

Southern Skies

Volume 34, Number 3

Journal of the Southeastern Planetarium Association

Summer 2014

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 - Wireless Mic Selection
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(Free Registration Required)

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Officers of the Southeastern Planetarium Association

President

David A. Dundee
Tellus Planetarium
Tellus Science Museum
P.O. Box 3663
Cartersville, GA 30120
(770) 606-5720

Email: DavidD@tellusmuseum.org

Vice President

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

Past-President

April Whitt
Jim Cherry Mem. Planetarium
Fernbank Science Center
156 Heaton Park Drive, N.E.
Atlanta, GA 30307
(678) 874-7102, Fax: (678) 874-7110
Email: april.whitt@fernbank.edu

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
(252) 455-8109
Email: wwg5n@alumni.virginia.edu

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

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David Dundee
Tellus Science Museum
Cartersville, GA

It was great to see old friends and make some new ones at our 2014 SEPA conference, hosted by the Buehler Planetarium at Seminole State College. Derek Demeter and Michael McConville were most excellent hosts.

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.

The week held a plethora of exciting activities! We enjoyed shows and demonstrations in the planetarium. Jon Bell commanded another fun constellation shoot out; our winner this year was James Aulbury! We got to play on air boats on Lake Jesup and saw some gators. Later, we even ate gator tail. Dave Hostetter gave us the scoop on "Super Moons;" Karrie Berglund talked to us about learning styles, and many more papers were presented. George Fleenor, Dave Manness and Patsy Wilson were all recipients of this year's Paul Campbell awards – all were well-deserved and received standing ovations. Vendor displays and presentations were all excellent and SEPA is grateful for their continued support. We had two inflatable domes in the vendor hall presenting no less than a dozen different shows. At our business meeting we created a new committee to look at ways for SEPA to increase membership and encourage new planetarians to join. This new committee will be headed by our Vice President Ken Brandt. And, finally, kudos to our new President Elect, Derek Demeter. Be sure to send him an e-mail and congratulate him.

Now it's time to look ahead to next year, SEPA 2015, in Cartersville, Georgia. Please put June 23 – 27, 2015 on your calendar. The conference theme for next year will be "Tell Me a Story." We are all storytellers in one way or another, whether you are presenting live programming, full dome shows, or building devices for the planetarium. We all tell stories about our universe. It is my plan to have workshops on live presentations under the stars, the premiere of *Can You Bluff the Planetarians?* with a

IPS REPORT

John Hare
ASH Enterprises
Bradenton, FL

IPS held their biennial conference in Beijing, China, June 22 to June 27. Over 370 people from 41 countries attended including many new members from China and other Asian countries. The conference theme was Educating for the Future but just as easily could have been called the IPS full-dome expo. The vendor exhibits and planetarium sessions were heavily weighted toward full dome technology with an occasional exception for Hybrid technologies, planetarium design, and teaching techniques. All in all, it was an overwhelming week of what planetariums are all about.

The IPS Council meeting took place immediately before the conference on June 21 and 22. The resignation of president elect, Paul Knappenberger,

announced only a few days prior to the council meeting, was cause for in-depth discussions regarding how the by-laws governed the vacancy. It was decided that the IPS Elections Committee had the authority to nominate individuals who would be voted upon in a special election to be held shortly after the candidates were announced. The deadline for candidates was July 8 and the ballots were to be sent out as soon as possible after that. By the time you read this, the election results should be known so visit the IPS Website for the results.

This is also an election year for the every-second-year election of officers. The person elected in the special election (President Elect) will assume the position of IPS President on January 1st. The new President Elect, Secretary, and Treasurer, will be voted upon by the membership and will also assume office on January 1st. The candidates for those offices are Shawn Laatsch, President Elect,

(Continued on page 18)

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: _____

Out with the Old - In with the New



Nagasaki is a 400 year-old port city on the southern Japanese island of Kyushu. For centuries, it was one of the principal cities where Japanese culture interacted with European and other Asian cultures. As such, it has always been a city that is curious, and eager for learning and new ideas.

The Nagasaki Science Museum now continues that eagerness for education with a total renovation of its planetarium. In March of 2014 the planetarium re-opened after removing an older, larger system from another company, and installing a new, smaller, brighter, state of the art GOTO CHIRON II HYBRID Planetarium™ system. This new projector uses extremely bright LED's to produce more, and smaller stars than ever before. In fact, the CHIRON II projects a Milky Way that is made up of 140,000,000 micro-stars!

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Editor's Message

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.

James Sullivan
Buehler Planetarium & Observatory
Davie, FL

(Continued on page 18)

If you haven't noticed, because you *only* read my column, this issue of *Southern Skies* includes an article on a Featured Planetarium; something that I often bemoan is missing. Bragging about the updates in our planetariums returns the focus to moving forward, rather than the "Oh, another planetarium bit the dust." It is also quite helpful, because how can I covet something that I don't know exists? So, if you are renovating your place, have just reopened, or soon hope to reopen, keep in mind the possibility of putting an article in *Southern Skies*. Vendors, if you have just landed that big contract to renovate a space in the SEPA region, you are welcome to submit, too. Remember, pictures are very important.



SEPA Membership Form

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

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___ Two Years, \$40

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City _____

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IPS Member? Yes _____ No _____

Contribution to Scholarship Award Account: \$ _____

Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
Hedgesville, WV

As the end of the school year neared, in April after Easter, I signed up to attend a workshop at the Applied Physics Lab of Johns Hopkins University in Laurel, MD. The Applied Physics Lab, known as APL, is often referred to as "The JPL of the East." Each spring, APL participates in a workshop for teachers from around the country, electronically in four different sites. I first attended a workshop about two years ago. I had hesitated, because it cost \$25.00 to attend, and I had this policy to not pay to attend workshops. But with budget cutbacks to NASA, they are unable to pay for food during outreach, so they charge \$25.00 and use it to purchase coffee, tea, breakfast, lunch and snacks. The name of the workshop was called, "The Scale of the Discovery: Rulers, Clocks, and Models." Besides the location that I was at, APL in Laurel, MD, there were three other locations connected electronically with us, the Jet Propulsion Laboratory in Pasadena, CA, the University of Montana in Bozeman, MT and the Johnson Space Center, in Houston, TX. All of the locations had teachers who had signed up for the workshop, along with informal educators who were amateur astronomers, solar system ambassadors, and there was at least one other planetarium professional there besides me, Patty from the plane-



tarium in Green Belt, MD. There was one gentleman who had driven to APL in Laurel, MD from New Jersey the night before, just to attend the workshop. People could watch the workshop live on the web for free as it was being broadcast live. Since we had workshops in four different locations in four different time zones, those of us in Laurel, MD started latest at 11:30 a.m. with lunch, after getting name tags and signing photo releases for allowing us to be broadcast live on the web and to the three other sites. If you were far from any of the sites, you could watch a live broadcast over the web.

The official program started with Shari Asplund, Discovery and New Frontiers Programs Education and Public Outreach Manager at JPL in Pasadena, CA. Now before I go on, I thought I might just interject that Ms. Asplund bears a striking resemblance to Annette Funichello of Disney fame. Anyway, she started out by showing us an amazing video which gave a good idea about how large the solar system objects are in relation to one another, along with the relationship of the Sun to the sizes of other named stars. Then we broke down into groups and we did an activity from the Maryland Science Center on drawing a sort of scale model of the solar system on paper that was like adding machine tape, which we were told that you can still buy, but unfortunately they did not give us a link to find it. Later in the day, we had a panel discussion that originated at APL and was webcast to people at the other three sites. It consisted of Hal Weaver and Gabe Rogers from New Horizons, Ralph McNutt from MESSENGER and Olivier Barnouin from OSIRIS-REx. Although all of the talks were great, it was nice to hear the talk about New Horizons since that is scheduled to happen next year at this time. I really enjoyed being at APL live for the talk, since we could find models of all three spacecraft in the building where the program was being held, so I got pictures of all of the models including GRAIL as well as the two spacecraft that were launched to study the Van Allen Belts whose name I cannot remember.

During the break while the other sites had lunch, I chatted with Hal Weaver. I had heard him talk once

(Continued on page 12)



Shari
Asplund

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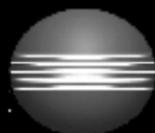
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BOOKENDS

Robin Byrne
Northeast State Community College
Blountville, TN

Empire of the Stars: Obsession, Friendship, and Betrayal in the Quest for Black Holes by **Arthur I. Miller**

This month, we return to the ol' bookshelf. A recent trip included a stop in a used book store, where I found "Empire of the Stars" written by Arthur I. Miller. The book is about Subrahmanyan Chandrasekhar and his life, focusing on his discovery that there is a limit to the mass of a white dwarf.

We begin with Chandra's early life. He was brought up in a very proper Indian household. His father was a civil servant working for the railroad, but Chandra's uncle, Raman, was a well-known physicist, and there was clearly a rivalry between Chandra's father and Raman. Chandra began to show signs of greatness while in school, when he performed research with his uncle, published his first papers, and gave public lectures. By the time he finished college, he was clearly a rising star, so it was natural that he would travel to England to attend Cambridge, where he would work on his PhD. It was on the ship, traveling to England, that Chandra made his discovery: beyond a certain mass, a white dwarf will collapse to nothingness. He couldn't wait to share this breakthrough with the world.

At Cambridge, Chandra worked with Arthur Eddington. Eddington was considered the preeminent expert on stars, so it was natural for Chandra to latch onto him. However, Eddington had his own ideas about stars, and the notion that a white dwarf, or anything, could collapse into nothingness was outrageous. He was not supportive. It all came to a

head at a meeting of the Royal Astronomical Society in 1935. Chandra presented his work, and Eddington tore his arguments apart. If Chandra had won his audience at first, Eddington made sure Chandra had no supporters by the time he was through. It was a slaughter. Chandra never fully recovered from this public humiliation.

The book takes us through all of Chandra's life and work, but this early setback clearly left its mark. Even after Chandra was vindicated, and won the Nobel Prize in Physics for this discovery, he didn't feel appreciated. While at Cambridge, Chandra did not receive the same offers of positions as his white colleagues. Prejudice against his color was at work. When he came to America, within the scientific community, his treatment was better, but discrimination in other settings was still a regular occurrence. Although he continued to work in a wide variety of areas in astrophysics, and published several books, he resented only being remembered for his earliest work.

The life of Chandrasekhar spans a time when astronomers went from knowing next to nothing about stars to having detailed models of stellar interiors and their life cycles. When Chandra began his work, the idea of nuclear fusion powering stars had not yet been proposed. The concepts of neutron stars and black holes had not been dreamt of, let alone accepted.

While the author's goal was to tell the story of Chandra, and clearly had a bias in his favor, his depiction of Eddington paints a very unpleasant picture. Eddington is presented as being pompous, malicious, and completely certain in his own righteousness. Chandra is not the only one who ends up being intellectually bullied by Eddington. But at the same time, Chandra continued to consider Eddington as a friend throughout his career, which may be why Eddington's betrayal cut so deep. Both men had their flaws, and Miller is not afraid to give the reader a glimpse of these imperfections.

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Small Talk (Continued from page 8)

before about New Horizons at the Air and Space Museum in Washington, DC, but that was before the four small moons were discovered. I especially asked him about the recent discovery about the small asteroid that has two rings around it. I asked him if any plans for the flyby changed because of that discovery and the fear that Pluto might turn out to be a rubble pile. He surprisingly said yes, that the spacecraft has been reprogrammed to turn around before the end of its close encounter, to send material back to Earth, just in case it might find material to crash into that would cause it to have an early end. Better to have some data and images than none at all. I even persuaded Dr. Weaver to pose for a picture with me near the model of New Horizons spacecraft. After lunch we switched originating sites to the Jet Propulsion Laboratory in Pasadena, CA. There were Bruce Banerdt and Susanne Smrekar from InSight, Steve Leven from Juno and Sami Asmar and Tim Weise from Dawn. Although it was great to hear about upcoming missions InSight and Juno, I really liked the segment on Dawn. The Vesta part of the Dawn mission is over and they gave a great rundown of that part of the mission and a great preview of the Ceres part of the mission. Right now as I write this, both asteroids are rather close to one another as viewed from Earth in the sky right now.

Our final activity was to check out the Crater Comparison Citizen Science Program. It seems that there are so many different images from so many different spacecrafts taking pictures that NASA has enlisted folks to make crater comparisons and determine information from the images. After a short on-line tutorial, people qualify to analyze craters and other features on worlds within our solar system and send their findings to NASA. There are hundreds of images that NASA scientists have never seen, so this is a way to call attention to something interesting on an image. Elementary school students have discovered lava



tubes and caves on Mars using images from the Mars Reconnaissance Orbiter.

All in all, the workshop was great and well worth going to and taking a day off to attend as well as pay the \$25.00.

Late May and early June proved to be a very optimistic time for me. A cousin got married in Massachusetts and another cousin was ordained a priest in Buffalo, New York. Then on the very last day of school, one of my pulsar search students asked if they could come after school, for one last time to look through the database. While we were searching, the student Samantha Grey, came across a definite pulsar that did not seem to be in the catalog. We notified the appropriate astronomer in charge and after school let out, we both received an e-mail that there were six possible candidates discovered so far this school year and we had time on the huge Green Bank Telescope from 10:30 p.m. to 3:00 a.m. on Thursday, June 12, 2014. Although observations with the telescope can be done on-line, who wouldn't want to go down to confirm that they discovered a pulsar? So we went down and were able use the telescope directly. Unfortunately, a new discovery was not to be. It turns out the data was recorded with an incorrect right ascension and declination and the supposed pulsar was already known and not a new one.

Finally, I want to tell you about a workshop I just attended, sponsored by NASA, and Arizona State University's Mars Education Program called "Finding Curiosity in Your Classroom: Educator Symposium and Field Trip." This took place from June 16 to 20, 2014 and we needed to fly into Phoenix, AZ and take the hotel shuttle to Tempe, AZ where the



Arizona State University was located. Our first day, we were at the older building where the Mars Education Program is located on the ASU campus. Here we were met by NASA scientists, Doug Ming from the Johnson Spaceflight Center, as well as Dave Blake from NASA Ames as well as Jack Farmer, a geologist from Arizona State University. Not only did we hear from these people, they went along with us on the Field Trip to Flagstaff, AZ where we established a home base at the New American Hotel there. While in the Flagstaff area we visited the Grand Canyon, Meteorite Crater, Sunset Crater, Lowell Observatory, Sedona and Montezuma's Castle. We had lunch and dinner at several interesting restaurants including a historical one in Tempe, AZ and one on the Navaho Reservation. We also went into the field at an area where there was once a salt/gypsum mine where we compared the environment with that of Mars. At the hotel, we analyzed our sample using mobile instruments similar to that of the Curiosity rover. I have never been to these sites before, always wanted to go, and what better way to see them and appreciate them than with a group of teachers interested in the environments of Earth that have some similarities to that of Mars. An added plus was having the NASA people and a geologist to give us information and to answer question while at the sites. I especially liked Sunset Crater since it showed an older volcanic landscape than the one I saw in Hawaii at Volcano National Park some years back. Also, this area was a test ground for training for prototypes of the Curiosity Rover over the terrain to prepare for it being deployed to Mars. On the trip, I enjoyed meeting teachers from around the world including one from the new high school opened just last year in Berkeley County near where my planetarium is located. There were also people from Mexico and a gentleman who teaches in a village above the Arctic Circle in Alaska. A woman from the Power Museum in Sydney, Australia was filming for a documentary to be made on the trip. Seeing both the Grand Canyon and Meteorite Crater up close was great and Lowell Observatory was a great historical spot for both Mars and Pluto. I was disappointed that the 24 inch Alvan Clark telescope was being refurbished and not in its famous historical wooden dome. The cliff dwelling at Montezuma's Castle was one of the best preserved in Arizona and we saw the same thing there as we search for life in



the universe: follow the water.

For each site we received extensive notes on the geology of each area and we received big binders full of notes and activities we could do in the classroom. We also received a goody bag full of posters, photos and even a "Mars" bar.

The last day we spent at the brand new Mars center which is open to the public which had exhibits and "Science on a Sphere" which could take you to study other worlds in our solar system. The center also boasted a theater for films, a life-size Curiosity rover model and one of the largest meteorite collections in the world. They even had pieces found in Russia



(Continued on page 14)

Small Talk (Continued from page 13)

from the meteorite that made "You Tube" fame last year when it blazed by, as well as some of the broken glass that the meteorite caused around town.



All in all, this workshop was expensive, since it did not include plane fare and hotel and meals and my school system would not reimburse me for any of the trip. But I was able to share a room with a lovely lady who teaches at a private college prep school in Oakland, CA and all admissions, the tour bus, and snacks were picked up by the ASU Mars Education

Program. They have offered this tour before, so you might like to get on the mailing list to attend next year if this sounds like something you would like to do. I thought it was worth every cent.

Summer has just begun, and this was just the first of three trips. I will be heading to McDonald Observatory in Ft. Davis, TX in July, as well as the SEPA meeting in Sanford, FL. Perhaps I will see you at SEPA and hope to hear some of your ideas for future columns.

President's Column (Continued from page 4)

mix of true and made-up mythology of the sky (i.e. can you tell which one is authentic?). We will also have the opportunities to observe the real sky in our observatory with our twenty-inch Plane Wave.

I look forward to seeing you all there next year.



2014 Mid-Year Financial Report – SEPA

Submitted by Patsy Wilson
July 1, 2014

All funds are held at Branch Banking and Trust Company

| | |
|---------------------------|-----------|
| Balances: (as of 6/30/14) | |
| Operating | 14,151.08 |
| Savings | 45,134.63 |
| Scholarship | 10,086.56 |
| Total | 69,372.27 |

Operating Account (as of 12/31/13) **23,923.66**

| | |
|----------------------|----------|
| Income: | |
| Full Membership | 600.00 |
| Associate Membership | 80.00 |
| Journal Ads | 1,080.00 |
| The Planets Purchase | 80.00 |

| | |
|----------------------------|------------------|
| Correction - deposit error | 4.00 |
| PD Fund Donations | 5.00 |
| Total Income | <u>1,849.00</u> |
| Total credits | 25,772.66 |

| | |
|--------------------------------------|----------|
| Disbursements: | |
| Journal (two issues) | 1,079.75 |
| The Planets Full dome conversion | 5,720.00 |
| USPS-Shipping Cost | 8.48 |
| Service Charge-Wire Transfer | 22.00 |
| Bank Card Replacement Fee | 5.00 |
| Transfer - Vendor Support to PD Fund | 4,333.00 |
| Awards & Engraving | 95.85 |
| Registration for PD Recipients | 357.50 |

| | |
|--------------------------------|--------------------|
| Total Debits | <u>(11,621.58)</u> |
| Balance (as of 6/30/14) | 14,151.08 |

| | |
|---|------------------|
| Savings Account (as of 12/31/13) | 25,647.69 |
| Income | |
| 2013 Conference Profit-deposit | 19,456.26 |
| Interest earned | <u>30.68</u> |
| Balance (as of 06/30/14) | 45,134.63 |

| | |
|--|------------------|
| Professional Development Scholarship Account (as of 12/31/13) | 5,753.56 |
| Income: | |
| 2013 Vendor Support from Conference | <u>4,333.00</u> |
| Balance (as of 06/30/14) | 10,086.56 |

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FEATURED PLANETARIUM

South Carolina State Museum

Tom Falvey
SC State Museum Planetarium
Columbia, SC

The South Carolina State Museum is BRIGHTER THAN EVER BEFORE! After 17 years of planning, designing and building, the State Museum will officially open its doors on SATURDAY, AUGUST 16, offering the only observatory of its kind in the nation, the largest planetarium in the Southeast and the only permanent 4D theater in the state. All three of these innovative elements, plus a multi-disciplinary museum, will be housed under one roof.

This long awaited project will position the State Museum on the cutting edge of education, particularly in the critical areas of science, technology, engineering and mathematics (STEM). Its innovative combination of facilities and services will create a unique complex. It represents a quantum leap forward for the state in the areas of tourism, recreation and, especially, education.

Centrally located for maximum accessibility to the state's population and its visitors, this facility will annually attract between 210,000 and 260,000 guests of all ages, from kindergarten students to parents and grandparents. In fact, during the first school year of operation, the State Museum projects that an additional 35,000 South Carolina school students will visit the museum.

OBSERVATORY

The new 2,500 square foot observatory will play a central role in the museum's new distance learning initiatives. The observatory houses a fully digitized

1926 Alvan Clark 12 3/8-inch refracting telescope. Lenses made by Alvan Clark & Sons were considered by many to be the finest telescope lenses ever made. The observatory also features an outdoor viewing terrace with additional telescopes.

The Clark telescope has a new, digital control system with advanced technology that will allow users to access the instrument, provide coordinates and receive images via the Internet – both onsite and offsite. This remarkable new resource will benefit students across the state and revolutionize the way in which educators can integrate astronomy into their teaching. Remote access to the telescope will be provided free-of-charge to every classroom across an entire state. Even students at schools with the most limited of resources will be able to access the Clark telescope to study phenomena from the rings of Saturn to the Orion nebula.

TELESCOPE GALLERY

Adjacent to the observatory, is a new 6,000 square foot telescope gallery that features an amazing collection of antique astronomical instruments dating back to 1730. Robert B. Ariail, a local astronomy enthusiast, donated 58 of the collection's 65 antique telescopes. The collection also includes a 5.6-inch Henry Fitz made in 1849 for Erskine College in Due West, SC, and donated to the museum by Erskine in 1985. It is the oldest surviving American-made observatory instrument.

In addition, the collection includes 25 binoculars and more than 100 eyepieces, micrometers, spectrographic eyepieces and solar eyepieces. This incredibly rare collection has been praised by the Antique Telescope Society as the best public collection of early American Telescopes in world.

PLANETARIUM

The 55-foot dome planetarium and theater will take guests on journeys to the deepest reaches of space through educational and entertaining astronomy shows, non-space films dealing with art, history or natural history and laser light shows set to music of the Beatles, Pink Floyd, U2 and more.

The planetarium will run on a Digistar 5 system,

featuring high-resolution detail and 3D terrain showing spectacular views of the earth, planets and moons in the solar system.

Real-time experiences such as live satellite-based programs and interactions from NASA will be available. Images taken of space from the observatory's telescope can be displayed on the planetarium's projection screen.

A permanent NASA gallery will be located in the planetarium lobby with interactive capabilities and artifacts from South Carolina astronauts, Charles Bolden, Charles Duke, Ron McNair and Frank Culbertson.

4D THEATER

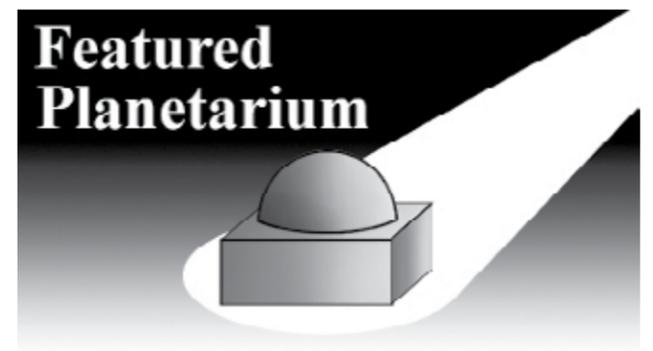
Designed by SimEx-Iwerks 4D FX Theater, the 4D theater couples high definition 3D digital projection films with physical features to provide multi-sensory, interactive experiences for guests. Physical features, including water sprayers, ankle ticklers, air blasters, scents, snow, bubble and smoke effects, strobe lights and vibrating seats, are synchronized to the images displayed on the film screen.

The only permanent theater of its kind in the state, the 4-D theater will offer educational and entertaining films year-round that complement other museum exhibits and popular movies that excite all ages.

The museum's new theater will provide important new opportunities for engaging young people's imaginations and intellect. It also will be used for a variety of programming, such as concerts and popular films, which will generate additional revenue that the museum will reinvest in its exhibits and mission-driven programming.

NEW LOBBY, STORE AND CAFE

The museum's new public lobby is bigger and better than before. A new glass entrance that extends outside of the front mill walls, will welcome guests as they walk under three massive telescope legs to enter the new lobby. Although these telescope legs have a practical use to fully stabilize the telescope, they also serve as an iconic industrial fixture of the



museum's new lobby and the museum's new logo and brand.

The lobby includes a donor recognition wall and a stage to host performances, demonstrations and much more. Several iconic artifacts are located through the lobby representing the museum's four disciplines. Three of the museum's partners, Columbia Visitor's Bureau, South Carolina Educational Television and the South Carolina Parks, Recreation and Tourism Department have their own unique permanent exhibits in the new public lobby. These spaces allow guests the opportunity to explore and learn about the great things happening in Columbia and across South Carolina.

The Cotton Mill Exchange is in a larger space in the front lobby, enhancing the shopping experience and boasting additional retail merchandise that represent every corner of South Carolina. A new admissions desk designed to resemble vintage textile machines is located next to the store and the new grand staircase leading to the Mezzanine.

The Crescent Cafe will be housed in the same location on the second floor Mezzanine, offering guests the opportunity to take a break for something delicious to eat and drink



IPS (Continued from page 5)

Lee Ann Hennig, Secretary, and Ann Bragg, Treasurer. Since there is only one candidate for each office, the official vote will be considered a vote of confidence for the various candidates.

This years Council meeting was the deadline for 2018 conference site invitations. Only one site submitted an bid. The Clarke Planetarium in Salt Lake City, UT will host the conference in June of that year. The invitation is not official until next year's Council meeting but is a mere formality by Council at that point.

The 2016 IPS conference will be held in Warsaw, Poland, June 19-25. The conference hosts announced that they intend to put out an early call for papers. Conference details will be included in a future issue of *Southern Skies*.

Book Review (Continued from page 11)

For an enjoyable read about the history of stellar astronomy, the people who ultimately figured it all out, and especially the life of Subrahmanyan Chandrasekhar, I highly recommend "Empire of the Stars."

Empire of the Stars: Obsession, Friendship, and Betrayal in the Quest for Black Holes by Arthur I. Miller, Houghton Mifflin, 2005

Editor's Column (Continued from page 7)

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.

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SEPA 2015 Conference

David Dundee
Tellus Science Museum
Cartersville, GA

By the time you read this, we will all have returned home from a most excellent SEPA 2014 at Seminole State College. But now it's time to put on your calendars SEPA 2015! It will be June 23 – 27, 2015 at Tellus Science Museum in Cartersville, Georgia. Tellus will be proud to host SEPA 2015. We will have lots of shows to see under our 40 foot dome, 120 seat Media Globe III. We just reupholstered our seats in June so our theater looks great. Our dome is in a space that could accommodate a fifty foot dome, so there is a lot of space around the periphery for extra equipment. Our Vendor area will be in our banquet room adjacent to where we will be eating our meals. The museum great hall will be able to accommodate some inflatable universes and we have four classrooms for breakout sessions as well as a 200 seat theater for plenary sessions. We will also have some opportunities to observe through our 20 inch telescope.

Since I am planning out the menus you, will notice a chocolate theme to most of the meals. Planning to diet during the conference? Sorry, plan on weight gain.

We will be taking a day trip to Huntsville to visit the Space and Rocket Center, that evening we will be hosted by the Wernher Von Brown Astronomy Astronomical Society at their planetarium and also some star gazing with local telescopes.

The Holiday Inn Cartersville is our host hotel and the site of our conference hotel (Room rates \$69.99

- \$79.99). This includes free hot breakfast. We have a large space reserved there for our hospitality suite.

There is an hourly van service (Groome Transit :\$35 one way \$65 round trip) from the Atlanta airport to Cartersville and we are located right off interstate 75 at exit 293.

The \$145 registration will cover all meals including the annual banquet and conference photo. I hope to see you all then.



SAVE THE DATE JUNE 23-27



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News From SEPA Region

ALABAMA

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



Mitzi Adams reports: Two planetaria in Birmingham, Alabama have closed their doors: the Robert R. Meyer planetarium at Birmingham Southern college and the Christenberry Planetarium at Samford University.

Planetarium University of North Alabama Florence, AL

Mel Blake reports: The UNA planetarium has had a busy spring. We have been working to develop partnerships with local clubs and to expand our offerings.

January

In January we attended the American Astronomical Society meeting in Washington, D.C. and took part in several education sessions. A highlight of the visit was the chance to visit the Smithsonian's Air and Space Museum. Another activity for the month of January was to attend the American Physical Society (APS) Women in Physics conference in Tallahassee Florida. While there, I visited the planetarium at the Challenger Learning Center, where the volunteer staff operate the planetarium. I

was given the chance to see the layout of the planetarium, its control room, and to sit in on a show. This gave me great ideas for our own programs and I want to thank the whole staff for taking so much time to show me their facility.

February

We hosted Audio Visual Imagineering's SkyLase shows in February for Valentines day. These were negatively affected by the ice storms that week, but guests were enthusiastic as usual. We also brought science demonstrations to the career fair at Florence middle school and along with some science demonstrations, encouraged kids to pursue degrees in physics and astronomy. We had help from the Society of Physics Students for this. We spoke to hundreds of students.



SPS students working with Florence Middle School students, Mary McDaniel (left), Dylan Mckelvey (right-middle), and Maisey Hunter (right-foreground).

March

The highlight for March was getting a chance to visit the Arecibo Observatory in Puerto Rico, while attending the Society of Physics Students southeastern zone meeting.

April

We are always happy to attend the Shoals Earth-Day festival every year on the first weekend of April. Along with the Shoals Astronomy Club we discussed the effects of light pollution on wildlife and the loss of the night sky. People often comment

on the fact that they had not really thought of lighting in that way before. We spoke to about a hundred people during the event, which was affected by rain. April also marks the beginning of the First-Fridays street festival in Florence, and the UNA planetarium partners with the Shoals astronomy Club to do sidewalk astronomy. This event is probably our most effective in terms of reaching the general public. In each of April and May about 150 people looked through telescopes at the Moon, Jupiter, and Mars.

May

The past few years have been disappointing for school visits, but things seem to be recovering as local schools have better funding for field trips. We had 13 school bookings in the last two weeks of May, which compares to just five the year before. This is encouraging for next year, and several schools reported that they planned to return to making this an annual field trip. We are particularly happy with the reception of three new planetarium shows we obtained last fall, *Perfect Little Planet* from Clark Planetarium, and *Case of the Disappearing Planet* and *Comets and Discovery* from Bays Mountain. These shows are very popular with the students.

June

June tends to be a slow period for us, but our summer programs are growing each year with the proliferation of summer day camps at local schools. Thus far in June, we have worked with a summer STEM camp organized by the UNA mathematics department. Students spend several days at the university doing programs related to mathematics, robotics, physics and astronomy. UNA planetarium hosts the astronomy, where we discuss optical telescopes and students then build a Galileoscope. When weather permits students take the telescope outside to view celestial objects. Thirty students attended this program in two groups in the second two weeks of June. Also in June we will be partnering with the local YMCA to do a question and answer session. We continue to book school and group visits and it looks like this could be one of our busiest summers.

FLORIDA

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



Florida Planetarium Association (FLORPLAN)

FLORPLAN is a meeting of all people with an interest in planetariums; screening shows, presentations from vendors on new equipment, the exchange of ideas and the opportunity for cordial interaction with colleagues. Mark Howard at Eastern Florida State College's planetarium will be our next host.

Bishop Planetarium South Florida Museum Bradenton, FL

Jeff Rogers reports: The South Florida Museum is excited to announce the debut of their NEW Planetarium, a Digistar 5 - Dual Projection System, including new shows. This system is among the most advanced planetarium technologies in the world. The planetarium re-opened for presentations on Tuesday, October 15 – at which point the planetarium unveiled two new shows, in addition to the many interactive features the system offers. The new Bishop Planetarium is state-of-the-art in astronomy education, with stunning multimedia capabilities. Planetarium presentations are included with General Admission to the South Florida Museum.

The Bishop Planetarium is the region's premier astronomy education facility, as well as a multimedia theater for films, lectures, live music and digital art performances. The Planetarium is a foundational component of the South Florida Museum's Mission: *To engage and inspire learners of all ages; we protect, interpret and communicate scientific and cultural knowledge of Florida, the world, and our universe.*

The Digistar 5 improves the viewer experience of the Museum's expanding full-dome show library

with projectors that are more than three times as bright and twelve times crisper (higher contrast) than the previous projector array.

We waited for the new Digistar system to be released, and I'm happy we did. The projection is bright, crisp and beautiful. And the new astronomy software is simply amazing. The stars in the night sky look fantastic, but there's so much more. We have a digital, three-dimensional map of the entire universe. We can lift off from Earth and fly out of our solar system, out of our galaxy, and out to the very edge of the universe. Or we can orbit Earth, using satellite data to observe and understand our planet in a whole new way. Through the use of 200 continually updated satellite datasets of our planet's land, ocean, atmosphere and climate and live Bing and On Terra views of the entire planet. It's hard to imagine a more powerful set of tools for exploring our universe and our place in it.

In addition to the new technology, the South Florida Museum opened several new shows; *Passport to the Universe* and *Perfect Little Planet*. *Passport to the Universe*, narrated by Tom Hanks, is returning to the Museum by popular demand. The show previously appeared in the Bishop Planetarium after the remodeled facility first opened in 2005. Fans have been asking for this amazing journey through the universe to return to the Planetarium ever since. *Perfect Little Planet* provides an opportunity for families and children of all ages to have fun and learn about our solar system. Stay tuned for announcements concerning additional new shows which will be added to the Planetarium schedule in future months.

The Museum held a FREE Open House on Thursday, November 7 from 5 – 7:30 pm to give the public the opportunity to see the new system. During the Open House, the Museum offered on-going Planetarium demonstrations, as well as astronomy games and activities, manatee presentations and access to the entire Museum. The event gave the Museum staff, Board of Directors and volunteers a chance to say thank you for the on-going support the community has given us through the years. The Museum's Executive Director Brynne Anne Besio says, "We are so pleased to be able to continue the legacy of educational excellence that the Bishop Planetarium

has always provided for our visitors, our community and the entire region. The Museum is proud of the contributions to higher science and astronomy education that we are now able to continue well into the future. We look forward to sharing this exciting resource with our community." Light refreshments were served and a cash bar was available. New planetarium presentations will be announced in the coming months; please visit the South Florida Museum's website at SouthFloridaMuseum.org for more information or to sign up for the weekly e-newsletter to receive the latest announcements.

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 *Solar System Odyssey*, *Earth, Moon & Sun*, *Shadows In Space*, *Saturn: the Ringed Planet*, and *Celestial Navigation*.

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. We usually have one telescope set up to view sunspots, and watch flares through a Hydrogen-Alpha filter on another.

Miami Space Transit Planetarium Patricia and Phillip Frost Museum of Science Miami, FL

Claudia Hernandez reports: This spring season has been full of highlights with community events, spring camps, film festivals, and fundraising endeavors at our dome. The season began with the Venus Orbit fundraising event showcasing not only the lustrous planet but also more specifically the amazing women who have rallied to raise funds for our new planetarium. The season progressed with community events like that of Innovation Weekend where our 65ft dome converted into a 270° interactive Kinect screen. And during the 3rd Annual Underwater Festival our dome screened wonderful

films and hosted panel discussions with scientists in our community. We have also hosted the Red Cross volunteer appreciation ceremony as well as many other special occasions too numerous to recount in this update! The last highlight to wrap up our spring season was with a promotional company that invited the Miami Girl Scout troupes to the planetarium for a night of celestial fun as well as a sneak peek of the extraterrestrial film "Earth to Echo."

Regardless of our busy event schedule, we continued to accommodate all visiting school groups and run a public show schedule seven days a week. Currently we are presenting for the public: Two Small Pieces of Glass: The Amazing Telescope, Nine Planets and Counting, Legends of the Night Sky: Perseus and Andromeda, and our live star lecture How to Find the Stars and Planets of the Month both in English and Spanish. And of course every month we celebrate Fabulous First Fridays; with a free star show, observatory viewing, and a night jammed packed with our music laser shows!

Spring was certainly eventful here at the Miami Space Transit Planetarium of the Patricia and Phillip Frost Museum of Science. And that, my fellow SEPA-ians, is our update for this past spring season; and as our late director Jack Horkheimer would always conclude, keep looking up!



Fernbank Science Center Planetarium Atlanta, GA

April Whitt reports: Summer time and the livin' is ...busy. Jim Cherry Memorial Planetarium hosted day camps, tourists and the general public for a variety of full-dome programming. Children's programs (Molecularium, The Moon, and One World, One Sky) and offerings for everyone (Saturn: The Ring World and Back to the Moon for Good) were

each introduced with a tour of the evening's sky, given by this summer's cadre of interns.

Evening sessions at the observatory were often clouded, rained or thundered out, but the Moon remains everyone's favorite telescopic object.

Lockheed Martin Aerospace Camp, NASA's SEMAA (Science, Engineering, Mathematics and Aerospace Academy) program, and a celebration of the 45th anniversary of Apollo 11's moon landing were all successful.

There was even some extra fun stuff: an opening event for the summer movie "Earth to Echo," complete with the film's director and star Astro, and internationally-known rock group Mastodon Rock held their release party for "Once More Around the Sun."

School started in early August, with new offerings for students and teachers.

Planetarium Tellus NW GA Science Museum Cartersville, GA

David Dundee reports: We had a busy spring. We re-upholstered our seats in the planetarium. In six years we wore them out. We are continuing to enjoy our new Media Globe III. We reopened "We are Aliens" for another run and also opened "In My Back Yard" for our younger visitors. In April, we had an all-night event for the total lunar eclipse. Of course it rained but we had about 600 observers watch the eclipse broadcast from the Griffith Observatory and Mexico. Astronomy Day brought over a thousand visitors and torrential rain, but by the time it got dark the clouds disappeared and we had lovely clear skies for the observatory and two star walks. We have continued to offer observatory open house nights when the rest of the museum was closed. In June we opened "Planetary Thrill Rides IV" which is the latest installation of Space Park 360 infinity. The last music track was finished two weeks before we opened. (A close one.) We started our day camp programs with about 5,000 booked for the summer. This summer we are building and launching air rockets.

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

Jim & Shirley Smith report: Smith Planetarium has had a good academic year, serving students in Walker, Catoosa, Chattooga and Dade Counties in Northwest Georgia and Hamilton County in Tennessee. Twenty-four days with free general public programs were provided as a service to the community. Arrangements were made for a number of special programs for groups of senior citizens, churches, scouts etc. One of these special groups will be coming in late July when the planetarium will be supporting and re-enforcing the efforts of our three public county libraries.

“Fizz, Boom, Read!” is the 2014 national slogan of the Collaborative Summer Library Program. This year, a science-based theme is being emphasized. The point of the summer reading program is to keep children reading throughout the summer. This year, the kids are learning not only about literature/language by reading, but also about different sciences! The libraries are having a variety of science-based activities and performers that teach about all kinds of different sciences. To reward each library’s top ten readers, the Smith Planetarium will present a special showing of our newest program THE MAGIC TREE HOUSE: SPACE MISSION.

Other activities at the Science Center this summer include getting the Helen Solomon Rock and Mineral Collection ready for display. Helen is a retired Walker County teacher (and super rock hound) who donated her world-wide collection for science center visitors to enjoy. The center has also been buzzing with Lego Camp! The Smith Planetarium is a small school district planetarium with many economic challenges. Our budget for staff salaries is \$0.00. Shirley and I serve without pay. The planetarium includes a dome of 12.2 meters (40 feet) diameter with 92 seats. The projector is a Media-Globe II by Konica-Minolta. Admission is \$4.00 per person. (Admissions & donations are used to purchase more programs.) In addition to the planetarium, students can tour the exhibits in the geology room. There is also a meeting room / exhibit area that some groups use during inclement weather to eat their box lunches. Many school groups combine

a visit to the planetarium with a field trip to Chickamauga Military Park and Museum.

During a typical school program, portions are experienced “live” and some parts are prerecorded. School programs address curriculum standards and include both live sky interpretive programs and prerecorded portions. During the first “live” part (12-15 minutes) of the program “the sky tonight” is addressed. That includes a discussion of sky motions, star patterns, earth’s motion and change of seasons. Students are introduced to various constellations, myths, and motions of the night sky. A seven (7) minute video “Seasonal Star Gazing (mini)” follows the first “live” portion. Then the visit package often includes one of the following prerecorded programs: “One World, One Sky: Big Bird’s Adventure”, “This is our Sky”, “Space Shapes”, “The Moon” “Magic Tree House: Space Mission”, “Kaluoka’hina, the Enchanted Reef”, “Two pieces of Glass” “Season of Light”, “First and Farthest”, & “Cowboy Astronomer”. Programs are concluded with a question and answer session, which sometimes requires a quick return to the night sky. Total time in the planetarium is about 55 to 60 minutes. We are excited to be preparing for the coming school year.

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

Becky Lowder reports: Summer is going full blast here at the planetarium in the department of physics with scheduled summer groups visiting on weekdays. We held a fun “Family Saturday Morning at the Planetarium” in June with One World, One Sky: Big Bird’s Adventure and Perfect Little Planet with live sky shows for younger children.

I recently purchased a small .5 gram meteorite from the Chelyabinsk, Russia meteor explosion that happened in February of 2013. I’m using it in teaching as well as sharing it with all our visitors. Most everyone saw it on the news, even the young elementary students, so they can relate better to what a meteorite is.

This week we’ll be upgrading our system to the

latest version of Digistar 5, so I’ll be learning how to use all the new features in weeks to come. In July we will host another Saturday event for families with older children, showing Flight Adventures and Stars: The Powerhouses of the Universe with live sky shows.

August will bring another busy semester of teaching university students daily on the Digistar 5 in the planetarium along with scheduled school groups visiting. We will also be welcoming everyone back to campus with a public evening of stargazing with telescopes on the roof, along with showing Two Small Pieces of Glass: The Amazing Telescope with a live sky show. Our ASTR 3790 students will be creating new astronomy presentations on the Digistar 5 for our fall public evenings. I am still amazed each day with what the digital planetarium systems can do in teaching astronomy concepts to students of all ages! Georgia Southern University will again host STEM FEST in September, engaging students and the public with hands-on activities in science, technology, engineering, and mathematics. The planetarium will be participating in the day-long event with astronomy activities and showing Two Small Pieces of Glass with a live sky show every 30 minutes all day.

We’re looking forward to attending GRAM, the Georgia Regional Astronomy Meeting, being held in October at the Tellus Museum in Cartersville, GA with David Dundee hosting. I know we’ll learn a lot from each other and our students that will be participating. In November, the entire building will be rocking to the music of Pink Floyd with the very popular full-dome Starlight Production presentation of Dark Side of the Moon.

We’ll end the year in December with Let it Snow: A Holiday Music Journey, from the Clark Planetarium in Salt Lake City, UT. I already have visitors asking us if we’ll be showing it again in December, and it’s just a few days past the summer solstice! I think they’re just already wishing for cooler temperatures here in southeastern Georgia! I know I am, especially while outdoors showing our visitors and students the Sun in our solar telescopes, or walking the solar system with them. Until next time, stay cool and enjoy the sky!

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 has been a strange year here at the EKSC. Winter snows here in Kentucky caused the cancellation of most of our school groups in January and February; the end result being that May and June had us swamped with all the groups that re-scheduled from the Winter.

Astronomy Day on May 10th had over 200 people visit the Science Center for Planetarium shows, hands on Astronomy activities, NASA handouts, and some outdoor Solar observing in between the cloud cover.



We were also one of only two science centers in the state of Kentucky to hold NANO Days activities.

The EKSC also opened up the new show Solar Quest from the Buhl Planetarium. An excellent show about the Sun and space weather. Although only 11 minutes long, we add on a 10 minute live section showing current views of the Sun via SOHO and SDO, and a 15 minute live night sky session.

As I write this, we are in the middle of doing ten Summer camps on a variety of science topics including Astronomy, Rocketry, Chemistry, Biology, and Magnetism. All ten camps are filled to capacity with 30 students in each.



We are also in the process of doing outreach science programs to the public libraries and public housing communities during the Summer.

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 proceeds from this year's scramble to benefit the Science Center. The Golf Scramble raised almost \$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!

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 ToThe Skies!!!!"

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) had a very successful National Astronomy Day on May 10 when it hosted what is called, "Earth & Sky Night" for 189 people. The skies were partly cloudy, but we still had a good group of interested people. Since National Astronomy Day is usually close to Earth Day, we combined the two into one celebration, although the astronomy side is certainly the highlight and the driving force behind the event. A variety of hands-on activities were available from 7:00 - 9:30 to help people understand the wonders of earth and space science. The Astronomy Club of Augusta (ACA) had a number of telescopes available for viewing the night sky and the Bechtel Telescope housed in the Ruth Patrick Science Education Center Observatory was providing great viewing of the night sky. ACA set up stations with questions that could be answered by speaking to a club member, reading through posted materials or looking through telescopes in the night sky. Our visitors very much enjoyed the activities.

In April, we participated in the first South Carolina State Wide Star Party. <http://rpsec.usca.edu/Events/StarParty/Statewide2014/> The focus of the event was on April 4 - 5, 2014, and the DuPont Planetarium held its session on April 5. Unfortunately, it was cloudy that night, but we still had 62 people participate in this inaugural event. We plan to offer the event again next year.

In May, we began our summer hours in the planetarium by opening an hour later at 8:00 and 9:00 p.m. to accommodate the use of the observatory after sunset. The planetarium presented the *Solar System Adventure Tour* from the Great Lakes Planetarium Association and *Blown Away: The Wild World Of Weather* from The New Detroit Science Center. In June, we showed, *In My Backyard* from the Calgary Science Centre and *More Than Meets the Eye* from Lochness Productions. In July, we featured *Digistar "Laser" Fantasy*, which is a local production; and *To the Moon and Beyond*, which is also a local production.

We are looking forward to September 6, 2014 when we will join the Astronomy Club of Augusta to celebrate International Observe the Moon Night

(InOMN). This annual event has been a good one for us, and we recommend that you become involved as well.

TENNESSEE

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



Dave Maness and Kris McCall report: Charles Ferguson reports that he was recently diagnosed with Myesthenia Gravis. He is also no longer employed. Many of you know that he ran the Akima Planetarium in Knoxville for many years and before that was employed as the Director of the planetarium at James Madison University where he suffered a brain aneurism. He would certainly like to reconnect with friends in SEPA and maybe even get some leads for a planetarium job.

He wrote in part: Thanks for thinking about me! I hope that everyone at S.E.P.A. has a great conference! ... Please, pass along my greetings to all who attend S.E.P.A. I do so miss being able to attend. Myasthenia Gravis, however, has control of my life at this point, now.... Please, have a good time at the conference and say "hello" to everyone for me!

Clear Skies! (PLEASE, just make them CLEAR!)
Charles R. Ferguson
KNOX-STARMAN@JUNO.COM

Bays Mountain Planetarium
Kingsport, TN

Adam Thanz reports: Summertime here at the Park means we're all abuzz with public programming and off-season school programs. We used to never get school programs at this time. But, "the times, they are a changin'." As such, we have been adjusting.

We're also gearing up for our annual astronomical convention, StarFest, held on Oct. 17-19, 2014.

This year marks our 31st anniversary and we have a great event planned. The theme is "Seeing the Sky." As such, our speakers will each highlight a different way one sees the sky. Through art, literature, science, and music. Three days in October of astronomy, fun, presentations, planetarium programs, observing, a commemorative shirt, a place to sleep, and all meals all included for one very low cost. Here's a short list of our keynote speakers. You should recognize these names: Mark Littmann, Dan Durda, Shanil Virani, Shanil's student, Emily Dick, and Paul Lewis. Go to our website for all the details! <http://www.baysmountain.com/astronomy/astronomy-club/?GTTabs=4> Send me your e-mail address if you want to be notified about this great event.

Our main show for July-August is "Back to the Moon - For Good." Its production is very good. We've added two live segments to augment the show. The first is a simple overview of the major features of the moon like maria, craters, rays, and the Apollo 11 landing sight. The second live component is a tour of the night sky with our Carl Zeiss ZKP-4 star projector.

Our main show for September-December will be "Chasing the Ghost Particle" from the Daniel M. Soref Planetarium. It's about searching for neutrinos with a huge, under-ice observatory in Antarctica. We'll add a live component that sets our star projector to a 90 degree S latitude to highlight such Australisine, celestial gems.

Our alternative program at 2 p.m. will be "Planetary Visions" and "Appalachian Skies." Both are in-house productions, with "Planetary Visions" available for distribution. A rollicking and adventurous tour of the Solar System. "Appalachian Skies" is our feature-length live tour of the current night sky.

The SEPA conference has come and gone and it was a mighty-fine event. I've mentioned in our previous TN News article about our scheduling kiosks that we designed. I presented a plenary talk about this project and plan on writing an article about its details for a future journal issue.

**Sharpe Planetarium
Memphis, TN**

Dave Maness reports: While on an unplanned trip south early last month, I stopped in to see a neighbor facility: the Davis Planetarium in Jackson, Mississippi. I had heard that this unique 60 foot planetarium theater was somehow suspended over the road. I don't remember what I pictured in my head, but this was nothing like it. I parked my Saturn underneath, planning to take a quick peak inside. However, I was disappointed to see a "closed" sign on the door. The note mentioned that they were in the process of renovating, which was a surprise to me. Without going into details, the note implied that they would reopen soon with some pleasant surprises.



The Davis Planetarium has since reopened with a new Konica Minolta Super MediaGlobe II. Phil Groce later explained their good reasons for keeping quiet about the project. They needed to be certain that they would meet their grand opening date of June 14, which was coming up soon. Director John Williams recently offered to loan me some items that will help improve the accuracy of our night sky projection, until we close for our improvements.

For the summer, the Sharpe Planetarium is offering Hubble Vision 2 from Loch Ness Productions and our own seasonal star show called Starlit Nights. If all goes as planned, these may be the last "classic" star shows presented here. We may be closing for renovations and upgrades as early as mid-September. While the theater is closed for those changes, I have been asked to offer seasonal sky programs on a flat screen using a laptop and Starry Night Podium. I would be glad to hear of your experi-

ences, if anyone out there has done something similar. We should only be closed for 3-4 months and reopen in the late winter or spring of 2015.

Our summer insect and arachnid exhibit at the Pink Palace Museum is called Twice Bitten. Children seem to enjoy the featured giant robotic grasshopper, horned beetles, caterpillar, and Praying Mantis. To beef up the exhibit, we added a wide variety of live Tarantulas and a Black Widow, in tanks with viewing ports, of course.



With the arrival of summer, I am starting to look forward to the annual SEPA conference as well as the startup of the summer hockey season which begins July 1. Since I will be on the same team, I'll get some more use out of the hockey jersey for team "Venom". This will be the first defense of our surprise championship win. After losing most of our regular season games, we looked like a long shot. Still it was a bitter sweet victory in a shootout, after overtime, against the team of our fallen friend Josh Maronde, who was their Captain.

My moment with the newly-named Maronde Cup.



PS – Our first game night was a double header. Like the NHL our season started with a rematch with our Championship rivals. Then we met the other team in the league. Long story short: we won both games, a much better start than last season! In the parking lot after the game, I pointed out Mars and Saturn to some of the other players.

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



**Chesapeake Planetarium
Chesapeake Municipal Center
Chesapeake, VA**

Robert Hitt reports: Not much news at the Chesapeake Planetarium. We are still considering adding a digital system to our star field. We may also build a totally new facility in a dark sky location when and if money comes available.

**Abbitt Planetarium
Virginia Living Museum
Newport News, VA**

Kelly Herbst reports: Summer is upon us, and we're hip deep in kids' camps! Summer shows in the planetarium also keep us busy, with 5 shows for the public each day.

Dinosaur Prophecy is back and is always very popular. For the younger crowd we're offering *Legends of the Night Sky: Perseus and Andromeda* (laser version); of course *Virginia Skies* remains a staple in the theater at any season; we're rounding out the summer with laser shows in the final spot of the day – *Laser U2*, *Spirit of America*, or *Lasero-polis* for June, July and August respectively.

NASA Langley recently worked with us to update our equipment loans and we're very excited! Not only do we now have a 1/3 scale model of an Apollo space capsule in our lobby, we will soon have a display of a lunar rover as well. All this will tie in wonderfully with our featured show in 2015: *Back to the Moon* for Good from the good folks at the Google Lunar X Prize. The icing on the cake? A one-year loan of an actual lunar rock! We're incredibly excited to feature this amazing piece of space history in our programming for the coming year.



September will see us close for a month for annual maintenance, and boy do we need it. Our seats have taken quite a beating over the last couple of years and we'll spend most of the month of September doing some major refurbishment on them. Fortunately it's all hardware...the actual seats remain as cushy as ever!

Fall will also bring a new exhibit to our changing gallery – a fascinating look at deep sea creatures as seen from the ALVIN submersible. We're hoping to have the full dome program *Into the Deep* by the

time the exhibit comes in November. If not, we'll run *Kaluoka'hina* instead. And of course, with Thanksgiving will come the annual holiday slate of shows...but I'm not ready to think about that yet!

Sadly, I can't make it to SEPA this year. Just too many zany things going on here at the museum. Have a wonderful conference!

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

Planetarium
Thomas Jefferson HS
Richmond, VA

Leslie Bochenski reports: Another school year has come to an end, my 11th year here, and it closed as a mediocre year. The 13 snow days wreaked havoc on my carefully planned schedule, then teachers got into 'testing panic mode' about a month earlier than usual because they had missed so many classroom days. As a result, the teachers cancelled a lot of trips to the Planetarium so they could spend more time working on test prep. By the end of the term, I had seen just over 1800 students in my programs, falling short of my goal of 2000.

Also, I did not update and improve my programs as I had planned. I only got one partially finished. I

was just out of new ideas and being very lazy about it. I'm hoping to get some ideas and inspirations in Florida this month. I haven't been to a SEPA meeting in several years, so I'm really looking forward to it. See you all under the Florida sunshine!

WEST VIRGINIA

contact: Tracey DeLaney
Planetarium, WV Wesleyan College
Buckhannon, WV delaney_t@wvwc.edu



Planetarium
West Virginia Wesleyan College
Buckhannon, WV

Tracy DeLaney reports: we have just finished our Summer Gifted Program and the students loved our old planetarium again this year. We were in the process of developing educational modules for our local schools and the children in Gifted program were willing guinea pigs for testing these modules for us. Our alumni relations department is actively seeking donors to help upgrade the planetarium and we have our fingers crossed that someone will step forward.

REMEMBER YOUR STATE COORDINATOR!

ALABAMA: Mitzi Adams
mitzi.adams@nasa.gov

FLORIDA: George Fleener
Jetson1959@aol.com

GEORGIA: David Dundee
DavidD@telluseum.org

KENTUCKY: Steve Russo
srusso0002@kctcs.edu

LOUISIANA: Jon Elvert
jelvert@lasm.org

MISSISSIPPI: James Hill
jhill@rainwaterobservatory.org

NORTH CAROLINA: Bob Hayward
rhayward@pari.com

PUERTO RICO: James Sullivan
jsulliva@broward.edu

SOUTH CAROLINA: Gary Senn
SennG@sc.edu

TENNESSEE: Kris McCall
krisccall@adventuresci.com

VIRGIN ISLANDS: James Sullivan
jsulliva@broward.edu

VIRGINIA: Kelly Herbst
Kelly.Herbst@thevlm.org

WEST VIRGINIA: Andrea Anderson
aanderso@access.k12.wv.us

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