ECLIPSE

The Newsletter of the Barnard-Seyfert Astronomical Society

Organized in 1928 **April 2006**

The Membership meeting will be held on April 20, 2006 at the Adventure Science Center at 7:30 pm.

Dr. Eric Klumpe, Professor of Astronomy at Middle Tennessee State University, will speak about the new Uranidrome and Naked-Eye Astronomy.
Come and join in with us for this informative talk by Dr Klumpe.

President's Message

By Mark Manner

I thought I would share some thoughts about the various aspects of our hobby (or is it an avocation, vocation, or obsession?) that were triggered in part by last weekend's Messier Marathon.

Like many amateur astronomers, I started out in astronomy because of my interest in "outer space" and in science generally. My first scope was a small 60mm refractor on a completely manual mount. After about 40 years of visual observation with various telescopes and a few fuzzy 35mm film shots of the moon and sun, my move to a relatively dark spot prompted me to try astronomical imaging with a modern cooled ccd camera. Although not for everyone, I have found that I really like the combination of equipment, computers, statistics, optics, photography and image processing that is part of this branch of the hobby. As a result, I have been working at it very hard over the past year and a half, and hope to continue to improve my image acquisition and processing skills for many years to come. For those who would like to try this type of imaging, there are many resources available, and I would be happy to share what I have learned so far with anyone who has an interest.

Although my telescopes are usually set up for imaging, almost everyone who visits my observatory wants to "take a look through the telescope". Although I initially resisted breaking down my imaging setups, I have found that I enjoy using the eyepiece with visitors. This was reinforced last Saturday night during the BSAS Messier Marathon. Visual observing and star hopping is a lot of fun, and this past weekend reminded me that I definitely need to re-learn the constellations so that I can actually find some things without surreptitiously clicking on my computer. In addition to purely visual observing and high end imaging, low cost webcams and medium cost video cameras and digital SLRs are frequently used by our members for both imaging and outreach. Although video cameras can be used quite effectively for imaging, they are a wonderful way to show large groups of people what is essentially a real time live view of astronomical objects on a TV screen. With a video camera setup you can be certain that your audience is actually seeing the object in question, and that it is in focus, not to mention the significant enhancement of the visibility of faint objects. As most of you know, BSAS' Lonnie Puterbaugh has achieved a national reputation in this branch of amateur astronomy and outreach. I encourage any of you who haven't yet seen Lonnie's "The Astronomy Channel" (http://www.theastronomychannel.com) to do so at your earliest opportunity.

Finally, amateur astronomers can use their equipment for "real" science. There are many avenues available for those with a scientific interest. As described later in this issue of the Eclipse, at our last monthly meeting, Wes Swift of Raytheon described his image of a lunar meteor impact and asked for help in future imaging programs. Last year some of our members participated in NASA's Deep Impact mission by imaging Comet Tempel 1 before and after the successful July 4th impact. Rocky Alvey of the Vanderbilt University Dyer Observatory (http://www.dyer.vanderbilt.edu/) is an enthusiastic and knowledgeable advocate for amateur astronomy science. At the University of North Carolina, Dr. Dan Reichart has established SkyNet (https://fungrb.physics.unc.edu/skynet/)

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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.

President's Message, continued from Page 1

and is soliciting amateurs to participate in a program that uses telescopes in the Northern and Southern hemispheres to image the afterglow of Gamma Ray Bursts. The Society for Astronomical Science (http://www.socastrosci.org/) is a very active organization that connects professionals and amateurs with interests in acquiring light curves of minor planets, binary stars and exoplanets (to name a few of SAS members' interests).

There are many other organizations and examples, and if you think you would like to try something different, ask around. One of the benefits of the BSAS is the ability to take advantage of the wide range of interests of our members. If you can think of something you would like to try, there will likely be someone in the BSAS that has either done it or would be interested in trying it with you. Amateur astronomy is a great pursuit—branch out a bit, learn something new and have some fun.

As usual, please don't hesitate to contact me if you have questions, concerns or suggestions regarding the BSAS.

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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). Please call President, John Harrington, (615) 269-5078 if you have questions. Dues can be sent to:

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Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held On Thursday, March 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 March 2, 2006. A sign-in sheet was circulated in lieu of a roll call. Having determined that a quorum was present, President Mark Manner called the meeting to order at 7:40 P.M. Board members Mike Benson, Keith Burneson, Bill Griswold, Mark Manner, Bob Rice, Pam Thomas, and Gary Wilkerson were present. Board members Tony Campbell, JanaRuth Ford, Kris McCall, and Randy Smith were absent. In addition to members of the board, BSAS members Joe Boyd and Terry Reeves were also present.

Mark Manner commented that the Society was seeking someone to help maintain its website. Mr. Manner also noted that Lonnie Puterbaugh may conduct a video astronomy workshop in June. He reported that last Sunday evening's preparatory session for the upcoming Messier Marathon at Spot Observatory was successful. Mr. Manner reminded board members about the potluck supper to be held at Dyer Observatory on March 17 and recommended contacting BSAS Past-President Pam Thomas or Dyer Observatory Superintendent Rocky Alvey for menu details. He also noted that Treasurer Randy Smith would follow-up on a BSAS member's inquiry regarding a magazine subscription.

Mark Manner reported that Ashland City teacher Dorothy Davis had requested an astronomical presentation at her school on an upcoming Saturday. Following a brief discussion, the board tentatively decided upon Saturday, April 15. Mr. Manner also reported that he would soon meet with a Cub Scout pack in Franklin to tell them about Spot Observatory. Bob Rice reported that, based upon recent contact with Treasurer Randy Smith, the Society was solvent with a cash balance in excess of $3,000.

Mark Manner and Keith Burneson announced that, after some minor revisions, the BSAS planned to execute a contract with the T.A.G. Church Camp to use their facility for the 2006 Tennessee Star Party (TNSP). Mr. Burneson announced that he was working to confirm speakers for the TNSP and Joe Boyd agreed to assist in that process.

Keith Burneson named Middle Tennessee State University (MTSU) astronomy professor Dr. Eric Klumpe as a potential speaker for the April membership meeting. Mark manner commented that he would discuss this with Dr. Klumpe at MTSU's March 3 public star party.

Noting that these events were typically discussed in advance via email or telephone, the board unanimously agreed that all future offsite public outreach activities would be approved as official BSAS sanctioned functions. Joe Boyd announced that the purpose of the March 3 public event at MTSU was to demonstrate the university's new Uranidrome naked eye observatory. Gary Wilkerson announced that he needed access to bulk BSAS member email addresses to send star party notices on tnastronomy.com.

Joe Boyd announced that Hopgood Elementary School, a designated NASA Explorer School, will hold a spring carnival with a NASA/space exploration theme on April 22. Bill Griswold announced that the BSAS will have to find another food caterer for TNSP 2006. Mike Benson asked for volunteers to assist with the judging at the Middle Tennessee Science & Engineering Fair to be held at Austin Peay State University on March 23. Bill Griswold announced that he might be able to do this. The board unanimously approved Lonnie Puterbaugh's acquiring materials and constructing electrical cables to be rented for a fee at TNSP 2006 and future TNSPs.

There being no further business to discuss, President Manner declared the meeting adjourned at 8:50 P.M.

Respectfully submitted,
Bob Rice
Secretary

Happy Birthday Wilbur Wright

By Robin Byrne

This month we look at the accomplishments of a man not associated with astronomy, but whose innovations helped pave the way to the exploration of space. Wilbur Wright was born on a farm in Millville, Indiana on April 16, 1867. While a child, the family relocated to Dayton, Ohio, where he and his brother, Orville, began their lifelong interest in all things mechanical. Although highly intelligent, Wilbur did not attend college, or even graduate from high school, due to family circumstances, including the early death of his mother.

From the beginning, Orville and Wilbur worked together on various projects, including a printing firm and their famous bicycle shop. In 1896, their interest in aviation was sparked by the achievements of glider pilot Otto Lilienthal. By 1899, they had studied so many books and writings on aviation to be experts themselves. That expertise allowed Wilbur to go beyond what those before him had done, and to become an innovator. The key to Wilbur and Orville's success was the addition of the ability to warp the wings of the plane, which allowed control of its direction of motion.

The first powered airplane constructed by Wilbur and Orville Wright was completed in the fall of 1903. The airplane weighed a total of 750 pounds (including the pilot), had wings that were 40.5 feet long, and ran on a lightweight engine of their own design. In that same year, on December 17, the airplane performed the world's first powered flight. The brothers took turns piloting for a total of three flights that day. Orville flew the first flight for 120 feet in 12 seconds, and Wilbur flew the longest flight of 853 feet in 59 seconds.

At first, the world's reaction was skeptical. How could two bicycle mechanics do something that had eluded the professionals? However, after a number of successful demonstrations, they were taken very seriously. In 1908, they had a contract to build the first military airplane for the U.S. government.

After this acceptance, Wilbur's fame took off. Traveling all over the world, demonstrating their flying machine, Wilbur became quite a showman. In Le Mans, France, Wilbur set a number of world flight records. He then returned to the United States to perform in front of an audience of 1 million people for a flight around the Statue of Liberty, followed by a trip up the Hudson River to Grant's Tomb.

Sadly, Wilbur Wright did not live long after his success began. In 1912, Wilbur was struck with typhoid fever and died on May 30 of that year. He was 45 years old. Orville continued on alone for a few more years before selling the Wright Company in 1915. In 1929, Orville accepted, on behalf of himself and Wilbur, the first Daniel Guggenheim Medal for contributions to the advancement of aeronautics. In 1965, Wilbur was elected to the Hall of Fame for Great Americans in New York City.

Of course, today we take airplanes for granted, but just a little over 100 years ago, that was not the case. Those early advancements in aviation would ultimately lead to today's space program. What is the Space Shuttle but a modified glider? One hundred years from now, our most advanced spacecraft of today will, undoubtedly, look as quaint and archaic as the Wright brothers' plane. But even those vehicles of the future will be able to trace their heritage back to the achievements of this month's honoree: Wilbur Wright.

References:

Wilbur Wright's Biography http://wright.grc.nasa.gov/wilbur.htm

Wilbur Wright| American Co-Inventor of the First Successful Airplane http://www.lucidcafe.com/library/96apr/wrightw.html

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

President Mark Manner called the meeting to order at 7:47 P.M. in the Adventure Science Center (ASC) and welcomed new members and visitors. The minutes of the previous membership meeting held on February 16, 2006 were approved without exception as published in the March 2006 issue of the *Eclipse* newsletter.

Mark Manner invited everyone to attend the Messier Marathon on March 25 and commented that even those who did not wish to participate were welcome to visit and look through the telescopes. Mr. Manner, reporting for Treasurer Randy Smith, announced that the BSAS' bank balance was $ 4,190.38. TNSP Coordinator Keith Burneson announced that a contract would be signed with the Tennessee Alabama Georgia (TAG) Church Camp to use their facility and that the evening of September 14 would most likely be reserved for BSAS members only.

Mark manner announced these upcoming events:

• March 17	Potluck dinner at Dyer Observatory (6:30 P.M)
• March 25	Messier Marathon at Spot Observatory (March 24 alternate)
• March 3 – April	TSSP at Fall Creek Falls
• April 1	Star party at Warner Park
• May 6	Astronomy Day at ASC
• June 3	BSAS annual picnic at Spot Observatory

Kris McCall announced that she would get further details regarding attendees, displays, and locations for the Astronomy Day celebration at ASC on May 6. Mark Manner told the audience that the Potluck Dinner at Dyer Observatory would be very informal. Pam Thomas announced that the BSAS would supply drinks for this event with members bringing side dishes of their choice. Mr. Manner stated that, if the sky were clear, attendees would probably get to look through the Observatory's large Seyfert telescope.

Vice-President Keith Burneson introduced Wesley Swift, a Raytheon contractor to the Marshall Space Flight Center (MSFC) in Huntsville, who delivered the evening's program on video astronomy activities at MSFC. Mr. Swift described video as a major breakthrough in amateur astronomy because it takes many pictures, accumulates light, can playback and recover moments of good seeing, and permits throwing away bad images while using the good ones. He described the ongoing Video Meteor Astronomy project at MSFC that had these purposes: to determine meteor rates and distribution; to analyze their effect upon (i.e., hitting) orbiting satellites; to use photometry for measuring the total light emitted; and ultimately to deduce their masses. Mr. Swift also described a lunar meteor impact observation made at MSFC on November 7, 2005. Unfortunately, this event was deemed to be "unofficial" because there were no other corroborating sightings. Mr. Swift stated that an estimated 261 meteoroids with a mass greater than 1 kilogram strike the moon each year – something on the order of a few each month. He stated that the MSFC was interested in seeking BSAS volunteers with telescopes of sufficient aperture to assist with future observations. Mr. Swift then answered questions from the audience following his presentation.

Since there was no further business to discuss, President Manner declared the meeting adjourned at 9:12 P.M.

Respectfully submitted,
Bob Rice, Secretary

Activities and Events

April 1 — 30, 2006

4/1-2 TSSP (Fall Creek Falls)
4/1 Star Party (Warner Park)
4/2 Daylight Savings begins; Moon 0.3½ N of Pleiades (M45)
4/5 FIRST QUARTER; Double shadow transit on Jupiter
4/6 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
4/7 Star Party, MTSU, 6:00 – 9:00 (contact JanaRuth Ford (553-9438)
4/8 Mercury greatest elongation W (28½)
4/13 FULL MOON; Spica 0.3½ S of Moon
4/15 Ashland City Schools Outreach — 6:00 pm
4/17 Antares 0.2½ N of Moon; Mars 0.7½ of M35 (64½ E)
4/18 Venus 0.3½ N of Uranus (45½W)
4/20 LAST QUARTER
4/20 BSAS monthly meeting at ASC: 7:30 p. m.
4/22 Star Party (Long Hunter State Park)
4/23 Uranus 1.2½ N of Moon
4/24 Venus 0.5½ N of Moon
4/27 NEW MOON
4/29 Private Star Party (Natchez Trace, Mile 412, Water Valley overlook)
4/29 Moon 0.2½ N of Pleiades (M45)

May 1 — 31, 2006

5/4 Jupiter at opposition
5/4 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
5/5 FIRST QUARTER
5/5 Star Party, MTSU, 6:00 – 9:00 (contact JanaRuth Ford (553-9438)
5/6 Astronomy Day at the Adventure Science Center
5/6 η-Aquarid meteors peak
5/10 Spica 0.3½ S of Moon, occultation
5/12 Jupiter 5½ N of Moon
5/13 FULL MOON
5/14 Antares 0.1½ N of Moon
5/18 BSAS monthly meeting at ASC: 7:30 p. m.
5/19 Neptune 4½ N of Moon
5/20 LAST QUARTER
5/20 Star Party (Long Hunter State Park) 8:30 - 10:30
5/21 Uranus 1.0½ N of Moon
5/27 NEW MOON
5/27 Private Star Party (Natchez Trace, Mile 412, Water Valley overlook)
5/31 Vesta 0.9½ S of Moon

Note: all dates & hours according to Central

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