

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

EXPERIMENTAL

(Nature of Service)

WR9XYO

(Call Sign)

XT MO

(Class of Station)

0548-EX-ST-2021

(File Number)

NAME The 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 soil moisture in a grassy and tree-covered region. The radar data will be used to validate and improve the national water model.

Station Locations

- (1) MOBILE: Tuscaloosa, AL University of Alabama Arboretum, within 100 km, centered around NL 33-11-42; WL 87-28-54

Frequency Information

MOBILE: Tuscaloosa, AL University of Alabama Arboretum, within 100 km, centered around NL 33-11-42; WL 87-28-54

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2.7-2.72 GHz	MO	0G02F3N	2 W (ERP)	
2.825-3.55 GHz	MO	0G72F3N	2 W (ERP)	
4.2-7.745 GHz	MO	3G54F3N	2 W (ERP)	

This authorization effective June 25, 2021 and
will expire 3:00 A.M. EST October 25, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Tuscaloosa, AL University of Alabama Arboretum, within 100 km, centered around NL 33-11-42; WL 87-28-54

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
7.755-8.33 GHz	MO	0G57F3N	2 W (ERP)	
8.34-10.7 GHz	MO	2G36F3N	2 W (ERP)	

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.
- (2) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at <http://sbe.org/wp-content/uploads/freqcoor.pdf> to find the appropriate coordinator.
- (3) Licensee must coordinate with the local Society of Broadcast Engineers frequency coordinator in the proposed area prior to operation in the proposed frequency bands.
- (4) Licensee must coordinate with Fixed Microwave Service licensees in the corresponding proposed venue in accordance with 47 C.F.R, Part 101.103(d) prior to commencing experimental operations.
- (5) With respect to operations in 3700-4200 MHz band, Licensee must avoid causing interference to existing FSS earth stations in the band. For applicant's reference, a list of registered incumbent FSS earth stations in the band can be found at the following link: <https://docs.fcc.gov/public/attachments/DA-20-823A2.xls>
- (6) The 4990-5000 MHz and 10680-10700 MHz bands shall be excluded from operation.
- (7) Avoid emissions into the adjacent 2.690-2.700 GHz band.
- (8) The University of Alabama shall adhere to the conditions of FAA WebFCR coordination NG T210265
- (9) NTIA noting the band 5850-5925 MHz, IAW NG 160, the use of the non-Federal mobile service is limited to Dedicated Short Range Communications operating in the Intelligent Transportation System radio service.