

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

EXPERIMENTAL

(Nature of Service)

WQ9XPJ

(Call Sign)

XT MO

(Class of Station)

1310-EX-ST-2020

(File Number)

NAME Firefly Aerospace

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 main purpose of the launch vehicle is to provide commercial space launch services.

Station Locations

- (1) MOBILE: Launch vehicle orbiting at 300km altitude, Vandenberg AFB, CA, centered around NL 34-45-20; WL 120-37-20

Frequency Information

MOBILE: Launch vehicle orbiting at 300km altitude, Vandenberg AFB, CA, centered around NL 34-45-20; WL 120-37-20

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2211 MHz	MO	780KG1D	10.5 W (ERP)	1 %
2215 MHz	MO	3M90G1D	10.5 W (ERP)	1 %

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

This authorization effective November 21, 2020 and
will expire 3:00 A.M. EST December 22, 2020

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COMMISSION**



Special Conditions:

- (2) 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.
- (3) All operations shall be limited to a single Firefly Aerospace launch from Vandenberg AFB, CA. This STA will expire as soon as the launch has been completed or 21 December 2020, whichever occurs first.
- (4) All operations shall be limited to telemetry, tracking and launch vehicle communications to provide commercial space launch services
- (5) Firefly Aerospace shall be aware that future access for non-federal launches in the 2200-2290 MHz will be considered on a case-by-case basis and Firefly Aerospace shall have no expectations that future launches will be approved for use of this band.
- (6) As soon as possible, but no later than 60 business days prior to the planned launch, Firefly Aerospace is required to provide, as a minimum, launch date/time/window and planned first- and second-stage trajectory, transmission frequencies with associated duration/cut-off time to:

a. Shane Berg (Shane.berg@us.af.mil, COMM: 805-605-3660, 30 SW)

b. Jimmy Nguyen (jimmy.nguyen@us.af.mil, AFSMO)

c. Shaobei Xu (shaobei.xu.1@us.af.mil, AFSMO)

d. Felipe Arroyo (felipe.arroyo-1@nasa.gov, NASA/WFF)

e. Scott Galbraith (vincent.s.galbraith@nasa.gov, NASA/GSFC)

f. NASA GSFC Spectrum Office

(NASA-DL-GSFC-Spectrum-Management@mail.nasa.gov),

g. Stephen Horan (stephen.j.horan@nasa.gov, NASA/LaRC),

h. Kenneth Dudley (kenneth.l.dudley@nasa.gov, NASA/LaRC),

i. NOAA Satellite Operations Control Center (Matt.G.Sullivan@noaa.gov),

j. Richard Ontiveros, (richard.ontiveros1@navy.mil, NMSC), and

k. Cathy Sham (catherine.c.sham@nasa.gov, NASA/JSC).

In the event of last-minute changes, 48-hour notice is required.

- (7) Firefly Aerospace shall coordinate all downlink operations using a frequency of 2215 MHz with the NASA JSC Spectrum Management Office (JSC-DL-SPECTRUM-MANAGEMENT@MAIL.NASA.GOV), at least 7 days prior to operation.
- (8) As soon as possible, but no later than 60 business days prior to the planned launch, Firefly Aerospace is required to pre-coordinate with the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), group email box; W_DLGR_NSWC_FTMA_FM@navy.mil. Primary frequency coordination contacts; Mr. James Moneyhon, (540) 653-3477- james.moneyhon@navy.mil, Mr. A. Jason Verdugo, (540) 653-9590 – Anthony.J.Verdugo@navy.mil, and/or Mr. Phillip B. Scyphers, (540) 653-6071 – Phillip.scyphers@navy.mil. for analyses, assessment, de-confliction and mitigation of harmful interference to Navy/Marine Corps/DoD operations. Firefly Aerospace must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).
- (9) 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 provided in the FCC application and provided to the NTIA for US Government review.

Special Conditions:

- (10) Firefly Aerospace shall keep a log of all transmissions in the band 2200-2290 MHz and provide to the NTIA after the mission. This log shall include, as a minimum, at least date, time, frequency, EIRP density, pointing direction of all antennas. The log shall be provided to the following NTIA personnel no later than three (3) weeks after completing the mission: bmittchell@ntia.doc.gov and edrocella@ntia.doc.gov
- (11) Firefly Aerospace must schedule their launch so that the launch vehicle will not be visible over Wallops during a COSMIC or JASON-3 satellite pass would ensure the NOAA downlinks are not impacted by Firefly operations. Dynamic analysis results show durations of potential interference to reception of COSMIC and JASON-3 downlinks at Wallops for up to approximately 3 minutes.