

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of	)	
	)	
Astranis Projects USA LLC	)	File No.: SAT-LOA-20221019-00145,
	)	SAT-MOD-20230412-00081, and
Application for 60-Day Special Temporary	)	SAT-STA-_____
Authorization to Launch and Operate the	)	
Arcturus Satellite at the 163° W.L. Orbital	)	Call Sign: S3092
Location in Ka-band Frequencies	)	

**APPLICATION FOR 60-DAY SPECIAL TEMPORARY
AUTHORIZATION OF ASTRANIS PROJECTS USA LLC**

Astranis Projects USA LLC (“Astranis USA”), pursuant to Section 25.120 of the Commission’s rules, 47 C.F.R. § 25.120, respectfully seeks a 60-day special temporary authorization (“STA”) to update the telemetry, tracking, and command (“TT&C”) frequencies on the Arcturus satellite¹ to reflect its current design and afford redundancy and flexibility for such critical operations.

Arcturus is a small geostationary orbit (“GSO”) fixed-satellite service (“FSS”) satellite manufactured by Astranis Space Technologies Corp. (“Astranis”). Arcturus will be operated by Astranis USA, an indirect wholly owned subsidiary of Astranis,² to provide satellite-based broadband connectivity to Alaska and the surrounding region in Ka-band frequencies from the 163° W.L. orbital location. Arcturus is currently scheduled for launch as a secondary payload on a SpaceX Falcon Heavy mission on April 18, 2023,³ and should begin providing high-speed connectivity to the Alaska region in Q3 2023. However, given the fast-approaching launch

¹ See Astranis Projects USA LLC, File No.: SAT-LOA-20221019-00145, Call Sign S3092 (granted-in-part/deferred-in-part Dec. 6, 2022) (the “Arcturus License”). The Arcturus satellite is also known as Aurora 4A.

² For ease of reference, Astranis and Astranis USA will be collectively referred to as “Astranis.”

³ A companion license modification application is being filed concurrent with this STA application. See SAT-MOD-20230412-00081. Astranis hereby incorporates by reference the technical information submitted with the modification application, including the associated Schedule S.

date, Astranis respectfully requests the Commission grant this 60-day STA to allow the Arcturus satellite to conduct necessary TT&C operations during the pendency of the associated application for modification of the Arcturus License.

I. INTRODUCTION

From the 163°W.L. orbital location, Arcturus is ideally positioned to provide high-speed Ka-band satellite connectivity to consumers, businesses, and government customers throughout Alaska, western Canada, and the surrounding Pacific Ocean regions. Astranis has partnered with Pacific Dataport, Inc. (“PDI”)⁴ to offer this dedicated satellite broadband connectivity. PDI will be the exclusive distributor of broadband capacity and services provided by the Arcturus satellite. PDI will also operate a dedicated Ka-band gateway located in Utah that provides gateway and on-station TT&C communications.

The center frequencies for the two megahertz TT&C emission included in the Arcturus License include 28.356 GHz (RHCP) (uplink) and 19.706 GHz (RHCP) (downlink). The updated TT&C center frequencies include 28.352 GHz (RHCP) and 28.355 GHz (LHCP) (uplink), and 19.702 GHz (RHCP) and 19.705 GHz (LHCP) (downlink). Importantly, the correct frequencies are included in an STA for the Intelsat Riverside, California earth station to support transfer orbit TT&C for the Arcturus satellite⁵ and have been coordinated with the U.S. government. Astranis otherwise seeks to operate the Arcturus satellite with the same technical characteristics authorized in the Arcturus License.

Grant of this STA application will afford operational flexibility and redundancy for Arcturus TT&C operations, thereby serving the public interest, convenience, and necessity.

⁴ PDI, a Delaware corporation headquartered in Alaska, was established to provide satellite broadband connectivity to Alaska and the surrounding region. The principal investor in PDI is Microcom, the largest provider of satellite systems and services in Alaska.

⁵ See File No. SES-STA-20221028-01229, Call Sign E170039 (granted March 7, 2023).

II. DISCUSSION

A. Legal Qualifications

The legal qualifications of an Astranis subsidiary to serve the U.S. market using the Arcturus satellite and the involvement of Astranis in the proposed operations have been accepted by the Commission.⁶ Among other things, Astranis has maintained a surety bond to support the launch and operation of the Arcturus satellite.⁷ In addition, except as sought to be modified via STA in this application, Astranis will comply with applicable Commission reporting requirements, all rules applicable to Arcturus operations, and with conditions included in the Arcturus License.

B. Update of TT&C Frequencies

In the context of granting the Arcturus License, Astranis demonstrates pursuant to Section 25.114 of the Commission's rules that the proposed operations of the satellite comply with applicable Commission rules and policies. Pursuant to Section 25.120 of the Commission's rules, Astranis provides information relating only to the proposed temporary TT&C operations of the Arcturus satellite. Astranis proposes no other changes to the technical and operational characteristics of the Arcturus satellite.

Astranis seeks to update the TT&C frequencies on the satellite to reflect its current design and afford redundancy and flexibility for such critical satellite operations. The correct frequencies have been included in an STA for the Intelsat Riverside, California earth station to support transfer orbit TT&C for the Arcturus satellite.⁸ In addition, Astranis has successfully

⁶ See Arcturus License and supporting application materials.

⁷ See Astranis Projects Surety Bond filed Dec. 20, 2022; Astranis Projects Surety Bond Rider filed Mar. 3, 2023, File No. SAT-LOA-20221019-00145, Call Sign S3092.

⁸ See File No. SES-STA-20221028-01229, Call Sign E170039 (granted March 7, 2023).

coordinated use of the frequencies with the U.S. government. There are no other parties that may potentially be affected by the change in TT&C frequencies of the Arcturus satellite, particularly given its relatively remote location in the geostationary arc over the Pacific Ocean.

C. Public Interest Considerations

The Commission has recognized the strong public interest in authorizing Arcturus satellite operations in granting the Arcturus License. Among other things, launch and operation of a purpose-built broadband satellite system to serve Alaska will greatly enhance consumer choice by bringing more reliable broadband Internet access to the entire state and surrounding regions, resulting in increased competition and connectivity, and lower prices.

Granting an STA to allow Arcturus to communicate temporarily on the new TT&C frequencies will more completely satisfy the Commission's public interest objectives. Astranis seeks to update the TT&C frequencies on the satellite to reflect its current design. Moving from one to two TT&C center frequencies in each direction of transmission will afford redundancy and flexibility for such critical satellite operations. In addition, the new frequencies have already been coordinated with the U.S. government. Finally, because there are no other satellite operators that could be adversely affected by the change, there would be no public interest drawbacks in granting the proposed STA.

The Commission may grant a temporary authorization upon a finding that there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of these temporary operations would seriously prejudice the public interest. As noted above, there are unique circumstances associated with Astranis's proposed update to its TT&C frequencies. Not only have the frequencies been coordinated with the U.S. government, but they also have been included in an associated TT&C earth station authorization. Although

Astranis should have filed a parallel request to modify the Arcturus License at the time it originally sought to adjust the satellite's TT&C frequencies, this inadvertent oversight should not preclude grant of the requested STA given strong supporting public interest factors, including the impending launch of Arcturus, the importance of efficiently and effectively operating the satellite to provide broadband satellite services to Alaska, and the absence of adverse impacts on other operations.

Furthermore, any delay in commencing the proposed temporary operations would seriously prejudice the public interest by potentially putting the Arcturus satellite at risk given the differences in frequencies authorized at the earth station versus satellite level. Ensuring that these fully coordinated frequencies are the same and affording appropriate operational flexibility and redundancy, even on a temporary basis, maximize the potential for success of the Arcturus broadband connectivity mission over the immediate and long term.

Given the foregoing, grant of this STA application would be consistent with the Commission's rules and policies, would strongly serve the public interest, and failure to grant the requested STA would seriously prejudice the public interest.

III. CONCLUSION

Astranis seeks this STA for the Arcturus satellite to conduct TT&C operations on updated center frequencies, including 28.352 GHz (RHCP) and 28.355 GHz (LHCP) (uplink), and 19.702 GHz (RHCP) and 19.705 GHz (LHCP) (downlink). These frequencies have been authorized to support transfer orbit TT&C for the Arcturus satellite and have been coordinated with the U.S. government. Grant of the requested STA to conduct TT&C operations on the updated bands would strongly serve the public interest and Astranis respectfully requests the Commission grant this STA application at the earliest practicable time.