BACK BAY observer

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

EPHEMERALS
october 2013

10/11, 7:30 PM
Garden Stars
Norfolk Botanical Gardens

10/25
Skywatch
Northwest River Park

10/31 - 11/02
East Coast Star Party
Coinjock, NC

11/02
Nightwatch
Chippokes State Park
Surry, VA

11/07, 7:30 pm
BBAA Monthly Meeting
TCC Campus, VA Beach
Building J, Rm. JC-12

Looking Up!

Editor's Note: This month's Looking Up column was written by Observer Editor, Paul Tartabini.

Have you ever found yourself "giving up" on deep sky observing at your home because of light pollution?

As much as I love observing at dark locations, a fact of life for me right now is that most of my observing takes place at my home in the middle of the light-polluted Peninsula. I have learned to adapt and have acquired quite a love for double stars and lunar observing, but I recently noticed that I was neglecting deep sky observing from home, not because I wasn't interested, but mostly because of my frustration with light pollution and yard lights.

After reading an article in the November Sky and Telescope on viewing globular clusters of the Andromeda galaxy, I decided that I could not wait until the next chance I had to get out to a dark site to try to find one of these extragalactic treats. So on Oct. 3, I spent about an hour using blankets, tarps and even taped newspaper to block every single extraneous light source that I could see from my favorite observing spot. I set my alarm for early morning, when I knew light pollution is at its minimum.

When I awoke I set my sights on **G1**, the brightest globular cluster in **M-31** (mag 13.7), and one that author Alan Whitman suggested was attainable in an 8" scope like mine. It took me quite a while to star hop to it and confirm that I had the right location. The seeing was very good that night and I viewed at 300x. The globular was quite apparent with averted vision and I was excited that I could view this from my home. So, it just goes to show you to always give it a try! Until next time...

- Paul Tartabini

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NASA's Space Place

Size Does Matter, But So Does Dark Energy

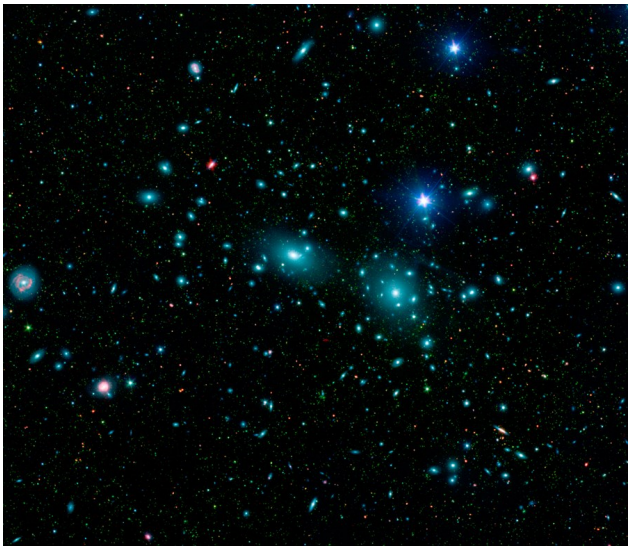
By Dr. Ethan Siegel

Here in our own galactic backyard, the Milky Way contains some 200-400 billion stars, and that's not even the biggest galaxy in our own local group. Andromeda (M31) is even bigger and more massive than we are, made up of around a trillion stars! When you throw in the Triangulum Galaxy (M33), the Large and Small Magellanic Clouds, and the dozens of dwarf galaxies and hundreds of globular clusters gravitationally bound to us and our nearest neighbors, our local group sure does seem impressive.

Yet that's just chicken feed compared to the largest structures in the universe. Giant clusters and superclusters of galaxies, containing thousands of times the mass of our entire local group, can be found omnidirectionally with telescope surveys. Perhaps the two most famous examples are the nearby Virgo Cluster and the somewhat more distant Coma Supercluster, the latter containing more than 3,000 galaxies. There are millions of giant clusters like this in our observable universe, and the gravitational forces at play are absolutely tremendous: there are literally quadrillions of times the mass of our Sun in these systems.

The largest superclusters line up along filaments, forming a great cosmic web of structure with huge intergalactic voids in between the galaxy-rich regions. These galaxy filaments span anywhere from hundreds of millions of light-years all the way up to more than a billion light years in length. The CfA2 Great Wall, the Sloan Great Wall, and most recently, the Huge-LQG (Large Quasar Group) are the largest known ones, with the Huge-LQG -- a group of at least 73 quasars – apparently stretching nearly 4 billion light years in its longest direction: more than 5% of the observable universe! With more mass than a million Milky Way galaxies in there, this structure is a puzzle for cosmology.

You see, with the normal matter, dark matter, and dark energy in our universe, there's an upper limit to the size of gravitationally bound filaments that should form. The Huge-LQG, if real, is more than double the size of that largest predicted structure, and this could cast doubts on the core principle of cosmology: that on the largest scales, the universe is roughly uniform everywhere. But this might not pose a problem at all, thanks to an unlikely culprit: dark energy. Just as the local group is part of the Virgo Supercluster but recedes from it, and the Leo Cluster -- a large member of the Coma Supercluster -- is accelerating away from Coma, it's conceivable that the Huge-LQG isn't a single, bound structure at all, but will eventually be driven apart by dark energy. Either way, we're just a tiny drop in the vast cosmic ocean, on the outskirts of its rich, yet barely fathomable depths !



Digital mosaic of infrared light (courtesy of Spitzer) and visible light (SDSS) of the Coma Cluster, the largest member of the Coma Supercluster. Image credit: NASA / JPL-Caltech / Goddard Space Flight Center / Sloan Digital Sky Survey.

Learn about the many ways in which NASA strives to uncover the mysteries of the universe: http://science.nasa.gov/astrophysics.

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

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 November 7 meeting will be held at TCC in Virginia Beach, Building J, Room JC-12 at 7:30 PM. Directions available at www.backbayastro.org

BBAA Internet Links

BBAA Website
www.backbayastro.org

Yahoo! Groups
tech.groups.yahoo.com/group/backbayastro

BBAA Observer Newsletter
www.backbayastro.org/observer/newsletter.shtml

September 5, 2013 BBAA Meeting Minutes

The Meeting at TCC was called to order at 7:30 PM by President Courtney Flonta.

Those in attendance were: Brian Brooks, Ken Broun, Tom Flatley, Courtney Flonta, Joshua Frechem, Mark Gerlach, Pete Goulart, Bill Holmes, Chris Jarvis, Thomas Jarvis, Robyn Korn, Leigh Anne Lagoe, Ben Loyola, Matt McLaughlin, Bill McLean, John Murray, Vincent Pendleton, Joey Quinn, Kevin Swann, Matt Swingle, and Paul Tartabini

Calendar:

- October 3 Thursday, monthly meeting @ TCC, 7:30PM, Binocular Night
- October 4 Friday, Grundland Astronomy Park (GAP), Hampton, dusk
- October 4-5, Stanton River Star Party (prior registration/payment required)
- October 5 Saturday, Nightwatch @ Chippokes, 6:00PM
- October 5 Saturday, York River State Park, Williamsburg, dusk
- October 11 Friday, Garden Stars @ Norfolk Botanical Gardens, 7:30PM
- October 12 Saturday, moon night with star occultation @ VA Air & Space Center
- October 25 Friday, Skywatch @ Northwest River State Park, Equestrian area, 6:00PM
- October 31 to November 3, East Coast Star Party (partial solar eclipse)

Continued on page 4

Meeting Minutes, continued from page 3

- November 2 Saturday, Nightwatch @ Chippokes, 6:00PM
- November 7 Thursday, monthly meeting @ TCC, 7:30PM

Treasurer's Report:

General fund opening	3755.78
Expenses	2571.55
General fund closing	1184.23
Scholarship fund opening	2703.67
Scholarship award	1500.00
Scholarship fund closing	1203.67

Visitors:

Vincent Pendleton (TCC student), John Murray (retired with 12" Dob), Brian Brooks (ODU Physics grad & president for ODU astronomy club with RRRT objectives) & Joshua Frechem (ODU Physics student).

Astronomy League Correspondent:

- The Astronomical League is the largest astronomy league in the world.
- Our BBAA representative, Bill McLean, began with the Messier program & used charts, scopes, logs which familiarized him with astronomy tools & the sky.
- Bill is currently working on his Herschel 400 program. He has been slowly working on it for 3 yrs now & only has 320 more to go.
- Of all the astronomy clubs in the AL, BBAA got the most Venus Transit awards.

Old Business

- A motion was made and seconded for a binocular Night presentation by Jeff Goldstein at the next monthly meeting (October 3rd). Ensuing discussion: some use a camera tripod with binocular mount from a camera shop. Others use a one-surface mirror on a table so they can look down instead of straining up.
- The purchase of a club solar scope tracking mount was discussed for up to $150. The motion was seconded (none opposed). Ben Loyola will purchase & get reimbursed by the next meeting.
- A Meade telescope with a .965" eyepiece with a possible tracking mount was also suggested.
- The ODU astronomy club offered use of a 'goto' Casssegrain & sheets of solar film for outreach if we need.
- Leigh Anne Lagoe suggested a club purchase of a universal camera phone eyepiece mount for outreach such as boardwalk astronomy since many people attemp to photograph & occupy too much viewing time. No one followed through with a motion.
- Mr Holmes suggested a scope swap night for scopes, books, charts, etc. E.g, Courtney stated she has four 26mm eyepieces that she would like to trade. Ben Loyola said swaps were regularly held in the back row of the monthly meetings. Courtney will email a reminder prior to the meeting & also discuss in her "Looking Up" newsletter column.
- A club membership of Sky & Telescope magazine for approximately $30/year was discussed. This includes an online subscription for pictures & reference tools. The magazine could be used during the monthly meeting (e.g., pull-out charts) & put in the library or possibly given to a new person at meeting's end. The motion was seconded (none opposed).
- A Northwest River Park coordinator is needed. See Chuck Jagow.
- Reminder: BBAA club library is at Bill Newman's home. Email him & he will bring to the next meeting.
- A question was asked about variable star resources. Ben Loyola is a member of American Association of Variable Star Observers (www.aavso.org) Site has star plotting tools.

New Business

- The 35th BBAA club anniversary luncheon is in December. The Fire & Vine restaurant at Hilltop shopping center was suggested again due to better service.
- BBAA elections will be held at the November monthly meeting where president & secretary positions will need to be filled.
- Treasurer & Vice President positions are up for election, but can be extended for 1 more year.

Observing reports:

♦Thomas & Chris Jarvis viewed Leonid meteor shower. ♦Robyn Korn saw the Perseid meteor shower in Maine. ♦Kevin Swann saw a bolide off the Jacksonville, FL coast in June. ♦Paul Tartabini, Matt McLaughlin and Bill McLean viewed from York River State Park Sunday. The park Rangers were very cooperative.

This evening's raffle winner was Ben Loyola who won a book titled: *Night Sky – A Guide to Constellations.* He gave it to the Jarvis boys.

Minutes taken by Secretary, Kevin Swann.

Orion 4.5-inch StarBlast EQ Review | Bill McLean

I bought the Orion StarBlast 4.5 Equatorial Reflector telescope as a light-weight, quick, grab-n-go scope. I already own several other scopes which are larger, heavier and take a good deal of time to set up to observe. As I have a bad back, the total weight of the scope, mount and tripod is a concern for me. Also, it was important to find a scope that I could stand at and not have to bend over or sit.

Bill McLean's 4.5 inch Star Blast EQ telescope ready for action in his urban backyard. Bill has enjoyed fabulous views with this scope and has relished the ease at which the scope can be set up and moved around without inflaming his back.

I've had this scope for 11 months and use it nearly every clear night. Its manageable size allows me to carry it with ease to different locations around my tree-covered property to view various objects.

Given that this is only a 4.5 inch mirror, I never expected bright views of dim objects. Nonetheless, I can make out the Messier open and globular clusters just fine. **M 35**, **M 36**, **M 37**, **M 38** and **M 13** are smallish fuzzy balls. I resolve no individual stars at the highest power I can comfortably use, which is 100x. At magnifications beyond that, the optics and the mount begin to cause troubles and degrade the view. Consequently, some of the faint Messier objects can be a bit of a challenge.

I have a lot of satisfying fun viewing solar system objects with this scope. I can clearly make out the bands on **Jupiter** along with enjoying the dance of her moons, and I can also just barely make out the Great Red Spot. **Saturn's** rings are also clear, and the Cassini Division is there, but difficult. Our **Moon** also looks sharp and well-defined, and I have successfully viewed the **Sun** with a 5" white light filter.

Prior to owning this scope, I had never regularly used an Equatorial (EQ) mount before. I had tried a few times with some of Bird Taylor's scopes, so I knew how they worked. Now, after gaining experience with this scope, I really like the EQ mount. After it is aligned to my latitude, all that needs to be done is to point it north. Then, once an object is in view, only one knob must be turned to hold it in the field of view. I would not recommend this mount for a fresh beginner unless they are patient and willing to learn to use it. Instead, perhaps a newbie should consider Orion's XT4.5, the Dobsonian incarnation of this scope.

All in all I am very happy with the StarBlast. As we all know, the best scope is the scope that gets used the most, and I use this one a lot. I highly recommend it.

One caveat: The mirror that came with it was not well figured. I could not get bright objects like the moon to focus sharply. I called Orion and they sent me another scope. This replacement mirror is much better and is probably the best mirror I own! Thanks Kent, for telling me about your experiences with Orion and replacement mirrors.

Do you have a telescope or some type of astronomical equipment or product that helps you enjoy the hobby more? If so, consider writing a review so that other members can benefit from your experience. One of the best thing about belonging to an astronomy club is making friends who can share their experiences and even let you try before you buy.

Observing Report | Kent Blackwell

On Friday, Sept 6 at 11:30 PM, NASA's Lunar Atmosphere and Dust Environment Explorer (LADEE) blasted off from the Wallops Flight Facility on Virginia's Eastern Shore, near Chincoteague. The launch was visible across the eastern seaboard and Virginia was prime location for awesome views of the spectacular night launch. Kent Blackwell viewed the launch from Virginia Beach and took some fabulous shots. Here's his report:

A fabulous shot by Kent Blackwell of the launch of LADEE on Sept. 6, 2013. Note the view of the Pleiades in the lower left center.

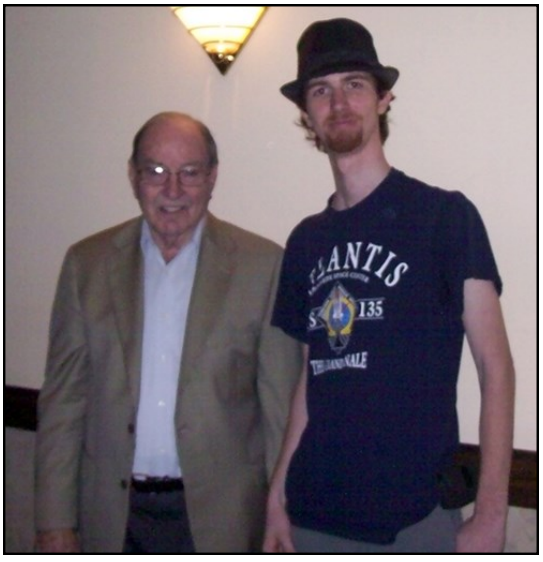
"I viewed and photographed the rocket from a small park only three blocks from my house in Virginia Beach. Although the sky is light polluted the rocket was fantastic. I hope all of you saw it. I've heard from a few who watched it. Robert Hitt and I watched it rising NE just as predicted. I'll never forget seeing that beautiful orange glow and the various stages.

Despite severe light pollution my pictures came out better than I feared. The nice part is Robert Hitt & I rode our bikes to watch it at a park only a few blocks away."

- Kent Blackwell

Member Notes | Nick Anderson

On September 20, BBAA member Nick Anderson was able to meet Apollo 14 astronaut **Dr. Edgar Mitchell**, the 6th man to walk on the Moon and one of only eight still living. Dr. Mitchell gave a presentation at the Blacksburg Lyric Theatre detailing his journey of becoming an Apollo astronaut. Nick seized the opportunity to shake his hand and get a quick photo in the lobby at the end of the presentation.



ALCOR Notes | Bill McLean

It is an honor and pleasure to be your Astronomical League Coordinator (ALCOR). I enjoy encouraging fellow astronomers to improve their observing expertise and enjoyment with this hobby by completing AL Observing Programs.

You guys don't need encouragement though. All I do is forward your logs to the appropriate chairperson. And a lot of you do that, too! There are some programs where I get to "approve" the logs first then send the chair my recommendation.

It is fun to read through your logs! So far your logs are way more organized and concise than my own- Georgie had to read through my jumble (before she handed the ALCOR reigns over to me).

Below is a list of the awards you have "worked" for and received since the beginning of 2012. Twenty-four awards! I am very proud of our club's members.

May I point out two members who have been promoters of astronomy on the Southside and the Peninsula for decades who received their first award. I am thrilled to include Kent Blackwell (Planetary Nebula Program) and Bird Taylor (Venus Transit) in the list of the recent BBAA awardees.

Also, Dave Kratz got his Planetary Nebula pin in 2012. He was the very first BBAA awardee in 1989 with the Herschel 400! How cool is that?

Member	Program	Type	Date Earned
Nick Anderson	Messier Program	Honorary	Jan. 2012
William McLean	Venus Transit Program	-	June 2012
Thomas Flatley	Venus Transit Program	-	June 2012
Scott Patterson	Venus Transit Program	-	June 2012
Robert Beuerlein	Venus Transit Program	-	June 2012
Nick Anderson	Venus Transit Program	-	June 2012
Jim Tallman	Venus Transit Program	-	June 2012
George Reynolds	Venus Transit Program	-	June 2012
Dean R. Giangregorio	Venus Transit Program	-	June 2012
Curtis Lambert	Venus Transit Program	-	June 2012
Charles Jagow	Venus Transit Program	-	June 2012
Bird Taylor	Venus Transit Program	-	June 2012
Benito Loyola	Venus Transit Program	-	June 2012
Annette McLean	Venus Transit Program	-	June 2012
A. Jeffrey Goldstein	Venus Transit Program	-	June 2012
Nick Anderson	Caldwell Program	-	July 2012
S. Kent Blackwell	Planetary Nebula Program	Advanced	Aug. 2012
Jim Tallman	Outreach Award	Outreach	Sept. 2012
Dave Kratz	Planetary Nebula Program	Advanced	Nov. 2012
Jim Tallman	Double Star Program	-	March 2013
Jim Tallman	Lunar Program	-	March 2013
Nick Anderson	Local Galaxy Program	-	March 2013
Nick Anderson	Planetary Nebula Program	Basic	April 2013
Nick Anderson	Herschel 400 Program	-	June 2013

October 2013

BBAA Events	Special Outreach	Astronomical Events
10/03 BBAA Monthly Meeting		10/04 New Moon
10/05 Nightwatch @ Chippokes State Park	10/12 Int'l Observe the Moon Night, ODU Planetarium	10/11 First Quarter
10/11 Garden Stars @ NBG		10/18 Full Moon
		10/22 Orionids Peak
10/25 SkyWatch @ Northwest River Park	10/31-11/02 East Coast Star Party, Coinjock, NC	10/26 Last Quarter

Sneak Peek into November

Sat 11/02/2013 Nightwatch at Chippokes State Park, Surry VA.
Thu 11/07/2013 BBAA Monthly Meeting, TCC Campus, 7:30 pm
Fri 11/08/2013 Garden Stars at Norfolk Botanical Gardens, 7:00pm
Fri 11/22/2013 Skywatch at Northwest River Park