



Special Notice

Future Program Announcement:

Rads to Watts

DARPA-SN-25-74

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**Rads to Watts
Defense Advanced Research Projects Agency (DARPA)
Defense Sciences Office (DSO)**

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BACKGROUND:

The purpose of this Special Notice (SN) is to provide public notification of additional research areas of interest to the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO), specifically for the contemplated forthcoming Rads to Watts program.

If released, the solicitation will be made available at <https://sam.gov/>.

PROGRAM GOALS:

Rads to Watts will explore new approaches for directly converting nuclear radiation energy into electricity, with a distinct focus on radiation voltaics (also known as radiovoltaics). The ultimate vision of Rads to Watts is to enable radiovoltaics that convert high-power nuclear radiation into kilowatts of electrical energy. Enabling the operation of radiovoltaics at higher radiation fluences will enable long-lived, unattended high-power sources for new operating domains that are power-starved and/or for which a logistics supply chain to replenish power sources does not exist. Radiation-induced defects in radiovoltaics degrade performance and lifespan of many current radiovoltaics, at both the materials and device levels, when they are exposed to higher-power radiation sources. Rads to Watts encourages program performers to go beyond typical low-power radiovoltaic architectures and semiconductors with low fluence tolerance in order to achieve long-lived, high-power conversion capabilities.

DARPACONNECT:

For those new to DARPA or national security, DARPA makes available a free, comprehensive resource via DARPAConnect on how to do business with the agency. In addition to DARPA 101 materials, relevant preparatory modules include “Making the Most of a Proposers Day” and “Understanding DARPA Broad Agency Announcements.” Registration and access are free at www.darpaconnect.us.

ADMINISTRATIVE:

This Special Notice is issued solely for information and program planning purposes and does not constitute a formal solicitation for proposals or white papers.