Attachment 1
Astro Digital US, Inc.
Response to Question 12

Request for Special Temporary Authorization

Astro Digital US, Inc. ("Astro Digital") hereby requests special temporary authority ("STA") for 30 days,[1] commencing on the deployment of the Astro Digital Landmapper satellite[2] from the PSLV launch vehicle on or about January 10, 2018, to allow the earth station identified below to communicate with the satellite for in-orbit testing and transmission of telemetry and command signals, consistent with the technical parameters specified in the associated pending application for regular authority.[3] This STA application is necessary because Astro Digital is relocating its earth station facility[4] and the new location, which is associated with the earth station application for regular authority, is not expected to be operational until after the launch of the satellite.[5]

The Commission has previously found that grant of earth station STAs to communicate with satellites, pending the processing of permanent applications, serves the public interest, convenience, and necessity by allowing for the deployment of new and additional satellite services in a timely manner.[6] Grant of this STA is necessary to allow for communications with Astro Digital's Landmapper satellite, pending the relocation of its permanent earth station facility.

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[1] *See* 47 C.F.R. 25.120(b)(4).
[2] *See* Astro Digital Application, IBFS File No. SAT-LOA-20170508-00071 (granted in part Dec. 14, 2017).
[3] *See* IBFS File No. SES-LIC-20171017-01179 (filed Oct. 17, 2017).
[4] Astro Digital currently operates this existing earth station facility for telemetry and command of the company's Perseus-M1, and Perseus-M2 under Part 5 experimental licenses. *See* ELS File No. 0317-EX-CR-2017; *see also* ELS File No. 0021-EX-CM-2016 (seeking authority to operate an additional experimental satellite).
[5] Astro Digital will be filing an amendment application to its pending earth station application for regular authority, reflecting a recent change in the location of its earth station to 3171 Jay St., Santa Clara CA, 95054 (37° 22' 48" N, 121° 57' 40" W).
[6] *See, e.g.*, Stamp Grant, Spire, SES-STA-20160324-00286 (granted Apr. 28, 2016); Stamp Grant, DG Consents Sub, Inc., SES-STA-20140717-00605 (granted Aug. 12, 2014); Stamp Grant, EchoStar Broadcasting Corporation, SES-STA-20130108-00019 (granted Jan. 10, 2013); Stamp Grant, Inmarsat Hawaii Inc., SES-STA-20080311-00275 (granted Apr. 4, 2008).

Earth Station Frequencies:

Astro Digital seeks authority to operate on the following frequencies, consistent with the FCC's recent partial grant of its space station license and its spectrum coordination with relevant federal agencies, and incorporates by reference the relevant waiver requests stated in the space station license application:[7]

Link Direction	Frequency Band	Bandwidth Occupied	Max. Data Rate
Uplink (command)	402.88-400.92 MHz 402.58-402.62 MHz[8]	40 kHz	38.4 kbps
Downlink (telemetry)	400.48-400.52 MHz 400.155-400.195 MHz[9]	40 kHz	38.4 kbps

Uplink output power is 41 dBW EIRP. Astro Digital understands that its authorized operations will be on an unprotected, non-harmful interference basis.

Site Address:

NASA Ames Research Park
340 Cody Road, Building 503
Moffett Field CA, 94035

Earth Station coordinates:

Latitude: 37˚ 24' 34" N
Longitude: 122˚ 03' 12" W

[7] *See* Astro Digital Application, IBFS File No. SAT-LOA-20170508-00071 (granted in part Dec. 14, 2017).
[8] Astro Digital has requested that the FCC correct its space station license to reflect that TT&C operations in the Earth-to-space direction are limited to a center frequency of 402.9 MHz, except as necessary for a period immediately following (i) the deployment of the satellite or (ii) a satellite software reset, resulting in the satellite returning to its default channel, in both cases to allow for the retuning of the satellite receive channel from 402.6 MHz to 402.9 MHz.
[9] As specified in the partial grant of the space station license, Astro Digital's TT&C operations in the space-to-Earth direction are limited to a center frequency of 400.5 MHz, except as necessary for a period immediately following (i) the deployment of the satellite or (ii) a satellite software reset, resulting in satellite transmissions returning to the default transmission channel, in both cases to allow for the retuning of transmissions from 400.175 MHz to 400.5 MHz. *Id*. at ¶ 7.