



Fall Observing is Back!

Newsletter of the New Hampshire Astronomical Society

Vol. 2005 No. 9

"All the news that fits in print"

September 2005

Astrophoto Fever

President's Message

As I write this, I have just gotten back from a weekend in Dummer, New Hampshire. Yes, it's a funny sounding name, but at least its not spelled d-u-m-b-e-r. This is the first opportunity I've had to spend a lot of time "north of the notch" up in the Great North Woods section of the state and I have to say it's very nice up there (I'll show some slides at this month's meeting). How does this relate to the club you ask? Well, I was invited to go by a former Massachusetts resident that recently opened a B&B and campground up there. He has always had an interest in astronomy and wanted to know if NHAS might have an interest in doing some sort of observing event at his place. Well I can tell you that the skies are inky black. The brightness of the Milky Way is absolutely astounding! Not since I was in Death Valley a couple years ago have I had trouble seeing the constellations because there are so many other stars in the way. They just started this place earlier this year, and they have some work to do before the camping area is ready, but I think there are definite possibilities here. Personally, I'm thinking we host a star party on the new moon weekend the month before Stellafane – that seems to be an open date every year with regard to the other New England astronomy events. I'll stay in touch with the owner and see how things develop for next year. Don't forget, Bob Sletton and John Bishop will be doing the Astro 101 Collimation Lab at this month's meeting at St. Anselm College. See you there!

* Matthew Marulla
NHAS President 2005

Photo Committee

The NHAS Photo Committee will have it's first meeting for the fall season on Saturday, September 17th at the Nashua Public Library at 2 Court Street in Nashua. The meeting is scheduled to start at 3:00 PM and will be held in the East Wing section on the basement level. There will be a short organizational meeting and then the main topic of discussion will center on affordable CCD cameras for deep sky and planetary imaging. As always if you have any recent images, equipment or software please bring them to share with the group.. All Photo Comm meetings are open to NHAS members and their guest no matter what your experience level. Hope to see you there

* Mike Kertyzak and
* Chase McNiss Co-chairs

Astrophoto Fever

On 9/2, John Blackwell reported another great clear night last night. I finished off the Gamma Cygni image. I want to go longer in the RGB, but there is this issue called sleep ;-)



Photo by John Blackwell

http://www.regulusastro.com/regulus/photos/text/gamma_cyg_lrgb.html This is an LRGB image. H-alpha was the Luminance. Times: LRGB=20:5:5:8 minutes. The RGB images were binned 2x2. That worked out very well. The H-Alpha was binned 1x1 for detail.

The RGB was made in MaxImDL and the final image was combined in PhotoShop using luminance layering. Note the coma at the edges. Ahh the joys if a Newtonian. Another clear night tonight!!

* John Blackwell

Chase McNiss took this photograph of Tyco and Clavius, the morning of 8-26-05, seeing 7/10, CP4500, 8x24 zoom, a-focal, color converted to B&W, 15th sec @f5.1, single image processed in Photoshop

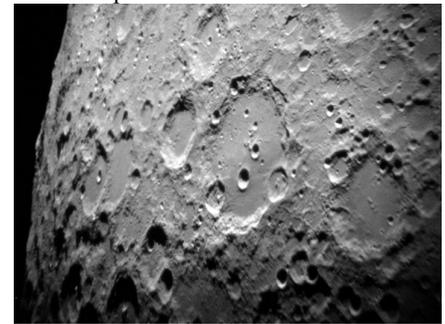


Photo by Chase McNiss

http://groups.yahoo.com/group/NHAS_Photo-Comm/files/Chase%27s%20images/Tycho%20and%20Clavius%20a.jpg

Noteworthy News

Fall Observing is Back ... Page 2
Auroras ... Page 3
UFO Weather Phenomenon ... Page 4
Astrophoto Fever (Cont) ... Page 6

Fall Observing is Back

I spent an extended Labor Day weekend at Mt. Desert Island in Maine on private property of a friend. His land pretty much borders along Arcadia and is right on the ocean.



Photo by Rich DeMidio

Jean and I spent four days camping and of course, given the dark skies I brought Obby along for the trip. The weather was spectacular and I got three nights in a row of wonderful observing. The site is right along the ocean so there was spectacular viewing all around especially south and southeast.



Photo by Rich DeMidio

If you compare to YFOS, we get great views in those directions as well but there were no trees blocking near the horizon. For darkness, I would say that compared to YFOS, this place was equal but not much darker. The Milky Way was easily noticed from Cassiopeia all the way through Aquila and onto the Sagittarius region. Many of our favorite objects were recognized such as the great Andromeda Galaxy, double cluster, M13, the Eagle, Lagoon, and Trifid Nebulas to name a few. At one point, I put in my 31 Nagler on Obby and just panned the whole Milky Way. I saw so much detail it was breathtaking. On Friday Evening, I started off my skywatch with Venus and Jupiter low on the western horizon. Although the soup was thick, I was able to make out the shape of Venus and saw some bands of Jupiter with my filter to reduce glare. Of course, the four Galileon moons were visible. As

the sky darkened, I did my typical double star tour, which is great during astronomical twilight. I chose my usual favorites Alberio, Eta Cassiopeia, and Epsilon Lyra to name a few. Many people did not know that Polaris was a double star until they looked at it through Obby.



Photo by Rich DeMidio

This also served as a good test for transparency for seeing conditions. The focus was fairly sharp but not as good as in the past, so seeing conditions were not perfect. I confirmed this with my crude but reliable laser pointer test. If I see the beam real easily and people around me can see it, then there is lots of humidity in the atmosphere. Being close to the ocean, this should not be too much of a surprise. As the sky darkened I got things started with M11, which dazzled everyone. I then hit M27 (Dumbell Nebula), M13 and M92. Then, I was ready to move into the Sagittarius region and we spent a long time looking at the Trifid, Eagle, and Swan Nebula. At first, I used my 31 Nagler but since conditions were good, I used the 17mm Nagler and we easily saw the dark areas around the Nebulosity. We probably spent close to 90 minutes on just those objects rotating eyepieces. I was really nice to just sit and look at those for a long time. Once they started to get lower on the horizon, I shifted gears and went to the Cygnus, Perseus, and Andromeda area. Ursa Major was also in a good position so I also hit M51 where we clearly saw the main and companion, M81 and M82 in the same field of view, and the Cat's Eye Nebula. I closed with the Veil Nebula, which was spectacular spending a considerable amount of time looking at it. On each successive night we pretty much repeated the same schedule picking some other neat objects from my charts. I also did some experimentation by just pointing my camera to the Sagittarius region on a tripod with some long

exposures. Some of them came out but nothing worthy to show. But I did manage to get some great sunsets and this picture of Venus and Jupiter at sunset. Another surprise was viewing the Veil Nebula without my O2 filter. In the past, I would always just put in the filter, but on Saturday night I forgot and just pointed Obby to it. I saw it clearly and did not realize that I forgot the filter until I went to view another object! That was a nice surprise as I thought it was only possible to see it with a filter. Of course the filter brought out the detail, but it was cool to view without it. I was also able to see the central star in M57 (the ring nebula) with averted vision. Actually, I did not see it at first but several of my friends were able to. Still not sure if I really but they had never seen it before so I am certain it was there ☺ Overall, it was a wonderful trip and a great way to start viewing again during the best time of year from my vantage point.



Photo by Rich DeMidio

This is an annual event so Jean and I are already planning for next year where we plan on going even longer.

* Rich DeMidio

The Clear Sky Clock predicted completely clear skies, excellent transparency, and good seeing for YFOS, so even though it was a weekday I packed up the 14" TScope and drove out there. John Bishop (with his 16" dob) also decided to avail himself of the opportunity. When we arrived at 8:30, Venus and Jupiter were both prominent as they were setting, but neither of us set up our scopes in time to catch them. The evening was cool (temps in the 50s) and mosquitoes were not a problem (I credit the MM for this). The sky darkened quickly and it was evident we were in for a good night's observing. Skies were mag 5.5 or better, although there was some background haze to the north. Milky Way from horizon to horizon, with the major Messier objects in the south

naked eye visible as fuzzy patches. One of my goals was to try to make a last attempt for the season to see the companion to Antares. My first whack at this, at about 9:30, was to no avail, even using a green filter to selectively attenuate the light of the primary. Just too blobby. About half an hour later, I decided to look for NGC 6144, a faint globular in the vicinity of Antares and M4. The seeing had improved to textbook levels, and I was so astounded by how pinpoint sharp the image of Antares was, with its razor-sharp diffraction spikes, that I put a 151X (11mm) Plossl in. And there it was, clear as day--the Antares companion, a tiny white pinpoint of light 3 arc seconds away from the primary. It reminded me of the contrast in brightness between Rigel and its companion. And yes, it does seem greenish if you stare at it a bit. John can confirm the sighting. I see now why it's so elusive. If the seeing is even a tad worse, so the airy disk or diffraction ring or diffraction spikes are just a smidgen larger, the companion's obscured. But if you can split the epsilon Lyrae double-double, you can easily split Antares, and you need only fine enough optics and seeing to reduce the primary's glare in order to see the companion. Alas, not ten minutes after that, Antares had sunk enough into murkier air, and the field had rotated to put the companion into a diffraction spike, and the seeing had gotten just enough worse that the companion was again as invisible as usual. But it was really there, and I have a witness. :-)

This was a banner night for double stars. Epsilon Lyrae, gamma Ariatis, eta Cassiopeia, and other favorites were all pieces of cake. John and I also searched for Uranus and Neptune, and found them easily. Both clearly were showing planetary disks of yellow-green (Uranus) or yellow (Neptune). This was also an excellent night for observing the southern DSOs. I got my best views of M8 ever. Even without the Lumicon Ultra High Contrast filter it was showing nebulosity, and with the UHC filter the swirling clouds were almost as impressive as the Orion Nebula. M22 was astounding. Now I know why they say it's the equal (or better) of M13. Nebulosity and a dark lane or two were visible in the Triffid

without any filter. With the UHC filter, all three dark lanes were distinct and the structure of the nebula was breathtaking. The Veil and North America nebulae were excellent under the O-III and UHC filters (respectively). Got to see the Pelican, too. John got better views of all this stuff. That extra two inches of aperture is good for something, after all. :-)

John got an excellent view of the explosive core of M82. Again, aperture rules--my 14" view was distinctly inferior. The northern view wasn't particularly good. We both tried M51, and the clarity wasn't anything like what we'd seen at the Messier Marathon this past spring, when it looked like one of Lord Rosse's sketches. In the carbon star arena, I bagged T Lyrae and 19 Ariatis, but I couldn't find S Cephei (my finder scopes were too dewed up by then). John bagged some really nice planetaries, including the Cat's Eye, the big and little dumbbells, and some other planetary I'd never heard of before that looked like a miniature of M57. M31, M32, and M110 were all there, but I've seen them more clearly. Neither of us thought to go for M33 until it was too late and the Moon had risen to spoil all the faint fuzzy views. By midnight, the combination of dew and fog and the rising Moon and the prospect of work the next day meant we had to pack it in. Mars was rising at better than 0 magnitude. This is going to be a great opposition. Let's hope for more such clear skies

* Paul Winalski

Aurora Sightings

Several members recently reported seeing Auroras. **Matthew Marulla** was able to grab the following photograph, which is on his web site taken in Northern NH.



Photo by Matthew Marulla

On September 10th, **Dan Smith** reported Last night I was at YFOS.

About 11pm, there was wide spread aurora activity. From Auriga to Ursa Minor, there was a major horizontal glow, which resembled serious urban sky glow. Then the streamers started heading south showing whites, reds, and greens. As the aurora progressed, it moved westerly by starting at Ursa Minor and the Big Dipper and ending all the way to Corona Borealis, which was early setting in the west. The event lasted at least 1.5 hours. Unfortunately, my camera was at home. Nuts!

* Dan Smith

I was observing with friends in Warner, NH last night. At around 11 PM, we noticed a broad and wide aurora band across the whole northern horizon. For the next hour or so, it put on a beautiful display of undulating curtains and streamers of light, some of them reaching halfway to zenith. Aurora activity calmed down (but never subsided) by 1 AM, but as I was driving home at 2 AM I noticed that activity had picked up again.

* Paul Winalski

Last night around 11:30, I could see the aurora arc with some activity on the northern horizon from my house. Some rays/streaks appeared for about five minutes and then the arc receded. I think we are in for quite an active two weeks if this sunspot keeps spewing out X-class solar flares. Another website one can monitor is:

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

* Tim Printy

Deep Sky Object of the Month

Observer: Lew Gramer
 Your skills: Intermediate
 Date and UT of Observation: 1997-06-7/8, 06:00 UT
 Location: Rumney, NH, USA (43N)
 Site classification: rural
 Limiting magnitude: 7.2 (zenith)
 Seeing: 3 of 10 - pretty good (but hazy)
 Moon up: no
 Instrument: 25" f/3.5 truss dobsonian reflector
 Magnification: 250x, 320x
 Filters used: None
 Object: M106 (ngc 4258)
 Category: Spiral galaxy [SAB(s)bcP]
 Constellation: CVn
 Data: mag 8.41 size 18.6'x7.2'

RA/DE: 12h19m +47o18m

Description:

In spite of a receding haze, we tried this fine prototype dob out on one of the most striking galaxies in the sky, M106. The Canes Venatici beauty exhibited an extended, extremely elongated halo some 20' long, with a minor axis of no more than 5'. The bright, multifaceted core showed strong spiral arms off-center, giving it the appearance of being "rotated" about 45o from the axis of the halo. No hint of spiral arms could be seen in the halo (probably thanks to the haze), but it did show large dark features both NE and SW (?) of core. The core brightened very suddenly toward the middle, where a startlingly bright stellar nucleus could be seen, especially at the higher power. What a SIGHT this galaxy is in such a scope under such skies! It would certainly deserve several more paragraphs of description, but as I was observing through a friend's scope, there was no way to give M106 the lengthy look-and-log which it deserves. :)

* Lew Gramer

UFO's / Weather Phenomenon

I have never been one to spend too much time or energy thinking about UFO's and Little Green Men, but there was an unusual occurrence a few years ago that left me wondering. I had gone out to Pack Monadnock to photograph the comet Hale-Bopp while it was still pretty far out in the solar system. I arrived early well before sunset and set up on the rocks to the southeast side of the mountain. I took along a pair of 10x50 binoculars to aid me in locating the comet and spent some time before dusk looking at some cloud formations to the east. While scanning and adjusting focus on different groups of clouds, I came across a visual anomaly that made me take a double take, a triple take and I then rubbed my eyes to make sure what I was seeing wasn't a new type of floater. What I saw could be compared to a fire works sparkler, but with a less concentrated center and

not nearly the brightness or contrast. My first impression was that this was a weather-related phenomenon, but I wasn't sure if it was something like a static discharge or precipitation related occurrence. I thought about attempting to take a photograph of the light show, but I had already set up my telescope and camera and I would have had to move the whole setup. I didn't want to risk missing the comet on film so that option was abandoned. I stood there and watched the light show for less than 5 minutes, occasionally trying to see it without the binoculars but to no avail. It was hard to tell if it was just the clouds that were moving or both the clouds and the light show. Eventually the sparkler show just ended without any gradual fading. I eventually got images of the comet and when I went home that night I told my wife that I had seen a UFO.



Photo by Chase McNiss

She seemed interested at first until I told her it was just some lights and not a space ship or flying saucer type object. I also spent some time looking through weather books and web sites to see if there were any other records or better yet, photographs of what I had seen. I never did find any mention of what I had seen and I went on to spend considerable time racking my poor little brain trying to come up with a sensible answer. I thought it could have been ice crystals, but I could not imagine why they would sparkle the way I observed. I also discounted ice because

it was fairly warm and I was not looking at any high altitude clouds. I mentioned this event to a few other people over the years, but primarily when the topic of UFO's came up. Again I don't think my account raised too many eyebrows and the discussion was mainly one sided on my part. Well just the other morning I saw another similar light show, but this time it was in my bathroom at home. It was a bright sunny morning and I had just turned on the shower. I stuck my hand into the water spray to test the water's temperature and watched the water deflect off my hand. As the water deflected off my hand, it came across a narrow shaft of light that was coming through a window in the bathroom. When my perspective view was just right I saw the light show all over again. At the time I wasn't even thinking about my UFO experience, but as soon as I saw the water sparkle through the light, I knew I had come up with a viable solution to my problem. Apparently what I saw that evening on Pack Monadnock was some form of precipitation, either ice or rain, that was moving through a shaft of light between the clouds. The sun was at a low enough angle in relation to myself and the clouds that my perspective did not allow me to see the light shaft itself, except for the precipitation moving through it. Funny how these puzzles stick in your mind only to present the answer years later while involved in a mundane, everyday activity.

*Chase McNiss

The Bottom Line

Starting Balance: \$3,712.92

August Deposits: \$542.50 (shirt sales and memberships)

August A/P: \$127.73 (Insurance and Stellafane BBQ)

Net Balance: \$4,128.59

Cash Balance: \$4,128.59

Membership: 133

New members: David White (Contoocook, NH)

Donations:

Dr. Seth and Melanie Bilazarian (Andover, MA)

* Barbara O'Connell

Looking Back at Last Month

Opening. **Matt Marulla** walked us through the various department reports and set the stage for the evening program regarding his desire to donate a spherical wave interferometer.

Scope of the Month. No actual scope but **Paul Winalski** brought his scope for the mirror testing lab exercise. Matt provided an overview of how it would be used for the evening program demonstration. Here, **Ed Los** checks out the configuration during the meeting break.



Photo by Chase McNiss

Public Observing. **Ed Ting**. Ed was unable to attend the meeting so **Joe Derek** reported in his place. There was a session in Chicster with adequate turnout. Joe Derek also organized a session in n Plainsfield that was attended by **Joe Derek, Mike Townsend, Chase McNiss, Gardner Gerry, John Bishop, and Paul Winalski**. There was excellent turnout of about 150 people. Other than some slight dew, the weather was good for observing. Joe described his idea regarding the passing out of passports, containing various types of objects in the sky. The idea was that the attendees could take a virtual trip

around the universe and could check off each object seen in the scopes. The team attending would have these objects already pointed to in their scopes making a great variety. The idea went over very well with several members suggesting that we consider this for future sky watches.



Photo by Chase McNiss

Book of the Month, Joel Harris. It seems that Joel has a lot of luck winning raffles at Stellafane so he presented a whole bunch of books that he won there this year. I guess that we will not be short on book of the months moving forward ☺ this month, Joel brought "*Bright star atlas 2000*" by Will Tirion and Brian Skiff. The stars down to magnitude 12 are listed along with many objects including Messier ones. The book is great for a 6-inch telescope and also includes the southern hemisphere. Joel also showed a binocular book, which shows what you would see with a 10x 50 set.



Photo by Chase McNiss

Committees. **Photo Club Chase McNiss** reported that there have not been any meetings lately. If there is anyone who wants to head the committee, please email Matt if you are interested. The basic responsibility of the chairperson is to organize a monthly meeting.. **Web: Matthew Marulla** reported that he is considering replacing the individual member areas with a forum-based solution. Existing technology could be utilized reducing the need for custom development. This

would also allow us to have security built-in for public, semi-private (only we post), or fully private. Could be done on a topic-by-topic basis. There was discussion that followed concluding that Matt is going to work on an iteration of this and report back. Matt also mentioned the idea of a member Blog section for the membership? . **ATMs: Larry Lopez** – reported about the work they are doing involving wireless drives to Joe's scope. Recall that they decided not to pursue for the last Stellafane as there was not enough time **Membership:** Matthew Marulla reported for **Bob Sletten** who was unable to attend. The next session of Astrolabs will be conducted at next month's meeting as the evening program. The session is collimation by **John Bishop**. This will be a working session so please bring your scope. **Barbara O'Connell** also reported that our order of attire arrived and would be handed out during the break. That was a huge crowd pleaser ☺



Photo by Chase McNiss

YFOS. **Larry Lopez** reported that he has a new mower at YFOS with three others in his barn. He requested permission to dispose and with a quorum of board members present, a short discussion and approval by those members was granted. The Snapper at YFOS now is working well with a few backup mowers there that were donated by other members. A short discussion on where to store also occurred. The mosquito population is diminishing with the net working fine in it's current location. Looks like this year's work will pay off next year as we have a lot of lessons learned to apply. Finally, another work session will be scheduled in the fall and announced via email. **Other Topics.** **Matthew Marulla** showed the audience a picture taken by the Mars express probe. The picture clearly shows evidence of water ice

within a crater on mars; the first picture ever of this occurrence. I have included the URL for your reference.

http://www.esa.int/SPECIALS/Mars_Express/SEMGKA808BE_0.html



Photo by Chase McNiss

This is the first image of real snow on mars and it is right near the Martian North Pole. It is approximately 2 km across with the patch of snow being about 900 ft. Matt also showed another movie Saturn's moon Enceladus from Cassini.

<http://saturn.jpl.nasa.gov/multimedia/videos/video-details.cfm?videoID=92>

Several images converted and placed into a movie. **Evening Program**

Matthew Marulla wishes to donate a spherical wave interferometer to the club and he demonstrated it's use with Paul's Winalski's scope. He hooked up the scope and showed the results using software installed on his computer that showed the various qualities of the optics. This device could be used by the ATM group during the productive of any scope



Photo by Chase McNiss

* Rich DeMidio

Astrophoto Fever (Con't)

Dave Weaver got a great long exposure shot of the Trifid Nebula. Trifid 2005/09/05 - ST-2000XM / FS-102, RGB 30/30/30 minutes



Photo by Dave Weaver

I particularly the next shot taken of the Helix Nebula taken by Herb Bubert . No stats available regarding the photo.



Photo by Herb Bubert

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E-mail articles to the Editor.

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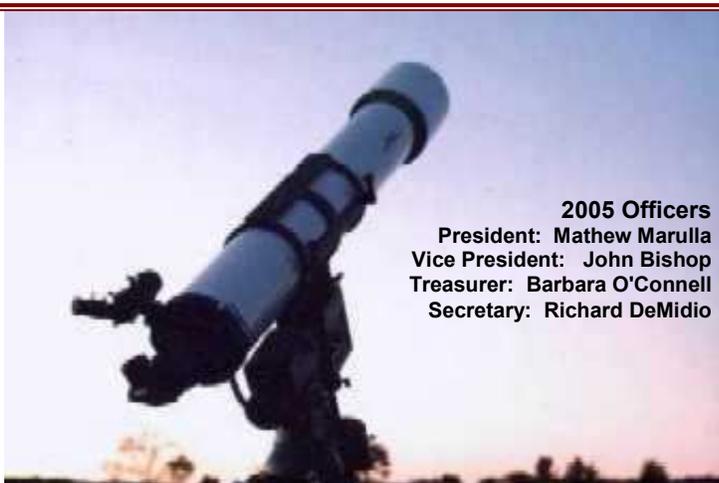
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This month's contributors:

Mathew Marulla, Larry Lopez, Barbara O'Connell, Chase McNiss, Bob Sletton, John Bishop, Joel Harris, Lew Gramer, Paul Winalski, Dan Smith, Tim Printy, Herb Bubert, Dave Weaver, Mike Kertyzak, John Blackwell, Joe Derek Rich DeMidio

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



Astro Lab Collimation, 9/16 St. Anslems

NHAS Upcoming Events

Event	Date	Time	Location
Sept Business Meeting	Sep 16	7:30 pm	St. Anslems
Coffeehouse	Sep 30		YFOS
CMP Skywatch	Oct 7	7:30 pm	Planetarium Concord, NH
October Business Meeting	Oct 21	7:30 pm	Planetarium Concord, NH
Coffeehouse	Nov 4		YFOS
CMP Skywatch	Nov 4	7:30 pm	Planetarium Concord, NH
Nov Business Meeting	Nov 18	7:30 pm	St Anslems