

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Planet Labs Inc.)	File No. SAT-LOA-20130626-00087
)	Call Sign S2912
Application for Authority to Launch and)	
Operate 28 NGSO Remote-Sensing)	
Satellites)	

COMMENTS OF DIGITALGLOBE, INC.

DigitalGlobe, Inc. (“DigitalGlobe”), by counsel and pursuant to Section 25.154 of the Commission’s Rules, 47 C.F.R. § 25.154, hereby comments on the above-captioned application of Planet Labs Inc. (“Planet Labs”).¹ DigitalGlobe strongly disagrees with the claim in the Planet Labs application regarding the “unlikely” potential for interference between its proposed Earth Exploration Satellite Service (“EESS”) system and other EESS systems operating in the 8025-8400 MHz band. Because that interference potential is instead very real, the Commission should require that Planet Labs bear the burden of coordination of its proposed satellite transmissions, and that Planet Labs modify its proposed operations as necessary to protect against interference to DigitalGlobe and other EESS operators.

¹ See Public Notice, Report No. SAT-00964 (rel. Aug. 2, 2013).

DigitalGlobe is one of the leading providers of space-based earth imagery products and services.² DigitalGlobe transmits high-resolution satellite images from its non-geostationary-orbit (“NGSO”) satellites to its ground segments using the 8025-8400 MHz band allocated to the EESS.

In its application, Planet Labs requests authority to launch and operate a constellation of 28 NGSO remote sensing satellites that would also transmit image data using the 8025-8400 MHz downlink band. Planet Labs addresses the potential for interference between its proposed Flock 1 constellation of satellites and those of other EESS systems operating at 8025-8400 MHz, concluding that such interference is “unlikely.” Specifically, Planet Labs asserts:

Interference between the Flock 1 satellites and those of other systems is unlikely because EESS systems operating in the 8025-8400 MHz band normally transmit only in short periods of time while visible from the dedicated receiving earth stations. For the interference to happen, satellites belonging to different systems would have to travel through the antenna beam of the receiving earth station and transmit at the same time. In such an unlikely event, the interference can be still be avoided by coordinating the satellite transmissions amongst the various EESS users so that they do not occur simultaneously.³

This statement grossly underestimates the potential for interference between EESS systems. The unsupported claim that simultaneous downlink events are “unlikely” occurrences is simply not credible given the large number of space stations – a total of 28 – that comprises Planet Labs’ proposed Flock 1 constellation. A constellation with that many satellites cannot avoid routine concurrent passes with the satellites of other EESS operators. Indeed,

² Through wholly-owned subsidiary companies, DigitalGlobe is authorized to operate the Quickbird, WorldView-1 and WorldView-2 EESS satellites under Call Sign S2129, the IKONOS EESS satellite under Call Sign S2144, and the GeoEye-1 EESS satellite under Call Sign S2348.

³ Planet Labs Application, Exhibit 43 at 7.

DigitalGlobe's analysis indicates that nearly 40 percent of the downlink passes over its U.S. ground sites will also have a downlinking Planet Labs satellite in view. When averaged over a month's time, DigitalGlobe calculates that 13 percent of its total available downlink time will coincide with downlink time of Planet Labs. The duration of these concurrences will vary from a few seconds to the entire concurrent pass itself. With Planet Labs' as-yet undefined global distribution of ground stations, the potential for interference with DigitalGlobe and other EESS operators will increase proportionately.

During these concurrences it is very possible that the Planet Labs downlinks will interfere with DigitalGlobe's authorized operations. The proposed Planet Labs satellites will use broad-beam/low-gain antennas for its high-power, high-rate mission data downlinks. When combined with its indeterminate pointing profile (which according to the Planet Labs application could be nadir pointing or ground station pointing, with no further explanation of how often each such mode will be used or which of the two antenna will be used for each mode),⁴ the potential is unacceptably high that substantial amounts of RF energy from Planet Labs' operations will spill over a very broad area of the earth, thereby affecting DigitalGlobe's operations.⁵

For the foregoing reasons, DigitalGlobe respectfully requests that prior to any grant of the PlanetLabs application, Planet Labs bear the burden of coordination of its planned satellite

⁴ DigitalGlobe cannot quantify the exact potential for radio-frequency ("RF") interference due to the ambiguity of PlanetLabs' downlink and pointing operations and the lack of detailed information concerning Planet Labs' design. Nevertheless, the potential for interference is a justifiable cause for concern.

⁵ In contrast to the Planet Labs satellites, the DigitalGlobe satellites use narrow-beam/high-gain antennas pointed directly at the target earth stations for the mission data downlinks. This ensures that RF energy is confined to a small footprint centered on the earth station.

transmissions and that Planet Labs modify its operations as necessary to protect against interference to other EESS operators, including DigitalGlobe.

Respectfully submitted,

DIGITALGLOBE, INC.

By: /s/ Philip A. Bonomo
Philip A. Bonomo

Lerman Senter PLLC
2000 K Street, NW, Suite 600
Washington, DC 20006
Tel. 202-429-8970

September 3, 2013

Counsel to DigitalGlobe, Inc.

TECHNICAL CERTIFICATE

I, Keith Constantinides, hereby certify that I am the technically qualified person responsible for the preparation of the technical discussion contained in the foregoing “Comments of DigitalGlobe, Inc.,” that I am familiar with Part 25 of the Commission’s Rules (47 C.F.R., Part 25), and that I have either prepared or reviewed the technical information and supporting facts contained herein and found them to be complete and accurate to the best of my knowledge and belief.

September 3, 2013

By: /s/ Keith Constantinides
Keith Constantinides

CERTIFICATE OF SERVICE

I, Rebecca J. Cunningham, do hereby certify that on this 3rd day of September, 2013, I sent a copy of the foregoing "Comments of DigitalGlobe, Inc." via first-class mail to:

Michael Safyan
Planet Labs Inc.
490 2nd Street, Suite 101
San Francisco, CA 94107

/s/ Rebecca J. Cunningham

Rebecca J. Cunningham