

**DARPA-BAA-16-25 Program**  
**Frequently Asked Questions (FAQs)**  
as of **01/29/16**

15Q: Would the development of an imaging detector in the THz or mmWave spectrum be of interest for this program, or is the focus limited to a shorter wavelength?

15A: Detect is a fundamental research program. Please see the BAA for more details.

14Q: How much emphasis in the proposal, if any, should be placed on the readout integrated circuit in terms of achieving these fundamental DETECT limits in a real world device?

14A: Detect is a fundamental research program. Please see the BAA for more details.

13Q: Do "dark counts" include background counts due to detected blackbody radiation?

13A: Yes.

12Q: In Phase I, to what extent do you want proofs of concept vs. system demonstrations? What about Phase II? Is a system/application connection of interest?

12A: Detect is a fundamental research program. Please see the BAA for more details.

11Q: Do you plan to fund teams of varying sizes, or do you have a specific team size in mind? What is the size of the typical team you envision?

11A: Teams must include the requisite expertise needed to achieve the proposed goals. Experience shows that basic research programs of this type require teams consisting of 3 to 5 investigators working collaboratively.

10Q: Are new concepts of interest even if there's limited preliminary work available?

10A: Yes.

9Q: Are single teams expected to work on multiple technologies, or is a single technology choice encouraged?

9A: Teams are required to choose a single focus technology.

8Q: Can you clarify to what extent the metrics have to be achieved simultaneously, or can be in different device designs, how different can the devices be? Can they be totally different, or tweaks within a device category?

8A: These issues are clearly described in sections I.C and I.D of the BAA.

7Q: Should we assume free-space coupling, or can we assume the photons are already in waveguides?

7A: The goal of Detect is to establish the physics-enforced limits of photon detection and to establish the fundamental trade-offs between the various metrics given in the BAA. Furthermore, the program seeks to develop detector designs for both free-space and guided-wave applications. Therefore, the proposers can assume either of the two scenarios.

6Q: Is there a preference regarding assumptions about the source timing, pulsed vs. CW?

6A: No. However, note that gated detection is equivalent to reduced detection efficiency.

5Q: Would spectral resolution be considered as a primary metric? Would QND detection (Quantum Non-demolition Detection) be considered a metric?

5A: The connection between temporal resolution and spectral resolution is generally understood. However, the primary metrics are defined in the BAA. Proposers can detail any additional metrics that help them make a compelling case for how they will achieve the primary metrics.

4Q: Please provide guidance for the spectral coverage associated with UV, Vis, and NIR.

4A: Detect is a fundamental research program. Please use generally accepted definitions for these spectral regions.

3Q: For a Federally funded laboratory, we need to show we are not competing against industry. Is having an industry or private company partner sufficient to be eligible?

3A: Procedures for proving eligibility for FFRDC's and Federally Funded Laboratories to receive funding are set forth in the BAA (Section III.A.1). Having an industry or private company partner is not, by itself, sufficient.

2Q: Are all results publishable?

2A: Yes.

1Q: Is international collaboration allowed?

1A: Yes, see Section III.A.2 of the BAA. This is subject to the laws and regulations of the U.S. Government.