

BACK BAY observer

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



EPHEMERALS june 2010

06/03

BBAA Monthly Meeting
Plaza MS Planetarium
7:30 pm

06/04

Skywatch
Northwest River Park
Dusk

06/12

Nightwatch
Chippokes State Park, Surrey
Dusk

06/17

Library Astronomy
Bayside Library, VB
7 pm

06/18

Nighthike
Northwest River Park

06/21

Library Astronomy
Pungo/Blackwater Library
7 pm

06/22

Boardwalk Astronomy
24th Street Stage, VB
Solar Scopes at 5:30 pm
Telescopes dusk - 11 pm



Looking Up!

The 2010 Spring ESCP has come and gone. I'd say it was a big success. We had two pretty good nights of observing, although there was a thin layer of clouds Friday night. Both nights we were treated to a flyover of the International Space Station. Early Sunday morning we had a huge thunderstorm blow through that I thought was going to carry off my tent with me in it. I had pitched it between three trees that I think protected me from the worst of the wind.

May's Garden Stars event was well attended. There were about 20 people there who asked several intelligent questions. George used the Quickphase Pro software to demonstrate the phases of the moon. After his talk we had several scopes set up outside. More thin clouds and several jet contrails pretty much limited our target selection to the moon, Saturn, Mars, and Venus. I did manage to locate M44 with my 25x100 binoculars. At 25 power, it fit the field nicely, although the sky around it was noticeably gray. Even so, it got several "Wow!"s from the attendees.

Ted Forte will be doing a presentation at Indian River High School on May 26, which is tomorrow as I write this. I'll report on that next month.

Our next meeting will be June 3 in the Planetarium at Plaza Middle School. George Reynolds is bringing the NASA video I mentioned in my last missive. It's about the history of the JPL and the Space Race in the 50's & 60's.

If I can manage to stay up late enough on the night of June 1 and find a spot with a decent southern view, I might get to see my second asteroid. At about 1 am (actually the 2nd), Sagittarius should be up high enough to catch Ceres in the southern portion of the Lagoon Nebula, M8. Ceres will be about magnitude 7.5 but may be washed out by the waning gibbous moon. See June's Sky

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Ancient Supernova Riddle, Solved

by Dr. Tony Phillips

Australopithecus squinted at the blue African sky. He had never seen a star in broad daylight before, but he could see one today. Was it dangerous? He stared for a long time, puzzled, but nothing happened, and after a while he strode across the savanna unconcerned.

Millions of years later, we know better.

That star was a supernova, one of many that exploded in our corner of the Milky Way around the Pliocene era of pre-humans. Australopithecus left no records; we know the explosions happened because their debris is still around. The solar system and everything else within about 300 light-years is surrounded by supernova exhaust—a haze of million-degree gas that permeates all of local space.

Supernovas are dangerous things, and when one appears in the daytime sky, it is cause for alarm. How did Earth survive? Modern astronomers believe the blasts were too far away (albeit not by much) to zap our planet with lethal amounts of radiation. Also, the Sun's magnetic field has done a good job holding the hot gas at bay. In other words, we lucked out.

The debris from those old explosions has the compelling power of a train wreck; astronomers have trouble tearing their eyes away. Over the years, they've thoroughly surveyed the wreckage and therein found a mystery—clouds of hydrogen and helium apparently too fragile to have survived the blasts. One of them, whimsically called "the Local Fluff," is on the doorstep of the solar system.

"The observed temperature and density of the Fluff do not provide enough pressure to resist the crushing action of the hot supernova gas around it," says astronomer Merav Opher of George Mason University. "It makes us wonder, how can such a cloud exist?"

NASA's Voyager spacecraft may have found the answer.

NASA's two Voyager probes have been racing out of the solar system for more than 30 years. They are now beyond the orbit of Pluto and on the verge of entering interstellar space. "The Voyagers are not actually inside the Local Fluff," explains Opher. "But they are getting close and can sense what the cloud is like as they approach it."

And the answer is ...

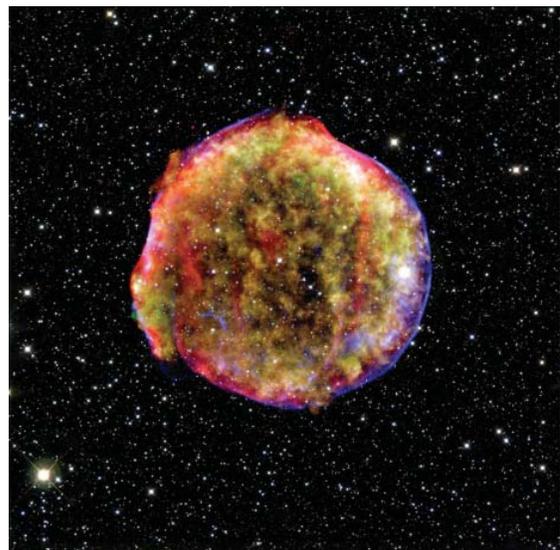
"Magnetism," says Opher. "Voyager data show that the Fluff is strongly magnetized with a field strength between 4 and 5 microgauss. This magnetic field can provide the pressure required to resist destruction."

If fluffy clouds of hydrogen can survive a supernova blast, maybe it's not so surprising that we did, too. "Indeed, this is helping us understand how supernovas interact with their environment—and how destructive the blasts actually are," says Opher.

Maybe Australopithecus was on to something after all.

Opher's original research describing Voyager's discovery of the magnetic field in the Local Fluff may be found in *Nature*, 462, 1036-1038 (24 December 2009). The Space Place has a new Amazing Fact page about the Voyagers' Golden Records, with sample images and sounds of Earth. Just in case one of the Voyager's ever meets up with ET, we will want to introduce ourselves. Visit <http://spaceplace.nasa.gov/en/kids/voyager>.

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



Left-over cloud from the Tycho supernova, witnessed by Tycho Brahe and other astronomers over 400 years ago. This image combines infrared light captured by the Spitzer Space Telescope with x-rays captured by the Chandra X-ray Observatory, plus visible light from the Calar Also Observatory in Spain.

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 June meeting will take place at the VB Planetarium at Plaza Middle School at 7:30 pm.** 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

Looking Up! Continued from page 1

& Telescope, page 62.

Our next Skywatch at Northwest River Park is Friday, June 4. By that time Ceres will be a little west of M8. It won't be moving much from night to night, around July 19 or 20, Ceres will be just south of Theta Ophiuchus. I'm hoping I will be able to pick it out sometime in June or July.

Another close approach is coming up, at least an apparent one. Jupiter and Uranus will spend the first couple of weeks in June within 1 degree of each other. Their closest approach will be June 8, 2010 at 4:14 A.M. when they will be 26 minutes apart. I doubt that I'll be able to catch that one. I'm taking a class in Visual Basic dot Net that week and will need my beauty sleep. I may have to wait until mid-September when they make another fairly close approach, I believe a little over a degree apart. Next January they will have a third pass within a degree of each other.

I mentioned M44 above. On the evenings of June 19 & 20, Venus will be within a degree of it. That should be a nice view in binoculars.

We are doing our usual collection of outreach events in June, with Bayside Astronomy on the 17th, Garden Stars and Night Hike on the 18th, and Boardwalk Astronomy on the 22nd (Rain date 24th). These are all on our Yahoo calendar. I would like to encourage all of our members to attend one or more of these events. It's great to be able to let someone see an object for the first time (the WOW factor). Even if you can't bring a scope or binoculars, it can be rewarding to be able to spend a part of an evening teaching, or learning or just enjoying the camaraderie. It's worth it. Keep Looking Up!

Mark Gerlach

BBAA Meeting Minutes

May 6, 2010

The May meeting was called to order at 7:30 PM in Room JC-13 of the TCC Science Building, Virginia Beach campus, by president Mark Gerlach.

Those in attendance were Neill Alford, Bruce Bodner, Ken Broun, Bryan Condrey, Courtney Flonta, Tony Flonta, Mike Galvas, José Gelpí, Mark Gerlach, Jeff Goldstein, Chuck Jagow, Karen Jagow, Curt Lambert, Ben Loyola, Matt McLaughlin, John Norman, Kevin Rasso, George Reynolds, Rob Schonk, Shelton Williams, and Joshua Wooley.

Reports: None were asked for.

The treasurer passed me a note stating that there is \$3,836.03 in the General Fund and \$3,228.07 in the Scholarship Fund, for a total of \$7,064.10.

Old Business: The annual BBAA Family Picnic is scheduled for Saturday, July 17* at Northwest River Park. Georgie June usually coordinates with the park, but was not at the meeting. She will be asked to contact the park and confirm. *

We need to find a location for the June meeting and the August meeting, since TCC will not be available. Pres. Mark Gerlach will contact Chuck Dibbs and Dr. Carlos Salgado about hosting those meetings at the VBCPS Planetarium and NSU Planetarium, respectively.

The bulk of the meeting was spent discussing the BBAA hosting of the VAAS conference in 2011. Possible dates and locations were suggested. One possibility is the TCC planetarium. Held on a Saturday in the Fall, Prof. Kenny Broun said a mid-October date would be best for him. It was determined that Saturday 22 October is the weekend closest to the New Moon. Tentative observing sites were discussed; Coinjock, Northwest River Park, Cornland Park, and the soccer complex off Centerville Turnpike north of NWRP. Someone said the complex is owned by the City of Chesapeake, so we would need to contact the city for access and permission to use it. Possible speakers would need to be lined up. "Bird" Taylor had in the past suggested getting someone through the NASA Speakers' Bureau. Our own Michelle Shinn would make a good speaker. John Norman mentioned some potential speakers

from NEAF, which he recently attended. John said most do not ask for an honorarium, but would need the club to pay for their transportation and room and board. John will give a list of speakers to Chuck Jagow, chairman of the VAAS planning committee. He mentioned the possible use of "frequent flyer miles" to help pay for the trips, if someone has a lot of miles accumulated.

Possible activities during the VAAS conference include vendors, such as MRO Computers and Astronomy, Hands on Optics in Maryland, Company 7, and Jeff Norwood's Camera Concepts. It was decided that the key is to set a definite date, then plan everything around it: location, speakers, vendors, and observing site.

Scholarship Report: Scholarship Committee Chairman Ben Loyola reported that so far 3 applications have been received: two from Virginia Beach and one from Chesapeake schools.

Vice President Courtney Flonta reminded the membership that a Cub Scout activity is scheduled on the same Friday as the East Coast Star Party, and we need to cover it with someone who is not going to ECSP.

Bryan Condrey and John Norman presented a brief slide show of their recent attendance at NEAF, the North East Astronomy Forum and Telescope Show. John told the group a little about "Astronomers Without Borders", who go to third world countries for astronomy outreach. John also mentioned that if anyone wants any kind of electronic gadget, one should send him an email. He and Bryan can make most anything.

New Business: The topic of possible patches or decals with the BBAA logo on them was mentioned. Mark Gerlach and Ben Loyola were the principle interested parties.

The meeting was adjourned early at 8:35 PM.

*NOTE: A day or two after the meeting it was learned that all the picnic shelters at NWRP are booked for Saturday, July 17, so the date for the BBAA Picnic was changed to SUNDAY, July 18, 11 AM to 3 PM.

Book Review

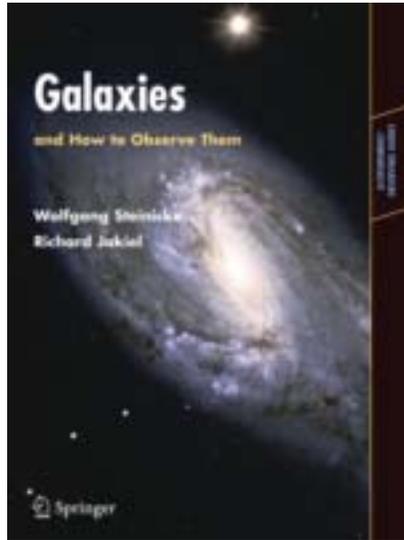
by Ted Forte

We so often concentrate on books for the novice, that those offerings that are aimed at the more experienced observer sometimes gets short shrift. This particular entry might just overwhelm a recent convert to the amateur astronomy community, but it contains a wealth of valuable information, background, and observing lists that the more advanced astronomer will find useful.

While not a new release, it is new to me. I was attracted to it both by the subject matter and by the reputations of the collaborating authors. Those of you familiar with the NGC/IC project will recognize Wolfgang Steinicke's name. Rich Jakiel is also a very well known astronomer and observer.

As observing guides go, I think it is well written and well thought out. It is divided into three sections, and their organization is the book's main advantage and why I feel comfortable in recommending it. Section I and II might be skipped (or used purely for reference) if what you require is just the meat and potato observing list. In Section III, recommended objects are presented in several interesting ways that could form the basis of a number of possible observing projects. Want to observe

just peculiar galaxies, Just edge-ons, just the nearest galaxies or the farthest galaxies? There are tables for almost any taste.



GALAXIES and How to Observe Them by Wolfgang Steinicke and Richard Jakiel Springer 2007

For the intermediate observer, Section II provides guidance on the techniques, equipment and theory of observing galaxies. Even the more experienced observer may learn a thing or two here; you could describe it as visual astronomy 101.

The first section is more for the devotee of the pure science of galaxies written at what is probably best described as a first year college level. It is basic enough to start from scratch, but deep enough to keep the interest of an astronomy major.

I confess that I have not read it cover to cover as yet (and maybe never will), but it is easy to find the essential parts and pull out what is most useful. I suspect different readers will see its main value in different sections. I for one am convinced it is well worth its purchase price.



Welcome New Members!

East Coast Star Party: May 14 & 15, 2010

by Kent Blackwell

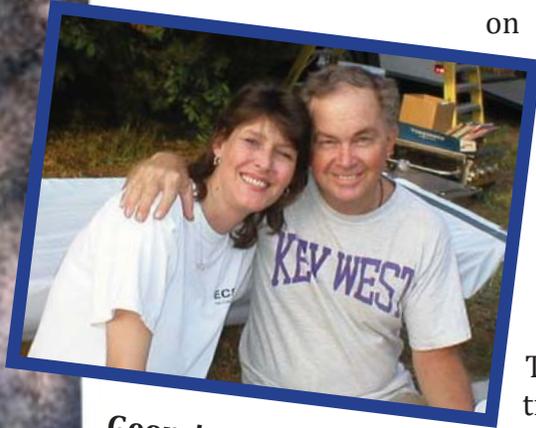
I want to thank those who attended the May 2010 East Coast Star Party. Despite predictions of less-than-ideal weather we actually had fairly good skies both Friday and Saturday nights.



Ray Moody and Dee Diffrient

Dee Diffrient treated us to one of her delicious spaghetti dinners Friday night, and Glenda Moody provided strawberry dessert. Thank you both, it was surely wonderful. Dee had to cook the spaghetti

on a swelteringly hot day with temperatures reaching in the low 90's. It was a lot of work, and we all appreciate it very much.



Georgie June and Dr. Bob Hitt

The sky transparency that night wasn't very good but the atmospheric seeing was

terrific. Saturn was beautiful in many of the telescopes, especially in Allen Davis' 6" Takahashi refractor and Steve Darnell's 6" Astro Physics refractor.

I managed to see a few galaxies and other deep sky objects but the thick soupy atmosphere didn't afford much of an opportunity of seeing all that much. If the sky had been clear I would have tried sighting some 15th magnitude galaxies in Virgo

that I wanted to search out with my 25" scope. Normally, the naked-eye limit at Coinjock NC is about 6.2 but that night the limit was only about 4.5 or so.

Saturday was a beautiful day, with moderately warm temperatures and a beautiful blue sky. About twenty attendees took an excursion to Mel's Diner for brunch. Mel's is a fun, old-fashioned silver diner located in a cornfield in the small town of Grandy NC. Others stayed around the campground and talked about what they had seen the evening before while some took advantage of the beautiful day and traveled to the beach at Nags Head NC.

The ECSP cookout was late Saturday afternoon. Thanks to many of you who brought food and deserts to the outing. Special thanks go out to cooks Bob & Scott Hitt for cooking eighty-some hamburgers and sixty hot dogs, and thanks also to Kevin Weiner for providing the P.A. system.

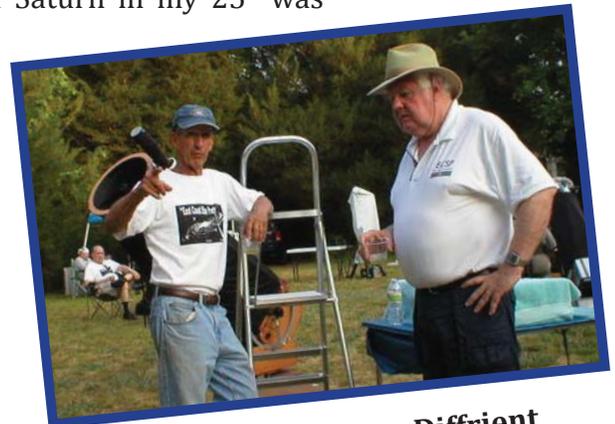
After the cookout I handed out various door prizes.

Before the usual prizes I gave all the kids raffle tickets and tried to arrange it so each child would win something.



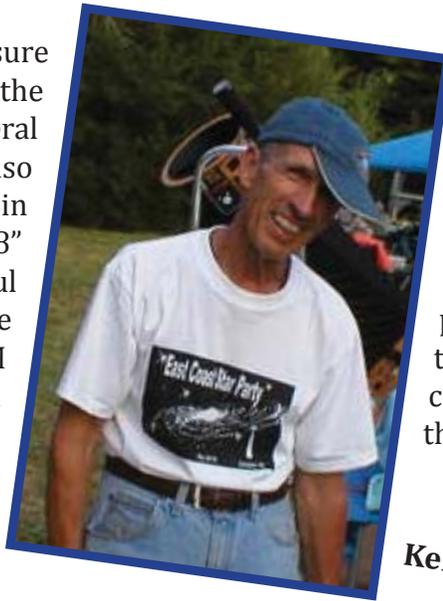
The winner of the grand prize of a Tele Vue 4mm Radian eyepiece donated by Mark Ost went to Don Wright. Earlier that day Don was heard saying his next eyepiece was going either to be a 6mm or 4mm. Congratulations, Don.

Soon after the cookout the sky started turning a bit white in color from thin clouds moving in from the northwest, which hampered our chances of viewing many deep sky objects. Nevertheless, seeing conditions were even better than Friday night. The view of Saturn in my 25" was



Kent Blackwell and Roy Diffrient

mesmerizing. It was indeed a pleasure to have dozens of people see it for the first time in a large telescope. Several people were lucky enough to also see the Ring Nebula's central star in my scope as well as Ted Forte's 18" Dobsonian. With such wonderful seeing globular clusters were amazing. The glorious cluster M 13 in Hercules filled the 450x field of view with a myriad of stars spread across the entire field of view. Even at that high power stars were sharp pinpoints.



reached eighty-miles-per-hour.

Allow me to thank everyone once again for attending, and especially those who's help made the East Coast Star Party possible. I met many new faces this year, and hope everyone comes back next Fall. I'll announce the date well in advance.

Kent who?

Every fifteen years Saturn's rings are nearly edge-on to our view from earth. One young boy looked in my scope and remarked, "It looks like it has an arrow through it". I thought that was a perfect description of its appearance.

The sky began worsening by 2:00 am so most of us went to bed. Was the party over? Oh no! Around 5:00 am my trailer started rocking back and forth to fierce winds. A few minutes later the bottom dropped out. It was raining so hard the visibility had dropped to zero. That was one unexpected strong thunderstorm! I was very concerned that the young kids sleeping in tents would be frightened by the heavy winds, strong lighting and ear-shattering thunder. Fortunately, when I inquired the next morning I was told the cedar trees had blocked most of the wind. Thank goodness for that because the winds at my unsheltered camper by the water's edge



Chow time!



NOT a meteor shower!



June 2010

BBAA Events	Special Outreach	Astronomical Events
03 BBAA Monthly Mtg at Plaza MS		
04 Skywatch at NWRP		04 Last Quarter
12 Nightwatch at Chippokes		12 New Moon
17 Library Astronomy at Bayside, VB		
18 Nighthike at NWRP		19 First Quarter
21 Library Astronomy at Pungo/Bkwtr		
	22 Boardwalk Astronomy	26 Full Moon



Sneak Peak into July
Meeting to be held at BBAA Summer Picnic
 07/02 Skywatch at NWRP
 07/10 Nightwatch at Chippokes
 07/16 Nighthike at NWRP
 07/19 Library Astronomy at Kempsville
 07/20 Boardwalk Astronomy

The August BBAA monthly meetings will NOT be held at Tidewater Community College. Please check the BBAA web site and/or the Backbayastro Yahoo Group and calendar for the announcement of the locations for the June 3 and August 5 meetings.

The July meeting will be the annual BBAA family picnic at Northwest River Park, July 17, 2010.