

Astro Views

Harford County Astronomical Society
Bel Air, Maryland
www.harfordastro.org



Volume 31 Issue 7

July 2005

"Press close bare-bosom'd night-press close magnetic nourishing night!
Night of south winds-night of the large stars!
Still nodding night-mad naked summer night."

Walt Whitman (1819-92)
"Song of Myself"
(lines 453-7)
1855, 1881

General Meeting: Saturday, July 23, 2005 7:30pm (19:30)
Public Star Party (Open House), July 16, 2005 at dusk

Club Calendar for 2005

<u>Meeting night</u>	<u>Open House/Public Star party</u>
August 20, 2005	August 13, 2005
September 17, 2005	September 10, 2005
October 15, 2005	October 8, 2005
November 19, 2005	November 12, 2005
December 17, 2005	December 10, 2005

Meeting time is 19:30 (7:30pm) unless noted otherwise. Dates and times are taken from the HCAS website.

<http://www.harfordastro.org>

Check the HCAS website for other club events.

Regular Agenda:

1. Treasurer Bill Geertsen opened the meeting at 7:40pm (19:40).
2. Minutes of June meeting were not discussed.
3. Treasurer's Report:

Previous report balance:	\$3,755.25	
Expenses:	(\$220.00)	AL Dues
Disbursements:	(\$107.90)	H-β filter-Jeremy K.
Donations:	\$10.00	Finder scope
Membership:	\$25.00	HCAS
Current Balance:	\$3,462.35	

AL dues were paid as follows;

42 members paid up as of 6/26/05 @ \$5.00 per member	\$210.00
HCAS club fee	\$10.00

Total AL dues paid \$220.00

Thank you Steve for taking the minutes, and Carol for retrieving mail from the PO Box and all the support!

Old Business:

1. **Treasurer's Note:** The club roster carries approximately 60 names. Of those 60, 42 are paid up. The dues were payable on June 1, 2005. Please contact me by phone or e-mail, if you have not yet paid but intend to do so, at 410-561-0973 or izar@juno.com. We will work something out.

I need to hear from you no later than July 30, 2005. After July 30, 2005, your name will be removed from the current membership roster, the newsletter mailing list and the e-mail list.

2. **Surplus equipment Note:** July 30, 2005 was the deadline for the purchase of HCAS surplus equipment exclusively by HCAS members. There is still much available to be purchased but we will now move to place it on Astro Mart and/or EBay.

Jeremy made a good-faith offer for the 6" f-15 green tubed refractor. There were no counter offers, so it will be reserved for him until such time as he can pay.

Larry Armstrong purchased a mount with wooden legs for \$5.00.

3. **Spruce Knob, West Virginia:** Larry and Fran Armstrong spent two nights at Spruce Knob over the July 4th weekend. Larry estimates the sky to be magnitude-7 as compared to our usual mag-4 skies. Camping conditions are primitive and the drive is about 4 hours long with the last third or so on unimproved (gravel/dirt) roads. Even though it clouded up at 11:00 each night, their only complaint was too many stars!! The constellations were too difficult to pick out!!

4. **Yerkes Observatory, Williams Bay, Wisconsin:** Bruce Wrinkle gave a passionate talk about his recent trip to Yerkes, the giant 40 inch refracting telescope (largest of it's kind) built by Alvin Clark & Sons and installed in 1897 (the grand dome is 90 feet in diameter, the movable observing floor is 75 feet in diameter), the wonderful architecture, the legend of the broken floor and how the three colors do not come to focus at the eyepiece. He passed around a photograph of the scope and explained its features to the group.

Visit <http://astro.uchicago.edu/vtour/history/> The entire Yerkes facility is up for sale if anyone is interested.

5. **Observatory lighting:** Jeremy brought up the badly faded condition of what were the red lights in the observatory. Three new, red bulbs were found in the library and installed upstairs, solving the problem. Users may wish to consider moving the red bulbs into the sockets which are on the dimmer control. At the moment, only the white lights can be dimmed.

New Business:

1. **HCC Faculty Day, 23 August, 2005, 10:30-14:30:** Sal Rodano has requested some support from HCAS. It can be as little as a scope and photos to display. Member presence is not needed. The 8" SCT in the classroom will suffice. Sal will have assistance moving it.

2. **Broad Creek, winter season:** Mark Kregal has been contacted for assistance with the winter camping activities for Webelo Scouts at Broad Creek. The program begins on 18 August, 2005. Assistance will be needed approximately once per month, bring a telescope.

3. **Parking lot path:** Sal Rodano said that HCC has issued a contract to construct a path from the parking lot to Observatory Drive and to provide widened areas along the drive for passage in two directions. Sal will follow up with HCC Facilities and get more details.

4. **Swan Fest, 9 October, 2005, 11:00-16:00:** Grace announced the event for this year at Swan Harbor, and asked if we should pursue it. The general feeling was 'yes'. This has been an enjoyable event in past years. Grace will complete the paperwork for us.

5. **“Buddy system”:** A request was made to discontinue the “rule of two” for night time dome operations. This needs to be discussed with the HCAS officers and HCC Campus Security. There are issues of personal safety and equipment accountability which led to imposing the rule initially.

6. **Motorizing the dome:** This is an old issue which should be resolved soon. Manual rotation of the dome, while possible, is difficult and requires two people. There is a possibility that motors exist somewhere in the club inventory, however, they have not been seen in many years. Mark Kregal has enough drive chain to fit around the moving base ring. He recommends using two hydraulic motors spaced 180 degrees apart. Mark will put together a cost proposal for the parts needed to accomplish this task. There was general agreement that this should be a high priority project.

This single upgrade would make the dome usable by all members, much safer and less primitive when we begin public operations.

7. **Old equatorial mount:** There is movement for HCC to declare the heavy duty EQ mount surplus property. Jeremy has located a buyer for the mount and gears. The gears are 12” and 14” Byers Starmasters with clutch assemblies and worms. They alone are worth about \$2,000.00. There was discussion of using whatever money is realized from this sale to offset the cost of dome rotation.

Meeting was adjourned at 20:20 hrs.

Member equipment for sale:

Tele Vue Ranger.70mm ED, 480 f/6.8 with carrying case , diagonal, 26mm eyepiece and finder.
A great travel scope.

Asking \$325

8" Meade SCT Mod. 2080. Purchased and setup by Roger Tuthill in 1988 for \$2900. Scope w/ 8X50 finder, wedge, HD field tripod footlocker case, 1-1/4 and 2" eyepiece holder, camera bracket, counterweights, several 1-1/4 eyepieces, Telrad finder, heated objective, light weight transport case, carrying case for all accessories. A complete manual, two video tapes, instructions for setting up and astro photo. Many more items. Can be run on 9 volt battery, 12 volt battery, and A/C.

Asking \$750.

Ernie Davis ernietd@earthlink.net
410 661 1225
410 661 0027
Cell 410 b746 7582

July Messier Objects

Between RA 13h 00m and 16h 59mm

M53 RA 13-12.9 Dec +18-10 Size 12' Mag 7.7 Globular cluster
NGC 5024 SA2K #7, 14

Large, bright cluster in Coma Berenices. Messier independently found this object in 1777, but it was originally discovered by J.E. Bode in 1775. About 70,000 LY distant.

M63 RA 13-16 Dec +42-02 Size 12.3'x7.6' Mag 8.6 Sb galaxy
NGC 4468 SA2K #7

Large, bright galaxy in Canes Venatici. About 24 million LY distant.

M51 RA 13-30 Dec +47-12 Size 11'x7.8' Mag 8.3 Sc galaxy
NGC 5194-5 SA2K #7

The famous "Whirlpool Galaxy" in Canes Venatici. Face-on, open arm spiral galaxy. The second galactic core in the same field is NGC 5195, mag 9.6, peculiarly shaped companion. Under a dark sky, the spiral arms are quite visible. About 37 million LY distant.

M83 RA 13-37 Dec -29-52 Size 11.2'x10.2' Mag 7.6 Sc galaxy
NGC 5236 SA2K #21

Large, relatively bright face-on spiral galaxy in Hydra. M83 never gets far above the horizon, so wait for a moonless night and work fast. M83 rises and sets quickly. About 8.5 million LY distant.

M3 RA 13-42 Dec +28-23 Size 16' Mag 6.4 Globular cluster
NGC 5272 SA2K #7

One of the five best globular clusters visible in the northern sky. Large, rich GC in Canes Venatici is in the same class as M13, M5, M22, and M92. About 48,000 LY distant.

M101 RA 14-02 Dec +54-21 Size 27'x26' Mag 7.7 Sc galaxy
NGC 5457 SA2K #2,7

The great "Pinwheel Galaxy" in Ursa Major. Just off the handle of the Big Dipper. Don't let the magnitude fool you into thinking this is a bright, easy object. Very large, low surface brightness face on galaxy, very challenging. About 27 million LY distant.

M5 RA 15-17 Dec +02-05 Size 21' Mag 5.8 Globular cluster
NGC 5904 SA2K #14, 15

If you think M# was great, wait until you see M5. A large, rich GC in Serpens. About 24,000 LY distant.

M80 RA 16-17 Dec -22-5937 Size 8' Mag 7.2 Globular cluster
NGC 6093 SA2K #22

Small, rich GC in Scorpius. About 36,000 LY distant.

M4 RA 16-24 Dec -26-32 size 34' Mag 5.9 Globular cluster
NGC 6121 SA2K #22

Beautiful, large, bright GC in Scorpius. You should be able to resolve many stars in this GC. About 24,000 LY distant.

M107 RA 16-33 Dec -13-03 size 12' Mag 8.1 Globular cluster
NGC 6171 SA2K #15

GC in Ophiuchus, much dimmer than the other globulars mentioned this month. About 20,000 LY distant.

M13 RA 16-42 Dec +36-28 size 20' Mag 5.9 Globular cluster
NGC 6205 SA2K #8

Other than Omega Centauri, M13 is the best globular cluster in the sky. Located in the keystone of Hercules, it is a naked eye object under dark skies. About 26,000 LY distant.

M12 RA 16-47 Dec -01-57 size 14' Mag 6.6 Globular cluster
NGC 6218 SA2K #15

Medium size globular cluster in Ophiuchus. About 19,000 LY distant.

M10 RA 16-57 Dec -04-06 size 19' Mag 6.6 Globular cluster
NGC 6254 SA2K #15

Almost a twin of nearby M12, a little more condensed, GC in Ophiuchus. About 16,000 LY distant.



are pleased to announce their Tenth annual No-Frills Star Party
 from September 28 through October 2, 2005 at
 Tuckahoe State Park's Equestrian Center near Queen Anne, MD.

The registration fee includes camping fee for the observing area. ALL NIGHT STARGAZER COFFEE, as always, will be free and usually corn-on-the-cob and watermelon as well. Sodas and hot dogs will be available at minimal cost. Campers will be permitted to park and set up by their scopes, but there are no hookups or electricity in the observation area. This year's No-Frills will be at to the Equestrian Center and Not at the Youth Camping Area (See map on back of registration form). All attendees are encouraged to register in advance for this event. Your entrance-parking permit will be sent to you on receipt of payment and your badges will be given to you when you arrive.

REGISTRATION for No-Frills IX

Number in party	2-3 Days		4 Days		5 Days	
	Pre-Registration	After Sept 9	Pre-Registration	After Sept.9	Pre-Registration	After Sept. 9
1 Person	\$25	\$40	\$30	\$45	\$35	\$50
2 Persons	\$40	\$55	\$50	\$65	\$55	\$70
Family (3 or more)	\$55	\$70	\$60	\$75	\$65	\$80

For more information, visit our web site at: www.delmarvastargazers.org , call or e-mail:
 Lyle Jones, President, (302) 736-9842 E-mail: worm1647@comcast.net
 Joe Cain, Reservations, (302) 998-4534 Email: joccamjr@cs.com

cut here

REGISTRATION FORM

Make check payable to Delmarva Stargazers
 Mail to Joe Cain, 2219 Henlopen Ave., Wilmington, DE 19804

Name _____ What Day Will You Arrive? _____
 Evening/ Weekend Phone _____
 Address _____ City _____
 State _____ Zip Code _____

Year & Make of Automobile _____
 Number in your party _____
 Attendee #2 _____ Attendee #3 _____
 Attendee #4 _____ Attendee #5 _____
 Attendee #6 _____ Attendee #7 _____

Use TABLE above to calculate Registration Fee(s). **TOTAL ENCLOSED** _____
 Are you interested in giving a presentation at the No-Frills? _____

What is the title on the presentation?

There are mail restrictions (number of pages) on the snail-mail version. To get the most out of your Astro Views, you are encouraged to subscribe to the e-mail version. This is easily done by contacting Bill Geertsen at izar@juno.com and adding your e-mail address to his mailing list.

This issue contains a detailed listing of objects in Sagittarius (which are visible in scopes of 10" or smaller aperture. Many are listed in the AL observing programs. Using the list will get you started on the AL observing-certificate programs.).

Astro Views is the official publication of the Harford County Astronomical Society, P.O. Box 906, Bel Air, MD 21014. For the year 2005 any items for publication in any issue are due to the editor by the 15th of the preceding month. Please send all contributions (electronic format is STRONGLY encouraged) to Bill Geertsen at (EMAIL):izar@juno.com, regular mail at: 36 Northwood Drive, Timonium, MD 21093. Permission is not necessary for non-profit use of this material, although proper acknowledgement is required. Address changes should be brought to the attention of the editor at the address given above.

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**HARFORD COUNTY ASTRONOMICAL SOCIETY
P.O. BOX 906
Bel Air, MD 21014**

**FIRST CLASS
Address Correction Requested**

Constellation: Sagittarius, "The Archer"

α Sagittarii "Rukbat", "Rucba"
June

Obj	DB#	Type	RA	Dec	Pa1r	Sep	PA	Mag	Size	Description
NGC 6440	*	GC	17h 48.9m	-20d 22m	*	*	*	10.4	0.7m	Very small, bright
H-150-1	*									No resolution
NGC 6445	*	PN	17h 49.2m	-20d 01m	*	*	*	11.0	38x29s	Round, blue green, Same FOV as NGC 6440
H-586-2	*									
NGC 6451	*	OC	17h 50.7m	-30d 13m	*	*	*	8.5	6m	Large, tight, many small stars
H-13-6	*									
M-23	*	OC	17h 57m	-19d 01m	*	*	*	5.5	27m	Lg, rich, best at low mag
NGC 6494	*		BMC		*	*	*			Binocular object
M-20	*	DN	18h 03m	-23d 02m	*	*	*	6.3	26m	"Trifid Nebula", much fainter than
NGC 6514	*		BMC		*	*	*			M-8, Dust lanes divide it into three
H-41-1	*				*	*	*			parts. O-III works well
NGC 6520	*	OC	18h 03.4m	-27d 54m	*	*	*	7.6	6m	*
H-7-7	*		UC		*	*	*			
NGC 6522	*	GC	18h 03.6m	-30d 02m	*	*	*	9.5	0.7m	Small, faint, use AV
H-49-1	*				*	*	*			
M-8	*	DN	18h 04m	-24d 23m	*	*	*	5.8	90mx40m	"Lagoon Nebula", NEV, Lg nebula
NGC 6523	*	OC	UC-BMC		*	*	*			involved with an open cluster.
NGC 6530	*				*	*	*			O-III works well, binocular object
NGC 6528	*	GC	18h 04.8m	-30d 03m	*	*	*	10.5	0.5m	Small, faint, NGC 6522 in same
H-200-2	*				*	*	*			FOV
M-21	*	OC	18h 05m	-22d 30m	*	*	*	5.9	13m	60+ stars, bright, nice field
NGC 6531	*				*	*	*			Binocular object
NGC 6540	*	OC	18h 06.3m	-27d 49m	*	*	*	11.0	0.5m	Small, 20+ stars
H-198-2	*				*	*	*			Resembles a nebula

Constellation: Sagittarius, "The Archer"

α Sagittarii "Rukbat", "Kneba"
June

Obj	DB#	Type	RA	Dec	Para	Sep	PA	Mag	Size	Description
NGC 6544	*	GC	18h 07.3m	-27d 49m	*	*	*	10.0	1.0m	Oval, bright, resolved w/6"
H-197-2	*									*
NGC 6553	*	GC	18h 09.3m	-25d 54m	*	*	*	10.0	1.7	Tight, rich, resolved, Near NGC 6544
H-12-4	*									
NGC 6568	*	OC	18h 12.8m	-21d 36m	*	*	*	8.5	*	33+ stars, large, loose
H-30-7	*									*
NGC 6569	*	GC	18h 13.6m	-31d 50m	*	*	*	10.4	1.4m	Bright center, easy
H-201-2	*									*
M-24	*	OC	18h 15m	-18d 26m	*	*	*	4.5	60mx120m	"Small Sagittarius Star Cloud"
NGC 6603	*	BMC			*	*	*	*	*	NEV, binocular object
NGC 6583	*	OC	18h 15.8m	-22d 08m	*	*	*	11.5	1.5	Faint, elusive, resembles a GC Use AV
H-31-7	*									∞
M-18	*	OC	18h 17m	-17d 09m	*	*	*	7.5	7m	Loose, use low mag, Binocular object
NGC 6613	*	BMC			*	*	*	*	*	
M-17	*	DN	18h 21m	-16d 11m	*	*	*	6.0	46mx37m	"Horsehoe/Omega/Swan Nebula"
NGC 6618	*	U/C-BMC			*	*	*	*	*	Beautiful object, easily found. O-III works well, binocular object
*	*				*	*	*	*	*	
M-28	*	GC	18h 21.5m	-24d 54m	*	*	*	7.3	15m	Nice, but unimpressive
NGC 6626	*	BMC			*	*	*	*	*	
NGC 6624	*	GC	18h 23.7m	-30d 22m	*	*	*	9.5	2.0	Large, bright center,
H-50-1	*				*	*	*	*	*	
NGC 6629	*	PN	18h 25.7m	-23d 12m	*	*	*	10.6	16sx14s	Round, no particular color
H-204-2	*				*	*	*	*	*	

Constellation: Sagittarius, "The Archer "

α Sagittarii "Rukbat", "Rucba"
June

Obj#	DB#	Type	RA	Dec	Pairs	Seq	PA	Mag	Size	Description
M-69	*	GC	18h 28.1m	-32d 23m	*	*	*	8.9	4m	Small, round, use high mag
NGC 6637	*	BMC			*	*	*	*	*	*
NGC 6638	*	GC	18h 30.9m	-25d 30m	*	*	*	10.2	1.4m	Small, faint, elusive Use AV
H-51-1	*				*	*	*	*	*	*
NGC 6642	*	GC	18h 31.9m	-23d 29m	*	*	*	10.5	1.0m	Small, faint, elusive Use AV
H-205-2	*				*	*	*	*	*	*
M-25	*	OC	18h 32m	-19d 13m	*	*	*	4.6	32m	50+ stars, many colored
IC 4725	*	BMC			*	*	*	*	*	*
NGC 6645	*	OC	18h 32.6m	-16d 45m	*	*	*	8.5	10m	50+ stars, large compressed center
H-23-6	*				*	*	*	*	*	*
M-22	*	GC	18h 36m	-23d 54m	*	*	*	5.1	24m	Almost as nice as M-13 (Hercules)
NGC 6656	*	UC-BMC			*	*	*	*	*	*
M-70	*	GC	18h 40m	-32d 21m	*	*	*	9.6	4m	Small, round, bright central concentration
NGC 6681	*	BMC			*	*	*	*	*	*
NGC 6716	*	OC	18h 41.5m	-19d 54m	*	*	*	7.5	10m	25 stars, elongated, "M" shaped
M-54	*	GC	18h 52m	-30d 32m	*	*	*	7.3	6m	Round, bright, resembles a PN
NGC 6715	*	BMC			*	*	*	*	*	*
Col 394	*	OC	18h 52.3m	-20d 12m	*	*	*	6.3	22m	Rich, 8 th mag an fainter, pair of yellow and blue 7 th mag stars on west side
*	*				*	*	*	*	*	*
NGC 6774	*	OC	19h 16m 36s	-16d 16m	*	*	*	*	19m	30 stars, not well detached,
NGC 6882	*	SG	19h 44m 54s	-14d 48m	*	*	*	8.8	16m x 14m	"Barnard's Galaxy", use low magnification
M-55	*	GC	19h 40m	-30d 58m	*	*	*	7.0	19m	Bright, loose globular, suffers from the low declination; finder scope
NGC 6809	*	BMC			*	*	*	*	*	*

Constellation: Sagittarius, "The Archer"

α Sagittarii "Rukbat", "Rueba"
June

Obj	DB#	Type	RA	Dec	Pa1	Pa2	Pa3	Pa4	Mag	Size	Description
NGC 6818	PN	PN	19h 44m	-14d 09m	*	*	*	*	9.9	22mx15m	"Little Gem Nebula", pale blue, inside a square formed by four stars. Use mod to high mag.
H-51-4	*	*	UC	*	*	*	*	*	*	*	
M-75	*	GC	20h 03.2m	-22d 04m	*	*	*	*	8.0	5m	Small, round, compact, difficult to find; bright center.
NGC 6864	*	*	BMC	*	*	*	*	*	*	*	

Named Stars

α Sgr	Rukbat: from Ulug Beg's Rukbat al Rami, "The Archer's Knee"
β1 Sgr	Arkab Prior: "The Tendon of the Archer"
β2 Sgr	Arkab Posterior
γ Sgr	Nash; Al Nash: "The Point"
δ Sgr	Kaus Meridionalis: "The Middle of the Bow"
ε Sgr	Kaus Australis: "The Southern Part of the Bow"
ζ Sgr	Ascella: Latin for "The Armpit"
λ Sgr	Kaus Borealis: "The Northern Part of the Bow"
σ Sgr	Nunki: "The Sea", from the Euphratian Tablet of the Thirty Stars'
ν1 Sgr	Aln al Rami
ο Sgr	Terrebellum
π Sgr	Albaldah