

# BACK BAY observer

The Official Newsletter of the Back Bay Amateur Astronomers  
P.O. Box 9877, Virginia Beach, VA 23450-9877



## EPHEMERALS september 2010

**09/02**

BBA Monthly Meeting  
TCC Va Beach  
Building J, Room JC-12  
7:30 PM

**09/03**

Skywatch  
Northwest River Park

**09/07**

Boardwalk Astronomy  
24th Street Stage  
Solar Scopes: 5:30 PM  
Telescopes: Dusk - 11:00 PM

**09/11**

Nightwatch  
Chippokes State Park  
Surry, VA

**09/21**

Boardwalk Astronomy  
24th Street Stage  
Solar Scopes: 5:30 PM  
Telescopes: Dusk - 11:00 PM

**09/24**

Nighthike  
Northwest River Park



## Looking Up!

Last month, I told you about my visit to the little town of Claiborne, Maryland, where my mother grew up. It is on the Chesapeake Bay, up State Route 33 to the northwest of Easton and St. Michaels (home of the Chesapeake Bay Maritime Museum, worth a trip in itself). We had been invited back up there for their annual village picnic on August 22. I loaded my Meade 8" SCT in the trunk of my Camry and we drove up on Saturday, the 21st. We stayed at the Claiborne Cottage Bed & Breakfast, run by a nice lady named Barb Reiser. (Claiborne@GoEaston.com) Folks, this is Seafood Country. We had dinner at a place called the Chesapeake Landing, just east of Claiborne on the road toward St. Michaels. They have a Crab Imperial that is FABULOUS. Saturday night it was too cloudy to see anything, not even the moon. Sunday afternoon was the village picnic. This little metropolis of 147 people served up a feast of steamed blue crabs smothered in Old Bay, three different offerings of shrimp, a whole smoked salmon, and the usual servings of fried chicken and many kinds of salads, fruits, and vegetables, all homemade. My mother was the guest of honor, being from Claiborne and the oldest person there. She was telling folks about who lived in each of the old houses on the main road in the early 20's, and regaled them with stories of playing around the marsh and the piers as a child. She met one lady who was 92 and lived in the area about the same time that Mom did, although they didn't know each other then.

A short storm started to blow in from over the Bay and everyone grabbed the plates and all the tables and

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## The Turbulent Tale of a Tiny Galaxy

by Trudy Bell and Dr. Tony Phillips

Next time you hike in the woods, pause at a babbling stream. Watch carefully how the water flows around rocks. After piling up in curved waves on the upstream side, like the bow wave in front of a motorboat, the water speeds around the rock, spilling into a riotous, turbulent wake downstream. Lightweight leaves or grass blades can get

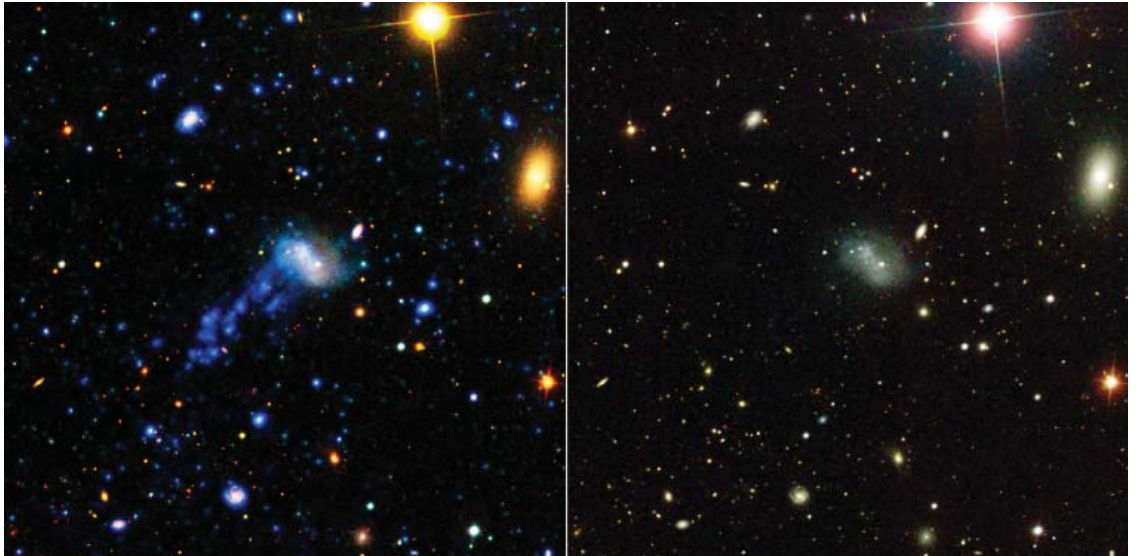
trapped in the wake, swirling round and round in little eddy currents that collect debris.

Astronomers have found something similar happening in the turbulent wake of a tiny galaxy that is plunging into a cluster of 1,500 galaxies in the constellation Virgo. In this case, however, instead of collecting grass and leaves, eddy currents in the little galaxy's tail seem to be gathering gaseous material to make new stars.

"It's a fascinating case of turbulence [rather than gravity] trapping the gas, allowing it to become dense enough to form stars," says Janice A. Hester of the California Institute of Technology in Pasadena.

The tell-tale galaxy, designated IC

3418, is only a hundredth the size of the Milky Way and hardly stands out in visible light images of the



busy Virgo Cluster. Astronomers realized it was interesting, however, when they looked at it using NASA's Galaxy Evolution Explorer satellite. "Ultraviolet images from the Galaxy Evolution Explorer revealed a long tail filled with clusters of massive, young stars," explains Hester.

Galaxies with spectacular tails have been seen before. Usually they are behemoths—large spiral galaxies colliding with one another in the crowded environment of a busy cluster. Tidal forces during the collision pull gas and stars of all ages out of these massive galaxies to form long tails. But in IC 3418, the tail has just young stars. No old stars.

**In the ultraviolet image on the left, from the Galaxy Evolution Explorer, galaxy IC 3418 leaves a turbulent star forming region in its wake. In the visible light image on the right (from the Sloan Digital Sky Survey), the wake with its new stars is not apparent.**

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# The Back Bay Amateur Astronomer's Observer

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 the month for the next month's edition. Please submit all items to: [BBAAErica@yahoo.com](mailto:BBAAErica@yahoo.com) or BBAA Observer, P.O. Box 9877, Virginia Beach, VA 23450-9877

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## BBAA Meetings

The BBAA meet the first Thursday of every month except for July. While school is in session, we meet at the VA Beach TCC Campus. **The August Meeting will be held at the Plaza Middle School Planetarium.** Directions available at [www.backbayastro.org](http://www.backbayastro.org).

## BBAA Internet Links

### BBAA Web Site

<http://www.backbayastro.org>

### Yahoo! Group

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

### BBAA Observer Newsletter

[www.backbayastro.org/observer/newsletter.shtml](http://www.backbayastro.org/observer/newsletter.shtml)

## Space Place, continued from page 2

"The lack of older stars was one tip-off that IC 3418's tail isn't tidal," says Hester. "Something else must be responsible for these stars"

Hester and eight coauthors published their findings in the June 10, 2010, issue of The Astrophysical Journal Letters. The team described the following scenario: IC 3418 is speeding toward the center of the Virgo cluster at 1,000 kilometers per second. The space between cluster galaxies is not empty; it is filled with a gaseous atmosphere of diffuse, hot hydrogen. Thus, like a bicyclist coasting downhill feels wind even on a calm day, IC 3418 experiences "a stiff wind" that sweeps interstellar gas right out of the little galaxy, said Hester—gas that trails far behind its galaxy in a choppy, twisting wake akin to

the wake downstream of the rock in the babbling brook. Eddy currents swirling in the turbulent wake trap the gas, allowing it to become dense enough to form stars.

"Astronomers have long debated the importance of gravity vs. turbulence in star formation," Hester noted. "In IC 3418's tail, it's ALL turbulence." To many astronomers, that's a surprising tale indeed.

See other surprising UV images from the Galaxy Evolution Explorer at <http://www.galex.caltech.edu>. Kids (and grownups) can play the challenging new Photon Pileup game at <http://spaceplace.nasa.gov/en/kids/galex/photon/>.



## Welcome New Members!

September 2010



## Looking Up! Continued from page 1

hustled them up on to the wrap-around porch of the house hosting the picnic. I was afraid this storm was a sign that Sunday night's skies would offer no better viewing, but it cleared up pretty quickly. After a nap, I found a spot on the last lane toward the water to the southwest of any streetlights. Yes, they really have streetlights! I think everyone was feasted out, because only a couple of people came out. Unfortunately it was only two days before full moon so it was hard to pick out anything impressive to look at. I think it would have easily be mag 6 skies had it not been for the moon. I did manage to show them M13 and a couple of other clusters before going to Jupiter and Luna. As you well know, you can't see much else after the (nearly) full moon at 133x, but everything I was able to find brought the 'Oohs' and 'Wows!' that we all love to hear. I promised them that I would be back next year for the 2nd Annual Claiborne Star Party, along with Mom, God willing.

One of the folks I met there was Capt. Norm, quite a colorful character, who hosts hunting and fishing trips in the area. His wife, also named Barb, was one of the ones who looked thru the scope Saturday night. Norm liked "the old lady" (Mom), so he promised he would get her some soft-shell crabs to take home. Monday morning, Norm drove me down to Tilghman's Island. Being a local, he knows everybody. He drove straight to a wholesaler, who he obviously knew, and asked for a dozen of his finest soft shells. Folks, do you know what soft-shell crabs cost these days? They are \$45 to \$60 straight from the wholesalers. And I am sure they are more than that in this neck of the woods. I won't put in print what these cost me, but it was considerably less than that. He even cleaned them for us. I also bought back some of the steamed crabs from the picnic, because there were so many left over. We got home late Monday afternoon and had fried soft-shelled crabs for dinner.

Oh yeah, this is an astronomy newsletter,

isn't it? Tuesday night, the 24th, was supposed to be Boardwalk Astronomy, but the weather was threatening, and the event was put off until our rain-date on Thursday, the 26th. Thursday turned out to be much better. Chuck Dibbs, Chuck Jagow, Ted Forte, Dale Carey, me, the Colvin Clan and several others (pardon my memory, or lack thereof). My 8" Meade was not being cooperative and I could not get it aligned. Maybe my batteries are low? I had to aim it manually, which means for the most part I was aimed at Jupiter. Looking at the other scopes, I think that is what most of us were on. We had hundreds of people come by. Many of them commented that they looked for us on Tuesday. Can we get the Beacon to list our rain date?

On September 21st, Jupiter is at opposition. Uranus reaches opposition the next day with the Autumnal Equinox that night about 11:09 EDT (3:09 GMT). Neptune was at opposition on the 20th of August and will be in retrograde until about November 1. Neptune has moved back into Capricorn and is about at RA 21h58m -13 degrees declination.

No major meteor showers this month. The Orionids peak about October 21st, but with the full moon on the 23rd, it is unlikely that there will be a good show.

Keep Looking Up!

*Mark Gerlach*

# BBAA Meeting 5 August 2010

## Minutes

*Prepared by Treasurer Chuck Jagow*

The August meeting was called to order at 7:32 PM at the VB Planetarium within Plaza Middle School, Virginia Beach campus, by president Mark Gerlach.

Those in attendance were Bird Taylor, Chuck Dibbs, Chuck Jagow, Karen Jagow, Ben Loyola, Tony Flonta, Courtney Flonta, Mark Gerlach, Bill Newman, Cheryl Colvin, Zachery Colvin, Jeff Goldstein, Curt Lambert, Kevin Swann, Amy Koenig Gardner and Sara Church.

Minutes: The meeting minutes for all of the meetings since April were unavailable as the club Secretary, George Reynolds was not in attendance due to a family function out of town. The club Treasurer was responsible for the August meeting minutes.

**Scholarship Committee Report:** Chairman of the Scholarship Committee, Ben Loyola announced that Ms. Tessa Adair of Virginia Beach was selected as the BBAA 2010 Scholarship recipient. Ms. Adair had been unable to make the picnic due to being on vacation in Puerto Rico and she was unable to attend the meeting as she had left for school the morning of the 5th.

**Treasurer's Report:** Treasurer Chuck Jagow reported that as of the meeting date there is \$3,236.07 in the Scholarship Fund and \$3,607.26 in the General Fund, for a total of \$6,843.33. And that the Scholarship check had NOT yet been issued. That he would go to the bank and draw a bank check and mail it to the winning recipient on Saturday.

**ALCOR's Report:** None, Georgie June not present.

**Rapid Response Robotic Telescope Report:** None, Ted Forte or any of the active participants present.

**Old Business:** Treasurer Chuck Jagow brought up the issue of how the club was handling the apparel arrangement with Ben Loyola. After a little discussion it was decided to table the discussion until after the meeting and resolve any concerns at that time.

Chuck also inquired as to the where the club's Solar

Scope was, if anyone knew where it was, no one present knew where it was. (NOTE: The club PST is in possession of Secretary George Reynolds.)

**New Business:** Chuck Jagow made the motion to print a 1,000 club brochures at Kinko's for an estimated cost of \$90 per 500. The move was seconded and voted on with unanimous approval.

**Presentation:** The evening's presentation was provided by Bird (Lawrence) Taylor who works at Langley for NASA who managed to get his hands on a DVD simply titled "ASCENT". For those of you who missed tonight's meeting, you picked the wrong one to skip. This is one of the best I have ever watched. It was nothing more than select camera clips of hundreds of views of the space shuttle lifting off. These were not just still pictures from thousands of feet away. They were taken by NASA's special cameras right there on the pad some running 400 frames per second. Even "What's Her Name" put down her Nook and watched the entire DVD! Well Done Bird!

Chuck Dibbs showed us a quick You Tube video on a couple who found a meteorite in Washington state, Nice...

**Commentary:** After the amazing DVD, Bird Taylor spoke at length about how NASA has shifted its "swim lanes" from manned missions to more unmanned scientific missions and that they are not just rolling up and going away, and that how some areas are flourishing.

Two attendees were very excited that they were able to see the aurora on Wednesday night as the result of the recent outbursts on the Sun earlier this week.

The meeting was adjourned at 8:53 PM into a howling rainstorm.

THANK YOU CHUCK DIBBS FOR THE USE OF YOUR PLANETARIUM!!!!!!!!!!!!!!!!!!!!





# September 2010

BBAA Events	Special Outreach	Astronomical Events
		01 Last Quarter
02 BBAA Monthly Meeting & TCC VB		
03 Skywatch at NWRP		
		08 New Moon
07 Boardwalk Astronomy		
11 Nightwatch at Chippokes		
		15 First Quarter
21 Boardwalk Astronomy		
24 Nighthike at NWRP		23 Full Moon



*Sneak Peak into October*

10/01 Skywatch at NWRP

10/07 BBAA Monthly Meeting at TCC VB, Building J, Room JC-12 at 7:30 pm

10/09 Nightwatch at Chippokes

10/29 Skywatch at NWRP