

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

EXPERIMENTAL

(Nature of Service)

WN9XKS

(Call Sign)

XT MO

(Class of Station)

1275-EX-ST-2019

(File Number)

NAME Virgin Orbit

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:

S-Band transmitter will be used for telemetry and video transmission from the launch vehicle.

Station Locations

(1) MOBILE: Mojave, CA, centered around NL 35-03-24; WL 118-09-28

Frequency Information

MOBILE: Mojave, CA, centered around NL 35-03-24; WL 118-09-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2215.5 MHz	MO	4M99G1W	80 W (ERP)	0.002 %
2215.5 MHz	MO	2M73G1W	25 W (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.

This authorization effective September 30, 2019 and
will expire 3:00 A.M. EST February 19, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) This STA is limited to telemetry and tracking operations for a single Launcher One launch scheduled for no earlier than 26 September 2019. This STA will expire as soon as the launch operations have been completed or 18 February 2020, whichever occurs first. Any future launches shall submit applications to the FCC to be re-coordinated with the NTIA.
- (4) All Virgin Orbit operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized federal stations.
- (5) Virgin Orbit shall be aware that future non-federal launches requests for the use of 2200-2290 MHz band will be considered on a case-by-case basis and Virgin Orbit shall have no expectations that future launches will be approved for operation in this band.
- (6) Virgin Orbit shall notify NASA GSFC Spectrum Management Office at NASA-DL-GSFC-SPECTRUM-MANAGEMENT@MAIL.NASA.GOV of the specific launch time and expected mission duration, at least seven days prior to operations. In the event of last-minute changes, 48-hour notice is required.
- (7) As soon as possible, but no later than 30 business days prior to commencing of planned launch, Virgin Orbit shall provide, as a minimum, launch date/window and planned first- and second-stage trajectory, transmission frequencies with associated duration/cut-off time to: Jimmy Nguyen (jimmy.nguyen@us.af.mil) and Robert Avery (robert.avery.9@us.af.mil).
- (8) Virgin Orbit 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. Virgin Orbit must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).
- (9) The STOP BUZZER POC information for all operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned at all times during launch operations.