Southern Skies

Volume 33, Number 2 Journal of the Southeastern Planetarium Association Spring 2013

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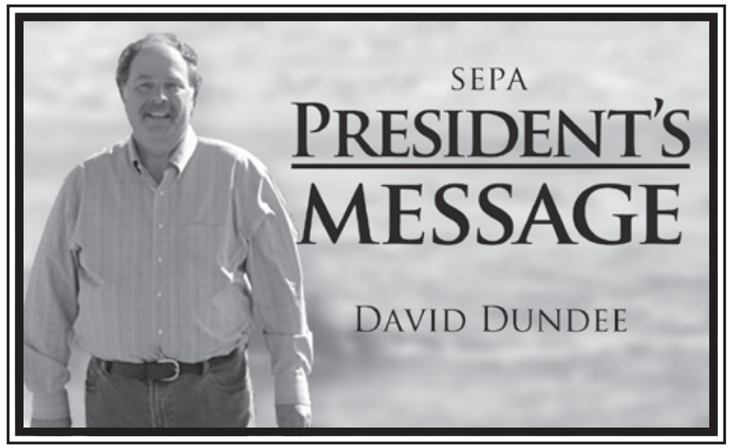


David Dundee
Tellus Science Museum
Cartersville, GA

It is funny how when you least expect it, sky events happen that help our mission to make people pause from their busy lives and look up. I was lazing in bed on the morning of February 15, expecting to enjoy my day off, when my wife Betty came in and said "Turn on the TV… big meteor in Russia… I think your day off is over." Moments later the phone began ringing. By the end of the day I had lost count of the number of television and radio interviews (and a few newspaper interviews too) that I had done.

Although it takes a lot of work and scrambling to accommodate every request, it really is worth it. To be able to get a few minutes of media time for astronomy is always worthwhile, especially when the air waves are usually filled with a lot of material not worth seeing or hearing. Who knows how many people we may turn on to looking at the beauty of the sky through these events? And I think planetarium folks are always better at explaining to the media what is happening in the sky rather than most of research and university folks; we really understand our audience and what level science needs to be discussed.

Meanwhile back on Earth, I pondered the last question asked of me on the Fox National News Cast: "Why were there no cell phone videos of the 1908 Russian meteor?" or the musings on CNN Headline news about the connection between the Earth's close asteroid pass and global warming. Then, the following week, Fox News was investigating the connection between the Russian Meteorite, the Asteroid, and the Pope's resignation. So, as you can see, the work of a science educator will never be done.

Finally, turning to other fun events, I hope to see you all in Jacksonville for SEPA 2013. Please connect through our SEPA web site to find all your registration details.

This just in …….SEPA is going to Orlando in 2014! And Land Between the Lakes in 2017! We are looking for 2015 hosts.

Until next time……

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

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

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

IPS REPORT

John Hare
ASH Enterprises
Bradenton, FL

IPS awards are handed out to qualifying individuals at each IPS conference. If you think you are deserving of an award or would like to nominate an individual for an award then now is the time to do it! Award nominations will be debated and decided by the IPS Council at their annual Council meeting that will take place this summer. Here is a summary of IPS awards.

First the classic IPS Service Award, on which our Standing Rules say: An IPS Service Award shall be bestowed, from time to time, by the Society upon an individual or institution whose presence and work in the planetarium field has been, through the years, an inspiration to the profession and its members. Between 1982 and 2012, twenty-three Service Awards have been given.

The second award is the IPS Technology and Innovation Award which, according to the Standing Rules, shall be bestowed, from time to time, by the Society upon an individual, institution or commercial vendor whose technology and/or innovations in the planetarium field have been, through the years, utilized or replicated by other members and/or planetariums. This is a rather new award, and it has so far been given only twice, in 2008 and 2010.

Deserving members of IPS can be named IPS Fellows. In order to be named a Fellow of IPS, the Standing Rules say that a member must have continuous active membership in good standing in IPS for at least five years, and substantial contributions in at least two of the following respects: (1) Serving IPS in elective office, diligent and/or devoted committee work, and the organization of conferences and meetings. (2) Relevant and significant publications and /or conference presentations. (3) Cooperation with professional societies, organizations and

(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: _____

_____

_____

_____

_____

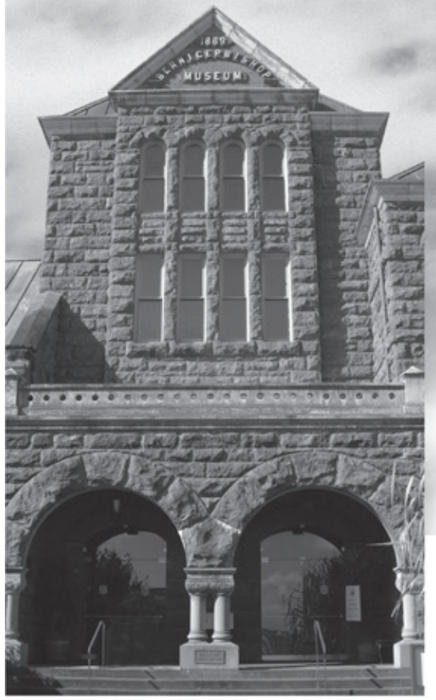
My Town,Our Planetarium # 181

GOTO

Bishop Museum's Voyage Continues

Many planetarians remember Bishop Museum, in Honolulu, Hawaii, as the creator of the NASA-sponsored "Explorers of Polynesia" planetarium show. It told the story of modern Hawaiians recreating migratory voyages around the Pacific in double-hulled sailing canoes. That show revealed some of the non-instrument navigational techniques which were developed using observations inside this planetarium 35 years ago.

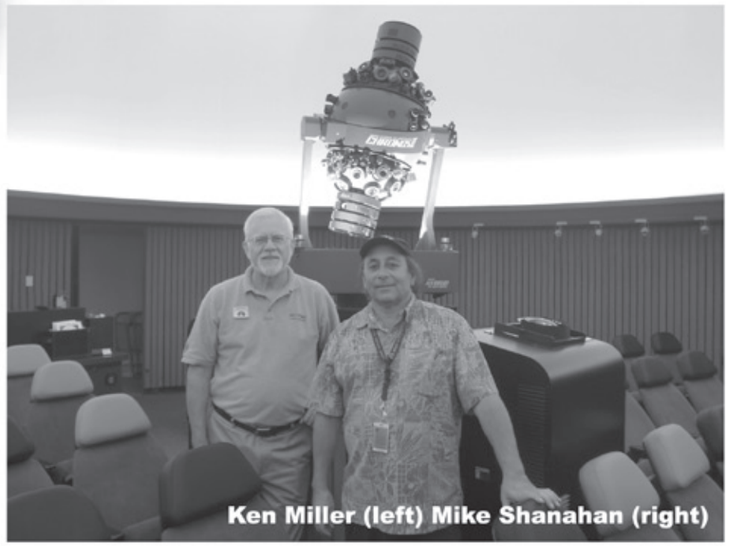
Of course Bishop also features programs on modern astronomy and the discoveries atop Mauna Kea, but planetarium director Mike Shanahan continues to tell the story of Hawaiian voyaging to tens of thousands of visitors and residents annually. And the planetarium continues to train new Polynesian navigators to sail with a deep understanding of the sky and signs from Nature, but without compass or sextant; without maps or GPS.



Bishop Museum recently renovated the planetarium with a new dome, seats, audio, lighting, and GOTO CHRONOS II HYBRID projection and control system. The CHRONOS II star projector uses long-life LEDs to illuminate 8,500 perfect stars and a gorgeous Milky Way to put audiences "on the canoe" at sea, on a perfect night. And unlike older analog projectors, the digitally-controlled CHRONOS II is able to "jump" to any location on earth, at any time in the past, present, or future, in a matter of seconds rather than minutes or hours.

A synchronized fulldome video system adds enhancements to the CHRONOS II sky which can include coordinate lines, constellation figures, or even partial clouds (!) to aide in the realistic simulations used to teach navigation. The intuitive and ergonomically-designed GOTO HYBRID control console recently allowed Hawaii's master navigator to simply walk up and begin using it to teach his current class of Polynesian navigators!

GOTO INC is very proud to have used input from former Bishop Museum planetarium director Ken Miller and hundreds of other planetarium professionals in the design of the CHRONOS II HYBRID system. Ken joined GOTO INC 13 years ago, where he helps custom fit GOTO systems to users around the world.


Ken Miller (left) Mike Shanahan (right)

To learn more, contact:

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Editor's Message

James Sullivan
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We would like to thank our sponsors who support this magazine and our conferences. Please, read their ads, examine their products, and support them. As an industry, we are interdependent.

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.

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.

SEPA Membership Form

Please send your check to SEPA, c/o Patsy Wilson, 140 Lyn Road, Salisbury, NC 28147.
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Contribution to Scholarship Award Account: $_____

Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
Hedgesville, WV

The spring equinox is here and the daffodils are coming up, despite the poor weather and a few inches of snow we received a few days ago.

Are you feeling like me, that it seems spring seems to come earlier and earlier each season? Forget about that early March snowstorm nicknamed "Saturn" or "Snowquester". http://www.huffingtonpost.com/2013/03/06/snowquester-pictures-snow-day-winter-storm-saturn-mid-atlantic_n_2820869.html Either way, I think both are silly names for a snowstorm and why should we name them anyway? Can't we just number them? Maybe I am in the minority there. However, NASA seems to agree with the folks thinking spring is coming earlier and earlier to us. Study these diagrams and see if you do not agree:

http://www.washingtonpost.com/blogs/capital-weather-gang/post/the-unmistakable-increase-in-northern-hemisphere-summer-temperatures/2012/09/14/819b3cc0-fe72-11e1-8adc-499661afe377_blog.html

But spring is definitely here and it brought comet Pan-starrs. I have not been able to coax it out of evening sunset twilight, but other people have. I am attaching a picture I got from friend Conrad Jung out in Oakland, CA. Were you able to get a peek at it either live or to take a photograph? Did you show it to anyone at the planetarium where you work? Staff or general public?

I don't know about you, however, the end of winter sometimes brings about illness. A faculty member here at the high school was telling me about his nineteen month old daughter having pneumonia. I read about someone I knew getting it at sixty-seven and getting a collapsed lung. Me, it wasn't something drastic. I am seldom sick; however, I caught some intestinal thing that made me really sick, so sick I actually missed a day at work, unusual for me. I came back after a day flat on my back downing liquids.

My first real meal was at a luncheon thrown by our business partnership organization and received a grant for the planetarium/astronomy class to buy some quality spectrographs and a copy of Space School Musical. Never heard of it? It is a fun play/musical that kids can put on about the solar system.

You can learn more about it here: http://discovery.nasa.gov/musical/index.cfml And here: http://www.jpl.nasa.gov/education/index.cfm?page=184

Get your local high school drama troupe or community theater group to put it together in your planetarium or a related part of your planetarium facility. Want a DVD? If you don't want to download the scripts and stuff, you can purchase a DVD kit from NASA CORE: http://corecatalog.nasa.gov/item.cfm?num=010.2-12D Perhaps you can split the proceeds with the theater group who does the show. Maybe this can generate a different audience for your planetarium.

It is only the third month of March 2013 and astronomy activities abound with three comets on the way. Sure Pan-starrs was a challenge, and the early morning low arrival of Comet Lemmon near the sun may make it a non-event for people, but hey you can always show the pictures in your dome. Isn't that what we do, bring astronomy to the public who do not look up that much on their own?

Speaking of people who don't look up on their own, there are my high school astronomy students who did not bother to do the four moon observations during the nine week grading period to generate a project grade. Can't we get high school kids to get away from the computer or gaming console or i-pad or smart phone to look up at the sky? Got any tips? I would love

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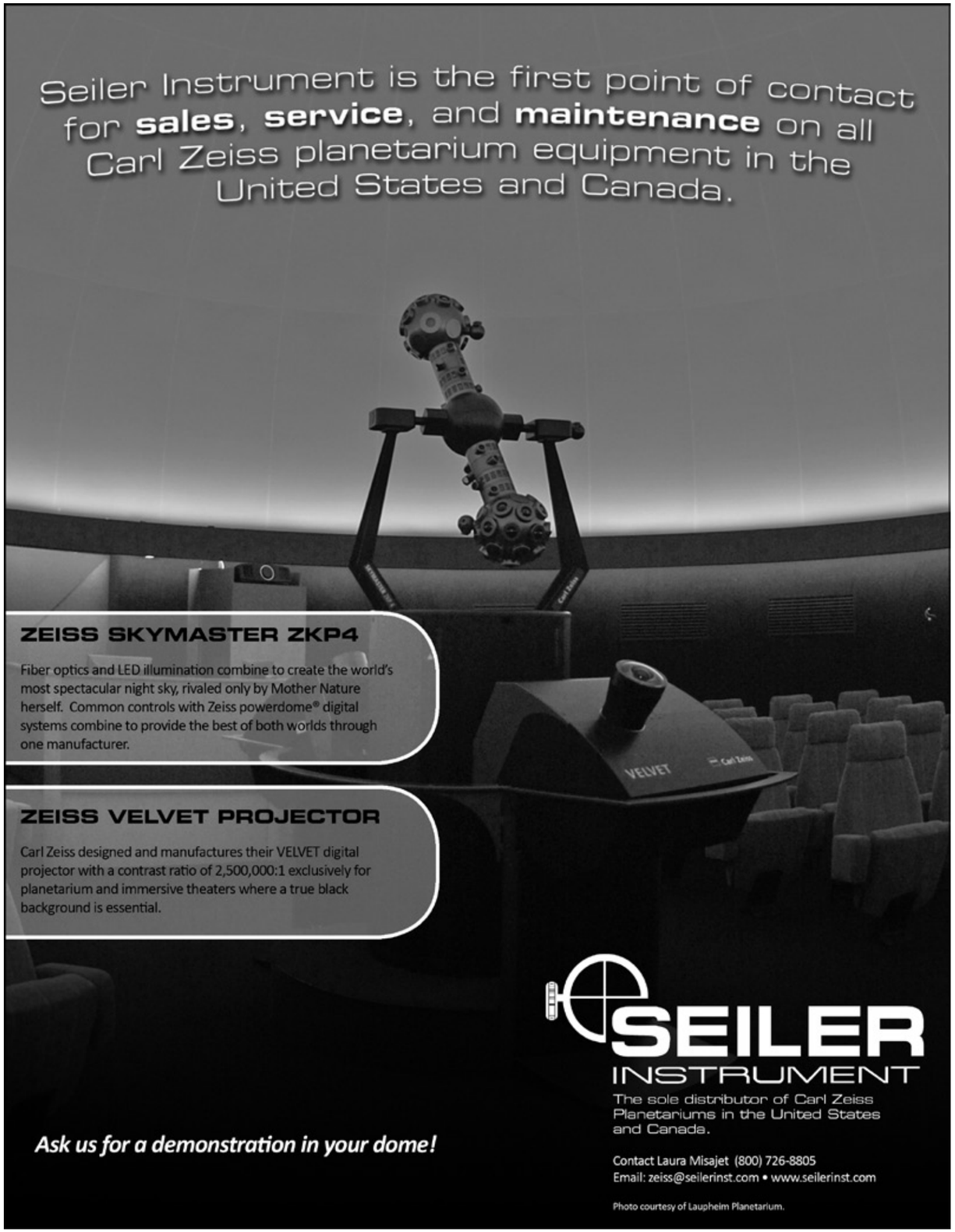


BOOKENDS

Robin Byrne
Bays Mountain Planetarium
Kingsport, TN

Star Wars and History
edited by N. Reagin and J. Liedl

It is time once again for a book review, and this time I chose "Star Wars and History," edited by Nancy R. Reagin and Janice Liedl. Does it have anything to do with astronomy? No. Then why review it? Because it's STAR WARS, of course!

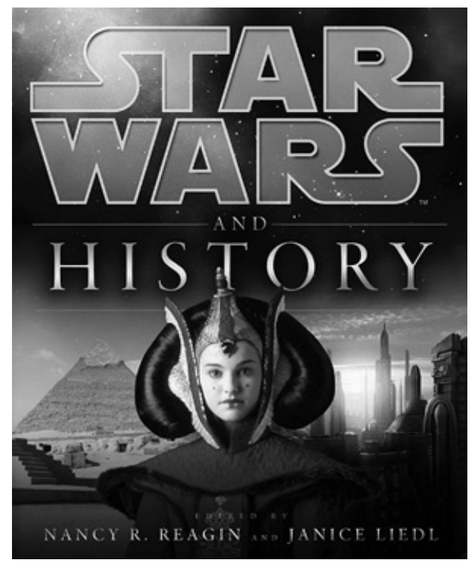
Written with the cooperation of George Lucas, this book looks at the historical influences Lucas based his story and characters upon, as well as other historical parallels. Broken into three parts, "Star Wars and History" begins with wars, rebellions and those who fought in such battles. The second section explores the politics of the Star Wars universe. And we end with the economics and society of the galaxy far, far away.

Starting with the rebellion, two eras in history are explored: the American Revolution and the Vietnam War. In the case of the rebels versus the Empire, as with both the American Revolution and Vietnam, we have a small band of poorly trained and supplied rebels fighting against a very powerful enemy. In all three wars, on paper, it seems obvious that the more powerful side will win. However, what makes the difference is a familiarity with the local terrain and the help of native peoples. Against the odds, the rebels come out triumphant.

The role of Princess Leia as a woman fighting in a war finds many parallels. Joan of Arc, Constance Markievicz (Ireland), Rose Greenhow (Civil War), and women in the French Resistance of World War II are all examples of a woman taking up arms, spying, and fighting for a cause. In many cases, the women had to disguise themselves as men, much as Leia did when she portrayed the bounty hunter Boushh, bringing Chewbacca to Jabba the Hutt.

The Jedi order also has some earthly equivalents. Their monk-like order and skill as fighters is very much like the Shaolin Monks. The Zen philosophy teaches to "let go of the conscious mind", much as Obi Wan Kenobi instructs Luke Skywalker to do when he first begins training in the Jedi arts. The Knights Templar had a similar hierarchy to their order as the Jedi, and saw themselves as a force of good fighting against evil. And the fate of the Jedis, being massacred by their enemies, is very similar to what happened to the Knights Templar on Friday the 13th of October 1307, when a secret order was executed to arrest the Templars as heretics.

The rise of Palpatine to Emperor also has connections to our past. Lucas clearly based much of his rise to the events of ancient Rome, where the leaders asked for temporary power in a time of crisis, only to never relinquish it. The fall of Rome into rule by an Emperor, and the Senate losing all power



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Are Planetariums Driven by their Technology or by Ideas?

Phil Groce
Helping Planetariums Succeed LLC
Macon, GA

In the December 14th, 2012 – VOL 338 issue of ***Science*** (the journal of the AAAS), Freeman J. Dyson wrote an insightful perspective asking the question "Is Science Driven by Ideas or by Tools?" It got me thinking about planetariums and a corollary question: "Are planetariums driven by their presentation technology (their tools) or by ideas?" The recent spats as recorded on Dome-L show that there is a great divide on this issue, and the implications of this question go to the very heart and soul of the purpose of a planetarium.

In Freeman's article, he notes that modern physics and astronomy are the results of ideas from dreamers like "Einstein and Heisenberg and Schrödinger and Dirac—who guessed nature's secrets by dreaming dreams of mathematical Beauty," yet, much of our modern understanding of the universe came from the inventors and builders of telescopes and sensing devices, the tools of modern astronomy. These dreams of Einstein have been built upon or supplanted by new ideas like "string theory" and "multiverses." Our tools have become even more powerful, revealing shadows of dark matter and dark energy. A Black Hole, once just an idea, is now confirmed by the tools of astronomy. Dyson writes that "perhaps astronomy is the last remaining science that still has its main tools producing output in the form of images."

Now how does this apply to planetariums? Well for one thing, we have a history of being a technology-driven or tool-driven profession. From the very beginning, when Zeiss made the first optical-mechanical planetarium, what we taught and showed our public audiences was determined by the technology or the tools that were made available to us. Sometimes, those tools limited what content we presented and what ideas we discussed. A good example is the venerable Spitz projector. These relatively low-cost planetariums made it possible for nearly every city to have a planetarium, yet their design limited us to largely discussing the stars of the Northern Hemisphere. Because there was no south polar region of stars to show, we basically ignored the Southern Sky and the rich discoveries they presented. The unwritten rule was, "if we couldn't show it, we didn't present it."

Roll forward in time and you have the addition of special-effect projectors, 35mm slide projectors, 16 mm motion picture projectors, and later, video projectors. Each of these presentation tools advanced and widened the circle of ideas that we could present to our students and to our public. Precisely because of the advent of these wonderful presentation tools, we became more about ideas than the technology. Lately, I have noticed how many planetarians look back at this period as the "golden age of planetariums". It was a time when innovation of content and the communication of ideas dominated our conferences.

Cycle to today and, once again, we have a profession dominated by technology rather than ideas. Friends of mine, looking for a reason for this decline, blame the rise of fulldome programs and digital planetariums. Nothing could be further from the truth. In reality, these wonderful tools are unlimited in what they can show and illustrate. Literally, almost anything you can imagine and have the talent to illustrate on a computer, you can present with these very powerful tools. They are only waiting to be used by people with the passion to communicate the ideas and discoveries of modern astronomy. No longer

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Archeo-astronomy

Something Wicked This Way Comes: a Few Words about Comets

Woodrow W. Grizzle III
Elizabeth City State University Planetarium
Elizabeth City, NC

You've come, have you?... You've come, you source of tears to many mothers, you evil. I hate you! It is long since I saw you; but as I see you now you are much more terrible, for I see you brandishing the downfall of my country. I hate you!

~ Eilmer of Malmesbury, writing of comet Halley, A.D. 1066

Comet fever is approaching full-swing with comet C/2011 L4 (PANSTARRS) now visible in the western sky of early evening. There are two comets nearing Sol now (March 2013), fizzing their primordial dust into interplanetary space. The other is comet C/2012 F6 (Lemmon). Unfortunately, comet Lemmon is not visible in the northern hemisphere right now, but it will become so in April. However, barring an outburst, it will likely be a modest magnitude 5 by then: quite dim to the naked eye, but still nice for binoculars and long exposure photographs. The wonder of seeing the two comets simultaneously in the photographs from the southern hemisphere is spectacular.

Caesar's comet (C/-43 K1), also known as Comet Caesar and the Great Comet of 44 BC, may have been the most famous comet of all antiquity. In the summer after Julius Caesar was murdered in 44 B.C., his heir, Octavian, now called Caesar Augustus, held funerary games for his adoptive father. It was during these games that what was perhaps the brightest daytime comet in recorded history appeared. For seven days, it blazed in the skies above Rome, rising at about 11 o'clock each day and being visible into the evening. The Romans attributed it as the soul of Caesar, rising to heaven. Because of this, a star was added to the brow of some of his statues and Augustus minted coins featuring his head on the obverse and the blazing comet on the reverse with the words *DIVVS IVLIV[S]*.

Caesaraugusta mint, *Denarius minted by Augustus.* Minted silver coin. Obverse: CAESAR AVGVSTVS, laureate head, right. Reverse: DIVVS IVLIV[S], with comet (star) of eight rays, tail upward. c. 19 B.C. Bibliotheca Apostolica Vaticana, Stato della Città del Vaticano.

Harold II, the last Anglo-Saxon king of England, is associated with a comet, as well. Though, in Harold's case, the comet was interpreted as much less favorable a sign. Appearing in March of 1066, the comet we now call Halley appeared in the skies above England for five nights. It was unusually bright this time around because it passed within 0.10 AU of Earth. Comets were almost always seen as omens by ancient and medieval peoples: sometimes good, most often bad. When it comes to, say, a battle, it depends on who you ask afterward what kind of omen the comet was. In 1066, it was a decidedly terrific omen for King Harold, as he did not survive the Battle of Hastings in October that year, when he was either shot in the eye with an arrow or ganged upon by four knights, brutally beaten, killed, and then dismembered. The comet was a good omen for one of those four knights, William, Duke of Normandy, who was later known as William the Conqueror (William the Bastard in non-Norman sources). A famous embroidered wall hanging known as the Bayeux Tapestry tells the story of how the Norman victory in 1066 came to be.

Artist(s) unknown, *Bayeux Tapestry panel showing Halley's comet.* Tabby-woven linen embroidered with wool yarn. Text reads ISTI MIRANT STELLA: "These [people] are looking at the star." c. A.D. 1070. Musée de la Tapisserie de Bayeux, Normandy, France

Comet Halley became so infamous a trouble maker during the Middle Ages that popular legend holds that Pope Callixtus III, believing the comet to be an ill omen for the success of Christian defenders of Belgrade against the aggression of the Ottoman Empire, excommunicated the comet by Papal Bull during its 1456 apparition. In 1470, Bartolomeo Platina gives this account in his Lives of the Popes:

> *A hairy and fiery star having then made its appearance for several days, the mathematicians declared that there would follow grievous pestilence, dearth and some great calamity. Callixtus, to avert the wrath of God, ordered supplications that if evils were impending for the human race He would turn all upon the Turks, the enemies of the Christian name. He likewise ordered, to move God by continual entreaty, that notice should be given by the bells to call the faithful at midday to aid by their prayers those engaged in battle with the Turk.*

While Callixtus did issue a Papal Bull in 1456 ordering prayers for the city's safety, there is no extant primary source material to corroborate the comet excommunication claim, and historians suggest the tale is likely an embellishment perpetrated by French mathematician and astronomer Pierre-Simon Laplace.

Alfonso de Borja, *obispo de Valencia y papa Calixto III* (Bishop of Valencia and Pope Callixtus III). A.D. 1568. Oil on leather. Museo de la Catedral de Valencia, Spain.

Fast-forwarding nearly four centuries to November 30, 1835, exactly two weeks after Halley's perihelion, Samuel Langhorne Clemens, better known by his pen name of Mark Twain, was born. In his 1909 autobiography, Twain wrote:

> *I came in with Halley's comet in 1835. It is coming again next year, and I expect to go out with it. It will be the greatest disappointment of my life if I don't go out with Halley's comet. The Almighty has said, no doubt: 'Now here are these two unaccountable freaks; they came in together, they must go out together.'*

The Turks and Caicos Islands Philatelic Bureau. *Postage stamp featuring Mark Twain riding Halley's comet*. A.D. 1985. Printed paper. Turks and Caicos Islands Postal Archives, Cockburn Town.

Mark Twain died on April 21, 1910, just one day after the comet again rounded the Sun.

In so rounding, I am now brought full-circle, back to comet PANSTARRS, for I have my own

(Continued on page 18)

Small Talk (Continued from page 8)

to hear about it. Share them in "Small Talk." We often talk about the "Graying of Astronomy": http://optcsf.com/citizen-science/474/ The Astronomical League did a whole issue in their magazine The Reflector on the topic of not getting any young people involved in astronomy. http://www.astroleague.org/al/reflectr/reflmain.html

If you are not a member of the Astronomical League, you should be.

Maybe you or the astronomy club associated with your planetarium does local outreach. The clubs I belong to do much local outreach: http://www.tristateastronomers.org/outreach.htm

Hey, there is a picture of me on the outreach page. Wish I could do more, but now that spring is here there is just way too much to do, I am hoping to make it to June.

Well, these people in Russian were definitely looking up on February 15, 2013, at 9:20 a.m. local time: http://www.skyandtelescope.com/community/skyblog/newsblog/Meteorite-Explodes-Over-Russia-191379871.html

Again another bonanza for us in the planetarium field. What a host of topics for us to cover from telescopes and their ability to detect things in outer space coming our way, to the nature of meteors and asteroids and where they come from in outer space. Get crafting with show ideas and dust off your meteorite impact programs. Maybe now, you will have some new slant to add to it.

Finally, Mars Curiosity is sidelined for the time being; at least as I write this, http://www.skyandtelescope.com/news/wires?id=183546790&c=y. However, I did manage to say "Hey" to Shawn O'Brien at the Air and Space Musuem's Einstein Planetarium when I went to see "Undiscovered Worlds" the full dome show they got from the Charles Hayden Planetarium in Boston, MA on exoplanets. I love my little classic planetarium, however, love those

Above: I went out to see Panstarrs from in front of my apartment and tried to take a photo, but only saw the thin crescent moon.

Below: Conrad Jung of Chabot Observatory took this picture of Comet Panstarrs from near his home in Oakland, CA

full dome shows as well. Isn't there a place for both in this world?

On the same night, March 12, 2013, I managed to catch the talk by John Grotzinger, chief scientist for the Mars Science Laboratory Science Mission on the same day NASA released their news release of life at Gale crater: http://www.jpl.nasa.gov/news/news.php?release=2013-092 at a press conference earlier in the day at NASA headquarters in Washington, DC. The man sitting next to me in the IMAX theater says to me, "This guy's had a busy day." The talk was called "Curiosity's Mission of Exploration at Gale Crater, Mars" and it is archived here if you wish to see it: http://www.ustream.tv/recorded/29934826 Don't be fooled. The chat session is abbreviated, but the talk starts up immediately afterwards. Before the talk I did get to ask if he enjoyed the landing or the launch better, and he said the launch because all you could do was watch and after all it was Florida and there was the beach, and the Space Center and Disney World and SeaWorld and the family. During landing, there was that seven minutes of terror. Spend some of that rare time you seldom get, while you wait for that school group that got lost with that substitute bus driver who went to the ball park instead of the planetarium to savor the talk. You won't be disappointed in understanding the detail of what Curiosity has been up to.

So heck of a year for astronomy, huh? And it is only March. What else is to come? The Conference in Jacksonville, FL, Comet ISON in November/December and probably stuff we can't even think of or imagine. Look up in your dome, but spend some time looking at what it imitates and send me your thoughts to include here.

Archeoastronomy (Continued from page 15)

personal tale of the apparition of a comet, subsequent unpleasantness, and how unrelated things may become entwined in human imaginations, seeking to make sense of this sometimes scary universe. Comet PANSTARRS first became visible from my part of the world on March 9, 2013. Twelve days later, a dear friend and cornerstone of our community, passed away after taking a turn for the worse spanning those days. Was the comet to blame? Twelve is a number of great significance in numerology; what would an astrologer make of these events? To make matters even more ominous, a bolide meteor was reported as passing from south to north over the now deceased's house two hours before his death. Being the local astronomy expert, many people, seeking interpretation, quizzed me about these apparitions. Such attention made me feel like some ancient wizard. Reeling from my own grief, I tried my best to answer these queries scientifically while gently regarding my neighbors' hopeful superstition. Still, if seeing these brief visitors as signs of Providence brings comfort in times of despair, I say, "Let it be." After all, as the tail of a comet is born of the warming Sun, we may, also, be renewed by the Sun's warmth meeting our cheeks with tomorrow's dawn.

References:

Chautauquan (1910). "The Death of Mark Twain." The University of Virginia Library. Retrieved 16 December 2009. <http://twain.lib.virginia.edu/sc_as_mt/mtobit5.html>.

Hicks, Carola. *The Bayeux Tapestry. The Life Story of a Masterpiece.* Chatto and Windus. London, 2006.

Paine, Albert Bigelow. *Mark Twain, a Biography: the Personal and Literary Life of Samuel Langhorne Clemens.* Harper & Brothers. New York, 1912. p. 1511.

Stein, John. "Bartolomeo Platina." *The Catholic Encyclopedia.* Robert Appleton Co.. New York, 1913. pp. 158–159.

Tranquillus, Gaius Suetonius. *The Twelve Caesars.* trans. by Alexander Thompson. George Bell & Sons, London. 1893. Book LXXXVIII, p. 55.

William of Malmesbury. *Gesta regum Anglorum / The history of the English Kings*, ed. and trans. R. A. B. Mynors, R. M. Thomson, and M. Winterbottom, 2 vols., Oxford Medieval Texts, Oxford. 1998–9. p. 121

IPS Report (Continued from page 5)

groups that bring attention to the importance of planetariums' existence. (4) The development of new methods in the planetarium field. Since the mid-1980ies, 242 IPS members have been named Fellows of IPS.

Don't forget to communicate your preference for the location of the 2016 IPS conference. Three sites have submitted bids and I will cast SEPA's vote at the upcoming Council meeting to be held in Tyrol, Italy in August.

Edmonton, Canada
Toulouse, France
Warsau, Poland

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, Shawn Laatsch slaatsch@imiloahawaii.org, myself at johnhare@earthlink.net, or on line at www.ips-planetarium.org

Book Review (Continued from page 11)

is exactly what happened in the Star Wars story. Similarly, Napoleon crowning himself as Emperor for the good of the Republic is much like Palpatine's seeming reluctance to accept his emergency powers, while declaring how much he loves the Republic. One of the most obvious parallels to our past is in the form of Storm Troopers - a clear reference to Germany's soldiers of the same name. Many of the uniforms of the high ranking officers of the Empire are reminiscent of those worn by Nazi Panzer officers.

Powerful women in the Star Wars stories are not judged by their gender, but by their skill. Queen Padme Amidala, as a young woman in a position of power, has a few role models in history. Cleopatra was also a young woman when she became Queen. In Prussia, Maria Theresa fought for rule of her country. Catherine the Great was a formidable leader who had tremendous political skill. And Queen Elizabeth, dressed in armor, rallied her troops prior to the attempt to invade England by the Spanish Armada, much as Princess Leia briefed the rebel troops on Hoth before the Empire's attack.

In a reverse direction, Star Wars had an influence on history. Reagan's Strategic Defense Initiative (SDI) was derisively dubbed "Star Wars" by Senator Ted Kennedy. Meanwhile, Reagan referred to the Soviet Union as "The Evil Empire." The ultimate weapon, the Death Star, plainly represents the power of nuclear weapons. The choice to use such a weapon must be made such that it will send a clear message to the enemy. Truman's decision to drop the atomic bomb on Hiroshima and Nagasaki was meant to instill so much fear that no further use would be necessary and World War II would finally be brought to an end. Similarly, Grand Moff Tarkin's choice to use the Death Star to destroy Alderaan, rather than the, supposed, rebel base of Dantooine, was because Dantooine was too remote to make an effective impact.

The Trade Federation also has its roots in history. Set up to represent certain economic interests, the Trade Federation had its own army to help maintain its economic power. This is very similar to the East India Company. Blockades and invasions were a part of how the East India Company maintained control and drove out competitors. Similarly, they acted with the support of the politicians back home, at times being quite useful for expanding empires. But their end also is very similar. Once they had served their purpose, their services were no longer needed, and they were cut off from all political support, much as when Palpatine orders Darth Vader to execute the Trade Federation representatives on Mustafar.

If you love Star Wars (and let's face it, who amongst us doesn't?) and you enjoy history, this book provides a rich tapestry of both. I definitely recommend giving it a read.

"Star Wars and History" edited by Nancy R. Reagin and Janice Liedl, John Wiley & Sons, Inc. 2012

REMEMBER YOUR STATE COORDINATOR!

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Planetariums (Continued from page 12)

are we restricted by the technology, and every day, these digital planetariums get easier and easier to use.

This beautiful picture of digital planetariums I paint is not without flaws. For one thing, we are still a vendor-driven profession. Lately, I have been amazed and troubled by how much time vendor presentations take up at our conferences. There is an obvious reason for this: money. Planetarians have exchanged content control of their conferences for sponsorship to lower the registration fees.
I don't think anyone, vendors or delegates, is really happy with this exchange. In the "golden age of planetariums", we discussed and debated ideas to be presented to our audiences, and we were inspired by well-written scripts that communicated those ideas. We went home from those conferences stealing every idea we could. Today, we go to conferences dominated by vendors peddling their wares. I know, for I'm one of them. Fortunately, without exception, I find the vendors to be benign and truly interested in serving planetariums. I don't know of any company that is getting rich off of the back of the planetarians. However, ceding our conferences to vendors marches us along a dangerous path for a profession that is suppose to celebrate ideas and not its tools.

There is also a problem with fulldome movies. Almost all of the pre-rendered programs have two masters to serve. The first is what can be affordably illustrated, and the second is what are the ideas that planetariums need to communicate. Too many of these fulldome shows are being produced by vendors and too few by end-users. In reality, we have not really advanced much since the days of Spitz projectors. We still only present the ideas that we can illustrate or, sadly, the fulldome shows we can afford. Unfortunately, many of those ideas presented in fulldome movies are not your ideas, but those of production houses. Before I completely offend every show producer, I must, again, point out that they are benign, are truly trying serve planetariums, and not one of them is getting rich doing it. However, conference planners may need to rethink how to return to discussing ideas and content instead of showcasing digital tools or pre-rendered content. We are not the only industry led by the nose by vendors. All you have to do is look at the computer industry (who really needs Windows 8?) or the medical profession. How many doctors are brow-beaten into prescribing medicine by the pharmaceutical companies? At least no one dies from our planetarium decisions.

Finally, there is the problem with digital planetarium projection systems themselves. They are by their very nature ephemeral. Many are built upon consumer-grade projectors and popular computer platforms, giving a whole new meaning to built-in obsolescence. It is in their nature to fail as they get older. Please accept this fact and get over it. It is the price you must pay for doing something stunning and awe-inspiring in your dome. All of the paradigms of how long a planetarium system should last or how much it cost to operate have been shattered. Like it or not, there is no turning back. The talk of failure rates of digital versus optical-mechanical is nonsensical. I have a hammer that has been in my family for more than 50 years. It always works. I also have a nail gun. It occasionally jams, resulting in my exclamation of a few well-chosen epithets. But the nail gun is the carpenter's tool of choice, because he can do more with it in a shorter period of time. A good carpenter has both tools. If it can afford it, a great technology planetarium, blends digital and optical-mechanical systems. But most planetarians, if put in the position of choosing one, rightly choose the digital system. In the end, it can help communicate and illustrate more ideas.

Rather than blame the digital planetarium systems or the fulldome show producers for the woes and high-cost of our industry, I ask every planetarian to look in the mirror for ideas and solutions. Planetarians should be leading vendors at conferences and not vice-versa. We should all remember that we are in the business of peddling ideas and scientific concepts in the most passionate, creative, and entertaining way possible. I am hoping that this is one idea and one dream we can all agree upon.

SEPA 2013 Professional Development Fund

SILENT AUCTION

Dave Maness
Sharpe Planetarium
Memphis, TN

It's that time of year again; time for you to set aside donation items for the annual silent auction to benefit the Professional Development Fund. In case you are new to the group, this is a fun activity we do to help planetarians attend conferences and workshops through grants from the Fund. Several of our colleagues have already benefitted from it.

In the past, we have offered books (some autographed), games, astronomical photographs, artwork, crafts (including a beautiful hand-made quilt and some hand-tooled leather belts), DVDs, and musical CDs. Some of the highest bids in past auctions were for hand-made items, true works of art. I know there are some very talented people out there. Of course we also like space-related items and artifacts.

As you may know, we did not have a full conference last year, yet a good chunk (~$4,000) of the fund account was used as an incentive for SEPA members to attend our business meeting at the IPS conference last summer in Baton Rouge, LA. As a result we need to replenish those funds this year in Jacksonville, Florida.

Please bring your useful items of all kinds to the conference in June. If you have a service to offer for bid, an item that cannot easily be brought to the auction site, or have something to offer but will not be able to attend, then please write up a description and /or attach a photo to the form provided in this issue. The winner can then contact you for transfer of the item. We typically hold the final bidding before the banquet. It is a fun event and I am already looking forward to it.

SEPA is also happy to accept monetary donations toward the fund. See the membership renewal form in the journal where you may add a donation when yo The fund's account balance stands at about $3,000. If you would like to apply for a grant, please do so as soon as possible using the form on the www.sepadomes.org website.

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

Thank you for your donations and I hope to see you all in Jacksonville.

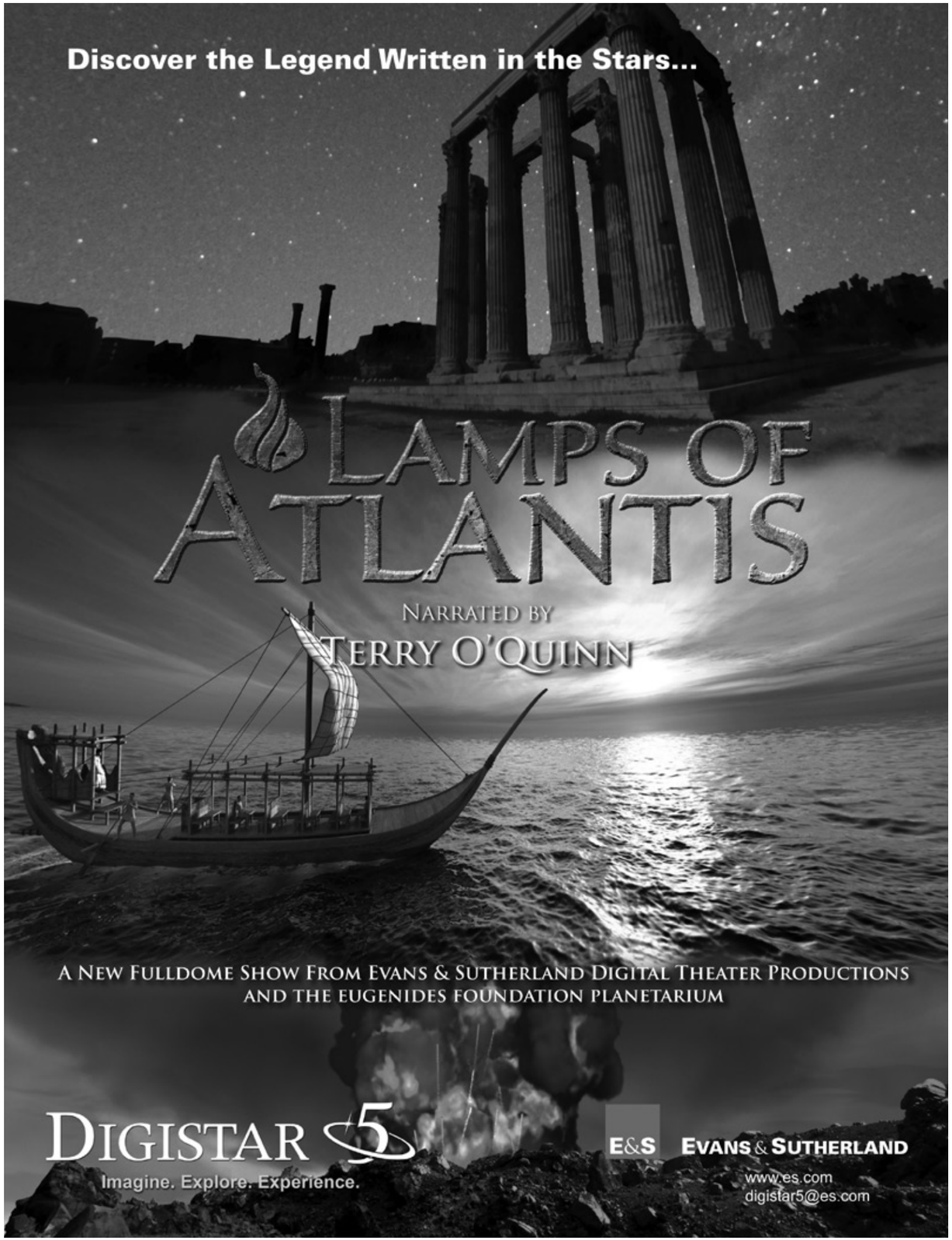
SEPA SILENT AUCTION ITEM

If you cannot bring the item, draw a picture or paste a photo, or describe your item or sevice here.

Item name:

Description:

Offered by (your preferred mode of contact: name, address, email, phone):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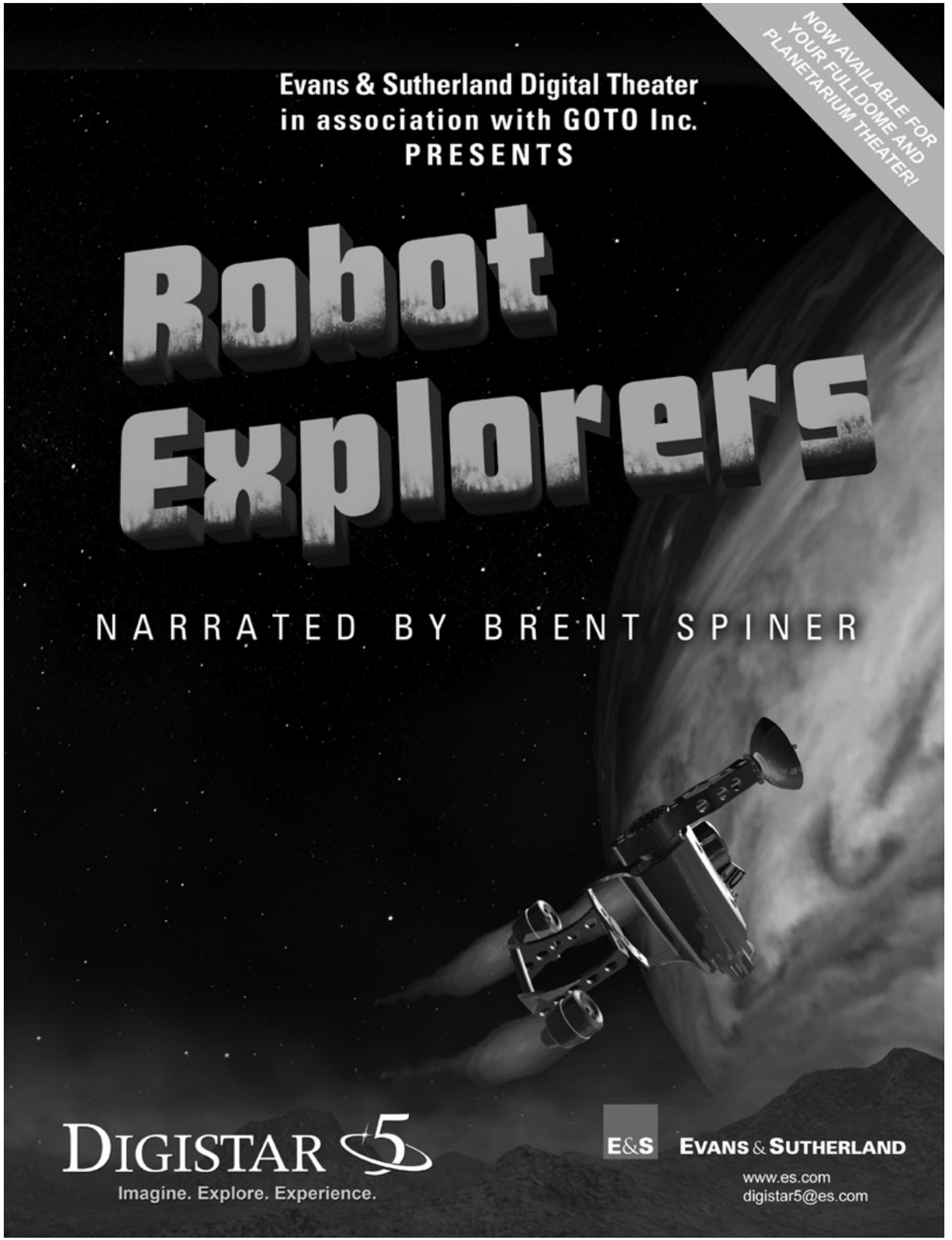
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SEPA 2013
Professional Development
APPLICATION

David Dundee
Tellus Science Museum
Cartersville, GA

The SEPA Professional Development Fund was set up by SEPA Council and is funded by proceeds from the Silent Auction held at conferences as well as from member donations.

Each award covers the amount of registration and, if funds allow, a small stipend for travel or hotel stay. Recipients' names will be sent to the conference host in order to assure that the conference registration fee will be covered by the Development Committee. If there is a stipend, it will be in the form of a check given to recipients at the end of the conference.

To apply, one must be currently employed as a member of the planetarium staff at an active planetarium in the SEPA region, be a full SEPA member, and not a vendor. The applicant must meet deadlines for submitting this application form and, if selected, must also meet deadlines for conference registration and paper presentations. Applicants must complete the form below and submit it electronically, or mail it to David Dundee (address below).

Award recipients must present a paper or poster at the conference. The paper, or a write-up of the poster, must be presented to the editor of *Southern Skies* in order for it to appear in the fall edition of SEPA's journal. Recipients of the award this year will not be eligible to receive the award next year.

Professional Development Application Form

Name: _____

Planetarium: _____

Postal address: _____ E-mail address: _____

Phone number where you can be reached directly: _____ Fax number: _____

How many years have you been a SEPA member? _____

How long have you worked in the planetarium field? _____

Without financial aid, will you be able to attend the upcoming SEPA Conference?

If your employer/planetarium is able to provide any financial assistance or pay part of the conference expense, please list the amount. $_____

In one paragraph, tell us why you believe you should receive this award.

How do you anticipate benefiting from attending the SEPA Conference?

Do you plan to attend any other planetarium conferences this year, with or without financial assistance?

Please describe your paper or poster that will be presented at the conference and be published in the SEPA journal.

The committee will discuss the applications and choose recipients as soon as possible after the **May 31, 2013** deadline. Successful applicants will be notified by e-mail on or about June 7, 2013. The Professional Development Committee takes great pleasure in supporting the SEPA membership and is looking forward to excellent applications.

SEND TO:
David Dundee, Astronomy Program Manager, Tellus Science Museum,
PO Box 3663, Cartersville, GA 30120, USA. DavidD@tellusmuseum.org

News From SEPA Region

FLORIDA

contact: George Fleenor
GeoGraphics Imaging and
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Florida Planetarium Association (FLORPLAN)

Contact George Fleenor for details.

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, Magic Sky, Exoplanets Galore, Celestial Navigation,* and *A Briefer History of Time.*

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.

GEORGIA

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

Fernbank Science Center Planetarium
Atlanta, GA

April Whitt reports: Fernbank Science Center had a busy spring. The experimental full-dome system from e-Planetarium has been enthusiastically received by both the general public and school audiences. We've added extra programs on Saturdays, and ticket sales continue to rise. Several schools in the district have partnered with Fernbank for "Spirit Nights," joint fundraisers for the school and the science center.

Summer interns, astronomy students from local colleges and universities, are in training for the summer show schedule.

A partnership with Georgia State University brought several dozen elementary science teachers to Fernbank for a professional development workshop in late March. STEM is the word of the day, and the planetarium is the perfect blend of science, technology, engineering and mathematics.

FSC hosted a number of special events during March and April. A Nanoscience day, with special "bite-sized science for pint-sized scientists" was a hit with the under-7 crowd, as was Sid The Science Kid Day on April 6, featuring a Sid look-alike contest.

Yuri's Night was held on April 5 this year because of DeKalb County Schools' spring break schedule. Students from Georgia Tech's Planetary Society group shared information, hosted a speaker and ran an Astronomy Trivia game in the planetarium.

Students from schools around the county enjoyed sharing a downlink with astronauts aboard the ISS in mid-April.

National Astronomy Day on April 20 combined forces with our semi-annual plant sale with plants for Moon Gardens and instruction on How To Use Your Telescope from members of the Atlanta Astronomy Club.

We're looking forward to a busy summer schedule of camps, exhibits, planetarium programs, and laying the groundwork for a fundraiser with the Southern Order of Storytellers

Planetarium
Tellus NW GA Science Museum
Cartersville, GA

David Dundee reports: 2012 turned out to be a great year for us we had our second best attendance year since opening. Just under 200,000 through the museum, and almost 100,000 through our little planetarium; should reach our 1 millionth visitor in early 2014. During the holidays we had our annual showing of "Mystery of the Christmas Star." We have also been playing "Big and Wildest Weather in the Solar System" and we will open "Undiscovered Worlds" at the end of March. In March, we have started doing observatory nights open to the public with the rest of the museum being closed. Comet Pan-STARRS is in our sky that same week so that helped swell our crowds to over 200. Asteroids passing near the Earth and meteorites hitting Russia gave us an opportunity to feature Tellus on many local radio and TV stations as well as CNN and Fox National news. We ran a second digital workshop partially funded by Harvard-Smithsonian observatory.

Smith Planetarium
Walker County Science and Technology Center
Chickamauga, GA

Jim & Shirley Smith report: Life is good! Attendance at The Smith Planetarium, (Walker County Georgia Schools) was nearly 4,000 students and adults. This includes student groups and adults from three Georgia counties: Walker, Catoosa, and Chattooga and was during the time period from October through March. General public programs are offered two days each month: the first Sunday afternoon and last Tuesday evening. We plan to increase our efforts of reaching out to schools in Alabama and Tennessee.

We have had a great deal of assistance from Philip Groce (Helping Planetariums Succeed, Inc.), from Ron Proctor (Ott Planetarium, Weber State University) and by Steve Hatfield with AVI. This has made recovery from the storm and adjustment from an opto-mechanical projector to a digital full-dome system much easier. Since January, we have added several more photographs from "Space Images, Inc." to our lobby area

Planetarium
Oatland Island Wildlife Center
Savannah, GA

Max McKelvey reports: In the last 4 months, Oatland Island Wildlife Center has provided programming to nearly half of all 4th graders and over half of all 2nd graders in the Savannah Chatham County school system (over 3500 students). We have also presented at several Math Science Nights and even took a ferry to Dufaski Island in South Carolina for a Digitarium program and Star party. We are currently trying to save funds to purchase an Apple tablet with software to control our Digitarium Alpha 2 and a Hero Black camera with fisheye lens to provide additional images of the local area. See you in Jacksonville.

Georgia Southern Planetarium
Georgia Southern University
Statesboro, GA

Becky Lowder reports: 2013 has been very busy with teaching university students in the planetarium along with the free public shows and K-12 visiting school groups.

The full-dome shows are a huge hit, along with the live constellation presentation and hands-on activities on astronomy concepts. The solar system walk (scale: 1 AU = 1 meter) is so much fun and a great way to end the school visit for ***Planetary Visions – A Solar System Adventure***, produced by

Bays Mountain Planetarium. It reinforces what they learned inside as we quiz them to be selected to be a planet on the walk. It really gets across how close the inner planets are compared to the huge distances of the outer planets. I think the teachers and parents are the most surprised! We have them all get in a huge circle outside on the sidewalk with the meter stick in the center and start the fun quiz to pick our Sun, Mercury at .4 AU/40 cm, Venus at .7 AU/70 cm, Earth at 1 AU/1 m, and Mars at 1.5 AU/1.5 m. When we start with the outer planets, they have to take 2 steps for every AU/meter so we make them do the math on how many steps they have to take. By the time we get to Neptune, the selected student has to take a whopping 60 steps out at 30 AU. They always ask about the dwarf planets but they would be across the pedestrium in a large parking lot so we don't go that far out for safety reasons. We end the walk with having everyone left in the circle become asteroids between Mars and Jupiter, so much fun! If the weather is clear we also offer safe solar viewing using our SunSpotter along with sharing our black polymer eclipse shades.

Our free public evenings with telescopic viewing on the rooftop deck continue to be very popular. We showed ***Ice Worlds*** (Evans and Sutherland Productions)in February, ***Stars: The Powerhouses of the Universe*** (Sudekum Planetarium at Adventure Science Center) in March, and plan to end the semester with ***Life: A Cosmic Story*** (California Academy of Sciences)in April in conjunction with ***No Impact Week*** and ***Georgia Southern University Spring Family Weekend*** celebrations on campus.

In the summer, we plan on using the planetarium for the university summer sessions of ASTR 1000 classes as well as having free public shows and scheduled summer camp groups visit. Until next time, wishing you all clear DARK skies!

KENTUCKY

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

Golden Pond Planetarium
Land Between the Lakes Nat'l Recreation Area
Golden Pond, KY

Ross Workman reports: As I reported in the last issue of *Southern Skies*, we planned on opening the planetarium for the months of January and February for the first time in its history. I'm happy to report the overall attendance was great! Golden Pond's schedule has been expanded to year around!

Springtime not only guarantees a beautiful time of the year in Land Between The Lakes, but it also means it's time for school groups. Like everyone in the SEPA region, we are gearing up for the invasion of kids!

Our monthly evening Planetarium shows and star parties began in March. The Observatory will be open every other weekend beginning Memorial Day through Labor Day, with other special programs planned throughout the summer.

The Planetarium and West Kentucky Amateur Astronomers are making plans for Astronomy Day on April 20. Power of the Sun is our theme. The Observatory will be open with solar observing and telescope displays taking place. The Planetarium will be presenting free shows all day and various other displays will be available to our visitors.
With the August 2017 total solar eclipse approaching, we are receiving several calls from people wanting information about the event. The point of greatest eclipse is about 20 miles from the Planetarium. We will experience 2m 7sec of darkness here at Golden Pond. I ran the event on our Mediaglobe II and it's going to be impressive! We are going to keep our fingers crossed for a clear sky on that day!

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

Steve Russo reports: January, February, and March have been very busy with school groups here at the Science Center. Almost every day had visits from a variety of school districts, and our Saturdays have been full with a variety of birthday parties, and various community organizations using our facility for their meetings.

Our Saturday afternoon planetarium shows continue to be popular and we have had to add some night time shows to accommodate a variety of groups that wanted private planetarium shows.

Our exhibit hall now has a temporary new exhibit. On loan from the Betts House in Cincinnati, the Big Shake details the New Madrid Earthquakes of 1811/1812. This series of quakes affected 15 states and is still the largest series of earthquakes in United States history.

In January we had two special events. The first one, in cooperation with a history professor here at the college, was a commemoration to Richard Nixon on his birthdate. In the planetarium, we did a presentation relating to Nixon and the space program, as most people forget, that all of the Moon landings took place when he was the president, and it was actually Nixon who started the Space Shuttle program in January of 1972.

In January we also tried an "experiment," and due to requests from the community we brought back our night time laser show. Since there was a bright Full Moon on January 26th we decided on Pink Floyd's Dark Side of the Moon, opening with a live night sky presentation with our GOTO Chronos, talking about the constellations and Lunar phases, leading into the laser show. Over 130 people showed up, and since our planetarium only holds 85, we had to add a second show. Our next night time laser show will be in April.

March saw two special Saturday events; NANO Days, highlighting the science of nanotechnology, and a "Spring Into Science and Math" day that attracted over 160 parents and children to see planetarium shows, and learn about weather, plants, frogs, and other sciences.

"Spring into Science and Math" event.

As I write this at the end of March, we are in planning for National Astronomy Day. Thanks to receiving money from a NASA workshop that I attended in the Fall, we received money to buy materials and supplies for our Astronomy Day activities, which will concentrate mainly on the Sun and "space weather." The day will be filled with planetarium shows, hands on activities, and solar observing with "Sun Spotters," our Coronado, and eclipse glasses. And like Doug mentioned, we have the Total Eclipse in 2017, although here in Prestonsburg we will see about 94% of the Sun covered up.

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

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

LOUISIANA

contact: Jon Elvert
Pennington Planetarium
Baton Rouge, LA
jelvert@lasm.org

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

Jon Elvert reports: We began the New Year by hiring an animator/producer – Kyra Elliott, previously from the Traveler's ScienceDome Planetarium/The Children's Museum in West Hartford, Connecticut. With Kyra's help, we're about to launch an interactive exhibit under our 5-meter ceiling exhibit dome. This exhibit features an iPad astronomy program app (Solar Walk) that allows the visitor to select and interact with six different pre-programmed categories: *Astronomy Update, Solar System, Exploring Earth, Deep Space Voyage, Sky Tonight* and *What's Up at LASM*. Each category appears as a button graphic that can be clicked on and then shown on the dome.

We're currently running W*e Are Aliens!, The Little Prince, Life of Trees,* our perennial visitor's favorite – *Digital Universe* (Sky-Skan's DS2 plug-in by the same name), *Rock the Dome* and *Dark Side of the Moon.* This show line-up will be refreshed in July.

This May, the Pennington Planetarium celebrated its tenth anniversary since opening in 2003. More than 600,000 visitors have since attended the planetarium.

We've also offered teacher workshops and a revised menu of school shows is planned for the coming school year.

Lafayette Planetarium
Lafayette Science Museum
Lafayette, LA

Dave Hostetter reports: The start of 2013 has been hectic at the Lafayette Science Museum. As many of you know, in January long-time planetarium technician Dexter LeDoux passed away after a long illness, leaving a tremendous void. While no one can be exactly like Dex, we have to go forward, and I'm pleased to announce that we now have a provisional technician while we conduct a search for a full-timer. His name is Paul McCasland, and we are very fortunate to have him. He was actually our part-time technician back in the early 1980s while he was still in high school and before Dex started helping us. He has a very strong background with the skills that can help us, and we look forward to working with him.

In late March, the planetarium hosted a Sky-Skan Digital Sky Academy, a three day meeting about Digital Sky programming. About two dozen delegates participated from planetaria around the country and from as far away as Macao, China. It was an intensive three days, interesting, fun, and collegial, and it was great to be involved (especially since Sky-Skan did most of the work!).

The Lafayette Science Museum is beginning to remake itself through a new five year plan, reducing reliance on blockbuster exhibits and increasing the use of interactives and science "areas." As part of that, the planetarium staff is strongly involved with our last theme-based exhibit, "Leaving Earth: The Story of Space Flight," opening May 1. This has been very time-intensive, but the exhibit will be a good one, running through the rest of 2013.

In the planetarium itself, as a public program we are now running the full dome version of *Red Planet Mars* (part of the "Interactive!" series of programs that came with our Sky-Skan system). We have also been showing live constellation programs as well as *Stars, We Are Astronomers, Two Small Pieces of Glass, The Little Star that Could*, and *The Modern Universe* (a live trip through the digital universe). In support of the new space flight exhibit, in April we will replace some of the current programs with *Dawn of the Space Age* and *Larry Cat in Space*.

Planetarium
St. Charles Parish Library
Luling, LA

Jason Talley reports: I have been remiss in regards to reporting. As Jon Bell quoted last issue, "matters more urgent caused our absence." However, I plan to correct this oversight.

Exciting events are afoot at the St. Charles Parish Library Planetarium. In November of last year, I hired a new Planetarium Assistant. The position had been vacant since I took over as Planetarium Director nearly three years ago. I am no longer a one man show, and I have high hopes for the newest addition to our planetarium family.

Renovation plans are under way for our theater and the attached public library. The planetarium will receive a face lift and much needed additional workspace. We are keeping our KMP MediaGlobe II projector system, which is running great. This planning process is a new experience for me, but one many of you have been through. The renovations are set for the beginning of 2014 and will close us down for about 10 months.

Until then, I hope our public attendance continues to rise as it has the past few months. I am working hard to introduce more live interaction into my shows while still running great fulldome titles. The public has responded well to my efforts.

NORTH CAROLINA

contact: Patsy Wilson
Woodson Planetarium, Salisbury, NC
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Planetarium
Elizabeth City State University
Elizabeth City, NC

Woodrow Grizzle reports: I spent the winter digitizing and cleaning up audio and visuals for conversion of some slide-based shows to digital classic format. Our new school show catalog is filling in nicely. We now have *In My Backyard* (Calgary Science Centre) for kindergarten, *The Little Star That Could* (AVI) for second grade, and *The Mystery of the Missing Seasons* (Bowen Productions) for fourth grade. That just leaves first and third grades without a specific show. At this time, we do not plan to offer grade-level specific shows for grade levels above four. This spring, I will be working on a live planet show for third grade. It will be interactive and easy to update as new discoveries are made. Based upon standards in North Carolina, the first grade show should focus primarily on the Earth/Moon/Sun relationship, specifically the differences between the daytime and nighttime sky, how objects move through the sky, and the phases of the Moon. I could produce a show along these lines, but, in the interest of time, I would like to purchase a show to fill this spot in our catalog. I have not come across anything specific, so, if you have ideas, please feel free to shoot me an e-mail. My contact info appears inside the front cover of this journal. The show must be in classic format.

In addition to the new and revised show offerings, work continues on pre- and post-visit lessons and activities for teachers to conduct in their classrooms, as well as pre- and post-assessment. These resource packages are ready for both *In My Backyard* and *The Little Star That Could*, and I will be spending spring and summer working on packages for the other shows in the catalog. The goal is to have everything ready (shows and resources) for the beginning of the 2013-14 school year.

On Friday, April 5 (still in the future as of this writing), we will host an observation program as part of the Statewide Star Party, the kick-off event for the 2013 North Carolina Science Festival. Facilities all across the state will be hosting similar events on the same night. We have never hosted such an event before at ECSU, but I have at other facilities, and we have some volunteers lined up. We are expecting at least 60 people, but it could balloon into many more. It should be a great event, and we are looking forward to it.

This summer holds more nighttime viewing sessions in store. On the third Thursdays of June,

July and August, we will hold our second annual Summer Sunset Stargaze series. These events begin at sunset with an hour-long introductory star tour inside the planetarium theater. Audience members will be familiarized with constellations and planets currently visible, and then we will adjourn to the parking lot to view the real sky with the naked-eye and binoculars, provided the weather allows it. Last year, this event was a huge success, with registration for all events filling up shortly after the first event took place last June. This response was due in large part to excellent coverage of the event in our local paper. My feeling in talking with folks in the community is that this year's Stargaze series will be just as popular. Historically, summer had been sort of a lull season for us, and the pent-up desire for astronomy experience fueled excellent attendance.

Robeson Planetarium and Science Center
Lumberton, NC

Ken Brandt reports: Once again, we have seen over 10,000 students and teachers as part of our public school programming. We were involved with the NC Science Festival, holding a star party and a 'make a telescope' hands on interactive activity. Our summer programs are in full swing, and we are featuring programming about the Curiosity mission to Mars and the Inspiration Mars flyby mission. I am also packing my suitcase for Jacksonville, and the SEPA conference in June.

PARI (Pisgah Astronomical Research Institute)
Rosman, NC

Christi Whitworth reports: PARI is celebrating the NC Science Festival in April with the rest of the state's science museums. The NC Star Party is being held on April 5, 2013, Yuri's night is scheduled for April 12, 2013. Other events this spring include PARI's Annual Space Day on May 4, 2103 and Homeschool Day on May 10, 2013. The solar maximum is highlighted in the spring session of Homeschool Day this spring. PARI will host the Duke TIP Field Study in Astronomy, Astrophysics and Astrobiology June 17 - July 1, 2013. PARI's docent led tours are held every Wednesday at 2 PM. Monthly Evening at PARI programs are held on the second Friday of each month.

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

Patsy Wilson reports: Our April Saturday public opening features, "Celestial Circle of the Sun," an original program that helps audiences to identify the constellations of the astronomical zodiac and to understand their relationship to the position of the Sun and Earth. This show will feature information from a scientific, historic and mythological perspective. The program is our contribution to the NC Science Festival. Patsy is counting the days to her retirement, while Jennifer is busy learning all the intricacies of running a planetarium. You don't realize how varied and unique our field of work is until you try to train someone else who will be totally responsible once you walk out the door.

SOUTH CAROLINA

contact: Gary Senn
DuPont Planetarium, Aiken, SC
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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) focused on comet watching in mid March. The RPSEC Observatory housing the Bechtel Telescope, a 16" Meade LX-200, hosted a series of viewing nights for the public from March 12 – 16. Only one of those dates had too many clouds that hid Comet PANSTARRS. Visitors were able to get some naked eye views and some very good telescope views of this visitor to the inner solar system.

On April 20, we hosted what we call, "Earth & Sky Night." Since National Astronomy Day is usually close to Earth Day, we combine the two into one celebration, although the astronomy side is certainly the highlight of the event. A variety of hands-on activities were available from 6:30 - 9:30 p.m. to help people understand the wonders of planet earth and space beyond. Many activities provided materials that visitors took home with them. Live animals such as snakes, turtles, alligators, and owls were on display. Telescopes operated by members of the Astronomy Club of Augusta were also available on the lawn outside of the RPSEC, and the RPSEC Observatory was open.

In April we showed *Worlds in Motion* from the Sudekum Planetarium for the general public. Student groups were able to see *Blown Away: The Wild World Of Weather* from The New Detroit Science Center and *Dark Shadows*, a local production that explores moon phases and eclipses.

May will feature *In My Backyard* from the Calgary Science Centre and *More than Meets the Eye* from Lochness Productions. Our school groups will finish in mid May, and we will begin to focus on our summer programs, which we offer for groups on Tuesdays, Wednesdays and Thursdays.

In June, our public shows will be *Blown Away: The Wild World Of Weather* from The New Detroit Science Center and *Solar System Adventure Tour*, produced by the Great Lakes Planetarium Association.

South Carolina State Museum
Columbia, SC

Tom Falvey reports: Progress continues on the South Carolina State Museum's planetarium, observatory and 4D theater project. With groundbreaking behind us, interior demolition work is on its way. Crews are putting up temporary walls in advance of major changes all over the building. By summer, we'll start to see real progress on the planetarium addition as steel and glass go up. For more updates, visit online http://www.southcarolinastatemuseum.org/plan_visit/construction.aspx and stay tuned.

Hooper Planetarium
Roper Mountain Science Center
Greenville, SC

Charles St. Lucas reports: The Roper Mountain Association has entered into an arrangement with Sliced Tomato Video, a local video production company in Greenville. Sliced Tomato Video is very much interested in producing full-dome modules for use in the classroom. These short educational modules (less than ten minutes each) will enable us to tailor individual lessons for our classes at the click of a mouse. They should also be of interest to any planetarium that uses full-dome lessons to teach their classes, as we have tried to request topics that are of interest to educators nationally.

During our Carolina Association of Planetarium Educators (CAPE) Conference in August 2012, we gave indications of the power of the full-dome experience to engage students. The live portion of our lessons can further enhance the learning experiences for our students. Full-dome video will likely never replace the live teacher-in-the-classroom, though it further enhances the multi-media utility of the planetarium to instructors.

Further information on the education videos will be made available at http://slicedtomato.net/ for interested teachers. Sliced Tomato is looking for modules to produce with large national demand. 2013 promises to be a big year for completion of some of these projects."

The Settlemyre Planetarium
Museum of York County
Rock Hill, SC

Jim Greenhouse reports: The Settlemyre Planetarium reopened from its renovation on October 13, 2012. All of the seats and carpet were replaced and the dome was painted and patched. AVI installed a MediaGlobe 3 planetarium system along with new surround sound. ECCS provided the LED cove lights and a presentation projector.

At the opening, retiring planetarium manager Glenn Dantzler was honored for his years of service to the museum. Jim Greenhouse, formerly the science

curator at the Mark Smith Planetarium in Macon, GA, was introduced as the new manager.

After some experimenting with the schedule, shows are now being presented Tuesday – Saturday at 3:30 p.m. A children's program is shown at 11 a.m. on Saturdays and also during school holidays. A live sky tour is offered on Saturdays at 2 p.m. and also on the second Tuesday of each month at 8 p.m. The second Tuesday show is part of an astronomy evening at the museum that includes observing when the sky is clear and a meeting of the local astronomy club, the Carolina Skygazers.

For a few weeks after reopening, attendance on Saturdays was almost quadruple of the average before renovation. Since then, the numbers have leveled off but stayed strong compared to what they were previously. School attendance has jumped by 88% with most groups coming specifically to see the planetarium. The planetarium is also assisting the Skygazers in developing an observing outreach at local business and public organizations, which included special events for Comet PanSTARRS.

TENNESSEE

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

Bays Mountain Planetarium
Kingsport, TN

Adam Thanz reports: As I write this, we are finishing up the production of our latest full-dome & classic format show, "Comets & Discovery." There's been quite a bit of interest in this show. We're glad we can produce a high-quality show but distribute it for a modest cost. If you haven't heard, the program is about comets and their discovery, but presented in first-person from two comet hunters. One, a modern-day comet hunter, the other is eighteenth century Caroline Herschel. We've also added two live activities, one involves audience members using a model of a comet and its tails; the other activity allows the presenter to share the current night sky as well as any current comets and any public observing sessions. This show is excellent as a school or public show for 2nd grade and above. The show is produced in many formats to better serve the planetarium community. There is the full-dome version, the classic version with a majority of the visuals in video format on DVD, and a unique classic format of a frame sequence of flat video, but in HD (1920x1080). Both of the classic formats have been rendered differently from the full-dome version so as to provide a true, flat field, not a cut-out of a full-dome file.

April will see the start of our showing "Astronaut" from NSC Creative as our main public program. I'm sure it will be great fun for all. April also sees the second month of our alternate show at 2 p.m., "Connections." May and June will be when "Appalachian Skies – Spring" is shown in our 2 p.m. slot.

Other parts of our life in the Park include tons of school programs in the Spring, tons of public shows in the summer, getting ready for a great Astronomy Day and gearing up for the 2013 edition of StarFest. It's our thirtieth anniversary! 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. This year's event is Oct. 11th-13th. Send me your e-mail address if you want to be notified about this great event.

Sharpe Planetarium
Memphis, TN

Dave Maness reports: It is hard to believe it is spring. Some of the trees are blooming but I saw snowflakes a few days ago while driving to Olive Branch, Mississippi for my hockey game at the Mid-South Ice House. We won 5-4 in a tie breaker shootout. Call it a mid-life crisis if you will, but I happen to know that the late, great Charles Shultz of Peanuts fame played the game into his 70's. The temperatures are sure to warm as the days go by, but I know at least one place where the ice will not melt, unless the power goes off.

In a move to win the hearts and minds of local teachers, we invited them to an open house last month. About 300 of them came by. We plied them with drinks and delicious snacks (catered by our very own Bella Café restaurant) and then we sent them on a kind of scavenger hunt to learn about all the programs we offer them. If they came back with a fully stamped "passport," then their name would go into a drawing for a nice prize. More importantly for us was that their contact information went into our database. Now we can be sure that they are always informed of the great new exhibits and programs we offer.

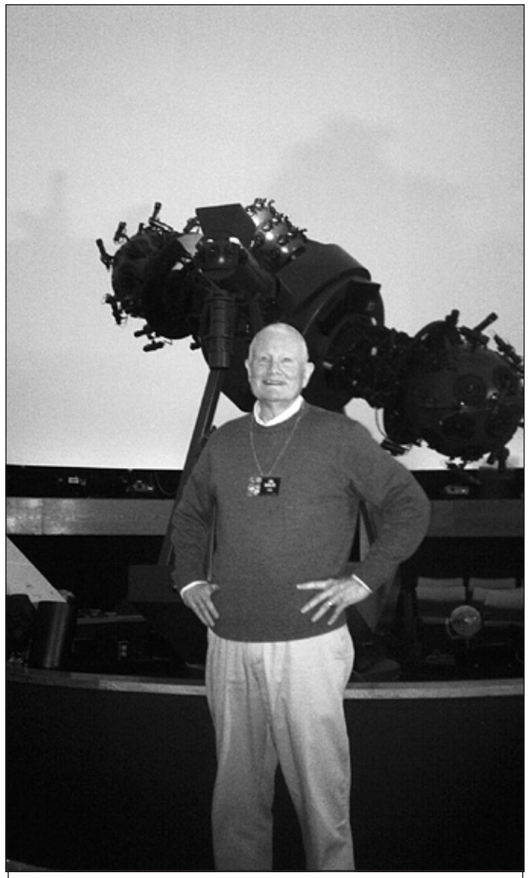
Last week I was preparing for a talk at the Solana Germantown, a local retirement community. I had worked diligently to create a power point program with lots of the latest photos. While I was home grabbing a quick bite to eat, I got a phone call from the activity coordinator who told me that they were not set up to show power point. "Is that a problem?" She asked. I told her I'd think of something. So I glanced on my bookshelf and grabbed my copy of a big coffee-table sized book that I think is called the *Cambridge Photographic Atlas of Astronomy*. This book with large, gorgeous photos really saved my talk! Afterward, the skies were clear so I set up a small telescope to show them Jupiter. Three cheers for low-tech!

In the planetarium, we are now running a great family program ***Bear Tales and Other Grizzly Stories*** in which I played the smart-alecky older brother Jimmy. The show ends with a fun sing-a-long to the chorus of the Dr. Seuss song "Waltzing with Bears." At the same time, our very own Memphis Grizzlies basketball team is making its run for the basketball championship. Could there be a marketing connection there? Their opponents may not like "waltzing" with our bears. Also showing is our own ***Visions of a Spring Night***, an original program produced by the Sharpe Planetarium many years ago, but still popular along with all of our seasonal programs. Those will give way to ***Light Years from Andromeda*** and ***Starlit Nights*** starting May 25 and running through the summer.

Last month, I showed a photo of our original planetarium: a vintage Spitz Model A1 projector now on display near our lobby ticketing booth. In the upper left was a photo showing one of the first groups to see a planetarium show at the Pink Palace. You might ask: who is that young man deftly pointing out the Spitz A1 sky for a rapt group of youngsters? It is none other than our newest staff member Jon Buhler. Back in the 1950's Jon was doing planetarium programs in the first planetarium theater at the Pink Palace Museum. It was a small 20 foot, cloth dome located in a small bay windowed area of the mansion. That space is now the office of our Buildings and Grounds Supervisor. Jon recently retired and asked us if we ever used volunteers. It took very little convincing and he is once again adeptly wielding the pointer for school groups and the general public.

Jon Buhler then - using the Spitz A1 in the 1950s

We are still moving toward renovation plans. I



Jon Buhler now - once again presenting.

expect that about this time next year we should be closed or about to close for a complete overhaul of the Sharpe Planetarium. It will then become the area's newest Full Dome digital facility. We plan to remove the scrim wall, replace the carpeting, clean and repaint the dome, add a cove trough and LED cove lighting, replace the seats, carpeting, and upgrade the sound system. There are likely a few other details that have escaped my mind for now. Unfortunately the fate of the big Konica/Minolta Series IV projector has not been determined as yet. I am hoping it can at least be displayed along with our little Spitz A1, and an Astro-Dome Model 5100 planetarium.

Lastly, please think of bringing items for the SEPA Silent Auction at the conference in Jacksonville. See my note in this issue for more details.

Sudekum Planetarium
Adventure Center
Nashville, TN

Kris McCall reports:

Transit of Venus Takes the Prize

More than 2,800 people came to the Adventure Science Center on June 5, 2012 to witness the Transit of Venus. That seems like ages ago now, but we were reminded of the excitement of the event on March 27, 2013, when Adventure Science Center received the Award of Excellence for Special Events from the Tennessee Association of Museums at their annual conference.

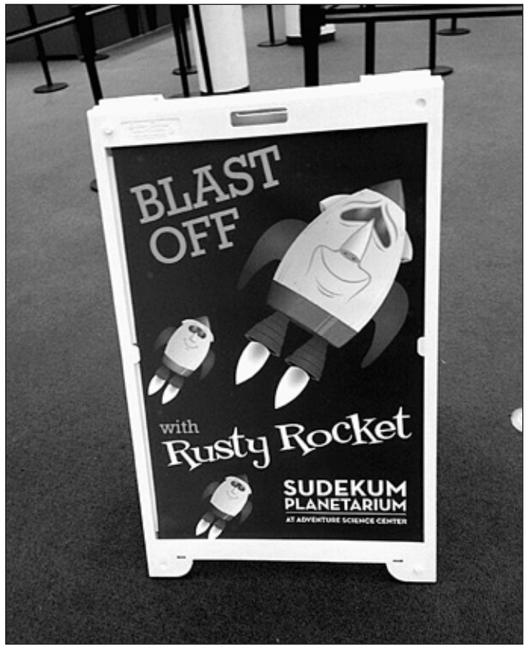
Some staff said we didn't stand a chance of winning an award against Civil War 150th anniversary programs and the HUGE Chihuly glass sculpture exhibition activities at Cheekwook Botanical Gardens in Nashville. Of course, we had no doubt that astronomy would trump even such formidable challengers.

BLAST OFF!!!

While Astronomy Day was officially celebrated on April 13, 2013, we scheduled out festivities early to coincide with the opening of the fulldome production of "Rusty Rocket's Last Blast." Moving the date up also allowed us to reach more people.

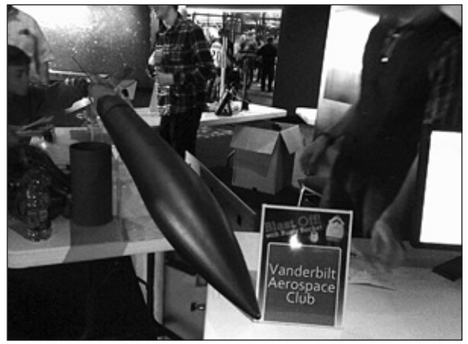
General science center attendance on a Saturday in April is usually only around 750. When Astronomy Day falls in early May, that number is less because we are competing with graduations, nice weather, the lake, etc.. This year, more than 1,500 people were in the science center to enjoy our wide range of rocket science and solar system activities on March 2, 2013.

A series of countdown signs, starting with "10," greeted visitors as they approached the science center from the main road.



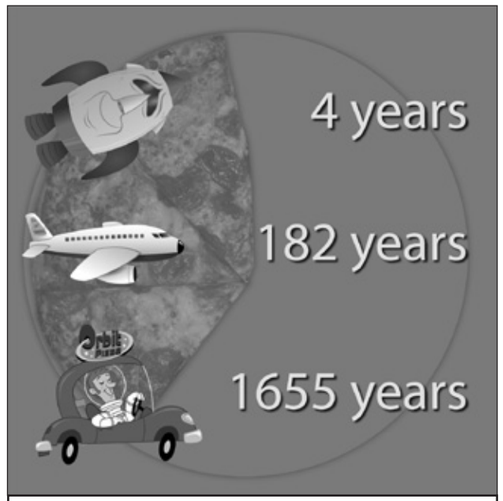
Blast Off! Day featured rocket building, launching, and even splashdown activities. Even though it was raining outside, we were launching straw rockets, pump rockets, and stomp rockets indoors.

The Vanderbilt University Aerospace Club brought a real rocket and a simulator for visitors to see and use.

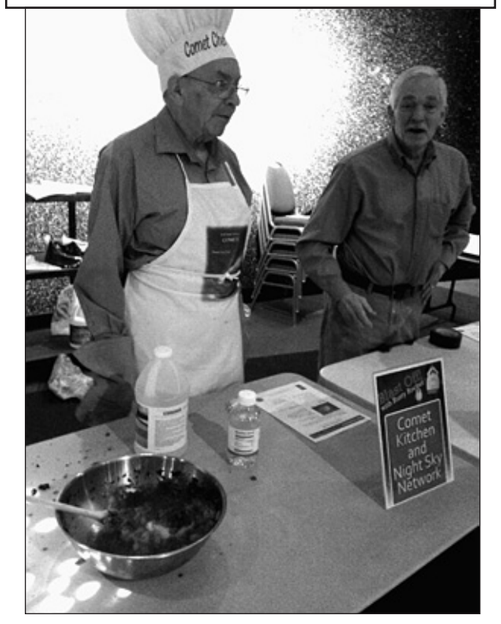


More than 75 teams built re-entry capsules to land their RAW eggs after a two-story descent. This is a GREAT activity for kids, families, AND adults. Capsules are built from simple and free/cheap materials. While it's easy to accomplish, success is not always guaranteed. To reduce the mess, we put the raw eggs in Ziploc bags because - not all egg-stronauts will survive.

Hundreds of visitors constructed scale models of the solar system that fit in their pocket, took the



Above: Bottom of pizza box
Below: Chef Joe cooking up comets



Planetary Pizza Challenge, and participated in Rusty Rocket's Rookie Rocket Recruitment Rally.

Chef Joe made comets as we hoped Comet PanSTARRS would pan out. Unfortunately, binoculars were necessary to see the comet from Middle Tennessee, but numerous pictures were posted on the spaceweather comet gallery pages. Theo Wellington is both Planetarium Educator and President of the Barnard-Seyfert Astronomical Society. Tom Murdic is a former President of BSAS and a JPL Solar System Ambassador.

Above: Comet PanSTARRS (Theo Willington)
Below: Comet PanSTARRS (Tom Murdic

Matter of Fact, It's all Dark

March 2013 also marked the 40th anniversary of the release of the groundbreaking Pink Floyd album **The Dark Side of the Moon**. Our celebration kicked off on **March 9** with a casual fundraising event benefiting Adventure Science Center. The ticket price included "Pink Floyd's The Dark Side of the Moon" laser show, live music by the **Pink Floyd Appreciation Society**, heavy hors d'oeuvres, wine and beer. This was a fun event because the guests were totally into Pink Floyd, and there were no black ties anywhere to be seen.

Adventures in Attendance

Spring is always the heaviest season for school field trips and programs in the Planetarium. For several years "Our Place in Space" and "Nine Planets and Counting" have been the #1 and #2 most frequently booked programs. This year, we added "Rusty Rocket's Last Blast" to the school menu starting in November 2012, and this show has already zoomed to #1 even though the others had a two-month lead. If you are interested in launching Rusty Rocket in your dome, please get in touch with me for a demo and details.

Meanwhile, we have had one of the WILDEST spring breaks EVER. Spring break season typically runs from the second week of March through the first week in April because different schools, counties, states, and regions take their breaks at different times. We add extra weekday public programs and frequently seat public ticket holders in school programs.

The week before Easter 2013 was one for the record books. Starting on Monday, we sold out all our public shows. As the week progressed, the crowds increased. Friday before EASTER was positively crazy with a line to get into the science center zig-zagging through the lobby, out the door, and running down the sidewalk toward the Planetarium. Of course, an early Easter, unusually chilly temperatures, and a constant, light drizzle were good for business. We had visitors from across Tennessee

and states far and wide. Even with the crowd, most people seemed to have a good time. It is also reassuring to see so many people on holiday spending hard earned money to experience the wonders of science and the universe that surrounds us.

May every one have a GREAT summer.

VIRGINIA

contact: Kelly Herbst
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Kelly.Herbst@thevlm.org

John C. Wells Planetarium
James Madison University
Harrisonburg, VA

Shanil Virani reports: Lots of activity to report over the last quarter! Our Christmas shows, featuring the full dome presentation of *Mystery of the Christmas Star*, continues to be enormously popular. We back showing this seasonal title right after Thanksgiving on Friday and Saturday evenings. Our run continued until about 1 week before Christmas. Each screening brought in a full house! Given that our Planetarium seats only 72, we brought a lot of people under our dome. After each show, we raise our Goto Chronos and give a live star featuring the gorgeous Shenandoah Valley night sky. Our reach is also expanding. We regularly hear from visitors coming from as far south as Roanoke, and as far as east as northern Virginia and Charlottesville. In the new year, we resumed our public science talk series. On January 24th, Dr. Jason Kalirai, the deputy project scientist of the James Webb Space Telescope and based at the Space Telescope Science Institute (home of Hubble!) in Baltimore, visited our campus and gave an evening presentation entitled "TELESCOPES AS TIME MACHINES: A Public Presentation about Hubble Space Telescope's Outrageous Legacy and the Future With The James Webb Space Telescope". More than 600 people came out to hear this fantastic talk! Dr. Kalirai reminded us about the revolution in ideas that Hubble has ushered in and

really what's in store once the $8B JWST launches in late 2018! A reminder that all of our science talks are recorded and available for you to stream via our website: http://www.jmu.edu/planetarium.

Unfortunately, many of our public star party nights this winter have been cancelled because of weather but that's ground-based astronomy for you! Nevertheless, this March we were treated to some gorgeous views of Comet Pan-STARRS. While our skies are horribly light polluted on campus, we were still able to capture some nice pictures. Let's hope Comet ISON comes even a little close to model predictions (notoriously difficult) as that will be the BIG SHOW this fall.

Our free, regular Saturday afternoon shows continue to draw large crowds. Our most popular title so far this year, without a doubt, is *One World, One Sky: Big Bird's Adventure*! This was a show we co-promoted with our local PBS affiliate (WVPT) that again allowed us to bring in new people to our facility. After each show, we of course do a live star talk that people often enjoy more than the full dome presentation! Fortunately, most of our Saturday afternoons have been sunny so we have had our Coronado PSTs set-up to see our Sun as the active, dynamic star that it is and not the pale, yellow dot drawn in elementary school. Our March closed by hosting another public science talk. Dr. Dennis McNabb,

from the Lawrence Livermore National Laboratory visited our campus and delivered a public presentation entitled: "Harnessing Fusion Power on Earth: Miniature Stars in the Laboratory". He provided us with an update of the research being carried out at the National Ignition Facility, home of the world's largest and highest energy laser to achieve nuclear fusion and energy gain in the laboratory.

Lastly, our online presence continues to grow! Our Facebook page (http://www.facebook.com/jmu.planetarium) now has more than 1100 "likes" while our Twitter feed (http://www.twitter.com/JMU-Planetarium) is closing in on 1000 "follows"!! Our growing presence online has really allowed us to broaden our outreach and engage a lot more from around the world with the aim of demonstrating that our knowledge of astronomy, indeed science, is constantly growing, and that this enterprise is FUN, COOL, EXCITING that we all should be engaged in (especially young boys and girls)! Lastly, lastly, if you attended the American Physical Society meeting this Spring, you may have caught us on APS TV! In case you missed it, you can find it on YouTube: http://bit.ly/16Yrqd8 Check it out!
(the pictures to accompany this report are: JMU-McNabb-Mar1613.002, JCW 1 and JCW 2. Credit to the John C. Wells Planetarium)

Abbitt Planetarium
Virginia Living Museum
Newport News, VA

Kelly Herbst reports: Everything is back to normal here at the Virginia Living Museum…and that means that spring fever has set in! Attendance, both by school groups and by the vacationing public, is on the rise. We're looking at a fantastic upcoming summer season with astronomy summer camps selling out within just a few days of registration opening! We're adding sessions as fast as we can clear weeks and are very much looking forward to spending our time getting things to fly, setting things on fire, testing the limits of duct tape, and occasionally blowing something up.

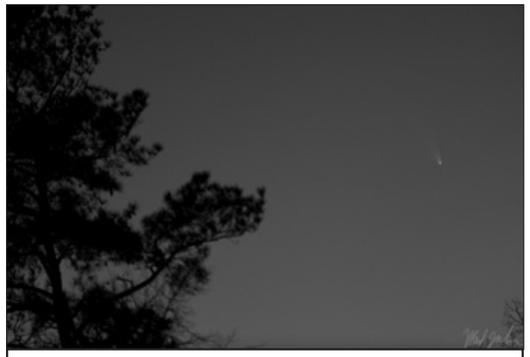
Perhaps the most exciting development in recent days here at the VLM is the pending completion of the installation of a solar generating array on the roof of the main building! The array is easily visible from the Abbitt Observatory deck, and indeed we will have a monitoring station there so we can explain to public how we make electricity with sunlight. We're so very excited to have this installation nearly complete – it has been a dream of mine to have a solar panel installation here at the museum for a long time. We're also looking forward to the reduction in our electric bill!

Currently in the planetarium we are featuring ***Inner-Space*** – a partner program to our visiting exhibit on childhood diabetes. We're also showing ***Legends of the Night Sky: Orion*** for our younger visitors, and naturally our live show ***Virginia Skies*** rounds out the offerings. With Spring Break coming next week, we'll expand the schedule to include daily showings of ***Oasis in Space*** as well as ***Laser U2*** for those that want to just relax and rock out. Spring Break is usually a very good week for us, and we're really looking forward to some spring weather as well!

Summer is already looming large, and we are hoping for a truly incredible one. Our special exhibit this year will be **Bodies Revealed** – an exhibition of plasticized human bodies. It is truly something to behold! We are anticipating large crowds all summer long. We'll feature ***Microcosm*** in the planetarium to connect with the exhibit. We've also got a special Abraham Lincoln program in production to celebrate the 150th anniversary of the Gettysburg Address. Mr. Lincoln's most famous trial hinged on his understanding of the Moon, and it makes for a fascinating little detective story! ***Abra-***

ham Lincoln: The Case of the Missing Moon will stick with us right up until Thanksgiving. Needless to say, with two programs in production simultaneously…we're keeping busy.

Comet PanSTARRS has put on quite a lovely show – I wish I'd seen it! Clouds, light pollution, and obstructing objects always seemed to be in the way wherever I was. The comet refused to acknowledge me, but several other astronomy staff and volunteers were able to get a peep at it. Witness the beautiful image taken by Mark Jablow, one of our regular star party night volunteer telescope jockeys.



Comet PANSTARRS L4-13. Credit: Mark Jablow

Ah well…maybe I'll have better luck with Comet ISON…

Pretlow Planetarium
Old Dominion University
Norfolk, VA

Declan De Paor reports: The following is the copy of an ODU News report on the Chelyabinsk bolide.

The meteor that is blamed for injuring as many as 1,000 people Thursday in and around the Siberian city of Chelyabinsk was of special interest for more than one reason to Old Dominion University geophysicist Declan De Paor.

Foremost, he is the director of the university's Pretlow Planetarium and has scholarly interest in hunks of rock or metal falling to Earth from outer space. But he had another reason, as well, to pay close attention to news coverage of this meteor. "This event struck a personal note for me," he explained. "My older son, Gavin De Paor, trained as a ballet dancer in the former Soviet Union Union (see www.pasodos.com/CENTRO/ENG/Resources/De_Paor_Gavin.pdf) and got his first job in Chelyabinsk. So you can imagine my surprise when I read today's news. This Siberian city was previously known mainly as the site of the worst nuclear accident prior to Chernobyl, which happened in 1957."

De Paor said he checked YouTube for video of the event and, sure enough, was able to post one (http://www.youtube.com/watch?v=e686-i7woR4&feature=youtu.be&t=10s) at 7 a.m. on Friday for students in his astronomy course. This was before he found out that his students had already posted the video at 4 a.m.

Here's an example of what he, as a scientist, could share with his students: "The fireball was caused by a 10-ton meteor, according to estimates by the Russian Academy of Sciences. The terminology is potentially confusing. We call these objects meteoroids when they are in outer space, meteors as they pass through the atmosphere and meteorites after they impact the surface. They are distinct from 'meteor showers,' which are particles of dust left over from the tails of comets that previously crossed Earth's orbit.

"Meteoroids are either fragments of a planet's crust knocked off during crater-forming impacts, or fragments of the interiors of planetesimals, which are failed planets that were smashed to smithereens by giant impacts early in the history of the solar system. They may be rock or metal, depending on whether they came from the mantle or core of a planetesimal, or they can be so-called chondrites if they came from a planetesimal that never got the chance to differentiate into a core and mantle. However, most burn up on entry and never reach the surface of the Earth."

Based on news reports, De Paor believes the main cause of injury was broken glass from the shock wave that the meteor created ahead of itself as it passed through the atmosphere.

"By coincidence," he added, "an unrelated astronomical event is happening today (Friday), as Near-Earth Asteroid DA14 passes remarkably close to the Earth. It will come well within the orbit of the moon and even within the orbits of geostationary satellites. Were it to hit Earth, the result would be a lot worse than Chelyabinsk. However, it would still probably be less than that in Tunguska, Siberia, site of a major impact event in 1908."

The Associated Press reported that the meteor on Thursday set off sonic booms as it streaked at supersonic speed over Russia's Ural Mountains. It entered Earth's atmosphere at a speed of at least 33,000 miles per hour and shattered 18-32 miles above ground, according to the Russian Academy of Sciences.

However, there were reports of a crater in the ice on nearby Chebarkul Lake, so at least some meteorite pieces may have made it to the ground.

"One thing is certain," De Paor added, "astronomers and geoscientists around the world are breathing a sigh of relief that this did not happen on Dec. 21, 2012, the end of the Mayan Calendar."

Radford University Planetarium
Radford University
Norfolk, VA

Rhett Herman reports: 3,349: Total number of planetarium visitors in calendar year 2012. This represents a one-calendar-year second-place-all-time number of visitors. This, in spite of the fact that I had to turn down a large number of show requests throughout the year due to maintenance (by me—we have zero budget!), and other reasons for downtime. This surprised me as I lost track of just how many people went through there. I was thinking that we wouldn't even hit 3,000 total visitors for the year. I was wrong.

128: Total number of separate planetarium shows in calendar year 2012. I never count little 10-minute "here's our planetarium shows" so these are real shows. Two students and I run all of the shows. Those RU Physics students are Alec Frazier and Sarah Montgomery. Both will graduate in May, 2013. Good for them, but bad for me since they are both really good at this.

1,841: Total number of Science Day visitors in calendar year 2012. The Radford University Science Days (http://www.radford.edu/sciencedays/) are days where the RU lab science departments host large groups—usually an entire grade level from a school—for a day that rotates smaller sub-groups through the planetarium, a physics show, a chemistry show, the earth science museum, the greenhouse, and a forensic science presentation. We cover a number of Virginia Standards of Learning that the teachers can't in their schools, and we also work to convey the excitement of science in general. Our goal is to help fan that scientific interest in these years when, for various reasons, they start to lose that interest in the sciences. It's a huge production given our limited space and time, but we've perfected it over the years and we seem to have "the system" down to an art.

Now for some really nice pictures! This past October, the regional photography club Exposure Roanoke (http://www.exposureroanoke.org/) made the trek to the RU Planetarium to get some practice shooting the night sky. This included instruction and practice for capturing star trails, dealing with light pollution, and other odd conditions that we could simulate. They spent time practicing their art in our never-cloudy skies in preparation for the real thing. This group is led by Jon Beard. Some of the images they took on Saturday, October 28, 2012 are here: http://www.exposureroanoke.org/photos/11451612/ They have since returned (Saturday, March 9, 2013) and will doubtless have more

Credit: Jon Beard

Credit: Jon Beard

spectacular images from that trip.

Planetarium
Children's Museum of Virginia
Portsmouth, VA

Dan Borick reports: We are well into our class visits. All third through sixth grade classes in the city get a visit with specialized programs (also from the Ed Dept at the museum - we flip flop classes during the visits). I put together a special show over the Christmas Holidays to coincide with our special evening hours. It was a 25 minute show I made linking the winter sky with the Nutcracker videos that Spitz was selling. I think it came out pretty good for my first long show. I have the high school Earth science classes come for lessons as well. This is the second semester of their visits.

I am looking at getting a few new titles to add to our shows. We cater to the younger visitors so kiddie type shows always are our targets.

Nothing definite yet, but we are working on a funding a summer camp for high school students to be held here at the museum. If funded, 16 9th - 12th graders will be selected to participate. The goal is to make two portable planetariums using world wide telescope protocols to make 4 student produced planetarium shows. Wish us luck on that one.

Planetarium
Thomas Jefferson HS
Richmond, VA

Leslie Bochenski reports: It's been a very busy season. More than 1700 students have visited the Planetarium so far this school-year, and we're on track to host over 2000 before the end of the term. This is a 10% increase over last year. But these snow days in March are playing havoc with my schedule! Who ever heard of snow days in the second half of March?

I'm incorporating some new computer models & simulations in my programs, from an on-line professional development program I've been attending from the Concord Consortium. You can see the models at http://itsisu.portal.concord.org/. You can view the activities as a guest on the site, or sign up as a teacher for full access.

As the month of March wraps up, I'm looking forward to Spring Break and Jacksonville this summer!

WEST VIRGINIA

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Planetarium
West Virginia Wesleyan College
Buckhannon, WV

Tracy DeLaney reports: Business has really picked up since the beginning of the year. We've had 4 cub scout groups and 3 Pre-k groups come through. In addition, the attendance at our public shows is about 20 people, which is comfortable for our old planetarium. Our current student assistant will be leaving at the end of this semester. He has been helping out for the last 2 years and will be sorely missed.

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