



# ***Harford County Astronomical Society***

*2015 Monthly Newsletter*

*Vol. 42 Issue 11--- November*

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*HCAS is an affiliated member of both the Astronomical League and the Night Sky Network*

This is an official publication of the Harford County Astronomical Society

Please go to our website for the latest updates for viewing schedule changes, and Public Outreach Events

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## Harford County Astronomical Society Executive Committee and Board Members

Please feel free to contact these members at anytime with your concerns.

### *Executive Committee:*

*Robert (Bob) Kesler*..... President

***OPEN*** ..... **Vice President**

*Tim Kamel*..... Treasurer

*Rick Fensch* ..... Secretary

*Sitting Members of the Board:*     ***2 OPEN POSITIONS***

Tom Rusek     Larry Hubble     Mike Talbard

Dave Jayroe     Tim Phelan

*Technical Advisor to the Board: (Lifetime Standing)*

Mark Kregel

*Astronomical League, Night Sky Network coordinator:*

**OPEN**

## *HCAS MISSION STATEMENT*

- **HCAS IS A GROUP OF PEOPLE FROM VARIED BACKGROUNDS OF ALL AGES BOTH MEN AND WOMEN WITH A COMMON BOND, THE LOVE OF ASTRONOMY. HCAS IS ASSOCIATED WITH THE HARFORD COUNTY COMMUNITY COLLEGE ( HCC ) AND HAS THE EXCLUSIVE USE OF THE OBSERVATORY AND ASSOCIATED MEETING ROOMS.**
- 
- **HCAS MEMBERS ARE FRIENDLY, AND WE WELCOME ANYONE WITH AN INTEREST OF ASTRONOMY TO JOIN OUR RANKS. A BEGINNER OR ADVANCED OBSERVER AND OR AN ASTRO-PHOTOGRAPHER. HCAS IS COMMITTED TO THE PEOPLE OF HARFORD COUNTY TO ASSIST AND AUGMENT LEARNING AND INTEREST IN ASTRONOMY, AS WELL AS PROVIDING STRONG, ALL VOLUNTEER OUTREACH PROGRAMS TO SCHOOLS, CLUBS, AND OTHER INTERESTED ORGANIZATIONS**



## **Goals for HCAS**

- 1.- PROMOTE THE INTEREST AND LOVE OF ASTRONOMY FOR THE PEOPLE OF HARFORD COUNTY, MARYLAND.**
- 2.- ADVOCATE FOR DARK SKIES AND FIGHT LIGHT POLLUTION AND LIGHT TRESPASS.**
- 3.- ENGAGE WITH SCHOOLS, CHURCHES, SCOUTS AND OTHER GROUPS TO EXPAND KNOWLEDGE AND INTEREST IN ASTRONOMY.**
- 4.- ESTABLISH AND MAINTAIN AN ATMOSPHERE AT THE OBSERVATORY WHERE EVERYONE IS INCLUDED AND INVITED TO JOIN AND SHARE ASTRONOMY BY VISUAL OBSERVING AS WELL AS ASTRO PHOTOGRAPHY, REGARDLESS OF SKILL LEVEL OR EDUCATION.**



This newsletter is an official publication of :

Harford County Astronomical Society

P.O. Box 906

Bel Air, Maryland 21014

For any articles and or pictures you would like to submit to the newsletter for consideration for publication

Please read the following :

It is strongly suggested that all articles be submitted in a “Word” document and sent to the newsletter email address at: [hcasnewsletter@gmail.com](mailto:hcasnewsletter@gmail.com)

Articles and pictures will need to be submitted by the deadline. The deadline for each monthly issue is **NO LATER THAN** the third week of each month.

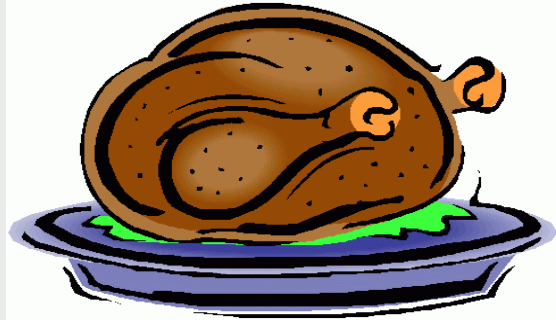
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Any address changes should be brought to the attention of the editor given above. Any complaints concerning any content of this newsletter should be brought to the attention of the editor promptly.

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*Upcoming Club  
Events this Month*



*HCAS Open House:*

Saturday, November 21st @ 6:30 pm At the Observatory ,

*HCAS General Meeting:*

Thursday November. 19<sup>th</sup> @ 7:00 pm in the classroom

*HCAS Board of Directors Meeting :*

Thursday November 19<sup>th</sup> @ 6:30 pm in the classroom

## Super Moon / Lunar Eclipse

Hello everyone. I hope all of you were able to view some of the eclipse last month. I know not all of us were lucky enough to witness the entire event. This was my first lunar eclipse that I actually observed or photographed. A few years ago I didn't pay any attention to these things. I loved space and astronomy but just wasn't into this hobby. Since I began paying attention I've missed the last few lunar eclipses due to the times that they occurred. Since this one was happening on a weekend and starting around 8pm I was really looking forward to catching it. But as the day drew closer I actually didn't plan on seeing any of it. All of the weather reports were suggesting clouds for the entire night. But just incase, I had all of my gear ready to go sitting just inside my slider door, and I kept a watch on the cloud cover as we approached the eclipse. Near 8pm cloud cover over me started to become scattered so I thought there may be hope. Once I noticed Earth beginning to block light from the moon I got excited and it was game time. I ran out and set everything up in about 20 minutes. It took some time to get my polar alignment down because Polaris was blocked by clouds for a while. While waiting for Polaris to pop out behind the clouds I was observing the eclipse through my binoculars. It was really neat because clouds were still hiding the moon every once and a while. Once Polaris popped out I was able to polar align, I then did a quick 2 star alignment and slewed to the moon. *And I didn't forget to set the scope to lunar tracking!* I had no idea what kind of exposures settings to expect because I didn't quite know how dark the moon was going to get. So I had to do my trial and error quickly since the colors and luminance were changing so rapidly. I have one camera but wanted 2 types of images. I was looking to get close shots of the moon through my 6in SCT but also some wide field images through my 70-200 lens. I had seen a few shots on line where you could see stars surrounding the moon. So I figured it was going to get pretty dark and I should try to get some stars myself. I piggy back my 70-200 lens on my scope nearly every time I go out, so I'm very used to that setup. I just had to gently swap the camera back and forth between the two lenses as the eclipse was happening. Turned out to be easy and really quick to do so. Here is a quick cell-phone snap of my setup followed by some images.





Here is my first image for the night. You can see clouds were still present and the moon was already completely eclipsed. Only moments later all of the clouds were gone and it was very clear! This one was the wide field through my 70-200.





**I then swapped over to the scope for this close up!**



**This was at its darkest point. This image was 8 seconds at ISO 800! That's dark!**



The following is my favorite shot. I also have not seen anything like it on the web. I hope I'm not the only one capturing this. In this shot you can see Earth moving out of the way. The left side of the moon is in direct sunlight. The right side is in shadow where only refracted long wavelengths of light are illuminating the surface. The cool part is on the transition line where the blue/purple light can be seen. I'm not positive on all of the "whys" with this, but it looks like this area is the higher wavelengths of light that are passing right through our atmosphere. Very cool! The large backwards C shape that can be seen in the middle of the moon is an artifact. It's light flaring. The sun lit side is so much brighter than the rest of the image that the light bounced around in my Schmitt telescope and created that shape. I was able to produce this image by taking different exposures and combining them into what is called an HDR image.



Here are the 6 images that were used to create the HDR.





I hope you enjoyed! If you have any questions about the photos please email me

at [richardfensch@gmail.com](mailto:richardfensch@gmail.com)

Rick

WELCOME NEW MEMBERS and  
Returning Members



Please **WELCOME** the following new members that have joined the club:

*Christos Ampatzis & Family*

*Ladonna Burleigh & Family*

*Doug Heeter*

*David Schenck*

And let's **WELCOME BACK** the following members:

*Jason Mills & Family*

*Mark Matysek*

# Lunar Eclipse

Tim P.

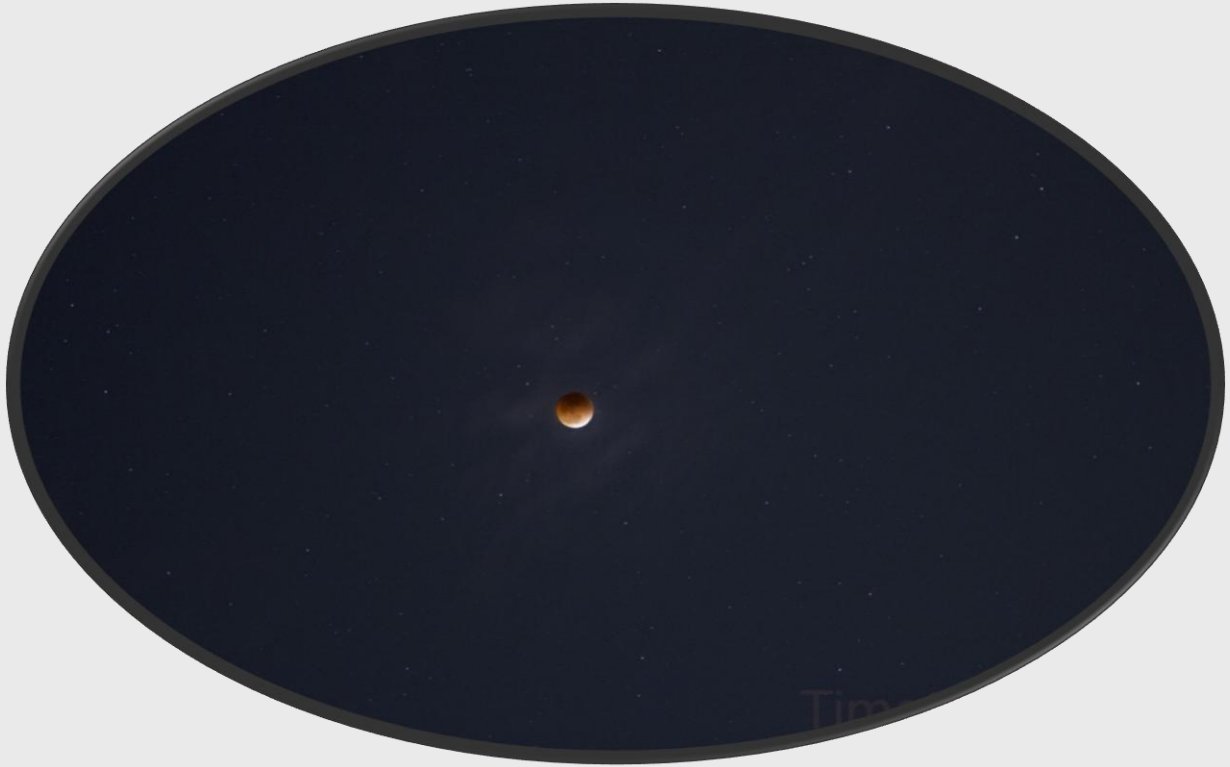
On Sunday September 27, 2015 we had the final of the “tetrad” of total lunar eclipses spanning a two year period. The Board of Directions decided the Thursday before to have a formal club event at the observatory for any guests who wished to show up. Larry posted the event to the website and Tim Kamel, Paul Sokolowski, and myself went up to the observatory. I arrived at the observatory around 7:40 pm and Tim and Paul were already there. The moon had just peaked over the tops of the trees in the east and that part of the sky was cloudless except for a thin layer of high, wispy clouds. We had intermittent gaps in the clouds through which to view the various stages of the eclipse.

We had eight guests show up in total which isn't bad considering we didn't advertise the event until two days before. Two of the guests were actually members but I can't remember their names. Tim K. and I had telescopes and Paul had a pair of binoculars. I was planning on shooting the eclipse through the club's 80mm refractor but I brought the wrong T-ring for my new Canon (I brought the Nikon adapter!). I took images with a 24-70L f/2.8 lens I rented from [www.lensrental.com](http://www.lensrental.com) and the camera was piggybacked on the scope.

All in all we had a good time viewing the eclipse. Around 11 pm the sky cleared up completely and we got to view the last 20 minutes of totality with perfectly clear skies. It was neat to see how much darker the sky got when the moon was in the Earth's umbra. The image I took kind of reflects that. It is a composite of two images. The background sky is a separate exposure to get the stars to show up and the moon was layered onto the background sky from a second exposure.

Unfortunately there are no more total lunar eclipses in North America until 2018 I believe. However, I am now turning my attention to planning for the total solar eclipse in August 2017! You want to be in the path of totality!





**Mr. Jim O'Leary**  
**Maryland Science Center**  
**Oct. 22, 2015**

Jim O'Leary, has been serving the Maryland Science Center (MSC) in numerous functions for more than 30 years. He is the MSC's lead space science and astronomy specialist. He has produced dozens of programs for MSC's Davis Planetarium, which have also played in planetariums worldwide. He has been recipient of NSF, NASA and NOAA grants for production of space and Earth science programs, and was awarded the NASA Excellence in Outreach Award.

A current NASA grant, partnering with Heliophysics researchers at NASA Goddard Space Flight Center, is producing education professional development and creation of library exhibits on the topic of the Sun and space weather. He has worked with the Space Telescope Science Institute in Baltimore on a number of education initiatives, including planetarium program production and exhibit development. With NASA, he has managed four live conversations between Baltimore City students and astronauts aboard the International Space Station and the Space Shuttle, and has organized multiple astronaut appearances at MSC. Jim is a popular lecturer on space science topics and regularly appears on radio and TV to explain topical science stories.

He hosted a radio program for 12 years on the local NPR affiliate, examining the latest developments in space science and astronomy. Jim talked to HCAS about his experience traveling to Chile as part of the Astronomer in Chile Educator Ambassador Program.

His presentation was very informative and educational. He offered many wonderful images of the trip and excellent stories about his visits to numerous observatories and observing platforms. We were most grateful to Jim for his time and effort to visit HCAS.

## Solar System this Month

November 2015

The following information is for viewing the Solar System this Month

Any and all feedback on this, or if you would like to add to it for next month

Then your input will be appreciated. Just send your info over to the Editor at the newsletter.

### Planets this month November :

*Mercury* – Not Visible this month

*Venus* ----- Low in the *SE*, in morning twilight

*Mars* ----- Rises in the *E* approx. 3am / visible in *SE* near dawn

*Jupiter* -- Rises approx 2am in *E* / high in the *SE* at Sunrise

*Saturn* ----- Not Visible this month

### Moon Phases this month:

Last Qtr. ----- Tuesday November 3 rd

New Moon ---- *Wednesday November 11th*

First Qtr. --- *Thursday November 19 th*

(Lunar Straight Wall is visible on Thursday November 19)

FULL MOON – *Wednesday November 25 th*

Hope you enjoyed this month's issue, stay tuned for next month

Let's all try to have a very safe and

Happy Thanksgiving !!!



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