

S2110 SAT-STA-20170223-00020
Iridium Constellation LLC
Iridium

IB2017000471



File # SAT-STA-20170223-00020
Call Sign S2110 Grant Date 03/31/17
(or other identifier)
From 03/31/17 Term Dates period of 30 days To:
Approved: *Stephen J. Duall*

Approved by OMB
3060-0678

Date & Time Filed: Feb 23 2017 12:26:23:390PM
File Number: SAT-STA-20170223-00020
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
30-day STA for first-generation storage orbit

1. Applicant

Name:	Iridium Constellation LLC	Phone Number:	703-287-7518
DBA Name:		Fax Number:	
Street:	1750 Tysons Boulevard	E-Mail:	maureen.mclaughlin@iridium.com
	Suite 1400		
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -
Attention:	Maureen C McLaughlin		

ATTACHMENT TO GRANT
Iridium Constellation LLC
IBFS File No. SAT-STA-20170223-00020

IBFS File No(s):	SAT-STA-20170223-00020	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	Iridium Constellation LLC (Iridium)	
Call Sign:	S2110	
Satellite Name:	Iridium Constellation	
Orbital Location: (required station-keeping tolerance)	763 km circular orbit, 86.4° inclination	
Administration:	United States of America	
Nature of Service:	Mobile-satellite service (telemetry, tracking and command only)	
Scope of Grant:	Special temporary authorization for a period of 30 days to conduct telemetry, tracking, and command operations necessary to transit a single first-generation satellite from the 778 km orbit and maintain it as an in-orbit spare at an altitude of approximately 763 km. ¹	
Service Area(s):	N/A	
Frequencies:	19.4-19.6 GHz (space-to-Earth) 29.1-29.3 GHz (Earth-to-space)	
<p>Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission's rules not waived herein. This grant is also subject to the following conditions:</p> <p>1. Authorization is limited to telemetry, tracking and command operations only.</p>		
<p>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.</p> <p>This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.</p> <p>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).</p>		
Action Date:	March 31, 2017	
Term Dates	From: March 31, 2017	To: period of 30 days
Approved:	 Stephen J. Duall Chief, Satellite Policy Branch	

¹ Iridium filed a letter supplementing its request for special temporary authority. Letter from Scott Blake Harris, Counsel to Iridium, to Marlene H. Dortch, FCC (filed Mar. 29, 2017). Iridium also separately confirmed that only a single satellite would be used as an in-orbit spare during the 30-day period of the STA request.

2. Contact

Name:	Jennifer D. Hindin	Phone Number:	202-719-4975
Company:	Wiley Rein LLP	Fax Number:	
Street:	1776 K St NW	E-Mail:	jhindin@wileyrein.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006 -
Attention:		Relationship:	Legal Counsel

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number or Submission ID

4a. Is a fee submitted with this application?

- If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).
- Governmental Entity Noncommercial educational licensee
- Other (please explain):

4b. Fee Classification CXW - Space Station (Non-Geostationary)

5. Type Request

- Change Station Location Extend Expiration Date Other

6. Temporary Orbit Location

7. Requested Extended Expiration Date

8. Description (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Iridium seeks STA for 30 days to keep up to 10 first-generation satellites in a storage orbit.

9. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes. Yes No

10. Name of Person Signing
Maureen C McLaughlin

11. Title of Person Signing
Vice President Public Policy

12. Please supply any need attachments.

Attachment 1: Narrative

Attachment 2:

Attachment 3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

_____)	
Application of)	
)	
Iridium Constellation LLC)	Call Sign: S2110
)	
For Special Temporary Authority)	File No. SAT-STA-2017_____
_____)	

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

Iridium Constellation LLC (“Iridium”) hereby requests special temporary authority (“STA”) for thirty (30) days,¹ commencing February 28, 2017, to modify its authorization for its “Big LEO” band non-geostationary satellite orbit (“NGSO”) constellation (call sign S2110).² Iridium plans to replace its first-generation satellites on a one-for-one basis through a phased launch of its second-generation satellites. Rather than commencing immediate end-of-life disposal for first-generation satellites that have been replaced, this STA seeks authority to keep up to 10 first-generation satellites in a storage orbit at an altitude of approximately 763 km (15 km below mission altitude). Iridium will maintain first-generation satellites in the storage orbit initially as spares and eventually de-boost and de-orbit them on a rolling basis consistent with the Iridium orbital debris mitigation plan previously approved by the Commission.³ Maintaining these first-generation satellites in a storage orbit will serve the public interest by facilitating an

¹ See 47 C.F.R. § 25.120(b)(4). Iridium will also file a request for STA for a period of 180 days, which Iridium anticipates will be placed on Public Notice. As needed, Iridium also will file a request for 30-day STA extension.

² See *Iridium Constellation LLC, Application for Modification of License to Authorize a Second-Generation NGSO MSS Constellation*, Order and Authorization, 31 FCC Rcd. 8675 (Aug. 1, 2016) (“Iridium NEXT Order”).

³ See *Iridium Constellation LLC Application for Modification of Big LEO License to Change the Orbital Debris Mitigation Plan*, 29 FCC Rcd 9422 (I.B. 2014).

efficient transition to Iridium's second-generation fleet, helping to ensure continuity of service for Iridium's end users and enabling the deorbiting process in a manner that coordinates satellite movements safely.

I. BACKGROUND AND REQUEST FOR SPECIAL TEMPORARY AUTHORITY

On January 1, 1995, the FCC authorized Iridium's predecessor-in-interest to launch and operate an NGSO mission constellation of 66 satellites in the Big LEO band along with 12 in-orbit spares.⁴ On August 1, 2016, the Commission authorized Iridium to construct, deploy and operate its second-generation satellite constellation, commonly known as Iridium NEXT, with 66 space stations and up to 15 "second-generation in-orbit satellites."⁵ Specifically, the grant "is based on a planned one-for-one substitution of first-generation satellites by second-generation satellites, but does not preclude Iridium seeking authorization at a later date to retain some first-generation satellites as spares."⁶

This STA seeks authority to retain up to 10 first-generation satellites as spares upon their substitution by a second-generation satellite. Iridium began its phased launch of second-generation satellites with the successful launch and delivery of 10 satellites to a temporary 625 km parking orbit in January 2017.⁷ Following positioning to the 780 km mission orbit and completion of in-orbit testing, second-generation satellites from this and subsequent launches will be brought into operation and replace first-generation satellites in specific orbital slots. Under the STA, Iridium seeks to move a replaced first-generation satellite to a storage orbit of

⁴ See *Application of Motorola Satellite Communications, Inc.*, Order and Authorization, 10 FCC Rcd 2268, ¶ 25 (IB 1995).

⁵ See generally Iridium Next Order, ¶¶ 45-47.

⁶ *Id.*, ¶ 5 n.22.

⁷ *Iridium Announces Successful First Launch of Iridium NEXT Satellites*, Iridium.com (Jan. 14, 2017), available at <http://investor.iridium.com/releasedetail.cfm?releaseid=1007978>.

approximately 763 km. There, these first-generation satellites can serve as spares to support Iridium's phased deployment of Iridium NEXT while they are de-boosted and de-orbited on a rolling basis. While positioned in storage orbit, the first-generation satellites will not be co-located and will not operate as part of Iridium's mission constellation.⁸

II. PUBLIC INTEREST STATEMENT

Grant of this STA request will serve the public interest. As the Commission has acknowledged, Iridium NEXT will "provide mobile voice and data services to end users on a network with improved voice quality and enhanced data transmission speeds."⁹ Allowing Iridium to retain some first-generation spares will backstop Iridium's phased transition to Iridium NEXT and its provision of these beneficial service enhancements. In addition, the STA will have a negligible effect on orbital debris mitigation. As Iridium subsequently launches second-generation satellites, Iridium will de-boost and de-orbit the first-generation satellites on a rolling basis. Use of the storage orbit will also provide time separation between the deorbits and ensure the availability of engineering resources needed to coordinate the safe movement of multiple satellites.

Grant of this STA request also poses no interference risk. The proposed location of the first-generation spare satellite orbit ensures safe station-keeping without any overlap in orbital position. Further, upon replacement by a second-generation satellite in the mission constellation, a first-generation satellite will suspend mission operations and will not be co-located and operated in tandem with the second-generation satellite.

⁸ Cf. File No. SAT-MOD-20120813-00128.

⁹ Iridium NEXT Order, ¶ 1.

III. CONCLUSION

Iridium respectfully requests that the Commission expeditiously grant this STA to permit Iridium to retain up to 10 first-generation satellites in a storage orbit as spares prior to their deorbit.

Respectfully submitted,

Jennifer D. Hindin
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Washington, DC 20006

By: *Maureen C. McLaughlin*
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February 23, 2017