Presidents column

On March 2, we will be joined by Terry Hancock, Michigan-based co-author of The Armchair Astronomer – Vol. 1 (Nebulae). It’s a beautiful e-publication that displays really well in iBooks. All the original images in the book were captured and processed by Terry at his Downunder Observatory in Fremont. Terry’s images are published regularly in Astronomy, Sky and Telescope and Sky at Night magazines. We’re fortunate that he found time in his busy schedule to visit with us and talk about the book and his imaging techniques. Learn more about The Armchair Astronomer at http://cosmicpursuits.com/e-books/armchair-astronomer-volume-1-nebulae/

Michael Rogers
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Please email your program suggestions to me at mwrogers7@gmail.com
Optolong LRGB Filter Testing and Comparison
with Baader LRGB Filters

By Terry Hancock

I was recently contacted by Optolong, a filter manufacture in China who asked me to test their filters. They sent me a set of 36mm unmounted LRGB and a set of 36mm Narrowband Filters, H-Alpha 7nm, OIII and SII 12nm. I was impressed when they arrived, nice packaging and presentation in a similar plastic case to the Baader. I limited my comparison for LRGB only which was carried out on the 15th and 16th August with similar average seeing conditions. The narrow band filters are not the final version that will be used for comparison. At the time they were only manufacturing them in 12nm pass band. The Baader equivalent is 7nm, which is more the industry standard. Subsequently they have started producing the narrow band filters in 7nm pass bands. They will have to wait for another day... Optolong are not new to manufacturing Astro Filters. Established in 1999 they are a subsidiary of Yulong Optics Kunming City China. Their products include Astronomical Filters, Band pass Filters, Fluorescence Filters, Edge filters, Long pass & Short pass Filters, Beam splitters, Anti-reflective Coating and Optical Mirrors. They are Quality assurance certified ISO9001.

Optolong literature states: **LRGB Filters Optolong**

- German Shott glass 2mm thick enabling parfocal performance
- Anti-reflection coating to eliminate halos
- Steep band pass filters to eliminate UV and IR interference

For the test the 36mm un mounted filters were fitted to a QHYCFW2-M-UltraSlim Filter Wheel. Camera used was a QHY23 Monochrome CCD, Telescope used was a Astro Tech AT130-EDT APO Refractor @ F5.6. I first checked the Minimum and Maximum ADU to help determine if there is any difference in color transmission. Here is the result: Based on the above I find the color transmission to be very similar. Next I checked for any halos using the bright star 52 Cygnus at the center of the image as reference and I found that the Baader Green and Blue Filters exhibited a much stronger halo than the Optolong. Both the Baader and Optolong Luminance and Red filters showed only very faint halos. I found no difference at all between the Baader and Optolong for either sharpness or contrast. Neither Baader nor Optolong distribute reflections for this test target. I found both the Baader and Optolong LRGB Filters are parfocal when used with this equipment. One thing I find strange is that with the Baader Filters the bright star at about 8 o'clock to 52 Cygnus showed a spike in all filters except the blue filter. No such spike at all with any of the Optolong Filters. **Retail Price in US Price Comparison**

36mm un mounted set of LRGB

Baader $477.00 per set
Optolong $299.00 per set

**Conclusion**

After taking identical images with the Optolong and Baader filters I was amazed at how similar the images were. The preceding images speak for themselves in large part. A closer observation of the images taken with Optolong filters, I found no noticeable reflections especially around the bright stars. Images showed excellent contrast with clear differentiation of colors.

The Optolong LRGB Filters offer similar to somewhat superior performance and quality to the Baader Filters at roughly 63% of the cost. This makes the Optolong filters a great value for the money. Optolong Filters can be purchased from the US Distributor [www.astrofactors.com](http://www.astrofactors.com)

See the whole article with images at cloudyviews reviews. Courtesy of Cloudynights Ad-libs astromonics

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Check out the new website for the club! Go to the Abrams Planetarium website click on public programs then the Capital Area Astronomy Association text line and see the new website. Thanks to John French for setting that up.

If you have Astronomy items for sale, images, test reports or observations you would like to post to the newsletter, please send them to me at kmelvin33@gmail.com
Hello, I spoke at the February meeting of my adventures in telescope making and travels to the Vivakananda Monastery for telescope making with John Dobson and the Astrofest star party in Illinois a large star party to stimulate your ideas. I also showed some high altitude images of high-powered flying model rocketry that I enjoyed. Then I reviewed my construction of “AQUA-ARIES 1A” the 24” computer controlled fork mounted equatorial Newtonian reflector telescope that has taken me 26 years to build. (Car crash, heart attack, cycle crash, heart attack helicopter ride). I showed images and spoke of the mirror grinding and polishing machine I made, the mirror testing setup, building the mount, primary mirror cell, upper secondary cage assembly, truss assembly, and the drive systems with over 33 million tics per revolution in R.A. and over 11 million tics per revolution in declination. I called the telescope AQUA-ARIES for my wife Sharon an Aquarian and my late brother Brad (Ph.D.) MSU an Aries, “THE WATER RAM” for plowing through the Michigan moisture. I showed a couple of short videos on the CNC plasma cutting machine I built cutting out a metal motor mount plate and the last figuring session of the 24 inch mirror on the polishing machine. I showed a sped up video of the roll out and setup process of the 24” scope. I spoke of the brains of the telescopes control system the “Sitech”tm. Servo II controller truly is an amazing piece of hardware. The system can be programmed with satellite coordinates to track satellites across the sky, Plate solving for astrometry, and much more than I yet realize. Then I did a little spiel about “ITS ALIVE, ITS ALIVE” and blamed everyone who caused this to happen, so I thank you all.

I mentioned about the telescopes I would like to produce for schools to build their own observatories, and for individuals. I spoke of how I am attempting to erect an observatory at my home for a Livingston county observatory to promote astronomy in our area, and possibly start another Astronomy organization to stimulate astronomical thought and disseminate scientific knowledge. I showed more images of the scope build and setup and images of some product I am trying to market soon, Eyepiece trays and holders to start with then hopefully more items I have in the works ready to go. I mentioned the need for financial support either through sales or donors. I am disabled with only my wife’s income, if anyone needs help with their scope or project I may be able to assist. Feel free to contact me at kmelvin33@gmail.com

Thank you for giving me the chance to show my endeavors and for listening to more of my astrobabble. Take care, Clear skies.
Kurt

UPCOMING EVENTS:

M.S.U. observatory open house, Resume on April 15
Science festival week

Fox park observatory open houses: (weather permitting)
Mar. 11-12 and Mar. 25-26, 8:00pm-11:00pm
jb.foxpark@gmail.com

Abrams Planetarium programs:
Family show: Perfect little planet
Feature show: Skywatchers of Africa

Mary Gowan’s Birthday celebration is March 12th at the Planetarium from 1-4 with a presentation at 3:00
Be sure to send Mary a Happy Birthday wish! Happy Birthday Mary! Thanks for all the help getting the Newsletter printed and mailed out!
Please call the Planetarium if you plan to attend.

Check out the cool meteorite display in the lobby of the Planetarium.

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My E-mail: kmelvin33@gmail.com

We had a nice public night at Fox Park on Saturday Feb. 20. Kevin, Tony and I opened the observatory and we had about 12-15 people come out to view the very bright 93% illuminated moon, Jupiter, The Orion Nebula and a few nice double stars and star clusters. Kevin worked his refractor and I had the 12” SCT pointing out objects. Jupiter was the highlight of the evening, with Io putting on a nice shadow transit, which we could see both in the 12in Schmidt and in Kevin’s Scope. The seeing was not perfect, but for the people seeing Jupiter up close for the first time, it took their breath away! One couple drove in from Novi and said they would be back! Please consider coming out and helping with one of the public nights at Fox Park.
--Chuck

Optical spectrum diagram (optical curves) by Optolong

Check out the cool meteorite display in the lobby of the Planetarium.

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--Chuck

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Check out the cool meteorite display in the lobby of the Planetarium.
The planetarium is open

The Observatory is open
(Weather permitting)

The Sky is open

Go look up!
AND ENJOY

HAPPY BIRTHDAY MARY

Thanks for all the help

Astronomy Technology Today magazine free subscription service
If you are a member of a club, we would appreciate it if you would spread the word on the offer. As a reminder, to take advantage of the free subscription offer, they can simply type in “club” in the discount code box on the subscribe page and then finish the subscription process. Thanks again for your patience with the lateness of this first issue. We are working on the second issue and will have it out soon! Clear Skies!

Gary Parkerson
Managing Editor
Astronomy Technology Today www.astronomytechnologytoday.com

Thanks to Kevin Keys for posting to the club.

LIGO (Laser Interferometer Gravity wave Observatory) detects gravity waves that washed across the earth in milliseconds proving that there is much more out there (and here) to the fabric of space than we know of. Did we all blink at the same time? Did your ears pop? Two massive black holes merged in near lightspeed orbits to create a gravity wave so powerful that it went across the pond of our universe, and the LIGO team detected it. I think they got the Nobel Prize wrapped up on that one.
Kurt