

Explanation of Experiment and Need for STA

Raytheon Missile Systems develops a range of technologies for US government and approved foreign customers. Raytheon is working on the advancement of a number of technologies, including advancements in radar systems, UAVs, and target detection.

The proposed experimentation will test the ability of a Raytheon product to detect and deter some of its UAVs using other Raytheon technologies.

Need for an STA

Raytheon is scheduled to begin testing of its UAV detection in the middle of December 2016. This testing is part of meeting US Navy customer requirements. Because of the short time required to start the testing, an STA is necessary to meet the timeline.

Technical Synopsis

Spectrum Required:	13-15 MHz
Area of Operations:	unpopulated desert areas in Arizona
Test Time Limited:	testing will be conducted sporadically during the workweek

Nature of Experimentation: Raytheon uses radar beams to test and develop improved search and tracking radar. The proposed operations will use the radar systems to detect and intercept UAVs. With this testing, Raytheon will improve its ability to use its radar systems to respond to increasing threats from UAV technologies. This capability is of particular interest to Raytheon's DOD customers, including the U.S. Navy.

Location of the testing: The experiments that Raytheon conducts use several narrow radar beams, pointed away from any population centers in the area of operations. The proposed test area is in a relatively unpopulated area in Arizona. The testing will be conducted to ensure that the radio transmissions are directed over the least populated areas. The altitude of the flight of the UAVs will help ensure that the radar systems are not directed in a way to cause interference with any satellite systems.

Raytheon works to minimize the use of any single channel, to use narrow, focused beam transmissions, and to limit its testing to the minimum power needed for the advancement of the technology being developed.

Stop Buzzer: The stop buzzer point of contact for the proposed operation is:

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Conclusion: This STA is requested to allow further advanced development and testing of search and track radar systems, in particular its capability to detect and deter UAVs.

Should there be any questions about this application, please contact Thomas J. Fagan, Spectrum Manager, Raytheon Missile Systems, 520-794-0227 or tjfagan@raytheon.com, or Anne Linton Cortez, WFS, 520-344-8525 or alc@conspecinternational.com.