

# Harford County Astronomical Society



## Monthly Newsletter

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*Volume 36 Issue 7 July 2010*

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### **Public Star Parties:**

**Saturday, July 17, 2010 and  
Saturday, August 14, 2010**

**at 8:00pm**

**At the HCAS Observatory**

### **General Meetings:**

**Thursday, July 22, 2010 and  
Thursday, August 19, 2010**

***Presentation afterward: "Observing and Hiking in the Southwest"***  
*by Roy Troxel*

**at 7:00pm**

**In the Observatory Classroom**

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Please check our website for possible schedule updates and changes:

<http://www.harfordastro.org>



<http://astroleague.org/>



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

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## HCAS General Meeting

Minutes of June 24, 2010

President Tom Rusek called meeting to order at 7:05.

Minutes of the May meeting, as published in the June 15<sup>th</sup> Newsletter, we approved.

**Treasurers Report:** Tim Kamel provided the Treasurer’s report. There is \$4435.22 in the checking account. We currently have 38 paid up members. 18 members from last year have still not renewed. The third and final follow up will be sent out Sunday 6/27.

**Newsletter Issues:** Newsletter continues to be a great document, Tom thanked Roy and all contributors.

**Outreach Programs:** Open house of 6/19 had clear skies and we had 49 guests join use. Member participation was good, with 14 members setting up telescopes and/or interacting with visitors. We have an event scheduled for 6/25 and there are 4 members already signed up to support this event. An program is scheduled for Susquehanna State Park on August 21<sup>st</sup>. Edgewood Library has requested a presentation in the fall.

**Observatory Operations:** finds that Mark and Gary have located the obstructions that were causing the dome to bind and have removed them. The dome now rotates freely. We are now ready to start welding the rollers and will be approaching the school to do this. Related to the dome renovation, we scheduled a session after the business meeting tonight to discuss what should be on our wish, going forward.

**Broad Creek:** We are privileged to have access to this site because it offers some decent dark skies and is readily accessible to our members. We are permitted to use this site as long as we continue to adhere to the rules of use established by the Boy Scouts and Park Services. These rules include cleaning up our trash, no loud music, and no alcoholic beverages. Smoking is only permitted in two designated parking lots, which are no where near Astronomy Hill. HCAS asks that all members using the Broad Creek observing site (Astronomy Hill) adhere to these rules.

**Star Parties:** Those attending Cherry Spring star party June 9 through June 11<sup>th</sup> were treated to one night of clear viewing and two nights of partially cloudy skies that offered good intermittent viewing. Skies were impressively dark. 8 HCAS members participated this year, the most in the six years since the Astronomical Society of Harrisburg has been presenting the star party. The

Mason Dixon Star party is scheduled for July 7 – 9, Stellaphane is scheduled in August. Almost Heaven is scheduled for the 1<sup>st</sup> weekend in September at Spruce Knob State Park in WV. Black Forest, also held at Cherry Spring State Park, is scheduled for September 10<sup>th</sup> and 11<sup>th</sup>. Phil Schmitz knows of a site on Mount Davis, PA, at a height of 2,600 feet, that is accessible at any time. Contact Phil, [harfordastro@yahoo.com](mailto:harfordastro@yahoo.com), if you are interested in viewing from this site

**Safety Talk:** President Rusek again reminds us to observe safely at our open house sessions. Watch your distances between scopes. Be careful using lasers. Be aware of children running around the site and ask their parents to stop the children.

This meeting was adjourned at 7:35.

- Tim Kamel

## President's Message

It has been 10 years since the new observatory was built. Since then, we have seen many changes. The open houses have moved from the high school parking lot to the observatory. We have built a fine library of books and magazines. We have a beautiful meeting room with comfortable chairs and an overhead projector. We have bulletin boards and a picture gallery for all to see. We have a sister club in Germany and a fantastic website that is being visited internationally. We are winning the war on the insect population (I think) and have a “named” mascot -a small hawk (a former tenant) who now visits occasionally, chases away the bats, and leaves “gifts”.

But more importantly, we have the camaraderie of truly gifted amateur astronomers. I have been a part of many clubs in the past but the intelligence of the members in this club is truly mesmerizing. We have approximately 35 members and each one in his or her way contributes to the “whole” of the club. All of you are appreciated and needed for a successful society. After all this time, I feel we are finally entering our “Golden Age”. Over the past 14 months, our diligent members have donated their time and expertise to improve conditions in the dome area. Though we are not completely finished with these improvements, the worst seems to be in the past. We can now move forward and make our club the BEST in the east.

Due to the new “Member Donation Program”, we have the funds to purchase the items so desperately needed to enhance our growing Astrophotography Program and to use our dome telescope at its fullest potential. We are looking forward to learning, enjoying and publishing photos once again.

Our Outreach Program is at an all time high. The open houses are attracting more and more visitors and the Young Astronomer’s Observing Programs are growing by leaps and bounds. The Night Sky Network has added tool kits for the education of our youth. Three (or four) of our members have become “NASA Moon Rock Handlers”. How cool is that!!! Our local schools are benefiting from this program, as well as from visits by our members as part of the Outreach Programs which educate the public about the universe.

And not to be left out, the individual observing by our members at Broad Creek and elsewhere contribute to the personal growth of our members. Hail to those who watch the skies while we sleep!

The future looks very promising for the HCAS. This fall, after the completion of the observatory repairs, we will host the HCC faculty and staff to their own Open House at the observatory. What a treat that will be for everyone! We are so grateful to the college for letting us be their “caretakers” of the Observatory and for their help in repair matters. Also, the Observatory will become closer in educating the handicapped, with big screen projections in the meeting room for those who cannot climb the 36 steps to the dome. We will also accommodate the visually impaired with special “Braille” books for them to enjoy.

Yes, folks we are entering the “Golden Age” of the HCAS. As the President of this fine society, I

want to congratulate everyone for their hours in making the club what it is today and what it will be for everyone in the community in the future. You are ALL important in your own way and PLEASE don't ever feel that you are not. Attend the meetings and see how far we have come in the last 14 months and learn from our accomplished members. We need to work together and SHARE our knowledge - how else can we move forward?

They say that the youth in our society have nothing to keep them occupied. We have much to offer the youth in our community. You can't find stuff like this hanging at the Mall.

In closing, thank you all for your hard work and time in making our club the BEST. I'm anxious to learn from all of you.

*Your President,  
Tommy Rusek*

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### **New Members June 27, 2010**

Please welcome the following new members:

Jim and Colleen Gerlach  
Frank Varisco

*Welcome aboard!*

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### **Observation Reports**

**The best times to observe at Broad Creek are between the last quarter and first quarter of the lunar cycle. The next period is :**

**Aug 4 – Aug 14, 2010**

***Try to keep some of these dates open on your schedule!***

*Because of the unpredictable weather conditions, we cannot set a specific date and time to observe. Sometimes the decision to go to BC is made within a few hours before sunset.*

*In any case, all club members will be notified by email.*

*For any questions, contact Roy Troxel at: [rtroxel@comcast.net](mailto:rtroxel@comcast.net)*

### **Broad Creek Observations July 3rd 2010**

Weather: Very pleasant, air dry and sky extremely clear.

Could hear lots of fireworks all around once it became dark. Fireworks sounded like both professional and private. Sounds came over from Cecil County and up and down the river. Became quiet at approx 11PM. The only wildlife noise to be heard after the fireworks settled was crickets and frogs. Not an animal or owl was heard

The Milky Way was very visible all the way across the sky.

I brought both my scope, plus my 30X80 Mega view binoculars

Using the 2 pieces of equipment, I observed the following:

1. Ring Nebula.
2. M81 galaxy - I was not able to find M82 for some reason.
3. Jewel Box and nebula in Scorpio (NGC6231).
4. Butterfly Nebula (M6).

I scanned the entire field of cluster and nebulae from the Butterfly north, past Sag with my Mega views. The binos can give a truly beautiful and breathtaking view of that part of the sky. No matter how many times you skim the area; you have to do it again.

1. Venus-half lit, viewed with and without a green filter.
2. Saturn-rings visible.
3. Double Cluster in Perseus
4. A satellite was seen in the area of the Big Dipper.
5. Hercules Cluster.
6. Andromeda galaxy.

I saw many other items, but I have a habit of not writing things down after observing. Needless to say, often I do not remember what I observed.

The outing consisted of me, Roy, Gary, Bill, Paul and Jeremy.

Larry was present for a short while, but needed to leave early.

- *Cathy Tingler*

**Broad Creek  
July 3/4, 2010  
9:15pm - 12:15am**

This was easily the clearest night ever at Broad Creek, especially in the eastern and southern skies. Moreover, there was very little humidity; in fact, no humidity at all until after 11:30pm. We all remarked on the special clarity of the sky around Sagittarius and Scorpius. You could plainly see the Teapot stars, with the "steam" of the Milky Way coming out the spout. You could see the entire tail of the Scorpion, including the two "stinger" stars, as well as the "Jewel Box" cluster, with some of its nebulosity.

I began the evening just after sundown with a view of Saturn. A satellite was perched in a corner formed by the eastern portion of the rings and the planet's eastern edge.

When the sky had totally blackened, by 10:15pm, I began to search for some of the dimmer galaxies in the Virgo-Coma-Ursa Major area. This region of the sky was now quite low in the southwest, so the 10th-magnitude galaxies didn't appear as bright as I had hoped, but Using the 12mm Nagler eyepiece, I was able to view NGC3982 (had a bright core with a distinct "halo" around it), NGC3998, 3990, 3977, 3972. These were all within a few degrees of each other.

I concluded my galaxy hunt with NGC3077, a spiral galaxy in Ursa Major. This galaxy is part of the same local group as M81, M82 and NGC2403.

I decided to switch to globular clusters for a while. Moving to Scorpius, the nearby globulars M4 and M80 were unusually distinct, for being near the southern horizon. In fact, I was able to count many distinct stars in those clusters - a first for Broad Creek observing. I also picked up the globular NGC6712 in Scutum, a constellation whose large star cloud was easily visible with naked eyes, as well.

Moving to the M16, the Eagle Nebula, I Was able to see the Pillars of Creation for the first time, thanks to some observing advice from Jeremy Kirkendall. Using the 24mm Meade SWA eyepiece and an UltraBlock filter, the Pillars could be seen to the right (4 o'clock) of the Eagle Nebula's center. Cathy Tingler was able to see them as well.

At this point, I paused for another look at the Milky Way, which was now halfway up the eastern sky. The dark rifts in Cygnus and Aquila were now very apparent.

Moving back to Sagittarius, I observed M8, the Lagoon Nebula. The distinctive "rivers" of dark nebulosity could be seen running through it. I used both the OIII and UltraBlock filters and obtained slightly differing views.

It was still very clear in the southeast sky, so I began a hunt for globular clusters in Sagittarius. I was able to observe M22 and see many of its individual peripheral stars. I continued with globulars M28, NGC6544, NGC6553,NGC6558, and NGC6569.

I concluded the night's session with NGC6633, an open cluster in Ophiuchus, plus NGC6940, a beautiful open cluster in Vulpecula and NGC6934, a globular cluster in Delphinus.

The moon rose around 12:15am and we all began packing our equipment at that point. There was little or no dew on anyone's equipment. What a night! - Roy Troxel

### **Broad Creek, Tuesday, 7/6/2010**



*The Dumbbell Nebula, M27, photographed by Tim Kamel*

Around the Fourth of July, we had a stretch of about 7 days of really hot and generally pretty clear skies that just invited a trip to Broad Creek. Other commitments prevented me from following up on the invitations that went out, and I could not go out on 7/3, when several members went.

Tuesday the sixth was another one of these nights and the Clear Sky Chart showed that it would be very clear and transparent and have good seeing. Perfect for astrophotography, I thought, so I put out a note and Bill joined me and I was able to get Larry to join me to help me with the shooting.

I brought along the club's 8" SCT and my DSLR and set the scope up. When Larry arrived, he did the polar alignment and we were set to go. First, we got Arcturus in the scope to do the focus. I then picked M-27 as a target. This would be my first serious attempt at using my DSLR on a deep sky object, and my first time using my DSLR with this scope. M-27 is fairly large and fairly bright, and was also fairly high in the sky, perfect for this attempt. Larry got the nebula into the scope and then we spent the next hour or so getting it centered. After that, we took sample shots to see how long of an exposure we could take and we settled on 20 second subs. Then it was time to shoot. Larry had to leave at that point, after setting up the remote to do 60 shots at 20 second each, 5 seconds apart. I then proceeded with the shots, which took about 25 minutes.

I wanted to do longer shots so I adjusted the tracking speed on the scope and tried some samples, seeing that I could do 30 second subs without star trails. But first, I did another 60 by 20 second exposures with the improved tracking. When these were done, I set the camera to take 40 shots at 30 seconds each. By the way, all the shots were taken in RAW format and were very large, 20 megabytes each and up. .

These were done at about 12:45 AM. We then packed it in and Bill and I left.

The next morning, I looked at the photos on the camera and found that the last 2 sessions (100 shots) looked pretty good to me. No trailing and the nebula did not budge in the frame. Basically, this told me that I had had excellent tracking. I put all the shots onto a DVD and asked Larry to process them. This photo is the result. This is a small copy for the newsletter. There is a better one on our website. - *Tim Kamel*

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## Outreach Programs

During the last month, there have been a number of outreach events away from the observatory. On June 25 Mark Kregel, Phil Schmitz, Bill Gelston, Paul Sokolowski and Grace Wyatt spent an enjoyable two hours at Mountain Christian Church as part of their Adventure Week program. Telescopes were lined up on a hill facing a western sky. From right to left, Venus, Regulus, Mars and Saturn reached into the sky. Thirty-two visitors viewed the sky and asked many questions about astronomy. One young man named Jeff had brought a telescope to help out. Jeff said he has visited our open house events in the past and hopes to join our club in the future.

On July 2 Larry Hubble took lead for an astronomy program at Swan Harbor Farms. The program was sponsored by the Anita Leight Estuary Center. Mark Kregel, Grace Wyatt and Gary George assisted with the event. A couple brought a telescope they had purchased and Larry showed them how to set it up and use it. They were happy to see Venus through their scope. Even though it was a small group of 14 people, it seemed each of them were very interested in astronomy and had numerous questions. Laser pointers are a necessity for these kinds of programs for all the "what is that" questions.

Grace Wyatt did a program for 4 year olds at Celebree Day Care Center near Festival on July 12. With the help of Dr. Suess, Grace made one 15-foot long pocket solar system for the class and left it for display for the rest of space week. Four-year-olds have very short attention spans and with 23 of them in the same room, participation was necessary. When we talked about Mercury, the children got up and ran in place because Mercury moves so fast. For Venus, first they spun counter-clockwise and then changed direction and spun clockwise like Venus. When we got to

Uranus, they laid on the floor and rolled because Uranus spins on its side. A solar system coloring sheet, light pollution coloring sheet and space stickers to remind them to turn off their lights to see the night sky seemed to be a hit.

Phil Schmitz and Grace Wyatt did a program for The Highlands School on July 13. We used the pocket solar system to talk about objects in the solar system and Phil brought some meteorites for the children to touch. Children at the Highlands School have learning differences. It was a challenge to try to meet the needs of children with learning issues. It seemed like chaos as we were giving the presentation. As the children were getting ready to leave, we asked them to tell us something they learned that they did not know before our presentation. It was a pleasant surprise when a number of the children raised their hands to tell us things we had taught that day that they did not know before.

- *Grace Wyatt*

### **Open House June 19, 2010**

For our June open house, we lucked out with fairly clear skies at the beginning of the session, which slowly deteriorated to thin clouds that pretty much put a thin haze over the sky, obscuring the faint fuzzies as well as dim objects. However, by the time that happened, the session was pretty much over.

We were scheduled to start at 8 PM but already had visitors waiting for us to set up our equipment. Once that was done, we waited for darkness, which was not expected till well past 9:30. Luckily, we had the moon to look at and it kept us and our guests fairly busy looking at the highlands, seas and craters. The Lunar Alps were prominent, as was the Alpine Valley. Next up was Venus, to the north and west of the moon. It is still small but getting bigger. It is still gibbous, showing a disk  $\frac{2}{3}$  to  $\frac{3}{4}$  full. After Venus, it was now dark enough that brighter stars were visible and our show was on. We featured several of the brighter objects and stars in the sky including the Ring Nebula, the Hercules Cluster, M 3, Saturn, Mars, Alberio, the Dumbbell and several others.

There were no groups scheduled to appear today and we did not have a set program. Visiting with us tonight were 49 adults and children. The younger ones pursued their HCAS Astronomer lists and the adults looked at what the young ones were looking at.

Club members supporting the event tonight were Karen & Maggie, Gary & Griffin, Beverly & Sara, Joe, Paul, Bill, Mark, Gary, Larry, Grace and Tim.

The session lasted till about 10:30, after which we packed up and left.

*Tim Kamel*



*Below is a thank you note we received from Parkville Middle School for the programs we did for them. In October 2009, we showed the lunar samples to 795 teachers and students. Quite a few club members participated in the event.*

## Parkville Middle School and Center of Technology

8711 Avondale Road Baltimore, MD 21234 410-887-5250

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April 27, 2010

To the Harford County Astronomical Society,

I am writing this letter to thank you for the wonderful contributions you have made to our school community this year.

The Moon Rock exhibit that you brought to our school in October was a tremendous educational experience for our students. They truly enjoyed seeing the display and learning interesting facts from the members of your society. Sharing the exhibit and your valuable time sparked student interest and made learning fun.

Although the Star Party had to be rescheduled a number of times, when it finally took place it was a great success. The students and parents enjoyed viewing stars, planets, and the moon through a variety of telescopes expertly set up by your society members.

The parents, students, and staff members of Parkville Middle were extremely impressed with the professionalism, knowledge, and friendliness of each of your society members. Your members did a wonderful job of planning for the event and as a result our students gained a true "hands on" experience that allowed them to discover the amazing sights of our universe.

Once again, thank you for reaching out to the students of Parkville Middle School. It is very encouraging to know that we have partners who are willing to assist us in our efforts to provide students exemplary educational experiences.

Sincerely,



Murray G. "Buddy" Parker, III  
Principal

## Astrophotography



### Flame and Horsehead Nebulae in Orion

Taken at the Black Forest Star Party, September, 2009. This was shot with my 40D (who says DSLRs can't do red stuff?) on my ED80 refractor. 29x2 minutes for 58 minutes of total exposure under mag 7 skies, ISO 1600.

That's not vignetting in the top left corner, that is the ONLY black spot in the image. The huge glow below the Horsehead and Flame is all background dust! I didn't think it was until I saw a pattern with some dark spots that matches the dust in other images too.

- *Jeremy Kirkendall*

To see high-resolution versions of these photographs, please visit our web site at:  
<http://www.harfordastro.org>.

## Miscellaneous

### NASA Moon Rocks

Again this year, we have been granted permission by NASA. to show the lunar samples, October 11th, through the 25th, Please keep in mind that this is on a "first come, first served" basis, So far I have heard from Tom, Grace, Karen and Mark, I need to hear back from Mike Talbard, Larry Hubble, Gary Almes, and Bill Gelston as to whether or not the children's school would be interested in having us bring the lunar samples to their school and show them to the staff and students. The information I need is: who in the club is interested, plus a verbal answer from the school's principal, and a tentative date. When we receive this information, we will be sending out a formal letter to the principal with the date and time we will be arriving . If you have any questions please feel free to contact me by e-mail or telephone

Thanks,

- Gary George

[e-mail: gg439209@yahoo.com](mailto:gg439209@yahoo.com)

telephone: 410-515-0143 ( after 7:30 pm )

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## TWO RECENT VISITS TO THE SPACE TELESCOPE SCIENCE INSTITUTE

### Looking Under the Hood of the Zooniverse

May 27, 2010

The first event I attended at the STScI was an Engineering Colloquia talk given by Dr. Pamela Gay of Southern Illinois University Edwardsville. Dr. Gay is not only a Professor of Physics, a podcaster with *Astronomy Cast* with Fraser Cain, but was a cornerstone of the IYA 2009 project. She was the voice of our Dedication Podcast Sponsorship for the 365 Days of Astronomy Podcast. I heard about her attending the STScI through Facebook. She had announced that she was attending *Balticon* during Memorial Day weekend and also giving a talk at the Institute.

Maggie and I attended the talk, which was about the Galaxy Zoo Projects. She explained the history of Galaxy Zoo - a citizen science internet project that uses everyday people who volunteer to classify different types of galaxies from the Sloan Digital Sky Survey. The human eye can distinguish the type and direction of whirl where a computer can not. Many discoveries have been made through this project, including Green Pea Galaxies and Hanny's Vootwerp.

Although this talk was geared more towards analyzing of the data gathered from the citizen science; Maggie, Georgene (my mom) and I had a great time learning about the different projects of the Galaxy Zoo. Recently released is the HubbleZoo, which will use the citizens to identify objects in the backgrounds of Hubble Space Telescope pictures. Also there is MoonZoo - the identification of numbers and types of impact craters on the Moon. This will go hand-in-hand with upcoming MercuryZoo, which will analyze data from the Messenger Mission.

*If you would like to see the Webcast of the presentation, visit here:*  
<https://webcast.stsci.edu/webcast/detail.xhtml?talkid=1980&parent=1>

*If you are interested finding out more about the Galaxy Zoo Project and perhaps do some classifications, visit here:*  
<http://www.zooniverse.org/>

It was a pleasure to meet Dr. Pamela Gay. She is an inspirational scientist and I have admired her for a long time. Maggie was impressed with meeting her as well.

### **Youth for Astronomy and Engineering (YAE) Family Night**

July 8, 2010



*Astronaut and Hubble repairman,  
Dr. John M. Grunsfeld,  
with HCAS members Matthew and Maggie Carey*

During the summer, the **STScI** has **Family Nights at the Institute**, geared toward getting kids interested in science, technology and engineering careers. It gives the opportunity for children to learn more about real life astronomy or engineering by one of the Institute's professionals. The evening is free, and includes some light refreshments, followed by the presentation. And with favorable conditions, there is viewing through the JHU's 20" Offit Telescope.

When we arrived for check-in, we had no idea who would be the speaker for the evening. Imagine my surprise when I read the agenda - none other than three-time "Hubble Hugger", Dr. John M. Grunsfeld was the keynote speaker! I had recently taken the family to see "Hubble 3D" at the Smithsonian's Air and Space Museum IMAX Theater, so when I explained to the kids we would be meeting one of the astronauts who repaired Hubble, they were excited, too. The presentation would be about Hubble's Servicing Mission 4.

Dr. Grunsfeld was very good speaking directly to the kids. Without getting too technical, he talked about the training, agenda for repairs and the spacewalks. He also talked about his fellow crew members and their specific tasks during the repair mission. He asked them questions and engaged them in the conversations. He shared what went right and what didn't go as planned. He played a silly little video of an alien singing "I Will Survive". He also shared personal pictures and stories about the mission.

He was a very engaging speaker and we were delighted to meet him. When he explained that he had decided at age 6 that he wanted to be an astronaut, Matthew was enraptured, being a 6-year old himself. After the talk, most of the attendees had left to observe through the telescope, however, we stuck around to meet Dr. Grunsfeld and get his autograph. I don't know who was more excited to meet a real astronaut, Maggie and Matthew, or myself!

[The Webcast can be viewed here:](https://webcast.stsci.edu/webcast/detail.xhtml?talkid=2035&parent=1)  
<https://webcast.stsci.edu/webcast/detail.xhtml?talkid=2035&parent=1>

If meeting an astronaut doesn't get one excited about science and engineering, I don't think anything will. We are already signed up for the next Family Night. I wonder who the speaker will be. I doubt they can top Dr. John Grunsfeld!

- Karen Carey

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**Black Forest Star Party**  
**Cherry Springs State Park, PA.**  
Sept. 10 thru Sept 12, 2010

**BFSP 2010 Registration is OPEN!**

BFSP 2010 will be held September 10-12, 2010. Registration is now open. Registration fills up fast near the end and each year they have to turn people away. You need to register early to reserve your spot.

To register, go to:  
<http://www.bfsp.org/>

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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 13<sup>th</sup> of the month of publication.*

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**Webmaster: Larry Hubble**