



REFLECTIONS / REFRACTIONS

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University Lowbrow  
Astronomers

August 2019

VOLUME 43, ISSUE 8



## Summer Delights

### From the Desk of the Northern Cross Observatory

Doug Bock | Milky Way Nebula | July 23, 2019

**Objective:** This month I decided to image some easier nebula in our Milky Way. These are bright and don't take much integration time to get some decent results.

**Process:** I acquired data on July 7-8, 2019, using the 10" f/8 RC at prime focus, with the ZWO asi071mc one shot color camera.

#### M 20, the Trifid Nebula

From Wikipedia: The Trifid Nebula is an H II region located in Sagittarius. It was discovered by Charles Messier on June 5, 1764. Its name means 'divided into three lobes'. The object is an unusual combination of an open cluster of stars; an emission nebula, a reflection nebula and a dark nebula.

**Distance to Earth:** 5,200 light years

**Radius:** 21 light years

**Magnitude:** 6.3

**Coordinates:** RA 18h 2m 23s |  
Dec -23° 1' 48"

**Constellation:** [Sagittarius](#)

**Did you know:** The nebula's designation in the New General Catalogue is NGC 6514.



The data acquisition was 28 x 60 second subs.



### M 8, The Lagoon Nebula

From Wikipedia: The Lagoon Nebula is a giant interstellar cloud in the constellation Sagittarius. It is classified as an emission nebula and as an H II region. The Lagoon Nebula was discovered by Giovanni Hodierna before 1654 and is one of only two star-forming nebulae faintly visible to the eye from mid-northern latitudes.

**Distance to Earth:** 4,077 light years

**Magnitude:** 6

**Coordinates:** RA 18h 3m 37s

Dec -24° 23' 12"

**Constellation:** [Sagittarius](#)

**Radius:** 55 × 20 ly

The data acquisition was 30 x 60 second subs.

### M 16, The Eagle Nebula

From Wikipedia: The Eagle Nebula is a young open cluster of stars in the constellation Serpens, discovered by Jean-Philippe de Chéseaux in 1745–46.

**Distance to Earth:** 7,000 light years

**Age:** 5.504 million years

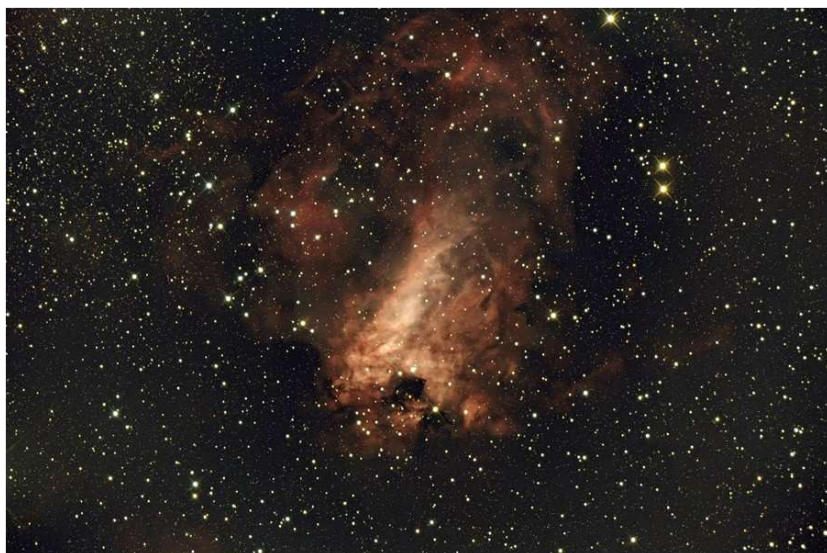
**Coordinates:** RA 18h 18m 48s

Dec -13° 49' 0"

**Radius:** 70×55 (cluster 15) ly

**Apparent dimensions (V):** 7.0 arcmins

The data acquisition was 24 x 60 second subs.



### M 17, The Swan Nebula

From Wikipedia: The Omega Nebula, also known as the Swan Nebula, Checkmark Nebula, and the Horseshoe Nebula is an H II region in the constellation Sagittarius. It was discovered by Philippe Loys de Chéseaux in 1745. Charles Messier catalogued it in 1764. It is located in the rich starfields of the Sagittarius area of the Milky Way.

**Radius:** 11 light years

**Magnitude:** 6

**Coordinates:** RA 18h 20m 26s |

Dec -16° 10' 36"

**Constellation:** [Sagittarius](#)

**Distance:** 5,000-6,000 ly

The data acquisition was 18 x 180 second subs.

## Portable Narrowband Setup - First Light

Federico Spotti email to members June 27th



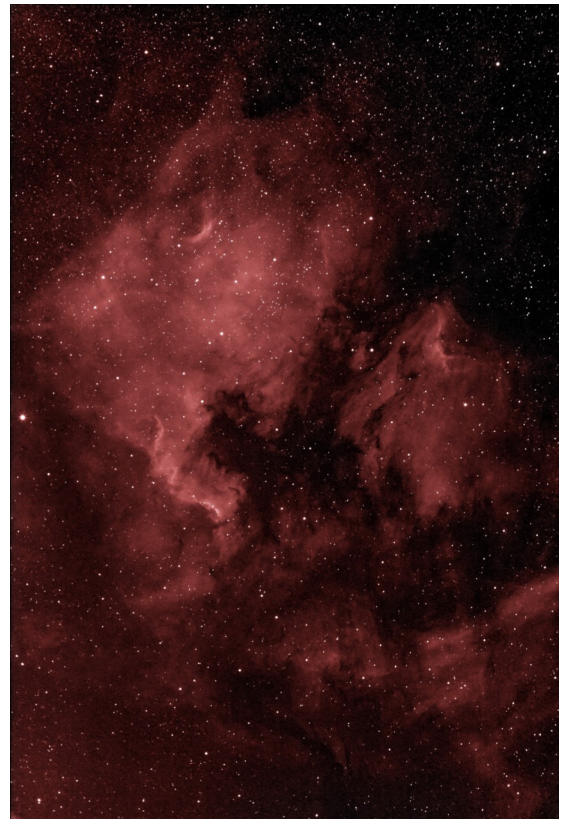
A new step in my search for most portable astrophoto setup.... I paired my ASI178MM to a Rokinon 85mm T1.5 (probably equivanet to a F1.2) cine lens, an astrodon Ha filter and my Skywatcher AZGTi. The entire setup, including pc, screen, lens, mount and batteries is less than 20 pounds, you can easily carry it around with one hand only....

Finally yesterday I had an hour free to test it. Having the Ha filter on North America and Pelican were the most obvious candidates for a wide field setup and this is the result. Image taken from the entrance of my condo (as you can see

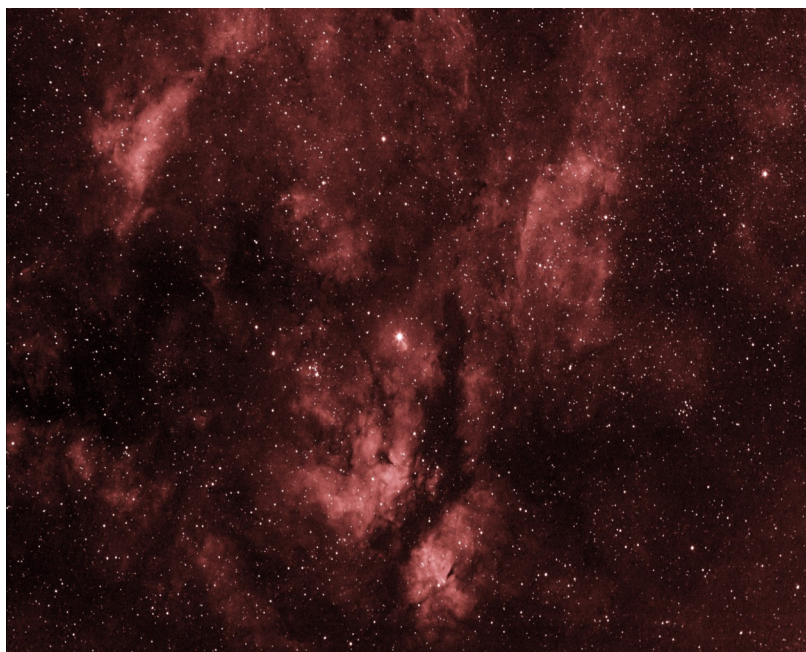
from the image of the setup, the place was almost daylight bright, magic of narrowband imaging!).

40x60 second frames, gain 400, darks but no flats, sharpcap 3.2, unguided, false Ha colour (it's a B&W image)

Same setup, from Sunday night (high clouds ruined a lot of exposures, but I managed to have 50min total of clear sky)



The bright star in the middle is Sadr and the nebula is the Gamma Cygni nebula. Same setup and false Ha colors as my other image...



At this point I'm seriously thinking at preparing a mosaic of the area... I just need clear skies!

Don Swetzig has emailed to members many good photos



M84 Black Eye Galaxy



Veil Nebula NGC6995



M51 Whirlpool Galaxy



M27 Dumbbell Nebula



M57 Ring Nebula



M97 Owl Nebula

## July 10th Brighton Library Event Report

By Don Fohey

The Brighton District Library asked for a program to support their summer reading program "A Universe of Stories". I presented the story of the New Horizon Mission to Pluto. The presentation was followed by telescope observations in the parking lot. The event was attended by some 25 children age 7 and older and their parents. I was impressed that the kids already knew a lot about the planets and asked very well founded questions. One knew the names of more dwarf planets than I did. I had originally called off the telescope viewing due to predicted clouds and then the day of the event asked for telescopes as the forecast had improved. Alex Mangani, Jim Forrester, Chuck Steel and John Wallbank set up telescopes providing views of Jupiter, the Moon, and Albero. The kids and parents stayed for an hour or so, asked good questions and enjoyed the evening.

Carla Sharp, Head of Youth Services, wrote me in an email: "Thank you again for an awesome evening at Brighton Library, we had many positive comments from parents, and "cool" comments from kids. I applaud your outreach efforts to our possible future scientists, engineers, and those in the technology, and mathematics fields. I hope to work together with you and your group in the future. If you would, please pass this email onto your club members, I would appreciate it."

## Open House Report July 27th.

By Don Fohey



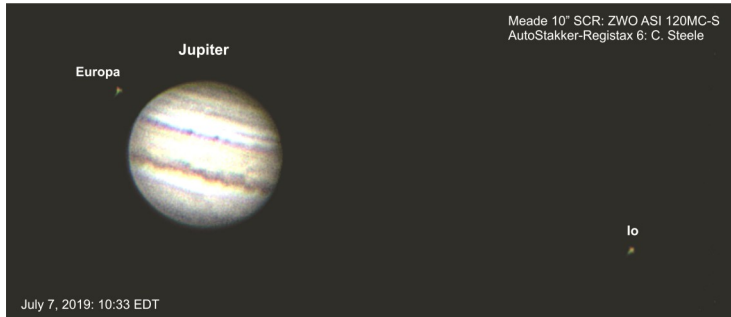
24" looking at Jupiter. Photo by Jack Brisbin



17" Setup with viewers. Photo by Jack Brisbin

This time of year cloud forecasting is a real challenge. I did manage to make the "Go for Open House" announcement before Noon on Saturday. I expected partly cloudy and partly cloudy is what we had. Jupiter and Saturn were prominent most of the evening. Jack Brisbin, Joy Poling and Charlie Nielsen were at the observatory. Views through the McMath delighted many visitors. Jim Forrester set up the club 17-1/2 inch. Mike Radwick and John Wallbank set up in the field near the Radio Telescope to provide views of Jupiter and Saturn. David Cooke and his daughter Rebecca set up mid-field for views near the zenith. I had the CAVE 8 inch set up by the cones at the road providing views to the north and wherever the clouds were not. In the 8 inch we were able to view the Whirlpool Galaxy, The Ring Nebula and the Dumbbell Nebula. New member Chuck Ward worked with Jack to learn the McMath and with Jim to learn the 17 1/2" operation. Viewing was not great, but it was a pleasant evening and the guest all seemed to enjoy themselves. Note: The July 6th scheduled open house was cancelled due to cloudy weather.

### First Attempt Jupiter



Charles Steele wrote in an email to members on July 11th. "This is my first attempt to image Jupiter using the ZTO camera and processing with AutoStacker and Registax. Just amazing to me how images have improved from the days of film to now with digital imaging and computer processing. It is a better image than what we saw through the eyepiece. But no GRS. You only get a 50/50 chance on seeing the Red Eye Express. "

### Jupiter from Backyard



Glenn Kaatz wrote in an email to members on July 12th. "Hi everyone: here's a DSLR image I captured using my 8" SCT in my backyard last night. The seeing conditions seemed good in that I was able to get a pretty clear shot, with the GRS visible. I think I'll try a video capture with stacking tonight and see what happens.

Magnification here was about 100x. I used ISO 100 with a 1/3 sec exposure for the planet, and a 2 sec exposure for the moons. I then merged the two photos in Photoshop. The camera was a Nikon D5200 and I used eyepiece projection to get better magnification than with prime focus."

### Dexter Library Report July 29th

By Don Fohey

Lowbrows Charlie Nielsen, Jack Brisbin and myself were in attendance. Jack was thoughtful enough to bring several different style telescopes to set up in the front of the room in support of the presentation. Charlie presented his very well rehearsed . "How Telescopes Work...But Do You Need One?" presentation. He added comments and jokes that really engaged those present.

Afterward I engaged in a conversation with one gentleman who is considering making a telescope from a 12" mirror grinding kit that he has had for years. He was pleased to know that the Lowbrows had an ATM group and will join the Lowbrows at our August meeting. This is proof that Charlie doesn't scare everyone away.

## Camp Burt Shurly Summary

By Don Fohey

We have had a successful Detroit Public Schools Camp Burt Shurly event every week in July. There are typically about 70 kids. We start about 9:45pm and go to 11:00pm. That gives us five 15 minute periods. Each 15 minutes period a new cabin or group of kids has their turn. Each scope is pointed at a different target and the kids move from one scope to another. It is really rewarding to see the amazement in the kids when they actually see craters on the Moon, the rings of Saturn or moons of Jupiter. Many Lowbrows have shared their time and talents to make this happen. I recall seeing Jim Forrester, Brian Ottum, Adrian Bradley, John Wallbank, Jack Brisbin, Chuck Steele, Dave Jorgenson , Abe Oraiqat, Awni Hafedh, and Doug Bock. I wasn't there ever week so if I missed you I apologize.

It is a little darker than Peach Mt. Several evening we stayed and hour or so after the kids went to their cabins and observed dark sky objects.

## Upcoming Events

### Peach Mt. Star Party

The week of August 25th. Jim Forrester will announce via email which clear evenings during the week he will open Peach Mt. for member observing.

### Astronomy at the Beach Sept . 13th and 14th

DATE	EVENT	LOCATION	
Saturday Aug3rd 9pm	Open House	Peach Mt. Observatory 10280 North Territorial Road	Coordinator: John Wallbank and Charlie Nielsen
Saturday Aug. 10th 3pm—5pm	Salem South Lyon Library Presentation	9800 Pontiac Trail, South Lyon, MI 48178	Presentation by Charlie Nielsen and John Wallbank about how our eyes and telescope work
Friday Aug 16th, 7:30pm	Monthly Meeting	<b>ROOM 2306 MASON HALL</b>	Dr. Richard Teague "Infant Exoplanets"
Saturday Aug 17th 8pm - 11pm	Leslie Science and Nature Center Back- yard Campers	Camp Birkett, 9141 Dexter Townhall Rd, Pinckney, MI 48169	Annual event for urban campers at Leslie Science and Nature Center. We provide a star party if conditions will allow. <b>Tentative do to site Restriction watch email</b>
Saturday Aug 24th 9pm	Open House	Peach Mt. Observatory 10280 North Territorial Road	Coordinator TBD Volunteers Needed.
Saturday Aug. 31st 9pm	Open House	Peach Mt. Observatory 10280 North Territorial Road	Coordinator TBD Volunteers Needed.

**University Lowbrow Astronomers**Monthly Club Meeting Minutes *July 19, 2019 7:30pm*

This month's meeting was our annual July escape from the Ann Arbor Art Fairs to the Eastern Michigan University campus in Ypsilanti. Several million dollars was spent to refurbish the Strong Hall Science Building from the studs out and our meeting was held in the newly remodeled auditorium on the second floor. As per tradition, the meeting was preceded by pizza, soft drinks and cookies. Many thanks to Lowbrow and Sherzer Observatory Director Norbert Vance and EMU for making this delightful evening possible.

President Charlie Nielsen called the meeting to order and introduced the evening's speaker, University of Michigan Professor James A. Slavin who gave a well received talk: "The Exploration of Mercury 1970-2030."

NASA has sent two missions to Mercury—Mariner 10 in 1974-5 and Messenger, which left in 2004 and arrived in 2011. The Japanese and European Space Agencies' BepiColombo launched last October and should begin orbiting Mercury and sending data in 2025.

**Business Meeting**

The club approved the annual \$400 donation to Astronomy At The Beach. This year as last, AATB will be held at Kent Lake Beach in the Island Lake Recreation Area Friday and Saturday, September 13-14.

Member John Wallbank and Observatory Director Jack Brisbin agreed to represent the Lowbrows at the Ann Arbor Hands-On Museum's July 20 celebration of the 50th anniversary of the first manned moon landing, weather permitting.

Vice President Jim Forrester reported the first 4 weeks of observing at Camp Burt Shurly were successful with the session/week schedule met and about 250 kids having looked through telescopes at the night sky.

Observatory Director Jack Brisbin has been recruiting volunteers to scrape the rust off and repaint the Observatory's roll off roof support structure. Let Jack know of your interest and availability. Jack also reminded those present our next Peach Mountain Open House is July 29.

Newsletter Editor Don Fohey made a plea for articles. Get writing folks! Don also reported the July 10 Brighton Library event a success. Don gave a talk to about 25 people about the New Horizons mission to Pluto followed by Lowbrows with telescopes providing views of Jupiter and bright deep sky objects. Don also reported the receiver he built for the St. Paul, MN schools solar event detector was successfully recording data.

Norbert Vance reminded the membership the annual Great Lakes Star Gaze is taking place near Gladwin, MI this coming September 26-29. Following the meeting, Norbert led a tour of his department's new facilities including a machine shop featuring a 4-axis mill, a 3-D printer and other assorted goodies. A fine example of our tax dollars at work.

Submitted respectfully by,

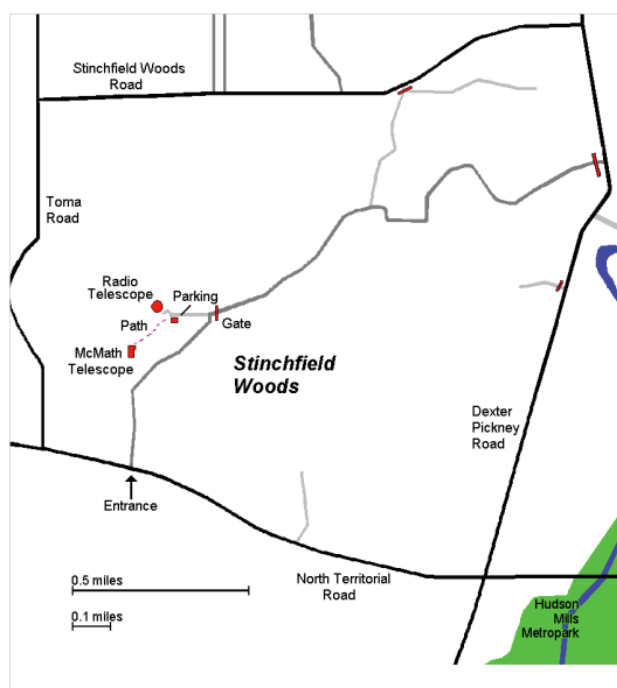
Jim Forrester  
Vice President



### 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](mailto: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](mailto:donfohey@gmail.com) to discuss format. Announcements, articles and images are due by the 1<sup>st</sup> day of the month as publication is the 7<sup>th</sup>.

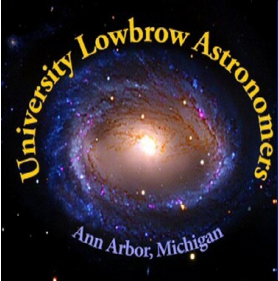
### Telephone Numbers

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](mailto:Lowbrow-members@umich.edu)



## University Lowbrow Astronomers



Member Club



Astronomical League Member Society  
#201601, Great Lakes Region

University Lowbrow Astronomers  
P.O. Box 131446  
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