

# Harford County Astronomical Society

Bel Air, Maryland  
www.harfordastro.org



*Volume 33 Issue 9*

*September 2007*

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**Note:**  
**General Meetings Have Been Changed to**  
**THURSDAY NIGHTS**

**Public Star Party (Open House):**  
**Sept. 22, 2007 at dusk**  
At the Observatory

**Outreach Presentation:**  
**Sept. 24, 2007 at 6:45 PM**  
Abingdon Library

**General Meeting:**  
**Thursday, Sept. 27, 2007, 7:00pm**  
At the Observatory

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## **Club Calendar for 2007:**

### **Open House/Public Star Party**

Oct 20, 2007

Nov 17, 2007

Dec 15, 2007

### **Meeting Night**

Oct 25, 2007

Nov 29, 2007

Dec 27, 2007

*Please check the website for possible schedule updates and changes:*

<http://www.harfordastro.org>

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## **HCAS Monthly Business Meeting Minutes of August 30th, 2007**

1. President Tom Rusek opened the meeting at 7:03 PM.
2. This was the first meeting to be held on a Thursday night. The day of the week was changed as a test to see if more members could come on a week night.
3. The minutes of the July meeting were published in the July newsletter. They were approved by a voice vote.
4. Treasurer: Tim Kamel reported that the club has \$5013.18 in the bank. He paid the insurance bill and the Astronomical League dues. There are currently 39 paid-up members. There are about 18 people who did not renew from last year. He sent the last follow-up letters to all of these lapsed members. Tim will also send the membership roster to the Astronomical League.
5. Observatory operations: Mark Kregel and Tim Kamel continue to investigate the problem with the observatory telescope's go-to system. They noted that it appears to work properly when connected to Jim Garrett's laptop computer, but it does not work right using the hand controller. Harford Community College has authorized a service call to repair the problem. Tim and Mark will set up a date to walk through the alignment and operations steps for the mount to further characterize the problem.
6. Outreach:
  - a. Approximately 50 people attended the program at Susquehanna State Park. It was well received.
  - b. The August 7th program at Camp Sunrise went very well. About 60 people, including children with cancer, participated. Grace Wyatt came early and helped the kids build solar system models and star wheels. The children were very enthusiastic about the topic and Tom Rusek's presentation.
  - c. Only 10-12 guests attended the open house on August 18th. The poor turnout was apparently due to the poor sky conditions.
  - d. The club will participate in the college's Family Fun Weekend on 15-16 September. There will not be enough room to set up any telescopes, so we will have a table with information and handouts. The event goes from 10 AM- 8 PM on Saturday, September 15th and from 11 AM to 5 PM on Sunday, September 16th. This may be a good opportunity to discuss the club and our activities with the college's leadership.

e. SwanFest takes place on October 14th at Swan Harbor in Havre de Grace.

f. Tom Rusek will lead an indoor and outdoor program at the Abingdon library on September 24th.

g. Tom was approached by the director of the Edgewood Senior Citizen center about giving an indoor program at lunchtime to their residents. He will coordinate a date in November with them and will announce this date to the club.

h. The club was accepted into the Night Sky Network. We received the first outreach tool kit in the mail, along with numerous press releases and other information via email. Grace discussed the contents of the tool kit. The "Seeing in the Dark" documentary featuring Tim Ferris and HCAS' own Joe Manning will air on September 19th on PBS. The network gives us these outreach materials for free, and in return we will report back to them how we use them and how many people attend the events.

#### 7. Observing reports.

a. Tim Kamel went to Shenandoah Valley, Virginia on vacation. He was able to do some observing while there.

b. Monroe Harden observed the August 28th lunar eclipse from Bulle Rock. The conditions were great, and the partial phases were clear and beautiful. Since the eclipse took place right before sunrise, the sky brightened as totality approached. By the time the eclipse was total, the sky was bright enough to make the moon disappear from view.

#### 8. Old business:

a. The article on the club was printed in a recent Sunday Baltimore Sun. The article and photos were well received. We have not heard back from the Pennysaver, so we will not pursue any additional advertising there for now.

b. Sal Rodano had scheduled a meeting at the observatory to determine where to locate additional computer and projector equipment. The meeting had to be postponed. Sal will send another email when the new date is determined.

c. Karen Carey said that she mailed the letter to the woman who donated the Odyssey 10" reflector. She included photos of Maggie using the telescope.

d. The club's non profit status is still being worked. Tim Kamel will ask a tax preparer what they would charge to do the necessary paperwork. He will also check with Sal Rodano to see if the college's legal department can help.

9. New business: Tim Kamel asked if we had identified the software to be used on the computer for running the observatory telescope. The group discussed several available software packages including Starry Night and The Sky.

10. The meeting was adjourned at 9:15 PM. After the formal business meeting ended, Joe Manning showed his photos from this summer's Stellafane convention.

- Monroe Harden

As of 09/14/07, our bank balance is \$5013.18.

I have paid our insurance bill and Astronomical League bill. All magazine subscription activity is current.

I have sent out my third and final follow up on membership renewals. I have received 5 more and we now have a total of 39 members. I have renewed our Astronomical League membership based on the 39 members.

- Tim Kamel

## **Notes from the President**

Folks,

This fall has been and will be a busy time for HCAS but also a rewarding one. We have coming up the HCC Festival, Swanfest, open houses as well as other Outreach programs. The observatory is coming along nicely. Over the last few weeks, time has been spent cleaning rooms, rearranging furniture and sorting out equipment. We are slowly winning the battle against the bugs. Also, the 14" Cassegrain in the dome room is in great shape thanks to the relentless efforts of Mark, Tim and Roy. The dome now rotates freely with the help of Sal and the college, to whom we owe special thanks. There will be more improvements to the dome and additions to the observatory in the near future. What a pleasure it is to now see members gather on off-nights and view Messier objects while talking about astronomy in the dome room-just like the old days! Thank you to everyone for your help. The HCC/HCAS will indeed be the talk of the state!

## **I Miss The Moon**

*From the writings of Tommy Rusek*

Where is the moon when it's not out at night?  
I miss its smile; I miss its light.  
Sometimes it's big and sometimes it's small.  
But I like the full moon best of all.  
It makes it seem as though the sun is still there  
And everyone can play late with hardly a care.  
When the moon is young, it doesn't stay long  
It disappears as quickly as singing a song.  
The sliver is pointy but it won't do you any harm  
They say it's the old moon in the new moons arms.  
As the days go by my friend only grows  
And stays with me longer to shine and to glow.  
But after this phase it starts to get dimmer  
It gets smaller and smaller while losing its shimmer.  
When it rises late, I sometimes see it in bed  
But I can't stay up; so weary is my head.  
So where does the moon go when it's not out at night?  
I miss its smile; I miss its light  
So long for now but I'll see you soon  
Though during these times, I miss the moon.

*...See you at the observatory,  
I am, as always, Tommy Rusek*

## Recent Open House and Outreach Presentations

### Open House

August 18, 2007

On 8/18/2007, we had our open house session for the month of August. And again the weather did not cooperate. We had significant haze that eventually got thick enough to block out all viewing.

Public participation was low, about 12 visitors.

Participation by members included Roy Troxel, Grace Wyatt, Mark Kregel, Tom Rusek, Karen and Maggie Carey and me.

We had the main scope in operation again and it was directed at Jupiter for the duration of the event. Scopes were also set up on the grounds.

It was a disappointing night that ended early.

Tim Kamel

### Sunrise Camp

August 7, 2007

Camp Sunrise was the setting for our outreach program on August 7--the hottest and most humid day of the year. Camp Sunrise is a summer camp for children with cancer. There were about 75 children registered this year ranging in age from 5 to 17. Tom and Angela Rusek, Grace Wyatt, Karen Carey, Maggie and Matthew Carey, Roy Troxel and Mark Kregel were on hand to help with the event.



Grace attended camp during the day to help with some craft projects and talk about astronomy in general. Grace did two classes with children ranging in age from 5 to 12 years old. The children made sky wheels and solar systems. The solar system project included Pluto. Four young girls reprimanded Grace for including Pluto because it is no longer a planet. Posters were donated to the camp by the club and were on display in the eating area for the lecture part of our presentation.

After dinner, Tom did a slide show presentation and talk to about 100 people including campers and staff. The presentation lasted about one hour. Half-way through his presentation, one of the counselors asked if Tom could take a break for kids to go to the bathroom or get water. We interrupted Tom in front of the audience to ask if he could take a break. There were resounding

shouts of "no" and "this is really interesting" and "we don't want to stop". Since the break was overruled by the audience, Tom continued. I think Tom got the loudest and longest applause he has received from this group of children.

Prior to this event, a staff member had asked if we could in any way accommodate a child who is blind. Thanks to Lucy Albert, we were able to help this young man appreciate a little bit of astronomy too. Lucy was able to loan us a copy of the book, *Touch the Universe A NASA Braille Book of Astronomy*. The book is written in Braille and the Hubble images are swell form so individuals who are blind can "see" the pictures by touch.

Unfortunately, the humidity and cloud cover prohibited any observing that night. However, the presentations we were able to provide were greatly appreciated and a number of people (staff and campers) asked if we were coming to camp again next year.

- Grace Wyatt



*Children making solar system models at Camp Sunrise*

### **Future Outreach Presentations:**

***Monday, Sept. 24, 6:45 PM: Abingdon Library (Indoor and Outdoor)***

***Sunday, Oct. 14: Swanfest, Havre de Grace, MD.***

We have some outreach opportunities fast approaching. The first event is a month away. It is The Family Fun Weekend at Harford Community College. This is an event sponsored by the college as part of its 50 year anniversary. We should definitely be a part of this celebration. Our club has been associated with the college for a large part of those 50 years. We need volunteers to help run a table on September 15 from 10 AM to 8 PM and also September 16 from 11 AM to 5 PM. You do not have to come for both days. You do not have to come for all day. You can sign up for whatever time you have on either days. But we do need some help with this event. Attending these kinds of events are fun and a great way to learn about astronomy and our club.

The second event is Swanfest. Swanfest is a family centered fun day for all ages. We have had great success at Swanfest attracting people to visit our open house events. Swanfest is October 14, 2007, from 11 AM to 4 PM.

We will need volunteers to help at both events. If you have solar viewing capability, please sign up with your equipment. If you don't, we need people to help give out information and answer questions about astronomy and the club.

We recently applied for membership in the Night Sky Network (NSN). NSN is a program that provides free outreach materials to amateur astronomy clubs. While we have not been accepted, we did get the following response to our application:

"Your partnership with the community college and your desire to expand your membership's astronomy outreach are some of the main goals of this program. We salute your current efforts and hope to be able to help you in the near future."

As stated above we have not been accepted into the program, but it is our outreach services that will help us to get astronomy materials to be for future outreach and by the club members. Come out to have some fun and help keep our club going.

Contact Grace Wyatt at [dgracew@comcast.net](mailto:dgracew@comcast.net) if you are able to help at either event.

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## Night Sky Network



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

*The Night Sky Network is sponsored and supported by the NASA Jet Propulsion Lab's PlanetQuest public engagement program.*

## Explore the Night Sky Network Web Site...

### **Saturn Observation Campaign:**

<http://soc.jpl.nasa.gov/index.cfm>

This program gives sky enthusiasts of all abilities the opportunity to share the splendor of Saturn with their local community. Through the Saturn Observation Campaign, we hope to share this spectacular planet with as many people as possible. The campaign's objective is to create opportunities for professional and amateur astronomers to engage the public in the excitement of astronomy, using telescopes and the Cassini-Huygens Mission to Saturn.

### **JPL Amateur Astronomy Page:**

<http://education.jpl.nasa.gov/amateurastronomy/index.html>

Features monthly "What's Up" videos, amateur astronomy outreach news and programs.

**NASA / JPL News Releases:**

<http://www.jpl.nasa.gov/news/news.cfm>

**Up-to-the-Minute Space Photos:**

*Earth:* <http://www.jpl.nasa.gov/earth/>

*Solar System:* <http://www.jpl.nasa.gov/news/news.cfm?release=2007-093a>

*Stars and Galaxies:* [http://www.jpl.nasa.gov/stars\\_galaxies/](http://www.jpl.nasa.gov/stars_galaxies/)

It is official. Harford County Astronomical Society has been chosen for acceptance into the Night Sky Network. We will receive outreach kits every few months. The kits will allow us to teach others about astronomy. Our first kit called Shadows and Silhouettes covers phases, eclipses, planet transits and the Kepler Mission. We will use the kit at our open house events and at other outreach opportunities.

We will be using the kit at HCC Family Fun Weekend on September 15 and 16. We will also use it at Swanfest on October 14, 2007. Swanfest is open from 11 AM to 4 PM. If you are available to help at either event, please contact Grace Wyatt to volunteer and use our new toolkit.

### **Teleconference, August 22**

We had our first Night Sky Network activity on August 22 in the form of a teleconference with Timothy Ferris hosted by the Astronomical Society of the Pacific. Roy Troxel, Joe Manning and Grace Wyatt met at the observatory to hear Mr. Ferris speak about an upcoming PBS special called *Seeing in the Dark* to be broadcast on September 19. Joe was interviewed at Stellafane for this documentary and has a very small part in the film.

Also a topic of discussion was the Robotic Telescope located at a high-altitude site in New Mexico. Teachers and students will be able to use the telescope to image star clusters, nebulae and galaxies. The turn around time from email request to getting the image back is approximately one to two days. After Mr. Ferris' speech, there was a brief question and answer period.

### **“Seeing in the Dark”**

**Documentary Coming to PBS (WMPT), September 19, 2007, 8pm**

Timothy Ferris, one of America's prominent astronomy writers, invites millions of viewers to enjoy the wonders of the night sky in an HDTV special.

Stargazing is the subject of *Seeing in the Dark*, a 60-minute, state-of-the-art, high-definition (HDTV) documentary that premieres September 19. The film, Ferris' third, is based on his book, *Seeing in the Dark* (2002), named by *The New York Times* as one of the ten best books of the year.

"*Seeing in the Dark* is meant to alter, inspire and illuminate the lives of millions," said Ferris. "It introduces viewers to the rewards of first-person, hands-on astronomy — from kids learning the constellations to amateur astronomers doing professional-grade research in discovering planets and exploding stars. I hope it will encourage many viewers to make stargazing part of their lives, and a few to get into serious amateur astronomy."

For more information, go to [www.seeinginthedark.org](http://www.seeinginthedark.org).

- Grace Wyatt



## Astronomical League



### A.L. Observing Clubs

The Astronomical League, of which HCAS is a member, includes many specialized observing clubs. In addition to the Messier, planetary and other groups, there are some very unique organizations as well. Here is a partial list:

#### **Orbiting Satellite Observers:**

<http://www.csastro.org/eosoc/>

This club is similar to many of the observing award programs hosted by the League whereby participants record observations for a variety of Earth orbiting satellites. After meeting all of the program requirements, award certificates are issued to the observer.

This observing program is designed to get those new to satellite observing familiar with the terminology, and techniques of tracking satellites.

#### **Binocular Deep Space Observers:**

<http://www.astroleague.org/al/obsclubs/dsbinoc/dsbinoc.html>

The purpose of the Deep Sky Binocular Club is not to put your observing skills to the test by including the toughest objects observable with binoculars, but to allow you to observe and enjoy sixty of the most beautiful objects in the heavens: objects other than those discovered by Charles Messier.

#### **Planetary Nebula Observers:**

<http://www.astroleague.org/al/obsclubs/planetarynebula/planetneb1.html>

Planetary Nebulae are perhaps the most interesting and beautiful objects in the heavens. A genre full of wonderful variation, they exhibit complex shapes, and may even show vibrant colors. The last hurrah of a sun-like star, their study is essential to the understanding of stellar evolution. There are at least a thousand planetary nebulae visible in amateur size instruments and many marvelous ones are not on our list.

#### **Arp Peculiar Galaxy Club:**

<http://www.astroleague.org/al/obsclubs/arppec/arppec.html>

Halton C. Arp's landmark compilation, the *Atlas of Peculiar Galaxies*, led him to challenge the fundamental assumption of modern cosmology, that redshift is a uniform indicator of distance. This new club is based on the 338 objects found in Dr. Arp's *Atlas*. One hundred of the 338 Arp galaxies must be imaged with a CCD camera to qualify for the Club's certificate. The AL feels that this new program will challenge the most serious of amateur astronomers.

**Something for everybody! A full list of observing clubs can be found here:**  
<http://www.astroleague.org/observing.html>

The AL's web site also offers this template for recording observations:  
<http://www.astroleague.org/al/astrnote/astnot03.html>

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## **Recent HCAS Observing Sessions**

### **Lunar Eclipse Observing Report**

August 28th 2007

I woke up early on the morning of August 28th to observe the total lunar eclipse. My home in Havre de Grace does not have good visibility to the west due to some large trees and my neighbors' houses, so I had to go find a better spot. Fortunately I found one right off of Bulle Rock Rd just up the hill from home.

I set up my scope on a side road near one of the model houses up there. The skies were clear and the moon was bright before the eclipse began. I was fortunate to have no problems with clouds or fog. At about 4:51 AM I noticed the first hints of the Earth's shadow on the full moon. A few minutes later I snapped my first photos. I had some trouble connecting my Digital Rebel camera to the scope, so I had to use my backup plan of hand-holding my Nikon Coolpix 4500 to the 40mm eyepiece.



Note that with the unaided eye, the shadow "bite" started at the top of the moon. It is shown on the lower right here due to the orientation of the camera as I took the photo. It is not visible in this photo, but through the scope visually I could see a hint of red in the shadowed portion almost right from the start.

As the shadow moved across the face of the moon, the moon moved lower, toward the horizon. Since sunrise was also approaching, the sky was brightening too. I took more photos every few minutes to document the partial phase of the eclipse.



After this photo (left), the moon became so dim that I couldn't adequately hand-hold the camera to the eyepiece.

When totality started at 5:52 AM, the moon looked like a very dim red disk. The sky was quite bright by then. I only got to see totality for a few moments before the brightening sky completely washed it out, making the moon invisible to me.

I was happy to actually see an astronomical event without being clouded or rained out. Hopefully the conditions will be as nice for the next lunar eclipse, which takes place on February 21st, 2008.

- Monroe Harden

## Stellafane ATM Convention

August 9 – 11, 2007



The 72nd Convention of Amateur Telescope Makers on Breezy Hill in Springfield, Vermont, the 2007 Stellafane Convention, was held Thursday through Saturday, August 9-11, 2007. Joe Manning, HCAS telescope-maker, attended this year, along with his prize-winning 20" Dobson.

For more information on Stellafane, go to: <http://www.stellafane.com/>



PS: Joe also makes a cameo appearance in the upcoming PBS special, "Seeing in the Dark."

## Broad Creek

September 2, 2007

On Sunday, 9/2, we had a successful view session at Broad Creek. Participating this night were Roy Troxel with his 120 mm Refractor, Cathy Tingler with Binoculars and a 90 mm spotting scope. Irv Koplowitz brought along an 8" Dob and I brought an 8" Criterion on a LXD 75 mount.

Clear Sky Clock predictions were for better-than-average seeing and better-than-average transparency. We were looking at one of the best nights we had seen all summer and one of the best for the year. Weather was warm. The only disappointment was a light dome to the south from Bel Air, right where we wanted to do our viewing. Nonetheless, we still had pretty good views of DSOs in Sagittarius.

We basically arrived within 5 minutes of each other, around 7:30 PM. This gave enough time to set up the scopes while we had some daylight. While waiting for Polaris to show, I spent some time viewing Jupiter. I had brought an 8" F/8, and used it to do some high power viewing of the planet. I was able to take the power up to 200X, but images broke down at higher powers. I guess I had pushed my Bausch & Lomb eyepieces to the limit. I tried to see if I could pick up 4-Vesta but not luck.

After doing my alignment, I spent some time hitting some of the Messier objects in Sagittarius. I picked up M-8, -16, -20 and -24. I also tried to do some work on my Messier list, as I still have 9 to go. Unfortunately I was only able to pick up one. The rest eluded me. I then started viewing some of the brighter objects available and saw the Dumbbell Nebula, the Ring Nebula and the Wild Duck. I could not see the Hercules Cluster because I could not reach the eyepiece on the F/8 scope.

I also could not reach the eyepiece to see M-31. However, it showed up really nicely in my 10x50 binoculars. The Double Cluster was no-go, too low.

By 11:30, the moon had cleared the trees and the sky to the east was washed out. Aside from looking at the moon for few minutes, I concentrated to the south and west and picked up Uranus and Neptune. Uranus was a very distinct bluish disk and there was no mistaking it. Neptune, on the other hand, was more difficult, with the color and disk barely discernable, looking more like an out of focus star than a planet.

By 12 Mid, we started packing up, motivated to some extent by a cool breeze that had chilled those of us who did not bring jackets. We all left by 12:15.

All in all, a very nice night of viewing.

- Tim Kamel

## Observatory Operations

September 2006

This is a progress report of some of the changes that have occurred at the observatory over the last few weeks.

First, we had been having issues getting the dome to rotate smoothly. It seems to bind at one spot, and would then take two people to free it. This has been going on for as long as I have been a member and has resulted in much discussion on the use of the dome and its automation. On Thursday, 9/6, Tom Rusek and Mark Kregel worked at lubricating the dome and found a spot where a raised weld on the dome ring was catching on a hold down clamp. Sal Rodano had a College maintenance person remove the hold down and the dome now rotates freely. This maintenance person is also expected to return and apply lithium grease to the rollers.

Second, we are now in the process of receiving two new computers from the College. One will be placed in the classroom and will be a desktop. This one is already in place but will have more memory added. The second one will be a laptop and will be placed up in the observatory. These two computers will be used to network the two rooms so that what is being seen through the scope can be seen in the classroom. The laptop will require a USB level 2.0 connection for taking CCD photos and will require a COM port so that the laptop can be used for auto guiding through the mount's COM port. This automation upgrade will also include a modem so that we can connect to the Internet through a DSL line and will include a projector and a screen in the classroom. On 9/11, Mark, Sal and I met with Donna from HCCC to iron out the details

Third, we have been having issues with the C-14 scope in the observatory over the last few months. Simply, the scope was not doing its GOTO routines properly. The process of diagnosing the problem was long and was made more complicated in that, up till 4 months ago, we were hardly using the scope. Also, at some times, we were using a computer to drive the scope and the scope then operated flawlessly. On the night of our last meeting, some of us (Mark, Roy, Joe and I) met in the observatory and ran the scope to do some specific testing. We found that the scope had no problem finding planets and stars, but would not find any Messier or NGC objects. Further, when instructed to find one of these objects, the screen on the hand box gave some impossible information. Magnitude of M4 is  $-32$  and M80 is  $-27$ . The listed constellation was gibberish and the type of object was blank. In some cases, the hand box would advise that the object was below the horizon when we knew it was not. The only conclusion we could reach was that the data in the mount was corrupt.

Mark undertook to contact Astro-Physics and spoke with Howard, the A-P support person that was extremely helpful to us during this process. He advised Mark that the repair is not difficult and can be readily done. He told us what needed to be done. He advised that likely the battery was dead and that we needed a replacement. Mark ordered one. We were also told that we needed to reinstall the object database. I then went onto the A-P website and found an article that addressed the problem that we were having. The symptoms were identical and the solution was simple. I downloaded the object database installer program and the instructions. I installed the software on my laptop but also took additional precautions. The laptop that I have is an old 486 that is running Windows 95. I was not sure that it would work. I also copied the needed files to a CD and a flashcard, just in case we needed to use another computer. Five of us (Mark, Roy, Tom, Sal and I) then met at the observatory on Thursday, 9/6, to make the change. To communicate with the mount, we needed a COM cable, which Mark brought. My laptop had a COM port, so we were in business.

We connected the COM line and ran the software and immediately got an error message "Component MSCOMM32.OCX or one of its dependencies is not correctly registered; a file is missing or is invalid". Great. To get around this, we try using the computer that has been stored in the storage room on the observatory level. However, this is a dead end as it is protected by a password and we do not have it. We now try with a computer that Mark had brought along. We connect it to the mount and run the installer. We get exactly the same message. We pack up and leave.

The following day, I called Howard at A-P and found that he had heard of this error, but not in the U. S. Apparently it was noted in Italy and Spain. The fix was easy, find the file on the Internet and copy it to the proper location on the laptop. He also advised that according to his records, the firmware we had on the computer is version 3.09, which will not allow us to update the object database. The firmware must be updated to version 4.12. OK, fine. I located the loader file for the firmware and the instructions. Since the operating instructions for the mount will change after the new firmware is installed, I locate a .PDF file with the new operating instructions. I download it and print it out. All 110 pages. Further discussion with Howard finds that a printed manual can be ordered from them for \$13.00. Our version "C" chip in the mount can be upgraded to version "D" if necessary. Howard advised that such an upgrade would be desirable if we do CCD camera work, which we are planning on doing. This is a \$45.00 purchase. If needed, we can replace the

entire hand controller for \$985.00. Obviously an expensive proposition and we would be better served protecting the one we have. A rubber protector is available, but I do not know the cost.

On Friday night, 9/7, I find that I had some time available and called Mark to see if he was available to do some more work on the mount. Mark was available and we met at the observatory at 7:30pm and proceeded to do the upgrade.

We connected my laptop and it now finds the mount with no problem. The software then goes through a routine of polling the mount to make sure that it will accept the change. The test is successful and the mount is now ready. First, the software uninstalls the old firmware, and that is successful. Next, it is to install the new, version 4.12 software but is stopped by the same error message we got Thursday, this time with a file called MSCOMCT.OCX. We go to plan 2. Mark had brought a laptop also. This one is very modern, running Windows XP and has the file that is missing from my laptop. Unfortunately, it does not have a COM port. Mark was ready for this and brought along a USB connector and a COM adapter. After installing the software to Mark's computer, we run the program. No luck, it will not find the mount. We pack up and leave.

When I got home, I found the missing file on the Internet. I download it and install it to my laptop. The next morning, I again find that I have free time and I call Mark. He is again available and we go to the observatory. We pick up where we left off and succeed in installing the firmware. Next is replacing the object database and that one goes flawlessly, except that it takes 1.5 hours to run the database.

Trying to test the installations was difficult in broad daylight. We settled for synchronizing on the sun and then slewed to Venus (beautiful thin crescent). No luck with the moon as the scope kept threatening to hit the pier. We then tried for Messier objects - M81, M51, and M36. The mount did slew and appeared to go in the right direction, but we were not able to do a visual confirmation. We did note that the hand box is now showing proper information for magnitude, constellation and object description instead of the gibberish we were seeing before. It has also stopped saying that the object is below the horizon when we know that it isn't.

On Sunday, 9/9, I had arranged to meet at the observatory with whoever wanted to participate. The intent was to test the scope and confirm that the object database was working. I was also hoping to do some observing. Roy Troxel met me at the observatory. Upon running the scope, we try for an M object and find that the database is again corrupt. We are now pretty sure that the battery is dead and we will have to replace it and reinstall the object database. Not sure why it ran properly on Saturday but maybe there was a residual charge. We were not able to do any observing as heavy clouds moved in and ended our session. We packed up and left at 8:45.

The replacement battery arrived on Wednesday, 9/12 and we scheduled the upgrade for Thursday night, 9/13. We had a good turnout with participation by Roy, Mark, Joe, Tom, Sal, Grace and me. We replaced the battery and updated the database with only a minor problem (I missed a step and had to restart). This time it only took an hour to get it done. I shut the mount down for 10 minutes, hoping to get rid of any residual power charge. When we started it up, it still held the database. We then spent about 2 hours doing some observing. Joe had brought his Nagler eyepieces and we looked at Jupiter, M13, M11, M31, M21 and the Double Cluster. We also tried for several objects in Sagittarius, as well M51 and M101 in Ursa Major. No luck. Too much in the way of light pollution and thin clouds that eventually became thick clouds and we ended the session at about 10:05. The GOTOs were perfect every time and tracking looks pretty good.

So far, we are comfortable that the battery replacement has cured our ills, but we will see when we go back to the observatory again.

- Tim Kamel

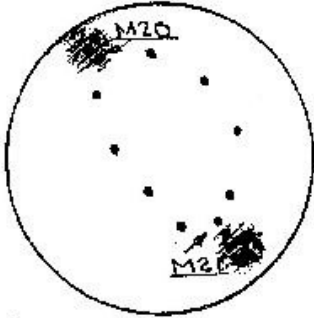
# Messier Objects

By Steve Krall

Steve uses a 10-inch, F/5 reflector unless otherwise noted. The observations were made in Kingsville, Maryland. He prefers the star-hopping method over using a go-to device.

## M20 and M21:

8/13/95, 9:40pm, EDT, 30x



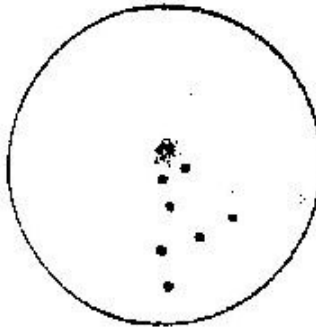
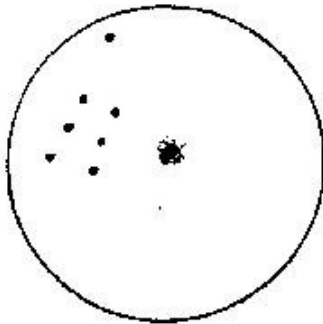
Difficult to resolve on a less than superior night, M20, nicknamed the Trifid Nebula, appeared as a faint, soft glowing cloud surrounding a bright solitary star. It is fairly large, rounded and off-white in color and its dim light tends to fade from view at times. You can find it just south of M21, in the same low-power field (see drawing). However, you will need the best of nights and a very dark observation site to see any additional definition, such as the nebula's separate lobes and lanes.

M21 is easily observable in low power. It appears as an elongated horseshoe-shaped string of stars bordering on M20 at one end and anchored at the other end to a fairly large glowing cloud, revealing a handful of stars shining through the haze. It looks startlingly similar to M16, the Eagle Nebula.

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## M69 and M70:

8/19/95, 9:35 – 10:30pm, EDT, 100x



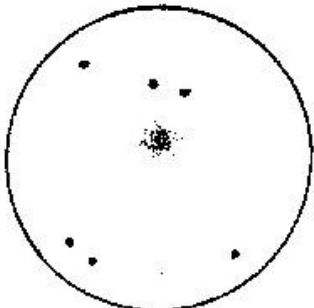
Somewhat vexing to find, you need an excellent night to see these two elusive, extremely compact globular clusters, unfavorably located very low in the southern sky. Try for them on a line drawn from Zeta Sagittarii to Epsilon Sagittarii, two reliable guide stars, with M70 lying about halfway on that line and M69 positioned directly due west of it about three

degrees (use your Telrad). Although both clusters are hard to resolve, small and sheathed in a thin nebulosity, M69 appeared a tad larger, brighter and easier to detect. (Finally tracking down these two isolated clusters residing just above the horizon in Sagittarius gave me a sense of satisfaction.)

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## M75:

8/19/95, 11:50pm, EDT, 100x



Searching for this obscure globular cluster located between Sagittarius and Capricornus, void of decent guide stars and lying close to the southern horizon, can be a daunting undertaking. It appears small and ashen gray in color. It is brighter toward the



center, rounded and highly compressed, appearing to merge into the background at times. I could not even come close to resolving this unimpressive-looking star cluster whose one claim to fame is its great distance: a whopping 95,000 light years, making it one of the most distant globulars in the Messier catalog.

\*\*\*\*\*

## **Harford County Community College Fall 2007 Observing Schedule**

The Harford County Community College has an astronomy program and the Fall Semester class has just started. We, as the Harford County Astronomical Society have supported this program for many years. This is a little more than just an outreach program; it is an expectation. We have had a close relationship with the College, use one of their classrooms for our monthly meetings, use the observatory and store our equipment there. The College also insures our activities while on College grounds.

The support is fairly simple. We set up telescopes at the Observatory and allow the students to observe the objects that they are being taught in class. Dr. George Thomson, the Astronomy Professor, takes the lead in talking with the students and lets us know where to point the scopes. The students arrive from their class at about 9:30 PM and observe till about 10:00 PM. We would plan on getting there shortly after 9:00 PM to set up and get ready.

*Note: There will be no session if it is cloudy, with the exception of Sept 17th. Please dress warmly and wear appropriate shoes and gloves.*

### **September**

- Sept. 17 (moonless) Observatory orientation session to be held irregardless of weather
- Sept. 24 (Full Moon - no session)

### **October**

- Oct. 1 (3rd quarter moon)
- Oct. 8 (moonless)
- Oct. 15 (moonless)
- Oct. 22 (1st quarter moon)
- Oct. 29 (Full moon - no session)

### **November**

- Nov. 5 (moonless)
- Nov. 12 (moonless)
- Nov. 19 (1st quarter moon)
- Nov. 26 (Full moon - no session)

## **December**

- Dec. 3 (moonless)
- Dec. 8 (4 a.m session at the observatory)
- Dec 9 (4 a.m. to be held only if preceding morning's session is clouded out)
- Dec 10 (moonless)

\*\*\*\*\*

## **Miscellaneous**

### **Google Sky**

If you have ever used the Google Earth photographic map of the world, you're going to love their new photographic map of the sky. It comes packaged with Google Earth 4.2. You can download it for free at: <http://earth.google.com/download-earth.html>

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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