



# The ECLIPSE



The Newsletter of the Barnard-Seyfert Astronomical Society

Organized in 1928

November 2013

**The Membership meeting will be held on November 20, 2013 at the Cumberland Valley Girl Scout Council Building located at the intersection of Harding Place and Granny White Pike at 7:30 pm.**

Thinking of getting someone a new astronomy gift for Christmas? Has your son or daughter been writing letters to Santa asking for a telescope or other astronomy gadget?

## Upcoming Events

Board of Directors Meeting, November 6 at the Cumberland Valley Girl Scout Building – 7:30 pm

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Eclipse photograph by  
Francisco Diego

## From the President

The Barnard-Seyfert Astronomical Society has several goals as an organization. First, it is an interest group. We get together because we all have an interest in the night sky and astronomy. So it's fun to meet and enjoy programs to learn more and share that interest. We also organize observing at dark locations so that we can enjoy a better view than most of us have at home. Learning from each other, exchanging tips and ideas about gear all helps everyone to go as far with the hobby as they would like. That's what we do with and for each other.

Outreach is the other area that has always been an important part of BSAS. What we can do for the community at large serves two functions. First, by increasing the visibility of the club, we hope to gain new members! There are a lot of people out there that are interested in astronomy or would like to learn more about looking at the night sky, and we hope to meet some of them.

More importantly, though, we hope to meet the next generation. We hope have them experience the same sort of wonder that first got us interested in the night sky. When many of us were growing up, the night skies were darker. We *could* see the Milky Way. And of course, we were right in the middle of the space race. We could see the stars and we thought we were going to the stars.

Fast forward to the 21<sup>st</sup> century. We haven't been to the Moon in 40 years. Now we are asked to get the next generation interested in science. A generation that is often kept indoors, out of view of the night sky. That cannot see the Milky Way. To me there is a clear connection between the disconnection of people to nature and a lack of desire to pursue science. Science is about asking questions, observing, and making predictions about the natural world....I don't see how the computer screen can generate the interest that comes from playing in the dirt, from collecting beetles as Darwin did, or from gazing out at the universe

## OFFICERS

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## Possible Targets for November

### Moon Phases

#### November 2013

11/3 New Moon

11/9 First Quarter Moon

11/17 Full Moon

11/25 Last Quarter Moon

#### December 2013

12/2 New Moon

12/9 First Quarter Moon

12/17 Full Moon

12/25 Last Quarter Moon

### Objects

#### Globular Clusters

M56, M71, M15, M2, M72,  
M75, M30

#### Open Clusters

M73, M29, M39, M52,  
NGC457 (ET), M103,  
NGC654, NGC663,  
NGC884/869  
(Double Cluster), M34, M45  
(Pleiades)

#### Nebula

M57 (Ring), NGC 6543 (Cat's  
Eye), NGC6826 (Blinking),  
M27  
(Dumbbell),  
NGC7000 (North America),  
IC5146 (Cocoon), NGC7293  
(Helix), NGC1499  
(California)

#### Galaxies

M31 (Andromeda), M32,  
M110, M33 (Triangulum), M74

#### Asterisms

Cr399 (Coat Hanger)

#### Multiple Star Systems

Double-Double (Epsilon Lyrae)  
Albireo (Beta Cygni)  
Gamma Delphini

#### Variable Stars

Mu Cephei (Herschel's Garnet  
Star), Beta Persei (Algol),  
Omicron Ceti  
(Mira)

#### Planets

Jupiter, Uranus

## Star Parties for November and December

Sat	11/2	BSAS trace	NM is 11/3	mile marker 435.5
Fri	11/8	Bowie Park	700 to 1000	FQ is 11/10 Andromeda Galaxy, Pleiades, etc
Sat	11/9	Warner Park	700 to 900	FQ is 11/10 2 <sup>nd</sup> Saturday – Moon, Andromeda Galaxy, Pleiades, etc
Sat	11/30	BSAS trace	NM is 12/3	mile marker 412 water valley overlook
Sat	12/7	Shelby Bottoms	700 to 900	FQ is 12/9 Moon, Andromeda Galaxy, Pleiades, Orion Nebula, Jupiter, etc
Sat	12/28	BSAS trace	NM is 1/1	mile marker 435.5

## Happy Birthday Alan B. Shepard

by Robin Byrne

This month we celebrate the life of an American Hero. Alan B. Shepard, Jr. was born November 18, 1923 in Derry, New Hampshire, where he spent his entire childhood. After graduating from High School, Shepard entered the U.S. Naval Academy where he received his Bachelors Degree in 1944. A year later he married Louise Brewer.

Shepard's first assignment in the Navy was during World War II. He was sent to the destroyer USS Cogswell, which was stationed in the Pacific Ocean. After the war, Shepard began flight training and received his wings in 1947. This led to assignments on a variety of aircraft carriers. Shepard's drive to be the best ultimately led to enrollment in the United States Naval Test Pilot School, from which he graduated in 1951. This led to a series of test flights, including measuring light in high-altitude experiments, measuring air masses over land, testing in-flight refueling techniques, and analyzing the first angled deck on an aircraft carrier. At the end of two tours of duty, Shepard spent five months as an instructor in the test pilot school at Patuxent River, Maryland. Shepard then enrolled in the Naval War College in Rhode Island, where he received a Masters Degree. This led to a position as the Aircraft Readiness Officer for the Commander-in-Chief of the Atlantic Fleet.

In 1959, the newly-established National Aeronautics and Space Agency (NASA) sent out invitations to 110 test pilots to go through a series of tests to become America's first astronauts. Seven men were chosen, including Alan Shepard. After almost three years of tests and training, America was ready to send our first man into space, and that man would be Alan Shepard. Originally scheduled for October of 1960, delays kept pushing it back. While all of the delays took place, the Soviet Union beat us into space on April 12, 1961, sending Yuri Gagarin into orbit for 108 minutes. Only 23 days later, on May 5, Alan Shepard's flight was finally set to launch.

Shepard's flight was to be a sub-orbital trip that would take him up to an altitude of 116 miles and back down over the course of about 15 minutes. Since the flight was so short, no provisions had been made for the astronaut to be able to relieve himself. The flight planners hadn't considered delays on the ground. Four hours of delays, with Shepard in the capsule, ultimately resulted with him having to relieve his bladder in his suit. Fortunately, the cooling system helped dry him out. As the mission continued to be delayed, Shepard reached his limit, saying "Why don't you fix your little problem and light this candle?" The success of sending the first American into space made Alan Shepard an instant hero for the entire nation.

After the Mercury Program ended, next up was Gemini. Naturally, Alan Shepard was chosen to fly the first Gemini flight. Sadly, in 1964, Shepard was plagued with uncontrolled dizziness, and was diagnosed with Meniere's disease, which involves a build-up of fluid in the inner ear. Shepard was grounded. He was not the first of the Mercury astronauts to be grounded due to health issues. Deke Slayton had not been allowed to fly at all due to an irregular heartbeat. Slayton had been made head of the Astronaut Office. Now Shepard would join him.

Fortunately, Shepard later heard about a surgical procedure to correct Meniere's disease, which was successful. He returned to flight status in 1969, and was originally assigned to command the Apollo 13 flight, with Edgar Mitchell as lunar module pilot and Stuart Roosa as command module pilot. However, it was decided that he needed more time to train, so the crews of Apollo 13 and 14 were swapped. On January 31, 1971 the crew of Apollo 14 took off for the Moon. Alan Shepard was 47 years old, and was, at that time, the oldest man to go into space. Shepard and Mitchell successfully landed in the Fra Mauro region, making the most accurate landing of all of the Apollo missions. Here

they set up a variety of experiment packages and collected close to 100 pounds of moon rocks. This was also the first mission to successfully use a color television camera. Near the end of their 33 hour stay on the Moon, Shepard performed one unscheduled experiment. Using a six-iron head attached to a lunar sample scoop handle, he hit two golf balls on the surface of the Moon. Shepard joked that the second ball went “miles and miles and miles.” The crew of Apollo 14 returned home to Earth on February 9. In the documentary “Moon Shot,” based on the book by Shepard and Slayton, Al tells the story of being with his father shortly after his Apollo flight. His father asked if Al remembered what his father thought about his joining the astronaut program. Al recalled that his father had not approved. His father then raised a glass of brandy and said, “I was wrong.”

Although Apollo 14 would be his last trip into space, Alan Shepard remained with NASA in the Astronaut Office until he retired from both NASA and the Navy in 1974 with the rank of Rear Admiral. In total, Alan Shepard spent 216 hours and 17 minutes in space, and 9 hours and 17 minutes on the Moon, and his NASA career lasted for 15 years, longer than any other Mercury astronaut.

After NASA, Shepard entered the world of business. He created a company, Seven Fourteen Enterprises, which was named after his two flights (Mercury 7 and Apollo 14). This served as an umbrella company for a variety of business ventures. He was so successful, he became the first millionaire astronaut. Shepard also served as the President of the Mercury Seven Foundation, which is a nonprofit organization that provides college scholarships for students wanting to pursue a career in science.

In 1996, Alan Shepard was diagnosed with leukemia. Two years later, on the 29th anniversary of his first moonwalk, July 21, Alan Shepard died in Pebble Beach, California. Five weeks later, his wife, Louise, died of a heart attack. Their ashes were scattered together near their home in Pebble Beach. They had been married for 53 years.

Alan Shepard was many things - pilot, astronaut, businessman, devoted husband, hero. He paved the way for America’s manned space program, and reestablished confidence in the Moon program after the Apollo 13 disaster. We owe much to this month’s honoree. Let’s all raise a glass of brandy to Alan B. Shepard, Jr.

#### References:

Alan Shepard - Wikipedia

[http://en.wikipedia.org/wiki/Alan\\_Shepard](http://en.wikipedia.org/wiki/Alan_Shepard)

Astronaut Bio: Alan B. Shepard, Jr. 7/98

<http://www.jsc.nasa.gov/Bios/htmlbios/shepard-alan.html>

Alan Shepard: Complicated, Conflicted and the Consummate Astronaut

**Barnard-Seyfert Astronomical Society**  
**Minutes of the Regular Meeting of the Board of Directors**  
**Held on Wednesday, October 2, 2013**

The board of directors of the Barnard-Seyfert Astronomical Society (BSAS) met in regular session at the Cumberland Valley Girl Scout Council Building in Nashville, Tennessee on Wednesday, October 2, 2013. A sign-up sheet was passed around in lieu of calling the roll. Joe Boyd, Spencer Buckner, Bill Griswold, Bud Hamblen, Melissa Lanz, Bob Norling and Poppy Simmons were present when Vice President Joe Boyd called the meeting to order at 7:30 PM. Joe Boyd asked for corrections to the minutes of the previous board meeting held on September 4, 2013, and, there being none, asked for a motion declaring them to be approved as published in the October 2013 edition of the Society's Eclipse newsletter. Spencer Buckner so moved and Bill Griswold seconded his motion, which was subsequently passed by a unanimous voice vote. Treasurer Bob Norling reported that the BSAS had \$2,146.93 in its regular checking account and \$1,251.28 in its equipment account. President Theo Wellington presided subsequently.

Theo Wellington described upcoming star parties:

- 10/5 Private Star Party at Natchez Trace MM 412 (Water Valley Overlook), which was expected to be canceled as Bill Griswold stated that the Natchez Trace viewing sites were closed until the National Park Service receives new appropriations.
- 10/12 Public Star Party at ASC (Observe the Moon night). One day past the First Quarter Moon.
- 10/18 Girl Scout camp outs at Camp Sycamore, Ashland City, and Camp Piedmont, Murfreesboro.
- 11/2 Private Star Party at Natchez Trace MM 435.5
- 11/8 Public Star Party at Bowie Park
- 11/9 Public Star Party at Warner Park

Theo Wellington described programs for upcoming member meetings:

- 10/16 Joe Boyd and Theo Wellington, Dark Skies
- 11/20 Spencer Buckner, All I Want for Christmas ...
- 12/18 Brad Hill, Planetary Photography
- 1/13 Spenser Buckner, How to Use Your New Astronomy Toy
- 2/19 Josh Emery, Studying a Dead Comet

Fabienne Bastien, Vanderbilt University PhD candidate, may speak on stellar photometry in 2014.

Theo Wellington submitted proposed star party dates for 2014:

Day	Date	Where	Time
Saturday	1/4	BSAS trace	
Saturday	1/11	Warner Park	700 – 900 pm
Saturday	1/25	BSAS trace	
Friday	1/31	Bells Bend	700 – 900 pm
Saturday	2/8	Shelby Bottoms	700 – 900 pm
Saturday	3/1	BSAS trace	
Saturday	3/8	Warner Park	730 – 930 pm
Saturday	3/22	Long Hunter	730 – 930 pm
Saturday	3/29	BSAS trace	
			messier marathon at Spot Observatory?
Saturday	4/12	ASC	730 – 1030 pm
Saturday	4/26	BSAS trace	
Friday	5/2	Bells Bend	830 – 1030 pm
Saturday	5/31	BSAS trace	
Saturday	6/21	Long Hunter	830 – 1030 pm
Saturday	6/28	BSAS trace	
Saturday	7/12	ASC	830 – 1030 pm
Saturday	7/26	BSAS trace	
Friday	8/15	Bells Bend	830 – 1030 pm
Saturday	8/23	BSAS trace	
Saturday	9/13	Long Hunter	800 - 1000 pm
Saturday	9/20	BSAS trace	
Saturday	10/11	ASC	730 – 1030 pm



Saturday		10/18	BSAS trace	
Saturday		11/1	Shelby Bottoms	700 – 900 pm
Friday	11/14	Bells Bend		700 – 900 pm
Saturday		11/22	BSAS trace	
Saturday		12/13	Warner Park	700 – 900 pm
Saturday		12/20	BSAS trace	

Theo Wellington presented officers and directors-at-large for next year. Steve Cobb is completing a term as director. Jeffrey Horne was willing to serve a term. Spencer Buckner is serving out the term formerly held by Theo Wellington. Bill Griswold has two years remaining in his term. Melissa Lanz and Kris McCall have one year remaining in their terms. Theo Wellington will continue as president, Joe Boyd will continue as Vice President, Bob Norling will continue as treasurer. Bud Hamblen is completing the term formerly held by Bob Rice.

Theo Wellington advised that the BSAS will sponsor 9 year old Sarah Cagna with the Astronomical League. This did not require a financial commitment by the BSAS.

Joe Boyd verified addresses in connection with the local chapter of the International Dark-Sky Association.

Bill Griswold reported that the Girl Scouts have not yet responded on renting space for 2014. If an alternative meeting location is needed, possible places mentioned included the Green Hills Public Library, KOA Opryland, Nashville State, Lipscomb and MBA.

Since there was no further business to discuss, Joe Boyd moved that the meeting be adjourned. Spencer Buckner seconded his motion that passed by a unanimous voice vote of the board at 8:30 PM without additional discussion.

Respectfully

Bud Hamblen, Interim Secretary

## Barnard-Seyfert Astronomical Society Minutes of the Monthly Membership Meeting Held On Wednesday, October 16, 2013.

The Barnard-Seyfert Astronomical Society held its monthly membership meeting for October at the Girl Scouts of Middle Tennessee, 4522 Granny White Pike, Nashville, Tennessee, on October 16, 2013. President Theo Wellington called the meeting to order at 7:30 pm. Fourteen members and guests were present. Theo Wellington asked for a motion to approve the minutes of the September 18, 2013, membership meeting as published in the October 2013 issue of the Eclipse. Spencer Buckner so moved, Bob Norling seconded the motion, and the minutes were adopted by a unanimous voice vote. Treasurer Bob Norling reported that there was \$2,146.93 in the regular account and \$1,251.36 in the equipment account.

Bob Norling is still taking orders for the 2014 RASC Observer's Handbook, 2014 Guy Ottewell Astronomical Calendar and 2014 Deep Space Mysteries Calendar, with a \$5 deposit per item. Orders will be placed right after the November membership meeting, November 20, in order for the merchandise to arrive in time for the December membership meeting and dinner, December 18.

Theo Wellington announced the following had volunteered to be candidates for officers and directors for 2014:

President – Theo Wellington  
 Vice President – Joe Boyd  
 Treasurer – Bob Norling  
 Secretary – Bud Hamblen  
 Director-at-Large – Steve Cobb  
 Director-at-Large – Jeffrey Horne

Theo noted these upcoming events and star parties:

Friday, October 18 - Astronomy outreach assistance for the Girls Scouts at Camp Sycamore Hills, near Ashland City, and at Camp Piedmont, near Murfreesboro.

Friday, October 25, 2013, 8:30 - 10:00 pm - Bells Bend Outdoor Center.

Saturday, November 2, 2013 - BSAS Private Star Party at Natchez Trace Parkway mile marker 435.5.

Friday, November 8, 7:00 - 10:00 pm - Bowie Nature Park, Fairview.

Saturday, November 9, 7:30 - 9:00 pm - Edwin Warner Park.

Saturday, November 16 - Astronomy outreach assistance for the Girl Scouts at Montgomery Bell State Park.

Pickett State Park, near Jamestown, Tennessee, is sponsoring a New Year's Star Party. A bunkhouse will be available for astronomers. Bring your own sleeping bag. The PARI Star Party takes place October 25-27, Asheville, NC.

Theo provided an update on Comet ISON, and showed a recent photo of the comet taken by BSAS member Tom Murdic.

Theo said we have not yet received James Davidson's contact information. If anyone knows how to contact Mr Davidson, please let us know.

News and updates are available at the BSAS website, <http://www.bsasnashville.com>, and the Facebook page, <https://www.facebook.com/bsasnashville>.

Theo Wellington and Joe Boyd presented "Losing the Dark: Light Pollution and You." Theo illustrated the effects of light pollution on the visibility of the night sky with photographs and the International Dark-Sky Association video, "Losing the Dark." <<http://www.youtube.com/watch?v=dd82jzstFio&list=PLDD79FC8870945AA5>>  
Joe presented more aspects of light pollution. Points raised by Theo and Joe included:

We are losing the beauty of the sky at night.

We want our children to reach for the stars, but what stars can they see?

Fully shielded lighting is available from Lowes.

Light pollution has adverse effects on human health and wildlife.

Poor night-time illumination is economically wasteful and is not proven to reduce crime.

Model ordinances for regulating illumination are available, but could be improved.

A local chapter of the IDA is being organized. <<http://www.darksky.org/>>

PowerPoint slides for the presentation are available from Theo and Joe.

There being no further business, Curt Porter moved for adjournment and the meeting was adjourned at 9:00 pm.

Respectfully submitted,  
Bud Hamblen, Interim Secretary

Program announcement continued from Page 1

Come to the November BSAS meeting and hear about all the latest gadgets and gift items available this Christmas. Dr. Spencer Buckner, former BSAS president, will cover things ranging from new telescopes costing thousands to simple planispheres and smart phone apps that only cost a few dollars. If you are the one hoping to get an astronomy toy for Christmas, drag your spouse or Mom & Dad to the meeting so they can find out about what you want and where to get it.

President's message, continued from Page 1

That's where we come in. Taking the telescopes out for everyone to enjoy the view. Each and every "awesome!" from a young person is a mind that just might begin to find science fun and interesting. Seeing the Sun, the Moon, planets and deep sky wonders *with your own eyes* is a different experience from seeing pictures. A Google+ online star party is just about pitiful.....remote images are ok, even sometimes at an actual star party, but the impact of million year old starlight on your own eyes is *different*. Each of us is also showing a new generation the passion and interest that we have. We find science interesting and cool, and hopefully communicate that to our visitors. You can make a tremendous impact just having fun showing bright planets to the public, and I hope more of our members will donate their time at star parties.

It might be just the Moon in the telescope, but in the eyes of a youngster it is the beginning of a journey that can take them anywhere.

Clear, dark skies,

Theo Wellington, President

### **Order your calendars and handbooks now!**

Treasurer Bob Norling is taking requests for next years Observer's Handbook (\$25), Astronomy Magazine's *Deep Space Mysteries* wall calendar (\$10), and Guy Ottewell's Astronomical Calendar (about \$29.95 depending on the # of orders). A \$5 deposit will put one on order for you! You can send the request and deposit to Bob Norling c/o BSAS, PO Box 150713, Nashville 37215-0713, or give a note with deposit to a board member at the early November star parties. He'll be ordering in Mid-November to try to have them here by the Christmas party!



## Become a Member of the BSAS!

Download and print the Application for membership from [www.bsasnashville.com](http://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)  
**\$12** Student\*

\* To qualify, you must be enrolled full time in an accredited institution or home schooled.

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

To find the expiration date for your current membership, visit our web site at <http://www.bsasnashville.com> and click the Renewals link.

There will be a two month grace period before any member's name is removed from the current distribution list.

## 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 Wednesday of each month at the Cumberland Valley Girl Scout Building at the intersection of Granny White Pike and Harding Place 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](http://www.bsasnashville.com). If you need more information, write to us at [info@bsasnashville.com](mailto:info@bsasnashville.com) or call John Harrington at (615) 739-4500.

[BSAS on Facebook](#)

## 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.