

The ECLIPSE

November
2014

The Newsletter of the Barnard-Seyfert Astronomical Society

Next Membership Meeting:

November 19, 2014, 7:30 pm
Cumberland Valley
Girl Scout Council Building
4522 Granny White Pike

Program Topic:

All I Want For Christmas are
Astronomy Toys!

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From the President:

Almost the end of the year, so it's time to wrap up things for the year and look forward to next year! That means you need a new calendar and Observer's Handbook. If you would like to reserve your copy of either the Deep Space Calendar from Astronomy magazine (\$10) or a 2015 Observer's Handbook (about \$20, depending on how many orders we get) please email me (tmwellington@comcast.net) or BSAS Treasurer Bob Norling (rdncpa@mindspring.com) so that we can get your name on the list. A \$5 deposit will hold your order. We try to order right after the November meeting so that we can have them for you at the Christmas dinner. If you would like a copy of Guy Ottewell's lovely Astronomical Calendar (\$20), email either me, or better, Dr. Spencer Buckner (BucknerS@apsu.edu) to reserve a copy.

Every year in December the meeting is the club's annual member potluck. The club will purchase the meat and drinks, members bring side dishes. This is a nice opportunity to just enjoy getting together. Bring a friend! There is also a silent auction which benefits the club as well... so think about what items you can donate for the cause. It's a great way to trade no longer needed equipment.

The program this month is about all of the great astronomy toys you might want to get for Christmas... a tour through some of the things you might want and some of the things you definitely should have to enjoy the night sky.



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Observing Highlights November and December

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)

Nebulae

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)

Upcoming Star Parties

Sat 11/14 7:00 - 9:00 pm	Bells Bend Outdoor Center
Sat 11/21 7:00 - 9:00 pm	Bowie Nature Park (Fairview)
Sat 11/22	Private Star Party Natchez Trace Parkway mile marker 412 (Water Valley Overlook)
Sat 12/13 7:00 - 9:00 pm	Edwin Warner Park



Nov 22
Dec 21



Nov 29
Dec 28



Nov 6
Dec 6



Nov 14
Dec 14

Book Review: Promised the Moon by Stephanie Nolen Reviewed by Robin Byrne

Once again, we return to ye olde bookshelf to review a book. This time, I read “Promised the Moon: The Untold Story of the First Women in the Space Race” by Stephanie Nolen. As a fan of anything to do with the history of the space program, and as a raving feminist, this looked to be right up my alley. I was not disappointed.

The story begins in September of 1959 while Geraldyn “Jerrie” Cobb was attending the Air Force Association annual meeting with her boss, Tom Harris. She worked for Aero Design and Engineering Company as a pilot and manager. While strolling on the beach with Harris, he introduced her to two men coming from the other direction: Donald Flickinger and Randy Lovelace. When Flickinger and Lovelace discovered that Jerrie was a pilot with over 7000 hours of flight time, her destiny was met. Lovelace was interested in putting women through the same tests the original Mercury astronauts had to endure to be chosen. He felt that women were even better suited for some of the stresses encountered in spaceflight, and he wanted to prove it. Jerrie was more than willing to be a guinea pig.

After Jerrie successfully completed the tests, Lovelace wanted to test other women. He sought help from his longtime friend, Jackie Cochran. Jackie made a name for herself as a competitive pilot, ran her own business, and was a millionaire whose donations help Lovelace set up his clinic. During World War II, Jackie organized and ran the Women AirForce Service Pilots (WASPs) program. With her political connections and ties to other female pilots, Lovelace asked her to help

recruit other women to be test subjects. Of those contacted, 12 answered the call.

All of the women were under the impression that they were being tested by NASA, since it was well known that the Lovelace Clinic was used by NASA to test the original astronaut candidates. They truly believed that they had a chance to go into space. That did not happen. The tests were being conducted by Lovelace primarily as a research project. When he contacted the same military base where Jerrie Cobb had completed some of her tests, with the request to test the other women, he was denied permission when they discovered that NASA was not backing the program. That’s when things got ugly.

The remaining 12 women weren’t notified until they had already made plans to go to Florida for 3 weeks of tests. Three of the women had to quit their jobs. Now they were left hanging with no explanation. Jerrie Cobb was furious and ready to fight. She contacted every person she could think of from NASA to congress, and all the way to the White House. She met with administrators, senators, and Vice President Johnson. After enough publicity hit the newspapers, the House Committee on Science and Astronautics had a hearing about the issue of women going to space. On July 17, 1962, the hearing convened. Representing the women along with Jerrie was one other candidate, Janey Hart, who knew her way around Washington since her husband was a senator. On behalf of NASA were George Low, John Glenn, and Scott Carpenter. The NASA line was that only military jet test pilots could be astronauts. If a qualified woman applied, they would

From the President, continued from page 1

Speaking of new toys, I mean equipment, if anyone has bought a piece of gear recently....consider writing a short paragraph for the newsletter about it. Tell us what you like (or not), what you are using it for, etc.

Comets have been in the news quite a bit over the last year....this month we may get a very unique view of what is usually just a fuzzball in our eyepieces. Follow the Rosetta spacecraft as we attempt to land on a comet! Landing is scheduled for next Wednesday, November 12th. See blogs.esa.int/rosetta. Then ride with Rosetta next to and on a comet through perihelion. Now, that's an astronomy toy!

Clear skies,

Theo Wellington



Member Tom Murdic took a very nice image of the Sun with the huge sunspot group the last week in October.

**Next BSAS meeting
November 19, 2014, 7:30 pm
Cumberland Valley
Girl Scout Council Building
4522 Granny White Pike**

Program topic: The program this month features Dr. Spencer Buckner's annual "All I Want For Christmas are Astronomy Toys!" He will highlight different types of telescopes and talk about other great observing aids that will fit under any tree. Come with questions about what you would like to get or give for Christmas this year.

Promised the Moon, continued from page 3

consider her. The women pointed out that only men were allowed in the military, so the requirements automatically excluded women unfairly. Then Jackie Cochran took the stand. Much to the shock of Jerrie and Janey, Jackie supported the decision to not include women. Between Jackie's testimony and the statements made by Low, Glenn, and Carpenter, the case was lost.

So much of the story of the Fellow Lady Astronaut Trainees (FLATs) is also a story of the attitudes towards women during the 1950's and 1960's. This was an era when married women had to have their husband's signature to open a bank account or make a large purchase. These women were already anomalies just by the fact that they chose to fly airplanes, either as a hobby or as a career. Much was made of the effort to appear feminine when participating in the various flight competitions or when flying for different businesses. They didn't want anyone to think the female pilots were lesbian. Meanwhile, the early space program was simply an old boy network of men primarily from the military. They took for granted that it was a boys-only group. NASA didn't change that attitude until the 1970's when the first women were recruited for the shuttle program.

For Jerrie Cobb, Janey Hart, Jean Hixon, Wally Funk, Irene Leverton, Jan Dietrich, Marion Dietrich, B Trimble, Sarah Gorelick, Rhea Hurrle, Gene Nora Jessen, Jerri Truhill, and K Cagle, they were just doing what they felt they were born to do. Although a disappointing story that the women were never given the opportunity to fly to space, they are still an inspiration. They followed their dream in the face of much criticism, discrimination, and harassment. Whether referred to as the FLATs or the Mercury 13, these women are best described as heroes.

Reference:

Promised the Moon: The Untold Story of the First Women in the Space Race by Stephanie Nolen; Thunder's Mouth Press 2002

Barnard-Seyfert Astronomical Society Minutes of the Regular Meeting of the Board of Directors Held On Wednesday, October 1, 2014

The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held October 1, 2014, at the Girl Scouts of Middle Tennessee, 4522 Granny White Pike, Nashville, TN 37204. Present were Joe Boyd, Steve Cobb, Bud Hamblen, Melissa Lanz, Kris McCall, Bob Norling and Theo Wellington, constituting a quorum. The meeting was called to order at 7:30 PM by President Theo Wellington. Treasurer Bob Norling reported that there was \$1,664.46 in the regular account and \$1,729.12 in the equipment account. Steve Cobb moved adoption of the minutes from the September board meeting, Joe Boyd seconded and the minutes were adopted as printed in the October, 2014, edition of the Eclipse.

Theo Wellington reported that the society received thanks from the Cumberland River Compact for our participation in the Dragon Boat Festival.

Bob Norling reported that the 2015 Astronomy magazine calendars would be \$10 a copy and that we would need orders for at least 10 copies of the 2015 RASC handbook to get the \$25 a copy price.

There was discussion of outreach efforts, including Astronomy Day at the Adventure Science Center, and a dark sky star party at Pickett State Park. Park Ranger Monique Johnson planned to be at the 10/15/14 membership meeting, reported Theo Wellington.

There being no further business, the meeting was adjourned at 8:50 PM.

Respectfully submitted,

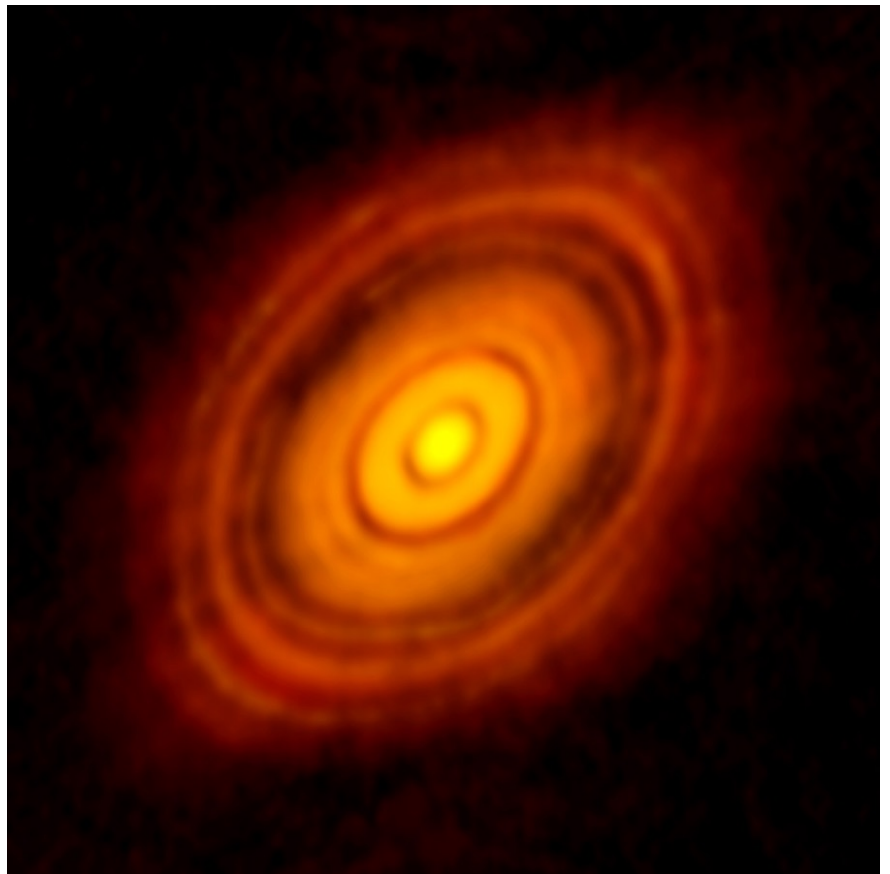
Bud Hamblen, Secretary

Birth of Planets Revealed in Astonishing Detail in ALMA's 'Best Image Ever'

Astronomers have captured the best image ever of planet formation around an infant star as part of the testing and verification process for the Atacama Large Millimeter/submillimeter Array's (ALMA) new high-resolution capabilities.

This revolutionary new image reveals in astonishing detail the planet-forming disk surrounding HL Tau, a Sun-like star located approximately 450 light-years from Earth in the constellation Taurus.

"These features are almost certainly the result of young planet-like bodies that are being formed in the disk. This is surprising since HL Tau is no more than a million years old and such young stars are not expected to have large planetary bodies capable of producing the structures we see in this image," said ALMA Deputy Director Stuartt Corder.



[Credit: ALMA \(NRAO/ESO/NAOJ\);
C. Brogan, B. Saxton \(NRAO/AUI/NSF\)](#)

**Barnard-Seyfert Astronomical Society
Minutes of the Monthly Membership Meeting
Held On Wednesday, October 15, 2014**

The Barnard-Seyfert Astronomical Society held its monthly membership meeting for January at the Girl Scouts of Middle Tennessee, 4522 Granny White Pike, Nashville, Tennessee, on Wednesday, October 15, 2014. 12 members and 3 guests signed in. President Theo Wellington called the meeting to order. Theo Wellington asked for revisions to the minutes of the membership meeting as published in the October, 2014, issue of the Eclipse. There being no revisions, the minutes were adopted as printed. Bob Norling reported that there were \$1,664.46 in the regular account and \$1,729.12 in the equipment account.

Dr Elvis Cherry, Metro Nashville Public Schools, has three Meade telescopes for sale, the proceeds to benefit Harris-Hillman School. E-mail for Dr Cherry is elvis.cherry@mnps.org.

The RASC Observers Handbook, Guy Ottewell Astronomical Calendar and the Astronomy Magazine Calendar for 2015 are being ordered through the society. A five dollar deposit per item is needed. See Bob Norling to place an order.

Joe Boyd and Theo Wellington made a presentation on light pollution and the International Dark-Sky Association. Joe Boyd is organizing a local chapter of the IDA. Contact Joe Boyd about the local chapter of the IDA.

There being no further business the meeting was adjourned.

Respectfully submitted,

Bud Hamblen, Secretary

Send your great amateur
astrophotos to:
eclipse@bsasnashville.com

Become a Member of BSAS!

Visit bsasnashville.com to download and print an application for membership.

All memberships have a vote in BSAS elections and other membership votes. Also included are subscriptions to the BSAS and Astronomical League newsletters.

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:

\$20 Individual
\$30 Family
\$15 Senior (+65)
\$25 Senior Family (+65)
\$12 Student*

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

You can check the status of your membership at bsasnashville.com.

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

About BSAS

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 bsasnashville.com. If you need more information, write to us at info@bsasnashville.com or call Theo Wellington at (615) 300-3044.

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 info@bsasnashville.com.