

# Southern Skies

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Journal of the Southeastern Planetarium Association

Summer 2010



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# President's Message

## Jon Elvert

Irene W Pennington Planetarium  
Baton Rouge, LA

As I write this message, our SEPA conference has just come to a close. I had been looking forward to this conference for several reasons and it exceeded all of my expectations. This conference had the right balance of paper presentations, vendor showcases under the dome, social networking, and opportunities to roam the exhibit hall. The conference food was even good. Kudos goes to Adam Thanz and his staff at the Bays Mountain Park & Planetarium, which was an ideal place to present a variety of

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

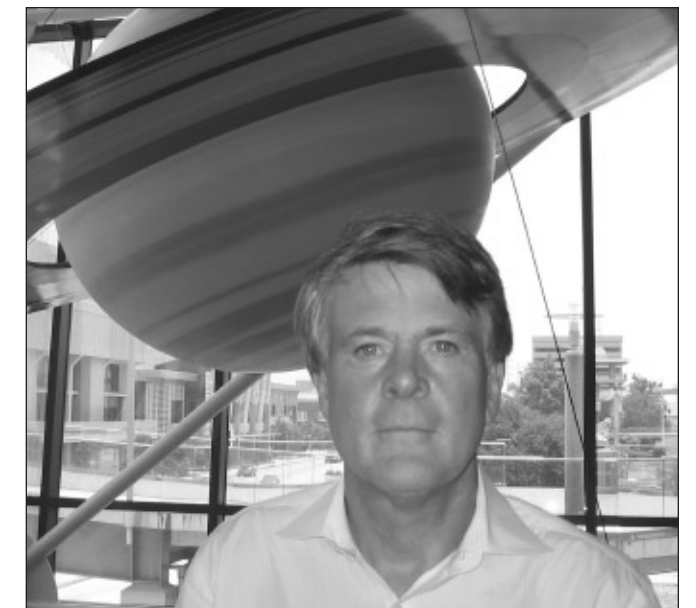
| Rates  | Dimensions                     |
|--------|--------------------------------|
| \$100. | Full-page 7" wide x 10" high   |
| \$50.  | Half-page 7" wide x 4.5" high  |
| \$25.  | Quarter-page 3" wide x 4" high |

These rates are per issue and in B&W copy. The entire back cover 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 Mickey Jo Sorrell). 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.

vendor shows, trailers, new hardware and softwares. I personally enjoyed the wildlife sanctuary and park-like setting where the planetarium is located. Other enjoyable highlights were picking through samples of tiny fossils and seeing actual fossil dig sites during our Gray Fossil site tour. The keynote speaker, Dava Sobel, is always a delight to hear, and the MeadowView Hotel was a perfect conference setting.

Aside from the daily conference sessions, SEPA membership and Officers made some important decisions. Our biennial elections were held and David Dundee from the Tellus Science Museum was elected President-elect. Since there were no other opponents, Patsy Wilson and John Hare were unanimously voted to Secretary/Treasurer and IPS Representative respectively. Although Kelly Herbst did not win the President-elect position, I sincerely hope she will consider running again in the future. Again, I want to thank all the Officers for their continued support and service to our association. Mickey Jo Sorrell is stepping down from her position at year's end after four years of doing a great job and improving upon this position. I also need to thank both Dave Maness on his management of the silent auction, as well as Dave Hostetter for being our parliamentarian during the business meetings. Our SEPA conference host for 2011, Steve Morgan, gave us an update on the Rollins Planetarium at

(Continued on page 22)



SEPA President Jon Elvert



# IPS Report

**John Hare**  
**ASH Enterprises**  
**Bradenton, FL**

I returned yesterday from the IPS conference and post-conference trips. The return journey took 35 hours from leaving the hotel in Aswan to arriving home in Bradenton! Exhausting as it was, the travels to and from Egypt were well worth it.

The conference was attended by 360 delegates from 44 countries. The total number of delegates exceeded the earlier conservative estimates of between 250 and 300, and the number of countries represented was an all-time record. The conference site was the new Library of Alexandria. It would be futile to attempt to describe the extent of the Library to any reasonable degree so I implore you to experience it thru their Website [www.bibalex.org](http://www.bibalex.org). It is truly a one-stop shopping source for knowledge and insight on a mind boggling number of topics.

Conference activities included the usual mix of papers, workshops, planetarium demos and vendor displays. Attendees will be furnished with a DVD containing the proceedings. The proceedings will also be available for purchase at the IPS Website, [www.ips.org](http://www.ips.org), Members receive a discounted price.

The IPS Council meeting took place over 2 full days immediately prior to the conference. Much of the meeting included the usual reviews of the minutes, and treasurer's report, officer's reports, and committee and affiliate reports. Three primary items of interest included a report by Jon Elvert regarding the 2012 IPS conference, site invitations for the 2014 conference, and the slate of candidates for the upcoming election. Summaries of those items appear below.

## *2012 IPS Conference*

Jon Elvert reported on the 2012 conference to be held in Baton Rouge, July 22-26. The official conference Website is [www.ips2012.com](http://www.ips2012.com). Additional information is, and/or will be available online and in various publications.

*(Continued on page 22)*

# Editor's Message

**James Sullivan**  
**Buehler Planetarium & Observatory**  
**Davie, FL**

SEPA 2010 was a wonderful conference! It was good to see everyone there, even though there were some regulars who were missed. If you didn't make it to the conference, you really missed out. Let's all start making plans now for next year.

Remember, SEPA members can apply for the funding raised by the silent auctions to use for the conference. See the website for details.

Thanks to everyone who contributed to the journal. This is a nice full issue.

We always appreciate getting pictures to use, and you've been doing great in sending them in. A word of caution - please send along the image files as

attachments. If you only send the images embedded in a document, it is difficult to work with them and the resolution is never as good.

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.



## 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: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SEPA Membership Form

Please send your check to SEPA, c/o Mickey Jo Sorrell, Morehead Planetarium & Science Center, CB#3480 UNC-CH, Chapel Hill, NC 27599.

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

\_\_\_\_ Two Years, \$40

Name \_\_\_\_\_

Organization \_\_\_\_\_

Planetarium \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State / Zip Code \_\_\_\_\_

Voice Phone \_\_\_\_\_

Fax Phone \_\_\_\_\_

Email Address \_\_\_\_\_

Staff Position \_\_\_\_\_

IPS Member? Yes \_\_\_\_\_ No \_\_\_\_\_

Contribution to Scholarship Award Account: \$ \_\_\_\_\_

# Small Talk

**Elizabeth Wasiluk**  
**Berkeley County Planetarium**  
**Hedgesville, WV**

Hi gang, I truly missed all of you at the SEPA meeting with Adam and crew at Bays Mountain in Tennessee and am sure you all had a great time and enjoyed your time together. I will be looking for your stories about the meeting in this issue.

I was finishing up school here, as we did not get out until June 9, 2010. I figured I could go for the last couple of days, but didn't feel it was worth driving five hours there for only two days. Maybe some of you decided to go to the International Planetarium Society meeting in Alexandria and will be posting some information about your trip there. I am looking forward to seeing pyramids and Sphinx photos and camel rides.

The end of May, I took the students who had been participating in the year long pulsar search team to West Virginia University to participate in our yearly Capstone event. Students got an all expense trip to the event if they had analyzed at least 50 pointings of data. A pointing consists of at least thirty graphs of radio data gathered by the Robert C. Byrd Radio Telescope located at the National Radio Astronomy Observatory in Green Bank, WV. The middle and high school students have searched the data to



find evidence of pulsar signals. They were trained to interpret the data and then took two tests to see if they could correctly identify a pulsar when it shows up in the data. They also learn to search a database of known pulsars to see if it has been previously discovered.

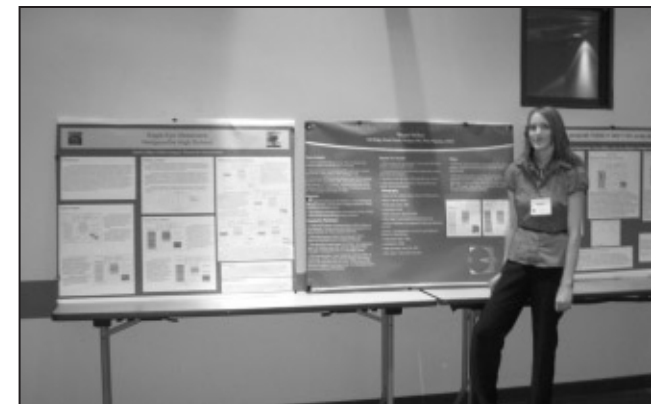
As a review of your basic astronomy, a pulsar is a neutron star that rotates very rapidly and sends off signals that can be detected by earth based radio telescopes. This project evolved into a student science program when the huge Robert C. Byrd telescope (the largest steerable radio telescope in the world) was set up on blocks and could only point up and down in altitude. The pulsar astronomers said, "No problem, we can still use the telescope by pointing it to a place in the sky and gathering signals from that area of the sky or pointing as the Earth rotates" Thus they gathered over 20 terabytes of data and wrote a National Science Foundation grant to establish this program so that middle and high school students can sift through the data and make discoveries. The grant is for three years, and after reading about the program in Sky and Telescope magazine, I thought this was a great way to get students involved in a "citizen science" program.

I started out with one student who accompanied me to Green Bank and learned to be a "team leader" in the project. In the 2008-2009 I had six students involved in the program and three students went to West Virginia University to present a poster paper at the end of the year.

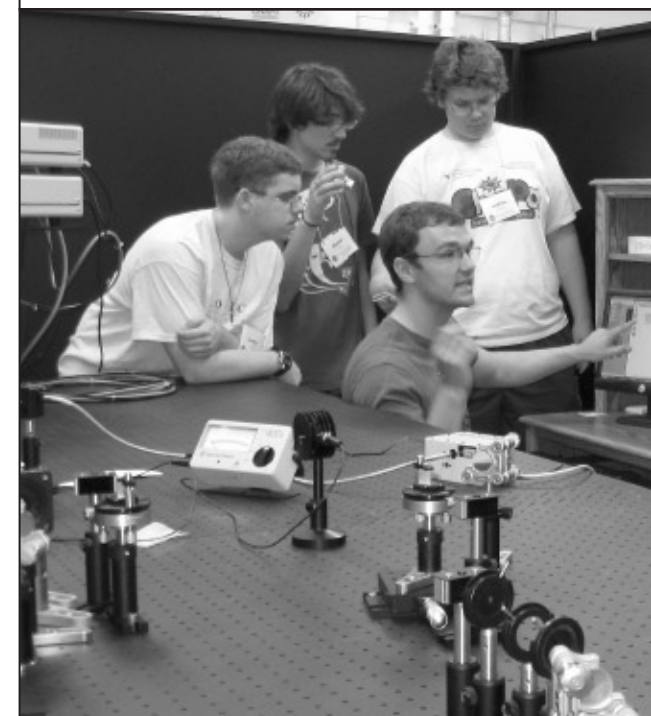
This year I had over fourteen students involved and the students entered and won two data analysis marathons which were competitions where students from all the teams saw how many data posts they could do in a fixed amount of time, such as a weekend or week. They won book bags and tee shirts and got certificates for their efforts. After students participate for one year, students can get up to 6 college credits for participation in the program from both West Virginia University and the University of Virginia. There are also a series of on-line lectures where students can get the latest information on topics such as stellar evolution and gravitational waves and can interact with the astronomers.

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*Small Talk (Continued from page 6)*



*Megan poses by our three winning poster papers*



*Students Larry, Josh and David check out some computer program to measure laser strengths*

*April Liska, our team leader, gets interviewed by the film crew for the documentary being made for the program*



At the end of year event at West Virginia University, I had seven students do three poster papers and six students went to present their poster papers in person. Of the many schools there, my students came in first in the poster paper competition. My team leader and I were recognized for our contributions to the program. There was also a film team there to make a documentary on the program and filmed interviews with my students.

So far there are two students from two different schools in West Virginia who made discoveries in the program. One was a new pulsar and the other was a rotating radio transient or RRAT which appears to be an intermediate object between a pulsar and neutron star that seems to send out sporadic radio signals. We still do not know why. The student that discovered the RRAT got to go to The White House star party held last October with the president and his family.

If you want to learn more about this program, you can check out our website at <http://pulsarsearchcollaboratory.com> Recently the Astronomy Education Review ran a description of the program. To read the article, go here: <http://dx.doi.org/10.3847/AER2010004>

I do worry that doing this work with pulsar search takes precious time away from the planetarium, but I do enjoy it and I think it gets students really involved. To involve the planetarium, we downloaded star finders from the Parkes Radio Telescope and attempted to see where in the sky the pulsars were located. (Go here to get a template of the star finder: <http://www.handsonuniverse.org/activities/unclear/ParkesStarWheel.pdf>. Be forewarned however, that the star wheel is from the Parkes Radio Telescope and is for the Southern Sky. (All the more challenging.) I did see students that I could not reach through my regular astronomy class, really striving to work on the database and interacting with the scientists and showing confidence talking with the film crew and scientists about their involvement in the program. Students learned a wealth about doing research and presenting it to the public, working with a database, using the internet, writing and presenting a scientific paper, taking on-line classes and doing teleconferencing. These are all skills that students can use with the "21st Century

*(Continued on page 8)*





*Donovan checks out the view a scientist shows him through an electron microscope*



*Larry, April, a middle school student from Il. and another W. Va. H. S. student demonstrate a gravity well around a massive object in space*

*To get around students crammed into West Virginia University's Personal Rapid Transit*



Learning” initiative that is bantered about a great deal in high schools today. Often astronomy goes by the wayside as not part of the state testing or science that is being taught in high school, and if it is, it is often considered an unnecessary frill. Now I can directly relate these “21st Century skills” to astronomy. Plus, I get students to learn stuff and not ask, “Why are we learning this?” since they see how this relates to the project as a whole. I guess there is much to “project based learning” that is being used to teach students necessary skills they need to survive in the 21st century.

Other good stuff to talk about is comet McNaught in the sky. Have you seen it yet? People tell me it is easy to see with binoculars in the morning sky. I will attach a photo taken by Conrad Jung of Chabot Observatory and Science Center in Oakland California.



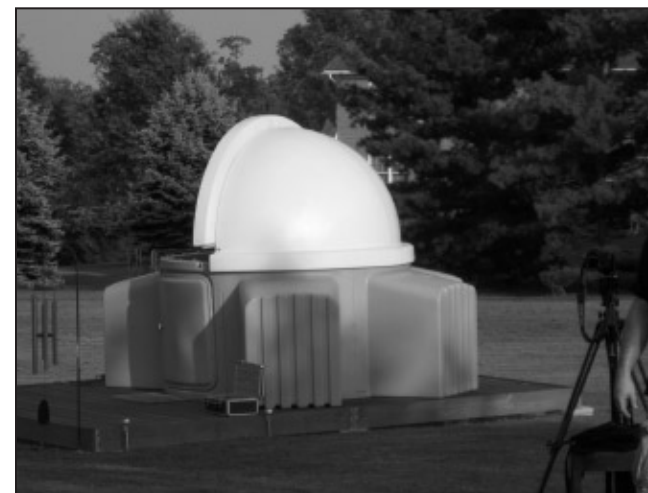
Summer is a time to go out and do some backyard astronomy, and I did just that with the moon and Venus in my own backyard, as well as at the home of Don Williams who lives near Frederick, MD and graciously volunteered his home and backyard “sky shed” observatory for a Tri-State Astronomers “Grillin’ and Gazin’”. Those G & G’s are a great astronomy club summer tradition. Go here for details: <http://www.tristateastronomers.org/> however, I would not advise you to turn your telescope into a grill as seen in the illustration.

Summer also brings a break for me from the planetarium and school and I hope to attend a teacher workshop on astrobiology at the University of Hawaii at the end of June. There will be a special

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*A typical “Grillin’ and Gazin’” scene*



*Don Williams’ skypod*



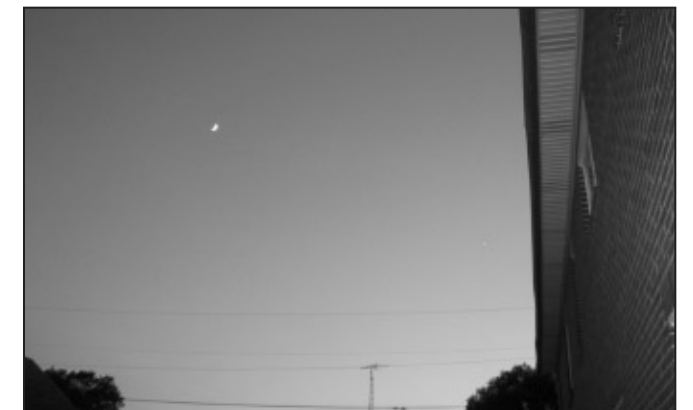
*Inside the sky pod*



*Inside the sky pod*

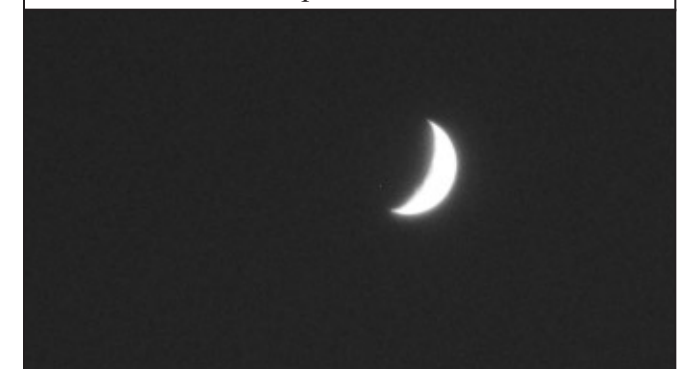
trip to the Mauna Kea Observatory and the Volcano National Park, which I am really looking forward to seeing. At the end of July, there is a trip to Penn State to take a teacher workshop on telescopes which should tie into the Mauna Kea Trip perfectly.

Whether you get a summer break or not, drop a line and let me know what is happening in your small planetarium, however you define the term.



*The Moon and Venus outside my apartment*

*Close up on the Moon*





# SEPA 2010 - A Howling Good Time!

**Adam Thanz**  
**Bays Mountain Planetarium**  
**Kingsport, TN**

The SEPA 2010 conference has come and gone. We've rolled up the banners and put away the confetti. There's a desk full of files to process and accounts to finalize. There's also a warm gathering of memories and an enhanced appreciation for the art of storytelling. One of many goals for this conference was to promote and teach storytelling skills. I hope you have been able to take advantage of these opportunities.

We have heard from many of you sharing your kind words of our hospitality. It was our pleasure and we thank you all for visiting us and sharing some time with us in East Tennessee. If you are ever in the area, you are most welcome to visit us. Just give us a ring.

I want to state early in this article a great THANK YOU to all the vendors who help sponsor this conference. Without them, the cost of registration would be much more expensive and the opportunity for planetarians to see the latest in technology and content would be lost.

We were a little concerned about the number of delegates as we were approaching the late registration. Alas, our original estimates were correct. I figured we would have 80-120 delegates. We had 116 full delegates and twelve guests. Three of the full delegates were students who took advantage of the half price registration. Some were at the last minute, but all were welcome. For those that did not attend, registrants received a natural cotton conference bag with original in-house artwork of Orion. Inside were the regular goodies like the conference program, DVDs, brochures, etc. We added some other

items like a very nice padfolio from Astro-Tec, a Nalgene water bottle (to promote drinking water and not using endless bottled waters), a glow-in-the-dark can coozie from Sky-Skan, and a pint pub glass with the Woodchuck logo from the Green Mountain Cidery! To add to the feeding frenzy, we added a snack bag with all sorts of treats. Many of those treats were local in origin and had a story explained within the conference program. Have you eaten all of the soft mint pillows?

For those that were in the area early, fifteen were in attendance at our log home down in the Cherokee National Forest area. A highlight was carting up the Spitz A3-P to the top level of our turret. Our future planetarium.



*Moving the A3-P to the planetarium at our home. (photo by Robin Byrne)*

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SEPA 2010 (Continued from page 10)



*Those brave enough to trek up the mountain to our home. (photo by Adam Thanz)*



*Carole Holmberg solar viewing. (photo by Christi Whitworth)*

The conference itself went very well. After the welcoming reception on Tuesday evening, we had lots of cool planetarium content to show and a dome crawl.

Wednesday included the storytelling workshop by Lynn Moroney, the SEPA pre-business meeting, delegate presentations, and activities at Bays Mountain in the evening. The vendor hall was open whenever there were activities at the MeadowView Conference Center. It might have been a mistake to include the wolf program at Bays Mountain as it initiated the vocalization of choice amongst the delegates. You know how those SEPA folks are. Whenever



*Grey wolf at BMP. (photo by Christi Whitworth)*



*Senior Naturalist at BMP, Fred Hilton, giving a wolf program. (photo by Adam Thanz)*

there was an opportunity for self-expression, they were howling like the wolves! I'm just glad they weren't emulating the ducks.... After the BBQ dinner, Chuck Brodsky provided an incredible evening of music. I'm glad the delegates enjoyed him. Lynn Moroney followed with some great Native-American storytelling under our planetarium sky. That was followed with a very good Constellation Shoot-Out led by Jon Bell. I was impressed with the sky knowledge of the contestants. I have noticed the increasing skill levels these past few years.

Thursday was a lot of fun. The morning was filled with impressive demos in the planetarium. I was happy that all the equipment fit in our theater and still didn't block aisles or seats. After lunch, we left the Park for the Gray Fossil Site. It was great to see the real science behind the site. We then had

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our snack of milk and cookies and left for Rocky Mount. After a short orientation, delegates were let loose to explore the first-person interpretation of Tennessee's eighteenth century. Some twenty-first century conjuring allowed us to take a group photo before the yummy dinner. The final activity at Rocky Mount was storyteller Heather Forest. I



Sifting through debris to find fossils!  
(photo by Robin Byrne)



Sifting through debris to find fossils from the actual site!  
(photo by Christi Whitworth)



Rocky Mount Historical Site.  
(photo by Christi Whitworth)

think she really impressed us all with her control of her words, voice, singing, body, hands, and guitar playing of songs and sound effects. A true surprise and delight.



Lynn Moroney giving a storytelling workshop.  
(photo by Adam Thanz)



Vendors galore! (photo by Christi Whitworth)



Adam Thanz summoning the celestial sounds of the aether.  
(photo by Alex Griswold)

Friday included vendor presentations, the SEPA Business Meeting, workshops, and the banquet with keynote speaker. The workshops were quite interesting and I hope you were able to attend many of them. I think Jon Bell's theremin workshop garnered some strange looks from folks at MeadowView that were not part of our conference. Strange sounds indeed! I participated. Before the banquet, there was the final chance to bid on the silent auction that supports the Scholarship Fund. Over \$700 were raised! For those that did not attend, there were some small surprises during the banquet. One was a small stuffed animal for each delegate. They were regional critters and judging by the way each person was holding theirs, they were a hit. The other was two chocolate bars (milk & dark) with the Zeiss ZKP-4 instrument in relief from Carl Zeiss. The final formal event was our keynote speaker, Dava Sobel. I think everyone enjoyed her insights into Galileo's scientific and personal life. The last Hospitality Suite commenced soon after the banquet and went into the wee hours. The great woodchuck would be proud.



Paul Campbell Fellowship Awardee Bob Hayward (c). SEPA President Jon Elvert (l) and fellow PARI-ite Christi Whitworth.

Saturday included a special breakfast and door prize drawings. Remember the howling? The prize desired by most were the four stuffed wolves that howled when squeezed. We're all kids at heart.

There are many people to thank for making the conference a success and I hope I don't forget anyone.

Thanks go to:  
Jason Dorfman - for taking care of the technical

needs and for many tasks behind the scenes. Heather Fries - for all the public shows during the week before and during the conference. Bays Mountain Staff - for their support and assistance during the event. City of Kingsport - for their financial and professional support. Drew Gilmore - for keeping the website up-to-date. Dave Maness - for taking care of the silent auction. Delegates and Vendors - for providing sponsorship, presentations, demos, and workshops. Robin Byrne - for taking charge of the check-in table and the years of support. I'm so lucky to have such an understanding wife.



Door prizes galore! (photo by Adam Thanz)



Dava Sobel at the Saturday afternoon presentation at Northeast State Community College.  
(photo by Adam Thanz)



# SEPA

## SEPA Business Meeting June 11, 2010 Kingsport, TN Minutes by Mickey Jo Sorrell

President Jon Elvert opened the meeting. Secretary/Treasurer Mickey Jo Sorrell established that a quorum was present. Jon introduced the SEPA Council, and recognized Journal Editor James Sullivan, Webmaster Drew Gilmore, Historian Leslie Bochenski, and Parliamentarian Dave Hostetter. A hearty thanks was given to host Adam Thanz and his Bays Mountain staff and to the vendors who supported the conference, including all breaks and transportation.

### Old Business:

The minutes of the 2009 Business Meeting were distributed and approved. (Hayward/Dundee) The Treasurer's Report (2009) was distributed and approved. (Groce/Fleenor) Copies of *The Planets* and the *Let There Be Night* DVDs are still available from Mickey. A suggestion was made that we review the SEPA membership year with an eye to matching financial and programmatic calendars. The Secretary/Treasurer responded that such a consideration is underway and might be brought to the membership in the future.

John Hare reported on the upcoming IPS conference in Egypt. The IPS Council will hear bids for 2014 conference from Toulouse, France, Athens, Greece, and Rio de Janeiro. More information will be published in the *Southern Skies* IPS column, with a vote at the council meeting next year. John reported that a committee has been formed to recognize deceased planetarians. He encouraged all SEPA members to join IPS and to respond to the IPS online survey (by June 15).

Journal Editor James Sullivan reported that all state coordinator positions have been filled, and thanked everyone for sending articles and columns. He also thanked the advertisers and reminded everyone of the quarterly deadline.

Historian Leslie Bochenski reported that she has been going through boxes of SEPA archives - transcribing and converting documents to pdfs. She requested that anyone with photos or historic docu-

ments send them to her. Her email address is on the SEPA website. (lbochens@richmond.k12.va.us)

Webmaster Drew Gilmore thanked Adam Thanz for his assistance getting all the conference information on the website. Drew has been scanning journals from the early 80s for web access. John Hare and Leslie Bochenski offered journals from the 70s. Drew asked for suggestions and contributions for anything anyone would like to see on the SEPA website.

President-elect April Whitt reported on the SEPA scholarship. There were no applications this year, despite repeated advertising. April asked if it would have been more useful if more money had been offered or if the requirement for a presentation stopped anyone from applying. These questions generated a lively discussion. It was suggested that members might be "too proud" to apply or might have thought the scholarship was for the "truly impoverished" or just for students. Others questioned or suggested further advertising, a name change (*fellowship? grant? stipend? funding opportunities? underwriting?*), a follow-up for first time attendees, or increasing the amount to include part of travel and lodging. The question was raised why there were not more students in attendance. Adam Thanz replied that he offered a student rate and three students applied.

Steve Morgan reported (with PowerPoint, handouts, and goodie bags) on the 2011 SEPA Conference at Young Harris College in the mountains of north-west Georgia, to be held June 21 - 25, 2011, with the theme "Creating Mountaintop Experiences."

Jon Elvert offered an update on planning for the 2012 conference. The IPS conference will be held in Baton Rouge, Sunday-Thursday, July 22-26. The SEPA membership was surveyed in late 2009 for preferences for combining conferences or having a separate SEPA conference. Response was low, but most respondents preferred a combined conference. There are now two options to consider:

- 1) Before - A SEPA conference starting Saturday, July 21, with a reception, a pre-business meeting on Sunday morning, and a business meeting during the Thursday regional meetings, with IPS beginning Sunday night.
- 2) During IPS - A SEPA reception and pre-business meeting on Tuesday evening and a business meeting on Thursday during regional meeting time.

(Continued on page 15)

SEPA (Continued from page 14)

During the ensuing discussion an offer was made that, thanks to the vendors, the first option would have no additional charges. The first option would also allow SEPA members to come for just one day and leave, although all SEPA members were encouraged to take advantage of this opportunity to attend an IPS meeting. IPS registration will be \$400, with hotel rooms at \$149, \$119, and \$89.

SEPA members would not need to be IPS members to attend Saturday and Sunday. The first option might also allow for a sense of "SEPA identity" that had been lost with a previous combined meeting. 2012 will be an election year, therefore it will be critical to have a quorum at the business meeting on Thursday night. A straw poll strongly supported the first option/before (24, 5). The final decision will rest with the council and will be announced at Friday night's banquet.

Jon Elvert reported that council has prepared guidelines to assist in hosting a SEPA conference. The document will be available on the SEPA website within a few weeks.

### Elections:

Jon Elvert thanked Adam Thanz and the elections committee (Dave Hostetter, Dave Maness) for their efforts in this year's election. Candidates were:  
President-elect - Kelly Herbst, Dave Dundee  
Secretary/Treasurer - Patsy Wilson  
IPS Representative - John Hare

The balloting process was explained and ballots were distributed. Christi Whitworth was nominated for President-elect from the floor. John Hare was elected by acclamation (moved by McCall/Bell). Patsy Wilson was elected by acclamation (moved by Groce/Bochenski). Dave Dundee was elected President-elect by secret ballot.

### Unfinished Business:

Dave Maness reminded everyone that the auction would continue until the end of the cocktail hour before the banquet begins.

### New Business:

Kris McCall reported that there had been many requests for the Uranus show (from the Mini Black Holes showcase) and the program would be made available for a contribution to the community foundation for flood

relief. Contact Kris or Drew for further information.

The meeting was adjourned (Elvert/Sorrell).

---

## 2009 Year End Report for the Southeastern Planetarium Association Submitted by Mickey Jo Sorrell June 12, 2010

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

Balances as of 12/31/09:

|             |                  |
|-------------|------------------|
| Operating   | 2,869.26         |
| Savings     | 24,448.15        |
| Scholarship | <u>3,060.58</u>  |
| Total       | <b>30,404.99</b> |

### Operating Account

|                                  |                 |
|----------------------------------|-----------------|
| Balance (01/1/09)                | 1764.02         |
| Income:                          |                 |
| Memberships                      | 3990.00         |
| Journal Ads                      | 1845.00         |
| "The Planets"                    | 150.00          |
| Transferred from savings 2000.00 |                 |
| Total Income                     | <u>7,985.00</u> |
| Total credits                    | <b>9,749.02</b> |

### Expenses paid:

|                           |                   |
|---------------------------|-------------------|
| Journal (three issues)    | 1487.256          |
| Copying/Mailing/Office    | 159.58            |
| Plaques                   | 195.01            |
| '10 Conference seed money | 3,750.00          |
| Let There Be Night DVDs   | 379.25            |
| 2008 Conference           | 1,295.43          |
| John Hare/IPS Travel      | 881.67            |
| Total Debits              | <u>(6,852.76)</u> |
| Balance                   | <b>2,896.26</b>   |

### Savings Account (1/1/10)

|                         |                   |
|-------------------------|-------------------|
| Interest earned         | 198.69            |
| Transferred to Checking | <u>(2,000.00)</u> |
| Balance                 | <b>24,488.15</b>  |

### Scholarship Account (1/1/09)

|           |                 |
|-----------|-----------------|
| Auction   | 752.00          |
| Donations | <u>430.00</u>   |
| Balance   | <b>3,060.58</b> |



# Archeo- astronomy

## *Living by the Moon: Ancient Traditions of Lunar Observation in Agriculture*

### *Part II: Real (?) Lunar Affects in Agriculture and How Planetarians Can Approach the Ques- tion*

**Woodrow W. Grizzle III**  
Jonesville, VA

*As many of you noticed, my article was conspicuously absent from last quarter's journal edition. Thanks go out to all who asked me about the missing article at this year's conference in Kingsport; it lets me know that you are reading! The truth is that I missed last quarter because of concerns over the severely declining health of a dear friend, who, just before conference, perished to cancer's indiscriminate hand. She left behind a loving husband,*

*a daughter and son, a grandson, a second son in spirit (me), and a prodigious legacy of optimism that lives in the hearts and deeds of her family and many friends. Many are not fortunate, as I am, to have two loving parents, and yet fewer still are blessed with an extra parent, yet, that is what Sandy was to me. Though her body is gone from this place, her mind still lives within those who know it best. It is with great humility that I dedicate this article to her honor and memory.*

*For Sandy...*



*Samuel Palmer. The Harvest Moon. Drawing for "A Pastoral Scene." c. 1831-2.*

Last time, we discussed the old system of lunar astrology that farmers of old developed to improve success in cultivation and animal husbandry. We discovered that both the Moon's phase and its position among the stars must be considered in agricultural planning. Amid the scientifically understood affects the Moon has on Earth, such as the ocean tides, there lies this possibility that the Moon affects agricultural practices, too. With scientific research being scant in the area, there remains much to be explained in regard to these supposed effects of the Moon.

Before we delve deeper, let us step back and ask this question: what started this whole lunar agriculture thing in the first place? Simply put, it was humankind's realization that the Moon's periodic motion and phasing provided the basis for time-

*(Continued on page 17)*

*Archeoastronomy (Continued from page 16)*

keeping beyond the day/night cycle. When humans realized this periodicity, they were suddenly able to measure the amount of time between the seasons and, from that, predict the best times to till the earth and sow and harvest crops. Having a calendar, even one as flawed as a lunar calendar, is essential for successful farming, and the Moon provides an easy to read calendar that has served humankind for at least 10,000 years. In addition to the phase cycle, early humans likely noticed the Moon's position relative to the starry background and, over years of observation, divined significance to the Moon's celestial position as it relates to growing crops and caring for livestock. Much as the precession of the equinoxes has rendered astrological tables askew in today's sky, the original significance of the Moon's position among the stars, based upon ancient measurements, may today be unclear.

There are basically two ways in which the Moon can affect biological processes on Earth: through its gravity and through reflected sunlight. Research shows that the latter is more likely to have an effect on plants, while the former has no clear relationship to agricultural factors such as animal behavior or crop germination and development. The amount of reflected sunlight varies with both the Moon's phase and its orbit; the more of the Moon's surface that is illuminated, the more reflected sunlight reaches Earth, and when the Moon is nearer Earth in its elliptical orbit, at perigee, more reflected sunlight reaches Earth. So, for one of the conditions in lunar agriculture, the Moon's phase, there is a real possibility that plants could be affected by changes in overnight light levels due to their reliance on photosynthesis. There is a problem for the other component of lunar agriculture, the lunar house, or the Moon's position among the background stars, in that there is no correlation between the Moon's phase and its position within any specific lunar house. In other words, the Moon is not always full when it is in the house of Aquarius, nor is it always new when it is in the house of Aries, for example. This problem is scientifically irresolvable, therefore, the focus on the Moon question should be placed upon the amount of light available during nighttime hours and any effect that additional light could have on plant growth.

Unfortunately, most fields and gardens are far from

laboratory conditions, and meteorological factors, such as cloud cover, affect the amount of light reaching garden soil. Apart from research done in home gardens, a few agricultural scientists have tackled the Moon question, and some have suggested that there may be indirect effects on practicing lunar agriculture.

Researchers at the Agricultural Research Service's National Tilth Laboratory in Ames, Iowa reported that another tangential relationship between the Moon and crop growth has to do with germination rates of certain weed species and how those rates are affected by the amount of available light. In a 1995 study conducted at Tilth Laboratory, Douglas Buhler and Keith Kohler reported findings that indicate that soil tillage done in total darkness reduces the overall germination rate of certain weed varieties. Their research suggests that, to reap the benefits of fewer weeds, a farmer would have to plow the field in the middle of a New Moon night. Even farmers who follow Moon planting schedules do not plough in the middle of the night, so any benefits of Buhler and Kohler's research likely do not correlate to any perceived benefit of practicing traditional lunar agricultural practices.

Michael Jawson, a researcher at the U.S. Department of Agriculture's Agricultural Systems Laboratory in Beltsville, Maryland said that any observed benefits of lunar gardening are most likely derived from the farmer's attentive care. "The indirect effect could be one simply of overall better management because of being careful to do good practices at more optimum times in relation to plant growth cycles," Jawson said. Jawson's research supports the hypothesis that structured agriculture, supported by a lunar calendar or other means, consistently produces higher yields than less structured methods.

Despite the lack of scientific proof that the Moon affects crops on Earth, people continue to "Moon garden," with ever-growing numbers of gardeners taking a new look at an old tradition. Much of the resurgence in lunar gardening can be attributed to recent movements toward organic and locally grown produce, parts of a general trend toward "back to the earth" living. A renewed interest in astrology as a whole may also contribute to increases in the

*(Continued on page 19)*



# Bookends

Robin Byrne  
Bays Mountain Planetarium  
Kingsport, TN

## *Miss Leavitt's Stars: The Untold Story of the Woman Who Discovered How to Measure the Universe* by George Johnson

It's no secret that I am interested in the biographical histories of astronomers. So, when I saw a book titled "Miss Leavitt's Stars: The Untold Story of the Woman Who Discovered How to Measure the Universe," I eagerly snatched it up. However, as the author, George Johnson, reveals at the start of the book, there are very few documents related to Leavitt, which makes piecing together her history much more difficult. How Johnson dealt with this obstacle was to intertwine the little known information about Leavitt with the broader story of how techniques for measuring astronomical distances were discovered and built upon.

The story of Leavitt's life begins with census data about who lived in the house during her childhood and the financial status of the family. It quickly moves on to Leavitt taking a job at the Harvard Observatory, working for Edward Pickering as one of his "computers." Most of what is known about Leavitt from this time on is based upon a scant few pieces of correspondence, plus articles Leavitt published in astronomical journals. Leavitt is best known for her discovery of the relationship between the period of variability and the luminosity of Cepheid variable stars. However, that was only a minor research project on which she had worked. Pickering decided what projects each of the women in his employ would work upon. He assigned Leavitt the task of establishing photographic magnitudes of stars near Polaris, so that they could then be used to measure the magnitudes of stars photographed in other parts of the sky. An important job, to be sure, and one of Pickering's pet projects, but not one that afforded Leavitt the opportunity for research.



After her discovery of the period-luminosity relationship using Cepheids in the Large Magellanic Cloud, other astronomers sent requests for her to expand the project to Cepheid variables elsewhere. In particular, there was the question of whether the same relationship held for "fast" Cepheids that worked for "slow" Cepheids (it would later be found that there was a difference). However, Pickering's photographic magnitude project took priority.

Another hindrance to Leavitt's ability to perform research were setbacks due to caring for family and her own health problems. From early on, Leavitt had poor health, including losing most of her hearing due to illness. Meanwhile, the correspondence that has been preserved indicate that much of Leavitt's time was devoted to helping relatives during times of illness and after the death of a loved one. These alone led to extended absences from her work. Those obligations were exasperated due to Leavitt frequently becoming ill while away. Letters from Pickering indicate an increasing level of frustration at the amount of time she was absent from the Observatory. He even offered to send photographic plates for Leavitt to work on while she convalesced, which, during at least one absence, he did. Continuing poor health, in this case cancer, would ultimately take Leavitt's life while she was only in her early fifties.

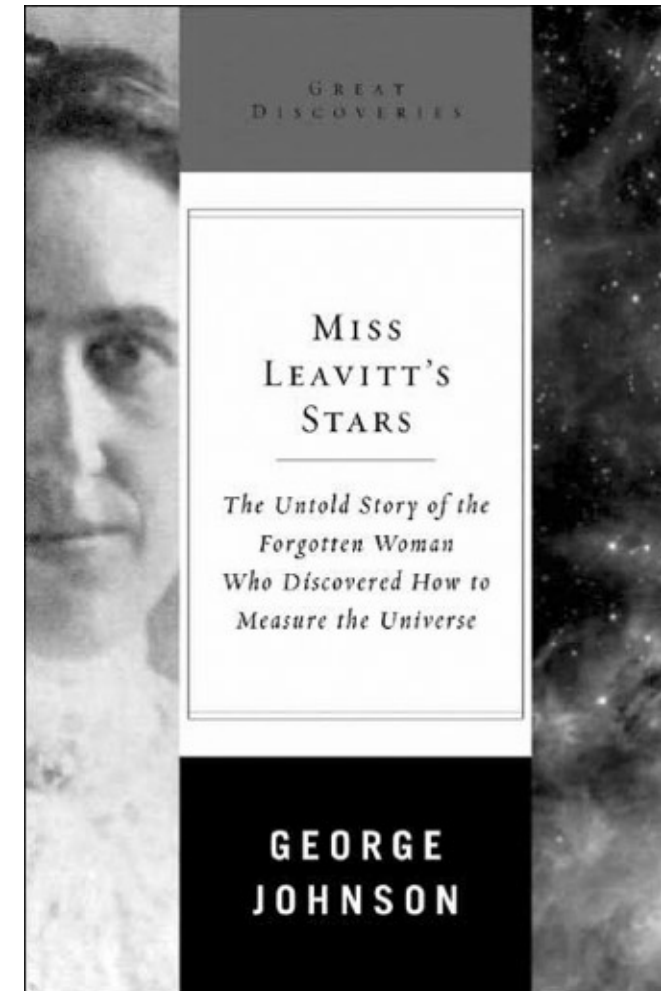
To flesh out the story, Johnson also tells about the quest to measure astronomical distances. Starting with parallax, and ultimately ending with Hubble's Law, he shows how Leavitt's period-luminosity relationship would hold the key to many discoveries. The work that led to the development of the Hertzsprung-Russell diagram was based, partly, on using Cepheids to gauge distances, leading to the establishment of the luminosities of the stars being studied. Harlow Shapley used Cepheids to measure the distances to

(Continued on page 19)

Bookends (Continued from page 18)

globular clusters, which then allowed him to determine the size of the Milky Way and our location in it. And, lastly, Edwin Hubble used Cepheids to determine the distances to other galaxies, leading to the discovery of the relationship between a galaxy's distance and how fast it is receding from us. This finding brought with it the conclusion that the universe is expanding and began with a Big Bang.

What started as a small observation that the longer a Cepheid took to vary in brightness, the higher its luminosity, ultimately helped us to understand how our universe came into being. George Johnson's book gives us a glimpse at the life of the woman responsible for that "small" observation. However, more importantly, he puts its importance into perspective, by leading us through all of the breakthroughs made as a result of Miss Leavitt's insights.



*Miss Leavitt's Stars: The Untold Story of the Woman Who Discovered How to Measure the Universe* by George Johnson; Atlas Books, 2005

Archeoastronomy (Continued from page 17)

number of practitioners of lunar agriculture.

As planetarians, we should be aware of these trends. We should also be prepared for questioning related to lunar agriculture, especially in rural areas, where provincial techniques are more common. It should not be concluded that these techniques are inherently wrong, for, as discussed, they do have some merit, rather the planetarian's role in this question is the same as in any other: to present available science and interpret it in a meaningful way. Just as the zodiac has significance apart from astrology, there is scientific significance to parts of lunar agriculture. People often relate better to new ideas when those ideas can be absorbed as a new ways of looking at old ideas, rather than as replacement newness that simply declares the old to be flat wrong and objectionable. It is then that common thought transforms into common understanding.

References:

Becker, Hank. Nightmare in Tilling Fields - A Horror for Weed Pests. Agricultural Research Magazine. United States Department of Agriculture, Agricultural Research Service. Washington, D.C. 1995.

Harris, R.J. RJ Harris' Moon Gardening. Really Useful Books. Plymouth, England, U.K. 2007.

Thomas, Robert B. The Old Farmer's Almanac, 2010. Volume 218. Yankee Publishing, Incorporated. Dublin, NH. 2009.

"Age-Old Moon Gardening Growing in Popularity" National Geographic News 21 December 2009. <[http://news.nationalgeographic.com/news/2003/07/0710\\_030710\\_moongarden\\_1.html](http://news.nationalgeographic.com/news/2003/07/0710_030710_moongarden_1.html)>.

Plinius Secundus, Gaius. Naturalis Historia. Books 12-19. trans. Rackham, Harris and D.E. Eicholz. Loeb Classical Library. Harvard University Press. Cambridge, MA.



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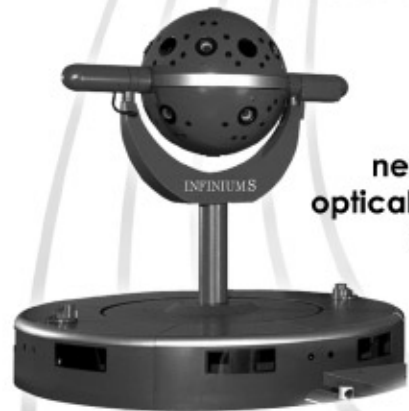
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**There are Stories in the Stars**



*President's Message (Continued from page 3)*

the Young Harris College in Young Harris, GA. Dates are: 21 - 25 June, so mark your calendars. The 2011 conference theme is *Creating Mountain-top Experiences*. More conference details will be posted on our web site and mentioned in this journal in coming months. And speaking of conferences, as I mentioned during our business meeting, I've written a How to Host a SEPA Conference document, with Officer's input, that is now posted on our web site. This document is intended to assist potential conference hosts on how to plan, organize, and implement a successful conference.

One of the more important items members discussed during our business meeting was our Scholarship Fund. Initially intended to offer partial financial assistance for attending SEPA conferences, this program was set up when Dave Maness was SEPA President and implemented when SEPA held its regional meeting during the IPS2002 conference in Wichita, KS. The Fund is supported by our conference auction revenues and member/vendor donations. During our conference business meeting, however, we heard that "Scholarship Fund" meant different things to different people and that some might have been "too proud" to request the assistance. There were several suggestions to change the name of "Fund" including *Professional Development Support Grant*, but other good titles were mentioned as well. April Whitt is collecting all the name change suggestions and will rework the guidelines for this program. Again, the purpose of this funding source is to financially assist members to attend our conferences, so we hope you use it. For other SEPA business meeting agenda items that were discussed, refer to the minutes and treasurer's report taken by Mickey Jo elsewhere in this journal.

During our conference banquet, SEPA's most prestigious award, the Paul Campbell Fellowship Award, was presented to Bob Hayward by April Whitt and David Dundee. Bob has been an educator/astronomer at the Pisgah Astronomical Research Institute in Rosman, NC and has made an impact on SEPA in many ways, so he's very deserving of this award. And from time to time, fellow SEPAians are granted emeritus status. This year, Jane Hastings and Michael Sandras were granted this status. Congratulations to Bob, Jane, and Mike.

I hope all of you had a restful summer and are geared up, or at least getting ready, for another school year. Please remember to continue providing updates on what's happening at your planetarium so that your state's contact person can submit it to our journal's *News From SEPA Region*.

*IPS Report (Continued from page 5)*

#### *2014 IPS Conference*

Three sites submitted formal invitations to host the 2014 conference:

Beijing, China  
Rio de Janeiro, Brazil  
Vancouver, Canada

Each site proposed a summer time frame. The site selection will be determined by vote of the IPS Council at the 2011 Council meeting. A detailed report of the invitations will be addressed in a future issue of *Southern Skies*.

#### *IPS Elections*

The following candidates accepted nominations for office. Elections will be held this fall and the winners will assume office January 1, 2011. Ballots will be furnished to all IPS members.

Secretary: Lee Ann Hennig  
Treasurer: Shawn Laatsch  
President Elect:  
Lars Broman, Falun, Sweden  
Alex Cherman, Rio de Janeiro, Brazil  
Thomas Kraupe, Hamburg, Germany  
Mark Rigby, Brisbane, Australia

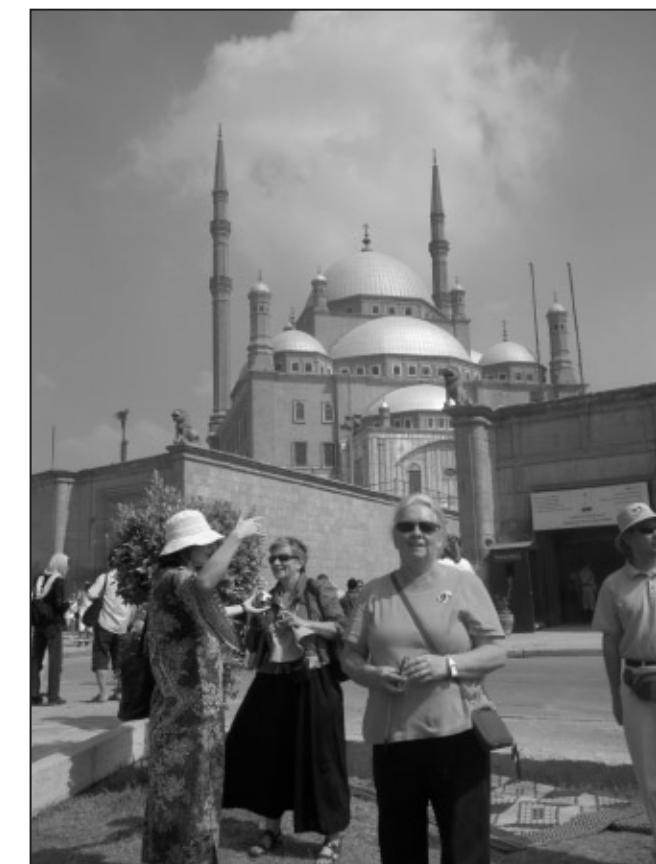
# IPS 2010

**John Hare**  
**ASH Enterprises**  
**Bradenton, FL**

## *The New Alexandria Library*



## *At Giza*





*Fun in Egypt with friends*



*Linda Hare and Sandro Gomes*

*IPS 2010 Gala Dinner in Egypt*



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# News From SEPA Region

will replace our cassette-playback system. The new system allows more reliable presentation of our slide-based shows and easier implementation of new slide shows. We have seven, slide-based shows that need to be encoded into our ECCS computer; I have already coded *Cosmic Catastrophes* an older show about the dangers in the Universe. *Cosmic Catastrophes* is still a good show and is not dated. I am now working on *Ring World*, a NASA show about the Cassini Mission to Saturn/Titan. Overall, we have had a successful semester and a new advertising campaign is starting to bring in more people for our public programs.

## ALABAMA

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



## FLORIDA

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



### Planetarium University of North Alabama

Mel Blake reports: UNA Planetarium has been busy doing our regular school visits. It seems they get more and more piled up to the early May period as schools don't want to do trips before the standardized tests are over. We continue to have increased visits from Scout troops. An exciting development is that the Continuing Education program came for an astronomy day camp program (the only science day camp in the program). After telling me about their lack of classroom space for astronomy, they are interested in expanding our partnership and possibly using the planetarium next summer. We have also been working with the Shoals Astronomy club to do Sidewalk Astronomy events at the Florence Public Library and the First Friday's monthly street festival. The Library has been really happy with the program and we are in conversations with the Muscle Shoals Library to do something similar. Recently we also did a solar-observing event for the Helen Keller Festival, supported by the Night Sky Network. On the technical side, we have gotten a digital-audio playback system from ECCS that

### 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 *In My Backyard*, *The Endless Horizon*, *Footsteps*, *Explorers of Mauna Kea* and *Skywatchers of Ancient Mexico*.

We continue to rotate shows on Wednesdays, and these shows include *The People*, *The Dawn of Astronomy*, *Astrology: Fact or Fiction*, *2061: Secrets of Mars*, *To Worlds Unknown* and *A Dozen Universes*.

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.

(Continued on page 27)

News From SEPA Region (Continued from page 26)

### Astronaut Memorial Planetarium and Observatory Brevard Community College Cocoa, FL

Mark Howard reports: The Astronaut Memorial Planetarium and Observatory in Cocoa, FL is pleased to have been the chosen venue for a promotional event in June for a new band from the UK.

*Monarchy* was recently signed by Mercury Records and the band was in Florida for a showcase event at our facility. Lighting and sound professionals from nearby Orlando were brought in to produce the one-time show which was purportedly *Monarchy's* first live performance outside the UK. *Monarchy* weaves space and astronomy themes into their music, so performing in a planetarium was a natural fit.



AMPO is also gearing up for the final shuttle launches with astronaut receptions scheduled later this fall.

Aside from a busy event schedule, this fall marks the opening of Sudekum Planetarium's show *Our Place In Space* as well as a new demo program showcasing the capabilities of AMPO's theater.

### Planetarium - Science Center Riverview High School Sarasota, FL

George Fleenor reports: The new Science Center is now complete and the staff is getting accustomed to their new equipment. As you may recall from the

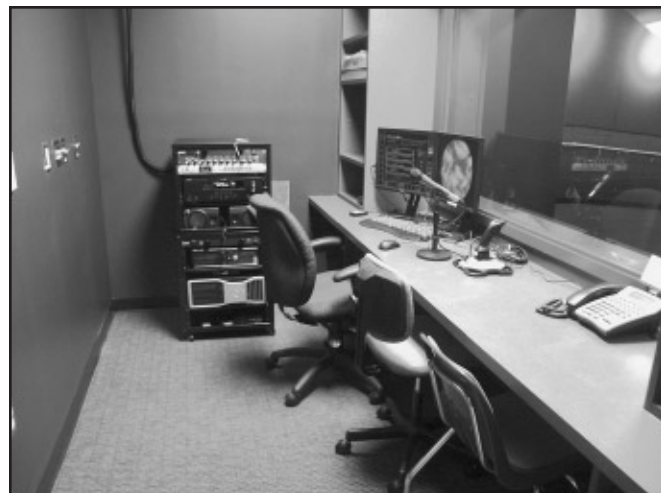
last journal, Riverview installed a Konica Minolta Mediaglobe II projector under an Astro Tech 40 foot, 5 degree tilted dome, with a 5.1 surround sound system and 114 seats. The new facility does not officially open until this fall but several soft openings have been occurring. The local astronomy club met there on July 14 and is also scheduled to host a public sidewalk astronomy event at the location on September 11.

Photos of the new facility provided by Phil Groce.



(Continued on page 28)





## GEORGIA

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



### Fernbank Science Center Planetarium Atlanta, GA

April Whitt reports: By the time you read this, Fernbank Science Center will have finished two weeks of summer Lockheed Aviation Camp, several weeks of NASA Science, Engineering, Mathematics and Aerospace Academy (SEMMAA), presented in-house productions of *Galaxy Gameshow* for families and *Meteorites: Stones from the Stars* for the general public, sweltered through Thursday and Friday evening observatory sessions (weather permitting), charted out school programs for grades K, 1, 2, 4 and 6, held scheduling sessions for teachers to choose their programs for the fall semester, produced a new program for kindergarten (*Here Comes the Sun*), and braved this year's budget cuts. SEPA in Kingsport and IPS in Alexandria, Egypt were highlights.

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

David Dundee reports: We really have been busy

this summer. We topped a 100,000 in the museum at the end of June and we are nearing 50,000 through the planetarium. Big Bird & Elmo have invaded the planetarium with "One World, One Sky" and has great audience response. "Extreme Planets," "Oasis in Space" and our live tour of the night sky continues. We hosted Rock Fest here at the beginning of June, (Gem & mineral dealers set up shop here for two days), and it was very hot and humid. But despite the heat we drew over 3,000 people that weekend. We are hiring four more educators in our department bringing our program staff to 22. Day-care & day campers continue to attend our special summer program some 3,600 have scheduled so far. This year's theme is color, every child makes and takes home a kaleidoscope. Comet McNaught was rather underwhelming never quite making naked eye and appeared as a green fuzz ball in our telescope.

## 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: After a disappointing spring school attendance, our summer morning shows have exceeded our attendance expectations, primarily due to an increase in visiting recreational and summer camp groups. Most of these campers are seeing *Space Park 360*, a relatively new and revolutionary approach to fulldome entertainment. The show takes on a musical amusement park atmosphere with amusement park rides on the planets and moons of our solar system. Kids are loving it. This show's sound track was compiled by our in-house composer. Speaking of camps, our own astronomy camp was a success for the sixth straight year.

Our two public sky shows are *In Search of Our*  
(Continued on page 29)

*Cosmic Origins* and *IBEX: Search for the Edge of the Solar System* - NASA's Interstellar Boundary Explorer (IBEX) satellite and its mission to create a map of our Solar System's boundary. These shows are preceded by an in-house produced seasonal sky segment, including an original music score. We're also running the digital version of *Mummies: Secrets of the Pharaohs*.

### Lafayette Planetarium Lafayette Science Museum Lafayette, LA

Dave Hostetter reports: The planetarium at the Lafayette Science Museum is working out specifications for our full dome conversion, and looks forward to a very busy time for the next year or so.

In the meantime, we are expecting a busy summer full of programs for youth groups and the general public. Our public program for the summer teaches visitors how to use star maps under the planetarium sky, and they take the maps home to use them under the real sky. It's been a popular program so far. In the fall, we will run the autumn version of the SEPA's *The Planets*.

Also in the fall, the rest of the Museum will host the traveling exhibit *Star Wars: Where Science Meets Imagination* and we hope to be nearly overwhelmed by attendance.

We continue to have a lot of success with sidewalk astronomy, doing solar viewing beside the Museum every clear Wednesday at lunchtime and evening viewing at local Art Walks and festivals. It's a fun activity that gets our name in front of a lot of people, and I would recommend it to any planetarium.

Assistant Planetarium Curator Charlotte Guillot is working on a series of school programs in French for 3rd through 5th graders. We expect to have a meeting with the French Immersion supervisors in late summer to set dates for their groups to visit.

### Planetarium St. Charles Parish Library Luling, LA

Jason Talley reports: For everyone who was unable to attend SEPA 2010 and did not get a chance to talk with him, Gary Meibaum retired earlier this year after more than 25 years of faithful service to the St. Charles Parish Library Planetarium and the planetarium community. Gary retired early due to health concerns. However, he is feeling well and plans to remain as active as possible in SEPA and the planetarium community as a whole, but the facility here in Luling will never be the same without Gary.

After Gary's retirement, I took over as Interim Planetarium Director in late March. I have done my best to continue Gary's tradition of excellence under our dome. I recently premiered *STARS* from the Sudekum Planetarium as our evening public show. It has received consistently good attendance and patron reviews and will continue to run through the end of July.

The Planetarium recently hosted a local premiere event for our new children's show, Sesame Street's *One World, One Sky: Big Bird's Adventure*. Produced by the Adler Planetarium and distributed by Sky-Skan, Inc., *One World, One Sky* takes the audience to Sesame Street where they join Big Bird, Elmo, and their friend from China, Hu Hu Zhu, and go stargazing.

For the premiere event, I worked with the staff of the West Regional Library, to which the Planetarium is attached, to host family friendly crafts, story times, face painting and other activities. I even hired a local performer to dress as Elmo and interact with the children. I enlisted the help of our local PBS station, WYES New Orleans, along with the local government access TV channel and newspapers to help promote the event.

The event was a huge success. By the end, I ran *One World, One Sky* six times; three more times than were originally planned, and had hosted 242 patrons. These numbers are quite impressive for my small 42 seat dome.



## MISSISSIPPI

contact: James Hill

Rainwater Observatory & Planetarium

French Camp, MS

jhill@rainwaterobservatory.org



### Rainwater Observatory & Planetarium French Camp, MS

James Hill reports: Rainwater Observatory & Planetarium in French Camp has added a Coronado 90 H-alpha scope and 10 foot dome to our inventory. We've hosted a course "Astronomy for Teachers for the University of Mississippi and held out first astronomy camp for 13-16 year olds. Our director will be spending 5 weeks at Bryce Canyon National Park in Utah presenting programs and observing sessions all over southern Utah. Astronomical artist Edwin Faughn has come on board as assistant director and will be in charge during the summer.

We had 125 people from 14 states at our Mid-South Astronomy conference in April.



Saturn imaged at the Mid-South Star Gaze  
by Dan Llewellyn



The Moon, Venus, and Mercury



Lyra above the scopes

## NORTH CAROLINA

contact: Patsy Wilson

Woodson Planetarium, Salisbury, NC

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### Carolina Association of Planetarium Educators (CAPE)

Patsy Wilson reports: Registration is now open for the 5th gathering of planetarians in the two Carolinas. The meeting will be held at the Natural Science Center of Greensboro, NC on August 30-31. Roger Joyner, Omnisphere Curator will host this event that features various planetarium shows and the movie,

(Continued on page 31)

"Sea Monsters." A variety of workshops from "The Sun is Hot" to "Inquiry with Balloons" to "Light Pollution" to "Enhancing Photo with Photomatix" will be offered during the two-day seminar.

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

Patsy Wilson reports: In an effort to encourage to community to explore Morehead's new full-dome projection system, FREE previews are offered each Tuesday and Wednesday (through Aug. 22) at 10 a.m. The 10-minute preview includes a peek at two popular shows, "Carolina Skies" and "Earth, Moon and Sun."

The Morehead is currently running *Magic Tree House*© Space Mission, Astronaut and Heart of the Sun.

Morehead's PLANETS program announces its summer 2010 professional development workshop for North Carolina teachers. PLANETS workshops for K-3 teachers have, as their centerpiece, North Carolina's first full-dome digital video portable planetarium. Workshop activities are designed to help teachers increase and reinforce their potential and enthusiasm for teaching space science. The activities include unique NASA-themed teaching tools and will demonstrate effective ways to link STEM content to other areas of the elementary school curriculum, especially language arts and social studies. Each teacher who completes the PLANETS workshop receives a resource kit with materials to conduct astronomy-related activities in the classroom.

### PARI StarLab Pisgah Astronomical Research Institute Rosman, NC

Christi Whitworth reports: PARI was excited to have both Bob Hayward and Christi Whitworth attend the SEPA conference in Kingsport, Tennessee at Bays Mountain Planetarium in early June. But things became even more exciting when "Dr. Bob" was presented the Paul Campbell Fellowship Award by the organization. Many people were able

to express their regard for Bob and his commitment to educating in the planetarium and to the planetarium community through this award.

PARI summer programs have expanded this year to include a weeklong Climate Study workshop in August for homeschooled high school age students. Spread the word about this NASA-funded program to your local homeschool communities. The Duke TIP Field Study in Astronomy and Space Science Lab are going strong again this summer. These students spend time under the sky and in the StarLab to prepare for and conduct their research projects.

PARI will also present at the Astronomy Society of the Pacific's Annual Conference in Boulder, Colorado in August. Bob and other staff members will be hosting groups on site through September. Also in September, PARI will hold its first SciGirls session aimed toward middle school-aged girls. These sessions will continue on the last Tuesday of the month throughout the year. These exciting new programs will ensure that this fall has plenty of opportunities to reach our audiences.

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

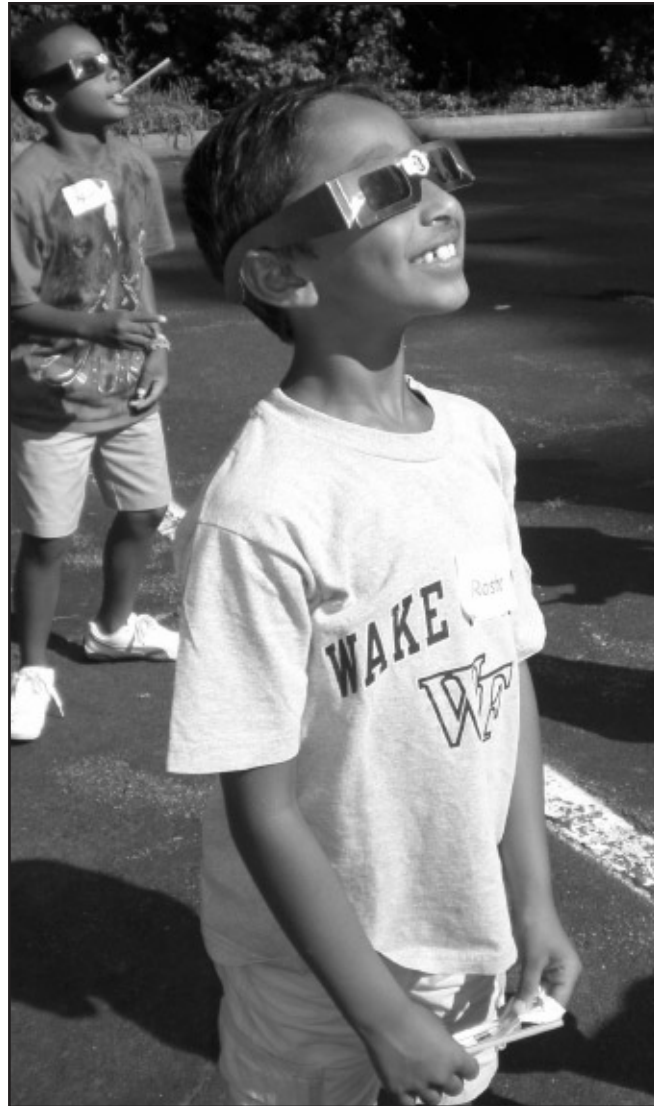
Patsy Wilson reports: The month of June was record-breaking busy for Horizons Unlimited and the planetarium. The first week was set aside for AIG Challenge Days. All of the 5th grade students currently enrolled in the county's gifted program attended a day of inquiry using CSI, Mythbusters and The Amazing Race as models for the activities.

Following an amazing and energizing SEPA conference in Kingsport, Tennessee, we hosted our first week of summer camp, "Rockets and Stars and Kids" for 3rd and 4th grade students. The campers built sundials, walked to Catawba College for a solar observing session, built and launched rockets of all descriptions, learned how to read star maps, made an astronomer's flashlight and enjoyed several short laser shows.

During the last week of June, twenty-four fifth and sixth grade students participated in "Kids Are Sci-

(Continued on page 32)





entists, Too!” camp. They made goofy glowing gel and silly slime; experimented on “mystery materials;” walked to the ecological preserve to “play in the mud” (aka-do aquatic sampling!); learned how to use microscopes and participated in the *Space “Eggs”ploration X-Prize*.

Still to come are a Biotechnology Camp for Middle School students and a Science Exploration Camp for 1st and 2nd grade students.

**SOUTH CAROLINA**

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



**DuPont Planetarium  
Ruth Patrick Science Ed. Ctr. , USC  
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) held a Renovation Celebration on June 19, 2010. We recently renovated the planetarium with new carpet and refurbished chairs making it cleaner, more attractive, and more comfortable. In addition, we have finally received an upgrade to the Bechtel Telescope in the RPSEC Observatory in the aftermath of a lightning strike that damaged the original telescope. The new 16” Meade LX200 GPS is providing great views of the heavens for the patrons in our area.

The Telescope arrived in May, nearly 11 months after the original telescope was struck by lightning. It was a long ordeal that included working with a Meade employee who left the company during the process. In the end, we were delighted when we finally had first light in our new telescope.

We had a very successful National Astronomy Day on April 24, despite the rain that dampened some activities. We hosted what we call, “Earth & Sky Night.” Since National Astronomy Day is usually

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close to Earth Day, we combined the two into one celebration, although the astronomy side is certainly the highlight and the driving force behind the event. A variety of hands-on activities were available from 7:00 - 9:30 to help people understand the wonders of earth and space science. We were unable to use telescopes, but members of the Astronomy Club of Augusta were on hand to provide insight to the night sky using Stellarium software. We presented our local production, *To the Moon and Beyond* in celebration of the 40th anniversary of Apollo 13.

In May, we began our summer hours in the planetarium by opening an hour later at 8:00 and 9:00 p.m. to accommodate the use of the observatory after sunset. We showed *More than Meets the Eye* by Lochness Productions and the local production, *Digistar Virtual Journey*. In June, we showed *Larry Cat in Space* by Lochness Productions and the local production, “To the Moon and Beyond.” In July the planetarium presented *In My Backyard* from the Calgary Science Centre and *Digistar “Laser” Fantasy*, which is a local production. In August, we will present *Digistar “Laser” Fantasy* again and also present our enhanced version of *Follow the Drinking Gourd* based on the program by the New Jersey State Museum Planetarium and the Raritan Valley Community College Planetarium. We provide some additional information to make people aware of some of the concerns that have been raised regarding the history of the show.

Finally, in August we are looking forward to the Carolina Association of Planetarium Educators (CAPE) annual meeting. This year, CAPE will be held at the OmniSphere Theater at the Natural Science Center of Greensboro on August 30-31. Many thanks are extended to Roger Joyner for inviting CAPE to his facility.

**Howell Memorial Planetarium  
Bob Jones University  
Greenville, SC**

Bill Lovegrove reports: The Howell Memorial Planetarium at Bob Jones University is stopping all public planetarium shows. The university has remodeled the room and installed regular classroom chairs so that the room can be used for multiple purposes. How-

ever, the dome is still in place and with our home-made Stellarium/mirror projector system we will continue to use the dome in astronomy classes. The door is open to restore the planetarium some day.

Perhaps most significantly, we have retired our ancient Spitz A2 projector. This was a big part of the decision to stop public shows, since the finances to replace it with a show-quality system are not available at this time.

**I.P. Stanback Museum and Planetarium  
South Carolina State University  
Orangeburg, SC**

Elizabeth A. Mayo, Ellen Zisholtz & Ingrid Owens report: South Carolina State University is fortunate to have an excellent exhibition facility located centrally on the campus. The I.P. Stanback Museum and Planetarium is a unique facility, the only museum with a planetarium on the campus of a Historically Black College or University and one of the few in the United States. Through its integration of the arts, humanities and sciences, the Stanback stands in the forefront of modern thinking.

The Stanback works with students and faculty in a variety of academic departments and includes students in the development of all activities. A partnership with the Department of Biological and Physical Sciences includes student involvement in the Planetarium and astronomical observing opportunities. Working closely with the Department of Visual and Performing Arts, the Stanback hosts student art exhibitions and presents and commissions original music. In addition, the Stanback houses the NASA Educators Resource Center for the State of South Carolina and is involved with community groups and educational outreach to pre-K through 12th grade students.

Originally dedicated in 1980, the museum was renovated and re-opened in 2007, after a hiatus of several years. The Main Gallery, with approximately 4000 square feet, utilizes a modular system, which can be arranged in an infinite number of design layouts. The Small Gallery and hallway spaces provide additional opportunities for exhibition. The next exhibition (beginning in October, 2010), *Part-*

(Continued on page 34)



nership in Social Justice, features the exhibition *Beyond the Swastika and Jim Crow: Jewish Refugee Scholars at Black Colleges*, on loan to the Stanback from the Museum of Jewish Heritage, a living memorial to the Holocaust. This exhibition tells the story of German and Austrian Jewish refugee scholars who, fleeing Nazism in the 1930s/40s, could not find employment at American universities because of anti-Semitism. However, they were welcomed by Black colleges in the American south and, as mentors, led students in the Civil Rights movement. The encounter between the scholars and the Black students changed them both. This exhibition explores racial conflict, prejudice, overcoming stereotypes and cultural barriers, which changed institutional and individual lives. There will also be an exhibition of social comment art on the topic.

Several new and original programs have been developed for use in the planetarium. These program include: the *Night Sky Series*, which tracks the seasonal changes of the interesting objects that can be viewed in the Orangeburg sky; the *Ancient Culture Series*, which highlights the early advances in Astronomy attributed to ancient cultures from around the world; and the Planets which takes the visitor on a tour of our Solar System and discusses and locates, in the night sky, the planets that are visible to the naked eye. There are also several special programs developed to accompany current exhibitions such as *In the Minds Eye: Illusion and Art* which was developed in conjunction with the Spring 2010 exhibition, *20th Century Masters from the Cochran Collection* and *Decoding the Stars: Negro Spirituals and the Underground Railroad* which was developed in conjunction with the exhibition, *The Journey from Africa to Gullah*. The Stanback Planetarium can accommodate up to 82 visitors, and is a wonderful educational resource. It features a Minolta IIB Planetarium Star Projector that can project 4000 stars onto the 40 foot domed ceiling, and can simulate the evening sky from any place, date or time. The planetarium at the Stanback is also in the process of being renovated. Beginning in July, 2010 and slated to be completed in 2011, these renovations will include a new, automated control system for the main star projector and a full dome video system.

The Stanback is open 9am to 5pm Monday

through Friday and on weekends by appointment. Public planetarium shows are available on Tuesday, Wednesday, and Thursday at 4pm and also by appointment. Currently the planetarium is featuring *In the Minds Eye: Illusion and Art*. Other shows are available on request.

**TENNESSEE**  
 contact: Kris McCall  
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 Nashville, TN  
 krismccall@adventuresci.com



**Craigmont Planetarium  
Memphis, TN**

Donna Budynas reports: I'm sorry to report that the Craigmont High School Planetarium is closing due to budget cuts. I am returning to the classroom and will be teaching at White Station Middle School in Memphis.

Kris McCall reports: I replied back that this was rotten news. I only hope the school system will take the proper precautions to protect the equipment and other assets so that it will be usable in the future. Too often, the equipment is not secured, and it is damaged or stolen.

**Sharpe Planetarium  
Memphis, TN**

Dave Maness reports: Spring was very busy here at the Sharpe planetarium. We saw an increase in the number of school groups toward the end of spring. Schools close around May 21 in western Tennessee. The fuel prices seem reasonable this year, so we are looking forward to the arrival of summer tourists.

I am proud to say that my institution is boldly presenting the topic of evolution (in the heart of the Bible belt no less) with a new traveling exhibit called *Surviving: The Body of Evidence*. I only wish that I could be showing the new full dome program *Natural Selection* that we saw at SEPA. But that will need to wait for the installation of the new

(Continued on page 35)

Full Dome system.

Early in May we held our annual Members' Day at the Coon Creek fossil research facility that we manage. I had a solar telescope set up along with a solar system walk. You can see Mars through the sun here. I don't know if you can make it out in the printed photo, but the red spot on my left leg was just about to become a major nuisance. It turns out that it was probably the bight of a Brown Recluse. I would spend a good part of the next two weeks on antibiotics. It's all better now.



Here is a photo of me and my assistant-for-the-day Bill Wood.

I recently returned from the great SEPA conference in Kingsport. If you were there, it was great to see you. Here's a photo of me (by Robin) getting in touch with the past. I am seen here checking out the old A3P planetarium projector that I worked on for 25 years. I helped carry into the room where it was being installed at Adam Thanz' soon-to-be home planetarium! That is Adam looking on and (I believe) John LaRosa from Seiler Instruments in the background. It was a bit disconcerting to see it "headless". But I'm sure that will soon be corrected by Adam.



If you weren't at the conference, then what was your excuse? If it was financial, then go to the SEPA website (www.sepadomes.org) before the 2011 conference and apply for professional development support for next year through the SEPA Grant Fund. Currently you will find the application under the

2010 conference registration form, but it will be available with the 2011 conference information.

Renovation plans are continuing even as the city government braces for decreasing tax revenue. The effects of the recent recession are making their way up the food chain. We are continuing with fundraising and looking into all aspects of improving the Sharpe Planetarium. I just hope the Minolta Series IV can hold up for another year or more. Just this past week former Sharpe employee and now a sub-contracted technician Roy Foppiano and I replaced a failed fan motor in the Minolta Series IV. The Pink Palace opened a new exhibit and I conducted 9 live programs for new and renewing members in conjunction with the exhibit openings. It amounted to two consecutive 12 hour (plus) days. I repeated the feat that following week but on Tuesday and Thursday for the opening of the new IMAX movie *Whales and Dolphins*. We also completed the several meetings with the AAM Accreditation representatives that same week. The Pink Palace was one of the very first accredited museums and we hope to keep that record intact. By the end of that week I was really looking forward to the weekend.

This summer we are running *The Cowboy Astronomer*, one of my favorites from Loch Ness. I give a short "live" segment along with every program, where I talk about points of interest in our current Memphis area skies. For those who want a more in-depth night sky program I offer *Starlit Nights Live*. This is a full length live guided tour through the sky with stories of the constellations and astronomical points of interest between sunset and sunrise.

Lastly, I got up early last Saturday to view the partial lunar eclipse just before sunrise. Here is a photo I took just minutes before it seemed to sink into a layer of clouds and vanish. You can just see the trees silhouetted against the dawn



(Continued on page 36)

brightening sky. I'm looking forward to the one on December 21. Maybe I can get a better camera by then.



**Sudekum Planetarium  
Adventure Science Center  
Nashville, TN**

Kris McCall reports: In Nashville, almost 700 people attended Astronomy Day on Saturday, April 17, 2010, when the Sudekum Planetarium and the Adventure Science Center took visitors To Worlds Beyond. From 12:00 to 4:00 pm, members of the Barnard-Seyfert Astronomical Society and Austin-Peay State University Physics Club were stationed throughout the Space Chase exhibits to demonstrate Newton's Laws of Motion, build scale models of the solar system, and explore the planets and other exciting destinations.



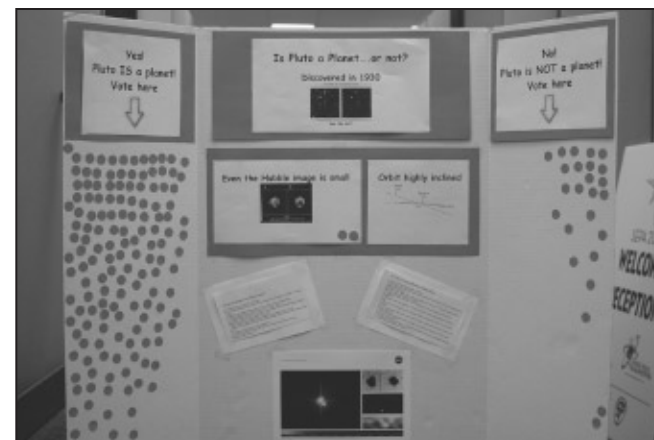
Crater Creator, Chuck Schlemm, presented one of the most popular demonstrations. What happens when a fast moving object hits the ground? In this dramatic demonstration, see what happens when objects from marbles to a bowling ball crash into a simulated lunar surface of flour and cocoa powder.



Chef Joe was making comets. Heinrich Tischler was helping guests make a scale model of the solar system that would easily fit in your pocket, and JanaRuth Ford made herself hoarse explaining the difference between meteorites and meteor wrongs. In the program for the day, everyone was encouraged to complete a Planetary Exploration Scavenger Hunt. After completing all the tasks below, visitors went to the Mission Manager to receive a reward.

- \* Bring back a souvenir from the Launch Pad that demonstrates one of Newton's Laws.
- \* Using the Solar System Touchscreens, find out how many moons are orbiting Uranus.
- \* Create a scale model of the solar system that fits in your pocket.
- \* Wear cool glasses to become a Spectral Detective.
- \* Vote at the Pluto Polling Station. Get a hand stamp.

Even the youngest astronomers exercised their voting rights at the Pluto Polling Station. This picture of the final results says it all.



To see more images from Astronomy Day 2010 in

Nashville, visit Theo Wellington's web page. Be sure to read her amusing captions.  
<http://picasaweb.google.com/AstroDork4/AstronomyDay2010?feat=email#>

**VIRGINIA** 

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

Kelly Herbst reports: It's summer, and thank goodness for air conditioning in the planetarium! The heat and humidity has been up here in Virginia, and our theater is reaping the benefits as people are coming indoors to beat the heat in our blessedly 68-degree planetarium. We're getting great response to HMNS' *Dinosaur Prophecy*, which we've partnered to our animatronic dinosaur exhibit Dinosaurs and More! Preschoolers are enjoying *The Zula Patrol: Under the Weather*, and I confess we're looking forward to being able to bring in the new installment! As always, our live program, *Virginia Skies*, is a perennial favorite. *Laser Country* currently rounds out our offerings - we'll be switching to *Laser Spirit* in July, and then *Laser Pop* in August. Through Labor Day, we run five shows a day, so we're keeping very busy here.

Once summer ends, however, we'll take the rest of September off and do a little cleaning and maintenance. What we lovingly call the "September List" is growing already, with some system updates to install, chairs that need fixing, and a boatload of production coming up. The financial picture here is probably about as good as it is anywhere...which isn't very. We're planning on do a lot of in-house production in the coming year as the money just isn't there to allow for new show purchases. Fall will see the return of some favorite programs to the theater, plus a new installment of *Captain Rip Manly* - the live theatrical-style production we do



for our annual Halloween event - *Night of the Living Museum*. And before we know it, holiday music will fill the air as *Star of Wonder: Mystery of the Christmas Star* and *Laser Holidays* grace our theater once again. It was such a blast seeing everyone at the SEPA Conference, and Adam Thanz and company at Bays Mountain certainly did not disappoint! Thanks to everyone who made SEPA such a wonderful and memorable experience. URANUS LIVES!

**Pretlow Planetarium  
Old Dominion University  
Norfolk, VA**

Declan De Paor reports: Old Dominion University's Pretlow Planetarium Director Declan De Paor and Instructional Technology Manager CJ Oakley have submitted a paper for publication in the September issue of *The Planetarium* in which they describe some new approaches to planetarium projection. Among their innovations is a pico projector strapped to an iPhone thus creating a hand-held device that can project images (such as constellation art or a movie of a pulsar, for example) onto any part of the dome in any orientation. The authors find that the mobile image helps retain audience attention and aids the show presenter in engaging the audience in interaction. It also helps tackle problems of canonicity that arise when patterns on the dome are viewed in unfamiliar orientations. Conference participants' reactions were very enthusiastic when De Paor and Oakley demonstrated the device at the MAPS meeting in Portland ME in end May.



NOTE: The attached photo accompanies this news item. The photo is credited to Declan De Paor. The constellation artwork projected is from Stellarium.

**Thomas Jefferson HS Planetarium  
Richmond, VA**

Leslie Bochenski reports: The school year is ending as I write this, and I'm pleased to report that almost 2000 students in grades 3-12 visited the Planetarium during the 2009-10 session. That's 121 programs, an increase of about 300 students and 10 programs compared to last year.

I thoroughly enjoyed seeing everyone in Kingsport. Thanks Adam & Robin for being such good hosts! Your attention to detail and organization made for a smooth, pleasant and informative SEPA Conference. I learned a lot, and had a great time (and so did Galileo!).

If you have photos from the Conference that you'd like to share for the SEPA archive, please send them to Adam Thanz on a CD, and he will forward them on to me. Or, you can send them to me directly at:

Leslie Bochenski  
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Richmond, VA 23221

THANKS!!

*Remember your State Coordinators!*

We know they would love to hear from you.

The following coordinators were lonely this issue:

West Virginia  
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Kentucky  
Rachel Connolly  
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Puerto Rico and the Virgin Islands  
James Sulliva  
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# There's an App That!



Introducing a revolutionary new way to operate your Digistar 4 system: the iPod Touch. With our new app, you can control virtually every system feature from a handheld wireless device. It has never been easier to give live astronomy presentations and respond instantly to audience questions with stunning examples on the dome. This unique interface puts the power of the universe at your fingertips.

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