



EPHEMERALS JANUARY 2008

DATE	WHEN	WHAT & WHERE
12/28	Dusk	Skywatch @ NWRP Equestrian Area
12/29	Dusk	Cloverwatch @ Franklin Fairgrounds
1	12:00a	HAPPY NEW YEAR !!!!
3	7:30p	BBAA Meeting @ Cox in Chesapeake
5	Dusk	Nightwatch @ Chippokes Plantation
19	7:00p	GardenStars @ Norfolk Botanical Gardens

Looking Up!

Tis' the season to give thanks not only for our blessings and our loved ones, but for the year long blessing of belonging to a great club full of wonderful and generous people. Generous of their time, knowledge, telescope views, efforts, and community spirit. When I joined BBAA some six or seven years ago, I was overwhelmed by the camaraderie and just the fun loving delight in sharing a pursuit and passion that we err to call a hobby.

The club has so many directions and levels of endeavor that I have difficulty recalling the list. Nightwatch, Skywatch, Cloverwatch, Gardenstars, Night Hike, and monthly meeting just to name the regular group activities. Irregular observing in generous member's dark backyards and member located unoccupied soccer fields! And then there's the two editions of the East Coast Star Party - but that's far more than this column can contain. Oh, OK, the astro road trips too!

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A special mention to those hardy and generous members (and wives), who put forth such tireless efforts this past year to make our newest and certainly ambitious project, the RRRT a reality. Congratulations now and many more to come. I feel as do many that this project has far to go and many years of fascinating knowledge and community outreach and astronomy education to convey for our club and others.

And for the new year, we can also look forward to a new venue for our regular monthly meetings. Perhaps as early as February, we will start meeting in TCC's new planetarium and observatory complex. Preliminary rumor says it will be spectacular.

To be elected your president at this time is a special privilege. I thank you for your confidence and look forward to another great year enjoying our passion/obsession/hobby/avocation and most of all friendship together.

Bruce "Doc" Bodner

The Back Bay Amateur Astronomer's Observer

December's Meeting Minutes

The December meeting of the Back Bay Amateur Astronomers was called to order by President Kevin Weiner on Thursday December 6th, 2007 at 7:33 PM at the Virginia Beach Tidewater Community College Campus.

Members in Attendance: There were 20 members in attendance at the December meeting. This included two new members, Jordan Bramble and Kelly Creger who signed up at the meeting. Welcome Aboard, we are glad you joined! Regular members in attendance were: Neill Alford, Woodrow Baker, Bruce Bodner, Kenny Broun, Gerry Carver, Larry Channel, Ted Forte, Jay Garrard, Mark Gerlach, Steve Hamilton, Robert Harris, Chuck Jagow, Georgie June, Ben Loyola, Matt McLaughlin, Bill McLean, George Reynolds and Kevin Weiner.

Treasurer's Report: Treasurer Barbara Weiner was absent, but the report was supplied by Kevin and it was reported that we have \$4,450.94 total of which \$1,751.80 exists in the BBAA Scholarship fund, leaving \$2,699.14 for club operations.

Secretary's Report: Secretary Chuck Jagow reported that the club membership is at 100 members of which there were about 20 delinquent members needing to pay their dues. The reading of the November minutes was waived, as they generally are, because they are posted on the Internet.

Astronomical League Correspondent's Report: Georgie June reported that Dave Sanderson had completed the Messier club requirements and that Cliff Hedgpeth had completed the requirements for Double Star club as well as the Urban club. Congratulations were given to Dave

and Cliff!

Old Business: There was further talk concerning the Astronomy Without Borders Program..

Chuck Jagow brought up that the old computers would be donated to Goodwill or any charity that would take them.

New Business: Ben Loyola made a plea for anyone who is interested in helping with the Scholarship Committee to contact him.

Kenny Broun explained that this would be our last meeting in the Pungo building. When we return after the holiday break in February we will meet in the new building. He promised to provide information of where the building is and what room as soon as he can.

Kevin Weiner spoke about the Gardenstars project and the need to develop new programs to engage the children more.

Rapid Response Robotic Telescope Project Report: Ted Forte reported that progress on the RRRT was continuing and that testing is still underway.

In Conclusion: The meeting was adjourned at 8:48 PM.

Chuck Jagow

NIGHT SKY GUIDES

The night sky guides we ordered this spring are in and are available for all, and we are asking for a \$4.00 donation to cover the cost of acquisition and distribution. Retail price for the guides is \$5.95. To see a representation of the Night Sky Guides, zip on over to the files section of the BBAA YAHOO group and look for the C5 NIGHT SKY GUIDE folder. See Chuck Jagow for your copy at the next meeting.

The Back Bay Amateur Astronomer's Observer



Ultraviolet Surprise

by Patrick L. Barry and Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before?

Now you can. Just point your web browser to galex.stsci.edu and start exploring.

That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky at ultraviolet wavelengths that can't be seen from the ground. Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer.

About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered.

"The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy postdoc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

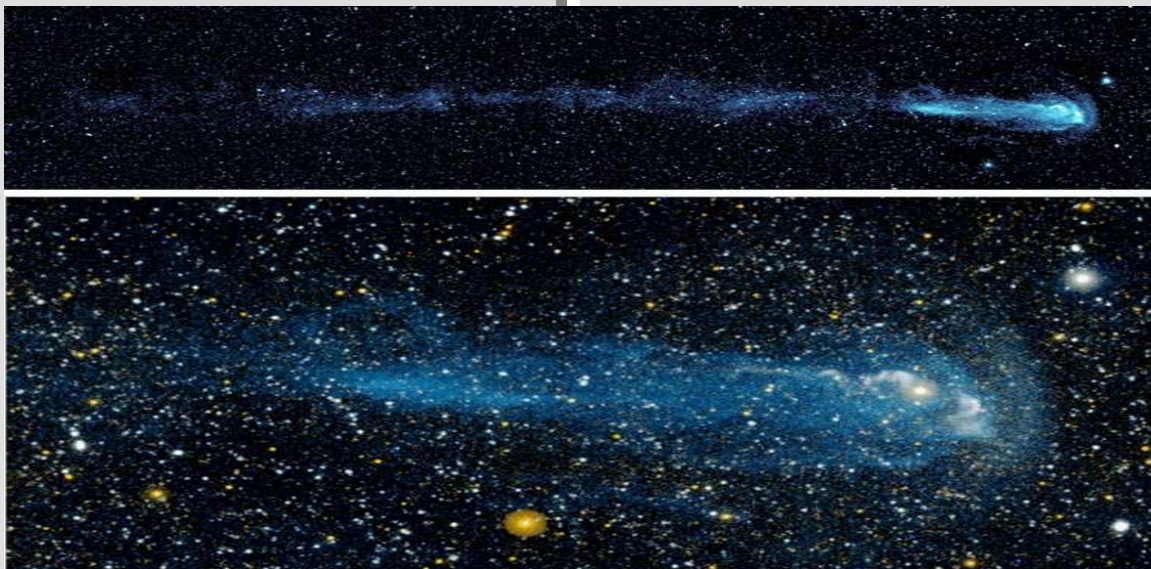
This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example. Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed

its secret: Mira possesses a comet-like tail 13 light-years long.

"Mira shows us that even well-observed stars can surprise us if we look at them in a different way and at different frequencies," Seibert says.

Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought!

The images from the ultraviolet space telescope are ideal for hunting new phenomena. The telescope's small, 20-inch primary mirror (not much bigger than a typical backyard telescope) offers a wide field of view. Each image



covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first

search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says.

So what are you waiting for? Fire up your web browser and let the discoveries begin!

Image Caption:

Astronomers looking at new ultraviolet images from the Galaxy Evolution Explorer spacecraft were surprised to discover a 13-light-year long tail on Mira, a star that has been extensively studied for 400 years.

The Back Bay Amateur Astronomer's Observer

BBAA INFO

The BBAA meet the first Thursday of every month. While school is in session we meet at the VA Beach TCC campus.

The January meeting will be on Thursday January 3rd at 7:30 PM at the Cox Communications Campus in Chesapeake.

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>

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
(.000000048134 AU).

Turn LEFT onto Princess Anne road
(.000000010322 AU).

Turn LEFT onto Community College Place
(.000000002131 AU).

At the Stop Sign turn right and follow the road around to the left and park in one of the parking lots.

The meeting is held in the Pungo Building which is on the right hand side of the pathway that splits the two major parking lots. The Astronomy classroom is in the far back right hand corner of the building.

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.

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RRRT Coordinator**
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Scholarship Coordinator
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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 December for the January 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

Observing Galaxies

I am currently working on two galaxy-related observing projects. Arp Galaxies and the Galaxy Groups and Clusters programs. The Arp program is actually designed for imagers but visual observers can also com-



plete the program by observing 100 of the 338 galaxies in "The Arp Atlas of Peculiar Galaxies" Even though I have completed the 100 galaxy requirement for the program and have received the certificate and pin I am continuing my quest to see as many of the objects as possible.. The Galaxy Group and Clusters program is something I have been working on for about five years and I'm only half done. But it's the journey, not the destination that's important. The program requires observing and sketching 30 (of 50) galaxy trios, 30 (of 99) Hickson groups, 30 (of 50) additional galaxy groups and 30 (of 50) Abell Galaxy Clusters. Observers attempting either of these programs visually will benefit from large aperture and dark skies.

The first thing one learns about observing galaxies is that listed magnitudes are a poor indication of what will be detectable by your eye. The listed magnitudes are "total" magnitudes and galaxies are extended objects. Their light is spread out. What's more descriptive is the quality known as "surface brightness" which is a more realistic approximation of the object's visual appearance. But even this is deceiving, since the calculation of surface brightness isn't as straight forward as you might think. Galaxies don't usually have uniform brightness distributions. It's also hard to know where

the galaxy ends and, therefore, how large an area to include. Add to that the different ways magnitudes are measured and the situation gets even more complex. The bottom line is that you just never know what you can see until you actually look! Don't let listed magnitudes put you off.

I don't often actually consider, when viewing a galaxy, that I'm looking at collections of countless stars and presumably billions of worlds; or that there may actually be some strange alien astronomers looking back. No, as incredible as that is, it's more the mechanics of seeing structural detail at the limit of visibility that draws me to these objects. Many novice observers are quite put off by all but the brightest examples of external galaxies, after all so many are little more than smudges of light. As with any other class of object in the celestial menagerie, the key to enjoying these objects is practice. Learn to see what so many others don't and you'll be a fan too.

While your eye doesn't actually accumulate photons like a photographic emulsion, perception does improve with prolonged study of an object. Don't rush it. And, you might feel silly with a towel draped over your head and eyepiece for several minutes, but it will add a magnitude to your light grasp. A photo to refer to is a big advantage when trying to eke out detail, but be aware

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there.
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light,
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For groups of galaxies, a good map is essential (don't leave the Milky Way without it.) Spring is the time to hunt these critters so get out there. I suggest you start with my newest favorite; the close pair NGC 5394 and 5395 (Arp 84) in CVn. Try it in a dark sky and tell me what you think.

Ted Forte

The Back Bay Amateur Astronomer's Observer

OBSERVERS CORNER

December 2007 - Well, I couldn't sleep so went out into the cold and was glad I did. A ground fog hung over the farm fields in the freezing weather. It is funny how sometimes you can tell the air is going to be very steady just by the feel. Saturn was very good using a light yellow filter to bring out the cloud bands at 330X. Low down seeing was a bit bumpy but when it settles it was very good. One of those great December Saturn nights like Paul, Ted and I used to have freezing out in the cold.

Mars, higher up showed excellent detail. This is the most subtle planet out there and easily the most colorful. Using the bino-viewers and the excellent Televue type A Mars filter, the Tharsis plateau was easily visible. There seemed to be a bright spot that may have been clouds over Olympus Mons but am not really too sure about that observation. Mare acidalia showed as a pastel of dark green and ashy gray. The dune filed surrounding the northern polar hood was distinct during moments of super seeing. Mars has so many subtle shades that it would be very difficult to portray them easily in one night.

Can't recommend the Televue Mars type A filter enough; it beats all others hands down for Mars. One of the only filters that does not alter the colors allowing you to have your cake and eat it too as they say. If you need a gift idea this is it. Mars will continue to be good for a month or more so plenty of time to get in some observation before good bye.

Mark Ost

December 2007 - I got a late start Friday night, but managed to catch some pretty bright meteors. I think within about an hour, I managed to see about five or six even with pretty tough cloud coverage and sucker holes.

I also got to take a gander at Mars for a while. To me it also looked pretty clear-about as clear as I've seen it, when the clouds would pass. I could see the Northern Polar Cap and was able to make out dark and large regions. I looked it up later and found out that they were Mare Acidalium and Mare Erythiaemum and the adjacent sinus regions. The sky was so bad that the meteors, Mars, and a few open clusters were about all I saw.

Rick Bish

Turnovers & New Duties

I am turning the Secretary reins over to Matt McLaughlin this month and I am picking up a brand new set that have been vacant for a few months. I am Glad that Matt volunteered for the Secretary job so we did not have to go out and Shanghai someone, eh Rick? I had never been a Secretary of a club before, even though I have held every other position in other clubs and associations. I must say, that I learned a great deal and I have a great deal of respect for the position. The club weathered a couple of "rough spots" during this last two years but we survived and hopefully we are a stronger organization as a result. I would like to thank Kevin, Barb, Dale, George and Ted for helping me and for all of their service to the BBAA.

I also would like the new officers, Doc, Matt and Neill to know that I look forward to the next two years and I offer my help in any way I can.

I would like to get back to helping the novices who come to our club for help. Perhaps we can organize a special interest group that meets on full moon weekends at a member's house. Each meeting to discuss something different like dew heaters, batteries, lenses, dew shrouds etc. These don't have to be big elaborate shindigs, just gatherings to discuss a topic that might be baffling to someone. Maybe converge at a "newbie's" house and help them with their telescope one night as a small group. I know I have given up several nights and gone to help folks with their new acquisitions the best I could, now isn't that a scary thought! The bottom line is we need to do more than just what we have been....

Chuck Jagow

The Back Bay Amateur Astronomer's Observer

Planetary Nebulae



They are, perhaps, the most interesting and diverse class of object in the night sky! They exhibit the full range of brightness from ghostly wisps of barely detectable nebulosity to objects bright enough to be detected in the glare of city lights. More than any other object, they show true colors that are easily detectable in the eyepiece. There is the vivid blue of NGC 7662, the vibrant green of NGC 6572 and even the subtle pink of IC 418 with all the variations in between. They display an entire menagerie of shapes and sizes; rings, disks, rectangles, butterflies and hour-glasses, from stellar pinpoints to huge globes.

What are they? They are the last hurrah of a sun-like star nearing the end of its luminous lifespan; a highly evolved star that has layers of stellar core. The core, what astronomers term a "white dwarf," is the hottest type of star known, and its irradiation surrounding the same way that the gas in a fluorescent light glows making the wonderful objects that Sir William Herschel termed planetary nebula.

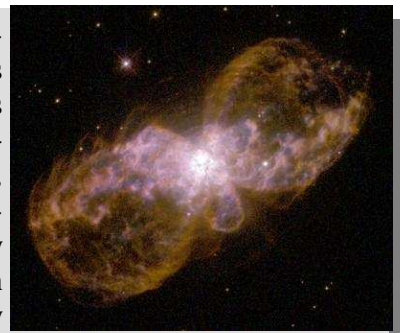


The Messier list contains four planetary nebulae, a ring (M57), two hourglass shapes (M27 and M76) and a disk (M97). Missing, oddly enough, are objects that would best be described as typical of the genre such as NGC 1501, NGC 40, or NGC 2392, that manifest a strong central star surrounded by a seemingly spherical nebula.



The Astronomical League has an observing program dedicated entirely to planetary nebulae. New members may be surprised to learn that the BBAA created that program

and that I am the coordinator. There are 110 objects on our list and two levels of award. Observing 60 objects earns you a certificate, and capturing all 110 entitles you to the planetary nebula pin which sports an image of M27 taken by BBAA member Richard



Dickson. All the rules for the club can be found on the AL website and the list of objects can be found on both our HR.Com website and on backbayastro. It is not an easy program, to date only three BBAA'ers have completed the basic program (60 objects) and a total of just nine observers have earned the Pne pin! How many planetary nebulae have you observed?

There are two possessions that are nearly essential to the planetary nebula observer, the first you can buy and the second you must earn. What you can buy is a narrow band filter such as Lumicon's OIII (oh-three) or Orion's U1. These filters make many planetaries essentially invisible without the filter. PNe emit radiation in a very narrow range of wavelengths. The filters pass these wavelengths unabated while blocking most of the other light in the field of view. This enhances the contrast and makes the nebula stand out.



The other possession is the skill to employ these filters in a unique method we call blinking. By holding the filter between thumb and forefinger and passing it into and out of the light path between eyepiece and eye you can cause a stellar-sized planetary to appear to blink. The stars, including the PN's central star are dimmed by the filter, while the tiny nebula appears to brighten. As a result, one "star" appears to brighten while the others seemingly fade, revealing the planetary in the field. Whenever high magnification fails to differentiate the PN from the star field, blinking a filter will uncover it. Try it! You'll be amazed!



Ted Forte

The Back Bay Amateur Astronomer's Observer



JANUARY 2008

BBAA EVENTS	SPECIAL OUTREACH	ASTRONOMICAL EVENTS
28 = SKYWATCH @ NWRP, Dusk		
29 = CLOVERWATCH @ Franklin Fairgrounds, Dusk		
		31 = LAST QUARTER
03 = BBAA Monthly Meeting @ TCC VB Campus Pungo Building, 7:30 PM		
05 = NIGHTWATCH @ Chippokes State Park, Dusk		08 = NEW MOON
19 = GARDENSTARS @ Norfolk Botanical Gardens, 7:00 PM, POC: Kevin Weiner		15 = FIRST QUARTER
		22 = FULL MOON
28 = SKYWATCH @ NWRP, Dusk		
29 = CLOVERWATCH @ Franklin Fairgrounds, Dusk		30 = LAST QUARTER