

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

EXPERIMENTAL

(Nature of Service)

XC FX

(Class of Station)

WH2XWG

(Call Sign)

0394-EX-PL-2015

(File Number)

NAME Atmospheric & Space Technology Research Associates (ASTRA), LLC.

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(b) of the Commission's Rules

Station Locations

- (1) Mountain View (HAWAII), HI - NL 19-00-49; WL 155-39-48
- (2) Keaau (HAWAII), HI - NL 19-36-48; WL 155-03-19
- (3) Kailua-Kona (HAWAII), HI - NL 19-43-44; WL 156-03-31

Frequency Information

Mountain View (HAWAII), HI - NL 19-00-49; WL 155-39-48

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4.442965-4.443035 MHz	FX	35H0N0N	164 W (ERP)	0.0007878 %
4.646965-4.647035 MHz	FX	35H0N0N	164 W (ERP)	0.00075317 %
6.768965-6.769035 MHz	FX	35H0N0N	164 W (ERP)	0.0005171 %
6.992965-6.993035 MHz	FX	35H0N0N	164 W (ERP)	0.0005005 %

This authorization effective July 13, 2015 and
will expire 3:00 A.M. EST July 01, 2016

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Keaau (HAWAII), HI - NL 19-36-48; WL 155-03-19

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4.442965-4.443035 MHz	FX	35H0N0N	164 W (ERP)	0.0007878 %
4.646965-4.647035 MHz	FX	35H0N0N	164 W (ERP)	0.00075317 %
6.768965-6.769035 MHz	FX	35H0N0N	164 W (ERP)	0.0005171 %
6.992965-6.993035 MHz	FX	35H0N0N	164 W (ERP)	0.0005005 %

Kailua-Kona (HAWAII), HI - NL 19-43-44; WL 156-03-31

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4.442965-4.443035 MHz	FX	35H0N0N	164 W (ERP)	0.0007878 %
4.646965-4.647035 MHz	FX	35H0N0N	164 W (ERP)	0.00075317 %
6.768965-6.769035 MHz	FX	35H0N0N	164 W (ERP)	0.0005171 %
6.992965-6.993035 MHz	FX	35H0N0N	164 W (ERP)	0.0005005 %