



March 20, 2026

**VIA ELECTRONIC FILING**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
45 L Street, N.E.  
Washington, DC 20554

Re: *ICFS File No. SAT-LOA-20260310-00118*

Dear Ms. Dortch:

Blue Origin suggests its application is “similarly situated” to SpaceX’s pending orbital data center system application.<sup>1</sup> In such situations, Amazon repeatedly requested that the Commission afford “similarly situated” applications similar treatment, arguing the failure to do so will “distort the playing field, introduce uncertainty and ambiguity that ossifies the licensing process with fighting and advocacy, and make coordination among operators more difficult.”<sup>2</sup>

Accordingly, SpaceX submits for the record Amazon’s petition to deny SpaceX’s orbital data center application<sup>3</sup> and requests that the Commission apply the substantive and procedural arguments in Amazon’s petition to Blue Origin’s application to facilitate equitable and consistent review and treatment across both applications. To that same end, SpaceX incorporates by reference all public comments submitted on the record in its orbital data center application<sup>4</sup> and requests the Commission assess the same substantive and procedural arguments with respect to Blue Origin’s application.

Sincerely,

*/s/ Cecilia Tenge-Rietberg*

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Attachment

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<sup>1</sup> See Comments of Blue Origin, ICFS File No. SAT-LOA-20260108-00016, at 3 (filed Mar. 6, 2026).

<sup>2</sup> Comments of Kuiper Systems LLC, ICFS File Nos. SAT-MOD-20200526-00055 and SAT-AMD-20210818-00105, at 17-18 (Feb. 8, 2022)

<sup>3</sup> See Petition to Deny of Amazon Leo, ICFS File No. SAT-LOA-20260108-00016 (filed Mar. 6, 2026).

<sup>4</sup> See ICFS File No. SAT-LOA-20260108-00016.

**CERTIFICATE OF SERVICE**

I hereby certify that, on this 20th day of March, 2026, a copy of the foregoing pleading was served via First Class mail upon:

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/s/ Ethan Kim  
Ethan Kim

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Space Exploration Holdings, LLC	)	Call Sign S00798
	)	
Application for Authority to Launch and	)	ICFS File No. SAT-LOA-20260108-
Operate the SpaceX Orbital Data Center	)	00016
System	)	

**PETITION TO DENY OF AMAZON LEO**

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March 6, 2026

## TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY. ....	1
II. THE COMMISSION SHOULD DISMISS THE APPLICATION AS INCOMPLETE. ....	3
A. The Application Lacks Basic RF and Orbital Parameters Required by the Commission’s Rules.....	4
B. The Application Fails to Provide Required Space Safety and Sustainability Information.	5
C. SpaceX’s System, As Proposed, Is Speculative and Unrealistic. ....	8
III. SHOULD THE COMMISSION CONSIDER SPACEX’S APPLICATION AS A SERIOUS PROPOSAL, IT SHOULD TREAT IT AS SUCH AND FULLY ADDRESS THE IMPACTS AND RISKS IT POSES TO COMPETITION AND THE COMMISSION’S BROADER SPACE AGENDA.....	11
IV. CONCLUSION. ....	13

**Before the  
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In the Matter of	)	
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Space Exploration Holdings, LLC	)	Call Sign S00798
	)	
Application for Authority to Launch and Operate the SpaceX Orbital Data Center System	)	ICFS File No. SAT-LOA-20260108- 00016

**PETITION TO DENY OF AMAZON LEO**

**I. INTRODUCTION AND SUMMARY.**

The above-captioned application filed by Space Exploration Holdings, LLC (“SpaceX”) seeks authority to operate a constellation of “up to” one million satellites in low-Earth orbit—a system it describes as unprecedented in scale and purpose.<sup>1</sup> The Application promises no less than a “first step towards becoming a Kardashev II-level civilization”—in other words, a society capable of harnessing the full power of the sun—while “ensuring humanity’s multiplanetary future among the stars.”<sup>2</sup>

Unfortunately, the Application provides only the barest outline of how SpaceX will deliver on these grand claims. The Application lacks basic details like satellite design (still under development),<sup>3</sup> orbital altitudes (anywhere between 500 km and 2,000 km),<sup>4</sup> radiofrequency

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<sup>1</sup> See Space Exploration Holdings, LLC, Application for Authority to Launch and Operate the SpaceX Orbital Data Center System, ICFS File No. SAT-LOA-20260108-00016 (Call Sign S00798) (filed Jan. 30, 2026) (“Application”). See also *Space Bureau Accepts For Filing SpaceX’s Application For Orbital Data Centers*, Public Notice, DA 26-113 (rel. Feb. 4, 2026).

<sup>2</sup> Application, Narrative at 1. Unfortunately, SpaceX offers no explanation of how placing data centers in space—rather than say, the invention of rocketry or solar panels or even mankind becoming a Kardashev I civilization—would be the first step towards the creation of a Dyson sphere.

<sup>3</sup> See, e.g., *id.* (noting that SpaceX “is designing its satellite system”).

<sup>4</sup> See *id.* (noting that the system will “operate between 500 km and 2,000 km altitude”).

(“RF”) characteristics (deemed too complex to supply, so instead provided for only three representative satellites),<sup>5</sup> or any credible plan for managing conjunctions or interference at million-satellite scale (offering only generalized assertions instead of specific assessment or demonstration).<sup>6</sup> Timing is likewise uncertain: deploying the proposed million-satellite constellation would take centuries, even assuming the availability of all global launch capacity to do so. SpaceX seeks a waiver of the Federal Communications Commission’s (“Commission”) rules that would require deployment of this million-satellite constellation within a specified timeframe.<sup>7</sup> Even on the million-satellite figure the Application is non-committal—at several points SpaceX carefully clarifies that it plans only to deploy “up to” this number.<sup>8</sup>

In short, the Application seems to describe a lofty ambition rather than a real plan—and a speculative placeholder rather than a complete application under the Commission’s rules. Nonetheless, it risks real harm. The Application has raised alarm from astronomers and environmental groups,<sup>9</sup> and risks worsening international backlash from regulators already concerned about the monopolization of orbital resources.<sup>10</sup> Those raising concerns are reacting to the Application as a genuine and imminent plan to deploy one million satellites. Though it plainly

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<sup>5</sup> See *id.*, Waiver Requests at 6 (“SpaceX intends to operate in many different orbital planes with a range of antenna gains, resulting in a large number of possible combinations of parameters. Rather than provide information for all possible configurations at all altitudes, SpaceX has provided information for satellites in a set of representative planes.”)

<sup>6</sup> See *generally id.*, Technical App’x at A-4 to A-14 (purporting to provide an orbital debris mitigation plan, notwithstanding the fact that virtually every design element remains unsettled).

<sup>7</sup> See *id.*, Waiver Requests at 3.

<sup>8</sup> See, e.g., *id.*, Technical App’x at A-1 (“SpaceX’s Orbital Data Center system is an NGSO system that will consist of up to one million satellites.”).

<sup>9</sup> Sachi Kitajima Mulkey, *Sorry SpaceX: It’s Getting Too Crowded Up There*, NEW YORK TIMES (Feb. 27, 2026), available at <https://www.nytimes.com/2026/02/26/climate/spacex-climate-musk-orbiting-data-centers.html>.

<sup>10</sup> *Space Bureau and Office of International Affairs Seek Comment on Satellite Market Access Reciprocity*, GN Docket No. 26-48, Public Notice, DA 26-208 (rel. Mar. 2, 2026); Sam Clark, *US Slams EU’s Proposed Space Law as Unacceptable*, POLITICO (Nov. 5, 2025), available at <https://www.politico.eu/article/us-slams-eus-proposed-space-law-as-unacceptable/> (reporting on the U.S. State Department concerns that proposed EU regulation of space appears targeted at US companies due to their size and prominence).

is not, should the Commission treat it as such, it will only validate those concerns and make measured policy discussions on these issues impossible. Granting the application would worsen matters further, forcing every other operator in low-Earth orbit to plan around a constellation that may never exist, distorting international spectrum and orbital coordination proceedings, and lending regulatory legitimacy to what amounts to a publicity and narrative-shaping exercise.

Amazon Leo<sup>11</sup> therefore petitions to deny the Application as facially incomplete. Should the Commission instead choose to treat the Application as a serious plan to deploy a million-satellite constellation, Amazon Leo urges the Commission to fully grapple with the novel issues raised by a constellation of this size—including demanding concrete technical details now missing from the Application and considering the effect of a million-satellite constellation on competition, the warehousing of orbital resources, and conjunction management.

## **II. THE COMMISSION SHOULD DISMISS THE APPLICATION AS INCOMPLETE.**

Section 25.112 of the Commission’s rules requires dismissal of applications that, among other things, fail to provide complete information or full answers to the questions asked by the Commission’s Part 25 licensing rules.<sup>12</sup> While often dismissing incomplete applications without prejudice, the Commission has long refused to process speculative, conceptual, or otherwise incomplete filings.<sup>13</sup> Here, the Application fails to provide even the minimum amount of information necessary to meaningfully assess the scope of the proposed system, its interaction with

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<sup>11</sup> Amazon Leo is the permanent brand name for Amazon’s satellite broadband network, formerly known as Project Kuiper.

<sup>12</sup> See 47 C.F.R. § 25.112.

<sup>13</sup> See, e.g., *Application of Pegasus Development DBS Corporation for Authority to Construct, Launch, and Operate a System of Direct Broadcast Satellites in the Broadcasting Satellite Service*, Order on Reconsideration, 21 FCC Rcd 6403 (IB 2006) (affirming dismissal of space station applications for failure to include required orbital debris information); *Spectrum Five LLC Petition for Declaratory Ruling to Provide Service from 110.9° W.L.*, Letter, 30 FCC Rcd 2277 (IB 2015) (dismissing request for market access for failure to provide “complete technical information”).

other non-geostationary satellite orbit (“NGSO”) systems, or its implications for space safety and orbital congestion. The Commission should therefore dismiss the Application without prejudice and allow SpaceX to refile when and if it can produce serious and credible plans regarding its million-satellite constellation.

**A. The Application Lacks Basic RF and Orbital Parameters Required by the Commission’s Rules.**

The Commission’s rules require NGSO applicants to specify basic RF and orbital parameters, including beam information, the number of satellites, the orbital planes those satellites will occupy, and how those satellites will be distributed across those planes.<sup>14</sup>

SpaceX provides only partial information for three satellites (or 0.0003% of the full system) located in three so-called “representative planes,” while omitting any description of the full constellation it seeks authority to deploy and operate.<sup>15</sup> SpaceX omits RF characteristics, explaining that it “intends to operate in many different orbital planes with a range of antenna gains, resulting in a large number of possible combinations of parameters,” and as a result, “[r]ather than provide information for all possible configurations at all altitudes, SpaceX has provided information for satellites in a set of representative planes.”<sup>16</sup> Likewise, SpaceX omits crucial orbital information, including the full set of orbital planes it intends to occupy, the number of satellites it proposes to operate in each plane, and even the size of its satellites.<sup>17</sup> As for the altitude

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<sup>14</sup> See 47 C.F.R. § 25.114(c)(6) (requiring applicants to specify, for space stations in non-geostationary orbits, “(i) The number of orbital planes and the number of space stations in each plane, (ii) The inclination of the orbital plane(s), (iii) The orbital period, (iv) The apogee, (v) The perigee, (vi) The argument(s) of perigee, (vii) Active service arc(s), (viii) Right ascension of the ascending node(s), and (ix) For each satellite in each orbital plane, the initial phase angle at the reference time”).

<sup>15</sup> See, e.g., Application, Schedule S at 1; *id.*, Waiver Requests at 5-6.

<sup>16</sup> *Id.*, Waiver Requests at 6.

<sup>17</sup> SpaceX notes that the satellites’ smallest dimension will be larger than 10 cm but provides no further information on actual bus size or design. *Id.*, Technical App’x at A-5.

of SpaceX’s planned constellation—a key parameter for both RF and physical coordination—the Application states only that the million satellites will operate between 500 km and 2000 km.<sup>18</sup> To this, the Application requests to add 100 km of orbital tolerance at either end of this range, meaning that the million satellites would—or at least could—occupy virtually any and every altitude within low-Earth orbit.<sup>19</sup>

The reason the Commission requires this information is simple. For both the Commission and other satellite operators alike, assessing the interference and space safety impact of a new constellation requires a combined understanding of both orbital geometry and RF emissions. This information is particularly important when, as here, the proposed constellation is two orders of magnitude larger than all satellites currently orbiting the Earth. Yet SpaceX’s technical description of its novel and unprecedented system spans little more than three pages—about half the length of its six-page request for various waivers.<sup>20</sup>

**B. The Application Fails to Provide Required Space Safety and Sustainability Information.**

The Application likewise fails to provide meaningful or complete information on how SpaceX’s proposed deployment would operate safely and sustainably—lacking meaningful detail on issues such as conjunction avoidance, reentry hazards, or the host of other certifications,

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<sup>18</sup> See *id.*, Narrative at 1 (noting that the system will “operate between 500 km and 2,000 km altitude”).

<sup>19</sup> See *id.*, Schedule S. SpaceX attributes these omissions in part to “limitations in Schedule S,” a form that it claims for several reasons does not allow for a full and accurate description of the proposed system. See Waiver Requests at 4-6. Where Schedule S does not accommodate the scale or complexity of a proposed system, the established practice is for applicants to submit supplemental materials—such as spreadsheets—detailing orbital parameters and mapping orbital characteristics to RF use. SpaceX is presumably aware of this possibility, given that it has employed this strategy itself in its own licensing proceedings. See, e.g., Application of Space Exploration Holdings, LLC, for Modification of Authorization for the SpaceX Gen2 NGSO Satellite System to Add a Direct-to-Cellular System, ICFS File No. SAT-MOD-20230207-00021, Attachment A (filed Feb. 7, 2023) (providing “Technical Information To Supplement Schedule S”); Application of Space Exploration Holdings, LLC, for Modification of Authorization for the SpaceX Gen2 NGSO Satellite System to Add a Mobile-Satellite Service System, ICFS File No. SAT-MOD-20230207-00021 (filed Feb. 7, 2023) (attaching 16 GIMS antenna pattern files). And yet, SpaceX failed to do so here.

<sup>20</sup> See Application, Technical App’x at A-1 to A-4.

assessments, and demonstrations required by the Commission’s application rules regarding space safety.<sup>21</sup> While the Application contains over ten pages of discussion on this topic—longer than the narrative and all other technical discussion combined—the discussion for the most part parrots rule language or rests on vaguely supported assertions regarding compliance with the Commission’s space safety rules. The Application does not contain any detailed assessment of, for example, collision risk with operators in similar orbits,<sup>22</sup> whether any components of the planned data-center space stations will survive reentry,<sup>23</sup> or how SpaceX intends to model and reserve fuel to ensure that it can conduct avoidance maneuvers and actively deorbit.<sup>24</sup>

SpaceX’s lack of detail on these issues stands in stark contrast to its searching review of the space safety plans of other operators. For example, SpaceX has intensely scrutinized the assessment of collision risk raised by operators in similar orbits—double checking the submissions of Amazon Leo, AST SpaceMobile, and others to ensure that the assessment provided captures all of the possible objects that could affect operations, that the plans of other operators adequately model the conjunction maneuvers necessary given nearby operations within a given orbit, and that operators sufficiently plan for operational issues such as maintaining a sufficient fuel reserve to both conduct avoidance maneuvers and actively deorbit.<sup>25</sup> Yet here, the Application provides no analysis of these issues at all, despite a constellation hundreds of times larger and spanning virtually the entire altitude range of low-Earth orbit.

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<sup>21</sup> 47 C.F.R. § 25.114(d)(14)(vii).

<sup>22</sup> *Id.* § 25.114(d)(14)(iii).

<sup>23</sup> Application, Technical App’x at A-13 to A-14 (“SpaceX satellites will either be designed such that no components impacting the surface of the Earth will have kinetic energy > 15 joules or SpaceX will show via NASA DAS or other higher fidelity assessment that the human casualty risk is < 1e-4”); *id.*, Narrative at 4-5 (providing similarly nonspecific information).

<sup>24</sup> *Id.* at A-12 (omitting any such data from the technical record); *see also id.*, Narrative at 5.

<sup>25</sup> *See, e.g.*, Comments of Space Exploration Holdings LLC, ICFS File No. SAT-MOD-20250612-00145, Call Sign 3065 (filed July 20, 2025).

SpaceX's ability to conduct avoidance maneuvers, likewise, calls for more than rote and little-explained assertions about maneuvering capability. The sheer number of satellites contemplated by the Application would necessitate near-continuous conjunction-avoidance maneuvers, at a volume that far exceeds existing warning, response, and coordination capabilities. Managing collision risk at this scale would impose an increased burden on operators ascending, descending, or transiting through SpaceX's orbital shells. Based on SpaceX's semi-annual report<sup>26</sup> and the fact that the Application proposes to cover all of low-Earth orbit, the practical effect of a grant would mean any operator seeking to orbit raise a space station anywhere in low-Earth orbit would be required to take on significant operational burdens, increased risk to valuable assets, and the additional cost of maneuvering around SpaceX's massive constellation.

Also lacking is a detailed discussion of disposal orbits. SpaceX simply asserts that it will select disposal orbits associated with passive decay times exceeding 200 years to reach 2,000 kilometers of altitude, with a passive-decay collision probability of 1 in 100 over a 100-year period.<sup>27</sup> It remains unclear whether SpaceX intends to dispose of these 1 million satellites and their replacements in or beyond geostationary satellite orbit ("GSO") graveyard orbits, or whether it intends to create a graveyard orbit somewhere between LEO and the geostationary arc.<sup>28</sup> At the scale proposed, this approach implies that collisions in medium earth orbit ("MEO") with defunct spacecraft could become a regular occurrence, severely degrading the space environment for

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<sup>26</sup> Space Exploration Holdings, LLC, Semi-Annual Report, ICFS File No. SAT-LOA-20170726-00110, 2 (filed July 1, 2025) (explaining that SpaceX's baseline for transiting objects to take maneuver responsibility is at a longer time horizon while SpaceX reserves the right to maneuver closer to the Time of Closest Approach if the risk is not mitigated).

<sup>27</sup> Application, Technical App'x at A-12.

<sup>28</sup> *Id.*

generations and denying other operators—including U.S. operators—the ability to access new orbits at higher altitudes.

Also lacking is any explanation of how SpaceX’s “chosen disposal method” will meet the Commission’s 99% threshold of reliability.<sup>29</sup> To begin with, it’s not clear what the chosen method is at all—the Application identifies several options (disposal in heliocentric orbits, disposal in other orbits above 2,000 km, or atmospheric reentry) but fails to provide any explanation of how it will choose a given strategy for a given orbital shell.<sup>30</sup> With respect to the reliability threshold, SpaceX simply asserts that it has “demonstrated” a 99% reliability—presumably referring to the reliability of its existing constellation.<sup>31</sup> But to the extent that SpaceX has designed its data center satellites at all, the design for these satellites will be fundamentally different than the design for its existing fleet of communications satellites. Even at a 99% success rate, this would mean that 10,000 satellites would fail to be safely disposed of—which is more than three times Amazon Leo’s total constellation size and more than the size of SpaceX’s most recent grant of authority to deploy and operate a 7,500-satellite constellation.

### **C. SpaceX’s System, As Proposed, Is Speculative and Unrealistic.**

The unprecedented size of SpaceX’s proposed constellation calls for more detail on these and other space safety issues rather than less. Yet the thin technical description in the Application appears to reflect the fact that there is no well-developed plan to deploy. At best, the Application appears to be an exercise in publicity and messaging—and at worst, an attempt to stake a priority claim over a vast swath of orbital resources with no genuine intent to deploy.

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<sup>29</sup> *Id.* at A-13; 47 C.F.R. § 25.114(d)(14)(vii)(D)(1).

<sup>30</sup> Application, Technical App’x at A-12 to A-13; *see also id.*, Narrative at 5.

<sup>31</sup> *Id.*, Technical App’x at A-13.

To begin with, the Application never affirmatively states that SpaceX intends to deploy one million satellites. It seeks authority for “up to” that number—in other words, this figure appears to establish a ceiling without a floor. SpaceX seeks a waiver of any rule that might hold it accountable for deploying a million satellites on any specific timeline.<sup>32</sup> This includes requesting a waiver of the Commission’s buildout milestones *and* surety bond rules, which together would establish a timeline for deploying SpaceX’s million satellites and impose monetary penalties for failure to fully deploy.<sup>33</sup> SpaceX itself recently emphasized the importance of both rules in discouraging speculative applications in the Commission’s *Space Modernization* proceeding.<sup>34</sup> SpaceX likewise notes that it has yet to submit a corresponding International Telecommunication Union (“ITU”) filing for its proposed constellation—an essential prerequisite for securing international priority, but a step that calls for details that the Application does not provide.<sup>35</sup> Together, these omissions strongly suggest that SpaceX does not intend to deploy the system as proposed, but instead seeks to warehouse valuable orbital resources through an application

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<sup>32</sup> See generally *id.*, Waiver Requests.

<sup>33</sup> *Id.* at 1-4.

<sup>34</sup> Comments of Space Exploration Holdings, LLC, SB Docket No. 25-306, 12 (filed Jan. 20, 2026) (recommending that surety bonds “should be set at a level sufficient to deter speculative applications (and paired with strict enforcement of milestones and bond forfeiture)” (“SpaceX Space Modernization Comments”); *id.* at 9-10 (arguing that “minimal deployment requirements would undermine the integrity of the processing round framework and sharing rules by creating significant uncertainty for Commission staff and earlier and later round systems”). See also *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713 ¶ 51 (2015) (“The Commission has established milestone and bond requirements to deter warehousing by satellite operators before a proposed space station has been launched and begun operations. In this instance, warehousing refers to the retention of preemptive rights to use spectrum and orbital resources by an entity that does not intend to bear the cost and risk of constructing, launching, and operating an authorized space station, is not fully committed to doing so, or finds out after accepting the license that it is unable to fulfill the associated obligations.”) (internal citations omitted).

<sup>35</sup> Application, Technical App’x at A-4; 47 C.F.R. § 25.111(b) (requiring space station applicants and licensees to “provide the Commission with the information required for Advance Publication, Coordination, and Notification of frequency assignment filings, including due diligence information, pursuant to the Radio Regulations of the International Telecommunication Union”).

untethered from any realistic deployment plan—precisely what SpaceX told the Commission, in its own words, that the rules must not permit.<sup>36</sup>

Full deployment of the proposed constellation is, moreover, impossible within any reasonable timeframe. In 2025—a record-breaking year for global spaceflight—4,526 satellites were launched into orbit worldwide.<sup>37</sup> At that pace, deploying one million satellites would take more than 220 years. This assumes every satellite launched anywhere on Earth, by every nation and every operator, was dedicated exclusively to SpaceX’s data center constellation. The replenishment math is equally sobering: assuming a five-year satellite lifespan, sustaining a million-satellite constellation would require replacing 200,000 satellites per year—more than 44 times the entire global satellite launch output in 2025, just to keep the constellation at steady state. In sum, SpaceX’s million-satellite deployment appears to be wholly unrealistic, if not impossible, to achieve in the foreseeable future unless there is a significant and unprecedented increase in global launch capacity.

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<sup>36</sup> See SpaceX Space Modernization Comments at 9 (opposing a proposal it argues “would upset the Commission’s carefully crafted NGSO sharing rules by significantly increasing the risk of speculative and premature applications that waste staff time and provide no benefit [to] consumers”); *id.* at 10 (“Speculative applications can create a false impression that not enough spectrum exists for all operators in a processing round, capping spectrum access for legitimate operators and encouraging rent-seeking from warehouse users. . . . [L]ittle meaningful incentive for licensees with processing round status to rapidly deploy systems[] enabl[es] them to warehouse valuable spectrum and deny resources to competitors, leading to inefficient use of the spectrum that impedes competition and harms consumers.”); Reply Comments of Space Exploration Holdings, LLC, SB Docket No. 25-306, 7 (filed Feb. 18, 2026) (“[S]peculative applications could significantly delay or even block beneficial upgrades to legitimate systems by requiring them to show through modification applications that they will not increase interference problems into non-existent systems. And of course, those nonexistent systems would have an opportunity to challenge those showings, further delaying system upgrades to systems that actually serve American consumers.”).

<sup>37</sup> Jonathan McDowell, *Space Activities in 2025*, 9 (Feb. 4, 2026), available at <https://planet4589.org/space/papers/space25.pdf>.

**III. SHOULD THE COMMISSION CONSIDER SPACEX’S APPLICATION AS A SERIOUS PROPOSAL, IT SHOULD TREAT IT AS SUCH AND FULLY ADDRESS THE IMPACTS AND RISKS IT POSES TO COMPETITION AND THE COMMISSION’S BROADER SPACE AGENDA.**

Should the Commission treat this as a genuine proposal, the competitive and space safety stakes merit extremely careful consideration. Further, the novelty of the issues raised by the Application requires review by the full Commission.<sup>38</sup>

*First*, the Commission must consider the impact of a million-satellite application on existing and future deployments, including whether such a deployment would hinder or wholly foreclose future deployments from other operators. For example, by claiming broad orbital shells across multiple altitudes and covering nearly all of low-Earth orbit, SpaceX would require future operators to coordinate their systems around SpaceX’s operations, making it the *de facto* gatekeeper to space. Rather than “[g]rowing a vibrant commercial space economy” and “fostering economic growth” as this Administration intends,<sup>39</sup> this would significantly slow commercial innovation and chill investment.

Another issue is how to address the near-total control a million-satellite application would give SpaceX over launch insertion orbits. Before launch of a satellite, an operator must address Launch Collision Avoidance (“LCOLA”) concerns and find a launch insertion orbit that minimizes these risks.<sup>40</sup> But with so many satellites at so many altitudes, the Application would effectively

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<sup>38</sup> 47 C.F.R. §§ 0.261(b)(1)(i)-(iii). The Commission has repeatedly recognized that applications for groundbreaking, unprecedented, first-of-their-kind orbital systems merit consideration by the full Commission. *See, e.g., Space Exploration Holdings, LLC Application for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System*, Memorandum Opinion, Order and Authorization, 33 FCC Rcd 3391 (2018); *Kuiper Systems LLC, Application for Authority to Deploy and Operate a Ka-band Non-Geostationary Satellite Orbit System*, Order and Authorization, 35 FCC Rcd 8324 (2020); *Space Exploration Holdings, LLC, Request for Orbital Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System*, Order and Authorization, 37 FCC Rcd 14882 (2022) (all authorized by full Commission vote).

<sup>39</sup> Exec. Order No. 14,369, Ensuring American Space Superiority, Sec. 2(c) (Dec. 18, 2025) (“Ensuring American Space Superiority EO”).

<sup>40</sup> LCOLA is the evaluation used to determine whether the trajectory of a particular launch assembly will cause any close approaches with other space objects once it reaches 150 km of altitude and for the three hours thereafter. NASA,

create a “wall” of satellites, inhibiting launches by other operators and creating a heightened risk of asset loss. This raises major space safety questions regarding launch windows, on-orbit maneuverability, satellite reflectivity, and operational flexibility—further compounding uncertainty for current and prospective space entrants.

Yet another concern is the externalities a million-satellite constellation might impose on other systems—both existing and planned. Although SpaceX asserts that it will operate within “narrow orbital shells spanning up to 50 kilometers[,]”<sup>41</sup> the absence of specific orbital parameters—combined with the unprecedented scale of the proposed constellation—could effectively cordon off vast regions of low-Earth orbit, particularly sun-synchronous orbits that are ideal for disaster response and national security use cases. In practice, broad altitude bands of this size would operate as exclusion zones, forcing other operators to design around SpaceX’s speculative Application aimed at warehousing valuable orbital resources rather than around defined, coordinated orbital architectures or systems with definitive deployment plans. Amazon Leo has serious concerns regarding the operational consequences of being required to avoid conjunctions with a wholly speculative, incumbent-entrenching, million-satellite system. These concerns are especially acute in and around densely populated low-Earth orbit altitudes, where such a system could interfere with launch and orbital placement for Amazon Leo and other U.S.-

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*NASA Spacecraft Conjunction Assessment and Collision Avoidance Best Practices Handbook*, 18 (Feb. 2023), available at [https://nodis3.gsfc.nasa.gov/OCE\\_docs/OCE\\_51.pdf](https://nodis3.gsfc.nasa.gov/OCE_docs/OCE_51.pdf). This assessment is intended to prevent collisions with orbiting objects before traditional collision avoidance maneuvers are available for use, and such assessments will become even more complicated should one million additional objects be added into orbit. With more on-orbit assets, there will be fewer available trajectories that meet LCOLA requirements, and, as a result, fewer launch opportunities. Accordingly, there would not only be an increased risk of collision, representing millions of dollars in losses, but also a potential increase in scrubbed launches that substantially worsens the global launch bottleneck. Moreover, because LCOLAs become more accurate as launch approaches, there would likely be an increase in last-minute cancellations, putting even more strain on the already limited global launch capacity. Notably, this would affect all operators, including SpaceX itself as both a satellite operator and a launch provider.

<sup>41</sup> Application, Technical App’x at A-1.

licensed systems, as well as the safe transit of spacecraft through orbits that SpaceX would effectively preempt. The risks associated with such forced avoidance are not theoretical; they directly affect mission design, insurance costs, launch feasibility, and long-term system reliability.

#### **IV. CONCLUSION.**

SpaceX seeks authorization for an orbital monopoly that will make it the gatekeeper to space, significantly chilling innovation and investment, contravening the Administration's goals, and running counter to the public interest. The Application lacks basic information required by the Commission's rules to support feasibility and the ability to meet space safety thresholds. For these reasons, the Commission must deny the Application.

Respectfully submitted,

*/s/ Michael John Carlson*

Michael J. Carlson  
Senior Corporate Counsel

Negheen H. Sanjar  
Corporate Counsel

Kuiper Systems LLC,  
an Amazon subsidiary  
525 14th Street S  
Arlington, VA 22202

March 6, 2026

**AFFIDAVIT OF MICHAEL JOHN CARLSON**

I, Michael John Carlson, am Senior Corporate Counsel, for Kuiper Systems LLC.

I hereby declare under penalty of perjury that I am qualified to speak on behalf of Kuiper Systems LLC. I have reviewed the preceding Petition to Deny, and the factual statements therein are complete and accurate to the best of my knowledge, information, and belief.

/s/ Michael John Carlson

Michael J. Carlson  
Senior Corporate Counsel  
Kuiper Systems LLC

Dated: March 6, 2026

## CERTIFICATE OF SERVICE

I hereby certify that, on this 6<sup>th</sup> of March 2026, a copy of the foregoing pleading was served via First Class mail upon:

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*/s/ Michael John Carlson*