

**GRANT
OPPORTUNITIES FOR
ACADEMIC
LIAISON
WITH INDUSTRY (GOALI)**



Initiative Announcement



NATIONAL SCIENCE FOUNDATION



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GRANT OPPORTUNITIES FOR ACADEMIC LIAISON WITH INDUSTRY

A major objective of the National Science Foundation (NSF) is to improve the nation's capacity for intellectual and economic growth. It does this by supporting the discovery of new knowledge and the enhancement of a skilled workforce. Industry can outline new technical challenges and assist in the support of academic institutions. By serving as a catalyst for industry-university partnerships, NSF helps ensure that intellectual capital and emerging technologies are brought together in ways that promote economic growth and an improved quality of life.

The GOALI initiative aims to synergize university-industry partnerships by making funds available to support an eclectic mix of industry-university linkages. Special interest is focused on affording the opportunity for: (1) faculty, postdoctoral fellows and students to conduct research and gain experience with production processes in an industrial setting, (2) industrial scientists and engineers to bring industry's perspective and integrative skills to academe, and (3) interdisciplinary university-industry teams to conduct long-term projects. This initiative targets high-risk/high-gain research with a focus on fundamental topics that would not have been undertaken by industry, new approaches to solving generic problems, development of innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry.

To meet this objective, the GOALI program provides funding, for example, for faculty, postdoctoral fellows, and students to develop creative modes of collaborative interactions with industry through individual or small-group projects, and industry-based fellowships for graduate students and post-doctoral fellows. The GOALI mechanisms suggested below are *examples only* and proposers are encouraged to modify or adapt them to meet individual needs or realize imaginative ideas.

- An extended faculty visit to industry (three to twelve months) to foster long-term industry-university collaboration.
- A faculty visit to industry (two to six months) at the beginning of a three-year university-based research project with the intention of transfer of research results to industry by project's end.

- University-based support for partnering university and industry scientists and/or engineers on a research project of mutual interest, including joint graduate student advising. A letter from the industrial collaborator(s) documenting the intention to collaborate should be appended to the proposal.
- Support for interdisciplinary research or educational projects to two or three faculty from different academic units to interact with one or more industrial partners in a "virtual industry-university group" or network.
- Visit of a leading engineer, scientist, or manager from industry to a university, to catalyze collaborative research or teach and develop curricula.
- Support for one or two semesters of work in industry by a doctoral student under the guidance of an academic adviser.
- Post-doctoral student support for one or two years of work in an industrial setting, under the guidance of an academic mentor in collaboration with an industrial partner.
- Support for supplement to an existing grant for high-risk/high-gain research in order to gain basic knowledge necessary for development of a generic technology.

PROGRAM GUIDELINES

The topics addressed in a GOALI award need not focus on fundamental issues only, but should address long-term, generic research within an intellectual envelope shared by the industrial partner. Fundamental research generally is performed in academe in parallel with more applied research in industry. Investigators are expected to integrate research objectives with educational and human resources goals and industry needs.

The GOALI program also emphasizes improving industry-university research linkages in the design of products and processes. The research should strengthen the fundamental scientific and engineering foundations on which new design and production practices and methods may be based. This emphasis

aims to improve basic understanding and the development of integrated design tools in both academe and industry.

The length of support requested should be appropriate to the purpose and can vary, for example, from two months for a visit to industry to three or more years for a full research proposal or educational program.

Faculty support is for full-time faculty only. When faculty visit industry to perform research or educational activities for intervals longer than one month, it is expected that industry will provide cost sharing of 50 percent of the salary during the visit. Any cost sharing must be documented in the request for funds.

Industry participation in the research and education projects is required, and cost sharing for the collaborative work at industrial sites and universities is encouraged. However, industrial partners are not required to match NSF research awards funds for projects performed in universities.

A co-investigator or co-advisor from industry is required and has to be listed on the proposal cover sheet (NSF form 1207) in a collaborative project or industrial fellowship. A letter from the industrial partner must confirm the participation of a co-investigator or co-advisor from industry. The letter should show the plan of interaction with the academic institution, the time commitment of the industrial researcher(s), and the nature of the work and cost sharing. An industry-university agreement on intellectual property including publication and patent rights must be included. Letters of intent and the draft agreement are required at the date of proposal submission, and the signed agreement at the date of award.

Proposals will be evaluated in accordance with the NSF merit review criteria (see Appendix 2) and the GOALI objectives. The industry-university interaction must be presented in the "Proposal Description", as outlined in the suggested GOALI mechanisms given in the Appendix 1.

Support by the GOALI program may be provided through a grant, or through a supplement to an eligible existing NSF award. In Fiscal Year 1998, the fourth year of the GOALI initiative, awards for approximately \$30 million have been made. In Fiscal Year 1999, the award funds are planned to increase pending the availability of funds. Proposals in the GOALI initiative will compete with all other proposals within the respective research/educational program.

Collaborations with foreign companies must be justified by significant benefits to the U.S. researcher and education enterprise, and overall benefits for U.S.

Small Grants for Exploratory Research (SGER) proposals may be considered, particularly for visits to industry for high-risk, high return or special temporary opportunities. The principal investigator is required to contact the program director in the corresponding research and education area (see Grant Proposal Guide, GPG, Chapter II, D 12a).

Persons interested in requesting funds under GOALI should contact a NSF Program Director in the Directorate in their area of interest for guidance on proposal submission. Re-

fer to the GPG, Appendix A, (<http://www.nsf.gov/bfa/cpo/gpg>) for a list of programs and telephone numbers. For additional current information you are encouraged to browse the Web sites of the appropriate directorate(s). This announcement and examples of GOALI projects are available on the Web: <http://www.nsf.gov/goali/>. While flexibility exists for proposals focused on one or several of the examples listed above, the following extant announcements offer specific guidelines for GOALI-related activities:

- ***The Directorate for Biological Sciences (BIO)***
(<http://www.nsf.gov/bio>)

Opportunities are made available for postdoctoral and graduate student research experiences in industry through the following mechanisms:

Existing BIO postdoctoral research programs, including "Minority Postdoctoral Research Fellowships and Supporting Activities" (NSF 94-133)

"Graduate Student Industrial Internships" for bioscience graduate students supported on BIO grants, for work in industry under the guidance of an academic advisor and an industrial mentor.

- ***The Directorate for Computer and Information Science and Engineering (CISE)***
(<http://www.nsf.gov/cise>)

Offers opportunities in all areas usually supported by the directorate.

- ***The Directorate for Education and Human Resources (EHR)***
(<http://www.nsf.gov/ehr>)

Supports research/education projects and fellowships in all areas of the directorate. Guidelines for suggested GOALI mechanisms for faculty and students in industry, industry specialists in academe, and full-scale university-industry collaborative projects, are provided in the *Appendix 1*.

- ***The Directorate for Engineering (ENG)***
(<http://www.eng.nsf.gov/goali>)

Supports research/education projects and fellowships in all areas of the directorate. Guidelines for suggested GOALI mechanisms for faculty and students in industry, industry specialists in academe, and full-scale university-industry collaborative projects, are provided in the *Appendix 1*.

- **The Directorate for Geosciences (GEO)**
(<http://www.nsf.gov/home/geo>)

Supports research/education projects and fellowships in all areas of the directorate. Guidelines for suggested GOALI mechanisms for faculty and students in industry, industry specialists in academe, and full-scale university-industry collaborative projects, are provided in the *Appendix 1*.

- **The Directorate for Mathematical and Physical Sciences (MPS)**
(<http://www.nsf.gov/mps>)

MPS encourages a broad range of GOALI proposals reflecting innovative academic-industrial cooperative pursuits in research and education in all areas supported by the Directorate. The announcements noted below are examples only of areas in which GOALI activities are supported; they are in no way restrictive.

“Environmentally Benign Chemical Synthesis and Processing” (NSF 92-13)

This initiative supports pre-competitive research projects in chemistry and chemical engineering aimed at reducing pollution at its source.

“University-Industry Cooperative Research Program in the Mathematical Sciences” (NSF 94-100)

Senior research fellowships, postdoctoral research fellowships, graduate research assistantships, and cooperative fellowships that enable synergistic university-industry research in the mathematical sciences are supported in this activity.

“Office of Multidisciplinary Activities ‘Dear Colleague’ Letter” (NSF 98-118)

The MPS Office of Multidisciplinary Activities (OMA) supports jointly with the five MPS Divisions innovative proposals in research and education that cross traditional disciplinary boundaries. Areas of emphasis for FY 1999 include development of next-generation instrumentation, innovations in education, and the MPS interface with biological sciences.

- **The Directorate for Social, Behavioral and Economic Sciences (SBE)**
(<http://www.nsf.gov/sbe/sber>)

“Joint NSF/Private Sector Research Opportunities” (NSF 92-136)

This initiative advances the mission of the Decision, Risk, and Management Science (DRMS) program to

support research that is grounded in theory but has an operational context. It is designed to encourage theory building in actual operational and managerial processes, problem solving, risk management, strategic planning and decision-making in private-sector organizations.

“Innovation and Organizational Change”

The objective of this program is to improve the performance of industrial, educational, and other organizations and institutions through the support of research on theories and concepts of innovation and organizational change. GOALI is focused on interactions with industry.

WHO MAY SUBMIT

U.S. institutions of higher education that confer degrees in research areas normally supported by NSF may submit proposals on behalf of faculty members with full-time appointments.

Only U.S. Citizens, Nationals, or Permanent Residents are eligible to apply for fellowships and assistantships.

Participation by women and under-represented minority engineers and scientists and those with disabilities is encouraged.

DEADLINES

All proposals are accepted throughout the year according to the review process established in each disciplinary program. Note that several divisions have deadlines or target dates for unsolicited proposals. For a list of deadlines and target dates, refer to the *NSF Bulletin*, *NSF Web site* (<http://www.nsf.gov>) or contact the appropriate disciplinary program. No additional deadline is required by the GOALI initiative.

PREPARATION AND SUBMISSION OF PROPOSALS AND REQUESTS FOR SUPPLEMENTS

Proposals and requests for supplements should be prepared and submitted in accordance with the instructions provided in *NSF Grant Proposal Guide (GPG)*, *NSF 98-2*, and Proposal Forms Kit (NSF 98-3), as amended by the instructions in this Announcement. Single copies of this brochure are available at no cost from:

NSF Publications Clearinghouse

Te: (703) 292-7827

E-mail: pubs@nsf.gov

Proposals must be submitted by the investigator's home institution in accordance with the target dates or deadlines, if any, of the NSF disciplinary program in the respective research/education area. Awards will be made to the academic institution in case of collaborative projects between academe and industry. All commitment letters, industry-university agreement letters on intellectual property, and documentation of collaborative arrangements of significance to the proposal should be provided as supplementary documentation and included in Section I of the proposal. This supplementary documentation will not be counted towards the 15-page Project Description limitation. *All requests for supplemental funding (2 copies) should be sent directly to the disciplinary Program Director.*

Proposal summaries must include a statement showing the research contribution of the industrial partner.

Proposals should refer to this Announcement by number, NSF 98-142. The proposal Cover Sheet (NSF Form 1207 in GPG) should identify the disciplinary program area in the top left box of the "NSF Organizational Unit", and the initiative "GOALI, NSF 98-142" in the lower box assigned for the "Program Announcement/Solicitation no./Closing date". When a specific announcement applies for a division or a directorate, the respective solicitation number must be first.

Ten (10) copies of the formal proposal should be sent to:

NSF 98-142/(NSF Program)
Proposal Processing Unit, P60
National Science Foundation
4201 Wilson Blvd.
Arlington, VA 22230

INQUIRIES

Inquiries about proposal submission are welcomed, and should be addressed **directly to the disciplinary NSF Program Director in the corresponding research/education area in each Directorate**. Refer to the Grant Proposal Guide, NSF 98-2, Appendix A, for a list of programs and telephone numbers.

For generic comments on new mechanisms for GOALI write to T. Quarles (tquarles@nsf.gov) in BIO, J. Cherniavsky in CISE (jchernia@nsf.gov), S. Ortega (sortega@nsf.gov) in EHR, D. Senich (dsenich@nsf.gov) in ENG, L.E. Johnson (lejohnso@nsf.gov) in GEO, H. Blount (hblount@nsf.gov) in MPS, and S. Sanderson (ssanders@nsf.gov) in SBE. For generic comments on NSF inter-directorate activities write to M.C. Roco (mroco@nsf.gov), Coordinator for the NSF GOALI initiative (NSF, 4201 Wilson Blvd., Arlington, VA 22230, Suite 525).

AWARD ADMINISTRATION

NSF grants will be administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions," or FDP-III, "Federal Demonstration Partnership General Terms

and Conditions," depending on the grantee organization. The grantee program will be determined as a function of the research and education activities. More comprehensive information on the administration of NSF grants is contained in the Grant Policy Manual (NSF 95-26).

GENERAL INFORMATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees 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 (FASSED) 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 or contact the program coordinator at (703) 306-1636.

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 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.

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: Reports Clearance Officer; Information Dissemination Branch, DAS; National Science Foundation; Arlington, VA 22230.

Patent Policy. Depending on the type of award (fellowship, research grant, supplement to an existing grant, etc.) either the Intellectual Property Rights provision in section 733.2 of the NSF Grant Policy Manual (<http://www.nsf.gov/bfa/cpo>) or the Patent Rights and Copyrightable Material provisions in section 731.3 and 732.2 will apply to inventions and writings created under the GOALI awards.

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 regarding NSF programs, employment, or general information. TDD may be accessed at (703) 292-5090 or through FIRS on 1-800-877-8339.

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include: computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF web site at <http://www.nsf.gov/oirm/y2k/start.htm>.

Appendix 1: SUGGESTED GOALI MECHANISMS IN EHR, ENG, and GEO

These guidelines provide supplemental information regarding the characteristics of the GOALI mechanisms for the industry-university collaboration in EHR, ENG and GEO. The proposers may combine or modify these mechanisms, or propose other arrangements to achieve the GOALI objectives. Such combinations or arrangements should retain a level of industry-university interaction and commitments comparable to the suggested mechanisms described in the following sections (A, B, and C). Applicants interested in submitting proposals for GOALI must contact the appropriate NSF Program Director in their area of research/education *prior to proposal submission*.

A. FACULTY AND STUDENTS IN INDUSTRY

Opportunities are made available for academic personnel to gain research experience in an industrial setting. The following opportunities are options to be considered:

- **Faculty in Industry** - for science and engineering faculty to conduct research for three to twelve months in industry; (the support is for new interactions only).
- **Graduate Student Industrial Fellowship** - for science and engineering graduate students (preferably Ph.D. students) for one to two semesters of full-time work in industry in an area related to his/her research under the guidance of an academic adviser and an industrial mentor.
- **Postdoctoral Industrial Fellowship** - for a science or engineering postdoctoral fellow for full-time work in industry under the guidance of an academic adviser and an industrial mentor.

Proposal description: The proposal must include the research and education plan, industry-university collaboration plan, and facilities and resources that will be available to support the research during the visit. Graduate students must provide a resume showing the student's special qualifications, and a statement of planned interactions with the academic adviser and industrial mentor. Postdoctoral fellows must include a resume, a professional goal statement, and a statement of planned interaction with the academic adviser and industrial mentor. The postdoctoral fellow must be awarded the Ph.D. degree between January 1, 1996 and August 30, 1998. Awards will be made only to fellows holding a Ph.D. degree. Proposals should contain a supporting letter from the industrial mentor for graduate students or postdoctoral fellows.

Budget: Faculty in Industry Awards will typically range from \$25,000 to \$50,000 for up to one year, and may include:

50 percent of the faculty salary and fringe benefits during the industrial residency period; up to 20 percent of the total requested amount may be used for travel and research expenses for the faculty and his/her students, including materials but excluding equipment; and up to 10 percent of the total direct cost may be allocated for administrative expenses in lieu of indirect costs. Faculty in Industry proposals must include a commitment of funds from the industrial partner to support the other 50 percent of the salary and fringe benefits during the industrial residency. The total matching amount must be shown on line M. (Cost Sharing) of the proposal budget, NSF Form 1030. The allocation of matching funds to each budget item must be specified on the Budget Explanation Page. Equipment purchases or equipment discounts are not acceptable as matching funds for the faculty salary.

Graduate Student Awards will be for up to one year with award amounts up to \$25,000 for a *graduate student industrial fellowship* and up to \$75,000 for a *graduate student traineeship site* (involving several students), and may include the following: a stipend of \$1,500 to \$2,000 per month for one or two semesters (three to twelve months); transportation expenses for the graduate student; a 10 percent allowance for the faculty adviser for research-related expenses excluding equipment, and an additional allowance up to 10 percent of the total direct cost for the sponsoring academic institution for administrative expenses, in lieu of indirect costs. Awards may be made for the support of individual students (*individual graduate student industrial fellowship*), as supplements to existing grants in the Directorates for EHR, ENG or GEO, or for a group of two to three graduate students at a given site (*graduate student traineeship site*) through either an initial proposal submission to the respective Directorate or supplements to existing grants in the same directorates.

Postdoctoral Industrial Fellowship Awards from NSF will be for amounts up to \$42,000 per year for one or two years and may include the following: 67 percent of the stipend for the postdoctoral fellow; transportation and moving expenses (limited to \$3,000); up to 10 percent of the total budget allowance may be used by the faculty adviser for research-related expenses; and an allowance up to 10 percent of the total indirect cost for the sponsoring academic institution for administrative expenses in lieu of indirect costs. The industrial sponsor is expected to provide the remaining 33 percent of the stipend as matching funds. The total matching amount must be shown on line M. (Cost Sharing) of the proposal budget, NSF Form 1030.

B. INDUSTRY ENGINEERS AND SCIENTISTS IN ACADEME

Opportunities are made available for industry personnel to interact with the academic community. The following opportunities are options to be considered:

- **Industry Presence on Campus** - for industrial engineers and scientists to visit academe for two to twelve months in order to catalyze collaborative research and/or provide innovations in teaching and engineering curricula; and
- **Industry-Based Graduate Assistantship** - for part-time science and engineering students, with permanent positions in industry to continue their graduate studies, particularly toward the Ph.D. The stipend will partially support the time necessary for course work and interaction with a faculty research adviser.

Proposal description: The proposal is submitted by the host university, on behalf of an academic principal investigator or the student's adviser and a co-principal investigator or student's co-adviser from industry. The visitor must maintain his/her initial affiliation in industry during the project. Proposals for Industry Presence on Campus awards must include the objectives of the research/educational project, and a plan of the industry-university interaction on campus. Proposals for Industry-Based Graduate Assistantships must include the research plan, a resume of the graduate student showing the student's special qualifications, training arrangements, description of the facilities and graduate student working conditions.

Budget:

Industry Presence on Campus Awards are for a maximum of \$50,000 for up to one year, to cover up to 67 percent of the total budget and may include the following: part-time salary support for the visiting specialist(s); expenses for student projects; teaching enhancement; and visits of faculty and students to the industrial site. Matching commitments from the industrial partner and/or the university, totaling at least the remaining 33 percent is required. The total matching amount and the matching source(s) must be shown on line M. (Cost Sharing) of the proposal budget, NSF Form 1030.

Industry-Based Graduate Assistantship Awards are limited to \$20,000 per year for one year (new awards) including indirect cost. Requests may be made as a regular proposal submission to the Directorates for EHR, ENG or GEO, or as a supplement to an existing grant in the respective directorate. A statement detailing the cost-sharing from industry and university is required.

C. INDUSTRY - UNIVERSITY COLLABORATIVE PROJECTS

Opportunities are made available for long-term collaborative industry-university projects for individuals or small groups. These research and education projects are jointly designed and implemented by university and industry engineers and scientists. The principal investigators and their students are encouraged to perform their research partially at the industrial sites.

Interdisciplinary research and educational projects of two or three faculty from different academic units to interact with one or more industrial partners in "virtual industry-university groups" or networks are also encouraged.

Proposal description: The proposal must describe the research approach and a detailed plan of the industry-university collaboration including the tasks for both partners. The purpose of the eventual visit(s) in industry or in academe must be explained. In the last year of the project, the principal investigator must plan at least two industrial seminars, one of which should be within the collaborating industrial unit.

Budget: NSF funds are for university research/educational activities. The university grant may support activities of faculty and his/her students and research associates in the industrial setting. When a faculty visit to industry is planned, NSF will support 50% of the faculty salary including fringe benefits and indirect cost for the time spent in industry. Matching funds from industry or the university will cover the other 50% of the faculty salary during the visit. For those industrial units currently receiving federal funds, those funds may not be used to support faculty visits. NSF may also support travel expenses for students or other research associates who are working on the project. Industry cost sharing and technological relevance of the research is essential evaluation criteria for these projects. During the project, the principal investigator may apply for supplementary funding to experiment with the basic research results in industry, if such an opportunity develops.

Appendix 2: MERIT REVIEW CRITERIA

Proposals submitted in response to this program announcement will be subject to the NEW merit review criteria approved by the National Science Board on March 28, 1997 (NSB97-72). The new merit review criteria are:

- **What is the intellectual merit and quality of the proposed activity?**

The following are suggested questions that the reviewer will consider in assessing how well the proposal meets this criterion. Each reviewer will address only those questions that he/she considers relevant to the proposal and for which he/she is qualified to make judgments.

How important is the proposed activity to advancing knowledge and understanding within its own field and 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 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?**

The following are suggested questions that the reviewer will consider in assessing how well the proposal meets this criterion. Each reviewer will address only those questions that he/she considers relevant to the proposal and for which he/she is qualified to make judgments.

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, 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?

GOALI proposals will be evaluated in accordance with these two criteria and the GOALI objectives.

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