

JHU/APL STA Application

- **Experiment Point of Contact:**

Brandon Katz, brandon.katz@jhuapl.edu, desk: 240-228-7905, cell: 240-484-7459

- **Background:**

This Special Temporary Authority (STA) License Application covers research initiated under the contract N00024-22-D-6404.

- **Objective:**

JHU/APL is tasked by the USG to assess the operation of an experimental VHF waveform

- **Experiment Description:**

The Johns Hopkins Applied Physics Laboratory (JHUAPL) is a University Associated Research Center (UARC) that conducts basic research for the United States Government (USG)

- JHU/APL is tasked to assess the operation of a VHF waveform
- One software defined transmitter will be utilized
- Transmissions will be approximately ten minutes over several instances throughout test weeks

- **Location Details: (See slide 3)**

Location 1:

- JHU/APL main campus
- 11100 Johns Hopkins Rd, Laurel, MD 20723
- 39° 9'57.15" N 76°53'47.52" W

Location 2:

- Chesapeake Bay near Annapolis
- 38° 57'57.89" N 76°25'14.95" W

- **Emission Details: (See slide 4)**

- **FCC License Request Dates:**

- 09/04/2026 – 03/04/2027 (mm/dd/yyyy)
- Sunday - Saturday

- **Licensee can accept restrictions on transmission days/times**

- **Licensee can accept prior coordination requirements**

Antenna Description

Antenna Description:

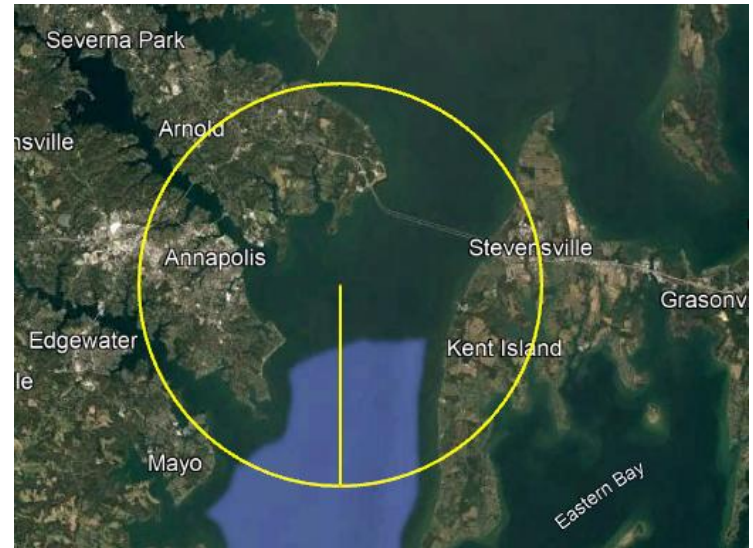
- Type: $\frac{1}{4}$ -wave monopole
- Antenna >6m above ground? No
- Directional? No, 5 dBic
- Manufacturer: Custom-built
- Model #: N/A
- Polarization: Linear
- 3-dB Beamwidth: 360deg azimuth, 39deg elevation

Test Sites

- Site 1 – APL Main Campus
 - $39^{\circ} 9'57.15''$ N $76^{\circ}53'47.52''$ W
 - 2mi radius



- Site 2 - Chesapeake Bay near Annapolis
 - $38^{\circ} 57'57.89''$ N $76^{\circ}25'14.95''$ W
 - 6mi radius



Emission Details

Center frequency: 140 MHz- 170 MHz

	Waveform 1	Waveform 2	Waveform 3
Frequency Tolerance	+/- 2ppm	+/- 2ppm	+/- 2ppm
Signal Bandwidth	10 MHz	5 MHz	1 MHz
Peak output power	10W	10W	10W
Peak ERP	13 dBW	13 dBW	13 dBW
Signal Type	MSK - 10M0G2D	MSK - 5M0G2D	MSK - 1M0G2D

- Only one waveform will be used at a time