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January & February Lecture Series

January 22 - Auctions
Tina Hollis & Wulf Clifton

**January 29 - Victorian Bonnet
 Making Workshop Part I**
Diane Sipiera & Jolene Foat

**February 5 - Victorian Bonnet
 Making Workshop Part II**
Diane Sipiera & Jolene Foat

February 12 - Ernest Shackleton
Paul Sipiera

**February 19 - Victorian Purse
 Making Workshop**
Diane Sipiera & Jolene Foat

**February 26 - Spinning Wheel
 Presentation**
Jolene Foat

Paul Sipiera Guest Speaks for the Elizabeth Historical Society Annual Meeting

The Elizabeth Historical Society (EHS) has been a huge help in retrieving valuable research regarding the 1876 Banwarth House. The EHS also runs the Great Chicago Railroad Museum in Elizabeth, Illinois. Every year, they have their annual members meeting and this year they asked if Paul Sipiera would be their guest speaker.

At this event, Paul talked about some of his Antarctic adventures and meteorite collecting there. They were very pleased that the Planetary Studies Foundation has provided enrichment into their community. After Paul's lecture, some of their members wanted to let Paul know that they were at the event either as tourists and some because they were stationed down there because of their military base that is located nearby. The Elizabeth Historical Society was extremely appreciative that the Planetary Studies Foundation was able to support their event.

The PSF & The Lizzadro Lapidary Museum Identify Public Rocks

The Lizzadro Lapidary Museum is a diamond in the rough. Their unique museum is located in Elmhurst, IL and specializes in lapidary, or the art of cutting and polishing stone. They are known for their rare jade collections, and rocks and minerals from around the globe.

This past fall, the Lizzadro Museum asked the Planetary Studies Foundation to do a program on meteorites and meteorite identification. Paul Sipiera spoke to the audience about the rarity of these celestial objects. Many of the people who attended brought in specimens that they thought were meteorites but some were disenchanted when they found out they were not. A few individuals did have something that looked very close to having the physical properties of being a meteorite and are now being analyzed at the Field Museum in Chicago.



A jadeite ewer, created in the early 20th century.

To visit the Lizzadro Museum of Lapidary Art or to see what programs they have scheduled for 2011, please visit www.lizzadromuseum.org or visit them at 220 Cottage Hill Avenue in Wilder Park, Elmhurst, Illinois, 60126.

PRESIDENT'S MESSAGE

This past year has been a very exciting year for your Planetary Studies Foundation. Now that we are settled-in at our Elizabeth, Illinois home and have established a number of on-site and outreach programs, we can sit back, take a deep breath, and enjoy our success. In the midst of a very difficult economic situation I am pleased to report that your organization is financially sound. This can be attributed to our policy of financial responsibility, careful management of our limited financial resources, and the continued generosity of our membership. We can take great pride in the fact that the Planetary Studies Foundation will celebrate its twenty-second anniversary next February 8th. How many not-for-profits have come and gone during that time frame? I certainly cannot answer that question, but I do know that we have been through both “feast and famine” and I expect that we will be here well into the future.

What can we expect from the new year? Admittedly, 2010 will be a tough act to follow! The staff at our historic 1876 Banwarth House is already planning a calendar of interesting events ranging from wool spinning demonstrations to Victorian Tea Parties. Our seasonal lecture series will once again feature a variety of topics. One exciting event that PSF will celebrate is the 100th anniversary of Roald Amundsen and his four companions reaching the South Pole on December 14th 1911. PSF is currently planning several activities to commemorate this historic event. Once the warmer weather arrives in April, we will resume our extremely popular astronomy observing sessions at the Apple River Fort Historic Site in Elizabeth. We are also hoping to expand our seven sessions to fourteen. This year's programs will also include afternoon solar observing. In celebration of our new 18" Dobsonian reflector telescope, the tentative date of May 7th is being considered for the dedication ceremony. In what now has become somewhat of a tradition, PSF will once again participate in the *Gathering of the Elizabeths* event on June 25th and several other scheduled events sponsored by the Elizabeth Chamber of Commerce and the Elizabeth Historical Society. Outreach programs in astronomy, earth and environmental sciences, and meteorites will remain as a vital part of our educational mission. Cooperative research with the Field Museum's, Robert A. Pritzker Center for Meteoritics and Polar Studies, Northern Arizona University, and the University of Washington will continue to keep the PSF at the fore-front of meteorites studies.

Space on this page does not permit me to personally thank everyone who has contributed so much to the organization's success this year, but I do want to recognize one individual in particular. A sincere thank you to Associate Board member **James N. Pritzker** whose continued confidence in our organization and financial support of the PSF has been the “glue” that holds this organization together. As both a friend and benefactor, the PSF could not have reached its current level of success without him. As Albert Einstein once said, “Everything is relative.” Members and staff contributions come in a variety of different ways. Cash donations are very much needed and appreciated, and no donation is ever too small. Time is also a valuable commodity, and we gratefully recognize the time our volunteers give to the organization. Our paid staff is no exception as they often give freely of their time and continue to work even after they go “off the clock”. It is this kind of dedication that truly makes PSF the kind of “family” that we are.

On behalf of the Sipiera Family to all our PSF members and friends...

We truly hope your holidays were special and we wish you a prosperous New Year!

Paul P. Sipiera

DONOR'S SPOTLIGHT

\$50,000 & Above

James N. Pritzker

2010 ANNUAL FUND CAMPAIGN

The PSF would like to thank the following members for their generous donations to our Annual Fund Campaign. This year our goal was set at \$10,000.00 for the purpose of initiating our astronomical observatory project in Jo Daviess County, Illinois. Although we did not reach that goal our donors did contribute a total of \$7,475.00. The PSF truly appreciates the support we received in these difficult financial times. The project is moving forward and has attracted a great deal of "in-kind" support for the construction of the building.

\$5,000 - \$1,000

Paul & Diane Sipiera

Tawani Foundation

\$999 - \$500

The Lancaster Family Foundation

Jennifer Schwartz

\$499 - \$100

Kate Butler

Bill & Mary Sue Coates

Carol Dehnbostel

Violetta J. DuPont

David M. Lauerman

John & Jane Yoder

\$99 & Below

Loren & Evelyn Acton

Richard E. Friedman

Richard & Ellie Leary

NEW MEMBERS

New Individual Memberships

Carl Bryant

Ryan Teutschmann

(gift of Monica Von Glahn)

Dottie Voetberg

Clarence Von Glahn

(gift of Monica Von Glahn)

Sharon Westenfelder

New Family Memberships

Christian & Eileen Bird

(gift of Beth Bird)

Jay & Debbie Graves

RENEWING MEMBERS

Renewal Memberships

Christina Hollis & Wulf Clifton

Richard & Alimae Persons

Michael Semkiu

Dan & Pam Tindell

Dan Wenny

Renewal Contributing Memberships

Larry Knight

Steve Koppes

Renewal Sponsoring Memberships

Alicia Anzaldo

MEMBERS' CORNER

Congratulations to **Caroline A. Szipiera** who was a contestant in the 2011 Miss Illinois Teen USA Pageant held at the McCormick Place Regency-Hyatt in Chicago from November 19th – 21st. Caroline was the youngest of 82 contestants selected from a group of over 1,000 applicants. Although she did not win the title, her on-stage appearance was exceptional for someone her age and with no previous pageant experience. She certainly made her family very proud of her!

Congratulations to Executive Board Member, **Dan Tindell** and his wife **Pam** on the engagement of their daughter Emily to Ben Mock of Mondovi, WI. They are looking forward to a July wedding!

Get well wishes to Executive Board Member, **Dave Lauer** after his recent surgery.

Wishing a speedy recovery to **Cindy Moehrlin**, wife of PSF Founder **Ray Moehrlin**, and their son Greg.

Congratulations to **Andrea Cosentino** on her recent promotion to Assistant Vice President of Marketing. After three years of hard work in a supportive role, she has been promoted to head all of the marketing operations and will begin traveling internationally.

MEET THE PSF BOARD MEMBERS & OFFICERS

EXECUTIVE BOARD MEMBERS

JOSEPH A. AUER, Jr., Chairman

President/Owner - J. Auer Consulting Enterprises

KATHIE FARLOW

Owner/Innkeeper – Farmer’s Guest House

DAVID M. LAUERMAN

Harper College – PSF Founder

JENNIFER SCHWARTZ

Senior Manager – Yahoo!

PAUL P. SIPIERA, Ph.D.

Professor Emeritus Harper College – PSF Founder

DAN TINDELL

Site Manager – Apple River Fort Historic Site

HERBERT WINDOLF

Retired Businessman and Author

OFFICERS

President – Paul P. Sipiера

Vice-President – Alicia Anzaldo

Treasurer – Kathie Farlow

Secretary – Andrea M. Cosentino

Executive Director – Diane M. Sipiера

HONORARY

(in order of election)

Meyer Rudolf, Vice-President- Emeritus (deceased)

Francis G. Stokes, Vice-President-Emeritus

Herbert Windolf, Vice-President-Emeritus

ASSOCIATE BOARD MEMBERS

LOREN W. ACTON, Ph.D., Space Shuttle Payload Specialist

TED BUNCH, Ph.D., Northern Arizona University

DAVID G. BUTTS, President, Redblock Knowledge Systems

BRUCE D. DOD, Ph.D., Professor Emeritus, Mercer University

JOSEPH R. DuPONT, retired Corporate President

SAM DURRANCE, Ph.D., Space Shuttle Payload Specialist

RICHARD E. FRIEDMAN, Chairman National Strategy Forum

OWEN K. GARRIOTT, Ph.D., Skylab III & Space Shuttle Mission Specialist

NATHAN GREINER, PE, President, Design Mill

DOUGLAS L. HICKS, Ph.D., Environmental Consultant - New Zealand

TREVOR IRELAND, Ph.D., Australian National University

TONY IRVING, Ph.D., The University of Washington-Seattle

JAMES R. LANCASTER, retired Corporate President

RICHARD L. LEARY, Ph.D., Illinois State Museum (retired)

JAMES A. LOVELL, Astronaut, Apollo 8 & 13

BYRON LICHTENBURG, Sc.D., Space Shuttle Payload Specialist

SPIKE O’DELL, WGN Radio - retired

JAMES N. PRITZKER, President & CEO, Tawani Enterprises

BRIGIT SATTLER, Ph.D., University of Innsbruck - Austria

HARRISON H. SCHMITT, Ph.D., Astronaut, Apollo 17

JAMES SCHWADE, M.D., Meteorite Curator

JAMES A. WOTEL, LL.D., CPA

*If you’re interested in learning more about becoming a Board Member or Officer,
please contact Diane Sipiера at dsipiера@planets.org - or - call (815) 858-3362*

MEMBER SPOTLIGHT: *Andrea Cosentino*

Andrea was born in Colorado Springs, Colorado when her mother, (you all know her as PSF's very own, Diane Sipiera!) was working for the United States Space Foundation. They moved to Illinois a couple years later and after her parents divorced, Diane met Paul Sipiera through an astronomy lecture and the rest is history! Paul has been Andrea's step dad since she was 6 years old, and what a wonderful world she has lived in having PSF, often times, headquartered out of their home! She enjoyed cheerleading throughout junior high and high school and although many people wouldn't typically associate cheerleaders with science fairs, it was quite an interesting combination. After advancing to regionals twice and once to state finals for science fair, only then did it become apparent that being emerged in science throughout the home, truly allowed it to come naturally to her. A year after graduating high school, PSF was in need of support from a person to serve as a 'jack-of-all-trades'... editor, writer, graphic designer and executive/administrative support. She's been working for PSF for almost 6 years and truly shares its passion for science!

PSF: What college did you attend and what was your primary area of study?

Andrea: I attained my Associate's degree from Harper College and attended Illinois State University with my major in Spanish and minor in Latin American studies.

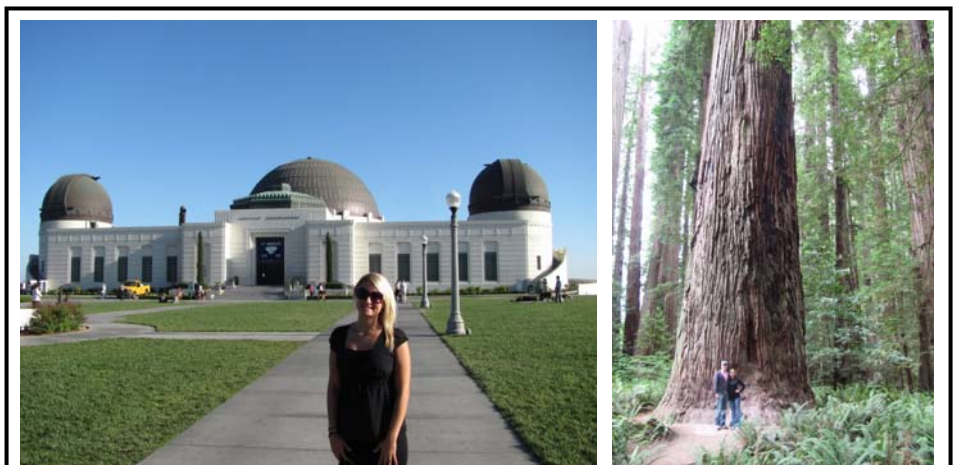
PSF: What is your current profession and what inspired you into that career?

Andrea: Currently, I work for an investment firm in downtown Chicago and head all of their marketing operations. Having gained a lot of experience from working for the PSF at such a young age... marketing, public relations and graphic design have always been something I have enjoyed and am good at. Working at an investment firm has been an eye-opening experience because I always knew I was good at being creative, but now that I apply that creativity to the constantly changing world of finance, it makes for a really interesting and fun day in the office. One thing that has always helped me be successful, is doing what I'm good at. So many times, I think people work really hard, sometimes struggling to get to the top, but often forget the very things that come natural to them. Identifying these talents and putting them to use can help you excel in life in so many ways.

PSF: Do you have any hobbies?

Andrea: Working for both the investment firm and the PSF makes for a very busy day, but in my free time I enjoy practicing yoga, honing my self-taught graphic design skills, teaching myself about astronomy and finance and having a great time in Chicago! I love visiting all of the different museums and the summertime is the best for beach visits to Lake Michigan and visiting local street fairs.

I also love spending time with my sisters, Paula and Caroline. They are my best friends and every time we're together I feel like I'm accelerating the wrinkle process on my face because we laugh SO much! I also enjoy traveling and went on a wonderful U.S. trip during the summer of 2010. I plan to do much more traveling in 2011!!!



Andrea while on her 2010 trip from the Seattle coast to the Los Angeles coast. (Right picture) Andrea at the Fairfield Observatory in Los Angeles, California. (Left picture) Andrea with her boyfriend at the 2,000 year old Redwoods beautifully located in Northern California.

PSF: Where is your favorite place you have traveled and what made it so special?

Andrea: My favorite international trip was a very special trip to Italy with my family in 2001. My father's side of the family originated from Italy and it was incredible to be in the very country they came from. Plus, Italy has so many must-see places that are filled with such incredible history, it was just amazing! We visited Rome, Naples, the Isles of Capri and my favorite spot was the Amalfi coast. If you ever make it to Italy in your lifetime... you have to visit the Amalfi coast! Another special trip took place this past summer. I took a coastal road trip from Seattle to Los Angeles with many stops along the way. From the port of Seattle, to the Oregon coastline, to the Redwoods, to the wineries, to San Francisco... it was a fantastic trip. Having the opportunity to see the beautiful coastline of the west coast of the U.S. was magnificent. It's so easy to forget what our own country has to offer!

PSF: What is your favorite area of science and why do you find it so interesting?

Andrea: Without a doubt, astronomy is my absolute favorite area of science. Learning about our galaxy is awesome and the mysteries behind all of it really excites me. It's also interesting how the more you know about "what's outside our planet", helps you understand better "what's inside our planet". And it seems like no matter how many skywatching and telescopes events I attend, I never cease to be amazed. My favorite planet to view is Saturn because of how clear the planet and all of its gorgeous rings appear.

PSF: What is your favorite thing about the PSF?

Andrea: Where do I start? And I'm not just saying that because it's my family and I work for them! I really think the PSF offers a special opportunity for people because it serves as a scientific resource for a variety of science enthusiasts. Whether serving the general public who may be looking for something fun to do with their families, to a world-recognized organization that is well-known for our advanced work in meteorites, Antarctic exploration and are truly viewed as astronomy professionals... the PSF is everywhere! I think it's really nice to have a community-focused organization like the PSF to further scientific education, serve as a 'go-to' for questions and rock identifications and now we've expanded to the 1876 Banwarth House, which for some of you, you may wonder what science and a historical house have in common... but you'd be surprised to learn how hand-in-hand science and history fit together. It has also allowed us to further explore the earth sciences which has been quite interesting and useful.

The other thing that is special to me is the family involvement throughout our organization. Not just within the Sipiera family, but the majority of our members include their spouses, children, or parents when buying memberships or attending events. This is special to me because it was my involvement as a small child that really inspired my love and passion for the sciences. And to parents, even if your kids moan and groan about having to do "space stuff" or "why do we have to go to some old house?", you never know when that science or history interest may surface. I didn't necessarily enjoy going to the Harper College observatory every weekend when I was 6 years old, but being exposed to astronomy for the past 18 years, provided me with enough knowledge to decide if I was truly interested or not.

PSF: What advice would you give to our younger readers and science enthusiasts?

Andrea: I would say to our younger readers who are interested in science... keep it up! Science is one of those areas that always needs new innovation, always needs new questions to be answered and needs more people from the younger generations to keep it goal-driven and focused. If you like science, continue to pursue your passion and don't be afraid to explore other areas of science either. You may really like astronomy, but there are also so many areas of science make up the study of our universe, that you never know what else may interest you. Also, if you like science, let people know! Sometimes communicating your passions to your family, friends and people around you can really open up some new opportunities.

THE SCIENCE BEHIND SOAP MAKING

When you take a bath or shower you probably reach for a bar a soap to cleanse with. But, do you really know what goes into a bar of soap? **Cyndy Hunter**, co-owner and soap maker from **Straddle Creek Soap Shop** gave a recent lecture to a PSF audience about the chemistry of soap making. When she was in high school and college, she never imagined what she could use chemistry for, but now she is proud to be a professional soap maker.

To start her lecture, Cyndy gave an introduction about how she and her husband, who currently live in Mount Carroll, Illinois, started their own business in 2003 because of their own troubled skin problems. The Straddle Creek Soap Shop officially opened in 2009 and now has extremely loyal customers who believe in their products.

She explained to the lecture attendees what fatty acids are, and their properties that they lend to soap. Lauric acids produce hardness, provides cleansing and fluffy lather. Ricinoleic acids are used for conditioning, fluffy lather and stable lather. She also had handouts about how she combines lye with lard or other fats and oils to make soap. It was amazing how avocado, castor, coconut, grape seed, hazelnut, lard, olive, palm, rice bran and tallow are all used to help maintain moisture. All of the soaps they produce have all natural color and no synthetic dyes. They believe that the skin is the largest organ and works hard to expel impurities and take in nutrients and moisture, so why would you use too harsh of soaps? Additionally, the audience was interested to be introduced to new vocabulary such as: saponification, exothermic, humectants, hygroscopic, surfactant and emollient. This lecture was really great and we invite all of our members to come check out the unique blend of science and history we've incorporated into our lecture series.

The Planetary Studies Foundation would like to thank John and Cyndy for volunteering their time and knowledge at the Banwarth House. We ask our members to check out their website at www.thestraddlecreeksoapshop.com. If you have questions about soap making, you can call them (815) 244-0075 or email them at soap@thestraddlecreeksoapshop.com.

The Straddle Creek Soap Shop presents natural soap and bath products hand-crafted with emollient oils full of skin-pampering vitamins and nutrients. Indulge in pure, real soap, colored with natural herbs and clay. Relax in soothing, healthy body care with milk baths, body oils, and lip balms. All products at The Straddle Creek Soap Shop are formulated, created, and used right here on our farm.

VICTORIAN HAT MAKING 101 EVENT

The sign of fall was in the air in mid-October when the PSF hosted it's first Victorian Hat Making Event. Instructors, **Jolene Foat** and **Diane Szipiera** taught the attendees the basic hardhat bonnet. The instructors taught and talked about the various materials that were used in the past, along with the various styles that were used and why. The attendees were amazed at how many materials went into making a bonnet: wool, silk, ribbon, ruffle feathers and lace were all incorporated to make a worthy hat.

Jolene and Diane wanted the attendees to be learn about the various looks women would have worn due to where they migrated from such as; Germany, Ireland, France or New England. These new settlers also had various tastes in what they wore from practical, to Sunday Best and even party attire. The attendees worked on these bonnets for two Saturdays to complete their project. The hand-sewn bonnets showed how time-consuming it was for these settlers to achieve their delights and many women did not have many hardhat bonnets. They would only be made for special events. One of these ladies even came back to show her completed ensemble. It was so rewarding to see happy participants!

This workshop will be offered again on January 29 & February 5th, along with a new workshop entitled: *Making of an Edwardian Hat* which will take place in May. The prices of these workshops are \$35.00 for non-PSF members and **\$25.00 for PSF members**.

2011 LECTURE SERIES & BANWARTH WORKSHOPS

JANUARY 22 - Auctions: Going Once, Going Twice, Fair Warning!

Features **Tina Hollis and Wulf Clifton**, owners of **Doctor Woodchuck's Auction Services**, from 1:00 p.m. to 2:30 p.m. Their previous lecture about auctions brought in many individuals who were interested in attending auctions but felt unsure of how an auction works. Tina and Wulf will explain the history of auctions, the individuals that make up an auction, how a typical auction works and how monies are distributed when an auction ends. One of the most important points they will focus on is which auctions to attend, and how to prepare for attending an auction. The price to attend this lecture is a \$3.00 donation for non-PSF members and **free for PSF members**.

JANUARY 29 - Victorian Hard Bonnet Making 101 Workshop (Part I)

Features a hands-on workshop in which you will have the opportunity to make a true Victorian hard bonnet. Your guides into the millinery world of hat making will be **Diane Szipiera and Jolene Foat**. This two-part event will begin on January 29 from 10:00 a.m. to 2:30 p.m. and will finish on February 5 starting at 10:00 a.m. until completion. The workshop fee is \$35.00 for non-PSF members and **\$25.00 for PSF members**. This fee will cover fabric, feathers, ribbon, form and thread. If you plan on attending this workshop please bring a sack lunch. To reserve your spot so that we can accommodate you with supplies, please call (815) 858-2014 or email dszipiera@planets.org.

FEBRUARY 5 - Victorian Hard Bonnet Making 101 Workshop (Part II)

See description above.

FEBRUARY 12 - Ernest Shackleton: A Life of Antarctic Exploration & Book Signing

PSF president and Antarctic explorer, **Paul Szipiera**, will enlighten guests with a slide presentation on the famous Antarctic explorer, Ernest Shackleton. Paul will begin the lecture with how Shackleton became involved with the Robert Falcon Scott, how Shackleton designed his own expedition and why he became one of the most respected Antarctic explorers of all time. The lecture will run from 1:00 p.m. to 2:30 p.m. The price for this event is \$3.00 for non-PSF members and **free for PSF members**.

Also, from 3:15 p.m. to 5:00 p.m. on Saturday, February 12 we will host a **PSF Members Private Valentine's Day Celebration**. We will have a late lunch with dessert along with a couple of fun games. If any of our members are interested in attending, please contact Diane at (815) 858-3362 or email dszipiera@planets.org. Also, we encourage our members to help by bringing a dessert to share. Please let Diane know if you plan to contribute so we know what types of desserts will be shared. Thank you!

FEBRUARY 19 - Victorian Purse Making Workshop

If you every wanted to learn to sew, this workshop is for you! **Jolene Foat and Diane Szipiera** will guide you step-by-step on how to make a drawstring purse that you can use for either historical decoration or historical interpretation. This program will begin at 11:00 a.m. The price for this workshop is \$20.00 for non-PSF members and **\$10.00 for PSF members**. The fee includes cloth material, drawstring, instruction on how to make a tassel, and use of a sewing machine. Please make your reservation ASAP by calling (815) 858-2014 or email Diane at dszipiera@planets.org.

FEBRUARY 26 - Spinning Wheel: Round and Round

This unique lecture is presented by master spinner, **Jolene Foat**. Jolene will demonstrate both the use of the spinning wheel and the drop spindle. Also, Jolene will speak on the process of wool sheering, the preparations of wool and dyeing of wool to what we are familiar with today. Jolene's goal in her lecture is to share her love of preservation in the art form of spinning wool. The event will run from 1:00 p.m. to 2:30 p.m. The fee for this event is a \$3.00 donation for non-PSF members and **free for PSF members**.

Movie Critique: *Hubble*

Reviewed by Andrea Cosentino

★★★★

In March of this year, the Museum of Science and Industry released its newest IMAX film *Hubble*. Upon hearing this I knew I had to make a special trip to the museum and I used the Veteran's Day holiday since it was one of their "free days". All I had to pay for was parking (\$16...eek) and the IMAX ticket (\$8) and because I didn't have to pay full admission, I didn't feel overly obligated to see all of the exhibits, but made it to a couple of the new ones while I waited for the show to start.

Seated in a 5 story dome, surrounded in image and matched with unbelievable sound, there are more than a few moments during this film where you'll feel your jaw drop in awe and I even caught myself shaking my head in disbelief because the images were that stunning. The story itself is pretty interesting, although the commentary from the astronauts leaves a lot to be desired from an astronomy enthusiast's perspective. But the struggle of the last mission to repair the Hubble is an absolute must-see. The launch scenes will give you goosebumps from the mere thought of all that goes into something that incredible, not to mention the rumbling of the surround sound makes you feel like your sitting on the launch pad, seriously!

As a proud "science geek" I have to recommend this movie just for the footage of the Andromeda and Orion galaxies but c'mon NASA, Leonardo DiCaprio as the narrator? I would have appreciated a science professional or astronaut, but celebrities doing voice-overs seems to be the growing trend amongst scientific movies (i.e. the Adler has a movie narrated by Whoopie Goldberg and National Geographic's "Journey to the Edge of the Universe" is narrated by Alec Baldwin). Overall, I think it is a great movie for anyone with an interest in our universe and it's at a comprehension level that kids-of-all-ages can appreciate. *Hubble* will be shown at the Museum of Science and Industry until January 31, 2011... don't miss it!

Upcoming "free days" at the Museum of Science and Industry are every week day in the month of January... for those members who are not in the Chicago area, check out www.imax.com to find a showing near you.

Hubble... Did You Know?

- NASA named the world's first space-based optical telescope after American astronomer Edwin P. Hubble (1889-1953). Dr. Hubble confirmed an "expanding" universe, which provided the foundation for the Big Bang theory.
- Cost at launch was \$1.5 billion
- In order to take images of distant, faint objects, Hubble must be extremely steady and accurate. The telescope is able to lock onto a target without deviating more than 7/1000th of an arcsecond, or about the width of a human hair seen at a distance of 1 mile.
- The primary mirror weighs 1,825 lb (828 kg)
- The Hubble contains 6 nickel-hydrogen batteries and has the capacity to store enough power equal to 20 car batteries.
- The Hubble can't observe the Sun or Mercury, which is too close to the Sun.



Change your view of the universe. Experience the gripping story—full of hope, crushing disappointment, dazzling ingenuity, bravery, and triumph—in Hubble.

You'll accompany space-walking astronauts as they attempt some of the most difficult and important tasks in NASA's history. The film offers an inspiring and unique look into the Hubble Space Telescope's legacy and highlights its profound impact on the way we view the universe and ourselves.

Hubble is an IMAX and Warner Bros. Pictures production, in cooperation with National Aeronautics and Space Administration (NASA).

Visit the official Hubble IMAX website: www.imax.com/hubble for further information on how the movie was made, a photo gallery, extra videos and educational activities for children, students and additional resources.

NASA FUNDS HIGH SCHOOL ROBOTICS PROGRAM

NASA is providing up to \$20 million over the next five years to support a national program to inspire student interest in science, technology and mathematics with a focus on robotic technology.

The funding is part of a cooperative agreement with the Foundation for Inspiration and Recognition of Science and Technology (FIRST), a nonprofit organization in Manchester, N.H. FIRST provides students the opportunity to engage with government, industry and university experts, including those at NASA's Jet Propulsion Laboratory, Pasadena, Calif., for hands-on, realistic exposure to engineering and technical professions.

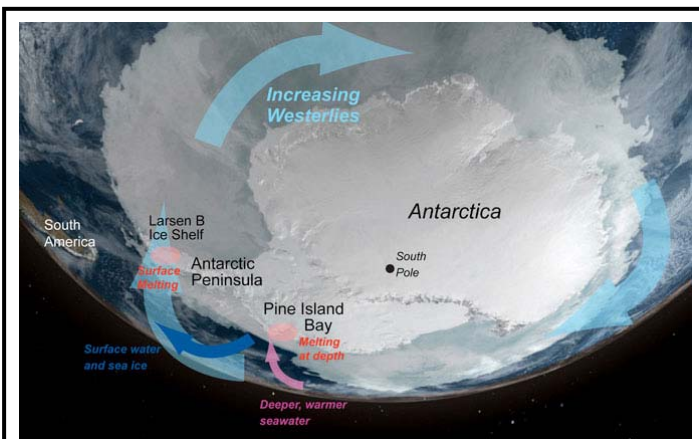
"This is the largest NASA-funded student program geared toward robotics activities," said NASA Administrator Charles Bolden. "For the next five years, approximately 25,000 students across the country will not only learn from our nation's best and brightest, but also compete and have fun at the same time."

Full story at http://www.nasa.gov/home/hqnews/2010/nov/HQ_10-307_Student_Robotics.html

Compliments of NASA, 01.06.11

TIME NOT HEALING GLACIAL WOUNDS

A new analysis by Ted Scambos, a glaciologist at the National Snow and Ice Data Center in Boulder Colo., and colleagues found that more than a decade after two major Antarctic ice shelves collapsed, glaciers once buttressed by the shelves continue to lose ice.



West Antarctica is seeing dramatic ice loss particularly the Antarctic Peninsula and Pine Island regions. Ice loss culprits include the loss off buttressing ice shelves, wind, and a sub-shelf channel that allows warm water to intrude below the ice. Credit: NASA/NSIDC

Changes are most evident in the West Antarctic Ice Sheet and along the Antarctic Peninsula. A spine of mountains forces passing winds to give up their moisture as snow, feeding glaciers that in turn feed the ice shelves that jut out into the Southern Ocean. More than a decade ago, dramatic changes started affecting a series of ice shelves, collectively called Larsen, along the Peninsula's northeast coast. In 1995, Larsen A was the first to collapse followed by a larger loss of Larsen B in 2002. Today, a small piece of the Larsen B and the entirety of the vast Larsen C hang on.

Investigating how the glaciers have responded to the loss of these ice shelf "dams," Scambos and colleagues tracked elevation information using data from satellites such as NASA's Ice, Cloud and land Elevation Satellite (ICESat) and previous airborne

missions. They show that between 2001 and 2006, glaciers feeding Larsen A and Larsen B lost 12 gigatons of ice loss per year, or 30 percent of all ice lost throughout the Peninsula.

Moreover, the continued draw down of glaciers, such as Drygalski Glacier, fifteen years after the loss of Larsen A, have set precedent for what to expect elsewhere. Losses by glaciers that fed the Larsen B, such as Crane Glacier, are likely to continue.

Scambos and a team of colleagues have now placed instruments on glaciers just south of the area where the shelves disintegrated, anticipating that further warming will lead to further glacier speed-ups. The instruments and new aircraft overflights will provide

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