EXHIBIT 43
Planet Labs Inc.
License Application
FCC Form 312
September 2014

Description of Application

With this application, Planet Labs Inc. ("Planet Labs") requests modification of its authorization to operate a non-geostationary ("NGSO") Earth imagery satellite system, Call Sign S2912. As detailed in the application below, Planet Labs intends to continuously maintain and operate a constellation of up to **fifty six (56)** technically identical satellites via deployments from the International Space Station ("ISS"). Due to the low altitude of the ISS, and thus the short orbital lifetime of the Planet Labs satellites, a continuous series of replenishment launches is required to maintain such a constellation. In light of this need, Planet Labs requests authorization to launch a total of up to five hundred (500) technically identical satellites to the "ISS orbit" over the next 10 years, with the number of simultaneously operational satellites in the ISS orbit never exceeding fifty six (56). Along with the currently authorized eleven (11) satellites of Flock 1c, a total number of sixty seven (67) active Planet Labs satellites will be maintained on orbit. Further additions to the Planet Labs satellite network are still in the planning stages and will be addressed in future license modifications. Only new information is provided in this narrative; all other information remains identical to the currently authorized satellite systems.[1]

Planet Labs anticipates launching an additional twenty six (26) identical satellites, collectively known as Flock 1d, as early as October 14, 2014, followed by a series of similar launches spaced approximately 6 months apart over the next 10 years. As was the case with Flock 1 and Flock 1b, Flock 1d (and all future "ISS Flocks") will be transported to the ISS aboard a cargo resupply mission and ejected from the ISS to an altitude between 380 and 410 km, 51.6° inclination. As the orbit naturally decays, operations of the X-band and S-band links will continue down to 300 km altitude, and operations of the UHF links will continue down to 200 km altitude. Flock 1d is currently scheduled to deploy from the ISS as early as January 2015, and future "ISS Flocks" will typically deploy 1 to 3 months from the time of launch.

Planet Labs has already submitted an application for license from the National Oceanic and Atmospheric Administration ("NOAA") to operate Flock 1d, which is a private remote sensing space system, and will continue to seek license from NOAA for all future launches. Planet Labs has previously received license to operate from NOAA for Flock 1, Flock 1b and Flock 1c.[2]

[1] *See* File No. SAT-LOA-20130626-00087 (granted 12/03/13,Call Sign S2912) and File No. SAT-MOD-20140321-00032 (granted 06/18/14, Call Sign S2912).
[2] *See* Planet Labs Inc. License from National Oceanic and Atmospheric Administration to Operate a Private Remote Sensing Space System for Flock 1, 1b and 1c (Access at http://www.nesdis.noaa.gov/CRSRA/licenseHome.html).

Timely deployment of the proposed satellite systems will enable Planet Labs to guarantee uninterrupted operations of the unique imaging services being provided to customers in the U.S. and around the world. To the extent necessary to enable Commission action prior to the launch of Flock 1d as early as October 14, 2014, Planet Labs respectfully requests expedited consideration of this request for launch and operation authority. In support of its request for authorization, Planet Labs offers the following information concerning its proposed satellite system.

I. Description of the Applicant

Planet Labs Inc. is a U.S. company funded by private investment and is headquartered in San Francisco, California. Planet Labs was initially incorporated in Delaware in December, 2010 under the name Cosmogia Inc., and the name of the corporation was legally changed to Planet Labs Inc. in June 2013. Planet Labs designs, constructs and operates small Earth imagery satellites, and provides Earth imagery products on a commercial basis to a variety of customers.

Planet Labs launched and operated two successful experimental missions, Dove 1 and Dove 2, in April 2013.[3] Planet labs also launched, and continues to operate, a third successful experimental mission, Dove 3, in November 2013.[4]

Once the satellite technology was matured via the experimental missions, Planet Labs began launching operational constellations. Planet Labs launched Flock 1, an operational constellation of 28 identical satellites, to the ISS in January 2014 under Call Sign S2912. Flock 1 was gradually deployed from the ISS throughout the month of February 2014 and successfully operated for approximately 5 months until the satellites began to deorbit and completely burn up via atmospheric decay. Planet Labs also launched Flock 1c in June 2014, a constellation of 11 identical satellites, to a 620 x 620 km Sun Synchronous Orbit (SSO), under Call Sign S2912, which continues to operate and has an expected operational lifetime of at least 2 years. Planet Labs then launched Flock 1b in July 2014 to the ISS, a constellation of 28 satellites to replace Flock 1, also under Call Sign S2912. The Flock 1b satellites are currently undergoing their deployment campaign, which is expected to complete sometime in January 2015. The physical and technical design of the proposed Flock 1d and future "ISS Flock" satellites are identical to that of Flock 1, Flock 1b and Flock 1c.

II. Information Required Under Section 25.114(d) of the Commission's Rules

A. General Description of Overall Facilities, Operations and Services

The proposed satellite system will consist of a space segment comprised of the following identical satellites:

- "ISS Flocks", up to 56 active satellites
- Flock 1c, 11 satellites
- Total of 67 satellites

And a ground segment comprised of earth stations located in:

- Brewster, WA[5]
- Fairbanks, AK (planned)[6]
- Maddock, ND (planned)
- Half Moon Bay, CA (UHF TT&C-only)[7]

[3] *See* FCC OET file number 0898-EX-ST-2012 and 0100-EX-PL-2012, respectively.
[4] *See* FCC OET file number 0548-EX-PL-2012.
[5] *See* SES-MOD-20140630-00551 (filed 06/30/2014 , Call Sign E990069).
[6] The Fairbanks, AK earth station site will not be visible to Flock 1d or any other ISS Flocks. This site is planned for use with Flock 1c and any future SSO satellites.

- Fargo, ND (UHF TT&C-only)[8]
- Morehead, KY (UHF TT&C-only)[9]
- Las Cruces, NM (planned, UHF TT&C-only)

along with other earth stations located in:

- Goonhilly, United Kingdom
- Awarua, New Zealand
- Usingen, Germany
- Ningi, Australia

All 26 Flock 1d satellites will be transported to the International Space Station (ISS) via a single Resupply Flight on Orbital Science's Antares launch vehicle no earlier than October 14, 2014. Once the 26 satellites have been delivered to the ISS, they will gradually be deployed into orbit starting as early as January 2015. All future "ISS Flocks" will be delivered to the ISS and deployed into orbit in a similar manner. The orbital period of the "ISS Flock" satellites, including Flock 1d, will be approximately 92 minutes. The nominal lifetime of the "ISS Flock" satellites, including Flock 1d, will be approximately 7 months. As was the case with Flock 1, all "ISS Flock" satellites, including Flock 1d, will naturally decay and the satellites will completely burn up in the atmosphere.

B. Power Flux Density Calculation

1. Power Flux Density at the Surface of the Earth in the band 8025-8400 MHz

The "ISS Flock" satellites, including Flock 1d, will operate in the same altitude band as Flock 1, and thus the power flux density (PFD) levels at the surface of the Earth will be identical to that of Flock 1, which was shown under all scenarios to be within the limits set forth in the ITU Radio Regulations Table 21-4.[10]

2. Power Flux Density at the Geostationary Satellite Orbit

The "ISS Flock" satellites, including Flock 1d, will operate in the same altitude band as Flock 1, and thus the power flux density (PFD) levels at GSO will be identical to that of Flock 1, which was shown under all scenarios to be within the limits set forth in the ITU Radio Regulations No. 22.5.[11]

---

[7] *See* SES-LIC-20140318-00146 (granted 06/30/2014, Call Sign E140036)
[8] *See* SES-LIC-20140411-00283 (granted 06/26/2014, Call Sign E140041)
[9] *See* SES-LIC-20140411-00282 (granted 06/25/2014, Call Sign E140040)
[10] *See* Planet Labs Inc., SAT-LOA-20130626-00087 (granted December 03, 2013).
[11] *Ibid.*

C. Interference Analysis

1. Interference between EESS systems operating in the band 8025-8400 MHz

Interference between the Planet Labs 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 narrow 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.

D. Public Interest Considerations

The grant of this application will permit Planet Labs to continue to launch and operate a state-of-the-art remote sensing satellite system. The data produced by the Planet Labs satellites will empower users to make better decisions and will help enable a more sustainable planet. Planet Labs will provide a unique data set of global-coverage, frequently updated imagery that is currently unavailable from private sector or government remote sensing providers. In addition to traditional consumers of remote sensing data, Planet Labs will provide direct benefit to environmental and humanitarian organizations that historically have not had access to this extent of imagery. This service will compliment existing offerings in the remote sensing market and will help promote new users and applications.

E. Orbital Debris Mitigation

Planet Labs has conducted an Orbital Debris Assessment Report ("ODAR") for the Flock 1d satellites in compliance with NASA-STD-8719.14, Appendix A, which is attached as a separate exhibit and is also representative of all future "ISS Flocks". As discussed in the submitted ODAR, the Flock 1d satellite systems, and thus all future "ISS Flocks", are compliant with all applicable orbital debris requirements as listed in Section 25.114(d)(14).

III. Additional/General Considerations

A. Waiver Request of Modified Processing Round Rules

Planet Labs requests that this application be processed pursuant to the first-come, first-served procedure adopted for "GSO-like satellite systems" under Section 25.158 of the Commission's rules. [12] To the extent necessary to allow for such processing, Planet Labs also requests waiver of Sections 25.156 and 25.157 of the Commission's rules, which stipulate the processing of "NGSO-like satellite systems" under a modified processing round framework.[13][14] The Commission has previously waived the modified processing round requirement and allowed a number of EESS NGSO satellite systems to be processed on a first-come, first-served basis, including the original Planet Labs authorization.[15][16][17]

Planet Labs' system is fully capable of sharing with current and future NGSO systems operating in the same frequency bands, even with the proposed additional satellites. Spectrum sharing will be possible because the Planet Labs satellites and satellites in other systems transmit only in short periods of time while visible from a limited number of dedicated receiving earth stations. For harmful interference to occur, satellites belonging to different systems would have to travel through the narrow antenna beam of the receiving earth station and transmit at the exact same time. In such an unlikely event, the resulting interference can still be avoided by coordinating the satellite transmission so that they do not occur simultaneously. For these reasons, the waiver request here is fully warranted because waiving Sections 25.156 and 25.157 will not undermine the policy objectives of those rules.

B. Waiver Request of Default Service Rules

Planet Labs requests a waiver of the default service rules under Section 25.217(b) of the Commission's rules[18]. Although the Commission has not adopted band-specific rules for EESS NGSO operations in the 8025-8400 MHz band, the Commission has previously granted a waiver of the default service rules contained in Section 25.217(b) to NGSO EESS system licensees, based on the fact that EESS operators in the 8025-8400 MHz band are required to comply with technical requirements in Part 2 of the Commission's rules and applicable ITU rules[19]. In these cases, the Commission concluded that because the cited requirements had been sufficient to prevent harmful interference in the 8025-8400 MHz band, there was no need to impose additional technical requirements on operations in that band, and therefore granted the waiver requests. For these same reasons, the Commission should grant Planet Labs a waiver of the default service rules contained in Section 25.217(b).

---

[12] *See* 47 C.F.R. § 25.158.
[13] *See* 47 C.F.R. §§ 25.156 & 25.157.
[14] *See* 47 C.F.R. § 1.3; WAIT Radio v. FCC, 418 F.2d 1153 (D.C. Cir. 1969) ("WAIT Radio"); Northeast Cellular Telephone Co. v. FCC, 897 F.2d 1164 (D.C. Cir. 1990) ("Northeast Cellular").
[15] *See* Space Imaging, LLC, 20 FCC Rcd 11694, 11968 (2005). *See also* Stamp Grant, Skybox Imaging, Inc., SAT-LOA-20120322-00058 (granted September 20, 2012).
[16] *Id.* See also DigitalGlobe, Inc., 20 FCC Rcd 15696, 15699 (2005) (waiving Sections 25.156 and 25.157). *See also* Stamp Grant, Skybox Imaging, Inc., SAT-LOA-20120322-00058 (granted September 20, 2012).
[17] *See* Stamp Grant, Planet Labs Inc., SAT-LOA-20130626-00087 (granted December 03, 2013).
[18] *See* 47 C.F.R. § 25.217.
[19] *See* Space Imaging, 20 FCC Rcd at 11973; DigitalGlobe, 20 FCC Rcd at 15701-02 (2005). *See* also Stamp Grant, Skybox Imaging, Inc., SAT-LOA-20120322-00058 (granted September 20, 2012).

C. Form 312, Schedule S

As required by the Commission's rules and policies, Planet Labs has completed the FCC Form 312, Schedule S submission that reflects the orbital and physical/electrical characteristics of the Planet Labs satellite network.

D. Implementation Milestones

Planet Labs intends to supply the Commission with information sufficient to demonstrate that it has already satisfied the first three implementation milestones under Section 25.164(b) for NGSO systems in a separate submission. Planet Labs understands that in the absence of a favorable Commission determination of milestone compliance issued with the grant of this application or within 30 days thereafter, the full amount of the bond specified in Section 25.165(a)(1) will be required.

E. ITU Advance Publication Materials and Cost Recovery

Planet Labs has prepared the International Telecommunication Union ("ITU") Advance Publication Information submission for its proposed non-geostationary EESS system, and will provide this information to the Commission under separate cover. In particular, Planet Labs will provide an electronic file with this information to the Satellite Engineering Branch of the Satellite Division of the Commission's International Bureau. Planet Labs will also provided a letter acknowledging that it is responsible for any and all cost recovery fees associated with filings for the proposed system under ITU Council Decision 482 (modified 2008), as it may be modified or succeeded in the future.

In sum, Planet Labs respectfully requests the Commission to grant the application for launch and operation authority as detailed herein. To the extent necessary, Planet Labs requests expedited consideration of this Application in order to ensure favorable Commission action in advance of the scheduled October 14, 2014 launch of Flock 1d.

ATTACHMENT A
Planet Labs, Inc.
FCC Form 312, Exhibit 43
September 2014

NOTIFICATION OF COMMENCEMENT OF SPACE STATION CONSTRUCTION

Planet Labs Inc. ("Planet Labs"), pursuant to Section 25.113(f) of the Commission's rules, 47 C.F.R. § 25.113(f), hereby notifies the Commission that it has commenced construction, at its own risk, of the twenty six (26) Flock 1d non-geostationary orbit ("NGSO") satellites it proposes to launch and operate in the Application to which this statement is attached.[20] Planet Labs intends to add these spacecraft to its licensed NGSO Earth Exploration-Satellite Service system.

[20] *See* 47 C.F.R. § 25.164 (b)(3).

ATTACHMENT B
Planet Labs, Inc.
FCC Form 312, Exhibit 43
September 2014

LINK BUDGETS

Flock 1d, along with all future "ISS Flocks", will operate in the same altitude band as Flock 1, and thus will have the exact same link characteristics as the currently licensed system.[21]

[21] *See* File No. SAT-LOA-20130626-00087 (granted 12/03/13,Call Sign S2912).

Attachment C
Planet Labs Inc.
FCC Form 312, Exhibit 43
September 2014

PREDICTED GAIN CONTOURS

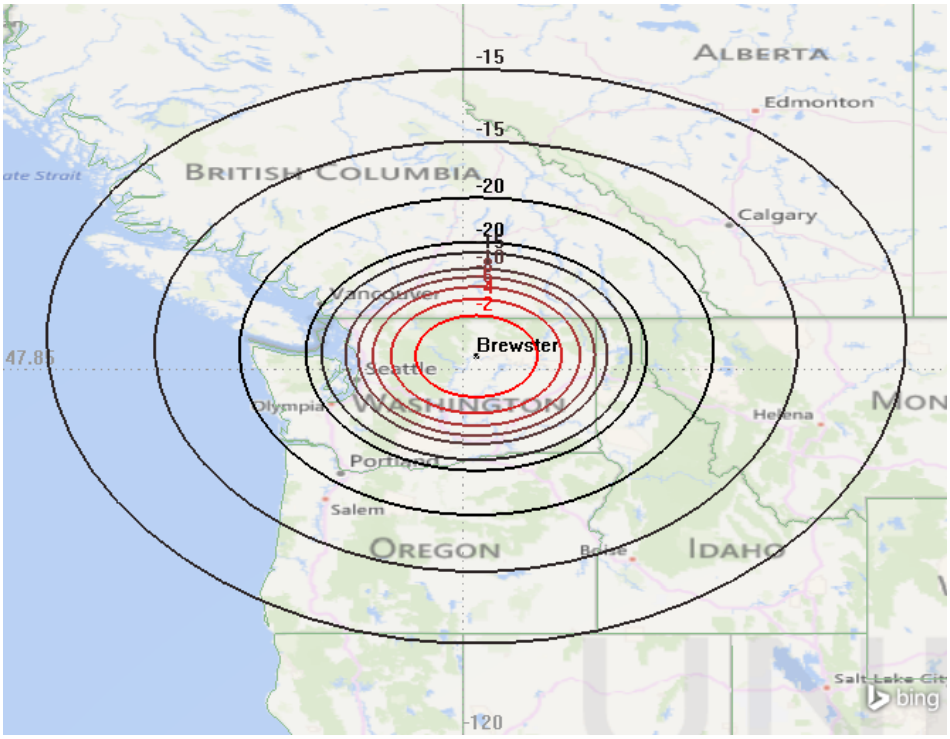

Figure 1 X-band helical antenna gain contour at 300km altitude over Brewster, WA ground station.

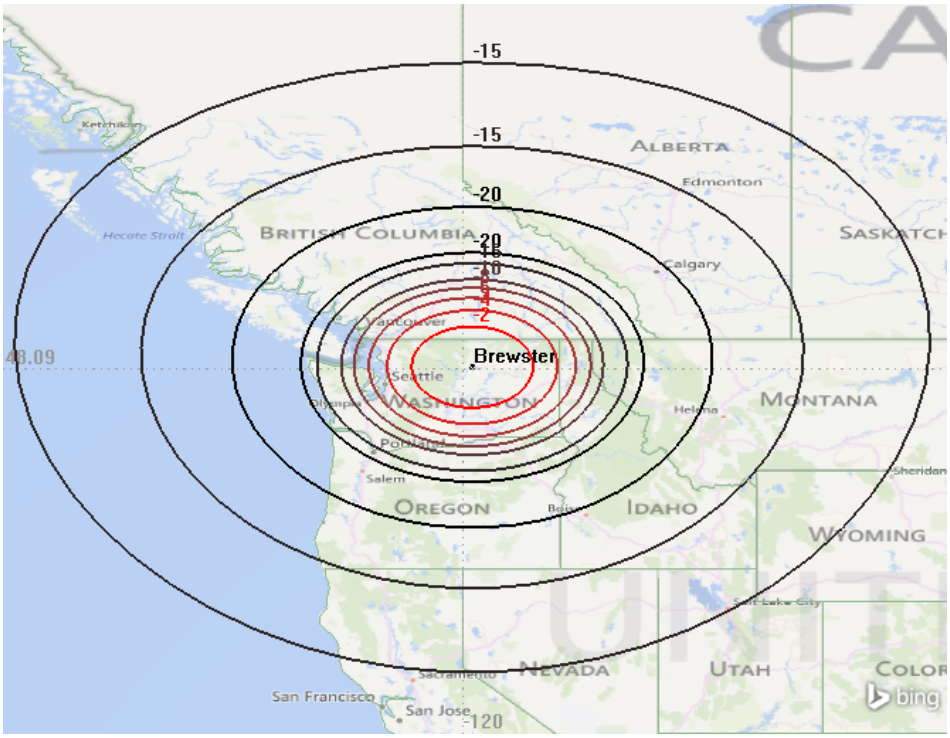

Figure 2 X-band helical antenna gain contour at 410 km altitude over Brewster, WA ground station.

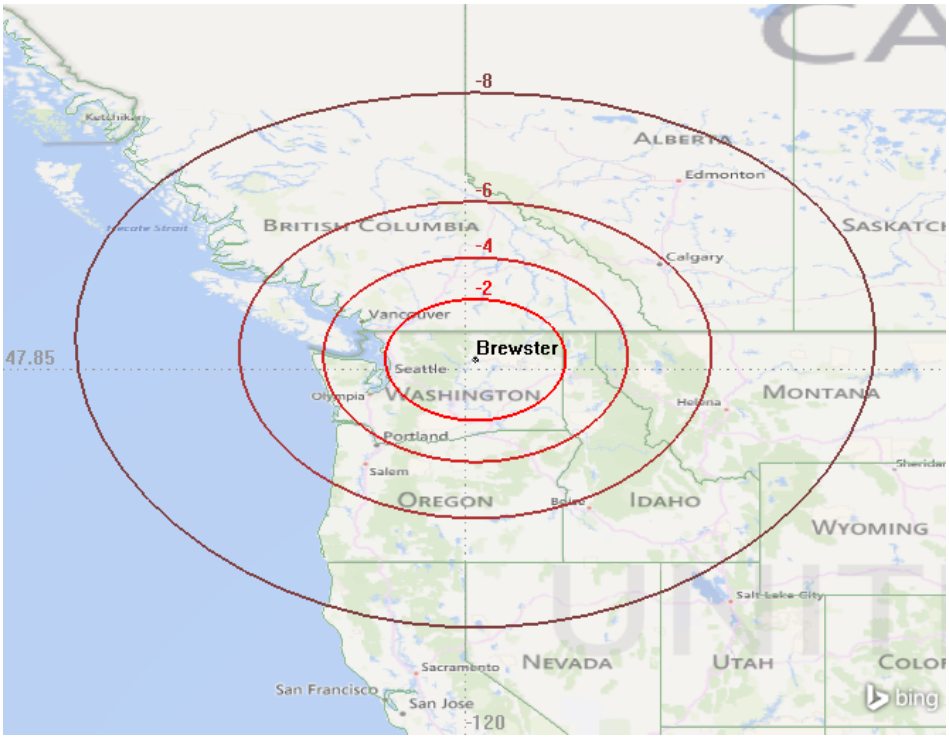

Figure 3 X-band patch antenna gain contour at 300km altitude over Brewster, WA ground station.[22]

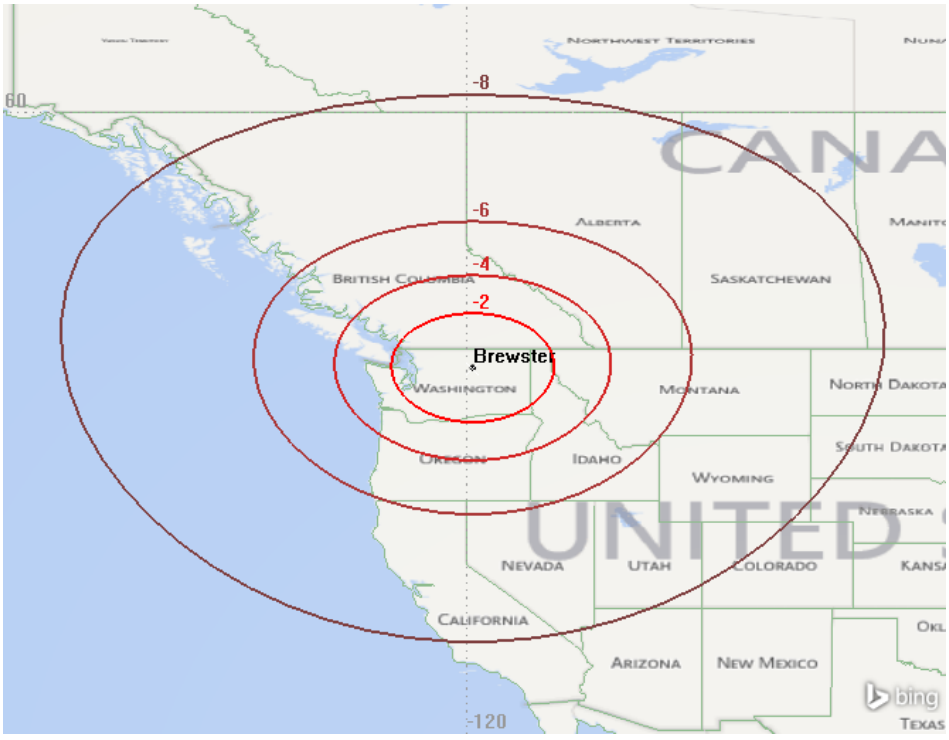

Figure 4 X-band patch antenna gain contour at 410 km altitude over Brewster, WA ground station [23]

[22] The -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are note shown.

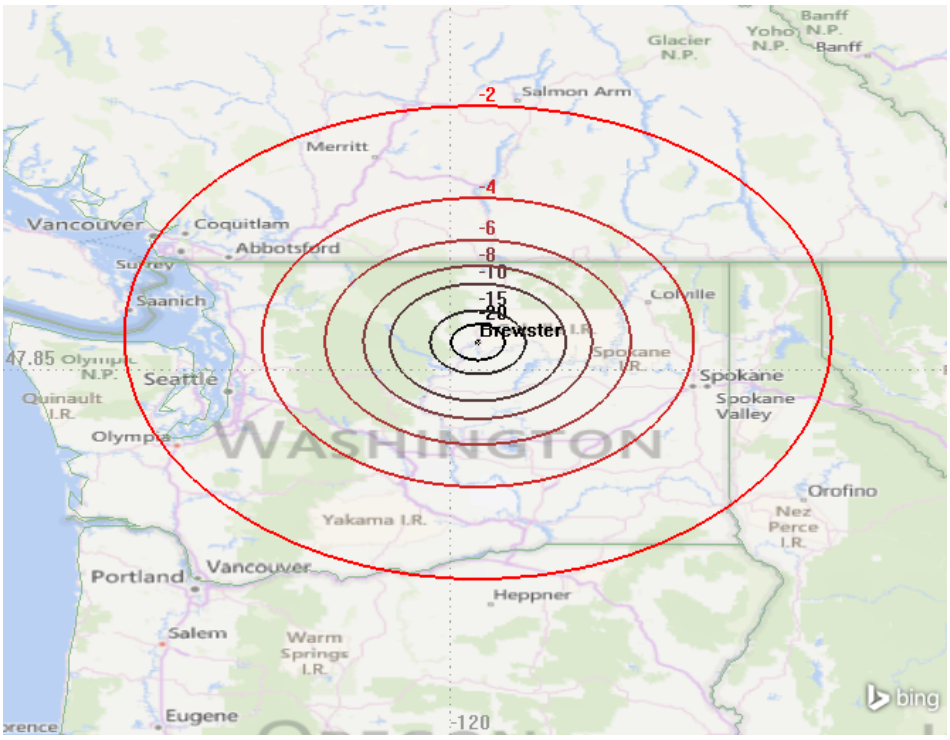

Figure 5 UHF monopole antenna gain contour at 200 km altitude over Brewster, WA ground station.

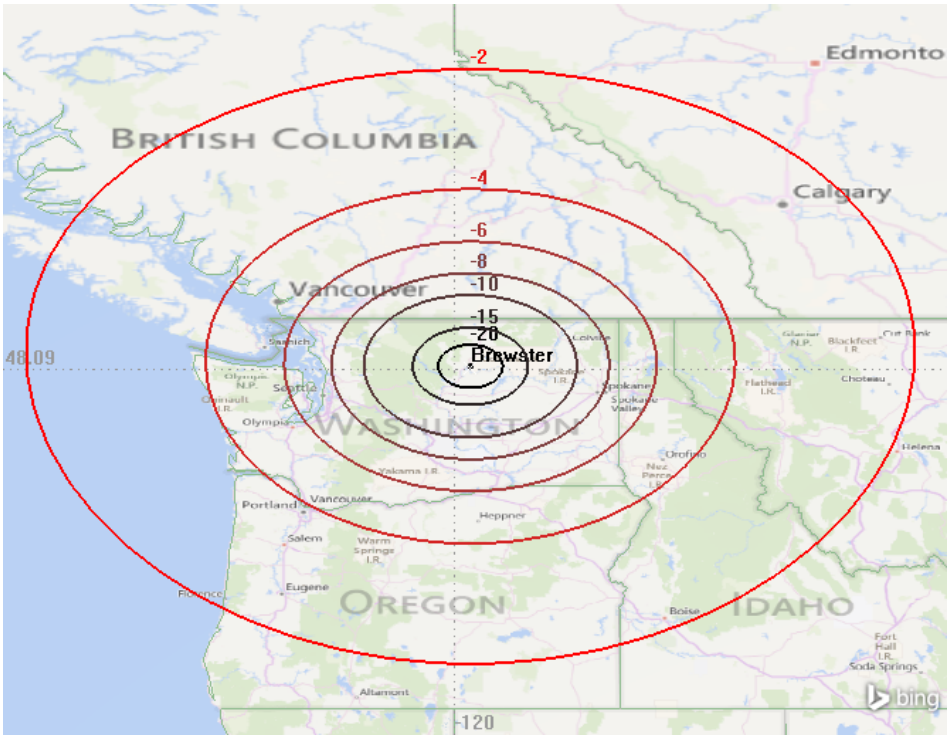

Figure 6 UHF monopole antenna gain contour at 410 km altitude over Brewster, WA ground station.

[23] The -8, -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are note shown.

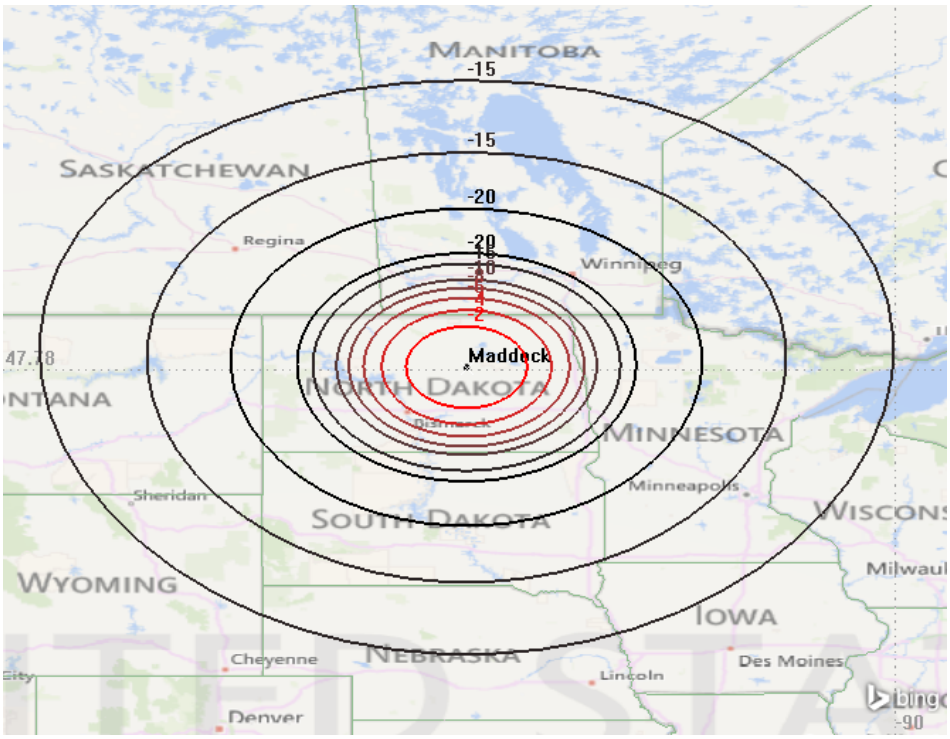

Figure 7 X-band helical antenna gain contour at 300 km altitude over Maddock, ND ground station.

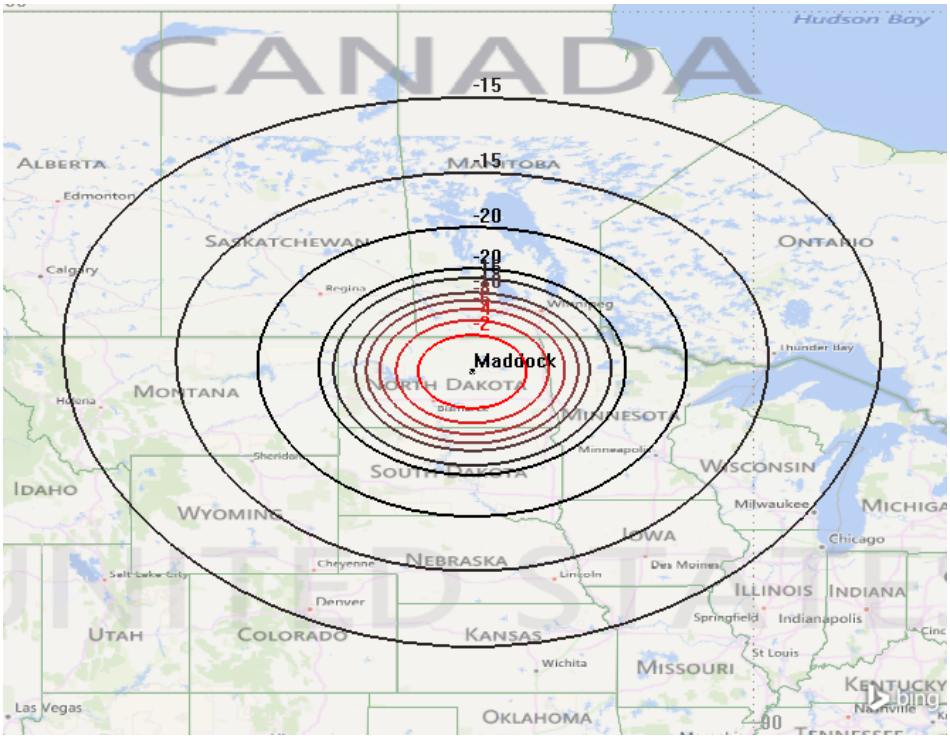

Figure 8 X-band helical antenna gain contour at 410 km altitude over Maddock, ND ground station.

Figure 9 X-band patch antenna gain contour at 300km altitude over Maddock, ND ground station. [24]

Figure 10 X-band patch antenna gain contour at 410 km altitude over Maddock, ND ground station. [25]

[24] The -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are note shown.

[25] The -8, -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are note shown.

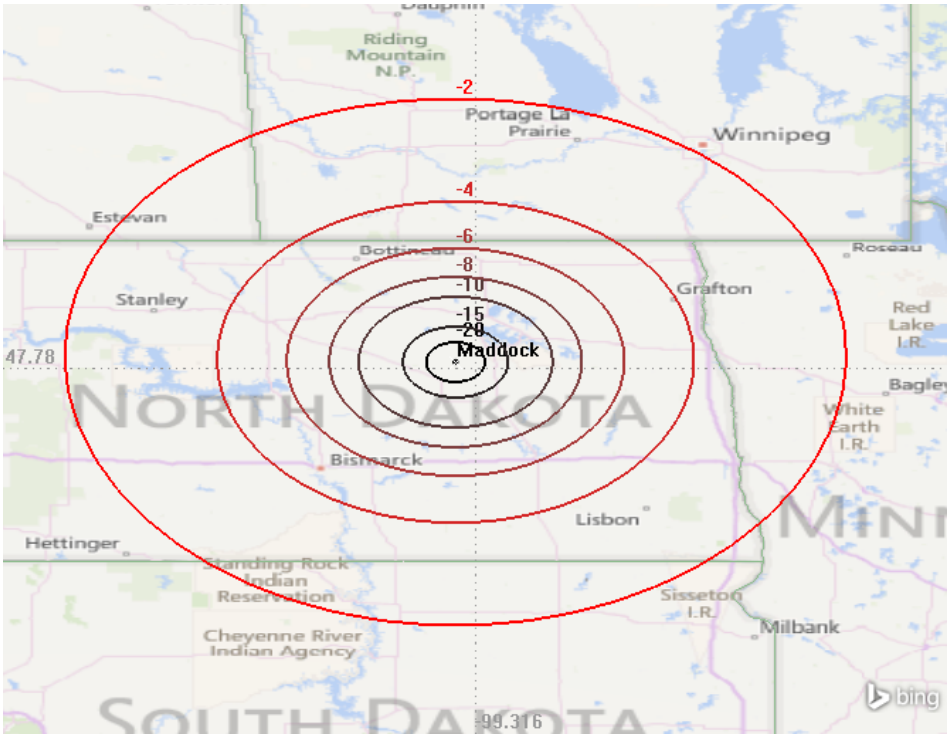

Figure 11 UHF monopole antenna gain contour at 200 km altitude over Maddock, ND ground station.

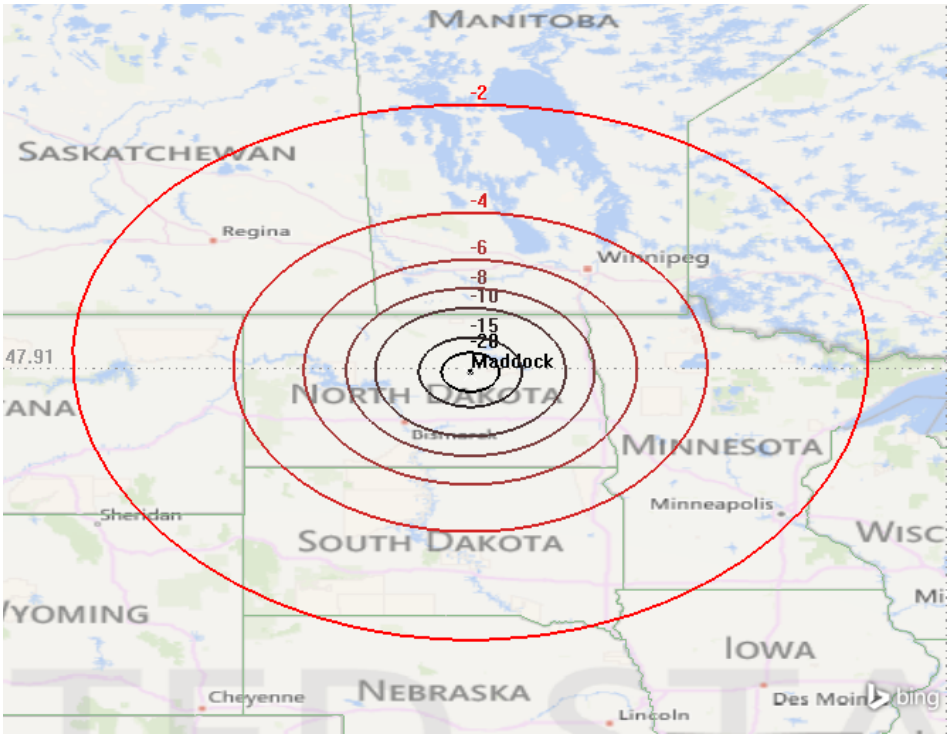

Figure 12 UHF monopole antenna gain contour at 410 km altitude over Maddock, ND ground station.

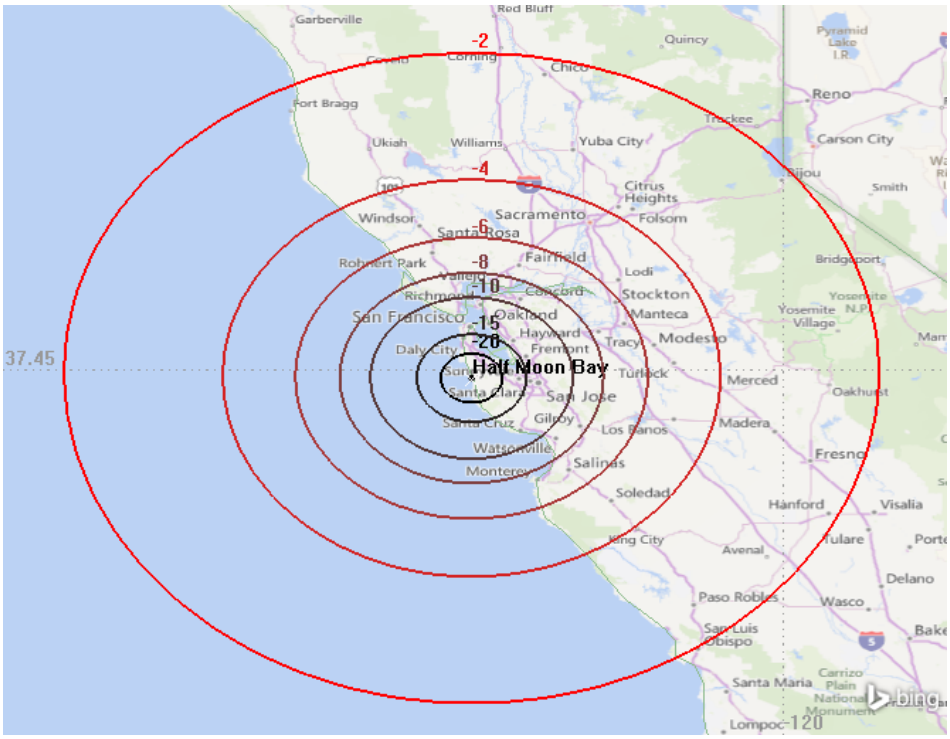

Figure 13 UHF monopole antenna gain contour at 200 km altitude over Half Moon Bay, CA ground station.

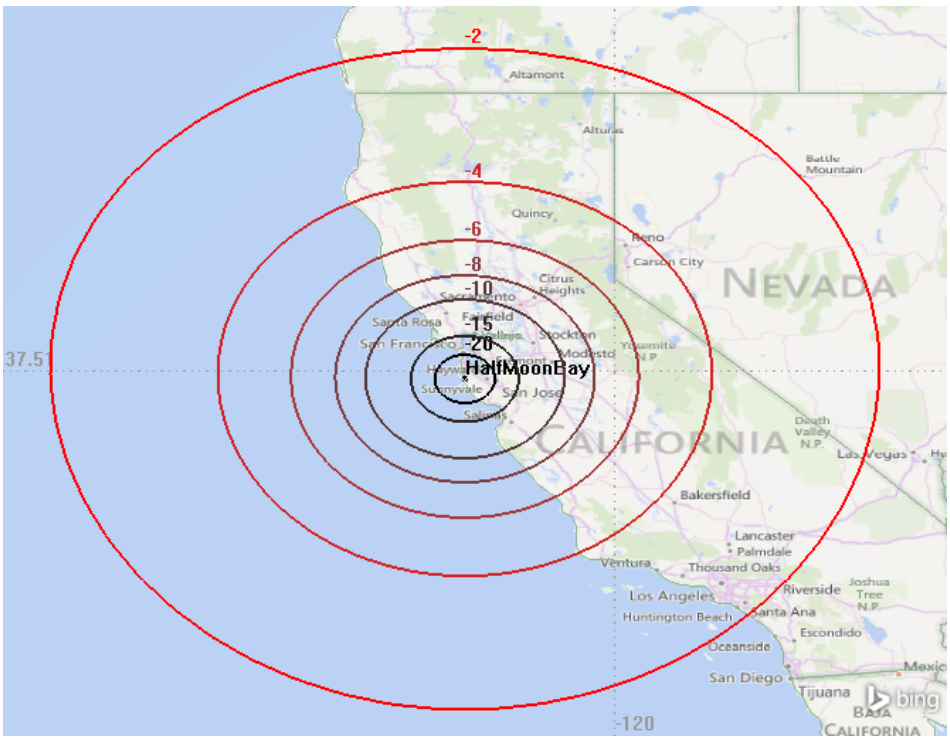

Figure 14 UHF monopole antenna gain contour at 410 km altitude over Half Moon Bay, CA ground station.

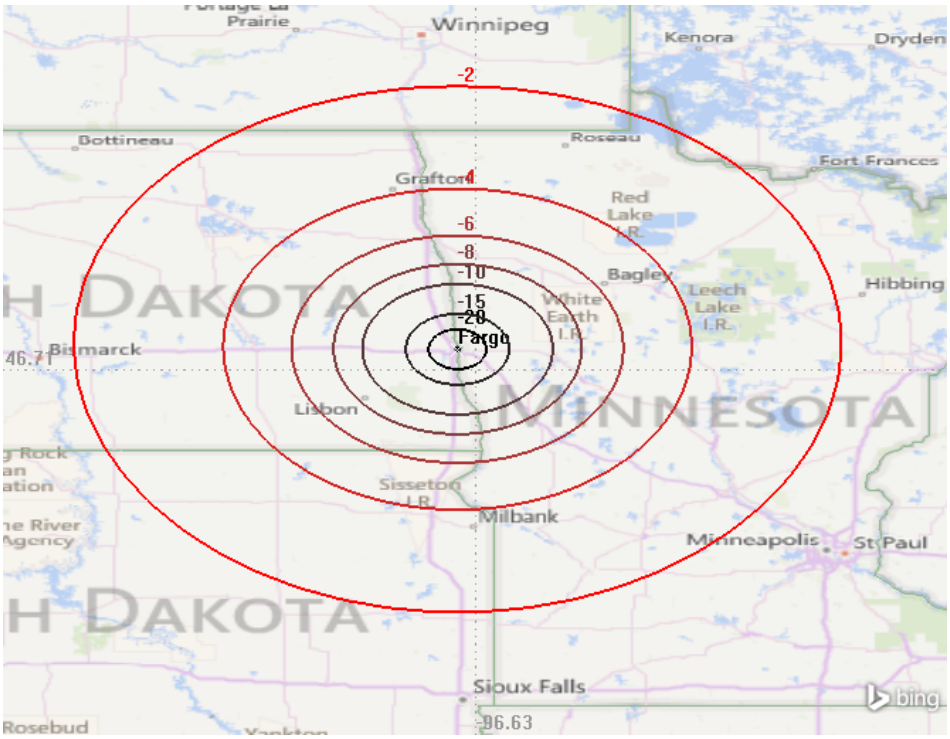

Figure 15 UHF monopole antenna gain contour at 200 km altitude over Fargo, ND ground station.

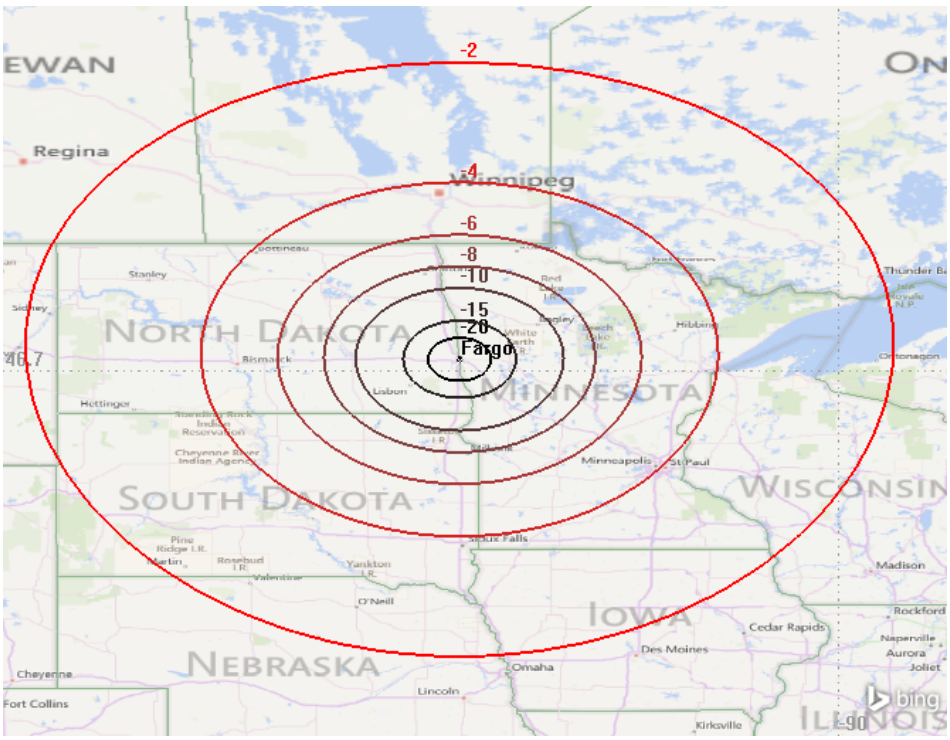

Figure 16 UHF monopole antenna gain contour at 410 km altitude over Fargo, ND ground station.

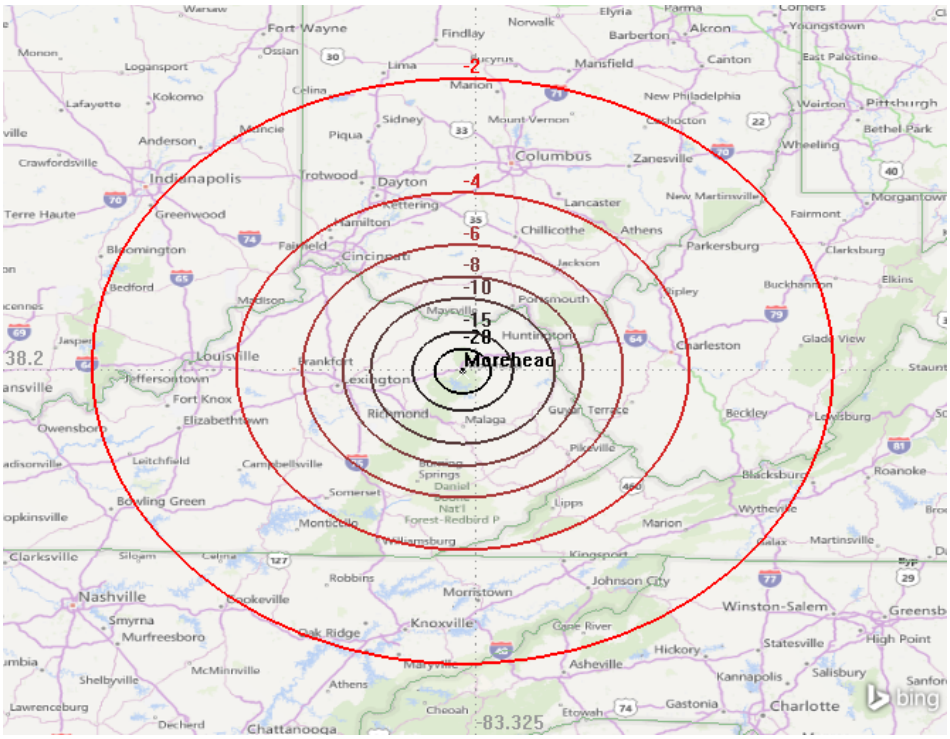

Figure 17 UHF monopole antenna gain contour at 200 km altitude over Morehead, KY ground station.

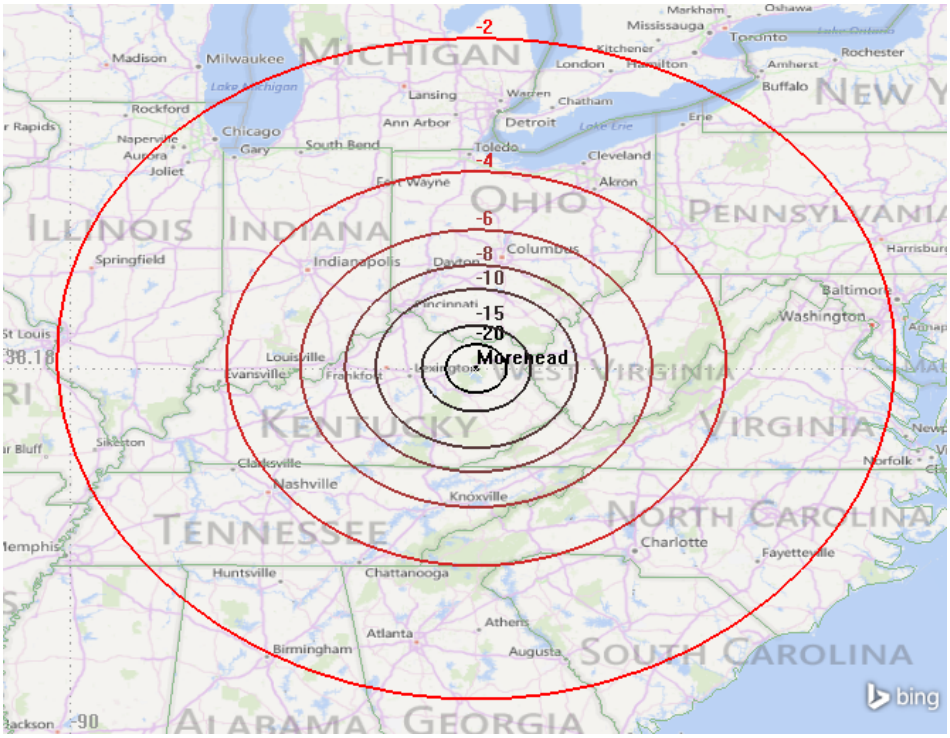

Figure 18 UHF monopole antenna gain contour at 410 km altitude over Morehead, KY ground station.

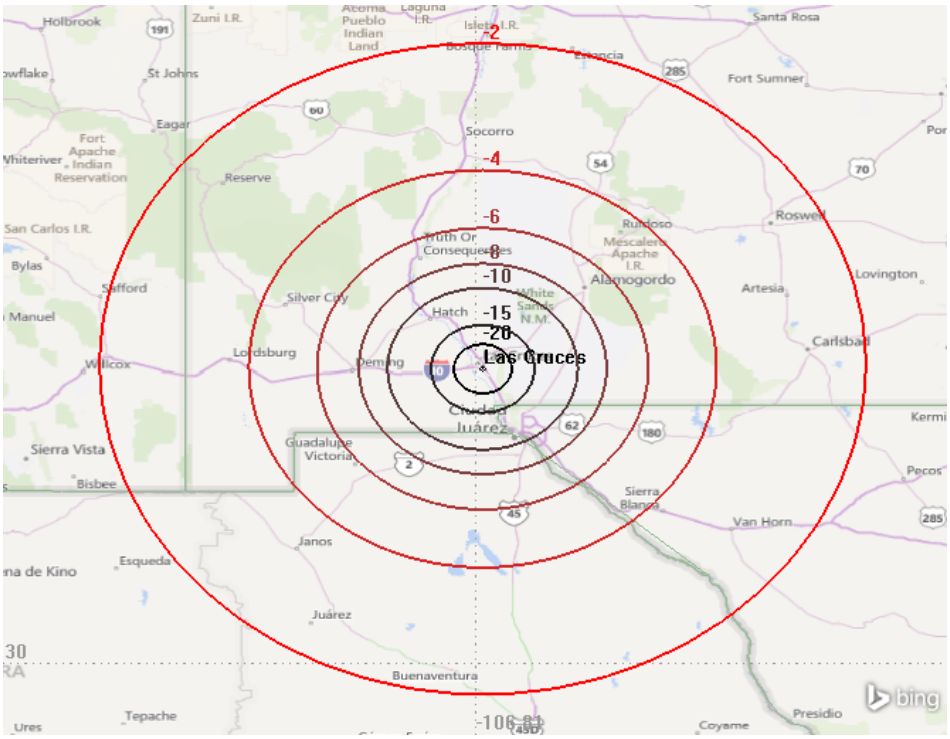

Figure 19 UHF monopole antenna gain contour at 200 km altitude over Las Cruces, NM ground station.

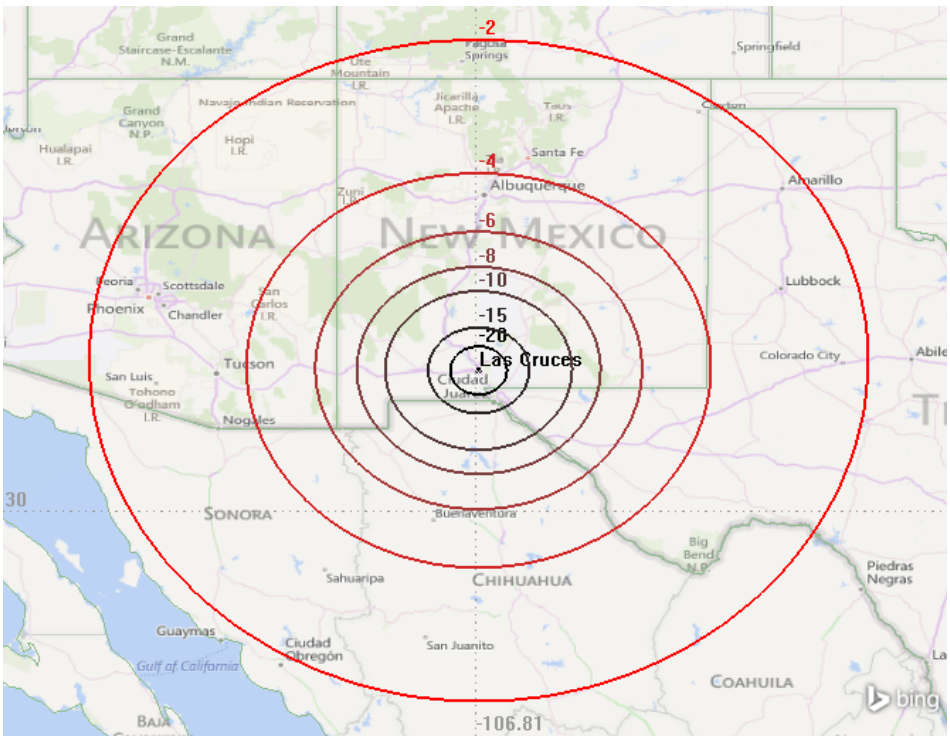

Figure 20 UHF monopole antenna gain contour at 410 km altitude over Las Cruces, NM ground station.

IV. TECHNICAL CERTIFICATE

I, Michael Safyan, hereby certify, under penalty of perjury, that I am the technically qualified person responsible for the preparation of the engineering information contained in the technical portions of the foregoing application and the related attachments, that I am familiar with Part 25 of the Commission's rules, and that the technical information is complete and accurate to the best of my knowledge and belief.

/s/ Michael Safyan
Michael Safyan
Director of Launch and Regulatory
Planet Labs Inc.
Dated: September 12, 2014