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AGU Planetary Sciences Section NEWSLETTER #31

1 May, 2009

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1) Planetary Sessions at the Spring General Assembly, Toronto

The Spring 2009 General Assembly, the "Meeting of the Americas", will be held Sunday, May 24 through Wednesday, May 27 in Toronto, Canada, and we have a scheduled a diverse set of planetary-themed sessions. Because this meeting is being held in conjunction with several Canadian societies and associations, there are quite a few planetary-themed sessions that will not show up under "P" in your program (which, of course, is digital-only now!) You can get more information at:

http://www.agu.org/meetings/ja09/

Below is a summary list of sessions that might be of particular interest to planetary scientists. In addition to the "P" sessions, I have tried to include most (but probably not all) of the sessions sponsored by other organizations. Be sure to check the program for other sessions that are jointly sponsored by the Planetary Sciences section.

Sunday Oral:

SM71A Energetic Particles in Magnetospheric Physics, Including First Results From the NASA TWINS Mission I

SM72A Energetic Particles in Magnetospheric Physics, Including First Results From the NASA TWINS Mission II

Sunday Posters:

SM73A Energetic Particles in Magnetospheric Physics, Including First Results From the NASA TWINS Mission I

Monday Oral:

U11A Connecting Atmospheric, Space, and Planetary Sciences to Accelerate Progress in Addressing Earth's Atmospheric and Oceanic Coupling and Climate Variability I

U12A Connecting Atmospheric, Space, and Planetary Sciences to Accelerate Progress in Addressing Earth's Atmospheric and Oceanic Coupling and Climate Variability II

GA13D Polar Processes on Earth and Mars: Comparative Studies I
MA11B Manna From Heaven: Insights Into the Origin and Evolution of the Solar System From the Mineralogical and Physical Properties of Meteorites I
MA12A Manna From Heaven: Insights Into the Origin and Evolution of the Solar System From the Mineralogical and Physical Properties of Meteorites II
MA13C Manna From Heaven: Insights Into the Origin and Evolution of the Solar System From the Mineralogical and Physical Properties of Meteorites III
P11A Planetary Sciences General Contributions I
P12A Rosetta at Asteroid Steins
SM14A Saturn Gas and Plasma: Sources, Losses, and Transport II

Monday Posters:
B13B Lessons from Astrobiology and Biogeochemistry: From Deep Biosphere to Ecosystem and Human Health I Posters
MA13A Manna From Heaven: Insights Into the Origin and Evolution of the Solar System From the Mineralogical and Physical Properties of Meteorites IV Posters
P13A Planetary Sciences General Contributions III Posters
SM13A Saturn Gas and Plasma: Sources, Losses, and Transport I Posters

Tuesday Oral:
CG22A Lunar Secular Evolution
B24A Lessons from Astrobiology and Biogeochemistry: From Deep Biosphere to Ecosystem and Human Health II
MA21B Mineralogy of Mars: Missions, Meteorites, and Terrestrial Analogues II
P21A Planetary Atmospheres: Dynamics, Chemistry, Climate, and Couplings I
P22A Planetary Atmospheres: Dynamics, Chemistry, Climate, and Couplings II

Tuesday Posters:
GA23B Polar Processes on Earth and Mars: Comparative Studies II Posters
MA21A Mineralogy of Mars: Missions, Meteorites, and Terrestrial Analogues I Posters
P23A Planetary Atmospheres: Dynamics, Chemistry, Climate, and Couplings III Posters

Wednesday Oral:
GA31C Terrestrial Impact Structures: Cratering Processes, Mineral Resource Deposits, and Environmental Consequences I
GA32B Terrestrial Impact Structures: Cratering Processes, Mineral Resource Deposits, and Environmental Consequences II
P31B Planetary Sciences General Contributions III
P31C Physical Attributes of Dwarf Planets in Our Solar System and Others
P32A Great Enceladus Debates: Plumes, Beams, Ocean, Chemistry? I
P33B Comparative Studies of Planetary Magnetospheres II

Wednesday Posters:
GA33B Terrestrial Impact Structures: Cratering Processes, Mineral Resource

Deposits, and Environmental Consequences III Posters
P31A Comparative Studies of Planetary Magnetospheres I Posters
P32A Great Enceladus Debates: Plumes, Beams, Ocean, Chemistry? II Posters

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2) Propose a Session for the AGU 2009 Fall Meeting

Members of the Earth and space sciences community are invited to propose a session for the 2009 Fall Meeting (to be held 14-18 December, 2009). You may submit a session proposal to any of the existing disciplines or themes. Session proposals must focus on scientific results and/or their applications. The deadline for proposing a session is **12 June, 2009**.

To propose a session or to get more information, visit:

http://www.agu.org/meetings/fm09/program/session_proposals.php

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3) Planetary Photogrammetry Guest Facility AT USGS

NASA and the US Geological Survey announce that they have jointly established a Planetary Photogrammetry Guest Facility at the USGS in Flagstaff, Arizona. This is a specialized computer workstation of the same type used by the USGS for stereo topographic mapping of the Moon and planets that will be available up to 50% of the time for qualified researchers to use to make products ranging from simple spot height measurements to fully edited digital topographic models (DTMs) from a wide variety of stereo images. USGS staff will provide training and supervision, but travel expenses are the responsibility of the selected investigator. To apply, send a short (1 page) informal application to rkirk@usgs.gov. The two key pieces of information required are the research goals (to allow us to evaluate whether images to achieve these goals are available) and the researcher's schedule of availability for group training and subsequent use of the facility. We ask that applications for the current fiscal year be transmitted by 31 May 2009. Applications received after that date will be considered for FY 2010. For more information about the capabilities of the stereo workstation and the application process, see the 2009 LPSC abstract:

http://www.lpi.usra.edu/meetings/lpsc2009/pdf/1414.pdf

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4) Planetary Science Decadal Survey Steering Group Appointed

The Chair of the National Research Council has approved the selection of the following individuals as members of the Steering Group for the Planetary Science Decadal

Survey: Wendy M. Calvin, University of Nevada, Reno; Dale Cruikshank, NASA Ames Research Center; Pascale Ehrenfreund, George Washington University and Leiden Institute of Chemistry; G. Scott Hubbard, Stanford University; Wesley T. Huntress, Jr., Carnegie Institution of Washington; Margaret G. Kivelson, University of California, Los Angeles; B. Gentry Lee, Jet Propulsion Laboratory; Jane Luu, Massachusetts Institute of Technology, Lincoln Laboratory; Stephen Mackwell, Lunar and Planetary Institute; Ralph L. McNutt, Jr., Johns Hopkins University, Applied Physics Laboratory; Harry Y. McSween, Jr., University of Tennessee, Knoxville; Amy Simon-Miller, NASA Goddard Space Flight Center; David J. Stevenson, California Institute of Technology; and A. Thomas Young, Lockheed Martin Corporation [Retired]. The appointment of Steven W. Squyres, Cornell University, and Laurence A. Soderblom, U.S. Geological Survey, as, respectively, the chair and vice chair of the Steering Group was announced in March.

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5) Letter from Steve Squyres, 2009-2011 Planetary Science Decadal Survey Chair

Dear Colleague:

This is the first of what will be a regular series of newsletters to the community regarding the 2009-2011 Planetary Science Decadal Survey. We all get too much email, so I'll try to keep these concise!

The key points in this newsletter are these:

1) The decadal survey will establish the priorities for planetary exploration in the U.S. for the coming decade.

2) The process is just getting started, and will take place over the next two years.

3) The goal is to formulate a plan for planetary exploration that truly represents the consensus view of the science community.

4) Community input to the decadal survey via participation in Town Hall meetings and generation of written white papers is strongly encouraged and in fact is necessary for the success of the survey. White papers should be submitted no later than September of this year.

5) More information is available at:

http://www7.nationalacademies.org/ssb/SSEdecadal2011.html

As most of you know, the Planetary Science Decadal Survey is organized by the National Research Council at the request of NASA and NSF. Its objective is to set clear priorities for solar system exploration for the coming decade. Congress and the Office of

Management and Budget highly value the decadal survey process for establishing the science priorities in various NASA fields. The astronomy and astrophysics decadal survey is also now underway, and the political leadership -- i.e., the people who control the funding-- are familiar with this process and want it to be used for solar system exploration as well.

The distinguishing characteristic of the decadal survey process is that it is based on broad input from the science community. The goal is to establish a true community consensus regarding the key science questions for the next decade, and the suite of missions that should address them.

To describe NASA's view of the decadal survey, I've asked Jim Green, the Director of NASA's Planetary Science Division, and Doug McCuistion, the Director of the Mars Exploration Program, to write a few words.

From Jim:

We are at the beginning of the development of the Planetary Science Decadal Survey that will chart our course for the next 10 years. If you are asked to be on one of the survey panels, I encourage you to accept. If you are not on a panel, please check the schedule for when and where the panel you are interested in will meet and plan to attend and participate. What makes the decadal a powerful document is the strong science focus and commitment by the community to follow it. It is the guide we use at NASA Headquarters, the current Administration and Congress. It is that important!

From Doug:

This decadal survey may be the most important one in decades for Mars exploration. I hope each of you will consider how to assist, advise and support the decadal team to create a successful and implementable approach to continue Mars scientific discovery. Jump in, take the opportunity to participate when asked, or volunteer. These proceedings will shape your Mars Program for at least the next 10 years, and I hope you will all engage to the fullest extent possible!

As Jim and Doug's comments make clear, the decadal survey is the process by which NASA's goals for exploring the solar system will be established for the coming decade.

The process will start from the science, summarizing the current state of knowledge in planetary science and identifying the key outstanding science questions. We will then address what mix of mission sizes (e.g., Discovery, New Frontiers, Flagship) would best address those questions, and generate a prioritized list of New Frontiers and Flagship missions for the coming decade. Missions to Mars and the Moon will be considered on an equal basis with all others. We will also consider a range of other topics, including NSF-funded infrastructure for planetary science, research and analysis activities, and technology development.

This decadal survey will differ from previous ones in that much greater emphasis will be placed on evaluating the technical maturity and probable costs of candidate missions. The goal is to produce a clearly prioritized list of missions that can be flown in the coming decade within the available budget. We will strive to avoid creating an oversubscribed plan!

The decadal survey will involve the entire U.S. planetary science community, and will be led by six groups. There will be a steering committee, chaired by me. Larry Soderblom of the USGS is the vice-chair of the steering committee. There will also be five panels, on the following topics:

Inner planets (Mercury, Venus, the Moon), Mars, Outer planets (including magnetospheres and rings), Outer planet satellites, Primitive bodies (asteroids, comets, Kuiper Belt objects).

Each panel will have a chair and a vice-chair; the panel vice-chairs will all serve on the steering committee. Total membership of the steering committee will be about 15, and total membership of each panel will be about 11.

This panel structure was arrived at after considerable thought, and consideration of a number of alternatives. Strong practical considerations regarding budget, schedule and logistics dictate that the number of panels be minimized. In the end, it was decided to use a panel structure that mimicked the one used for the last decadal survey. This has the considerable advantage of allowing each panel to use the work done by the equivalent panel from last time as a starting point. The primary difference from last time is that ten years ago astrobiology was segregated from the rest of the survey in a sixth panel. This time, astrobiology will be fully integrated into the five-panel structure, with astrobiologists as appropriate on each of the panels.

Over the next couple of months, membership for the steering committee and panels will be established. This is a careful process, conducted by the NRC and aimed at establishing a distinguished membership with the appropriate balance among scientific disciplines, institutional affiliations, gender, and so forth. The panels will do most of their work in the second half of 2009. 2010 will be devoted to studying and costing mission concepts, establishing priorities, and writing the report. The final report will be released in the first quarter of 2011.

The primary job of all the decadal survey groups will be to actively engage the entire US planetary science community in the process. We will do this via a variety of mechanisms.

We will hold a number of Town Hall meetings at major science conferences, at community gatherings like meetings of the standing Analysis Groups (LEAG, VEXAG, MEPAG, OPAG), in conjunction with panel and steering committee meetings, and in other settings. Your participation in these sessions is strongly encouraged.

We will also solicit white papers from the community. These written inputs are a key part of the survey process, and white papers on any topic of relevance to the survey are strongly encouraged. A good white paper should be very concise, with strongly-reasoned arguments. Because the goal of the decadal survey is to build community consensus, it will be particularly effective for white papers to have many co-authors. We need to receive white papers no later than September of this year, so a good time to get started writing them is now.

Finally, we will try to make the activities of the steering committee and panels as transparent to the community as possible. For example, we hope to conduct live webcasts of the open sessions of all steering committee and panel meetings.

There's much more that I could write, but in the interest of brevity I'm going to save more details for future newsletters. If you'd like more information now, or if you'd like to volunteer to serve on one of the panels, go to:

http://www7.nationalacademies.org/ssb/SSEdecadal2011.html

This web site includes the formal statement of task for the decadal survey, a presentation about the survey that I recently gave at the Lunar and Planetary Science Conference, and instructions for how to volunteer. We will soon add a "Frequently Asked Questions" section and information about how to submit white papers to the site.

The Planetary Science Decadal Survey is the process by which the US program of solar system exploration for the coming decade will be established. Its effectiveness is derived directly from the broad community participation that characterizes it. I look forward to working with all of you in the months ahead.

Best wishes,

Steve Squyres
2009-2011 Planetary Science Decadal Survey Chair

For future newsletter items please contact:
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