

From: Robert Koppel

To: Behnam Ghaffari

Date: April 15, 2015

Subject: FCC File No. 0206-EX-PL-2015

Message:

Question: Will there be 2-way communication with the Hughes/EchoStar GSO Satellites in space (14-14.5 GHz)?

Yes. The earth terminals will transmit to the satellite(s) in the 14.0 – 14.5 GHz band (Ku-band) and in the 28.6 – 29.1 GHz and 29.5 – 30.0 GHz bands (Ka-band). The earth terminals will receive from the satellite(s) in the 11.7 – 12.2 GHz band (Ku-band) and the 18.3 – 18.8 GHz and 19.7 – 20.2 GHz bands (Ka-band).

Although communications will be in both directions, the application for an experimental license does not seek authorization to receive in the space-to-earth downlink bands. The Hughes/EchoStar satellites are licensed pursuant to Part 25 of the Commission's Rules, and no further authorization is required for receive operations by earth terminals.

If yes, please provide the following information with respect to the satellite(s):

1. Satellite coverage (Narrow Beam (NB) or Earth Coverage (EC)): Not applicable.
2. Receive antenna gain: Not applicable.
3. Beam width of the receive antenna at the half power points: Not applicable

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

1. Transmit antenna gain (dBi): 35 dBi.
2. Beam width of transmit antenna at the half-power points: 1.5 degrees.
3. Transmit antenna azimuth: the application seeks authorization for the earth terminal to operate anywhere in CONUS. Thus, the antenna azimuth will vary.
4. Elevation of transmit antenna MSL (in meters): please see previous response.
5. Elevation of transmit antenna AGL (in meters): please see previous response.