



National Science Foundation

4201 Wilson Boulevard
Arlington, Virginia 22230

Title: National Astronomy and Ionosphere Center (NAIC)

Dear Colleague:

Consistent with the National Science Board Resolution on Competition and Recompetition of NSF Awards ([NSB-08-12](#)), NSF will compete the next cooperative agreement for the management and operation of the National Astronomy and Ionosphere Center (NAIC) through an open, merit-based review process. The Division of Astronomical Sciences (AST) of the Directorate for Mathematical and Physical Sciences (MPS), in cooperation with the Division of Atmospheric Sciences (ATM) of the Directorate for Geosciences (GEO), is currently preparing the program solicitation, which is expected to lead to the award of a single, five-year cooperative agreement for the management and operation of NAIC following the expiration of the current cooperative agreement in 2010.

ELIGIBILITY INFORMATION

The competition for the management and operation of NAIC will be open to the following organizations or consortia of organizations: academic institutions, other not-for-profit organizations, and any industrial firm operating as an autonomous organization or as an identifiable, separate operating unit of a parent organization. Consortia may include international partnerships, but NSF funds may be awarded only to U.S. organizations.

NAIC must be managed in the public interest with objectivity and independence, free from organizational conflicts of interest, and with full disclosure of its affairs to NSF. NSF will have overall responsibility for award oversight, including technical, programmatic, and financial and administrative performance.

PROGRAM DESCRIPTION

NAIC research facilities are located at Arecibo Observatory on approximately 120 acres of U.S. Government-owned land in Barrio Esperanza, Arecibo, Puerto Rico. NAIC has been operated as an NSF Federally Funded Research and Development Center (FFRDC) since 1970, when ownership of the Observatory was transferred to NSF from the Department of Defense. NSF is presently examining the status of NAIC as an FFRDC, a designation that is independent of its current role as a national research center.

Arecibo Observatory's primary instrument is a 305-meter diameter, fixed, spherical reflector, which is equipped with aberration-correcting Gregorian optics and a suite of state-of-the-art, low-noise receivers covering frequency bands ranging from 400 MHz to 10 GHz. A new seven-feed array receiver, the Arecibo L-band Feed Array, was commissioned in 2005–2006 and is now conducting routine science observations. A 1-Megawatt S-band (2380-MHz) radar system is available for solar system studies, and a 430-MHz incoherent scatter radar serves as a key instrument for ionospheric research. Several lidars for atmospheric observations are also located on site.

As the world's largest single-dish radio/radar telescope, Arecibo Observatory is unique in its sensitivity for radio astronomy, solar system radar astronomy and ionospheric observations. The facility serves users through the administration of observing time via competitive proposals. Radio astronomers and planetary scientists use the Arecibo facility to study such diverse areas as interstellar gas, galactic structure formation and evolution, pulsars and fundamental physics, the dynamic variations in Earth's ionosphere, and topics in solar system astronomy, such as the physical properties of asteroids, planetary surfaces and moons and the post-discovery characterization and orbital refinement of near-Earth asteroids.

The incoherent scatter radar at Arecibo Observatory is part of an NSF-supported network of radars strategically distributed to observe the transport of radiative and corpuscular energy, from its origins at the sun to its deposition in Earth's upper atmosphere. The unique sensitivity of Arecibo allows it to measure the density, temperature and motion of plasma in Earth's ionosphere with unrivaled time and spatial resolution. It is also the only aeronomy observatory located at tropical mid-latitudes where many important ionospheric processes take place.

In addition to enabling frontier research, NAIC has a primary goal to provide educational and public outreach programs at all levels. Arecibo Observatory offers significant potential to enhance the participation of underrepresented and underserved communities within Puerto Rico in the research and education mission of the Observatory and to strengthen the strategic growth of a scientific and technically trained workforce in the region and for the Nation.

SPONSOR'S CONCEPT OF NAIC OPERATIONS

The recipient of the award shall manage facilities and equipment provided by NSF, will provide additional facilities and equipment as necessary, and will provide support and technical personnel to manage Arecibo Observatory as a scientifically competitive research and education facility. In cooperation with NSF, NAIC will plan and execute a research program consistent with the objectives and priorities of NSF and the scientific community. The Observatory is a multidisciplinary resource; as such, a significant portion of the research and education program at the Observatory should be carried out in collaboration with its stakeholder communities.

NSF expects to provide support for NAIC at a reduced level relative to current operations. As such, interested organizations are encouraged to consider novel models of operations and governance, revisions to programmatic scope, and/or sources of additional funding that would sustain Arecibo Observatory as a competitive scientific and educational facility that is responsive to its stakeholders in the scientific community and the Commonwealth of Puerto Rico.

ANTICIPATED COMPETITION SCHEDULE

This notice does not constitute a solicitation; therefore, no award of any kind will result from this notice. Although the competition is still in the planning stage, NSF anticipates that a program solicitation will be issued in early 2009. The solicitation will specify all program guidelines and proposal requirements, including budgetary information, review criteria, exceptions to [NSF Grant Proposal Guide](#) proposal preparation instructions, and a schedule for potential site visits and bidders' meetings.

It is expected that the program solicitation will call for the submission of voluntary Letters of Intent, due 90 days after publication of the solicitation. The Letters are expected to provide a statement of the organization's capabilities to perform the management and operation of Arecibo Observatory, as well as an outline of the organization's vision and design concept for the future of the Observatory. The Letters would be intended to provide an overview of the applicant's approach, and as such will be limited in length.

The anticipated due date for full proposals in response to the program solicitation is six months following publication of the solicitation.

REQUESTS FOR INFORMATION

All inquiries regarding this announcement and the competition for the management and operation of NAIC should be directed to the Primary Contact listed below.

NSF invites requests for individual conferences with NSF from eligible organizations interested in this competition. At conferences, organizations may request clarification of general aspects of the competition or identify to NSF any information needed for proposal preparation. Requests should be submitted via email or phone to the Primary Contact listed below no later than 22 December 2008.

Sources of additional information:

- National Science Foundation, Astronomical Sciences: <http://www.nsf.gov/div/index.jsp?org=AST>
- National Science Foundation, Atmospheric Sciences: <http://www.nsf.gov/div/index.jsp?div=ATM>
- National Astronomy and Ionosphere Center: <http://www.naic.edu>

Primary Contact:

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Sincerely,

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