

From: Cynthia Grady

To: Behnam Ghaffari

Date: March 11, 2016

Subject: FCC File No. 0181-EX-PL-2016

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Message:

Subject: RE: FCC File No. 0181-EX-PL-2016

Please provide the following information with respect to the satellite(s):

1. Satellite Longitude  
310 degrees East Longitude
2. Satellite orientation (Narrow Beam (NB) or Earth Coverage (EC))  
Narrow Beam (NB)
3. Receive antenna gain (dBi)  
42.3 dBi from Dick Evans
4. Beam width of the receive antenna at the half power points  
From Dick Evans: Beamwidth is not a specified parameter for these satellite beams. A rough estimate of the beamwidth based on the gain is 1.5 degrees.
5. Antenna Polarization

Satellite Receive

Beam	Polarization	Frequency	Nominal Beam Area
U39	Horizontal	14.069 - 14.119 GHz	New England
U02	Horizontal	14.381 - 14.431 GHz	Mid Atlantic
U04	Vertical	14.131 - 14.181 GHz	Southeast US

Satellite Receive

Beam	Polarization	Frequency	Nominal Beam Area
U39	Vertical	11.706 - 11.819 GHz	New England
U02	Vertical	12.081 - 12.194 GHz	Mid Atlantic
U04	Horizontal	12.081 - 12.194 GHz	Southeast US

Please provide the following information with respect the transceiver ground-station antenna(s):

All of the answers except for #4, come from / agree with the documentation provided for license call sign WI2XBD.

1. Transmit antenna gain (dbi)  
30.7 dBi at 14.50 GHz
2. Beam width of transmit antenna at the half-power points  
2.2 degrees in azimuth direction  
2.4 degrees in elevation direction
4. Elevation of transmit antenna AGL (in meters)  
0 to 8500 meters  
This antenna is to be mounted on an aircraft that may fly between 0 to 8500 meters.

## 5. Antenna Polarization

Linear.

Selectable between horizontal transmit / vertical receive and vertical transmit / horizontal receive.