Harford County Astronomical Society

Bel Air, Maryland
www.harfordastro.org

Volume 32 Issue 11 *November 2006*

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Public Star Parties (Open House):
Saturday, November 25, 2006 at dusk

General Meeting:
Saturday, December 2, 2006 7:30pm

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Club Calendar for 2006:

Meeting Night	Open House/Public Star Party
December 2, 2006	December 30, 2006

Please check the website for possible schedule updates and changes:

http://www.harfordastro.org

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In This Issue:

Steppingstone

October 20, 2006

It was a good session at Steppingstone with Grace and Irv.

I got there around 7:00pm, planning to set up in the parking lot. To my surprise, the lot was filled with RVs, inhabited by many dogs and their owners! It was some kind of kennel club convention. Grace arrived a few minutes later, however, and we quickly located a large field, away from the dogs and with a very wide view of the entire sky. As the Andromeda galaxy rose higher in the sky, it could be seen with unaided eyes, so the seeing was definitely good, though not as good as Broad Creek last summer. The only polluted area was to the bright southwest, toward Bel Air. The Teapot could only be glimpsed. Otherwise, very dark skies.

My "mission" that night was to test out my new push-to controls, Orion's Intelliscope system. I had been adjusting the push-to for several weeks now, with varying degrees of success. This time, to my complete satisfaction, the Intelliscope found everything - Ring Nebula, the double-double, etc. The best part of the evening was locating Uranus and Neptune, which the push-to did very quickly - more quickly than it had located the Ring Nebula, in fact. I also used the "tour" function that can direct your scope to 12 preselected objects in the October sky (or in whichever month you choose.) Consequently, I would recommend the Intelliscope controls, but be prepared for some initial calibrating, such as setting the “Dec=0” marking.

With their binoculars, Grace and Irv got some beautiful views of the Pleiades, the Double Cluster, and the Milky Way in general.

-Roy

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HCAS Outreach Program

Abingdon Library

Tom Rusek conducted his outreach presentation on October 23, at the Abingdon Public Library,

before a crowd of about 50 people. Using a slide presentation, he discussed the comparative sizes of stars and planets and other space objects, including the Oort Cloud, which extends approximately 3 light years from the Sun and is considered the limit of the Sun's gravitational pull.

Tim also reviewed the arcane reasons as to why Pluto has lost its status as a planet.

Trivia: The same year that Pluto was discovered, 1929, was also the year Walt Disney gave Mickey Mouse a pet dog. Guess what his name is.

The Next HCAS Outreach Programs
For further information, please contact Tom Rusek at
rusek54@yahoo.com
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Open House

October 28, 2006
Sub Title – Baby it's cold outside

On 10/28/2006, we had our open house function. The open house coincided with an outreach program being conducted at the same time by Tom Rusek at our observatory. As a result, we had to split our available resources between the two functions.

The most memorable thing about the open house was the weather. It was not particularly cold, low 40's maybe, dropping into the high 30's later in the event. The wind, however, was brutal. We had 40-50 mph winds which, when combined with the temperature, made it pretty uncomfortable for those (me included) that were not prepared.

I arrived fairly early, somewhere around dusk and was the first one there. There were some fast moving clouds but the sky was fairly clear and it got better as the night moved on. Seeing was poor due to high winds. Light pollution, as usual for this site, was fairly high due to the lights from the school and the college. But, the Pleiades could be vaguely seen.

I tried to set up my EXT-70 and got the tripod up when a fairly strong wind gust came up. I shielded the tripod and suffered through the chill 30-second blast. When it abated, I leaned over to get the OTA itself when the wind returned and knocked the tripod down. Great. I set it up again and tried to put the scope on. Another gust came up and I had a tough time holding myself up against the wind while avoiding being pushed into the scope. It occurs to me that this is not a good idea. I packed up the ETX-70 and went for the club's 6" f/10.4 that I also had with me. The OTA assembly weighs 29 pounds. I am guessing the tripod/mount weigh at least 45 pounds. If this did not stand up to the wind then nothing was going to and I was going to pack it in. It stood up to the wind and I was in business but viewing during a gust was bad with the OTA shaking like crazy. One of our visitors brought along a Tasco and set it up, but it was also knocked down by a wind gust.

Other club members participating this night were Mark Kregel, who brought his 14.5" Dob, and Grace Wyatt who brought binoculars on a parallelogram stand. Conrad Buelow, a new member, also joined us. Roy brought his 120mm refractor. I have a poor memory of the events of that night so if I did not mention others who attended, I apologize.

Anyway, participation by the public was pretty good. Mr. McLeod again sent his science class to our session to get extra credit. We had a small Girl Scout troop show and there were several adults who came to do some viewing. Two guests came and brought a scope and a set of binoculars. Attendance for the open house was on the order of 40-50 people.

Targets for the night were the moon, always a good topic and always guaranteed to get a good reaction from some one looking through a scope for the first time. Other targets were the Andromeda Galaxy and the Pleiades. I also tried to bring in Alberio but could not do so. My finder was out of alignment and my fingers were just too cold to be dinking around with 6 screws. I gave up trying to get Alberio into the narrow field of view of the scope.

Some visitors, mostly the students, were satisfied with their one look through the scope and bailed out. Really could not blame them, the wind made it feel much colder than it really was and most, like me, did not dress appropriately. Some hardier souls stayed for the full duration of the event, asking questions and looking through the scopes and binoculars.

We adjourned some time around 10:30. Still a great session even with the cold.

Tim

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HCCC Astronomy Class Support

October 30, 2006

On October 30th, the weather was clear and we supported the HCCC Astronomy class. This was the first session in four weeks as we were clouded out 2 Mondays and did not have a session on Monday, 10/9 due to the full moon.

The weather was much better than the public open house two days previously. Of course, this time I was much better dressed. There was no wind and it was fairly mild. I would judge the seeing being fair and the transparency being fair.

The moon was one day past First Quarter and was the primary target this night. The moon killed any hope of faint fuzzies for the night so we settled for clusters, including the Pleiades in Taurus

and M36, M37 and M38 in Auriga. Not too considering that we only have ½ hour with the students.

Also participating this session were Mark (14.5" Dob), Irv (8" Dob), Roy (120 mm Refractor) and Grace (6" Dob). I brought my 127 mm Mak.

As we were packing up, around 10:15 PM or so, we noted Orion coming up over the trees. By the next session, we should be able to serve up the Orion Nebula.

Just a reminder that the morning session is scheduled for 11/18 at 4:00 AM. In case of clouds, we will have the session on 11/19, same time.

Tim

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Treasurer's Report

As of 10/20/06, balance in the checking account is $5486.42.

There have been no changes in the number of members. There are no other financial issues to report.

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Telescope Buyer's Workshop

November 4th, 2006

Our club presented a Telescope Buyer's Workshop at Harford Community College on the evening of November 4th, 2006. President Jim Garrett, with help from several other members, set up the room with examples of different types of telescopes, accessories, and product information.

The purpose of the workshop was to provide information to people interested in purchasing a telescope for themselves or as a gift, as well as anyone interested in getting started in astronomy. We chose an early November date to help people considering a telescope purchase for the upcoming holidays.

After a short introduction about the club, Jim Garrett structured his presentation around three questions:

1. Do you want a telescope?
2. What can you expect from a telescope?
3. What kind of telescope should you buy?

Jim explained why a telescope was useful for enjoying the night sky. He cautioned that some retailers or manufacturers put beautiful Hubble Space Telescope photos on their product boxes and catalogs, but in real life you won't see anything like that. Exaggerated claims of useful magnifications in the hundreds are also misleading, since small consumer telescopes and mounts cannot gather enough light to make such high powered views useable.

This led to a discussion of the different types of amateur telescopes. Jim showed an example of a cheap department store refractor on a spindly mount with 0.965" eyepieces. He explained why this was not a good choice, and the frustration it would generate could discourage someone from further enjoyment of the hobby. He then described an affordable Dobsonian, a Newtonian refractor on an equatorial mount, his 10" SCT, and binoculars on a parallelogram mount.

He explained the pros, cons, and usual costs for each type of instrument. The quality of the mount was also emphasized.

Jim recommended that a true beginner start with an affordable set of binoculars and a mount if possible. This gives the novice an instrument that is useable for other purposes, and it facilitates learning the night sky. Once the person is comfortable with the sky and how to find objects of interest, reflecting telescopes of various sizes and mounts are available. He did not recommend that a novice buy a refractor as a first scope, since quality refractors are quite expensive.

The seminar ended with a raffle and some promotional item giveaways. Chesapeake Optics in Havre de Grace told us that they would give a discount to anyone bringing one of their flyers from the workshop into their store, so we made sure that all of our guests had the opportunity to pick one up. We also had Orion catalogs, lens cleaning kits, and Zeiss baseball hats to give away.

The guests told us that the workshop was very useful to them, and Jim answered all of their questions.

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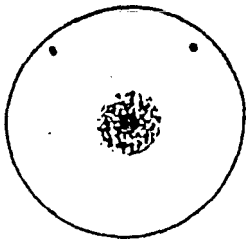
Messier Objects for Winter

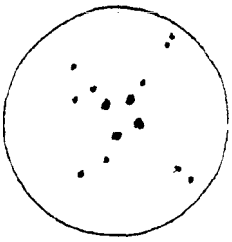
By Steve Krall



M15:

To locate M 15, first visually trace out the starry pattern of the 'Great Square' in the constellation Pegasus then using 2.5 mag. Markab as your starting point slide southeast to 3.5 mag.Baham from there turn northwest to 2.4 mag. Enif where you can uncover M15's solitary image just an eye-blink away to the northwest. It's a simple matter of connecting the `dots'! At first glimpse M15 grabs you right away, appearing as a small, soft-glowing globule seemingly suspended hovering in that distant halo enclosing our Milky Way. Going to higher power the change was dramatic, revealing a larger, brighter orb with an impenetrable concentration of stars crammed together toward the center. This remote globular cluster lying just off the edge of our galactic disk 40 thousand light years distant is a remarkable sight and deserves more regard.

Note: Messier describes M15 as a "Nebula without a star, round and brilliant at the center."



M29:

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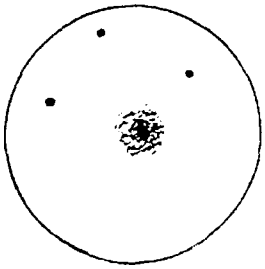
Located in Cygnus, deep in the midst of the Milky Way's glowing band of cosmic dust and countless stars crossing over our sky, you might assume sorting this diminutive cluster out of that mass of stars to be a daunting task. Yet, using low power with brilliant, steady Saar as a beacon, you could pin down this unimpressive, small aggregate of stars right off the bat just a heartbeat away to southeast of Saar. M29 is little compressed, numerically poor, sheltered in the faintest nebulosity and is composed of only about twenty stars. I was particularly drawn to M29's four bright stars in the center of the cluster arranged in a distinctive configuration similar to the 'keystone' segment in Hercules. Besides the satisfaction of tracking down this rather elusive, uninteresting cluster I also enjoyed taking in the magnificence of the Milky Way while I was at it.

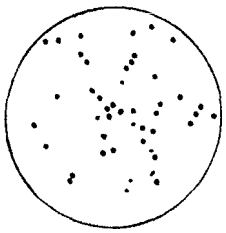
Note: Messier described M29 as "a cluster of 7 or 8 small stars, looks like a nebula in a 3 and 1/2 foot telescope."



M30:

October nights are the most favorable of times to observe this globular cluster when it is at its highest in the sky and close to your meridian. Lying just off the western edge of Capricorn's comparatively low in the sky at minus 23 degrees Dec. and plagued more often than not by the haze choked southern skies, M30 can be no easy quest. Rummaging around for it a few degrees off Seta Capricorn in that barren region can begin to test your patience somewhat until you finally pin it down. My first glimpse of M30 in that black nothingness appeared as a moderately large, milky-white ball. It is fairly bright with a brighter center, rounded, very compressed, and filled with unresolved stars to the brim although I sensed that very high power might achieve some resolution. M30 is not a unique looking cluster, it shares a remarkable resemblance to two other nearby clusters namely M15 and M2 which like M30 can also be found orbiting our milking way's frigid outer halo 40 thousand light years away.

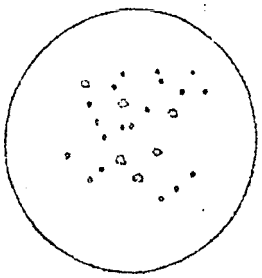
Note: Messier describes M30 as "a nebula seen with difficulty in a 3 1/2 foot telescope, round, contains no star."



M34:

They just don't come any better than this lovely cluster. Easily resolvable in the smallest telescopes, you can find it readily snuggled in between Perseus and Andromeda about one-third of the way from Algol to Alamak where it appears replete with blazing blue-white I stars in an impressive display. M34 is a particularly rich assemblage of scattered stars, very little compressed, very widespread with bright stars out to its edge and uncommonly containing only a few smaller stars. It is a grand sight, resplendent with brilliant stars and I am tempted to compare it to the Pleiades, imperfect as that comparison may seem. There are some who say that M34 can be seen faintly with the naked-eye and that it can only be seen at its finest with binoculars, I have no problem with that.

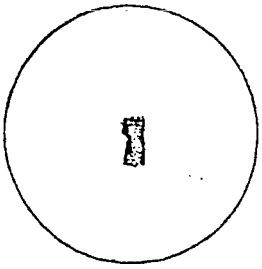
Note: Messier described M34 as "a cluster of small stars, you can distinguish the stars in a 3 foot telescope."



M39:

M39's unimpressive view might just be a consequence of being in the wrong place at the wrong time. Look for it in Cygnus, about 10 degrees a little to the northeast of Deneb embedded in the swarming stars of the Milky Way's Orion spiral arm. M39 is difficult to separate from such a glittering background and requires close scrutiny to detect. However, once you can sort out this sparse, insignificant cluster it becomes clearly apparent and I can espy at least six large, brilliant stars and some smaller ones as well, spread around randomly in a fairly large field. Ill-fated to languish in the over-whelming glow of the Milky Way and resigned 'not' to be all it can be, I like to envisage how much more exciting M39 would appear had it been placed in another more accommodating part of the heavens.

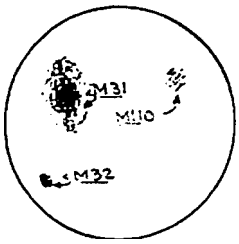
Note: Messier described M39 as "a cluster of stars near the tail of the Swan, they can be seen with an ordinary telescope of 31/2 feet."



M76:

You need a moonless night and steady seeing to track down the feeble light of this notoriously elusive planetary nebula. Lying in Perseus, lacking well-known bright stars to guide you, finding M76 can be a challenge and you may want to research your star atlas for this one. Look for it parked about one degree north of Phi Persei where it appears as a solitary, ashen-gray, diminutive, rectangular shaped figure, looking like some eerie, cosmic left-over remnant. Fortunately, higher power works very well here and zooming in for more detail with a sky filter showed M76 as being much brighter, with a distinctive kink in the middle of its shimmering, silver-gray body which I can only assume suggests the intersection of the separate lobes that they theorize about so much. If you want a glimpse of this nebula, popularly known as the Barbell Nebula, I suggest that you bide your time and exercise all the patience and concentration you can muster.

Note: Messier described M76 as "a nebula on the right foot of Andromeda. Comprised only of small stars containing nebulosity."



M31, M32, M110:

They say that the **Andromeda Galaxy, M31**, is the farthest celestial object that can be seen with the unaided eye but I cannot claim such visual acuity, from my backyard anyway, even when M31 is at its highest in the sky. However, on a moonrise night in the environs of the outer suburbs and if you know where to look, you may discern the faintest glow there. While it can be trying to see with the naked eye, this splendorous object is impossible to miss even in the smallest optical instrument. At low power M31 appears as an extremely bright, large, ash-gray colored cloud, shaped like a football (American style, that is) with a large, intensely brighter center, reminding me of the glowing gaseous cloud in the Great Nebula in Orion. The historic significance in which M31 was the major player in the discovery of the expanding universe and the island universe concept makes M31 particularly interesting to me.

Note: Messier described M31 as" the beautiful nebula shaped like a spindle

M32: Appeared only as a star, higher power revealed a small rounded, bright disk--easy to find.

Note: Messier described M32 as "a nebula without a star, much fainter than M31."

M110: A fairly large, grayish smudge, very dim, almost transparent. It fades into the starry background at times, difficult to keep in view.

Note: Messier described M110 as " A large, faint, oval nebula. Best on low power, seems to sparkle."

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M1 at 40x, with 120mm refractor

M1 (Crab Nebula):

Has anybody seen this one? I had tried for several weeks to see the Crab Nebula, partly because of its interesting history: It is the remnants of a star that exploded in 1054. With my 120mm refractor, I couldn't see a thing, even using the push-to controller. Finally, one night around midnight, with Taurus near the zenith, I caught a glimpse of the nebula. It was a very pale grey oval-shaped object. I moved my scope a few seconds of arc, to make sure it wasn't a smudge on the eyepiece, but the oval remained in the same relative position, so yes, it was the nebula. Next, I inserted a higher-power eyepiece, with a narrow-band filter. The nebula did appear larger, but with no more detail – nothing like the photographs from Hubble:
http://seds.org/messier/more/m001_h3.html

Note: Messier wrote, "Nebula above the southern horn of Taurus, it doesn't contain any star; it is a whitish light, elongated in the shape of a flame of a candle, discovered while observing the comet of 1758."

-Roy Troxel

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Government Surplus Glass for Amateur Telescope Makers

By Robert L. Clark

Editor's Note: Mr. Clark taught Computer Science at the University of the District of Columbia. These optics for sale were originally taken out of circulation following World War II, because the US government did not want to compete with the Japanese and German economies at that time.

October 2006

A few years ago, I came into possession of a large quantity of optical glass components. The circumstances of my ending up with the stuff are a bit strange but were largely motivated by an intention to make it available to folks who might use it. Another part of the motivation was the desire to build the stuff I couldn't afford in terms of time and material, 40 years ago. This collection of glass is something of an overkill in terms of my use. *(That ought to get some sort of award for understatement!)*

This material consists of a wide variety of components, both very standard and some rather odd stuff.

I have a pretty complete inventory. I have nearly 20,000 pieces counted and stored. There are about 250 different items.

Up to now I have only written a few letters and made a few phone calls. The results have been a mixture of opportunities to give some of it away and sell some of it at pretty much cut-rate prices. That is pretty much the mixture I would like to maintain.

I have a catalog of the material. Call or EMAIL for a copy.

Some items are in rather large quantity; others are small quantity.

Among the lens type items are:

5+ Inch Crown and Flint pairs	**a few**
4 + Inch Crown and Flint pairs	**over 400**
3 Inch Crown and Flint pairs	**over 400**
Smaller Pairs (Binocular - Finder sizes)	**over 3,000**

A lot of thick blanks (Crown and flint) in sizes like 2" to 3" diameter and 1" to 1-1/4" thick.

Many of the Flints are F621s and many of the Crowns are BSC 517 but there are several other glass types including some light crowns, some rather dense crowns, and some very dense flints.

Some of the above are castings, some are milled castings, some are formed (Curved) castings and some are rough ground to curves. Some of the crowns are matching curves; some are asymmetrical. All curves seem to be spherical. The flints are either cast, milled plane, cast to concave or ground to concave. Some items have slight damage in the form of edge chips, etc.

There are about 50 finished doublets fl 3/4, diameter 3/4. Some odd, very thin lenses etc. See listing. That is all the finished material.

Various Prism Blanks:

There is a wide variety of cast and or cast and ground prisms. Most are right angle; some are pentagonal. They run from small to quite large. Again, see the listing.

Blocks and Slabs:

There are a lot of various crowns and flints in slab, sheet, and block form.

I have produced a draft "listing" with "tentative" prices assigned to most of the items. Everything is subject to negotiation or "buy some and get some free" deals for clubs, etc. Find a use for some of the odd stuff and "let me know how it works" deals are interesting. Trade for finished material and or services (Aluminizing?) ideas are interesting. Questions along the line of "Do I have something that might be used for XYZ?" are welcome but give me a little response time.

About the only thing I don't want to consider is free shipping. This stuff is not light.

I have written a little PC Windows program that will compute the curves, etc. for three of the old Ellison Objective designs. I can supply a copy on disk with any order for $2.00 extra.

I have some notes on the construction and use of a turntable-grinding machine. I can supply a copy with any order.

For further information, please contact:

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49 Fitzhugh Avenue, Westminster, MD 21157
Phone 410.751.9710 Fax 410.751.9771

ROBERTLCLARK@VERIZON.NET

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Book of Dreams

The Harford County Astronomical Society has been invited to participate in the kick-off of a book called ***The Book of Dreams***. The book is an educational project about the underground railroad. Here is the link to the website: http://www.bookofdreamsproject.org/ .

The event is going to be at Steppingstone Museum on December 8 from 7 to 9 PM. The person who is organizing the book said the stars played a key role in helping slaves escape to freedom. Maps were not possible but the stars were always available for travel. He thinks it would be great if people at the opening could go outside to look at the stars with our club members. Basically club members would provide an open house event at the Steppingstone Museum at the time of the event. If you are available to assist, please contact Grace Wyatt at 410-836-7285 or dgracew@comcast.net

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Harford County Astronomical Society
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Items for the newsletter are due to the editor by the 13th of the month of publication.

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