REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Space Exploration Holdings, LLC ("SpaceX"), pursuant to Section 25.120 of the Commission's rules, hereby requests Special Temporary Authority ("STA") for its first-generation non-geostationary orbit ("NGSO") satellites to communicate with its user terminals operated by its sister company, SpaceX Services, Inc. ("SpaceX Services") in the polar regions of the United States. SpaceX has been authorized to launch and operate a constellation of 4,425 NGSO satellites (call sign S2983/S3018) using Ku- and Ka-band spectrum.[1] SpaceX Services has received blanket authority to deploy its user terminals throughout the continental United States, Hawaii, Alaska, Puerto Rico, and the U.S. Virgin Islands.[2]

This application requests carefully limited, temporary authority solely to authorize communications between SpaceX satellites and user terminals at elevation angles no less than 10 degrees in polar regions — *i.e.*, at latitudes above 53 degrees. This application does not seek authority to deploy any additional satellites or earth stations. It also does not seek any change in the technical or operating characteristics of the satellites and earth stations the Commission has already authorized, except for this narrow change to the minimum elevation angle observed in polar regions. This stop-gap operation will enable SpaceX to speed deployment of its high-speed, low-latency service to the polar regions of the United States in the interim period before SpaceX's system is sufficiently deployed to provide polar service at its already authorized 25-degree minimum elevation angle. This operation would take place throughout the 10.7-12.7 GHz (downlink) and 14.0-14.5 GHz (uplink) bands.

The Commission has good cause to approve this request quickly. Specifically, the requested STA would enable SpaceX to speed the deployment of next-generation satellite service to some of the most underserved areas of the country, driving high-speed, low-latency broadband connectivity that will help consumers connect to work, school, healthcare, and government services. Moreover, this request is strictly temporary in nature, serving as a critical stop-gap measure while SpaceX deploys satellites to cover the polar regions at its authorized 25-degree elevation angle. Accordingly, this request is in the public interest.

SpaceX operations at elevation angles less than 25 degrees will be conducted on a non-interference basis. Consistent with its authorization, SpaceX will observe the applicable equivalent power flux-density limits set forth in Article 22 and Resolution 76 of the ITU Radio Regulations and the applicable power flux-density limits set forth in the Commission's rules and Article 21 of the ITU Radio Regulations, which the Commission has found sufficient to protect

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[1] *See Space Exploration Holdings, LLC; Application for Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System et al,* Memorandum Opinion, Order and Authorization, 33 FCC Rcd. 3391 (2018); *Space Exploration Holdings, LLC; Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, Order and Authorization, 34 FCC Rcd. 2526 (2019).

[2] *See SpaceX Blanket−Licensed Earth Station Application*, Radio Station Authorization, IBFS File No. SES-LIC-20190211-00151, Call Sign E190066 (granted Mar. 13, 2020).

GSO systems and terrestrial systems, respectively, against harmful interference. Granting this STA will not increase interference to the two other NGSO operators operating in Polar regions in the band. First, OneWeb claims they operate at a high minimum elevation angle of 45 degrees compared to SpaceX's typical minimum elevation angle of 25 degrees.[3] As illustrated below, permitting SpaceX to operate at lower minimum elevation angles in the polar regions will reduce interference to OneWeb operations compared to SpaceX's typical operations by increasing the separation angles between active OneWeb and SpaceX satellites and thus decreasing the risk of in-line events. With respect to Kepler, SpaceX will leverage any information it receives regarding the locations of Kepler earth stations and satellites that would be impacted by 10–25-degree elevation angle operations under this STA to avoid greater interference to the Kepler system at those locations.

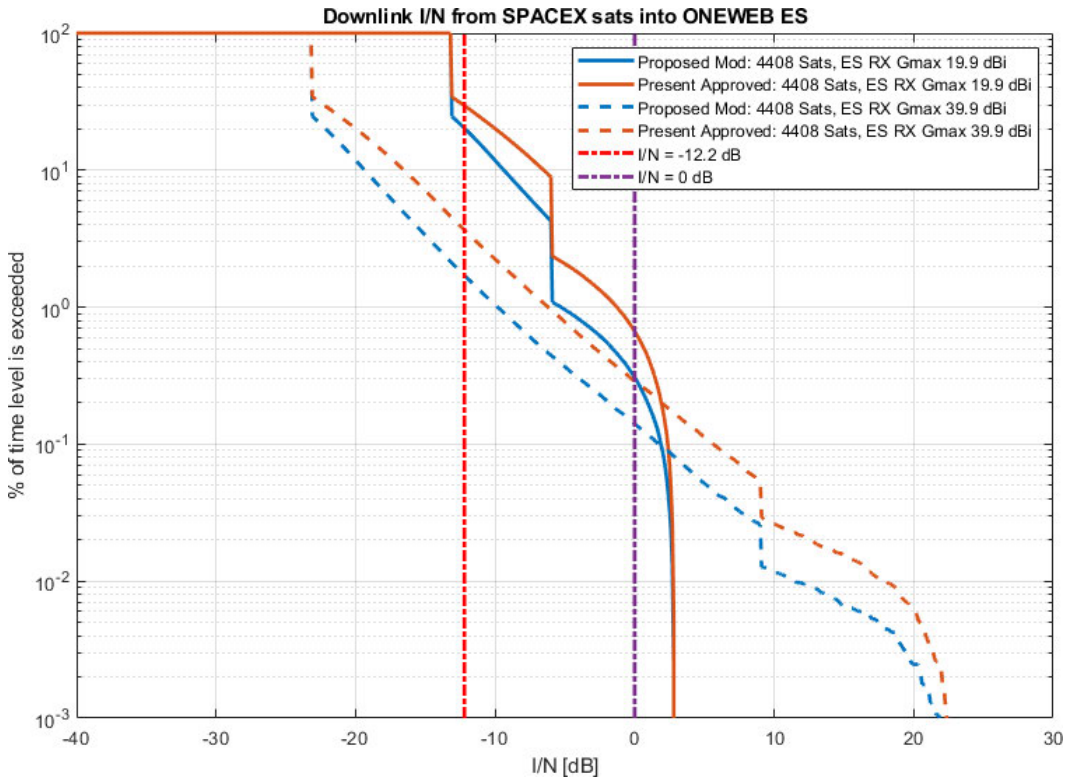

Figure 1 — Downlink Interference from SpaceX into OneWeb Earth Stations (ES collocated at 75°N, 100°W)

[3] *Application of WorldVu Satellites Limited, Debtor-in-Possession*, Technical Information to Supplement Schedule S, IBFS File No. SAT-LOI-20170301-00031, Call Sign 2994, 7 (filed Mar. 1, 2017).

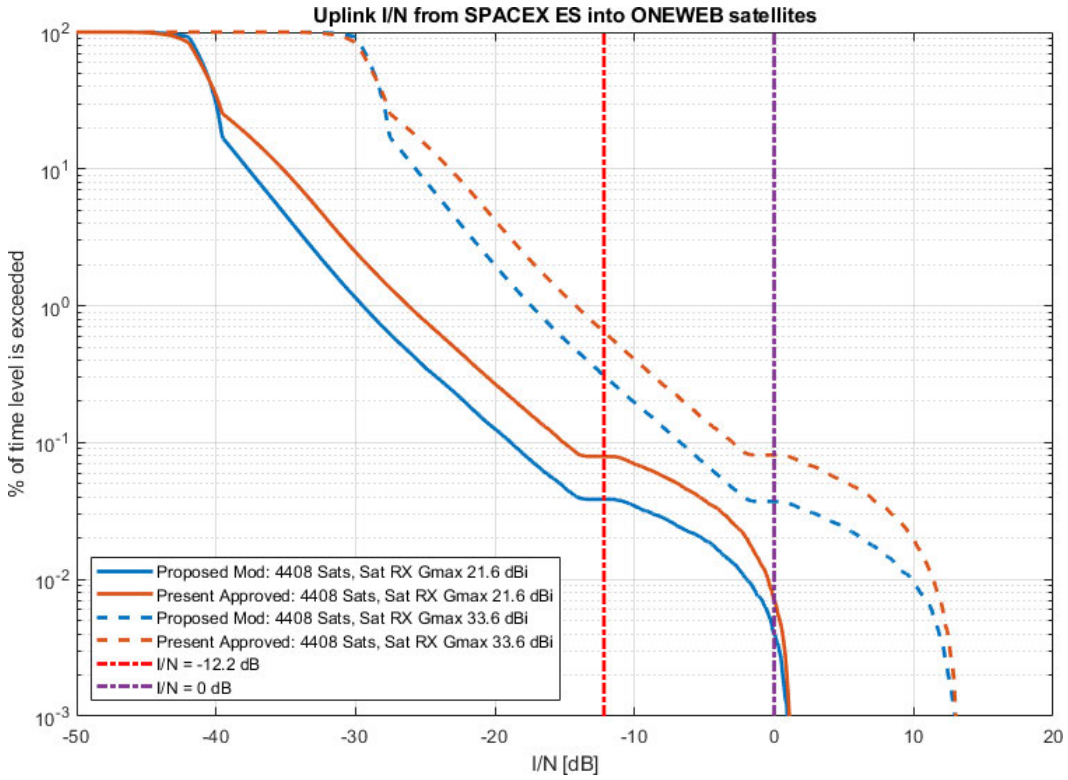

Figure 2 — Uplink Interference from SpaceX Earth Stations into OneWeb Satellites (Earth Stations Collocated at 75°N, 100°W)

In the extremely unlikely event that harmful interference should occur due to transmissions to or from its spacecraft, SpaceX will take all reasonable steps to eliminate the interference. Should an issue arise, SpaceX can be reached at satellite-operators-pager@spacex.com, which links to the pagers of appropriate technical personnel 24/7.

SpaceX requests that the Commission issue an STA structured to begin as soon as feasible and remain in force for up to six months thereafter. SpaceX Services has requested a parallel STA to permit its terminals communicate with the satellites at issue in this STA.