



EPHEMERALS - AUGUST 2007

| DATE | WHEN | WHAT & WHERE |
|------|-------|--|
| 2 | 7:30p | BBAA Meeting @ COX in Chesapeake |
| 3 | Dusk | Skywatch @ NWRP Equestrian Area |
| 11 | Dusk | Nightwatch @ Chippokes Plantation |
| 17 | 7:00p | Nighthike @ NWRP Ranger's Station |
| 18 | 7:30p | Garden Stars @ Norfolk Botanical Gardens |
| | | Quiet |
| | | Month |
| | | Indeed! |

LOOKING UP

Hello All,

Our annual BBAA Picnic on Saturday, July 14th at NWRP was a hit. Hot dogs, hamburgers, side dishes, drinks and deserts, uhm-uhm!. I would like to report that the high noon showdown at the OK coral brought all kinds of neat looking guns. Water guns that is. You never seen so many "adults" running around with squirt guns acting like little kids, you would have thought, these are astronomers? I was mending a wound and couldn't join in, but wait till next year.

Kind of a bad month for some of us, Cliff in the hospital with pneumonia, Taylor for her blood sugar, Bruce with a hip replacement and me, had to have my gall bladder out. We all managed to get through and on the mend. Our August meeting will be this Thursday, Aug. 2nd 2007 at Cox Communication in Chesapeake, and we will be voting on changes to the by-

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laws.

The next two nights bring Skywatch and Cloverwatch, followed by Nightwatch at NWRP the following Saturday. The 8th through the 12th is the "Almost Heaven Star Party" in W. Va. Hope to see everyone at the next meeting.

Dale Carey

IMPORTANT NOTICE!

A proposition for amending the club constitution to allow a free associate membership to be offered to youngsters was discussed at the May meeting. Attending members discussed the language of the amendment which appears later in the newsletter to be read by the general membership for approval or rejection by popular vote in August. Important details inside on page 6. **CHANGES!!!!!!**

THE BACK BAY AMATEUR ASTRONOMER'S OBSERVER

JULY'S MEETING MINUTES

The July meeting of the Back Bay Amateur Astronomers was called to order by President Dale Carey on Saturday July 12th, 2007 at sometime between 11:00 AM and 3:00 PM during the annual BBAA summer picnic at the Northwest River Park in Chesapeake.

Members in Attendance: There were numerous people in attendance at the summer picnic, about 26 people were counted which was a far cry from the fifty plus who signed up on the Yahoo database. An Attendance was not taken as there was not enough time between eating and dripping. It is very difficult for the secretary to write when he is dripping all over the pad of paper. Guests included the park staff who enjoyed their fill of grub.

Treasurer's Report: Treasurer Barbara Weiner reported that we have money.

Secretary's Report: Chuck Jagow reported that he still thinks we have some members.

Astronomical League Correspondent's Report: Georgie mumbled something under her towel.

Old Business: No one spoke up.

New Business: Still quiet.

Rapid Response Robotic Telescope Project Report: Quiet like a church mouse it was.

Presentation: The water battle waged for hours, but took a break for "**The Wedding**" and then continued on until nearly close of business.

In Conclusion: The meeting was adjourned in about eight minutes, give or take a quarter hour.

Chuck Jagow

The Observer's Corner

Jul-14-07 After a night of clouds, I woke up at 3:15 (not planning to) and looked out the window... Well when you can see stars you gotta do something. So I got up and looked at Uranus.

Under a clear sky with diminished sky glow (bars are closed) I greeted the fall constellations. If you haven't seen Andromeda in a bino viewer you need to. Most deep sky objects are not good in stereo but Andromeda and the double cluster are two that are (along with M27). The enhanced contrast really brings out the disk of the galaxy. Mars was coming up so time to test out the bins on the red planet. Seeing was fair to good and some albedo features are returning to Mars. The planet was surprisingly good in stereo and I will probably use the bins for observing Mars this year. The four inch does well using all my Martian filters including the deep red. I thought that it might be a shade too dark for the aperture but it does alright. For you new planetary/lunar observers; on the subject of filters I tend to use them as little as possible. Most filters have poor optical quality glass which distorts detail but for some things they are useful. I use none on the moon, preferring to cut light using the bino viewers. This could be a problem if you can't or don't have bino viewers. If not I suck it up and go blind! I personally use nothing on Jupiter either. My experience is that filters may enhance contrast of bands but you lose all detail in the bands which is a bad trade off. Mars on the other hand is one place where filters make all the difference. Without filters you miss out when it comes to Mars. Red or Orange for Albedo. Light Blue for clouds and hazes.

Mark Ost

=====
May-28-07 Thanks to the 15 or 16 people who made it to my Blue Moon Star Party Saturday night, and hats off in particular to Chuck & Karen Jagow for feeding all of us top grade steaks!

Although not very clear, it was an excellent site for our picnic at my camping trailer site, a few yards from the edge of the Currituck Sound. While still daylight we had a nice view of Mercury and Venus in my 100 mm f/8 refractor. We also looked at the very blue moon. The panoramic sunset was beautiful. The sky had been clear all day but as night fell the transparency went down to 2 or 3 out of 10, although seeing was at least 9/10. The transparency didn't improve until about 2:00 am. By that time I was pretty toasted and every star looked double. The weather might not have been too clear but the warm, gentle breezes over the Currituck Sound were to die for.

After most people had left, five of us viewed about a 1/2-dozen tight, and/or faint doubles in Hercules. Our crowning achievement was splitting Antares with the 100 mm f/8 refractor. Only after each had observed it did we discuss the P.A., and we said the same thing! Pretty good, huh.

By night's end it was only Ted and Georgie and I remaining. I showed them just ONE MORE object before letting them go. By that time the clock had struck 2:45 AM. But wait, "I have just one more object to show you before you leave!!"

Kent Blackwell



Omit Needless Bytes!

by Patrick Barry and Tony Phillips

Now is an exciting time for space enthusiasts. In the history of the Space Age, there have never been so many missions “out there” at once. NASA has, for example, robots on Mars, satellites orbiting Mars, a spacecraft circling Saturn, probes en route to Pluto and Mercury—and four spacecraft, the two Voyagers and the two Pioneers, are exiting the solar system altogether.

It’s wonderful, but it is also creating a challenge.

The Deep Space Network that NASA uses to communicate with distant probes is becoming overtaxed. Status reports and data transmissions are coming in from all over the solar system—and there’s only so much time to listen. Expanding the network would be expensive, so it would be nice if these probes could learn to communicate with greater brevity. But how?

Solving problems like this is why NASA created the New Millennium Program (NMP). The goal of NMP is to flight-test experimental hardware and software for future space missions. In 1998, for instance, NMP launched an experimental spacecraft called Deep Space 1 that carried a suite of new technologies, including a new kind of communication system known as Beacon Monitor.

The system leverages the fact that for most of a probe's

long voyage to a distant planet or asteroid or comet, it's not doing very much. There's little to report. During that time, mission scientists usually only need to know whether the spacecraft is in good health.

“If you don't need to transmit a full data stream, if you only need some basic state information, then you can use a much simpler transmission system,” notes Henry Hotz, an engineer at NASA's Jet Propulsion Laboratory who worked on Beacon Monitor for Deep Space 1. So instead of beaming back complete data about the spacecraft's operation, Beacon Monitor uses sophisticated software in the probe's onboard computer to boil that data down to a single “diagnosis.” It then uses a low-power antenna to transmit that diagnosis as one of four simple radio tones, signifying “all clear,” “need some attention whenever you can,” “need attention soon,” or “I'm in big trouble—need attention right now!”

“These simple tones are much easier to detect from Earth than complex data streams, so the mission needs far less of the network's valuable time and bandwidth,” says Hotz. After being tested on Deep Space 1, Beacon Monitor was approved for the New Horizons mission, currently on its way to Pluto, beaming back a simple beacon as it goes.

Discover more about Beacon Monitor technology, as well as other technologies, on the NMP Technology Validation Reports page, <http://nmp-techval-reports.jpl.nasa.gov>.

Image Caption:

This artist's concept shows the New Horizons spacecraft during its planned encounter with Pluto and its moon, Charon. The spacecraft is currently using the Beacon Monitor system on its way to Pluto.



THE BACK BAY AMATEUR ASTRONOMER'S OBSERVER

B B A A I N F O

The BBAA meet the first Thursday of every month. While school is in session we meet at the VA Beach TCC campus in the Pungo building. Summer meetings are usually held at the Chesapeake COX campus. The August meeting will be on Thursday August 2nd at 7:30 PM at the Cox Communications campus in Chesapeake.

WHERE IS THE MEETING?

TIDEWATER COMMUNITY COLLEGE CAMPUS

The TCC Campus is located in Virginia Beach off of Princess Anne road. The following should help you locate the campus.

FROM Interstate I-64:

Proceed to the I64 / I264 junction and take I264 East .
Take the S. Independence Exit, 17A, right hand lane
(.000000048134 AU).

Turn LEFT onto Princess Anne road
(.000000010322 AU).

Turn LEFT onto Community College Place
(.000000002131 AU).

At the Stop Sign turn right and follow the road around to the left and park in one of the parking lots.

The meeting is held in the Pungo Building which is on the right hand side of the pathway that splits the two major parking lots. The Astronomy classroom is in the far back right hand corner of the building.

COX COMMUNICATIONS CAMPUS

The COX Communications Campus is located in Chesapeake's Greenbrier section. The following should help you locate the facility.

FROM Interstate I-64:

Take exit 289B (between the Indian River & Battlefield exits).
South on Greenbrier Parkway (.7382 miles).
Turn RIGHT onto Eden Way West (.9231 miles).
Turn RIGHT on Crossways Blvd (.88901 miles).
Turn Right into the Cox Campus

The meeting is usually held in the Silver room located on the North side of the facility. Enter and tell the guard that you are with the BBAA and they will issue a badge and direct you to the room.

BBAA INTERNET LINKS

BBAA WEB SITE

<http://groups.hamptonroads.com/bbaa/>

YAHOO GROUP

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

BBAA OBSERVER NEWSLETTER

<http://www.backbayastro.org/newsletters/newsletter.shtml>

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What do you want to do?

OBSERVER INFO

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 17th of August for the September issue. Please submit all items to:

ObserverBBAA@cox.net / chuck@jagowds.com

OR

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

The Heart of America Star Party

It was June 14th, 2007; I was attending the Heart of America Star Party outside of Butler Mo. Oh, this looked like a great week. Out in the middle of nowhere, bathrooms, hot showers and food. I was ready with my camera to document the whole trip. This club has done what all clubs aspire to do. Buy their own land way away from city lights and start making it the way you want it. Building shelters, and putting down gravel for roads, having electricity installed on the field with a bunch of outlets everywhere. This is going to be one nice place, and I am sure the popularity will only grow.

I had gotten up that morning and decided to take a motorcycle ride. I had brought my Honda 1100 Shadow on the trailer to give me something to do during the days. This was open country, what all riders look for. Back country roads, paved with only dirt roads crossing only once in a while. Slow rolling hills, sunshine, 80 degrees, sounds like a great way to spend the day. I had been riding for about an hour and a half, taking pictures of small towns, old rail lines, and open ranges. I was out in the middle of nowhere, my cell wasn't even usable. Doing about 40 mph I saw a curve to my left a little way in front of me. As I leaned left, there it was, a Wolf, at least that was the first thing that I could think of, large long nose, brown and gray, and he was at full throttle going across the road, As I jammed on the brake I think I felt the front wheel graze his side, I didn't hit him but it sat me up just enough where I now was running off the road on my right. The road turned to the left and I was going straight, in my head I remember, intersection, dirt roads, stop sign on 4 x 4 post, bike sliding in ditch (about 3 foot deep), grass making me slide, hold tight.

I could see that stop sign on a 4 x 4 post coming at me, but there was nothing I could do, Bang, I'll always remember that sound, the sound of the sign hitting the windshield.

I lay in the weeds looking up, I could hear nothing. Don't know how I got up, but I actually tried to lift my bike up when the pain in my chest made me stop. I remember walking out of the ditch and standing at the intersection. Could see no houses and I knew I was out in the middle of nowhere land, I just stood, now unable to move. I could see where I ran off the road, down in a ditch, up the embankment, no tire marks through the intersection? On the other side of the intersection I saw the 4 x 4 post, broken, lying in the bushes. There were no marks going to the sign? Only the flattened weeds behind the sign. Wow, I must have went airborne coming out of that ditch on one side of the road, hit the sign and into the bushes on the other side of the intersection. I noticed that my broken headlight had grass in it. But why was dirt sticking out of the rear taillight also?

The bike looks like it dove into the ground, from both directions. Dang, this thing dove headfirst, then bounced up, turned and landed on it rear fender, bounced and landed facing the opposite direction in the bushes. Where was I when all this was going on, I have no idea. After 15 minutes I knew it might be awhile before anyone drove by out here, my cell said, "no service". I reached in

my pockets and also noticed my wallet was not in my back pocket. Great, my wallet is somewhere in those sticker bushes. A car, I saw a car coming, I shuffled out to the middle of the intersection and watched as a little old lady just drove on by. "Help" I said as I saw her looking at me, no sound came out, just the thought, "help". Dang, I hung my head as she motored on down the road. As I looked down I saw that my shirt had blood all down the front and I still had my helmet on. No wonder she didn't stop. I removed the helmet, and let it drop to the ground. It was about 20 minutes later when an old truck with 2 women and an old man drove up. I saw them stop and look at me, I raised my head, "help", I whispered.

You ok? One asked, but I couldn't answer. They did not have a cell phone and one of them was going to drive back to their house and make a call when a UPS truck pulled up. He called for help, then with the other man tried to get my bike out of the weeds. It was just too tangled in the weeds to try and move it. I said; let the tow truck driver worry about it.

Everyone looked for my wallet but it had just vanished. I don't know how long it took for the ambulance to arrive, but by the time they got there I could not even take a step. They strapped me to a board and lowered me into the vehicle. The ride to the hospital seemed to take forever and every bump was a knife in the chest. X-rays - MRI's, blood tests, and a battery of tests before they would give me anything for pain. Somehow I managed to call Connie although I don't remember. The report said 3 compound breaks to the ribs, 2 breaks in collar bone, dislocation of right and possible left shoulders, extensive tears to ligaments and muscles along the neck area, bruised lung and chest. Both arms were black and blue from the shoulders to my elbows, and over half of my chest was black and blue. On top of all this my pre existing problem with my gall bladder started acting up. One of the Doctors that read the report said he has read autopsies that weren't this bad.

I awoke the next day with Rick Singmaster standing at the end of my bed. He lives not to far from the site and is a regular there. We had just been talking about motorcycles the day before, he rides what else, a Harley. Rick's Starmaster scopes are well known in the astronomy world. Later that day several members of the Astronomical Society of Kansas City showed up to see for themselves that I was still kicking. I wish I could say just who it was that showed but I don't remember alot of what was going on, probably from the pain meds. I know this, the day I was released from the hospital they had already gone into town and retrieved my broken bike and had brought it to the site. They sat me down and said, "What do you need us to do". Wow, they tied my bike in the trailer, packed up my equipment, and got everything in order so all I had to do is go. All I had to do was drive to Kansas City, a friend of mine flew in to drive me home. The astronomy world seems to always draw great crowds and good people, but I need to say this, Thank You to the members from the Astronomical Society of Kansas City for helping a fellow astronomer in a crises situation. They took this out of town guest, and looked after me, helped me, treated me like one of their own. Sounds like our club, don't it? From president to president, from club to club, from member to member, thank you.

Dale Carey

THE BACK BAY AMATEUR ASTRONOMER'S OBSERVER

PROPOSED AMENDMENT TO THE BBAA CONSTITUTION

During the April BBAA meeting it was discussed to setup some form of a youth membership for the club. Initially it was envisioned as a free membership for kids to encourage young people's interest in astronomy. Ted Forte crafted the draft of the changes and at the May meeting the recommended changes were presented and hashed over until all were pretty much in agreement that it was sound.

The changes have been presented to the membership for two months in the Newsletter and now they will be voted on by the membership at the August meeting.

Since the meetings draw only about a third of the membership at any time, a special email campaign will be conducted the week of the meeting to solicit the member's vote upon the subject. The club Secretary shall conduct the email voting campaign. An email ballot will be sent to all members. Each member will be asked to return the ballot prior to the meeting.

Any email ballot not received back prior to the August meeting shall be counted as "IN FAVOR" of the change to the BBAA constitution.

The following text represents the proposed changes to the BBAA Constitution with the changes in red:

ARTICLE III - MEMBERSHIP

Section 1. Types of Membership. Membership shall be of **three types.**

- a. Regular Membership
- b. Associate Membership
- c. Honorary Membership

Section 2. Eligibility. Subject to the limitations contained in this and other Articles of the Constitution and By-laws, a person with an interest in astronomy or a related science is eligible for membership. The BBAA shall not discriminate with regard to age, sex, race, creed or national origin.

Section 3. Regular Membership. Upon payment of annual dues a member becomes a Regular Member for a period of twelve months. A regular member shall be entitled to hold

office in the Organization, vote on Organization matters and receive the Organization publications. Directly related family members of the regular member shall be permitted to participate in meetings and other activities, but shall not be entitled to hold office in the Organization or vote **without payment of annual dues.**

Section 4. Associate Membership. Any person under the age of 18 shall, upon application, be an Associate Member of the organization without payment of annual dues. Associate membership shall remain in force until the person attains their 18th birthday or upon graduation from high school. Associate members shall be entitled to participate in meetings and other activities, but shall not be entitled to hold office in the Organization or vote. Associate members shall not be counted for purposes of determining a quorum or for determining the number of members required to achieve an approval percentage of members. Organization publications may not be mailed to Associate Members at club expense. Upon payment of partial dues equal to the current Astronomical League dues, an Associate Member shall be reported to the League as a Regular Member, but shall have no other privileges of Regular Membership without payment of full annual dues.

Section 5. Honorary Membership. Any individual nominated and approved by majority vote at a regular meeting in which a quorum as defined by Article II Section 2 of the organization By-Laws is present, shall be considered an Honorary Member for life. Honorary Members shall have all the rights and privileges of Regular Members without payment of dues.

Section 6. Guests. Meetings are open to the public. Guests are invited to attend Organization meetings, but shall not be entitled to hold office in the Organization, vote on Organization matters or receive the Organization publications.

Section 7. Expelling of Members. The elected officers of the Organization shall have the power to expel any member by majority vote of the officers for conduct damaging to the property or reputation of the BBAA or its members. Failure to pay financial obligations due the Organization shall result in termination of membership.

Section 8. Disposition of Dues and Fees. Any member who resigns or is expelled from the Organization shall also forfeit dues, fees or money paid to the Organization, subject to waiver by a majority vote of the Organization Officers.

COME TO THE MEETING
AND VOTE!

Saturn Turns 60

By DC Agle

Scientists have recently discovered that the planet Saturn is turning 60 –not years, but moons.

"We detected the 60th moon orbiting Saturn using the Cassini spacecraft's powerful wide-angle camera," said Carl Murray, a Cassini imaging team scientist from Queen Mary, University of London. "I was looking at images of the region near the Saturnian moons Methone and Pallene and something caught my eye."

The newly discovered moon first appeared as a very faint dot in a series of images Cassini took of the Saturnian ring system on May 30 of this year. After the initial detection, Murray and fellow Cassini imaging scientists played interplanetary detective, searching for clues of the new moon in the voluminous library of Cassini images to date.

The Cassini imaging team's legwork paid off. They were able to locate numerous additional detections, spanning from June 2004 to June 2007. "With these new data sets we were able to establish a good orbit for the new moon," said Murray. "Knowing where the moons are at all times is important to the Cassini mission for several reasons."

One of the most important reasons for Cassini to chronicle these previously unknown space rocks is so the spacecraft itself does not run into them. Another reason is each discovery helps provide a better understanding about how Saturn's ring system and all its billions upon billions of parts work and interact together. Finally, a discovery of a moon is important because with this new knowledge, the Cassini mission planners and science team can plan to perform science experiments during future observations if and when the opportunity presents itself.

What of this new, 60th discovered moon of Saturn? Cassini scientists believe "Frank" (the working name for the moon until another, perhaps, more appropriate one is found) is about 1.2 miles (2 kilometers) wide and, like so many of its neighbors, is made mostly of ice and rock. The moon's location in the Saturnian sky is between the orbits of Methone and Pallene. It is the fifth moon discovered by the Cassini imaging team.

"When the Cassini mission launched back in 1997, we knew of only 18 moons orbiting Saturn," said Murray. "Now, between Earth-based telescopes and Cassini we have more than tripled that number – and each and every new discovery adds another piece to the puzzle and becomes another new world to explore."

Murray and his colleagues may get the chance to explore Saturn's 60th moon. The Cassini spacecraft's trajectory will put it within 7,300 miles (11,700 kilometers) in December of 2009.

RRRT UPDATE

Here is an update on the RRRT. All the necessary preparations required prior to telescope installation are now complete and we are ready for telescope installation. OGS is scheduled to install the telescope on 23-25 July. If the weather cooperates they should have the scope polar aligned and ready to turn over before they leave. We then have 60 days to complete acceptance testing.

Kevin Weiner and I accompanied Dr Salgado to Fan on Saturday and Sunday 30 June - 1 July and again on Friday July 6 through Sunday July 8. Dr McDavid worked with us all this weekend too. Over those two weekends we set up the control room, made repairs to the Dome, dressed and finished the network cabling and configured the network. We also installed the cloud sensor, inspected the wiring, tested the dome motors, hooked up the telephone and prepared the scaffolding for the telescope installation.

Barb Weiner accompanied us this weekend too. She made sure that we ate well.

We could not have done it without her!! Thanks Barb!

For those that might not know, the dome has a small fit problem most likely caused by the long period of storage. The dome segment sections apparently warped while sitting on the pallets for so long, affecting their fit. When the dome closes fully, there is a small gap where the dome halves meet over about a third of the sealing surface. It was decided that the most expedient fix was to install a second, larger rubber seal over the existing seal to extend over the gap. We were successful in installing the 23 foot strip of six inch rubber, and it appears that the gap is covered. Time and rain storms will tell the tale.

There is a lot more to do after the telescope is installed. We need to install the dome camera, and automate the dome AC unit. We have to install UPS systems and some other monitoring and safety type issues must be addressed. Then everything must start to work together. During acceptance testing we must test all the advertised mechanical parameters of the telescope and critically evaluate the optics. Bob Denny of ACP will work with us to complete the automation of the scope and auxiliary equipment over the next two months.

For more than the first year, the scope will require a human (or two) onsite during operation. We will be asking BBAA members to volunteer to "man the box" and monitor telescope operation.

Watch for more updates over the next few weeks. I'll post some photos showing the most recent efforts soon.

Ted Forte



AUGUST 2007

| DBAA EVENTS | SPECIAL OUTREACH | ASTRONOMICAL EVENTS |
|--|------------------|---------------------|
| 03 = SKYWATCH @ NWRP, Dusk | | |
| 04 = CLOVERWATCH @ Franklin Fairgrounds, Dusk CANCELLED | | 05 = LAST QUARTER |
| 11 = NIGHTWATCH @ Chippokes State Park, Dusk | | 12 = NEW MOON |
| | | |
| 17 = NIGHT HIKE @ NWRP Ranger Station, 7:00 PM, Ted Forte POC | | |
| 18 = GARDENSTARS @ The Norfolk Botanical Gardens, 7:00 PM | | 20 = FIRST QUARTER |
| | | |
| | | 28 = FULL MOON |