

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of	)	
	)	
Sidus Space, Inc.	)	File No.
	)	
Application for Authority to Launch and Operate a	)	Call Sign:
Non-Geostationary Orbit Satellite System in the	)	
Earth-Exploration Satellite Service	)	
	)	

APPLICATION

Brian D. Weimer
Jodi A. Goldberg

SHEPPARD MULLIN RICHTER & HAMPTON LLP
2099 Pennsylvania Ave. N.W., Suite 100
Washington, D.C. 20006
(202) 747-1900
jgoldberg@sheppardmullin.com
Counsel to Sidus Space, Inc.

June 13, 2023

Carol Craig
Chief Executive Officer

John Curry
Chief Mission Operations Officer

SIDUS SPACE, INC.
150 N. Sykes Creek Pkwy, Ste 200,
Merritt Island, FL 32953
(409) 370-7190
john.curry@sidusspace.com

TABLE OF CONTENTS

	<u>Page</u>
I. BACKGROUND AND DESCRIPTION OF SIDUS	1
II. DESCRIPTION OF SYSTEM FACILITIES AND OPERATIONS.....	2
A. Space Segment	2
B. Orbital Information and Launch Schedule.....	6
C. Ground Segment and Operations	7
III. SPECTRUM USE AND SHARING CAPABILITIES	8
A. S- and X-band EESS	9
IV. WAIVER REQUESTS	11
A. Modified Processing Round Rules.....	12
B. Default Service Rules	12
C. U.S. Table of Frequency Allocations - 2200-2290 MHz (space-to-Earth) TT&C and Data Downlink.....	13
V. GRANT OF THE APPLICATION IS IN THE PUBLIC INTEREST	13
VI. OTHER MATTERS.....	15
A. NOAA Authorization.....	15
B. ITU Compliance.....	15
VII. CONCLUSION.....	16

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of	)	
	)	
Sidus Space, Inc.	)	File No.
	)	
Application for Authority to Launch and Operate a	)	Call Sign:
Non-Geostationary Orbit Satellite System in the	)	
Earth-Exploration Satellite Service	)	
	)	

APPLICATION

Sidus Space, Inc. (“Sidus”), pursuant to Sections 25.114 of the Federal Communications Commission (the “Commission”) rules, herein requests authority to launch and operate four Earth exploration satellite service (“EESS”) non-geostationary orbit (“NGSO”) satellites in low Earth orbit, known as LizzieSat-3 through -6 (“LS-3 to -6”).¹ A completed Form 312, Schedule S, and Technical Annex are included with this Application pursuant to the Commission’s rules.²

I. BACKGROUND AND DESCRIPTION OF SIDUS

Sidus is a publicly traded, vertically integrated provider of Space-as-a-Service solutions, including end-to-end satellite support, based in Merritt Island, Florida. Founded on a vision of conveying spaceflight heritage to new technologies that advance delivery of data and predictive analytics, Sidus combines mission critical hardware manufacturing, multi-disciplinary engineering services, and full lifecycle mission planning and operations, with in-orbit support and space-based data collection for customers domestically and abroad.

¹ See 47 C.F.R. § 25.114. LS-1 and LS-2 are experimental satellites filed under the Commission’s Part 5 rules. See ELS File Nos. 0905-EX-CN-2023 and 0545-EX-CN-2023, respectively (“Experimental Applications”).

² See 47 C.F.R. § 25.114.

Sidus has designed and is now building a multi-mission satellite constellation using its hybrid, 3D-printed multi-purpose satellite, “LizzieSat,” to provide continuous, near real-time Earth observation and Internet-of-Things (“IOT”) data for the global space economy (the “LizzieSat Constellation”). Leveraging Sidus’s existing manufacturing operations, flight hardware manufacturing experience, and commercial-off-the-shelf subsystem hardware, the LizzieSat Constellation will provide a platform through which Sidus can deliver customer sensors to orbit in months, rather than years. The deployment of the LizzieSat Constellation will enable Sidus to deliver high-impact data for insights on aviation, maritime, weather, space services, Earth intelligence and observation, financial technology (Fintech) and IOT.

The LizzieSat Constellation will consist of one hundred (100) LS satellites operating in diverse orbits between 28°-98° inclination and 300-650 km altitude based on the operational needs and preferences of the customer payloads. The LS-1 and LS-2 satellites, which will serve as technology demonstrators and pathfinder missions, will be deployed in separate missions pursuant to experimental authority beginning in Q4 2023.³ The first two pairs of commercial LizzieSat satellites, LS-3 and LS-4, and LS-5 and LS-6, which are the subject of the instant application (the “Application”), will be deployed no earlier than (“NET”) February and June 2024, respectively, on successive SpaceX Transporter rideshare missions.

II. DESCRIPTION OF SYSTEM FACILITIES AND OPERATIONS

A. Space Segment

Each LizzieSat satellite is custom-built by Sidus in its Merritt Island manufacturing facility, with the standard LizzieSat bus having a mass of sixty-five kilograms (65 kg). Each LizzieSat bus

³ See Experimental Applications.

can host up to thirty-five kilograms (35 kg) of Sidus or third-party payloads, for a total aggregate satellite mass of up to one hundred kilograms (100 kg).⁴ The payloads will collect data over multiple Earth-based locations, record the data onboard, and then the LizzieSat satellite will downlink the data via commercial ground stations across the globe. The downlinked data will then be routed via the AWS Cloud to Sidus Mission Control Center (“MCC”) in Merritt Island, Florida.

The LizzieSat satellites will operate in the radiofrequency bands outlined in the table below. None of the individual payloads on the LizzieSat satellites will engage in radiofrequency transmissions, but rather will communicate through the LizzieSat satellite communications links. Satellite downlink transmissions can be turned on and off by ground telecommand in compliance with Commission rules.⁵

Type of Link and Transmission Direction	Frequency Ranges
TT&C Uplink (Earth-to-space)	2025-2110 MHz,
TT&C and Data Downlink (space-to-Earth)	2200-2290 MHz
EESS Data Downlink (space-to-Earth)	8025-8400 MHz
GPS Signals (receive only)	L1 and L2 GPS frequency bands

The LS-3 to LS-6 satellites will each have six payloads, five of which will be standard across all spacecraft. LS-4 will also have an additional imager.

⁴ As a non-propulsive system, LizzieSat has the same wet and dry mass.

⁵ See *generally* Technical Annex; 47 C.F.R. § 25.207.

Fig. 1: The LS-3 to LS-6 Payloads

LS-3	LS-4	LS-5	LS-6
LizzieSat Bus [65 kg]	LizzieSat Bus [65 kg]	LizzieSat Bus [65 kg]	LizzieSat Bus [65 kg]
[Mass Simulator]	HEO Robotics Holmes	[Mass Simulator]	[Mass Simulator]
Satlab Polaris	Satlab Polaris	Satlab Polaris	Satlab Polaris
Raptor Photonics Owl	Raptor Photonics Owl	Raptor Photonics Owl	Raptor Photonics Owl
Raptor Photonics Hawk	Raptor Photonics Hawk	Raptor Photonics Hawk	Raptor Photonics Hawk
SkyServe	SkyServe	SkyServe	SkyServe
ExoSpace FeatherEdge	ExoSpace FeatherEdge	ExoSpace FeatherEdge	ExoSpace FeatherEdge

1. The Standard Payloads Across LS-3 to LS-6

a. Exo-Space “FeatherEdge” Data Processing Unit

The first payload common to LS-3 through LS-6 is a 0.5U data processing unit (“DPU”) developed by Exo-Space, Inc., called “FeatherEdge.” FeatherEdge is an image-analysis device that is intended to provide onboard image processing using machine vision algorithms contained within the DPU to detect objects within its field of view. During the LizzieSat mission, the FeatherEdge payload will provide: (i) machine vision processing of optical sensor data; (ii) a capability to update existing data processing models; and (iii) the ability to add new data processing models. All power and command signals will be sent to the FeatherEdge payload via the LizzieSat bus operated from the Sidus MCC; the payload does not transmit.

b. SkyServe Edge-Computing Platform

The second common payload is a mass-less payload running edge-computing software developed by SkyServe, Inc, which is hosted inside a Sidus-owned LizzieSat payload hard drive. The hardware-agnostic software can process satellite sensor data on orbit to provide near-real-time analysis of collected information and update algorithms to adapt to customer needs. All power and command signals will be sent to the SkyServe payload via the LizzieSat bus operated from the Sidus MCC; the payload does not transmit.

c. Raptor Photonics and Satlab Sensors

The LizzieSat satellites will also host three sensors: the Raptor Photonics Owl, Raptor Photonics Hawk, and Satlab Polaris automatic identification system (“AIS”). The Raptor Photonics Owl 1280 camera offers a visible response from 0.6μm to 1.7μm, enabling high sensitivity imaging. The Owl has a readout noise (rms) specification of <28 electrons and a high intra-scene dynamic range of 51dB, enabling simultaneous capture of bright & dark portions of a scene. The Raptor Photonics Hawk Cooled is CMOS night vision mono/RGB camera, enabling better quality imaging under low light conditions and ultimate sensitivity like EMCCD technology. Both cameras are operated by Sidus and are in the process of being licensed by the National Oceanic and Atmospheric Administration (“NOAA”).⁶ Satlab Polaris sensors passively collect data from marine automatic tracking systems to detect ship locations using a VHF receiver (the sensor does not transmit).

2. *LS-4 NEI Imager*

In addition to the standard package of imagers and sensors described above, the LS-4 satellite will also host a non-Earth imaging (“NEI”) camera manufactured by HEO Robotics Pty. Ltd. (“HEO Robotics”), called “Holmes.” The Holmes imager is specifically designed for NEI space-to-space imaging and will capture resolved imagery of space objects as LS-4 moves through its orbit. The Holmes imager has a 94 mm aperture, narrow field of view optical system developed for in-orbit inspection services. The Holmes imager is a technology demonstrator; LS-4 will provide accurate attitude and pointing and onboard time keeping, assisting image capture as objects pass the spacecraft, but the LS-4 will not translate or conduct any proximity operations.

⁶ Sidus’s NOAA application covers the each of LS-3 through LS-6 satellites in their entirety at 525 km, not just the individual cameras and sensors.

The imager is operated by Sidus and is in the process of being licensed by NOAA.⁷ All power and command signals will be sent to the Holmes imager via the LizzieSat bus operated from the Sidus MCC; the payload does not transmit.

As described more fully in the accompanying orbital debris assessment report (“ODAR”) and Technical Annex, all LizzieSat Constellation satellites are equipped with state-of-the-art hardware and software solutions to ensure safe and efficient mission operations. The LizzieSat satellites can make orbital adjustments and perform collision avoidance maneuvers by utilizing differential drag but will not carry propulsive systems.⁸

B. Orbital Information and Launch Schedule

The four LizzieSat satellites are manifested to launch in pairs on successive SpaceX Transporter missions NET February 2024 and June 2024, respectively. The satellites described in the Application will operate at an altitude of 525 km at a 97.5° inclination.⁹ The information below describes the anticipated orbital characteristics for the LizzieSat satellites.

Orbital Plane Number	1	2
Number of Satellites Per Orbital Plane	2	2
Inclination Angle	97.5°	97.5°
Orbital Period	95 minutes 8 seconds	95 minutes 8 seconds
Apogee	525 km	525 km

⁷ *Id.*

⁸ ODAR at 4.

⁹ The LizzieSat spacecraft will be integrated into a 15” separation ring that attaches to the Exolaunch Separation System and launched on a SpaceX Falcon 9 vehicle, which will transport multiple payloads simultaneously. Since the SpaceX mission includes multiple payloads, discretion over the final deployment parameters remains exclusively with SpaceX. Sidus anticipates the average altitude of the operational LizzieSat spacecraft will be 525 km 97.5° inclination and will notify the Commission of any changes in orbital deployment parameters within thirty (30) days following deployment. *See id.*; *see also* Schedule S.

Orbital Plane Number	1	2
Perigee	525 km	525 km
Argument of Perigee	0°	0°
Active Service Arc ¹⁰	-90° to 90°	-90° to 90°
Local Time of Descending Node ¹¹	13:00+60min	13:00+60min

C. Ground Segment and Operations

The MCC for the LizzieSat Constellation will be located at Sidus’s headquarters in Merritt Island, Florida. Consistent with Sidus’s obligations under its existing and pending NOAA licenses, the LizzieSat Constellation will be always monitored via automated and human systems, facilitating rapid response to any technical or regulatory concerns.¹²

Sidus will conduct its mission operations—sending commands from the Sidus MCC to the LizzieSat Constellation—through a network of ground stations that will initially consist of the commercial facilities, operated by KSAT and ATLAS, listed in the table below.¹³ The Sidus MCC does not transmit commands directly to the LizzieSat satellites in space.

Location	Latitude; Longitude	Provider
Athens, Greece	37.85° N; 22.62° E	KSAT
Awarua, New Zealand	46.53° S; 168.38° E	KSAT
Hartebeesthoek, South Africa	25.89° S; 27.71° E	KSAT
Puertollano, Spain	38.67° N; 4.16° W	KSAT
Punta Arenas, Chile	52.94° S; 70.87° W	KSAT

¹⁰ Although the LizzieSat satellites are capable of transmitting throughout the entire orbit, they will only transmit when visible to one of their respective earth stations. *See* Technical Annex, § 2.2.

¹¹ The LizzieSat satellites are non-propulsive spacecraft. The satellites will begin to naturally decay upon insertion.

¹² National Environmental Satellite Data and Information Service, NOAA Licensees (last visited May 23, 2023), <https://www.nesdis.noaa.gov/commercial-space/regulatory-affairs/licensing/noaa-licensees>.

¹³ *See* Technical Annex, § 2.2.

Location	Latitude; Longitude	Provider
St. Martin, Mauritius	20.50° S; 57.45° E	KSAT
Barrow, Alaska USA	71.28° N; 156.81° W	ATLAS
Dundee, Scotland	56.41° N; 3.19° W	ATLAS
Mingenew, Australia	29.01° S; 115.34° E	ATLAS
Dubai, United Arab Emirates	24.94° N; 55.35° E	ATLAS

Sidus may expand its ground station network over the course of the LizzieSat Constellation operational lifetime to include additional commercial stations either within or outside the United States and will seek to modify its authorization as conditions arise. Sidus has initiated coordination efforts with Federal operators in its requested bands and will operate in accordance with the terms of any agreements.¹⁴

III. SPECTRUM USE AND SHARING CAPABILITIES

Sidus is committed to ensuring equitable sharing among all licensed co-frequency spectrum users and the LizzieSat Constellation will operate in a manner that will not materially constrain co-frequency operators. Sidus has initiated coordination discussions with Federal operators in the requested spectrum bands and will operate in accordance with any applicable coordination conditions. Moreover, LizzieSat satellites only transmit and receive while visible to the relevant earth stations, reducing the likelihood of interference to other systems and allowing for interference mitigation through coordination. Since the LizzieSat Constellation is currently made up of a small number of satellites communicating with a limited number of earth stations, the

¹⁴ Sidus agrees to be bound by the same pre-coordination agreement with NASA as in the Experimental Applications: The LizzieSat satellites will not be used over ground sites used by NASA's Cubesat Proximity Operations Demo ("CPOD") satellites (Punta Arenas, Chile; Awarua, New Zealand; Hartbeesthoek, South Africa; and Puertollano, Spain) but will instead transmit on its backup transmission frequencies at 2262.25 MHz or 2283.25MHz while over those locations.

potential for unacceptable interference is limited and can be coordinated among EESS operators to avoid potential in-line events. As a result, the instant application will not create mutual exclusivity with other NGSO EESS systems in the same frequency bands nor will it preclude future entry.

A. S- and X-band EESS

Sidus intends to use the following band segments for service link operations for the LizzieSat Constellation: 2025-2110 MHz (Earth-to-space) and 2200-2290 MHz and 8025-8400 MHz (space-to-Earth). Sidus reasonably expects that its system can operate in these bands without causing harmful interference to or requiring protection from any other higher priority service duly licensed in these bands.

The LizzieSat Constellation meets the definition of EESS because the satellites will observe and record data originating from or surrounding the Earth and downlink such data to earth stations that are part of the satellite network. The data associated with the sensors and imagers onboard the LizzieSat satellites will comprise all the data downlinked from the LizzieSat satellites. The Exo-Space and SkyServe payloads are onboard processors and software, respectively, that work to enhance data collected by the sensors and imagers, which do not separately transmit or collect data. Thus, the LizzieSat Constellation is an EESS system and can reasonably expect to share spectrum with other EESS system in S- and X-band frequencies.

1. S-band TT&C Uplink (2025-2110 MHz)

Sidus seeks authorization to utilize the 2025-2110 MHz band for telecommand, consistent with the band's EESS (Earth-to-space) allocation.¹⁵ In the United States, non-Federal Earth-to-

¹⁵ 47 C.F.R. § 2.106.

space transmissions in the 2025-2110 MHz band may be authorized in the EESS services subject to such conditions as may be applied on a case-by-case basis. Uplink transmissions shall not cause harmful interference to authorized Federal and non-Federal operations operating in accordance with the Table of Frequency Allocations.¹⁶ Sidus has already initiated coordination with Federal operators in this band to ensure that Sidus uplinks do not interfere with critical systems of these agencies,¹⁷ and will coordinate with additional co-frequency operators, as necessary, to ensure spectrum sharing consistent with the Commission's rules.

2. *S-band TT&C and Backup Data Downlink (2200-2290 MHz)*

Sidus seeks authorization to utilize the 2200-2290 MHz band for telemetry and backup data downlink operations outside the United States. The 2200-2290 MHz (space-to-Earth) band is allocated internationally for EESS, space research, and space operations, and is allocated in the United States for Federal EESS, space research, and space operations.¹⁸ Sidus will communicate only with coordinated earth stations outside the United States, including the sites listed in Section II.C above and possibly other non-U.S. earth station locations as they are added to the Sidus network in the future. Sidus will pre-coordinate with Federal operators in the band to ensure no harmful interference.

¹⁶ 47 C.F.R. § 2.106 n. US347. The Commission has granted multiple EESS applications proposing TT&C uplink operations within this band. *See, e.g., Application of Capella Space Corp. for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System in the Earth-Exploration Satellite Service*, Stamp Grant, File No. SAT-LOA-20200914-00108 (Dec. 17, 2020); *see also Amendment Application of Loft Orbital for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System in the Earth-Exploration Satellite Service*, Stamp Grant, File No. SAT-AMD-20200527-00063 (Granted Oct. 8, 2020) (“Loft Orbital Grant”).

¹⁷ For example, Sidus has already initiated coordination discussions with representatives from NASA regarding the planned operations of LS-1 and LS-2 within this spectrum band. *See* n.14 *supra*.

¹⁸ *See* 47 C.F.R. § 2.106.

3. *X-band Primary Data Downlink (8025-8400 MHz)*

The 8025-8400 MHz band is allocated on a primary basis internationally and in the United States for EESS (space-to-Earth). In the United States, the 8025-8400 MHz band is allocated on a primary basis for non-Federal use, subject to a case-by-case electromagnetic compatibility analysis.¹⁹ Transmissions from the satellites operating in this band shall not cause harmful interference to Federal and non-Federal stations operating in accordance with the U.S. Table of Frequency Allocations. Sidus will coordinate with Federal and non-Federal operators in this band to ensure compliance with these requirements.

IV. WAIVER REQUESTS

The Commission may waive any of its rules where there is “good cause” to do so.²⁰ 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.²¹ 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.²² Sidus respectfully submits that good cause exists to waive the following Commission rules when granting the instant application.

¹⁹ See 47 C.F.R. § 2.106 n.US258.

²⁰ 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).

²¹ See *Northeast Cellular*, 897 F.2d at 1166.

²² See *WAIT Radio*, 418 F.2d at 1157.

A. Modified Processing Round Rules

Sidus requests waiver of Sections 25.156 and 25.157 of the Commission's rules, which provide for the processing of "NGSO-like satellite systems" under a modified processing round framework.²³ Instead, Sidus requests that its application be processed pursuant to the first-come, first-served procedure adopted for "GSO-like satellite systems" pursuant to Section 25.158.²⁴ The grant of such waiver would be consistent with Commission precedent and would be appropriate in this instance.²⁵ Good cause exists to waive the modified processing round rules since spectrum sharing is possible in the bands subject to the Application. Since the LizzieSat Constellation and the satellites in other similar systems only transmit/receive for short periods of time while in view of a relevant earth station, operators can coordinate transmissions to and from earth stations to avoid any potential, albeit unlikely, in-line interference events. As a result, the Application will not create mutual exclusivity with other NGSO EESS systems in the same frequency bands nor will it preclude future entry. Therefore, good cause exists to grant waiver, consistent with precedent.

B. Default Service Rules

Out of abundance of caution and to the extent necessary, Sidus requests a waiver of the default service rules pursuant to Section 25.217(b) of the Commission's rules.²⁶ The Commission

²³ See 47 C.F.R. §§ 25.156, 25.157.

²⁴ See 47 C.F.R. § 25.158.

²⁵ See, e.g., Planet Labs, Inc., Stamp Grant, IBFS File No. SAT-LOA-20130626-00087 (granted Dec. 3, 2013) ("Planet Labs Stamp Grant"); Skybox Imaging, Inc., Stamp Grant, IBFS File No. SATLOA-20120322-00058 (granted Sept. 9, 2012) ("Skybox Imaging Stamp Grant"); *Space Imaging, LLC*, Declaratory Order and Order and Authorization, 20 FCC Rcd 11964, ¶¶ 9-11 (2005) ("Space Imaging Order").

²⁶ 47 C.F.R. § 25.217(b).

has previously granted a waiver of the default service rules to NGSO EESS applicants since operators are required to comply with technical requirements in Part 2 of the Commission's rules and applicable ITU rules.²⁷ As a result, the Commission concluded that the requirements were sufficient to prevent harmful interference and there was no need to impose additional technical requirements. The same rationale applies to the Application and thus, good cause exists for the Commission to grant waiver.

C. U.S. Table of Frequency Allocations - 2200-2290 MHz (space-to-Earth) TT&C and Data Downlink

Sidus requests a waiver of the U.S. Table of Frequency Allocations to use the 2200-2290 MHz band (space-to-Earth) as a TT&C and data downlink band, consistent with its international and Federal allocations.²⁸ The band is allocated to Space Operations (space-to-Earth) and EESS (space-to-Earth) on a co-primary basis across all ITU regions and for Federal use within the United States.²⁹ Sidus's S-band transmitters will only be used to communicate with non-U.S. Earth stations, as described in Section II.C above. Sidus will coordinate its operations with all Federal operators prior to use.

V. GRANT OF THE APPLICATION IS IN THE PUBLIC INTEREST

The grant of the instant application will serve the public interest by facilitating the near-term deployment of low-cost, high-value imaging and Earth Observation services. The proposed

²⁷ See Space Imaging Order ¶¶ 26-31; *DigitalGlobe, Inc.*, Order and Authorization, 20 FCC Rcd 15696 ¶¶ 1, 15 (2005); see also Planet Labs Stamp Grant; Skybox Imaging Stamp Grant; Spire Global Inc., Stamp Grant, IBFS File No. SAT-LOA-20151123-00078 (granted in part Mar. 18, 2016).

²⁸ See 47 C.F.R. § 2.106.

²⁹ *Id.*; see, e.g., *Loft Orbital Solutions, Inc.*, Application for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System in the Earth-Exploration Satellite Service, Stamp Grant with Conditions, IBFS File Nos. SAT-LOA-201908-00072 & SAT-AMD-20200527-00063, Condition 10 (Oct. 14, 2020).

LizzieSat Constellation will demonstrate new capabilities, opportunities, and efficiencies in the commercial Earth Observation marketplace for all stakeholders.

The pathfinding LizzieSat Constellation seeks to demonstrate the benefits of turnkey access to space, providing a roadmap to a sustainable constellation built upon flight proven hardware and mission managed services for new and innovative technologies. By building a reliable, safe, multi-mission platform, Sidus can offer customers all the support and resources necessary to design, manufacture, authorize, integrate, launch, and operate a satellite payload while customers are free to focus on their own mission-in-chief. The LizzieSat Constellation will serve as a standardized platform for innovative applications, reducing the need for entities to deploy individual spacecraft or even small to mid-sized constellations. Through the development and deployment of the LizzieSat Constellation, Sidus also strives to reduce licensing and administrative burdens for entities seeking to access space and provide services on Earth.

These first four LizzieSat satellites (LS-3 to LS-6) serve as a vanguard to valuable new services for customers in the United States and around the world. The satellites are a combination of mature, flight proven technologies and services organized to improve the efficiency and effectiveness by which third-party capabilities can be delivered from low Earth orbit without the need for duplicative and costly infrastructure. Critically, the LizzieSat Constellation will provide these services while becoming neither a potential new source of orbital debris nor a source of harmful interference to co-frequency operators. For these reasons, Sidus submits that grant of this application is in the public interest.

VI. OTHER MATTERS

A. NOAA Authorization

Sidus is in the process of applying for a new license to operate a private remote sensing space system from NOAA's National Environmental Satellite, Data, and Information Service to reflect the payloads described herein.³⁰ Sidus will operate the LizzieSat Constellation consistent with the terms of any NOAA license.

B. ITU Compliance

Pursuant to Section 25.111 of the Commission's rules, Sidus acknowledges the Commission will submit filings to the ITU on Sidus's behalf and that Sidus is responsible for any and all fees charged by the ITU for such filings.³¹ Sidus will provide the Commission with the appropriate electronic files for submission to the ITU under separate cover. Sidus's ITU Cost Recovery Letter is attached to this application.³²

³⁰ Sidus has previously received a NOAA license for the LizzieSat-1 satellite, and a separate NOAA license for the LizzieSat-2 to LizzieSat-8 spacecraft. *See* Experimental Applications. Sidus is in the process of submitting a new authorization request for LS-3 to -6 to reflect the payloads described in the instant Application.

³¹ 47 C.F.R. § 25.111.

³² *See* Sidus ITU Cost Recovery Letter (filed May 25, 2023).

VII. CONCLUSION

For the foregoing reasons, and for the reasons set forth in the accompanying materials, Sidus respectfully requests the Commission determine that granting Sidus operating authority for the LizzieSat Constellation proposed herein would serve the public interest and issue such grant expeditiously.

Respectfully submitted,

/s/ John Curry

Brian D. Weimer
Jodi A. Goldberg

Carol Craig
Chief Executive Officer

SHEPPARD MULLIN RICHTER & HAMPTON LLP
2099 Pennsylvania Ave. N.W., Suite 100
Washington, D.C. 20006
(202) 747-1900
jgoldberg@sheppardmullin.com

John Curry
Chief Mission Operations Officer

Counsel to Sidus Space, Inc.

SIDUS SPACE, INC.
150 N. Sykes Creek Pkwy, Ste 200,
Merritt Island, FL 32953
(409) 370-7190
John.curry@sidusspace.com

June 13, 2023