

Southern Skies

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Ken Brandt
Robeson Planetarium
Lumberton, NC

I will begin by thanking David Dundee, who has done an outstanding job of leading this organization for the last two years. I realize, too, that every other member of council (with the exception of Derek and me) have served as president of this organization. In addition, many of you, have also served SEPA in this capacity. Recent SEPA meetings have had a 'hall of presidents' air to them, so I know that there is plenty of leadership assistance available to me should I require it.

So why am I here? I'll blame the long tedious hours of 'hurry-up-and-wait' that are a feature of service aboard a Navy ship (I served aboard USS Ponce; which is the ship currently testing out the drone-killing LASER!). Add to these long sleepless nights, wanderlust, and the 'big eyes'-stereo binoculars on the signal bridge. Throw in the near-perfect seeing of a darkened ship (red lights only) trying not to be seen, friends who also want to be taught about the night sky, and you have all the ingredients



for a new addiction-astronomy. I became a teacher with a focus on High School Earth and Space Science in Ocala, Florida ten years later. Two years after I started teaching, Jim and Shirley Smith were training teachers in the use of the Starlab portable system. I fell in love with the idea of teaching about the night sky during the day. Ten years later, the position of directing the Robeson Planetarium and Science Center opened up. So here we are. So, when I do something boneheaded, you can just look at Jim and Shirley and give them that "really, him?" look.

What do I want to see done while I'm in office, you ask? You didn't, but I'm telling you anyway. Because President I am, I get this space for free, and like Yoda I will write.

1. Figure out and implement new ways to recruit membership. At the last business meeting, we created a new membership committee to address this problem. Some great ideas are rolling in, and we'll try to implement some of these changes at conference in Georgia in June. I will email the membership a summary of these ideas in time to bring them up as agenda items at the initial business meeting at Tellus, GA. The members of this committee as of this writing are: Phil Groce, Leslie Bochenski, Derek Demeter, George Fleenor, Dave Maness, and Ross Workman. If you have ideas about this important subject, please contact them or me.

2. Also at the last business meeting, "...a committee on the increased use of technology to benefit

(Continued on page 16)

IPS REPORT

John Hare
ASH Enterprises
Bradenton, FL

Are you an IPS member?

Hopefully you will respond "yes" to the question. IPS has something to offer to everyone working in the planetarium field. A quick visit to the IPS Website, www.ips-planetarium.org, will give you a good introduction to the many benefits of membership.

Follow the link to the "Vision 2020 Strategic Plan" and see what IPS has in store for the future.

You'll also find information about several, FREE, full-dome shows. These are available to IPS members by simply furnishing various information about you and your planetarium on the accompanying form.

While you're perusing the Website, follow this link for information for the 2016 IPS conference to be held in Warsaw, Poland, <http://www.ips-planetarium.org/?page=ips2016home>

As always, I urge you to join and actively participate in IPS. Dues are \$65 for a 1-year membership and \$100 for 2-years.

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

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

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

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

Paul Campbell Fellowship Award Nomination Form

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

Nominee's Name: _____

Qualifications: _____

GOTO

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In October, Ball State University in Muncie, Indiana, opened the Charles W. Brown Planetarium - the largest in the state. After operating a 30' dome for more than 30 years, Dr. Ron Kaitchuck moved into a totally new 52' dome featuring a GOTO INC CHRONOS II HYBRID system with full-dome video by RSA Cosmos. Prime equipment contractor Ash Enterprises helped to design the dome with 148 seats, great handicapped accessibility, and ample space for lectures or small ensemble concerts.

A vibrant undergraduate program at Ball State reaches more than 1,600 astronomy students each year - one of the largest enrollments in the country! In addition to this large and growing number of university students, the new planetarium will also serve area K-12 school children and the surrounding community, continuing Ball State's 47-year tradition of providing all planetarium programs free of charge.

At the center of the action is the new GOTO CHRONOS II totally LED-illuminated opto-mechanical star projector. It is getting rave reviews from astronomy faculty, amateur astronomers, and fellow planetarians who gathered for a Great Lakes regional conference in the dome one week after its dedication. The CHRONOS II's 8,500 stars, combined with the 10,000,000 micro-stars which make up the Milky Way and deep sky objects are simply amazing. It is so realistic that the staff delights in loaning binoculars to visitors to show them the sky as it has never before been seen in a planetarium.

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Asst. Director Dayna Thompson and Dr. Ron Kaitchuck, Director

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Editor's Message

James Sullivan
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Davie, FL

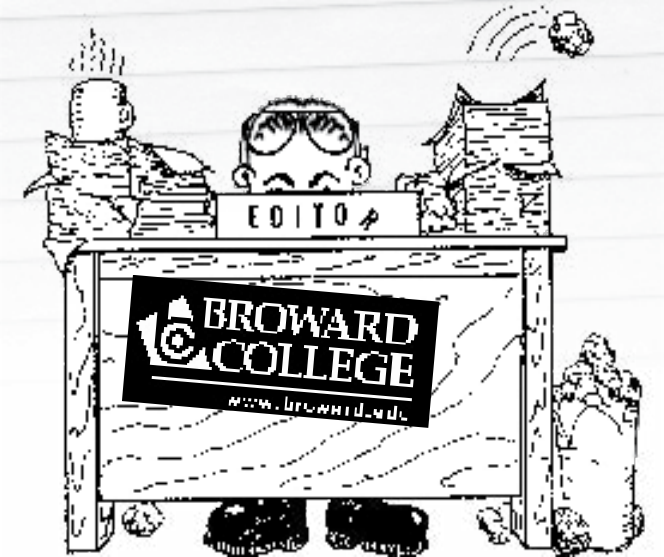
Submission deadlines: January 1 (Winter), April 1 (Spring), July 1 (Summer), October 1 (Fall).

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

Wow, I hope that you all will take a look at what John Hare has to say in his column. It is probably one of the best notices that has appeared in SEPA since the SEPA planet show was announced. There is dome content at the price most of us like best of all - free. I was able to find it by searching "IPS free shows" in Google. So, he is not woofing.

Some of you States are slackin' - send something in!

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

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____ Two Years, \$40

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Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
Hedgesville, WV

Hey, I have the Folk Alley holiday music stream playing on the computer:

<http://www.folkalley.com/music/holidaystream/>

Over the intercom, the powers that be have been running Christmas music during the change of classes here in the hallways until the kids and I have been kind of sick of them. There are still exams to give and it seems like an endless stream of packages to wrap and shows to give and days I come home plum exhausted. Is it Christmas yet? I plan on sleeping in both Christmas and the New Year.

October was so busy with eclipses, as I alluded to in my last column. The Lunar Eclipse was clear, but was far too low in the sky as it moved into totality for me to view with the sky brightening and houses in the way. I did enjoy seeing the moon go into totality, however, as I did the kid from my astronomy class who shared his lunar eclipse report that he and his grandma went out to watch it together.

I tried giving two lunar eclipse programs, but did not get many takers, except a guy who came while I was in the bathroom and didn't wait for me to come back, must have not really wanted to see the program and that is after lots of publicity.



Conrad Jung at Chabot Observatory in Oakland, CA took this lunar eclipse montage during the October 2014 lunar eclipse.

On the day of the partial solar eclipse, I meant to leave early, however, Steve Pielot, the planetarium repair guy showed up a day early, unannounced, for routine maintenance on my star projector, so I stuck around to watch from school, but as would be the case, clouds got in my way and I did not see anything before the sun set. Instead, we watched a live broadcast from Griffith Observatory. They had a live brass quartet perform "Thus Spake Zarathusa" from "2001: A Space Odyssey" at the start of the eclipse. During mid-eclipse, Donovan Leitch performed "Sunshine Superman." I think they have it archived on the web, so if you wish to watch it, you can go to "Griffith Observatory Television." I especially liked the fact that there was a humongous sunspot right in the middle of the sun during the eclipse.



Conrad Jung took this during the partial solar eclipse that occurred during October 2014. Note the large sunspot group on the sun.

I was glad to see Steve Pielot arrive to work on the star projector. I also was worried about a laser disk player that refused to move from park. I still use old technology such as laser disks and slide projectors as well as our star projector. I actually use my laser disk a lot, however, the new laser disk does not seem to be able to take computer input commands to go to a specific frame or play until it gets to a specific frame. If anyone has some ideas for me as to how I can program my laser disk player, I would love to hear from you.

In November, a teacher friend of mine, who teaches in another county East of mine, came with me for a visit to the Udvar-Hazy Center of the National Air and Space Museum that is located in Chantilly, Virginia. We went on a tour and marveled at

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BOOKENDS

Robin Byrne
Northeast State Community College
Blountville, TN

Promised the Moon: The Untold Story of the First Women in the Space Race by **Stephanie Nolen**

Once again, we return to ye olde bookshelf to review a book. This time, I read “Promised the Moon: The Untold Story of the First Women in the Space Race” by Stephanie Nolen. As a fan of anything to do with the history of the space program, and as a raving feminist, this looked to be right up my alley. I was not disappointed.

The story begins in September of 1959 while Geraldyn “Jerrie” Cobb was attending the Air Force Association annual meeting with her boss, Tom Harris. She worked for Aero Design and Engineering Company as a pilot and manager. While strolling on the beach with Harris, he introduced her to two men coming from the other direction: Donald Flickinger and Randy Lovelace. When Flickinger and Lovelace discovered that Jerrie was a pilot with over 7000 hours of flight time, her destiny was met. Lovelace was interested in putting women through the same tests the original Mercury astronauts had to endure to be chosen. He felt that women were even better suited for some of the stresses encountered in spaceflight, and he wanted to prove it. Jerrie was more than willing to be a guinea pig.

After Jerrie successfully completed the tests, Lovelace wanted to test other women. He sought help from his longtime friend, Jackie Cochran. Jackie made a name for herself as a competitive pilot, ran her own business, and was a millionaire whose donations help Lovelace set up his clinic.

During World War II, Jackie organized and ran the Women AirForce Service Pilots (WASPs) program. With her political connections and ties to other female pilots, Lovelace asked her to help recruit other women to be test subjects. Of those contacted, 12 answered the call.

All of the women were under the impression that they were being tested by NASA, since it was well known that the Lovelace Clinic was used by NASA to test the original astronaut candidates. They truly believed that they had a chance to go into space. That did not happen. The tests were being conducted by Lovelace primarily as a research project. When he contacted the same military base where Jerrie Cobb had completed some of her tests, with the request to test the other women, he was denied permission when they discovered that NASA was not backing the program. That’s when things got ugly.

The remaining 12 women weren’t notified until they had already made plans to go to Florida for 3 weeks of tests. Three of the women had to quit their jobs. Now they were left hanging with no explanation. Jerrie Cobb was furious and ready to fight. She contacted every person she could think of from NASA to congress, and all the way to the White House. She met with administrators, senators, and Vice President Johnson. After enough publicity hit the newspapers, the House Committee on Science and Astronautics had a hearing about the issue of women going to space. On July 17, 1962, the hearing convened. Representing the women along with Jerrie was one other candidate, Janey Hart, who knew her way around Washington since her husband was a senator. On behalf of NASA were George Low, John Glenn, and Scott Carpenter. The NASA line was that only military jet test pilots could be astronauts. If a qualified woman applied, they would consider her. The women pointed out that only men were allowed in the military, so the requirements automatically excluded women unfairly. Then Jackie Cochran took the stand. Much to the shock of Jerrie and Janey, Jackie supported

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Small Talk (Continued from page 8)

our first look at space shuttle Discovery which is housed there. Since we both attended the Honeywell Teacher Workshop at Space Camp in Huntsville, AL, we got our picture taken in front of the space shuttle wearing our flight suits.



Me and friend Marianne Tomasic pose in front of "Discovery" in our flight suits at the Udvar-Hazy Center at the Air and Space Museum in Chantilly, VA.

We also got to see the movie "Interstellar" in the IMAX theater and afterwards we went to see the life size model of the spacecraft "Ranger." We also took part in the Oculus Rift virtual reality experience of floating through the spacecraft from the movie, as if we were weightless. It was by far the best virtual reality experience I have ever had. I reached for floating books and pens and could see out the window to Saturn and the black hole from the film. It was worth the two hour wait to take part in the three minute experience. If you want to learn more about the Oculus Rift company and how they hope to move virtual reality into the gaming industry, there is a great article in the November 2014 issue of *Smithsonian* magazine.

Before exams, my astronomy students suggested several targets for a 20 inch telescope that is being installed at Penn State. They had called for suggestions for first light and so I submitted three proposals from students. The suggestions were very basic, one the Sun, one Mars and one 3C273, the brightest quasar. I do not know if any of these will be chosen as targets. We will see on January 18 when they take images.



Marianne Tomasic tries on the "Oculus Rift" goggles for the "Interstellar" virtual reality experience.

My astronomy students have also begun a detective lab on spectra where they look at lots of examples of spectra and try and determine what kind of spectra they are looking at. We will continue it when school resumes in January. They will also take a stab at naming craters on Mercury.

Winter break would have been a great time to visit Dave Maness in Memphis, TN what with West Virginia University playing Texas A& M in the Liberty Bowl there. However, reading the last issue of Southern Skies, I am glad I didn't, since the Sharp Planetarium where he works is undergoing renovation.

What are you looking forward to in 2015? The further adventures of Rosetta a Comet P/67? The April lunar eclipse? Dawn at Ceres? New Horizons at Pluto? For the latter, pictures start coming in on January 15th.

What in your opinion is the highlight of 2014? If you have answers to any of the questions I am asking here, drop me an E-mail, write, phone or fax. The information is on the second page of the journal. I would be happy to list your thoughts.



Free Show New Horizons for a Little Planet

Hartnell College Planetarium is offering a new free show, "New Horizons for a Little Planet", to all full dome planetariums. "New Horizons for a Little Planet" is a lighthearted introduction to NASA's *New Horizons* mission to Pluto and the Kuiper Belt. Launched in 2006, the *New Horizons* spacecraft is scheduled to fly by Pluto and its moons in July of 2015. The purpose of the program is to introduce planetarium visitors to the mission prior to its arrival at Pluto.

After it encounters Pluto, *New Horizons* will con-

tinue on through the Kuiper Belt and the mission will likely be extended. A smaller, more primitive Kuiper Belt Object will then be targeted for a rendezvous in 2018 or 2019. These encounters promise us unprecedented close up views of these distant worlds and the information gathered by *New Horizons* will provide valuable insight into the formation of our solar system and its planets.

"New Horizons for a Little Planet" is distributed by Audio Visual Imagineering, (AVI). The show comes with a Resource Package which include animations, artist renderings, education material, info and handouts. If you are interested in presenting "New Horizons for a Little Planet" simply go to <http://www.av-Imagineering.com/new-horizons/#more> and fill out the *New Horizons* Download Application. Once accepted, AVI will provide you with links to download your Dome Master and Resources. No license agreement is required.

Throughout Earth's violent history, impacts from comets and asteroids have mercilessly shaped its surface.

The ancient barrage continues today; from harmless meteors - those brilliant streaks in the night sky, to mountain sized boulders wandering perilously close to Earth.

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.

Life on Earth owes its very existence to these denizens of the solar system, yet it could all be wiped out in an instant.

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Attention: Planetarium People Who Also Like To Sing

Jon Bell
Hallstrom Planetarium
Indian River State College

I am trying to start up a singing group that I hope will be able to present songs about astronomy, plus a lot of STEM* related tunes at the next SEPA conference. I'm calling this group, *The Sidereal Singers*, (at least until I can think up a better name...) If you have an interest in learning how to sing some of these far-out science songs that I've been posting to Southern Skies, e-mail me at jbelle@irsc.edu, and I'll send you an information packet.

If we can get together at the beginning of the conference to practice, we might even get to sing in front of all our colleagues, and won't that be fun? Here's a partial list of songs that could be done:

There Are Plenty of Stars in the Sky
Fungi Isn't Fun
Constellation Barcarole
DNA
Moon Crater
Why Does the Sun Shine?
What's the Value of Pi?
Universe Calling!
Nobody Goes to the Moon
I Know Why There's Stormy Weather!
Mycologia Dreamin'
What is Gravity?
That's a Moray!
What is a Shooting Star?
Waltzing With Bears
Betelgeuse
Einstein the Genius
Jocelyn Found a Radio Star
The Malacologist's Farewell

Thanks!

**STEM = Science, Technology, Engineering and Math. I'm writing more of these songs now, as they are very popular at our local science fair awards presentations, public speaking engagements, etc.*

NEW SONG

I was looking for another moon song to accompany "Moon Crater," and "Moon Rovers," for an upcoming planetarium concert - "Songs of Earth and Space" - and I wanted something to commemorate the Apollo missions as well. The 60's song, "Everyone's Gone to the Moon," popped up on my internet search, and the title just got to me, since all I could think of was, "Yeah, right, but nobody goes there anymore," and that just got things rolling. Took only an hour or so to write new lyrics, the words pretty much fell right out onto the paper (or Microsoft Word document, whatever.)

"On the beach," is a reference to Florida's eastern "space coast" where NASA launches its big rockets. "Stepping stones" are the planets that we should have tried to go to after establishing a moon base, as envisioned by those of us who were caught up in the excitement of those incredible missions.

The list of astronauts who walked on the moon in the second verse is complete, although in no particular order because I had to maintain the cadence of the music. And you will no doubt note that I did add one more astronaut who had the dubious distinction of being the only person to travel to the moon twice and yet never land (I'm pretty sure you can pick him out from the others...)

NOBODY GOES TO THE MOON

Jon U. Bell, August 25, 2014

Sung to the tune, "Everyone's Gone to the Moon"
by J. King, 1965

Wings of Apollo
Long ago
Aimed for the Heavens
Rockets' glow
Promise of living
Up there soon
Everyone went to the moon.

Armstrong and Aldrin,
Conrad, Bean
Shepard and Mitchell
Irwin, Scott
Young, Duke and Cernan
Lovell and Schmitt
All of them went to the moon.

Bridge: Long time ago
Stepping stones sought
The moon was our playground we thought

Now we are grounded
On the beach
Rockets are broken
Stars out of reach
Dreams are forgotten all too soon

Nobody goes to the moon.
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Book Review (Continued from page 11)

the decision to not include women. Between Jackie's testimony and the statements made by Low, Glenn, and Carpenter, the case was lost.

So much of the story of the Fellow Lady Astronaut Trainees (FLATs) is also a story of the attitudes towards women during the 1950's and 1960's. This was an era when married women had to have their husband's signature to open a bank account or make a large purchase. These women were already anomalies just by the fact that they chose to fly airplanes, either as a hobby or as a career. Much was made of the effort to appear feminine when participating in the various flight competitions or when flying for different businesses. They didn't want anyone to think the female pilots were lesbian. Meanwhile, the early space program was simply an old boy network of men primarily from the military. They took for granted that it was a boys-only group. NASA didn't change that attitude until the 1970's when the first women were recruited for the shuttle program.

For Jerrie Cobb, Janey Hart, Jean Hixon, Wally Funk, Irene Leverton, Jan Dietrich, Marion Dietrich, B Trimble, Sarah Gorelick, Rhea Hurrle, Gene Nora Jessen, Jerri Truhill, and K Cagle, they were just doing what they felt they were born to do. Although a disappointing story that the women were never given the opportunity to fly to space, they are still an inspiration. They followed their dream in the face of much criticism, discrimination, and harassment. Whether referred to as the FLATs or the Mercury 13, these women are best described as heroes.

Reference:

Promised the Moon: The Untold Story of the First Women in the Space Race by Stephanie Nolen; Thunder's Mouth Press 2002

President's Message (Continued from page 4)

members will also be formed..." We have a new facebook page, (<https://www.facebook.com/sepa-domes>) which I strongly urge you to post to and contribute what you're able. Other ideas for a more robust web presence are eagerly sought.

Regarding these two items above, one great example that we'll be talking about some more is the idea, contributed by Kris McCall and Steve Russo, to do something that already works well for the Mid Atlantic Planetarium Association: master planetarians mentoring those new to the field. I was fortunate enough to be sent out to neighbor planetaria in NC, to see how they do their mission of education. I can't thank Patsy Wilson and Richard McColman enough for the inspiration they provided to me as I began my directorship of 'The Mother Dome.' Every newbie should have that same opportunity afforded them in our region.

3. Investigate making parts of our conference virtual. I watched with great interest some of the meetings at AGU and at GLPA, and have been wondering; why can't we at SEPA do that? It is a given that not every SEPA member can attend every conference. It is also a way for us to reach potential new members, as well as increasing our footprint in the planetarium and astronomy communities.

I look forward to the challenges, opportunities, and adventures ahead. In Disney's *Pinocchio*, Jiminy Cricket's character speaks the line: "What they can't do these days!" Sorry, Jiminy, but that list of 'can't do's' is getting smaller day-by-day. By the time you read this Philae may have reawakened, Dawn will be spiraling down into its orbit around Ceres, Curiosity may have found more evidence of organics and methane on Mars, and New Horizons will be beginning collection of meaningful data about the denizens of the Kuiper belt. And no doubt, there will be other space science surprises that we'll get to explain to our audiences. That, for me, is the reason I teach this stuff-it is always changing, making textbooks obsolete before the ink dries on them. "...I work for that. Short man, large dream ..." -Ray Bradbury, *If Only We Had Taller Been*.

Peace.

SAVE THE DATE JUNE 23-27



SEPA CONFERENCE 2015



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News From SEPA Region

FLORIDA

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Florida Planetarium Association (FLORPLAN)

Attn: Florida Planetarians!

Save the date: March 21, 2015

What: FLORPLAN Meeting (Florida Planetariums)

Hosted by: James Albury
Kika Silva Pla Planetarium – Santa Fe College
Gainesville, FL
Phone: 352-395-5381
<http://www.sfcollege.edu/planetarium>
<http://www.stargazersonline.org>

In December 2014, the planetarium retired its aging digital planetarium projector and upgraded to a higher definition, RSA Cosmos 1C-3K system. This is only the second RSA Cosmos system in the United States and the first single lens system. Along with a Goto Chronos star projector, the Kika Silva Pla Planetarium offers its visitors stunning visual and educational experiences. Come see for yourself!

More information will be released as the date nears. So, please, save the date and plan to attend. Let's

give James our full support!

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 *Cosmic Colors*, *Amazing Stagazing*, *Discovering Distant Worlds*, *African Skylore*, and *Shadows in Space*. On Wednesdays, we run *Stories for a Starry Night*.

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.

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

Claudia Hernandez reports: This season our dome buzzed with events like the Disney Vacation Club, United Way's volunteer appreciation day, and even an Interstellar promotion opportunity. The gem of the season, however, was Astronomy Day! We kicked this celebration off with a couple of signature event nights; Science Up Close: Accelerating Our Understanding of Particle Physics and Planetarium AstroJam!

The Science Up Close series serves the inquisitive adults of our community with an informal atmosphere to engage with local scientists in the fields of astronomy and particle physics. The second Astronomy Day event was Planetarium AstroJam!, a night filled with the artistic aspects of the planetarium visual effects culture. This was a collaborative effort with local artists and musicians to create a surreal planetarium experience.

Our Astronomy Day celebration was a great success with the visiting public. These are a few of the Astronomy Day highlights posted on our museum blog (<http://www.miamisci.org/blog/>):

- A Frost School of Music ensemble trio performed

a spectacular set of space-themed tunes inside the Planetarium under the stars.

- Kids built their rockets out of water bottles and launched them into the sky over the Museum.
- Florida International University's Society of Women Engineers brought circuits for visitors to learn about the parts of robots, which are key to exploring space where humans can't go (yet).
- "Star Gazers" co-host James C. Albury presented a "Best of" compilation of "Star Gazers" episodes inside the Museum's Theatre throughout the day.
- Visitors enjoyed showings in the Planetarium of Horkheimer's original "Helios."

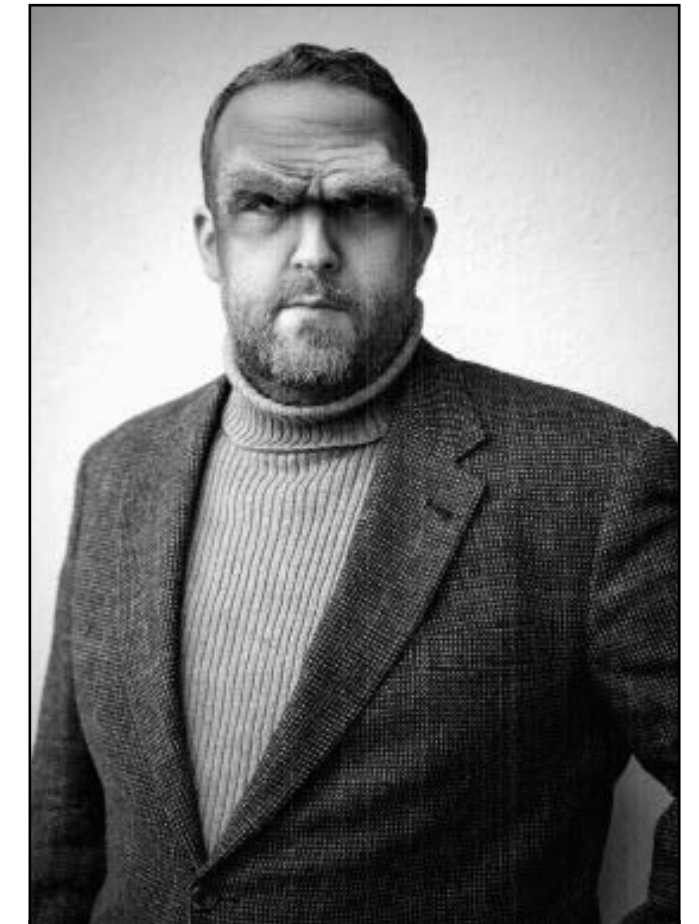
As always, we continue to accommodate all visiting school groups and run a public show schedule seven days a week. And of course every month, we celebrate Fabulous First Fridays; with a free star show, observatory viewing, and a night, jammed-packed with our music laser shows!

Well my fellow SEPA-ians that was our update for the fall of 2014. By the time you read this issue of Southern Skies our new planetarium, currently under construction, will have been capped off! We are very close to finishing our new home where we will continue to keep the legacy of our late director Jack Horkheimer to "keep looking up!"

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

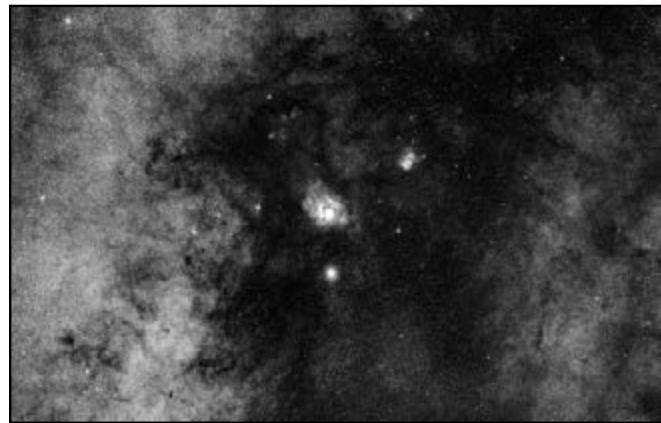
Derek Demeter reports: The Emil Buehler Perpetual Trust Planetarium at Seminole State College enjoyed a very active fall season! We presented a show in October called "Into the West: Astronomical Origins of Halloween" that explored the ancient celtic culture and their festival of Samhain and its connection to the Pleiades star cluster. We also teamed up with the college physical science faculty to offer a unique family Halloween event called the Owlpheratz School of Science and Spooks. For one night, we transformed the area where the planetarium is located into a haunted science school featuring science demonstrations, arts and crafts, slime making, and a costume contest. The pictures attached are of the characters we played. Michael plays the big-foot provost Dr. Samuel Adams Squatch and Derek

plays the eccentric mad scientist and headmaster Dr. Demetrius Deuteron.



We also began a program during the month of October called "Telescope Thursdays" where we travel to various areas around Central Florida and present free sidewalk astronomy events. These have been very successful and we plan to continue our program until the month of April. We also presented our own version of the "Star of Bethlehem" planetarium program during the month of December.

This picture I took of Lagoon/Trifid/Mars hat made Astronomy Picture of the Day.



Hope all is well and clear skies to you!

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



**Fernbank Science Center Planetarium
 Atlanta, GA**

April Whitt reports: By the time you read this, the celebration will have begun.

Fernbank Science Center marks its 50th anniversary in December of 2017. We're starting the party early, with a "50 for 50" string of special events between March 2015 and December 2017. Beginning with our "Spring into Science" theme for the second Atlanta Science Festival on March 21st,

including lectures and exhibits developed in-house and in collaboration with the Chandra folk and others, and continuing with the upcoming August 2017 solar eclipse, Fernbank is looking forward to offering exciting programs for our visitors.

Full-dome technology does allow a wider variety of planetarium presentations for both school and public groups. Attendance continues to rise as the economy improves. While our ticketing system currently lacks the ability for visitors to purchase planetarium tickets online, the Living Social website provides a good alternative. The web site is www.livingsocial.com. Patrons can get tickets sent to their smartphones and show them at our ticket booth for admission. Revenue has increased nicely since we signed on with Living Social.

School programs in collaboration with other departments at the science center are proving to be popular as well. An entire grade level from a school can visit in one morning for a planetarium presentation, followed by individual hands-on class sessions. Second and fourth grades attended sessions during the fall of 2014. Astronomy, chemistry and physics work together well.

October's "Fun with Flashlights" Halloween themed program for families with young children was a huge success. Well over a hundred small children and their parents, armed with flashlights of every imaginable light source, filled the dome with light. It reminded our director of the Devil's Tower scene from "Close Encounters of the Third Kind." Lots of fun for all.

John Serrie's "Upon a Midnight Clear" concert in early December is already a tradition. The planetarium was full of music - and star-lovers for the event in 2014.

Although this will appear in the "winter" issue, a happy vernal equinox to all.

**Planetarium
 Tellus NW GA Science Museum
 Cartersville, GA**

David Dundee reports: We had a really busy autumn

at Tellus. We conducted 4 astronomy workshops, one for boy scouts earning their Astronomy Merit badges, 3 others for families (stellar astronomy workshop; teaching folks the basics of observing and rotary star charts, lunar workshop; teaching folks about the moon and lunar observing. The final workshop was funded through a Harvard-Smithsonian grant to train students how to use robotic telescopes in Arizona and Massachusetts to take and process their own color images of deep space objects. We hosted events for both a lunar and solar eclipses in October. Although the clouds were present, we wowed the crowd with images on our big screen from Los Angeles. We also hosted (GRAM) Georgia Regional Astronomy Meeting, in October. We hosted 75 Georgia astronomers and astronomy graduate students from universities and colleges throughout the state presenting papers on their latest research. In the planetarium we premiered "Super Volcanoes" and brought back "Stars" for an encore run. In November we opened an annual favorite "Mystery of the Christmas Star". As we move into mid-December we near about 80,000 visitors through the planetarium for 2014, just over 20,000 will be from school groups. As the museum starts its seventh year, public attendance has gone down a bit, but school groups continue to grow in numbers and we are just about sold out through May for school programs.

Chickamauga, GA

Bobby Thompson reports: Cataract Surgery!

Look no glasses! Well, except for reading. What an experience this is! I have had to have glasses all my life! I now have a contact in my left eye but that soon will be unnecessary. I thought my doctor's office was a dirty yellow, but no! It is a nice light gray. One fellow told me that when his wife had the surgery, he had to repaint the whole house inside, because she didn't like that old yellow. With my new color vision, I see my hair is not blonde, but silver gray. Getting the yellow out of my left eye tomorrow. No more glasses or contacts maybe. Another week of eye protection and more eye drops. It will be a real white Christmas with the left eye done. Now everything is a pinkest white, and things are sharp from 3 feet out to Orion:) I slept for 5 hours

or more after my surgery. I remember Doc poking around in my eye. All nurses were very nice to this old man, but could not get any to go home with me.

This morning I went out and tried my new eye optics. Even tho it was hazy, I could see Alcor separated from Mizar! My right eye keeps improving. I can now read car tags at ~75 feet. The colors are magnificent. My neighbor, who took me in for left eye surgery, has shared the flu with me, but didn't stop me from going to see the beautiful sky last night. It was clear! I saw so many many deep sky fuzzes from the Great Dog to the "W". The Milky Way just stood out. M31, the Double Cluster, Bee Hive, and M42 all were naked eye. I can see stars another magnitude or more dimer! I love my new eyes. I could see the nebulosity around the Pleiades with my WW2 7x50 binoculars! Night driving is now a pleasure. I drove to a New Years party for the first time at night. There was no glare from all the lights.

Please protect your eyes. Our first optics to see the star filled sky are our eyes. Some of us never see and some have a limited vision compared to others. You learn to appreciate what you have when your view of the sky is limited, such as a hole in the forest of trees that opens to the sky.



I have known that vision is something you can lose at anytime. Maybe the most tenuous of all our senses. It was brought home to me when one beautiful girl in my neighborhood lost an eye from a piece on stone from another neighbors hammer. We were about six years old. Not long ago I lost

part of my vision in one eye. I watched it return as things came back through a deep purple of a broken blood vessel in my retina.

I did learn to see with my fingers. I worked with a Pakistani Machinist in Saudi Arabia. He taught me to feel bearings to a ten thousands of inch. I have had to work in dark or places I could not see, but learn to form a image of what I was feeling. I have worked with children that were blind or were losing their vision in Walker County Schools, and most of the time very rewarding and funny at times. You know you learn from your students! One little girl of about six was a brat, like Helen Keller. She didn't want to be limited. She knew me by my stink and feel. She would smell up my arm and feel my hands. I had a band aide on my hand when we first met. She almost didn't recognize me when I took it off.

May your visions all ways be fantastic!

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

Becky Lowder reports: After a very busy 2014, our planetarium is heading into another wonderful and busy new year in 2015!

Plans are underway again for a campus-wide solar system walk in conjunction with the Georgia Southern University Art Department. Participants will make rubbings in their solar system passports at each planet station and if they complete the entire solar system walk, they can select a prize! We're also looking into having geocache boxes on campus for added astronomy educational outreach and prizes, more later.

We've added a couple new fulldome presentations to our educational selections for school groups: *Chasing The Ghost Particle - From The South Pole Out To The Edge Of The Universe*, and *The Making Of A Star And Her Entourage - A Celestial Journey Through Time*. We're looking forward to also showing these new presentations during our monthly public events in the spring semester, along with live current sky star shows by our university students

taking the internship astronomy class. Our second semester interns will also be creating their own presentations to present as a public event and add to the Digistar cloud. The planetarium will continue being used in teaching some of our daytime astronomy labs where we always have clear skies for observing. Until next time, wishing everyone clear skies!



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

Jon Elvert reports: We started the New Year with a new line up of public shows: *Dark Universe*, *Hitchhiker's Tour through the Universe*, and *The Moon*. *Hitchhiker's Tour through the Universe* is an updated in-house production of our ever popular *Digital Universe* show, now retired. *Hitchhiker's* uses our DS2 system to tour 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, a relationship with space and time, and our audiences always seem to appreciate the live presentation.

In January we had two of three talks in our science lecture series – one on aurora, and the other on the making of *Dark Universe* presented by Dr. Carter Emmart, director of the Astrovisualization for production and education at the Rose Center for Earth and Space at the American Museum of Natural History. Carter also delighted the audience by taking them on his renowned "Magic Carpet Ride," a three-dimensional tour through the universe.

The Pennington Planetarium also hosted NASA's Orion Launch back in early December, which was more a success with school teachers than the general public. And our two portable planetariums were out

in schools and libraries every day for the first three weeks of December.

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

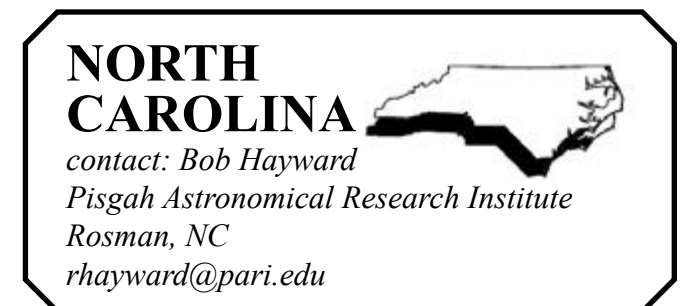
Dave Hostetter reports: The Lafayette Science Museum Planetarium had a good autumn. Live programs included *The Sky Tonight*, *The Modern Universe*, and *Stonehenge*, and playback programs (most with short live extra segments) included *Dawn of the Space Age*, *Black Holes*, *Firefall*, *To Space and Back*, *Earth, Moon, and Sun*, *Rusty Rocket's Last Blast*, *Larry Cat in Space*, *The Little Star that Could*, *Secret of the Cardboard Rocket*, *Two Small Pieces of Glass*, and *Flight Adventures*. Some of these ran only once (during an extended holiday schedule in the last two weeks of the year), but we are finding some success in doing that.

In September, our planetarium attendance (as opposed to overall museum attendance) passed the attendance for all of 2013! It looks as if our overall 2014 planetarium attendance will be about 150% of that in 2013 and about 190% of that in 2003 (our first full year in our new building).

Planetarium curator Dave Hostetter attended the Kavli Institute of Cosmological Physics' "Cosmology Short Course" at the University of Chicago in September, and would recommend it to anyone.

The planetarium's sidewalk astronomy programs were popular, the high point coming at a Christmas festival in early December when over 400 people got a look at the nearby full moon. Another 350 people (mostly school students) participated in our "Launch Fest" activities in support of NASA's Orion test launch in early December.

Early in 2015, we will begin the process of accessioning much of our traditional planetarium equipment into our museum's permanent collection in order to preserve not only an important part of our museum's history but also some of the history of the planetarium profession. Final planning is underway to include some of the collection in a small planetarium exhibit.



**Morehead Planetarium
Morehead Planetarium and Science Center
Chapel Hill, NC**

Amy Sayle reports: We are thrilled to have Mickey Jo Sorrell back at Morehead Planetarium and Science Center. After a few years away for graduate school, AmeriCorps, and several grandchildren, Mickey (former SEPA Secretary/Treasurer) is under the dome, in the classroom, and around the building again. She is Coordinator of the Statewide Star Party and standing in for the Science Programs Manager.

Morehead's Education Internship program is in its fifth successful year, placing two energetic, motivated educators into one-year positions with the GSK Fulldome Theater, Science Stage, Morehead Afterschool Program, and Summer Camp. Chosen from UNC students with excellent Morehead experience, these interns have the opportunity to explore all areas of science education while serving as key personnel in two critical programs. Watch for these talented educators as they launch into the job market. Our most recent planetarium and science stage intern, Nick Eakes, has raised the bar to new heights,



Nick Eakes

absorbing all we have to offer him with grace and flare, and developing his own engaging style both under the dome and with live science demos.

Fall 2014 marked the opening of Morehead's original fulldome production "Grossology and You," a show based on the book *Grossology and You*, written by Sylvia Branzei, illustrated by Jack Keely, and published by Price Stern Sloan. In the show, Noreen Neuron, host of the "Personal Universe" game, leads us through a competition to decide which body system is the best and brightest. Will it be Scabby (the immune system), Boogie (the respiratory system), or Flatus (the digestive system)? This show was supported by a Science Education Partnership Award from the National Institutes of Health.



Miss Boogie (aka Jarrett Grimm) signs autographs at the opening of Morehead's new fulldome show, "Grossology and You."

Morehead's production team is now working on a new original fulldome production, "Take Flight." This aeronautical-oriented show explores the four forces of flight (lift, weight, thrust, and drag) through a series of historic aeronautical events. The

Wright brothers come alive in a light-hearted story-line and introduce viewers to the physical phenomena and principles that make airplanes work. Along the way, audiences encounter notable aviation pioneers such as Charles Lindberg, Bessie Coleman, Amelia Earhart, and Chuck Yeager. The show is due to open in October 2015, and will be available for leased distribution to other fulldome planetariums soon thereafter.

Preparation is underway for the 3rd annual North Carolina Statewide Star Party, a signature event of the NC Science Festival, which is produced by Morehead (www.ncsciencefestival.org). Approximately 40 hosts, including some SEPA members, are planning public skywatching events across the state on Friday, April 24, or Saturday, April 25, 2015. Thanks to funding from NC Space Grant, each host will receive a star party kit. We will try out star party kit activities at the Astronomy Days event hosted by the NC Museum of Natural Sciences on January 24-25, 2015.

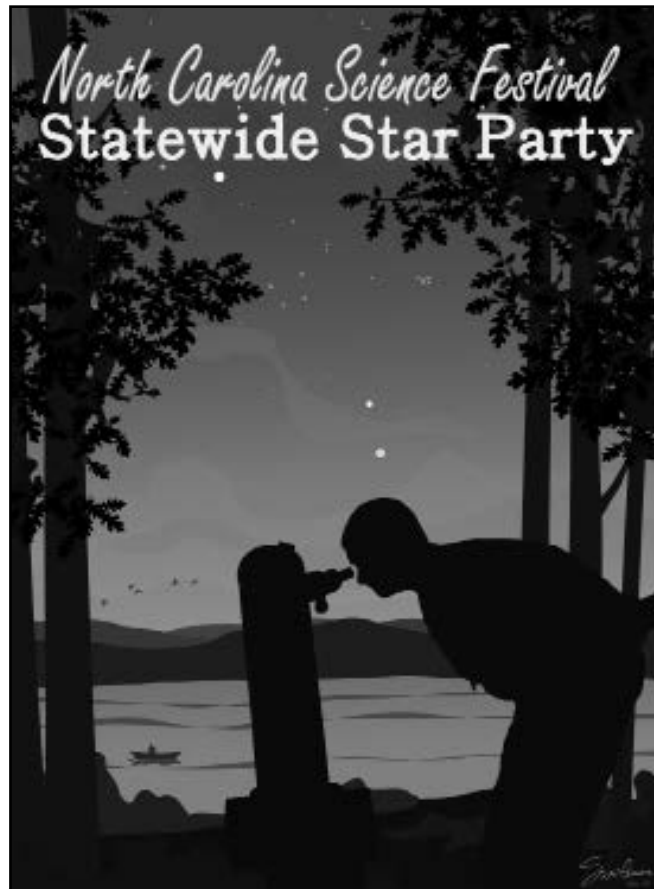


Illustration by S. Brian Owen, brianowenart.com.

Robeson Planetarium and Science Center Lumberton, NC

Ken Brandt reports: We have just completed the activities for the first launch of the Orion test vehicle, as well as our winter holiday shows. Here in NC, we seem to be doing more and more testing of students, and this is having a negative impact on attendance. I wonder if other institutions in NC, and in the SEPA region overall are experiencing a similar downturn in attendance numbers? We are advertising the planetarium's availability to non-testing school groups, senior centers, and other public groups.

Fortunately, by the time you are reading this, we will have less testing and more kids visiting here. Other projects we are involved with include the possible installation of several solar panels from a local company, who is installing solar farms throughout Robeson County.

PARI (Pisgah Astronomical Research Institute) Rosman, NC

Bob Hayward and Christi Whitworth report: Great things have been happening at PARI both inside the inside planetarium and inside and outside the outside planetarium and elsewhere at PARI and at venues other than PARI. Clear?

First, school programs are going well. Most groups that come to the PARI campus request a StarLab program that complements the classroom curriculum and then a walk from the Sun to the Kuiper Belt up the hill. A while ago we added partial circles in the parking lot next to our "Galaxy Walk" scaled solar system. These circles of different colors represent the orbits of the terrestrial planets and enable us to have students become Venusians or Mercurians and stand along the orbits of these two planets. The Martians stand on the red circle to demonstrate how Mars can be on the other side of the Earth and, thus, up at midnight.

As Christi mentioned in our last report, a major physical change on the PARI campus is the development of an "outdoor planetarium" on the site of a

radome that had to be removed when NASA and NSA left the site. The circular base of the radome has been fitted with benches and a speaker's platform so that we can use it for sky interpretation sessions. As of this writing it has been used very successfully for several public events even on rather cold mountain evenings. The building at the site has been remodeled into a small nature center and a warm-up room for use on cold evenings and for telescope storage. This facility has been a great addition to our monthly Evening at PARI programs. Bob will make a presentation on this at SEPA in June.



PARI Nature Center and Outdoor Planetarium

PARI staff continue outreach to the local community and elsewhere. Christi works with the local 4-H folks on a monthly SciGirls program presented at PARI or at the 4-H facility in downtown Brevard. She has also presented speaking engagements and training sessions on 3D printers and the Smiley remote control radion telescope not only in North Carolina but also in Tennessee and Virginia. So, PARI is truly becoming a regional resource.

Mike Castelaz has left his full-time position at PARI to accept a professorship at Brevard College. He continues to serve as PARI's Science Director on a contract basis. Mike, in character as Melchior, joined Balthazar, a.k.a. Bob Hayward, for an Evening at PARI presentation on the "Star of Bethlehem." They didn't solve the mystery but had a lot of fun arguing the pros and cons of the various theories.

Another major change at PARI was the removal of the radome over the 12-m radio telescope. This was quite an operation involving the whole staff assisted by local contractors.



PARI Radome removal from 12-m.

Finally, PARI has for many years hosted the astronomy session of the Duke TIP (Talent Identification Program) at PARI. This 2-week resident program for high school students has been very successful and popular with a waiting list each summer. We are proud to announce that PARI recently signed a contract with Duke to expand to two sessions in the summer of 2015.

Margaret C. Woodson Planetarium
Horizons Unlimited, Rowan-Salisbury Schools
Salisbury, NC

Jennifer Barbee reports: Exciting times in the Margaret C. Woodson planetarium include program-

ming for educational value as well as entertainment. Each weekday throughout December and January we welcomed the eager faces of first grade students ready to explore the skies. Children from both Rowan-Salisbury and Davie County public school systems, local private schools and special request groups created our full schedule of programming each week. "Sky News" was developed to directly align with NC Essential Standards for science and aim to support teachers in their delivery of astronomy topics for young learners with an integrated STEM approach.

In a few short weeks, the planetarium will begin to serve third grade students as well. Our new seventy-five minute class is entitled "Solar System Sleuths" as students will be responsible for resolving misconceptions associated with numerous objects of our solar system. Offerings provide opportunities for young learners to interact with each other using kinesthetic activities.

The Margaret C. Woodson Planetarium takes pride in partnering with institutes of higher education throughout the year based on the academic needs of courses. Each session is accompanied by a live sky portion that includes a review of seasonal patterns, and unique opportunities for monthly sky-gazing.

Public openings are held the second Saturday of each month, serving audiences of all ages. We are pleased to announce additional programming offered by a multitude of Horizons Unlimited staff members. We now have multiple offerings designed for scouts and look forward to providing our audiences with the best that the Margaret C. Woodson Planetarium and Horizons Unlimited has to offer. In January, our public show will feature "Stories of the Night." This program is designed to support requirements needed for Girl Scouts' Night Owl badge. Audiences will also enjoy a live sky, AVI's Orion laser show, and hands on learning opportunities as they familiarize themselves with winter constellations.

SOUTH CAROLINA

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 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) enjoyed a successful Christmas season with its annual presentation of 'Tis the Season (Season of Light) from Lochness Productions. Back in October, we hosted events for the lunar and solar eclipses that occurred. Both dates provided opportunity of good visibility of the eclipses and the events were greatly enjoyed by all who attended.

In January, we presented *Ancient Sky Lore* and *Mission to Mars*. *Ancient Sky Lore* is a live presentation that takes the planetarium visitors on a tour of the heavens as we discuss the history and stories of constellations from a variety of cultures. *Mission to Mars* explores the idea of future Mars exploration as the audience listens to what appears to be a conversation between the presenter and a patron. Discussions of travel to Mars as well as much exciting information about Mars are presented during the show. Both of these shows are local productions.

In February, we will show *Follow the Drinking Gourd*, based on the program by the New Jersey State Museum Planetarium and the Raritan Valley Community College Planetarium. We updated the script somewhat to make it a little longer and to include some more astronomy. We also address some of the concerns that others have expressed about the accuracy of the facts in the show surrounding the song and the Underground Railroad.

In March, the planetarium will offer 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.

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

Liz Klimek reports: As part of the South Carolina State Museum's "Windows to New Worlds" Project, the BlueCross BlueShield of South Carolina Planetarium opened on August 16, 2014 to great success. The 55-ft theater is equipped with a Digistar 5 system and SkyLase laser projector. We started simple with a single show, "Seven Wonders", which played for the first month and a half. Afterward we slowly introduced a variety of other offerings, including full-dome planetarium shows, live sky presentations, and laser shows. For the holidays we featured the Eugenides Planetarium's "Star of Bethlehem," as well as holiday laser shows from AVI and FirstLight Laser Productions. School groups, public shows, evening rentals, and special events have kept us going nonstop.

More details to come after we've had a chance to catch our breath!

South Carolina welcomes Jack Dunn

Jack Dunn reports: Glad to be here in South Carolina (Columbia). As of August 7th I retired as Planetarium Coordinator of the Mueller Planetarium at the University of Nebraska State Museum. I started



Jack Dunn and Ken Brandt.

there in 1971 after coming from the Planetarium in Lafayette, LA. (SEPA was just getting formed in those days.) (g) I was the president of the Great Plains Planetarium Association since 1999. In fact, I was one of the founding members of GPPA. As of January 1st, I'm now past president. But I also have been a member of SEPA since the 1980s. I came to a SEPA meeting in Cocoa in 1979. Phil Groce showed up with some musicians and puppeteers with giant heads. My thought was: "this is really weird, but memorable and I like it." And thus I was hooked. I have so many great memories of conferences over the years and I look fondly on old friends I made like Jim Hooks, Jane Hastings, Jack Horkheimer and John Hare. SEPA members impressed me with their enthusiasm, creativity and love of the profession.

So, how did I end up here in South Carolina? As you should see elsewhere in the South Carolina report, my wife Elizabeth Klimek is the manager of the new planetarium here in Columbia. Sure, I volunteer a little at the observatory and planetarium, but mostly I'm just enjoying life.

For years, I tried to help other planetariums in the plains. I'm Australian Paul Bourke's US collaborator for his spherical mirror projection concepts. My planetariums never had much budget and I know all too well how a planetarium might have to exist on limited funds. So I've spent quite a few years working with people on the plains trying to survive.

I'm most proud of helping the Astronomical Society of Kansas City save the Gottlieb Planetarium. That place is a 60-foot theater that had already closed twice before we were able to get it going again. I really enjoyed that. So I enjoy consulting. If you have questions or just want to talk domes, you can find me at jdunn@spacelaser.com I'm hoping to get to visit other planetariums in the area in the next year. It was great that several SEPA folk visited us around opening day here in Columbia.

See you at SEPA 2015.

TENNESSEE

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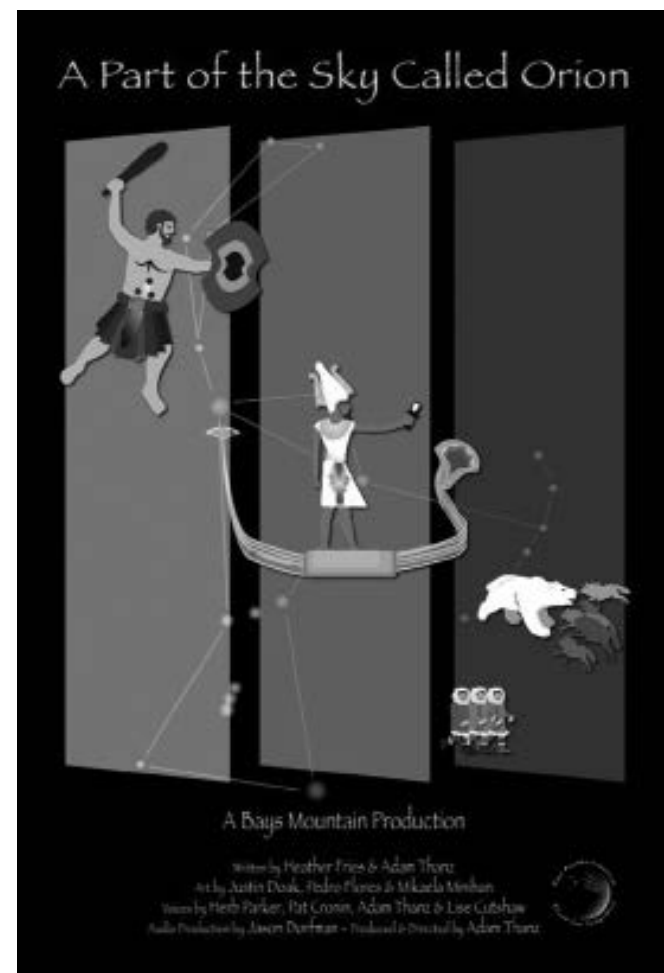


Bays Mountain Planetarium Kingsport, TN

Adam Thanz reports: Greetings Fellow Planetarians!

As I write this, we are just starting winter. After 6" of snow at our house on Halloween, who knows how this season will turn out.

Our main program for Jan.-April is our own production, "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! A modern-day narrator introduces each act and also shows how we can see each of these constellation collections. The stories themselves are done in first-person and they link the star lore with the teller's real life during ancient times. See the image that shows a frame from the Inupiaq section. Our audiences include all ages and they have really enjoyed the program. They appreciate the mix of storytelling, artwork, and music. The show is mastered in 4K and is available in two versions. One that will use your own star projector and another that is fully digital. Contact us for more info.

Our secondary program that is offered at 2 p.m. on the weekends is currently our live star program, "Appalachian Skies - Winter." Then in March, that show will be replaced with "Astronaut" from NSC Creative. We've added a great set of live activities to "Astronaut." We review major points of the U.S. & Russian Space Programs and then get the audience out of their seats when we compare rocket sizes with huge printouts that are 1/50th scale!

Have you been able to see Comet Lovejoy C/2014 Q2? Robin & I have seen it at our house around its perihelion. We have definitely seen it naked eye, but binoculars are needed to see its green color with nucleus, coma, bow shock, and just a hint of a small, spike of a tail.

Jason & I are working on a new show about Pluto and the New Horizons spacecraft. It is slated to be available for distribution this spring at an extremely low cost like we did for our Venus Transit program. It will look at primarily exploration, discovery, and our changing understanding based on new evidence (the scientific method). The program is designed to have two live sections to increase audience understanding and participation. Look for this exciting, new show this spring!

I'm currently compiling two workshops for the upcoming SEPA conference. One will be about creating a planetarium show in only one hour! Actually, it will be lots of fun in which we will learn about time management and utilizing talent to create a show in a timely manner. Everyone is going to be a part of it as it will be held on the bus ride to Huntsville, AL. The ride is three hours, but the workshop is only one. The other workshop is under

wraps right now and is contingent on a number of factors, the biggest being available funds. So, no more about it until it is set.

Another addition to our planetarium are two, kind-new interns. Joel Shelton was our intern for almost three years. He recently left to be able to do educational work that was closer to his schooling. He is tutoring mathematics while he is completing his last year of graduate school at ETSU. He is working towards his Masters in Mathematics! Upon this change, Kayla Jenkins joined us last summer to learn and help out with our public programming. She is a high school senior who is interested in earning degrees in astronomy. Julie Vaughn started about two months ago and she is a freshman in college with her sights on a degree in science with a focus on education. This is what makes our job so great!

Sharpe Planetarium Memphis, TN

Dave Maness reports: The Sharpe planetarium is still closed for renovations this winter. We are now running the winter version of *Seasonal Skies* from Loch Ness Productions in our flat-screen *Wonders of the Universe* program at the Mansion Theater. As always, the program includes a live section looking at the sky tonight. Below is part time staffer Kelsey Moody operating the program.



In the Sharpe Planetarium space, big changes have already taken place as you can see below. Many of you have already gone through this before, as I had

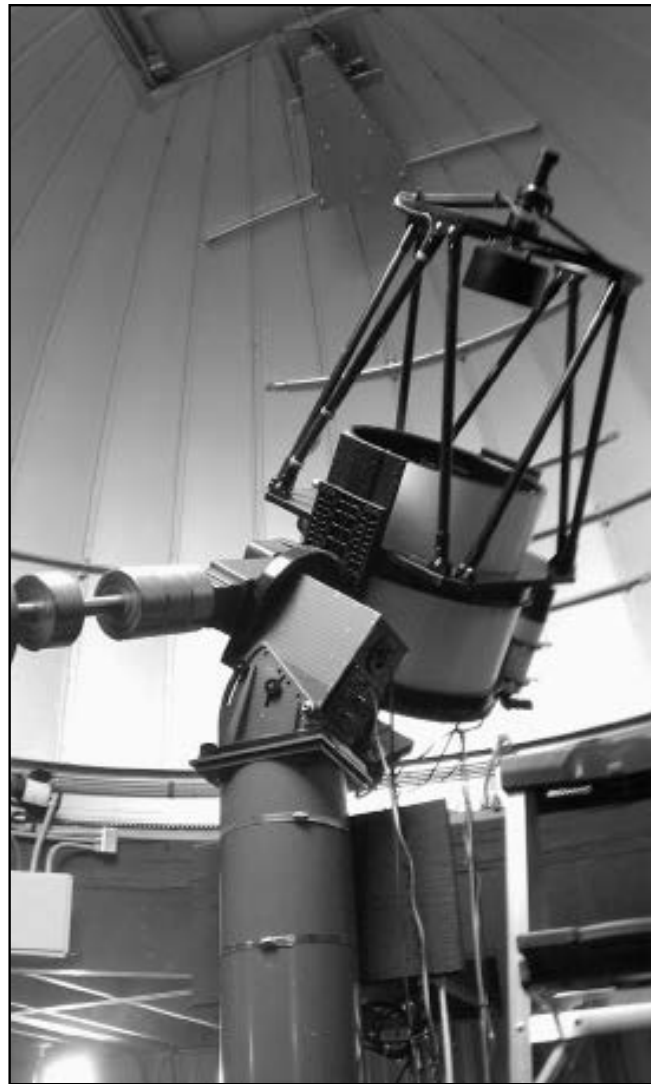
done decades ago at the Virginia Living Museum, but that doesn't make this sight any easier to take. The gutting of the old Sharpe proceeded at a brutal pace in November, and I could only bear an occasional glance.



This is essentially the view I have as I write this. However, the elevator platform in the center pit area is no longer visible from this vantage point. Being disconnected from power, the mechanism is slowly losing pressure and gradually lowering its floor toward the bottom of the pit. It is now about a 4 foot drop. At some point, it will be connected to power one last time and raised flush with the rest of the floor level. Then it will be welded into place, creating a stable floor for the new digital projector.

Soon the dome will be professionally cleaned and painted. Next a cove trough will be added to make room for a new full color, LED lighting system that will give us (for the first time ever) the ability to project a blue sky! Following shortly afterward, we will install a new sound system, new carpeting, new seats, and a new digital full dome projector. Now that I write about what is to come, I'm beginning to feel much better about the prospects for the New Year!

Over the Holidays I made my annual trek 550 miles northwest to visit my sister near Topeka, Ks. This time I made contact with Mike Ford of the Banner Creek Science Center. He operates a small, non-profit science education center, and observatory. Mike was kind enough to open the day after New Year's Day to give my sister and I a tour.



With the 20 inch remote/computer controllable telescope, and a Starlab, he supports local science education, including students on the Native American reservations in his area.



While we talked about our observatory and outreach experiences, I couldn't help but notice the wall hanging on the right side of the classroom space. He said it was presented to him as a "thank you"

by one of the Tribes in the area. I don't know how well it will show up in black and white, but I think the unknown designer beautifully and elegantly captured in blue, white, and shades of orange and brown, the ancient tradition of storytelling around a campfire, which (I think) is the ultimate origin of what we do.



Happy New Year!

VIRGINIA
contact: Kelly Herbst
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Abbitt Planetarium
Virginia Living Museum
Newport News, VA

Kelly Herbst reports: Happy New Year! 2015 is off to a wild start here at the Virginia Living Museum. We are back up and running again after a cable took us down just before New Year's...but the great folks at Spitz had us back in business again within 48 hours of learning about the problem. Thank you Spitz!

We're ringing in the New Year with a new slate of shows. Preschoolers will have the opportunity to learn about the constellation Orion with the laser version of *Legends of the Night Sky: Orion*. Space science will be covered with a new fulldome program, *Back to the Moon For Good*, a free show

from the Google Lunar XPrize folks. The offerings are rounded out with, of course, our live show, *Virginia Skies*.

Winter is a busy season for us with numerous events coming up on the calendar. Astro Camp-ins, our sleepover event for scouting groups, pick up this month. We'll also be featuring extended show times for Martin Luther King Jr. Day and our Groundhog Day event on January 31st. February brings *Follow the Drinking Gourd: A Quest for Freedom* to the line up for Black History Month, as well as Reptile Weekend and its popular show *A Sky Full of Scales*. We'll be offering *My Laser Valentine* at our February Star Party on Valentine's Day.

Welcome, 2015! May it be a year of prosperity for all of our domes!

Pretlow Planetarium
Old Dominion University
Norfolk, VA

Declan De Paor reports: This Fall, Pretlow Planetarium introduced "Trivia Tuesdays" and gave a prize of a telescope to the semester's winner. It was a big success and will be repeated in the Spring. Credit is due to Planetarium Manger Justin Mason for this innovation, which the readers may want to emulate.

Shameless self-promotion alert! Pretlow Planetarium Director Declan De Paor received ODU's "Teaching with Technology" award. Declan reads students' (texted) questions during presentations using Google Glass and has been awarded a U.S. patent for a novel planetarium projection system.

Planetarium
Thomas Jefferson HS
Richmond, VA

Leslie Bochenski reports: It's been a fun-filled fall semester, with over 650 first, third, and fourth grade students visiting the Planetarium. The first grade program "Shadows Big & Small" had proved especially popular this season. It is about Earth's rotation and is one of my favorite to perform because

the students are always very excited on first seeing the Planetarium, and they come up with the funniest ideas. Like the kid who said "people on the other side of Earth walk upside-down."

This winter, I will be closing the Planetarium for about 6 weeks while I recover from surgery. The programs already scheduled for this period will be postponed until spring. Jane Hastings will be making a return to Thomas Jefferson to teach the high school astronomy class in my absence. The students are lucky to have such an experienced and enthusiastic teacher taking over, and I am lucky to have a good friend in Jane (and her husband George!).



REMEMBER YOUR STATE COORDINATOR!

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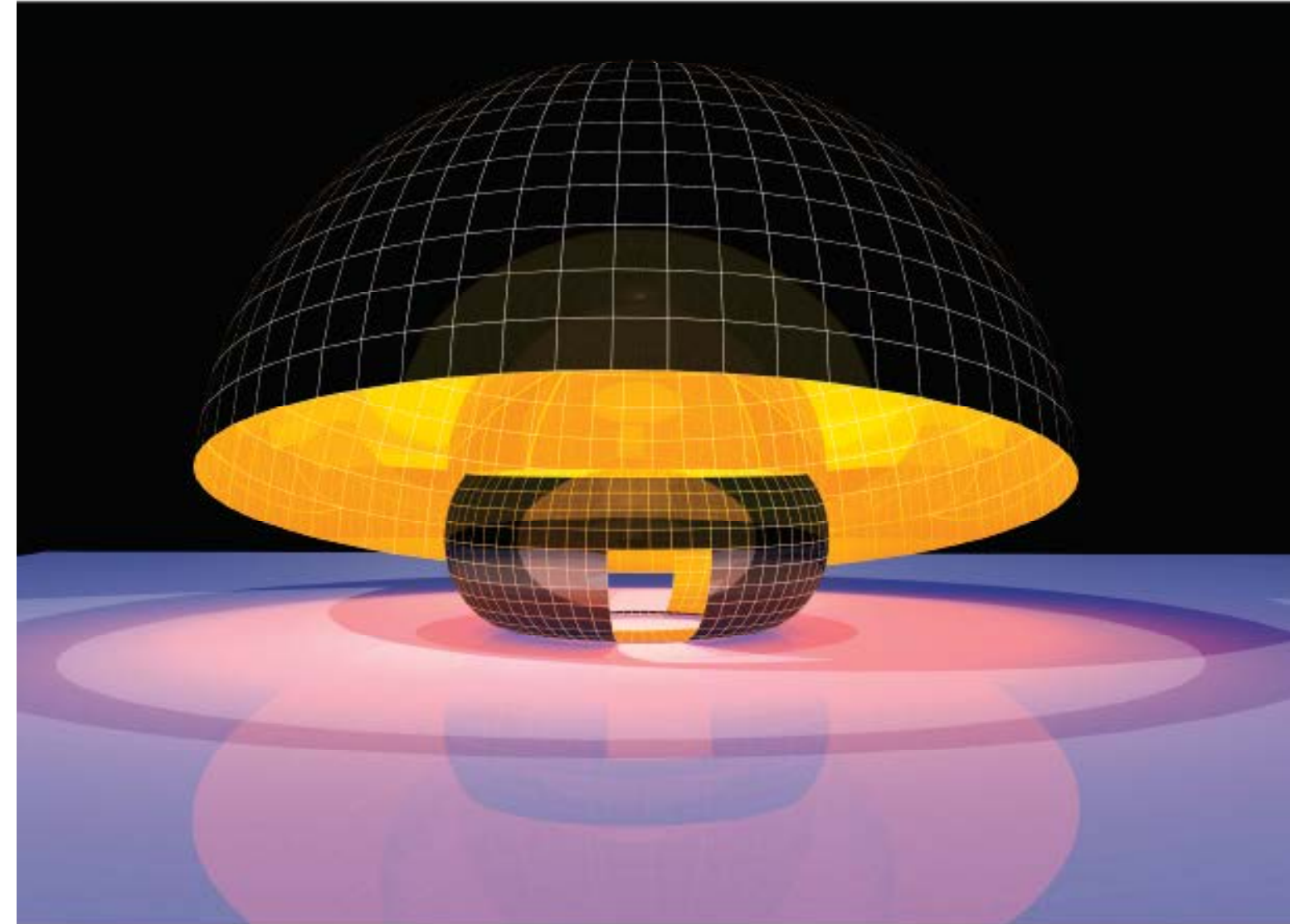
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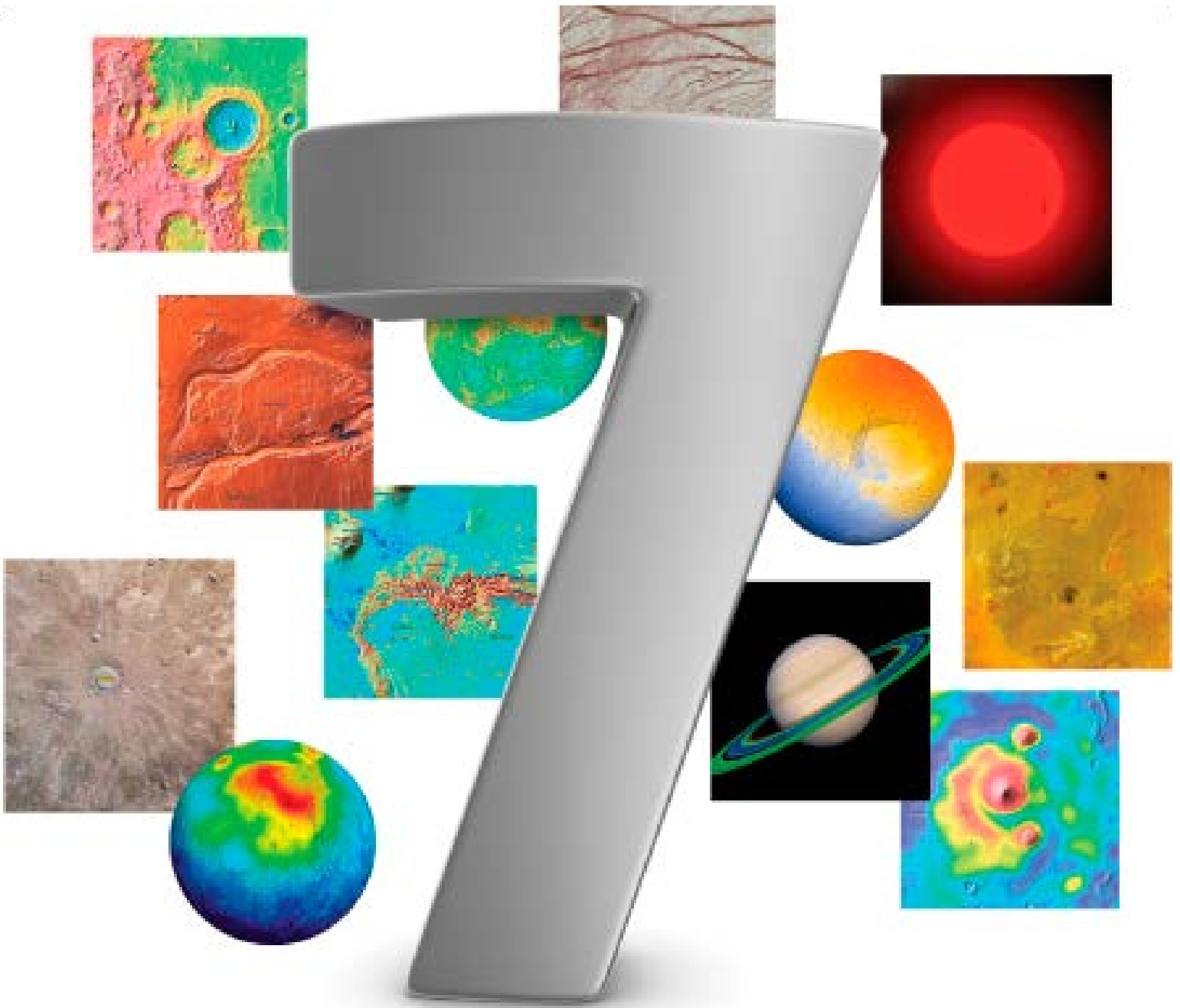
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