

# REFLECTIONS / REFRACTIONS

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University Lowbrow Astronomers Monthly Newsletter

February 2024, Vol 48, Issue 2

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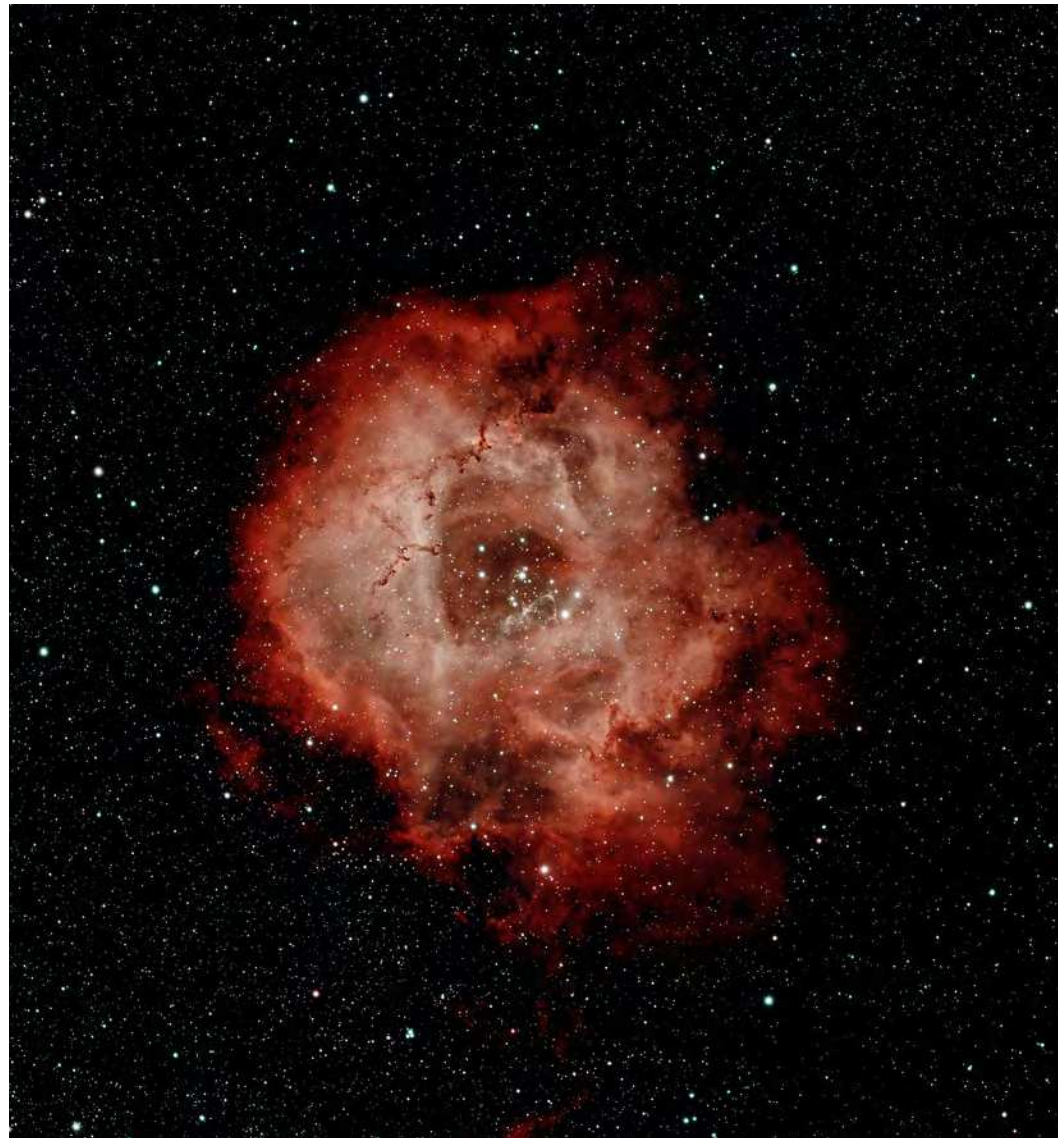
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## ROSETTE NEBULA

BY GARY NICHOLS

Camera-ASI533MC Pro, Optolong L Enhanced filter, 50x300 sec lights, 15x300 sec darks, 15x.3 sec flats, 15x.3 sec dark flats.  
Software used was PixInsight, Photoshop, BlurXterminator and NoiseXterminator. ■



# REVIEW: VISUAL VIEW STELLARVUE M002C

BY JACK SPRAGUE

In the December Lowbrow meeting, several of the officers made compelling statements regarding the open houses and our mission to bring astronomy to the public as one of the reasons we are the Lowbrows.

I needed a solid departure from my automated imaging rig to contribute to the visual events which are Peach Mountain open houses. I needed a new manual mount.

Reviewing what was on the market, I chose the Stellarvue M002C mount for three reasons: one, solid reputation as an all-machined piece of gear. I'm a Losmandy fanboy so you can see the parallels here: buy once, use forever. Second, I needed something idiot simple to use in the deep twilight set-up because my evenings for observing often start late. Twitchy bits and bobs in the dark are not an advantage. Lastly, I needed something that could utilize gear I already own: a thirty-pound plus capacity Manfrotto tripod from other pursuits and a wide-field 73mm William Optics doublet on a v-rail.



Short version: The Stellarvue M002C is a point-to mount that holds position, accommodates Losmandy and Vixen rails using a generous mount shoe (akin to the ADM heavy-duty shoe I used to replace the horrible factory shoe on my EQ6-R), and is easily adjusted for slewing and general correction for the motion of planets and the moon. It simply works.

PROS	CONS
Position is adjusted through two large and easily managed knobs (January cold-spell glove-friendly) to create enough friction with Teflon bushings that slewing and correction is instinctive and smooth.	The extension column – a separate buy one does need – is a little tall. I mentioned this is a separate buy.
The Stellarvue handle is the perfect size and its use is natural. It also has a foam grip so the bite of cold metal is banished if you forget and grab the thing during a winter session.	The handle is a separate buy though a little Lowbrow ingenuity could replace the Stellarvue model with a lovely piece of wood.
The mount head is a sturdy 6 pounds but holds 25+ pounds of OTA.	Like many astronomy items, it is not a cheap solution. Price \$500 +/- without a new tripod. It is a lifetime purchase.

STELLARVUE REVIEW continues, p. 3

Details: The Manfrotto 055 tripod I own is a fine aluminum and magnesium model (now all aluminum if one were to purchase new) which is rated for over thirty pounds of weight. With the z73 at 6.25 pounds, the M002c at 6.25 pounds, and with the extension tube, diagonal, and eyepieces, the load is nearly twenty pounds. With a 3x Explore Scientific focal extender (planetary views) and a 2" Baader zoom eyepiece, the view is stable.

I'd put an 80mm doublet on the tripod; but, a 90mm or larger doublet or certainly a triplet demands a sturdier base with better dampening properties. I'd use a wooden tripod. Performance equals cost. The mount head and column secure to the tripod with the standard 3/8"-16 photography mounting bolt. The column base can be ordered with support for more robust mounting options including a 12mm threaded bolt. For a heavier rig - say a 120mm triplet - I'd definitely look at the sturdier attachment options. The collapsed length of my tripod with the extension tube and the mount head in a "folded-down" position is only slightly longer than my EQ6-R tripod when it is fully folded down. It is certainly a trunk-portable unit. Overall, I enjoyed "first light" while simultaneously imaging in early January during the brief clear night of the deep cold. It will do the job for years as my grab-and-go for contributing a tube to the open house efforts.

It was a spend.

The kids in my neighborhood will enjoy it much more than looking at my EAA efforts on a tablet even if EAA is a real-time production image. The eyepiece experience and the moon are keys to my personal outreach success. (I also bought a glass solar filter for the objective lens to take a peek at some of the extraordinary solar activity we have been experiencing).

Alas, my January 30th brief talk with Cub Scouts will be completely clouded in. We'll have to make due as amateur scientists in our investigation of the newly discovered exoplanet: Tennis Ball. What can we tell



about this new planet merely by observing?  
(Hopefully, no Golden Retrievers will be present to steal our science lesson.)

The Stellarvue M002c is a solid piece of manual gear to support visual observing. ■

# FROM THE DESK OF THE NORTHERN CROSS OBSERVATORY

BY DOUG BOCK

We've had mostly cloudy weather this past couple of months, which is normal for Michigan in the winter. During that time some updates to the PixInsight software and plug-ins have occurred. One of those updates was a plugin tool called BlurXterminator. What I've done is reprocess some older data to see how it may improve results.

The primary result is that it eliminates blurry components of the image, such as stars that are slightly out of focus or oblong due to image tilt or coma. In other words, slightly oblong stars are brought back close to circular. This recent update to the software was amazing to see the results on a few images. I had some distortion in one corner of some data due to a slight tilt in one of my sensors. This software eliminated that issue.



In addition, nebula structure is sharpened up a bit as well.

Here is the final result on the Horsehead and Flame Nebula image I took at the Okie-Tex star party in October of 2021, using my 105mm f/7 APO refractor and the ZWO asi2600mc pro camera on the Losmandy G11 mount. ■



# **SPECIAL INTEREST GROUPS (SIGS) ON WEBSITE**

**BY DAVE SNYDER**

We are in the process of setting up SIGs (special interest groups) within the club. To start with we have the following:

## **Observatory Committee**

The Observatory Committee is responsible for: Supervising the renovation, repair and upkeep of the 24-inch telescope and observatory. Scheduling of observation time with the 24-inch telescope should an increase in demand cause conflicts to arise. Publicity and organization of public open houses and events held at Peach Mountain. Interfacing with the University on issues relating to the observatory and grounds, the McMath telescope, open houses and special events held at Peach Mountain. Training of members on the operation and care of the 24" McMath telescope. Keeping an inventory of all equipment and property belonging to the Lowbrows.

## **Communications Committee**

The Communications Committee is responsible for: Assisting the Online Coordinator with virtual meetings, via hosting, etc. Welcoming guests at star parties and providing Lowbrow information (e.g., club membership information, star party etiquette, etc.).

Organizing annual elections, especially electronic polling. Coordinating with the Webmaster on Public Relations outreach, including website and social media content, producing flyers, and contacting media outlets.

## **Amateur Astro Photography**

A special interest group where astrophotography images are shared.

## **Additional SIGs can be formed if there is interest.**

Some possible topics:

- ACNO (any clear night observers). This involves impromptu observing events for members of the club and their guests.
- Astronomy outreach. There are various possible venues: The U-M Museum of Natural History, The Ann Arbor District Library, The Leslie Science & Nature Center, The Ann Arbor Hands-On Museum.
- Amateur telescope makers.
- Astronomy software.

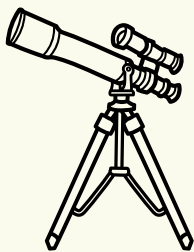
For information about joining these SIGs, log into the members only section of the new website (lowbrows.org) and go to Membership -> Members Only -> Special Interest Groups. In addition to lowbrow SIGs, there are a few non-lowbrow groups that might be of interest to club members. ■

We also have a new events list on the website!

<https://lowbrows.club/events-list>

Thanks go to  
Jeff Kopmanis and Adrian Bradley.

# UPCOMING TOPICS FOR THE OBJECTIVE LENS



BY JACK SPRAGUE

Our Lowbrow photographic roll features images from snapshots, eyepiece imaging, EAA captures, and astrophotography. All images are welcome and while we have a monthly theme, we love any submission.

**March** -- Observers. It is always fun to see Lowbrows at the scope. The March edition encourages the images of Polar Observers (aka Michiganders) preparing for the rare winter outings. Let's see those parkas! Boot packs? Get them in frame. Do we have any Lowbrow toboggan caps? The Tigers have them. Maybe we should, too!

**April** - The Trapezium! Officially known as Theta Orionis, this beautiful cluster of 4 stars deep in the Orion Nebula is traditionally a mark of passage for astrophotographers from "astro competent" to "astro accomplished." Many efforts have been thwarted over exposure, over-sampling, under-sampling, and the dreaded overprocessing. Orion is well positioned and tracking nicely across the ecliptic as I write this. Give it a shot. I've seen lovely images from DSLR photography using 1-second exposures in an unguided mode! So, for those of us with the latest "full English" pile of gear can surely make a solid go at it.

**May** - Galaxies. Get processing on those images from galaxy season and let's have a rogue's gallery of the spiral, the elliptical, the irregular, and the interacting! It would be interesting to see how deep our deep-field images can go. There will be a prize for the most distant, discernable, galaxy captured. Can we top 300Mly? ■

## UPCOMING MEETING SPEAKER SCHEDULE

**February 16:** Rosalyn Friend, EMU  
Physics graduate

Topic: *Atmospheric Gravity Waves  
and Solar Eclipses*

**March 15:** Jim Shedlowski

Topic: *Searching for the Dark  
Universe*

**April 19:** Jeff Kopmanis, Club Online  
Coordinator

Topic: *Automated*

*Astrophotography (On the Cheap)*

- **May 17:** Gary Nichols

Topic: *How Smart Are They? A  
Comparison of the New Breed of  
All in One Smart Telescopes*

**June 21:** Club members Ed  
Hernandez, Jeff Kopmanis, Ken  
Leitch, Marcus Clarke, Jack Sprague,  
Dmitri Tsahelnik, Glenn Kaatz, Brian  
Ottum

Topic: *Timed Showings of  
Astrophotography by Club  
Members*

**July 19:** Miles Mercier, EMU grad  
(also Norb Vance)

Topic: *TBA, about radio astronomy  
and primordial hydrogen*

University Lowbrow Astronomers - Meeting Minutes January 19, 2024 7:30pm

Meeting was called to order by Charlie Neilsen at 7:30 PM.

Our guest speaker, Melissa Kaelin, spoke about using space weather models and social media to chase aurora's in Michigan. There were 20 online and 23 in person to hear the presentation. The question and answer session with our speaker concluded at 9:00 PM. More information is available from Melissa's website: <https://kaelinart.com/>

Our business meeting began at 9:09 PM

Charlie discussed the next Owosso airport fly-in star party on Saturday August 24th, 2023. Look for an email with more information from Charlie, and let him know if you are interested in participating. The lowbrows with telescopes are a feature at this event. Ann Arbor Christian School has requested a private event, more details to follow.

Adrian Bradley is adding to our event page in the new website. <https://lowbrows.club/events-list>  
Returning event: Michigan Math+Science July 9th, rain date would be July 11th.

Jeff Kopmanis has added a page for lowbrows involved in other events. Also there are so many photos that we will start making sub-categories to help organize them. All Royal Astronomical Society materials have been delivered.

Our new website, available via: <https://lowbrows.club/>

VP Jim Forrester sent out the 2024 Peach Mountain open house schedule for comments, here as revised:

April 13, May 4, June 1, 8 and 29, July 6, August 3 and 31, September 7 and 28, October 26

Jim made a motion to accept the schedule, Adrian seconded, no nays.

These dates will be sent to the Ann Arbor Observer and published.

Each lowbrow member in the area should select at least one open house date to help with.

No scope is needed, but your presence is.

Also: Astronomy At The Beach (AATB) is September 20, 21

Glencairn Elementary in East Lansing event Wednesday February 7th. 5pm setup, 6pm program, over by 8pm. It will be cancelled if there is heavy weather. Interested in helping, please contact Jim Forrester.

VP Dave Snyder has set up a Special Interest Groups (SIG) page on the new website. It currently includes information about the Observatory Committee, Communication Committee, Astrophotography SIG and a list of external groups. The latter includes the Solar Sisters, Michigan Dark Skies and Saturday Morning Physics. Dave is open to suggestions for

improvements/additions. Next Saturday Morning Physics is 2/17/2024 with David Gerdes (head of the UofM physics dept.), the topic is the upcoming solar eclipse.

Newsletter editor Amy Cantu had no report: "nada".

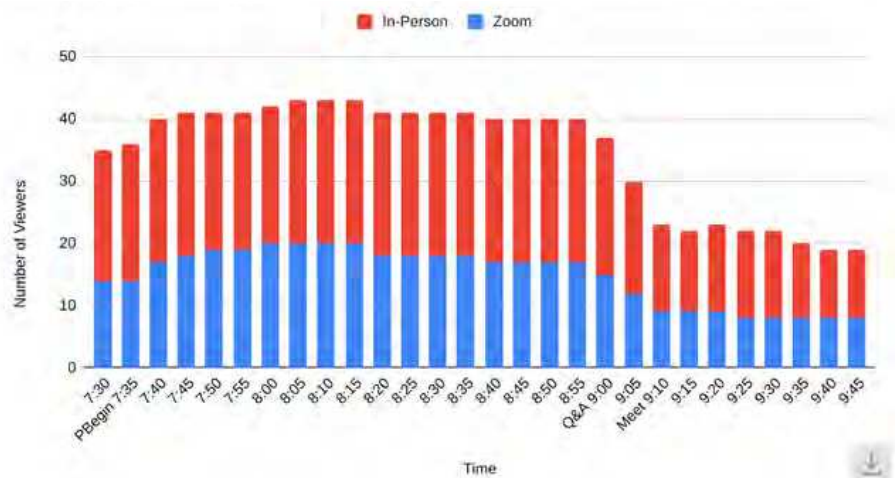
Treasurer Doug Scobel sent in that we have 200 members, no extra expenditures. Normal costs for phone, and mailing 3 newsletters.

Observatory Director Jack Brisbin - There is a new wall mounted convection heater and a temperature data-logger installed in the observatory. The data will be collected at the end of the month to see how it performed. Executive board has been working on setting up the equipment loaner program procedure and equipment tracking form. It was decided that whoever is keeping the loanable equipment for the club will be responsible to document the transaction. Taking photos of the equipment before and after is required. Charlie made a motion to accept the updated equipment loan procedure and form. Dave Snyder seconded. No nays. The procedure and form will be made available to the membership.

The club's 17.5 inch dobsonian telescope has a GOTO hand controller and complete users manual. There are restrictions on loaning this telescope. It is primarily for Lowbrow Public Observing events and has been loaned out to officers for use at National Astronomy Events. Due to the rising cost of telescope parts, we do not know the exact replacement cost of this telescope, which is important if something is damaged or missing.

VP Brian Ottum - requested any interested lowbrows should volunteer to join the AATB board and help run this large public event.

Meeting adjourned at 9:44pm  
Minutes respectfully submitted,  
Ken Cook





## PLACES & TIMES

Monthly meetings of the University Lowbrow Astronomers are held on the third Friday of each month at 7:30 p.m. The location is usually the Judy & Stanley Frankel Detroit Observatory. The Observatory is located at 1398 E. Ann St., Ann Arbor. The Ann Street Parking Structure (M86), the Catherine Street Structure (M5), the Glen Street Structure (M61), and the School of Public Health II Lot are usually open after 6:00 p.m. Mon-Fri. The M86 structure is closest to the Detroit Observatory.

Peach Mountain Observatory is the home of the University of Michigan's 25-meter radio telescope and McMath 24" telescope, which is maintained and operated by the Lowbrows. The entrance is addressed at 10280 North Territorial Road, Dexter MI, which is 1.1 miles west of Dexter-Pinckney Rd. A maize and blue sign marks the gate. Follow the gravel road to the top of the hill to a parking area south of the radiotelescope, then walk about 100 yards along the path west of the fence to reach the McMath Observatory.



## PUBLIC OPEN HOUSE / STAR PARTIES

Public Open Houses / Star Parties are generally held on the Saturdays before and after the New Moon at the Peach Mt. Observatory but are usually canceled if the forecast is for clouds or temperatures below 10 degrees F. For the most up-to-date info on the Open House / Star Party status call: (734) 975-3248 after 4 pm. Many members bring their telescope to share with the public and visitors are welcome to do the same. Mosquitoes can be numerous, so be prepared with bug repellent. Evenings can be cold so dress accordingly.

Lowbrow's Home Page  
<http://www.umich.edu/~lowbrows/>

## MEMBERSHIP

Annual dues are \$30 for individuals and families, or \$20 for full time students and seniors age 55+. If you live outside of Michigan's Lower Peninsula then dues are just \$5.00. Membership lets you access our monthly newsletter online and use the 24" McMath telescope (after some training). Dues can be paid by PayPal or by mailing a check. For details about joining the Lowbrows, contact the club treasurer at: [lowbrowdoug@gmail.com](mailto:lowbrowdoug@gmail.com)

Lowbrow members can obtain a discount on these magazine subscriptions:

**Sky & Telescope** - \$43.95/year

**Astronomy** - \$34.00/year, \$60.00/2 years or \$83.00/3 years

### Newsletter Contributions:

Members and non-members are encouraged to write about any astronomy-related topic. Contact the Newsletter Editor: Amy Cantu [cantu.amy@gmail.com](mailto:cantu.amy@gmail.com) to discuss format. Announcements, article, and images are due by the 1st day of the month as publication is the 7th.

### Telephone Numbers:

President:	Charlie Nielsen (734) 747-6585
Vice President:	Adrian Bradley (313) 354-5346
	Jim Forrester
	Brian Ottum
	Dave Snyder
Treasurer:	Doug Scobel (734) 277-7908
Observatory Director:	Jack Brisbin
Newsletter Editor:	Amy Cantu
Key-holders:	Jim Forrester
	Jack Brisbin
	Charlie Nielsen
Webmaster:	Krishna Rao
Online Coordinator:	Jeff Kopmanis

**A NOTE ON KEYS:** The Club currently has three keys to the Observatory and the North Territorial Road gate to Peach Mountain. University policy limits possession of keys to those whom they are issued. If you desire access to the property at an unscheduled time, contact one of the key-holders. Lowbrow policy is to provide as much member access as possible.

Email to all members  
[Lowbrow-members@umich.edu](mailto:Lowbrow-members@umich.edu)



# University Lowbrow Astronomers

