

Appendix to Rocket Lab USA, Inc. Ground Testing STA Application

Application File Number: 1261-EX-ST-2022

Date of Submission: August 25, 2022

This document provides additional details for the application for Special Temporary Authority (STA) for which Rocket Lab USA, Inc. (“Rocket Lab”) has applied to authorize ground testing for its Electron Launch Vehicle at 7396 Aerospace Gateway, Wallops Island, VA 23337. First, it briefly summarizes the purpose of the STA application and the proposed testing. Next, it provides tables of technical details for the testing, including specific frequency usage information.

The launch authorization STA 1084-EX-ST-2022 has been submitted and its status is pending. The Electron vehicle launch is scheduled for December 1, 2022.

Rocket Lab is in the process of coordinating its testing operations with NTIA and appropriate federal incumbents. Rocket Lab proposes only to operate consistent with coordination agreements reached with these incumbents, including the U.S. Air Force, U.S. Navy, and the National Aeronautics and Space Administration.

Background and Testing Overview:

Rocket Lab is an American aerospace company with operations in the United States and New Zealand. Rocket Lab is the manufacturer of the Electron rocket, a three-stage launch vehicle designed to launch small satellites into low earth orbit. As noted above, Rocket Lab has planned a rideshare mission using Electron as the launch vehicle on December 1, 2022.

Rocket Lab seeks FCC authorization to use frequencies to conduct ground testing on Rocket Lab’s launch vehicle – Electron – at two locations: (1) inside Rocket Lab’s integrated control facility (ICF) which is located at 7396 Aerospace Gateway, Wallops Island, VA 23337 and (2) at NASA Wallops Flight Facility Launch Pad 0-A located at 37° 50’ 0” North, 75° 29’ 18” West. Ground testing will be conducted as part of vehicle and ground system verification. The ground tests will verify the proper transmission and reception of launch vehicle telemetry and communications data between the launch vehicle and ground systems. No individual test at either the ICF or the launch pad location will last longer than one hour.

REQUESTED TESTING TRANSMISSIONS

Beam 1

Center Frequency	2211 MHz (ATM) (Emhiser)
Minimum 99% BW	5- MHz
Maximum 99% BW	5- MHz
Proposed minimum emission designation	N/A
Proposed maximum emission designation	5M00G1D--
Minimum transmit power	0 dBW
Maximum transmit power	7 dBW
Minimum Elevation Angle Transmit	0
Maximum Elevation Angle Transmit	90
Transmit Antenna Polarization	Linear

Beam 2

Center Frequency	2287.50 MHz (BTM) (Emhiser)
Minimum 99% BW	5MHz
Maximum 99% BW	5 MHz
Proposed minimum emission designation	N/A
Proposed maximum emission designation	5M00G1D--
Minimum transmit power	0 dBW
Maximum transmit power	7 dBW
Minimum Elevation Angle Transmit	0
Maximum Elevation Angle Transmit	90
Transmit Antenna Polarization	Linear

Beam 3

Center Frequency	2272.5 MHz (OTMSDL) (SatLab SRS-3)
Minimum 99% BW	0.075 MHz
Maximum 99% BW	0.6 MHz
Proposed minimum emission designation	75K0G1D--
Proposed maximum emission designation	600KG1D--
Minimum transmit power	-3 dBW
Maximum transmit power	7 dBW
Minimum Elevation Angle Transmit	0
Maximum Elevation Angle Transmit	90
Transmit Antenna Polarization	RHCP

Beam 4

Center Frequency	2085 MHz (OTMSUL) (Satlab SRS-3)
Minimum 99% BW	0.075 MHz
Maximum 99% BW	0.075 MHz
Proposed minimum emission designation	75K0G1D--

Proposed maximum emission designation	75K0G1D--
Minimum transmit power	-60 dBW
Maximum transmit power	-40 dBW
Rx antenna polarization	RHCP