

## Northrop Grumman Systems Corporation

Northrop Grumman Systems Corporation (NGSC) submits this application for the purpose of using the requested frequencies to test the integration of an X band radar system. The radar will be used from both a fixed ground lab location and during airborne flight test operations. Data collected will be used to evaluate both mission system performance and radar performance.

The radar will be frequency agile, with center frequencies between 8520 MHz to 8980 MHz and 9220 MHz to 9980 MHz. Wideband waveforms will use center frequencies selected so that emissions are within the authorized bands.

The pulse width(s) are: 1.5 usec to 110 usec. PRF(s) are: 500 to 125,000 Hz. Modulation Code / Signal (as applicable) are: Barker Phase Code and Linear FM. The antenna is an Active Electronically Scanned Array (AESA) with antenna gain of 32.8 dBi. The main beam width is 2.8 degrees horizontal, 5.0 degrees vertical, at the 3 dB points. Vertical polarization will be used.