

**United States of America  
FEDERAL COMMUNICATIONS COMMISSION  
EXPERIMENTAL  
RADIO STATION CONSTRUCTION PERMIT  
AND LICENSE**

EXPERIMENTAL  
(Nature of Service)

WK2XIU  
(Call Sign)

XC MO  
(Class of Station)

0011-EX-CN-2019  
(File Number)

NAME Space Sciences & Engineering

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(c & k) of the Commission's Rules

Station Locations

(1) MOBILE: Nongeostationary

Frequency Information

MOBILE: Nongeostationary

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
8.26 GHz	MO	20M0G1D	3.85 W (ERP)	0.0004 %

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.

This authorization effective February 19, 2020 and  
will expire 3:00 A.M. EST March 01, 2024

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



**Special Conditions:**

- (2) 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.
- (3) 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.
- (4) Consistent with discussions with NASA and other federal operators, the authorized satellite, GNOMES-1, shall communicate in the X-band frequencies using only a 20-MHz channel with a center frequency of 8260 MHz. Such transmissions shall be made only to the following four ground stations (as specified in the application): Svalbard, Norway; Troll, Antarctica; Harmon, Guam; and Dubai, UAE. Operations by the GNOMES-1 at 8260 MHz shall be on a non-interference basis.