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M13, the Globular Cluster in Hercules



M27, the Dumbbell Nebula in Vulpecula



*M57, the Ring Nebula in Lyra
The prominent stars along the diagonal are
Top Right: Sheliak (β Lyrae, an eclipsing binary) and
Bottom Left: Sulafat (γ Lyrae).*

Armed with a trusty Canon EOS DSLR acquired from Gardner Gerry, **Gary Duranko** stepped over to the truly dark side of astronomy in order to bag his first DSOs.

With the benefit of three consecutive clear night skies over Salem, NH, he took a few shots using his Orion XT8 (f/3.9), mainly 30-second exposures at 1600 ISO. While the Wild Duck cluster (M11) was too low in the skies and too close to lights to present a good target, the trio to the left represents the beginnings of

Gary Duranko,
*Deep Space
Astro-Photographer*

Pease Public Library, Plymouth NH, August 5

This sky watch took place as scheduled on Monday, August 5. The library staff was successful in shutting off the parking lot lights and we had delightfully dark, clear, and steady skies once the Sun had set. **Ramaswamy** and I arrived way early, and by 7pm I had set up my Coronado PST to offer some solar observing to the library staff. There was an impressive prominence curving around the far limb of the Sun. The librarians weren't able to use their library telescope, as it was checked out by a patron.

Gardner Gerry (of *Concord Monitor* fame) gave the indoor presentation. **John Bishop**, Gardner, Ramaswamy, and I were operating telescopes for the sky watch. We had about 50 people at the start, just as the Sun had set, and when only Arcturus, Vega, and Saturn were visible. As happens all too often this time of year, most of the families with small children had to leave just as it was getting dark enough to really show stuff.

There was a LOT of satellite activity this evening. We enjoyed two fine Iridium flares, an excellent high pass of the International Space Station, and about four other satellites, including a very bright tumbling one. I was able to track the ISS in the 14" TScope at 52X for a while. It had a definite shape, but I couldn't really see too much detail as it was moving too fast. I also saw several dim satellites that just happened to pass through the field of view while I was looking at other objects.

Plymouth has impressively dark skies. We were in downtown, and I still was able to get a decent view of the Veil Nebula. The Milky Way was glorious, and the North America Nebula was a naked-eye object. Objects I showed off: Arcturus, Vega, Saturn (along with Titan and another, unidentified moon), Alberio, Mizar, 61 Cygni, M13, M92, M3, M11, S Scuti, M17, Gamma Delphinus, the Great Cygnus Star Cloud, and the Veil Nebula. The structure in the Veil Nebula brought out by use of the O-III filter was impressive. They are planning to have us back in the fall.

- **Paul Winalski**

Madison Old Home Week Skywatch, Silver Lake NH, August 6

Marc Stowbridge and **Ted Blank** conducted a very successful event for some 30 people.

- **Paul Winalski**

Green Hills Preserve Stargazing, North Conway NH, August 10

Here was something a little different. A hike to an open mountaintop for summer stargazing. We were told the trail was wide and easily negotiated with flashlights, a distance of about 1.7 miles each way. Obviously we didn't bring large scopes up the trail, so binoculars and small, easily packed scopes were the way to go. My son **Sean** and I arrived at the trail-head about 6:30pm and met the Nature Conservancy guide Wink. Several others that were already there, including one man with two energetic 9-10 year old boys, got ready and hit the trail by 7pm.

We arrived at the summit just after the sun had dropped below the horizon, and it was windy and cooling off rapidly. We were treated to a great view south, west and north including Mt. Washington (which was clouded over). We moved back down to a slightly lower and flatter spot, from where we observed the Moon and Venus to the west.

Then the brightest stars started popping out. Just after 9pm we witnessed a nice bright ISS pass from west to north-east. I pointed out the prominently named stars and their constellations, and talked cosmology for a bit. By 9:30pm the cold and wind won out, so we retreated to the trail head parking area, arriving by 10. To my surprise **Marc Stowbridge** was there with his 8" SCT set up and already observing, so I didn't have to set up a scope and we all observed with Marc. We were also watching for Perseids and saw several. Sean and I left by 11pm after the others had gone. It was a long drive for us from southern NH but well worth the trip.

- **Gardner Gerry**

Naval Sea Cadets Skywatch, Center Strafford NH, August 11

We had very clear (albeit damp) skies for this event. The site is excellent – very wide horizon view, away from building lights, and easy access by car. Skies are also very dark in Strafford. I did a presentation for the cadets covering the usual topics in the sky, but also elaborated on some instruments and techniques that can be used for navigation at sea by the stars.

We got a magnificent view of the Milky Way. **Ramaswamy** and I set up telescopes. The first object, during twilight, was of course Saturn. After that Ramaswamy concentrated on double stars while I went for star clusters. With 50 cadets and trainers and only two scopes, we were limited in what we could show. And the Sea Cadets had to get up early in the morning, so unfortunately the session ended just as it was really getting dark. Everyone got to see Saturn (plus Titan and another two moons), Mizar, Alberio, and M13. Afterwards I showed some other stuff, including M11, M17, and M8, to the officers who had invited us. Andy Nash was very pleased with how it went, and I think he intends to invite us back.

- **Paul Winalski**

Solar Observing for YMCA of Greater Nashua, Merrimack NH, August 14

Ted Blank and **Bob Veilleux** were the others representing NHAS, so we had three stations. Ted ran two telescopes: one H-alpha and one projecting on a solar screen. While clouds blocked the view at times, we had good views for most of the time and all the kids got to look through all the telescopes. The YMCA folks did crowd control.

There were about 60 kids, grades 1 to 6, and most were in the younger grades. They were interested, appreciative and seemed to enjoy the experience. I did a short introduction inside, mostly about "don't touch the telescopes." They had a lot of questions, which I answered as best I could.

- **John Bishop**

Goffstown Public Library, Goffstown NH, August 16

This event had been postponed from July 8 due to bad weather, but things went very well on this night. Jim Roberge, an NHAS member only since June, was the designated astronomer:

As new members, this was our first chance to participate in a skywatch and we had a great time. We had a consistent flow of observers at our scope, but only had people waiting for a turn once or twice. Hearing the reaction to Saturn never gets old and one of the best parts of the evening.

It was also nice to meet a few more members. Ted introduced himself early on, Gardner helped answer some of Michelle's questions about beginner astrophotography, we were next to Herb and one other member who helped us explore a few additional double stars when he heard that I was pointed at Alberio for the public to view; the list included the double-double (epsilon Lyrae).

All in all we had a great time and the public that came by our scope seemed to thoroughly enjoy themselves. We look forward to taking part in more skywatches in the future.

- **Jim and Michelle Roberge**

The garage light was off for this year's Goffstown skywatch, hooray! Although the moon was pretty bright, the event went off very well. The club responded enthusiastically to the "all scopes on the deck" call - I remember (counting down from one end of the row) **Herb Bubert, Steve Rand, Ed Ting, Jim and Michelle Roberge, Rich DeMidio, Ted Blank, "Rags," Ramaswamy, Gardner Gerry, John Rose**, and two more members over in the paved parking lot. Almost the entire club roster!

I don't recall an extremely large crowd of visitors, but every scope seemed to have one or two families clustered around it all night. I showed the Moon in the C8 most of the night, and put a video camera in an 80mm WO refractor on the other mount to show people the Nova, which worked well. I also showed them how the area where the Nova appeared was empty in Stellarium running on my laptop next to the little TV screen, proving the star was new. I was very happy this worked out. It was a very enjoyable night.

Just as the last few visitors were leaving a uniformed policeman came up to my table and said, "May I ask what is going on here?" He was clearly a little worried, but soon the views through Obby calmed him down and he quickly called two other of Goffstown's Finest on the radio to come by and take a look.

- **Ted Blank**

I was at Goffstown for first time, and I have to say what a delight!! The Sky Watch was apparently in a different place this year, which was a huge field with super easy access and gobs of room for our cars, our telescopes, the public, plus a big top if we had one.

Horizon was superb in my mind with little to interfere with observing even low objects, which is where Saturn was by the time it was dark enough to find it. The sky co-operated pretty well to boot; I thought there was a lot of moisture in the air, so the near 3/4 Moon really washed things out such that even the Milky Way couldn't be seen. There were no clouds to speak of, however, and with that good horizon plenty of targets were available.

I brought two telescopes; the C8 on the Atlas and the nameless "prototype" 102 on the Voyager. My intent was to train the C8 on something and let it track while I showed the Moon or whatever in the other, and this worked pretty well. Half the night Emma Lowe's parents ran the 102 while I manned the C8. I showed Venus, Saturn, vainly tried to find the Lagoon (just under the Moon, I mean really), vainly tried to find the nova, but then Ted found the nova and I used the laser pointer on his scope to find the nova and left the C8 on it the rest of the evening. After Emma's parents left, I used the 102 to show the Moon, Mizar, and Alberio. Everyone I talked to seemed very interested and asked lots of questions, many of which I was actually able to answer.

When I packed up everything was *soaking* wet, like it had been left out in a rain shower. The dew was so bad that even the 102's primary fogged up, which I don't recall ever seeing before. It all dried fine in the garage and on a positive note, as I packed it away I actually *cleaned* my eye pieces. Hope they don't crack in shock.

- **"Rags"**

I setup my Zenithstar 80 FD and showed Saturn at low power as Galileo would have seen it, and then upped to 185x with the 3mm Radian. The first time I have used the Radian in a skywatch and I was as amazed as the folks around me, and half a dozen families looked at it! I set Saturn up at one edge of the FOV and let each person watch it drift across to the other end, taking full advantage of the clear-to-edge optics of the scope. At least 3 folks independently spotted the dot that was Titan.

Later on, since John Rose had 'usurped' Alberio, I showed Mizar and quite a few were comparing the tightness of the separation. I explained all about magnification and that some binaries were in tighter orbits than others. One man was taken aback by the possibility that if Jupiter were 80 to 100 times more massive, we too might be part of a binary system!

Ed Ting proposed to me the Sagitta arrow route to the Nova Del 2013, but I stuck to my tried and true sky hop, and when I did get to it, I was unsure because it didn't look as bright as any of the Delphinus diamond stars. So I could only claim a 90% assurance I was showing them the Nova. No one seemed to mind. Later on I estimated it was on par with Eta Sagittae, which shows up as 5.05 in Stellarium.

But the star attraction of the evening had to be Ted Blank duct-taping his way to the Nova with his astro-photography gear output on one display, and the Stellarium output of the same region on another... it was equal parts entertaining and inspirational. All in all, a good skywatch. My first time there and I had a steady flow of 'customers.' Too bad things started dewing up by about 9:30pm, so I had to pack up earlier than I had intended to.

- **Ramaswamy**

The crowd was steady and I was busy from the opening moment. In fact, I did not even get to chat with many of our members. I'm glad that we have some new folks attending but feel awful not meeting them.

The police showed up while starting to pack up. It started off with one officer looking through Obby, then a second arrived, and then a third. The news got out ... and before you knew it, I was delivering an "after sky watch" event for them staying for

nearly an hour. I showed them M31, NGC 457, WZ Cass, the Double Cluster, M13, M92, Alberio, M103 and the NGC close by (open cluster). One of the officers had served in Afghanistan and mentioned how dark the skies were there, which got him interested in Astronomy. At one point, I shared the story about NHAS purchasing and sending over a scope to Iraq for a member who was serving. He and his unit used it and had a wonderful time.

I forgot my thermo cell, but Ted had an extra, so my thanks to Ted. Remember, this event served as the Thermo Cell proving grounds, which is why they are the choice of record for NHAS mosquito counter-measures.

- **Rich DeMidio**

Community Roots Skywatch, Lee NH, August 17

I arrived about 7:30pm with Joe **Derek and Rich DeMidio** already starting to set up at a lovely site at the Coppal House Farm, on a flat top of a small hill with *no lights* to be seen. The area was about 5 football fields long and 2 across, with a dirt road for access right down the middle. The families had set up tents at the far end near a cornfield maze, and had a campfire near the tent area. We set up 75 to 100 feet away. If not for the almost full moon, the sky would have been as dark as YFOS. A bit of clouds and haze moved in after 9:30pm, but by then the kids had gone to their tents and the most of the parents were enjoying the camp fire. The families were all very nice and the kids well behaved.

We had 10-12 adults and 8 or 9 kids in the 5-to-8 year old range.

I showed Saturn, M13, M57, M31, M92, the Blue Snowball and the Blinking Planetary nebula. Rich also showed Alberio and some open clusters. Joe was on the other side of the road from us, so I'm not sure what he was showing, other than Saturn early on and the Moon in bino viewers. We packed up and were on our way home by 11:30pm.

In talking with one of the people who run the farm, they said that we could come and use the field for observing during the year. I will give some info to Ted and Tom if they want to contact the farm and set up an NHAS event for NH Seacoast area members. The site is *that* good, and only about 10 minutes from exit 7 on Route 101.

"When the stars ain't shinin' bright,
You feel like you've lost your way..."
From the song *Soulshine*,
by Warren Haynes

- **Ken Charles**

There were about six families camping, totalling about 25 adults and children. When I arrived, I was immediately taken by the beauty of the observing site that was a wide open field (in all directions). It was far away from light pollution, but since the Moon was nearly at full, I knew it would cause us some issues. Having said this, there were several deep sky objects that I was able to show everyone.

I was able to start showing the Moon to the kids with Obby. I had to use my Moon filter and even with that, it was bright. I used the opportunity to educate them about how Obby is for faint deep sky objects, so a few safety precautions had to be taken when using a scope of this nature on the Moon. The kids were very excited looking at the Moon, with a few of them trying to count craters.

All of us worked together showing different objects to give variety to the observers. Joe had Saturn while it was visible and I could hear the reactions from the people looking at it. Ken picked some nice deep sky objects while I did the same. Using his go-to, it was easier for Ken to quickly get to some more difficult objects such as the Blue Snowball and the Ring Nebula. I pointed Obby at M13, M92, NGC 457, M103, Double Cluster, M31, Polaris, WZ Cass, and Alberio as I recall. We gave them a great show.

The adults were very interested in Astronomy and I had many lively discussions with several regarding the type of scopes, the differences, and how to choose them. I talked while viewing types of objects in terms of their age, formation, and such. In a few cases, this led to some deep discussions regarding cosmology and philosophy. There wasn't a wasted moment at any time. Several adults enquired about us coming back when the skies would be moon-free so that they could appreciate the sky and the viewing of deep sky objects more. I told them that we would be happy to oblige.

When NHAS members see this field, they would want to come here. While packing up, Ken and I discussed this and we might take some further action to inquire about using the field in the future.

I really enjoyed helping out at this event and I hope they have us back again as it was such a great observing site. I have been conversing with one of the adults over email to maintain a rapport.

- **Rich DeMidio**

Meredith Public Library, Meredith NH, August 27

We had about 30 or so people attend **Steve Rand's** talk and a few more walk-ups as well. Despite some early clouds I was able to show M13, M27, M57, M51 and Alberio with the 8" dob. Even right in the middle of town and with many lights on nearby there was Milky Way visible, and the objects near zenith looked great. Well attended and much appreciated by the public.

- **Gardner Gerry**

Located in the center of town and with partly cloudy skies, this was not the greatest observing location. The audience was very enthusiastic however, and had a lot of questions, especially about their Library Telescope. After the presentation their Library Scope was set up outside where **Barrie Sawyer** did a great job as the designated astronomer. Improving skies did give up double stars, planetary nebulae, and globular clusters and had Gardner answering questions until 10:30pm.

- **Steve Rand**

*[Skywatches for **Gafney Library, Sanbornville NH, and for East Kingston Library, East Kingston NH, were cancelled due to bad weather, and will be re-scheduled at a later date. –Ed.]***

Stellafane 2013

Joel Harris could not make it to Stellafane this year, so **Larry** and **Linda Lopez** stepped up to organize NHAS activities there (the Saturday afternoon lunch, in particular). The 2013 edition was held on August 8-11 in Springfield, Vermont. For NHAS member **April South** it was the first time, and so naturally she posed a few questions of veteran NHAS attendees:

1. Should I camp there, or go to a nearby campground instead? Are there any advantages/disadvantages?
2. Do you get to pick your camping area at Stellafane, or do they direct you to a spot?
3. If you get to pick a spot, what is the most favorable spot to camp?
4. Do you get to camp near your vehicle, or do you have to haul all your stuff far away to your campsite?
5. Is it customary to bring your own scope, or is it unnecessary?
6. Anything else I should know that isn't already covered on the Stellafane website?



(Photo: A. South)

She got plenty of feedback, and here are the excerpts:

1. I don't mind camping in general, but camping at Stellafane is back-to-back with your neighbor, and there are no showers. I always stay at a B&B in nearby Chester, VT. Though I haven't "camped" overnight at Stellafane, I have slept in my vehicle a few times right by the NHAS tent (awning). The advantage of staying overnight at Stellafane comes down to how long you want to stay up at night. If you want to do a lot of observing, when you are done, you just have to walk a few minutes back to your tent/car and plop down. ... Some people don't camp. Some people drive in Saturday morning, drive home Saturday evening. Be aware that it sometimes rains. Inflatable mattresses and good planning go a long way to having a nice experience. Be prepared for bugs. Be prepared for rain. We rarely get rained out, but we often get rain. Air mattress and awareness of which way the rain flows are good ideas.
Be aware that sometimes people are noisy or inconsiderate
or will loan you exactly what you need (coffee)
or will require you to look through their telescope
or will put red plastic on your flashlight
or will feed you.
2. You get to pick your spot if you are early enough.
3. This is a matter of opinion. We camp in the pine forest; it is cooler. Others camp close to the club tent.
4. You usually park near your vehicle. ...
Vehicles are mixed in or very near camp sites.
5. If you do want to stay up late, bring your own scope, just in case you can't find someone else staying up till the wee hours that has a scope (though if the weather is good there are many who stay up past 3:00am). There are usually several members with their scopes set up near the tent that you will be able to observe through. ... I usually bring my own scope, but there are plenty of other people's scopes to look through. Probably better not to for your first visit. ...



The Pink House

(Photo: Andy Jaffe)

- It is customary for you to bring your own scope. It is customary for me to look through your scope. You could probably arrive with no equipment and borrow everything you need. There are Stellafane scopes to look through. There are scopes on the top of the hill (pink clubhouse) which are scary big.
6. Bring money for the swap tables, and no hour is too early. They were going strong at 5am in recent years. ... Do not miss the Saturday night talks with the raffle, awards for the best telescopes, and the keynote speaker. The pink clubhouse is a short hike, but there are buses. Make sure you visit it. On a hot day, take the bus.

My First Stellafane

I arrived on Friday around noon. It was somewhat muddy but the rain, for the most part, had stopped. Since it was my first time there, I had no idea what I was doing, but everyone I spoke to was so friendly and helpful that I found Pine Island in no time at all. My son was to arrive later that evening after work so I was the advance team for camp set up. I parked my car next to someone else's and started setting up my tent when a gentleman came up to me and helped me pick a better spot (not in a parking spot this time) next to theirs. Then he and his family helped me set up both tents in record time. It turns out that they were the couple giving the Introduction to Stellafane talk later that evening (Dennis and Kim Cassia). After setting up the tents, they walked me around the area so I could get familiar with the layout.

I had no idea what to expect at the convention. I had read the information on the website and "primitive" was used to describe the camping, but I found it to be far from that. The food tent was fantastic. I ended up using little, if any, of the food I brought with me only because the food offered at the tent was convenient, tasty, and reasonably priced. They even had ice for sale, which was very convenient. Although there were no plumbed bathroom facilities, I found well maintained port-a-johns everywhere.

Over the next day and a half, my son and I hurried from one event to another trying to take in as much as possible. My only regret is that we didn't arrive sooner. There were so many things to see that we missed out on a lot, but we very much enjoyed everything we did get to see; I scored an Astro-Tech Paradigm 8mm eyepiece and a Tele Vue 2.5X Powermate at the swap tables! The Saturday cookout by NHAS was great - lots of good food and great people.

As for viewing, I brought a very small telescope (Meade ETX60AT) but never unpacked it. We spent the evening looking through other people's scopes as well as the McGregor Observatory (viewed Saturn, Ring Nebula, and a globular cluster). We also used the binoculars I brought (Celestron SkyMaster 15X70) and my Celestron Sky Scout to look at the Milky Way, the Summer Triangle, Scorpius, Sagittarius, Cassiopeia, Hercules, Corona Borealis, the Andromeda Galaxy and others. The Sky Scout really impressed my son with the audio portion describing each star or constellation we looked at. Several meteors were spotted as well as both a daytime and night-time spotting of ISS. In addition, we also had an opportunity to do some solar viewing through quite a few different solar scopes.



Stellafane Meteors (Photo: Joel Harris)



*The view from the NHAS Tent: Dobs and mega Dobs.
(Photos: Andy Jaffe)*



The Schupmann Telescope

In summary, we had a fantastic time and now I know what all the fuss was all about. I am already making plans for next year.

Clear skies!

April South

Astronomer-in-the-making

The Perseids

It was not an NHAS event, but **Rex Gallagher** organized a gathering atop Mt. Major in central New Hampshire for the night of Sunday, August 11-12, to witness the Perseids meteor shower. A number of NHAS members participated in the hike up the hill, and had a very good time at the top. Even the [Portsmouth Herald covered the story!](#)



Settling down for the sunset, and then the long wait

(Photo: Celeste Guidice)

Rich DeMidio was a participant:

I had a wonderful time and in terms of meteors, I would estimate about seeing 50 through the night. I remember one particular instance during morning twilight that lit up the whole summit. It came from just beyond zenith on the side of Perseus. Unfortunately, we had cloud cover for some of the morning hours. At times, the clouds were only light, so I saw a few even during this time, but once the clouds thickened, I could not see anything.

I also spent a lot of time with my 15 X 75 binos observing many objects. I spent time in the Serpens and Sagittarius region looking at M11, the Eagle, Omega and the Lagoon nebulae, and M22 and countless other open clusters. I believe I also observed the North American Nebula. About 3 degrees from Deneb, it looked like a faint white smudge which nearly filled up my FOV. I also looked at Cassiopeia, Andromeda and Perseus. M31 and M33 were visible naked eye. Both looked great in the binoculars. I was pretty comfortable laying down on my crash pad and using the binos. I probably spent just as much time observing as looking for meteors.



*"Now hear this!" – Rex being Rex.
(Photo: Rex Gallagher)*

Melinde Byrne reported:

Don and I also had a wonderful time at Rex's Mt. Major event. We enjoyed Ted's presentation on the area geology - especially the plutons. Rich did a fine impromptu job describing NHAS and its purposes. Between 10PM and 2AM (when clouds moved in for a time) we saw about 60 meteors, most with very short arcs. Lying flat and looking up, we caught quite a few in our peripheral vision. There were three seemingly stationary flashes, one very bright, suggesting a different angle of entry. We also saw 7 orbiting objects in the early evening hours when sunlight lit them up.

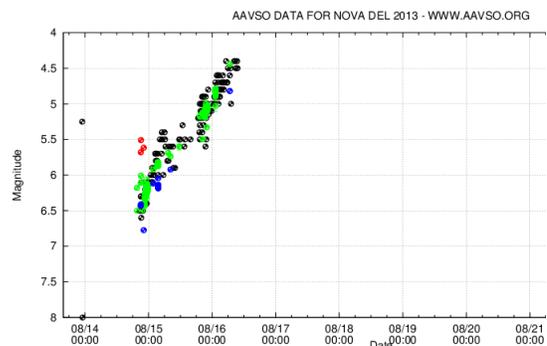
Nova Delphini 2013

The event of mid-August was a Nova in Delphinus, discovered by Japanese amateur astronomer **Koichi Itagaki** at about 6:00 UT on August 14, with an estimated visual magnitude of 6.8. By the evening of August 15, it had North America buzzing. By 8am EST on August 16, it was reported at magnitude 4.3, making it one of the 900 brightest stars in the skies. But that would be about as bright as it would get, though the early interpretations of the trajectory of its AAVSO Light Curve held out hopes for something spectacular.

John Blackwell had been chatting with **Mike Simonsen** of AAVSO about imaging the latest outbursts, notably UX Boo (which hasn't outburst in 10 years), when news of the nova hits the wires.

Light Curve Generator (LCG)

- Plot another light curve
- Search observations for NOVA DEL 2013
- Create star chart for NOVA DEL 2013
- Search VSX for NOVA DEL 2013



*AAVSO Light Curve for Nova Delphini 2013, at 8AM on August 16
(Courtesy: AAVSO)*

Both started imaging it – Mike with a 2" refractor and a B filter, and John using a 10" with VBRI filters. But he had to stop; he couldn't shorten exposures enough to prevent the CCD from blooming on the star.

Dave Weaver, among many other NHAS members, imaged the nova with his Edge 1100 (f/10.0) and Canon EOS 7D in prime focus. The result of the 30-second exposure, with some post-processing for color, tint and curve adjustments, is shown on the right.



The Nova imaged by Dave Weaver on August 15-16

At the Goffstown Public Library skywatch on the evening of August 16, **Ted Blank** rigged up a neat demonstration of the star that hadn't been there 2 nights ago. With his Zenithstar 80 and a video camera projecting the nova's image on a DVD player's screen, he had a laptop running Stellarium alongside that showed a void in that very spot of the sky. The progenitor of the nova is believed to be a magnitude 17 star.

That same night, **Paul Winalski** had a look at the nova and got a bonus in the bargain:

I finally got to observe the nova at 10 PM Friday August 16, from my driveway in Merrimack NH. Skies were clear but very damp, and the nearly full Moon was lighting up the background haze. This, and my light-polluted position between Manchester and Nashua, made it difficult to see Delphinus (only three of the four "diamond" stars visible), and Sagitta was barely visible at all.

Using a 50mm wide-field eyepiece with the TeleVue 85mm refractor, I was able to find the right patch of sky but, being unfamiliar with the field, I couldn't make a positive identification.

I set up the 14" TScope hoping to enter the nova's RA and DEC into Argo Navis and push-to the correct location. Unfortunately there was some sort of encoder problem that I was not prepared to sort out in the dark while hobbling around on two injured legs. But, using the 9x50 finder and Uranometria, I was able to star hop from Sagitta to the appropriate field. This is the first time I've ever observed the Coathanger asterism (usually I'm operating at too high a power and too narrow a FOV to appreciate it). It turns out that the line of stars in the Coathanger is almost parallel to the 20-degree DEC line, and so by lining up the cross-hairs in the finder I was able to navigate along a straight line right at the correct DEC. After a few minutes I ended up in the field where Uranometria said that the nova should be, and sure enough the brightest star in this field, mag 4.something, wasn't on the chart.

Now that I knew where to look, I thought I could just make out the star naked-eye. Centering on that star using the Rigel QuikFinder brought me to the same field I'd found by star-hopping. The nova appears brilliant white in the 14" reflector.

By the end of the month, Nova Delphini 2013 had dropped below 6.5 in visual magnitude.

A PixInsight Workshop

A PixInsight workshop was held on Friday, August 23, at the Goulet Science Center, St. Anselm College, Manchester, NH (where the Business meetings are held on odd months), from 7pm to 10pm.

The attendees were encouraged to download PixInsight onto their laptops from <http://pixinsight.com/>

From that Home Page, they had to fill in and submit the form to "Request Trial License" to get the information and authorization codes needed to run the package for a 45-day period on a laptop. Since at each invocation the software contacted a server to verify that the trial period hadn't yet expired, wireless capability was required on the laptop. If it did not have wireless internet capability, PixInsight could be opened at home using wired connectivity, and left open with the laptop in hibernation until the workshop began. Attendees were also asked to bring some images to practice on.

Josh Lake was the guest presenter and he covered the main processes in PixInsight including:

Batch preprocessing, Image calibration, Star alignment, Image integration, Channel combination, Screen Transfer Function, Background neutralization, Color calibration, Dynamic Background Extraction, Histogram Transformation, Curves Transformation, Morphological Transformation and HDR Multiscale Transformation.

In attendance were **Gardner Gerry, Rich Schueller, Rob Mack, Shane Cross, Dave Weaver and Herb Bubert.**

With this new tool, Gardner Gerry set about reprocessing an old image of his, of the Horsehead and Flame Nebulae taken in 2010.

The structure made prominent by the PixInsight 1.8 processing is amazing, bringing out all the dust in areas where, in the old image, it is just black sky background.

[An online tutorial](#) is also available for help, and was used by Gardner in this exercise.

- **Ramaswamy**



*The before and after of the Horsehead and Flame nebulae in Orion.
(Images: Gardner Gerry)*



Gardner D. Gerry © 2014

NHAS August 2013 Business Meeting Report

The monthly business meeting was held at McAuliffe-Shepard Discovery Center, Concord NH on August 9th, with our President **Rich DeMidio** presiding. The Treasurer's report by "**Rags**" follows (next page).

President's Report

We have expanded our use of Facebook, and all officers, board members, and committee chairs can now post to the FB account. We are also drafting a policy for pictures posted on Facebook.

The Crotched Mountain Variance issue is ongoing, and while Members are free to voice their concerns as private citizens, they should not act as an agent of NHAS. We have also reached out to International Dark-Sky Association (IDA) for assistance.

Stellafane is in progress as we speak, through Sunday. Since Joel Harris could not make it over there this year, **Larry and Linda Lopez** took over for the planning. Larry had 24 responses this year and several members are already there. The NHAS Cookout is on Saturday, with Sue and Andy Jaffe in-charge.

Weather looks promising for Sunday Evening/Monday Morning for the height of the Perseids meteor shower. **Rex Gallagher** has organized a hike up to the top of Mt. Major. See Rex, Ted, or Rich during the break.

The Portable Planetarium Prototype is in place and the early feedback is that the radial projector is not bright enough. EOC is exploring use of a laptop computer with screen for **Emma Lowe**, using available NHAS resources. 4-H is also willing to assist Emma with her project.

Regarding Science Technology Engineering Mathematics (STEM), NHAS is to work in an advisory capacity, providing mentoring at monthly meetings and other venues. EOC is working the details.

The Q3 Officers Meeting Report

The Portable Planetarium was discussed, and a Facebook policy is being crafted in accordance with best practices adopted by other Astronomy Clubs. **Matt Marulla** has experience in this area and **Paul Winalski** has been asked to review it. We have finalized policy for donations accepted via the Website, and the feature is now operational. A **DONATE** button is featured at the Home Page.

No additional financial obligations are required for NEFAF (being held next month). Ted Blank and others will be looking for volunteers and will soon publish the NHAS specific agenda and assistance required. NHAS has voted YES to Inter-club Events with Maine Astronomy Clubs. **Dwight Lanpher** is the liaison and will attend a future meeting to describe what he does.

YFOS repairs are being undertaken and **Joe Derek** has been contacted for the work, which is tentatively planned to start after Stellafane. The board already approved funding.

The Financial review has been pushed out to Q4.

Astronomy Shorts

Rich DeMidio: was at lake in NY with the TV 102 and reported that the TeleVue Big Barlow worked all well with 2" eyepieces as compared to comparable 1.25" eyepieces of similar magnification.

John Bishop: mentioned that the Plymouth Pease Library site has dark skies and can turn off lights in the parking lot.

Paul Winalski: reported lots of satellite activity at the Plymouth sky watch.

Rich Schueller: tried to image July S&T object (NGC 5866 or M102), about 3 hours of exposures, then saw comet PanSTARRS and imaged it.

Ted Blank: was in Atlanta and had an opportunity to go to Texas for Southwest Research Institute. Set up telescopes for an asteroid occultation, and got three positive chords on Aquitania (and a total of 5 chords).

Rags: observed for the first time in 4 months and tried the Sue French list of Bootes objects, only to fail miserably. He found M3, but nothing else in the list.

The Evening Presentation

Ted Blank presented an update on the Mars *Curiosity* Rover.

NHAS Treasurer's Report
(as of August 7, 2013)

Starting Checking Balance:	\$11,029.39	Membership:	140
Deposits:		Renewals:	0x30.00 0.00
Membership	60.00	New Members:	2x30.00 60.00
Donations	885.00	Total:	2 \$60.00
Interest	0.00	Current Members:	142
Total:	\$945.00	New Members:	
Expenses Paid:		Jess Hepler	Hooksett NH
Astronomical League (20 members)	. 110.00	Ken Geddes	Auburn NH
Josh Lake (PixInsight workshop)	75.00		
United Site Services (PortaPotty)	56.45	Donations:	
Total:	\$241.45	Ken Geddes	EOC 20.00
Current Checking Balance:	\$11,732.94	Gardner Gerry	GEN 200.00
Petty Cash:	\$100.00	(LX90 Fork sale)	
Current Cash Balance:	\$11,832.94	Roger Goun (Telescope and Chair sale)	GEN 665.00
EOC Share:	\$6.160.23	Total:	\$885.00

Contact Information

How to join NHAS

Write to us: **NHAS**
P. O. Box 5823
Manchester, NH 03108-5823

Send Email to: info@nhastro.com

Visit our web site: <http://www.nhastro.com>

How to contribute to the Observer

Email articles and snapshots to the Editor:

ramax.astro@yahoo.com



Dawn at Mt. Major, August 12, 2013 (Photo: Rex Gallagher)

Event	Date	Time	Location
First Friday Skywatch for MSDC	Friday, September 6	7:00pm	MSDC, Concord NH
Rey Center Skywatch	Saturday, September 7	8:00pm	Waterville Valley NH
Owls Landing Campground Skywatch	Saturday, September 7	7:00pm	245 US 3, Holderness NH
Concord High School Solar Observing	Wednesday, September 11	8:30am	140 Warren Street, Concord NH
Concord High School Solar Observing (backup date)	Friday, September 13	8:30am	140 Warren Street, Concord NH
NEFAF	Friday, September 13	6:00pm	UNH Observatory, Spinney Ln, Dover NH
NEFAF	Saturday, September 14	10:00am	UNH Observatory, Spinney Ln, Dover NH
Sidewalk Astronomy Skywatch	Saturday, September 14	6:00pm	Market Square, Portsmouth NH
Owls Landing Campground Skywatch (backup date)	Saturday, September 14	7:00pm	245 US 3, Holderness NH
NHAS Business Meeting	Friday, September 20	7:30pm	St. Anselm, Manchester NH
Nashua Public Library Skywatch	Monday, September 23	7:00pm	2 Court Street, Nashua NH
Nashua Public Library Skywatch (backup date)	Tuesday, September 24	7:00pm	2 Court Street, Nashua NH
Coffee House Night	Saturday, September 28	5:00pm	YFOS
LTP Modification Party	Sunday, September 29	11:30am	MSDC, Concord NH
Winnacunnet High School Astronomy Club Skywatch	Tuesday, October 1	6:30pm	1 Alumni Drive, North Hampton NH
Goffstown High School Skywatch	Wednesday, October 2	7:30pm	Goffstown HS, Goffstown NH
Winnacunnet HS Astronomy Club Skywatch (backup date)	Thursday, October 3	6:30pm	1 Alumni Drive, North Hampton NH
Fall Messier Marathon	Friday, October 4	5:00pm	[Members Only]
First Friday at MSDC	Friday, October 4	7:00pm	MSDC, Concord NH
Fall Messier Marathon (backup date)	Saturday, October 5	5:00pm	[Members Only]
Rey Center Skywatch	Saturday, October 5	7:00pm	Waterville NH
Concord High School Skywatch	Tuesday, October 8	7:00pm	White Farm, Rt. 13, Concord NH
Rundlett Middle School Skywatch	Thursday, October 10	6:30pm	Rundlett Middle School, Concord NH
Concord High School Skywatch (backup date)	Thursday, October 10	7:00pm	White Farm, Rt. 13, Concord NH
NHAS Business Meeting	Friday, October 11	7:30pm	MSDC, Concord NH
Sidewalk Astronomy Skywatch	Saturday, October 12	6:00pm	Market Square, Portsmouth NH

Credits

Contributors to this month's **Observer**:

AAVSO, John Bishop, John Blackwell, Ted Blank, Herb Bubert, Melinde Byrne, Ken Charles, Rich DeMidio, Gary Duranko, Rex Gallagher, Gardner Gerry, "Rags" Gilmore, *Celeste Guidice*, Joel Harris, Andy Jaffe, Larry Lopez, Matt Marulla, Steve Rand, Jim and Michelle Roberge, April South, Dave Weaver and Paul Winalski.