

DARPA Seeks “Robust Quantum Sensors”

By John Knowles

The Defense Advanced Research Projects Agency (DARPA) announced plans to issue a solicitation for its Robust Quantum Sensors (RoQS) program. Managed by the agency's Microsystems Technology Office, the objective of the RoQS effort is to “bring quantum sensors to DOD programs,” as described in “Future Program Announcement Special Notice DARPA-SN-25-27.”

DARPA and Service labs have been developing quantum computing and quantum sensing technologies, and the DoD is eager to move this work into operational applications. According to the program description, “While quantum sensors have demonstrated exceptional laboratory performance in a number of modalities (magnetic and electrical field, acceleration, rotation, and gravity, etc.), their performance degrades once the sensor is placed on moving platforms due to electrical and magnetic fields, field gradients, and system vibrations. RoQS seeks to overcome these challenges through innovative physics approaches to quantum sensing. The forthcoming RoQS program aims to develop and demonstrate quantum sensors that inherently resist performance degradation from platform interferers and demonstrate them on a government-provided platform.”

The announcement explains, “It is the intent of RoQS to transition RoQS-developed quantum sensors onto DoD platforms with associated Programs of Record (POR) fulfilling outstanding Requirements. RoQS will take a two-pronged approach to accomplishing this goal. First, the program seeks to engage with platform makers within industry to identify DoD systems for quantum sensor integration. Second, a government team will identify government platform owners and

stakeholders, Requirements, and Program of Record platforms to facilitate integration and testing at the end of the RoQS program.”

DARPA has not stated precisely when it plans to release a formal solicitation for RoQS. The technical point of contact is Dr. Jonathan Hoffman, MTO Program Manager, e-mail DARPA-SN-25-27@darpa.mil. Queries in response to the RoQS program announcement are due by Jan. 24.