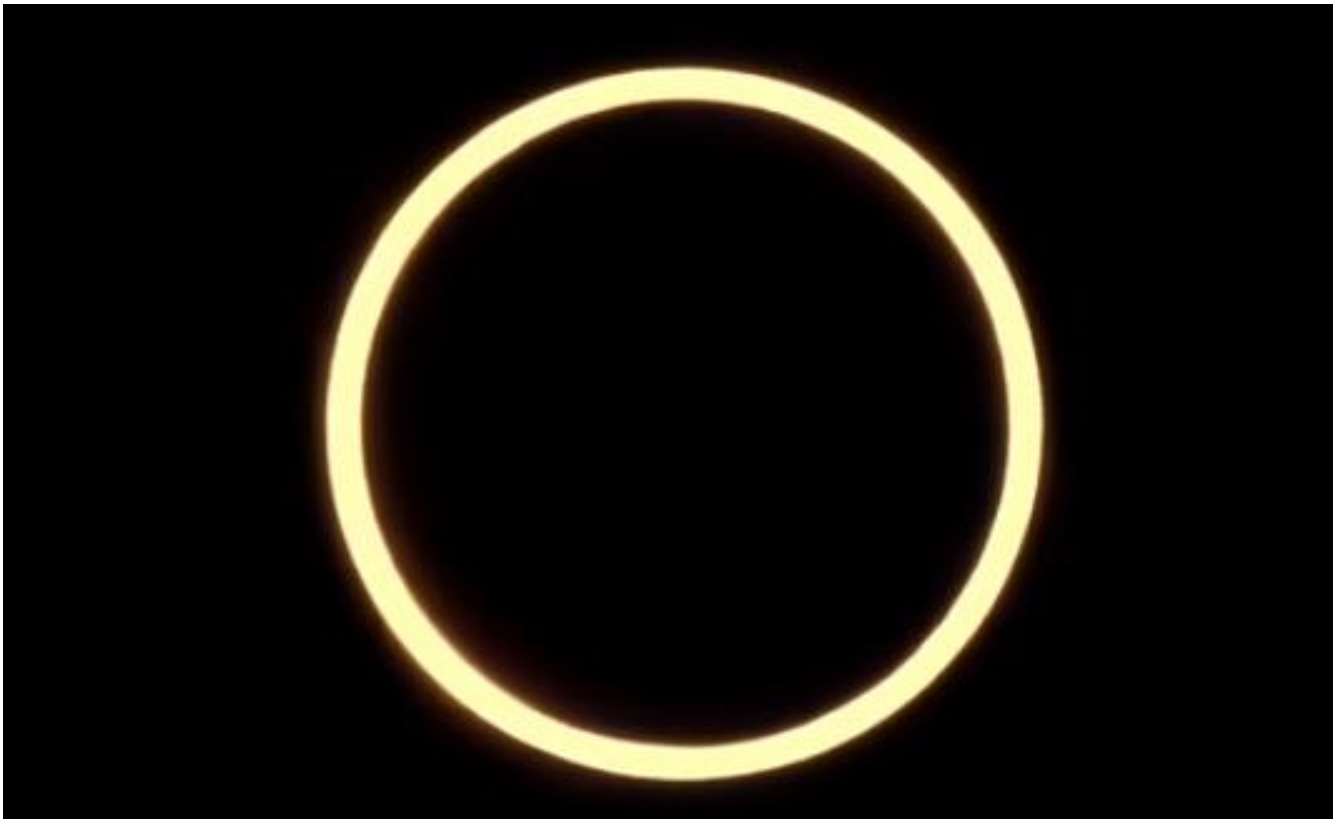
Put together by
Rich DeMidio

The NHAS Observer

Newsletter of the New Hampshire Astronomical Society

Vol. 2023 No. 10 "All the news that fits in print" October 2023

Annual Solar Eclipse



From New Mexico, by Matt Marulla

Video link: Annular Solar Eclipse - 14 Oct 23

IN THIS MONTH'S ISSUE

Editor's Message

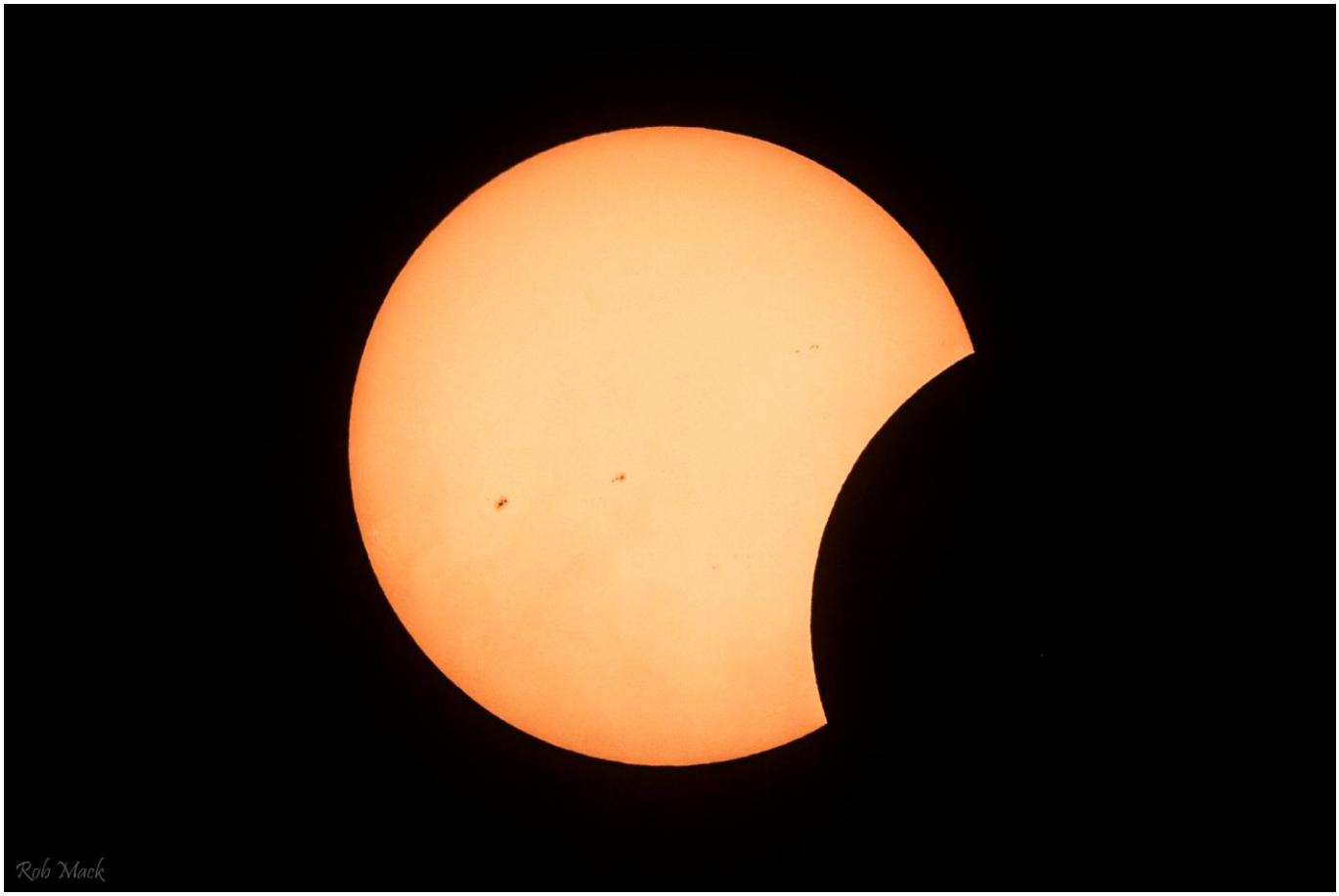
On October 14th, an Annular Eclipse occurred visible from New Hampshire. Many members participated and shared dozens of photos. Most were posted on Slack and on the NHAS chat list. I will include some of them here as well.

This is my favorite time of year for Astronomy as it gets darker earlier, the bugs are gone, and it's cool outside. A great time for visual and astro imaging.

Solar Eclipse Reports

From Rob Mack: Hi all! Took this one at 12:52 PM from St. Gaudens in Cornish NH. It was partly sunny with some decent sucker holes for the first half of the eclipse. Cloudy for the last half.

Handheld camera and 500mm telephoto with a Thousand Oaks filter.



From R.P. Hale: It started out well enough, but the incoming clouds of Tláloc accomplished what Tēccūhciztécatl the Moon could not: hide the face of Tōnátiuh the Sun. I had to give it up near the halfway phase, too. And, I had to rediscover the fact that H-a scopes don't like haze or any kind of thin clouds. Several of us here got to see it. I also noticed that first contact and beyond was hiding a magnificent prominence. The second image was also the final one, taken at 1:31pm.

Image cropped by editor

From John Blackwell: The first half was quite good, as the clouds managed to stay mostly out of the way. Past that, things got rather rough, and we ended without seeing the finish... that's ok. Got some nice images. Had a slew of visitors, easily over 50, and lost count.

Here's first contact and some place nearer to mid eclipse.

From Tom Cocchiaro: Hi All, had a small window here in Portsmouth to capture some iPhone video and a couple stills from today's partial solar eclipse. The video was taken through a William Optics 72mm refractor telescope and Thousand Oaks solar filter. The video shows the eclipse in progress with a thin curtain of clouds scooting by. What look like spots (on the sun) are -in fact- sunspots. Unfortunately, we in NH only got a small bite of the eclipse pie. You can check out the video at the NHAS Facebook page. Link is below.

https://fb.watch/nGUOK0CzXq/

From Deb Slocam: I used a low-res photo for the first email and it's just a blob. Here's the original size. The crescent is obvious.

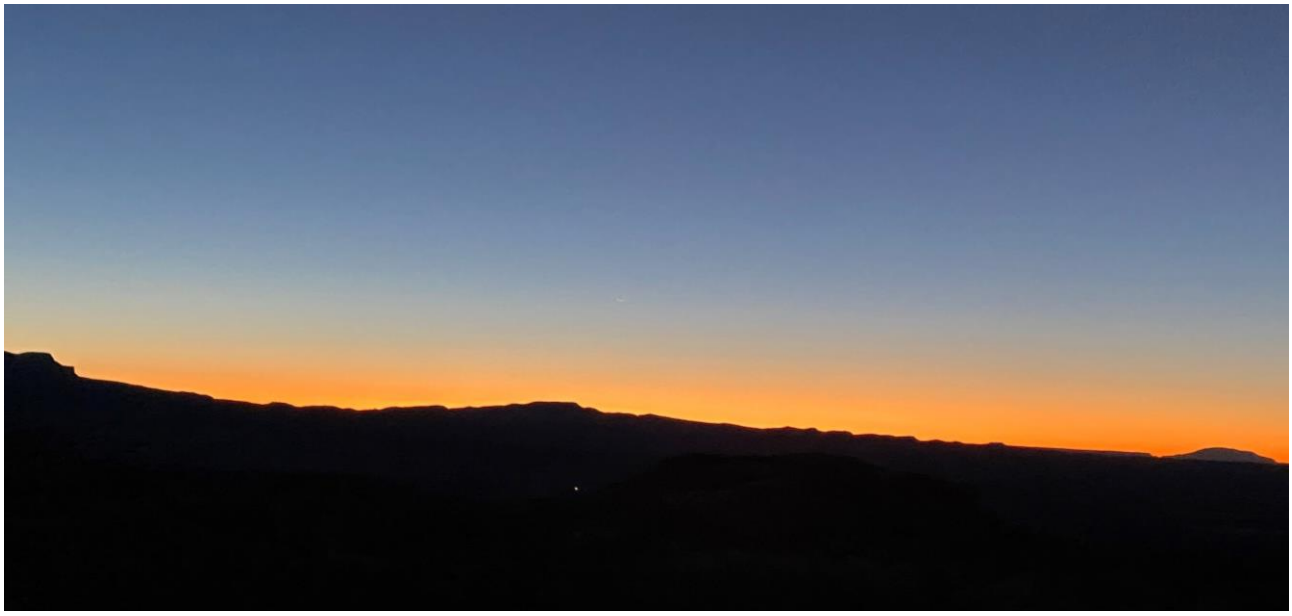


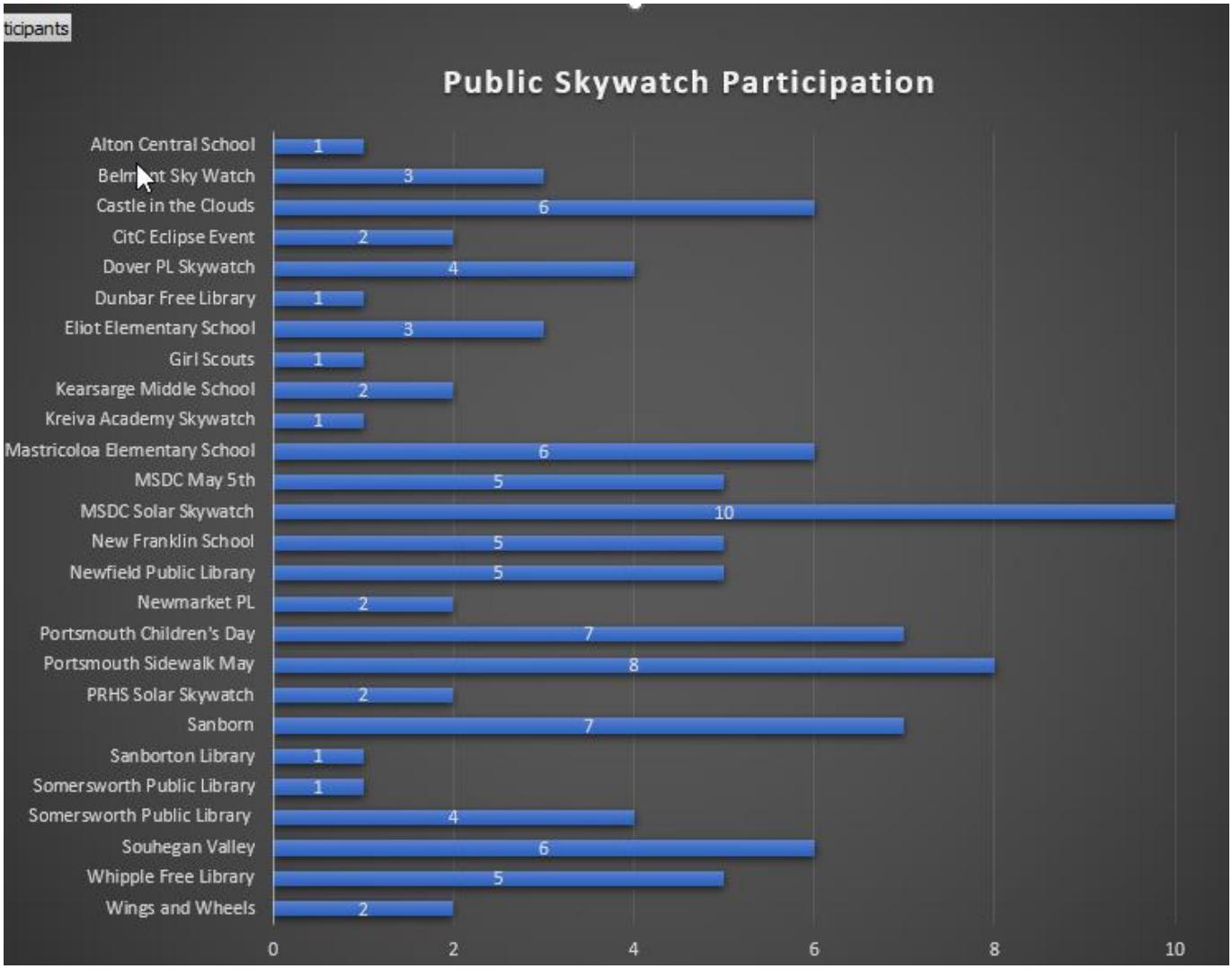
Image cropped by Editor. The sun is in the center a tad above the orange

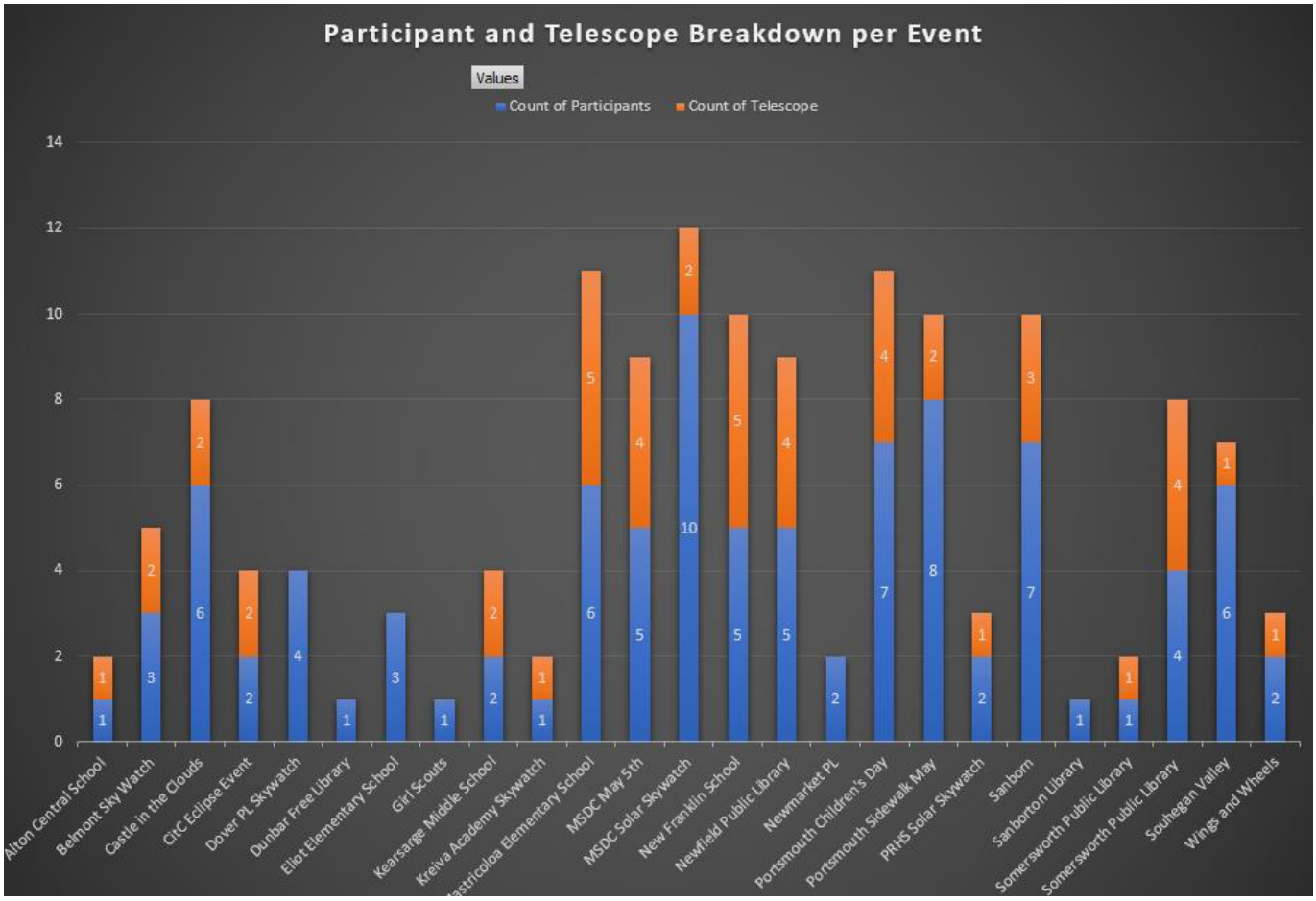
From Bob Gillette: This is what the eclipse looked like about 500 miles west of the centerline, in Santa Cruz CA, holding one lens of eclipse glasses over an iPhone camera lens. Coverage reached about 70% of the Sun, but of course clouds blotted that out.

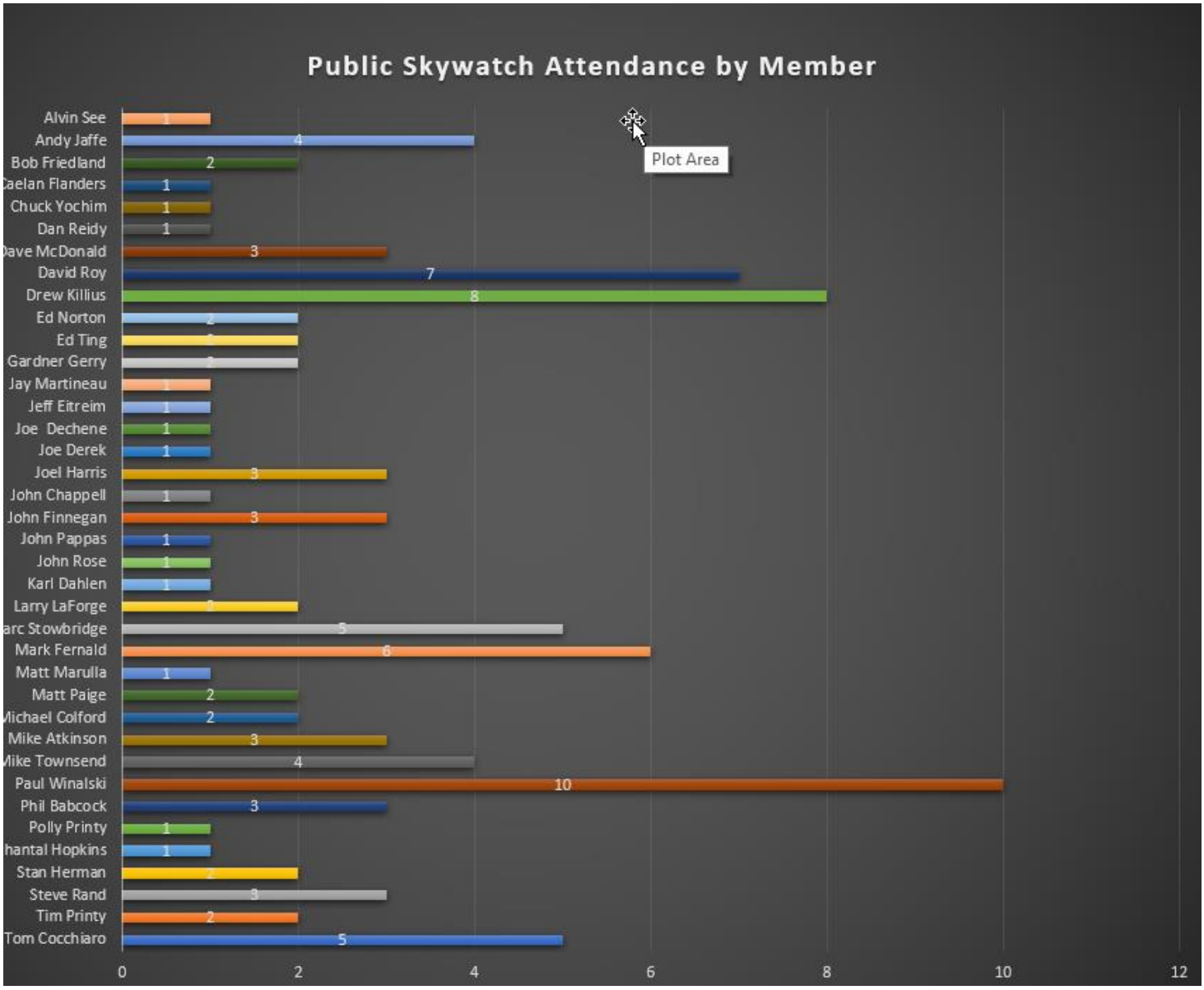
Image cropped by Editor

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.*




Participant and Telescope Breakdown per Event
Values
Count of Participants
Count of Telescope
14
12
10
8
6
4
2
0
Alton Central School
Belmont Sky Watch
Castle In the Clouds
CitC Eclipse Event
Dover PL Skywatch
Dunbar Free Library
Eliot Elementary School
Girl Scouts
Kearsarge Middle School
Kreiva Academy Skywatch
Lastricoloa Elementary School
MSDC May 5th
MSDC Solar Skywatch
New Franklin School
Newfield Public Library
Newmarket PL
Portsmouth Children's Day
Portsmouth Sidewalk May
PRHS Solar Skywatch
Sanborn
Sanborton Library
Somersworth Public Library
Somersworth Public Library
Souhegan Valley
Wings and Wheels


Public Skywatch Attendance by Member
Plot Area
Alvin See
Andy Jaffe
Bob Friedland
Caelan Flanders
Chuck Yochim
Dan Reidy
Dave McDonald
David Roy
Drew Killius
Ed Norton
Ed Ting
Gardner Gerry
Jay Martineau
Jeff Eitreim
Joe Dechene
Joe Derek
Joel Harris
John Chappell
John Finnegan
John Pappas
John Rose
Karl Dahlen
Larry LaForge
Marc Stowbridge
Mark Fernald
Matt Marulla
Matt Paige
Michael Colford
Mike Atkinson
Mike Townsend
Paul Winalski
Phil Babcock
Polly Printy
Shantal Hopkins
Stan Herman
Steve Rand
Tim Printy
Tom Cocchiaro
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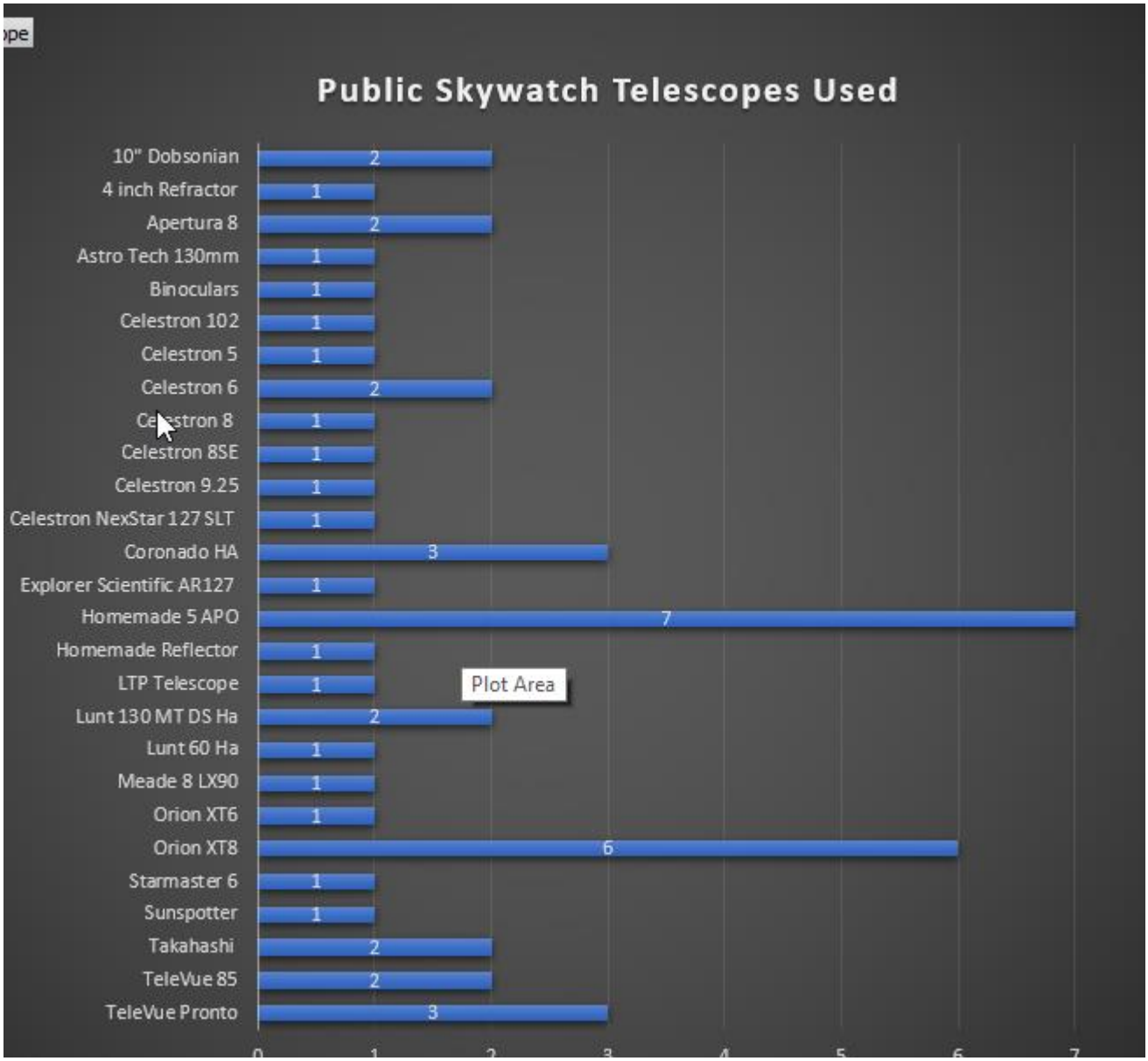
12



YFOS Renovations

Folks:

Once again Dave Roy threaded the needle on a day with a rain forecast, and got us a day of no rain (OK, there were a few sprinkles around 5:00) on Saturday 9/23 to complete the handicap ramp to the warming hut at YFOS.

Dave Roy, Tim Printy, Shail Srinivas and Phil Babcock were there on Saturday to finish this 3-day project.

For this project Dave Roy once again went way above and beyond in acquiring all the materials needed for this ramp (many of them donated for free), creating a design for a code-compliant handicap ramp, bringing the supplies and tools to YFOS, and leading a team of amateurs to replace the failing stoop on

the warming hut with a new ramp that should last many decades. We all owe him a debt of gratitude for all that he has done for the club, especially all the construction projects done at our observing facility, YFOS.

As always, it was a fun day working with such pleasant people, and knowing we were contributing to the usefulness of our observatory.

As shown in the enclosed pictures, the warming hut and its new ramp are open for business. Now the access is a gentle ramp, which will be much easier to navigate in the dark than the steps we used to have.

The railings need another coat of paint to completely finish the project. If you are interested in spending half a day at YFOS painting, let me know and we'll see if we can pick a weekend day to have a painting party.

Editor's note: Unless specified, all photos provided by Phil Babcock

Was a multi-day effort so this was work in progress with no-access yet. Stairs on the left had to be used in the meantime.

From Shail Srinivas: Thanks to Dave and Phil for carrying this project through. Based on everyone's availability, we can have a painting party one weekend. One more coat should do the trick.

Dave Roy and Phil Babcock, photo by Shail Srinivas

Boys and Girls Club of Souhegan Valley (Mike Atkinson)

Members in attendance included Mike Atkinson (DA), Steve Rand, Dave Roy, Larry LaForge, Mike Townsend and at least one other member (Name escapes me). I believe there were 4 telescopes set up by NHAS members. There were probably 25 to 30 members of the public who attended the view.

I would suggest the children were on the younger side … mostly, 5 to 7 years of age, by my estimate. A couple perhaps a bit older.

The targets at which I pointed my telescope included: Saturn, Albireo, Epsilon Lyrae and the Owl Cluster. Without the scope, I talked to some of the Summer Triangle, Cassiopia, Cephus, and Pegasus. Other targets included the Double Cluster, I heard the Ring Nebula mentioned. I believe some pointed on Andromeda … Others may choose to chime in with more specifics.

A starlink chain did make a pass by.

Sky was mostly cloud free; much better than I expect through the morning.

There were local lights on the nearby buildings, so we never got really dark.

By 8:30 pm everyone had left, except our hostess Jaclyn. For sticking around to close up the night … she was treated to a view of Jupiter and its moons as they came into view.

From Matt Paige: I was the other one there! Really fun group and a nice night despite the forecast. I had a 4" refractor out on a manual mount. Saturn, Double Cluster, and M31 were my targets - with the bonus of Jupiter at the end.

Whipple Free Library (New Boston) Sky Watch 9/28 (Mike Atkinson)

A quick update. Steve's presentation had 6 or 7 Public attendees and the hostess from the library.

There were 4 telescopes functioning, as I recall. (One gentleman was there working on getting his Celestron Go-To setup .. but dark came one too quickly)

Three of us set up our telescopes by the library, where we had a difficult battle with dew. The library is in a low lying section of town, with the river adjacent. The lights around the building were turned off, which was nice. There were trees that obscured the South East and South view from our location, delaying viewing of Saturn and obscuring the moon. And there were trees to the North, preventing viewing of Mizar / Alcor.

So, we had to look overhead. We focused on Epsilon Lyrae, Ring Nebular, Albireo, a globular cluster. Saturn eventually came out from behind the trees.

One gentleman set up his scope near the Post Office, up the hill a bit from the library. This allowed a better view of the Southern Sky. I'm sure he looked at the Moon and Saturn, but I don't know what else, Eventually Jupiter (and a couple of moons) came into view. This location, however, did have external lights on ... so, with the full moon, it was quite bright.

Sadly, there was a lot of moisture. Not the best night of viewing.

From Gardner Gerry: I was at the Whipple Free Library. I was the one set up in the Post Office parking lot. Objects shown with the C9.25 were Saturn, Albireo, M31, M13, NGC 457, the Double Cluster and Jupiter.

Editor's Note: NGC457 is one of the top objects that I love to show at sky watches. Over the years, I have had people describe it as a bird, fighter jet, of course, a "Lobsta"

Followup: We received this note from the sponsor:

Hi Steve!
Thank you so much for a truly mind-blowing event last night! It was nothing short of awe-inspiring. The husband of one of our library trustees attended, and she said he hasn't stopped talking about it since he got home last night. And I believe it because Aaron and I have been doing the same thing! Our library director Tanya was thrilled to hear how positively the program was received and has given me the go-ahead to bring you back in the spring to do a solar eclipse program. I know you're heading north for the actual eclipse so let me know what your schedule looks like in early April and we'll get something set up.
I'm very much looking forward to hosting you again!

--
Sue Pellerin
Adult Services and Public Outreach
Whipple Free Library
New Boston, NH 03070603-487-3391

Dover PL Skywatch (Mark Fernald)

A great time was had by all at the Dover library skywatch. Myself, Andy Jaffe, Dave Roy, and John (I did not get his last name - John, please reply to this) had scopes there. I set up shortly after 6:30 and there was a family waiting for us. Lots of young children got to look through the scopes. Saturn was prominent, M13, Albireo, Alcor/Mizar, and a few other objects. Yes, the parking lot and building lights were a problem, but we made the most of it.

From John Finnegan: That was me! Definitely a strong turnout from the public last night. Plenty of "wow"s to go around! I also met a local named Peter with his own scope, who'd had trouble learning to find things with the RACI. I encouraged him to join NHAS and made sure he knew we'd be happy to help him figure it out. Hopefully we see him at a sky watch soon!

From Dave Roy: Hi All. Absolutely excellent skies last night and plenty of future astronomers in the crowd. Despite all the parking lot and building lights I was able to show some of the major constellations with a laser pointer. Also was on Albireo, Alcor and Mizar, Saturn, M13, NGC 884/869 and 457. I didn't think to get any pics for the newsletter sorry.

Eclipse presentation at Newmarket PL 9/28 (Paul Winalski)

I gave Steve Rand's excellent presentation on the upcoming North American solar eclipses (2023 Annular, 2024 total) at Newmarket Public Library. About 15 people attended. Five of them had experienced totality at the 2017 Great American Eclipse--more than I would have expected.

The library has 200 or so eclipse glasses and handed them out. The talk started at 5:30 PM and the Sun was still up, so we all went outside, I showed them the proper way to use eclipse glasses, we looked at the Sun, and then went indoors for the presentation.

Joel Harris mistakenly thought this was a sky watch and had set up his telescope. Fortunately, he lives nearby and so didn't drive a long way to a non-sky watch. His views of the Moon were much appreciated by the attendees.

Sanbornton Library presentation 10/11 (Paul Winalski)

It turns out I made the right weather call. It was overcast and drizzly. Four people showed up for the indoor presentation, which was well-received. My thanks to those who contributed slides about Ursa Major and its use in finding one's way around the sky. It greatly helped me put together that part of the presentation.

CitC eclipse event (Marc Stowbridge)

I was joined by club member Dan Reidy to the CitC event. I got there about 11, set up my Lunt, a white light 80mm, and my 20x80 white light filtered binoculars.

K, the program director, was starting to set up the activity tables when folks stared coming by. I used my clicker for about 10 minutes, got past 40 people, and gave up counting! At times there was a crowd of what seemed like 50 people, and the folks just kept coming!

We gave out many glasses and viewers, I think I passed out over 100, and K had her own pile to give out.

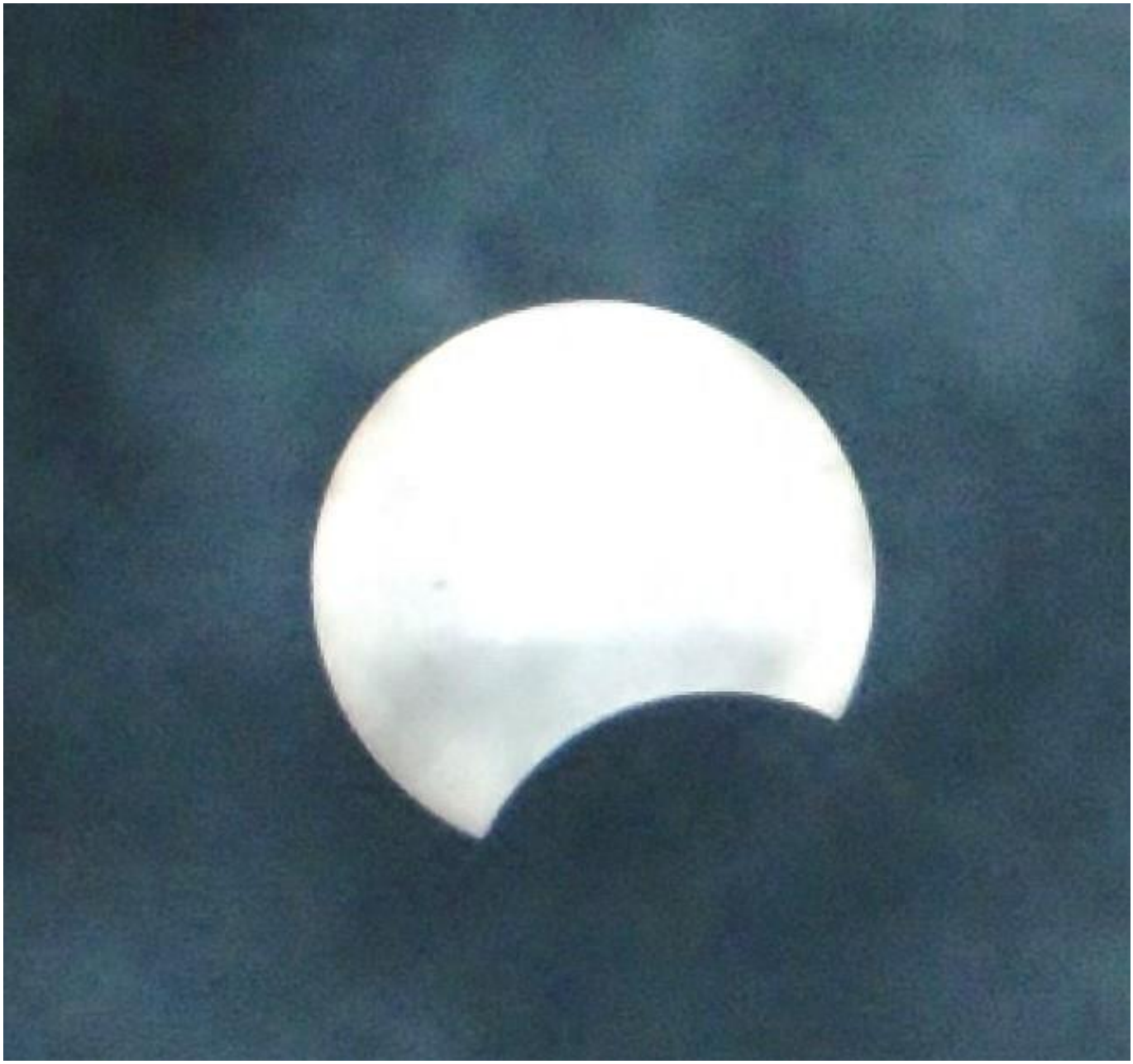
Speaking of swag, late Friday evening I looked out my side door to see what the sky was doing. I found a UPS box from the kind folks at JPL, 27 pounds of handouts, posters and three stacks of glasses! Talk about “Just in time….”

Kids love NASA stickers and packs of “trading cards” about planets and NEOs.

Dan had three or four Sun Spotters set up and had a steady flow of people. He also helped people use the binoculars on the parallelogram mount, and also assisted people with my telescopes when I was talking to others.

This picture is from my Dwarf 2 telescope. I also shot some videos and sequenced shots. The focus was hard to adjust on my phone under bright sun, and auto focus seemed confused by the thin clouds.

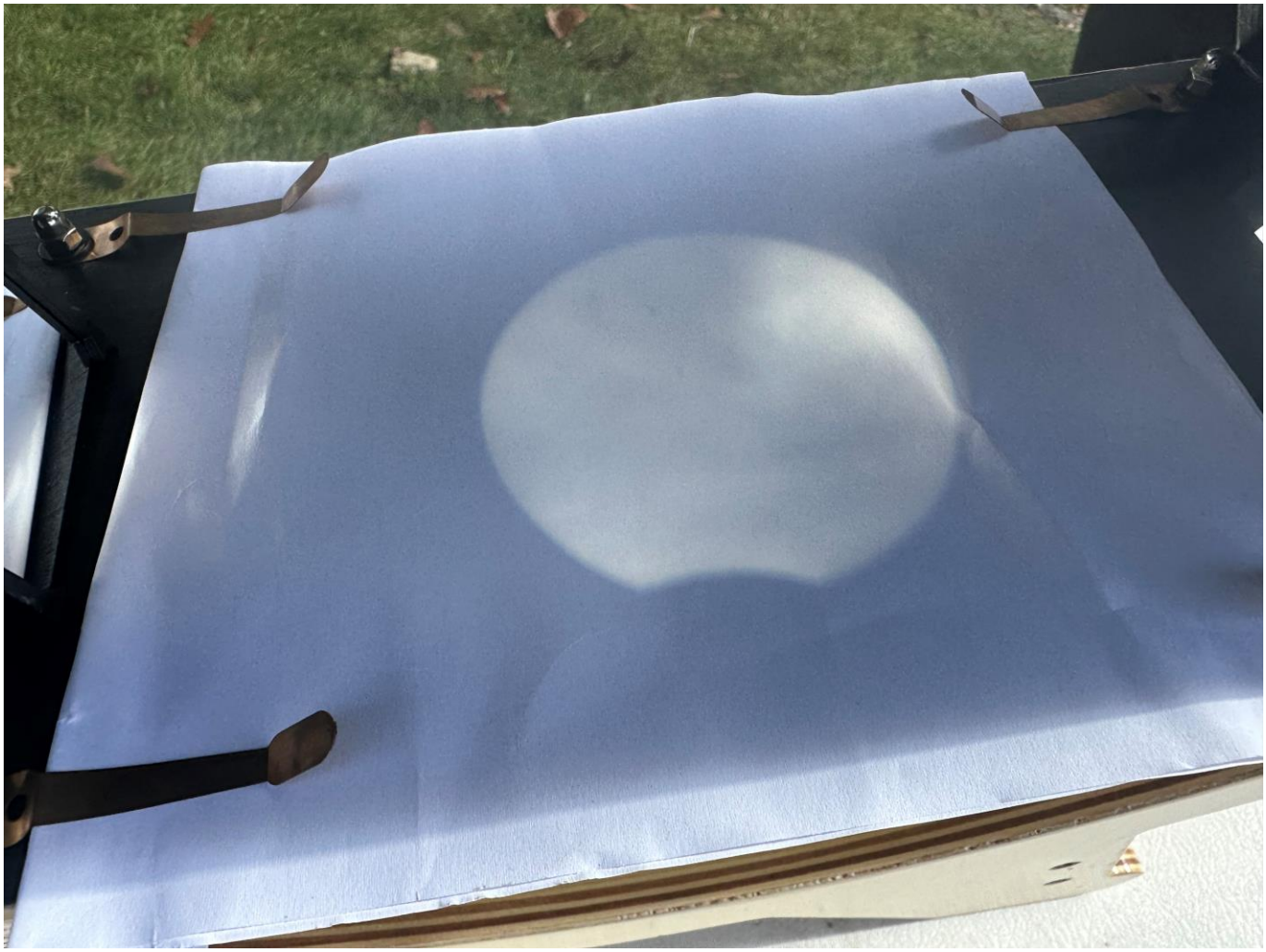
This was a great way to finish the official season at the Castle, though I can see a few more trips as the foliage turns.

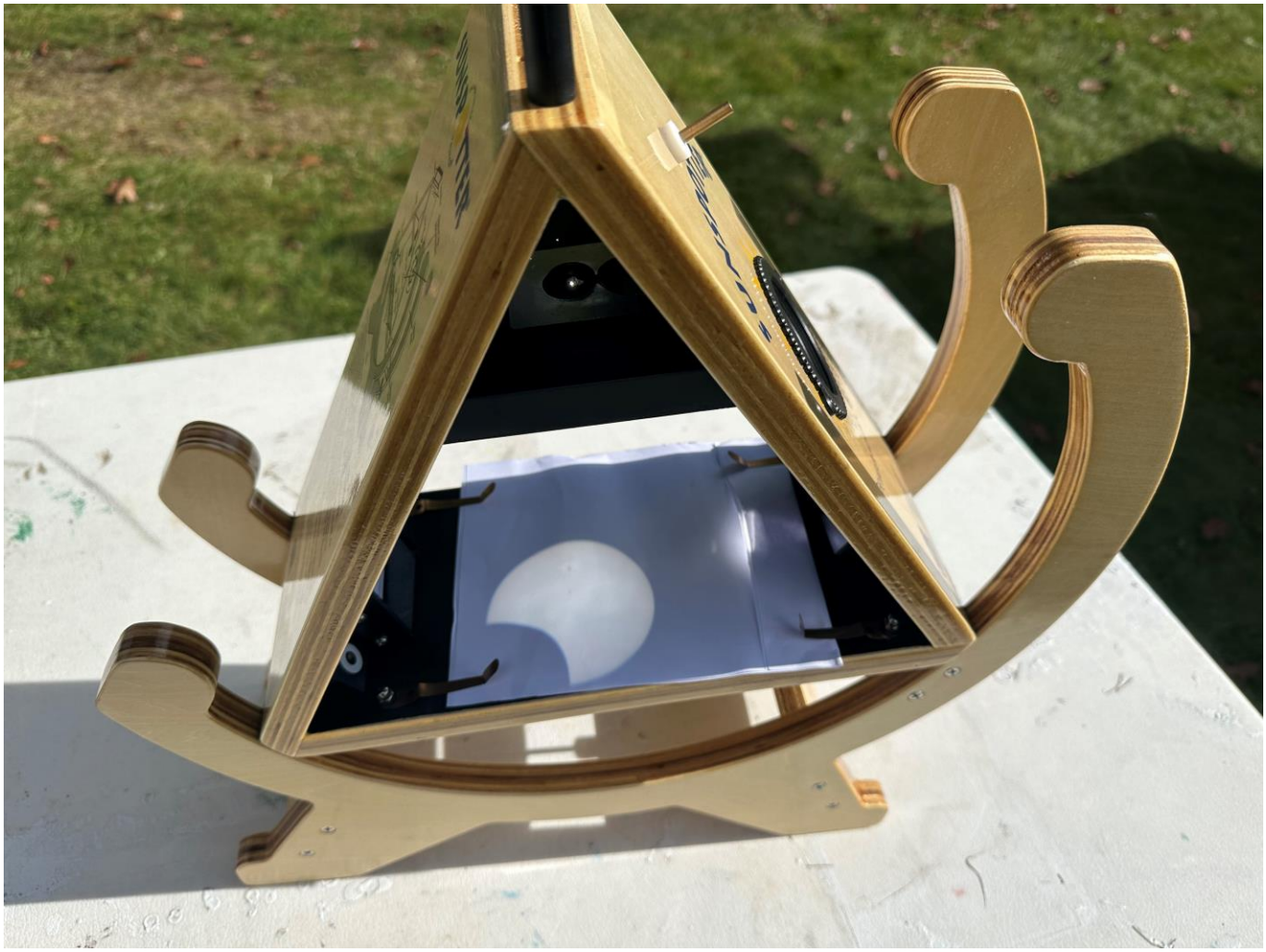


From Dan Reidy: It was a blast working with an excited crowd alongside Marc. Conditions were good to start, then clouded up a fair deal, leaving the occasional window in the clouds to drift by.

The crowd was enthusiastic and kept coming, even after the eclipse had concluded just to see the Sun in Marc's binoculars, twin mounted scopes and the results of the Dwarf 2 scope on his phone!

Below are some photos from the Sunspotter scopes of the eclipse's progression. People were just as fascinated with watching the image drift across the paper to see, in real time, the rotation of the Earth, as they were seeing the sunspots and the Moon's transit.





In-Reach Report (Phil Babcock)

Little River Park - Lee Evening Observing (Ed Norton)

The skies were relatively clear at the Sunday Lee evening observing. A little haze here and there. But overall, quite nice.

Hopefully I have all these details right. Correct me if I'm wrong. Joe had his 4" skywatcher refractor on an alt-az goto mount. Joel had his wide field camera setup piggyback on his SCT. Both were showing the night sky to some guests/family friends of Joe's. Both were setup on the tennis courts. They were all set up by the time I got there.

I decided not to drag my C6 and EQ mount to the tennis courts since I knew I would be most likely closing up the joint, so I set up next to my car and starting capturing my first try at M31. I then joined the gang at the tennis courts. I brought my recently arrived Seestar to share a little electrically assisted astronomy.

I don't know what everyone saw but everyone seemed to have a good time but didn't stay too terribly late, except me who stayed until the clouds came home.

Thanks, Phil, for arranging this.

Constellation of the Month (Phil Babcock)

https://drive.google.com/file/d/1O2cP5lBxLBxX_0ozb0Q8jHulwGU1F7_7/view?usp=share_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)

M42, More than just Stars and Gas JWST's Near-Infrared Camera has turned its attention toward one of our favorite winter time targets …M42. It's discovered more than 500 rogue planets free floating in the Orion Nebula. Strangely about 40 of these rogues in the Trapezium Cluster exist as binary pairs, which brings up the question how did they form? And why so many? Is it possible that these rogue pairs condensed from a cloud that formed no star? Or could they have formed from a stellar accretion disk and then expelled by gravitational forces? …a mystery to be sure!

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_cGyLEdYP4QSRJlZGl8RPU3?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. 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