

Request for Experimental Authority

Iridium Satellite LLC (“Iridium”) seeks an experimental license for seven months, beginning July 2, 2024, to transmit in the 1618.725-1626.5 MHz band from its space stations¹ to the smallsat “**Gluon**” operated by Atomos Nuclear and Space Corporation (“Atomos”). Gluon was launched on the SpaceX Transporter 10 vehicle for Atomos’ Mission-1 demonstration along with another Atomos spacecraft, Meson, which is an orbital transfer vehicle.² As explained below, grant of Iridium’s companion application and a separate companion application Iridium is filing for a seven-month experimental license to communicate with Meson will allow Atomos’ Gluon and Meson mission to be extended seven months.³

Gluon and Meson are being used to test a series of proximity docking and rendezvous maneuvers. Due to launch delays the satellites will have only been in orbit for three months at the expiration of the current special temporary authority (“STA”) on July 2, 2024. Grant of Iridium’s application would allow Atomos to compensate for these delays and overcome reduced communication rates that have slowed the pace of the demonstration mission.⁴ The particulars of the experiment are contained in Iridium’s original applications which are hereby incorporated by reference.⁵

There will be no change during the experiment in the operating parameters of Iridium’s space stations, which are licensed as Part 25 space stations under Call Sign S2110. For this reason, no operating parameters, other than effective radiated power and emission designator, are used in the form that this exhibit accompanies. The only change for which Iridium seeks authority is adding Gluon as a point of communication. Iridium’s Part 25 space station license does not cover space-to-space communications.

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

² See Atomos Nuclear and Space Corporation, Call sign WV9XQY, OET File No. 0943-EX-ST-2023, granted Jan 11, 2024 (Gluon). See also Atomos Nuclear and Space Corporation, Call sign WV9XQX, OET File No. 0911-EX-ST-2023, granted Jan 11, 2024 (Meson).

³ Iridium companion STAs expire July 2, 2024. See Iridium Satellite LLC, Call sign WW9XRN, OET File No. 1422-EX-ST-2023, granted Jan 18, 2024 (Gluon). See also Iridium Satellite LLC, Call sign WW9XRO, OET File No. 1423-EX-ST-2023, granted Jan 18, 2024 (Meson).

⁴ See Atomos Nuclear and Space Corporation, OET File No. 1093-EX-ST-2024, filed Jun 7, 2024 (Gluon); and OET File No. 1088-EX-ST-2024, filed Jun 7, 2024 (Meson).

⁵ Iridium Satellite LLC, Call sign WW9XRN, OET File No. 1422-EX-ST-2023, granted Jan 18, 2024 (Gluon). Iridium Satellite LLC, Call sign WW9XRO, OET File No. 1423-EX-ST-2023, granted Jan 18, 2024 (Meson).

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