



Five Super Nova by Doug Bock

On May 12, 2020 I made a run on 5 super nova that range from Magnitude 12.4 to 15.4.

SN 2020 hvp – Magnitude 14.6 - in NGC 6118

SN 2020 fqv – Magnitude 15.4 - in NGC 4568

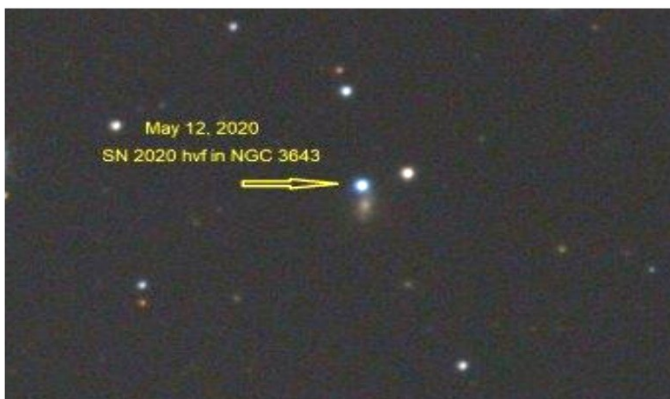
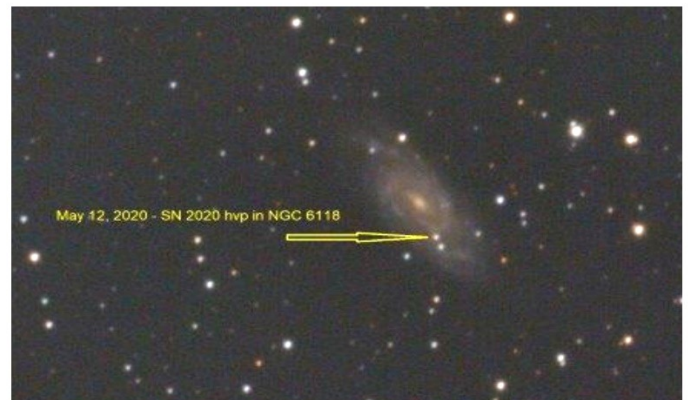
SN 2020 ftl – Magnitude 14.6 - in NGC 4277

SN 2020 hvf – Magnitude 12.4 - in NGC 3643

SN 2020 jfo – Magnitude 14.3 - in M 61 or NGC 4303

Note: color saturation shows a couple of them to be very blue – white

All images taken with the 10" f/8 RC and the ZWO asi071mc PRO camera



Moon, Mercury and Venus

By Jack Brisbin



This time the Weather Wizards got it right, on May 24. The sky cleared up and I decided to try some horizon photos of the planets. I wanted to drive to a close by area away from the subdivision lights. So I ended up at Staebler Farm County Park, located on Plymouth Rd between Prospect Rd and Curtis Rd. in Superior Twp. I have been there during the day and I knew the area had some low unobstructed horizons because it was farm property converted to a county park.

I arrived there about 9:15 pm and started to set up my camera/tripod and my 8 inch reflector just to do

some horizon viewing, when the park attendant drove up and informed me that they lock the park gates at sunset. The attendant did tell me I could set up my camera/telescope in the driveway in front of the gate. I only planned on being there for an hour or two, so I set up in front of the gate. The camera I'm using is a Canon power shot G9X. The camera is programmable, Zoom lens features, Auto focus and Star sense option. I used Sky Safari Pro 6 set to "use current location" for Planet locations and horizon timing.

Venus can be seen above the horizon in the lower right hand corner next to the trees. Mercury is in the center of the photo between the Moon and Venus.



At 9:46 pm Venus is 5 degrees above the horizon, Mercury is 8 degrees and the Moon is 11 degrees.

The brown coloring on the horizon is probably due to seeing and transparency issues, some thin low level clouds. Picture was taken at 10:24 pm and the moon is 5 degrees above the horizon.

No UFO's where photographed



Astronomy Outreach, Despite Social Distancing Measures

By Adrian Bradley

When I first joined the University Lowbrow Astronomers a few years ago, I learned all about the necessity for large mirrors, well-crafted eyepieces, and dark skies to view details in Deep Sky Objects. Depending on the type of object it was and what it was made of, you may also need special filters in order to see the type of light that it emits. For example, NGC 7293 (The Helix Nebula) is one of those objects that is tough to view without perfect conditions and an OIII filter. But with a camera that is sensitive to all wavelengths of light, the Helix's colors can pop out on a screen to be viewed with as little as a 1-minute exposure. The same is true for other nebulas, such as M42/43. The longer the amount of time you expose the object to your camera sensor, the more detail you can capture.

"That's nice," says the observational astronomer. "But I'm fine with my observational equipment." To be frank, observational astronomy has its benefits in an experience less concerned with the workings of electronic equipment and more about viewing DSOs with the naked eye (through the telescope of course). The actual photons emitted from that galaxy, nebula, cluster of stars, or supernova remnant is bouncing off of the system of mirrors in the telescope, through the eyepiece, and right into your retinas. You have seen something that is millions of light years away and impossibly far to travel to with our current technology (in 2020), save for simulations of space travel.

Both technologies (observational and astrophotography) were always viewed as divergent paths that amateur astronomers could choose to follow. Most would focus on one, then the other, but usually not both at the same time.

Enter 2020 and the COVID-19 Pandemic. Due to the nature of this disease, it is no longer a wise option to share eyepieces with multiple persons until modern medicine figures out a way to neutralize it. This does not bode well for shared observation of an object through one telescope, which involves multiple people looking through the instrument via the eyes, while touching or breathing on the instrument. The light gathered into the eyepiece cannot be viewed from a far-enough distance to be considered 'safe'.

However, the general public is not likely to enjoy standing for hours on end waiting for an astrophotographer to compile enough frames of a subject, followed by the final stacking, editing, and other post-processing techniques that are used to create a polished image of a DSO.

One possible answer to this is: live-viewing.

Not long after I joined the Lowbrows, a product became available that did its best to tie together elements of both observational astronomy and astrophotography. CCD camera imaging was not new, but what this product (Revolution Imager) did was to provide a small monitor, a portable battery, and all connections necessary to manage a small 1/3 CCD chip that fit into a 1.25" eyepiece socket. Now you can point your telescope to an object, and whatever it's pointing at will show up on screen. Edit some settings, and it can expose more of an object. If your telescope has tracking, it can even expose colors of the object it is pointing to. Hook your camera up to a computer that has live-stacking software and you can aggregate more data to show someone. And the best part is that it can be viewed at a 'social distance', allowing safe practices to be followed. Once those practices are no longer needed, it still helps the general public by seeing what the object looks like without staring in an eyepiece.

The same concept that the imager uses can be extended to other cameras connected to the telescope. The company PlaneWave has perfected this idea by creating their telescopes to do both visual astronomy as well as astrophotography. While on the high end of the cost spectrum, they are used for professional research as well as imaging for citizen scientists.

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Astronomy Outreach, Despite Social Distancing Measures
Continued

Going even further... live streams of viewing astronomy objects are a great way to make the night sky available to those who are inside their homes and have access to connect to such a stream via computer, tablet, or smart device. All it takes to set something like this up is to have one or more well-placed telescopes set up with a camera feed pushed to the same device that is a part of the live stream. The person streaming the image would switch between an image of themselves and the image brought in by the camera. Or, the person doing the livestream can connect to the stream with two different devices. One device would show the camera feed of what's in the telescope, and the other device is used to show the human behind the camera. Our Lowbrow community has a few of it's members who are doing this already, and have become very good at it.

I must mention some of the drawbacks of this technology:

- Adding the camera to the rig also adds the need to make sure it is in focus. If your rig is stationary then you can set it once and need very little in adjustments from that point on. For some telescopes with large focal lengths and large mirrors, cameras would provide a very narrow field of view on an object. Focal reducers are available and would be absolutely necessary to view some objects.
- Tracking is required for this. Otherwise live-view cameras would not gather enough light to see most deep space objects any better than through the eyepiece with no filters. In most cases it would be worse.
- The more 'ease of use' you want in your system, the higher the cost.
- There is also a higher cost of acquiring all of the connections you need, as well as a way to display what your camera is showing in real time.
- The brightness of the screen can ruin night vision. 'Astrophoto' distancing is much further away than 'social distancing', so you would need to take precautions not to blind others with the light from your screen.
- And finally, there is the power requirement. If you already have tracking and are powering it with a battery, you now need another source of power (or a way to tap into that source) to power your camera and monitor or computer.

As mentioned before, our club as well as other astronomy clubs in Michigan (and likely many other states) have members who have overcome these obstacles and are able to share what they are viewing through telescopes or astro-cameras on a screen. They would be leaned on to assist all clubs in doing live astronomy online or at an event where it's important to keep a safe distance between participants.

At the time of this writing, social distancing measures are in place to help combat the spread of the SARS-CoV-2 virus that causes the COVID-19 disease. Although an earlier form of Coronavirus exists that humanity can control, this 'novel' form of Coronavirus goes by the same name and is often used to refer to either the virus itself, the disease it causes, or both. While the world's top disease experts work furiously to create and test a vaccine for this virus, the number of cases may flatten out to the point that social gatherings gradually begin returning. It is easy to assume that safety measures such as masks, gloves, and social distancing where possible, will still be recommended so that cases continue to stay at a sustainable pace by our health system.

Rather than simply cancel events, we have ways to allow the public to view objects from our telescopes at a safe distance, thereby bridging the gap between social distancing and the time that a vaccine is made available to the general public. With very few social events available to be done, amateur astronomy is one of them that can and should use current technology to continue sharing the night sky with others.

Crescent Venus—Observed

Doug Scobel



Yes, looking through a telescope eyepiece is still a thing. And surprisingly or not, yours truly did it recently! I kid you not. During our May 15 online meeting, I think it was Norb Vance who reminded us that Venus was swinging between us and the sun, becoming a thinner and thinner crescent day by day. But he also warned that it would disappear in the sun's glare within a couple weeks, so if we want to see it then we'd better get while the getting was good. That Saturday (May 16) evening's sky was pretty clear, except for a nagging cloud bank to the northwest. Undaunted, I dragged my neglected Mars Scope (an 8-inch f/8 Newt that I built for the Great Mars Opposition of 2003) out of the basement and set it up in my driveway. It took a while for the clouds to drift out of the way, but after they did, I was treated to some really good views of our

sister planet. Yes indeed, a very nice, thin crescent. It was high enough in the sky and the atmosphere was steady enough that I could push the scope to about 275x and still get a clear image. I was even able to get my wife to come out and take a look. I used my cell phone to take a voucher pic of the scope and a so-so afocal pic of Venus through the eyepiece. Here they are, in case no one believes that I got a scope out and actually looked through it. But yes, it really happened! Thanks for the heads up, Norb!



Celestron StarSense Explorer, Update

By John Manney

Last month, I described Celestron's new smartphone-based system for aiming a telescope.

Since I submitted my previous article, I got more experience with it. I have found that accuracy is a bigger problem than I thought. In fairness, Celestron has cautioned that it is not accurate enough for big scopes. It is targeted at the "beginner" market, so we shouldn't be too critical when we are using it for another purpose.

My main problem is that calculated scope position constantly changes. The varied results can differ from each other by more than $\frac{1}{2}$ degree. I take a guess at which reading is correct and move the scope to that point. If the object is not inside my field of view ($\frac{1}{2}$ degree), it is usually nearby.

I am wishing for a new version for more advanced users. Celestron is silent on this subject. We may find that the smartphone-based system needs to be replaced with a purpose-built camera and processor which will be compatible with a planetarium app. Time will tell.

Meanwhile, I am enjoying the StarSense system.

My May Observing

by Don Fohey



This spring seems to have had few clear nights. I had been hoping for an opportunity to use my relatively new 14 1/4 inch DOB telescope.

On May 12th I decided to try out the relatively new Washtenaw County Staebler Farm County Park not far from my house. It has a nice parking area, just South of Plymouth Rd and low horizons in most directions. The park has a gate and a sign indicates the park closes at 10pm. I didn't know if they really closed the gate so I decide to try out the site. I had a splendid view of a thin crescent Venus. At 10pm just a some stars were appearing a very nice park service employee arrived. He wished I could stay to look at the stars but explained the park was closed and he was there to lock the gate. I thanked him and quickly packed up and departed.

Sunday May 24th looked like it was going to be clear. Forecasts varied, clouds and a rain shower passed over about dinner time. The Clear Dark Sky Chart put a cloudy patch over Lake Hudson. I looked at the GOES-East Satellite Sector view and it looked like the sky was clearing and the clouds would be staying in Ohio. So with a last minute decision, I packed up and started the hour and a half drive to Lake Hudson

I arrived as Joy Poling was setting up her new 12". We set up on the concrete pad, she on one side and I on the other. It was nice to have another observational astronomer to share the evening with even if we wouldn't be sharing eyepiece views. A young man named David was there to meet up with someone who was to teach him how to take star photographs. He was fascinated by our DOB telescopes and wonder what we would be looking at. He seemed perplexed that we would not be taking photographs and would just be looking with our eyes (eye). His instructor arrive and they moved down the parking lot a bit to give us a dark space. Adrian Bradley arrived and set up near them to attempt some circumpolar star trail photography. After dark, every 20 minutes or so, someone would drive a car with headlights into the picnic area, drive around the turnaround and leave. Very annoying to Joy and I, and I am sure destroyed some of the astro-photographers time exposures.

It was disappointing that the Moon, Venus and Mercury were below the tree line in our location. It was dark by 11pm and the first object on my list were the Antenna Galaxies (mag.10). They were bright and easy in my new telescope. I had seen them before thru Mark Deprest's telescope some years ago and it was rewarding to see them again. The May issue of Sky and Telescope had an article by Ted Forte tiled "May's Galaxy Cascade". I had made a Sky Safari list of the 16 objects and started down the list. Time was slipping away and I stopped logging sightings and just started hopping from one old favorite to another. I was seeing detail in M101, M51, the Cocoon and others that I had not seen before with my smaller telescope. Neither Joy or I was able to see magnitude 7.4 comet 289/Blapain in Leo. I matched star fields but was unable to discern the comet. I didn't think to try for T2.

It was a beautiful evening with a comfortable temperature and no bugs. I spent some time just sitting in my chair staring up at the sky. Just after 1am Joy, Adrian and I started packing up. I had a great evening! I was home and asleep by 3am. A 9am waking provided me with 6 hours of sleep which was enough to enjoy a nice Memorial Day.

Comet T2 and Coddington's Nebula

By Briand Ottum Ph.D.



Brian Ottum Ph.D. wrote to member email on Wed, May 27th. Subject: "Comet T2 and Coddington's Nebula Last Night." "Nice contrast between green comet and blue nebula."

Upcoming Events

Note June thru September Open House and other events have been canceled.

DATE	EVENT	LOCATION	
Friday June 19th. 7:30 pm	Monthly Meeting	By Video Conference. Instructions will be emailed to members,	Ken Bertin speaking the science an- imations works of Max Fleischer

University Lowbrow Astronomers

Monthly Club Meeting Minutes

15 May 2020, 7:35 pm, Individual Live Connections via conferencing tools

After some chatter to allow for late arrivals, President Charlie Nielsen called the meeting to order and introduced our speaker.

Speaker

Who

David Cinabro, Chair of the Astronomy Department at Wayne State University

Subject

Zowada Observatory

A Q&A session occurred afterward with audience members using multiple formats to ask questions. Charlie thanked our speaker for the presentation.

Business Meeting

Name	Topic
Vice President Adrian Bradley	This year Astronomy At The Beach will be a virtual event. Similar to the star party Brian Ottum held (https://youtu.be/E3uZQQ-Fvns) on May 11 th , 2020. A member asked if there was any possibility that GLAAC might change their mind and was told that at this point, not enough time would be left as it takes months of planning to organize an event this size.
Vice President Jim Forrester	Proposed to cancel all Open Houses through September . Editors have been contacting him monthly to inquire whether or not to publish our Open House dates on Local Events lists. No objections were voiced. We again returned to this subject later in the meeting. Members discussed that the University currently had canceled all campus activity through August anyway, and upon reopening, department areas with ongoing research would likely be the priority, not classrooms. For the second time, no objections were voiced.
Observatory Director Jack Brisbin	Reports that the ruts in the road look even deeper without the leaves in them and could do considerable damage to the undercarriage of vehicles not designed with extra ground clearance if a tire were to slip into one. Jack explained that the ruts could likely be avoided if navigated carefully. Argo Navis settings are still holding. Observatory looks good. A member asked if the observatory painting projects planned for this summer could still be accomplished if we were to limit exposure by having a smaller crew than last year. Jack replied it is still possible but later in the year after summer, or when the Corona Virus Restrictions have been reduced.
Various	A reoccurring theme throughout the meeting was the desire to have internet service on Peach Mountain. Many members discussed past workarounds and the results they had. Also, various new ideas were proposed. Was left for further consideration.
Treasurer Doug Scobel	Report by email: 151 memberships \$7532.00 in the treasury Astronomical League renewals are coming up end of June so I'll be sending out emails regarding that. Annual dues are still \$7.50 AFAIK.

Addendum

Special thanks to this evening's conferencing videographers and moderators: Jeff Kopmanis and Adrian Bradley. About 45 devices attended tonight's virtual meeting.

Adjourned

9:05 pm

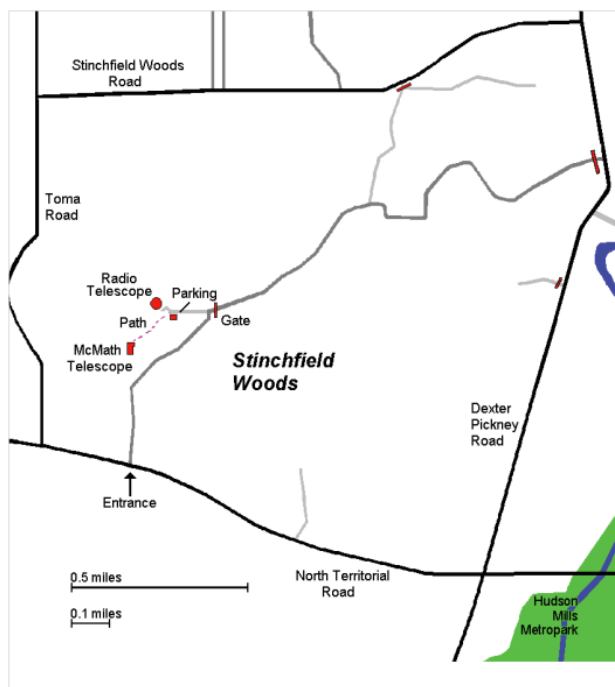
Minutes were taken and transcribed by

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

Annual dues are \$30 for individuals and families, \$20 per year for students and seniors (age 55+) and \$5 if you live outside of the Lower Peninsula. Membership entitles you online access to our monthly Newsletters and use of the 24" McMath telescope (after some training). A mailed copy of the newsletter can be obtained with an additional \$18 annual fee to cover printing and postage. Dues can be paid by PayPal (contact the treasurer to find out how) or by 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 \$65.90/2 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.

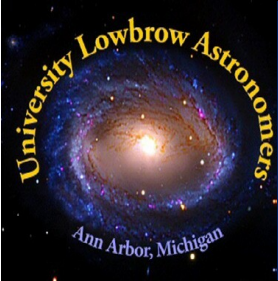
Telephone Numbers

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	Jim Forrester (734) 663-1638
	Joy Poling
	Dave Jorgensen
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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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