Southern Skies

Volume 32, Number 2 Journal of the Southeastern Planetarium Association Spring 2012

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2004 Venus Transit Credit: George Fleenor

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Only six months to the end of the world, fellow planetarians. Even more important, SEPA elections at the end of July.

In an election year, it's vitally important that at least a quorum of members are present for the voting and business meeting.

Host Jon Elvert and his team have put together some great papers and discussion sessions for us at this year's meeting. Did you take advantage of the $200 off offer for the first 20 SEPAns to register for both SEPA and IPS? Come celebrate the fair state of Louisana's 200th birthday with friends and colleagues. The SEPA web site (http://www.sepadomes.org/) has all the information you'll need.

By the time you read this, the transit of Venus will be history. Again. What did you do for the event? Dusted off that solar filter and dug out the telescope? Held a public viewing event? Hosted a news feed from some place with good viewing? Ran a Venus trivia contest? Sponsored an art contest? Listened to the local high school band's enthusiastic rendition of "Sousa's Transit of Venus" march? Waved angry fists at the cloud cover? Bring your stories to share in Baton Rouge.

See you there.

IPS REPORT

John Hare
ASH Enterprises
Bradenton, FL

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IPS 2012 will mark the best opportunity since we met in Cocoa in 1994 for SEPA members to attend an IPS conference. Compared to a typical SEPA conference, IPS can be overwhelming. Here are 10 tips to allow you to get the most out of the IPS experience.

• The vendor displays will be extensive. There will be a "dome village" adjacent to the booths. Do a quick walk thru of both areas then decide which vendors and displays are of primary interest. Allow enough time to visit as the schedule permits.

• Don't be afraid to ask vendors about special configurations for your particular needs. They need to know your wants and needs in order to give you information on your specific situation.

• Carry a quantity of business cards that contain accurate information such as cell number and e-mail addresses.

• Have an overall description of your facility available in order to discuss specifics with vendors and delegates.

• Look for papers, posters, and workshops that are of interest. Be sure to sign up early for workshops that may have limited slots.

• Activities start early and run late. Don't go full bore then have to crash because you're tired. Catch a cat nap if there is a opportunity where there is nothing of interest to you.

• Use the official message board to post or respond to inquiries.

• Break out of your usual conference social group and use the opportunity to meet planetarians from

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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: _____

_____

_____

_____

_____

Editor's Message

James Sullivan
Buehler Planetarium & Observatory
Davie, FL

Wow - thanks so much for all of your contributions. Have you noticed how we're getting more and more ads? Send more! Buy more! Share the word.

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 entire back cover or inside back 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.

SEPA Membership Form

Please send your check to SEPA, c/o Patsy Wilson, Margaret C. Woodson Planetarium, 1636 Parkview Circle, Salisbury, NC 28144.
_____One Year, $25 ($15 outside SEPA geographical region)
_____Two Years, $40
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Staff Position _____
IPS Member? Yes _____ No _____
Contribution to Scholarship Award Account: $_____

Small Talk

Elizabeth Wasiluk
Berkeley County Planetarium
Hedgesville, WV

As I write this, the Earth has passed the Vernal Equinox in its orbit and we are hurtling toward the spot which will coincide with the upcoming gathering of SEPA/IPS members in Baton Rouge, LA this summer. I am looking forward to it, so hopefully I will see you there and will maybe gather some more interesting information about your ‘‘Small Planetarium’’ whether it is small in size, staff or budget.

For now, I am coming off of a busy week. Just this morning I participated in a live observing session via the web with the people at the National Radio Astronomy Observatory at Green Bank, WV. They were doing a monthly check of the pulsars discovered by high school students around the country in the pulsar search collaboratory which I have told you about periodically here in ‘‘Small Talk’’. Students use an on-line database to analyze plots of random regions in the sky taken by the 100 meter Green Bank Telescope in Green Bank, WV. If they find something that looks interesting, they check it using the Australia Telescope Facility Catalog. If it is not listed as a known pulsar, they go to the pulsarsearchcollaboratory.com website and check its Dispersion Measure. Space is a vacuum, however, between us and a pulsar in space we will pick up stay electrons in between us and the pulsar. Since we only can detect pulsars within our galaxy and in surrounding globular clusters, using the right ascension and declination of an unknown signal, we can determine if the measurement to the supposed pulsar is reasonable. Students have an app on the website to input astronomical coordinates as well as the DM reading on the plot. If the plot’s DM comes back as reasonable, then there is a good chance that the plot could represent an undiscovered pulsar. Students the post it on: http://pulsarsearchcollaboratory.com

and let astronomers comment on it. If they think it looks promising, the students get to watch as the telescope reobserves the sky in those coordinates. Students can either observe live from the control room of the telescope in Green Bank or they can watch via the internet. If the plot reappears as a pulsar, their discovery is confirmed and they get official credit for their discovery. Sometimes it takes a while to find the location of the pulsar, due to the beam width of the telescope being so tiny. They have to do a process called ‘‘gridding’’ which literally means that the telescope observes in five places around the coordinates of the suspected pulsar to make sure they have either eliminated the possibility that the signal came from a pulsar, or they pick up the pulsar’s signal completely. Using this method, five pulsar candidates have been found so far in the database, by twelve high school students. One object has been found that is a RRAT, which is a rotating radio transient, a bizarre object we think is a transitional stage in a pulsar which might signify a pulsar which gives off a signal irregularly, having to store up energy after many rotations. Read more about this sort of object here: http://www.skyandtelescope.com/news/3310901.html?page=1&c=y

The lady who made the discovery in the article, Maura McLaughlin is one of the astronomers who mentor us in the pulsar search collaboratory. This morning’s observation showed the pulsar again in a monthly monitoring of the pulsars discovered in the program. It was kind of fun to chat with ‘‘Joseph Swiggum’’ the astronomer observing and running the observation from Green Bank on the 300 meter and Jessica Pal, the high school student who made the discovery from Rowan County High School in Kentucky. The pulsar was not behaving itself. It was ‘‘nulling’’. This is a phenomenon that is not quite understood yet, where a pulsar mutes its signal, keeping it quiet for a spin or two.

Just a little example of using new technology to

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BOOKENDS

Robin Byrne
Bays Mountain Planetarium
Kingsport, TN

A More Perfect Heaven: How Copernicus Revolutionized the Cosmos **by Dava Sobel**

Another astronomy book has crossed my path, so time to review it. “A More Perfect Heaven: How Copernicus Revolutionized the Cosmos” by Dava Sobel is an interesting combination of a biography of Copernicus, a history of his scientific ideas and how they fit into the cultural history of the time, and a fictional two act play about the pivotal time when Copernicus was convinced to write his book, “On the Revolutions.”

Much of the material covering the life of Copernicus has been written in other books. However, as usual, Dava Sobel manages to add so much more to the story by including the cultural history surrounding the events. As a Canon in the Catholic Church, Copernicus had many mundane responsibilities, such as overseeing transfers of land, making sure the peasant farmers supplied the required amount of goods each month to the church, and advocating for a currency standard. But, at the same time, he devotedly studied the night sky and made observations of the positions of the planets whenever possible. Because of his accurate observations, which provided a more precise measurement of the length of a year, Copernicus was consulted about calendar reform, which ultimately led to the development of the Gregorian calendar used today.

What is not known, however, is when Copernicus came to the conclusion that a much simpler explanation of the sky’s motions would require a moving Earth. He did not document his internal thoughts or the process that brought him to this “revolutionary” idea. What is clear, is that Copernicus knew that all of the convoluted epicycles of Ptolemy still didn’t accurately predict planet positions, no matter how many extra circles upon circles were added. This lack of accuracy, coupled with the complicated system that had grown out of the initial geocentric model, certainly were motivations for Copernicus to find a better solution.

Meanwhile, surrounding this dramatic change of thought, other dramatic changes were occurring. Martin Luther was leading a split from the Catholic Church, resulting in the formation of the Lutheran faith. Years of violence and discrimination ensued as the Catholic Church tried to prevent the inevitable divide.

It was near the peak of anti-Lutheranism, when a

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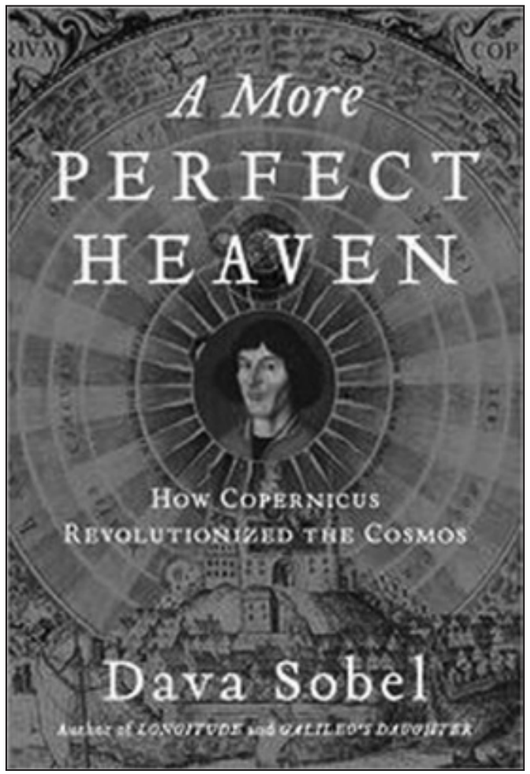

The Importance of Being Human

Phil Groce
Helping Planetariums Succeed, LLC
Macon, GA

One of my favorite plays is Oscar Wilde's "The Importance of Being Earnest." It is a clever story with crisp dialogue and a moral that illustrates the meaning of being true to one's identity. It has some relevance to a planetarium medium that is searching for its identity in this world of fulldome digital systems. This essay is about exploring that identity. At the end of this declaration, I shall reveal a foolproof formula for making every planetarium successful. However, before you skip to the end, I respectfully ask that you indulge this writer and consider the following.

Every great teacher you ever knew helped you, or at the very least, allowed you, to love learning. They themselves were lovers of learning. They were passionate about their subjects, and their excitement was infectious. You succumbed to an incurable disease of wanting to know more. These rare and wonderful teachers took you beyond textbooks and rote learning. They taught you that learning wasn't something that stopped at the end of the school day. It was alive in books, libraries, museums, science centers, historic sites, nature trails, and yes, even in planetariums.

Something horrible happened on the way to the 21st century. We, as educators and purveyors of the wonders of the universe, seem to have forgotten our primary mission. Somehow we have strayed into thinking that our job was to merely get students to master a group of skill sets, to pass a series of tests, and to meet some arbitrary standards of education. In the process, we may have managed to kill all love of learning. We forgot our primary purpose: to make our students and our public visitors life-long learners - to develop people young and old who are in a constant state of knowledge growth and not in an endgame of test and subject achievement followed by academic amnesia.

… by some estimates individuals spend as little as 9 percent of their lives in schools. Furthermore, science in K-12 schools is often marginalized by traditional emphases on mathematics and literacy; hence little science is actually taught during school hours.

Excerpt from Surrounded by Science: Learning Science in Informal Environments by Marilyn Fenichel and Heidi A. Schweingruber; National Research Council (2010).

Planetariums in general, and those in particular associated with public museums and science centers, are active participants in the other 91% of an individual's life. Over a human lifespan, one is likely to learn much more science from informal education sources such as museums, libraries, documentaries, and the internet than in the formal education setting of the classroom. I would argue that museums, zoos, and planetariums are far more significant educators long-term.

These informal educational institutions should not be trapped in a sticky gel of state-mandated test standards for classrooms to justify school field trips or funding support. Having served on a state educational standards committee, I can tell you that not one of the adopted science goals and objectives for K-12 students required a planetarium. It is virtually the same in every state. If it is mandated by a state standard that there are to be no astronomy concepts taught in a specific grade level, then the teacher has an up-hill battle to justify a field trip to the planetarium. I would argue that precisely because there is no astronomy taught at that grade level, the teacher and principal are morally obligated to take their students to the planetarium and teach them that there are other significant ways of learning. I can't tell you how many times I see planetarium programs that are really lessons that could be taught just as well, if not better, in a classroom. When I talk to superintendents trying to determine whether they should close or re-invest in their planetariums, they almost always ask why should they support such an expensive "classroom" upgrade when computer desktop planetariums and videos do as good a job helping them meet state standards? I reply: "That is exactly why you invest in them, because one of the unique purposes of a planetarium is to teach or illustrate those concepts that are difficult, if not impossible, to teach or illustrate in a classroom or on a desktop computer." Our collective planetarium purpose is to educationally lead our communities, not follow. It is time for planetariums to be earnest and to embrace their true mission of inspiring and instilling wonder and awe, to provoke their public audiences to look beyond their classrooms, to recognize the role of informal education, and to see first-hand an amazing and mysterious universe. Those planetariums that are taking this not-so-politically-correct path are succeeding. Their bravery is rewarded and is an important key to being a successful planetarium.

There are other keys. Those of us who were in charge of planetariums associated with museums were often called "planetarium curators," a strange word meaning "keeper" or "caretaker." I always found it difficult to understand how I could be the 'keeper" of the universe or the "caretaker" of the Sun, Moon and stars in a cosmos where I am just lucky enough to be here. This word has evolved to also mean "interpreter" of objects and collections. For the planetarium, the objects are the Sun, Moon and stars and the Universe is the ultimate collection. In the fullness of time, I realized that the role of the planetarium was to celebrate the universe with as much passion and love of knowledge as possible and to help our visitors interpret what they see in the sky. I think this is the role of people who teach in and produce for planetariums. We are not just curators of the planetariums or the stars they represent, but rather, nurturers of the human desire of our students and visitors to know more.

Planetariums have gone through an amazing revolution with the advent of fulldome digital planetarium projection systems. For the first time, we have a presentation media with some standardization. We have the ability to show anything we can imagine and the talent and financial resources to create. Now a program produced for a 20-meter dome and designed to play back on a multi-million dollar system can play back flawlessly on a 6-meter dome on a system that costs less than $100,000. This should be the "golden age" or the "renaissance" of planetariums. We have more in common with Imax® theaters that for decades we resented or only secretly admired. It is a perfect example of "be careful what you wish for."

Today many planetariums have converted to fulldome digital technology and are faced with much higher costs of operation, particularly for pre-rendered shows. The days of getting a program for $250 are long gone. Now, even the smallest planetarium must have a tenfold increase in show budgets. Most don't have the funds to produce their own unique fulldome extravaganza and must depend on the works of other larger, better-funded institutions or dedicated independent producers. Today there is very little difference between these digital planetariums. For the most part, they tend to present the same pre-rendered content. Each facility is haunted by the question: Once we burn through our library of expensive pre-rendered programs, what do we show?

In the 1970s and early 80s, Salt Lake City's Hansen Planetarium won several grants to produce and distribute free programs. Its Director, Mark Littmann, wrote and produced several wonderful shows with titles like "The People: Sky lore of the American Indian" and "Skywatchers of Ancient Mexico" that later played in hundreds of planetariums across the US and around the world. I enjoyed going to other facilities to see how they staged and presented these shows. Each planetarium put its own personal mark or style on these programs. Many times I saw something new and unique and took those ideas back to my own theater. In those days, every planetarium had a unique personality and used their limited resources to create a unique show for their local

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Being Human (Continued from page 9)

audience. They were the first to "think universally, act locally."

The fact that each planetarium was unique with its own criteria for quality wasn't without problems. There were a lot of bad planetarium shows, and some producers rightly lamented on the lack of creative or quality control of their programs.

We have always had our planetarium controversies. Some in retrospect may seem silly. In the 1950s, it was the audacity of adding music to our "lectures." In the 1960s, it was slides, 16mm film, and special effects. In the 1970s, it was pre-recorded narration or "canned" versus "live" programs and the use of automation. In the 1980s, it was computer animation and video. And in the 1990s, it was the rise of fulldome digital planetariums versus the sky quality of optical-mechanical projectors. In spite of the controversy, each of these "advances" offered the potential to make us better storytellers. Fast-forward to today, and many planetariums have much more in common with movie theaters than planetariums of the past. Sadly, some of these facilities have become a movie-push-a-button-planetarium with little soul and even less personality.

Please don't misunderstand me here. There are wonderful fulldome programs that have a great script, narration and music score wrapped in stunning visualizations. However, what marks a great fulldome show is the unique passion and viewpoint it brings to the audience. For instance, Robin Sip of Mirage3D has transformed his love of science and storytelling into some amazing fulldome productions. I am emotionally moved when I see a Robin Sip show or hear a Carolyn Collins Petersen script because they communicate at a very human level and are on an earnest quest to enlarge our view of the universe. They share their "personal" and unique perspective through a very impersonal digital medium. That is not easy.

One notable experiment in making these fulldome programs more human is at the Griffith Observatory in Los Angeles. Here 'live' actors in synchronization with the visualizations and music speak a story of the history of humankind's exploration of the Universe. I have seen the same show twice, once with a female actor and the other with a male actor. Judging from my own reaction and the reactions of the audience, I'd say all of us paid more attention to this more personal approach. The actors smiled, looked you in the eye, and used props to add even more visual realism. My only disappointment is that the actors had to stay with the script and could not deviate. That meant they couldn't react to a laugh or a nod of understanding or take a path that might have been more relevant. That is where the presentation stopped being human. It made me realize that it might be better to give astronomy lecturers acting lessons on how to speak poetically and passionately about a subject rather than use actors to parrot a well-worn script. Regardless, the Griffith should be seen by every planetarian. It is a brave and bold experiment that holds lessons for all of us.

So where do we go from here? How do we use these new digital tools with our limited program budgets? Well, fortunately, there are many shining examples around us. The Tellus Science Museum's Planetarium in Northwest Georgia under the leadership of David Dundee has elected not to simply be a digital movie theater. He has over 30 trained showrunners and operates 8 hours a day, 7 days a week, 12 months a year. His 120-seat theater has averaged more than 100,000 paid admissions per year over the last three years. The secret to this planetarium's success is David's philosophy that every visitor shall receive a live (human) guided tour of the night sky before each fulldome movie presentation. These are quality educational and entertaining presentations that allow the planetarium to meet the expectations of its audience. Every show is different and worth seeing. This show philosophy is also part of other successful planetariums such as Nashville's Sudekum Planetarium. A long time ago, Jack Horkheimer gave me some advice. "Always have a section in your programs that just shows the stars." Yes, we all want to create visual extravaganzas; however, the audience will always feel cheated if we simply don't take the time to show them the stars." Jack was right then, and he still is now.

One possible solution to under-funded planetarium budgets is to not depend solely on purchasing expensive pre-rendered content. Live shows presented with passion by knowledgeable humans using all of the capabilities of digital planetariums

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Being Human (Continued from page 11)

will sell as well as most pre-rendered programs. Combined with fulldome movies, you have the best of both worlds and a way to extend the life of these movies in your theater.

So my friends, here it is, the secret of the universe, planetariums and everything:
Be earnest and true to yourselves - be a planetarium, and, most important of all, be unafraid to be human by sharing your love of the Sun, Moon and stars. You don't need a million-dollar budget or even a thousand-dollar budget to do that. It doesn't matter what technology you use or what size dome you project upon. If you can approach your presentations with same awe and wonder you had when you saw your first star-filled sky, you will succeed. For what our audiences want the most is a learned and passionate guide to the heavens. They want someone with a cosmic perspective who will inspire them to go find their own starry night, explore it and, yes, celebrate it. Nothing could be more human and, for planetariums, more important.

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all over the world, many of whom will share your interests and concerns.

[a] Bring layers of clothing. The HVAC may be set for worst case situations which can mean widely ranging temperatures and hence levels of comfort (or discomfort!)

• Attend the regional breakout session where SEPA will hold their official business meeting. This is tentatively scheduled for Thursday, 1630-1730 at the Hilton. This is an election year and we need a quorum to conduct business!

Book Review (Continued from page 7)

Lutheran mathematician, Georg Joachim Rheticus, approached Copernicus. Despite the danger Rheticus faced if he were caught in the home of a Catholic, he remained for an extended period of time, encouraging and assisting Copernicus to publish his observations and conclusions. This encounter between two unlikely colleagues is the focus of the two act play, presented in the middle of the book. Here, Sobel gets to use her imagination about the conversations they must have had, which ultimately led to Copernicus' book being published just as he lay on his deathbed. Although a work of fiction, the play does incorporate many known events from both the lives of Copernicus and Rheticus to lend it historical relevance.

Sobel goes past the end of Copernicus' life to discuss how his book was received. Naturally, many accused it of being heretical. Although never banned, presumably due to the useful tables for calculating planetary positions, the book was on a list of questionable publications. These books were required to have certain passages amended by the owner before they had permission to keep it. We even venture into the works of Brahe, Kepler and Galileo, all of whom were influenced by "On the Revolutions." Finally, we even get a taste of modern astronomers studying original copies of the book, and forensic scientists exhuming Copernicus' skull to create an image of what he would have looked like in old age.

Dava Sobel continues to produce books that are enjoyable on so many levels. Whether you simply want to know about the life of Copernicus, or wish to understand the religious turmoil of 16th century Europe, or want to indulge in imagining the conversations held by great men of the time, "A More Perfect Heaven" will provide exactly what you are looking for.

"A More Perfect Heaven: How Copernicus Revolutionized the Cosmos" by Dava Sobel, Walker Publishing Company, 2011

Small Talk (Continued from page 6)

engage teenagers in astronomy. To make the plots students analyze, the hardware comes from the gaming industry. To learn more and find out about the most massive neutron star ever found, and how they did it, go here: http://www.nrao.edu/pr/2010/bigns/

Did you do a special program for the Venus/Jupiter conjunction? I did and got to meet all sorts of folks who were curious to go out and look at the conjunction and learn more about Venus and Jupiter. My crowds are always small, but that gives me the opportunity to answer questions directly. One of our visitors was a kid who is an exchange student from Croatia to Hedgesville High School, the high school where the planetarium is located.

Ms. Hatfield, a new English teacher who actually graduated from Hedgesville High School, holds the school record for most visits to the planetarium in one week. She brought her children, her yearbook staff and the newspaper staff to see three different programs. Gave me a workout and I got a great article in the school newspaper to show for it. A great deal all around.

Have you seen the new supernova in M95 yet? If not in real life, than at least on the web via APOD (Astronomy Picture of the Day)? Maybe you can check out this cool vimeo: http://vimeo.com/38910919
I like vimeo, as opposed to you tube, since you tube is blocked by the school system. Boo, Hisss. Don't put any of your stuff on you tube if you wish me to see it.

Speaking of computers, my IT person hates me because I go through computers like water. Four in four years. I now have a laptop I am getting to use as I write this. Seems like I really like it, so far...

SEPA Professional Development Fund Silent Auction

Dave Maness
Sharpe Planetarium
Memphis, TN

Normally at this time, I would be asking for you to set aside donation items for the annual silent auction to benefit the Professional Development Fund. But this year we will not be having a full conference and there is much to accomplish on that day. So it was decided that we would skip the auction this year in favor of a big one at the next conference in Jacksonville, Florida. If you have any items, please hold onto them until then and I am sure we will have a great auction in 2013.

Until then SEPA will (as always) be happy to accept monetary donations toward the fund. See the membership renewal form in this issue and I believe you may add a donation to your conference registration letter.

As of this writing, the fund's account balance stands at over $7,000 and I am happy to say that people have already benefitted from the account. If you think you are a good candidate please apply as soon as possible using the form on the www.sepadomes.org website.

Thank you for your donations and I hope to see you all in Red Stick (Baton Rouge).

Small Talk (Continued from page 13)

There has been no snow days so far this school year, and chances are in March and April, there will be none this year. So students last day is May 22, 2012. Students are in great expectations for spring break, but a welcome distraction was our version of March madness when the school's boy's basketball team won the state championship, and to show that we aren't just a bunch of talented jocks, the academic team also won the covered first place as well. It is always great to be part of a team that keeps winning.

Another welcome distraction was the Drama Department doing a really kick butt version of Rodgers and Hammerstein's Cinderella. I still have songs in my head from attending...''Ten minutes ago, I saw you, and I whispered my 'how do you do'...

I also attended a great workshop on incorporating art with space science at the Applied Physics Lab at John Hopkins University called ''A Vison of Discovery''. Go here to discover more about it: http://dawn.jpl.nasa.gov/discovery/vision_of_discovery.asp It was linked cybernetically with the Jet Propulsion Lab in Pasadena, CA and the Space Center in Houston and the Oregon Science Center in Portland. I had never done anything like this, but it was great fun and worth the $25.00 I paid to attend, if for nothing else, but the NASA musical video on the solar system based on ''High School Musical'' with actual students presenting the songs and impersonating the members of our solar system. Love the asteroids as a bad boy gang rapping. If you haven't seen it check it out at: http://discovery.nasa.gov/musical/index.cfml Better yet get your local high school or college drama department to put it on in or around your dome.

Here I am at the ''Vision of Discovery'' workshop at the Applied Physics Laboratory of John Hopkins University in Laurel, MD. I am watching them put together a mosaic of a Messenger space craft image of Mercury that the members of the workshop drew parts of separately.

Back in December, I won The Idea Book's contest for best use of their A & E Network material in a classroom. It was for my use of teaching kids to search for pulsars, using the History Channel's episode of their series Universe on pulsars and quasars. I was only one of eight winners nationwide. I won a thousand dollar grant to use with my pulsar search kids. Want your own copy of The Idea Book? Go here: http://www.biography.com/assets/pdf/IdeaBook.pdf .

More importantly, I won the ''Gamma Ray Burst Lottery'' by guessing where the next Gamma Ray Bust the Swift Space Craft would detect. I was only 77 degrees of sky off. Wanna do better? Go to http://swift.sonoma.edu/grb_lotto/ I am awaiting my prize now.

One day in late March, I walked into my planetarium to the ceiling falling on the floor. Luckily not during a program, and not on the console board or dome, star projector or visitors or me for that matter. This created a giant light leak; I am giving a shout out to Mr.Baumberger, our tech ed guy for giving me a huge piece of black plywood to cover up the light leak. As I write this, the ceiling is still on the floor. Any bets that it will be still on the floor the next time we get together to ''Small Talk''? Keep me posted of what ''Small Talk'' is going on around your dome so I can share it with everyone in SEPAland. 'Til next time.

News From SEPA Region

FLORIDA

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

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 *Earth, Moon & Sun, Infiniti Express, 4000 Years and Home, Japan: Reflections In Time,* and *Celestial Navigation.*

We continue to rotate shows on Wednesdays, and these shows include *The People*, *The Mars Show*, *The Voyager Encounters*, *Dawn of Astronomy, A Dozen Universes* and *Astrology: Fact or Fiction.*

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
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Planetarium
Tellus NW GA Science Museum
Cartersville, GA

2012 so far has been beating all previous attendance records with over 20,000 through the planetarium by the end of February. We have been running "Solar Storms" and brought back "Oasis in Space". Even though Oasis is an older show, it kept being requested by our patrons so we brought it back. We also opened "Trip Through Space". It's a great show school groups and public really love it. January & February we do our Junior workshops in the observatory (ages 5 – 12) since it gets dark early then. The workshops are available for up to 120 folks each; they both sold out. We are also starting a rocket club at Tellus; we hosted our second "Build & Blast" workshop for families to come and build and launch their own rockets. Thanks to the donation of some equipment from Dave Moffet at Furman our Radio telescope is another step closer to operation. Our partnership with NASA continues (see the attached photo of a bolide caught by our camera on March 7).
YIKES

Smith Planetarium
Walker County, GA

James Alonzo Smith reports: The Smith Planetarium in Walker County, Georgia is still not operational but we hope to be operational by September. As you probably know, we had our grand opening last year and then one program before a devastating storm hit. The new planetarium is an add-on to an older building. The old building was greatly damaged and will be completely razed. Before contracts could be "let" for bulldozers to do their work, asbestos and mold abatement had to be accomplished. The Walker County School Board has approved the purchase of a New "Konica Minolta MediaGlobe II Planetarium Projector". It is the like the one now used by the Tellus Planetarium in Cartersville, GA. Even though I'm on the School Board, there is a lot about time lines I do not know. I expect to see the bulldozers begin taking down the old building sometime before April. There will be a lot of site work to be done as the planetarium is at a lower elevation than the old building. We definitely don't want to see another disaster such as a water problem flooding the planetarium. I believe the Smith Planetarium should become operational by mid September 2012.

O. Wayne Rollins Planetarium
Young Harris College
Young Harris, GA

Steve Morgan reports: We recently finished a successful run of a Family Starry Nights promotion, featuring "The Little Star That Could" for the younger set, and a live-narrated "Skies Over Georgia" for general audiences. We are now running Clark's "Led Zeppelin" show as our spring Cosmic Concert. There's a long tradition of such concerts here at the college, and they're quite popular with both the campus and local community crowds. This one is a bit of a change in pace for us, in that it is a fulldome video as opposed to primarily laser-oriented experience, and the initial response from the Led Heads has been terrific! Our summer show will tap into the current interest in exoplanet discoveries with Clark's "Extreme Planets."

In addition to all the regular school groups who visit the planetarium on field trips, we continue to host numerous YHC classes in biology, chemistry and photography. Our fulldome digital system can display things like amino acids, DNA and other PDB models for biology, atomic orbitals for chemistry, and our optomechanical star projector is perfect for star trails for the photography students. It's great to see the planetarium being utilized in so many different ways by our instructors!

KENTUCKY

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

Golden Pond Planetarium
Land Between the Lakes
Golden Pond, KY

Ross Walkman reports: He has just completed a renovation of his facility. Previously, the 40 foot dome housed a Spitz 512 installed around 1979, but that has just been replaced with a Konica Minolta Mediaglobe, which made its debut at the beginning of March. The facility also recently installed a new 16" Meade SCT LX 200 ACF telescope and also has a MallinCam and Coronado Solar Filter.

Ross was originally with Golden Pond in the late 1990's, started his own Starlab Business, went into construction, and now since January is back at Golden Pond running the Planetarium and Observatory.

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

Steve Russo reports: Due to a variety of sources, I have been able to find out that at one point, the state had at least nine planetariums in operation. I am now on a quest to find out the status of those nine. I know that at least six are still in operation. One of them, the Trigg County Schools Planetarium is still physically there but has not been in operation for many years. It has a Spitz Nova III.

I may actually spend this summer travelling around the state to physically visit some of the facilities that I cannot find any information about.

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: As I write, preparations are well under way for SEPA2012. If you have not yet registered, it isn't too late, and if you're still undecided about attending our SEPA meeting, you can register on site. Registration is free and includes an evening reception, buffet breakfast and lunch. All registration information is on line at www.sepadomes.org. The Belle of Baton Rouge Hotel and Casino is our meeting hotel where registration, papers and meals will take place. On Saturday, 21 July registration begins at 3 pm. followed by the reception at 6 pm. On Sunday, opening remarks begin at 9 am. And it's not too late to submit an abstract for presenting a paper, or a presentation in a portable planetarium. If you have last minute questions, please contact me at jelvert@lasm.org or land line: 225.344.5272 x 141.

Besides preparing for SEPA2012, the Pennington Planetarium staff is putting together final programming arrangements for the IPS2012 conference. Preparation for IPS is now all day, every day (and most nights). We really hope that those of you attending our SEPA meeting will attend the IPS2012. If you haven't already, go to www.ips2012.com for details. Remember, our SEPA meeting concludes just before the IPS conference begins.

And, Domefest 2012 is taking place immediately following the IPS conference on Friday and Saturday 27 – 28 July. For more information, including past winners, clips of juried shows and details on how to see or submit to DomeFest, head to www.domefest.com

Our summer, early fall new programming lineup includes National Geographic Entertainment's *Wildest Weather in the Solar System*, a NASA grant consortium production *We Chose Space!* (grant partners: Louisiana Art & Science Museum, Houston Museum of Natural Science and Rice University) and Softmachine's *Kaluoka'hina – The Enchanted Reef.* Our other public showing, *Wild Ocean*, continues through October.

We also unveiled NASA's new traveling exhibit *Hubble's Magnificent Universe: Images from the Hubble Space Telescope*. The exhibit brings together 14 over sized Hubble images, chosen primarily for their visual impact, which explores the relationship between aesthetics and science.

Lafayette Planetarium
Lafayette Science Museum
Lafayette, LA

Dave Hostetter reports: The Lafayette Science Museum Planetarium has been closed since January 1 for remodeling and installation of a 6 projector Sky-Skan Definiti full dome system. Construction and initial training is complete and the planetarium will reopen on May 1 with a (gulp!) full slate of school and public programs. The opening public program schedule will include *We Are Astronomers, When Venus Transits the Sun,* and *The Little Star that Could,* in addition to live constellation programs and Digital Sky2/Digital Universe programs. *Ibex* and *Two Small Pieces of Glass* will go into the schedule during the summer and fall as programs are rotated. From June through early August (when school starts), there will also be twice-weekly live morning programs called "Space Flight for Kids," combining full dome DS-2 graphics with rocket models and 1/50 scale rocket drawings.

NORTH CAROLINA

contact: Patsy Wilson
Woodson Planetarium, Salisbury, NC
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Morehead Planetarium and Science Center
Chapel Hill, NC

Amy Sayle reports: As part of the 2012 North Carolina Science Festival, Morehead Planetarium and Science Center is hosting Neil deGrasse Tyson for a special presentation on the UNC-Chapel Hill campus on April 26. Morehead is also leading the UNC Science Expo as part of the festival. Morehead founded and continues to coordinate the North Carolina Science Festival, which was the first statewide science festival in the United States. More than 77,000 people participated in the first festival, and this year's festival events span two weeks and a 500-mile-wide swath across the state. More information can be found at http://www.ncsciencefestival.org .

Planetarium
Elizabeth City State University
Elizabeth City, NC

Woodrow Grizzle reports: We continue to develop three-screen video versions of shows so that we can completely move away from slide projectors. Three factors contributed to our decision to go digital for non-star field assets: (1) bridging the gap between outmoded technology (slide projectors) and possible future full-dome, (2) streamlining the production, installation, and performance process, and (3) improving guest experiences by providing programming that is both current and aligned with 21st century expectations.

Speaking of contemporary expectations, we are also in the process of developing curriculum resources to accompany our school shows. These resources will include pre- and post-visit classroom lessons and homework activities, along with pre- and post-tests, which will allow us to assess the degree of academic impact among students who visit us. In addition to enriching student experiences, these efforts will go a long way toward providing potential funders with data that clearly demonstrate our value to the community, as well as providing us with a useful tool for measuring institutional effectiveness. I strongly encourage theaters to offer curricula that go beyond the spring line, and I am perfectly willing to share my experiences with anyone who is interested.

We are also preparing to construct a sundial here on the campus of Elizabeth City State University (ECSU). Ours will be an analemmatic sundial of our own design. This type of sundial is both fun and interactive, as the human observer serves as the gnomon. We chose the analemmatic design specifically because of its immersion, which meshes well with lessons designed to engage visual, kinesthetic, and auditory learners.

Though designing your own sundial may sound like a daunting task, I was able to find a good deal of information about their design on the World Wide Web. Particularly helpful was a comprehensive and fascinating discussion of the mathematics and theory behind analemmatic sundials entitled "Analemmatic sundials: How to build one and why they work," by Chris Sangwin and Chris Budd:

<http://plus.maths.org/content/os/issue11/features/sundials/index>

As I write this, we are preparing for the 2012 North Carolina Science Festival. ECSU Planetarium will present *The Truth Behind 2012* on Friday, April 13, 2012. The show looks at the apocalypse allegedly foretold by the Mayan long count calendar to occur (or begin) on December 21, 2012. (Friday the 13th seemed a perfect occasion to discuss the end of the world.) It also looks at several theories said to detail the mechanism by which the world will end: asteroid collisions, planetary alignments, solar storms, and more. This fantastic program was produced by Morehead Planetarium and Science Center and graciously shared with us especially for the Science Festival. Look for a recap of the event in the next issue of *Southern Skies*.

Robeson Planetarium and Science Center
Public Schools of Robeson County
Lumberton, NC

Ken Brandt reports: The Robeson Planetarium is offering summer programs for schools, camps and other public groups. We completed a successful run of NC Science Festival events and led a workshop on astrobiology for the Jet Propulsion Lab.

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

Patsy Wilson reports: We spent the month of March doing the STEAM Festival for our area 3rd graders. STEAM stands for Science, Technology, Engineering, Art and Math. The focus of the festival was Leonardo da Vinci, his life and his work. The students had sessions on Chemistry and Art, Bodies in Motion, Leonardo's Workshop and Earth, Sun, Moon. The book, "Neo Leo" was provided to each school's media center for use in preparation before the students participated at Horizons Unlimited. This book illustrated many of da Vinci's famous invention ideas (drawings) and the modern devices that eventually grew from them. It was a great success among teachers and students.

We will host "A Starry Evening at the Woodson Planetarium" on April 21st. This is an official event of the NC Science Festival. Participants will see "Bear Tales and Other Grizzly Stories", use ActivExpressions to test their knowledge of constellations, and make and take a star wheel for use in their own personal observing sessions.

We participated in the regional Science Olympiad held at UNC Charlotte in March by leading the event, "Reach for the Stars". This is a pencil and paper tested event. Teams of 2 from approximately 35 area middle schools participated. We were delighted when the team from Knox Middle School, our next door neighbor and first time Science Olympiad participants, won our event.

Slots for our summer camp, "Rockets and Stars and Kids" completely filled in the first three weeks. This camp will be held in early August.

SOUTH CAROLINA

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

DuPont Planetarium
Ruth Patrick Science Ed. Ctr., USC Aiken
Aiken, SC

Gary J. Senn reports: The DuPont Planetarium at the Ruth Patrick Science Education Center (RPSEC) on the campus of the University of South Carolina Aiken (USCA) is in preparation for National Astronomy Day on April 28. On that day, we host 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 will be available from 6:30 - 9:30 p.m. to help people understand the wonders of planet earth and space beyond. Many activities will have materials that visitors can take home with them, and live animals such as snakes, turtles, alligators, and owls will be on display. Telescopes operated by members of the Astronomy Club of Augusta will be set up on the lawn outside of the RPSEC, and the RPSEC observatory will be open.

In March, we showed *Mission to Mars*, a local production, and *Journey into the Living Cell* from the Carnegie Science Center and Buhl Planetarium. Throughout the month of April we showed a local production, *To the Moon and Beyond* in celebration of the 40th anniversary of Apollo 16.

In May, we will be presenting a show that focuses on the Transit of Venus, which will occur on June 5. In May we move our evening planetarium show times an hour later so that there is a better chance of it being dark enough for patrons to visit the Bechtel Telescope on the roof of our facility.

On June 5, we will be holding an event for the Transit of Venus. We are hoping to have clear skies and enough time to view a good portion of the transit before the Sun and transiting Venus dip below our local horizon.

TENNESSEE

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

Bays Mountain Planetarium
Kingsport, TN

Adam Thanz reports: We are currently showing our brand-new full-dome show entitled "When Venus Transits the Sun." It is, of course, about the upcoming transit. It covers many interesting points about eclipses, the sun, Venus, how to view, etc. It also looks back to the transit of 1769 in which the Royal Observatory set forth a number of major expeditions to accurately measure the transit contact points from three major sites on the earth. Each site had a number of observation points. All of the data would then be combined to use trigonometry to calculate the solar parallax, and hence, the size of the Solar System. The general public and school groups are really enjoying this program.

We've also added two live activities that take place in the middle of the show. The great thing about these activities is that everyone can do it from the comfort of their seat and no equipment or props are needed. The first is about parallax. I'm sure you know this one. Hold your thumb out at arm's length and, using one eye, block something with your thumb. Then, switch eyes. The exploration occurs when you ask them "what happened?" They will first reply with "it moved" or "my thumb moved." You, as the educator, must keep inquiring as to what really happened. Providing clues to get them in the right direction, hopefully they will realize they were using their two eyes and thus two points of view. The separation of their eyes and the distance to their thumb creates a triangle and thus, an angle to subtend to what they were looking at. The same as what the astronomers in 1769 were doing.

The other activity is about the dreaded black drop effect! You may not know about this activity. Hold your forefinger and thumb very close together so they are parallel, but not touching. Hold them very close to your eye and look at a bright area. You should see a dark area between your fingers. If you have good eyes and are very careful, you will see many parallel lines of light and dark. This is the black drop effect. It is also known in physics as diffraction. When light travels through a slit that is very slender, the wave nature of light will force the light to spread out, or diffract. Poor atmospheric seeing, Venus' atmosphere, and poor telescopes of the 18th century made this effect worse.

We have a public viewing scheduled for the transit, like most of you, with lots of scopes and lots of volunteers. We are also having our observing at a public site that can handle the large amount of cars and people that we expect. Our Park has about 120 parking spots. Not nearly enough. We are also partnering with a local university, ETSU, to combine our efforts and resources to make this a fun event for the region. Now we only have to see about the weather! What if the following scenario happens? You'll read it here first, but written April 1, 2012 (really). What if a sunspot is seen on the sun during the transit that is large enough and dark enough that it becomes a confusion for the public to know which is the spot and which is Venus!

We've also been very busy this spring handling the requests for copies of our full-dome Venus transit show. We even remastered a version for DVD for classic theaters. We priced this show really low so most any theater could afford it and help get the word out about this event. We're happy to say that many copies have been distributed all over the world. It is nice to know that planetarians appreciate and value our work in production.

As a side note about our productions, in order to better serve the planetarian community, we have adjusted our show pricing. We will still create shows that are excellent, but are now more affordable.

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 2012 edition of StarFest. Three days in October of astronomy, fun, presen-

tations, 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. 12th-14th. Send me your e-mail address if you want to be notified about this great event

Akima Planetarium
East Tennessee Discovery Center
Knoxville, TN

Charles Ferguson reports: As I have, already, stated, not a great deal happens in my dome. All the administration wants me to do are simple sky interpretation talks with that worn out Spitz A3'. I do those, as well as, custodial services, maintenance, gardening, accounting, etc. But, if nothing more happens, then I can't report just alot more. So, oh, well!

Clear Skies! (In spite of what George Fleenor says, just make them CLEAR!)

Kris McCall adds: I suspect Charles' custodial duties involve more than just emptying his own trash can. How many of us would do custodial, gardening, and more so we could continue to give sky tours? Kudos to Charles for sticking with it.

Charles Ferguson also reports: Lambuth University was a liberal arts university located in Jackson, Tennessee, founded in 1843. (WOW!) The University was supported by the Memphis Annual Conference of the United Methodist Church, but closed it doors in summer 2011 due to financial challenges and low enrollment. The Lambuth Campus is now an extension of the University of Memphis.

There was a small planetarium on campus, but we were never able to make contact with a staff member. Maybe the changes there will allow for the reincarnation of the Lambuth Planetarium.

Sharpe Planetarium
Memphis, TN

Dave Maness reports: It seems that spring weather has arrived a little early this year. A recent trip to Huntsville showed a good crop growing in the rocket garden at the U.S. Space and Rocket Center.

While there I enjoyed some good German food and a nice exhibit of memorabilia from the life and career of Werner Von Braun. I also had my first microgravity experience on the Space Shot ride which was surprisingly terrifying and fortunately brief.

This past week we had another demonstration of Full Dome Digital technology. Thanks to Phil Groce and his crew I think we made a big impression on a major potential donor. An upgrade in the future looks much more likely.

We will be heading out on April 27 to Coon Creek Science Center our off-site facility to set up for the annual Members' Day on Saturday. As far as I know we are the only facility that gives the general public the chance to dig for 70 million year old fossils from this unique paleontological formation. And unless the fossils turn out to be unusual or scientifically significant, they can even keep them. If the weather permits, I will be showing safe telescopic views of the sun.

For the Venus transit on June 5, I plan to offer some telescopic viewing if the weather permits. Otherwise I will try to find online coverage I can show in the planetarium theater. I also plan to have the portable sundial and a scale model solar system walk set up on the lawn for that as well.

In the theater we are currently offering **Mars Quest** from Loch Ness Productions. I have already gotten some interesting comments about the classic science fiction book cover art included in the program. Soon that program will step aside for another Loch Ness program **Hubble Vision II**. We are also running a seasonal favorite produced here called **Visions of a Spring Night** a program that is jam packed with constellations, sky lore, and history. If all goes as planned, by this time next year we should be getting ready to open our newly renovated theater.

I hope to see you all at the conference in Baton Rouge.

VIRGINIA

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

Kelly Herbst reports: Even as I type, we are readying ourselves for the Spring Break onslaught. Local schools roll through Spring Break over the coming two weeks, and we'll be running a heavy daily schedule, with 5 showings each day. On the docket, we have our end-of-the-world show ***2012: The End of the World? NOT!*** which has been very well received by our audiences here, and a new show for us from the good folks at Discovery Dome called ***Night of the Titanic***. With the 100th anniversary of the sinking of the Titanic on April 14, we thought it would be appropriate to offer this show over Spring Break. It will be returning to our dome this summer as we partner with our neighbor The Mariner's Museum who will be hosting a fabulous exhibit on the subject. We'll of course have a daily ***Virginia Skies*** for Spring Break, plus the partner program to our current changing exhibit gallery offering ***Legends of the Night Sky: Orion.*** Rounding things out will be ***Laser Pop***, 'cause who doesn't want to rock out in the planetarium for Spring Break?

After Spring Break rolls through, we begin in earnest the preparations for summer. Dinosaurs will back, and so will the wonderful program ***Dinosaur Prophecy!*** Our Titanic program and live show will run all summer long, of course, and the last spot of the day rotates through a couple laser shows and our 2012 show. We'll be featuring two new laser shows this summer! June will be a fun time for little ones with ***Here Come They Might Be Giants***, a brand-new laser show from AVI. It's a real treat with TMBGs excellent kid songs about numbers, letter and science. If you've not heard the science songs – go get them. Now. It's AWESOME! In July, we rock out to patriotic hits with ***Spirit of America*** from Jay Heck and his wonderful updates to the Laser Fantasy stable of shows. All in all, we're hoping for a big summer!

Also big this summer is my schedule of kid's day camps. I'm doing many more weeks than usual this summer…in fact, if I'm not vacation this summer, I'm teaching kid's camps. So sadly, that will keep me away from SEPA and IPS. I hope everyone has a fabulous time! Go Woodchuck!

Nothing, however, could keep us from seeing the Transit of Venus on June 5! Well, okay, nothing but clouds. But even then, we'll have the internet! We're hosting a Dinner with Venus event (a paral-

lel to the Breakfast with Venus we hosted in 2004) and we are really hoping for clear skies and lots of people! Only a few days before the transit, we'll be hosting Dinosaurs! The Camp-in! a fun sleepover event we do whenever the museum has dinosaurs in the changing exhibit gallery. And right after that, we're into classes, so June is going to be a banner month for us.

Before I close, I want to share a little story that made me smile. I was running our 2012 show one afternoon, and a mom and several kids were attending. The oldest boy looked to be about 12. After the show was over, the 12-year-old stood up and said "Man, you mean none of that stuff was true?" To which Mom replied, "Yes, I told you this show would clear it all up. Now quit listening to your stupid friends!"

Sorry, dude, but you still have to finish that book report. :)

I wish you all a wonderful SEPA/IPS, clear skies for viewing Venus against the Sun, and great summer under the dome.

Thomas Jefferson HS Planetarium
Richmond, VA

Leslie Bochenski reports: It's been a busy season, with planet programs for 9th grade classes, and moon phases for grade 3. My biggest problem lately has been a lot of last minute cancellations. Teachers are cancelling less than one week before their scheduled trip, usually due to a conflict with standardized testing, or because they did not submit the paperwork to take a field trip. I try not to schedule programs during testing periods, but each school has different test dates. I've been rescheduling the cancelled programs, but now April & May are so full that I won't have time to breathe! Does anyone else experience so many cancellations? If so, do you try to reschedule all the programs? It's driving me nuts!!

The Richmond Astronomical Society and the Science Museum of Virginia are hosting a day of special events on National Astronomy Day, Saturday, April 28. One great addition to our usual line-up is a new feature-length film, "The City Dark." It's an award-winning documentary produced by Ian Cheney, who grew up in rural Maine and missed the night sky when he moved to New York City. The film looks at the detrimental effects of light pollution not just from the standpoint of astronomers, but also examines the environmental effects on migrating birds and hatching turtles, and public health effects such as increased accidents and a possible link to breast cancer in shift workers. I would recommend this film to any group trying to raise awareness of light pollution. It is affordable; $195 for one screening, $295 for multiple screenings; and comes on DVD format. You can find out more and apply for a screening at www.thecitydark.com.

Planetarium
Children's Museum of Virginia
Portsmouth

Dan Borick reports: We are loving our Scidome here at the planetarium. We use it almost every morning to reach specific lessons for all our district's third, fourth, fifth and sixth grade students. We have openings for our middle and high school kids as well. We are offering public shows at 1:00, 2:00, and 3:00pm on weekdays (Tues - Fri) and two shows on the weekends as well. Currently we are showing for the public:

1:00pm Zula Patrol - Down to Earth
2:00pm IBEX
3:00pm Zula Patrol - Down to Earth

Zula Patrol is our weekend show. Starting in April - Two Small Pieces of Glass will be shown at 2:00pm.

We are getting ready for vacation mode with extra shows the next two weeks. Show times will be 11am, 12, 1, and 3pm. Two shows of Zula and TSPG will run daily.

The Skies over Virginia (15 minute live sky show) will follow TSPG beginning Memorial Day weekend.

This summer I am attending the SPITZ institute for all 5 days and hope to bring all that I learn back here to develop shows.

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Out of this world *experiences....*

Out of this world *experiences....*

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