

=====

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

=====

Company: EMERGING MARKETS COMMUNICATIONS INC

Site Name, State: Satellite 2012, DC

Call Sign:

Latitude	(NAD83)	38	54	15.7	N
Longitude	(NAD83)	77	1	20.4	W
Elevation AMSL	(ft/m)	77.70		23.68	
Receive Frequency Range	(MHz)				
Transmit Frequency Range	(MHz)	5925.00		6425.00	
Range of Satellite Orbital Long.	(deg W)	55		56	
Range of Azimuths from North	(deg)	147.22		148.54	
Antenna Centerline	(ft/m)	115.00		35.05	
Antenna Elevation Angles	(deg)	39.48		39.94	

Equipment Parameters 6.17 GHz

Antenna Gain, Main Beam	(dbI)	42.00			
15 DB Half Beamwidth	(deg)	3.20			
Antennas	Transmit: PRODELIN 1251				
Max Transmitter Power	(dbW/4KHz)			-18.20	
Max EIRP Main Beam	(dbW/4KHz)			23.80	
Modulation / Emission Designator	Digital	5M29G7W	2M63G7W		

Coordination Parameters 6.17 GHz

Max Greater Circle Distances	(km)	124.99			
Max Rain Scatter Distances	(km)	100.00			
Max Interference Power Long Term	(dbW)	-151.80			
Max Interference Power Short Term	(dbW)	-130.80			
Rain Zone / Radio Zone		2		A	

MICRONET COMMUNICATIONS, INC.
02-28-2012

File: M1203006

page 2

=====

Horizon Angle	Horizon Gain	Final Contour	-	6.17 GHz TRANSMIT ONLY
---------------	--------------	---------------	---	------------------------

=====

Company: EMERGING MARKETS COMMUNICATIONS INC

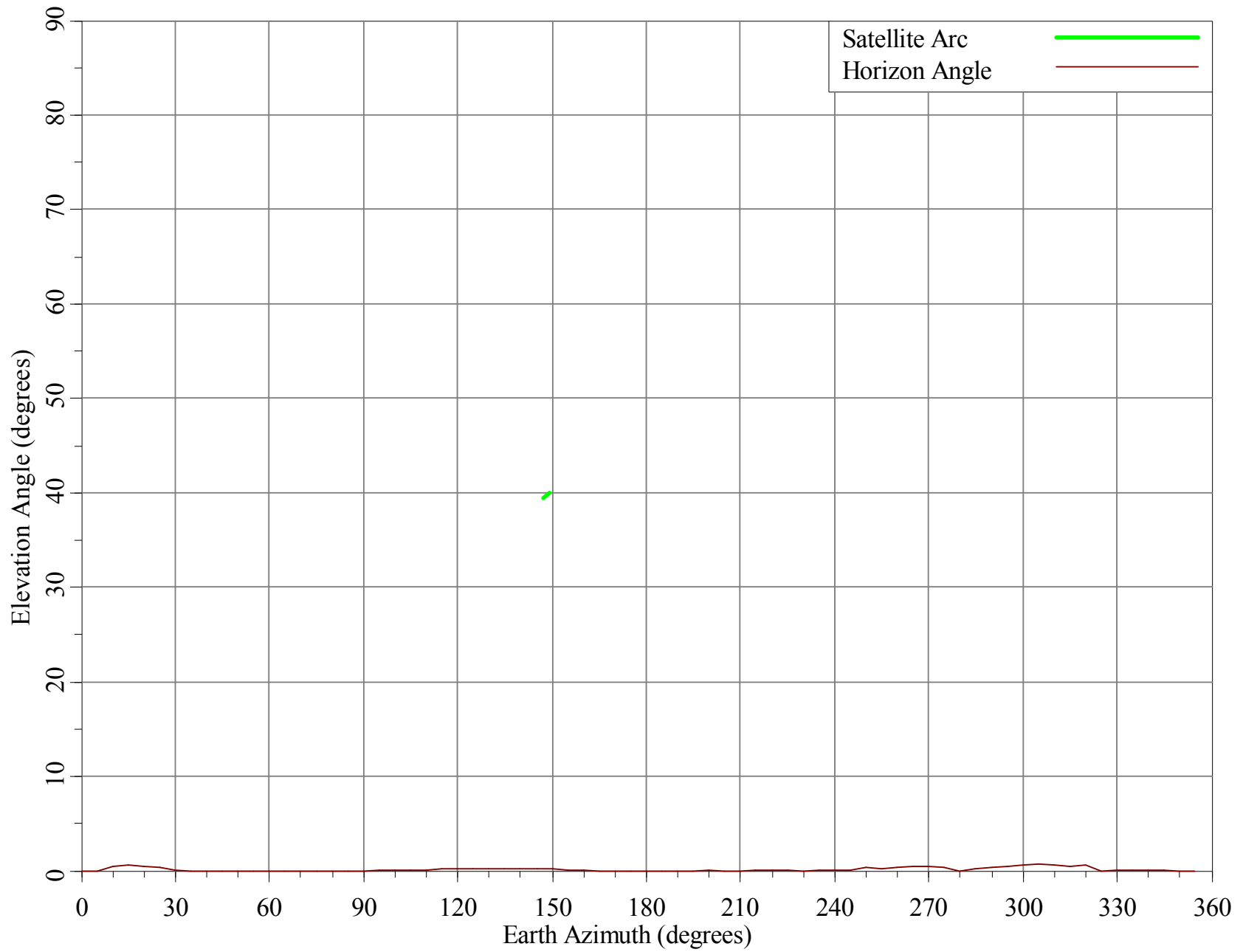
Site Name, State: Satellite 2012, DC

Call Sign:

Latitude (NAD83) 38 54 15.7 N Longitude (NAD83) 77 1 20.4 W

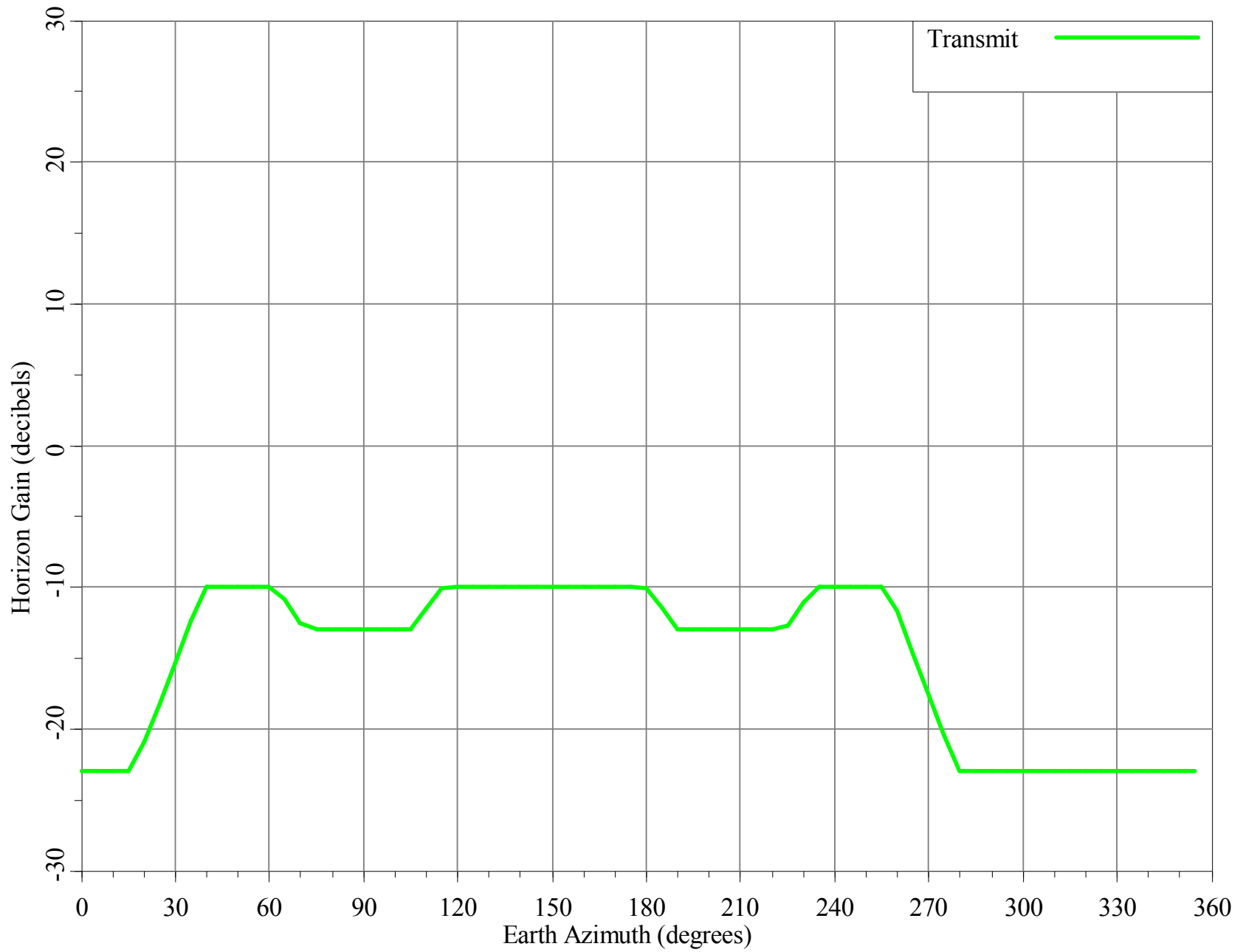
North Azimuth (deg)	Horizon Angle (deg)	Horizon Gain (db)	Final Contour (km)	North Azimuth (deg)	Horizon Angle (deg)	Horizon Gain (db)	Final Contour (km)
0	0.25	-23.00	110.3	180	0.00	-10.08	119.9
5	0.27	-23.00	109.9	185	0.00	-11.46	121.4
10	0.48	-23.00	102.3	190	0.00	-12.96	122.6
15	0.52	-23.00	101.1	195	0.00	-13.00	123.7
20	0.49	-20.95	102.1	200	0.01	-13.00	124.5
25	0.27	-18.21	109.6	205	0.01	-13.00	124.9
30	0.22	-15.30	111.6	210	0.02	-13.00	125.0
35	0.03	-12.39	119.3	215	0.09	-13.00	124.6
40	0.08	-10.00	119.3	220	0.11	-13.00	123.9
45	0.00	-10.00	119.3	225	0.06	-12.73	122.8
50	0.04	-10.00	119.3	230	0.06	-11.10	121.5
55	0.00	-10.00	119.3	235	0.13	-10.00	120.1
60	0.00	-10.00	119.3	240	0.19	-10.00	119.3
65	0.00	-10.86	119.3	245	0.20	-10.00	112.2
70	0.00	-12.50	119.3	250	0.29	-10.00	109.1
75	0.00	-13.00	119.3	255	0.23	-10.00	111.3
80	0.00	-13.00	119.3	260	0.35	-11.68	107.0
85	0.00	-13.00	119.3	265	0.41	-14.63	104.9
90	0.02	-13.00	119.3	270	0.41	-17.56	104.7
95	0.03	-13.00	119.3	275	0.30	-20.48	108.7
100	0.02	-13.00	119.3	280	0.15	-23.00	119.3
105	0.02	-13.00	119.3	285	0.22	-23.00	111.5
110	0.09	-11.50	119.3	290	0.40	-23.00	105.3
115	0.18	-10.04	119.3	295	0.54	-23.00	100.3
120	0.22	-10.00	111.5	300	0.58	-23.00	100.0
125	0.17	-10.00	119.3	305	0.63	-23.00	100.0
130	0.21	-10.00	111.8	310	0.60	-23.00	100.0
135	0.22	-10.00	111.6	315	0.51	-23.00	101.4
140	0.22	-10.00	111.6	320	0.47	-23.00	102.7
145	0.21	-10.00	112.0	325	0.34	-23.00	107.2
150	0.14	-10.00	119.3	330	0.35	-23.00	107.0
155	0.09	-10.00	119.3	335	0.36	-23.00	106.6
160	0.06	-10.00	119.3	340	0.31	-23.00	108.5
165	0.03	-10.00	119.3	345	0.21	-23.00	111.7
170	0.00	-10.00	119.3	350	0.26	-23.00	110.2
175	0.00	-10.00	119.3	355	0.31	-23.00	108.5

Horizon Angle & Satellite Arc for Satellite 2012, DC Micronet Communications, Inc.

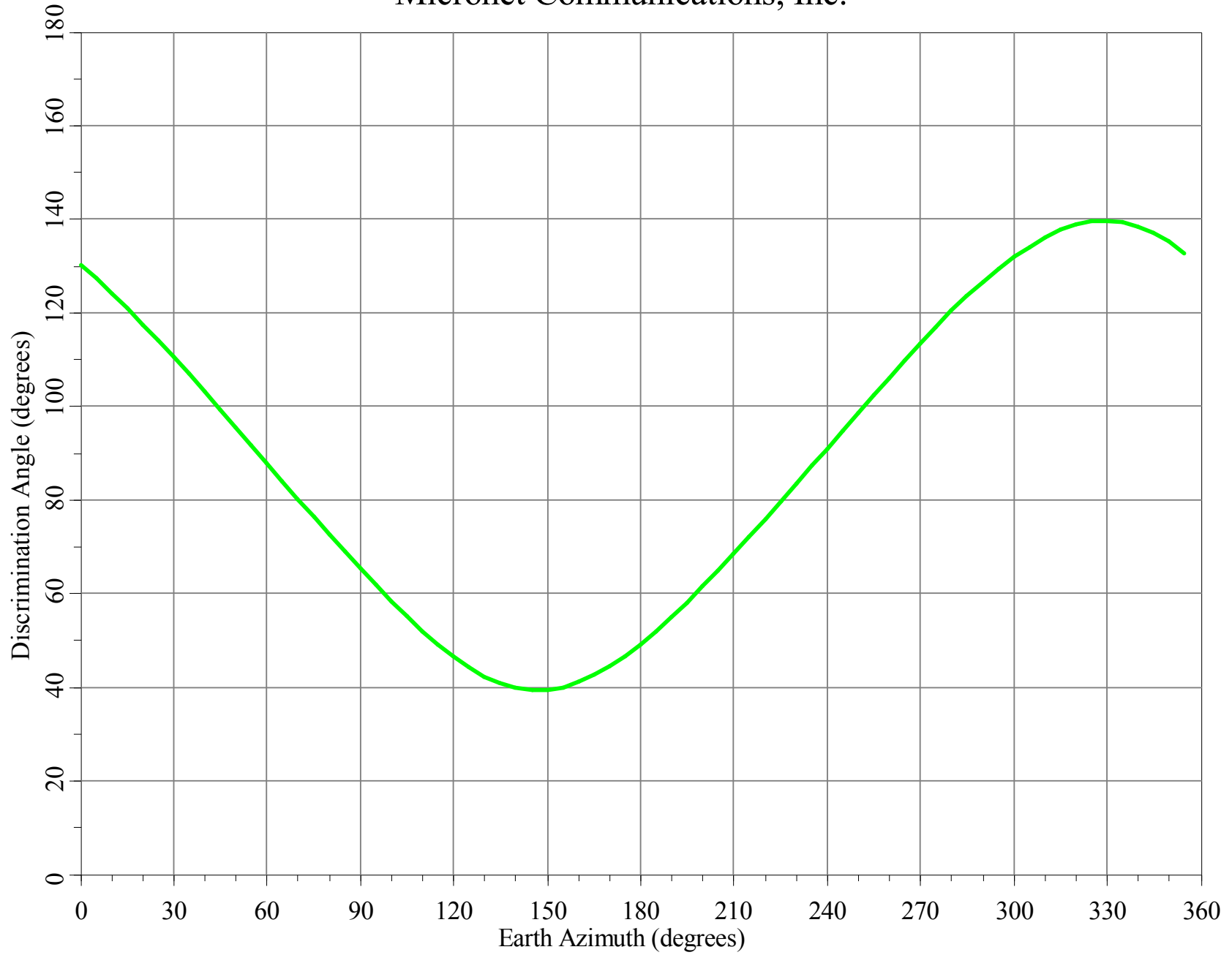


Horizon Gain for Satellite 2012, DC

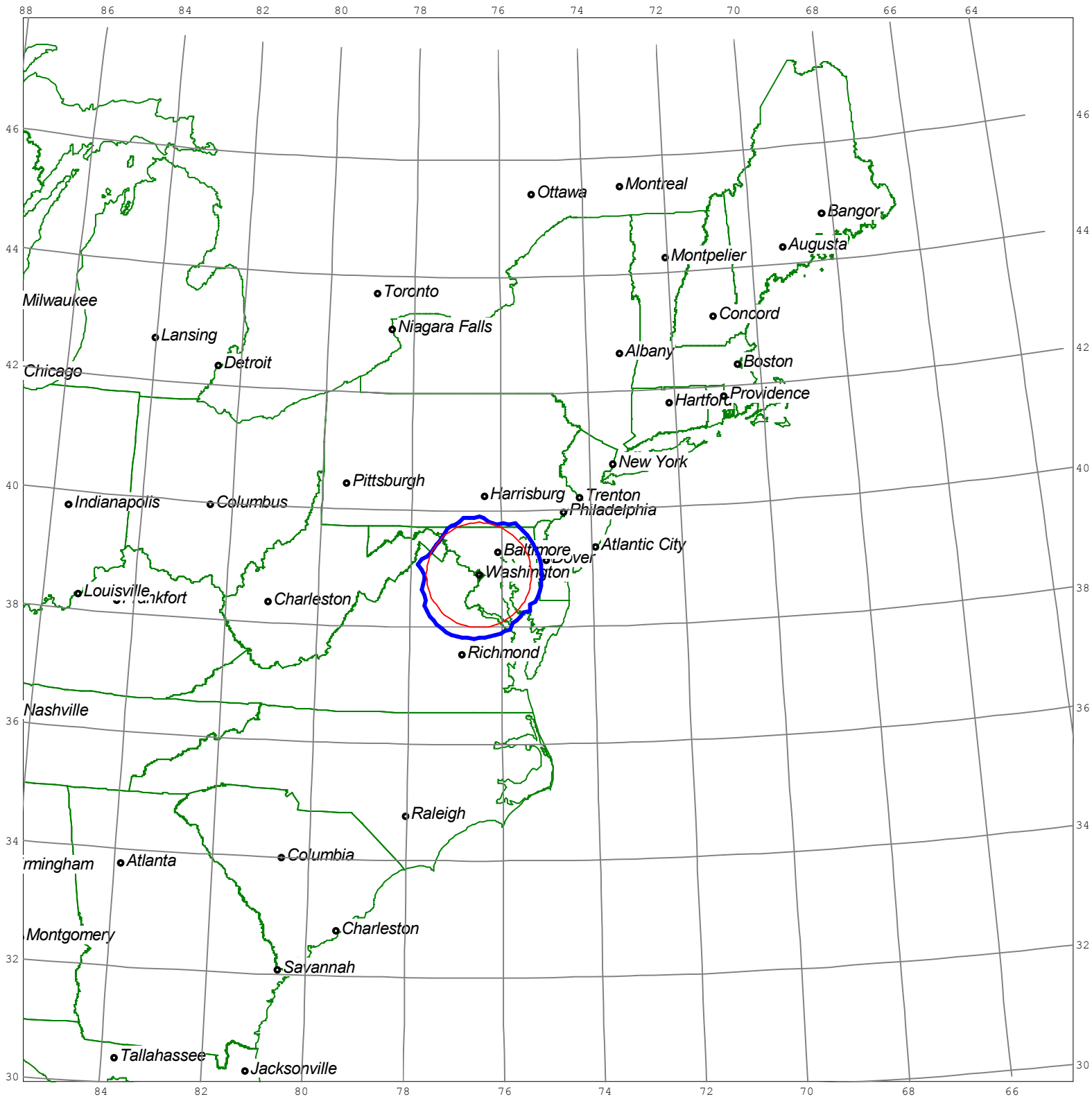
Micronet Communications, Inc.



Minimum Discrimination Angles for Satellite 2012, DC
Micronet Communications, Inc.



Final Contour & Rain Scatter for Satellite 2012, DC - Transmit



Micronet Communications, Inc.
 720 F Avenue, Suite 100
 Plano, Texas 75074
 972-422-7200

File: N1203006

=====

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

=====

Company: EMERGING MARKETS COMMUNICATIONS INC
 Site Name, State: Satellite 2012, DC
 Call Sign:
 Latitude (NAD83) 38 54 15.7 N
 Longitude (NAD83) 77 1 20.4 W
 Elevation AMSL (ft/m) 77.70 23.68
 Receive Frequency Range (MHz)
 Transmit Frequency Range (MHz) 6025-6065/6125-6425
 Range of Satellite Orbital Long. (deg W) 119.00 119.00
 Range of Azimuths from North (deg) 235.08 235.08
 Antenna Centerline (ft/m) 115.00 35.05
 Antenna Elevation Angles (deg) 27.66 27.66

Equipment Parameters Transmit

Antenna Gain, Main Beam (dbI) 42.00
 15 DB Half Beamwidth (deg) 3.20

Antennas Transmit: PRODELIN 1251

Max Transmitter Power (dbW/4KHz) -18.20
 Max EIRP Main Beam (dbW/4KHz) 23.80
 Modulation / Emission Designator DIGITAL 5M29G7W 2M63G7W

Coordination Parameters Transmit

Max Greater Circle Distances (km) 135.18
 Max Rain Scatter Distances (km) 100.01
 Max Interference Power Long Term (dbW) -151.80
 Max Interference Power Short Term (dbW) -130.80
 Rain Zone / Radio Zone 2 A

MICRONET COMMUNICATIONS, INC.
02-28-2012

File: N1203006

page 1

=====
Horizon Angle Horizon Gain Final Contour - 6.17 GHz TRANSMIT ONLY
=====

Company: EMERGING MARKETS COMMUNICATIONS INC

Site Name, State: Satellite 2012, DC

Call Sign:

Latitude (NAD83) 38 54 15.7 N Longitude (NAD83) 77 1 20.4 W

North Azimuth (deg)	Horizon Angle (deg)	Horizon Gain (db)	Final Contour (km)	North Azimuth (deg)	Horizon Angle (deg)	Horizon Gain (db)	Final Contour (km)
0	0.25	-23.00	110.3	180	0.00	-13.00	119.3
5	0.27	-23.00	109.9	185	0.00	-13.00	119.3
10	0.48	-23.00	102.3	190	0.00	-11.14	119.3
15	0.52	-23.00	101.1	195	0.00	-10.00	119.3
20	0.49	-23.00	102.1	200	0.01	-10.00	119.3
25	0.27	-23.00	109.6	205	0.01	-10.00	119.3
30	0.22	-23.00	111.6	210	0.02	-10.00	119.3
35	0.03	-23.00	119.3	215	0.09	-8.63	119.3
40	0.08	-23.00	119.3	220	0.11	-6.12	119.3
45	0.00	-23.00	119.3	225	0.06	-4.80	119.3
50	0.04	-23.00	119.3	230	0.06	-4.47	119.3
55	0.00	-23.00	119.3	235	0.13	-4.34	119.3
60	0.00	-23.00	119.3	240	0.19	-4.43	119.3
65	0.00	-23.00	119.3	245	0.20	-4.75	112.2
70	0.00	-23.00	119.3	250	0.29	-5.88	109.1
75	0.00	-23.00	119.3	255	0.23	-8.43	111.3
80	0.00	-23.00	119.7	260	0.35	-10.00	107.0
85	0.00	-23.00	122.2	265	0.41	-10.00	104.9
90	0.02	-23.00	124.8	270	0.41	-10.00	104.7
95	0.03	-23.00	127.4	275	0.30	-10.00	108.7
100	0.02	-23.00	129.8	280	0.15	-11.03	119.3
105	0.02	-23.00	132.1	285	0.22	-13.00	111.5
110	0.09	-23.00	133.9	290	0.40	-13.00	105.3
115	0.18	-19.97	135.2	295	0.54	-13.00	100.3
120	0.22	-16.46	125.0	300	0.58	-13.00	100.0
125	0.17	-12.95	135.0	305	0.63	-13.00	100.0
130	0.21	-10.00	123.5	310	0.60	-13.00	100.0
135	0.22	-10.00	121.4	315	0.51	-12.21	101.4
140	0.22	-10.00	119.2	320	0.47	-10.31	102.7
145	0.21	-10.00	117.7	325	0.34	-10.00	107.2
150	0.14	-10.18	124.5	330	0.35	-10.00	107.0
155	0.09	-12.06	122.0	335	0.36	-10.00	106.6
160	0.06	-13.00	119.5	340	0.31	-10.00	108.5
165	0.03	-13.00	119.3	345	0.21	-12.81	111.7
170	0.00	-13.00	119.3	350	0.26	-16.32	110.2
175	0.00	-13.00	119.3	355	0.31	-19.80	108.5

MICRONET COMMUNICATIONS, INC.
02-28-2012

File: N1203006

page 2

=====

Discrimination Angle	Transmission Loss	-	6.17 GHz TRANSMIT ONLY
----------------------	-------------------	---	------------------------

=====

Company: EMERGING MARKETS COMMUNICATIONS INC

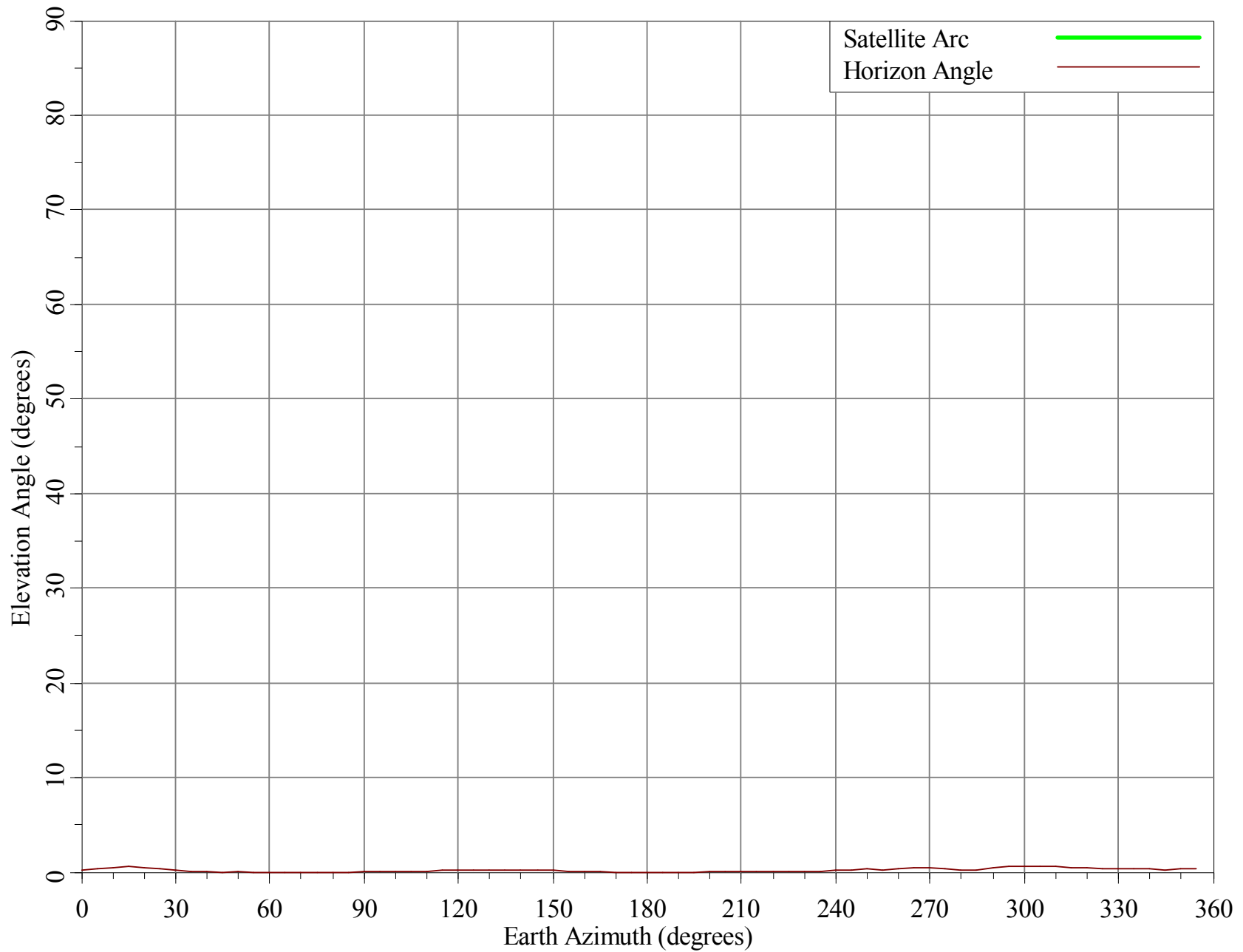
Site Name, State: Satellite 2012, DC

Call Sign:

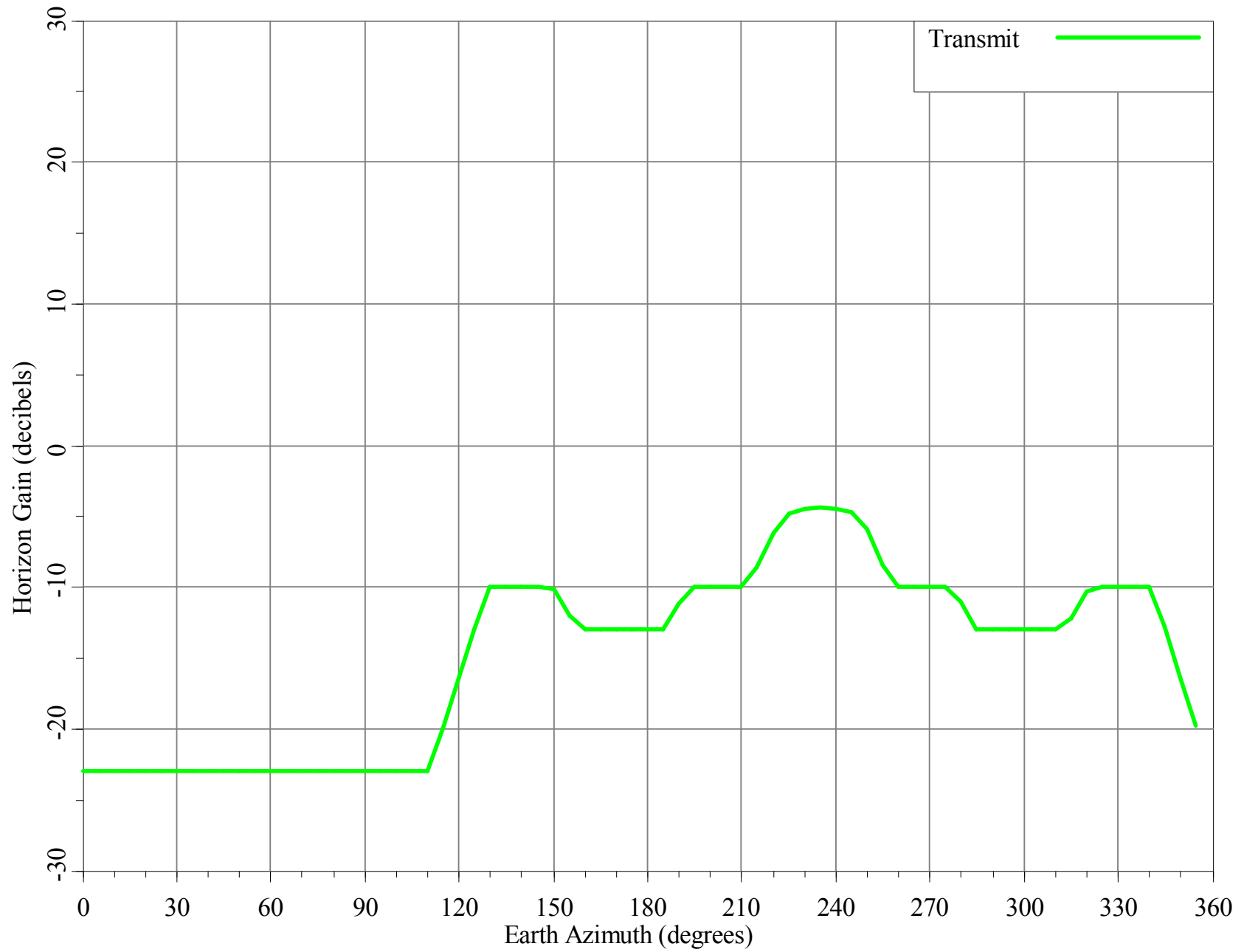
Latitude (NAD83) 38 54 15.7 N Longitude (NAD83) 77 1 20.4 W

North Azimuth (deg)	Minimum Discrimination Angle (deg)	Trans Loss (db)	North Azimuth (deg)	Minimum Discrimination Angle (deg)	Trans Loss (db)
0	120.326	149.88	180	59.537	149.88
5	124.485	149.88	185	55.364	149.88
10	128.424	149.88	190	51.288	149.88
15	132.336	149.88	195	47.337	150.00
20	136.124	149.88	200	43.540	150.91
25	139.836	149.88	205	39.960	151.84
30	143.173	149.88	210	36.646	152.78
35	146.263	149.88	215	33.631	153.71
40	148.713	149.88	220	31.121	154.55
45	150.699	149.88	225	29.246	155.23
50	151.881	149.88	230	28.029	155.69
55	152.343	149.88	235	27.531	155.88
60	151.943	149.88	240	27.870	155.75
65	150.751	149.88	245	29.057	155.30
70	148.859	149.88	250	30.882	154.64
75	146.384	149.88	255	33.427	153.78
80	143.446	149.88	260	36.283	152.89
85	140.150	149.88	265	39.555	151.95
90	136.563	149.88	270	43.145	151.01
95	132.771	149.88	275	47.018	150.07
100	128.837	149.88	280	51.067	149.88
105	124.759	149.88	285	55.102	149.88
110	120.553	149.88	290	59.182	149.88
115	116.265	149.88	295	63.365	149.88
120	111.945	149.88	300	67.655	149.88
125	107.626	149.88	305	71.988	149.88
130	103.225	149.88	310	76.390	149.88
135	98.819	149.88	315	80.841	149.88
140	94.400	149.88	320	85.279	149.88
145	89.978	149.88	325	89.768	149.88
150	85.580	149.88	330	94.191	149.88
155	81.184	149.88	335	98.605	149.88
160	76.790	149.88	340	103.033	149.88
165	72.425	149.88	345	107.457	149.88
170	68.089	149.88	350	111.782	149.88
175	63.784	149.88	355	116.057	149.88

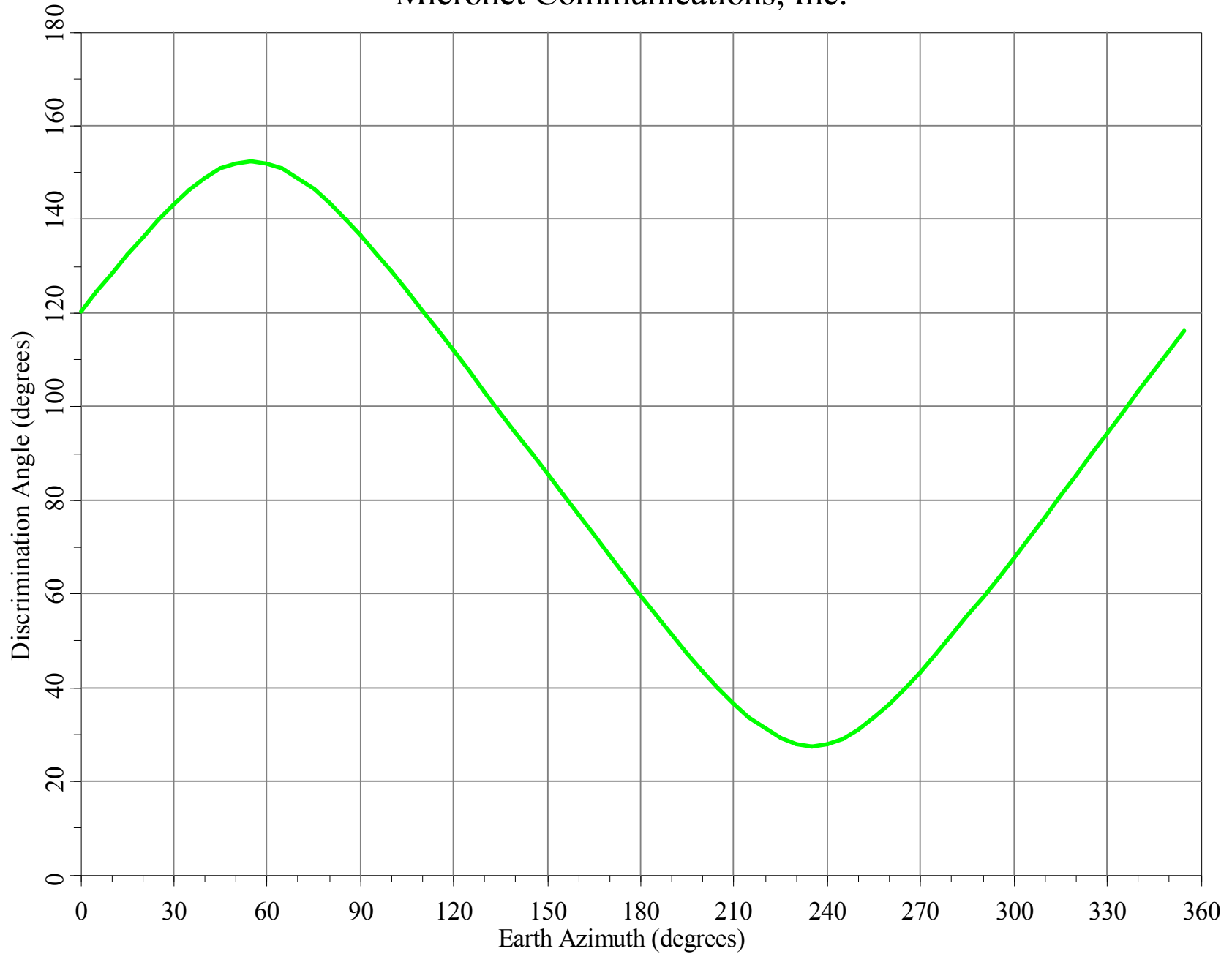
Horizon Angle & Satellite Arc for Satellite 2012, DC Micronet Communications, Inc.



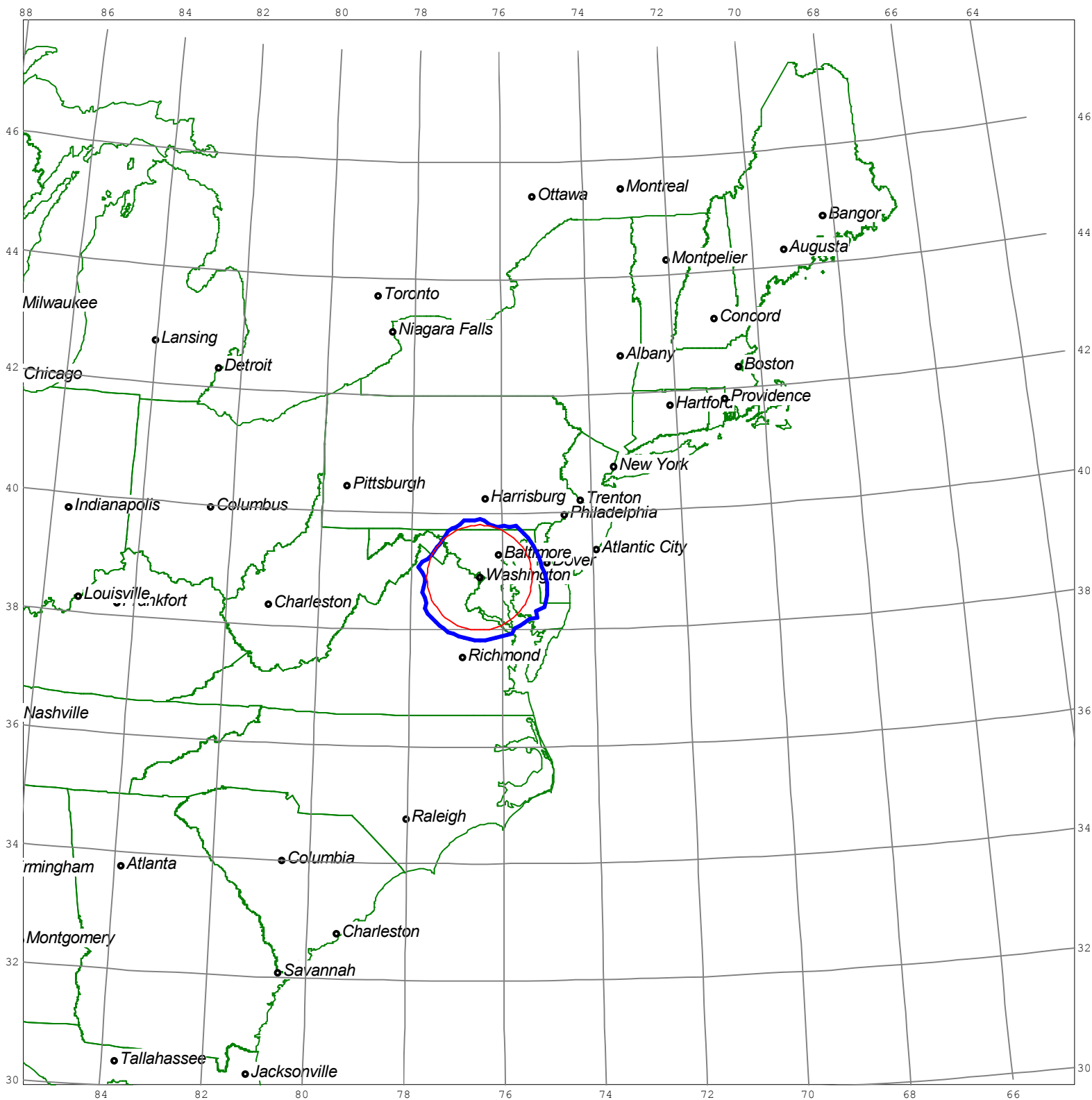
Horizon Gain for Satellite 2012, DC Micronet Communications, Inc.



Minimum Discrimination Angles for Satellite 2012, DC
Micronet Communications, Inc.



Final Contour & Rain Scatter for Satellite 2012, DC - Transmit



ANALYSIS OF NON-IONIZING RADIATION
for EMERGING MARKETS COMMUNICATIONS INC
Site: Satellite 2012 State: DC
Latitude: 38 54 15.7 Longitude: 77 1 20.4 (NAD83)
02-28-2012

The Office of Science and Technology Bulletin, No. 65, October 1985 and revised August 1997, specifies that the maximum level of non-ionizing radiation that a person may be exposed to over a six minute period is an average power density equal to 5 mW/cm**2 (five milliwatts per centimeter squared) for a controlled environment. For an uncontrolled environment, the maximum level of non-ionizing radiation that a person may be exposed to over a thirty minute period is an average power density equal to 1 mW/cm**2 (one milliwatt per centimeter squared). It is the purpose of this report to determine the maximum power flux densities of the earth station in the far zone, near zone, transition zone, at the main reflector surface, and between the antenna edge and the ground.

Parameters which were used in the calculations:

=====

Antenna Diameter, (D) = 2.4000 m
Antenna Surface Area (Sa) = $\pi(D^2)/4$ = 4.5239 m**2
Wavelength at 6.1750 GHz (λ) = 0.0485 m
Transmit Power at Flange (P) = 20.0000 Watts
Antenna Gain at Earth Site (GES) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)
pi = 3.1415927
Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

=====

$$\text{Distance to the Far Zone} \quad (D_f) = \frac{(n) (D^{**2})}{\text{lambda}} = 71.2577 \text{ m}$$

$$\text{Far Zone Power Density} \quad (R_f) = \frac{(GES) (P)}{4 * \text{pi} * (D_f^{**2})} = 4.9677 \text{ W/m}^{**2}$$
$$= 0.4968 \text{ mW/cm}^{**2}$$

2. NEAR ZONE CALCULATIONS

=====

Power Flux Density is considered to be at a maximum value throughout the entire length of this Zone. The Zone is contained within a cylindrical volume which has the same diameter as the antenna. Beyond the Near Zone, the Power Flux Density will decrease with distance from the Antenna.

$$\text{Distance to the Near Zone} \quad (D_n) = \frac{D^{**2}}{4 * \text{lambda}} = 29.6907 \text{ m}$$

$$\text{Near Zone Power Density} \quad (R_n) = \frac{16.0 (n) P}{\text{pi} (D^{**2})} = 10.6103 \text{ W/m}^{**2}$$
$$= 1.0610 \text{ mW/cm}^{**2}$$

3. TRANSITION ZONE CALCULATIONS

=====

The Power Density begins to decrease with distance in the Transition Zone. While the Power Density decreases inversely with distance in the Transition Zone, the Power Density decreases inversely with the square of the distance in the Far Zone. Since the maximum Power Density in the Transition Zone will not exceed the Near Zone values, it is not calculated.

4. MAIN REFLECTOR ZONE
=====

$$\begin{aligned} \text{Main Reflector Power Density} &= \frac{2(P)}{S_a} = 8.8419 \text{ W/m}^{**2} \\ &= 0.8842 \text{ mW/cm}^{**2} \end{aligned}$$

5. ZONE BETWEEN THE MAIN REFLECTOR AND THE GROUND
=====

Applying uniform illumination of the Main Reflector Surface:

$$\begin{aligned} \text{Main to Ground Power Density} &= \frac{P}{S_a} = 4.4210 \text{ W/m}^{**2} \\ &= 0.4421 \text{ mW/cm}^{**2} \end{aligned}$$

CALCULATED SAFETY MARGINS SUMMARY
AND EVALUATION

Controlled Safety Margin = 5.0 - Calculated Zone Value (mW/cm**2)

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	4.5032	Complies with ANSI
2. Near Zone	3.9390	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.1158	Complies with ANSI
5. Main Reflector to Ground	4.5579	Complies with ANSI

Uncontrolled Safety Margin = 1.0 - Calculated Zone Value (mW/cm**2)

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.5032	Complies with ANSI
2. Near Zone	-0.0610	POTENTIALLY HAZARDOUS
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.1158	Complies with ANSI
5. Main Reflector to Ground	0.5579	Complies with ANSI

6. EVALUATION
=====

A. Controlled Environment

B. Uncontrolled Environment

The NEAR ZONE does not comply with the ANSI standards!

The system will be FENCED so that no one can enter the affected Zone while the system is in use. Additionally, the system will be shut down for servicing.