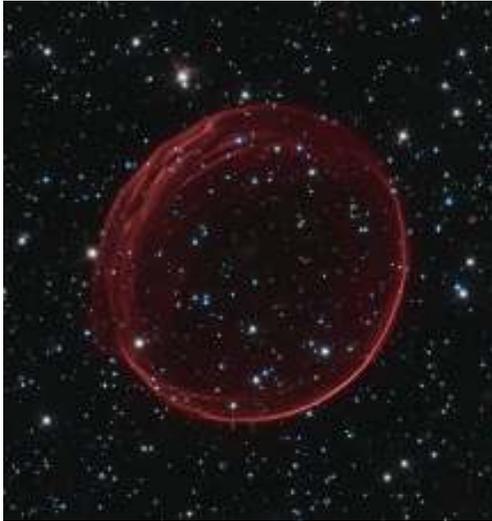




CONSTELLATION

Winter 2010, No. 4



A delicate sphere of gas, photographed by NASA's Hubble Space Telescope, floats serenely in the depths of space. The pristine shell, or bubble, is the result of gas that is being shocked by the expanding blast wave from a supernova. Called SNR 0509-67.5 (or SNR 0509 for short), the bubble is the visible remnant of a powerful stellar explosion in the Large Magellanic Cloud (LMC), a small galaxy about 160,000 light-years from Earth.

Ripples in the shell's surface may be caused by either subtle variations in the density of the ambient interstellar gas, or possibly driven from the interior by pieces of the ejecta. The bubble-shaped shroud of gas is 23 light-years across and is expanding at more than 11 million miles per hour (5,000 kilometers per second).

Hubble's Advanced Camera for Surveys observed the supernova remnant on Oct. 28, 2006, with a filter that isolates light from glowing hydrogen seen in the expanding shell. These observations were then combined with visible-light images of the surrounding star field that were imaged with Hubble's Wide Field Camera 3 on Nov. 4, 2010.

MAPS Conference 2011 May 4-7, 2011



Upper Dublin School District Planetarium in Dresher PA

The annual MAPS conference will be co-hosted by three school planetariums in the Philadelphia area May 4-7 2011. The Ft. Washington Holiday Inn (www.fwholiday.com) will be the headquarters and the site for the Friday banquet.

The conference will kick off with a reception at the hotel on Wednesday night. We'll spend most of Thursday at Keith Johnson's Edelman Planetarium at Rowan University in Glassboro NJ (www.rowan.edu/planetarium). On Friday we will visit Kim Small's planetarium at Upper Dublin School District in Dresher PA (www.udsd.org/page.cfm?p=367) and Don Knapp's H.W. Ray Special Experiences Room at Centennial School District in Warminster PA (www.centennialsd.org/19251069162230673/site/default.asp).

(Continued on page 14)



ELECTIONS

Candidate for President-Elect

Alan Davenport

Having worked in the University of Maine Maynard F. Jordan Planetarium since 1981 presenting, producing and developing programs and educational materials, I am well versed in the basic issues of our industry. Mine is a small facility with one full-time staff (myself) and a handful of students. As a member of MAPS and past member of MAPS Board of Directors, I have attended numerous conferences, presented papers and workshops, and published the first conference proceedings of any regional to distribute in digital media format. I have been on the Education Committee and established and still host the electronic distribution list for MAPS's quarterly journal, Constellation. I have been a member of IPS since 1988 and am a fellow of the Great Lakes Planetarium Association.



As a long-time planetarian and witness to an ever-changing industry I sense that there is a role for organizations like MAPS to track the needs of its members and engage the technology developers. Communication and education will keep vendors and users tuned to the missions of our facilities and help the industry evolve new tools to fulfill those missions. Education itself and its methodologies are changing. MAPS can advance its members' interests by representing them where input is possible such as in the NSTA National Congress on Science Education that even now is revising science education standards. The leaders of our board already have engaged in this process and I would like to ensure that MAPS continues that and similar initiatives.

Communication and conferences are the highlight of any widely dispersed group of professionals such as our membership is. I look forward to helping each conference host, as officers always have, to offer opportunities and activities that are both unique and beneficial to our members. In addition, I will work to ensure that those who are unable to attend will share the valuable output offered up in presented papers through a published proceedings.

The electronic universe gives us fluid communication, which is important for a board member/officer who is distanced from the heart of the region, as I would be, so I will use it constantly if elected. I will not use it to beg for your vote, but will plan to contact as many members as possible to learn about your activities and needs if I am elected to this office and start down the six-year path of service it entails.

Candidates for Secretary

Sam Storch (Incumbent)



I've been a MAPS member for more than three decades and owe a great deal to MAPS for my professional growth and involvement. I retired in 2009 after over 30 years as the Director of the Edwin P. Hubble Planetarium in Brooklyn, New York. Besides that service, and work as Adjunct Professor in the Department of Physical Sciences at Nassau Community College, I presented for many years a Philosophy of Science class through Kingsborough Community College's program for high school seniors and especially enjoyed lecturing at New York's Hayden Planetarium for over thirty years. Now that I have relocated to a new home in Florida, I'll still carry the torch of astronomy wherever I can.

My service to MAPS began as Treasurer back in 1989 and has continued as your Secretary since 1991. During that time, I was named a Fellow of both the International Planetarium Society and of MAPS. Having received the distinct professional honor of presenting the Margaret Noble Address to our Society at its 2007 Conference, I was honored with the MAPS Distinguished Service Award in 2010, and was given a Lifetime Achievement Award at Stellafane 2010 by the Northeast Region of the Astronomical League.

(Continued on page 3)

ELECTIONS (Continued from page 2)

The “outdoor stars” also beckon. An avid deep-sky observer, I also enjoy observing occultations and eclipse chasing. Working with the Astronomical Society of Long Island as its Vice President for many years, I was editor of its newsletter continuously from 1983 to 2010, more than a quarter century of service!

Nobody understands what we strive for in our domes but planetarium professionals, so I hope you’ll allow me to continue serving our Society as its Secretary and repaying the membership for the tremendous intellectual and spiritual recharging we all benefit from as we work together to share what we do best!”

Stephen Dubois



Stephen Dubois has been around his hometown Planetarium for his entire life. When the Buffalo State College Planetarium opened in 1964 Stephen's father Robert, a Physics professor, was asked to be co-administrator of the new facility. Two years later, Dr. James Orgren replaced Robert and accepted the newly created position of full-time Director. During times when Steve would travel with his father to campus, a visit under the dome with "Dr. O" was always a highlight.

As a young teenager, Steve began to learn the night sky and after the summer of 1983 he set his goals on seriously studying astronomy. It was inevitable that he would again cross paths with the newly rebuilt and renamed Ferguson Planetarium when he began his first semester of college at Buffalo State in 1986. He joined the Astronomy Club and held many key positions throughout his college years. In 1987, Steve was formally trained as an operator and has been working at the planetarium ever since.

An advocate of both new technology and traditional educational values, Steve believes that, first and foremost, a planetarium should replicate the experience of viewing the night sky under perfect conditions. In other words, the stars should always be central focus of any planetarium. Steve has been presenting live

shows under the Ferguson dome for 23 years as well as working for Ancient Eyes Productions as a music composer, illustrator and writer. Additionally, he has served as director, author and production designer on a wide variety of multi-media public show presentations.

Stephen says: “I am honored to be nominated and excited by the prospect of putting my diverse experience to use. I will represent well the mission statement of the Middle Atlantic Planetarium Society if elected.”

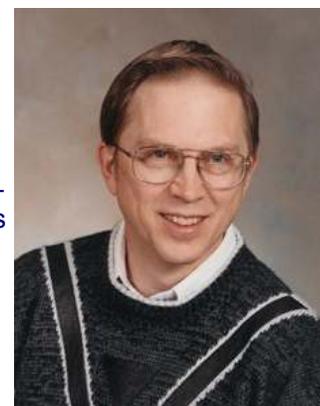
Candidate for Treasurer

Keith H. Johnson (Incumbent)

Keith Johnson is the director of the Edelman Planetarium at Rowan University in Glassboro NJ. He was the first director appointed to this new facility 6+ years ago, and evidently no one has noticed that he's still around.

Keith has been involved in planetarium organizations since he started in the field, 'lo, these many years ago. He has served as treasurer for the Southwestern Association of Planetariums, the Pacific Planetarium Association, and the International Planetarium Society, all of whom were quite happy when he found a new job on the East Coast and was elected MAPS treasurer. He also wrote a column on astronomical software for *The Planetarian* for several years, stopping only when the computers began to beat him at Tic-Tac-Toe on a regular basis.

Keith was fortunate to experience a bit of real astronomy before getting involved in the virtual version. He was a founding editor of the Journal of the Pocahontas County Astronomical Society. He earned, or at least received, an M.S. in astronomy from the University of Arizona (but that was a long time ago, so don't ask him what his thesis was about). He appreciates the trust his fellow members have seen fit to give him over the past few years, and promises to administer the treasury of the society to the best of his ability.



CONTACT!

MAPS Executive Committee

Officers (2009-2011)

President

Steve Mitch
Benedum Planetarium (retired)
Wheeling, WV
srmgm@verizon.net
304-242-7614

President Elect

Patty Seaton
H. B. Owens Science Center
Prince George's County, MD
pxts13@yahoo.com
301-918-8750

Past President

Gloria Villalobos
Novins Planetarium
Toms River, NJ
gvillalobos@ocean.edu
732-255-0400 X 2111

Secretary

Sam Storch, Retired,
Boyton Beach, FL
8130 Nadmar Avenue
Boca Raton, FL 33434-6316
liskies@aol.com

Treasurer

Keith Johnson
Edelman Planetarium
Glassboro, NJ
johnsonk@rowan.edu
856-256-4389

Board Members (2010-2012)

Lee Ann Hennig
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Alexandria, VA
lahennig@earthlink.net
703-750-8380

Paul J. Krupinski
Mr. K.'s Mobile Dome Planetarium
RMSC's Strasenburg Planetarium
Cheektowaga, New York
mobiledome1993@earthlink.net

Mike Smith
North Planetarium, North Museum
Lancaster, PA
msmith@northmuseum.org

President's Message

Another year has come to a close. Another decade has come to a close. Geez, it seems like yesterday there was world-wide panic about Y2K, which as we all know, went by the way of all the other doomsday predictions. Well, we are now entering a new decade, one by the way that contains a prediction that the world will come to an end on the Winter Solstice of 2012. I'm sure that too will join the ranks of failed prophecies.



Although the economy rallied somewhat during 2010, a number of planetariums are still struggling, but the number of planetariums that are undergoing reconstruction, renovations, re-openings or new construction is on the rise, and that is a good sign indeed. I think that number will continue to rise in the next decade.

The MAPS elections are coming up and I want to encourage all MAPS members to step up and cast your ballots. The offices of President-Elect, Secretary and Treasurer/Membership Chairman will be on the ballot along with a proposed amendment to the By-Laws, the details of which will be listed in this issue of The Constellation (see page 12).

Plans for the spring conference in the Philadelphia area are progressing and will be a challenge for the hosts to have it spread among three facilities and to be able to have activities in different venues with different hardware. I don't recall MAPS ever having a conference of this type and I am excited about the possibilities.

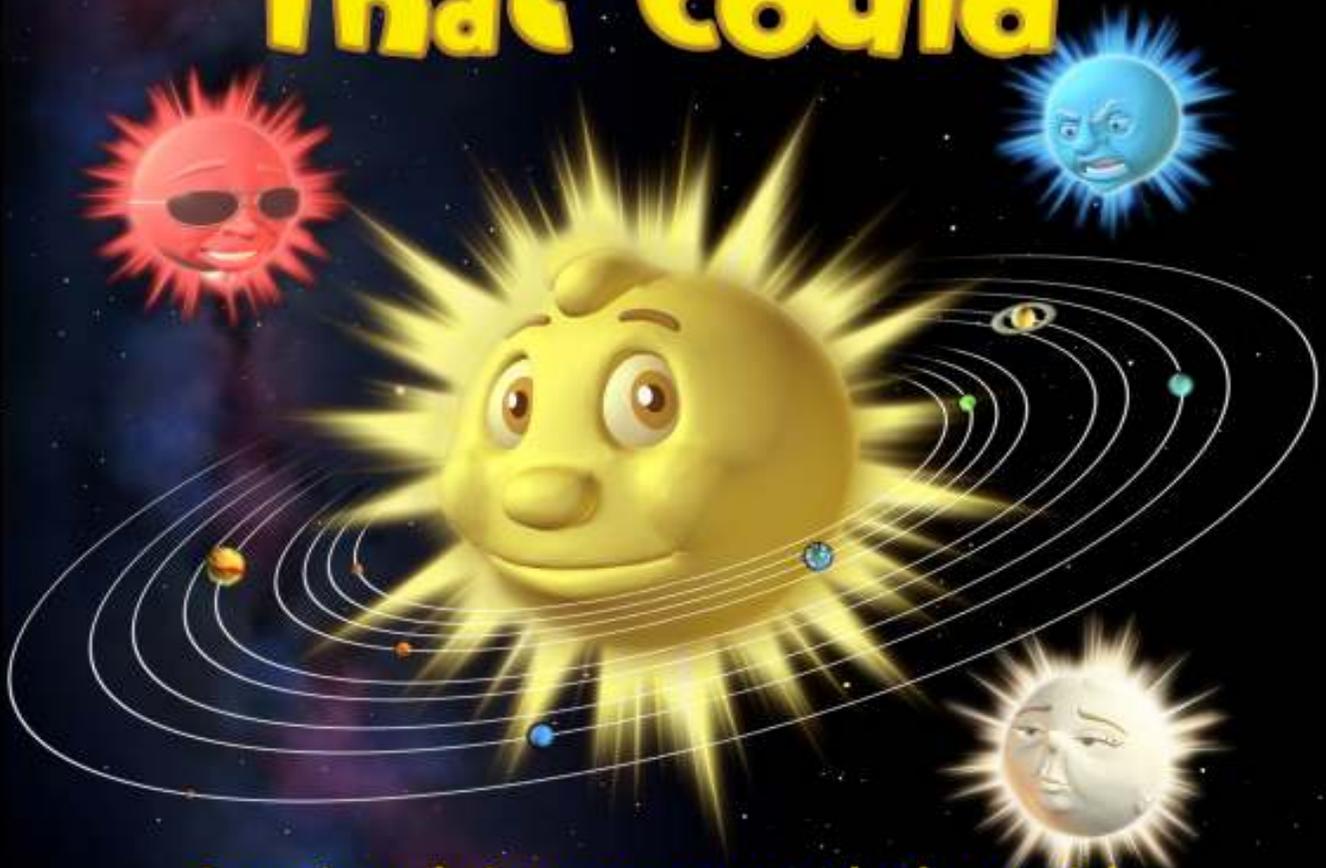
I hope each and every one of you have a prosperous and successful New Year.

Sincerely,

Steven Mitch

Steven Mitch, President

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MIDDLE ATLANTIC PLANETARIUM SOCIETY MINUTES OF THE BUSINESS MEETING OF MAY 22, 2010

The meeting was called to order by Steve Mitch at 9:30 AM.

Secretary's Report: The Minutes of the May 9, 2009 Business Meeting were distributed and approved.

Treasurer's Report: Keith Johnson presented the MAPS financial report. As of December 31, 2009, we have a balance in our account of \$66,840.67. The current balance is over \$90,000.00, but this balance does not reflect hotel expenses for the present meeting. We have enjoyed tremendous support from our sponsors. A motion to approve the Treasurer's Report was passed.

Membership Committee: Keith Johnson reported that we actually had 145 members last year (this is a corrected figure from that reported by Keith in last year's minutes); we have 127 members, and 19 life members, for a total of 146 members. Some members have paid dues more than once, and can either have their memberships extended or receive a refund of the extra dues paid.

Keith reported that he is compiling a master list of all planetariums in our region; this will be distributed to the membership for correction and verification and then used for recruiting new members. A revised membership brochure is almost ready thanks to the efforts of Gloria Villalobos. Kathy Michaels reported that she will be contacting portable planetariums to let them know of our ability to support their growth. Discussion emphasized the importance of individual efforts in making contacts with nearby facilities. A "MAPS Ambassador" program is in the planning stages. A motion to approve the Membership Report was passed.

Education Committee: John Scala reported that the Education Committee met at this Conference. The *Constellation* will be the major method to disseminate the contributions of the committee. The MAPS web site will show you how to contribute lessons, etc., and will also make the contributed materials available directly for our use. As an incentive to participate, those who contribute will enjoy a reduced registration fee for our next Conference.

As valuable as the annual meeting is to educators, it was agreed that one day local meetings are of great value as well. These meetings currently enjoy financial support from MAPS. For example, Kathy Michaels reported that there will be a western New York meeting September 17-18, 2010, in Lockport, NY. A motion to approve the report of the Education Committee was approved.

Conference Report: Steve Innes reported that we have about 75 delegates in attendance and excellent vendor support for this Conference. The current budgetary situation in our region as well as the geographic location of the venue contributed to a lower number of delegates than normally attend. The Conference Report was accepted.

Web Committee: Ted Williams reported that the Society will have an entirely new web site which will be user friendly and will emphasize continuous member participation. The new site will be available in the coming weeks. The URL will slightly change, from "maps-planetarium.org" to "mapsplanetarium.org." The web committee report was accepted.

Publications Committee: The report was presented by Kevin Conod. The *Constellation* still welcomes your submissions for coming issues. We are now up to 14 pages. Mike Smith will be working to assist with the production and distribution of the *Proceedings*. Photos from the Conference are welcome, too. The report of the Publications Committee was accepted.

Awards Committee: Wendy Ackerman is not present this year, but did initiate the MAPS Fellows awards as well as the Distinguished Service Awards for this year.

Nominations Committee: Don Knapp handled the election of our Board members. Paul Krupinski and Mike Smith will join the Board. The next election will be for Officers; this process will start in the Fall. Audit Committee: January's election for the Board of Directors was described by Paul Krupinski. Ballots were counted by Steve DuBois. A total of 81 ballots were counted.

Constitution Review Committee: Steve Russo reported for Jan Russo that a proposed name change from "Nominations Committee" to "Elections Committee" be approved; this proposed change more accurately describes the present work of the committee. This change will apply to the By-Laws in Article IV, sections 1 and 2, and in Article V, sections 1 and 2. This change was unanimously approved by a membership vote at this meeting.

Another change was proposed for future approval; this change would alter the wording of our Purpose, (By-Laws, Article II) to better reflect the work of the Society on behalf of its members. A Strategic Planning Committee has been established to construct a set of four organizational imperatives for the immediate future. The report of the Constitutional Review Committee was accepted.

IPS Report: Lee Ann Hennig reported on IPS activities and plans. This year's meeting is in Egypt, and the 2012 meeting will be in Baton Rouge, LA. There are bids for 2014 from Sendai (Japan), Rio de Janeiro, Vancouver and Beijing. At present, all issues but the current year of the *Planetarian* are available on line. Susan Button reminded the membership of the opportunity to go to

Italy and teach (in English) to students in the planetarium; this program includes reimbursed expenses for travel, food, and lodging, and is not only for portable planetariums but also for fixed-dome presenters. The deadline for application is September 15.

Sharon Shanks has asked for contributions from smaller facilities, "classical" planetariums, and educational institutions. These can be sent to the educational committee chair or the portable planetarium committee within IPS.

All MAPS members were invited to join IPS. The report of the IPS Committee was accepted.

Unfinished Business: none.

New Business: The new Strategic Planning Committee has met twice and discussed major issues facing MAPS now. The Committee also envisioned changes for MAPS going into the future. The committee consists of Steve Mitch, Patty Seaton, Gloria Villalobos, and Lee Ann Hennig.

Goals and objectives were developed from a situational analysis of our strengths and weaknesses, and the challenges and opportunities facing the Society.

Four critical focus areas were identified:

1. Organizational functionality- committee chairs now will submit uniform reports of objectives and a time line for completion, job descriptions, budget needed, and membership. A *Handbook for Executive Officers* is being developed to enumerate responsibilities.
2. Collaboration and partnership with other organizations - we are a Charter member of NSTA (as a CAG group), and therefore a representative will be sent annually to NSTA meetings. Currently, the ongoing work at the CAG meetings is the revision of national science standards, and planetariums are entitled to a voice in formulating these standards.

We have an IPS representative to attend IPS meetings; this is usually our President. We will establish cooperation with the ASP as well as the Astronomical League.

Planetarium closures are a major problem in our region; perhaps other regional Presidents can work with the national science standards and, through IPS, carry more influence. Discussion among the delegates indicates that our members need to learn the best practices for publicizing the valuable work of our facilities. Projectors which become available when a facility permanently closes need "new homes."

3. New member issues - we are considering a new member recognition session for future conferences and working to establish a MAPS Ambassador program as well as adding material to our web site to provide assistance and resources to new members.
4. Conference and vendor issues - we seek input and contribution from vendors who can contribute expertise not necessarily related to selling a particular product. What role do vendors have at our meetings beyond sales? We are considering holding panel discussions among vendors, having a vendor column in our publications, and making vendors aware of the impact of advertising on the profession ("turnkey" operations).

An upgrade of our web site is another outcome of this committee. Other items will be addressed in the future by this (Ad Hoc) committee which will be activated whenever needed as time goes on.

A motion to accept the report of the Strategic Planning Committee was approved.

For the Good of the Order:

Steve Innes was thanked for his work on this Conference. Jerry LaSala and Ed Gleason were also thanked.

The meeting was adjourned at 10:50 AM.

Respectfully submitted,
Sam Storch

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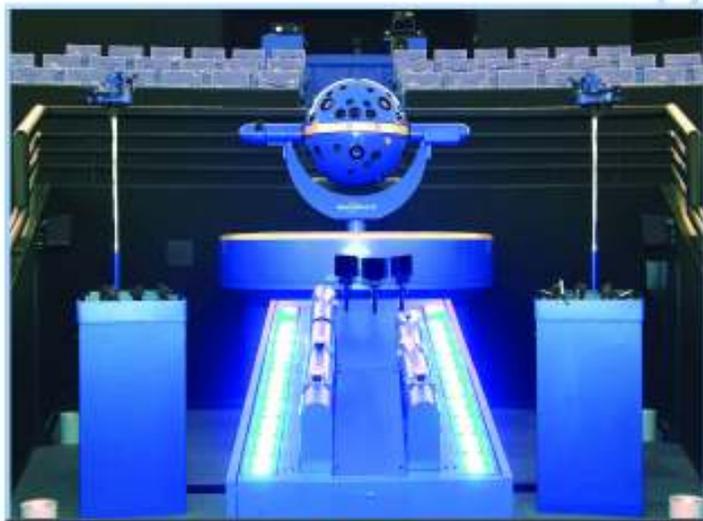
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EDUCATION COMMITTEE

Happy Holidays from the Education Committee:

Here in New Jersey education & educators are being made the scapegoat for the State's fiscal woes. Now more than ever, no matter where your facility is, it is important to spread the word of the GREAT things your planetarium does! Hosting local school groups, local scouting organizations, Senior Citizen shows for those folks looking for an afternoon under the stars, music under the stars - whatever it is that YOU do, use the local media to get the word out to the community of the vital services you so uniquely provide. Strive to make your planetarium a vital part of the community, and not just a luxury or white elephant that your citizens are "stuck" with. This begins in your classroom with your students. If they leave school excited about their planetarium experiences, they will certainly bring this home and spread the word. Word of mouth is a powerful tool - use it to your advantage!

As always, we encourage all members to submit lessons/activities/best practices for consideration of inclusion in the 'Constellation', as well as the MAPS webpage. Submission can be made to jscala@lvhs.org. Best wishes for a Happy & Healthy Holiday Season!

This issue's submission is made by Sue Button, dealing with 'Celestial Motion'. During this lesson the planetarium will be used as a laboratory. The lab activity involves locating & recording apparent celestial motion of four easily identifiable stars at "home" latitude and at selected other latitudes. With the information collected students can then calculate the average hourly apparent motion and as well the latitude of the observer. The lesson Extension addresses how knowledge of apparent celestial motion is reflected and passed on in the sky stories of various cultures. Target group for this lesson is middle school and older. The lesson in its entirety will be available shortly on the MAPS web page.



Astronomers Stumble onto Huge Space Molecules By Trudy E. Bell and Tony Phillips

Deep in interstellar space, in a the swirling gaseous envelope of a planetary nebula, hosts of carbon atoms have joined together to form large three-dimensional molecules of a special type previously seen only on Earth. Astronomers discovered them almost accidentally using NASA's Spitzer Space Telescope.

"They are the largest molecules known in space," declared Jan Cami of the University of Western Ontario, lead author of a paper with three colleagues published in *Science* online on July 22, 2010, and in print on September 3.

Not only are the molecules big: they are of a special class of carbon molecules known as "fullerenes" because their structure resembles the geodesic domes popularized by architect Buckminster Fuller. Spitzer found evidence of two types of fullerenes. The smaller type, nicknamed the "buckyball," is chemical formula C_{60} , made of 60 carbon atoms joined in a series of hexagons and pentagons to form a spherical closed cage exactly like a black-and-white soccer ball. Spitzer also found a larger fullerene, chemical formula C_{70} , consisting of 70 carbon atoms in an elongated closed cage more resembling an oval rugby ball.

Neither type of fullerene is rigid; instead, their carbon atoms vibrate in and out, rather like the surface of

(Continued on page 13)



Space Flights Now Departing

PLANETARIUM NEWS

SCHOLARSHIP FUND ESTABLISHED FOR PLANETARIUM TRAINING

The Hamilton Planetarium Scholarship Fund Inc. was established under the laws of New York State as of October 20, 2010. The organizing statement says that America faces expanding challenges to its position in space, from China, Europe, Japan, and even Russia. To face these challenges both the public and governmental officials need to gain a better understanding of astronomy and space related issues, particularly in a world where many question whether the Apollo landings took place, and others question whether ancient Mayan prophecies foretell doom from the skies. One of the ways such matters are confronted is from the nation's nearly three thousand planetariums. However, professional training for planetarium work has lagged. In order to enhance professional preparation in this field, the Hamilton Planetarium Scholarship Fund hopes to provide financial incentives for talented individuals to enter the field. Student stipends will be for one year, renewable, and will include a paid one year membership in professional organizations in the planetarium field. Those interested in being considered for a scholarship must complete an application form, available by e-mail from: tham153@hotmail.com or by regular mail from:

Hamilton Planetarium Scholarship Fund Inc.
153 Arlo Road, Staten Island, NY 10301

The trustees of the Fund include Thomas Wm. Hamilton, who worked on the Apollo Project, has experience in the planetarium field since 1968, taught astronomy for 32 years, was named a Fellow of the International Planetarium Society, and in 2009 had asteroid 4897 named Tomhamilton in his honor. He is the author of dozens of articles in the planetarium field, two books on computers, and a science fiction novel published in 2008, Time for Patriots.

Also a trustee is Sheldon Schafer, director of the Lakeview Museum Planetarium in Peoria, Illinois. Schafer is a Past President of the Great Lakes Planetarium Association, and is responsible for the world's largest complete model of the Solar System. Centered on his planetarium, it extends for 80 miles into the countryside beyond Peoria. He has been in the planetarium field since 1973, and has taught astronomy at Bradley University for 30 years.

Rounding out the trustees is Pam Eastlick, director of the planetarium of the University of Guam since 1993. This planetarium is noted for being the most isolated on Earth, nearly two thousand miles from its nearest planetarium neighbor. Eastlick also does two weekly newspaper columns and a weekly radio show, devoted to astronomy and general science, and teaching people about Guam's beautiful night skies.



Visitors from The Ukraine

This past Summer, members of the Ukraine Astronomical Foundation, visited the Suits-Bueche Planetarium at the Schenectady Museum. They spent time touring the Museum and had a chance to "play" with the GOTO Chronos.

In the Photo are:

Planetarium Manager Steve Russo
Denis Svechkarev
Education Manager Megan Dominguez
Bogdan Dereka
Suffolk Community College Astronomy Professor
George Lomaga



By-Laws Amendment

As presented at the Business Meeting at the Middle Atlantic Planetarium Society annual conference on May 22, 2010, the Constitutional Review Committee is recommending an amendment to the By-Laws concerning the "Purpose" of the Middle Atlantic Planetarium Society. We are considering this change so as to more accurately reflect the mission of our organization. This is being sent as a reminder that the proposed amendment will be placed on the ballot with MAPS officers in January of 2011.

Current Purpose:

Article II Purpose

Section 1. The Society shall promote excellence in all facets of planetarium education and programming.

Section 2. The Society shall endeavor to upgrade the personnel and the facilities of its members by becoming a source of information and a medium for exchange of ideas among its members.

New Purpose:

Section 1. The Society shall cultivate, foster and promote excellence in all facets of the planetarium profession, including research, education and programming.

Section 2. The Society shall strive to advance the personnel and facilities of its members by being a source of information and a medium for the exchange of ideas, services, and resources among its membership.

During the upcoming elections in January, along with voting for the President-elect, Secretary, and Treasurer, you will be asked to vote for the above changes in the By-Laws.

Constitutional Review Committee
Steven LJ Russo (Chair), Janet C Russo, Megan EN Dominguez

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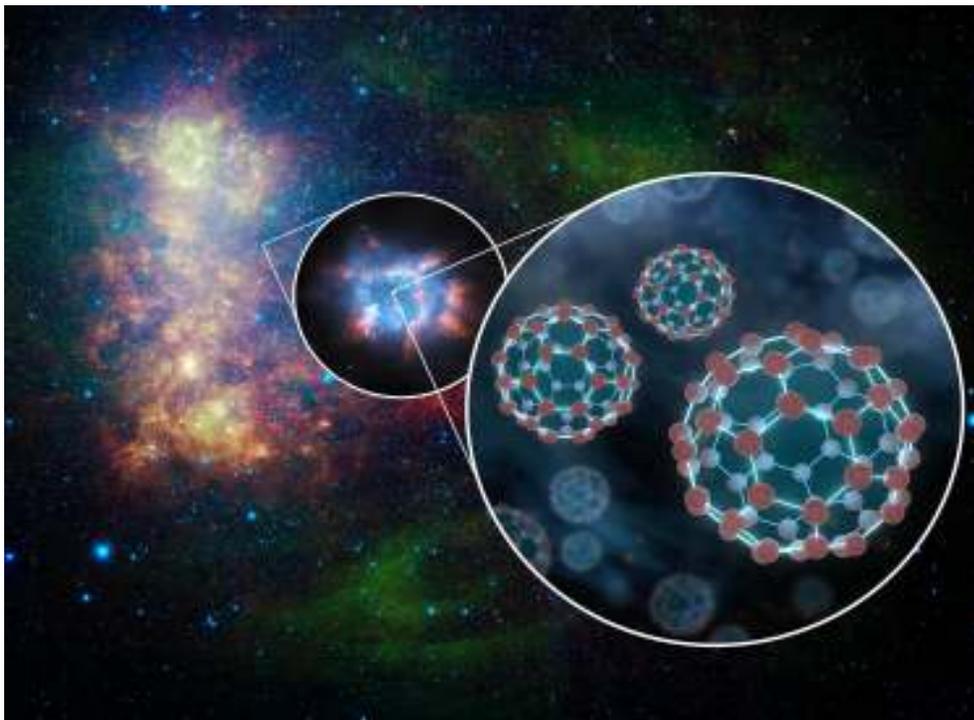
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Astronomers Stumble onto Huge Space Molecules

(Continued from page 9)



Superimposed on a Spitzer infrared photo of the Small Magellanic Cloud is an artist's illustration depicting a magnified view of a planetary nebula and an even further magnified view of buckyballs, which consist of 60 carbon atoms arranged like soccer balls.

a large soap bubble changes shape as it floats through the air. "Those vibrations correspond to wavelengths of infrared light emitted or absorbed—and that infrared emission is what Spitzer recorded," Cami explained.

Although fullerenes have been sought in space for the last 25 years, ever since they were first identified in the laboratory, the astronomers practically stumbled into the discovery. Co-author Jeronimo Bernard-Salas of Cornell University, an expert in gas and dust in planetary nebulae, was doing routine research with Spitzer's infrared observations of planetary nebulae with its spectro-

copy instrument. When he studied the spectrum (infrared signature) of a dim planetary nebula called Tc 1 in the southern-hemisphere constellation of Ara, he noticed several clear peaks he had not seen before in the spectra of other planetary nebulae.

"When he came to me," recounted Cami, an astrophysicist who specializes in molecular chemistry, "I immediately and intuitively knew it I was looking at buckyballs in space. I've never been that excited!" The authors confirmed his hunch by carefully comparing the Tc 1 spectrum to laboratory experiments described in the literature.

"This discovery shows that it is possible—even easy—for complex carbonaceous molecules to form spontaneously in space," Cami said. "Now that we know fullerenes are out there, we can figure out their roles in the physics and chemistry of deep space. Who knows what other complex chemical compounds exist—maybe even some relevant to the formation of life in the universe!"

Stay tuned! Learn more about this discovery at <http://www.spitzer.caltech.edu>. For kids, there are lots of beautiful Spitzer images to match up in the Spitzer Concentration game at <http://spaceplace.nasa.gov/en/kids/spitzer/concentration>.

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

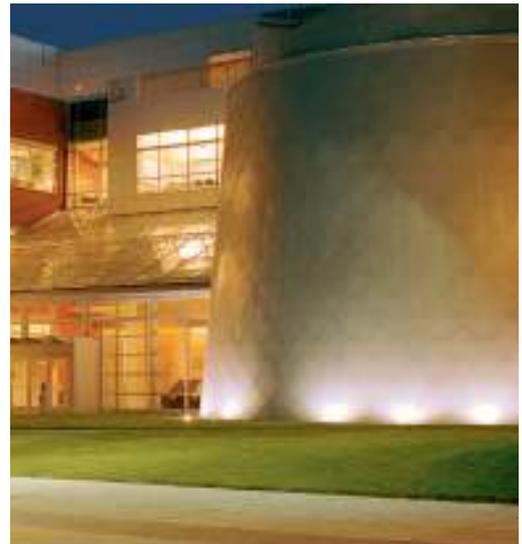
MAPS Conference 2011 May 4-7, 2011

(Continued from page 1)

Tentative plans include visits to the Johnsville Centrifuge and Science Museum (nadcmuseum.org) and to the National AeroSpace Training and Research (NASTAR) Center (www.nastarcenter.com).

The theme for the conference will be "Education in the Dark." We invite members to consider offering their thoughts on using new technology as an educational tool, the current status of educational standards, new ideas for planetarium teaching, and more. If you have any suggestions about workshops and panel discussions, they would be very welcome. Email Keith at johnsonk@rowan.edu.

We hope to see you all in May. If you don't come, you'll have to sit on a stool in the corner wearing a dunce cap all summer!



Edelman Planetarium at Rowan University in Glassboro NJ

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