

The January membership meeting will be held on Thursday, January 17, 2008 at 7:30 pm at the Adventure Science Center

On Thursday, January 17, 2008 we will hold our regularly scheduled membership meeting at the Adventure Science Center.

The topic this month will be "How to Use Your New Astronomy Toy". You got just the astronomy gift you wanted for Christmas but the skies didn't cooperate Christmas night. Since then you have gone out on the clear nights we've had but you still aren't quite sure how to use your new toy. The program will be presented by several BSAS members, including Dr. Spencer Buckner, Keith Burneson, Lonnie Putterbaugh and Chuck Schlemm. They're aimed at getting you going with your new astronomy gadget. From how to set-up your new telescope or which eyepiece to use to how to attach that new camera you got for astro-imaging or how to use your new Sky Scout, they will cover a variety of equipment and gadgets that were popular this Christmas. There is no better source for information on how to use your astronomy equipment than members of the BSAS and they will do all they can to get you fired up and going strong with the hobby of astronomy.

We will also have a visit from Susan Duvenhage, CEO of Adventure Science Center. Please plan on attending!

Message from the President

As I write this, it is Christmas Day. Since last night was a clear night, I decided to see if I could tweak my "new to me" telescope. I purchased it at this year's TNSP. I bought it largely because I wanted to try a Newtonian, and the price seemed reasonable. Well, this scope is turning out to be something of a challenge to use. The challenge is caused by numerous reasons with the most important being my lack of experience with Newtonians. There also appear to be some problems with the scope itself. I suspect that I am going to learn a lot from this scope.

What I should have done was grab a club member with some experience with Newtonians to look at the scope with me. A second pair of eyes could have caught some of the problems before the purchase. This, by the way, points out one of the most important benefits of belonging to a club: you do not have to try to figure everything out for yourself.

Do you need advice on what scope to buy? Ask around. I expect you will get more than an earful. You can come to the club's private star parties to see what other people have. Actually experiencing a telescope will clarify many things. We also have programs periodically on what telescope to buy. The most recent was given by Spencer Buckner at the November meeting.

Do you need advice on how to use your telescope? Come to the January meeting. This month's program will cover that very thing. If you need one-on-one help, ask around. You might be surprised how much people want to help.

Do you want to improve your observing skills? Come to the private star parties. Ask for help. This is an astronomy club. It's what we do.

Changing the subject, I would like to thank those who put together the Christmas party/December meeting. The food was good. We earned some money at the silent auction. Charlie Warren was an excellent speaker. I believe a good time was had by all.



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Message from the President

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Since we are now beginning a new year, it is also time to thank those who have served as officers, board members, and committee members this past year. Without your efforts, we would not exist.

As we move into the coming year, I want to focus on two things. First, we need to have fun. This is a hobby after all. If we are not enjoying it, what is the point? Second, we need to focus on outreach. Sharing our love of all things astronomical with the public is not just a way to grow our club. That child who just went "WOW!!!!!" after viewing Saturn for the first time might become the next Einstein. Our efforts might just change the world. It is also just as important to educate the general public about science. I believe a part of the reason our nation seems to be falling behind in mathematics and science is a lack of interest in those subjects by the general public. We can be a part of the solution.

Finally, I would like to say that I am looking forward to the coming year. The calendar is already filling with many exciting events. I would especially like to ask you to support our outreach events. You don't need a telescope to help.

Terry Reeves
President

FREE TELESCOPE OFFER!!!

Did someone say free telescope? 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. A waiting list is 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

**MAGAZINE SUBSCRIPTIONS FOR
BSAS MEMBERS**

We are always able to accept requests for new and renewal yearly subscriptions to SKY AND TELESCOPE and ASTRONOMY from our members in good standing.

The current yearly rates are as follows:
SKY AND TELESCOPE: \$32.95
ASTRONOMY: \$34.00

Checks or Money Orders should be made out to the Barnard-Seyfert Astronomical Society (BSAS) and sent to the following address:
BSAS
P. O. Box 150713
Nashville, TN 37215-0713

DUES INFORMATION

On your Eclipse mailing label is the expiration date for your current membership in the BSAS. There will be a two month grace period before any member's name is removed from the current mailing list. You will be receiving a number of warnings informing you that your membership is expiring.

Dues per year are \$20.00 Regular (1 vote); \$30 Family (2 votes); \$15.00 Student (under 22 years of age)(1 vote); \$15 Seniors (65 years or older)(1 vote); \$25 Senior Family (65 years or older)(2 votes).

Contact president@bsasnashville.com if you have questions. Dues can be sent to:
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THE ECLIPSE NEWSLETTER

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BSAS Logo by Tony Campbell

Happy Birthday Pultusk Meteorite Fall

by Robin Byrne

This month we celebrate the anniversary of a spectacular meteorite fall. It was January 30, 1868 near 7:00 pm when the residents of Pultusk in Poland were treated to an amazing sight. Approximately 180,000 stones fell over an area of roughly 50 square miles. It is estimated that over 2 tons of meteorite material fell, but only about one fourth of that total has been recovered. Of the 68,780 pieces found, most were small (less than 1 gram), and have been dubbed "Pultusk Peas." Only about 200 fragments had masses over 1 kilogram, with the largest being 9 kilograms.

Because of the fall being near Warsaw, with a higher population, there were enough eyewitnesses to determine the fall's path. It is estimated that the fall began at a height of 180 miles. Following a 44° trajectory, the path was traced for over 100 miles. During the object's descent through the atmosphere, the heat of friction caused what was initially a large piece of asteroid material to break into the smaller fragments.

The meteorites recovered have been classified as H5 chondrites. Chondrites are the most common type of meteorite found. Any meteorite that is called a chondrite is one that comes from an asteroid that did not experience any melting during its formation. This makes the composition more representative of the early solar system, although processes such as radioactive decay and impact have caused some thermal changes. The lack of heating during formation allowed for the formation of chondrules, which are small (roughly 1 millimeter) droplets of silicate materials like olivine and pyroxene. These were probably floating in space in a partially molten state when the asteroid slowly accreted material together, trapping the droplets in the process. The letter classification indicates the amount of iron present. In this case, "H" stands for High iron content. These also tend to have smaller chondrules than chondrites with lower iron abundances. The number classification indicates how much its chemical composition has been altered from the original formation materials. The larger the number, the more alteration that has occurred. A classification of 5 means that there has been enough thermal changes so that the chondrules have begun to blend with the surrounding materials.

Although not widely known about today, the Pultusk Fall was the most famous meteorite fall of the 19th century. Despite the meteorites being considered ordinary, they, and the fall itself, have nonetheless been extensively studied, especially by geologists in Poland. Ordinary or not, a fall of thousands of meteorites must have been a sight to see. Just imagine what it must have been like on that cold January night in 1868 when the sky truly fell. Very likely frightening and awe-inspiring at the same time, but either way, it sure would have been incredible to watch.

References:

Pultusk meteorite 1868

http://www.geo.uw.edu.pl/MUZEUM/METEORITE/pultusk_a.htm

Meteorite Chondrite

http://www.meteorite-martin.de/english/chondrite_en.html

Meteorite: Messengers from Space - Google Book Search

<http://books.google.com/books?id=k3Tu0BcNEaoC&pg=PA8&lpg=PA8&dq=pultusk+meteor+fall+eyewitness&source=web&ots=m6xg9d3ISW&sig=wSEgg1ElrwxWI4B8SsCp9ykh4#PPA8,M1>

Meteoroids, Meteors, Meteorites, and Tektites

<http://members.tripod.com/astro1000/info/i0000027.htm>

chondrite: Definition and Much More from Answers.com

<http://www.answers.com/topic/chondrite?cat=technology>

Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held on Thursday, December 6, 2007

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 6, 2007. A sign-in sheet was circulated in lieu of a roll call. Board members Keith Burneson, JanaRuth Ford, Bill Griswold, Donna Hummell, Bob Rice, Dr. Terry Reeves, Randy Smith, and Steve Wheeler were present. Board members Mike Benson, Tony Campbell, Kris McCall, and Mark Manner were absent. Also attending were BSAS members Joe Boyd, Dr. Spencer Buckner, and Lonnie Puterbaugh. A quorum being present, President Bill Griswold called the meeting to order at 7:35 P.M.

Treasurer Randy Smith reported the BSAS had a bank balance of \$2,800.14 and provided a handout showing operating details. Program Committee Chair JanaRuth Ford reported that BSAS member and *Amateur Astronomy Magazine* editor Charlie Warren would deliver a program on trends in amateur astronomy and conduct his popular Astro-Jeopardy game at the combined December meeting and annual Christmas Potluck Supper. She also announced that Mr. Warren might be able to discuss his compilation of star party best practices at the January or March board meeting. The board briefly discussed possibilities for the 2008 Tennessee Star Party.

Bill Griswold announced that Mark Manner had graciously offered to host these events at his home (Spot Observatory) during 2008:

A members-only astronomy retreat on a date to be determined,

The Messier Marathon on March 8 with April 5 as an alternate date, and

The annual picnic on Saturday, June 7 to include workshops & observing

Mr. Griswold announced that the private star party scheduled for Natchez Trace on February 9 would be cancelled and replaced by a public event at Warner Park. He also noted that the BSAS would participate in a public lunar eclipse-viewing event at the Adventure Science Center on February 20. In addition, he stated that public observing events at Middle Tennessee State University would be added to the BSAS' calendar.

Bill Griswold reported that the National Park Service approved all private star party dates applied for at the two Natchez Trace National Scenic Trail sites, but he has not yet received a signed copy of their acceptance. Mr. Griswold noted that the new arrangement allowed the BSAS to change scheduled dates in the event of inclement weather by contacting Ranger Gabe Bell.

Lonnie Puterbaugh reported that some 300 boy scouts would attend a camporee at Camp Boxwell during April 11-13 with "Race to the Stars" as the theme. Having already discussed this with a scout leader, Mr. Puterbaugh emphasized that this would be an excellent outreach activity for the BSAS. After a brief discussion, Terry Reeves moved that the Society adopt this event as an outreach project and Donna Hummell seconded this motion that was subsequently adopted by a unanimous voice vote.

Dr. Spencer Buckner, an Associate Professor at Austin Peay State University (APSU), reported that the university's recent application for an astronomy related grant was turned down, but that APSU planned to resubmit its request in January. Dr. Buckner asked the board update its previously issued letter of support and recommendation to be included with that request. Although the present board was universally in favor of doing this, they deferred a final decision for the newly elected board to consider at their first meeting on January 3, 2008.

Lonnie Puterbaugh announced that the recent movie "Magnificent Desolation" about the Apollo moon missions was available on DVD and could be ordered online from amazon.com. He also announced that the first season of the TV series "The Universe" could be ordered from the History Channel. Mr. Puterbaugh reminded the board that 2009 had been designated as the International Year of Astronomy to celebrate the 400th anniversary of Galileo's first use of the telescope. He suggested that the BSAS should start planning now for a special public outreach activity – perhaps at the Green Hills Mall – to recognize this occasion. Mr. Puterbaugh also noted that the year 2009 would mark the 40th anniversary of the first Apollo moon landing.

JanaRuth Ford suggested that the BSAS should begin efforts to partner with the ASC. In keeping with her suggestion, Terry Reeves and Lonnie Puterbaugh agreed to invite the ASC's new director to join the BSAS' Potluck Christmas Supper on December 20. There being no further business to discuss, President Griswold declared the meeting adjourned at 8:41 P.M.

Respectfully submitted,

Bob Rice, Secretary

Barnard-Seyfert Astronomical Society Minutes of the Monthly Membership Meeting Held On Thursday, December 20, 2007

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, eyepieces, and other astronomy related materials to look and record their bids.

President Bill Griswold called the group to order at 6:40 PM. for a brief business meeting. Treasurer Randy Smith announced that he had copies of the *Observers Handbook* and the *Deep Space Mysteries Calendar* for sale. Kris McCall asked members to donate copies of their self-made astrophotos for a display to be included with the planned summer 2008 opening of the ASC's new planetarium. Dark Sky Committee Chair Powell Hall announced that this committee would meet on the second Tuesday of the month (January 8, 2008).

Bill Griswold thanked Pam Thomas, Kris McCall, and Drew Gilmore for setting up the meeting room and placing the tablecloths in preparation for the combined meeting and supper. Kris McCall announced that the BSAS might be able to hold its June 2008 meeting in the new planetarium currently under construction. Treasurer Randy Smith reported that the Society had a cash balance of \$2,800.14 and reminded members that they could now renew their *Sky & Telescope Magazine* subscriptions online at the lower club rates. Program Committee Chair JanaRuth Ford announced that the January 2008 membership meeting program would be given by Dr. Spencer Buckner on "How To Use Your New Astronomy Gifts."

Bill Griswold introduced the newly elected officers and directors for 2008: Dr. Terry Reeves - President; Keith Burneson - Vice-President; Bob Rice - Secretary; Randy Smith - Treasurer; and Dr. Spencer Buckner, Tony Campbell, and Theo Wellington - Directors-At-Large. Asking President-Elect Terry Reeves to come forward, Mr. Griswold then presented him with the ceremonial floppy rubber gavel to continue the tradition begun last year by Out-Going President Mark Manner. Mr. Griswold announced that he had reserved the Girl Scout Center location for board meetings in 2008. BSAS ALCor (Astronomical League Coordinator) Mike Benson presented Donna Hummell with the League's Messier Club Award that included a certificate and a pin for her documented observing accomplishments. Mr. Benson reminded the membership that the Astronomical League offered awards in 30 different astronomical observing categories.

Star Party Coordinator Steve Wheeler announced that the next members-only star party would be held on January 12, 2008 at the Natchez Trace Parkway mile marker 435 location. Bill Griswold announced that the Natchez Trace Park Rangers had granted the BSAS permission to substitute dates for scheduled star parties that were cancelled due to inclement weather.

Bill Griswold introduced BSAS member and *Amateur Astronomy Magazine* editor Charlie Warren who began the evening's program with "Trends in Amateur Astronomy." Drawing upon his contacts and experiences as an astronomy magazine editor, Mr. Warren described these developments as being mostly global challenges:

- Increasing light pollution,
- Haze from industrial & automotive pollutants,
- Varying quality of astronomical items made in China,
- Diminishing supply of Pyrex blanks for mirrors, and
- The graying of amateur astronomy.

Mr. Warren then cited these positive developments (among others):

- Rapid expansion of technology & lower prices,
- Many options for personal observatories,
- Growing number of astronomical communities,
- New generation of larger & more portable altazimuth mounts,
- Fused sandwich mirrors as replacements for Pyrex,
- Ultra compact telescopes,
- Improved goto tracking systems,
- Image intensified eyepieces,
- New breed of video cameras,
- Increasing selection of entry level CCDs, and
- Proliferation of star parties.

Lastly, Mr. Warren offered these three meaningful suggestions:

1. Don't forget to have fun,
2. Pass on your enthusiasm for the hobby, and
3. Help that person who is a step or two behind you to advance to the next level.

The drawing for the evening's door prize – a copy of *The Illustrated Guide To Astronomical Wonders* donated by the publishers – was won by Powell Hall. Charlie Warren then continued the program with his much anticipated Power-Point version of "Astro-Jeopardy." Patterned after the popular TV show, Mr. Warren first allowed audience participants to choose astronomical objects from various categories and levels of difficulty. He next gave a verbal description of the selected object followed by a picture if the participants were still unsure. All correct answers were rewarded by pieces of candy thrown to the winning responders. The game continued with unabashed enthusiasm until all categories and levels of difficulty had been selected.

The meeting concluded around 9:25 PM and, having enjoyed a wonderful evening of fellowship, everyone exchanged good-byes and best wishes for the holidays.

Respectfully submitted,
Bob Rice, Secretary

ACTIVITIES and EVENTS*January 1—31, 2008*

1/3 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
1/5 Venus 7° N of Moon
1/7 Jupiter 7° N of Moon
1/8 NEW MOON
1/15 FIRST QUARTER
1/17 BSAS Membership mtg. 7:30 p.m. at ASC
1/20 Conj. of Moon & Venus
1/22 FULL MOON
1/23 Conj. of Mercury & Neptune
1/24 Conj. of Venus & Pluto
1/25 Saturn 3° N of Moon
1/30 LAST QUARTER

February 1—29, 2008

2/4 Jupiter 4° N of Moon, Venus 4° N of Moon
2/7 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office, NEW MOON
2/14 FIRST QUARTER
2/16 Mars 1.6° S of Moon
2/19 Moon 0.3° N of Beehive (M44)
2/21 BSAS Membership mtg. 7:30 p.m. at ASC, FULL MOON, total lunar eclipse
2/26 Mercury 1.3° N of Venus
2/29 LAST QUARTER

*All times listed are Central Time

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