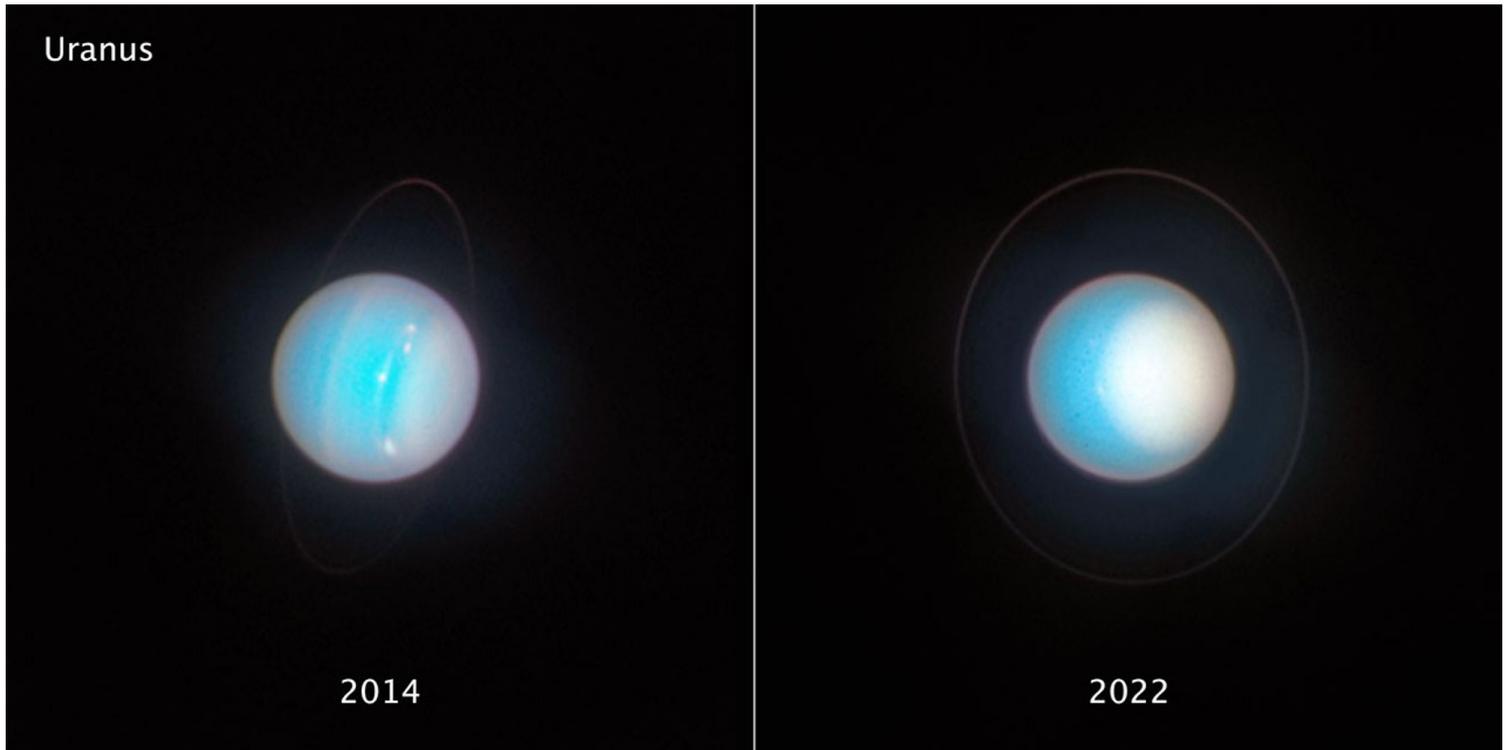


The ECLIPSE

June 2025

The Newsletter of the Barnard-Seyfert Astronomical Society



Night Sky Notes: Seasons of the Solar System

By Kat Troche

Here on Earth, we undergo a changing of seasons every three months. But what about the rest of the Solar System? What does a sunny day on Mars look like? How long would a winter on Neptune be?

Let's take a tour of some other planets and ask ourselves what seasons might look like there.

Martian Autumn

Although Mars and Earth have nearly identical axial tilts, a year on Mars lasts 687 Earth days (nearly 2 Earth years) due to its average distance of 142 million miles from the Sun, making it late autumn on the red planet. This distance and a thin atmosphere make it less than perfect sweater weather.

A recent weather report from Gale Crater boasted a high of -18 degrees Fahrenheit [for the week of May 20, 2025](#).

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Officers

Tom Beckermann
President

Steve Hughes
Vice President

Bud Hamblen
Secretary

Theo Wellington
Treasurer

Keith Rainey
Ex-officio

Directors at Large

Cory Brucker

Chip Crossman

Tony Drinkwine

Stephanie Brake

Andy Reeves

Kathy Underwood

Contact BSAS officers at
bsasnashville.com/contact, or email info@bsasnashville.com

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 at the Dyer Observatory 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.

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.

Book Review: Wizard

by Robin Byrne

Nikola Tesla is a fascinating person, so when I came across the book *Wizard: The Life and Times of Nikola Tesla Biography of a Genius* by Marc J. Seifer, I figured it would be something I'd enjoy. I was wrong.

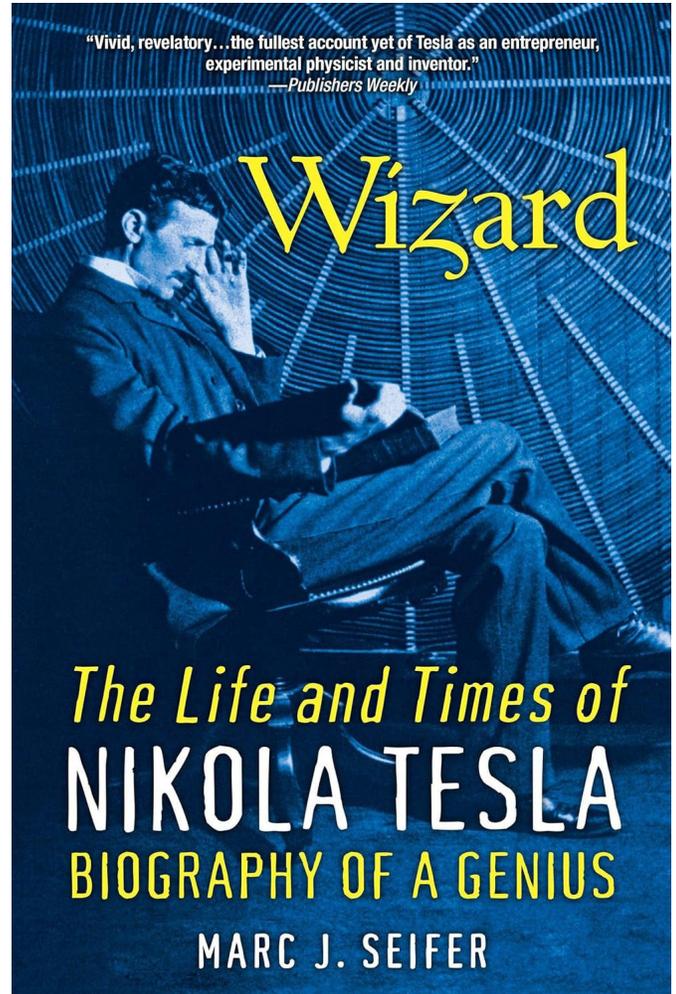
I should start by saying that there were parts that I found interesting. Seifer clearly researched Tesla's life quite a bit, including his correspondence with various people. So the parts of the book that dealt with the events in Tesla's life were fine and included many tidbits that were fun to read about.

Where my problems lie is with the author. I would have expected someone writing a biography of Tesla to either be in a field related to electronics or be a science historian. Seifer is neither. His degree is in psychology, specializing in handwriting analysis, which is a dubious area at best. He has no expertise in electricity, so no means to judge which of Tesla's claims were believable or not. He simply took everything Tesla said as truth.

While he did acknowledge that there were many who questioned some of Tesla's ideas, Seifer made a point of finding at least one person who would stand behind Tesla's claims and use that single endorsement to validate all that Tesla said.

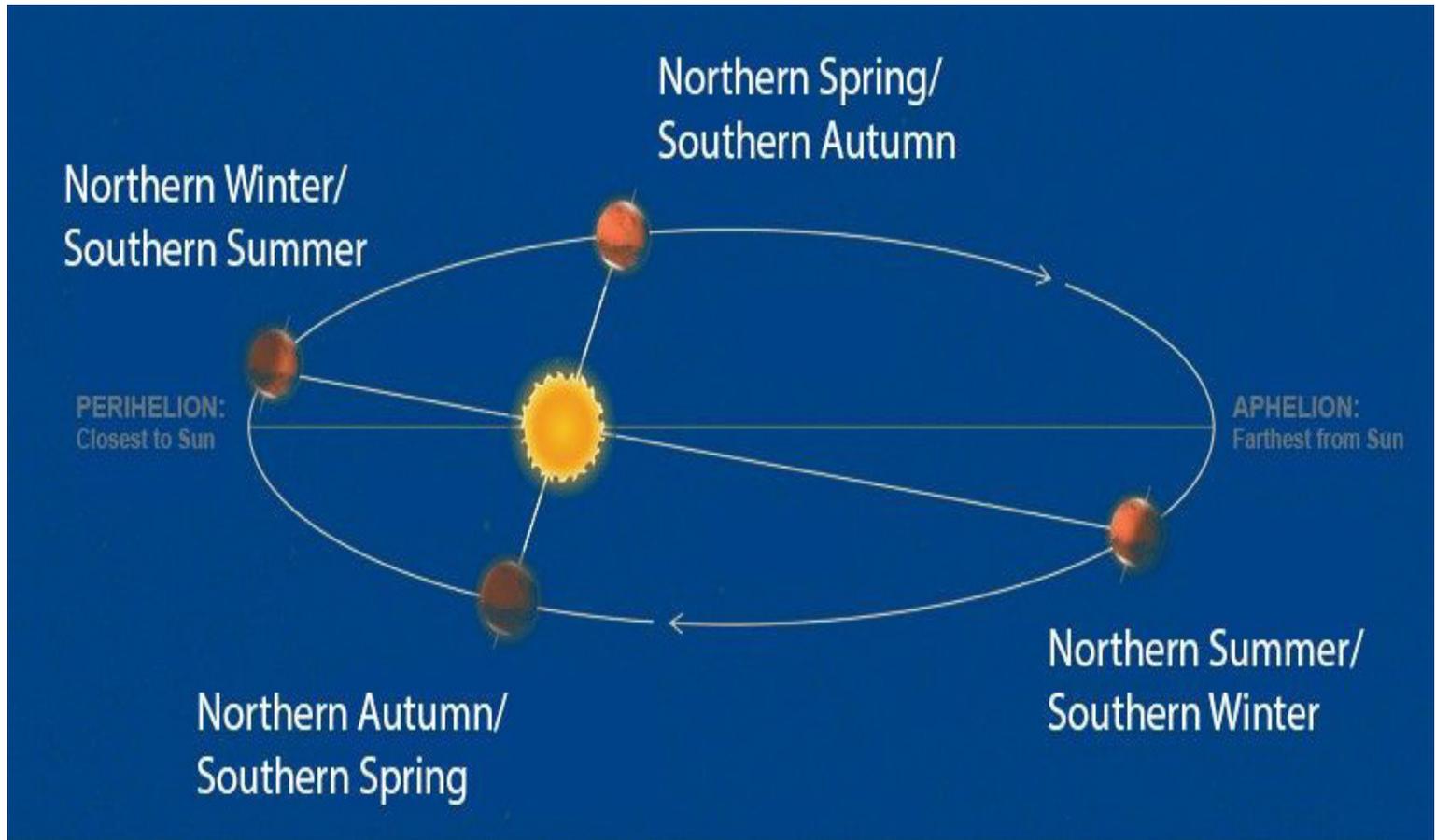
The other area where Seifer lost my respect was in the way he used the written correspondence to create scenes with quoted dialogue between Tesla and other people in his life. He in no way makes a disclaimer to say that the following dialogue is based on letters or other source material, but simply presents the reader with a scenario as though it actually occurred. And to add insult to injury, Seifer then embellishes these meetings with his own interpretation of what people were feeling or thinking. He essentially presented fictional stories as fact.

Seifer wrote this biography from the viewpoint of a total fan of Tesla's. I'm a fan, too, but I recognize that Tesla's early development of alternating current and other innovations by no means lend validity to his later, crazier ideas. Seifer believes it all and goes to extremes to convince the reader that Tesla's "discoveries" actually were legitimate and would be in use today if not for all the people who worked so hard to keep Tesla down. Conspiracy theory much?



Continued on Page 7

Seasons, continued from Page One



An artist's rendition of Mars' orbit around the Sun, and its seasons. Credit: NASA/JPL-Caltech

Seven Years of Summer

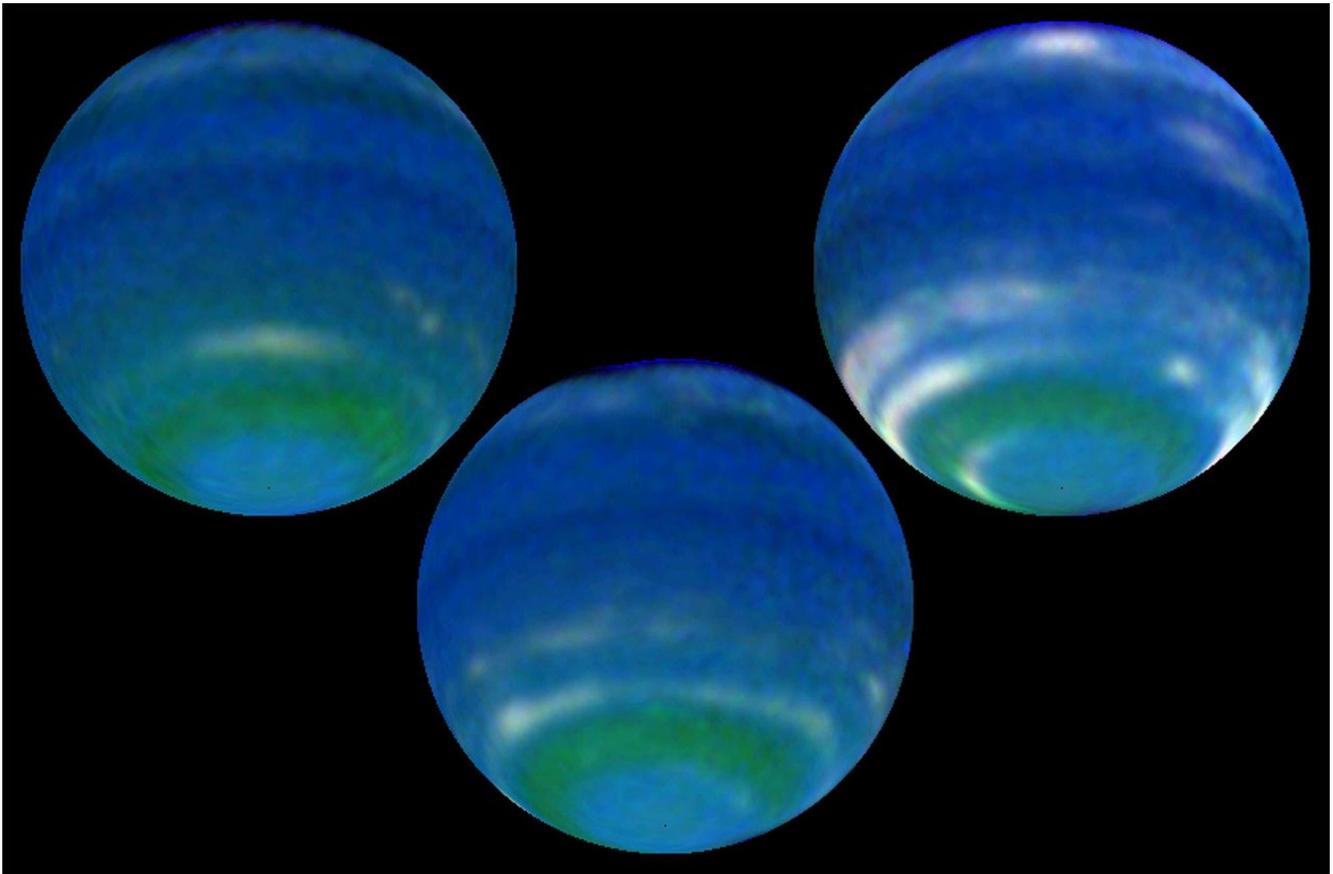
Saturn has a 27-degree tilt, very similar to the 25-degree tilt of Mars and the 23-degree tilt of Earth. But that is where the similarities end. With a 29-year orbit, a single season on the ringed planet lasts seven years. While we can't experience a [Saturnian season](#), we can observe a [ring plane crossing](#) here on Earth instead. The most recent plane crossing took place in March 2025, allowing us to see Saturn's rings 'disappear' from view.

A Lifetime of Spring

Even further away from the Sun, each season on Neptune lasts over 40 years. Although changes are slower and less dramatic than on Earth, scientists have observed seasonal activity in Neptune's atmosphere.

[These images were taken](#) between 1996 and 2002 with the Hubble Space Telescope, with brightness in the southern hemisphere indicating seasonal change.

As we welcome summer here on Earth, you can build a [Suntrack](#) model that helps demonstrate the path the Sun takes through the sky during the seasons. You can find even more fun activities and resources like this model on NASA's [Wavelength and Energy](#) activity.



NASA Hubble Space Telescope observations in August 2002 show that Neptune's brightness has increased significantly since 1996. The rise is due to an increase in the amount of clouds observed in the planet's southern hemisphere. Credit: NASA, L. Sromovsky, and P. Fry (University of Wisconsin-Madison)

Cover Photo: Uranus rolls on its side with an 84-year orbit and a tilt just 8° off its orbital plane. Its odd tilt may be from a lost moon or giant impacts. Each pole gets 42 years of sunlight or darkness. Voyager 2 saw the south pole lit; now Hubble sees the north pole facing the Sun. Credit: NASA, ESA, STScI, Amy Simon (NASA-GSFC), Michael Wong (UC Berkeley); Image Processing: Joseph DePasquale (STScI)

This article is distributed by NASA Night Sky Network.

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more! You can catch up on all of NASA's current and future missions at nasa.gov.

With articles, activities and games NASA Space Place encourages everyone to get excited about science and technology. Visit spaceplace.nasa.gov to explore space and Earth science!

**Barnard-Seyfert Astronomical Society
Minutes — Regular Membership Meeting
April 16, May 21, & June 18, 2025**

April 16:

The Barnard-Seyfert Astronomical Society met at Vanderbilt's Dyer Observatory and on-line for the regular general meeting on Wednesday, April 16, 2025, Dr Tom Beckermann presiding. The meeting was called to order at 7:00 PM.

Minutes: The minutes for the February 19 and March 19 meetings were adopted without discussion.

Membership Report: Keith Rainey reported that there were 235 members.

Treasurer's Report: Bank balance was \$9,074.74 (\$5,199.33 in the general fund and \$3,875.41 in the equipment fund). PayPal balance was \$340.68. Expenses included \$17.47 for Zoom and \$236.38 for business cards and brochures.

Social Media Report: The Facebook page (<https://www.facebook.com/bsasnashville>) was liked by 2,400 and followed by 2,700. "X" (<https://x.com/BSASNashville>) had 323 followers. Instagram (<https://www.instagram.com/bsasnashville/>) had 319 followers and followed 59. The BSAS members-only discussion forum is at <https://groups.google.com/g/bsasnashville>. The discussion forum has 162 members signed up. If you are a BSAS member and are interested in the discussion forum, please contact info@bsasnashville.com to get a link to sign up for the forum. Membership applications are through the Night Sky Network and dues payments are through the club's web site (see the club's membership web page at <https://www.bsasnashville.com/membership/>).

Upcoming Meetings: The next regular meeting will be at Vanderbilt's Dyer Observatory on Wednesday, May 21, 2025, from 7:00 PM to 8:30 PM. Let us have your thoughts on meeting topics and speakers.

Previous Events: The public star party scheduled at Bowie Nature Park on April 5 was cancelled owing to weather. The Nashville Outdoor Festival and Expo at Bells Bend Outdoor Center on April 12 featured solar telescopes operated by Chuck Schlemm and Theo Wellington.

Upcoming Events: Public star parties are open to the general public and are usually held at municipal or state parks. Some events require registration through the park's events pages because of limited parking. Public star party on April 18 at Cedars of Lebanon) State Park, Lebanon, Tennessee, from 7 PM to 12 AM (register with the park). Public star party on April 19 at the Winnetta-Ayers Park, 129 Bridgeview St, Wartrace, Tennessee, from 8 to 10 PM. Public star party on April 25 at Henry Horton State Park, Chapel Hill, Tennessee, from 7 PM to 12 AM (register with the park). Public Star Party on April 26 at Cedars of Lebanon State Park from 7 PM to 12 AM (register with the park).

Private star parties are open only to members of the Barnard Seyfert Astronomical Society and are held in the Natchez Trace Parkway National Park at the Mile Marker 435.3 parking area and the Mile Marker 412 Water Valley Overlook. Members need to have a copy of the Park Service Permit (a copy of the PDF on your smart phone is OK). The permit is posted on the BSAS Nashville Google group. Permit dates are on Saturdays near the new Moon. An upcoming date is May 4, 2025.

Friends of Shelby Bottoms asked for telescopes to support their event at the Shelby Bottoms Nature Center. This

is not a BSAS event. See the message on Google Groups for details. Theo Wellington presented “Meteor Showers/ Meteorites/ (and Meteorwrongs)/Asteroids.

[Link to YouTube recording of the meeting.](#)

There being no further business, the meeting adjourned at 8:30 PM.

May 21:

The Barnard-Seyfert Astronomical Society met at Vanderbilt’s Dyer Observatory and on-line, for the regular general meeting on Wednesday, May 21, 2025, Dr Tom Beckermann presiding.

The program was “Intro to Telescopes.”

Meetings: The next membership meeting is scheduled for Wednesday, June 18, 7:00 PM, at Vanderbilt’s Dyer Observatory. Program to be determined.

Membership Report: 238 members.

Minutes: The minutes for the April general meeting were adopted without comment.

Social Media: The Facebook page is followed by 2,700 and liked by 2,400.

Star Parties and Events: Previous events on April 19 and May 3 were rained out. The private star party at Natchez Trace Parkway Mile Marker 435.3 and the public star party in Wartrace on May 17 had better conditions. Upcoming events include a private star party at the Natchez Trace Parkway Water Valley Overlook on May 24, a public star party on May 24 at the Harpeth River State Park Hidden Lake Trailhead, a public star party on Friday, May 30, at the Montgomery Bell State Park Ball Field, and a public star party on Saturday, May 31, at Bells Bend Outdoor Center.

Treasurer’s Report: \$8,735.27 Bank balance; \$526.12 PayPal balance. Expenses:\$17.47, Zoom account; \$352, storage unit.

There being no further business, the meeting adjourned at 8:30 PM.

June 18:

The Barnard-Seyfert Astronomical Society met at Vanderbilt’s Dyer Observatory and on-line for the regular general meeting on Wednesday, June 18, 2025, Dr Tom Beckermann presiding. The meeting was called to order at 7:00 PM. About 20 attended.

Minutes: The minutes for the May 21 meeting were adopted without discussion.

Membership Report: There were 239 members.

Treasurer's Report: Total bank balance: \$8,390.99 (\$3,875.41 in the equipment fund and \$4,515.58 in the general fund). PayPal balance was \$681.94. One poster was sold. Expenses included \$17.47 for Zoom, \$28.00 for one month of storage (paid by Theo Wellington), \$54.81 for one month of storage plus setup (paid by Tom Beckerman), and \$244.00 for yearly PO Box rental

Social Media Report: The Facebook page (<https://www.facebook.com/bsasnashville>) was liked by 2,400 and followed by 2,700. "X" (<https://x.com/BSASNashville>) had 325 followers. Instagram (<https://www.instagram.com/bsasnashville/>) had 319 followers and followed 59. The BSAS members-only discussion forum is at <https://groups.google.com/g/bsasnashville>. The discussion forum has 162 members signed up. If you are a BSAS member and are interested in the discussion forum, please contact info@bsasnashville.com to get a link to sign up for the forum. Membership applications are through the Night Sky Network and dues payments are through the club's web site (see the club's membership web page at <https://www.bsasnashville.com/membership/>).

Upcoming Meetings: The next regular meeting will be at Vanderbilt's Dyer Observatory on Wednesday, July 16, 2025, from 7:00 PM to 8:30 PM. Let us have your thoughts on meeting topics and speakers.

Previous Events: The public star party on May 24 at the Harpeth River State Park Hidden Lake Trailhead was cancelled owing to the weather. The public star party on Friday, May 30, at the Montgomery Bell State Park Ball Field was successful. Chuck Schlemm reported that they had eight telescopes out and about 75 guests. Smoke from wildfires in Canada caused extremely hazy skies for the public star party on Saturday, May 31, at Bells Bend Outdoor Center was successful.

Upcoming Events: Public star parties are open to the general public and are usually held at municipal or state parks. Some events require registration through the park's events pages because of limited parking. Friday, June 27, at Montgomery Bell State Park ball field, 2003 Jackson Hill Rd, Burns, Tennessee from 6:30 to 8:30 PM (solar viewing) and 8:30 to 11:00 PM (stars and planets). Saturday, June 28, at Cornelia Fort Air Park, 2641 Airpark Dr, Nashville, Tennessee from 9 to 11 PM.

Private star parties are open only to members of the Barnard Seyfert Astronomical Society and are held in the Natchez Trace Parkway National Park at the Mile Marker 435.3 parking area and the Mile Marker 412 Water Valley Overlook. Members need to have a copy of the Park Service Permit (a copy of the PDF on your smart phone is OK). The permit is posted on the BSAS Nashville Google group. Permit dates are on Saturdays near the new Moon. An upcoming date is June 21, 2025, for Mile Marker 435.3..

The attendees joined breakout groups for telescope workshop 2.0

[Link To YouTube recording of the meeting .](#)

There being no further business, the meeting adjourned at 8:30 PM.

Respectfully submitted,

Bud Hamblen
Secretary



I Spy in the Palm Springs Sky ... your trusty newsletter compiler was sitting poolside in Palm Spring on a balmy June evening, minding his own business, when a perfectly good rocket was launched from nearby Vandenberg Air Force Base. Rumor is that it was a Falcon Heavy carrying a payload of Starlink satellites.

Tesla, Continued From Page 3

It is extremely rare that I don't recommend a book, but this is one of those times. Don't waste your money or your time on *Wizard: The Life and Times of Nikola Tesla Biography of a Genius* by Marc J. Seifer. There are much better Tesla biographies out there that are more deserving of your attention.

Reference:

Wizard: The Life and Times of Nikola Tesla Biography of a Genius by Marc J. Seifer; Citadel Press Kensington Publishing Corp. 1998

Become a Member of BSAS! Visit bsasnashville.com to join online.

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

Annual dues:

- Regular: \$25
- Family: \$35
- Senior/Senior Family: \$20
- Student:* \$15



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

Barnard-Seyfert Astronomical Society
Minutes – Board of Directors
April 2 & June 4, 2025

April 2:

The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held April 2, 2025, online, Dr. Tom Beckermann presiding. Tom Beckermann, Donna Burgess, Tony Drinkwine, Bud Hamblen, Steve Hughes, Gene Matthews, Andy Reeves and Theo Wellington logged in for the meeting.

Meetings: We are looking for presenters for April and beyond. The question of paying speakers' fees was discussed.

Membership Report: Keith Rainey provided a membership count of 234.

Minutes: The minutes of the board meeting of March 5, 2025, were adopted without discussion.

Social Media Report: The Facebook page was liked by 2.3K and followed by 2.6K.

Star Parties and Outreach: Abstracts of astronomy related projects presented at the Middle Tennessee Science and Engineering Fair on March 21, 2025, were provided to the board. A public star is scheduled for April 5th at Bowie Nature Park in Fairview. The club will have a booth with solar viewing at Bells Bend Outdoor Festival on April 12.

Treasurer's Report: Theo reported the bank balance to be \$9,346.06 (\$3,875.41 in the equipment fund and \$5199.33 in the general fund). The PayPal balance was \$340.66. Expenses for the month included \$17.47 for the Zoom account and \$236.38 for the new brochures and business cards, which have been received.

There being no further business, the meeting was adjourned at 8:30 PM.

June 4:

The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held June 4, 2025, online, logged in for the meeting were Tom Beckermann, Chip Crossman, Tony Drinkwine, Bud Hamblen, Gene Matthews, Keith Rainey, Andy Reeves, and Theo Wellington.

Meetings: The June members' meeting is planned to be a follow up telescope night.

Membership Report: Keith Rainey provided a membership count of 239.

Minutes: The minutes of the board meeting of May 7, 2025, were adopted without discussion.

Social Media Report: The Facebook page was liked by 2.4K and followed by 2.7K. "X", which is largely inactive, is still followed by 325.

Star Parties and Outreach: The private star party at the Natchez Trace Parkway Water Valley Overlook was rained out.

Chuck Schlemm reported that he was able to host a star party at Montgomery Bell Park on May 30. We had about 8 scopes on the field with ~75 guests. 2 scopes were by soon to be BSAS members. One family came from Memphis just for the star party!

Chuck set up an astronomy exhibit of posters and a solar system model under the pavilion around 5:00 and gave away a dozen or so space science books. He then started doing solar observing. He had to go back and forth from Sun to crescent Moon between some clouds, but showed sunspots to about 30 guests. Night targets he observed with guests included the Moon, Mars, Castor A,B&C, Arcturus, Mizar A&B and Alcor, Antares, Vega, Epsilon Lyra, M57 Ring Nebula, and Albireo. He awarded astronomy certificates to two girls. One operated the club's Dobsonian scope. They also saw many satellites including the International Space Station (7) and the Chinese space station Tiangong (3) with 10 crew in space.

Chuck and crew received many thanks for coming out from guests and the park ranger. Thanks to all the BSAS members for coming and sharing the night sky. The Bells Bend public night was marked by smokey skies, which limited good views to the Moon. Randy Oaks organized public nights at Henry Horton State Park and Cedars of Lebanon State Park. He made a huge shout-out to Bobby McCullough and Scott Legg. Their scopes were able to cut through the haze better than his.

Star hopping was largely a bust as very few stars were visible. Arcturus and Vega were dim. Antares was a very dim pinprick of light as were Mars and Regulus. They were all able to provide nice views of the crescent moon. Eventually the Big Dipper became visible, so we were able to provide some views of Mizar, Alcor, also the double double by Vega. Bobby was the hero of the night as his Seestar 50 was able to provide viewing for multiple targets including M13, 51, 81, and 82. Scott was able to show Bodes as well.

While the 3 of them felt like even a crummy night under dim stars was better than home on the couch, their audience of almost all first-time star party attendees was excited to see what they presented and were appreciative of their time and equipment and excited about the chance to return to better conditions. The park rangers also expressed strong interest in future programs. Upcoming events include a members-only night at the Natchez Trace Mile Marker 435.3 on June 21, a public night at Montgomery Bell State Park on June 27, a public night at Cornelia Fort Air Park on June 28.

Treasurer's Report: Total bank balance: \$8,390.99 (\$3,875.41 in equipment fund, \$4,515.58 in general fund). PayPal balance: \$681.94. We sold another poster. Expenses since the last board meeting: \$17.47 for Zoom account, \$28.00 for one month of storage (by Theo Wellington), \$54.81 for one month of storage plus setup (by Tom Beckermann), and \$244.00 for yearly PO Box renewal. Payment for the Astronomical League membership is due in June.

Other Business: Theo is continuing to organize the Dark Sky initiative. Members of the International Dark Sky who reside in Tennessee are part of the initiative. There was discussion on how to best support venues distant from Nashville. The club has received a solar toolkit of outreach materials from the NASA/JPL Night Sky Network.

There being no further business, the meeting was adjourned at 8:00 PM.

Respectfully submitted,

Bud Hamblen
Secretary



In honor of the club's 90th anniversary we partnered with Hatch Show Print to create a unique poster that would honor the achievement of the club. For those who don't know Hatch Show has been making posters for a variety of events and concerts for 140 years. In all that time we are their first astronomy club.

On the poster at the center is the moon. This was made from a wood grained stencil that the shop has used for over 50 years. To contrast that the telescope that the people are using is a brand new stencil made for our poster.

The poster has three colors. First the pale yellow color of the moon was applied. Next the small stars, circles, and figures at the bottom were colored in metallic gold. The third color is a blue for the night sky.

Where it overlaps with the metallic gold it creates a darker blue leaving the figures at the bottom looking like silhouettes.

This was a one time printing so the 100 that we have are all that will be printed.

The prints are approximately 13 3/4" x 22 1/4" and are available for \$20 at our membership meetings, or \$25 with shipping by ordering through bsasnashville.com. Frame not included.



Next BSAS meeting
Wednesday, July 16, 7:00 pm

Dyer Observatory
 1000 Oman Dr.
 Brentwood, TN 37027