

Application to Modify Experimental License

Northrop Grumman Systems Corporation submits this application to modify experimental license WH2XYL, File No. 0483-EX-PL-2015, in two respects.

- To add a new mobile location centered on NL 30-38-49, WL 86-31-17; and
- To add authorization to conduct tests while in flight at a maximum altitude of 31,000 feet MSL within an area defined by the following geographic coordinates:
 - NL 39-08-50, WL 77-49-38
 - NL 38-23-36, WL 76-09-26
 - NL 29-56-09, WL 85-33-41
 - NL 30-43-57, WL 87-45-32

The modifications sought by this application are to further support development and demonstration of new Ku band AESA antenna technology and hardware, combined with new control and processing software. Various technologies will be evaluated relevant to equipment intended for future federal agency contracts. Active testing of the system is required to fully assess its capability against real targets.

The radar will operate from 16.2 GHz to 17.2 GHz. The waveforms will make use of linear FM techniques to support SAR and GMTI modes as well as certain air search and weather capabilities. The processor for the frequency agile radar selects the proper frequency to ensure the mask of the radar emission is contained within the authorized bandwidth. The maximum transmitter power is 4000 watts output. The gain of the antenna provides a peak ERP of 31.6 MW. The maximum duty cycle is 20%, for a mean ERP of 6.32 MW. Pulse Widths will be 200 usec, 50 usec, & 100 usec with PRFs of 300 Hz, 3 kHz, & 2 kHz.

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