

Form 442 Question 4: Government Project Description
MIT Lincoln Laboratory
Experimental License Application
File Number: 1082-EX-CN-2020

The proposed experiment fulfills requirements for work supported by the Department of the Air Force under Air Force Contract No. FA8702-15-D-0001.

MIT Lincoln Laboratory is requesting authorization to conduct tests with an FCC approved Furuno marine radar, model DRS25A (FCC ID: ADB9ZWRTR095A), which when operated on a voluntary ship, does not require an individual license. However, for these tests the radar will be operated on land. The purpose of the testing is to determine the capabilities of other technologies used in conjunction with the radar to detect and respond to threats. The radar will be mounted on a vehicle and operated within a small area within a 225 km radius of Palmdale, CA.

The DRS25A radar with the XN12A open array antenna has a narrow beamwidth, 1.9 degrees horizontal and 22 degrees vertical. The energy, at that frequency, is highly focused and will dissipate quickly, with very low energy in the sidelobes. The radar will be mounted on a vehicle to meet radiation safety requirements.

The software defined radio transmitters will be used as calibration sources during the tests. They will be operated within a small area within a 225 km radius of Palmdale, CA.

The proposed tests will be conducted over a brief time period. The radars are expected to be in use for two consecutive weeks about every six months and will be operated during the workday during those two weeks.