

# The ECLIPSE

April  
2014

*The Newsletter of the Barnard-Seyfert Astronomical Society*

## Next Membership Meeting:

April 16, 2014, 7:30 pm  
Cumberland Valley  
Girl Scout Council Building  
4522 Granny White Pike

### Program Topic:

*Dark Energy Survey*  
*J. Allyn Smith,*  
*Austin Peay State University*

*(details on page 5)*

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## From the President:

Brrrr, it's been a cold wet winter! Not many clear nights that were not also very cold. But spring is finally here.

You don't have to own a telescope to enjoy astronomy or the night sky. For thousands of years, humans have observed the sky with the two natural telescopes we all have, our two eyes.

There are several good naked eye events in our near future. First, on April 15th, we can watch a Total Lunar Eclipse. True, it begins for us at an inconvenient time... the partial phase at 12:58am. Yep, am. Totality begins at 2:06 am, ending at 3:24am. Happens to be a Tuesday morning, too. Many of us will need to go to work later that same morning. But if the weather is clear, set your alarm, get up and enjoy a sight wondered at since before recorded human history. When completely within the shadow of the Earth, the eclipsed Moon is lit by the light from every sunrise and sunset happening at that moment around the globe, so it isn't completely dark. Instead, the color can range from bright orange to purple, depending on weather, dust, and other factors. I look forward to seeing your pictures! Send them to [eclipse@bsasnashville.com](mailto:eclipse@bsasnashville.com).

Watching the ISS transit the evening sky is also a treat. After the first week we should start seeing more night passes again. Check out our Facebook page, we post there when there will be a nice evening pass. Citizen scientists are wanted to map light pollution.... you can be a part of the Globe At Night campaign. You can contribute data through a smart phone, tablet or computer. Head to [globeatnight.org](http://globeatnight.org) for more details.

The Lyrid meteor shower peaks on April 17th. There is also a possible new meteor shower that might peak on the night of May 23-24. From debris left behind by

## Officers

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## Observing Highlights February and March

### Planets

Venus  
Mars  
Jupiter  
Saturn  
Pluto

### Open Clusters

M36, M37, M38, M35, NGC2264  
(*Christmas Tree*),  
M41, M50, M47, M46, M93,  
M48, M44 (*Beehive*), M67,  
Mel111 (*Coma Star Cluster*),  
NGC4755  
(*Jewel Box Cluster*)

### Nebulae

NGC1499 (*California*), M1, M42  
(*Orion*), M43, M78,  
NGC2392 (*Eskimo*),  
NGC3242 (*Ghost of Jupiter*),  
M97 (*Owl*)

### Variable Stars

R Leporis  
(*Hind's Crimson Star*),  
U Orionis, L Puppis, R Leonis

### Globular Clusters

M79, M53, M3

### 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, M68,  
M104 (*Sombrero Galaxy*),  
M59, M60, M94,  
M64 (*Black-Eye Galaxy*),  
M63 (*Sunflower Galaxy*), M51  
(*Whirlpool Galaxy*),  
M83

### Multiple Star Systems

Beta Orionis (*Rigel*),  
Alpha Geminorum (*Castor*),  
Gamma Leonis (*Algieba*),  
M40, Gamma Virginis  
(*Porrina*),  
Alpha Canum Venaticorum  
(*CorCaroli*),  
Zeta Ursae Majoris (*Mizar*)

## Upcoming Star Parties

Sat 4/5 through 9:00 PM	Daytime activities and public star party at <a href="#">Forrest State Park</a>
Sat 4/5 - 7:30-9:30	<a href="#">Cornelia Fort Airpark</a>
Fri 4/25 - 8:00-10:00	<a href="#">Bowie Nature Park, Fairview</a>
Fri 5/2 - 8:30-10:30	<a href="#">Bells Bend Outdoor Center</a>



Apr 29  
May 28



Apr 7  
May 6



Apr 15  
May 14



Apr 22  
May 21

## Happy Birthday Arno Allan Penzias by Robin Byrne

Our April honoree is a man who has made a big bang in more than one way. Arno Allan Penzias was born in Munich, Germany on April 26, 1933 to Karl and Justine Penzias. His father made a good living as a leather broker until 1938, when all Jews of Polish origin were ordered to be deported to Poland. The Penzias family, however, were fortunate. Upon arrival at the border, they were told that it was past the deadline for any new immigrants to enter Poland. That probably spared their lives. Many people who had entered Poland were housed in the open, where more than half froze to death.

Penzias' father made every effort to leave Germany. When England agreed to accept 10,000 Jewish children, Arno and his younger brother, Gunther, were sent off alone. Soon after, their parents acquired the paperwork to join the children. As soon as they could, the family moved to the United States. They arrived in New York City in January, 1940.

Penzias graduated from Brooklyn Technical High School in 1951 and entered City College with the plan to major in chemical engineering. In his first year, he discovered physics and changed his major. He graduated in 1954 in the top ten percent of his class.

After graduation, Penzias joined the army, where he served as a radar officer

for two years. From there, he became a researcher at the Radiation Laboratory of Columbia University and began work on his graduate degrees. He received his M.A. in 1958, and his Ph.D in 1962.

His research had involved building a maser amplifier and doing astronomical observations. His first job, as a member of the technical staff at Bell Labs, allowed Penzias to continue with his work. While at Bell Labs, he worked on radio communications, including work on the Telstar communications satellite. In 1963, Robert W. Wilson joined the staff and began a partnership with Penzias that would last for many years.

One of their first jobs was to work with a very sensitive radio antenna for use in radio astronomy and satellite communications. However, there was a problem. No matter where they looked, there was a background hiss that they could not eliminate. Penzias and Wilson explored a variety of possible sources, including the Milky Way, the Sun, and droppings from the pigeons that were nesting in the antenna, but nothing they did got rid of the noise. In 1965, Penzias mentioned the problem with a colleague in Boston and discovered that Princeton physicist Robert Dicke had predicted just such a noise should exist as a remnant of the Big Bang. Penzias and Wilson had provided the first experimental proof of the Big Bang. In 1978 they shared the Nobel Prize for Physics for this discovery.

## Arno Allan Penzias, continued

Over the years, Penzias has risen through the ranks at Bell Labs, but continued to participate in research. Penzias discovered carbon monoxide and other compounds in interstellar gas clouds. In 1973, along with Wilson and Keith Jefferts, Penzias found the presence of deuterium (heavy hydrogen) in interstellar sources. This discovery helped to provide clues to the conditions of the universe shortly after the Big Bang.

Besides being a superb scientist, Penzias is also an inventor and holds several patents. Among his patented inventions are a system for identifying participants in a teleconference and a computerized public transportation system.

In addition to his scientific work, Penzias has been actively involved with humanitarian and political efforts. He served as vice-chairman of the Committee of Concerned Scientists, which works for freedom of scientists in totalitarian countries. He has also worked for the freedom of all people who experience persecution. Part of his Nobel Prize money was donated to organizations that work to protect young people and Jewish immigrants.

In 1998, Penzias officially retired, but did not stop working. He now serves as an advisor for various companies in Silicon Valley that work on developing new technologies.

Observational proof of the Big Bang was one of the key moments that led to the widespread acceptance of this controversial idea. Although there are still people who refuse to believe this theory, more and more observational evidence has accumulated that continues to confirm the basic premise that our universe had a beginning, including a recent discovery that confirms the inflationary model. Our understanding of the universe and our origins has been enhanced by the work of Arno Penzias. For that, we honor him.

### Resources:

Arno Penzias Biography

[www.nea.com/team/arno-penzias-phd](http://www.nea.com/team/arno-penzias-phd)

Penzias, Arno Allen

[www.infoplease.com/ce6/people/A0838219.html](http://www.infoplease.com/ce6/people/A0838219.html)

MediaMente: Arno A. Penzias

[www.mediamente.rai.it/mediamentetv/learning/ed\\_multimediale/english/bibliote/biografi/p/penzias.htm](http://www.mediamente.rai.it/mediamentetv/learning/ed_multimediale/english/bibliote/biografi/p/penzias.htm)

Nobel Laureate Arno Penzias Retires After 37 Years at Bell Labs by Gordon Bishop

[www.bell-labs.com/user/feature/archives/penzias/](http://www.bell-labs.com/user/feature/archives/penzias/)

## From the President, continued from page 1

Comet 209/P Linear, the shower might be one of the best for quite some time. Hope for clear warm nights, and we won't be disappointed by enjoying the night sky.

For those of you who have to get out early, maybe to walk the dog, the Moon and Venus will be very pretty in the sky April 25th. And April finds Mars at opposition, so enjoy the bright red planet outshining Spica in the midnight sky.

Lastly, on Saturday, March 29th we will attempt our annual Messier Marathon out at Spot Observatory. Check the [web site](#) and [Facebook page](#) to see if it is still scheduled.

Directions are below!

Clear, dark skies,

Theo Wellington

**DIRECTIONS:** Spot Observatory ([www.spotastro.com](http://www.spotastro.com)) is located at 3330 HWY 230 West about 50 miles west of Nashville. To get there, go I-40 West from Nashville and take Exit 152, Bucksport. At the bottom of the exit ramp, take a left on HWY 230, and follow it back under I-40 and around an "S" curve to a "T" intersection stop sign. At the stop sign, take a left, continuing on HWY 230 (the signs will indicate "HWY 230 East"). From that stop, the entrance to the observatory is approximately 4 miles on the left. You will see a black wooden fence with a silver metal farm gate. Just past this entrance, Dodd Hollow Road comes into HWY 230 on the right. If you get to Dodd Hollow Road, you have gone a bit too far, so turn around and come back a few hundred feet.

**Next BSAS meeting  
April 16, 2014, 7:30 pm  
Cumberland Valley  
Girl Scout Council Building  
4522 Granny White Pike**

*J. Allyn Smith,  
Austin Peay State University*

*We will discuss the Dark Energy Survey (DES) and its goals. We will present some of the results from the first year of survey operations (as collaboration rules allow) and discuss some of the preliminary work to bring the survey into being. We will highlight some of the differences between classical (standard) observing and "industrial observing" during survey operations.*

**Barnard-Seyfert Astronomical Society  
Minutes of the Regular Meeting of the Board of Directors  
Held on Wednesday, March 5, 2014**

The regular meeting of the Board of Directors of the Barnard-Seyfert Astronomical Society was held March 5, 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, Jeffrey Horne, Bob Norling, Poppy Simmons and Theo Wellington. A quorum being present, President Theo Wellington called the meeting to order at 7:35 PM. Theo Wellington asked for a motion to approve the minutes of the February 5, 2014, board meeting as printed in the February, 2014, edition of the Eclipse. Bob Norling so moved, Joe Boyd seconded, and the minutes were adopted by a unanimous voice vote. Bob Norling reported that the balances in the regular account was and in the equipment account, \$1,528.94 in the equipment account.

Theo Wellington reported the following upcoming star parties:

March 8, Public star party at Long Hunter State Park.

March 22, Public star party at Edwin Warner Park.

March 29, Private Messier Marathon at Spot Observatory and Water Valley Overlook.

April 5, Public star party at Cornelia Fort Air Park.

April 5, Public Astronomy Day at Nathan Bedford Forrest State Park.

Theo Wellington reported that she had been in discussion with Jessica House, TN State Parks, about training volunteers and park rangers to do night programs during the second week in May.

Theo Wellington reported that Dr Terry Reeves and Gary Eaton will present a "What's Up" focused on the Messier Marathon for the March membership meeting, and that Allyn Smith will present a program for the April membership meeting. Fabienne Bastien has been invited to speak and may be available for July. Lauren Palladino has been invited to speak at the suggestion of Chuck Schlemm, but has not yet responded. Craig and Tammy Temple have been invited to speak.

We need member to present programs or find persons to invite. If a member wants to talk at a meeting about something they enjoy, or know of a speaker to invite, please contact Theo Wellington.

Bob Norling reported that SunTrust Bank provided little assistance on the question of providing on-line payments for society dues.



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

Joe Boyd reported that the IDA group is scheduling a meeting with Metro Councilwoman Megan Barry. Theo Wellington noted that the Nashville State campus on White Bridge Rd was an example of good outdoor lighting, while new lighting in Hendersonville was an example of poor outdoor lighting.

The being no further business, Steve Cobb moved for adjournment, Poppy Simmons seconded, and the meeting was adjourned at 8:16 PM.

Respectfully submitted,

Bud Hamblen, Secretary



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Send your great amateur  
astrophotos to:  
[eclipse@bsasnashville.com](mailto:eclipse@bsasnashville.com)

From BSAS Member Jarrod Smith: *M45 from Bellevue on 2/24/14. 20x360s exposures through an 80mm f/6 apo doublet. Tried on 2/23 but light pollution limited exposure times to about 180s and the nebulosity was weak. A skyglow imaging filter helped a lot for this image.*

**Barnard-Seyfert Astronomical Society  
Minutes of the Monthly Membership Meeting  
Held On Wednesday, March 19, 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, March 19, 2014. The meeting was called to order at 7:45 PM. Theo Wellington asked for a motion to approve the minutes of the February 19, 2014, membership meeting as published in the March edition of the Eclipse. Steve Cobb so moved, Melissa Lanz seconded, the minutes were approved by unanimous voice vote.

**Star Parties:**

Saturday, March 22, public star party at the Warner Parks Special Events Field. Theo Wellington reported that the weather forecast for this event was poor.

Saturday, March 29, private Messier Marathon star party at Mark Manner's Spot Observatory. The location at Natchez Trace Mile Marker 412 (Water Valley Overlook) is also available that night.

Saturday, April 5, public star party at the former Cornelia Fort Air Park, and Astronomy Day events at Nathan Bedford Forrest State Park.

Saturday, April 19, public solar observing at Centennial Park.

Friday, April 25, public star party at Bowie Nature Park.

**Other Events:**

Monday, March 31, BSAS members Chuck Schlemm and Lonnie Puterbaugh will be exhibiting in the lobby of the Belcourt Cinema at the showing of the motion picture For All Mankind. Another motion picture in this series, Particle Fever, will be showing through Sunday, March 30.

Saturday, April 12, the monthly Second Saturday showing at the Sudekum Planetarium. This is Yuri Gagarin night.

Jeffery Horne recently returned from a social media event at the Goddard Space Flight Center.

Gary Eaton and Dr Terry Reeves presented "What's Up" in the night sky, emphasizing Messier objects in anticipation of the upcoming Messier Marathon, Saturday, March 29, 2014, at Spot Observatory. Gary presented binocular objects while Terry presented telescopic objects, including a detailed tour of the galaxies in Leo. Terry and Gary presented favorite printed guides to Messier objects: The Year-Round Messier Marathon Field Guide by Harvard Pennington [www.willbell.com/handbook/mess.htm](http://www.willbell.com/handbook/mess.htm), Deep-Sky Companions: The Messier Objects by Stephen James O'Meara [www.cambridge.org/us/academic/subjects/astronomy/amateur-and-popular-](http://www.cambridge.org/us/academic/subjects/astronomy/amateur-and-popular-)



## Minutes of the Monthly Membership Meeting, continued

[astronomy/deep-sky-companions-messier-objects](#), and *The Next Step: Finding and Viewing Messier Objects*, by Ken Graun (apparently out of print). Gary presented favorite apps from the Apple iTunes App Store for mobile devices: *Star Walk* by Vito Technology Inc., *Messier List* by Scot Spencer, and *Exoplanet* by Hanno Rein. *Exoplanet* doesn't locate Messier objects, but is a cool app nevertheless.

There being no further business the meeting was adjourned at 8:58 PM.

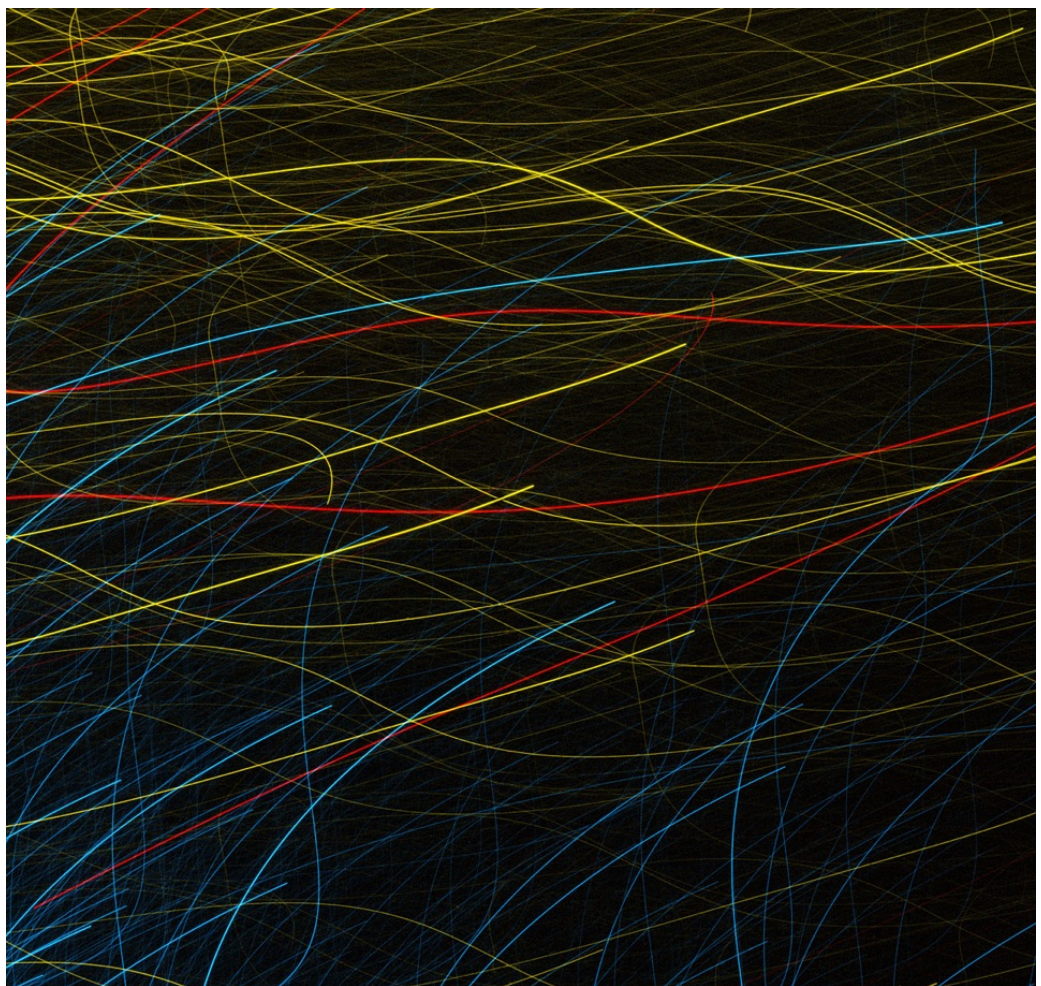
Respectfully submitted,

Bud Hamblen, Secretary

*The distinctive splashes of colour must surely be a piece of modern art, or an example of the photographic technique of "light painting". Or, could they be the trademark tracks of electrically charged particles in a bubble chamber? On a space theme, how about a time-lapse of the paths of orbiting satellites?*

*The answer? None of the above. In fact, this is a genuine frame that Hubble relayed back from an observing session.*

*Hubble uses a Fine Guidance System (FGS) in order to maintain stability whilst performing observations. A set of gyroscopes measures the attitude of the telescope, which is then corrected by a set of reaction wheels. In order to compensate for gyroscopic drift, the FGS locks onto a fixed point in space, which is referred to as a guide star.*



*It is suspected that in this case, Hubble had locked onto a bad guide star, potentially a double star or binary. This caused an error in the tracking system, resulting in this remarkable picture of brightly coloured stellar streaks. The prominent red streaks are from stars in the globular cluster NGC 288. It seems that even when Hubble makes a mistake, it can still kick-start our imagination.*

[Credit: ESA/NASA](#)

**Become a Member of BSAS!**

Visit [bsasnashville.com](http://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](http://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](http://bsasnashville.com). If you need more information, write to us at [info@bsasnashville.com](mailto:info@bsasnashville.com) or call Theo Wellington at (615) 300-3044.

**Free Telescope Offer!**

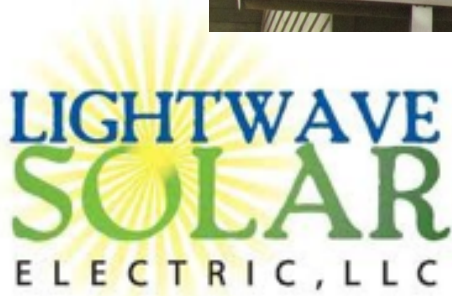
Did someone say free telescope? Yes, you did read that correctly. The BSAS Equipment & Facilities Committee has free telescopes ranging in size from 2.6" to 8" that current members can actually have to use for up to 60 days at a time. We also have some other items in the loaner program such as a photometer, 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](mailto:info@bsasnashville.com).



# The Power of the Sun

Saturday, April 12, 2014, 9:30 a.m. - 3 p.m. at Warner Park Nature Center

Learn about the original source of energy, the SUN! Observe the Sun through a solar scope, make a solar cooker, and follow solar energy through the food webs of Warner Parks at this hands-on, open house-style program at the Nature Center.



LightWave Solar will be on-hand to discuss solar panel installation and solar energy use in Tennessee between 10-11:30 a.m.

Register by calling 615-352-6299.

		 For ADA Accommodations, please contact 862-8400	
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Warner Park Nature Center is located at 7311 Highway 100 in Bellevue at the corner of Old Hickory Boulevard and Highway 100.

Stay connected to Warner Park Nature Center:





# What's Up With the Astronomical League March, 2014

Compiled by Carroll  
Iorg, President and  
Media Officer

## ALCON 2014, JULY 10-12



Alcon 2014 offers you the opportunity to interact with many people, such as research astronomers, authors, university professors, youth astronomers and other amateur astronomers.

The following speakers are confirmed at this time:

**Don Pettit**, astronaut explorer; **Don Olson**, Celestial Sleuth; **Erika Rix**, Astro-Sketching; **Amanda Bayless**, Stellar Binaries; **Forrest Mims**, Earth's Atmosphere; **John Davis**, Art in Astro-Imaging; **Mike Simmons**, Astronomers Without Borders; **Larry Mitchell**, Deep Sky Objects; **William Bucklew**, Lowell Observatory; **Aaron Clevenson**, Supernova 2014J and **Laura Allai**, Astrophotography. *See page 2 for a mail in registration or refer to the convention website for paypal registration and much more information about ALCon at [alcon2014.astroleague.org](http://alcon2014.astroleague.org).*

**Remember the special \$99 room rate is available both a few days before and after the actual convention dates.**

### Things to do and places to see in the San Antonio area while at ALCon:

- The Alamo
- Sea World
- San Antonio Missions National Park
- San Antonio Botanical Gardens
- Tower of the Americas
- San Antonio Museum of Art
- Natural Bridge Cavern & Wildlife Ranch
- Menger Hotel
- Paseo del Rio (Riverwalk)
- Six Flags Fiesta Texas
- San Antonio Zoo
- Japanese Tea Gardens
- Witte Museum
- McNay Art Museum
- Institute of Texas Cultures
- Spanish Governor's Palace

### Special Android Application now available from the NASA Space Place Program:

Space Place Prime is now available on Android! A spinoff of NASA's popular kids' Space Place website ([spaceplace.nasa.gov](http://spaceplace.nasa.gov)), Space Place Prime has timely, educational, and easy-to-read articles and activities from the Space Place and other science websites, the latest and most impressive NASA space and Earth imagery, and a wide array of informational movies. There is plenty to keep everyone occupied and informed. Content is updated daily, <http://tinyurl.com/lyqme53>

# ALCON 2014 REGISTRATION INFORMATION—JULY 10, 11, 12 2014

Printable form available at [astroleague.org](http://astroleague.org).

Mail completed form with your check made payable to **ALCon 2014** to:  
Astronomical League, ALCon 2014  
9201 Ward Parkway, Suite 100  
Kansas City, MO 64114

Please use one form for each attendee. One check is acceptable for your group. You may also register at [alcon2014.astroleague.org](http://alcon2014.astroleague.org) and make remittance with PayPal.

Name: \_\_\_\_\_

Name and Title for ID badge: \_\_\_\_\_

Email address: \_\_\_\_\_

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Daytime Phone Number: \_\_\_\_\_

Alternate Phone Number: \_\_\_\_\_

Astronomical Affiliation (Club)? \_\_\_\_\_

Are you a member of ALPO? \_\_\_\_\_

You may make your room reservations at the Hilton San Antonio Airport by calling 1-888-728-3031. Be sure to ask for the "National Astronomical League 2014 Convention—ALCon 2014" special rate, \$99 per room night. Must reserve by June 14 to receive the ALCon rate. Free parking and free wifi.

## ALCon merchandise (Order Deadline June 25)

Silk-screened T-shirt, White \_\_\_\_\_; or Royal Blue \_\_\_\_\_  
S \_\_\_ M \_\_\_ L \_\_\_ XL \_\_\_ XXL \_\_\_ XXXL \_\_\_ : \$20

Embroidered polo shirt, White \_\_\_\_\_; Royal Blue \_\_\_\_\_  
Mens: S \_\_\_ M \_\_\_ L \_\_\_ XL \_\_\_ XXL \_\_\_ XXXL \_\_\_ : \$25

Womens: S \_\_\_ M \_\_\_ L \_\_\_ XL \_\_\_ XXL \_\_\_ XXXL \_\_\_ : \$25

Help the League help amateur astronomy by making a tax deductible donation \_\_\_\_\_

*The organizers reserve the right to make such changes to the event as may be necessary due to conditions outside of their control.*

**ALCON2014.ASTROLEAGUE.ORG**

## Registration Schedule

**Early Registration Fees** (after June 25, add \$20)

For each item you wish to select, please enter the amount on the right.

Individual 2 or 3 day registration: (\$50) \_\_\_\_\_

Single day registration: (\$35) \_\_\_\_\_

Couples 2 or 3 day registration: (\$80) \_\_\_\_\_

Students: (\$20) \_\_\_\_\_

Children under 15 years of age accompanying adults who are registering: free

## Are you a vendor?

General registration is required for each person.

Vendor Table, include 2 chairs and skirt (\$25) \_\_\_\_\_

## Thursday night Star BQ

BarB-Q Brisket and Smoked Sausage, BarB-Q Chicken; Cole Slaw; Pecan Pie; Iced Tea, Coffee. (\$40) \_\_\_\_\_

## Friday Bus from Hilton Airport to Riverwalk and

return (for those needing transportation). Leave 6:00 p.m. return 10:00 p.m. Avoid driving aggravations and parking fees! Individual (\$20) \_\_\_\_\_ Couple (\$32) \_\_\_\_\_

## Saturday night Awards Banquet (Please select one)

• Vegetarian: Spinach and Fromage Tortellini with Capers, Kalamata Olives and Fresh Vegetables in a Saffron Tomato Basil Sauce (\$42.50) \_\_\_\_\_

• Chicken Roulade stuffed with Sun-dried Tomatoes, Spinach & Boursin Cheese with Cream Sauce (\$45) \_\_\_\_\_

• Roasted Pork Tenderloin (\$45) \_\_\_\_\_

## Summary:

Registration Type \_\_\_\_\_ +

Vendor Table Registration \_\_\_\_\_ +

Merchandise \_\_\_\_\_ +

Thursday's Star BQ \_\_\_\_\_ +

Friday's Riverwalk Bus \_\_\_\_\_ +

Saturday's Awards Banquet \_\_\_\_\_ +

League Donation \_\_\_\_\_ =

**Grand Total: \$ \_\_\_\_\_**