit it off very well and I knew exactly how to interact with this son. He loved looking at Saturn through Obby and the parent was pretty knowledgeable about Astronomy.

I was very impressed with the children who had been obviously briefed on the etiquette. In fact, I was very comfortable with them to the point where I showed them how to use the fine focuser and even move Obby to keep the object in the field of view. When I asked them what the Orion Nebula was, several replied that it was a place where stars are born. Many of them had questions about how stars evolve and what are various types of objects like Red Giants and clusters. It was very enjoyable and I had a great time teaching them the fundamentals.

I arrived around 6pm and got set up quickly again in just 15 minutes. The moon was nearly full and since a few people were already gathering, I started to show the Moon through Obby. It looked best with the 27mm panoptic. I saw aberrations coming from the mirror which surprised me since I thought it would have been cool. Not sure if some of it might have been related to distortion in the atmosphere. The sky clock said seeing conditions would not be optimal but transparency was average.

During the evening, I primarily showed the Orion Nebula, Saturn, and the Double Cluster. Venus was also visible but was very bright and looked 3/4 phase. Very blurred and tough to focus on. Just too much glare with Obby and really need to use a filter for future

reference. Of course, the light pollution from the moon was interfering, but still saw the objects really well with all that aperture. I pointed out and asked several children if they could see the bird wing in the Orion Nebula that represented by the nebulosity. It's just a trick I use to help the kids and everyone was easily able to see it. Plenty of "Wow!"s which always brings a smile to me.

Also looked at Saturn but the seeing conditions were below normal so I did not get a crisp focus. Several moons were picked out and at one point, I counted eight but I suspect some might be stars in the line of sight. Would have to compare that again over a few sessions to see if they have moved.

I also pointed out a few double stars for some nice color when some children asked if color could be seen. Eta Casseopiae proved to be a good choice there. M35 was in good position and it showed up adequately even in the light polluted sky.

In summary, I am glad that I made the trip. The kids were very appreciative and extremely well behaved. It is a tribute to our sponsor who really did a great job. I would go back there in a heartbeat to help Marc again especially on a night where the moon would not interfere. I can already hear the reactions to kids looking at some really cool deep sky objects through Obby.

,, Rich DeMidio

April CMP Sky Watch

It was sunny and extremely clear when I packed my telescopes into the car the morning of 6 April. The Clear Sky Clock was most pessimistic, predicting bad transparency during the night hours. But the broader maps on which the sky clock is based were showing us at the edge of a clear spot. Late afternoon, the clouds indeed rolled in at Nashua, but there were some sucker holes present, so I decided to take a gamble and go for it.

The aforementioned sucker holes had vanished, leaving grey skies, as I drove off from work at 6 PM toward CMP in Concord. I got there at 7 PM and the skies were nearly completely overcast. I set up Mr. T. the 14" TScope for a group of four NHTI students who apparently were working on some

course project, as they took notes. **Mike Townsend** showed up a bit later, making me glad that I wasn't the only overly optimistic idiot enough to hope for the best from the depressing skies.

There was a big sucker hole on the western horizon, through which we were able to show Venus to a few of the public after the early evening sky show. Venus is in about a 5/6 gibbous phase at present, and, naked-eye, a dazzlingly brilliant twilight object. At this time (8 PM or so) the only other object visible was Sirius.

Things actually cleared up remarkably after 9 PM or so, and I got in more practice on my star-hop to Hubble's Variable Nebula. The Christmas Tree Cluster and $\Sigma 953$ were both easily visible, but the sky was too bright and hazy to view the Variable Nebula itself.

By the time **Matt Marulla's** talk on black holes was over, the sky was tolerably clear. Mike concentrated on Saturn (that long-focus 4" achromat of his is a WONDERFUL planetary scope!), and I showed off various DSOs, starting with a fine view (for Concord skies) of M42 in Orion (5 of the Trapezium visible). I then went to various star clusters, proceeding from M35, M37, M36, to M3 and finally the core of the two galaxies in M51 (only dimly visible). The great thing about M51 is that CMP has a framed Hubble Space Telescope image of M51 and its companion visible from outside through the windows. So I was able to say, "So you saw those fuzzy dots in the telescope. Now here's a Hubble image of what you just saw with your own eyes." Most impressive. I also showed Mizar as an illustration of a double star (as well as the quadruple of the Trapezium in M42, of course).

About 15 of the public braved the cold and came out to look through the scopes. Not bad for what looked like it would be a total wash-out (yet again), but turned out to be the first scheduled CMP sky watch that's actually come off since last September.

Sky conditions were cloudy with clear patches (more clear patches than clouds, later in the evening). No dew, thank goodness, but temperatures around freezing. Given the wind, seeing was remarkably steady, and I got some of my best views of Saturn during this

opposition. Only four moons were visible (light pollution taking its toll), but detailed banding on the planet, a sharp image of the rings (with Cassini's Division), and sharp shadows of the planet on the rings and the rings on the planet. Mike had a better, larger, and steadier view with the EQ-mounted refractor, but I had a bit better detail on the banding (aperture does count for something, even with planets).

The surprisingly steady skies also meant good viewing for double and multiple stars. Objects that are often blobby, such as Sigma Orionis, were tack-sharp even at 52x magnification (32mm Plossl in 1661mm focal length 14" reflector). All four of the components were there, as well as the three from the adjacent Struve triple. I got five of the Trapezium when observing M42 (not bad for Concord skies). Izar and Castor were also showing pretty well (although I've seen better). Cor Caroli was an easy target. While in an ultimately futile search for M41 in Canis Major, I stumbled across a beautiful double star that was like an exact miniature of Albireo. Mike said it was a famous double that has a John Herschel catalogue number, but he didn't recall the exact designation. It's a very nice double, easily found by locating Sirius and proceeding directly due south.

This was a most satisfying observing session, made especially so because, despite the pessimistic weather predictions, the sky for once cooperated and let us show several sky treasures to the public at CMP. This was long overdue!

,, Paul Winalski

Astro Photons

No Astrophotography Committee meetings to report on, and the poor weather has kept our scopes and cameras indoors and covered for the most part. It's been a good time to go back through old data and reprocess as **Herb Bubert** has shown us with his Four Years of Saturn image that made it into the online version of *Sky and Telescope* at <http://skytonight.com/community/gallery/celestial/3441116.html> Well done Herb! Visit the club forums Pictures

section to see more work done by our club's astrophotographers.

There will be an Astro 101 course Introduction to Photography presented by **John Blackwell** and held at the Grainger Observatory at Phillips Exeter Academy on May 25th. Space is limited, so please sign up in advance with John or **Alan Shirey**.

,, Gardner Gerry

Herb's Saturn image also made Astromart's Image of the Day.

,, Paul Winalski

Radio Astronomy

Last November we worked on an attempt to hear meteors via radio at Very Low Frequencies (VLF). This effort may be continued this year but there are other interesting things detectable at VLF. Using a VLF receiver it is possible to monitor solar activity via its effects on the earth's ionosphere. There are many VLF transmitters around the world that put out a continuous signal. By using a receiver tuned to this frequency a person can learn how the earth's atmosphere is being influenced by the sun. There are many other things that are detectable at VLF. Some are astronomical, others are natural terrestrial signals, and many are man made.

Here are some URL's regarding VLF technologies in general:

<http://www.vlf.it/> ,

http://www.qsl.net/dl4yh/vlf_rcvr.htm

One of the advantages of VLF work is that the receivers are comparatively easy to make. The disadvantages are the high noise levels and the antenna efficiencies. To make antennas perform well is a fun part of the challenge of VLF work.

As we consider things we might do together in our radio initiative there are some interesting possibilities at VLF.

,, Bob Sletten

Astronomy Day May 4 and 5

Our Astronomy Day event is coming up on May 4th and 5th, held together with CMP's Spacetacular Saturday. Since the Friday night before is the First Friday of the month anyway, the night observing will happen on Friday the 4th.

We will be setting up our solar observing, static scopes and other displays on Saturday the 5th. If you would like to volunteer to help out at A-Day on Friday night or Saturday, and we need volunteers, please contact the coordinator at aday.2007@nhastro.com.

∴ Gardner Gerry

Proposed Bylaws Change

At the March NHAS business meeting it was moved and seconded that the following two changes be made to the NHAS Bylaws:

(1) From section II.A.3 (duties of the Treasurer), strike paragraph (d), which reads:

d. sign, laminate, and distribute all membership cards;

(2) From section II.A.4. (duties of the Secretary), strike paragraph (c), which reads:

c. be responsible for the production of membership cards, valid for one year and to be provided for each shareholder at the January meeting

The rationale for the motion was that laminated membership cards no longer seem to be necessary, and their production represents an unnecessary burden on the officers involved, as well as an extra expense for the Club.

This motion will be discussed at the April NHAS business meeting.

A copy of the NHAS Bylaws is available from the NHAS website (<http://www.nhastro.com>). Contact the club Secretary to obtain a paper copy of the Bylaws.

∴ Paul Winalski

NHAS March 2007 Business Meeting

YFOS

Don Ware reported that the Titan mount in the YFOS observatory died recently—this was a disaster waiting to happen. Money from sale of the Baker assets will be used to upgrade the drive to steel worms and a 50:1 gear ratio that will be gentler on the motor.

Don also described the inventory process that the Board of Directors is undertaking. All club assets are being photographed and documented.

ATM

No report.

Membership

Alan Shirey reported one new member—**Elizabeth Wood** from Concord.

The first Astro 101 course (Telescopes and Optics) was held at the last YFOS Coffee House Night. The next, Navigating the Night Sky, will be at CMP at 6 PM. There are further courses committed through the summer. From this we will have a library of presentations. Astro 201 is in the planning stages.

Public Observing

Sky watches are planned for Newfields (April 4), and Moultonboro and Goffstown over the summer. 1000 NHAS business cards have been printed and are available to members. **Marc Stowbridge** is putting together a curriculum base for us to use with Scouts and Schools. He is looking for canned multimedia presentations.

Tom Cocchiaro has written up a grant proposal for AV equipment and will be submitting it to PC Connection.

Web Administration

No report.

Photography

Gardner Gerry reported that the Photo Committee met on March 10 at Nashua Public Library. **Herb Bubert** discussed image processing. **Nils Wygant** gave a talk about his new observatory.

Radio Astronomy

Bob Sletten gave his presentation on listening to Jupiter to a ham radio event.

Other Business

It was moved and seconded to strike from the NHAS Bylaws the requirement for the Treasurer and Secretary to produce laminated membership cards annually. (See article above.)

We need an Astronomy Day Coordinator (or two).

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Scope of the Month

A “classic small dob” made from pipe and other ordinary construction materials by a St. Anselm student.

“Mount of the Month”—an Orion tracking alt-az mount. You program it with your latitude, point it North, and level it. Turn off/on, and then it will track. It has three slewing speeds and a 8 lb capacity. Cost is about \$250. It uses AA batteries. The only drawback is the tripod.

Book of the Month

Alan Shirey presented Saturn, a book of photos taken by the Cassini fly-bys. It is by Lovett, Horvath and Cuzzi and published by Abrams.

Evening Program



John Bishop gave a talk on the Astronomical Clock installed in the City Hall building of Ulm, Germany.

With its several dials and hands, it shows the zodiacal position of the Sun and Moon, times of sunrise and sunset

and moonrise and moonset, and even the current time of day.

The Ulm clock is not unique—several other cities in Central Europe have them. These projects were undertaken for the same sorts of reasons that today’s cities build a sports stadium—as a civic showpiece. In the case of the ornate astronomical clocks, it says to the traveler, “see what great skill we have in mechanical craftsmanship.”



The Ulm Astronomical Clock

So the short answer to “why don’t cities build these sorts of clocks today?” is that they don’t need to anymore.

✎ Paul Winalski

The Bottom Line

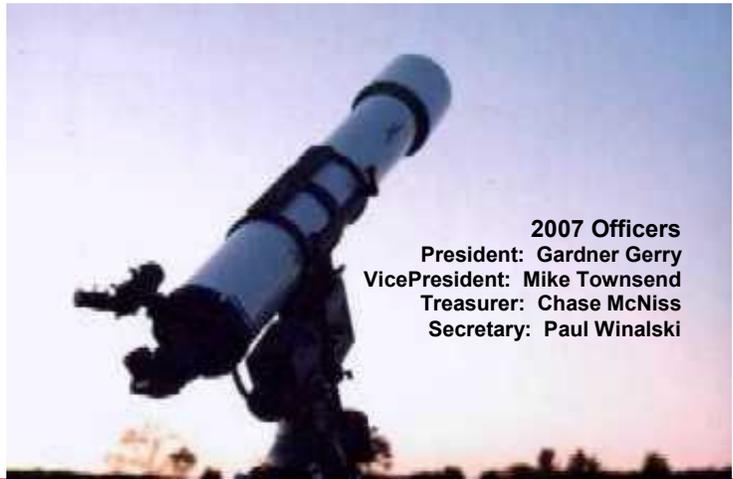
Starting Balance:	\$5824.62
Deposits/Credits:	\$45.00
(Membership)	
Accounts/Paid:	\$126.67
(Peerless, LAB Plowing)	
Net Account Balance:	\$5742/95
Petty cash drawer:	\$195.75
Cash Balance:	\$5938.70

2007 Membership: 123

New members:

Mary Brezezenski, Derry, NH
 David Gilmore, Greenfield, NH

✎ Chase McNiss



2007 Officers
 President: Gardner Gerry
 VicePresident: Mike Townsend
 Treasurer: Chase McNiss
 Secretary: Paul Winalski

DEADLINE May 2007 Issue: 5 PM May 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:

Gardner Gerry, Larry Lopez, Alan Shirey, Rich DeMidio, Don Ware, Bob Sletten, Chase McNiss, John Bounomo, Paul Winalski

New Hampshire Astronomical Society
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NHAS Upcoming Events

Event	Date	Time	Location
Astro 101: Navigating the Night Sky	Apr 20	6:00 PM	Christa McAuliffe Planetarium, Concord, NH
April Business Meeting	Apr 20	7:30 PM	Christa McAuliffe Planetarium, Concord, NH
Northeast Astronomy Forum (NEAF) & Northeast Astro-imaging Convergence	Apr 28-29		Rockland Community College, Suffern, NY
CMP Sky Watch	May 4	7:00 PM	Christa McAuliffe Planetarium, Concord, NH
Coffee House Night	May 11	5:00 PM	YFOS
May Business Meeting	May 18	7:30 PM	St. Anselm College
Astro 101: Introduction to Photography	May 25	7:30 PM	Philips Exeter Academy (pre-registration required)