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May I emphasize that the November meeting of OPAG is a very important occasion. We - the outer planets science community - need to hear the results of the extensive, detailed studies of missions to Europa and Titan. We will discuss their scientific merits and hear about technical feasibility. This will probably be the last opportunity for OPAG to provide comments to NASA for their potential decision about these two missions.

Fran Bagenal
OPAG Chair
Professor of Astrophysical and Planetary Sciences
Laboratory of Atmospheric and Space Physics
UCB 392 University of Colorado
Boulder CO 80309-0392
bagenal at colorado.edu

1. Status report on Outer Planet Flagship studies

Last week Curt Niebur presented to the OPAG Steering Group via telecon the current status of the OPF studies. We have posted his presentation on the OPAG website at <http://www.lpi.usra.edu/opag/announcements.html>

Also posted is Curt Niebur's presentation to PSS in June.

2. "Europa lander: science goals and experiments"

First announcement: International workshop

9-13 February 2009, Space Research Institute (IKI), Moscow, Russia

<http://www.iki.rssi.ru/conf/2009elw>

The Europa lander workshop will be hosted by the Space Research Institute (IKI) of Russian Academy of Sciences in Moscow, Russia, from 9 to 13 February 2009. The workshop will last 5 days including the days of arrival/departure (and some sightseeing events) and consists of several sessions dedicated to the scientific goals and logistics of the project, key issues of Europa science with the special emphasis on astrobiology, and discussions of the requirements for scientific instruments.

We kindly ask all colleagues interested in participation of Europa Lander workshop to register at the meeting website.

3. AGU SM09: Outer Planet Auroras: In Situ and Remote Sensing Results

Sponsor: SPA-Magnetospheric Physics

CoSponsor: Planetary Sciences

Convener: John T. Clarke, Boston University

jclarke@bu.edu

Jon Nichols, Boston University

jdn@bu.edu

William Kurth, U. of Iowa

william-kurth@uiowa.edu

Index Terms: 5706 5737 7549 7845 Description: New results from the Hubble Space Telescope large program of auroral observations of Jupiter and Saturn, combined with in situ measurements from Cassini at Saturn and New Horizons at Jupiter, provide a uniquely detailed data set to test our understanding of auroral processes at the giant planets. In addition, scientific planning for the JUNO mission is ongoing, which will make detailed measurements of auroral processes in close polar passes at Jupiter. This session will solicit presentations on recent results from HST and ground-based observations of planetary aurora, coordinated measurements from planetary spacecraft, theoretical work on planetary auroral processes, and planning/prediction work for future missions.

4. NASA Proposal Writing Workshop at DPS

Discipline scientists at NASA Headquarters will host a proposal writing workshop at the DPS meeting this fall that may be of interest to you, your colleagues, or your graduate students. The workshop will be held on Friday, October 10, from 1-5 pm at the conference hotel in Ithaca. The workshop is open to all interested planetary scientists from graduate students on up and is free of charge. The workshop will focus on understanding NASA's research programs and will include information on how to write a research proposal, where to apply for funding, and what kind of feedback one can expect. Other opportunities for funding, such as participating scientist programs and education/public outreach add-on awards, will also be discussed. To register, send an e-mail with your name, affiliation, and current position to curt.niebur@nasa.gov.

5. Cassini Sessions at AGU

Descriptions of these sessions, and a Calendar of Important Deadlines for the meeting follow:

P03: Planetary Rings: Observation and Theory

Convener: L. Esposito; L. Spilker

Larry.Esposito@lasp.colorado.edu; Linda.J.Spilker@jpl.nasa.gov

Description: This session will focus on new theoretical and observational studies of planetary rings. Subjects to be covered include the structure, dynamics and composition of the rings; rings around Saturn's moon, Rhea; the interaction of the rings with the ionosphere, magnetosphere, and interplanetary meteoroids; and the origin and evolution of the rings. Recently obtained Cassini observations will be highlights, but observations from Earth and HST, theoretical models, and relevant laboratory data are also of interest.

Focus: Theory and observations wrt planetary rings, including their interactions with their surroundings; Earth-based observations and spacecraft observations are welcome.

P05: Blowing Hot, Blowing Cold: The Diversity of Outer Planet Satellites

Convener: C. Hansen; K. Khurana

candice.j.hansen@jpl.nasa.gov; kkhurana@igpp.ucla.edu

Description: This session explores present and past planetary processes that lead to dramatically differing conditions on outer planet satellites such as scorching volcanoes on Io, a cold thick atmosphere on Titan, a plasma-sputtered tenuous atmosphere on Europa and water-oceans in the icy moons of Jupiter. Continued analysis of Jovian data from Galileo and New Horizons and unrelenting exploration of the Saturnian system by Cassini have provided exciting and sometimes confounding discoveries from the outer planet satellites. Guided by these discoveries, ESA, JAXA and NASA are currently studying future flagship exploration missions to the Jovian and Saturnian systems to intimately explore their major satellites. This session will explore similarities and differences of the outer planet satellites to uncover trends indicative of common and unique origins, and similar and dissimilar evolutionary processes. The session will consist of invited and contributed talks that highlight geological and geophysical modeling and interpretation of remote-sensed and in-situ data, interaction of planetary field and plasma with the surfaces and interiors of the moons and theoretical models of the origin and evolution of surfaces and interiors of the moons. Contributed papers covering Jovian, Uranian and Neptunian moons are welcome in addition to presentations on the Saturnian satellites.

Focus: Icy and rocky outer planet satellites, including those of Jupiter, Saturn, Uranus, and Neptune. Work of an interdisciplinary nature that has to do with the effects of a moon (e.g. Enceladus) on its environment is welcome.

P06: Focus on Enceladus

Convener: C. Porco, C. McKay

carolyn@ciclops.org; cmckay@mail.arc.nasa.gov

Description: "The small icy Saturnian moon, Enceladus, has recently been found to be among the most fascinating in all the solar system, and this special session will be devoted to it. Excess heat arising from prominent fissures crossing its south polar region, and towering jets of icy particles accompanied by water vapor and complex organic compounds issuing from these fissures has pushed Enceladus into the forefront in a sparsely populated field of solar system objects that may house habitable liquid water environments.

In this session, we will discuss recent observational findings and theoretical and modelling results focussed on Enceladus' thermal and interior state, south polar morphology, geologic activity, the state and dynamics of its jets and plumes, as well as its astrobiological potential. New results from the 2008 Cassini flybys of Enceladus should be directed to this session. Designs for a future Saturnian system flagship mission that targets both Titan and Enceladus will also be discussed."

Focus: Solely Enceladus, including but not limited to: its geological activity; south polar morphology; jets/plumes and interior state; and to report of new results. Earth-based and new Cassini results are welcome.

P17: Titan at the end of the Cassini Prime Mission.

Convener: C. Alexander; R. Pappalardo

claudia.j.alexander@jpl.nasa.gov; robert.pappalardo@jpl.nasa.gov

Description: Our knowledge and understanding of Titan, Saturn's largest moon, have increased significantly as a result of measurements obtained from the Cassini spacecraft following its successful prime mission and ongoing extended mission. The project's original science objectives have been addressed spectacularly, leading to new questions. The bulk chemical composition of the atmosphere has been shown to be, not primarily methane, as was thought pre-Cassini, but N₂, CH₄, and H₂ with significant trace amounts of hydrocarbons, and isotopes that include: D 13C, 15N, 18O, and double isotopes 13C₂, D13C; the surface has been shown to be covered with dunes and low altitude craters that show potential for cryovolcanism; the question of the presence of oceans of liquid hydrocarbons on the surface of Titan has been answered in the negative - but Cassini discovered lakes, particularly at the poles of Titan; the rates of escape of atomic and molecular hydrogen from the upper atmosphere of Titan have been shown to be appropriate for hydrodynamic escape and not that of nominal planetary Jean's escape, as is common on other planets; *the atmosphere of Titan has been shown to interact with the solar wind and Saturn itself. Frozen field lines were measured there on the occasion that Cassini encountered Titan in the solar wind; The nature of the hydrocarbon "hydrological cycle" on Titan has been shown to be quite extensive, in which the end product is not ethane, but benzene and a plethora of other hydrocarbons including polycyclic-aromatic-hydrocarbons (PAHs). This session will include a broad

range of topics related to Titan; papers are invited which continue to explore these themes.

Focus: Titan, including but not limited to: its geological activity; morphology; atmosphere/ionosphere; magnetospheric interaction; interior state; and to report of new Cassini results.

P18: Outer Planet Systems: Comparisons of Processes Among the Four Giant Worlds of our Solar System

Convener: C. Alexander; R. Pappalardo

claudia.j.alexander@jpl.nasa.gov; robert.pappalardo@jpl.nasa.gov

Description:

The outer planets have remained objects of fascination after decades of exploration. This session focuses on interdisciplinary comparisons among the outer planets -- the processes that formed them, the chemistry that shaped them, the plasma environment that surrounds them, and the origins of the small bodies in their environment. Outstanding questions in dynamics and chemistry of the Jupiter system include the formation of the Jovian system and whether that formation environment provided the initial conditions favorable to Europa's habitability. Recent models of heavy element enrichment of Saturn are able to predict the carbon abundances observed by Cassini, and have been extended to Uranus and Neptune. Intercomparisons can be made between the hydrocarbon chemistry of the giant planet atmospheres and their moons. The measured rotation of Saturn has been shown to be time-variable in ways that are very different from its cousin Jupiter. Enceladus dominates the plasma environment around Saturn in a matter analogous to Io at Jupiter. Oxidants may play an important role in outer planet satellite chemistry, and mediation of such oxidants (on a global scale) has been studied in relation to a 'snowball' Earth, and Mars. Papers are invited that explore these themes with an interdisciplinary view toward the physics, chemistry, and systems-level intercomparisons among the outer planets.

Focus: Jupiter, Saturn, Uranus, Neptune, and their system science. Effects of a moon (e.g. Enceladus) on its environment might be an incidental part, and not the sole focus, of this session.

SM09: Outer Planet Auroras: In Situ and Remote Sensing Results

Convener: John T. Clarke; Jon Nichols; William Kurth

jclarke@bu.edu; jdn@bu.edu; william-kurth@uiowa.edu

Description: New results from the Hubble Space Telescope large program of auroral observations of Jupiter and Saturn, combined with in situ measurements from Cassini at Saturn and New Horizons at Jupiter, provide a uniquely detailed data set to test our understanding of auroral processes at the giant planets. In addition, scientific planning for the JUNO mission is ongoing, which will make detailed measurements of auroral processes in close polar passes at Jupiter. This session will solicit presentations on recent results from HST and ground-based observations of planetary aurora, coordinated measurements from

planetary spacecraft, theoretical work on planetary auroral processes, and planning/prediction work for future missions.

Focus: Aurora of the following bodies: Jupiter, Saturn, Uranus, Neptune. Earth-based observations and spacecraft observations are welcome.

Noteworthy AGU deadlines:

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| 10 September 2359UT
Exceptions! | Abstract Deadline for Electronic Submissions – No |
| 20 October | Program Posted on AGU Website |
| 23-24 October | Acceptance letters sent to Presenters and Session Chairs |
| 14 November
will increase) | Pre-Registration Deadline (after this date registration rates |
| 14 November | Housing Registration Deadline |
| 26 November | Last Day to Register Before the Meeting |
| 15-19 December 2008 | Fall Meeting in San Francisco |

6. OPAG Meeting November 6-7

The next OPAG meeting will be held November 6-7 at the Four Points Sheraton in Tempe, AZ, adjacent to Arizona State University. A major topic will be the final reports from the ongoing Outer Planet Flagship studies, and this is the last opportunity for the community to hear from these studies and provide feedback before a selection is made by NASA and ESA in January. A block of rooms is available at the hotel ((480) 968-3451).
