

**Office of Science**  
**Notice DE-FG01-05ER05-27**

*Advanced Detector Research Program*

**Department of Energy**

**Office of Science Financial Assistance Program Notice**  
**DE-FG01-05ER05-27: Advanced Detector Research Program**

**AGENCY:** U.S. Department of Energy

**ACTION:** Notice inviting grant applications.

**SUMMARY:** The Office of High Energy Physics of the Office of Science (SC), U.S. Department of Energy, hereby announces its interest in receiving grant applications for support under its Advanced Detector Research Program. Applications should be from investigators who are currently involved in experimental high energy physics, and should be submitted through a U.S. academic institution. The purpose of this program is to support the development of the new detector technologies needed to perform future high energy physics experiments.

**DATES:** Applicants are requested to submit a Letter of Intent by November 15, 2005, which includes the title of the proposal, the name of the principal investigator(s), the requested funding, and a one-page abstract. Failure to submit a letter of intent will not negatively prejudice a responsive formal application submitted in a timely manner.

Formal applications submitted in response to this notice should be received by 8:00 p.m., Eastern time, December 15, 2005, to permit timely consideration for award in Fiscal Year 2006.

**ADDRESSES:** Letters of Intent referencing Program Notice DE-FG01-05ER05-27 should be submitted via E-mail at the following E-mail address: Saul.Gonzalez@science.doe.gov. Please include the phrase "ADR Letter of Intent" in the subject line.

**Formal Applications**

Applications submitted to the Office of Science must be submitted electronically through Grants.Gov to be considered for award. The Funding Opportunity Number is: DE-FG01-05ER05-27 and the CFDA Number for the Office of Science is: 81.049. Instructions and forms are available on the [Grants.Gov](http://www.grants.gov) website. Please see the information below and also refer to the "Funding Opportunity Announcement", Part IV - Application and Submission Information; H. Other Submission and Registration Requirements for more specific guidance on "Where to Submit" and "Registration Requirements." If you experience problems when submitting your application to Grants.gov, please visit their customer support website: <http://www.grants.gov/CustomerSupport>; email: support@grants.gov; or call 1-800-518-4726.

**Registration Requirements:** There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider and register with [Grants.Gov](http://www.grants.gov)). See <http://www.grants.gov/GetStarted>. Use the Grants.gov Organization Registration Checklist to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at **least 14 days** to complete these requirements. It is suggested that the process be started as soon as possible.

**VERY IMPORTANT - Download PureEdge Viewer:** In order to download the application package, you will need to install PureEdge Viewer. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following Web site: <http://www.grants.gov/DownloadViewer>.

**FOR FURTHER INFORMATION CONTACT:** Dr. Saul Gonzalez, SC-25.1/Germantown Building, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-1290. Telephone: (301) 903-2359. E-Mail: [Saul.Gonzalez@science.doe.gov](mailto:Saul.Gonzalez@science.doe.gov).

**SUPPLEMENTARY INFORMATION:** Future high energy physics experiments will require higher performance detectors to exploit the higher beam energies and intensities of new or upgraded accelerators. Higher performance detectors are also needed to probe for new physical processes in both accelerator-based and non-accelerator-based experiments. Proposed detector research should be driven by the anticipated needs of experiments to be built within the foreseeable future. Generic detector research that could be applied to upgrades that have not yet been approved would also be appropriate. It is expected that the final engineering or fabrication of detectors for specific experiments will **not** be funded by this program. Interesting technologies would include but not be limited to charged particle track detectors, calorimeters or particle identification detectors that are less susceptible to radiation damage, have higher resolution, are lower in cost, or can be read out faster than currently available detectors. Proposals to develop detector technology that is targeted at experiments for an energy frontier e+e- linear collider should **not** be submitted under this notice unless additional credible uses for the technology are described. Alternative funding is potentially available for that purpose.

### **Program Funding**

It is anticipated that in Fiscal Year 2006 approximately \$500,000 will be available for new awards. The number of awards will be determined by the number of excellent applications and the total funds available for this program. Investigators are encouraged to limit their submission to a single grant application. Multiple year grants should be requested if the project cannot be completed in one year. A maximum of three years will be considered. Out-year funding will be provided on an annual basis subject to availability of funds. Cost sharing is encouraged but not required. It is anticipated that project selection will be completed by June 1, 2006.

DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted.

## **Collaboration**

Applicants are welcome to collaborate with researchers in other institutions, such as universities, industry, non-profit organizations, federal laboratories and Federally Funded Research and Development Centers (FFRDCs), which include the DOE National Laboratories. In the case of collaborative applications submitted from different institutions that are directed at a single research activity, each application must have a different scope of work and a qualified principal investigator who is responsible for the research effort being performed at his or her institution. There must be a single technical description of the proposed work, and separate face pages and budget pages for each institution. The scope of work at each institution must be clearly specified. While collaboration with researchers at FFRDCs (Fermi National Accelerator Lab and other DOE national labs are examples of FFRDCs), is encouraged, no funds will be provided to those organizations under this notice. The procedure for submitting a collaborative application can be accessed via the web at: <http://www.science.doe.gov/grants/Colab.html>. This section provides specific details regarding collaborating institutions.

## **Merit Review**

After an initial screening for eligibility and responsiveness to the solicitation, applications will be subjected to scientific merit review (peer review). The applications will be evaluated against the following criteria, which are listed in descending order of importance as set forth in 10 CFR Part 605.10 (d):

1. Scientific and/or technical merit of the project;
2. Appropriateness of the proposed method or approach;
3. Competency of applicant's personnel and adequacy of proposed resources; and
4. Reasonableness and appropriateness of the proposed budget.

In considering item 1 particular attention will be paid to:

- the importance of the physics that motivates developing the proposed detector,
- whether the proposed research is generic detector research that will benefit more than one experiment,
- the magnitude of the potential impact versus the risk of failure.

## **Submission Information**

### **(PLEASE NOTE INFORMATION BELOW ON PAGE LIMITS)**

For this notice, **project descriptions must be 25 pages or less**, including tables and figures, but excluding forms and certifications. The application must also contain an abstract or project summary of 250 words or less. Letters of intent from all non-funded collaborators and short curriculum vitae of all senior personnel must be included in the application. Applications not meeting these requirements will be deemed ineligible during the initial screening process.

Information about the development and submission of applications, eligibility, limitations, evaluation, selection process, and other policies and procedures may be found in the Application Guide for the Office of Science Financial Assistance Program and 10 CFR Part 605. Electronic access to the Guide and required forms is available via the World Wide Web at: <http://www.science.doe.gov/grants/>. DOE is under no obligation to pay for any costs associated with the preparation or submission of applications.

The Catalog of Federal Domestic Assistance number for this program is 81.049, and the solicitation control number is ERFAP 10 CFR Part 605.

Martin Rubinstein  
Director  
Science Programs Support Division  
Office of Science

Posted on the Office of Science Grants and Contracts Web Site  
September 20, 2005.