

**FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPECIAL TEMPORARY AUTHORITY**

Applicant Name

Name of Applicant: Peter Driessen

Address

Attention: Peter Driessen
Street Address: 3800 Finnerty Road
P.O. Box: EOW 448
City: Victoria
State:
Zip Code: V8P5C2
Country: Canada
E-Mail Address: peterdri@gmail.com

Best Contact

Give the following information of person who can best handle inquiries pertaining to this application:

Last Name: Driessen
First Name: Peter
Title: Professor
Phone Number: 250-213-9425

Explanation

Please explain in the area below why an STA is necessary:

An STA is required to allow transmission of signals as part of an observation time grant awarded by the Long Wavelength Array radio observatory. This facility can receive terrestrial and celestial signals in the 4-88 MHz range, is located in the Sevilleta National Wildlife Refuge, New Mexico, and is operated by the University of New Mexico as part of the University Radio Observatory Program supported by the National Science Foundation.

Purpose of Operation

Please explain the purpose of operation:

The purpose is to measure properties of the ionosphere using the 256-element Long Wavelength Array in New Mexico to receive signals from a terrestrial transmitter just outside ground wave distance via near vertical incidence sky wave (NVIS). The transmitter will emit both continuous waves and linear frequency sweeps up to 70 KHz wide at a rate of 0.1-10 sweeps per second over a 4-hour period on center frequencies suitable for NVIS in the range 4-7 MHz at a 100 watt power level. The data from each of the 256 elements will be processed digitally to create time-varying images of the ionosphere that can be interpreted to detect earth-disturbing events such as earthquakes.

Information

Callsign:
Class of Station: FX
Nature of Service: Experimental

Requested Period of Operation

Operation Start Date: 07/01/2019
Operation End Date: 12/31/2019

Manufacturer

List below transmitting equipment to be installed (if experimental, so state)
if additional rows are required, please submit equipment list as an exhibit:

Manufacturer	Model Number	No. Of Units	Experimental
ICOM	IC7610	1	No

Certification

Neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. The applicant hereby waives any claim to the use of any particular frequency or electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.) The applicant acknowledges that all statements made in this application and attached exhibits are considered material representations, and that all the exhibits part hereof and are incorporated herein as if set out in full in this application; undersigned certifies that all statements in this application are true, complete and correct to the best of his/her knowledge and belief and are made in good faith. Applicant certifies that construction of the station would NOT be an action which is likely to have a significant environmental effect. See the Commission's Rules, 47 CFR1.1301-1.1319.

Signature of Applicant (Authorized person filing form): Peter Driessen

Title of Applicant (if any): Professor

Date: 2019-04-16 00:00:00.0

Station Location

City	State	Latitude	Longitude	Mobile	Radius of Operation
Santa Fe	New Mexico	North 35 42 41	West 106 0 30		

Datum: NAD 83**Is a directional antenna (other than radar) used?** No**Exhibit submitted:** No**(a) Width of beam in degrees at the half-power point:****(b) Orientation in horizontal plane:****(c) Orientation in vertical plane:**

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 6.00**(b) Elevation of ground at antenna site above mean sea level in meters:** 2080.00**(c) Distance to nearest aircraft landing area in kilometers:**

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	4000.00000000-kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	1H00A0	NONE
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	4000.00000000-kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	75K0A1A	SWEEP
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	5300.00000000-5375.00000000 kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	1H00A0	NONE
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	5300.00000000-5375.00000000 kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	75K0A1A	SWEEP
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	5351.50000000-kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	1H00A0	NONE
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	5351.50000000-kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	1H00A0	NONE
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	5351.50000000-kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	75K0A1A	SWEEP
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	7050.00000000-7125.00000000 kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	1H00A0	NONE
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	7050.00000000-7125.00000000 kHz	FX	100.000000 W 100.000000 W	M	1.00000000 %	75K0A1A	SWEEP

