

## 2020 August Observations from Big Woodchuck Observatory

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

**Subject:**[ORAS] Astronomy imaging filter test

**Date:**Thu, 06 Aug 2020

hi all,

Recently, I added a ZWO filter drawer, (with additional filter holders), and a 2" ZWO IR/UV cut filter, along with a 2" Optolong L-Pro light-pollution filter to go with my Optolong 2" L-eNhanse narrowband filter. This now gives me a complete interchangeable 2" filter set that covers planetary, (IR/UV), starclusters & galaxies (L-Pro), and emission nebula (L-eNhanse) imaging.

Last night, I had a short window of dark-sky before moonrise, so I decided to test the filters.

First I wanted to see how close the three filters were to being par-focal to each other. My hope was that they would be close enough to not require re-focusing the telescope between swapping out filters. I used a Bahtinov focusing mask with the bright star Arcturus for the test.

Then I wanted to take a test exposure of a deep-sky object that would hit each filters strength.

So I chose M20 'the Triffid Nebula as it's an object with a nice star field that in addition contains emission, reflection, and dark nebula. I kept the exposures short, 30 second subs for 15 minute total exposure.

During the imaging, I kept nearly all the various camera settings the same for each filter, only making a few slight tweaks when using the L-eNhanse filter to help bring out detail in M20, as the L-eNhanse really needed a longer exposure. I've created a PDF of the test results. Here's a link to the doc: <http://stellar-journeys.org/Filter%20Test.pdf>

Overall, I'm very happy with the test results. The IR filter gives an overall pleasant, natural looking image of M20, and should be excellent on the planets. The L-Pro light pollution filter also worked very well, and I think that if I had adjusted the the camera settings specifically for the filter, I would have produced an image close to that of the IR filter. I'm looking forward to seeing how the L-Pro will work on galaxies from my backyard. We already know that the L-eNhanse works wonders on emission nebula from a light polluted or 'moon up in the sky' scenario. (see my webpage - <http://www.stellar-journeys.org/gallerytour.htm> ). As with the L-Pro, I would have adjusted the camera settings to take better advantage of the L-eNhanse capabilities, if it wasn't for wanting to keep the test conditions consistent, as close as possible.

Depending on the weather, I plan on repeating the test on a bright galaxy, (either M51 or M101), in the next week when we have a longer dark sky window without the Moon.

Larry

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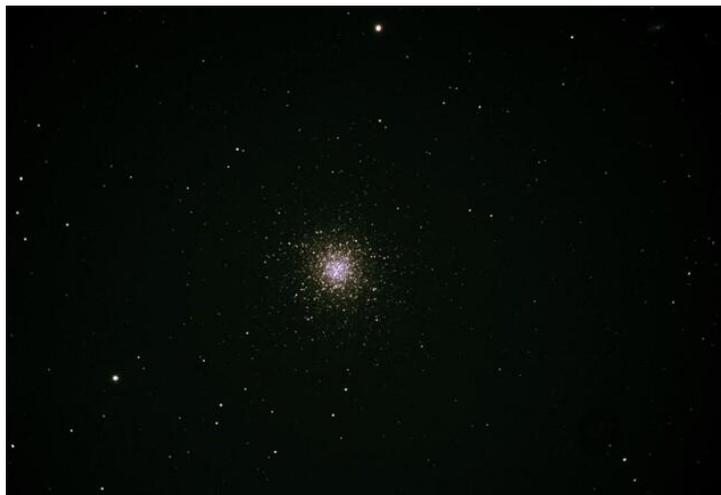
**Subject:**[ORAS] Monday night pre-Perseid observations

**Date:**Wed, 12 Aug 2020

hi all,

Even though Monday was a bit of a scorcher, I decided to get out that evening for a little deep-sky observing before Moonrise, and hopefully catch a few early Perseids.

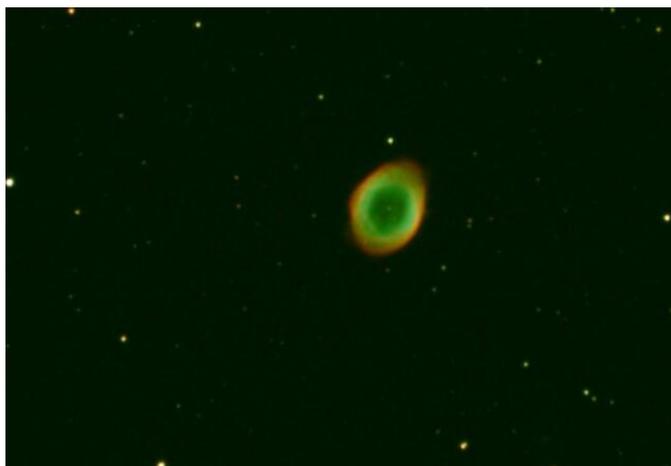
Opened-up the observatory and uncovered the telescopes early to let everything cool off. While that helped some, it never fell below 80 degrees inside the observatory. Good thing I keep a fan inside! LOL. I was hoping to image a galaxy or two with the new Optolong L-Pro filter, but as darkness fell, wispy clouds and haze began to roll in from the NW. Transparency took a nose-dive, so I abandoned galaxy imaging. (image capture from my allsky cam:)



The clearest portion of the sky was straight overhead, so I instead turned to observing the globular clusters M13 and M92 in Hercules. Here's an image of M13 made using the ZWO IR/UV filter:

(8" Celestron SCT f6.3 on Atlas mount & ASI294MC, ROI=4144x2822, stack of 20 subs at 30 secss for a 10 min exposure)

I then switched over to the L-Pro filter, and imaged the Ring Nebula - M57, next door in Lyra:



(8" Celestron SCT f6.3 on Atlas mount & ASI294MC, ROI=1024x768, stack of 60 subs at 15 seconds for a 15 minutes)

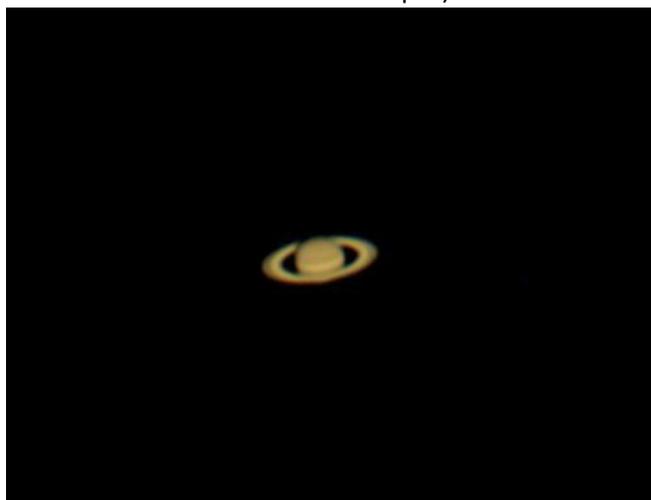
With the sky "thickening", I gave up on deep-sky and went to the planets to capture an AVI stack of both Jupiter and Saturn using the IR filter.

Here's an overexposed image of Jupiter to capture it's moon:



(from the left - *Callisto* top, *Io* bottom, to the right - *Europa*, then *Ganymede*).

Europa's shadow was visible on the surface of Jupiter. (the black 'dot' above the Great Red Spot)



(8" Celestron SCT f6.3 on Atlas mount & ASI294MC, ROI=640x480 & additional post cropping, exposure = 0.044 seconds, 15 second avi clip, stacked using Registax)

Then on to Saturn:

Finally, while my allsky cam mostly captured clouds, I did get a few meteors. Here's the best of the lot, from 3:43 am:



Unfortunately, it appears to be a sporadic and not a Perseid.

So, while it wasn't a great evening, any night under the stars, (even hazy stars), is a good night! Larry

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

**Subject:**[ORAS] Perseid pic

**Date:**Wed, 12 Aug 2020

hi all,

So I took yesterday evening off from observing and let my allsky cam 'observe' the Perseid shower peak last night. Glad I went that route as once again the sky wasn't that great, with clouds moving in shortly after 1am thru nearly 3am. Once it cleared there was a bright Moon up that washed-out the meteors. Still, the dome-camera, (ZWO ASI224MC & fisheye lens), managed to pickup a total of seven perseids over a 6.5 hour run. There was a particularly bright 'fireball' at 12:44am! It left a long trail running thru Cepheus just above Polaris, and from the double bright spots in the meteor train, it looks like it broke-up before completely burning up. Here's an image of it:



That should have been visible from a wide area, so hopefully someone got to see it naked-eye. The camera caught several other bright streaks before it clouded-up and after it cleared. But none good as the bolide!

Here's the video from the allsky cam. Lots of clouds & airplanes, with a few quick meteors scattered in:

<https://youtu.be/gQfCU7Gb58g>

Larry