

Put together by
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The NHAS Observer

Newsletter of the New Hampshire Astronomical Society



Vol. 2023 No. 9

"All the news that fits in print"

September 2023

Stellafane



NHAS Tent in our traditional area. Photo by Tom Cocchiaro

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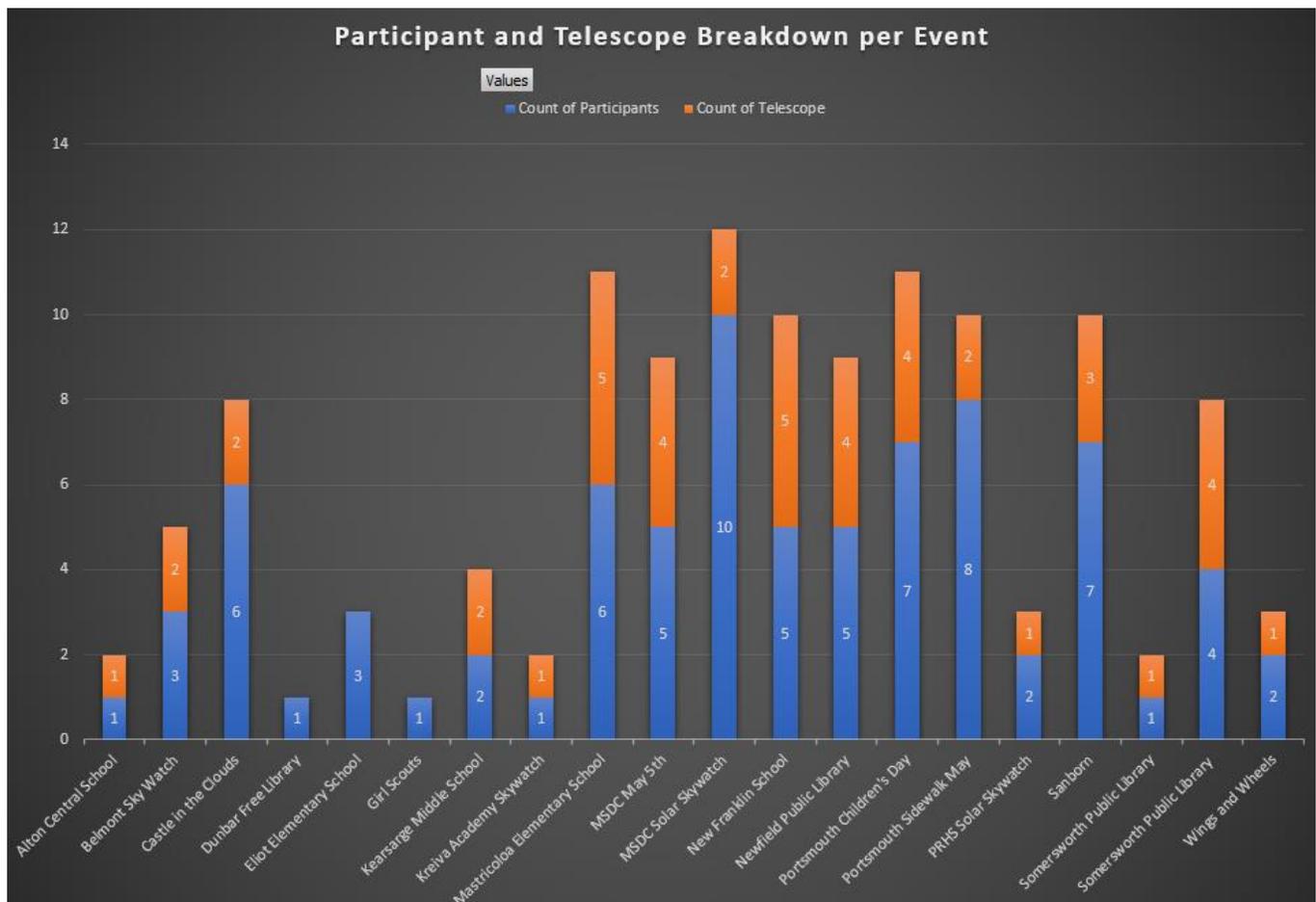
Editor's Message

I'm late this month with the newsletter so my apologies. It was a very busy summer for me with most of it spent in upstate New York where I grew up and at the lake house that has been in my family my whole life. Summer is traditionally a tough time for astronomy given the shorter nights, bugs, and humidity. Coupled with lots of daytime activities, I was pretty tired come nightfall on most nights. Nonetheless, I managed to do some visual observing and some wide field astrophotography.

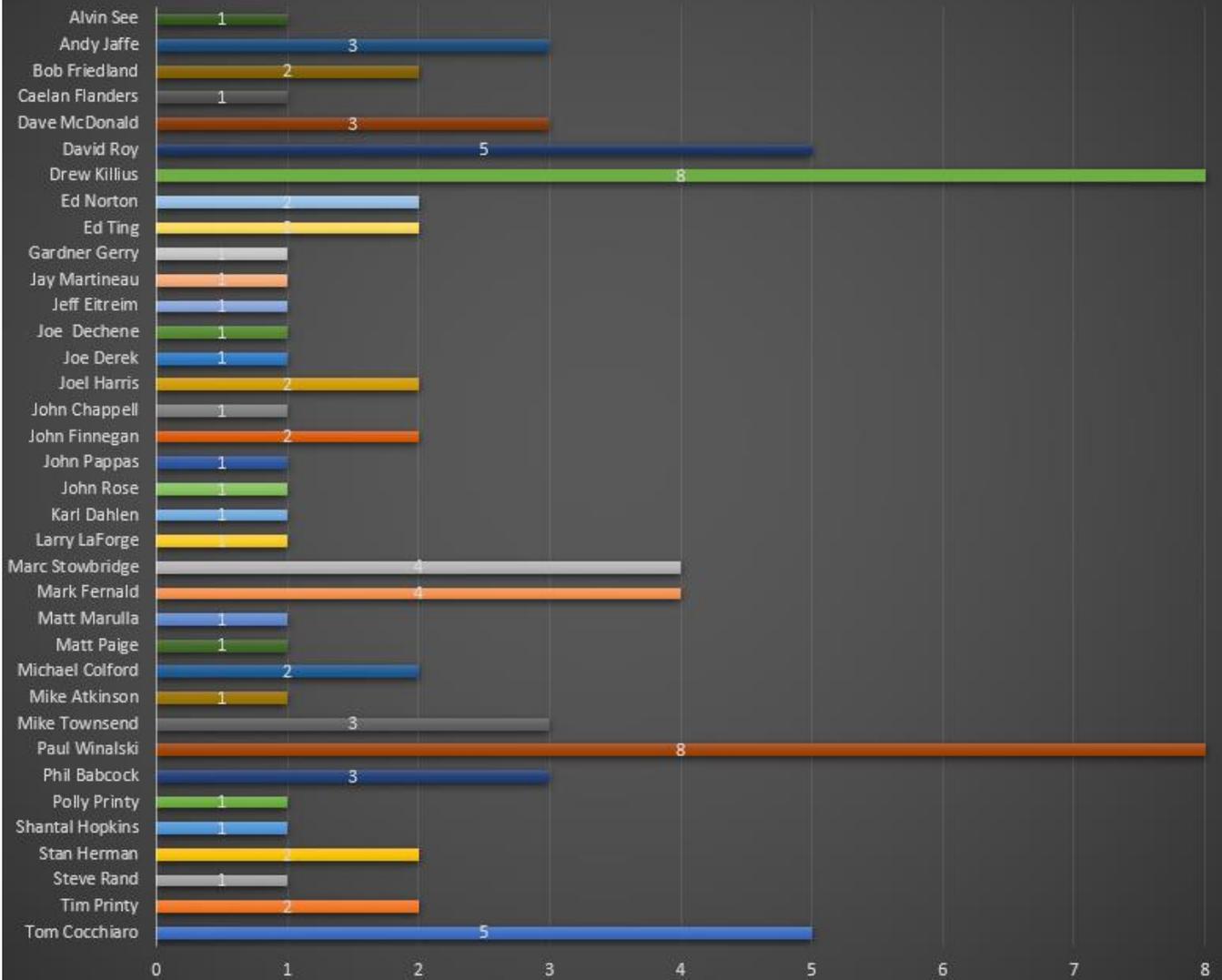
Summer is also the time for the annual Stellafane event of NHAS has a rich history of attending. A good portion of this month's newsletter is devoted to that topic.

Public Skywatch summary

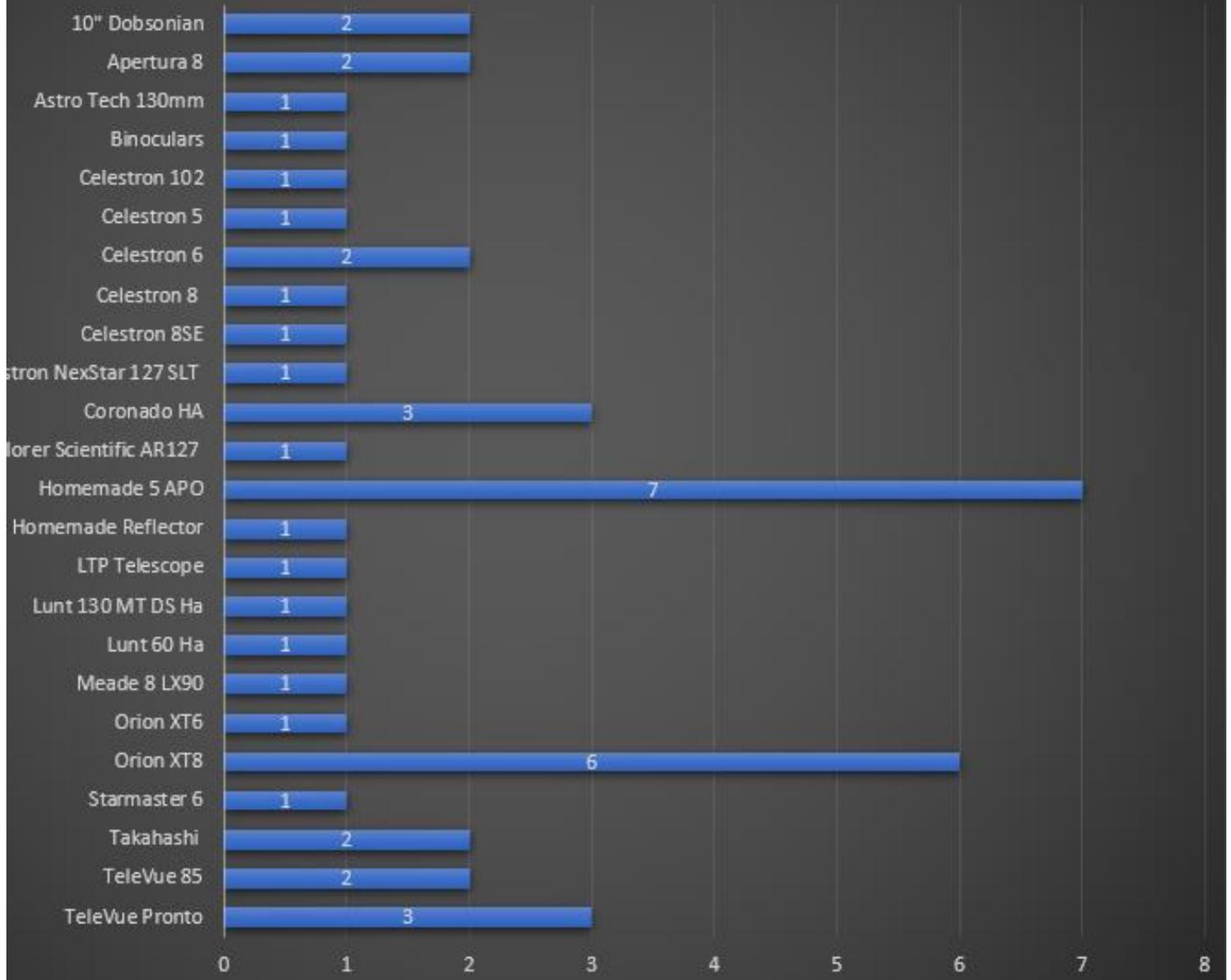
Latest tally from our events. As a reminder, if you have data for a 2023 skywatch not shown, please send to me so that I can add to the list. Please email me if I missed some entries. I will update for the publication. *All charts are sorted alphabetically.*



Public Skywatch Attendance by Member



Public Skywatch Telescopes Used



Stellafane

Several members have provided reports for this event. Enjoy!

From David Roy including photos: NHAS had a great showing at Stellafane! I counted at least 15 members present. Joe Derek and Joe Deshanes both entered mechanical designs in the competition (Joe Derek's dob shown). Unfortunately, neither won. We had only Friday evening clear for observing and Saturday after 10 but hazy. Tom Cocchiario had his solar scope active on Friday. Joe Rao gave an excellent presentation on all his eclipse adventures over the years and the 100th anniversary presentation was well done.



Joe Derek's scope entered for competition



Eclipse presentation by Joe Rao

From Tom Cocchiaro: Tom provided several photos from the event. Stellafane accommodations on "Pine Island."



Stellafane traditional swap table crowd at about 8 am Saturday morning.



Joel Harris checking out an active sun on Friday through Tom's Lunt double stack Ha scope —on a day we were supposed to have a washout rain— obviously not.



Camp chef Dave Roy rustling up some easy over eggs, sausage and hash browns for breakfast Friday morning.



Joe Derek setting up his 18-inch reflector for the mechanical competition with a little help from Dave Roy and Tom Cocchiaro.



Hartness House on its 100th anniversary—“there be clouds, but no rain.”



From Joel Harris: Stellafane observing field on Saturday night, waiting for sucker holes in the clouds to get larger. It did clear by 11pm. Cell phone 32 sec@ iso 3200.



A timelapse of Stellafane that Joel also took. <https://photos.app.goo.gl/jAy4W3LuDhP3vufu6>

Castle in the Clouds (CiTC) on 8/20 (Marc Stowbridge / Stan Herman)

Alvin and I had a late start under questionable conditions on Monday. However, the solar features were quite good and entertaining. We had about 120 people come by including some who came specifically for the solar viewing. Alvin had his sun spotter while I had my white light and Ha scopes on my iOptron mount.

We had periods of so so viewing that did not last long. We had spectroscopes and meteorites to show folks while they waited. Even though the haze, surface features were quite clear.

People who had just looked called passersby people to come look. Lots of kids too, everyone using the solar viewers correctly. First, stand in the sun, hold the viewer to your eyes, turn to look towards the direction of the sun, lift your face, say "Wow!", and reverse the process. The kids seem to think this makes the experience even better and special. The parents helped the youngsters, and I think they liked their teaching role. Some kids even told their parents to try again, this time saying "Wow!". There are rules, at that age.

After Labor Day, we will likely keep going, but only on weekends.

From Stan Herman: It was a very nice event today. I think that several adults and kids expressed a desire to do more in astronomy. My rig today consisted of my Daystar Quark Chromosphere, AT-102ED and Sirius mount. Views were outstanding, smoke notwithstanding. All in all, a very successful public event.

Castle in the Clouds (CiTC) on 9/5 (Mark Stowbridge)

Stan, Alvin and I held the last formal solar observing session this Labor Day. We started early, about 10 am, and had lovely weather. We had over 90 people stop by, coming from Germany, Australia, England, Wales, California, Washington State, Florida (who thought it was quite cold here!) and lots of different states. Many young children, three being about the youngest who could comprehend the telescopes, and gave out many solar viewers to very appreciative and enthusiastic people. We instructed the adults just the same as we did the youngsters, and every one followed the drill.

Thank you to the club members who came to help out over the summer. It always felt like a party when we had lots of people there.

I plan on going informally on weekends when the weather is good, particularly during leaf season. I'll post to the list when that is likely to occur.

And finally, a great "Thank you" to the wonderful people at the Castle, who were so welcoming and supportive of our efforts.

Girl Scout Troop 51595 Astronomy event (Mike Atkinson)

Just want to do a quick debrief of last night's discussion. We had a lively, wide-ranging discussion with ... if I recall ... 12 young ladies from 4th to 8th grade, 3 young men of similar ages, three adult women leaders of the troop, and one adult man wondering in and out during our 2-hour conversation.

Before I arrived, they group had already put together some planisphere like charts that Alison had sent along. 😊 And they discussed the planets and solar system.

They were a bright and lively bunch. We discussed many different topics related to astronomy. It was mostly led by the young people and their questions. Questions ranged from 'can stars orbit each other', to 'what is the composition of the moon(s)', to 'will black holes absorb the entire universe', to 'is the Andromeda Galaxy going to crash into the Milky Way Galaxy', to 'what happens when a star dies'.

We also discussed the constellation and the ages of those constellations. We discussed apparent magnitude and how binoculars and telescopes gather light to see more dim objects.

Lastly, we talked about the April eclipse and viewing safety. Each person put on my solar sunglasses and I then pointed a rather annoying flashlight right into their eyes while the glasses were on, to demonstrate how dark safe observing needs to be.

We hope to follow up with a night of viewing in the not-too-distant-future. Stacey is going to confirm a date and location.

Wings and Wheels 9/17 event report (Paul Winalski)

Concord Airport's annual Wings and Wheels event took place on Sunday Sep. 17. Sky conditions were near perfect--clear and with good seeing. NHAS had a table right at the hangar entrance. Tom Cocchiaro and I each set up two scopes--one white-light, one H-alpha). We split our time between the table and the scopes. About 200 people took a look at the Sun. There were lots of sunspots and several large prominences visible in H-alpha. I spoke with several people who said they plan to join NHAS. All told, a very successful event.



Paul Winalski showing a visitor the Sun with the Coronado. Photo by Tom Cocchiaro

Skywatch for Somersworth Public Library (Phil Babcock)

Folks:

We had an “interesting” evening at the Somersworth Public Library Skywatch.

The presentation at the library had 15-20 people. There was a good mix of ages - from elementary-aged kids up to folks of a “certain age”. As people were arriving, I asked if there were any questions. One person asked if the 2024 eclipse could be seen from “here”. I went over the % of the sun that would be covered “here”, where to go to see totality and that totality is nothing like even 99% covered. I also gave a warning about the likelihood of cloud cover, and then we went over safety for observing partial and total eclipses. There were also a few questions during the presentation.

After the presentation everyone headed up to Noble Pines Park. Two people came at the end of the presentation and were just interested in the observing. No one needed any shuttle service to get to the park. Joel Harris (our DA of the evening) had arrived at the park and started setting up at 6:30; John Finnegan and Mark Fernald arrived later and got set up before the guests got to the park. There had been an idea that people could even walk the 0.5 miles from the library to the park, but there is one really nasty uphill on the way there that would discourage many from taking that approach.

The park is fine for doing a skywatch. It is in a residential area and surrounded by trees on 2 sides and houses on 2 sides. While there are no house lights shining directly on the field, there is definitely a glow from the “downtown” just a few blocks away. You do have to re-locate your scope to get a view of different parts of the sky.

The challenge this night was that it was mostly overcast with thin clouds. Vega and Deneb were visible much of the evening, but it wasn’t clear enough to see any deep sky objects. I had Albireo in my scope for about a minute, then it clouded over in that area for most of the time we were there. But the mostly clear area of the sky was at a good location: where the Moon and Saturn were. The Moon put on a great show (with Joel even going in close to show Tycho and its rays) and Saturn was the usual big hit, even though they both had very thin clouds over them at times, reducing the contrast and sharpness.

Joel Harris had his Celestron 8” Schmidt Cassegrain scope, John Finnegan brought his 8” Apertura Dobsonian, Mark Fernald showed up with his Celestron 5” Schmidt Cassegrain, and Phil Babcock had his Tele Vue 85. Everyone was focused on the Moon and Saturn.

As people were leaving, Joel Harris used one of his apps to help us all see an ISS transit from the western horizon to just above the Big Dipper. This was a hit with the remaining guests.

It was too bad we had clouds over much of the sky, but the guests seemed to have a good time seeing the Moon and Saturn.

Dunbar Free Library light pollution presentation (Matt Marulla)

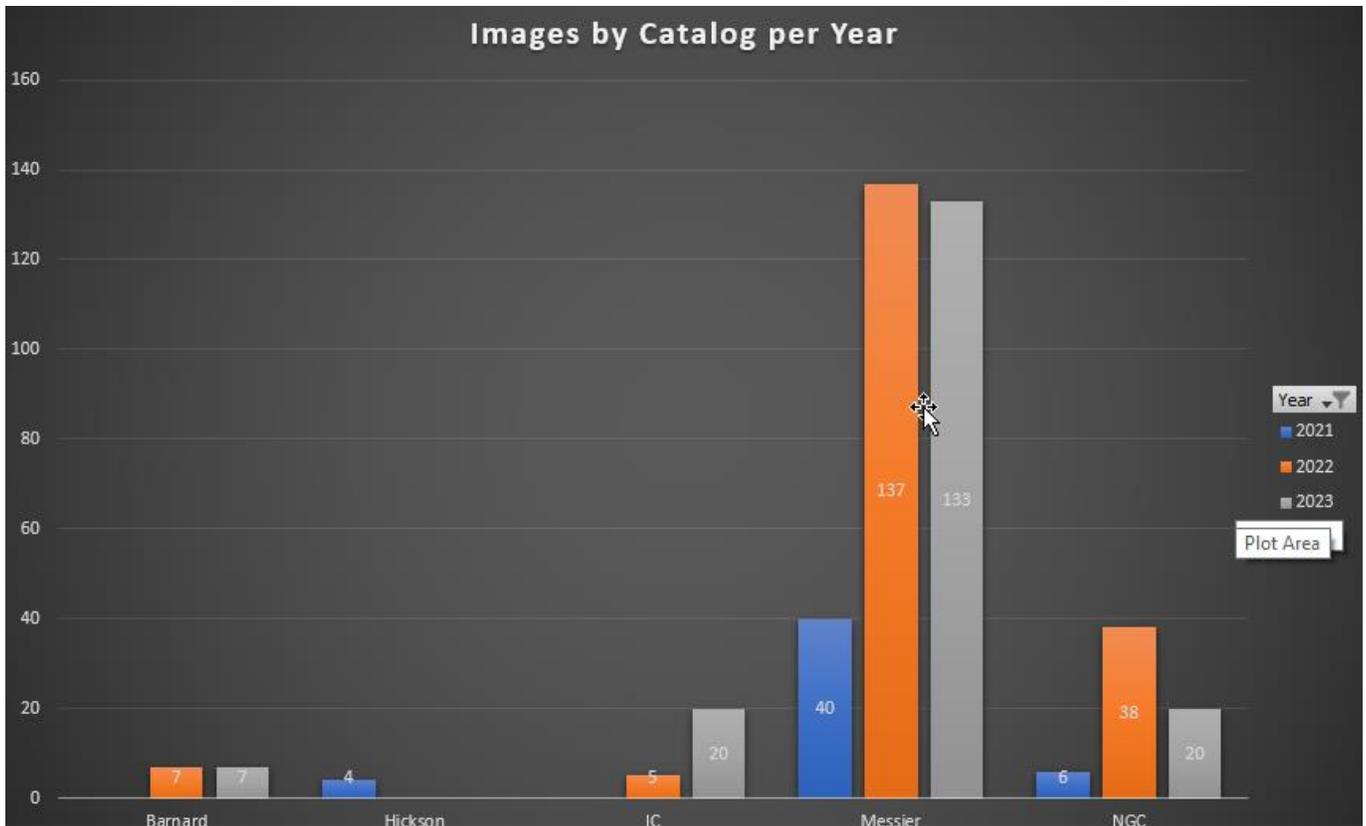
Good turnout with at least 15 people. Presentation was 45 minutes including questions and discussion.

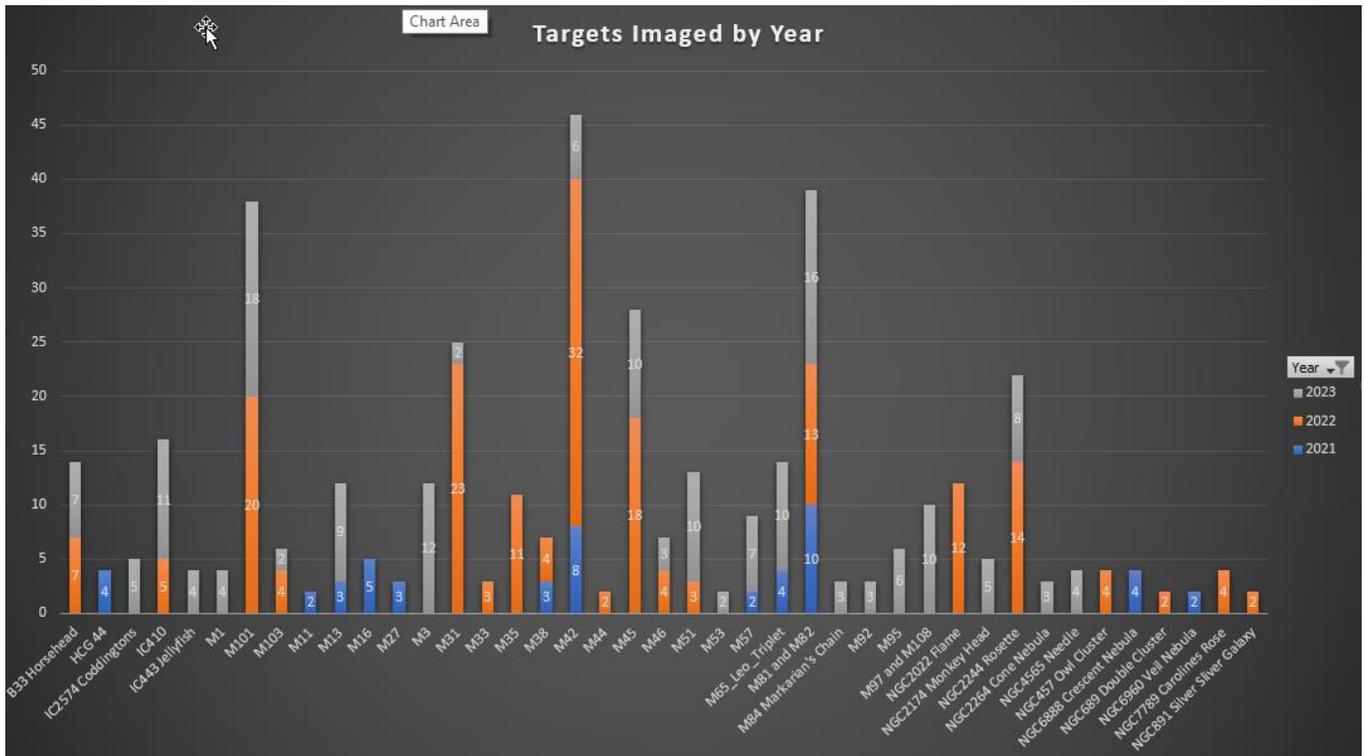
THE NIGHT SKY & LIGHT POLLUTION



Ut oh, the Metrics Nerd strikes again!

Summertime is slowest time of the year for me in both visual and Astrophotography. It gets too late, the bugs are nasty, and dew becomes a huge issue. Now that I am preparing for upcoming months of Astrophotography, I took some time to normalize my data making it consistent to run some analytics. It was three years ago when I formally started my journey with Astrophotography. I have summarized the effort below documenting the various catalogs (ie. Messier) and targets by year. I hope you enjoy the report 😊





In-Reach Report (Phil Babcock)

Editor's Note: There have been no updates since the last report. I am including the latest for convenience excluding any events that have already passed.

NHAS In-Reach Report, August 16, 2023

Once again, we have had a somewhat quiet month on the In-Reach front. Late evening darkness and seemingly endless clouds have restricted observing opportunities. But we had a pretty good weekend for observing last weekend, so perhaps things are improving. And there are always more In-Reach activities to come!

Over the last month:

- Some reminders were sent to the membership of what events are coming up that are places to bring questions and to get help. These opportunities are very much focused on members that are new to amateur astronomy.
- Three more Episodes of “The Constellation of the Month-ish” were released. Episode 4 covered Scorpius and the globular cluster Messier 4 (M4). The 5th Episode focused on Sagittarius and Messier 8 (M8), the Lagoon Nebula. These 2 episodes culminated in Episode 6: “A Messier Hop”. Usually, each episode describes how to find a prominent and useful constellation, and how to find, with star hopping, a deep sky object (cluster, nebula, galaxy) or other object of interest in or near the constellation, using binoculars, a finder scope and a telescope. This 6th episode did not introduce a new constellation or even do any star hopping. Rather, it picked up from where

Episode 5 left off in Sagittarius and “Messier Hopped” from Messier object to Messier object, the next one always visible in the Field of View (FOV) of the previous one.

- Our second survey of the membership is under review by the Officers. It is focused on determining which members can contribute what skills to meet the desires (uncovered in the first survey) for Astro 101 seminars and education topics, along with who can be a mentor.

Coming soon are:

- Reminders for the members of the membership benefits of belonging to NHAS.
- Alerts for all the various opportunities for the members newer to amateur astronomy to get the help they need.
- More Astro 101 and beginner-focused observing nights.
- Scheduled open observing evenings at Little River Park in Lee, Joppa Hill in Bedford, and YFOS.
- The next exciting episode of “The Constellation of the Month-ish”. This one will cover the Summer Triangle, the double star Albireo, and M27, the Dumbbell Nebula.
- Work on securing observing focal points (like we did in Lee) for the northern and western members.

Surveys:

- Distribution of the survey mentioned above, focused on which members can contribute what skills to meet the desires for Astro 101 seminars and education topics, along with who can be a mentor.
- Another survey to collect information on observing sites across the state that members can use freely.
- As always, if you have any suggestions or want to volunteer to help out with some aspect of this, please let me know at psbiv4@gmail.com.

Phil Babcock

8/16/23

Constellation of the Month (Phil Babcock)

https://drive.google.com/file/d/1hChNoLICXX2nLzTyRgMKsoJANMJb4O-L/view?usp=drive_link

Fellow Astronomers:

Here is the 7th Episode of “The Constellation of the Month-ish”. After a flurry of Episodes in early August, including one that did Messier hopping instead of star hopping, we return to a more normal “Constellation of the Month-ish”.

In this Episode we introduce asterisms – useful and fun patterns of stars that may span a few constellations, reside within a constellation, or only be seen in binoculars or a telescope.

Specifically, we use an asterism that spans 3 constellations to get started, then use an asterism of the bright stars within one of those constellations to get to a very colorful double star. Then we star hop to

a most unusual binocular or finder-scope asterism, and use that to get to a constellation so small it fits within a binocular's field of view, and then onto our deep sky goal of a planetary nebula.

If you haven't heard of the term "asterism" before, I'm sure you already know some. The Big Dipper, Orion's Belt, and the Great Square of Pegasus are all asterisms. In this Episode, we will show how fun and useful asterisms are. We cover the asterisms of the Summer Triangle, the Northern Cross and the Coat Hanger (no, I'm not kidding). We start with the constellation of Cygnus (the Swan), and then cover the constellations of Sagitta (the Arrow) and Aquila (the Eagle), and have shout-outs to Delphina (the Dolphin) and the Lyra (the Lyre). For deep sky objects we focus on M27, a planetary nebula called the Dumbbell nebula, and also take in the clusters M71 and M11.

In these episodes, binoculars are mentioned pretty regularly. This isn't to imply that you should only look at these objects with binoculars. Rather, in support of the mission of "The Constellation of the Month-ish", which is to help beginners learn how to find things in the sky, the message here is that a lot of amateur astronomy can be done with just binoculars. Also, by focusing on objects that can be seen in binoculars, they can just as easily be seen in a finder scope, and that gets the telescope pointed there and the telescope will provide a different view and experience of the object. We build the skills of finding things in the sky with these easier, but rewarding, targets.

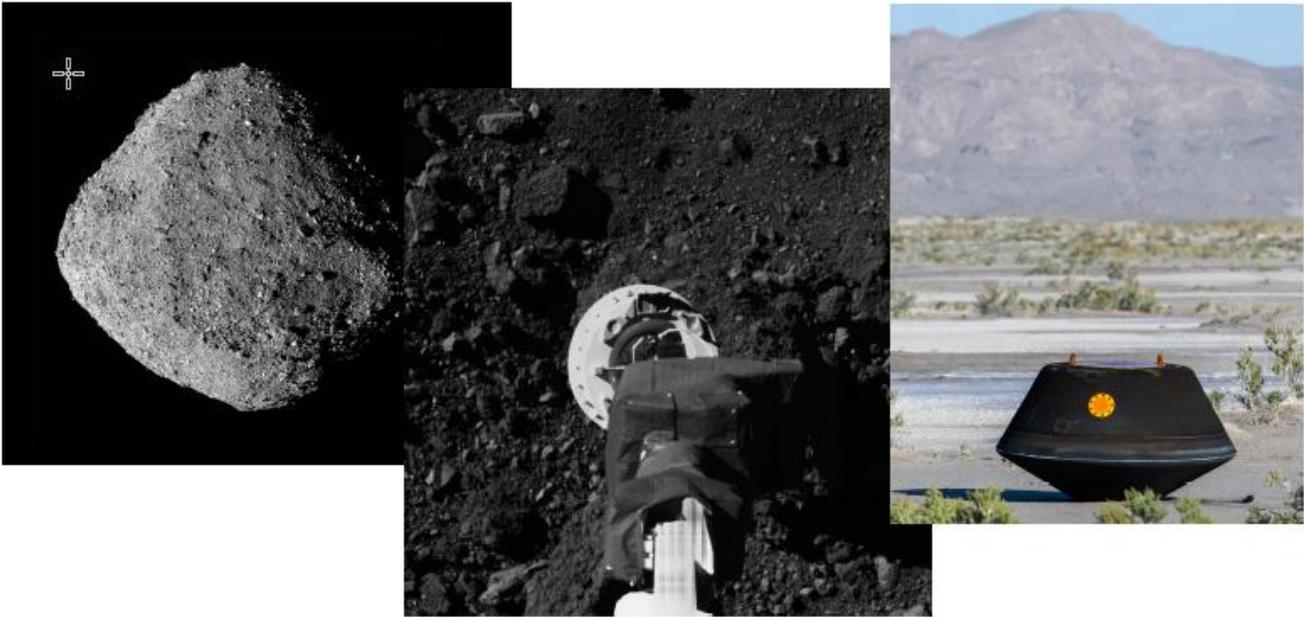
While "The Constellation of the Month-ish" is mostly for the members that are in the earlier parts of their journey, more experienced members can join in by sharing their favorite objects in this region in and above Sagittarius, or share photos of these objects that they have taken.

And, of course, I welcome the always interesting and educational corrections people offer.

Happy hunting!

In the News (Steve Rand) - BENNU SAMPLE RETURN

I think the most significant story this month was the successful sample return of material from the asteroid Bennu by the spacecraft OSIRIS-REx. Launched in 2016, OSIRIS-REx arrived at Bennu in 2018. After a couple years analyzing possible sample locations, the spacecraft touched the surface of the asteroid, collecting a small sample of its regolith. Back home three years later, the spacecraft ejected its sample return capsule causing it to parachute successfully to the Earth's surface in Utah, about eighty miles west of Salt Lake City



Not done yet, the spacecraft has been renamed OSIRIS-APEX and is now on its way to the asteroid Apophis. It will arrive in April of 2029 and orbit Apophis for around 18 months. It will then do another asteroid surface touch, but no samples to collect this time, just a spectral analysis of the asteroids subsurface.

ASTRO PHOTONS

Many club members have been showcasing their astrophotography talents on the Astro-pictures channel in Slack. Please go there to review photos as it would be terribly redundant to include them here. In addition, Herb Bubert takes a sampling from that channel posting them on the club's Facebook page on a monthly basis.

CLUB AND OTHER LINKS OF INTEREST

Facebook Page:

<https://www.facebook.com/search/top?q=new%20hampshire%20astronomical%20society>

NHAS YouTube including some enablement education:

<https://www.youtube.com/@newhampshireastronomicalso1786>

NHAS Club Calendar:

<http://www.nhastro.com/calendar.php>

Did you know that Slack offers analytics? It's pretty cool if you are a metrics nerd like me 😊

<https://nhastro.slack.com/stats#overview>

LTP YouTube channel

<https://www.youtube.com/@librarytelescope>

Phil Babcock In-Reach materials (let me know if you cannot see the folder)

https://drive.google.com/drive/folders/1eVm896w7E_cGyLEdYP4QSRJIZGI8RPU3?usp=share_link

Marc Stowbridge provided this link to an LTP brochure:

https://librarytelescope.org/images/flyers/International_Library_Telescope-2023-flyer.pdf

SUMMARY

This is your newsletter so please let me know of content you might like to see. Also anyone is welcome to submit articles of your choosing. For example, an observing session report, a field trip or some event, etc.

Clear Skies!

Rich DeMidio