

GRANT
Sidus Space, Inc.
ICFS File No. SAT-MOD-20260511-00194

 GRANTED* Space Bureau	File # SAT-MOD-20260511-00194 Call Sign: <u>S3175</u> Grant Date: <u>08/14/2026</u> (or other identifier) From: <u>August 14, 2026</u> To: <u>December 21, 2039</u> Approved: <u>Carolyn A. Mahoney</u> Acting Division Chief Satellite Programs and Policy Division
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*with conditions

ICFS File No(s):	SAT-MOD-20260511-00194 ¹	GRANTED – With Conditions  Space Bureau Satellite Programs and Policy Division
Licensee/Grantee:	Sidus Space, Inc. (Sidus Space)	
Call Sign:	S3175	
Satellite Name:	LizzieSat-2 through LizzieSat-5 ²	
Orbital Location: (required station- keeping tolerance)	Non-geostationary satellite orbit (NGSO). LizzieSat-2: Altitude of 550 (± 50) km; inclination of 45 (±1.0) degrees. LizzieSat-3, LizzieSat-4, and LizzieSat-5: Altitude of 550 (± 50) km; inclination of 97.5 (± 1.0) degrees. ³	
Administration:	United States of America	
Nature of Service:	Earth Exploration Satellite Service (EESS)	
Scope of Grant:	Authority to install an Iridium Satellite LLC (Iridium) transceiver on the LizzieSat-4 and LizzieSat-5 satellites, and conduct space-to-space operations between LizzieSat-4 and LizzieSat-5 the Iridium network in the 1618.725-1626.5 MHz band (space-to-space).	
Previous Grant(s):	Authority to construct, deploy, and operate four NGSO satellites. ⁴ Authority to deploy the LizzieSat-3 satellite with a radio capable of communicating with the Iridium network, and for the LizzieSat-3 to transmit to and receive from the Iridium network in the 1618.725-1626.5 MHz band (space-to-space) for testing purposes. ⁵	
Service Area(s):	Global, subject to limitations in specific frequency bands. ⁶	
Frequencies:	<u>EESS:</u> 8025-8400 MHz (center frequency 8046.0 MHz, bandwidth 42.0 MHz) (space-to-Earth). ⁷	

¹ See Sidus Space, Inc., ICFS File No. SAT-MOD-20260511-00194 (filed May 30, 2026) (Application). This application was placed on public notice on July 10, 2026. *Satellite Licensing Division and Satellite Programs and Policy Division Information, Space Station Applications Accepted for Filing*, Report No. SAT-02015 (July 10, 2026). No comments were filed.

² Sidus Space previously stated that, due to a change in launch order, Sidus Space renumbered the constellation from what was originally included in its application so that the numbering of the commercial satellites will directly follow the first experimental mission, LizzieSat-1 (ELS File No. 0905-EX-CN-2023). See Letter from John Curry, Chief Mission Operations Officer, Sidus Space, to Jeanine A. Poltronieri, Deputy Chief, Satellite Programs and Policy Division, Space Bureau, FCC, ICFS File No. SAT-LOA-20230613-00141 at 1, n.1 (dated Dec. 28, 2023).

³ These orbital parameters are coordinated with Federal operators.

⁴ ICFS File Nos. SAT-LOA-20230613-00141; SAT-AMD-20240506-00094 (granted Oct. 1, 2024) (Sidus 2024 Grant)

⁵ ICFS File No. SAT-MOD-20241104-00248 (granted Jan. 15, 2025).

⁶ See conditions 1, 2, and 6, *infra*, and Appendix.

⁷ In Barrow, Alaska, only X-band frequencies will be used for downlink. See ICFS File No. SAT-LOA-20230613-00141, Tech Annex at 10.

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	<u>Telemetry/Tracking:</u> 2200-2290 MHz⁸ (center frequency 2201.25 MHz, bandwidth 2.5 MHz)⁹ (space-to-Earth) (outside of U.S. only). <u>Command:</u> 2025-2110 MHz (center frequency 2025.35 MHz, bandwidth 0.7 MHz) (Earth-to-space). <u>Global Positioning System (GPS) Reception:</u> 1575.42 MHz (GPS L1) 1227.60 MHz (GPS L2) <u>Automatic Identification System (AIS) Reception:</u> 156.775 MHz (AIS 3) (25 KHz bandwidth) 156.825 MHz (AIS 4) (25 KHz bandwidth) 161.975 MHz (AIS 1) (25 KHz bandwidth) 162.025 MHz (AIS 2) (25 KHz bandwidth) <u>Inter-Satellite Links (Lizzie-Sat-3, -4, and -5 only):</u> 1618.725-1626.5 MHz (center frequency 1622.6125 MHz, bandwidth 0.042 MHz) (space-to-space) (transmit and receive) inter-satellite links with the Iridium system (using frequencies assigned for operations by Iridium).
Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications and commitments set forth by the applicant or petitioner and with the Federal Communications Commission's rules not waived herein. This grant is also subject to the following conditions: 1. Sidus Space must strictly limit its space-to-Earth and Earth-to-space operations to durations when the LizzieSat space stations referenced within this grant are visible to the corresponding earth station locations listed in the Appendix of this grant, in addition to any other restrictions within this grant. 2. Sidus Space's transmissions in the 2200-2290 MHz (space-to-Earth) band to non-Federal earth stations are limited to earth stations located outside of the United States.¹⁰ The National Telecommunications and Information Administration (NTIA) will consider the request by Sidus Space for access to the 2200-2290 MHz band for ground stations located outside of the United States on a case-by-case coordinated basis¹¹	

⁸ Sidus Space also originally requested additional use of the 2200-2290 MHz band as a potential backup downlink for its EESS data. Use of the 2200-2290 MHz band is limited to telemetry, tracking, and command (TT&C) based on coordination with federal spectrum users.

⁹ Operations using this center frequency were previously restricted to exclude communications with ground stations in Puntas Arenas, Chile; Awarua, New Zealand; Hartebeesthoek, South Africa; or Puertollano, Spain. *See* ICFS File No. SAT-LOA-20230613-00141, Tech Annex at 11, n.6. After additional coordination with the National Aeronautics and Space Administration (NASA), Sidus Space indicated the restriction had been relaxed and NASA has permitted operations with this center frequency with these ground stations. *See* Letter from Drew Svor, Counsel to Sidus Space, Inc., to Marlene H. Dortch, Secretary, FCC, ICFS File Nos. SAT-MOD-20241104-00248, SAT-AMD-20240506-00094, SAT-LOA-20230613-00141 at 1, N.2 (filed Dec. 5, 2025) (updating the list of coordinated non-Federal earth stations associated with the LizzieSat NGSO constellation, pursuant to Condition 8 of the Sidus 2024 Grant).

¹⁰ In the United States Table of Frequency Allocations, 47 CFR § 2.106(a) (U.S. Table), the 2200-2290 MHz is allocated to Space Operations (space-to-Earth) and EESS (space-to-Earth) in all ITU regions, but the band is allocated solely for federal use within the United States (except as provided for in 47 CFR §§2.106(c)(96), (303) (footnotes US96 and US303), which are not applicable here).

¹¹ *See* Appendix for a list of coordinated earth station locations.

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with appropriate electromagnetic compatibility (EMC) analysis to NTIA (ravery@ntia.gov), the Air Force Spectrum Management Office (AFSMO) (jimmy.nguyen@us.af.mil), the National Aeronautics and Space Administration (NASA) (HQ-SatCoord@mail.nasa.gov), and the Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA) (spectrum.coordinator@noaa.gov) to ensure compatibility of operations with the Federal government.

3. Power flux-density (PFD) levels at the surface of the Earth resulting from space-to-Earth operations in the 2200-2290 MHz band must not exceed the limits in Table 21-4 of the International Telecommunication Union (ITU) Radio Regulations, and the power spectral density levels at Space Research Service (deep space) earth stations resulting from space-to-Earth operations in the 2200-2290 MHz band must not exceed the protection criteria in Recommendation ITUR SA.1157-1 and Recommendation ITU-R SA.609-2.
4. Sidus Space must limit LizzieSat satellite uplinks from Barrow, Alaska on 2025.35 MHz to a 60% transmit duty cycle (referenced to the amount of time the LizzieSat satellites are visible to Barrow). Additionally, uplinks from the Puertollano, Spain; Barrow, Alaska and Punta Arenas, Chile earth stations, must use a minimum elevation angle of 10 degrees.
5. This grant includes the previously-granted waiver of the United States Table of Frequency Allocations (U.S. Table), 47 CFR § 2.106(a), to allow non-conforming use of the 2025-2110 MHz (Earth-to-space) band for TT&C.¹² We previously found good cause to waive the U.S. Table to allow Sidus Space to operate command links only with its satellites based on Sidus Space's coordination with Federal users in the band, which should ensure that any authorized Federal users are protected from harmful interference.¹³ Sidus Space must accept interference from and not cause interference to any authorized users in the 2025-2110 MHz and adjacent bands that are operating in accordance with the Table of Frequency Allocations. Upon receipt of a documented report of harmful interference, Sidus Space must immediately cease the operations causing the harmful interference until the issue is resolved and notify the Commission, in writing, of such an event.
6. Transmissions in the 2025-2110 MHz, 2200-2290 MHz, and 8025-8400 MHz bands may only be made to/from Federal earth stations or earth stations coordinated with NASA, AFSMO, DOC/NOAA, and the Department of the Navy (DON). Any use of Federal or government-sponsored ground stations must be coordinated by Sidus Space's federal government customers with AFSMO (jimmy.nguyen@us.af.mil), NASA (HQ-SatCoord@mail.nasa.gov), and DOC/NOAA (spectrum.coordinator@noaa.gov). A list of coordinated non-Federal earth stations is attached as the Appendix. Sidus Space must provide the FCC with an updated list of coordinated non-Federal earth stations within ten business days following any changes to this list.
7. Earth station transmissions from the United States to the LizzieSat-2 through LizzieSat-5 satellites in the 2025-2110 MHz (Earth-to-space) band must be coordinated with fixed and mobile stations in the 2025-2110 MHz band (e.g., via the Society of Broadcast Engineers (SBE)).

¹² See ICFS File No. SAT-AMD-20240506-00094, Narrative at 3. In the U.S. Table, the band 2025-2110 MHz (Earth-to-space) is allocated, *inter alia*, to the Space Operation Service on a secondary basis for non-Federal use, with transmissions restricted to pre-launch testing and space launch operations under section 2.106(a), (c)(94) of the Commission's rules. Additionally, under section 2.106(a), (c)(347) of the Commission's rules, non-Federal Earth-to-space and space-to-space transmissions in the 2025-2110 MHz band may be authorized in the Space Research Service and EESS on a non-interference basis to Federal and non-Federal stations that are operating in accordance with the Table of Frequency Allocations. 47 CFR § 2.106(a), (c)(94), (347). Sidus Space intends to operate TT&C in these frequencies but will not operate in the EESS using these frequency bands, and will not comply with the restrictions in section 2.106(a), (c)(94) of the Commission's rules for Space Operation Service transmissions in the 2025-2110 MHz band. 47 CFR § 2.106(a), (c)(94).

¹³ See Sidus 2024 Grant at Condition 7.

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8. PFD levels at the surface of the Earth from space-to-Earth operations in the 8025-8400 MHz band must not exceed the limits in No. 22.5 and Table 21-4 of the ITU's Radio Regulations, the power spectral density levels at space research service (deep space) earth stations from space-to-Earth operations in the 8025-8400 MHz band must not exceed the protection criteria in Recommendation ITU-R SA.1157-1, and the Sidus Space must follow guidelines for systems operating in the 8025-8400 MHz band in Recommendation ITU-R SA.1810. Sidus Space's LizzieSat satellites' out-of-band emissions exceed the deep space protection criteria in ITU-R SA.1157-1. Therefore, Sidus Space must cease LizzieSat space-to-Earth transmissions centered at 8046.0 MHz when the spacecraft are within radio line-of-sight of the earth station locations listed in Table 3 of Recommendation ITU-R SA.1014-4 (or current in-force SA.1014). Any alternative mitigation techniques to achieve the deep space interference protection criteria must be successfully coordinated with NASA prior to departure from the radio line of sight restriction. Sidus Space must provide the FCC, with a copy to NASA, the specific alternative mitigation technique(s) to protect the deep space stations within ten (10) business days after of the conclusion of the coordination with NASA.
9. Sidus Space's STOP BUZZER POC information for operations in the 8025-8400 MHz band must be provided to NTIA (ravery@ntia.gov) and NASA (HQ-SatCoord@mail.nasa.gov).
10. This grant includes the previously granted waiver of the U.S. Table to transmit signals to and receive signals from the Iridium Network in the 1618.725-1626.5 MHz (space-to-space) band with the LizzieSat-3 space station.¹⁴ Sidus Space's request for a waiver of the U.S. Table, to transmit signals to and receive signals from the Iridium Network in the 1618.725-1626.5 MHz (space-to-space) band¹⁵ is GRANTED.¹⁶ Sidus Space states that these transmissions between the spacecraft will only occur on frequencies assigned by Iridium to the spaceborne Iridium modem incorporated into the LizzieSat-3, -4, and -5 satellites, and that transmissions will be consistent with Iridium's coordination agreements in the band, ensuring that no other licensee will be transmitting at the same time and on the same frequency as Sidus Space's space-to-space transmissions and preventing harmful interference.¹⁷ Sidus Space must comply with the following conditions:
 - A. Sidus Space must operate on an unprotected, non-interference basis. Sidus Space must accept interference from and not cause interference to any authorized users in the 1618.725-1626.5 MHz and adjacent bands that are operating in accordance with the Table of Frequency Allocations. Upon receipt of a documented report of harmful interference, Sidus Space must immediately

¹⁴ ICFS File No. SAT-MOD-20241104-00248 (granted Jan. 15, 2025).

¹⁵ See SAT-MOD-20260511-00194, Narrative at 4. The allocation for the Mobile-Satellite Service (MSS) in which the Iridium network operates and that encompasses this band does not include a space-to-space directional indicator. See 47 CFR § 2.106(a).

¹⁶ We note that Iridium is not a party to this application and therefore this waiver does not apply to any operations of their system for space-to-space inter-satellite communications in the 1618.725-1626.5 MHz band.

¹⁷ See ICFS File Nos. SAT-MOD-20241104-00248, Narrative at 3-4, SAT-MOD-20260511-00194, Narrative at 3-4. Sidus Space indicates that the primary anticipated use of this band is to forward data over the Iridium network consisting of analytics derived from imagery and other data sources collected by LizzieSat-3, -4, and -5. See ICFS File Nos. SAT-MOD-20241104-00248, Narrative at 2, SAT-MOD-20260511-00194, Narrative at 2. Satellite commands and telemetry will also be transmitted between LizzieSat-3, -4, and -5 and the Iridium network. See ICFS File Nos. SAT-MOD-20241104-00248, Narrative at 2, SAT-MOD-20260511-00194, Narrative at 2. Sidus Space states that, among other things, these inter-satellite links will enable Sidus Space to more expediently and efficiently transmit onboard image-analysis and detection results to consumers and will help demonstrate how commercial operators may ultimately reduce the coordination burden on both Federal and commercial operators in shared Earth observation bands. See ICFS File Nos. SAT-MOD-20241104-00248, Narrative at 4, SAT-MOD-20260511-00194, Narrative at 4.

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cease the operations causing the harmful interference until the issue is resolved and inform the Commission, in writing, of such an event.¹⁸

- B. Authorization to transmit to and receive from the Iridium Network with the LizzieSat-3, -4, and -5 satellites is subject to coordination with Federal operators, through the NTIA. If there are any objections resulting from this coordination to the operations of the intersatellite links, LizzieSat-3, -4, and -5 may not transmit or receive with the Iridium Network until such objections are resolved and Sidus Space has notified the Commission of the resolution.
11. Sidus Space must coordinate physical operations of spacecraft with any operator using similar orbits, for the purpose of eliminating collision risk and minimizing operational impacts. The orbital parameters specified in this grant are subject to change based on such coordination.
 12. Sidus Space must report to the Commission, in writing, any loss of ability to orient any of the LizzieSat satellites to achieve a different drag configuration not later than ten (10) days following the loss of that ability.¹⁹
 13. The number of simultaneously operational LizzieSat satellites operating pursuant to this authorization must not exceed four satellites.
 14. Because Sidus Space must comply with technical requirements of the Commission's rules and the above-referenced PFD limits, which should prevent harmful interference to other operations in the band, this grant includes the previously granted waiver of the default service rules in 47 CFR § 25.217(b).²⁰
 15. Sidus Space has launched 50 percent of the maximum number of authorized space stations.²¹ Accordingly, Sidus Space has satisfied the milestone obligations under the Commission's rules.²²

¹⁸ See ICFS File Nos. SAT-MOD-20241104-00248, Narrative at 4, SAT-MOD-20260511-00194, Narrative at 4.

¹⁹ SpaceX requested that the FCC impose the following license conditions: (1) file semi-annual reports on collision avoidance maneuvers and satellite disposal, including any difficulties or failures related thereto; (2) apply an object-years metric for assessing disposal failures that accounts for both the number of failed satellites and their entire passive decay time; (3) communicate and collaborate with NASA to promote space safety and sustainability; (4) take all possible steps to assess and mitigate collision risk after receiving a conjunction warning from the 19th Space Defense Squadron or other source; and (5) coordinate with NSF to reach a mutually acceptable agreement to mitigate the impact of its satellites on optical ground-based astronomy, with associated annual reporting requirements). SpaceX Ex Parte at 1. SpaceX has filed similar letters in several other NGSO satellite applications. We note that Sidus Space is authorized to deploy and operate a total of only four satellites of approximately 110 kg each, that the satellites will be deployed to an altitude between 500 km and 600 km, and that the satellites will not have any on-board propulsion capabilities. We previously adopted this reporting requirement related to failure on-orbit, as appropriate to address the specific facts of this satellite system but, declined to adopt other conditions requested. Sidus Space states that at the end of the spacecraft's operational lifetime, Sidus Space will begin the deorbit process by commanding the LizzieSat's attitude control system to orient the satellites into a maximum drag configuration, which will result in accelerating orbital decay. See ICFS File No. SAT-AMD-20240506-00094, ODAR at 12. Sidus Space states that the spacecraft will de-orbit within five years of its end of mission. *Id.*; see also 47 CFR § 25.283(e). Finally, we note that the Commission recently adopted reporting requirements for satellite systems. See *Space Modernization for the 21st Century*, SB Docket No. 25-306, Report and Order, FCC 26-47, (rel. Jul. 23, 2026) (*Space Modernization Report and Order*). When the rules adopted in the *Space Modernization Report and Order* become effective, the applicable rules will supersede this condition. *Id.*, Appendix A at § 100.201.

²⁰ See Sidus 2024 Grant at Condition 17.

²¹ See Letter from Drew Svor, Sheppard, Mullin, Richter & Hampton LLP, Counsel to Sidus Space, Inc., to Marlene H. Dortch, Secretary, FCC, ICFS File No. SAT-MOD-20241104-00248 (filed Jan. 13, 2026); *Satellite Licensing Division and Satellite Programs and Policy Division Information, Actions Taken*, Public Notice, Report No. SAT-01967 (rel. Jan. 16, 2026).

²² 47 CFR § 25.164.

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16. Within 30 days after deployment of each satellite pursuant to this authorization, Sidus Space must file a notification with the Commission specifying its apogee and perigee altitudes and orbital inclination. Sidus Space must also file this notification with AFSMO (jimmy.nguyen@us.af.mil), NASA (HQ-SatCoord@mail.nasa.gov), and DOC/NOAA (spectrum.coordinator@noaa.gov).

17. The license term for the constellation is 15 years and began on December 21, 2024.²³

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned. This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 CFR § 0.261, and is effective upon release. Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	August 14, 2026	
Term Dates	From: August 14, 2026	To: December 21, 2039
Approved: Carolyn A. Mahoney Acting Division Chief, Satellite Programs and Policy Division Space Bureau		

²³ Letter from Jodi A Goldberg, Counsel to Sidus Space, Inc., Sheppard, Mullin, Richter & Hampton LLP, to Marlene H. Dortch, Secretary, FCC, ICFS File No. SAT-LOA-20230613-00141 (dated Jan. 25, 2025).

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Appendix

List of Coordinated Non-Federal Earth Stations²⁴

Coordinated earth stations for LizzieSat-2:

1. Athens, Greece
2. Awarua, New Zealand
3. Hartebeesthoek, South Africa
4. Jeju, South Korea
5. Mingenew, Australia (KSAT)
6. Puertollano, Spain
7. Punta Arenas, Chile
8. St. Martin, Mauritius
9. Dundee, Scotland
10. Mingenew, Australia
11. Dubai, United Arab Emirates
12. Dublin, Ireland
13. Pretoria, South Africa
14. Absheron, Azerbaijan
15. Awarua, New Zealand (LEAF)
16. Plana Bulgaria
17. Blönduós, Iceland
18. Kandy, Sri Lanka
19. Mon Loisir, Mauritius
20. Unst, Shetland, United Kingdom
21. Punta Arenas, Chile (LEAF)

Coordinated earth stations for LizzieSat-3, LizzieSat-4, and LizzieSat-5:

1. Athens, Greece
2. Awarua, New Zealand
3. Hartebeesthoek, South Africa
4. Jeju, South Korea
5. Mingenew, Australia (KSAT)
6. Puertollano, Spain
7. Punta Arenas, Chile
8. St. Martin, Mauritius
9. Svalbard, Norway
10. Tromsø, Norway
11. Troll, Antarctica
12. Barrow, Alaska USA (only S-band uplink and X-band downlink)
13. Dundee, Scotland
14. Mingenew, Australia
15. Dubai, United Arab Emirates
16. Boden, Sweden

²⁴ See Letter from Drew Svor, Counsel to Sidus Space, Inc., to Marlene H. Dortch, Secretary, FCC, ICFS File Nos. SAT-MOD-20241104-00248, SAT-AMD-20240506-00094, SAT-LOA-20230613-00141 (filed Dec. 5, 2025) (updating the list of coordinated non-Federal earth stations associated with the LizzieSat NGSO constellation, pursuant to Condition 8 of the Sidus 2024 Grant).

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17. Dead Horse, AK (only S-band uplink and X-band downlink)
18. Dublin, Ireland
19. Pretoria, South Africa
20. Absheron, Azerbaijan
21. Awarua, New Zealand (LEAF)
22. Plana, Bulgaria
23. Blönduós, Iceland
24. Kandy, Sri Lanka
25. Mon Loisir, Mauritius
26. Punta Arenas, Chile (LEAF)
27. Unst, Shetland, United Kingdom