

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

- ! **Federal Agency Name(s):** Office of Oceanic and Atmospheric Research, National Oceanic and Atmospheric Administration, Department of Commerce
- ! **Funding Opportunity Title:** The Argo Project: Global Ocean Observations for Understanding and Prediction of Climate Variability
- ! **Announcement Type:** Notice of request for proposals
- ! **Funding Opportunity Number:** OAR-ORS-2006-2000414
- ! **Statutory Authority:** 49 U.S.C. 44720 (b); 33 U.S.C. 883d; 15 U.S.C. 2904; 15 U.S.C. 2931-2934
- ! **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.431, Climate and Atmospheric Research.
- ! **Dates:** Letters of Intent in electronic, facsimile, or hard copy form are due 5 p.m. ET, October 31, 2005. Letters of Intent are used for assessment purposes only and are not a requirement for proposal submission. Full proposals in electronic or hard copy form are due 5 p.m. ET, December 16, 2005. Funds awarded and project beings approximately July 1, 2006.
- ! **Funding Opportunity Description:** The Office of Oceanic and Atmospheric Research (OAR), on behalf of the National Ocean Partnership Program (NOPP), is entertaining letters of Intent and subsequently full proposals for implementing the next phase of the U.S. contribution to the global Argo array of profiling floats. Beginning in FY 2006 NOAA intends to complete the development and deployment of the initial phase of Argo and begin to demonstrate the sustained operation of Argo. Contingent on the availability of appropriated funds, this phase of Argo is expected to continue for five years. The level of funding available each year will be dependent on appropriations. It is expected that approximately \$9,200,000 annually will be available for the project. It is expected that one, multi-investigator award will be made.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The National Oceanographic Partnership Program (NOPP) was established by 10 U.S.C. 7902 et seq. to (1) promote the national goals of assuring national security, advancing economic development, protecting quality of life, and strengthening science education and communication through improved knowledge of the ocean; and (2) coordinate and strengthen oceanographic efforts in support of those goals by identifying and carrying out partnerships among Federal agencies, academia, industry, and other members of the oceanographic scientific community in the areas of data, resources, education, and communication.

In 1999, Argo was identified as a key NOPP program and selected for implementation. Beginning in FY 2006 NOAA intends to complete the deployment of the initial phase of Argo and begin to demonstrate the sustained operation of Argo. Contingent on the availability of appropriated funds, this phase of Argo is expected to continue for five years.

B. Program Description

Argo, a broad-scale global array of temperature/salinity profiling floats, is planned as a major component of the ocean observing system. Argo builds on the existing upper-ocean thermal networks, extending their spatial and temporal coverage, depth range and accuracy, and enhancing them through addition of salinity and velocity measurements. For the first time, the physical state of the upper ocean will be systematically measured and assimilated in near real-time.

The objectives of Argo fall into several categories. Argo will provide a quantitative description of the evolving state of the upper ocean and the patterns of ocean climate variability, including heat and freshwater storage and transport. Argo is designed to have a strong complementary relationship with the Jason altimeter mission. The data will enhance the value of the Jason altimeter through measurement of subsurface vertical structure ($T(z)$, $S(z)$) and reference velocity, with sufficient coverage and resolution for interpretation of altimetric sea surface height variability. For the first time, the physical state of the upper ocean will be systematically measured and assimilated in near real-time.

Argo data will be used for initialization of ocean and

coupled forecast models, data assimilation and dynamical model testing. A primary focus of Argo is seasonal to decadal climate variability and predictability, but a wide range of applications for high-quality global ocean analyses is anticipated.

The initial design of the Argo network is based on experience from the present observing system, on newly gained knowledge of variability from the TOPEX/Poseidon altimeter, and on estimated requirements for climate and high-resolution ocean models. All Argo data will be publicly available in near real-time via the GTS (Global Telecommunications System), and in scientifically quality-controlled form with a few months delay. Global coverage should be achieved during the Global Ocean Data Assimilation Experiment (GODAE), which together with CLIVAR (CLImate VARIability and Predictability Program) and GCOS/GOOS, provide the major scientific and operational impetus for Argo. The design emphasizes the need to integrate Argo within the overall framework of the global ocean observing system.

International planning for Argo, including sampling and technical issues, is coordinated by the Argo Science Team. Presently 19 nations plus the European Union have Argo programs that include float development, procurement and/or production, with three additional nations expected this year. Combined deployments from these nations are expected to exceed 2200 floats per year by 2006.

C. Program Authority

Authority: 49 U.S.C. 44720 (b); 33 U.S.C. 883d, 15 U.S.C. 2904; 15 U.S.C. 2931-2934, (CFDA No. 11.431) - CLIMATE AND ATMOSPHERIC RESEARCH.

II. Award Information

This RFP is to implement the NOAA component of the U.S. contribution to Argo. The NOAA component of the U.S. contribution to Argo is, presently, to develop and maintain 50% of the global, operating array of instruments; the maintenance of the real-time data stream, including insertion of data onto the GTS; and the delayed-mode quality control of the data from those instruments. It is expected that approximately \$9,200,000 annually will be available for the project. Actual funding levels will depend upon final budget appropriations each year of the program.

This announcement is for a project to be conducted by investigator(s) both inside and outside of NOAA, over a five year period. It is expected, though not certain, that a single project involving multiple investigators will be funded. In

accordance with the NOPP, team efforts among academia, industry, and government participants with resource sharing are strongly encouraged. For Federal Government investigators, funding will be provided through intra or interagency transfers, as appropriate. The funding instrument for extramural awards will be a grant unless it is anticipated that NOAA will be substantially involved in the implementation of the project such as developing, deploying, and the operation of instrumentation; managing data streams; and/or quality control of data; in which case the funding instrument should be a cooperative agreement. NOAA will make decisions regarding the use of a cooperative agreement on a case-by-case basis.

III. Eligibility Information

A. Eligible Applicants

Extramural eligibility is not limited. Eligible applicants include institutions of higher education, other non-profits, commercial organizations, international organizations, state, local and Indian tribal governments. Applications from non-Federal and Federal applicants will be competed against each other. PLEASE NOTE: Before non-NOAA Federal applicants may be funded, they must demonstrate that they have legal authority to receive funds from another Federal agency in excess of their appropriation. The only exception to this is governmental research facilities for awards issued under the authority of 49 USC 44720. Because this announcement is not proposing to procure goods or services from applicants, the Economy Act (31 USC 1535) is not an appropriate legal basis for receipt of federal funds.

B. Cost Sharing or Matching Requirement

Cost sharing or matching is not required; however, resource sharing amongst partners within NOPP programs is encouraged. See Evaluation Criteria 6.

IV. Application and Submission Information

A. Address to Request Application Package

There is no application package for letters of intent. Applications for full proposals are available through www.grants.gov. For applicants without internet access, contact Dr. Stephen R. Piotrowicz, mail address: NOAA/Office of Oceanic and Atmospheric Research, 1315 East-West Highway, R/OSS, Rm. 11538, Silver Spring, MD 20910; phone: 703-588-0850; or e-Mail: steve.piotrowicz@noaa.gov.

B. Content and Form of Application Submission

1. Letters of Intent

To prevent the expenditure of effort that may not be successful, proposers are encouraged to first submit Letters of Intent. Letters of Intent are used for assessment purposes only and are not a requirement for proposal submission. Letters of Intent must be single or double-spaced, typewritten in at least a 10-point font, and printed on metric A4 (210 mm x 297 mm) or 8½" x 11" paper. The following information should be included:

(a) Title page: The title page should clearly identify the project area being addressed by starting the project title with "The Argo Project: Global ocean observations for understanding and prediction of climate variability." Principal Investigators and collaborators should be identified by affiliation and contact information. The total amount of Federal funds and matching funds being requested should be listed for each budget period.

(b) A concise (2-page limit) description of the project. Proposers may wish to use the Evaluation Criteria for additional guidance in preparing the Letter of Intent.

(c) Resumes (1-page limit) of the Principal Investigators.

2. Full Proposals

Each full proposal must include the first eight items listed below; the standard forms included as Item 9 will only be required for proposal(s) selected for funding. All pages should be single- or double-spaced, typewritten in at least a 10-point font, and printed on metric A4 (210 mm x 297 mm) or 8½" x 11" paper. Brevity will assist reviewers and program staff in dealing effectively with proposals, therefore, the Project Description may not exceed 15 pages. Proposals from 3 or more investigators may include a statement of work of up to 15 pages of overall project description plus up to 5 additional pages in total for individual project descriptions. Literature citations and letters of support, if any, are not included in the 15-page limitation. All information needed for review of the proposal should be included in the main text; no appendices, other than support letters, if any, are permitted. Failure to adhere to the above limitations may result in the proposal being rejected without review.

(1) Signed Title Page: The title page should be signed by the Principal Investigator and the institutional representative and should clearly identify project by starting the title "The Argo Project: Global ocean observations for understanding and prediction of climate variability." The Principal Investigator

and institutional representative should be identified by full name, title, organization, telephone number, and address. The total amount of Federal funds being requested should be listed for each year of the project; the total should include all subrecipient's budgets on projects involving multiple institutions.

(2) Abstract: An abstract must be included and should contain an introduction of the problem, rationale and a brief summary of work to be completed. The abstract should appear on a separate page, headed with the proposal title, institution(s) investigator(s), total proposed cost and budget period.

(3) Project Description/Work Statement: The Project Description should include identification of the problem; objectives (both operational and scientific) of the work; relevance to the operational prediction mission; proposed implementation strategy; proposed methodology (e.g., float acquisition, communications, deployment); transition to pre-operational status in the period 2011-2016; and a transition plan for long-term data management. The following elements should be described in detail:

(a) Deployment strategy: The project should include a plan for interactions with the operational and research communities with regard to the deployment strategy for the U.S. contribution to the global 3-degree array. The project should describe with whom interactions will occur, and how their recommendations will be considered to determine the configuration of the array that you intend to deploy. The project should also address how the proposed deployment strategy complements and/or supplements other components of the observing system as they relate to operational predictions, as well as to the objectives of CLIVAR (CLImate VARIability program) and GODAE (Global Ocean Data Assimilation Experiment).

(b) Deployment logistics: All costs associated with the implementation of Argo should be included, including communications and deployment costs. The proposal should demonstrate that access to appropriate deployment platforms (ships, aircraft) is available to implement the strategy being proposed.

(c) Data Management: The proposal should also include a plan for continued inter-comparison of floats from different manufacturers within the consortium and within the international science group. It should illustrate how real-time (within 24 hours) delivery of data will be achieved. Since the implementation of the global Argo array will be the responsibility of several international groups that may change over time, the proposal must include a plan for maintaining the integrity of the data system (data flow and quality control) over the lifetime of the project.

(4) Current and Pending Support: Applicants must provide information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State, or local government agencies, private foundations, industrial or other commercial organizations) must be listed. The proposed project and all other projects or activities requiring a portion of time of the Principal Investigator and other senior personnel should be included, even if they receive no Federal salary support from the project(s). The number of person-months per year to be devoted to the projects must be stated, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including those within NOAA.

(5) Vitae (2 pages maximum per investigator): Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last three years with up to five other relevant papers.

(6) Results from prior research: The results of related projects supported by NOAA and other agencies should be described, including their relation to the currently proposed work. Reference to each prior research award should include the title, agency, award number, Principal Investigators, of award and total award. The section should be a brief summary and should not exceed two pages total.

(7) DUNS Number: All applications must have a DUNS (Dunn and Bradstreet [D&B]) Data Universal Numbering System when applying for Federal grants. No application is deemed complete without the DUNS number and only OMB may grant exceptions.

(8) Standard Application Forms: For proposal(s) selected for funding, the following forms must also be submitted: Standard Forms 424, Application for Federal Assistance, and 424B, Assurances-Non-Construction Programs, (Rev 4-88). Please note that both the Principal Investigator and an administrative contact should be identified in Section 5 of the SF424. For Section 10, applicants should enter ``11.431`` for the CFDA Number and "Climate and Atmospheric Research" for the title. The form must contain the original signature of an authorized representative of the applying institution.

(9) Proposals submitted in hard copy form should contain one original plus two copies of the full proposal. If color and/or grayscale graphics are included in the proposal, and offerer feels that color or grayscale graphics would be necessary for the review process, the offerer may submit twelve additional copies of the these graphics.

C. Submission Dates and Times

October 31, 2005, 5 pm (ET) - Letter of Intent in electronic, facsimile, or hard copy form due. Letters of Intent are used for assessment purposes only and are not a requirement for proposal submission.

December 16, 2005, 5 pm (ET) - Proposal due.

Proposals submitted through www.grants.gov will be accompanied by a data and time receipt indication on them. If an applicant does not have internet access, hard copy proposals will be accepted and date recorded when they are received in the program office. Electronic or hard copies of proposals received after the deadline will not be considered and hard copy applications will be returned to the sender.

D. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

E. Other Submission Requirements

Letters of Intent should be sent electronically to: Steve.Piotrowicz@noaa.gov. For those applicants without internet access, hard copies may be mailed to Ocean.US, 2300 Clarendon Blvd., Suite 1350, Arlington, VA 22201; ATTN: Dr. Stephen R. Piotrowicz. Faxes may be sent to: Ocean.US, ATTN: Stephen R. Piotrowicz at 703-588-0872.

Proposals should be submitted through Grants.gov. For those applicants without internet access, hard copies may be sent to Ocean.US, 2300 Clarendon Blvd., Suite 1350, Arlington, VA 22201; ATTN: Dr. Stephen R. Piotrowicz.

V. Application Review Information

A. Evaluation Criteria

Evaluations of the proposals will use the following selection criteria:

1. Importance and/or relevance and applicability of the proposed project to the program goals: This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, State or local activities (25%):

- a. Data accessibility;

b. applicability of the project to NOPP objectives of developing a better understanding of the oceans and establishing leadership in oceanography through broad participation within the oceanographic community, significant partnering between at least two of the following parties: academia, industry, or government, and those partners have a long-term commitment to the proposed objectives of the project;

c. resource sharing among partners; and

d. achieving and sustaining an Integrated Ocean Observing System.

2. Technical/scientific merit: This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives (25%):

a. Instrumentation to be employed;

b. deployment strategy, including how the proposed strategy interfaces with the global Argo array and complements and/or supplements deployment strategies of other components of the observing system as they relate to operational predictions, as well as the objectives of CLIVAR and GODAE;

c. deployment logistics, including communications as well as deployment; and

d. data management.

3. Overall qualifications of the applicants: This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project (30%).

4. Project costs: The Budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame(10%).

5. Outreach and education: NOAA assesses whether this project provides a focused and effective education and outreach strategy to protect the Nation's natural resources (10%).

B. Review and Selection Process

The review process will be conducted by the NOPP Program Office on behalf of the NOPP agencies. A description of the NOPP Proposal Review Process can be found at:

<http://www.nopp.org/Dev2Go.web?id=236688&rnd=31591>.

All proposals, including those submitted by NOAA employees, will be evaluated similarly. The process uses peer reviews solicited by mail and/or a panel. Federal conflict of interest rules are followed. The individuals who provide peer review are scientists drawn from academic, government, and industrial/commercial communities. Mail reviews require a scoring in accordance with the criteria presented in Section IV, Evaluation Criteria, as well as a narrative assessment. If a panel is convened along

with soliciting mail reviews, it will consider the results of the mail reviews and rate the proposals. If only a panel is convened, it will both score the proposals numerically in accordance with the criteria in Section IV and rate the proposals. The ratings will be determined by a vote of the Panel on each proposal individually. No consensus advice will be given by the Panel (unless the panel is composed entirely of Federal employees). The merit review ratings will provide a rank order to the selecting official to make the selection(s). The selecting official shall award in rank order unless the proposal is justified to be selected out of rank order based on one or more of the following factors:

1. Availability of funding.
2. Balance/distribution of funds:
 - a. Geographically.
 - b. By type of institutions.
 - c. By type of partners.
 - d. By research areas.
 - e. By project types.
3. Whether this project duplicates other projects funded or considered for funding by NOAA or other Federal agencies.
4. Program priorities and policy factors.
5. Applicant's prior award performance.
6. Partnerships and/or Participation of targeted groups.
7. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary before recommendations for funding are made to the Grants Officer.

VI. Award Administration Information

1. Award Notices

This notice of award is signed by the NOAA Grants Officer and is the authorizing document. It may be provided by postal mail or electronically to the appropriate business office of the recipient organization. Unsuccessful applications will be destroyed.

2. Administrative and National Policy Requirements

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements - The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2004 (69 FR 78389) is applicable to this solicitation.

Limitation of Liability - In no event will NOAA or the

Department of Commerce be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

National Environmental Policy Act (NEPA) - NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals which are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website:

(<http://www.nepa.noaa.gov/>), including our NOAA

Administrative Order 216-6 for NEPA,

(http://www.nepa.noaa.gov/NAO216_6_TOC.pdf), and the Council on Environmental Quality implementation regulations,

(http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm).

Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting of an environmental assessment, if NOAA determines an assessment is required.

Applicants will also be required to cooperate with NOAA in identifying and implementing feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for the denial of an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

3. Reporting - If you are selected to receive a grant award for this project you must:

- a. Submit a project status report for, and participate in, an annual program review by the U.S. Argo Science and Implementation Panel.
- b. Submit a final report within 180 days after the completion of the project.
- c. The final report must describe the project and include an evaluation of the work performed and the results and benefits in sufficient detail to enable us to assess the success of the completed project.

This may be submitted either electronically or in hard copy.

VII. Agency Contact(s)

Contact Dr. Stephen R. Piotrowicz, mail address: NOAA/Office of Oceanic and Atmospheric Research, 1315 East-West Highway, R/OSS, Rm. 11538, Silver Spring, MD 20910; phone: 703-588-0850; or e-Mail: steve.piotrowicz@noaa.gov.