Facility and Instrumentation Request Process (FIRP)

PROGRAM SOLICITATION
NSF 23-602

REPLACES DOCUMENT(S):
NSF 21-611

National Science Foundation
Directorate for Geosciences
　Division of Atmospheric and Geospace Sciences

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

　Proposals Accepted Anytime

IMPORTANT INFORMATION AND REVISION NOTES

The FIRP Solicitation has been revised to make changes based on community feedback and to clarify aspects of the request process. The summary of key changes follows:

- Separately submitted collaborative proposals are now allowed for all proposal Tracks. PIs should discuss with the relevant NSF Program Director (PD) whether a separately submitted collaborative proposal or a single proposal with subawards is preferred if there are multiple partners. Costs for the facilities component of the proposals will continue to be funded as subawards or supplements to facility providers.
- The Track 1 funding cap has been raised to $75,000. Of this amount, no more than $50,000 is allowed for deployment of assets. These caps may be waived for airborne campaigns.
- Proposal deadline dates have been removed.
- The National Center for Atmospheric Research (NCAR) Earth Observing Laboratory (EOL)-led Observing Facility Assessment Panel (OFAP) is discontinued. Assessment of the feasibility and suitability of the experimental design will be conducted by NSF in collaboration with the facility providers and proposal reviewers.

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) that is in effect for the relevant due date to which the proposal is being submitted. The NSF PAPPG is regularly revised and it is the responsibility of the proposer to ensure that the proposal meets the requirements specified in this solicitation and the applicable version of the PAPPG. Submitting a proposal prior to a specified deadline does not negate this requirement.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

　Facility and Instrumentation Request Process (FIRP)

Synopsis of Program:

　The Facility and Instrumentation Request Process (FIRP) solicitation describes the mechanism by which the research community can propose projects that require access to instrumentation and facilities sponsored by the Facilities for Atmospheric Research and Education (FARE) Program in the Division of Atmospheric and Geospace Sciences (AGS). FARE provides funding to a variety of organizations to make specialized instrumentation and facilities available to the atmospheric science research community through the Lower Atmosphere Observing Facilities (LAOF) and the Community Instruments and Facilities (CIF) programs. FIRP allows for parallel evaluation of intellectual merit and broader impacts along with the feasibility of the proposed project.

　All proposals to AGS that require the use of FARE-sponsored assets must be submitted through this solicitation.

　The FIRP solicitation offers three proposal submission tracks based on the type and purpose of the request:

Track 1 - Education and Outreach.
- Track 2 - Single Facility Request.
- Track 3 - Field Campaigns.

Preference for funding will be given to proposals submitted to programs in the Division of Atmospheric and Geospace Sciences (AGS) in the Geosciences Directorate (GEO). **If you are planning to submit a proposal to a program outside AGS, including NSF-wide or Directorate-wide solicitations, please contact the FARE program director, Shree Mishra at fare@nsf.gov to discuss the timelines, review process, and budget request for the use of FARE assets.**

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Subhashree Mishra, telephone: (703) 292-8521, email: fare@nsf.gov
- Nicholas Anderson, telephone: (703) 292-4715, email: AGS-PDM@nsf.gov
- Sylvia Edgerton, telephone: (703) 292-8522, email: AGS-ATC@nsf.gov
- Eric DeWeaver, telephone: (703) 292-8527, email: AGS-CLD@nsf.gov

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

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 5 to 15

The number of awards will vary depending on the number of proposals received, their scientific merit, and programmatic considerations.

Anticipated Funding Amount: $10,000,000 to $20,000,000

Projects awarded under the FIRP solicitation will be funded by a combination of disciplinary science program and FARE program funding. Research proposal costs, such as PI salary, student support, travel and publications, materials and supplies will be funded by the relevant disciplinary science program(s). Field deployment and usage costs for LAOF and CIF will be funded by the FARE program.

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

Eligibility Information

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E. Unaffiliated individuals are not eligible to submit proposals in response to this solicitation.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or co-PI:

If a PI has had a Track 1 award with a particular facility, they may not submit another Track 1 proposal requesting the same facility within 3 years of the start date of the previous Track 1 award.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**

- Full Proposals submitted via Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
- Full Proposals submitted via Grants.gov: *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov* guidelines apply (Note: The *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide).

B. Budgetary Information

- **Cost Sharing Requirements:**

  Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:**

  Not Applicable

- **Other Budgetary Limitations:**

  Not Applicable

C. Due Dates

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

  Proposals Accepted Anytime

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review criteria 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

To facilitate fundamental research in the atmospheric sciences, the Division of Atmospheric and Geospace Sciences (AGS) supports state-of-the-art instruments and facilities through the Facilities for Atmospheric Research and Education (FARE) Program. The FARE Program includes the Lower Atmosphere Observing Facilities (LAOF) and the Community Instruments and Facilities (CIF), which are summarized in the Program Description below.

This FIRP solicitation describes the process by which Principal Investigators can request access to FARE assets through proposals for research, education, and/or outreach projects. FIRP comprises three proposal submission tracks that are distinguished by the type and complexity of the request. Track 1 proposals are small requests for limited field or laboratory activities that target education and outreach. Track 2 proposals pertain to the use of a single CIF or other small or single instrument facility within the LAOF. Track 3 proposals are for field campaigns that require significant lead time and planning.

Track 1 proposals must describe the education and/or outreach activities that will be conducted with the FARE assets. Track 2 and 3 proposals are scientific proposals that describe the use of FARE assets as part of the research plan. All proposals must attach the Facility Request document as a supplementary document as further described in this solicitation. More details on the distinction between these Tracks is provided in the following section.

II. PROGRAM DESCRIPTION

Observational science (including field and laboratory-based research) is critical to improving understanding of the multitude of processes in the Earth's atmosphere. Many observations that are essential to unraveling the mysteries of the atmosphere can only be conducted using expensive platforms and/or highly specialized equipment. To facilitate this science, AGS provides access to a variety of specialized instrumentation and facilities that are supported through the Facilities for Atmospheric Research and Education (FARE) program. The suite of instruments and facilities is a combination of major research facilities (known as the Lower Atmosphere Observing Facilities, LAOF) supported through the National Center for Atmospheric Research (NCAR) and the University of Wyoming, and facilities funded through the Community Instruments and Facilities (CIF) solicitation NSF 20-596. The instruments and facilities that may be requested through the FIRP solicitation, including facility provider or point of contact (POC) are listed here: https://www.nsf.gov/geo/ags/programs/fare/. This list is continuously updated as the suite of available facilities changes.

The intent of the FIRP solicitation is to invite proposals from the atmospheric and related science community to use the instrumentation and facilities that are sponsored by the FARE program.

Institutions without significant observational capabilities, primarily undergraduate institutions, minority serving institutions, and community colleges are especially encouraged to apply to the FIRP. For all three Tracks, proposers are encouraged to explore innovative outreach efforts to include the participation of the full spectrum of diverse talent in STEM in experiential learning.

Submission Tracks

The FIRP solicitation consists of three Tracks for requesting FARE-supported instrumentation and facilities. These Tracks are primarily based on the complexity of the request and determine the timelines and procedures that should be followed. Descriptions of the Tracks, instructions for proposal submission, and a summarizing table are provided below. Questions about the suitability of a track for a given project should be addressed to FARE program (fare@nsf.gov) as early as possible. *If there is any ambiguity about which Track a project belongs to, contact the FARE Program about submission Track and timeline. If a proposal is submitted to the wrong Track, the proposal will be Returned Without Review (RWR).*

Proposals to all three Tracks may be submitted either as a single NSF proposal with subawards to collaborating institutions, or as collaborative proposals submitted as separate submissions from multiple organizations. For Track 1 proposals without a formal Statement of Interest (SoI), separately submitted collaborative proposals may be submitted after consulting with the FARE program.

Proposals for EAGERs, RAISEs, and RAPIDs seeking the use of FARE facilities will be considered according to facility availability. PIs are instructed to email the FARE PD at fare@nsf.gov to discuss potential mission ideas.

Proposals for Track 1 should select the FARE program in the "Where to Apply" section of Research.gov. Track 2 and 3 should select the relevant science program(s).

Track 1 (Education and Outreach): Track 1 proposals are requests for limited field or laboratory activities that target education and outreach. Track 1 proposals must include educational activities in formal and/or informal settings aimed at providing hands-on student training in field and/or laboratory based observational research, and/or provide significant public outreach through coordinated events. The total proposal cost must be under $75,000. No more than $50,000 of the total budget may be requested for facility use.

PIs of funded or proposed field campaigns should include education and outreach in their original research proposal and not rely on Track 1 proposals to augment the campaign. The primary focus of Track 1 proposals must be education and outreach; projects with substantial research

components should usually be submitted under Track 2 or Track 3.

If a PI has had a Track 1 award with a particular facility, they may not submit another Track 1 proposal requesting the same facility within 3 years of the start date of the previous Track 1 award.

Track 1 Aircraft Deployments

A waiver for the Track 1 proposal budget cap of $75,000 may be allowed for aircraft-based educational deployments using the Wyoming King Air and the NCAR-operated C-130 and G-V. Track 1 requests for the C-130 and G-V may only be made in conjunction with already-funded field campaigns or planned test flights. Stand-alone Track 1 proposals may include the Wyoming King Air after consultation with the FARE program director. PIs are encouraged to look at the list of funded airborne deployments on the NCAR EOL webpage and consult with the FARE program director if they would like to add Track 1 educational flight(s) on a funded field deployment.

Track 2 (Single Facility Request): Track 2 proposals are primarily for U.S.-based research projects that require a single CIF, such as a laboratory facility or a single mobile radar/lidar facility, or a single instrument/instrument system within the LAOF facility pool, such as the Integrated Sounding System (ISS). Small international campaigns with straightforward logistics may be requested for Track 2 with approval from the FARE program director.

Deployments including aircraft or a network of instruments, or multi-year field deployments, are not eligible under Track 2. NSF may accept a multi-year request for the use of laboratory-based equipment as a Track 2 request depending upon the complexity of the request. Final determination will be made by the FARE program after reviewing the Statement of Interest (SoI).

Track 3 (Field Campaigns): Track 3 proposals are for the deployment of major LAOF such as aircraft, multiple CIF, or a combination of LAOF and CIF. A proposal for a multi-year research campaign will fall under Track 3. Examples of Track 3 activities include research aircraft-based deployments, coordinated mobile remote sensing studies, and deployment of observing networks.

Proposal timelines and process

Track 1 (Education and Outreach):

Statement of Interest

Statements of Interest (SoI) for Track 1 requests are recommended, but not required. SoI guidelines can be found at the end of this section.

Proposal

Track 1 proposals should be submitted **between 9 and 12 months prior** to the start date of the use of the facility and **at least 6 months prior** to the requested award start date. If a Track 1 aircraft-based proposal intends to coordinate activities with a funded field deployment, the PIs must notify the FARE program director as soon as possible to allow enough time for coordination and planning.

Track 1 PIs must engage with the relevant facility provider listed on the FARE webpage during the proposal preparation process to ascertain facility availability and suitability for a Track 1 proposal. The Track 1 PI will submit a request for the use of the facility to the facility provider with a copy to the FARE program at least 1 month prior to proposal submission. The facility provider will be expected to provide a budget estimate for the proposed facility use as a supplemental document for the Track 1 proposal. Facility use costs will be awarded directly to the facility provider via a supplement to the CIF or LAOF award. Track 1 proposal budgets are capped at $75,000, inclusive of all costs, with a maximum of $50,000 for facility use. These budget caps do not apply to requests pertaining to the use of FARE-supported airborne facilities. The Facility Request document and facility budget estimate must be uploaded to the NSF proposal as a supplementary document. Requests to use a facility for a Track 1 by the facility provider on behalf of another entity require advance discussion with the FARE PD.

Track 1 proposals should be submitted to the FIRP Solicitation with FARE (1529) as the program in the "Where to Apply" section of Research.gov. Further guidance on proposal preparation is provided in Section V of this solicitation.

Track 2 (Single Facility Request):

Statement of Interest

PIs are required to submit a SoI via email to the FARE Program, with a copy to the relevant science Program Director and facility manager **at least 3 months prior** to proposal submission (see proposal timelines and SoI instructions below). NSF will confirm whether the potential project is consistent with the FIRP solicitation and, if so, will provide an email to the PI with the proposal track and timeline information. This email must be uploaded as a document entitled "FIRP – Program Director Concurrence Email" in the Other Supplementary Documents section of the proposal.

Proposal

Track 2 proposals are required to be submitted between **9 and 15 months prior** to the start of the use of the facility. If the research/field activity is not planned for the first year of the proposal, the proposal must be submitted **at least 6 months** prior to the requested award start date.

Track 2 projects that include multiple institutions may be submitted either as a single NSF proposal with subawards to collaborating institutions, or as collaborative proposals submitted as separate submission from multiple organizations.

Track 2 PIs need to engage with the facility provider during the proposal preparation process to ascertain the facility availability and suitability for the proposed research. The Track 2 PI must submit a request for the use of the facility to the facility provider and send a copy to the FARE program **at least 2 months prior** to the proposal submission. Facility usage costs for CIF need to be included as subaward(s). Facility usage costs for LAOF will be estimated by the facility manager for the requested facility and must be included as a supplementary document. Adjustments to the Facility Request document are allowed prior to the proposal submission. The final version of the Facility Request must be uploaded to the proposal as a Supplementary Document.

Track 2 proposals should be submitted to this solicitation with the most relevant science program selected in the "Where to Apply" section of Research.gov. Further guidance on proposal preparation is provided in Section V below.

Track 3 (Field Campaign):

Statement of Interest

PIs are encouraged to provide a SoI as soon as plans reach a mature stage and are required to submit the SoI **at least 3 months prior to** the proposal submission (see proposal timelines and SoI instructions below). NSF will confirm whether the potential project is consistent with the FIRP solicitation and, if so, will provide an email to the PI with the proposal track and timeline information. This email must be uploaded as a document entitled "FIRP – Program Director Concurrence Email" in the Other Supplementary Documents section of the proposal.

Proposal

Track 3 proposals have two submission time-frames, determined by the complexity of the facility deployment. Complexity of deployment is correlated with the lead time required to conduct the field campaign, which depends on the location of the project, the resource(s) required, the level of instrument integration needed, and the degree of interagency and/or international collaboration. NSF, in consultation with the facility provider(s), will determine the required proposal timeline.

- Activities that are deemed "straightforward" will have a submission window between 15 and 21 months in advance of the campaign start date.
- Activities that are deemed "complex" will have a submission window between 18 and 24 months in advance of the campaign start date.

If the research/field activity is not planned for the first year of the proposal, the proposal must be submitted **at least 6 months** prior to the requested award start date.

Track 3 projects that include multiple institutions may be submitted either as a single NSF proposal with subawards to collaborating institutions, or as collaborative proposals submitted as separate submissions from multiple organizations.

Track 3 PIs must engage with the facility provider(s) during the proposal preparation process to ascertain the facility availability and suitability for the proposed research. The Track 3 PI is required to submit a request for the use of the facility to the facility provider and send a copy to the FARE program director **at least 2 months prior** to the proposal submission. The facility provider is expected to provide a budget estimate for facility use that can be used in the FIRP proposal. Facility usage costs for CIF must be included as subaward(s). Facility use costs for LAOF will be estimated by the facility manager for the requested facility and must be included as a supplementary document. Adjustments to the Facility Request document are allowed prior to the proposal submission. The final version of the Facility Request must be uploaded to the proposal as a supplementary document.

Track 3 research proposals should be submitted to the FIRP Solicitation with the most relevant science program selected in the "Where to Apply" section of Research.gov. Further guidance on proposal preparation is provided in Section V below.

Statement of Interest (SoI) guidelines:

The SoI must be no longer than 3 pages and must contain the following information.

 a. Project title;
 b. Names and affiliations of PIs, Co-PIs, and Senior Personnel;
 c. Requested deployment schedule;
 d. Summary of the proposed activity and the scientific objectives;
 e. List of Facilities requested along with the anticipated deployment location;
 f. A rough order of magnitude total project budget estimate, **exclusive of CIF and LAOF costs**;
 g. Expected involvement of other funding bodies, whether U.S. or international.

The SoI must be emailed to the FARE Program with a copy to the cognizant science PD and the requested facility provider(s) on the timelines indicated above.

Summary of solicitation requirements

	Track 1	Track 1 - Aircraft Request	Track 2	Track 3 - Straightforward	Track 3 - Complex
Statement of Interest (SoI)	Recommended	Recommended	Required	Required	Required
SoI Timeline	N/A	N/A	3 months prior to proposal submission	3 months prior to proposal submission	3 months prior to proposal submission
Facility Request Timeline	1 month prior to proposal submission	1 month prior to proposal submission	2 months prior to proposal submission	2 months prior to proposal submission	2 months prior to proposal submission
Proposal Timeline	9 to 12 months prior to start of facility use activity and at least 6 months before award start date.	At least 12 months prior to start of facility use activity and at least 6 months before award start date.	9 to 15 months prior to start of facility use activity and at least 6 months before award start date.	15 to 21 months in advance of start of facility use activity and at least 6 months before award start date.	18 to 24 months in advance of start of facility use activity and at least 6 months before award start date.
Project Description Length	5 pages	5 pages	15 pages	20 pages	20 pages
Proposal Budget	Total proposal including deployment not to exceed $75,000.	No cap	No cap	No cap	No cap
	Track 1 facility costs are awarded directly to the facility provider.	Track 1 facility costs are awarded directly to the facility provider.	Subaward for CIF assets (if necessary)	Subaward for CIF assets (if necessary)	Subaward for CIF assets (if necessary)
	Subaward for partner institutions (if necessary)	Subaward for partner institutions (if necessary)	Subaward for partner institutions (if necessary)	Subaward for partner institutions (if necessary)	Subaward for partner institutions (if necessary)
Additional Supplementary Documents Required	Facility Request	Facility Request	Facility Request	Facility Request	Facility Request
		Description of integration with existing flight campaign (NCAR-operated aircraft only)	Experimental Design Plan (10 pages max)	Experimental Design Plan (10 pages max)	Experimental Design Plan (10 pages max)
				Roles and Responsibilities Document	Roles and Responsibilities Document
	Budget for FARE assets	Budget for FARE assets	Budget for NCAR or Wyoming assets (if necessary)	Budget for NCAR or Wyoming assets (if necessary)	Budget for NCAR or Wyoming assets (if necessary)

			Budget for NCAR/EOL Field Catalog, Project Management, and additional support (if necessary)	Budget for NCAR/EOL Field Catalog, Project Management, and additional support (if necessary)	Budget for NCAR/EOL Field Catalog, Project Management, and additional support (if necessary)
			Program Director email on proposal timeline	Program Director email on proposal timeline	Program Director email on proposal timeline

III. AWARD INFORMATION

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 5 to 15

The number of awards will vary depending on the number of proposals received, their scientific merit and programmatic considerations.

Anticipated Funding Amount: $10,000,000 to $20,000,000

Projects awarded under the FIRP solicitation will be funded by a combination of disciplinary science program and FARE program funding. Research proposal costs, such as PI salary, student support, travel and publications, materials and supplies will be funded by the relevant disciplinary science program(s). Field deployment and usage costs for LAOF and CIF will be funded by the FARE program.

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

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E. Unaffiliated individuals are not eligible to submit proposals in response to this solicitation.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or co-PI:

If a PI has had a Track 1 award with a particular facility, they may not submit another Track 1 proposal requesting the same facility within 3 years of the start date of the previous Track 1 award.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov*. The complete text of the *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at:

(https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via Research.gov. PAPPG Chapter II.E.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

FIRP proposals must follow the requirements specified in the NSF Proposal and Award Policies and Procedures Guide (PAPPG), except where different instructions are provided below.

Project Title. The project title must begin with "AGS-FIRP Track 1:" or "AGS-FIRP Track 2:" or "AGS-FIRP Track 3:" and follow with an informative title.

Project Description:

In addition to the content specified in the PAPPG, including the requirement for a separate section labeled "Broader Impacts", deviations and details of additional information to be provided are discussed below. The project description needs to demonstrate a strong scientific and/or education/outreach justification for the use of the FARE assets.

Track 1 Proposals:

- The Project Description is limited to **5 pages** for requests that do not involve an airborne deployment. Requests for airborne educational deployments may be up to **15 pages**.
- The proposal must describe the education or outreach activity that will be conducted, including the scope and level of involvement of individuals, integration with existing or planned activities, expected number of participants in the education or outreach activities using the FARE-sponsored facility, and how the project will use the requested FARE assets to include the participation of the full spectrum of diverse talent in STEM.

Track 2 Proposals:

- Track 2 Project Descriptions are limited to **15-pages** in length. The Project Description must present an integrated plan that outlines the scientific objective(s) of the project, how the proposed deployment will address the scientific objectives, how the research will be conducted, and efforts for education, outreach and plans for including the participation of the full spectrum of diverse talent in STEM. The Project Description may refer the reader to the Experimental Design Plan in the Supplemental Documents but needs to contain enough information about the experimental setup to allow the reader to seamlessly assess whether the experiment addresses the scientific questions and hypotheses.
- All PIs and Co-PIs are required to report on Results from Prior NSF Support as detailed in the PAPPG. For projects with many PIs, NSF recommends keeping these sections concise and moving article citations to the References Cited section.

Track 3 Proposals:

- Track 3 Project Descriptions are limited to **20 pages** in length.
- The Project Description must present an integrated plan that outlines the scientific objective(s) of the project, how the proposed deployment will address the scientific objectives, how the research will be conducted, and efforts for education, outreach and plans for including the participation of the full spectrum of diverse talent in STEM. The Project Description may refer the reader to the Experimental Design Plan in the Supplemental Documents but must contain enough information about the experimental setup to allow the reader to seamlessly assess whether the experiment addresses the scientific questions and hypotheses.
- The Project Description must contain a section on results from any field campaign that has focused on the same and/or similar topic(s), including campaigns conducted by other researchers and groups.
- All PIs and Co-PIs are required to report on Results from Prior NSF Support as detailed in the PAPPG. For projects with many PIs, NSF recommends keeping these sections concise and moving article citations to the References Cited section.

Budget:

Track 1: Track 1 proposals are limited to $75,000, with the exception of airborne deployments. Costs related to PI/Personnel time for planning, outreach and time spent during the deployment are limited to 25% of the total budget. Facility costs may not exceed $50,000 unless the request pertains to the use of aircraft. Proposals should include the budget estimate provided by the facility provider as a Supplementary Document

unless otherwise directed by the FARE PD. The proposal funding limit is inclusive of all costs to conduct the project. Proposers are encouraged to explore effective outreach efforts to include the participation of the full spectrum of diverse talent in STEM in experiential learning in an effort to broaden participation. PIs are encouraged to include a plan and may request funds for these activities in the proposal budget. Travel costs may also be requested for supporting outreach efforts.

Track 2 and Track 3: There are no funding limits, though the PI is encouraged to engage with the FARE program director and relevant science program director regarding the scope of the project. Facility usage costs for CIF will be included as subaward(s). Facility use costs for LAOF will be estimated by the facility manager for the requested facility and need to be included as a supplementary document.

Note: EAGER/RAISE/RAPID Proposals or proposals to cross-directorate solicitations should include the cost of the facility use within the total award budget limits of those programs.

Special Information & Supplementary Documents:

The following supplementary documents are required for each Track.

Track 1:

- A copy of the Facility Request.
- If the educational and outreach request is for a research aircraft, the PI must provide a supplemental document of **up to 3 pages** describing the "target of opportunity" flight(s) and the plan for integration with the existing field campaign or test flights.
- The facility budget must be included as a supplementary document.

Track 2:

- A copy of the Facility Request.
- An experimental design plan of **up to 10 pages** that includes the following requirements:

1) A description of the experimental design of the project, which should include, but not be limited to, deployment location, a catalog of all available assets (NSF-requested and otherwise), the integration between those observations, and mode of operation. The PI needs to justify the optimal time frame and provide information on whether there is any flexibility in deployment timelines.

2) A Campaign Management Plan (CMP), which should include, but not be limited to, discussion of the management structure for the campaign, how deployment decisions will be made, instrument operation, expected data products from the facility providers, and the expected data availability timeline (not to exceed one year from the date of completion of the field deployment).

3) A Science Traceability Matrix (STM) which allows the reader to determine what measurements and instruments are necessary for each of the scientific objectives/goals. The STM needs to be structured such that the observations are placed on one axis and are traceable to the science hypotheses/questions that are placed on the other axis. Other beneficial information may include the responsible personnel for the research activities.

- For LAOF requests, the estimated deployment budget must be included as a supplementary document.
- For proposals that are requesting NCAR/EOL services, such as a Field Catalog or Project Management, an estimated budget must be included as a supplementary document.
- An email regarding the submission timeline must be uploaded as a document entitled "FIRP – Program Director Concurrence Email" in the Other Supplementary Documents section of the proposal.

Track 3:

- A copy of the Facility Request.
- An experimental design plan of **up to 10 pages** that includes the following requirements:

1) A description of the experimental design of the project, which should include, but not be limited to, deployment location, a catalog of all available assets (NSF-requested and otherwise), the integration between those observations, and mode of operation. The PI needs to justify the optimal time frame and provide information on whether there is any flexibility in deployment timelines.

2) A Campaign Management Plan (CMP), which should include, but not be limited to, discussion of the management structure for the campaign, how deployment decisions will be made, instrument operation, expected data products from the facility providers, and the expected data availability timeline (not to exceed one year from the date of completion of the field deployment).

3) A Science Traceability Matrix (STM) which allows the reader to determine what measurements and instruments are necessary for each of the scientific objectives/goals. The STM needs to be structured such that the observations are placed on one axis and are traceable to the science hypotheses/questions that are placed on the other axis. Other beneficial information may include the responsible personnel for the research activities.

- Roles and Responsibilities document – For all campaigns with multiple institutions, each institution must provide a document of **up to 2 pages** in length detailing the specific role of each institution, who is involved in the project, what instruments they will operate (if any), and what they individually expect to accomplish scientifically. In the scenario where two or more distinct research groups from the same institution are involved, the limit may increase to **3 pages**. Facility providers (CIF/LAOF) who are not scientific collaborators do not need to submit a Roles and Responsibilities document.
- For LAOF requests, the estimated deployment budget must be included as a supplementary document.
- For proposals that are requesting NCAR/EOL services, such as a Field Catalog or Project Management, an estimated deployment budget must be included as a supplementary document.
- An email regarding the submission timeline must be uploaded as a document entitled "FIRP – Program Director Concurrence Email" in the Other Supplementary Documents section of the proposal.

Data Management Plan: All proposals must describe plans for data management and sharing of the products of research. PIs must submit data obtained using FARE assets to NCAR for archiving, **no later than 1 year** from the date of completion of the project. Data archiving at NCAR will be provided via NCAR-hosted Geoscience Data Exchange for NSF (GDEX) and emails regarding data archiving can be directed to gdex@ucar.edu. If extenuating circumstances require an extension to the 1-year deadline, a request for extension must be sent to the FARE program director. Investigators are encouraged to reference the AGS data management guidance while drafting their data management plan: https://www.nsf.gov/geo/geo-data-policies/ags/index.jsp.

The data management plan must describe how data collected during the field deployment or use of the CIF/LAOF will be quality controlled and made publicly available, including exclusionary period rules and data access policies. Data providers should be mindful of using standard file formats and standard vocabularies in their metadata when possible to enable machine readable searches. Detailed information on metadata requirements can be obtained by contacting gdex@ucar.edu.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

C. Due Dates

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

    Proposals Accepted Anytime

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov 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.

For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: https://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

Proposers that submitted via Research.gov may use Research.gov to verify the status of their submission to NSF. For proposers that submitted via

Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. 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 either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with 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. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years (FY) 2022 - 2026*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which 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.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are

expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.D.2.d(i). contains additional information for use by proposers in development of the Project Description section of the proposal). Reviewers are strongly encouraged to review the criteria, including PAPPG Chapter II.D.2.d(i), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
    a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
    b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and other underrepresented groups in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

Track 1 requests:

- To what extent does the project provide a unique learning experience?
- Does the proposed project significantly benefit the intended participants?
- Are the intended participants well integrated into the field campaign activities (e.g. field campaign or other scientifically relevant efforts related to the deployment?
- Does the proposal present effective outreach efforts to include the participation of the full spectrum of diverse talent in STEM in experiential learning?

Track 2 and Track 3 requests:

- Is the proposed facility use well-aligned with the science objectives?
- Is the integration of the various components of the deployment request well-conceived? This includes, but is not limited to, integration of

efforts across platforms, institutions and PIs, and planning for joint data analyses.
- Are each of the instruments requested critical to achieving the objectives of the project?

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 evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. 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 strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements or the Division of Acquisition and Cooperative Support for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform 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.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, 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.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by an NSF Grants and Agreements Officer. 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 notice, 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 notice; (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 notice. 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 https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Administrative and National Policy Requirements

Build America, Buy America

As expressed in Executive Order 14005, Ensuring the Future is Made in All of America by All of America's Workers (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's Build America, Buy America webpage.

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 no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following 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 all identified PIs and co-PIs on a given award. 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 Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also 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.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Subhashree Mishra, telephone: (703) 292-8521, email: fare@nsf.gov
- Nicholas Anderson, telephone: (703) 292-4715, email: AGS-PDM@nsf.gov
- Sylvia Edgerton, telephone: (703) 292-8522, email: AGS-ATC@nsf.gov
- Eric DeWeaver, telephone: (703) 292-8527, email: AGS-CLD@nsf.gov

For questions related to the use of NSF systems contact:

- NSF Help Desk: 1-800-673-6188
- Research.gov Help Desk e-mail: rgov@nsf.gov

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.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, "NSF Update" is an information-delivery system 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 Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at https://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 most 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 55,000 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 Arctic 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 (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.F.7 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 https://www.nsf.gov

- **Location:** 2415 Eisenhower Avenue, Alexandria, VA 22314

- **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: nsfpubs@nsf.gov

    or telephone: (703) 292-8134

- **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 System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." 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
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
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