

Additional Technical Information

Northrop Grumman Systems Corporation (NGSC) in this application, FCC File No. 0635-EX-CN-2020, requests authorization to test a prototype modular phased array antenna which forms an integral component of an airborne mobile radar. The experimental radar set will operate at a maximum altitude of 17,500 ft AMSL within 370 km radius centered on NL 38-41-23; WL 75-21-37. The digital active electronically scanned array (AESA) antenna is manufactured by Northrop Grumman. The antenna uses eight 'tiles' of transmit/receive (TR) elements, each tile forming a modular antenna that can be combined as needed for the required application, operating as a single unified antenna. Its main beam width is a maximum of 13.3 degrees azimuth, 105.7 degrees elevation. Both horizontal and vertical polarization will be used. The peak power levels in the application are for the entire 8-tile array. A single element will be used to transmit for array tuning and calibration. The modulation codes to be employed are unmodulated pulse, barker coded pulse, and LFM. The pulse widths will range from 1-100 us and PRF(s) will be 0.5 kHz to 250 kHz.