



BACK BAY observer

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

EPHEMERALS January 2016

01/07, 7:30 pm
BBAA Monthly Meeting
Plaza Middle School Planetarium
Virginia Beach, VA

01/08 & 1/15, 4:00 PM
Cornwatch
Cornland Park

01/14, 7:00 PM
Garden Stars
Norfolk Botanical Garden

01/16, 10:00 AM
"Sun" Day
Bells Mill Park
Chesapeake, VA

01/30, 4:00 PM
Skywatch
Northwest River Park



Looking Up!

Unfortunately, I must start off my first *Looking Up* column on a very sad note. BBAA member Nick Anderson passed away unexpectedly on December 22nd. Nick was our third member to complete the Astronomical League's Master Observer program and wear the coveted Master Observer pin. He had also been the BBAA Webmaster until he commenced his studies at Virginia Tech in Blacksburg.

Nick was a very accomplished and dedicated observer and would often return to the area for the East Coast Star Party and an occasional Skywatch. This last summer Nick took summer employment at Yellowstone National Park where he immersed himself in the Park and its visitors. He had recently sent me an email letting me know he was accepted into a postgraduate program and he was excited.

Nick, you will be greatly missed, and I sincerely hope you are now enjoying the universe you dedicated so much time to observing.

Akin to the next big asteroid to grace planet Earth, in that it is not a matter of "if" but a matter of "when", my becoming the BBAA President was bound to be. I sincerely hope that the asteroid holds off much longer.

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December 3, 2015 Meeting Minutes

Meeting was called to order at 7:30 PM, in room JC10 at TCC in Virginia Beach, by President Jim Tallman.

ALCOR:

- Club AL Coordinator, Bill McLean, reported that Mark Gerlach and Leigh Anne Lagoe were both listed in the Reflector for receiving the Outreach Award. Also, former members Courtney Flonta and Adam Forte were mentioned in the same issue for the Horkheimer Award. BBAA is well represented in the AL's Reflector.
- Bill encouraged all to participate in at least one AL observing program.

Scholarship Report:

- We are awaiting payment from VA Beach for Boardwalk Astronomy to be awarded for the general scholarship fund.
- Donations to the scholarship fund are greatly appreciated.

Club Bylaws Committee (Chuck Jagow):

- The club is adding the necessary legal terminology to the bylaws due to incorporation of the club.
- Changes will include allowing an officer to serve their terms for up to 3 years.
- Dues will increase to \$23.

- Once the Bylaws revision is complete, it will be sent to all members for a vote.

Observing Reports:

- There were reports of the Jupiter, Venus, Mars conjunction in early November with Mercury low on the horizon. It was a lovely line of planets.
- The Taurid Meteor Shower is peaking.

New Business:

- Kunio Sayanagi is looking for a team of amateur astronomers to image Jupiter and contribute to the Juno Mission. More information is to come at the February club meeting.
- A new Night Sky Network outreach toolkit will be tested by our club.
- An Orion XT8 telescope has been donated to our club.
- Club member Kayce Garske offered to help order scarves with Hubble images to anyone interested.

Presentation: Astronomy 101, The Moon

- George Reynolds gave a presentation on Luna with handouts, maps, book recommendations, and a crater-finding activity.

Meeting adjourned at 9:00 PM.

December Minutes taken by Secretary Leigh Anne Lagoe.

From George's talk, a list of **highly recommended** reading to learn about Moon facts and observation.

- *Turn Left at Orion* by Guy Consolmagno (pages 12-25)
- *Objects in the Heavens*, edition 5.2 by Peter Birren (pages 30-36)
- *Exploring the Moon through Binoculars and Small Telescopes* by Ernest H. Cherrington, Jr.
- *Atlas of the Moon* by Antonín Rükl, Revised, edited by Gary Seronik, published by *Sky & Telescope*
- *Atlas of the Lunar Terminator* by John E. Westfall
- *The Moon Book* by Kim Long
- *Observer's Handbook 2016*, pub. annually by the Royal Astronomical Society of Canada (RASC)
- *Sky & Telescope's Moon Map*, available from ShopAtSky.com <http://www.shopatsky.com/product/Moon-Map-Laminated/maps-and-globes>

And four Internet sources:

- Chuck Wood's Moon, www.lpod.org/cwm/
- The Nine (Eight) Planets www.nineplanets.org/luna.html
- Lunar and Planetary Observing by António Cidadao, www.astrosurf.com/cidadao/
- Inconstant Moon www.inconstantmoon.com

(The latter two links have not been updated for several years, but still contain items of interest.)

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:
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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 Feb. 4, 2016 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

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

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

Observer's Corner



COMET C/2013 US10 (CATALINA)

It seems the more notoriety a comet gets in the mainstream media the more of a dud it becomes. I got up at 5:00 am on December 5 to see this? Maybe I'm being too harsh, but thinking back this summer, Comet Lovejoy was in the sky for months. It was more impressive and visible high in the sky at convenient hours of the night. Poor Lovejoy didn't enjoy much media hype at all.

- Kent Blackwell

Details:

Canon 20Da Camera
80mm f/6 TMB refractor
106-second single exposure
ISO 800
12/05/2015, 5:54 AM.

Solar System Log | Uranus

A strange and interesting world that continues to fascinate

By Nick Anderson

Editor's Note: It is with great sadness that The Observer notes the unexpected passing of Nick Anderson on December 22, 2015. As Observer readers know, Nick was a prolific contributor to the club newsletter and submitted numerous articles and sketches over the past several years. Our club was fortunate that Nick was so willing to share his many interests and talents with us. This was the last article that Nick submitted before he passed away.

In 1781, Uranus became the first of the non-classical planets to be discovered. Just bright enough to be spotted with the unaided eye, it was inadvertently included on star charts no less than 17 times before its true planetary status became known. Its characteristic color comes from the presence of methane (CH₄), the third most abundant component in its atmosphere (after hydrogen and helium).

From Earth, its angular diameter spans a mere 3.4 to 3.7 arcseconds. While it is an easy target for binoculars or a small telescope, even large telescopes will not reveal much more than a pale cyan disk with a darkened limb.

With an unusually high axial tilt of 98 degrees, Uranus rotates on its side. As a result, it features extreme seasons, with each pole receiving 42 years of continuous sunlight followed by 42 years of continuous darkness.

The atmosphere of Uranus is the calmest of the gas giants. Near the 1986 Uranian solstice, Voyager 2, the only spacecraft

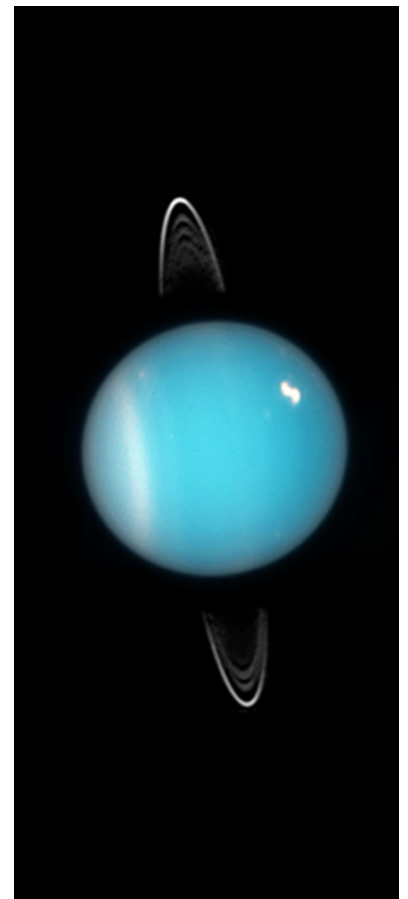
to visit Uranus to date, was presented with a nearly featureless disk (top right). However, the years approaching the 2007 equinox presented quite a different appearance (below right).

Unlike any other planet in the Solar System, Uranus is not named after a Roman deity, but rather a Greek one instead. Its moons also break from the naming convention, in that they are named for characters in the literary works of English poets William Shakespeare (1564 - 1616) and Alexander Pope (1688 - 1744).

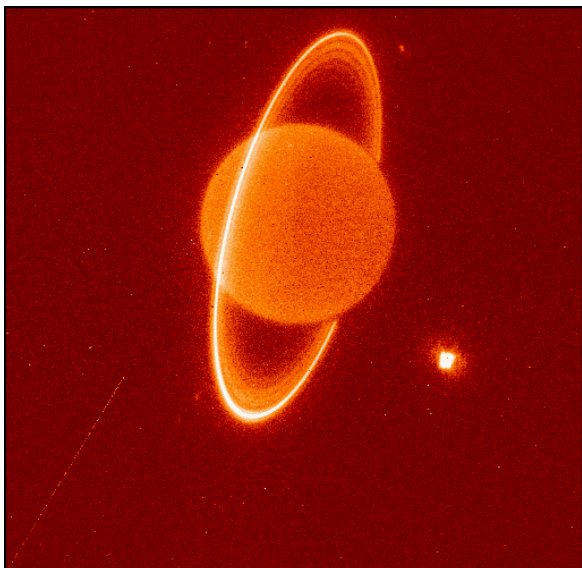
Six years after the discovery of Uranus, the brightest and largest two moons - Titania and Oberon - were also realized by the planet's discoverer: none other than Sir William Herschel (1732 - 1822), a legendary observer later also known for his compilation of a 2,500 object deep sky catalog and the discovery of infrared radiation in 1800. Titania and Oberon both exhibit an apparent brightness around 14.0 magnitude. Though certainly a



Uranus seen up-close by Voyager 2 in 1986 (NASA).



Uranus and its ring system, seen by the Hubble Space Telescope in 2005. Credit: NASA, ESA and M. Showalter (SETI Institute).



challenge, it is in fact possible for telescopes with apertures as small as 8 inches to resolve either of these moons from Uranus, particularly when either of them are near their maximum apparent separation from the planet (about 30 and 40 arcseconds, respectively).

Image showing the ring structure of Uranus taken at the Keck Observatory in 2012. The image was taken with a filter where sunlight is absorbed by the methane atmosphere, but the rings still reflect, so they remain bright.

Image Credit: Michael Brown (twitter.com/plutokiller).

IN MEMORIAM: NICK ANDERSON



I know I am not alone among the BBAA family when I say that a cloud formed over my holiday season after learning that Nick Anderson had passed away on December 22.

Nick was one of the most well-known and active members of our club, despite spending most of his time at Virginia Tech pursuing a Physics Degree. In addition to serving as the BBAA webmaster for a couple years, he was a regular contributor to the club newsletter and an avid poster to our online forums.

Nick was skilled at everything he put his mind to, not the least of which was astronomy. With his beloved 8-inch telescope Nick was able to observe countless faint celestial objects that eluded the owners of much larger scopes. His impressive observational feats were never questioned by anyone who knew Nick and witnessed the remarkable dedication and determination that he applied towards observing.

Nick is one of only three BBAA members who have earned the Astronomical League's prestigious Master Observer award. This award requires completion of 10

AL Observing programs including the Herschel 400! An impressive accomplishment for anyone, it was especially so for Nick who completed it only a few years after getting his telescope and was one of the youngest to ever achieve the honor.

I was fortunate to be one of Nick's friends and observing buddies. We hit it off early on when we realized that we had started in the hobby around the same time and that we both had the same kind of telescope. Later, we found that we had other things in common: we were both fanatical visual observers and we both had an irrational love of our simple Orion XT8 telescopes. A night of stargazing with Nick was always an observing growth experience. He had a knack for pushing people beyond their perceived observational limits and introducing them to objects they had never heard of before. Thanks to his encouragement I became a better observer. I learned to give any object a try before dismissing it as too faint or difficult to see. That was Nick's way.

We will miss you, Nick.

- Paul Tartabini

Cornwatch 2016

By Chuck Jagow

In 2005 while joy riding on my motorcycle I stumbled across Cornland Park in the Southern part of Chesapeake. I observed there a few nights and on more than one occasion the Chesapeake Police roused me for using the park after sunset. I commenced negotiations with the city of Chesapeake, which culminated in me acquiring a limited special use permit for my personal use and up to six guests. The permit was very restrictive in that each guest must sign a liability waiver before going to the park. Each use required that I contact a city authority and let them know I would be going to Cornland to observe. As time passed our observing at Cornland waned significantly. By 2015, I could not even remember the last time I officially observed out there.

In 2015 several of us were wondering about a location to observe the upcoming Perseid meteor shower, I suggested Cornland park and acquired a special use permit for the evening/morning of the Perseid meteor shower. The day after the Perseids I vowed to try and acquire a general special use permit for the BBAA membership for 2016. Within two months I had satisfied ALL of the City's requirements and a general special use permit was granted for two nights per month for 2016. I selected dates that generally coincided with a new moon, the Friday before and the Friday after a new moon. October - December 2016 deviated slightly from this scenario, with one Cornwatch date at the beginning of the month and a second one toward the end of the month. This is our first year so we will take stock in the date selection and adjust accordingly for 2017.

The important thing about Cornwatch is

that, like Nightwatch at Chippokes State Park, this is a BBAA MEMBER'S ONLY observing event. This means that BBAA members in good standing with the club (dues up to date) have a dark (somewhat) observing site less than a half hour from all of our Tidewater area. Guests of BBAA members are allowed. At least one member attending should be in possession of the special use permit in case Chesapeake Police come to see who is in the park after dark. Please be courteous with anyone who challenges us, this is our first year with this permit and we don't want to jeopardize approvals of future permits.

Special Use Permit Conditions

- Someone in the group must have a copy of the special use permit signed by the City. It is recommended that each BBAA member acquire the necessary documents from the event description on the NASA Night Sky Network. <https://nightsky.jpl.nasa.gov>
- Each member shall have a copy of their 2016 BBAA membership card (electronic or printed).
- The use of alcoholic beverages on City property is strictly prohibited.
- If you make trash, dispose of it accordingly or pack it back out with you.
- The special use permit is only valid on our City approved dates (see below)
- Each BBAA member should be familiar with all of the conditions identified in the special use permit, take the time to read it and if you have any questions, please send them to President@backbayastro.org.

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2016 Approved Dates for Cornwatch

<u>Date</u>	<u>Date</u>	<u>Date</u>	<u>Date</u>
01/08/16	04/01/16	07/01/16	10/07/16
01/15/16	04/08/16	07/08/16	10/28/16
02/05/16	05/06/16	08/05/16	11/04/16
02/12/16	05/13/16	08/12/16	11/25/16
03/04/16	06/03/16	09/02/16	12/23/16
03/11/16	06/10/16	09/09/16	12/30/16

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

For those of you who do not know me yet, I have been a member of the BBAA since January of 2004. In December of 2003 in an effort to get the perfect Christmas gift, my Bride gave me my first real telescope, a Meade ETX-70. Within one day that ETX-70 turned into an ETX-125 and within a month that ETX-125 became a 10" LX-200GPS. At that point I began my search for "my" perfect telescope. To keep a very long and painful (\$) story short, suffice it to say I have owned a few telescopes in the last decade, many of which are currently within the capable hands of many of our members. At this time my mainstay outreach telescopes are an Orion 14" goto Dobsonian and a 60mm Coronado SolarMax hydrogen alpha solar scope. I image (rank amateur, I assure you) with tandem 127mm & 80mm refractors on a Losmandy G1 mount and driveway observations are provided by my trusty old LX-200GPS. In the fall of 2005 I constructed the Rott'n Paws observatory, a tiny 6'x8' roll-off roof observatory in my backyard in Greenbrier. It is just barely big enough to image a few bright objects from.

In the fall of 2005 I was wrangled into my first run as a BBAA officer, Secretary for 2006- 2007. My first stint as VP was 2008-2009 followed as Treasurer from 2010-2011. I took a break from being an officer in 2012, however I was voted back as VP for 2013 and I have spent 2014-2015 as Treasurer again. Concurrently I was Newsletter

Editor from 2006-2010 before Paul Tartabini became our award-winning Editor. In mid 2009 I also covered the job of Webmaster before I turned the reins over in mid 2012 to Nick Anderson. I guess you could say the BBAA is part of me and I a part of it.

January brings us some interesting items including:

- Our first CORNWATCH on Friday January 8th and again on the 15th at Cornland Park in South Chesapeake. Please remember that this is a **members only** observation event.
- Mercury is visible before sunset in the first week and before dawn the last week.
- The Quadrantids meteor shower peaks the morning of the 4th.
- Comet Catalina passes Arcturus within .5 of a degree on the first of the month.

I have been associated with the BBAA for a very long time and I have seen the club through good times and some not so good times. I can honestly say that the good times are much more prevalent and I hope to bring as much good to the club as our former President, Jim Tallman. Just remember to keep looking up.

Chuck Jagow

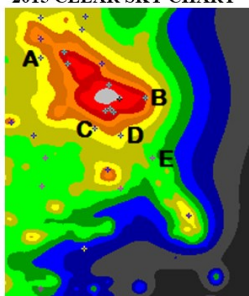
Cornwatch, continued from [page 6](#)

Cornland Park: 2908 Benefit Road, Chesapeake, VA 23322

Directons from Virgina Beach:

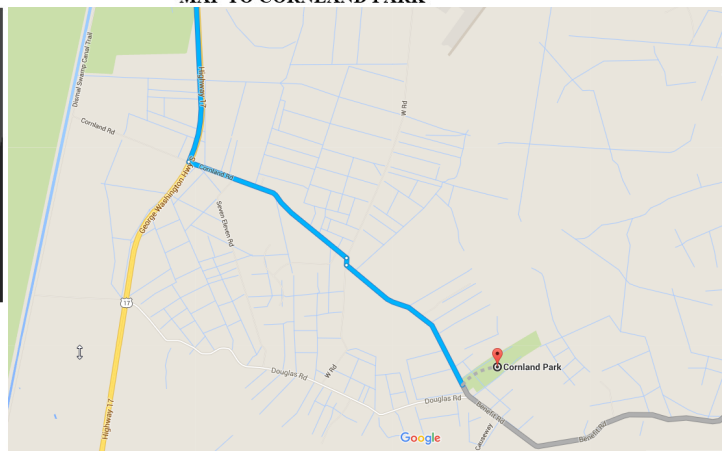
- 1) I-64 East
- 2) Exit 291B, merge onto I-464 S/VA-168 S
- 3) Continue on VA-168 S
- 4) Exit 15B to US-17 S (Dominon Blvd)
- 5) Follow Dominion Blvd South to Cornland Rd. (~9.5 mi.)
- 6) Turn Left onto Cornland Rd., follow for ~1.1 mi.
- 7) Turn Right onto West Rd. and then Left on Benefit Rd.
- 8) Follow Benefit Rd. ~1.1 mi.
- 9) Cornland Park will be on the left, just before the Fire Station

2015 CLEAR SKY CHART



A - Chippokes Plantation
B - Tidewater Area
C - Cornland Park
D - NWRP
E - Coinjock

MAP TO CORNLAND PARK





January 2016

BBAA Events	Special Outreach	Astronomical Events
01/07 BBAA Monthly Meeting		01/04 Quadrantid meteor shower peaks
01/08 Cornwatch @ Cornland Park		01/09 New Moon
01/14 Nightwatch @ Chippokes Plantation	01/16 "Sun" Day @ Bells Mill Park, Chesapeake, VA	01/16 First Quarter Moon
01/15 Cornwatch @ Cornland Park		01/23 Full Moon
01/30 Skywatch @ Northwest River Park		01/31 Last Quarter Moon

Sneak Peek into February

Thu 2/04/2016 Monthly Meeting, Plaza Middle School, 7:30 pm
 Fri 2/05/2016 Observing session at Cornland Park
 Sat 2/06/2016 Nightwatch at Chippokes Plantation
 Fri 2/13/2016 "Sun" Day at Bells Mill Park, 10:00 am
 Sat 2/27/2016 Skywatch at Northwest River Park, 4:00 pm