

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
AST&Science LLC)	IBFS File Nos. SAT-PDR-20200413-00034,
)	SAT-APL-20200727-00088, SAT-APL-
Petition for Declaratory Ruling Granting)	202001028-00126
Access to the U.S. Market for a Non-U.S.)	
Licensed Non-Geostationary Orbit Satellite)	Call Sign S3065
Constellation)	

**COMMENTS OF
THE BOEING COMPANY**

The Boeing Company (“Boeing”), through its counsel and pursuant to Section 25.154 of the Commission’s rules, provides these comments on the petition for declaratory ruling (“Petition”) of AST&Science LLC (“AST”) seeking U.S. market access for a non-geostationary satellite orbit (“NGSO”) system operating in various frequencies, including the proposed use of the V-band for feeder links. Boeing is an applicant for authority to launch and operate an NGSO satellite system that would also operate using V-band frequencies.¹ Therefore, Boeing is directly affected by AST’s Petition.

Boeing does not object to the eventual grant of AST’s Petition. The Commission, however, must initiate a new processing round for V-band NGSO systems if the Commission is going to consider AST’s proposal for access to the 42.0-42.5 GHz and the 45.5-47.0 GHz bands, neither of which are currently subject to an NGSO processing round. The Commission should

¹ See The Boeing Company, Application for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System in the Fixed Satellite Service, IBFS File Nos. SAT-LOA-20170301-00028, SAT-AMD-20170929-00137 and SAT-AMD-20180131-00013 (call sign S2993) (March 1, 2017).

also consider initiating a second processing round to address the remaining V-band frequencies that are identified for use in AST's market access Petition.

I. AN APPLICATION CUT-OFF DEADLINE MUST BE ESTABLISHED BEFORE THE COMMISSION CONSIDERS AST'S PROPOSED USE OF THE 42.0-42.5 GHZ AND 45.5-47.0 GHZ BANDS

AST's Petition seeks authority to use several portions of the V-band that are not currently subject to an application processing round for NGSO satellite systems, including the 42.0-42.5 GHz and the 45.5-47.0 GHz bands.² The 42.0-42.5 GHz band was included as a requested frequency in an NGSO system application that Boeing filed with the Commission on June 22, 2016, but the 42.0-42.5 GHz band was excluded by the Commission from the NGSO application processing round that it initiated on November 1, 2016,³ and the Commission later declined to add a fixed-satellite service ("FSS") allocation to this spectrum.⁴ In contrast, the 45.5-47.0 GHz band does include an allocation for the mobile-satellite service ("MSS") (Earth-to-space), but Boeing is unaware of any application processing rounds that have been initiated by the Commission for use of this spectrum.

Therefore, with respect to both the 42.0-42.5 GHz and the 45.5-47.0 GHz bands, AST's application must be treated as a "lead application" pursuant to Section 25.157(c) of the

² See Satellite Policy Branch Information, Space Station Applications Accepted for Filing, Report No. SAT-01501, at 1 (Oct. 2, 2020) (listing the frequencies addressed in AST's Petition).

³ See Satellite Policy Branch Information, Boeing Application Accepted for Filing in Part, IBFS File No. SAT-LOA-20160622-00058, Cut-Off Established for Additional NGSO-Like Satellite Applications or Petitions for Operations in the 37.5-40.0 GHz, 40.0-42.0 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz Bands, DA 16-1244, at 1 (Nov. 1, 2016) (indicating that "[w]e defer consideration at this time of Boeing's request to operate in the 42.0-42.5 GHz and 51.4-52.4 GHz frequency bands and do not include these bands in the processing round).

⁴ See *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, 8144, ¶ 368 (2016).

Commission's rules. Pursuant to Section 25.157(c)(2), before the Commission can consider these portions of AST's application, the Commission must "initiate a processing round" and "establish a cut-off date for competing NGSO-like satellite system applications."⁵

AST requests a waiver of the application processing round requirement.⁶ AST argues that it "will comply with the spectrum sharing requirements of Section 25.261 and AST will engage in good-faith coordination with authorized and future NGSO systems" and therefore a processing round for these frequencies is unnecessary.⁷ AST also notes that the Commission has previously granted waivers of its processing round requirements.⁸ In each of those previous cases, however, it did not appear evident that there were concurrent competing interests by other satellite system applicants in using the identified frequencies. In this case, however, a V-band processing round is already ongoing, additional V-band NGSO system applications have recently been filed outside the current processing round and, most importantly, one of the two spectrum segments, the 42.0-42.5 GHz band, was considered and rejected by the Commission for inclusion in the currently ongoing V-band NGSO processing round. It would therefore be inappropriate to consider AST's proposed use of these frequencies without making them concurrently available to other satellite system operators and applicants. Instead, other parties that have expressed interest in operating

⁵ Boeing takes the position that the November 2nd public notice seeking comment on AST's application did not initiate a processing round for NGSO-like systems seeking access to these frequency bands because the public notice did not identify a cut-off deadline for the filing of new applications.

⁶ *AST Petition* at 12.

⁷ *Id.*

⁸ *See id.* at 13, n.42.

NGSO systems in V-band frequencies should be given an opportunity to file competing applications for access to this spectrum.

AST states that it will comply with the Commission's rules for NGSO spectrum sharing and will coordinate in good faith with other NGSO system operators.⁹ Although the Commission's default spectrum sharing rules have existed for many years, they have never been tested in practice, particularly with respect to the obligations of a non-U.S. licensee that is solely seeking market access from the Commission. It is also unclear whether practical limits exist on the number of NGSO systems that could operate concurrently in these frequencies. This is particularly true with respect to the 45.5-47 GHz band, which is allocated to MSS, a service that has not normally employed directional antennas to facilitate sharing between competing NGSO satellite systems. Therefore, it may not be technically feasible for NGSO MSS systems to comply with the Commission's default NGSO spectrum sharing rules if long standing MSS technologies are employed.

Boeing anticipates that these issues potentially could be addressed through a rulemaking addressing service rules for NGSO operations in the 45.5-47.0 GHz band. Such a rulemaking, however, should involve all satellite system operators with interests in these frequencies as reflected by the outcome of an NGSO application processing round for this spectrum. The Commission, however, should not give a non-U.S. system operator preferential access to these frequencies by considering its application before initiating a process for competing applications from U.S. satellite operators that would also be interested in using this spectrum.

⁹ *Id.* at 12.

II. TO ENSURE CLARITY WITH RESPECT TO V-BAND SPECTRUM SHARING OBLIGATIONS, THE COMMISSION SHOULD ALSO INITIATE A SECOND V-BAND NGSO PROCESSING ROUND

This is the third set of comments that Boeing has filed in as many months addressing a new or significantly modified application for authority to operate an NGSO system in the same V-band frequencies that are already the subject of an application processing round that was initiated on March 1 2017. Given the passage of time and the number of new or modification applications that are pending before the Commission, it would be prudent to initiate a new processing round for NGSO systems that seek to operate within the 37.5-42.0 GHz, 47.2-50.2 GHz and the 50.4-51.4 GHz bands. The use of an additional processing round would help to protect the reasonable expectations of existing NGSO system applicants and licensees. It would also avoid confusion regarding the spectrum sharing structure applicable to the more recent applicants that have sought new or significantly modified authority to use the V-band to provide broadband communications services in the United States.

As the Commission has explained, the purpose of its application processing rounds is to “establish a sharing environment among NGSO systems, to provide a measure of certainty in lieu of adopting an open-ended requirement to accommodate all future applicants.”¹⁰ The recent wave of new applications materially alters the “establish(ed) sharing environment among NGSO systems” that was bounded by the March 2017 cut-off deadline.¹¹ The Commission should therefore create a new processing round in which the sharing status of the new applicants is deferred “considering both the need to protect existing expectations and investments and provide

¹⁰ Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters, IB Docket No. 16-408, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 17-122, ¶ 61 (Sept. 27, 2017).

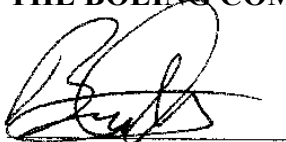
¹¹ *Id.*

for additional entry as well as any comments filed by incumbent operators and reasoning presented by the new applicant.”¹²

In raising this issue, Boeing acknowledges that it is too soon to determine the appropriate spectrum sharing status of NGSO system applications processed in a subsequent processing round. None of the eight applicants that participated in the 2017 processing round have yet launched their V-band systems and thus we do not yet know how many will be launched and whether the V-band will be able to accommodate additional NGSO constellations. Nevertheless, to avoid confusion and to protect the reasonable expectations of existing applicants, the Commission should establish a new processing round for the additional applications that have been filed.

Respectfully submitted,

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¹² *Id.*

CERTIFICATE OF SERVICE

I, Bruce A. Olcott, hereby certify that on November 2, 2020, I caused a copy of the foregoing Comments of The Boeing Company to be served by U.S. first-class mail, postage paid, upon the following:

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