University Lowbrow Astronomers
Ann Arbor, Michigan
REFLECTIONS / REFRACTIONS
University Lowbrow Astronomers
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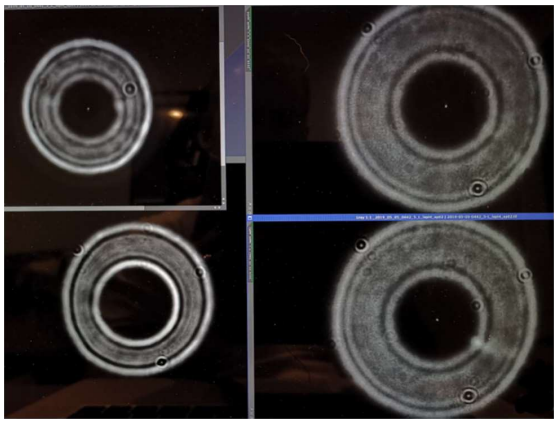
Skywatcher Skymax 180 mm Review

By Awni Hafedh

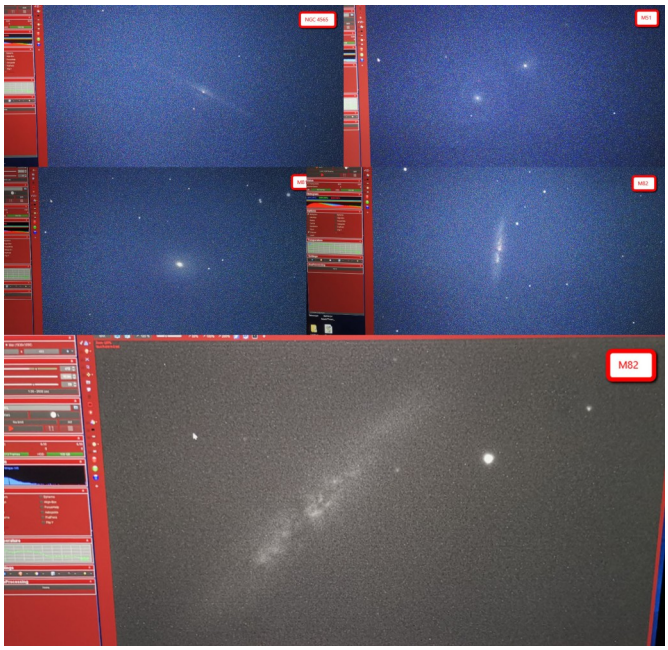
Recently I bought a used Skywatcher Skymax 180 mm Maksutov-Cassegrain Telescope. I remember someone asked me for a full review. It cost me $900 shipped all the way from Canada, the original owner took really good care of it and the shipping box was very well padded.

It came with two eyepieces 9mm and 25mm, as well as a view finder. I was able to mount it on my old iOptron ZEQ25 mount,. My first star to point at was Arcturus in order to align my finder scope which was super easy.

I then focused it in/out to check the collimation and to be honest for a telescope that travelled all the way from Canada to Vancouver to CA and to Michigan the collimation was amazing, in fact that is one thing that I really liked about the 180 Mak is it's hard to loose collimation.



Visually, I was able to see many objects with the help of the view finder and 25mm eyepiece, despite that my backyard is in a red zone area, has lots of neighbor lights, and it's an f/15. The objects that I saw were M81, M82, M51, M13 and NGC4565. Astrophotography is also really good. I connected two different cameras, an ASI290MM and an ASI1600MC. With a 30sec single exposure I was able to capture those objects. Focus was easy with a Bahtinov Mask. To be honest I am excited because lunar imaging was something that I always wanted to experience but with my Hyperstar setup I had to remove the secondary mirror every time I imaged which destroyed the collimation and it was really painful to have it collimated again.

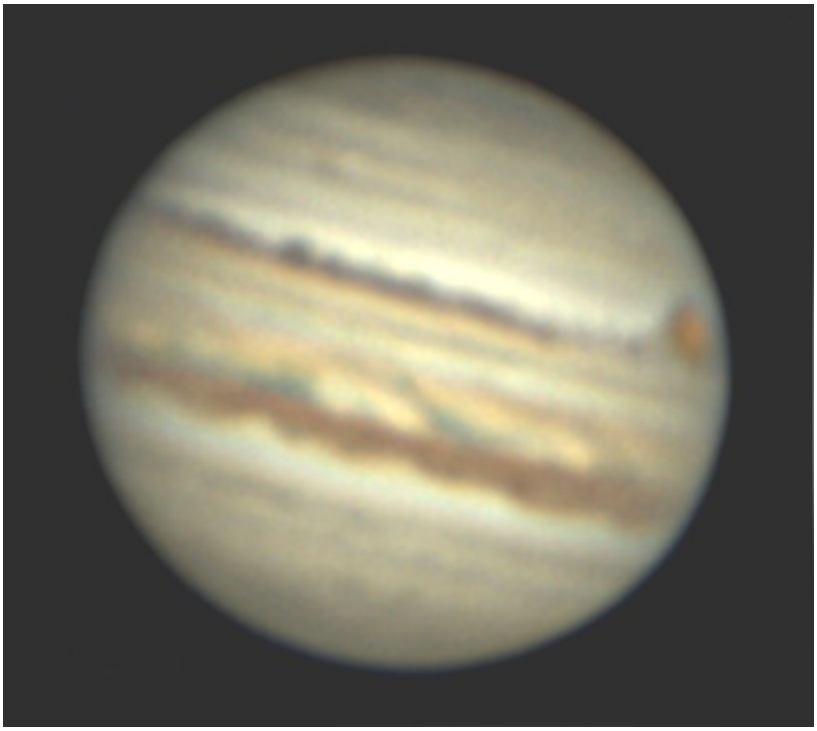


With the Mak the collimation seem to be rock solid. It is also easy to transport and visually is very promising which gives me the chance to participate in some of the club's Star Parties and learn more about visual astronomy. If I am planning to do remote image of the Moon then I will need an SCT dual speed focuser so I can focus remotely.

Some bad things about this telescope. It doesn't come with a manual to explain how to collimate or what is the optimum back focus in case if you want to connect a camera. It takes a long time to cool down as the front element glass is thick and there are no ventilation points.

Jupiter Rules the Evening Sky

Jeff Kopmanis email to members June 30th



I got through processing one of the best raw captures from last night in my driveway in Ypsilanti Township. 800 frames in the original raw .SER file at 640x480 resolution. This is through an 8" Celestron SCT, with a 3x barlow and a ZWO ASI120MC camera. Exposure per frame was 21.5ms, gain was 28. I used SharpCap 3.2, AutoStakkert!2 for stacking, and Registax 6 for final processing. Skies were clearer in Ypsilanti at midnight when this was taken, but somewhat hazy earlier. Skies were pretty turbulent as well, hence the mediocre clarity. My idea behind using the barlow was to fill as much as the CMOS chip as possible, and it filled the frame pretty well, which I think really helped the final result. (Editor: Jupiter was at opposition on June 10th)

MMSS Report

June 25th Email to members from
Jack Brisbin

Last nights observing event with the Michigan Math Science Scholars was clouded out. But we did show them the radio telescope and a tour of the observatory

Lowbrows Present at the Cromaine District Library for the Alive 55+ program

By Jeff Kopmanis

On June 10, 2019, Lowbrow member Jeff Kopmanis, presented "Diving Into Astrophotography (without selling a kidney!)" as part of the Cromaine District Library's Alive 55+ series of talks and presentations. Janice Yaklin put together the series, which began on June 1 and will run every week through the summer. "Diving into AP" started at 1:30pm in the community room on the 3rd floor and went for approximately 90 minutes. 15 people attended the presentation, and refreshments were served. The Cromaine District Library made a donation of $120 to the University Lowbrow Astronomers club.

The audience was mostly new to astronomy and photography in-general, so "Diving Into AP" started by introducing what "sights there are to see" categorized into either planetary and deep-space objects. Example images from Jeff's personal gallery as well as some others from the Lowbrows were used as examples of what's possible.

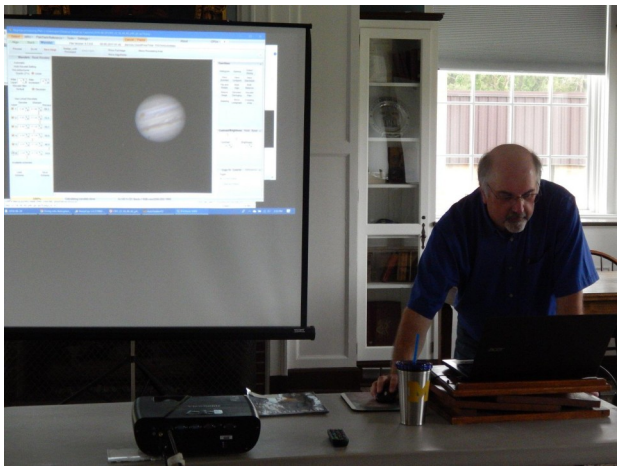
Next, the 3 main types of telescopes were introduced: refractors, reflectors and cassegrains. Each type's light path was described, with photos of commercially available examples, and the pros and cons of each type that related back to the types of objects best seen by that type.

During the telescope discussion, the issue of focal length came up, and Jeff put on a quick hands-on demonstration: he'd brought a bag full of carboard toilet paper, paper towel and aluminum foil tubes, each labelled with "Meade" or "Celestron" or other telescope manufacturers. "Each of you gets to take home a FREE 1x TELESCOPE today!" broke some of the monotony of telescope specs and allowed Jeff to demonstrate focal length. Each participant was instructed to hold the tube close to their eye and observe the *extent* of their view, and then slowly move the tube away from their eye, keeping an eye on the constricting view that they observed. This drove home the point that longer focal length equipment will have a dramatically different view and characteristics than short-tube, wide-view telescopes. It was a hit with the crowd, yet ***strangely*** some returned their telescopes!

Cameras were next on the agenda, with a slide that started with a Polaroid Instant camera, to drive home the point that astrophotography is a bit more than taking snapshots. A short discussion of DLSRs and dedicated CCD/CMOS cameras ended with a short live demo showing Jeff's ZWO ASI120MC and SharpCap software to show off how sensitive the camera was and how many different parameters could be tweaked with it.

(The presentation can be viewed at this link: https://tinyurl.com/yxvrkq5s) Photos by Jeff Kopmanis and Janice Yaklin)

Cromaine District Library Continued



Next, the basic capture-align-stack-tweak process was outlined with examples of free and commercial software available to perform each step.

Finally, Jeff live-demoed a complete processing session, starting with a raw image .SER video he'd captured of Jupiter in the summer of 2018. Audience members saw how jiggly and fuzzy things look straight out of the camera as a "starting point". Then, over the course of 20 minutes or so saw, at each stage, how alignment, stacking and finally Registax processing brought out the details and colors of the image. Registax' wavelets feature made for a great "final climax" as each wavelet layer revealed different colors and details. Jeff used the checkbox to turn each wavelet on or off, so that the audience could see the effect on the photo.

In all, everyone walked away with better insight into astrophotography, and had very positive comments. Jeff has already been contacted by the Cromaine Garden Club about potential Fall talks and/or viewing events.

Open House Report Saturday Jun 29th.

Email to members from Charlie Nielsen

Well, it did not turn out the way it was supposed to. We only had clear skies for a short time and then it varied from partly to mostly cloudy until we began packing up at around 12:30 PM or so. But, as always, we made the best of it, and had some great views of Jupiter. Our open house coordinator was Jim Forrester. Helping him were fellow club members: Joy Poling, Jack Brisbin, Adrian Bradley, Ken Ruble, Mike Radwick, Federico Spotti, Norb Vance, and yours truly, Charlie Nielsen. Please let me know if I did not account for you!. Thank you all! (Editorr: Open Houses scheduled for June1at and June 8th were canceled due to weather)

Hidden Lake Gardens Saturday June 22nd

Email to members from Charlie Nielsen

Photo by Gretchen (wife of Jeff Kopmanis)

This was a huge success. It is very, very fortunate that I did not cancel Thursday night as I very nearly did. Friday AM the forecasts changed and it was looking better. It turns out we had totally clear skies until just as we began to pack up around midnight. We delighted the crowd with views of Jupiter, Saturn and a variety of DSO's. Since the Moon had not risen we got to get a good idea how dark the site is, which we decided is probably a bit darker than Peach Mountain. I will get an official count Monday, but I estimated at least 75 guests. Thanks to the following Lowbrows for making it happen: Jeff Kopmanis, Clay Kessler, DJ Roberts, Kurt Hillig, Jim Forrester, and Awni Hafedh. We did good, real good.

(Editor: Photo from https://www.facebook.com/pg/orangecanastronomy/community/)

Want to go to Mars!

Jack Brisbin

Now that I have used Shock and Awe journalism to get your attention, you will still go to Mars but in name only. NASA has invited the public to submit names to fly aboard the next Mars 2020 Rover.

It will be years before the first humans set foot on Mars, but you will have the opportunity to send your name on a special stencilied chip that will ride on the Mars 2020 Rover under a glass cover. The rover is scheduled to launch early July 2020 . the spacecraft is expected to land on Mars February 2021**. ……Get Your Boarding Pass Now!! this offer good until Sept 30, 2019**
Search the website for more information about the Orbit schedule including lauch and return. The rover design and how the various test equipment will function. The Rover is being considered a robotic scientist that will collect samples of “Past Microbial Life” and return the samples to Earth.

Now we take the past microbial life from Mars and let different groups of Genetic Engineeers play with a CRISPER Cas9 genome editing equipment.

Now we get a Genetic Big Bang and create genetically altered Martians on Earth.

How big will they be and what will they look like I don’t know . But the Science Fiction Movie Industry will figure it out.

Lowbrow Officers' Meeting—June 7, 2010

The meeting came to order at 7:11 PM at the home of Webmaster Krishna Rao. Krishna generously supplied snacks and soft drinks.

Attending: President Charlie Nielsen, Treasurer Doug Scobel, Webmaster Krishna Rao, Observatory Director Jack Brisbin and Vice Presidents Dave Jorgensen, Adrian Bradley, Joy Poling and Jim Forrester.

1) Charlie led a discussion about the difficulties of scheduling and negotiating the arrangements for Lowbrow attendance at away from Peach Mountain events. Krishna will remove all language about the club offering daytime events from both the Welcome to the Lowbrows website and the Young Astronomers website.

1-a) The Club will turn down most requests for daytime events unless a member/s offer to handle the arrangements, including soliciting speakers and support from other members.

1-b) The first suggestion to those requesting will be to attend an Open House. This is especially true of groups without a past relationship with the Club or groups like the Scouts and other youth groups.

1-c) Charlie and Adrian will produce an intake questionnaire that will produce answers to the questions the Lowbrows need answered before discussing scheduling an event. Too much of Charlie's time is spent ferreting out basic information. Hopefully, an intake questionnaire will streamline the process.

2) The Officers rejected the idea of setting up a shadow organization or list of individual members (or anyone else) that would accept remuneration for services now provide free as a way to fill requests the Club rejects. Payment changes the relationship the Club has with the community in terms of expectations and assumption of responsibility that the Lowbrows are not equipped to oversee. Providing simple information that such a service exists would be fine, but the emphasis should be the service has nothing to do with the Lowbrows.

3) Jack has done some excellent research into the 24" McMath Telescope at the UM Bently Library. Among the finds were notes on the original optical designs of the instrument, including the properties of other secondaries that could change the focal length and allow conversion into a Newtonian.

4) Jack also had several other items to report about Peach Mountain and the Observatory:

4-a) The building next to the large Radio Telescope has suffered a fair amount of vandalism including destruction of the chain locking the fence around the facility, many broken windows and a forced door. Those of us at the Members Night June 2 noticed an interior light turned on, much as George Lattimer did when he was in charge of the instrument.

4-b) Newsletter Editor Don Fohey suggested via email that the support structure for the Observatory's roll-off roof be scraped and painted. Jack has a large belt sander and will test to see if it can handle the job. Additionally, primer, paint, brushes would have to be obtained.

4-c) Water is still condensing in the coldest weather on the inside of the Observatory, particularly the inside of the roof. The condensate drips down onto the McMath Telescope including the primary. Last year the University hired an independent contractor to report on the condition of various University buildings, including those on Peach Mountain. He was impressed with the condition of the Observatory including the masonry repair work and suggested lining the roof with spray insulation foam. Jack has gotten suggestions about which product from member and retired architect Chris Sarnecki. Jack will look into the what, how and cost of such a project.

4-d) The Officers rejected hiring contractors to do this work as this involves many layers of the University bureaucracy and the likelihood the work would never get done.

4-d) Jack believes re-coating the flat in the large diagonal will improve the views in the McMath Telescope. The Officers encouraged him to find coating vendors and get prices. It is likely the Officers will approve this project.

5) Doug relayed the request from an out of town member for the Club to broadcast in real time the Monthly Club Meeting. The Officers will survey the membership for individuals willing to take on this task. Discussion also included which application(s) to use and whether it would be available to the general public. The officers believe each speaker's permission would be needed for general broadcast. Currently, John Causland records selected meetings and posts a link to the members. Initially, the members should be made aware when a meeting is recorded and to monitor their inboxes for the link.

6) The links on the Young Astronomer website will be updated, swapping out links that no longer exist or whose content is not longer updating. Jack and Krishna will work on this.

7) Camp Burt Shurly begins Monday, June 24 or the first clear night (through Thursday) of the week and ends the week of August 5.

Recorded and submitted by,

Jim Forrester
Vice President

Upcoming Events

CAMP BURT SHURLY EVERY WEEK IN JULY, VOLUNTEERS NEEDED

DATE	EVENT	LOCATION	
Saturday July 6st.	Open House 8pm	Peach Mt. Observatory 10280 North Territorial Road	Coordinator TBD
Wednesday July 10th 8:45pm to 1030:pm	Brighton District Library Event	100 Library Drive, Brighton, MI 48116	University Lowbrow Astronomer member, Don Fohey, will speak on NASA's voyage to unexplored Pluto, giving us background on the *New Horizons* mission to this fascinating planet. Following a 30 minute presentation, weather permitting, telescopes will be available to viewing of the night sky. Ages 7 and up with a caregiver present
Friday July 19, 7:30pm	Monthly Meeting	Eastern Michigan University Planetarium, 900 Oakwood St, Ypsilanti, MI 48197,	James Slavin, Professor of Space Science, U/M, Topic: Mercury Tour of newly renovated Strong Hall afterword
Saturday July 20th 10am 4pm	Hands on Museum	220 E Ann St, Ann Arbor, MI 48104	Telescope and optics demonstrations, and (hopefully) solar viewing, as part of the museum's celebration of the Apollo 11 lunar landing.
Saturday July 27th	Open House 8pm	Peach Mt. Observatory 10280 North Territorial Road	Coordinator TBD Volunteers Needed.
Monday July 29th 7pm	Dexter Library	Dexter District Library, 3255 Alpine, Dexter, MI 48130	"How Telescopes Work...But Do You Need One?" Presented by Charlie Nielsen. Assistance : Don Fohey

University Lowbrow Astronomers

Monthly Club Meeting Minutes *June 21, 2019 7:30pm*

President Charles Nielsen called the meeting to order in our temporary location at room 2306 of Mason Hall and then introduced our speaker. Zachary Constan, Ph.D. works as the outreach coordinator for the National Superconducting Cyclotron Laboratory at MSU. The presentation was titled "Fantastic Nuclei and Where to Find Them". He explained what they do at the lab and how it's done. Many audience questions were answered both during and after his presentation. After our guest was thanked and T-shirted Charlie called for Don Fohey to come forward and share with us his involvement in Apollo ASLEP. He passed around a binder of photos he took of the various experiments they had prepared.

Business Meeting:

Jeff Kopmanis--Summarized his experience at the Cromaine Library on June 10, 2019.

- Presentation about getting started with astrophotography
- About 14 individuals attended
- Does have copies of his slide presentation for anyone who missed the event
- Accepted a gratuity check on behalf of the club from the library

President Charlie Nielsen--Upcoming calendar reminders

- Hidden Lake Gardens event is tomorrow and requests helpers
- MMSS annual star party is approaching. Jack has been in contact and this year they do not desire a lecture portion therefore no chairs will need to be set up for the event.
- An out of state member via email, has requested having a live feed of meetings and was passed on to the club looking for anyone interested in pursuing.

Abe Oraiqat--Mentioned a vendor that had requested being linked to on the Lowbrow website. Charlie reminded that we can have no "for profit" links on the site.

Observatory Director Jack Brisbin--Proposed repairs/upgrades for the observatory.

- Scrape and paint roll off roof frame. He tried removing rust from a small section with equipment and product he already owns and knows to gauge effort needed. He showed before and after pictures. Conversation flowed to the possible use of a needle scaler and will be discussed further among those individuals. Volunteers will also be needed to lend on hand on the of the project.
- Insulate the roof to prevent dew formation. A specific product was recommended by a site inspector that was assesed all UofM properties. He will continue to look into this product.

Vice President Adrian Bradley

- Libraries are now making requests for events via Facebook.
- Working on a questionnaire to be emailed to individuals that request us to do an event. A draft of the form has been emailed to Charlie.
- Lowbrow Facebook site has 894 likes.

Newsletter Editor Don Fohey

- Has taken possession of the donated 5" Meade Mak Cass and will begin repairs.
- He also thanked those that contributed articles for the newsletter.

Vice President Jim Forrester--Wants to remind all that Camp Burt Shurly starts on Monday and answered any questions about how it works. Volunteers needed.

Treasurer Doug Scobel

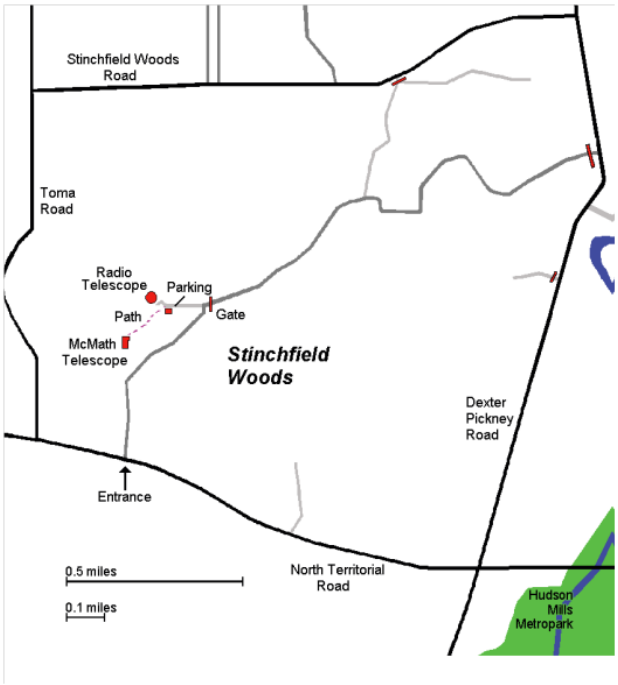
- Swag orders are in and most have been distributed.
- 156 memberships.
- Treasury balance is $7353.00.

Reported and prepared by Joy Poling

Places & Times

Monthly meetings of the University Lowbrow Astronomers are held the third Friday of each month at 7:30 PM. The location is usually Angel Hall, ground floor, Room G115. Angell Hall is located on State Street on the University of Michigan Central Campus between North University and South University Streets. The building entrance nearest Room G115 is the east facing door at the south end of Angell Hall.

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 radio telescope, 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 cancelled if the forecast is for clouds or temperature below 10° F. For the most up to date info on the Open House / Star Party status call: (734) 975-3248 after 4pm. 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. Evening can be cold so dress accordingly

Lowbrow's Home Page

http://www.umich.edu/~lowbrows/

Membership

The University Lowbrow Astronomers membership dues are $30 per year for individuals or families, $20 per year for students and seniors (age 55+) and $5 if you live outside of the Lower Peninsula of Michigan. Membership entitles you access to our monthly Newsletters on-line at our website and use of the 24" McMath telescope (after some training).
A hard copy of the Newsletter can be obtained with an additional $18 annual fee to cover printing and postage. Dues can be paid at the monthly meetings, by PayPal, or be check made out to University Lowbrow Astronomers and mailed to:

The University Lowbrow Astronomers
P.O. Box 131446
Ann Arbor, MI 48113-1446

Lowbrow members can obtain a discount on these magazine subscriptions:
Sky & Telescope -$32.95/year or $62.95/2 years
Astronomy -$34.00/year, $60.00/2 years of $83.00/3 years
For more information about dues or magazines contact the club treasurer at: lowbrowdoug@gmail.com

Newsletter Contributions

Members and non-members are encouraged to write about any astronomy related topic. Contact the Newsletter Editor: Don Fohey donfohey@gmail.com to discuss format. Announcements, articles 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	(734) 663-1638
	Joy Poling	
	Dave Jorgensen	
Treasurer:	Doug Scobel	(734) 277-7908
Observatory Director:	Jack Brisbin	
Newsletter Editor:	Don Fohey	(734) 812-3611
Key-holders:	Jim Forrester	
	Jack Brisbin	
	Charlie Nielsen	
Webmaster	Krishna Rao	

A NOTE ON KEYS: The club currently has three keys each to the Observatory and the North Territorial Road gate to Peach Mountain. University policy limits possession of keys to those who 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

Night Sky Network

Member Club

Astronomical League Member Society
#201601, Great Lakes Region

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