BACK BAY observer

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

Looking Up!

Live from Florida……Yes, by now many of you have seen the "orange" visage of Chiefland posted on the Yahoo group by our "cheerleader" Georgie June. In the background you can see the clouds breaking up as Ida heads up the coast to wreak havoc on Hampton Roads. It did! Chiefland got 2 inches and a cloudy day……well, you guys know what happened up here! Sorry about that.

What possesses us to brave weather, insects, damp, cold, disappointed girlfriends, spouses, and children to repeatedly go outside and simply – look up? As I found out when I reentered this hobby/passion some nine years ago, the sheer immensity and beauty of the dark night sky with all those glistening jewels to be discovered anew each clear night is addicting. The knowledge gained from our longer term club members serves as a nexus and wealth of information and skills honed in observational skills. "Averted vision", gosh, I am an eye doctor and never encountered that one in the medical books. But Ted Forte is a great teacher as many have come to appreciate. The hours he spent with this newbie at NWRP and the ECSP in my early club years have really paid off in allowing me to rediscover the glory of our shared night skies. Thanks Ted.

A club trip out to New Mexico Skies in 2005 with ten of us was a real adventure. Thank heavens for Kevin and Barb Weiner who helped me kill all those long hours of driving while yakking on the walkie-talkie, visiting their family in Arkansas, and counting Wal-Mart's from the interstate, forty-seven one way! But ooooohhhh was it worth the effort. There were more stars in Scorpio alone then I have ever seen naked eye in Coinjock. But at eight thousand feet and 10% humidity you can see forever. Seeing a comet race through the Bee Hive and Omega Centauri rise and set revealing all its glory in a big Dob was worth the trip alone. And yes, Barb even made her famous brownies at eight thousand feet!

Then there's Kent – well who needs to say more other than "the best I've ever seen"! He can be thrilled with anything with a lens or mirror larger than 21/2 inches!

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EPHEMERALS december 2009

12/02/09
Bayside Astronomy
Bayside Library
Virginia Beach, VA
7 PM

12/03/09
BBAA Monthly Meeting
TCC VA Beach
Building J, Room JC-12
7:30 PM

12/11/2009
Skywatch
Northwest River Park

12/19/2009
BBAA Anniversary Luncheon
Lynnhaven Fish House
12:00 Noon

Nightwatch at Chippokes
Surry, VA

The **BBAA Anniversary Luncheon** is December 19th. Sign up on at the Yahoo Group!!!

CONTENTS

NASA's Space Place

A Cosmic Crash

Two small planets hurtle toward each other at 22,000 miles per hour. They're on a collision course. With unimaginable force, they smash into each other in a flash of light, blasting streams of molten rock far out into space.

This cataclysmic scene has happened countless times in countless solar systems. In fact, scientists think that such collisions could have created Earth's moon, tilted Uranus on its side, set Venus spinning backward, and sheared the crust off Mercury.

But witnessing such a short-lived collision while pointing your telescope in just the right direction would be a tremendous stroke of luck. Well, astronomers using NASA's Spitzer space telescope recently got lucky.

"It's unusual to catch such a collision in the act, that's for sure," said Geoffrey Bryden, A cosmic Crashspitzer_an astronomer specializing in extrasolar planet formation at NASA's Jet Propulsion Laboratory and a member of the science team that made the discovery.

When Bryden and his colleagues pointed Spitzer at a star 100 light-years away called HD 172555, they noticed something strange. Patterns in the spectrum of light coming from nearby the star showed distinctive signs of silicon monoxide gas — huge amounts of it — as well as a kind of volcanic rock called tektite.

It was like discovering the wreckage from a cosmic car crash. The silicon monoxide was produced as the high-speed collision literally vaporized huge volumes of rock, which is made largely of silicon and oxygen. The impact also blasted molten lava far out into space, where it later cooled to form chunks of tektite.

Based on the amount of silicon monoxide and tektites, Bryden's team calculated that the colliding planetary bodies must have had a combined mass more than twice that of Earth's moon. The collision probably happened between 1,000 and 100,000 years ago — a blink of an eye in cosmic terms.

The scientists used the Spitzer space telescope because, unlike normal telescopes, Spitzer detects light at invisible, infrared wavelengths.

"Spitzer wavelengths are the best wavelengths to identify types of rock," Bryden says. "You can pin down which type of rock, dust, or gas you're looking at."

Bryden says the discovery provides further evidence that planet-altering collisions are more common in other star systems than people once thought. The "crash-bang" processes at work in our own solar system may indeed be universal. If so, Spitzer has a front row seat on a truly smashing show.

See Spitzer Space Telescope's brand new Web site at http://spitzer.caltech.edu/. Kids can learn about infrared light and see beautiful Spitzer images by playing the new Spitzer Concentration game at http://spaceplace.jpl.nasa.gov/en/kids/spitzer/concentration.

Artist's rendering of cosmic collision involving two objects whose combined mass was at least twice that of our Moon. Discovered using the Spitzer Space Telescope in the planetary system of a star called HD 172555 100 light-years away.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with

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
or BBAA Observer, P.O. Box 9877, Virginia Beach, VA 23450-9877

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 December meeting will take place at TCC VB in Building J, Room JC-16 at 7:30 PM.**
Directions available at www.backbayastro.org.

BBAA Internet Links

BBAA Web Site
tech.groups.yahoo.com/group/backbayastro
Yahoo! Group
groups.yahoo.com/group/backbayastro
BBAA Observer Newsletter
www.backbayastro.org/observer/newsletter.shtml

Looking Up! Continued from page 1

And what about the enthusiasm I have witnessed over these last several years as individuals have volunteered to do hard labor in remote sites; i.e., RRRT on Mount Oliver/Fan Mountain or long summer afternoons and evenings at the Boardwalk. A special thank you to Dale Carey and Chuck Dibbs for making astronomy at the Boardwalk not only possible but a hit to boot. And a special thank you to all of those club members who came to the beach after a long days work to spend more hours showing thousands of people what is so exciting about our skies. And I have to add that this activity helped our treasury to increase the size of the yearly scholarship. Thanks too to Ben Loyola for directing the scholarship committee these past years.

To Prof. Kenny Broun for hosting the club at TCC and opening their great facilities for the club to utilize – a big thank you!

And last but hardly least, I have been supported and the club enriched by the officers you elected to serve with me 25 months ago. Special thanks to Chuck Jagow who appears that he doesn't want to serve again, but don't believe it! Chuck and his fellow officers, Matt McLaughlin, and Neil Alford have given much time and attention to club matters both in front of the cameras and behind helping to support our many activities and endeavors. And one last special thank you to George Reynolds, our NASA Ambassador, who has displayed boundless energy throughout all the years I have known him. His love of teaching and students to teach are truly inspiring.

There are so many of you that have pitched in and made these few years so very enjoyable and worthwhile. The club is bettered by each and every member!

No, no one will get a Nobel being President of BBAA, but they will get real inspiration and purpose as I did just as I retired and assumed office. I hope I have helped to steer the club well enough these past two years and look forward to helping Mark Gerlach and his new team in the coming years.

Thank you all for allowing me to do my Astro thing!

……Clear Skies,

Doc Bruce

A Winter Treatise

Ted Forte

Falling in the realm of better late than never, this treatise combines the five PN Club objects for November with the four objects best observed in December skies. Among these nine objects are some of my favorites, and in a sense, this list represents the top of the batting order, the beginning of the RA-sorted list.

Keeping with tradition, let's dispatch the two objects best described as stellar first. IC 351 and IC 2003 are both in Perseus and nothing short of large aperture and high magnification will reveal anything more than a star-like point of light. A thoughtful comment by the world's newest PN Club advanced award recipient recently reminded me that these challenging stellar objects are as much a part of the planetary nebula mystique as the showpieces and should not be disparaged. Still, there's not much to describe here, so let's just rejoice in the joy of the hunt, mark them off, and move on.

NGC 40	PN G120.0+09.8	Cep	00h13m34.0s	+72°34'19"
NGC 246	PN G118.8-74.7	Cet	00h47m33.3s	-11°48'58"
Little Dumbbell	M 76	Per	01h42m56.8s	+51°37'17"
IC 1747	PN G130.2+01.3	Cas	01h58m18.0s	+63°21'57"
Abell 4	PN G144.3-15.5	Per	02h46m01.0s	+42°35'25"
IC 289	PN G138.8+02.8	Cas	03h11m05.6s	+61°21'03"
NGC 1360	M 1-3	For	03h33m39.0s	-25°50'07"
IC 351	PN G159.0-15.1	Per	03h48m10.0s	+35°04'33"
IC 2003	PN G161.2-14.8	Per	03h56m58.7s	+33°54'09"

NGC 40 in Perseus is a favorite of most PN observers. And why not? High in the northern sky, it is accessible most of the year, and it is an impressive sight in even a modest telescope. Discovered by William Herschel it has the nicknames of The Bowtie and The Scarab Nebula. It is representative of a group of planetaries that have a significant contrast between the bright central star and the surrounding nebula which is only half as bright and therefore seems delicate and translucent. The bow tie moniker results from features that might escape smaller scope users; wisps of looping material that form an irregular shell. Most observers see it as blue-green and some report annularity. Try an h-beta filter on this one, it will surprise you.

NGC 246 in Cetus is known as The Skull Nebula, its mottled appearance vaguely reminiscent of a human skull (to observers with overactive imaginations) . It is located 6 degrees north of Beta Ceti. Its low declination is a disadvantage for viewers here in Tidewater, the faint disk can fade almost to invisibility on less transparent nights leaving just a hint of mist around the 11.8 magnitude central star and its retinue of attending bright stars arrayed in a triangle around it. But when conditions allow, it is a round mottled disk. William Herschel discovered this one in 1785.

Perseus, contains one of just four planetaries on the Messier list. M76 is best known as the Little Dumbbell, but has a host of other names like The Cork, or The Barbell - it even earns two NGC numbers: NGC 650 and 651 owing to its dual lobed appearance. It is far less observed than its larger cousin M27 and that is a shame, because it's a really fascinating object. In small scopes, M76 is very rectangular, but larger instruments show it as a peanut shaped object angled NE-SW. The SW lobe being significantly brighter. We may be seeing a broad ring seen edgewise , or two opposing conical outflows, but it is also very possible that it is a more spherically shaped nebula with the brightness variations due merely to the way gases of different densities obscure the light from the central star. It is interesting to note that M76 is about the same size as M27 but appears smaller because it is five times more distant.

IC 1747 in Cassiopeia was discovered by Williamina Fleming in 1905 and for most observers it may fall into the stellar category. But don't dismiss it too fast, there is a bit of structure to be gleaned and it can even show some annularity. The OIII filter and moderate to high power, in larger telescopes, will reward the patient observer.

Abell 4 in Perseus was discovered by George Abell

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Science Saturday
at the Franklin Library
November 21, 2009

Treatise, con'd

in 1964. In large apertures, it is an easy catch - a bright round disk even without a filter. As aperture decreases, so does its ease of detection, but it remains one of the more accessible planetaries with the Abell designation. Use low power and try the OIII and UHC filters.

Louis Swift discovered IC 289 in 1888. Located in Cassiopeia, this 13th magnitude disk can appear annular in larger scopes. The 16th magnitude central star is probably not visible.

Those of you that remember Walter Scott Houston probably have memories of some object or another that he encouraged you to seek out. For me, I think of NGC 1360, the much ignored planetary in Fornax. I wonder how many of you have explored this constellation and know this planetary? The way Scotty put it was:

"Perhaps NGC 1360 is overlooked because it is in a nondescript constellation that U.S. observers subconsciously class as too far south."

That admonition resonated with me and enticed me to give it a try and I found it to be a not too difficult planetary; large and reasonably bright. A bright central star in an oval disk of nebulosity elongated NNE-SSW. Well worth the gyrations required to bring it into view. And as Scotty pointed out, it is no further south than M4.

I hope you'll give these nine objects a try at your next outing and post your results at the Yahoo! group.

Welcome New Members!
Cheryl & Zachery Colvin

Observing at Pettigrew State Park in North Carolina

Kent Blackwell

It was a on a clear November day that I decided to make a pilgrimage to Pettigrew State Park near Creswell, NC to engage in a bit of stargazing. Eleven years have passed since I last visited the site, a place to which Back Bay Amateur Astronomers member Charles Allewelt introduced me.

Members of the Raleigh Astronomy Club, in coordination with the North Carolina Museum of Natural Sciences were supposed to meet at Pettigrew for Dark Sky Weekend November 13 & 14. Unfortunately that had to be cancelled because of the devastating nor'easter storm that slammed so hard into the mid-Atlantic east coast.

I loaded my little Acura with an Orion 10" IntelliScope, a few camping essentials and headed to Pettigrew, 93 miles from my home in Virginia Beach. Arriving around 2:00 pm the rangers told me I could camp anywhere I desired since no one else was camping at the campground. They mentioned another astronomer would be joining me later.

None of the campsites is particularly conducive to stargazing since tall trees block much of the sky. Site # 13 is the best, with a view of the southern sky obstructed about 40%. However, the boat ramp surrounding Lake Phelps provides an excellent horizon. Here you can view nearly the entire sky all the way to the water's edge, except the northeast, and even it wasn't obstructed too severely.

Before setting up the scope I walked over to Somerset Place, an antebellum plantation. It was an active plantation from 1786-1865 and encompasses 100,000 acres and was at one time a prosperous plantation of rice wheat and corn. The plantation operated as a business investment for more than forty years. In 1829 it became the home to two generations of a planter family, Josiah Collins III, his wife Mary and their six sons. When the Civil War ended in 1865 so did slavery. Left without unpaid labor, planters such as the Collins family could no longer maintain the plantation system that had characterized much of the antebellum south.

To get to Somerset Place walk down Carriage Nature Trail from the campground. You'll be able to tour the Collins Family Home and many of the related domestic dependencies as well as reconstructed dwelling places where many of the slaves lived.

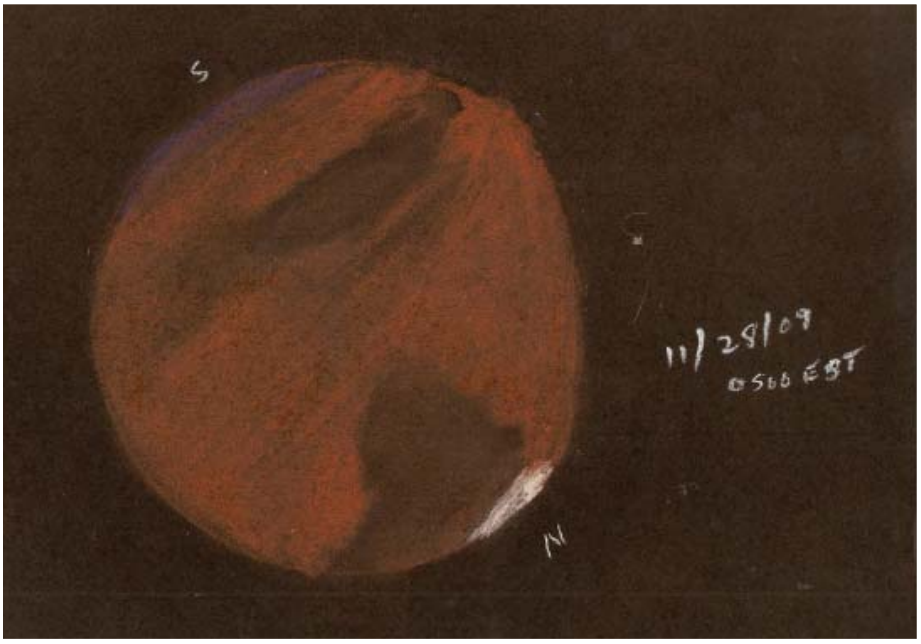
Around 4:00 pm I set up my scope at the boat ramp just as another car pulled up. Jim Polermo is an amateur astronomer from North Carolina who, for the last few years has been coming to Pettigrew to stargaze. After a brief introduction he set up his 10" Dobsonian next to me.

Sunset was one of the most spectacular I have ever witnessed. In fact, the sky was perfectly clear all the way to the water's edge. The sun had darkened through the atmospheric haze just enough to be able to view it through my 10" telescope. I was certain the green flash would be visible, but even in the telescope I saw no such flash. I've only seen it twice in my life, once off the coast of Key West and once at sea near the North Pole.

As the sun set I could tell it was going to be a special observing night. Soon, the Milky Way blazed across the sky, with the constellation Cygnus nearly at the zenith. I took a reading on the Sky Quality Meter of 21.0, not bad for shortly after sunset. By 8:00pm the sky was even darker, with a reading of 21.3, followed later by 21.47 and finally by the end of the night 21.50.

Some of the deep-sky objects I was looking for were NGC galaxies in Aquarius. I started the quest of trying to see all the NGC galaxies in that constellation months ago. Of the 122 in Aquarius I only had 23 remaining but those remaining galaxies varied from magnitude 14.7 and fainter. I found twenty, the faintest slightly fainter than 15th magnitude. Such an elusive galaxy would have never been visible with a 10" telescope under lesser skies.

Jim Polermo was searching for a few faint



Mark Ost

Pettigrew, con'd

planetary nebulae and I clued him in how to "blink" a filter as an aid to seeing those nearly stellar planetaries. The Cygnus area where he was observing is a difficult region to find illusive stellar planetaries but Jim managed to pull it off.

By 11:00 pm fog drifted in so I loaded up the scope and headed back to the camping area. The fog was so dense I could hardly find my way but managed to do so. I put the scope outside the car at my campsite so that I could crawl in the little car to sleep. At 3:30 am I awakened and just for fun took a meter reading. Despite lingering fog, the meter read 21.60, or about ½-magnitude darker than Coinjock.

The next morning I headed home through the small town of Creswell. It's good that I had my GPS in the car because every street I went down was still impassably flooded from the weekend nor'easter. It took more than thirty-minutes to get through. Creswell is the only town near Pettigrew State Park. An old logging town, Creswell population continues to decline. I saw no convenience stores, and no grocery store. If you need any foods or supplies while camping at Pettigrew State Park you'd best take them with you.

My trip to the park was well worth it. We're lucky Hampton Lodge Camping Resort in Coinjock, NC is so near to Tidewater, VA residents, and it's certainly more convenient to me to observe there. However, if you want to experience the darkest skies within reasonable driving distance Pettigrew State Park is highly recommended. The campground only has thirteen campsites and the observing area at the boat ramp can only accommodate a handful of telescopes so it's not a suitable place for a star party. Still, I highly recommend it. Be sure to tell the rangers you're an amateur astronomer and ask them to turn the lights off in the restroom building and especially at the boat ramp. The entire staff is accustomed to visits from amateur astronomers and very accommodating.

It's a rare place indeed where the amount of light pollution has, if anything decreased in the eleven years since I last visited. If you combine superb observing, camping, hiking down nature trails or visiting historical landmarks such as Somerset Place and the tomb of General James Pettigrew you'll find it just doesn't get any better than that.

BACK BAY observer

December 2009

BBAA Events	Special Outreach	Astronomical Events
	02 Bayside Astronomy / 7 PM	02 Full Moon
03 BBAA Monthly Meeting / 7 PM		
		09 Last Quarter
11 Skywatch at NWRP		
		16 New Moon
19 BBAA Holiday Banquet / Noon		
19 Nightwatch at Chippokes		
		24 First Quarter
		31 Full Moon

Sneak Peak into January:
01/07 BBAA Meeting, location TBA
01/08 Skywatch at Northwest River Park
01/16 Nightwatch at Chippokes State Park