

Request for Experimental Authority

Iridium Satellite LLC (“Iridium”) is a limited liability company with headquarters in McLean, VA. Iridium seeks experimental authority to add the Air Force Institute of Technology’s (“AFIT”) Space Object Self-Tracker (“SOS”) CubeSat as a point of communication, since Iridium’s Part 25 space station license does not cover space-to-space communications.

A single Iridium modem model 9602 will be installed on the AFIT SOS, which is scheduled to launch as a payload on NASA’s Green Propellant Infusion Mission (“GPIM”) satellite on June 22, 2019. AFIT seeks to develop an identification and precision tracking capability for future space situational awareness architectures and a method for accurately estimating orbits using GPS and Low Earth Orbit satellites.

Iridium requests an experimental license for 18 months, from July 22, 2019, to January 22, 2021. This time period reflects the 12-month scheduled duration of the mission plus six months to account for any possible launch or other technical delays common to spacecraft missions.

The 9602 modem will transmit from the SOS CubeSat to space stations in Iridium’s “Big LEO” constellation, under authority to be obtained from the National Telecommunications and Information Administration.¹ Iridium hereby requests an experimental license to transmit in the reverse direction, from its Big LEO constellation to the modem on the SOS CubeSat, in the 1618.725–1626.5 MHz band. The technical characteristics of these transmissions will be identical to the technical characteristics of Iridium’s already-licensed space station transmissions.²

Iridium’s space station constellation is licensed under Call Sign S2110. Because Iridium will be operating under the parameters of its license, no operating parameters, other than effective radiated power and emission designator, were used in the form that this exhibit accompanies. The only change from Iridium’s licensed operations is that Iridium will be adding the AFIT SOS-based modem as a point of communication. Iridium’s space station license does not cover intersatellite communications in the 1618.725–1626.5 MHz band.

¹ See SPS-23648/1.

² Iridium’s constellation is licensed under call sign S2110 and is comprised of 66 satellites, any one of which may be used as part of the experiment at any point in time.