

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WM9XBD

(Call Sign)

XT MO

(Class of Station)

1702-EX-ST-2017

(File Number)

NAME Virgin Orbit, LLC

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

The purpose of the experiment is to test the ability of Virgin Orbit, Long Beach ground station (receive only) to track satellite launch vehicles.

Station Locations

- (1) MOBILE: Max altitude 2500 ft, Long Beach, CA, within 33 km, centered around NL 33-49-12; WL 118-09-04

Frequency Information

MOBILE: Max altitude 2500 ft, Long Beach, CA, within 33 km, centered around NL 33-49-12; WL 118-09-04

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2262 MHz	MO	7M02G2D 3M51G2D	158.49 uW (ERP)	0.002 %

Special Conditions:

- (1) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

This authorization effective January 02, 2018 and
will expire 3:00 A.M. EST June 30, 2018

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (3) Virgin Orbit, LLC must agree that this STA will not be used to establish future service in this frequency band. Must be coordinated with Mr. Andrew Foltz at DoD WAFC andrew.foltz@navy.mil Commercial 760-939-6948 before use.
- (4) All transmissions in the band 2200-2290 MHz shall comply with national and international power flux density limits, unless otherwise coordinated and agreed to. PFD analysis and exceedances shall be included in the FCC application and provided to the NTIA for US Government review.
- (5) Virgin Orbit, LLC shall be aware that future non-federal requests for operation in the 2200-2290 MHz frequency band will be considered on a case-by-case basis, and Virgin Orbit, LLC shall have no expectations that future requests will be approved.
- (6) All operations shall be pre-coordinated with the NASA GSFC SM Scott Galbraith at 301.286.5089 or vincent.s.galbraith@nasa.gov at least 7 days prior to operations.
- (7) The STOP BUZZER POC information, for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.
- (8) Virgin Orbit, LLC must coordinate with the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon, (540)653-3477, or james.moneyhon@navy.mil, a minimum of 60-days prior to any operations, to mitigate harmful interference to Navy and Marine Corps operations. The launch vehicle provider must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).
- (9) This authorization SUPERSEDES the previous issued authorization with the same call sign and file number: adding special conditions.