CONSTELLATION

Fall 2005, No. 3

"Most people today still believe, perhaps unconsciously, in the heliocentric universe … every newspaper in the land has a section on astrology, yet few have anything at all on astronomy.

— Hannes Alfven

An Important Note from the Treasurer:

MAPS correspondence for the Treasurer should heretofore be addressed to:

Anthony Villano
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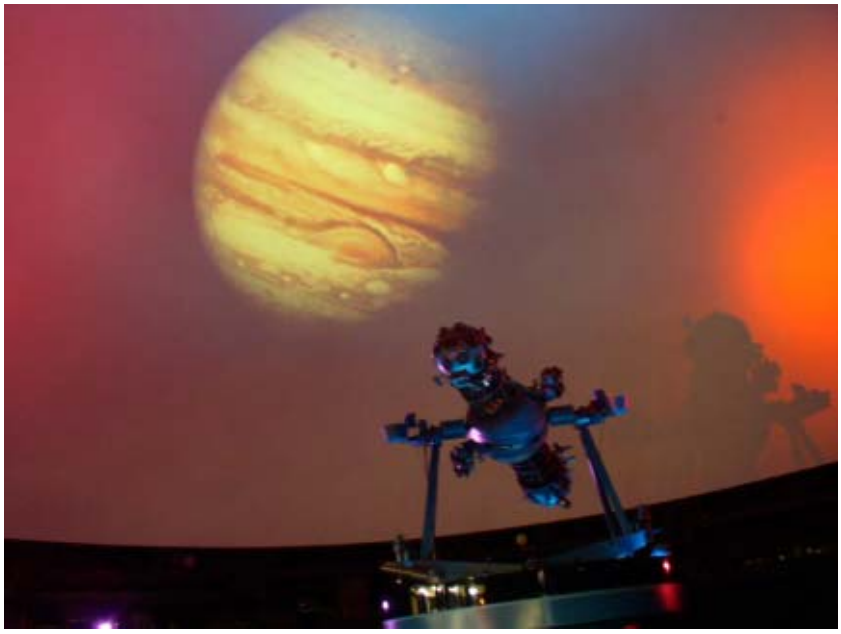
MAPS GOES "DOWN THE SHORE"*



MAPS 2006 Conference
May 17-20, 2006
Robert J. Novins Planetarium
Ocean County College
Toms River, NJ

Conference Hotel: Quality Inn Toms River
www.qualityinntr.com

May 2006 is fast approaching, and the staff of the Novins Planetarium is looking forward to welcoming you to our facility in Toms River, NJ. "Where?" you may ask, is Toms River? We're located in Central New Jersey, just a brief drive from local beaches, and within easy access of Manhattan, Atlantic City, and Philadelphia. The Novins Planetarium itself is located on the campus of Ocean County College, and features a 40-ft dome, Minolta star projector, and a "standard" array of panorama, all-sky, dissolve and video projectors.

While the Novins grounds itself in the traditional skills of live lectures, in-house production and the like, we also integrate new technologies and skills whenever possible in an attempt to create "The Best of all

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CONTACT!

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A Note from the Past President

Inspiring Future Generations

Okay, so maybe this is a just an excuse to show off my lovely daughter, Trixie. But as compelled as I was to take her to my planetarium almost as soon as she was born, I couldn't help but parallel this desire to the one we all have to inspire future generations in our planetariums. Regardless of whether we have a classroom or museum theater, an optical or digital sky, we are bonded by our common mission – to teach astronomy to those who walk through our doors. This is why we meet on a yearly basis to share our successes, share our common roadblocks and solutions around and through them, and share our latest and greatest equipment/software! Of course, you don't have to wait until the Spring Conference to share your stories. Submit them to the Constellation and let us enjoy them on a quarterly basis! This Autumnal Equinox will find me returning to a school system planetarium theater which is in many ways falling apart. Yet every student that walks through our doors can't wait to come to the room "where the stars are". I can't wait to take them there! How about you?!

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Patty Seaton
President

PIPS MEETING IN SCHENECTADY

Participants take a group photo in the Planetarium Lobby.

On Monday August 22nd, Steve Russo and Megan Dominguez hosted a PIPS Meeting at the Suits-Bueche Planetarium at the Schenectady Museum in Schenectady, NY.

Twenty-two people showed up from all over New York State and Connecticut.

The day included a tour of the Collections area of the museum, a lesson on how to make pocket Sun Dials and Star clocks, "Light Years From Andromeda" Planetarium show, a talk about the Dudley Observatory, and sessions in the Starlab.

Breakfast was supplied by Learning Technologies, and lunch was supplied by the Suits-Bueche Planetarium. Hand-outs were supplied by the Space Telescope Science Institute and Astrographics.

Participants construct Star Clocks.

Sue Reynolds Button in the Starlab.

Where No Spacecraft Has Gone Before

by Dr. Tony Phillips

In 1977, Voyager 1 left our planet. Its mission: to visit Jupiter and Saturn and to study their moons. The flybys were an enormous success. Voyager 1 discovered active volcanoes on Io, found evidence for submerged oceans on Europa, and photographed dark rings around Jupiter itself. Later, the spacecraft buzzed Saturn's moon Titan—alerting astronomers that it was a very strange place indeed! —and flew behind Saturn's rings, seeing what was hidden from Earth.

Beyond Saturn, Neptune and Uranus beckoned, but Voyager 1's planet-tour ended there. Saturn's gravity seized Voyager 1 and slingshot it into deep space. Voyager 1 was heading for the stars—just as NASA had planned.

Now, in 2005, the spacecraft is nine billion miles (96 astronomical units) from the Sun, and it has entered a strange region of space no ship has ever visited before.

"We call this region 'the heliosheath.' It's where the solar wind piles up against the interstellar medium at the outer edge of our solar system," says Ed Stone, project scientist for the Voyager mission at the Jet Propulsion Laboratory.

Out in the Milky Way, where Voyager 1 is trying to go, the "empty space" between stars is not really empty. It's filled with clouds of gas and dust. The wind from the Sun blows a gigantic bubble in this cloudy "interstellar medium." All nine planets from Mercury to Pluto fit comfortably inside. The heliosheath is, essentially, the bubble's skin.

"The heliosheath is different from any other place we've been," says Stone. Near the Sun, the solar wind moves at a million miles per hour. At the heliosheath, the solar wind slows eventually to a dead stop. The slowing wind becomes denser, more turbulent, and its magnetic field—a remnant of the sun's own magnetism--grows stronger.

So far from Earth, this turbulent magnetic gas is curiously important to human life. "The heliosheath is a shield against galactic cosmic rays," explains Stone. Subatomic particles blasted in our direction by distant supernovas and black holes are deflected by the heliosheath, protecting the inner solar system from much deadly radiation.

Voyager 1 is exploring this shield for the first time. "We'll remain inside the heliosheath for 8 to 10 years," predicts Stone, "then we'll break through, finally reaching interstellar space."

What's out there? Stay tuned…

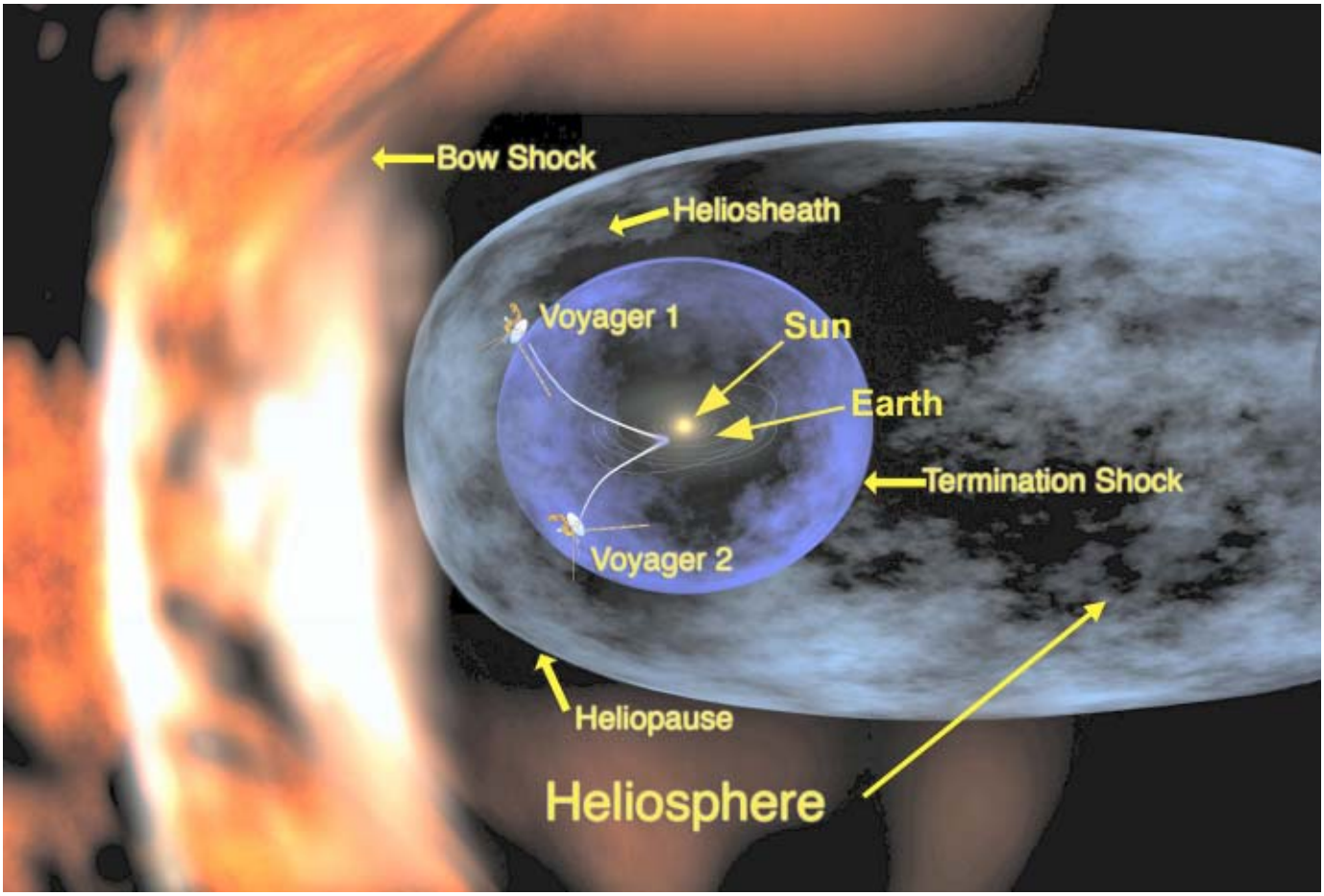
For more about the twin Voyager spacecraft, visit voyager.jpl.nasa.gov. Kids can learn about Voyager 1 and 2 and their grand tour of the outer planets at spaceplace.nasa.gov/en/kids/vgr_fact3.shtml .

INTELLIGENT DESIGN

At the October 2nd meeting of the Board of the Middle Atlantic Planetarium Society considered issues and statements with respect to the controversy over “intelligent design” and creationism and the input from our members as previously solicited. The following statement is being issued to the membership:

> *The Board of the Middle Atlantic Planetarium Society endorses the statements already made by the American Astronomical Society, the International Planetarium Society, the American Physical Society, American Association for the Advancement of Science, and the American Association of Physics Teachers with regard to intelligent design. After review and careful evaluation we find that these statements already reflect the view of our membership and Board, therefore no additional statement need be made.*

For details on these statements, see:
AAS: www.aas.org/governance/council/resolutions.html#teach
AAAS: www.aaas.org/news/releases/2002/1106id2.shtml
APS: www.aps.org/media/pressreleases/080405.cfm
AAPT: www.aapt.org/Policy/evolutandcosmo.cfm



Voyager 1, after 28 years of travel, has reached the heliosheath of our solar system.

Upcoming Events

October

- 02 - Hayden Planetarium's 70th Birthday (1935)
- 04-10 - World Space Week
- 05 - Mercury Passes 1.3 Degrees From Jupiter
- 06 - 15th Anniversary (1990), Ulysses Launch
- 09 - Draconids Meteor Shower Peak
- 10 - Very Large Array's (VLA) 25th Birthday (1980)
- 11 - Cassini, Dione Flyby
- 16 - 30th Anniversary (1975), GOES 1 Launch
- 17 - Partial Lunar Eclipse
- 19-22 - GLPA Conference, Grand Rapids, MI
- 20 - 35th Anniversary (1970), Zond 8 Launch
- 21 - Orionids Meteor Shower Peak
- 22 - 30th Anniversary (1975), Venera 9, Venus Landing
- 25 - 30th Anniversary (1975), Venera 10, Venus Landing
- 28 - Cassini, Titan Flyby
- 29 - Mars Closest Approach To Earth (0.46 AU)
- 30 - Daylight Saving Time Ends - Set Clock Back 1 Hour

November

- Hayabusa (MUSES-C), Asteroid Itokawa Sample Collection
- 03 - Taurids Meteor Shower Peak
- 03 - Mercury At Its Greatest Eastern Elongation
- 03 - Venus At Its Greatest Eastern Elongation
- 07 - Mars at Opposition
- 10 - 35th Anniversary (1970), Luna 17 Launch
- 12 - 25th Anniversary (1980), Voyager 1, Saturn Flyby
- 17 - Leonids Meteor Shower Peak
- 26 - Cassini, Rhea Flyby

December

- 01 - 45th Anniversary (1960), Sputnik 6 Launch
- 02 - 10th Anniversary (1995), SOHO Launch
- 04 - 40th Anniversary (1965), Gemini 7 Launch
- Dec 12 - Mercury at Greatest Western Elongation
- Dec 13 - Geminids Meteor Shower Peak
- Dec 15 - 35th Anniversary (1970), Venera 7 Landing
- Dec 15 - 40th Anniversary (1965), Gemini 6 Launch
- Dec 16 - 40th Anniversary (1965), Pioneer 6 Launch
- Dec 21 - Winter Solstice, 18:35 UT
- Dec 22 - Ursids Meteor Shower Peak
- Dec 26 - Cassini, Titan Flyby
- Dec 30 - 5th Anniversary (2000), Cassini, Jupiter Flyby

Source: JPL Space Calendar

MAPS GOES "DOWN THE SHORE"*

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Worlds." This idea is, in fact, the theme for this year's conference and we invite you to bring the best of your world to share with the MAPS community.

The conference hotel is the Quality Inn – Toms River, located 6 miles from the Planetarium. Our conference room rate has been set at $79/night. Other planned conference activities include: a visit by "Galileo," a field trip to the Princeton Plasma Physics Lab, and the return of "Shoot Your Mouth Off."

A number of area planetarians are already helping out on the 2006 conference planning committee, and I invite anyone interested in participating on the committee to e-mail me at gvillalobos@ocean.edu.

I look forward to seeing you all in 2006!

Gloria A. Villalobos
Director, Robert J. Novins Planetarium

Save the Date!
Triple Conjunction

MAPS, SEPA & GLPA
Oct. 9-13, 2007
Oglebay Resort & Conference Center
Wheeling, West Virginia

Details TBA!

* Editor's note: just so you know, here in Jersey we don't go to the shore — we go down the shore.

DEADlINES

The Constellation is published quarterly near the solstices and equinoxes.

Issue	Deadline
Dec. 2005	Nov. 18
March 2006	Feb. 24
June 2006	May 28
Sept. 2006	Aug. 25

Please send articles, reviews, photos and other items to:

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Join MAPS-L!

Remember to subscribe to the MAPS e-mail list "MAPS-L." Send a blank e-mail to: maps-l-subscribe@yahoogroups.com Or visit: groups.yahoo.com/group/maps-l/join

If you register for a Yahoo ID, you can access other features such as an archive of messages, files and a calendar. See: groups.yahoo.com/group/maps-l

NEW MEMBERS

The following have joined our merry band of planetarians. Please extend a warm welcome to the following new and returning members:

- John Ernissee
  Peirce Planetarium
  Clarion University
  Clarion, PA

- Bruce Angney
  Keith Valley Middle School Planetarium
  Horsham, PA

- Pam Krison
  Planetarium Adventures
  Saratoga Springs, NY

- Diana Slattery
  Domeworks
  Albany, NY

Constellation
c/o Kevin Conod
The Newark Museum's
Dreyfuss Planetarium
49 Washington Street
Newark, NJ 07102

WANTED:

Conference Proceedings Editor

~ Dead or Alive ~

The MAPS Publication Committee is searching a volunteer to compile and edit the Proceedings of the annual MAPS Conference. If this person is apprehended, please contact the Publication Chair immediately.

- Kevin Conod
973-596-6609 or kconod@newarkmuseum.org