

# Southern Skies

Volume 38, Number 2    Journal of the Southeastern Planetarium Association    Spring 2018



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Mel Blake  
Department of Physics and Earth Science  
University of north Alabama  
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Hello everyone! You will be finding that this issue is following hot on the heels of the Winter issue. This is part of my agenda to try to get the issues out in a more timely manner thereby making the ads and information more relevant. It has been a problem that needed to be fixed. I could not have gotten this issue out on time without the support and cooperation of the state coordinators and associate editors. They compiled the state reports and got them to me on time, and that made things so much easier, since I had all the material I needed to start right away. The book review showed up almost a month early! Well done Robin! There are still some states and columns that I have not heard from in more than a year and I will be trying to work with their state coordinators on that.

One other issue is related to the submission deadlines. I am told that our deadlines are fairly different from other planetarium associations and that having the deadlines line up with the equinoxes and solstices would make us more consistent. This apparently would simplify things for our advertisers. Proposed

and Sept 22nd. This would have an added benefit for me, since the Dec 21st deadline would be during Christmas vacation, March 21 near spring break, and June 21 during our summer. This would make it possible for me to work on issues right away without interference from classes. However, this also might make it harder for university-based people to send in reports since the deadlines would fall during some of their holidays as well. So I welcome feedback. For now the deadlines are staying the same.

Also with the aim of making it easier for people to contribute I am working on a style guide for people who want to submit articles. Right now it is fairly haphazard, and it might be helpful for authors to know how to format things. All articles are welcome. Looking back at past issues, there were many more articles submitted previously than now. People were submitting reviews of videos, technical advice, and how-to articles. We need to get back to that. Hopefully getting issues out faster will help.

Finally, I have sent out some feelers to services that do indexing, which will make our articles searchable and create impact factors. This should also make us more professional and allow submitted articles to count as publications on promotion applications. I will provide updates as this initiative progresses.

I hope the spring is going well for everyone!

Mel Blake

### Submit your Articles!

Do you have a great activity to engage your audiences? Have you devised a cool gadget or do-it-yourself upgrade that you would like to share? SEPA would love to hear about it and share your knowledge.

We can receive electronic files in most any format. Graphics can be received electronically or in hard-copy, including slides or photos, and will be converted to digital with sufficient resolution.

Submission deadlines: Jan 1 (Winter), April 1 (Spring), July 1 (Summer), Oct 1 (Fall).



**John Hare**  
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IPS Council Rep  
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## Membership trivia...

Currently, 54 percent of SEPA members are also IPS members. The percentage tends to fluctuate from more during IPS conference years, to less during non-conference years. Many IPS members join for reasons other than the conferences. Besides the wealth of benefits, another incentive is the savings that is realized with a 2-year membership. You pay \$65 for a 1-year membership, and only \$35 more for a 2-year membership. Is this a no-brainer or what?

A quick look at the IPS website will show you the extent of member benefits. The IPS journal, *The Planetarian*, is a fact-filled quarterly publication of almost 100-pages. The IPS Directory is a compendium of every known planetarium, corporate, and individual member. The IPS Resource Directory contains information about companies and individuals who furnish support to planetariums worldwide.

## IPS conferences and initiatives...

IPS conferences are held biennially in even-numbered years at various sites worldwide. Only South America and Antarctica have yet to host an IPS conference.

## IPS 2018

By the time you read this, the 2018 IPS conference should be on the verge of convening. The site is Toulouse, France and upwards of 500 delegates should attend.

## IPS 2020

2020 will mark the 50th anniversary of the founding conference for IPS, the CAPE conference (Conference of American Planetarium Educators) that was organized and hosted by Abrams Planetarium in East Lansing, MI.

The Tellus World of Science in Edmonton, Canada will host the 2020 conference. Dates are June 21 to June 25.

## IPS 2022

Invitations for the 2022 IPS conference site will be heard at this year's IPS Council meeting in Toulouse. Interested facilities should notify IPS of their intention to bid no later than June 29.

## IPS Vision 2020

Vision 2020 is an ongoing initiative of IPS. Its basic purpose is to implement changes to IPS that will allow the organization to grow and better serve the international planetarium community. The first day of this year's IPS Council meeting will be devoted to a continuing workshop for this initiative.

## 100th anniversary of the planetarium

The year 2023 will mark the 100th anniversary of the unveiling of the first modern planetarium. This achievement was reached by Zeiss of Germany and was followed by an unleashing of similar technology that became international in scope.

Björn Voss, Planetarium Münster, Germany, Society of German-Speaking Planetariums, is chairing the efforts of IPS to commemorate this important anniversary. Voss states..."While there are already many ideas in place, many more are needed. We seek all kinds of ideas from everyone in the community: planetarium staff, vendors, students, scientists—we ask everyone to provide their thoughts! Which concrete activities would you suggest in order to make the centennial a long-lasting success? What else do you think is relevant to realize the maximum potential of this centennial?"

Please let your thoughts be known directly to [bjornvoss@gdp-planetarium.org](mailto:bjornvoss@gdp-planetarium.org) or through your affiliate representative.

Visit the IPS Website for more information about IPS and its many initiatives; [www.ips-planetarium.org](http://www.ips-planetarium.org).

# BOOKENDS

Robin Byrne  
Northeast State Community College  
Blountville, TN

Book Review: *Margaret and the Moon* reviewed by Robin Byrne

For this book review, I'm doing something different and reviewing a children's book. *Margaret and the Moon: How Margaret Hamilton Saved the First Lunar Landing* by Dean Robbins and illustrated by Lucy Knisley is targeted to children ages 4 - 8, though this 53 year old also enjoyed reading it.

This is the true story of Margaret Hamilton. It begins with her childhood and love of solving problems, from insects to music and all points in between. The book also shows how, despite growing up in the 1930's and 40's, she was willing to break gender stereotypes, even playing on the all-boys baseball team.

Mathematics was her true love, though. From simple arithmetic to algebra to calculus, she always enjoyed the challenge of solving problems. Then she discovered the world of computers and transferred her love of problem solving to writing computer code. She even coined the new title for the work she did: Software Engineer. Some of her earliest programs began with basic arithmetic, but built up to tracking airplanes through clouds, and using computer software to predict the weather.

In 1964, Margaret joined NASA to write computer code to help land men on the Moon. Her code not only dealt with the expected events of the lunar trip, but she also built into the software contingency plans for when things didn't go as planned. Moving up through the ranks, Margaret became Director of Software Programming for Project Apollo. Her code was first used for Apollo 8, but it was Apollo 11 that really put her software to the test. During the Apollo 11 landing, there was a problem with the computer - it became overloaded with too much happening at once. However, Margaret had a simple fix already written into



the code that allowed the computer to ignore everything but the landing. The rest, as they say, is history.

This book tells a great story and should be particularly inspirational for young girls. Some of the vocabulary may be above the level of the youngest children being targeted, but that can provide an opportunity for conversations between the child and parent. The illustrations by Lucy Knisley are enchanting. At the end of the book are actual photographs of Margaret Hamilton, some of which were clearly used as the source for the drawings.

Whether you are a big kid who enjoys reading about the unsung heroes of the space program, or you have a young person in your life who you want to help inspire, *Margaret and the Moon* is the book for you.

References:

*Margaret and the Moon: How Margaret Hamilton Saved the First Lunar Landing* by Dean Robbins, illustrated by Lucy Knisley; Alfred A. Knopf 2017.

# GOTO

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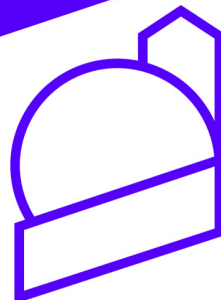
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### Advertise in Southern Skies!

Rates and submission formats for advertising space in SEPA's quarterly journal *Southern Skies* are:

#### Rates Dimensions

- \$100. Full-page 7" wide x 10" high
- \$50. Half-page 7" wide x 4.5" high
- \$25. Quarter-page 3" wide x 4" high

These rates are per issue and in B&W copy. The back cover, inside back cover or inside front cover of our journal is also available either in B&W for \$125, or in color for \$150. A 10% discount to any size ad can be offered only with a year's (four issues) commitment of advertising. Ads accepted on a space available basis. Ads must be camera ready and conform to dimensions listed. Payment must accompany advertisement order, made payable to the Southeastern Planetarium Association (send payment to Secretary/Treasurer Patsy Wilson). The underlying mission of our advertisements is to promote resources, products, and services related to the planetarium profession. SEPA reserves the right to refuse advertisements.

### Paul Campbell Fellowship Award Nomination Form

Nominees must have been a member of SEPA for at least ten years, and they must display qualities in each of five areas, as represented by the five-pointed star shaped award: integrity, friendship, service, knowledge, and vision. Please submit this form to any SEPA Council member.

Nominee's Name: \_\_\_\_\_

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# News From the SEPA Region Spring 2018

## GEORGIA

contact: David Dundee  
Tellus Museum  
Cartersville, GA



### Bentley Planetarium

Tellus Science Museum, Cartersville, GA

David Dundee reports: We have had a few weather challenges this past winter, closing the museum twice because of ice and snow. We opened 2018 with “We Are Aliens” and “Black Holes: Journey to the Unknown.” We continued with our showing of “Accidental Astronauts” for our young astronomers to be. We hosted about 100 girl scouts for our annual night sky program for scouts. We had two sold out (120) Junior Observatory workshops in January and February for ages 5 – 12. Also in February we conducted our biannual rocket building workshop. 90 rockets were built and launched. We have started a new program at Tellus called “Quiet Mornings”. This is aimed at our families with autistic family members. The museum opens an hour early, lighting is kept low. The planetarium was showing on a continuous loop “The Universe” a show produced by the ESA with full dome images and music. We also had red rope lights around the planetarium so you were never in total darkness. We do this quarterly, and we have done it twice so far. It has been well received but attendance has been small around 20.

James A. Smith Planetarium, Walker County Schools, Chickamauga, GA

John M. Hart reports: Things are going well here at the Smith Planetarium. We recently completed a couple of projects which have been on our “to do” list for a while now. Last year we acquired an antique Armillary Sphere and have been diligently scouring the area for an appropriate base on which to mount it. A couple of months ago, I found the perfect base and we proceeded with the installation. We located it along the side of the drive as you come into the planetarium parking lot. It looks really nice and due to its historic significance to astronomy we felt it was a good addition to our facility. In addition to the armillary sphere, we have also installed a new horizontal projector in our dome which allows us to play movies (DVD or BluRay). The picture resolution and surround sound are both of theater quality. The projection itself is on the front of the dome and it is approximately. 20’ x 14’. Even with the curved dome surface there is very little noticeable distortion in the image. It is crystal clear and we could not be happier with the results of this latest project.



*The armillary sphere at Smith Planetarium.*



*Horizontal projection at Smith planetarium.*

### Fernbank Science Center, Atlanta , GA.

**April Whitt reports:** The celebration of Fernbank Science Center's first 50 years continues. The December Gala was snowed out and rescheduled later that month, but March's Birthday Bash was a big success.

Fifty cent planetarium show tickets reflected prices when the Center opened in 1967. Science activities for families filled the exhibit hall.

Fernbank is serving as a drop-off point for solar filters from the August 2017 eclipse. We've sent several thousand to Astronomers Without Borders already, and collection box in the exhibit hall continues to fill.

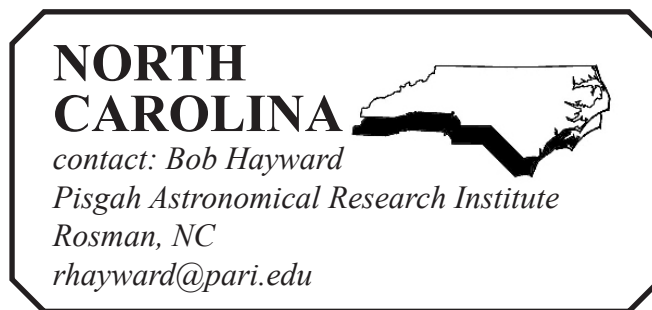
Fernbank staff gave presentations at the National Science Teachers Association meeting in March. NASA's SOFIA mission and using lock-boxes to "unlock" science curricula were featured. There was an excellent presentation about using maps of the Moon for student activities, by Leesa Hubbard from Lynchburg, TN. They were smack on the centerline for the eclipse, the lucky ducks.

Snake Day in mid-March brought reptile lovers from around the Atlanta area. Younger visitors crafted snake spirals, and local herpetologists shared some of their "pets." A previously-slide-based planetarium program, "ArcticSaurus: Dinosaurs at the North Pole" was converted for the fulldome system, and was well received. Kids love reptiles.

Fernbank Science Center coordinates the elementary level Science Olympiad. Over 40 schools and 600 students participated this year in late March. Winners go on to the state level competitions.

Presentations at county libraries are increasing in number. After the presentations we did prior to the eclipse, we're getting wider audiences at branch libraries. Those are good places to leave brochures for your planetarium programs, as well.

The plant sale in April included plants with silvery foliage and blue or white blossoms, suitable for planting a "moon garden." An area to the north side of the Center features a moon garden in pots. It's helping raise awareness of pollinators as well as moon phases. Astronomy Day featured a session about Pluto. New Horizons scientist Kirby Runyon led a discussion about the "planetary" status of Pluto. Enthusiastic supporters (and non-supporters) weighed in with their ideas.



### Pisgah Astronomical Research Institute Rosman, NC

**Christi Whitworth reports:** PARI is searching for a new educator this spring. Leby Moran is moving on and we have an opening. Applicants can reach out to [cwhitworth@pari.edu](mailto:cwhitworth@pari.edu) for more information or to submit resumes.

PARI's spring schedule includes the NC Science Festival and NC Star Party in April. PARI's special Evening at PARI in April will include tasting fun foods that have been served in space.

May brings our annual Space Day on May 5 and an Evening at PARI with AAVSO Executive Director Stella Kafka. Learning about variable star searches and the latest research finds by AAVSO members will

*continued from page 12*

be an exciting event! PARI's Fellowships also kick off in May. Look for more details about the Fellowship participants in the summer 2018 report.

June will kick off three sessions of Duke Talent Identification Programs Field Study in Astronomy for 2018. A 14-day residential program for high school students to use PARI's instruments to conduct real-time research in astronomy has been a popular offering for over 15 years for Duke TIP.

### **Horizons Unlimited, Margaret C. Woodson Planetarium, Salisbury, NC**

**Neil Pifer reports:** Hello everyone! We here at Horizons Unlimited and the Margaret C. Woodson planetarium are excited that we are teaming up with Curiosity Machine (<https://www.curiositymachine.org>) to provide our local families AI and engineering challenges, dinner, and a planetarium show. We received a \$5,000 grant to allow this program to happen free of charge. If this seems like something you would like to explore, please feel free to contact me. We have done 2 challenges so far and they have been a wild success. I am now looking for good engineering and coding full dome shows to pair with future challenges. We are also excited to partner with our local astronomers and the public library to help host a site for state star party in April. We cannot host at Horizons Unlimited because our campus is terrible for direct observation due to large woods, security lighting, and limited parking. Being able to take advantage of the darker skies in the southern part of our county and collaborate with other "astronomy nerds" in our community is a valuable partnership for our planetarium. Dark, clear skies ahead everyone!

### **Robeson Planetarium Lumberton, NC**

**Ken Brandt reports:** We have seen over 2300 4th and 6th graders so far. I am making many network connections, all making the case for the rebuild. To all of you that have written letters of support, they are truly appreciated.

### **1. Report from the Robeson Planetarium's Rising Phoenix Advisory Board, John Allen reports:**

We have met three times so far, and are setting the fundraising wheels in motion. We are also engaging our planetarium audiences and public to do letters of support, to be addressed to our school board and county commissioners.

The obvious question: if you know of a philanthropic individual or organization that would like "naming rights" for a rebuilt STEAM Center and planetarium, please have them contact John Allen, at [johnallen2@robeson.k12.nc.us](mailto:johnallen2@robeson.k12.nc.us). If your institution would like to write a letter of support, please see Alan Gould's carefully crafted template on the IPS website: <http://www.ips-planetarium.org/?page=letterofsupport>

### **2. Report from the Robeson Inflatable Planetarium, Ken Brandt reports:**

As Scotty would say on Star Trek, TOS; "we have impulse power!" We are seeing roughly 1/3 our usual numbers this school year—that's over 2,800 children by the time you read this! A large part of this I owe to three factors; the unwavering support of my administration and school board, the continuing encouragement I get from seeing children's eyes light up in those "3 seconds of wonder" when they enter the dome, and see the night sky, and the Robeson County Partnership for Children. The image is of the inflated dome in the multipurpose room, and the gentleman pictured is Rev. Tim Little, the funding director of the Partnership. He and the staff of the Partnership have turned what would have been a long string of "away games" in seedy hangouts into "home games."



The media has also been fantastic, as the following links show. Here are three links to stories in the media in the last 48 hours about the speaking engagement at the Robeson County commission meeting, advocating for the rebuild of the STEAM center and planetarium:

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WPDE15: <http://wpde.com/.../robesson-planetarium-director-sees-future-...>

Robesonian: <https://www.robesonian.com/.../planetarium-director-to-speak-...>

and

<https://www.robesonian.com/.../planetarium-director-gives-cou...>

Robeson Planetarium and STEAM Center has a twitter handle: @robessonplanet. Please follow us and tweet!

My HS world history teacher, Mr. Louisidies, had on the wall of his classroom the following: "Every problem is an opportunity".

We have impulse power!

**VIRGINIA**  
*contact: Kelly Herbst*  
*Virginia Living Museum*  
*Newport News, VA*  
*Kelly.Herbst@thevlm.org*



Abbitt Planetarium  
Virginia Living Museum  
Newport News

**Kelly Herbst reports:** As write this, it is Spring Break here in Virginia. We've got lots happening this week here at the Virginia Living Museum, and at last the weather is beginning to almost match the season!

Spring Break means extra shows, plus, we're celebrating the opening of a new eel exhibit here at the museum with Wonders of the Sea week, so the schedule is really packed. On a daily basis we're offering Into the Deep, Legends of the Night Sky: Perseus and Andromeda, Kaluoka'hina: The Enchanted Reef, Journey to Mars, Virginia Skies, and Laser Mania. Lots of great choices for all of our Spring Break guests! After the early-month craziness, we'll settle back down to just Journey to Mars, Virginia Skies, and Kaluoka'hina,

with Laser U2 rounding out our weekends. Visitation tends to increase around this time of year, both public and school field trips, so we're looking forward to a very big Spring.

May will bring dinosaurs back to the changing exhibits gallery, including a 40 foot animatronic T. Rex who will be coming to our conservation garden! We know the kids will absolutely love him. To accompany our Destination: Dinosaur summer exhibit, we'll be featuring two fulldome shows in the planetarium: The Zula Patrol: Down to Earth and our newest one, Did an Asteroid Really Kill the Dinosaurs? We know it will be a dino-riffic summer at the planetarium!

Lengthening days mean later starts to our monthly star parties, but additional laser shows for our families to enjoy. We're looking forward to warmer weather – the winter nights were not kind to us and most of our winter star parties were rained/clouded/snowed out. Here's hoping for a good spring!

Any Virginia planetarian with news to share with SEPA should contact Kelly Herbst at [kelly.herbst@thevlm.org](mailto:kelly.herbst@thevlm.org) or 757-595-1900 ext. 256

**SOUTH CAROLINA**  
*contact: Gary Senn*  
*DuPont Planetarium, Aiken, SC*  
*SennG@sc.edu*



BlueCross BlueShield of South Carolina Planetarium, South Carolina State Museum  
Columbia, SC

**Liz Klimek reports:** Right after the winter holidays, the South Carolina State Museum jumped straight into planning for two February events: our annual Amore event for Valentine's Day, and our inaugural annual Space Party for the museum's AstroKids membership program. As part of Amore, we put together a three-part planetarium program called "Amore Amongst the Stars." This consisted of John French's Holst Venus piece, a live telling of the tale of

*continued from page 14*

Hikoboshi and Orihime (the Cow Herder and the Weaver Maiden), and a trip to Tycho crater on the moon for some star- and Earth-gazing. For the Space Party, we put together a live program called “Saturn’s Rings and Super Strange Things,” where we blasted off on a trip to Saturn to see both the ringed planet and some of its odd-looking moons. The best audience reaction came from getting to see Pan, the “ravioli moon,” nestled in the ring plane.

This spring we did another live Space Mission Spotlight presentation for homeschools, this time focusing on Juno’s mission to Jupiter. Our Science Education Manager did a complementary classroom lesson about Juno’s instruments, where students got to construct a miniature version of the spacecraft and learn about how and why its instruments are collecting data. In the planetarium class that followed, we took a trip to Jupiter, talked about what we know and what we’re still trying to learn, and visited the Galilean moons to compare them to our own moon. Both classes highlighted some of the amazing images taken by JunoCam. Both classes were designed such that one was not a prerequisite for the other.

We have also been building up our show library and will be offering several new shows over the course of this year. We debuted Clark Planetarium’s 10th Anniversary Edition of “Black Holes” in March, and next fall we will be adding “We Are Stars” to our school group lineup, which currently includes “Earth, Moon and Sun” and “Two Small Pieces of Glass.” Our Friday Night Laser Lights nights are morphing into Cosmic Fridays, where we will alternate laser shows with fulldome music shows on a few Fridays throughout the year.

We are looking forward to many exciting events on the near and far horizon. This April the State Museum will be doing our first Astronomy Day event. There will be hands-on physics and astronomy demos provided by both us and partners from around the state. The planetarium will be featuring “Black Holes,” since we just recently added it to our show schedule. Our observatory will be open for its usual daily solar observing, and we’re hoping to

be able to pair up with the local amateur astronomy club for some sidewalk astronomy that evening.

It looks like June 4-8, 2019 will be the best time for us to host SEPA 2019. Planning is well underway, and I’ve started contacting former hosts to ask for their wisdom and advice. If you’ve hosted a regional conference in the past 10 years and haven’t heard from me yet, don’t worry, you will soon. In the meantime, I look forward to seeing everyone in Memphis this year!

Dooley Planetarium  
Francis Marion University  
Florence, SC

**Jeannette Myers reports:** Dooley Planetarium at Francis Marion University is gearing up for our summer programs. We continue to offer shows to groups throughout the year and twice a month on Sunday afternoons. With the solar eclipse in August last year there was a record year of attendance at our programs with over 7,000 attendees during the school year. We continue to do public outreach events and will be taking part in Astronomy Day at the State Museum in Columbia on April 21st. We also hold observing nights on campus and are excited to announce we have a new telescope about to be installed in our observatory. We will soon be installing a Meade LX600-ACF 14” F/8 in the dome. As the mounting points do not match our old telescope we have a mounting plate being machined in town. Once that is ready we will be getting the telescope in place and ready for first light. We look forward to using the instrument in our astronomy classes next year.



3 MONTHS AND COUNTING ...

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University of South Carolina Aiken  
Aiken, SC

**Gary J. Senn reports:** The DuPont Planetarium at the Ruth Patrick Science Education Center (RPSEC) on the campus of the University of South Carolina Aiken (USCA) is preparing to close for four weeks to add some seating to the theater. With our upgrade from Digistar II to Digistar 6, we no longer need a projector in the middle of the theater. So, we will be adding 9 seats. That might not seem like many seats to most people, but when you only have 45 seats, adding an additional 9 is a healthy percentage.

A significant initiative by our campus is a partnership with Aiken County Public School District to form the Aiken Scholars Academy (ASA). ASA will bring 50 high achieving freshmen to campus in the fall of 2018. Another cohort of 50 freshman will arrive in the fall of 2019 with additional classes each following year. After four years and into the future, the full complement will be 200 students. During the first two years, they will take classes together. During their junior and senior years, they will take classes with the rest of the university students. The freshmen and sophomores will be housed at the Ruth Patrick Science Education Center until a permanent space is developed for the high school on the university campus. This space in the RPSEC is in classrooms adjacent to the planetarium but will not have much impact on the planetarium. School and public shows in the planetarium will continue as they have in the past.

In April, we presented “*Magic Tree House – Space Mission*” by the Morehead Planetarium and Science Center and “*Seven Wonders*” from Evans and Sutherland. In May, we presented “*Two Small Pieces of Glass*” by the European Southern Observatory and Supernova Planetarium, and *Sunstruck* from the Michigan Science Center, until we closed the planetarium the third week of the month. After we reopened in June, we presented “*Magic Tree House – Space Mission*”, “*Seven Wonders*” and a locally produced show that we called, “*Digistar 6 Special Effects Extravaganza*”.

Settlemyre Planetarium  
Museum of York County  
Rock Hill, SC

**Carole Holmberg reports:** Our 3rd annual Harry Potter Science Saturday was a success, with more than 1000 visitors in attendance. This was an event that started as a planetarium show, but grew and grew, until now it encompasses the entire Museum and its grounds (quidditch, bookmobile, photo ops). The Museum staff has been very supportive and staff and visitors all dress for the occasion. For public shows, we are now showing “*Red Planet Rising*” and “*Weather: Wonders & Mysteries Revealed*” in the spring. Thanks to some wonderful sponsors, we will be showing both “*We Are Stars!*” and “*The Secret World of Moths*” this summer.

Timmons Planetarium  
Furman University  
Greenville, SC

**David Moffett reports:** The Timmons Planetarium at the Townes Science Center on the campus of Furman University is a multipurpose space under a 23-ft dome, serving as a classroom and planetarium. First constructed during the Science Center’s renovation in December 2007, the first projector installed was a Konica Minolta Mediaglobe II. The projector was replaced at the end of last spring - just in time for the 2017 solar eclipse - with a Konica Minolta Sigma. Many thanks to Phillip Groce, and the team at Magna-Tech Electronic Co.: Vicki Amorosi, Evan Oleson, and Adam Hendershot, for their professional installation and excellent service.

Prior to the eclipse, we hosted planetarium shows for summer camps and campus visitors, educating the public about the upcoming eclipse and distributing free eclipse glasses. On August 21st, we hosted Eclipse@Furman, inviting faculty, staff, students, parents (it was move-in day for the university), and visitors from the Greenville community and beyond, to join us at Paladin Stadium for activities, free glasses and water (it was hot!), music from the Furman Regiment Band, and a narrated program during the hour before totality. Over 7000 witnessed the eclipse from the stadium, while another 7000 watched from the campus grounds. Totality began at 2:38 PM, and for two minutes, the crowd watched in silence as the Moon’s shadow passed over us. The temperature dropped (by 8 degrees Fahrenheit), crickets and cicadas began to sing in the woods next to the stadium, and the planets Jupiter and Venus shone in the eerie twilight sky. Many thanks to Dr. John Wheeler and Dr. John Kaup of the

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Office of Integrative Research at Furman, the staff at the Younts Conference Center, and the Furman Police, for their assistance during this highly successful event! Do check out a story published by Furman, and some photos from the event, at the following web site: <https://news.furman.edu/2017/08/21/a-second-sunrise/>.

Through the Fall term of 2017, and the Spring term of 2018, the Timmons Planetarium was used for Introductory Astronomy simulations, monthly Astronomy Club meetings, shows for campus visitors, and training student assistants. In November, we hosted Dr. Tim Christensen of East Carolina University, who gave the presentation, "Ancient Photons: Photographic Time Travel," to the Furman community. And during the first week of March, we hosted Dr. Eva Lilly of the Planetary Science Institute, who gave the presentation, "Death from the skies: Dangerous asteroids and what we can do about them." As the Spring term closes, we are busily preparing home-grown programs, and purchasing commercially-available shows, for children in Furman camps this summer.

It has been a long time since we submitted any news to the SEPA newsletter. It is certainly good to be back after such a long absence!



Planetarium  
Lafayette Science Museum  
Lafayette, LA

**Dave Hostetter reports:** At the Lafayette Science Museum we have seen an uptick in attendance in February and March of over 10% per month, apparently as a result of simply listing each planetarium program as an individual event on our Museum Facebook page. It's hard to say if this will continue after only 2 months of data, and we will be watching our numbers carefully.

We are preparing to run the JPL program Gravity of Jupiter as one of our weekend programs in April and

May. It's a live presentation about the Juno mission to Jupiter.

On the evenings of May 31 and June 1 we will host musician Jonn Serrie for live presentations combining astronomy and his music. We call it The Universe in Music. Jonn will bring his personal piece of an original Death Star movie prop and we have arranged with the local 501st Legion (Star Wars reenactors) to provide some Storm Troopers or other "bad guys" to guard it from the Rebel hordes that we hope will attend the programs. Should be interesting!

Irene W. Pennington Planetarium  
Louisiana Art & Science Museum  
Baton Rouge, LA

**Jay Lamm reports:** Our Universe Gallery is currently host to *Aurora Borealis*. This vibrant exhibit features video presentations on our walls and mini-dome, and a hands-on station where patrons can make their own Inuit inspired, Northern Lights and igloo landscape.

We had yet another successful Engineering Day. From robotics and solar-powered cars to nanoscience and medical physics, this event was coupled with the very popular planetarium show, *Dream Big: Engineering Our World*.

Of course, Astronomy Day is coming up and we're preparing for an exciting roster of events. The whole family will enjoy a special line-up of planetarium shows and hands-on astronomy-related activities throughout the building.

Here in the planetarium, we've also been running a very special family hour before our Saturday morning schedule that's been taking off. It's called Planetarium Family Hour and Stargazing. Younger children gather around our "camp fire" and learn about stars and constellations in the local nighttime sky. This brief activity, specially designed for a younger audience, is followed by an age-appropriate feature presentation.

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As far as our current planetarium content, we welcomed *The Secrets of Gravity: In the Footsteps of Albert Einstein* as our new astronomy-based show. This will go great with the recent information coming out from LIGO regarding gravitational waves. *One World, One Sky: Big Bird's Adventure* and *Magic Treehouse: Space Mission* are our Family shows. In addition, we've been running *Dinosaurs Alive!* as our "B" large-format film and *Dream Big* as our "A" film. We'll also be rotating in some planetarium favorites from the past such as *Flight of the Butterflies*, *Journey to the Stars*, and *National Parks Adventure*.

**KENTUCKY**  
contact: Steve Russo  
East Kentucky Planetarium,  
Prestonsburg, KY  
srusso0002@kctcs.edu



East Kentucky Science Center  
Prestonsburg, KY.

Steven L. J. Russo reports: Well, once the Solar Eclipse got out of the way, we were able to resume our regular programming. We ran eight summer camps with topics involving colors, machines, elements, water, solar science, engineering, robotics, and astronautics. We had our annual Halloween Open House, attended by 1200 people, which included planetarium shows, our Fright Light Laser Show, and "spooky" hands on science activities.

Our annual Science Fair in November played host to over 20 schools from six different counties in Eastern Kentucky, and in December we had our annual run of Season of Light and Laser Holidays.

In January, we had our media premier of "*Black Holes, The Other Side of Infinity*" from Spitz, and in February we received our new AVI Live Laser Controller which will allow us to run our Sky Lase manually for special programs.

In March, my staff and I had a tour of the Morehead (KY) Space Science Center at Morehead University. Most folks are not aware that Kentucky's biggest

export is Aerospace products (and you thought it was Bourbon), and only Washington and California export more. The Morehead Space Science Center is also a leader in Cube-sat development and its 21-meter dish is actually part of NASA's Deep Space Network. Staff from the Space Science Center will be partnering with the East Kentucky Science Center for Astronomy Day activities in April.

Until Next Time, "Look to the Skies!!!!"



Staff of the EKSC at the 21-meter dish control room at Morehead State University. Steve, Susan, Pauletta, Lavena, and Morehead Graduate Assistant, Kennedy.

**TENNESSEE**  
contact: Adam Thanz  
Bays Mountain Planetarium  
Kingsport, TN  
thanz@kingsporttn.gov



The Autozone Dome at  
The Sharpe Planetarium  
Memphis, Tennessee  
david.maness@memphistn.gov

Dave Maness reports: It has been a very busy spring for us here at the Pink Palace Museum and the AutoZone Dome at the Sharpe Planetarium. I am working every day toward welcoming you all to the SEPA/WAC conference June 5-9. I have always valued the sharing aspect of every conference I have attended. I have always come back from conferences energized. I also notice that visitors always respond well when I express my own passion for astronomy, and so I have selected Sharing Our Passion as the

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conference theme. The hotel is the Holiday Inn University, 3700 Central Avenue, Memphis, TN 38152-6481. It is about 1 mile from the host planetarium. It is also on the same street, so it will be relatively easy to get to daily sessions in the theater. Details are posted on the [www.sepadomes.org](http://www.sepadomes.org) website. We will have a fine selection of vendors, paper sessions, and workshops. Registrations are coming in every day.

March was particularly busy. It usually corresponds with spring breaks that seem to be different for different school districts. This combined with the Easter Holiday often gives us a several weeks of high visitation. We were offering a unique tour of the solar system with a show called *Perfect Little Planet* as the feature running at 11:00 a.m. (if not precluded by a scheduled school program), 1:00 and 3:00 p.m. Our Children's program at 9:45 a.m. is *One World, One Sky: Big Bird's Adventure*. The program slate is filled out by *Seasonal Stargazing* at 12 Noon and 2:00 p.m. and *Space Park 360* daily at 4:00 p.m. On top of that, we conducted a test of the AVI Skylase system on the weekends of March 16 and 23 from 6-10 p.m. on Friday and Saturday nights. I heard very positive responses from people who said they haven't visited since our last public laser shows ran back in 2005!

By April our feature will be replaced by *From Earth to the Universe*. *Space Park 360* will go "back into the vault" and *Perfect Little Planet* will move to the 4:00 time slot.

April 4 of this year also marks the 50th anniversary of the tragic assassination of Dr. Martin Luther King Jr. The City of Memphis recently sold property containing controversial confederate statues. This was done to bypass efforts by the State Legislature to delay a change the City long wanted and needed to make. The new private owner then immediately removed those statues. This cleared the way for solemn events that the City has been planning for years in order to honor Dr. King's courageous efforts in the cause for civil rights.

As I mentioned last time, I am working nearly every day on the SEPA/WAC Conference that we will host here in Memphis, June 5-9, 2018. Memphis last hosted way back in 1981. That was my very first SEPA

conference! I had no idea that I would one day be inviting SEPA (and WAC) to return to "The Bluff City", as it is often called. I already knew that it was one of two "Music" cities in Tennessee. I hope to give folks a chance to explore some of its history while you are here. I hope you will plan to join this June. Registration information is posted on the SEPA website.



Bays Mountain Planetarium, Kingsport, TN

by Adam Thanz

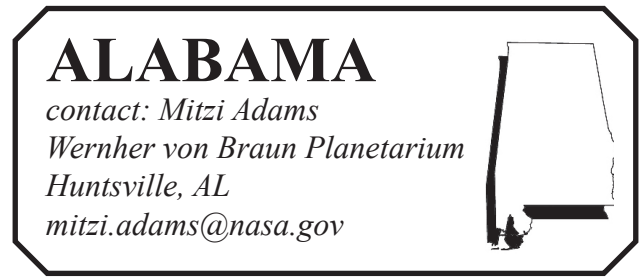
Astronomy & Space Sciences Program Coordinator  
- Planetarium Director

Our main program is currently “*Out There – The Quest for Extrasolar Worlds.*” Starting in May, we’ll be showing “*SEEING! – A Photon’s Journey Across Space, Time and Mind.*” We’ll follow both with a short star ID.

Our alternate show for April is another in-house production, “*A Part of the Sky Called Orion.*” It’s a fabulous show that looks at how three different cultures (Greek, Egyptian, & Inupiaq) saw the same stars, but had different pictures and stories. The alternate show for May-June will be “*Appalachian Skies - Spring.*” A fully live star-ID show.

I last wrote about us working on replacing our decade-old Mac Pros to the new iMac Pro. They have arrived and are working great! They are very new and we have a ton of files to organize before we can get into the nitty-gritty of using it in show production. But, a quick, initial test of a 2,000 frame sequence of 4K files show that we can scrub in the Final Cut Pro X timeline! We will be doing more testing and I’ll be presenting our findings at the SEPA conference. Let’s just say that the touted specs are true and really improve our work experience.

See you at SEPA 2018 in Memphis, TN!



Christenberry Planetarium,  
Samford University, Birmingham, Alabama

David Weigel reports: The year started with a great trip to the American Astronomical Society conference in Washington, DC. David Weigel (myself) and Christina Moraitis (a senior physics major at Samford and our planetarium student coordinator) represented both Samford University and WorldWide Telescope by running virtual reality demonstrations and teaching a couple workshops on data visualization within the software. The rest of January was spent rewiring the entire planetarium control room in preparation for a projection upgrade (pending approvals – for what seems like forever).

With the eclipse still fresh in the minds of Birminghamians, The Christenberry Planetarium at Samford University has kept very busy as the public yearns for a continued dose of space education. The excitement remains high and the focus of the past few months was to celebrate women in astronomy. We augmented several of our live presentations by highlighting individuals such as Katherine Johnson, Vera Rubin, Cady Coleman, Maria Cunitz, and the list goes on and on. The series, titled “*Infinite Possibility: Celebrating Women in Astronomy*” involved mini presentations within our shows that were delivered by our female student staff to provide inspiration and empowerment to young girls and women interested in STEM fields. Each of our female students selected 2-3 women whose contributions to astronomy were deemed particularly inspiring to them and through their presentations, they were able to reach out to many female audience members with excitement for the sciences. The grand finale of the Infinite Possibility series was a live fulldome presentation produced by Christina Moraitis. The presentation: *A Woman’s Possibilities are as Infinite as the Universe* took the audience on a tour from the far reaches of the universe all the way back home, all the while providing a look into the accomplishments of female astronomers throughout history.

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The Homewood Public Library was awarded a NASA @ My Library grant and has teamed up with the Christenberry Planetarium staff for a host of events over the next few years. The first of these was a Pluto day celebrating everyone's favorite dwarf planet and also the dog. David Weigel provided a virtual reality tour of Pluto highlighting icy mountains and a youthful beating heart. Never too early to teach planetary science to 2-6 year olds.

The Tiangong-1 might fall out of the sky over the Birmingham area, but citizens cannot say they weren't warned. Local news reached out to David Weigel for a quick interview on the possibilities of disaster and carnage (and were a bit disappointed when they didn't quite get the answers they were hoping for...) See the article and the recorded newscast and witness slight but minimal quote twisting here: <http://abc3340.com/news/local/alabama-possibly-in-the-path-of-a-space-station-crashing-toward-earth-experts-say>.

With the summer looming, we look forward to a vibrant and busy summer series of presentations. The highlight of the summer, however, will be our second rendition of the Christenberry Planetarium Space Science Mentorship Program (maybe we need a better name?), which was discussed in the previous publication. In brief, youth aged 10-18 can apply to be mentored in space related science projects by both a planetarium student assistant and the director meeting throughout the summer to accomplish the project. This is my favorite outreach program that we have offered in my almost 4 years and it will remain a staple for the foreseeable future. Sample projects include 3d modeling, 3d printing, and launching of rockets as well as the development of VR videos within World-Wide Telescope. I look forward to seeing everyone at SEPA 2018 and IPS this summer!

**Von Braun Astronomical Society**  
Huntsville, Alabama

**Mitzi Adams reports:** The Von Braun Astronomical Society continues to present programs in their planetarium on Monte Sano in Huntsville, AL each Saturday evening with observing afterward, weather permitting. Upcoming programs in the planetarium in April include discussions of Lunar Missions and the Hubble Space Telescope. May programs include

Meteors, Comet Sample Return, and Human Experience of the Sky. In June, we will explore the New Horizons and Juno Missions.

The members' meeting on April 21 will begin at 1:00 p.m. and run until dark, featuring a "swap shop", where members can sell gear they no longer use. In addition, VBAS will part with a number of its smaller telescopes, at very good prices.

In the fall of 2017, with the assistance and approval of Monte Sano State Park personnel, multiple tall trees were removed to expand the telescope viewing area and to give a better view of the southern sky. Some indigenous shorter trees have been planted to replace those that were removed.



**University of North Alabama Planetarium**  
University of North Alabama,  
Florence, Alabama

**Mel Blake reports:** We started off the year with our annual servicing and we are very happy with the new LED star lamp from Ash that replaced the old A3P star lamp. The stars on the dome look brighter and sharper than they did before, and some new constellation slides help with the telling of our stories during our constellation tours. A concerted effort has started to find funds to replace our current equipment and repair the observatory which now has a large pressure crack, making it unsafe. We will report on future developments in this direction when things

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happen.

Also in January was the January 31st total lunar eclipse. Florence lay just on the edge of the track that allowed totality to be seen before the moon set below the horizon. The timing was terrible for this, starting at 4:50 a.m. in the morning and ending essentially at sunrise. Despite that, we invited people to come watch the eclipse and about a dozen hardy people took us up on it. We had some scrubby clouds make an appearance, and the Moon was setting as the eclipse progressed, but that made for some interesting photos.



The January 31st total lunar eclipse. Photo by Mel Blake.

February featured our annual Valentine's Day program entitled "*Binary Stars - Held Together by Mutual Attraction*". This is a live talk and lets me talk about my area of research with the audience, which I don't get to do often. This was well attended. We decorated the planetarium for the evening with lot of hearts and bows and pink stuff. The favorite seemed to be the chocolates and candy!



Also in February staff participated in the first annual UNA Robotics competition. This was a fun day and involved over 18 schools from the area, from K-12. I was skeptical that the younger kids could run a robot, but apparently several models are now available commercially that allow for it. It was exciting. I acted as a judge, and so many teams failed to complete the course, that when they did we all cheered. I guess as a judge you are not supposed to do that!

In March I finally found a replacement for my departed assistant Stacy Verros, who is now off doing her teaching internship to complete her education degree. Chemistry and Physics major Lauren Wigginton is now helping out. She wants to do astrochemistry for a career and is a great addition to the team. I have caught her reading non-course related astronomy books, which is a good sign.

March is Women's history month, and UNA Planetarium does a push every year for this. This year we did a *Women in Astronomy - 2000 Years of Exploring the Universe* live lecture, discussing the roles of women in astronomy, from Hypatia to Annie Cannon to Jocelyn Bell-Burnell. I am working on developing this as a show, as I think there is a need for it, but I don't know too much about show production. To that end, we contributed a podcast of the same title to 365 Days of Astronomy, which allowed me to write a script for the show. It was important that the voice of the narrator be a woman, and Lauren did the duties admirably. It is still on-line for those who want hear it. I will need to clean up the script and come up with some visuals to make it a show. Also for Women's History Month we showed the Bays Mountain show "*Comets and Discovery*". This show includes Caroline Hershel and her contributions, and her birthday is in March. We also showed the documentary "*Christa McAuliffe: Reach for the Stars*" and the movie "*Hidden Figures*" about the NASA "calculators".

UNA Planetarium staff also went to the Alabama Academy of Sciences and presented the talk "*Tales from the War Zone: Lessons from the 2017 Total Solar Eclipse*". I discussed the crazy weeks of the eclipse and mistakes made and some cautions for those who do large public events.

Overall it was busy but successful month!

**REMEMBER  
YOUR STATE  
COORDINATOR!**

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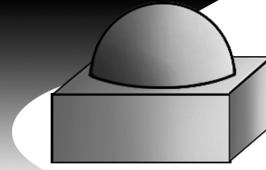
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# Featured Planetarium



## The Von Braun Planetarium By Mel Blake

The Von Braun Astronomical Society (VBAS) operates a rather beautiful facility located on the top of Monte Sano Mountain in Huntsville, Alabama. The site is located in the state park, and offers a panoramic view of the city. The planetarium was promoted by Wernher von Braun, the legendary rocket engineer. Some of you may have had a chance to visit it during the field trip for the 2015 SEPA meeting. The planetarium features a Spitz A3P projector that was donated, as is much of their equipment, and the facility is entirely volunteer operated. Recently, UNA Planetarium contributed its original console which was replaced some years ago and was sitting in a closet.



*The VBAS A3P projector taken at the 2015 SEPA meeting field trip. A VBAS volunteer is presenting. Photo by Mel Blake.*

The facility is unique in many ways. The circular ceiling offers a view of a dome that is actually the top of a fuel tank of a Saturn V that Von Braun himself acquired for the planetarium. When you are there you can tell that the dome is not quite round, and it gives the constellations a different appearance than you might be used to if you are under planetarium domes a lot.

Perhaps one of the most impressive features of the facility is the observatory, which features several small telescopes as well as a 16-inch Celestron telescope on a fork mount, and the Swanson 21-inch Newtonian telescope on a horseshoe equatorial mount. They also have a dedicated solar telescope. These are serious telescopes and are used for showing the public astronomical objects.



*Outside the VBAS Planetarium and Observatory. Photo by Mel Blake.*

The fact that volunteers at VBAS are able to offer regular public nights each Saturday shows what a dedicated group can do. Talks feature current and retired NASA scientists and amateur astronomers. This makes visiting well worth the drive up the mountain. Tours start at 7:30 p.m. in April and group bookings can be made by contacting the director. You can get all the details at their website:

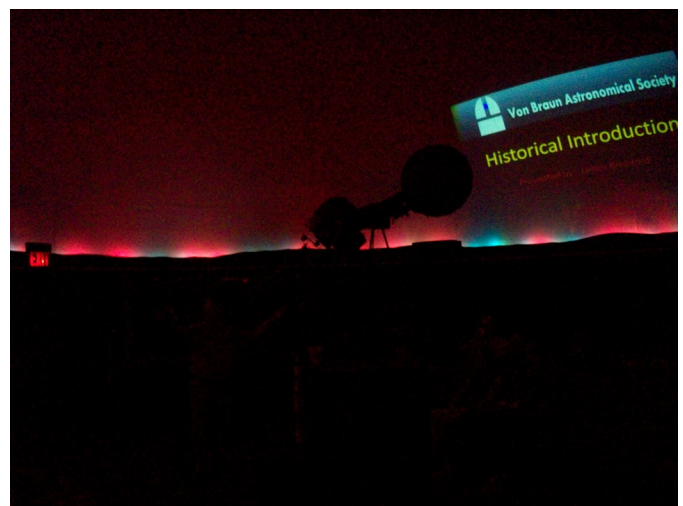
<http://www.vbas.org/>



*The 21-inch Swanson Telescope at VBAS observatory. Photo by Mel Blake.*



*The VBAS 16-inch Celestron telescope. Photo by Mel Blake.*



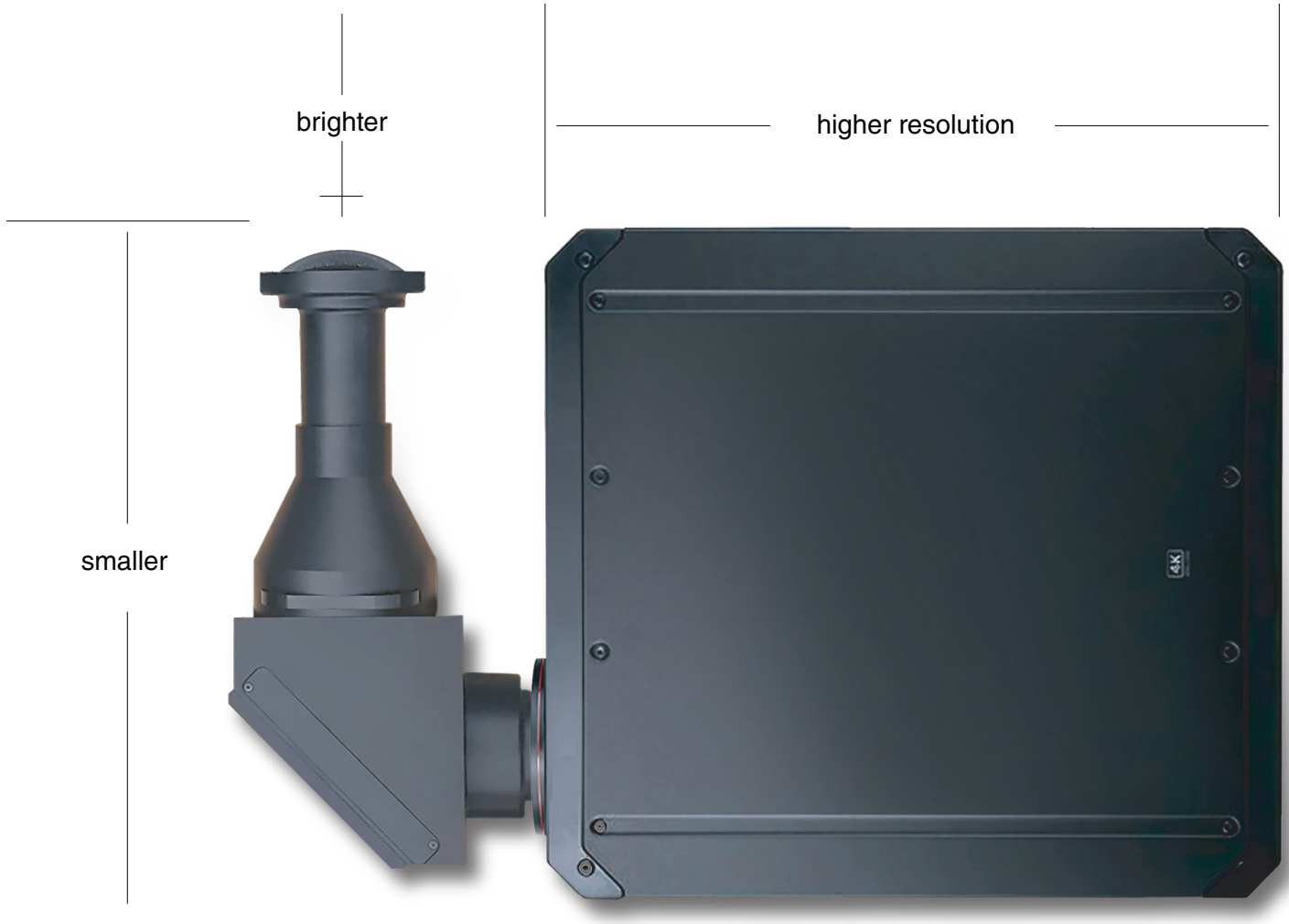
*Under the dome. Photo by Mel Blake.*

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