

TEST

DARPA to develop transportable gamma ray generator for detecting explosives, drugs, and nuclear material

Industry to develop transportable gamma ray generator for weapons and components test & measurement; nuclear material, explosives, and drugs detection.

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ARLINGTON, Va. – U.S. military researchers will brief industry via Webcast next month on an upcoming project to develop a transportable gamma ray radiation generator for test and measurement [test and measurement](#) to detect nuclear materials, conventional explosives, and illegal drugs.

Officials of the U.S. Defense Advanced Research Projects Agency will make a Webcast available at 2 p.m. on 8 July 2019 for the upcoming Gamma Ray Inspection Technology (GRIT) project. Slides for the Webcast will be available on 9 July 2019.

A transportable [gamma ray](#) radiation generator also would be useful for elemental imaging, non-destructive inspection of additive manufactured components, medical diagnostics, to help scientists understand detailed nuclear structures.

GRIT will develop the critical subsystem and component technologies, support system integration, and perform the testing necessary to demonstrate these new capabilities.

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The program seeks to develop a prototype gamma ray [generator](#) able to produce intense, tunable, and narrow- bandwidth gamma rays using techniques and emerging component technologies small enough for transportable systems.

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Gamma rays are penetrating electromagnetic radiation caused by the radioactive decay of atomic nuclei. Gamma rays are the shortest wavelength of electromagnetic waves, and impart the highest photon energy.

The GRIT Proposers Day is to introduce proposers, academia, and government to the GRIT program vision and goals, and encourage teaming arrangements among organizations with the expertise, facilities, and capabilities for carrying out GRIT program goals. DARPA anticipates releasing the GRIT solicitation this month.

DARPA wants the ability to produce tunable gamma rays from ten of kilo electron-volts (keV) to more than 10 mega electron-volts (MeV) of energy intensities as high as 10¹²/second with sub 1 percent bandwidth.

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Such a technology provides the ability to characterize objects non-destructively not only for their elemental content, but also for their nuclear composition.

Those interested in viewing the Webcast must register online no later than 1 July at <https://events.sa-meetings.com/GRITProposersDay>. The Webcast is free.

Email questions or concerns to Mark Wrobel, the DARPA GRIT program manager, at GRIT@darpa.mil.

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<https://www.fbo.gov/spg/ODA/DARPA/CMO/D/SN-19-59/listing.html>.

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