

Office of Science
Notice DE-FG01-04ER04-29

Plasma Physics
Junior Faculty Development Program

Department of Energy

Office of Science Financial Assistance Program Notice DE-FG01-04ER04-29; Plasma Physics Junior Faculty Development Program

AGENCY: U.S. Department of Energy

ACTION: Notice inviting grant applications.

SUMMARY: The Office of Fusion Energy Sciences (OFES) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving grant applications for support under its Plasma Physics Junior Faculty Development Program. Applications should be from tenure-track faculty investigators who are currently involved in experimental or theoretical plasma physics research and should be submitted through a U.S. academic institution. The purpose of this program is to support the development of the individual research programs of exceptionally talented scientists and engineers early in their careers.

DATES: Letters of Intent, including information on collaborators and a one-page summary of the proposed research, should be submitted by October 22, 2004, directly to OFES at the address listed below.

Formal applications submitted in response to this notice must be received by 4:30 p.m., Eastern Time, November 23, 2004, in order to be accepted for merit review and to permit timely consideration for award in Fiscal Year 2005.

ADDRESSES: Letters of Intent referencing Program Notice DE-FG01-04ER04-29, should be sent to Mr. John Sauter by e-mail: john.sauter@science.doe.gov, with a copy to Dr. Darlene Markevich at: darlene.markevich@science.doe.gov. Please include the phrase "Junior Faculty Letter of Intent" in the subject line of the e-mail.

Formal applications referencing Program Notice DE-FG01-04ER04-29 must be sent electronically by an authorized institutional business official through DOE's Industry Interactive Procurement System (IIPS) at: <http://e-center.doe.gov>. IIPS provides for the posting of solicitations and receipt of applications in a paperless environment via the Internet. In order to submit applications through IIPS your business official will need to register at the IIPS website. **Although IIPS offers the option of using multiple files, please limit submissions to one volume and one file if possible, with a maximum of no more than four PDF files.** The Office of Science will include attachments as part of this notice that provide the appropriate forms in

PDF fillable format that are to be submitted through IIPS. Full page color images should be submitted in IIPS as a separate file in PDF format and identified as such. These images should be kept to a minimum due to the limitations of reproducing them. They should be numbered and referred to in the body of the technical scientific grant application as Color image 1, Color image 2, etc. Questions regarding the operation of IIPS may be e-mailed to the IIPS help desk at: HelpDesk@pr.doe.gov or you may call the help desk at (800) 683-0751. Further information on the use of IIPS by the Office of Science is available at: <http://www.science.doe.gov/grants/>.

If you are unable to submit an application through IIPS, please contact the Grants and Contracts Division, Office of Science at: (301) 903-5212 or (301) 903-3064, in order to gain assistance for submission through IIPS or to receive special approval and instructions on how to submit printed applications.

FOR FURTHER INFORMATION CONTACT: Dr. Darlene Markevich, Office of Fusion Energy Sciences, SC-55/Germantown Building, U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585-1290, telephone: 301-903-4920, e-mail: darlene.markevich@science.doe.gov.

SUPPLEMENTARY INFORMATION: The Plasma Physics Junior Faculty Development Program was started in Fiscal Year 1997. A principal goal of this program is to identify exceptionally talented plasma faculty members early in their careers and to assist and facilitate the development of their research programs. Eligibility for awards under this notice is, therefore, restricted to tenure-track regular academic faculty investigators who are conducting experimental or theoretical plasma physics research. Those Junior Faculty members presently holding career development awards will not be considered under this announcement.

Applications from Junior Faculty involved in any area of plasma physics research, not only magnetic fusion, are welcomed and encouraged. Emphasis is to be placed on the fundamental plasma physics elements of the research as opposed to applications of plasma physics. In determining awards among closely ranked applications, preference will be given to those applications whose proposed research is the most relevant to the current research interests of OFES. (Please refer to the Fusion Energy Sciences section of the Office of Science Notice DE-FG01-05ER05-01, Annual Notice - Continuation of Availability of Grants and Cooperative Agreements, for information on the fusion program research interests <http://www.science.doe.gov/grants/FAPN05-01.html>). For applications to be considered for funding, certification of the status of the applicant as a tenure-track regular academic faculty member by the head of the applicant's academic department or other university/college certifying official will be required before the grant is awarded. Awards made under this program will help to maintain the vitality of university plasma physics research and ensure continued excellence in the teaching of plasma physics and related disciplines.

Program Funding

It is anticipated that a total of up to \$450,000 will be available in Fiscal Year 2005 for funding the program. Annual funding levels up to \$150,000 per award may be made available for grants under this notice with a project period starting in Fiscal Year 2005, contingent upon the

availability of appropriated funds. Funding for equipment above this level will be considered on a case-by-case basis. The number of awards during Fiscal Year 2005 will depend on the number of meritorious applications and the availability of appropriated funds. Multiple-year funding of grant awards is expected, with funding provided on an annual basis subject to availability of funds, progress of the research, and continuing program need. The usual duration of these grants is three years and they will not be renewed under the Plasma Physics Junior Faculty Development Program after the project period is completed. It is anticipated that at the end of the grant period, grantees will submit new grant applications to continue their research to the Department of Energy or other Federal funding agencies. DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted.

Merit and Relevance Review

Applications will be subjected to formal merit review and will be evaluated against the following criteria, which are listed in descending order of importance as set forth in 10 CFR Part 605 at: (<http://www.science.doe.gov/grants/605index.html>). Included with each criterion are the detailed questions that are asked of the reviewers.

1. Scientific and/or technical merit of the proposed research

- Does this application address an important problem in plasma science, plasma technology, fusion energy science, or fusion energy technology?
- How does the proposed research compare with other research in its field, both in terms of scientific and/or technical merit and originality?
- What is the likelihood that it will lead to new or fundamental advances in its field?

2. Appropriateness of the proposed method or approach

- Are the conceptual framework, methods, and analyses adequately developed and likely to lead to scientifically valid conclusions?
- Does the proposed research employ innovative concepts or methods?
- Does the applicant recognize significant potential problems and consider alternative strategies?

3. Competency of the applicant's personnel and adequacy of the proposed resources

- How well qualified are the applicant's personnel to carry out the proposed research? (If appropriate, please comment on the scientific reputation and quality of recent research by the principal investigator and other key personnel.)
- Please comment on the applicant's research environment and resources.
- Does the proposed work take advantage of unique facilities and capabilities and/or make good use of collaborative arrangements?

4. Reasonableness and appropriateness of the proposed budget

- Are the proposed budget and staffing levels adequate to carry out the proposed research?

5. Other Appropriate Factors

- How is the proposed project relevant to the Office of Fusion Energy Science's goals?
- Could the proposed research make a significant contribution to another field?
- Is there potential for spin-offs?
- Please comment on the educational benefits of the proposed activity, including the involvement of graduate and undergraduate students.

The evaluation will include program policy factors such as the relevance of the proposed research to the terms of the notice and the Department's programmatic needs. The selected projects will be required to acknowledge support by DOE in all public communication of the research results.

The Application

(PLEASE NOTE SPECIAL INSTRUCTIONS BELOW ON PAGE LIMITS AND CONTENT)

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 made available via the World Wide Web: <http://www.science.doe.gov/grants/guide.html>. DOE is under no obligation to pay for any costs associated with the preparation or submission of applications if an award is not made.

Type size and line spacing requirements: Applications must have 1-inch margins at the top, bottom, and on each side. Type sizes must be 10 point or larger. Line spacing is at the discretion of the applicant, but there must be no more than 6 lines per vertical inch of text. Pages should be standard 8 1/2" x 11" (or metric A4, i.e., 210 mm x 297 mm).

Applicants are asked to use the following ordered format:

- **Face Page** (DOE F 4650.2 (10-03))
- **Project Abstract Page**; single page only, should contain:
 - Title
 - Principal investigator name, postal address, e-mail address, and telephone number
 - Abstract text should concisely describe the overall project goal in one sentence and limit background/significance of project to one sentence. Short descriptions of each individual aim should focus on what will actually be done.
- **Background and Recent Accomplishments**
- **Budget pages** for each year and a summary budget page for the entire project period (using DOE F 4620.1)
- **Budget Explanation**
- **Project Description, 20 pages or less**, exclusive of attachments. The project description should be a clear statement of the work to be undertaken. The statement should outline

the general plan of work, including project schedule, goals, and deliverables, and an adequate description of methods and procedures.

- **Literature Cited**
- **Biographical Sketches** (please limit to 2 pages)
- **Facilities and Resources** description
- **Current and Pending Support**
- **Letters** from collaborators (if applicable)

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
Grants and Contracts Division
Office of Science

Posted on the Office of Science Grants and Contracts Web Site
September 22, 2004.