Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
SIDUS SPACE, INC.	)	File Nos.: SAT-MOD-2026_____
	)	
Modification to Application for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Observation Satellite Service	)	Call Sign: S3175

MODIFICATION

Pursuant to Section 25.117 of the Federal Communications Commission's ("Commission") rules, Sidus Space, Inc. ("Sidus") hereby seeks to modify the operational parameters of two satellites—LizzieSat-4 and LizzieSat-5—within its non-geostationary orbit ("NGSO") Earth exploration satellite service ("EESS") constellation to enable data relay capabilities (the "Modification").[1] On January 15, 2025, the Commission granted Sidus' prior modification request to add identical data relay capabilities to LizzieSat-3.[2] Sidus now seeks to extend those same capabilities to LizzieSat-4 and LizzieSat-5. A revised Schedule S and updated Ownership Attachment are included as part of this Modification.[3] Except as described herein, all other

[1] See Sidus Space, Inc., *Application for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Observation Satellite Service*, Stamp Grant with Conditions, ICFS File Nos. SAT-LOA-20230613-00141, SAT-AMD-20240506-00094 (granted Oct. 1, 2024) ("Sidus Grant"); *see also* 47 C.F.R. § 25.117.

[2] Sidus Space, Inc, *Modification to Application for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Observation Satellite Service*, ICFS File No. SAT-MOD-20241104-00248, Grant of Authority, DA 25-65 (Jan. 15, 2025) ("LizzieSat-3 ISL Grant").

[3] Sidus will separately provide the Commission with the appropriate electronic files for submission to the ITU reflecting the modifications proposed herein. For completeness, Sidus has identified both ITU Satellite Network Names associated with its LizzieSat Constellation—USASAT-30V & USASAT-30V-IRISL—in its technical submissions.

technical aspects of LizzieSat-4 and LizzieSat-5—and the LizzieSat Constellation, as a whole—remain unchanged from the Sidus Grant and are incorporated herein by reference.[4] LizzieSat-5 is slated for launch on the SpaceX Transporter 18 mission, currently scheduled to launch NET October 1, 2026.[5] Sidus therefore respectfully requests grant of this Modification by no later than August 15, 2026.

Sidus seeks to modify its authorization to install an Iridium Satellite LLC ("Iridium") 9602 modem on LizzieSat-4 and LizzieSat-5 and conduct Space-to-Space transmissions between those satellites and the Iridium satellite network in the 1618.725-1626.5 MHz band consistent with the LizzieSat-3 ISL Grant. The Iridium transceiver will be contained within the FeatherEdge payload. The next generation FeatherEdge payload on LizzieSat-4 and LizzieSat-5 is comprised of the same materials as the model on LizzieSat-3 and has no material impact on the orbital debris assessment for the spacecraft.[6] Sidus will conduct operations between the FeatherEdge payload on LizzieSat-4 and LizzieSat-5 and the Iridium network.

The data forwarded over the Iridium network will consist of analytics derived from imagery and other data sources collected by LizzieSat-4 and LizzieSat-5. Raw collected data will be processed onboard each satellite by machine learning/machine vision algorithms to extract the useful and relevant information. Then, the derived data will be packetized into short burst messages that will be forwarded over the Iridium network. Satellite commands and telemetry will also be transmitted between LizzieSat-4 and LizzieSat-5 and the Iridium network.

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[4] *See generally*, Sidus Grant.

[5] LizzieSat-4 is slated for launch on the SpaceX Bandwagon 6 mission, currently scheduled to launch NET April 1, 2027.

[6] *See* Sidus Space, Inc., *Amendment to Application for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Observation Satellite Service*, ICFS File No. SAT-AMD-20240506-00094, ODAR (May 6, 2024) (updating the orbital debris assessment for the LizzieSat Constellation).

While the Space-to-Space communications between the systems otherwise conform to Iridium's authorized operating parameters and are consistent with Commission precedent,[7] out of an abundance of caution and to the extent necessary, Sidus requests a waiver of Section 2.106 of the Commission's rules to communicate with the Iridium network in the 1618.725-1626.5 MHz band on a non-conforming basis.[8]

The Commission may waive any of its rules if there is "good cause" shown.[9] In general, waiver is appropriate if (1) special circumstances warrant a deviation from the general rule; and (2) such deviation would better serve the public interest than would strict adherence to the rule.[10] Generally, 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.[11]

The Commission has previously indicated that in considering requests for such non-conforming spectrum uses, it would generally grant waivers "when there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the

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[7] *See*, *e.g.*, LizzieSat-3 ISL Grant; Capella Space Corp., *Application for Authority to Launch and Operate a Non-Geostationary Satellite System in the Earth Exploration Satellite Service*, Stamp Grant with Conditions, ICFS File No. SAT-LOA-20200914-00108 (2020) ("Capella Grant") (permitting Capella-2 through 4 to communicate via inter-satellite links with the Inmarsat system using BGAN terminals onboard space stations); Iridium Satellite LLC, ELS File No. 0427-EX-CN-2023 (granted Dec. 15, 2023); Internet Think Tank, Inc., ELS File No. 0878-EX-CN-2023 (granted Oct. 3, 2023); NOVI Space, Inc., *Application for Authority to Launch And Operate a Non-Geostationary Satellite System in the Earth-Exploration Satellite Service*, Stamp Grant with Conditions, ICFS File No. SAT-LOA-20250609-00140 (granted Dec. 11, 2025).

[8] 47 C.F.R. § 2.106.

[9] *See* 47 C.F.R. § 1.3; *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

[10] *See Northeast Cellular*, 897 F.2d at 1166.

[11] *See WAIT Radio*, 418 F.2d at 1157.

non-conforming operator accepts any interference from authorized services."[12] Indeed, the Commission granted Sidus' prior modification request for identical operations on LizzieSat-3 on this basis.[13] As with LizzieSat-3, transmissions between the spacecraft will only occur on frequencies assigned by Iridium to the spaceborne Iridium modem incorporated into the FeatherEdge payload consistent with Iridium's coordination agreements in the band, thereby ensuring there is no harmful interference. Indeed, Sidus has received no reports of harmful interference resulting from its Space-to-Space operations on LizzieSat-3. Moreover, Sidus accepts that all Space-to-Space transmissions in the 1618.725-1626.5 MHz band are non-conforming and will be made on a non-interference, non-protected basis. In the unlikely event any reports of interference are received, Sidus will immediately cease all transmissions in the band. Thus, grant of such waiver would be consistent with Commission precedent—including the Commission's prior grant of the LizzieSat-3 modification.

Additionally, out of an abundance of caution, Sidus requests a limited waiver of 47 C.F.R. § 25.114(c) of the Commission's rules to address a known limitation of the Schedule S filing system.[14] While Sidus outlined its inter-satellite link ("ISL") operational parameters in the Space-to-Space portions of the Schedule S (S6 and S7), the Schedule S system also auto-generated inputs in the Earth-to-Space (S4) and Space-to-Earth (S5) sections. The Schedule S system does not permit Sidus to remove the auto-generated ISL entries in the Earth-to-Space (S4) and Space-to-

[12] *See*, *e.g.*, *Fugro-Chance, Inc.*, 10 FCC Rcd. 2860, ¶ 2 (IB 1995) (authorizing non-conforming MSS in the C-band); *Motorola Satellite Communications, Inc.*, 11 FCC Rcd. 13952, ¶ 11 (IB 1996) (authorizing service to fixed terminals in bands allocated to MSS); Capella Grant, Condition 5 (authorizing non-conforming Space-to-Space MSS in the L-band).

[13] *See* LizzieSat-3 ISL Grant, Condition 12.

[14] 47 C.F.R. § 25.114(c).

Earth (S5) sections, nor the corresponding placeholder frequency band entries in Section S2.[15] Sidus respectfully requests that the Commission disregard the erroneous entries from Sections S2, S4, and S5, and accept the Schedule S as corrected herein.[16]

Grant of the Modification would serve the public interest because it will extend the previously authorized ISL capabilities to Sidus' forthcoming operations on LizzieSat-4 and LizzieSat-5, enabling continued testing and operational use of the novel FeatherEdge payload. The Commission has already found that such operations serve the public interest in granting the LizzieSat-3 modification. As the Commission is aware, ISLs greatly reduce data transmission delays, free up valuable capacity onboard smaller spacecraft, and facilitate the creation of more efficient and responsive networks for customers. Coupled with the FeatherEdge technology, these ISLs will enable Sidus to more expediently and efficiently transmit onboard image-analysis and detection results to consumers. Moreover, the transmissions will help demonstrate how commercial operators may ultimately reduce the coordination burden on both Federal and commercial operators in shared Earth observations bands, limiting the number of and duration that co-frequency earth stations will be subject to coordination worldwide. Sidus will continue to comply with all conditions of the LizzieSat-3 ISL Grant, including relevant federal coordination requirements.[17]

For the foregoing reasons, Sidus respectfully requests the Commission grant this Modification to enable LizzieSat-4 and LizzieSat-5 to communicate with the Iridium network in the 1618.725-1626.5 MHz band on a non-interference, unprotected basis, consistent with the

[15] Sidus has identified the extraneous data in S2 with the following description: "Placeholder due to Schedule S bug."

[16] In addition, Sidus notes that the current Schedule S lists the "total number of satellites in the active constellation" as 6; the Sidus Grant, however, authorizes 4 satellites.

[17] *See generally* LizzieSat-3 ISL Grant.

authority previously granted for LizzieSat-3. Grant of this Modification is respectfully requested by no later than August 15, 2026 given current launch service provider requirements for the Transporter-18 mission.

Respectfully submitted,

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