

REFLECTIONS / REFRACTIONS

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University Lowbrow Astronomers Monthly Newsletter

June 2024, Vol 48, Issue 6

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AURORA CORONA

by Barry Chapman



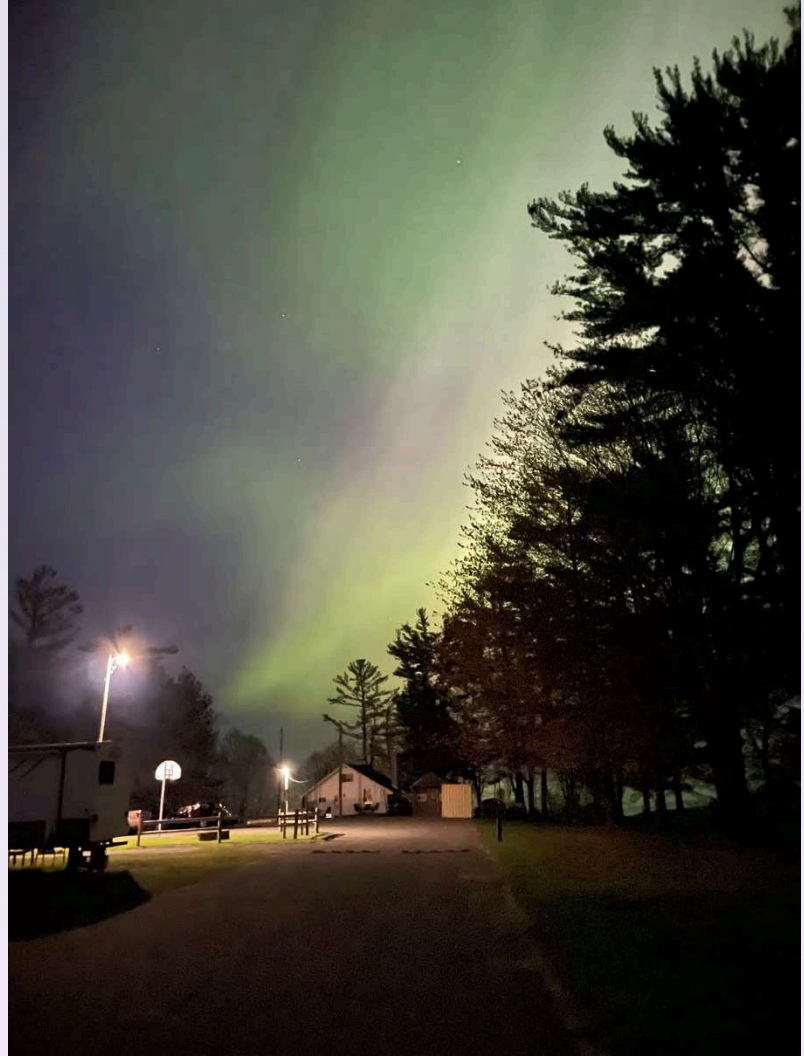
LAST-MINUTE AURORA ADVENTURE - KP9 IN THE THUMB

BY ALEX SWARTZINSKI

Observing takes many forms. I'm generally a telescopic observer. Hunting down a new DSO or revisiting an old friend is great fun! But sometimes, the show is best enjoyed with our 7mm (or so) naked eyes. Last month, the total solar eclipse captured my enthusiasm for the sky in a manner that I'd never experienced before. I made a mental note to check off the aurora box next, a task that's not super hard from 42-45 degrees of latitude. In fact, last spring I missed a decent show by three days at my Northern MI dark site.

As the week drew to a close, I was left scratching my head. A massive CME was on the way, but our forecasts weren't looking good. My Dark site south of Alpena was showing clouds and possibly rain. My township (Plymouth) in Metro Detroit was forecasting some gaps in the weather before clouding later in the evening. Michigan's thumb was looking like the best bet. Clouds moving in from the Northwest would reach this area last. I was hesitant. Would it really stay clear? I'd already driven 450 miles a couple of days ago returning from two great nights of observing, and this drive would be another 180 plus. Around 5:30, I finally decided to go for it. Searching Google Maps for a campground, I selected a little site north of Lexington on Lake Huron. I didn't want a 2-hour drive at 2:00 a.m., especially since I was already feeling a little tired. Camping was the best option.

But there was a problem with this approach: I hadn't tent camped in seven years. My Dad gave me a really quick demo with his hiking one-person tent, and I was on the road by 6:30. The site was awesome. For \$30, I got the last spot on the tent row of this little cul-de-sac campground. I didn't have any neighbors on either side of me, and it was a super clean little place. Quickly setting up after my 8:30 arrival time, I walked to the beach. The Great Lakes never cease to amaze me with their scale and beauty. I need to visit them more often!



Around 10:00, I started my journey back to the beach. On my way there, I groaned. A thin layer of clouds was screaming in from the south, or was it? I looked north and realized what I was seeing. Bright green auroras danced brilliantly, and this massive white shelf was quickly identified as an aurora by the way it changed brightness. I couldn't believe my eyes. Practically running down the steep staircase to the beach, I turned to face north. It was beautiful. Auroras of pink, green, and white. Color was visible when they flared up. It was much like seeing M42 or another DSO. The color was there, but slightly muted. The pinks and greens were an amazing touch to the spectacular view. For the next four hours, I stood and sat on the beach, watching as they gleamed down onto the water. Every time I looked away briefly, I was met with a different show when I turned my attention back to the north. It felt like a dream, much like totality did. This wasn't really happening -- yet it was! Seeing auroras dancing at the zenith and even to the south will be hard to repeat from 43N.

LAST-MINUTE AURORA continues, p.3.

LAST-MINUTE AURORA continued ...

Early in the night, I got a notification that the ISS was passing overhead. Sure enough, I saw it crossing over the aurora. A family nearby noticed at the same time and I heard their puzzled comment. When I told them what it was, they were super enthusiastic. It was awesome to hear everyone's reaction down on the beach. Much like totality, we were brought together for the common goal of seeing the universe, a beautiful display of human curiosity. I took this image of the ISS (right) crossing the aurora. Two distant ships add to the mood of this photo.

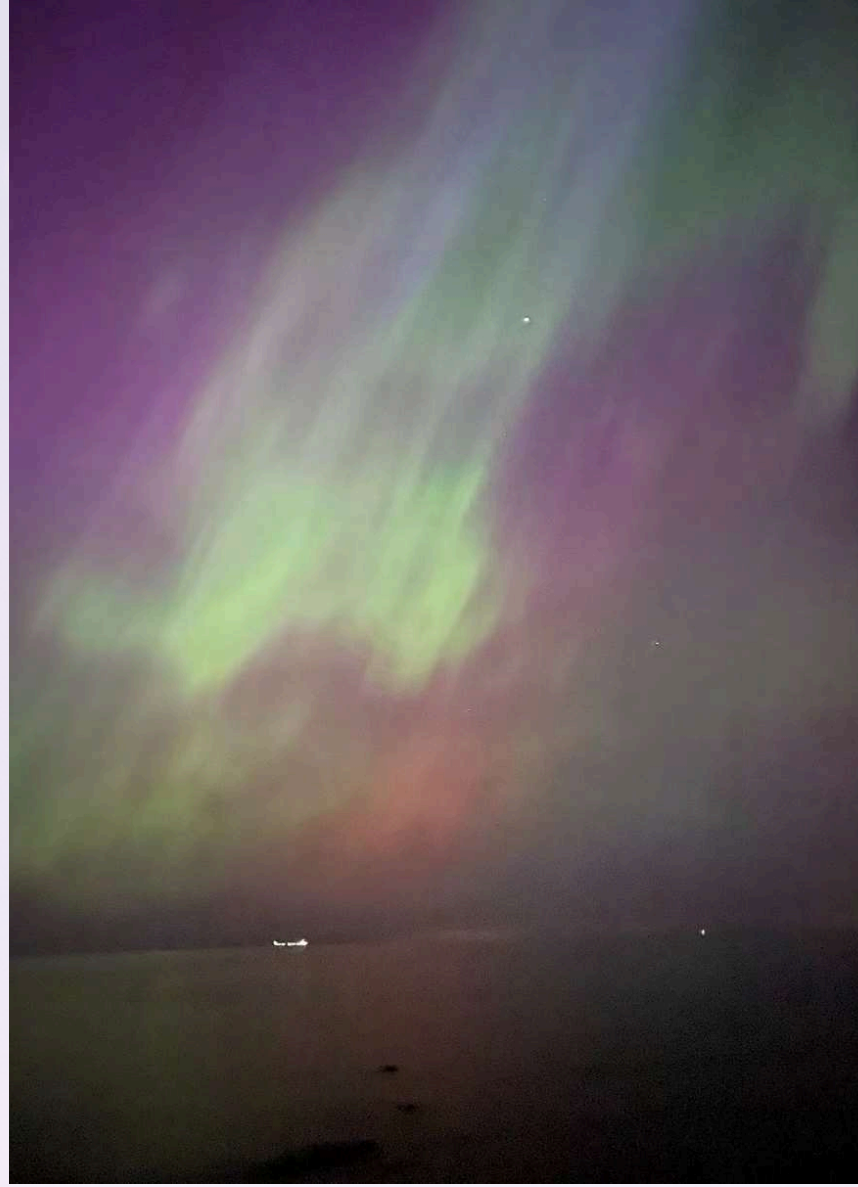
Speaking of photos, I was amazed at how well the point-and-shoot mode worked with my older iPhone 12. I'm not an astrophotographer but these turned out pretty decently. Most of the night, I just enjoyed the show naked eye. It was my first aurora display and I don't think I can top it for a very long time.

By 1:30, I was getting cold and the northern auroras were getting blocked by distant cloud cover. The gamble had paid off though. The thump's tip was covered, Metro Detroit was cloudy, and my dark site was getting rained on. Returning to the truck bed, I looked west at the streamers as they got fainter. The KP was dropping from a mind-blowing 9 on the index to 6 or 7. Still very high on a typical night, but this wasn't a typical night. Peak must have been between 10:00 and 11:30, but it was still fantastic later in the night.

I woke up at 6:00 a.m. to heavy rain. Thankfully my limited tent skills pulled through and I didn't get wet. I quickly realized that sleep was not going to happen, and the radar showed thunderstorms on the way. Using a brief clearing, I tore the tent down and took one last look at the beach. A freighter passed by in the distance. Sunrise colors were contrasted with distant rain shafts. Beautiful. Stopping for breakfast, I drove through the rain back towards metro Detroit. Thankfully it let up, and the remaining hour passed quickly.

The moral of this story? Last-minute adventures are great fun, and amateur astronomy provides us with many incentives to make these trips! It also reinforced my desire to camp more.

It was great to hear everyone's stories and experiences over the email threads! ■





When: July 11, 2024 7-10pm

Where: Judy & Stanley Frankel Detroit Observatory at
The University of Michigan in Ann Arbor
1398 E. Ann Street (Corner of Ann and Observatory Streets)
Ann Arbor, MI 48109
[Google Maps](#)

Sponsors: Judy & Stanley Frankel Detroit Observatory &
The University Lowbrow Astronomers

Trail Guide: Jeff Kopmanis, University Lowbrow Astronomers

Cost: Free!

Registration: <https://forms.gle/RLVzASDq3thdt5ZQ7>

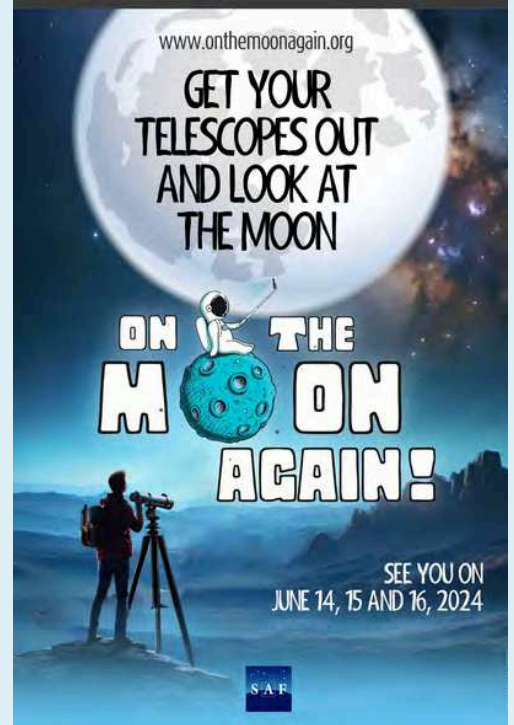
Summary: The workshop will do a deep-dive into planetary astrophotography post-processing: from capturing strategy to essential steps in post-processing that will pull in the details from raw images to produce richly detailed final photos.

Attendees are encouraged to bring their own laptop computers to try their own hand with supplied raw images of Jupiter, Saturn and Mars (no need to capture your own for the workshop!).

Software: Siril - <https://siril.org>
GIMP - <https://gimp.org>
SER Player - <https://github.com/cgarry/ser-player/releases/tag/v1.7.2>
(Only Linux is available in v1.7.3)
Additional Resources:
<https://lowbrows.club/astrophotography-software-resources>

ON THE MOON AGAIN - ON THE ANN ARBOR DISTRICT LIBRARY SIDEWALK

COME ONE, COME ALL: In the spirit of John Dobson, we have a REAL "sidewalk astronomy" event coming on Friday, June 14 (rain date June 15). Come and share your night sky passion with the public on their turf -- the sidewalk in front of the Downtown Library, 343 S. Fifth Avenue. We'll start setting up between 6-7 pm. Questions? Contact Brian Ottum.



UPCOMING TOPICS FOR THE OBJECTIVE LENS

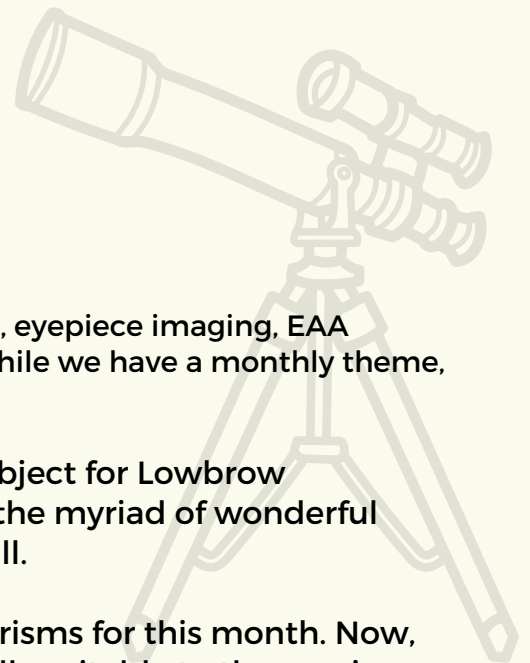
BY JACK SPRAGUE

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.

Who knew the recent eclipse would be such a dramatic subject for Lowbrow photographers? Well, Lowbrows of course. I am floored by the myriad of wonderful images captured and shared by the members. Thank you all.

June - Summer is beautiful in Michigan. Let's try some asterisms for this month. Now, asterisms can be large area captures and these are especially suitable to those using wide-angle grab-and-go class scopes. I got my start capturing entire constellations! Some super attractive beasts include the JAWS asterism, the Spade, the Seven Arrows (tough right now, though), Ferrero 6 (in Ursa Major), and Upgren 1. Let's connect those dots - er - stars!

July - Skyscapes! We'll all have had a chance to catch a snap of the moon through trees or reflected on water, or for the lucky few some northern trips might yield northern lights. It's always hard to tell when the sun is this active and what next week brings. A Michigan sunset outlining observing gear is always delightful - and better if the observer is in frame! ■



UPCOMING MEETING SPEAKER SCHEDULE

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***

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

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

August 16: Club Picnic (Location TBD)

September 20: Club meeting cancelled for Astronomy at the Beach (AATB)

October 18: Club members Ed Hernandez, Adrian Bradley, and Doug Nelle

Topic: ***Memories of the Eclipse***

November 15: Dragan Huterer
Topic: TBA

June Open Houses

June 8
June 29

We're always looking for 4-5 people to help - greeters, someone to run the McMath, folks to operate scopes for the public.

Please help out if you can. If you have questions or would like to learn the ropes, members are ready to help!

COMING in JULY

- **Open House, OHC TBD: July 6th**
- **Michigan Math and Science Scholars: July 9 (rain date July 11)**
- **ALCON (Astronomical League) @ Doubletree by Hilton in Overland Park, Kansas: July 17th-Jul 20th**
- **Lowbrow Monthly Meeting @ Sherzer Observatory: July 19th Meeting at EMU, Miles Mercier, EMU grad. Topic: Radio Astronomy and Primordial Hydrogen. Also presenting is Norb Vance.**

Meeting was called to order by Charlie Neilsen at 7:35 PM.

Many members of our club presented photos of the recent aurora, covering a large geographical area. A question was raised about what caused the different colors and an infographic was sent out by Jeff Kopmanis via email explaining the mechanism, of which altitude and specific ionized elements being the primary factors. Kurt Hillig presented an image from a previous auroral event that captured a Strong Thermal Emission Velocity Enhancement, or STEVE phenomenon before the term had been defined. All of the images shared are available on our new website: <https://lowbrows.club/aurora-may-10-2024>

Our business meeting began at 8:46 PM

The club could still use one more VP to help find speakers and assist with club activities.

We need open house coordinators (OHC) and support of at least 4 members for our published open houses. Please review our calendar and commit to helping with open houses.

Doug Scobel recently received word that member Glenn Bowman passed away in January, we had a moment of silence in his memory.

Our meeting speaker schedule is now full for 2024, and we are scheduling speakers for 2025. Please see the club calendar for the variety of topics covered.

VP Don Fohey reported we had a very well publicized and successful open house April 13th with 75 visitors and 10 lowbrows. The May 4th Open House was canceled because of clouds. A very successful Member Only Nights was held Monday May 6th. Seven attended the Members Only night the following week. The public is interested and we need more member support to help with open houses. Watch for short notice (less than 48 hours) for members only nights at Peach mountain.

Observatory Director Jack Brisbin reported technical issues with the Argo Navis telescope computer on the McMath telescope. The Argo Navis reads the right ascension and declination angle sensors, compensates for any tracking errors in the system, then sends the aiming information to a Sky Safari WiFi unit that send's the data to a tablet, computer, or cell phone showing the view in a star map application. This is very useful for finding faint objects while manually pushing and pulling the scope. The issue is the SKY Safari WIFI unit interface is no longer working on android devices, but wifi will work with Apple devices. The bluetooth interface will work for Android devices if paired. The main issue is Simulation Curriculum is no longer manufacturing the Sky Safari WIFI unit. We would like to have a spare Argo Navis as the current one is about twenty years old and has some circuit board issues and could/will fail. The Argo

Navis components appear to be available online for around \$600. Ken Cook made a motion for the club to authorize up to \$800 not including tax and shipping to purchase the Argo Navis components. Don Fohey seconded, and the motion was carried by unanimous voice vote.

Post meeting update: The Sky Safari WiFi components are no longer available. The officers emailed discussing several possible alternatives. Look for more information at the next meeting.

Jeff Kopmanis reported that our new website looks good and has more features to support image galleries than our previous. Clicking on a photo will overlay its detailed information. The image gallery does not support video. Jeff is looking into alternative components to show submitted video clips. There are no storage or bandwidth limits on the new website. The UofM reported that any security breach on our former website will force it to be deleted, they will not attempt to fix or clean it.

While Jeff is no longer on the GLAAC board, he reported that Astronomy on the Beach will have a different location this year. The park that hosted last year is being repaved, all the roads will be torn up. Mayberry state park is the location for the September 20th and 21st, 2024 event. The same staff as last year will be working the event in this new location. The theme is "our home star". GLAAC will be looking for volunteers and support from our club.

Jeff and other members will present a planetary image post processing workshop on July 11th at the Detroit Observatory. This will cover improving digital images after you capture them from your telescope. Source images will be provided. The workshop will cover stacking, sharpening, color fixing, and possibly derotation. Attendees are encouraged to bring their own computer. They'll be responsible for loading the Siril and GIMP programs as well as the sample images. After registration, probably mid-June, Jeff will set up the permissions on the Dropbox directory and send registrants the information on how to access it. More information is online at: <https://lowbrows.club/2024/06/planetary-ap-processing-workshop>

Newsletter editor Amy Cantu discussed that June 14th the Ann Arbor main library will have sidewalk astronomy with the theme "on the moon again". We are looking for members to participate. We saw an image of the poster for the event. The newsletter and Object Lens deadline is approaching, please submit your articles and images.

Treasurer Doug Scobel reported we have 206 members, and our normal expenditures (newsletter printing, open house hotline) for the month. Thirty nine lowbrows are also members of the Astronomical League, and the \$9 annual individual membership fee should be paid to Doug Scobel by June 30th. A question was raised if it made sense to have a club membership or stay with individuals. Club membership might make sense if well over half of the club were members, and would require an increase in our annual dues. Look for a reminder email from Doug about your Astronomical League dues.

A reminder that our October meeting will have members presenting images from the total solar eclipse.

Jim Forrester is still our contact for the Ann Arbor Observer, and gets emails asking to confirm our monthly calendar. This really should be handled by an officer.

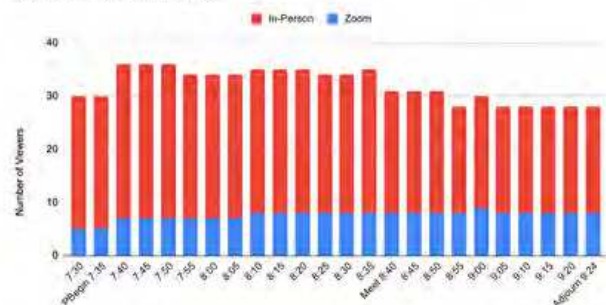
Our next meeting is June 21st.

Doug Nell made a motion to adjourn, Jeff Kopmans seconded.
Adjourned at 9:20 pm

Minutes respectfully submitted
Ken Cook, VP

Meeting Attendance

May 17, 2024 - Member Aurora Perry



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

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 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:	Don Fohey Brian Ottum Ken Cooke
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



University Lowbrow Astronomers

