



# BACK BAY observer

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

## EPHEMERALS september 2015

9/03, 7:30 pm  
BBAA Monthly Meeting  
TCC Campus, VA Beach  
Building J, Rm JC-13

9/12, 4:00 PM  
Nightwatch  
Chippokes Plantation

9/18, 9:00 PM  
Kings Grant Service Unit  
Girl Scout Outreach Event  
YMCA Camp Silver Beach

9/22, 6:00 PM  
Boardwalk Astronomy  
VA Beach Boardwalk at 24th St.

9/27, 8:00 PM  
Lunar Eclipse Watch  
Chesapeake Planetarium



## Looking Up!

Well the hot and muggy days of August are behind us but the coming of Fall brings many of the night sky wonders of our universe. At some point we might even get to look at them a bit if the weather would cooperate with us a little bit. Seems we only get clear skies when the moon is full or up at night.

It was good to see everyone at the annual BBAA picnic on July 18, and I'm glad it wasn't too hot for us to get out and have some fun. Too bad we don't have access to a water source any longer for the water battle. We also had a very successful observing event at the [Blue Moon Full Moon-A-Palooza](#) at Hunt Club Farms on the July 31st. Lots of fun and lots of people at the event to observe the Blue Moon.

There are a few things in September to check out night sky wise. If you are working on or planning to start the Astronomical League (AL) Planetary Nebula program, many of the 110 Planetary Nebulae on the program's observing list will be visible. This program was developed by the BBAA some time ago and there is a very good writeup by our own Ted Forte of what is visible month by month. Click on the link to retrieve the very helpful [PN Club-by-Month document](#).

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There are also the following events to look out for this month:

- On September 1, Neptune was at Opposition, and made its closest approach of the year to Earth. All month Neptune will be [well placed for viewing](#) and brighter than any other time of the year.
- September 19 is *International Observe the Moon Night*. Consider visiting Old Dominion University's [Pretlow Planetarium](#) at 7:00 PM to take part in the fun (see page 5).
- A [total lunar eclipse](#) is visible on the evening of September 27. We are fortunate here on

the East Coast as we will be able to watch every stage of the eclipse during convenient hours with the Moon fairly high in the sky. Be sure to join BBAA and others at the [Chesapeake Planetarium](#) to watch the Eclipse. The eclipse begins at 8:11 PM, reaches maximum at 10:47 PM and ends at 1:22 AM.

So if you can get out and actually see the sky, I would suggest that you do so because we haven't had many good observation days here on the east coast, and every one of them counts. Until next month, keep looking up.

*Jim Tallman*

## July 18, 2015 Meeting Minutes

A brief meeting took place at the BBAA annual picnic at Redwing Park in Virginia Beach. The meeting was called to order by club President, Jim Tallman.

**Treasurer's Report:** The club dues will be increasing to \$23.00 per month, effective upon revision of the bylaws.

**ALCOR:** The BBAA has won the drawing for the Horkheimer Library Telescope Program. We will receive a 4.5 Orion Starblast telescope with a zoom eyepiece, which the club will modify and then donate to the VB Public Library system. (See article on [page 5](#) of this newsletter).

**Scholarship Report:** A second scholarship has been established in memorial to Georgie June.

**Annual Picnic:** Many guests and their families made it out to Redwing Park for our potluck picnic. With the soaring temperatures, we were fortunate to be nestled in the trees with a gentle breeze. There were burgers, hotdogs, plenty of food, and plenty of good conversation. Between the passing clouds, we were treated to some solar observation as well. The young kids stayed occupied playing on the nearby playground, and setting off "Rocket Balloons".

*Editor's Note: July Minutes taken by Secretary Leigh Anne Lagoe. The August 2015 meeting was cancelled*



*Scenes from the 2015 BBAA Summer Picnic (Clockwise from Top Left): 1) Jim Tallman performing one of the presidential duties--cooking hot dogs; 2) great weather and a great turnout; 3) Ben Loyola launching a balloon rocket; 4) Solar observing in the parking lot; 5) The picnic is always a great time to catch up with other members. Images by Leigh Anne Lagoe.*

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/observer/newsletter.shtml>

Please submit articles and items of interest no later than the date of the monthly meeting in order to be in the next month's edition.

Please submit all items to:  
bbaa.newsletter@gmail.com or BBAA Observer, P.O. Box 9877, Virginia Beach, VA

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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 Sept. 4, 2014 meeting will be held at TCC in Virginia Beach, Building J, Rm JC-13 (or nearby room) at 7:30 PM. Directions are on our [Night Sky Network page](#).

## BBAA Internet Links

BBAA Website  
[www.backbayastro.org](http://www.backbayastro.org)

Yahoo! Groups  
[tech.groups.yahoo.com/group/backbayastro](http://tech.groups.yahoo.com/group/backbayastro)

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

## Observer's Corner



### AN EMERGING SUPER MOON

*The Super Moon, expertly captured by Dan Pelzel, as it emerges from a thin veil of clouds. The August 29, 2015 Full Moon occurred only 18 hours before perigee, making it appear larger and brighter than usual.*

Image Credit: Dan Pelzel

Details: Taken with AT65EDQ and Canon T3i, handheld.

## On the Brightness of Venus

By Dr. Ethan Siegel

Throughout the past few months, Venus and Jupiter have been consistently the brightest two objects visible in the night sky (besides the moon) appearing in the west shortly after sunset. Jupiter is the largest and most massive planet in the solar system, yet Venus is the planet that is closest to our world. On June 30th, Venus and Jupiter made their closest approach to one another as seen from Earth (a conjunction) coming within just  $0.4^\circ$  of one another, making this the closest conjunction of these two worlds in over 2,000 years.

And yet throughout all this time, and especially notable near its closest approach, Venus far outshines Jupiter by 2.7 astronomical magnitudes, or a factor of 12 in apparent brightness. You might initially think that Venus's proximity to Earth would explain this, as a cursory check would seem to show. On June 30th Venus was 0.5 astronomical units (AU) away from Earth, while Jupiter was six AU away. This appears to be exactly the factor of 12 that you need.

Only this doesn't explain things at all! Brightness falls off as the inverse square of the distance, meaning that if all things were equal, Venus ought to seem not 12 but 144 times brighter than Jupiter. There are three factors in play that set things back on the right path: size, albedo, and illumination. Jupiter is 11.6 times the diameter of Venus, meaning that despite the great difference in distance, the two worlds spanned almost exactly the same angular diameter in the sky on the date of the conjunction. Moreover, while Venus is



*Image credit: E. Siegel, using the free software Stellarium (L); Wikimedia Commons user TimothyBoocock, under a c.c.-share alike 3.0 license (R). The June 30th conjunction (L) saw Venus and Jupiter pass within  $0.4^\circ$  of one another, yet Venus always appears much brighter (R), as it did in this image from an earlier conjunction.*

covered in thick, sulfuric acid clouds, Jupiter is a reflective, cloudy world, too. All told, Venus possesses only a somewhat greater visual geometric albedo (or amount of reflected visible light) than Jupiter: 67 percent and 52 percent, respectively. Finally, while Venus and Jupiter both reflect sunlight toward Earth, Jupiter is always in the full (or almost full) phase, while Venus (on June 30th) appeared as a thick crescent.

All told, it's a combination of these four factors—distance, size, albedo, and the phase-determined illuminated area—that determine how bright a planet appears to us, and all four need to be taken into account to explain our observations.

Don't fret if you missed the Venus-Jupiter conjunction; three more big, bright, close ones are coming up later this year in the eastern pre-dawn sky: Mars-Jupiter on October 17, Venus-Jupiter on October 26, and Venus-Mars on November 3.

Keep watching the skies, and enjoy the spectacular dance of the planets!

# Club News: The Library Telescope Program

by Leigh Anne Lagoe



The BBA has won the 2015 Horkheimer Library Telescope contest! The drawing took place at the 2015 Astronomical League Conference (ALCon) in Las Cruces, NM, on July 11 where ten telescopes were awarded to astronomy clubs all over the country.

Our club will receive an Orion 4.5 inch StarBlast Dobsonian Telescope and a Celestron 8-24mm zoom eyepiece, courtesy of the Horkheimer Charitable Fund and the Astronomical League.

Once we receive the telescope, we are required to make some modifications before donating it to a local library. Some of those modifications include:

- Adding a primary mirror cap to prevent tampering with the collimation screws.
- Screwing the eyepiece into the focuser and securing the eyepiece.
- Adding a moon port for bright lunar observing.

Once our telescope is modified, we will donate it to the [Virginia Beach Public Library](#) system. We have notified the [Princess Anne branch](#) that they

will be receiving the telescope, and they are making arrangements for its arrival. The library will be responsible for loaning the telescope out to library patrons, but will partner with the BBA for assistance with minor maintenance. The details of the partnership are still being worked out.

Think how excited people in our community will be when they discover that they can borrow a telescope from their local library. What a great way to expand the way we offer astronomy outreach to the public!

For more information about the Library Telescope Program, visit

<https://www.astroleague.org/content/library-telescope-program>

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## International Observe the Moon Night at ODU'S Pretlow Planetarium



Join Old Dominion University's [Pretlow Planetarium](#) on September 19th from 7:00-9:00 pm for International Observe the Moon Night. We will have telescopes, liquid nitrogen ice cream, and plenty of family-friendly activities.

[International Observe the Moon Night](#) (InOMN) is an annual event dedicated to encouraging people to look up and take notice of our nearest neighbor, the Moon. From looking at the Moon with a naked eye to using the most sensitive telescope, every year on the same day, people from around the world hold events and activities that celebrate our moon.!

# Outreach Report: Blue Moon-A-Palooza

## By Leigh Anne Lagoe

The Blue Moon-a-Palooza at [Hunt Club Farm](#) on Friday July 31 began under a clear blue sky with plenty of sunshine. The BBAA was set up in a back field alongside the roaming cage-free guinea fowl - far from the main event. So far that we were unsure that we'd get any visitors at all.

Before sunset a few guests did wander by and were able to view the sun through the solar scopes that Dale Carey, Jim Tallman, and Chuck Jagow brought, until it sank behind the trees. Some lucky passersby were able to view the sliver crescent Venus against the blue sky in Jim's scope and Saturn in Chuck's.

By nightfall, a steady stream of visitors

began to filter in and we were in business. Shawn Loescher, Shaun Sheppard, Leigh Anne Lagoe, Mel Spruill, Paul Tartabini, and Beth Cox also brought telescopes to help with this event.

With the periodic scream of a peacock echoing through the trees, we all set our telescopes on Saturn as it appeared in the darkening sky. When the highlight of the evening, the Blue Moon, appeared from behind the distant woods, the field flooded with moonlight and even more people started lining up to see it.

Hundreds of guests stopped by throughout the night, taking a break from the concerts and party games, to come and be wowed by the striking moon and the beautiful night sky.



*The 2015 Blue Moon-A-Palooza at Hunt Club Farm in Virginia Beach (Clockwise from Top Left)*

*1) You wouldn't know driving in, but Hunt Club Farm knows how to throw a party; 2) "Camp BBAA" the back field of the farm, complete with a diverse array of telescopes and club members ready for action; 3) Interspersed among our many human astronomy-enthusiast guests were a range of critters including these curious (and loud) peacocks; 4) One guest reacts with surprise and delight after viewing a crescent-shaped Venus in Jim Tallman's telescope; 5) The crowds started early and kept up strong right until we left at 11 PM, and pretty much everyone looking through a scope had a cup attached to one hand; 6) BBAA members, Leigh Anne Lagoe, Dale Carey and Shaun Sheppard enjoying a refreshment prior to the evening rush brought on by the rising 'blue' moon. Images by P. Tartabini.*

# Outreach Report: Boardwalk Astronomy

By George Reynolds

Last night's Boardwalk Astronomy event (Tuesday, 8/25/15) was a success, despite the forecast of clouds and rain. We did have some clouds, but they did not interfere with viewing the Moon, and many visitors to the oceanfront got to see Saturn before it sank into the gloom near the western horizon.

The turnout was lighter than usual, both in passersby and BBAA members, but everyone had a good time.

Chuck Jagow showed the sun in Ha, and George Reynolds used the "sun funnel" to show off two large sunspot clusters. Dale Carey, Chuck Dibbs, and Leigh Anne and Niam Lagoie staffed their telescopes, and Jeff Goldstein had his large 22x100 binoculars on a sturdy tripod.

Before it got dark the binos and at least one scope showed visitors views of a passing ship way off shore. After dark we were serenaded by the [Navy's Fleet Forces band](#) in concert, as we all showed the Moon and Saturn to folks along the boardwalk. I counted close to 300 people who looked through my refractor or asked questions about astronomy.

The crowd was smaller than usual, but no less interested. We heard a lot of "Wow"s and "OMG"s from folks who had never seen Saturn or the Moon close up. Chalk up another successful BWA. Our last one is scheduled for September 22nd.



Image by Vincent Pendleton

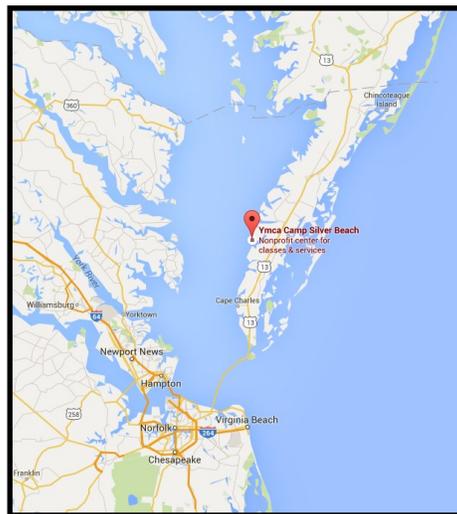
*Boardwalk Astronomy is held monthly during the warmer months at 24th St. on the Virginia Beach Boardwalk and is a popular astronomy outreach event. Popular with vacationers from across the world and popular with club members who enjoy such a fun venue for sharing their hobby. Consider joining us for the final 2015 event on Sept. 22. Not only is it fun, but proceeds earned from the event fund our club scholarships.*

## Mark Your Calendars: Astronomy Outreach Opportunity Kings Grant Service Unit Girl Scout Encampment, YMCA Camp Silver Beach

There will be astronomy outreach event to several Girl Scout troops at the very dark sky site Silver Beach, on the Eastern Shore on **Friday Sept. 18, 2015**.

We will show the sky to the Girl Scouts one troop at a time from 9 to 11 pm. After that, members are welcome to stay and do some serious observing under some very dark skies (note: the Moon sets at 10:16 pm). A cabin can be available if someone wants to stay overnight. We just need to give the Girl Scout leader Amy Gary a headcount.

Sign up through the Night Sky Network. Stay tuned as a carpool may be organized. Also, consider getting an [E-ZPass transponder](#) if you don't have one, as it will minimize tolls over the Chesapeake Bay Bridge Tunnel.





## September 2015

BBAA Events	Special Outreach	Astronomical Events
9/03 BBAA Monthly Meeting		9/05 Last Quarter Moon
		9/13 New Moon
9/12 Nightwatch @ Chippokes Plantation	9/18 Girl Scout Encampment @ YMCA Camp Silver Beach	9/20 First Quarter Moon
9/22 Boardwalk Astronomy		9/22 Fall Equinox
	9/27 Lunar Eclipse Watch @ Chesapeake Planetarium	9/27 Full Moon and Lunar Eclipse

### Sneak Peek into October

Thu 10/01/2015 Monthly Meeting, TCC, 7:30 pm

Fri 10/03/2015 Skywatch at Northwest River Park, 6:45 pm

Thu-Sun 10/8/2015 - 10/11/2015 East Coast Star Party, Coinjock, NC.

Thu 10/15/2015 STEM & M Night at Greenbrier Intermediate School, 6:00 pm.

Fri 10/23/2015 Garden Stars at Norfolk Botanical Gardens, 7:00 pm.

