



# CONSTELLATION

Fall 2007, No. 3



*"The universe is like a safe to which there is a combination, but the combination is locked up in the safe."*

*- Peter de Vries*

## Save the Date

**MAPS 2008 Conference  
May 14-17, 2008  
in Schenectady, NY**

**See page 8 for details**



## A Message From the Conference Host

The conference has become international! I have delegates or vendors coming from Japan, Sweden, New Zealand, Canada, Germany, The Netherlands and England. The delegate count is well above 200 as of September 18. The websites for all three regions contain the current listings for papers, posters, workshops, and speakers as well as the titles and abstracts. (A Summary of the conference agenda is included here on page 3) MAPS members can access the MAPS website at [www.maps-planetarium.org](http://www.maps-planetarium.org). A few changes may happen with the agenda, but is basically complete. As you will see, the conference schedule is going to be tight.

Anyone wishing to sign up for workshops for the conference must contact the workshop presenter directly. The name of the presenter and their email are clearly printed in the workshops listings. Please, do not sign up for a workshop through the conference host.

Also, please consult the MAPS website for any last minute issues such as traffic patterns, etc. Driving instructions coming from the East are on page 2 of the original conference registration materials section, "Delegate Information and Conference Schedule" under the heading of "Getting Here". If you should be coming into Wheeling on

*(Continued on page 3)*

<i>Contents</i>	
<i>Conference 2007</i>	<i>1</i>
<i>Note from the President</i>	<i>2</i>
<i>Cosmic Cockroaches</i>	<i>4</i>
<i>Member News</i>	<i>5</i>
<i>Conference 2008</i>	<i>8</i>

## CONTACT!

### MAPS Executive Committee

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## Almost to Totality

So how many of you on August 28 watched as much of the total lunar eclipse as could be seen from your location? I'm guessing that most of you were outside, even though we knew we couldn't watch it all the way through. I actually got up and watched from my backyard, which gave me a great view West. I didn't lose sight of the moon behind the trees on the horizon until just before totality. So I got to see it ALMOST to totality. There was something poetic about that, and I felt a little whimsical. Because I knew in a few short weeks I would be seeing many of you at Oglebay. We're almost to totality! I'm looking forward to that as much as I was looking forward to watching the lunar eclipse! Also at the end of the upcoming conference, I will be turning over my President's cap to Gloria Villalobos. I will still be serving you as Past President, but the idea of "stepping down" left me with mixed emotions. There are still many areas in which our organization could expand. We've already taken huge strides in improving the effectiveness of our website. We're working on ramping up our committees to serve you even better. Remember, this is your organization! We're always open to suggestions and comments. And if it doesn't seem like we are taking them into consideration, be patient with us! I have found that some things take much longer to initiate than others. Yet just like the August eclipse, things will come to totality. Because we're all working together to make it happen!

Thanks for the support the last two years! I'll be with you behind the scenes!

Sincerely,

*Patty*

Patty Seaton,  
President

## CONFERENCE

(Continued from page 1)

I-70 from West of the Ohio River, please be sure to follow the detour signs at St. Clairsville, Ohio. The eastbound tunnels of I-70 at Wheeling are closed for reconstruction. Directions to Oglebay are marked along the highway.

For those staying over Saturday, Jon Bell will be doing his Constellation Shootout in the planetarium around 2:00pm on Saturday afternoon. Afterwards, encore presentations of Nine Planets and Counting and the new SEPA production, The Planets, will be shown to those interested. The conference host may be three sheets to the wind by then, but.....

### TRIPLE CONJUNCTION: Important Dates to Remember!

- ◆ **October 1** - Late, Late Registration Deadline. Any registrations submitted on or after this date (form must be faxed, not mailed, to 304-243-4110 - attention Steve Mitch) will be assessed a \$50 additional fee. Persons registering after Oct. 1 may jeopardize being able to purchase meal packages and those registering upon arrival definitely will not be able to purchase a meal package. There will be no refunds for registrations after this date.
- ◆ **October 1** - Last Day to cancel registration and receive full refund if notification is made before 4:00 pm. Call or E-mail Steven Mitch (304) 243-4034.; [smitch@oglebay-resrot.com](mailto:smitch@oglebay-resrot.com)
- ◆ **October 1** - Deadline for submitting paper/poster electronic text, per "Instructions to Authors" to Dale W. Smith; [dsmith@newton.bgsu.edu](mailto:dsmith@newton.bgsu.edu). in order to avoid cancellation of paper or poster.

## 2007 Conference Program Agenda

**Subject to change—for a more detailed schedule see [www.maps-planetarium.org](http://www.maps-planetarium.org).**

### Tuesday, October 9

- ◆ 3:00pm - Hotel check-in begins
- ◆ 3:00pm - Registration area opens (rear lobby of Wilson Lodge)
- ◆ 6:30 - 8:00pm - Opening reception
- ◆ 7:30 - 8:15pm - New member orientation
- ◆ 8:15pm - Jon Bell's "Astropardy" game contest.

### Wednesday, October 10

- ◆ 6:30 - 8:00am - Breakfast
- ◆ 8:00 - 8:20am - Welcome and Opening Remarks
- ◆ 8:30 - 11:45am - Vendor Hall Open
- ◆ 8:30am - Paper Session #1
- ◆ 10:00am - Paper Session #2
- ◆ 10:45 - 11:30am - Workshops
- ◆ 11:45 - 1:00pm - Lunch w/speaker Chuck Wood
- ◆ 1:00 - 1:30pm - Group A travel to planetarium
- ◆ 1:30 - 5:30pm - Vendor Session #1 - Planetarium
- ◆ 1:30 - 5:00pm - Vendor Hall Open
- ◆ 1:30 - 4:00pm - Portable Dome Workshops
- ◆ 5:30 - 7:45pm - Dinner on your own
- ◆ 8:00pm - Keynote Speaker - David Levy
- ◆ 9:15 - 10:30pm - Planetarium Programs Shown in Planetarium
- ◆ 10:00pm - Hospitality Suite Opens - Chalet "B"

### Thursday, October 10

- ◆ 8:00 - 10:00am - Vendor Hall Open
- ◆ 8:30 - 9:45am - Paper Session # 3
- ◆ 8:30 - 10:00am - Workshop #3
- ◆ 10:45am - Travel to Pittsburgh - Carnegie Science Center/Buhl
- ◆ 12:00 - 5:00pm - Carnegie Science Center - James Hughes, Co-Host

(Continued on page 9)

# COSMIC COCKROACHES

By Dr. Tony Phillips

Cockroaches are supposed to be tough, able to survive anything from a good stomping to a nuclear blast. But roaches are wimps compared to a little molecule that has recently caught the eye of biologists and astronomers—the polycyclic aromatic hydrocarbon.

Polycyclic aromatic hydrocarbons (PAHs for short) are ring-shaped molecules made of carbon and hydrogen. “They’re all around us,” says Achim Tappe of the Harvard Center for Astrophysics. “PAHs are present in mineral oils, coal, tar, tobacco smoke and automobile exhaust.” Aromatic, ring-shaped molecules structurally akin to PAHs are found in DNA itself!

That’s why Tappe’s recent discovery may be so important. “PAHs are so tough, they can survive a supernova.”



*Using the IR spectrometer on the Spitzer Space Telescope, scientists found organic molecules in supernova remnant N132D.*

The story begins a few thousand years ago when a massive star in the Large Magellanic Cloud exploded, blasting nearby star systems and interstellar clouds with hot gas and deadly radiation. The expanding shell, still visible from Earth after all these years and catalogued by astronomers as “N132D,” spans 80 light years and has swept up some 600 Suns worth of mass.

Last year “we observed N132D using NASA’s Spitzer Space Telescope,” says Tappe. Spitzer is an infrared (IR) telescope, and it has a spectrometer onboard sensitive to the IR emissions of PAHs. One look at N132D revealed “PAHs all around the supernova’s expanding shell. They appear to be swept up by a shock wave of 8 million degree gas. This is causing some damage to the molecules, but many of the PAHs are surviving.”

Astronomers have long known that PAHs are abundant not only on Earth but throughout the cosmos—they’ve been found in comet dust, meteorites and many cold interstellar clouds—but who knew they were so tough? “This is our first evidence that PAHs can withstand a supernova blast,” he says.

Their ability to survive may be key to life on Earth. Many astronomers are convinced that a supernova exploded in our corner of the galaxy 4-to-5 billion years ago just as the solar system was coalescing from primitive interstellar gas. In one scenario of life’s origins, PAHs survived and made their way to our planet. It turns out that stacks of PAHs can form in water—think, primordial seas—and provide a scaffold for nucleic acids with architectural properties akin to RNA and DNA. PAHs may be just tough enough for genesis.

Cockroaches, eat your hearts out.

Find out about other Spitzer discoveries at [www.spitzer.caltech.edu](http://www.spitzer.caltech.edu).

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*

## MEMBER NEWS



### Summer Workshop

Lee Ann Hennig and Harold Geller (on the left) conducted an astronomy workshop for teachers this summer. The workshop was sponsored by the State Council of Higher Education of Virginia in concert with the Math Science Innovation Center of Virginia and the Virginia Earth Science Collaborative at George Mason University. This included training with a portable StarLab planetarium system.

### PIPS Meeting

On July 23rd, the Suits-Bueche Planetarium at the Schenectady Museum held a one day PIPS meeting. Hosts for the conference were Planetarium Manager, Steve Russo and Assistant Planetarium Manager, Megan Dominguez.

There were 22 people who attended this meeting, from several different states. Represented were folks from college planetariums, museum planetariums, and private portables. They came from New York, New Jersey and Massachusetts.

Along with seeing a planetarium show, there were demonstrations of the GOTO Chronos, lessons in the Starlab, free handouts from planetariums and NASA, and viewing of soil and rock samples brought back from the Apollo missions.

Breakfast and Lunch was supplied by Learning Technologies, and GOTO.



### PLANETARIUM SHOW WIKI

Kevin Conod, Newark Museum

Recently, as many planetariums upgrade to Full-Dome projection systems, it has become more and more difficult to find new programs that will run in a "conventional" slide-based theater. To help planetariums find new programs I started a Planetarium Show "Wiki". Similar to Wikipedia, anyone can add information to it. It is a very simple page that lists some basic information about shows and what kind of equipment you need to run them. Several people have already added information to it. Check it out at: [planetariumshows.wikispaces.com](http://planetariumshows.wikispaces.com).





## JOB OPENING

**September 2007:**

**Assistant Producer/Education Coordinator**

Davis Planetarium, Maryland Science Center  
Baltimore, MD

[www.marylandsciencecenter.org](http://www.marylandsciencecenter.org)

We're looking for an energetic, amiable individual who can effectively present astronomy information to audiences aged pre-school through adult.

This person is expected to actively participate in program development including topic research, script writing, audio/visual design and installation for new and seasonal programs. Responsibilities include, but are not limited to: slide production; developing activities for teacher mailings; compiling current sky information for a bi-monthly publication; maintaining visual integrity of all Planetarium programs.

If you have: 1 to 3 years of production and/or presentation experience (preferably in a museum or planetarium setting); a bachelor's degree in astronomy, science, science education, or related field; and a desire to work as part of a creative team producing original planetarium programs, then send your resume for immediate attention.

Direct inquiries to:

Assistant Producer  
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Maryland Science Center  
601 Light Street  
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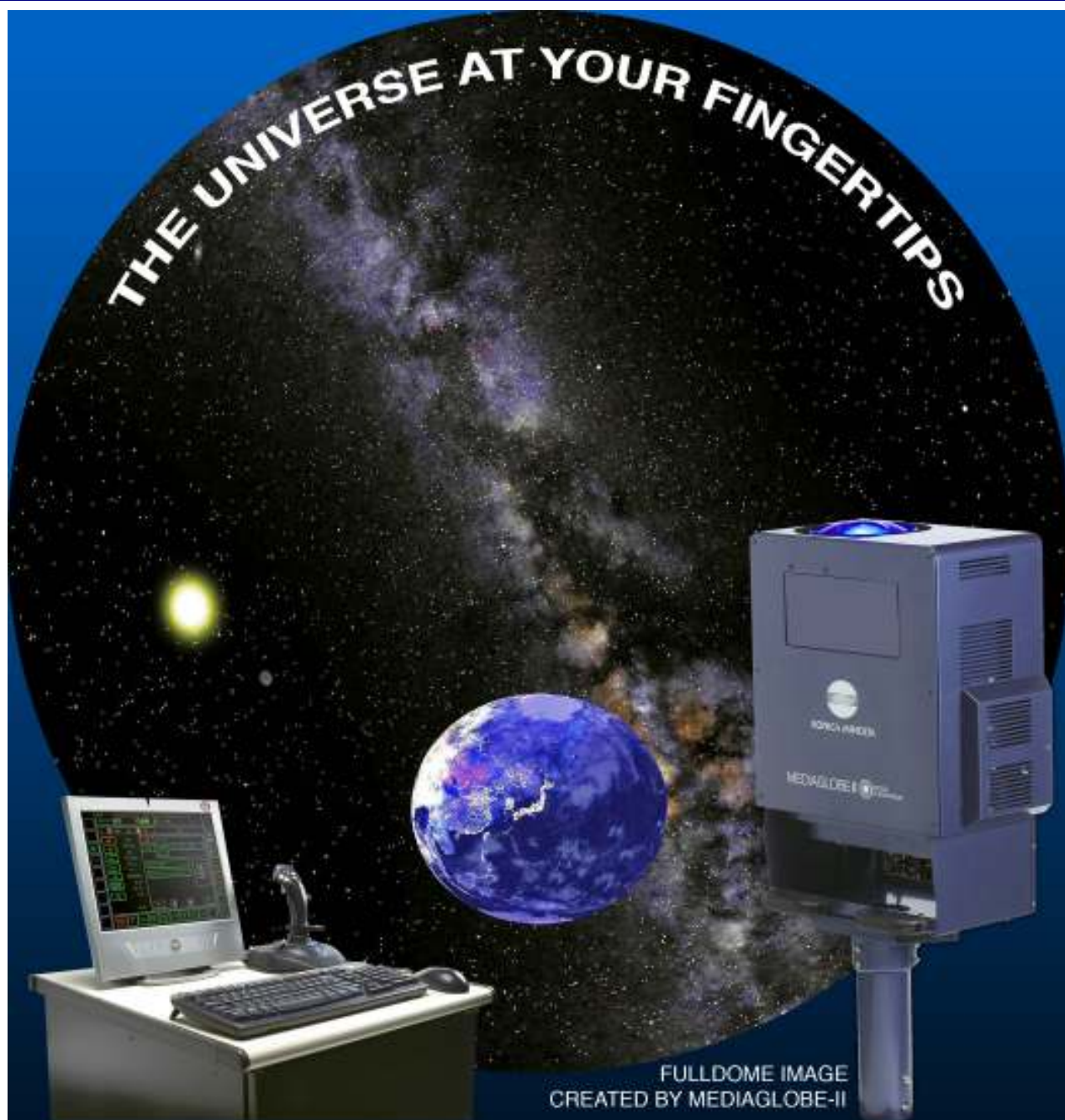
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KONICA MINOLTA

# MAPS 2008

## May 14-17

### Suits-Bueche Planetarium at the Schenectady Museum in Schenectady, NY



Mark your calendars for May 14th through 17th, of 2008, as the next MAPS conference will be held at the Suits-Bueche Planetarium at the Schenectady Museum in Schenectady, NY.

The Planetarium has finished the second phase of its renovation, with the installation of a GOTO Chronos Space Simulator star machine, in a 30 foot dome which seats 60 -65 people.

The Schenectady Museum is a museum about science and technology, and has exhibits relating to power generation, the history of TV and radio, the MRI Machine, and our collections and Archives contain the fourth largest photo collection in the world; the history of General Electric and the development of electrical power across North America.

A Holiday Inn Conference Center is literally across the street from the museum. More information will be forthcoming.

Steven LJ Russo  
Planetarium Manager  
Suits-Bueche Planetarium  
Schenectady Museum  
Nott Terrace Heights  
Schenectady, NY 12308  
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russo@schenectadymuseum.org  
<http://www.schenectadymuseum.org>

## 2007 Conference Program Agenda

*(Continued from page 3)*

- ◆ 5:15 - 5:45pm - Travel to Carnegie Museum of Natural History
- ◆ 5:45 - 7:45pm - Dinner and explore CMNH
- ◆ 7:45 - 9:15pm - Speaker - James Kaler - Annual Astronomy Update
- ◆ 10:30pm - Hospitality Suite Opens - "Chalet B"

### Friday, October 12

- ◆ 6:30 - 8:00am - Breakfast
- ◆ 8:00 - 11:00am - Vendor Hall Open
- ◆ 8:30 - 9:15am - Workshop #4
- ◆ 8:30am - Paper Session #4
- ◆ 10:00am - Paper Session #5
- ◆ 11:00am - Group Photo
- ◆ 11:45 - 1:00pm - Lunch
- ◆ 1:00 - 1:30pm - Group B travel to planetarium
- ◆ 1:30 - 5:30pm - Vendor session #2 - planetarium
- ◆ 6:30pm - Banquet Reception
- ◆ 7:15pm - Banquet
- ◆ 8:30pm - Banquet Speaker - James Sweitzer
- ◆ 10:00pm - Hospitality Suite Opens - "Chalet B"

### Saturday, October 13

- ◆ 8:00 - 10:00am - Breakfast (state meetings)
- ◆ 10:00 - 11:30am - Regional Business meetings
- ◆ 11:30am - Door prizes (winners must be present)
- ◆ 12:30pm - Conference closing

## FIFTY YEARS IN SPACE

Thomas Wm. HAMILTON  
HOSS Planetarium

The Space Age began with two announcements in 1954. The first, in April, was largely overlooked or ignored, when the Soviet Union announced an intention to launch artificial satellites into orbit around the Earth during the 1957-58 International Geophysical Year. On July 28 the USA made a similar announcement. This got a lot more attention, including the potentially alarming headline in the New York Post of "SPACESHIPS!"

Two years later, on September 17, 1956 the United States launched a test firing of a Jupiter C missile from Cape Canaveral. This four stage rocket was capable of placing its final stage in orbit, but someone, never publicly identified, travelled from Washington to Cape Canaveral to assure that the final stage of the rocket had sand instead of rocket fuel in its tanks. The Jupiter C landed in the Atlantic Ocean off the coast of Africa.

Another year later, on October 4, 1957 Radio Moscow broadcast an announcement from TASS News Agency that the Soviet Union had launched the first satellite into orbit. Two groups in the USA were unknowingly in a race to be the first to tape the signal of Sputnik 1 and put it on the public airwaves.

In Riverhead, Long Island, a group of radio engineers from NBC became the first Americans to hear, and record, the 0.3 second long recurrent beep of Sputnik. They then had to drive over sixty miles to Manhattan to get this on the air, and in 1957 the Long Island Expressway had not been completed. The drive took over two hours.

Meanwhile, Sputnik rose higher over America, finally clearing Manhattan's horizon. At Columbia University several students from the school's FM radio station, WKCR, took an Ampex tape recorder, weighing over thirty pounds, one block across campus to the ham radio

*(Continued on page 10)*

## FIFTY YEARS IN SPACE

*(Continued from page 9)*

station. At the ham station, W2AEE, they recorded a couple minutes of Sputnik 1 and then lugged the Ampex and its precious recording back to WKCR's studio, where they put it on the air.

The next morning, about 9:05 am, two men came into the station, and asked to see the person in charge. The station President asked what they wanted. They flashed credentials showing they were from the FBI, and asked, "Do you have a tape of that Russian [sic] thing in space that you've been broadcasting?" The response was a brag, although at this point no one yet realized that WKCR had been the first in the United States to get Sputnik on the air. "We want the tape. Now." And the FBI walked off with the tape, never to pay for it, return it, or replace it.

The following Tuesday Prof. Jan Schilt, Rutherford Professor of Astronomy and director of Columbia's Rutherford Observatory, began his introductory astronomy class with the comment "Well, gentlemen, it is not every day that we have something new in the sky to talk about." He then devoted the entire class period to proving the Soviets had deliberately launched Sputnik 1 into an orbit where it would be in space for the longest possible time before becoming visible in the USA (six weeks, as the Earth moved to a new point in its orbit and Sputnik's orbit had precessed).

## COSMOLOGY COURSE

**Chicago Maps the Cosmos  
A Cosmology Short Course  
for Museum & Planetarium Staff  
December 7-9, 2007**

This three-day, intensive short course will highlight cartography on the grandest scales: mapping the cosmos. It will explore the ethereal science of cosmology in the concrete terms of the observed hierarchical structure of the universe - which we have only recently come to understand. Chicago Maps the Cosmos will explore our current understanding of the cosmos from the perspective of those who are at the forefront of investigating it, and it will provide participants with the tools they need to bring the excitement of discovery back to their home institutions. Chicago Maps the Cosmos will also encompass the broader themes of Festival of Maps: Chicago - cartography, discovery, exploration, inspiration and showcasing the local riches of the city of Chicago.

Course Description and On-Line Registration can be found at: [kicp.uchicago.edu/maps2007](http://kicp.uchicago.edu/maps2007)

In This Issue...

Triple Conjunction   Cosmic Cockroaches   MAPS 2008   Member News



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c/o Kevin Conod  
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