Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Intelsat License LLC	)	File Nos. SAT-LOA-20170524-00078 &
	)	SAT-AMD-20170613-00086
Application for Authority to Launch and	)	Call Sign S3015
Operate Galaxy 15R at 133° W.L.	)	

REPLY OF O3B LIMITED AND SES AMERICOM, INC.

O3b Limited ("O3b") and SES Americom, Inc. ("SES Americom," and with O3b, the "SES Companies") hereby submit this reply regarding the above-referenced Intelsat License LLC ("Intelsat") applications for the Galaxy 15R space station.[1] The SES Companies demonstrated in their informal objection that the Galaxy 15R Filings are subject to dismissal for two independent reasons: Intelsat has not shown that its proposed spacecraft can operate on a non-interference basis with respect to non-geostationary orbit ("NGSO") fixed-satellite service ("FSS") systems and did not include in its application the required interference analysis for Ka-band geostationary orbit ("GSO") FSS operations.[2]

Because the Intelsat response[3] does not cure either of these defects, the Commission should dismiss the Galaxy 15R Filings without prejudice to refiling. At the very least, processing of the applications should be suspended until such time as Intelsat has supplied the missing NGSO sharing analysis and interested parties have had an adequate opportunity to

[1] Intelsat License LLC, Call Sign S3015, File Nos. SAT-LOA-20170524-00078 (the "Galaxy 15R Application") and SAT-AMD-20170613-00086 (the "Galaxy 15R Amendment," and with the Galaxy 15R Application, the "Galaxy 15R Filings").

[2] Informal Objection of O3b Limited and SES Americom, Inc., File Nos. SAT-LOA-20170524-00078 and SAT-AMD-20170613-00086, filed Jan. 5, 2018 (the "SES Objection").

[3] Response of Intelsat License LLC, File Nos. SAT-LOA-20170524-00078 and SAT-AMD-20170613-00086, filed Jan. 12, 2018 (the "Intelsat Response").

review and comment on a full and complete record regarding Intelsat's proposed operations that includes all the information required by Commission rules and precedent.

I. INTELSAT MUST SHOW, NOT JUST ASSERT, THAT IT CAN OPERATE ON A NON-INTERFERENCE BASIS IN NGSO-PRIMARY SPECTRUM

As discussed in the SES Objection, Intelsat's failure to show that Galaxy 15R's planned use of the 28.6-29.1 GHz and 18.8-19.3 GHz bands in which NGSO FSS systems have primary status (the "NGSO Primary Bands") would not interfere with services provided by O3b or future NGSO networks is a fatal omission.[4] Although Intelsat has acknowledged that it must "accept interference from, and not cause interference to, NGSO FSS operators,"[5] such an acknowledgment cannot substitute for a demonstration that would allow O3b to evaluate the interference risk to O3b's Commission-authorized, primary operations that would be posed by transmissions from Galaxy 15R and its associated earth stations. Indeed, in the one example Intelsat cited in the Galaxy 15R Filings regarding a Commission grant of authority for GSO use of the NGSO Primary Bands,[6] the underlying application included not only a recognition of the obligation to protect NGSO systems but also a "quantitative demonstration" that the proposed GSO operations would not cause interference to existing or future NGSO systems.[7]

In its response, Intelsat doubles down on its claim that simply recognizing its secondary status – without providing any information regarding how Galaxy 15R could use NGSO Primary Bands on a non-interference basis – is all that is needed to justify its planned secondary

[4] SES Objection at 2-7.

[5] Galaxy 15R Amendment, Legal Narrative at 7.

[6] *See id.*, Legal Narrative at 7& n.25 (citing decisions involving the Hughes Ka-band satellite authorized at the nominal 97° W.L. orbital location).

[7] Hughes Network Systems, LLC, Call Sign S2834, File No. SAT-LOI-20110809-00148, Letter of Intent at 11.

operations.[8] Intelsat's arguments, however, are contrary to both Commission precedent and to Intelsat's own prior position regarding the obligations imposed on an applicant seeking to employ spectrum on a secondary basis.

Rather than supporting Intelsat's claims, each prior example Intelsat mentions in which a GSO applicant sought to use the NGSO Primary Bands on a secondary basis simply highlights the stark contrast between the justification provided in those applications and the absence of any comparable showing with respect to Galaxy 15R. As noted above, the Commission authorizations referenced in the Galaxy 15R Filings involving the Hughes spacecraft at the nominal 97° W.L. orbital location were issued based on Hughes' specific explanation regarding how its proposed GSO network would operate without causing interference to NGSO systems – something wholly lacking in the Galaxy 15R Filings.

The Intelsat Response refers to a more recent Hughes application for Ka-band operations at the nominal 95° W.L. orbital location[9] that only serves to further highlight the gap between what the Commission has required in other proceedings and what Intelsat has submitted here. The underlying Hughes application in that proceeding included a detailed description of how Hughes would protect O3b and other Ka-band NGSO systems from unacceptable interference, taking into account the specific details of the O3b network and addressing interference risks from both the proposed Hughes space station and associated earth stations.[10] Having reviewed that

[8] Intelsat Response at 8 & n.31.

[9] *Id.* at 8-9.

[10] Hughes Network Systems, LLC, Call Sign S3017, File No. File No. SAT-LOA-20170621-00092, Technical Exhibit at 17-18 & 20-21.

information, the International Bureau required Hughes to supply further details explaining how Hughes proposed to prevent interference to primary NGSO operations:

> Although Hughes states that it will protect NGSO operations by avoiding in-line interference and that it will coordinate with NGSO operators in this band, we request further clarification on how Hughes proposes to avoid in-line interference events or a more detailed discussion of the general approach that Hughes will use to ensure protection of U.S.-licensed NGSO FSS systems.[11]

In response, Hughes submitted three paragraphs describing its intention to "implement coordination mechanisms to avoid causing harmful interference to NGSO FSS systems."[12] Hughes explained that it had already reached coordination agreements addressing sharing by other Hughes networks with both the operational O3b Ka-band NGSO system and the planned NGSO system licensed to OneWeb.[13] Hughes indicated that it anticipated that those agreements and the interference mitigation measures set forth therein would form the basis for Hughes to successfully coordinate with other future NGSO operators.[14]

Intelsat's attempt to suggest that its showing with respect to Galaxy 15R is "consistent with" the precedent established in these Hughes proceedings[15] does not pass the straight-face test. Unlike Hughes, Intelsat has supplied no description of proposed sharing methodology, simply a restatement of Commission requirements that a secondary spectrum user must operate

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[11] Letter from Jose P. Albuquerque, Chief Satellite Division, to Jennifer A. Manner, Hughes Network Systems, LLC, File No. SAT-LOA-20170621-00092 (August 15, 2017) at 2.

[12] Letter from Jennifer A. Manner, Senior Vice President, Regulatory Affairs, Hughes Network Systems, LLC, to Jose P. Albuquerque, Chief, Satellite Division, Federal Communications Commission, File No. SAT-LOA-20170621-00092 (Sept. 8, 2017) at 3-4.

[13] *Id.* at 3.

[14] *Id.* at 4.

[15] Intelsat Response at 8.

on an unprotected, non-interference basis with respect to primary networks. The one further commitment introduced in the Intelsat Response – a promise that Intelsat will "engage in coordination discussions with all primary users of the 18.8-19.3 GHz and 28.6-29.1 GHz bands to ensure that its operations in these bands will not interfere with NGSO FSS operators"[16] – actually undercuts, rather than bolsters, Intelsat's claim of full compliance with its obligations as a secondary spectrum user. Given the absence of any showing to allow the Commission to determine that Galaxy 15R would not cause interference to NGSO networks, Intelsat must do far more than "engage in coordination discussions" to receive authority for secondary operations – it must successfully conclude and comply with coordination agreements with primary NGSO systems.

This requirement is highlighted by a recent decision involving a ViaSat request for a blanket license to communicate with GSO satellites in the NGSO Primary Bands. In the license grant, the Commission expressly relied on the information ViaSat had previously presented concerning its satellites' "interference mitigation capabilities."[17] Even with that showing regarding the feasibility of spectrum sharing, the Commission went on to impose additional conditions:

> Additionally, no later than sixty days before the scheduled initial launch of each NGSO FSS satellite system licensed or granted market access in the United States to operate in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands, the licensee must either: (1) notify the Commission in writing when an agreement has been reached with the NGSO satellite system operator, or (2) seek and obtain the Commission's approval of a modification of this license including detailed technical demonstrations of how the licensee will protect the NGSO FSS satellite system. If neither condition is

[16] *Id.* at 9.

[17] ViaSat, Inc., Call Sign E170088, File No. SES-LIC-20170401-00357, granted Nov. 9, 2017, at 5, condition 90447.

> met, the licensee must cease earth station operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.[18]

In short, Commission precedent clearly establishes that an applicant seeking to operate a GSO spacecraft using NGSO Primary Bands must do more than state its willingness to be bound by Commission requirements for unprotected, non-interfering operations. It must also provide evidence sufficient to demonstrate to the Commission and to primary operators how it will make good on its commitments.

Indeed, Intelsat itself has insisted on such showings when Commission applicants have sought to establish operations in spectrum where Intelsat's GSO FSS networks have primary status. For example, in connection with the application by Space Exploration Technologies Corp. ("SpaceX") for an experimental authorization to launch and operate Ku-band NGSO prototype satellites,[19] Intelsat repeatedly emphasized the need for SpaceX to make publicly available information showing that its secondary experimental operations would not create unacceptable interference to Ku-band GSO networks. SpaceX had submitted documentation regarding its ability to operate on a non-interference basis with respect to Ku-band GSO spacecraft but had done so pursuant to a request for confidential treatment. Intelsat complained that as a result, Intelsat and other interested GSO operators did not have "the necessary information (including technical information) about SpaceX's experimental plans to determine whether and how" the satellites proposed by SpaceX "could operate on a non-interference

[18] *Id.*

[19] Application of Space Exploration Technologies Corp. for Experimental License, Call Sign WH2XWB, File No. 0356-EX-PL-2015.

basis."[20] After additional information regarding the SpaceX operations was made public, Intelsat objected that GSO FSS operators would need to run time-consuming simulations to determine the risk of interference:

> Each incumbent FSS operator should not have to spend considerable time and resources determining the risk of interference posed by an experimental license application. Rather, before authorizing this experiment, the Commission must ascertain that co-frequency GSO operators reasonably can expect their existing operations will be protected. The simple solution is to require the applicant – SpaceX – *to demonstrate it can meet the requirements of 47 C.F.R. § 5.84*, which is designed to protect co-frequency operations, including GSO receivers.[21]

Intelsat's suggestion that simply promising to protect primary systems is a sufficient basis for seeking secondary operations cannot be squared with its statements in the SpaceX proceeding.

Thus, contrary to Intelsat's contentions, Commission precedent makes clear that the failure to provide a showing that Galaxy 15R could effectively protect the operations of O3b and future NGSO systems in the NGSO Primary Bands is disqualifying, and the Galaxy 15R Filings should not have been placed on public notice with this material omission. The Commission should address this error now by dismissing the filings without prejudice to resubmission.[22] At the very least, Intelsat must be required to submit evidence of its ability to operate on an unprotected, non-interference basis in the NGSO Primary Bands, subject to review and comment by O3b and the prospective operators of other NGSO systems.

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[20] Letter from Susan H. Crandall, Associate General Counsel, Intelsat Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, File No. 0356-EX-PL-2015, dated July 9, 2015 at 2.

[21] Letter from Susan H. Crandall, Associate General Counsel, Intelsat Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, File No. 0356-EX-PL-2015, dated Oct. 21, 2015 at 2 (emphasis in original).

[22] *See* SES Objection at 6, citing 47 C.F.R. § 25.112.

II. INTELSAT'S FAILURE TO TIMELY FILE THE REQUIRED KA-BAND TWO-DEGREE SPACING ANALYSIS ALSO JUSTIFIES DISMISSAL OF THE GALAXY 15R FILINGS

As discussed in the SES Objection, the fact that the Galaxy 15R Filings lacked the interference analysis required pursuant to Rule 25.140(a)(3)(v) provides an independent basis for dismissing the applications.[23] Moreover, the belated submission of this essential showing was simply the most recent in a train of supplemental filings addressing a variety of required information,[24] exposing a pattern of noncompliance and suggesting that in its haste to prepare an application for filing as soon as the Ka-band spectrum at 133° W.L. became available, Intelsat prioritized speed over completeness and accuracy.[25]

The Intelsat Response does not dispute the SES Companies' contention that the Rule 25.140(a)(3)(v) showing was a required element that should have been submitted with the Galaxy 15R Amendment. Instead, Intelsat simply asserts that it "promptly provided the interference analysis upon becoming aware of its inadvertent admission,"[26] and states that it would not object to the Commission specifying an additional 30-day period to allow interested parties to review and comment on the analysis or to issuance of a further public notice regarding

[23] SES Objection at 7-9.

[24] *Id.* at 8.

[25] In the Galaxy 15R Amendment, Intelsat explained that it was filing for Ka-band spectrum in response to a Commission notice issued on Friday, June 9, 2017, that announced the surrender of the relevant frequencies by ViaSat and specifying that applications would be accepted for the spectrum beginning at 2 p.m. the following Tuesday, June 13, 2017. *See* Galaxy 15R Amendment, Legal Narrative at 3-4 & n.8, *citing Policy Branch Information; Actions Taken, Public Notice*, Report No. SAT-01244, SAT-LOI-20160208-0016 (June 9, 2017).

[26] Intelsat Response at 9.

the Ka-band frequencies.[27] Intelsat also observes that the Commission can at its discretion waive the provisions of Section 25.112 that require dismissal of defective applications.[28]

The facts here, however, provide no justification for the Commission to exercise leniency or to take any action short of dismissing the Galaxy 15R Filings. While Section 25.112 expressly contemplates that the Commission can waive rules in order to accept an otherwise defective application for filing, Intelsat has not presented any public interest grounds for such a waiver. A waiver would allow Intelsat to enjoy the benefits of its current position in the first-come, first-served processing queue based on a series of supplemental filings intended to address deficiencies in the original submission. Such an outcome would violate the purpose underlying Section 25.112(a)'s express instruction that applications that are incomplete and do not substantially comply with Commission rules and requirements are unacceptable for filing.[29]

As the SES Objection observes, the "Commission's rules do not contemplate that an application would be considered notwithstanding multiple omissions of required information."[30] While the Commission typically allows – or even requires – the submission of supplements to address an isolated oversight, correct errors, or provide clarification of information provided in an application, the multiple substantive holes in the Galaxy 15R Filings go well beyond such minor issues. Accordingly, the SES Companies believe that this is a relatively rare case when dismissal is the appropriate action. At a minimum, as Intelsat has conceded, issuance of a further public notice regarding the Intelsat proposal for Ka-band frequencies is required to allow

[27] *Id.* at 9-10 & n.35.

[28] *Id.* at 10 n.35.

[29] 47 C.F.R. § 25.112(a).

[30] SES Objection at 8.

interested parties to comment on all the relevant information, including the late-filed two-degree spacing analysis.

CONCLUSION

Because the Galaxy 15R Filings failed to show that Intelsat's proposed secondary use of the 18.8-19.3 GHz and 28.6-29.1 GHz bands will be compatible with NGSO use of these frequencies by O3b or other prospective NGSO operators and lacked the interference analysis required for Ka-band GSO systems, the applications should be dismissed. At a minimum, the Commission should suspend processing of the Galaxy 15R Filings pending Intelsat's submission of an adequate showing with respect to use of the NGSO Primary Bands and issuance of a further public notice allowing comment on both that showing and the Ka-band two-degree spacing analysis.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 22nd day of January, 2018, I caused a true and correct copy of the foregoing "Reply of O3b Limited and SES Americom, Inc." to be sent by first class mail, postage prepaid, to the following:

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