Deep Underground Science and Engineering Program Planning and Technical Requirements

Program Solicitation

NSF 04-595



National Science Foundation

Directorate for Mathematical and Physical Sciences
Division of Physics
Directorate for Geosciences
Division of Earth Sciences
Directorate for Engineering
Division of Civil and Mechanical Systems

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

September 15, 2004

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Deep Underground Science and Engineering Program Planning and Technical Requirements

Synopsis of Program:

This solicitation invites proposals to develop the scientific and engineering objectives and technical requirements for any areas of science and engineering that require the special characteristics of a deep underground environment. The separate Elements (experiments) should be grouped in Modules (groups of experiments that share basic infrastructural requirements) for a possible deep underground science and engineering laboratory. The primary purpose of this solicitation is to establish the site-independent scientific and engineering benchmarks against which the capabilities of the candidate sites for an underground laboratory will be measured. The Elements within each Module may be grouped by required depth, required space, by scientific or engineering area, or by other unifying features. Potential spatial or other infrastructural incompatibilities between individual elements should also be identified.

Cognizant Program Officer(s):

- Richard N. Boyd, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7381, fax: (703) 292-9078, email: rboyd@nsf.gov
- Eugene C. Loh, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7379, fax: (703) 292-9078, email: eloh@nsf.gov
- David Lambert, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8558, email: dlambert@nsf.gov

• Richard J. Fragaszy, Program Director, Directorate for Engineering, Division of Civil & Mechanical Systems, 545 S, telephone: (703) 292-8360, email: rfragasz@nsf.gov

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

- 47.041 --- Engineering
- 47.050 --- Geosciences
- 47.049 --- Mathematical and Physical Sciences

Eligibility Information

• Organization Limit:

Proposals may be submitted by academic organizations in the United States, or by non-profit non-academic organizations in the United States, with research and education programs in at least some of the areas of research relevant to an underground laboratory. Collaborations that include all of the relevant research areas are encouraged. In proposals involving multiple organizations, a single organization must submit the proposal as the lead organization, and accept overall management responsibility. Collaborators may also be affiliated with state governments or national laboratories.

• PI Eligibility Limit:

An individual may be the Principal Investigator (PI) for only one proposal.

• Limit on Number of Proposals: No more than one proposal may be submitted by any one organization as the lead organization.

Award Information

- Anticipated Type of Award: Standard Grant
- Estimated Number of Awards: 1 to 3
- Anticipated Funding Amount: \$500,000 -- Up to a total of \$500,000 subject to availability of funds.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

• Full Proposal Preparation Instructions: This solicitation contains information that deviates from the standard 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.
- Indirect Cost (F&A) Limitations: Not Applicable.
- Other Budgetary Limitations: Not Applicable.

C. Due Dates

• Full Proposal Deadline Date(s) (due by 5 p.m. proposer's local time): September 15, 2004

• **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 science and engineering disciplines address an extraordinary range of issues across a broad spectrum of spatial and temporal scales. Making advances in these disciplines frequently requires unusual environments. Scientists and engineers sometimes create those environments artificially; in some instances they can exploit naturally existing environments with particular characteristics, provided there is appropriate access and infrastructure.

In the past several years, research communities in physics, geosciences, and engineering have developed powerful scientific arguments for access to facilities deep underground. A series of reports (see, e.g., the NRC report Connecting Quarks with the Cosmos, the NRC report Neutrinos and Beyond, and Proceedings of the International Workshop on Neutrinos and

Subterranean Science 2002) provides the groundwork for developing the scientific and engineering case for a deep underground laboratory. The Mathematical and Physical Sciences Directorate, Division of Physics is taking the lead for NSF, in partnership with the Directorates for Geosciences and Engineering, in working with the relevant communities to implement a sequence of steps that might lead to the creation of such a laboratory. This is the first of three solicitations that will guide the process.

II. PROGRAM DESCRIPTION

This solicitation is the first in a series of three that will provide the underpinnings for a decision on creating an infrastructure for underground science and engineering and enabling an initial set of experiments. It invites proposals to:

- (1) Develop the scientific and engineering case for the range of potential experiments needing underground access (the Elements):
- (2) Describe the associated technical requirements on the infrastructure and instrumentation; and
- (3) Group the Elements with similar scientific motivation and associated technical requirements for infrastructure into Modules.

NSF will consider proposals to develop Modules incorporating relevant areas of physics, astrophysics, geosciences, engineering, microbiology, manufacturing, defense-related areas, and any other areas of science and engineering that require the special characteristics of an underground environment. The reports cited above indicate that the following Modules would be an appropriate starting point: "deep" physics; "large" physics; engineering; biology; geophysics; national security; and "other."

Awards made under this solicitation will establish the scientific and engineering case for underground laboratory infrastructure and the site-independent science and engineering benchmarks against which the capabilities of candidate sites for a laboratory will be measured. Thus, it is essential that the entire community of scientists and engineers who might develop experiments for an underground facility be involved in the process. Those responding to the solicitation are encouraged to combine forces so as to generate a complete interdisciplinary representation of the underground science and engineering spectrum.

III. ELIGIBILITY INFORMATION

Proposals may be submitted by academic organizations in the United States, or by non-profit non-academic organizations in the United States, with research and education programs in at least some of the areas of research relevant to an underground laboratory. Collaborations that include all of the relevant research areas are encouraged. In proposals involving multiple organizations, a single organization must submit the proposal as the lead organization, and accept overall management responsibility. Collaborators may also be affiliated with state governments or national laboratories.

IV. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. Up to a total of \$500,000 will be targeted in FY05 for this solicitation. One to three standard grants for six months not to exceed \$500,000 will be made. Support of a proposal for this solicitation does not imply the funding or creation of an underground laboratory.

A. Proposal Preparation Instructions

Full Proposal Instructions:

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained 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/cgi-bin/getpub?gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

The program announcement/solicitation contains deviations from the standard Grant Proposal guide (GPG) proposal preparation guidelines:

- 1. NSF Cover Sheet. Indicate the total amount requested for the six months of NSF support in the box entitled "requested amount."
- 2. List each senior investigator (faculty level or equivalent), by full name, and his or her institutional and departmental affiliation. Include a biographical sketch for each senior participant, up to a maximum of 15. The list should be comprised of collaborators chosen to reflect the research diversity of the collaboration. Up to ten publications pertinent to this proposal can be included for each participant so listed. Limit: 2 pages for each senior investigator. Enter in the "Add/Modify Non CO-PI Senior Personnel" FastLane form. A separate list should include the names, and institutional and departmental affiliations of any additional senior participants.
- 3. Project Description. This forms the core of the proposal. It provides information on the team's plan to delineate the Elements, their scientific and engineering motivation, their associated technical requirements for underground infrastructure, and their formation into Modules. Components of the project description include:
 - Scope of the effort in terms of fields of science and engineering and likely range of technical demands on underground infrastructure.
 - Likely framework for presenting the Elements and Modules.
 - The role played by and expected intellectual contributions of each of the senior participants in conducting the work.
 - Methods to be used in collecting information about possible Elements, their technical requirements, and formation into Modules.
 - How the plan for developing Elements and Modules builds on the current state of underground research capabilities and the research currently being carried out underground, both nationally and internationally.
 - Opportunities for collaborating with other sectors, including industry, national laboratories, and international groups, in developing the Elements and Modules.
 - Resources required to conduct the work.
 - Plan for coordinating the efforts of scientists and engineers across the spectrum of underground research activity in developing the Elements and Modules.
 - Plan for integrating the information collected into a final presentation of Elements and Modules.
 - Achievements by members of the team under prior NSF or other agency support, where relevant to the present proposal.

Proposers are reminded to identify the program announcement/solicitation number (04-595) in the program announcement/solicitation block on the proposal Cover Sheet. 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 in proposals submitted under this Program Solicitation.

Budget Preparation Instructions:

Complete budget pages and up to three pages of budget justification are allowed. Provide separate budget pages for the proposal as a whole and for each participating institution.

C. Due Dates

Proposals must be submitted by the following date(s):

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

September 15, 2004

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this announcement/solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/a1/newstan.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 announcement/solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

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. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: http://www.fastlane.nsf.gov

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the Grant Proposal Guide Chapter III.A for further information). 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 he/she is qualified to make judgments.

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 and original 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?

NSF staff 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:

In addition to the standard NSF review criteria of Scientific Merit and Broader Impacts, proposals will also be reviewed against the following general review criteria. Following each criterion are potential considerations that reviewers may employ in the evaluation.

What is the viability of the plan for developing the motivation for the science and engineering Modules?

Do the proposers have a well developed plan for defining the scientific or engineering motivation of the Elements?

Are the proposers sufficiently connected with the physical sciences, geosciences, and engineering communities to obtain the necessary information? How well qualified are the proposers to conduct the project? If appropriate, the reviewers will comment on the quality and relevance of the prior work.

What is the viability of the plan for developing the technical requirements of the Elements?

Do the proposers have a well-developed plan for determining the technical requirements of the Elements? Are the proposers sufficiently connected with the relevant research communities to obtain the necessary information? How well qualified are the proposers to conduct the work?

Is there a coordinated plan for integrating the many Elements and Modules that will result from this study?

Do the proposers have a well-developed plan for coordinating the accrual of information? Are they in contact with all the groups from whom they will be soliciting information? Do they have a clear plan for reaching out to all of the underground science and engineering communities? Who are the potential international collaborators?

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by 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.

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 Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In most cases, proposers will be contacted by the Program Officer after his or her recommendation to award or decline funding has been approved by the Division Director. This informal notification is not a guarantee of an eventual award.

NSF is striving to be able to tell proposers whether their proposals have been declined or recommended for funding within six months. The time interval begins on the closing date of an announcement/solicitation, or the date of proposal receipt, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

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 Division

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.A. 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 (NSF-GC-1); * or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/cgi-bin/getpub?gpm. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Website at http://www.gpo.gov.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. PIs should examine the formats of the required reports in advance to assure availability of required data.

Pls are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. Pls will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding this program should be made to:

- Richard N. Boyd, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7381, fax: (703) 292-9078, email: rboyd@nsf.gov
- Eugene C. Loh, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7379, fax: (703) 292-9078, email: eloh@nsf.gov
- David Lambert, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8558, email: dlambert@nsf.gov
- Richard J. Fragaszy, Program Director, Directorate for Engineering, Division of Civil & Mechanical Systems, 545 S, telephone: (703) 292-8360, email: rfragasz@nsf.gov

For questions related to the use of FastLane, contact:

 Ramona Winkelbauer, Computer Specialist, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7390, fax: (703) 292-9078, email: rwinkelb@nsf.gov

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at http://www.nsf.gov/cgi-bin/getpub?gp. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF Website at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF, although some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the GPG Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

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 (703) 292-5111

(NSF Information Center):

• TDD (for the hearing-impaired): (703) 292-5090

• To Order Publications or Forms:

Send an e-mail to: pubs@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; 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 applicant 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 needing information as part of the review process or in order to coordinate programs; 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," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). 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 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 this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.

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The National Science Foundation 4201 Wilson Boulevard, Arlington, Virginia 22230, USA Tel: 703-292-5111, FIRS: 800-877-8339 | TDD: 703-292-5090

Contact NSF Customize