

#### A.4.4 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), and Mars Global Surveyor (MGS) 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 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 MPF, and/or MGS (additional information about the 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 or for support of observing 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 will be provided to support proposals that are selected that address these objectives.

An investigator may also propose 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 \$2.0M will be provided to support proposals that are selected that address these objectives, which increases the total MDAP budget from approximately \$4.0M to \$6.0M.

Proposals for topical conferences, workshops, consortia, symposia, or other new initiatives related to MDAP are also solicited through this NRA. For more information

about the type of research supported by this program, abstracts for currently funded investigations are available at <http://www.hq.nasa.gov/office/oss/codesr/welcome.html> .

## 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, and MGS, 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 \$6.0M will be available for the MDAP in Fiscal Year 2002. It is estimated that 75 to 100 investigations (both new and in-progress multiple-year 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.

Annual Progress Reports: Holders of existing multiple year awards that are entering their second or third year of a three-year award from a previous NRA for this program element must submit a request for an annual funding allotment for their award. This request, in the form of a *Annual Progress 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 *Progress 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 *Progress 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 *Progress Report* should be prefaced by a copy of the proposal's original Cover Page/Proposal Summary and a copy of the original approved budget. Note that any request for an augmentation to the budget must be supported by detailed information in conformance with Section 2.3.10 of the *OSS Guidebook-2001* (see further in section entitled "Important Information" below).

## 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 *OSS Guidebook for Proposers Responding to NASA Research Announcement – 2001* (or “*OSS Guidebook – 2001*” for short) that is accessible by opening “Research Opportunities and Data” from the menu at URL <http://spacescience.nasa.gov> , or directly at URL <http://spacescience.nasa.gov/research/ossguidebook/> . 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*, for electronic access to the required *Budget Summary* form, and the mailing address for the submission of a proposal.

The schedules for submission of the Notice of Intent and proposal are given in Table 1 of the cover letter of this NRA.

Questions about this program element may be directed to the cognizant Discipline Scientist:

Mr. Joseph M. Boyce  
Research Program Management Division  
Code SR  
Office of Space Science  
NASA Headquarters  
Washington, DC 20546-0001  
Telephone: (202) 358-0302  
E-mail: [joseph.boyce@hq.nasa.gov](mailto:joseph.boyce@hq.nasa.gov)