

## **Special Notice 13-SN-0006**

### **Special Program Announcement for 2013 Office of Naval Research**

#### **“Compact High Power Microwave Sources and Antennas”**

##### **I. INTRODUCTION:**

This announcement describes a discovery and invention opportunity, entitled High Power Microwave Source and Antenna, to be launched under the ONRBAA13-001, Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology which can be found at <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>. The research opportunity described in this announcement specifically falls under the numbered paragraph 3, Force Protection (Code 30). The submission of proposals, their evaluation, and the placement of applied research contracts and grants will be carried out as described in that Broad Agency Announcement.

The purpose of this announcement is to focus attention of the scientific community on (1) the area to be studied, and (2) the planned timetable for the submission of white papers and proposals.

##### **II. TOPIC DESCRIPTION**

###### **Compact High Power Microwave (HPM) Sources**

The purpose of this topic is to identify potential performers to provide novel concepts for compact high power microwave sources & related components. This notice serves as a request for interested parties to submit white papers and full proposals. The objectives of the research opportunity are described below.

###### **Background:**

High Power Microwave (HPM) has been under investigation as a potential directed energy weapon that can provide operational effectiveness against various weapons, IEDs and sensor systems. ONR, along with many government agencies, has invested in the research and the development of various concepts of HPM sources and their related components. While the effectiveness of HPM systems has been demonstrated, the lack of compact HPM systems limits the development and delivery of practical systems to warfighters. This announcement aims to identify and develop novel microwave sources and their related key components that significantly improve upon existing state-of-the-art performance, size, weight and power.

## **Research Areas:**

The Office of Naval Research (ONR), Code 30, Expeditionary Maneuver Warfare and Combating Terrorism Department, Force Protection Thrust is soliciting FY13 6.1 Basic Research topics to pursue and exploit fundamental science and innovation that provide promising new approaches and concepts to advance current state-of-art technologies. Specifically, ONR is soliciting topics to improve the following:

- (1) The power and efficiency of HPM sources (high peak and/or average power; narrow/wide band source)
- (2) The fundamental understanding of the limitations of high power microwave source technology and related components
- (3) The efficient and agile use of the microwave spectrum (tunability, broadband/multi-frequency radiation, high repetition rate, etc.) while maintaining high power

The thrust will also consider any other innovative concepts and technologies that can significantly improve HPM DEW capabilities beyond the topics listed above.

## **III. WHITE PAPER SUBMISSION**

Although not required, white papers are strongly encouraged for all offerors seeking funding. Each white paper will be evaluated by the Government to determine whether the technology advancement proposed appears to be of particular value to the Department of the Navy. Initial Government evaluations and feedback will be issued via e-mail notification from the Technical Point of Contact. The initial white paper appraisal is intended to give entities a sense of whether their concepts are likely to be funded.

Detailed Full Proposal (Technical and Cost volumes) will be subsequently encouraged from those Offerors whose proposed technologies have been identified through the above referenced e-mail as being of "particular value" to the Government. However, any such encouragement does not assure a subsequent award. Full Proposals may also be submitted by any offeror whose white paper was not identified as being of particular value to the Government or any offeror who did not submit a white paper.

For white papers that propose efforts that are considered of particular value to the Navy but either exceed available budgets or contain certain tasks or applications that are not desired by the Navy, ONR may suggest a full proposal with reduced effort to fit within expected available budgets or an effort that refocuses the tasks or application of the technology to maximize the benefit to the Navy.

White papers should not exceed 4 single-sided pages, exclusive of cover page and resume of principal investigator, and should be in 12-point Times New Roman font with margins not less than one inch.

The cover page should be labeled “White Paper for ONR 2013 Research Opportunity: Compact High Power Microwave” and include the following information: title of the proposed effort, technical point of contact, telephone number, fax numbers, and e-mail address.

The 4-page body of the white paper should include the following information:

- (1) Principal Investigator;
- (2) Relevance of the proposed effort to the research areas described in Section II;
- (3) Technical objective of the proposed effort;
- (4) Technical approach that will be pursued to meet the objective;
- (5) A summary of recent relevant technical breakthroughs; and
- (6) A funding plan showing requested funding per fiscal year.

A resume of the principal investigator, not to exceed 1 page, should also be included after the 4-page body of the white paper.

White papers should be submitted electronically to the program technical points of contact, Lee Mastroianni and Joong Kim. Files exceeding 10MB in size should not be emailed, but instead transitted via a file transfer service, for example AMRDEC Safesite, <https://safe.amrde.army.mil>, or mailed on DCROM or DVD. White papers shall be in Adobe PDF format (preferred) or in Microsoft Word format compatible with MS Office 2007.

To ensure full, timely consideration for funding, white papers should be submitted **no later than 2:00 PM Eastern Daylight Time (EDT) on 11 Jan 2013**. White papers received after that date will be considered as time and availability of funding permit.

The planned date for completing the review of white papers is **30 January 2013**.

## **VI. FULL PROPOSAL SUBMISSION AND AWARD INFORMATION**

Full proposals (including one (1) technical volume and one (1) cost volume) should be submitted under ONRBAA13-001 by 2:00 PM Eastern Daylight time (EDT) on 4 March 2013. Full Proposals under this Announcement received after that date will be considered as time and availability of funding permit.

ONR anticipates that grants/contracts will be issued for this effort. Full Proposals for contracts should be submitted in accordance with the instructions at Section IV, Application and Submission Information, item 2.b, Full Proposals. Full proposals for grants should be submitted in accordance with the instructions at Section IV, Application and Submission Information, item 5, Submission of Grant Proposals through Grants.gov. All full proposals for grants must be submitted through [www.grants.gov](http://www.grants.gov). The following information must be completed as follows in the SF 424 to ensure that the application is directed to the correct individual for review: Block 4a, In the "Federal Identifier" field, all offerors should insert "N00014". Block 4b, Agency Routing Number, Enter the Program Office (Code 30) and the Program Officer's name, last name, first name in brackets ( "[Mastroianni, Lee]"). All attachments to the application should also include this identifier to ensure the proposal and its attachments are received by the appropriate Program Office.

ONR plans to fund multiple awards up to \$300K per year under 6.1 Basic Research fund. However, proposals outside of this cost range will be considered. The period of performance for projects may be up to four years.

Funding decisions should be made by 29 Mar 2013. Projects will have an estimated award date on or about 30 August 2013.

Although ONR expects the above described program plan to be executed, ONR reserves the right to change the respective program.

## **VII. SIGNIFICANT DATES- TIMES**

### **Event / Dates / Times**

White Paper Submission Date:	11 Jan 2013 2:00 PM EDT
Recommendation for full proposal Date:	30 Jan 2013 2:00 PM EDT *
Full Proposal Submission Date:	4 March 2013 2:00PM EDT
Awards:	30 August 2013 *

Note:\* These are approximate dates.

## VIII. POINTS OF CONTACT

In addition to the points of contact listed in ONRBAA13-001, the specific points of contact for this announcement are listed below:

Technical Points of Contact:

Mr. Lee Mastroianni, Program Officer, [lee.mastroianni@navy.mil](mailto:lee.mastroianni@navy.mil)

Dr. Joong H. Kim, Deputy Program Officer, [joong.kim@navy.mil](mailto:joong.kim@navy.mil)

Business Point of Contact:

Ms. Stacey Crawford, Contract Specialist, [stacey.crawford@navy.mil](mailto:stacey.crawford@navy.mil)

## IX. Submission of Questions

Any questions regarding this announcement must be provided to the Technical Points of Contact and/or the Business Point of Contact listed above. All questions shall be submitted in writing by electronic mail.

Answers to questions submitted in response to this Special Notice will be addressed in the form of an Amendment and will be posted to the following web pages:

- Federal Business Opportunities (FEDBIZOPPS) Webpage – <https://www.fbo.gov/>
- Grants.gov Webpage – <http://www.grants.gov/>
- ONR Special Notice Webpage - <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Special-Notices.aspx>

Questions regarding **White Papers or Full Proposals** should be submitted NLT two weeks before the dates recommended for receipt of White Papers and/or Full Proposals. Questions after this date may not be answered.