



Jet Propulsion Laboratory
California Institute of Technology

4800 Oak Grove Drive
Pasadena, California 91109-8099

(818) 354-4321

REQUEST FOR PROPOSAL

REQUEST FOR PROPOSAL NO. MC-560865

FOR:

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
/ ASSOCIATION OF AMERICAN STATE GEOLOGISTS
(NASA / AASG) PILOT PROJECT**

PROPOSALS ARE TO BE RECEIVED AT JPL NO LATER THAN:

Date: October 8, 2002

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:

Name: Margaret Cooper

Mail Stop: 201-203

Title: JPL Contract Negotiator

Phone: 818 354-2889

Fax: 818 393-9372

E-Mail: Margaret.R.Cooper@jpl.nasa.gov

California Institute of Technology
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109-8099

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GENERAL INSTRUCTIONS

I. GOALS OF THIS REQUEST FOR PROPOSALS

This announcement offers opportunities for State Geologic Surveys to participate in the NASA/AASG cooperative project to align NASA's research and applications development activities in the geological and natural hazards sciences with the operational requirements of State Geologists and State Surveys. This RFP seeks proposals for the implementation of the NASA/AASG Letter of Agreement (LOA) strategy in the area of solid Earth science spanning the spectrum from research and data analysis to applications of NASA products by the end user. The primary objective of this RFP is to enhance the ability of the State Geologic Surveys to utilize NASA data, technology, and expertise to solve operational problems facing the states.

Candidate applications proposals will support the operational mandates and decision making requirements of state governments. NASA sponsored applications research and development projects will support the "leave behind" concept. That is, the decision support systems should try to aim to be fully sponsored by the partnering users following a successful demonstration of the program. Pilot projects will be initially sponsored for a period of one year. Depending on future availability of funds, accepted projects may be extended for an additional period, or further projects may be solicited at a later date.

II. THE NASA/AASG LETTER OF AGREEMENT

A Letter of Agreement (LOA) was signed on January 11, 2000 by Ghassem Asrar, Associate Administrator of NASA's Office of Earth Science, and John Price, President of the Association of American State Geologists (AASG). The Purpose of the LOA is to "describe the support and cooperation that will be provided by both parties to advance mutual objectives through AASG's State Geological Surveys and NASA's Office of Earth Science. The goal of this cooperative effort will be to align NASA's research and applications development activities in the geological and natural hazards sciences with the operational requirements of State Geologists, State Surveys, and other attending agencies and to facilitate the adoption of resulting science and space technologies by AASG and other professional Geologists."

"AASG's responsibility under this LOA will be to define operational needs and to develop an implementation strategy for the incorporation of NASA science and technology by the State geological surveys. NASA's responsibility will be to conduct applied research and develop research results into operational capabilities, and transfer knowledge and technology to the geologic community through the State geological surveys. Specifically, the topics that AASG and NASA will pursue under this LOA include:

- Development and maintenance of a standard "menu" of NASA data and information products that would be useful to the various states. The AASG and NASA will collectively decide what those products might be.

- Access to technical advice from NASA's DAACs or NASA-sponsored researchers by the States that may require expertise in processing or interpreting remote sensing products to facilitate useful interpretation of the NASA products.
- Enabling AASG to become more intimately involved with NASA research and development projects by electing appropriate representative(s) to act as adjunct science team members that helps establish mission tasks for satellite and airborne systems, if appropriate.
- Utilization of appropriate State Geologic Surveys as outreach centers and outlets for NASA science and data products."

III. GUIDANCE FOR PROPOSERS

A. ELIGIBILITY

Participation in this RFP research and applications opportunity is open to all State Geological Surveys that are members of the Association of American State Geologists.

B. AVAILABILITY OF FUNDS

Approximately \$250K is available for research solicited under this RFP beginning in fiscal year 2003. Funds for this program in 2004 and beyond have not yet been appropriated by Congress. We anticipate funding a maximum of five (5) proposals.

C. PROPOSAL SUBMISSION AND REVIEW

1. PROPOSAL CONTENT AND FORMAT

Details on the proposal format, content, and order of materials are provided in Appendix C. Proposers are urged to read the information in these appendices carefully and to follow the specific guidelines. Your proposal should be organized as closely as practicable to the format and sequence indicated in these proposal instructions and must be submitted as outlined. Please note that JPL has assigned a recommended page limitation to the individual proposal volumes. JPL reserves the right to retain all proposal information submitted in response to this RFP. Note that 7 paper copies and a digital version are required for proper submission.

2. PROPOSAL PREPARATION AND RELATED COSTS

(a) **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.

(b) 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 following legend: "Data contained in pages _____ of this proposal furnished in connection with RFP No. MC-560865 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."

(c) 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 Form to this RFP.)

3. PERIOD OF PERFORMANCE

Proposals will be considered for periods of performance of one year, however, will not to go beyond September 28, 2003.

4. REVIEW PROCESS

The review process and the evaluation criteria to be used are described in Appendix D. Final decisions will be made promptly and proposers will be notified either by electronic mail or surface mail, or both.

5. PROPOSAL SUBMISSION DATE

October 8, 2002.

6. ADDITIONAL INFORMATION

Prospective investigators are urged to read the information in all of the appendices carefully and to follow the specific guidelines therein carefully.

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.

The following items apply only to this announcement.

Identifier:	RFP-560865
Submit Proposals to:	Attn: Margaret Cooper / RFP M/S 201-203 Jet Propulsion Lab 4800 Oak Grove Dr. Pasadena CA 91109
Number of Paper Copies:	7
Electronic Version Required :	MSWord on 3.5 inch floppy, CD,
Point of Contact:	Margaret Cooper, Negotiator Jet Propulsion Lab, M/S 201-203 4800 Oak Grove Dr. Pasadena, CA 91109

Telephone: (818) 354-2889
FAX: (818) 393-9372
margaret.r.cooper@jpl.nasa.gov

IV. 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:

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.
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.
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.

V. SOURCE EVALUATION AND SELECTION PROCESS

A. SOURCE EVALUATION

Proposals will be evaluated in the areas of Technical merit (50%), Relevance to LOA goals and objectives (25%) and Cost (25%) as described in Appendix D. 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 is based on the following: If all offers in the competitive range are of approximately equal qualitative (technical and management) merit, JPL will select for negotiations the offer with the lowest cost. However, JPL may select for negotiations a contractor whose proposal offers a higher qualitative merit if the difference in cost is commensurate with added value. Conversely, JPL may select for negotiations a contractor whose proposal offers a lower qualitative merit if the cost differential between it and other offers so warrants. For purposes of this evaluation, JPL may use the proposed costs or the JPL-determined probable costs, as defined in paragraph (d) below. JPL will evaluate the proposals utilizing the following process:

1. Before issuing the RFP, JPL establishes specific criteria and their weighting for the evaluation of the proposals. After receipt at JPL, the proposals are evaluated against the pre-set criteria outlined in Appendix D.

2. 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.

3. 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 (i) Discussing those aspects of each proposal which contain omissions, ambiguities and uncertainties; (ii) Verifying and identifying strengths and weaknesses which could affect work performance; (iii) Verifying the validity of the proposed cost; and (iv) Assessing the proposed personnel and the proposer's capabilities for performing the work.

4. After discussions, the initial evaluation findings are reviewed and may be revised to incorporate the results of the discussions to arrive at a final evaluation. This final evaluation includes completing a thorough assessment of the cost realism of each cost estimate and comparing the cost estimates. In performing this assessment, JPL may develop a "probable cost" for each proposer. "Probable cost" is defined as JPL's best estimate of the cost of any contract that is most likely to result from the offeror's proposal. (NOTE: JPL will not request best and final offers (BAFOs).)

B. SELECTION PROCESS

The results of the final evaluation are submitted to the JPL Source Selection Official who selects the Contractor(s) for negotiation.

C. JPL RESERVES THE RIGHT TO reject all proposals, to award a contract based on initial proposals (without proposal clarifications) or conduct oral discussions prior to making source selection.

APPENDIX A. RESEARCH AND APPLICATIONS OPPORTUNITIES

The LOA provides some suggested research topics:

- Standard NASA products could be provided routinely and/or specifically for the map areas proposed by each state in their annual StateMap proposals. The products would then become an additional data layer for the StateMap project area. NASA and the States can explore the existing NASA archives for both satellite and airborne data sets.
- The need for help by accessing NASA technical advice may vary from NASA performing turn-key image analysis and interpretation to *ad hoc* guidance of state personnel in performing their own image analysis and interpretation.
- Outreach activity could also include State Surveys being the locations of knowledgeable hosts for Internet access to NASA products. The concept is that

- NASA could develop a sophisticated web site for the preview and ordering of products on a cost-recovery basis. NASA would train a State Survey member in the intelligent use of the web site to guide local customers in selecting the correct products and in placing the order.
- Demonstration pilot projects seeking to solve particular problems facing the State Surveys in their normal operational activities. These might include, for example, acquiring NASA or other space or airborne data to monitor subsidence phenomena.

APPENDIX B. AVAILABLE DATA SETS

Proposers are encouraged to review the existing data bases and acquisition resources before requesting the development of new data resources. Costs for any other types of required data also should be identified in the budget request.

The following is a partial listing of internet addresses which will provide additional information on strategic plans, missions, data networks, instruments, and data systems that are of relevance to this RFP.

Missions, Networks and Instruments

Shuttle Radar Topography Mission and other topographic data:

<http://www.jpl.nasa.gov/srtm/>

<http://www.geo.ed.ac.uk/home/ded.html>

<http://edcdaac.usgs.gov/main.html>

Gravity and Climate Experiment (GRACE)

<http://www.csr.utexas.edu/grace/>

Southern California Integrated GPS Network

<http://www.scign.com/>

SAC-C

<http://www.conae.gov.ar>

CHAMP

<http://www.gfz-potsdam.de/html/projekte.html>

Oersted

<http://www.dsri.dk/Oersted/>

<http://www.dmi.dk/eng/f+u/index.html>

Earth Observing System Instrument Home Pages:

<http://modarch.gsfc.nasa.gov/MODIS/>

<http://terra.nasa.gov/>

<http://geo.arc.nasa.gov/sge/landsat/landsat.html>

LIDAR- Shuttle Laser Altimeter 1 & 2 (SLA) and SLICER airborne data

<http://core2.gsfc.nasa.gov/lapf/>

International GPS Service (IGS)

<http://igscb.jpl.nasa.gov/>

International Laser Ranging Service (ILRS)

http://ilrs.gsfc.nasa.gov/ilrs_home.html

International VLBI Service (IVS)

<http://ivscg.gsfc.nasa.gov/>

Data Systems

Crustal Dynamics Data Information System (CDDIS)

http://cddisa.gsfc.nasa.gov/cddis_welcome.html

GENESIS GPS ESIP

<http://www-genesis.jpl.nasa.gov/html/index.shtml>

NASA CRSP Home Page:

<http://www.crsp.ssc.nasa.gov/databuy/dbmain.htm>

NASA Airborne Science Program:

<http://www.dfrc.nasa.gov/airsci/>

NIMA DTED-1 data availability

Contact: Steve Kempler

GSFC DAAC

kempler@eosdata.gsfc.nasa.gov

(301) 614-5765

APPENDIX C. PROPOSAL CONTENT AND FORMAT

I. PURPOSE

These guidelines contain general and specific information regarding the submission of proposals in response to this RFP. Formats for submission of proposals for research related to this program are provided. The evaluation criteria are specified.

II. PROPOSAL CONTENT AND FORMAT

The proposal should provide sufficient detail to enable a reviewer to assess the value of the proposed research, its relation to the objectives of the RFP, and the probability that the investigators will be able to accomplish the stated objectives within the requested resources and schedule. Capabilities of the proposing organizations should be described including the experience of the Principal Investigator and any Co-Investigators.

The technical part of the proposal should be limited to the equivalent of 7 pages of text, single-spaced, with type no smaller than 12 pt. A reasonable number of figures and tables (not to exceed 4 pages) may be appended. Short resumes for all investigators should be included. The cover sheet, table of contents, abstract, list of references, management plan, cost plan, and resumes need not count in the technical plan page limit. The proposal should be self-contained, and should not refer reviewers to external sources or web sites for critical information. Additional pertinent information (e.g., reprints, letters indicating the commitment of co-investigators and collaborators) may be added as appendices. If color is used, proposers should ensure that all copies have color. Proposals should not be bound or in covers.

Seven paper copies and one digital version are required for submission. The digital version should be in MSWord and recorded on 3.5 inch floppy, or CD format.

A. PAGE LIMITS

Offerors should adhere to the following page limit recommendations:

Cover Letter	1
Cover Page	1 - 2
Table of Contents	1
Abstract	1
Technical Plan	7
References	1 - 2
Management Plan	1 – 2
Cost Plan	3 - 8
Resumes	1 - 2 per investigator
Other	As few as possible

B. CONTENT

Each proposal should contain the following materials assembled in the order given.

1. Proposal Cover Page. *Please note that the budget request to be summarized on the cover page should be for the entire investigation, totaling the budget requests for all institutions participating in the proposal.*

2. Table of Contents (recommended length: 1 page). A table of contents listing the page numbers for key sections of the proposal, including the cost and management plans, should be provided.

3. Abstract (length should not exceed 1 page). The abstract should summarize the research proposed in one page or less. It should contain a simple, concise overview of the investigation, its objectives, its scientific approach, expected results, and the value of its results the NASA/AASG project. It is very important that this abstract be specific and accurately represent the research to be conducted.

4. Technical Plan (length should not exceed 7 pages). The main body of the proposal should contain a full statement of the research to be undertaken and should describe key background, objectives, scientific or applications relevance, technical approach, and expected significance of the work. The key elements of the project should be clearly identified and related to each other. The methods or approaches to be used should be described, and, as appropriate, the advantages of the selected methods or approaches over alternatives should be discussed. The anticipated results should be identified and their relation to the proposal's stated objectives and the objectives, as outlined in the RFP, should be discussed. The research should be described in sufficient detail that peer reviewers can adequately assess the scientific methods and quality of the work proposed. Where resources from satellites or other data sources (e.g., aircraft sensors) are required, proposals should indicate whether a commitment has been made for access to the other systems or whether the required/desired data are available. The

costs for such data should be included in the cost plan. The plan should also describe how any data products to be created or additional, ancillary data sets to be obtained will be shared with NASA, other investigators, and the broader scientific and user communities. Figures will not be considered a part of the technical page count. A reasonable number of figures and tables, not to exceed 4 pages, may be appended.

5. References (recommended length: 1-2 pages). A complete list of references cited in the technical plan must be provided. Each reference should include the title, names of all authors, book or journal, volume number, page numbers, and year of publication. While it is important to be concise, proposers should follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal.

6. Management Plan (recommended length: 1/2 - 2 pages, depending on complexity). The Management Plan should outline the roles and responsibilities of all investigators and collaborators and indicate the relationships among these roles and responsibilities within the group. The management plan should also identify what contractor and/or non-institutional support is anticipated and who will be providing it. A schedule for reporting results and publishing papers should be described.

7. Cost Plan (recommended length: 3 – 8 pages). Contributions from any cost-sharing plan or other support for the proposed research should be detailed. The inclusion of a cost sharing plan is strongly encouraged. Cost sharing will be a significant element of the evaluation.

Costs for the acquisition, purchase, storage, or processing of all required data should be included. Also, costs for modeling, if proposed, should include all aspects of the process from writing software through computer operations and time. If use of NASA or other supercomputer resources is anticipated, an estimate of computational requirements should be included as part of the budget submission. Requirements for any data from NASA's commercial data buy should be clearly specified. Full costs for the purchase of data from commercial sources should be included in the budget and the requirement documented in the proposal. Describe any costs associated with graduate student support, field expense, cost for expert consultations, software purchase, etc.

8. Resumes. Brief resumes (1-2 pages) for all named investigators should be appended to the proposal.

9. Other Enclosures. Any other material pertinent to the consideration of the proposal may be attached as an appendix. This might include preprints or reprints of relevant publications, background on new measurement or analysis approaches, or letters of support and/or participation by scientists and/or institutions. However, reviewers will be under no obligation to read this material, so critical information should be included in the main body of the proposal. Inclusion of general materials that will not aid in the evaluation of the proposal is specifically discouraged.

APPENDIX D. SELECTION PROCESS AND EVALUATION CRITERIA

I. GENERAL

The review of proposals submitted under this RFP will consist of a full peer review including external reviewers, which may involve a mail review, a panel review, or both. This will be followed by a programmatic review in which NASA managers will assess program balance across the competitive-range proposals and evaluate any logistical, implementation, cost, and/or management concerns.

II. EVALUATION CRITERIA

The criteria listed below will be used in evaluating individual proposals and are weighted as follows: 1. Intrinsic merits of the Investigation @ 50%; 2. Relevance and Responsiveness to LOA @ 25%; 3. Cost of the Investigation @ 25%.

1. The intrinsic merits of the investigation, including:

(a) the overall scientific or technical merit of the proposal or unique and innovative methods, approaches, or concepts demonstrated by the proposal.

(b) the qualifications, capabilities, and relevant experience of the Principal Investigator and any Co-Investigators or collaborators as an indication of their ability to carry the investigation to a successful conclusion within the requested resources, including timely publication of peer-reviewed journal articles.

(c) the adequacy of facilities and ability and commitment of the investigator's institution to provide the necessary support to ensure that the investigation can be completed satisfactorily.

(d) end-user involvement in project initiation, requirement definition, and application evaluation and testing

2. The relevance and responsiveness of the proposed research to the goals and objectives of the NASA/AASG LOA and to the goals and objectives described in this RFP, including:

(a) the probability of achieving one or more significant objectives directly relevant to the areas identified in this RFP.

(b) the soundness, logic, and practicality of the proposed technical methods and concepts for achieving successful results.

(c) the potential benefits to other State Geologic Surveys.

(d) the quality, effectiveness, and appropriateness of the management plan.

3. The cost of the investigation, including consideration of the realism and reasonableness of the proposed cost, the relationship of the proposed cost to available funds, and the potential value of the research results (i.e., cost/benefit) to the user community. ***The degree of cost sharing among project participants and, the soundness of the funding plan for transition from application implementation to operations.***