

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

EXPERIMENTAL

(Nature of Service)

WQ9XGQ

(Call Sign)

XT MO

(Class of Station)

0057-EX-ST-2020

(File Number)

NAME Remote Sensing Center/University of Alabama

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:

We plan to operate an airborne microwave radar for measuring snow thickness in the alpine region. The radar data will be used to validate and improve the national water model.

Station Locations

- (1) MOBILE: Grand Mesa area and Senator Beck Basin area, within 100 km, centered around NL 38-33-50; WL 107-24-29

Frequency Information

MOBILE: Grand Mesa area and Senator Beck Basin area, within 100 km, centered around NL 38-33-50; WL 107-24-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2-18 GHz	MO	16G0F3X	2 W (ERP)	

Special Conditions:

- (1) This frequency assignment in one of the bands 1435-1525, 2310-2320 and 2345-2390 MHz was coordinated prior to authorization with the Area Frequency Coordinator, Ft. Huachuca, AZ, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the AFC, Ft. Huachuca, as necessary to ensure compatibility with existing uses.

This authorization effective March 13, 2020 and
will expire 3:00 A.M. EST April 11, 2020

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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) 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.
- (4) Per FAA response, licensee shall notch out the frequency band 5030-5091 MHz
- (5) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (6) Operations in the frequency bands 2320-2345 MHz and 12.2-12.7 GHz are prohibited.
- (7) Operations in the WCS bands (2305-2320 MHz and 2345-2360 MHz) must comply with the emission limits applicable to those bands. See 47 C.F.R. § 27.53(a).
- (8) The stop buzzer contact for this project is Stephen Yan
Phone: 205-348-5760
Email: jbyan@ua.edu
- (9) Licensee shall secure consents from the Advance Wireless Service licensees prior to operation in the frequency ranges from 2000 MHz to 2200 MHz.
- (10) Licensee shall obtain consents from the Educational Broadband Service and the Broadband Radio Service licensees prior to operation in 2496-2690 MHz range.
- (11) Licensee shall maintain operation separation from the grandfathered earth stations as defined in Part 90, Subpart Z, or coordinate an agreement with the grandfathered earth station licensees prior to operation in 3650-3700 MHz band.
- (12) Licensee shall consult the ULS database to ensure that the operation will not cause harmful interference to any existing registered stations in the 3650-3700 MHz band, and notify the registered users in the proposed geographic areas prior to operation in this band.
- (13) Licensee shall coordinate with the local Society of Broadcast Engineers frequency coordinator and the affected Fixed Microwave Service licensees prior to commencing the test operation
- (14) Prior to commencing any operations in WCS frequencies (2305-2320 MHz/2345-2360 MHz), the applicant must obtain consent from the WCS licensee (AT&T).
- (15) Airborne use in 2305-2310 MHz frequencies is not allowed due to an explicit airborne prohibition in our rules.
- (16) Operations are non-interference basis to Flight Test telemetry and Air Force Spectrum Dependent System.
- (17) Prior to commencing any operations in Aeronautical and Fixed frequencies (2360-2395 MHz), the applicant must coordinate with the Aerospace and Flight Test Radio Coordinating Council (AFTRCC).
- (18) Operations in the WCS bands (2305-2320 MHz and 2345-2360 MHz) must comply with the emission limits applicable to those bands. See 47 C.F.R. § 27.53(a).

Special Conditions:

(19) Remote Sensing Center/University of Alabama must notch out the following:

a.(+/- 2.3 MHz) 2855 MHz, 2885 MHz

b.(+/- 5 MHz) 7130 MHz, 7145 MHz, 7305 MHz, 7395 MHz, 7415 MHz, 7440 MHz, 7565 MHz, 7605 MHz

c.(+/- 8.35 MHz) 4490 MHz, 4790 MHz

d.(+/- 14.8 MHz) 4655 MHz

e.2690 - 2700 MHz, 4990 - 5000 MHz, 10.125 - 10.325 GHz, 10.68 - 10.7 GHz, 15.35 - 15.4 GHz