

S2912 SAT-MOD-20140321-00032 IB2014000523
Planet Labs Inc.
FLOCK 1b & c



File # SAT-MOD-20140321-00032

Call Sign S2912 Grant Date 06/18/14

(or other identifier)

Term Dates See

From 06/18/14

To: conditions

Approved by OMB
3060-0678

Approved: Stephen J. Duall

Stephen J. Duall
Chief, Satellite Policy Branch

*with conditions

Date & Time Filed: Mar 21 2014 1:38:08:136PM
File Number: SAT-MOD-20140321-00032

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Flock 1b and Flock 1c mod

1-8. Legal Name of 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.com
City:	San Francisco	State:	CA
Country:	USA	Zipcode:	94107 -
Attention:	Mr. Michael Safyan		

Attachment to Grant
IBFS File No. SAT-MOD-20140321-00032
Call Sign S2912

The application of Planet Labs, Inc. for modification of its license to launch and operate non-geostationary orbit (NGSO) remote-sensing space stations IS GRANTED as conditioned below. Specifically, Planet Labs is authorized to launch and operate 39 additional NGSO satellites that are physically and technically identical to those previously authorized under Call Sign S2912, which will transmit remote-sensing and telemetry data to fixed earth stations in the 8025-8400 MHz frequency band, receive command signals in the 2025-2110 MHz band, and may use the 401-402 MHz and 449.75-450.25 MHz bands for early-phase and emergency-backup telemetry, tracking, and command operations. Twenty eight of the additional satellites (“Flock 1b”) are to operate in circular orbits at altitudes between 380 and 410 kilometers. The other 11 additional satellites (“Flock 1c”) are to operate in circular orbit at an altitude of 620 kilometers. Operations under this authorization must be in accordance with the previously authorized parameters for S2912, except as otherwise specified in IBFS File No. SAT-MOD-20140321-00032, and must comply with the Federal Communications Commission’s rules except as waived herein, subject to the following conditions:

1. Planet Labs must prepare the necessary information, as may be required, for submission to the International Telecommunication Union (ITU) to initiate and complete the advance publication, international coordination, due diligence, and notification process for these space stations, in accordance with the ITU Radio Regulations. Planet Labs shall be held responsible for all cost-recovery fees associated with ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations. See 47 C.F.R. § 25.111(b).
2. Power flux-density from operation in the 8025-8400 MHz band must not exceed the limits in No. 22.5 or Table 21-4 of the International Telecommunication Union’s Radio Regulations or the limits in ITU-R Recommendation SA-1157. 3.
3. Operations pursuant to this authorization must not cause harmful interference to stations operating in the 2025-2110 MHz band in accordance with the U.S. Table of Frequency Allocations. See 47 C.F.R. § 2.106, Footnote US347.
4. Given the opportunity for additional entrants to operate in the 8025-8400 MHz band, we grant Planet Lab’s request for waiver of the modified processing round requirements of 47 C.F.R. §§ 25.156 and 25.157. See *DigitalGlobe, Inc.*, Order and Authorization, 20 FCC Rcd 15696 (Sat. Div., Int’l Bur. 2005), at Paragraph 8.
5. Because Planet Labs must comply with technical requirements in Part 2 of the Commission's rules and the above-referenced power flux-density limits, which should prevent harmful interference to other operators in the band, we grant its request for a waiver of the default service rules in 47 C.F.R. § 25.217(b). See *DigitalGlobe, Inc.*, *supra*, at Paragraph 15.

Attachment to Grant
IBFS File No. SAT-MOD-20140321-00032
Call Sign S2912

6. Planet Labs must disable the data transmitters in the 8025-8400 MHz band on Flock 1 satellites on a one-for-one basis as Flock 1b satellites commence operations in that frequency band.
7. Flock 1c satellites are not authorized for downlink transmissions in the 8025-8400 MHz frequency band to ground stations in Alaska.
8. Unless extended by the Commission for good cause shown, this authorization will become null and void in the event the authorized space stations are not constructed and launched in accordance with this application pursuant to the schedule in Section 25.164(b) of the Commission's rules:
 - a. Enter into a binding non-contingent satellite construction contract by June 18, 2015.
 - b. Complete Critical Design Review by June 18, 2016.
 - c. Begin construction of the first satellite by December 18, 2016.
 - d. Launch one satellite, place it in the authorized orbit, and operate it in accordance with this authorization by December 18, 2017
 - d. Bring all of the authorized satellites into operation by June 18, 2020.
9. Planet Labs must file a bond with the Commission in the amount of \$5,000,000 pursuant to 47 C.F.R. § 25.165 and the procedures set forth in Public Notice, DA 03-2602, 18 FCC Rcd 16283 (2003), within 30 days of the date of this grant, *i.e.*, by July 18, 2014.
10. Within 30 days after deployment of each Flock 1b satellite pursuant to this authorization, Planet Labs must file a notification with the Commission specifying its apogee and perigee altitudes and orbital inclination.
11. The authority granted herein is subject to the existing license term for operation under S2912.
12. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106 and 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.



*with conditions

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Term Dates see
From 06/18/14 To: conditions
Approved: Stephen J. Duall

Stephen J. Duall
Chief, Satellite Policy Branch

9-16. Name of Contact Representative

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

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- b3. Amendment to a Pending Application
- b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)
- (N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States
- (N/A) b12. Application for Database Entry
- b13. Amendment to a Pending Database Entry Application
- b14. Modification of Database Entry

<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).</p> <p><input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee</p> <p><input type="radio"/> Other (please explain):</p>	
<p>17d.</p> <p>Fee Classification CGW – Space Station Modification (Non-Geostationary)</p>	
<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2912</p>	<p>19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:</p> <p>(a) Date pending application was filed: (b) File number: SATLOA2013062600087</p>

TYPE OF SERVICE

<p>20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:</p> <p><input type="checkbox"/> a. Fixed Satellite</p> <p><input type="checkbox"/> b. Mobile Satellite</p> <p><input type="checkbox"/> c. Radiodetermination Satellite</p> <p><input checked="" type="checkbox"/> d. Earth Exploration Satellite</p> <p><input type="checkbox"/> e. Direct to Home Fixed Satellite</p> <p><input type="checkbox"/> f. Digital Audio Radio Service</p> <p><input type="checkbox"/> g. Other (please specify)</p>	
<p>21. STATUS: Choose the button next to the applicable status. Choose only one.</p> <p><input type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier</p>	<p>22. If earth station applicant, check all that apply.</p> <p><input checked="" type="checkbox"/> Using U.S. licensed satellites</p> <p><input type="checkbox"/> Using Non-U.S. licensed satellites</p>
<p>23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:</p> <p><input type="radio"/> Connected to a Public Switched Network <input type="radio"/> Not connected to a Public Switched Network <input checked="" type="radio"/> N/A</p>	
<p>24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).</p> <p><input type="checkbox"/> a. C-Band (4/6 GHz) <input type="checkbox"/> b. Ku-Band (12/14 GHz)</p> <p><input checked="" type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.)</p> <p>Frequency Lower: 401 Frequency Upper: 8400 (Please specify additional frequencies in an attachment)</p>	

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary–Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non–Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive Transmit–Only Receive–Only N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a — authorization to add new emission designator and related service
- b — authorization to change emission designator and related service
- c — authorization to increase EIRP and EIRP density
- d — authorization to replace antenna
- e — authorization to add antenna
- f — authorization to relocate fixed station
- g — authorization to change frequency(ies)
- h — authorization to add frequency
- i — authorization to add Points of Communication (satellites & countries)
- j — authorization to change Points of Communication (satellites & countries)
- k — authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l — authorization to change orbit location
- m — authorization to perform fleet management
- n — authorization to extend milestones
- o — Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

Yes No

ODAR – Flock 1b

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30–34.

29. Is the applicant a foreign government or the representative of any foreign government?

Yes No

30. Is the applicant an alien or the representative of an alien?

Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government?

Yes No N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes No N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes No N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

ODAR – Flock 1c

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

Yes No

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Exhibit 40

41. 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

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Planet Labs Inc. requests modification of its authorization to operate a NGSO EESS space station license, Call Sign S2912, to add a total of thirty nine (39) additional satellites (Flock 1b and Flock 1c) to the authorized system . See Exhibit 43 for additional information.

Exhibit 43

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Michael Safyan

46. Title of Person Signing
Regulatory Compliance

→

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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