

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

In the Matter of)	
Space Exploration Holdings LLC	)	ICFS File Nos. SAT-LOA-20200526-00055,
	)	SAT-AMD-20210818-00105, SAT-AMD-
	)	20221215-00175, SAT-AMD-20241017-00228
	)	SAT-MOD-20230207-00021; SAT-AMD-
	)	20240322-00061; GN Docket No. 23-135
)	
	)	SAT-MOD-20240111-00224
	)	SAT-MOD-20250611-00144
)	
	)	Call Sign S2992/3069
)	
	)	ICFS File Nos. SAT-LOA-20250916-00282 and
	)	SAT-AMD-20251125-00339
	)	Call Sign S00735; GN Docket No. 25-340
)	
Kepler Communications Inc.	)	ICFS File No. SAT-PDR-20211224-00204
	)	Call Sign S3131
)	
Satelio IoT Services USA Inc	)	ICFS File No. SAT-PDR-20250428-00108
	)	Call Sign S3230
)	
AST & Science LLC	)	ICFS File No. SAT-MOD-20260105-00005
	)	Call Sign S3065
)	
Space Bureau Opens New Docket to Explore)	
EchoStar Corporation's Use of 2 GHz MSS	)	SB Docket No. 25-173
Spectrum)	
)	
Petition for Rulemaking by Space Exploration)	
Holdings, LLC Regarding the Revision of the	)	RM-11975
Commission's 1.6/2.4 GHz "Big LEO" NGSO)	
MSS sharing Plan)	
)	
Petition for Rulemaking of Iridium)	
Communications Inc. to Optimize Mobile)	
Satellite Service in the 1.6 GHz Band)	
)	

ORDER**Adopted: April 23, 2026****Released: April 23, 2026**

By the Chief, Space Bureau:

I. INTRODUCTION

1. The United States has long been a global pioneer in mobile satellite services (MSS). Since the Commission first proposed to allocate spectrum and establish licensing procedures in 1985,¹ MSS technology has undergone waves of investment, experimentation, competitive entry, and market discovery. In recent years, the electric growth of the American space economy has ushered generational improvements and renewed enthusiasm in direct-to-device technology. Unprecedented investment, globally harmonized standards, and ubiquitous adoption in consumer handsets confirm that the frontier of possibilities for direct-to-device services is rapidly expanding. In the last 18 months alone, the United States has seen more than \$28 billion in deal flow across at least 130 megahertz of spectrum, including MSS spectrum, to support direct-to-device services.

2. The Commission intends to support the renaissance in direct-to-device by fostering a predictable regulatory environment that protects investment-backed expectations and encourages secondary-market transactions.² Accordingly, we reaffirm a licensee's exclusive right to use certain MSS frequency bands for which it is authorized—both inside of and outside of the United States. In doing so, we uphold existing domestic policy, and maintain existing international agreements and complex technical coordination arrangements to position U.S. companies such that they can seek to implement harmonized global operations. Our decisions flow from decades-long Commission precedent and align with the exclusive-use framework for terrestrial spectrum that underpins our Supplemental Coverage from Space (SCS) rules.

3. Our decision today is both necessary and timely. With the burgeoning interest in direct-to-device, the Commission has received a number of petitions and applications that question our longstanding policy of MSS exclusivity and generated regulatory uncertainty. We resolve them today. First, we reject pending requests for a license or U.S. market access in certain MSS bands that are already licensed to another entity, and/or that would potentially constrain operation of frequencies licensed for use in the United States by the same operator outside the United States. Specifically, we dismiss with prejudice the requests of Space Exploration Holdings LLC (SpaceX), Kepler Communications Inc. (Kepler), Satelio IoT Services U.S. Inc. (Sateliot), and AST & Science LLC (AST) to access specific MSS bands.³ We also dismiss two petitions for rulemaking from SpaceX and Iridium that seek to change

¹ *Rules to Allocate Spectrum for, To Establish Rules and Policies Pertaining to, the Use of Frequencies in Land Mobile Satellite Service for Various Common Carrier Services*, Notice of Proposed Rulemaking, FCC 84-558, 1985 W.L. 94293 (1985). Globalstar Licensee, LLC and Iridium Constellation, LLC were among the first licensed MSS systems. Motorola Satellite Communications, Inc. Order, 10 FCC Rcd 3925 (IB 1995) (Iridium Constellation, LLC) and *Loral/Qualcomm, L.P., Authority to Construct, Launch and Operate Globalstar*, Order and Authorization, 10 FCC Rcd 2333 (IB 1995). The Space Bureau is the predecessor to the former International Bureau (IB). See generally *Establishment of the Space Bureau and the Office of International Affairs and Reorganization of the Consumer Governmental Affairs Bureau and the Office of the Managing Director*, MD Docket No. 23-12, Order, 38 FCC Rcd 608 (2023).

² See 47 U.S.C. § 151.

³ See Space Exploration Holdings LLC, ICFS File No. SAT-MOD-20250611-00144 (SpaceX Gen2 1.5 GHz and 1.6/2.4 GHz Modification); Space Exploration Holdings LLC, ICFS File Nos. SAT-MOD-20230207-00021 and

(continued....)

the licensing band plan for MSS services in the 1.6/2.4 GHz bands.

4. Our decision today serves the public interest in two ways. In the short term, we give companies the clarity they need to deploy direct-to-device services intensively and invest in MSS spectrum confidently. In the longer term, today's decision will pave the way for future reforms we intend to pursue to supercharge direct-to-device technology for the good of Americans.

II. BACKGROUND

5. *SpaceX's Applications.* SpaceX has filed multiple applications to communicate using the 1.5 GHz, 1.6/2.4 GHz, and 2 GHz bands.⁴ In 2023, SpaceX filed an application seeking to modify the authorization for its second generation Starlink system (Gen2 Starlink) to add a direct-to-cell (D2C) service (SpaceX Gen2 D2C Modification).⁵ This SpaceX Gen2 D2C Modification sought to operate in the 1910-1915 MHz and 1990-1995 MHz bands within the United States, and the 1429-2690 MHz band outside the United States. When the Space Bureau (Bureau) partially granted the SpaceX Gen2 D2C Modification in 2024, it deferred consideration of certain sub-bands in the 1429-2690 MHz range, including the 1.5 GHz, 1.6/2.4 GHz, and 2 GHz bands.⁶ In the SpaceX Gen2 Upgrade Applications, SpaceX requested to amend the pending portion of its application, including the pending 1.5 GHz, 1.6/2.4 GHz, and 2 GHz bands to add operations in these bands outside the United States as part of its larger applications to upgrade its Gen2 Starlink satellites to its new "V3" satellite design.⁷ This amendment was accepted for filing and placed on public notice, and the record has been active.⁸ SpaceX also applied for authority for a new constellation of 15,000 low-Earth orbit, non-geostationary orbit (NGSO) satellites to provide D2C services in the United States and outside of the United States including in the 1.5 GHz, 1.6/2.4 GHz, and 2 GHz bands (SpaceX D2C Application). This application was placed on public

SAT-AMD-20240322-00061 (SpaceX Gen2 D2C Modification); Space Exploration Holdings LLC, ICFS File Nos. SAT-MOD-20241011-00224 and SAT-LOA-20200526-00055, SAT-AMD-20210818-00105, SAT-AMD-20221216-00175, and SAT-AMD-20241017-00228 (SpaceX Gen2 Upgrade Applications); Space Exploration Holdings LLC, ICFS File Nos. SAT-LOA-20250916-00282 and SAT-AMD-20251125-00339; GN Docket No. 25.340 (SpaceX D2C Application); Kepler Communications Inc., ICFS File No. SAT-PDR-20211224-00204 (Kepler Application); Satelio IoT Services USA Inc., ICFS File No. SAT-PDR-20250428-00108 (Sateliot Application); and AST & Science LLC, ICFS File Nos. SAT-MOD-20260105-00005 (AST Application). AST also filed a separate application requesting operations in the 2020-2025 MHz band which we do not address in this order. ICFS File No. SAT-MOD-20260121-00036.

⁴ In this Order the 1.5 GHz band or "L Band" refers to 1525-1559 and 1626-1660.5 MHz, the 1.6/2.4 or "Big LEO" band refers to 1610-1626.5 MHz and 2483.5-2500 MHz, and the 2 GHz band refers to 2000-2020 MHz and 2180-2200 MHz.

⁵ See SpaceX Gen2 D2C Modification. The request includes an amendment to include lower altitude operations. SpaceX has also requested modification of its Gen2 constellation to add operations in the 2 GHz band inside the United States. See Space Exploration Holdings LLC, ICFS File No. SAT-MOD-20250514-00119. This application remains pending, and we do not address it in this Order.

⁶ *Space Exploration Holdings, LLC*, Order and Authorization, 39 FCC Rcd 12550 (SB 2024) (SpaceX Gen2 SCS and 300 km Order).

⁷ See SpaceX Gen2 Upgrade Applications. The changes to the request for operations outside the U.S. in the 1429-2690 MHz, including the bands at issue in this Order, focused on changes to the orbital parameters for these operations. In its partial grant of the SpaceX Gen2 Upgrade Applications, the Bureau continued to defer most of the pending sub-bands in the 1429-2690 MHz band, including the 1.5 GHz and 1.6/2.4 GHz bands, but the Bureau did authorize SpaceX to communicate in the 2 GHz band outside the United States. *Space Exploration Holdings, LLC*, Authorization and Order, DA 26-36 (SB 2026) (SpaceX Gen2 Upgrade Order).

⁸ *Satellite Licensing Division and Satellite Programs and Policy Division Information, Space Station Applications Accepted for Filing*, Public Notice, Report No. SAT-01892 (Feb. 7, 2025). Multiple comments were filed, as well as petitions, including those addressing SpaceX's proposed use of MSS bands: Petition of Iridium Constellation to Dismiss or Deny in Part (filed Mar. 10, 2025), Petition to Deny of Globalstar, Inc. (filed Mar. 10, 2025), and Petition to Deny of Viasat, Inc. (filed Mar. 10, 2025).

notice.⁹ In response, multiple comments and several petitions to deny were filed.¹⁰

6. *Kepler's Application for Market Access.* On December 24, 2021, Kepler filed a Petition for Declaratory Ruling requesting U.S. market access for 212 new satellites to provide MSS, focusing on Internet of Things (IoT) device data transfers in the 1610-1617.775 MHz (Earth-to-space) and 2483.5-2500 MHz (space-to-Earth) bands (1.6/2.4 GHz bands) in the United States.¹¹ Globalstar, which is licensed in the 1.6/2.4 GHz bands, along with EchoStar and Omnispace (collectively the Joint Parties), submitted a letter in opposition to the Application, stating that it should be dismissed without being accepted for filing.¹² Kepler filed a response.¹³ SpaceX filed *ex parte* letters requesting that the Commission impose certain conditions on the license requested by Kepler.¹⁴ Kepler's Application has not been placed on public notice as accepted for filing.¹⁵

7. *Sateliot's Application for Market Access.* On April 28, 2025, Sateliot filed a petition for U.S. market access for an initial constellation of 10 satellites to support narrowband, satellite-based IoT applications in the 2 GHz MSS band.¹⁶ Sateliot proposes to use one megahertz of spectrum in the 2000-2010 MHz band (Earth-to-space) and one megahertz of spectrum in the 2190-2200 MHz band (space-to-Earth). Sateliot seeks a waiver of some of the Commission's rules covering MSS operations in the 2 GHz MSS bands¹⁷ and requests processing under the Commission's streamlined process for Small Satellites.¹⁸ Sateliot's application has not been placed on public notice as accepted for filing.¹⁹

⁹ See ICFS File Nos. SAT-LOA-20250916-00282 and SAT-AMD-20251125-00339; see also *Space Bureau and Wireless Telecommunications Bureau Accept for Filing Application of SpaceX Requesting NGSO MSS Authorization and Supplemental Coverage from Space Authorization and Seek Comment on Waivers*, Public Notice, GN Docket No. 25-340 (Dec. 5, 2025). In this application, SpaceX also proposes to use various Ka-band and V-band frequencies for FSS transmissions.

¹⁰ In addition to receiving multiple comments, Globalstar and Iridium filed petitions to deny SpaceX's proposed use of the Big LEO bands, *Petition to Deny of Globalstar, Inc.* (filed Jan. 5, 2026), and *Petition of Iridium Constellation LLC to Dismiss or Deny in Part and Request for Conditions* (filed Jan. 5, 2026). Viasat also filed a petition which included objections to SpaceX's use of the 1429-2690 MHz band.

¹¹ Kepler Application at 1. Kepler also seeks market access for the 2020-2025 MHz (Earth-to-space) band. We do not address Kepler's proposed use of the band in this Order.

¹² Letter from Mindel De La Torre, Omnispace LLC, Jennifer Manner, EchoStar Satellite Services LLC, and L. Barbee Ponder, Globalstar, Inc. to Marlene H. Dortch, Secretary, FCC (dated Jan. 21, 2022). Globalstar also filed *ex parte* letters on July 25, 2022, and August 30, 2022.

¹³ Letter from Nickolas G. Spina, Director of Regulatory Affairs, Kepler Communications Inc. to Marlene Dortch, Secretary, FCC (dated Jul. 8, 2022). Kepler also supplemented the record with information about its German license. See Letter from Polly Avern, Regulatory Associate, Kepler Communications Inc., to Marlene H. Dortch, Secretary, FCC (dated Nov. 11, 2022); Letter from Nickolas G. Spina, Director of Regulatory Affairs, Kepler Communications Inc., to Marlene H. Dortch, Secretary, FCC (dated Nov. 17, 2022). Additionally, Kepler filed notices of *ex parte* meetings. See Letter from Polly Avern, Regulatory Associate, Kepler Communications Inc., to Marlene H. Dortch, Secretary, FCC (dated Sept. 28, 2022); Letter from Nickolas G. Spina, Director of Regulatory Affairs, Kepler Communications Inc., to Marlene H. Dortch, Secretary, FCC (dated Nov. 16, 2022).

¹⁴ Letters from David Goldman, Director of Satellite Policy, SpaceX to Marlene H. Dortch, Secretary, FCC (Jan. 17, 2023, and Mar. 31, 2023).

¹⁵ See 47 CFR §§ 25.112(a)-(b), 25.157(c).

¹⁶ Satelio IoT Services, USA, Inc., ICFS File No. SAT-PDR-20250428-00108. Sateliot notes this application is a precursor to "full commercial deployment." *Id.*, Narrative at 4.

¹⁷ 47 CFR § 25.143.

¹⁸ *Id.* § 25.122.

¹⁹ Sateliot filed a similar petition for U.S. market access in 2023. This petition was dismissed as unacceptable for filing based on the same grounds set forth below. *Satelio IoT Services USA, Inc.*, Order, DA 25-20 (SB 2025).

8. *AST's Application.* On January 7, 2026, AST filed an application to operate MSS in the 1980-2020 MHz (Earth-to-space) and 2160-2200 MHz (space-to-Earth) bands outside the United States.²⁰ AST does not have authority, nor has it applied for authority, to operate in these bands in the United States. This application was placed on public notice.²¹

9. *Petitions for Rulemaking.* SpaceX filed a petition for rulemaking seeking changes to the Commission's rules for MSS systems operating in the 1610-1617.775 MHz and 2483.5-2500 MHz bands (Big LEO bands). Specifically, SpaceX requests that the Commission allow new entrants in the band and revise rules to allow sharing between multiple next generation operators. SpaceX's petition for rulemaking was placed on public notice.²² Iridium Communications, LLC (Iridium) also filed a petition for rulemaking requesting a revision of the Big LEO band plan. Iridium's petition, however, addresses only the 1.6 GHz portion of the band. Iridium operates in this band with Globalstar Communications, LLC (Globalstar) and seeks to increase its share of dedicated spectrum. This petition was not placed on public notice.²³

III. DISCUSSION

10. Given the requests filed for additional operations in the 1.6/2.4, 2 GHz, and 1.5 GHz bands, after reviewing the applications, petitions, and the associated records, we reaffirm a licensee's exclusive rights to use certain MSS frequency bands for which it is authorized—both inside of and outside of the United States and affirm that MSS licenses are spectrum based. We discuss each frequency band in turn below.

A. 1610-1626.5 MHz (Earth-to-space) and 2483.5-2500 MHz (space-to-Earth) (“Big LEO Bands”)

11. For over 30 years, the 1610-1626.5 MHz and 2483.5-2500 MHz bands have been designated through Commission rulemaking proceedings for use by NGSO MSS “Big LEO” systems. First established in 1994, the initial band plan considered operations by NGSO MSS systems using code division multiple access (CDMA) techniques, and time division multiple access (TDMA) techniques.²⁴ The Commission designated the 1610-1621.35 MHz band for CDMA uplink operations, the 2483.5-2500

²⁰ See ICFS File No. SAT-MOD-20260105-00005 (AST Application). AST has also requested to operate in the 2020-2025 MHz (Earth-to-space) band both inside and outside of the United States. See *id.*; ICFS File No. SAT-MOD-20260121-00036. We will not consider those requests in this Order.

²¹ *Satellite Licensing Division and Satellite Programs and Policy Division Information, Applications Accepted for Filing*, Public Notice, Report No. SAT-01974 (Feb. 13, 2026). In response, Petitions to Deny were filed by ViaSat, Inc. (Mar. 16, 2026) and Space Exploration Holdings, LLC (March 16, 2026). AST filed a Consolidated Opposition (Mar. 31, 2026). See also, Letters from Kathryn Dickerson, AST SpaceMobile, to Marlene H. Dortch, Secretary, FCC (Apr. 17, 2026 and Feb. 18, 2026).

²² Request for Comment on Petition for Rulemaking by Space Exploration Holdings, LLC Regarding Revision of the Commission's 1.6/2.4 GHz “Big LEO” NGSO MSS Sharing Plan, Public Notice DA 24-298 (Mar. 26, 2024). In response to the public notice, the following comments/reply comments were filed: Globalstar, Inc. Opposition to Petition for Rulemaking (Apr. 25, 2024, reply filed May 11, 2024); Comments of Omnispace, LLC (Apr. 25, 2024); Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (May 10, 2024, reply filed May 10, 2024); Kepler Communications, Inc. (Apr. 25, 2024, reply filed May 10, 2024); Comments of Ukrainian Congress Commission of America, Inc. (Apr. 24, 2024); Reply Comments of the Mobile Satellite Services Association (May 10, 2024); Comments of Jon Kramer (Apr. 25, 2024); and Comments of TechFreedom in Support of SpaceX Petition for Rulemaking (Apr. 25, 2024). In addition, multiple *ex parte* notifications were filed. See, e.g., Globalstar, Inc. (filed June 6, 2024 and June 24, 2025); Kepler Communications, Inc., (filed June 25, 2024).

²³ Section 553(e) of the Administrative Procedure Act gives parties the right to petition for rulemaking but does not require notice and comment on such petitions. See 5 U.S.C. § 553(e).

²⁴ *Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands*, Report and Order, 9 FCC Rcd 5936, para. 43 (1994) (*Big LEO Order*). Big LEO refers to low-Earth orbit (LEO) mobile satellite services above 1 GHz.

MHz band for CDMA downlink operations, and the 1621.35-1626.5 MHz band for TDMA operations on a bi-directional basis.²⁵ Only two Big LEO systems were ultimately deployed—Globalstar, using CDMA, and Iridium, using TDMA.²⁶ In 2007, in response to a petition from Iridium, the Commission rebalanced the Big LEO band plan to eliminate co-channel sharing, stating that the public interest would be better served by reassigning the spectrum to give CDMA and TDMA systems equal assignments of the spectrum for their exclusive MSS operations, and to limit sharing to a segment of less than one megahertz.²⁷ The Commission then modified the licenses of Globalstar authorizing the 1610-1617.775 MHz portion of the band to Globalstar on an “exclusive basis,” for its CDMA system²⁸ and the 1618.725-1626.5 MHz portion of the frequency band to Iridium on an “exclusive basis” for its TDMA system. The 1617.775-1618.725 MHz portion of the band was assigned to both Globalstar and Iridium to be used on a coordinated basis recognizing that sharing of the spectrum between the two systems over the same geographic area would not be feasible.²⁹

12. In granting Globalstar and Iridium exclusive operating rights in the Big LEO band, the Commission explained that it was not a temporary arrangement. The Commission’s stated objectives included to provide regulatory “certainty and stability for MSS systems operating in the Big LEO bands” and to “ensur[e] that both MSS operators have access to adequate spectrum to provide their services.”³⁰ This carefully rebalanced Big LEO band plan did not envision any additional MSS systems, noting the difficulty of sharing the spectrum with additional systems.³¹ Based on the Big LEO band plan objectives and precedent, the Bureau, in several proceedings, reiterated Globalstar’s exclusive MSS spectrum rights and determined it was not in the public interest to veer from the band plan.³²

²⁵ *Id.* at paras. 43-48.

²⁶ *Big LEO Spectrum Sharing Second Order*, 22 FCC Rcd 19733, para. 4.

²⁷ *Id.* at 19739-40.

²⁸ *Globalstar Licensee LLC, GUSA Licensee LLC and Iridium Constellation LLC, Iridium Satellite LLC, Iridium Carrier Services LLC, Modification of Authority to Operate a Mobile Satellite System in the 1.6 GHz Frequency Band*, Order of Modifications, 23 FCC Rcd 15207, para. 44 (2008) (*Globalstar Modification Order*) (emphasis added). U.S. licensees are obligated to abide by the explicit terms of their U.S. license on a global basis. Consistent with treaty obligations, the Commission has authority to prescribe conditions and restrictions on satellite authorizations, including frequencies that are authorized globally, that are in the public interest. 47 U.S.C. §§ 151, 152, 301, 303(r); International Telecommunication Union, Radio Regulation 18-1. *See also Modification of Licenses held by Iridium Constellation, LLC*, Order, 18 FCC Rcd 20023, 20028, (Sat. Div., IB 2003) (The United States, as the licensing administration for Iridium, is responsible for its global operations in accordance with [ITU] treaty obligations).

²⁹ *Globalstar Modification Order*, 23 FCC Rcd at 15208.

³⁰ *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big Leo Bands/Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking, 22 FCC Rcd 19733, para. 43 (2007).

³¹ *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking*, 22 FCC Rcd 19733, 19742-43 (2007) (*Big LEO Spectrum Sharing Order*); *Globalstar Modification Order*, 23 FCC Rcd 15207, para. 44 (“Globalstar’s Big LEO MSS satellites and mobile earth station terminals are authorized to operate in the 1610-1617.775 MHz frequency band on an exclusive basis.”).

³² *Globalstar Licensee LLC, Application for Modification of Non-Geostationary Mobile Satellite Service System Authorization*, Order and Authorization, DA 24-825, paras. 8-9 n.34 (Aug. 16, 2024) (“Globalstar has exclusive use of the 1610-1617 MHz band”), and *Space Exploration Holdings, LLC Application for Modification of Authorization for the SpaceX Gen2 NGSO Satellite System to Add a Mobile-Satellite Service System*, Order, 39 FCC Rcd 3007, para. 6 (2024) (“Globalstar is authorized to operate its space stations in the 1610-1617.775 MHz frequency band on an ‘exclusive basis’”).

13. In addition to the Commission’s conclusion regarding the impracticability of Big LEO spectrum sharing, we find there are strong public interest justifications to confirm the spectrum use set forth in the Big LEO band plan. The licensees, over the years, have developed substantial systems providing multiple types of services with a significant customer base.³³ They have designed equipment to maximize operations relying on the current MSS regulatory and technical environment with the expectation of exclusive use of the spectrum.³⁴ The band plan provides for service continuity and the ability to replace systems over time. We find no policy or public interest reasons to overhaul the current licensing framework.

14. Considering prior Commission actions addressing Big LEO spectrum, we reiterate the Commission’s conclusion that the 1.6/2.4 GHz bands are not available for licensing of an additional MSS system—both inside and outside of the United States. As a result we dismiss, with prejudice, SpaceX’s requests in its applications - for its Gen2 Starlink upgrade to operate in the Big LEO bands—including for operations outside of the United States.³⁵ In addition, we dismiss, with prejudice, the portion of SpaceX’s D2C Application requesting operations in the Big LEO band outside of the U.S.³⁶ We also dismiss, with prejudice, the part of Kepler’s application for U.S. market access seeking authority to operate in the Big LEO bands for the reasons noted above.³⁷ Consistent with U.S. domestic policy and in order to maintain existing international agreements and to allow the U.S. MSS operator to continue to use its licensed spectrum to compete on a global basis, we dismiss the requests for operations in these bands outside of the United States.³⁸

15. *Pending Rulemaking Petitions.* We dismiss, pursuant to section 1.401(e), SpaceX’s and Iridium’s petitions for rulemaking to modify the spectrum environment for the Big LEO bands.³⁹ SpaceX requests that the Commission revise its licensing and spectrum sharing framework for the Big LEO MSS systems operating in the 1.6 and 2.4 GHz bands, in which Globalstar is currently licensed and operating. Iridium requests that the Commission revisit the Big LEO band plan specifically to allow Iridium to share more of Globalstar’s licensed spectrum at 1610-1617.775 MHz. SpaceX and Iridium make arguments that are similar. Each point to use of the subject bands by Globalstar and contend that the spectrum could

³³ See e.g., Petition to Deny of Globalstar, filed in ICFS File Nos. SAT-LOA-20250916-00282 and SAT-AMD-20251125-00339, at 7-8; and Petition of Iridium Constellation LLC to Dismiss or Deny in Part and Request for Conditions at 2-3, filed in ICFS File Nos. ICFS File Nos. SAT-LOA-20250916-00282 and SAT-AMD-20251125-00339.

³⁴ *Id.*

³⁵ See SpaceX Gen2 D2C Modification; SpaceX Gen2 Upgrade Applications; SpaceX Gen2 1.5 and 1.6/2.4 GHz band Modification. Specifically, we dismiss SpaceX’s 1.6/2.4 GHz Modification as it has not been accepted for filing, and dismiss the applications for the pending bands at issue here in the SpaceX D2C Mod and the SpaceX Upgrade Applications. See 47 CFR § 25.112(a)(2). We note that placing the application on public notice does not protect it from later dismissal. As stated in each Space Station Applications Accepted for Filing Public Notice, “The Commission reserves the right to return any of the applications if, upon further examination, it is determined that the application is not in conformance with the Commission’s rules or its policies.”

³⁶ See SpaceX D2C Constellation Application.

³⁷ See Kepler Petition.

³⁸ In addition, both the Globalstar and Iridium systems have been fully notified with the ITU and have among the highest coordination priority status internationally. Later filed systems with the ITU planning to operate in the 1.6/2.4 bands are required to coordinate with both Globalstar and Iridium. To date, coordination of later filed systems with Globalstar and Iridium have proven very difficult to impossible to achieve. See e.g., Letter from Satellite Division, International Bureau, to Thomas Weber, Satellite Services Department, Federal Network Agency (dated Apr. 21, 2022) (request for coordination of German Courier-3 ITU filing noting significant impacts to Big LEO capacity and quality of service).

³⁹ 47 CFR § 1.401(e).

be used more intensively by additional carriers.⁴⁰ SpaceX requests a rulemaking to update the Big LEO sharing plan to reflect new technology and allow new entrants by initiating a processing round.⁴¹ This action, SpaceX asserts, will ensure that proposed systems achieve levels of operational and spectrum sharing capabilities for efficient use of the spectrum.⁴² SpaceX claims the Commission recognized that the potential for the band to support multiple operators sharing and now needs to address how it will facilitate new entry and the corresponding rights of the new systems.⁴³ It further asserts that the 1.6 GHz band is underutilized and that Globalstar only needs a small fraction of the band to grow its business.⁴⁴

16. Iridium's request is somewhat more discrete: it focuses only on the 1.6 GHz band and asks the Commission to update the band plan to allow Iridium to make use of more spectrum, and points to its current operations for evidence of how it makes use of spectrum efficiently to provide a variety of services.⁴⁵ Like SpaceX, it cites the decisions made in the original 1.6 GHz band plan regarding the possible inclusion of up to four CDMA systems and contends that Iridium's pressing spectrum needs justify modification of the current band plan.⁴⁶

17. We find both petitions unconvincing. Neither has presented a sufficient basis to disturb the longstanding certainty and stability of the spectrum plan for Big LEO systems. As noted above, there are strong public interest policies for retaining the existing band plan.⁴⁷ In addition, neither SpaceX nor Iridium, nor commenters who support the SpaceX petition, have provided sufficient justification to support a revision to the Commission's decision in 2007.⁴⁸ Rather, the petitioners and commenters make assumptions about allocations and system operations that are not fully explained. While Iridium argues that Globalstar's planned system relies on dynamic assignment of narrowband channels which will facilitate sharing more easily than its current system, this statement is speculative and does not justify the opening of a proceeding.⁴⁹ Globalstar, for its part, has provided evidence that it has made use of the spectrum, providing the first commercially available direct-to-device satellite services since 2022 through its partnership with Apple,⁵⁰ the "SPOT" family of devices that provide emergency services to those without terrestrial wireless services, and IoT for a range of industries.⁵¹ Globalstar also submitted technical support to show that additional systems operating in the 1.6/2.4 GHz band would cause harmful

⁴⁰ See, e.g., SpaceX Petition at 5 (arguing the Commission should expeditiously modernize its sharing framework for MSS operation in the 1.6/2.4 GHz Band to enable efficient sharing between multiple next-generation satellite operators); Iridium Petition at 3 (requesting that the Commission once again revise the 1.6 GHz band plan to provide Iridium's in-orbit MSS system full spectrum access down to 1616 MHz, for a total of 10.5 megahertz (1616-1626.5 MHz), and additionally to allow Iridium's future third generation of satellites to use the same spectrum plus share the remainder of the 1.6 GHz band with Globalstar's system (1610-1616 MHz)).

⁴¹ SpaceX Petition at 7-8.

⁴² *Id.*

⁴³ *Id.* at 7. SpaceX also asks that the Commission allow good faith coordination to address spectrum issues in the band before reverting to default sharing. *Id.* at 9.

⁴⁴ *Id.*

⁴⁵ Iridium Petition at 2-4.

⁴⁶ *Id.* at 8-10.

⁴⁷ *Supra* paras. 8-9.

⁴⁸ See, e.g., Kepler Comments at 7.

⁴⁹ *Id.* at 11.

⁵⁰ Opposition to Petition for Rulemaking, Globalstar, Inc., RM-11975, at 4-7 (Apr. 25, 2024) (Globalstar Opposition). Globalstar also notes that it has lost spectrum since the plan's inception: three megahertz in the L-band to Iridium in 2007 and five megahertz in the S-band in 2004 to facilitate Broadband Radio Service operations. *Id.* at 5.

⁵¹ *Id.* at 8.

interference to its system.⁵²

18. Given the nature of MSS, including the ubiquity and portable nature of mobile devices, and the use of omni-directional antennas, there are significant harmful interference challenges to incumbent users in allowing additional uses in these bands. These challenges, combined with the risk to investment, growth, and innovation afforded in the current Big LEO structure, lead us to determine that the petitions do not warrant further consideration and that it is in public interest to dismiss these requests.⁵³

B. 2000-2020 MHz (Earth-to-space) and 2180-2200 MHz (space-to-Earth) (2 GHz Bands)

19. The 2 GHz bands are allocated on a co-primary basis for fixed, mobile, and MSS in the United States.⁵⁴ In 2001, the Commission approved eight satellite operators to provide MSS in the 2 GHz bands available in the United States. The Commission intended for MSS to provide communications in areas where it is difficult or impossible to provide communications coverage via terrestrial base stations and at times when coverage may be unavailable from terrestrial-based networks.⁵⁵

20. Due to failures to meet system implementation milestones or licensees surrendering authorizations, by 2005 there were only two remaining MSS operators. In 2012, EchoStar acquired those two operators' market access grants through its subsidiaries.⁵⁶ Also in 2012, the Commission adopted a terrestrial service plan for Advanced Wireless Service (AWS), known as the AWS-4 plan, which allowed for full, stand-alone terrestrial service in the 2000-2020 MHz and 2180-2200 MHz bands. The Commission determined that the public interest would be served by granting AWS-4 terrestrial authority to the existing MSS operators.⁵⁷

21. The existing 2 GHz MSS authorizations were then modified to add AWS operating authority to allow operators to provide both terrestrial and satellite service using the same spectrum, reasoning that one operator could minimize interference between its satellite and terrestrial uses.⁵⁸ It

⁵² See Letter from L. Barbee Ponder IV, General Counsel, Globalstar to Marlene H. Dortch, Secretary FCC (dated Dec. 30, 2025) filed in ICFS File No. SAT-PDR-20250214-00047; RM-11975; ICFS File Nos. SAT-AMD-20241017-00228, SAT-MOD-20250611-00144, and SAT-LOA-20250916-00282, citing Consolidated Response of Globalstar Licensee LLC, ICFS File No. SAT-PDR-20250214-00047 (Jul. 15, 2025) (attaching Roberson and Associates, LLC Interference Analysis from Proposed SpaceX and Kepler MSS Systems into Globalstar's HIBLEO-4 and HIBLEO-X MSS Systems).

⁵³ See generally Globalstar Opposition (describing significant investments in MSS made thus far as well as the chilling effect a rulemaking would have on future investments); see also *Press Release*, Globalstar, Amazon to Acquire Globalstar and Expand Amazon Leo Satellite Network, (Apr. 14, 2026), <https://investors.globalstar.com/news-releases/news-release-details/amazon-acquire-globalstar-and-expand-amazon-leo-satellite>.

⁵⁴ 47 CFR § 2.106.

⁵⁵ See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, IB Docket No. 01-185, ET Docket No. 95-18, Notice of Proposed Rulemaking, 16 FCC Rcd 15532, 15532, para. 1 (2001).

⁵⁶ *New DBSD North America, Inc. Debtor-in-Possession; New DBSD Satellite Services G.P., Debtor-in-Possession, Pendrell Corporation, Transferor, and TerreStar Licensee Inc., Debtor-In-Possession, Request for Rule Waivers and Modified Ancillary Terrestrial Component Authority*, Order, 27 FCC Rcd 2250 (IB 2012).

⁵⁷ *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102 (2012) (*AWS-4 Report and Order*).

⁵⁸ *AWS-4 Report and Order; Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Order of Modification, 28 FCC Rcd 1276 (Sat. Div, IB; BD; WTB 2013) (modifying the licenses of Gamma Acquisition and New DBSD Satellite Services GP to provide AWS in the AWS-4 spectrum band).

noted that for MSS and terrestrial services, same band, separate operator sharing is “impractical.”⁵⁹ The rules included the requirement of AWS to protect 2 GHz MSS operations.⁶⁰ This plan was intended to parallel that of the 2 GHz MSS band, so as to “minimize the possibility that AWS-4 operations could interfere with 2 GHz MSS operations and . . . offer the greatest opportunity for synergies between the two mobile services.”⁶¹ The Commission stated that because this approach was incompatible with the deployment of additional MSS systems, it anticipated that applications for new or modified MSS systems would be “limited to an incumbent operator or its assignee or transferee.”⁶² The 2012 *AWS-4 Report and Order* provided that additional MSS applications were precluded and incumbent MSS operators were assigned terrestrial rights by modification of their authorizations. Limiting use of the spectrum to the incumbent MSS operators was based on eliminating the potential for harmful interference. Thus, the current plan does not allow for additional MSS systems, and the Commission’s AWS-4 order acknowledged that only incumbent operators can deploy MSS operations in the band.⁶³

22. Based on the spectrum exclusivity granted to the incumbent authorization holder, EchoStar, we find that Sateliot’s market access application is not in compliance with Commission requirements. We note that Sateliot filed its petition under the Commission’s streamlined process for small satellites.⁶⁴ The criteria for processing under the Small Satellite rules includes the requirement that “radiofrequency operations will be compatible with existing operations in the requested frequency bands and not materially constrain future operations of other satellites in the band.”⁶⁵ The Commission’s long-standing finding that this band can only be used by one operator in the United States means that by its nature Sateliot’s proposed operations are not compatible with the existing authorizations in the band. Accordingly, we dismiss, with prejudice, Sateliot’s application to provide service in the United States using the 2000-2010 MHz (Earth-to-space) and the 2190-2200 MHz (space-to-Earth) bands.⁶⁶

23. Consistent with our domestic policy and to ensure that the U.S. 2 GHz spectrum licensee has a fair opportunity to compete in the global MSS marketplace, we also decline to consider any

⁵⁹ *AWS-4 Report and Order*, 27 FCC Rcd at 16165.

⁶⁰ 47 CFR § 27.1136; *see also AWS-4 Report and Order*, 27 FCC Rcd at 16164, para. 160 & n.468 (“An AWS licensee of the 2000-2020 MHz and 2180-2200 MHz bands must accept any interference received from duly authorized MSS operations in these bands. Any such AWS licensees must protect MSS operations in these bands from harmful interference.”).

⁶¹ *AWS-4 Report and Order*, 27 FCC Rcd at 16117.

⁶² *Id.* at 16164, para. 160 & n.468. The Commission also directed the International Bureau to dismiss a then-pending petition seeking access to the band. *See also Flexibility for the Delivery of Communications by Mobile-Satellite Providers in the 2 GHz band, the L-band band, and the 1.6/2.4 GHz Bands*, Memorandum Opinion and Order and Second Order on Reconsideration, 20 FCC Rcd 4616, 4629, & n.91 (providing that in the 2 GHz MSS bands, each licensee has exclusive rights to a block of spectrum).

⁶³ In September 2025, EchoStar entered into an agreement with SpaceX to transfer its rights to the AWS-4 and 2 GHz MSS spectrum. *See Applications of Spectrum Business Trust 2025-1, Space Exploration Technologies Corp., and EchoStar Corporation for Consent to Assign Spectrum and Earth Station Licenses (GN Docket No. 25-302) (EchoStar/SpaceX Transaction Application)*. SpaceX filed an associated application for a separate satellite constellation using this spectrum—the SpaceX D2C Application. Both applications are pending.

⁶⁴ 47 CFR § 25.122(c)(9); Sateliot Application, Attach. B, Exh. 1.

⁶⁵ *Streamlining Licensing Procedures for Small Satellites*, Report and Order, 34 FCC Rcd 13077, 13083-84 (2019).

⁶⁶ We note that Sateliot requested a waiver of 2 GHz MSS service rules, section 25.143, to the extent necessary, as it is requesting access to the band under the Commission’s Small Satellite rules in section 25.122, which include a geographic and other service requirements that cannot be met by its small satellite system. Sateliot Application, Narrative at 24. We need not address the waiver because whether Sateliot meets the 2 GHz service rule requirements—or not—has no bearing on the Bureau’s finding that the band is not available for additional entry.

additional U.S. commercial systems for international operations in the 2 GHz band.⁶⁷ We therefore, dismiss, with prejudice, AST's request to operate in the 2000-2020 MHz (Earth-to-space) and 2180-2200 MHz (space-to-Earth) bands outside of the United States.⁶⁸

24. We also terminate the Bureau's inquiry into EchoStar's use of the 2 GHz MSS spectrum. On May 12, 2025, the Bureau opened a proceeding to build a record on use of the 2000-2020 MHz and 2180-2200 MHz band for MSS based on questions raised about use by the sole licensee, EchoStar.⁶⁹ As previously noted, EchoStar entered into an agreement with SpaceX to assign its rights to the spectrum.⁷⁰ As such, there is no reason to continue the inquiry regarding EchoStar's 2 GHz MSS operations, and we terminate the proceeding.⁷¹

C. 1525-1559 MHz (space-to-Earth) and 1626.5-1660.5 MHz (Earth-to-space) (Standard L-band)

25. "L-band" is a general designation for the entire frequency range from one to two gigahertz. In this Order, however, the term "L-band" denotes the so-called "upper L-band" (1545-1559 MHz and 1646.5-1660.5 MHz) and "lower L-band" (1525-1544 MHz and 1626.5-1645.5 MHz), which are internationally allocated for MSS. The Commission has allocated the 1525-1559 MHz band for downlink transmission from MSS satellites to mobile earth stations in the United States and the 1626.5-

⁶⁷ EchoStar, through its EchoStar Global Australia subsidiary, has among the highest ITU priority rights for an NGSO constellation in the 2 GHz band. SIRION-1 Satellite Network, ITU Filing SNS Notice ID: 121500178. In 2009 the European Union granted Solaris (now EchoStar) and Inmarsat (now Viasat) exclusive rights to provide MSS in the 1980-2010 MHz and 2170-2200 MHz bands for a fixed period of time. EchoStar's international rights will accrue to SpaceX with its acquisition of EchoStar's spectrum assets. *See* EchoStar Corporation, Form 8-K, Sept. 8, 2025, at Item 1.101 (stating the EchoStar/SpaceX License Purchase Agreement includes rights and licenses granted by the Federal Communications Commission, together with Foreign Assets, including international rights and priorities to the 2 GHz spectrum). The Foreign Assets will be transferred directly to SpaceX at the Spectrum Acquisition Closing. SpaceX was also recently granted authority to provide MSS outside of the United States in the 1980-2010 MHz and 2010-2025 MHz bands. *SpaceX Gen2 Upgrade Order*. Given the global nature of SpaceX's proposed D2C constellation and the nature of the MSS service SpaceX proposes, in which the mobile terminals will be radiating and receiving in all directions—in an omnidirectional fashion, sharing the spectrum with other MSS systems would be difficult.

⁶⁸ AST's request to operate in the 1980-2000 MHz (Earth-to-space), 2020-2025 MHz (Earth-to-space), 2160-2170 MHz (space-to-Earth), and 2170-2180 MHz (space-to-Earth) bands remains pending. ICFS File No. SAT-MOD-20260105-00005. AST asserts that ITU priority does not confer global exclusivity and that any operator must coordinate with lower-priority networks. Letter from Kathryn Dickerson, AST SpaceMobile, to Marlene H. Dortch, Secretary, FCC (dated Apr. 17, 2026). The Bureau's determination here rests on the technical characteristics and service environment of the 2 GHz MSS band and the exclusive spectrum rights conferred to the licensee in the band.

⁶⁹ Space Bureau Opens New Docket to Explore EchoStar Corporation's Use of the 2 GHz MSS Spectrum, Public Notice, SB Docket 25-173 (May 12, 2025). Multiple comments, reply comments, and *ex parte* letters were filed. *See e.g.*, Comments of Iridium (filed May 23, 2025) (supporting the acceptance of new applications in the band); Comments of Space Exploration Holdings, LLC (filed May 27, 2025) (EchoStar's failure to use the band as required has left the band ripe for new competitive entry from U.S.-licensed satellite systems); Comments of Public Knowledge and Open Technology Institute at New America (filed May 27, 2025) (requesting termination of the proceeding noting that permitting EchoStar to expand its network is the best way to make efficient use of the band).

⁷⁰ *See* EchoStar/SpaceX Transaction Application.

⁷¹ To the extent certain commenters in the proceeding, including SpaceX, suggest that the Commission open the band to new applications, we do not intend to do so. As noted above, the Commission stated that MSS systems in the band would be limited to an incumbent operator or its *assignee or transferee*. *See* para 17 *supra* (emphasis added). After the Bureau initiated the proceeding, EchoStar and SpaceX entered into an agreement for the assignment of some of EchoStar's spectrum rights, including the 2 GHz band, to SpaceX. SpaceX then filed an application for authority to operate in the 2 GHz MSS spectrum to be acquired from EchoStar. *See* SpaceX D2C Application. Therefore, it is no longer relevant to inquire about EchoStar's use of the spectrum.

1660.5 MHz band for uplink transmission from mobile earth stations to MSS satellites.⁷² The 1660-1660.5 MHz band is also allocated for radio astronomy observation on a co-primary basis.⁷³ Both the uplink and downlink bands are also allocated for ancillary terrestrial component (ATC) transmission, except for two one-megahertz segments at 1544-1545 MHz and 1645.5-1646.5 MHz, which are allocated exclusively for safety services.⁷⁴

26. *Coordination.* L-band operations in the United States are pursuant to a 1996 Mexico City Memorandum of Understanding and related Operating Agreements (MOU) originally signed by the United States, Canada, Mexico, Russia, and Inmarsat, and covering all of North America.⁷⁵ The parties to the MOU last formally revised the assignments under the specific originally contemplated procedures in 1999.

27. Currently, Ligado Networks Subsidiary LLC, Debtor-in-Possession (Ligado), a U.S.-licensed operator, and Inmarsat, a U.K.-licensed operator, operate in the L-band in the United States pursuant to the MOU.⁷⁶ Following coordination disputes between Ligado's predecessors and Inmarsat, in 2007 those entities signed a 100-year cooperation agreement to resolve the disputes which provided Ligado access to more spectrum over North America in return for a series of payments and commitments from Ligado regarding Inmarsat's spectrum rights in the rest of the world. Ligado and Inmarsat have since amended this cooperation agreement.⁷⁷

28. *Ligado Authority in the United States.* In the mid-1990s, Ligado's predecessor launched two MSS satellites that would serve the United States using L-band spectrum: MSAT-1, a Canadian-licensed GSO satellite with U.S. market access, and MSAT-2, a U.S.-licensed GSO satellite.⁷⁸ In 2004, the Commission granted Ligado's predecessor authority to perform MSS and ATC operations in the United States subject to certain limitations and conditions.⁷⁹ The Commission subsequently authorized Ligado's predecessor to launch and operate two additional GSO MSS satellites, SkyTerra-1 and SkyTerra-2.⁸⁰ Ligado's license has most recently been modified to permit MSS and ATC operations in the L-band pursuant to updated technical parameters in 2020.⁸¹

⁷² 47 CFR § 2.106.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ The U.K. Administration replaced Inmarsat as a party to the MOU when Inmarsat was privatized. Under the MOU, L-band spectrum for operation via certain satellites was to be dynamically assigned pursuant to successive annual arrangements among the respective satellite operators licensed by the signatory Administrations. Furthermore, rather than creating permanent assignments of specific spectrum, the MOU was designed to permit operators' assignments to change from year to year based on their marketplace needs.

⁷⁶ When we discuss Ligado in this Order we also refer to its "predecessor." This is not a reference to a singular licensee, but for ease of reference, an acknowledgment that the Commission action took place with regard to different entities whose authorization Ligado currently holds. In addition, when we refer to "Inmarsat," we refer to Inmarsat Global Limited and Inmarsat PLC interchangeably. In 2023, Viasat, which provides voice, video, and data MSS services using GSO satellites acquired Inmarsat. *Viasat, Inc. and Connect Topco Limited*, Memorandum Opinion and Order and Declaratory Ruling, 38 FCC Rcd 4776 (2023).

⁷⁷ See generally *Inmarsat Global Ltd. Reply*, ICFS File No. SAT-MOD-20251206-00374 (rec. Mar. 23, 2026).

⁷⁸ ICFS File Nos. SAT-LOA-19930708-00029 and SES-LIC-19980330-00339.

⁷⁹ *Mobile Satellite Ventures Subsidiary LLC*, Order and Authorization, 19 FCC Rcd 22144 (IB 2004).

⁸⁰ See *Mobile Satellite Ventures Subsidiary LLC*, Order and Authorization, 20 FCC Rcd 9752 (IB 2005); *Mobile Satellite Ventures Subsidiary LLC*, Order and Authorization, 20 FCC Rcd 479 (IB 2005) (2005 Order). Ligado's predecessor surrendered its license for the SkyTerra-2 in 2006. See Letter from Jennifer Manner, MSV International, LLC, to Marlene H. Dortch, Secretary, FCC (dated June 12, 2006).

⁸¹ See *LightSquared Technical Working Group Report, et al.*, Order and Authorization, 35 FCC Rcd 3772 (2020).

29. *Ligado's Use of the L-band.* The Commission has historically licensed Ligado, its predecessors, and Inmarsat as the only space station operators in L-band spectrum due to the nature of service being provided. These operators have been providing MSS in which the user terminal can be anywhere within its licensed geographic area and with the energy of the user terminal radiated in all directions with no angular discrimination against other systems operating on the same frequencies. Under these operating conditions it is not possible for other systems to operate on the same frequencies without causing or receiving interference. The Commission recognized this impossibility in 1987 when it established its MSS framework in which only one MSS system other than Inmarsat would be licensed to a consortium for the first generation to use the entire allocated bandwidth, both co-primary and secondary segments.⁸² In reaching this decision, the Commission reasoned that a larger amount of bandwidth will permit a greater variety of services to be provided by an MSS system, and a larger customer base to be served.⁸³ Therefore, in 1989, when the Commission first granted authority for Ligado's predecessor, licensed as a consortium, to operate in the MSS, it granted the predecessor authority to operate pursuant to this newly established MSS framework.⁸⁴ Subsequently the Commission allocated additional spectrum in the L-band to MSS and authorized Ligado's predecessor to use the 1525-1559 MHz (space-to-Earth) band and the 1626.5-1660.5 MHz (Earth-to-space) band as the "only U.S. MSS system currently authorized to operate in the L-band."⁸⁵ The Commission has not authorized additional operators to use this L-band spectrum in the United States.⁸⁶

30. The Commission has also avoided licensing additional U.S. operators to operate in Ligado's licensed MSS L-band spectrum on a global basis. The Commission previously authorized Ligado's predecessor to use the L-band frequencies that the Commission had already coordinated and authorized for the predecessor's North American system to also operate the SkyTerra-2 satellite in South America. In authorizing a satellite for operations outside of the United States, the Commission explained that it would not license another U.S. system to operate in the same frequencies as the MSAT-2.⁸⁷ We continue to uphold the Commission's reasoning when authorizing operations of the SkyTerra-2 satellite when considering Ligado's operations in the L-band today. As the Commission previously found, we will not consider applications for new systems where the new system's operations would cause interference to licensed systems.⁸⁸ Given the difficulty that MSS operators have in sharing spectrum bands, we anticipate that any additional commercial satellite operations using Ligado's licensed L-band spectrum would cause harmful interference to Ligado's MSS operations in those bands. Therefore, permitting additional commercial operators to use this spectrum would effectively make it impossible for Ligado to provide service in these bands.

31. Furthermore, we acknowledge the desire and capability of U.S.-licensed MSS operators

⁸² *Amendment of the Rules to Allocate Spectrum for and Establish Rules Pertaining to the Use of Radio Frequencies in the Land Mobile Satellite Service*, Second Report and Order, General Docket No. 84-1234, 2 FCC Rcd 485, 486, para. 6 (1987).

⁸³ *Id.*

⁸⁴ See *Amendment of Parts 2, 22, 25 of the Commission's Rules to Allocate Spectrum for and to Establish Rules and Policies Pertaining to the Use of Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services*, Memorandum Opinion, Order and Authorization, 4 FCC Rcd 6041 (1989) *remanded by Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428 (D.C. Cir. 1991); *Final Decision on Remand*, 7 FCC Rcd 266 (1992); *aff'd, Aeronautical Radio, Inc. v. FCC*, 983 F.2d 275 (D.C. Cir. 1993).

⁸⁵ *Establishing Rules and Policies for the Use of Spectrum for Mobile Satellite Services in the Upper and Lower L-Band*, Report and Order, 17 FCC Rcd 2704, 2704, para. 1 (2002) (*2002 Order*).

⁸⁶ In addition, in December 2025, Ligado filed an application to provide MSS aboard AST & Science LLC's constellation of NGSO satellites using the 1525-1599 MHz and 1626.5-1660.5 MHz bands. ICFS File No. SAT-MOD-20251206-00374.

⁸⁷ *2005 Order*, 20 FCC Rcd at 482, para. 8.

⁸⁸ *Id.*

to expand their coverage internationally. This interest was made evident through the extensive coordination history across borders for use of the L-band. Similarly, MSS operators like Ligado are capable of offering coverage across a broad service area due to their use of omni-directional antennas. Because MSS operations are highly susceptible to harmful interference when more than one commercial operator utilizes the same set of bands, we seek to ensure that Ligado, a U.S. MSS licensee, will not be prevented from providing L-band MSS service in any region where it may be capable of providing coverage.⁸⁹ As a result, we decline to authorize additional commercial operators for international operations in bands that are licensed to Ligado in the United States to ensure that as a U.S. operator, it has a fair opportunity to compete in the global MSS marketplace.⁹⁰ In doing so, we also maintain existing international agreements and complex technical coordination arrangements.

32. As a result, we dismiss, with prejudice, the portions of SpaceX's various applications to modify its Gen2 Starlink constellation to add operations in the 1525-1559 MHz and 1626.5-1660.5 MHz band both inside and outside the United States⁹¹ and we also dismiss, with prejudice, the portion of SpaceX's D2C Application requesting operations in these bands.⁹² With this action we also dismiss with prejudice the SpaceX Gen2 1.5 GHz and 1.6/2.4 GHz Modification application in its entirety.

IV. ORDERING CLAUSES

33. Accordingly, IT IS ORDERED, that Space Exploration Holdings LLC's request for its Gen2 Starlink satellites to operate in the 1525-1559 MHz, 1626.5-1660.5 MHz, 1610-1626.5 MHz, and 2483.5-2500 MHz bands in the United States and outside of the United States in ICFS File Nos. SAT-LOA-20200526-00055, SAT-AMD-20210818-00105, SAT-AMD-20221215-00175, SAT-AMD-20241017-00228, SAT-MOD-20230207-00021, SAT-AMD-20240322-00061, SAT-MOD-20240111-00224, and SAT-MOD-20250611-00144 is DISMISSED with prejudice.

34. IT IS FURTHER ORDERED, that Space Exploration Holding LLC's request for its D2C Constellation for operations outside of the United States in the 1610-1626.5 MHz and 2483.5-2500 MHz bands in ICFS File Nos. SAT-LOA-20250916-00282 and SAT-AMD-20251125-00339 and GN Docket No. 25-340 is DISMISSED with prejudice.

35. IT IS FURTHER ORDERED that Kepler Communications, Inc.'s request for U.S. market access to provide service in the 1610-1617.775 MHz and 2483.5-2500 MHz bands in ICFS File No. SAT-PDR-20211224-00204 is DISMISSED with prejudice.

36. IT IS FURTHER ORDERED that Satelio IoT Services USA, Inc.'s request for U.S. market access to provide service in the 2000-2010 MHz and 2190-2200 MHz bands in ICFS File No. SAT-PDR-20250428-00108 is DISMISSED with prejudice.

37. IT IS FURTHER ORDERED that AST & Science LLC's request for authority to operate in the 1980-2020 MHz and 2160-2200 MHz bands in ICFS File No. SAT-MOD-20260105-00005 is DISMISSED with prejudice.

38. IT IS FURTHER ORDERED that the Petition of Iridium Constellation to Dismiss or Deny in Part SpaceX's Gen2 Upgrade Applications is DISMISSED, in part, as moot.

39. IT IS FURTHER ORDERED that the Petitions of Viasat to Deny SpaceX's Gen2 Upgrade Applications and D2C Applications are DISMISSED, in part, as moot.

40. IT IS FURTHER ORDERED that the Petitions to Deny of Globalstar in the SpaceX

⁸⁹ *Id.*

⁹⁰ *2002 Order*, 17 FCC Rcd at 2710, para. 16.

⁹¹ See SpaceX Gen2 D2C Modification; SpaceX Gen2 Upgrade Applications; SpaceX Gen2 1.5 and 1.6/2.4 GHz band Modification.

⁹² See SpaceX D2C Constellation Application.

Gen2 Upgrade Applications and D2C Application are DISMISSED as moot.

41. IT IS FURTHER ORDERED that Globalstar's opposition to Kepler's request to use the 1610-1626.5 MHz and 2483.5-2500 MHz bands is DISMISSED as moot.

42. IT IS FURTHER ORDERED that the Petition for Rulemaking by Space Exploration Holdings, LLC Regarding the Revision of the Commission's 1.6/2.4 GHz "Big LEO" NGSO MSS Sharing Plan, RM-11975, is DISMISSED.

43. IT IS FURTHER ORDERED that the Petitions and Comments in Opposition of SpaceX's Petition for Rulemaking in RM 11975 filed by Globalstar, Inc., Omnispace, Public Knowledge, Open Technology Institute at New America, and the Mobile Satellite Services Association are DISMISSED as moot.

44. IT IS FURTHER ORDERED that the Petition for Rulemaking of Iridium Communications Inc. to Optimize Mobile Satellite Service in the 1.6 GHz Band is DISMISSED.

45. IT IS FURTHER ORDERED that SB Docket No. 25-173 is TERMINATED.

46. These actions are taken pursuant to sections 0.51, 0.261, 25.112, 25.117, 25.137(c), 1.1401(e), and 1.407 of the Commission's rules, 47 CFR §§ 0.51, 0.261, 25.112, 25.117, 25.137 (c), 1.401(e), 1.407, and section 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. § 303(r).

FEDERAL COMMUNICATIONS COMMISSION

Jay A. Schwarz
Chief, Space Bureau