PROGRAM SOLICITATION
NSF 06-584

REPLACES DOCUMENT(S):
NSF 04-573

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

- February 05, 2007
- February 05, 2007
- First Monday in February, Annually Thereafter
- February 04, 2008
- First Monday in February, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

A revised version of the NSF Proposal & Award Policies & Procedures Guide (PAPPG) NSF 10-1 was issued on October 1, 2008 and is effective for proposals submitted on or after January 5, 2009. Please be advised that the guidelines contained in NSF 10-1, with the exception of the requirements in Chapter II.C.2.d, Chapter III.A., and Chapter IV.B. that relate to mentoring activities for postdoctoral researchers, apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 5th, 2009 must also follow the guidelines contained in NSF 10-1.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:
CEDAR, GEM, and SHINE Postdoctoral Research

Synopsis of Program:
The Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) program, the Geospace Environment Modeling (GEM) program, and the Solar, Heliosphere and Interplanetary Environment (SHINE) program are special programs within the Aeronomy, Magnetospheric Physics and Solar-Terrestrial Research programs in the Atmospheric Sciences Division of the Geosciences Directorate. These three programs each involve specific regions of the space environment and the way these regions interact. Each of the programs has its own Program Solicitation, but they also have a common commitment to support researchers who have recently received their Ph.D. degree, allowing them to request limited support for CEDAR/GEM/SHINE research activities of their own devising.

Cognizant Program Officer(s):
- Kile B. Baker, Program Director, 775 S, telephone: (703) 292-8519, fax: (703) 292-9022, email: kbaker@nsf.gov
- Paul Bellaire, Program Director, 775 S, telephone: (703) 292-8519, fax: (703) 292-9023, email: pbellaire@nsf.gov
- Robert Robinson, Program Manager, 775 S, telephone: (703) 292-8519, fax: (703) 292-9022, email: mrobins@nsf.gov
- Farzad Kamalabadi, telephone: (703) 292-8529, email: fkamalab@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):
Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 3 to 6 each year

Anticipated Funding Amount: $320,000 each year, pending availability of funds.

Eligibility Information

Organization Limit:

None Specified

PI Limit:

The researcher to be supported must have received his/her Ph.D. (or equivalent) within the past 3 years or expect to be in a postdoctoral research position by the time the award is made. The researcher to be supported may appear on only one proposal submitted in response to this program solicitation in any given year. He/she should appear on the proposal as the sole Principal Investigator if the institution allows this. If the institution does not allow postdoctoral researchers to act as PIs on research grants, then the researcher's advisor at the institution should appear as the sole PI, and the researcher to be supported should be listed by name in the Senior Personnel section of the budget.

Limit on Number of Proposals per Organization: 1 per postdoctoral researcher. There is no limitation on the number of proposals an organization may submit.

Limit on Number of Proposals per PI:

None Specified

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- Letters of Intent: Not Applicable
- Preliminary Proposal Submission: Not Applicable
- Full Proposal Preparation Instructions: This solicitation contains information that deviates from the standard NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information.

B. Budgetary Information

- Cost Sharing Requirements: Cost Sharing is not required under this solicitation.
- Indirect Cost (F&A) Limitations: Not Applicable
- Other Budgetary Limitations: Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):
  
  February 05, 2007
  February 05, 2007
  First Monday in February, Annually Thereafter
  February 04, 2008
  First Monday in February, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.
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I. INTRODUCTION

The Coupling, Energetics and Dynamics of Atmospheric Regions (CEDAR), Geospace Environment Modeling (GEM) and Solar, Heliospheres and Interplanetary Environment (SHINE) programs all relate to solar influences on the space environment surrounding Earth. An important goal of these programs is to foster the development of a new generation of researchers involved in the fundamental research covered by the three individual programs. Each of the three programs provides extensive support for students to attend annual workshops and, in addition, each of the three is committed to providing support for outstanding young scientists who have recently received a Ph.D. degree or expect to have received their Ph.D. degree by the time the award could be made.

II. PROGRAM DESCRIPTION

The CEDAR, GEM, and SHINE programs are all broad-based, community-initiated research programs dealing with special regions of Earth's space environment. Each of these three programs has its own NSF Program Solicitation and each has its own web page hosted at one of the research institutions involved. Postdoctoral researchers interested in submitting a proposal in response to this Program Solicitation should also examine these other program solicitations and web sites for more details on the CEDAR, GEM and SHINE programs. Awards made under this Program Solicitation will be for research appropriate to one (or more) of the CEDAR, GEM, and SHINE programs. Proposals for cross-cutting research that would be appropriate for two or all three of the CEDAR, GEM, and SHINE programs are encouraged.

The primary goal of this program is to provide a mechanism for the support of young researchers to pursue research goals (related to the areas described above) of their own devising. Because of the special nature of these awards, there are special rules for the preparation of the proposals, the budgets and the review process (see below for details).

III. AWARD INFORMATION

NSF expects to make the following type of award(s): Standard or Continuing Grant.

The estimated number of awards will be 3 to 6 per year. The anticipated award date will be in September of each year.

The anticipated funding amount is $320,000 per year, with the typical award being about $80,000 per year. All awards will be limited to a duration of two (2) years. Note that there are budgetary limitations (see Section V.B).

Estimated program budget and number of awards are subject to the availability of funds.
IV. ELIGIBILITY INFORMATION

Organization Limit:  
None Specified

PI Limit:  
The researcher to be supported must have received his/her Ph.D. (or equivalent) within the past 3 years or expect to be in a postdoctoral research position by the time the award is made. The researcher to be supported may appear on only one proposal submitted in response to this program solicitation in any given year. He/she should appear on the proposal as the sole Principal Investigator if the institution allows this. If the institution does not allow postdoctoral researchers to act as PIs on research grants, then the researcher's advisor at the institution should appear as the sole PI, and the researcher to be supported should be listed by name in the Senior Personnel section of the budget.

Limit on Number of Proposals per Organization:  1

per postdoctoral researcher. There is no limitation on the number of proposals an organization may submit.

Limit on Number of Proposals per PI:  
None Specified

Additional Eligibility Info:

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Instructions: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the guidelines specified in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-PUBS (7827) or by e-mail from nsfpubs@nsf.gov.

The following instructions deviate from the NSF Grants.gov Application Guide instructions:

The title on the cover sheet of proposals submitted in response to this Program Solicitation should begin with one (or more) of the acronyms CEDAR, GEM, and SHINE (to indicate to which of those programs the research is relevant) and the word "Postdoc: . . ." For cross-cutting research use a form such as "GEM/SHINE Postdoc: . . . ."

The project description may be brief (3-5 pages) and must not exceed 10 pages. The project description need only include a synopsis of the type of CEDAR/GEM/SHINE-related research that is to be carried out.

The postdoctoral researcher's biographical sketch must be included in the biographical sketch section of the proposal. A letter indicating the host institution's interest in pursuing this project must be included, along with two letters of recommendation, an abstract of the candidate's doctoral thesis, and a transcript of the candidate's graduate course work. This additional material should be submitted as supplementary documents.

Proposers are reminded to identify the program solicitation number (NSF 06-584) in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost Sharing: Cost sharing is not required under this solicitation.

Other Budgetary Limitations:

The CEDAR, GEM, SHINE postdoctoral research awards are two-year awards and provide a stipend for the postdoctoral researcher, plus appropriate amounts for benefits, travel, publishing expenses, and indirect costs. If NSF increases the postdoctoral stipend level for NSF awardees, the budget limitation of the postdoctoral researcher's stipend under this solicitation will be adjusted accordingly. It is not the intent of this budget limitation to restrict the total compensation that the supported researcher may receive. Awards made under this Program Solicitation may provide salary or stipend support only for the postdoctoral researcher.

C. Due Dates

- Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):
  - February 05, 2007
  - February 05, 2007
  - First Monday in February, Annually Thereafter
Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

What is the intellectual merit of the proposed activity?
How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?
How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?


Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also will give careful consideration to the following in making funding decisions:

Integration of Research and Education
One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities
Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

Additional Review Criteria:
Reviewers will be asked to comment on the relevance of the proposed research to the CEDAR, GEM and SHINE program.
B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review. Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to the submitting organization by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1), * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF’s Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@ NSF.gov.


C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports.) Within 90 days after expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF’s electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications, and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.
VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Kile B. Baker, Program Director, 775 S, telephone: (703) 292-8519, fax: (703) 292-9022, email: kbaker@nsf.gov
- Paul Bellaire, Program Director, 775 S, telephone: (703) 292-8519, fax: (703) 292-9023, email: pbellair@nsf.gov
- Robert Robinson, Program Manager, 775 S, telephone: (703) 292-8519, fax: (703) 292-9022, email: rmrobins@nsf.gov
- Farzad Kamalabadi, telephone: (703) 292-8529, email: fkamalab@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov
- Ruth E. Joel, Program Assistant, 775 S, telephone: (703) 292-8522, fax: (703) 292-9022, email: rjoel@nsf.gov

IX. OTHER INFORMATION

The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, National Science Foundation Update is a free e-mail subscription service designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the NSF web site.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in all fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information**
  - (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
Send an e-mail to: nsfpubs@nsf.gov
or telephone: (703) 292-7827

- To Locate NSF Employees: (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, “Principal Investigator/Proposal File and Associated Records,” 69 Federal Register 26410 (May 12, 2004), and NSF-51, “Reviewer/Proposal File and Associated Records,” 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Division of Administrative Services
National Science Foundation
Arlington, VA 22230