

## A.2.5 MARS DATA ANALYSIS

### 1. Scope of Program

The objective of the Mars Data Analysis Program (MDAP) is to enhance the scientific return from the Mars Pathfinder (MPF), Mars Global Surveyor (MGS), and Mars Odyssey (MO) missions by broadening the scientific participation in the analysis of their respective data sets and to fund high priority areas of research that support planning for future Mars missions. The MDAP supports scientific investigations using data obtained during and after the aerobraking phase of MO and MGS, and data obtained by MPF in its primary and extended mission phases on the surface of Mars. Where justified to support planning for future Mars missions, investigations that use data collected by other spacecraft (e.g., Viking, Mariner 9) will also be considered.

An investigator may propose a study (scientific, landing site science, cartographic, topographic, geodetic research) based on analysis of Mars data collected by the MO, MPF, and/or MGS (additional information about the MO, MPF, and MGS missions, and references containing preliminary science results can be found on the Mars Program homepage at URL <http://mpfwww.jpl.nasa.gov>). In addition, correlative studies that use Mars data from another source with flight mission data to further the understanding of some aspect of Mars science are also included in this category. The other data could come from ground-based observations or from other spacecraft. Funds awarded for correlative studies will be used to cover data analysis and expenses involved in collaboration with other Mars investigators. Funds will not be authorized for taking new observations (whether astronomical, field, or laboratory studies) or for support of observing or laboratory facilities. In anticipation that selected investigations may result in by-products (e.g., mineral, topographic, planometric, cartographic, and geologic maps, and calibration data) that are of broad use to the science community, a plan for archiving and making such by-products readily available must be included in the proposal. Approximately \$4.0M is available to support both existing and new proposals that address these objectives.

An investigator may also propose a study(ies) in the following high priority areas of research that support planning for future Mars missions: (i) improvement of atmospheric models that further the understanding and forecasting of atmospheric conditions that affect aerobraking and aerocapture; (ii) characterization of potential landing sites for future Mars Surveyor missions (e.g., distribution and size of rocks, pits, sand dunes, regional and local slopes, and altitude for mission hazard analysis); (iii) improved models for the gravity field, global topography, and global planetary figure; (iv) improvement of the geodetic network of Mars for precision landing demonstration; and (v) analysis and comparison of the Mars orbital and surface data to increase the predictive accuracy of surface characteristics of Mars from orbit. Approximately \$7.6M is available to support both existing and new proposals that address these objectives.

Proposals for topical conferences, workshops, consortia, symposia, or other new initiatives related to MDAP and that are generated through the initiative of the proposer

may also be proposed through this NRA. For more information about the type of research supported by this program, abstracts for currently funded investigations are available online at <http://spacescience.nasa.gov/>, link through "Research Solicitations" to "Past/Archive solicitations & Selections."

## 2. Sources of Information and Data

It is the responsibility of the investigator to acquire any required data. Before submitting a proposal, each proposer should determine that the required data are available. MPF, MGS, and MO, as well as data from previous Mars missions, are available from the Planetary Data System (PDS). The PDS home page can be accessed at <http://pds.jpl.nasa.gov/pds.home.html>. Proposers who wish to use photographic and cartographic materials may find such data at the nearest Regional Planetary Image Facility (RPIF). Locations of RPIF's are listed on the RPIF home page at URL <http://cass.jsc.nasa.gov/library/RPIF/RPIF.html>.

## 3. Programmatic Information

The MDAP is envisioned to be a multiyear program that will support analysis of data returned by the planned series of Mars Surveyor missions over the next decade. It is anticipated that approximately \$3.6M will be available for new investigations supported by the MDAP in Fiscal Year 2002. It is estimated that 50 to 75 investigations (new proposals) may be selected from proposals submitted in response to this Announcement. Investigations may be proposed for a one-, two-, or three-year period of performance. Funding of investigations will be phased to ensure new starts each successive year of the program.

Status Reports: Holders of existing multiple year awards in this program that are entering their second or third year of a three-year award from a previous NRA for this program element must submit a Status Report. This Status Report should cover progress made toward completing the originally proposed research since the initiation of the award or last year's deadline for new proposals, whichever came last. This Status Report is due by the same deadline as for new proposals for this program element (see Table 1 or 2 in the Summary of Solicitation of this NRA). These Status Reports will be screened by the same peer review panel that will be convened to review new proposals as an aid to NASA's evaluation of existing awards. Such a *Status Report* should not exceed three single-spaced, typewritten pages with roughly two pages used for a description of the progress made during the previous year and the remainder to a statement of the work planned for the coming year (Note: this three page limit does not include references, figures, reprints, or appendices). The Status Report should be prefaced by a copy of the proposal's original Cover Page submitted through the web at the same site specified for new proposals in the summary of solicitation of this NRA (Note: the home page for this program element will provide the option to designate whether the *Cover Page* is for a new proposal or Status Report). and a copy of the original approved budget. Any request

for an augmentation to the budget relative to the current approved funding must be supported by detailed information in conformance with Section 2.3.10 of the *OSS Guidebook-2001*. Submission of hard copy of the Status Report must include an original and four copies. Also note that it is expected that within a year a new electronic proposal data system that is now under development will begin to automatically notify holders of existing awards 75 days in advance of their award's anniversary date to submit the Annual Progress Report that is required to implement the next funding supplement of the award. The implications of possibly calling for two reports per year of existing awards in this Program Element will be resolved by then.

### **IMPORTANT INFORMATION**

As discussed in the *Summary of Solicitation* of this NRA, the Office of Space Science (OSS) is now using a single, unified set of instructions for the submission of proposals. This material is contained in the document entitled *NASA Guidebook for Proposers Responding to NASA Research Announcement – 2001* (or *NASA Guidebook for Proposers* for short) that is accessible by opening URL <http://research.hq.nasa.gov>, and linking through the menu item "Helpful References," or may be directly accessed online at URL <http://www.hq.nasa.gov/office/procurement/nraguidebook/>. This NRA's Summary of Solicitation also contains the schedule and instructions for the electronic submission of a *Notice of Intent* (NOI) to propose and a proposal's *Cover Page/Proposal Summary*, which now also includes the required *Budget Summary*, and the mailing address for the submission of a proposal.

Until April 1, 2002:

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After April 2, 2002, a new Discipline Scientist for this program will be announced as an amendment to this NRA.