

C.11 DISCOVERY DATA ANALYSIS

NOTICE: Proposals to this program will be taken by a two-step process in which the Notice of Intent is replaced by a required Step-1 proposal submitted by an organization Authorized Organizational Representative. No PDF upload is required for the Step-1 proposal. Step-1 proposers merely must fill in the Proposal Summary text box on the NSPIRES cover pages. Only proposers who submit a Step-1 proposal are eligible to submit a Step-2 (full) proposal. See Section 2 for details.

1. Scope of Program

The objective of the Discovery Data Analysis Program (DDAP) is to enhance the scientific return of Discovery Program missions by broadening the scientific participation in the analysis of data, both recent and archived, collected by Discovery missions.

1.1. Sources and Analysis of Mission Data

It is the responsibility of the proposers to DDAP to specifically identify any needed mission data and to ascertain that those data are publically available. Proposals dealing with mission data should provide convincing evidence that the data have sufficient quality and are available in sufficient quantity to achieve the goals set forth in the proposal. The proposer should demonstrate a familiarity with the data and an understanding of the work required to refine the data for the purposes of the analysis.

The following is a list of Discovery Missions for which archived data is available:

- [NEAR](#)
- [Lunar Prospector](#)
- [Stardust](#)
- [Genesis](#)
- [Deep Impact](#)
- [MESSENGER](#)
- [Dawn](#)

The following is a list of Discovery Missions of Opportunity for which archived data is available:

- [EPOXI](#)
- [Stardust-NExT](#)

Please note, proposals focusing on data returned from Mars Pathfinder and [ASPERA-3](#) should be submitted to the Mars Data Analysis Program (C.9), and proposals focusing on data from GRAIL and the Moon Mineralogy Mapper (M3) should be submitted to the Lunar Data Analysis Program (C.8). Proposals primarily focusing on data from these missions are not eligible for submission to DDAP.

The DDAP supports investigations that use only data available in the Planetary Data System (PDS; <http://pds.nasa.gov/>) or equivalent publicly accessible archive(s), such as Genesis data at <http://genesis.lanl.gov/plots/>. The data must be archived and publicly available 30 days prior to the submission deadline for DDAP proposals. Spacecraft data that have not been placed in such archives are not eligible for use in DDAP investigations. In all cases, it is the responsibility of the DDAP investigator to acquire any necessary data. Investigators are encouraged to contact the PDS for assistance in identifying specifics of available datasets. Datasets to be used in the proposed work must be clearly and specifically identified in the proposal. Regardless of the archive(s) used, if the data to be analyzed have known issues that might represent an obstacle to analysis, the proposers must demonstrate clearly and satisfactorily how such potential difficulties will be overcome.

Proposals to DDAP must include a science investigation. Proposals to produce a higher order data product that enhances the science return from one or more missions, but does not include a science investigation, should be submitted to the Planetary Data Archiving, Restoration, and Tools (PDART) Program, C.7.

Proposals should make significant use of (or greatly enhance the use of) data returned by one or more Discovery Program missions. Proposals to work with Discovery Program data and also use ground-based or other data are acceptable, provided that the success of the proposal, as written, is dependent upon the Discovery data. Investigations that incorporate theory, modeling, laboratory studies, correlative analyses, and/or other research that would greatly increase the use of, or significantly facilitate the interpretation of, data from Discovery Program missions are also eligible. Such proposals that don't directly analyze data, but are intended to amplify its interpretation will be judged upon the perceived impact of the proposed work on the interpretation of data from the Discovery Program mission(s) emphasized.

1.2. Data Archiving into PDS

It is the responsibility of the proposers to DDAP to specifically identify any needed data and to ascertain that these data are available. Proposals dealing with mission data should provide convincing evidence that the data have sufficient quality and are available in sufficient quantity to achieve the goals set forth in the proposal. The proposer should demonstrate a familiarity with the data and an understanding of the work required to refine the data for the purposes of the analysis.

Data products produced by funded DDAP investigations must be archived in the Planetary Data System. When proposing the archiving of products into the PDS, an archive plan must be included, identifying schedule and budget to go through the PDS ingestion process. Data products should be submitted to the PDS by the end of the funded research period, unless the investigator explicitly makes a case in the proposal for a later date. For more information, please contact the Planetary Data System (<http://pds.nasa.gov/>). This requirement supersedes the general requirement found in Appendix C.1.

1.3 Program Exclusions

The Discovery Data Analysis Program is not intended to overlap other active data analysis or core research and analysis programs. Therefore, the DDAP does not support the analysis of:

- Lunar data (see the Lunar Data Analysis Program (LDAP) in C.8);
- Mars data obtained by missions to Mars (see the Mars Data Analysis Program (MDAP) in C.9); and
- Data from Cassini (see the Cassini Data Analysis and Participating Scientists program (CDAPS) in C.10).

PSD solicits proposals whose work efforts are primarily analysis of planetary mission data through this and other Data Analysis Programs. If a proposal would analyze data within the scope of more than one of the data analysis programs in order to perform comparative studies across the Solar System, but is not appropriate to any one data analysis program, then submission to a Core Research Program is encouraged. If a proposal is not appropriate for one of the Data Analysis programs, but does fit within the bounds of a Core Research Program (i.e., Solar System Workings or Emerging Worlds), it should be submitted to that Core Program.

Proposers to this NASA Research Announcement should also note that DDAP is not intended to support:

- Investigations whose primary emphasis is fundamental theoretical research, the development of numerical models, laboratory measurements (unless clearly demonstrating the research would greatly increase the use of, or significantly facilitate the interpretation of, data from Discovery Program missions), or detector development (other NASA programs support these research activities);
- Investigations with a focus on Exoplanets (see E.3 Exoplanets Research for support of these research activities); and
- Proposals for organizing and/or hosting scientific meetings (which should be submitted to Topical Workshops and Scientific Conferences, E.2).

Spacecraft data that have not yet been obtained (i.e., future mission data), or those that have not been accepted into approved archives, as indicated above, may not be proposed for use in DDAP investigations.

Please note that Dawn VIR data in the three-micron region are currently unavailable because they have not been submitted for archiving in the PDS.

Members of Discovery Program mission teams who wish to apply to DDAP must clearly demonstrate that their proposed investigation will use only released and publicly available data. Flight team members must scrupulously comply with the 30-days-prior-to-submission rule (above). Additionally, flight team members must clearly demonstrate how the proposed DDAP research does not overlap and is not redundant with data analysis duties, responsibilities already funded by their respective mission.

2. The Two-Step Submission Process

To facilitate the early recruitment of a conflict-free review panel, given the nature of the new calls, and to ensure proposals are submitted to the appropriate program, this program uses a two-step proposal submission process (see Section IV. (b) vii of the ROSES *Summary of Solicitation*.)

A Step-1 proposal is required and must be submitted electronically by the Authorized Organizational Representative (AOR). No budget is required. Only proposers who submit a Step-1 proposal are eligible to submit a Step-2 proposal. Full (Step-2) proposals must broadly contain the same scientific goals proposed in the Step-1 proposal. The PI cannot be adjusted and proposers that want to add funded investigators between the Step-1 and Step-2 proposals must inform the point(s) of contact below and cc sara@nasa.gov at least two weeks in advance of the Step-2 due date. Submission of the Step-1 proposal does not obligate the proposer to submit a Step-2 (full) proposal later.

2.1 Step-1 Proposal

Proposers should refer to the "Instructions for Submitting a Step-1 Proposal" under "Other Documents" on the NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) web page for this program. The Scientific/Technical/Management section of the Step-1 proposal is restricted to the 4000-character Proposal Summary text box on the NSPIRES web interface cover pages and should include a description of the science goals and objectives to be addressed by the proposal, a brief description of the methodology to be used to address the science goals and objectives, and the relevance of the proposed research to this call. The Step-1 proposal may be used to determine whether the proposal was submitted to the appropriate program element. No evaluation of intrinsic merit will be performed on Step-1 proposals.

NSPIRES will notify proposers whether their Step-2 proposal is encouraged or not, at which point they will be able to submit Step-2 proposals.

2.2 Step-2 Proposal

All proposals to ROSES must strictly conform to the formatting rules in Chapter IV of this announcement and Chapter 2 of the *NASA Guidebook for Proposers*. Those that violate the rules may be rejected without review. In previous years, problems with the formatting of the Scientific/Technical/Management section proposals have been noted. Please pay particular attention to:

- Length of the Scientific/Technical/Management section: 15 pages
- Margins: 1 inch on all sides, with a standard page size of 8.5 × 11 inches.
- Font: The *NASA Guidebook for Proposers* requires that proposers use a 12-point or larger font. The selected font must meet the requirement of having, on average, no more than 15 characters per inch (e.g., Times New Roman and Arial). Proposers may not adjust the character spacing or otherwise condense a font from its default appearance.

- Line spacing: Font and line-spacing settings should produce text that contains no more than 5.5 lines per inch. Proposers may not adjust line-spacing settings for a selected font below single-spaced.
- Figure captions: Must follow the same font and spacing rules as the main text.
- Figures and tables: For text in figures and tables, font and spacing rules listed above do not apply, but all text must be judged to be legible to reviewers without magnification above 100%. Do not place expository text in tables or figures in order to gain space.

3. Programmatic Information

3.1 Progress Reports

An Annual Progress Report will be due no later than 60 days in advance of the anniversary date of the award. Awards to NASA Centers, including the Jet Propulsion Laboratory (JPL), always have an anniversary date of the start of the Federal fiscal year, October 1.

3.2 Duration of Awards

We anticipate that most proposals will seek three years of funding. Proposals for less than three years are encouraged for projects that can be completed on shorter timescales. Four-year proposals may be selected if the need for the longer duration is sufficiently well justified.

3.3 Early Career Fellowship Program

Early career researchers are encouraged to apply for the Early Career Fellowship (ECF) Program. The purpose of the ECF program (see C.16) is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by the Planetary Sciences Division. This Program is based on the idea that supporting key individuals is a critical mechanism for achieving high impact science that will lead the field forward with new concepts, technologies, methods, and more.

Applicants requesting consideration for ECF may include an additional page to their Curriculum Vitae to provide information that can be used by reviewers to evaluate the Principal Investigator's (PI's) future research contributions and the potential for leadership within the scientific community. Please see C.16 of ROSES for more information on the two-step process for the ECF program and the criteria for evaluating candidates.

4. Resources: Information, Data, and Facilities

Proposers are strongly advised to read C.1, The Planetary Science Division Research Program Overview, for information on the new mandatory data management plans.

4.1 Facilities and Data Sources Available to Proposers

Proposers are advised to read C.1, The Planetary Science Division Research Program Overview, for information on facilities and data sources that are available to supported investigators. If their use is anticipated, this should be discussed and justified in the submitted proposals (especially note the provision for such discussion in the proposal section entitled Facilities and Equipment). Also note that, per the directions in Section 2.3 of the *NASA Guidebook for Proposers*, a letter of support may be required from any facility required for the proposed effort.

4.2 Map Publication

Proposed investigations of any planetary or satellite surface that are intended to result in the publication of a Scientific Investigations Map (SIM) by the U.S. Geological Survey (USGS) should check the relevant box on the proposal Cover Page and clearly indicate this intention in the Proposal Summary, as well as in the text of the proposal. The scientific goal of such a geologic map product should be clearly explained and justified. Proposers are advised to read C.1, The Planetary Science Division Research Program Overview, for the USGS' information on and requirements for map production and publication.

5. Summary of Key Information

Expected program budget for first year of new awards	~\$1.5 M
Number of new awards pending adequate proposals of merit	~10-13
Maximum duration of awards	4 years; shorter-term proposals (1-3 years) are typical; fourth year must be explicitly and scientifically justified.
Due date for Step-1 proposals	See Tables 2 and 3 in the <i>Summary of Solicitation of this NRA</i> .
Due date for Step-2 proposals	See Tables 2 and 3 in the <i>Summary of Solicitation of this NRA</i> .
Planning date for start of investigation	~Six months after Step-2 proposal due date.
Page limit for the central Science-Technical-Management section of proposal	15 pp; see also Chapter 2 of the <i>NASA Guidebook for Proposers</i>
Relevance	This program is relevant to the Planetary Science questions and goals in the NASA Science Plan. Proposals that are relevant to this program are, by definition, relevant to NASA.

General information and overview of this solicitation	See the <i>ROSES Summary of Solicitation</i> .
Detailed instructions for the preparation and submission of proposals	See the <i>NASA Guidebook for Proposers</i> at http://www.hq.nasa.gov/office/procurement/nraguidebook/ .
Submission medium	Electronic proposal submission is required; no hard copy is required or permitted. See also Section IV of the <i>ROSES Summary of Solicitation</i> and Chapter 3 of the <i>NASA Guidebook for Proposers</i> .
Web site for submission of proposals via NSPIRES	http://nspires.nasaprs.com/ (help desk available at nspires-help@nasaprs.com or (202) 479-9376)
Web site for submission of proposals via Grants.gov	http://grants.gov (help desk available at support@grants.gov or (800) 518-4726)
Funding opportunity number for downloading an application package from Grants.gov	NNH15ZDA001N-DDAP
NASA point of contact concerning this program	Christina Richey Planetary Science Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Email: christina.r.richey@nasa.gov Telephone: 202-358-2206