

Request for Experimental Authority

Iridium Satellite LLC (“Iridium”) hereby requests experimental authority for a period of seven months, starting February 15, 2023, to transmit from its space stations¹ to a Virginia Space Cubesat Program (“VSCP”) smallsat operating in low earth orbit in the 1618.725–1626.5 MHz band. VSCP is owned and operated by the Virginia Commercial Space Flight Authority in partnership with the Virginia Institute for Spaceflight and Autonomy (“VISA”) at Old Dominion University.

VISA proposes to launch and operate a pair of smallsats: VSCP-1A and VSCP-1B. This application seeks authority to communicate with VSCP-1A only and is a companion to VISA’s application for an experimental license to launch and operate VSCP-1A.²

The VSCP-1A cubesat mission proposes to demonstrate payload boom deployment systems and downlink required telemetry for payload validation and will also carry an impedance probe and multispectral sensor experiment in collaboration with the US Coast Guard Academy. As outlined in VISA’s application, a single Iridium 9603 transceiver will be mounted on the cubesat to provide command and control, mission data downlink, and satellite position data.³

The cubesat will be launched as a secondary payload aboard the NG-19 Antares Launch Vehicle from Wallops Island no earlier than February 15, 2023. Transmission will begin approximately 30 minutes after deployment and cease when thermal buildup consumes the spacecraft during re-entry, estimated to occur within a few days after launch. Iridium is seeking an experimental license for seven months to account for the possibility of a later launch.

There will be no change during the experiment in the operating parameters of Iridium’s space stations. For this reason, no operating parameters, other than effective radiated power and an emission designator, are shown in the form that this exhibit accompanies. The only change for which Iridium seeks an experimental license is adding VSCP-1A as a point of communication. Iridium’s Part 25 space station license does not cover space-to-space communications.

¹ Iridium’s constellation licensed under Callsign S2110 is comprised of 66 satellites, any one of which may be used as part of the experiment at any point in time.

² See Virginia Institute for Spaceflight & Autonomy, Application for Experimental Authority to Launch and Operate VSCP-1, OET File No. 0899-EX-CN-2022, filed Aug 14, 2022.

³ *Id.* at Technical Description Exhibit, pp. 2-3.

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