

October 28, 2022

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
45 L Street NE  
Washington, DC 20554

Re: Request for 180-day Grant of Special Temporary Authority  
Nuevo, California Earth Station E170039

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests 180 days of Special Temporary Authority ("STA"),<sup>1</sup> commencing January 4, 2023, to use its Nuevo, California Ka-band earth station, Call Sign E170039, to provide launch and early orbit phase ("LEOP") services for the Arcturus (Aurora-4a) satellite.<sup>2</sup> Arcturus is expected to launch on January 4, 2023.<sup>3</sup> Intelsat expects the LEOP to last approximately 180 days.

The Arcturus operations will be performed at the following frequencies: 28352.0 MHz and 28355.0 MHz in the uplink; and 19702.0 MHz and 19705.0 MHz in the downlink.

The LEOP operations will be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path.<sup>4</sup> All operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs. In the extremely unlikely event that harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference.

The 24x7 contact information for the Arcturus mission is as follows:

Ph.: (703) 559-7701 – East Coast Operations Center (primary)  
(310) 525-5591 – West Coast Operations Center (back-up)  
Request to speak with Kevin Bell or Glen Jones.

<sup>1</sup> Intelsat has filed its STA request, FCC Form 159, a \$210.00 filing fee, and this supporting letter electronically via the International Bureau's Filing System.

<sup>2</sup> In support of this request, additional operational information and a waiver request are attached as Exhibits A and B, respectively.

<sup>3</sup> See *Satellite Policy Branch Information; Actions Taken*, Report No. SAT-01608, File No. SAT-PPL-20210607-00075 (Feb. 4, 2022) (Public Notice). The in-orbit testing and final location will be 163.0° W.L.

<sup>4</sup> Astranis, the manager of the Arcturus mission, will handle the coordination.

Ms. Marlene H. Dortch  
October 28, 2022  
Page 2

Finally, Intelsat clarifies that during the Arcturus LEOP mission, Astranis will serve as the mission manager. Astranis will build and send the commands to the Intelsat antenna, which will process and execute the commands. Telemetry received by Intelsat will be forwarded to Astranis. Intelsat will perform the ranging sessions by sending a tone to the spacecraft periodically. Intelsat will remain in control of the baseband unit, RF equipment, and antenna.

Grant of this STA request will allow Intelsat to help launch the Arcturus satellite. This will help provide services at the 163.0° W.L. location and thereby promotes the public interest.

Please direct any questions regarding this STA request to the undersigned at (703) 559-7799.

Respectfully submitted,

/s/ W. Ray Rutngamlug

W. Ray Rutngamlug  
Associate General Counsel  
Intelsat US LLC

cc: Franco Hinojosa

## EXHIBIT A

Intelsat's request for STA to provide LEOP for Arcturus

|                                              |                                          |
|----------------------------------------------|------------------------------------------|
| Earth Station                                | E170039                                  |
| Antenna size (m)                             | 9.2                                      |
| Transmit Frequencies (MHz)                   | 28352.0 and 28355.0                      |
| Receive Frequencies (MHz)                    | 19702.0 and 19705.0                      |
| Emission Designator(s)                       | 1M00F2D and 2M00G1D                      |
| Polarization                                 | Linear                                   |
| Bandwidth                                    | 1 MHz and 2 MHz                          |
| Transmit Gain                                | 65.4 dBi at 28350.0 MHz                  |
| Maximum EIRP per Carrier (dBW)               | 85                                       |
| Maximum EIRP Density per Carrier (dBW/4 kHz) | 61 (1 MHz carrier)<br>58 (2 MHz carrier) |
| Site Location                                | Nuevo, California                        |
| Latitude/Longitude (NAD83)                   | 33° 47' 42.7" N, 117° 05' 22.5" W        |
| Satellite Point(s) of Communication          | Arcturus                                 |
| Satellite Call Sign                          | S3092                                    |
| Satellite Type                               | Geostationary                            |
| Satellite Location                           | n/a                                      |