



BACK BAY observer

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

EPHEMERALS june 2014

6/05, 7:30 pm
BBAA Monthly Meeting
Virginia Beach Planetarium
Plaza Middle School, VA Beach

6/06, 9:00 PM
Garden Stars
Norfolk Botanical Garden

6/10, 6:30 - 11:00 PM
Boardwalk Astronomy
VA Beach Boardwalk at 24th St.

6/20, 8:30 PM
Skywatch
Northwest River Park

6/28
Nightwatch
Chippokes Plantation
Surry, VA



Looking Up!

Have you ever thought about why some of us attend star parties, even when we know the weather is not going to cooperate? I myself had not really given it much thought until attending the East Coast Star Party (ECSP) last week, and events over those three days got me thinking.

I had been closely watching the weather forecasts in the run up to the party, and the first couple of days didn't look very good. Rain was predicted for Thursday and cloudy skies through the evening on Friday. I decided to go anyway, thinking that since I had a camper, I would at least be dry.

I arrived on Thursday afternoon to the predicted cloudy, misty skies. I picked a spot on the south end and set up my observing area, then headed out to locate Kent Blackwell, all the while wondering why I didn't just show up the next day. Later, a few more people rolled in which increased our numbers to eight. I helped Ray Moody a bit with getting our dinner ready and enjoyed talking with the others who were there.

It was then that I realized why I come to the East Coast Star Party each year, rain or shine. Yes, the big objective for a star party is "Stars" but for me it is about reconnecting with friends from both near and far, some of which I don't even get to see except at the ECSP.

Kent has been hosting the ECSP for many years and I think his recipe for a successful Star Party is pretty effective because, regardless of the weather, we always have a good time. There is always an evening dinner, lots of snacks, and drinks, and a friendly atmosphere that promotes fellowship and fun.

[Continued on page 2](#)

CONTENTS	Ephemerals	1
	Looking Up	1
	Meeting Minutes	<u>2</u>
	Observer's Corner	<u>3</u>
	NASA Space Place	<u>5</u>
	GAP Deck Report	<u>6</u>
	Calendar	<u>8</u>

Looking Up, continued from [page 1](#)

The ECSP is not, by any measure, the largest star party around, but it is, without a doubt, the friendliest group of people I know, and this is the reason why I come back year after year, rain or shine. To see old friends, make new ones, and talk about past adventures with friends that are no longer close enough to attend.

Kent and I were laughing about the reputation of the ECSP in other star party circles in that the ECSP is the only star party where you get a free glass of wine with your registration (if you are over 21). We certainly have a lot of fun and I have to honestly say that I will take the ECSP over the other star parties hands down!

Oh, and the skies finally did clear up on Friday evening. Saturday was also very nice until about 11PM, except when it clouded up until about 1:30AM. But even when there are no stars to be seen astronomically, there are plenty of "stars" to hang out with at the ECSP. Well done again this year Kent!

Jim Tallman



Jim Tallman took this photo of the Ring Nebula (M57) just before the skies got cloudy again on Friday night. He was going to take a series of four, but after seeing this beautiful image, decided he liked the one shot.

Image taken May 31, 2014, 800 ISO, 4 min. exposure

May 1, 2014 Meeting Minutes

The May 2014 meeting was called to order at 7:32 PM in room JC-10 at TCC in Virginia Beach by Vice President George Reynolds.

Members in attendance were: Kenny Broun, Scott Cadwell, Bill Holmes, Chuck Jagow, Jeff Klein, Robyn Korn, Leigh Anne Lagoe, Curt Lambert, Kirk Leppert, Ben Loyola, Matt McLaughlin, Bill McLean, Bill Powers, Bruce Powers, Joey Quinn, George Reynolds, Mark Roehm, Melvin Spruill Jr., Bird Taylor, Mike Webster, and Christopher Weller. **Guests** were Dominic Bates, Justin Knightes, Roni Sherritt, and Garrick Weller.

Vice President Report: Calendar

- 5/2 - Garden Stars event cancelled, not enough guests registered
- 5/2 - VPAS: Gosnold's Hope Park Observing
- 5/9 - Star Hike (Night Hike) at Northwest River Park - meet at ranger station, 6:30 PM.
- 5/10 - National Astronomy Day at Virginia Beach Central Library, 9:30 AM - 5:00 PM
- 5/10 - Star Party at Virginia Living Museum
- 5/13 - Boardwalk Astronomy #1, behind 24th Street Stage, dusk - 11 PM.

- 5/16 - VPAS: Gosnold's Hope Park Observing
- 5/23 - Skywatch at Northwest River Park, dusk - midnight.
- 5/29 - 5/31 - East Coast Star Party hosted by Kent Blackwell in Coinjock, NC
- 6/5 - BBAA Club Meeting at Plaza Middle School Planetarium, 7:30 - 9 PM.
- Upcoming Boardwalk Astronomy dates: 5/13, 6/10, 7/8, 8/5 and 9/2.
- Please RSVP for Star Hike as there is a limited number of members that can participate.

ALCOR (Astronomical League Coordinator):

- Nick Anderson is now a Master Observer. Our club now has 4 Master Observers.

Observing Reports:

- Mars is still in good position for viewing.

Old Business:

- Bird Taylor reported on the status of the RRRT at Fan Mountain. A report is in the May newsletter. The computers worked well and he will be returning within two to three weeks to do some photometry and check the camera.

[Continued on page 4](#)

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

President
Jim Tallman
president@backbayastro.org

ALCOR
Bill McLean
alcor@backbayastro.org

Vice President
George Reynolds
vp@backbayastro.org

Librarian
Bill Newman
billn59@verizon.net

Treasurer
Chuck Jagow
treasurer@backbayastro.org

Scholarship Coordinator
Ben Loyola
benito@loyola.com

Secretary
Leigh Anne Lagoe
secretary@backbayastro.org

RRRT Coordinator
Lawrence "Bird" Taylor
Lawrence.W.Taylor@nasa.gov

Webmaster
Curt Lambert
webmaster@backbayastro.org

Newsletter Editor
Paul Tartabini
bbaa.newsletter@gmail.com

BBAA Meetings

The BBAA meet the first Thursday of every month except for July. The next meeting will be held on June 5, 2014 in the [Virginia Beach City Public Schools Planetarium](#) at [Plaza Middle School](#) located at 3080 South Lynnhaven Rd in Virginia Beach at 7:30 pm.

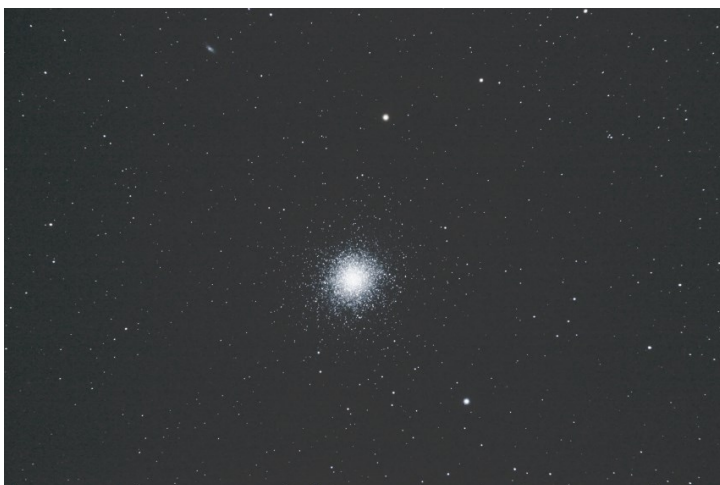
BBAA Internet Links

BBAA Website
www.backbayastro.org

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

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

The Observer's Corner



Jim Tallman took full advantage of the gorgeous ECSP skies on June 1, 2014 as this beautiful image of M13 clearly shows. Note that the tiny galaxy, NGC 6207, (about a degree to northeast) shows up quite nicely in Jim's image.

As President Jim Tallman related in this month's *Looking Up* column, the spring East Coast Star Party was a huge success once again this year, thanks in large part to the tireless efforts of Kent Blackwell, who makes sure the party is fun no matter what the weather decides to do.

This year, party-goers were treated to several long stretches of pristine skies, with Kent recording a sky quality reading of 21.44 (about 6.5-6.7 magnitude) on Saturday night, the highest he has seen at Coinjock in a long time, and that is saying something!

May Minutes, continued from [page 2](#)

In the future, candidates such as the BBAA may be able to submit proposals to use the RRRT equipment for research.

- The GAP (Grundland Astronomy Park) dome (POD) is in good condition after a tornado several months ago, but due to damage to the surrounding area, there is still no access to the site. The city of Hampton is willing to donate materials to build a deck for the GAP.

Scholarship Report: There are six applications going to the scholarship board for review.

Treasurer Report:

- Chuck Jagow reported that there is \$1585.80 in the General Fund and \$2389.67 in the Scholarship Fund, for a total of \$3975.47. The insurance bill was paid and the club has expenses to pay to the Astronomical League and the International Dark Sky Association.

New Business:

- The BBAA constitution requires updating. George Reynolds asked for volunteers to form a revision committee for the constitution and by-laws. Volunteers met after the meeting.

Meeting Presentation:

*What Every Telescopic Observer Should Know
about Weather on Mars*

Our guest speaker was Dr. Nicolas Heavens, a Research Assistant Professor of Planetary Science at Hampton University. Dr. Heavens compared the weather on Earth and Mars and explained why we study Mars. He discussed warm dust seasons, including global dust storms, and how they compare to the icy seasons. Dr. Heavens explained how the image we see through the telescope correlates with the seasonal cycle of weather on Mars, as well as the important role amateur astronomers have played in the study of Mars, especially when Mars spacecraft are not functioning properly.

Door Prize Drawings:

- Binoculars awarded to Bruce Powers.
- Sky & Telescope magazine awarded to Robyn Korn.

Meeting adjourned at 9:07 pm.

Minutes taken by Secretary Leigh Anne Lagoe

Note: Minutes were modified due to space constraints. Full minutes can be viewed at <http://backbayastro.org/minutes/2014-05-minutes.pdf>



Dr. Nicholas Heavens, an Asst. Proferssor at Hampton University was the guest speaker at the BBAA meeting in May. Dr. Heavens is the author of numerous articles exploring the impact of clouds and aerosols on the atmosphere and climate of planets in our Solar System.

Dr. Heavens' talk was the latest in a series of lectures presented to BBAA members at monthly meetings in 2014 by planetary scientists from Hampton University.

The Hottest Planet in the Solar System

By Dr. Ethan Siegel

When you think about the four rocky planets in our Solar System—Mercury, Venus, Earth and Mars—you probably think about them in that exact order: sorted by their distance from the Sun. It wouldn't surprise you all that much to learn that the surface of Mercury reaches daytime temperatures of up to 800°F (430°C), while the surface of Mars never gets hotter than 70°F (20°C) during summer at the equator. On both of these worlds, however, temperatures plummet rapidly during the night; Mercury reaches lows of -280°F (-173°C) while Mars, despite having a day comparable to Earth's in length, will have a summer's night at the equator freeze to temperatures of -100°F (-73°C).

Those temperature extremes from day-to-night don't happen so severely here on Earth, thanks to our atmosphere that's some 140 times thicker than that of Mars. Our average surface temperature is 57°F (14°C), and day-to-night temperature swings are only tens of degrees. But if our world were completely airless, like Mercury, we'd have day-to-night temperature swings that were *hundreds* of degrees. Additionally, our average surface temperature would be significantly colder, at around 0°F (-18°C), as our atmosphere functions like a blanket: trapping a portion of the heat radiated by our planet and making the entire atmosphere more uniform in temperature.

But it's the second planet from the Sun -- Venus -- that puts the rest of the rocky planets' atmospheres to shame. With an atmosphere **93 times as thick as Earth's**, made up almost entirely of carbon dioxide, Venus is the ultimate planetary greenhouse, letting sunlight in but hanging onto that heat with incredible effectiveness. Despite being nearly twice as far away from the Sun as Mercury, and hence only receiving 29% the sunlight-per-unit-area, the surface of Venus is a toasty 864°F (462°C), with *no difference* between day and night

temperatures! Even though Venus takes hundreds of Earth days to rotate, its winds circumnavigate the entire planet every four days (with speeds of 220 mph/360 kph), making day and night temperature differences irrelevant.

Catch the hottest planet in our Solar System all spring-and-summer long in the pre-dawn skies, as it waxes towards its full phase, moving away from the Earth and towards the opposite side of the Sun, which it will finally slip behind in November. A little atmospheric greenhouse effect seems to be exactly what we need here on Earth, but as much as Venus? No thanks.

Check out these "10 Need-to-Know Things about Venus":

<http://solarsystem.nasa.gov/planets/profile.cfm?Object=Venus>

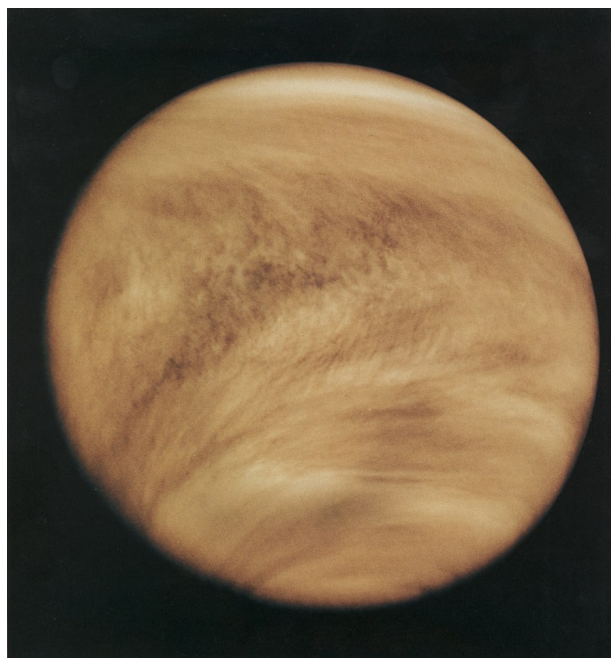


Image Credit: NASA's Pioneer Venus Orbiter image of Venus' upper-atmosphere clouds as seen in the ultraviolet, 1979.

Update on the Grundland Astronomy Park Deck

Lawrence “Bird” Taylor

Editor’s Note: In the [December 2013](#) issue of The Observer we reported on the assembly of a Personal Observing Dome (POD) at the Grundland Astronomical Park (known as “The GAP”) in Hampton. The POD was a gift to the BBAA by the late Cecil Nichols, a long time BBAA member. At the December 2012 meeting, BBAA members voted to donate the POD for use in astronomy outreach at the GAP.

The GAP is a wonderful astronomy park in Hampton and is the site of regular public outreach observing sessions provided by the Virginia Peninsula Astronomy/Stargazers (VPAS). BBAA member, Bird Taylor, is the founder of VPAS, and there are quite a few BBAA members who are also members of VPAS.

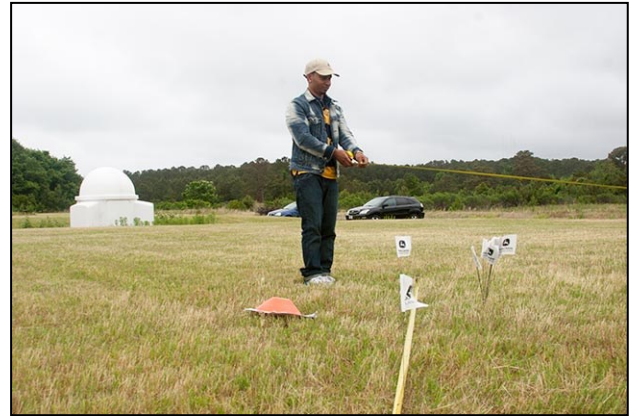
Bird’s vision of a fully functional observing space for public outreach at the GAP has three elements. The first, as reported in the previous newsletter article, was the assembly and installation of the POD itself. The next two elements include installation of a wood deck followed by construction of four concrete piers for telescopes.

Now, as if improving the GAP’s public outreach capabilities were not enough, Bird also came up with the idea of offering local Boy Scouts the opportunity to manage each of these three development efforts as their Eagle Scout project. In this latest article, Bird gives an update on the status of the second project, construction of the wood deck.

Kyle and Boy Scout Troop 31 are two days of construction into his Eagle Scout Project: the building a 20' x 20' Observation Deck out at Grundland Astronomy Park (GAP). Sunday June 8th will be the third and hopefully final day.

This project is huge in scope (pun intended) and has turned out to be quite challenging to execute. The design not only had to meet building codes, but it also had to be built to commercial standards (as opposed to residential standards) because it is in a Hampton City Park. Also, the inclusion of the future telescope piers added more difficulties that took some time to clear up. In addition, there were several other barriers and obstacles that Kyle had to overcome, not the least of which was the GAP being condemned and designated as a “denied access park” after a tornado swept through it in January and destroyed an old building on the site that city inspectors

later found to contain asbestos. That finding has caused the longest delay and continues to hinder access. Finally, Kyle has also had to deal with a change in personnel in the building permit office that resulted in additional required modifications. But all of this is only the bad news. Fortunately, the good news greatly outweighs the bad.



Eagle Scout candidate, Kyle, measuring footing and pier locations in preparation for augering holes.

Hampton Parks & Recreation, in the person of Ms. Beth Haines, has been a godsend. She provided tons of wise advice and guidance along with all of the materials. The City brought out a water truck, mowed the whole site, picked up and delivered lots of hardware, ordered and received all of the lumber and concrete, and provided location flags for Kyle and his dad to mark the location holes on Thursday so that Hampton Parks & Recreation could auger the twelve footing holes and four pier holes. All holes are a foot in diameter and are between two and three feet deep in dirt and fill with chunks of road and other very hard pieces. I can't even imagine trying to get one hole dug, much less all sixteen!

[Continued on page 7](#)



Kyle explaining beams, anchors and L-bolts

GAP Deck, continued from [page 6](#)

Kyle and Beth had several meetings and emails coordinating the event. Sure enough, at the first work session last Saturday, everything ticked off like clockwork. After his safety briefing, the group was broken down into smaller working groups. Some dug to clear the fill inside the augured holes. Another group started cutting and assembling the three 3 x 2" x 10" beams, and Sonotube concrete forms were fitted into the augured holes for the footings. Then much time was spent making sure that the beams were placed properly. The design required the team to dig a trench for the beams to rest in so that when the joists and decking were added, steps wouldn't be required.

Afterwards, just under forty 80# bags of concrete were mixed and poured in the forms. L-bolts were positioned for the beams and finally the beams were placed on the ground and forms. I had thought that they would only get the footings poured. I never expected them to get the beams and rim joists completed, too. Wow, what an amazing first day!



Kyle showing how to properly mix concrete for the footings.

Day two had a much smaller group of workers, but they still cranked through a lot of lumber. All of joist hangers were positioned and then the joists were measured, cut, and secured with hangers from the beams. Awesome! As you can see in the "end of day 2" photo, there are four holes that are already dug and awaiting the next Eagle Scout Project to construct the four piers. The joists and cross members were placed with that in mind. Decking was started and they were even able to get about a quarter of that done, before calling it a day. I was very impressed with all of the hard work and great teamwork exhibited from Kyle and his Troop.

The GAP Deck will be the new home for the

GAP POD that Back Bay Amateur Astronomers (BBAA) donated last year and was assembled for a previous Eagle Scout Project.



End of Day Two: footings, beams, joists and the first quarter of the decking complete. Notice the pier locations. The GAP POD is in the background.

We had a few AstroBuddies come by to check out the happenings. You might recognize the couple sitting on a pair of thrones in the photo near the bottom.

A very special thanks to Hampton Parks & Recreation for everything. This facility will be used for years into the future for sharing the joy of astronomy in Hampton Roads.

The next step is designing and building the four telescope piers that will pierce the GAP deck. Two will be for Schmidt-Cassegrain scopes (Meade or Celestron), one will be for a Dobsonian mount, and the final will be a little higher for a refractor scope. Concrete is purchased, delivered, and is in a shed awaiting us out at the GAP along with the Sonotube concrete forms.



AstroBuddies, Bill and Annette McLean, visiting the construction site.



June 2014

BBAA Events	Special Outreach	Astronomical Events
6/05 BBAA Monthly Meeting		6/05 First Quarter Moon
6/06 Garden Stars @ Norfolk Botanical Gardens	6/10 Boardwalk Astronomy, 24th St, VA Beach Oceanfront	6/12 Full Moon
6/20 Skywatch @ Northwest River Park	6/19 96X-Fest NTelos Pavilion, Portsmouth	6/19 Last Quarter Moon
		6/21 Summer Solstice
6/28 Nightwatch @ Chippokes Plantation		6/26 New Moon

Sneak Peek into July

No meeting in July (picnic instead)

Tue 7/08/2014 Boardwalk Astronomy, 24th St. VA Beach, 6:00 pm

Fri 7/11/2014 Garden Stars at Norfolk Botanical Gardens, 9:00 pm

Sat 7/12/2014 BBAA Summer Picnic, Redwing Park, 11:00 am

Fri 7/18/2014 Skywatch at Northwest River Park

Sat 7/26/2014 Nightwatch at Chippokes State Park, Surry VA.

