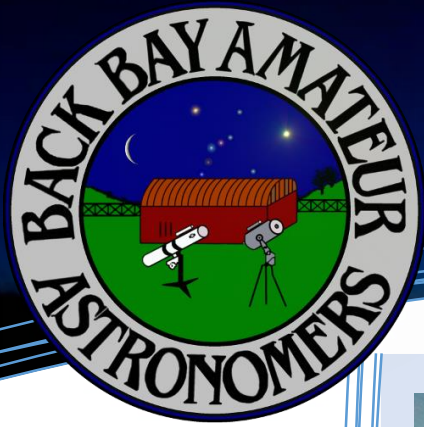




BACK BAY *OBSERVER*

Apr
2019

The official newsletter of the Back Bay Amateur Astronomers

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UPCOMING

Apr 11 **Malibu STEAM Night**
6-7:30PM
Malibu Elementary, VB

Apr 12 **Star Party in
the Swamp**
6-9:30PM
Dismal Swamp State Park, NC

Apr 15 **Intro to Astronomy**
1-3PM
Chesapeake Central Library

*For more information, go to
www.backbayastro.org/*



At March's Skywatch, guests were able to view various nebulae, galaxies, star clusters, Mars, a pass of the International Space Station, and more.

LOOKING UP! *a message from the president*

This month I'd like to discuss two things about "Looking Up."

The first is outreach. Engaging with the public and encouraging them to *look up* helps you and your fellow amateur astronomers. The more the public is aware of astronomy and views the night sky, the more concerned they will be about things like light pollution and funding for astronomy-related fields. One thing all amateur astronomers have in common is that we all have shared the moment when a member of the public sees Saturn or Jupiter through a telescope for their first time and cannot contain themselves. There's always at least one person at each outreach event who is so taken aback by the experience that they cannot contain their excitement. It happened again for me at the Deep Creek Central Elementary School event in March.

So once again I encourage *all* of our club members to get involved in our outreach events. No matter how little you think you know about astronomy, chances are that you know more than the general public. You are helping them

Continued on page 2

The BBAA is a member organization of the Astronomical League.

OBSERVERS' CORNER

The Sunflower Galaxy By Dan Pelzel

M63, the Sunflower Galaxy is a flocculent spiral galaxy (SAbc) found in the Canes Venatici constellation.

It's 29.3 million light years away and interacts gravitationally with M51. I imaged this last March at the Staunton River Star Party. It was cold, windy, and the ground was soaked from days of rain and snow flurries. Because of thin clouds, high winds, and equipment failures, I was only able to get 2.5 hours out of the 16 hours I had planned on. Iffy forecasts for more miserable weather caused me to retreat home with minimal data and cracked tent poles. 2.5 hours of data wouldn't normally be enough for an image but the very dark skies at the SRSP prevailed.

More Observers on page 11



Imaged by Dan Pelzel with 8in RC, ASI1600MM-Cool and LRGB filters.

For full resolution image go to:

<https://www.astrobin.com/full/338552/C/>

Looking Up! Cont'd

to discover the night sky, and the joy you bring them can be seen at every outreach event.

The second thing about “Looking Up” is the Astronomical League’s observing programs. In the past, our club members have completed many of the programs as can be evidenced by viewing our Hall of Fame section on the website located here: [BBAA Observing Programs Hall of Fame](#). Completing these programs will enable you to be a better observer and amateur astronomer.

I’d like to refer you to the article *Outreach is a Pro/Am Privilege* by Kristine Larsen in the December 2018 issue of the Reflector. If you haven’t read it, I highly recommend it.

While on the topic of the AL observing programs, I would also like to thank Bill McLean for all of his years volunteering to be the club’s ALCOR, and to welcome our new ALCOR, Bruce Powers.

See you at the next club event and until then keep Looking Up.

Shawn Loescher



MARS THE WANDERER

By David Prosper

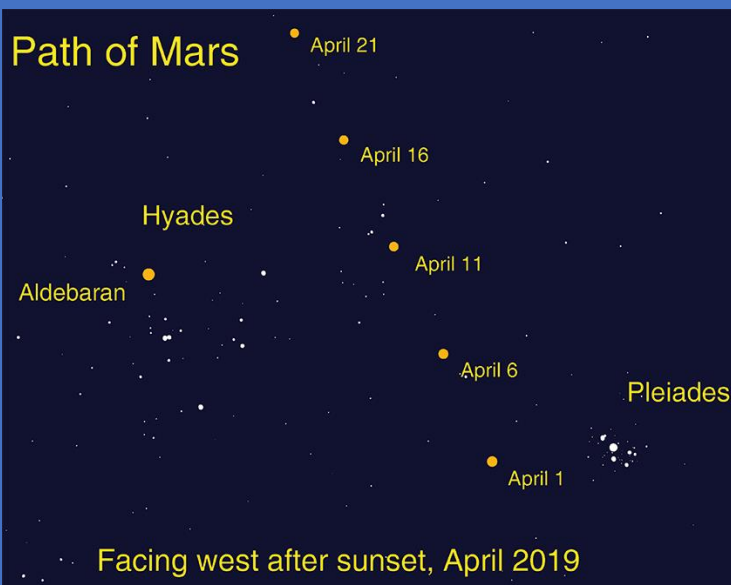
April's skies find Mars traveling between star clusters after sunset, and a great gathering of planets just before sunrise.

Mars shows stargazers exactly what the term “planet” originally meant with its rapid movement across the evening sky this month. The ancient Greeks used the term *planete*, meaning *wanderer*, to label the bright star-like objects that travelled between the constellations of the zodiac year after year.

You can watch Mars as it wanders through the sky throughout April, visible in the west for several hours after sunset. Mars travels past two of the most famous star clusters in our night sky: the **Pleiades** and **Hyades**. Look for the red planet next to the tiny but bright Pleiades on April 1st. By the second week in April, it has moved eastward in Taurus towards the larger V-shaped Hyades. Red Mars appears to the right of the slightly brighter red-orange star **Aldebaran** on April 11th. We see only the brightest stars in these clusters with our unaided eyes; how many additional stars can you observe through binoculars?

Open clusters are made up of young stars born from the same “star nursery” of gas and dust. These two open clusters are roughly similar in size. The Pleiades appears much smaller as they are 444 light years away, roughly 3 times the distance of the Hyades, at 151 light years distant. Aldebaran is in the same line of sight as the Hyades, but is actually not a member of the cluster; it actually shines just 65 light years away! By comparison, Mars is practically next door to us, this month just a mere

Path of Mars



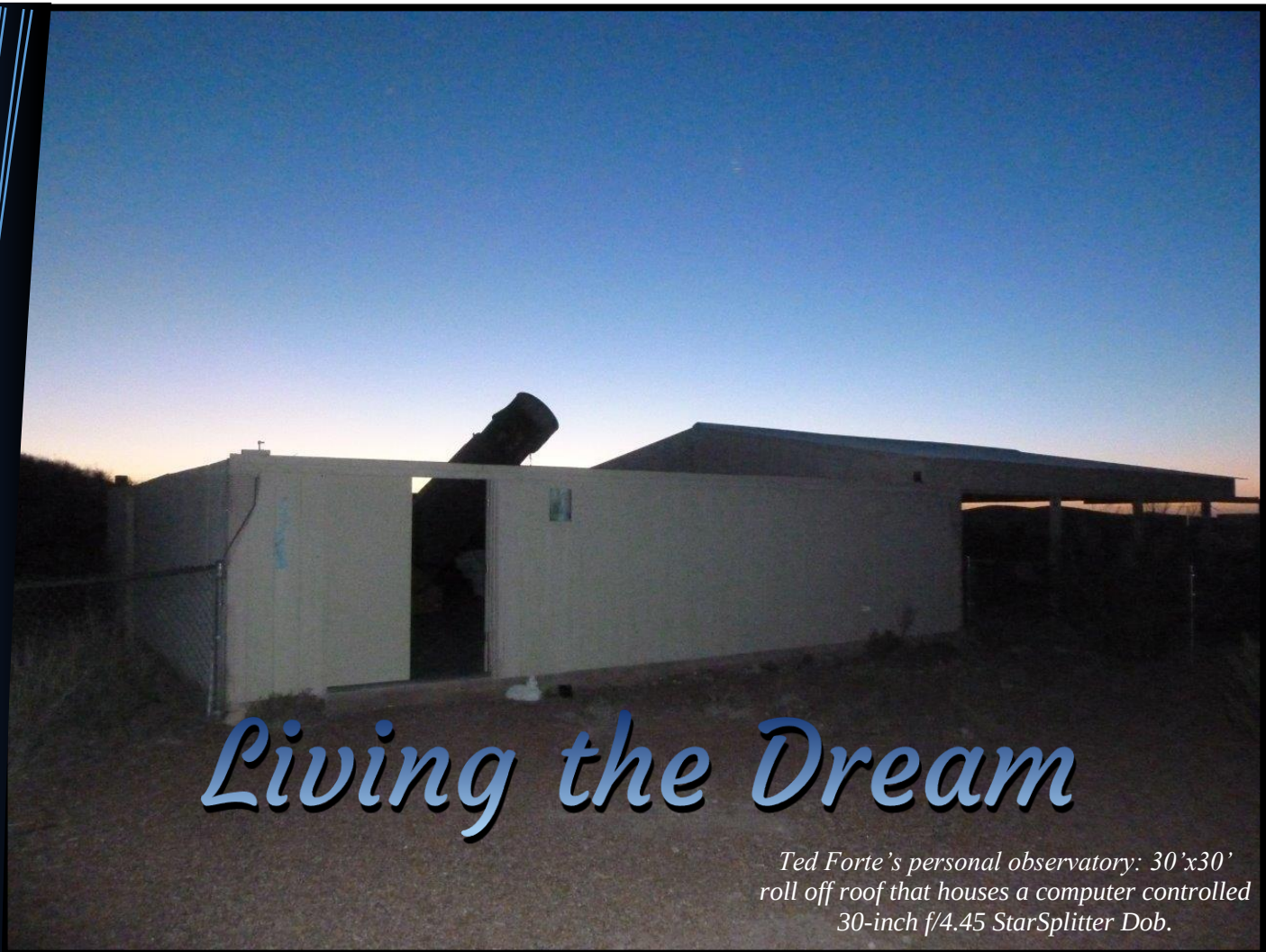
Facing west after sunset, April 2019

The path of Mars between the Pleiades and Hyades in April.

Image created with assistance from Stellarium.

18 light minutes from Earth - that's about almost 200 million miles. Think of the difference between how long it takes the light to travel from these bodies: 18 minutes vs. 65 years! The rest of the bright planets rise before dawn, in a loose lineup starting from just above the eastern horizon to high above the south: **Mercury**, **Venus**, **Saturn**, and **Jupiter**. Watch this month as the apparent gap widens considerably between the gas giants and terrestrial planets. Mercury hugs the horizon all month, with Venus racing down morning after morning to join its dimmer inner solar system companion right before sunrise. In contrast, the giants Jupiter and Saturn move away from the horizon and rise earlier all month long, with Jupiter rising before midnight by the end of April.

The **Lyrids** meteor shower peaks on April 22nd, but sadly all but the brightest meteors will be washed out by the light of a bright gibbous Moon.



Living the Dream

Ted Forte's personal observatory: 30'x30' roll off roof that houses a computer controlled 30-inch f/4.45 StarSplitter Dob.

By Ted Forte

A couple of months ago, I hosted some travel journalists at the Patterson Observatory (on the campus of the University of Arizona, Sierra Vista). Toward the end of their visit they interviewed our participating club members and asked what our 'dream' was. I told them my dream was to move to southern Arizona and have a 30-inch telescope in my dark back yard.

So yeah, I guess you'd say I am living the dream!

New members of BBAA are wondering: who is this guy (and why is he a member of BBAA if his driver's license says "Arizona" on it)? I've been a member of BBAA since 1995 and up until mid-2012 when I retired and moved to Arizona, I was a pretty active member. I miss my BBAA family a lot; I miss the events, Skywatch, Night Hike, and Boardwalk, and the planetariums, and I really miss the ECSP (East

Coast Star Party). So after more than a half dozen years away, I thought I'd say hello.

While I certainly miss Virginia, I love my new home. Southeastern Arizona is a Mecca for astronomers for a reason. Cochise County AZ, where I reside, boasts more than 60 amateur

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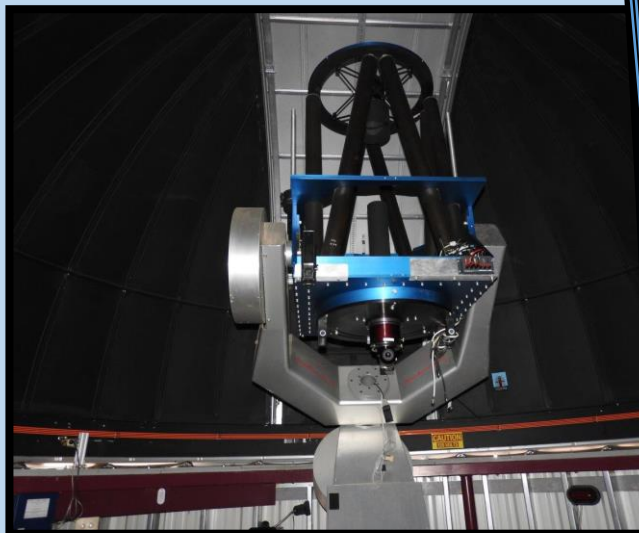


Patterson Observatory

observatories. Our county's sparse population and stringent outdoor lighting codes make for a pretty dark sky.

Situated about 8 miles east of Sierra Vista Arizona on 4.5 acres of high desert scrub at an altitude of 4,160 feet, my observatory is a 30'x30' roll off roof that houses a computer controlled 30-inch f/4.45 StarSplitter Dob.

I purchased my home, the observatory and the 30-inch from Gary Meyers of Stellar Cat – the creator of the Servo Cat dual axis drive system with which some of you are no doubt familiar. My scope was his test platform when his product line was first being developed. The serendipitous availability of his property just as my retirement neared is the reason I landed in Sierra Vista.



Patterson Observatory's 20-inch f/8.1 RC in a 16-foot Ash Dome

My Arizona club (Huachuca Astronomy Club) members are the volunteer operators at an observatory on the UA South campus (the Patterson Observatory) that houses an OGS 20-inch f/8.1 RC in a 16-foot Ash Dome. As both an officer of the club and a sitting member of the board of directors for the foundation that owns the facility, I am the de facto director of that observatory. We do much of our outreach there and I spend enough time there to call it a second home.

So, I am living the dream – enjoying a remarkably dark sky from the convenience of my backyard and living large in a small rural town. Yet, I still think about my Tidewater friends and I'm still proud to be a member of the BBAA! (Albeit 'BBAA West' these days). If you find yourself visiting SE AZ (I'm just 20 minutes from Tombstone) stop by and say hello!

-Ted Forte



Congratulations to **Kayla Robinson** on being selected for the NASA Internship!

Read the full story on [Kayla's blog](#).



CLUB MEETING

We met for our monthly meetings on March 7th and April 4th at TCC Virginia Beach. Full meeting minutes are posted on our [website](#).

The Back Bay Amateur Astronomers meet on the first Thursday of each month from 7:30 – 9pm.

Typically, we meet at TCC Virginia Beach on the second floor of **Building J—the Science Building**, in room JC-11. (room may vary)

Occasionally, we meet at either TCC's planetarium on the first floor, or at the Plaza Middle School planetarium.

All meetings are free and open to the public. After normal business, there is usually a presentation.

Did you know?

The BBAA has Scholarship Opportunities

The BBAA scholarship program offers financial assistance to graduating high school seniors in our area that demonstrate an avid interest in astronomy. The BBAA awards two scholarships each year. A general \$1,500.00 scholarship and the Georgie June Memorial Astronomy Scholarship for \$500.00. Georgie June was a passionate amateur astronomer and longtime active member of the BBAA.

To apply, download our [scholarship application form](#). If you would like to make a donation to our scholarship fund please go to the [BBAA store](#) and scroll down to the section marked "Donate to the BBAA Scholarship Fund".

Deadline to apply is May 1.



2018 Scholarship Recipients, Zoe Waring and William Greer with Scholarship Committee Chairman, Ben Loyola

Getting Your Telescope Mirror Aluminized

By Kent Blackwell

If like me you've had your reflector telescope a decade or more, it might be time to consider having a fresh aluminum coating applied. My 16" f/6 mirror is now 23 years old and I could see multiple pinholes in the reflective surface so figured it was time to bite the bullet and have it done.

There are only a handful of companies that can do that, most of them are inconveniently located in the western parts of the country. I used to use a company in the Chicago area but I've heard bad press about them lately. Fortunate for us, Majestic Coating was located in Clark, NJ. Even more fortunate, owner Jeff Decker recently moved his company to Ruckersville, Virginia, just north of Charlottesville. I have had Majestic re-coat a couple of my mirrors 10 years ago, when he was in New Jersey, so it was an easy decision as to whom to send my 16" mirror for a re-coat.

First, how to pack my prized mirror for shipment? Thanks to an Internet link sent to me from Roy Diffrient, I visited Home Depot and purchased a 22"x22"x22" extra heavy duty shipping carton.



Extra Heavy Duty shipping carton from Home Depot. under \$3.

Home Depot and Lowes sell all kinds of expensive packing materials, but none seem to fit the bill for telescope mirrors. Instead, I went to the building supplies department and purchased 2" thick 4'x8' foam board. Don't fret about how to get it home, they'll cut it for you. Actually, saws don't work well on foam board, instead they score it and snap it to the size that'll fit in your car.

When I got home I cut three sections with a razor knife, each to fit snugly in the afore-mentioned 22" square shipping carton. *Continued next page*



Full 4'x8', 2" thick foam board from Home Depot, \$29.

Mirror cont'd

I cut a 16" hole (two halves actually) for the mirror in the middle section with a band saw, but you could use a razor knife or even a putty knife if you don't have a band saw lying around. Once the mirror and three sections of the 2" foam board were set in place I cut the 22" high shipping box down to 6", this will also reduce the shipping cost. I have included pictures of how I packed my mirror.

After packing it carefully I shipped it FedEx surface to Majestic. Surprisingly it was delivered the very next day. Exactly one week later the beautifully coated mirror was delivered back to me. I can't believe how fast Jeff is, and the job done is wonderful.

I wholeheartedly recommend Majestic Coating. Jeff's prices are as low as, or lower than, any other company coating mirrors, and the prompt service is second to none.



2" thick foam board from Home Depot cut to size to fit inside the shipping carton. One layer is placed below the mirror section, and one above.



2" thick foam board cut circular for the mirror. I used a band saw, but a razor knife will work; it's just not as neat. Note how I cut the corners of the foam for ease of removal from the carton.



Majestic Coating

Jeff Decker

378 Kenwood Lane

Ruckersville, VA 22968

888-278-8308

info@majestic-coatings.com



Kent Blackwell has been observing the night sky for over 50 years. Although his astronomical interests lie primarily in deep sky observing with large telescopes, he also enjoys splitting double stars with his 80mm and 100mm refractors.

Kent exclaims, "You can't ever have enough telescopes!"

Although his favorite is a homemade 25" f/5, he also enjoys his 4.5" Orion StarBlast mini-Dobsonian. Kent has been a volunteer at the Chesapeake Planetarium since 1970, and has hosted the East Coast Star Party in Coinjock, NC for over a quarter century.

BRINGING ASTRONOMY TO THE PEOPLE *of Hampton Roads*

The Back Bay Amateur Astronomers, Inc. is a 501(c)(3) nonprofit organization dedicated to astronomy outreach.

We are a 100% volunteer-run organization that relies on our dedicated members to *“bring astronomy to the people of Hampton Roads.”*

Anyone who has volunteered at one of our events can tell you that it is incredibly rewarding to show the moon to someone who has never seen it through a telescope. You never know whom you’ll inspire to become the next great astrophysicist. At the very least, you may instill within someone a passion to look up at the sky.

Please help us achieve our mission and sign up to volunteer. **All experience levels welcome.**

See our monthly [calendar](#) for events.



Skywatch Success!

The clouds stayed away for Skywatch at Northwest River Park on March 23rd. At least eleven members set up scopes as well as a few others. Several dozen guests came out to enjoy the views.



BBAA volunteers set up for another successful Saturday SUN Day, allowing the public to view the sun through solar-filtered scopes.



Chuck Jagow with his newest telescope. Obsession 18" UC Ultra Compact with ServoCat GoTo and Argo Navis digital setting circles.



The Back Bay Amateur Astronomers, Inc is a member organization of the Astronomical League.

A special thanks to our outgoing ALCOR, **Bill McLean**, for years of dedication and service to the BBAA.

Everyone please welcome **Bruce Powers** as our new Astronomical League Coordinator. For information on some of the astronomical league observing programs, click here: <https://www.astroleague.org/observing.html>

For questions about the observing programs, you can email alcor@backbayastro.org.



Join the BBAA for Astronomy Day!

Virginia Beach Central Library

May 11

10AM—2PM



Astronomers Without Borders

ONE PEOPLE + ONE SKY

Astronomers Without Borders is proud to host the fourth AstroArts contest. Art is a fantastic way to share the excitement of astronomy. We can't wait to see what you'll submit to the contest!

The competition is open to everyone of all ages.



"Colorful Journey of a Star from a Nebula" by Aavya Singh, Second Prize winner, teen category, GAM2018

For details go to:

<https://astronomerswithoutborders.org/gam2019-programs/astroarts/4651-astroarts-contest.html>



**Register for
ALCon 2019**

**50th Anniversary
of the First Moon Landing**

July 25-29

**Kennedy Space Center and
Southern Skies
Cruise to the Bahamas.**

<https://alcon2019.astroleague.org/>



Even with the moon up, Jim Tallman had a nice morning. He set up the night before to catch some more planetary nebulae for the Astronomical League's [Planetary Nebula Observing Program](#). The last image was of M27, The Dumbbell Nebula. Since the moon was up, he spent the early morning imaging to the east and M27 made a nice end to his morning's effort. Five more planetary nebulae down.

5" Takahashi refractor

G-11 Losmandy Mount

Canon T3i (modified)

10 90s lights at 400ISO, 20 darks, 40 bias & flats

Stacked and processed with PixInsight



Dust off your flip-flops!
Boardwalk Astronomy will be back
starting **May 14.**



Be sure to take a look at the latest Reflector.
Congratulations to **Shawn Loescher** and
Curtis Lambert on receiving the
2018 Astronomical League Webmaster Award!

Congratulations to **Dan Pelzel** on the publication
of his Bubble Nebula photograph.

MAKING CONTACT

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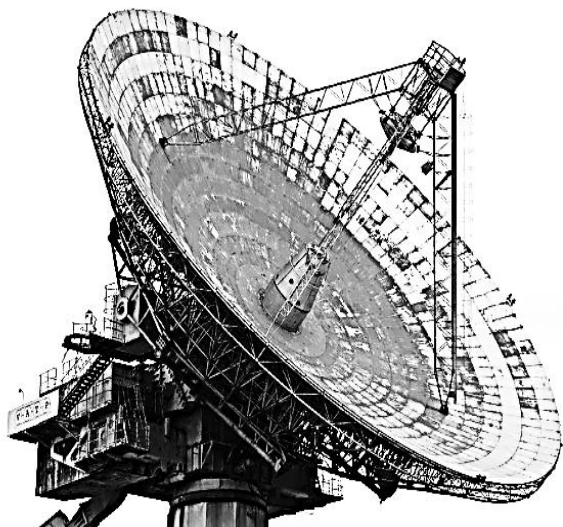
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TELL US ABOUT IT!

Whether you're a seasoned astro-photographer or a beginner enjoying your first view through a telescope, we'd love to hear about your experience at club events or doing astronomy-related activities on your own. Please submit your articles and/or photographs for publication in the Observer.

Email editor@backbayastro.org

Upcoming BBAA Events

April

DATE	TIME	LOCATION	EVENT	DESCRIPTION
Apr 11	6-7:30PM	Malibu Elementary, Virginia Beach	Malibu STEAM Night	Public viewing (moon/daylight)
Apr 12	6-9:30PM	Dismal Swamp State Park, South Mills, NC	Star Party in the Swamp	Public viewing
Apr 15	1-3PM	Chesapeake Central Library	Chesapeake Library Intro to Astronomy	Presentation to homeschool group
Apr 20	10AM-1PM	Elizabeth River Park	Saturday "SUN" day	Public solar viewing
Apr 26	Dusk-dawn	Cornland Park, Chesapeake	Cornwatch	BBAA members-only observing
Apr 27	8PM-12AM	Northwest River Park	SKYWATCH	Public viewing
Apr 30	5:30-7PM	JFK Middle School, Suffolk	Springing into SOLs	Presentation for students

May

May 2	7:30-9PM	TCC Virginia Beach, Science Building J	BBAA Club Meeting	Club business, presentation TBD
May 3-4	Dusk-dawn	Cornland Park, Chesapeake	Cornwatch	BBAA members-only observing
May 4-5	dusk-dawn	Chippokes Plantation State Park, Surry	Nightwatch	BBAA members-only observing
May 8	8:30PM	Norfolk Botanical Gardens	Garden Stars	Public viewing and indoor presentation
May 11	10AM-2PM	Virginia Beach Central Library	Astronomy Day	Solar observing, indoor displays
May 14	6-11PM	24 th Street Boardwalk, Virginia Beach	Boardwalk Astronomy	Public viewing
May 18	10AM-1PM	Elizabeth River Park	Saturday "SUN" day	Public solar viewing
May 18	9-10PM	Chippokes Plantation State Park, Surry	Chippokes Under the Stars	Nation Kids to Parks Day, public viewing
May 25	8PM-12AM	Northwest River Park	SKYWATCH	Public viewing
May 31	Dusk-dawn	Cornland Park, Chesapeake	Cornwatch	BBAA members-only observing