18” Circular Antenna Tabular Data
for
L3 VMES System

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2 HORIZONTAL POLARIZATION

2.1 Azimuth Patterns

2.1.1 Horiz-Az 13.84 GHz

Tabular Data
Frequency 13.84 GHz
Polarization HORIZONTAL

Axis AZ

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-37.2	-53.8
-175	-48.6	-48.9
-170	-50.3	-45.4
-165	-52.6	-49.5
-160	-66.3	-72.4
-155	-59.0	-55.9
-150	-59.6	-51.9
-145	-50.8	-54.5
-140	-55.8	-57.8
-135	-52.1	-55.1
-130	-71.5	-61.3
-125	-56.3	-58.6
-120	-50.0	-58.0
-115	-47.7	-68.0
-110	-49.4	-50.4
-105	-47.2	-58.1
-100	-44.5	-50.2
-95	-42.6	-57.8
-90	-41.3	-61.9
-85	-37.8	-59.9
-80	-36.6	-72.7
-75	-37.0	-53.1
-70	-42.4	-55.1
-65	-38.9	-58.1
-60	-34.7	-64.5
-55	-43.6	-61.7
-50	-33.9	-67.4
-45	-38.7	-59.2
-40	-33.8	-51.9
-35	-52.2	-49.4
-30	-38.2	-53.5
-25	-29.9	-57.8
-20	-45.1	-45.5
-15	-33.6	-48.0
-10	-21.6	-50.0
-9.9	-21.6	-50.0
-9.8	-21.4	-49.6
-9.7	-21.2	-51.4
-9.6	-21.0	-48.6
-9.5	-20.9	-48.6
-9.4	-20.9	-49.6
-9.3	-20.6	-52.0
-9.2	-20.5	-47.0
-9.1	-20.2	-47.0
-9.0	-20.1	-48.5
-8.9	-20.0	-48.0
-8.8	-19.8	-48.0
-8.7	-19.8	-49.3
-8.6	-19.5	-45.6
-8.5	-19.4	-45.6
-8.4	-19.3	-44.9
-8.3	-18.8	-43.3
-8.2	-18.6	-43.3
-8.1	-18.3	-42.3
-8.0	-18.3	-42.2
-7.9	-17.9	-41.2
-7.8	-17.5	-41.2
-7.7	-17.0	-41.0
-7.6	-16.3	-39.6
-7.5	-15.7	-38.5
-7.4	-15.1	-38.5
-7.3	-15.1	-39.1
-7.2	-14.4	-38.3
-7.1	-13.8	-38.3
-7.0	-13.0	-38.3
-6.9	-12.4	-37.4
-6.8	-11.7	-37.5
-6.7	-11.2	-37.0
-6.6	-10.6	-37.9
-6.5	-10.6	-37.9
-6.4	-10.0	-37.1
-6.3	-9.4	-37.5
-6.2	-9.0	-37.5
-6.1	-8.6	-37.6
-6.0	-8.2	-37.2
-5.9	-7.8	-37.3
-5.8	-7.8	-37.3
-5.7	-7.5	-37.3
-5.6	-7.3	-37.1
-5.5	-7.2	-37.3
-5.4	-7.2	-37.3
-5.3	-7.2	-37.2
-5.2	-7.2	-36.3
-5.1	-7.3	-36.3
-5.0	-7.3	-36.3
-4.9	-7.7	-34.5
-4.8	-8.0	-34.5
-4.7	-8.6	-33.3
-4.6	-9.1	-32.6
-4.5	-10.0	-31.5
-4.4	-10.9	-31.5
-4.3	-10.9	-30.7
-4.2	-12.1	-29.8
-4.1	-12.9	-29.0
-4.0	-13.3	-29.0
-3.9	-12.8	-28.4
-3.8	-11.5	-27.8
-3.7	-9.8	-27.8
-3.6	-8.0	-27.3
-3.5	-8.0	-26.7
-3.4	-6.4	-26.0
-3.3	-4.9	-26.0
-3.2	-3.6	-25.8
-3.1	-2.3	-25.8
-3.0	-1.2	-25.4
-2.9	-0.1	-25.2
-2.8	0.8	-25.0
-2.7	1.7	-25.0
-2.6	2.8	-24.9
-2.5	3.5	-25.0
-2.4	4.2	-24.9
-2.3	4.2	-25.1
-2.2	5.1	-25.1
-2.1	5.6	-25.1
-2.0	6.1	-25.1
-1.9	6.8	-25.4
-1.8	7.4	-25.8
-1.7	7.8	-26.0
-1.6	7.8	-26.0
-1.5	8.3	-26.3
-1.4	8.7	-26.8
-1.3	9.1	-27.1
-1.2	9.4	-27.1

-1.1	9.7	-28.1	4.0	-13.1	-37.0	9.1	-19.6	-47.6
-1.0	9.9	-28.8	4.1	-13.5	-37.2	9.2	-19.6	-46.1
-0.9	9.9	-28.8	4.2	-13.0	-36.8	9.3	-19.8	-50.4
-0.8	10.2	-29.6	4.3	-12.2	-36.8	9.4	-20.0	-50.4
-0.7	10.4	-30.4	4.4	-11.1	-37.4	9.5	-20.1	-48.1
-0.6	10.6	-31.9	4.5	-10.2	-38.4	9.6	-20.4	-48.8
-0.5	10.7	-31.9	4.6	-9.4	-37.8	9.7	-20.6	-48.8
-0.4	10.8	-32.1	4.7	-8.7	-37.8	9.8	-20.6	-51.6
-0.3	10.8	-33.8	4.8	-8.7	-38.7	9.9	-20.8	-56.1
-0.2	10.9	-33.8	4.9	-8.2	-39.0	10	-21.1	-56.1
-0.1	10.9	-35.0	5.0	-7.8	-39.0	15	-35.6	-53.1
0.0	11.0	-35.9	5.1	-7.4	-38.3	20	-42.4	-54.5
0.1	11.0	-35.9	5.2	-7.2	-38.8	25	-29.6	-53.9
0.2	11.0	-36.1	5.3	-7.1	-38.8	30	-37.3	-61.4
0.3	10.9	-36.0	5.4	-7.0	-39.4	35	-47.3	-60.2
0.4	10.9	-36.0	5.5	-7.0	-39.9	40	-34.4	-70.6
0.5	10.7	-36.0	5.6	-7.0	-40.1	45	-37.7	-58.0
0.6	10.6	-34.9	5.7	-7.2	-40.1	50	-34.0	-52.8
0.7	10.6	-34.7	5.8	-7.2	-40.3	55	-43.4	-54.0
0.8	10.5	-33.7	5.9	-7.4	-42.2	60	-34.9	-52.2
0.9	10.2	-33.7	6.0	-7.8	-42.2	65	-36.6	-57.6
1.0	10.0	-32.7	6.1	-8.0	-43.0	70	-44.1	-53.3
1.1	9.8	-32.0	6.2	-8.4	-46.3	75	-38.2	-54.0
1.2	9.5	-32.0	6.3	-8.8	-46.3	80	-36.1	-62.3
1.3	9.2	-31.8	6.4	-9.4	-46.0	85	-38.1	-54.5
1.4	8.9	-31.4	6.5	-9.4	-48.3	90	-41.6	-59.7
1.5	8.6	-30.8	6.6	-9.8	-48.3	95	-41.0	-55.6
1.6	8.2	-30.8	6.7	-10.3	-51.4	100	-44.2	-61.2
1.7	8.2	-30.6	6.8	-10.8	-57.9	105	-58.8	-47.9
1.8	7.8	-30.9	6.9	-11.4	-71.9	110	-46.3	-71.4
1.9	7.3	-30.9	7.0	-12.0	-71.9	115	-50.1	-53.8
2.0	6.6	-30.4	7.1	-12.6	-54.4	120	-53.9	-58.8
2.1	6.1	-30.4	7.2	-13.1	-57.8	125	-53.9	-63.9
2.2	5.5	-30.7	7.3	-13.8	-52.9	130	-36.7	-68.3
2.3	4.9	-30.7	7.4	-14.4	-52.9	135	-54.4	-73.6
2.4	4.3	-30.5	7.5	-15.0	-49.1	140	-57.9	-61.9
2.5	3.7	-30.7	7.6	-15.5	-48.3	145	-47.9	-54.1
2.6	3.0	-31.7	7.7	-16.0	-46.2	150	-55.9	-51.7
2.7	2.2	-31.7	7.8	-16.5	-46.2	155	-41.8	-46.3
2.8	1.4	-31.6	7.9	-16.9	-45.0	160	-24.0	-40.4
2.9	0.5	-32.2	8.0	-17.4	-45.6	165	-36.0	-43.0
3.0	-0.4	-32.3	8.1	-17.7	-45.5	170	-44.5	-50.2
3.1	-1.5	-33.0	8.2	-17.7	-45.5	175	-46.8	-46.3
3.2	-2.5	-33.0	8.3	-18.0	-43.7	180	-51.7	-58.9
3.3	-2.5	-33.3	8.4	-18.3	-44.7			
3.4	-4.3	-34.2	8.5	-18.5	-43.7			
3.5	-5.6	-34.8	8.6	-18.7	-43.7			
3.6	-7.1	-34.8	8.7	-18.9	-43.8			
3.7	-8.7	-34.9	8.8	-19.1	-44.6			
3.8	-10.5	-35.5	8.9	-19.3	-44.1			
3.9	-12.0	-37.0	9.0	-19.4	-44.1			

2.1.2 Horiz-Az 14.16 GHz

Tabular Data
Frequency 14.16 GHz
Polarization HORIZONTAL

Axis AZ

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-44.4	-52.9
-175	-43.1	-54.7
-170	-51.5	-49.6
-165	-52.1	-53.1
-160	-53.7	-48.9
-155	-51.2	-66.9
-150	-51.3	-53.4
-145	-72.2	-57.1
-140	-75.1	-52.4
-135	-60.8	-57.3
-130	-54.2	-60.4
-125	-62.9	-52.4
-120	-66.3	-52.8
-115	-49.1	-54.1
-110	-50.1	-55.9
-105	-48.6	-63.0
-100	-50.1	-70.5
-95	-45.9	-65.5
-90	-42.6	-55.8
-85	-41.8	-52.7
-80	-40.3	-55.1
-75	-44.2	-52.6
-70	-52.8	-59.1
-65	-37.9	-55.9
-60	-37.0	-58.6
-55	-42.6	-63.2
-50	-36.0	-63.7
-45	-39.8	-55.5
-40	-40.5	-54.8
-35	-43.9	-52.4
-30	-35.0	-59.4
-25	-32.7	-67.1
-20	-40.1	-53.7
-15	-30.8	-63.1
-10	-20.9	-54.3
-9.9	-20.9	-50.4
-9.8	-20.8	-50.4
-9.7	-20.7	-48.9
-9.6	-20.5	-51.5
-9.5	-20.4	-51.5
-9.4	-20.3	-50.7
-9.3	-20.2	-50.6
-9.2	-20.2	-50.6
-9.1	-20.1	-48.3
-9.0	-20.1	-54.3
-8.9	-20.0	-51.7
-8.8	-20.0	-51.7
-8.7	-19.6	-50.9
-8.6	-19.4	-51.4
-8.5	-19.4	-51.4
-8.4	-19.2	-55.5
-8.3	-18.9	-57.4
-8.2	-18.6	-57.4
-8.1	-18.1	-59.1
-8.0	-17.5	-53.8
-7.9	-17.0	-53.8
-7.8	-16.4	-48.3
-7.7	-16.4	-48.9
-7.6	-15.8	-45.0
-7.5	-15.2	-45.0
-7.4	-14.7	-46.1
-7.3	-14.2	-44.0
-7.2	-13.3	-43.1
-7.1	-12.7	-43.1
-7.0	-12.2	-42.1
-6.9	-11.7	-40.9
-6.8	-11.2	-40.0
-6.7	-10.7	-40.9
-6.6	-10.2	-39.5
-6.5	-9.8	-39.5
-6.4	-9.4	-38.4
-6.3	-9.0	-38.5
-6.2	-8.7	-38.3
-6.1	-8.7	-38.3
-6.0	-8.4	-37.8
-5.9	-8.1	-37.0
-5.8	-7.9	-37.8
-5.7	-7.8	-37.8
-5.6	-7.8	-37.8
-5.5	-7.8	-37.0
-5.4	-7.8	-37.0
-5.3	-7.9	-37.4
-5.2	-8.2	-36.8
-5.1	-8.5	-37.3
-5.0	-8.9	-37.3
-4.9	-9.5	-37.1
-4.8	-10.3	-36.0
-4.7	-10.3	-36.0
-4.6	-11.2	-35.6
-4.5	-12.4	-34.8
-4.4	-13.9	-34.8
-4.3	-15.6	-34.1
-4.2	-17.0	-34.3
-4.1	-17.0	-33.7
-4.0	-15.2	-33.7
-3.9	-12.8	-33.3
-3.8	-10.6	-32.7
-3.7	-8.6	-32.7
-3.6	-6.8	-32.5
-3.5	-5.3	-32.4
-3.4	-3.4	-32.4
-3.3	-3.4	-32.8
-3.2	-1.6	-32.0
-3.1	-0.6	-32.4
-3.0	0.7	-32.4
-2.9	0.7	-32.5
-2.8	1.8	-32.8
-2.7	2.9	-32.5
-2.6	3.5	-33.2
-2.5	4.4	-33.2
-2.4	5.2	-33.9
-2.3	5.2	-34.9
-2.2	5.8	-35.1
-2.1	6.5	-35.1
-2.0	7.1	-36.1
-1.9	7.6	-38.0
-1.8	7.6	-39.8
-1.7	8.1	-39.8
-1.6	8.5	-41.7
-1.5	9.0	-45.2
-1.4	9.3	-44.5
-1.3	9.3	-44.5
-1.2	9.7	-43.8
-1.1	9.9	-41.3
-1.0	10.2	-39.5
-0.9	10.2	-39.5
-0.8	10.5	-36.5
-0.7	10.6	-34.9
-0.6	10.8	-33.7
-0.5	10.9	-33.7
-0.4	10.9	-32.5
-0.3	10.9	-31.2
-0.2	11.0	-30.2

-0.1	11.0	-30.2	5.0	-7.9	-36.4	15	-31.4	-62.2
0.0	11.0	-29.7	5.1	-7.9	-36.6	20	-41.9	-58.0
0.1	11.0	-28.9	5.2	-7.6	-37.6	25	-31.9	-60.7
0.2	10.9	-28.9	5.3	-7.5	-37.6	30	-35.1	-55.0
0.3	10.9	-28.4	5.4	-7.4	-37.9	35	-44.2	-60.9
0.4	10.9	-27.9	5.5	-7.5	-39.1	40	-38.4	-58.3
0.5	10.7	-27.9	5.6	-7.5	-39.5	45	-41.0	-54.6
0.6	10.6	-27.3	5.7	-7.6	-39.5	50	-36.4	-58.3
0.7	10.4	-27.0	5.8	-7.8	-40.1	55	-44.2	-58.0
0.8	10.2	-26.9	5.9	-8.0	-40.9	60	-36.3	-56.7
0.9	10.0	-26.7	6.0	-8.4	-41.6	65	-38.0	-55.2
1.0	10.0	-26.7	6.1	-8.4	-41.6	70	-51.4	-69.6
1.1	9.7	-26.5	6.2	-8.7	-43.1	75	-43.0	-49.3
1.2	9.3	-26.5	6.3	-9.0	-43.9	80	-39.3	-56.0
1.3	9.0	-26.3	6.4	-9.6	-43.9	85	-40.6	-55.4
1.4	8.5	-26.5	6.5	-10.1	-44.2	90	-45.8	-51.0
1.5	8.5	-26.6	6.6	-10.7	-47.5	95	-50.5	-56.6
1.6	7.9	-26.6	6.7	-11.2	-47.5	100	-73.1	-55.9
1.7	7.6	-26.6	6.8	-11.2	-48.0	105	-49.6	-55.9
1.8	7.1	-26.8	6.9	-11.9	-48.4	110	-50.0	-67.3
1.9	7.1	-26.8	7.0	-12.5	-49.0	115	-55.8	-55.1
2.0	6.4	-27.0	7.1	-13.1	-49.0	120	-50.8	-56.6
2.1	5.8	-27.0	7.2	-13.8	-51.4	125	-60.1	-50.7
2.2	5.1	-27.3	7.3	-14.5	-48.4	130	-40.0	-52.4
2.3	4.3	-27.3	7.4	-14.5	-49.0	135	-44.1	-56.2
2.4	3.5	-27.5	7.5	-15.2	-49.0	140	-49.7	-61.2
2.5	3.5	-27.5	7.6	-15.9	-49.8	145	-48.2	-57.0
2.6	2.7	-27.9	7.7	-16.5	-51.5	150	-48.4	-60.9
2.7	1.8	-28.2	7.8	-17.0	-50.1	155	-38.5	-44.2
2.8	0.7	-28.5	7.9	-17.6	-50.1	160	-33.9	-31.0
2.9	-0.3	-28.8	8.0	-17.6	-48.4	165	-50.0	-40.0
3.0	-1.5	-28.8	8.1	-18.2	-51.0	170	-51.4	-50.4
3.1	-2.9	-29.1	8.2	-18.5	-48.4	175	-50.2	-66.7
3.2	-2.9	-29.6	8.3	-18.8	-53.7	180	-42.9	-58.1
3.3	-4.6	-30.1	8.4	-19.3	-53.7			
3.4	-6.3	-30.5	8.5	-19.4	-49.5			
3.5	-8.4	-31.1	8.6	-19.4	-51.5			
3.6	-10.9	-31.5	8.7	-19.5	-51.5			
3.7	-10.9	-31.5	8.8	-19.6	-50.9			
3.8	-13.7	-32.2	8.9	-19.8	-51.9			
3.9	-16.2	-32.4	9.0	-19.9	-50.0			
4.0	-17.2	-33.8	9.1	-19.8	-50.0			
4.1	-16.1	-33.8	9.2	-20.1	-49.6			
4.2	-16.1	-34.0	9.3	-20.1	-53.2			
4.3	-14.0	-34.0	9.4	-20.1	-53.2			
4.4	-12.2	-34.9	9.5	-20.3	-55.6			
4.5	-10.8	-35.1	9.6	-20.1	-53.5			
4.6	-9.8	-36.1	9.7	-20.4	-53.5			
4.7	-9.8	-36.1	9.8	-20.5	-53.2			
4.8	-8.9	-36.0	9.9	-20.8	-50.4			
4.9	-8.4	-36.4	10	-20.8	-60.8			

2.1.3 Horiz-Az 14.50 GHz

Tabular Data
Frequency 14.5 GHz
Polarization
HORIZONTAL

Axis Azimuth

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-42.4	-56.3
-175	-40.1	-65.0
-170	-39.4	-54.8
-165	-55.0	-45.5
-160	-62.6	-78.7
-155	-75.4	-75.2
-150	-83.5	-51.7
-145	-66.1	-52.2
-140	-63.6	-52.7
-135	-69.5	-67.1
-130	-66.1	-50.4
-125	-54.6	-62.1
-120	-51.4	-57.9
-115	-54.9	-65.3
-110	-53.1	-55.1
-105	-52.1	-52.7
-100	-50.7	-56.6
-95	-43.1	-54.3
-90	-42.2	-55.7
-85	-39.8	-54.0
-80	-39.4	-60.6
-75	-40.3	-62.0
-70	-64.7	-63.5
-65	-40.3	-56.1
-60	-38.2	-48.6
-55	-52.9	-60.1
-50	-41.4	-58.2
-45	-46.1	-48.9
-40	-49.2	-60.2
-35	-43.3	-52.1
-30	-37.8	-47.9
-25	-40.6	-69.6
-20	-45.1	-53.3
-15	-28.0	-55.9
-10	-24.7	-49.9
-9.9	-24.7	-45.3
-9.8	-24.9	-45.3
-9.7	-25.1	-50.1
-9.6	-25.4	-47.1
-9.5	-25.4	-47.1
-9.4	-25.6	-49.2
-9.3	-26.3	-51.3
-9.2	-26.9	-51.3
-9.1	-27.7	-50.4
-9.0	-27.7	-51.0
-8.9	-28.4	-51.0
-8.8	-29.6	-53.4
-8.7	-30.5	-52.1
-8.6	-30.5	-50.3
-8.5	-31.4	-50.3
-8.4	-31.7	-49.4
-8.3	-32.2	-47.7
-8.2	-32.2	-47.7
-8.1	-31.7	-47.6
-8.0	-30.8	-48.1
-7.9	-30.8	-48.1
-7.8	-29.6	-48.1
-7.7	-27.7	-46.5
-7.6	-26.2	-44.4
-7.5	-26.2	-44.4
-7.4	-24.6	-45.3
-7.3	-23.1	-44.1
-7.2	-21.7	-44.9
-7.1	-20.1	-44.9
-7.0	-20.1	-42.1
-6.9	-18.8	-42.9
-6.8	-17.6	-41.9
-6.7	-16.5	-40.7
-6.6	-15.5	-40.7
-6.5	-15.5	-41.2
-6.4	-14.4	-40.3
-6.3	-13.6	-40.1
-6.2	-12.8	-40.1
-6.1	-12.8	-38.5
-6.0	-12.1	-38.9
-5.9	-11.4	-38.8
-5.8	-10.9	-38.8
-5.7	-10.9	-39.1
-5.6	-10.5	-38.8
-5.5	-10.3	-38.1
-5.4	-10.1	-38.1
-5.3	-10.0	-38.1
-5.2	-10.0	-39.7
-5.1	-10.0	-39.1
-5.0	-10.1	-39.1
-4.9	-10.3	-41.0
-4.8	-10.8	-40.9
-4.7	-11.2	-40.9
-4.6	-11.9	-42.3
-4.5	-12.7	-43.0
-4.4	-13.8	-47.6
-4.3	-15.9	-47.6
-4.2	-17.8	-50.4
-4.1	-17.8	-51.8
-4.0	-19.4	-51.8
-3.9	-19.5	-49.7
-3.8	-17.4	-45.2
-3.7	-14.6	-42.4
-3.6	-11.9	-42.4
-3.5	-9.6	-39.9
-3.4	-7.4	-37.5
-3.3	-5.6	-37.5
-3.2	-4.1	-36.1
-3.1	-2.8	-34.4
-3.0	-1.5	-32.9
-2.9	-1.5	-32.9
-2.8	-0.2	-32.2
-2.7	0.8	-31.0
-2.6	1.7	-31.0
-2.5	2.5	-30.5
-2.4	3.3	-29.8
-2.3	4.0	-28.8
-2.2	4.7	-28.3
-2.1	5.3	-28.3
-2.0	6.0	-27.6
-1.9	6.7	-27.6
-1.8	6.7	-27.1
-1.7	7.3	-27.0
-1.6	7.8	-27.0
-1.5	8.4	-26.5
-1.4	8.7	-26.0
-1.3	8.7	-26.1
-1.2	9.2	-26.1
-1.1	9.5	-26.0
-1.0	9.8	-25.9
-0.9	10.0	-25.9
-0.8	10.2	-25.9
-0.7	10.2	-25.6
-0.6	10.5	-25.8
-0.5	10.6	-25.8
-0.4	10.7	-25.8
-0.3	10.9	-26.1

-0.2	10.9	-26.5	4.9	-10.6	-40.6	10	-24.2	-50.5
-0.1	10.9	-26.5	5.0	-10.1	-40.6	15	-28.0	-52.0
0.0	10.9	-26.5	5.1	-9.9	-42.2	20	-44.4	-53.2
0.1	11.0	-26.5	5.2	-9.9	-42.2	25	-38.3	-64.1
0.2	10.9	-26.5	5.3	-9.8	-43.3	30	-37.0	-67.8
0.3	10.9	-26.8	5.4	-9.8	-43.4	35	-44.7	-57.6
0.4	10.8	-27.1	5.5	-9.9	-43.4	40	-45.2	-63.7
0.5	10.7	-27.1	5.6	-10.1	-44.8	45	-48.2	-72.9
0.6	10.6	-27.2	5.7	-10.1	-43.9	50	-41.0	-70.1
0.7	10.4	-27.6	5.8	-10.5	-43.9	55	-50.6	-60.9
0.8	10.4	-27.6	5.9	-10.8	-46.2	60	-38.4	-64.4
0.9	10.2	-27.6	6.0	-11.3	-48.6	65	-39.6	-71.2
1.0	9.9	-28.0	6.1	-11.8	-48.4	70	-54.9	-56.3
1.1	9.7	-28.1	6.2	-12.3	-48.4	75	-40.5	-58.6
1.2	9.4	-28.5	6.3	-12.9	-47.8	80	-38.9	-57.1
1.3	9.2	-28.8	6.4	-13.7	-50.5	85	-39.6	-52.8
1.4	8.8	-28.9	6.5	-14.5	-50.5	90	-40.5	-58.3
1.5	8.4	-28.9	6.6	-14.5	-53.7	95	-42.6	-54.0
1.6	8.0	-29.3	6.7	-15.4	-56.6	100	-44.5	-61.4
1.7	7.6	-29.3	6.8	-16.3	-56.6	105	-45.8	-60.5
1.8	7.6	-29.3	6.9	-17.3	-63.1	110	-48.4	-71.1
1.9	6.9	-29.9	7.0	-18.6	-58.7	115	-50.3	-54.8
2.0	6.4	-30.0	7.1	-18.6	-64.8	120	-72.6	-60.9
2.1	5.8	-30.4	7.2	-19.8	-64.8	125	-53.5	-54.7
2.2	5.3	-30.4	7.3	-21.2	-60.8	130	-40.7	-60.2
2.3	4.6	-30.7	7.4	-22.6	-54.3	135	-41.7	-48.6
2.4	4.0	-30.7	7.5	-22.6	-56.8	140	-55.0	-53.0
2.5	3.0	-31.4	7.6	-24.2	-56.8	145	-50.6	-52.4
2.6	2.2	-31.3	7.7	-25.6	-51.0	150	-57.7	-57.4
2.7	1.4	-31.7	7.8	-27.1	-54.2	155	-37.3	-43.7
2.8	1.4	-31.7	7.9	-28.4	-56.6	160	-29.1	-42.2
2.9	0.5	-31.9	8.0	-28.4	-56.6	165	-37.5	-51.4
3.0	-0.8	-32.3	8.1	-29.4	-51.5	170	-46.7	-60.1
3.1	-1.9	-32.6	8.2	-30.0	-54.3	175	-50.7	-47.6
3.2	-3.0	-32.9	8.3	-30.7	-58.4	180	-41.5	-51.5
3.3	-4.3	-32.9	8.4	-30.7	-58.4			
3.4	-6.3	-32.7	8.5	-30.1	-59.4			
3.5	-8.0	-34.3	8.6	-30.3	-55.4			
3.6	-10.0	-34.5	8.7	-29.4	-55.8			
3.7	-12.2	-34.5	8.8	-28.4	-55.8			
3.8	-14.8	-34.7	8.9	-28.4	-66.9			
3.9	-17.3	-35.7	9.0	-27.5	-55.5			
4.0	-19.1	-36.1	9.1	-26.7	-55.5			
4.1	-18.9	-36.1	9.2	-26.1	-59.2			
4.2	-17.3	-36.6	9.3	-26.1	-55.0			
4.3	-17.3	-37.2	9.4	-25.4	-57.4			
4.4	-15.5	-38.0	9.5	-24.9	-57.4			
4.5	-14.0	-38.0	9.6	-24.9	-57.8			
4.6	-12.8	-38.4	9.7	-24.7	-50.4			
4.7	-11.8	-39.5	9.8	-24.2	-50.4			
4.8	-11.1	-39.5	9.9	-24.2	-58.1			

2.2 Elevation Patterns

2.2.1 Horiz-El 13.84 GHz

Tabular Data
Frequency 13.84 GHz
Polarization HORIZONTAL

Axis EL

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-37.2	-53.8
-175	-48.6	-48.9
-170	-50.3	-45.4
-165	-52.6	-49.5
-160	-66.3	-72.4
-155	-59.0	-55.9
-150	-59.6	-51.9
-145	-50.8	-54.5
-140	-55.8	-57.8
-135	-52.1	-55.1
-130	-71.5	-61.3
-125	-56.3	-58.6
-120	-50.0	-58.0
-115	-47.7	-68.0
-110	-49.4	-50.4
-105	-47.2	-58.1
-100	-44.5	-50.2
-95	-42.6	-57.8
-90	-41.3	-61.9
-85	-37.8	-59.9
-80	-36.6	-72.7
-75	-37.0	-53.1
-70	-42.4	-55.1
-65	-38.9	-58.1
-60	-34.7	-64.5
-55	-43.6	-61.7
-50	-33.9	-67.4
-45	-38.7	-59.2
-40	-33.8	-51.9
-35	-52.2	-49.4
-30	-38.2	-53.5
-25	-29.9	-57.8
-20	-45.1	-45.5
-15	-33.6	-48.0
-10	-21.6	-50.0
-9.9	-21.6	-50.0
-9.8	-21.4	-49.6
-9.7	-21.2	-51.4
-9.6	-21.0	-48.6
-9.5	-20.9	-48.6
-9.4	-20.9	-49.6
-9.3	-20.6	-52.0
-9.2	-20.5	-47.0
-9.1	-20.2	-47.0
-9.0	-20.1	-48.5
-8.9	-20.0	-48.0
-8.8	-19.8	-48.0
-8.7	-19.8	-49.3
-8.6	-19.5	-45.6
-8.5	-19.4	-45.6
-8.4	-19.3	-44.9
-8.3	-18.8	-43.3
-8.2	-18.6	-43.3
-8.1	-18.3	-42.3
-8.0	-18.3	-42.2
-7.9	-17.9	-41.2
-7.8	-17.5	-41.2
-7.7	-17.0	-41.0
-7.6	-16.3	-39.6
-7.5	-15.7	-38.5
-7.4	-15.1	-38.5
-7.3	-15.1	-39.1
-7.2	-14.4	-38.3
-7.1	-13.8	-38.3
-7.0	-13.0	-38.3
-6.9	-12.4	-37.4
-6.8	-11.7	-37.5
-6.7	-11.2	-37.0
-6.6	-10.6	-37.9
-6.5	-10.6	-37.9
-6.4	-10.0	-37.1
-6.3	-9.4	-37.5
-6.2	-9.0	-37.5
-6.1	-8.6	-37.6
-6.0	-8.2	-37.2
-5.9	-7.8	-37.3
-5.8	-7.8	-37.3
-5.7	-7.5	-37.3
-5.6	-7.3	-37.1
-5.5	-7.2	-37.3
-5.4	-7.2	-37.3
-5.3	-7.2	-37.2
-5.2	-7.2	-36.3
-5.1	-7.3	-36.3
-5.0	-7.3	-36.3
-4.9	-7.7	-34.5
-4.8	-8.0	-34.5
-4.7	-8.6	-33.3
-4.6	-9.1	-32.6
-4.5	-10.0	-31.5
-4.4	-10.9	-31.5
-4.3	-10.9	-30.7
-4.2	-12.1	-29.8
-4.1	-12.9	-29.0
-4.0	-13.3	-29.0
-3.9	-12.8	-28.4
-3.8	-11.5	-27.8
-3.7	-9.8	-27.8
-3.6	-8.0	-27.3
-3.5	-8.0	-26.7
-3.4	-6.4	-26.0
-3.3	-4.9	-26.0
-3.2	-3.6	-25.8
-3.1	-2.3	-25.8
-3.0	-1.2	-25.4
-2.9	-0.1	-25.2
-2.8	0.8	-25.0
-2.7	1.7	-25.0
-2.6	2.8	-24.9
-2.5	3.5	-25.0
-2.4	4.2	-24.9
-2.3	4.2	-25.1
-2.2	5.1	-25.1
-2.1	5.6	-25.1
-2.0	6.1	-25.1
-1.9	6.8	-25.4
-1.8	7.4	-25.8
-1.7	7.8	-26.0
-1.6	7.8	-26.0
-1.5	8.3	-26.3
-1.4	8.7	-26.8
-1.3	9.1	-27.1
-1.2	9.4	-27.1
-1.1	9.7	-28.1
-1.0	9.9	-28.8
-0.9	9.9	-28.8
-0.8	10.2	-29.6
-0.7	10.4	-30.4

-0.6	10.6	-31.9	4.5	-10.2	-38.4	9.6	-20.4	-48.8
-0.5	10.7	-31.9	4.6	-9.4	-37.8	9.7	-20.6	-48.8
-0.4	10.8	-32.1	4.7	-8.7	-37.8	9.8	-20.6	-51.6
-0.3	10.8	-33.8	4.8	-8.7	-38.7	9.9	-20.8	-56.1
-0.2	10.9	-33.8	4.9	-8.2	-39.0	10	-21.1	-56.1
-0.1	10.9	-35.0	5.0	-7.8	-39.0	15	-35.6	-53.1
0.0	11.0	-35.9	5.1	-7.4	-38.3	20	-42.4	-54.5
0.1	11.0	-35.9	5.2	-7.2	-38.8	25	-29.6	-53.9
0.2	11.0	-36.1	5.3	-7.1	-38.8	30	-37.3	-61.4
0.3	10.9	-36.0	5.4	-7.0	-39.4	35	-47.3	-60.2
0.4	10.9	-36.0	5.5	-7.0	-39.9	40	-34.4	-70.6
0.5	10.7	-36.0	5.6	-7.0	-40.1	45	-37.7	-58.0
0.6	10.6	-34.9	5.7	-7.2	-40.1	50	-34.0	-52.8
0.7	10.6	-34.7	5.8	-7.2	-40.3	55	-43.4	-54.0
0.8	10.5	-33.7	5.9	-7.4	-42.2	60	-34.9	-52.2
0.9	10.2	-33.7	6.0	-7.8	-42.2	65	-36.6	-57.6
1.0	10.0	-32.7	6.1	-8.0	-43.0	70	-44.1	-53.3
1.1	9.8	-32.0	6.2	-8.4	-46.3	75	-38.2	-54.0
1.2	9.5	-32.0	6.3	-8.8	-46.3	80	-36.1	-62.3
1.3	9.2	-31.8	6.4	-9.4	-46.0	85	-38.1	-54.5
1.4	8.9	-31.4	6.5	-9.4	-48.3	90	-41.6	-59.7
1.5	8.6	-30.8	6.6	-9.8	-48.3	95	-41.0	-55.6
1.6	8.2	-30.8	6.7	-10.3	-51.4	100	-44.2	-61.2
1.7	8.2	-30.6	6.8	-10.8	-57.9	105	-58.8	-47.9
1.8	7.8	-30.9	6.9	-11.4	-71.9	110	-46.3	-71.4
1.9	7.3	-30.9	7.0	-12.0	-71.9	115	-50.1	-53.8
2.0	6.6	-30.4	7.1	-12.6	-54.4	120	-53.9	-58.8
2.1	6.1	-30.4	7.2	-13.1	-57.8	125	-53.9	-63.9
2.2	5.5	-30.7	7.3	-13.8	-52.9	130	-36.7	-68.3
2.3	4.9	-30.7	7.4	-14.4	-52.9	135	-54.4	-73.6
2.4	4.3	-30.5	7.5	-15.0	-49.1	140	-57.9	-61.9
2.5	3.7	-30.7	7.6	-15.5	-48.3	145	-47.9	-54.1
2.6	3.0	-31.7	7.7	-16.0	-46.2	150	-55.9	-51.7
2.7	2.2	-31.7	7.8	-16.5	-46.2	155	-41.8	-46.3
2.8	1.4	-31.6	7.9	-16.9	-45.0	160	-24.0	-40.4
2.9	0.5	-32.2	8.0	-17.4	-45.6	165	-36.0	-43.0
3.0	-0.4	-32.3	8.1	-17.7	-45.5	170	-44.5	-50.2
3.1	-1.5	-33.0	8.2	-17.7	-45.5	175	-46.8	-46.3
3.2	-2.5	-33.0	8.3	-18.0	-43.7	180	-51.7	-58.9
3.3	-2.5	-33.3	8.4	-18.3	-44.7			
3.4	-4.3	-34.2	8.5	-18.5	-43.7			
3.5	-5.6	-34.8	8.6	-18.7	-43.7			
3.6	-7.1	-34.8	8.7	-18.9	-43.8			
3.7	-8.7	-34.9	8.8	-19.1	-44.6			
3.8	-10.5	-35.5	8.9	-19.3	-44.1			
3.9	-12.0	-37.0	9.0	-19.4	-44.1			
4.0	-13.1	-37.0	9.1	-19.6	-47.6			
4.1	-13.5	-37.2	9.2	-19.6	-46.1			
4.2	-13.0	-36.8	9.3	-19.8	-50.4			
4.3	-12.2	-36.8	9.4	-20.0	-50.4			
4.4	-11.1	-37.4	9.5	-20.1	-48.1			

2.2.2 Horiz-El 14.16 GHz

Tabular Data
Frequency 14.16 GHz
Polarization HORIZONTAL

Axis EL

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-46.9	-47.2
-175	-71.5	-60.7
-170	-51.7	-51.2
-165	-55.5	-61.7
-160	-54.9	-52.2
-155	-51.0	-55.1
-150	-50.2	-49.1
-145	-48.0	-50.0
-140	-49.0	-55.3
-135	-46.7	-56.5
-130	-46.5	-59.0
-125	-48.7	-57.6
-120	-45.4	-61.6
-115	-46.3	-55.3
-110	-44.0	-55.0
-105	-42.1	-55.6
-100	-42.2	-62.5
-95	-41.4	-51.4
-90	-37.1	-55.3
-85	-36.5	-57.6
-80	-35.8	-62.9
-75	-38.7	-57.3
-70	-52.2	-72.4
-65	-43.9	-54.2
-60	-38.1	-49.6
-55	-47.7	-55.5
-50	-35.9	-56.2
-45	-41.7	-63.9
-40	-47.3	-66.1
-35	-42.6	-67.4
-30	-34.8	-51.6
-25	-34.7	-49.9
-20	-32.8	-56.8
-15	-26.1	-53.0
-10	-17.8	-59.5
-9.9	-17.9	-59.7
-9.8	-17.9	-71.5
-9.7	-18.0	-71.5
-9.6	-18.3	-59.9
-9.5	-18.4	-72.4
-9.4	-18.7	-61.3
-9.3	-19.3	-61.3
-9.2	-19.6	-69.3
-9.1	-20.0	-72.5
-9.0	-20.0	-72.5
-8.9	-20.5	-74.1
-8.8	-21.0	-66.7
-8.7	-21.4	-66.7
-8.6	-21.9	-64.2
-8.5	-21.9	-60.0
-8.4	-22.1	-57.9
-8.3	-22.2	-57.9
-8.2	-22.2	-59.1
-8.1	-22.1	-58.6
-8.0	-21.7	-58.6
-7.9	-21.2	-56.2
-7.8	-20.7	-62.3
-7.7	-20.1	-56.3
-7.6	-19.4	-56.3
-7.5	-18.5	-54.9
-7.4	-18.5	-58.1
-7.3	-17.3	-51.7
-7.2	-16.6	-51.7
-7.1	-15.4	-50.4
-7.0	-14.4	-49.4
-6.9	-14.4	-48.2
-6.8	-13.3	-48.2
-6.7	-12.2	-47.7
-6.6	-11.2	-47.7
-6.5	-11.2	-48.1
-6.4	-10.3	-48.1
-6.3	-9.7	-46.1
-6.2	-9.1	-48.1
-6.1	-8.5	-46.3
-6.0	-8.0	-46.3
-5.9	-7.5	-46.6
-5.8	-6.9	-46.6
-5.7	-6.5	-46.0
-5.6	-6.1	-46.0
-5.5	-5.8	-48.6
-5.4	-5.5	-49.6
-5.3	-5.4	-48.8
-5.2	-5.3	-48.8
-5.1	-5.2	-46.1
-5.0	-5.2	-47.0
-4.9	-5.3	-47.0
-4.8	-5.5	-46.2
-4.7	-5.7	-42.9
-4.6	-6.0	-42.9
-4.5	-6.5	-42.9
-4.4	-7.0	-40.0
-4.3	-7.9	-40.0
-4.2	-8.9	-39.2
-4.1	-10.3	-37.5
-4.0	-12.1	-37.5
-3.9	-12.1	-37.0
-3.8	-14.9	-36.1
-3.7	-19.1	-34.6
-3.6	-24.9	-34.6
-3.5	-20.5	-34.5
-3.4	-14.8	-33.5
-3.3	-10.9	-32.7
-3.2	-7.8	-32.7
-3.1	-5.6	-32.2
-3.0	-5.6	-31.4
-2.9	-3.8	-31.1
-2.8	-2.2	-31.1
-2.7	-0.8	-30.7
-2.6	0.4	-30.1
-2.5	1.4	-30.1
-2.4	2.3	-29.6
-2.3	3.2	-29.1
-2.2	4.1	-29.2
-2.1	4.9	-29.2
-2.0	5.8	-29.2
-1.9	5.8	-28.9
-1.8	6.4	-29.1
-1.7	7.0	-28.8
-1.6	7.6	-29.2
-1.5	8.0	-29.4
-1.4	8.5	-29.4
-1.3	8.9	-29.4
-1.2	8.9	-29.8
-1.1	9.3	-30.4
-1.0	9.7	-30.4
-0.9	9.9	-30.6
-0.8	10.2	-31.3
-0.7	10.4	-32.7
-0.6	10.4	-32.7
-0.5	10.6	-32.9
-0.4	10.7	-34.3
-0.3	10.9	-34.3
-0.2	10.9	-35.9

-0.1	10.9	-37.0	5.0	-6.4	-40.4	15	-25.6	-52.1
0.0	11.0	-37.0	5.1	-6.3	-41.6	20	-34.9	-52.5
0.1	11.0	-39.2	5.2	-6.3	-43.8	25	-34.4	-54.0
0.2	10.9	-41.9	5.3	-6.4	-43.8	30	-34.9	-56.7
0.3	10.9	-43.5	5.4	-6.5	-47.8	35	-39.6	-65.2
0.4	10.9	-43.5	5.5	-6.5	-47.4	40	-44.7	-61.0
0.5	10.7	-45.0	5.6	-6.8	-47.4	45	-45.0	-56.8
0.6	10.6	-42.2	5.7	-7.2	-50.4	50	-38.5	-58.7
0.7	10.5	-42.2	5.8	-7.5	-49.4	55	-43.8	-61.0
0.8	10.2	-40.0	5.9	-7.9	-49.4	60	-39.4	-53.8
0.9	10.2	-37.6	6.0	-8.4	-46.6	65	-40.9	-53.5
1.0	10.0	-35.5	6.1	-8.9	-46.6	70	-48.5	-64.0
1.1	9.7	-35.5	6.2	-9.4	-46.6	75	-41.5	-57.2
1.2	9.4	-33.8	6.3	-9.4	-46.6	80	-37.3	-67.3
1.3	9.0	-33.2	6.4	-10.2	-44.5	85	-36.0	-54.8
1.4	8.6	-33.2	6.5	-10.9	-44.5	90	-38.2	-61.3
1.5	8.1	-31.7	6.6	-11.7	-44.5	95	-40.7	-55.8
1.6	8.1	-30.9	6.7	-12.4	-45.1	100	-46.3	-55.9
1.7	7.6	-30.0	6.8	-13.3	-45.4	105	-44.7	-54.0
1.8	7.0	-30.0	6.9	-14.1	-44.4	110	-48.4	-68.6
1.9	6.3	-29.7	7.0	-14.1	-44.4	115	-46.8	-72.0
2.0	5.8	-29.3	7.1	-15.1	-46.6	120	-45.1	-59.6
2.1	5.8	-29.2	7.2	-16.0	-44.6	125	-51.5	-57.0
2.2	4.9	-29.2	7.3	-17.0	-44.6	130	-38.7	-56.3
2.3	4.1	-29.1	7.4	-17.9	-44.6	135	-45.9	-51.0
2.4	3.2	-28.9	7.5	-18.7	-46.3	140	-45.5	-50.6
2.5	2.1	-28.8	7.6	-18.7	-46.0	145	-52.4	-54.2
2.6	2.1	-28.8	7.7	-19.6	-45.1	150	-46.2	-55.6
2.7	0.9	-28.7	7.8	-20.5	-45.1	155	-41.3	-56.1
2.8	-0.4	-28.8	7.9	-21.2	-48.9	160	-40.8	-46.5
2.9	-1.9	-29.2	8.0	-21.7	-49.7	165	-40.8	-43.2
3.0	-3.6	-29.2	8.1	-22.2	-49.4	170	-55.6	-51.5
3.1	-3.6	-29.2	8.2	-22.2	-49.4	175	-50.7	-52.2
3.2	-5.8	-29.8	8.3	-22.4	-47.3	180	-47.3	-50.1
3.3	-8.2	-29.4	8.4	-22.5	-49.1			
3.4	-11.3	-30.2	8.5	-22.4	-48.1			
3.5	-11.3	-30.2	8.6	-22.4	-48.4			
3.6	-15.8	-30.2	8.7	-21.9	-48.4			
3.7	-19.9	-30.9	8.8	-21.5	-47.3			
3.8	-21.7	-31.5	8.9	-21.0	-48.8			
3.9	-19.0	-31.5	9.0	-21.0	-48.8			
4.0	-14.7	-32.3	9.1	-20.5	-47.3			
4.1	-12.6	-33.1	9.2	-19.9	-47.1			
4.2	-10.8	-33.7	9.3	-19.9	-48.1			
4.3	-9.6	-33.7	9.4	-19.4	-48.1			
4.4	-8.6	-35.1	9.5	-19.1	-48.1			
4.5	-7.9	-35.9	9.6	-18.7	-46.6			
4.6	-7.3	-35.9	9.7	-18.7	-46.6			
4.7	-6.8	-37.3	9.8	-18.5	-47.3			
4.8	-6.6	-38.1	9.9	-18.2	-47.9			
4.9	-6.4	-40.4	10	-18.0	-47.9			

2.2.3 Horiz-El 14.50 GHz

Tabular Data
Frequency 14.5 GHz
Polarization HORIZONTAL
Axis Elevation

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-45.1	-62.0
-175	-42.6	-58.8
-170	-42.6	-50.4
-165	-62.3	-70.0
-160	-59.8	-52.4
-155	-69.4	-56.2
-150	-47.5	-57.6
-145	-49.9	-51.5
-140	-46.5	-60.4
-135	-52.6	-56.7
-130	-44.8	-71.2
-125	-47.9	-55.8
-120	-50.1	-70.2
-115	-47.9	-60.4
-110	-45.2	-62.3
-105	-44.2	-63.5
-100	-42.1	-65.8
-95	-40.1	-57.8
-90	-37.7	-57.4
-85	-36.9	-56.3
-80	-37.9	-53.7
-75	-45.8	-58.9
-70	-48.1	-65.7
-65	-49.8	-54.6
-60	-44.1	-60.9
-55	-40.9	-60.1
-50	-34.3	-60.5
-45	-43.1	-56.6
-40	-44.0	-64.3
-35	-38.4	-54.2
-30	-30.5	-69.9
-25	-37.6	-54.9
-20	-33.5	-59.7
-15	-22.9	-50.6
-10	-17.3	-52.2
-9.9	-17.2	-53.0
-9.8	-17.2	-53.0
-9.7	-17.2	-50.7
-9.6	-17.3	-49.5
-9.5	-17.4	-48.1
-9.4	-17.4	-48.1
-9.3	-17.7	-48.0
-9.2	-17.9	-53.9
-9.1	-18.4	-53.9
-9.0	-18.4	-53.7
-8.9	-18.7	-49.3
-8.8	-19.1	-49.2
-8.7	-19.5	-49.2
-8.6	-19.9	-50.7
-8.5	-19.9	-47.4
-8.4	-20.3	-47.4
-8.3	-20.7	-46.8
-8.2	-21.0	-46.6
-8.1	-21.0	-46.6
-8.0	-21.3	-46.1
-7.9	-21.1	-45.4
-7.8	-20.8	-45.4
-7.7	-20.8	-45.8
-7.6	-20.5	-41.8
-7.5	-20.0	-44.6
-7.4	-19.2	-44.6
-7.3	-18.2	-43.6
-7.2	-17.5	-41.4
-7.1	-16.3	-41.5
-7.0	-15.5	-41.5
-6.9	-15.5	-41.6
-6.8	-14.4	-41.1
-6.7	-13.5	-41.7
-6.6	-12.5	-42.1
-6.5	-11.6	-42.1
-6.4	-10.7	-40.4
-6.3	-9.8	-41.0
-6.2	-9.0	-40.3
-6.1	-8.2	-40.3
-6.0	-8.2	-40.2
-5.9	-7.5	-41.0
-5.8	-6.9	-41.0
-5.7	-6.2	-40.5
-5.6	-5.7	-38.8
-5.5	-5.2	-38.9
-5.4	-4.9	-38.9
-5.3	-4.5	-38.8
-5.2	-4.5	-38.9
-5.1	-4.3	-38.1
-5.0	-4.1	-38.1
-4.9	-4.0	-36.5
-4.8	-4.0	-37.1
-4.7	-4.0	-37.1
-4.6	-4.0	-36.3
-4.5	-4.3	-36.7
-4.4	-4.6	-35.6
-4.3	-5.0	-35.6
-4.2	-5.6	-35.3
-4.1	-6.4	-34.1
-4.0	-7.3	-34.1
-3.9	-8.4	-33.5
-3.8	-9.9	-32.7
-3.7	-9.9	-32.7
-3.6	-11.7	-33.0
-3.5	-15.4	-31.9
-3.4	-17.9	-31.2
-3.3	-17.7	-31.2
-3.2	-13.5	-31.0
-3.1	-9.6	-30.7
-3.0	-9.6	-30.1
-2.9	-6.7	-30.1
-2.8	-4.4	-30.1
-2.7	-2.4	-29.9
-2.6	-0.8	-29.7
-2.5	0.5	-29.7
-2.4	1.7	-29.6
-2.3	1.7	-30.0
-2.2	2.7	-29.6
-2.1	3.7	-29.4
-2.0	4.5	-29.4
-1.9	5.3	-29.4
-1.8	6.0	-29.9
-1.7	6.6	-30.1
-1.6	7.2	-30.2
-1.5	7.7	-30.3
-1.4	8.2	-30.3
-1.3	8.6	-30.2
-1.2	9.0	-30.7
-1.1	9.0	-30.7
-1.0	9.4	-30.6
-0.9	9.9	-30.2
-0.8	10.1	-30.6
-0.7	10.3	-30.6
-0.6	10.5	-30.2
-0.5	10.7	-30.0
-0.4	10.8	-29.5
-0.3	10.8	-29.5
-0.2	10.9	-29.2

-0.1	11.0	-28.9	5.0	-4.6	-35.1	15	-23.8	-54.2
0.0	11.0	-28.4	5.1	-4.6	-35.1	20	-34.9	-58.5
0.1	11.0	-28.4	5.2	-4.7	-35.7	25	-37.2	-60.2
0.2	11.0	-27.8	5.3	-5.0	-38.3	30	-31.0	-53.3
0.3	10.9	-27.4	5.4	-5.3	-38.3	35	-37.9	-56.8
0.4	10.8	-27.4	5.5	-5.7	-39.7	40	-43.2	-57.0
0.5	10.8	-26.8	5.6	-6.0	-41.1	45	-41.7	-68.6
0.6	10.7	-26.0	5.7	-6.0	-41.1	50	-35.2	-77.4
0.7	10.5	-25.7	5.8	-6.5	-42.5	55	-41.2	-58.3
0.8	10.3	-25.7	5.9	-7.0	-44.2	60	-41.9	-59.7
0.9	10.1	-25.4	6.0	-7.6	-46.5	65	-52.0	-74.8
1.0	9.8	-24.9	6.1	-8.2	-46.5	70	-43.6	-59.2
1.1	9.4	-24.9	6.2	-8.9	-51.0	75	-52.8	-50.9
1.2	9.4	-24.6	6.3	-9.8	-50.5	80	-39.4	-53.5
1.3	9.0	-24.3	6.4	-9.8	-50.5	85	-39.6	-62.9
1.4	8.6	-24.3	6.5	-10.6	-60.3	90	-39.4	-56.0
1.5	8.1	-24.2	6.6	-11.5	-56.0	95	-45.1	-50.6
1.6	7.4	-24.0	6.7	-12.3	-51.7	100	-42.9	-55.3
1.7	6.9	-23.6	6.8	-13.3	-51.7	105	-49.6	-53.6
1.8	6.9	-23.5	6.9	-14.4	-59.0	110	-46.5	-56.7
1.9	6.2	-23.5	7.0	-14.4	-53.8	115	-44.9	-54.9
2.0	5.5	-23.5	7.1	-15.4	-53.8	120	-46.6	-59.3
2.1	4.8	-23.5	7.2	-16.5	-60.1	125	-44.7	-58.2
2.2	4.1	-23.5	7.3	-17.5	-50.0	130	-41.4	-49.1
2.3	3.1	-23.5	7.4	-18.4	-60.7	135	-50.5	-64.4
2.4	2.1	-23.7	7.5	-18.4	-60.7	140	-54.4	-49.6
2.5	0.9	-23.7	7.6	-19.3	-54.5	145	-58.4	-56.8
2.6	-0.4	-23.8	7.7	-20.0	-49.8	150	-49.8	-54.7
2.7	-0.4	-23.8	7.8	-20.6	-58.4	155	-44.3	-42.0
2.8	-1.9	-24.1	7.9	-21.0	-64.8	160	-34.9	-44.2
2.9	-3.6	-24.3	8.0	-21.3	-64.8	165	-35.2	-52.0
3.0	-5.5	-24.3	8.1	-21.5	-57.2	170	-52.2	-68.6
3.1	-7.9	-24.6	8.2	-21.5	-69.0	175	-66.1	-57.5
3.2	-10.2	-24.6	8.3	-21.4	-55.3	180	-41.4	-52.4
3.3	-13.5	-25.1	8.4	-21.5	-55.3			
3.4	-17.9	-25.5	8.5	-21.0	-65.8			
3.5	-20.3	-25.8	8.6	-20.9	-59.0			
3.6	-17.2	-26.3	8.7	-20.5	-58.1			
3.7	-13.6	-26.3	8.8	-20.1	-58.1			
3.8	-11.0	-27.0	8.9	-19.7	-56.3			
3.9	-11.0	-27.8	9.0	-19.7	-63.3			
4.0	-9.3	-28.3	9.1	-19.3	-58.6			
4.1	-7.9	-28.3	9.2	-18.7	-58.6			
4.2	-6.8	-29.3	9.3	-18.5	-73.8			
4.3	-6.1	-29.9	9.4	-18.0	-70.4			
4.4	-5.5	-29.9	9.5	-18.0	-72.6			
4.5	-5.1	-30.9	9.6	-17.8	-72.6			
4.6	-4.8	-31.9	9.7	-17.6	-57.6			
4.7	-4.6	-31.9	9.8	-17.5	-72.2			
4.8	-4.6	-33.1	9.9	-17.5	-72.2			
4.9	-4.5	-34.1	10	-17.3	-56.3			

3 VERTICAL POLARIZATION

3.1 Azimuth Patterns

3.1.1 Vert-Az 13.84 GHz

Tabular Data
Frequency 13.84 GHz
Polarization VERT
Axis AZ

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-37.2	-53.8
-175	-48.6	-48.9
-170	-50.3	-45.4
-165	-52.6	-49.5
-160	-66.3	-72.4
-155	-59.0	-55.9
-150	-59.6	-51.9
-145	-50.8	-54.5
-140	-55.8	-57.8
-135	-52.1	-55.1
-130	-71.5	-61.3
-125	-56.3	-58.6
-120	-50.0	-58.0
-115	-47.7	-68.0
-110	-49.4	-50.4
-105	-47.2	-58.1
-100	-44.5	-50.2
-95	-42.6	-57.8
-90	-41.3	-61.9
-85	-37.8	-59.9
-80	-36.6	-72.7
-75	-37.0	-53.1
-70	-42.4	-55.1
-65	-38.9	-58.1
-60	-34.7	-64.5
-55	-43.6	-61.7
-50	-33.9	-67.4
-45	-38.7	-59.2
-40	-33.8	-51.9
-35	-52.2	-49.4
-30	-38.2	-53.5
-25	-29.9	-57.8
-20	-45.1	-45.5
-15	-33.6	-48.0
-10	-21.6	-50.0
-9.9	-21.6	-50.0
-9.8	-21.4	-49.6
-9.7	-21.2	-51.4
-9.6	-21.0	-48.6
-9.5	-20.9	-48.6
-9.4	-20.9	-49.6
-9.3	-20.6	-52.0
-9.2	-20.5	-47.0
-9.1	-20.2	-47.0
-9.0	-20.1	-48.5
-8.9	-20.0	-48.0
-8.8	-19.8	-48.0
-8.7	-19.8	-49.3
-8.6	-19.5	-45.6
-8.5	-19.4	-45.6
-8.4	-19.3	-44.9
-8.3	-18.8	-43.3
-8.2	-18.6	-43.3
-8.1	-18.3	-42.3
-8.0	-18.3	-42.2
-7.9	-17.9	-41.2
-7.8	-17.5	-41.2
-7.7	-17.0	-41.0
-7.6	-16.3	-39.6
-7.5	-15.7	-38.5
-7.4	-15.1	-38.5
-7.3	-15.1	-39.1
-7.2	-14.4	-38.3
-7.1	-13.8	-38.3
-7.0	-13.0	-38.3
-6.9	-12.4	-37.4
-6.8	-11.7	-37.5
-6.7	-11.2	-37.0
-6.6	-10.6	-37.9
-6.5	-10.6	-37.9
-6.4	-10.0	-37.1
-6.3	-9.4	-37.5
-6.2	-9.0	-37.5
-6.1	-8.6	-37.6
-6.0	-8.2	-37.2
-5.9	-7.8	-37.3
-5.8	-7.8	-37.3
-5.7	-7.5	-37.3
-5.6	-7.3	-37.1
-5.5	-7.2	-37.3
-5.4	-7.2	-37.3
-5.3	-7.2	-37.2
-5.2	-7.2	-36.3
-5.1	-7.3	-36.3
-5.0	-7.3	-36.3
-4.9	-7.7	-34.5
-4.8	-8.0	-34.5
-4.7	-8.6	-33.3
-4.6	-9.1	-32.6
-4.5	-10.0	-31.5
-4.4	-10.9	-31.5
-4.3	-10.9	-30.7
-4.2	-12.1	-29.8
-4.1	-12.9	-29.0
-4.0	-13.3	-29.0
-3.9	-12.8	-28.4
-3.8	-11.5	-27.8
-3.7	-9.8	-27.8
-3.6	-8.0	-27.3
-3.5	-8.0	-26.7
-3.4	-6.4	-26.0
-3.3	-4.9	-26.0
-3.2	-3.6	-25.8
-3.1	-2.3	-25.8
-3.0	-1.2	-25.4
-2.9	-0.1	-25.2
-2.8	0.8	-25.0
-2.7	1.7	-25.0
-2.6	2.8	-24.9
-2.5	3.5	-25.0
-2.4	4.2	-24.9
-2.3	4.2	-25.1
-2.2	5.1	-25.1
-2.1	5.6	-25.1
-2.0	6.1	-25.1
-1.9	6.8	-25.4
-1.8	7.4	-25.8
-1.7	7.8	-26.0
-1.6	7.8	-26.0
-1.5	8.3	-26.3
-1.4	8.7	-26.8
-1.3	9.1	-27.1
-1.2	9.4	-27.1
-1.1	9.7	-28.1
-1.0	9.9	-28.8
-0.9	9.9	-28.8
-0.8	10.2	-29.6
-0.7	10.4	-30.4

-0.6	10.6	-31.9	4.5	-10.2	-38.4	9.6	-20.4	-48.8
-0.5	10.7	-31.9	4.6	-9.4	-37.8	9.7	-20.6	-48.8
-0.4	10.8	-32.1	4.7	-8.7	-37.8	9.8	-20.6	-51.6
-0.3	10.8	-33.8	4.8	-8.7	-38.7	9.9	-20.8	-56.1
-0.2	10.9	-33.8	4.9	-8.2	-39.0	10	-21.1	-56.1
-0.1	10.9	-35.0	5.0	-7.8	-39.0	15	-35.6	-53.1
0.0	11.0	-35.9	5.1	-7.4	-38.3	20	-42.4	-54.5
0.1	11.0	-35.9	5.2	-7.2	-38.8	25	-29.6	-53.9
0.2	11.0	-36.1	5.3	-7.1	-38.8	30	-37.3	-61.4
0.3	10.9	-36.0	5.4	-7.0	-39.4	35	-47.3	-60.2
0.4	10.9	-36.0	5.5	-7.0	-39.9	40	-34.4	-70.6
0.5	10.7	-36.0	5.6	-7.0	-40.1	45	-37.7	-58.0
0.6	10.6	-34.9	5.7	-7.2	-40.1	50	-34.0	-52.8
0.7	10.6	-34.7	5.8	-7.2	-40.3	55	-43.4	-54.0
0.8	10.5	-33.7	5.9	-7.4	-42.2	60	-34.9	-52.2
0.9	10.2	-33.7	6.0	-7.8	-42.2	65	-36.6	-57.6
1.0	10.0	-32.7	6.1	-8.0	-43.0	70	-44.1	-53.3
1.1	9.8	-32.0	6.2	-8.4	-46.3	75	-38.2	-54.0
1.2	9.5	-32.0	6.3	-8.8	-46.3	80	-36.1	-62.3
1.3	9.2	-31.8	6.4	-9.4	-46.0	85	-38.1	-54.5
1.4	8.9	-31.4	6.5	-9.4	-48.3	90	-41.6	-59.7
1.5	8.6	-30.8	6.6	-9.8	-48.3	95	-41.0	-55.6
1.6	8.2	-30.8	6.7	-10.3	-51.4	100	-44.2	-61.2
1.7	8.2	-30.6	6.8	-10.8	-57.9	105	-58.8	-47.9
1.8	7.8	-30.9	6.9	-11.4	-71.9	110	-46.3	-71.4
1.9	7.3	-30.9	7.0	-12.0	-71.9	115	-50.1	-53.8
2.0	6.6	-30.4	7.1	-12.6	-54.4	120	-53.9	-58.8
2.1	6.1	-30.4	7.2	-13.1	-57.8	125	-53.9	-63.9
2.2	5.5	-30.7	7.3	-13.8	-52.9	130	-36.7	-68.3
2.3	4.9	-30.7	7.4	-14.4	-52.9	135	-54.4	-73.6
2.4	4.3	-30.5	7.5	-15.0	-49.1	140	-57.9	-61.9
2.5	3.7	-30.7	7.6	-15.5	-48.3	145	-47.9	-54.1
2.6	3.0	-31.7	7.7	-16.0	-46.2	150	-55.9	-51.7
2.7	2.2	-31.7	7.8	-16.5	-46.2	155	-41.8	-46.3
2.8	1.4	-31.6	7.9	-16.9	-45.0	160	-24.0	-40.4
2.9	0.5	-32.2	8.0	-17.4	-45.6	165	-36.0	-43.0
3.0	-0.4	-32.3	8.1	-17.7	-45.5	170	-44.5	-50.2
3.1	-1.5	-33.0	8.2	-17.7	-45.5	175	-46.8	-46.3
3.2	-2.5	-33.0	8.3	-18.0	-43.7	180	-51.7	-58.9
3.3	-2.5	-33.3	8.4	-18.3	-44.7			
3.4	-4.3	-34.2	8.5	-18.5	-43.7			
3.5	-5.6	-34.8	8.6	-18.7	-43.7			
3.6	-7.1	-34.8	8.7	-18.9	-43.8			
3.7	-8.7	-34.9	8.8	-19.1	-44.6			
3.8	-10.5	-35.5	8.9	-19.3	-44.1			
3.9	-12.0	-37.0	9.0	-19.4	-44.1			
4.0	-13.1	-37.0	9.1	-19.6	-47.6			
4.1	-13.5	-37.2	9.2	-19.6	-46.1			
4.2	-13.0	-36.8	9.3	-19.8	-50.4			
4.3	-12.2	-36.8	9.4	-20.0	-50.4			
4.4	-11.1	-37.4	9.5	-20.1	-48.1			

3.1.2 Vert-Az 14.16 GHz

Tabular Data
Frequency 14.16 GHz
Polarization VERT
Axis AZ

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-44.4	-52.9
-175	-43.1	-54.7
-170	-51.5	-49.6
-165	-52.1	-53.1
-160	-53.7	-48.9
-155	-51.2	-66.9
-150	-51.3	-53.4
-145	-72.2	-57.1
-140	-75.1	-52.4
-135	-60.8	-57.3
-130	-54.2	-60.4
-125	-62.9	-52.4
-120	-66.3	-52.8
-115	-49.1	-54.1
-110	-50.1	-55.9
-105	-48.6	-63.0
-100	-50.1	-70.5
-95	-45.9	-65.5
-90	-42.6	-55.8
-85	-41.8	-52.7
-80	-40.3	-55.1
-75	-44.2	-52.6
-70	-52.8	-59.1
-65	-37.9	-55.9
-60	-37.0	-58.6
-55	-42.6	-63.2
-50	-36.0	-63.7
-45	-39.8	-55.5
-40	-40.5	-54.8
-35	-43.9	-52.4
-30	-35.0	-59.4
-25	-32.7	-67.1
-20	-40.1	-53.7
-15	-30.8	-63.1
-10	-20.9	-54.3
-9.9	-20.9	-50.4
-9.8	-20.8	-50.4
-9.7	-20.7	-48.9
-9.6	-20.5	-51.5
-9.5	-20.4	-51.5
-9.4	-20.3	-50.7
-9.3	-20.2	-50.6
-9.2	-20.2	-50.6
-9.1	-20.1	-48.3
-9.0	-20.1	-54.3
-8.9	-20.0	-51.7
-8.8	-20.0	-51.7
-8.7	-19.6	-50.9
-8.6	-19.4	-51.4
-8.5	-19.4	-51.4
-8.4	-19.2	-55.5
-8.3	-18.9	-57.4
-8.2	-18.6	-57.4
-8.1	-18.1	-59.1
-8.0	-17.5	-53.8
-7.9	-17.0	-53.8
-7.8	-16.4	-48.3
-7.7	-16.4	-48.9
-7.6	-15.8	-45.0
-7.5	-15.2	-45.0
-7.4	-14.7	-46.1
-7.3	-14.2	-44.0
-7.2	-13.3	-43.1
-7.1	-12.7	-43.1
-7.0	-12.2	-42.1
-6.9	-11.7	-40.9
-6.8	-11.2	-40.0
-6.7	-10.7	-40.9
-6.6	-10.2	-39.5
-6.5	-9.8	-39.5
-6.4	-9.4	-38.4
-6.3	-9.0	-38.5
-6.2	-8.7	-38.3
-6.1	-8.7	-38.3
-6.0	-8.4	-37.8
-5.9	-8.1	-37.0
-5.8	-7.9	-37.8
-5.7	-7.8	-37.8
-5.6	-7.8	-37.8
-5.5	-7.8	-37.0
-5.4	-7.8	-37.0
-5.3	-7.9	-37.4
-5.2	-8.2	-36.8
-5.1	-8.5	-37.3
-5.0	-8.9	-37.3
-4.9	-9.5	-37.1
-4.8	-10.3	-36.0
-4.7	-10.3	-36.0
-4.6	-11.2	-35.6
-4.5	-12.4	-34.8
-4.4	-13.9	-34.8
-4.3	-15.6	-34.1
-4.2	-17.0	-34.3
-4.1	-17.0	-33.7
-4.0	-15.2	-33.7
-3.9	-12.8	-33.3
-3.8	-10.6	-32.7
-3.7	-8.6	-32.7
-3.6	-6.8	-32.5
-3.5	-5.3	-32.4
-3.4	-3.4	-32.4
-3.3	-3.4	-32.8
-3.2	-1.6	-32.0
-3.1	-0.6	-32.4
-3.0	0.7	-32.4
-2.9	0.7	-32.5
-2.8	1.8	-32.8
-2.7	2.9	-32.5
-2.6	3.5	-33.2
-2.5	4.4	-33.2
-2.4	5.2	-33.9
-2.3	5.2	-34.9
-2.2	5.8	-35.1
-2.1	6.5	-35.1
-2.0	7.1	-36.1
-1.9	7.6	-38.0
-1.8	7.6	-39.8
-1.7	8.1	-39.8
-1.6	8.5	-41.7
-1.5	9.0	-45.2
-1.4	9.3	-44.5
-1.3	9.3	-44.5
-1.2	9.7	-43.8
-1.1	9.9	-41.3
-1.0	10.2	-39.5
-0.9	10.2	-39.5
-0.8	10.5	-36.5
-0.7	10.6	-34.9
-0.6	10.8	-33.7
-0.5	10.9	-33.7
-0.4	10.9	-32.5
-0.3	10.9	-31.2
-0.2	11.0	-30.2

-0.1	11.0	-30.2	5.0	-7.9	-36.4	15	-31.4	-62.2
0.0	11.0	-29.7	5.1	-7.9	-36.6	20	-41.9	-58.0
0.1	11.0	-28.9	5.2	-7.6	-37.6	25	-31.9	-60.7
0.2	10.9	-28.9	5.3	-7.5	-37.6	30	-35.1	-55.0
0.3	10.9	-28.4	5.4	-7.4	-37.9	35	-44.2	-60.9
0.4	10.9	-27.9	5.5	-7.5	-39.1	40	-38.4	-58.3
0.5	10.7	-27.9	5.6	-7.5	-39.5	45	-41.0	-54.6
0.6	10.6	-27.3	5.7	-7.6	-39.5	50	-36.4	-58.3
0.7	10.4	-27.0	5.8	-7.8	-40.1	55	-44.2	-58.0
0.8	10.2	-26.9	5.9	-8.0	-40.9	60	-36.3	-56.7
0.9	10.0	-26.7	6.0	-8.4	-41.6	65	-38.0	-55.2
1.0	10.0	-26.7	6.1	-8.4	-41.6	70	-51.4	-69.6
1.1	9.7	-26.5	6.2	-8.7	-43.1	75	-43.0	-49.3
1.2	9.3	-26.5	6.3	-9.0	-43.9	80	-39.3	-56.0
1.3	9.0	-26.3	6.4	-9.6	-43.9	85	-40.6	-55.4
1.4	8.5	-26.5	6.5	-10.1	-44.2	90	-45.8	-51.0
1.5	8.5	-26.6	6.6	-10.7	-47.5	95	-50.5	-56.6
1.6	7.9	-26.6	6.7	-11.2	-47.5	100	-73.1	-55.9
1.7	7.6	-26.6	6.8	-11.2	-48.0	105	-49.6	-55.9
1.8	7.1	-26.8	6.9	-11.9	-48.4	110	-50.0	-67.3
1.9	7.1	-26.8	7.0	-12.5	-49.0	115	-55.8	-55.1
2.0	6.4	-27.0	7.1	-13.1	-49.0	120	-50.8	-56.6
2.1	5.8	-27.0	7.2	-13.8	-51.4	125	-60.1	-50.7
2.2	5.1	-27.3	7.3	-14.5	-48.4	130	-40.0	-52.4
2.3	4.3	-27.3	7.4	-14.5	-49.0	135	-44.1	-56.2
2.4	3.5	-27.5	7.5	-15.2	-49.0	140	-49.7	-61.2
2.5	3.5	-27.5	7.6	-15.9	-49.8	145	-48.2	-57.0
2.6	2.7	-27.9	7.7	-16.5	-51.5	150	-48.4	-60.9
2.7	1.8	-28.2	7.8	-17.0	-50.1	155	-38.5	-44.2
2.8	0.7	-28.5	7.9	-17.6	-50.1	160	-33.9	-31.0
2.9	-0.3	-28.8	8.0	-17.6	-48.4	165	-50.0	-40.0
3.0	-1.5	-28.8	8.1	-18.2	-51.0	170	-51.4	-50.4
3.1	-2.9	-29.1	8.2	-18.5	-48.4	175	-50.2	-66.7
3.2	-2.9	-29.6	8.3	-18.8	-53.7	180	-42.9	-58.1
3.3	-4.6	-30.1	8.4	-19.3	-53.7			
3.4	-6.3	-30.5	8.5	-19.4	-49.5			
3.5	-8.4	-31.1	8.6	-19.4	-51.5			
3.6	-10.9	-31.5	8.7	-19.5	-51.5			
3.7	-10.9	-31.5	8.8	-19.6	-50.9			
3.8	-13.7	-32.2	8.9	-19.8	-51.9			
3.9	-16.2	-32.4	9.0	-19.9	-50.0			
4.0	-17.2	-33.8	9.1	-19.8	-50.0			
4.1	-16.1	-33.8	9.2	-20.1	-49.6			
4.2	-16.1	-34.0	9.3	-20.1	-53.2			
4.3	-14.0	-34.0	9.4	-20.1	-53.2			
4.4	-12.2	-34.9	9.5	-20.3	-55.6			
4.5	-10.8	-35.1	9.6	-20.1	-53.5			
4.6	-9.8	-36.1	9.7	-20.4	-53.5			
4.7	-9.8	-36.1	9.8	-20.5	-53.2			
4.8	-8.9	-36.0	9.9	-20.8	-50.4			
4.9	-8.4	-36.4	10	-20.8	-60.8			

3.1.3 Vert-Az 14.50 GHz

Tabular Data
Frequency 14.5 GHz
Polarization VERT
Axis Azimuth

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-42.4	-56.3
-175	-40.1	-65.0
-170	-39.4	-54.8
-165	-55.0	-45.5
-160	-62.6	-78.7
-155	-75.4	-75.2
-150	-83.5	-51.7
-145	-66.1	-52.2
-140	-63.6	-52.7
-135	-69.5	-67.1
-130	-66.1	-50.4
-125	-54.6	-62.1
-120	-51.4	-57.9
-115	-54.9	-65.3
-110	-53.1	-55.1
-105	-52.1	-52.7
-100	-50.7	-56.6
-95	-43.1	-54.3
-90	-42.2	-55.7
-85	-39.8	-54.0
-80	-39.4	-60.6
-75	-40.3	-62.0
-70	-64.7	-63.5
-65	-40.3	-56.1
-60	-38.2	-48.6
-55	-52.9	-60.1
-50	-41.4	-58.2
-45	-46.1	-48.9
-40	-49.2	-60.2
-35	-43.3	-52.1
-30	-37.8	-47.9
-25	-40.6	-69.6
-20	-45.1	-53.3
-15	-28.0	-55.9
-10	-24.7	-49.9
-9.9	-24.7	-45.3
-9.8	-24.9	-45.3
-9.7	-25.1	-50.1
-9.6	-25.4	-47.1
-9.5	-25.4	-47.1
-9.4	-25.6	-49.2
-9.3	-26.3	-51.3
-9.2	-26.9	-51.3
-9.1	-27.7	-50.4
-9.0	-27.7	-51.0
-8.9	-28.4	-51.0
-8.8	-29.6	-53.4
-8.7	-30.5	-52.1
-8.6	-30.5	-50.3
-8.5	-31.4	-50.3
-8.4	-31.7	-49.4
-8.3	-32.2	-47.7
-8.2	-32.2	-47.7
-8.1	-31.7	-47.6
-8.0	-30.8	-48.1
-7.9	-30.8	-48.1
-7.8	-29.6	-48.1
-7.7	-27.7	-46.5
-7.6	-26.2	-44.4
-7.5	-26.2	-44.4
-7.4	-24.6	-45.3
-7.3	-23.1	-44.1
-7.2	-21.7	-44.9
-7.1	-20.1	-44.9
-7.0	-20.1	-42.1
-6.9	-18.8	-42.9
-6.8	-17.6	-41.9
-6.7	-16.5	-40.7
-6.6	-15.5	-40.7
-6.5	-15.5	-41.2
-6.4	-14.4	-40.3
-6.3	-13.6	-40.1
-6.2	-12.8	-40.1
-6.1	-12.8	-38.5
-6.0	-12.1	-38.9
-5.9	-11.4	-38.8
-5.8	-10.9	-38.8
-5.7	-10.9	-39.1
-5.6	-10.5	-38.8
-5.5	-10.3	-38.1
-5.4	-10.1	-38.1
-5.3	-10.0	-38.1
-5.2	-10.0	-39.7
-5.1	-10.0	-39.1
-5.0	-10.1	-39.1
-4.9	-10.3	-41.0
-4.8	-10.8	-40.9
-4.7	-11.2	-40.9
-4.6	-11.9	-42.3
-4.5	-12.7	-43.0
-4.4	-13.8	-47.6
-4.3	-15.9	-47.6
-4.2	-17.8	-50.4
-4.1	-17.8	-51.8
-4.0	-19.4	-51.8
-3.9	-19.5	-49.7
-3.8	-17.4	-45.2
-3.7	-14.6	-42.4
-3.6	-11.9	-42.4
-3.5	-9.6	-39.9
-3.4	-7.4	-37.5
-3.3	-5.6	-37.5
-3.2	-4.1	-36.1
-3.1	-2.8	-34.4
-3.0	-1.5	-32.9
-2.9	-1.5	-32.9
-2.8	-0.2	-32.2
-2.7	0.8	-31.0
-2.6	1.7	-31.0
-2.5	2.5	-30.5
-2.4	3.3	-29.8
-2.3	4.0	-28.8
-2.2	4.7	-28.3
-2.1	5.3	-28.3
-2.0	6.0	-27.6
-1.9	6.7	-27.6
-1.8	6.7	-27.1
-1.7	7.3	-27.0
-1.6	7.8	-27.0
-1.5	8.4	-26.5
-1.4	8.7	-26.0
-1.3	8.7	-26.1
-1.2	9.2	-26.1
-1.1	9.5	-26.0
-1.0	9.8	-25.9
-0.9	10.0	-25.9
-0.8	10.2	-25.9
-0.7	10.2	-25.6
-0.6	10.5	-25.8
-0.5	10.6	-25.8
-0.4	10.7	-25.8
-0.3	10.9	-26.1
-0.2	10.9	-26.5

-0.1	10.9	-26.5	5.0	-10.1	-40.6	15	-28.0	-52.0
0.0	10.9	-26.5	5.1	-9.9	-42.2	20	-44.4	-53.2
0.1	11.0	-26.5	5.2	-9.9	-42.2	25	-38.3	-64.1
0.2	10.9	-26.5	5.3	-9.8	-43.3	30	-37.0	-67.8
0.3	10.9	-26.8	5.4	-9.8	-43.4	35	-44.7	-57.6
0.4	10.8	-27.1	5.5	-9.9	-43.4	40	-45.2	-63.7
0.5	10.7	-27.1	5.6	-10.1	-44.8	45	-48.2	-72.9
0.6	10.6	-27.2	5.7	-10.1	-43.9	50	-41.0	-70.1
0.7	10.4	-27.6	5.8	-10.5	-43.9	55	-50.6	-60.9
0.8	10.4	-27.6	5.9	-10.8	-46.2	60	-38.4	-64.4
0.9	10.2	-27.6	6.0	-11.3	-48.6	65	-39.6	-71.2
1.0	9.9	-28.0	6.1	-11.8	-48.4	70	-54.9	-56.3
1.1	9.7	-28.1	6.2	-12.3	-48.4	75	-40.5	-58.6
1.2	9.4	-28.5	6.3	-12.9	-47.8	80	-38.9	-57.1
1.3	9.2	-28.8	6.4	-13.7	-50.5	85	-39.6	-52.8
1.4	8.8	-28.9	6.5	-14.5	-50.5	90	-40.5	-58.3
1.5	8.4	-28.9	6.6	-14.5	-53.7	95	-42.6	-54.0
1.6	8.0	-29.3	6.7	-15.4	-56.6	100	-44.5	-61.4
1.7	7.6	-29.3	6.8	-16.3	-56.6	105	-45.8	-60.5
1.8	7.6	-29.3	6.9	-17.3	-63.1	110	-48.4	-71.1
1.9	6.9	-29.9	7.0	-18.6	-58.7	115	-50.3	-54.8
2.0	6.4	-30.0	7.1	-18.6	-64.8	120	-72.6	-60.9
2.1	5.8	-30.4	7.2	-19.8	-64.8	125	-53.5	-54.7
2.2	5.3	-30.4	7.3	-21.2	-60.8	130	-40.7	-60.2
2.3	4.6	-30.7	7.4	-22.6	-54.3	135	-41.7	-48.6
2.4	4.0	-30.7	7.5	-22.6	-56.8	140	-55.0	-53.0
2.5	3.0	-31.4	7.6	-24.2	-56.8	145	-50.6	-52.4
2.6	2.2	-31.3	7.7	-25.6	-51.0	150	-57.7	-57.4
2.7	1.4	-31.7	7.8	-27.1	-54.2	155	-37.3	-43.7
2.8	1.4	-31.7	7.9	-28.4	-56.6	160	-29.1	-42.2
2.9	0.5	-31.9	8.0	-28.4	-56.6	165	-37.5	-51.4
3.0	-0.8	-32.3	8.1	-29.4	-51.5	170	-46.7	-60.1
3.1	-1.9	-32.6	8.2	-30.0	-54.3	175	-50.7	-47.6
3.2	-3.0	-32.9	8.3	-30.7	-58.4	180	-41.5	-51.5
3.3	-4.3	-32.9	8.4	-30.7	-58.4			
3.4	-6.3	-32.7	8.5	-30.1	-59.4			
3.5	-8.0	-34.3	8.6	-30.3	-55.4			
3.6	-10.0	-34.5	8.7	-29.4	-55.8			
3.7	-12.2	-34.5	8.8	-28.4	-55.8			
3.8	-14.8	-34.7	8.9	-28.4	-66.9			
3.9	-17.3	-35.7	9.0	-27.5	-55.5			
4.0	-19.1	-36.1	9.1	-26.7	-55.5			
4.1	-18.9	-36.1	9.2	-26.1	-59.2			
4.2	-17.3	-36.6	9.3	-26.1	-55.0			
4.3	-17.3	-37.2	9.4	-25.4	-57.4			
4.4	-15.5	-38.0	9.5	-24.9	-57.4			
4.5	-14.0	-38.0	9.6	-24.9	-57.8			
4.6	-12.8	-38.4	9.7	-24.7	-50.4			
4.7	-11.8	-39.5	9.8	-24.2	-50.4			
4.8	-11.1	-39.5	9.9	-24.2	-58.1			
4.9	-10.6	-40.6	10	-24.2	-50.5			

3.2 Elevation Patterns

3.2.1 Vert-El 13.84 GHz

Tabular Data
Frequency 13.84 GHz
Polarization VERT
Axis EL

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-43.2	-42.4
-175	-45.6	-50.0
-170	-49.5	-48.4
-165	-58.2	-55.7
-160	-55.1	-56.1
-155	-61.6	-61.7
-150	-53.9	-64.3
-145	-57.1	-53.9
-140	-48.4	-75.3
-135	-45.9	-61.9
-130	-52.4	-65.6
-125	-49.2	-52.9
-120	-47.5	-53.5
-115	-55.6	-49.7
-110	-43.5	-70.4
-105	-42.8	-57.4
-100	-45.8	-57.6
-95	-43.1	-63.3
-90	-39.0	-51.9
-85	-37.3	-60.4
-80	-39.1	-53.0
-75	-43.9	-54.8
-70	-46.6	-59.8
-65	-36.0	-49.9
-60	-39.8	-54.5
-55	-50.8	-59.9
-50	-50.7	-49.8
-45	-43.8	-59.4
-40	-47.3	-68.3
-35	-40.1	-77.8
-30	-36.9	-66.1
-25	-37.9	-47.7
-20	-33.5	-51.6
-15	-26.7	-51.2
-10	-17.9	-49.0
-9.9	-18.4	-45.3
-9.8	-18.7	-45.3
-9.7	-18.7	-46.0
-9.6	-19.2	-48.2
-9.5	-19.8	-48.2
-9.4	-19.8	-46.8
-9.3	-20.4	-48.1
-9.2	-20.8	-49.1
-9.1	-21.5	-49.1
-9.0	-21.5	-47.6
-8.9	-21.9	-46.5
-8.8	-22.3	-46.5
-8.7	-22.4	-49.1
-8.6	-22.4	-47.0
-8.5	-22.5	-47.0
-8.4	-22.1	-46.2
-8.3	-22.1	-48.1
-8.2	-21.7	-50.4
-8.1	-21.1	-50.4
-8.0	-21.1	-48.4
-7.9	-20.1	-47.6
-7.8	-19.3	-47.7
-7.7	-18.1	-47.7
-7.6	-18.1	-47.0
-7.5	-17.0	-46.9
-7.4	-15.9	-46.9
-7.3	-14.9	-44.4
-7.2	-14.9	-44.9
-7.1	-13.9	-44.7
-7.0	-12.9	-44.9
-6.9	-12.0	-44.9
-6.8	-11.1	-44.4
-6.7	-11.1	-45.9
-6.6	-10.3	-43.0
-6.5	-9.6	-45.0
-6.4	-9.0	-45.0
-6.3	-8.5	-42.5
-6.2	-7.9	-42.7
-6.1	-7.4	-42.7
-6.0	-7.4	-42.5
-5.9	-7.0	-42.3
-5.8	-6.6	-42.7
-5.7	-6.3	-42.7
-5.6	-6.1	-41.7
-5.5	-5.9	-41.9
-5.4	-5.8	-41.9
-5.3	-5.8	-42.4
-5.2	-5.8	-42.4
-5.1	-5.9	-42.7
-5.0	-6.1	-42.7
-4.9	-6.5	-43.3
-4.8	-6.8	-42.0
-4.7	-6.8	-45.0
-4.6	-7.3	-45.0
-4.5	-8.0	-42.4
-4.4	-9.0	-44.5
-4.3	-10.1	-44.5
-4.2	-11.7	-44.1
-4.1	-13.9	-43.2
-4.0	-17.2	-43.2
-3.9	-23.3	-44.1
-3.8	-37.3	-42.1
-3.7	-21.4	-41.1
-3.6	-15.5	-41.1
-3.5	-11.9	-40.6
-3.4	-9.1	-39.2
-3.3	-7.1	-37.7
-3.2	-4.8	-37.7
-3.1	-4.8	-38.6
-3.0	-2.9	-36.6
-2.9	-1.4	-36.0
-2.8	-0.1	-36.0
-2.7	1.1	-36.0
-2.6	2.1	-35.4
-2.5	2.1	-35.1
-2.4	3.0	-35.1
-2.3	3.9	-35.1
-2.2	4.6	-34.8
-2.1	5.3	-35.0
-2.0	5.8	-35.0
-1.9	6.5	-35.0
-1.8	7.1	-34.9
-1.7	7.6	-34.9
-1.6	8.0	-35.5
-1.5	8.4	-35.2
-1.4	8.8	-35.2
-1.3	9.1	-35.8
-1.2	9.1	-36.0
-1.1	9.5	-36.7
-1.0	9.8	-36.7
-0.9	10.0	-38.3
-0.8	10.3	-40.0
-0.7	10.3	-40.0
-0.6	10.5	-42.4
-0.5	10.6	-42.7

-0.4	10.7	-42.7	4.7	-8.1	-44.0	9.8	-18.8	-56.5	9.9
-0.3	10.8	-46.0	4.8	-7.5	-44.0		-18.5	-56.5	
-0.2	10.9	-51.2	4.9	-7.2	-44.8	10	-18.5	-59.6	
-0.1	10.9	-51.2	5.0	-6.8	-52.2	15	-26.8	-57.0	
0.0	11.0	-49.7	5.1	-6.6	-58.2	20	-32.8	-59.3	
0.1	10.9	-45.1	5.2	-6.5	-58.2	25	-35.5	-58.2	
0.2	10.9	-40.9	5.3	-6.4	-55.6	30	-36.6	-72.8	
0.3	10.8	-40.9	5.4	-6.4	-52.0	35	-37.8	-58.4	
0.4	10.7	-39.1	5.5	-6.5	-52.0	40	-47.7	-55.1	
0.5	10.6	-36.5	5.6	-6.7	-47.3	45	-44.5	-53.8	
0.6	10.6	-36.5	5.7	-6.9	-44.4	50	-49.1	-63.0	
0.7	10.5	-35.4	5.8	-6.9	-44.4	55	-47.6	-58.0	
0.8	10.3	-34.3	5.9	-7.2	-43.8	60	-40.3	-60.3	
0.9	10.1	-33.7	6.0	-7.7	-42.7	65	-35.8	-58.9	
1.0	9.9	-33.7	6.1	-8.0	-41.3	70	-44.0	-58.7	
1.1	9.5	-33.1	6.2	-8.4	-41.3	75	-45.2	-58.8	
1.2	9.2	-32.1	6.3	-8.9	-42.9	80	-38.4	-54.7	
1.3	9.2	-32.1	6.4	-9.4	-41.0	85	-37.4	-54.4	
1.4	8.9	-31.7	6.5	-10.1	-41.0	90	-40.0	-54.4	
1.5	8.6	-30.9	6.6	-10.5	-41.7	95	-40.1	-55.9	
1.6	8.2	-30.6	6.7	-11.2	-40.9	100	-40.7	-55.0	
1.7	7.8	-30.6	6.8	-11.8	-40.9	105	-40.8	-59.1	
1.8	7.3	-30.3	6.9	-12.5	-40.6	110	-44.9	-52.4	
1.9	6.8	-30.0	7.0	-13.3	-41.8	115	-46.5	-53.8	
2.0	6.3	-30.0	7.1	-14.1	-41.5	120	-47.2	-55.7	
2.1	5.8	-30.1	7.2	-14.1	-41.3	125	-49.0	-53.1	
2.2	5.1	-29.7	7.3	-14.9	-41.3	130	-45.8	-44.2	
2.3	4.5	-29.9	7.4	-15.8	-41.7	135	-42.6	-53.0	
2.4	3.7	-30.0	7.5	-16.7	-42.4	140	-50.7	-49.7	
2.5	3.0	-30.0	7.6	-17.6	-43.7	145	-57.3	-58.5	
2.6	1.9	-29.7	7.7	-17.6	-43.7	150	-60.7	-68.6	
2.7	0.9	-30.2	7.8	-18.5	-42.9	155	-44.3	-46.1	
2.8	-0.2	-29.9	7.9	-19.4	-44.3	160	-24.2	-35.7	
2.9	-0.2	-30.0	8.0	-20.0	-45.6	165	-39.4	-42.4	
3.0	-1.5	-30.0	8.1	-20.0	-45.3	170	-44.0	-45.3	
3.1	-3.1	-30.4	8.2	-20.7	-45.3	175	-55.6	-44.5	
3.2	-4.5	-30.7	8.3	-21.2	-45.5	180	-42.6	-39.9	
3.3	-6.5	-31.4	8.4	-21.2	-46.2				
3.4	-9.0	-31.4	8.5	-21.5	-47.1				
3.5	-11.4	-31.9	8.6	-21.5	-47.1				
3.6	-15.2	-32.4	8.7	-21.5	-46.3				
3.7	-20.5	-33.3	8.8	-21.4	-51.2				
3.8	-33.1	-33.3	8.9	-21.4	-52.2				
3.9	-26.3	-33.7	9.0	-21.0	-52.2				
4.0	-19.0	-35.6	9.1	-20.8	-50.9				
4.1	-15.2	-36.3	9.2	-20.5	-53.7				
4.2	-12.9	-36.3	9.3	-20.1	-53.7				
4.3	-12.9	-37.0	9.4	-19.8	-51.5				
4.4	-11.2	-40.1	9.5	-19.4	-53.8				
4.5	-9.8	-40.1	9.6	-19.4	-53.8				
4.6	-8.9	-40.6	9.7	-19.1	-54.0				

3.2.2 Vert-El 14.16 GHz

Tabular Data
Frequency 14.16 GHz
Polarization VERT
Axis EL

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-46.9	-47.2
-175	-71.5	-60.7
-170	-51.7	-51.2
-165	-55.5	-61.7
-160	-54.9	-52.2
-155	-51.0	-55.1
-150	-50.2	-49.1
-145	-48.0	-50.0
-140	-49.0	-55.3
-135	-46.7	-56.5
-130	-46.5	-59.0
-125	-48.7	-57.6
-120	-45.4	-61.6
-115	-46.3	-55.3
-110	-44.0	-55.0
-105	-42.1	-55.6
-100	-42.2	-62.5
-95	-41.4	-51.4
-90	-37.1	-55.3
-85	-36.5	-57.6
-80	-35.8	-62.9
-75	-38.7	-57.3
-70	-52.2	-72.4
-65	-43.9	-54.2
-60	-38.1	-49.6
-55	-47.7	-55.5
-50	-35.9	-56.2
-45	-41.7	-63.9
-40	-47.3	-66.1
-35	-42.6	-67.4
-30	-34.8	-51.6
-25	-34.7	-49.9
-20	-32.8	-56.8
-15	-26.1	-53.0
-10	-17.8	-59.5
-9.9	-17.9	-59.7
-9.8	-17.9	-71.5
-9.7	-18.0	-71.5
-9.6	-18.3	-59.9
-9.5	-18.4	-72.4
-9.4	-18.7	-61.3
-9.3	-19.3	-61.3
-9.2	-19.6	-69.3
-9.1	-20.0	-72.5
-9.0	-20.0	-72.5
-8.9	-20.5	-74.1
-8.8	-21.0	-66.7
-8.7	-21.4	-66.7
-8.6	-21.9	-64.2
-8.5	-21.9	-60.0
-8.4	-22.1	-57.9
-8.3	-22.2	-57.9
-8.2	-22.2	-59.1
-8.1	-22.1	-58.6
-8.0	-21.7	-58.6
-7.9	-21.2	-56.2
-7.8	-20.7	-62.3
-7.7	-20.1	-56.3
-7.6	-19.4	-56.3
-7.5	-18.5	-54.9
-7.4	-18.5	-58.1
-7.3	-17.3	-51.7
-7.2	-16.6	-51.7
-7.1	-15.4	-50.4
-7.0	-14.4	-49.4
-6.9	-14.4	-48.2
-6.8	-13.3	-48.2
-6.7	-12.2	-47.7
-6.6	-11.2	-47.7
-6.5	-11.2	-48.1
-6.4	-10.3	-48.1
-6.3	-9.7	-46.1
-6.2	-9.1	-48.1
-6.1	-8.5	-46.3
-6.0	-8.0	-46.3
-5.9	-7.5	-46.6
-5.8	-6.9	-46.6
-5.7	-6.5	-46.0
-5.6	-6.1	-46.0
-5.5	-5.8	-48.6
-5.4	-5.5	-49.6
-5.3	-5.4	-48.8
-5.2	-5.3	-48.8
-5.1	-5.2	-46.1
-5.0	-5.2	-47.0
-4.9	-5.3	-47.0
-4.8	-5.5	-46.2
-4.7	-5.7	-42.9
-4.6	-6.0	-42.9
-4.5	-6.5	-42.9
-4.4	-7.0	-40.0
-4.3	-7.9	-40.0
-4.2	-8.9	-39.2
-4.1	-10.3	-37.5
-4.0	-12.1	-37.5
-3.9	-12.1	-37.0
-3.8	-14.9	-36.1
-3.7	-19.1	-34.6
-3.6	-24.9	-34.6
-3.5	-20.5	-34.5
-3.4	-14.8	-33.5
-3.3	-10.9	-32.7
-3.2	-7.8	-32.7
-3.1	-5.6	-32.2
-3.0	-5.6	-31.4
-2.9	-3.8	-31.1
-2.8	-2.2	-31.1
-2.7	-0.8	-30.7
-2.6	0.4	-30.1
-2.5	1.4	-30.1
-2.4	2.3	-29.6
-2.3	3.2	-29.1
-2.2	4.1	-29.2
-2.1	4.9	-29.2
-2.0	5.8	-29.2
-1.9	5.8	-28.9
-1.8	6.4	-29.1
-1.7	7.0	-28.8
-1.6	7.6	-29.2
-1.5	8.0	-29.4
-1.4	8.5	-29.4
-1.3	8.9	-29.4
-1.2	8.9	-29.8
-1.1	9.3	-30.4
-1.0	9.7	-30.4
-0.9	9.9	-30.6
-0.8	10.2	-31.3
-0.7	10.4	-32.7
-0.6	10.4	-32.7
-0.5	10.6	-32.9
-0.4	10.7	-34.3
-0.3	10.9	-34.3
-0.2	10.9	-35.9
-0.1	10.9	-37.0

0.0	11.0	-37.0	5.1	-6.3	-41.6	20	-34.9	-52.5
0.1	11.0	-39.2	5.2	-6.3	-43.8	25	-34.4	-54.0
0.2	10.9	-41.9	5.3	-6.4	-43.8	30	-34.9	-56.7
0.3	10.9	-43.5	5.4	-6.5	-47.8	35	-39.6	-65.2
0.4	10.9	-43.5	5.5	-6.5	-47.4	40	-44.7	-61.0
0.5	10.7	-45.0	5.6	-6.8	-47.4	45	-45.0	-56.8
0.6	10.6	-42.2	5.7	-7.2	-50.4	50	-38.5	-58.7
0.7	10.5	-42.2	5.8	-7.5	-49.4	55	-43.8	-61.0
0.8	10.2	-40.0	5.9	-7.9	-49.4	60	-39.4	-53.8
0.9	10.2	-37.6	6.0	-8.4	-46.6	65	-40.9	-53.5
1.0	10.0	-35.5	6.1	-8.9	-46.6	70	-48.5	-64.0
1.1	9.7	-35.5	6.2	-9.4	-46.6	75	-41.5	-57.2
1.2	9.4	-33.8	6.3	-9.4	-46.6	80	-37.3	-67.3
1.3	9.0	-33.2	6.4	-10.2	-44.5	85	-36.0	-54.8
1.4	8.6	-33.2	6.5	-10.9	-44.5	90	-38.2	-61.3
1.5	8.1	-31.7	6.6	-11.7	-44.5	95	-40.7	-55.8
1.6	8.1	-30.9	6.7	-12.4	-45.1	100	-46.3	-55.9
1.7	7.6	-30.0	6.8	-13.3	-45.4	105	-44.7	-54.0
1.8	7.0	-30.0	6.9	-14.1	-44.4	110	-48.4	-68.6
1.9	6.3	-29.7	7.0	-14.1	-44.4	115	-46.8	-72.0
2.0	5.8	-29.3	7.1	-15.1	-46.6	120	-45.1	-59.6
2.1	5.8	-29.2	7.2	-16.0	-44.6	125	-51.5	-57.0
2.2	4.9	-29.2	7.3	-17.0	-44.6	130	-38.7	-56.3
2.3	4.1	-29.1	7.4	-17.9	-44.6	135	-45.9	-51.0
2.4	3.2	-28.9	7.5	-18.7	-46.3	140	-45.5	-50.6
2.5	2.1	-28.8	7.6	-18.7	-46.0	145	-52.4	-54.2
2.6	2.1	-28.8	7.7	-19.6	-45.1	150	-46.2	-55.6
2.7	0.9	-28.7	7.8	-20.5	-45.1	155	-41.3	-56.1
2.8	-0.4	-28.8	7.9	-21.2	-48.9	160	-40.8	-46.5
2.9	-1.9	-29.2	8.0	-21.7	-49.7	165	-40.8	-43.2
3.0	-3.6	-29.2	8.1	-22.2	-49.4	170	-55.6	-51.5
3.1	-3.6	-29.2	8.2	-22.2	-49.4	175	-50.7	-52.2
3.2	-5.8	-29.8	8.3	-22.4	-47.3	180	-47.3	-50.1
3.3	-8.2	-29.4	8.4	-22.5	-49.1			
3.4	-11.3	-30.2	8.5	-22.4	-48.1			
3.5	-11.3	-30.2	8.6	-22.4	-48.4			
3.6	-15.8	-30.2	8.7	-21.9	-48.4			
3.7	-19.9	-30.9	8.8	-21.5	-47.3			
3.8	-21.7	-31.5	8.9	-21.0	-48.8			
3.9	-19.0	-31.5	9.0	-21.0	-48.8			
4.0	-14.7	-32.3	9.1	-20.5	-47.3			
4.1	-12.6	-33.1	9.2	-19.9	-47.1			
4.2	-10.8	-33.7	9.3	-19.9	-48.1			
4.3	-9.6	-33.7	9.4	-19.4	-48.1			
4.4	-8.6	-35.1	9.5	-19.1	-48.1			
4.5	-7.9	-35.9	9.6	-18.7	-46.6			
4.6	-7.3	-35.9	9.7	-18.7	-46.6			
4.7	-6.8	-37.3	9.8	-18.5	-47.3			
4.8	-6.6	-38.1	9.9	-18.2	-47.9			
4.9	-6.4	-40.4	10	-18.0	-47.9			
5.0	-6.4	-40.4	15	-25.6	-52.1			

3.2.3 Vert-El 14.50 GHz

Tabular Data
Frequency 14.5 GHz
Polarization VERT
Axis Elevation

20120923m01v03.6pm_CircularAntennaPlots.xlsx

Angle Deg	EIRP PSD dBW/ 4kHz	XPOL PSD dBW/ 4kHz
-180	-45.1	-62.0
-175	-42.6	-58.8
-170	-42.6	-50.4
-165	-62.3	-70.0
-160	-59.8	-52.4
-155	-69.4	-56.2
-150	-47.5	-57.6
-145	-49.9	-51.5
-140	-46.5	-60.4
-135	-52.6	-56.7
-130	-44.8	-71.2
-125	-47.9	-55.8
-120	-50.1	-70.2
-115	-47.9	-60.4
-110	-45.2	-62.3
-105	-44.2	-63.5
-100	-42.1	-65.8
-95	-40.1	-57.8
-90	-37.7	-57.4
-85	-36.9	-56.3
-80	-37.9	-53.7
-75	-45.8	-58.9
-70	-48.1	-65.7
-65	-49.8	-54.6
-60	-44.1	-60.9
-55	-40.9	-60.1
-50	-34.3	-60.5
-45	-43.1	-56.6
-40	-44.0	-64.3
-35	-38.4	-54.2
-30	-30.5	-69.9
-25	-37.6	-54.9
-20	-33.5	-59.7
-15	-22.9	-50.6
-10	-17.3	-52.2
-9.9	-17.2	-53.0
-9.8	-17.2	-53.0
-9.7	-17.2	-50.7
-9.6	-17.3	-49.5
-9.5	-17.4	-48.1
-9.4	-17.4	-48.1
-9.3	-17.7	-48.0
-9.2	-17.9	-53.9
-9.1	-18.4	-53.9
-9.0	-18.4	-53.7
-8.9	-18.7	-49.3
-8.8	-19.1	-49.2
-8.7	-19.5	-49.2
-8.6	-19.9	-50.7
-8.5	-19.9	-47.4
-8.4	-20.3	-47.4
-8.3	-20.7	-46.8
-8.2	-21.0	-46.6
-8.1	-21.0	-46.6
-8.0	-21.3	-46.1
-7.9	-21.1	-45.4
-7.8	-20.8	-45.4
-7.7	-20.8	-45.8
-7.6	-20.5	-41.8
-7.5	-20.0	-44.6
-7.4	-19.2	-44.6
-7.3	-18.2	-43.6
-7.2	-17.5	-41.4
-7.1	-16.3	-41.5
-7.0	-15.5	-41.5
-6.9	-15.5	-41.6
-6.8	-14.4	-41.1
-6.7	-13.5	-41.7
-6.6	-12.5	-42.1
-6.5	-11.6	-42.1
-6.4	-10.7	-40.4
-6.3	-9.8	-41.0
-6.2	-9.0	-40.3
-6.1	-8.2	-40.3
-6.0	-8.2	-40.2
-5.9	-7.5	-41.0
-5.8	-6.9	-41.0
-5.7	-6.2	-40.5
-5.6	-5.7	-38.8
-5.5	-5.2	-38.9
-5.4	-4.9	-38.9
-5.3	-4.5	-38.8
-5.2	-4.5	-38.9
-5.1	-4.3	-38.1
-5.0	-4.1	-38.1
-4.9	-4.0	-36.5
-4.8	-4.0	-37.1
-4.7	-4.0	-37.1
-4.6	-4.0	-36.3
-4.5	-4.3	-36.7
-4.4	-4.6	-35.6
-4.3	-5.0	-35.6
-4.2	-5.6	-35.3
-4.1	-6.4	-34.1
-4.0	-7.3	-34.1
-3.9	-8.4	-33.5
-3.8	-9.9	-32.7
-3.7	-9.9	-32.7
-3.6	-11.7	-33.0
-3.5	-15.4	-31.9
-3.4	-17.9	-31.2
-3.3	-17.7	-31.2
-3.2	-13.5	-31.0
-3.1	-9.6	-30.7
-3.0	-9.6	-30.1
-2.9	-6.7	-30.1
-2.8	-4.4	-30.1
-2.7	-2.4	-29.9
-2.6	-0.8	-29.7
-2.5	0.5	-29.7
-2.4	1.7	-29.6
-2.3	1.7	-30.0
-2.2	2.7	-29.6
-2.1	3.7	-29.4
-2.0	4.5	-29.4
-1.9	5.3	-29.4
-1.8	6.0	-29.9
-1.7	6.6	-30.1
-1.6	7.2	-30.2
-1.5	7.7	-30.3
-1.4	8.2	-30.3
-1.3	8.6	-30.2
-1.2	9.0	-30.7
-1.1	9.0	-30.7
-1.0	9.4	-30.6
-0.9	9.9	-30.2
-0.8	10.1	-30.6
-0.7	10.3	-30.6
-0.6	10.5	-30.2
-0.5	10.7	-30.0
-0.4	10.8	-29.5
-0.3	10.8	-29.5
-0.2	10.9	-29.2
-0.1	11.0	-28.9
0.0	11.0	-28.4

0.1	11.0	-28.4	5.2	-4.7	-35.7	25	-37.2	-60.2
0.2	11.0	-27.8	5.3	-5.0	-38.3	30	-31.0	-53.3
0.3	10.9	-27.4	5.4	-5.3	-38.3	35	-37.9	-56.8
0.4	10.8	-27.4	5.5	-5.7	-39.7	40	-43.2	-57.0
0.5	10.8	-26.8	5.6	-6.0	-41.1	45	-41.7	-68.6
0.6	10.7	-26.0	5.7	-6.0	-41.1	50	-35.2	-77.4
0.7	10.5	-25.7	5.8	-6.5	-42.5	55	-41.2	-58.3
0.8	10.3	-25.7	5.9	-7.0	-44.2	60	-41.9	-59.7
0.9	10.1	-25.4	6.0	-7.6	-46.5	65	-52.0	-74.8
1.0	9.8	-24.9	6.1	-8.2	-46.5	70	-43.6	-59.2
1.1	9.4	-24.9	6.2	-8.9	-51.0	75	-52.8	-50.9
1.2	9.4	-24.6	6.3	-9.8	-50.5	80	-39.4	-53.5
1.3	9.0	-24.3	6.4	-9.8	-50.5	85	-39.6	-62.9
1.4	8.6	-24.3	6.5	-10.6	-60.3	90	-39.4	-56.0
1.5	8.1	-24.2	6.6	-11.5	-56.0	95	-45.1	-50.6
1.6	7.4	-24.0	6.7	-12.3	-51.7	100	-42.9	-55.3
1.7	6.9	-23.6	6.8	-13.3	-51.7	105	-49.6	-53.6
1.8	6.9	-23.5	6.9	-14.4	-59.0	110	-46.5	-56.7
1.9	6.2	-23.5	7.0	-14.4	-53.8	115	-44.9	-54.9
2.0	5.5	-23.5	7.1	-15.4	-53.8	120	-46.6	-59.3
2.1	4.8	-23.5	7.2	-16.5	-60.1	125	-44.7	-58.2
2.2	4.1	-23.5	7.3	-17.5	-50.0	130	-41.4	-49.1
2.3	3.1	-23.5	7.4	-18.4	-60.7	135	-50.5	-64.4
2.4	2.1	-23.7	7.5	-18.4	-60.7	140	-54.4	-49.6
2.5	0.9	-23.7	7.6	-19.3	-54.5	145	-58.4	-56.8
2.6	-0.4	-23.8	7.7	-20.0	-49.8	150	-49.8	-54.7
2.7	-0.4	-23.8	7.8	-20.6	-58.4	155	-44.3	-42.0
2.8	-1.9	-24.1	7.9	-21.0	-64.8	160	-34.9	-44.2
2.9	-3.6	-24.3	8.0	-21.3	-64.8	165	-35.2	-52.0
3.0	-5.5	-24.3	8.1	-21.5	-57.2	170	-52.2	-68.6
3.1	-7.9	-24.6	8.2	-21.5	-69.0	175	-66.1	-57.5
3.2	-10.2	-24.6	8.3	-21.4	-55.3	180	-41.4	-52.4
3.3	-13.5	-25.1	8.4	-21.5	-55.3			
3.4	-17.9	-25.5	8.5	-21.0	-65.8			
3.5	-20.3	-25.8	8.6	-20.9	-59.0			
3.6	-17.2	-26.3	8.7	-20.5	-58.1			
3.7	-13.6	-26.3	8.8	-20.1	-58.1			
3.8	-11.0	-27.0	8.9	-19.7	-56.3			
3.9	-11.0	-27.8	9.0	-19.7	-63.3			
4.0	-9.3	-28.3	9.1	-19.3	-58.6			
4.1	-7.9	-28.3	9.2	-18.7	-58.6			
4.2	-6.8	-29.3	9.3	-18.5	-73.8			
4.3	-6.1	-29.9	9.4	-18.0	-70.4			
4.4	-5.5	-29.9	9.5	-18.0	-72.6			
4.5	-5.1	-30.9	9.6	-17.8	-72.6			
4.6	-4.8	-31.9	9.7	-17.6	-57.6			
4.7	-4.6	-31.9	9.8	-17.5	-72.2			
4.8	-4.6	-33.1	9.9	-17.5	-72.2			
4.9	-4.5	-34.1	10	-17.3	-56.3			
5.0	-4.6	-35.1	15	-23.8	-54.2			
5.1	-4.6	-35.1	20	-34.9	-58.5			