


APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Fargo STA

1. Applicant

Name:	Planet Labs Inc.	Phone Number:	415-829-3313
DBA Name:		Fax Number:	415-534-8992
Street:	490 2nd Street Suite 101	E-Mail:	mike@planet-labs.com
City:	San Francisco	State:	CA
Country:	USA	Zipcode:	94107
Attention:	Mr. Michael Safyan		



File: SES-STA-20140212-00075

Call Sign Name: Grant Date 4-23-14
(or other identifier)

From: 4-23-14 **From Dates:** To: 5-13-14

Approver: Paul E. Allen

GRANTED
International Bureau


Conditions of Grant

Planet Labs Inc.

SES-STA-20140212-00074- MOREHEAD, KY
SES-STA-20140212-00075- FARGO, ND
SES-STA-20140212-00076- HALFMOON BAY, CA

Planet Labs Inc. is granted special temporary authority, for 30 days, to operate fixed earth stations, as noted in the applications above, with the Flock1A , S2912, non-geostationary space station network on the 450.0 MHz (Earth-to-space) center frequency and on the 401.3 MHz (space-to-Earth) center frequency under the following conditions:

1. Operations at Halfmoon Bay, CA, Planet Labs must send the transmission schedule, orbital updates and stop buzzer P.O.C. to AFSPC.A6CE.SMO@US.AF.MIL
2. Planet Labs must coordinate operations with the local Society of Broadcast Engineers (SBE) coordinators to avoid interference to the Broadcast Auxiliary Services in the 450 – 450.03 MHz band
3. Operations on a non-interference basis only.
4. Operations on a non-protected basis only.
5. In the event that there is a report of interference, Planet Labs must immediately terminate transmissions and notify the FCC in writing.
6. Grant of this authorization is without prejudice to any determination that the Commission may make regarding any other pending or future Planet Labs applications.
7. Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the antennas' power flux-density levels exceed the specified guidelines.
8. Planet Labs shall take extraordinary measures to ensure that the antenna does not create the potential for exposure of persons who may be within the immediate vicinity of radiofrequency radiation in excess of FCC safety guideline to prevent human exposure in excess of the FCC-specified safety limits. Warning signs, such as those discussed in the FCC's OET Bulletin 65, shall be posted informing members of the public to keep outside the exposure area that exceeds limit.
9. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Planet Labs 's own risk..

 GRANTED International Bureau	File # <u>SES-STA-2014 0212-00075</u>
	Call Sign <u>None</u> Grant Date <u>4-3-14</u> (or other identifier)
	From <u>4-3-14</u> Term Dates To: <u>5-3-14</u>
	Approver's <u>Paul E. Blaker</u>

2. Contact

Name: Planet Labs Inc. **Phone Number:** 415-829-3313
Company: **Fax Number:** 415-534-8992
Street: 490 2nd Street **E-Mail:** mike@planet-labs.com
Suite 101
City: San Francisco **State:** CA
Country: USA **Zipcode:** 94107 -
Attention: Mr. Michael Safyan **Relationship:** Engineer

(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 CGX - Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant Change Station Location Other

6. Requested Use Prior Date

02/25/2014

7. City/Fargo

8. Latitude
(dd mm ss.s h) 46 54 36.51 N

9. State ND	10. Longitude (dd mm ss.s h) 96 47 47.7 W
11. Please supply any need attachments. Attachment 1: Exhibit A	Attachment 2: Attachment 3:
12. 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.)	<div style="border: 1px solid black; padding: 5px;"> <p>See Exhibit A</p> </div>
13. 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.	<p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>
14. Name of Person Signing Michael Safyan	15. Title of Person Signing Regulatory Compliance
<p style="text-align: center;">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).</p>	

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Description of Request for Special Temporary Authority

Planet Labs Inc. (“Planet Labs”) hereby requests special temporary authority (“STA”) to operate a proposed “UHF” earth station located in Fargo, ND for 30 days, beginning February 25, 2014. The proposed earth station will transmit at 450.0 MHz, and receive at 401.3 MHz. Testing will involve communications with Flock 1, a constellation of non-geostationary orbit (“NGSO”) Earth Exploration Satellite Service (“EESS”) imaging satellites¹.

As detailed in the Flock 1 application, during initial commissioning and emergency situations, the Flock 1 ground segment is designed to send telecommand signals to the Flock 1 satellites using the 450.0 MHz channel, and will receive telemetry signals from the satellites using the 401.3 MHz channel. The proposed site in Fargo, ND has been identified as a potential location for such an earth station site.

Launch of the Flock 1 satellites to the International Space Station (ISS) occurred in January 2014. Throughout the months of February and March 2014, all 28 satellites will gradually be deployed from the ISS into low earth orbit and activated. Planet Labs has an immediate need to operationally test the validity of the proposed earth station located in Fargo, ND by communicating with the Flock 1 satellites. Pending testing results during the requested 30 days, Planet Labs intends to file a follow-on application for regular authority for this earth station with identical technical parameters. Grant of this STA request will serve the public interest by allowing Planet Labs to begin immediate testing of the proposed earth station site to support operations of Flock 1.

In summary and on the basis of the information provided herein, Planet Labs requests, for a period of 30 days commencing on February 25, 2014, special temporary authority to operate its proposed earth station for testing purposes.

¹ See File No. SAT-LOA-20130626-00087

Technical Parameters

The following describes the technical parameters and operational constraints Planet Labs proposes to operate under.

Operation	Frequency
Receive (space-to-Earth)	
Digital/Telemetry Downlink	401.270 – 401.33 MHz
Transmit (Earth-to-space)	
Digital/Command Uplink	449.970 – 450.03 MHz

Polarization: horizontal and vertical

Emissions:

<u>Freq (MHz)</u>	<u>Emissions</u>	<u>Max. EIRP (dBW)</u>	<u>Max. EIRP Density (dBW/4kHz)</u>	<u>Modulation & Service</u>
449.970 - 450.03 MHz	60K0F1D	25.48	13.72	Digital/TC (GFSK)

Satellites: Flock 1

Conditions:

1. Operations on a non-interference basis only.
2. Operations on a non-protected basis only.
3. Planet Labs shall take extraordinary measures to ensure that the antenna does not create the potential for exposure of persons who may be within the immediate vicinity of radiofrequency radiation in excess of FCC safety guideline to prevent human exposure in excess of the FCC-specified safety limits. Warning signs, such as those discussed in the FCC's OET Bulletin 65, shall be posted informing members of the public to keep outside the exposure area that exceeds limit.