



JET PROPULSION LABORATORY  
CALIFORNIA INSTITUTE OF TECHNOLOGY

# REQUEST FOR PROPOSAL

REQUEST FOR PROPOSAL NO.: MTO-62503

FOR:

**MARS EXPLORATION PROGRAM  
MARS TELECOM ORBITER SPACECRAFT DESIGN STUDIES**

**PROPOSALS ARE TO BE RECEIVED AT JPL NO LATER THAN:**

Date: July 11<sup>th</sup> 2003

Local Time: 3:00 p.m.

## **COMMUNICATIONS IN REFERENCE TO THIS RFP**

It is requested that any communication in reference to this RFP be in writing and directed to the attention of:

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Title:	JPL Subcontract Manager	Phone:	818 354-2158
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Date of Issuance: 6/20/03

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## 2. Attachments to the Solicitation, See form JPL 2839 for a list of Attachments

This Section of this RFP consists of those forms and documents containing information applicable to this RFP. Group A Attachments must be completed and attached to your proposal. Group B Attachments consist of forms and documents for informational purposes only. Both A and B Attachments can be found through the electronic address identified below. Hard copies of the Group B Attachments will be mailed by request only. Note that Group B Attachments are very important and may become requirements under the Contract.

World Wide Web: <http://acquisition.jpl.nasa.gov/e2000.htm>

## 3. Specimen Contract, Dated 6/9/03

## GENERAL INSTRUCTIONS

### 1.0 PROPOSAL REQUIREMENT

The following provides general instructions and information regarding preparation of your proposal in response to this Request for Proposal (RFP). The effort to be performed will be in accordance with the Specimen Contract; if you choose to submit more than one proposal for this effort, each proposal must be independently complete and under separate cover.

### 2.0 PACKAGING AND SUBMITTING YOUR PROPOSAL

#### 2.1 Organization and Format.

- 2.1.1 Your proposal, which should be organized as closely as practicable to the format and sequence indicated in these proposal instructions, must be submitted as outlined below. Please note that JPL has assigned a mandatory page limitation to the individual proposal. Technical and management information **MUST** be submitted within its respective volume. Any information pertaining to a technical and management submitted elsewhere will be excluded from evaluation.

<u>Volume No./Title</u>	<u>Page Limit</u>	<u>Number of Copies</u>
I Technical/Management	30	7
II Cost		7

- 2.1.2 For the purpose of the mandatory page limitation, the following rules apply:

- 2.1.2.1 All text must be typed on 8 1/2" x 11" paper.
- 2.1.2.2 Drawings will be considered as part of the page count. Fold out drawings will be counted proportionally as additional pages (e.g. 11" x 17" will be counted as two pages, etc.).
- 2.1.2.3 A minimum of single spacing is required. Page margins shall be no less than 1/2" inch at the top, bottom, and sides.
- 2.1.2.4 Type font size shall be no smaller than 10 point character height.
- 2.1.2.5 A page is defined as each face of a piece of paper containing substantive evaluable information. Any pages which exceed the above noted limitations will be removed from the proposal and will not be evaluated.

- 2.1.3 Unnecessarily elaborate brochures or presentation layouts, other than those sufficient to present a complete and effective proposal, are not desired. Except when specifically requested, mockups, models, samples, hardware, or software of any kind must not be furnished and will not be considered.
- 2.1.4 JPL reserves the right to retain all proposal information submitted in response to this RFP.

#### 2.2 Address and Identification.

To help ensure timely receipt and processing of your proposal, please affix the enclosed yellow adhesive label to the envelope/container containing the complete original copy of

your proposal. (NOTE: The yellow label is JPL's notification that the package you send is a proposal.) In case the mailing label is lost, address your proposal on a similar yellow label containing JPL's address, the name of the individual designated on the cover page of this RFP (including the mail stop) and the RFP number. All proposal envelopes/containers must be identified with the RFP number that appears on the RFP cover page.

### 2.3 Hand Carried Proposals.

Hand-carried proposals must be delivered to the California Institute of Technology/Jet Propulsion Laboratory (JPL) Visitor Control Center, at 4800 Oak Grove Drive, Pasadena, Building 249, where it will be received and time-stamped. Visitor Control is open to receive proposals only on working weekdays, between 7:30 a.m. and 4:30 p.m. (proposals are due at the time and date stated on the cover of this RFP).

## 3.0 GENERAL INFORMATION

### 3.1 Proposal Preparation and Related Costs.

This RFP does not commit JPL or the Government of the United States to pay any costs incurred in submitting your proposal, making studies or designs for preparing the proposal or in procuring or subcontracting for services or supplies related to the proposal.

### 3.2 Data.

If the proposal contains data that either you or your subcontractors do not wish to be disclosed for any purpose other than proposal evaluation, you must mark the cover sheet of each volume containing such information with the legend below:

- 3.3 “Data contained in pages \_\_\_\_\_ of this proposal furnished in connection with RFP No. (\*\*) shall not be used or disclosed, except for evaluation purposes, provided that if a contract is awarded to this offeror as a result of or in connection with the submission of this proposal, JPL and the Government shall have the right to use or disclose this data to the extent provided in the contract. This restriction does not limit JPL's right to use or disclose any data obtained from another source without restriction.”  
(\*\* insert RFP number)

### 3.4 Security

There shall be no classified information submitted in response to this RFP.

### 3.5 Requests for Clarification/RFP Addenda.

During the proposal preparation period, all requests for clarification and/or additional information, must be submitted in writing to the individual referenced by “Attention:” on the cover page of this RFP. When appropriate, responses to requests, as well as any JPL initiated changes, will be provided to all prospective proposers in writing as addenda to the RFP. (NOTE: You must include reference to all addenda on your Acknowledgment to this RFP [Attachment A-1].)

## 4.0 LATE PROPOSALS

Any proposal, portion of a proposal, or unrequested proposal revision received at JPL after the time and date specified on the cover page of this RFP is late. Any volume of a proposal received after the time and date specified will cause the entire proposal to be late. Late proposals will not be considered for award, except under the following circumstances:

- 4.1 JPL determines that the late receipt was due solely to a delay by the U.S. postal service for which the offeror was not responsible. Timely postmark or receipt of registered,

certified, or express mail "next-day service," establishing the time of deposit must be evidenced.

- 4.2 JPL determines that the proposal was late due solely to mishandling by JPL after receipt at JPL, provided that the timely receipt at JPL is evidenced.
- 4.3 No acceptable proposals are received in a timely manner.

**NOTE TO PROPOSERS:** If an emergency or unanticipated event interrupts normal JPL processes so that solicitation responses cannot be received at the JPL office designated for receipt by the exact time specified in the solicitation, and urgent JPL requirements preclude amendment of the solicitation closing date, the time specified for receipt of proposals will be extended to the same time of day specified in the solicitation on the first work day on which normal JPL processes resume.

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## 7.0 SOURCE EVALUATION AND SELECTION PROCESS

### 7.1 Source Evaluation.

Proposals will be evaluated in the areas of technical and management as described in paragraph 8 below. Price is not a significant consideration in the evaluation process. JPL plans to make source selection based on the offeror whose proposal is determined to represent the best value to JPL. JPL's best value source selection will be based on the relative qualitative merit of the proposals within the \$200,000 price limit. JPL will select for negotiations up to three offers with the highest qualitative merit. JPL will evaluate the proposals utilizing the following process:

- 7.1.1 Before issuing the RFP, JPL establishes specific criteria and their weighting for the evaluation of the Technical and Management proposals. After receipt at JPL, the proposals are evaluated against the pre-set criteria outlined in paragraph 8 below.
- 7.1.2 Price proposals are reviewed for mathematical accuracy, rate application, price omissions, and price reasonableness. If the Buy American Act, the Balance of Payment Program, or rent free use of Government-furnished property applies, the prices will be adjusted as required for the purpose of evaluation.
- 7.1.3 Responsibility (i.e., consideration of matters such as contractor financial capability, past performance record, adequacy of facilities, etc.) is assessed within the meaning of Federal Acquisition Regulation 9.1. Award will not be made to a Contractor deemed to be nonresponsible.
- 7.1.4 Results of the initial proposal evaluation are used to determine which proposals are within the competitive range (i.e., those having a reasonable chance of being selected for award). Proposals determined not to be within the competitive range are eliminated from further consideration, and the proposers are notified accordingly.
- 7.1.5 JPL may, at its discretion, conduct limited communications with one or more proposer(s) for the purpose of determining whether the proposer should be included in the competitive range. Such precompetitive range communications may be conducted to enhance JPL understanding of proposal(s) and may be used to:
  - 7.1.5.1.1 Validate the proposed price; and

- 7.1.5.1.2 Clarify omissions, ambiguities and uncertainties in the proposer's supplemental business/cost information; and
    - 7.1.5.1.3 Clarify relevant past performance information.
  - 7.1.6 JPL reserves the right to make a competitive range determination without conducting such communications. Further, JPL, at its discretion, may waive minor informalities and minor irregularities in proposals received.
  - 7.1.7 JPL may make source selection after the initial proposal evaluation or may conduct discussions with the proposers determined to be within the competitive range. The purpose of the discussions is to assist the evaluators in fully understanding each proposal by:
    - 7.1.7.1 Discussing those aspects of each proposal which contain omissions, ambiguities and uncertainties;
    - 7.1.7.2 Verifying and identifying strengths and weaknesses which could affect work performance.
    - 7.1.7.3 Verifying the validity of the proposed price; and
    - 7.1.7.4 Assessing the proposed personnel and the proposer's capabilities for performing the work.
  - 7.1.8 After discussions, JPL may request price proposal deltas in order to correct errors, omissions or ambiguities in the proposal. Only those deltas requested by JPL will be accepted. (NOTE: JPL will not request best and final offers (BAFOs).)
  - 7.1.9 Finally, the initial evaluation findings are reviewed and ratings are assigned which incorporate the results of the discussions.
- 7.2 Selection Process.

The results of the final evaluation are submitted to the JPL Source Selection Official, who selects the Contractor(s) for negotiation.
- 7.3 JPL reserves the right to reject all proposals, to award up to three contracts based on initial proposals (without proposal clarifications) or to conduct oral discussions prior to making source selection.

## 8.0 TECHNICAL AND MANAGEMENT EVALUATION CRITERIA

The Technical/Management evaluation criteria for this procurement are listed below. The factors shown under the criteria are not individually weighted for evaluation purposes and are not listed in any particular order.

### 8.1 Qualifications of Proposer and Study Team Personnel – Criterion 1 ( 550 points)

The degree to which the experience and skills of the team members and the experience of the organization are appropriate to conduct the study tasks and to enable a comprehensive and technically competent study effort. Factors to be considered are:

- 8.1.1 Experience of key personnel and percentage of time being proposed for each key person.
- 8.1.2 Organization's related experience in conducting large, space-based system trade studies such as the one required by this study.
- 8.1.3 Organization's experience in the design and development of complex spacecraft having deep space and/or planetary orbiter (including earth) application, especially those having long lifetimes.

### 8.2 Technical/Management Approach – Criterion 2 (450 points)

The degree to which the proposed technical/management plan reflects a viable and well thought-out approach for organizing and implementing the study effort. Factors to be considered are:

- 8.2.1 System trade approach and use of trade evaluation tools.
- 8.2.2 Lines of responsibility and communications of the proposed study organization with the overall organization.
- 8.2.3 Plan for achieving a quality study within the schedule outlined in this RFP.

## 9.0 EXCEPTIONS TO GENERAL PROVISIONS AND ADDITIONAL GENERAL PROVISIONS

A large number of exceptions or one or more significant exceptions to the General Provisions and/or Additional General Provisions may make your proposal unacceptable for evaluation. **You must provide a detailed explanation, including the rationale, for any exceptions you take.** Proposers who submit proposals with exceptions may be selected for negotiations; however if an agreement cannot be negotiated, your proposal may be rejected.

## 10.0 (THIS PARAGRAPH IS INTENTIONALLY LEFT BLANK)

## VOLUME I – TECHNICAL/MANAGEMENT INSTRUCTIONS

### 1.0 INTRODUCTION

This portion of the proposal instructions sets forth the requirements to be followed in preparing the Technical Proposal. The following specific information must be included to permit an evaluation of your technical capabilities:

#### **1.1 Part 1 Qualifications of Proposer and Study Team Personnel:**

List your proposed key team members, their proposed roles, and the percentage of time proposed for each key person assigned to this effort. Describe their experience working on space system/subsystem design implementations and/or studies, in particular the design of deep space/planetary orbiters and long duration spacecraft missions.

Discuss the spacecraft design trade studies conducted by your organization during the past five years that are comparable to those required in the MTO design study. Include information relative to the tradeoffs that were performed involving cost, mass, power, telecommunication rates, and data handling. Discuss your approach to the use of existing/heritage designs vs new designs with particular attention to issues of parts obsolescence, and inheritability.

Describe your organization's experience in the design of planetary and or earth orbiters and deep space missions over the past 10 years with particular reference to missions with lifetimes greater than 5 years. Discuss how redundancy, appropriate parts selection, and other long life considerations factor into system and subsystem level design characteristics, such that a mission lifetime of 10 years can be achieved.

#### **1.2 Part 2 Technical/Management Approach and Commitment:**

Provide a plan for achieving the study objectives and for meeting the proposed study schedule as outlined in the Specimen Contract. Highlight important challenges and relevant tasks and demonstrate how these tasks will be prioritized.

Discuss in detail your proposed system trade approach and your proposed trade evaluation tools, including the use of appropriate integrated tools for subsystem modeling and end to end system modeling.

Discuss how the study team would be organized and how it would integrate within your overall organization in terms of lines of authority, responsibility, communications, and overall integration of technical and management functions.

## **COST INSTRUCTIONS**

### **1.0 PROPOSAL PRICING**

Provide a total price for the work effort contained in the Specimen Contract and the applicable supporting data requested in paragraph 1.1, below.

#### **1.1 Price or Cost Breakdown.**

Provide the information requested on Attachment A-19, Cost Elements Breakdown (Short Form). Proposers may provide the requested information, as applicable on an alternate computer generated form. For each element of material cost provide a basis of estimate. For each subcontract and for each element of other direct cost provide a brief explanation.

#### **1.2 Price Breakout**

Provide three (3) individual price estimates for the tasks under paragraphs 1.1, 1.2, and 1.3 of Article I.

### **2.0 PARTIAL PAYMENTS**

Partial Payments will not be allowed under this Contract.

### **3.0 PROGRESS PAYMENTS**

Progress payments will not be allowed under this Contract.

### **4.0 SUPPLEMENTAL BUSINESS/COST INFORMATION**

#### **4.1 Financial Statement**

Submit a copy of your annual financial statements for the last three years and any information regarding additional resources required to perform the proposed effort such as an established line of credit or other financial resource. If this information has recently been submitted to JPL resubmittal is not necessary, simply reference the applicable JPL RFP number under which the data was submitted.

#### **4.2 License and Royalty Information**

If your proposal contains costs for royalties or licenses, indicate the amount and be ready to furnish details.

#### **4.3 Attachments**

The Section of this RFP entitled "Attachments" consists of those forms and documents containing information applicable to this RFP. Group A Attachments must be completed and attached to your cost proposal. Group B Attachments consist of forms and documents for informational purposes only and can be accessed via the electronic address provided below. Hard copies of the Group B Attachments will be mailed by request only. Note that the Group B Attachments are very important and may be required under the Contract.



## ATTACHMENTS TO THE SOLICITATION

The following attached forms and documents are organized into two major groupings:

1. Group A must be completed and returned as part of your quotation or proposal.
2. Group B are for information purposes only in preparing your quotation/proposal.

### GROUP A - Complete and return as part of your quotation/cost proposal, as applicable:

<b>Attachment Number</b>	<b>Title and Form Number</b>
<input checked="" type="checkbox"/> A-1	Acknowledgment (form JPL 2384)
<input checked="" type="checkbox"/> A-19	Cost Elements Breakdown (Short Form) (form JPL 0549-1)

### GROUP B - For information only:

<b>Attachment Number</b>	<b>Title and Form Number</b>
<input checked="" type="checkbox"/> B-1	Waiver of Rights to Inventions (form JPL 62-301)