



ECLIPSE



The Newsletter of the Barnard-Seyfert Astronomical Society

Organized in 1928

March 2006

The Membership meeting will be held on March 16, 2006 at the Adventure Science Center at 7:30 pm.

NASA scientists at the Meteoroid Environment Office at the Marshall Space Flight Center in Huntsville, Alabama, set up a telescope outside their office building to monitor flashes on the Moon's shadowed side.

Rob Suggs, team leader of NASA's space environments team, and Wesley Swift, a contractor who supports the environments team, connected an Astrovid StellaCam EX to an Orion 10-inch f/4.7 Newtonian on an Atlas mount as a 1-night project. The two were testing the feasibility of the monitoring technique. Video cable ran from the setup outside the engineering building to a desktop computer inside. According to Bill Cooke, an astronomer at the Marshall Space Flight Center, the video sat on the computer for a week before Suggs analyzed it and found the 7.3-magnitude flash.

Mr. Wesley Swift, on the NASA's space environments team will be our speaker to tell us about the telescope set-up and methods of observing and recording the impact information.

President's Message

In March the BSAS has two special events that I want to continue to keep in front of the membership. The first is a pot-luck dinner to be held at the Vanderbilt University Dyer Observatory on Friday, March 17, 2006, starting at 6:30 pm. As you all know, for many years the BSAS and Dyer have had a very special relationship, and hopefully this event will be the first of many that will involve both Dyer and the BSAS. Please make plans to attend, and if you are interested in helping with the logistics, please let me know.

The other special event this month is the annual BSAS Messier Marathon, to be held the night of Saturday-Sunday, March 25-26 at Spot Observatory. If the weather looks bad for Saturday night, we will if possible have the Messier Marathon on Friday, March 24. We will keep you advised as the date approaches. As many of you know, I have suggested that BSAS members join the Yahoo Group TNAstronomy, as it is a great way to keep advised on current events. We will always post notices about star party and event cancellations or changes there as soon as they are available. A link to TNAstronomy appears below my contact information.

Now, a little more about the Messier Marathon and its location. Spot Observatory (www.spotastro.com) is located at 3330 HWY 230 about 50 miles west of Nashville. It is located in a relatively dark area (approximately Bortle 4/3), with views of the horizon that are variable, but very low if one is willing to move around a bit. For the March 25th date this year at the observatory's latitude of approximately 36 degrees, it is theoretically possible to view 109 of the 110 Messier objects (weather and horizon permitting). The 12% moon will rise at 4:15 am, just as the sky begins to brighten before sunrise at 5:45 am.

To get there, go I-40 West and take Exit 152, Bucksport. At the bottom of the exit ramp, take a left on HWY 230, and follow it back under I-40 and around an "S" curve to a stop sign. At the stop sign, take a left, continuing on HWY 230. From that stop, the entrance to the observatory is approximately 4 miles on the left. You will see a black wooden fence with a silver metal farm gate. Just past this entrance, Dodd Hollow Road comes into HWY 230 on the right. If you get to Dodd Hollow Road, turn around and come back a few hundred feet. I will have my cell phone with me, so call if you have any directional issues.

I suggest that you arrive an hour or two before sunset (6:06 pm that night) so that you can get set up, take a look at the observatory, and socialize with other BSAS members. For those not wishing to do the marathon alone, there will be others there who will be happy to share the experience. I will also have my observatory open and available for those who want to look at other things or do some quick imaging of deep sky objects or the planets (I have a 15+ degree horizon in my observatory, so we won't be imaging or viewing the lower objects). Please dress warmly with layers, and bring a red flashlight, as we will be observing red light rules throughout the night.

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Middle Tennessee State University Star Party

During the MTSU First Friday Star Party on March 3, 2006, Dr. Eric Klumpe will talk about the history of astronomy and introduce the new MTSU Uranidrome. His presentation, *Naked-Eye Astronomy in the 'Boro*, will be followed by a demonstration of the new observatory if the weather is clear. The Uranidrome will make it easy for those not familiar with the night sky to find the North Star. Visitors will be able to identify circumpolar constellations and use them as a way to tell time. In addition, visitors will also be able to measure the Earth's rotation rate and its rate of revolution around the Sun as well as calculate the angular size of the Sun and Moon and their relative distances.

The lecture will start at 6:30pm in the Wiser-Patten Science Hall in room 102. If the skies are clear, the program will be followed by telescopic viewing. Parking is FREE behind the WPS building. Use the Main Street entrance to MTSU, follow Blue Raider Drive past the Cope Building and Old Main Circle. Turn left at Friendship street and again into the 2nd parking lot to the left. WPS is the 2nd building to the right. Room 102 is down-stairs.

(The April 7 First Friday Star Party at MTSU will feature a presentation by Dr. Chuck Higgins on Dark Matter. More in the April issue of the Eclipse.)

Dark-Sky Announcement

March 7 (Tuesday) 7:30 p. m. BSAS Dark-sky committee, Room 201, McKendree Towers, 4343 Lebanon Pike, Hermitage, Tennessee

When I asked Bill Griswold to announce the annual meeting of the International Dark-Sky Association, March 16-18, in Tucson, AZ, he asked me to submit a paragraph. As chairman of the BSAS dark-sky committee and officer of the Middle Tennessee Section of IDA, I plan to attend this meeting. It will be held at the University Marriott Hotel in Tucson, close to the University of Arizona. One of the side options is a trip to a private observatory. My 2004 experience of the annual IDA meeting was that the conference was as rich and interesting as any I had ever taken part in. Contact IDA at 520-293-3198. E-mail address: admin@darksky.org.

"IDA's goal is to preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting."

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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THE ECLIPSE NEWSLETTER

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BSAS website: www.bsasnashville.com

BSAS Logo by Tony Campbell

Happy Birthday Valentina Tereshkova

by Robin Byrne

This month we honor a true pioneer of both space exploration and of women's rights. Valentina Vladimirovna Tereshkova was born March 6, 1937 in Maslennikovo, Russia. When Valentina was quite young, her father died while serving during World War II. Her mother, Elena Fedorovna, raised her three children while working in a textile plant. At the age of 8, Valentina began school, but left when she was 16 to begin working. However, she did continue her education via a correspondence course and earned her certification of graduation.

When Valentina was 18, she began working at a textile mill, but also became interested in parachuting. She joined an amateur parachuting club, which would ultimately become the key to her space flight. In 1961, after Yuri Gagarin's historic flight, it was decided to recruit women into the Cosmonaut program in order to pull off another space "first." Since there were few female pilots, parachutists were also considered for eligibility. At the age of 24, Valentina applied to become a Cosmonaut. In 1962, Valentina Tereshkova, along with four other women, became the first female Cosmonauts.

The training of the female Cosmonauts was identical to that of the men: weightless flights, parachuting, piloting, rocketry theory, spacecraft engineering, along with isolation and centrifuge training. The idea of putting a woman into space was the idea of the Soviet Union's space program head, Sergei Korolev; however, the selection of who would become the first woman in space was made by Nikita Krushchev, the leader of the Soviet Union.

The Soviet space program was held under great secrecy throughout the Cold War, and the idea of sending a woman into space was no different. Valentina couldn't even tell her own mother she was a Cosmonaut or where she was going, so Elena found out when everyone else in the country did. On June 16, 1963, Valentina Tereshkova launched into space aboard Vostok 6. While in orbit, her spacecraft came within 3 miles of Vostok 5 with Valeri Bykovsky on board. However, Korolev did not trust Tereshkova to perform properly in space, so she was not allowed to have manual control of her spacecraft during the entire flight. After 3 days in orbit, Valentina reentered Earth's atmosphere. At an altitude of 20,000 feet, she ejected to parachute the remaining distance to the ground, which was standard procedure for the Soviets at that time. Her flight lasted longer than all of the U.S. Mercury flights combined. It was another propaganda coup for the Soviets.

After her flight, rumor has it that Krushchev thought that the Soviet's female Cosmonaut should marry the only single male Cosmonaut: Andriyan Nikolayev. Some versions of the story say that so much pressure was placed upon the couple that they relented. They married November 3, 1963, with Krushchev in attendance. The next year, their daughter, Yelena, was born - the first child born to two parents who had been in space. The "arranged" marriage did not last, though, and they eventually divorced.

After her flight, Valentina continued her education by enrolling in the Zhukovskiy Military Air Academy in 1964. Four years later, she graduated with distinction, and the title of Colonel-Engineer Tereshkova. The following year, the female Cosmonaut program ended. It wasn't until the U.S. was preparing to send Sally Ride into space aboard the Space Shuttle that another female Cosmonaut would go into orbit.

Upon selection to the Cosmonaut corps, Valentina had joined the Communist Party. After her flight, she became very active in Communist Party organizations, including: member of the Yarsoslavl Supreme Soviet in 1967; member of the council of the Union of the Supreme Soviet in 1966-1974, elected to the presidium of the Supreme Soviet in 1974, and Soviet representative to the UN Conference for the International Women's Year in Mexico City in 1975. After the collapse of the Soviet Union and of Communism, Valentina faded from public view, her Communist Party ties now a liability. It is believed that she is currently retired in Moscow and living a quiet life.

Although used solely for propaganda reasons, Valentina Tereshkova's flight proved that women could perform the same tasks as men when in space. Her milestone ultimately led to Sally Ride's flight, and, more recently, to Eileen Collins' role as Commander of two Shuttle flights. As the Soviet representative to many international conferences related to women, she continued to serve as not only a role model, but as a leader in the struggle for women's equality. The decline of Communism brought her public contributions to a halt, but the legacy of Valentina Tereshkova lives on.

References:

Tereshkova

<http://www.astronautix.com/astros/terhkova.htm>

Valentina Tereshkova

Biography <http://space.about.com/od/cosmonautbiographies/a/tereshkovabio.htm>

**Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held On Thursday, February 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 February 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 7:32 P.M. Board members Mike Benson, Keith Burneson, Tony Campbell, JanaRuth Ford, Bill Griswold, Mark Manner, Bob Rice, and Gary Wilkerson were present. Board members Kris McCall, Randy Smith, and Pam Thomas were absent. In addition to members of the board, Long Range Planning Committee Chair Joe Boyd, Equipment Committee Chair Lonnie Puterbaugh, and BSAS member Terry Reeves were also present.

Bob Rice, reporting for Treasurer Randy Smith, announced that the BSAS' bank balance was \$4,666.91. Mark Manner reported that a potluck dinner was scheduled at Dyer Observatory on March 17 at 6:30 P.M. and noted that details would be coordinated at the next board meeting. Mr. Manner announced that BSAS participation in the upcoming Seyfert Lectures at Vanderbilt University would also be discussed at the same time. In addition, he offered to assist with proofreading the *Eclipse* newsletter. Mr. Manner noted that Webmaster Tony Campbell was updating the BSAS website and announced that the Cumberland Astronomical Society had contacted him about holding a joint star party.

Mark Manner announced that several members with AOL accounts had not received some mass e-mailings. Mr. Manner stated that the Star Party Coordinator would issue "go or no-go" decisions regarding these events on the BSAS website. He also noted that a controlled access list of BSAS members would soon be established on the website. Mr. Manner announced that the Messier Marathon would be held at his home (a.k.a. Spot Observatory) on Saturday, March 25. He noted that Lonnie Puterbaugh would conduct a Messier Marathon instruction session immediately after the membership meeting on March 16. Webmaster Tony Campbell invited everyone to send website announcements to him at astro@tonyc.com

Mr. Manner also announced these developments:

- A new BSAS member has offered to help with public relations ideas,
- The BSAS picnic will be held on June 3 at Spot Observatory, and
- Keith Burneson and JanaRuth Ford will share Program Committee duties.

Mike Benson informed the board that he had received a letter from Austin Peay State University (APSU) announcing that judging for projects entered in the Middle Tennessee Science & Engineering Fair would occur from 5:30 P.M. to 10:00 P.M. on March 23. Mr. Benson asked the board to consider providing \$100, \$50, and \$25 prizes in the name of the BSAS for astronomy related entries as had been done for the last several years. Following a very brief discussion, the board unanimously agreed to do this. Mr. Benson said that he would send a brief paragraph describing the BSAS' participation to Webmaster Tony Campbell to be placed on our website.

Tennessee Star Party (TNSP) Coordinator Keith Burneson announced that he had received detailed information from the Tennessee, Alabama, Georgia (T.A.G.) church camp that is being considered as a potential site for TNSP 2006. Mr. Burneson stated that the facilities would cost \$930 per night and that he, Lonnie Puterbaugh, and Terry Reeves would inspect the camp on Saturday, February 4. The board will consider entering into a contract with T.A.G. after hearing their report on this visit. Mr. Burneson also announced these potential speakers for TNSP 2006: Loren Ball (asteroid hunter), Todd Gary (Tennessee State University), Charles McGruder (Western Kentucky University), and possibly Bill Keel (University of Alabama).

JanaRuth Ford announced that, due to Astronomy Day activities scheduled at the Adventure Science Center on May 6 conflicting with graduation ceremonies at many Tennessee Board of Regents universities on the same day, the BSAS may be asked to fill in for potential speakers from those schools who can not participate.

Mark Manner stated that the BSAS needed to set the format and find presenters for member-oriented workshops. Mr. Manner suggested that these might be held on Saturdays in conjunction with informal picnics. Some of the discussed topics included:

Meeting of the Board of Directors, continued from Page 4

- Video astronomy (Maybe Lonnie Puterbaugh in May)
 - Telescope collimation
 - Telescope selection (In the fall before the Christmas rush)
 - Telescope accessories (Possibly with emphasis on filters)
 - Books & resource materials (Maybe Mike Benson)
- Mr. Manner will compile and circulate a more complete list among the board members.

Mike Benson noted that *Astronomy Magazine* was offering a \$2,500 prize for outstanding outreach activities by an astronomy club. Mr. Benson will obtain the required details, guidelines, and deadlines for discussion at the next board meeting.

Equipment Committee Chair Lonnie Puterbaugh used his laptop computer to illustrate these committee accomplishments and upcoming activities:

- Development of an extensive loaner telescope program
- Committee members will be pictured in the next *Eclipse*
- Joe Boyd will write a brief article about the loaner program
- Keith Burneson will write about using the Society's LX 200 telescope
- Building a reference library for members

Mr. Puterbaugh stated that these activities and resources would be described in the *Eclipse* newsletter and on the BSAS website. Lastly, he showed the board a video clip of the NASA Stardust capsule's recent descent taken by a passing DC-9 aircraft.

There being no further business to discuss, President Manner declared the meeting adjourned at 8:47 P.M.

Respectfully submitted,
Bob Rice
Secretary



Here are four members of The Equipment & Facilities Committee at the February 2006 monthly meeting. The 8"/f6 Dobsonian telescope pictured has since been loaned out to our newest BSAS member, Kim Hanes. Over the past year, several of our members have been making use of this popular program. It is a true benefit to BSAS membership. We know of at least three current BSAS members that have purchased telescopes this year after trying out one or more of the club's loaner scopes first! More information about the club's loaner program will follow in an upcoming issue of the *Eclipse*.

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.

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

President Mark Manner called the meeting to order at 7:48 P.M. in the Adventure Science Center (ASC) and welcomed new members and visitors. The minutes of the previous membership meeting held on January 19, 2006 were approved without exception as published in the February 2006 issue of the *Eclipse* newsletter.

Mike Benson introduced Barbara Wilson, staff amateur astronomer at the Houston Museum of Natural History's George Observatory, who delivered the evening's presentation on *Observing at the Edge of Visibility*. Ms Wilson explained the chemical and physical properties of the human eye in performing visual astronomical observation. Describing visual observers as being photon-collectors, she described a methodology with four goals: (1) to hone the senses, (2) to prepare for seeing detail, (3) to allow seeing exotic things, and (4) to have fun. She explained that, because of subjective and personal factors, there was no single answer to how faint an object a person could see. She also added that most published limiting magnitude tables were very general and could be exceeded by disciplined practice. In addition, she cited dark adaptation, use of averted vision, and intense concentration as being critical elements in seeing extremely faint objects. Ms Wilson graciously answered questions from the audience following her presentation.

Mark Manner recalled the meeting to order at 9:05 P.M. Treasurer Randy Smith reported that the BSAS' checking account balance was \$4,474.41. Long Range Planning Committee Chair Joe Boyd announced that this committee had reviewed returned questionnaires from members and would issue a report later this year.

Tennessee Star Party (TNSP) Coordinator Keith Burneson reported that an initial inspection of the TAG (Tennessee-Alabama-Georgia) church-camp site near Lynchburg was favorable. He explained that adding an extra night - possibly for BSAS members only - was being considered with September 15, 16, and 17 as potential dates. Mark Manner added that the site's darkness would be measured with a sky meter.

Webmaster Tony Campbell asked for volunteers to help with the BSAS website. Mr. Campbell also announced that the International Space Station would appear as a bright and rapidly moving "star" tomorrow morning (February 17, 2006) at 5:08 A.M. near the Big Dipper. Gary Wilkerson announced that he would keep everyone apprised of the status of upcoming star parties.

Mark Manner announced these upcoming events of interest:

Feb 25	- Private star party at the Natchez Trace Parkway site
Mar 03	- MTSU star party
Mar 16	- BSAS Membership meeting at the ASC
Mar 17	- Potluck dinner at Vanderbilt's Dyer Observatory (6:30 P.M.)
Mar 25	- Messier Marathon at Spot Observatory (March 24 alternate)
Mar 31 thru Apr 2	- TSSP at Fall Creek Falls
Apr 01	- Public star party at Warner Park
May 06	- Astronomy Day at ASC
Jun 03	- BSAS annual picnic at Spot Observatory

Mark Manner also announced these upcoming hands-on workshops:

- Video Astronomy on a Saturday to be determined in May at Lonnie Puterbaugh's home
- CCD/Webcam Imaging on Saturday, June 3 before or after the BSAS picnic
- Telescope Selection on Saturday, August 12 prior to the Warner Park star party
- Telescope Operation on Saturday, November 17 prior to the Long Hunter star party
- Accessories From A to Z on a Saturday to be determined

JanaRuth Ford announced that the March 3 public session at MTSU would describe using the university's Naked Eye Observatory (also affectionately known as "Murph-Henge"). Mark Manner announced that Lonnie Puterbaugh would conduct a Messier Marathon preparation session immediately following the meeting.

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

Respectfully submitted,
Bob Rice, Secretary

President's Message continued from Page 1

We have bathrooms, and a warm place to rest or sleep. Bring food for your supper Saturday night (we have microwaves and stoves for re-heating), and a sleeping bag or blanket, since I may run out of beds and my floors are hard! Water, soft drinks, coffee and hot chocolate will be available all night, and we will have some type of breakfast food available Sunday morning.

As usual, please don't hesitate to contact me if you have questions, concerns or suggestions regarding the BSAS. I really look forward to seeing all of you on March 25th.

Mark Manner

Cell 615-351-3172

Office 615-251-1066

mark.manner@h3gm.com

<http://www.spotastro.com>

<http://groups.yahoo.com/group/tnastronomy/>



Messier Marathon 2006

March 25-26 Spot Observatory



Activities and Events

March 1 — 31, 2006

- 3/2 BSAS Board of Directors mtg., 7:30 p.m. at Girl Scout Office
- 3/3 Star Party, MTSU, 6:00 – 9:00 (contact JanaRuth Ford (553-9438))
- 3/5 Moon 0.3° N of Pleiades (M45)
- 3/6 FIRST QUARTER
- 3/14 FULL MOON, penumbral eclipse
- 3/16 BSAS monthly meeting at ASC: 7:30 p. m
- 3/17 Pot luck picnic at Dyer Observatory, 6:30 p.m..
- 3/17 Spica 0.3° S of Moon
- 3/20 Equinox; Antares 0.3° N of Moon
- 3/22 LAST QUARTER
- 3/24-25 Messier Marathon, Spot Observatory (3/24 is a rain date)
- 3/25 Venus greatest elongation W (47°); Ceres 0.8° S of Moon
- 3/26 Venus 1.9° N of Moon
- 3/27 Uranus 1.4° N of Moon; Mercury 2° N of Moon
- 3/28 Double shadow transit on Jupiter
- 3/29 NEW MOON
- 3/31 TSSP (Fall Creek Falls)

April 1 — 30, 2006

- 4/1-2 TSSP (Fall Creek Falls)
- 4/1 Star Party (Warner Park)
- 4/2 Daylight Savings begins; Moon 0.3° 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 (28°)
- 4/13 FULL MOON; Spica 0.3° S of Moon
- 4/17 Antares 0.2° N of Moon; Mars 0.7° of M35 (64° E)
- 4/18 Venus 0.3° N of Uranus (45°W)
- 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 1.2° N of Moon
- 4/24 Venus 0.5° N of Moon
- 4/27 NEW MOON
- 4/29 Private Star Party (Natchez Trace, Mile 412, Water Valley overlook)
- 4/29 Moon 0.2° N of Pleiades (M45)

Note: all dates & hours according to Central Time

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