MARGINS

Program Solicitation for FY 2001/2002 proposals

Program Solicitation

NSF 01-17

DIRECTORATE FOR GEOSCIENCES
DIVISION OF EARTH SCIENCES
DIVISION OF OCEAN SCIENCES

DEADLINE(S) :

January 16, 2001	**For FY 2001 support.**
November 1, 2001	**For FY 2002 support.**

NATIONAL SCIENCE FOUNDATION

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- **TDD (for the hearing-impaired):** (703) 292-5090
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  or telephone: (301) 947-2722
- **To Locate NSF Employees:** (703) 292-5111

SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: MARGINS

Synopsis of Program: The MARGINS research program has been formulated to understand the complex interplay of processes that govern continental margin evolution globally. Mechanical, chemical, biological and fluid processes act in concert to govern the initiation, evolution and eventual destruction of continental margins, as well as the accumulation of resources in these regions.

Cognizant Program Officer(s):

- Bilal Haq, Program Director, Marine Geology and Geophysics Program, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8582, e-mail: bhaq@nsf.gov.
- David Fountain, Program Director, Tectonics Program, GEO/EAR, Division of Earth Sciences, 785, telephone: 703-292-8552, e-mail: dfountai@nsf.gov.
- Bruce T. Malfait, Program Director, Ocean Drilling Program, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8581, e-mail: bmalfait@nsf.gov.

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

- 47.050 --- Geosciences

ELIGIBILITY INFORMATION

- **Organization Limit:** None
- **PI Eligibility Limit:** None
- **Limit on Number of Proposals:** None

AWARD INFORMATION

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** approximately 10 per year
- **Anticipated Funding Amount:** approximately $4.3 million

PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

- **Full Proposal Preparation Instructions:** Standard Preparation Guidelines
    - Standard GPG Guidelines apply.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Not Applicable.

C. Deadline/Target Dates

- **Letter of Intent Due Date(s):** None
- **Preproposal Due Date(s):** None
- **Full Proposal Due Date(s):**

January 16, 2001	For FY 2001 support.
November 1, 2001	For FY 2002 support.

D. FastLane Requirements

- **FastLane Submission:** Full Proposal Required
- **FastLane Contact(s):**
    - Kandace Binkley, Assistant Program Director, Ocean Science Research Section, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8580, e-mail: kbinkley@nsf.gov.

PROPOSAL REVIEW INFORMATION

- **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program announcement/solicitation for further information.

AWARD ADMINISTRATION INFORMATION

- **Award Conditions:** Additional award conditions apply. Please see the program announcement/solicitation for further information.
- **Reporting Requirements:** Standard NSF reporting requirements apply.

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I. INTRODUCTION

The MARGINS program was initiated by the scientific community and the National Science Foundation and has been designed to elevate our present largely descriptive and qualitative knowledge of continental margins to a level where theory, modeling and simulation, together with field observation and experiment, can yield a clearer understanding of the processes that control margin genesis and evolution. Although continental margins have been traditionally assigned to three distinct tectonic settings, i.e., convergent, divergent and translational, the approach used by the MARGINS program recognizes that a range of fundamental physical and chemical processes that form and deform the surface of the Earth operate at all margins. Tectonic setting may govern the specific expression of a particular process that may vary in different environments. However, a relatively small number of processes, i.e., lithospheric deformation, magmatism, other mass/energy fluxes, sedimentation, and fluid flow, are fundamental to the evolution of the margins. Study of these basic processes, wherever they are best expressed, provides a more logical line of inquiry for understanding the complex nature of continental margins. This process-oriented approach to understanding the entire system of margin evolution requires broadly based interdisciplinary studies and a new class of major experiments. The MARGINS science plan, developed from a series of well attended workshops over the past decade, advocates concentration on several study areas (Focus Sites) targeted for intensive, multidisciplinary programs of research in which interaction between field experimentalists, numerical modelers and laboratory analysts would occur. MARGINS plans to foster the involvement of a broad cross-section of investigators in focused, multidisciplinary experiments, to achieve the objectives that could not be accomplished otherwise. Thus the MARGINS program will concentrate on four special-focus experiments - this list will be periodically reviewed and supplemented as new experiments are identified and planned. In FY 2000 NSF funded 10 MARGINS projects that will cost approximately $4.3 million. It is expected that the funding level will be approximately the same for the next cycle.

II. PROGRAM DESCRIPTION

The National Science Foundation (NSF) invites proposals directed towards the program elements listed below in the special-focus section. NSF funding will be provided by the Divisions of Earth and Ocean Sciences. Proposals submitted to the MARGINS program should be prepared in accordance with the guidelines provided in the NSF publication Grant Proposal Guide (GPG), NSF-01-2. Single copies of the GPG are available at no cost from: NSF Publications Clearinghouse, P.O. Box 218, Jessup, MD 20794-0218, phone (301) 947-2722, or via the Internet: pubs@nsf.gov.

Proposals submitted to MARGINS Program should also include a statement addressing the relevance of the proposed study to the overall goals of the MARGINS initiative and their relationship to identified special-focus experiments. Proposals will be reviewed in accordance with established Foundation procedures and the criteria described in the GPG. Competition for MARGINS funding will take place once a year and be evaluated by a joint Earth and Ocean Sciences panel. Note that all MARGINS proposals will be reviewed by a single panel comprised of panelists from both OCE and EAR communities. The FY 2001 deadline for proposal submittal

is January 16, 2001. For FY 2002 the deadline will be November 1, 2001. Proposals can be submitted to any of the three programs named below, depending on their degree of relevance to marine or onshore work. In addition, proposals submitted for support from the Ocean Drilling Program should contain a section that addresses the potential of the proposed research to enhance the effectiveness or planning of proposed drilling activities. Questions regarding proposal preparation and target dates may be directed to the following program officers:

Dr. Bilal Haq,
Marine Geology and Geophysics Program,
Division of Ocean Sciences,
Phone: 703-292-8582, Fax: 703-292-9085
Email: bhaq@nsf.gov

Dr. David Fountain,
Tectonics Program,
Division of Earth Sciences,
Phone: 703-292-8552, Fax: 703-292-9025
Email: dfountai@nsf.gov

Dr. Bruce Malfait,
Ocean Drilling Program,
Division of Ocean Sciences,
Phone: 703-292-8581, Fax: 703-292-9085
Email: bmalfait@nsf.gov

SCIENTIFIC OBJECTIVES OF THE MARGINS PROGRAM

The MARGINS objectives were established in the context of three basic criteria: Scientific merit; societal relevance; and feasibility. MARGINS investigations must be aimed toward a comprehensive understanding of the observable system properties, together with self-consistent theory (or models) that relate these properties to processes which govern the evolution of the system. MARGINS projects should also enhance an understanding of the key processes relevant to societal concerns. For example, understanding fluid flow is critical to effectively managing the world's energy and water resources. Sedimentary successions are permanent recorders of past history and climate change. Understanding active tectonics provides the basis for earthquake and volcanic hazard assessment. The MARGINS objectives must be achievable with existing technological capabilities or reasonable increments beyond present capabilities, even though a new class of experiments will clearly be needed. Finally, education and outreach are also important elements of the MARGINS program such that proposals are also encouraged that seek to disseminate the results of MARGINS-funded work to K-16 audiences through the development of school curricula. The major scientific objectives of the MARGINS program comprise (for details, see the MARGINS web page, http://www.ldeo.columbia.edu/margins):

1. The Low-Strength Paradox of Lithospheric Deformation

MARGINS will focus on resolving the paradoxical and conflicting evidence from a number of studies of large fault structures at continental margins along subduction zone thrusts, major transforms, and normal detachments that indicate fault movement at resolved shear stresses far smaller than those expected to cause failure. Currently, we lack a viable theory to account for this mode of failure.

2. Strain Partitioning During Deformation

Strain measured at the surface by geological techniques may be significantly different from that inferred to be taking place in the lower crust and upper mantle from geophysical observations. Further,the strain measured by geodetic techniques over short time scales may be difficult to relate to deformation over geologic time scales. While strain partitioning during deformation over various space and time scales is undoubtedly linked to rheology variations within and between the crust and mantle, our understanding of the processes remain largely conjectural and incomplete.

3. Magma Genesis and Recycling

Models of mantle flow, melt generation, and melt migration for margin settings have lagged behind those for mid-ocean ridges due to the more complex boundary conditions and uncertainties about the relative roles of subducted and upper mantle material. Tracing and balancing mass, volatiles, and energy across a convergent margin are promising paths to better understand the controls on the seismogenic zone, the cycling of crustal materials through the subduction zone, and the magmatic fluxes that ultimately lead to continental crust formation.

4. Stratigraphic Preservation of Geological Events

Continental margins, being the principal loci of sediment accumulation, contain one of the best preserved records of global sea-level variations, climatic fluctuations, lithospheric deformation, ocean circulation, geochemical cycling, organic productivity and sediment supply. Margins, therefore, record the variations in the solid Earth-ocean-atmosphere system essential to evaluating today's global changes. Nevertheless, the complex and dynamic interplay of processes responsible for the erosion, transport, accumulation, and preservation of margin sediments is poorly understood, thereby limiting our decoding of the encrypted records and our use of the available resources.

5. Fluid Fluxes

Large-scale fluid circulation is the most important chemical transport mechanism through margin sediments and igneous forearcs. Water/ rock/ organic matter interactions change the composition of interstitial fluids. By altering rock porosity/ permeability and shear strength, this interaction creates a feedback mechanism affecting fluid pathways and flow rates, fluid pressure and deformation. These feedback mechanisms, their rates and spatial and temporal scales, remain largely unknown, and need to be addressed by field mapping and computational analyses collaborative studies.

SPECIAL FOCUS EXPERIMENTS
(see also http://www.ldeo.columbia.edu/margins)

Seismogenic Zone Experiment (SEIZE)

Subduction zone megathrusts produce the largest and potentially most destructive earthquakes and tsunamis on Earth by shear along converging plate boundaries. Despite the societal and economic importance of great earthquakes, little is known about the seismogenic zone that produces them. A shallowly dipping subduction zone thrust provides a large fault surface, partly seismic and partly aseismic, that is accessible to study by a combination of selective drilling and extensive ongoing monitoring, using passive and active seismology and geodesy. The zone lies in the forearc, and the processes that control the partitioning of strain, the flow of water and other volatiles, the formation and behavior of faults, and the onset of seismic slip are relatively accessible to geophysical imaging and direct sampling. This experiment represents an opportunity to address primary MARGINS objectives related to mechanics of seismic and aseismic faulting. A variety of linked objectives will be studied in both of the SEIZE Focus Sites, the Nankai Trough and Costa Rica/Nicaragua subduction system. In concert with field data acquisition, investigators will conduct laboratory experiments and formulate testable quantitative models of how the subduction earthquake cycle works, including the complex interactions among various chemical and mechanical processes.

Subduction Factory Experiment (SubFac)

At convergent margins, raw materials (sediments, oceanic crust and upper mantle) are fed into the "subduction factory" where many processes (including dewatering, metamorphism, melting) under changing physical and chemical conditions shape the final products (magma, volatiles, ore deposits, new continental crust, recycled materials) with significant environmental consequences. In practice, it has been difficult to investigate processes and estimate fluxes through the "factory" owing to poor constraints on the volumes of magmas, fluids, and volatiles produced. The MARGINS approach is to implement an interdisciplinary study of these problems, using the Izu-Bonin-Marianas and Costa Rica/Nicaragua subduction systems as Focus Sites, where optimum characteristics of volatile cycling and crustal growth occur, and where geological and geophysical measurements will constrain ongoing processes in real time.

Source-to-Sink Experiment (StS)

The MARGINS Source-to-Sink effort encapsulates several conceptual innovations, the most important of which involves the recognition of margins as entities stretching from sediment source to sediment sink, and extending from eroding continental highlands to the portions of the oceans that constitute the ultimate sediment sink. Material dispersal systems convey water, sediment and associated chemicals from the continent to the sea by a wide range of processes (e.g., rivers, mass movements and turbidity currents). The various segments of this system are typically in a state of flux over geological time scales. The temporal and spatial evolution of a margin involves strong interactions between the various segments of the sediment production and dispersal system. Understanding, quantifying and predicting these interactions is a major objective of the Source-to-Sink initiative, which will comprise interdisciplinary studies and fully integrated field, experimental and modeling experiments to unravel the convolution of sediment flux, morphodynamics and stratigraphy. The various field programs will be based in Papua-New Guinea and New Zealand, the community-selected Focus Sites.

Rupturing Continental Lithosphere Experiment (RCL)

The MARGINS Rupturing Continental Lithosphere effort seeks to understand the complex interplay of processes that govern how, why and when continental lithosphere ruptures to form continental margins. Answers to these questions are ultimately tied to the structural architecture and stratigraphic evolution of the margin. The MARGINS approach involves concentration on several study areas targeted for intense, multidisciplinary programs of research in which an ongoing dialogue among field experiment, numerical simulation and laboratory analysis, is axiomatic. A fundamental aspect of the MARGINS program includes the need to focus on active extensional systems that have progressed along strike from onshore rifting to sea floor spreading. This "complete" system approach is deemed critical because of the need to study extensional margins as large, complex, interactive dynamic systems and so that the boundary and initial conditions and the physical and chemical states of the lithosphere before, during and after deformation are adequately characterized. Using the Gulf of California and central/northern Red Sea as the Focus Sites, the RCL initiative of the MARGINS program will concentrate on a variety of linked objectives dealing with elucidating the driving forces responsible for the initiation and development of extensional margins as thermo-mechanical systems.

III. ELIGIBILITY INFORMATION

The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program announcement/solicitation.

IV. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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 Web Site at: http://www.nsf.gov/cgi-bin/getpub?nsf012. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from pubs@nsf.gov.

Proposers are reminded to identify the program announcement/solicitation number (NSF 01-17) in the program announcement/solicitation block on the NSF Form 1207, *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 is not required in proposals submitted under this Program Solicitation .

C. Deadline/Target Dates

Proposals submitted in response to this announcement/solicitation must be submitted by 5:00 PM, local time on the following date(s):

January 16, 2001	For FY 2001 support.
November 1, 2001	For FY 2002 support.

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this Program Solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call 1-800-673-6188.

Submission of Signed Cover Sheets. The signed copy of the proposal Cover Sheet (NSF Form 1207) must be postmarked (or contain a legible proof of mailing date assigned by the carrier) within five working days following proposal submission and be forwarded to the following address:

National Science Foundation
DIS – FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

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.

Proposals will be reviewed against the following general review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given

proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she 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 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?

Principal Investigators should address the following elements in their proposal to provide reviewers with the information necessary to respond fully to both of the above-described NSF merit review criteria. NSF staff will give these elements careful consideration 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
Proposals submitted to MARGINS Program should also include a statement addressing the relevance of the proposed study to the overall goals of the MARGINS initiative and their relationship to identified special-focus experiments. In addition, proposals submitted for support from the Ocean Drilling Program should contain a section that addresses the potential of the proposed research to enhance the effectiveness or planning of proposed drilling activities.

A summary rating and accompanying narrative will be completed and signed by each reviewer.

In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are mailed 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.

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 Mail Review followed 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.

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 will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. 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 its 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 Web site at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 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 Web site 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 Web site at http://www.gpo.gov.

Special Award Conditions
In accordance with sections 1869a and 1869b of title 42 of the United States Code, the awardee will do the following: 1.Obtain from the school board or comparable authority responsible for the schools considering participation in the project, written approval prior to involvement of pre-college students in pre-college education research and development, pilot-testing, evaluation, and revision of experimental and innovative pre-college curriculum. 2. Include in every publication, testing, or distribution agreement involving instructional materials developed under this grant (including, but not limited to, teachers' manuals, textbooks, films, tapes, or other supplementary material) a requirement that such material be made available within the school district using it for inspection by parents or guardians of children engaged in educational programs or projects using such material of that school district.

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. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented an electronic project reporting system, available through FastLane. 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. PIs 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 MARGINS should be made to:

- Bilal Haq, Program Director, Marine Geology and Geophysics Program, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8582, e-mail: bhaq@nsf.gov.
- David Fountain, Program Director, Tectonics Program, GEO/EAR, Division of Earth Sciences, 785, telephone: 703-292-8552, e-mail: dfountai@nsf.gov.
- Bruce T. Malfait, Program Director, Ocean Drilling Program, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8581, e-mail: bmalfait@nsf.gov.

For questions related to the use of FastLane, contact:

- Kandace Binkley, Assistant Program Director, Ocean Science Research Section, GEO/OCE, Division of Ocean Sciences, 725, telephone: 703-292-8580, e-mail: kbinkley@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 web site 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 (unless otherwise specified in the eligibility requirements for a particular program).

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 program announcement/solicitation for further information.

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, FIRS at 1-800-877-8339.

The National Science Foundation is committed to making all of the information we publish easy to understand. If you have a suggestion about how to improve the clarity of this document or other NSF-published materials, please contact us at plainlanguage@nsf.gov.

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.

Pursuant to 5 CFR 1320.5(b), 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, Information Dissemination Branch, Division of Administrative Services, National Science Foundation, Arlington, VA 22230, or to Office of Information and Regulatory Affairs of OMB, Attention: Desk Officer for National Science Foundation (3145-0058), 725 17th Street, N.W. Room 10235, Washington, D.C. 20503.

OMB control number: 3145-0058.