

The ECLIPSE

June
2014

The Newsletter of the Barnard-Seyfert Astronomical Society

Next Membership Meeting:

June 18, 2014, 7:30 pm
Cumberland Valley
Girl Scout Council Building
4522 Granny White Pike

Program Topic:

Mallory Johnston
Marshall Space Flight Center

(details on page 4)

From the President:

Halfway through another year! We've had a few clear nights this spring, although our observing hearts were broken yet again by a comet. This time it was 209/P LINEAR whose old dust trails apparently had very little dust. The meteor shower predicted for the wee hours of May 24 never really happened for us visually. Thanks to our good friends at the Warner Park Nature Center for providing a place to watch.

We have a number of new members... welcome! I look forward to seeing you at meetings and star parties. I hope you will enjoy star parties both in observing and in helping our visitors enjoy the night sky. Please don't think you have to be an "expert" to bring a telescope and show off the sky... our most popular object is the Moon! I have a tough time memorizing a lot of facts and figures, so I try to know just a few things about objects I might be viewing. For example, in June we might be looking at Saturn and M13, the great globular cluster in Hercules. So I might make up a cheat sheet... how far is Saturn? How big are the rings? How far away is M13? How many stars in the cluster? Those are the most likely kinds of questions. I also tell visitors that it is fine to stump me... I get questions I don't know the answer to, and that's great! I don't mind saying I don't know, but I'll look it up and then I learn something new.

If you missed the meeting... a great way to learn more about the sky and sharpen your observing skills is by taking advantage of the club's membership in the Astronomical League. One of the

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Observing Highlights June and July

Open Clusters

M48, M44 (Beehive), M67,
Mel111 (*Coma Star Cluster*),
M6 (Butterfly), M7, M23

Galaxies

M81, M82, NGC3115 (Spindle
Galaxy), M95, M96, M105,
M108,
M65/M66/NGC3628
(*Leo Triplet*),
M109, M98, M99, M106, M61,
M100, M84, M85, M86, M49,
M87, M88, M91, M89, M90,
M58, M104 (*Sombrero Galaxy*),
M59, M60, M94,
M64 (*Black-Eye Galaxy*),
M63 (*Sunflower Galaxy*),
M51 (*Whirlpool Galaxy*),
M83, M101/M102

Nebulae

NGC3242 (*Ghost of Jupiter*),
M97 (*Owl*), NGC6302 (*Bug*),
NGC6309 (*Box*),
NGC6543 (*Cat's Eye*)

Variable Stars

R Leonis

Globular Clusters

M68, M53, M3, M5, M80, M4,
M107, M13, M12, M10, M62,
M19, M92, M9, M14

Multiple Star Systems

Gamma Leonis (*Algieba*),
M40,
Gamma Virginis (*Porrima*),
Alpha Canum Venaticorum
(*CorCaroli*),
Zeta Ursae Majoris (*Mizar*),
Epsilon Bootis
(*Izar or Pulcherrima*)
Mu Bootis (*Alkalurops*),
Beta Scorpii (*Acrab*),
Alpha Herculis (*Rasalgethi*)

Planets

Venus, Mars, Jupiter,
Saturn, Uranus, Neptune

Upcoming Star Parties

Sat 6/21 8:30 - 10:30	Long Hunter State Park
Sat 6/28	Private star party at Natchez Trace Parkway mile marker 433.5
Fri 7/25 7:00 - 9:00 pm	Bowie Nature Park (Fairview)
Sat 7/26	Natchez Trace Parkway mile marker 412 (Water Valley Overlook)



Jun 27
Jul 26



Jun 5
Jul 5



Jun 12
Jul 12



Jun 19
Jul 18

Happy Birthday Jim McDivitt by Robin Byrne

This month we celebrate the life of one of America's first astronauts. James Alton McDivitt was born in Chicago, IL on June 10, 1929. After graduating high school in Kalamazoo, Michigan, McDivitt first attended Jackson Junior College in Jackson, MI. His college education was interrupted, though, by the Korean War.

In 1951, McDivitt joined the Air Force and earned his pilot's wings the following year. He flew in 145 combat missions from 1952 - 1953. In 1954, McDivitt enrolled in the advanced flight school at Tyndall Air Force Base. In 1957, the Air Force paid for him to return to college. McDivitt majored in Aeronautical engineering at the University of Michigan and graduated first in his class in 1959. From there, McDivitt went on to test pilot school, and later completed the U.S. Air Force Aerospace Research Pilot School program, qualifying him to be a test pilot at Edwards Air Force Base. Overall, McDivitt flew more than 5000 hours, 3500 hours of which were in jet aircraft.

On April 18, 1962 NASA announced that applications for the second set of astronauts would be accepted. These new astronauts would begin as support for the Mercury 7 and then fly with the original astronauts on the Gemini missions. Jim McDivitt threw his name in the hat. Five months later, NASA announced the "New Nine" astronauts, including McDivitt. McDivitt's first flight was as the Commander on Gemini 4 with Ed White as his Pilot. Launched on June 3, 1965, the mission objectives were to perform a rendezvous with the upper stage of their launch vehicle and to perform America's first spacewalk. The rendezvous was not a success. The launch vehicle was still venting its unused fuel, making it an erratic moving target, and orbital rendezvous was still not fully understood. McDivitt's best guess was that they got within 200 feet, but he and Ed White had difficulty estimating the distance and never

could agree. In order to preserve their fuel, McDivitt decided to stop the attempt at rendezvous. Next up was Ed White's spacewalk. While White floated in space, McDivitt photographed him and maintained the attitude of the capsule. The vehicle's hatch consistently had problems with sticking. McDivitt had to use his gloved hands to manually mesh the gears to make it close upon Ed White's return to the capsule after 20 minutes of walking in space. On June 7, the two men returned to Earth, falling just one day short of the endurance record set by the Soviets. This flight also has the distinction of a possible "UFO" sighting. McDivitt saw something he describes as looking "like a beer can or a pop can, and with a little thing like maybe like a pencil or something sticking out of it." He took some photos, but the exposures were not good. His best guess is that it was either ice or Mylar insulation that fell off of the capsule. That didn't stop the press from trying to find flying saucers in the series of photographs that came back. One reporter found pictures that appeared to have four objects that looked like tadpoles. McDivitt identified them as reflections of bolts made to appear unusual due to the multiple panes of glass in the window.

McDivitt's next venture into space would occur on March 3, 1969 as Commander of Apollo 9. This was the first Apollo flight to include the Lunar Excursion Module (LEM). In Earth orbit, McDivitt and Rusty Schweickart (Lunar Module Pilot) separated the LEM from the Command Module (CM), where David Scott remained as Command Module Pilot. The LEM was maneuvered 180 km away from the CM before returning and docking after 6.5 hours of flight. This was the first time two spacecraft as part of a single mission had flown separately. This led to the need to have names for the two vehicles, so the CM was dubbed "Gumdrop" and the LEM was called "Spider." The 10-day

Jim McDivitt, continued

mission was an unqualified success. This was McDivitt's last spaceflight. He flew a total of 14.12 days in space.

In May 1969, McDivitt became Manager of Lunar Landing Operations. The group's objective was to oversee the lunar exploration program, and to also redesign the lander for longer missions. Three months later, McDivitt was named Manager of the Apollo Spacecraft Program, during which he oversaw the Apollo 12-16 missions.

In June 1972, McDivitt retired from NASA and from the Air Force, taking the position of Executive Vice President for Consumers Power Company. Three years later, he moved to Pullman, Inc, where he ultimately became President of the Railcar Division. In 1981, McDivitt became Senior Vice President at Rockwell International. In 1995, McDivitt retired.

Jim McDivitt is the epitome of a go-getter. Whether as a pilot, astronaut, or businessman, McDivitt was consistently a success. May his life serve as an inspiration for us all.



References:

James McDivitt - Wikipedia
http://en.wikipedia.org/wiki/James_McDivitt

Astronaut Bio: James A. McDivitt
<http://www.jsc.nasa.gov/Bios/htmlbios/mcdivitt-ja.html>

McDivitt - Encyclopedia Astronautica
<http://www.astronautix.com/astros/mcdivitt.htm>

**Next BSAS meeting
June 18, 2014, 7:30 pm
Cumberland Valley
Girl Scout Council Building
4522 Granny White Pike**

Our speaker for the June meeting will be Mallory Johnston from Marshall Space Flight Center in Alabama. Ms. Johnston is working on manufacturing in space, both in ways that will be important to future human space exploration and things that may help business in the present. From the hot new ability to do 3-D printing to more nuts and bolts topics, this is the technology that will allow us to move out into space.

From the President, continued from page 1

things they do is offer encouragement in the form of certificates and nice looking pins to observe sets of objects. Not all need a telescope! You might start with the [Constellation Hunter Program](#)... you'll learn 39 constellations visible from our Northern Hemisphere skies! There is also a nice [Lunar Program](#) to get familiar with the visual, binocular, and telescopic views of our nearest neighbor. I'd like to challenge you to spend some time on one or both of these over the next year, our AL representative Mike Benson would love to present certificates to you! On the sidebar of both of those links you can look at the many other options for observing recognition. And ALL of you who help out at star parties... download the spreadsheet that goes with the [Outreach award](#)!!! You already do this, just keep track of your hours and events and you can wear the cool pin.



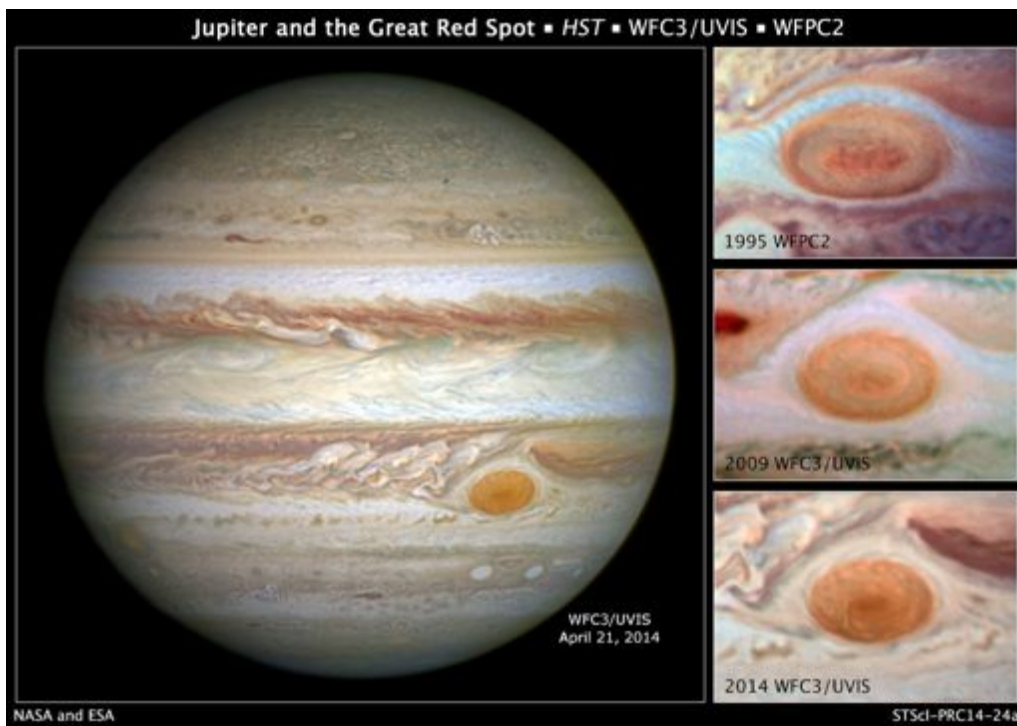
Outreach



Constellation Hunter



Lunar Program



Jupiter's monster storm, the Great Red Spot, was once so large that three Earths would fit inside it. But new measurements by NASA's Hubble Space Telescope reveal that the largest storm in our solar system has downsized significantly. The red spot, which has been raging for at least a hundred years, is only the width of one Earth. What is happening? One possibility is that some unknown activity in the planet's atmosphere may be draining energy and weakening the storm, causing it to shrink. The Hubble images were taken in 1995, 2009, and 2014.

[Photo Credit: NASA, ESA, and A. Simon \(Goddard Space Flight Center\)](#)

Barnard-Seyfert Astronomical Society
Minutes of the Regular Meeting of the Board of Directors
Held on Wednesday, May 7, 2014

The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held May 7, 2014, at the Girl Scouts of Middle Tennessee, 4522 Granny White Pike, Nashville, TN 37204. A sign-in sheet was passed around instead of calling the roll. Present were Joe Boyd, Steve Cobb, Bud Hamblen, Jeff Horne, Melissa Lanz, Kris McCall, Bob Norling, Poppy Simmons and Theo Wellington. A quorum being present, Theo Wellington called the meeting to order at 7:37 PM CDT. Theo asked for a motion to approve the minutes of the April 2, 2014, board meeting. Bob Norling so moved, Joe Boyd seconded, and the minutes were approved by a unanimous voice vote. Bob Norling reported that we had \$1,616.21 in the regular account and \$1,528.94 in the equipment account.

Theo reported that the following star parties were scheduled:

- May 31, private BSAS star party at Natchez Trace Mile Marker 412, Water Valley Overlook.
- June 21, public star party at Long Hunter State Park from 8:30 PM to 10:30 PM.
- June 28, private BSAS star party at Natchez Trace Mile Marker 433.5.

Theo reported on the following prospective membership meeting programs:

Craig and Tammy Temple said they may be available for the June meeting.

Jeff Horne's friend Mallory from MSFC may be available for the July meeting.

Fabienne Bastien may be available in late Summer.

Lauren Palladino has been invited to speak on her research into hypervelocity stars, but has not yet responded.

We need input on future programs. Any member who has an idea for a program, a lead on a prospective presenter, or has something to say, should contact a board member.

Theo reported that efforts are ongoing for on-line payments.

Bob Norling said that he needed a copy of the current membership list for the Astronomical League (BSAS members also are members of the Astronomical League).

Bob noted that Earth Day was an effective outreach event. Metro Council Member Mrs. Burkley Allen was an attendee. Poppy Simmons noted that she gave out about 200 BSAS business cards with the society's web address.

Minutes of the Regular Meeting of the Board of Directors, continued

Joe Boyd said that he would be able to make a presentation on light pollution later this year. A time and place for the International Dark-Sky chapter meeting were being arranged.

Melissa Lanz proposed that the society consider creating a list server where persons could sign up to receive e-mail notifications of society meetings and events. This could serve as a membership recruitment tool. Theo noted that we do have a Facebook presence and create Facebook events.

There being no further business, Steve Cobb moved for adjournment, Joe Boyd seconded, and the meeting was adjourned at 8:30 PM.

Respectfully submitted,
Bud Hamblen, Secretary



This image was taken by Mastcam: Left (MAST_LEFT) onboard NASA's Mars rover Curiosity on Sol 640 (2014-05-25 16:24:15 UTC). [Image Credit: NASA/JPL-Caltech/MSSS](#)

**Barnard-Seyfert Astronomical Society
Minutes of the Monthly Membership Meeting
Held On Wednesday, May 21, 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, May 21, 2014. The meeting was called to order at 7:40 PM. Theo Wellington asked for a motion to approve the minutes of the April 16, 2014, membership meeting as published in the May edition of the Eclipse. Steve Cobb so moved, Joe Boyd seconded, and the minutes were approved by unanimous voice vote. Bob Norling reported that there were \$1,684.26 in the regular account and \$1,528.94 in the equipment account.

Theo Wellington announced the following star parties:

- The early morning of Saturday, May 24, from Midnight to 4 AM, a watch for meteors from Comet 209P/Linear.
- The evening of Saturday, May 31, a private BSAS star party at Natchez Trace Mile Marker 412 (Water Valley Overlook).

Mike Benson, Astronomical League Coordinator, introduced Barbara Brand, who has completed an Astronomical League observing program, the Binocular Messier Program, and received the award. Theo Wellington presented descriptions of several AL observing programs: Messier, Binocular Messier, Double Star (chaired by Mike Benson), Lunar, Constellation Hunter, Solar System Observer, Urban Observing, Variable Star, and Outreach Award. To receive an award, the participant has to be a member of the Astronomical League (BSAS members are also members of the Astronomical League), complete the requirements of the observing program (given on the AL website, <http://www.astroleague.org/>), and submit their observing records to the Astronomical League for verification. Contact Mike Benson for further assistance.

Lonnie Puterbaugh was scheduled to have the Astronomy Channel van at Warner Park on May 24. BSAS members Joe Boyd, Tom Murdic and Chuck Schlemm also are available for outreach as JPL-sponsored Solar System Ambassadors.

There being no further business the meeting was adjourned at 8:45 PM.

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.

EDUCATIONAL

FUN

INTERESTING



FREE! FREE! FREE! FREE! FREE! FREE!
FREE! FREE! FREE!

WHAT: Free to the Public Solar Outreach Event

WHEN: June 22, 2014 from 9:00 a.m. until sunset

WHERE: Memorial Park
151 East Main Street
Hendersonville, TN 37075
(behind the tennis courts)

**SOLAR TELESCOPES & SOLAR SUNGLASSES for
SAFELY VIEWING SUNSPOTS, PROMINENCES & OTHER
FEATURES OF THE SUN**

