

Newsletter 18-27

Issue 18-27, July 10, 2018

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REMINDER: HARTMANN STUDENT TRAVEL GRANTS FOR DPS 50

A generous contribution from William K. Hartmann, supplemented by member contributions and matching funds from the DPS Committee, has enabled a limited number of student travel grants to assist participation by early-career scientists at the annual DPS meeting.

Application details are at: <https://dps.aas.org/meetings/hartmann-application> [1]

Travel grants are primarily intended for students, but post-doctoral scientists without other means of support will also be considered.

THE DUE DATE FOR APPLICATIONS IS JULY 12, 2018 11:59 PM.

The DPS Leadership is also soliciting additional contributions from members

for the Hartmann Fund. Your tax-deductible gift promotes the careers of our next generation of planetary scientists. Thanks so much for your generosity.

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DPS 2018 ELECTION REMINDER

The 2018 election for DPS Vice-Chair and Committee is now open, and will close on July 31st 2018.

Please remember to vote!

Go to <https://aas.org/vote/> [2]

You will need your AAS member login ID (which defaults to your membership number), and your password.

If you have trouble voting on line, the AAS can do a proxy vote and vote on your behalf (send an e-mail to dpssec@aas.org [3]). You will still get an automated email confirmation and a separate manual email, both with who you voted for and a confirmation number.

You should vote for one of the two candidates for Vice Chair:

- o Matija Ćuk, SETI Institute
- o Amanda Hendrix, Planetary Science Institute

The elected Vice Chair will take his/her functions in October 2018 and will become the DPS Chair in October 2019.

You should also vote for two of the four candidates for DPS Committee:

- o Michael Bland
- o Will Grundy, Lowell Observatory
- o Lucille Le Corre, Planetary Science Institute
- o Krista Soderlund, University of Texas

The successful candidates will serve on the Committee for three years after October 2018.

The detailed vitae and position statements for each of the candidates is linked from the main election page,
<https://aas.org/vote/> [2]

It is very important for all DPS Members to participate to these elections, so please take a moment to vote!

Thank you!

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INPUT REQUESTED FOR SOLAR SYSTEM SCIENCE WITH ASTROPHYSICS ASSETS

A committee has been established to determine what the capabilities are for current/pending/future Astrophysics Assets. This effort follows a number of Solar System working groups that were organized for JWST and WFIRST (among others). Many lessons learned will carry over to other future missions, but requirements or desirements for all wavelengths should be considered in the era of the next large astrophysics mission (e.g. LUVOIR, OST, HabEX, LYNX, etc).

Goal: to compile a uniform set of basic capabilities and needs to maximize the yield of Solar System science with future Astrophysics missions while allowing those missions to achieve their Astrophysics priorities.

Here we are seeking input from the community to be considered. All recommendations will be considered and compiled into a report for NASA's Planetary Science and Astrophysics Divisions to consider.

Please fill this form out by August 17.

Form here: <https://goo.gl/forms/U21a1LZ3v3cHtUAP2> [4]

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NASA SMD SEEKS VOLUNTEER REVIEWERS

The Science Mission Directorate is seeking volunteers to serve as mail-in and/or panel reviewers of proposals submitted to ROSES-2018. Just follow the links below to the volunteer review forms and click the boxes to indicate the topics in which you consider yourself to be a subject matter expert. If your skills match our needs for that review, we will contact you to discuss scheduling.

The newly posted volunteer reviewer forms include: [5] [6]

- [Cassini Data Analysis Program \(ROSES C.10\)](#) [7]
- [CloudSat and CALIPSO Science Team \(ROSES A.30\)](#) [8]
- [Earth Science Applications: Water Resources \(ROSES A.36\)](#) [9]
- [New Frontiers Data Analysis Program \(ROSES C.19\)](#) [10]

- [Planetary Data Archiving, Restoration, and Tools \(ROSES C.7\)](#) [11]
- [Planetary Science and Technology Through Analog Research \(ROSES C.14\)](#) [12]

The names of the programs above should contain links to those individual review forms, but the landing page with all of the forms may be found at:

<http://science.nasa.gov/researchers/volunteer-review-panels/> [13]

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2018 FALL AGU SESSION NOTICES

A) SESSION P022: ICARUS WORLDS: UNDERSTANDING THE
VOLCANIC AND MAGMA OCEAN ENVIRONMENTS OF HIGHLY
IRRADIATED AND TIDALLY HEATED ROCKY EXOPLANETS AND
PLANETARY SATELLITES

Session Description:

The first characterizable rocky exoplanets in the near future will likely be close-in rocky worlds around their host stars due to observational advantages stemming from their short orbital periods and bright day-side infrared flux. The extreme physical environment these planets will exist in will potentially result in significant volcanism and local to global surface magma oceans — environments analogous to early surface conditions of tidally locked planetary satellites in our Solar System. Interpreting upcoming observations of these worlds requires interdisciplinary studies that integrate atmospheric and geophysical modeling, field studies of analogous volcanic environments, and experimental laboratory work. This session brings together these different communities to inform the types of environments and processes that may exist on these worlds and their respective observational properties. Given the additional yield of these planets expected from the TESS

mission and the ability of JWST to characterize them, they are a high priority for study.

Conveners: Prabal Saxena, Erika Kohler, Avi Mandell, Jacob A Richardson

B) SESSION P056: TITAN: LOOKING BACKWARD, LOOKING FORWARDS

During the Cassini-Huygens mission from 2004 to 2017, Titan was revealed like never before: from the discovery of surface lakes and seas, dune fields and rare impact craters; through the meteorology of the neutral atmosphere; to the chemical melting pot of the ionosphere, where the seeds of organic particles that cover Titan's surface are born. Much of the Cassini-Huygens dataset has only been partially explored, and many more discoveries await therein. While the Cassini-Huygens dataset is complete, ground and space-based telescopes continue to point at Titan, and computer modeling and laboratory experimentation continue apace. Looking further ahead, new missions such as the proposed APL Dragonfly aerover, promise that we will not be absent from Titan for long. In this session, scientific presentations are solicited to cover the whole spectrum of current Titan research, from interpretation of past mission data, experimental and observational work, and modeling for future missions.

Abstracts are due August 1st.

<https://agu.confex.com/agu/fm18/prelim.cgi/Session/47319> [14]

Conveners:

Conor A Nixon, NASA Goddard Space Flight Center

Alexander Hayes, Cornell University

Kathleen Mandt, The Johns Hopkins University Applied Physics Laboratory

Christophe Sotin, NASA Jet Propulsion Laboratory

C) SESSION P050: THE ORIGIN, EVOLUTION AND FATE OF COMETS:

NEW RESULTS FROM ROSETTA, OTHER MISSIONS, AND GROUND-
BASED OBSERVATIONS

Comets are among the primitive building blocks of the planets, but as they enter into the inner Solar System, they become dynamical bodies, almost transient in nature. Some comets have broken up completely (S/L-9 for example), while others have given up a little of themselves. The recent and up-close study of 67/P Churyumov –Gerassimenko during its 2015 perihelion passage has revealed in close detail the types of changes comets undergo as they are heated by the sun.

This session will cover the dynamical nature of the nucleus and coma of 67P/ and other comets. The session will also include comparisons between the results from Rosetta and other missions to understand how comets evolve through time. Broader topics such as the chemistry of comets and what that reveals about their origin and diversity are also welcome. Both spacecraft and ground-based observations are relevant to this session.

Convenors: Bonnie J Buratti, NASA JPL/Caltech; Mathieu Choukroun, JPL;
and Matt Taylor, ESA

<https://agu.confex.com/agu/fm18/prelim.cgi/Session/48761> [15]

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JOBS, POSITIONS, OPPORTUNITIES



A) CORNELL UNIVERSITY: RESEARCH SUPPORT SPECIALIST II

Cornell is a private Ivy League University and the land grant University for New York State. The Cornell Center for Astrophysics and Planetary Science's mission is to foster research among astronomers, engineers, geologists and other researchers with interests relevant to space sciences. Connected to, and contained within, the Department of Astronomy, the Center administers research grants and contracts across several Cornell departments. The Center also aims through public outreach to disseminate information about space science to students and the general public.

The Cornell Center for Astrophysics and Planetary Science (CCAPS) is seeking candidates to fill a Research Support Specialist II position expected to be available this summer. The successful candidate is expected to support a three to four year project to design, construct, install and commission a 40-beam cryogenically cooled phased array feed system operating at a frequency of 1.4 GHz (20 cm wavelength) intended for use on the 305 m Arecibo radio telescope in Puerto Rico. The responsibilities of the successful candidate will be to assist in refining the current design of the 1.4 meter diameter dewar and its associated cooled dipole and low noise amplifier arrays, take a leading role in organizing the fabrication and procurement of the dewar, its internal components and the monitor and control system, and assist with testing of the instrument and planning for its installation on the telescope. This project is one of several cryogenically cooled instruments being designed and built in the Center. The following skills are particularly relevant to the project:



1. Mechanical engineering skills including computer aided design (CAD) and thermal analysis (Such as Solid Works) and the preparation of fabrication drawings.
2. Experience with cryogenics and low temperature (20K) refrigerators.
3. A good appreciation of machining issues and the low temperature behavior of materials.
4. Good organization skills and the ability to interact professionally with machining and fabrication firms.
5. Some knowledge of electronics at least at the level of designing and implementing a monitor and control system for the cryostat primarily using off the shelf components.

Qualifications and Education Requirements

Bachelor's Degree with 3-5 years of Experience

CAD Design such as Solid Works Required

Familiarity with Windows

Mac OS X

Linux Systems

Apply online at:

https://cornell.wd1.myworkdayjobs.com/en-US/CornellCareerPage/job/Ithaca-Main-Campus/Research-Supp-Spec-II_WDR-00015536-1 [16]

Provided Benefit Information can be found at:

<https://hr.cornell.edu/summaries-benefits> [17]

For Additional Information Please Contact:

Ms. Lynda Sovocool

Finance and Human Resource Manager

Cornell Department of Astronomy

Cornell Center for Astrophysics and Planetary Science

(PH) 607-255-4342

(F) 607-255-3433

Lmk3@cornell.edu [18]

Cornell University is an Affirmative Action, Equal Opportunity Employer.

Woman and underrepresented minorities are strongly encouraged to apply.

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

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Send submissions to:

Anne Verbiscer, DPS Secretary (dpssec@aas.org [3])

You are receiving this email because you are a DPS member.

To unsubscribe or update your information, please send your request to privacy@aas.org [19]. The more general AAS privacy policy is available online at <https://aas.org/about/policies/privacy-policy> [20].

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Source URL: <https://dps.aas.org/newsletters/18-27>

Links:

[1] <https://dps.aas.org/meetings/hartmann-application>

[2] <https://aas.org/vote/>

The DPS is a Division of the

- [3] <mailto:dpssec@aaas.org>
- [4] <https://goo.gl/forms/U21a1LZ3v3cHtUAP2>
- [5] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-2017-a23>
- [6] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-a51-sage-iiiiss-science-team>
- [7] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-c10-cassini-data-analysis-program>
- [8] <https://science.nasa.gov/researchers/volunteer-review-panels/cloudsat-and-calipso-science-team>
- [9] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-a36-earth-science-applications-water-resources>
- [10] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-c19-new-frontiers-data-analysis-program>
- [11] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-c7-planetary-data-archiving-restoration-and-tools>
- [12] <https://science.nasa.gov/researchers/volunteer-review-panels/roses-c14-planetary-science-and-technology-through-analog-research>
- [13] <http://science.nasa.gov/researchers/volunteer-review-panels/>
- [14] <https://agu.confex.com/agu/fm18/prelim.cgi/Session/47319>
- [15] <https://agu.confex.com/agu/fm18/prelim.cgi/Session/48761>
- [16] https://cornell.wd1.myworkdayjobs.com/en-US/CornellCareerPage/job/Ithaca-Main-Campus/Research-Supp-Spec-II_WDR-00015536-1
- [17] <https://hr.cornell.edu/summaries-benefits>
- [18] <mailto:Lmk3@cornell.edu>
- [19] <mailto:privacy@aaas.org>
- [20] <https://aaas.org/about/policies/privacy-policy>