

Request for Special Temporary Authority

The National Telecommunications and Information Administration (“NTIA”) has authorized the National Aeronautics and Space Administration (“NASA”) to conduct experiments with the Passive Thermal Coating Observatory Operating in Low-Earth Orbit (“PATCOOL”) cubesat operated by the University of Florida. A copy of that authorization is attached hereto.¹

Iridium Satellite LLC (“Iridium”) seeks special temporary authority (“STA”) for a period of one hundred and eighty (180) days, to transmit from its space stations to PATCOOL in the 1618.725–1626.5 MHz band,² between August 18, 2021 and February 14, 2022, in the manner described below. Although Iridium is requesting an STA term that would not begin until August 18, 2021, it asks that its STA request be granted in the near term because evidence of a grant must be provided to the integrator for the PATCOOL cubesat.

The PATCOOL cubesat will be brought to the International Space Station (“ISS”) via a Nanoracks launch scheduled for early summer of 2021. Once ejected from the ISS, it will be used to assess the effectiveness of various novel thermally coated components in space. These components will be mounted on the spacecraft and will be monitored for sun and space exposure during flight. An Iridium 9602N transceiver mounted on the PATCOOL cubesat will transmit measurement readings and other data via the Iridium constellation.³

The mission is expected to be carried out over a period of 30 days. Due to the uncertainty of launch schedules and to minimize the possibility of having to seek an extension, Iridium requests a full 180 days for its STA.

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 STA is adding PATCOOL as a point of communication. Iridium’s Part 25 space station license does not cover space-to-space communications.

¹ *Certification of Spectrum Support*, Control No. Doc. 444271/1 SPS-243401, June 2, 2020.

² 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.

³ There will be two 9602N transceivers mounted on the PATCOOL cubesat, one of which will serve as a back-up.