

JHU/APL STA Application

- Experiment Point of Contact: Chris Haskins 240-228-3405, Ralf Perez 240-592-2183
- Background: This Special Temporary Authority (STA) License Application covers research initiated under the contract 80MSFC20D0004 / 80MSFC20F0185.
- Objective:
 - Test a wideband Ka-band user terminal with multiple USG and commercial relay services.
- Experiment Description: The Johns Hopkins Applied Physics Laboratory (JHU/APL) is a University Associated Research Center (UARC) that conducts basic research for the United States Government (USG)
 - 1 Ka-band transmitter and receiver using an Avl 85 cm antenna tracking LEO, MEO, and GEO satellites
 - Fixed location ground terminal at JHU/APL Laurel, MD campus
 - 6/1/21 to 11/30/21
 - ~ 8AM to 8 PM, M-F daily
- Location Details:
 - Latitude, Longitude: +39.16570188297089, -76.8989663042774
 - JHU/APL: 11100 Johns Hopkins Road, Laurel, MD 20723
- Emission Details (include for each signal if multiple)
 - Peak output power: 20W
 - Peak ERP: TDRSS: +52 dBW: SES/O3b: +53.5 dBW
 - Frequency of operation: 25.25 to 31.00 GHz (capability)
 - For STA: TDRSS: 27.100 GHz, SES/O3b: 28.709 GHz
 - Frequency Tolerance: +/- 5 ppm
 - Signal Bandwidth: up to 216 MHz
 - Signal Type/description: DVB-S2
- FCC License Request Dates:
 - 6/1/21 to 11/30/21



Antenna Description:

- Antenna > 6m above ground? No
- Directional? Yes
- Manufacturer: Avl
- Model #: 870-O3b 85cm
- Polarization: LHCP or RHCP transmit
- 3-dB Beamwidth: 0.9 deg. transmit
- Orientation in horizontal plane: 90 to 270 deg.
- Orientation in vertical plane: 0 to 90 deg.

