
**AGU Planetary Sciences Section NEWSLETTER #39
May, 2011**

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1) Message from the Section President

Building on last Newsletter discussion of the Year of the Solar System, I'd like to highlight two very exciting missions coming up: Dawn and GRAIL. Dawn seeks to unlock the secrets of some of the most enigmatic and interesting objects in our Solar System: Main Belt Asteroids. This month, Dawn enters the most critical phase of its mission since launch in 2007 – it has imaged its first target, Vesta, and will be entering orbit around it this July. Dawn is truly a groundbreaking mission, being the NASA first science mission to use ion propulsion, and the first mission to orbit a main belt asteroid. I'm sure Dawn's science will be just as groundbreaking. I can't wait to see Vesta up close! Look for lots of great results at Fall Meeting!

Although it has taken Dawn almost 4 years to reach its target, GRAIL is still on the ground and yet will have results by early next year! It sure is convenient when your target, the Moon, is so close by. GRAIL seeks to understand the Moon's history as recorded in its internal structure and thermal evolution. GRAIL will use two spacecraft in low orbit around the Moon, flying about 200 km apart, and will precisely track the changes in distance between the two orbiters, which are caused by variations in the Moon's gravity field. GRAIL will address questions that have been open since the Apollo days, including the origin of the nearside-farside difference in crustal thickness, and the existence and size of a lunar core. Scheduled for launch in September, GRAIL results should be a highlight of next Spring's LPSC, and I'm sure we'll hear some great in depth analysis at future AGU meetings.

GRAIL and Dawn are both Discovery Missions – NASA's low-cost, PI-led planetary missions. They are great examples of the innovative ideas our community can bring to fruition. And because all the data are accessible through the Planetary Data System, these missions benefit our whole community. Speaking of Discovery, congratulations to the three missions and teams recently selected for mission concept studies for the next Discovery Mission. Congrats to these finalists: Geophysical Monitoring Station (GEMS)

with PI Bruce Banerdt of JPL (and former Secretary of our AGU Section!), Titan Mare Explorer (TiME) with PI Ellen Stofan of Proxemy Research Inc, and Comet Hopper with PI Jessica Sunshine of the University of Maryland in College Park. For more info on all this, check out the [Discovery Program home page](#).

Exciting times in the Solar System!

Best regards,
Laurie Leshin

2) Fall AGU 2010 Outstanding Student Paper Awards Announced

Please join us in congratulating our Section Outstanding Student Paper Award winners!

Alexander Hayes (Caltech): Seasonal variation in Titan's lakes and their role in the methane cycle (P22A-07)

Daniel Heisselmann (Technische Universität Braunschweig): Experimental investigations on the collisional properties of ice particles in Saturn's rings (P23B-1632)

Andrew Poppe (U. Colorado): Non-monotonic potentials above the lunar surface: implications for electron reflectivity measurements (P54B-08)

Natalie Szponar (Memorial Univ.): Present-day serpentinization in the Tablelands, Gros Morne National Park, Newfoundland: a Mars analogue site (P13B-1393)

Eric Wolf (U. Colorado): A fractal aggregate model of early Earth organic hazes: UV shielding with minimal antgreenhouse cooling (P11A-1317)

3) Deadline approaching to apply for summer School of Planetary Sciences

CPS 8th International School of Planetary Sciences:
[Challenges in Astronomy: Observational Advances](#)

Date: 26 September - 1 October 2011

1-3 October 2011 for a [tour of Kamioka Observatory](#)

Venue: Minami-Awaji Royal Hotel, Hyogo 656-0503, Japan

The objective of the school/seminar is to promote education and research in planetary sciences for highly motivated PhD students, postdocs, and young research/academic staff who have a good command of English by providing them with an opportunity to

interact with leading scientists in a specific field. Note that the term “Planetary Sciences” is used in a broader sense to include astronomy, astrophysics, astrochemistry, astrobiology, astromineralogy, geosciences, space science, cosmology, and other related fields. The main part of the school will be a series of lectures on recent and future advances in observational astronomy:

1. David Bennett (Univ. Notre Dame, USA), Exoplanet Detection by Gravitational Microlensing
2. Sebastian Wolf (Univ. of Kiel, Germany), Protoplanetary & Debris Disks
3. A. Subramaniam (IIA, India), Optical Astronomy
4. Ajit Kembhavi (IUCAA, India), Virtual Observatory
Masatoshi Ohishi (NAOJ, Japan), Virtual Observatory
5. Jayaram Chengalur (NCRA/TIFR, India), GMRT & Radio Astronomy
6. Hideyo Kunieda (Nagoya Univ., Japan), X-ray Astronomy
7. Nobuyuki Kanda (Osaka City Univ., Japan), Gravitational-Wave Astronomy

Important Dates:

All deadline times are 23:59 Japanese Standard Time, UTC+9

18 May 2011 Registration Application Deadline

18 May 2011 Abstract Submission Deadline

31 May 2011 Result Notification

For more information, please contact [Jun Kimura](#).

4) Planetary Science Decadal Survey Newsletter Available

The 7th of [Steve Squyres' newsletters](#) to the planetary science community is now available.

Information about the decadal survey, including links to the report and related presentations, can be found on the [National Academies' Web site](#).

David H. Smith
Study Director
Planetary Science Decadal Survey

5) Announcement of a Special Issue of *Advances in Space Research* on Lunar Exploration

Papers are invited for a special topical issue of *Advances in Space Research* entitled "Lunar Exploration".

The recent and coming lunar missions provides new opportunities to explore and understand space environments, surface processes, interior structure, evolution, and

origin of the Moon, e.g., SMART-1, SELENE, ChangE-1 and 2, Chandrayaan-1, and LRO/LCROSS, and coming Chandrayaan-2, SELENE-2, LADEE, GRAIL as well as other manned missions and sample return missions. This special issue is open to all scientists who may have an appropriate scientific paper to present latest results from lunar missions, including theory, methods, measurements, modeling and findings as well as comparative studies with the Earth in the atmosphere, surface and interiors. Manuscripts on new advances or simulations in lunar science, lunar mission concepts, the instrumentation for the future lunar missions and surviving the lunar environment including habitats and radiation protection are also welcomed.

Papers must be submitted electronically to [Advances in Space Research](#). To ensure that all manuscripts are correctly identified for inclusion into the special issue, authors must select "Lunar Exploration" when they reach the "Article Type" step in the submission process.

Submitted papers must be written in English and should include full affiliation addresses for all authors. Only full-length papers will be considered for publication, subject to peer review by two reviewers. There are no page limits although the length of the paper should be appropriate for the material being presented. While the deadline for submissions is 31 October 2011, papers will be published electronically as soon as they are accepted. The printed issue will be assembled within a reasonable time with late papers being printed in other regular issues. All articles will be typeset at no cost to the author; there is a nominal charge for printing color figures although there is no charge for color figures on the electronic version.

[Dr. Shuanggen Jin](#) is the Guest Editor for this special issue. Questions can be directed to Dr. Jin or to the Co-Editor for Special Issues, [Dr. Peggy Ann Shea](#).

6) New "Discoveries in Planetary Science" classroom powerpoints available

The AAS Division of Planetary Science Education Subcommittee announces the 4th release of "Discoveries in Planetary Science" Classroom Powerpoints, covering six new topics:

- A Thousand New Planets
- Buried Martian Carbonates
- The Lunar Core
- A Six Planet System
- Martian Gully Formation
- Propellers in Saturn's Rings

These are succinct summaries of discoveries too recent to appear in intro college textbooks; each set consists of just three slides: the discovery itself, a basic explanation based on good planetary science, and the "big picture" context. Another page for further

information is provided as well. Powerpoints and pdfs can be downloaded from the [American Astronomical Society's Web site](#).

Feedback from the community on how these slide sets are used and received is welcomed, and will be used to improve future releases. Planetary scientists with recent or upcoming results of broad interest are encouraged to submit them for consideration by providing an initial draft using the template provided on the website. For more information, contact [Nick Schneider & Dave Brain](#).

7) Early AGU Fall meeting abstract deadline: August 4

Abstract submission for 2011 AGU Fall meeting opens June 8, 2011. For more information, visit the [AGU Web site](#).

Abstract deadline 4 August 2011 23:59ET/3:59+1 GMT

8) Proposals for town hall meetings at Fall AGU are due with abstracts

This year [town hall meeting proposals](#) are due at the same time abstracts are. Don't wait until the fall to think about your town hall!

For future newsletter items please contact:
Section Secretary [Lindy Elkins-Tanton](#)
