

## Narrative

Astro Digital US, Inc. (“Astro Digital”) requests special temporary authority (“STA”) for 180 days to communicate with the Sherpa-LTC1 spacecraft (SAT-STA-20210812-00098<sup>1</sup>), which is owned and controlled by Spaceflight Inc. (“Spaceflight”), commencing on the deployment of the spacecraft, which is presently scheduled to occur between December 1, 2021 and January 31, 2022.<sup>2</sup> Astro Digital is providing TT&C ground station support for the Spaceflight mission from an operational Astro Digital ground station (Call Sign E170192).<sup>3</sup> Astro Digital is seeking Part 25 temporary authority to transmit command uplinks from the Astro Digital earth station specified below and receive telemetry downlinks from the Sherpa-LTC1 spacecraft, separately authorized by Spaceflight.

### **Frequencies:**

The earth station will operate on the following frequencies with the Sherpa-LTC1:

| <b>Link Direction</b> | <b>Frequency Band</b> | <b>Bandwidth Occupied</b> | <b>Max. Data Rate</b> | <b>Max. Transmit Power</b> |
|-----------------------|-----------------------|---------------------------|-----------------------|----------------------------|
| Uplink (command)      | 402.88-402.92 MHz     | 40 kHz                    | 38.4 kbps             | 95 watts                   |
| Downlink (telemetry)  | 400.48-400.52 MHz     | 40 kHz                    | 38.4 kbps             | 36 dBm<br>(EIRP 6 dBW)     |

Astro Digital understands that its STA operations on the above UHF frequencies will be on an unprotected, non-harmful interference basis.

### **Site Address:**

3171 Jay Street  
Santa Clara, CA 95054

### **Coordinates:**

Latitude: 37° 22’ 48” N  
Longitude: 121° 57’ 40” W

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<sup>1</sup> See generally Application of Spaceflight, IBFS File No. SAT-STA-20210812-00098 (filed Aug. 12, 2021) (“Sherpa Application”). Although not relevant for purposes of this application, Astro Digital will also communicate with the Sherpa-LTC1 through facilities in Tromso, Norway.

<sup>2</sup> The satellite is expected to be deployed into a 525 km ± 25 km circular orbit with a 97.59 deg. inclination. See *id.* at 1.

<sup>3</sup> See Stamp Grant, Astro Digital US, Inc., SES-AMD-20171227-01389 (granted Jul. 27, 2018) (authorizing use of 402.88-402.92 MHz for command uplink and 400.48-400.52 MHz for telemetry downlink for communications with Astro Digital satellites).