

BACK BAY observer

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



EPHEMERALS august 2011

8/04
BBAA Monthly Meeting
Virginia Beach Planetarium

8/05
Garden Stars
Norfolk Botanical Gardens
7 pm

8/09
Boardwalk Astronomy
24th Street & The Boardwalk
Dusk - 11pm

8/19
Skywatch
Northwest River Park

8/26
Nighthike
Northwest River Park

8/27
Nightwatch
Chippokes State Park

Looking Up!

If you missed our annual picnic in July, you missed the best hamburgers ever. At least that's what my twin great-nephews said. In any case, the rain held off and twenty-five or thirty folks enjoyed a nice day, good food, a view thru a solar scope, great camaraderie, and the traditional water-gun battle. (I think Kent lost.) Many thanks to Georgie June and Jim Tallman for their shopping and preparation.

July 12 was Boardwalk Astronomy. As usual, we had hundreds of people from all over the world ooh'ing and WOW'ing over Saturn, the moon, and other sights. My great-nephews, Tom and Chris, came out with their Galileo scope and managed to get it trained on the moon. I appointed them Junior Amateur Astronomers and they proudly announced this title to those they talked to. I even had a pair of newlyweds stop by who took pictures of each other taking their first view through a telescope.

August brings the Perseid meteor shower. It can present up 100 or more fast, bright meteors an hour. The Perseids were the first meteor shower I ever saw and I look for them with anticipation every year. When I was thirteen or fourteen I was camping with family at Sherando Lake outside of Waynesboro, Virginia. Two of my nephews and I were in a large field near our campsite when we started seeing them. Over an hour or so we saw dozens of bright streaks flash across the sky. I had little knowledge then of meteors and did some research at the library when I got

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New GOES-R to Give More Tornado Warning Line

by Dauna Coulter and Dr. Tony Phillips

So far this spring, more than 1,400 tornadoes have struck the U.S. Some of them have cut jaw-dropping trails of destruction across the countryside and, tragically, across inhabited communities, too. Hundreds of lives have been lost in the onslaught.

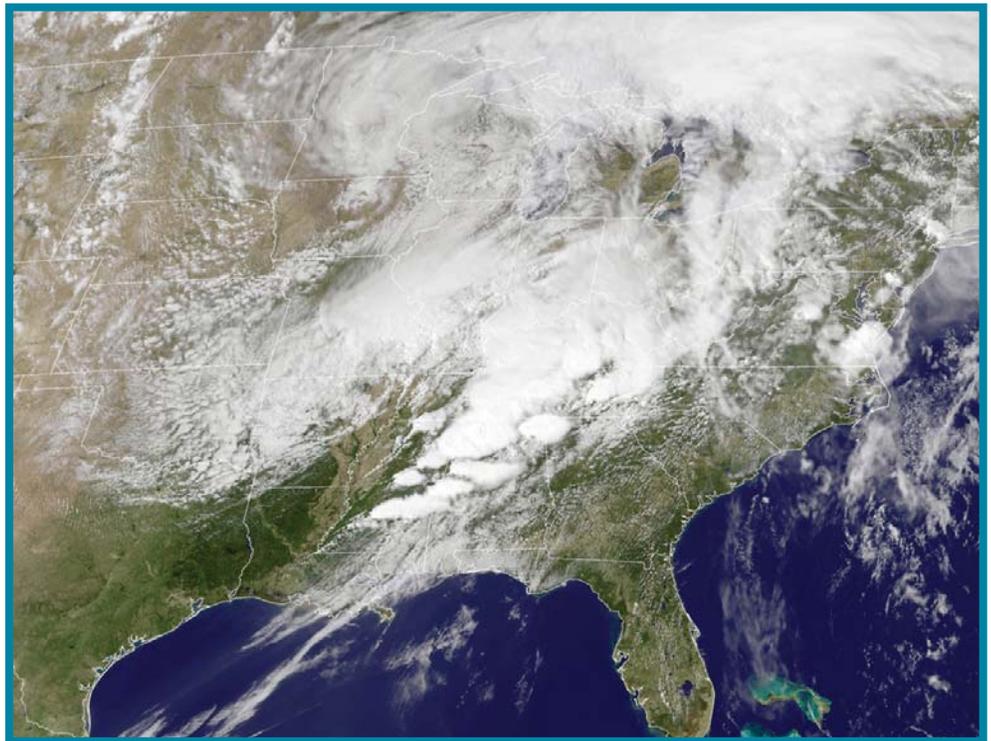
Throughout the season, the National Weather Service has routinely issued tornado alerts. In the case of the Alabama tornadoes of April 27th, forecasters warned of severe weather five full days before the twisters struck. Because they couldn't say precisely where the twisters would strike, however, many of their warnings went unheeded.

"If people get a hurricane warning, they often evacuate the area," notes NOAA's Steve Goodman. "But we react differently to tornado warnings."

Perhaps it's because tornadoes are smaller than hurricanes, and the odds of a direct hit seem so remote. Recent pictures from Tuscaloosa, Alabama, and Joplin, Missouri, however, show the perils of playing those odds. Goodman believes that more precise warnings could save lives.

To fine-tune tornado warnings, NOAA will soon launch the first in a series of next-generation weather satellites – GOES-R (Geostationary Operational Environmental Satellites-R series). The spacecraft is brimming with advanced sensors for measuring key ingredients of severe weather including winds, cloud growth, and lightning.

"GOES-R will be the first geostationary spacecraft to carry a lightning sensor," says Goodman, the GOES-R Program Senior Scientist. "Studies show that sudden changes in the total lightning activity correlate with storm intensity—and with tornadoes."



This GOES image shows the storms that spurred the intense April 27 tornado outbreak in the southern U.S. Animation showing the development of weather can be seen at <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=50347>.

The lightning mapper will detect and map not only cloud-to-ground lightning, but also bolts within and between clouds. The kind of cloud-to-ground lightning we see from our front yards accounts for only 15-20 percent of total lightning. To get a clear idea of a storm's intensity, meteorologists need to know about all the lightning—a view GOES-R can provide.

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
astogirl12@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
precioumyprecious@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. **The August meeting is at the Virginia Beach Planetarium.** 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

All by itself, the lightning mapper will provide 7 minutes more lead time in tornado warnings, according to Goodman. GOES-R's state-of-the-art instruments will also improve long-range forecasts.

"The satellite's Advanced Baseline Imager (ABI), for instance, will provide a much clearer picture of clouds," says NOAA research meteorologist Tim Schmit. Compared to lesser instruments already in orbit, ABI can better detect super-cold "overshooting tops," evidence of enormous energy and upward velocity that correlate with subsequent severe weather.

"Accurate advanced notice of high-risk tornadic conditions can cue officials to close schools and businesses even before tornadoes are actually detected," says Schmit.

Forecasters doubt tornadoes can ever be predicted with 100% accuracy. The twisters are just too capricious. GOES-R, however, is a step in the right direction.

Find out more about GOES-R's unprecedented capabilities at <http://www.goes-r.gov>. Young people can learn more about tornadoes and all kinds of other weather at <http://scijinks.gov>.

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!

August 2011

Looking Up! Continued from page 1

home (This was before AlGore invented the Internet). I found out this was an annual shower and is usually the best one. The peak this year is expected to be on the night of August 12-13. Unfortunately, the full Moon will outshine and wash out most of them. I'll be looking anyway. Maybe I'll see a bolide.

Another occultation event is coming soon. On Wednesday, August 10, the mag 2.9 star Pi Sagittarii will disappear behind the waxing gibbous moon. Pi is northeast of the handle of the teapot. The moon will be very bright so binocs or a scope will be needed to watch it. Pi is a triple star, so it may not wink out all at once, but may dim once or twice before it disappears. Please see www.skyandtelescope.com/community/skyblog/observingblog/120963734.html for more info.

We have several comets falling sunward at this point, though it appears none of them that approach in the near future will get much brighter than mag 6. Comet Garradd (C/2009 P1) was discovered August 13, 2009 by an Aussie, Gordon Garradd, of Siding Spring Australia, using a half meter instrument. Currently the comet is moving out of Pegasus toward Delphinus. Sometime in the first few days of August it will pass close to M15. It is expected to reach magnitude 7 in mid February 2012 and have its closest approach to Earth on March 5. The latest picture I've seen at this point shows two distinct tails. The orbital elements and ephemerides for Garrard and the other comets are available on the IAU Minor Planet Center website at www.minorplanetcenter.net. Credit goes to that site for much of this information, also to Gary W. Kronk's Cometography.com. Another nice site is cometchasing.skyhound.com/

Comet Elenin (C/2010 X1) was discovered quite a bit later than Garradd. Leonid Elenin (Lyubertsy, Russia) discovered it on December 10, 2010 on some images taken using a 45cm astrograph located at a robotic Observatory near Mayhill, New Mexico. Currently Elenin is about mag 11. It will be about 2 degrees from the sun

on September 26, and will pass .23 AU (about 21.4 million miles) from the Earth on October 16 at about mag 6.6.

Comet 45P/ Honda- Mrkos- Pajdusakova (pronounce that one!) is a small periodic comet classed as a middle-age, dwarf comet with a period of about 5.2 years. Discovered by Minuru Honda on December 3, 1948, this is its eleventh observed return. It is only about a half mile across and will pass within 0.06 AU of the Earth on August 15, only a little over half a million miles out. It is only expected to be about mag 7.5 on that date.

Comet PANSTARRS (C/2011 L4) is the brightness exception. Its discovery was even more recent. It was discovered by the 1.8m Pan-STARRS1 Ritchey-Chretien telescope at Haleakala, Hawaii on June 6, 2011. It will pass closest to the Earth on March 5, 2013 at 1.1 AU. The JPL HORIZONS system (<http://ssd.jpl.nasa.gov/horizons.cgi#top>) indicates that the comet could be as bright as magnitude -0.59 around March 11 when it will be about RA 00h 25m 18s, Decl: -03d 43m 06s. However, it appears that this is rather close to the Sun which will be at RA 23h 24m, Decl. -03d 48m on March 11. Charts of its path will undoubtedly become available as it approaches. I may try to chart it out myself.

Our August meeting will be at the Virginia Beach Planetarium. In September we will be back at TCC.

In the meantime, keep Looking Up!!



Godspeed Juno!

Comet Garradd Gives Hope to Observers

by Mark Ost

Finally the comet drought may be over. For many months now there has been a dearth of bright visible comets available to observers with average telescopes. While it is rare that there are no comets in the sky, most are far too dim to be easily accessible to most amateur astronomers. Setting aside the spectacular naked eye comets, which have been in short supply also, any visitor from the outer solar system has been quite rare for the past couple of years now.

Comet Garradd 2009/P may change that. We first spotted this comet during the July sky-watch under less than ideal conditions using Ted Forte's 18 inch reflector. Subsequently, the comet has been observed by Kent Blackwell using his 14 inch Orion and myself utilizing my 5 inch refractor under somewhat better conditions but still far from ideal observing conditions.

Discovered in 2009 by the Siding Springs Observatory, Australia, the comet has been making the rounds of the inner solar system getting nearer to the closest point of approach to earth on March 5th 2012 (assuming the earth is still here Maya calendar aside!).

As anyone who spends any time chasing comets knows it can be quite hard to predict their behavior and often difficult to even get a look at them under good conditions. Moonlight, clouds, haze, and the often early hours required to view the comets all conspire to frustrate the comet observer. So when a good comet appears at a reasonable hour it is worth noting. Currently the comet is easily bright enough to be observed with most telescopes and will hang around M-15 in Pegasus for quite some time before traveling to Sagitta later in the year. *

As an added bonus this comet appear to have a broad tail. I can't remember the last time we were able to easily observe a comet with a tail that was easily seen. I can remember getting up very early to see several comets when only the most dedicated observers would be up to get a pre dawn glimpse of a phantom putting in an appearance for only a few

days. One memorable comet, McNaught, was naked eye visible for only a ten minute window prior to sundown, low in the west, for around five days. This comet became the most spectacular recent naked eye comet but only for those in the southern hemisphere! Ask Georgie how easy that one was to catch!

If you have never seen a comet now is a good chance to follow one for an extended period. Charts of the comet's location are available on the web and most observing programs such as Sky Tools have it in their index of objects. It pays to observe many times as comet appearance can change over time. This comet is scheduled to gain about 0.7 magnitude in the coming months. Currently it is listed as 8th magnitude, within the range of most telescopes. Telescopes up!

* Sky Tools 3 shows Gerradd crossing into Sagitta this Tuesday.



2011 BBAA Annual Picnic







BACK BAY ***observer***

August 2011

| BBAA Events | Special Outreach | Astronomical Events |
|--|------------------|---------------------|
| 04 BBAA Meeting TBA | | |
| 05 Garden Stars at Norf. Bot. Gard. 8:30 | | 06 First Quarter |
| 09 Boardwalk Astronomy at 24th St. | | |
| | | 13 Full Moon |
| | | |
| 19 Skywatch at NWRP | | 21 Last Quarter |
| 26 Nighthike at NWRP | | |
| 27 Nightwatch at Chippokes | | 29 New Moon |
| | | |

Sneak Peak into September

Thursday 09/01/2011 Meeting at TCC VA Beach, Building J, Room JC-12 at 7:30 p.m.

Friday 09/02/2010 Garden Stars at Norfolk Botanical Gardens at 7:00 p.m.

Tuesday 09/06/11 BOARDWALK ASTRONOMY @ 24th Street & The Boardwalk in Virginia Beach

Dusk - 11:00 PM Those with solar scopes may come as early, not much before 6:00 PM, Dale Carey POC

Friday 09/09/2010 Nighthike at Northwest River Park

Friday 09/16/2011 Skywatch at Northwest River Park

Saturday 09/24/2011 Nightwatch at Chippokes State Park, Surry VA.

