BACK BAY observer

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

Looking Up!

EPHEMERALS february 2010

02/04
BBAA Monthly Meeting
TCC Va Beach
Building J, Room JC-12
7:30 PM

02/05
Skywatch
Northwest River Park
CANCELLED due to conditions of the field

02/13
Nightwatch
Chippokes State Park

LATE-BREAKING ANNOUNCEMENT: The Green Run Elementary School Science Night has been POSTPONED. It will be held sometime in April (date TBA), instead of on the BBAA meeting night, February 4th.

First off, let me apologize for not having anything ready for a January newsletter. As many of you are already aware, I spent Christmas and New Year's in Sentara Leigh Hospital with a collapsed lung. I got up the morning of December 21st with pains under my right ribs and thought I was having a heart attack. Fortunately (?), I wasn't. A "spontaneous pneumothorax" the Doctor called it. It was not a fun holiday. I did lose fourteen pounds, but I wouldn't recommend it as a diet. I did get to come home on New Year's Day and was able to get back to work on the 18th. (I told the Doctor I couldn't afford another week off.) Enough of that, I'll spare you all the medical details.

Next I want to thank you all for handing me the reins of this great organization. Special thanks to Bruce "Doc" Bodner, Chuck Jagow, Neill Alford, and Matt McLaughlin for their service in keeping everything running smoothly the past two years, and to George, Ted, Dale, Georgie, Gerry, Ben, and all the others who go out of their way to keep our outreach and other programs going. (If I left you out, it's thru my oversight, not lack of appreciation)

At our January meeting, I was pleased to hear that plans are either complete or well underway for the 2010 continuation of our popular programs: Skywatch, Night Hike, Garden Stars, Boardwalk Astronomy, Chippokes, Astronomy day, and the many library, school, and scouting functions. I am proud to be a part of a group of people so dedicated to educating the public about the science and hobby of astronomy. I've only been a member for about three years, but I feel like I have made many good friends. I'm looking forward to working with my fellow officers, Courtney, Chuck, George in the coming year, and with all the rest of you.

About me: I've been an astronomy buff since I was about 12, when my dad sent me a 60mm, 60x Japanese refractor and a small book

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NASA's Space Place

Building A Case Against Ozone

by Patrick Barry

When it comes to notorious greenhouse gases, carbon dioxide is like Al Capone—always in the headlines. Meanwhile, ozone is more like Carlo Gambino—not as famous or as powerful, but still a big player.

After tracking this lesser-known climate culprit for years, NASA's Tropospheric Emission Spectrometer (TES) has found that ozone is indeed a shifty character. Data from TES show that the amount of ozone—and thus its contribution to the greenhouse effect—varies greatly from place to place and over time.

"Ozone tends to be localized near cities where ozone precursors, such as car exhaust and power plant exhaust, are emitted," says Kevin Bowman, a senior member of the TES technical staff at the Jet Propulsion Laboratory. But the ozone doesn't necessarily stay in one place. Winds can stretch the ozone into long plumes. "Looking out over the ocean we can see ozone being transported long distances over open water."

Unlike CO2, ozone is highly reactive. It survives in the atmosphere for only a few hours or a few days before it degrades and effectively disappears. So ozone doesn't have time to spread out evenly in the atmosphere the way that CO2 does. The amount of ozone in one place depends on where ozone-creating chemicals, such as the nitrogen oxides in car exhaust. are being released and which way the wind blows.

Thisshortlifespan also means that ozone could be easier than CO2 to knock off.

"If you reduce emissions of things that generate ozone, then you can have a quicker climate effect than you would with CO2," Bowman says. "From a policy standpoint, there's been a lot of conversation lately about regulating short-lived species like ozone."

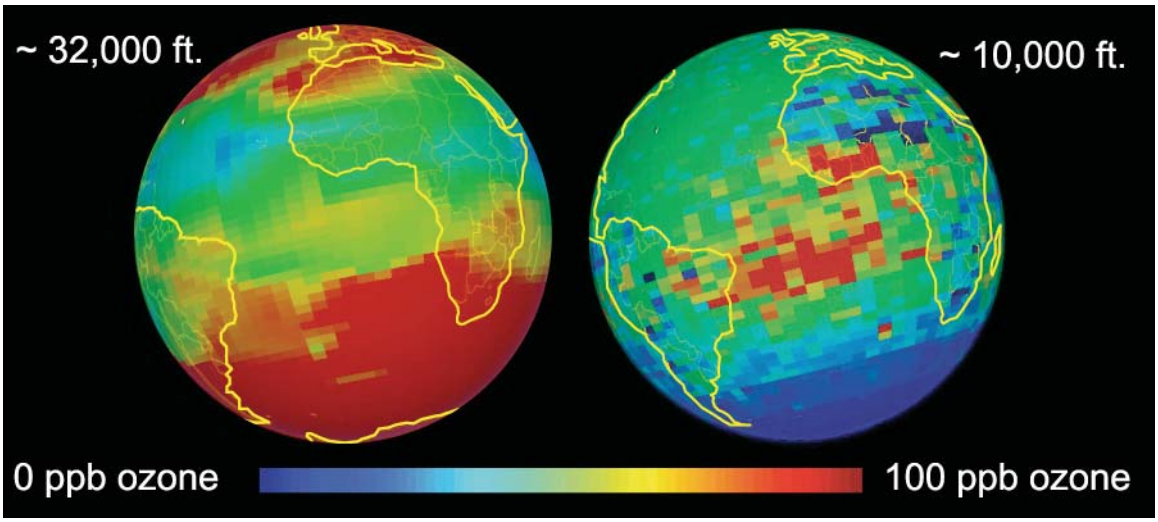
To be clear, Bowman isn't talking about the famous "ozone layer." Ozone in this high-altitude layer shields us from harmful ultraviolet light, so protecting that layer is crucial. Bowman is talking about ozone closer to the ground, so-called tropospheric ozone. This "other" ozone at lower altitudes poses health risks for people and acts as a potent greenhouse gas.

TES is helping scientists track the creation and movement of low-altitude ozone over the whole planet each day. "We can see it clearly in our data," Bowman says. Countries will need this kind of data if they decide to go after the heat-trapping gas.

Ozone has been caught red-handed, and TES is giving authorities the hard evidence they need to prosecute the case.

Learn more about TES and its atmospheric science mission at tes.jpl.nasa.gov. The Space Place has a fun "Gummy Greenhouse Gases" activity for kids that will introduce them to the idea of atoms and molecules. Check it out at spaceplace.nasa.gov/en/kids/tes/gumdrops.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



These images are TES ozone plots viewed with Google Earth. Colors map to tropospheric ozone concentrations. The image on the left shows ozone concentrations at an altitude of approximately 32,000 feet, while the one on the right shows ozone at approximately 10,000 feet. The measurements are monthly averages over each grid segment for December 2004.

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/newsletters/newsletter.shtml.**

Please submit articles and items of interest no later than the 15th of the month for the next month's edition. Please submit all items to: BBAAErica@yahoo.com
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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 February meeting will take place at TCC VB in Building J, Room JC-16 at 7:30 PM.** Directions available at www.backbayastro.org.

BBAA Internet Links

BBAA Web Site
tech.groups.yahoo.com/group/backbayastro
Yahoo! Group
groups.yahoo.com/group/backbayastro
BBAA Observer Newsletter
www.backbayastro.org/observer/newsletter.shtml

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by some guy named Patrick Moore. I remember the first time I found the Andromeda galaxy and when I saw the moons of Jupiter. I got away from doing very much active participation in astronomy thru high school and college. Then came comet Kohoutek and sparked my interest again. I couldn't afford any bigger telescope, but I did try my hand at astrophotography, of a sort. I set my 1947 model Leica F2 35mm range finder camera on top of my bother-in-law's car (I rode a motorcycle at the time), and carefully pressed the shutter. I was able to take a few exposures of between 4 and 20 seconds. I actually got a couple of frames where there was a recognizable tail. As many of you probably recall, Kohoutek was a bit over-hyped and failed to reach many people's expectations.

In those days I was in the hardware business, as in a True Value Home Center selling hammers and nails and fertilizer. I was lucky to be able to afford much beyond hamburger. Now I'm in the software business, as in writing it and building complex computer systems (sometimes still with a little fertilizer ;), and earn little better compensation. I was able a couple of years ago to invest in a Meade 8" LX90 GPS, which I have enjoyed immensely.

Which brings me to my current point in time. My scope is a "GoTo" scope. It can find 30,000 objects, most of which I would have no idea where to look. I'll probably never earn the Messier pin, but I truly enjoy seeing these objects and the few NGC objects I can resolve. I know there are some purists who look down on automated scopes and would rather star-hop using a map or a catalog. To me, it's the same object, in the same place. It's just a matter of how you find it.

I hope to make as many of this year's events as I can. I think one of the things that makes this hobby worthwhile is when someone who has never looked into a scope leans over to put their eye at your eyepiece and says "Wow!"

Mark Gerlach

BBAA Meeting Minutes
January 7, 2010

The January meeting was called to order at 7:30 PM at the Virginia Beach City Public Schools Planetarium by new president Mark Gerlach, who recently had suffered a collapsed lung and had just gotten out of the hospital. His niece Katie accompanied him to the meeting as his "designated driver."

Those in attendance were Neill Alford, Jordan Bramble, Brenda Butler, Dale Carey, Gerry Carver, Cheryl Colvin, Zachery Colvin, Richard Cooper, Courtney Flonta, Tony Flonta, Ted Forte, Mark Gerlach (and niece Katie), Jeff Goldstein, Chuck Jagow, Karen Jagow, Georgie June, Greg Nottingham, Bill Powers, Kevin Rasso, George Reynolds, Kevin Swann, and "Bird" Taylor. Chuck Dibbs, the VBCPS Planetarium Director, was our host.

Outgoing secretary Matt McLaughlin read the minutes of the December meeting. They were accepted as read. Outgoing treasurer Neill Alford gave the Treasurer's Report. As of the meeting date there is $7,582.84 in the treasury, of which $3,206.05 is designated for the Scholarship Fund.

There was no Old Business.

New Business: Much discussion was conducted concerning the schedule, not just for this month, but on into the summer.

Skywatch: Tomorrow (1/8/2010). Most of 2010 Skywatch dates will be the Friday following the BBAA monthly meeting. Skywatch dates are listed on the BBAA Web site and on the Backbayastro Yahoo group calendar.

Nightwatch at Chippokes Plantation State Park in Surry: Saturday, 1/16/2010. Chuck Jagow reminded us that the 2010 permit is posted on the BBAA Web site, www.backbayastro.org, and that a copy must be present with someone attending Nightwatch. He also reminded us to register at the park gate and deposit the nominal fee (was $3.00 last year). It is also a good idea, he said to place a placard saying "BBAA" in the car window.

Garden Stars for 2010 will be a rain-or-shine event, reported Matt McLaughlin, as opposed to 2009, when most of the dates were canceled on account of bad weather. The 2010 dates so far are Feb. 19, Mar. 26, May 21, and Jun. 18. The start times will vary, depending on sunset times and Daylight Saving Time. Additional dates will be posted on the BBAA Yahoo group calendar. The cost to attend Garden Stars is $16 per person, or $10 for NBG members. BBAA members bringing telescopes get in free.

Night Hike dates for Northwest River Park, as coordinated by Ted Forte, will be May 28, Jun. 18, Jul 16, Aug. 13, and Sep 24.

Mount Trashmore: Friday, April 23 will be another Star Fest at Mount Trashmore. Last year's event was a part if the IYA "100 Hours of Astronomy", and drew large crowds.
National Astronomy Day this year will be the very next day, Saturday, April 24. As in the past, telescopes will be set up at the Virginia Beach Central Library. Kevin Rasso commented that his South Carolina astronomy club got together with local colleges for Astronomy Day and had events with special speakers. He suggested we look into something like that.

Boardwalk Astronomy is coming up again in 2010. After a brief discussion of possible dates it was decided for the officers and Dale Carey to come up with six possible dates for Chuck Dibbs to present to the City of Virginia Beach to choose from. It was suggested that some of the dates include a Full Moon.

VAAS Conference: At last year's VAAS Conference

(Virginia Association of Astronomical Societies), BBAA was volunteered to host the annual event in 2010 or 2011. Chuck Jagow will find out which year it is, and the date, so we can start planning. The suggestion was made to coordinate with Kent Blackwell and try to arrange an observing session at Hampton Lodge Campground in Coinjock, North Carolina.

Yuri's Night: Lawrence "Bird" Taylor mentioned that Yuri's Night is scheduled for the evening of April 10 at the Virginia Air and Space Center in Hampton.

Chuck Jagow stated that if anyone learns of a public astronomy event or request, to get the information to Vice President Courtney Flonta, since a duty of the VP is to coordinate outreach events.

Green Run Elementary School is holding their Science Night on Thursday, February 4. That is a BBAA meeting night. Volunteers need to be recruited and coordinated before then with Courtney.

Georgie June mentioned that BBAA has a page on Facebook, for those who are interested. This is the link: http://www.facebook.com/group.php?gid=164636817828&ref=ss#

President Mark Gerlach asked for suggestions of what we can do new or different this year. Someone suggested we have a workshop for "newbies" – novice amateur astronomers (who might have just received a telescope for Christmas) for them to learn what to do. Others expressed an interst in learning how to collimate their telescopes. Mark Gerlach suggested that a collimation class be held at a future Skywatch.

Jeff Goldstein mentioned that he has a rocketry club at Princess Anne Middle School. He gets together with the Boy Scouts for a rocket shoot at Fentress Field in October, and that BBAA may want to participate and show the Scouts some stars. Ted Forte outlined the steps needed to become a merit badge counselor for the Boy Scouts.

After the business session, Chuck Dibbs presented an animated presentation about Galileo Galilei.

The meeting was adjourned about 9:00 PM.

The meeting room at TCC's new science building has varied between JC16, JC12, and JC 13. When you come to the meeting, go to the second floor, JC hallway, and look for the BBAA members and you'll find the right room.

Welcome New Members!

February Planetaries *by Ted Forte*

Most of you probably don't associate mid winter evenings with planetary nebulae observing. Prominent overhead this time of year is the brightest collection of stars in the northern hemisphere, probably the best known constellation in the sky and a host of well known showpieces, that with the exception of the Eskimo, probably doesn't include any PNe. However, eleven objects on the planetary nebula club list are optimum targets for February nights. It is an eclectic list, containing a few of the most famous as well as a few of the most obscure objects on the list. I managed to observe all of the January objects over the past few weeks and have already gotten a start on this month's list; I'm keeping my fingers crossed that I get enough eyepiece time this month to revisit the rest of them.

My guess is that IC 2165 in Canis Major is not in your log book unless you make a habit of seeking faint, tiny planetaries. In an 8-inch scope it is quite stellar looking. At twice that aperture, however, it is a small disk that may be a bit annular. It photographs green but appears blue in the eyepiece to most observers. It owes its tiny size to its distance, probably about 2.5kpc away. Star-hoppers might imagine a line connecting Sirius with M42 and look for the planetary about a third of the way along it (closer to Sirius). It is about 39' west of a sixth magnitude star. Use high power and a filter.

Jonckheere 900 in Gemini, discovered in 1912, gets perhaps more notoriety than it merits because of its unfamiliar designation I think. It lies a little more than half way from Gamma Gem to Eta Gem and is about a degree SW of 4th magnitude 18-Gem. It is much easier to see than its obscure designation would suggest. Small, almost stellar, bright and green. Use the OIII filter and moderate power.

Minkowski 1-7 is also in Gemini but is a little more challenging. A small disk that responds well to filters, it lies about 2 degrees SW of 3rd magnitude Epsilon Gem.

NGC 2346 in Monoceros is a more interesting target. It is fairly bright, easy to locate and has some shape and structure even in smaller scopes. Its flattened edges and pinched waist earn it its "Hourglass" moniker, but it has also gotten press as "The Butterfly" after a 1999 Hubble image showed its shape to good advantage. The central star of 2346 is known to be a binary - the once widely separated pair spiraled together during the pre-planetary phases of its evolution and is now very close. The planetary is fairly close to us, just 2000 light years away or so, which makes its actual size about a half of a light year across.

The "Gemini Nebula" or "Double Bubble", NGC 2371 and NGC 2372 is one of my favorite planetaries. It is hard to make out any shape in small telescopes, but in my 18 it is marvelous - two equal sized lobes aligned NE-SW. A faint central star can be detected between the two seemingly separate objects. There are arcs of faint nebulosity, the brightest segments of an outer halo, that reveal themselves on the best of nights.

George Abell discovered the Medusa Nebula in 1955, and it is now designated Abell 21. This object will prove the worth of your OIII filter. Abell 21 is a barely noticeable, no, nearly invisible without a filter. John Raymond might remember a night at ECSP when he was trying desperately to see the Medusa when Kent and I happened along. I had an OIII filter in my pocket, and when we inserted it into John's eyepiece, we witnessed a sort of magic. The filtered view reveals a large incomplete disk of delicate tendrils and wispy clouds. Use low power.

NGC 2392 is certainly the most famous object on our February list. The Eskimo Nebula gets its name from its appearance in photos that is reminiscent of a man wearing a parka. A bright central star is surrounded by an extended halo that often appears

as two concentric rings. I often show this object to guests at public events; it is so easy to see that you can be sure people can pick it out. PNe are noted for bearing up well under high magnification and the Eskimo is particularly noted for it. Mark Ost and I had a really detailed look at it one early morning in Coinjock - at 939x!

NGC 2438 in Puppis seems to lie inside M46, the pair make a striking visual contrast. The apparent enigma of a planetary nebula which is an end of life sun-like star residing in a bright nearby open cluster which by definition is composed of young stars is resolved by the fact that the two objects do not share the same radial velocity and are therefore not associated. In fact the cluster lies at about 5000 light years and the planetary at about 3000 light years making it a foreground object. Appearances can be deceiving in more ways than one. NGC 2438 seems to show a bright central star, but its real progenitor is a 17.5 magnitude no-show that is just behind the bright impostor. The bright open cluster might distract you, but with a little effort the PN is quite easy.

NGC 2440 in Puppis is another example of a PN with a central star impostor; a faint centrally located star that you can see with averted vision is probably not the true central star. The real central star is a candidate for the title of "hottest known white dwarf" with a surface temperature of about 200,000 Kelvin.

The PN is an attractive object; an oval disk with bright knots , and in larger instruments a bi-polar halo is visible. Use a filter, averted vision, and high power.

NGC 2452 in Puppis is an annular ring when conditions are good and a small disk most other times. I see it as green, how about you? Use averted vision for this one too. See if you can detect brightness variations on the north and south edges.

IC 2165	PN G221.3-12.3	CMa	06h22m08.7s	-12°59'25"
J-900	PK 194-2.1	Gem	06h26m30.4s	+17°47'10"
M 1-7	PN G189.8+07.7	Gem	06h37m55.6s	+24°00'09"
NGC 2346	Hourglass	Mon	07h09m51.3s	-00°49'15"
NGC 2371	Gemini Nebula	Gem	07h26m10.4s	+29°28'20"
Abell 21	Medusa Nebula	Gem	07h29m34.5s	+13°13'41"
NGC 2392	Eskimo Nebula	Gem	07h29m44.3s	+20°53'35"
NGC 2438	PN G231.8+04.1	Pup	07h42m17.1s	-14°45'14"
NGC 2440	PN G234.8+02.4	Pup	07h42m20.3s	-18°13'50"
NGC 2452	He 2-4	Pup	07h47m48.9s	-27°21'31"
JnEr 1	PK 164-31.1	Lyn	07h58m35.3s	+53°23'48"

Rebecca Jones and Richard Emberson are credited with discovery of an object in Lynx knownasJones-Emberson 1 in 1939. Amateur astronomers David Knisley and Rick Johnson gave it its nickname: "Headphones Nebula" . OK, if they say so. Actually it does look like a set of headphones in photographs, but I can't attest to seeing anymore than a vague shape; two brighter arcs only hinting at a continuous sphere. The filter is a must for this one. Use low power and averted vision. And good luck.

BACK BAY observer

February 2010

BBAA Events	Special Outreach	Astronomical Events
04 BBAA Monthly Meeting / 7:30 PM		
05 Skywatch at NWRP		05 Last Quarter
13 Nightwatch at Chippokes		
		14 New Moon
		22 First Quarter
	24 Bayside Library Astronomy, 7 PM	
		28 Full Moon

Sneak Peak into March:
03/03 Meeting at TCC Va Beach, Building J, Room JC-12 at 7:30
03/05 Skywatch at NWRP
03/13 Nightwatch at Chippokes