



**National Aeronautics and  
Space Administration**

**July 8, 1998**

---

**NRA-98-OES-10**

# **RESEARCH ANNOUNCEMENT**

**New Investigator Program (NIP) in Earth Science**

---

**Proposals Due September 30, 1998**

**OMB Approval No. 2700-0087**

**New Investigator Program (NIP) in Earth Science**

**NASA Research Announcement  
NRA 98-OES-10  
Issued July 8, 1998  
Proposals due September 30, 1998**

**Office of Earth Science  
National Aeronautics and Space Administration  
Washington, DC 20546**

## I. Introduction

The mission of NASA's Earth Science Enterprise is to develop understanding of the total Earth system and the effects of natural and human-induced changes on the global environment. The Office of Earth Science (OES) supports research, analysis, and science communication that would promote and increase the use of remotely sensed information for detecting and evaluating environmental status and change at both regional and global scales. See Appendix A for relevant URL addresses.

The New Investigator Program (NIP) was established in Fiscal Year 1996 to encourage integrated environments for research and education for scientists and engineers at the early stage of their professional careers. The program is designed for investigators at academic institutions and non-profit organizations. This NASA Research Announcement (NRA) marks the second solicitation for NIP proposals. Proposals submitted in response to this announcement will be competing for about \$2.0 million in Fiscal Year 1999. The awards will average \$80,000-\$120,000 per year for a period of up to three years subject to satisfactory progress and availability of funds.

Each year, NASA selects its nominees for Presidential Early Career Awards for Scientists and Engineers (PECASE) from the exceptionally meritorious awardees sponsored by its four strategic enterprises. PECASE awards recognize outstanding scientists and engineers who, early in their career, show exceptional potential for leadership at the frontiers of knowledge. Each Presidential Award is of five-year duration. NASA does not issue a special announcement for this award. The awardees of the New Investigator Program constitute a primary, but not the only, source of nominations by the Office of Earth Science. If an NIP awardee is selected for the PECASE award, the duration for the combined honor is five years.

## II. Program characteristics

The NIP is an OES-wide program encompassing all areas of research and development in Earth system science and application and associated activities in education, science communication, and interdisciplinary endeavors. The proposed research project must be led by a single principal investigator (PI); however, the research project itself may be collaborative. In particular, interdisciplinary or educational collaborations with partners from institutions other than the submitting institution are encouraged. International collaborations are also encouraged. Access to unique research equipment, facilities, and/or geographical locations, and the opportunity to collaborate with outstanding foreign researchers and educators may provide substantial benefits to the research proposed; note that U.S. funds cannot be used to support participation of foreign partners.

## III. Eligibility

The proposed principal investigators must be U.S. citizens or permanent residents. They must be recent Ph.D. recipients, graduating on or after January 1 of the year that is no more than five years before the issuance date of this NRA.

Institutions and organizations are encouraged to apply for support under the NIP on behalf of their outstanding new faculty who intend to develop academic careers involving research and education in Earth system science. All investigators are required to identify education and outreach activities and/or interdisciplinary endeavors from which the community of practitioners in Earth and environmental sciences can benefit. To be eligible for an NIP award, proposed PI's must meet the following requirements:

- Be employed at an institution in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico, which awards a baccalaureate or advanced degree in a field supporting the objectives of NASA Earth Science Enterprise, or be employed at a research institution or other organization which performs significant amount of work in fields of research supporting the objectives of NASA Earth Science Enterprise. Such organizations could include museums, observatories, government or non-profit research laboratories, as well as entities in the private sector.
- Be in their initial tenure-track or equivalent appointment and within the first five years of that appointment at the time of proposal submission. Note that the equivalency refers to continuing appointments at institutions or in departments that do not offer tenure, or continuing research appointments with substantial educational responsibilities. Note, also, that non-tenured faculty members (or equivalent) more than five years beyond their initial appointment who have interrupted their careers for substantive reasons such as family leave or serious health problems are also eligible, although the nature of the interruption should be clearly stated in the proposals.
- Not hold or have held tenure on or before the submission deadline of this NRA.
- Not be a current or former recipient of the NIP or PECASE award.

NASA encourages the participation of PI's who are women, under-represented minorities, or persons with disabilities.

#### IV .Proposal preparation

The NIP proposals should be prepared in accordance with the instructions given in Appendices B and C with the following exceptions. Project description, which constitutes the main body of the proposal, should be a detailed statement of the research and education plan and should not exceed 10 single-spaced pages, including figures, tables, and references. The research and education plan should include the objectives and significance of the proposed activities in relation to the applicant's professional goals, job responsibilities, and the goals of the institution. See Appendix D for examples of education activities.

#### V . Budget requirements

The NIP awards are typically three years in duration; the amount for each is judged according to the scope of the proposed work and the overall amount of funds available. Salary for up to three months of PI time is acceptable. For PI's in tenure-track appointment, additional academic year salary for the PI is not allowed unless justified by a plan for a limited period of field work which requires an extended stay away from the applicant's home institution. Funds may be used for graduate student and/or postdoctoral fellows, for equipment and supply purchase, computing, travel, etc. in a manner consistent with NASA rules on grants and contracts (see Appendix E). Salary costs for other senior personnel or consultants, and subcontracts are not allowed except in support of the proposed education activities accompanied by appropriate justification. Civil service salary costs are not reimbursable.

NASA strongly encourages the submitting institution to contribute to the cost of the proposed project. Of special interest is cost-sharing in which the employing institution would provide release time to enable the applicant to more fully concentrate on the activities related to the proposal. Institutional support of equipment purchase and co-funding of student and/or postdoctoral support would also be recognized as valuable cost-sharing. Hardware purchased through start-up funds for a recently hired investigator or salary support provided through other federally sponsored research may not count as cost-sharing for the purpose of an NIP proposal.

## VI. Proposal review and evaluation

Proposals will be evaluated by a combined mail and panel review. Depending on the response to this solicitation, the panel review may be accomplished by a single panel or by two or more discipline-oriented panels; not all disciplines in Earth system science are necessarily represented in the final selection of awardees.

The general evaluation factors in Appendix B apply to the NIP with the following exceptions:

- Creativity or innovation in the proposed research and education activities will be considered with an approximate weight of 2:1, respectively. See Appendix D for the evaluation criteria against which the proposed education activities will be judged.
- Long-term commitment to the applicant's career development by the employing institution will be a significant factor, contributing positively, in the evaluation.

## VII. Proposal submission and selection schedule

Submit proposals to:

NRA 98-OES-10  
Mail Code YSP-44  
NASA Headquarters  
400 Virginia Avenue, SW, Suite 700  
Washington, DC 20024  
TEL: 202/554-2775

Submission deadline and timing: by 5 p.m., September 30, 1998.

Copies required: 10

Selecting officials: Director of Research Division, and  
Director of Applications and Outreach Division  
Office of Earth Science

Inquiries: Dr. Ming-Ying Wei, Manager  
Earth Science Education Program  
Code YO  
NASA Headquarters  
300 E Street, SW  
Washington, DC 20546-0001  
TEL: 202/358-0771  
FAX: 202/358-2771  
Email: ming-ying.wei@hq.nasa.gov

Announcement of selections: January 15, 1998

Your interest and cooperation in participating in this opportunity are appreciated.

ORIGINAL SIGNED BY

Ghassem Asrar

Associate Administrator  
Office of Earth Science

Enclosures:

Appendix A, "Relevant URL addresses"

Appendix B, "Guidelines for responding to NASA research announcements for solicited basic research proposals"

Appendix C, "Proposal cover sheet and required certifications"

Appendix D, "Examples and evaluation criteria for the education component"

Appendix E, "Budget summary sheet"

## **Appendix A**

Relevant URL addresses:

1. NASA Earth Science Enterprise (ESE) Home Page

*<http://www.hq.nasa.gov/office/ese/>*

2. ESE/EOS Project Science Office Home Page

*[http://sps0.gsfc.nasa.gov./sps0\\_homepage.html](http://sps0.gsfc.nasa.gov./sps0_homepage.html)*

**Appendix B**  
**INSTRUCTIONS FOR RESPONDING TO NASA RESEARCH ANNOUNCEMENTS**  
**(JANUARY 1997)**

**(a) General.**

(1) Proposals received in response to a NASA Research Announcement (NRA) will be used only for evaluation purposes. NASA does not allow a proposal, the contents of which are not available without restriction from another source, or any unique ideas submitted in response to an NRA to be used as the basis of a solicitation or in negotiation with other organizations, nor is a pre-award synopsis published for individual proposals.

(2) A solicited proposal that results in a NASA award becomes part of the record of that transaction and may be available to the public on specific request; however, information or material that NASA and the awardee mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law, including the Freedom of Information Act.

(3) NRAs contain programmatic information and certain requirements which apply only to proposals prepared in response to that particular announcement. These instructions contain the general proposal preparation information which applies to responses to all NRAs.

(4) A contract, grant, cooperative agreement, or other agreement may be used to accomplish an effort funded in response to an NRA. NASA will determine the appropriate instrument. Contracts resulting from NRAs are subject to the Federal Acquisition Regulation and the NASA FAR Supplement. Any resultant grants or cooperative agreements will be awarded and administered in accordance with the NASA Grant and Cooperative Agreement Handbook (NPG 5800.1).

(5) NASA does not have mandatory forms or formats for responses to NRAs; however, it is requested that proposals conform to the guidelines in these instructions. NASA may accept proposals without discussion; hence, proposals should initially be as complete as possible and be submitted on the proposers' most favorable terms.

(6) To be considered for award, a submission must, at a minimum, present a specific project within the areas delineated by the NRA; contain sufficient technical and cost information to permit a meaningful evaluation; be signed by an official authorized to legally bind the submitting organization; not merely offer to perform standard services or to just provide computer facilities or services; and not significantly duplicate a more specific current or pending NASA solicitation.

(b) **NRA-Specific Items.** Several proposal submission items appear in the NRA itself: the unique NRA identifier; when to submit proposals; where to send proposals; number of copies required; and sources for more information. Items included in these instructions may be supplemented by the NRA.

(c) The following information is needed to permit consideration in an objective manner. NRAs will generally specify topics for which additional information or greater detail is desirable. Each proposal copy shall contain all submitted material, including a copy of the transmittal letter if it contains substantive information.

**(1) Transmittal Letter or Prefatory Material.**

(i) The legal name and address of the organization and specific division or campus identification if part of a larger organization;

- (ii) A brief, scientifically valid project title intelligible to a scientifically literate reader and suitable for use in the public press;
- (iii) Type of organization: e.g., profit, nonprofit, educational, small business, minority, women-owned, etc.;
- (iv) Name and telephone number of the principal investigator and business personnel who may be contacted during evaluation or negotiation;
- (v) Identification of other organizations that are currently evaluating a proposal for the same efforts;
- (vi) Identification of the NRA, by number and title, to which the proposal is responding;
- (vii) Dollar amount requested, desired starting date, and duration of project;
- (viii) Date of submission; and
- (ix) Signature of a responsible official or authorized representative of the organization, or any other person authorized to legally bind the organization (unless the signature appears on the proposal itself).

**(2) Restriction on Use and Disclosure of Proposal Information.** Information contained in proposals is used for evaluation purposes only. Offerors or quoters should, in order to maximize protection of trade secrets or other information that is confidential or privileged, place the following notice on the title page of the proposal and specify the information subject to the notice by inserting an appropriate identification in the notice. In any event, information contained in proposals will be protected to the extent permitted by law, but NASA assumes no liability for use and disclosure of information not made subject to the notice.

Notice  
Restriction on Use and Disclosure of Proposal Information

The information (data) contained in [insert page numbers or other identification] of this proposal constitutes a trade secret and/or information that is commercial or financial and confidential or privileged. It is furnished to the Government in confidence with the understanding that it will not, without permission of the offeror, be used or disclosed other than for evaluation purposes; provided, however, that in the event a contract (or other agreement) is awarded on the basis of this proposal the Government shall have the right to use and disclose this information (data) to the extent provided in the contract (or other agreement). This restriction does not limit the Government's right to use or disclose this information (data) if obtained from another source without restriction.

**(3) Abstract.** Include a concise (200-300 word if not otherwise specified in the NRA) abstract describing the objective and the method of approach.

**(4) Project Description.**

(i) The main body of the proposal shall be a detailed statement of the work to be undertaken and should include objectives and expected significance; relation to the present state of knowledge; and relation to previous work done on the project and to related work in progress elsewhere. The statement should outline the plan of work, including the broad design of experiments to be undertaken and a description of experimental methods and procedures. The project description should address the evaluation factors in these instructions and any specific factors in the NRA. Any substantial collaboration with individuals not referred to in the budget or use of consultants should be described. Subcontracting significant portions of a research project is discouraged.

(ii) When it is expected that the effort will require more than one year, the proposal should cover the complete project to the extent that it can be reasonably anticipated. Principal emphasis should be on the first year of work, and the description should distinguish clearly between the first year's work and work planned for subsequent years.

(5) **Management Approach.** For large or complex efforts involving interactions among numerous individuals or other organizations, plans for distribution of responsibilities and arrangements for ensuring a coordinated effort should be described.

(6) **Personnel.** The principal investigator is responsible for supervision of the work and participates in the conduct of the research regardless of whether or not compensated under the award. A short biographical sketch of the principal investigator, a list of principal publications and any exceptional qualifications should be included. Omit social security number and other personal items which do not merit consideration in evaluation of the proposal. Give similar biographical information on other senior professional personnel who will be directly associated with the project. Give the names and titles of any other scientists and technical personnel associated substantially with the project in an advisory capacity. Universities should list the approximate number of students or other assistants, together with information as to their level of academic attainment. Any special industry-university cooperative arrangements should be described.

(7) **Facilities and Equipment.**

(i) Describe available facilities and major items of equipment especially adapted or suited to the proposed project, and any additional major equipment that will be required. Identify any Government-owned facilities, industrial plant equipment, or special tooling that are proposed for use. Include evidence of its availability and the cognizant Government points of contact.

(ii) Before requesting a major item of capital equipment, the proposer should determine if sharing or loan of equipment already within the organization is a feasible alternative. Where such arrangements cannot be made, the proposal should so state. The need for items that typically can be used for research and non-research purposes should be explained.

(8) **Proposed Costs.**

(i) Proposals should contain cost and technical parts in one volume: do not use separate "confidential" salary pages. As applicable, include separate cost estimates for salaries and wages; fringe benefits; equipment; expendable materials and supplies; services; domestic and foreign travel; ADP expenses; publication or page charges; consultants; subcontracts; other miscellaneous identifiable direct costs; and indirect costs. List salaries and wages in appropriate organizational categories (e.g., principal investigator, other scientific and engineering professionals, graduate students, research assistants, and technicians and other non-professional personnel). Estimate all staffing data in terms of staff-months or fractions of full-time.

(ii) Explanatory notes should accompany the cost proposal to provide identification and estimated cost of major capital equipment items to be acquired; purpose and estimated number and lengths of trips planned; basis for indirect cost computation (including date of most recent negotiation and cognizant agency); and clarification of other items in the cost proposal that are not self-evident. List estimated expenses as yearly requirements by major work phases.

(iii) Allowable costs are governed by FAR Part 31 and the NASA FAR Supplement Part 1831 (and OMB Circulars A-21 for educational institutions and A-122 for nonprofit organizations).

(9) **Security.** Proposals should not contain security classified material. If the research requires access to or may generate security classified information, the submitter will be required to comply with Government security regulations.

(10) **Current Support.** For other current projects being conducted by the principal investigator, provide title of project, sponsoring agency, and ending date.

(11) **Special Matters.**

(i) Include any required statements of environmental impact of the research, human subject or animal care provisions, conflict of interest, or on such other topics as may be required by the nature of the effort and current statutes, executive orders, or other current Government-wide guidelines.

(ii) Proposers should include a brief description of the organization, its facilities, and previous work experience in the field of the proposal. Identify the cognizant Government audit agency, inspection agency, and administrative contracting officer, when applicable.

(d) **Renewal Proposals**

(1) Renewal proposals for existing awards will be considered in the same manner as proposals for new endeavors. A renewal proposal should not repeat all of the information that was in the original proposal. The renewal proposal should refer to its predecessor, update the parts that are no longer current, and indicate what elements of the research are expected to be covered during the period for which support is desired. A description of any significant findings since the most recent progress report should be included. The renewal proposal should treat, in reasonable detail, the plans for the next period, contain a cost estimate, and otherwise adhere to these instructions.

(2) NASA may renew an effort either through amendment of an existing contract or by a new award.

(e) **Length.** Unless otherwise specified in the NRA, effort should be made to keep proposals as brief as possible, concentrating on substantive material. Few proposals need exceed 15-20 pages. Necessary detailed information, such as reprints, should be included as attachments. A complete set of attachments is necessary for each copy of the proposal. As proposals are not returned, avoid use of "one-of-a-kind" attachments.

(f) **Joint Proposals.**

(1) Where multiple organizations are involved, the proposal may be submitted by only one of them. It should clearly describe the role to be played by the other organizations and indicate the legal and managerial arrangements contemplated. In other instances, simultaneous submission of related proposals from each organization might be appropriate, in which case parallel awards would be made.

(2) Where a project of a cooperative nature with NASA is contemplated, describe the contributions expected from any participating NASA investigator and agency facilities or equipment which may be required. The proposal must be confined only to that which the proposing organization can commit itself. "Joint" proposals which specify the internal arrangements NASA will actually make are not acceptable as a means of establishing an agency commitment.

(g) **Late Proposals.** A proposal or modification received after the date or dates specified in an NRA may be considered if doing so is in the best interests of the Government.

(h) **Withdrawal.** Proposals may be withdrawn by the proposer at any time before award. Offerors are requested to notify NASA if the proposal is funded by another organization or of other changed circumstances which dictate termination of evaluation.

(i) **Evaluation Factors**

(1) Unless otherwise specified in the NRA, the principal elements (of approximately equal weight) considered in evaluating a proposal are its relevance to NASA's objectives, intrinsic merit, and cost.

(2) Evaluation of a proposal's relevance to NASA's objectives includes the consideration of the potential contribution of the effort to NASA's mission.

(3) Evaluation of its intrinsic merit includes the consideration of the following factors of equal importance:

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

(ii) Offeror's capabilities, related experience, facilities, techniques, or unique combinations of these which are integral factors for achieving the proposal objectives.

(iii) The qualifications, capabilities, and experience of the proposed principal investigator, team leader, or key personnel critical in achieving the proposal objectives.

(iv) Overall standing among similar proposals and/or evaluation against the state-of-the-art.

(4) Evaluation of the cost of a proposed effort may include the realism and reasonableness of the proposed cost and available funds.

(j) **Evaluation Techniques.** Selection decisions will be made following peer and/or scientific review of the proposals. Several evaluation techniques are regularly used within NASA. In all cases proposals are subject to scientific review by discipline specialists in the area of the proposal. Some proposals are reviewed entirely in-house, others are evaluated by a combination of in-house and selected external reviewers, while yet others are subject to the full external peer review technique (with due regard for conflict-of-interest and protection of proposal information), such as by mail or through assembled panels. The final decisions are made by a NASA selecting official. A proposal which is scientifically and programmatically meritorious, but not selected for award during its initial review, may be included in subsequent reviews unless the proposer requests otherwise.

(k) **Selection for Award.**

(1) When a proposal is not selected for award, the proposer will be notified. NASA will explain generally why the proposal was not selected. Proposers desiring additional information may contact the selecting official who will arrange a debriefing.

(2) When a proposal is selected for award, negotiation and award will be handled by the procurement office in the funding installation. The proposal is used as the basis for negotiation. The contracting officer may request certain business data and may forward a model award instrument and other information pertinent to negotiation.

(1) **Cancellation of NRA.** NASA reserves the right to make no awards under this NRA and to cancel this NRA. NASA assumes no liability for canceling the NRA or for anyone's failure to receive actual notice of cancellation.

**Appendix C  
Proposal Cover Sheet  
NASA Research Announcement 98-OES-10**

Proposal No. \_\_\_\_\_ (Leave Blank for NASA Use)  
Title: \_\_\_\_\_  
Principal Investigator: \_\_\_\_\_  
Department: \_\_\_\_\_  
Institution: \_\_\_\_\_  
Street/PO Box: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Country: \_\_\_\_\_ E-mail: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Budget:  
1st Year: \_\_\_\_\_ 2nd Year: \_\_\_\_\_ 3rd Year: \_\_\_\_\_ Total: \_\_\_\_\_

Certification of Compliance with Applicable Executive Orders and U.S. Code

By submitting the proposal identified in this *Cover Sheet/Proposal Summary* in response to this Research Announcement, the Authorizing Official of the proposing institution (or the individual proposer if there is no proposing institution) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and stipulations set forth in the two Certifications contained in this NRA [namely, (i) *Certification of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs*, and (ii) *Certifications, Disclosures, And Assurances Regarding Lobbying, Debarment & Suspension, And Drug-Free Workplace Requirements*].

Willful provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

Title of Authorizing Institutional Official: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Name of Proposing Institution: \_\_\_\_\_  
Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_ Facsimile: \_\_\_\_\_

---

**Certification of Compliance with the NASA Regulations Pursuant to Nondiscrimination in  
Federally Assisted Programs**

---

The (*Institution, corporation, firm, or other organization on whose behalf this assurance is signed, hereinafter called "Applicant "*) hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1962 (20 U.S.C. 1680 et seq.), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the Age Discrimination Act of 1975 (42 U.S.C. 16101 et seq.), and all requirements imposed by or pursuant to the Regulation of the National Aeronautics and Space Administration (14 CFR Part 1250) (hereinafter called "NASA") issued pursuant to these laws, to the end that in accordance with these laws and regulations, no person in the United States shall, on the basis of race, color, national origin, sex, handicapped condition, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives federal financial assistance from NASA; and hereby give assurance that it will immediately take any measure necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to the Applicant by NASA, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which the federal financial assistance is extended to it by NASA.

this assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts, or other federal financial assistance extended after the date hereof to the Applicant by NASA, including installment payments after such date on account of applications for federal financial assistance which were approved before such date. The Applicant recognized and agrees that such federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign on behalf of the Applicant.

NASA FORM 1206

## **CERTIFICATIONS, DISCLOSURES, AND ASSURANCES REGARDING LOBBYING AND DEBARMENT & SUSPENSION**

### **1. LOBBYING**

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 14 CFR Part 1271, as defined at 14 CFR Subparts 1271.110 and 1260.117, with each submission that initiates agency consideration of such applicant for award of a Federal contract, grant, or cooperative agreement exceeding \$ 100,000, the applicant must **certify** that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

### **2. GOVERNMENTWIDE DEBARMENT AND SUSPENSION**

As required by Executive Order 12549, and implemented at 14 CFR 1260.510, for prospective participants in primary covered transactions, as defined at 14 CFR Subparts 1265.510 and 1260.117—

(1) The prospective primary participant **certifies** to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency.

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

## **Appendix D**

### **Examples and evaluation criteria for the education component**

Proposed education activities may be in a broad range; examples include, but are not limited to:

- Earth system science course or curriculum development for majors and/or non-majors, or innovative undergraduate laboratory development;
- Active participation in pre-college educational projects such as teacher preparation, teacher enhancement, and instructional materials development in support of Earth system science;
- Student mentoring and advising, outreach activities to schools and communities, and activities to enhance general scientific and technical literacy of Earth system science in the adult lay public;
- Development of computer programs, instruments, and/or data which will be made broadly and easily available to the scientific community and which are expected to find wide application by a number of groups conducting research and education projects in Earth system science;
- New, creative approaches to graduate training and mentoring, including introduction of cross-sector and/or cross-disciplinary experiences that can enrich the graduate education experience beyond that normally obtained;
- Involving students from groups that have been traditionally underrepresented in the discipline and/or from geographical locations that have less developed capability for research in Earth system science; and
- Development of research and/or education partnerships with other institutions typically (but not necessarily) in the same geographical area as the applicant's institution. Activities which bring faculty and/or students from non-Ph.D. granting institutions into the activities at Ph.D.-granting institutions and other research-oriented institutions are particularly encouraged.

The evaluation criteria against which the proposed education activities will be judged are:

- The effectiveness and realism of the proposed education program;
- The effectiveness and extent of partnerships with institutions and/or personnel in the fields of educational and/or public outreach;
- The effective leveraging of existing and/or ancillary resources beyond those requested in the proposal (including, for example, the waiver of institutional overhead on the education component by the submitting institution);
- The prospects for the proposed education program to have a "multiplier effect" beyond the immediately involved personnel (e.g., the training of teachers or the broad dissemination of the planned educational product);
- The degree to which the proposed education program benefits and promotes nationally recognized and endorsed efforts in education reform;
  
- The capability and commitment of the applicant to carry out the proposed education program; and
- The realism and adequacy of the proposed budget for education.

**Appendix E  
BUDGET SUMMARY**

For period from \_\_\_\_\_ to \_\_\_\_\_

- Provide a complete Budget Summary for year one and separate estimated for each subsequent year.
- Enter the proposed estimated costs in Column A (Columns B & C for NASA use only).
- Provide as attachments detailed computations of all estimates in each cost category with narratives as required to fully explain each proposed cost. See *Instructions For Budget Summary* on following page for details.

	A	NASA USE ONLY	
		B	C
1. <u>Direct Labor</u> (salaries, wages, and fringe benefits)	_____	_____	_____
2. <u>Other Direct Costs</u> :			
a. Subcontracts	_____	_____	_____
b. Consultants	_____	_____	_____
c. Equipment	_____	_____	_____
d. Supplies	_____	_____	_____
e. Travel	_____	_____	_____
f. Other	_____	_____	_____
3. <u>Facilities and Administrative Costs</u>	_____	_____	_____
4. <u>Other Applicable Costs</u> :	_____	_____	_____
5. <u>SUBTOTAL--Estimated Costs</u>	_____	_____	_____
6. <u>Less Proposed Cost Sharing</u> (if any)	_____	_____	_____
7. <u>Carryover Funds</u> (if any)			
a. Anticipated amount : _____			
b. Amount used to reduce budget	_____	_____	_____
8. <u>Total Estimated Costs</u>	_____	_____	XXXXXXXX
9. APPROVED BUDGET	XXXXXX	XXXXXXXX	_____

## INSTRUCTIONS FOR BUDGET SUMMARY

1. Direct Labor (salaries, wages, and fringe benefits): Attachments should list the number and titles of personnel, amounts of time to be devoted to the grant, and rates of pay.
2. Other Direct Costs:
  - a. Subcontracts: Attachments should describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting.
  - b. Consultants: Identify consultants to be used, why they are necessary, the time they will spend on the project, and rates of pay (not to exceed the equivalent of the daily rate for Level IV of the Executive Schedule, exclusive of expenses and indirect costs).
  - c. Equipment: List separately. Explain the need for items costing more than \$5,000. Describe basis for estimated cost. General purpose equipment is not allowable as a direct cost unless specifically approved by the NASA Grant Officer. Any equipment purchase requested to be made as a direct charge under this award must include the equipment description, how it will be used in the conduct of the basic research proposed and why it cannot be purchased with indirect funds.
  - d. Supplies: Provide general categories of needed supplies, the method of acquisition, and the estimated cost.
  - e. Travel: Describe the purpose of the proposed travel in relation to the grant and provide the basis of estimate, including information on destination and number of travelers where known.
  - f. Other: Enter the total of direct costs not covered by 2a through 2e. Attach an itemized list explaining the need for each item and the basis for the estimate.
3. Facilities and Administrative (F&A) Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate.
4. Other Applicable Costs: Enter total explaining the need for each item.
5. Subtotal-Estimated Costs: Enter the sum of items 1 through 4.
6. Less Proposed Cost Sharing (if any): Enter any amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.
7. Carryover Funds (if any): Enter the dollar amount of any funds expected to be available for carryover from the prior budget period. Identify how the funds will be used if they are not used to reduce the budget. NASA officials will decide whether to use all or part of the anticipated carryover to reduce the budget (not applicable to 2nd-year and subsequent-year budgets submitted for award of a multiple year award).
8. Total Estimated Costs: Enter the total after subtracting items 6 and 7b from item 5.