

HARFORD COUNTY ASTRONOMICAL SOCIETY

MONTHLY NEWSLETTER



VOLUME 40 ISSUE 10 OCTOBER 2013

<p>PUBLIC OPEN HOUSE SATURDAY, OCTOBER 12TH AT 7:00PM & NEXT MEMBERS' OBSERVING NIGHT SATURDAY, NOVEMBER 2ND HCAS OBSERVATORY</p>	<p>BOARD OF DIRECTORS MEETING THURSDAY, NOVEMBER 14TH, 6:00PM & GENERAL MEETING THURSDAY, OCTOBER 17TH AT 7:00PM HCAS OBSERVATORY CLASSROOM</p>
---	---

Please check our website for possible schedule updates and changes
<http://www.harfordastro.org>

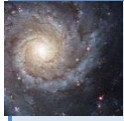
and our Facebook page <http://www.facebook.com/HarfordAstro>



<http://astroleague.org/>



<http://nightsky.jpl.nasa.gov/>



GENERAL MEETING MINUTES & INFORMATION

EDITOR'S NOTE: Due to the advancing monthly dates of the HCAS general meetings, the Editor requests that all articles for publication be submitted by the 1st of every month.

MINUTES OF THE SEPTEMBER 19, 2013 BOARD OF DIRECTORS MEETING

BOD meeting attendees:

Gary, Lucy, Tim, Mark, Mike, Jim, Rick, Dave [Presenter]

The list of parts to be ordered has been given to Tim and the parts will be ordered within the upcoming week. All monies to be sent by H.C.A.S. check

E-mail written July 2013 to Sal, his response was that he is passing email on to the Dean; suggestion was "the club" to have trees trimmed, can't do this - suggestion was made take the \$500 from Karen's work and add \$500 from treasury and make 1K donation to help with trimming trees to Sal. Before the club makes any donation to the college for trimming the trees, Lucy made a motion which was allowed and discussed asking that we follow up.

Sal and the Dean to see if anything has been decided as to trimming the trees, Gary read His original email to Sal, and the Board has requested that we add the fact that the Boy and Girls Scouts as well as the Cubs Scouts are now scheduling time to earn their Astronomy Badges. We also need to include that with the bottom flap bolted in place the ecliptic is Now firmly entrenched in the tree limbs, and the "Winter planets" and the "Moon" will be almost impossible to view. We would also like to mention to Sal that the "Wi-Fi" is still not Working, and the new classroom computer is now and has always been "password protected. The donation of \$500. from Karen's employer and a matching donation from the club of \$500. Was discussed and passed, but before making any offer of the \$1k to the College, we are going to wait and see what type of response we get back from Sal.

The motion to send a second email was voted on and passed by the BOD.

A motion was placed on the floor to reimburse Tim for the 2" eyepiece he purchased at the Black Forest Star Party. Tim had purchased a 2" 56 mm eyepiece while up at Black Forest, he suggested the club may Want to buy it to replace the 40 mm that is up in the Observatory. Tim also suggested that if The club did not want to buy it that he would keep it for himself. The Board had a discussion on this and has voted to purchase the eyepiece from Tim

Cost of the eyepiece was \$89.00

MINUTES OF THE AUGUST 22, 2013 GENERAL MEETING

Call to Order: 7:00 PM

Motion to accept last month's minutes as written in the newsletter

Newsletter Issues: Lucy- hcasnewsletter@gmail.com Another excellent issue by Lucy, She has suggested that all the upcoming Speakers Bio's will be included in all issues of the newsletter and has suggested that Larry make them front and center on our webpage. The general members all voted on to ask Larry to make this a priority.

Website Issues: Larry

Larry was absent from the meeting and all issues on the website will be conveyed over to Larry. We would also ask Larry to include the Speaker of the month bio on the front page of the webpage, and also ask if the monthly calendar can be open on the page with the Open Houses listed as well .

Observatory Reports:

BROAD CREEK: Lucy Albert and Cathy Tingle had observed the LADEE rocket launch from Broad Creek. They had excellent skies to view it and had made note that they could watch the stage separations. Lucy had also noted that the tree growth up at B.C. is really starting to impede on the horizons.

OBSERVATORY: Our past Open House had 38 to 40 people show up, Mark, Tim, Rick, and Cathy had telescopes set up in the parking lot and showing various objects to all the public ,also we had Larry, Jim, and Tom up in the observatory showing different objects as well. A very good and clear evening, excellent for viewing, and a good time was had by all that showed up.

H.C.A.S. STAR BQ AND COOK OUT:

This turned out to be a spectacular event, the location was absolutely unbelievable and the host for this was great. First of all the park is stunning, the comments that were made have been passed on to Ed and his family, the talk around the club is to make this an annual event there, and hopefully the “HCAS CURSE” will leave us alone next year. We had a very good turn out from club members as well as the families that came along, maybe next year we can use the “indoor swimming pool and hot tub” I know that I am still trying to figure out how I can get the original “smokehouse” that is still there and working into the back seat of my car without Ed even knowing that is gone. Ed has made the comment that we can use the park not only for the cookout but if we want to come up several times a year and use it that all we need to do is contact him. And Im quite sure that we may just be doing this.

BLACK FOREST STAR PARTY:

Tim Kamel as well as 4 other club members did make the annual trek up to Cherry Springs State Park for the Star Party, Tim has noted that there was “no dew” this year, and his very tiny “dew zapper” did not work very well on the ICE that formed on everything, yes you read it correctly ICE, but they did get two good nights of viewing in before the weather turned against them.

There was a note to be added to this, Bob Kesler who is currently doing our e-mails for the club, has requested that we get someone else to take the system over. Rick Fensch has stepped up and said that he will get in touch with Bob and take on this project. I personally want to “THANK” Bob for all of his very hard work and effort that he has put into getting the email system back up and running, very few people know exactly what issues Bob had to face in getting the system back to where it is today, the “countless hours” that he has put into this and telephone calls that Bob and I had made to each other will always be very much appreciated, if there was an award for everything he has put up with , Bob is right there and should be commended for this. THANKS BOB for your dedication to H.C.A.S.

Call to end meeting: A motion was made to end the meeting at 7:55pm

Motion: Tim K. Second : Dave J.

NEW MEMBERS

Please welcome the following new member: DAVID HANNA AND FAMILY
Welcome aboard!

MEMBERS NIGHT & OPEN HOUSE REPORTS

The next members night is scheduled for Saturday, November 2, 2013.

OPEN HOUSES

It was a nice night for change, clear with decent seeing. We had a fairly decent guest turnout, I am guessing about 40 people. I brought along my 8" F/4 Orion Reflector on my LXD 75 mount and set it up on the handicap apron in the parking lot. Also setting up telescopes were Karen, Dave and Rick F. Larry and his two sons were operating the C-14. As it got dark and the stars started popping out, I did my alignment and slewed the scope to the moon, only to find that it was blocked by trees. I decided that I would move away a bit from the trees and did an alignment. By the time I slewed to the moon again, it was again behind the trees! I had to do it two more times before I was in the clear but did get a nice view. I also was able to feature a few other objects, notably the Great Cluster in Hercules, The Double Cluster, the Andromeda Galaxy and Almach, a very nice double star that needs lots of magnification to split the red and blue components.

Also present this night were Gary, Tom, Mark, and Ann.

It was a good night with good participation by the club and many visitors.

Tim Kamel



GUEST SPEAKER PROGRAM

**TOM RUSEK, PAST PRESIDENT OF HCAS AND
LONG-TIME EDUCATION AND OUTREACH PROVIDER.**

PLEASE JOIN US ON OCTOBER 17TH AS TOM PRESENTS:

THE ESSENCE OF LIGHT, SPECTROSCOPY AND THE SPECTROSCOPE

This topic will cover the colors of the visible spectrum and the result of their mixtures, the different types of lighting encountered every day and their spectra and how each differs. Also, the spectrographics of stars will be explored along with what a spectroscope shows and how to build a simple one. This will not be a complex topic but a very down-to-earth explanation of light in general. It will be fun and educational and even the young will enjoy this talk!

Tom Rusek has been an avid amateur astronomer for over 20 years. He started out as a member of the Columbus Astronomical Society at the Perkins Observatory in Ohio. After moving to Maryland in 1996, he joined the Harford County Astronomical Society (HCAS). He has served as President (5 years), Vice-President and has been on the Board of Directors. He likes to observe but his specialty is the Outreach Program. To date, Tom has given many slide presentations and has reached out to over 4,000 people of

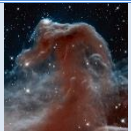
all ages. His other interests include reading about theoretical physics, the universe's origin, Earth's history and science in general. Tom likes to write and has authored a book for all ages on how the universe was created combining science and religion with a unique use of time. Tom has Degrees in Biology, Chemistry and Marine Biology and works for Battelle as a Principal Research Scientist, now for 25 years.

Please join us as we offer a program of timely presentations at many of our general meetings. These programs will last about 30-45 minutes in addition to our regular discussions. We hope to have a speaker at every other meeting.

We also encourage our members to share their special skills and knowledge with everyone in the club. Anyone who would like to present a topic of interest to the HCAS membership is welcome.

A short 10-15 minute presentation by our members is welcome at our general meetings when we don't have a special speaker.

Please contact Lucy Albert at 410-679-7055 or ljalbert608@gmail.com to make arrangements to present.



OBSERVING NOTES, STAR PARTIES, ASTROPHOTOGRAPHY AND OTHER FUN STUFF

NOTE: Because of the unpredictable weather conditions, we cannot set a specific date and time to observe. Sometimes the decision to go to our observing area at Broad Creek or at the Observatory is made within a few hours before sunset. In any case, all club members will be notified by email.

OBSERVING REPORT 1

TIM PHELAN

A GREAT "NEW-ISH" STAR PARTY

This past weekend (October 4-5) I had the pleasure of attending the Staunton River Star Party with club member Jeremy Kirkendall. My desire to attempt another star party so quickly after Black Forest last month was due to the terrible weather we had at Black Forest on Friday and Saturday. When Jeremy told me about Staunton River (apparently pronounced "Stanton River" by the locals) down in Halifax County, Virginia which is about two hours southwest of Richmond and I jumped at the opportunity. The star party was located at the Staunton River State Park, which is thankfully not federal land... This was the third year for the star party so it is still building up its own reputation which I have to say it's quite a good reputation! Staunton River is unique in that it is an autumn star party as well as a spring one. It is hosted every March and October by the Chapel Hill Astronomical and Observation Society (CHAOS). It's nice to have star party options during those months since

most seem to be clustered around the June – September period. There were probably between 75-100 people in attendance so it was not too big but not too small.

The park is easy to drive to (if you don't hit the nastiness that is northern Virginia traffic like I did) and is just a tad bit further than Cherry Springs. It's roughly a five hour drive from my home in northeast Baltimore. The facilities there are very nice, featuring a visitor's center that is equipped with RED LIGHTS and heat so you can go in and warm up without ruining your night vision. I can only imagine how nice it must be to get out of the freezing cold early morning October weather...but we never got the chance since the low temperature both nights was in the low 60's! There is also a pool house on the grounds with a full shower room. Those who have been to Cherry Springs know that's a huge improvement over having to drive 15 minutes to another park to take a shower. Another amenity that stands out is the "Deep Sky Diner" where you can purchase meals 22 out of 24 hours a day; they only close from 4 am to 6 am. It was nice to take a break from observing and go grab a coffee at midnight without having to fire up a camp stove and boil water.

There are also speakers during the day for those who choose not to sleep all day. Friday afternoon Rob Teeter gave his talk about the evolution of the Dobsonian telescope which was quite good. I actually heard that one at BFSP last month. Saturday featured an employee from the Chapel Hill Observatory at UNC who gave a talk entitled "Thou Shall Not Speak Messier" about how to engage the public during outreach events. You don't want to just say "That's M57, the Ring Nebula...next person in line!" You want to connect the tangible object in the sky with something they can relate to such as telling them that the Ring Nebula is the future of our Sun one day. Next was Steven van Vuuren, the producer of the upcoming IMAX film *In Saturn's Rings*. He spoke about why he is making the film and his production process and the challenges facing the project. The film will be released across the globe in 2014. Spoiler alert: it looks amazing!

As I mentioned the weather was tremendous all weekend. The high temperature during the day topped out near 90 degrees! We were blessed with cloudless skies with lows near 60 both nights. As far as darkness goes it's a 3 on the Bortle Scale so not quite as dark as Cherry Springs but definitely very dark. The only light pollution that was evident was to the south (Raleigh-Durham) and the east (Danville). Even that promises to improve in the coming years as the star party, with the help of CHAOS, has had such a positive impact on the surrounding county that the nearby city of South Boston is considering installing fully-shielded light fixtures to county buildings and businesses and Halifax county is considering requiring all road lighting to be dark sky friendly! That's a positive impact if I've ever seen one!

As for the observing we did I do have to brag a little. Jeremy had his 16" truss tube DOB and I had my 10" DOB with me. We each were able to push our scopes to their respective limits both nights. Friday night the transparency wasn't the best but Jeremy was able to observe four individual globular clusters *INSIDE* M31. The globs ranged from magnitudes 14.2 – 15.4 and as small as 0.3 arcminutes. Jeremy also managed to observe one globular in M110 at magnitude 14.96. Saturday night yielded better transparency so we attempted some more challenging targets. On Saturday Jeremy logged seven different NGC and IC objects in M33. Having the smaller scope I decided to go after the challenging Pegasus I galaxy cluster. I was able to push my 10" to the max by observing five of the members of Pegasus I, NGC's 7619, 7626, 7617, 7631, and 7608 ranging from magnitude 12.3 to 13.8 and as far away as 250 million light years. We also observed distant Neptune and its moon Triton. We were both very pleased with the observing we accomplished over both nights. We logged a total of 15 hours of observing over two cloudless and mild nights!

Overall, I was very pleased with the weekend and I will definitely be going back in the spring for the March star party. Jeremy won't be there on account of him getting married that weekend, which I think is a legitimate excuse so we'll let him slide.

This is a great star party that is growing in both size and reputation and one I believe is well worth the drive. The only drawback is that the observing field sits right next to the main road that goes through the park and until it gets reasonably late you have car headlights sweeping through the observing field. It is a bit of a nuisance but if you close your eyes it's not the end of the world. Still, overall I couldn't be happier with the event as a whole. It would be great to get a group of club members to go down in March!

You can find more information about the star party and state park at their website <http://www.chaosastro.com/starparty/>.

OBSERVING REPORT 2

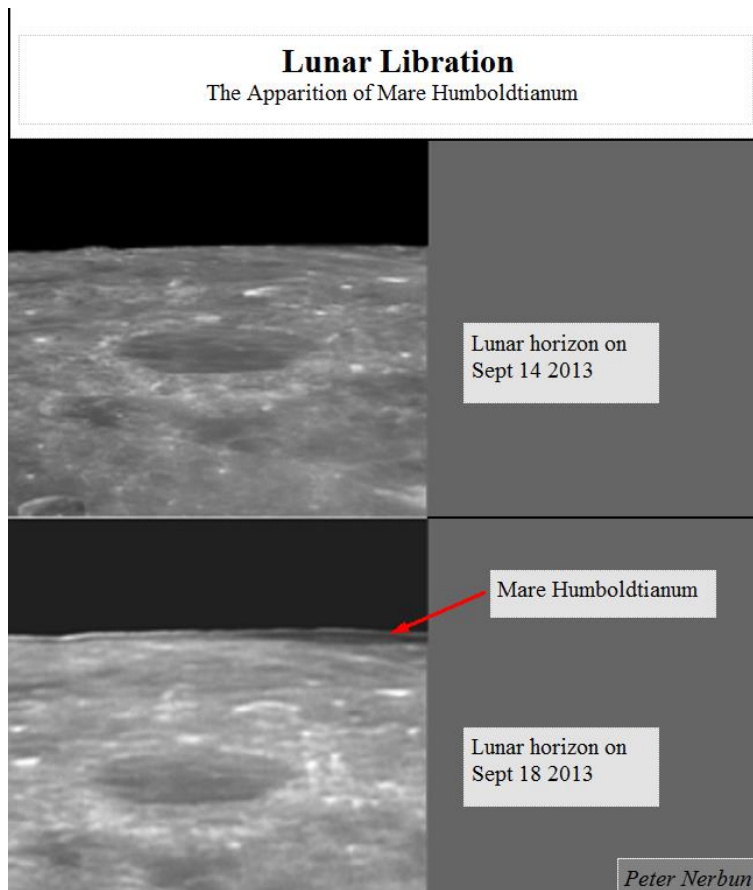
Astrophotography
Peter Nerburn

LUNAR LIBRATION AND THE APPARITION OF A LUNAR SEA ON THE MOON'S HORIZON

These two photos of the Moon demonstrate the effect of Lunar Libration. Because of the eccentricity of the Moon's orbit and the inclination of its poles the Moon oscillates in both longitude and latitude as seen from the Earth; this oscillatory motion is known as "Libration". As a result we see a portion of the dark side of the Moon during the course of each lunar orbit around the Earth.

In these images which I captured on Sept 14 and Sept 18 note that a lunar sea known as Mare Humboldtianum appears on the horizon of the Sept 18 image. This lunar sea is not visible in the first image captured on Sept 14. The apparition of Mare Humboldtianum in the Sept 18 image occurred because the Moon oscillates due to the lunar libration that I explained in the previous paragraph.

I captured this image with a C11 SCT, a 2.2x Barlow and a CMOS webcam.



OBSERVING REPORT3

BLACK FOREST STAR PARTY, SEPTEMBER 6-8, 2013 TO SUNDAY, SEPTEMBER 8TH

TIM KAMEL

I had the good fortune to again be able to participate in the Black Forest Star Party that was scheduled for Friday, September 6th participating from the club this year were Jeremy Kirkendall and his Mom, Tim Phelan and his Dad, Bill Gelston, Ken Carle and Paul Zappala.

I actually arrived the day before. I had checked the website the weekend before and found that the session was almost sold out. Forecast for Thursday, Friday and Saturday were for clear skies, so I decided to go up Thursday to get an early start on the viewing and to hopefully get a good camp site near an electrical outlet.

When I got there, I found the place was absolutely packed. This was the busiest I had ever seen in 7 years of attending star parties at Cherry Spring State Park. Jeremy was already there and setting up so I set up near him. I was well removed from the electric outlet and my two extensions were about 50 feet too short. Oh well. The good news about the heavy attendance is that the sponsors arranged for the food wagon to arrive a day early and the portable potties were also set up a day early.

After setting up my equipment, I ate a light dinner and got ready. I laid out my equipment and, as the forecast was for a chilly night, I dressed up warmly. I then waited for darkness. When it came, I did my alignments and was ready.

I had brought along my 12" dob, primarily to do observing, and my 80 mm ED refractor, mounted on my GoTo mount, to do astrophotography. This time, I planned to do piggyback photography, which I had not done before. I started off doing some viewing while waiting for complete darkness, using the Dob and a pair of binos. I visited familiar objects such as M-13, M-31, M-33, The Double Cluster, The Mirfak Association, Alberio, Alcor/Mizar, Almach, and several others. During the night, I also took the time to view other objects as they rose. The three star clusters Auriga were pretty neat in my 15x70 binos. I also saw The Great Nebula in Orion, Jupiter, and the Pleiades for the first time this season.

As the night proceeded, it started getting cold and I was thankful that I had dressed warm. I also made a trip to the snack wagon for hot chocolate about 1 AM. I was able to keep going till about 4 AM. It was then that I was looking at the Orion Nebula through the scope and was having a tough time seeing it through the finder. I thought I was dewed over so I eyeballed the location over the trees and got the Nebula centered in the scope, only to find that I was finding it impossible to focus. So I checked the eyepiece and finder and found them covered with ice. The dew had come in and froze in the very short period of time. I have a battery powered hair drier-like blower and I tried that, only to find that though it works well on dew, it was not having much effect on ice. At this point, between the fatigue and the ice, I gave up. I covered up the scopes and went to bed.

The next day, Friday, which was the first official day of the event, I watched new visitors come in and scrounge around for decent sites because there were very few left. Many wedged themselves in spaces between other campers. The park was packed to the fence lines. I was really glad I came a day early. I spent the day doing various activities, checking equipment, having breakfast and lunch in the park and driving into town with other HCAS members for dinner. I also visited the vendors and picked up a pair of nebula filters for my binoculars and also a 2" nebula filter for my 2" eye pieces.

Viewing that night was completely different than the night before. For one thing, seeing was pretty poor. Second, though the forecast was for clearing, we initially had clouds as the night fell. It cleared and then clouded a couple of times before eventually clouding completely. My attempts at astrophotography were useless. Any time I set up a target, clouds rolled in. I had to settle for viewing in sucker holes and chatting with my neighbors when we were completely clouded out. I would say I had maybe 2 hours of viewing before packing it in around 1 AM. I heard later that it cleared around 4 AM for a bit, but I missed it.

The forecast for Saturday was for completely clouded out and I decided to pack it in and head for home.

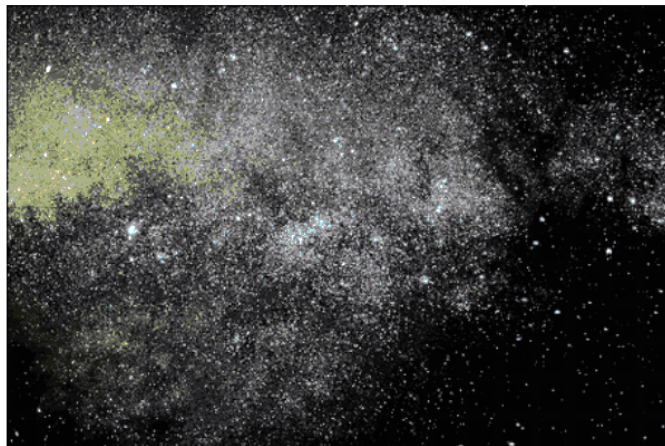
As far as the astrophotography went, it seems like I had a fairly good polar alignment Thursday night, because I was able to get 90 second time exposures without any noticeable drift. Two minute exposures, however, were poor. Armed with a very fast F 1.4, 50 mm lens on my Canon T1i and an ISO of 400, I was able to get some decent wide-field exposures. It was not completely dark yet when I started shooting. I picked the Mirfak (Alpha Perseus) Association, which is a large star cluster best seen in binoculars, and to Sunday, September 8th at Cherry Springs State Park in Potter County, PA. Also wide field camera lenses, and got this shot. This is a stack of four 60 second shots.



I then moved on to Andromeda and got this shot of the Galaxy. This is a stack of five 90 second exposures.



After this, the night was completely dark and the sky was just blazing with stars. Scorpius had already set except for Antares and the pincers. Sagittarius was still up and I spent some time looking at some of the objects there before deciding that I would just shoot a starscape of the area around the constellation. This is a 4 shot stack of the first shot in that part of the sky that I took that night. For best perspective, the photo should be rotated 110 degrees counter clockwise to show the Milky Way running up the sky, not across it.



I have at least three more shots that I have yet to process. You'll note that I have finally figured out how to get color into the pictures. I will share the rest, if they came out decently, in the next newsletter. I am also planning on placing hi-res versions of these on our website.



CLASSIFIEDS

HCAS MISSION STATEMENT

WHAT IS HCAS?

HCAS is a group of people from varied backgrounds of all ages, men and women, with a common bond – a love for astronomy. HCAS is associated with Harford Community College and has use of the HCC Observatory and meeting rooms.

Our members are friendly and welcome anyone with an interest in astronomy – a beginner or an advanced observer and/or 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

- * Promote the interest and love of astronomy for the people of Harford County, Maryland.
- * Advocate for dark skies and fight light pollution and light trespass.
- * Engage with schools, churches, scouts and other groups to expand knowledge and interest in astronomy.
- * 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 the official publication of

HARFORD COUNTY ASTRONOMICAL SOCIETY
P.O. BOX 906,
BEL AIR, MD 21014

Items for the newsletter are due to the editor by the 1st of the month of publication. Please send all contributions (electronic format – MS Word - is strongly encouraged) to:

Editor: Lucy Albert: hcasnewsletter@gmail.com

Permission is not necessary for non-profit use of this material, although proper acknowledgment is required. Address changes should be brought to the attention of the editor at the address given above.

And be sure to visit our award-winning web Site: <http://www.harfordastro.org>

Webmaster: Larry Hubble lkhubble@verizon.net

...and our Facebook page at: <http://www.facebook.com/HarfordAstro>