

BACK BAY observer

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



EPHEMERALS October 2010

10/01

Skywatch
Northwest River Park
Dusk

10/07

BBA Monthly Meeting
TCC VA Beach
Building J, Room JC-12
7:30 PM

10/09

Nightwatch
Chippokes State Park
Surry, VA
Dusk

10/29

Skywatch
Northwest River Park

Looking Up!

We had two Boardwalk Astronomy events in September. On the 7th, I wasn't expecting a whole lot of people to come out, since the summer was almost over, but the crowd surprised me. I had replaced the batteries in my Meade 8" LX90 SCT and had a whole lot better luck getting an alignment done. I still ended up aimed at Jupiter or the moon most of the night, but later I was able to get the Andromeda Galaxy (M37), and I did it without using "GoTo"!!

Tuesday September 21st was our final Boardwalk event of the year. Again I wasn't expecting a big crowd, but we had a couple of hundred pairs of eyes eager for stellar sights. Jupiter was at opposition that night and at its closest approach in many years. I was telling folks that it was ONLY 368 million miles away. Jupiter and the nearly full Moon made easy targets. A little harder target was Uranus. For him, I did use the GoTo computer on my scope. Just a little blue dot ("Funny, you don't LOOK Bluish!"). I cranked up the power with a smaller eyepiece and was able to resolve a very small blue disk. I'm sure that very few of the attendees and some of our participants had ever seen Uranus before. Some folks said they had never seen Jupiter. I suggested that they probably had, but just didn't know what it was. Chuck Dibbs forwarded some very emails from Mike Eason and Bobby Melatti of the City of Virginia Beach expressing their appreciation for our efforts. I look forward to next year's Boardwalk Astronomy events. Even though this is far from being a dark-sky venue, it is enjoyable and rewarding to be able to meet people from all over the US and from many other countries and introduce

Continued on page 4

CONTENTS

Ephemerals	1
Looking Up	1
NASA Space Place	2
September Minutes	5
IYA Report	6



The Hunt is On!

by Carolyn Brinkworth

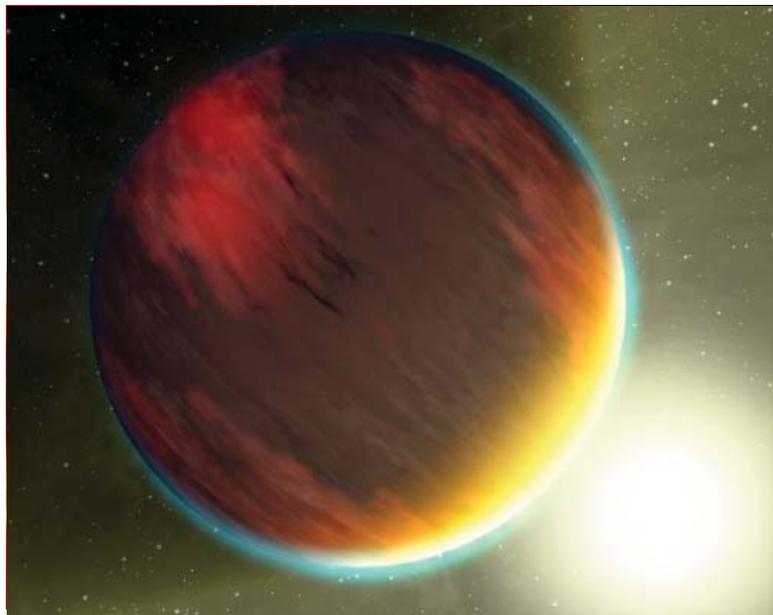
The world of astronomy was given new direction on August 13, 2010, with the publication of the Astro2010 Decadal Survey. Astro2010 is the latest in a series of surveys produced every 10 years by the National Research Council (NRC) of the National Academy of Sciences. This council is a team of senior astronomers who recommend priorities for the most important topics and missions for the next decade.

Up near the top of their list this decade is the search for Earth-like planets around other stars—called “extrasolar planets” or “exoplanets”—which has become one of the hottest topics in astronomy.

The first planet to be found orbiting a star like our Sun was discovered in 1995. The planet, called “51 Peg b,” is a “Hot Jupiter.” It is about 160 times the mass of Earth and orbits so close to its parent star that its gaseous “surface” is seared by its blazing sun. With no solid surface, and temperatures of about 1000 degrees Celsius (1700 Fahrenheit), there was no chance of finding life on this distant world. Since that discovery, astronomers have been on the hunt for smaller and more Earth-like planets, and today we know of around 470 extrasolar planets, ranging from about 4 times to 8000 times the mass of Earth.

This explosion in extrasolar planet discoveries is only set to get bigger, with a

NASA mission called Kepler that was launched last year. After staring at a single small patch of sky for 43 days, Kepler has detected the definite



Artist's rendering of hot gas planet HD209458b. Both the Hubble and Spitzer Space Telescopes have detected carbon dioxide, methane, and water vapor—in other words, the basic chemistry for life—in the atmosphere of this planet, although since it is a hot ball of gas, it would be unlikely to harbor life.

signatures of seven new exoplanets, plus 706 “planetary candidates” that are unconfirmed and in need of further investigation. Kepler is likely to revolutionize our understanding of Earth's place in the Universe.

We don't yet have the technology to search for life on exoplanets. However, the infrared Spitzer Space Telescope has detected molecules that are the basic building blocks of

Continued on page 3

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 or BBAA Observer, P.O. Box 9877, Virginia Beach, VA 23450-9877

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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 October Meeting will be held at TCC-Virginia Beach.** Directions available at www.backbayastro.org.

BBAA Internet Links

BBAA Web Site

<http://www.backbayastro.org>

Yahoo! Group

<http://tech.groups.yahoo.com/group/backbayastro>

BBAA Observer Newsletter

www.backbayastro.org/observer/newsletter.shtml

Space Place, continued from page 2

life in two exoplanet atmospheres. Most extrasolar planets appear unsuitable for supporting life, but at least two lie within the "habitable zone" of their stars, where conditions are theoretically right for life to gain a foothold.

We are still a long way from detecting life on other worlds, but in the last 20 years, the number of known planets in our Universe has gone from the 8 in our own Solar System to almost 500. It's clear to everyone, including the Astro2010 decadal survey team, that the hunt for exoplanets is only just beginning, and the search for life is finally underway in earnest.

Explore Spitzer's latest findings at <http://www.spitzer.caltech.edu>. Kids can dream about finding other Earths as they read "Lucy's Planet Hunt" at <http://spaceplace.nasa.gov/en/kids/storybooks/#lucy>.

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

Looking Up! Continued from page 1

them to our hobby.

Last month I mentioned the Orionids meteor shower, and that they are unlikely to be very spectacular this year due to the full moon. The Draconids shower is rather irregular, with bursts in some years and thinner in others. This year Earth will pass thru what is suspected to be the heavier part of the stream left by the parent comet, 21P/Giacobini-Zinner. The Draconids should peak about 20:30 to 22:30 EDT on the evening of October 6th. The radiant is around the head of Draco, which is high in the evening. This means the most activity will be before midnight rather than after it.

The Taurids shower is a long one, split between the Southern Taurids from mid to late October and the Northern Taurids in mid-November. These meteors are associated with Comet 2P/Encke and usually are fewer per hour but tend to be larger and brighter. As the Taurids are fading, the Leonids shower comes along. This shower peaks on the mornings of November 17th and 18th, but for the best show you'll probably have to wait until a couple hours before dawn after the moon sets.

Tonight, Oct 1, was my first chance to try out my new 10" Dob. Well it really isn't new, but new to me and seems to be in excellent condition. You may have seen the post from Derek W. a week or so ago on the Yahoo website message board. I did buy it from him and had not had much chance to try it out. It will be a whole lot easier for me to carry around to the various events we have. I won't have to bug anyone to help me lift my scope.

(One of our new members, Kevin Dougherty, had also expressed an interest in the scope. If anyone has a spare Dob they would be willing to part with, please contact him. He is very interested in upgrading.)

I have been trying to spot Comet Hartley 2. A week or so ago, before the rains, I tried with my

11x70 binocs with no luck. It was supposed to be about 6th mag and 1½ degrees south of Alpha Cassiopeia (Shedar). The Dob has a mount for a laser pointer. I have one green laser pointer that has a permanent "on" switch at the back end instead of just a push button on the side. It was easy to install this and align it on a star. I put in a 40mm wide-view eyepiece to get a nice low magnification. At 30x, I figured that the comet and Shedar should be pretty near in the same field of view. Using a map I printed from a Sky & Telescope email and the S&T Pocket Sky Atlas (a great little book) I got aimed at where it seemed the comet should be. No luck. Then I remembered that the dates on the S&T map were UT, so I aimed a little ways back on the track. Still no luck. I scanned a couple of degrees all around Shedar and never spotted any "faint fuzzy". On the 8th or 9th, it should be passing near the Double Cluster, so maybe I'll be able to find it next weekend in Roanoke when I go out to the VAAS annual convention. Hartley 2's closest approach to Earth is October 20 and will be at about mag 5 and just south of Capella. The full moon is on the 23rd, though and will probably make viewing a little difficult.

You have probably seen the news elsewhere, but I think it bears repeating: Astronomers R. Paul Butler of the Carnegie Institution of Washington and Steven Vogt of the University of California at Santa Cruz reported in the *Astrophysical Journal* this week that they have discovered a planet in the "Goldilocks" zone (liquid water) of its parent star, Gliese 581. They have been using ground-based telescopes for 11 years to track the radial velocity measurements of the star. The planet is about 3 earth masses and circles the red dwarf in about 37 days. This is the sixth planet discovered around the star which lies about 20 light-years away in Libra. Thursday's *Virginian*—Pilot (Sept.30) had a half-page article.

See you at the next meeting on October 7, and keep Looking Up!

Mark Gerlach

Minutes

IYA - A Report

Ted Forte

During 2009, the International Year of Astronomy, clubs all over the world were asked to make a special effort to reach out to the public as never before. The goal was to bring as many people to the eyepiece as possible and, in particular, to offer a view through the telescope to people who had never had the chance to view through a scope before. I served as the club's coordinator for IYA events and this is a report of the year's effort.

We had a few large events, and several very small ones. Our largest crowd was about 1200 strong but more than a few events netted just a half dozen folks or so. Most of the events were things we do every year, a couple were special for IYA. All of them were fun and worthwhile.

The keys to reaching large numbers of people are advertising and location. We were able to get a couple of our efforts announced in the *Virginian Pilot*, and that always made a big difference, but it's also important that the event take place in a location that has readymade crowds or significant foot traffic. Weather is the final arbiter of success, however, and since you can't control the weather, you have to plan a lot of events in order to have good weather for a few of them. Nature thwarted us on two counts: we had a particularly high number of cloudy days, and the Sun remained overly quiescent, robbing us of our primary day-time target. We were also hampered by the late availability of the Galileo scope kits. These scopes figured prominently in a few of our plans but were not available in time to see those plans to fruition. Still we persevered and kept up our enthusiasm.

Astronomy Day has been a long standing special event for the BBAA. In recent years, we have taken up a partnership with area libraries. 2009 was no exception. On the official Astronomy Day, we set up at the main library in Virginia Beach, the area's largest. Library patrons were greeted by a gaggle of telescopes aimed at the sun, and the moon. There were plenty of astronomers to show off their scopes and answer questions, and lots of free stuff for the kids to take home. The Chesapeake Planetarium

provided moon maps, star charts, solar system charts, moon phase calendars and assemble-it-yourself starfinders. The NASA Space Place folks supported us with lots of stickers, postcards, bookmarks, and photos of celestial wonders. Orion Telescope provided dozens of their catalogs. Our own Solar System Ambassador, George Reynolds, had a display depicting current space exploration missions next to a telescope projecting an image of the sun. Inside the library entrance, patrons could touch some meteorites and learn about the geology of the moon from BBAA's resident geologist, Mark Ost. They could also test their astronomical knowledge and see if they were Smarter Than an Eighth Grader. The library added their own display that highlighted many astronomical themed books.

Later in the year, we repeated Astronomy Day with similar displays and activities at the main library in Chesapeake and, a smaller set up at a more rural library in Carrollton, Virginia.

Our best new idea came from Georgie June. She created a clever take-off on BINGO that she called PLUTO. Instead of letters, the cards contained astronomical themed images. When a corresponding image was pulled from the hopper, a short fact was presented. For instance, if the image of Galileo was selected, she would read off the back ... "Galileo was the first person to look at the sky through a telescope" and so on. When a row or column was filled, the winner had to declare "PLUTO". It was very popular with the kids (and some adults too).

In 2008 we were invited by Virginia Beach Planetarium director, Chuck Dibbs to participate in "Boardwalk Astronomy", a Virginia Beach resort strip version of Sidewalk Astronomy ala John Dobson. It became our favorite event of 2009. We set up our telescopes on the boardwalk near the 24th Street Stage, where free entertainment draws good crowds in the early evening. There we engaged the curious tourists in conversation about astronomy and telescopes and then offered them views of the moon or a bright planet. It was a big hit, both among our members who enjoyed the events immensely and the tourists who looked forward to participating after reading about it in the local paper

or the hotel leisure guides. A surprising number of tourists told us that they planned their Virginia Beach visit around the dates we were scheduled to be on the boardwalk. Many spent hours hanging around the scopes and endured long lines over and over again to look at each new target. We managed to get in five sessions on the boardwalk from June to September. As an added bonus, the city made small donations to our scholarship fund for each event that we did.

An event we called the “Celebrate Astronomy Festival” was billed as our Flagship Event of the IYA. We planned this event months in advance and worked with the Department of Parks and Recreation for the City of Chesapeake and the staff at Northwest River Park which provided the location. We lined up speakers from NASA Langley, the Virginia Air and Space Museum, Jefferson Labs, Norfolk State University and the Virginia Beach Planetarium. The plan called for members to bring out solar telescopes, a homemade radio telescope, and to support a night-time public observing session with a variety of scopes including our club’s largest ... Kent Blackwell’s 25-inch behemoth Dobsonian. We planned lots of events for kids - this is where we unveiled the PLUTO game and we wanted to offer a telescope workshop where kids could assemble their own Galileo Telescope. But the weather is a fickle partner as any amateur astronomer can attest. A powerful storm system whipped through Tidewater and threatened to wash away all of our plans. Our speakers were either delayed or forced to cancel. In the end, we were allowed a few clear hours and managed to entertain a hundred or so guests with about half of our activities coming off. The nighttime session where the newly assembled Galileo scopes were to “discover” the rings of Saturn had to be canceled.

In contrast, our biggest event of the year turned out to be the Mount Trashmore Star Party organized by Chuck Dibbs in conjunction with the world-wide event, the “100 Hours of Astronomy”. Virginia Beach Department of Parks and Recreation sponsored and promoted the event and we hosted well more than a thousand people. Visitors of all ages came from all over

the area and lined up to view the Moon, Saturn and a few bright deep sky objects through a variety of scopes. The oohs and ahhs emanating from old and young alike were to be heard all over the field.

So how did BBAA do? Well, overall I think we were successful in supporting and furthering the world wide goal. We started planning IYA events several months early and we pursued an ambitious schedule. Of course not everything worked out. The weather was the main impediment, more than half of our planned events were rained out or curtailed by clouds.

We used the database function on backbayastro to keep track of scheduled events and to record the number of visitors that attended them. The statistics collected are admittedly approximate but I estimate (conservatively) that 3,788 non-members looked through our scopes at 30 outreach events and that over 700 of them had never done so before. We encouraged each member to ask viewers as they approached the eyepiece if they had ever looked through a telescope before, and to estimate the percentage reporting their first such experience. Most of the “first timers” were young children, but a few notable adults, some of quite advanced age, were treated to their first-ever eyepiece view. For a special few, this was a significant life event and some of our members were privileged to share some poignant moments that we’ll all remember warmly.

Outreach events like these remind us of the curiosity people feel for the sky and of the power of astronomy to inspire and entertain. The interaction between astronomer and passer-by also provides the platform from which to educate the public about light pollution and demonstrate firsthand what is being lost to poor outdoor lighting. If we don’t resolve to make every year a “year of astronomy” we will soon lose the battle for the preservation of the starry sky.



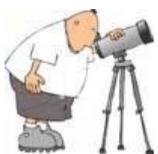
Welcome New Members!



BACK BAY ***observer***

October 2010

BBAA Events	Special Outreach	Astronomical Events
01 Skywatch at NWRP		
		04 Full Moon
07 BBAA Meeting at TCC VB		11 Last Quarter
09 Nightwatch at Chippokes		
		18 New Moon
		26 First Quarter
29 Skywatch at NWRP		



Sneak Peak into November

11/04

BBAA Monthly Meeting at TCC VB

11/06

Nightwatch at Chippokes