



Fireball in the Sky

President's Message

Blazars and Polars and GRBs. Oh My! As most of you know, I missed our March meeting because I was off in New Mexico to attend "The 3rd High-Energy Astrophysics Workshop for Amateur Astronomers." This 4-day event, hosted by AAVSO, NASA, and Sonoma State University, was all about X-Ray and Gamma Ray astronomy, and how amateurs can contribute real science (Yes, even if you don't have your own orbiting Gamma Ray observatory!). For instance, one speaker from Sonoma State University presented the vast amount of data that had been learned about Blazars by studying the brightness variation of a single object, Markarian 501 in the constellation Hercules. He then revealed that every single data point on this object had come from Robert James, an amateur astronomer from New Mexico with an 8-inch SCT! And, as it turned out, he was sitting right next to me. Since NASA paid my way to New Mexico, they would like me to pass on what I learned there (your tax dollars at work!). So, for our May meeting I have put together a talk on Gamma Ray Bursts. There is a lot of really cool stuff about these things, so it should be a good talk. At a later meeting I'll cover the rest with a talk on Blazars, Polars, and Magnetars. You are waiting on the edge of your seats, right? :)

* Matthew Marulla
NHAS President 2005

Public Observing Highlights

We had an excellent turnout for our skywatch at N Salem Elementary on Tuesday, April 19th. Over 200 people showed up. I did a slide show indoors

while everyone waited for the skies to get dark. Afterwards, we all headed outside where eight NHAS members showed up with their telescopes. We had clear skies and showed them Saturn, Jupiter, the Moon, Castor, the Orion Nebula, and other objects. The school gave us a \$100 donation afterwards. Way to go, N Salem Elementary!

* Ed Ting

Pictures Galore



Photo by Dave Weaver

M42 & M43 meteor A meteor in the luminance channel is just below M43, L-100s, RGB-300s, taken starting 2003-10-31 09:08:04 UT, exponential histogram brought out the meteor as well as nebula detail.

Fireball in the Sky

Editor's Note: On the evening of April 24th, several members reported bright objects in the sky. Many local law enforcement agencies received reports from the community. I am including several reports from members who described what they saw.

Did anyone see what looked like a bright satellite traveling from west to east around 9:00PM? It was passing thru Virgo into Bootes and suddenly released plume of gas and then there seemed to be two objects now traveling

in the same directions, the 2nd traveling noticeably slower. The object in the lead continued to show a gas tail and seemed to increase in velocity.

* Joe Derek

I may have seen the same object. I also saw what appeared to be gas clouds but I did not see a second object separate from the first as I was trying to catch it with the 8-inch dob. I saw it through the eyepiece a couple of times briefly, two close points of light traveling together. This made me think it could have been a very high altitude aircraft, but there were no strobes or red and green navigation lights. So perhaps it was a satellite behaving strangely.

* Gardner Gerry

I was just reading the Space.com article. It sounds like the Titan launch. http://www.space.com/missionlaunches/sfn_titan4b_cntdwn_050429.html

* Tim Printy

According to several news sources on the Internet, at 8:50 PM EDT Friday evening a Titan 4 rocket launched a "classified military payload" into orbit from Cape Canaveral Air Force Station in FL According to one article, "the flight path and the jettison of the rocket's boosters would force an evacuation of oil rigs near Newfoundland."

* Michael Aramini

Noteworthy News

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Astronomy Day 2005

We did have fun, inside that is. Boy was it rainy and windy outside! Because of that, it was quite crowded inside. There were no sunburns, including the people that were cooking on the grill outside. There was plenty of food and drinks in the CMP office for all. I liked the meteor table, I felt close to space there. Some of us went to the auditorium to see Mike Melvill, who was the first civilian astronaut on "Space Ship One". He had great experiences and images to share to the group.



Photo by Rich DeMidio

We sold 20 T-shirts at the NHAS table. I will bring the remaining ones to the next NHAS meeting in Goffstown for people who want to buy one or more for themselves. Of course, we really want blue skies next year.



Photo by Bob Sletten

* Joel Harris

Although the weather was crummy, it did not put a damper on activities this year. CMP did a great job and had a good contingency plan. So, there was plenty to do inside. I attended for part of the afternoon helping at the booth, taking pictures, and conversing with a few people.

Ernie Lopez diligently maintained watch at our NHAS table selling shirts and speaking with folks. **Mike Frascinella** and **Joel Harris** also assisted in desk duty. **Matt Marulla**

setup is his astrophysics scope near our table. This turned out to be quite an attraction. As seen below Ernie and Mike were busy talking with folks as they walked by.



Photo by Rich DeMidio

NHAS was well represented with a static scope display. Below, **Herb Bubert** and **Mike Townsend** take a break from speaking with many visitors to the static scope display.



Photo by Rich DeMidio

Several members contributed to interacting with the public speaking about telescopes, our role with CMP, and what NHAS does as an organization. Below is **Mike Townsend** answering questions from an attendee.



Photo by Rich DeMidio

As mentioned earlier, Matt's scope drew quite a lot of attention to the booth so he is seen here conversing with an attendee.



Photo by Bob Sletten

Finally, a weather balloon was launched during the day resulting in some outside activity.



Photo by Bob Sletten

All in all, the event was well attended and NHAS got some great recognition. Even though no observing was able to take place, everyone had a great time.

* Rich DeMidio

Fire Ball

(Continued from p. 1)

I was observing last night over at my daughters house in Auburn and my Wife, daughter, and son-in-law all saw the two parts of the rockets traveling through Leo, Virgo, and Serpens. The two parts were very bright and close together in Leo then got further and further apart as they traveled through Virgo and on into Serpens. When I first noticed them they were clearly as bright as Jupiter but the most interesting thing was the very diffuse nebulous gas surrounding them, easily 1-2 degrees in diameter. The gas had a very distinctive greenish-blue color which diminished as they tracked further on into Serpens. I too quickly tried to track

them in my 8-inch LX 200 the trailing one quickly faded and my son-in-law lost it visually while I watched it dim considerably in the telescope up to the point I gave up on trying to track it any longer. My wife and daughter immediately said UFO. We were not sure at the time what we were seeing until I remembered seeing in the newspaper the article about the radar tracking ship anchored in Portland Maine and the mention of a secret military launch sometime this weekend. It was quite a show, but alas I have to admit that I was hoping for some auroras. I had got two alerts during the day. Did anyone see any auroras?

* Bob Veilleux

Hey, I saw them too last night. I saw two objects, one following the other with maybe 20 degrees separation, sometime around 9 or 9:30. To me, it looked like they were traveling from south to north - they passed near Jupiter. Both objects had a single light and a small cloud of mist BEHIND them. At first I thought they were two aircraft flying through clouds so I started slewing to Jupiter to get a look at the Big Red Spot before the clouds enveloped it. There were no clouds.... just the "mist" close behind the lights. I didn't have time to see them in the scope. My vote is the rocket boosters from the launch last night.

* Barry Mackinnon

Editor's Note: I browsed the URL that Tim Printy provided and found a comprehensive report. Here is an excerpt from the full article. Please refer to the article for complete details.

A sophisticated radar-imaging spy satellite is what the Titan 4B rocket launched Friday night, according to sharp-eyed sky watchers who spotted the spacecraft literally minutes after blastoff. Hobbyist satellite observers were anxiously awaiting the liftoff due to the mysterious identity of what the big booster would place into orbit. Given the 8:50 p.m. EDT (0050 GMT) liftoff time, watchers in Canada and across Europe were well placed to see the payload flying on its own after deployment from the rocket. The leading theory before launch suggested this was the fifth in a series of radar-

imaging satellites known in the public as LACROSSE. Ted Molczan, an experienced and respected satellite observer from Toronto, Canada, and his fellow internet sky-watching group members knew exactly where to look if this launch was going into such an orbit for LACROSSE 5. The Titan launched on schedule, soaring up the U.S. East Coast to the dazzling delight of spectators from Florida to New England who saw the rocket's exhaust trail and the remarkable sight when the first stage jettisoned at the moment of second stage ignition.

Deep Sky Object of the Month

Editor's Note: Since there has been some recent conversations regarding Godzilla, I thought it would be appropriate to pick an object that was observed through that telescope.

Observer: Lew Gramer
 Your skills: Intermediate (some years)
 Date/time of observation: Late Spring/Early Summer Evening
 Location of site: Stinson Lake, NH, USA (Lat 44oN, Elev 330m)
 Site classification: Rural
 Sky darkness: 7.0 <Limiting magnitude>

Seeing: 4 <1-10 Seeing Scale (10 best)>
 Moon presence: None - moon not in sky
 Instrument: 36" f/5 Obsession dob
 Magnification: 130x, 380x
 Filter(s): None
 Object(s): NGC 4565
 Category: External galaxy.
 Class: SA(s)b?sp I
 Constellation: Com
 Data: mag 9.6 size 16'x2'
 Position: RA 12:36 DEC +25:59
 Description:

I had the chance to view this Monster of the Spring Skies at once with TWO larger instruments - my 20" (see previous log), and Barrie Sawyer and Ralph Pass's 36". Repeating my hop to 4565 from 17 Comae turned out to be difficult: the lack of a Telrad on the Big Eye tonight meant I had to spend considerable time making sure the mag 4-5 white star I kept pointing at was in fact 17! And once I was sure, the more limited wide-angle field (30' vs. 55') made the

actual sweep a little tougher too - not to mention the sheer manual labor of slewing "Godzilla" vs. my own li'l "Frankendob". :) Once found however, the Great Coma Edge-on showed itself to me as I've never seen it! Again, this was a friend's scope, so my log was far more cursory than it would have otherwise been: but in the space of a few short minutes I managed to trace the roiling edges of the central dark lane for what seemed to me a full 20', could clearly distinguish some tiny bifurcations ("Great Rifts") within the lane, distinguished a pinpoint-sharp nucleus surrounded by an inner core in the bright S central bulge (with a matching inner core suspected in the N bulge), and even some hints of mottling AWAY from center, in the SE extremity of the spindle. This object in this instrument tonight appeared clearly superior to any image or photograph I've ever seen: the breadth as well as depth of detail was staggering! Thanks again to Barrie and Ralph for sharing the visual bounty that is Godzilla. :)

* Lew Gramer

Other Tidbits

There is currently a very active thread in the NHAS area regarding YFOS history. I found it fascinating reading about the history, the planning, unusual events, and of course the fun that many members put into constructing the site. If you get a chance, might want to check that out. I was probing the NASA website recently and came across an interesting article regarding the Mars Polar Lander. Read the full story at:

<http://www.spaceflightnow.com/news/0505/05mpl/>

The Bottom Line

Starting Balance: \$3991.08

Deposits: \$30.00

A/P: 166.67 (Insurance, Plowing)

Net Balance: 3,854.41

Cash Balance on April 30: 3,854.41

Membership: 113

New members: 3

Mike O'Shaughnessy Merrimack NH, LX-200GPS 10", Wade Walker, New London NH, Joe LeBrun, Laconia, NH Celestron C-102HD Orion XT-10 Classic

Donations: None

* Barbara O'Connell

Looking Back at Last Month

Opening. **Matt Marulla** opened the meeting briefing the audience on the evening program that everyone would enjoy. He would also fill in for some reports due to several folks away at NEAF. **Astronomy Day Update** Dave McDonald from CMP took a few moments to thank everyone for monthly sky watch and expressed appreciation from cmp and public. He is looking forward to great astro day this year. **Book of the Month.** Skipped to make additional time for evening program.

Scope of the Month. Skipped to make additional time for evening program.

Public Observing. **Ed Ting** Not present. **Committees.** **Web:** **Barbara** There was a long discussion about history of the club and YFOS with the intent of publishing it on the website. Barbara drove the discussion about members who can contribute by writing down their thoughts. Sort of a scrap book. **Matt** would like to get an outline to work from then ask others to fill in the details. **Matt** is also working on a members only area on the website. It would be password protected so things like maps to YFOS could be stored securely. **ATMs: No report.**

Membership: **Bob Sletten** reported that existing attempt at Lab sessions has been difficult due to weather. Also, with MM getting bumped to April, it conflicted with some lab sessions. The strategy now is try and schedule the same lab session two or three times so that enough people will be able to attend. Some will be at YFOS and some at CMP weather permitting. Stay tuned to email threads for details. .

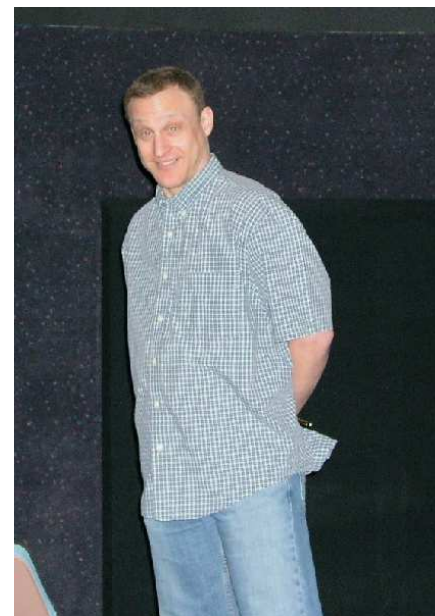
YFOS. **Matt Marulla** reported for Larry. The ground was muddy a few days ago, but im but the ground is firming up. It is probably ok to drive over them. There were a few jugs of water in the warming hut that froze over so please remember not to leave water during cold weather. The shelves are up now with magazines. Finally, Matt proposed the idea of purchasing a mosquito traps. He will research and report back to the board. Don Ware endorsed the idea of researching into one. Finally, Matt also hung some posters from his old Astronomy day inventory.. **Other Topics.** **Matt**

Marulla showed some recent pictures from the Mars rovers. Of particular interest was the one that Spirit took on March 9th; A picture of a dust devil on Mars which scientists have believed to exist, but had never been able to capture a picture until now. The very next day, one passed over Spirit and cleaned off the dust much to the delight of everyone as it cleaned the cameras and solar panels. Power levels on spirit went up to 80% power from original landing. Since spirit was currently in a tough ascent on a mountain, the increase in power enabled the rover to complete the traverse. Because of this and other successes, NASA has allocated 18 months of additional funding. In fact, both rovers are 11 months beyond their 3 month life expectancy! The downside though is that some of the hardware may soon fail or wear out. All it takes is a single bolt or screw. The Rock abrasion tool on Spirit is now gone but it was only designed to retrieve samples from three rocks and instead, it got sixteen! it was designed for 3 rocks, and got 16 rocks. **Linda Lopez** is working on an inventory of all stuff that NHAS owns. Matt proposed that we take everything that we do not want – take it to stellafane, and put money in the treasury. Discussion followed and the group agrees this is a good agree. There is a lot of stuff that is esoteric and the fear is that Larry might buy it back. ☺

Matt Marulla talked about a former member who has built a lodge in a dark sky area in Northern NH. By late summer, there will be a campground and wants to know if we want to check it out and have us make a trip. Matt is

going to G2 the site and report back. There was a lot of interest of everyone present that this would be a great road trip. **Matt** talked briefly about this NM visit on astrophysics. Experts about how amateur astronomers can help out. Matt is putting together a formal presentation that might span over a few club meeting evening events. Expect some really cool presentations to follow in next few meetings.

Evening Program. . Remote Observing by Matt BenDaniel Chief Scientist, SLOOH.com Co-Founder, Editor, CTO and published Astrophotographer.



Matt took up astrophotography in 2000 and is a software engineer by trade for over 20 years. His vision was to create an opportunity for renting telescopes over the Internet. The result of this vision is <http://www.slooh.com/>, the worlds only live observatory experience. Based in the see live images in color with audio from Canary Islands, subscribers can retrieve live images of many objects. It brings Astronomy into a whole new perspective. Imagine observing at any time of day over your computer. The experience literally makes you feel like you are there The creators did research and concluded that one out of every twenty people who buy a telescope, stick with the hobby. They get frustrated or realize how much work it would be. Expectations are not met so they abandon the hobby. In addition, being at the mercy of clouds and other weather conditions creates every more

frustration. Remote viewing was the vision for the other nineteen people ☺ There are several scenarios that observers can subscribe. One of them is called a group mission. There, the subscriber taps into a pre-programmed schedule based on 5 minute or 10 intervals. The other scenario is the solo event where the subscriber can reserve their own time. Here the user would specify coordinates and be able to enjoy their own time. The observatory has four different scope systems with different ranges and field of views. Low power to high power magnification. The designers also envisioned a low maintenance site so physical visits are only required every three months. As the software technology also improves, slooh will provide enhancements to make the observing experience even better. The site was designed for both novices and serious amateurs. One way of viewing the site, is to think of it as "cloud insurance". The designers also benefited in that the software assumed a 56K connection. Research has showed most households have broadband so look for even higher resolution observing moving forward. The observatory is located at 28 degrees latitude, 90 miles off of Morocco. Magnitude 6.5 objects can be seen with the naked eye. The altitude is about 7900 feet and the site has had an uptime of around 70%. They are nested in the mist of large research telescopes used by Astronomers all over the world. The site is also five hours ahead of EST so you can observe during school hours. This was actually part of the original business plan. If you ever wanted to travel to the site, plan on about twenty hours to get there. There are several scopes on site. The Alpha dome has a C14/f1, with a TV85 mounted piggyback. The Beta dome has a C14/f6 with a Nikon camera mounted piggyback. There is also an Allsky Fisheye along with SBIG ST10 and ST2000 systems. The software on the website allow the subscriber to toggle back and forth between both domes. The current images are jpg at 700x500 resolution. Enhancements are planned to improve the resolution. The mission interface is very impressive and comprehensive. The functionality is very robust. Users can also snap up to

three pictures per mission. From a business perspective, Slooh has developed a strategic partnership with discovery.com this past March. This will provide much more visibility for slooh. There are many enhancements that slooh is looking to provide. Some of them include advanced imaging which gives the user more flexibility instead of limited to five minutes. The web interface is also being enhanced to allow advanced astrophotographers the ability to specify their own exposure settings. They will also provide a batch mode operation so an observer can program a scope to view a specific portion of the sky for a specific timeframe, then download the images as the result. This would be very useful or those folks who wish to view the same portion of the sky for several nights. Slooh hopes that observations like this might result in the discovery of new comets, supernovas, or other objects. There are also plans for an image library that currently contains over 390K images. They are also looking into multiple sites with some of them focusing on specific tasks. For example, a sight focused on Auroras in Alaska. In all, they wish to provide full 24 hr capability since it will always be dark somewhere in the world. Slooh also offers live audio feeds which speakers who currently participate. The designers are currently many speakers and this is anticipated to grow. Folks like David Levy has already participated. As more speakers are signed up, the goal is to have live audio at all times. Finally, related to audio the designers are investigating based on requests, the possibility of offering radio astronomy. No definitive decisions have been made at this time. To appreciate the service, you really need to subscribe as a member. There is very little for a non-subscriber. Currently, slooh offers a trial period with a credit card. You are only billed if you do not cancel. Please refer to the website for pricing options. The company is not even close to

making a profit at this point. Plans can be monthly or annual. There are also the ability to purchase gift memberships. The site is very impressive and the authors have really done a good job for bringing remote astronomy to your living or recreation area. For the value offered, the subscription is very good value.

* Rich DeMidio

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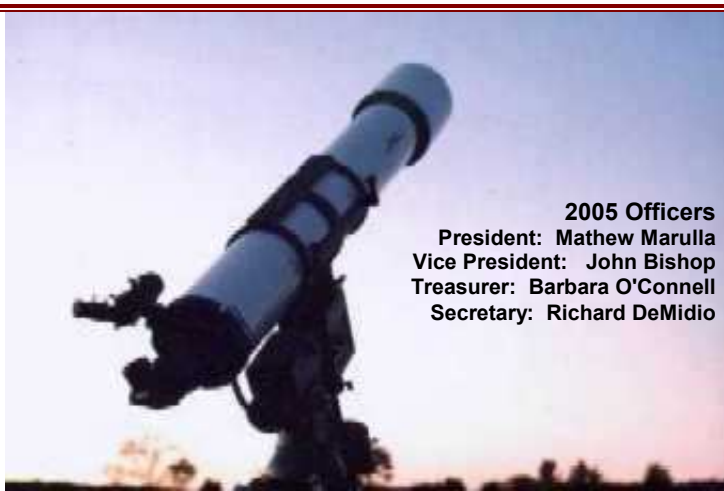
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This month's contributors:

Mathew Marulla, Ed Ting, Dave Weaver, Joel Harris, Gardner Gerry, Joe Derek, Bob Veilleux, Barry Mackinnon, Tim Printy, Michael Aramini, Barbara O'Connell, Rich DeMidio, Bob Sletten, Lew Gramer

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Gamma Ray Bursts, 5/20, St. Anselm's

NHAS Upcoming Events

Event	Date	Time	Location
May. Business Meeting	May 20	7:30 p.m.	St. Anselm's College, Goffstown, NH
CMP Skywatch	June 3	7:30 p.m.	Planetarium, Concord, NH
Coffee House	June 3	7:00 p.m.	YFOS
June Business Meeting	June 17 th	7:30 pm	Planetarium, Concord NH
CMP Skywatch	July 1	7:30 p.m.	Planetarium, Concord, NH