

REQUEST FOR INFORMATION: PREPARATION FOR THE DEVELOPMENT OF A COMMUNITY-BASED ROADMAP FOR NASA'S PLANETARY DATA SERVICES.

General Information:

Solicitation Number: NNH15ZDA012L  
Release Date: November 5, 2015  
Response Date: January 5, 2016

NASA is preparing to work with the planetary science community to develop a Roadmap for its Planetary Data Services — the data and sample management architecture that supports the robotic exploration of the Solar System — particularly, the Planetary Data System (PDS). This Roadmap will address actions for the years 2017-2026. To this end, NASA is seeking input from the planetary and data science communities.

Background

The Planetary Data System (PDS) archives electronic data products from NASA planetary missions (as well as some ground-based and laboratory data sets), sponsored by NASA's Science Mission Directorate. It actively manages the archive to maximize its usefulness. All PDS-curated products are stored in a well-defined format, peer-reviewed, well-documented, and available online to scientists and to the public. The PDS recently completed a competitive selection for the scientific Discipline Nodes and that system now includes the Ring-Moon Systems and Cartography and Imaging Sciences Nodes.

PDS is one of four organizations that form the data and sample architecture for robotic planetary exploration. The other organizations are:

1. The Minor Planet Center, which is responsible for the designation of minor bodies in the Solar System and for the efficient collection, computation, checking, and dissemination of astrometric observations and orbits for minor planets and comets;
2. NASA's Astromaterials Acquisition and Curation Office, whose goal is to protect, preserve, and distribute samples for study from the Moon, Mars, and interplanetary space in support of solar system exploration; and,
3. The joint NASA-U.S. Geological Survey Astrogeology Science Center, whose mission includes producing planetary maps and cartographic products that reveal topography, geology, topology, image mosaics, and more, all made available to the international scientific community and the general public as a national resource.

One of the long-term objectives of future planning is to make the interfaces between these elements seamless and transparent to the user community.

## Requested Information

The response to this RFI will be in the form of a PDF document that is uploaded through NASA's NSPIRES system (see instructions below). Each response shall not exceed five pages in length and shall address a single topic identified by the respondent. The topic addressed should be relevant to the Planetary Data System or its potential integration with the Minor Planets Center, the Astromaterials Acquisition and Curation Office, or the Astrogeology Science Center. There is no limit on the number of responses that an individual or institution may submit.

NASA especially seeks input from the planetary and data science communities on the following topics:

1. What tools, resources, workflows, tutorials, and interfaces will future users expect or require?
2. How can the interaction between the PDS and data providers (missions and individual researchers) be improved in order to make the archiving process seamless and less costly (to both data providers and the PDS)?
3. How can the interaction between the PDS and data providers be improved to move data from the provider to the public as rapidly as possible?
4. What role should the PDS play, relative to other archiving alternatives (including scientific journals), in providing the public access to the data that is the product of NASA's funded research and the basis of published scientific studies?
5. What is the highest priority need for integration between PDS data products and either cartographic products, sample material, or data from the Minor Planets Center (or all of them)?
6. What role should the PDS play in encouraging the development of higher-order data products and ensuring archive quality is quickly achieved?
7. Are there identifiable improvements to the current search capabilities of the PDS that would allow researchers improved access to data products and metadata?

The response must contain the following information:

- Name of submitter and contact information (institutional affiliation, E-mail address);
- A clear and concise statement of the topic addressed;
- An articulate and compelling rationale for why the chosen topic would be significant to a wide range of planetary scientists;
- Suggested improvements or changes relevant to the topic;
- A discussion of the impact of not making the suggested improvements or changes; and,
- A discussion of the potential impacts of the suggested improvements or changes.

It is emphasized that this RFI is for planning and information purposes only and is not to be construed as a commitment by the Government to enter into a contractual agreement, nor will the Government pay for information solicited.

## Instructions

All responses to this RFI must be submitted in electronic form via NSPIRES, the NASA online announcement data management system, located at <http://nspires.nasaprs.com/>. For this RFI, a response submission will take the form of a Notice of Intent (NOI) within the NSPIRES online announcement data management system. The RFI response itself will be a PDF-formatted document that is attached (uploaded) to the NSPIRES system.

You must be registered with NSPIRES to submit a RFI response. See registration instructions at <http://nspires.nasaprs.com> (select "Getting an account"). Neither institution registration nor an institution affiliation is required to respond to this RFI.

1. Log into your account at <http://nspires.nasaprs.com/>.
2. Select "Proposals/NOIs" from your account page.
3. Select "Create NOI" from your proposals page.
4. Click "Continue" on the next page.
5. Select "Request for Information: NNH15ZDA012L (Preparation for the development of a community-based roadmap for the Planetary Data System and associated organizations.)" from the bulleted list of announcements.
6. Click "Continue".
7. Enter RFI response title ("NOI title" field will be shown).
8. Select "do not link at this time" for submitting organization page.
9. Click "Save" on next page.
10. It is not necessary to complete any of the "NOI Details"; all requested information should be included in the attached PDF document. Information which is entered into "NOI Details" but not included in the attached PDF document will not be considered.
11. Prepare your RFI response offline and save as a PDF document (note NSPIRES instructions on PDF formats). The response document must include the respondent's name, institution, and E-mail address so the file is self-contained. File names format should be "PI Last Name - First Name – Number - RFI". "Number" will be used to distinguish multiple responses from the same PI. Each response should not exceed five pages in length.
12. To attach (upload) your PDF document:
  - a. Click "add" under NOI attachments section;
  - b. Select "Proposal Document" from the drop down list;
  - c. Browse to attach your PDF file;
  - d. Select "Upload";
  - e. Click "OK";
  - f. Your RFI document has been uploaded to NSPIRES.
13. Click "Submit NOI" button. NOTE that this does not complete the submission process.
14. Ignore any warnings about incomplete NOI elements. Ensure that your NOI document is attached and click "Continue".

15. Click "Submit". This will take you to the NOI submission confirmation page, which provides you with the NOI/RFI number for your records. This completes the submission process.

Please note: You may delete and replace form fields and uploaded documents anytime before the submission deadline, however, once the RFI response is submitted, it cannot be deleted.

#### Contact Point

Questions concerning this Request for Information should be addressed to Dr. Michael New, Planetary Science Division, Science Mission Directorate, National Aeronautics and Space Administration, Washington, DC 20546; Telephone: (202) 358-1766; E-mail: [michael.h.new@nasa.gov](mailto:michael.h.new@nasa.gov).