

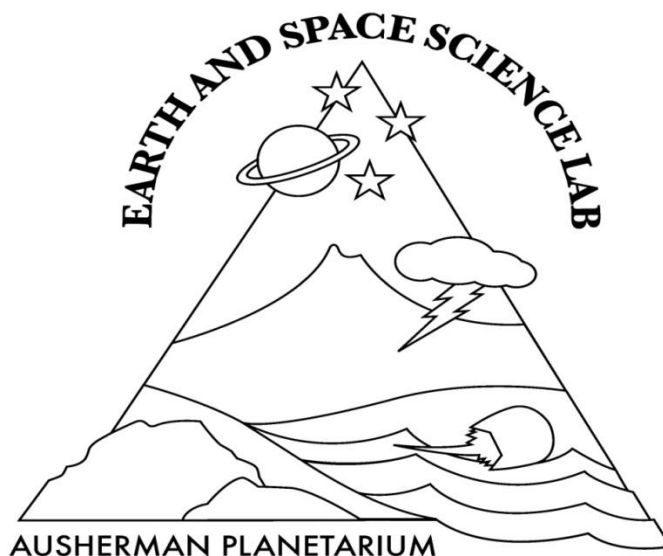
Middle Atlantic Planetarium Society



Conference Agenda

“Spaceship Earth: Educating its Crew”

July 17th – July 20th, 2013



*Thanks to our 2013 conference sponsors for
their generous support!*

1st Magnitude

Audio Visual Imagineering

GOTO INC

Spitz, Inc

Sky-Skan

2nd Magnitude

Evans & Sutherland

RSA Cosmos

3rd Magnitude

Ash Enterprises International, Inc.

Prismatic Magic Laser Programs

Mirage 3D

4th Magnitude

Chroma Cove

Seiler Instrument

Konica-Minolta and Magna Tech Electronic Company

East Coast Control Systems

Conference Agenda

“Spaceship Earth: Educating Its Crew”



Wednesday, July 17th

5:00 p.m. - Registration at the Earth and Space Science Lab
(Transportation to and from hotel is on your own.)

- Welcome, Tour the building, Pet Drupal

5:30 p.m. - Buffet Dinner

- Sponsored by: **Ash Enterprises International, Inc., Mirage 3D,
and Prismatic Magic Laser Programs**

6:30 - 7:00 p.m.- Official Welcome in the Ausherman Planetarium

Ann Bonitatibas, Chief Operating Officer, Frederick County Public Schools

“Moons of Jupiter “- in front of a captured, er, captive audience

*“Planets, Deep Space Objects, Seasonal Stars” – Demonstration of the
Chronos/D3 Hybrid system as used in our classroom presentations*

7:00 - 7:30 p.m. – *“Super Volcanoes”* - a full dome show presented by **Spitz, Inc.**

7:30 - 7:45 p.m. - Break (Last call for the buffet!)

7:45 - 9:00 p.m. – *“The Missing Moon Mystery”* - **Sam Storch, Retired/Domeless**

“RADIANT Laser Systems” - **Chris Volpe, Ph.D., Prismatic Magic Laser Programs**

“To See the Universe” - **Patty Seaton, Howard B. Owens Science Center**

“A Planet for Goldilocks” - a full dome show presented by **GOTO INC**

9:00 - 9:20 p.m. - Break

9:20 – 10:00 p.m. - *“Hollywood Astronomers, Scaling the Earth, Sun, Alpha Centauri, Galaxies, and Light Speed”* – **Jeff Grills, Earth and Space Science Lab**

“The Blind Man with the Starry Eyes” - a full dome show presented by **RSA Cosmos**

Announcements

10:00 – 11:00 p.m. - Natelli Observatory will be available for observations.

10:30 p.m. - Taurus Session - Holiday Inn Hospitality Suite
Sponsored by: **Ash Enterprises International, Inc., GOTO INC, RSA Cosmos**

10:30 p.m. - Executive Board Meeting – Holiday Inn

Program Description for Wednesday, July 17th, 2013

“The Missing Moon Mystery” – **Sam Storch, Retired and Domeless**

A student’s friend, living in Barrow, AK (latitude 70°N) claims that nobody there ever sees a full moon in June. Can this be true? If so, why? We will investigate full moons in both June and in December, from our home latitude as well as from the latitude of Barrow, AK.

“RADIANT Laser Systems” - **Chris Volpe, PhD, Prismatic Magic Laser Programs**

Enjoy the latest advancements in their innovative RADIANT Laser System. RADIANT is a complete laser show solution that is unique because it equally supports both entertainment and STEM outreach activities. Enjoy several samples from their new *“Lasers in Astronomy”* laser show.

“To See the Universe” – **Patty Seaton, Howard B. Owens Science Center**

Inspired by a comment from a student in Brescia, Italy: “It’s amazing to see the universe and not just to study it,” a brief lesson under the stars is designed more to inspire than to instruct.

“Hollywood Astronomers, a Scale Model of the Earth, Sun, Alpha Centauri, Galaxies, and Light Speed!” - **Jeff Grills, Earth and Space Science Lab**

It is easy to pontificate! It is fun to be dramatic and speak with conviction about something that you have no skills to accomplish yourself or something that is physically impossible to do. If you think it is a stretch to grasp the size of the universe, the great expanses between objects, the number of stars, or the impossibility of space travel with our present understanding of physics, try this entertaining model with your students to begin to grasp the size of the universe.

Thursday, July 18th

6:30 - 8:00 a.m. - Breakfast (Travel to ESSL on your own)

7:00 a.m. - Committee Meetings – Hotel Courtyard

8:00-8:30 a.m.- Three Scavenger Hunts at the ESSL – Big Prizes!

- 1) Secrets of the ESSL, 2) Treasure the Arts (on Nexus 10 tablets)
 - 3) Arboretum Scavenger Hunt for those rugged enough to participate.
- Visit and tour the 2 acre arboretum adjacent to the ESSL. High heels are not recommended. (South Frederick Arboretum – located next to the ESSL)

8:30 - 9:30 a.m. - Vendor Hall open - Official Vendor Welcome (Gymnasium)
Refreshments: Sponsored by: **Seiler Instrument**

9:30 - 10:40 a.m. - Plenary talks (Cafeteria)

“New Astronomy Curriculum for Dome Education” - **Dr. David Bradstreet, Spitz Inc.**

“The Making of the Full Dome Film: Dinosaurs at Dusk” - **Robin Sip, Mirage 3D**

“The IPS Connection” – **Patty Seaton, Howard B. Owens Science Center**

“A Variety of Light Demonstrations” - **Chris Volpe, Ph.D.,
Prismatic Magic Laser Programs**

10:55 a.m. – 12:10 p.m. - Dome Time (Ausherman Planetarium)

“Full Dome Projector, Laser Shows, and Interactive Weather Modules”
- **JoAnne Young, Audio Visual Imagineering**

“BUT WAIT, THERE’S MORE: Creating a ‘Package-deal’ with a Full-dome Show,”
- **Deb Lawson, The Children’s Museum of Indianapolis**

“Warped Media Full Dome System” – **Eric Melenbrink,
Ash Enterprises International, Inc.**

“The Sky to Watch - Comet Ison” – **Alan Davenport, Maynard F. Jordan Planetarium**

12:20 p.m. - Lunch (Cafeteria) Sponsored by: **RSA Cosmos**

1:00 – 1:30 p.m. - *“Finding Space Under the Stars”* Christopher Horne, Ph.D.
Curriculum Specialist for Elementary Mathematics, Frederick County Public Schools

1:30 – 1:50 p.m. - Photo shoot on the ESSL steps

1:50 – 3:10 p.m. Dome/Plenary Time (Ausherman Planetarium)

“Chronos Hybrid, Full Dome Programs, and Much More!” – GOTO INC, Ken Miller

“Constellation Competition” – Jeff Grills, Earth and Space Science Lab

“What’s New at E&S?” - Scott Niskach, Evans & Sutherland

“What’s New with Ash Enterprises?” - Eric Melenbrink, Ash Enterprises International, Inc.,

3:10 – 3:25 p.m. - Break Sponsored by: **ChromaCove**

3:25 - 4:10 p.m. - Workshops (45 minutes) (Sign-up on Wednesday at registration)

“Raising a Million \$ - Creative Ways to Build/Fund Your Planetarium”
- Jeff Grills, Earth and Space Science Lab (Planetarium) (25)

“New Horizons to Pluto” - April Whitt, Fernbank Science Center (Blue Room) (25)

“Earth, Sun, Moon Models” – Mark Bowman, Earth and Space Science Lab
(Brown Room) (25)

4:10 – 4:50 p.m. - Dome Time (Ausherman Planetarium)

“Sky-Skan Corporate Presentation” – Paul Tetu, Sky-Skan

“Trailers and Outtakes from Mirage 3D “ - Robin Sip, Mirage 3D

4:50 – 5:20 p.m. – Travel to Delaplaine Visual Art Studio – Groups A - 4:50 Group B - 5:10.

5:20 - 6:00 p.m. - Tour art exhibits, Appetizers served

Adult Beverages – Sponsored by: **Konica Minolta and Magnum Tech Electric Company**

6:00 - 6:50 p.m. - Dinner - Sponsored by: **Audio Visual Imagineering and Sky-Skan**

6:50 - 7:30 p.m. - *“The Next Step In Space”* - Stephanie Bednarek. Space X

7:30 - 8:00 p.m. - return to the ESSL - Group A – 7:30 Group B – 7:45

8:00 – 8:45 p.m. - Dome/Movie Time (Ausherman Planetarium)

“The Sky to Watch - Part 2” - **Alan Davenport, Maynard F. Jordan Planetarium**

“Robot Explorers” - a full dome show presented by **Evans and Sutherland**

8:45 -9:00 p.m. - Break

9:00 – 10:00 p.m. - Dome/Movie Time (Ausherman Planetarium)

“Moon Phases in the Dome” - **Steve Russo ,
East Kentucky Science Center and Planetarium**

“Dinosaurs at Dusk” - a full dome show presented by **Mirage 3D**

10:00 – 11:00 p.m. - Natelli Observatory open/Return to Hotel

10:30 p.m. - Taurus Session at the Holiday Inn Hospitality Suite

Sponsored by: **Ash Enterprises International, Inc., GOTO INC, RSA Cosmos**

Program Descriptions for Thursday, July 18th, 2013

Dome/Plenary Time

"New Astronomy Curriculum for Dome Education" – Spitz, Inc

Dr. David Bradstreet will introduce Volume 2 of the Spitz Full dome Curriculum. The new series of classes and mini-lessons uses unique, never-before-seen visualizations to teach diverse subjects like Time and Time Keeping, Eclipses, Stellar Sizes, Planet Positions, and even US History.

"The Making of Dinosaurs at Dusk"- Mirage 3D

Robin Sip, of Mirage 3D, will highlight their efforts in developing their newest full dome feature film.

"The IPS Connection" - Patty Seaton, Howard B. Owens Science Center

I attended my very first International Planetarium Society (IPS) conference, in Baton Rouge, LA. It was life changing. Over 700 delegates from 40 different countries were in attendance. Through contacts made there, I spent spring break in Rio de Janeiro, Brazil, in the home of new friends. Inspired, I applied for the "Two Weeks in Italy for an American Planetarium Operator" program. I was accepted and went to Perugia, Italy. These international connections have had a lasting impact. May I encourage you to do the same!!

"Prismatic Magic Laser Programs" - Chris Volpe, Ph.D. - Chris shares some easy, crowd-pleasing demonstrations of basic principals of optics and color using inexpensive lasers, LEDs, and other junk that you have lying around.

"Audio Visual Imagineering" – JoAnne Young - We will present our new full dome projector, Omnistar powered by Uniview, the first module of our newest interactive full dome modular show called "The Weather" for K-2 , and a 4 minute full dome power-packed laser show.

"BUT WAIT, THERE'S MORE: Creating a "Package-deal" with a Full-dome Show" – Deb Lawson

The Children's Museum of Indianapolis developed and launched FLIGHT ADVENTURES, our first full-dome show. The show offered great connected content - programs, activities, interactives, displays, web content - all produced by a skilled team, based on common goals and objectives. A virtual "package deal," the show will be described, with a focus on the associated content, giving visitors and school groups a variety of companion museum attractions and follow-up to keep interest and ROI going strong.

"Warped Media Full Dome System" - Ash Enterprises International, Inc., Eric Melenbrink

The Warped Media full dome system developed by Ash will be demonstrated. Mounted at the side of the planetarium, the Warped Media system offers an affordable digital projection device to compliment your center mounted optical machine.

"The Sky to Watch 2013 - Comet Ison" - Alan Davenport, Maynard F. Jordan Planetarium

Using the planetarium sky, we will step through the best viewing of this exciting celestial event in the real sky over the MAPS region.

“Chronos Hybrid, Full Dome Programs, and Much More!” – Ken Miller, GOTO INC

See a new look at the HYBRID concept and actual photographic comparisons of digital vs. optical skies. Get a taste of two of GOTO INC's newest full dome programs, *“A Planet for Goldilocks,”* and *“Journey to Black Hole.”* Finally take a tour of the CHRONOS HYBRID and its amazing teaching capabilities.

“A Hybrid Constellation Competition” – Jeff Grills, Earth and Space Science Lab

All planetarians, vendors, and guests who think they know, and even those who don't know anything about constellations are encouraged to partake in a polite, civilized, studious, and good natured constellation competition using the hybrid system. Red lights, clipboards, and pencils will be provided. Prize – a case of Adult Beverages brewed in Frederick!

“What's New at E&S?” - Scott Niskach, Evans & Sutherland

What's new at E&S? An update on the exciting Digistar 5 full dome capabilities and a content montage of what E&S has to offer will take place.

“What's New with Ash Enterprises!” - Eric Melenbrink, Ash Enterprises International, Inc.

An update will be provided on the latest projects and products available from our company.

Workshops - Sign ups available on Wednesday and Thursday

“New Horizons to Pluto” – April Whitt – Fernbank Science Center (25)

In 2004, a small robot spacecraft left Earth for the outer solar system. Two summers from now, we will get our first close-up images of the dwarf planet Pluto. Participants will receive activities for sharing the excitement with their own audiences, some background information from the scientists leading the mission, and lots of free materials.

“Earth, Sun, Moon Models” - Mark Bowman, Earth and Space Science Lab (20)

This activity is designed to give teachers and students a concrete/hands-on option to explore the relative position and motion concepts of rotation, revolution, Earth's tilt on its axis, intensity of light and heat, seasonal changes, moon phases, and eclipses. Planetarians may want use these models as a pre or post planetarium experience.

“Raising a Million \$ - Creative Ways to Build/Fund Your Planetarium” - Jeff Grills, Earth and Space Science Lab - (1 Person @\$1,000,000, or 25 people may come free)

The new Earth and Space Science Lab was built with state, county, and private funding. However, the private funding is what generated the enthusiasm and brought the state and the county to the table. Learn about what we did, who contributed, and how we convinced them. Participants should be ready to share the ways their facilities are being funded.

Dome/Plenary Time

“Sky-Skan Corporate Presentation” – Paul Tetu, Sky-Skan

Sky-Skan will present a pre-rendered corporate overview and trailers of new full dome content.

“Trailers and Outtakes from Mirage 3D “ - Robin Sip, Mirage 3D

An overview of all Mirage3D shows will be presented.

“The Sky to Watch 2013 – Other Celestial Events” - Alan Davenport, Maynard F. Jordan

Using the planetarium sky, we will step through the best night scenery and events of interest to the public and planetarium professionals. A parade of planets and an eclipse will be shown as they will display in the real sky over the MAPS region.

“Moon Phases in the Dome” – Steve Russo ,

East Kentucky Science Center and Planetarium

Friday, July 18th

6:30 - 8:00 a.m. - Breakfast, Travel to ESSL on your own

8:30 – 9:40 a.m. - MAPS Business Meeting (cafeteria) - All are invited to attend

9:40 – 10:30 a.m. - Plenary time (cafeteria)

“Who is RSA Cosmos?” - **Anthony Pereira, RSA Cosmos**

“A Weather Module for Grade 1” – **Joanne Young, Audio Video Imagineering**

“Highlights from Seiler Instrument” – **Laura Misajet , Seiler Instrument**

10:30 – 11:20 a.m. - Vendor Hall Open

Refreshments sponsored by: **East Coast Control Systems**

11:05 -11:20 a.m. - Delegates with posters report to duty in the vendor hall.

11:20 – 12:15 p.m. - Plenary time (cafeteria)

“Off-Worlding Odyssey” - **Kyra Elliot, Louisiana Art & Science Museum**

“30th Anniversary of Digistar” - **Scott Niskach, Evans and Sutherland**

“What’s New at Konica Minolta and Comet Ison”

- **Konica-Minolta and Magna Tech Electronic Company**

“Effective Musical Scoring - What I've learned over the Last 25 Years”

- **Stephen Dubois, Whitworth Ferguson Planetarium**

12:15 p.m. – 1:30 p.m. - Lunch (Cafeteria) Sponsored by: **Evans and Sutherland**

Guest Speaker: *“Mapping Geologic History in Margaritifer Terra, Mars”*

- **Dr. Kevin Williams, Buffalo State, SUNY**

1:40 – 3:00 p.m. - Dome/Plenary Time (Ausherman Planetarium)

“SciDome XD, SciTouch, and Much More!” – **Scott Huggins, Spitz, Inc.**

“Nexus 10 tablets in the Planetarium”– **ESSL “staff”**

“Discover the Wonders of the Universe with RSA Cosmos”

– **Anthony Pereira, RSA Cosmos**

“ChromaCove Update!” - **Chuck Rau, ChromaCove**

3:00 – 3:15 p.m. Break sponsored by: **Konica Minolta and Magnum Tech Electric Company**

3:15 – 4:10 p.m. – Dome/Plenary Time (Ausherman Planetarium)

“African Cosmos” - **Kevin Conod, Newark Museum/Dreyfuss Planetarium**

“Incorporating Scientific Discoveries into Planetarium Visualization”

– **Mike Sperry, Sky-Skan**

“The Reasons for Choosing a GOTO Hybrid” - **Ken Miller, GOTO INC**

4:15 – 5:45 p.m. **Workshops** Sign-up at Wednesday’s registration or Thursday or Friday morning

3 - 90 minute workshops

“Planetarium Activities for Student Success” (20) Planetarium and Brown Room

– **Sue Button, Quarks to Clusters**

“Blender for Beginners” - **Participants MUST have their own laptops!** (ESSL Office) (10)

Waylena McCully - William M. Staerkel Planetarium

“Adding Live and Real Data to your Earth Science Programs” (25)

Planetarium and Brown Room – **Patrick McQuillan, IRIS**

2 – 45 minute workshops

“From Solar System to Exoplanets – Do It in Live Session!” (blue room) **(20)**

- 4:10 – 4:55 p.m.- Session 1 - **Anthony Pereira, RSA Cosmos**

“Nexus 10 Tablets in your Facility” (blue room) (20)

- 4:55 – 5:45 p.m. - Session 2 – **Dawn Getzandanner, Earth and Space Science Lab**

5:45 p.m. - Return to hotel

6:30 p.m. The MAPS Conference Banquet Commences in the Holiday Inn Banquet Room
Sponsored by: **GOTO INC and Spitz, Inc.**

6:30 p.m. – 7:30 p.m. - Cash bar/appetizers

7:30 p.m. – 8:30 p.m. - Dinner

8:30 – 9:30 Margaret Noble Address – “Lost in Space: Now What”

Don Knapp, Retired/Domeless

Taurus Session at the Holiday Inn Hospitality Suite

Sponsored by: **Ash Enterprises International, Inc., GOTO INC, RSA Cosmos**

Programming Description for Friday, July 19th

"Who is RSA Cosmos?" - **Anthony Pereira, RSA Cosmos**

Choose RSA Cosmos and work with a partner who can help you design, implement and support your project. Our partnership with Ash Enterprises and GOTO INC has been established to answer all kinds of requests in the US. Yield to the temptation and collaborate with RSA Cosmos.

"A Weather Module for Grade 1" - **Joanne Young, Audio Video Imagineering**

We are planning to present the first module "The Weather" (flat screen version) with all interactive components to demonstrate the whole live interactive part of the show as if the audience were a first grade class.

"Highlights from Seiler Instruments" - **Laura Misajet , Seiler Instruments**

Carl Zeiss's philosophy and quality may have remained the same over the decades but his planetarium projection technology sure has advanced. Only Carl Zeiss provides both optical AND digital from one manufacturer. Carl Zeiss is the only large manufacturer that offers SCISS Uniview with all its digital installations and is the only planetarium vendor that designs and manufactures its own digital projector specifically for planetarium projection. Join us for highlights of what makes Carl Zeiss truly unique and the industry's high-end provider.

"Off-Worlding Odyssey" - **Kyra Elliot, Louisiana Art & Science Museum**

Wild adventures span the solar system! Zip lining on the scorched Mercury, snowmobiling on Pluto, bungee jumping into outer space from an asteroid, diving in a submersible to see the volcanoes of Venus, hang gliding over the hydrocarbon lakes of Titan, riding a low-g monster truck along a lunar crater wall, rappelling into the solar system's largest canyon, spelunking in an ice cave on Europa, or jet packing in a geyser's spray on Triton - we can experience these off-world adventures now as we wait for the future to arrive. This is the second show written and produced by a partnership between Rice University, the Houston Museum of Natural History and the Louisiana Art & Science Museum and funded by a NASA grant.

"30th Anniversary of Digistar" - **Scott Hiskach, Evans and Sutherland**

This year E&S celebrates 30 years of Digistar. See what is new this year with Digistar 5.

"What's New at Konica Minolta and Comet Ison"

Philip Groce, Konica-Minolta and Magna Tech Electronic Company

What's new from Konica-Minolta and Magna Tech Electronic Company as well as the latest information on Comet ISON.

"Effective Musical Scoring – 'What I've learned over the Last 25 Years'"

Stephen Dubois, Whitworth Ferguson Planetarium

Music can have an incredible impact on the overall quality of a narrated or live show. Over the last quarter century, and after dozens of programs, I will share some tips and techniques to make presentations come to life with music.

“SciDome XD, SciTouch, and Much More!” – **Scott Huggins, Spitz, Inc.**

Spitz will demonstrate the capabilities of the **SciDome XD** digital planetarium. We'll explore fulldome education with *“The Layered Earth,”* and *“Starry Night Dome”* and share an in-depth look at the new **SciTouch** hand-held dome controller. SciTouch is a revolutionary new teaching interface, using infrared laser for direct dome control of dome visuals and commands.

“Nexus 10 tablets in the Planetarium”– **ESSL “staff”**

Use a Nexus 10 tablet in the planetarium to have the students identify various constellations, planets and other celestial bodies – as opposed to telling the students what they are. This will be the first time we have used all 60 tablets at once! Let the chaos begin!

“Discover the Wonders of the Universe with RSA Cosmos” – **Anthony Pereira, RSA Cosmos**

Exoplanets systems with their goldilocks zone, auroras and magnetosphere, the sun like you would see it in a telescope and much more. Experience the unique features of SkyExplorer V3!

“ChromaCove Update!” - **Chuck Rau, ChromaCove**

Here's the latest scoop on ChromaCove's LED lighting system and an update about our recent expansion into a new manufacturing facility in Cleveland, Ohio.

“African Cosmos” - **Kevin Conod, Newark Museum/Dreyfuss Planetarium**

The Newark Museum is fortunate to be hosting the Smithsonian's *African Cosmos* exhibit this year. Organized by the National Museum of African Art, *African Cosmos: Stellar Arts* shows how the sun, moon, stars, and the phenomena of lightning and rainbows inspired the arts of Africa for thousands of years. To compliment the exhibition, the staff of the Dreyfuss Planetarium presented programs, activities and a simulation of the Northern Lights by a South African artist.

“Incorporating Scientific Discoveries into Planetarium Visualization” – **Mike Sperry, Sky-Skan**

New scientific discoveries are happening all the time as telescopes and instruments advance and new data rolls in. In this session we will focus on new discoveries and how to prepare the data for visualization on the dome.

“The Reasons for Choosing a GOTO Hybrid” - **Ken Miller, GOTO INC**

Ken Miller will discuss owners' reasoning for choosing GOTO HYBRIDS, and show some recent installations, including some in the USA, Europe, and Asia. As a special feature.... he will finish EARLY! So don't be late!

90 Minute Workshops – Friday, July 19th

“Planetarium Activities for Student Success” (20) – Sue Button, Quarks to Clusters

During the first half of this workshop Volume 8 of the PASS series of Planetarium Lessons, *Colors from Space?* will be explored. Discuss how to help students deepen their understanding of why scientists are interested in colors from space by guiding them through a series of activities. They will "travel" to an imaginary planet circling a red, blue, or green sun, experiment with color filters and diffraction gratings. We will also look at related classroom activities including observing spectra, making secret messages that can be decoded only with color filters, and then using the same filters to view nebulae and planets.

During the second half of this workshop Volume 12 of the PASS series of Planetarium Lessons, *Stonehenge*, will be explored. We will look at how students observe the apparent motion of the stars, sun, and moon can investigate the possibility that the ancient ruins of Stonehenge could have been used by its builders as a gigantic astronomical observatory and calendar. Classroom activities provided in this lesson include making a Solar Motion Demonstrator and recording sunrise/sunset positions.

“Blender for Beginners” – Waylena McCully - William M. Staerke Planetarium (10) **Must have own laptop!!!**

Get a basic introduction to 3D production with Blender, a free, open-source tool that works on most computer operating systems. Blender has been used to create professional-quality movies, and is now being used for planetarium show production around the world, for both full dome and traditional presentation facilities.

Learn how to navigate the Blender interface, create and animate simple objects in 3D, and use freely available 3D textures to create a simple Earth-Moon system. Participants must bring their own laptops. An external mouse is highly recommended. Please provide active email address for further up-dates.

“Adding Live and Real Data to your Earth Science Programs” – Patrick McQuillan, IRIS

IRIS (Incorporated Research Institutions for Seismology) has a wide variety of freely available earth science educational materials. Many of these materials use real data to explain earth science concepts (plate tectonics, plate motion, fault locations, internal structure of the Earth). In this workshop, we will explore several of the online computer resources that will allow you to present school programs, planetarium shows, and summer camps using real scientific data.

Learn how to make use of the amazing US Array resource. By becoming the “earthquake expert” in your town, you will be able to take advantage of the increased press interest in US Array and earthquakes in general.

45 Minute Workshops

"From Solar System to Exoplanets. Do it in Live Session!" - **Anthony Pereira, RSA Cosmos**

Come and enhance your knowledge and the latest discoveries of the universe with Skyexplorer V3. Thanks to this workshop, you will be able to interact with your public preparing didactic and captivating content!

"Nexus 10 Tablets in your Facility" – **Dawn Getzandanner, Earth and Space Science Lab**

Open up a tablet and an 'app' and set the kids loose! Hold on. It's not that simple. Join us for a wireless look at how the ESSL is beginning the process of incorporating the use of tablets at our facility. Participants can use the Nexus 10 tablets to interact with some of the various stations around the building.

Thursday's Speakers

"Finding Space Under the Stars" - **Christopher Horne, Ph.D., Frederick County Public Schools**

In Richard Louv's book, *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, he addresses many concerns with the current American culture that too often finds our young people indoors and away from nature.

Very similar concerns exist as our next generation of young learners are sitting inside at night in front of TVs and video games rather than taking the time to explore the wonders of the heavens. How can we better make the case for the value and joy in studying the night sky? What can we do to encourage children and their parents to unplug and look up? How can we be part of the solution to Celestial-Deficit Disorder?

Chris has been employed by the Frederick County school system in a variety of positions for over 20 years.

"The Next Step in Space" - **Stephanie Bednarek, Government Affairs Manager, SpaceX**

Stephanie Bednarek is the Government Affairs Manager at Space Exploration Technologies (SpaceX) which designs, manufactures, and launches the world's most advanced rockets and spacecraft. In this role, she manages all aspects of executive branch, legislative, state and federal agency affairs including strategy, policy development, and research.

Prior to joining SpaceX, Stephanie held positions at the George Washington University Space Policy Institute, Space Foundation, Space Studies Board at the National Research Council, Aerospace Industries Association, and Orbital Sciences Corp. She received a B.S. degree in aerospace engineering from the University of Virginia and an M.A. in science and technology policy from George Washington University. Stephanie recently served as the Vice President of Programs for Women in Aerospace.

Friday's Speakers

"Mapping Geologic History in Margaritifer Terra, Mars" - **Dr. Kevin Williams, Buffalo State, SUNY**

Mars has been mapped since the early days of Lowell and others, but it wasn't until flyby and orbital spacecraft returned more detailed images that the history of the Red Planet could be studied in a realistic way. During the 1970s, Mariner 9 and the Viking Orbiters returned images that allowed geologists to study Mars' variety of geologic features in detail. Still, the resolution of those images often didn't show enough detail to more accurately describe the Martian surface.

Since the late 1990s, more images have been returned from one European and three U.S. orbiters. These newer images provide amazing detail that has led to interpretations that were not possible with Viking Orbiter images. They have provided the level of detail needed to unravel the geologic history of part of Margaritifer Terra, an interesting area on Mars that was shaped by a combination of impact cratering, volcanism, fluvial processes, and wind. Mapping results show an ancient surface where water and heat may have once provided an environment suitable for life.

Kevin K. Williams is an associate professor in the Department of Earth Sciences and Science Education at Buffalo State, SUNY. In addition to teaching courses in geology, the solar system, geomorphology, and remote sensing, he has also included several dozen undergraduate students in his research, which focuses on geologic mapping of Mars and near-surface geophysical investigation of various areas on Earth using Ground Penetrating Radar (GPR).

Kevin received his Ph.D. in Planetary Geology from Arizona State University after which he spent four years as a post-doctoral researcher at the Center for Earth and Planetary Studies located at the Smithsonian Institution's National Air and Space Museum. He started at Buffalo State in 2006 and was appointed as director of the Whitworth Ferguson Planetarium in 2010.

Margaret Noble Address, 2013, *"Lost in Space: Now What?"*

- **Don Knapp, Retired/Domeless**

Don Knapp, a longtime member and pillar of the MAPS organization will deliver the 2013 Margaret Noble address speaking from a life of planetarium operation leading to his recent retirement. Don started in planetariums in 1972 with a BA in astrophysics from Indiana University. Through the years with his professional positions in four institutions, Don opened the skies to thousands of visitors in museums and school districts, and has played key roles in our own MAPS fellowship.

He is a past president of MAPS who also led the initiatives to start our web site, edited the Constellation, and published conference proceedings. Don has chaired our nominations committee and in his last year of a long planetarium career, he co-hosted the 2011 MAPS Conference. His talk, *"Lost in Space: Now What?"*, will enlighten us with characteristic light-hearted insights and the richness of his experience.

Saturday, July 20th

This day will take place at the Holiday Inn Conference Center

7:30 – 8:30 a.m.- Breakfast

8:30 – 10:00 a.m.- Plenary Sessions, Papers, Demonstrations

“An Update on Astronomy Education Research” – **Kim Small,**
Upper Dublin School District

“NGSS Update” – **Lee Ann Hennig, Thomas Jefferson High School for Sci & Tech**

“Homeless and Domeless: Are You Prepared for the Streets”
Tim Collins, Whitworth Ferguson Planetarium

10:00 - 10:20 a.m.- Break

10:30 - 11:15 a.m. - Plenary Sessions, Papers, Demonstrations

“Regarding James Orgren” – **Paul Krupinski**

“Mentorship: Dr. James Orgren” - **Tim Collins, Whitworth Ferguson Planetarium**

“Life and Death of Stars” – **Mark Bowman, Earth and Space Science Lab**

“IRIS Update” – **Patrick McQuillan, IRIS**

11:20 - Door Prizes – The Fun Never Stops!!

“Mentorship: Dr. James Orgren” - **Tim Collins, Whitworth Ferguson Planetarium**

For each of us, there is some influence that affected our decisions that lead us to our common field. It may have been an event, or it may have been a person. For many of us, we have a direct tie to the Earth and Space Science Lab in Dr. James Orgren.

“Homeless and Domeless: Are You Prepared for the Streets”

Tim Collins, Whitworth Ferguson Planetarium

As technology improves, many facilities are closing to upgrade to newer systems. In some cases, an upgrade will take years. Are you prepared at your facility if this is the case? What will you do? How can you not fall out of the public eye?

“An Update on Astronomy Education Research” - **Kim Small, Upper Dublin School District**

An update of a two year longitudinal study of early elementary children’s understanding of observational astronomy concepts regarding the moon will be presented. Part of this research was funded by the MAPS Education Research Grant.

“Life and Death of Stars” – **Mark Bowman, Earth and Space Science Lab**

By the end of this balloon demonstration of the “Life and Death of Stars,” you should be able to answer the following questions and more –

- How were the stars arranged in order?
- What color stars are the youngest? Oldest?
- How are stars born?
- What is an exploding star called?
- Do all stars make a black hole?
- Can you explain how our sun was born and how it will die?

“Free Earth Science Animations, Lessons, Speakers, and Exhibit” – **Patrick McQuillan, IRIS**

Free resources for your programs and exhibits will be available.

Conference Poster Presentations

This year's conference posters will be on display in the vendor hall throughout the conference and at the Holiday Inn on Saturday morning. Poster presenters will be available at their respective posters during certain times of the conference.

"Universe in Transformation" – **Joseph Clinton, Retired/Domeless**

The poster presentation is a series of paper sculptures and accompanying digital animation inspired by the expansion of the Universe.

A CD Rom will be available explaining the thought behind the art form, the geometry behind them, a copy of the animation, and printable patterns for constructing the sculptures.

"MAPS Education Research Grant" – **Kim Small, Upper Dublin School District**

Learn more about the MAPS Education Research Grant. See how you can apply for this grant to help fund your own planetarium research.

"Life Beyond Earth" – **Wendy Ackerman, Maryland Science Center**

The Maryland Science Center's "Life Beyond Earth" exhibit presents the theme of Astrobiology and includes several tactile experiences for the visually impaired visitors. A companion Braille guide and large print exhibit guide are also available. Samples will be on hand at the conference and a variety of education outreach materials are available to take home.

"Scholarships to Enter Our Field" – **Thomas Hamilton,**

Hamilton Planetarium Scholarship Fund.

An application form for a scholarship fund will be available along with some additional information.

"IRIS Active Earth Monitor Display EarthScope Content Set"

– **Patrick McQuillan, IRIS**

Learn how to set up a free interactive Earth science display in your facility. EarthScope will have a dense array of seismometers on the East Coast for the next two years. Your facility will be no more than 35 km from a live seismic station. Show live data from this station in your programs.

Full Dome Shows that will be presented at this year's conference:

Spitz, Inc – ***“Super Volcanoes”***

GOTO INC – ***“A Planet for Goldilocks”***

Evans and Sutherland – ***“Robot Explorers”***

RSA Cosmos – ***“The Blind Man with the Starry Eyes”***

Mirage 3D – ***“Dinosaurs at Dusk”***