

Southern Skies

Volume 35, Number 2

Journal of the Southeastern Planetarium Association

Summer 2015

SEPA 2015



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Jeff,

I am writing to let you know that everything is running flawlessly here & that I simply could not be more pleased with your team's work. The technology you provided was well thought out, installed perfectly & works great! May I thank you, Mark Trotter & everyone on your team who helped make our new planetarium your team's best? Evansville, Indiana was a one of your best! Job well done.



EVANSVILLE MUSEUM
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Mark Trotter

Director of Science Experiences
Evansville Museum



Congratulations to Mitch and the Evansville Museum on their exciting new Immersive Theater! BT was honored to provide Theater Design, 5.1 Audio, LED Lighting, Theater Control, Distance Learning, Lobby Systems, Astrotec Dome and Digistar 5

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Ken Brandt
Robeson Planetarium
410 Caton Road
Lumberton, NC 28360
kenneth.brandt@robeson.k12.nc.us

Vice President

Derek Demeter
Emil Buehler Perpetual Trust Planetarium
Seminol State College of Florida
100 Weldon Blvd.
Sanford, FL 32773
407-708-2408
Email: DemeterD@smeinoestate.edu

Past-President

David A. Dundee
Tellus Planetarium
Tellus Science Museum
P.O. Box 3663
Cartersville, GA 30120
(770) 606-5720
Email: DavidD@tellusmuseum.org

Secretary/Treasurer

Patsy Wilson
140 Lyn Road
Salisbury, NC 28147
(704) 640-7643
Email: wilsonpatsyk@gmail.com

IPS Council Representative

John Hare
3602 23rd Avenue West
Bradenton, FL 34205
(941) 746-3522, Fax: (941) 750-9497
Email: johnhare@earthlink.net

Editorial Staff of *Southern Skies*

Southern Skies Editor

James Sullivan
Buehler Planetarium & Observatory
Broward College
3501 Davie Road
Davie, FL 33314
(954) 201-6681
Email: jsulliva@broward.edu

Associate Editors

Archeoastronomy Column

Woodrow W. Grizzle III
141 Horse Farm Trail
Jonesville, VA 24263
Email: wwg5n@alumni.virginia.edu
woodrow.grizzle@gmail.com

Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
109 Ridge Road North
Hedgesville, WV 25427
(304) 754-3354, Fax: (304) 754-7445
Email: isbeth4@hotmail.com

Bookends Column

Robin Byrne
Northeast State Community College
2425 Tennessee 75
Blountville, TN 37617
Email: rlbyrne@northeaststate.edu

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Ken Brandt
Robeson Planetarium
Lumberton, NC

I hope this missive finds you rested, well, and happy as we return from SEPA 2015. I'm confident that our Past President, David Dundee, has pulled together a masterfully rendered conference.

SEPA has always been an organization with its roots firmly planted in educating our visitors about science, whether it is students, or members of the public. Toward that end, I have proposed an educational activity resource center be established as part of our members-only section of the website. We all have ideas and unique 'twists' on teaching astronomy to our audiences. I'd like to see some of those you don't mind sharing with us all posted into that area of our website. Of course I have contributed some in there. I have sorted them by grade level, if appropriate. For example, the Finding North at Noon activity is posted under 4-6th grade, as that's the relevant area for the NGSS, which most of our region is either using outright, or has stan-



dards based on that template. Please remember that posting other institutions' or individual's activities should not be done without their express written permission.

Our new member committee is doing many things to generate new membership on two very important fronts:

1. Institutions in our region that have 'drifted' away from SEPA over time,
 2. Younger, newer members in the profession.
- I take a special interest in this objective, since I see it as crucial to SEPA's long-term survival. Of course, as the current Director of the mother dome, I have a vested interest in SEPA's perpetuation.

Of course, our sights are now set on the next conference, SEPA 2016, to be hosted by Rick Evans, Director of the W.A. Gayle Planetarium in Montgomery, AL. Please join me in thanking Rick for hosting the next SEPA conference. I know I look forward to experiencing Montgomery for the first time!

Lastly, I'd like to take this opportunity to welcome two masters of our craft; Jack Dunn, and Steve Russo to SEPA's ranks. Both of these fine gentlemen have recently taken up residence in our region, and bring over 50 years of combined experience to us. They are two of many examples of the dedicated, experienced, and excellent professionals that exemplify all that we are as an organization.

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.

IPS REPORT

John Hare
ASH Enterprises
Bradenton, FL

In the last issue of *Southern Skies*, I suggested that you visit the IPS Website to learn more about the IPS conference to be held in Warsaw, Poland in June, 2016. Basic information is now available and as the conference dates draw closer, more and more information will be posted.

But wait, there's more! Have you ever taken the time to peruse the publications of IPS? There are literally weeks and weeks of reading material contained in the various publications. The IPS journal, *The Planetarian*, is published quarterly and is mailed to all members. It's also available on-line to members. It contains up to date information in articles, news columns, regional news, vendor advertising, and more, in dozens of full-color pages of material.

Copies of past publications, some dating back to the founding of the organization, are also available to

members at the IPS Website.

In past columns, I've mentioned the *IPS Directory*, a compendium that is published every 2-years. It contains information about every known planetarium facility worldwide. It contains an index of personnel, an index of star projectors, full-dome systems, city index, country index, Website index, and more.

Another publication of note is the IPS Resource Directory. This publication could be considered the "Yellow Pages" of the planetarium world. Anything and everything you could ever envision needing under your dome or to support your profession is available in this publication. The Product Category pages contain such information as *full dome shows/software*, 10 pages, *telescopes/binoculars*, 6 pages, *parts/lamps*, 4 pages, *video hardware*, 5 pages, etc, etc. There are links to companies and indexes by country and staff.

All of this information is at your fingertips for a 1-year membership of \$65, or a 2-year membership of \$100.

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

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: _____

GOTO

My Town, Our Planetarium # 188

Rebirth of a Czech Jewel

Ostrava, the third-largest city in the Czech Republic, lies in the eastern part of the country, near the border with Poland. Once known primarily as a coal mining and heavy industry city, it now proudly offers new opportunities in the arts, culture, music, and education, including the VSB Technical University and its planetarium.

Opened in 1980, it is now named for the famous Czech astronomer Johann Palisa, who discovered more than 122 asteroids in the early 1900's. The entire planetarium building has recently undergone a total to-the-walls renovation and has re-emerged as a true jewel of astronomy and science education. Exhibits on astronomy, astronautics, physics, geology and seismology join a beautiful observatory which is also open to the public.

About the planetarium's new GOTO INC projection system, Tomas Graf, scientific manager of the renovation project said, "The HYBRID planetarium allows us to satisfy the interest of many people, not only pupils and students from all kinds of schools but also the general public, parents, young children and even amateur and professional astronomers, who would appreciate an authentic image of the night sky." Graf even utilizes the system in popular programs featuring jazz, classical, and relaxation music.

The essential, authentic sky image is provided by the GOTO PANDIA HYBRID system. The GOTO PANDIA produces a spectacular sky from a tiny starball only 48 cm in diameter. It shines 8,500 brilliant stars onto the 13 meter dome, along with hundreds of deep sky objects and a 40,000,000 micro-star Milky Way. A full-dome video system from EVANS & SUTHERLAND is seamlessly linked and synchronized with the PANDIA through GOTO's unique HYBRID software and manual control console.

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Tel: +1-317-537-2806
E-Mail: gotousa@earthlink.net
Contact : Ken Miller

Editor's Message

James Sullivan
Buehler Planetarium & Observatory
Davie, FL

Submission deadlines: January 1 (Winter), April 1 (Spring), July 1 (Summer), October 1 (Fall).

Thanks to Broward College and its wonderful printing department for assistance.

Wow, the 2015 conference in Georgia is upon us. Next issue, we will start pushing the next one, 2016 in Montgomery, AL. It is hard to believe that this issue is a bit of a milestone ... at least for me. It marks ten years as Editor. I must say editing here is easy because of the brilliance of the people that make submittals to *Southern Skies*. If you have ever wanted to see your writing in print, submit something!

We can receive electronic files in most any format. Also, graphics can be received electronically or in hardcopy, including slides or photos, and will be converted to digital with sufficient resolution.



SEPA Membership Form

Please send your check to SEPA, c/o Patsy Wilson, 140 Lyn Road, Salisbury, NC 28147

____ One Year, \$25 (\$15 outside SEPA geographical region)

____ Two Years, \$40

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Organization _____

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City _____

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Voice Phone _____

Fax Phone _____

Email Address _____

Staff Position _____

IPS Member? Yes _____ No _____

Contribution to Scholarship Award Account: \$ _____

Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
Hedgesville, WV

There is nothing worse to happen to a planetarian than for them to lose their dome. It is happening more frequently to small domes in school systems and it conjures up great school planetarians to lose their domes such as Keith Goeing and Mike Ryan. Although I would not put myself in the “great school planetarian” category, it was non-the-less, my turn on January 20, 2015.

It was then that my principal popped his head into the door of the planetarium and called me into his office. Now last month, he had written me a glowing recommendation for my bid to apply to fly on a SOFIA mission. For those who do not know, SOFIA is the airborne infrared observatory who flies missions to study sky objects in infrared and they invite teachers to go along for the ride. After I had applied, I had sent him You Tube videos of teachers who had flown, and I kept hearing him talk about how great it was that I had applied and how he was hoping I would get to fly along.

This time was very different. He had said that the school system was suffering from a tremendous budget shortfall due to declining property revenues and an increase in the number of autistic kids we service and the now antiquated system the state bases school funding. The bottom line was that I still had a job, but it would no longer be in the planetarium, I would have to teach full time.

Now I have never taught full time in the twenty-seven years I have been here. I have always been “planetarium director” even when first hired, where I taught three classes and ran the planetarium the rest of the day. It was decided then that I was teaching when most of the classes who wished to come to the planetarium and so I ended up just teaching astronomy and running the planetarium the rest of the day.

I heard later from the science supervisor in the county, a former principal of our school who is now superintendent of secondary instruction as well as the superintendent of elementary instruction, who was also a former principal who I did science camp with, sat down together in a room and cut eighty positions across the county. The planetarium position was one of the positions cut, but since I have tenure, they have to offer me a position, and so it is a position to teach physical science. Our department chairs in the high school were pretty upset that they had no input into scheduling for next year as they had always had. Some of my colleagues in the department had said that it was strange that I was teaching physical science since they would think a better choice would be my teaching earth science and I must admit, I would feel more comfortable teaching earth science. There just seems to be a tremendous amount of sections of physical science. With at least two people being cut from each department, class sizes will become huge. My principal said the average class size will be at least 33 in the physical science class, although my department chair says more like 27. I do not know at this point who to believe.

In addition to the eighty positions cut, the faculty was told to limit photocopying and there is now a way to track individual use of the photocopiers as well as limits on its use. Everyone was also told to remove individual dorm refrigerators in the classroom. There is no longer a teacher resource center for us to use as well.

To make us all the more depressed, there are two lawsuits against the school district, one of which for financial misdealings by the superintendent and assistant superintendent and everyone at the board office were designated essential personnel and no one there will have a job cut.

All of this has left students as well as faculty in a great funk. It did not help much with our state legislature instituting education bills about bringing in



“Teach For America” as well as charter schools, making an already limited budget, even more limited. Thank goodness the crazy bill about firing social studies teachers for promoting un-American content in their classrooms, what ever that was interpreted as, was cancelled.

But I have not taught full time since 1985, and I am not relishing the thought. I am two years from retirement, so when I went to visit friend and fellow astronomy instructor, Dr. Jason Best at Shepherd University, he told me that I should do this for myself, don't jeopardize my retirement, after which I could go do what I want. He said it was like being on a plane and hearing the safety regulations to put the mask on your own face before taking care of others. He reminded me that the school board had never really supported me, if they had, I would be full dome digital by now, or at least they would have fixed the collapsed ceiling in the planetarium. I must admit, he does have a point.



Students from Mr. Hudkins' drama class check out the fix Mr. Bamburger did to the ceiling where tiles fell out.

So here I be. Sad, that the planetarium will sit unused next year, an overpriced storage room at best, telescopes sitting idle. I am thinking that I should just accept my fate, or search for another dome to work in or protest the reassignment to the school board with no hope I will be reinstated. Teaching was always my fall back on career. Looks like I will be falling back on it.

By the way, this year we had service done on the star projector in October and just bought equipment from Mitch Lumen in Indiana as his planetarium finally went digital, stuff I will not get to use. Total money spent so far this year, \$854.34.

Cards and e-mails from people in the field have been very helpful as well and encouraging. However, I have been somewhat depressed, but had a few bright moments, I caught a beautiful view of Venus and the Moon on a frigid morning. I also did a “Preparing for the Upcoming Total Lunar Eclipse” program. My only takers were a father/son team who were last at my overcrowded comet show last year and were happy to have a program all to themselves.



Right now I am trying to decide if I wish to go to SEPA and/or WAC this summer. Is it worth it, since there will be nothing there I can use in the classroom next year.

Hope things are looking up for you. If happy things are happening in your “small” dome, no matter how you define “small,” drop a line, call or e-mail. I could use some cheering up.



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BOOKENDS

Robin Byrne
Northeast State Community College
Blountville, TN

Revolution in Time: Clocks and the Making of the Modern World

by David S. Landes

Let us once again peruse ye olde bookshelf for a book review. "Revolution in Time: Clocks and the Making of the Modern World" by David S. Landes was published in 1983. However, since it focuses on the history of watches, being an older book doesn't affect the information very much.

The author, David Landes, is an economist who collects old watches, and those two areas of interest definitely influence his approach to this subject. Be prepared for plenty of arcane watch terminology plus a hefty dose of world economics. You also may want to brush up on various languages (Latin, French and German, to name a few), since Landes enjoys throwing in an occasional word or phrase without translation.

Landes organizes the book into four main themes. He begins by exploring the transition from sundials for keeping time, along with gear driven devices designed for entertainment, to actual gear driven time keepers, typically powered by falling water. This early section is when you are first introduced to various watch parts and their names. If you really want to keep up, I'd recommend taking notes. I did not do that, so the fine nuances of each part's development floated past me like so much fluff. I was fine with that. It was during this section that I became annoyed that the illustrations were on separate glossy pages, far from the text that references each illustration. Combining the illustrations along with the text would have been much better, even if they could not be printed with as high of quality.

Once actual clocks are being manufactured, the next section focuses on accuracy of time pieces. The main driving force behind this endeavor was for

astronomical and navigational uses. This was especially important for determining longitude at sea (see Dava Sobel's "Longitude" for an excellent discussion of that saga). Many people were involved with improving clocks, and we encounter each one and their particular contributions. We meet many rivals, nationalistic endeavors for supremacy, suspicion, jealousy, and even fraud, as each man strives to lay claim to creating the most accurate clock. While John Harrison was awarded the prize for a clock that could run accurately at sea, his design was so intricate that it was not practical to mass produce. That was the next goal, and many people helped develop smaller clocks (and, eventually, pocket watches) that were both accurate enough to use at sea, while being easy enough to produce in large quantities.

The process of creating better watches, in large numbers, takes us into the world of business. Here, Landes explores each major country and their manufacturing processes. Various European nations laid claim to quality watch-making at different times, and Landes looks at each in detail. England, France, Germany, Switzerland, and Geneva each went through eras during which they were considered the best watch-makers in the world. Landes takes us on the journey from a cottage industry where one man made the watch from start to finish, to later developments of using machine presses to make generic parts that could be used by multiple manufacturers. At this point, a single watch is made by several people, each of whom specializes in one step of the process. It is also during this time that watches are being exported to other countries, which creates unwanted competition in countries already making their own watches. Many companies do not survive, while others become established as the world's standard. The United States enters into the story near the end. Despite some poor business practices, American watches take over in the market of affordable wrist watches, especially by Timex. Meanwhile, Swiss watches continued to be considered the best made watches, but at a price.



(Continued on page 18)



Patsy Wilson
Salisbury, NC

2014 Year-End Financial Report

Southeastern Planetarium Association
Submitted by Patsy Wilson
December 31, 2014

All funds held at Branch Banking and Trust Company, Chapel Hill, North Carolina.

Balances as of 12/31/14:

Operating	8,154.84
Savings	42,170.44
PD Fund	<u>10,373.56</u>
Total	60,698.84

Operating Account

Balance (as of 1/1/14) **23,923.66**

Income:

Full Membership	1,230.00
Associate Membership	125.00
Dues paid at conference	885.00
Journal Ads	3,680.00
Transfer from Savings	3,000.00
<i>The Planets Show Kit</i>	80.00
Correct Deposit Error	4.00
PD Fund Donations	30.00

Total Income **9,034.00**

Total Credits **32,957.66**

Disbursements:

Journal (three issues)	1,632.71
Awards & Plaques	203.19
Website	3,976.74
<i>(develop, maintain, domain)</i>	
SC Secretary of State	10.00
<i>(filing fee)</i>	
USPS-Postage/Shipping	18.70

Service Charges	31.00
<i>(Wire Transfers)</i>	
Conference Registration	357.50
<i>(2 PD Awards)</i>	
Marriott Lake Mary	7,084.58
<i>(Room Attrition)</i>	
FullDomeFX	5,720.00
<i>(The Planets for fulldome)</i>	
2015 Conference	629.75
<i>(Seed Money)</i>	
Vendor Support to PD Fund	
	4,333.00
Hospitality Expenses	805.65
<i>(2014 Conference)</i>	
Total Debits	<u>(24,802.82)</u>
Balance (as of 12/31/14)	8,154.84

Savings Account

Balance (as of 1/1/14) **25,647.69**

Income:

2013 Conf. Profit	19,456.26
Interest earned	66.49
Total Income	<u>19,522.75</u>
Total Credits	<u>45,170.44</u>

Disbursements:

Transfer to Operating Account	<u>(3,000.00)</u>
Balance (as of 12/31/14)	42,170.44

Professional Development Scholarship

Account (as of 1/1/14) **5,753.56**

Income:

Proceeds from Silent Auction	287.00
Vendor Support-2013 Conf.	<u>4,333.00</u>
Total Income	4,620.00
Total Credits:	<u>10,373.56</u>
Balance (as of 12/31/14)	10,373.56

Dollars and Sense – Spring Issue, 2015

Patsy Wilson reports: The balances in our accounts as of April 1, 2015 are:

Checking	18,667.38
Business Checking	\$42,178.03
Professional Development Fund	\$10,046.06

All funds are held at Branch, Banking and Trust (BB&T).

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January 2014

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Bay Village, OH - May 2014

Hurst Planetarium, Jackson, MI
June 2014

Museum of Arts and Science
Daytona Beach, FL - July 2014

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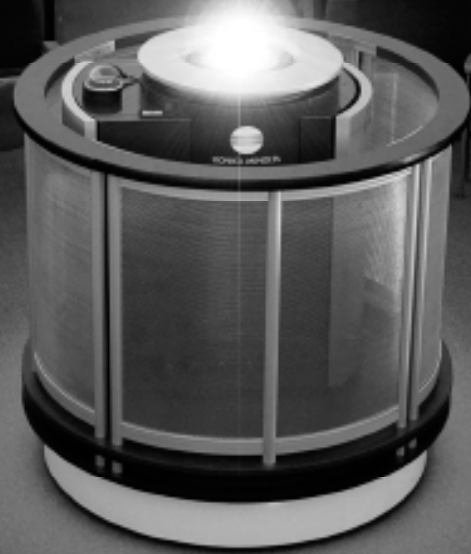
Contact: Steve Hatfield at steve@av-imagineering.com 1-407-859-8166

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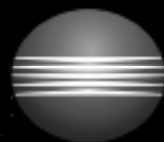
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SEPA 2015

Tell Me A Story

Planetarium
Tellus NW GA Science Museum
Cartersville, GA

Tellus Science Museum is 120,000 square feet of science adventure, featuring four galleries; a 240-seat theater; a forty-foot domed, fully-digital planetarium; and a 20-inch Planewave telescope in our on-site observatory.

Our museum is located an easy 40 minutes north of downtown Atlanta, and an hour south of Chattanooga. Cartersville is the site not only of three additional museums and historic sites, but it is home to theater, restaurants, and many fun and eclectic shopping opportunities.

The theme of this year's SEPA conference is "Tell Me a Story". We are all story tellers who use our talents to share the stories of the cosmos.

This conference will keep you very busy. We have workshops, multiple papers, dome demonstrations, and much more.

Workshops will cover a variety of topics, including: meteorite identification, GoPro cameras (with a nominal fee, you can even take home a GoPro

(Continued on page 17)

SEPA 2015 (Continued from page 16)

camera for your institution!), educational materials for your programs, and the fun of live shows.

Our keynote speaker will be Mark Kochte, Encounter Mission Specialist at Applied Physics Laboratory, Johns Hopkins University; Mark has also worked on the Messenger Mission. During his talk, he will be giving us the latest scoop on the New Horizons Space Craft and its mission. The very night he is speaking at our SEPA banquet, APL will be fully powering up the space craft! How cool is that?

Not only will there be activities at Tellus Museum, we have a great field trip planned. You can join us to spend a day at Huntsville Space Center, tour Marshall Space Flight Center, and visit the Wernher von Braun Planetarium.



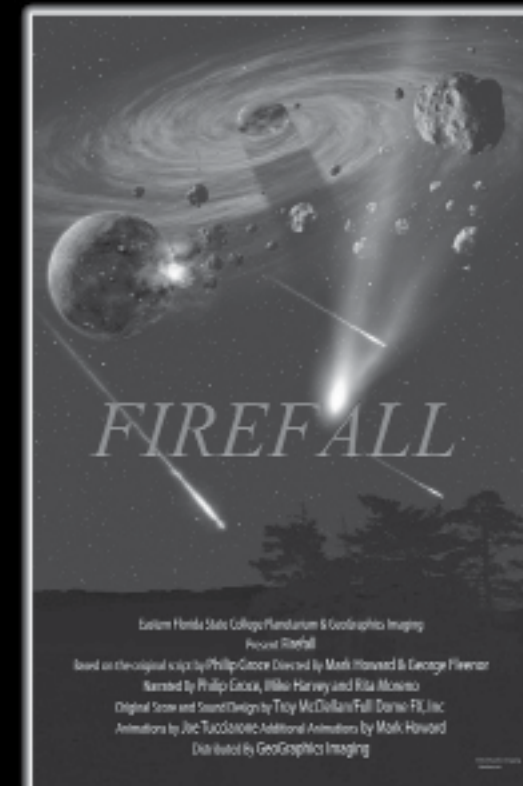
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Terrifying and majestic, these invaders from space are capable of utter destruction yet they have delivered life-giving water and most of the organic materials necessary for life.

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This ceaseless Firefall is our only tangible connection to the universe beyond and is an ever-present reminder of our own humble beginnings in the hostile environment of space.

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Book Review (Continued from page 11)

The end of the book explores the rise of digital watches run by quartz crystals. Many traditional watch makers shunned this new technology, and, subsequently, lost out on a rising market. However, Japan and Hong Kong quickly rose to dominate the digital watch market. Being published in 1983, digital watches were at their height of popularity. It brought to mind the following passage from "The Hitchhiker's Guide to the Galaxy" by Douglas Adams: "Far out in the uncharted backwaters of the unfashionable end of the Western Spiral arm of the Galaxy lies a small unregarded yellow sun. Orbiting this at a distance of roughly ninety-eight million miles is an utterly insignificant little blue-green planet whose ape-descended life forms are so amazingly primitive that they still think digital watches are a pretty neat idea."

Today, many people don't even wear a watch, instead using their cell phone as their portable time-keeper. As Landes described all the wondrous features of digital watches (ability to display times in more than one time zone, alarms, and calculators), I

wondered what he would have thought if someone told him that 30 years later there would be devices that could tell the time, be used as a phone, could access unlimited information, take pictures and movies, play music, and could perform more functions than a computer of 1983 could even dream of. Would he have been amazed or incredulous?

"Revolution in Time: Clocks and the Making of the Modern World" is not an easy read. Parts of it are a tedious slog through more details than you'd ever want to know about watch parts, while other sections are an interesting story of the people and history of the watch-making industry, and then back to a slog through economic theory and its applications to the watch industry. Overall, not a well-balanced book. Depending on where your interests are will ultimately determine if this book is worth your time.

"Revolution in Time: Clocks and the Making of the Modern World" by David S. Landes; The Belknap Press of Harvard University Press, 1983

SEPA 2015 Professional Development Fund SILENT AUCTION

Dave Maness
Sharpe Planetarium
Memphis, TN

This Silent Auction is a fun activity held at each SEPA Conference. The funds raised from the auction go to help support the Professional Development Fund (PDF), which was set up by SEPA Council in order to benefit colleagues who might not otherwise be able to afford to attend the conference.



If you think you are a good candidate please apply as soon as possible using the form on the www.sepadomes.org website. Also, check the website for information about SEPA 2015.

It's time once again to start thinking about what items you would like to donate to this year's silent auction.

What we need from the membership (as always) are your contributions of items or services that you would be willing to provide to the highest bidder. In the past we have offered books, games, artwork, crafts (including a beautiful hand-made quilt and some hand-tooled leather belts), musical CDs, books and even an actual piece of space memorabilia. We have gotten some of the highest prices for items that were hand made works of art. I know there are some very talented people out there. Of

course we also like space related items and artifacts. So think it over and let me know if you plan to bring something along to the conference. Knowing what to expect ahead of time will help us plan the space requirements.

To all those who provided items and bid on items in the past, I cannot thank you enough.

I have provided a form for you to use in describing the item(s) you plan to bring for auction. If you have an item you want to donate, but cannot make it to the conference, then please send it to me or to the conference host.

As usual the auction will take place in the mingling time before the banquet. Thanks again for your participation as an item provider, bidder, raffle ticket buyer, or all three. I hope to see you all at SEPA 2015.

SEPA SILENT AUCTION ITEM

If you cannot bring the item, draw a picture or paste a photo here (if you think it will help with the sale.)

Item:

Description: _____

Offered by (Your name): _____

Preferred mode of contact information (Phone, Mail, Email, Fax, Telegram, Pony Express, or other)

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News From SEPA Region

ALABAMA

contact: Mitzi Adams
Wernher von Braun Planetarium
Huntsville, AL
mitzi.adams@nasa.gov



Planetarium University of North Alabama Florence, AL

Mel Blake reports: UNA planetarium has had a very busy late winter/early spring, although ice storms precluded some of the fun. Up to now, our normal Tuesday public nights and school visits continued successfully. We began a partnership with the Northwest Alabama Girl Scouts as part of a task force to encourage schools with populations of economically-disadvantaged families to target fifth-grade girls so they are inspired to seek careers in science. We travel to the schools and do interactive programs on weather and physics. This program is ongoing. So far we have done three workshops with two canceled due to poor weather; these two will take place in April. I am officially a member of the task force with the Girl Scouts.

In February we attended the middle-school science fair to encourage grade eight students to choose physics as a career. We were aided by volunteers from the UNA chapter of the Society of Physics Students. Also in February we performed our annual LASER shows for Valentine's Day with a rented Skylase system from Audio Visual Imaging. The program combined Pink Floyd's *Dark Side of the Moon* with a sampling of Led Zeppelin. These programs have become very popular for us

and were very well attended. In March we started up the First Friday's Sidewalk Astronomy in partnership with the Shoals Astronomy Club. For this monthly street arts festival, we set up a telescope for passersby to view the Moon and planets. Over 75 people took a look through the telescope on March 6th. One highlight in March was a visit by a Daisy troop of the Girl Scouts. The young girls learned about constellations and made a star viewer from a cardboard tube and constellation templates to simulate the appearance of constellations. We modified the activity presented on the Momma Owls website: <http://mommaowlslab.blogspot.com/2013/09/diy-constellation-tubes.html>. This activity was new for us and went well.



Daisies make a constellation viewer from a cardboard tube and star stickers. March 7th.

At the end of March we did a program we call *Telescope Night* as part of our partnership with the Florence Public Library. Along with volunteers from the Shoals Astronomy Club, we invite members of the public who have telescopes to bring them in. We help them learn how to use their own equipment and explain the workings and purpose of the various parts. This time there were three telescopes brought to us, including that of nine year old Olivia, who got her telescope for Christmas, but had not been able to find anything with it. The telescope was a Celestron on a German mount, which is a lot of telescope for a nine year old. After some instruction she was able to point the telescope at the Moon on her own. This was a fine ending for *Telescope Night* at the Library.



Nine year old Olivia practices with her Celestron telescope. After some help she was successful in pointing her telescope at the Moon, March 30th. at the Florence Public library.

Christenberry Planetarium Samford University Homewood, AL

A. David Weigel reports: The Christenberry Planetarium at Samford University is back in commission as of September of 2014, with the hiring of a director, David Weigel. From September 2014 to March 2015, we have produced eight original shows, along with a solar and lunar eclipse viewing. These shows plus the two eclipse viewings have accounted for 18 individual events with a total attendance of 1199. We had an additional attendance of 1554 from school field trips in this time



Here is a view inside the Christenberry Planetarium.

period. Our shows are made using Worldwide Telescope, which is freely available from the Microsoft Research Group. Our shows are all live and interactive, meaning that each show is unique and tailored to the audience's interests within the topic of the presentation. Weather permitting, we take telescopes out after the show into the quad to look for the objects discussed in the presentation.

Beginning in September, we presented *Alabama Autumn Skies*, a night sky show detailing the prominent autumn constellations, their associated stories, planets, stars, and deep sky objects; this program was reworked for the winter and spring seasons.

Alabama Autumn Skies: Eclipse was presented in early October highlighting eclipse dynamics of both lunar and solar eclipses and basic dynamics in the solar system. The introductory video to this show has become our trailer which you can view here: <https://youtu.be/vTq76MZ3V-U>. We camped out at our observatory (across the street, on the roof) a couple days later to witness the total lunar eclipse (October 8, 2014). There was a tremendous Samford student presence, of about 60 people, for a 3-6 a.m. event. A couple weeks after, we hosted a viewing for the partial solar eclipse, but ran into some poor luck with weather, although we caught a nice glimpse of the eclipse for about three minutes just before sunset.

Late October featured *Alabama Autumn Skies: Mars*, a presentation detailing the various active Mars missions and highlighting the many exciting features of the Martian surface. We looked specifically at Opportunity and Curiosity's traverse paths, as well as Olympus Mons and Valles Marineris.

In December, we presented an entirely reworked *Star of Bethlehem* special, looking at possibilities for the Star of Bethlehem from a historical, astronomical, and biblical perspective, which segued into the true meaning of Christmas (a la Charlie Brown). This was by far our most popular presentation, boasting four out of four sell out shows and which, required an encore on the final night to accommodate everyone.

Alabama Winter Skies: Comet Landing tested the capabilities of the Worldwide Telescope software in February. This presentation described the ESA Rosetta mission that dropped a lander (Philae) on

comet 67P Churyumov-Gerasimenko. We imported the orbital trajectories of both the satellite and comet, as well as the 3D models, and took a good look comet structure. Further, we discussed solar system history and formation to gain insight into comet history and composition. The introductory video for this show is available online here: https://youtu.be/bvqI2y9_X_Y.

I'm beginning to get the hang of this! Our most recent presentation, *Alabama Spring Skies: Astronomy 101* is the fruit of my labors from the past 7 months. Our March show discussed the basics of the universe as we spoke about our galaxy and the solar system, visiting the Sun, all the planets, the Moon, Ganymede, and even comet 67P. We have certainly provided a very broad, very exciting look at space!!



In the lobby of the planetarium, young Scouts take a rest. The oldest "scout" on the far left, is A. David Weigel, Planetarium Director.

We look forward to the summer with great anticipation, at which time we hope to present shows about asteroids (the Dawn mission to Ceres) and Pluto (New Horizons mission). We are also likely to recycle many of the previous shows for summer viewing. Be sure to stop by for a visit if you are in the Birmingham, AL area and keep up with us via social media.

Facebook: <https://www.facebook.com/ChristenberryPlanetariumSU>
Twitter: https://twitter.com/Planetarium_SU, give us a shout using #GetExcitedSU.

FLORIDA

contact: *George Fleenor*
GeoGraphics Imaging and Consulting, Bradenton, FL
Jetson1959@aol.com



Buehler Planetarium Broward College Davie, FL

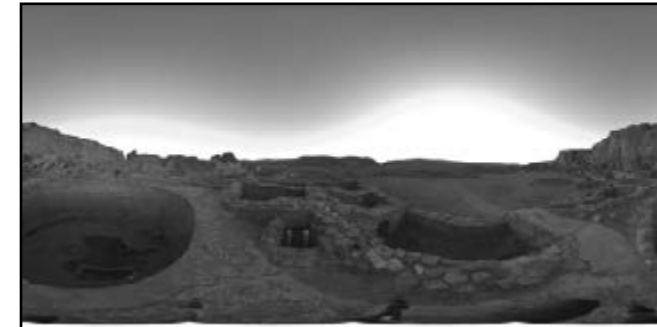
Susan J. Barnett reports: The Buehler Planetarium & Observatory is running public shows four days a week. The weekend shows and monthly specials include *Infinity Express*, *Amazing Stargazing*, *The Missing Universe*, *The Dwarf Planets* and *Saturn: Journey to the Ringed World*.

The Buehler Observatory has viewing four times a week. It has free public observing Wednesday, Friday, and Saturday evenings. In addition, we observe the Sun on Wednesday afternoons.

Buehler Perpetual Trust Planetarium Seminole State College of Florida Sanford, Fla.

Derek Demeter reports: We hosted a number of special events during the winter months here at the Buehler Planetarium. Our first big event was held on January 31, our Winter Sky Festival. Over 1,200 people came to enjoy the festivities which included science and technology demos, planetarium laser shows, food trucks, space story time, astronomy presentations, and of course dozens and dozens of telescopes. Our next event was the Harmony Dark Sky Festival, which was held in late February. Unfortunately the rain dampened the activities for the evening but we assisted in providing portable planetarium programs indoors. Michael and I traveled during our spring break to produce content for several new planetarium programs. The work I did was done in New Mexico and Arizona and produced new full dome content for our Native American astronomy program and content for future earth science shows. Michael traveled through Virginia and Maryland documenting historical sites from the Civil

War era of American history that will be featured in a special planetarium show "The Civil War: which was presented during the week of the 150th anniversary of the end of the war.



Above: CoChaco Canyon Spherical Panorama (credit: Derek Demeter)

Below: McLean House fisheye featured in "The Civil War" planetarium program. Credit: Michael McConville).



GEORGIA

contact: *David Dundee*
Tellus Museum
Cartersville, GA
DavidD@tellusmuseum.org



Fernbank Science Center Planetarium Atlanta, GA

April Whitt reports: Fernbank Science Center hosted

the opening of the Atlanta Science Festival with a day of science activities on March 21. Spring Into Science, Nanoday, and the Southern Order of Storytellers entertained and educated hundreds of visitors.

The week of Festival continued with a lecture about pheromones and a perfume-making class, a neurobiologist from Georgia Tech with the latest on the dynamics of memory, and a Cosmic Camp-in complete with a marshmallow freeze, campfire chemistry and late-night planetarium program.

Fernbank's planetarium is growing in popularity as a concert venue. Jonn Serrie's "Lucky In Love" concert on Friday, February 13 brought a good crowd to the planetarium for music and poetry under the stars. Cypress South does their show on May 1, and the DeKalb Choral Guild has chosen songs with a celestial theme for their concert on May 8.

The reviving economy is bringing more school groups to our planetarium lessons, and both Groupon and Living Social offers have sent public attendance on weekends soaring.

To round out a great spring, I learned in February that Susan Oltman - a 6th grade science teacher at Kittredge Magnet School in DeKalb County - and I have been selected as SOFIA Airborne Ambassadors. We're part of a group of 28 educators from around the country who will fly with scientists on the Stratospheric Observatory for Infrared Astronomy in the fall of 2015. Rejoice with us! The observatory and its incredible volunteers have been busy. A run of clear nights brought Jupiter-watchers out in force.

Planetarium Tellus NW GA Science Museum Cartersville, GA

David Dundee reports: We had a busy winter at Tellus. We hosted two sold out Junior Astronomy workshops in the observatory and planetarium. We also had another successful rocket launch day with our biannual **Build and Blast** event. We opened **Dynamic Earth** in the planetarium. We have had several planetarium rentals for wedding proposals. We are offering discounts to those happy couples if they do their weddings at Tellus too. Tellus was on

the main stage performing at the 2015 Atlanta Science Festival. We also had the observatory open for solar observations as part of that event.

**Smith Planetarium
Walker County Science and Technology Center
Chickamauga, GA**

Jim & Shirley Smith report: Smith Planetarium has had a very active school year serving student groups from Georgia, Tennessee and Alabama. Staff members are looking forward to summer activities and attending the upcoming SEPA Conference at the Tellus Museum in Cartersville, GA.

* The Helen Solomon Rock and Mineral Collection is being viewed and enjoyed by visitors to our center. Geologist Nathan Robey from the University of Tennessee at Chattanooga unpacked, sorted, labeled and prepared the collection for display.

* EARTH, MOON AND SUN produced by Morehead Planetarium at the University of North Carolina has been added to our list of programs.

* NASA's 14" Meade LX200-ACF telescope is presently in Huntsville, Alabama, getting a much needed refurbishment. After reinstallation of the telescope this summer, we will be able to show live images on the dome in the planetarium to our night time public. When not being used by NASA or the planetarium, students may remotely access the telescope after approval of project driven requests. NASA uses the telescope to monitor comets to determine their rate of meteoroid production.

* Our center will host Walker County's LEGO CAMP again this summer.

**Georgia Southern Planetarium
Georgia Southern University
Statesboro, GA**

Becky Lowder reports: The Georgia Southern University Planetarium has had a very exciting and busy spring semester with public events each month, visiting school and adult groups visiting each week-day, as well as many university classes being taught in the planetarium.

Each spring we treat our students and community with the Planetarium Hamburg full-dome presenta-

tion, *Lichtmond – Universe of Light*. We also participated in "No Impact Week" on our campus with multiple showings of *Ice World*, and demonstrated ways to lessen our carbon footprint. We celebrated the 5th Anniversary of our University President, Dr. Brooks Keel, with a public evening presenting *Life – A Cosmic Story*. We're enjoying showing ESO's *Journey to the Center of the Milky Way* full-dome presentation as well as *New Horizons for a Little Planet*. My university student interns and I have enjoyed sharing the excitement of the missions exploring our solar system and beyond!

We welcome the visiting groups in with the ISS in orbit above Earth on the dome, and engage the students in discussions about what they are seeing. We explore how to see it pass overhead from their back yards, where does it get electricity from, discuss the latest expeditions, and of course, R2, looking more like C3PO. With asking the visiting students questions, and answering their many wonderful and sometimes unique questions, we're hopefully inspiring the next generation of astronauts, astronomers, scientists, teachers, engineers, and more. Our university interns have enjoyed creating their own live interactive current sky presentations, sharing how to simply star-hop around the constellations to find them and their deep sky objects within. We love hearing the visiting school children share their stories they've learned of the constellations and the excitement in their voices when they've spotted them on the dome! It brings great joy to me when my university astronomy lab students, or my planetarium interns come in to class to tell me about how they spotted an object in the real sky we'd been learning about, or showing me the latest images or discoveries in astronomy they'd seen. To me, this is what working in the planetarium and astronomy field is all about. We enjoy engaging the visiting students in a short solar system walk outdoors based on 1 AU = 1 meter, asking them questions to select individuals to be the planets. After Neptune, the rest of them are asteroids orbiting the Sun between Mars and Jupiter so none of the students are left out of participating. We then observe the Sun and any sunspots safely with our Sunspotter telescope and safe solar eclipse shades while asking them questions on why the image of the Sun is moving across the paper, leading into the fact that the Earth is spinning at over 1000 miles per hour. The next question is "Why don't we fly off the Earth

if we're spinning that fast? – GRAVITY!" I always end my visits with, "I'm in my 61st journey around the Sun! How many journeys have YOU made on planet Earth around the Sun?" Most of them understand, and gleefully yell out how old they are. I'm still learning new discoveries on every journey, and I encourage them to keep on learning new things about this incredible universe we live in on each new journey THEY take around the Sun!



I bid you all farewell my dear SEPA friends as I leave to take care of my mother full-time at home. My heartfelt thanks to all my "kindred spirits of the dome" for the 16+ amazing years of support, advice, and most of all, your friendship. Wishing everyone as always, clear skies!

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

**East Kentucky Science Center & Planetarium
Big Sandy Community and Technical College
Prestonsburg, KY**

Steve Russo reports: It's been pretty busy here at

the EKSC since the Summer.

We held ten Summer camps on a variety of science topics including Astronomy, Rocketry, Chemistry, Biology, Magnetism, and Robotics. All ten camps were filled to capacity with 30 students in each.

Our Summer was also spent doing outreach programs to housing projects in surrounding counties, and programs in the library system as part of the "Fizz, Boom, Read" nationwide Collaborative Summer Library Program. This Summer's program was a science based theme, and was designed to keep kids reading over the Summer.

The Fall was busy with the EKSC making appearance at several community events, holding our Halloween open house, our annual "Early Childhood event" and our regional science fair. Each of these activities attracted literally hundreds of people.

Our big event was our "Block Party." A grant allowed us to purchase many different block set-ups to teach kids about engineering concepts. Several hundred children and adults participated in this event.

The winter season was hard on us, as here in eastern Kentucky, one inch of snow will shut the schools for several days. Major snowstorms of a foot and 8 inches, had some schools out for a month, and even our Science Center was closed for eight days in February. But things are looking good, as we were booked solid for March and totally booked for April, and are now in planning for Astronomy Day, and Summer Camps.

The end of March also saw the return of NANO Days here at the EKSC. A day of demonstrations and hands on activities relating to the science of Nano-Technology. The EKSC is one of only three science Centers in Kentucky that hosted NANO Days.

Support for the EKSC remains strong in the community as proven by the money raised in the annual William G Duke Golf Scramble. Each year, Big Sandy Community and Technical College (The organization that runs the EKSC) holds an annual fund raiser. The President of the college picked the Science Center to get the proceeds from this year's scramble. The Golf Scramble raised almost



The staff of the East Kentucky Science Center poses with the block exhibit. Pauletta, Steve, Heather, and Susan, in the window!

\$30,000.00 (yes, thirty thousand dollars) for the Science Center. Not too bad since the EKSC is located in a town of 3400 people!

Considering the state of the economy, and the fact that eastern Kentucky is an area that has a lot of poverty, our attendance at the EKSC was up 10 percent in 2013/2014 from the year before.

And please don't forget, that I am the contact for the state of Kentucky for the News From SEPA Region. I want to hear from all of the Bluegrass State planetariums. E-mail me srusso0002@kctcs.edu or srltts@suddenlink.net

Until next time, "Look To The Skies!!!!"



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

Jon Elvert reports: Coinciding with the Hubble Space Telescope's 25th anniversary, the Pennington Planetarium premiered a photo exhibit, beginning with the infamous image of M100 and concluding

with the recent water vapor plume image on Europa. The exhibit runs through August. We also offered a series of HST related anniversary webinars for the public. In April, we hosted an all-day public event on National Astronomy Day highlighting Hubble's anniversary, careers in astronomy, light pollution, and proposed NASA future missions.

We continued with our primary line-up of public shows: *Dark Universe and Hitchhiker's Tour Through the Universe*, the latter being a live presenter-led tour of the contents of the universe emphasizing the scaling of celestial objects from the Earth-Moon system to the furthest known galactic structures. It's essentially a show about visualizing perspective and the relationship with space and time.

In March, we concluded our winter astronomy lecturer series with an update on the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), located not far from Baton Rouge, which "should" detect those elusive gravity waves.

**Lafayette Planetarium
Lafayette Science Museum
Lafayette, LA**

Dave Hostetter reports: The Lafayette Science Museum Planetarium has had a fairly quiet winter and spring sandwiched between a couple big events. Over 300 school kids and public visitors participated in presentations and viewing of NASA's Orion test flight back in December, which was followed a few days later by over 400 people looking through our telescope at the moon during a Christmas festival.

The big events coming up in April are the 25th anniversary of the Hubble Space Telescope's launch, and another festival. Because of previous commitments we have to do Hubble programming the weekend before the actual anniversary, but with a new dinosaur fossil exhibit opening just prior to that we hope to see a lot of people attend. An annual international music festival in Lafayette on the actual Hubble anniversary should bring over 200,000 people literally past the Museum's door over a three day period. We will be open for free for that Saturday and Sunday and expect thousands to go through the Museum. If the weather is good,

our sidewalk telescope that Friday night should be plenty busy!

In between those festivals we have been putting together live segments for spring and summer programs. In April one of our public programs will be *Galaxies and Cosmic Castaways*, using Cosmo Quest's *Cosmic Castaways* program with a live 10-minute introduction to galaxies and galaxy interactions. We are also in the final stages of developing a live program segment for the summer about Pluto and New Horizons.



**Robeson Planetarium and Science Center
Lumberton, NC**

Ken Brandt reports: By the time you read this, we will have completed the following outreach activities:

1. The North Carolina Science Festival and Star Party (thanks to Morehead Planetarium for coordinating this!)
2. Hubble 25 anniversary simulcast
3. Can U C Ceres

We have been visited by over 9,000 school children this year. Most of the 5th graders were shown the *Back to the Moon for Good* program, from the Google Lunar X Prize, and produced by the California Academy of Sciences. The 4th graders were treated to a program about Curiosity, and then given updates to the mission.

They then look for mineral specimens like the ones they could find in NC. I managed to get a mineral flume installed into my science center 6 years ago, and it is by far the most fun of any of the activities we do back there. Contact me if you're curious about installing a flume at your facility.

Sixth grade audiences have been shown *Fragile Planet*, which goes into depth about potential sources for life in our solar system, then explores the possibility of earth-like planets. That's followed by an update of the most recent discoveries about water in our solar system and exoplanets beyond it.

As a high school student, you'd have seen *Natural Selection* by Robin Sip. We pull no punches, and lean headlong into the geological time necessary for life to develop as understood by modern science.

Our summer programs are a reboot of the 1980 release of *Cosmos*, featuring my hero, Carl Sagan. The main points to get to my audiences: Science is the finest method we humans have for seeking empirical truth. The cosmos can be interrogated and understood.

**PARI (Pisgah Astronomical Research Institute)
Rosman, NC**

Bob Hayward and Christi Whitworth report: Things continue to move along well at PARI thanks to a dedicated staff and some very talented and loyal volunteers. Christi just finished two training sessions for staff, volunteers and teachers on how to use the StarLab planetarium and how to use the Smiley radio telescope. Of course, everyone in SEPA is at least a bit familiar with STARLAB's and the training in its use is a standard event. However, what is not so standard is training on how to pack the station wagon or the pick-up truck we use to take the giant dome, projector and all sorts of other toys out to a school. So, now we have a cadre of individuals who now can help with those very important tasks.

Smiley is the 15-ft radio telescope left over from the days when NASA and DOD used this site. Some of the operators in those days, having a keen sense of humor, painted a smiley face on the dish as a greeting to any spacecraft of other nations that might be photographing the site from their own satellites. At the end of the Cold War, photographs of the then called Rosman Tracking Station were released and, sure enough, there was Smiley saying "Cheese" for the cameras. Now, Smiley is an important player in PARI's educational programs. Officially named the School of Galactic Radio Astronomy (SGRA) Smiley is used by high school students and teachers

throughout the world. After receiving the training such as the one recently held, teachers receive passwords that allow them to reserve the use of Smiley over the internet for their classes. Smiley is also used by PARI staff and volunteers when representing PARI at various conventions, museum public events and other gatherings of an educational nature, such as visits this winter for Astronomy Day at the NC Museum of Natural Sciences and the Atlanta Science Festival.



Smiley approves class.

Just before this writing Bob taught a full day (eight classes) with the StarLab at the local Brevard Elementary School. Five of the classes were 3rd graders who learned all about the phases of the moon. In the process Bob gave the teachers information on the upcoming total lunar eclipse of April 4 and asked the students if they would be willing to get up at 6 a.m. that Saturday morning. Of course, the responses were almost unanimous in the positive. Bob noticed some skepticism on the parts of the teachers. We look forward to the October eclipse which has been scheduled at a much more convenient hour for those of us on the east coast.

A new addition is under construction for PARI's exhibit area. John Sinclair, geologist extraordinaire, is preparing a gem and mineral exhibit hall for visitors to PARI. John is a valuable volunteer at PARI and is under contract to develop this valuable addition to PARI's exhibit area. At PARI we work hard to encompass all the earth sciences and many other sciences in educational programs and

John's contributions are part of this effort. John will be presenting a workshop at the SEPA meeting in Cartersville so those of us attending will be able to capture his enthusiasm for his subject first hand.

Christi continues her participation in the SciGirls program in partnership with the Transylvania County 4-H under a \$1000 grant from Exede, a local satellite internet provider. She has also taught courses in astrophotography and telescope building through two 8-week programs for Asheville Middle School which has been funded by Burroughs Wellcome Fund's Student Science Enrichment Program for the past three years.

SOUTH CAROLINA

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



DuPont Planetarium
Ruth Patrick Science Ed. Ctr., USC 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) debuted its newest show in mid March called, *Engineering the International Space Station*. The show was produced in house with a wonderful script written by our own very creative Darlene Smalley. Darlene led the production and took advantage of some of our college students to be "actors" in the show. The show is just under 35 minutes of running time with hands-on activities before and after the show to provide a one-hour experience.

On April 4, we celebrated the Lunar Eclipse that occurred in the morning by focusing on eclipses during our evening planetarium showing of *Dark Shadows*, which is a locally produced program.

On April 25, we hosted what we call, "Earth & Sky Night." Since National Astronomy Day is usually close to Earth Day, we combine the two into one celebration, although the astronomy side is cer-

tainly the highlight of the event. A variety of hands-on activities were available from 6:30 - 9:30 p.m. to help people understand the wonders of planet earth and space beyond. Many activities provided materials that visitors took home with them. Live animals such as snakes, turtles, alligators, and owls were on display. Telescopes operated by members of the Astronomy Club of Augusta were also available on the lawn outside of the RPSEC, and the RPSEC Observatory was open.

In April we debuted our new show to the public, *Engineering the International Space Station*. Student groups were able to see the new show; *More than Meets the Eye* from Lochness Productions; and *Dark Shadows*, a local production that explores moon phases and eclipses.

May will feature *To the Moon and Beyond*, a local production, and *Larry Cat in Space* from Lochness Productions. Our school groups will finish in mid May, and we will begin to focus on our summer programs, which we offer for groups on Tuesdays, Wednesdays and Thursdays.

In June, our public shows will be *In my Backyard* from the Calgary Science Centre and *More than Meets the Eye* from Lochness Productions.

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

Liz Klimek reports: We continue to stay busy here in Columbia as we enter the height of school group season. At the same time, we are gearing up for our first ever celebration of Astronomy Day, which will be combined with a celebration of the Hubble Space Telescope's 25th Anniversary. Called "Happy Hubble 25", we plan to offer a specially tailored live sky program as well as various hands-on activities for the event, which will take place the evening of Friday, April 24th. We will also be participating in the National Air and Space Museum's Hubble Anniversary Livestream Event. Additionally, the museum's observatory will be open for night sky viewing. We have also partnered with Astronomy Magazine to be able to give away a telescope in a drawing.

We have rotated new shows into our schedule, including *Violent Universe*, which opened on March 28. On Tuesday evenings we've introduced a 25-minute live sky tour, which runs just ahead of a laser rock show. These programs are part of a continuing effort to make Tuesday evenings special, as Tuesday is the only day of the week when the museum has extended hours. Our first laser show of the year was *The Beatles*, chosen to run alongside the opening of the museum's *Bugs Exhibit*, and it was later replaced by *The Doors*.

In January, the planetarium collaborated with our museum's own history curator to host its first ever live performance for a special event commemorating the 150th Anniversary of the Burning of Columbia. In a sequence of dramatic readings by live actors, the performance aimed to take audiences back in time to a historic night in 1865 that still resonates with Columbians today. The planetarium utilized its digital sky and cove light system to set the scene and create the atmosphere.

On April 30th the planetarium will host another live performance, this time featuring choral and organ music inspired by astronomy. This event is entitled "The Quadrivium", a term from the Middle Ages which encompasses the subjects of arithmetic, geometry, astronomy, and music. The planetarium will once again assemble and choreograph visuals to the music. Live musical performances will also take place in other parts of the museum, and the evening will also include night sky viewing in the observatory if weather permits.

Lots of exciting things continue to happen. I look forward to seeing many fellow planetarians at the upcoming SEPA conference in Cartersville!

Children's Museum of South Carolina
Myrtle Beach, SC

Kortnee Crumpler reports: The Children's Museum of South Carolina in Myrtle Beach, has been working diligently to improve the portable Digitalis Planetarium outreach program that they offer to schools throughout Horry and surrounding counties. As the Outreach Educator, I have transformed our portable Digitalis Planetarium program from a lecture style

program to an interactive lesson involving both students and teachers. Many teachers have expressed that the improvements make the program even more enjoyable than before. I am currently conducting a study to determine the relationship between increased movement and knowledge retention during the Digitalis Planetarium outreach program. The museum's overall mission is to promote and stimulate self-discovery through interactive learning experiences, which will enhance every child's understanding of his or her global community. Our goal is to incorporate our mission in all of our programming across the board. The Digitalis program is growing in popularity tremendously and we hope that we can continue to keep our program fresh and ever changing, for those that see us annually.

TENNESSEE

contact: Kris McCall
Sudekum Planetarium
Nashville, TN
krismccall@adventuresci.com



Bays Mountain Planetarium Kingsport, TN

Adam Thanz reports: Greetings Fellow Planetarians!

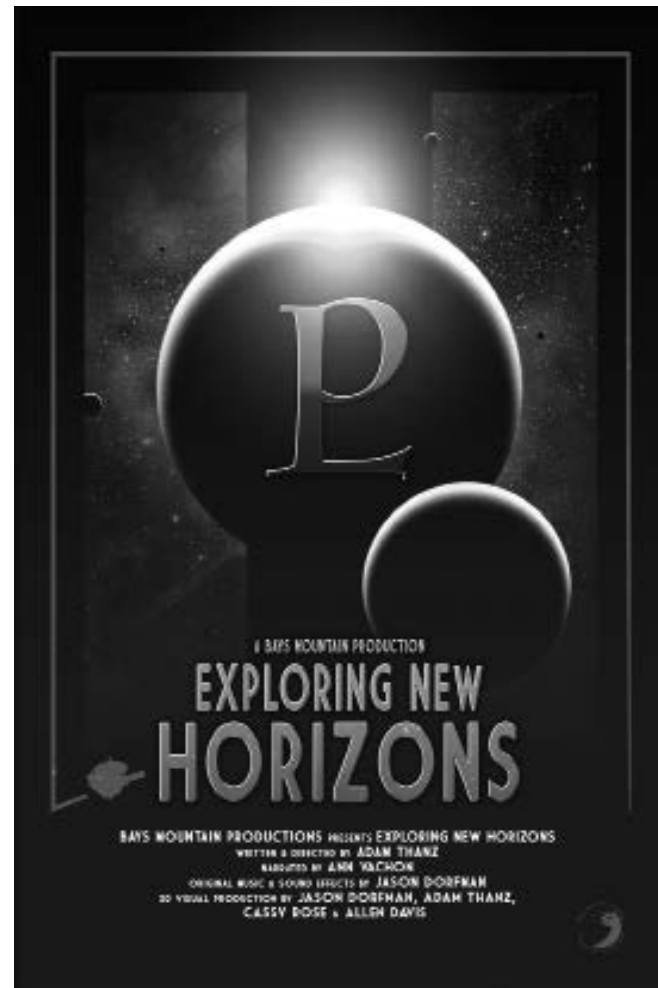
For those of us in the northern part of the southern part of the United States, we can say that Spring has sprung! The total snow amount wasn't so bad, but it all came at one time. Local schools were in and out of session, but mostly out for 2.5 weeks. I hope the weather didn't affect you too bad.

We're finishing up showing one of our productions entitled "A Part of the Sky Called Orion." It looks at three fascinating sky stories from three different ancient cultures; Greek, Egyptian, and Inupiaq. But, the common thread is that they are all using the same stars!

Our secondary program that is offered at 2 p.m. on the weekends is our live star program, "Appalachian Skies - Spring."

Our new public show for the summer will be

"Exploring New Horizons." When you read this, it will be available for distribution at an extremely low cost like we did for our Venus Transit program. It is about Pluto and the New Horizons spacecraft, but also the scientific method. It will primarily look at exploration, discovery, and our changing understanding based on new evidence. It will also look at the most famous of dwarf planets, Pluto, and its examination by the New Horizons craft. The program is designed to have two live sections to increase audience understanding and participation. One of these live sections will be activities to highlight the method of Pluto's discovery and also the scientific method. The second live section allows you to add the latest and greatest news and imagery of Pluto. This keeps the show up to date, allows for pre-flyby anticipation, and provides a way for the presenter to have audience engagement. See our website, baymountain.com or fddb.org for more info.



You'll be reading this just prior to the SEPA 2015 conference held in Cartersville, GA. You don't want to miss this event! The Tellus Science Museum and

Dave Dundee have a great event planned. Lots of education, hands-on exploration, inspiration, camaraderie and yummy food. All at very reasonable costs.

Jason Dorfman is going to provide a very informative presentation on audio formats, what they mean, and how to apply that understanding to audio files you receive (or create) for your theater.

I'm involved with a number of workshops and such, but the biggy is leading a two-hour workshop on using a GoPro camera for planetarium production. In fact, if you are one of the lucky 25 that pay the modest fee for the workshop, you'll go home with the top of the line GoPro camera (Hero 4 Black) along with some very useful accessories! There are an additional 25 workshop slots for no fee, but does not include the equipment. I must say at this point that this would not be possible if not for the generous financial support of SEPA and the SEPA 2015 Conference.

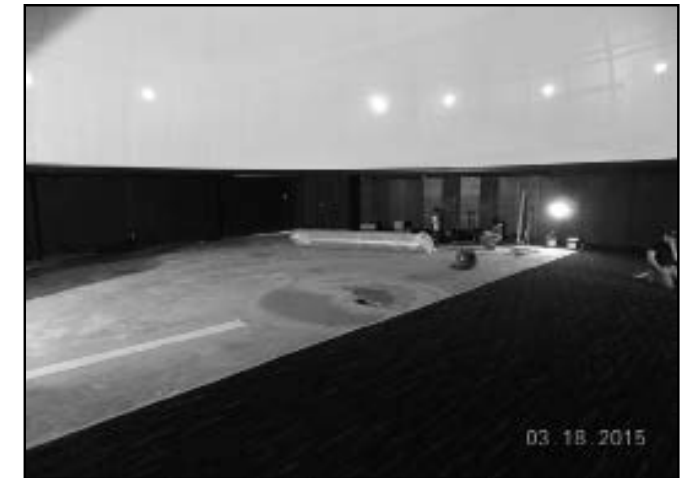
See you in June!

Sharpe Planetarium Memphis, TN

Dave Maness reports: **{Some of you know how much I am yearning to tell you all about our recent fire. But since investigations are still in progress, I was advised not to put details in writing that could conceivably come back to haunt us. As a result, the following was severely edited. Words and photos were removed and someone else's words inserted. Needless to say, I resent the fact that I am not permitted to tell the whole story at this time, but I understand the reasons. If you want to know more, ask me in person.}**

March 18, 2015 began with excitement over the new carpet installation. Next to the new cove trough (installed earlier by Astro-Tec) this addition was really going to change the look of the theater for the better. Since we closed in August, I have been taking photos from standard positions nearly every day, to record the changes. Minutes after the photo below (next column), I returned to my office.

Then the fire alarm sounded. Staff and visitors



calmly exited the building and soon we saw fire trucks arriving.

The good news? Everyone was safe, no one was injured. The bad news? The fire damaged the planetarium and the Museum Store. The schedule for planetarium renovation will change, and the store is closed for now. We will have both open again as soon as possible.

In the meantime, we continue to run *Seasonal Skies* from Loch Ness Productions along with our live flat-screen *Wonders of the Universe* program using the Starry Night Podium in the Mansion Theater.

And until everything is back to normal, I can still take out my frustrations on the ice.



VIRGINIA

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



Abbitt Planetarium Virginia Living Museum Newport News, VA

Kelly Herbst reports: Holy cow, where is the year going? It's already Spring, and Summer is looming on the horizon. Time flies when you're crazy busy!

Currently in the theater we're offering *Legends of the Night Sky: Orion* for the preschool set, but even adults like it with the tour of the evening sky we've added to the beginning. *Back to the Moon For Good* continues to play well to our audiences, and the line about "...some people think the missions (Apollo, etc) never ever happened" always gets a chuckle. Our live show, *Virginia Skies*, of course always does well, and rounding out the offerings is a new in-house produced show called *Noisy Neighbors: A Frog Story*, that accompanies our new exhibit *Frogs: A Chorus of Colors*. The frogs are wildly popular, and the show has been doing very well.

We've had busy season with a budding lecture series as well. We've been trying to get some better and more high-profile speakers to come to the museum, and I think we succeeded beyond our wildest dreams when we had the Bad Astronomer himself, Dr. Phil Plait, come to speak and join us for an observing session. His talk, *Death From the Skies!*, was wonderful and everyone had a great time – thank goodness we partnered with a local university to bring him and they allowed us to use a nice big 300 seat theater because we filled it! Afterwards, Phil was kind enough to sign books and chat with people for over 2 hours. It was an amazing evening. As I write this, we are preparing for our next speaker tonight – Dr. Ellen Stofan, Chief Scientist for NASA!

Hang on to your hats, folks, here comes summer!



Phil and Kelly.

Pretlow Planetarium Old Dominion University Norfolk, VA

Declan De Paor reports: This semester, we introduced a new feature: "Bad Movie Night." On the First Friday of every month, we are showing a terrible sci-fi movie! We also have free shows, (good) movies on Tuesday and live shows and telescopes on Thursdays (weather permitting) through April 30. Doors open at 5:45PM and families are welcome.

Planetarium Thomas Jefferson HS Richmond, VA

Leslie Bochenski reports: The Planetarium has been closed since mid-January because I was on medical leave following kidney transplant surgery. Jane Hastings came out of retirement to teach the Astronomy class during my absence. As of this writing, I have been back at work for two days. I am planning to reopen for Planetarium programs after Spring Break, the week of April 6 to 10.

Jane did a wonderful job with my students, who can be a handful at times. I am lucky that she was willing to take on this task, and she ended up volunteering for more hours than she was paid. Jane's husband George Hastings also prepared and presented a class about the planets for my students. I owe a debt of gratitude to Jane, George, and everyone who supported me during my recovery.

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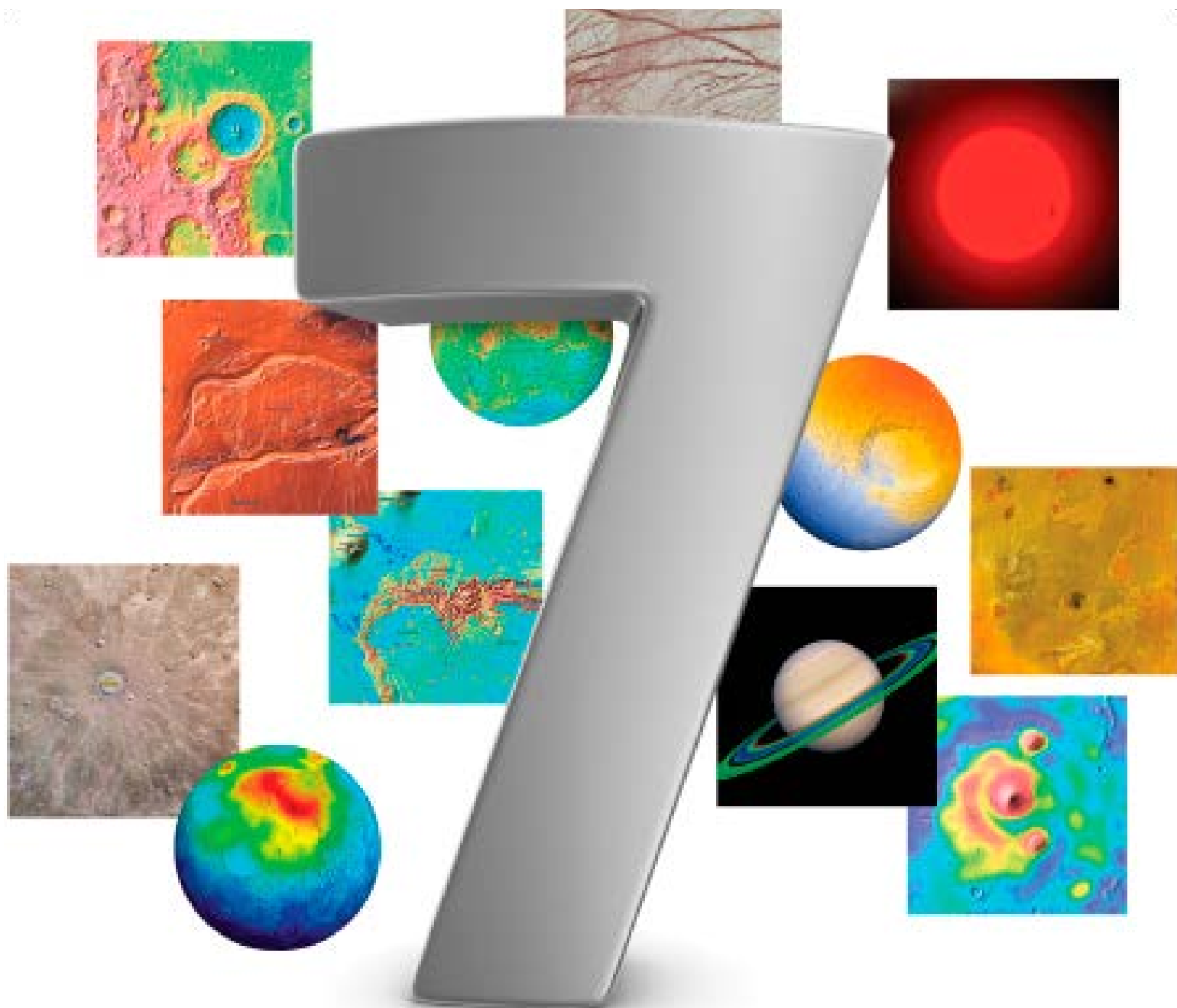
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