



**The New Seven Sisters Observatory.
8-9-2018 – by Clayton Kessler**



Observatory with roof closed.

Shortly after I moved out to my Manchester home I installed a pier on a large cement anchor in the back yard and set up a G11 on a permanent basis. The mount, with a scope attached, has been out in the yard since 2003 with great success. Of course I keep it covered using a Telegizmos 365/24 scope cover – something I cannot recommend high enough, a great cover. My wife and I have talked many times about building an observatory building but I always begged off – unsure of what I wanted. Several years ago I had a concrete observing pad poured while having some other concrete work done. I went with a 10' X 20' pad with rat walls on the off chance I would ever decide to build something on it.

Jan was adamant that I make a decision and build something. Her theory was “build now before you retire and are too old to do it”. Still – it seemed like a lot of work that I didn't have time for. In the spring we purchased a pre-fabricated shed from a large vendor and they also built “telescope sheds”. We got a price quoted but WOW – that wasn't happening. Local guru Doug Bock made mention in a Lowbrows e-mail that he got a quote from Backyard Observatories in Ohio that was pretty reasonable. I am, at least, passing familiar with BYO as they built a nice roll off for Tom Trusock up in the thumb. I remember that being a very nice building.

Scott Horstman and the BYO crew travels all over the country building custom observatories. I understand he is hard to get a hold of due to his work schedule but I sent off an e-mail anyway. I was quite surprised at the quick response and we began a correspondence that resulted in a quote for my observatory. I guess I got a hold of him at the right time because he was coming to Michigan in June and had some builds scheduled. He said he would work me in!

The Lumber truck dropped off a load on June 28th and Scott arrived on the 29th. It was HOT but that did not stop them. They got to work and my observatory started to take shape. My basic design was to have a 10' X 20' building with half being a roll off roof observatory and half being control room and warehouse. The observatory roof rolls off over the control room roof. This way I don't have columns and rails sticking out into the lawn. I had this image in my head but I did not know how to build it. Scott asked me to describe what I wanted, said he could build that, and proceeded to make the image in my head come to life.

The New Seven Sisters Observatory (continued)



I tried to take some pictures at the end of each day to show the progress: The first day was short – the crew drove down from Traverse City from another build. This picture was at the end of Saturday. The building is taking shape nicely!



By the end of day 3 things were really looking good.



End of day 4 – looks like siding is all that is left. I tried to tell Jan that I had OSB colored vinyl siding but she wasn't buying it.



And finally – the structure is finished. A shot with the roof rolled open,

I am sure Scott and his crew (which included his wife Diane) were happy to get out of the heat. Temperatures were in the mid to upper 90's all the time they were working. I don't know how they did it.

Now that the structure is finished my work started. I took on the responsibility to do the wiring. I had power at the pier from previous work so I mounted boxes for plugs and lights/switches and ran romex to provide for easy use of the system. It took me a while – I kept running out of romex. Who knew it took that much. Eventually I had wall plugs, outside plugs, red lights, white lights and light switches with a distribution panel and circuit breakers.

I had other things to do as well. I had a sturdy pier but it was too short for the 7 foot observatory walls. After some measurements I decided to make a 14" pier riser. While the pier was out a new paint job was appropriate and easily accomplished.

The New Seven Sisters Observatory (continued)



The pier riser was designed to fit on the existing pier anchor. The re-painted pier bolted to the top plate of the riser – easy peasy.

As you can see – lots of wires and boxes – they just all move with the mount. I have a control room behind the window where the computer and telescope control is done. It seems to be well sealed against biting bugs which is a blessing on these hot summer nights.

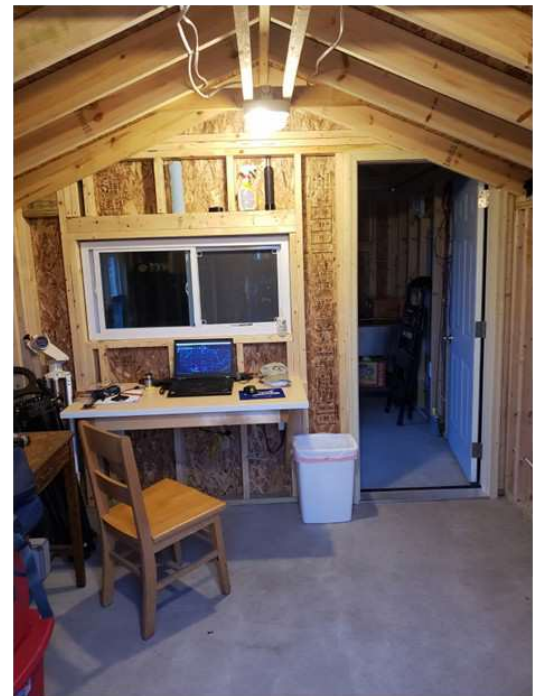


As setup now the system is great.



Once the electrical was finished I was able to clean up and get the imaging system set up. At this time the system consists of an 8" R/C with a carbon fiber tube and an 80mm f6 triplet refractor. This fall I am expecting to replace the 80mm with a 127mm F7.5 Explore Scientific "Frankenscope" that I am currently working on as I get time. I need to machine a cell adapter and a dew shield to get it usable.

Electrical is finished, floor swept, mount balanced and everything is ready to go. I tried to make an effort to reduce the wires that left the mount as much as I could. As long as pulse guiding works (it does!) I will only have a 12VDC line going to the telescopes and a USB3 data line coming from the scopes. Not that there isn't a lot of wires but I was able to mount all the controllers and power distribution on the moving portion of the system.



The New Seven Sisters Observatory (continued)

Hopefully, the start of many, many more sessions. I highly recommend an observatory building. While my equipment was mostly out there before covered on my pier the ability to roll the roof off and have a system set up and ready to go is wonderful. The observatory build started almost 15 years – to the day – after I poured the concrete for the pier. I don't know why I waited so long.....



The current system works very well as I found last Saturday when I had first light. I was able to easily get 40, three minute exposures of M27 that stacked and calibrated well.

Monthly Activities Summary

Ann Arbor Library Pittsfield Branch Plant Viewing Party August 3rd.

(Summary of Amy Cantu ,and Barry Wissman email report to members.)

The library staff stopped counting at 400 people and lines of 40+ people at each telescope. Barry was amazed at the number of people who showed up. At one point, the line to look through his scope was snaking around the parking lot. His wife helped run the telescope so he could talk to people in line and point out constellations, etc. He loved peoples reaction to first time view of Saturn. Some where disappointed with the dust storm obscured features of Mars. Lowbrow's Dave Snyder, Adrian Bradley and Jim Forrester were also in attendance. Read Jim's report in meeting minutes page 8.

Peach Mt. Open House August 4th. (Summary Ardian Bradley email report to members.)

Transparency was not the best, so the stars of the night weren't stars at all, but planets and meteors. Many good size meteors streaked across the sky, as if to foreshadow the Perseids of next weekend. Jupiter, Saturn, and Mars did not disappoint, as Lowbrows used filters to bring out the best views. A faint Milky Way arm was visible, but was being masked by wispy high altitude clouds.

Adrian position his scope near the road where the cones are setup with a view of Ursa Major. Joy Poling, did a wonderful job of helping him greet incoming guests. She also made several good suggestions that led to us displaying a good view of M51 from the imager, contrasting it with an eyepiece view that some had earlier. The iconic spiral arms, including the 'bridge arm' to the smaller companion galaxy, were easily visible. Jack Brisban operated the McMath. Ken Ruble set up the club 17.5 inch near the observatory. Don Fohey set up the Cave F7 8" in a position for early views of Mars. He remembers being next to Mark Cray's sister and daughter's refractor. John Manney and other lowbrows set telescopes up in the field at the top of the hill. There were about 100 guest with the last staying till 1:00am.

Monthly Activities Summary (continued)

Peach Mt. Open House August 11th. (Summary of Charlie Nielsen's email report to members.)

It was not a typical open house. The sky cleared enough for good views of Jupiter, Saturn, and Mars, and a few brighter DSO's. The public came early and in large numbers. There was a line out the door of the Observatory most of the time, and a number of people laying outside the building looking for meteors. Charlie saw three Perseids. He saw lightning off and on which was apparently from distant thunderstorms. Only once did he think he may have heard thunder. Around 11 PM Jim Forrester showed Charlie the weather radar of a robust storm approaching. He continued observing another 15 minutes or so as clouds began to come in from the north. They closed down the observatory and informed the large number of people hanging around that we had to ask them to head home. Just as we were finished packing up some rain drops hit our windshields.

Despite what happened he deem the open house a success. The club extracted the most that we could for the conditions and did so for 2 or 3 hours. He estimated 150 guests. Adrian and Joy were the main McMath operators and Don Fohey did the meet and greet and showed people views through our 8" Cave telescope. Also there with telescopes were Jim Forrester and Doug Scobel.

Peach Mt. Perseid Viewing August 12th. (Report by Don Fohey)

Jim Forrester opened Peach Mt. Sunday night for an evening viewing of the Perseid meteors at their peak. My wife Jan and I joined Jim, Barry Wissman and two walk-in's from the road for a night of viewing. The sky was marginal for viewing with lots of moisture in the air. The Milky Way was only slightly visible near the zenith in Cygnus. We did see several bright fireballs and I noticed a few dim streaks that just hinted at the many minor meteors that were just below visibility. It was a nice social evening as we laid on the ground cloth with our head on a pillow covered with a blanket looking up at the sky and talking with Jim and Barry. The conversations were broken with remarks like "Did you see that one to the North" Jan said it was the best meteor viewing evening she had every had and I agree.

Hidden Lake Gardens August 18th. (Summary of Charles Nielsen email report to members.)

Charlie stretched his presentation from his brisk one-hour version to one that took at least 90 minutes. He wanted to fill the gap between that and when we could show the guests objects through our telescopes. Almost everyone stayed till the end and there was an estimated 85 attendees! He presented a lot of material and Kurt did a fine job of adding to it at times.

Outside was a different story. It had clouded up. So much for that prediction of mostly clear! The Lowbrow's did manage to give them some short views of the Moon as it occasionally broke free. As soon as the telescopes were taken down, the sky improve. Saturn popped out to insult us just long enough to rub it in. There was lightening during the event and there was radar indication of heavy rain coming through the Ann Arbor area from the north.

Thanks to the following club members for showing up to help: Kurt Hillig, Don Fohey, John Wallbank, David Cooke, Glenn Kaatz, and D.J. Roberts. Our host, Samantha Edwards, said that several people asked if they would have us return. So we will get another chance, and this is a really nice site.

Member Photo



Doug Bock sent this image in an email to members on July 18th.

Subject: "Emailing: M20 Trifid Nebula 49 x 30 second stack July 17 2018"

"I took another 15 minutes of M20 last night and stacked that data with the July 7th data."



Michigan Math and Science Scholars Program (MMSS)

by Jack Brisbin

Once again the University Lowbrow Astronomers hosted the MMSS program at Peach Mountain Observatory on July 24. A lot of club members have asked what the MMSS program does. The program is offered by the University of Michigan and designed to offer a pre-college experience for high school students interested in current developments and research in the sciences. MMSS are small 15 student classes taught by University of Michigan faculty. Class sessions offer courses from the science departments within the college of Literature, Science and the Arts. Students learn about exciting research in math and science with real time information. If you would really like to learn more, then go to : <http://www.math.lsa.umich.edu/mmss/index.html>

The MMSS Observing session started out with the Weather Wizard Conundrum, cloudy, rainy or clear. As some members were leaving Ann Arbor and driving to the observatory it started to rain.



It stopped raining by the time they got to Peach Mountain and it was still cloudy. When the students arrived it was starting to get less cloudy but not completely clear. We started off in the observatory with a classroom lecture on telescopes by club President Charlie Nielsen.

To turn the Observatory into a classroom with chalkboard we moved the telescopes and other equipment to the north side of the bldg. Then we brought in about 20 chairs for the class and faculty. We repositioned the 24" McMath telescope for better viewing of the lecturer and chalkboard. The humidity lights were turned off except for the one light shining on the lecturer and chalkboard wall. This is the second time we converted the Observatory to a classroom and it is complicated. We may continue to do this in the future.



After the lecture we went outside to do some Observing and the skies cleared up, but we still had clouds that argued with us. We picked up Venus, Jupiter and Saturn and just before we left, Mars coming off the trees on the horizon. We managed to look at some star clusters in between the clouds. The students got a chance to look through various telescopes and the 24" McMath and an understanding of the night sky.

This was made possible by the members who brought their telescope to the observatory and turned the evening into an Observing event.

Charlie Nielsen, Adrian Bradley, Jim Forrester
Shannon Murphy, Joe Velez and Jack Brisbin

Upcoming Events

Astronomy at the Beach (AATB) is the ultimate public outreach for Michigan during 2018. AATB is expected to exceed last year's attendance of 4,000. They are hoping for 70 telescopes. Plan on attending. and bring your telescope.

DATE	EVENT	LOCATION	
Saturday Sept. 4th 8pm	Open House	Peach Mt.	Coordinator: TBD
Friday Sept. 14th 6pm	Astronomy at the Beach	Island Lake Recreation	Public Event., Telescopes are needed
Saturday Sept 15th 6pm	Astronomy at the Beach	Island Lake Recreation	Public Event., Telescopes are needed
Friday Sept. 21st. 7:30pm	Monthly Meeting	Room G115 Angel Hall 435 South St. Street Ann Arbor, MI	Professor Nicolle Zellner, Albion College. Topic to be announced.
Saturday Sept. 29th 8pm to 10 pm	Telescope viewing for guests of LSNC.	Leslie Science and Nature Center	Public Event., Telescopes are needed

**University Lowbrow Astronomers
Meeting Minutes—August 17, 2018**

President, Charlie Nielsen, opened the meeting at 7:37 and introduced our speaker, Professor Ed Cackett, from Wayne State University.

Ed described the LIGO project from the initial concepts to the latest discoveries including the gravitational wave data confirming the detection of binary Black Hole collisions and binary Neutron star collisions. A periodic table was shown that indicated which of these events result in the production of the heavier elements on the chart.

Following his talk, Ed fielded questions from our talented audience.

Charlie presented Ed with a gift card to Zingerman’s restaurant as a thank you from the club.

Business meeting:

President, Charlie Nielsen, asked for Lowbrow telescope support for the Hidden Lake Garden event on August 18. Leslie Science Center has requested an April 27, 2019 event. Jim Shedlowsky will replace speaker Dan Durda for our Oct 19 club meeting. Charlie has been contacted by State Wide Astronomy Night for April 12, 2019, but he was not necessarily in favor of supporting their request for our participation.

VP, Jim Forrester, was absent, but Charlie read his email report:

This summer's observing at Camp Burt Shurly is complete and went quite well. The Camp added an extra week this year, but week 5 of 6 was clouded out. However, we did match last year's total of 500-600 young observers, showing them the Moon, planets and double stars. These sessions are some of the most satisfying on our calendar, and I'm hoping the Lowbrows will show more campers the 2019 night sky. Many thanks to Adrain Bradley, John Manney, Joy Poling, John Causland, Jack Brisbin, John Wallbank, Don Fohey, Abe Oriqat (and family) and especially Brian Ottum for being our liaison with the Camp and getting the program started. (Over the summer, the Lowbrows managed an impressive turnout. Apologies to anyone I've failed to mention.)

Meeting Minutes (continued)

We got a last minute call from the Ann Arbor District Library for help with their August 3 Planet Viewing Night at the Library's Pittsfield branch, just outside Ann Arbor's southwestern city limits. Dave Snyder, Barry Wissman, Adrain Bradley and myself attended. After a paltry turnout of 15 or so last year, hundreds swamped the 2018 event. Library staff stopped counting at 400. And very likely all of them viewed Saturn through my 12.5 inch dobsonian as at least 50 people were lined up at my scope all evening. The Library was unsure of the reason for the attendance spike, but more than one person asked, "Can we see Mars?"

The "Third Annual Peach Mountain Star Party" was not as successful as I had hoped. One night was cancelled due to a tree having fallen across the access road and another two because of poor weather. The remaining 3 nights were poorly attended, surprising as the final night was the height of the Perseid Meteor Shower. The weather, however, was not encouraging as clearing did not happen until sunset and with some very poor transparency. The final night had some remarkable seeing, with views of the planets at 400x.

Astronomy At The Beach, 2018 takes place September 14 and 15. Organization of the observing field is somewhat different from last year and hopefully all of you have received Brian Ottum's email describing the arrangements. My best suggestion is to arrive and set up as early as you can manage. This is the largest public astronomy event of the year in southeast Michigan and hopefully all Lowbrows will attend.

Approximately 1000 people have looked through my telescope this summer. Other members have generated equal, if not more impressive outreach totals. The only reason we've been so successful is because we're Lowbrows and the club as a whole should be proud of its members accomplishments.

The road up the Hill from the North Territorial Road gate is badly in need of repair. Jack has been very good in presenting our needs to Sucilla of the SNRE and the appropriate persons in the Engineering College, but the road is approaching impassibility. My fear is the coming winter will destroy it if repairs aren't made this fall.

VP, Adrian Bradley, was absent, but Charlie read his email report.

He has been involved in many outreach activities, including AADL and at his company's picnic, where he was DJ and set up a scope for solar viewing. He is planning a planet viewing session for his company on August 24. Charlie said that would not interfere with any Lowbrow commitments.

Facebook likes is at about 800. We are getting some visitors who find out about us from the Facebook site. Word of mouth also seems to be bringing in more guests as well.

Newsletter Editor, Don Fohey:

Don has been in contact with Chris Faust, a teacher, who has a science project he would like help with regarding detecting solar flares. Don asked us to support that activity with a club contribution of \$135 for Don's work in building the electronics. The club approved of this expenditure.

Don asked for additional newsletter articles, but said the September newsletter would be published.

Treasurer, Doug Scobel, reported 144 memberships and a treasury of about \$6300. Astronomy Magazine dues are due next week at the club reduction rate.

Observatory Director, Jack Brisbin, reported that the 17.5 battery charger is not working. Doug Scobel will follow up with analysis and replacement as required. Jack and Jim removed the fallen tree obstruction for the road up to Peach Mountain.

Member, John Causland, will perhaps have an ACNO event on August 18.

Member, Brian Ottum, reminded us of the AATB event for Sept 14-15, and distributed flyers about the event.

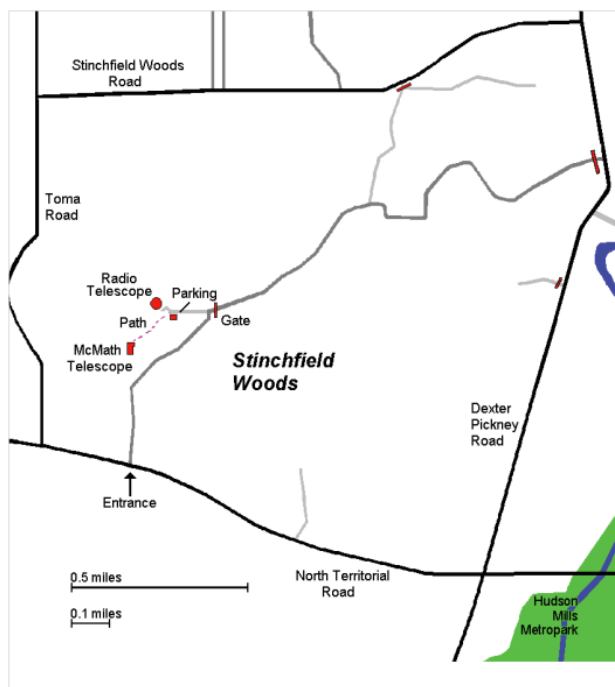
The meeting was closed by Charlie at 9:34PM

Submitted by Dave Jorgensen

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 or \$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
- Larry Halbert
- 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



Member Club



Astronomical League Member Society
#201601, Great Lakes Region

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