

Upcoming Events

Board of Directors Meeting

August 4th at the Cumberland Valley Girl Scout Council Building
- 7:30 pm

September 1st at the Cumberland Valley Girl Scout Council Building
- 7:30 pm

Membership Meeting *(note new dates and location)*

August 17th at the Adventure Science Center - 7:30 pm

September 21st at the Cumberland Valley Girl Scout Council Building - 7:30 pm

Star Parties

August 6th - BSAS Public Star Party at Edwin Warner Park

August 26-27th - BSAS Private Annual Retreat at Spot Observatory

September 23rd - BSAS Public Star Party Bells Bend Outdoor Nature Center

September 24th - BSAS Private Star Party at mile marker 435.5

In this issue:

President's Message	1
Observing Highlights	2
Book Review	3
Board Meeting Minutes	4
Monthly Meeting Minutes	5
Space Place	6
Member Contributions	7
About Our Organization	8



Astronomy Outreach Programs at Vanderbilt University

Wednesday, August 17, 2011
Adventure Science Center
7:30 pm



Dr. Erica Grundstrom will be giving an overview of various astronomy outreach programs of the Physics and Astronomy department at Vanderbilt University.



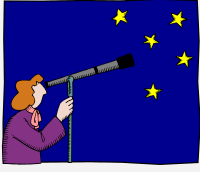
From The President

Greetings and clear skies from your BSAS president. This month brings momentous changes to the BSAS. One of those changes we have been talking about for a couple of months: the change in our monthly public meeting day from the third Thursday to the third Wednesday of each month. Wednesday August 17 will be our first monthly meeting held on a Wednesday. I hope everyone has appropriately marked their calendars and remembers the change when the day of the meeting rolls around. The second change also involves our monthly public meeting, this time to the location.

As I have mentioned in the last couple of "From the President" messages, the BSAS has been involved in negotiating a Memorandum of Understanding with the Adventure Science Center over the last several months. Those negotiations were not easy and they have finally been brought to a close. By a unanimous vote the board of directors has decided not to sign the MOU that was negotiated with the ASC. The board felt that the agreement and the associated rental policy which was to apply to our Christmas pot luck meeting placed too many restrictions and requirements on the club.

There isn't enough space in this message to explain all the issues the board had with the MOU so if you would like to know the details, feel free to ask any of the board members and they will supply you with an earful. Since we are not signing the MOU, we must seek a new location for our monthly public meeting. The board of directors has met at the Girl Scout Headquarters on Granny White Pike and Harding Place for a number of years. The Girl Scouts have agreed to let us use one of their large meeting rooms for our monthly public meeting beginning in September and we have reserved the room through December 2012. So, beginning Wednesday September 21, the BSAS will hold our monthly public meetings at the Girl Scout Headquarters on Granny White Pike and Harding Place on the third Wednesday of each month. We will put maps and directions to the meeting place on the BSAS website and in next month's newsletter so hopefully the change in venue will go smoothly.

Continued on Page 2



"Man must rise above the Earth – to the top of the atmosphere and beyond – for only thus will he fully understand the world in which he lives."

Socrates
470-399 BC

FREE TELESCOPES!

Yes, you did read that correctly. The BSAS Equipment & Facilities Committee has free telescopes ranging in size from 2.6" to 8" that current members can actually have to use for up to 60 days at a time.

We also have some other items in the loaner program such as a photometer, H-alpha solar telescope, educational CDs, tapes, DVDs, and books.

Some restrictions apply, and a waiting list may be applicable in some cases. The BSAS Equipment Committee will not be held responsible for lost sleep or other problems arising from use of this excellent astronomy gear.

For information on what equipment is currently available, contact Lonnie Puterbaugh at (615) 661-9540.

Observing Highlights all times listed are Central Standard Time

LUNAR PHASES

August 2011

08/06 FIRST Quarter
08/13 FULL Moon
08/21 LAST Quarter
08/29 NEW Moon

September 2011

09/04 FIRST Quarter
09/12 FULL Moon
09/20 LAST Quarter
09/27 NEW Moon

OBJECTS VISIBLE THIS MONTH

Messier Objects:

Globular Clusters:
M9, M10, M12, M19, M62, M107

Open Clusters:
M6, M7, M21, M23

Nebulae:

M8 (The Lagoon Nebula), M20 (The Trifid Nebula)

From the President, cont.

I would like the separation from the Adventure Science Center to be an amicable one. The ASC is a valuable resource for the city of Nashville and I would hope that the BSAS can continue friendly relations with them. They host an annual Astronomy Day celebration and I would like to see the BSAS continue supplying volunteers to that event and to star parties the ASC hosts on their properties. We will continue hosting star parties at parks around the metropolitan Nashville area and I hope the ASC will continue to advertise those star parties on their website. We may no longer meet there but there are still a number of ways that the BSAS and ASC can cooperate with each other to the benefit of Nashville. Only time will tell how our relationship with the Adventure Science Center evolves but it is my wish that the evolution of that relationship is pleasant.

Speaking of star parties, our next one is a private event that former president Mark Manner has hosted at his Spot Observatory in Hickman County for the last several years. Sometimes called our Fall Retreat, it comes a little early this year so we will simply call it the BSAS Retreat. It happens on the weekend of August 26/27. Most of the activities will take place Saturday August 27 but if you plan on going out Friday August 26 and camping overnight you should contact Mark ahead of time. A link to Mark's website can be found in the Calendar on the BSAS website and you can contact him through his website.

Finally, our last public meeting at the Adventure Science Center will be Wednesday August 17. Our speaker is Dr. Erika Grundstrom of Vanderbilt University. Dr. Grundstrom heads up the astronomy outreach programs for the Vanderbilt department of physics & astronomy. Her talk should be an interesting one so please make a point to be there. See you then.

Clear Skies!

Dr. Spencer Buckner
President

Dragonfly: NASA and the Crisis Aboard Mir

Book Review by Robin Byrne

It's time once again to venture over to the ol' bookcase and find an astronomy/space book to review. This time, the book is "Dragonfly: NASA and the Crisis Aboard Mir" written by Bryan Burrough. This book is a little dated, having been published in 1998. However, it was written shortly after the events discussed in the book, so the information gleaned from interviews was fresh on the minds of all involved.

The time frame is 1992 to 1997. The Shuttle program seems directionless, there's vague talk of a space station sometime in the future, but congress continues to cut NASA's budget. Meanwhile, with the fall of the Soviet Union, the Russian space program is strapped for cash; trying to maintain their image of excellence in space, they cling to their one big success: the Mir space station. In an effort to bolster U.S. - Russian relations, a political decision is made to fly U.S. astronauts aboard Mir. Ostensibly, the reasoning is that we will learn about long duration space flight prior to building our own space station. Meanwhile, we will pay for the opportunity for our astronauts to make the flight, thus helping Russia financially. It was later in the process, as more cuts were made in NASA's budget, that the idea of an International Space Station was also incorporated into the deal. If we were to build a space station along with Russia, the Shuttle-Mir missions will, presumably, help with the logistics of such an undertaking.

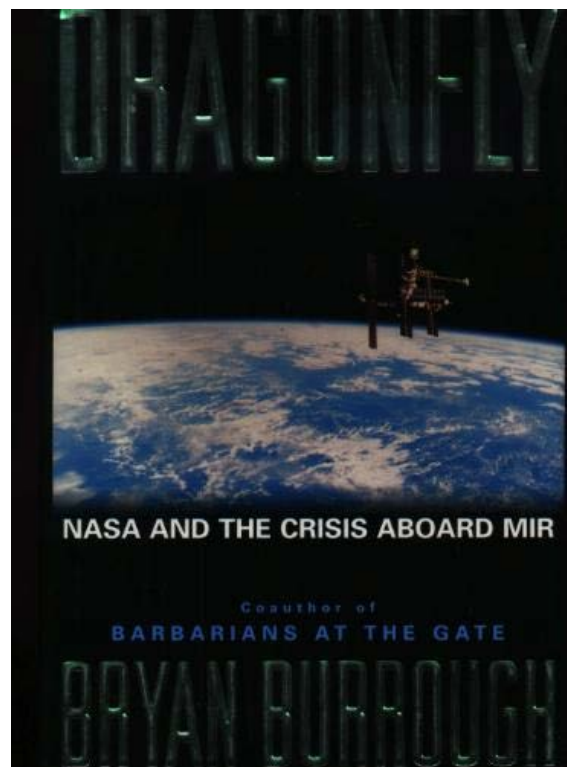
The agreement was simple: we pay \$400 million for the opportunity of having seven astronauts live on Mir for approximately four months each. The first astronauts and support personnel were sent to Russia for training in 1994. All of the astronauts were required to learn to speak Russian, as well as learn some of the basic principles of Mir operations. They also underwent physical training with their future cosmonaut crew mates.

However, what we see, as the story unfolds, is that the differences between the two cultures will create difficulties every step of the way. The Russians were confident of their superiority, and didn't fully trust the Americans. Meanwhile, the attitude of the people at NASA about the program was unenthusiastic. They felt that Washington was going too far in dictating space program missions, and very few people wanted to be a part of it. And, despite lessons, presumably, learned from the Challenger explosion, there was still an environment in which dissenting voices and concerns were stifled if they conflicted with larger goals. It was a disaster waiting to happen.

My one complaint with the book is that it was not presented in chronological order. For dramatic purposes, the story begins with the fourth Shuttle-Mir mission with Jerry Linenger aboard Mir. It was during this flight that the crew had to contend with a fire on board, in addition to a near miss with a Progress supply ship. It is only after the telling of this harrowing tale, that Burrough goes back to 1992 and discusses the development of the program and the early stages leading up to the actual flights. After the backstory, the tale is told of Mike Foale's flight, including the collision with a Progress supply ship and decompression of one Mir module.

The saga of the Shuttle-Mir missions is a cautionary tale on so many levels. On the American side: so much emphasis was placed on the political goals, that no one paid attention to the practical situation. We went in, blindly believing that the Russian program was organized the same as NASA, that we could send our people over there, and they would be just fine. So few people were involved, that the majority of people at NASA had no idea what was going on. Those who were involved were inexperienced, and ill-equipped to deal with the Russians, let alone the very serious problems that arose. Meanwhile, the cavalier Russian attitude toward astronaut and cosmonaut safety was that they are expendable. The spaceship was more important, and should they die trying to save it, well ... they died heroes. The cosmonauts were also willing to take risks, since they would get paid extra for each daring feat they accomplished. Add into the mix the financial incentive to keep the Americans happy, so that serious situations were being covered up or downplayed.

"Dragonfly" turned out to be not only an interesting history of some of the most serious accidents in space, but also an intriguing look at how much more dangerous space can be when politics and money become the prime goals. A lesson that has not yet been truly learned.



"Dragonfly: NASA and the Crisis Aboard Mir"
By Brian Burroughs

Publisher: Harpers Collins
ISBN: 978-0887307836

Board Meeting Minutes – July 7, 2011

Bob Rice, Secretary

The board of directors of the Barnard-Seyfert Astronomical Society (BSAS) met in regular session at the Cumberland Valley Girl Scout Council Building in Nashville, Tennessee on July 7, 2011. A sign-in sheet was passed around in lieu of a roll call. Board members Dr. Spencer Buckner, Steve Cobb, Jana Ruth Ford, Bill Griswold, Bob Norling, Curt Porter, Dr. Terry Reeves and Bob Rice were present. Board members Dr. Donna Hummell, Santos Lopez, Kris McCall, and Theo Wellington were absent. Past President Joe Boyd was present as a guest. A quorum being present, President Dr. Spencer Buckner called the meeting to order at 7:36 P.M.

Treasurer Bob Norling reported that the BSAS had \$2,166.23 in its regular checking account and \$407.36 in its equipment account. Dr. Spencer Buckner announced these upcoming events and star parties:

- Jul 23 – Public star party at Long Hunter State Park from 8:30 P.M. to 10:30 P.M.
- Jul 30 – Private star party at Natchez Trace Parkway mile marker 412 - sunset to whenever.
- Aug 06 – Public star party at the Warner Parks from 8:00 P.M. to 10:00 P.M.
- Aug 26 – BSAS Annual Retreat at Mark Manner's Spot Observatory – details to be announced.

Bob Rice relayed a request originally made to Joe Boyd from the Bowie Nature Park in nearby Fairview, TN asking the BSAS to host a star party there on September 30, 2011. Following a brief discussion, the board agreed to do so for that particular date and Dr. Spencer Buckner said that he would ask for volunteers at the upcoming July 21 membership meeting. Dr. Buckner also informed the board that the program for that meeting date would be a "What's Up?" presentation by BSAS members Dr. Terry Reeves and Steve Wheeler.

Dr. Spencer Buckner announced that he and Joe Boyd met with Susan Duvenhage, the President and Chief Executive Officer of the Adventure Science Center (ASC), approximately three weeks ago to continue discussing the Memorandum of Understanding (MOU) being drafted between that organization and the BSAS regarding the Society's use of their facilities. Dr. Buckner stated that, although several provisions were still being negotiated, a final agreement on this document was nearing completion. The board discussed at length both the latest draft MOU and the ASC's revised Private Event/Meeting Policies that contained several subjects referenced in the draft MOU. Items identified for additional discussion in the draft MOU included #2 and #4 under General Policies. Items identified for additional discussion in the ASC's Private Event/Meeting Policies included: #2 & #3 under General Policies; #2 under Staff; #2 under Parking And Transportation; and #2 under Food And Beverage. NOTE: copies of both documents are attached as addenda to these minutes. Dr. Buckner said that he would set up another meeting with Ms Duvenhage as soon as possible.

Dr. Spencer Buckner announced that, as approved by a previous online vote of the membership, the BSAS' membership meeting dates would change from the third Thursday evening of each month to the third Wednesday evening of each month starting with the August membership meeting that will be held on Wednesday, August 17 instead of on Thursday, August 18. Bob Rice said that he would contact all the speakers scheduled for our upcoming meetings to see if this change presented a problem for them. Dr. Buckner also noted that the board of directors would continue to meet on the first Thursday evening of each month through the end of 2011 but that he would see about changing this to the first Wednesday of each month for 2012.

Since there was no further business to discuss, President Dr. Spencer Buckner declared the meeting to be adjourned at 9:53 P.M.

OFFICERS

Dr. Spencer Buckner
President

Dr. Donna Hummell
Vice-President

Bob Rice
Secretary

Bob Norling
Treasurer

Directors at Large

Steve Cobb
Jana Ruth Ford
Bill Griswold
Santos Lopez
Curt Porter
Theo Wellington
Kris McCall (ex officio)

Steve Wheeler
Newsletter Editor
wsw261@hotmail.com

Our AUGUST monthly meeting will be held at:



The Adventure Science Center

**800 Fort Negley Blvd
Nashville, TN 37203**

Our SEPTEMBER monthly meeting will be held at:

The Cumberland Valley Girl Scout Council Building

**4522 Granny White Pike
Nashville, TN 37204**

Monthly Meeting Minutes – July 21, 2011

Curt Porter, BSAS Board Member

President Spencer Buckner brought the meeting to order at 7:35pm CDT. The Treasurer reported a balance of \$2204.48 in the general account and \$407.36 in the equipment fund.

Upcoming star parties include those open to the public at Long Hunter State Park on 23-JUL from 8:30 to 10:30 and Edwin Warner Park (Nashville) on the model airplane field, on 6-AUG, from 8:00 to 10:00. A private star party (BSAS members and guests) will be held at MM412 on the Natchez Trace on the evening of 30-JUL. The BSAS Annual Retreat will be held at the Spot Observatory on 26-27-AUG.

The August general meeting's speaker will be Erica Gundstrum of Vanderbilt University; the subject of the talk is untitled at this time.

The MOU between BSAS and the Adventure Science Center is still a work in progress and will be discussed at the BSAS Board of Directors meeting on 4-AUG 7:30 at the Girl Scouts building at Granny White Pk & Battery Ln, Nashville.

Bylaws revisions (7 pages) were brought up for discussion and motion to vote was made by Joe Boyd, second by Curt Porter, passed by voice vote without opposition. the BSAS wishes to thank Joe Boyd, Donna Hummel, and Bob Rice for their tireless efforts on this large, badly needed update to the BSAS Bylaws.

The night's presentation was, "What's Up - Summer 2011", by Terry Reeves and Steve Wheeler, the team gave a great survey of celestial objects ranging from those easy for a beginner to find, to the more challenging catches for the more advanced observers. A job well done!

With no more business, the meeting adjourned at 8:43pm. Informal discussion continued for a time afterward.

BSAS Affiliations

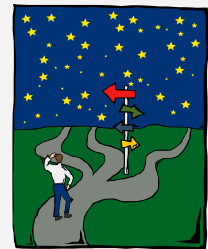
The Astronomical League
<http://www.astroleague.org/>



The Night Sky Network
<http://nightsky.jpl.nasa.gov/>



International Dark Sky Association
<http://www.darksky.org/>



The Adventure Science Center
<http://www.adventuresci.com>



New GOES-R to Give More Tornado Warning Time

Space Place Partners Article, July 2011
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."

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.

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 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>.

Member Contributions



Clearing the Tower - The Launch of STS 125

Image by Steve Wheeler

In honor of the end of the Space Shuttle program, I dug into the archives and picked this image of the launch of space shuttle Atlantis on 05-11-2009. The mission was STS 125 - the final servicing mission to the Hubble Space Telescope. I viewed it from the NASA causeway, approximately 6 miles from the launch pad.

I hope that everyone who had a desire to view a launch was able to have that opportunity – it was something I will never forget!

Become a Member of the BSAS!

Download and print the Application for membership from www.bsasnashville.com (Adobe® Acrobat Reader® required).

Then fill it out and bring it to the next monthly meeting or mail it along with your first year's membership dues to:

BSAS
P.O. Box 150713
Nashville, TN 37215-0713

Annual dues, which include membership in the BSAS and Astronomical League, and subscriptions to their newsletters, are:

- \$20** Individual
- \$30** Family
- \$15** Senior (+65)
- \$25** Senior Family (+65)
- \$12** Student*

* To qualify, you must be enrolled full time in an accredited institution or home schooled.

All memberships have a vote in BSAS elections and other membership votes,

Also included are subscriptions to the BSAS and Astronomical League newsletters.

IMPORTANT DUES INFORMATION

To find the expiration date for your current membership, visit our web site at <http://www.bsasnashville.com> and click the Renewals link.

There will be a two month grace period before any member's name is removed from the current distribution list.



We're on the Web!

See us at:
www.bsasnashville.com

About Our Organization

Organized in 1928, the Barnard-Seyfert Astronomical Society is an association of amateur and professional astronomers who have joined to share our knowledge and our love of the sky.

The BSAS meets on the third Wednesday of each month at the Cumberland Valley Girl Scout Council Building in Nashville. Experienced members or guest speakers talk about some aspect of astronomy or observing. Subjects range from how the universe first formed to how to build your own telescope. The meetings are informal and time is allotted for fellowship. You do not have to be a member to attend the meetings.

Membership entitles you to subscriptions to *Astronomy* and *Sky & Telescope* at reduced rates; the club's newsletter, the *Eclipse*, is sent to members monthly. BSAS members also receive membership in the Astronomical League, receiving their quarterly newsletter, the *Reflector*, discounts on all astronomical books, and many other benefits.

In addition to the meetings, BSAS also sponsors many public events, such as star parties and Astronomy Day; we go into the schools on occasion to hold star parties for the children and their parents. Often the public star parties are centered on a special astronomical event, such as a lunar eclipse or a planetary opposition.

Most information about BSAS and our activities may be found at www.bsasnashville.com. If you need more information, write to us at info@bsasnashville.com or call Dr. Spencer Buckner at (931) 221-6241.

**BARNARD-SEYFERT
ASTRONOMICAL SOCIETY**
PO BOX 150713
NASHVILLE, TN 37215-0713

