

# Harford County Astronomical Society



## Monthly Newsletter

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*Volume 35 Issue 6*

*June 2009*

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### **Public Star Party (Open House):**

**Saturday, June 27, at Dusk  
At the HCAS Observatory**

**"Clusters of Stars"  
Activity: Trip around the Triangle  
Featured Object--The Hercules Cluster**

### **General Meeting:**

**Thursday, July 2, 2009  
7:00pm**

**In the Observatory Classroom**

**Guest Speaker: Dr. Dora Musielak  
"Mayan Skywatchers and Their Astonishing Astronomical Calendar"  
8:00pm**

Please check the website for possible schedule updates and changes:

<http://www.harfordastro.org>



<http://astroleague.org/>



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

### In This Issue:

Minutes of HCAS Business Meeting, June, 2009.....	p.2
Observation Reports.....	p.4
Outreach Programs.....	p.7
Observatory Upgrades.....	p.8
Astrophotography.....	p.9
HCAS Astronomy Quiz.....	p.10
Miscellaneous Announcements.....	p.11

### Guest Speaker for July 2 Business Meeting

We will have a guest speaker at our July 2 general meeting. Dr. Dora Musielak will give a presentation titled "Mayan Skywatchers and Their Astonishing Astronomical Calendar". The presentation will begin promptly at 8 PM.

Dr. Dora Musielak is a rocket scientist by training. She has spent her career conducting research in rocket propulsion, and now she works for ATK, an aerospace company that helped NASA design, test, and build the planet-hunter telescope Kepler and the rocket motors that powered its ascent into space. Dr. Musielak has also taught engineering, science, and mathematics courses at several universities, most recently at the University of Texas at Arlington. She is a NASA Fellow, Associate Fellow of the American Institute of Aeronautics and Astronautics, and a member of the Planetary Society.

Please make every effort to attend this presentation!

### HCAS Business Meeting

The meeting was called to order at 7:04pm on June 4, 2009 by President Tom Rusek.

Minutes published in the last newsletter were approved as submitted.

**Newsletter issues:** Roy has stated there was a request for higher resolution photos in the email newsletter. Roy explained that he keeps the photographs in lower resolution to keep the newsletter light in people's inboxes, and if they would like a higher resolution version, to contact the photographer. The photographers may also wish to use the photos utility on the Yahoo groups. Roy also stated he received an email about publishing an article about Globular Clusters from a group in California. It was agreed that this would be a welcome addition to our newsletter.

**Treasurer's Report:** We currently have \$5261.94 in the checking account. We have 25 members, and it past the deadline to renew memberships. We have received the bill for

insurance and dues for the Astronomical League are due. Also there will be paid outs for Astronomy and Sky & Telescope Magazines.

**Outreach:** Open House on May 30 had 16 members participating and 48 visitors to the Observatory. The Observatory is closed for the upgraded, but HCAS members did a wonderful job in making sure the public was able to view wonders of the Cosmos. We had fabulous weather and a wide array of telescopic equipment, including Joe Manning's incredible 20" handmade Dob. We picked up a new member, and we had a Boy Scout troop in attendance to earn their belt loops. Thank you to all members present for making this Open House a great success.

The Open House for the Staff and Faculty of the College will be scheduled for the Fall, when the upgrades to the Observatory are complete.

**Upcoming events:** July 18 at Susquehanna State Park. Presentation will be done by Mark Kregel at 8pm, followed by observing afterward. If you are available to come, please do. October 11 is Swanfest in Havre de Grace. It will be from 11am to 4pm.

Edgewood Library was not selected to have the Harry Potter program, but would still like us to come out on three dates in the Fall to give a Program. We decided on October 22, November 5 and December 3.

Grace Wyatt gave an oral presentation to two Kindergarten classes. She found the children to be very interested in Space.

**Night Sky Network:** The next Teleconference will be about Black Holes, and Grace will publish the date in the newsletter and via email. Grace will show our most recent toolkit "Glass and Mirrors" after the meeting tonight.

**Observatory Operations:** Gary has been emailing highlights of the progress of the Dome Upgrades. Further information can also be found in this newsletter. Thank you to everyone who has been working on this project. Work crews are usually put together at the last minute via an email loop, and if someone is interested in helping out, contact Gary, Tim or Larry to be added to the loop. The motor was in need of coming downstairs, it was very heavy, but this was to be taken care of after the membership meeting.

Larry Hubble had a meeting with Sal Rodano. Discussed was a memorial for Leo Heppner. There is a wall at the Science Center, and it was discussed to have the Memorial placed on the Wall. Perhaps we could provide photos or a showcase with items for the Memorial.

Larry Hubble says that other members will need to be taught how to run the Astroimager. Gary is in the process of learning. Jeremy stated that he is interested in making upgrades to the club's 13" Odyssey. At the time of publishing this newsletter, he has already cleaned up the telescope and started work to make it usable for the Cherry Springs Star Party. He suggests that the Club purchase a Telrad for use on this telescope.

Observing Reports: Tim, Roy, Jimi, Gary and Jeremy are eagerly awaiting the Cherry Springs Star Party June 18-20.

On Saturday June 6, the Moon will occult Antares. June 10th will bring 4 of Saturn's moons in a tight parallelogram.

The meeting was adjourned at 7:49pm.

- Karen Carey, Secretary

### **Board of Directors Meeting**

The meeting was called to order at 6:25 with the following BoD members in attendance: Gary, Larry, Roy, Phil, and Jimi. HCAS Officers Tom, Grace, Tim and Karen were also in attendance.

On the agenda were the following issues:

- Permanent Sign for the Observatory on Thomas Run Road

- Parking Area Expansion
- Paving of the Access Road to the Observatory
- Separation of In/Out Roads

There was much debate on all four issues. The most basic fact is that if we put a permanent sign out for the Observatory, then we will need to allow the public to park in our parking lot. Several people have mentioned to HCAS members that they do not feel safe walking in the dark from the High School lot, through the trees and up the road to the Observatory. When we do have a guard assigned to direct traffic, they do not always stay at the post for the entire time of the Open House. Another issue brought up was the desire to keep headlights out of our eyes during the Open House times. This can be potentially avoided by putting up a sign asking the public to put on their parking lights as they drive up our access road. One issue of lighting was that the college is expanding the campus to the north of the Observatory, and lighting will most certainly increase in the expansion. In the long run, it was decided that we would submit a proposal to the college to pave (or improve) the road and expand the parking lot, and we would discuss it further if these improvements were definitely needed after the upgrades to the dome were complete.

- *Karen Carey, Secretary*

## Observation Reports

### Broad Creek May 19, 2009

Well, as you know, the weather lately has just been awful. Mostly, it has been overcast or raining, and when it is not, it seems that the moon is always out there. Visits to Broad Creek have been scarce and my last outing there was on March 23<sup>rd</sup>.



We had a three-night window in mid-May that looked promising. Prediction for Monday, 5/18 was for clearing skies after daytime clouds. However, it never did clear. I could not go that night, but several others who had planned on going canceled out. The 19<sup>th</sup> was clear and stayed that way. I was able to go that night and went with Phil, Roy and Cathy to Broad Creek.

The weather was fairly mild. Prediction was for good transparency and good seeing. Basically, that is what we got and it stayed till we left.

I was the first to arrive and was joined quickly by Roy and Phil. Cathy came along last. I brought along my 10" reflector and LXDMount. Roy had his 12.5" Obsession. Phil had his 16" reflector and Cathy brought along a spotting scope and a pair of binoculars on a nice mount.

We set up and waited for the sky to darken so that we could do our alignments. I was able to do a good one that gave me good GOTOs through the night. When it got dark enough, I started off with M44 and spent a little time looking at Saturn through different eyepieces, trying to pick out the moons and the bands. The ring is fairly edge on, only a couple of degrees (4?) of angle.

From there, I looked at M3 and M13, two beautiful globular clusters. I looked at large open cluster in Coma Berenices, Melotte 111, if I am not mistaken, using my 10x 50s. I then hit some targets of opportunity, including M81/M82, M4, Alberio, the Coat Hanger (in binoculars) and others.

Of particular note, I was able to see M83, a galaxy far in the south. This one is particularly important for me because it is the last Messier object I need to pick up to complete my list. I could not see it in my 10", too dim and too close to the horizon, in the light pollution. However,

Roy was able to get it in his scope and I saw it as a very dim patch. I am going to try it in my scope when I go to Cherry Spring in June. However, I consider my list complete and will move on to the next list - the Schmitz 72.

I had to work the next day so I had to leave early and started packing up and left shortly after 11pm. The rest started packing up at that time also but were still there when I left.

The following night, Wednesday, was also to be clear but I did not go.

- *Tim Kamel*

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## Broad Creek May 18, 2009

All observations were with a 12mm 2 inch eyepiece unless otherwise noted. Observation started about 9 PM and ended around midnight. Seeing was a four and transparency was a four as well throughout the night. Upon arriving at Broad Creek, I noticed the grass had not been cut, it was at least two feet tall in areas. After placing my tarp on the ground, I walked all over it to flatten the grass under it. Then set up the 16 inch scope.



Started out looking at the multiple star Castor in Gemini, next was the large open cluster M44 in Cancer. This cluster needs a wide field of view to be truly appreciated.

Saturn's rings are still visible, almost edge on. Titan was the only satellite I saw this observation. The only multiple star seen in Leo was Al Gieba, a very close pair of stars, both appeared yellowish orange. NGC 2903, a 9th magnitude galaxy that Charles Messier did not see, was seen. Moving near the tail of Leo, the fine triplet of M65, M66 and NGC 3628 were seen. M66 is slightly brighter than M65 (by about .3 of a magnitude), while NGC 3628

is the faintest of the three. While M65 and M66 are more oval, NGC 3628 is an elongated spiral galaxy, making this triplet a must see in a wide field eyepiece view. The other interesting triplet in Leo; M105, NGC 3384 and NGC 3389 easily fit into the field of view of the 12mm 2 inch eyepiece. Although NGC 3384 (11th) is about two whole magnitude fainter than M105 (9.2), I am surprised that Messier did not see it. NGC 3389, a much fainter galaxy (12.5) appears almost starlike, rounds out the triplet. M95 and M96, two spiral galaxies were bright and easy to see.

One of the easier Hickson group of galaxies to see is Hickson 44 in Leo, near the double star Al Gieba. This galaxy group contains four galaxies, NGC 3190 at magnitude 11.2 and NGC 3193 at magnitude 10.9 are the easy two galaxies to see, while NGC 3187 at mag 13.4 and NGC 3185 at magnitude 13.0 are more difficult. I only saw the brighter two this session.

Moving into Lyra, the Harp, the double double split easily and M57, the Ring Nebula, was seen. The globular cluster in Hercules, M13, showed many stars across its disk. The little galaxy NGC 6207, on the northern edge of M13 was seen. Although this galaxy (NGC 6207) appears to be small in comparison to M13, we must realize that the opposite is actually true. NGC 6207 in reality is a lot larger than M13. It is simply a matter of distance!



Saw M4, a very diffuse globular cluster, in Scorpius, appeared to have a central bar through it!

Looking into Ursa Major, the only other planetary nebula I saw this session was M97, the Owl Nebula. This ghostly nebula is large and easy to see, however the “eyes” were not seen. M81, a bright large spiral galaxy and M82, an irregular galaxy were both seen. I borrowed the club’s 35mm eyepiece that Roy was using to see both of these galaxies in the same field, what a view.

It was about midnight and since I didn’t bring enough warm clothing, I decided to shut down for the night. Cathy, Tim, Roy and I all left about the same time. Remember the three foot high grass? Our entire viewing area was now flat as a pancake when we left! The temperature was 47 degrees.

- Phil Schmitz

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### **Broad Creek May 20, 2009**

The night looked promising at first. The Clear Sky Clock and Weather Underground had given the cloud cover, transparency and seeing its highest ratings, but by the time I had set up the scope a haze had begun to form over Broad Creek. The previous night (Tuesday) had been easily the better night.

This night, the images through the scope were kind of fuzzy. There was the usual light dome in the southwest horizon, as well as one in the Northeast, above the trees. (There might be some new construction going on. Nonetheless, I did manage to see two of the Hickson 44 galaxies in Leo, plus some Virgo galaxies, including M104, but overall everything was dimmer than it was on Tuesday.

### **May 21, 2009**

The Sky Clock and Weather Underground had given the same predictions as the night before, but when I arrived at BC, there wasn’t as much haze in the sky as there had been the previous night. So I set up the scope and after the sun had set and the sky had become darker, I began to look at Saturn. The view was definitely clearer than it had been the previous night, because the bands across the planet and some spots could easily be seen, as could the dark black shadow of the rings. (In case you haven’t looked recently, the rings are now almost totally edge-on from earth’s viewpoint. In fact they almost look detached from either side of the planet, like the “ears” that Galileo thought he saw.) The satellites, however, were sharp, bright points. I used a light blue filter to observe the planet.



The northern region sky was, again, the darkest part of the sky and I turned to the galaxies M81 and 82 in Ursa Major. Both of these galaxies were very bright and distinct, especially the dark dust clouds of M82. I used the club’s 35mm Panoptic eyepiece to get them both into the same field of view, and then I used my own 9 mm Nagler to examine each one specifically. There were also many stars in the field of view as well, which had not been the case the night before.

I next turned the scope to some familiar star clusters, including M13 and M44. Their individual stars appeared as intense points of light, as both objects were then very high in the sky..

Again using the 9mm eyepiece, I observed the “double-double” star (Epsilon Lyrae), and it appeared very cleanly split. Lyra is currently rising in the Northeast around 9 pm. This is a small but attractive constellation with two distinct patterns: the parallelogram composed of the stars Beta, Gamma, Delta and Zeta Lyrae and, above that, the small triangle of stars formed by Epsilon and Zeta Lyrae along with the very bright Vega. Vega itself is one of the stars composing the Summer Triangle, with Deneb and Altair, both of which rise in the east around 11pm.

M57, the Ring Nebula, was bright and its smoke-ring shape very distinct. Also seen was M56, a globular cluster about 31,000 light years away. Each of these objects wobbled from time to time due to the fact that they were low near the horizon where the atmosphere was thick and probably a little humid.

A meteor crossed the northern sky near Polaris coming from the Northeast about 10 pm.

I decided to try next for some of the Leo galaxies. Leo is currently dropping lower in the West, and the sky was not too clear in that area. I was able to see M65 and 66, however NGC 3190 and NGC 2903 were not to be found.

I then moved eastward to Virgo. I used the 35 mm eyepiece to observe the galaxies in Markarian's chain, but they weren't nearly as bright as they had been on Tuesday night. (However, no fewer than three meteors flashed through the scope's field of view as I was searching for galaxies in Virgo.)

It was approaching 11pm when I decided to look for some globular clusters and began with M10 and M12 in Ophiuchus. Scorpius was rising by then, but it was still low in the southeastern haze, so I didn't bother to search for any globulars in that region. On the other hand, the cluster M5 in Serpens Caput (“Head of the Snake”) appeared large and bright.

By 11:30pm., the sky's haze was there to stay, so I began to pack up my scope and return home. Nonetheless, I had been able to observe for three nights in a row at Broad Creek - definitely an unusual opportunity!

- Roy Troxel

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## **Outreach Programs**

### **Open House**

**May 30, 2009**

Halleluiah, finally, a clear night after 4 overcast open houses, and we had a great event.

Weather was nice and mild, a little cool but not too much, just enough to keep the mosquitoes at bay. As the session started, we had a little haze that delayed us in getting alignment stars but as the night went on, it got clearer and clearer till transparency and seeing were pretty good.

Participation by club members was very good. Helping out were Jimi Hajek, Grace Wyatt, Mark Kregel, Karen and Maggie Carey, Tom and Angela Rusek, Larry and Linda Hubble, Gary George, Joe Manning, Tim Kamel, Paul Sokolowski, Tony Mullen, Roy Troxel, Garry and Olivia Lang, Phil Schmitz and the Graysons (Matthew, Carrie and Caleb). Scopes ranged in size from Joe's 20" Dob to my 70mm ETX. Mostly, we had Dobs set up. However, Roy brought a 5" refractor and Garry had a 4" Mak as well as a 15x70 binocular set up on a trapezoid mount. First time I had seen one in action and it worked really well.

We had 48 people attend including Pack 808 Cub Scouts who worked on their Astronomy loops and pins tonight.

We started the open house at 7PM with a class room session for the Scouts. The session moved outdoors but it was still too early and too bright. We set up scopes and demonstrated what equipment we had had to the visitors. After it got dark, we started showing off what was available. The moon and Saturn were bright enough to be seen first and were shown to whoever was there. We were able to see 5 moons of Saturn in the 20" scope. We then spent time looking at various DSOs. The moon precluded any galaxies but we could readily see clusters. M13 was a big hit, as were M44, M3, M57, the Double Double, and M92 and several others. I was busy with the guests and did not have the resources to keep a list of all the objects.

- Tim Kamel

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## Observatory Upgrades

**Saturday, May 23, 2009**



Today brought another 2 -1/2 hours of work up at the dome, basically what we accomplished today was the re-installation of the base plate the telescope sits on, the leveling of it and removing the roller cover plates, then taking the measurements from the vertically mounted rod on the base plate to the outside of each roller that the dome rotates on, so we can start to get ready for the new plates the servo- motor and drive chain will be attaching to, now this part is still a couple weeks away, we are still waiting for the college to install the scaffolding so they can remove the wind screen drive motor that's up in the ceiling. but one thing I did notice now I can't say for sure if Larry or Mark caught it but the driveway to the dome has been back filled with some crush and run ( the pot holes ) so the drive in is now a little easier on your car and not the big thump when you hit them.

- Gary George e-mail: [gg43920@aol.com](mailto:gg43920@aol.com)



**Tuesday, June 2,  
2009**

We proceeded today on stage 4 of the dome renovations. This was the process of removing the windshield motor and gear assembly from the top of the dome. Members participating were Mark Kregel, Joe Manning, Grace Wyatt.

After giving some thought as to how to proceed, we decided to secure the motor with ropes and lowered the

ropes and attached them to a come-along that was attached to the telescope pier.

A photo is worth a thousand words so use them to understand the progress. Joe had to leave after about an hour or so. This left Mark and I to uncouple the motor and drive assembly and lower said to the floor. Grace was a lot of help. She also worked hard to help get things in place, run for tools needed and really helped to keep things moving. She was also designated as the photographer. Grace also had an uncanny sense of when to run for her life. This was fun to watch!

As you can see we managed to get it down all the way to the floor. It turned out to be time consuming and a little hard work, but Mark was right. If we had waited for the college to contract it out, we would have waited a month for the work to get done.

We will keep you updated when the next trip to the observatory will be needed.

- Larry Hubble

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## Astrophotography



*M13 Globular Cluster in Hercules*

Finally an open house with clear skies! Gary and I demoed the camera at the open house. I was too busy to really take notice how well received it was. I would appreciate it if someone would please give me their take on this. We shot M13 just to have something bright to shoot so we would have something instantly to show our guests. We did not use any Dark frames, Flat fields and only took 5x20 second shots. I have attached the stacked five shot image. This goes to show everyone how easy this camera is to use. "It's so easy a caveman could do it". I would like to thank everyone who brought their scopes. We had great club participation that was truly needed since the main scope is out of commission.

I would like someone to step up and demo the camera next open house. I want to have my scope free to show others through it. I will be there to help anyone get set up and get started and if needed can use my laptop. Email me if you have any questions. Thank you, Gary, for all of your help.

- Larry Hubble email: [lhubble@comcast.net](mailto:lhubble@comcast.net)

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## HCAS Astronomy Quiz

### This quiz is on the Pleiades

1. In what constellation is the Pleiades located?

Taurus      Orion      Pisces      Its own constellation

2. What is the brightest star in the Pleiades?

Alcyone      Atlas      Electra      Maia

3. What is another name associated with the Pleiades?

The Magnificent Seven    The Seven Sisters      The Seven Brothers      The Seven Kids

4. What ancient culture gave the Pleiades the name "The Constellation"?

Mexicans      Egyptians      Mesopotamians      Greeks

5. As a whole, the Pleiades does not have an assigned NGC number, however, one of its member stars does, which one?

Alcyone      Merope      Atlas      Taygeta

### ANSWERS to last month's quiz:

1. In which constellation is the Crescent nebula?

Monoceros      **Cygnus**      Hydra      Scorpius

The Crescent Nebula (NGC6888) is a very large and faint nebula.

2. Which constellation is the California nebula?

Perseus      **Pegasus**      Cassiopeia      Andromeda

The California Nebula, NGC1499 is best seen with an Hydrogen-beta filter.

3. Which constellation houses the Pelican nebula?

Sagittarius      Delphinus      Aquila      **Cygnus**

The Pelican Nebula (IC5067) is next to the North American Nebula .(NGC7000).

4. Which constellation houses the Pipe nebula?

**Ophiuchus**      Orion      Sagittarius      Perseus

The Pipe Nebula is a dark nebula, situated near Theta Ophiuchi. This nebula is several hundred light years across and include B59, B65, B66, B67 and B78.

5. Which constellation houses Hubble's variable nebula?

Perseus      Sagittarius      Orion      **Monoceros**

Hubble's variable nebula (NGC 2261) is both an emission and reflection nebula first observed by William Herschel in 1793. This nebula was the first object photographed by the 200" Hale telescope at Mt. Palomar in 1949. It's about 3,000 light years distant.

- Phil Schmitz

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## Miscellaneous

### Observing Globular Clusters

*This month's theme of the International Year of Astronomy is "Clusters of Stars." In keeping with that, Tom Koonce of Lancaster, California sent us his article on globular clusters. (He had read our newsletter on the HCAS web site.)*

What inspired your earliest interest in amateur astronomy? Was it your first telescopic views of the Moon's craters or your first view of Saturn's rings? Perhaps it was watching the night sky for satellites passing overhead on a summer's night. Whatever inspired you to pursue astronomy as a hobby, it has probably been deep sky views of galaxies, nebulae, and beautiful star clusters that have kept your interest focused. For many of us, motivation has come from globular clusters appearing like spheres of sparkling jewels in the heavens.

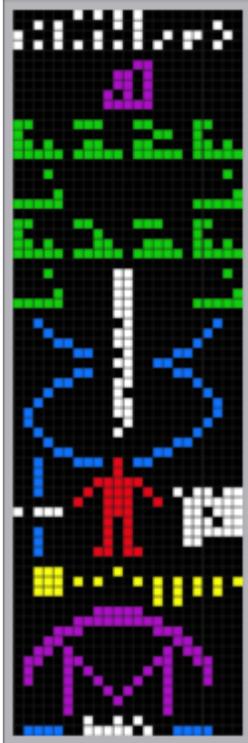
Among the oldest objects in our galaxy, globular clusters have an abundance of older, metal-poor, redder stars. Formed billions years ago, all of the stars in these cluster were born at approximately the same time from a common cloud of interstellar dust. Astronomers have determined the age of the clusters by measuring the concentrations of heavy elements contained within them and comparing these amounts with the other stars in the galactic disk. As generation after generation of stars pass and stars die, supernovae release heavy elements out into space, so the next generations of stars in globular clusters appear to have less heavy elements than other stars.

I'll never forget the night when a fellow amateur astronomer showed me my first high power view of the rich pool of stars within the globular cluster M13. It was an awe-inspiring sight to see hundreds of thousands of stars orbiting around each other, packed into a spherical volume just 145 light years across. Now, each time I swing the telescope into the constellation Hercules and find M13, I still feel that sense of wonder and amazement.

Unlike our Sun, globular clusters are located in the halo of the Milky Way, the 'fog' of stars and matter that orbit the center of the galaxy above and below the plane of the galactic disk, with a significant concentration toward the Galactic Center. Our galaxy is associated with about two hundred globulars.

Try imagining what it might be like to stand on the surface of a planet circling a star just inside of a globular cluster... Surrounded by stars brighter than the planet Venus, perhaps two main concentrations of stars would be visible to you; one very large area of the sky towards the center of the globular cluster would be visible as a region more closely packed with stars; and perhaps opposite this, a view of the central bulge of stars of the Milky Way could be seen prominently in the night sky. The sky might be so dazzling at night that the subtlety of faint nebulae might be completely overwhelmed in the light. With so many bright stars surrounding you, your view of other galaxies might be severely limited. In fact your location within the Milky Way could be a limiting factor in your very understanding of the universe, a tradeoff between beauty and knowledge.

Sir Edmund Halley discovered M13 in 1714 and it was logged as a nebula by Charles Messier when he added it to his famous listing fifty years later. By the 1920 debate on the size of the universe between Harlow Shapley and Heber Curtis, globular clusters (including M13) featured prominently in Shapley's rough determination of the shape of the Milky Way. Since globulars are essentially spherical in shape, can be seen from great distances and appear to be evenly distributed around the galaxy, they were a natural choice for Shapley's research. Globular clusters exist in most other galaxies too. The Hubble Space Telescope was used to detect approximately thirteen thousand (!) globulars associated with the galactic giant galaxy M87, indicating that globulars will remain an important focus of astronomical research into galactic evolution for years to come.



If you haven't observed M13 yet, get out your binoculars or at least a 3-inch telescope and you'll be able to resolve stars within the cluster, but you'll be able to see hundreds of stars and details of its structure using an eight inch telescope at about two hundred power. More details become visible as you add aperture so this cluster never gets boring. M13 is located one third of the way between the stars Eta and Zeta Hercules on an imaginary line connecting them. Through the eyepiece, stars will fill the field of view from edge to edge. Use fairly low power to see the overall structure of the cluster and then switch to much higher power to peer deeper into the depths of the globular, to see dust lanes and the tendrils of star chains. The view is worth the work of finding M13 and adding it to your 'star party favorites' list. It's 25,100 light years away and contains between hundreds of thousands to one million stars. One estimate put the age of M13 between 12 and 14 billion years old, making it certainly one of the oldest objects in our galaxy.

For M13's part in galactic history, perhaps none is more interesting and unusual than the fact that in 1974 it was selected as the target for one of Earth's first intentional radio messages to be beamed to the stars. The message was designed as a 'First Contact' message to possible extra-terrestrial intelligent races and sent by SETI using the Arecibo Observatory. (See diagram on left.) The message will take about 25,100 years to reach the cluster, so that an answer cannot be expected for over fifty thousand years. You can relax, there's still time to go out and observe M13 through your telescope while you're waiting!

As you gaze upon the galactic jewels in the globular cluster M13 and are imagining the view from a planet orbiting a star nestled within, also try to imagine what possible creatures living there might think upon receiving this message in another 25,065 years. Hopefully our species will be around to get the answer.

Clear Skies,

Tom Koonce

*Other Globular Clusters to observe in Hercules: M92 and NGC 6229*

*References:*

*SETI Message:* <http://www.news.cornell.edu/releases/Nov99/Arecibo.message.ws.html>

*The Munich Astro Archive:* <http://www.maa.clell.de/Messier/E/m013.html>

*SETI Institute:* <http://www.seti.org/Page.aspx?pid=1241>

*Tom writes that he has "been interested in astronomy since my family gave me my first small refractor telescope when I was 7 years old. After studying astronomy and physics in college, I got an 8" SCT and taught myself the sky through many hours of star hopping my way through the Messier list. These days I observe the deep sky with an 18 inch Dobsonian under the dark*

*Mojave desert skies in south central California."*

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**ALCON EXPO 2009**

*Date:* Sunday August 2nd through Saturday August 8th, 2009

*Place:* Hofstra University on Long Island, New York

**Sponsored by: Amateur Observers' Society of NY, Inc.**

For more details visit:

[www.alcon2009.org](http://www.alcon2009.org)

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**Galileo Exhibit**

at the

**Franklin Institute**

**222 North 20<sup>th</sup> Street**

**Philadelphia, PA 19103**

Phone: 215-448-1200

**April 4 through Sept. 7, 2009**

**For More Information, visit:**

<http://www2.fi.edu/exhibits/traveling/galileo/index.html>

Karen Carey will be planning a group trip this summer to the Franklin Institute in Philadelphia to see the exclusive Exhibit of the Galileo Telescope. Please contact Karen at [carey.karen@gmail.com](mailto:carey.karen@gmail.com) for details.

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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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