

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): National Environmental Satellite, Data, and Information Service, National Oceanic and Atmospheric Administration, Department of Commerce

Funding Opportunity Title: Research in Satellite Oceanography

Announcement Type: Initial Announcement

Funding Opportunity Number: NESDIS 2004-2

Catalog of Federal Domestic Assistance (CFDA) Number: 11.440 - Environmental Sciences, Applications, Data, and Education.

Dates: Complete applications must be received by the Office of Research and Applications no later than 4:00 p.m. Eastern Daylight Time, August 22, 2003.

Funding Opportunity Description: The National Environmental Satellite, Data, and Information Service (NESDIS), Office of Research and Applications (ORA), announces the availability of Federal assistance in the area of satellite oceanography. This program responds to a need for research and activities that expand the use of satellite oceanographic data. Funded proposals will help build capabilities nationwide in the application of satellite oceanographic data for environmental monitoring, prediction, and coastal management.

FULL ANNOUNCEMENT

I. Funding Opportunity Description

A. Program Objectives

The Ocean Remote Sensing Program, managed by the NOAA/NESDIS/ORA/Oceanic Research and Applications Division, has as its overall goal to help support the missions of NOAA and NESDIS by building capabilities nationwide to make expanded and improved use of earth-orbiting satellite oceanographic data and information. The Program has particular interest in activities relating to sustaining healthy coasts, building sustainable fisheries, recovering protected species, providing improved environmental forecasts, and preparing for future NOAA operational satellite missions. The Ocean Remote Sensing Program has five overall goals:

- (1) Realize the full potential of environmental satellites in coastal and ocean applications including (a) participating in the development of an end-to-end system for ocean data and product production and access, (b) leveraging the existing worldwide investment in ocean sensing satellites including non-NOAA satellite data, and (c) the formation of strategic partnerships with other Federal agencies, foreign, state, and local government institutions, as well as academia and the private sector.

- (2) Simplify user access including the provision of satellite ocean data and products in common formats and providing the ability to fuse satellite data with in-situ, historical, and other remotely sensed data.
- (3) Increase users' capacity including the provision of user training and regionally focused projects.
- (4) Expand services through the development of new products and access systems.
- (5) Prepare for future satellite systems.

B. Program Priorities

The NESDIS ORA will only consider individual proposals addressing one or more of the Program Priorities listed below. Proposals must clearly specify which Program Priority(s) is (are) addressed. All proposals will be evaluated in the context of the potential value of the proposed work to a targeted user community (to be identified in the proposal), and the relationship of the proposed work to the Ocean Remote Sensing Program Goals as described in the "Program Objectives" section of this Notice. The Program Priorities are:

- (1) Increased understanding of the measurement of skin sea surface temperatures (SST) from satellite passive microwave and infrared instruments including the development and validation of SST products from these instruments, as well as the fusion of microwave and infrared SST data. For proposals including a validation component, the skin-bulk SST relationship should be addressed.
- (2) Research leading to the development of innovative automated ocean-parameter measurement techniques using satellite synthetic aperture radar (SAR) data for: (a) significant wave height, full wave spectrum and/or other wave parameters, or (b) ocean applications exploiting multi-polarization SAR data from the ENVISAT Advanced SAR (ASAR) instrument.
- (3) Employment of satellite altimetric sea surface height measurements to identify and seek understanding of regional differences in Global Sea Level rise, particularly as it affects the U.S. coastline. If possible, include coastal impacts, such as erosion and inundation.
- (4) Research leading to the development of improved atmospheric correction of satellite ocean color imagery in turbid coastal waters.
- (5) Research directed at quantifying the tradeoffs of higher resolution satellite ocean vector wind data in NOAA's operational short-term warnings and forecasting. Proposals should address both the coastal and global ocean environment in examining what spatial resolutions are realistically

required to meet the needs of numerical weather prediction models and human forecasters.

- (6) Research directed at reducing the uncertainties in the measurements of in-water apparent optical properties, suspended particulates, and dissolved organic matter through modeling or modifications of protocols. The primary focus should be on the measurement of the spectral attenuation coefficients for the upwelled radiances, water-leaving radiances, high performance liquid chromatography (HPLC) pigments, colored dissolved organic matter, and total suspended matter.

C. Program Authority

Statutory authority for this program is provided under 33 U.S.C. 1442 and 49 U.S.C. 44720(b).

II. Award Information

A. Funding Availability

NOAA/ ORA believes its Ocean Remote Sensing Program will benefit significantly from a strong partnership with outside investigators. Current program plans assume the total resources provided through this announcement will support extramural efforts through the broad research community. Because of Federal budget uncertainties, it has not been determined how much funding will be available through this announcement. The total amount available is anticipated to be approximately \$375,000. It is anticipated that three or four awards will be made from this budget. There is no guarantee that sufficient funds will be available to make awards for all qualified projects. Publication of this notice does not oblige NOAA to award any specific project or to obligate any available funds. If one incurs costs prior to receiving an award agreement signed by an authorized NOAA official, one would do so solely at one's own risk of these costs not being included under the award.

B. Project/Award Period

This program announcement is for projects to be conducted by investigators for a 1- year, or 2-year period. Individual awards are expected to range from a minimum of \$50,000 to a maximum of \$125,000 per year for no more than 2 years. When a proposal for a multi-year award is approved, funding will be provided for only the first year of the program. Funding for each subsequent year for a multi-year proposal is at ORA's discretion and will be contingent upon satisfactory progress in relation to the stated goals of the proposal to address specific science needs and priorities of ORA and availability of funds.

C. Type of Funding Instrument

Selected recipients will either receive a grant, or enter into a cooperative agreement with ORA, depending upon the amount of ORA's involvement in the project. A grant will be awarded where the proposed work is considered substantially independent work. A cooperative agreement will be awarded where there is substantial involvement by ORA in the proposed work. Examples of substantial involvement may include but are not limited to, proposals for collaboration between NOAA scientists and a recipient scientist and/or contemplation by NOAA of detailing Federal personnel to work on proposed projects.

III. Eligibility Information

A. Eligible Applicants

Eligible applications can be from institutions of higher education, other non-profits, commercial organizations, and state, local and Indian tribal governments. Federal agencies or institutions are eligible to receive Federal assistance under this Notice as sub-awardees only and are limited in the amount of assistance to be received to not more than 20% of the total budget (direct plus indirect costs) requested in the proposal. Proposals with Federal agency or institution sub-award amounts exceeding 20% of the total amount requested will be considered ineligible, and will be destroyed without being reviewed.

Note: Non-NOAA Federal agency or institution sub-awardees must demonstrate that they have legal authority to receive funds for the purpose of this program in excess of their appropriation. Because this announcement is not proposing to procure goods or services from another Federal agency, the Economy Act (31 U.S.C. 1535) is not an appropriate legal basis. Federally Funded Research and Development Centers and Government Owned and Operated Laboratories are eligible to receive Federal assistance under this Notice as sub-awardees only to the extent that the receipt of funds would be consistent with the legal authorities under which they were established and operate.

B. Cost Sharing or Matching Requirement

No cost sharing is required under this program.

C. Other - Not applicable

IV. Application and Submission Information

- A. Application Information** - All application packages must include the following standard forms - original signed copy:
- SF-424 - Application for Federal Assistance (Rev. 7/97)
 - SF-424A - Budget Information - Non-Construction Programs
 - SF-424B - Assurances - Non-Construction Programs
 - CD-511 - Certification Regarding Debarment, Suspension, and Other Responsibility Matters: Drug-Free Workplace Requirements and Lobbying
 - SF-LLL - Disclosure of Lobbying Activities (submit only if engaged in lobbying activities)

These forms and additional information are available on the NOAA Grants Homepage: <http://www.ofa.noaa.gov/~grants/index.html>

B. Content and Form of Application Submission

Proposals must adhere to the two provisions under "Proposals" and the seven requirements under "Required Elements" by the deadline of August 22, 2003. Failure to follow these restrictions will result in proposals being destroyed without review.

(1) Proposals

- (a) Proposals submitted to the NOAA/NESDIS Ocean Remote Sensing Program must include the original and two unbound copies of the proposal. Investigators are not required to submit more than three copies of the proposal; however, the normal review process requires five copies. For an optimal review, investigators are encouraged to submit sufficient proposal copies, especially color or unusually sized (not 8.5" X 11"), or otherwise unusual materials submitted as part of the proposal. Only an original version of the federally required forms and two copies are needed.
- (b) Proposals should be no more than 10 double-spaced pages in a 12- point font on 8.5x11 paper (numbered) in length. The title page, abstract, budget details, vitae, current and pending support, Federal grant application package forms, and any other appendices are not included in the 10 page limit.

(2) Required Elements

- (a) Signed title page. The title page should be signed by the Principal Investigator (PI) and the institutional representative and should clearly indicate which Program Priority(ies) is(are) being addressed. The PI and institutional representative should be identified by full name, title, organization, telephone number, e-mail address and postal address. The total amount of Federal funds being requested should be listed for each budget period.
- (b) 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 name, names of investigators, proposed cost, and budget period.
- (c) 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, PIs, period of award and total award. The section should be a brief summary and should not exceed two pages total.

- (d) Project description. The proposed project must be completely described, including identification of the problem; scientific objectives; proposed methodology; relevance to the objectives and priorities of the Ocean Remote Sensing Program; specifics of how the project will contribute to improving the use of satellite oceanographic data by an identified primary target audience (the target audience must be explicitly stated); identification of project partners and their roles; and milestones, time lines, and desired outcomes (in multi-year proposed efforts by year).
- (e) Budget. Applicants must submit a Standard Form 424 “Application for Federal Assistance,” including a detailed budget using the Standard Form 424A, “Budget Information—Non-Construction Programs.” The form is included in the standard NOAA application kit. The proposal must include total and annual budgets corresponding with the descriptions provided in the project description. In addition to the required forms, a detailed budget must be included in an appendix to the proposal including a narrative providing the basis and justification of the proposed budget. For proposals that include sub-awards to Federal Government agencies, include these amounts in the detailed budget in the budget appendix, but do not include sub-awards to Federal Government agencies on the SF-424 and SF-424A. Applicants are required to include travel for two trips per year: one to the NOAA Cooperative Institute for Oceanographic Satellite Studies (CIOSS) located at Oregon State University in Corvallis, Oregon, and a second to the ORA site in Camp Springs, Maryland. The purpose of this travel is to report on grant progress and prospective achievements at a yearly review of the Ocean Remote Sensing Program to be held at the NOAA Cooperative Institute for Oceanographic Satellite Studies and to interact with the relevant ORA Science Teams in Camp Springs.
- (f) Vitae. Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last 3 years with up to five other relevant papers. The vitae(s) should be included in the appendix.
- (g) Current and pending support. For each investigator, submit a list which includes project title, supporting agency with grant number, investigator months, dollar value, and duration. Requested values should be listed for pending support. This information on current and pending support should be included in the appendix.

C. Submission Date and Time

The deadline for receipt of proposals at the NOAA/NESDIS office is 4:00 p.m., Eastern Daylight Time, August 22, 2003. Proposals received after the deadline will be destroyed without review. NOAA/ NESDIS determines whether an application has been submitted before the deadline by date/time stamping the applications as they are physically received in the NOAA/ NESDIS office.

D. Intergovernmental Review

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

E. Funding Restrictions - No special restrictions apply.

F. Other Submission Requirements

All applicants are to submit hard copy proposals only. Facsimile transmissions and electronic mail submission of proposals will not be accepted. The hard copies may be submitted by postal mail, commercial delivery service, or hand-delivery. Proposals must be submitted to: ATTN: William Pichel, NOAA/NESDIS; 5200 Auth Road, Room 701, Camp Springs, MD 20746.

V. Application Review Information

A. Evaluation Criteria - The evaluation criteria and weighting of the criteria are as follows:

- (1) Importance/Relevance and Applicability of Proposal to the Program Goals (25 percent): This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For the Satellite Oceanography competition this includes: Does the proposed project directly address one or more of the research areas specified in "Program Priorities?" Does the proposed project (directly or indirectly) address a critical need? Are the project goals and objectives clear and concise? Does the proposed project have a clearly defined user audience and application? Are there direct ties to relevant NESDIS, NOAA, and Federal, regional, state or local activities? Are the overall objectives and outcomes of the proposed work timely in the sense that they address current needs with current state-of-the-art satellite oceanographic data?
- (2) Technical/Scientific Merit (30 percent): This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. For the Satellite Oceanography competition this includes: Is the approach technically sound? Does the proposed project build on existing knowledge? Is the approach innovative? Does the proposed research provide a significant contribution to ocean remote sensing?

- (3) Overall Qualification of Applicants (15 percent): This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. For the Satellite Oceanography competition this includes: Are the proposers capable of conducting a project of the scope and scale proposed (*i.e.*, scientific, professional, facility, and administrative resources/capabilities) and has prior work demonstrated knowledge of research area/topic? Are partnerships appropriate and are they likely to contribute to the success of the program?
- (4) Project Costs (15 percent): This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time-frame. For the Satellite Oceanography competition this includes: Do researchers demonstrate the ability to leverage other resources? Is there a high ratio of operationally useful results versus proposed costs? Is the budget realistic and commensurate with the project needs? Does the narrative justify the proposed expenditures?
- (5) Outreach and Education (15 percent): This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. For the Satellite Oceanography competition this includes: Does the proposed work have the potential of increasing the accessibility, usability (*i.e.*, easily understood and used), and relevance of satellite-observed oceanographic data and information by the identified target user community? Does the proposed work provide for flexible, early, and effective opportunities for user involvement (*e.g.*, through cooperative experiments, demonstrations, or user evaluations)?

B. Review and Selection Process

An initial administrative review/screening is conducted to determine compliance with requirements/completeness. All proposals will be evaluated and individually ranked in accordance with the assigned weights of the above evaluation criteria by at least 3 independent peer reviewers. These reviewers may include both Federal and non-Federal individuals. The merit reviewers ratings are used to produce a rank order of the proposals. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based upon one of the selection factors provided below. The Program Official and/or Selecting Official may negotiate the funding level of the proposal. The Selecting Official makes final recommendations for award to the Grants Officer who is authorized to obligate the funds and execute the award.

C. Selection Factors

The merit review ratings shall provide a rank order to the Selecting Official for final funding recommendations. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based upon 1, 2.a.,b, 3, 4, and 5 of the following factors:

- (1) Availability of Funding

- (2) Balance/distribution of funds:
 - (a) Geographically: The selecting official may take into account the need to spread awards geographically.
 - (b) By type of institution: While an institution/organization/agency may submit more than one application, the selecting official may limit the awards to only one per institution/organization/agency.
 - (c) By type of partners
 - (d) By research areas
 - (e) By project type
- (3) Duplication of other Projects Funded or Considered for Funding by NOAA/Federal Agencies. Whether an application substantially duplicates other projects currently approved for funding or funded by NOAA or other Federal agencies may be considered by the selecting official.
- (4) Program Priorities and Policy Factors: The selecting official may take into account the need to distribute awards among the Program Priorities given in the "Program Priorities" section of this Notice.
- (5) Applicant's Prior Award Performance: Unsatisfactory performance may be a basis for not funding.
- (6) Partnerships with/Participation of targeted groups

D. Anticipated Announcement and Award Dates

Subject to the availability of funds, review of proposals will occur during September and October 2003, and funding should begin during winter 2004 for most approved projects. February 1, 2004, should be used as the proposed start date on proposals, unless otherwise directed by the Program Officer.

VI. Award Administration Information

A. Award Notices

The notice of award is signed by the NOAA Grants Officer and is the authorizing document. It is provided by postal mail to the appropriate business office of the recipient organization. NOAA/NESDIS will notify unsuccessful applicants, in writing, by postal mail. Those proposals that are not ultimately selected for funding will be destroyed.

B. Administrative and National Policy Requirements

Administrative and national policy requirements for all Department of Commerce awards are contained in the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements published in the Federal Register on October 1, 2001 (66 FR 49917), as amended by the Federal Register notice published on October 30, 2002 (67 FR 66109). You may obtain a copy of these by notices by contacting the agency contact(s) under Section VII, or by going to the website at: www.access.gpo.gov/su_docs/aces140.html.

Applicants whose proposed projects may have an environmental impact should furnish sufficient information to assist proposal reviewers in assessing the potential environmental consequences of supporting the project.

C. Reporting

All financial and progress reports will be submitted in triplicate (one original and two copies). Financial reports are to be submitted to the NOAA Grants Officer, and Performance (technical) reports are to be submitted to the NOAA Program Officer. Financial and Performance reports are semi-annual.

VII. Agency Contacts

Administrative questions: Christine Brown, NOAA/NESDIS, 5200 Auth Road, Room 701, Camp Springs, Maryland 20746, or by phone at 301-763-8127 ext. 107, fax: 301-763-8108, or e-mail: Christine.L.Brown@noaa.gov. Technical questions: William Pichel (Program Officer), NOAA/NESDIS; 5200 Auth Road, Room 701, Camp Springs, Maryland 20746, or by phone at 301-763-8231 ext. 166, or fax to 301-763-8020, or via internet at William.G.Pichel@noaa.gov.