



CONSTELLATION

Fall 2006, No. 3



“And then let us cast our eyes up to the spangled canopy of heaven, where innumerable luminaries at such an immense distance from us cover the face of the skies. All suns as great as that which illumines us, surrounded with Earths perhaps no way inferior to the ball which we inhabit and no part of the amazing whole unfilled! System running into system, and worlds bordering on worlds! Sun, Earth, Moon, stars be ye made, and they were made!”

*- Edmund Burke
(1729-1797)*



MAPS “DOWN UNDER” AT IPS 2006

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The IPS 2006 Conference in Melbourne Australia was full of wonderful activities, engaging workshops, passionate speakers, informative presentations, supportive and eager vendors, and superb Australian hospitality! Our MAPS members were frequent participants and leaders in many of the events taking place during and after the conference. The business of the organization was highlighted in the Council Meeting two days prior to the start of the conference, and during the General Business Meeting for the membership during the Conference.

There were so many events and activities that occurred during the conference it is hard to comment on all of them, however a few that stood out in my mind are the following:

1. Professor David Malin’s opening lecture on photography/imaging - outstanding!
2. Rob Landis’ Keynote Address – an informative, energizing, insider view of the return to the Moon - vintage Landis!!

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A Note from the President

Pluto for Planetariums

"My! Very educated morons just screwed up numerous planetariums." (by Josh Mishell, from www.kottke.org/06/08/pluto-mnemonic-device-contest-results).

So what are you up to this Autumnal Equinox? Still changing your planetarium programs to reflect the IAU's latest update to the definition of "planet"? Still listening to arguments as to whether or not Pluto should be considered a planet? Okay, so Frank Summers and the Rose Center can sit back and watch as the rest of us scramble around. But truth be told, I am sure that all of you have found the recent increase in public interest on the topic to be a beneficial one. What an opportunity discuss the nature of science which forces us to re-evaluate our understanding of the universe as technologies improve and our new observations challenge our old way of thinking! What a great time for planetariums to take leading roles in public awareness of these challenges! As we continue to do what we do best, the rest of the community will once more see the value of the planetarium as a place of learning.

Of course, Pluto's new nomenclature isn't the only event happening! I know that many of you took advantage of meeting with your colleagues world-wide at this year's IPS Conference in Australia! Those of us who were unable to attend look forward to reaping the benefits from those of you who did. We look forward to updates and new insights that you send through a variety of venues – publishing in the *Constellation*, preparing talks at our regional conferences, and posting to MAPS-L. Speaking of regional conferences, make sure you are prepared to participate in the **Triple Conjunction** MAPS/SEPA/GLPA Conference on October 9-13, 2007 at Oglebay Resort and Conference Center. Please see details at our recently re-designed website (kudos, Don Knapp and Ted Williams!).

Finally, please continue to consider serving on the MAPS Executive Board. We are accepting nominations for President-Elect, Secretary, and Treasurer. Ballots are expected to go out in January, so send your nominations (including for yourself) to Jerry Vinski today (jvinski@raritanval.edu).

In the meantime, I have to run. **My Very Energetic Mother Just Screamed Utter Nonsense!**

Patty

Patty Seaton,
President

MAPS “DOWN UNDER” AT IPS 2006

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3. Professor Fred Watson’s Banquet presentation on “Astronomers Behaving Badly”- an entertaining (hilarious) journey through astronomical history on little known episodes of astronomical antics by some of our most revered scientists- no one fell asleep during this after dinner talk!!
4. The pervasive theme of the history, culture, and contributions of the indigenous peoples of Australia.
5. The beauty of the Southern Skies - our experience of an evening observation session at the Leon Mow Dark Sky site hosted by the Astronomical Society of Victoria. (How lucky we were to have a clear night!)
6. The sharing of knowledge, expertise, and support of our planetarium community.
7. The global nature of the planetarium field: recognizing and working with the diversity of our profession.



Ayers Rock - a sacred sandstone formation in Central Australia

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Sunset over Mauna Kea



Lee Ann at 14,000 feet in front of the Gemini North Telescope

The New Solar System



A map of the "new" Solar System
 High resolution versions of this are available at: www.iau2006.org/mirror/www.iau.org/iau0603/index.html

By now everyone's heard of the controversial resolutions passed by the International Astronomical Union (IAU). Below is the text of the resolutions passed on August 24, 2006.

RESOLUTION 5A

The IAU therefore resolves that "planets" and other bodies in our Solar System, except satellites, be defined into three distinct categories in the following way:

1. A "planet"¹ is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit.
2. A "dwarf planet" is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape², (c) has not cleared the neighbourhood around its orbit, and (d) is not a satellite.
3. All other objects³ except satellites orbiting the Sun shall be referred to collectively as "Small Solar-System Bodies".

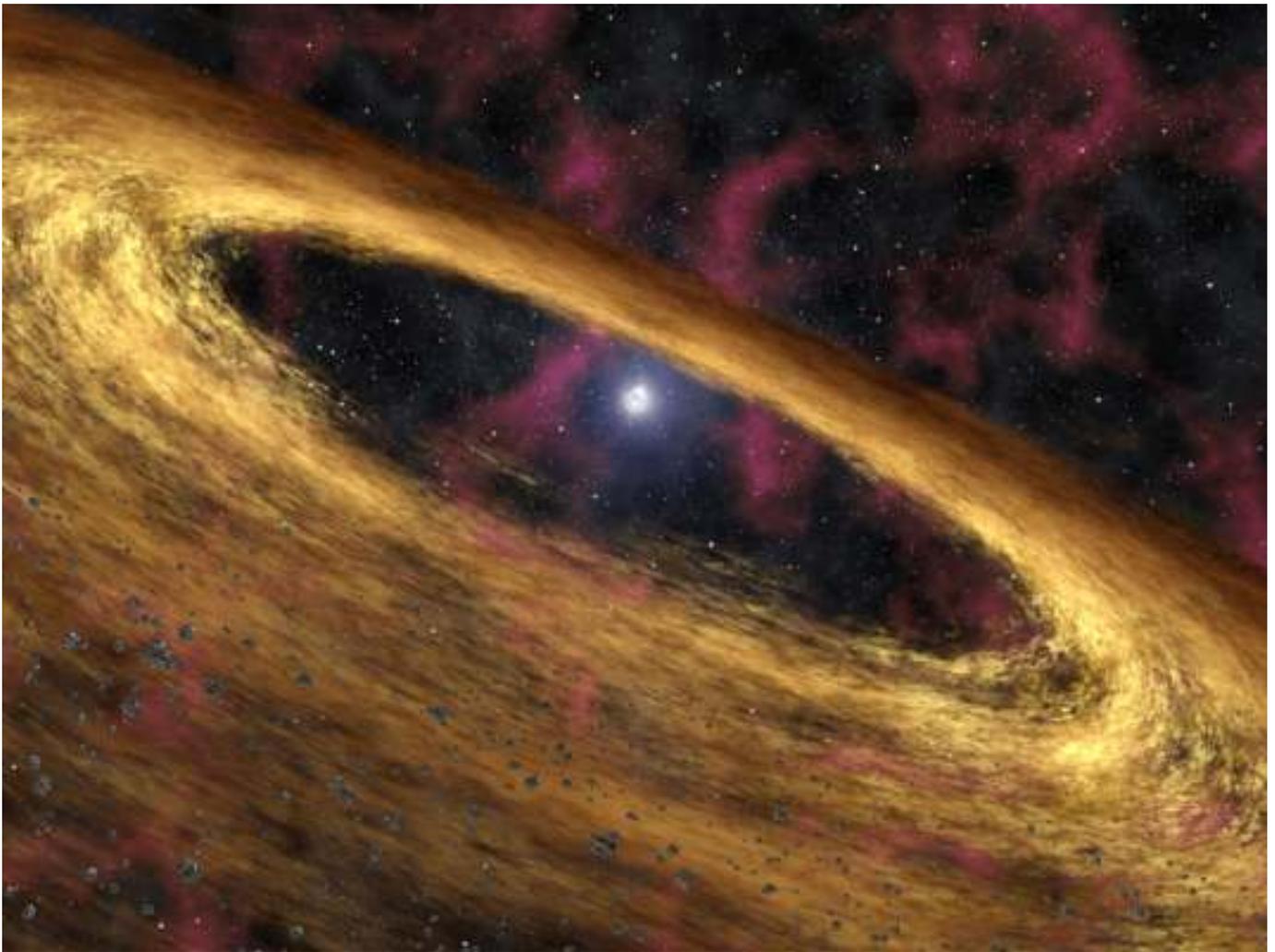
¹ The eight "planets" are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

² An IAU process will be established to assign borderline objects into either dwarf planet and other categories.

³ These currently include most of the Solar System asteroids, most Trans-Neptunian Objects (TNOs), comets, and other small bodies.

IAU Resolution: Pluto RESOLUTION 6A

The IAU further resolves: Pluto is a "dwarf planet" by the above definition and is recognized as the prototype of a new category of trans-Neptunian objects.



Deadly Planets

By Patrick L. Barry and Dr. Tony Phillips

About 900 light years from here, there's a rocky planet not much bigger than Earth. It goes around its star once every hundred days, a trifle fast, but not too different from a standard Earth-year. At least two and possibly three other planets circle the same star, forming a complete solar system.

Interested? Don't be. Going there would be the last thing you ever do.

The star is a pulsar, PSR 1257+12, the seething-hot core of a supernova that exploded millions of years ago. Its planets are bathed not in gentle, life-giving sunshine but instead a blistering torrent of X-rays and high-energy particles.

"It would be like trying to live next to Chernobyl," says Charles Beichman, a scientist at JPL and director of the Michelson Science Center at Caltech.

Our own sun emits small amounts of pulsar-like X-rays and high energy particles, but the amount of such radiation coming from a pulsar is "orders of magnitude more," he says. Even for a planet orbiting as far

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Deadly Planets

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out as the Earth, this radiation could blow away the planet's atmosphere, and even vaporize sand right off the planet's surface.

Astronomer Alex Wolszczan discovered planets around PSR 1257+12 in the 1990s using Puerto Rico's giant Arecibo radio telescope. At first, no one believed worlds could form around pulsars—it was too bizarre. Supernovas were supposed to destroy planets, not create them. Where did these worlds come from?

NASA's Spitzer Space Telescope may have found the solution. Last year, a group of astronomers led by Depto Chakrabarty of MIT pointed the infrared telescope toward pulsar 4U 0142+61. Data revealed a disk of gas and dust surrounding the central star, probably wreckage from the supernova. It was just the sort of disk that could coalesce to form planets!

As deadly as pulsar planets are, they might also be hauntingly beautiful. The vaporized matter rising from the planets' surfaces could be ionized by the incoming radiation, creating colorful auroras across the sky. And though the pulsar would only appear as a tiny dot in the sky (the pulsar itself is only 20-40 km across), it would be enshrouded in a hazy glow of light emitted by radiation particles as they curve in the pulsar's strong magnetic field.

Wasted beauty? Maybe. Beichman points out the positive: "It's an awful place to try and form planets, but if you can do it there, you can do it anywhere."

More news and images from Spitzer can be found at <http://www.spitzer.caltech.edu>. In addition, The Space Place Web site features a cartoon talk show episode starring Michelle Thaller, a scientist on Spitzer. Go to spaceplace.nasa.gov/en/kids/live for a great place to introduce kids to infrared and the joys of astronomy.

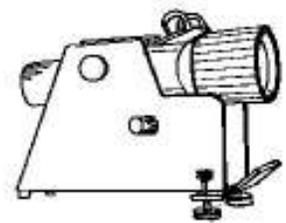
This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

The Radical Radmar

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For many years we've carried a small slide projector with our portable planetarium to show constellation outlines and other celestial objects. Although slides have to be fed in one at a time, it is lightweight and extremely rugged. In nearly twenty years of use it has rarely needed repair and has only had its bulb changed once, at most twice, during that time!

When considering audiovisual equipment for a new outreach program we thought about using a laptop and LCD projector. But given the weight and expense of such equipment, I wondered if Radmar projectors were still available. Sure enough a search turned up the website at www.radmar.com. The company has moved but is still selling the same projectors. Ordering from the website is a little clunky, it's a good idea to print out the catalog and refer to it while placing an order. Check it out if you need a durable and portable projector for outreach or a single slide projector for your planetarium.





The Digistar Users Group Is Coming to Utah

The Digistar Users Group recently voted to hold their annual meeting in Salt Lake City, Utah. Evans & Sutherland will host the three-day meeting during which Digistar users will share and demonstrate new programs, discuss upcoming features, and review customer service and support.

Along with DUG activities, E&S will be providing free hardware and software training seminars for all Digistar owners and introductory seminars on the Digistar product line.

Please plan to join us in Salt Lake City on September 27-29. We invite you to stay and take advantage of all that Utah has to offer, including a wide variety of outdoor activities and scenic adventures.

Space is limited, so visit the DUG website today to register for the meeting and reserve your spot in our training classes.

<http://www.digistardomes.org>



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MAPS “DOWN UNDER” AT IPS 2006

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The IPSNews Listserve carried a journal of the conference reported by Pacific Planetarium Association Representative Gail Chaid (you can access that by joining the listserv group) and it will be posted on the IPS Website along with articles on the conference in the December issue of the *Planetarian*. The Adler Planetarium in Chicago will be hosting IPS 2008. The bid sites for 2010 are Beijing, China, Alexandria, Egypt, and St. Etienne, France.



Shadow of Mauna Kea

I was very proud of our MAPS members who were able to attend the conference and the roles they took in leadership, support, presentations, and vendor/business participation. Many of us extended our visit to attend the post tour events at neighboring planetarium facilities, observatory tours, and the sites of that beautiful country. I ran into several MAPSers at Ayres Rock, and the Great Barrier Reef. When I stopped in Hawaii on the way home, I thought about many of my colleagues as I stood atop Mauna Kea and watched the Sun set over the great domes on a perfect ending to a summer trip. What a great job we have and what a fantastic group of people to work with!

MEMBER NEWS

Jack Wilcox (1936-2006)

Jackson F. Wilcox, former director of the Alden Planetarium at the Ecotarium in Worcester, Massachusetts, passed away on the morning of August 27, 2006 at his home in Clear Lake, Iowa. He was 70. Jack was director of the planetarium from 1968 to 1977.

Jack was Chief Technician at the Charles Hayden Planetarium at the Museum of Science in Boston, Mass., from 1957 to 1968. He was also a former member of the Middle Atlantic Planetarium Society.

MEMBER NEWS

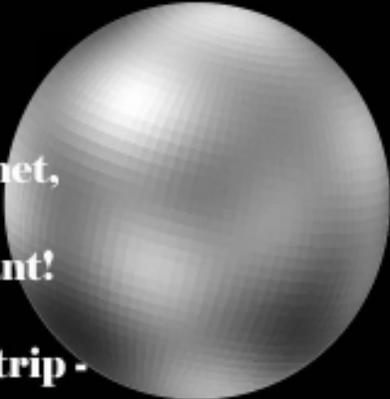
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Tom Hamilton

Tom Hamilton has taken up writing science fiction. Samples are available at the link below. He claims to try to work some astronomy into most of his stories, including one set partially on Kitt Peak ("The Mountain of Long Eyes"), and, if you can stand the concept, he has George Washington in a planetarium ("Time for Patriots", which is part one of four parts making up a novel).

See:

www.changingthetimes.net/authors/TOMHAMILTON.htm



Pluto's no longer a planet, but Pluto is still important!

Let's take a trip -

Destination: Pluto

A new planetarium Solar System slide show from the Paulucci Space Theatre. Updated Pluto information includes IAU decision, New Horizons mission, updated moons numbers, and more!

More information at 218-262-6718 or email marcrouleau@hibbing.edu

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A New Star Projector for Schenectady

On Tuesday, August 29th, the Suits-Bueche Planetarium at the Schenectady Museum received delivery of its new GOTO Chronos Space Simulator. Planetarium Educator Megan Dominguez took delivery of the Chronos while Planetarium Manager Steve Russo was on vacation in Georgia.

The Planetarium will be closed for renovation from September 23rd, through October 28th, for the renovation and installation. There will be a grand opening party on the evening of the 28th, complete with planetarium shows, door prizes, and a "costume contest" (afterall, it is close to Halloween), along with refreshments and other happenings.

If any of you out there would like to attend this event, please let me know, and I will make sure that you get a "formal" invitation.

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