Southern Skies

Volume 38, Number 3 Journal of the Southeastern Planetarium Association Summer 2018

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Southern Skies is the quarterly journal of the Southeastern Planetarium Association published for the purpose of communicating association news, reports, reviews, and resources to its members. Cover photo credit Shannon Wells, UNA Photographer.

EDITORS SOAP BOX

Mel Blake
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So we present the lastest issue of *Southern Skies*. This issue has been delayed a couple weeks because everyone was off to the SEPA meeting, and what I hear was a great Inernational Planetarium Society meeting in France. I feel bad for the poor people who had to take one for the team and go to Toulouse, but we all have to sacrifice for the cause sometimes. I look forward to the reports on this in the Fall issue. We all need to thank the SEPA conference sponsors. See page 9.

This edition of *Southern Skies* is jam packed. We have the news of Jim and Shirley Smith receiving Emertis membership; only four others have been honored by SEPA this way. We also see the return of the Archaeostronomy column by Woodrow Grizzle, and a great book review by Robin Byrne. and the IPS report from John Hare. Patsy Wilson gives us a midyear financial report, and it turns out we are solvent! Then of course there are the contributed reports from our planetariums. Keep sending articles and reports.

I am sure everyone is getting ready to do programs for the Mars close approach and there will be plenty of hype. I am down playing this because I have always found Mars to be a disappointing object to show people. It is a little red ball, with maybe a polar cap visible, and some surface smudges that you have to describe to people, and even then they are unimpressed. Give me Saturn any day. Hype is also part of the annual Perseid meteor shower. The newscasts and websites talk about 80 meteors per hour, and tantalize with the possibility of bursts of hundreds. They quote Zenith Hourly Rate, which does not mean much unless you are at a latitude that will put the shower right over your head. It does not really help peope know what to expect. I always just quote from my own experiences that they will see about 30 meteors per hour after midnight if they are careful about it and in a dark site. The Geminids in December are better anyway. So let's try not to hype things to0 much!

Speaking of the Perseids, I am getting set to do my annual travel to watch the Perseid meteors, which I do each year before our classes start in the Fall. I try to visit a new state that I have not seen, as a part of a goal to visit all 50 states. This year will consist of a trip to North Carolina and then Virginia to see the Green Bank radio telescope, and do some camping. I will be trying to fit in some visits to some planetariums while I am away to photograph and document them for the Feaured Planetarium column. So don't be surprised if I show up on your doorstep!

Best wishes to everyone for a great rest of the summer!

Submitt 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).

IPS REPORT

John Hare
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About 600 delegates gathered in Toulouse, France for the 2018 IPS conference. Conference host Marc Mouton, along with a capable staff of a dozen or so colleagues, staged an awe-inspiring gathering at Europe's largest space center Cite de l'espace. The proximity of nearby hotels afforded convenient access to the vendor displays and multi-theater presentations.

IPS 2020

The Tellus World of Science in Edmonton, Canada will host the 25th IPS Conference, June 18 to June 25, 2020. Delegates from Edmonton were in attendance in Toulouse, and furnished comprehensive feedback regarding the 2020 meeting. For conference details, sign up for the IPS 2020 e-newsletter at ‹IPS.twose.ca›

IPS 2022

Invitations for the 2022 IPS conference site were presented to IPS Council in Toulouse. Two invitations were received:

Houston, TX
Space City.
Prpossed dates are July 3 – 9.

Saint Petersburg, Russia
ART Technology Ltd.
Proposed dates are August 7 – 11.

The 2022 conference site will be chosen by a vote of IPS Council at the 2019, off-year council meeting to be held in Iceland. Additional details for 2022 will be furnished in future editions of *Southern Skies*.

IPS Vision 2020

Radical changes to the structure of IPS will be phased in over a 2-year period beginning this year. IPS Council representatives will still be part of the overall structure but will report to regional representatives, who in turn will report to IPS. This will reduce the number of direct delegates from 23 to 8. A non-profit management company will be contracted to handle many of the day-to-day responsibilities. Details of the implementation process, many of which still need to worked out, will be furnished in the next issue of *Southern Skies*

I encourage you to visit the IPS Website for more information about IPS and its many initiatives; www.ips-planetarium.org.

You can obtain IPS membership forms from IPSTreasurer Ann Bragg at ann.bragg@marietta.edu, myself at johnhare@earthlink.net, or at the IPS Website, www.ips-planetarium.org

BOOKENDS

Robin Byrne
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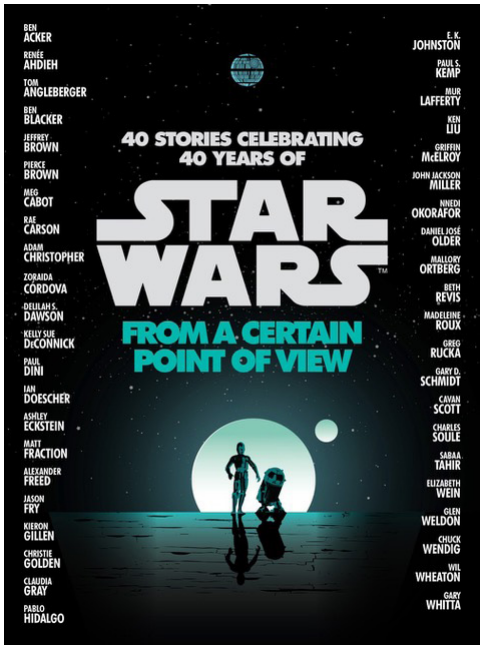
Book Review: From a Certain Point of View reviewed by Robin Byrne

I'm deviating from my traditional review of a book dealing with factual information to the realm of fiction. Why? BECAUSE IT'S STAR WARS! From a Certain Point of View was written to celebrate the 40th anniversary of the release of Star Wars: A New Hope. It is comprised of 40 short stories, each written by a different author (or authors). While the stories follow the events of A New Hope, they are told from the perspective of characters either in the background, or not even seen in the film.

Because each story has a different author, the styles vary widely. That means there may be some stories you'll love and others that bore you. That was certainly my experience. However, there were far more that I truly enjoyed than stories I could have done without. I got the audio book to listen to while driving to and from work. The audio book version has the added bonus of hearing the stories read by a variety of people lending their voice talents to the characters, along with sound effects and music enhancing the tales.

Some of the stories you'll encounter include: how to cover up the fact that you didn't shoot down the escape pod that you now realize carried the Death Star plans to Tatooine; dreams of one of the Jawas; a touching story from the perspective of the red droid with the bad motivator that was rejected by Luke's Uncle Owen; thoughts from a disgruntled Storm Trooper who would rather get a drink in the cantina than question people about droids they aren't even looking for; several stories from the various beings frequenting the cantina; why the bartender really hates droids and won't serve their kind; who was that cloaked, long-nosed spy telling the Storm Troopers where to find the droids; tales from a variety of



employees stationed on the Death Star; the contents of the incident report filed after Darth Vader force choked Admiral Motti; the last moments of Leia's adoptive parents on Alderaan; an ill-fated love affair on the Death Star as seen through the eyes of a mouse droid; the experiences of different rebels during the Battle of Yavin; where Mon Mothma was during the battle and how she was prepared for the worst; and a humorous take on the opening crawl from a critic.

The stories range from heart-breaking to hilarious, and they left me wanting to watch A New Hope again with an eye only on what's happening in the background. And if that isn't enough to encourage you to get the book, proceeds are donated to First Book, which provides books to teachers and children's organizations.

So there you have it - a combination of Star Wars, a wide range of stories, and it helps a non-profit organization. What are you waiting for? Get yourself a copy of From a Certain Point of View.

References:

From a Certain Point of View: 40 Stories Celebrating 40 Years of Star Wars, various authors, Del Rey, 2017

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SEPA NEWS

Jim and Shirley Smith, Emeritus Members of SEPA

Jim and Shirley Smith were awarded the distinction of becoming emeritus members of SEPA at the recent SEPA/WAC conference in Memphis, TN. Upon the written recommendation of a number of members, the executive council voted to confer this honor upon the deserving couple. They were surprised by the announcement at the Friday night banquet and received an extended and heartfelt standing ovation.

"Jim and Shirley are officially retired from the profession yet continue to volunteer at their planetarium and faithfully participate at the annual SEPA conference. Together this couple, married more than 60 years, has represented the best of our profession.

They have served their planetarium community by practicing the greatest educational integrity for more than 50 years. Jim Smith's career in education included teaching at Fairview Elementary, Rossville High School, and Dalewood Junior High in Chattanooga, and serving as an assistant principal at Rossville and principal at Gillen and Naomi elementary schools. He also taught astronomy at the University of Tennessee at Chattanooga and Cleveland State, and served in several system-wide administrative positions in the Walker County Schools.

Jim and Shirley opened the Rock Spring, Georgia planetarium in 1967. Several students who interned at that planetarium have gone on to be astronomers and NASA researchers. The planetarium was closed in 1999 to make way for a new Rock Spring Elementary, and Walker County was without a planetarium until the new one opened that now bears the name of "James Alonzo Smith and Shirley R. Smith Planetarium". It was dedicated in their honor on May 4th, 2011.

Even though Walker County was without a planetarium for a period from 1999 to 2011, Jim and Shirley Smith were not without a planetarium. In fact, they were around many of them, but primarily as a business.

Starting in 1979, Jim and Shirley formed Kensington House Ltd., which sold portable and permanent planetariums. They began selling them fulltime after his retirement in 1991 and continued until 2008. With the opening of Walker County's Jim & Shirley Smith Planetarium, this amazing couple continue to volunteer their time and

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efforts to giving planetarium programs to classes and hosting public planetarium and observatory openings.

According to Dr. Wayne Robinson, a former SEPA planetarium director and now at the Chattanooga Creative Children's Museum, " Jim and Shirley have inspired students, including my wife and me, as long as I have known them. They are as true to the cause as any two people I have met. Their hearts are in the right place. It's always about the kids. It's always about teaching." (Written by Phil Groce in support of their nomination)

Emeritus Membership has only been issued to four other individuals. They are: Jack Fletcher, James Hooks, Jane Hastings and Mike Ryan

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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: _____

Qualifications: _____

_____

_____

_____

_____

News From the SEPA Region
Summer 2018

LOUISIANA

contact: Jon Elvert
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Lafayette Science Museum
Lafayette, LA

Dave Hostetter reports: As summer begins, planetarium attendance for public programs is running about 30% ahead of attendance in each of the last two years! Some of this seems to come from posting each and every planetarium presentation as an "event" on our Facebook page. We are also having tremendous success with the program "Magic Tree House: Space Mission" (produced by UNC Morehead Planetarium and Science Center). We've had to turn so many people away due to sell outs that we are adding an extra presentation of it!

Our featured public program beginning in July will be "Moons: Worlds of Mystery" from the Boston Museum of Science, and we will add "Accidental Astronauts" from Clarke Planetarium to our Saturday morning children's show rotation. From July 17 through 19 we will have our annual planetarium marathon of 21 programs in three days, with only the 4:00 p.m. Sky Tonight program repeating during that time.

Beyond public programs, our school shows have been replaced by programs for day care groups. The Museum is seeing more of those groups than ever before, too.

This summer will be a busy time for our sidewalk astronomy. We've started our summer lunchtime solar viewing every Wednesday from noon to 1:00 p.m. We'll have a telescope at a downtown Art-Walk on July 14, and lots of telescopes out in a park behind the Museum for "Planet-Palooza" on July 20. Depending on weather and public interest about the Mars opposition, we may repeat that on the 27th with another one on July 30. The latter two won't be advertised until we determine if they are needed or not. Finally, a more traditional star party at a park just out of town is scheduled for September 8.

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

Jay Lamm reports: Our Universe Gallery is currently host to "Food in Space: The Evolution of Dining in Orbit." This new installation traces the development of astronaut cuisine, from the first "tube and cube" selections prepared for the Mercury missions, to the gourmet items sent up to the International Space Station today. This runs in conjunction with the current exhibit, Feast For The Eyes: The Story of Food in Photography, and Capitol City Contemporary 4: Food, Glorious Food.

The Universe Gallery will also be the home to our new 48" spherical display OmniGlobe. This will offer a wide array of engaging content for both school groups and our public visitors to experience. The educational and entertaining possibilities open up our classroom routines to incorporate this new OmniGlobe in fun, new ways. Installation will begin in early July.

We had yet another successful Dino Day. Visitors were able to unearth dinosaurs and get a glimpse into their prehistoric world with the hands-on activities we offered. There was also a special line-up of dinosaur-themed planetarium shows, culminating in the very popular presentation of "The Land Before Time".

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Of course, Astronomy Day 2018 has come and gone. We had a variety of hands-on activities from our newest NISENET Earth and Space Science Kits and a special line-up of shows, as well as presentations and experiments.

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. Magic Treehouse: Space Mission is our Family show. In addition, we've been running Dream Big as our "B" film and welcome the large-format Jean-Michel Cousteau's Secret Ocean as our new "A" film.

NORTH CAROLINA

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The Learning Center at PARI
Rosman, NC

Christi Whitworth reports: Notice the name change and new logo! The Learning Center at PARI is proud to host Duke TIP's Field Study in Astronomy in three two-week sessions between June 10 and August 5. That means thirty research projects will be completed this summer using the instruments at The Learning Center. Public programs such as Stargazers Journey on Saturdays, and the Science Jamborees will continue in the fall of 2018 along with the new public hours on Saturdays and Sundays. Observing opportunities every weekend weather permitting are proving to be very popular. The staff and volunteers are keeping busy to make sure these are enjoyable experiences.

Mondays through Fridays are reserved for special groups. There will be two new faces helping with education programs this summer. David Cornette works with weekend programming and special programming just for the summer. Nonnie Cullipher joins the team as a full-time employee, and will be delivering multi-day experiences on The Learning Center's campus. Campus improvements include two new cabins for overnight guests and improved workspaces for groups in the ATS building also known as Building 4.

New overnight cabins for guests at PARI.

Horizons Unlimited, Margaret C. Woodson Planetarium
Salisbury, NC

Neil Pifer reports: Happy Summer Solstice! We are busy hosting many summer camps and summer groups as many of you are. The most exciting new development is the fact that our local astronomy club, the Astronomical Society of Rowan County, is meeting in our facility for the next 3 monthly meetings. This connection to the passionate space science community back to our dome after a long absence has the potential to grow this group with our shared marketing and our larger facility. Also, we are hosting CAPE (Carolina Association of Planetarium Educators) here August 30th and 31st – please email or call if you are interested in joining us here, especially if you are a small dome, portable dome, or educational facility in North or South Carolina. This conference is FREE and we will have a blast sharing stories, meeting new and old friends, and sharing our best practices over a 2 day conference.

Neil Pifer
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704-639-3004

Robeson Planetarium
Lumberton, NC

Ken Brandt reports: I have had a very successful school year, seeing over 2,700 students and teachers. Summer is shaping up to be extremely busy as well. I have already seen more visitors in the first two weeks than I did the last normal Summer (without an eclipse). My administration supports the work completely. I recently completed the overhaul of our system, the result is that we are now more "portable" than before. This allows us to expand our range and offerings for our students.

For those of you who have written letters of support-thank you! More people locally are offering their assistance than were previously. Our advisory board numbers continue to rise, and they are offering different perspectives on this situation that are both innovative and helpful.

Also, I'm writing a column to appear in our local newspaper which will appear monthly. More speaking engagements, TV interviews, and other public awareness efforts will have their affect - I just need to remain patient and aware of grace. I'm planning a large community event to coincide with the Mars Opposition.

I continue to study and emulate GLPA's very helpful advice in the document; "How to Keep Your Planetarium Open". It has been a lifesaver on several occasions.

Dave Maness and co. at the Pink Palace showed us a great time in Memphis at SEPA/WAC 2018!

Morehead Planetarium & Science Center
Chapel Hill, NC

Richard McColman, Amy Sayle, and Mickey Jo Sorrell report: Morehead Planetarium & Science Center is currently preparing for some much-needed renovations, due to begin in spring of 2019. The GlaxoSmithKline Fulldome Theater – the planetarium – will lead things off with a six-week closure and renovation, slated to begin on May 6. First among improvements in the theater will be a repainting of the original 1949 dome. While the projection surface has very few blemishes, the reflectance value of the dome is currently around 80% -- definitely way too bright for optimum fulldome video projection. Our plan is to drop the reflectivity with the repainting down to about 44%, which should dramatically improve the contrast and color saturation of projected images. New seats and carpet are also in the plan, as well as a repositioning of the control console, to better match an altered post-renovation traffic pattern in the science center.

Speaking of the science center, it will get a major facelift too, adding new areas for exhibits and a maker space, as well as creating improved visitor accessibility and traffic flow. While the theater is slated to reopen in mid-June, the science center renovations will extend several months later.

While Richard is busy with renovation plans, Amy and Mickey are planning the 7th annual North Carolina Statewide Star Party for April 12 and 13, 2019, when dozens of hosts across the state will offer skywatching events for the public. The focus for 2019 is inspired by the 50th anniversary of the Apollo 11 Moon landing and will include activities about observation, exploration, and our solar system.

In addition, Mickey is planning her retirement from Morehead, beginning in September. After more than seventeen years as a Morehead educator (including five as SEPA Secretary-Treasurer), the call of grandchildren and garden has finally gotten loud enough to distract her. She'll still be looking up, however, and maybe have time now to visit your dome.

SOUTH CAROLINA

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

Liz Klimek reports: Here at the State Museum, summer camps are well underway, and planetarium staff is again heavily involved in teaching astronomy camps. This year's 9-11 astronomy campers will get to present their very own (heavily guided) live sky program for friends and family at the end of the week. We did this for the first time 3 years ago, and it was a great success. Campers work in pairs, each pair getting assigned a constellation in the current night sky and a planet. Assisted by our educators, each pair gets a turn sitting in the driver's seat, using our Digistar system to bring up constellation artwork and summon their planet if it isn't currently visible. They then share information about their constellation and planet with everyone. We provide some basic information to get them started, but often the campers will want to add their own fun facts and stories about their objects, which we greatly encourage.

Our Friday Night Laser Lights summer series is back, now featuring both laser and fulldome music shows. These events occur once per month during the summer and also include a food truck, a selection of beer and wine, and fun games in the planetarium lobby. In July we will feature "Laser Salute to America" during the week of the 4th, and "We Are Stars" will join our regular show schedule, alongside the Clark Planetarium's Black Holes, Earth, Moon and Sun, and our Live Sky Tours.

We are also looking forward to the fall, getting ready for another round of astronomy homeschool classes and a brief breather before the holidays start to ramp up in October.

Finally, it was great seeing everyone in Memphis for SEPA-WAC! We're very excited to be hosting SEPA-MAPS next June, and throughout the year we'll be busy planning a great experience for everyone. Be sure to check the SEPA website for updates, and it's never too early to think about what you might like to present!

DuPont Planetarium
Ruth Patrick Science Education Center
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) re-opened on June 9, 2018 with 20% more seating capacity! Well, that way of presenting the statistics might be a bit misleading. Prior to our renovation, we had 45 seats. Now, we have 57 seats. The reconfiguration actually provided more seats than we originally planned, which was a nice bonus. For many planetariums, that is still rather small, but we feel like we have much more room for our guests now.

The new seating was made possible when we upgraded to a Digistar 6 system. Our Digistar II was in the center of the theater and took up significant space. Stairs were alongside of the Digistar II. Through the renovation, the stairs were removed and replaced with "new" seats. The area where the Digistar II was located is now where the stairs are in place. We also have new LED stair lighting, which is much brighter when we need it to be but allows us to use just enough light to allow visitors to see where they are stepping. We are proudly displaying our Digistar II system at the RPSEC for people to see. It makes a very interesting exhibit.

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

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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. Throughout the summer, the space for the school has been in renovation mode in preparation for students to arrive in August. The two renovation projects provided significant activity at the RPSEC, and we are looking forward to serving our community as we move into the fall.

In June, we presented "Magic Tree House – Space Mission" by the Morehead Planetarium and Science Center and "Seven Wonders" from Evans and Sutherland. We also debuted our newest show that we called, "Digistar Special Effects Extravaganza." We promoted this as a fun-filled experience of sight and sound as we showed off the special effects capabilities of Digistar. From a picture gallery of locations on the USCA Campus to fast-paced movements through a variety of shapes and objects, we promised that our patrons would have great fun with our extravaganza. We also included a live sky presentation just before the extravaganza. Our audiences have responded well, and we are pleased with that.

In July, we presented "Two Small Pieces of Glass" by the European Southern Observatory and Supernova Planetarium, and Digistar Special Effects Extravaganza.

KENTUCKY

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East Kentucky Science Center and Planetarium.
Prestonsburg, KY

Steven L. J. Russo reports: Astronomy Day took place at the EKSC on April 21st with 200 people in attendance.

There were planetarium shows, hands on activities for kids and adults, and guest speakers. Our highlighted speaker was Kennedy Haught, graduate assistant from the Morehead Space Science Center, in Morehead, Kentucky. She brought along several cube-sats and spoke about the Space Science Engineering degrees that can be received from Morehead.

The EKSC also took part in the Jenny Wiley State Park Kids Day open house, where over 800 kids and adults participated in hands on activities from many different organizations.

We also resumed our outreach programs to the Floyd County Library system, bringing science to the public with after school programs.

Currently as I type this in early July, our summer camps are underway as is our new "Drop in for Science" weekly programs. More on this next time!

And remember to keep me informed of all of your activities so I can post it in News From The SEPA Region. Send me info at srusso0002@kctcs.edu


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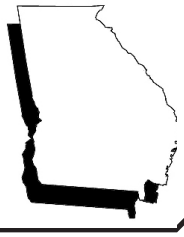
Tellus Museum
Cartersville, GA



Bentley Planetarium - Tellus Science Museum, Cartersville, GA

David Dundee reports: We had a strong spring with a full calendar of school groups. National Astronomy Day went well with almost 1200 visitors enjoying clear skies, planetarium shows and NASA funded activities. We had several activities for our young astronomers: Human powered solar system, Human Trappist 1 exoplanet system, and making exoplanet planospheres. Our big planetarium news is that we are upgrading our Media Globe III to a Minolta Sigma 1.5. Our new projector gets installed in August, so we are excited about our next chapter in our planetarium. We have opened for our summer run "The Search for Life: Are We Alone?" and "Big". In addition, for our youngest guests "One World One Sky" introduces audiences to the stars. These shows play in addition to two live tours of the night sky daily.

Georgia Southern Planetarium, Statesboro, Ga.

Dillon Marcy reports: Summer is in full swing here at the Georgia Southern University Planetarium. We have groups lined up throughout the summer with many of our regular groups and summer camps. We have become quite busy this year as we have gathered more regulars who will often bring others with them that we hope to will visit us again. We are even busy with university classes who want to utilize us for classes such as physics, but also just to show what our campus has to offer. Despite our best efforts, we stay as a relative unknown secret here on campus with many just knowing us as the round wall in the Math/Physics Building. Thanks to faculty we work with around campus, we are continuing to bring in first year student classes to come and visit us. With these classes we have continued gathering more regular students, and even future interns and helpers for the Planetarium.

Since the conference we have been using what was learned to enhance our own shows. Our seasons and moon phase presentations are being broken down and reconfigured to better teach our visitors in new visual ways. With our small planetarium and restricted space we have mostly been focused on what can happen inside the planetarium. We have also moved more to work on adding more presentations not just on the dome. We have begun using different methods to compliment the presentation on the dome such as more hands on activities and audience interaction.

Along with reworking our own presentations and adding new interactive presentations, we are in the process of adding more to the dome by using 3D modeling. We are currently learning the basics of 3D modeling software such as Blender in hopes we can make 3D models that can be added to the dome, but also animation to help with our presentations. The hope is we will be able to design models that will assist in teaching, but also help create things that our dome simply cannot. This includes presentations primarily for physics for the time being. By creating animations using Physics we can bring in our Physics and Astronomy classes for the department and be a readily available resource for the department.

Along with working on new material for the dome we are getting ready for fall and deciding on which shows to present. Due to overwhelming demand last year for our show "Experience the Aurora" we will present it again in September. Our October show will be reserved to our new show "Saturn: Jewel of the Heavens." Of course we will be playing our standard November and December shows "Pink Floyd: Dark Side of the Moon" and "Let it Snow." During the shows in September and October we will be having our interns assist us in making accompanying presentations, and presenting for the public. That's it for now. I had an amazing time meeting you all at the conference, and look forward to meeting you all again.

TENNESSEE

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Kingsport, TN
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Sudekum Planetarium, Adventure Science Center, Nashville, TN

Drew Gilmore Reports: It's been a busy year so far! Our team will be growing soon, with the addition of a second part-time educator position.

As far back our records go, the name of our live star talk show, "Skies Over Nashville," dates back to the late '70s if not earlier. There had long been suspicion that the name might have discouraged some of our significant tourist audience from attending. A recent zip code analysis of ticket sales compared with other shows suggested that was very likely true. In November of last year we made the tough decision to change the name to "Nightwatch," on a trial basis. Since then, Nightwatch has become our best selling show, now running at least twice daily. Hooray for constellations!

An addition to the spring lineup: "Fantastic Fractals", to go along with a travelling math exhibit visiting Adventure Science Center. This live show incorporates visuals and music from the Fractal Foundation, and gives the audience just a taste of the math behind the beautiful images.

In January, Nashville band Moon Taxi held an album release party for "Let the Record Play" in the planetarium. Hot on the heels of that event, country star Kacey Musgraves held a album release party for "Golden Hour" here in March. Given the TOP SECRET music in advance for both events, the planetarium staff spent several weeks with tunes lodged in our heads as we imagined and programmed fulldome visuals, both pre-rendered and real-time Digistar effects. The second of these events also gave us the opportunity to show off our new ChromaCove lighting system.

Sudekum Planetarium has long been open late on the second Saturday of each month, to show artistic "Fulldome Features" and laser shows. Until now, the rest of Adventure Science Center has been closed during this time, frankly looking a little dark and spooky. Starting in July, all of ASC stays open until 10 pm on Second Saturdays. Plus, we're running laser shows at 4:15 daily during the summer.

On June 20, the planetarium was host to "Dome-Com," a new part of Film-Com, an annual Nashville conference for filmmakers. Dome-Com is an effort by Film-Com to inform and educate conference-goers about the world of fulldome production. Guests saw a number of short examples of fulldome content, and heard from a guest panel comprised of Derrick Rohl, Manager of the Sudekum Planetarium, Jay Heinz, Digital Production and Exhibitions Manager at Morehead Planetarium, and via Skype, Dan Neafus, Manager of the Gates Planetarium. The discussion was a great introduction to the art, technology, and business of fulldome.

Bays Mountain Planetarium, Kingsport, TN

Adam Thanz, Astronomy & Space Sciences Program Coordinator - Planetarium Director reports: Greetings Fellow Planetarians!

Our main program is currently "Seeing!" Our alternate programs offered once a day is currently our live tour of the night sky called "Appalachian Skies - Spring." That will run until the end of June. July starts "Back to the Moon - For Good." We'll provide an update on the Google X-prize contest at the end of the show.

As I write this, it is just a few days away from the start of the SEPA/WAC 2018 conference in Memphis, TN. It will be hosted by Dave Maness and the staff at Pink Palace. I know he and the staff are working very hard to provide a very cool event. I know I'll enjoy it!

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My last state news offering mentioned about the new iMac Pros we just received. We are still working with the IT department to get the final network solutions installed, but the computers have worked wonderfully. A huge feature is that it is so well designed that it runs silent. Not kind of quiet, but silent. No fan noise. Only two or three times I have heard the fan and it is best described as a low hush to the gentlest of breezes that caress your cheek on a summer's twilight. Not the annoying 50-60dB roar (or louder) you normally hear when a computer is rendering. Think of a muffled rusted lawn mower. Sound familiar? I will be presenting about using this new creature for show production at the SEPA conference.

See you at SEPA 2018 in Memphis, TN!

We see Adam Thanz basking in the high-resolution glow of the new iMac Pro at his desk. Photo by Adam Thanz

ALABAMA

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Von Bran Astronomical Society
Huntsville, Alabama

Beth Boro reports: The Von Braun Astronomical Society (VBAS) maintains both an observatory and planetarium atop Huntsville's Monte Sano. This all-volunteer society offers a public planetarium show followed by telescope viewing (weather permitting) every Saturday night throughout the year (with the exception of Christmas and New Year's). Hour-long planetarium shows for the 2018 year are focused on research missions by NASA and the ESA to solar system objects. In July and August, the emphasis will be on Mars research, and will continue through the fall, examining other upcoming missions. Private shows for school or scout groups are available on request.

The VBAS has a unique student-intern program; young people aged 12 and up are invited to take training to be 'stellar instructors' and to help visitors find their way across the sky during telescope observing after each planetarium show. Older students may train to be planetarium interns, who help to set up for shows, welcome guests, and run the small gift shop.

The society will celebrate Astronomy Day on Saturday, October 20 with an afternoon and evening of demonstrations and talks by NASA, the Huntsville Alabama L5 Society (HAL5), the US Space and Rocket Center, and other local entities. Astronomy Day is free and open to the public. Members are preparing for this event by continuing to clear some trees from our viewing area, cleaning and repairing facilities, upgrading one of our telescopes, and refurbishing our library room.

The VBAS recently instituted a new monthly meetin- called the Special Interest Group (SIG). On the first Friday evening of the month, members are invited

contiued from page 21

to meet and discuss issues of interest such as astro-photography, dark sky preservation, telescope building, comet and asteroid watching, and public outreach. Members also meet on the third Friday of the month for pizza and an in-depth presentation at monthly members' meetings. If you find yourself in Huntsville on a public or member night, stop in for a visit.

University of North Alabama Planetarium
Florene, Alabama

Mel Blake reports: One of our peak periods at UNA Planetarium is between April to June. We always have a number of school bookings as local schools finish their standard testing and start doing field trips. This year was no exception, and we had a busy time. One special program that was unexpected was a school program at local Brooks Elementary. Due to the fact that I volunteer for the BEST Robotics, from time to time I get requests to help out with other STEM related activities as well. In this case, a program was beign done at the school by NASA's John Cranston related to the James Webb telescope. He was visiting the school, and the kids were learning about the mission and building models of the spacecraft. They needed volunteers to help the kids make the models. It sounded like fun, and I agreed to help.

At the school we broke up into one volunteer at each table, and six classes came and visited throughout the day to build the models. At the end of each session the kids signed a model of a mirror of the Webb telescope which will be displayed at the Space and Rocket Center in Huntsville. It was a fun day and over 100 kids built models. I got to take a kit for myself and got an actual piece of the heat-sheild foil from the spacecraft to display at the UNA planetarium. I am hoping to do a similar program with some scout troops.

We also particiapted in Astronmy Day with the Shoals Astronomy Club. We went to the Lagrange College site and club president Eric Geater set up a scale model of the solar system, and we showed the observatory to people. The weather was poor, but everyone had a good time despite the fact that we had

Another big effort in late May and eary June was a set of teacher workshops and STEM camp organized by our Mathematics and Computer Science departments. This year we had a bigger role, helping design experiments that teachers then learned to conduct. I helped design a forensics experiment for an ice alien. For the STEM camp I did two evening programs at the planetarium for the students. We did a star show, discussed how to use star wheel, EM radiation, and then constructed Galileoscopes. We have been doing this program for several years now and students report it as one of their favorite parts of STEM camp.

The rest of the summer will be busy, with a grant due on Octber 5th to the American Astronomical Society to support a STEM satellite for radio atronomy and trying to prepare to make our portable planetarium available for programs.

Best wishes to everyone!

Kids hold up their models ofte James Webb Telecope.

The signed mdoel of a james Webb mirror signed by the kids (am me!)

REMEMBER

YOUR STATE

COORDINATOR!

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Archaeoastronomy

Stonespeak: A reflection review of The Archaeoastronomy of a Few Megalithic Sites of Jharkhand by Subhashis Das.

By Woodrow W. Grizzle III
Jonesville, Virginia

Every man carries with him unconsciously the memory of ancient civilizations. Similarly, the rock is a fragment of the world's memory. — Carl Gustav Jung

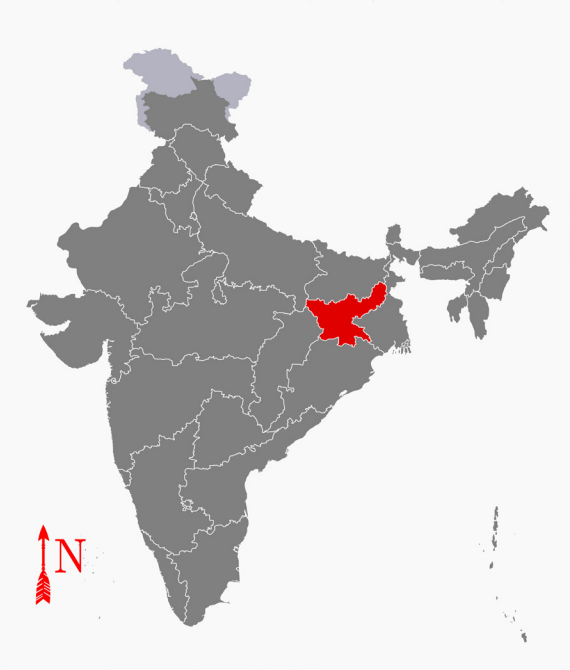
I once told my ninth grade earth science students, "Stones speak; you need only learn how to hear them. They tell a story of the world before us." I think in that Subhashis Das, author of a new book of archaeoastronomy, would agree. Das included the more poetic quote from Swiss psychiatrist Carl Jung as the frontispiece of his new book, The Archaeoastronomy of a Few Megalithic Sites of Jharkhand. Reading this book, I found that not only do the monolithic stones of Jharkhand speak, but Mr. Das has a knack for interpreting their language in a way that is not only comprehensible, but compelling. If ever an archaeoastronomy book could be deemed a page-turner, Jharkhand is it. It is at once entertaining, instructional, and, in my case at least, profoundly moving.

I first learned about the book when a Google search returned a review of it in The Hindu, a Chennai newspaper. I immediately contacted the publisher and requested a review copy, which they promptly sent. It arrived in Virginia from New Delhi in less than a week.

I must admit I knew nothing of Jharkhand before reading this book. I had neither heard the name before, nor had I any idea where it was within India's borders. Since I knew I had some time before the book arrived, I thought it best spent conducting preliminary research so that I might develop some context (however basic) upon which to judge the book's merit. What I discovered, I shall now briefly relay.

continued from page 23

Jharkhand is a state found in India's northeast. It is rich in coal and various minerals, including metal ores and asbestos. Much like my own home in Central Appalachia, Jharkhand suffers from a phenomenon known as resource curse: widespread poverty in regions blessed with bounteous natural resources. The poverty level in Jharkhand is nearly 40%, much the same as Harlan County, Kentucky, and about 10 points higher than that of my home in Lee County, Virginia. Jharkhand's per capita annual income is $726.80.



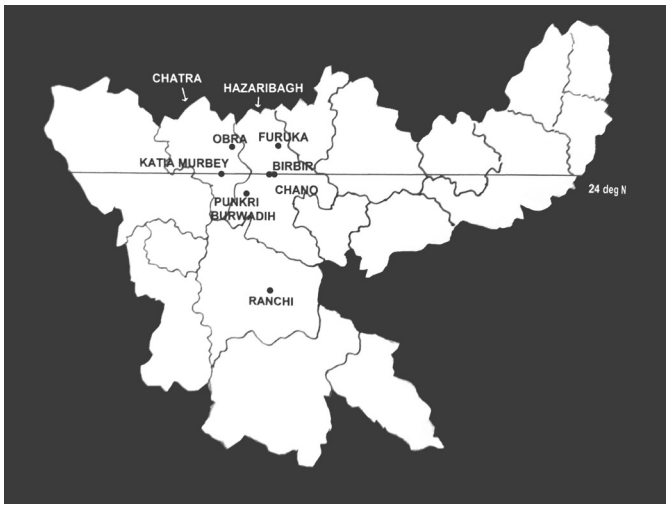
Map of India denoting Jharkhand's location.

As is typical of so poverty-stricken an area, natives of Jharkhand tend to be possessed of an aspect both provincial and superstitious. Hinduism is by far the largest religion in the region, followed by Islam, then Christianity. Education rates are low, with the literacy rate at just over 67%. However, since Jharkhand's formation as a state in 2000, major education reforms have raised elementary school enrollment from 56% to 95%. Because of this, literacy rates are expected to climb significantly in the near term.

Once the book arrived and I began reading it, I experienced unexpected enlightenment. Mr. Das' book taught me a lot about life in Jharkhand, and, to my surprise, I found personal identification there. Poverty found paradoxically alongside bountiful natural resources, and the loss of heritage in the face of ignorance and indifference are themes that exist also in Central Appalachia, and which I know all too well. Never before would I have thought that there was anything about India that I would find familiar or could possibly relate to. When I requested this book, I never thought it would change my perspective, but it has, and I am thankful. Is that not that the highest aspiration of a humanities author?

An Interdisciplinary Approach

One of the great things about Mr. Das' work is how he combines geometry, astronomy, archaeology, and sociology into his research efforts and then relays such complex subject material in such a relatable way. He discusses his findings within of a number of sites throughout Jharkhand, discussing the local tribal customs and their use of stonework in each. A few still practice megalith-making, while most have long abandoned the practice and allowed the sites to fall into ruin. Among them all, there are some common themes.



Map of Jharkhand showing the megalithic sites discussed in this book.

Ancient tribal belief held that the earth was the mother goddess and that the sun was the great inseminator. A priesthood of observers developed over the centuries who observed the sun's behavior throughout the year and drew out temple precincts in special areas sanctified by sun's touch. It was from these temple precincts that priests could calculate the land's fertility and guide the development of land for agricultural use.

These ancients also practiced ancestor worship alongside veneration of the earth. Thus, the monoliths had

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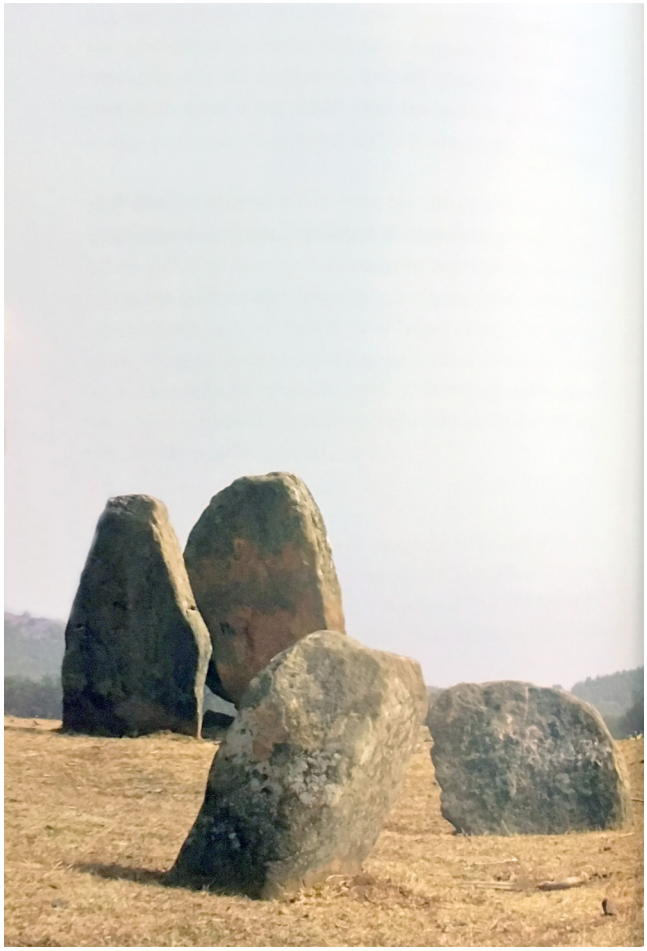
added significance as burial monuments.

The stones, together with the landscape, form a temple precinct that, as a whole represented a site of sacred import to the vitality and security of the people who lived there. Today, sight lines to those bounding landscape features are blocked or otherwise altered, preventing obvious notion that they are even there.

There is at once joy and underlying sorrow in the pages of this book. Joy and enthusiasm in discovering the astronomical alignments and learning more about India's past, but also sorrow at the truth that that same heritage is in danger of disappearing forever. Jharkhand's monolithic sites are in trouble. By and large, modern Indians are ignorant of the existence of the stones, much less their import. Road projects, the expansion of tenements, and neglect threaten their existence. Some are even used as garbage dumps.

Mr. Das has done a great job telling the story of these megalithic sites. It remains to be seen whether this will be the end of their story or the beginning of the next chapter.

Title: The Archaeoastronomy of a Few Megalithic Sites of Jharkhand; Author: Subhashis Das; Publisher: Niyogi Books; Pages: 116 + back matter; Price: 695



A view of Punkri Burwadih.

A modern-day Oraon-type Mundari sasandiri.

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2018 Mid-Year Financial Report – SEPA

Submitted by Patsy Wilson –May 31, 2018

All funds are held at Branch Banking and Trust Company

Balances: (as of 5-31-18)	
Operating	39,896.29
Savings	25,240.15
Professional Development Fund	2,198.36
PayPal Account	3,014.51
Total	80,349.31

Operating Account (as of 1-1-18)		**5,773.17**
Income:		
Memberships	355.00	
Journal Ads	360.00	
Transfer from PD Account	465.00	
Transfer from PayPal	8,500.00	
Transfer from Business Checking	7,000.00	
Conference	26,785.00	
Total Income		43,465.00
Total Credits		**49,238.17**

Disbursements:		
Website Maintenance	2,047.00	
Postage and Supplies	8.15	
PD Awards	465.00	
Conference 18	6,821.73	
Total Debits		(9,341.88)
Balance (as of 5-31-18)		**39,896.29**

continued from page 28

Professional Development Fund (as of 1-1-18)		**12,663.36**
Disbursements:		
PD Award for Registration	175.00	
PD Award Stipend	290.00	
Total Debits		(465.00)
Balance (as of 5-31-18)		**12,198.36**
PayPal Account (as of 1-1-18)		641.08
Income		
Memberships	725.00	
Fee Reversal	15.66	
Registration	9,175.00	
Mini-LIPS	300.00	
Ricoh Camera Workshop	1,400.00	
Affiliate Dues	35.00	
Guest Meals	125.00	
Total Income:		11,775.66
Total Credits		12,416.74
Disbursement:		
Fees	362.23	
Transfer to Operating Account	8,500.00	
Refund	540.00	
Total Debits:		(9,402.23)
Balance (as of 5-31-18)		**3,014.51**

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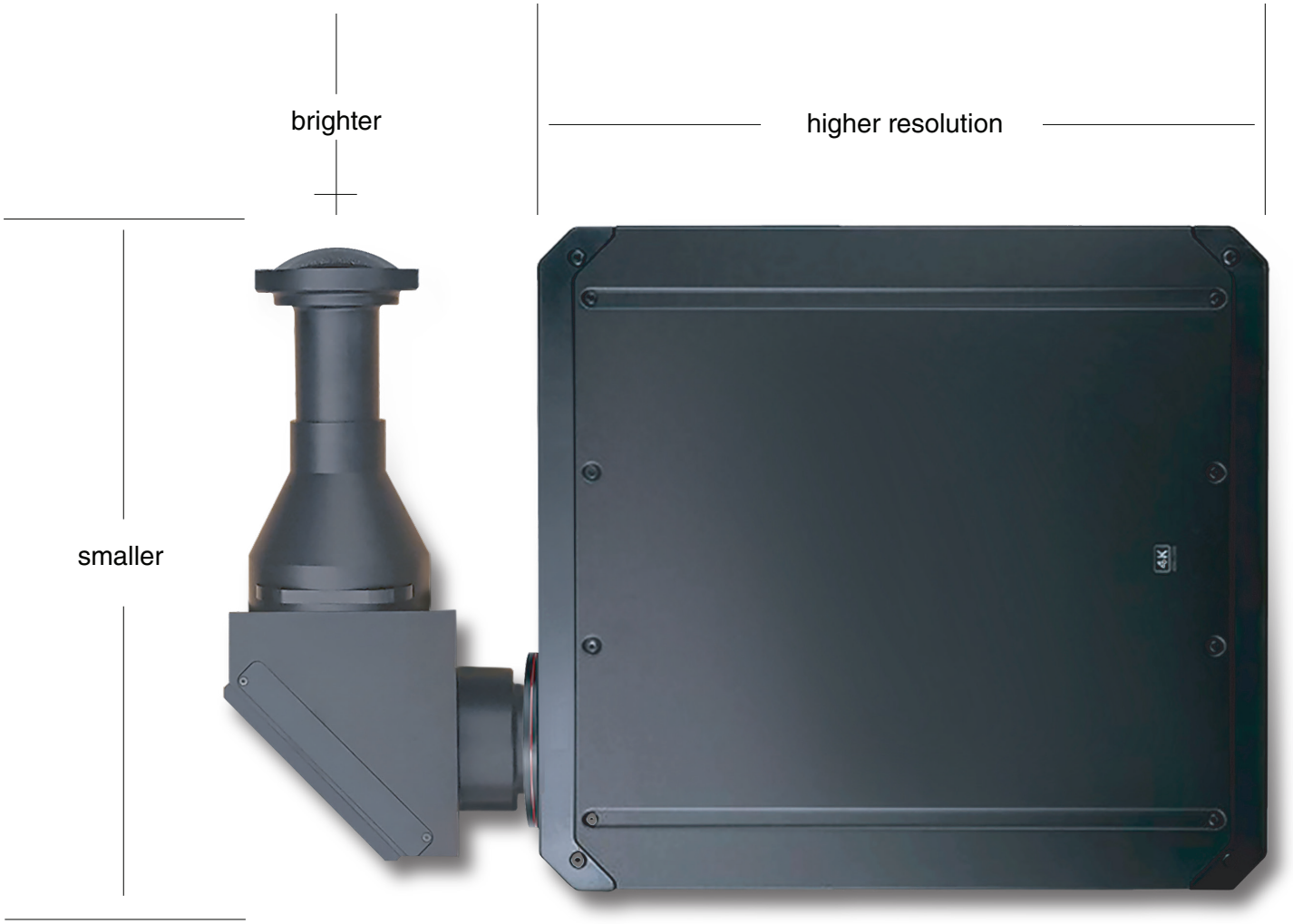

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