



ECLIPSE



The Newsletter of the Barnard-Seyfert Astronomical Society

Organized in 1928

December 2006

**The Membership Meeting will be held on
Thursday, December 21, 2006 at 6:30 pm at
The Adventure Science Center**

The annual BSAS Holiday party will begin at 6:30 pm. The main course of ham and turkey as well as soft drinks will be provided by the club. Please bring your favorite pass around dish to share. Following dinner, we will have the opportunity to test the numerous museum exhibits, participate in a "Constellation Shootout" and planetarium show as well as our annual silent auction. This has been a very successful fundraiser in the past and we encourage our members to participate by donating Astronomy related books, pictures, posters, games, etc. to the cause and by bidding high and often. Items will be accepted by Kris McCall at ASC prior to the event. Bidding will begin following dinner and will continue for approximately 1 hour. Winners will be announced at the conclusion of the auction and payment will be accepted immediately. All proceeds benefit the BSAS.

President's Message

This month I would like to inform the membership of the results of the elections held at the November membership meeting. The BSAS Board and Officers for 2007 will be:

President – Bill Griswold

Vice-President – Terry Reeves

Secretary – Bob Rice

Treasurer – Randy Smith

Immediate Past President—Mark Manner

New Board Members at Large – Keith Burneson,
Donna Hummell and Steve Wheeler

Continuing Board Members—Mike Benson, Tony Campbell and JanaRuth Ford

Board Member Ex Officio – Kris McCall

I think almost all of you know President Elect Bill Griswold and his great work with the society over many years. To enable Bill to assume the role of President, Pam Thomas has agreed to take over Bill's responsibilities for publication of *The Eclipse*. Special thanks again go this year to Bob Rice and Randy Smith for agreeing to continue their long-term service as Secretary and Treasurer, and to Tony Campbell for his work on our website. The addition of Terry Reeves as Vice President, and Donna Hummell and Steve Wheeler to the Board will be of great benefit to the society next year.

Although formal selection of committees for 2007 will be the responsibility of the new Board, I am happy to announce that Keith Burneson has agreed to serve again next year as the Tennessee Star Party Coordinator. In my opinion, the TNSP coordinator is the most demanding job in the organization, and Keith's hard work on the 2006 TNSP and willingness to do it again in 2007 is greatly appreciated.

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Finally, I would like to thank you for allowing me to serve as President of the organization this year. As a relatively new member of the society, I found that the best part of being President was the opportunity to spend time with members, and I hope this can continue in the coming year. In particular, I look forward to having society functions and individual members out to my observatory for the Messier Marathon and other events.

Please accept my best wishes for a prosperous and healthy 2007 with many clear and steady nights.

Best regards, Mark Manner

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: \$37.00

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:

BSAS
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THE ECLIPSE NEWSLETTER

Editor: Pam Thomas

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BSAS Officers:

Bill Griswold, President
Terry Reeves, Vice President
Bob Rice, Secretary
Randy Smith, Treasurer
Mark Manner, Immediate Past President

Board of Directors

Keith Burneson
Donna Hummell
Steve Wheeler
Mike Benson
Tony Campbell
JanaRuth Ford
Kris McCall, Ex Officio

BSAS website: www.bsasnashville.com

BSAS Logo by Tony Campbell

Happy Birthday Wilhelm Tempel

by Robin Byrne

This month we look at the life and achievements of an astronomer whose name is associated with one of the more famous comets. Ernst Wilhelm Leberecht Tempel was born in Nieder-Kunersdorf, in present-day Germany, on December 4, 1821. Shortly after his birth, his mother died. Being in a family with limited financial means, at the age of nine, Tempel was sent to work, under the care of a schoolmaster, until reaching the age of 14 years.

When Tempel was about 20 years old, he moved to Copenhagen and began working as a lithographer. During the three years there, Tempel was exposed to the arts and culture of the time, and he called his experiences during that time "his academic career."

After traveling around for a few years, Tempel settled in Venice. It was here that he met his wife, Marianna, and where Tempel converted to Catholicism. Although a happy marriage, there were no children. It was also here that Tempel purchased his first telescope: a 4-inch refractor. On April 2, 1859, Tempel discovered his first comet. In October of the same year, Tempel noticed nebulosity around the star Merope in the Pleiades. Although more difficult to see through larger aperture telescopes, it was eventually confirmed and accepted by the astronomical community.

Emboldened by his discoveries, Tempel decided to pursue a career in astronomy in Paris. However, the director of the Paris Observatory at the time, Urbain Leverrier, was dismissive of Tempel's lack of education and turned him away. So, in 1860, Tempel and his wife moved to Marseilles for a position at the observatory as assistant astronomer under Benjamin Valz. Probably because of pressure from Leverrier, he was only there for 6 months, but did manage to find another comet during that time, and began his interest in discovering asteroids.

Working as a lithographer, Tempel continued his astronomical work during his spare time. Over the next 7 years, he discovered five asteroids and eight comets. The most famous of the comets discovered during this time is the comet now known as Tempel - Tuttle. This is the short-period comet associated with the Leonid Meteor Shower.

In 1871, Tempel, along with all other Germans, was expelled from France, due to the Franco-Prussian War. Tempel found work at the Brera Observatory in Milan, under the directorship of Schiaparelli. Here, Tempel found 3 more comets, including one with only a 5-year period, the shortest periodic comet discovered up to that time. Tempel's comet observations were published in Milan's ephemeris, which included Tempel's own calculations of the comet orbits. Despite his lack of a formal education, Tempel was quite mathematically capable. The ephemeris also included lithographs by Tempel of the Pleiades, showing the nebula around Merope.

In 1874, Tempel made his last move, this time to Arcetri, France for a position as assistant in charge of the Arcetri Observatory. Although the observatory was in poor condition, and the telescope mounts lacking in many ways, the two refractors (one with an aperture of 9.4 inches, and the other 11 inches) were perfect for Tempel's continued interest in comets and nebulae. Here he found his 13th, and last, comet in 1877. But it was here that his best nebula observations occurred. Many nebulae, including some not observed since Herschel, were meticulously sketched by Tempel. Overall, he made accurate drawings of 186 nebulae.

Near the end of 1886, Tempel was struck by a liver complaint, which eventually led to partial paralysis. When he was no longer able to observe, he worked to put all his notes and illustrations in order. For over two years, Tempel slowly deteriorated, finally succumbing to his illness on March 16, 1889.

This time of year, there are many nice meteor showers, including November's Leonids, which are due to Earth passing through the debris left behind by various periodic comets. Our knowledge of these comets and meteor showers are due to dedicated comet hunters like Wilhelm Tempel. During the next shower, pause to remember Wilhelm Tempel, and all the intrepid comet hunters, who have expanded our knowledge of our solar system over the years.

References:

Wilhelm Tempel Obituary by J.L.E. Dreyer
<http://leo.astronomy.cz/tempel/tempel.html>

Catholic Encyclopedia: Wilhelm Tempel by J.G. HAGEN
Transcribed by Thomas M. Barrett
<http://www.newadvent.org/cathen/14479d.htm>

European Planetology Network: Ernst Wilhelm Tempel
<http://euromet.cesr.fr/documents/tempel.pdf>

Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held On Thursday, November 2, 2006

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 November 2, 2006. A sign-in sheet was circulated in lieu of a roll call. Board members Mike Benson, Keith Burneson, JanaRuth Ford, Bill Griswold, Bob Rice, and Randy Smith were present. Board members Tony Campbell, Kris McCall, Mark Manner, Pam Thomas and Gary Wilkerson were absent. Also attending were Long Range Planning Committee Chair Joe Boyd along with BSAS members Donna Hummell and Terry Reeves. A quorum being present, Vice-President Keith Burneson called the meeting to order at 7:41 P.M.

Treasurer Randy Smith reported that the Society's bank balance was \$4,578.61 noting that this amount included funds recently transferred from the Tennessee Star Party (TNSP) 2006 account. Mr. Smith asked the board for guidance regarding the number of extra copies of the 2007 *Observers Handbook* and the 2007 *Deep Space Mysteries* calendar that he should order. After a brief discussion, the board recommended ordering five extra copies of each. Mike Benson announced that he had three copies of the 2007 Ottewell Astronomical Calendar still available.

Program Committee Chair JanaRuth Ford announced these upcoming membership meeting programs and other activities:

- November – Dr. Chuck Higgins of Middle Tennessee State University (MTSU) on “Dark Matter”
- December – Annual potluck holiday supper to include a silent auction, possibly a constellation shootout, and a laser show in the Sudekum Planetarium
- January – Dr. Scott Hawley of Belmont University on “Gravity and Black Holes”
- February – Possibly Dr. Keivan Stassun of Vanderbilt University on “Brown Dwarfs”

Nominating Committee Chair Bill Griswold reported these recommended candidates for the election of officers and board members at the annual membership meeting on November 16th: for President – Bill Griswold; for Vice-President – Terry Reeves; for Secretary – Bob Rice; for Treasurer – Randy Smith; for Board Members at Large – Keith Burneson, Donna Hummell, and Steve Wheeler; and for Board Member Ex Officio – Kris McCall. Secretary Bob Rice noted that other nominations would also be solicited from the floor and that printed ballots would be available if needed.

Secretary Bob Rice, reporting as the TNSP 2006 Treasurer, noted that all funds from the TNSP bank account had been transferred to the BSAS' bank account and that any outstanding bills would be paid from that latter account. Mr. Rice also reported that he had renewed the BSAS' charter as a Title 48 non-profit corporation under the Tennessee Code Annotated. In addition, Mr. Rice reported that he would file Form 8734 with the Internal Revenue Service to continue the BSAS' status as a 509 (a) (2) tax exempt organization. Joe Boyd suggested that this action should be authorized by a resolution of the board of directors. Bill Griswold moved that such a resolution be adopted and Keith Burneson seconded this motion which passed by a unanimous voice vote.

Bill Griswold provided the board with a list of upcoming star party dates and locations for the remainder of this year and for next year. Mr. Griswold noted that the suggested dates and events were coordinated with staff at the ASC, Nashville's Warner Parks, and Long Hunter State Park. He also said that he would add the public star party dates at MTSU to the list and seek renewal of the BSAS' permission to use the Natchez Trace State Park sites for BSAS private star parties. The board unanimously approved this modified list which will be published in the *Eclipse* newsletter. Keith Burneson reminded the board that the Society would have to find another star party coordinator because Gary Wilkerson, the present coordinator, would soon be moving to Kentucky.

Joe Boyd reported on a recent meeting that he and BSAS member Heinrich Tischler had with the Warner Parks Director, Engineer, and Naturalist Heather Gallagher. These three officials disclosed several major changes to the park facilities that included: the removal of all lights; replacing the model airplane field with a 200 foot runway that will parallel Vaughan Road; addition of a reinforced sodden drive with electrical conduits along that same side of the park; installation of outlets for switch-controlled stringed red lights along the road; and positioning of the park sign and shrubs to block oncoming car headlights. Mr. Boyd noted that work was planned to begin in January or February 2007 and to be finished by summer.

Since there was no further business to discuss, Vice-President Burneson declared the meeting adjourned at 8:37 P.M.

Respectfully submitted,
Bob Rice
Secretary

**Barnard-Seyfert Astronomical Society
Minutes of the Monthly Membership Meeting
Held on Thursday, November 16, 2006**

President Mark Manner called the meeting to order at 7:36 P.M. in the Adventure Science Center (ASC) and welcomed new members and visitors. The minutes of the previous membership meeting, held on October 19, 2006, were approved without exception as published in the November 2006 edition of the *Eclipse* newsletter. Bob Rice, reporting for Treasurer Randy Smith, announced that the BSAS' bank balance was \$4,062.61.

Mark Manner initiated the annual election of officers and directors by reporting these recommendations from the Nominating Committee: for President – Bill Griswold; for Vice-President – Terry Reeves; for Secretary – Bob Rice; for Treasurer – Randy Smith; for Board Members at Large – Keith Burneson, Donna Hummell, and Steve Wheeler; and for Board Member Ex Officio – Kris McCall. Mr. Manner then called for nominations from the floor and, there being none, asked for a motion to accept the recommended slate of nominees by acclamation. Such a motion was made, seconded, and passed by a unanimous voice vote of the membership.

Mark manner announced these upcoming events of interest:

November 17: Public star party at Long Hunter State Park

December 1: Public star party at Middle Tennessee State University (MTSU)

December 15: Public star party at Warner Park

December 21: BSAS holiday party at the ASC

Program Committee Chair JanaRuth Ford introduced Dr. Chuck Higgins, Assistant Professor of Astronomy at MTSU, who delivered the evening's program on "What's All This Dark Stuff?" Using an automated PowerPoint presentation, Dr. Higgins probed two of the greatest mysteries of modern physics and astronomy: what are dark matter and dark energy? Dr. Higgins noted that the most recent observations indicate that the universe "clumped early" and that there was simply not enough luminous matter to account for these density fluctuations so soon after the Big Bang - thus the term Dark Matter. He also explained that recent observation of type IA supernovae indicated that the universe was not only expanding, but expanding – an effect that has been attributed to the unidentified force of Dark Energy. Noting that Dark Matter and Dark Energy combined seemed to comprise about 96% of the universe, Dr. Higgins jokingly concluded that "...maybe we are the table scraps." He then graciously answered questions from the audience following his presentation.

Joe Boyd introduced his guest and long-time friend Jim Balazar to the audience. Pam Thomas reminded the group that the holiday party on December 21st would start at 6:30 P.M. Kris McCall also commented that the party would include a constellation shoot-out with prizes and a laser show in the Sudekum Planetarium.

Since there was no further business to discuss, President Manner declared the meeting adjourned at 8:49 P.M.

Respectfully submitted,
Bob Rice, Secretary

Activities and Events

December 1 — 31, 2006

- 12/1 MTSU Star Party, 6:30 to 9:00
- 12/3 Moon 0.6° N of Pleiades (M45)
- 12/4 FULL MOON
- 12/7 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
- 12/9 Mercury 1.0° N of Mars (15° W)
- 12/10 Saturn 1.2° S of Moon; Mercury 0.1° N of Jupiter
- 12/11 Mars 0.8° S of Jupiter
- 12/12 LAST QUARTER
- 12/14 Geminid meteors peak
- 12/15 Spica 0.8° N of Moon; Star Party, Warner Park, 8:00 to 10:00
- 12/16 Private Star Party, Natchez Trace mile 435
- 12/18 Antares 0.4° N of Moon
- 12/20 NEW MOON
- 12/21 BSAS monthly meeting at ASC: 6:30 p.m. Covered dish and Christmas Party Solstice
- 12/25 Christmas day; Uranus 0.08° S of Moon
- 12/27 FIRST QUARTER
- 12/31 Moon 0.7° N of Pleiades (M45)

January 1 — 31, 2007

- 1/1 NEW YEAR'S DAY
- 1/2 Dark-sky committee, 7:30 McKendree Tower
- 1/3 FULL MOON
- 1/4 Quarantid Meteor Shower: Jupiter 4° N of Antares
BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
- 1/6 Conj. Moon & Saturn; Regulus 1.2° S of Moon
- 1/7 Conj. Sun & Mercury
- 1/11 LAST QUARTER; Spica 1.1° N of Moon
- 1/15 Antares 0.5° N of Moon; Conj., Moon & Jupiter
- 1/16 Conj., Moon & Mars
- 1/18 NEW MOON; Conj. Venus & Neptune
BSAS monthly meeting at ASC: 7:30 p.m.
- 1/20 ISLAMIC NEW YEAR; Conj., Moon & Neptune, Moon & Venus
Outreach Star Party at Warner Park, 7:30-10:00
- 1/22 Conj., Moon & Uranus
- 1/25 FIRST QUARTER

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