

Request for Experimental License

Iridium Satellite LLC (“Iridium”) seeks an experimental license for a twenty-four (24) month period, beginning June 1, 2021, to add an experimental satellite as a point of communication, as described below, to Iridium’s low earth orbit constellation authorized under Part 25 of the Commission’s Rules. Iridium is seeking an experimental license for these operations because its Part 25 space station license does not cover space-to-space communications.¹

Cornell University (“Cornell”) has requested experimental authority to operate a RockBlock MK II transceiver installed on its ALPHA experimental satellite to communicate with mission operations via the Iridium constellation.² The 24-month time period requested by Iridium herein takes into account the need for documentation to be provided to the ALPHA satellite integrator; the scheduled duration of the ALPHA mission; and the possibility of delays in the launch of the ALPHA satellite or the start of its mission.³

The RockBlock MK II modem is based on the Iridium 9602 chipset and will transmit from the ALPHA experimental space station to space stations in Iridium’s “Big LEO” constellation. Iridium seeks authority to transmit in the reverse direction, from its Big LEO constellation to the modems on the ALPHA experimental space station. The technical characteristics of these transmissions will be identical to the technical characteristics of Iridium’s already-licensed Part 25 space station transmissions in the 1618.725–1626.5 MHz band.

Iridium’s experimental operations will be in accordance with the parameters of its Part 25 license. Accordingly, no operating parameters other than effective radiated power and emission designator are provided in the form that this exhibit accompanies. The only change from Iridium’s Part 25 licensed operations is to add Cornell’s ALPHA project satellite as a point of communication.

¹ 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.

² See Cornell University, File No. 1004-EX-CN-2020.

³ This experimental license application supersedes an Iridium request for Special Temporary Authority (“STA”) submitted under File No. 1455-EX-ST-2020. That STA request was a companion to Cornell’s STA request under File No. 1984-EX-ST-2019, which was superseded by its experimental license application cited in n. 2.