

Request for Experimental Authority

Iridium hereby requests experimental authority to add the Thomas Jefferson Research and Education Vehicle for the Evaluation of Radio Broadcasts or ("TJ REVERB") as a point of communication to Iridium's Big LEO constellation. For the reasons set forth below, Iridium requests experimental authority for a period of 18 months, beginning April 1, 2020, and respectfully requests that this authority be granted September 30, 2019, or at the earliest practicable time thereafter.

Iridium's request is made to support the Thomas Jefferson High School Partnership Fund, Inc. ("TJHSPF"), run through Thomas Jefferson High School, as part of the Fairfax County Public School System in the Commonwealth of Virginia. TJHSPF has filed a separate application seeking experimental authority to operate a 2U experimental cubesat called TJ REVERB.¹

TJHSPF's cubesat will carry an Iridium short burst data (SBD) modem and patch antenna that will be used to demonstrate and evaluate communications between the Iridium constellation and TJ REVERB, and for backup TT&C. The demonstrations and evaluations will be conducted intermittently over a one-year period commencing shortly after deployment of TJ REVERB from the International Space Station. The mission will utilize a single Iridium 9603 modem to transmit to space stations in Iridium's Big LEO constellation, as described in TJHSPF's experimental application.

TJ REVERB is currently scheduled to be launched in the first quarter of 2020, but the launch aggregator requires all regulatory approvals to be in place by September 30, 2019, or at the earliest practicable time thereafter, to facilitate integration in Q4 2019.² Iridium seeks experimental authority for 18 months to account for any launch delays.

Iridium's space station constellation is licensed under Call Sign S2110.³ Because Iridium will be operating under the requested experimental authority in accordance with the parameters of this license, no operating parameters, other than effective radiated power and an 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 TJ REVERB cubesat 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 Thomas Jefferson High School Partnership Fund, Inc., Application for Experimental Authority, FCC File No. 0950-EX-CN-2018 filed Nov 28, 2018.

² The satellite is expected to be launched to the International Space Station ("ISS") in Q1 2020 and released from the ISS in Q2 2020.

³ 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.