

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of	)	
	)	
CESIUMASTRO, INC.	)	File Number: SAT-LOA-20260621-00247
	)	
Application for Authority to Launch, Operate, and Replenish Synchronicity	)	Call Sign: _____
	)	

APPLICATION

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July 6, 2026

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ITU Cost Recovery Letter

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APPLICATION

CesiumAstro, Inc. (“CesiumAstro”)¹ requests authority to launch, operate, and replenish Synchronicity, a 737-non-geostationary orbit (“NGSO”) fixed-satellite service (“FSS”) satellite system.² Synchronicity will use satellites with reconfigurable processing and proprietary phased array technology to connect fixed and mobile users across Ku-, Ka-, and V-band frequencies. Granting the application would serve the public interest by adding reconfigurable satellite capacity for users that need adaptable coverage, user terminal optionality, and resilient connectivity beyond standardized broadband offerings. CesiumAstro asks that the Commission grant the license before January 6, 2027.

I. OVERALL DESCRIPTION (47 C.F.R. § 25.114(D)(1))

Synchronicity will be a two-tranche constellation. Tranche 1 will operate at approximately 1200 km, and Tranche 2 will operate at approximately 1100 km. The constellation will use multiple orbital inclinations, including 100.3 degrees and 67 degrees, to support geographic reach, network diversity, and operational resiliency. Schedule S provides detailed orbital parameters, tolerances, satellite distribution, and beam information.

¹ CesiumAstro is an Austin, Texas-based company incorporated in Delaware.

² See 47 C.F.R. § 25.110 *et seq.*

Synchronicity's core advantages are CesiumAstro's vertical integration paired with reconfigurable processing and phased arrays that cover wide frequency ranges. CesiumAstro designs satellites, phased arrays, processors, waveforms, software, and artificial intelligence traffic optimization tools in-house to allow the communications chain to be engineered as a unified platform that can change waveforms, beam configurations, and frequency schemes to satisfy geography, mission, or customer needs.

The space and ground facilities will support service; feeder/gateway; and telemetry, tracking, and command links. Synchronicity will operate in the Ku-, Ka-, and V-band frequencies identified in Schedule S. Uplink signals received in authorized Earth-to-space bands can be processed and routed on board for downlink through authorized space-to-Earth service or feeder bands. Most service and feeder beams are designed for steering, shaping, and variable bandwidth operation, which gives CesiumAstro flexibility to manage traffic across changing demand patterns, gateway visibility, and customer needs.

The user terminal architecture is designed for customer choice. Synchronicity can support CesiumAstro terminals as well as compatible terminals supplied by other vendors. Fixed terminals can serve enterprise sites, government facilities, industrial locations, and dedicated installations. Mobile terminals can support platforms and users that require connectivity across changing locations or operating environments. This approach will allow CesiumAstro to address business-to-business, government, mobility, industrial, and specialized commercial applications without forcing all customers into a single equipment model.

II. PUBLIC INTEREST (47 C.F.R. § 25.114(D)(6))

Granting this application would serve the public interest by adding a flexible and technically differentiated NGSO FSS system to the satellite communications market. CesiumAstro's architecture can adapt over the life of the system as customer requirements,

technology, and operating conditions change. That adaptability has practical value for users whose needs vary by geography, platform, terminal type, security requirement, and traffic profile.

A two-tranche deployment will provide a scalable foundation for service growth and network resiliency. The 1200 km and 1100 km tranches will support coverage optimization across the proposed constellation while multiple inclinations will improve service availability across varied geographies and mission profiles. The result is a system suited for fixed and mobile users across enterprise, government, industrial, mobility, and specialized commercial environments.

Customer choice will also benefit from CesiumAstro's open terminal strategy. Many users need terminals that fit existing platforms, procurement programs, operating environments, or security requirements. CesiumAstro's ability to support compatible terminals from multiple vendors gives those users more flexibility and creates opportunities for equipment manufacturers, integrators, and service providers. A broader terminal ecosystem can reduce adoption barriers and support applications that require tailored hardware.

The proposed system would strengthen U.S. leadership in advanced satellite communications. CesiumAstro's recent financing supports expanded domestic manufacturing, research and development, facilities growth, and workforce expansion. Those investments align with national needs for resilient communications, secure connectivity, emergency response capability, mobility support, and critical infrastructure continuity. A U.S.-based provider with phased array expertise, government market traction, and substantial institutional backing can add meaningful depth to the domestic space and communications industrial base.

Authorizing Synchronicity would advance competition, innovation, and service diversity. The NGSO FSS market benefits when customers have access to multiple satellite architectures, service models, and technical approaches. CesiumAstro's reconfigurable platform would expand

that choice, support specialized and evolving use cases, and promote continued U.S. leadership in next-generation satellite communications.

III. KU-BAND AND KA-BAND NGSO FSS COMPLIANCE (47 C.F.R. § 25.114(D)(12))

For all 10.7-30 GHz NGSO FSS operations, the Commission has licensing and operating obligations.³ CesiumAstro certifies it will comply with them.

IV. CONCLUSION

For these reasons, the Commission should grant the Synchronicity application.

Respectfully submitted,

/s/ Krystle Caponio

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July 6, 2026

³ See *id.* § 25.146.

ATTACHMENT A (TECHNICAL ANNEX)

This attachment offers supplemental technical details regarding Synchronicity because the preceding Narrative and attached Form 312, Schedule S require further clarification.

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I. ITU FILINGS AND COST RECOVERY (47 C.F.R. § 25.111)

When issuing launch-and-operational authority, the Commission submits advance publication information and/or coordination request filings to the International Telecommunication Union (“ITU”).¹ In concert with this application, CesiumAstro will submit the necessary ITU filings and unconditionally accepts all associated cost-recovery responsibilities.

II. FREQUENCY PLAN AND IN-BAND AND ADJACENT-BAND SHARING CONSIDERATIONS (47 C.F.R. § 25.114(C)(7))

Synchronicity will use frequencies for Earth-to-space and space-to-Earth, as summarized in Table A-1.

Table A-1: Synchronicity Frequency Plan

Frequency Band (MHz)	Link Direction	Requested Round²
10700-11700	Space-to-Earth	2026
11700-12200	Space-to-Earth	2026
12200-12700	Space-to-Earth	2026
12700-12750	Earth-to-Space	2026
12750-13250	Earth-to-Space	2026
13750-14000	Earth-to-Space	2026
14000-14200	Earth-to-Space	2026
14200-14470	Earth-to-Space	2026
14470-14500	Earth-to-Space	2026
14500-14750	Earth-to-Space	First
14750-14800	Earth-to-Space	First
15430-15630	Earth-to-Space	2026
17300-17700	Space-to-Earth	2026
17700-17800	Space-to-Earth	2026
17800-18142	Space-to-Earth	2026
18142-18300	Space-to-Earth	2026

¹ See 47 C.F.R. § 25.111.

² On June 5, 2026, the Space Bureau initiated new processing rounds for additional NGSO FSS systems in the Ku-, Ka-, and V-bands. See *Space Bureau Opens Processing Rounds*, Public Notice, DA 26-552 at 1, 4 (SB rel. June 5, 2026) (“*Processing Round Public Notice*”). The present application includes Ku-, Ka-, and V-band FSS frequencies that should be treated as part of this new 2026 processing round.

Frequency Band (MHz)	Link Direction	Requested Round ²
18300-18600	Space-to-Earth	2026
18600-18800	Space-to-Earth	2026
18800-19300	Space-to-Earth	2026
19300-19700	Space-to-Earth	2026
19700-20200	Space-to-Earth	2026
24750-25750	Earth-to-Space	2026
27500-28350	Earth-to-Space	2026
28350-29100	Earth-to-Space	2026
29100-29250	Earth-to-Space	2026
29250-29500	Earth-to-Space	2026
29500-30000	Earth-to-Space	2026
37500-38000	Space-to-Earth	2026
38000-39500	Space-to-Earth	2026
39500-40000	Space-to-Earth	2026
40000-40500	Space-to-Earth	2026
40500-41000	Space-to-Earth	2026
41000-42000	Space-to-Earth	2026
42000-42500	Space-to-Earth	First
47200-48200	Earth-to-Space	2026
48200-50200	Earth-to-Space	2026
50400-51400	Earth-to-Space	2026
51400-52400	Earth-to-Space	First

Synchronicity will also use optical intersatellite links.³

³ The optical intersatellite link operations fall outside ITU and FCC regulation. *See, e.g., TRW Inc.*, 16 FCC Rcd 14407 ¶ 20 (IB 2001) (“Optical beam communications are not considered a type of radio communication since they operate at frequencies above 300 GHz, and they are not within the jurisdiction of the Communications Act.”); *Hughes Communications, Inc.*, 16 FCC Rcd 14310 ¶ 16 (IB 2001) (same); *Teledesic LLC*, 14 FCC Rcd 2261 ¶ 14 (IB 1999) (“Because optical [intersatellite links] do not involve wire or radio frequency transmissions, the Commission does not have jurisdiction over the use of optical [intersatellite links].”). Optical links do not require coordination with other commercial users. Indeed, the one time that the ITU reviewed the possibility of adopting procedures for free-space optical links, the U.S. position was that “interference between inter-satellite links would also be rare due to directed and narrow beamwidths, and the vast geometry of space[;]” therefore, “there is no evidence to suggest procedures for free space optical links are needed.” *See U.S. Contributions Sent To CITEP PCC.II*, FCC at P2!R-1853_i and P2!R-1854_i, <https://tinyt.io/Bhzo> (last updated May 14, 2015). The ITU agreed. *See World Radiocommunication Conference 2012 (WRC-12), Final Acts*, 176 (Feb. 2012), <https://tinyt.io/Bhzs> (list of resolutions approved for deletion). The Department of Defense

A. NGSO FSS Protection

CesiumAstro will satisfy the coordination and sharing requirements in 47 C.F.R. § 25.261 and ITU RR Art. 9.

B. NGSO MSS Protection

CesiumAstro will operate on an unprotected, non-interference basis where necessary to protect MSS feeder link operations.⁴ CesiumAstro will also coordinate with any previously authorized NGSO MSS system operators and will not conduct operations in the 19.4-19.6 GHz and 29.1-29.5 GHz bands until such coordination is complete consistent with FCC precedent.⁵

C. GSO FSS and MSS Protection

CesiumAstro will satisfy the GSO coordination and protection requirements in 47 C.F.R. §§ 25.146(a)(1)-(2),⁶ 25.289, ITU RR Art. 22, and Res. 76 (rev. WRC-23).⁷

(“DoD”) Laser Clearinghouse is intended for DoD users and others using lasers intentionally directed at DoD assets (neither of which this payload does). *See, e.g.*, U.S. Department of Defense, DoD Instruction 3100.11, Management of Laser Illumination of Objects in Space § 1.1 (Oct. 24, 2016), <https://tinyt.io/Bhzt> (limiting applicability to DoD owned, leased, or operated lasers and spacecraft).

⁴ *See* 47 C.F.R. § 2.106(b)(535)(i), (d)(166).

⁵ *See, e.g., Request for Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System et al.*, ICFS File Nos. SAT-LOA-20200526-00055 et al., Order et al., DA 26-36 ¶ 12 (SB rel. Jan. 9, 2026) (“*SpaceX Order*”); Kuiper Systems LLC, Stamp Grant, ICFS File Nos. SAT-LOA-20211104-00145 et al. at Condition 2(c), n. 19 (granted Feb. 10, 2026) (“*Amazon Grant*”); *Lynk Global, Inc.*, Order and Authorization, 37 FCC Rcd 10681 ¶¶ 19-20 (IB 2022).

⁶ CesiumAstro understands that the Commission has revised the NGSO-GSO spectrum sharing framework and will comply with the new framework once it takes effect. *See Modernizing Spectrum Sharing for Satellite Broadband*, SB Docket No. 25-157, Report and Order, FCC-26-26 (rel. May 1, 2026); *see also Modernizing Spectrum Sharing for Satellite Broadband*, SB Docket No. 25-157, Erratum, DOC-421751A (SB rel. May 14, 2026).

⁷ *See* World Radiocommunication Conference 2023 (WRC-23) Final Acts, 291-99 (Aug. 2024).

D. Terrestrial Service Protection

CesiumAstro will satisfy the PFD limits in 47 C.F.R. § 25.208(c)-(d), (q)-(t) and ITU RR Table 21-4. The Schedule S shows PFD limit compliance.

E. Radio Astronomy Service, Earth Exploration-Satellite (Passive) Service, and Space Research Service Protection

CesiumAstro will satisfy the coordination and other applicable requirements in the relevant Tables of Frequency Allocation footnotes and ITU resolutions and recommendations.

F. U.S. Federal Services Protection

CesiumAstro's operations in the 12.7-12.75 GHz (Earth-to-space), 27.5-29.1 GHz (Earth-to-space), 29.1-30.0 GHz (Earth-to-space), and 42.0-42.5 GHz (space-to-Earth) bands will not cause harmful interference to current and future operational U.S. federal systems operating pursuant to primary federal allocations. CesiumAstro will coordinate through mutual exchange of system information, to the extent possible consistent with national security requirements, in good faith, and on an ongoing basis, with potentially affected U.S. federal systems to ensure protection of operational U.S. federal systems. In all cases, CesiumAstro will provide all necessary system information and technical parameters to the affected federal entities to allow those entities to conduct their required interference analysis. CesiumAstro will maintain sufficient information to timely investigate and resolve documented instances of harmful interference and make available such information to affected federal entities upon request. CesiumAstro will adjust its operations to accommodate future operational U.S. federal systems and aggregate effects into U.S. federal systems. Upon receiving a documented report of harmful interference from an affected U.S. federal system, CesiumAstro will immediately cease the operation causing the harmful interference until the issue is resolved and coordination with the affected federal entity is complete.

CesiumAstro will also complete coordination with potentially affected federal agencies and services engaged in national security or safety-of-life services, through mutual exchange of system information to the extent possible consistent with national security requirements, prior to operating in the 13.75-14.0 GHz (Earth-to-space), 14.5-14.75 GHz (Earth-to-space), 14.75-14.80 GHz (Earth-to-space), 15.43-15.63 GHz (Earth-to-space), 17.3-17.8 GHz (space-to-Earth), 17.8-18.6 GHz (space-to-Earth), 18.6-18.8 GHz (space-to-Earth), 18.8-19.3 GHz (space-to-Earth), 19.3-19.7 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 24.75-25.75 GHz (Earth-to-space), 37.5-41.0 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space), 50.4-52.4 GHz (Earth-to-space) bands, which are allocated on a primary basis to federal services or are adjacent to primary federal allocations. CesiumAstro will notify the Commission within 30 days after completion of coordination, with a copy to National Telecommunications and Information Administration (“NTIA”) and the relevant federal entity. Notification will be submitted to the FCC’s International Communications Filing System. Two weeks prior to the start of any operations in such bands, CesiumAstro will provide contact information for a 24/7 point of contact for the resolution of any harmful interference to contacts provided by the NTIA.

III. REPRESENTATIVE ANTENNA GAIN CONTOUR PLOTS (47 C.F.R. § 25.114(C)(4)(VI))

For all space-to-Earth and Earth-to-space bands, the Schedule S includes representative antenna gain contour plots at 1225 km (the highest possible operational altitude representing the broadest possible contour).⁸

⁸ Where the gain contour does not intersect the Earth, the contour is not shown in those figures.

IV. ORBITAL DEBRIS MITIGATION PLAN (47 C.F.R. § 25.114(D)(14))

CesiumAstro will submit and secure approval for the required orbital debris mitigation plan before deploying and operating any satellites.⁹

V. OPTICAL ASTRONOMY PROTECTION

CesiumAstro will coordinate with the appropriate parties (including the National Aeronautics and Space Administration, National Science Foundation, and National Radio Astronomy Observatory) and work with the astronomy community in good faith to minimize the impacts of its satellites' reflectivity on optical astronomy.¹⁰ CesiumAstro expects to mitigate the brightness of its satellites through darkening and light deflection away from the Earth while making detailed satellite tracking information available to astronomers.

⁹ See 47 C.F.R. § 25.114(d)(14).

¹⁰ See, e.g., *Request for Orbital Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System*, Order and Authorization, 37 FCC Rcd 14882 ¶ 135(gg) (2022); *Planet Labs PBC*, Order, 38 FCC Rcd 7897, Attachment to Grant at Condition 21 (SB 2023); *ICEYE US, Inc.*, Order, 38 FCC Rcd 7887, Attachment to Grant at Condition 19 (SB 2023).

ENGINEERING CERTIFICATION

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in this application, that I am familiar with Part 25 of the Commission's rules, that I have either prepared or reviewed the engineering information submitted in this application, and that it is complete and accurate to the best of my knowledge and belief.

/s/ Danilo Dadic

Danilo Dadic

ATTACHMENT B (WAIVER REQUESTS)

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I. INTRODUCTION

The Commission may waive any of its rules for “good cause.”¹ Waiver is appropriate when (i) special circumstances warrant a deviation from the general rule and (ii) such deviation will serve the public interest better than strict adherence to the rule.² In general, the Commission will grant a waiver of its rules if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.³ For the reasons specified below, good cause exists in this case to waive the following rules to the extent necessary to consider and grant the application.

II. 47 C.F.R. §§ 2.102(A) (FREQUENCY ASSIGNMENTS); 2.106 (INTERNATIONAL AND U.S. NON-FEDERAL FREQUENCY ALLOCATION TABLES)

CesiumAstro seeks a waiver to use certain frequency bands on a non-conforming basis with the International Table of Frequency Allocations and/or the U.S. Table of Frequency Allocations.⁴ Such relief is attainable “when there is little potential for interference into any service authorized . . . and when the non-conforming operator accepts any interference from authorized services.”⁵ All proposed bands are consistent with the International and U.S. Tables of

¹ See 47 C.F.R. § 1.3; *Ne. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); see also *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

² *Ne. Cellular*, 897 F.2d at 1166.

³ *WAIT Radio*, 418 F.2d at 1157.

⁴ Section 2.102(a) requires that the assignment and actual use of frequencies be consistent with the Table of Frequency Allocations absent an applicable exception. Section 2.106 requires that frequencies be allocated according to what is listed in the Table of Frequency Allocations, which includes the International Table of Frequency Allocations and the U.S. Table of Frequency Allocations.

⁵ *The Boeing Company*, Order and Authorization, 16 FCC Rcd 22645 ¶ 12 (IB & OET 2001) (internal punctuation omitted). See generally *Application of Fugro-Chance, Inc.*, Order and Authorization, 10 FCC Rcd 2860 (IB 1995); *Application of Motorola Satellite Communications, Inc.*, Order and Authorization, 11 FCC Rcd 13952 (IB 1996).

Frequency Allocation except for the bands identified in the following sub-sections. CesiumAstro demonstrates below how its operations will not interfere with authorized services. CesiumAstro also accepts any interference from authorized services in these bands.

A. 14.5-14.75 GHz (Earth-to-space); 14.75-14.8 GHz (Earth-to-space) (U.S. Table)

The 14.5-14.75 GHz and 14.75-14.8 GHz bands are allocated internationally for FSS Earth-to-space operations; however, domestically these bands are not allocated for non-federal use.⁶ CesiumAstro thus requests a waiver of the U.S. Table of Frequency Allocations, as necessary, to receive uplinks in the 14.5-14.75 GHz and 14.75-14.8 GHz bands in the United States consistent with FCC precedent.⁷

Waiver is justified because the requested operations would support efficient use of contiguous spectrum for advanced satellite broadband services. The Commission has recognized the importance of enabling contiguous spectrum to support advanced services, such as high-speed broadband access.⁸ Moreover, providing access to an additional 300 megahertz of spectrum would strengthen the uplink capacity of Synchronicity and align with FCC policy promoting the deployment of more symmetrical broadband speeds to consumers, particularly in areas of the country underserved and unserved by terrestrial broadband. Further, because the 14.5-14.75 GHz and 14.75-14.8 GHz bands are allocated solely for federal use in the United States, CesiumAstro

⁶ See 47 C.F.R. § 2.106.

⁷ See *SpaceX Order, Grant at Frequencies, Condition 2(a)*.

⁸ See *Amendment of Parts 2 and 25 of the Commission's Rules to Enable NGSO Fixed-Satellite Service (Space-to-Earth) Operations in the 17.3-17.8 GHz Band*, Report and Order, 39 FCC Rcd 11156 ¶ 1 (2024) (“Our action today provides a contiguous 1300 MHz of spectrum for NGSO FSS downlink operations, allowing for technologically innovative and enhanced satellite services to the benefit of American consumers.”).

will operate only to the extent it is able to successfully coordinate with federal users and subject to any conditions that federal users may impose to ensure successful coexistence.

B. 17.3-17.7 GHz (space-to-Earth) (International Table (Region 3))

The 17.3-17.7 GHz band is allocated for FSS space-to-Earth operations in ITU Regions 1 and 2 and domestically for non-federal FSS space-to-Earth operations.⁹ The band is not currently allocated for FSS space-to-Earth operations in ITU Region 3.¹⁰ CesiumAstro therefore requests authority to operate in ITU Region 3 on a non-conforming basis.

Waiver is justified because international consideration of expanded FSS downlink use in this band is ongoing. WRC-27 Agenda Item 1.4 will consider a possible new primary FSS space-to-Earth allocation in the 17.3-17.7 GHz band in ITU Region 3, reflecting continued international consideration of this use.¹¹ Further, consistent with Article 4.4 of the ITU Radio Regulations, CesiumAstro will not cause harmful interference to, and will not claim protection from, stations operating in accordance with the ITU Radio Regulations or applicable national allocations.

C. 18.6-18.8 GHz (space-to-Earth) (U.S. Table and Ka-band Plan)

The 18.6-18.8 GHz band is allocated internationally in all three ITU regions for FSS on a co-primary basis; domestically, non-federal use is currently limited to geostationary satellites (“GSOs”).¹² CesiumAstro therefore requests a waiver of the U.S. Table of Frequency Allocations

⁹ See 47 C.F.R. § 2.106.

¹⁰ See *id.*

¹¹ See World Radiocommunication Conference 2023 (WRC-23) Final Acts, 631-33 (Aug. 2024).

¹² See 47 C.F.R. § 2.106(a), (d)(164).

and Ka-band Plan,¹³ as necessary, to permit NGSO FSS space-to-Earth operations in the 18.6-18.8 GHz band in the United States consistent with FCC precedent.¹⁴

Waiver is justified because CesiumAstro's satellite design and operating capabilities will enable coexistence with co-frequency NGSO and GSO operations, as well as other authorized services. CesiumAstro's systems will be equipped in multiple ways to mitigate interference, both proactively and reactively, including with respect to systems operating in the Earth exploration-satellite service and space research service. Further, as mentioned above, CesiumAstro will also coordinate with other operational systems authorized in the 18.6-18.8 GHz band inside the United States and agrees to operate on a non-interference, non-protection basis in the 18.6-18.8 GHz band inside the United States.

D. 19.4-19.6 GHz (space-to-Earth) and 29.1-29.5 GHz (Earth-to-space) (U.S. Table and Ka-band Plan)

The 19.4-19.6 GHz and 29.1-29.5 GHz bands are allocated internationally in all three ITU regions for FSS on a co-primary basis; domestically, however, non-federal NGSO FSS is limited to FSS operations for MSS feeder links.¹⁵ CesiumAstro therefore requests a waiver of the U.S. Table of Frequency Allocations and Ka-band Plan,¹⁶ as necessary, to permit NGSO FSS user link operations in these bands consistent with FCC precedent.¹⁷

¹³ See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order et al., 32 FCC Rcd 7809 at Appendix B (2017) (“*Ka-band Plan R&O*”).

¹⁴ See *Amazon Grant at Frequencies*, Condition 2(a); see also *SpaceX Order*, Grant at Frequencies, Condition 3(a).

¹⁵ See 47 C.F.R. § 2.106(a), (d)(166).

¹⁶ See *Ka-band Plan R&O* at Appendix B.

¹⁷ See *Amazon Grant at Frequencies*, Condition 2(b), 5; see also *SpaceX Order*, Grant at Frequencies, Condition 3(d).

Waiver is justified because CesiumAstro’s proposed operations can be conducted without precluding authorized MSS feeder link operations or other authorized uses of the bands. CesiumAstro’s operations will be limited by coordination and will proceed only in a manner that protects authorized MSS users. Further, CesiumAstro will operate in these bands on an unprotected and non-interference basis and will not commence FSS user link operations in these bands until it completes coordination with authorized MSS users.

E. 42.0-42.5 GHz (space-to-Earth) (U.S. Table)

The 42.0-42.5 GHz band is allocated internationally for FSS space-to-Earth operations on a primary basis; domestically, however, the band does not currently include an FSS allocation.¹⁸ CesiumAstro therefore requests a waiver of the U.S. Table of Frequency Allocations, as necessary, to permit FSS space-to-Earth operations in the 42.0-42.5 GHz band in the United States.

Waiver is justified because the band is internationally recognized for FSS downlink use, and the Commission is actively considering expanded satellite access to the band. The Commission has recognized that the 42 GHz band is “greenfield” spectrum, with no incumbent licensees in the United States, and has sought comment on whether to add an FSS space-to-Earth allocation in the band, including on a primary or secondary basis, as part of its *Satellite Spectrum Abundance Proceeding*.¹⁹ The Commission also noted that aligning the domestic Table of Allocations with the international primary FSS space-to-Earth allocation could support more efficient and intensive use of the band by satellite communications.²⁰ Further, CesiumAstro will

¹⁸ See 47 C.F.R. § 2.106(a).

¹⁹ See *Office of International Affairs Seeks Comment on Recommendations Approved by the World Radiocommunication Conference Advisory Committee*, Public Notice, 39 FCC Rcd 8629 (2024) (“*Satellite Spectrum Abundance Proceeding*”).

²⁰ See *id.*

operate on a non-interference, non-protection basis with respect to any authorized co-channel operations in the United States and will protect adjacent-band operations, including radio astronomy operations in the 42.5-43.5 GHz band, consistent with applicable requirements.

F. 51.4-52.4 GHz (Earth-to-space) (International (All Regions) and U.S. Tables)

The 51.4-52.4 GHz band is allocated internationally in all three ITU regions for FSS on a co-primary basis and is currently limited to GSO use; domestically, no corresponding allocation exists.²¹ CesiumAstro therefore requests a waiver of the International and U.S. Table of Frequency Allocations, as necessary, to permit NGSO FSS Earth-to-space operations in the 51.4-52.4 GHz band in the United States consistent with FCC precedent.²²

Waiver is justified because the United States is considering expanded NGSO FSS use of this band internationally and domestically. The United States' World Radiocommunication Conference ("WRC") Advisory Committee has recommended that the United States support WRC-27 Agenda Item 1.3, which would consider studies to use the band for NGSO FSS operations with gateway earth stations. Waiver would be consistent with this position.

Further, the CesiumAstro System will have operational flexibility to both proactively and reactively mitigate harmful interference to other co-frequency systems operating in all V-band uplink frequency bands, including the 51.4-52.4 GHz band. CesiumAstro will coordinate with other operational systems authorized to operate in the 51.4-52.4 GHz band inside the United States. Until such agreements are reached, CesiumAstro agrees to operate on a non-interference, non-

²¹ See 47 C.F.R. § 2.106(a), (b)(555)(ii).

²² See *Amazon Grant* at Frequencies, Condition 3(a); *SpaceX Order*, Grant at Frequencies, Condition 5(a).

protection basis in the 51.4-52.4 GHz band inside the United States. CesiumAstro will also abide by any rules adopted as part of the *Satellite Spectrum Abundance Proceeding*.²³

III. 47 C.F.R. § 25.112 (APPLICATION COMPLETENESS)

Section 25.112 provides that an application may be dismissed if it contains incomplete information or internal inconsistencies.²⁴ The Commission's rules also provide that the Commission may accept a defective application if accompanied by an appropriate waiver request.²⁵ CesiumAstro requests waiver of the application completeness rule and permission to supplement its application if additional information or explanation is necessary. Granting this waiver would avoid unduly harsh results. It would also conserve limited FCC resources by allowing concerns to be addressed on an issue-specific basis.

IV. 47 C.F.R. § 25.114 (SCHEDULE S)

Section 25.114 requires applicants to submit technical information, including through Schedule S, as part of a space station application.²⁶ A Schedule S form accompanies this application. CesiumAstro requests a waiver of Section 25.114 to the extent necessary because Schedule S does not allow CesiumAstro to accurately describe all aspects of its proposed operations. CesiumAstro provides additional technical information and the clarifications below to describe Synchronicity accurately.

Total Number of Satellites Deployed During the License Term. The total number of satellites deployed during the license term may change based on the final satellite design, including the satellites' operational lifetime, as well as the ultimate license term applicable to the system. If

²³ See generally *Satellite Spectrum Abundance Proceeding*.

²⁴ See 47 C.F.R. § 25.112(a).

²⁵ See *id.* § 25.112(b).

²⁶ See *id.* § 25.114(c).

the license term shifts from 15 to 20 years as part of the transition from Part 25 to Part 100, the total number of replacement satellites deployed over the license term may increase accordingly.²⁷ CesiumAstro will update this information as appropriate once the final satellite design and applicable license term are determined.

Phase Angle Spacing. Schedule S rounded the phasing information to the nearest integer and, therefore, is not completely representative as Synchronicity will have evenly spaced satellites.

Antenna Gain Contour Diagrams. Because Schedule S includes numerous receive and transmit beams, CesiumAstro has uploaded the antenna gain contour diagrams for each applicable antenna gain value, rather than duplicative diagrams for every beam with the same gain characteristics. Specifically, the RX1A contour diagram represents all beams with a 5 dBi receive antenna gain, the RX1B contour diagram represents all beams with a 32.6 dBi receive antenna gain, and the RX31 contour diagram represents all beams with a 35.6 dBi receive antenna gain. The TX73 contour diagram represents all beams with a 5 dBi transmit antenna gain, the TX1 contour diagram represents all beams with a 32.6 dBi transmit antenna gain, and the TX37 contour diagram represents all beams with a 35.6 dBi transmit antenna gain.

V. 47 C.F.R. § 25.146(C) (FAVORABLE OR QUALIFIED FAVORABLE ITU FINDING)

The Commission requires that, “[p]rior to the initiation of service, an NGSO FSS operator licensed or holding a market access authorization to operate in the 10.7-30 GHz frequency range must receive a ‘favorable’ or ‘qualified favorable’ finding by the ITU Radiocommunication Bureau, in accordance with Res. 85 (rev. WRC-23) regarding its compliance with applicable ITU

²⁷ See generally *Space Modernization for the 21st Century*, SB Docket No. 25-306, Draft Report and Order et al., FCC-CIRC2607-02 (rel. July 1, 2026).

[equivalent power flux-density (‘EPFD’)] limits.”²⁸ CesiumAstro requests a waiver of this requirement to allow it to initiate service while the ITU finding remains pending. Waiver is justified because CesiumAstro will be able to demonstrate compliance with applicable EPFD limits *through* the ITU-approved validation software while the ITU review process is ongoing. To support transparency and confirm compliance, CesiumAstro will also make available to any requesting party the data used in the ITU-approved validation software to demonstrate compliance with applicable EPFD limits for its operations outside the United States.

VI. 47 C.F.R. § 25.157(D) (APPLICATION GRANT TIMING)

The Commission grants all the applications that meet FCC standards after reviewing each application in the processing round and all the pleadings filed in response to each application.²⁹ CesiumAstro requests waiver of this requirement because, here, strictly applying the processing round framework regarding the timing of application grants serves no practical purpose and would unnecessarily delay consideration of an application that can be evaluated on its own merits under 47 C.F.R. § 25.156(a). The Commission has granted NGSO applications on an individualized basis where they satisfy the applicable technical and legal standards.³⁰ CesiumAstro’s request is consistent with this established approach and simply seeks equivalent treatment.

CesiumAstro has made substantial investments in the design, engineering, and planned deployment of Synchronicity, all of which depend on prompt regulatory action. Requiring

²⁸ 47 C.F.R. § 25.146(c). These bands were not included in the Space Bureau’s new processing rounds for additional NGSO FSS systems in the Ku-, Ka-, and V-bands. *See Processing Round Public Notice* at 1, 4.

²⁹ *See* 47 C.F.R. § 25.157(d).

³⁰ *See, e.g.*, Logos Space Services, Inc., Stamp Grant, ICFS File No. SAT-LOA-20241030-00243 at Condition 3 (granted Jan. 30, 2026); Space Exploration Holdings, LCC, Stamp Grant, ICFS File Nos. SAT-LOA-20200526-00055 et al. at Condition 12 (granted Jan. 9, 2026).

CesiumAstro to wait until a processing round is complete would impose unjustified delay and slow the introduction of new connectivity services. Granting this waiver will enable the Commission to act expeditiously and allow CesiumAstro to begin providing service as soon as feasible while advancing competition and next-generation FSS connectivity availability across the globe.

VII. 47 C.F.R. § 25.217 (DEFAULT SERVICE REQUIREMENTS)

Section 25.217 establishes default service requirements that apply where the Commission has not adopted service-specific rules for a particular frequency band.³¹ CesiumAstro requests a waiver of the default service requirements as necessary. Because the Commission has not adopted service rules for many of the frequency bands in which CesiumAstro proposes to operate, the default service rules would otherwise apply to those operations.³² The Commission has previously found that compliance with the technical requirements in FCC rule parts 2 and 25 and applicable ITU Radio Regulations is sufficient to prevent harmful interference.³³ Such a waiver is appropriate because CesiumAstro commits to satisfying the FCC technical requirements and applicable ITU Radio Regulations and will further coordinate with other operators to prevent harmful interference.

³¹ See 47 C.F.R. § 25.217(b).

³² See *id.* § 25.217(b).

³³ See, e.g., *Space Imaging, LLC*, Declaratory Order and Order and Authorization, 20 FCC Rcd 11964 ¶ 25 (2005).

ATTACHMENT C (OWNERSHIP INFORMATION)

This attachment includes the ownership information sought in the attached Form 312, Main Form.¹

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I. 10% OR MORE OF THE EQUITY AND/OR VOTING INTEREST HOLDERS

Name	Address	Nationality	~Record Interest %	~Voting Interest %
Shey Sabripour	13215 Bee Cave Pkwy. Suite A-300 Austin, TX 78738	U.S.	25.14 (22.57 fully diluted)	77.11 (75.56 fully diluted)
AGVF II LP AVF III LP AVF IV LP (combined entities)	3000 Sand Hill Rd., Building 1, Suite 120 Menlo Park, CA 94025	U.S.	13.36 (12.00 fully diluted)	4.10 (4.02 fully diluted)

II. DIRECTORS

Shey Sabripour
Jonathan Hodock
Daniel Sable
Thomas D'Halluin
Phillip Sarofim
Victor C. See, Jr., RADM USN (Ret)

III. OFFICERS

Shey Sabripour – President, Secretary, Treasurer, CEO
Chris “Trey” Pappas III – CRO
Ken Smith – CFO
Brett Paulson – COO

IV. DIRECTORS AND OFFICERS MAILING ADDRESS

13215 Bee Cave Parkway
Suite A-300
Austin, TX 78738

¹ Form 312, Main Form questions 30-34 are inapplicable because CesiumAstro does not seek broadcast, common carrier, aeronautical en route, or aeronautical fixed radio station licensing. *See* 47 U.S.C. § 310(b).