

BACK BAY observer

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



EPHEMERALS July 2011

7/02
Nightwatch
Chippokes State Park
Surrey, VA

7/08
Nighthike
Northwest River Park

7/08
Garden Stars
Botanical Gardens
9 pm

7/12
Boardwalk Astronomy
24th Street @ The Boardwalk
Virginia Beach

7/22
Skywatch
Northwest River Park

7/30
Nightwatch
Chippokes State Park
Surrey, VA

Looking Up!

Star Quest 8

Last week I went to Star Quest 8 At Green Bank, West Virginia. Other of our members attending were Dr. Michelle Shinn, Chuck Jagow, Dale Carey, and Bill McLean, along with his son, Sam. This was my first trip there and I was very impressed. The event is held on the grounds of the National Radio Astronomy Observatory (NRAO). There are several radio telescopes of various sizes, the largest and newest being the 100 meter (328 ft) Robert C. Byrd Green Bank Telescope (GBT), the world's largest fully steerable single aperture antenna. Other dishes include a 43m (140ft), three 26m (85ft), and a 40ft fixed-azimuth dish that is used for educational purposes.

The Sky Quest 8 event lasted for four days and nights. The days were filled with speakers, seminars, educational sessions and activities for the kids. At night we were treated to the exceptionally dark skies that Dale Carey often brags about. Wednesday and Thursday nights we had mag 6 skies from twilight on. I could see stars all the way down to three or four degrees from the barely visible surrounding mountains. The Milky Way was bright from Sagittarius all the way across to Cassiopeia. Friday night started out cloudy but cleared up very nicely by eleven pm. No star party has perfect skies, though. Saturday night was cloudy and reminded me of the typical view from my light polluted front yard.

There were four keynote speakers. Our own Dr. Michelle Shinn gave a fascination presentation on Thursday evening

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The BBAA Family Picnic is
Saturday, July 9th at the large
shelter in Northwest River Park,
Chesapeake, from 11 am to 3 pm!

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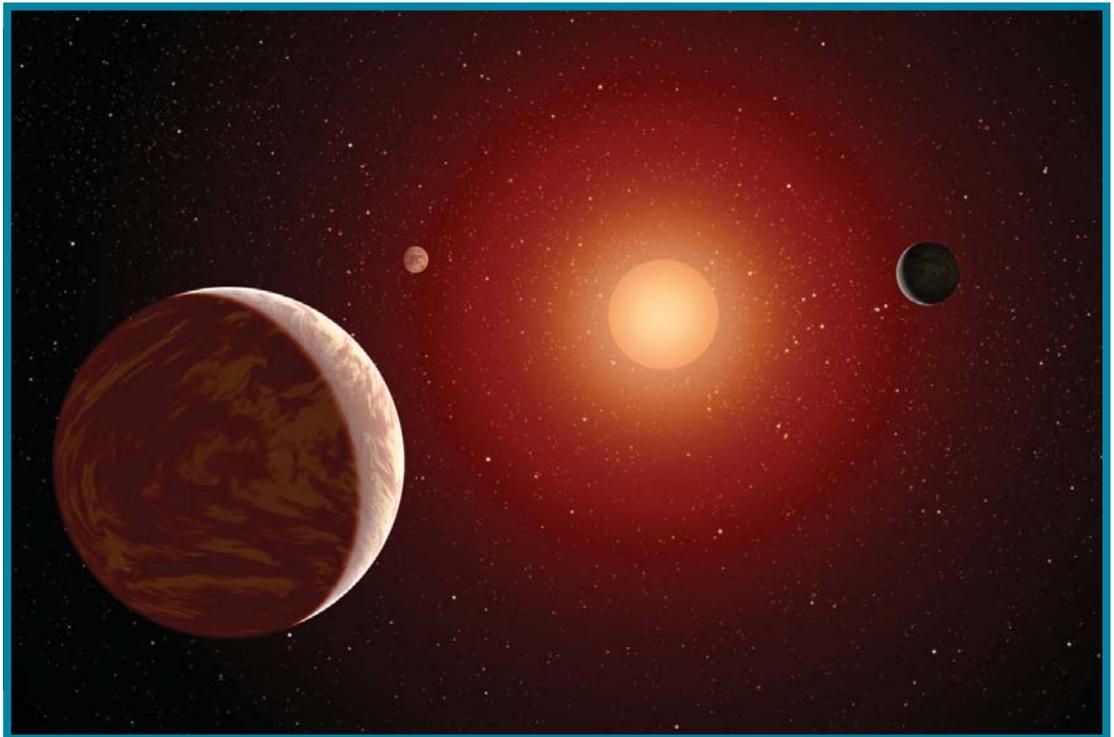
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Finding Planets among the Stars

by Dr. Tony Phillips

Strange but true: When it comes to finding new extra-solar planets, or exoplanets, stars can be an incredible nuisance.

It's a matter of luminosity. Stars are bright, but their planets are not. Indeed, when an astronomer peers across light years to find a distant Earth-like world, what he often finds instead is an annoying glare. The light of the star itself makes the star's dim planetary system nearly impossible to see.



ultraviolet part of the electromagnetic spectrum that Galaxy Evolution Explorer can sense. Because dwarf stars are so numerous—as a class, they

Talk about frustration! How would you like to be an astronomer who's constantly vexed by stars? Fortunately, there may be a solution. It comes from NASA's Galaxy Evolution Explorer, an ultraviolet space telescope orbiting Earth since 2003. In a new study, researchers say the Galaxy Evolution Explorer is able to pinpoint dim stars that might not badly outshine their own planets.

"We've discovered a new technique of using ultraviolet light to search for young, low-mass stars near the Earth," said David Rodriguez, a graduate student of astronomy at UCLA, and the study's lead author. "These M-class stars, also known as red dwarfs, make excellent targets for future direct imaging of exoplanets."

Young red dwarfs produce a telltale glow in the

Exoplanets are easier to see directly when their star is a dim, red dwarf.

account for more than two-thirds of the stars in the galaxy—astronomers could reap a rich bounty of targets.

In many ways, these stars represent a best-case scenario for planet hunting. They are close and in clear lines-of-sight, which generally makes viewing easier. Their low mass means they are dimmer than heavier stars, so their light is less likely to mask the feeble light of a planet. And because they are young, their planets are freshly formed, and thus warmer and brighter than older planetary bodies.

Astronomers know of more than five hundred distant planets, but very few have actually been

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The Back Bay Amateur Astronomer's Observer

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President

Mark Gerlach
757-434-4220
mgerlach@verizon.net

Vice President

Courtney Flonta
757-553-4418
astrogirl12@yahoo.com

Treasurer

Jim Tallman
757-553-8193
jctallman@cox.net

Secretary

George Reynolds
757-497-0755
pathfinder027@yahoo.com

Webmaster

Chuck Jagow
757-430-9732
chuck@jagowds.com

ALCOR

Bill McLean
preciousmyprecious@yahoo.com

Librarian

Bill Newman
billn59@verizon.net

RRRT Coordinator

Ted Forte
twforte@cox.net

Scholarship Coordinator

Ben Loyola
benito@loyola.com

Newletter Editor

Erica Smith-Llera
BBAAErica@yahoo.com

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

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. **There is no meeting in July. The August meeting is TBD.** 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

seen. Many exoplanets are detected indirectly by means of their "wobbles"—the gravitational tugs they exert on their central stars. Some are found when they transit the parent star, momentarily dimming the glare, but not dimming it enough to reveal the planet itself.

The new Galaxy Evolution Explorer technique might eventually lead to planets that can be seen directly. That would be good because, as Rodriguez points out, "seeing is believing."

And it just might make astronomers feel a little better about the stars.

The Galaxy Evolution Explorer Web site at <http://www.galex.caltech.edu> describes many of the other discoveries and accomplishments of this mission. And for kids, how do astronomers know how far away a star or galaxy is? Play "How Old do I Look" on The Space Place at <http://spaceplace.nasa.gov/whats-older> and find out!

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



Welcome New Members!

July 2011

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entitled "Becoming Enlightened About the Dark", detailing the current thinking and her research into the theory of Dark Matter. The night before, Dave Meisel gave a talk called "The Answer is 42", described as 'A lighthearted look at cosmology and our place in the universe. The title refers to a scene from the English TV series A Hitchhiker's Guide to the Galaxy. On Friday evening, Dr. D. J. Pisano had a presentation called "Where do galaxies get their gas?" describing the inflows of hot and cold Hydrogen onto galaxies. The final presenter on Saturday night was Dr. Seth Shostak, the Senior Astronomer at the SETI Institute. He gave an informative and often humorous talk about SETI and its history, current projects, and the likelihood of detecting alien intelligences. He made an interesting suggestion, that given the rate of advancement in computer power, any intelligence we might detect is likely to be machine intelligence. Other talks covered the Messenger spacecraft now orbiting Mercury, the solar cycle and space weather, and astronomical sketching. There was even a sketching contest. Dale Carey won one of the prizes. He also won several of the door prizes, but that's another story.

There were a wide variety of door prizes: several Meade eyepieces, many books, several First Look and other beginner's telescopes, a Star Quest quilt, and the grand prize, an IR converted Canon camera. I won a tool carrying case.

Participants could attend an 'Introduction to Radio Astronomy' and get to operate the 40ft dish. There were also tours of the engineering

area and the GBT control room. I attended several information workshops given by Brent Maynard on astrophotography, time-lapse photography, and how to convert a Canon DSLR for astrophotography by removing the IR filter to increase infrared sensitivity. Other workshops included "Getting to Know the Moon" and "Getting Kids Interested in Astronomy". After attending Brent Maynard's workshop on Astro-imaging, I played with my Nikon enough to figure out how to set it for long exposures using a remote trigger. I took 50-60 frames on Friday night, but haven't had a chance to work with them yet. I know that some of them are useless, the camera lens fogged up considerably and I had to use a hair drier to warm it up.

All in all, this would be a worthwhile event even if it rained. The breadth of interesting and informative workshops, seminars and speakers just may pull me back next year.

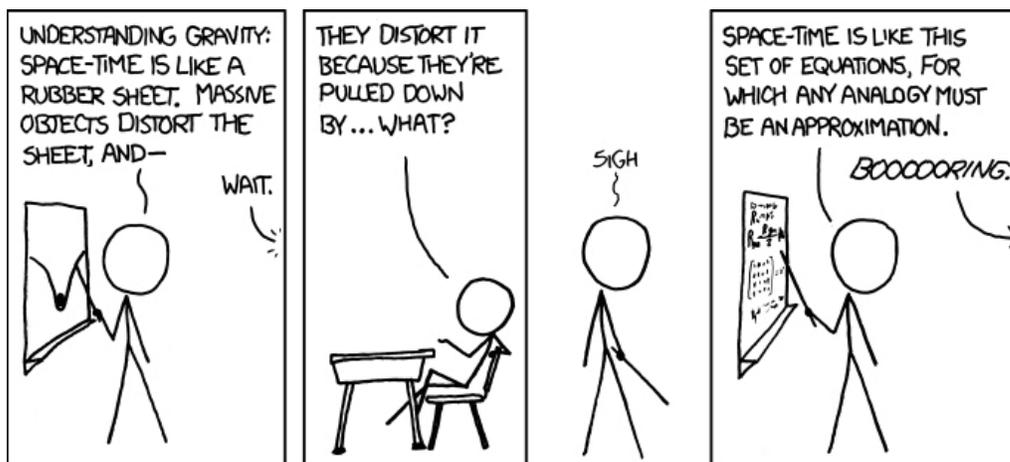
UPCOMING EVENTS

Hopefully this newsletter will get out in time to remind members of the BBAA Picnic on Saturday, July 9. The delay is entirely my fault (again). Sign up on the Yahoo website in the database section.

July 8 is both Garden Stars and the Star Hike at NWRP. Our next Boardwalk Astronomy is Tuesday, July 12, with a rain date of the 14th. Skywatch is on the 22nd.

Mark your calendar: August brings the Perseid meteor show, arguably the best meteor shower of the year. It can present up 100 or more fast bright meteors per hour. The peak is usually on the 11th or 12th.

In the meantime, keep Looking Up!!



<http://xkcd.com/895/>

Special Recognition

Congratulations to Courtney Flonta, our 2011 Jack Horkheimer Youth Service Award winner!



Courtney attended the Astronomical League Convention (ALCon 2011) in Bryce Canyon National Park Utah June 29 - July 2, 2011 where she received her award. Astronomical League V.P. John Goss sends: "It was a pleasure meeting her and listening to her speak of her experiences with the BBAA (all good experiences, mind you) and with bringing astronomy to the public. She really "wowed" the audience at ALCon! Courtney doesn't know this, but at least ten people commented to me on her graciousness and poise, and her ability to instill enthusiasm in others."

The Jack Horkheimer Youth Service Award is based upon service to the League, either directly or through service to any Astronomical League society. Service could be in the form of educational outreach, knowledge and skills at public star parties or other astronomical service. Courtney earned this award for her service to our club as Vice President - the officer responsible for coordinating outreach. Courtney has executed her duties as vice president with an aplomb belying her youth. She has demonstrated exceptional dedication to her duties and has done a remarkable job coordinating (and participating in) outreach!

Courtney, we are proud of you! We all look forward to hearing all about the convention from our Vice President, and offer her our heartiest congratulations. It was a well deserved honor, and no doubt, a herald of honors yet to come!

photos by A.L. VP John Goss



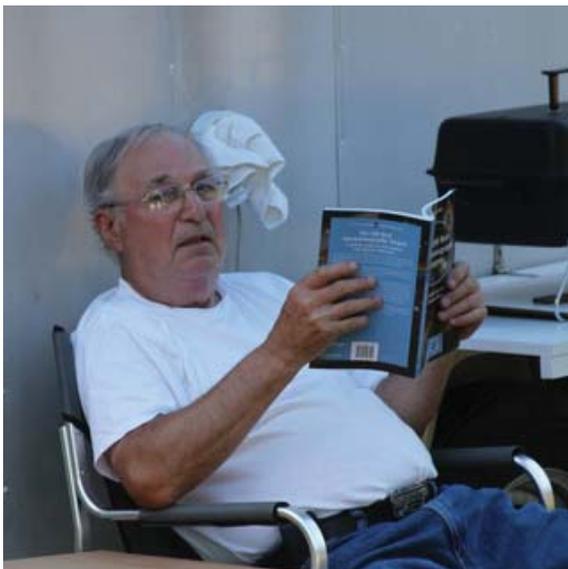
Jack Horkheimer was not only the executive director of the Miami Space Transit Planetarium, he was also the host of the PBS program *Jack Horkheimer: Star Gazer* through which he inspired millions of viewers from 1976 until his death this past year.

East Coast Star Party - 2011





All generations brought together for observing, learning, and conversation (with some bike riding and reading thrown in!)





BACK BAY ***observer***

July 2011

BBAA Events	Special Outreach	Astronomical Events
		01 New Moon
08 Nighthike at NWRP		08 First Quarter
08 Garden Stars at Botanical Gardens		
09 BBAA Picnic at NWRP		15 Full Moon
	12 Boardwalk Astronomy @ VB	
	24th Street at Oceanfront Dusk -11p	23 Last Quarter
22 Skywatch at NWRP		
30 Nightwatch at Chippokes		30 New Moon

Sneak Peak into August

Thursday 08/04/2011 Meeting at TBD.

Friday 08/05/2010 Garden Stars at Norfolk Botanical Gardens at 8:30 p.m.

Tuesday 08/09/11 BOARDWALK ASTRONOMY @ 24th Street & The Boardwalk

Friday 08/19/2011 Skywatch at Northwest River Park

Friday 08/26/2010 Nighthike at Northwest River Park

Saturday 08/27/2011 Nightwatch at Chippokes State Park, Surry VA.

