Management and Operation of the Gemini Observatory

PROGRAM SOLICITATION
NSF 14-594

National Science Foundation

Directorate for Mathematical & Physical Sciences
Division of Astronomical Sciences

Letter of Intent Due Date(s) ***(required)*** (due by 5 p.m. submitter's local time):

November 28, 2014

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

February 27, 2015

IMPORTANT INFORMATION AND REVISION NOTES

Informational Site Visit

NSF intends to conduct site visits to the Gemini Observatory operational sites in Chile and Hawai'i for representatives of potential proposing organizations. The visits are expected to take place in September and October 2014, and will be guided and managed by NSF staff. The visits are voluntary for proposers, but they will be an opportunity for potential proposers to view the facilities and to acquire information relevant to the development of a proposal. Attendees will be responsible for their own expenses. Additional detail on the site visits, such as dates, times, locations, and number of participants, will be available from the Cognizant Program Officer.

Eligible organizations that are interested in submitting a proposal and wish to send representatives to the site visit should email the Cognizant Program Officer by August 29, 2014.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 17-1), which is effective for proposals submitted, or due, on or after January 30, 2017.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Management and Operation of the Gemini Observatory

Synopsis of Program:

Proposals are solicited to manage and operate the Gemini Observatory through a cooperative agreement with the National Science Foundation (NSF). The Gemini Observatory is an international collaboration currently consisting of the funding partners of the U.S., Canada, Australia, Brazil, and Argentina, as well as host institutions in Chile and Hawai'i. The Gemini Partnership operates twin optical/infrared optimized 8 m diameter telescopes on the superb sites of Mauna Kea, Hawai'i and Cerro Pachon, Chile, providing large light-collecting areas, exquisite image quality, high infrared transparency (especially at Mauna Kea), agile and efficient scheduling queues, access to the entire sky, and well-developed infrastructures. Gemini North and Gemini South have carried out scientific operations since 2000 and 2001, respectively, addressing fundamental scientific questions with new observational and operational techniques.

The terms under which the Partnership currently operates are codified in the International Gemini Agreement[1], signed through the end of calendar 2015 by the U.S., Canada, Australia, Brazil, Argentina, and Chile. An updated version of this agreement, which will apply through the end of calendar 2021, is being finalized by the partners and a draft version of this document will be made available to proposers as part of the resource library being compiled for this solicitation. The Gemini agreement specifies the roles of the NSF, the Gemini Board, and the managing organization. Namely,

- The NSF serves in two capacities in the Gemini Partnership. It acts as Executive Agency according to the terms of the International Gemini Agreement, and as such is empowered to act on behalf of the Partnership

to execute necessary administrative actions. In addition, the NSF serves as the U.S. funding agency, having programmatic responsibility for oversight of U.S. interests in the Partnership.
- The Gemini Board is a supervisory and regulatory body responsible for budgetary and policy oversight, guidance of the managing organization for Gemini, and review of the terms of the award between the Executive Agency and managing organization. The Gemini Board is composed of representatives from each of the partner countries, in approximate proportion to partner share. U.S. members include an NSF representative and members of the U.S. scientific community.
- According to terms set forth in the Gemini Agreement, the appointment of the managing organization for Gemini includes review and approval by the partners. Funding is accomplished through a cooperative agreement (CA) between the NSF and the managing organization. The Awardee resulting from this solicitation will serve as the managing organization, as defined in the Gemini Agreement.

The Awardee will work closely with NSF and the scientific community to ensure that the Gemini Observatory continues to support, sustain and advance frontier science as enabled by Gemini's unique research capabilities and as promoted through a culture of excellence. In cooperation with NSF and within available resources, Gemini will plan and execute a viable, coherent and inclusive program of research and education, consistent with the objectives and priorities of the scientific community. The Awardee will manage facilities and equipment provided by NSF, will provide and develop additional equipment as necessary to fulfill the approved programmatic scope, and will provide support and technical personnel to manage the Gemini Observatory as a well-integrated research and education facility.

Proposals should describe how the proposing institution(s) will provide observing capabilities and access to the resulting scientific data; facilitate an integrated program of research, education, training and outreach; maintain instruments, facilities and infrastructure; manage and develop a skilled and diverse workforce; and establish appropriate relationships with universities, industry, private organizations and the international community to support the mission of the Observatory.

The successful proposal will be awarded as a cooperative agreement(s) with a duration of six (6) years beginning January 1, 2017.

---

[1] Also termed the Gemini Agreement, see http://www.gemini.edu/science/support/Gem_Agreement_combined.pdf.

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.

- Christopher J. Davis, W9136, telephone: (703) 292-4910, email: chrdavis@nsf.gov
- Elizabeth A. Pentecost, W9152, telephone: (703) 292-4907, email: epenteco@nsf.gov

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

- 47.049 --- Mathematical and Physical Sciences

Award Information

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 1

Anticipated Funding Amount: $182,229,000 to $208,103,000

$182.229M for operations and maintenance plus up to $25.874M for instrument development over a 6-year period beginning January 1, 2017, subject to the availability of funds.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- For-profit organizations: U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.
- Consortia including international collaborations, but NSF funds may be awarded only to U.S. organizations.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 1

Limit on Number of Proposals per PI or Co-PI: 1

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is required. Please see the full text of this solicitation for further information.
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
  - Full Proposals submitted via FastLane: *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:**

  Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Letter of Intent Due Date(s) *(required)*** (due by 5 p.m. submitter's local time):

  November 28, 2014

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

  February 27, 2015

Proposal Review Information Criteria

Merit Review Criteria:

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

Award Administration Information

Award Conditions:

Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements:

Additional reporting requirements apply. Please see the full text of this solicitation for further information.

TABLE OF CONTENTS

I. INTRODUCTION

The National Science Foundation (NSF) is authorized by the National Science Act of 1950, as amended, to initiate and support basic and applied scientific research and to initiate and support programs to strengthen scientific research potential. To achieve these goals, NSF supports facilities that provide research capabilities in various scientific disciplines. One such facility, the Gemini Observatory, provides telescope capabilities and instrumentation for research in optical and infrared astronomy, as well as public information and outreach to enrich the understanding of the universe among the communities in the host and partner countries.

The stated mission of the Gemini Observatory is

> *To advance our knowledge of the Universe by providing the international Gemini Community with forefront access to the entire sky.*

The Gemini Observatory is currently adjusting to a reduction of approximately 23% in operations budget due to the 2012 withdrawal of the United Kingdom from the Partnership. As detailed in the Observatory's program plans[2], modifications in operations model and scope required by this reduction in funding include a reduced instrument complement available at each telescope, migration of observing personnel from the mountain summits to operations basecamps, a reduction in institutional research, and more limited development activities. This adjustment is scheduled to be complete by the inception of the award under consideration here, and the Awardee should plan on an approximately uniform level of partner funding for the duration of the agreement, adjusted for inflation, as described in Section III of this solicitation.

The Gemini Observatory is currently managed through a cooperative agreement with the Association of Universities for Research in Astronomy (AURA). The National Science Board (NSB) has adopted the principle that NSF awards should be competed to assure the best use of NSF funds for supporting research and education (NSB-08-12). Through this program solicitation, NSF's Division of Astronomical Sciences (AST), hereby solicits proposals for the management and operation of the Gemini Observatory through a cooperative agreement(s) beginning January 1, 2017, and continuing through a six-year award period.

---

[2] Information describing the Gemini Observatory, including annual reports and program plans, is available at the Gemini Observatory website http://www.gemini.edu, as well as in the resource library being provided as part of this solicitation.

II. PROGRAM DESCRIPTION

A. Description of the Gemini Observatory

The Gemini Observatory is an international collaboration that operates twin optical/infrared 8 m diameter telescopes on superb sites for ground-based astronomy. Situated at the summits of Mauna Kea, Hawai'i and Cerro Pachon, Chile, the facilities provide the current funding partners of the U.S., Canada, Australia, Brazil, and Argentina as well as host institutions in Chile and Hawai'i with large light-collecting areas, exquisite image quality, high infrared transparency (especially at Mauna Kea), agile and efficient scheduling queues, access to the entire sky, versatile instrumentation, and well-developed infrastructures. Researchers use Gemini to study such diverse topics as the solar system and exoplanets, planetary nebulae, star formation, supernovae, the formation and evolution of galaxies, quasars and supermassive black holes, and the structure of the universe on the largest scales.

The Gemini North telescope is one of four 8"10 m class optical/infrared telescopes that stand atop the 4213 m (13,822 ft) summit of Mauna Kea on the Big Island of Hawai'i. Mauna Kea is generally acclaimed as the world's premier Northern Hemisphere observing site, being surrounded by a thermally-stable tropical sea, located atop a massive mountain with very gradual slopes that are bathed in dry trade winds above the inversion layer, and absent of major sources of light pollution. In Chile, sharing much of the common

infrastructure with the telescope facilities on nearby Cerro Tololo, the Gemini South telescope is situated on a ridge in the foothills of the Andes at 2722 m (8930 ft) elevation on Cerro Pachon, and less than 1.5 km from the site of the revolutionary Large Synoptic Survey Telescope, which is currently scheduled for first light during the interval covered by this award. The Cerro Tololo/Pachon astronomical complex is one of the darkest, driest, and best-developed sites in the Southern Hemisphere.

The Gemini telescopes utilize exquisitely figured 8 m diameter monolithic primary mirrors and each incorporates laser-assisted adaptive optics to greatly improve the image sharpness over what is otherwise available from the ground. At Gemini South, the state-of-the-art Gemini Multi-Conjugate Adaptive Optics System, GeMS, corrects for distortions introduced at multiple levels through the Earth's atmosphere, and over a wider field of view, than has been achieved at any other telescope in the world. Both Gemini telescopes are distinct among 8-10 m class observatories in their highly optimized infrared design. The telescopes employ unique sputtered multilayered silver coatings on their primary, secondary, and tertiary mirrors that, together with other facets of their design, achieve extremely low emissivity, diffraction-limited performance at near-infrared and mid-infrared wavelengths, and smooth, stable point-spread functions. The durability and quality of the coatings, coupled with preventive maintenance techniques, have extended the time interval between re-coatings to a nominal five years. The result is reduced downtime.

Each of the Gemini telescopes feeds a modern suite of imagers and spectrometers, which collectively provide the Gemini community with access to the optical and near-infrared ground-accessible spectral windows. The Gemini Multi-object Spectrometer/Imagers (GMOS) are workhorse instruments available at both sites, while Gemini South features the near-infrared Gemini South Adaptive Optics Imager (GSAOI) and the facility near-infrared wide-field imager and multi-object spectrograph, FLAMINGOS-2. Commissioned during the past year is the world-leading high-contrast coronagraphic Gemini Planet Imager (GPI), which will be employed in an extensive campaign to image and characterize planets orbiting nearby stars starting in 2014. Additional instruments for Gemini North include the versatile Gemini Near-Infrared Spectrograph (GNIRS) and the Near InfraRed Imager and Spectrometer (NIRI), as well as a natural/laser guide-star adaptive optics system. The Gemini High-resolution Optical Spectrometer (GHOS) is currently in development. By resolution of the Gemini Board, a maximum of four instruments, plus adaptive optics, will be maintained as facility instruments for each telescope. However, visitor instruments are supported on a limited basis at both sites, to enable capabilities not otherwise covered by facility instrumentation.

The telescope design utilizes a Cassegrain focal turret, with three instruments nominally mounted concurrently, plus an adaptive optics system that can feed any instrument, and a calibration system. Redirecting the beam with a movable mirror allows almost instantaneous instrument changes and on-the-fly responses to changing sky or instrument conditions, or to support time-critical observations. Instruments are typically mounted for periods of months, thereby reducing lost observing time and expense due to frequent changes. The instruments are highly integrated into Gemini's control systems and are amenable to both queue and classical observing.

Though a proposer may advocate an alternate arrangement, Gemini's Hilo Base Facility is the current headquarters for the Gemini directorate as well as the administrative core for Gemini North and is located in an NSF-owned facility on a tract leased to the NSF at the University Research Park of the University of Hawai'i-Hilo. The current Gemini South Base Facility is situated within the same gated compound as the operations bases for the Cerro Tololo Inter-American Observatory (CTIO) and the Southern Astrophysical Research (SOAR) Telescope. Each base facility provides office and lab space for science, engineering, and administrative staff, and supports data processing and remote operations for the local telescope.

Time on the Gemini telescopes is awarded to each of the partners national communities in proportion to its financial contribution to capital investments and operating costs of the Observatory. Each partner has its own National Gemini Office (NGO) which acts as the interface between their national community and the Gemini Observatory. The NGOs interact with the Observatory on several planes, the most fundamental being the management of a National Time Allocation Committee (NTAC) in each respective country. The NTACs collect, peer-review, and prioritize the observing proposals from their respective constituents each semester. The results of all of the NTAC deliberations are then forwarded to the International Time Allocation Committee (ITAC), composed of representatives of the national partners and the Observatory staff, where national evaluations are merged and a consensus ranking of the entire set is reached. Finally, proposals are grouped into three broad prioritized categories, referred to as Bands 1, 2 and 3, and the Observatory schedules the Bands according to the overarching national observing-time fractions. Mechanisms to enable Target of Opportunity (rapid-response) and Large/Long Term observing programs are also in place.

In seeking to optimize the scientific return on investments made, Gemini offers both queue and classical observing modes. Gemini's rapidly reconfigurable multi-instrument Cassegrain focal cubes are key elements of Gemini's observing queue: the scientific ranking of a program determines its priority for execution, and every attempt is made to complete each high-priority program under the sky conditions it requires. Queue-based operations rely upon the Observatory staff to conduct researchers observations by executing preprogrammed scripts that are designed by the researcher. When appropriate to the study in question, a queue-based model is able to make efficient use of oversubscribed observing time. Observations and calibrations can be optimally utilized across multiple programs, enhancing the science productivity of the Observatory. Classical observing - hands-on observing by the Principal Investigator team using a fixed block of time - has also proven to be desirable and is the preferred mode for activities such as programs that involve visitor instruments, experimental observing procedures, the training of young scientists, technology explorations, and instrument commissioning. Moreover, these programs familiarize astronomers from the community with Gemini and encourage close contact with Gemini scientists. Additional measures to improve efficiency and connect the Observatory with its constituents include the development of (1) eavesdropping, (2) basecamp, and (3) remote observing. These capabilities, being phased in sequentially, will provide for (1) monitoring an observational program by a PI from his/her home institution, (2) the execution of a classical program from the base facility as opposed to being resident on the mountain summit, and (3) full remote execution of a program from an observer's home institution, respectively.

B. Governance under the Gemini Partnership

Over 20 years ago, discussions within an international group of astronomers and technologists developed the idea for a ground-based observatory with two telescopes - one in the northern hemisphere and the other in the south - each telescope utilizing a single-piece mirror of very large collecting area and capable of superb image quality and infrared performance under the best observing conditions. As a result of these efforts, in 1993 and 1994 the United States, United Kingdom, Canada, Chile, Argentina, and Brazil came together to form the government-to-government Gemini Partnership. The Partnership has evolved to the current formulation of the United States, Canada, Australia, Brazil, and Argentina as funding partners whose astronomical communities receive observing time in proportion to their fractional financial contribution, plus the site hosts of Chile and the University of Hawai'i, each of which receive 10% of the observing time on the local telescope. According to the Gemini Agreement, partners intentions for remaining with or withdrawing from the Partnership are declared for periods of nominally three years, with Australia having declared at the 2012 assessment point that it is

not able to commit funds toward continued participation beyond the end of calendar 2015. In response to this announcement, the Gemini Board is discussing opportunities with other potentially interested institutions to participate in the Partnership.

The Gemini Observatory serves the interests of all its member countries, as provided for in the Gemini Agreement. The primary governing body is the Gemini Board, a supervisory and regulatory body responsible for exercising budgetary and policy control for the Observatory and providing guidance to the managing organization (here the Awardee). The broad oversight functions of the Gemini Board are defined in the Gemini Agreement. The Gemini Board is composed of representatives from each of the partner funding agencies and scientific communities, in approximate proportion to their partner share. The Board provides the forum for partner interaction and appoints subcommittees as necessary. The Gemini Board has reserved the right to approve the appointment of the Gemini Director. Observatory policy is directed by means of Gemini Board resolutions, which may be found at http://www.gemini.edu/science/#gbod.

The Gemini Agreement also establishes an Executive Agency, empowered to act on behalf of the Partnership to execute Gemini, and names NSF to serve in that capacity. The Executive Agency acts as the sole conduit for funding from all partners and conveys Gemini Board-established policy guidelines for the Observatory through the managing organization. NSF provides oversight on behalf of the Gemini Board, particularly through periodic reviews, and, as specified in the Gemini Agreement, provides the Executive Secretariat for the Gemini Board.

The Gemini Observatory Director is responsible to the Gemini Board and managing organization for the overall operation of the Observatory. The Director defines and carries out the overall scientific mission of the Observatory as approved by the Gemini Board, and provides scientific and management leadership. The Director also ensures that the Observatory is in compliance with Federal and other regulatory requirements. The Director establishes a senior Observatory management team to lead activity in major Observatory functions which currently consists of:

- Deputy Director / Head of Science
- Associate Director, Operations
- Associate Director, Development
- Chief Financial Officer

The activities are coordinated in an integrated structure across the two sites that allows for common management practices.

The Gemini Science and Technology Advisory Committee (STAC) is advisory to the Gemini Board, providing scientific and technical expertise to assess both short and long term plans for the development of telescope capabilities and associated instrumentation. The STAC therefore has a crucial role in defining and guiding Gemini's strategic scientific vision. Like the Gemini Board itself, membership on the STAC is approximately representative of partner share.

A second committee charged with advising the Gemini Board is the Gemini Finance Committee (GFC), comprised of financial authorities from the funding partners. The GFC considers financial documents, budget reports, and long range plans for the Observatory.

Finally, the Gemini User Committee is comprised of representatives from the Gemini partner community and concentrates on the short-term functional concerns of users. While the committee reports to the Gemini Director, both the Observatory and the NGOs have important roles in receiving and responding to this user feedback.

C. Description of Awardee Responsibilities

1. *Core Expectations*

As the Gemini Observatory managing organization, the Awardee will work closely with NSF and the distributed Gemini scientific research community to ensure that, within available resources, Gemini supports, sustains, and advances frontier science as enabled by Gemini's research capabilities and as promoted through a culture of excellence. The Awardee will be accountable for fulfilling the Gemini mission through a visionary strategy outlined in approved annual program plans and one which capitalizes on the financial investment to serve the scientific community and promote world-class research and education. The Gemini program should embody the NSF strategic vision: to transform the frontiers of science and engineering, to stimulate innovation and address societal needs through research and education, and to excel as a Federal science agency[3].

The Awardee will be responsible for the overall management and performance of Gemini, including the infrastructure, instrumentation and staff. In discharging these responsibilities, the Awardee will ensure that Gemini maintains its character as a multidisciplinary and multi-user facility that primarily enables first-rate visitor research.

In cooperation with NSF and within available resources, Gemini will plan and execute an imaginative, viable and inclusive program of research and education, consistent with the objectives and priorities of its scientific community. The Awardee will manage facilities and equipment provided by the Gemini partners to fulfill the proposed programmatic scope, and will develop a diverse and inclusive team of expert support and technical personnel to manage Gemini as a scientifically competitive research and education facility.

NSF intends that Gemini should serve as an exemplar of management excellence. The Awardee will be expected to meet the highest standards for service and delivery to the scientific community and to demonstrate a proactive and effective approach to performance management. The Awardee will ensure that Gemini operates with integrity and transparency, maintaining quality and responsiveness in administration and management.

2. Specific Duties

The Awardee shall, within the financial resources available under this solicitation:

- Staff, manage, operate, maintain, and develop the Gemini Observatory, provide written annual progress reports, budgets, and program plans for review and approval by the NSF on behalf of the Gemini Board.
- Provide, through its staff and the facilities of the Observatory, scientific, technical, managerial, and other support necessary for the conduct of research programs in astronomy. Visiting scientific investigators and the staff of the Observatory shall carry out the research. The major criteria for the utilization of Gemini facilities by both visitors and staff shall be the scientific merit of the

proposed research, the broader impacts of the proposed activity, the competence of the proposing individuals, and suitability of the facilities for the proposed research as determined by the Gemini Director in accordance with existing internal and external review procedures, modified as necessary to include advice from community experts, appropriate NSF staff, and policies set by the Gemini Board.

- Maintain a staff with sufficient scientific and technical expertise to enable the accomplishment of Observatory goals for the delivery of science capability to the observing community.
- Develop new techniques and instruments for astronomical observatories and data processing, utilizing as appropriate expertise in other institutions, in keeping with the Gemini Agreement.
- Promote the utilization of knowledge in astronomy and related fields, and engage in education, public outreach, and training programs.
- Disseminate and publish scientific information developed in the course of the work, subject to the provisions of the Gemini Agreement and the data rights policy as approved by the Gemini Board.
- Cooperate in the integration of Observatory programs into the overall efforts in astronomy and related fields in the partner countries, while striving to ensure that, as far as possible, the Observatory's programs complement, without undesirable duplication, research conducted by other institutions.
- Determine: (1) the scientific community's needs for operations support and instrumentation which would be most appropriate for the Observatory to provide, and (2) the Observatory's need for staffing and the support thereof. On the basis of this determination submit, to the Gemini Board, recommendations for specific actions which are justified in terms of:

    1. the importance to the achievement of the Observatory's mission and the requirements of the science it supports;
    2. the impact if the recommendations are not implemented; and,
    3. available options for meeting the identified needs.

- Develop appropriate procedures for assessing the Observatory's performance with regard to:

    1. the effective use of resources in support of scientific investigations performed using Gemini;
    2. the quality and impact of science conducted using Gemini; and,
    3. the leadership displayed in the conduct of research and technical development programs in astronomy and related fields.

- Secure NSF approval of these procedures and implement them. Provide for such NSF participation in their implementation, as these procedures require.
- Conduct such other Observatory-related activities as the NSF, acting on behalf of the Gemini Board, and the Awardee may agree in writing to support.
- Work closely with the NSF and the other partner agencies in a cooperative effort to inform the public about the Observatory and its programs and accomplishments.

3. Management

The Awardee will define and implement an organizational structure for the Gemini Observatory that will provide vision, leadership and service to manage the Observatory as a vibrant, community-serving facility. Models and approaches for observatory management should be consistent with NSF goals, the needs of Gemini's scientific community, and the requirements described in this solicitation. Organizational structures for Gemini management and operations may include the establishment of new institutions, corporations or consortia, provided that the proposing organization(s) provide materials in support of the financial capability of the Awardee(s), as required in Section V.B.

The Awardee will establish processes within a structured framework for planning, review and performance management, including the development and use of appropriate mechanisms to aid both the Awardee and Gemini's stakeholders in assessing performance and identifying areas for improvement.

4. Operations

The Awardee will be responsible for staffing and managing Gemini to ensure that on-site instruments are able to operate in response to high-priority scientific research conducted by qualified scientists. To this end the Awardee will articulate a strategic plan for maintaining a viable, community-driven scope of observatory operations and will employ mechanisms for reviewing and scheduling user access through an open process that demonstrates NSF core values.

The Awardee will provide a data management plan that describes the acquisition, analysis, archiving and accessibility of all data, including the definition of proprietary periods and appropriate cyberinfrastructure and cybersecurity to meet the proposed scope of user community support.

5. Maintenance

All parts of the Gemini infrastructure that are necessary to meet the proposed operations activities will be competently maintained to enable the attainment of program objectives and for the safety and security of staff and visitors. The Awardee will be responsible for budgeting, scheduling and tracking a comprehensive safety, environmental compliance and maintenance plan for all parts of the Gemini infrastructure, including plans, as appropriate, to remove or dispose of those parts of the infrastructure deemed unnecessary for the proposed level of operations.

6. Science

The Awardee will prepare an Annual Report and Program Plan for Gemini that demonstrates responsiveness to community-based scientific objectives, an innovative vision built on existing and potential capabilities, a well-defined scope of high-priority activities, and a credible plan for establishing the necessary resources to support the proposed suite of activities. In addition, the Awardee will develop and annually update a Long-Range Plan that outlines the strategic vision for Gemini over a time span of at least five years, and considers the Observatory's role in meeting the needs of the partner community in the context of the continually evolving scientific and technological landscapes.

As defined by these proposed plans, the Awardee will ensure that Gemini has sufficient internal or external expertise to (1) support

outside users, (2) help guide decisions relating to current and future instrumentation and observing modes, (3) develop and maintain data acquisition and data processing software, (4) develop and implement policies and strategies for validating data quality, providing data accessibility and data archiving.

7. Staffing

The Awardee will recruit, retain and develop an expert scientific, engineering, technical and administrative staff, consistent with the NSF strategic goal of cultivating a world-class, broadly inclusive science and engineering workforce. Proposers should include a staffing plan that identifies the roles and responsibilities of lead personnel and delineates the organizational structure, including full-time equivalent estimates, position titles, and location, that supports them.

8. Diversity

Gemini offers significant potential to enable the participation of traditionally underrepresented and underserved communities in the research and education mission of the Observatory and to strengthen the strategic growth of a scientific and technically trained workforce. The Awardee will demonstrate leadership in employing best practices for broadening participation in science and engineering at all levels within the Observatory's activities.

9. Education and Public Outreach

Gemini currently operates a vigorous program of education, outreach and community development activities that includes collaborations with undergraduate and minority-serving institutions, student involvement in Gemini research, and resources for K-12 students and teachers in Hawai'i and Chile. The Awardee will be responsible for developing and implementing an innovative, integrated program of research and education that builds on Gemini's scientific strengths and on its local context to advance NSF strategic goals.

10. *Collaborations*

Gemini is an international partnership with a number of different stakeholders. The Awardee must be sensitive to the needs of these stakeholders, as represented on the Gemini Board, by proposing and carrying out programs that are consistent with the various perspectives of the partners. Any programs that are conducted as collaborations between Gemini and other organizations must be consistent with the Gemini mission and complement and enhance activities funded and approved by the Partnership.

11. Managing Organization's Juridical Status in Chile

The Awardee is responsible for complying with all applicable laws of the location in which it operates. Accordingly, proposers must demonstrate the capability and authority to conduct operations in Chile, including the employment of Chileans. Recognizing that obtaining the necessary authority may require an extended time period, proposers must demonstrate knowledge of what is required to obtain the necessary authorities, if they do not already have such authority. Proposers should seek their own counsel regarding the laws of Chile. As a starting point, proposers should familiarize themselves with Chile laws No. 15,172 and No. 17,318 and consider conducting provisional consultations with an appropriate representative of the University of Chile. Other laws with which proposers should familiarize themselves include, but are not limited to, Chilean laws regarding labor and employment.

Chilean operations for Gemini are administered by the current managing organization, the Association of Universities for Research in Astronomy Inc. (AURA). Gemini facilities include offices and labs in La Serena, Chile (about 500 km north of Santiago) and an astronomical observing site on Cerro Pachon, approximately 60 km from La Serena. All of the Chilean land on which Gemini facilities reside is owned by AURA, a U.S. non-profit corporation. The current Cooperative Agreement (CA) between NSF and AURA stipulates:

In the event that AURA ceases to be the managing organization for the Gemini Observatory, AURA agrees that it shall enter into a lease agreement with a successor managing organization(s) designated by NSF. The successor managing organization will have access to and use of all real and personal property necessary for continuing operations located in Chile which was acquired hereunder, and titled in AURA and which NSF determines are reasonably necessary for the operation of Gemini South as an astronomical research observatory. Such lease arrangement will be made available to the successor organization(s) at a rate of $1 per year for as long as such property is used and maintained for astronomical research. This lease shall be for a period of 25 years and in view of the intent to maintain such property for the use of astronomy, shall be renewable in 25-year increments by mutual consent. Such consent shall not be unreasonably withheld by either AURA or NSF.

D. General Information

Additional information on Gemini can be found in the resource library associated with this solicitation, access to which can be provided by the Cognizant Program Officer. Proposing organizations should note especially the following documents, made available in the library, but redacted for any confidential information:

- The current Gemini Annual Project Report and Program Plan,
- The current Gemini Agreement, and the draft updated version being finalized by the partners,
- The current cooperative agreement for the management and operation of the Gemini Observatory,
- Master site infrastructure plans,
- Ownership, leases, easements, and related inventories of AURA and non-AURA owned Real and Personal property,
- AURA agreements in Chile,
- Multi-year contracts,
- MOUs and similar agreements.

Access to the resource library will be provided to proposing organizations upon request to the Cognizant Program Officer. Any additional materials and information relating to this solicitation, including NSF responses to all pertinent questions, will be made available through the resource library as appropriate.

Informational Site Visits

NSF intends to conduct site visits to the Gemini Observatory facilities in Hawai'i and Chile, for representatives of potential proposing organizations. The visits are expected to take place in September and October 2014, prior to the submission of Letters of Intent, and will be guided and managed by NSF staff. This will be an opportunity for potential proposers to view the Observatory's buildings and

facilities and to acquire information relevant to the development of a proposal. Attendees will be responsible for their own expenses.

Eligible organizations that are interested in submitting a proposal and wish to send representatives to the site visits should email the Cognizant Program Officer by August 29, 2014.

---

[3] *Investing in Science, Engineering, and Education for the Nation's Future. NSF Strategic Plan for 2014-2018*.

III. AWARD INFORMATION

The award will be a cooperative agreement for a duration of six years, covering the period January 1, 2017 through December 31, 2022.

Funds for the Gemini Observatory are provided through annual contributions by the partners in two distinct categories: (1) an operations and maintenance (O&M) fund and (2) an instrumentation development fund (IDF). The latter category is essentially a capital development fund that enables the development of new astronomical instrumentation and provides for major upgrades to existing instruments. Intended contributions to each fund are declared by the partners prior to the inception of a cooperative agreement, with the O&M contribution determining a partner's share in the collaboration and the IDF component regarded as a best-effort contribution that is subject to a partner's year-to-year funding picture. The funding and budgetary history for Gemini can be found in Gemini Board resolutions and annual reports contained in the resource library. For the purposes of planning as applicable to the writing of a proposal in response to this solicitation, the O&M budget should match the annual anticipated partner contributions, which for CY2017[4] should be taken to be $28.172M. Over the lifetime of the award the O&M component should total $182.229M.

New facility instruments and major upgrades can be acquired through competitively-awarded contracts of IDF funds to development groups within the partnership or through transfers of separately-funded items to the observatory as in-kind contributions to the IDF from one or more partners. Therefore, the observatory need not be staffed to undertake large technology development efforts in-house, but should include appropriate personnel to manage and monitor these development efforts, as well as to provide the necessary hardware and software interface. Note also that IDF funds are accumulated into spending authority for use as periodic payments on major development projects, so significant IDF carry-forward as well as multi-year contractual obligations (e.g., the GHOS optical spectrometer construction) are likely to exist at the inception of the award. An Awardee other than the incumbent will be expected to assume these obligations and formally accept transfer of ownership of all existing contracts, including their terms and conditions and responsibility for execution, from the incumbent prior to inception of the award. Information on these obligations can be found in the resource library.

For the reasons described above, IDF contributions to Gemini tend to fluctuate, but proposers may assume an equivalent contribution of $4.000M in 2017, made through a combination of contributed funds and in-kind developments and products. These levels of support are indicated in the table below.

Assumed Gemini Observatory Contributions for CY2017

CY	O&M ($M)	IDF ($M)	Total ($M)
2017	28.172	4.000	32.172

For calendar years 2018-2022, proposers should assume an escalation factor of 3% annually for both O&M and IDF categories. The escalation factor is derived from consideration of projections for inflation factors for U.S. wage earners and includes the complexities of planning operating costs in Chile with Chilean inflation and legal requirements for employees' salary increases. The escalation is intended to maintain a constant level of purchasing power. Actual funding levels will be established on the basis of annual program plans submitted by the Awardee to NSF and approved by NSF, subject to the availability of contributed funds and to the performance of both the Awardee and Observatory.

In the event that a new Awardee is selected to replace the incumbent, NSF will fund additional, appropriate, transition costs through a cooperative support agreement with the new Awardee for a transition period of up to six months preceding the six-year cooperative agreement. Relevant transition activities include interviewing and hiring personnel, assigning subcontracts, transferring data and property, and obtaining permits and licenses. During this transition period, the new Awardee will have appropriate access to Gemini personnel and facilities.

---

[4] Because of differences in the partners fiscal calendars, Gemini operates on the calendar year.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

- For-profit organizations: U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.
- Consortia including international collaborations, but NSF funds may be awarded only to U.S. organizations.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 1

Limit on Number of Proposals per PI or Co-PI: 1

Additional Eligibility Info:

Proposals for the management and operation of Gemini may be submitted by U. S. academic institutions, non-profit organizations, for-profit organizations, or consortia thereof, subject to the qualifications outlined in the NSF Proposal and Award Policies and Procedures Guide (PAPPG). Only a single award will result from this solicitation, therefore separately submitted collaborative proposals are not acceptable. In proposals involving multiple organizations, a single organization must be identified as the lead organization and accept overall management responsibility.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent *(required)*:

Complete submission of a Letter of Intent (LOI) requires two separate components that must each be submitted prior to the LOI due date.

FastLane LOI Component-Via Fastlane, submit the following LOI information:

- Project Title
- Synopsis of the Proposed Program (a brief abstract of maximum 2,500 characters of plain text)
- Point of Contact for NSF inquiries
- Project PI Information, including a biosketch and contact information
- Participating Organizations

Submission of this component via FastLane will produce an LOI ID that must be included in the PDF LOI Component described below.

PDF LOI Component-Via an email to the Cognizant Program Officer, submit a document of no more than 5 pages in Portable Document Format (PDF) that addresses the following:

- a description of the proposed organizational and governance structure for the Gemini managing organization, including the identification of all collaborating and partnering institutions and their roles in the managing organization;
- a list of proposed Key Personnel, including all PIs, co-PIs and senior personnel, that identifies full names and affiliations;
- a description of the organization's overall management concept for Gemini;
- a description of the strategic vision for the organization's fulfillment of the Gemini mission;
- a brief synopsis of the organization's proposed approach to conducting business in Chile;
- an overview of the major elements of the organization's transition plan and estimated resource needs for assuming management of Gemini;
- a brief synopsis of the past performance history of the organization.

The PDF document should include the FastLane LOI ID in a running header and must be consistent with NSF Proposal and Award Policies and Procedures Guide formatting guidelines (NSF PAPPG Section II.B).

Letters of Intent will be used by NSF to ensure that the appropriate expertise is available for participation in the review and selection process, to foresee potential conflicts of interest, and to anticipate special award conditions that may be necessary to accommodate the proposed organizational and governance structure. The Letter of Intent is a statement of a proposer's preliminary plans, the senior personnel, and collaborating or partnering organizations. It is recognized that proposed plans may change between submission of the Letter of Intent and submission of the Full Proposal.

Full Proposals may be submitted only by organizations that have submitted a Letter of Intent by the due date.

Letter of Intent Preparation Instructions:

When submitting a Letter of Intent through FastLane in response to this Program Solicitation please note the conditions outlined below:

- Submission by an Authorized Organizational Representative (AOR) is not required when submitting Letters of Intent.
- Submission of multiple Letters of Intent is not permitted

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

- Full proposals submitted via FastLane: 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) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- 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) 292-7827 or by e-mail from nsfpubs@nsf.gov.

Important Proposal Preparation Information: FastLane will check for required sections of the full proposal, in accordance with *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) instructions described in Chapter II.C.2. The PAPPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support; Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, **FastLane will not accept the proposal.**

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions. If the solicitation instructions do not require a PAPPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

Please note that per guidance in the PAPPG, the Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities. Unless otherwise specified in this solicitation, you can decide where to include this section within the Project Description.

Due to the complexity of the proposals being submitted, use of Fastlane to prepare and submit proposals is strongly encouraged.

The Full Proposal shall conform to the guidelines specified in the NSF Grant Proposal Guide or the NSF Grants.gov Application Guide, except where detailed below.

Proposers are reminded to review procedures under "Proprietary or Privileged Information" in Chapter 1, Section D.3 of the PAPPG and to mark only such information, including patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which might harm the proposer, with the appropriate legend such as, "The following is (proprietary or confidential) information that (name of proposing organization) requests not be released to persons outside the Government, except for purposes of review and evaluation." Please also see the section entitled "Privacy Act and Public Burden Statements" below. The following information is required for the Full Proposal:

1. **Project Summary** - This section should provide a one-page summary of the key points of the proposal and should be understandable to a scientifically or technically literate lay reader. This section must follow the standard PAPPG or NSF Grants.gov Application Guide guidelines. Proposals that do not include an overview and separate statements on intellectual merit and broader impacts within the one-page Project Summary will not be accepted by FastLane or will be returned without review.
2. **Project Description** - Each proposal should describe the proposing organization's scientific, technical, and managerial qualifications to operate Gemini by addressing the areas described in Section II.C, Description of Awardee Responsibilities, of this solicitation. The Project Description is limited to no more than 80 pages. Where noted below, necessary resource material may be marked separately as an Appendix to the proposal and submitted as Supplementary Documentation (see below). Such material is not subject to, or included in, the 80-page limit. The Project description should demonstrate how the proposing organization would efficiently and effectively fulfill each of the Awardee responsibilities articulated in Section II of this solicitation.
3. **References Cited** - This section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
4. **Biographical Sketches** - As provided for in the PAPPG, a resume, limited to 2 pages, should be provided for the PI, each co-PI, and all Key Personnel. At a minimum, each resume; should include a description of the individual's education and professional preparation, academic/professional appointments, relevant publications, and synergistic activities as required in PAPPG Section II.C.2.f.(i)a-d. Other PAPPG guidelines on order and format do not apply to this section of the proposal.
5. **Budget** - See the instructions in Section B, below.
6. **Current and Pending Support** - This section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
7. **Facilities, Equipment and Other Resources** - This section is not required for the Full Proposal. All relevant information must be provided in the Project Description and Appendices). Proposers should insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.
8. **Date Management Plan** - If applicable, this section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
9. **Postdoctoral Mentoring Plan** - If applicable, this section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
10. **Supplementary Documentation** - Except as specified in this solicitation (e.g., the required Transition Plan) and in the NSF Grant Proposal Guide (see PAPPG Section II.C.2.j), special information and related documentation must be included as part of the Project Description (or as part of the budget justification), if it is relevant to determining the quality of the proposed work. Exceptions include, but are not limited to, documentation of collaborative arrangements of significance to the proposal through letters of commitment, and the required submission of a Postdoctoral Researcher Mentoring Plan for each proposal that

requests funding to support postdoctoral researchers.

11. **Single Copy Documents** - Information for the two items below should be entered via the Single Copy Documents section in Fastlane as "Additional Single Copy Documents." This information is required by NSF for determining conflicts of interest in the review process. The information includes the names of Project Personnel and the names of Collaborators and other Individuals with Conflicts. The information should be entered in the Single Copy Document section of FastLane labelled "List of Personnel, Collaborators and Affiliates."
    - **Project Personnel**: Provide the full names and affiliations of all Key Personnel.
    - **Collaborators/Individuals with Conflicts of Interest**: Provide the names of all persons, participants and affiliates with potential conflicts of interest as specified in Section II.C.2.f.(i)(e) of the NSF PAPPG. For each person, enter the first name, last name, and institutional affiliation(s). For each person listed on the project personnel list include all co-authors/editors and collaborators (within the past 48 months); list all graduate advisors and advisees; list individuals who would act as external advisory committee members for Gemini; list all subcontractors who would receive funds through the award.
12. **Transition Plan** - Proposing organizations, other than the incumbent, may be funded for an additional transition period of up to six months preceding the transfer of operating authority. If a new Awardee is selected to operate Gemini, the incumbent will cooperate with the successor to the extent necessary to facilitate uninterrupted support for Gemini during the transition period and will provide transfer of legal rights to relevant property and equipment. NSF will support appropriate transition costs incurred by a successor Awardee if different from the current Awardee.
    - Organizations other than the incumbent should provide, as a Supplementary Document not to exceed 10 pages, a detailed transition plan for a transition period of up to six months preceding the new award.

      The transition plan must include, at a minimum:

    - A proposed duration and schedule for the transition period;
    - Budget for the transition period as specified in V.B. below;
    - Plans for recruitment, orientation and training;
    - Plans for changes to staffing, facilities or operational modes;
    - A plan to acquire office infrastructure and manage the transfer of assets, inventory, commitments, plans and documents; and
    - Identification of assumptions that underlie the transition plan.
13. **Other Supporting Materials** - Within the 80-page limit of the Project Description, the proposing organization may provide additional material that it believes will be of assistance in evaluating the proposal but that does not fit into any of the defined sections of the Project Description.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

Proposing organizations may include a fixed annual management fee in their proposed budget, and must include a brief justification for the fee in the budget justification. The management fee must be clearly identified as such.

Budget Preparation Instructions: The full proposal should include a budget on the budget form in FastLane or the R&R Budget Form in Grants.gov for each year of the six-year period proposed. The first year's operations and maintenance budget should equal the anticipated O&M total contributions of $28,172,000, while CY2017 contributions to instrument development can be assumed to be equivalent to $4,000,000, made in the form of funds and/or in-kind partner contributions and developments. Subsequent years should be escalated by 3.0% per year, as described in Section III. A cumulative budget for the six-year award period will automatically be provided in FastLane and Grants.gov.

The proposal should provide all staffing and budgeting information needed to describe how the organization will fulfill the expectations in Sections I and II of this solicitation. Requested budget amounts for each year of the proposal should reflect the level considered necessary to perform the NSF-funded activities described in the proposal. Proposers should be cognizant of budget constraints implied by the estimated funding levels provided under Section III. A budget justification shall be submitted with the budgets for each year of the award and shall be in sufficient detail to show how the proposer reached the amounts specified in the budget. The total length of these justifications should not exceed 20 pages. NSF anticipates performing a detailed cost analysis of the successful proposal budget.

Enter the anticipated total level of subcontract support on line G5, Subawards, of the FastLane budget or line F5 of the R&R Budget Form in Grants.gov. Full proposals require the inclusion of separate budgets for subcontracts that exceed $250,000 per year. For subcontracts that would be less than $250,000 year, include the costs in the aggregate on the subaward line in the budget.

Proposing organizations other than the incumbent must also provide a detailed budget for a transition period of up to six months preceding the new award. This information must be provided as part of the aforementioned Transition Plan that is submitted as Supplementary Documentation. The budget must be presented in the same style with all applicable budget line items as for the budget for each year of the proposal. If a new Awardee is selected to manage and operate Gemini, the incumbent will cooperate with the successor to the extent necessary to facilitate uninterrupted support for Gemini during the transition period and will provide transfer of legal rights to relevant property and equipment. NSF will support appropriate transition costs incurred by a successor Awardee if different from the current Awardee.

The transition budget should not include non-renewal costs of the incumbent. These include medical insurance, severance pay, or other costs incurred by the incumbent under the current cooperative agreement, including costs related to the nonrenewal of subcontracts. If a new managing organization is selected, the incumbent may submit to NSF costs related to the cooperative agreement non-renewal, and these costs will be considered separately.

In a separate document labeled Financial Capability, proposing organizations must include information in support of the organization's

financial condition and capability. This material, which should be uploaded as a Single Copy Document, should provide:

- A detailed structure and plan for implementing and monitoring business systems and internal controls for financial management and accounting, property standards, equipment standards, procurement standards, reporting and records management.
- A total compensation plan setting forth proposed salaries and fringe benefits for professional employees, with supporting information such as recognized national and regional compensation surveys, and studies of professional, public and private organizations used in establishing the total compensation structure.
- If available, the organization's annual audited financial statements (e.g. Balance Sheet, Profit and Loss Statement and Annual Reports) for the three most recent fiscal years and/or other documentation to clearly explain its current financial strength and resource capability.
- A current indirect cost rate proposal and supporting financial data. If the organization's indirect cost rates have been approved by a Federal agency, provide copies of such agreements.
- A current Cost Accounting Standards Board (CASB) Disclosure Statement or Cost Policy Statement.

Organizations that have not previously received NSF awards should review the NSF Prospective New Awardee Guide https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pnag for additional guidance in preparing their budget submission.

C. Due Dates

- **Letter of Intent Due Date(s)** ***(required)*** (due by 5 p.m. submitter's local time):

  November 28, 2014

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

  February 27, 2015

D. FastLane / Grants.gov Requirements

For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program 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: http://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 FastLane are strongly encouraged to use FastLane 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 *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. 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.C.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.C.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 underrepresented minorities 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

For Full Proposals, reviewers will be asked to evaluate the following:

- Strengths and weaknesses of the proposed management approach;
- Strengths and weaknesses of the proposed budgeting and financial plans;
- Opportunities and potential benefits that the proposed approach presents for Gemini;
- Any risks to the future success of Gemini in the proposer's approach and the degree to which risks are addressed;
- Cost reasonableness and cost efficiency of the proposed approach.

In the process of formulating an overall assessment of the viability of the proposer's management and operations plan for Gemini, reviewers will consider each of the areas below.

1. Management: overall management and financial plans

Reviewers will consider:

- the strengths and weaknesses of the plan for management and operation of Gemini as described in the proposal;
- the strengths and weaknesses of the activity-based budget breakdown in the proposal;
- the correspondence between the staffing plan and the available funding;
- the quality, relevance and extent of the proposing organization's strategic vision for fulfillment of the Gemini mission;
- the viability of the organization's management strategy to maintain and further develop Gemini's position as a world-class, multi-user facility;
- the role of the managing organization in relation to Gemini, NSF and the multiple stakeholders;
- the relevance of proposed methods to support and reinforce the Gemini mission and programmatic scope;
- the extent and quality of the plan to engage the multidisciplinary and multi-user community served by Gemini, with clear lines of communication, understanding of community needs and issues, and the means to engage the community in planning, research, education and development of relevant instruments and technology;
- the suitability, credibility and risks of proposed collaborations and their added value to Gemini and to NSF-supported science, education and outreach;
- the applicability of proposed methodologies for identifying, estimating and prioritizing future requirements, including demonstrated awareness of potential directions of the relevant sciences and responsiveness to stated community needs and ambitions;
- the information provided on the organization's past experience and performance in managing a facility that serves a large scientific community;
- the evidence provided for the organization's capability for managing an observatory in Chile.

2. Operations, maintenance, environmental, safety, health, and security

Reviewers will consider:

- the feasibility, relevance to Gemini stakeholders, and potential for success of the proposed approach, including organizational structure, resource integration, provision of space and equipment, logistics support for scientific initiatives, data management and information technology, and maintenance, safety and security of systems and facilities;
- the sufficiency, and potential for achieving effective results, of the proposed methodology for assessing and improving Gemini's performance.

3. Budgeting, staffing, and workforce management

Reviewers will consider:

- the adequacy of the proposed methods and processes for managing the budget of a complex organization;
- the adequacy and appropriateness of the organization's named personnel and proposed labor categories for fulfilling the Gemini mission;
- the suitability and potential for success of the proposed methods for recruitment and retention, promoting diversity at all levels

in the organization, invigorating and training the workforce, and infusing new ideas and approaches in Gemini programs and administration.

4. Science and facility planning

Reviewers will consider:

- the ability to respond to and prioritize evolving scientific and engineering needs and opportunities in the community, particularly in response to changing budgetary environments;
- the degree to which the proposed programs, priorities and technical capabilities reflect the needs of Gemini stakeholder communities and utilize the unique research capabilities provided and facilitated by Gemini;
- the scope, feasibility and innovation of the planned activities;
- the extent to which planning targets critical goals relevant to the Gemini strategic vision, identifies challenging scientific and technical questions or barriers to be overcome, identifies performance measures for the planning and delivery process, and reflects appropriate and effective use of resources where possible.

5. Education, public outreach, and open access

With due consideration of the funding limitations, reviewers will consider:

- the extent and quality of the proposed education and outreach programs, their potential for success, and the resulting impacts on identified target audiences;
- the relevance of the proposed plan to engage and develop intellectual talent, including groups underrepresented in the sciences, mathematics and engineering, in the conduct of Gemini research, education and operational support activities;
- the suitability of proposed mechanisms to ensure broad and equitable access to Gemini among the relevant scientific research communities.

6. Transition Plan: The Transition Plan will be evaluated to assess the proposing organization's ability to assume full responsibility for the management and operation of Gemini upon completion of the transition period without degradation of high-quality services, research efforts and facilities.

In addition, NSF will assess the organization's budgetary and financial information as requested as part of the review and as outlined under Section V.B of this solicitation. The organization will be assessed for the adequacy of its internal accounting and operational controls (including human resources, property control and procurement systems), potential for attracting qualified employees, and the adequacy of its financial resources for managing Gemini. The proposed fee (if any) and proposed total costs will be evaluated by NSF for reasonableness and potential impact on funding available for science and related activities.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, or Reverse Site Review.

The panel will have access to the ad hoc reviews, and with its own deliberations will formulate an overall evaluation of each proposal. The panel membership will include experts in business practices and management of scientific organizations and will be representative of the range of interests present in the Gemini partnership.

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

B. Award Conditions

An NSF award consists of: (1) the award 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) 292-7827 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.

Special Award Conditions:

The award associated with this solicitation will be a cooperative agreement, not a standard grant or a contract. Individual cooperative support agreements will be issued under the terms and conditions of the overall agreement. Any special requirements not stated herein will be negotiated at time of award.

Programmatic Terms and Conditions: The cooperative agreement(s) awarded as a result of this competition will be administered by the NSF Division of Astronomical Sciences. The following measures will be employed in providing oversight for the cooperative agreement:

- Review of annual reports, program plans and performance metrics;
- Virtual and face-to-face meetings with Key Personnel, as necessary;
- Site visits annually, or as necessary.

Financial and Administrative Terms and Conditions: Costs to be reimbursed in accordance with 2 CFR 220 -- Cost Principles for Educational Institutions, 2 CFR 230 -- Cost Principles for Nonprofit Organizations, or Federal Acquisition Regulation (FAR) Part 31, as applicable.

The Awardee will be required to submit to an NSF Business Systems Review at least once during the award period. Standard cooperative agreement terms and conditions, including supplements for managers of FFRDCs, are available at: https://www.nsf.gov/awards/managing/co-op_conditions.jsp?org=NSF . Specific terms and conditions will be negotiated at time of award.

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.

The managing organization will be required to provide planning documents such as annual program plans and long-range plans, for all programs at Gemini, along with reports as may be required by NSF. Under the Government Performance and Results Act (GPRA), NSF is required to report on the Federal Performance Goals for Facilities. Any and all facilities with an annual budget exceeding a specific threshold must report on their operations activities; and any and all construction/upgrade projects that exceed a total project cost of a specific threshold must report on their construction/upgrade activities. Therefore, the Awardee will be required, upon request

of the cognizant NSF program officer, to submit annual reports related to the GPRA performance goals. This may include the collection and submission of specific data related to the NSF GPRA requirements.

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:

- Christopher J. Davis, W9136, telephone: (703) 292-4910, email: chrdavis@nsf.gov
- Elizabeth A. Pentecost, W9152, telephone: (703) 292-4907, email: epenteco@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@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 http://www.grants.gov.

ABOUT THE NATIONAL SCIENCE FOUNDATION

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

NSF funds research and education in 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.E.6 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** (NSF Information Center)**:** (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**

  Send an e-mail to: nsfpubs@nsf.gov

  or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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

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

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Alexandria, VA 22314