

Middle Atlantic Region from the International Space Station



Photo Courtesy of NASA

Middle Atlantic Planetarium Society 2014 Conference

Renew, Refresh, Revive!

September 10 – 13, 2014

Davis Planetarium at the Maryland Science Center
Baltimore, MD



Table of Contents

Maryland Science Center Map	p. 3
Wednesday Schedule	p. 5
Thursday Schedule	p. 7
Friday Schedule	p. 11
Saturday Schedule	p. 13

Program Descriptions

Demonstrations	p. 15
Guest Speakers	p. 16
Planetarium Program Showcase	p. 17
Posters	p. 18
Talks	p. 19
Workshops	p. 21

MAPS Executive/Conference Planning Committee

Alan Davenport, President
Jerry Vinski, President Elect
Patty Seaton, Past President
Keith Johnson, Treasurer
Stephen Dubois, Secretary
Wendy Ackerman, Host

MAPS Board of Directors

Lee Ann Hennig
Paul J. Krupinski
Kim Small

Thank you to our conference sponsors for your generous support.

First Magnitude



EVANS & SUTHERLAND



An E&S Company



Second Magnitude



Third Magnitude



Museum of Science.

GOTO INC



Fourth Magnitude

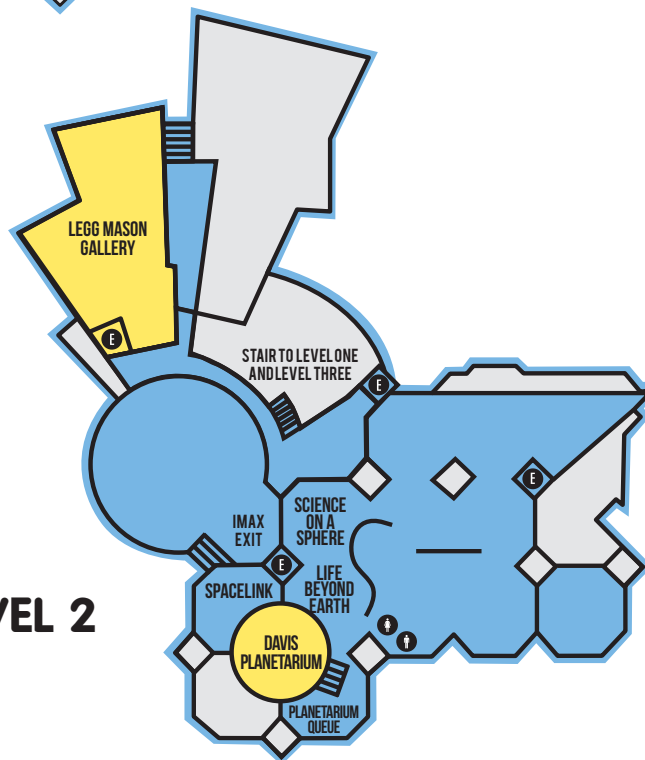
East Coast Control Systems
Innovative Controls For Planetariums



LEVEL 1



LEVEL 2



LEVEL 3



Access the Rooftop, Observatory, and Harbor Terrace Room by taking the double door elevators to Level 4

Elevators are located

Level 1: Next to Security

Level 2: Next to Science on a Sphere

Level 3: Behind The Shed

Wednesday, September 10

Legg Mason Gallery, Level 2


1:00pm Exhibit Hall Open for Set-Up

Royal Sonesta Harbor Court Hotel

4:00pm Hotel Check-In Opens

Maryland Science Center

5:30pm Conference Registration Opens

5:45pm Reception at Maryland Science Center
presented by 



EVANS & SUTHERLAND

6:00pm – 10:00pm Cash Bar (*Rooftop, Level 4*)
 Observatory Open (*Rooftop, Level 4*)
 Science on a Sphere automated programs
 (*Level 2*)

6:00pm Welcome Remarks (*Roof top, Level 4*)
First Time Attendees Meet & Greet
(*Harbor Terrace Room*)

6:30pm Hubble 3D IMAX Film
(St. John Properties IMAX Theater, Level 1)

7:15pm Dr. Frank Summers, Guest Speaker
Space Telescope Science Institute
(*St. John Properties IMAX Theater, Level 1*)

7:40pm Davis Planetarium Renovation Review
Jim O'Leary, Maryland Science Center
(Davis Planetarium, Level 2)

Planetarium Queue

8:00pm

Snack Break, *presented by*



Meet the Mural Artist Katie Feild

Planetarium Program Showcase Part I (Davis Planetarium, Level 2)

8:00pm To Space & Back *produced by Sky Skan Inc. and Fels Planetarium*

8:30pm Supervolcanoes *produced by Spitz Inc.*

9:00pm We Are Aliens *produced by NSC Creative*


9:30pm Dinosaurs at Dusk *produced by Mirage 3D*

Notes

[illegible]

Thursday, September 11

Legg Mason Gallery, Level 2

- 8:00am Breakfast, presented by  **EVANS & SUTHERLAND**
- 8:30am Opening Remarks, Van Reiner
Maryland Science Center President and CEO

Davis Planetarium, Level 2

- 9:00am Davis Planetarium Show and Tell—
Marriage Proposals
- 9:15am Vendor/Delegate Demonstrations (Sky Skan
Inc., Clark Planetarium, *Adventures in Live
Presenting: The Overview* with Talia Sepersky,
Seiler Instruments, AVI)


Legg Mason Gallery, Level 2

- 10:45am Break with Vendors, presented by
 &  **East Coast Control Systems**
Innovative Controls For Planetariums

MSC Theater, Level 3

- 11:45am Delegate Talks
- From the Blue Planet to the Red Planet:
A New Planetarium Show for Full-Dome and
Classic-Format Theaters with Noreen Grice
- Meditation Under The Stars with Amie Gallagher
- Here, There, and Everywhere: A New NASA-
Funded Program with Noreen Grice & Kimberly
Kowal Arcand
- Cosmic Pointilism with Frank Summers

Legg Mason Gallery, Level 2

- 12:45pm Lunch, presented by  **R.S.A. Cosmos**
- Fred Espenak, Guest Speaker
Scientist Emeritus, NASA's GSFC

Workshop Break-Out Session, Choose One (45 minutes each)

- 2:15pm Data From the Dome with Sam Storch & Stephen
Berr (*SciZone, Level 1*)
- Using Improv Theater Techniques with Patrick
McQuillan (*MSC Theater, Level 3*)
- Adventures in Live Presenting: The Workshop
with Talia Sepersky (*Davis Planetarium, Level 2*)
- Modeling the James Webb Space Telescope with
Joseph Clinton, \$10 per person (*The Shed, Level 3*)

Davis Planetarium, Level 2

- 3:15pm Vendor Demonstrations (E&S, GOTO INC.)

Legg Mason Gallery, Level 2


- 4:00pm Poster Presentations
- Break with Vendors, presented by
 **PRISMATIC MAGIC** &  **CHROMACOVE**

Thursday, September 11 (continued)

MSC Theater, Level 3

5:15pm Vendor Talks (Spitz Inc., Chromacove LLC, Ash Enterprises, East Coast Controls)

Harbor Lobby, Level 1



6:30pm Dinner (cash bar), presented by  Sky-Skan
Alan Stern, Guest Speaker
Principal Investigator New Horizons mission to Pluto



Davis Planetarium

7:40pm Sky Challenge with Jeff Grills

Planetarium Queue

9:00pm Snack Break *presented by*  &  Museum of Science.



Planetarium Program Showcase, Part II

8:00pm *Dynamic Earth* produced by Spitz, Inc

8:30pm *From the Blue Planet to the Red Planet* produced by E&S, Museum of Science Boston, & The New Children's Museum & Connecticut Center for Advanced Technology

9:00pm *Dark Universe* developed by the American Museum of Natural History, New York in collaboration with the California Academy of Sciences and GOTO INC.


9:30pm *Journey to a Billion Suns* a European show produced in cooperation with ESA and 30 planetariums

Notes

[illegible]

Friday, September 12

Legg Mason Gallery, Level 2


- 8:00am Breakfast, *presented by* 
- 8:45am Vendor Talks (E&S, Sky Skan Inc., RSA Cosmos, Astro-Tec, Seiler Instruments)
- 10:15am Break with Vendors, *presented by*



Davis Planetarium, Level 2

- 11:15am Preview of Planet Gatherings in 2015 with Bob Victor
- 11:30am Vendor Demonstrations (Spitz Inc., Ash Enterprises, Prismatic Magic, Museum of Science Boston, RSA Cosmos)

Legg Mason Gallery, Level 2

- 1:00pm Lunch, *presented by* 
- Lisa May, Guest Speaker
NASA Program Executive
- 2:15pm Business Meeting
- 3:15pm Break with Vendors, *presented by*







- 4:15pm Exhibit Hall Breakdown

MSC Theater, Level 3

- 4:15pm Delegate Talks
- A Longitudinal Study Featuring Early Elementary-Aged Students with Kim Small
- Common Core, and Next Generation Science, and STEM Standards! Oh My! with Samantha Blau
- The Survival of a Rural Planetarium in Northern Maine with Larry Berz
- What is New (and Free) from IRIS? with Patrick McQuillan
- 5:15pm Adjourn


Reception

Royal Sonesta Harbor Court Hotel

- 6:30pm Cocktail Reception, Cash Bar
- 7:15pm Banquet Reception, *presented by* 
- 8:00pm Margaret Noble Address
- Carter Emmart, Director of Astrovisualization, AMNH
- 8:45pm Live Music featuring The Real Geniuses, *presented by*
-    **EVANS & SUTHERLAND**
- 10:15pm Receptions Ends

Saturday, September 13

Harbor Terrace Room, Level 4

- 8:00am Breakfast, presented by 
An E&S Company
- 9:00am Lora Bleacher, Guest Speaker
EPO Lead, Solar System Exploration
Division, NASA/GSFC

Davis Planetarium, Level 2

- 10:00am Maryland Science Center Demonstrations
Pi in the Sky
Operation Kindergarten

SciZones, Level 1

- 10:45am Break, presented by
 & **GOTO INC**

- 11:00am First Time Attendees Meet and Greet

Workshop Break-Out Session, Choose One (45 minutes each)

- 11:30am Soundtrack Production for Full Dome
with Michael Daut (*Davis Planetarium, Level 2*)
Reasons for Seasons with April Whitt
Optional \$15 per person for take home supplies
(*SciZone, Level 1*)

Brown Bag Zone, Level 1

- 12:30pm Lunch, presented by 

MSC Theater, Level 3

- 1:30pm Delegate Talks
The Train Wreck That Changed Time with
Francine Jackson
NASA Mars Insight Lander (a Seismometer on
Mars) with Patrick McQuillan
Full dome Business Models: How to Ensure
Quality Content with Mike Murray

Workshop Break-Out Session, Choose One (45 minutes each, *SciZones Level 1*)

- 2:30pm Investigating Icy Worlds with Shira Moskowitz
Unwrapping Common Core Standards for the
Planetarium with Samantha Blau

Davis Planetarium, Level 2

- 3:30pm Door Prizes and Closing Remarks
4:00pm Adjourn

Notes

Demonstrations

AVI

Our new Omnistar has been installed in 5 planetariums so far this year. Meet our new customers and learn about our new offerings. You're always a winner with AVI.

Adventures in Live Presenting: The Overview with Talia Sepersky, Museum of Science, Boston

This talk briefly introduces some of the innovative techniques and methods used by the team at the Charles Hayden Planetarium in Boston to create two types of live presentations. (Workshop to follow.)

Operation Kindergarten with Katie Feild & Jesse Lorentson, Maryland Science Center

Recent developments in wax and paper technology have hinted at the intriguing possibility of a Crayon Solar System. Explore this developing phenomenon and other fun projects for your digital planetarium.

Pi in the Sky with Wendy Ackerman & Jesse Lorentson, Maryland Science Center

Behold the first 10,000 digits of Pi on the dome and see what we do with them.

RSA Cosmos

Choose RSA Cosmos and work with a partner who can help you design, implement and support your project. We partner with ASH Enterprise and GOTO Inc. to answer all kinds of requests in the U.S.

Marriage Proposals with Wendy Ackerman & Jesse Lorentson, Maryland Science Center

The Davis Planetarium has staged several marriage proposals. Come see our latest method!

Guest Speakers

Lora Bleacher, Education and Public Outreach Lead, Solar System Exploration Division, NASA/GSFC

Watery Mars

Compare similarities and differences of how water shaped the landscapes on Mars and Earth.

Carter Emmart, Director of Astrovisualization, AMNH

Ways of Being "There" (Margaret Noble Address)

Where are we going as an industry? Advances in computing are bringing the universe here in staggering ways. What does it mean to be "there" when we can bring other worlds "here" to immerse ourselves in. Guided by data, our industry takes us on the most profound journey of all - to the limits of knowledge.

Fred Espenak, Scientist Emeritus, NASA's GSFC

Predicting and Chasing Solar Eclipses

Espenak has spent over four decades predicting and chasing eclipses around the world. He will share his experiences with us through photos and video. The next total eclipse through the USA occurs on August 21, 2017. A preview of this exciting event will also be presented.

Lisa May, NASA Program Executive

MAVEN/Mars

Lisa's talk touches upon why we study Mars, some of the key findings of NASA's Mars Exploration Program missions, and how the MAVEN mission will further our understanding of the red planet.

Alan Stern, Principal Investigator New Horizons Pluto-Kuiper Belt Mission

New Horizons/Pluto

Anticipation is building with New Horizons closing in on Pluto. Hear about what's in store on the way to, at, and beyond New Horizons closest approach to Pluto in July 2015.

Dr. Frank Summers, Outreach Astrophysicist, Space Telescope Science Institute

Truth and Beauty in Astronomy Visualization

This talk will discuss the transformation of Hubble images and data into cinematic sequences for the IMAX film "Hubble 3D", with an emphasis on the compromises made and the flourishes enabled when paying homage to the twin ideals of truth and beauty.

Planetarium Program Showcase

Dark Universe developed by the American Museum of Natural History, New York in collaboration with the California Academy of Sciences and GOTO INC

Dark Universe whisks audiences across the Milky Way galaxy and out to the far reaches of space and time to highlight a series of breakthroughs that have led astronomers to confront two great cosmic mysteries: dark matter and dark energy. Contact licensing@amnh.org or visit www.amnh.org/planetarium-content

Dinosaurs at Dusk produced by Mirage 3D

A fantastical time travel adventure of Lucy and her father, back in Dinosaur time in search for the origins of flight.

Dynamic Earth produced by Spitz Inc

Explore the inner workings of Earth's climate system in this cutting-edge production. Follow energy that flows from the Sun into the systems that shape our climate. Dive into a monster hurricane, come face-to-face with sharks and whales, and fly into roiling volcanoes.

From the Blue Planet to the Red Planet produced in collaboration by E&S, Museum of Science, Boston & The New Children's Museum & Connecticut Center for Advanced Technology

This story follows a young woman stationed on Mars as she communicates with her brother back on Earth. Audiences learn differences between Earth and Mars and what it might be like to live and work on another planet.

Journey to a Billion Suns a European show produced in cooperation with ESA and 30 planetariums

This is a modern astronomy show about stars, space science and the distances in the Universe. Comes in 45 and 30 minutes, 10+ languages, Full dome and classic, and with educational material.

To Space and Back produced by Sky Skan Inc and The Franklin Institute
Take a journey from the far reaches of our known universe to our own planet. Human ingenuity and incredible engineering transport us through space, paving the way for the devices and apps we use every day.

Planetarium Program Showcase (continued)

Supervolcanoes produced by Spitz Inc

This show looks back at rare classes of eruptions that have marshaled the energy that lurks beneath the surface of planet Earth then moves beyond Earth to explore the impact of giant volcanic eruptions around our solar system.

We Are Aliens produced by NSC Creative

Explore how our understanding of life on Earth guides the hunt for alien life elsewhere in the Universe. We visit Mars, Europa and distant Exoplanets to help answer the ultimate question... are we alone?

Posters

Here, There, and Everywhere: A New NASA-Funded Program with Noreen Grice, You Can Do Astronomy

This program utilizes analogies for teaching science, technology, engineering and math. Find out how your planetarium can display this resource, including a set of tactile components for non-visual learners.

IRIS Active Earth Monitor Public Display with Patrick McQuillan, IRIS

The Active Earth Monitor (AEM) is a free Earth Science display. The content is free; you provide the computer/monitor. Topics include: earthquakes, volcanoes, tsunamis, plate tectonics and live seismic data.

Modeling the James Webb Space Telescope with Joseph Clinton, Retired

This poster displays a model of the James Webb Space Telescope - approx 18"x12"x12". The model is constructed from laser cut card stock. Construction patterns on display. (Also see related workshop.)

Thank the Stars! with Keith Johnson, Edelman Planetarium

Thank you notes to show & share from over 40 years of presenting the universe to local schools. Please feel free to add your own to this display.

Talks

***A Longitudinal Study Featuring Early Elementary-Aged Students* with Kim Small, Upper Dublin School District**

A study to measure the impact and long-term effects of planetarium programs and instruction.

***Common Core, and Next Generation Science, and STEM Standards! Oh My!* with Samantha Blau, Maryland Science Center**

Review the new curriculum standards and discuss the implications of these standards in informal education settings.

***Cosmic Pointillism* with Frank Summers, Space Telescope Science Institute**

The art form of pointillism made famous in the late 1800s is revived on a grander scale in some of today's astronomy visualizations. This talk discusses the challenges of being part of the new school of Cosmic Pointillism.

***From the Blue Planet to the Red Planet: A New Planetarium Show* with Noreen Grice, Traveler's Science Dome**

Follow a young woman in the year 2132 as she studies geology on a future Mars base. This NASA-funded show is designed for full-dome and classic-format theaters. Complimentary show kits for classic-style theaters are available during the conference.

***Fulldome Business Models: How to Ensure Quality Content* with Mike Murray, Clark Planetarium**

Business models for running successful digital dome theaters require a fresh examination of "quality" content and funding to produce or purchase it. This talk examines three model budgets at three tiers, and the need to build in and prioritize content creation and production staff.

***Here, There, and Everywhere: A New NASA-Funded Program* with Noreen Grice, Founder of You Can Do Astronomy & Kimberly Kowal Arcand, Chandra X-Ray Center/Smithsonian Astrophysical Observatory**

This program utilizes analogies for teaching science, technology, engineering and math. Find out how your planetarium can display this special resource, including a set of tactile components for non-visual learners.

Talks (continued)

***Meditation Under The Stars* with Amie Gallagher, Raritan Valley Community College**

Have some unused time in your theater? Have some spacey music? Have some drifting stars? You have a potential new program! Relax and quiet your mind with a meditation under the stars.

***NASA Mars Insight Lander (a Seismometer on Mars)* with Patrick McQuillan, IRIS**

IRIS is an Education & Public Outreach partner for the 2016 NASA Insight mission to place a seismometer on the surface of Mars. Learn about informal education products related to the mission.

***Preview of Planet Gatherings in 2015* with Bob Victor, Retired Astronomer**

Follow Venus and Jupiter from late January to June and again, with Mars in October.

***Sky Challenge* with Jeff Grills, Earth and Space Science Laboratory**

Test your prowess of the stars in this quick-paced 'contest' against others.

***The Survival of a Rural Planetarium in Northern Maine* with Larry Berz, The Francis Malcolm Institute**

Come hear the saga of the Francis Malcolm Planetarium (FMP) and its legendary director, "Sunny Acres" Berz. Sensationalize your soul to the cosmic battle between retail, domestic, and agricultural light polluters with isolated advocates of some of the darkest frontier skies in the US.

***The Train Wreck That Changed Time* with Francine Jackson, University of RI Planetarium**

Sometimes inspiration for programs can come directly from your neighborhood. In 1853, a railroad accident just two miles from my house became the impetus for time regulation around the world.

***What is New (and Free) from IRIS?* with Patrick McQuillan, IRIS**

The Incorporated Research Institutions for Seismology (IRIS) produce free educational products for planetarium programs, exhibits, classes and summer camps. Learn what products are new this year.

Workshops

***Adventures in Live Presenting: The Workshop* with Talia Sepersky, Museum of Science Boston**

Explore live show techniques using a digital system and MOS methods of creating unique immersive guest lectures and interactive public shows.

***Data From the Dome* with Sam Storch & Stephen Berr, Retired Planetarians**

Participants will collaborate to identify categories of information that can be observed or measured, and design 'worksheets' to use during a planetarium teaching period. This 'brainstorming workshop' is especially useful to relatively new planetarium professionals.

***Investigating Icy Worlds* with Shira Moskowitz, Maryland Science Center**

Similar to what the New Horizons spacecraft will do at Pluto in July 2015, you will simulate observing various wavelengths of light to reveal and analyze surface features.

***Modeling the James Webb Space Telescope* with Joseph Clinton, Retired**

Attendees receive 2 kits - 1 to assemble at the workshop and another to assemble later. Materials include instructions, resource materials and model pattern on CD ROM. (\$10 per person cash or check to Joe Clinton) Also see POSTER of this model in Exhibit Hall.

Workshops (continued)

***Reasons for Seasons* with April Whitt, Fernbank Science Center**

Discuss strategies for teaching the seasons in different learning styles, model "reasons for seasons," and use sound-generating devices to measure seasonal solar energy. (Optional - purchase materials to-go \$15 per person cash or check to April Whitt.)

***Soundtrack Production for FullDome* with Michael Daut, E&S**

A behind the scenes look at the process of producing an immersive soundtrack for fulldome shows. We'll walk through the creative process from script, cast, composer and recording to sound design & mix.

***Unwrapping Common Core Standards for the Planetarium* with Samantha Blau, Maryland Science Center**

Identify Common Core standards that apply to the planetarium setting. Learn how to unwrap an individual standard and talk about how we can use the information to create targeted programming.

***Using Improv Theater Techniques to Take Your Public Programs to the Next Level* with Patrick McQuillan, IRIS**

There are some overarching ground rules of improv regardless of the specific improv game that is played. These ground rules can help you present better programs and be a better leader in your museum staff interactions.