



EPHEMERALS JULY 2008

DATE	WHEN	WHAT & WHERE
5	Dusk	Nightwatch @ Chippokes Plantation
10	7:30p	BBAA Meeting @ Cox Chesapeake
11	7:00p	Night Hike @ NWRP
17	8:00p	BBAA Night @ Chesapeake Planetarium
23	8:00p	Boardwalk Astronomy @ 24th St. Stage & Boardwalk
25	Dusk	Skywatch @ NWRP Equestrian Area

Looking Up!

Well done BBAA'ers! Our first session of Boardwalk Astronomy was quite an event and in the end must be judged successful. With the assistance and cooperation of VB officials and lights out along the breadth of the 24th street stage, our members showed the delights of the sun, a summer solstice moon, Mars, Saturn, Jupiter, M57, and Albireo to between 500-700 polite locals and tourists. All were very grateful for the event, especially VB City officials who were impressed with our commitment and endurance. This is certainly a potential break for the club and its long term goal of public outreach. Thanks to Chuck Dibbs, Dir. VB Planetarium for his vision in sponsoring this event and enlisting the club's resources. This is especially prophetic as we contemplate our mission during the upcoming 2009 International Year of Astronomy.

There will be a special BBAA July meeting at the COX Communications classroom at 7:30 PM on Thursday the 10th. Dr Carlos Salgado and Ted Forte will lead a discussion regarding the RRRT project becoming available this summer for use as a research and teaching tool and also to discuss ideas and concepts for an application for an Education and Public Outreach Proposal (EPO Grant) from NASA to enhance our outreach efforts for next years IYA events. NASA is cooperating with UNESCO, the AAS and a host of international astro-

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nomical societies to promote the International Year of Astronomy (IYA) celebrating the 400th anniversary of telescopic astronomy. The stated goal of the international consortium being organized for next year's celebration is to get every person on the planet to look through an eyepiece next year! This may include not only our current outreach schedule but additional events utilizing area planetariums and major public gatherings. Monies are available from NASA for this but applications are due by July 17th! So time is short. Please plan to attend this meeting and bring your ideas and concepts so 2009 can be a special year for BBAA.

Congratulations to Cliff Hedgepeth on becoming an Astronomical League Master Observer upon finishing the Herschel 400. Cliff was presented with a framed plaque of his certificate by our ALCOR representative Georgie June. Georgie took a moment from her task as picnic coordinator extraordinaire to present Cliff with his award but was surprised by Ted's announcement that she had earned her first award of a Messier certificate using a "loaner" 18" Dob! See you on the 10th!

Bruce "Doc" Bodner

The Back Bay Amateur Astronomer's Observer

June's Meeting Minutes

Members in Attendance:

There were approximately 40 members with assorted friends and family members in attendance at BBAA's annual picnic at Northwest River Park in Chesapeake. The picnic served as the venue for a short and informal June club meeting.

Meeting Attendance:

Neill Alford, Charles Allewelt, Rick Bish, Bruce Bodner, Carol Bryan & her son, Ron Burgess and his son, Dan Falvy, Courtney Flonta & her sister as well as their dad Tony Flonta, Ted & Hali Forte, Joe & Vicki Hansen, Cliff Hedgepeth, Karen Jaffe, Chuck Jagow, Karen Jagow with daughter & grandson, James Kresky, Ben Loyola, Matt McLaughlin, Bill McLean, Jim Miller, Garry & Cassandra Mitchell, Mark Ost, George Reynolds, Chuck Rippel, Bernie Rusnock, Rob Schonk, Matt Swingle, Lawrence Taylor, Barb Weiner, and Kevin Weiner.

Treasurer's Report:

None.

Secretary's Report:

Reading of the March meeting minutes waived due to availability on the internet. Club membership at 100 members, 15 members dues are in arrears.

Astronomical League Coordinators Report:

Cliff Hedgepeth awarded his AL Master Observer certificate.

Georgie June awarded AL Messier certificate.

Old Business:

None

New Business:

Bruce discussed the Club calendar:

Wednesday June 18th:	Boardwalk Astronomy
Wednesday, July 23rd	" " " "
Thursday, August 14th	" " " "
Wed-Thurs June 25-26th	NSU/NASA Workshop

Friday June 27th	Skywatch
June 28th	SARA/NRAO Conference
July 5th	Green Bank StarQuest
Sat July 5th	NightWatch at Chippokes
Friday July 25th	SkyWatch
July 31st - August 3rd	Almost Heaven Star Party
Thursday August 7th	BBAA Monthly Meeting

The club received a \$500 donation for the scholarship fund from BAE Systems "Dollars For Doers" program. The donation was in recognition of Ted Forte's contributions to BBAA.

The club received a \$100 donation for the scholarship fund from Ben Loyola. Thank You Ted and Ben for these contributions to the BBAA scholarship fund!!!

Kevin reported that GardenStars is still on hold until October/November at the earliest. He is in contact with Norfolk Botanical Gardens about the schedule for 2009.

The meeting was adjourned and the picnic continued until about 3PM.

Matt McLaughlin

Chesapeake Planetarium Family Night

Just wanted to let everyone know that we are planning a BBAA/Chesapeake Planetarium Family Night!

Please come out and support the Chesapeake Planetarium and bring your family and your friends. It will be held on Thursday July 17th and the program begins at 8:00 pm. The show is free and open to the public. If you'd like to watch the show **you will need to make the reservations** for you and your family at 547-0153.

BBAA WILL BE THERE AFTER THE SHOW WITH TELESCOPES IF THE WEATHER COOPERATES. (hint, hint, bring your scopes - my mom is coming!)

The show title is: **"The Summer Stars"**

The wonders of the summer sky will be the topic of this program.

Hope to see a lot of BBAA'ers there!

Georgie June

The Back Bay Amateur Astronomer's Observer



Space Buoys

by Dr. Tony Phillips

Congratulations! You're an oceanographer and you've just received a big grant to investigate the Pacific Ocean. Your task: Map the mighty Pacific's wind and waves, monitor its deep currents, and keep track of continent-sized temperature oscillations that shape weather around the world. Funds are available and you may start immediately.

Oh, there's just one problem: You've got to do this work using no more than *one* ocean buoy.

"That would be impossible," says Dr. Guan Le of the Goddard Space Flight Center. "The Pacific's too big to understand by studying just one location."

Yet, for Le and her space scientist colleagues, this was exactly what they have been expected to

accomplish in their own studies of Earth's magnetosphere. The magnetosphere is an "ocean" of magnetism and plasma surrounding our planet. Its shores are defined by the outer bounds of Earth's magnetic field and it contains a bewildering mix of matter-energy waves, electrical currents and plasma oscillations spread across a volume billions of times greater than the Pacific Ocean itself.

"For many years we've struggled to understand the magnetosphere using mostly single spacecraft," says Le. "To really make progress, we need many spacecraft spread through the magnetosphere, working together to understand the whole."

Enter Space Technology 5.

In March 2006 NASA launched a trio of experimental satellites to see what three "buoys" could accomplish. Because they weighed only 55 lbs. apiece and measured not much larger than a birthday cake, the three ST5 "micro-satellites" fit onboard a single Pegasus rocket. Above Earth's atmosphere, the three were flung like Frisbees from the rocket's body into the magnetosphere by a revolutionary micro-satellite launcher.

Space Technology 5 is a mission of NASA's New Millennium Program, which tests innovative technologies for use on future space missions. The 90-day flight of ST5 validated several devices crucial to space buoys: miniature magnetometers, high-

efficiency solar arrays, and some strange-looking but effective micro-antennas designed from principles of Darwinian evolution. Also, ST5 showed that three satellites could maneuver together as a "constellation," spreading out to measure complex fields and currents.

"ST5 was able to measure the motion and thickness of current sheets in the magneto-

sphere," says Le, the mission's project scientist at Goddard. "This could not have been done with a single spacecraft, no matter how capable."

The ST5 mission is finished but the technology it tested will key future studies of the magnetosphere. Thanks to ST5, hopes Le, lonely buoys will soon be a thing of the past.

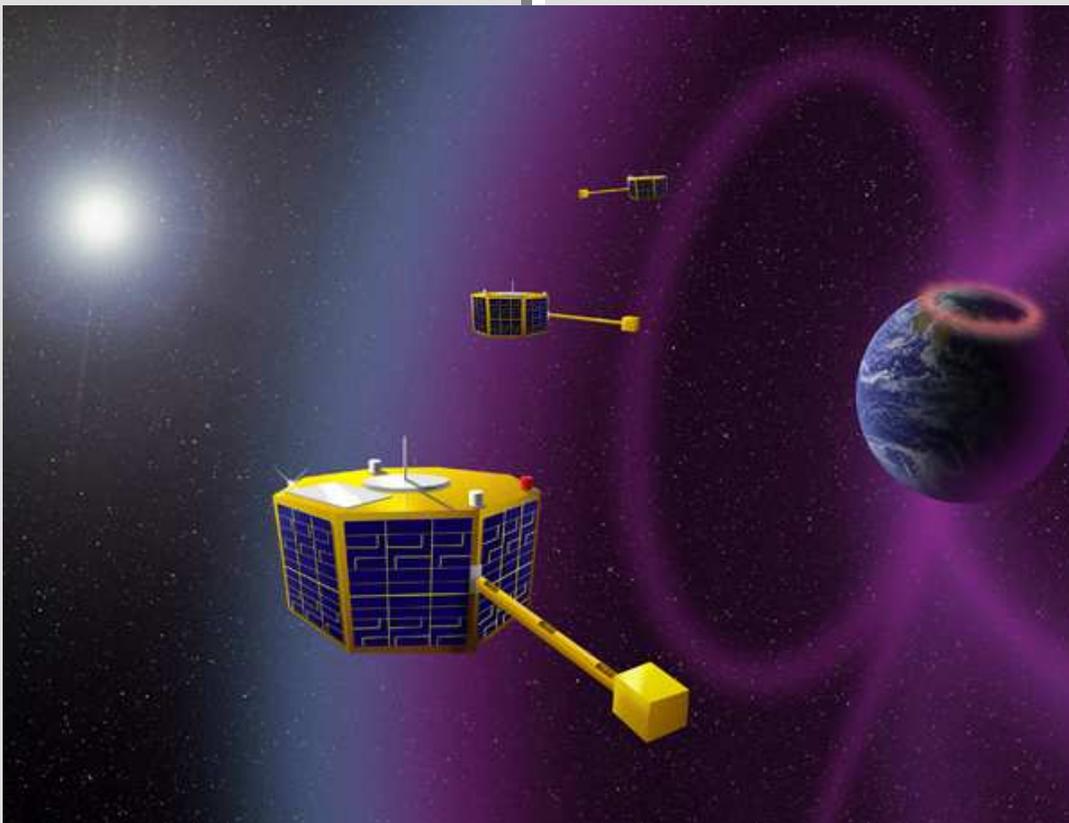


Image Caption:

The Space Technology 5 micro-satellites proved the feasibility of using a constellation of small spacecraft with miniature magnetometers to study Earth's magnetosphere.

The Back Bay Amateur Astronomer's Observer

BBAA INFO

The BBAA usually meet the first Thursday of every month. While school is in session we meet at the VA Beach TCC campus. In the summer we sometimes meet at Cox in Chesapeake.

The July meeting will be on Thursday July 10th at 7:30 PM at Cox Communications campus in Chesapeake. This date was chosen due to the July 4th Holiday week schedules of many folks.

WHERE IS THE MEETING?

TIDEWATER COMMUNITY COLLEGE CAMPUS

The TCC Campus is located in Virginia Beach off of Princess Anne road. The following should help you locate the campus.

FROM Interstate I-64:

Proceed to the I64 / I264 junction and take I264 East . Take the S. Independence Exit, 17A, right hand lane and proceed (.000000040879639 AU) (3.8 mi).

Turn LEFT onto Princess Anne road and proceed (.000000011833579 AU) (1.1 mi).

Turn LEFT onto Concert Drive and proceed (.000000001426233 AU) (700').

Turn LEFT and then turn RIGHT on University Drive go (.000000002151559 AU) (0.2mi).

Proceed to College Crescent and then park in one of the lots in front of the Advanced Technology Center.

The Science Building is immediately south of the ATC building. Walk toward the ATC entrance, but bear left, the Science building is straight ahead. Find the rounded part, this is the Planetarium. Locate the stairs nearest the planetarium and upstairs you will find classroom JC12 on the next floor.

COX COMMUNICATIONS CAMPUS

The COX Communications Campus is located in Chesapeake's Greenbrier section. The following should help you locate the facility.

FROM Interstate I-64:

Take exit 289B (between the Indian River & Battlefield exits). South on Greenbrier Parkway (.7382 miles).

Turn RIGHT onto Eden Way West (.9231 miles).

Turn RIGHT on Crossways Blvd (.88901 miles).

Turn Right into the Cox Campus

The meeting is usually held in the Silver room located on the North side of the facility. Enter and tell the guard that you are with the BBAA and they will issue a badge and direct you to the room.

BBAA INTERNET LINKS

BBAA WEB SITE

<http://groups.hamptonroads.com/bbaa>

YAHOO GROUP

<http://groups.yahoo.com/group/backbayastro>

BBAA OBSERVER NEWSLETTER

<http://www.backbayastro.org/newsletters/newsletter.shtml>

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What do you want to do?

OBSERVER INFO

The BBAA Observer is published monthly, the monochrome version is mailed to members who do not have Internet access. Members who do have Internet access can acquire the full color version on the Internet at:

<http://www.backbayastro.org/newsletters/newsletter.shtml>

Please submit articles and items of interest no later than the 15th of July for the August issue. Please submit all items to:

ObserverBBAA@cox.net / chuck@jagowds.com

OR

BBAA Observer

P.O. Box 9877

Virginia Beach, VA 23450-9877

The Back Bay Amateur Astronomer's Observer

Always Looking Up

It was a cold, winter evening in late 2000. I had just taken my 7-year-old granddaughter, Taylor, home to the small town of Newsoms, Virginia. As we stepped from the car she moved out into the front yard and said, "Granddad come here. See those three stars? That's called Orion's belt!"

Well that started it. I had always had interest in the solar system but knew very little about deep space. Our son, Taylor's uncle, gave her a Meade 50 mm refractor for Christmas and we were excited at our first views at Jupiter and the moon. We soon found that the little refractor was difficult to use and set our sights on something better. We found a shareware program called "Distant Suns" that helped us to learn the sky. And subscribed to Astronomy Magazine.

It didn't take long to realize that we needed something a little better so Taylor and I started saving our money. Shortly thereafter we pooled our resources (Put her \$20 with my \$200) and ordered our first telescope., an Orion EQ mounted 130 reflector.

In early 2003 we found the BBAA and started working on our observing programs. We had a lot to learn.

We would go outside and look at M42, Jupiter and M45 until one night I spotted a naked eye faint fuzzy and point it out to Taylor who immediately searched her atlas and found



it to be "The Beehive", alright! We're on a roll now! She started working on her Sky Puppy program and I the Lunar program, both of which we completed by the 2003 BBAA picnic.

Shortly after the picnic we received the permanent loan of an original Celestron C8, we could really find stuff now. Taylor would log for

me and look but had no interest in pursuing any more awards. She enjoyed helping me and meeting BBAA folks.

I pressed on with trying to find the Messiers. This was my biggest learning tool. I learned about fil-



ters, averted vision and the celestial sphere. We would star hop to an object and confirm it by its coordinates on the C8's large setting circles. By March 2004 I had seen 70 Messiers and got my second certificate. It would take another year and a half to complete them in July 2005. I had observed quite a few of them with binoculars while observing with the scope so in September 2005 came the Binocular Messier. While doing these I had also been logging Globular Clusters and learning to classify them using the Shapley-Sawyer system . In November 2005 I received the Globular Cluster Certificate for finding and classifying 50 globulars. By this time I had graduated to an Orion XT 12 Intelliscope.

The next program was two years in coming and by far the most challenging one, the Open Cluster Club. This one required that I find 125 Open Clusters and classify them using the Trumpler system. Should be easy, wrong. These were 125 specific clusters ranging from second to fifteenth magnitude. Some were next to impossible to pick from the surrounding star field. DSS images and eyepiece charts proved invaluable to finding these. The next one was easy, the Double Star Club. The requirement is to log and sketch 100 specific double stars. 2 dots

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The Back Bay Amateur Astronomer's Observer

OBSERVERS CORNER

May 2008 - Last night I was able to get out and look at M4, M8 and Jupiter. Even though I had set up in my apartment's parking lot, the views of M8 were awful under the high pressure sodium lights. Even with an OIII filter I was able to see the Ring and M4 fairly good. The seeing conditions were the worst I've seen in a while and I was only able to get 250X out of my CPC 1100. Since I was on duty and I have to work allot more than the norm, I had to be chained to my apartment. M4 did show a good tight structure and M8 was only visible with an OIII filter but just the bright part and just barley. The Moon is always a good target and I love to scan the terminator looking at the mountains and craters. Even the lava flows were spectacular.

If I can get to a dark sky sight I can really have fun and scan the heart of the scorpion and the heart of the galaxy. I hope to make it to a Skywatch soon.

Garry Mitchell

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June 2008 - Nice to be back in the solar observing business after having the PST reconditioned and acquiring the Herschel wedge. One nice thing about solar is who cares about light pollution! The sun is at the bottom of its 11 year solar cycle so the action has been slow for the past year. Many of can remember three years ago when things were a bit more active and there was lots to see. Well now is a good time to acquire gear for the next cycle as things will ramp up in the coming years.

I caught a break in the smoke this morning around 8:30. This is an ideal time to observe because the atmosphere is still steady and the Sun is high enough to escape some of the low level distortion. Clear steady skies produced excellent images in white light and the photosphere's disk was covered by granulation. Having a sun spot, however small, to work with aids in focusing on this elusive feature of the Sun. Granules are convection cells in the lower solar atmosphere and are typically 1.5 arc seconds in diameter. To see them requires very steady seeing and a scope capable of this resolution. Almost always they are seen in the morning hours of steady seeing. As the atmosphere heats up seeing goes to the dogs and you can forget about seeing granulation. I have really seen them clearly twice, once with a Baader planetarium Mylar filter on my old 8 inch dob, on an early winters morning, and today with the wedge in the 4 inch refractor. A green filter is almost always required to see this somewhat elusive feature. The slightest bit of turbulence blurs the cells and you can see them disappear as if they didn't exist with any atmospheric disturbance.

Mark Ost

Education and Public Outreach Proposal

The stated goal of an international consortium being organized for next year's celebration of the International Year of Astronomy (visit www.astronomy2009.org) is to get every person on the planet to look through an eyepiece next year! NASA will be accepting requests for funding from organizations to support that goal. Dr. Salgado of Norfolk State University has asked BBAA to collaborate on a funding request.

Essentially, NSU will act as a conduit to channel NASA grant money into what we already do! We now need to act very quickly to organize a plan of action that will constitute the bulk of the funding proposal. The deadline for the proposal is July 17. We need to have our input to Dr. Salgado long before that. (June 30 is our target!)

So how would we effectively use funding to support IYA related events and activities? We need your ideas. Keep in mind that the goal is to get people to look through telescopes, specifically those that have never done so before. We need exciting (doable) events that get telescopes out and about in front of large crowds of people.

I'm told the cash pot is considerable so feel free to think big. We'll take undeveloped concepts and random ideas, but if you're able to take an idea all the way please do. Lay out exactly how we would do what you suggest, and provide the logistic details and financial particulars (budget) of the event/program. Get your ideas to Bruce or me as soon as possible.

We have decided to have a regular meeting July 10, 2008 at the Cox Communication campus in Chesapeake. Dr. Salgado will be our guest speaker. By July 10, our proposal should be just about finalized, but we can, however, add the final touches to it at that meeting.

Ted Forte

The Back Bay Amateur Astronomer's Observer

Boardwalk Astronomy

Our first Boardwalk Astronomy event held in cooperation with the City of Virginia Beach on June 18th went off in a spectacular way. I was worried all day that the weather would cloud us out. As it turned out the weather couldn't have been nicer for the event. I drove up from work to 24th street and met Bruce and Dale who were already set up with Dale's solar rig on the Boardwalk. After a bit of chit-chat, I decided to set up my main telescope on the lawn in front of the stage just in case I could



get a view of Saturn when it became dark. I set up the solar scope next to Dale on the Boardwalk for Bruce to hawk solar views to tourists while I finished setting up my main telescope.

Once I finished, I relieved Bruce and began accosting tourists to come look. I kept scooting down the beach as the sun would dip down and hit a roofline, I ended up about 100' from where I started when I finally packed up the solar scope. By then most of the other folks had shown up Jordan, Ron, George, Ted, Rick, Bill, Hunter and Georgie. Chuck Dibbs provided a very impressive slide show running on a massive HDTV for all to see as well. When darkness fell, the hordes were upon us and I had my scope trained on Saturn for what seemed like an eternity, I decided I was not going to spend the entire night on it so I located M57, the Ring, and began showing that object, made folks look for that baby in those light infested skies. Once they acquired it, they were amazed at what it was and that they could actually SEE it. I finished out the evening on Jupiter, I didn't even get a chance to look at the gorgeous moon!

Chuck Jagow



(Always Looking Up, Continued from page 5)

can be used on this one and the two star cluster clubs.

Then I noticed something in looking over my records. I had completed the requirements for the Urban Club from my house in Franklin. A good reason for keeping good records that can be cross-referenced. I use a program called AstroPlanner for that. Sky Tools will also allow for that.

The next one was an easy one but a good learning experience. The Northern Constellation Hunter. No scope required. Just a pencil and paper. Sketch 38 Constellations but only from sight and sketch only what the naked eye will see. Some are quite dim but it really helps learn the sky.

Sir Patrick Caldwell Moore had long fascinated me so I had been pursuing his program for a couple of years. It requires 70 objects from his list be found using the old fashioned method and sketching one. I chose NGC 457, one of my favorites.

Well that brought the total to nine. I had been logging the Herschel 400 for three years now and I was finally down to five left. This was just prior to 2008 Spring East Coast Star Party. I was so excited, almost there! Then I found with all the rain we had that I couldn't get my equipment trailer out of the yard. Boo! So I came without scope and my old college classmate (we call them Brother Rats at VMI), Bruce Bodner, came to the rescue and allowed me to use his scope to find them. Saturday morning I presented my log to Georgie. The Herschel 400 are 400 objects seen by William Herschel and are bright for the most part. There are a hundred or so that are dimmer than 11th magnitude so it is obtainable with an 8" scope. Just takes time to wait for the seasons to change.



This also qualified me for Master Observer Club, which required the completion of ten programs to include Herschel 400, Messier, Binocular Messier, Double Star, and my first, the Lunar Club. It took over five years but it was a great learning experience. It helped me develop skills and see things I would not have been able to see five years ago. There are so many people that helped me to learn the skills necessary. But the spark was a little girl. She has graduated to teen things but still goes, every now and then, stargazing with old granddad.

Cliff Hedgepeth

The Back Bay Amateur Astronomer's Observer



JULY 2008

BBAA EVENTS	SPECIAL OUTREACH	ASTRONOMICAL EVENTS
05 = NIGHTWATCH @ Chippokes State Park, Dusk		02= NEW MOON
10 = BBAA Monthly Meeting @ Cox Communications Campus, Chesapeake, 7:30 PM		10 = FIRST QUARTER
11 = NIGHT HIKE @ NWRP, Chesapeake, VA @ 7:00 PM - POC: Ted Forte CONTACT TED FIRST as NWRP limits # of people.	17 = BBAA NIGHT @ Chesapeake Planetarium Chesapeake, VA @ 8:00 PM- POC: Georgie June	
		18 = FULL MOON
	23 = BOARDWALK ASTRONOMY @ 24th Street Stage Boardwalk, Virginia Beach Blvd, Virginia Beach, VA @ 8:00 PM- 11:00 PM - POC: Chuck Jagow	
25 = SKYWATCH @ NWRP, Dusk		25 = LAST QUARTER
26 = CLOVERWATCH @ Franklin Fairgrounds, Dusk - POC Cliff Hedgepeth ON HOLD !!!!!		