

File Number: 1006-EX-ST-2021

Call Sign: WS9XJV

Class of Station: Fixed/Mobile

Station Location: Fixed/Mobile

Effective Date: 09/10/2021

Expiration Date: 09/30/2021

Operation Start Date: 09/13/2021

Operation End Date: 09/23/2021

Iridium operates a constellation of 66 satellites in low earth orbit. The FCC has granted Iridium a Part 25 license to operate these satellites and blanket Part 25 licenses to operate associated mobile user terminals.

Iridium has exclusive use of the portion of the Big LEO band at 1618.725-1626.5 MHz. Iridium uses those frequencies in both the uplink direction and the downlink direction. The signals the user terminals receive from Iridium's satellites are weak because the signals are transmitted hundreds of km away in space.

Raytheon's experimental STA authorizes 3 watt transmissions (approximately) with an omni antenna in Iridium's band. That is about 150 dB above the noise floor for the user terminals and would interfere with the user terminals' reception for hundreds of kilometers.

Given this interference scenario, we are hoping Raytheon can conduct its experiment without operating in Iridium's 1618.725-1626.5 MHz band. Please note that Raytheon would not be able to use these frequencies commercially, other than as a customer on Iridium's satellite system, since the frequencies are exclusive to Iridium.

Due to interference concerns, Iridium is asking can Raytheon conduct the X-Net Radio testing without operating in 1618.725 – 1626.5 MHz frequency band. See below email.

Raytheon has agreed to notch out frequency range 1618.725-1626.5 MHz to avoid interfering with Iridium constellation of the 66 satellites in low earth orbit.