



Elephant's Trunk Nebula (IC1396)

By Awni Hafedh

(extracted from an email to members on October 26th. 2018)



Final result of processed Images.

The Elephant's Trunk Nebula (IC 1396) is a concentration of interstellar gas and dust within the much larger ionized gas region located in the constellation Cepheus about 2,400 light years away from Earth. I had the chance to drive to Delaware Park which is located in Palms – Michigan. Dark sky map has this park in the Blue to Dark Zone. The stars there are simply mesmerizing, the only down side is towards the South where you get USA-Canadian border light pollution and towards the West where there is a tree line, other than that it's beautiful. I decided to capture the Elephant's trunk nebula which was almost straight up, and managed to capture 30 Subs 120sec each for all (Ha, OIII and SII) filters, everything went smooth with no clouds and perfect clear sky.

[Continued next page](#)

Elephant's Trunk Nebula (IC1396) continued

At this point I usually drive back home super tired, the sun is burning my sore eyes. Once I reach home I carry everything inside and go straight to bed. If I have to go to work, I'll take a one hour nap and then hit the road to work. That is the story of my life and some will say that's crazy. The rewarding part starts when you stack the images together and work slowly with image processing to produce the final image.

This process usually starts as follows:

- 1) Calibrate each sub with the correspondence master bias, dark and flat frames.
- 2) Align and stack the calibrated subs. The final results will look as below for each filter.



The next steps to create the final image are as follows:

- 3) Match the background of each frame to the other by running linear fit process in PixInsight, or by simply playing with curves in Photoshop and try your best.
- 4) Assign each of the narrowband filter frame to a color channel and combine it. To create the Hubble Palette effect you assign (Ha=Green, OIII=Blue and SII=Red) and combine them to create the RGB image.
- 5) At this point you start playing with curves and levels, color saturation and mapping to create the final image that satisfy your artistic need.

The below website will give you a very nice tutorial whether you are using PixInsight or Photoshop.

<http://bf-astro.com/hubblep.htm>

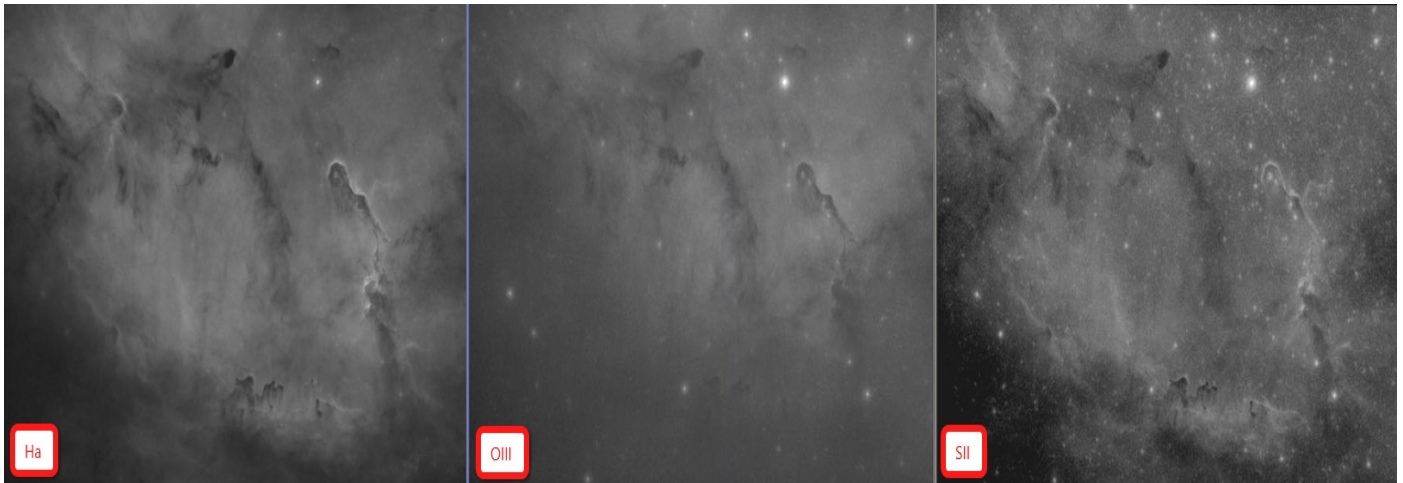
<http://www.lightvortexastronomy.com/tutorials.html>



At this point you will probably end up with an image that looks like what you see to the left, which frankly speaking, looks amazing. Most of us will call it done and start showing it off. But for some with OCD like me, you know you can do better so here is the trick. After you are done with the stacking process you can try to remove all the stars from the image (there are a lot of tutorials on the Internet that will describe in details how to do so) and then go ahead and combine the images together to create the RGB frame. After you are done with the curves, levels and color saturation, you can simply bring back the stars by adding only the Ha frame to the image. It's as simple as adding another lighting layer in Photoshop. Play with the opacity until you are satisfied.

Continued next page

Elephant's Trunk Nebula (IC1396) continued



Stars removed from filter images

The final image will simply bring up the WOW effect, I really hope that you like the information above and will be useful.
 (Editor: The final image is on the cover page)



Federico Spotti wrote in an email to members on Dec. 9 2018

“I was at Lake Hudson but left just when you arrived. This is a quick processing of the data I took of M45 (just over one hour, enough to bring some nebulosity, but still a bit of a noisy image).

Thanks to Awni for suggesting the target!

(skywatcher AZGti, Borg90FL@F4, Asi294 Pro, captured in sharpcap, master light and master dark subtracted in real-time and stacked... Post process in startools and Photoshop) “

Crab Nebula (M1)

By Doug Bock

(extracted from an email to members on Dec. 9 2018)

The Crab Nebula, Messier 1 (M1, NGC 1952), is the most famous and conspicuous known supernova remnant, the expanding cloud of gas created in the explosion of a star as supernova which was observed in the year 1054 AD.



M 1 - Crab Nebula 12/08/2018

- 12 x 300 seconds.
- 10" f/8 RC
- ZWO asi071mc cooled to -5C
- gain of 300
- Northern Cross Observatory

Working with Frankenscope

By Clay Kessler

(extracted from an email to members on January 1, 2019)



M33

Well - the weather guessers promised clear sky on Sunday until about 1AM Monday morning. Needless to say that didn't happen! I was determined to get out and I started to get some luminance frames of the Helix Nebula. Clouds started encroaching on that part of the sky very quickly and I was only able to determine that the object fits the frame with this 5" f7.5 scope very well.

Once the clouds appeared I switched to M33. Again I had to deal with clouds pretty quickly but I was able to salvage some frames. Today I was able to grab flat frames and I did a quick process of the set. I need a lot more luminance frames, some H-Alpha and, of course, color frames but I got something useful.

This shot has been stretched WAY more than I would usually would but I wanted to get some idea of what detail was available in the frames. The shot is super noisy due to the few frames and the heavy stretch bit it does show the promise of the system I can only hope I get the rest of the frames before spring.

I am really glad I built Frankenscope!

Andromeda Galaxy (M31)

By Brian Ottum Ph.D.

(extracted from an email to members on October 21th. 2018)



This was taking with modest equipment:

- Canon DSLR
- 200mm telephoto
- Tripod
- Small motor drive
- Dark sky in northern MI
- 141 x 1 minute exposures taken in late September.

Photo and shooting details available in the instagram post:

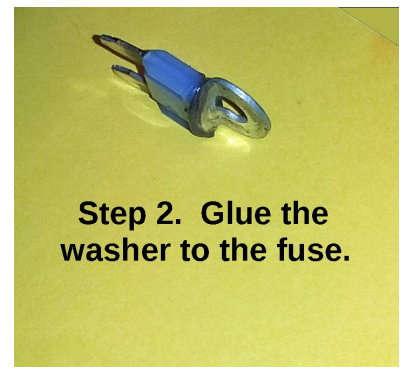
<https://www.instagram.com/p/BpM2jRLnluP/?hl=en&taken-by=astropicsdaily>

"Lowbrow Fix" by John Manney



At star parties, vehicle lighting systems can be troublesome because they are easy to activate by mistake. One way to take control is to pull the fuse or fuses from the offending circuits.

Some fuses are easy to reach, while others are close to impossible. Even for the easy locations, finding the correct fuse is not always easy. For my Ford Fusion, the fuse panel is behind the instrument panel, above the driver's feet. It can't be seen, even in the daylight. I have had good success with the following fix: Glue a handle onto the fuse! I bent some small



washers and glued them to the fuses. I used JB Weld, but other brands ought to be OK. With the handle in place, it is easy to find the fuse, and it is easy to get a grip to pull the fuse. One problem with this approach is that you may shut down more systems than you want. In my case, the dome light is on the same circuit as the power windows, and a bright green warning message appears on the instrument cluster.

January Special Election

Charles Nielsen wrote in an email to members on Dec 24, 2018

“As you may recall, Vice President Larry Halbert has moved to California. If you are reading this Larry; I hope it is going well for you out there. According to our By-Laws, we should hold a special election to fill the vacancy. I will do this at our January meeting, which means nominations are now officially open. Past Treasurer, Liz Calhoun expressed interest in being a VP someday, and therefore she was nominated by Jim Forrester, and I seconded that nomination. If anyone reading this that is a paid up member would like to run, or if you know someone in the club that you would like to see run...now is your chance to do a nomination, even if that is for yourself. “

Lowbrow Library Discontinued

The Lowbrow Library located in the upper level of the Footprints shoe store on Main St is being discontinued. John Causland brought a group of the books to the December meeting and they were offered to any who would like them. Perhaps 40% of the books were given away. John will bring the rest to subsequent Friday night meetings for member selection.

Upcoming Events

DATE	EVENT	LOCATION	
Friday January 18, 2019. 7:30pm	Monthly Meeting	Room G115 Angel Hall 435 South St. Street Ann Arbor, MI	Professor Fred Adams Ph.D. LSA Astronomy U of M
Begins Sunday January 20, 2019	Lunar Eclipse	To be Determined	



AdrianBradley wrote in an email to members on Oct16th.

“This was the best image out of about 10 that we took of the 1st quarter. Taken with a Canon EOS 30D and Abe’s 8” SCT. A little post processing to make the craters and seas more prominent.

We shot this after the Westland Library event winded down... right before the lights came on around 9pm.

ISO was around 800, shutter speed 1/350”, aperture of scope was f/10. “

University Lowbrow Astronomers - Meeting Minutes

University Lowbrow Astronomers – Meeting Minutes – Dec. 21, 2018

President Charlie Nielsen opened the meeting at 7:38 and introduced our speaker, Fred Schebor, a former President of our club.

Fred gave us a music and slide presentation entitled "The Artsy-Meaningless Slide Show" which showed photos of early club history, club events, and astro photos, all done by Lowbrow members. It was great fun. The audience nearly filled Room G115.

A short break followed Fred's presentation.

Business Meeting

- President, Charlie Nielsen, reminded us of a request from Clinton High School to do a presentation to them between Jan 7 to Jan 18. Charlie asked the members if anyone could do this presentation. Charlie also mentioned that our VP, Larry Halbert, has moved to California. So now we need a replacement. Liz Calhoun has submitted her name as a VP candidate. Charlie said that our January meeting would include the election of a new VP.
- VP, Adrian Bradley, sent a note to the coordinator of Rolling Hills Park, Hannah Cooley. We may be able to attend one of her camping events like we did 2 years ago. He also mentioned that he is working on a Newsletter article regarding the club member activity about Comet 46P.
- Newsletter Editor, Don Fohey, asked for Newsletter articles. He suggested that topics might include astronomy equipment that we received as Christmas gifts. He also suggested that if you like a newsletter article send an email to the author telling him that you enjoyed it.
- Webmaster, Krishna Rao, reported that all of our websites and social media sites are up to date.
- Observatory Director, Jack Brisbin, reported that a "heat box" has been put in place at the observatory to keep the McMath Argo-Navis electronics and SKyFi wireless adapter warm during the winter. He also reported that he met with the Optical Society of Ann Arbor. They would like to meet at one of our Open House events during 2019.
- Treasurer, Doug Scobel, reported a membership of 152 and a club treasury at \$7145.
- Newsletter Editor, Don Fohey, reported that the low frequency detector he made for a science teacher at Gordon Parks School has been very "noisy". Jim Shedlowski has put him in touch with Tom Hagen who will help him with the receiver and antenna.

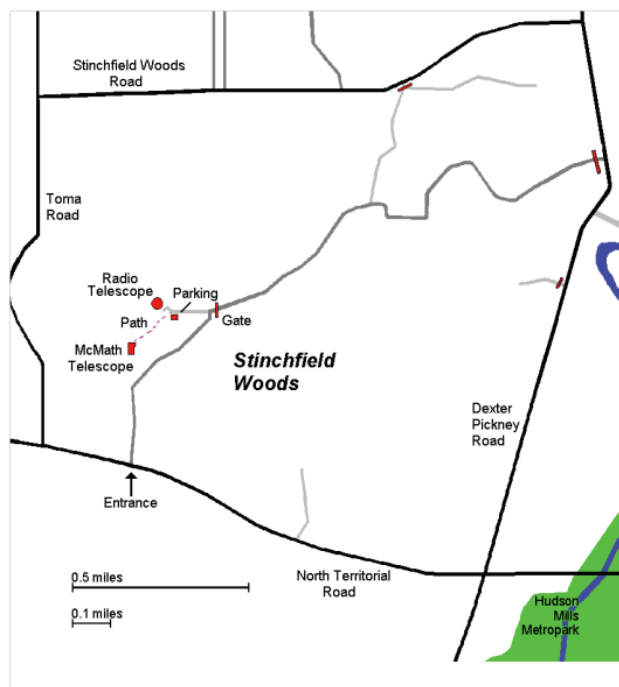
Charlie closed the meeting a bit after 9:00 PM.

Submitted by VP, David 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

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

STAMP