

The ECLIPSE

October
2015

The Newsletter of the Barnard-Seyfert Astronomical Society

Next Membership Meeting:

October 21, 2015, 7:30 pm
Cumberland Valley
Girl Scout Council Building
4522 Granny White Pike

Topic: "What's up in the fall sky?" A look at what interesting astronomical objects are in the fall night sky and how to find them, led by Terry Reeves.

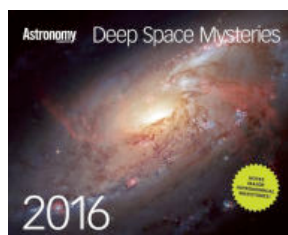
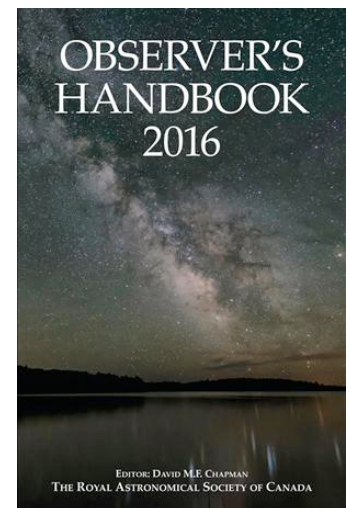
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From the President:

October! A chance for the bugs and the heat to die down. Now all we need are clear skies to enjoy the season. Fall also means it is time for some year-end activities. We need YOU... to consider helping take BSAS into the next year as part of our Board of Directors. Specifically, if anyone has either the experience or inclination, we need a Treasurer as well as a couple of at-large directors and a Vice-President. Treasurer is not about high finance, we just process money from memberships and pay our few bills. Come join us, bring some new ideas... I *could* bring cookies if that helps! There are a lot of things out there that we could be doing over the next few years, so don't make us twist your arms too hard.

Our calendars are getting thinner at the bottom, that means that it is time to order new ones! We will be taking orders at the next two meetings, you can always email us as well. Three separate calendars, three ways to astronomically enjoy the new year. First up is the nearly indispensable [Observers Handbook](#), from our good friends the Royal Astronomical Society of Canada. This has wonderful information on the major events of the year, handy lists of objects, and much more. I always carry mine into the field, as it does not require internet access or batteries.



Need a calendar for the kitchen or office wall? **Deep Space Mysteries** from Astronomy magazine features a stunning image for each month, observing highlights, plus plenty of room to write in our star party dates.



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Observing Highlights October and November

Globular Clusters

M56, M71, M55, M75,
M15, M2, M72, M30

Open Clusters

M11 (*Wild Duck*), M26,
M73, M29, M39, M52

Nebulae

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

Asterisms

Cr399 (*Coat Hanger*)

Multiple Star Systems

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

Variable Stars

Mu Cephei (*Herschel's Garnet Star*)

Upcoming Star Parties

Saturday 10/10	Private Star Party Natchez Trace Parkway mile marker 433.5
Saturday 10/17 7:00 - 9:00 pm	Public Star Party Edwin Warner Park
Saturday 11/7	Private Star Party Natchez Trace Parkway mile marker 412 (Water Valley Overlook)
Saturday 11/14	Public Star Party Shelby Bottoms Nature Center



Oct 12
Nov 11



Oct 20
Nov 19



Oct 27
Nov 25



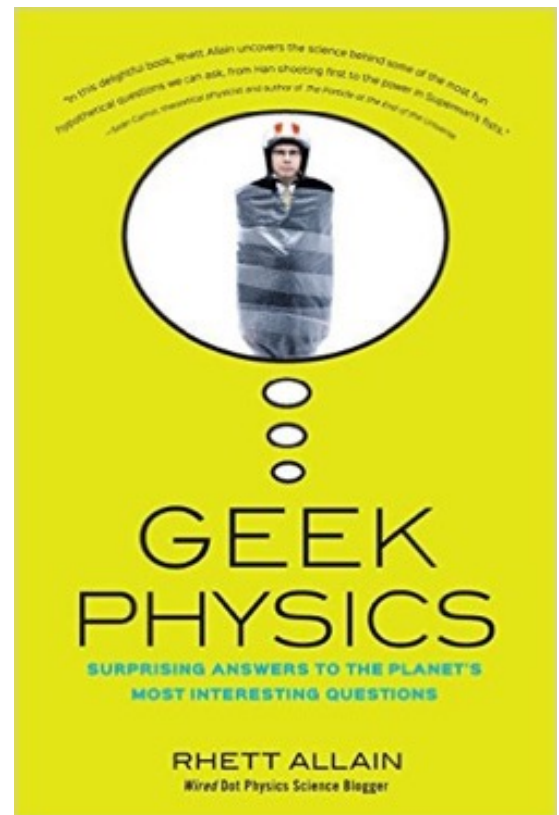
Oct 4
Nov 5

Book Review: Geek Physics reviewed by Robin Byrne

About a year or two ago, I discovered that Turner Publishing will occasionally have drawings for book giveaways. Soon after, I was the winner of “Geek Physics - Surprising Answers to the Planet’s Most Interesting Questions” written by Rhett Allain. Needless to say, I was a happy camper.

Allain is a physicist who clearly loves pop culture, so he combines the two to address various questions you may never had realized you wanted answered. (If you want to check him out, he is a contributor to wired.com in the Dot Physics section.) He begins with more traditional physics scenarios, such as crashing into a moving car versus crashing into a wall, why astronauts float, and what happens if you use a bathroom scale on the bottom of a pool. This gives him a chance to introduce various physics concepts used later in the book, though he recaps them each time they are used.

Then he gets more fanciful. Such questions as: would the Hulk crack a sidewalk each time he pushes off to jump, can Superman punch someone into space, and how much power is needed to run a lightsaber are all explored. He even goes in depth on the physics of Angry Birds. In other areas, he looks at physics as applied to various sporting feats and estimating such things as the number of Legos needed to build a scale model of the Death Star based on the size of the Lego people. If you ever wanted to know how much bubble wrap you’d need to cushion your fall, you can find the answer here. Zombies, Back to the Future, and The Hobbit all make an appearance, as well.



My complaints about the book are minor. I understand that he’s writing for a more general audience, but I would have liked to see more equations and calculations (I fully realize that I would be in the minority on this score). There were some typos the editors missed, the most egregious was being given the equation for calculating distance travelled, when it was supposed to be the equation for the force of gravity.

Geek Physics, continued

Minor complaints aside, I truly enjoyed the book. Allain throws in plenty of humor, which lightens it up. His topics are fun, with some results that were quite surprising. Even if you want to steer clear of physics problems (though I can't imagine why), you can skim through the physics and just enjoy the final answers. Mostly while I read it, I kept wishing I still taught a physics class. There are a plethora of fun ideas for problems to give to students (excuse me while I let out an evil laugh).

Bottom line: if you are entertained by pop culture geekdom and appreciate applying science to some unusual situations, you will very likely enjoy "Geek Physics" by Rhett Allain,

References:

Geek Physics - Surprising Answers to the Planet's Most Interesting Questions by Rhett Allain; Turner Publishing Company; 2015

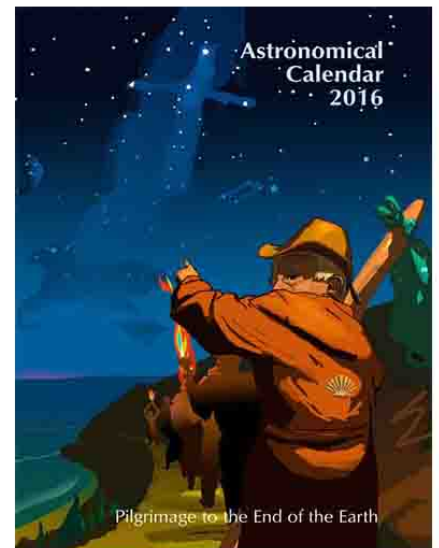


Hubble Revisits the Veil Nebula [Credit: NASA, ESA, Hubble Heritage Team](#)

From the President, continued

For artistic merit, though, the large format Ottewell **Astronomical Calendar** is superb. From the original art on the cover to the 3-D depictions of comet orbits, this calendar is a unique presentation of the astronomical events of the coming year.

The club orders these in bulk, which saves us on both price and postage. The Observer's Handbook comes from Canada, and we'd like to have them delivered by the December potluck. To order, please let us know either in person or by email (info@bsasnashville.com). Then please hand or send in a \$5 deposit for each calendar ordered to reserve your copy! **Go ahead and get your order in** before it gets lost in the busy holiday season. The number of orders determines the final price, but typical final prices are \$10 for Deep Space Mysteries, \$25 for the Observer's Handbook, and \$20 for the Ottewell Calendar.



I hope everyone had a chance to get a glimpse of the recent lunar eclipse... did anyone get a picture? Send it in!

Clear skies,

Theo Wellington

Next BSAS meeting
 October 21, 2015, 7:30 pm
 Cumberland Valley
 Girl Scout Council Building
 4522 Granny White Pike

Topic: "What's up in the fall sky?" A look at what interesting astronomical objects are in the fall night sky and how to find them, led by Terry Reeves.

Also, mark your calendars for two events coming up at Pickett State Park:

The annual New Year's Eve hike and star gaze.

Contact Monique at the park and she will find you accommodations if you come!

The first Pickett-Pogue Dark Sky Park Astronomy Weekend April 1-3.

Bunkhouse and meals on Saturday, breakfast on Sunday for \$50.

Astronomy presentations and hiking and outdoor opportunities in this scenic park.

**Barnard-Seyfert Astronomical Society
Minutes of the Monthly Membership Meeting
Held On Wednesday, September 16, 2015.**

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, September 16, 2015. 14 members signed in. Theo Wellington called the meeting to order at 7:30 PM. Theo asked for a motion to approve the minutes of the August, 2015, meeting as printed in the September, 2015, edition of the Eclipse. Chuck Schlemm so moved, Bill Griswold seconded, and the minutes were approved with a unanimous voice vote. Bob Norling reported there was \$1,517.41 in the regular account and \$1,619.54 in the equipment account.

Theo Wellington noted upcoming public star parties at Log Hunter State Park (9/19), Pickett State Park (9/19). Adventure Science Center (9/27) and Warner Parks Nature Center (9/19), and Warner Parks Special Events Field (10/17) and a private star party at Natchez Trace Mile Marker 432.5 (10/10).

Theo Wellington presented a program on the upcoming lunar eclipse, Blood Moons, Super Moons, facts, fallacies and internet hype.

Mike Benson moved for adjournment, Joe Boyd seconded, and the meeting was adjourned at 8:45 PM.

Respectfully submitted,

Bud Hamblen
Secretary

Next page: Majestic Mountains and Frozen Plains: Just 15 minutes after its closest approach to Pluto on July 14, 2015, NASA's New Horizons spacecraft looked back toward the sun and captured a near-sunset view of the rugged, icy mountains and flat ice plains extending to Pluto's horizon. The smooth expanse of the informally named Sputnik Planum (right) is flanked to the west (left) by rugged mountains up to 11,000 feet (3,500 meters) high, including the informally named Norgay Montes in the foreground and Hillary Montes on the skyline. The backlighting highlights more than a dozen layers of haze in Pluto's tenuous but distended atmosphere. The image was taken from a distance of 11,000 miles (18,000 kilometers) to Pluto; the scene is 230 miles (380 kilometers) across.

[Credit: NASA/Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute](#)

Barnard-Seyfert Astronomical Society
Minutes of a Regular Meeting of the Board of Directors
Held On Wednesday, September 2, 2015.

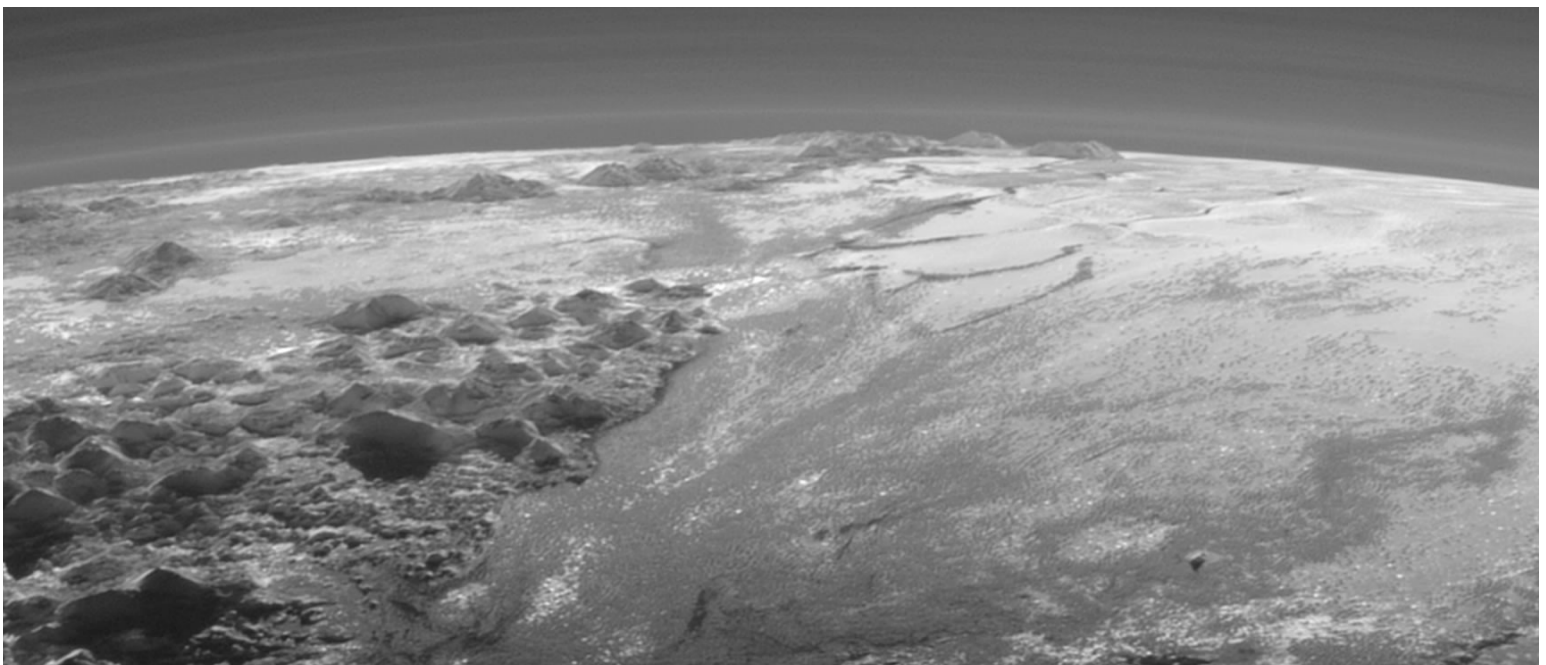
The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held September 2, 2015, at the Girl Scouts of Middle Tennessee, 4522 Granny White Pike, Nashville, TN 37204. Present were Joe Boyd, Gary Eaton, Bud Hamblen, Rob Mahurin, Bob Norling and Theo Wellington. A quorum being present, Theo Wellington called the meeting to order at 7:50 PM. Theo Wellington asked for a motion to approve the minutes of the August meeting as printed in the September issue of the Eclipse. Gary Eaton so moved, Rob Mahurin seconded, and the minutes were approved by a unanimous voice vote. Bob Norling reported that there were \$1,573.31 in the regular account and \$1,619.54 in the equipment account.

Discussions centered around the upcoming lunar eclipse. Events are going to be staged at the Adventure Science Center and the Warner Parks Nature Center.

Rob Mahurin moved to adjourn the meeting, Gary Eaton seconded, and the meeting was adjourned at 8:40 PM.

Respectfully submitted,

Bud Hamblen
Secretary





Charon in Enhanced Color: NASA's New Horizons captured this high-resolution enhanced color view of Charon just before closest approach on July 14, 2015. The image combines blue, red and infrared images taken by the spacecraft's Ralph/Multispectral Visual Imaging Camera (MVIC); the colors are processed to best highlight the variation of surface properties across Charon. Charon's color palette is not as diverse as Pluto's; most striking is the reddish north (top) polar region, informally named Mordor Macula. Charon is 754 miles (1,214 kilometers) across; this image resolves details as small as 1.8 miles (2.9 kilometers).

[Credit: NASA/Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute](#)



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* 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.