

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

Upcoming Events

Board of Directors Meeting

April 2nd at the Cumberland Valley Girl Scout Council Building
– 7:30 pm

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

Membership Meeting

April 16th at the Adventure Science Center – 7:30 pm

May 21st at the Adventure Science Center – 7:30 pm

BSAS Annual Messier Marathon

April 25th at Spot Observatory

Public Star Party

May 2nd – Long Hunter State Park

IYA 2009 Events

See page 6 for details.

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Monthly Membership Meeting

Thursday, 04/16/2009
Adventure Science Center
7:30 pm



Sudekum Planetarium director Kris McCall will host a special showing of two spectacular planetarium programs. In *Two Small Pieces of Glass*, follow two students to a local star party to learn about telescopes and discover how observing the sky has expanded our universe. Also being shown is the planetarium's premiere show, *STARS*, an original production narrated by actor Mark Hamill.

From The President



Well, spring is finally here. That means it is time for things like marathons. Now, I am not talking about gut-wrenching, lung-killing, muscle exhaustathon like the Music City Marathon. I'm talking about the astronomical version called a Messier Marathon. For those of you who are either new or have been trying to not pay attention, there was a comet hunter by the name of Charles Messier (1730-1817). In the course of his work, he kept finding these faint fuzzy objects that were not comets. In his frustration, he started a list. This list is known as the Messier Catalog. Depending upon who is counting, there are 109 or 110 objects in the list. These objects include most of the best and brightest in the night sky.

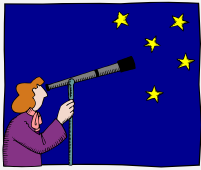
An interesting detail about the objects in the list is that if you plot them in the sky, you will see a hole. When the Sun is in that hole, it is possible (with some luck and a lot of determination) to observe all of the objects in one night. If you are like me, you just do the best you can and stop when it you are no longer having fun. The goal here is not that you have to finish the list, but that you stretch yourself and learn how to find these objects with your equipment.

We are going to hold the marathon at Spot Observatory (aka the home of Mark and Anne Manner) on the night of Saturday, April 25, weather permitting. You can find directions on Mark's web site, <http://www.spotastro.com>. While you are there, take a look at some of Mark's photographs. He does excellent work. We always have a wonderful time, even the year when the clouds just refused to clear out. So, make plans to come and run a marathon, a half marathon, a quarter marathon, or just observe.

As I write this, Earth Hour 2009 was last night. The bad weather that rolled through our area earlier in the day threatened to keep us from having a star party. A small number of us showed up along with more than a few members of the public. A few lights were actually turned off. Not as many as I hoped, but about what I expected. Still, it is a start. The interesting thing is that the cold front actually cleared up the sky tremendously. I have never seen the sky that transparent at the Adventure Science Center. On the other hand, it was a bit cold and the wind was quite strong. All in all, it was a fun event; I just wish I had brought a heavier coat.

I want to thank Spencer Buckner for bringing one of the Harlow Shapley public lectures to March meeting. It was good to be reminded of what we are trying to accomplish with the International Year of Astronomy 2009. We are still working on the details for the April meeting. For May, our own JanaRuth Ford is scheduled to be talking about meteors.

Dr. Terry Reeves
President



"I suppose the one quality in an astronaut more powerful than any other is curiosity. They have to get some place nobody's ever been."

*Senator John H. Glenn, Jr.
Friendship 7
STS-95*

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

LUNAR PHASES

April 2009

04/02 FIRST Quarter Moon
04/09 FULL Moon
04/17 LAST Quarter Moon
04/25 NEW Moon

May 2009

05/01 FIRST Quarter Moon
05/09 FULL Moon
05/17 LAST Quarter Moon
05/24 NEW Moon
05/31 FIRST Quarter Moon

OBJECTS VISIBLE THIS MONTH

Messier Objects:

Double Star
M40

Galaxy
M65, M66, M95, M96, M105, M106, M108
M109

Planetary Nebula
M97 (The Owl Nebula)

Outreach Update *Dr. Terry Reeves, president*

On Friday, April 3, we have another public star party scheduled at the Adventure Science Center from 8:00 PM until 10:00 PM. We will be supporting the opening of the planetarium show, "Two Small Pieces of Glass". This program is being shown as a part of IYA 2009, and as a companion to the documentary "400 Years of the Telescope" which will air locally on PBS on the night of Friday, April 10. The next night, Saturday, April 4, we will have a public star party at Warner Park from 8:00 PM until 10:00 PM.

On Saturday, May 2, we have a public star party scheduled at Long Hunter State Park from 8:00 PM until 10:00 PM.

As always, you need to show up early enough to get set up before the public arrives. Additionally, at Warner Park, we need to arrive by 7:30 PM to avoid moving cars and moving people in the viewing area at the same time.

The night of the Messier Marathon to Saturday, April 25. It will be held at Mark Manner's home. The BSAS annual picnic is scheduled to start at 4:00 PM on Saturday, May 23. (This is Memorial Day weekend.) There will be opportunity for viewing afterward, weather permitting.

Happy Birthday Mercury 7

by Robin Byrne

This month we celebrate the 50th anniversary of the selection and announcement of America's first astronauts. On April 9, 1959 Scott Carpenter, Gordon Cooper, John Glenn, Gus Grissom, Wally Schirra, Alan Shepard, and Deke Slayton became household names. How did this group of men, collectively known as the Mercury Seven, have the fortune to be chosen for such notoriety?

Six months prior to the introduction of the Mercury Seven, NASA announced its plans for Project Mercury. This would be America's first attempt to put man in space, see how he functions, and bring him home safely. But how do you determine who will be suited for an endeavor that has never been attempted before? Some of the criteria were practical: the heights and weights of the candidates were dictated by the Mercury capsule specifications. Some of the criteria were political: President Eisenhower insisted that the candidates be test pilots with college degrees. Although these conditions would narrow the field, it was hardly enough to bring the total down to the desired number of six astronauts. The selection committee consisted of engineers, flight surgeons, psychologists and psychiatrists. The candidates would be tested on how well they worked with equipment under stressful conditions; their physical health would be evaluated, as would their mental health.

From an original pool of 508 military records, 110 men were found to meet the initial criteria. This candidate list was divided into 3 groups of 34 to 37 men each. At the beginning of February, 1959, the first group of men was invited to Washington, D. C. for initial interviews, written tests and preliminary medical exams. A week later, the second group was reviewed. From these first two groups, 32 men were interested in continuing with the process. Since that was more than had been expected, the third group never even got this far.

The next round of tests was performed at the Lovelace Clinic in Albuquerque, NM. Here, the candidates were put through a battery of medical examinations: lab tests, full body x-rays, total-body radiation count, body water content, body density, and complete examinations of their eyes, ears, nose, throat and heart, as well as establishing the most extensive medical histories ever compiled. Despite the incredibly thorough screening process, only one candidate was eliminated due to potential health issues.

The remaining 31 candidates then were sent to the Wright Aeromedical Laboratory at the Wright Development Center in Dayton, OH. For a week in March, the candidates were tested for physical and mental endurance. The physical tests included: treadmill endurance, being on a tilt table, placing their feet in ice water, and seeing how long they could blow up a balloon. The psychological evaluation included personality, motivation, intellectual and aptitude tests. The candidates were also asked to answer the following two questions: "Who am I?" and "Whom would you assign to the mission if you could not go yourself?"

By the end of that March, the candidate list had been pared down to 18 contenders. Despite trying to establish defining criteria, the men were so well qualified physically and mentally, they were essentially equally ranked. It came down to which men had the kind of technical experience that would benefit the space program. The committee tried to find men who would each have unique skills to create a well-balanced team. Although they had planned on having six astronauts, it was too difficult to narrow the list that much, so seven men were recommended. Each were notified by phone, and all eagerly agreed to become a part of the Mercury Program, and of history.

The Mercury Seven astronauts have flown on every U.S. spacecraft to date. Mercury astronauts flew not only on the Mercury missions (other than Slayton due to an irregular heartbeat), but also Gemini (Cooper, Grissom, Schirra), Apollo (Grissom, Schirra, Shepard), Apollo-Soyuz (Slayton), and the Space Shuttle (Glenn). Of the original seven, only two are still alive: John Glenn and Scott Carpenter. America's history of manned spaceflight not only owes its beginnings to the Mercury Seven, but has ties to these men every step of the way. I wouldn't be the least bit surprised if Glenn and Carpenter somehow are a part of our future missions to the Moon and Mars - it would only be fitting.

References:

Mercury Seven - Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Mercury_Seven

40th Anniversary of the Selection of the Mercury 7 Astronauts
<http://history.nasa.gov/40thmerc7/intro.htm>

NASA - Project Mercury Overview - Astronaut Selection
http://www.nasa.gov/mission_pages/mercury/missions/astro_naut.htm



Image: Wikipedia

March 2009 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 March 5, 2009. A sign-in sheet was circulated in lieu of a roll call. Board members JanaRuth Ford, Bill Griswold, Dr. Donna Hummell, Kris McCall, Bob Norling, Curt Porter, Dr. Terry Reeves, Bob Rice, and Steve Wheeler were present. Board members Dr. Spencer Buckner, Tony Campbell, and Theo Wellington, were absent. BSAS member and NASA Solar System Ambassador Joe Boyd also attended. A quorum being present, President Terry Reeves called the meeting to order at 7:34 P.M.

Treasurer Bob Norling reported that the BSAS' bank balance was \$2,138.29. Dr. Terry Reeves stated that he would contact Webmaster Tony Campbell about putting a notice on the BSAS' website regarding the March 18th membership meeting. Kris McCall also suggested contacting science teacher Wesley Roberts at Hume-Fogg Magnet School and putting a notice on the tnastronomy website. Dr. Reeves reported that the board approved cash prizes of \$100.00, \$50.00, and \$25.00 for the 57th Middle Tennessee Science and Engineering Fair during a special board meeting following the close of the February 19th membership meeting.

Dr. Terry Reeves reminded the board that the BSAS would conduct a public star party at the Adventure Science Center (ASC) during Earth Hour on March 28th with city lights being turned off at 8:30 P.M. Kris McCall announced that the ASC's parking lot lights would be turned off for the star party. Dr. Reeves noted that the Messier Marathon was also scheduled for March 28th and would be moved back to the May 23rd alternate date to avoid a conflict. Kris McCall reported that a special preview of the planetarium presentation "Two Small Pieces of Glass" would be held on April 3rd for astronomy boards before being made available to the public. Jana Ruth Ford announced that the Night Sky Network would send out demonstration kits related to the April 10th showing of "400 Years of the Telescope" on PBS. Kris McCall announced that astronomers from Tennessee State University would present a public lecture on extra-solar planets at the ASC from 6:00 to 8:00 P.M. on March 31st. Dr. Terry Reeves announced that the BSAS would conduct a public star party at the Warner Parks on April 4th from 8:00 to 10:00 P.M.

Jana Ruth Ford announced that Warner Parks Naturalist Heather Gallagher had contacted her about the BSAS assisting with public binocular astronomy sessions on June 20th and 27th. Following a brief discussion, the board decided that assisting with one session on Friday June 26th would be preferable. Dr. Terry Reeves announced that the BSAS would conduct a private star party at Long Hunter State Park on July 25th. Kris McCall announced that PBS would air a "Tennessee Crossroads" TV program on the ASC's recent Sudekum Planetarium expansion to be followed by an article in Sky and Telescope magazine later in the fall.

Bill Griswold announced that Camp Idlewild had donated \$100.00 to the BSAS largely due to Steve Wheeler's recent assistance with an astronomy program at that facility. Dr. Terry Reeves also announced that Bill Collins' family had made a donation. Curt Porter made a motion that the BSAS set up a new account to keep these and similar funds separate from regular operating monies. Bill Griswold seconded this motion that, following a brief discussion, was approved by a unanimous voice vote. Joe Boyd announced that he had made a recent PowerPoint presentation on the solar system to third graders at the West Meade School. Jana Ruth Ford reported that Middle Tennessee State University (MTSU) was considering eliminating its Physics and Astronomy Department due to state imposed budget cuts. Joe Boyd volunteered to draft a formal resolution opposing that action for presentation to Dr. Sydney McPhee, MTSU's president.

There being no further business to discuss, Dr. Reeves declared the meeting to be adjourned at 9:13 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**

March 2009 Monthly Meeting Minutes

Bob Rice, Secretary

President Dr. Terry Reeves called the meeting to order at 7:48 P.M. in the Adventure Science Center (ASC) and welcomed new members and guests. Dr. Reeves reported that the BSAS' bank balance was approximately \$1,900.00. Joe Boyd recognized Vanderbilt Professor Dr. Bob O'Dell who was in the audience as being a friend of and a frequent presenter to the BSAS.

Dr. Terry Reeves announced these upcoming BSAS star parties and events:

- Mar 28 – Earth Hour observation followed by a public star party at the ASC,
- Apr 03 – Public star party from 8-10 P.M. at the ASC,
- Apr 04 – Public Star Party from 8-10 P.M. at the Warner Parks,
- Apr 25 – Messier Marathon at Mark Manner's Spot Observatory.
- May 02 – Public star party from 8-10 P.M. at Long Hunter State Park.

Vice President Dr. Spencer Buckner introduced Dr. Susana Deustua, a Harlow Shapley visiting astronomer, who delivered the evening's program on the International Year of Astronomy 2009 (IYA). Dr. Deustua pointed out that the IYA was a global celebration of astronomy intended to educate the public and to recognize the 400th anniversary of Galileo Galilei's first use of the telescope for exploring celestial objects. She noted that although Galileo was a college dropout (in medicine), he insisted on evidence and proof along with using mathematics to describe the natural world. She also demonstrated one of the IYA's telescopes patterned after Galileo's that was being sold to the public for \$15.00. Following her presentation she answered questions and invited attendees outside to look through the IYA telescope.

Kris McCall announced that Tennessee State University astronomers would celebrate ten years of extra-solar planetary discovery and research with a public lecture at the ASC on March 31st from 3:00 -6:00 P.M. Since there was no further business to discuss, President Reeves declared the meeting to be adjourned at 9:07 P.M.

BSAS Affiliations

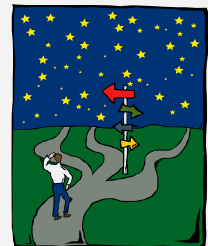
The Astronomical League
<http://www.astroleague.org/>



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



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





Celebrate the **International Year of Astronomy**

2009 is the International Year of Astronomy, and the Barnard-Seyfert Astronomical Society will be participating in many events to celebrate the wonders of the night sky.

For the latest event information visit
<http://www.sudekumplanetarium.com/>
or <http://www.bsasnashville.com/> .

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|-----------------|---|
| April 3 | Public Star Party at the Adventure Science Center
(8:00 – 10:00 PM) |
| April 4 | Public Star Party at Warner Park
(8:00 – 10:00 PM) |
| April 9 | Sudekum Planetarium featured on NPT series
<i>Tennessee Crossroads</i> 7:00 PM CST (rebroadcast
scheduled for April 12 th at 10:00 AM) |
| April 16 | NPT airs documentary <i>400 Years of the Telescope</i>
(check local listings for air times) |



The Flame (NGC 2024) and the Horsehead (Barnard 33) Nebula
DSLR Image by Steve Wheeler



Comet C/2007 N3 (Lulin)
DSLR Image by Steve Wheeler

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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