

Applicant: Astro Digital US, Inc.  
File No.: SES-STA-20210408-00620  
Call Sign: E170192  
Special Temporary Authority (“STA”)

Astro Digital US, Inc. (“Astro Digital”) is granted to operate a 2.7 meter antenna fixed earth station in Santa Clara, CA in the Earth Exploration satellite service (“EESS”) under Special Temporary Authority for 180 days, commencing June 24, 2021 through December 21, 2021, to provide telemetry, tracking and command (“TT&C”) functions on frequencies: 402.88-402.92 MHz (Earth-to-space); and 400.48-400.52 MHz (space-to-Earth) with EESS sun-synchronous NGSO spacecraft Sherpa-LTE 1 (authorized under FCC IBFS File No.:SAT-STA-20210205-00017) at 525 km  $\pm$  25 km circular orbit with a 97.59 ° inclination. STA operations shall conduct under the following conditions:

1. Transmission from the Astro Digital earth station using a frequency of 402.9 MHz or 402.6 MHz shall cease when the NASA International Space Station (NORAD designation 25544, International Spacecraft ID 1998-067A) is within horizon-to-horizon in-view of the Santa Clara, CA earth station.
2. Astro Digital’s operations in the 402.88-402.92 MHz (Earth-to-space) frequency band is granted on a nonconforming, non-harmful interference and unprotected basis. Astro Digital must immediately terminate nonconforming operations upon notification of harmful interference. Astro Digital shall tune TT&C UHF links to an agreed frequency range with DoC/NOAA to not cause interference to NOAA GOES Data Collection System (DCS) and radiosonde operations.
3. Astro Digital’s TT&C operations in the Earth-to-space direction are limited in UHF to the 402.88-402.92 MHz frequency band. To ensure compatibility with NOAA radiosonde systems, Astro Digital earth stations in the U.S. in the Earth-to-space direction must not transmit RF signals during radiosonde synoptic hour (0:00 UTC and 12:00 UTC; synoptic hour typically indicates a 120-minute period of the radiosonde flight time) and must avoid pointing their uplink antennas main beam within a 30 degree horizontal sector in the direction of any radiosonde receiver ground station locations that are within 150 kilometers from any Astro Digital earth station in the U.S. during radiosonde flights.
4. Operations on the 400.48-400.52 MHz (space-to-Earth) and the 402.88-402.92 MHz band (Earth-to-space) are limited to TT&C and shall not exceed the long-term interference criteria specified in Table 2 (Type C) of Recommendation ITU-R RS.1263-2 to protect DoC/NOAA radiosondes operations in the United States and its Possessions.
5. Operations will be limited to the coordinated power and emissions.

6. In the event of any harmful interference as a result of operations under this grant of STA, Astro Digital shall cease operations immediately upon notification of such interference and shall immediately inform the Commission, in writing, of such an event.
7. All operations shall be on an unprotected, non-interference basis to both government and non-government operations.
8. Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector.
9. The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. The FCC's OET Bulletin 65 (available on-line at [www.fcc.gov/oet/rfsafety](http://www.fcc.gov/oet/rfsafety)) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
10. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Astro Digital's own risk.
11. Grant of this authorization is without prejudice to any determination that the Commission may make regarding any pending or future Astro Digital applications.

This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.