

Southern Skies

Volume 29, Number 1

Journal of the Southeastern Planetarium Association

Winter 2009



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Hubble Soft Capture Mechanism Credit: Suresh Atapattu

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President's Message

Jon Elvert

Irene W Pennington Planetarium
Baton Rouge, LA

This is the first message as your new President and I am honored to serve SEPA in this role for the next two years. My predecessors have set high standards that I will try to live up to and to serve SEPA and its members to the best of my ability.

2009 brings a slight change to SEPA Council members. Adam Thanz now becomes our Past-president, Mickey Jo Sorrell stays on as our Secretary-Treasurer, Patsy Wilson who has served SEPA for the past six years as President-elect, President and Past-president now rotates off Council. April Whitt from

the Fernbank Science Center in Atlanta, GA joins the Council as our new President-elect. Again, welcome aboard April. And rounding out our Council, John Hare continues as our regional representative to the IPS. I look forward to working with Council on the many projects and challenges ahead. I particularly wish to express thanks to now Past-president Adam Thanz for these past two years for his guidance and strengthening of the association. In particular I wish to thank Adam yet again for his role in the production and overall direction of SEPA's DVD planetarium program: The Planets, as well as presiding over the two previous SEPA conferences, initiating numerous communications with Council, and remaining cool under pressure. As President-elect it was a pleasure working with Adam and I look forward to his continued input and support on Council.

The year 2009 also brings an exciting opportunity to commemorate the 400th anniversary of Galileo's turning a telescope skyward. Both the United Nations and the International Astronomical Union declared this year the International Year of Astronomy (IYA). From now through this summer, there

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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.



SEPA President Jon Elvert and friend Galileo

IPS Report

John Hare
ASH Enterprises
Bradenton, FL

2010 IPS Conference...

Alexandria, Egypt will host IPS in 2010.
Conference dates are June 26-30.
Conference website <www.bibalex.org/ips2010/home/home.aspx>

2012 Conference site invitations...

Three sites have submitted invitations to host the 2012 IPS conference. Detailed information has yet to be posted to the IPS website but should be available prior to the site selection by IPS Council. IPS Council will meet in Toulouse, France July 4-5, 2009. If you have a preference, please contact me before June 27 to voice your opinion.

St. Etienne, France
Proposed dates- July 16-22
Planetarium de Saint-Etienne
Host: Jacques Guarinos

Baton Rouge, LA
Irene Pennington Planetarium
Host: Jon Elvert
Proposed dates- July 22-26

San Francisco, CA.
Alexander Morrison Planetarium
Host: Ryan Wyatt
Proposed dates- to be determined

Two Small Pieces of Glass: The Amazing Telescope...

Telescopes are amazing tools for astronomy, but where did they come from? How do they work? Most importantly, how have they shaped our understanding of the universe? In *Two Small Pieces of Glass: The Amazing Telescope* we join two teenage students as they attend a local star party and converse with a female astronomer. With her as their guide, the students learn how telescopes work and are used today. They peer through a telescope to explore the Galilean Moons, Saturn's rings, and a variety of other objects. As they see these celestial wonders the astronomer shares the importance of Galileo, Huygens, Newton, Hubble and how their use of telescopes have helped us understand the cosmos and our place in it.

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Editor's Message

James Sullivan
Buehler Planetarium & Observatory
Davie, FL

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. For digital submissions, we can easily accept jpg, tiff, psd (photoshop), and ai (illustrator). For any others, please contact me (jsulliva@broward.edu). Please ensure the image is larger than needed or of sufficient resolution at print size (300 dpi). When in doubt, send a large image and we will scale as needed.

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.

Folks, as a reader I always found the News From SEPA States one of the most useful parts of this journal. I enjoyed reading about my colleagues, and always picked up some trick, tidbit, or idea for a show. Your State Coordinators can only do the same as me - that is, beg you to contribute. Please send in something, just a few lines, a quick note. Please help your State Coordinators feel like they are not wasting their time.

I have included a full list of all the State Coordinators. Please write them.

(Continued on page 12)



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
Hedgesville High School Planetarium
Hedgesville, WV

As I write this, it is the last day before Christmas break. I just printed out my boarding pass and I will be flying to Buffalo, NY and then driving across the border of Canada.

I have begun writing this in the computer lab of the high school. Earlier today, I tried to get on and there were no connections available in the planetarium to the internet. I could not even get on the server to work on Microsoft Word.

Back in October, my students entered the essay contest in order to pick a target for the Cassini Spacecraft. They were given a choice of three targets of Saturn's moons and they were to decide which of them they should choose for the spacecraft to turn their camera on. They were to write a well crafted article about why their target is the best. My students received a teleconference with the NASA scientists after Cassini imaged the three targets. The Parkes radio telescope gathered the data, but there was severe rain and the image for the moon Tethys was lost. But there were great images for Mimas and



Student April Liska and I get our picture taken by assistant principal Ron Allen after we finish the teleconference with Cassini Scientists at JPL in Pasadena, CA.

Titan. Go here to see them: <http://saturn.jpl.nasa.gov/Education/scientistforadayed6view/>

Cassini is planning to do another one of these essay contests in spring. Wouldn't this be a great activity for your facility to add to the already burgeoning list of things to do for International Year of Astronomy? You could sponsor the contest and offer to send the essays in for kids who have no internet access. Do it with a homeless shelter or disadvantaged student group. Whip together a mini program on the targets, or do what I did, show "Ringworld" to give them an idea about the Cassini spacecraft and mission.

There is still a classroom outside of the planetarium I work in. There are photography and art classes going on there. One day, a student asked to borrow the solar system model for a project she was doing in photography. I will pass her photo essay along to James with hopes that it makes it into *Southern Skies*. (Editor: see p. 7.)



I am sure many of you will be doing outreach during the international year of astronomy as Shenandoah Astronomical Society members John Hershey, left and club president, Steve Vaughn do solar observing at the balloon fest at the Historic Long Branch, near Winchester, VA in October of 2008.

By the time you read this, it will be International Year of Astronomy. Have you a game plan for the year. If not, check out this PDF: <http://www.astronomy2009.us/Content/Documents/IYAGetInvolved-Planetaria-6Oct2008.pdf>. It has plenty of different ideas for you to choose from. And you might like to share this with teachers who come to visit your planetarium this year: <http://www.astronomy2009.us/Content/Documents/IYAGetInvolved-Teachers-6Oct2008.pdf>.

Small Talk (Continued from page 6)



I plan on starting off with a program the first part of January to kick off the year. Then in February, I will be receiving the images of M101 from the Great

Observatories program. I am at a big quandary as to how to display them. I am just one person and I will need help just tacking them up on the wall. It seems like I am the only place in West Virginia where these images can be viewed, so I am excited that a tiny planetarium such as myself should get this honor. Now comes the problem of where to hang them and how to do it and when. I will tackle that after the new year. First I have to get through exams, however. Meanwhile have a great International Year of Astronomy and share what you are doing this year. Maybe you can send information to post in this column. It will be nice to see what some small planetaria are doing to celebrate.

Postscript: I am writing this after my return from Buffalo, NY and Hamilton, Ontario, Canada. On the Southwest flight home to Baltimore, MD, from 25,000 feet up, I was able to see the thin crescent moon, Jupiter, Venus and Mercury. What a fabulous view! Have you been watching the dance of planets in the Southwest? Send James your photos to share. What a great way to end 2008 and begin 2009, the International Year of Astronomy.



Venus and Jupiter: My humble attempt at a picture after the conjunction in December 2008.

These are pictures taken by Rachel Goldman and referred to in my Small talk article. Follow the travelling solar system around Hedgesville High School.



SEPA Circuits

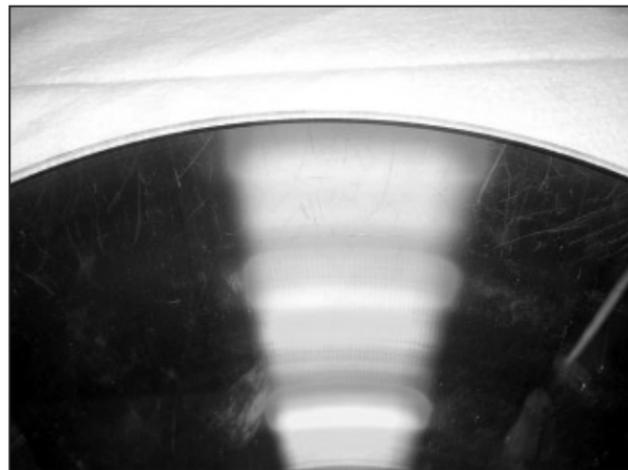
Got Scratches?

Robert Cruz
Miami Space Transit Planetarium
Miami, FL



In this issue I'm going to cover a process I've used to buff out scratches from laser discs. Before I get into the process I need to tell you that I'm in no way an optics engineer and that this process has not been lab tested. Any long term effects it may have on the discs are unknown. There's plenty of ideas on how to do this task, this is just one way that worked for me.

I tested it on the workbench using discs that were blatantly scratched up and beginning to act up when played. If you have a disc that's almost at the point of being unplayable, this process might save the disc and make it playable again but by all means record that video ASAP to another media. This process may work on cd's and dvd's but I haven't tried that yet.



First off, you need to clean the disc of any grease or grime. Once it's clean and dry we are ready to start. You will need to obtain two products, a small jar of *Mother's Mag and Wheel Polish* and a bottle of plastic scratch remover. I have a few friends in the public safety business and they swear by *Mother's Mag and Wheel Polish* when it comes to removing haze and light scratches in plastic lenses. Yes, wheel polish cleans up scratched plastic! Who would have thought to try that one out?

The second product, plastic scratch remover, is available at some auto parts stores and at boat stores. It's used for polishing up plastic windshields and so forth. The particular brand I used was *Star Brite Plastic Scratch Remover*. This stuff looks and smells like watered down car wax. It may just be that in a special bottle. I haven't tried car wax but I imagine clear coat safe car wax *might* work the same.

You will also need 3 small CLEAN terry cloth towels. One big enough to lay the disc on while you work on it, and two to work in the compounds. These towels must be clean, as in "right out of the washer and haven't been used for anything else" clean. Now we'll get to work!

Lay the towel down on a flat surface and lay the disc on the towel. Open up the jar of *Mother's* and swab a little out with your finger tip (you did wash your hands before starting this process right?). Start working the compound onto the disc using small circular motions just as if you were washing a car. Obviously long fingernails are not conducive to this task. Use light pressure as you are doing this. You

SEPA Circuits (Continued from page 8)



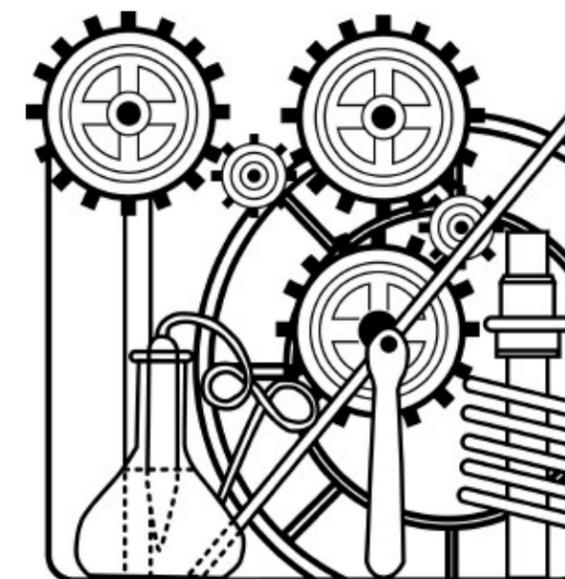
want to have enough compound to make it easy to work but don't lather it on the disc. Work your way all around the disc. It's very important you use circular polishing motions and not side to side. Allow it to dry for a few minutes and then take one of your terry cloth towels and start buffing. Once again use small circular motions. Once you've achieved a cloudy haze all around the disc move on to a clean part of the towel and re-buff till the disc shines. Don't forget to remove any compound that got on the edge of the disc or on the inner edge where the hole is. This process should have helped clear up some of the more pronounced scratches.

Now we're going to use the liquid scratch remover for the final polish. Clean your hands. Apply as per directions on bottle. Work liquid onto disc using same small circular buffing motions with fingertip. Allow to set for a few minutes. Buff out to a light haze with clean part of towel. Buff again to a shine with another clean part of towel. Lift disc up and clean up any compound that got on the edges or somehow worked its way under the disc.



Wallah! You're done.. on one side at least! If you have a two sided disc repeat the process for the other side but make sure you're not laying the freshly polished side on any globs of spilled compound.

To see higher resolution pics of this process go here.. <http://s31.photobucket.com/albums/c386/secretagentxxx/disc%20polishing/>



Archeo- astronomy

A Tale of Two Tomes

Woodrow W. Grizzle III
Jonesville, VA

Since I began writing this article, many colleagues have asked me about Archaeoastronomy as a discipline. Whenever asked, I would, of course, answer with the best succinct definition possible. (Those who know me personally know that succinctness often eludes me.) But, the question got me thinking: thinking that I should delve into some of the intricacies of the field, and to write an article about archaeoastronomy discussing the methodology and some of the notable players in the field. As a further note, if you are interested in reading more, many of the authors whose work appears cited in this article have many books currently in print.

Archaeoastronomy is at once a study of ancient astronomical observations (and observatories) and of the ethnographic, or sociocultural, aspect of astronomy in situ in the cultures of the world. Some archaeoastronomers have chosen to focus more on one side or the other, while some believe that a harmony of both is necessary for complete understanding. It is important to remember, though, that according to Clive Ruggles, a noted archaeoastronomer, "Archaeoastronomy is specifically not the study of ancient astronomy, as astronomy is a culturally specific concept and ancient peoples may have related to the sky in another way." We will discuss this statement later, after delving into the main camps of archaeoastronomy.

As with many sciences, there are camps within the study of archaeoastronomy; in this case, there are two. Interestingly, these two camps arise from two

volumes of the same work: affectionately called the "green book" and "brown book." Both were written and edited by the same collaborators, Aveni and Heggie, and divide the disciplines between old and new worlds.

Green Archaeoastronomy (hereafter, Green), so named after the green cover of the book, *Archaeoastronomy in the Old World*, by Anthony F. Aveni. Green seeks to understand the way in which ancient peoples observed the cosmos. To that end, much observation and measurement is taken at various sites throughout the world. Its roots are in the British Isles and the study of megalithic sites. In Green writings, you would find writings about Stonehenge, Newgrange, and the associated artifacts, such as bone calendars and cave paintings. These old world sites are united in the fact that social evidence is rare or absent from the record, and Green has come under fire by many as being too separated from the cultures themselves, and cannot, therefore, explain why a given culture would specifically care about making such observations. Despite criticism, Green acknowledges its own limitations and serves as the best modern method when considering ancient observatories severed from their ethnographic past.



Stone Row at Auglish, Co. Derry, Northern Ireland. Alun Salt, 2004. Old World sites such as this are the primary focus of Green Archaeoastronomy.

The New World is a different story. There, the other camp, known as Brown Archaeoastronomy (hereafter, Brown), is used. Brown is much a marriage of astronomy and anthropology, and it seeks to understand not only how the ancients related to the sky,

Archeoastronomy (Continued from page 10)

but why they would want to in the first place. Why is Brown the name of the game in the New World? It is so because of the abundance of social evidence left behind in the wake of the Spanish conquest in the A.D. fifteenth and sixteenth centuries. Sites such as the Incan capital of Cusco are rich with archaeoastronomical data revealed through Brown, and would not have been possible without the Spanish records.



Incan Temple at Cusco, Peru, showing stonework detail. Wikimedia Commons 2009. Temples such as these are among those on routes aligned astronomically, an aspect discovered through Brown Archaeoastronomy.

Brian Bauer and David Dearborn bring up in their book, *Astronomy and Empire in the Ancient Andes*, that the radial arrangement of the roads leading to the Incan capital of Cusco into the empire were actually of great astronomical import, with each route aligning to points of different astronomical significance as the year progressed. Without the anthropological data left by the Spanish, such a deduction would not have been possible, therefore demonstrating the power of Brown.

There is an evident weakness in both methods. As previously stated, Green lacks an ethnographic or anthropological element. However, Brown lacks the statistical robustness of Green. Without a strong Green background, the Brown archaeoastronomer is susceptible to temptation of wild speculation. Therefore, it is important that when one considers archaeoastronomy for any purpose, it must be looked at objectively with Green and Brown frames.

With that in mind, let us return to Ruggles' argument about what archaeoastronomy is not. It is interesting for a couple of reasons. The first is

that, here, he solidly rejects the Green method. He does so because the Greens cannot account for the anthropological aspect of observations and observatories. Secondly, he labels astronomy as a culturally specific concept, which is something that we tend not to accept: we think of all science as universal. However, when taken in context, his statement means that our scientific way of experiencing the heavens is merely the most recent iteration of humankind's relationship to the heavens. Ruggles says here that science is a culture in itself. To do archaeoastronomy justice, one must understand that and realize the full nature of ancient perspectives through a modern lens. As big as our universe seems through modern science, it seemed equally as big to the ancients.

The overall purpose of archaeoastronomy is to understand how our ancestors related to the sky: how they talked about it, how they experienced it. Like all science, it is a quest for understanding. As the poet once said, "How can we know where we are going if we do not know where we have already been?" Archaeoastronomy is like that, too. It is a great looking-back. As this is my third article for *Southern Skies*, I suppose this introduction is a looking-back, as well.

References:

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President's Message (Continued from page 3)

will be prime opportunities for sky watchers to observe spectacular gatherings of bright planets and to observe what Galileo first contemplated nearly four centuries ago, including the Milky Way, the Pleiades, details of the Moon, the four moons of Jupiter, the phases of Venus, and the mysterious disappearance of Saturn's rings. If you haven't already begun to plan related events and activities, go to the IYA's official web site at www.iya2009.org where there's a wealth of information about projects, activities, and opportunities that connect you and your visitors to Galileo. There's even a web site for choosing appropriate dates that coincide with IYA and celestial events: <http://astronomy2009.us/getinvolved/>. These suggested dates are simply a starting point to help planetariums, astronomy clubs and interested groups begin planning for IYA. One corner stone project for IYA that I'm particularly interested in is the upcoming 100 Hours of Astronomy, which kicks off on April 2 and runs through the 5th. So mark your calendars and get involved with the celebration!

I'd like to take this opportunity to remind all of you how important it is to submit articles and regional planetarium updates to our journal *Southern Skies*. This journal is our flagship publication and not only does it contain resourceful articles, but it's a primary way of communicating to our members what's going on within the SEPA region. Our editor, James Sullivan, continues to do a great job on getting each issue out on time, but he needs input from all of us in order for the journal to be successful. Please consider submitting upcoming events or programs you're planning for the IYA, or sharing other newsworthy items like equipment upgrades, new staff, or educational opportunities.

Reminder that our 2009 SEPA Conference will be held 16-20 June at the Sudekum Planetarium at the Adventure Science Center in Nashville, TN. Much more on this conference in our spring journal. Looking ahead, Adam Thanz will be our host for the 2010 SEPA Conference at the Bays Mountain Planetarium in Kingsport, TN. During our upcoming June conference, we'll be deciding on a conference site for 2011, so please consider hosting this conference by contacting me or any of the SEPA Officers if you are interested in preparing a bid.

I also encourage your feedback on ways we could

enhance membership benefits or improve our association as a whole. Again, I look forward to serving the SEPA membership and working with a great team. Together, we want to help you get the most out of being a SEPA member.

IPS Report (Continued from page 4)

The planetarium show is available in 2 formats: 1) a digital full-dome show distributed as dome masters with audio in several languages, and 2) a traditional dome version distributed on DVD's featuring stills, video clips, audio, all-skies, and other resources for non-digital domes.

The traditional version is available FREE to all International Planetarium Society Members and distribution is scheduled beginning in January. The digital full-dome version is available by filling out a request form. A licensing fee is required for the full-dome version. For more information on the show including the request form, go to: www.400years.org

Editor's Message (Continued from page 5)

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News From SEPA States



Florida Planetarium Association (FLORPLAN)

George Fleenor reports: The following is from Laurent Pellerin of Kika Silva Pla Planetarium, Santa Fe College -

"I am planning to host FlorPlan 2009 this Spring here at the newest planetarium in the State of Florida. FlorPlan is the unofficial Florida Planetarium Association, with no official Charter, Board, Officers, or Membership, just getting together once or twice a year to see and talk about planetarium items in the State.

I'm hoping that with my more "northernly" location now, that we'll get some of the Panhandle planetariums to join us, although it means a little farther travel for South Florida planetaria.

The tentative schedule includes:
Demos of Chronos and SciDome
Demos of SciDome for live use and simple full dome programming techniques
Presentation of "Planets in the House!" a full dome tour of the planets, (Live, not recorded)
General Discussion

Other presentations:
Maybe a guest presentation by an University of

Florida Astronomer.
Presentation of "Black Holes: The Other Side of Infinity," from Denver, since I believe we are the only planetarium in Florida with this show.
Tour of the Santa Fe Teaching Zoo, one of only two teaching zoos in the US, and right here on campus.
Tour of the Rock Cycle Garden and our small geology museum.

For those of you who wish to stay over night, there are several hotels close by, and you might wish to visit Paynes Prairie on the south side of Gainesville. Paynes Prairie is a large preserve where you might get to see wild bison and wild mustangs.

I am currently planning to host FlorPlan 2009 on Saturday, March 14. This is Spring Break week here in Gainesville, so we will not be open to the public, and most of the UF and Santa Fe students will be gone making traffic easier. But this date can be changed if need be for maximum participation.

Please let me know if you will be here, or if the date needs changed.

352 395 5381
laurent.pellerin@sfcc.edu

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 *Max's Flying Saucer*, *Comets Are Coming*, *The New Cosmos*, *African Skylore* and *Women Hold Up Half The Sky*.

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

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.

LOUISIANA

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



Lafayette Planetarium Lafayette Natural History Museum Lafayette, LA

Dave Hostetter reports: Our fall public programs have been *The Explorers* and *The Sky Tonight*, with *The Sky over Mr. Rogers' Neighborhood* as our Saturday children's program. In January the children's program will shift to *Rusty Rocket's Last Blast*, and the public program will shift to *Our Star, the Sun*. That will be replaced in February with *New Horizons: Bridge to the Beginning*.

As we do each year when the sky is clear, we had telescopes out at the local Christmas festival. Over 300 people got a look at the moon in a 4 hour period! Good thing it was cloudy a good part of the evening or it would have gotten really busy.

We are looking forward to the International Year of Astronomy with IYA activities at least once in each month. If the weather cooperates we plan activities at each monthly downtown Art Walk, ranging from sidewalk astronomy to local astrophotography exhibits to special planetarium programs, and including using our prototype rooftop observatory with the public for the first time. Other activities are being planned at various sites in Lafayette and surrounding towns.

Planetarium Saint Charles Parish Library Luling, LA

Gary Meibaum reports: We are continuing to col-

lect free show materials from NASA and converting them into fulldome shorts for our MEIDAGLOBE II projector. Nearing completion (hopefully as I compose this report) is a complete re-animation of *Don't Duck, Look UP!* from the Davis Planetarium in Baltimore. We had originally done in slide show style for our digital dome. But since learning about 3D space and the free program Blender at the Mediaglobe User's Group meeting, Jason Talley has reworked the show into something special. I have always liked this show for use with the Pre K through 1st grade groups. Its simple explanation of day and night with creating constellations from the perspective of barnyard animals works very well. Our programs for the spring include *Spring Stargazing* from Loch Ness and *Astronomyths* from White Tower Media. We have instituted an audience request show on Saturday afternoons. We give our audience a list of about 24 shows and they get to vote for the show they would like to see. Since can easily run any show on the list, the group is thrilled that they can see the show they want. The most popular request shows have been *Black Holes* from Clark and *Astronaut* from the National Space Center.

MISSISSIPPI

contact: James Hill
Rainwater Observatory & Planetarium
French Camp, MS
jhill@rainwaterobservatory.org



Rainwater Observatory & Planetarium French Camp, MS

James Hill reports: The Sangre .65m telescope is now in operation and we will soon have the ability to provide images on request for educational and research purposes as part of the Las Cumbres Global Telescope Network. We will be having a part in the NASA great observatories image unveiling on February 13 and having a NASA Space Grant funded educational workshop February 27-28. March will see a series of public "Backyard Astronomy" events and in April we'll host the week long Mid-South Astronomy Conference. More information

and online registration forms for these events is on our web site <http://rainwaterobservatory.org>



NORTH CAROLINA

contact: Patsy Wilson
Woodson Planetarium, Salisbury, NC
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Carolina Association of Planetarium Educators (CAPE)

See Millholland Planetarium, Catawba Science Center, Hickory, NC.

Millholland Planetarium Catawba Science Center Hickory, NC

Curt Spivey reports: *Infinity Express* and *Heart of the Sun* are now up and running! Our planetarium and laser attendance have slowed somewhat due to the recent economic downturn, but continue to exceed projections.

We have also selected our new planetarium shows for next year: we will be getting the "new" St. Louis Science Center/ AVI show *The Little Star That Could*, Clark Planetarium's *Extreme Planets* and the HMNS weather production *Force 5*. I am also entering the scary world of show production with our first original called *Carolina Skies*. It will be about Cherokee sky lore and culture. Thanks again to Christy and Bob at PARI for the big assist getting this one started!

It is also likely we will be adding new laser shows to our lineup! We're considering getting *Pink Floyd's Wish You Were Here* and/ or *Laser Praise* from Laserdome out of PA. The popularity of our laser shows may lead to expanded offerings in FY 09/10.

Many of you Carolina planarians will, by the time of this publication, have received information about CAPE 2009. It will take place on Monday, June 29 and Tuesday, June 30 here at the Catawba Science Center! This is open to any in the SEPA family – If any NC and SC planetarians haven't got the info yet, please contact me at astronomy@catawbascience.org for more details. I look forward to hosting you!

Morehead Planetarium and Science Center University of North Carolina Chapel Hill, NC

Richard McColman and Mickey Jo Sorrell report: "If all goes well.....we'll be renovating soon." That's what we've been saying for a couple of years now. And all is going well, though slower than we might have wished. We are starting to say "next year, this time." Our master interpretive plan is a stunning foundation for our dreams; our capi-

tal campaign is underway; our architectural plans, almost complete. Soon.

Meanwhile we are getting very excited about putting a digital portable dome on the road. That new effort begins this spring with a pilot program to four underserved counties in northwestern North Carolina. By summer we plan to have a teacher training program with a full time astronomy educator – a part of our successful Destiny program of traveling science labs.

Production work proceeds in earnest on the full dome video version of Morehead's favorite *Earth, Moon & Sun* planetarium show. Unlike many full dome shows now available, this program is designed with strong tie-ins to the K-4 National Science Education Standards, and is a strong offering to fulfill the needs of school groups. Along with the solid education correlations, the program has high production values, and is a lot of fun for kids and accompanying adults. *Earth, Moon & Sun* will roll out in our pilot digital portable dome. Stay tuned for wider distribution soon thereafter...

MPSC will be celebrating IYA2009 throughout the year. Highlights include our own IYA ambassador, Rebecca Holmes, in attendance at the opening ceremonies in Paris, a family science event in February (with consummate Morehead "astro-ham" Michael Neece as Galileo), and a visit in April with Owen Gingerich (Senior Astronomer Emeritus at the Smithsonian Astrophysical Observatory and author of *God's Universe*) and Eileen Reeves (author of *Galileo's Glassworks: The Telescope and the Mirror*).

PARI StarLab
Pisgah Astronomical Research Institute
Rosman, NC

Bob Hayward reports: In October, Christi Whitworth presented at Bay's Mountain's StarFest and at NSTA's regional conference in Charlotte. Christi and Mike Castelaz will present at North Carolina Museum of Natural Sciences *Astronomy Days* in January and the National Science Teachers Association National Conference in New Orleans in March.

PARI's fall Homeschool Day this year was successful even after being rescheduled due to bad weather as students explored comets and meteors. For the third year PARI will host Brevard Middle School's entire 6th grade on campus in late March.

FYI to other planetariums and Science Centers in the area: "Johannes Kepler" will be on PARI's campus May 2, 2009 celebrating Space Day and IYA. He prefers to visit more than one location while traveling and may have other dates open while in this area. If your facility would like to extend an invitation to Kepler, please contact johanneskepler@att.net.

Recently, PARI's Board of Directors awarded Christi the title of Education Director and Mike, Science Director. These new titles more clearly describe the responsibilities each of them has been carrying out for quite some time.

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

Patsy Wilson reports: As a holiday gift to the community, we showed *Laser Holidays* free on December 20th. Each show was completely full. While there was no charge for the shows, we did sell Laser specs for \$1.00 each. Those were a big hit! Later that evening we did *Laser U2* for the paying audience. We've scheduled *Laser Mania* and *Laser Zeppelin* for February. The Skylase system has proven to be very valuable in our public outreach (both for pay on Saturday evenings and for free during the regular school day when various local community groups visit. Our school system is hosting a "Business Night Out" at Horizons Unlimited and one of the attractions will be 10 minute laser tasters shown several times throughout the event.

A new 3rd grade program, *Stars of the Night Sky*, not only teaches students how to read and use a star map, but also uses the live sky to learn to recognize the constellations on the map. The class incorporates information about seasonal constellations, the ecliptic, and the changing position of star pictures due to daily motion. At the end of the lesson, we watch AVI's *Legends of the Stars: Perseus and*

Andromeda or *Orion* depending on the season.

We have recently hung exhibits of Hubble images (one of my door prizes at SEPA in Lafayette!!) and Spitzer images as a way to introduce visitors to IYA. In addition, we plan to have a week-long summer camp on astronomy. Each of our monthly Saturday openings will pull appropriate information from the IYA website to heighten awareness of this observation.

TENNESSEE
contact: Kris McCall
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Bays Mountain Planetarium
Kingsport, TN

Adam Thanz reports: Bays Mountain is all a buzz with the upcoming opening of our newly refurbished planetarium theater. You've read and heard about this project for quite a while. It is starting to look like a real planetarium now instead of a construction mess. As I write this in mid December, the dome, sloped floor, carpeting, lighting, walls, and custom control desk are installed. Jon Frantz from East Coast Controls is arriving today to install the advanced LED cove lighting system. The seats from Greystone will be installed Friday. Some electrical work, the audio system, and the ZKP-4 & Spacegate Quinto from Zeiss are yet to come. Due to a small delay, we will be opening to the public on March 7, 2009. Jason and I are very excited as this is truly a "Dream Planetarium." It will have all sorts of innovative ways to educate and inspire. It will also be a very cool environment as well. Most of the construction is being handled by a local contractor. But specialty items to install are, of course, special. The Ultimate Seam dome was fabricated and installed by Astro-Tec. We were quite impressed by their professionalism and quality of craftsmanship. The dome is great and will be a great compliment to the stringent needs of full-

dome video. The program we will open with is a complete in-house show production that combines full-dome video with the stellar ZKP-4 sky. It is called *Connections*. It shows how nature, planets, constellations, stars, and galaxies are all connected. It will be a new type of program for us, style wise. I think it will be quite popular. You'll probably get to see it during the 2010 SEPA conference.

Speaking of the 2010 conference, I have been very busy arranging the main speaker, the field trips, hotel, meeting areas, etc. There are only a few loose ends, but the schedule, activities, and budget are already set. I do not want to reveal any details until the 2009 conference when we do a presentation about it. I know you will not want to miss this extraordinary experience. The dates are June 8-12, 2010. The theme is "The Art of Storytelling." Be ready to have a great time and learn a lot.

By the time you read this, we will be close to our opening but also starting up our free, Spring Star-Watch programs. That's where we use our telescopes to show the public the real night sky. They are held every Saturday in March & April, starting at dusk. Poor weather means we'll be in the theater, but now with a really cool system to use! We'll also be very occupied with school shows as spring is our busy school time. We are creating completely new school shows. We will even change how we do our shows as the theater layout is different. The new floor plan will enable us to be easily seen as well as allowing us proximity. We'll also be wireless so we won't be tied to a console. Some exciting times ahead!

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

Kelly Herbst reports: Be careful what you wish for,

you may get it! We've reopened the theater and have been turning people away left and right trying not to wear our staff to a frazzle. Both the new laser system and the new digital projection system are drawing sold-out crowds and everyone is just amazed and what we can do now. We don't do a show that doesn't draw oohs and aahs from the crowd.

My favorite story thus far: during any given performance of *Star of Wonder: Mystery of the Christmas Star*, some of the adults in the audience gasp or otherwise express amazement when the first full-dome image comes up and you are suddenly inside Cologne Cathedral in Germany. At one show, however, it was a young man of about ten who proclaimed, "That is awesome!" I couldn't agree more.

By the time you read this, we will have finished our Christmas run and a new slate of shows will have taken over. Beginning January 2, we will be running Bays Mountain's The Friendly Stars for what we lovingly call "The Stroller Brigade" – the preschoolers and their moms that spend their early afternoons hanging out at the museum. We'll also be running Spitz's *Oasis in Space*...at least until our next changing exhibit gallery exhibition opens (Microbes!) and then we'll switch to E&S' *Microcosm*. We'll round out the line-up with *Virginia Skies*, our live sky program, on the weekends.

John and I are in frantic production mode, trying to rework all of our school programs as we prepare to reopen to school children in January. It seems like every time we turn our systems on, we learn something new. It's a brave new world in our theater, and we're having a lot of fun exploring it. And there's so much to learn! Hope everyone has a wonderful 2009 and hooray for the International Year of Astronomy!

Pretlow Planetarium
Old Dominion University
Norfolk, VA

Bruce Hanna reports: I will be retiring in Jan. after 32 years as the director of Old Dominion's Pretlow Planetarium. Dr. Declan De Paor will take over as

director. He can be reached at ddepaor@odu.edu.

Radford University Planetarium
Radford University
Norfolk, VA

Rhett Herman reports: Here at the Radford University Planetarium it's been a typically busy year. We set an overall attendance record with 2,760 visitors in 2008. And we also had the highest yearly "Science Day" attendance totaling 1,040 with the bulk of those visitors being middle schoolers from the surrounding area.

There is also a somewhat sad note, at least for me and for the RU Planetarium. It all started in the spring of 2004 when a skinny high schooler was wandering around the hallway in front of the planetarium on a Saturday morning. I was only wandering around doing some other work and just happened to stumble upon this youngster. He was very interested in the planetarium and told me that he wandered away from his scheduled campus recruiting tour when he knew he was close to our building. His name was Dustin Lackey and I invited him into the planetarium to take a look around.

Dustin loved the place and we started talking about his astronomy background. Dustin had taken the single class his northern Virginia high school had offered in astronomy. But he wanted more. For his last two years in high school he took independent study classes in astronomy, and worked a bit with the small planetarium (suspended dome with nice projector) in his high school. He asked me if there was a way that he could help out with the planetarium at times while at RU. I stunned him when I told him that he could actually have a workstudy job as part of his financial aid package, and that his workstudy assignment could be working with me to run the planetarium shows. He was extremely excited about this prospect, and I hoped that he would eventually choose to attend RU.

I was pleasantly surprised when he showed up the following fall and I quickly started his training. At the time I had all our shows on slide projectors. It took a lot of work to coordinate the soundtrack computer along with 6 slide projectors since each pro-

jector had its own manual control. We did not have any fancy multi-projector control. He had to coordinate our analog SG-8 star projector with those and a few "special effects" that I had rigged up. Dustin caught on quickly and he worked his first solo show within several weeks.

Over the next 4.5 years Dustin came to regard the planetarium as his own, and I was definitely glad to see that. That meant that when Dustin was in there running a show, it was the same as if I were running things. He was very enthusiastic, and took great pride in his unscripted sky tours using only the star projector. He was very popular with not only the off-campus visitors but also with his fellow students. He could connect with them better than I since they would enthusiastically listen to one of their own.

But now the sad part: Dustin has had the audacity to finish his degree and graduate! As of December 20, 2008 Dustin is taking his physics major and astronomy minor out into the real world to look for a job, one that he hopes to secure in the planetarium and/or science museum field. I hate to see him go, but I wish him the best of luck. And yes, I have asked repeatedly if he has any younger siblings who could take over for him. Unfortunately for me, the answer was always no.

The RU Planetarium will reopen with the start of the spring semester but it just won't be the same without Dustin.

Thomas Jefferson HS Planetarium
Richmond, VA

Leslie Bochenski reports: I've had a busy fall semester with classes from the 3rd and 4th grades from all over the Richmond Public School system. I've been *Spinning in Space* with 4th graders, a program on rotation and revolution. I also performed *Keep Your Eyes on the MOON* for 3rd grade classes; this was a new program this year, designed to introduce the pattern of the moon phases, and the terms waxing and waning.

When school resumes in January, I will be seeing the Middle School students to go *On the Lookout*

for *Planets*.

Right now, however, I am enjoying our two week Winter Break, as evidenced by the fact that I am typing this at 1 in the afternoon while wearing my pajamas.

Cover Picture

Hubble Soft Capture Mechanism

Suresh Atapattu
Buehler Planetarium & Observatory
Davie, FL

This image was photographed inside the NASA clean room at KSC where the Hubble Flight Hardware is being prepared for the much delayed final servicing mission to the HST. This image shows the Soft Capture Mechanism (SCM). It is the ring-like device that attaches to Hubble's aft bulkhead and situated in the middle top of picture. It is in its payload configuration with technicians putting the final touches on it.

As part of Servicing Mission 4, engineers have developed the Soft Capture and Rendezvous System, or SCRS, which will enable the future rendezvous, capture, and safe disposal of Hubble by either a crewed or robotic mission.

The SCM will launch on a turn-table like piece of equipment called the Flight Support System (FSS) within the cargo bay of the Shuttle. The FSS serves as the berthing platform for Hubble and provides all electrical and mechanical interfaces between the Shuttle and the telescope while Hubble is docked.

Photographed using a Canon 1DsMkII at F/32; 1/40 second; ISO 320; 25mm lens.

