

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

EXPERIMENTAL

(Nature of Service)

WQ9XJH

(Call Sign)

XT      FX MO

(Class of Station)

1984-EX-ST-2019

(File Number)

NAME Cornell University

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:**

Downlink data from Alpha experiment and transmit data from mission ops to the spacecraft.

Station Locations

- (1) MOBILE: LEO 400KM
- (2) MOBILE: LEO 400KM A
- (3) Ithaca (TOMPKINS), NY - NL 42-26-37; WL 76-28-54
- (4) MOBILE: LEO 400KM B
- (5) MOBILE: LEO 400KM C
- (6) MOBILE: LEO 400KM D

**Frequency Information**

MOBILE: LEO 400KM

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 1621 MHz  | MO            | 35K0G1D             | 1.518 W (ERP)    | 0.0001 %                  |

This authorization effective August 01, 2020 and  
will expire 3:00 A.M. EST February 01, 2021

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

MOBILE: LEO 400KM A

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 915 MHz   | MO            | 62K1G1D             | 0.01 W (ERP)     | 0.001 %                   |

Ithaca (TOMPKINS), NY - NL 42-26-37; WL 76-28-54

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 915 MHz   | FX            | 62K1G1D             | 96.64 W (ERP)    | 0.002 %                   |

MOBILE: LEO 400KM B

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 915 MHz   | MO            | 62K1G1D             | 0.01 W (ERP)     | 0.001 %                   |

MOBILE: LEO 400KM C

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 915 MHz   | MO            | 62K1G1D             | 0.01 W (ERP)     | 0.001 %                   |

## Frequency Information

MOBILE: LEO 400KM D

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 915 MHz   | MO            | 62K1G1D             | 0.01 W (ERP)     | 0.001 %                   |

## Special Conditions:

- (1) The licensee shall provide the Commission with all information required for the Advance Publication, Coordination and Notification of frequency assignments pursuant to the International Radio Regulations. This includes the preparation of draft materials, to be provided to the Commission prior to submission to the International Telecommunication Union. The authorized operations require notification of frequency assignments pursuant to Article 11 of the ITU Radio Regulations. Licensee shall provide the FCC, not later than 30 days after a frequency assignment is brought into use, the documents required for notification (including SpaceCap Notification MDB file) of such frequency assignments. The licensee shall also prepare materials for informing the ITU that a frequency assignments has been brought into use, or that its use has been suspended or permanently discontinued.
- (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) Upon receipt of a conjunction warning from the JSpOC or other source, the licensee must review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including, but not limited to: contacting the operator of any active spacecraft involved in such warning; sharing ephemeris data and other appropriate operational information with any such operator; modifying spacecraft attitude and/or operations.
- (4) Following launch of the satellite, the licensee must notify the FCC through electronic submission to the license file, of the status of the satellite (transmissions commenced, etc.), not later than 7 days after commencement or expected commencement of transmissions, and of termination of transmissions, not later than three months after such termination.
- (5) Prior to commencing any operations in the frequencies below, the applicant must notify the following within 316 miles of the contours of the testing area:
  - > Location & Monitoring Service licensees (902-928 MHz)
- (6) Concurrence is contingent upon the proper licensing of the complimentary portion of the requested operations by Iridium Satellite LLC.
- (7) Point of Communication: ALPHA CubeSat

Special Conditions:

- (8) ALPHA Cubesat Mission Stop Buzzer Designation  
Dr. Mason Peck, Associate Professor, Cornell University  
607-255-4023  
455 Upson Hall, 124 Hoy Rd, Ithaca, NY 14853  
mp336@cornell.edu