2023 January Observations from Big Woodchuck Observatory

-------- Original Message --------

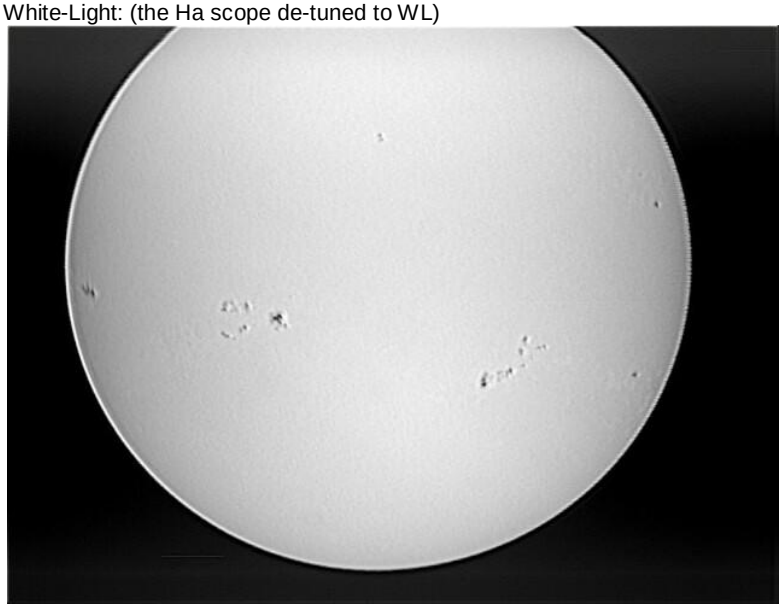
Solar observations from today - 01-09-2023

hi all,

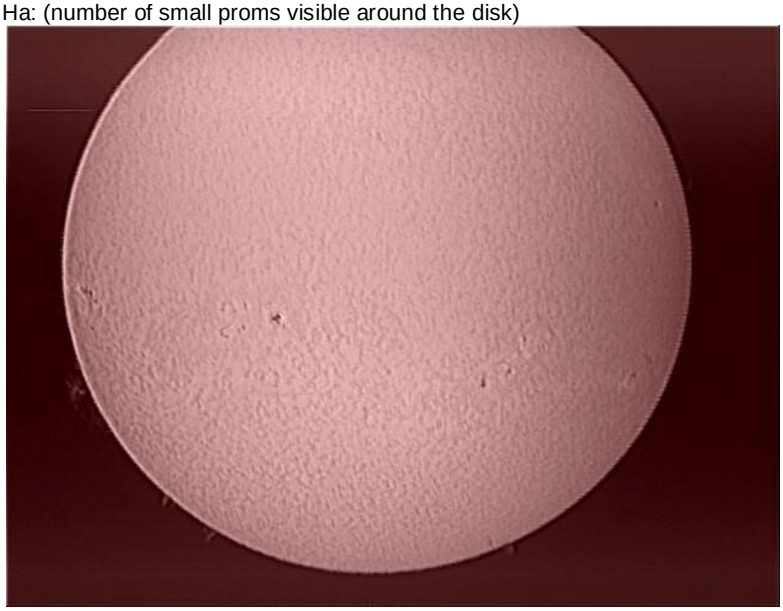
The Sun has been quite active this past month, lots of good sunspot activity in White-Light, along with prominence's and flares in Ha. Unfortunately, I've missed all that due to our W.Pa. weather, but have been following along on Spaceweather.com lol.

But today, we had a nice afternoon clearing, so I got outback for a quick solar observing session. Had to be quick, as I got a late start and the Sun soon 'sat' behind my observatory wall.
Was able to capture avi's using both PST's (Ha and Cak) and my analog cameras.

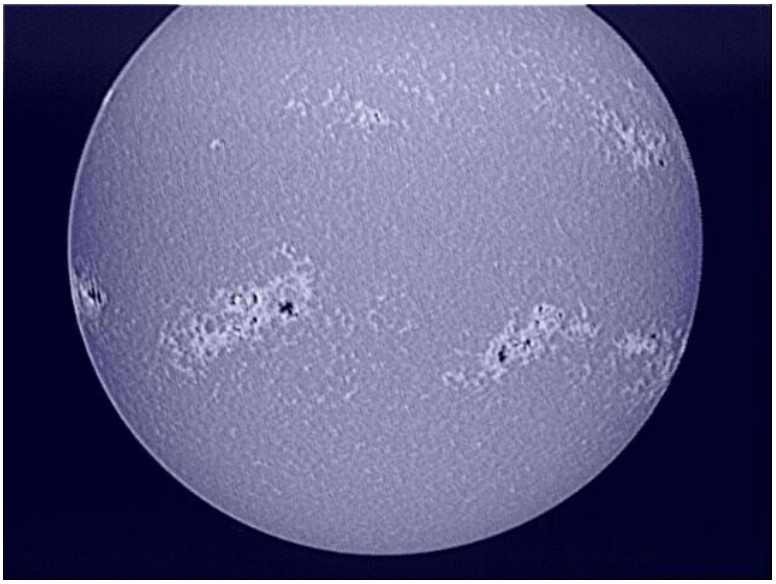
White-Light: (the Ha scope de-tuned to WL)



Ha: (number of small proms visible around the disk)



Cak:



(each image stacked/processed using Registax6 from a 20 second avi file, of between 350 - 450 subframes).

Larry

-------- Original Message --------

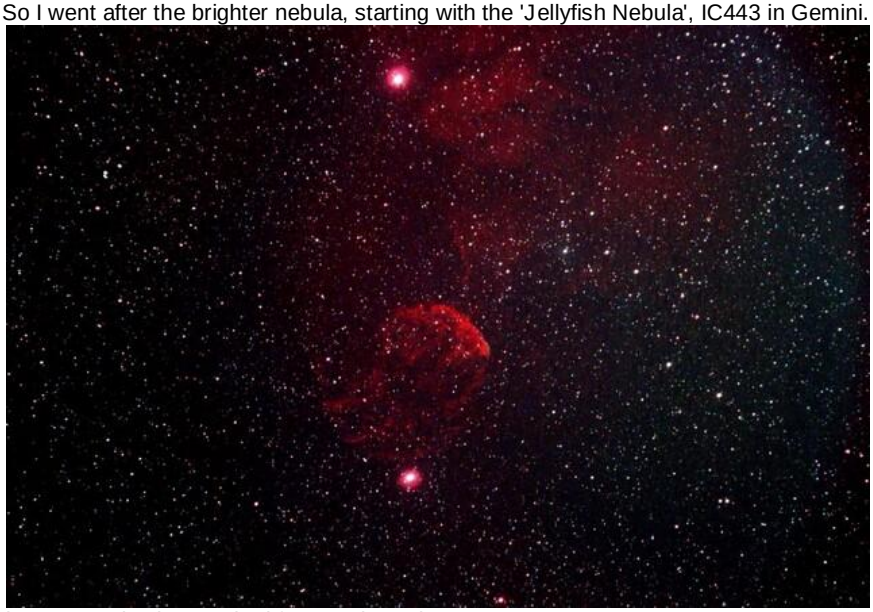
A frosty, moonlit January evening (01/11/2023)

hi all,
After nearly a month long drought of usable clear evening skies here in the PGH area, (excluding the few clear nights that I was occupied by family engagements or where it was too dang cold to go out), I was able to finally get outback for several hours on Monday evening.

With a 91% gibbous moon rising in the east, it was a night of narrowband EAA observing of winter nebulae. While I was tucked inside the observatory with the propane heater, outdoors it was a frosty 30 degrees. The sky was generally bright, but my telescope was shaded from any direct light from the Moon or neighbors by the observatory fence enclosure. I spent the early part of the evening dodging a few uninvited clouds, taking advantage of the gaps to image thru. (one of the nice things about having an AllSky camera is that you can see the clouds coming)

My plans for the night was to continue using my main camera, (ZWO ASI294MC & filter wheel), with the little Skywatcher EV50mm f4 refractor piggybacked on my 8" SCT/Atlas Gem mount to observe a number of large wide-field objects. I started off in Auriga going after several SH2 'Sharpless' nebula, but with the strong moonlight, the nebula were a little too faint, even with using the L-eNhance narrowband filter.

So I went after the brighter nebula, starting with the 'Jellyfish Nebula', IC443 in Gemini.



(180 second subs, stacked for 21 minutes).

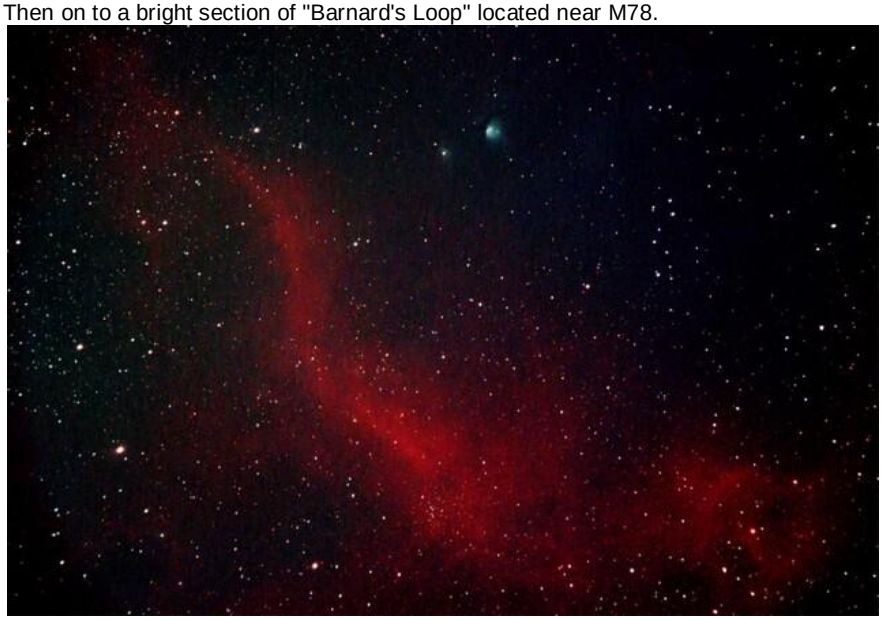
I then dropped down to Orion, for the 'Great Orion Nebula', M42. (along with M43, NGC1973, NGC1975, NGC1977, NGC1980 & NGC1981)

(15 second subs, stacked for 30 minutes).

And of course, the Horse! (B33 the 'Horsehead Nebula' and the 'Flame Nebula' NGC2044)

(180 second subs, stacked for 30 minutes).

Then on to a bright section of "Barnard's Loop" located near M78.



As I was finishing up the 'Loop', I noticed that on both my old Samsung analog camera that I have setup outdoors to monitor the telescope when it slews, and my AllSky camera, that the Moon had cleared the trees to my east, and was now above the eastern side of the observatory.
Bright moonlight was now flooding the observatory fence enclosure and the telescope was casting shadows! LOL!

So I called it a night and shutdown and covered up the telescope.
A good, frosty, moonlit night of deep-sky EAA observing! □
Larry

-------- Original Message --------

Re: Observer's report for 1/15/16.2023

hi all,

I was also out EAA observing Sunday evening in my backyard observatory.
Spent most of the night making wide-field nebula observations, still using my new EVO50mm refractor with my main ZWO ASI294MC camera and filter wheel attached. (I'll post my comet observations in a new topic).
After a beautifully clear afternoon, the night started off a little hazy. Here's a phone-shot of my AllSky view:

But, it soon cleared off for most of the night. The majority of the evenings observing time was over in Orion and Monoceros.
I started off trying to view the 'Witch-Head' reflection nebula in Eridanus, near the bright star Rigel, but with my bright suburban skyglow conditions, the L-Pro broadband filter wasn't up to the job, I ended up abandoning that observation. Will have to save the Witch for a dark-sky trip in the fall. I then switched over to the narrowband L-eNhance filter and headed up to Orion's head for a very large, faint Sharpless emission nebula, SH2-264. Here's the EAA observation with the 50mm, 3 minute subs livestacked for a half-hour:

I then headed eastwards into Monoceros for NGC2244 - the "Rosette Nebula":

Just a single 3 minute sub was impressive! I let the stack run for 30 minutes. What a great wide-field object!

Next up were observations of the large nebulous complex around NGC2264, including the "Cone Nebula", "Xmas Tree", and "Fox Fur". (the 'Cone' is the tiny little dark nebula just to the left of the grouping of bright stars in the center of the image).

Lots of good stuff going in in this widefield view!

I followed that up by observing the large "Seagull Nebula" - IC2177, which consists of multiple SH2 designations:

Both of these are 3 minute subs, livestacked for 30 minutes.
I then attempted to observe another large SH2 nebula centered on starcluster NGC2354 in southern Canis Major, but it was eclipsed by my observation wall. Will also have to save that one for a camping trip. □

At that point, I was ready for comet hunting, bu we'll cover that later.

Oh, and I did make an AllSky video from the evening: https://youtu.be/qBeMgSyRncY
From 5:15pm till 8am. Watch for Airplanes, hazy clouds, neighbors lights LOL, the telescope slewing, my red light from switching cameras, and Moonrise over the observatory wall.

Larry

Re: Observer's report for 1/15/16.2023

hi Eric
The length of my subs depends on several factors: type of object (15 second for clusters, 30 sec or longer for nebula & galaxies), how bright are the sky conditions, filter used, how well you have your mount aligned, if yer guiding, and whether the observation is more EAA in trying to pull out a specific feature within the object or if trying for a pretty picture, (or sometimes both at the same time, lol).
The narrowband filters, such as the L-eNhance, generally do require longer exposures than say the broadband L-Pro filter.
Generally, for using the L-eNhance on nebula's I use 180 second subs and livestack those for 15, 30, or longer minutes.

So about your image,, (nice galaxy by the way), I took the liberty to 'enhance' your photo by blowing up the midtone level (using Microsoft Office Picture Manager) to better see whats going on. (see below).
First off, looks like you got nailed by a trio of satellites. If you using Sharpcap Pro, you can mitigate those by using both sigma clipping and the satellite trail removal function. (also, there's a trick where if you are saving individual raw subframes, you can go back afterwards, find the offending raw sub, delete it, then use the 'Monitor Camera' function to re-livestack all the subs).
Also, the 'starry' chip amp glow in the upper right corner, a matched darkframe to your exposure time should take care of that. The general circular haze in the middle of the frame, that's where a properly generated flat comes in. (there's a bit of 'magic/art' involved with getting your flats right, one that I'm not too much experienced with myself, lol)

Anyway, if you need more technical help with using Sharpcap with any of this, send me a personal email, and I'll see if I can lead you further astray.

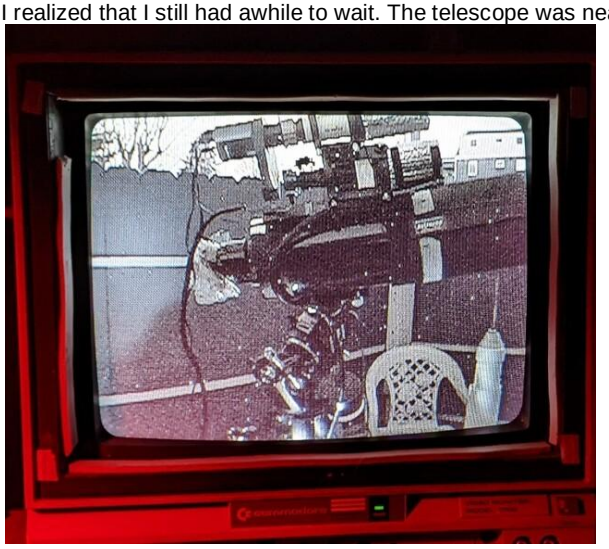
Larry

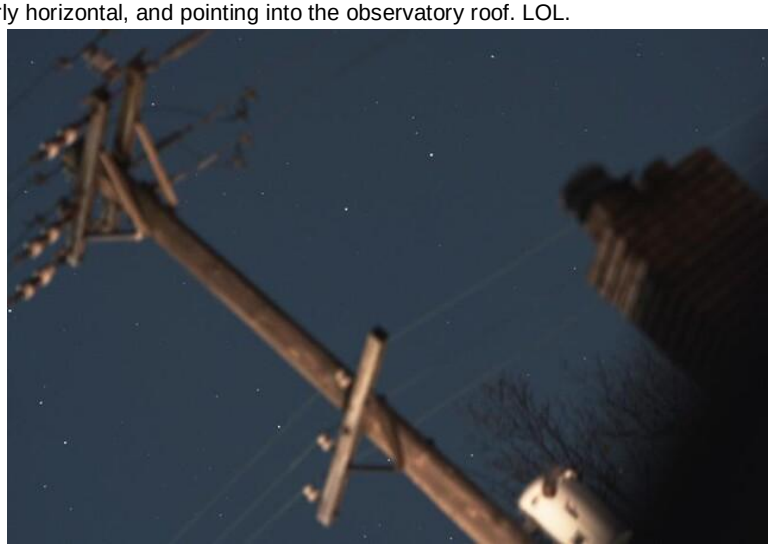
-------- Original Message --------

Comet 2022-E3 ZTF, morning of 01/16/2023

hi all,

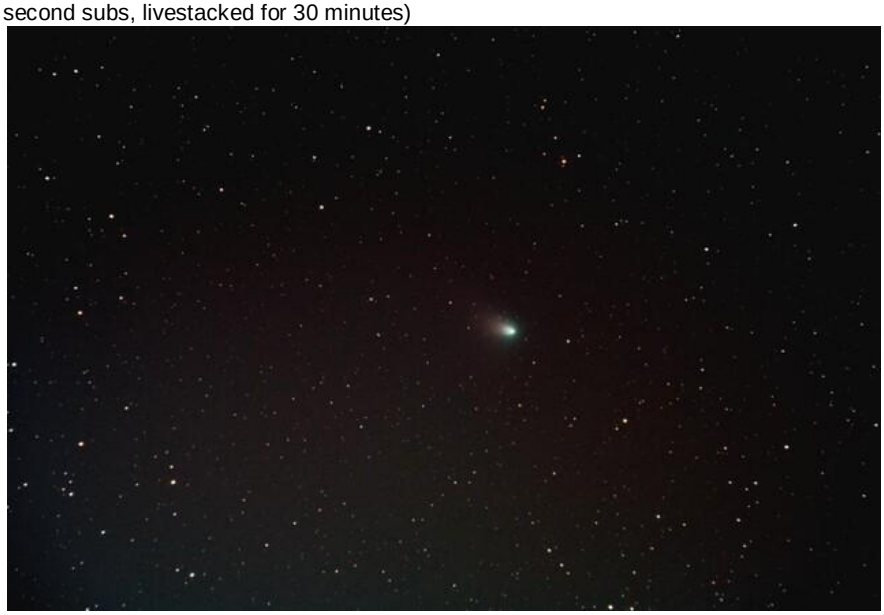
So after my nebula observing earlier on Sunday night, I chilled-out in the observatory, letting Comet 2022 E3 (ZTF) rise in the NE.
The night was clear and frosty, temps dipping into the mid twenties, sky conditions were good as it gets from my backyard for comet hunting.
Knowing that I would have issues with trees and building, I waited till well after midnight before slewing the telescope to the comets position, now above the horizon. While watching the scope move into position on the monitor and then the blank image that appeared from the camera, I realized that I still had awhile to wait. The telescope was nearly horizontal, and pointing into the observatory roof. LOL.





As I waited with the telescope mount tracking, the Earth's rotation soon began to bring the comets position into view, rising over the observatory and nearby neighbors roof. Finally, about 1am, the comet cleared the obstructions, but I held off for another 20 minutes to let the little fuzz-ball get a bit higher before trying to EAA observe.

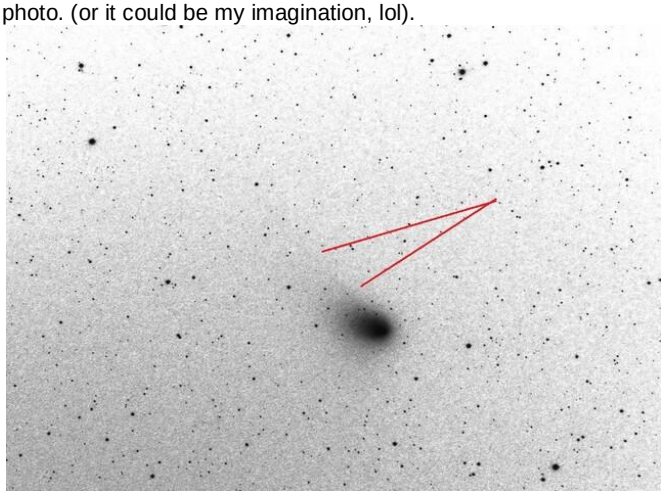
Here's my best wide-field observation of the night, using the EVO50mm and my ZWO ASI294MC camera and L-Pro broadband filter. (60 second subs, livestacked for 30 minutes)



I then decided to switch my main camera & filter wheel back to the 8" SCT optical tube, so after a hour or so of freezing fingers, I finally had the camera reattached, focused, and mount realigned from my accidentally bumping it.
Here's the best image using the 8" SCT: (60 second sub livestacked for 5 minutes).

By now, the Moon was up above the observatory walls, flooding the telescope with bright light.
I had hoped to observe the Ion tail that was showing up so prominently in photos going around the internet, but I guess my bright sky and low elevation, including shooting over the observatory roof, and now the Moon, wouldn't allow it.

Today though, I did drastically stretch one of the images from last night, and there is a 'hint' of the pencil-thin ion tail in this enlarged negative photo. (or it could be my imagination, lol).



Anyway, with the incoming weather, this looks to be my last attempt for the next week. Hopefully, around New Moon, with the comet much higher in the sky, (and much earlier in the evening), I'll get another chance to observe it.
Larry

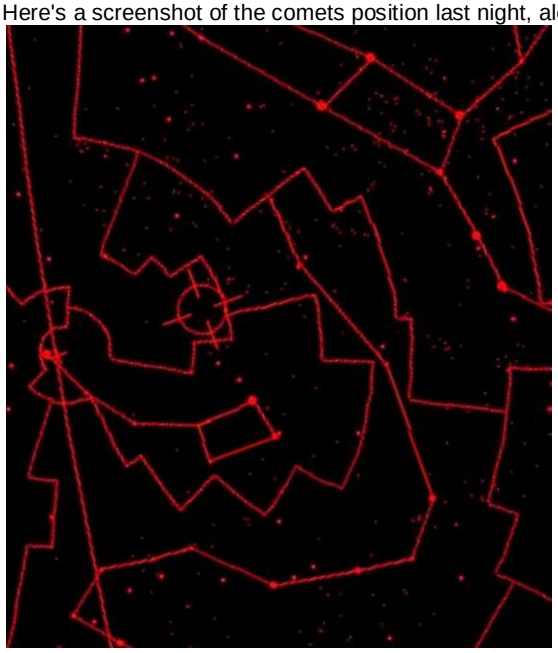
-------- Original Message --------

Comet 2022-E3 ZTF, evening of 01/28/2023

hi all,

Made another attempt at Comet ZTF last night.
Had a short, relatively cloud free observing window from around 9 till 11:30pm. The author of Sharpcap had just released a new beta version that does comet align/stack, so I wanted to try that out on the fast moving comet. (for those interested, here's a link to the Sharpcap forum:) https://forums.sharpcap.co.uk/viewtopic.php?t=6230)

Here's a screenshot of the comets position last night, along with a 8 second frame from my AllSky cam:



(the comet is barely visible in the middle of the red circle)
My usual suburban sky brightness, along with a 55% waxing gibbous Moon up in the sky didn't help. I couldn't see the comet naked-eye, and didn't have my binocs down with me in the observatory. (all three pairs were up in the house, lol)

Here's the EAA observation using both my EV50mm refractor and ZWO ASI290MC camera (15 sec exposure, livestacked for 20 minutes), and from the C8 SCT optical tube @ f6.3 with the ASI294MC camera & L-Pro broadband filter (30 sec exposure, livestacked for 20 minutes).

The comet display a bright fan-shaped dust tail extended out from the brilliant blue-green coma, along with a narrow ion tail.
Didn't really see any of the anti-tail, though I've read reports that has faded due to our shifting viewing perspective of the comet's orbital path.
(and my sky conditions & Moon didn't help).

I may try to get out again later in the week. We're suppose to get clear weather, but the Moon will be closer to Full.
Larry