EXHIBIT 43
Planet Labs Inc.
License Application
FCC Form 312
March 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 add a total of thirty nine (39) additional satellites to the authorized system that are physically and technically identical to that of the authorized system, but in different orbits. This will bring the total number of identical operational Planet Labs satellites to sixty seven (67). Only new information is provided in this narrative; all other information remains identical to the authorized satellite system.[1]

Planet Labs anticipates launching an additional twenty eight (28) identical satellites, collectively known as Flock 1b, as early as May 2014. As was the case with Flock 1, Flock 1b will be transported to the International Space Station (ISS) aboard the Antares rocket and ejected from the ISS to an altitude between 380 and 410 km, 51.6° inclination.

Planet Labs also anticipates launching an additional eleven (11) identical satellites, collectively known as Flock 1c, as early as June 2014 aboard the Dnepr rocket to a 620 km altitude, 97.98° inclination. All Flock 1c satellites will be ejected directly into orbit at the time of launch.

Planet Labs has already submitted an application for license from the National Oceanic and Atmospheric Administration ("NOAA") to operate Flock 1b and Flock 1c, which are private remote sensing space systems. Planet Labs has previously received license to operate from NOAA for its initial operational constellation, Flock 1.[2]

Timely deployment of the proposed satellite systems will enable Planet Labs to expand the coverage and 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 1b as early as May 6, 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.

[1] *See* File No. SAT-LOA-20130626-00087 (granted 12/03/13,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 (Access at http://www.nesdis.noaa.gov/CRSRA/licenseHome.html).

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 technology demonstration missions, Dove 1 and Dove 2, in April 2013.[3] Planet labs also launched, and continues to operate, a third successful technology demonstration mission, Dove 3, in November 2013.[4] Planet Labs then 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 is currently successfully operating in orbit. The physical and technical design of the proposed Flock 1b and Flock 1c satellites are identical to that of Flock 1, but will operate in different orbits.

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:

- Flock 1, 28 satellites
- Flock 1b, 28 satellites
- Flock 1c, 11 satellites
- Total of 67 satellites

And a ground segment comprised of earth stations located in:

- Brewster, WA[5]
- Fairbanks, AK[6]
- Half Moon Bay, CA (TT&C-only)[7]
- Fargo, ND (TT&C-only)[8]
- Morehead, KY (TT&C-only)[9]

along with other earth stations located in Goonhilly, United Kingdom and Awarua, New Zealand.

[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-STA-20140224-00097 (filed 02/24/2014 , Call Sign E990069).
[6] Proposed. Earth station authority will be filed separately.
[7] *See* SES-LIC-20140318-00146 (filed 03/18/2014, Call Sign E140036)
[8] *See* SES-STA-20140212-00075 (filed 02/12/2014)
[9] *See* SES-STA-20140212-00074 (filed 02/12/2014)

All 28 Flock 1b 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 May 6, 2013. Once the 28 satellites have been delivered to the ISS, they will gradually be deployed after an approximately one month stowage period. The orbital period of the Flock 1b satellites will be approximately 92 minutes. The nominal lifetime of Flock 1b satellites is 7 months, with a maximum lifetime of 10 months, depending on ejection altitude and atmospheric drag. The Flock 1b orbit will naturally decay and the satellites will completely burn up in the atmosphere.

All 11 Flock 1c satellites will be launched aboard a single Dnepr rocket and will be ejected directly into orbit at the time of launch. The orbital period of the Flock 1c satellites will be approximately 97 minutes. The predicted operational lifetime of the Flock 1c satellites is 2 years, with a worst case post-operations orbit lifetime of 20.4 years (worst case of 22.4 years total in orbit). The Flock 1c orbit 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

Since the Flock 1b satellites will operate in the same altitude band as Flock 1, and the Flock 1c satellites will operate at a higher altitude than Flock 1, the power flux density (PFD) levels at the surface of the Earth will be no worse than 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

With the addition of the Flock 1b and Flock 1c satellites, the minimum possible distance between a Planet Labs satellite and GSO is 35786 km - 620 km = 35166 km, which represents the Flock 1c altitude. Under a hypothetical scenario of a Flock 1c satellite antenna radiating directly toward GSO, the worst case condition produces a PFD at GSO of -184.54 dB(W/m^2) in any 4 kHz band. The worst case scenario does not exceed the limit set forth in the ITU Radio Regulations No. 22.5.

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 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.

[10] *See* Planet Labs Inc., SAT-LOA-20130626-00087 (granted December 03, 2013)

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 additional Flock 1b and Flock 1c satellites in compliance with NASA-STD-8719.14, Appendix A, which is attached as a separate exhibit. As discussed in the submitted ODAR, the Flock 1b and Flock 1c systems 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. [11] 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.[12][13] 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.[14][15][16]

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 happen, satellites belonging to different systems would have to travel through the 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

[11] *See* 47 C.F.R. § 25.158.
[12] *See* 47 C.F.R. §§ 25.156 & 25.157.
[13] *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").
[14] *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).
[15] *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).
[16] *See* Stamp Grant, Planet Labs Inc., SAT-LOA-20130626-00087 (granted December 03, 2013).

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[17]. 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[18]. 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).

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. The only fields that have changed from the original submission are questions S4 and S5; all other values remain the same. For convenience, the updated values for questions S4 and S5 are also submitted in Attachment C.

D. Implementation Milestones

Planet Labs was assigned a $5 million bond for its licensed system on December 03, 2013, and since has demonstrated compliance with the first three milestones.[19] Because Planet Labs is not requesting the use of any new frequencies and intends only to add physically and technically identical satellites to its already licensed system, the company believes that no modification to the existing bond amount or additional bond submission is necessary. To the extent necessary, Planet Labs will demonstrate within 30 days of grant of this application that the company has met the first implementation milestones for the entire proposed Planet Labs constellation (i.e. Flocks 1, 1b, and 1c).

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

[17] *See* 47 C.F.R. § 25.217.
[18] *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).
[19] *See* DA-13-2473A1 (dated December 27, 2013)

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 May 2014 launch of Flock 1b.

ATTACHMENT A
Planet Labs, Inc.
FCC Form 312, Exhibit 43
March 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 additional thirty nine (39) 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
March 2014

LINK BUDGETS

Flock 1b will operate in the same altitude band as Flock 1, and thus will have the exact same link characteristics as the currently licensed system. Flock 1c will operate at a slightly higher altitude, which results in an increase in the path loss attenuation of up to 3.6 dB compared to Flock 1. This increase in path loss attenuation is well within the system link margins, as the satellites were designed for a wide range of operational altitudes. Considering all other link characteristics are identical, the link budgets are not repeated in this application.

Schedule S, Questions S4 and S5

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System: 67

S4b. Total Number of Orbital Planes in Network or System: 3

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.): E

S4d. Orbit Epoch Date: 12/15/13

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other
1	28	51.6	5520	410	410	280.5	61.8	0	360	
2	28	51.6	5520	410	410	153.92	202.11	0	360	
3	11	97.98	5820	620	620	334.75	0	0	360	

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)
2	1	0
2	2	12.86
2	3	25.71
2	4	38.57
2	5	51.43
2	6	64.29
2	7	77.14
2	8	90
2	9	102.86
2	10	115.71

2	11	128.57
2	12	141.43
2	13	154.29
2	14	167.14
2	15	180
2	16	192.86
2	17	205.71
2	18	218.57
2	19	231.43
2	20	244.29
2	21	257.14
2	22	270
2	23	282.26
2	24	295.71
2	25	308.57
2	26	321.43
2	27	334.29
2	28	347.14

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)
3	1	0
3	2	32.73
3	3	65.45
3	4	98.18
3	5	130.91
3	6	163.64
3	7	196.36
3	8	229.09
3	9	261.82
3	10	294.55
3	11	327.27

Attachment D
Planet Labs Inc.
FCC Form 312, Exhibit 43
March 2014

PREDICTED GAIN CONTOURS

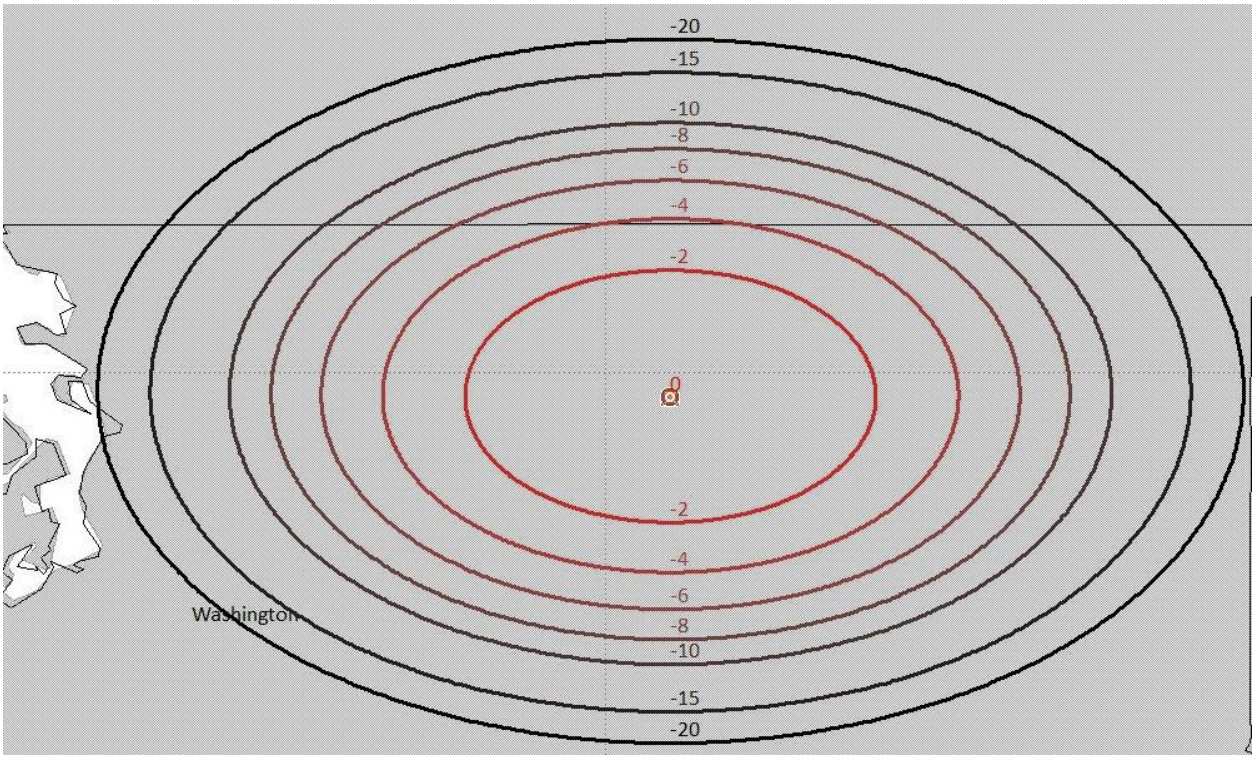

Figure 1 X-band helical antenna gain contour at 200km altitude over Brewster, WA ground station.

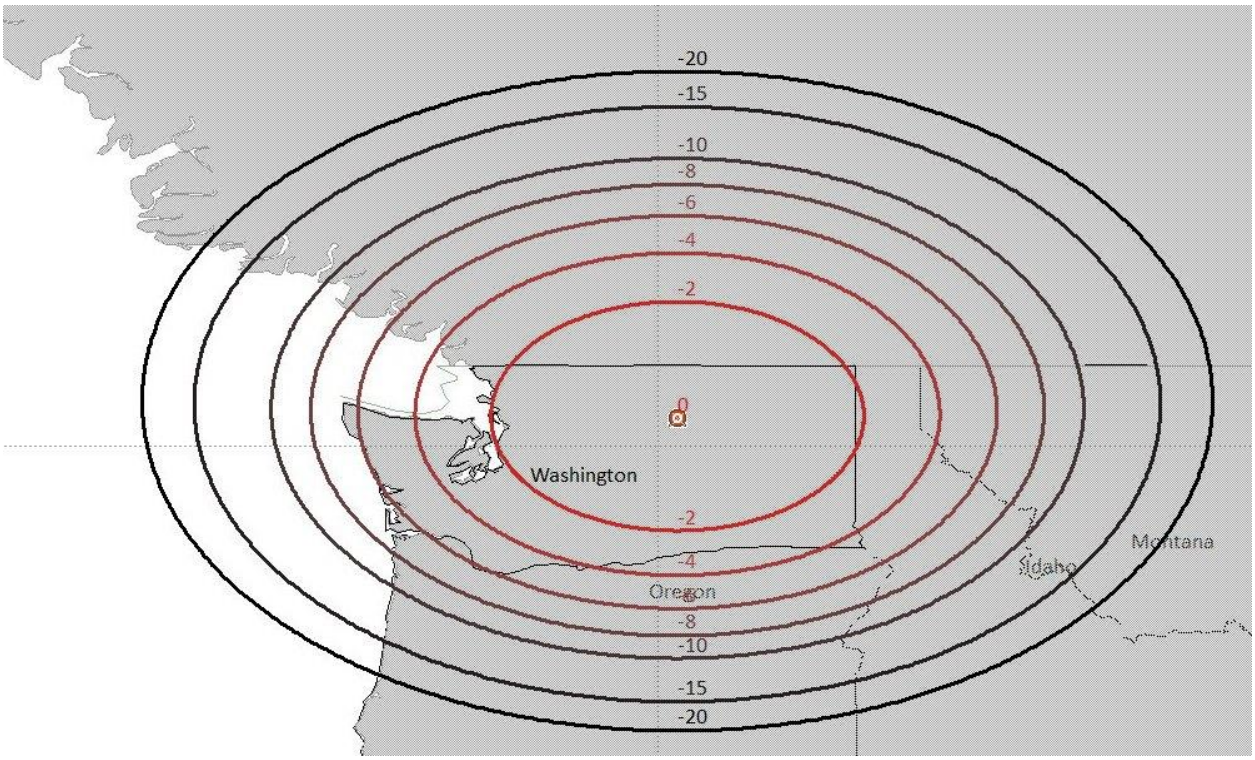

Figure 2 X-band helical antenna gain contour at 620km altitude over Brewster, WA ground station.

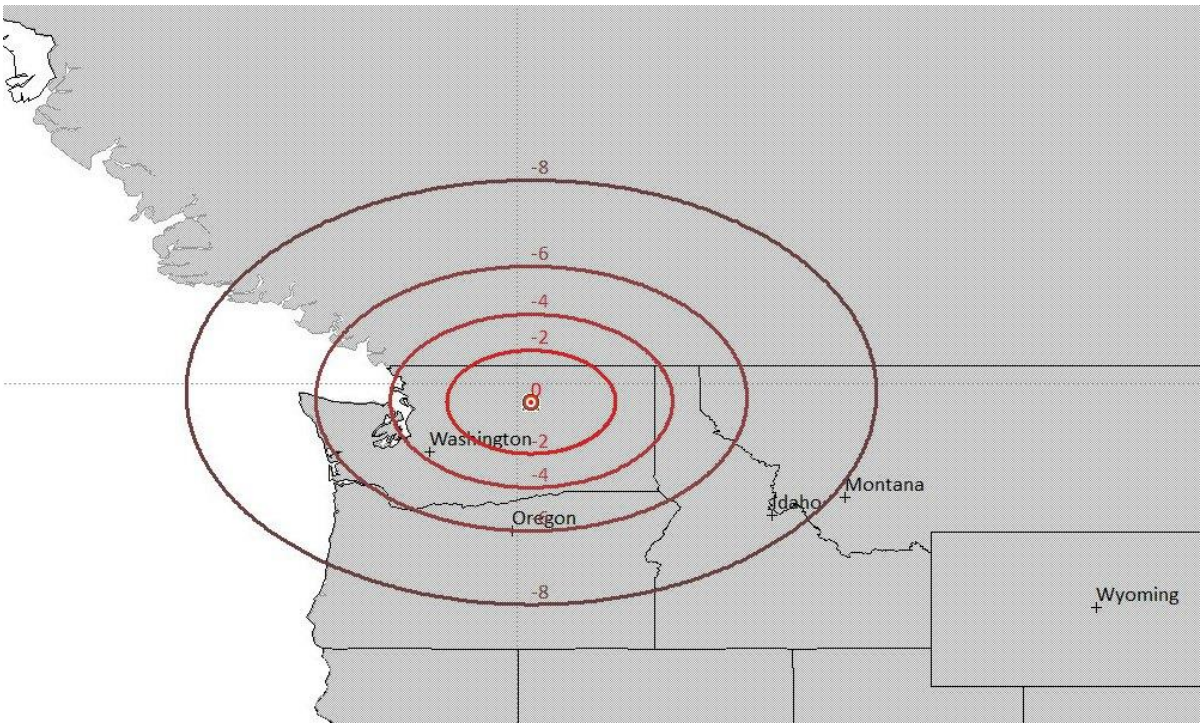

Figure 3 X-band patch antenna gain contour at 200km altitude over Brewster, WA ground station.[21]

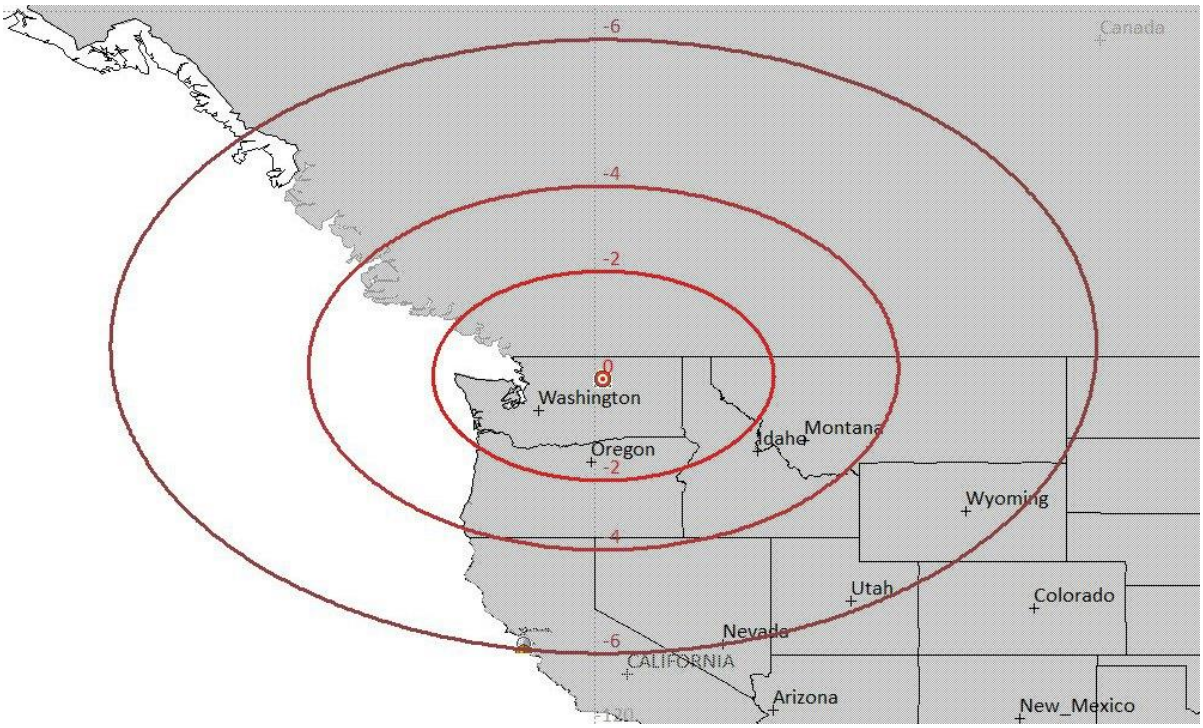

Figure 4 X-band patch antenna gain contour at 620km altitude over Brewster, WA ground station [22]

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

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

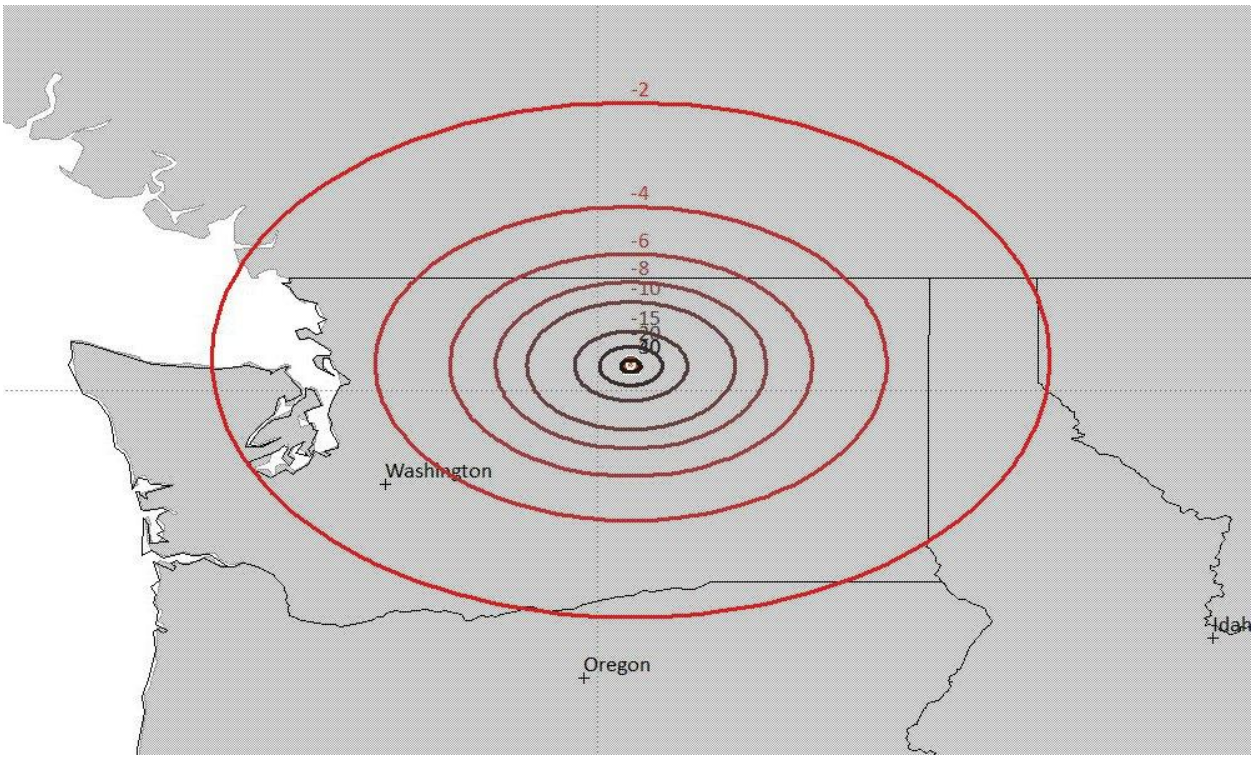

Figure 5 UHF monopole antenna gain contour at 200 km altitude over Brewster, WA ground station.

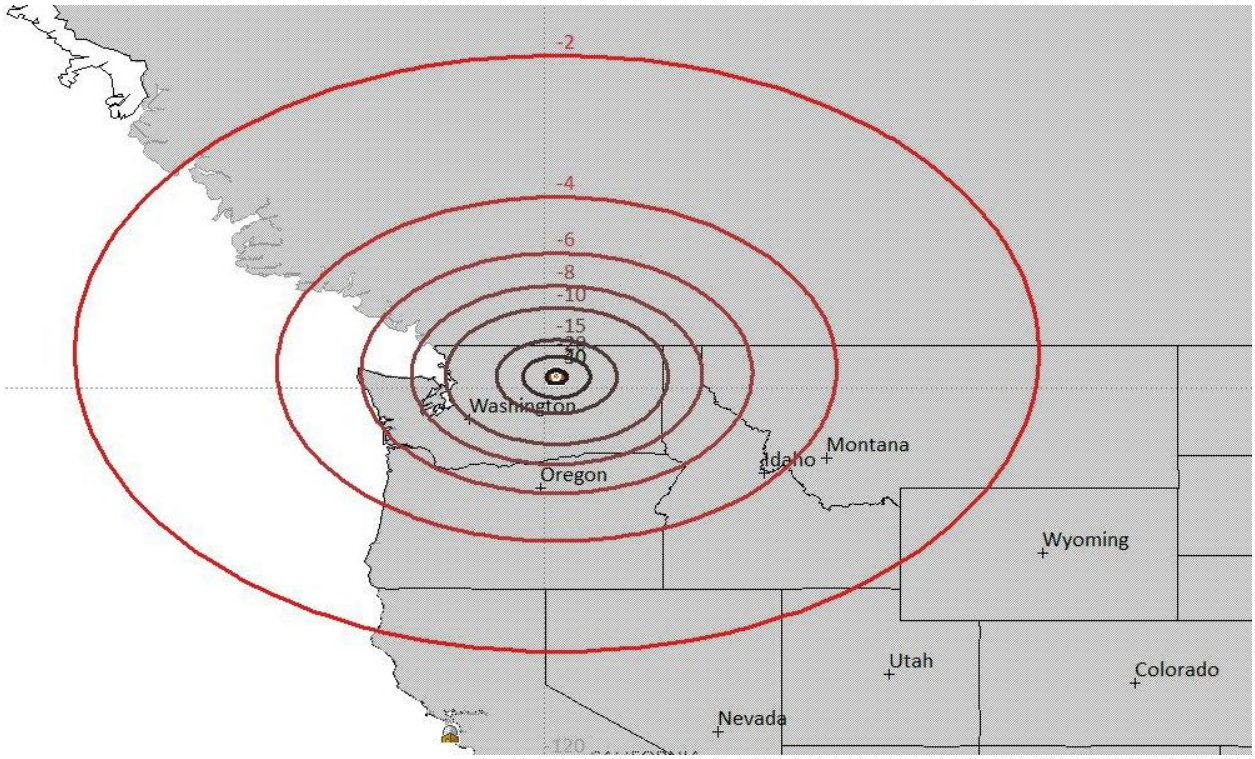

Figure 6 UHF monopole antenna gain contour at 620 km altitude over Brewster, WA ground station.

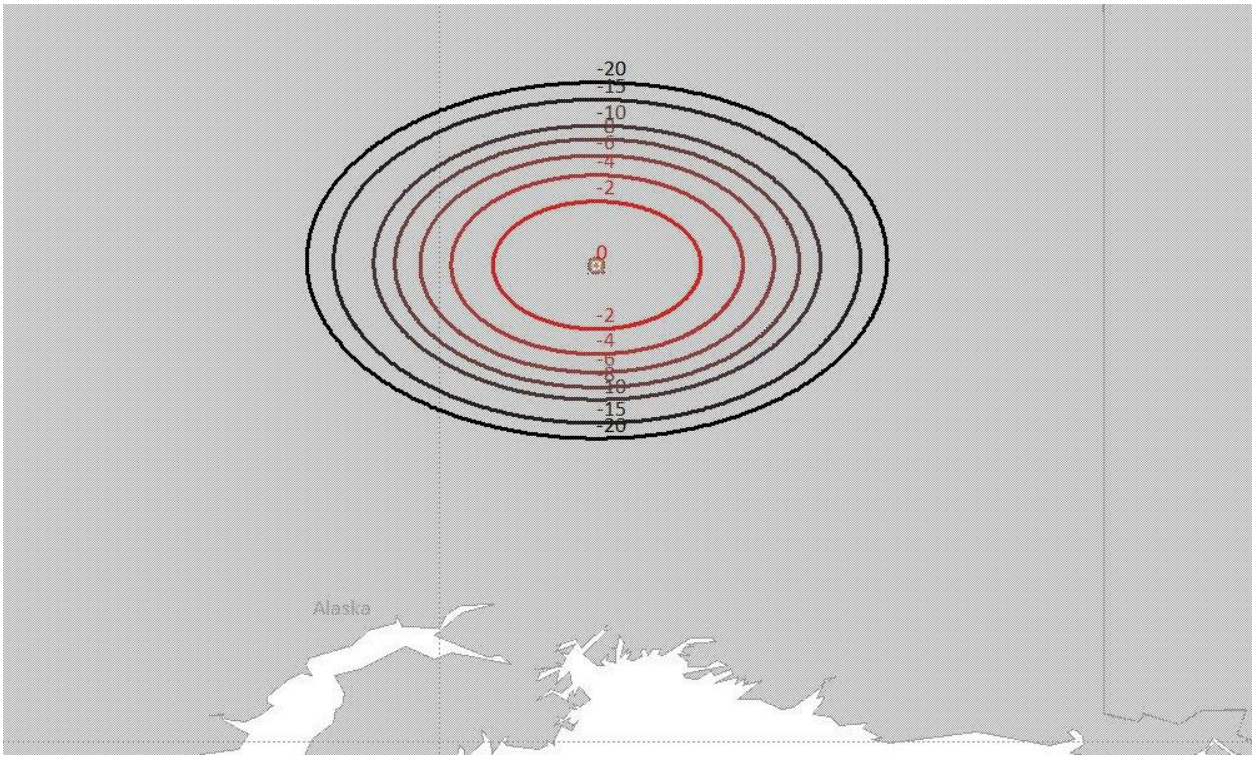

Figure 7 X-band helical antenna gain contour at 200 km altitude over Fairbanks, AK ground station.

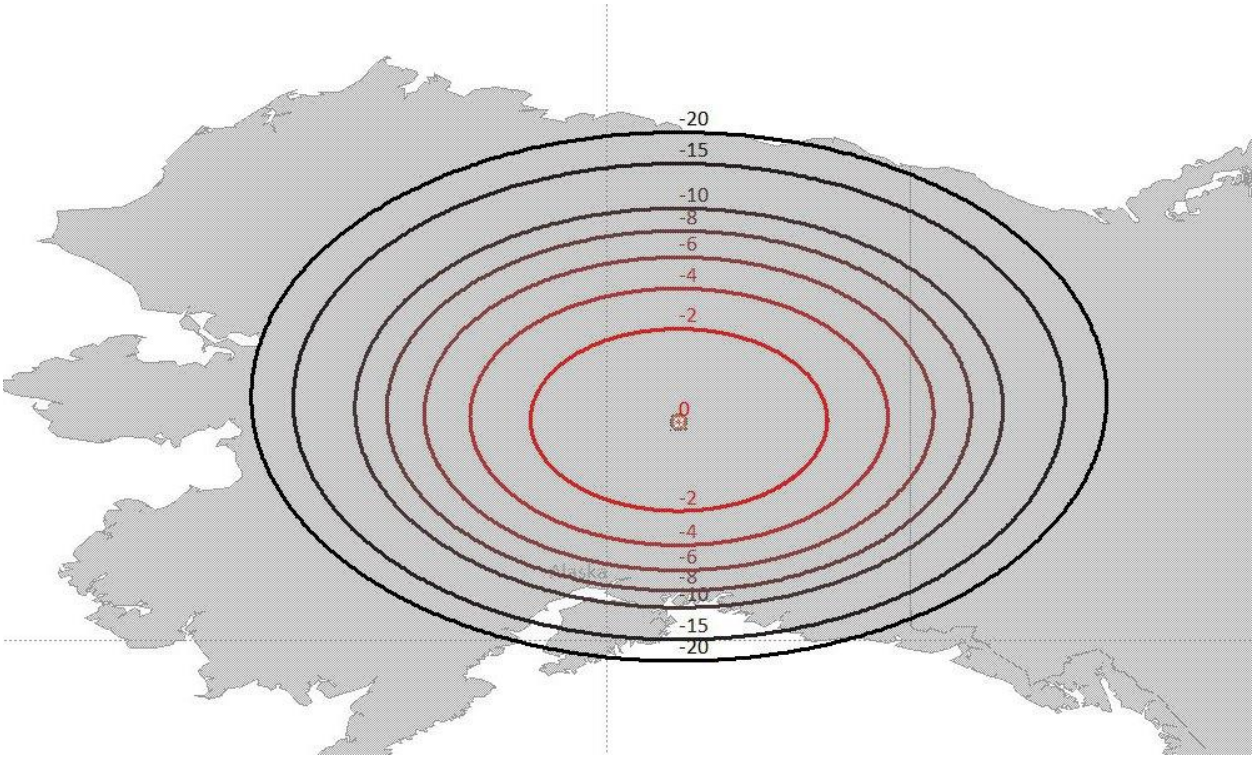

Figure 8 X-band helical antenna gain contour at 620 km altitude over Fairbanks, AK ground station.

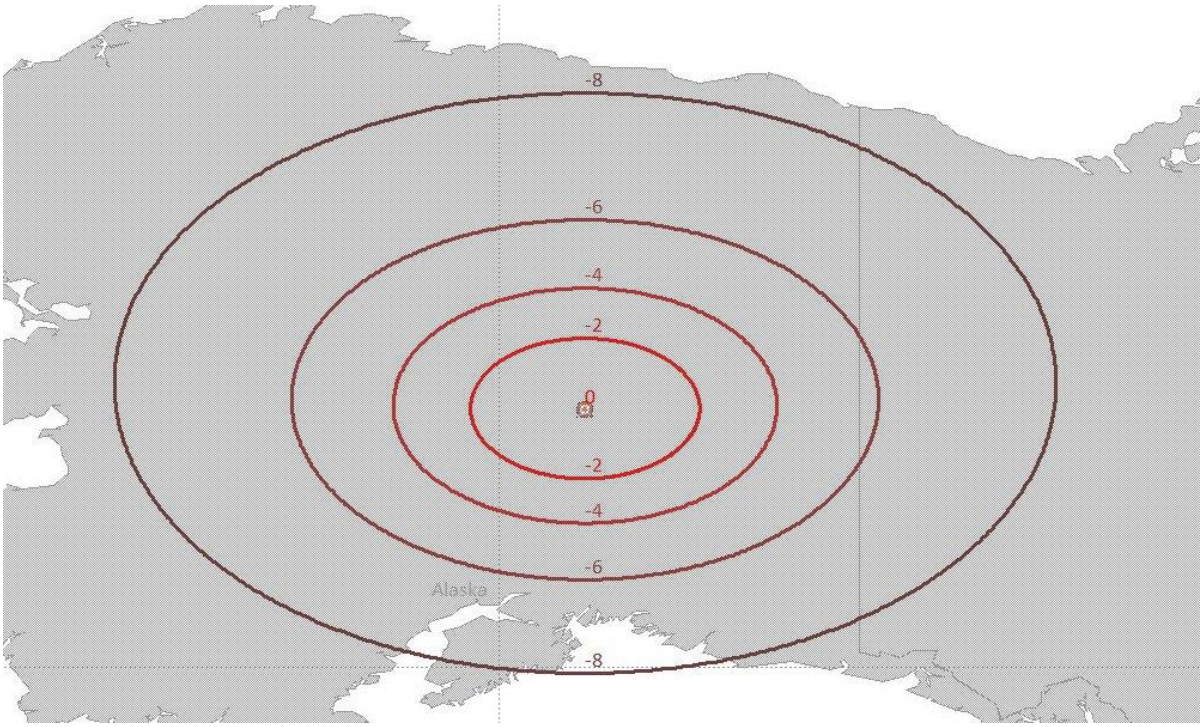

Figure 9 X-band patch antenna gain contour at 200km altitude over Fairbanks, AK ground station. [23]

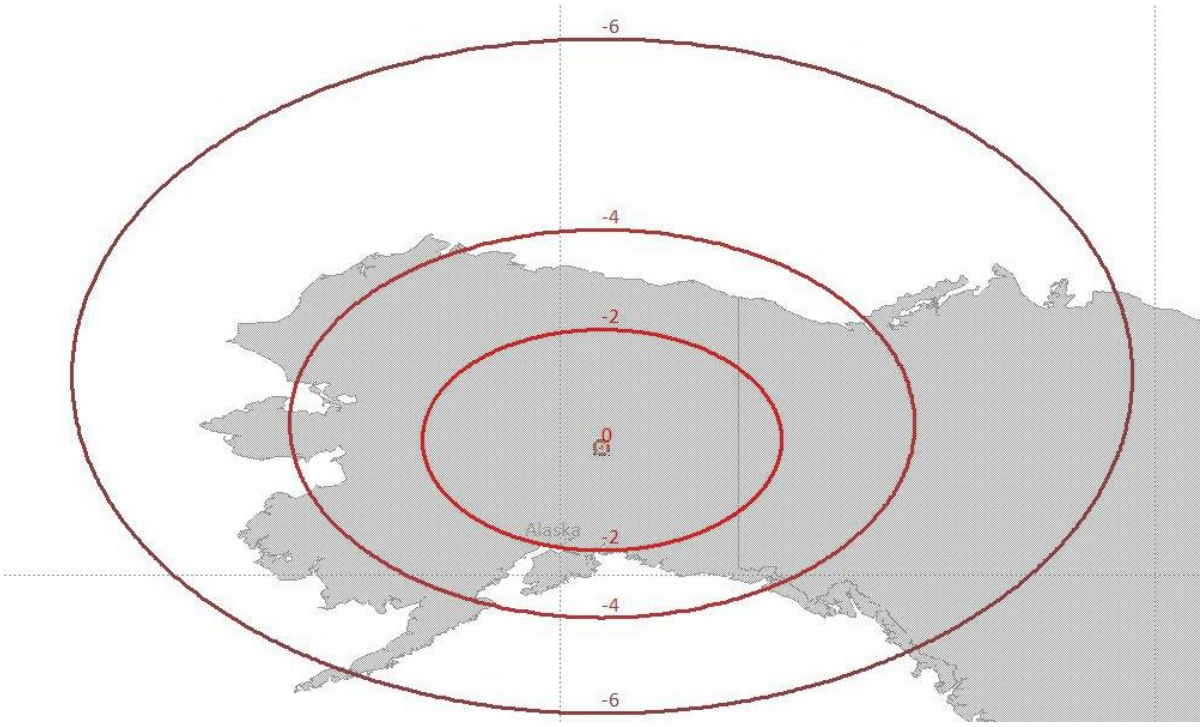

Figure 10 X-band patch antenna gain contour at 620km altitude over Fairbanks, AK ground station. [24]

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

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

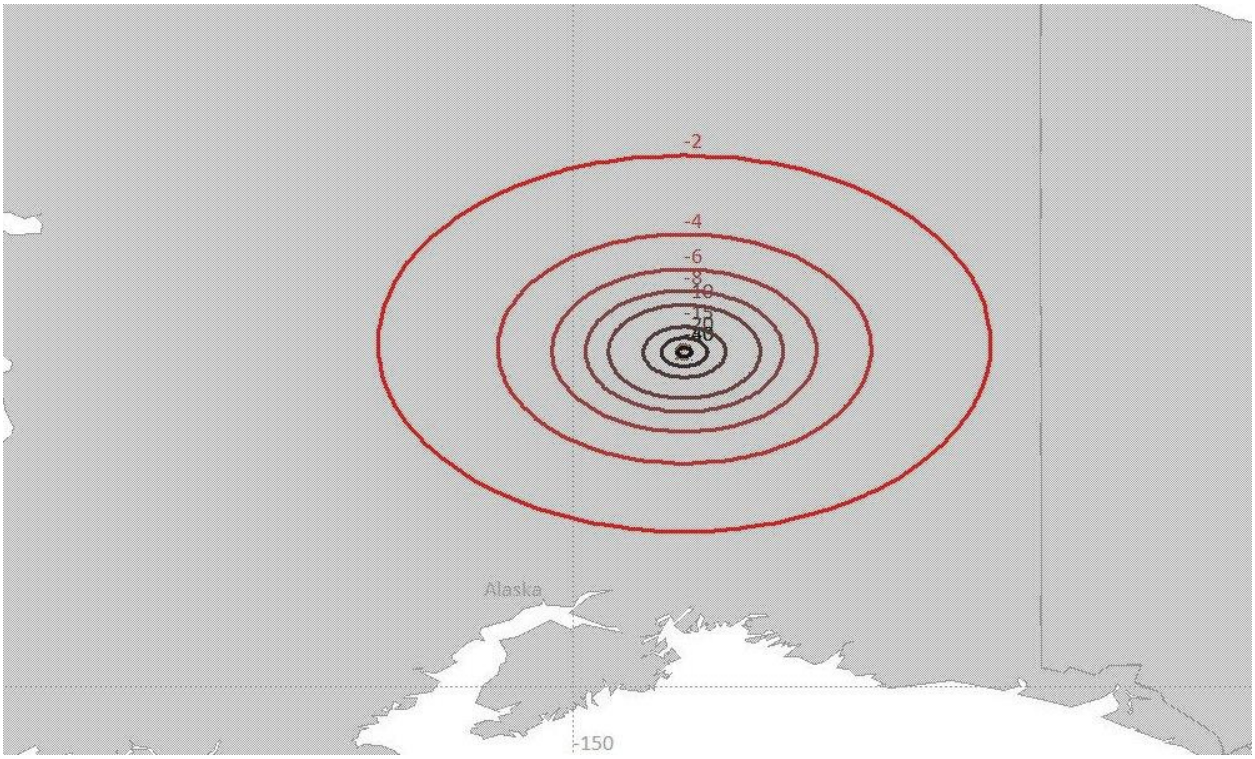

Figure 11 UHF monopole antenna gain contour at 200 km altitude over Fairbanks, AK ground station.

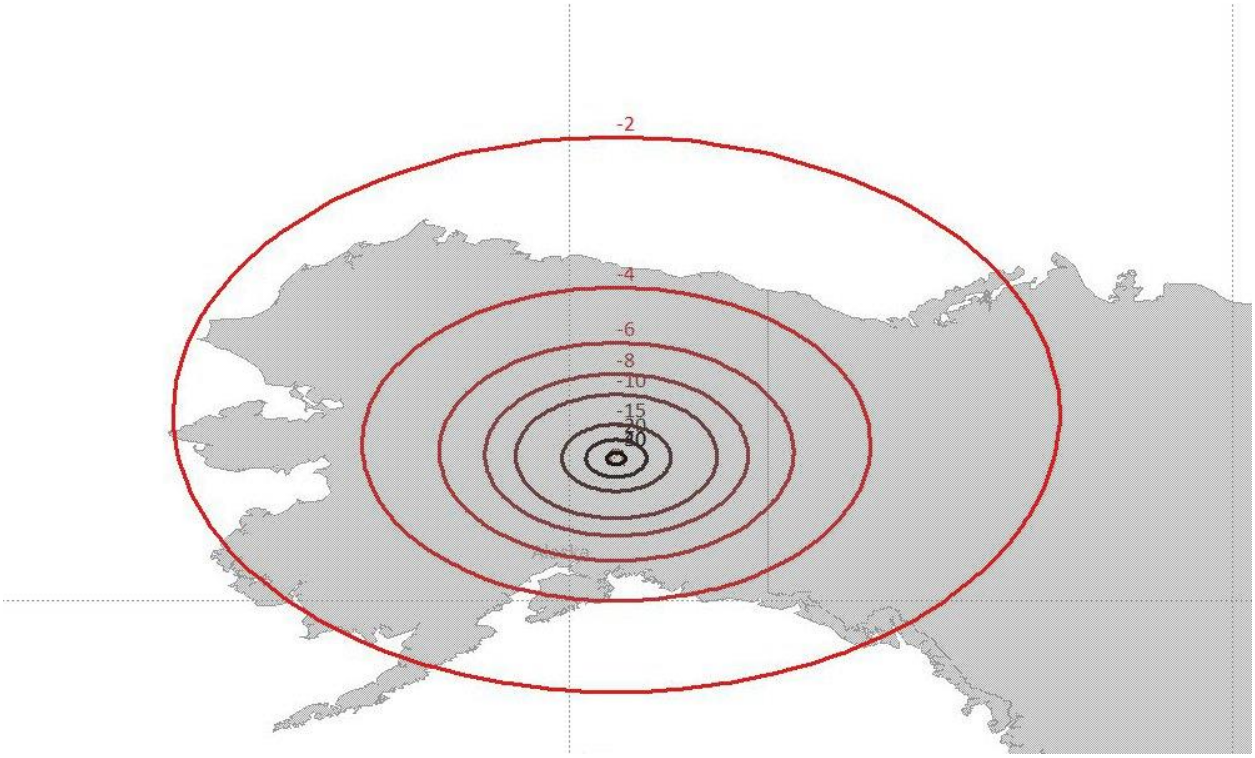

Figure 12 UHF monopole antenna gain contour at 620 km altitude over Fairbanks, AK ground station.

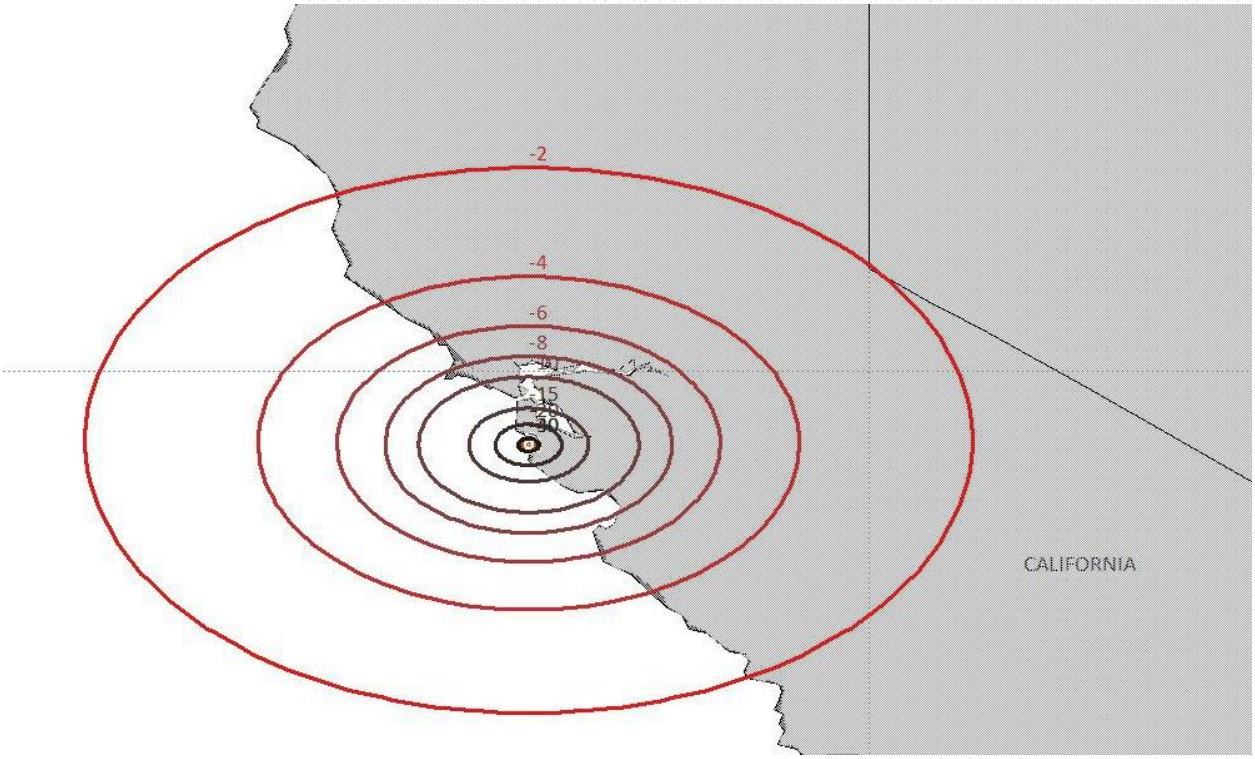

Figure 13 UHF monopole antenna gain contour at 200 km altitude over Half Moon Bay, CA ground station.

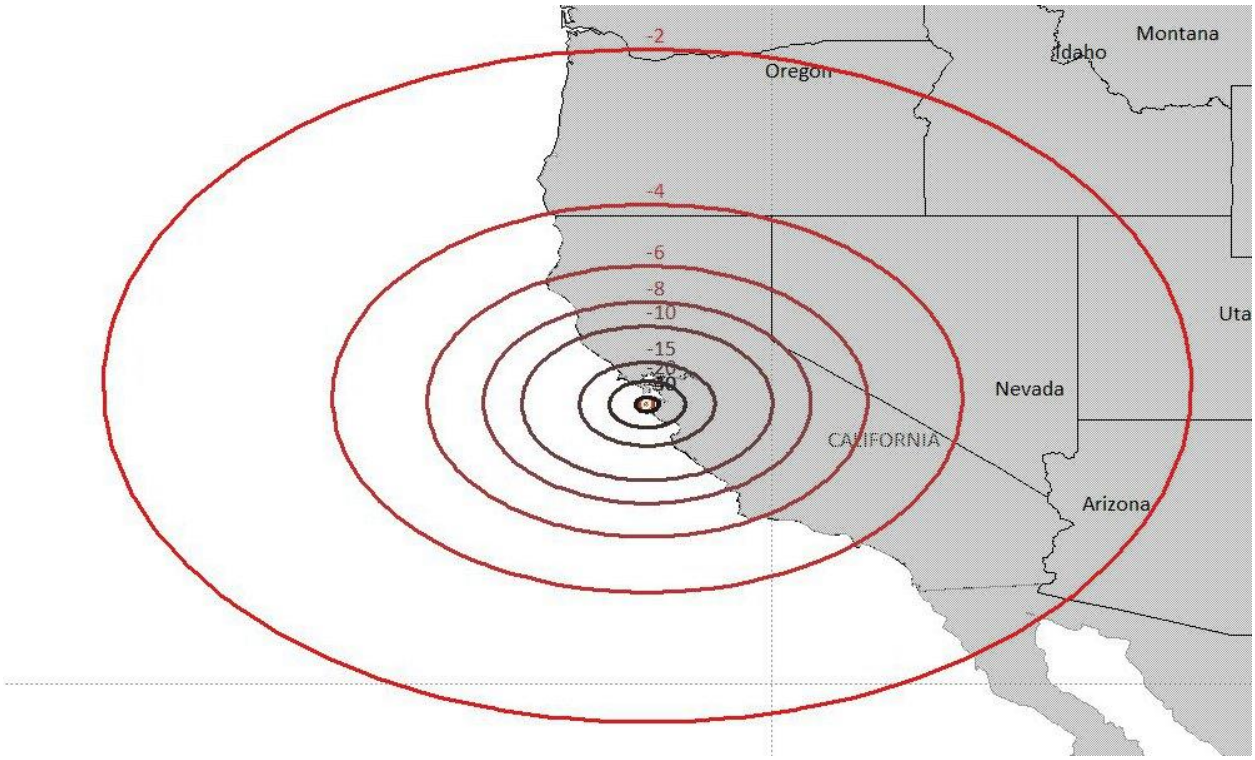

Figure 14 UHF monopole antenna gain contour at 620 km altitude over Half Moon Bay, CA ground station.

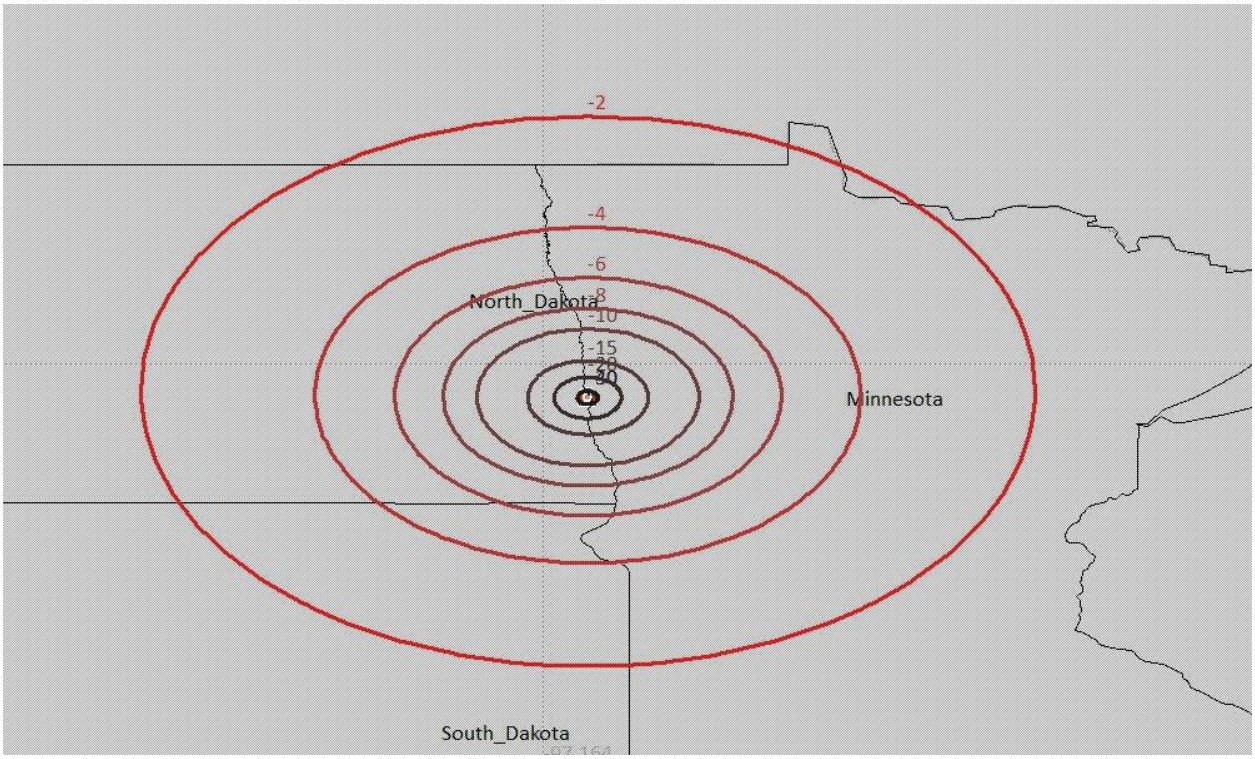

Figure 15 UHF monopole antenna gain contour at 200 km altitude over Fargo, ND ground station.

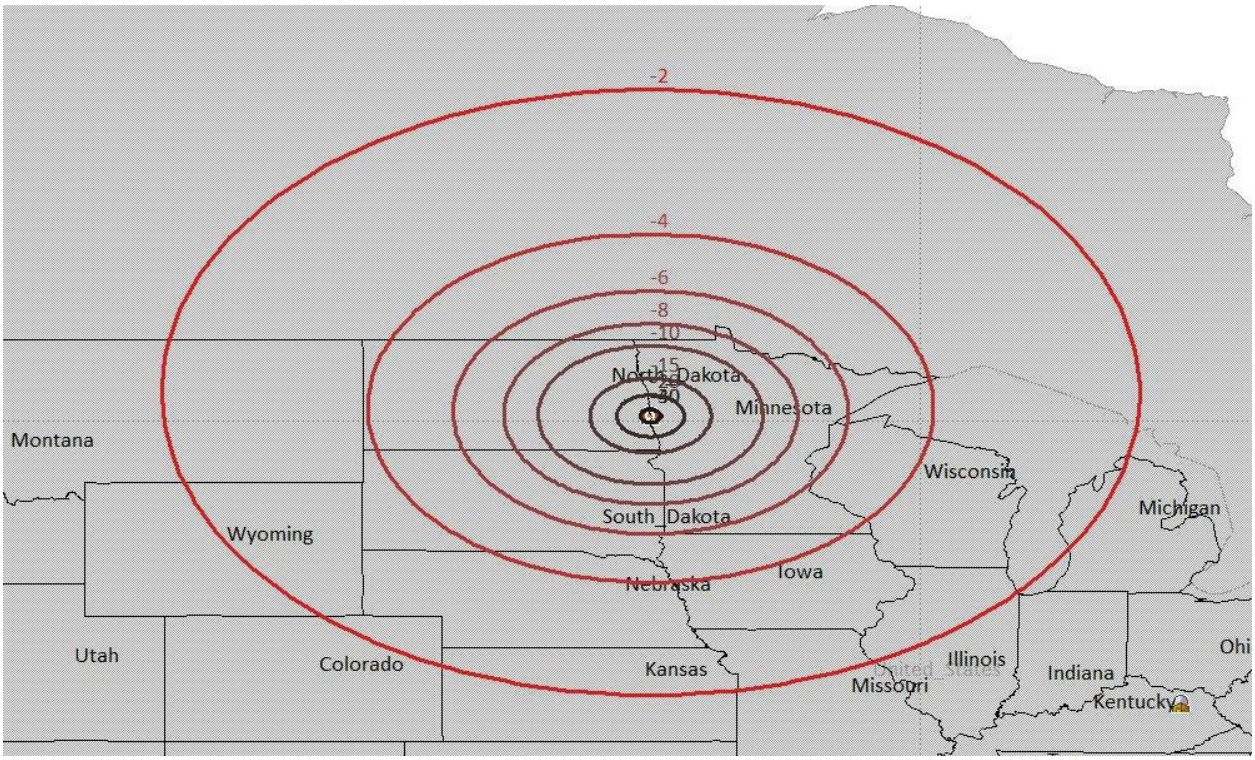

Figure 16 UHF monopole antenna gain contour at 620 km altitude over Fargo, ND ground station.

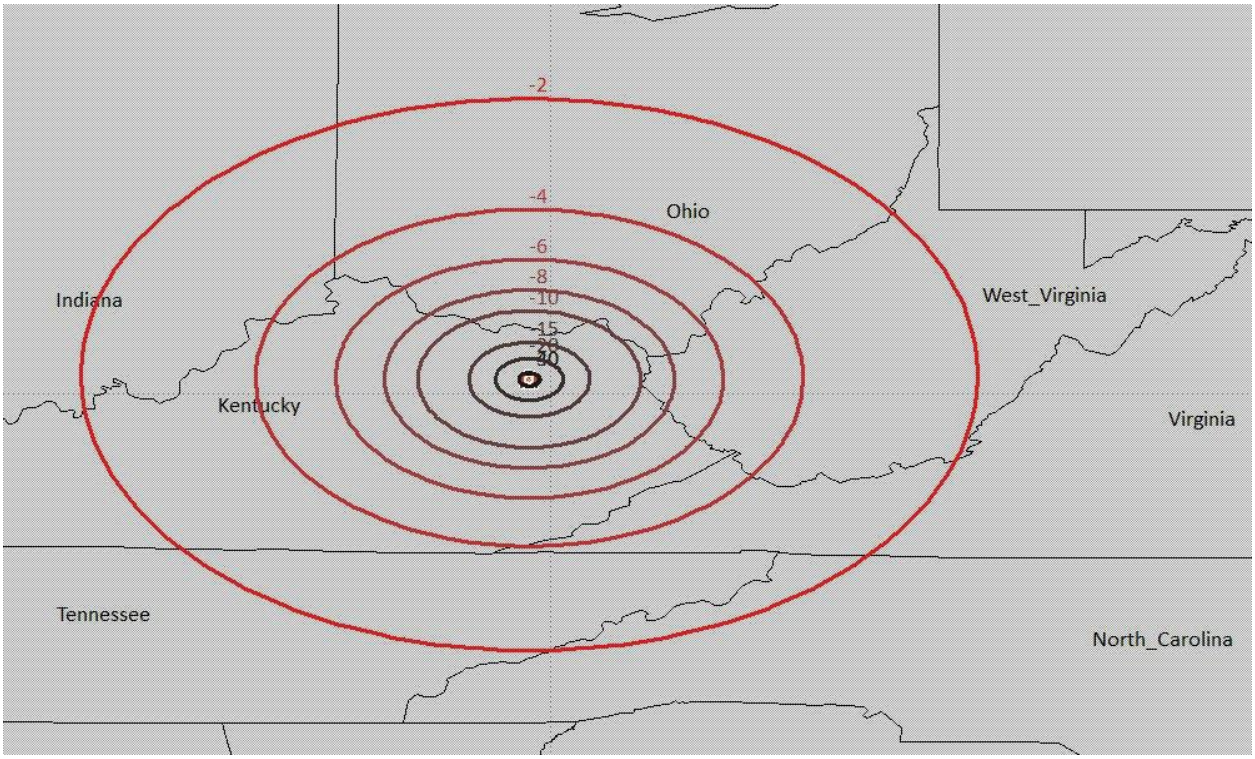

Figure 17 UHF monopole antenna gain contour at 200 km altitude over Morehead, KY ground station.

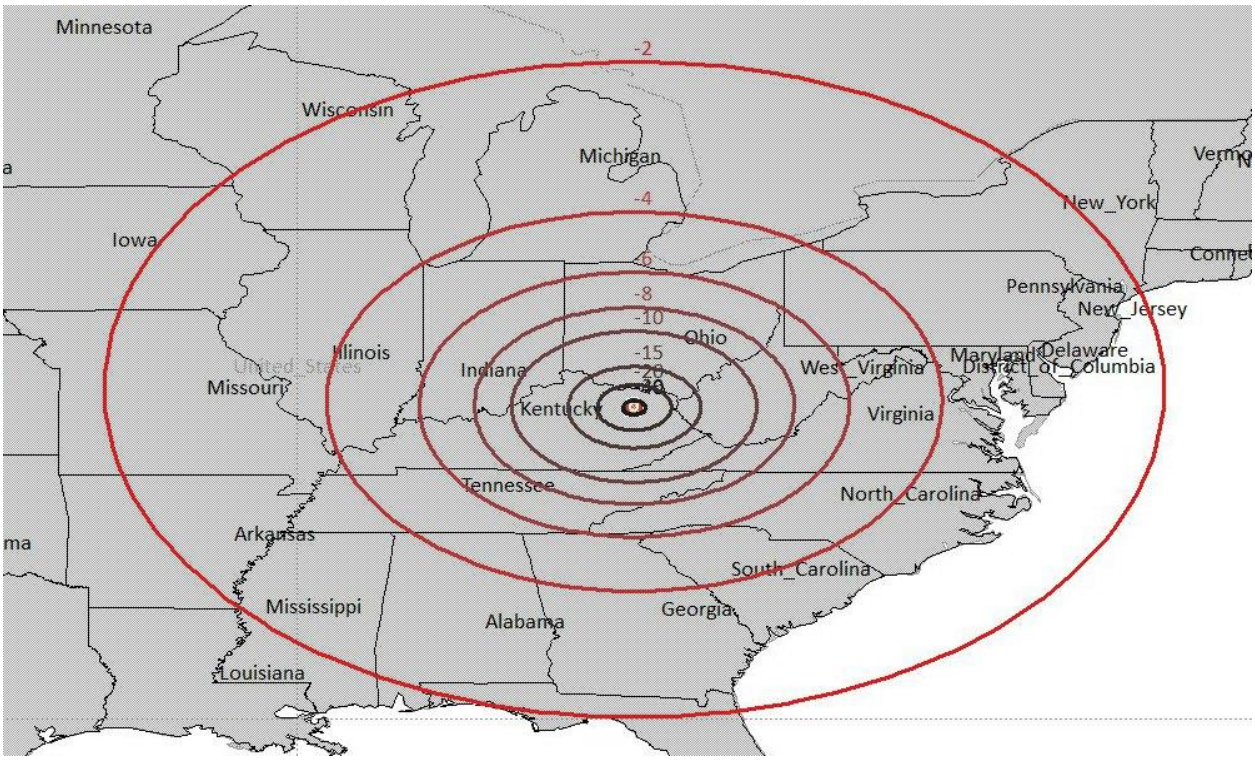

Figure 18 UHF monopole antenna gain contour at 620 km altitude over Morehead, KY ground station.

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
Regulatory Compliance
Planet Labs Inc.
Dated: March 20, 2014