

Request for Special Temporary Authority

Iridium Satellite LLC (“Iridium”) hereby requests experimental special temporary authority (“STA”) 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 180 days, beginning August 1, 2022. To satisfy the requirements of the satellite integrator, Iridium requests a grant of this application no later than May 1, 2022.

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 was previously granted authority to operate a 2U experimental cubesat called TJ REVERB.¹ Due to unforeseen assembly and testing delays on top of the effects of the COVID-19 pandemic, the TJ REVERB mission was unavoidably delayed. This application seeks to support an application TJHSPF is filing seeking extension of its experimental authority and is substantively identical Iridium’s previous application granted under call sign WK2XKD that expired February 1, 2021.² TJ REVERB is currently scheduled to be launched in August 2022, and Iridium hereby seeks experimental STA for 180 days to account for the anticipated mission duration and any launch delays.

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 period of up to one year commencing shortly after deployment of TJ REVERB from the International Space Station (“ISS”). The mission will utilize a single Iridium 9603 modem to communicate with space stations in Iridium’s Big LEO constellation, as described in TJHSPF’s experimental application.

¹ See Thomas Jefferson High School Partnership Fund, Inc., call sign WJ2XXB, FCC File No. 0950-EX-CN-2018 (granted Aug 7, 2019). See also FCC File Nos. 0440-EX-CR-2020 (granted Jul 31, 2020) and 0443-EX-CR-2021 (granted Jul 29, 2021).

² See Iridium Satellite LLC, call sign WK2XKD, FCC File No. 0553-EX-CN-2019 (granted Aug 7, 2019).

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.

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.