

The newsletter of the Barnard Seyfert Astronomical Society, PO Box 150713, Nashville, TN 37215-0713

Upcoming Events

Board of Directors Meeting

January 8th at the
Cumberland Valley Girl Scout
Council Building – 7:30 pm

Membership Meeting

January 15th at the
Adventure Science Center –
7:30 pm

Public Star Party

January 17th – Camp Boxwell
Boy Scout Astronomy
Jamboree (see page 2
Outreach Update for details)

Private Star Party

January 24th – mm 435.5 on
the Natchez Trace Parkway

Public Star Party

January 31st – 7:30-9:30 pm
Edwin Warner Park

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Monthly Membership Meeting

Thursday, 01/15/2009
Adventure Science Center
7:30 pm



Did you receive a telescope or some other astronomy gadget for Christmas? Do you have some questions on their setup or use? Bring them to the January meeting as BSAS Vice-president Dr. Spencer Buckner hosts an informal Q & A on *How to Use the Astronomy Toys You Got For Christmas*.

From The President



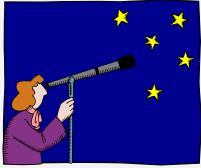
Well, another year has come and gone. I hope that you and yours have been having a joyful time during this season. This is the time when it is customary and proper for me to thank everyone who served the club in any capacity last year. Now, my memory is not what it once was, so I hope people will be forgiving if I forget to mention your contribution. First, I would like to thank last year's officers (Keith Burneson - Vice-president, Bob Rice - Secretary, Randy Smith - Treasurer) and board members (Spencer Buckner, Tony Campbell, JanaRuth Ford, Donna Hummell, Theo Wellington, Steve Wheeler, Bill Griswold - past President, and Kris McCall - ex officio). It was a pleasure working with each and every one of you.

I also want to thank the incoming officers (Spencer Buckner - Vice-president, Bob Rice - Secretary, Robert Norling - Treasurer) and board members (Tony Campbell, JanaRuth Ford, Donna Hummell, Kurt Porter, Theo Wellington, Steve Wheeler, Bill Griswold - past President, and Kris McCall - ex officio) for being willing to serve. I'm looking forward to the new year. I want to thank Pam Thomas and Steve Wheeler for their work in producing the Eclipse during the past year. Thanks are also due to Tony Campbell for his continuing work on the club web site. Finally, I would like to thank the Adventure Science Center and its staff for providing us with what is probably the perfect meeting place. (We should also include the generous donors who provided funds so that the new planetarium could be built.) Thanks also to Mark and Anne Manner for hosting the club last year at their home.

I also would like to thank Bob Rice for his work in making sure we had what we needed for December's pot luck dinner, and Charlie Warren for a fascinating presentation. Thanks also to those who donated items for the silent auction, and to the Science Center for setting up the tables in the room. (I hope I didn't miss anyone.)

The January meeting will be our now traditional "I got a new telescope/astronomy toy for Christmas! Now, how do I use this thing?" presentation. This is a meeting where we hope to have many people from outside of the club present. We are planning to have a shorter formal presentation this year so that we can break up into small groups with the goal of showing people how to use what they just got. I know that we won't be able to solve everyone's issues in the time allotted, but we will do what we can. Please, bring a friend.

Terry Reeves
President



The most incomprehensible thing about the universe is that it is comprehensible.

Albert Einstein
1879-1955

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

JANUARY 2009

- 01/03 Quadrantids meteor shower peak
- 01/04 FIRST Quarter Moon
- 01/08 BSAS Board of Directors Mtg., 7:30 pm, Girl Scout Office
- 01/10 FULL Moon
- 01/15 BSAS Monthly Meeting, 7:30 pm, ASC
- 01/17 LAST Quarter Moon, Camp Boxwell Boy Scout Astronomy Jamboree
- 01/24 Private Star Party – mm 435.5 Natchez Trace Pkwy
- 01/26 NEW Moon
- 01/31 Public Star Party – 7:30 - 9:30 pm, Edwin Warner Park

OBJECTS VISIBLE THIS MONTH

Messier Objects:

- Galaxies*
M33, M74, M77
- Open Clusters*
M103, M52, M76, M34

Planetary Nebulae

- M76 – The Little Dumbbell

Caldwell Objects:

- C22 – The Blue Snowball (PN)
- C23 – Galaxy (aka NGC 891)
- C39 – The Eskimo Nebula (PN)
- C46 – Hubble's Variable Nebula

Outreach Update *Terry Reeves, President*

Both the public and private star parties in December were clouded out. If nothing else, our hobby teaches us patience.

We have three star parties scheduled for January. The first is on Saturday, January 17, at Camp Boxwell. This is for an Astronomy Jamboree being held for 100 to 200 boy scouts. The purpose of the event is to try to get each of the scouts as far down the path to an Astronomy merit badge as possible. There will be classes given during the day. The star party part will start at 7:00 PM. You should plan to be there by 6:00 PM, although you may want to give yourself some spare time to find the site if you are not familiar with Boxwell. We may go as late as 11:00 PM. We may need to ask some of you to show specific objects so that merit badge requirements can be met. Supper will be served at 4:00 PM for those who come and set up early.

We will need a head count for those who want supper. Please, either send me an e-mail at terry.reeves@comcast.net or call me at (615)-833-6759. In order to get to Camp Boxwell, you take exit 232B off of I-40. (This is on the east side of Nashville.) This exit puts you on Highway 109. Take Highway 109 north towards Gallatin. About 5 miles south of Gallatin, you will turn at the Boxwell Reservation sign. This road leads to the Boxwell Reservation. The jamboree is in the Percy Dempsey camp. You should be able to follow the signs once you turn off of Highway 109.

The second star party is a private star party on Saturday, January 24, at the turnout at the 435.5 mile marker on the Natchez Trace. This is just south of where the Natchez Trace goes over Highway 96.

The third star party is a public star party on Saturday, January 31, from 7:30 PM to 9:30 PM at the Special Events Field at Edwin Warner Park. Please arrive at least 30 minutes before the star party starts. For safety reasons, you will not be able to drive onto the field after 7:00 PM.

Happy Birthday Wilhelm Wolf Beer

by Robin Byrne

This month we celebrate the life of an amateur astronomer who made tremendous contributions to our understanding of the Moon and Mars. Wilhelm Wolff Beer was born January 4, 1797 in Berlin in what was then known as Prussia. His youth was privileged with a good education, which influenced both his life and those of his brothers: Giacomo Meyerbeer (a composer) and Michael Beer (a poet). When Wilhelm was 16, he joined the military to fight against Napoleon. After a few years, he joined his father, working as a banker. When his father died in 1826, Wilhelm took over his position, heading the bank.

It was Beer's hobby of astronomy which eventually led to his meeting Johann Heinrich von Mädler. Orphaned at the age of 19 by an outbreak of typhus, Mädler found himself caring for his 3 sisters by working as a private tutor. A mutual friend, Alexander Humbolt (an explorer and naturalist) introduced Beer and Mädler, who quickly became good friends.

The friendship spurred Beer to build his own observatory in 1829 at his villa in Tiergarten, Berlin. Here he housed a 9.5 cm refractor made by Joseph von Fraunhofer. The previous year, during the opposition of Mars, Beer and Mädler closely studied the planet. By 1830, they had used their observations to create the first Mars globe.

Next they focused their attention on the Moon. From 1834 to 1836, they published in four volumes the first exact map of the Moon, titled "Mappa Selenographica." Using a scale of 34 inches for the Moon's diameter, for the first time the Moon was divided into four quadrants, bounded by the lunar equator and prime meridian. Two more publications in 1837, titled "Der Mond," provided measurements of the diameters of craters and elevations of mountains, as well as 130 new names for features, most of which are still used today. Upon completing this work, Beer and Mädler concluded that the Moon has no atmosphere or water, and that the features do not change. Up to this time, there was debate over whether the Moon was inhabited or not. Many believed that the maria were oceans and the highlands were land masses. Among those who believed the Moon was inhabited were Johann Bode and William Herschel. The work of Beer and Mädler helped to conclusively turn the tide in how people thought about the Moon.

Meanwhile, subsequent oppositions of Mars were not ignored. Beer and Mädler continued to study the red planet during 1832, 1835, and 1837. In 1840, they published "Physische Beobachtungen des Mars in der Erdnähe." This became the first true map of Mars. They were the first to use, what is now known as, Sinus Meridiani as the prime meridian for the planet. Using their observations, Beer and Mädler were able to calculate the rotation period of Mars as 24 hours, 37

minutes and 22.7 seconds, which is only 0.1 seconds from the currently accepted value.

Not long after this publication, Mädler became the director of the observatory at the University of Dorpat. Without Mädler's assistance, Beer spent less time with astronomy and became more of a community activist. He was instrumental in the development of a railway system in Prussia. He was also an advocate for the Jewish community in Berlin. Eventually, he entered politics, being elected to a seat in the Prussian Chamber of Deputies in 1846. In 1849, he was elected as an MP to the first Prussian Parliament. Beer also published a number of political pamphlets.

On March 27, 1850, Wilhelm Wolff Beer died. Over the years, his accomplishments have been honored with the naming of Beer crater on Mars (not far from Mädler crater), Beer crater on the Moon, and asteroid 1896 Beer.

Sometimes amateur astronomers are looked upon as being mere hobbyists. However, the lesson learned from the life of Wilhelm Beer is that astronomy is one of the few sciences in which amateurs can make significant contributions to our understanding of our solar system and universe as a whole. When we look at the contributions of Wilhelm Beer, we have much for which to be grateful.

References

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December 2008 Board Meeting Minutes

Bob Rice, Secretary

The board of directors of the Barnard-Seyfert Astronomical Society met in regular session at the Cumberland Valley Girl Scout Council Building in Nashville, Tennessee on December 4, 2008. A sign-in sheet was circulated in lieu of a roll call. Board members Dr. Spencer Buckner, Tony Campbell, JanaRuth Ford, Bill Griswold, Dr. Terry Reeves, Bob Rice, Randy Smith, and Steve Wheeler were present. Board members Keith Burneson, Dr. Donna Hummell, Kris McCall, and Theo Wellington were absent. Board members-elect Bob Norling and Curt Porter were also in attendance. A quorum being present, President Terry Reeves called the meeting to order at 7:30 P.M.

Treasurer Randy Smith reported that the Society's bank balance was \$1,997.43 and announced that he had three copies each of the Royal Astronomical Society of Canada's 2009 Observers Handbook and Kalmbach Publishing Corporation's Deep Space Mysteries Calendar for 2009 available for sale.

Dr. Terry Reeves announced that BSAS member and Amateur Astronomy magazine editor Charlie Warren would speak on "The Seven Wonders of the Universe" at our annual holiday dinner on December 18th. For our January meeting Dr. Reeves stated that Dr. Spencer Buckner would present "How To Use Your New Astronomy Toys" as an aid to beginners who received telescopes or other astronomical equipment during the holidays. This presentation will be more of a workshop than a formal lecture. Dr. Reeves said that the program for our February meeting would be another edition of the popular "What's Up?" series on seasonal features in the sky with the presenters to be announced later.

Dr. Terry Reeves reported that the December 18th holiday supper would be held at the Adventure Science Center (ASC) in the large meeting room on the first floor. Bob Rice volunteered to procure and bring the meat and supplies for the supper with instructions from the board to try to keep the expense below \$200.00. Dr. Terry Reeves announced these upcoming star parties: Warner Park on December 13th at 7:30 P.M. (public), Natchez Trace on December 20th (private), Natchez Trace on January 24th (private), Warner Park on January 31st (public), and Shelby Bottoms on February 28th (public).

Dr. Terry Reeves announced that the Boy Scouts would hold an Astronomy Jamboree with 150-200 attendees at Camp Boxwell on January 17, 2009. Dr. Reeves explained that BSAS members were invited to help the scouts earn astronomy merit badges and would have their supper provided. The board expressed a strong interest in assisting at the Jamboree and Dr. Reeves asked for a motion to adopt this as an official BSAS outreach activity. Dr. Spencer Buckner so moved and Steve Wheeler seconded his motion that subsequently passed by a unanimous voice vote.

Bill Griswold reported that the rent of \$10.00 per month was due to continue using the Cumberland Valley Girl Scout Council Building for board meetings during 2009 and moved that this be done. Dr. Spencer Buckner seconded this motion and, following a brief discussion, the board approved doing so by a unanimous voice vote.

Bill Griswold reported that the National Park Service had approved the BSAS' using the sites at mile markers 412 and 433.5 on the Natchez Trace Parkway for private star parties during 2009. Dr. Terry Reeves reported that Lonnie Puterbaugh had notified him that the Girl Scouts would hold an environmental gathering at Camp Sycamore on February 27-28, 2009 and suggested that this would be a good opportunity for a star party and outreach event. The board agreed and, following a brief discussion, decided that February 28th would be the best date with activities divided between star parties at Shelby Bottoms and at Camp Sycamore. Dr. Spencer Buckner put this decision into a motion that was seconded by Randy Smith and passed by the board with a unanimous voice vote.

Dr. Terry Reeves commented that so far there appeared to be very little interest in developing special club activities to participate in the International Year of Astronomy for 2009. Dr. Spencer Buckner noted that our practice of holding board meetings on the first Thursday of the month would cause the January 2009 meeting to fall on New Years Day (January 1st). Seeing this as being inconvenient, the board decided to hold this meeting a week later on January 8th, 2009. Dr. Reeves said that he would announce this change at the December 18th membership meeting.

Steve Wheeler suggested that we take pictures of the newly elected officers and board members for publication in the Eclipse newsletter. Treasurer-elect Bob Norling asked if a second person was authorized to sign checks for the Society. The board examined the bylaws and determined that the president was authorized to do so. Since there was no further business to discuss, President Reeves declared the meeting to be adjourned at 8:20 P.M.

OFFICERS

Dr. Terry Reeves
President

Dr. Spencer Buckner
Vice-President

Bob Rice
Secretary

Bob Norling
Treasurer

Directors at Large

Tony Campbell
Jana Ruth Ford
Dr. Donna Hummel
Curt Porter
Theo Wellington
Steve Wheeler
Kris McCall (*ex officio*)

Steve Wheeler
Newsletter Editor
wsw261@hotmail.com

**Monthly meetings
are held at:**



**The Adventure
Science Center**

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

December 2008 Monthly Meeting Minutes

Bob Rice, Secretary

BSAS members gathered in the Adventure Science Center (ASC) around 6:30 PM for the Society's annual Christmas potluck supper and related activities. Dining soon began with the Society providing the main course of sliced ham and turkey along with eating utensils, plates, and soft drinks. Members provided a variety of their favorite side dishes including salads, casseroles, and desserts. The silent auction was repeated again this year with members shuffling among the donated books and other astronomy related materials to look and record their bids.

President Dr. Terry Reeves called the group to order at 7:35 PM. for a brief business meeting and to welcome everyone. Dr. Reeves announced that he had three copies of the Deep Space Mysteries Calendar for sale at \$10.00 each and that Mike Benson also had copies of Ottewell's Astronomical Calendar for sale at \$22.00 each. He commented that the weather did not look promising for the private star party scheduled at Natchez Trace on December 20th but that a "go or no-go" announcement would be made via the internet on Saturday afternoon.

Dr. Reeves then announced these other scheduled star parties and outreach activities: assisting the Boy Scouts with earning astronomy merit badges during their Astronomy Jamboree at Camp Boxwell on January 17th (an evening star party will follow this activity), a private star party at Natchez Trace on January 24th, a public star party at Warner Park on January 31st, a public star party at Shelby Bottoms on February 28th, and a star party for the Girl Scouts during their environmental gathering at Camp Sycamore on February 28. Dr. Reeves pointed out that BSAS members would split their participation between the concurrent star parties at Shelby Bottoms and Camp Sycamore on February 28th.

Dr. Terry Reeves announced that the January membership meeting would feature Dr. Spencer Buckner speaking on "How To Use The Astronomy Toys That You Got For Christmas," explaining that this would be more of a hands on event for attendees who brought their new telescopes than a formal lecture. Joe Boyd announced that Nashville had been accepted as one of four U.S. cities to participate in the International Year of Astronomy 2009's "Great Light Switch Out" program on March 28, 2009. Kris McCall announced that she would like to have an associated event at the ASC.

Dr. Terry Reeves introduced BSAS member and Amateur Astronomy magazine editor Charlie Warren who delivered the evening's program on "The Eight Wonders of the Universe." Quickly noting that there could actually be many more than eight wonders, Mr. Warren described these phenomena as being capable of stimulating individuals just as when they first started observing:

1. Life Here On Earth – the importance of being just the right distance from both our Sun and the center of our Milky Way galaxy.
2. The Planets – with emphasis on Saturn as being the "Lord of the Rings."
3. The Sun – as a huge thermonuclear furnace containing 99% of the solar system's mass but also being smaller than 99% of the stars we can see at night.
4. Stars With Extrasolar Planets – emphasizing 51 Pegasi b and 16 Cygni b as two example stars that can be seen with the naked eye.
5. Carbon Stars – massive red variable stars with R Leporis (Hind's Crimson Star) and Mu Cephei (Herschel's Garnet Star) as principal examples visible to the naked eye.
6. Planetary Nebulae – the beautiful remnants ejected when a star similar to our Sun dies.
7. Interacting Galaxies – galaxies in conflict or collision with each other such as M82.
8. Gravitationally Lensed Quasars – not for small telescopes but actually showing space-time warping.

Mr. Warren suggested that researching the what, where, when, and why related to observed objects could go a long way toward maintaining any amateur's enthusiasm. Lastly, he emphasized the satisfaction that could be gained from helping those who were a step or two behind you to get to the next level.

Dr. Terry Reeves then invited everyone to continue participating in the silent auction. The meeting concluded around 8:57 PM with members lingering to renew conversations and to exchange good-byes and best wishes for the holidays.

BSAS Affiliations

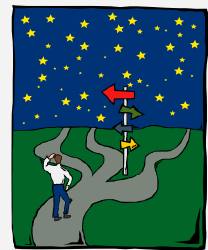
The Astronomical League
<http://www.astroleague.org/>



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



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



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)
- \$15** Student*

* To qualify, you must be 21 or younger & enrolled in an accredited institution.

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

On your Eclipse mailing label is the expiration date for your current membership. There will be a two month grace period before any member's name is removed from the current mailing 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 Thursday of each month at the Adventure Science Center 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 Joe Boyd at (615) 386-3134.

**BARNARD-SEYFERT
ASTRONOMICAL SOCIETY**
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NASHVILLE, TN 37215-0713

