

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of

Facilitating the Communications of Earth  
Stations in Motion with Non-Geostationary Orbit  
Space Stations

IB Docket No. 18-315

**REPLY COMMENTS OF IRIDIUM COMMUNICATIONS, INC.**

The Commission started this rulemaking to facilitate communications between earth stations in motion (“ESIMs”) and non-geostationary satellite orbit (“NGSO”) space stations in the fixed-satellite service (“FSS”) in Ku-/Ka- frequencies where communications with NGSO FSS space stations are *already* permitted.<sup>1</sup> Notwithstanding the clearly defined scope of this proceeding, Viasat and Boeing filed comments asking the Commission to consider ESIMs in spectrum that, for NGSO systems, is reserved for feeder links with space stations in the mobile-satellite service (“MSS”).<sup>2</sup> With barely a mention of the merits, and no explanation of how their proposals might pass procedural muster, these commenters have attempted to co-opt a focused inquiry into a wholesale re-litigation of the Ka-band plan and the U.S. Table of Frequency

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<sup>1</sup> See *Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, Notice of Proposed Rulemaking, FCC No. 18-160, IB Docket No. 18-315 ¶ 14 (rel. Nov. 16, 2018) (“*NPRM*”) (“We will not consider allowing ESIMs to communicate with NGSO FSS systems in bands where communications with NGSO FSS space stations are not permitted under the U.S. Table of Frequency Allocations because we believe the reasons for such limitations are also valid for ESIMs operating with NGSO FSS systems.”)

<sup>2</sup> See Comments of The Boeing Company at 10, IB Docket No. 18-315 (filed Feb. 11, 2019) (“Boeing Comments”); Comments of Viasat, Inc. at 7-8, IB Docket No. 18-315 (filed Feb. 11, 2019) (“Viasat Comments”).

Allocations.<sup>3</sup> Iridium Communications, Inc. (“Iridium”) urges the Commission to reject their ill-advised and out-of-scope proposals.

**I. NGSO FSS OPERATIONS IN THE 19.4-19.6 GHz AND 29.1-29.5 GHz BANDS FALL WELL BEYOND THE SCOPE OF THE RULEMAKING.**

Under the Ka-band plan as revised by the Commission in 2017 and the U.S. Table of Frequency Allocations, use of the 19.4-19.6 GHz and 29.1-29.5 GHz bands by NGSO systems is limited to feeder-link transmissions to and from space stations in the MSS.<sup>4</sup> Consistent with the Commission’s rules, Iridium uses the 19.4-19.6 GHz and 29.1-29.3 GHz bands for feeder links that communicate with its large second generation NGSO MSS constellation. Nevertheless, Boeing asks the Commission to give “consideration . . . to opening the 19.4-19.6 GHz band to NGSO FSS systems, including those operating with ESIMs, on a secondary basis with respect to MSS FSS feeder links in these frequencies.”<sup>5</sup> Viasat likewise asks the Commission to consider “NGSO ESIMs in the entire range of the Ka band uplink spectrum” from 27.5-30.0 GHz.<sup>6</sup>

The Commission should reject these proposals, which are completely outside the scope of the present rulemaking. The Commission did not propose in the NPRM to upend the Ka-band plan and the U.S. Table of Frequency Allocations in the manner contemplated by Viasat and Boeing. It did not seek comment on the issue, nor even hint that it might be on the table. To the

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<sup>3</sup> See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, 31 FCC Rcd. 13651, 13654 ¶¶ 7-8 (2016) (“*NGSO FSS NPRM*”) (proposing to update the Ka-band plan to facilitate NGSO FSS systems); *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd. 7809, 7815 ¶ 18 n.40, 20 (2017) (“*NGSO FSS Report and Order*”) (declining to permit NGSO FSS operations in the 19.4-19.6 GHz, 29.1-29.3 GHz, and 29.3-29.5 GHz bands).

<sup>4</sup> See 47 C.F.R. § 2.106 nn.NG166 & NG535A; *NGSO FSS Report and Order* at Appendix B.

<sup>5</sup> Boeing Comments at 10.

<sup>6</sup> Viasat Comments at 7-8.

contrary, noting the absence of “rules governing ESIMs communicating with NGSO FSS systems,”<sup>7</sup> the Commission proposed to create a regulatory framework “allowing ESIMs to communicate with NGSO FSS systems” in frequencies where “the Commission’s rules allow ESIM communications with GSO FSS space stations”<sup>8</sup> *and* where communications with NGSO FSS space stations are already permitted.<sup>9</sup> The 19.4-19.6 GHz band and 29.1-29.25 GHz segment of the NGSO MSS feeder uplink band do not meet the first criteria, and none of the spectrum at issue meets the latter. That is why the Commission excluded the 19.4-19.6 GHz and 29.1-29.5 GHz bands from the list of frequencies subject to this proceeding.<sup>10</sup>

It is also why the Commission was careful to note that, although it was proposing to allow NGSO ESIMs “in many of the same . . . frequencies” discussed in the recent Order on GSO ESIMs, the “18.6-18.8 GHz and 29.25-29.5 GHz” bands proved “the exception”<sup>11</sup>—precisely because FCC rules prohibit operations with NGSO FSS space stations in that spectrum.<sup>12</sup>

Moreover, to avoid creating any doubt on the issue, the Commission explicitly stated in paragraph 14 that it

*will not consider* allowing ESIMs to communicate with NGSO FSS systems in bands *where communications with NGSO FSS space stations are not permitted under the U.S. Table of Frequency Allocations* because we believe the reasons for such limitations are also valid for ESIMs operating with NGSO FSS systems.<sup>13</sup>

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<sup>7</sup> *NPRM* at ¶ 6.

<sup>8</sup> *Id.* at ¶¶ 7, 8.

<sup>9</sup> *Id.* at ¶ 14.

<sup>10</sup> *See id.* at ¶¶ 9-13.

<sup>11</sup> *Id.* at ¶ 7, 8.

<sup>12</sup> *Id.* at ¶ 7 n.19.

<sup>13</sup> *Id.* at ¶ 14 (emphasis added).

Importantly, the Commission provided that clarification after Iridium raised concerns about language in the draft version of the item that might have been misconstrued as potentially seeking comment on MSS feeder uplink spectrum.<sup>14</sup> Thus, the Commission did not inadvertently leave the 19.4-19.6 GHz and 29.1-29.5 GHz bands out of its proposal. Rather, it affirmatively *excluded* the 19.4-19.6 GHz and 29.1-29.5 GHz bands from consideration.

## **II. THE COMMISSION HAS ALREADY DECIDED THE ISSUE.**

Viasat's and Boeing's requests are deficient for the additional reason that the Commission has already rejected them—and it did so recently. In the *NGSO FSS NPRM*, the Commission sought comment on frequencies in the Ka-band that would be appropriate for NGSO FSS operations.<sup>15</sup> In doing so, the Commission declined even to *propose* NGSO FSS use of the 19.4-19.6 GHz and 29.1-29.3 GHz bands due to Iridium's vital feeder-link operations.<sup>16</sup> Moreover, in the Report and Order and Further Notice that followed the *NGSO FSS NPRM*, the Commission *again* rejected calls to “examine the 19.4-19.6 GHz and 29.1-29.3 GHz bands currently used by NGSO MSS feeder links” for NGSO FSS use,<sup>17</sup> and declined to allow NGSO FSS operations even in the 29.3-29.5 GHz segment of the NGSO MSS feeder uplink band that is unused by Iridium.<sup>18</sup> In addition, even though the Commission released a Further Notice to examine additional matters related to NGSO FSS system operations, it “focuse[d]” that “inquiry”

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<sup>14</sup> See *id.* at ¶ 14 n. 31; Letter from Scott Blake Harris, Counsel, Iridium Communications, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 18-315 (filed Nov. 8, 2018) (“Iridium Nov. 8 Ex Parte”).

<sup>15</sup> *NGSO FSS NPRM* at ¶¶ 1-2.

<sup>16</sup> See *id.* at ¶¶ 7-8.

<sup>17</sup> *NGSO FSS Report and Order* at ¶ 18 & n.40.

<sup>18</sup> *Id.* at ¶ 20.

on a “specific” and entirely separate “issue—the Commission’s current domestic coverage requirement for NGSO FSS systems.”<sup>19</sup> That should have been the end of the story.

Even more recently, the Commission decided not to consider NGSO FSS use of this spectrum in the *NPRM* itself. As discussed above, the Commission excluded the 19.4-19.6 GHz and 29.1-29.5 GHz bands from consideration in the *NPRM*—and even added language prior to the Commission’s vote emphasizing that these and other bands would remain off the table.<sup>20</sup>

Nothing has changed since the Commission last decided this precise issue, and neither Viasat nor Boeing explain why they believe the Commission should reverse its recent rulings. In fact, both companies practically ignore the merits of their proposals. Boeing simply says *GSO* ESIMs have a “history of success in operating . . . on a shared basis with *other* services.”<sup>21</sup> To the extent Viasat evaluates interference concerns in 27.5-30.0 GHz at all, it focuses on sharing between NGSO ESIMs and terrestrial services in the 27.5-28.35 GHz band.<sup>22</sup> Thus, given the complete lack of substantive analysis on the record—which only underscores the procedural impropriety of considering a proposal based on the whims of two commenters—the Commission has no reason to revisit its prior decisions about NGSO FSS use of these bands.

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<sup>19</sup> *Id.* at ¶ 73.

<sup>20</sup> *See NPRM* at ¶¶ 7-8. *See also id.* at ¶ 14 (“[The Commission] will not consider allowing ESIMs to communicate with NGSO FSS systems in bands where communications with NGSO FSS space stations are not permitted under the U.S. Table of Frequency Allocations[.]”); Iridium Nov. 8 Ex Parte at 1-2.

<sup>21</sup> Boeing Comments at 10 (emphasis added).

<sup>22</sup> *See Viasat Comments* at 6-7.

## CONCLUSION

The Commission should reject requests to consider NGSO FSS operations in the 19.4-19.6 GHz and 29.1-29.5 GHz bands. They are beyond the scope of the rulemaking and no more than a half-hearted attempt to re-litigate matters repeatedly decided by the Commission.

Respectfully submitted,

A handwritten signature in black ink that reads "SCOTT HARRIS". The signature is stylized, with the first name "SCOTT" in all caps and the last name "HARRIS" in all caps, followed by a small flourish.

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