

# FCC Composite Gain Test Report

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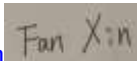


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### Basic Information

|                  |                                                                                             |       |            |
|------------------|---------------------------------------------------------------------------------------------|-------|------------|
| EUT Description: | AX5400 Whole Home Mesh Wi-Fi 6 System                                                       |       |            |
| Brand Name:      | tp-link                                                                                     |       |            |
| Model Name:      | Deco X60                                                                                    |       |            |
| Tested By:       | Fan Xin  | Date: | 2025/06/09 |

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# 1 Operation Mode and Antenna Information

## 1.1 EUT Operation Mode

The Deco X60(MODEL NUMBER) is the Four-band wireless router of 12 internal antennas, of which 4 were 2.4G & 5GL Dual-Band antennas and 4 were 5GU antennas and 4 were 6G antennas

## 1.2 Antenna Information

The Antennas are internal , the Locations of Antennas are shown below:

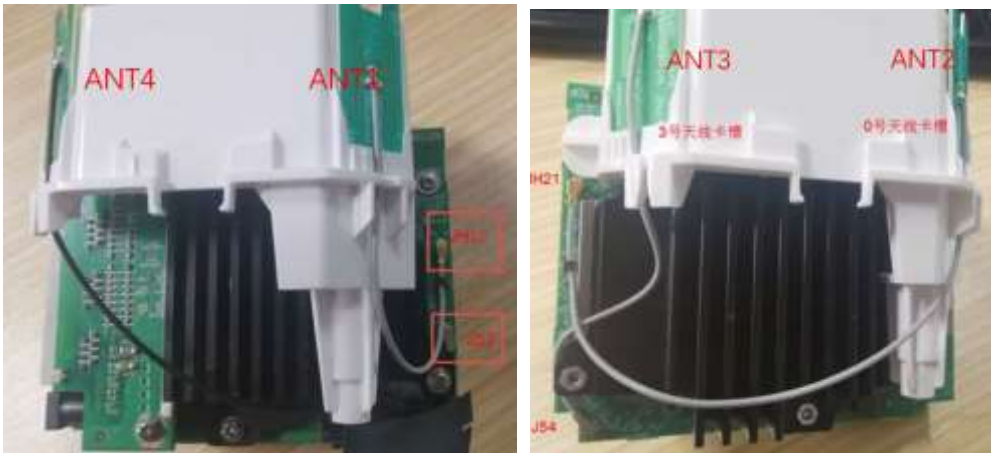


Figure 1-1 Locations of Antennas

The Antenna Information was shown below:

Table 1-1 Antenna Information

| Antenna Position | Antenna Type | Connector | Mode of operation |
|------------------|--------------|-----------|-------------------|
| Ant1             | Dipole       | ipex      | 2.4G&4G           |
| Ant2             | Dipole       | ipex      | 5G                |
| Ant3             | Dipole       | ipex      | 2.4G&4G           |
| Ant4             | Dipole       | ipex      | 5G                |
|                  |              |           |                   |
|                  |              |           |                   |
|                  |              |           |                   |
|                  |              |           |                   |

## 1.3 Test Frequency

Test frequency bands are shown in *Table 1-2*.

Table 1-2 Test Frequency

| Frequency Band(MHz) |
|---------------------|
| 2400-2500           |
| 5150-5250           |
| 5250-5350           |
| 5470-5725           |
| 5725-5925           |

## 2 Test System

### 2.1 Test Equipment

Table 2-1 Test System

| Equipment                  | Model       | Manufacturer | S/N        | Cali. Interval | Cali. Due Date |
|----------------------------|-------------|--------------|------------|----------------|----------------|
| Chamber                    | Rayzone2800 | GTS          | MY53470435 | 12months       | 2026/04/15     |
| Vector<br>Network Analyzer | E5071C      | Keysight     | MY46315238 | 24months       | 2026/05/27     |

### 2.2 Test Software

Table 2-2 Test Software

| Software       | Version | Function                     |
|----------------|---------|------------------------------|
| GTS MaxSign100 | V2.1    | Passive Antenna Measurements |

## 3 Test Summary

### 3.1 Measurement Environment

This measurement experiment adopted an antenna near-field measurement system, and the diagram of the measurement system was shown in Figure 3-1. The excitation signal was generated by the Keysight E5071C (300kHz-20GHz). Under the control of the central computer, the probe rotated in the  $\theta$  direction, and the EUT rotated in the  $\phi$  direction with the turntable. The probe sampling frame received and collected signals in the near-field range of the EUT. The software system which was controlled by the central computer completed the processing, output and display of the test data.

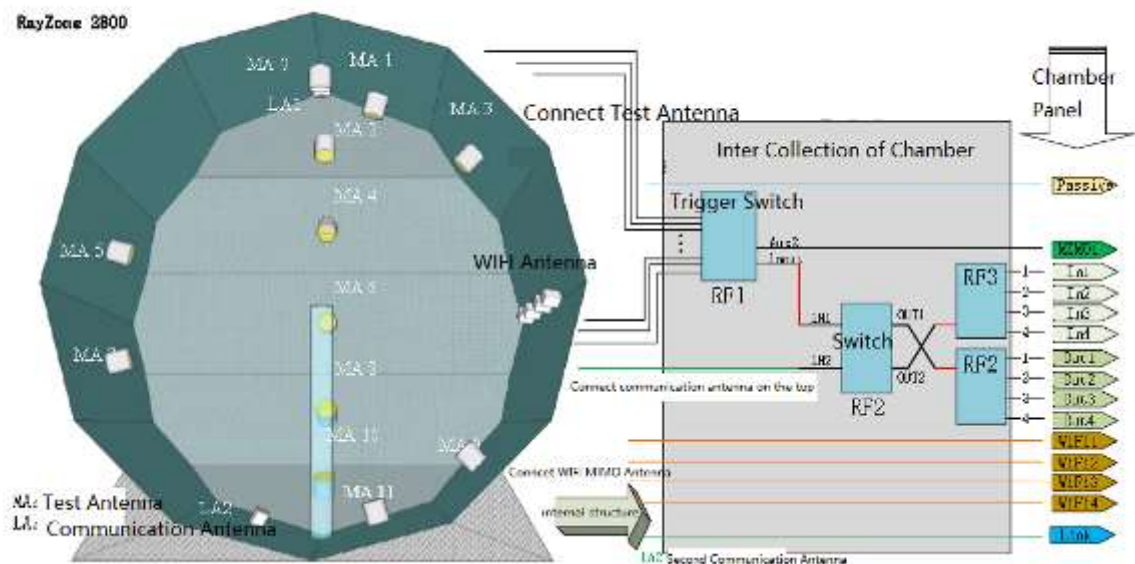


Figure 3-1 Schematic diagram of antenna near-field measurement system

The test site was a full anechoic chamber with a size of 3.0m×3.1m×2.97m, which was built by GTS Rayzone2800. All six surfaces of the anechoic chamber were pasted with absorbing materials. And the chamber was calibrated by the authoritative third-party lab every year. The antenna anechoic chamber measurement system adopted a 13-probe multi-probe system. The probe antennas were evenly distributed on the spherical surface surrounding the EUT, and their operating frequency was 600MHz~8.5GHz.

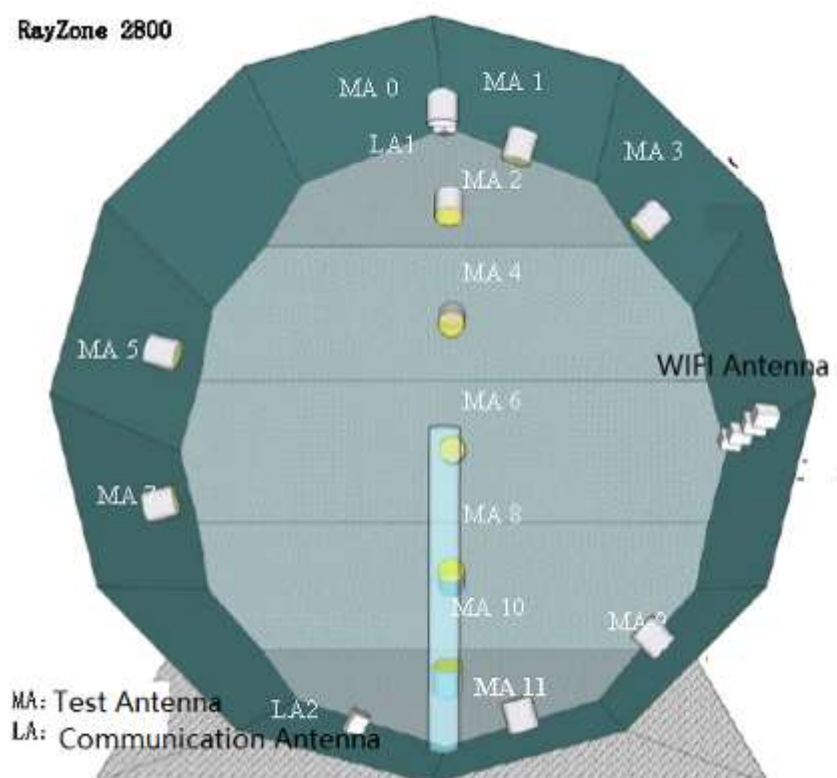


Figure 3-2 Antenna anechoic chamber for near-field measurement

During the measurement, the probe antennas were rotated in the  $\theta$  direction under the control of the probe holder to sample the near-field data at the  $\theta$  angle. At the same time, the EUT rotated with the turntable in the  $\phi$  direction to sample the near field data at the  $\phi$  angle. The system diagram was shown in Figure 3-3. From the sampling results, the EUT's near-field test data of  $\theta$  component,  $\phi$  component and total component could be obtained.

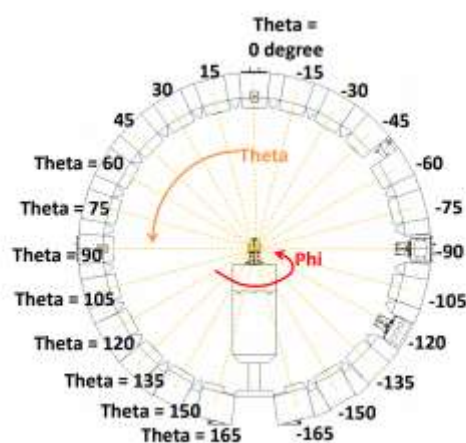


Figure 3-3 System diagram

Before the measurement, calibrated the vector network analyzer, and then connected the input end of each antenna to the output end of the vector network analyzer, and evenly the antennas to be measured. The Calibration information was shown in table 2-1.

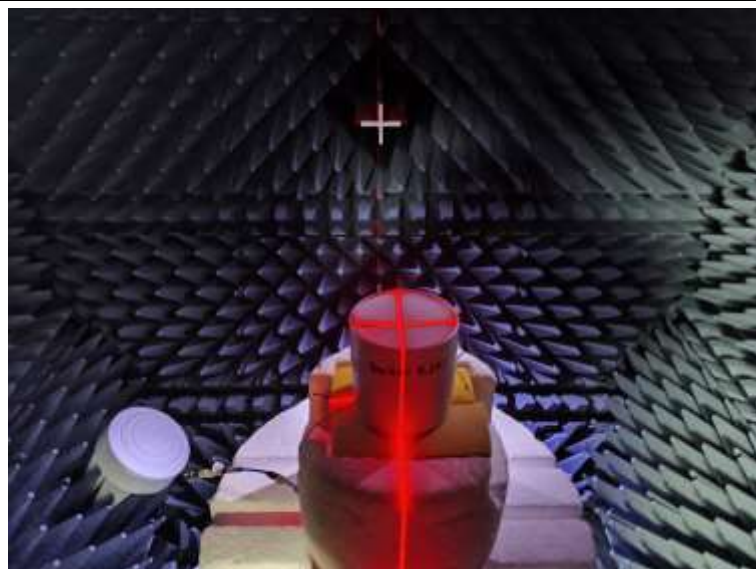


Figure 3-4 Antennas measurement diagram

Table 3-1 Calibration information

| Measurement Class | Standard |
|-------------------|----------|
| Cal Type          | 2p/1-2   |
| Cal Kit           | N4691B   |

## 3.2 Measurement Quantity

In this measurement experiment, the Directional Gain was measured at a certain frequencyS interval within the whole frequency range. The measurement frequency interval of the 2.4G antennas was 10MHz, while the 5GL and 5GU and 6G antennas was 50MHz.

## 3.3 Test Method

During the measurement, the probe antennas were rotated in the  $\theta$  direction under the control of the probe holder to sample the near-field data at the  $\theta$  angle. At the same time, the EUT rotated with the turntable in the  $\varphi$  direction to sample the near field data at the  $\varphi$  angle. The sampling accuracy was 15°. The system diagram was shown in Figure 2-6. From the sampling results, the EUT's near-field test data of  $\theta$  component,  $\varphi$  component and total component could be obtained.

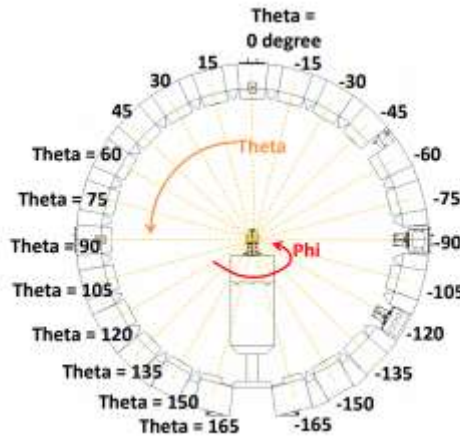


Figure 3-5 Test angle

### 3.4 Directional Gain Calculations

Multiple antennas system, each of which has one of two (or three) polarizations that are orthogonal to one another (i.e., cross polarized), The total gain—including array gain—is computed separately for each of the two (or three) polarizations using the procedures presented in this document. The highest of the total gains shall apply.

Theoretical Directional Gain represented the theoretical value calculated by formula 2-1. As we all know, the effect of array gain must be included in the calculation of overall directional antenna gain for devices that transmit on multiple outputs simultaneously in the same band, in the same or in overlapping frequency ranges. Therefore, in formula 2-1, the directional gain calculation needs to include all directions and all Frequencies and all Polarizations, and then take the maximum value as the final directional gain value. Therefore, the calculation formula of theoretical directional gain value can be modified as formula 2-2

$$\text{Directional Gain} = 10\log \left[ \frac{\sum_{j=1}^{N_{SS}} \left( \sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] \quad (2-1)$$

Where

Nss = the number of independent spatial streams of data; NSS =1.

Nant = the total number of antennas: NANT =4 for 2.4G & 5G antennas

$g_{j,k} = 10^{G_k/20}$  if the kth antenna is being fed by spatial stream j, or zero if it is not;

$G_k$  is the gain in dBi of the kth antenna .

$$\text{Directional Gain} = \text{Maximum} \left[ 10\log \left[ \frac{\sum_{j=1}^{N_{SS}} \left( \sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] \right] \quad (2-2)$$

**Maximum** function is the max directional gain overall directions and all frequency all polarizations.

### 3.5 Directional Gain ( $N_{ss}=N_{ant}$ ) Calculations

Multiple antennas system, each of which has one of two (or three) polarizations that are orthogonal to one another (i.e., cross polarized), The total gain—including array gain—is computed separately for each of the two (or three) polarizations using the procedures presented in this document. The highest of the total gains shall apply.

Theoretical Directional Gain represented the theoretical value calculated by formula 2-1. As we all know, the effect of array gain must be included in the calculation of overall directional antenna gain for devices that transmit on multiple outputs simultaneously in the same band, in the same or in overlapping frequency ranges. Therefore, in formula 2-1, the directional gain calculation needs to include all directions and all Frequencies and all Polarizations, and then take the maximum value as the final directional gain value. Therefore, the calculation formula of theoretical combined gain value can be modified as formula 2-2

$$\text{Directional Gain} = 10\log \left[ \frac{\sum_{j=1}^{N_{ANT}} g_{j,k}}{N_{ANT}} \right] \quad (2-3)$$

Where

$N_{ss}$  = the number of independent spatial streams of data;  $N_{SS} = N_{ant}$ .

$N_{ant}$  = the total number of antennas:  $N_{ANT} = 4$  for 2.4G & 5G & 6G antennas

$g_{j,k} = 10^{G_k/10}$  if the kth antenna is being fed by spatial stream j, or zero if it is not;

$G_k$  is the gain in dBi of the kth antenna .

$$\text{Directional Gain} = \text{Maximum} \left[ 10\log \left[ \frac{\sum_{j=1}^{N_{ANT}} g_{j,k}}{N_{ANT}} \right] \right] \quad (2-4)$$

**Maximum** function is the max directional gain overall directions and all frequency all polarizations.

### 3.6 Test Procedure

The calculation method of DG (Directional Gain) in this scheme is summarized as follows:

- 1) The antenna anechoic chamber is used to measure the gain of each antenna, the gain of each antenna at this angle is taken every 15 °to calculate the Directional Gain;
- 2) Use formula below to calculate and the DG\_ $N_{ss}=1$  of the system at this angle is obtained

$$\text{Directional Gain} = 10\log \left[ \frac{\sum_{j=1}^{N_{ss}} \left( \sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] \quad (2-5)$$

- 3) Use formula below to calculate and the DG\_ $N_{ssmax}$  of the system at this angle is obtained

$$\text{Directional Gain} = 10\log\left[\frac{\sum_{j=1}^{N_{ANT}} g_{j,k}}{N_{ANT}}\right] \quad (2-6)$$

- 4) For each frequency point, the Directional Gain value under 24 different angles can be obtained, and finally the maximum value is taken as the system Directional Gain value.

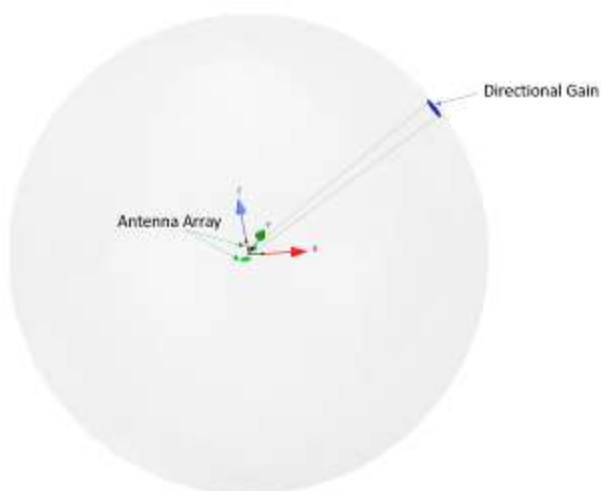


Figure 3-6 Directional Gain Calculation Sketch Map

## 4 Measured Value and Maximum Gain Positions

### 4.1 Antenna Number

The Antennas number for measured in the following section was shown below:

Table 4-1 Antennas number

| Antenna Number | Antenna Position |      |
|----------------|------------------|------|
|                | 2G               | 5G   |
| Ant1           | Ant1             | Ant1 |
| Ant2           | Ant2             |      |
| Ant3           | Ant3             | Ant3 |
| Ant4           | Ant4             |      |

### 4.2 2G

#### 4.2.1 DG\_1SS Max Value Position

Table 4-2 DG\_1SS Max Value Position

|                |           |
|----------------|-----------|
| Frequency(GHz) | 2.40~2.50 |
| Ant1(dBi)      | 5.52      |
| Ant2(dBi)      |           |
| Ant3(dBi)      | -1.40     |
| Ant4(dBi)      |           |
| Polarization   | Theta     |
| $\Phi$ (°)     | 270       |
| $\theta$ (°)   | 90        |

#### 4.2.2 DG\_1SS Max Value Position Calculation

Table 4-3 DG\_1SS Max Value Position Calculation

|                             |                  |
|-----------------------------|------------------|
| Frequency(GHz)              | 2.40~2.50        |
| Ant1[ $10^{(G/20)}$ ]       | $10^{(5.52/20)}$ |
| Ant2[ $10^{(G/20)}$ ]       |                  |
| Ant3[ $10^{(G/20)}$ ]       | $10^{(-1.4/20)}$ |
| Ant4[ $10^{(G/20)}$ ]       |                  |
| Ant1[ $10^{(G/20)}$ ] value | 1.89             |
| Ant2[ $10^{(G/20)}$ ] value |                  |
| Ant3[ $10^{(G/20)}$ ] value | 0.85             |

|                                             |      |
|---------------------------------------------|------|
| Ant4[10 <sup>(G/20)</sup> ] value           |      |
| Sum of Ants Value(Antmax)                   | 2.74 |
| DG[10*Log(Antmax <sup>2</sup> /Nant)] (dBi) | 5.74 |

### 4.2.3 DG\_NSSmax Max Value Position

Table 4-4 DG\_NSSmax Max Value Position

|                |           |
|----------------|-----------|
| Frequency(GHz) | 2.40~2.50 |
| Ant1(dBi)      | 5.52      |
| Ant2(dBi)      |           |
| Ant3(dBi)      | -1.40     |
| Ant4(dBi)      |           |
| Polarization   | Theta     |
| Φ (°)          | 270       |
| θ (°)          | 90        |

### 4.2.4 DG\_NSSmax Max Value Position Calculation

Table 4-5 DG\_NSSmax Max Value Position Calculation

|                                              |                          |
|----------------------------------------------|--------------------------|
| Frequency(GHz)                               | 2.40~2.50                |
| Ant1[10 <sup>(G/10)</sup> ]                  | 10 <sup>(5.52/10)</sup>  |
| Ant2[10 <sup>(G/10)</sup> ]                  |                          |
| Ant3[10 <sup>(G/10)</sup> ]                  | 10 <sup>(-1.40/10)</sup> |
| Ant4[10 <sup>(G/10)</sup> ]                  |                          |
| Ant1[10 <sup>(G/10)</sup> ] value            | 3.56                     |
| Ant2[10 <sup>(G/10)</sup> ] value            |                          |
| Ant3[10 <sup>(G/10)</sup> ] value            | 0.72                     |
| Ant4[10 <sup>(G/10)</sup> ] value            |                          |
| Sum of Ants Value(Antmax)                    | 1.28                     |
| DG[10*Log <sub>10</sub> (Antmax/Nant)] (dBi) | 3.31                     |

## 4.3 5G

### 4.3.1 DG\_1SS Max Value Position

Table 4-6 DG\_1SS Max Value Position

| Frequency(GHz) | 5.15~5.25 | 5.25~5.35 | 5.47~5.725 | 5.725~5.925 |
|----------------|-----------|-----------|------------|-------------|
| Ant1(dBi)      | -0.54     | -0.5      | -1.81      | -7.73       |
| Ant2(dBi)      | 3.1       | 3.5       | 4.44       | 3.1         |
| Ant3(dBi)      | 1.4       | 0.65      | 1.58       | 4.07        |

|                                |       |       |       |       |
|--------------------------------|-------|-------|-------|-------|
| <b>Ant4(dBi)</b>               | 3.7   | 2.78  | 2.57  | 2.37  |
| <b>Polarization</b>            | Theta | Theta | Theta | Theta |
| <b><math>\Phi</math> (°)</b>   | 165   | 165   | 165   | 135   |
| <b><math>\theta</math> (°)</b> | 90    | 90    | 75    | 90    |

### 4.3.2 DG\_1SS Max Value Position Calculation

Table 4-7 DG\_1SS Max Value Position Calculation

|                                                      |                   |                  |                   |                   |
|------------------------------------------------------|-------------------|------------------|-------------------|-------------------|
| <b>Frequency(GHz)</b>                                | 5.15~5.25         | 5.25~5.35        | 5.47~5.725        | 5.725~5.925       |
| <b>Ant1[10<sup>^(G/20)</sup>]</b>                    | $10^{(-0.54/20)}$ | $10^{(-0.5/20)}$ | $10^{(-1.81/20)}$ | $10^{(-7.73/20)}$ |
| <b>Ant2[10<sup>^(G/20)</sup>]</b>                    | $10^{(3.1/20)}$   | $10^{(3.5/20)}$  | $10^{(4.44/20)}$  | $10^{(3.1/20)}$   |
| <b>Ant3[10<sup>^(G/20)</sup>]</b>                    | $10^{(1.4/20)}$   | $10^{(0.65/20)}$ | $10^{(1.58/20)}$  | $10^{(4.07/20)}$  |
| <b>Ant4[10<sup>^(G/20)</sup>]</b>                    | $10^{(3.7/20)}$   | $10^{(2.78/20)}$ | $10^{(2.57/20)}$  | $10^{(2.37/20)}$  |
| <b>Ant1[10<sup>^(G/20)</sup>] value</b>              | 0.94              | 0.94             | 0.81              | 0.41              |
| <b>Ant2[10<sup>^(G/20)</sup>] value</b>              | 1.43              | 1.50             | 1.67              | 1.43              |
| <b>Ant3[10<sup>^(G/20)</sup>] value</b>              | 1.17              | 1.08             | 1.20              | 1.60              |
| <b>Ant4[10<sup>^(G/20)</sup>] value</b>              | 1.53              | 1.38             | 1.34              | 1.31              |
| <b>Sum of Ants Value(Antmax)</b>                     | 5.07              | 4.90             | 5.02              | 4.75              |
| <b>DG[10*Log(Antmax<sup>2</sup>/Nant)]<br/>(dBi)</b> | 8.09              | 7.77             | 8.00              | 7.52              |

### 4.3.3 DG\_NSSmax Max Value Position

Table 4-8 DG\_NSSmax Max Value Position

|                                |           |           |            |             |
|--------------------------------|-----------|-----------|------------|-------------|
| <b>Frequency(GHz)</b>          | 5.15~5.25 | 5.25~5.35 | 5.47~5.725 | 5.725~5.925 |
| <b>Ant1(dBi)</b>               | -0.54     | -7.53     | -6.34      | -7.73       |
| <b>Ant2(dBi)</b>               | 3.1       | 4.01      | 3.89       | 3.1         |
| <b>Ant3(dBi)</b>               | 1.4       | 3.9       | 3.3        | 4.07        |
| <b>Ant4(dBi)</b>               | 3.7       | 1.82      | 2.99       | 2.37        |
| <b>Polarization</b>            | Theta     | Theta     | Theta      | Theta       |
| <b><math>\Phi</math> (°)</b>   | 165       | 135       | 135        | 135         |
| <b><math>\theta</math> (°)</b> | 90        | 90        | 90         | 90          |

### 4.3.4 DG\_NSSmax Max Value Position Calculation

Table 4-9 DG\_NSSmax Max Value Position Calculation

|                                   |                   |                   |                   |                   |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Frequency(GHz)</b>             | 5.15~5.25         | 5.25~5.35         | 5.47~5.725        | 5.725~5.925       |
| <b>Ant1[10<sup>^(G/10)</sup>]</b> | $10^{(-0.54/10)}$ | $10^{(-7.53/10)}$ | $10^{(-6.34/10)}$ | $10^{(-7.73/10)}$ |
| <b>Ant2[10<sup>^(G/10)</sup>]</b> | $10^{(3.1/10)}$   | $10^{(4.01/10)}$  | $10^{(3.89/10)}$  | $10^{(3.1/10)}$   |
| <b>Ant3[10<sup>^(G/10)</sup>]</b> | $10^{(1.4/10)}$   | $10^{(3.9/10)}$   | $10^{(3.3/10)}$   | $10^{(4.07/10)}$  |

|                                                       |                 |                  |                  |                  |
|-------------------------------------------------------|-----------------|------------------|------------------|------------------|
| <b>Ant4[10*(G/10)]</b>                                | $10^{(3.7/10)}$ | $10^{(1.82/10)}$ | $10^{(2.99/10)}$ | $10^{(2.37/10)}$ |
| <b>Ant1[10*(G/10)] value</b>                          | 0.88            | 0.17             | 0.23             | 0.17             |
| <b>Ant2[10*(G/10)] value</b>                          | 2.04            | 2.52             | 2.45             | 2.04             |
| <b>Ant3[10*(G/10)] value</b>                          | 1.38            | 2.45             | 2.14             | 2.55             |
| <b>Ant4[10*(G/10)] value</b>                          | 2.34            | 1.52             | 1.99             | 1.72             |
| <b>Sum of Ants Value(Antmax)</b>                      | 6.64            | 6.66             | 6.81             | 6.48             |
| <b>DG[10*Log<sub>10</sub>(Antmax/Nant)]<br/>(dBi)</b> | 2.21            | 2.22             | 2.31             | 2.10             |

## 5 Test and Calculate Result

### 5.1 Peak Antenna Gain (Single)

Table 5-1 Antenna Test Result

| Frequency Band(MHz) | Ant1 | Ant2 | Ant3 | Ant4 |
|---------------------|------|------|------|------|
| 2400-2500           | 5.52 |      | 3.20 |      |
| 5150-5250           | 2.90 | 4.07 | 5.32 | 4.40 |
| 5250-5350           | 3.26 | 4.34 | 5.13 | 4.40 |
| 5470-5725           | 3.11 | 4.12 | 5.65 | 3.60 |
| 5725-5925           | 3.01 | 4.07 | 4.79 | 3.36 |

### 5.2 DG\_1SS Calculate Result

Table 5-2 Test & Calculate Result

| Frequency Band(MHz) | Max Combined Gain | Polarization/ $\Phi$ (°) / $\theta$ (°) |
|---------------------|-------------------|-----------------------------------------|
| 2400-2450           | 5.74dBi           | Theta/270/90                            |
| 5150-5250           | 8.09dBi           | Theta/165/90                            |
| 5250-5350           | 7.77dBi           | Theta/165/90                            |
| 5470-5725           | 8.00dBi           | Theta/165/75                            |
| 5725-5925           | 7.52dBi           | Theta/135/90                            |

### 5.3 DG\_NSSmax Calculate Result

Table 5-3Test & Calculate Result

| Frequency Band(MHz) | Max Combined Gain | Polarization/ $\Phi$ (°) / $\theta$ (°) |
|---------------------|-------------------|-----------------------------------------|
| 2400-2450           | 3.31dBi           | Theta/270/90                            |
| 5150-5250           | 2.21dBi           | Theta/165/90                            |
| 5250-5350           | 2.22dBi           | Theta/135/90                            |

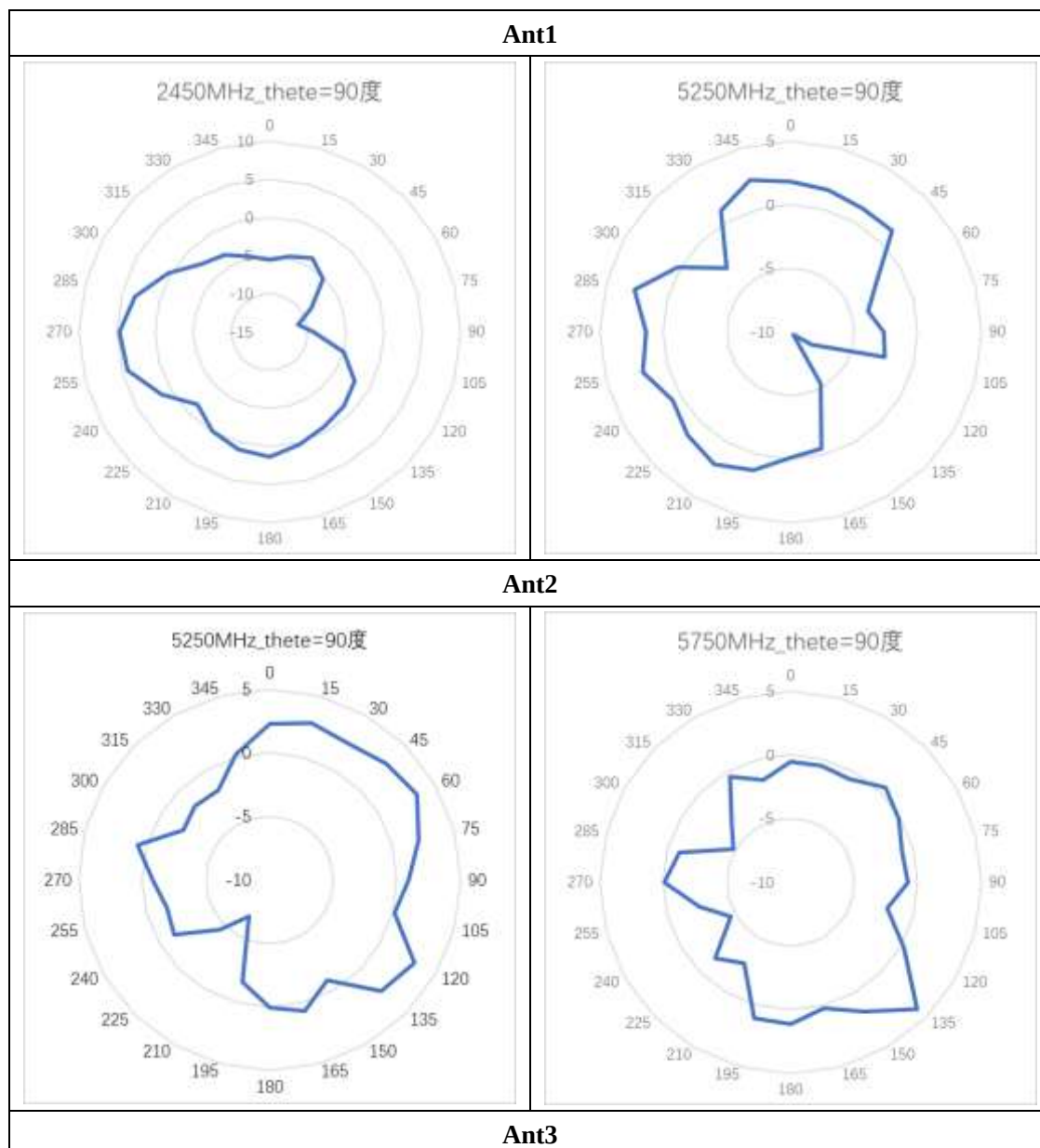


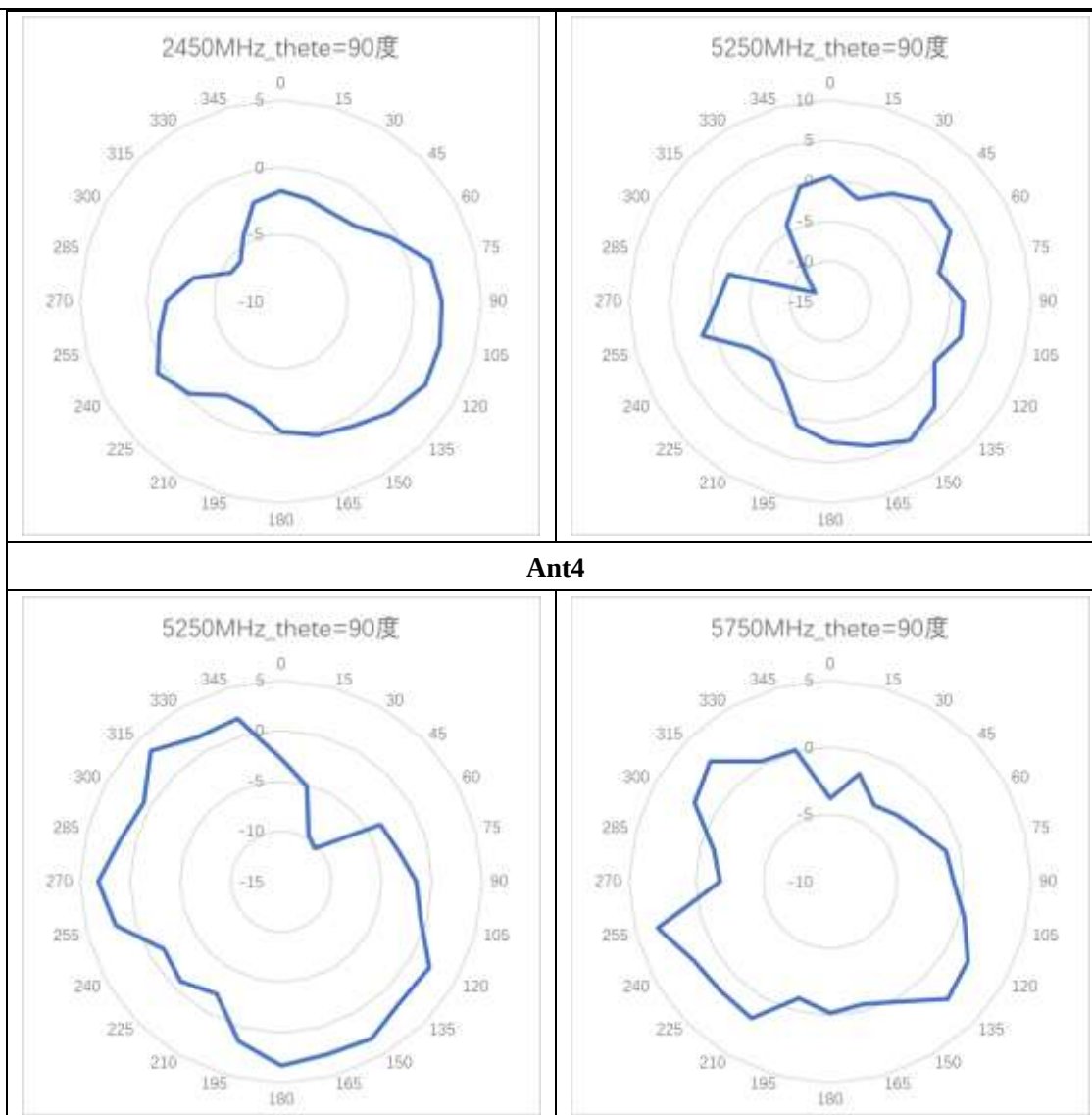
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|           |         |              |
|-----------|---------|--------------|
| 5470-5725 | 2.31dBi | Theta/135/90 |
| 5725-5925 | 2.10dBi | Theta/135/90 |

## 6 Test Pattern

### 6.1 Antenna Pattern





## 7 Test Pattern

### 7.1 DG\_1SS Test Data

| Ant1         |       |       |         |       |       |       |        |       |       |        |        |        |        |
|--------------|-------|-------|---------|-------|-------|-------|--------|-------|-------|--------|--------|--------|--------|
| Polarization | Total |       | Channel | 2     |       | Freq  | 2410   |       |       |        |        |        |        |
| Phi\Theta    | 0     | 15    | 30      | 45    | 60    | 75    | 90     | 105   | 120   | 135    | 150    | 165    | 180    |
| 0            | -4.36 | -3.73 | -2.78   | -2.55 | -4.59 | -3.76 | -3.65  | -4.25 | -8.65 | -9.7   | -10.11 | -10.04 | -13.07 |
| 15           | -4.35 | -4.39 | -3.88   | -3.3  | -4.81 | -3.18 | -3.27  | -4.67 | -9.69 | -8     | -7.88  | -8.61  | -13.07 |
| 30           | -4.36 | -5.17 | -5.34   | -3.98 | -3.72 | -3.06 | -2.84  | -6.16 | -9.17 | -5.36  | -5.75  | -7.73  | -13.07 |
| 45           | -4.33 | -6.03 | -6.79   | -3.71 | -2.84 | -2.76 | -5.27  | -7.39 | -7.26 | -3.62  | -4.65  | -7.6   | -13.07 |
| 60           | -4.26 | -7.05 | -7.63   | -3.04 | -2.54 | -2.88 | -9.96  | -9.62 | -6.29 | -4.06  | -5.46  | -8.3   | -13.07 |
| 75           | -4.15 | -7.9  | -7.33   | -2.86 | -2.66 | -2.79 | -10.38 | -6.74 | -5.97 | -5.32  | -7.75  | -10.29 | -13.07 |
| 90           | -4.1  | -8.3  | -6.57   | -2.98 | -3.24 | -3.12 | -7.25  | -3.07 | -4.2  | -5.91  | -9.05  | -12.41 | -13.07 |
| 105          | -4.05 | -8.03 | -5.81   | -3.33 | -4.79 | -4.34 | -4.18  | -2.28 | -4.76 | -6.67  | -8.01  | -8.68  | -13.07 |
| 120          | -3.98 | -7.31 | -5.25   | -4.02 | -7.02 | -4.74 | -2.61  | -4.48 | -9.25 | -10.23 | -5.52  | -5.67  | -13.07 |

|     |       |       |       |       |       |       |       |       |        |        |        |        |        |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| 135 | -3.97 | -6.51 | -4.72 | -4.52 | -6.7  | -3.98 | -2.29 | -6.58 | -13.61 | -13.7  | -4.87  | -4.7   | -13.07 |
| 150 | -3.94 | -5.76 | -4.27 | -4.2  | -4.3  | -2.12 | -1.44 | -4.82 | -9.31  | -8.77  | -5.46  | -3.88  | -13.07 |
| 165 | -3.99 | -5.17 | -3.77 | -3.36 | -2.82 | -0.76 | 0.04  | -2.72 | -4.97  | -5.53  | -5.05  | -3.14  | -13.07 |
| 180 | -4.08 | -4.73 | -3.13 | -2.17 | -2.99 | 0.11  | 1.28  | -0.83 | -2.21  | -4.59  | -3.11  | -2.86  | -13.07 |
| 195 | -4.14 | -4.2  | -2.31 | -0.58 | -3.42 | 0.18  | 1.44  | 0.94  | -1.03  | -3.42  | -1.89  | -3.32  | -13.07 |
| 210 | -4.18 | -3.6  | -1.38 | 0.75  | -1.83 | -1.39 | 1.07  | 1.2   | -0.53  | -1.51  | -1.7   | -4.74  | -13.07 |
| 225 | -4.23 | -3.02 | -0.49 | 1.49  | 0.97  | -0.55 | -0.51 | 0.81  | -0.49  | -1.19  | -2.17  | -7.12  | -13.07 |
| 240 | -4.26 | -2.56 | 0.35  | 2.32  | 2.36  | 2.78  | 1.94  | 0.81  | -1.51  | -1.68  | -3.91  | -10.53 | -13.07 |
| 255 | -4.27 | -2.32 | 0.95  | 3.15  | 2.73  | 4.71  | 4.77  | 2.83  | -1.35  | -3.29  | -6.87  | -13.07 | -13.07 |
| 270 | -4.34 | -2.35 | 1.02  | 3.2   | 2.89  | 4.93  | 5.52  | 3.95  | 0.03   | -3.05  | -8.9   | -11.61 | -13.07 |
| 285 | -4.45 | -2.41 | 0.53  | 2.32  | 2.07  | 4.26  | 4.56  | 3.19  | -0.08  | -3.23  | -10.53 | -9.84  | -13.07 |
| 300 | -4.57 | -2.45 | -0.28 | 0.99  | -0.22 | 2.27  | 2.53  | 1.52  | -2.6   | -6.25  | -12.61 | -9.04  | -13.07 |
| 315 | -4.61 | -2.5  | -1    | -0.48 | -2.18 | -0.21 | -0.07 | 0.16  | -6.22  | -9.91  | -14.51 | -9.45  | -13.07 |
| 330 | -4.61 | -2.72 | -1.48 | -1.7  | -2.31 | -2.46 | -2    | -1.56 | -6.98  | -12.3  | -13.28 | -10.76 | -13.07 |
| 345 | -4.45 | -3.13 | -2.02 | -2.14 | -3.32 | -3.5  | -3.35 | -3.14 | -7.66  | -11.07 | -11.88 | -11.25 | -13.07 |

| Ant3         |       |       |         |       |       |       |       |       |       |        |        |        |       |
|--------------|-------|-------|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| Polarization | Total |       | Channel | 2     |       | Freq  | 2410  |       |       |        |        |        |       |
| Phi\Theta    | 0     | 15    | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135    | 150    | 165    | 180   |
| 0            | -9.19 | -5.56 | -2.59   | -0.27 | -1.97 | -0.98 | -1.31 | -4.3  | -5.16 | -3.73  | -5.43  | -5.57  | -12.2 |
| 15           | -9.14 | -5.91 | -2.31   | 0.08  | -1.8  | -0.71 | -1.17 | -3.29 | -5.71 | -3.88  | -3.86  | -6.45  | -12.2 |
| 30           | -8.94 | -6.49 | -2.36   | -0.06 | -1.6  | -1.71 | -1.82 | -4.7  | -6.91 | -2.97  | -3.73  | -8.57  | -12.2 |
| 45           | -8.71 | -7.19 | -2.78   | -0.58 | -1.07 | -2.01 | -2.86 | -5.58 | -9.15 | -2.11  | -4.7   | -11.3  | -12.2 |
| 60           | -8.58 | -7.89 | -3.55   | -0.94 | -0.75 | 0.35  | -1.03 | -4.42 | -7.93 | -3.34  | -6.58  | -12.2  | -12.2 |
| 75           | -8.6  | -8.33 | -4.43   | -0.72 | -0.45 | 2.35  | 1.38  | -2.53 | -7.33 | -3.77  | -7.86  | -10.88 | -12.2 |
| 90           | -8.65 | -8.74 | -5.19   | -0.51 | 0.11  | 2.73  | 1.92  | -1    | -2.75 | -2.1   | -5.56  | -10.15 | -12.2 |
| 105          | -8.72 | -9.13 | -5.74   | -0.43 | 0.69  | 2.75  | 1.84  | 1.17  | -0.02 | -0.33  | -3.65  | -9.99  | -12.2 |
| 120          | -8.59 | -9.44 | -6      | -0.13 | 1.36  | 3.15  | 1.96  | 1.46  | 0.11  | -0.05  | -3.43  | -9.11  | -12.2 |
| 135          | -8.47 | -9.85 | -5.66   | 0.39  | 1.79  | 3.11  | 1.48  | 0.05  | -0.93 | -0.59  | -3.97  | -8.39  | -12.2 |
| 150          | -8.34 | -9.97 | -4.86   | 0.69  | 1.64  | 2.46  | 0.76  | -0.86 | -1.08 | -0.35  | -4.9   | -8.53  | -12.2 |
| 165          | -8.25 | -9.44 | -3.82   | 0.72  | 1.06  | 1.37  | 0.43  | -0.71 | -0.87 | 0.25   | -5.2   | -8.65  | -12.2 |
| 180          | -8.2  | -8.51 | -2.75   | 0.47  | -0.18 | -0.21 | -0.23 | -0.45 | -0.68 | -0.38  | -5.71  | -9.07  | -12.2 |
| 195          | -8.41 | -7.52 | -2.14   | 0.16  | -1.68 | -2.5  | -1.01 | -0.82 | -1.21 | -1.9   | -8.48  | -10.16 | -12.2 |
| 210          | -8.69 | -6.85 | -1.89   | 0.44  | -2.83 | -2.78 | -0.84 | -1.06 | -3.44 | -3.68  | -10.45 | -10.78 | -12.2 |
| 225          | -8.97 | -6.39 | -1.99   | 0.67  | -1.73 | -0.62 | 0.35  | -0.71 | -4.64 | -5.58  | -8.12  | -9.92  | -12.2 |
| 240          | -8.96 | -6.26 | -2.52   | 0.66  | -1.01 | 0.02  | 0.75  | -0.26 | -4.77 | -4.72  | -6.87  | -8.42  | -12.2 |
| 255          | -8.81 | -6.42 | -3.41   | -0.21 | -1.58 | -0.95 | -0.42 | -1.66 | -6.56 | -5.08  | -6.54  | -7.59  | -12.2 |
| 270          | -8.68 | -6.81 | -4.35   | -2.14 | -3.77 | -3.28 | -1.4  | -3.42 | -8.4  | -9.16  | -6.58  | -7.74  | -12.2 |
| 285          | -8.81 | -7.16 | -5.04   | -4.55 | -6.72 | -6.67 | -4.16 | -3.61 | -8.44 | -12.61 | -6.6   | -8.44  | -12.2 |
| 300          | -9.04 | -6.95 | -4.96   | -5.5  | -6.71 | -7.85 | -8.33 | -4.93 | -7.57 | -12.75 | -7.26  | -8.79  | -12.2 |
| 315          | -9.24 | -6.41 | -4.39   | -4.28 | -4.57 | -4.35 | -8.11 | -4.75 | -5.93 | -12.22 | -7.2   | -8     | -12.2 |
| 330          | -9.23 | -5.85 | -3.78   | -2.32 | -2.95 | -2.59 | -5.94 | -5.62 | -3.96 | -10.36 | -6.12  | -6.65  | -12.2 |
| 345          | -9.21 | -5.49 | -3.11   | -1    | -2.35 | -1.61 | -2.8  | -6.78 | -3.92 | -6.59  | -6.26  | -5.75  | -12.2 |

| 2410MHz Composite Gain |       |       |         |      |       |      |       |       |       |       |       |       |       |
|------------------------|-------|-------|---------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Polarization           | Total |       | Channel | 2    |       | Freq | 2410  |       |       |       |       |       |       |
| Phi\Theta              | 0     | 15    | 30      | 45   | 60    | 75   | 90    | 105   | 120   | 135   | 150   | 165   | 180   |
| 0                      | -3.43 | -1.59 | 0.33    | 1.67 | -0.17 | 0.75 | 0.61  | -1.26 | -3.72 | -3.20 | -4.45 | -4.51 | -9.61 |
| 15                     | -3.41 | -2.11 | -0.05   | 1.56 | -0.16 | 1.15 | 0.85  | -0.94 | -4.46 | -2.69 | -2.63 | -4.45 | -9.61 |
| 30                     | -3.34 | -2.79 | -0.71   | 1.21 | 0.41  | 0.65 | 0.70  | -2.39 | -4.96 | -1.07 | -1.67 | -5.13 | -9.61 |
| 45                     | -3.24 | -3.58 | -1.55   | 1.01 | 1.10  | 0.63 | -0.97 | -3.43 | -5.14 | 0.18  | -1.66 | -6.24 | -9.61 |
| 60                     | -3.14 | -4.45 | -2.34   | 1.08 | 1.41  | 1.89 | -1.38 | -3.63 | -4.06 | -0.68 | -2.99 | -7.02 | -9.61 |
| 75                     | -3.08 | -5.10 | -2.75   | 1.29 | 1.53  | 3.17 | 0.36  | -1.37 | -3.61 | -1.50 | -4.79 | -7.57 | -9.61 |
| 90                     | -3.07 | -5.51 | -2.84   | 1.35 | 1.61  | 3.30 | 1.50  | 1.04  | -0.43 | -0.79 | -4.12 | -8.20 | -9.61 |
| 105                    | -3.06 | -5.55 | -2.76   | 1.25 | 1.39  | 2.92 | 2.35  | 2.63  | 0.94  | 0.08  | -2.55 | -6.30 | -9.61 |
| 120                    | -2.97 | -5.30 | -2.61   | 1.15 | 1.15  | 3.08 | 2.98  | 2.00  | -0.36 | -0.72 | -1.40 | -4.21 | -9.61 |
| 135                    | -2.92 | -5.01 | -2.17   | 1.29 | 1.55  | 3.28 | 2.81  | 0.36  | -2.13 | -1.87 | -1.40 | -3.34 | -9.61 |
| 150                    | -2.85 | -4.60 | -1.55   | 1.59 | 2.18  | 3.48 | 2.74  | 0.39  | -1.24 | -0.57 | -2.17 | -2.89 | -9.61 |
| 165                    | -2.85 | -4.03 | -0.78   | 1.93 | 2.35  | 3.38 | 3.25  | 1.35  | 0.33  | 0.84  | -2.11 | -2.45 | -9.61 |
| 180                    | -2.89 | -3.41 | 0.07    | 2.26 | 1.54  | 2.96 | 3.57  | 2.37  | 1.60  | 0.78  | -1.30 | -2.41 | -9.61 |
| 195                    | -3.00 | -2.69 | 0.79    | 2.81 | 0.50  | 1.95 | 3.31  | 3.11  | 1.89  | 0.38  | -1.56 | -3.07 | -9.61 |
| 210                    | -3.14 | -2.06 | 1.38    | 3.61 | 0.69  | 0.95 | 3.18  | 3.15  | 1.15  | 0.48  | -2.01 | -4.23 | -9.61 |
| 225                    | -3.27 | -1.53 | 1.80    | 4.10 | 2.73  | 2.43 | 2.94  | 3.09  | 0.69  | -0.10 | -1.63 | -5.40 | -9.61 |
| 240                    | -3.29 | -1.20 | 2.04    | 4.54 | 3.85  | 4.52 | 4.38  | 3.30  | 0.02  | -0.06 | -2.25 | -6.40 | -9.61 |
| 255                    | -3.24 | -1.12 | 2.05    | 4.64 | 3.85  | 5.34 | 5.57  | 3.88  | -0.56 | -1.13 | -3.69 | -6.89 | -9.61 |
| 270                    | -3.23 | -1.29 | 1.75    | 3.94 | 3.19  | 4.77 | 5.74  | 4.03  | -0.19 | -2.57 | -4.65 | -6.45 | -9.61 |
| 285                    | -3.35 | -1.45 | 1.19    | 2.56 | 1.75  | 3.42 | 4.26  | 3.45  | -0.28 | -3.70 | -5.33 | -6.10 | -9.61 |
| 300                    | -3.51 | -1.40 | 0.70    | 1.35 | 0.14  | 1.62 | 1.71  | 1.89  | -1.72 | -5.90 | -6.52 | -5.90 | -9.61 |
| 315                    | -3.61 | -1.23 | 0.48    | 0.84 | -0.28 | 0.97 | -0.18 | 1.06  | -3.06 | -7.98 | -7.10 | -5.68 | -9.61 |
| 330                    | -3.61 | -1.13 | 0.46    | 1.01 | 0.39  | 0.49 | -0.74 | -0.34 | -2.33 | -8.27 | -5.97 | -5.45 | -9.61 |
| 345                    | -3.50 | -1.22 | 0.46    | 1.46 | 0.19  | 0.51 | -0.06 | -1.76 | -2.58 | -5.53 | -5.61 | -5.06 | -9.61 |

| Ant1         |       |        |         |        |       |        |       |       |        |        |        |       |        |
|--------------|-------|--------|---------|--------|-------|--------|-------|-------|--------|--------|--------|-------|--------|
| Polarization | Total |        | Channel | 14     |       | Freq   | 5250  |       |        |        |        |       |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75     | 90    | 105   | 120    | 135    | 150    | 165   | 180    |
| 0            | -9.12 | -9.01  | -5.01   | -0.41  | -1.49 | -0.76  | 1.8   | 2.2   | 1.69   | 1.86   | -0.69  | -4.68 | -11.65 |
| 15           | -9.08 | -11.66 | -6.98   | 0.41   | -1.34 | -0.33  | 1.53  | -0.11 | -0.72  | 0.06   | -2.43  | -4.59 | -11.65 |
| 30           | -9.08 | -16.03 | -6.23   | 0.66   | -0.77 | 0.73   | 1.22  | -1.56 | -3.08  | -3.86  | -6.86  | -4.75 | -11.65 |
| 45           | -8.83 | -18.83 | -5.6    | 2.76   | 1.03  | 1.23   | 1.27  | -0.79 | -4.35  | -8.17  | -8.99  | -5.3  | -11.65 |
| 60           | -8.58 | -16.1  | -6.2    | 1.39   | -0.11 | 0.39   | -2.22 | -2.21 | -5.72  | -5.2   | -7.32  | -7.45 | -11.65 |
| 75           | -8.74 | -13.94 | -7.93   | -4.47  | -2.51 | -2.29  | -3.71 | -2.91 | -8.3   | -9.21  | -7.43  | -9.28 | -11.65 |
| 90           | -9.04 | -13.29 | -10.01  | -8.03  | -2.27 | -3.67  | -2.66 | -6.78 | -10.27 | -10.26 | -7.8   | -8.75 | -11.65 |
| 105          | -9.24 | -13.28 | -11.64  | -6.92  | -3.59 | -2.72  | -2.31 | -5.39 | -2.72  | -10.64 | -10.39 | -8.5  | -11.65 |
| 120          | -8.9  | -12.58 | -12.73  | -9.6   | -9.04 | -15.05 | -8.08 | -10.2 | -4.24  | -12.53 | -10.48 | -8.07 | -11.65 |
| 135          | -8.67 | -10.45 | -14.08  | -13.22 | -7.33 | -10.09 | -9.67 | -3.89 | -6.47  | -9.49  | -7.48  | -8.32 | -11.65 |

|     |       |       |        |        |       |       |       |       |       |       |       |        |        |
|-----|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 150 | -8.58 | -8.62 | -11.39 | -14.02 | -7.26 | -6.43 | -5.31 | -5.6  | -4.5  | -7.44 | -9.03 | -8.3   | -11.65 |
| 165 | -8.76 | -7.16 | -9.11  | -6.06  | -5.35 | -1.91 | -0.5  | -1.74 | -2.7  | -7.34 | -9.75 | -8.22  | -11.65 |
| 180 | -9.12 | -6.1  | -6.05  | -2.99  | -3.53 | -1.04 | -0.15 | -3.23 | -4.51 | -4.77 | -8.82 | -9.74  | -11.65 |
| 195 | -9.48 | -5.74 | -3.83  | -1.23  | -1.05 | 1.91  | 1.25  | -0.65 | -6.24 | -3.74 | -4.62 | -11.65 | -11.65 |
| 210 | -9.52 | -6.01 | -2.75  | 0.66   | 0.55  | 1.07  | 1.97  | 0.74  | -3.43 | -3.1  | -2.77 | -9.67  | -11.65 |
| 225 | -9.47 | -6.83 | -3.55  | 0.27   | -0.21 | 1.05  | 1.46  | 2.28  | -0.67 | -3    | -5.19 | -5.1   | -11.65 |
| 240 | -9.43 | -8.09 | -4.72  | -3.3   | -2.3  | 0.54  | 0.72  | 1.69  | 0.4   | -5.03 | -3.77 | -2.4   | -11.65 |
| 255 | -9.4  | -9.02 | -5.63  | -1.93  | -0.73 | 1.17  | 2.03  | 2.68  | 0.97  | 1.25  | -3.26 | -2.07  | -11.65 |
| 270 | -9.21 | -8.86 | -6.78  | -2.54  | -1.83 | 0.08  | 1.33  | 2.28  | 1.89  | -0.77 | -4.33 | -3.81  | -11.65 |
| 285 | -9.32 | -8.17 | -6.47  | -4.04  | -2.54 | 0.6   | 2.73  | 1.32  | 1.92  | -0.42 | 0.83  | -5.4   | -11.65 |
| 300 | -9.73 | -7.87 | -6.15  | -3.01  | -2.15 | -0.98 | 0.22  | 0.02  | 0.38  | 1.39  | 0.5   | -5.16  | -11.65 |
| 315 | -9.65 | -8.19 | -5.47  | -0.82  | -3    | -3.96 | -2.92 | -1.26 | -0.18 | 0.32  | -2.91 | -5.1   | -11.65 |
| 330 | -9.43 | -8.16 | -3.99  | 0.05   | -1.96 | -2.42 | 0.97  | 1.41  | 1.59  | 2.35  | -1.82 | -4.42  | -11.65 |
| 345 | -9.37 | -7.97 | -4.2   | 0.32   | -0.46 | 0.47  | 2.35  | 2.77  | 1.79  | 2.9   | -0.82 | -3.68  | -11.65 |

| Ant2         |        |        |         |        |       |        |        |        |        |        |       |        |     |
|--------------|--------|--------|---------|--------|-------|--------|--------|--------|--------|--------|-------|--------|-----|
| Polarization | Total  |        | Channel | 14     |       | Freq   | 5250   |        |        |        |       |        |     |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75     | 90     | 105    | 120    | 135    | 150   | 165    | 180 |
| 0            | -10.53 | -14.33 | -7.22   | -3.05  | -3.8  | 0.22   | 0.56   | -2.48  | -11.02 | -4.81  | -4.49 | -4.88  | -12 |
| 15           | -10.5  | -14.5  | -5.31   | -0.96  | -1.93 | -2.16  | -1.77  | -1.41  | -5.79  | -2.11  | -4.39 | -4.33  | -12 |
| 30           | -10.74 | -14.77 | -5.39   | -0.02  | 0.49  | 1.5    | 0.4    | -1.13  | -2.77  | -2.19  | -6.01 | -4.94  | -12 |
| 45           | -10.89 | -13.89 | -6.07   | -1.17  | 0.19  | 3.16   | 2.52   | 1.12   | -0.21  | -0.38  | -5.98 | -5.42  | -12 |
| 60           | -10.84 | -12.86 | -6.69   | -1.73  | -1.66 | -0.67  | 2.3    | -1.12  | -2.38  | 0.12   | -3.47 | -6.26  | -12 |
| 75           | -10.43 | -11.73 | -6.44   | -2.95  | -3.09 | -5     | -1.02  | -2.29  | -4.46  | 0.18   | -1.89 | -7.86  | -12 |
| 90           | -10.12 | -10.53 | -6.97   | -5.46  | -6.44 | -1.73  | 1.61   | 1.61   | -2.66  | 1.88   | -1.29 | -8.87  | -12 |
| 105          | -9.75  | -10.52 | -9.14   | -6.36  | -6.77 | -2.76  | 1.86   | 1.53   | -1.3   | -0.37  | -2.29 | -8.72  | -12 |
| 120          | -10.06 | -12.23 | -12.52  | -6.81  | -6.3  | -1.99  | -0.02  | 1.32   | -2.24  | -6.51  | -4.47 | -9.41  | -12 |
| 135          | -10.39 | -13.83 | -12.99  | -5.27  | -3.31 | 1.28   | 3.44   | 3.62   | -2.06  | -6.49  | -5.4  | -9.63  | -12 |
| 150          | -10.28 | -14.01 | -8.87   | -3.8   | -0.74 | 3.87   | 4.94   | 3.45   | 0.55   | -2.03  | -3.58 | -10.32 | -12 |
| 165          | -10.13 | -13.8  | -7.07   | -4.04  | 0.67  | 5.32   | 3.5    | 3.51   | 0.87   | -1.54  | -3.94 | -12    | -12 |
| 180          | -10.1  | -13.21 | -7.04   | -3.8   | 1.59  | 4.15   | 2.41   | 0.98   | -2.18  | -4.36  | -5.24 | -10.74 | -12 |
| 195          | -10.08 | -11.79 | -7.19   | -0.27  | 0.97  | 2.6    | 0.89   | -1.92  | -6.86  | -8.4   | -6.67 | -9.85  | -12 |
| 210          | -10.3  | -9.32  | -5.2    | 0.95   | 0.02  | 0.84   | -3.18  | -3.75  | -6.53  | -4.04  | -7.43 | -8.76  | -12 |
| 225          | -10.58 | -7.51  | -2.75   | -0.16  | -4.8  | -1.15  | -4.69  | -3.13  | -2.53  | -2.07  | -7.93 | -6.71  | -12 |
| 240          | -10.44 | -6.85  | -1.02   | -0.63  | -2.21 | -0.11  | -3.48  | -3.55  | -4.27  | -5.67  | -7.4  | -5.92  | -12 |
| 255          | -10.3  | -6.85  | -1.67   | -1.33  | -2.69 | -2.13  | 1.4    | -3.95  | -3.91  | -6.57  | -10.5 | -7.41  | -12 |
| 270          | -10.51 | -7.44  | -4.51   | -4.97  | -6.46 | -2.28  | -0.99  | -6.34  | -5.12  | -7.09  | -8.94 | -6.61  | -12 |
| 285          | -10.9  | -8.32  | -7.05   | -7.47  | -4.85 | -1.83  | -2     | -4.73  | -3.25  | -10.91 | -6.99 | -4.55  | -12 |
| 300          | -11.02 | -9.71  | -8.32   | -12.27 | -5.6  | -12.46 | -12.86 | -8.12  | -4.42  | -7.14  | -8.58 | -3.87  | -12 |
| 315          | -11.09 | -11.76 | -10.93  | -7.1   | -8.83 | -7.24  | -11.22 | -12.12 | -8.68  | -6.75  | -8.38 | -3.93  | -12 |
| 330          | -11.02 | -13.92 | -13.18  | -5.24  | -7.26 | -4.37  | -4.07  | -3.82  | -4.56  | -5.07  | -7.55 | -4.05  | -12 |
| 345          | -10.61 | -14.65 | -10.27  | -4.04  | -4.32 | 0.28   | -0.41  | -2.42  | -4.84  | -6.2   | -4.79 | -4.69  | -12 |

| Ant3         |       |        |         |        |        |        |       |       |       |        |        |        |        |
|--------------|-------|--------|---------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 3      |        | Freq   | 5250  |       |       |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60     | 75     | 90    | 105   | 120   | 135    | 150    | 165    | 180    |
| 0            | -5.5  | -3.99  | -10.77  | -3.07  | 0.38   | 2.05   | 2.3   | 2.26  | 1     | -3.85  | -9.92  | -6.25  | -13.86 |
| 15           | -5.63 | -3.15  | -7.3    | -3.76  | -0.26  | 0.77   | 2.8   | 3.23  | 1.72  | -1.51  | -5.74  | -4.85  | -13.86 |
| 30           | -5.86 | -2.75  | -5.29   | -1.5   | 0.38   | 1.18   | 2.41  | 3     | -0.02 | -1.96  | -3.14  | -4.59  | -13.86 |
| 45           | -6.16 | -3.18  | -2.73   | -0.96  | 0.31   | 1.39   | 2.92  | 3.36  | -2.94 | 0.36   | -0.74  | -3.87  | -13.86 |
| 60           | -6.37 | -3.88  | -1.56   | -0.52  | -1.72  | 0.58   | 3.4   | 2.92  | -1.26 | 1.94   | 0.81   | -4.15  | -13.86 |
| 75           | -6.34 | -4.62  | -1.93   | 0.38   | -1.1   | 1.58   | 2.15  | 3.48  | 1.87  | 2.1    | -1.02  | -2.99  | -13.86 |
| 90           | -6.11 | -5.53  | -3.72   | -0.85  | 1.99   | 2.62   | 0.94  | 3.91  | -1.12 | -0.72  | -0.6   | -0.55  | -13.86 |
| 105          | -5.9  | -7.03  | -7.31   | -2.17  | 1.6    | -1.38  | 0.19  | 0.11  | -6.49 | -1.1   | -0.05  | -0.53  | -13.86 |
| 120          | -5.81 | -10.01 | -10.67  | -0.88  | -1.78  | -2.22  | 3.12  | -2.5  | -2.11 | -0.23  | -1.07  | -2.02  | -13.86 |
| 135          | -5.89 | -14.06 | -9.25   | -0.96  | -3.14  | 1.95   | 2.38  | 0.77  | -0.86 | -0.6   | -2.4   | -2.88  | -13.86 |
| 150          | -5.95 | -14.29 | -8.13   | -2.6   | -4.16  | -0.54  | -0.91 | -2.04 | -1.91 | 0.6    | -1.97  | -2.41  | -13.86 |
| 165          | -5.91 | -12.32 | -8.44   | -3.75  | -3.82  | -0.83  | 0.65  | -1.71 | -1.5  | -1.32  | -4.63  | -3.53  | -13.86 |
| 180          | -5.66 | -10.97 | -9.99   | -2.37  | -5.76  | -0.57  | 0.08  | -0.74 | -2.71 | -5.47  | -7.29  | -4.16  | -13.86 |
| 195          | -5.35 | -9.76  | -9.81   | -2.02  | -6.87  | -0.96  | -1.72 | 0.49  | -1.39 | -2.67  | -4.44  | -5.39  | -13.86 |
| 210          | -5.27 | -8.83  | -13.02  | -4.4   | -5.47  | -7.68  | -6.71 | -4.83 | -4.39 | -2     | -3.12  | -6.21  | -13.86 |
| 225          | -5.18 | -8.02  | -16.6   | -11.58 | -6.58  | -12.64 | -4.47 | -8.26 | -6.24 | -5.22  | -4.65  | -5.09  | -13.86 |
| 240          | -5.08 | -7.67  | -25.1   | -17.31 | -10.24 | -6.14  | -1.36 | -6.44 | -1.48 | -4.62  | -7.47  | -4.6   | -13.86 |
| 255          | -5.17 | -8.27  | -14.8   | -12.53 | -6.98  | -4.4   | -1.64 | -4.77 | -1.31 | -4.34  | -8.27  | -5.63  | -13.86 |
| 270          | -5.1  | -9.54  | -8.39   | -5.58  | -6.17  | -1.83  | -0.79 | -4.5  | -6.22 | -4.59  | -7.6   | -8.16  | -13.86 |
| 285          | -5.11 | -10.03 | -6.21   | -3.57  | -0.64  | 0.69   | 0.72  | 0.76  | -2.9  | -6.65  | -12.37 | -13.86 | -13.86 |
| 300          | -5.31 | -9.04  | -5.51   | -2.01  | -1.13  | 1.33   | -2.17 | 1.49  | -4.11 | -8.26  | -10.37 | -13.6  | -13.86 |
| 315          | -5.41 | -7.26  | -7.34   | -1.74  | -2.62  | -1.16  | -1.74 | 2.11  | -1.98 | -6.88  | -12.37 | -10.63 | -13.86 |
| 330          | -5.42 | -5.88  | -9.13   | -1.3   | -1.03  | -1.84  | -1.88 | -1.32 | -5.33 | -10.39 | -13.34 | -7.75  | -13.86 |
| 345          | -5.53 | -4.98  | -11.89  | -1.79  | -0.04  | 0.34   | 0.22  | 0     | -3.46 | -10.56 | -14.56 | -6.64  | -13.86 |

| Ant4         |       |        |         |       |        |       |        |       |        |       |        |        |        |
|--------------|-------|--------|---------|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|
| Polarization | Total |        | Channel | 3     |        | Freq  | 5250   |       |        |       |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45    | 60     | 75    | 90     | 105   | 120    | 135   | 150    | 165    | 180    |
| 0            | -9.03 | -6.97  | -8.88   | -6.68 | -2.44  | -3.87 | -2.85  | -1.27 | -4.92  | -5.37 | -1.74  | -4.42  | -11.17 |
| 15           | -8.98 | -7.14  | -9.6    | -6.99 | -7.27  | -3.85 | -5.18  | 0.84  | -5.89  | -1.49 | -2.88  | -6.03  | -11.17 |
| 30           | -8.84 | -7.85  | -8.13   | -9.37 | -10.56 | -5.43 | -9.64  | -7.56 | -4.68  | -3.34 | -6.3   | -7.7   | -11.17 |
| 45           | -8.96 | -8.82  | -8.57   | -9.36 | -8.99  | -3    | -10.29 | -9.94 | -3.48  | -3.35 | -10.04 | -7.69  | -11.17 |
| 60           | -9.26 | -10.16 | -10.62  | -5.75 | -3.69  | -8.77 | -3.63  | -8.84 | -5.83  | -3.37 | -7.58  | -7.22  | -11.17 |
| 75           | -9.17 | -12.23 | -9.78   | -2.5  | -2.89  | -4.49 | -3.01  | -4.38 | -8.62  | -1.29 | -5.01  | -7.02  | -11.17 |
| 90           | -8.89 | -14.59 | -8.17   | -1.41 | -3.92  | -0.96 | -1.54  | 0.99  | -11.19 | -2.77 | -9.09  | -8.06  | -11.17 |
| 105          | -8.83 | -16.16 | -8.08   | -2.13 | -3.55  | 0.06  | -0.61  | -2.69 | -2.27  | -3.61 | -15.68 | -9.21  | -11.17 |
| 120          | -8.75 | -16.03 | -8.16   | -2.21 | -1.38  | -2.37 | 2.05   | -5.23 | -1     | -1.66 | -12.48 | -10.25 | -11.17 |
| 135          | -9.01 | -14.5  | -5.85   | -0.59 | 1.06   | 1.09  | 1.84   | -2.11 | -0.85  | -4.06 | -10.9  | -11.17 | -11.17 |
| 150          | -9.47 | -13.37 | -6.32   | -1.45 | -0.08  | 1.84  | 2.97   | -1.45 | -1.54  | -4.25 | -8.62  | -8.94  | -11.17 |
| 165          | -9.31 | -13.46 | -8.66   | -3.81 | -0.66  | 1.15  | 2.78   | 2.33  | -0.99  | -1    | -4.63  | -6.56  | -11.17 |

|     |       |        |        |       |       |       |       |       |       |       |       |       |        |
|-----|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 180 | -9.31 | -14.16 | -10.79 | -4.54 | -1.02 | 1.77  | 3.28  | 4.21  | 1.31  | 1.35  | -1.89 | -4.41 | -11.17 |
| 195 | -9.31 | -14.46 | -13.18 | -5.86 | -3.23 | 0.96  | 1.42  | 3.87  | 3     | 3     | -0.15 | -2.06 | -11.17 |
| 210 | -9    | -14.8  | -18.66 | -5.62 | -4.48 | -0.99 | -2.08 | -0.72 | 2.12  | 3.43  | 1.04  | -1.49 | -11.17 |
| 225 | -9.04 | -14.57 | -14.51 | -3.59 | -1.68 | -0.23 | -0.9  | -4.66 | -1.05 | 2.08  | 1.08  | -2.83 | -11.17 |
| 240 | -9.33 | -14.33 | -11.68 | -1.41 | -2.11 | 0.43  | -1.59 | 0.05  | -3.48 | -0.57 | 0.29  | -4.31 | -11.17 |
| 255 | -9.33 | -13.44 | -13.58 | -1.68 | -0.58 | 1.32  | 2.03  | -0.49 | -0.52 | -2.19 | -1.01 | -5.09 | -11.17 |
| 270 | -9.47 | -11.88 | -15.67 | -3.84 | 0.92  | 1.1   | 3.23  | -2.98 | 0.93  | -1.01 | -4.51 | -5.41 | -11.17 |
| 285 | -9.47 | -10.57 | -9.98  | -4.98 | -1.4  | 1.83  | 1.44  | 0.23  | 0.97  | -1.29 | -8.16 | -4.75 | -11.17 |
| 300 | -9.09 | -9.59  | -8.06  | -5.71 | -3.36 | 2.28  | 0.74  | 1.26  | -0.65 | -3.01 | -4.87 | -4.58 | -11.17 |
| 315 | -9    | -8.59  | -7.45  | -1.79 | 0.95  | 4.4   | 3.33  | 1.89  | -0.38 | -2.75 | -2.81 | -4.51 | -11.17 |
| 330 | -9.12 | -8.11  | -6.43  | -2.45 | -1.26 | 0.42  | 1.58  | -2.02 | -0.81 | -5.96 | -2.94 | -4.47 | -11.17 |
| 345 | -9.18 | -7.54  | -7.03  | -7.61 | -2.24 | -0.13 | 1.73  | -1.79 | -1.92 | -7.76 | -3.19 | -4.27 | -11.17 |

| 5250MHz Composite Gain |       |       |         |      |      |      |      |      |      |      |       |       |       |
|------------------------|-------|-------|---------|------|------|------|------|------|------|------|-------|-------|-------|
| Polarization           | Total |       | Channel | 13   |      | Freq | 5250 | 6575 |      |      |       |       |       |
| Phi\Theta              | 0     | 15    | 30      | 45   | 60   | 75   | 90   | 105  | 120  | 135  | 150   | 165   | 180   |
| 0                      | -2.32 | -1.80 | -1.69   | 3.00 | 4.32 | 5.69 | 6.69 | 6.45 | 4.04 | 3.51 | 2.47  | 0.99  | -6.09 |
| 15                     | -2.33 | -2.02 | -1.15   | 3.64 | 3.70 | 4.80 | 5.89 | 6.83 | 3.97 | 4.80 | 2.26  | 1.09  | -6.09 |
| 30                     | -2.43 | -2.65 | -0.17   | 4.24 | 4.39 | 5.93 | 5.68 | 4.97 | 3.55 | 3.22 | 0.57  | 0.61  | -6.09 |
| 45                     | -2.52 | -3.27 | 0.53    | 4.82 | 4.96 | 6.99 | 6.44 | 5.67 | 3.42 | 3.72 | 0.39  | 0.56  | -6.09 |
| 60                     | -2.59 | -3.52 | 0.35    | 4.74 | 4.32 | 4.62 | 6.48 | 4.65 | 2.46 | 4.84 | 2.33  | -0.15 | -6.09 |
| 75                     | -2.52 | -3.79 | 0.01    | 3.82 | 3.66 | 3.88 | 4.93 | 5.06 | 2.26 | 4.87 | 2.54  | -0.43 | -6.09 |
| 90                     | -2.39 | -4.23 | -0.89   | 2.56 | 3.92 | 5.40 | 5.78 | 6.75 | 0.82 | 4.07 | 2.12  | 0.25  | -6.09 |
| 105                    | -2.27 | -5.07 | -2.87   | 1.91 | 3.48 | 4.40 | 5.93 | 4.80 | 3.03 | 2.90 | 0.94  | 0.13  | -6.09 |
| 120                    | -2.21 | -6.44 | -4.80   | 1.82 | 1.96 | 1.96 | 6.22 | 2.83 | 3.70 | 1.97 | 0.08  | -0.76 | -6.09 |
| 135                    | -2.31 | -7.03 | -3.90   | 2.26 | 3.35 | 5.70 | 6.78 | 6.09 | 3.74 | 1.47 | 0.01  | -1.37 | -6.09 |
| 150                    | -2.39 | -6.22 | -2.47   | 1.70 | 3.41 | 6.47 | 7.27 | 5.22 | 4.35 | 3.23 | 0.76  | -0.89 | -6.09 |
| 165                    | -2.35 | -5.22 | -2.27   | 1.66 | 4.06 | 7.42 | 7.77 | 6.94 | 5.04 | 3.57 | 0.56  | -1.04 | -6.09 |
| 180                    | -2.35 | -4.49 | -2.22   | 2.63 | 4.27 | 7.35 | 7.55 | 6.75 | 4.26 | 3.18 | 0.61  | -0.74 | -6.09 |
| 195                    | -2.32 | -3.82 | -1.81   | 3.92 | 3.94 | 7.25 | 6.57 | 6.75 | 4.10 | 4.02 | 2.39  | -0.40 | -6.09 |
| 210                    | -2.27 | -3.18 | -1.84   | 4.40 | 4.08 | 4.95 | 4.07 | 4.17 | 3.59 | 5.12 | 3.46  | 0.11  | -6.09 |
| 225                    | -2.29 | -2.73 | -1.26   | 3.34 | 3.06 | 4.11 | 4.26 | 3.43 | 3.66 | 4.39 | 2.51  | 1.20  | -6.09 |
| 240                    | -2.29 | -2.77 | -0.98   | 2.28 | 2.39 | 5.09 | 4.72 | 4.51 | 4.01 | 2.30 | 2.05  | 1.81  | -6.09 |
| 255                    | -2.29 | -3.05 | -1.21   | 2.67 | 3.63 | 5.33 | 7.10 | 4.91 | 5.00 | 3.54 | 1.07  | 1.19  | -6.09 |
| 270                    | -2.29 | -3.27 | -1.95   | 1.87 | 3.19 | 5.40 | 6.89 | 3.77 | 4.61 | 3.04 | -0.10 | 0.17  | -6.09 |
| 285                    | -2.39 | -3.19 | -1.28   | 1.13 | 3.80 | 6.44 | 6.91 | 5.72 | 5.51 | 2.16 | 0.74  | -0.40 | -6.09 |
| 300                    | -2.49 | -3.00 | -0.91   | 1.07 | 3.12 | 5.10 | 3.87 | 5.43 | 4.07 | 2.63 | 1.23  | -0.04 | -6.09 |
| 315                    | -2.50 | -2.77 | -1.56   | 3.47 | 3.30 | 5.11 | 4.28 | 5.18 | 3.81 | 2.54 | 0.26  | 0.35  | -6.09 |
| 330                    | -2.47 | -2.54 | -1.53   | 4.00 | 3.48 | 4.14 | 5.46 | 4.79 | 4.20 | 2.52 | 0.66  | 0.97  | -6.09 |
| 345                    | -2.43 | -2.11 | -1.82   | 3.21 | 4.41 | 6.26 | 7.06 | 5.90 | 4.28 | 2.25 | 1.46  | 1.27  | -6.09 |

| Ant1         |       |  |         |    |  |      |      |  |  |  |  |  |  |
|--------------|-------|--|---------|----|--|------|------|--|--|--|--|--|--|
| Polarization | Total |  | Channel | 19 |  | Freq | 5500 |  |  |  |  |  |  |

| Phi\Theta | 0      | 15     | 30     | 45     | 60    | 75     | 90    | 105    | 120   | 135    | 150    | 165    | 180 |
|-----------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|--------|--------|-----|
| 0         | -10.9  | -11.34 | -7.46  | -0.65  | 0.78  | 1.23   | 2.45  | 2.91   | 2.07  | 2.11   | 0.4    | -5.47  | -13 |
| 15        | -10.45 | -10.47 | -7.88  | -0.5   | -0.27 | 0.7    | 2.09  | 1.24   | 0.48  | 1.07   | -1.24  | -4.18  | -13 |
| 30        | -10.88 | -10.88 | -10.17 | -0.11  | -0.97 | 0.26   | 0.84  | -1.76  | -2.84 | -1.57  | -3.33  | -4.6   | -13 |
| 45        | -11.6  | -12.12 | -11.8  | -0.2   | -0.41 | 0.56   | 0.35  | -1.74  | -5.09 | -3.95  | -5.11  | -5.1   | -13 |
| 60        | -11.53 | -12.59 | -8.53  | 0.67   | 0.17  | 0.96   | -1.4  | -1.75  | -6.62 | -6.06  | -4.66  | -5.29  | -13 |
| 75        | -10.98 | -11.88 | -7.96  | -2.1   | -0.53 | 0.02   | -1.86 | -1.24  | -8.04 | -11.64 | -4.74  | -5.66  | -13 |
| 90        | -10.68 | -11.1  | -10.25 | -10.09 | -5.2  | -4.2   | -2.57 | -6.21  | -7.69 | -12.42 | -5.01  | -5.66  | -13 |
| 105       | -10.81 | -10.07 | -12.9  | -11.88 | -4.72 | -3.32  | -1.03 | -5.32  | -2.06 | -11.74 | -8.18  | -6.96  | -13 |
| 120       | -10.76 | -8.5   | -12.17 | -10.85 | -5.63 | -9.75  | -3.87 | -13.04 | -2.91 | -11.7  | -8.25  | -9.59  | -13 |
| 135       | -11.26 | -7.45  | -10.62 | -7.41  | -6.71 | -6.29  | -6.72 | -4.81  | -6.13 | -7.52  | -7.17  | -12.34 | -13 |
| 150       | -11.2  | -6.62  | -11.01 | -6.84  | -12.9 | -10.01 | -8.63 | -7.63  | -4.93 | -8.81  | -12.05 | -13    | -13 |
| 165       | -11.01 | -6.45  | -7.58  | -5.5   | -8.74 | -1.81  | -1.31 | -1.9   | -3.04 | -7.79  | -11.2  | -11.79 | -13 |
| 180       | -11.07 | -6.92  | -4.58  | -3.27  | -4.19 | -2.18  | -1.94 | -5.15  | -7.18 | -2.76  | -4.84  | -10.85 | -13 |
| 195       | -11.42 | -7.21  | -3.07  | -0.15  | -1.37 | 0.32   | -1.32 | -0.93  | -6.03 | -1.75  | -3.24  | -9.38  | -13 |
| 210       | -11.72 | -8.1   | -4.44  | 0.85   | 0.41  | 1.11   | 1.41  | 1.8    | -1.31 | -1.76  | -3.28  | -8.3   | -13 |
| 225       | -11.98 | -9.29  | -6.49  | -0.99  | -0.38 | 2.21   | 1.19  | 1.97   | -1.45 | -5.11  | -7.74  | -5.86  | -13 |
| 240       | -11.65 | -10.5  | -7.65  | -2.55  | -0.56 | 1.44   | 1.08  | 1.81   | -0.54 | -6.68  | -5.86  | -3.12  | -13 |
| 255       | -11.45 | -11.28 | -10.48 | -3.67  | -2.14 | -0.43  | 0.23  | 0.96   | 0.35  | 0.51   | -2.6   | -1.7   | -13 |
| 270       | -11.31 | -12.2  | -12.28 | -3.08  | -0.63 | -1.21  | -0.33 | 1.99   | 1.09  | -0.5   | -4.76  | -2.98  | -13 |
| 285       | -11.02 | -13.15 | -11.64 | -1.17  | -0.49 | 0.97   | 1.32  | 2.21   | 1.47  | -1.33  | 0.85   | -4.39  | -13 |
| 300       | -11.88 | -12.94 | -9.91  | -4.49  | -2.23 | -0.07  | -2.16 | -0.06  | 0.94  | -1.18  | 0.17   | -4.27  | -13 |
| 315       | -12.39 | -11.83 | -10.48 | -7.6   | -4.71 | -1.24  | -1.74 | -0.54  | -0.36 | -1.6   | -2.98  | -5.13  | -13 |
| 330       | -12.02 | -11.45 | -10.57 | -6.1   | -6.11 | -1.39  | -1.75 | 2.44   | 1.41  | 1.43   | -1.46  | -5.4   | -13 |
| 345       | -11.42 | -12.01 | -8.43  | -3.25  | -1.96 | 0.23   | 1.2   | 3.08   | 2.11  | 2.9    | -0.68  | -5.48  | -13 |

| Ant2         |       |        |         |        |       |       |       |       |       |       |       |        |        |
|--------------|-------|--------|---------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Polarization | Total |        | Channel | 19     |       | Freq  | 5500  |       |       |       |       |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165    | 180    |
| 0            | -6.46 | -11.56 | -9.83   | -3.84  | -1.52 | -0.14 | 2.3   | -0.37 | -4.22 | -4.23 | -6.93 | -4.64  | -13.62 |
| 15           | -6.74 | -10.81 | -12.44  | -4.17  | -1.04 | -1.32 | -0.13 | -2.48 | -2.44 | -4.79 | -8.64 | -3.71  | -13.62 |
| 30           | -6.99 | -10.59 | -15.59  | -3.8   | -1.32 | 2.19  | 1.76  | -1.61 | -0.57 | -2.37 | -5.66 | -4.13  | -13.62 |
| 45           | -6.94 | -9.6   | -13.45  | -5.12  | -3.02 | 1.7   | 0.78  | -2.8  | -2.95 | 0.26  | -3.32 | -4.73  | -13.62 |
| 60           | -6.58 | -8.05  | -10.83  | -5.73  | -3.27 | 0.09  | -0.51 | -0.02 | -4.49 | 1.1   | -2.11 | -5.89  | -13.62 |
| 75           | -6.4  | -6.83  | -8.29   | -3.76  | -0.46 | -0.25 | 0.49  | 0.23  | -3.46 | 1.48  | -0.86 | -7.8   | -13.62 |
| 90           | -6.48 | -6.62  | -6.63   | -5.57  | -3.99 | -3.1  | 0.82  | 2.28  | -1.71 | 0.33  | -1.11 | -7.42  | -13.62 |
| 105          | -6.8  | -6.92  | -9.15   | -11.72 | -6.91 | -3.91 | -0.33 | 1.1   | 0.73  | -2.14 | -3.03 | -6.85  | -13.62 |
| 120          | -7.07 | -7.9   | -17.3   | -9.92  | -4.93 | -0.42 | 3.07  | 2.58  | 2.43  | -1.89 | -6.75 | -6.92  | -13.62 |
| 135          | -7.22 | -10.48 | -15.73  | -5.78  | -2.51 | 2.7   | 4.45  | 5.56  | 1.32  | -1.18 | -7.97 | -7.61  | -13.62 |
| 150          | -6.84 | -15.16 | -11.01  | -1.75  | -0.98 | 3.95  | 4.48  | 3.67  | 1.13  | -0.75 | -4.22 | -8.45  | -13.62 |
| 165          | -6.46 | -22.04 | -7.7    | -1.75  | 0.04  | 4.44  | 1.73  | 3.4   | 1.25  | -0.23 | -3.3  | -8.88  | -13.62 |
| 180          | -6.25 | -23.69 | -7.38   | -3.9   | 1.53  | 2.97  | -0.18 | 0.92  | -1.54 | -1.88 | -3.76 | -9.65  | -13.62 |
| 195          | -6.13 | -25.8  | -8.9    | -2.8   | 0.94  | 0.44  | -2.34 | -4.12 | -6.61 | -8.19 | -6.06 | -13.62 | -13.62 |

|     |       |        |        |        |        |       |        |        |        |        |        |        |        |
|-----|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| 210 | -6.08 | -22.26 | -10.17 | -0.36  | 0.41   | -1.16 | -2.05  | -4.6   | -12.64 | -11.02 | -10.61 | -13.06 | -13.62 |
| 225 | -6.12 | -14.58 | -7.47  | -0.64  | -1.51  | -1.32 | -0.94  | -3.59  | -3.1   | -4.7   | -12.83 | -11.2  | -13.62 |
| 240 | -6.26 | -10.1  | -5.08  | -1.1   | -8.36  | -1.52 | -2.23  | -8.62  | -3.7   | -6.36  | -9.47  | -7.85  | -13.62 |
| 255 | -6.37 | -8.15  | -5.81  | -0.71  | -6.46  | -3.11 | -0.92  | -5.83  | -6.52  | -9.32  | -12.81 | -7.54  | -13.62 |
| 270 | -6.24 | -7.3   | -7.82  | -3.32  | -8.11  | -4    | -2.04  | -8.32  | -6.29  | -9.24  | -10.7  | -6.42  | -13.62 |
| 285 | -6.08 | -7.22  | -6.44  | -9.91  | -6.8   | -7.83 | -4.07  | -9.33  | -4.88  | -8.94  | -7.92  | -4.27  | -13.62 |
| 300 | -6.02 | -7.76  | -6.03  | -10.55 | -10.41 | -8.79 | -18.66 | -8.67  | -5.52  | -10.61 | -9.67  | -3.44  | -13.62 |
| 315 | -5.89 | -9.08  | -8.84  | -11.43 | -9.07  | -7.6  | -7.4   | -11.89 | -6.17  | -5.35  | -8.93  | -3.38  | -13.62 |
| 330 | -6.04 | -10.76 | -12.43 | -9.47  | -8.22  | -2.66 | -1.91  | -4.45  | -3.47  | -4.54  | -6.62  | -3.42  | -13.62 |
| 345 | -6.32 | -11.74 | -10.64 | -5.43  | -4.78  | -0.95 | -2.15  | -1.83  | -10.49 | -4.95  | -4.87  | -4.53  | -13.62 |

| Ant3         |       |        |         |        |       |       |       |        |       |        |        |        |        |
|--------------|-------|--------|---------|--------|-------|-------|-------|--------|-------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 8      |       | Freq  | 5500  |        |       |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75    | 90    | 105    | 120   | 135    | 150    | 165    | 180    |
| 0            | -5.23 | -3.63  | -2.72   | -5.59  | -5.51 | -3.52 | -0.86 | 0.8    | 0.17  | -2.76  | -6.57  | -4.69  | -19.03 |
| 15           | -5.35 | -3.66  | -3.88   | -3.27  | -3.02 | 0.46  | 0.36  | 3.51   | 2.27  | -0.13  | -4.53  | -3.7   | -19.03 |
| 30           | -5.46 | -4.03  | -5      | -5.33  | -2.7  | 1.35  | 0.3   | 3.82   | 1.79  | 0.47   | -3.35  | -3.36  | -19.03 |
| 45           | -5.39 | -4.73  | -5.8    | -6.33  | -4.23 | -0.11 | 1.05  | 3.8    | -0.03 | 0.3    | -2.21  | -3.5   | -19.03 |
| 60           | -5.44 | -5.48  | -4.98   | -2.56  | -3.93 | -2.14 | 1.79  | 3.17   | 0.68  | 0.98   | -1.09  | -4.51  | -19.03 |
| 75           | -5.37 | -5.94  | -5.63   | -2.68  | -1.8  | -2.38 | 0.17  | 1.9    | 1.53  | 0.53   | -1.66  | -3.14  | -19.03 |
| 90           | -5.28 | -6.56  | -6.3    | -5.19  | -3.51 | -0.44 | -2.21 | 1.31   | -0.65 | -1.02  | -0.42  | -0.17  | -19.03 |
| 105          | -5.1  | -7.69  | -5.2    | -2.8   | 0.72  | 1.29  | 1.45  | 2.15   | -3.09 | -1.01  | -0.06  | 0.29   | -19.03 |
| 120          | -5.09 | -9.17  | -3.99   | -2.75  | -1.25 | -3.54 | 0.72  | -0.68  | -5.82 | -1.53  | -1.71  | -0.72  | -19.03 |
| 135          | -5.04 | -10.48 | -2.42   | -0.27  | 0.32  | 0.7   | 2.95  | 0.57   | -1.01 | -3.18  | -4.66  | -2.82  | -19.03 |
| 150          | -4.96 | -10.94 | -2.82   | 0.15   | 0.61  | -0.42 | -0.9  | -1.98  | -1.82 | -1.07  | -4.22  | -2.15  | -19.03 |
| 165          | -4.77 | -10.41 | -5.29   | -2.63  | -2.44 | 1.58  | 3.02  | 1.32   | 0.35  | -1.09  | -4.97  | -2.4   | -19.03 |
| 180          | -4.61 | -9.35  | -7.16   | -1.61  | -1.04 | 0.65  | 1.97  | 0.28   | -0.11 | -3.95  | -5.89  | -2.64  | -19.03 |
| 195          | -4.42 | -8.14  | -7.96   | -0.22  | -1.35 | 0.02  | 2.25  | 0.71   | 0.84  | -2.6   | -3.22  | -2.72  | -19.03 |
| 210          | -4.31 | -7.31  | -9.45   | -1.63  | -2.65 | -2.97 | -2.49 | -5.62  | -3.93 | -2.81  | -2.2   | -3.09  | -19.03 |
| 225          | -4.24 | -6.34  | -11.08  | -3.9   | -4.13 | -6.31 | -6.15 | -7.8   | -7.38 | -3.87  | -4.49  | -3.19  | -19.03 |
| 240          | -4.32 | -5.84  | -10.4   | -8.08  | -6.96 | -9.83 | -4.95 | -12.53 | -1.61 | -5.9   | -10.21 | -3.58  | -19.03 |
| 255          | -4.42 | -5.9   | -8.58   | -7.37  | -12.3 | -8.58 | -1.5  | -6.64  | -1.22 | -3.33  | -8.85  | -5.53  | -19.03 |
| 270          | -4.57 | -6.3   | -6.6    | -1.78  | -9.6  | -3.32 | -1.12 | -3.65  | -5.34 | -3.86  | -7.07  | -8.59  | -19.03 |
| 285          | -4.63 | -6.39  | -6.81   | -0.82  | -5.1  | -0.18 | -0.3  | -2.05  | -2.83 | -7.59  | -14.89 | -14.49 | -19.03 |
| 300          | -4.61 | -6.11  | -10.16  | -3.41  | -3.76 | 0.67  | -5.73 | -0.6   | -4.49 | -8.74  | -11.99 | -19.03 | -19.03 |
| 315          | -4.53 | -5.59  | -9.93   | -3.38  | -1.26 | -0.84 | -3.13 | 0.81   | -0.39 | -5.58  | -8.89  | -11.86 | -19.03 |
| 330          | -4.73 | -4.62  | -6.18   | -6.5   | -0.66 | -3.01 | -1.38 | -2.27  | -5.41 | -10.01 | -10.8  | -8.11  | -19.03 |
| 345          | -4.98 | -3.85  | -3.41   | -11.55 | -2.05 | -0.91 | 0.33  | 0.43   | -2.69 | -7.19  | -10.73 | -6.36  | -19.03 |

| Ant4         |       |       |         |        |       |      |      |       |       |       |       |       |        |
|--------------|-------|-------|---------|--------|-------|------|------|-------|-------|-------|-------|-------|--------|
| Polarization | Total |       | Channel | 8      |       | Freq | 5500 |       |       |       |       |       |        |
| Phi\Theta    | 0     | 15    | 30      | 45     | 60    | 75   | 90   | 105   | 120   | 135   | 150   | 165   | 180    |
| 0            | -9.91 | -8.92 | -8.6    | -14.14 | -2.11 | -3.7 | -0.7 | -1.32 | -2.99 | -5.89 | -3.09 | -4.57 | -10.83 |

|     |       |        |        |        |       |       |       |        |       |       |        |        |        |
|-----|-------|--------|--------|--------|-------|-------|-------|--------|-------|-------|--------|--------|--------|
| 15  | -9.66 | -8.47  | -9.5   | -10.24 | -3.61 | -6.48 | -2.97 | -0.45  | -4.34 | -2.56 | -3.29  | -6.64  | -10.83 |
| 30  | -9.59 | -7.97  | -9.63  | -7.42  | -5.58 | -7.39 | -5.52 | -18.94 | -4.5  | -2.34 | -4.39  | -8.79  | -10.83 |
| 45  | -9.58 | -7.94  | -8.4   | -7.49  | -7.87 | -1.48 | -7.69 | -6.78  | -4.41 | -2.08 | -7.79  | -9.76  | -10.83 |
| 60  | -9.6  | -8.85  | -9.66  | -9.57  | -3.38 | -2.46 | -1.92 | -3.72  | -4.8  | -1.79 | -7.36  | -10.83 | -10.83 |
| 75  | -9.87 | -9.94  | -11.29 | -6.75  | -3.8  | -4.44 | -0.76 | -1.51  | -7.55 | -0.66 | -6.19  | -9.97  | -10.83 |
| 90  | -9.99 | -10.37 | -13.15 | -1.17  | -4.84 | -1.67 | -2.7  | 2.54   | -8.81 | -3.75 | -13.41 | -9.39  | -10.83 |
| 105 | -9.73 | -10.58 | -16.36 | -2.28  | -2.18 | 0.25  | 1.44  | -2.49  | -1.65 | -2.35 | -15.37 | -9.36  | -10.83 |
| 120 | -9.55 | -10.9  | -7.65  | -0.03  | 0.52  | -3.24 | 1.94  | -4.02  | -2.91 | -3.17 | -11.15 | -9.86  | -10.83 |
| 135 | -9.29 | -11.83 | -6.6   | -0.16  | 1.39  | -0.28 | 2.26  | -3.8   | -1.34 | -2.71 | -8.51  | -9.73  | -10.83 |
| 150 | -9.1  | -12.94 | -9.67  | -3.95  | 0.87  | 1.97  | 2.85  | 1.45   | -0.82 | -0.53 | -4.73  | -7.57  | -10.83 |
| 165 | -9.38 | -11.73 | -11.79 | -4.94  | -0.83 | 2.57  | 1.35  | 2.87   | -0.23 | -0.63 | -2.65  | -5.61  | -10.83 |
| 180 | -9.33 | -11.49 | -11.4  | -5.63  | -3.97 | 0.99  | 0.27  | 3.6    | 1.94  | 0.34  | -0.98  | -3.61  | -10.83 |
| 195 | -9.08 | -11.66 | -11.67 | -6.51  | -6.26 | -0.33 | -2.62 | 2.52   | 2.42  | 2.43  | 0.58   | -1.66  | -10.83 |
| 210 | -9.08 | -11.12 | -11.32 | -4.06  | -5.18 | -1.84 | -1.8  | -1.7   | 0.22  | 2.73  | 1.2    | -0.73  | -10.83 |
| 225 | -9.08 | -9.9   | -8.75  | -2.61  | -3.76 | 0.22  | -0.38 | -1.79  | -3.81 | 1.78  | 1.13   | -1.63  | -10.83 |
| 240 | -9.06 | -8.86  | -5.53  | -1.54  | -2.18 | 2.01  | -0.12 | 0.52   | -2.37 | -1.01 | -0.12  | -2.35  | -10.83 |
| 255 | -9.39 | -8.6   | -4.56  | -2.69  | -2.59 | -0.67 | 2.17  | -3.9   | 0.44  | -4.49 | -1.13  | -2.76  | -10.83 |
| 270 | -9.26 | -9.52  | -5.35  | -5.29  | -3.82 | -1.39 | 0.59  | -4.67  | -0.84 | -2.34 | -4.01  | -3.12  | -10.83 |
| 285 | -9.02 | -10.76 | -5.55  | -3.52  | -2.07 | 1.91  | 0.68  | 2.12   | 0.65  | -1.42 | -8.06  | -3.17  | -10.83 |
| 300 | -9.11 | -10.45 | -5.03  | -3.49  | -3.34 | 0.44  | 1.23  | 1.56   | -0.68 | -1.85 | -4.42  | -4.28  | -10.83 |
| 315 | -9.35 | -9.71  | -5.04  | -1.13  | 0.15  | 2.68  | 3.12  | 1.27   | -0.64 | -1.76 | -2.99  | -5.26  | -10.83 |
| 330 | -9.56 | -9.53  | -5.27  | 0.61   | 0.8   | -0.01 | 2.18  | -1.21  | -2.26 | -4.46 | -4.14  | -5.44  | -10.83 |
| 345 | -9.87 | -9.18  | -6.76  | -3.26  | -3.64 | -2.71 | 1.43  | -2.75  | -3.83 | -6.77 | -4.55  | -4.71  | -10.83 |

| 5500MHz Composite Gain |       |       |         |      |      |      |      |      |      |      |       |       |       |
|------------------------|-------|-------|---------|------|------|------|------|------|------|------|-------|-------|-------|
| Polarization           | Total |       | Channel | 13   |      | Freq | 5500 |      |      |      |       |       |       |
| Phi\Theta              | 0     | 15    | 30      | 45   | 60   | 75   | 90   | 105  | 120  | 135  | 150   | 165   | 180   |
| 0                      | -1.79 | -2.20 | -0.68   | 1.18 | 4.21 | 4.75 | 6.96 | 6.67 | 5.14 | 3.88 | 2.50  | 1.19  | -7.62 |
| 15                     | -1.78 | -1.83 | -1.85   | 2.13 | 4.14 | 4.79 | 6.04 | 6.75 | 5.38 | 4.70 | 1.99  | 1.54  | -7.62 |
| 30                     | -1.95 | -1.89 | -3.30   | 2.28 | 3.56 | 5.83 | 5.78 | 4.38 | 4.82 | 4.65 | 1.89  | 1.04  | -7.62 |
| 45                     | -2.03 | -2.16 | -3.33   | 1.71 | 2.54 | 6.26 | 5.29 | 4.98 | 3.13 | 4.83 | 1.66  | 0.54  | -7.62 |
| 60                     | -1.94 | -2.36 | -2.19   | 2.52 | 3.58 | 5.25 | 5.63 | 5.82 | 2.67 | 5.02 | 2.54  | -0.29 | -7.62 |
| 75                     | -1.82 | -2.31 | -2.04   | 2.37 | 4.47 | 4.44 | 5.58 | 5.97 | 2.54 | 4.70 | 2.93  | -0.25 | -7.62 |
| 90                     | -1.79 | -2.39 | -2.63   | 1.08 | 1.66 | 3.78 | 4.48 | 6.63 | 2.02 | 2.97 | 2.31  | 1.09  | -7.62 |
| 105                    | -1.79 | -2.66 | -3.90   | 0.03 | 3.22 | 4.88 | 6.47 | 5.36 | 4.62 | 2.59 | 1.06  | 1.13  | -7.62 |
| 120                    | -1.82 | -3.03 | -2.92   | 1.33 | 3.57 | 2.39 | 6.85 | 3.87 | 4.26 | 2.27 | -0.24 | 0.10  | -7.62 |
| 135                    | -1.87 | -3.88 | -1.50   | 3.20 | 4.66 | 5.80 | 7.66 | 6.41 | 4.62 | 2.67 | -0.93 | -1.38 | -7.62 |
| 150                    | -1.69 | -4.80 | -1.86   | 3.30 | 4.34 | 6.23 | 6.72 | 5.84 | 4.68 | 3.82 | 0.26  | -0.91 | -7.62 |
| 165                    | -1.55 | -5.07 | -1.77   | 2.46 | 3.62 | 8.00 | 7.36 | 7.67 | 5.74 | 4.07 | 1.06  | -0.45 | -7.62 |
| 180                    | -1.43 | -5.01 | -1.28   | 2.54 | 4.43 | 6.82 | 6.16 | 6.47 | 4.89 | 4.10 | 2.35  | 0.06  | -7.62 |
| 195                    | -1.34 | -4.88 | -1.30   | 3.96 | 4.38 | 6.14 | 5.24 | 5.89 | 4.58 | 4.27 | 3.36  | 0.45  | -7.62 |
| 210                    | -1.33 | -4.59 | -2.39   | 4.90 | 4.57 | 4.94 | 4.93 | 3.99 | 2.78 | 4.06 | 3.24  | 0.93  | -7.62 |
| 225                    | -1.35 | -3.53 | -2.26   | 4.08 | 3.72 | 5.24 | 4.85 | 3.91 | 2.34 | 3.54 | 1.49  | 1.24  | -7.62 |

|     |       |       |       |      |      |      |      |      |      |      |       |      |       |
|-----|-------|-------|-------|------|------|------|------|------|------|------|-------|------|-------|
| 240 | -1.37 | -2.60 | -0.90 | 3.10 | 2.10 | 5.11 | 4.76 | 3.23 | 4.04 | 1.37 | 0.59  | 2.04 | -7.62 |
| 255 | -1.47 | -2.25 | -1.03 | 2.73 | 0.99 | 3.37 | 6.13 | 2.71 | 4.70 | 2.54 | 0.86  | 1.93 | -7.62 |
| 270 | -1.44 | -2.53 | -1.63 | 2.74 | 1.21 | 3.62 | 5.35 | 3.17 | 3.71 | 2.59 | -0.25 | 1.05 | -7.62 |
| 285 | -1.32 | -2.95 | -1.30 | 2.83 | 2.75 | 5.46 | 5.66 | 5.34 | 4.99 | 1.87 | 0.34  | 0.41 | -7.62 |
| 300 | -1.45 | -2.91 | -1.46 | 0.98 | 1.60 | 4.83 | 2.16 | 4.84 | 3.99 | 1.37 | 0.83  | 0.03 | -7.62 |
| 315 | -1.50 | -2.73 | -2.27 | 0.99 | 2.97 | 4.99 | 4.54 | 4.73 | 4.44 | 2.65 | 0.57  | 0.14 | -7.62 |
| 330 | -1.61 | -2.62 | -2.10 | 1.50 | 3.25 | 4.33 | 5.48 | 5.02 | 3.96 | 2.56 | 0.91  | 0.58 | -7.62 |
| 345 | -1.74 | -2.50 | -0.88 | 0.73 | 2.99 | 5.00 | 6.33 | 6.05 | 3.38 | 3.10 | 1.51  | 0.78 | -7.62 |

| Ant1         |        |        |         |        |       |        |       |        |        |        |        |        |        |
|--------------|--------|--------|---------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|
| Polarization | Total  |        | Channel | 24     |       | Freq   | 5750  |        |        |        |        |        |        |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75     | 90    | 105    | 120    | 135    | 150    | 165    | 180    |
| 0            | -11.24 | -14.71 | -9.57   | -4.04  | -0.55 | 0.59   | 0.98  | 2.26   | 2.2    | 1.2    | -0.49  | -4.21  | -15.15 |
| 15           | -11.82 | -15.44 | -8.25   | -2.15  | 0.86  | 0.35   | 1.35  | 0.52   | -0.67  | -0.3   | -1.98  | -3.44  | -15.15 |
| 30           | -11.8  | -14.32 | -7.78   | -2.5   | 0.32  | 0.67   | 2.19  | -0.19  | -2.37  | -2.06  | -3.73  | -4.79  | -15.15 |
| 45           | -11.36 | -12.75 | -9.35   | -3.19  | 0.55  | 0.94   | 1.11  | -2.14  | -5.2   | -4.24  | -6.27  | -6.43  | -15.15 |
| 60           | -11.21 | -12.25 | -18.47  | -4.11  | -0.3  | 1.21   | 1.04  | -1.63  | -5.9   | -5.96  | -7.17  | -6.72  | -15.15 |
| 75           | -11.19 | -11.39 | -12.87  | -4.04  | -3.4  | 0.27   | -2.32 | -2.87  | -8.03  | -10.21 | -4.5   | -5.84  | -15.15 |
| 90           | -11.6  | -9.7   | -13.45  | -6.73  | -4.53 | -3.02  | -0.96 | -3.09  | -12.26 | -15.9  | -4.73  | -5.01  | -15.15 |
| 105          | -12.01 | -7.81  | -10.84  | -10.66 | -9.34 | -5.91  | -1.31 | -4.01  | -3.27  | -11.04 | -9.25  | -5.38  | -15.15 |
| 120          | -11.93 | -6.78  | -6.69   | -6.72  | -13.5 | -15.84 | -7.9  | -12.17 | -3.7   | -11.13 | -7.74  | -7.42  | -15.15 |
| 135          | -11.31 | -6.51  | -7.94   | -4.21  | -7.62 | -2.43  | -7.73 | -4.31  | -5.54  | -7.2   | -7.3   | -10.88 | -15.15 |
| 150          | -11.05 | -6.59  | -11.49  | -5.11  | -5.97 | -5.83  | -5.89 | -7.87  | -3.52  | -8.41  | -10.88 | -15.15 | -15.15 |
| 165          | -11.29 | -6.8   | -13.48  | -7.44  | -7.09 | -3.78  | -1.42 | -3.02  | -3.64  | -7.63  | -9.46  | -13.75 | -15.15 |
| 180          | -11.72 | -7.2   | -10.23  | -4.58  | -3.4  | -1.41  | -2.37 | -2.06  | -6.82  | -2.32  | -4.15  | -12.78 | -15.15 |
| 195          | -11.8  | -9.26  | -9.12   | -1.45  | 0.4   | 1.56   | 0.15  | 0.99   | -3.54  | -2.06  | -2.6   | -10.86 | -15.15 |
| 210          | -11.73 | -12.19 | -8.66   | -1.58  | 1.25  | 1.83   | 2.66  | 1.05   | -1.22  | -2.54  | -3.25  | -7.82  | -15.15 |
| 225          | -11.41 | -14.71 | -9.3    | -3.62  | -1.46 | 1.83   | -0.44 | 0.68   | -2.21  | -4.66  | -6.09  | -6.67  | -15.15 |
| 240          | -11.23 | -14.69 | -12.31  | -5.9   | -2.72 | 0.52   | 0.4   | 1.37   | 0.74   | -3.3   | -4.44  | -3.56  | -15.15 |
| 255          | -11.03 | -13.61 | -9.21   | -6.13  | -2.61 | -0.07  | 0.41  | 1.01   | 1.79   | 0.28   | -1.92  | -1.48  | -15.15 |
| 270          | -11.35 | -14.24 | -9      | -4.08  | -2.56 | -0.28  | -0.62 | 1.97   | 2.24   | -1.83  | -5.26  | -2.27  | -15.15 |
| 285          | -11.62 | -17.06 | -10.06  | -5.3   | -3.56 | -0.56  | -1.2  | 1.15   | 1.79   | -1.68  | -0.47  | -3.7   | -15.15 |
| 300          | -11.6  | -19    | -10.1   | -4.64  | -5.14 | -0.22  | 1.39  | 0.36   | 1.83   | -3.5   | -0.96  | -2.84  | -15.15 |
| 315          | -11.45 | -20.18 | -10.17  | -6.25  | -4.77 | -0.42  | 0.32  | 0.02   | 0.36   | -2.3   | -3.4   | -3.63  | -15.15 |
| 330          | -11.39 | -23.52 | -12.98  | -10.08 | -7.64 | -1.91  | -0.12 | -0.14  | 1.43   | 1      | -2.53  | -3.72  | -15.15 |
| 345          | -10.93 | -17.61 | -11.04  | -7.06  | -6.3  | -0.46  | 0.58  | 1.26   | 3.01   | 2.69   | -1.45  | -4.75  | -15.15 |

| Ant2         |       |       |         |        |       |       |       |       |       |       |       |       |        |
|--------------|-------|-------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization | Total |       | Channel | 24     |       | Freq  | 5750  |       |       |       |       |       |        |
| Phi\Theta    | 0     | 15    | 30      | 45     | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0            | -9.93 | -7.25 | -13.55  | -10.87 | -2.43 | -0.39 | 2.41  | -1.42 | -4.52 | -6.6  | -5.47 | -4.89 | -11.88 |
| 15           | -9.73 | -8.17 | -15.87  | -7.15  | -1.82 | -0.36 | -0.31 | -4.43 | -3.81 | -5.32 | -6.15 | -5.26 | -11.88 |
| 30           | -9.59 | -9.05 | -13.05  | -5.79  | -1.98 | 1.71  | 1.52  | -1.33 | -2.57 | -2.8  | -5.83 | -7.85 | -11.88 |

|     |        |        |        |        |       |        |        |        |       |        |        |        |        |
|-----|--------|--------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|
| 45  | -9.49  | -8.97  | -10.55 | -3.35  | -3.28 | 1.19   | 1.3    | -1.07  | -3.56 | -0.54  | -4.1   | -10.64 | -11.88 |
| 60  | -9.78  | -8.78  | -10    | -4.33  | -1.43 | 1.17   | -0.09  | 0      | -4.46 | -0.68  | -1.96  | -10.59 | -11.88 |
| 75  | -9.85  | -8     | -7.63  | -7.71  | -2.64 | 0.28   | 0.7    | -0.09  | -6.37 | -1.5   | 0.38   | -6.58  | -11.88 |
| 90  | -9.87  | -7.05  | -4.62  | -6.37  | -3.3  | -4.88  | -1.08  | 1.23   | -2.98 | -1.29  | -0.77  | -5     | -11.88 |
| 105 | -9.73  | -7.14  | -4.99  | -3.64  | -3.58 | -1.59  | -0.92  | 0.57   | 0.37  | -1.64  | -3.27  | -5.36  | -11.88 |
| 120 | -9.76  | -8.22  | -8.35  | -5.54  | -2.41 | -0.7   | 2.5    | 1.22   | 2.51  | -1.57  | -6.64  | -6.29  | -11.88 |
| 135 | -9.77  | -10.25 | -12.14 | -9.44  | -2.31 | 1.1    | 3.1    | 4.79   | 1.37  | -1.13  | -8.61  | -8.29  | -11.88 |
| 150 | -10.12 | -13.37 | -10.31 | -3.91  | -4.46 | 1.66   | 3.73   | 2.36   | 0.74  | -0.72  | -6     | -10.15 | -11.88 |
| 165 | -10.29 | -16.06 | -8.95  | -2.37  | -3.52 | 3.72   | 1.69   | 2.28   | 1.7   | -0.19  | -4.25  | -11.88 | -11.88 |
| 180 | -10.12 | -15.92 | -8.01  | -4.43  | -0.99 | 3.54   | 0.2    | 2.02   | -1.31 | -1.58  | -4.64  | -10.27 | -11.88 |
| 195 | -9.95  | -13.43 | -6.74  | -8.17  | 0.67  | 2.78   | 0.49   | -1.27  | -4.19 | -3.86  | -5.31  | -10.76 | -11.88 |
| 210 | -10.1  | -11.41 | -7.32  | -5.67  | 0.59  | -2.35  | -4.43  | -6.33  | -8.28 | -10.81 | -7.12  | -10.69 | -11.88 |
| 225 | -10.09 | -11.35 | -11.67 | -3.28  | 1.15  | -1.81  | -0.87  | -3.42  | -4.66 | -6.11  | -8.85  | -9.36  | -11.88 |
| 240 | -10.12 | -12.29 | -14.32 | -3.37  | -2.98 | -4.82  | -0.5   | -9.91  | -2.87 | -5.82  | -9.82  | -6.05  | -11.88 |
| 255 | -10.24 | -11.78 | -9.22  | -4.19  | -5.54 | -2.86  | -0.52  | -4.22  | -2.91 | -8.61  | -16.86 | -5.7   | -11.88 |
| 270 | -10.18 | -10.12 | -9.15  | -9.79  | -4.81 | -9.74  | -3.4   | -6     | -5.59 | -8.77  | -12.33 | -6.22  | -11.88 |
| 285 | -9.96  | -8.58  | -7.67  | -10.1  | -3.87 | -14.94 | -1.63  | -8.55  | -3.23 | -8.53  | -7.62  | -5.29  | -11.88 |
| 300 | -9.91  | -7.95  | -7.01  | -3.89  | -9.22 | -4.27  | -16.49 | -8.96  | -4.93 | -9.67  | -8.89  | -4.21  | -11.88 |
| 315 | -9.8   | -7.88  | -10.83 | -4.83  | -8.57 | -11.3  | -10.87 | -15.63 | -8.72 | -4.8   | -7.63  | -3.84  | -11.88 |
| 330 | -9.77  | -7.77  | -15.8  | -10.18 | -10   | -8.19  | -2.09  | -2.95  | -4.59 | -4.48  | -5.68  | -4.32  | -11.88 |
| 345 | -9.8   | -7.22  | -13.91 | -10.01 | -4.2  | -1.53  | -0.81  | -1.15  | -7.29 | -5.6   | -4.17  | -5.55  | -11.88 |

| Ant3         |       |        |         |       |       |        |       |       |       |       |        |       |        |
|--------------|-------|--------|---------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|
| Polarization | Total |        | Channel | 13    |       | Freq   | 5750  |       |       |       |        |       |        |
| Phi\Theta    | 0     | 15     | 30      | 45    | 60    | 75     | 90    | 105   | 120   | 135   | 150    | 165   | 180    |
| 0            | -7.57 | -3.72  | -2.55   | -1.71 | -3.37 | -0.77  | -0.53 | 1.38  | 0.92  | -1.42 | -3.64  | -6.01 | -16.65 |
| 15           | -7.18 | -4.8   | -3.93   | -4.23 | -3.8  | 0.61   | -0.55 | 2.33  | 2.45  | 0.85  | -2.82  | -4.04 | -16.65 |
| 30           | -7.39 | -5.28  | -5.11   | -5.94 | -4.87 | 1.24   | -0.64 | 2.68  | 1.32  | 0.05  | -2.77  | -2.65 | -16.65 |
| 45           | -7.69 | -5.23  | -6.74   | -3.08 | -3.18 | 0.21   | 0.56  | 3.96  | 1.36  | -2.08 | -2.45  | -2.1  | -16.65 |
| 60           | -7.88 | -5.71  | -7.74   | -2.65 | -1.88 | -1.67  | -0.14 | 2.11  | 1.01  | -0.72 | -0.79  | -2.43 | -16.65 |
| 75           | -7.91 | -6.55  | -6.89   | -2.15 | 0.41  | -1.45  | -0.91 | 0.64  | 1.84  | 2.17  | -1.2   | -1.93 | -16.65 |
| 90           | -7.66 | -7.43  | -8.63   | -6.57 | -2.82 | -0.91  | -0.75 | -1.04 | -0.42 | -0.8  | -1.17  | 0.34  | -16.65 |
| 105          | -7.4  | -7.46  | -7.27   | -4.5  | -2.76 | -0.13  | -2.13 | -1.12 | -6.74 | -4.51 | -1.95  | 0.92  | -16.65 |
| 120          | -7.53 | -6.63  | -3.69   | -0.25 | -0.73 | -1.66  | 0.27  | -0.06 | -4.24 | -1.61 | -2.68  | 0.05  | -16.65 |
| 135          | -7.45 | -6.09  | -2.13   | 0.56  | 1.44  | 0.86   | 4.07  | 2.4   | 0.79  | -1.05 | -4.58  | -2.87 | -16.65 |
| 150          | -7.15 | -6.12  | -2.66   | 1.13  | 3.81  | 2.4    | 1.67  | -0.81 | -1.49 | -1.28 | -4.54  | -3.43 | -16.65 |
| 165          | -6.76 | -6.19  | -4.25   | -0.92 | -0.26 | -2.96  | 0.23  | -1.2  | -1.03 | -0.77 | -4.05  | -3.28 | -16.65 |
| 180          | -6.43 | -6.99  | -7.4    | -1.79 | -1.89 | -0.35  | 1.09  | -0.44 | -1.22 | -4.7  | -7.13  | -4.26 | -16.65 |
| 195          | -6.31 | -8.42  | -10.4   | -0.79 | -2.14 | -2.09  | 1.03  | 1.09  | 0.98  | -4.47 | -5.2   | -3.77 | -16.65 |
| 210          | -6.36 | -9.22  | -11.27  | -2.67 | -3.3  | -3.39  | -2.7  | -4.72 | -2.33 | -2.83 | -3.18  | -4.15 | -16.65 |
| 225          | -6.71 | -9.43  | -7.32   | -6.96 | -4.52 | -1.69  | -1.61 | -6.12 | -8.19 | -5.42 | -5.27  | -4.72 | -16.65 |
| 240          | -6.8  | -10.07 | -5.36   | -9.33 | -5.41 | -5.87  | -4.59 | -7.38 | -0.6  | -5.96 | -11.77 | -5.71 | -16.65 |
| 255          | -6.62 | -11.15 | -5.48   | -6.14 | -6.93 | -12.52 | -2.59 | -7.21 | -1.7  | -4.77 | -7.66  | -7.81 | -16.65 |

|     |       |       |       |       |       |       |       |       |       |        |        |        |        |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 270 | -6.36 | -9.72 | -7.63 | -0.41 | -4    | -3.93 | -0.11 | -2.25 | -4.74 | -3.58  | -8.52  | -12.64 | -16.65 |
| 285 | -6.14 | -6.37 | -9.35 | -1.04 | -2.72 | 0.28  | -0.94 | -3.52 | -3.75 | -5.01  | -19.34 | -16.65 | -16.65 |
| 300 | -6.25 | -3.75 | -6.13 | -4.78 | -3.22 | 1.26  | -4.78 | -0.49 | -2.54 | -13.32 | -10.96 | -10.31 | -16.65 |
| 315 | -6.91 | -2.51 | -3.11 | -6.49 | -0.88 | -0.69 | -3.47 | -1.65 | -1.25 | -7.39  | -12.54 | -8.44  | -16.65 |
| 330 | -7.47 | -2.42 | -2    | -8.49 | -0.78 | -0.76 | -0.46 | 0.47  | -6.56 | -13.44 | -15.45 | -8.05  | -16.65 |
| 345 | -7.73 | -2.89 | -1.88 | -3.38 | -3.93 | -2.16 | -1.69 | -1.15 | -2.85 | -6.76  | -8.1   | -8.01  | -16.65 |

| Ant4         |        |        |         |        |       |       |       |       |       |       |        |        |        |
|--------------|--------|--------|---------|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Polarization | Total  |        | Channel | 13     |       | Freq  | 5750  |       |       |       |        |        |        |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75    | 90    | 105   | 120   | 135   | 150    | 165    | 180    |
| 0            | -9.78  | -19.73 | -13.63  | -7.72  | -5.91 | -2.99 | -3.82 | -4.84 | -4.66 | -6.98 | -3.82  | -6.03  | -10.14 |
| 15           | -9.66  | -18.45 | -11.63  | -10.83 | -5.65 | -7.63 | -1.67 | -0.51 | -1.09 | -4.47 | -3.74  | -6.97  | -10.14 |
| 30           | -9.9   | -15.57 | -8.75   | -11.39 | -5.71 | -5.71 | -3.43 | -9.38 | -7.43 | -2.73 | -6.17  | -8.53  | -10.14 |
| 45           | -9.91  | -12.75 | -7.1    | -9.11  | -6.21 | -1.14 | -2.97 | -7.01 | -4.07 | -1.64 | -10.11 | -10.14 | -10.14 |
| 60           | -10.3  | -11.02 | -5.81   | -7.43  | -8.54 | -1.2  | -2.34 | -2.85 | -2.17 | -2.55 | -7.91  | -9.92  | -10.14 |
| 75           | -10.43 | -10.3  | -7.56   | -4.66  | -3.05 | -6.15 | -1.08 | -3.69 | -6.87 | -2.17 | -5.31  | -7.83  | -10.14 |
| 90           | -9.81  | -10.77 | -11.42  | -5.44  | 0.13  | -0.4  | -0.75 | 1.23  | -5.66 | -3.36 | -10.07 | -6.36  | -10.14 |
| 105          | -9.59  | -12.52 | -11.51  | -3.7   | -0.24 | -0.88 | 0.34  | -1.55 | -4.17 | -2.63 | -10.86 | -6.17  | -10.14 |
| 120          | -9.78  | -15.94 | -9.62   | -1.35  | 2.06  | 1.2   | 1.88  | -0.54 | -1.66 | -2    | -8.33  | -7.46  | -10.14 |
| 135          | -9.88  | -16.44 | -13.91  | -3.97  | 1     | -0.11 | 2.37  | -1.81 | 0.12  | -1    | -5.27  | -7.99  | -10.14 |
| 150          | -10.4  | -13.52 | -10.52  | -4.55  | 0.46  | 1.33  | 0.38  | 0.22  | -1.27 | -2.1  | -2.95  | -6.45  | -10.14 |
| 165          | -10.8  | -10.93 | -6.9    | -2.96  | -1.64 | 1.26  | -0.55 | 0.22  | -0.63 | -2.19 | -2.35  | -4.81  | -10.14 |
| 180          | -11.38 | -8.86  | -6.73   | -4.65  | -5.63 | 1.32  | -0.16 | 3.07  | 2.95  | 1.45  | -0.96  | -3.38  | -10.14 |
| 195          | -12.39 | -7.64  | -5.94   | -3.82  | -7.72 | -0.55 | -0.97 | 1.97  | 3.14  | 2.58  | -0.01  | -2.28  | -10.14 |
| 210          | -11.92 | -6.86  | -4.18   | -0.95  | -1.68 | -0.22 | 1.75  | -1.14 | -0.33 | 1.09  | 0.54   | -1.22  | -10.14 |
| 225          | -11.17 | -6.97  | -4.49   | -1.01  | -0.62 | 1.72  | 1.52  | 0.92  | -7.39 | -0.4  | -0.26  | -2.16  | -10.14 |
| 240          | -11.14 | -7.38  | -5.61   | -2.96  | -0.86 | -0.07 | 1.73  | 0.93  | -2.98 | -1.15 | -2.59  | -3.12  | -10.14 |
| 255          | -10.96 | -7.7   | -5.74   | -2.52  | -1.4  | -2.08 | 3.32  | -2.45 | 1.34  | -1.85 | -3.66  | -2.85  | -10.14 |
| 270          | -11.34 | -8.58  | -5.79   | -2.18  | -5.41 | -2.98 | -1.8  | -2.91 | -0.45 | -2.42 | -5.01  | -1.94  | -10.14 |
| 285          | -12.54 | -10.51 | -6.86   | -2.21  | -5.53 | -1.61 | -0.99 | 0.2   | -0.82 | -3.35 | -9.28  | -1.2   | -10.14 |
| 300          | -12.1  | -13.64 | -8.67   | -3.93  | -2.6  | -2.55 | 1.7   | 1.4   | -0.03 | -4.23 | -3.61  | -2.77  | -10.14 |
| 315          | -11.22 | -17.92 | -10.45  | -1.73  | 0.54  | 0.96  | 2.61  | 1.38  | 0.38  | -1.59 | -1.97  | -4.66  | -10.14 |
| 330          | -11.02 | -19.51 | -12.45  | -1.18  | 1.38  | 1.97  | 0.3   | -0.84 | -3.02 | -2.77 | -4.26  | -5.31  | -10.14 |
| 345          | -10.58 | -19.84 | -11.72  | -3.21  | -3.14 | -1.54 | 0.15  | -0.33 | -4.81 | -2.72 | -4.12  | -5.77  | -10.14 |

| 5750MHz Composite Gain |       |       |         |      |      |      |      |      |      |      |      |       |       |
|------------------------|-------|-------|---------|------|------|------|------|------|------|------|------|-------|-------|
| Polarization           | Total |       | Channel | 13   |      | Freq | 5750 |      |      |      |      |       |       |
| Phi\Theta              | 0     | 15    | 30      | 45   | 60   | 75   | 90   | 105  | 120  | 135  | 150  | 165   | 180   |
| 0                      | -3.51 | -3.27 | -2.52   | 0.61 | 3.17 | 5.23 | 6.07 | 5.78 | 5.05 | 3.27 | 2.86 | 0.77  | -7.06 |
| 15                     | -3.42 | -4.05 | -2.82   | 0.51 | 3.76 | 4.83 | 5.79 | 5.83 | 5.53 | 4.11 | 2.48 | 1.20  | -7.06 |
| 30                     | -3.51 | -4.04 | -2.21   | 0.16 | 3.30 | 5.95 | 6.19 | 4.95 | 3.79 | 4.22 | 1.51 | 0.39  | -7.06 |
| 45                     | -3.49 | -3.32 | -2.27   | 1.67 | 3.33 | 6.37 | 6.18 | 5.32 | 3.55 | 4.00 | 0.73 | -0.60 | -7.06 |
| 60                     | -3.68 | -3.05 | -3.36   | 1.56 | 3.50 | 6.00 | 5.72 | 5.63 | 3.54 | 3.79 | 2.11 | -0.76 | -7.06 |

|     |       |       |       |       |      |      |      |      |      |       |       |       |       |
|-----|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|
| 75  | -3.74 | -2.83 | -2.42 | 1.60  | 3.99 | 4.62 | 5.19 | 4.71 | 2.17 | 4.12  | 3.68  | 0.77  | -7.06 |
| 90  | -3.60 | -2.58 | -2.86 | -0.24 | 3.57 | 3.90 | 5.14 | 5.78 | 1.68 | 2.32  | 2.55  | 2.43  | -7.06 |
| 105 | -3.51 | -2.46 | -2.22 | 0.83  | 2.62 | 4.16 | 5.06 | 4.64 | 2.95 | 1.74  | 0.49  | 2.55  | -7.06 |
| 120 | -3.59 | -2.66 | -0.77 | 2.98  | 3.96 | 3.69 | 6.04 | 4.43 | 4.68 | 2.73  | -0.03 | 1.36  | -7.06 |
| 135 | -3.47 | -2.93 | -1.77 | 2.45  | 4.82 | 5.98 | 7.52 | 6.99 | 5.59 | 3.78  | -0.27 | -0.97 | -7.06 |
| 150 | -3.52 | -3.17 | -1.91 | 3.30  | 5.36 | 6.46 | 6.65 | 5.23 | 4.77 | 3.37  | 0.39  | -1.75 | -7.06 |
| 165 | -3.57 | -3.17 | -1.76 | 2.91  | 3.25 | 6.13 | 6.08 | 5.81 | 5.32 | 3.77  | 1.36  | -1.31 | -7.06 |
| 180 | -3.62 | -3.07 | -1.98 | 2.25  | 3.21 | 7.00 | 5.80 | 6.90 | 5.08 | 4.51  | 2.08  | -0.79 | -7.06 |
| 195 | -3.75 | -3.40 | -1.85 | 2.90  | 4.40 | 6.65 | 6.23 | 6.79 | 5.66 | 4.54  | 3.02  | -0.03 | -7.06 |
| 210 | -3.70 | -3.65 | -1.46 | 3.48  | 5.42 | 5.22 | 5.83 | 3.72 | 3.47 | 3.20  | 3.19  | 0.78  | -7.06 |
| 225 | -3.61 | -4.15 | -1.77 | 2.55  | 4.89 | 6.21 | 5.75 | 4.51 | 0.74 | 2.18  | 1.48  | 0.69  | -7.06 |
| 240 | -3.60 | -4.67 | -2.51 | 0.98  | 3.18 | 3.91 | 5.58 | 3.61 | 4.74 | 2.20  | -0.34 | 1.51  | -7.06 |
| 255 | -3.49 | -4.77 | -1.21 | 1.41  | 2.18 | 2.72 | 6.44 | 3.31 | 5.87 | 2.89  | 0.07  | 1.90  | -7.06 |
| 270 | -3.53 | -4.40 | -1.76 | 2.55  | 1.89 | 2.41 | 4.63 | 4.20 | 4.48 | 2.26  | -1.29 | 1.18  | -7.06 |
| 285 | -3.68 | -3.80 | -2.37 | 2.00  | 2.16 | 3.46 | 4.83 | 4.10 | 4.80 | 1.73  | -0.84 | 0.89  | -7.06 |
| 300 | -3.62 | -3.29 | -1.82 | 1.72  | 1.33 | 4.83 | 3.85 | 4.91 | 4.97 | -0.79 | 0.82  | 1.47  | -7.06 |
| 315 | -3.63 | -3.24 | -1.96 | 1.41  | 3.28 | 4.26 | 4.47 | 3.99 | 4.40 | 2.29  | 0.53  | 1.08  | -7.06 |
| 330 | -3.75 | -3.49 | -2.98 | -0.57 | 2.98 | 4.51 | 5.47 | 5.25 | 3.36 | 2.47  | 0.21  | 0.82  | -7.06 |
| 345 | -3.65 | -3.19 | -2.23 | 0.54  | 1.70 | 4.62 | 5.62 | 5.74 | 3.92 | 3.75  | 1.87  | 0.08  | -7.06 |

## 7.2 DG\_NSSmax Test Data

| Ant1         |       |       |         |       |       |       |        |       |        |        |        |        |        |
|--------------|-------|-------|---------|-------|-------|-------|--------|-------|--------|--------|--------|--------|--------|
| Polarization | Total |       | Channel | 2     |       | Freq  | 2410   |       |        |        |        |        |        |
| Phi\Theta    | 0     | 15    | 30      | 45    | 60    | 75    | 90     | 105   | 120    | 135    | 150    | 165    | 180    |
| 0            | -4.36 | -3.73 | -2.78   | -2.55 | -4.59 | -3.76 | -3.65  | -4.25 | -8.65  | -9.7   | -10.11 | -10.04 | -13.07 |
| 15           | -4.35 | -4.39 | -3.88   | -3.3  | -4.81 | -3.18 | -3.27  | -4.67 | -9.69  | -8     | -7.88  | -8.61  | -13.07 |
| 30           | -4.36 | -5.17 | -5.34   | -3.98 | -3.72 | -3.06 | -2.84  | -6.16 | -9.17  | -5.36  | -5.75  | -7.73  | -13.07 |
| 45           | -4.33 | -6.03 | -6.79   | -3.71 | -2.84 | -2.76 | -5.27  | -7.39 | -7.26  | -3.62  | -4.65  | -7.6   | -13.07 |
| 60           | -4.26 | -7.05 | -7.63   | -3.04 | -2.54 | -2.88 | -9.96  | -9.62 | -6.29  | -4.06  | -5.46  | -8.3   | -13.07 |
| 75           | -4.15 | -7.9  | -7.33   | -2.86 | -2.66 | -2.79 | -10.38 | -6.74 | -5.97  | -5.32  | -7.75  | -10.29 | -13.07 |
| 90           | -4.1  | -8.3  | -6.57   | -2.98 | -3.24 | -3.12 | -7.25  | -3.07 | -4.2   | -5.91  | -9.05  | -12.41 | -13.07 |
| 105          | -4.05 | -8.03 | -5.81   | -3.33 | -4.79 | -4.34 | -4.18  | -2.28 | -4.76  | -6.67  | -8.01  | -8.68  | -13.07 |
| 120          | -3.98 | -7.31 | -5.25   | -4.02 | -7.02 | -4.74 | -2.61  | -4.48 | -9.25  | -10.23 | -5.52  | -5.67  | -13.07 |
| 135          | -3.97 | -6.51 | -4.72   | -4.52 | -6.7  | -3.98 | -2.29  | -6.58 | -13.61 | -13.7  | -4.87  | -4.7   | -13.07 |
| 150          | -3.94 | -5.76 | -4.27   | -4.2  | -4.3  | -2.12 | -1.44  | -4.82 | -9.31  | -8.77  | -5.46  | -3.88  | -13.07 |
| 165          | -3.99 | -5.17 | -3.77   | -3.36 | -2.82 | -0.76 | 0.04   | -2.72 | -4.97  | -5.53  | -5.05  | -3.14  | -13.07 |
| 180          | -4.08 | -4.73 | -3.13   | -2.17 | -2.99 | 0.11  | 1.28   | -0.83 | -2.21  | -4.59  | -3.11  | -2.86  | -13.07 |
| 195          | -4.14 | -4.2  | -2.31   | -0.58 | -3.42 | 0.18  | 1.44   | 0.94  | -1.03  | -3.42  | -1.89  | -3.32  | -13.07 |
| 210          | -4.18 | -3.6  | -1.38   | 0.75  | -1.83 | -1.39 | 1.07   | 1.2   | -0.53  | -1.51  | -1.7   | -4.74  | -13.07 |
| 225          | -4.23 | -3.02 | -0.49   | 1.49  | 0.97  | -0.55 | -0.51  | 0.81  | -0.49  | -1.19  | -2.17  | -7.12  | -13.07 |
| 240          | -4.26 | -2.56 | 0.35    | 2.32  | 2.36  | 2.78  | 1.94   | 0.81  | -1.51  | -1.68  | -3.91  | -10.53 | -13.07 |
| 255          | -4.27 | -2.32 | 0.95    | 3.15  | 2.73  | 4.71  | 4.77   | 2.83  | -1.35  | -3.29  | -6.87  | -13.07 | -13.07 |
| 270          | -4.34 | -2.35 | 1.02    | 3.2   | 2.89  | 4.93  | 5.52   | 3.95  | 0.03   | -3.05  | -8.9   | -11.61 | -13.07 |

|     |       |       |       |       |       |       |       |       |       |        |        |        |        |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 285 | -4.45 | -2.41 | 0.53  | 2.32  | 2.07  | 4.26  | 4.56  | 3.19  | -0.08 | -3.23  | -10.53 | -9.84  | -13.07 |
| 300 | -4.57 | -2.45 | -0.28 | 0.99  | -0.22 | 2.27  | 2.53  | 1.52  | -2.6  | -6.25  | -12.61 | -9.04  | -13.07 |
| 315 | -4.61 | -2.5  | -1    | -0.48 | -2.18 | -0.21 | -0.07 | 0.16  | -6.22 | -9.91  | -14.51 | -9.45  | -13.07 |
| 330 | -4.61 | -2.72 | -1.48 | -1.7  | -2.31 | -2.46 | -2    | -1.56 | -6.98 | -12.3  | -13.28 | -10.76 | -13.07 |
| 345 | -4.45 | -3.13 | -2.02 | -2.14 | -3.32 | -3.5  | -3.35 | -3.14 | -7.66 | -11.07 | -11.88 | -11.25 | -13.07 |

| Ant3         |       |       |         |       |       |       |       |       |       |        |        |        |       |
|--------------|-------|-------|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| Polarization | Total |       | Channel | 2     |       | Freq  | 2410  |       |       |        |        |        |       |
| Phi\Theta    | 0     | 15    | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135    | 150    | 165    | 180   |
| 0            | -9.19 | -5.56 | -2.59   | -0.27 | -1.97 | -0.98 | -1.31 | -4.3  | -5.16 | -3.73  | -5.43  | -5.57  | -12.2 |
| 15           | -9.14 | -5.91 | -2.31   | 0.08  | -1.8  | -0.71 | -1.17 | -3.29 | -5.71 | -3.88  | -3.86  | -6.45  | -12.2 |
| 30           | -8.94 | -6.49 | -2.36   | -0.06 | -1.6  | -1.71 | -1.82 | -4.7  | -6.91 | -2.97  | -3.73  | -8.57  | -12.2 |
| 45           | -8.71 | -7.19 | -2.78   | -0.58 | -1.07 | -2.01 | -2.86 | -5.58 | -9.15 | -2.11  | -4.7   | -11.3  | -12.2 |
| 60           | -8.58 | -7.89 | -3.55   | -0.94 | -0.75 | 0.35  | -1.03 | -4.42 | -7.93 | -3.34  | -6.58  | -12.2  | -12.2 |
| 75           | -8.6  | -8.33 | -4.43   | -0.72 | -0.45 | 2.35  | 1.38  | -2.53 | -7.33 | -3.77  | -7.86  | -10.88 | -12.2 |
| 90           | -8.65 | -8.74 | -5.19   | -0.51 | 0.11  | 2.73  | 1.92  | -1    | -2.75 | -2.1   | -5.56  | -10.15 | -12.2 |
| 105          | -8.72 | -9.13 | -5.74   | -0.43 | 0.69  | 2.75  | 1.84  | 1.17  | -0.02 | -0.33  | -3.65  | -9.99  | -12.2 |
| 120          | -8.59 | -9.44 | -6      | -0.13 | 1.36  | 3.15  | 1.96  | 1.46  | 0.11  | -0.05  | -3.43  | -9.11  | -12.2 |
| 135          | -8.47 | -9.85 | -5.66   | 0.39  | 1.79  | 3.11  | 1.48  | 0.05  | -0.93 | -0.59  | -3.97  | -8.39  | -12.2 |
| 150          | -8.34 | -9.97 | -4.86   | 0.69  | 1.64  | 2.46  | 0.76  | -0.86 | -1.08 | -0.35  | -4.9   | -8.53  | -12.2 |
| 165          | -8.25 | -9.44 | -3.82   | 0.72  | 1.06  | 1.37  | 0.43  | -0.71 | -0.87 | 0.25   | -5.2   | -8.65  | -12.2 |
| 180          | -8.2  | -8.51 | -2.75   | 0.47  | -0.18 | -0.21 | -0.23 | -0.45 | -0.68 | -0.38  | -5.71  | -9.07  | -12.2 |
| 195          | -8.41 | -7.52 | -2.14   | 0.16  | -1.68 | -2.5  | -1.01 | -0.82 | -1.21 | -1.9   | -8.48  | -10.16 | -12.2 |
| 210          | -8.69 | -6.85 | -1.89   | 0.44  | -2.83 | -2.78 | -0.84 | -1.06 | -3.44 | -3.68  | -10.45 | -10.78 | -12.2 |
| 225          | -8.97 | -6.39 | -1.99   | 0.67  | -1.73 | -0.62 | 0.35  | -0.71 | -4.64 | -5.58  | -8.12  | -9.92  | -12.2 |
| 240          | -8.96 | -6.26 | -2.52   | 0.66  | -1.01 | 0.02  | 0.75  | -0.26 | -4.77 | -4.72  | -6.87  | -8.42  | -12.2 |
| 255          | -8.81 | -6.42 | -3.41   | -0.21 | -1.58 | -0.95 | -0.42 | -1.66 | -6.56 | -5.08  | -6.54  | -7.59  | -12.2 |
| 270          | -8.68 | -6.81 | -4.35   | -2.14 | -3.77 | -3.28 | -1.4  | -3.42 | -8.4  | -9.16  | -6.58  | -7.74  | -12.2 |
| 285          | -8.81 | -7.16 | -5.04   | -4.55 | -6.72 | -6.67 | -4.16 | -3.61 | -8.44 | -12.61 | -6.6   | -8.44  | -12.2 |
| 300          | -9.04 | -6.95 | -4.96   | -5.5  | -6.71 | -7.85 | -8.33 | -4.93 | -7.57 | -12.75 | -7.26  | -8.79  | -12.2 |
| 315          | -9.24 | -6.41 | -4.39   | -4.28 | -4.57 | -4.35 | -8.11 | -4.75 | -5.93 | -12.22 | -7.2   | -8     | -12.2 |
| 330          | -9.23 | -5.85 | -3.78   | -2.32 | -2.95 | -2.59 | -5.94 | -5.62 | -3.96 | -10.36 | -6.12  | -6.65  | -12.2 |
| 345          | -9.21 | -5.49 | -3.11   | -1    | -2.35 | -1.61 | -2.8  | -6.78 | -3.92 | -6.59  | -6.26  | -5.75  | -12.2 |

| 2410MHz Composite Gain |       |       |         |       |       |       |       |       |       |       |       |       |        |
|------------------------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization           | Total |       | Channel | 2     |       | Freq  | 2410  |       |       |       |       |       |        |
| Phi\Theta              | 0     | 15    | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0                      | -6.14 | -4.55 | -2.68   | -1.26 | -3.09 | -2.15 | -2.32 | -4.27 | -6.56 | -5.76 | -7.17 | -7.25 | -12.61 |
| 15                     | -6.12 | -5.08 | -3.02   | -1.29 | -3.05 | -1.77 | -2.09 | -3.93 | -7.26 | -5.47 | -5.42 | -7.40 | -12.61 |
| 30                     | -6.07 | -5.78 | -3.60   | -1.59 | -2.53 | -2.33 | -2.30 | -5.37 | -7.89 | -4.00 | -4.62 | -8.13 | -12.61 |
| 45                     | -5.99 | -6.57 | -4.34   | -1.87 | -1.87 | -2.37 | -3.90 | -6.39 | -8.10 | -2.80 | -4.67 | -9.07 | -12.61 |
| 60                     | -5.90 | -7.45 | -5.13   | -1.86 | -1.55 | -0.97 | -3.52 | -6.28 | -7.03 | -3.69 | -5.98 | -9.83 | -12.61 |

|     |       |       |       |       |       |       |       |       |       |        |       |        |        |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|
| 75  | -5.83 | -8.11 | -5.64 | -1.66 | -1.42 | 0.50  | -1.35 | -4.14 | -6.60 | -4.48  | -7.80 | -10.57 | -12.61 |
| 90  | -5.80 | -8.51 | -5.83 | -1.57 | -1.25 | 0.72  | -0.59 | -1.91 | -3.41 | -3.60  | -6.96 | -11.13 | -12.61 |
| 105 | -5.79 | -8.55 | -5.77 | -1.64 | -1.24 | 0.51  | -0.20 | -0.22 | -1.77 | -2.43  | -5.30 | -9.29  | -12.61 |
| 120 | -5.70 | -8.25 | -5.61 | -1.65 | -1.06 | 0.79  | 0.25  | -0.56 | -2.42 | -2.66  | -4.35 | -7.06  | -12.61 |
| 135 | -5.66 | -7.87 | -5.16 | -1.41 | -0.65 | 0.87  | -0.01 | -2.11 | -3.71 | -3.39  | -4.40 | -6.16  | -12.61 |
| 150 | -5.61 | -7.37 | -4.55 | -1.10 | -0.38 | 0.75  | -0.20 | -2.40 | -3.48 | -2.78  | -5.17 | -5.61  | -12.61 |
| 165 | -5.62 | -6.80 | -3.79 | -0.86 | -0.46 | 0.43  | 0.24  | -1.60 | -2.45 | -1.74  | -5.12 | -5.07  | -12.61 |
| 180 | -5.67 | -6.22 | -2.94 | -0.65 | -1.36 | -0.05 | 0.59  | -0.64 | -1.38 | -1.99  | -4.22 | -4.94  | -12.61 |
| 195 | -5.77 | -5.55 | -2.22 | -0.19 | -2.46 | -0.96 | 0.39  | 0.15  | -1.12 | -2.59  | -4.04 | -5.51  | -12.61 |
| 210 | -5.87 | -4.93 | -1.63 | 0.60  | -2.30 | -2.03 | 0.22  | 0.22  | -1.75 | -2.46  | -4.17 | -6.79  | -12.61 |
| 225 | -5.98 | -4.39 | -1.18 | 1.10  | -0.17 | -0.58 | -0.06 | 0.12  | -2.09 | -2.85  | -4.20 | -8.30  | -12.61 |
| 240 | -6.00 | -4.03 | -0.85 | 1.57  | 0.99  | 1.62  | 1.39  | 0.31  | -2.84 | -2.94  | -5.14 | -9.35  | -12.61 |
| 255 | -5.97 | -3.90 | -0.70 | 1.79  | 1.09  | 2.74  | 2.91  | 1.14  | -3.22 | -4.09  | -6.70 | -9.52  | -12.61 |
| 270 | -5.99 | -4.03 | -0.88 | 1.30  | 0.73  | 2.53  | 3.31  | 1.67  | -2.40 | -5.11  | -7.59 | -9.26  | -12.61 |
| 285 | -6.10 | -4.17 | -1.42 | 0.12  | -0.40 | 1.59  | 2.10  | 1.00  | -2.50 | -5.77  | -8.13 | -9.08  | -12.61 |
| 300 | -6.25 | -4.14 | -2.02 | -1.14 | -2.35 | -0.34 | -0.14 | -0.60 | -4.41 | -8.38  | -9.16 | -8.91  | -12.61 |
| 315 | -6.34 | -4.03 | -2.37 | -1.98 | -3.21 | -1.80 | -2.45 | -1.64 | -6.07 | -10.91 | -9.47 | -8.66  | -12.61 |
| 330 | -6.33 | -4.01 | -2.48 | -2.00 | -2.62 | -2.52 | -3.54 | -3.13 | -5.21 | -11.22 | -8.37 | -8.24  | -12.61 |
| 345 | -6.21 | -4.15 | -2.53 | -1.53 | -2.81 | -2.45 | -3.07 | -4.59 | -5.40 | -8.28  | -8.22 | -7.68  | -12.61 |

| Ant1         |       |        |         |        |       |        |       |       |        |        |        |        |        |
|--------------|-------|--------|---------|--------|-------|--------|-------|-------|--------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 14     |       | Freq   | 5250  |       |        |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75     | 90    | 105   | 120    | 135    | 150    | 165    | 180    |
| 0            | -9.12 | -9.01  | -5.01   | -0.41  | -1.49 | -0.76  | 1.8   | 2.2   | 1.69   | 1.86   | -0.69  | -4.68  | -11.65 |
| 15           | -9.08 | -11.66 | -6.98   | 0.41   | -1.34 | -0.33  | 1.53  | -0.11 | -0.72  | 0.06   | -2.43  | -4.59  | -11.65 |
| 30           | -9.08 | -16.03 | -6.23   | 0.66   | -0.77 | 0.73   | 1.22  | -1.56 | -3.08  | -3.86  | -6.86  | -4.75  | -11.65 |
| 45           | -8.83 | -18.83 | -5.6    | 2.76   | 1.03  | 1.23   | 1.27  | -0.79 | -4.35  | -8.17  | -8.99  | -5.3   | -11.65 |
| 60           | -8.58 | -16.1  | -6.2    | 1.39   | -0.11 | 0.39   | -2.22 | -2.21 | -5.72  | -5.2   | -7.32  | -7.45  | -11.65 |
| 75           | -8.74 | -13.94 | -7.93   | -4.47  | -2.51 | -2.29  | -3.71 | -2.91 | -8.3   | -9.21  | -7.43  | -9.28  | -11.65 |
| 90           | -9.04 | -13.29 | -10.01  | -8.03  | -2.27 | -3.67  | -2.66 | -6.78 | -10.27 | -10.26 | -7.8   | -8.75  | -11.65 |
| 105          | -9.24 | -13.28 | -11.64  | -6.92  | -3.59 | -2.72  | -2.31 | -5.39 | -2.72  | -10.64 | -10.39 | -8.5   | -11.65 |
| 120          | -8.9  | -12.58 | -12.73  | -9.6   | -9.04 | -15.05 | -8.08 | -10.2 | -4.24  | -12.53 | -10.48 | -8.07  | -11.65 |
| 135          | -8.67 | -10.45 | -14.08  | -13.22 | -7.33 | -10.09 | -9.67 | -3.89 | -6.47  | -9.49  | -7.48  | -8.32  | -11.65 |
| 150          | -8.58 | -8.62  | -11.39  | -14.02 | -7.26 | -6.43  | -5.31 | -5.6  | -4.5   | -7.44  | -9.03  | -8.3   | -11.65 |
| 165          | -8.76 | -7.16  | -9.11   | -6.06  | -5.35 | -1.91  | -0.5  | -1.74 | -2.7   | -7.34  | -9.75  | -8.22  | -11.65 |
| 180          | -9.12 | -6.1   | -6.05   | -2.99  | -3.53 | -1.04  | -0.15 | -3.23 | -4.51  | -4.77  | -8.82  | -9.74  | -11.65 |
| 195          | -9.48 | -5.74  | -3.83   | -1.23  | -1.05 | 1.91   | 1.25  | -0.65 | -6.24  | -3.74  | -4.62  | -11.65 | -11.65 |
| 210          | -9.52 | -6.01  | -2.75   | 0.66   | 0.55  | 1.07   | 1.97  | 0.74  | -3.43  | -3.1   | -2.77  | -9.67  | -11.65 |
| 225          | -9.47 | -6.83  | -3.55   | 0.27   | -0.21 | 1.05   | 1.46  | 2.28  | -0.67  | -3     | -5.19  | -5.1   | -11.65 |
| 240          | -9.43 | -8.09  | -4.72   | -3.3   | -2.3  | 0.54   | 0.72  | 1.69  | 0.4    | -5.03  | -3.77  | -2.4   | -11.65 |
| 255          | -9.4  | -9.02  | -5.63   | -1.93  | -0.73 | 1.17   | 2.03  | 2.68  | 0.97   | 1.25   | -3.26  | -2.07  | -11.65 |
| 270          | -9.21 | -8.86  | -6.78   | -2.54  | -1.83 | 0.08   | 1.33  | 2.28  | 1.89   | -0.77  | -4.33  | -3.81  | -11.65 |
| 285          | -9.32 | -8.17  | -6.47   | -4.04  | -2.54 | 0.6    | 2.73  | 1.32  | 1.92   | -0.42  | 0.83   | -5.4   | -11.65 |

|     |       |       |       |       |       |       |       |       |       |      |       |       |        |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|
| 300 | -9.73 | -7.87 | -6.15 | -3.01 | -2.15 | -0.98 | 0.22  | 0.02  | 0.38  | 1.39 | 0.5   | -5.16 | -11.65 |
| 315 | -9.65 | -8.19 | -5.47 | -0.82 | -3    | -3.96 | -2.92 | -1.26 | -0.18 | 0.32 | -2.91 | -5.1  | -11.65 |
| 330 | -9.43 | -8.16 | -3.99 | 0.05  | -1.96 | -2.42 | 0.97  | 1.41  | 1.59  | 2.35 | -1.82 | -4.42 | -11.65 |
| 345 | -9.37 | -7.97 | -4.2  | 0.32  | -0.46 | 0.47  | 2.35  | 2.77  | 1.79  | 2.9  | -0.82 | -3.68 | -11.65 |

| Ant2         |        |        |         |        |       |        |        |        |        |        |       |        |     |
|--------------|--------|--------|---------|--------|-------|--------|--------|--------|--------|--------|-------|--------|-----|
| Polarization | Total  |        | Channel | 14     |       | Freq   | 5250   |        |        |        |       |        |     |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75     | 90     | 105    | 120    | 135    | 150   | 165    | 180 |
| 0            | -10.53 | -14.33 | -7.22   | -3.05  | -3.8  | 0.22   | 0.56   | -2.48  | -11.02 | -4.81  | -4.49 | -4.88  | -12 |
| 15           | -10.5  | -14.5  | -5.31   | -0.96  | -1.93 | -2.16  | -1.77  | -1.41  | -5.79  | -2.11  | -4.39 | -4.33  | -12 |
| 30           | -10.74 | -14.77 | -5.39   | -0.02  | 0.49  | 1.5    | 0.4    | -1.13  | -2.77  | -2.19  | -6.01 | -4.94  | -12 |
| 45           | -10.89 | -13.89 | -6.07   | -1.17  | 0.19  | 3.16   | 2.52   | 1.12   | -0.21  | -0.38  | -5.98 | -5.42  | -12 |
| 60           | -10.84 | -12.86 | -6.69   | -1.73  | -1.66 | -0.67  | 2.3    | -1.12  | -2.38  | 0.12   | -3.47 | -6.26  | -12 |
| 75           | -10.43 | -11.73 | -6.44   | -2.95  | -3.09 | -5     | -1.02  | -2.29  | -4.46  | 0.18   | -1.89 | -7.86  | -12 |
| 90           | -10.12 | -10.53 | -6.97   | -5.46  | -6.44 | -1.73  | 1.61   | 1.61   | -2.66  | 1.88   | -1.29 | -8.87  | -12 |
| 105          | -9.75  | -10.52 | -9.14   | -6.36  | -6.77 | -2.76  | 1.86   | 1.53   | -1.3   | -0.37  | -2.29 | -8.72  | -12 |
| 120          | -10.06 | -12.23 | -12.52  | -6.81  | -6.3  | -1.99  | -0.02  | 1.32   | -2.24  | -6.51  | -4.47 | -9.41  | -12 |
| 135          | -10.39 | -13.83 | -12.99  | -5.27  | -3.31 | 1.28   | 3.44   | 3.62   | -2.06  | -6.49  | -5.4  | -9.63  | -12 |
| 150          | -10.28 | -14.01 | -8.87   | -3.8   | -0.74 | 3.87   | 4.94   | 3.45   | 0.55   | -2.03  | -3.58 | -10.32 | -12 |
| 165          | -10.13 | -13.8  | -7.07   | -4.04  | 0.67  | 5.32   | 3.5    | 0.87   | -1.54  | -3.94  | -12   | -12    | -12 |
| 180          | -10.1  | -13.21 | -7.04   | -3.8   | 1.59  | 4.15   | 2.41   | 0.98   | -2.18  | -4.36  | -5.24 | -10.74 | -12 |
| 195          | -10.08 | -11.79 | -7.19   | -0.27  | 0.97  | 2.6    | 0.89   | -1.92  | -6.86  | -8.4   | -6.67 | -9.85  | -12 |
| 210          | -10.3  | -9.32  | -5.2    | 0.95   | 0.02  | 0.84   | -3.18  | -3.75  | -6.53  | -4.04  | -7.43 | -8.76  | -12 |
| 225          | -10.58 | -7.51  | -2.75   | -0.16  | -4.8  | -1.15  | -4.69  | -3.13  | -2.53  | -2.07  | -7.93 | -6.71  | -12 |
| 240          | -10.44 | -6.85  | -1.02   | -0.63  | -2.21 | -0.11  | -3.48  | -3.55  | -4.27  | -5.67  | -7.4  | -5.92  | -12 |
| 255          | -10.3  | -6.85  | -1.67   | -1.33  | -2.69 | -2.13  | 1.4    | -3.95  | -3.91  | -6.57  | -10.5 | -7.41  | -12 |
| 270          | -10.51 | -7.44  | -4.51   | -4.97  | -6.46 | -2.28  | -0.99  | -6.34  | -5.12  | -7.09  | -8.94 | -6.61  | -12 |
| 285          | -10.9  | -8.32  | -7.05   | -7.47  | -4.85 | -1.83  | -2     | -4.73  | -3.25  | -10.91 | -6.99 | -4.55  | -12 |
| 300          | -11.02 | -9.71  | -8.32   | -12.27 | -5.6  | -12.46 | -12.86 | -8.12  | -4.42  | -7.14  | -8.58 | -3.87  | -12 |
| 315          | -11.09 | -11.76 | -10.93  | -7.1   | -8.83 | -7.24  | -11.22 | -12.12 | -8.68  | -6.75  | -8.38 | -3.93  | -12 |
| 330          | -11.02 | -13.92 | -13.18  | -5.24  | -7.26 | -4.37  | -4.07  | -3.82  | -4.56  | -5.07  | -7.55 | -4.05  | -12 |
| 345          | -10.61 | -14.65 | -10.27  | -4.04  | -4.32 | 0.28   | -0.41  | -2.42  | -4.84  | -6.2   | -4.79 | -4.69  | -12 |

| Ant3         |       |       |         |       |       |      |      |      |       |       |       |       |        |
|--------------|-------|-------|---------|-------|-------|------|------|------|-------|-------|-------|-------|--------|
| Polarization | Total |       | Channel | 3     |       | Freq | 5250 |      |       |       |       |       |        |
| Phi\Theta    | 0     | 15    | 30      | 45    | 60    | 75   | 90   | 105  | 120   | 135   | 150   | 165   | 180    |
| 0            | -5.5  | -3.99 | -10.77  | -3.07 | 0.38  | 2.05 | 2.3  | 2.26 | 1     | -3.85 | -9.92 | -6.25 | -13.86 |
| 15           | -5.63 | -3.15 | -7.3    | -3.76 | -0.26 | 0.77 | 2.8  | 3.23 | 1.72  | -1.51 | -5.74 | -4.85 | -13.86 |
| 30           | -5.86 | -2.75 | -5.29   | -1.5  | 0.38  | 1.18 | 2.41 | 3    | -0.02 | -1.96 | -3.14 | -4.59 | -13.86 |
| 45           | -6.16 | -3.18 | -2.73   | -0.96 | 0.31  | 1.39 | 2.92 | 3.36 | -2.94 | 0.36  | -0.74 | -3.87 | -13.86 |
| 60           | -6.37 | -3.88 | -1.56   | -0.52 | -1.72 | 0.58 | 3.4  | 2.92 | -1.26 | 1.94  | 0.81  | -4.15 | -13.86 |
| 75           | -6.34 | -4.62 | -1.93   | 0.38  | -1.1  | 1.58 | 2.15 | 3.48 | 1.87  | 2.1   | -1.02 | -2.99 | -13.86 |
| 90           | -6.11 | -5.53 | -3.72   | -0.85 | 1.99  | 2.62 | 0.94 | 3.91 | -1.12 | -0.72 | -0.6  | -0.55 | -13.86 |

|     |       |        |        |        |        |        |       |       |       |        |        |        |        |
|-----|-------|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 105 | -5.9  | -7.03  | -7.31  | -2.17  | 1.6    | -1.38  | 0.19  | 0.11  | -6.49 | -1.1   | -0.05  | -0.53  | -13.86 |
| 120 | -5.81 | -10.01 | -10.67 | -0.88  | -1.78  | -2.22  | 3.12  | -2.5  | -2.11 | -0.23  | -1.07  | -2.02  | -13.86 |
| 135 | -5.89 | -14.06 | -9.25  | -0.96  | -3.14  | 1.95   | 2.38  | 0.77  | -0.86 | -0.6   | -2.4   | -2.88  | -13.86 |
| 150 | -5.95 | -14.29 | -8.13  | -2.6   | -4.16  | -0.54  | -0.91 | -2.04 | -1.91 | 0.6    | -1.97  | -2.41  | -13.86 |
| 165 | -5.91 | -12.32 | -8.44  | -3.75  | -3.82  | -0.83  | 0.65  | -1.71 | -1.5  | -1.32  | -4.63  | -3.53  | -13.86 |
| 180 | -5.66 | -10.97 | -9.99  | -2.37  | -5.76  | -0.57  | 0.08  | -0.74 | -2.71 | -5.47  | -7.29  | -4.16  | -13.86 |
| 195 | -5.35 | -9.76  | -9.81  | -2.02  | -6.87  | -0.96  | -1.72 | 0.49  | -1.39 | -2.67  | -4.44  | -5.39  | -13.86 |
| 210 | -5.27 | -8.83  | -13.02 | -4.4   | -5.47  | -7.68  | -6.71 | -4.83 | -4.39 | -2     | -3.12  | -6.21  | -13.86 |
| 225 | -5.18 | -8.02  | -16.6  | -11.58 | -6.58  | -12.64 | -4.47 | -8.26 | -6.24 | -5.22  | -4.65  | -5.09  | -13.86 |
| 240 | -5.08 | -7.67  | -25.1  | -17.31 | -10.24 | -6.14  | -1.36 | -6.44 | -1.48 | -4.62  | -7.47  | -4.6   | -13.86 |
| 255 | -5.17 | -8.27  | -14.8  | -12.53 | -6.98  | -4.4   | -1.64 | -4.77 | -1.31 | -4.34  | -8.27  | -5.63  | -13.86 |
| 270 | -5.1  | -9.54  | -8.39  | -5.58  | -6.17  | -1.83  | -0.79 | -4.5  | -6.22 | -4.59  | -7.6   | -8.16  | -13.86 |
| 285 | -5.11 | -10.03 | -6.21  | -3.57  | -0.64  | 0.69   | 0.72  | 0.76  | -2.9  | -6.65  | -12.37 | -13.86 | -13.86 |
| 300 | -5.31 | -9.04  | -5.51  | -2.01  | -1.13  | 1.33   | -2.17 | 1.49  | -4.11 | -8.26  | -10.37 | -13.6  | -13.86 |
| 315 | -5.41 | -7.26  | -7.34  | -1.74  | -2.62  | -1.16  | -1.74 | 2.11  | -1.98 | -6.88  | -12.37 | -10.63 | -13.86 |
| 330 | -5.42 | -5.88  | -9.13  | -1.3   | -1.03  | -1.84  | -1.88 | -1.32 | -5.33 | -10.39 | -13.34 | -7.75  | -13.86 |
| 345 | -5.53 | -4.98  | -11.89 | -1.79  | -0.04  | 0.34   | 0.22  | 0     | -3.46 | -10.56 | -14.56 | -6.64  | -13.86 |

| Ant4         |       |        |         |       |        |       |        |       |        |       |        |        |        |
|--------------|-------|--------|---------|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|
| Polarization | Total |        | Channel | 3     |        | Freq  | 5250   |       |        |       |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45    | 60     | 75    | 90     | 105   | 120    | 135   | 150    | 165    | 180    |
| 0            | -9.03 | -6.97  | -8.88   | -6.68 | -2.44  | -3.87 | -2.85  | -1.27 | -4.92  | -5.37 | -1.74  | -4.42  | -11.17 |
| 15           | -8.98 | -7.14  | -9.6    | -6.99 | -7.27  | -3.85 | -5.18  | 0.84  | -5.89  | -1.49 | -2.88  | -6.03  | -11.17 |
| 30           | -8.84 | -7.85  | -8.13   | -9.37 | -10.56 | -5.43 | -9.64  | -7.56 | -4.68  | -3.34 | -6.3   | -7.7   | -11.17 |
| 45           | -8.96 | -8.82  | -8.57   | -9.36 | -8.99  | -3    | -10.29 | -9.94 | -3.48  | -3.35 | -10.04 | -7.69  | -11.17 |
| 60           | -9.26 | -10.16 | -10.62  | -5.75 | -3.69  | -8.77 | -3.63  | -8.84 | -5.83  | -3.37 | -7.58  | -7.22  | -11.17 |
| 75           | -9.17 | -12.23 | -9.78   | -2.5  | -2.89  | -4.49 | -3.01  | -4.38 | -8.62  | -1.29 | -5.01  | -7.02  | -11.17 |
| 90           | -8.89 | -14.59 | -8.17   | -1.41 | -3.92  | -0.96 | -1.54  | 0.99  | -11.19 | -2.77 | -9.09  | -8.06  | -11.17 |
| 105          | -8.83 | -16.16 | -8.08   | -2.13 | -3.55  | 0.06  | -0.61  | -2.69 | -2.27  | -3.61 | -15.68 | -9.21  | -11.17 |
| 120          | -8.75 | -16.03 | -8.16   | -2.21 | -1.38  | -2.37 | 2.05   | -5.23 | -1     | -1.66 | -12.48 | -10.25 | -11.17 |
| 135          | -9.01 | -14.5  | -5.85   | -0.59 | 1.06   | 1.09  | 1.84   | -2.11 | -0.85  | -4.06 | -10.9  | -11.17 | -11.17 |
| 150          | -9.47 | -13.37 | -6.32   | -1.45 | -0.08  | 1.84  | 2.97   | -1.45 | -1.54  | -4.25 | -8.62  | -8.94  | -11.17 |
| 165          | -9.31 | -13.46 | -8.66   | -3.81 | -0.66  | 1.15  | 2.78   | 2.33  | -0.99  | -1    | -4.63  | -6.56  | -11.17 |
| 180          | -9.31 | -14.16 | -10.79  | -4.54 | -1.02  | 1.77  | 3.28   | 4.21  | 1.31   | 1.35  | -1.89  | -4.41  | -11.17 |
| 195          | -9.31 | -14.46 | -13.18  | -5.86 | -3.23  | 0.96  | 1.42   | 3.87  | 3      | 3     | -0.15  | -2.06  | -11.17 |
| 210          | -9    | -14.8  | -18.66  | -5.62 | -4.48  | -0.99 | -2.08  | -0.72 | 2.12   | 3.43  | 1.04   | -1.49  | -11.17 |
| 225          | -9.04 | -14.57 | -14.51  | -3.59 | -1.68  | -0.23 | -0.9   | -4.66 | -1.05  | 2.08  | 1.08   | -2.83  | -11.17 |
| 240          | -9.33 | -14.33 | -11.68  | -1.41 | -2.11  | 0.43  | -1.59  | 0.05  | -3.48  | -0.57 | 0.29   | -4.31  | -11.17 |
| 255          | -9.33 | -13.44 | -13.58  | -1.68 | -0.58  | 1.32  | 2.03   | -0.49 | -0.52  | -2.19 | -1.01  | -5.09  | -11.17 |
| 270          | -9.47 | -11.88 | -15.67  | -3.84 | 0.92   | 1.1   | 3.23   | -2.98 | 0.93   | -1.01 | -4.51  | -5.41  | -11.17 |
| 285          | -9.47 | -10.57 | -9.98   | -4.98 | -1.4   | 1.83  | 1.44   | 0.23  | 0.97   | -1.29 | -8.16  | -4.75  | -11.17 |
| 300          | -9.09 | -9.59  | -8.06   | -5.71 | -3.36  | 2.28  | 0.74   | 1.26  | -0.65  | -3.01 | -4.87  | -4.58  | -11.17 |
| 315          | -9    | -8.59  | -7.45   | -1.79 | 0.95   | 4.4   | 3.33   | 1.89  | -0.38  | -2.75 | -2.81  | -4.51  | -11.17 |



|     |       |       |       |       |       |       |      |       |       |       |       |       |        |
|-----|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|--------|
| 330 | -9.12 | -8.11 | -6.43 | -2.45 | -1.26 | 0.42  | 1.58 | -2.02 | -0.81 | -5.96 | -2.94 | -4.47 | -11.17 |
| 345 | -9.18 | -7.54 | -7.03 | -7.61 | -2.24 | -0.13 | 1.73 | -1.79 | -1.92 | -7.76 | -3.19 | -4.27 | -11.17 |

| 2410MHz Composite Gain |       |        |         |       |       |       |       |       |       |       |       |       |        |
|------------------------|-------|--------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization           | Total |        | Channel | 13    |       | Freq  | 5250  | 6575  |       |       |       |       |        |
| Phi\Theta              | 0     | 15     | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0                      | -8.11 | -7.20  | -7.46   | -2.77 | -1.57 | -0.10 | 0.85  | 0.66  | -1.06 | -1.93 | -3.05 | -5.00 | -12.06 |
| 15                     | -8.15 | -7.09  | -7.04   | -2.00 | -2.03 | -1.05 | 0.31  | 0.98  | -1.47 | -1.18 | -3.67 | -4.90 | -12.06 |
| 30                     | -8.25 | -7.25  | -6.12   | -1.27 | -1.06 | 0.21  | 0.28  | -0.41 | -2.30 | -2.77 | -5.32 | -5.33 | -12.06 |
| 45                     | -8.37 | -7.79  | -5.25   | -0.49 | -0.56 | 1.20  | 1.12  | 0.41  | -2.45 | -1.84 | -4.81 | -5.37 | -12.06 |
| 60                     | -8.46 | -8.37  | -5.09   | -0.97 | -1.61 | -0.93 | 0.90  | -0.63 | -3.34 | -0.77 | -2.98 | -6.06 | -12.06 |
| 75                     | -8.40 | -8.92  | -5.47   | -2.01 | -2.32 | -1.71 | -0.76 | -0.34 | -2.63 | -0.55 | -3.16 | -6.10 | -12.06 |
| 90                     | -8.27 | -9.49  | -6.59   | -3.04 | -1.54 | -0.30 | -0.07 | 1.28  | -4.30 | -1.23 | -3.23 | -4.88 | -12.06 |
| 105                    | -8.15 | -10.48 | -8.76   | -3.84 | -1.98 | -1.54 | 0.04  | -0.87 | -2.81 | -2.56 | -3.72 | -4.95 | -12.06 |
| 120                    | -8.07 | -12.22 | -10.61  | -3.63 | -3.59 | -3.37 | 0.80  | -2.38 | -2.25 | -3.21 | -4.93 | -6.05 | -12.06 |
| 135                    | -8.16 | -12.88 | -9.32   | -2.97 | -2.19 | 0.31  | 1.44  | 0.53  | -2.06 | -3.98 | -5.51 | -6.74 | -12.06 |
| 150                    | -8.24 | -11.86 | -8.32   | -3.66 | -2.22 | 1.03  | 1.91  | -0.19 | -1.49 | -2.35 | -4.76 | -6.28 | -12.06 |
| 165                    | -8.21 | -10.74 | -8.25   | -4.32 | -1.65 | 1.89  | 1.89  | 1.22  | -0.88 | -2.19 | -5.24 | -6.58 | -12.06 |
| 180                    | -8.17 | -9.88  | -8.03   | -3.35 | -1.33 | 1.59  | 1.65  | 1.15  | -1.48 | -2.31 | -5.00 | -6.31 | -12.06 |
| 195                    | -8.10 | -9.26  | -7.23   | -1.90 | -1.68 | 1.32  | 0.63  | 1.02  | -1.02 | -1.10 | -3.26 | -5.67 | -12.06 |
| 210                    | -8.04 | -8.76  | -6.50   | -1.18 | -1.58 | -0.63 | -1.42 | -1.57 | -1.76 | -0.32 | -2.10 | -5.27 | -12.06 |
| 225                    | -8.04 | -8.40  | -5.89   | -1.98 | -2.63 | -1.19 | -1.38 | -1.76 | -2.15 | -1.20 | -2.82 | -4.71 | -12.06 |
| 240                    | -8.02 | -8.46  | -5.23   | -2.85 | -3.23 | -0.64 | -1.17 | -1.03 | -1.82 | -3.45 | -3.35 | -4.12 | -12.06 |
| 255                    | -8.03 | -8.81  | -5.89   | -2.77 | -2.11 | -0.41 | 1.19  | -0.60 | -0.86 | -2.00 | -4.25 | -4.60 | -12.06 |
| 270                    | -8.02 | -9.15  | -7.35   | -4.07 | -2.29 | -0.51 | 1.05  | -1.58 | -0.80 | -2.65 | -5.92 | -5.71 | -12.06 |
| 285                    | -8.10 | -9.15  | -7.20   | -4.78 | -2.09 | 0.51  | 1.04  | -0.07 | -0.23 | -3.12 | -3.92 | -5.95 | -12.06 |
| 300                    | -8.22 | -8.99  | -6.84   | -4.38 | -2.76 | -0.11 | -1.40 | -0.10 | -1.70 | -2.56 | -3.77 | -5.58 | -12.06 |
| 315                    | -8.24 | -8.66  | -7.39   | -2.30 | -2.18 | 0.12  | -0.69 | -0.02 | -1.80 | -2.96 | -5.09 | -5.40 | -12.06 |
| 330                    | -8.22 | -8.20  | -7.01   | -1.84 | -2.29 | -1.72 | -0.30 | -1.02 | -1.37 | -2.27 | -4.60 | -4.95 | -12.06 |
| 345                    | -8.22 | -7.65  | -7.35   | -2.39 | -1.46 | 0.25  | 1.11  | 0.14  | -1.35 | -2.14 | -3.78 | -4.69 | -12.06 |

| Ant1         |        |        |         |        |       |       |       |        |       |        |       |       |     |
|--------------|--------|--------|---------|--------|-------|-------|-------|--------|-------|--------|-------|-------|-----|
| Polarization | Total  |        | Channel | 19     |       | Freq  | 5500  |        |       |        |       |       |     |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75    | 90    | 105    | 120   | 135    | 150   | 165   | 180 |
| 0            | -10.9  | -11.34 | -7.46   | -0.65  | 0.78  | 1.23  | 2.45  | 2.91   | 2.07  | 2.11   | 0.4   | -5.47 | -13 |
| 15           | -10.45 | -10.47 | -7.88   | -0.5   | -0.27 | 0.7   | 2.09  | 1.24   | 0.48  | 1.07   | -1.24 | -4.18 | -13 |
| 30           | -10.88 | -10.88 | -10.17  | -0.11  | -0.97 | 0.26  | 0.84  | -1.76  | -2.84 | -1.57  | -3.33 | -4.6  | -13 |
| 45           | -11.6  | -12.12 | -11.8   | -0.2   | -0.41 | 0.56  | 0.35  | -1.74  | -5.09 | -3.95  | -5.11 | -5.1  | -13 |
| 60           | -11.53 | -12.59 | -8.53   | 0.67   | 0.17  | 0.96  | -1.4  | -1.75  | -6.62 | -6.06  | -4.66 | -5.29 | -13 |
| 75           | -10.98 | -11.88 | -7.96   | -2.1   | -0.53 | 0.02  | -1.86 | -1.24  | -8.04 | -11.64 | -4.74 | -5.66 | -13 |
| 90           | -10.68 | -11.1  | -10.25  | -10.09 | -5.2  | -4.2  | -2.57 | -6.21  | -7.69 | -12.42 | -5.01 | -5.66 | -13 |
| 105          | -10.81 | -10.07 | -12.9   | -11.88 | -4.72 | -3.32 | -1.03 | -5.32  | -2.06 | -11.74 | -8.18 | -6.96 | -13 |
| 120          | -10.76 | -8.5   | -12.17  | -10.85 | -5.63 | -9.75 | -3.87 | -13.04 | -2.91 | -11.7  | -8.25 | -9.59 | -13 |

|     |        |        |        |       |       |        |       |       |       |       |        |        |     |
|-----|--------|--------|--------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-----|
| 135 | -11.26 | -7.45  | -10.62 | -7.41 | -6.71 | -6.29  | -6.72 | -4.81 | -6.13 | -7.52 | -7.17  | -12.34 | -13 |
| 150 | -11.2  | -6.62  | -11.01 | -6.84 | -12.9 | -10.01 | -8.63 | -7.63 | -4.93 | -8.81 | -12.05 | -13    | -13 |
| 165 | -11.01 | -6.45  | -7.58  | -5.5  | -8.74 | -1.81  | -1.31 | -1.9  | -3.04 | -7.79 | -11.2  | -11.79 | -13 |
| 180 | -11.07 | -6.92  | -4.58  | -3.27 | -4.19 | -2.18  | -1.94 | -5.15 | -7.18 | -2.76 | -4.84  | -10.85 | -13 |
| 195 | -11.42 | -7.21  | -3.07  | -0.15 | -1.37 | 0.32   | -1.32 | -0.93 | -6.03 | -1.75 | -3.24  | -9.38  | -13 |
| 210 | -11.72 | -8.1   | -4.44  | 0.85  | 0.41  | 1.11   | 1.41  | 1.8   | -1.31 | -1.76 | -3.28  | -8.3   | -13 |
| 225 | -11.98 | -9.29  | -6.49  | -0.99 | -0.38 | 2.21   | 1.19  | 1.97  | -1.45 | -5.11 | -7.74  | -5.86  | -13 |
| 240 | -11.65 | -10.5  | -7.65  | -2.55 | -0.56 | 1.44   | 1.08  | 1.81  | -0.54 | -6.68 | -5.86  | -3.12  | -13 |
| 255 | -11.45 | -11.28 | -10.48 | -3.67 | -2.14 | -0.43  | 0.23  | 0.96  | 0.35  | 0.51  | -2.6   | -1.7   | -13 |
| 270 | -11.31 | -12.2  | -12.28 | -3.08 | -0.63 | -1.21  | -0.33 | 1.99  | 1.09  | -0.5  | -4.76  | -2.98  | -13 |
| 285 | -11.02 | -13.15 | -11.64 | -1.17 | -0.49 | 0.97   | 1.32  | 2.21  | 1.47  | -1.33 | 0.85   | -4.39  | -13 |
| 300 | -11.88 | -12.94 | -9.91  | -4.49 | -2.23 | -0.07  | -2.16 | -0.06 | 0.94  | -1.18 | 0.17   | -4.27  | -13 |
| 315 | -12.39 | -11.83 | -10.48 | -7.6  | -4.71 | -1.24  | -1.74 | -0.54 | -0.36 | -1.6  | -2.98  | -5.13  | -13 |
| 330 | -12.02 | -11.45 | -10.57 | -6.1  | -6.11 | -1.39  | -1.75 | 2.44  | 1.41  | 1.43  | -1.46  | -5.4   | -13 |
| 345 | -11.42 | -12.01 | -8.43  | -3.25 | -1.96 | 0.23   | 1.2   | 3.08  | 2.11  | 2.9   | -0.68  | -5.48  | -13 |

| Ant2         |       |        |         |        |        |       |        |        |        |        |        |        |        |
|--------------|-------|--------|---------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 19     |        | Freq  | 5500   |        |        |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60     | 75    | 90     | 105    | 120    | 135    | 150    | 165    | 180    |
| 0            | -6.46 | -11.56 | -9.83   | -3.84  | -1.52  | -0.14 | 2.3    | -0.37  | -4.22  | -4.23  | -6.93  | -4.64  | -13.62 |
| 15           | -6.74 | -10.81 | -12.44  | -4.17  | -1.04  | -1.32 | -0.13  | -2.48  | -2.44  | -4.79  | -8.64  | -3.71  | -13.62 |
| 30           | -6.99 | -10.59 | -15.59  | -3.8   | -1.32  | 2.19  | 1.76   | -1.61  | -0.57  | -2.37  | -5.66  | -4.13  | -13.62 |
| 45           | -6.94 | -9.6   | -13.45  | -5.12  | -3.02  | 1.7   | 0.78   | -2.8   | -2.95  | 0.26   | -3.32  | -4.73  | -13.62 |
| 60           | -6.58 | -8.05  | -10.83  | -5.73  | -3.27  | 0.09  | -0.51  | -0.02  | -4.49  | 1.1    | -2.11  | -5.89  | -13.62 |
| 75           | -6.4  | -6.83  | -8.29   | -3.76  | -0.46  | -0.25 | 0.49   | 0.23   | -3.46  | 1.48   | -0.86  | -7.8   | -13.62 |
| 90           | -6.48 | -6.62  | -6.63   | -5.57  | -3.99  | -3.1  | 0.82   | 2.28   | -1.71  | 0.33   | -1.11  | -7.42  | -13.62 |
| 105          | -6.8  | -6.92  | -9.15   | -11.72 | -6.91  | -3.91 | -0.33  | 1.1    | 0.73   | -2.14  | -3.03  | -6.85  | -13.62 |
| 120          | -7.07 | -7.9   | -17.3   | -9.92  | -4.93  | -0.42 | 3.07   | 2.58   | 2.43   | -1.89  | -6.75  | -6.92  | -13.62 |
| 135          | -7.22 | -10.48 | -15.73  | -5.78  | -2.51  | 2.7   | 4.45   | 5.56   | 1.32   | -1.18  | -7.97  | -7.61  | -13.62 |
| 150          | -6.84 | -15.16 | -11.01  | -1.75  | -0.98  | 3.95  | 4.48   | 3.67   | 1.13   | -0.75  | -4.22  | -8.45  | -13.62 |
| 165          | -6.46 | -22.04 | -7.7    | -1.75  | 0.04   | 4.44  | 1.73   | 3.4    | 1.25   | -0.23  | -3.3   | -8.88  | -13.62 |
| 180          | -6.25 | -23.69 | -7.38   | -3.9   | 1.53   | 2.97  | -0.18  | 0.92   | -1.54  | -1.88  | -3.76  | -9.65  | -13.62 |
| 195          | -6.13 | -25.8  | -8.9    | -2.8   | 0.94   | 0.44  | -2.34  | -4.12  | -6.61  | -8.19  | -6.06  | -13.62 | -13.62 |
| 210          | -6.08 | -22.26 | -10.17  | -0.36  | 0.41   | -1.16 | -2.05  | -4.6   | -12.64 | -11.02 | -10.61 | -13.06 | -13.62 |
| 225          | -6.12 | -14.58 | -7.47   | -0.64  | -1.51  | -1.32 | -0.94  | -3.59  | -3.1   | -4.7   | -12.83 | -11.2  | -13.62 |
| 240          | -6.26 | -10.1  | -5.08   | -1.1   | -8.36  | -1.52 | -2.23  | -8.62  | -3.7   | -6.36  | -9.47  | -7.85  | -13.62 |
| 255          | -6.37 | -8.15  | -5.81   | -0.71  | -6.46  | -3.11 | -0.92  | -5.83  | -6.52  | -9.32  | -12.81 | -7.54  | -13.62 |
| 270          | -6.24 | -7.3   | -7.82   | -3.32  | -8.11  | -4    | -2.04  | -8.32  | -6.29  | -9.24  | -10.7  | -6.42  | -13.62 |
| 285          | -6.08 | -7.22  | -6.44   | -9.91  | -6.8   | -7.83 | -4.07  | -9.33  | -4.88  | -8.94  | -7.92  | -4.27  | -13.62 |
| 300          | -6.02 | -7.76  | -6.03   | -10.55 | -10.41 | -8.79 | -18.66 | -8.67  | -5.52  | -10.61 | -9.67  | -3.44  | -13.62 |
| 315          | -5.89 | -9.08  | -8.84   | -11.43 | -9.07  | -7.6  | -7.4   | -11.89 | -6.17  | -5.35  | -8.93  | -3.38  | -13.62 |
| 330          | -6.04 | -10.76 | -12.43  | -9.47  | -8.22  | -2.66 | -1.91  | -4.45  | -3.47  | -4.54  | -6.62  | -3.42  | -13.62 |
| 345          | -6.32 | -11.74 | -10.64  | -5.43  | -4.78  | -0.95 | -2.15  | -1.83  | -10.49 | -4.95  | -4.87  | -4.53  | -13.62 |

| Ant3         |       |        |         |        |       |       |       |        |       |        |        |        |        |
|--------------|-------|--------|---------|--------|-------|-------|-------|--------|-------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 8      |       | Freq  | 5500  |        |       |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75    | 90    | 105    | 120   | 135    | 150    | 165    | 180    |
| 0            | -5.23 | -3.63  | -2.72   | -5.59  | -5.51 | -3.52 | -0.86 | 0.8    | 0.17  | -2.76  | -6.57  | -4.69  | -19.03 |
| 15           | -5.35 | -3.66  | -3.88   | -3.27  | -3.02 | 0.46  | 0.36  | 3.51   | 2.27  | -0.13  | -4.53  | -3.7   | -19.03 |
| 30           | -5.46 | -4.03  | -5      | -5.33  | -2.7  | 1.35  | 0.3   | 3.82   | 1.79  | 0.47   | -3.35  | -3.36  | -19.03 |
| 45           | -5.39 | -4.73  | -5.8    | -6.33  | -4.23 | -0.11 | 1.05  | 3.8    | -0.03 | 0.3    | -2.21  | -3.5   | -19.03 |
| 60           | -5.44 | -5.48  | -4.98   | -2.56  | -3.93 | -2.14 | 1.79  | 3.17   | 0.68  | 0.98   | -1.09  | -4.51  | -19.03 |
| 75           | -5.37 | -5.94  | -5.63   | -2.68  | -1.8  | -2.38 | 0.17  | 1.9    | 1.53  | 0.53   | -1.66  | -3.14  | -19.03 |
| 90           | -5.28 | -6.56  | -6.3    | -5.19  | -3.51 | -0.44 | -2.21 | 1.31   | -0.65 | -1.02  | -0.42  | -0.17  | -19.03 |
| 105          | -5.1  | -7.69  | -5.2    | -2.8   | 0.72  | 1.29  | 1.45  | 2.15   | -3.09 | -1.01  | -0.06  | 0.29   | -19.03 |
| 120          | -5.09 | -9.17  | -3.99   | -2.75  | -1.25 | -3.54 | 0.72  | -0.68  | -5.82 | -1.53  | -1.71  | -0.72  | -19.03 |
| 135          | -5.04 | -10.48 | -2.42   | -0.27  | 0.32  | 0.7   | 2.95  | 0.57   | -1.01 | -3.18  | -4.66  | -2.82  | -19.03 |
| 150          | -4.96 | -10.94 | -2.82   | 0.15   | 0.61  | -0.42 | -0.9  | -1.98  | -1.82 | -1.07  | -4.22  | -2.15  | -19.03 |
| 165          | -4.77 | -10.41 | -5.29   | -2.63  | -2.44 | 1.58  | 3.02  | 1.32   | 0.35  | -1.09  | -4.97  | -2.4   | -19.03 |
| 180          | -4.61 | -9.35  | -7.16   | -1.61  | -1.04 | 0.65  | 1.97  | 0.28   | -0.11 | -3.95  | -5.89  | -2.64  | -19.03 |
| 195          | -4.42 | -8.14  | -7.96   | -0.22  | -1.35 | 0.02  | 2.25  | 0.71   | 0.84  | -2.6   | -3.22  | -2.72  | -19.03 |
| 210          | -4.31 | -7.31  | -9.45   | -1.63  | -2.65 | -2.97 | -2.49 | -5.62  | -3.93 | -2.81  | -2.2   | -3.09  | -19.03 |
| 225          | -4.24 | -6.34  | -11.08  | -3.9   | -4.13 | -6.31 | -6.15 | -7.8   | -7.38 | -3.87  | -4.49  | -3.19  | -19.03 |
| 240          | -4.32 | -5.84  | -10.4   | -8.08  | -6.96 | -9.83 | -4.95 | -12.53 | -1.61 | -5.9   | -10.21 | -3.58  | -19.03 |
| 255          | -4.42 | -5.9   | -8.58   | -7.37  | -12.3 | -8.58 | -1.5  | -6.64  | -1.22 | -3.33  | -8.85  | -5.53  | -19.03 |
| 270          | -4.57 | -6.3   | -6.6    | -1.78  | -9.6  | -3.32 | -1.12 | -3.65  | -5.34 | -3.86  | -7.07  | -8.59  | -19.03 |
| 285          | -4.63 | -6.39  | -6.81   | -0.82  | -5.1  | -0.18 | -0.3  | -2.05  | -2.83 | -7.59  | -14.89 | -14.49 | -19.03 |
| 300          | -4.61 | -6.11  | -10.16  | -3.41  | -3.76 | 0.67  | -5.73 | -0.6   | -4.49 | -8.74  | -11.99 | -19.03 | -19.03 |
| 315          | -4.53 | -5.59  | -9.93   | -3.38  | -1.26 | -0.84 | -3.13 | 0.81   | -0.39 | -5.58  | -8.89  | -11.86 | -19.03 |
| 330          | -4.73 | -4.62  | -6.18   | -6.5   | -0.66 | -3.01 | -1.38 | -2.27  | -5.41 | -10.01 | -10.8  | -8.11  | -19.03 |
| 345          | -4.98 | -3.85  | -3.41   | -11.55 | -2.05 | -0.91 | 0.33  | 0.43   | -2.69 | -7.19  | -10.73 | -6.36  | -19.03 |

| Ant4         |       |        |         |        |       |       |       |        |       |       |        |        |        |
|--------------|-------|--------|---------|--------|-------|-------|-------|--------|-------|-------|--------|--------|--------|
| Polarization | Total |        | Channel | 8      |       | Freq  | 5500  |        |       |       |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45     | 60    | 75    | 90    | 105    | 120   | 135   | 150    | 165    | 180    |
| 0            | -9.91 | -8.92  | -8.6    | -14.14 | -2.11 | -3.7  | -0.7  | -1.32  | -2.99 | -5.89 | -3.09  | -4.57  | -10.83 |
| 15           | -9.66 | -8.47  | -9.5    | -10.24 | -3.61 | -6.48 | -2.97 | -0.45  | -4.34 | -2.56 | -3.29  | -6.64  | -10.83 |
| 30           | -9.59 | -7.97  | -9.63   | -7.42  | -5.58 | -7.39 | -5.52 | -18.94 | -4.5  | -2.34 | -4.39  | -8.79  | -10.83 |
| 45           | -9.58 | -7.94  | -8.4    | -7.49  | -7.87 | -1.48 | -7.69 | -6.78  | -4.41 | -2.08 | -7.79  | -9.76  | -10.83 |
| 60           | -9.6  | -8.85  | -9.66   | -9.57  | -3.38 | -2.46 | -1.92 | -3.72  | -4.8  | -1.79 | -7.36  | -10.83 | -10.83 |
| 75           | -9.87 | -9.94  | -11.29  | -6.75  | -3.8  | -4.44 | -0.76 | -1.51  | -7.55 | -0.66 | -6.19  | -9.97  | -10.83 |
| 90           | -9.99 | -10.37 | -13.15  | -1.17  | -4.84 | -1.67 | -2.7  | 2.54   | -8.81 | -3.75 | -13.41 | -9.39  | -10.83 |
| 105          | -9.73 | -10.58 | -16.36  | -2.28  | -2.18 | 0.25  | 1.44  | -2.49  | -1.65 | -2.35 | -15.37 | -9.36  | -10.83 |
| 120          | -9.55 | -10.9  | -7.65   | -0.03  | 0.52  | -3.24 | 1.94  | -4.02  | -2.91 | -3.17 | -11.15 | -9.86  | -10.83 |
| 135          | -9.29 | -11.83 | -6.6    | -0.16  | 1.39  | -0.28 | 2.26  | -3.8   | -1.34 | -2.71 | -8.51  | -9.73  | -10.83 |
| 150          | -9.1  | -12.94 | -9.67   | -3.95  | 0.87  | 1.97  | 2.85  | 1.45   | -0.82 | -0.53 | -4.73  | -7.57  | -10.83 |

|     |       |        |        |       |       |       |       |       |       |       |       |       |        |
|-----|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 165 | -9.38 | -11.73 | -11.79 | -4.94 | -0.83 | 2.57  | 1.35  | 2.87  | -0.23 | -0.63 | -2.65 | -5.61 | -10.83 |
| 180 | -9.33 | -11.49 | -11.4  | -5.63 | -3.97 | 0.99  | 0.27  | 3.6   | 1.94  | 0.34  | -0.98 | -3.61 | -10.83 |
| 195 | -9.08 | -11.66 | -11.67 | -6.51 | -6.26 | -0.33 | -2.62 | 2.52  | 2.42  | 2.43  | 0.58  | -1.66 | -10.83 |
| 210 | -9.08 | -11.12 | -11.32 | -4.06 | -5.18 | -1.84 | -1.8  | -1.7  | 0.22  | 2.73  | 1.2   | -0.73 | -10.83 |
| 225 | -9.08 | -9.9   | -8.75  | -2.61 | -3.76 | 0.22  | -0.38 | -1.79 | -3.81 | 1.78  | 1.13  | -1.63 | -10.83 |
| 240 | -9.06 | -8.86  | -5.53  | -1.54 | -2.18 | 2.01  | -0.12 | 0.52  | -2.37 | -1.01 | -0.12 | -2.35 | -10.83 |
| 255 | -9.39 | -8.6   | -4.56  | -2.69 | -2.59 | -0.67 | 2.17  | -3.9  | 0.44  | -4.49 | -1.13 | -2.76 | -10.83 |
| 270 | -9.26 | -9.52  | -5.35  | -5.29 | -3.82 | -1.39 | 0.59  | -4.67 | -0.84 | -2.34 | -4.01 | -3.12 | -10.83 |
| 285 | -9.02 | -10.76 | -5.55  | -3.52 | -2.07 | 1.91  | 0.68  | 2.12  | 0.65  | -1.42 | -8.06 | -3.17 | -10.83 |
| 300 | -9.11 | -10.45 | -5.03  | -3.49 | -3.34 | 0.44  | 1.23  | 1.56  | -0.68 | -1.85 | -4.42 | -4.28 | -10.83 |
| 315 | -9.35 | -9.71  | -5.04  | -1.13 | 0.15  | 2.68  | 3.12  | 1.27  | -0.64 | -1.76 | -2.99 | -5.26 | -10.83 |
| 330 | -9.56 | -9.53  | -5.27  | 0.61  | 0.8   | -0.01 | 2.18  | -1.21 | -2.26 | -4.46 | -4.14 | -5.44 | -10.83 |
| 345 | -9.87 | -9.18  | -6.76  | -3.26 | -3.64 | -2.71 | 1.43  | -2.75 | -3.83 | -6.77 | -4.55 | -4.71 | -10.83 |

| 5500MHz Composite Gain |       |        |         |       |       |       |       |       |       |       |       |       |        |
|------------------------|-------|--------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization           | Total |        | Channel | 13    |       | Freq  | 5500  |       |       |       |       |       |        |
| Phi\Theta              | 0     | 15     | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0                      | -7.51 | -7.54  | -6.22   | -4.01 | -1.55 | -1.01 | 1.08  | 0.80  | -0.54 | -1.56 | -2.99 | -4.83 | -13.26 |
| 15                     | -7.56 | -7.30  | -7.32   | -3.37 | -1.77 | -0.90 | 0.19  | 1.00  | -0.29 | -1.06 | -3.69 | -4.40 | -13.26 |
| 30                     | -7.72 | -7.42  | -8.63   | -3.31 | -2.31 | 0.28  | 0.07  | -0.25 | -0.89 | -1.29 | -4.08 | -4.79 | -13.26 |
| 45                     | -7.76 | -7.77  | -8.87   | -3.78 | -3.12 | 0.32  | -0.31 | -0.22 | -2.65 | -1.03 | -4.14 | -5.24 | -13.26 |
| 60                     | -7.66 | -8.06  | -7.90   | -2.80 | -2.26 | -0.65 | -0.26 | 0.17  | -2.85 | -0.64 | -3.19 | -6.06 | -13.26 |
| 75                     | -7.56 | -8.04  | -7.85   | -3.50 | -1.45 | -1.42 | -0.40 | 0.07  | -2.58 | -0.63 | -2.84 | -5.92 | -13.26 |
| 90                     | -7.53 | -8.18  | -8.28   | -4.43 | -4.33 | -2.12 | -1.40 | 1.04  | -3.38 | -2.31 | -2.92 | -4.18 | -13.26 |
| 105                    | -7.52 | -8.54  | -9.05   | -5.06 | -2.35 | -0.87 | 0.52  | -0.24 | -1.28 | -2.90 | -3.81 | -4.00 | -13.26 |
| 120                    | -7.56 | -8.98  | -7.89   | -3.70 | -2.09 | -3.16 | 1.12  | -1.09 | -1.20 | -3.23 | -5.56 | -5.00 | -13.26 |
| 135                    | -7.60 | -9.74  | -6.45   | -2.31 | -0.93 | 0.22  | 2.21  | 1.37  | -1.07 | -3.11 | -6.81 | -6.67 | -13.26 |
| 150                    | -7.42 | -10.23 | -7.05   | -2.38 | -0.94 | 1.02  | 1.53  | 0.54  | -1.10 | -1.81 | -5.39 | -6.12 | -13.26 |
| 165                    | -7.25 | -10.10 | -7.53   | -3.43 | -1.97 | 2.23  | 1.46  | 1.85  | -0.15 | -1.62 | -4.54 | -5.83 | -13.26 |
| 180                    | -7.11 | -10.06 | -7.01   | -3.37 | -1.26 | 0.97  | 0.25  | 0.88  | -0.67 | -1.77 | -3.46 | -5.34 | -13.26 |
| 195                    | -6.98 | -9.85  | -6.73   | -1.76 | -1.34 | 0.12  | -0.52 | 0.17  | -0.67 | -1.08 | -2.33 | -4.64 | -13.26 |
| 210                    | -6.95 | -9.75  | -7.94   | -0.95 | -1.19 | -0.95 | -0.93 | -1.53 | -2.50 | -1.05 | -2.08 | -4.16 | -13.26 |
| 225                    | -6.95 | -9.14  | -8.13   | -1.85 | -2.17 | -0.35 | -0.86 | -1.49 | -3.46 | -1.93 | -3.29 | -4.25 | -13.26 |
| 240                    | -7.00 | -8.41  | -6.71   | -2.62 | -3.39 | -0.23 | -1.01 | -1.49 | -1.91 | -4.27 | -4.44 | -3.79 | -13.26 |
| 255                    | -7.11 | -8.08  | -6.77   | -3.01 | -4.42 | -2.24 | 0.23  | -2.73 | -1.01 | -2.88 | -4.25 | -3.81 | -13.26 |
| 270                    | -7.10 | -8.29  | -7.36   | -3.19 | -4.13 | -2.32 | -0.62 | -2.04 | -1.81 | -3.00 | -5.97 | -4.69 | -13.26 |
| 285                    | -7.02 | -8.60  | -7.09   | -2.72 | -2.94 | -0.08 | -0.17 | 0.04  | -0.69 | -3.57 | -4.07 | -5.03 | -13.26 |
| 300                    | -7.08 | -8.59  | -7.20   | -4.73 | -4.05 | -0.72 | -2.56 | -0.67 | -1.65 | -3.88 | -4.05 | -5.18 | -13.26 |
| 315                    | -7.08 | -8.45  | -7.99   | -4.33 | -2.51 | -0.45 | -0.72 | -0.59 | -1.34 | -3.17 | -5.01 | -5.49 | -13.26 |
| 330                    | -7.22 | -8.15  | -7.68   | -3.63 | -2.12 | -1.60 | -0.35 | -0.63 | -1.68 | -2.60 | -4.56 | -5.29 | -13.26 |
| 345                    | -7.41 | -7.81  | -6.49   | -4.88 | -2.95 | -0.96 | 0.41  | 0.34  | -1.76 | -1.75 | -3.94 | -5.21 | -13.26 |
| Ant1                   |       |        |         |       |       |       |       |       |       |       |       |       |        |
| Polarization           | Total |        | Channel | 24    |       | Freq  | 5750  |       |       |       |       |       |        |

| Phi\Theta | 0      | 15     | 30     | 45     | 60    | 75     | 90    | 105    | 120    | 135    | 150    | 165    | 180    |
|-----------|--------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|
| 0         | -11.24 | -14.71 | -9.57  | -4.04  | -0.55 | 0.59   | 0.98  | 2.26   | 2.2    | 1.2    | -0.49  | -4.21  | -15.15 |
| 15        | -11.82 | -15.44 | -8.25  | -2.15  | 0.86  | 0.35   | 1.35  | 0.52   | -0.67  | -0.3   | -1.98  | -3.44  | -15.15 |
| 30        | -11.8  | -14.32 | -7.78  | -2.5   | 0.32  | 0.67   | 2.19  | -0.19  | -2.37  | -2.06  | -3.73  | -4.79  | -15.15 |
| 45        | -11.36 | -12.75 | -9.35  | -3.19  | 0.55  | 0.94   | 1.11  | -2.14  | -5.2   | -4.24  | -6.27  | -6.43  | -15.15 |
| 60        | -11.21 | -12.25 | -18.47 | -4.11  | -0.3  | 1.21   | 1.04  | -1.63  | -5.9   | -5.96  | -7.17  | -6.72  | -15.15 |
| 75        | -11.19 | -11.39 | -12.87 | -4.04  | -3.4  | 0.27   | -2.32 | -2.87  | -8.03  | -10.21 | -4.5   | -5.84  | -15.15 |
| 90        | -11.6  | -9.7   | -13.45 | -6.73  | -4.53 | -3.02  | -0.96 | -3.09  | -12.26 | -15.9  | -4.73  | -5.01  | -15.15 |
| 105       | -12.01 | -7.81  | -10.84 | -10.66 | -9.34 | -5.91  | -1.31 | -4.01  | -3.27  | -11.04 | -9.25  | -5.38  | -15.15 |
| 120       | -11.93 | -6.78  | -6.69  | -6.72  | -13.5 | -15.84 | -7.9  | -12.17 | -3.7   | -11.13 | -7.74  | -7.42  | -15.15 |
| 135       | -11.31 | -6.51  | -7.94  | -4.21  | -7.62 | -2.43  | -7.73 | -4.31  | -5.54  | -7.2   | -7.3   | -10.88 | -15.15 |
| 150       | -11.05 | -6.59  | -11.49 | -5.11  | -5.97 | -5.83  | -5.89 | -7.87  | -3.52  | -8.41  | -10.88 | -15.15 | -15.15 |
| 165       | -11.29 | -6.8   | -13.48 | -7.44  | -7.09 | -3.78  | -1.42 | -3.02  | -3.64  | -7.63  | -9.46  | -13.75 | -15.15 |
| 180       | -11.72 | -7.2   | -10.23 | -4.58  | -3.4  | -1.41  | -2.37 | -2.06  | -6.82  | -2.32  | -4.15  | -12.78 | -15.15 |
| 195       | -11.8  | -9.26  | -9.12  | -1.45  | 0.4   | 1.56   | 0.15  | 0.99   | -3.54  | -2.06  | -2.6   | -10.86 | -15.15 |
| 210       | -11.73 | -12.19 | -8.66  | -1.58  | 1.25  | 1.83   | 2.66  | 1.05   | -1.22  | -2.54  | -3.25  | -7.82  | -15.15 |
| 225       | -11.41 | -14.71 | -9.3   | -3.62  | -1.46 | 1.83   | -0.44 | 0.68   | -2.21  | -4.66  | -6.09  | -6.67  | -15.15 |
| 240       | -11.23 | -14.69 | -12.31 | -5.9   | -2.72 | 0.52   | 0.4   | 1.37   | 0.74   | -3.3   | -4.44  | -3.56  | -15.15 |
| 255       | -11.03 | -13.61 | -9.21  | -6.13  | -2.61 | -0.07  | 0.41  | 1.01   | 1.79   | 0.28   | -1.92  | -1.48  | -15.15 |
| 270       | -11.35 | -14.24 | -9     | -4.08  | -2.56 | -0.28  | -0.62 | 1.97   | 2.24   | -1.83  | -5.26  | -2.27  | -15.15 |
| 285       | -11.62 | -17.06 | -10.06 | -5.3   | -3.56 | -0.56  | -1.2  | 1.15   | 1.79   | -1.68  | -0.47  | -3.7   | -15.15 |
| 300       | -11.6  | -19    | -10.1  | -4.64  | -5.14 | -0.22  | 1.39  | 0.36   | 1.83   | -3.5   | -0.96  | -2.84  | -15.15 |
| 315       | -11.45 | -20.18 | -10.17 | -6.25  | -4.77 | -0.42  | 0.32  | 0.02   | 0.36   | -2.3   | -3.4   | -3.63  | -15.15 |
| 330       | -11.39 | -23.52 | -12.98 | -10.08 | -7.64 | -1.91  | -0.12 | -0.14  | 1.43   | 1      | -2.53  | -3.72  | -15.15 |
| 345       | -10.93 | -17.61 | -11.04 | -7.06  | -6.3  | -0.46  | 0.58  | 1.26   | 3.01   | 2.69   | -1.45  | -4.75  | -15.15 |

| Ant2         |        |        |         |        |       |       |       |       |       |       |       |        |        |
|--------------|--------|--------|---------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Polarization | Total  |        | Channel | 24     |       | Freq  | 5750  |       |       |       |       |        |        |
| Phi\Theta    | 0      | 15     | 30      | 45     | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165    | 180    |
| 0            | -9.93  | -7.25  | -13.55  | -10.87 | -2.43 | -0.39 | 2.41  | -1.42 | -4.52 | -6.6  | -5.47 | -4.89  | -11.88 |
| 15           | -9.73  | -8.17  | -15.87  | -7.15  | -1.82 | -0.36 | -0.31 | -4.43 | -3.81 | -5.32 | -6.15 | -5.26  | -11.88 |
| 30           | -9.59  | -9.05  | -13.05  | -5.79  | -1.98 | 1.71  | 1.52  | -1.33 | -2.57 | -2.8  | -5.83 | -7.85  | -11.88 |
| 45           | -9.49  | -8.97  | -10.55  | -3.35  | -3.28 | 1.19  | 1.3   | -1.07 | -3.56 | -0.54 | -4.1  | -10.64 | -11.88 |
| 60           | -9.78  | -8.78  | -10     | -4.33  | -1.43 | 1.17  | -0.09 | 0     | -4.46 | -0.68 | -1.96 | -10.59 | -11.88 |
| 75           | -9.85  | -8     | -7.63   | -7.71  | -2.64 | 0.28  | 0.7   | -0.09 | -6.37 | -1.5  | 0.38  | -6.58  | -11.88 |
| 90           | -9.87  | -7.05  | -4.62   | -6.37  | -3.3  | -4.88 | -1.08 | 1.23  | -2.98 | -1.29 | -0.77 | -5     | -11.88 |
| 105          | -9.73  | -7.14  | -4.99   | -3.64  | -3.58 | -1.59 | -0.92 | 0.57  | 0.37  | -1.64 | -3.27 | -5.36  | -11.88 |
| 120          | -9.76  | -8.22  | -8.35   | -5.54  | -2.41 | -0.7  | 2.5   | 1.22  | 2.51  | -1.57 | -6.64 | -6.29  | -11.88 |
| 135          | -9.77  | -10.25 | -12.14  | -9.44  | -2.31 | 1.1   | 3.1   | 4.79  | 1.37  | -1.13 | -8.61 | -8.29  | -11.88 |
| 150          | -10.12 | -13.37 | -10.31  | -3.91  | -4.46 | 1.66  | 3.73  | 2.36  | 0.74  | -0.72 | -6    | -10.15 | -11.88 |
| 165          | -10.29 | -16.06 | -8.95   | -2.37  | -3.52 | 3.72  | 1.69  | 2.28  | 1.7   | -0.19 | -4.25 | -11.88 | -11.88 |
| 180          | -10.12 | -15.92 | -8.01   | -4.43  | -0.99 | 3.54  | 0.2   | 2.02  | -1.31 | -1.58 | -4.64 | -10.27 | -11.88 |
| 195          | -9.95  | -13.43 | -6.74   | -8.17  | 0.67  | 2.78  | 0.49  | -1.27 | -4.19 | -3.86 | -5.31 | -10.76 | -11.88 |

|     |        |        |        |        |       |        |        |        |       |        |        |        |        |
|-----|--------|--------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|
| 210 | -10.1  | -11.41 | -7.32  | -5.67  | 0.59  | -2.35  | -4.43  | -6.33  | -8.28 | -10.81 | -7.12  | -10.69 | -11.88 |
| 225 | -10.09 | -11.35 | -11.67 | -3.28  | 1.15  | -1.81  | -0.87  | -3.42  | -4.66 | -6.11  | -8.85  | -9.36  | -11.88 |
| 240 | -10.12 | -12.29 | -14.32 | -3.37  | -2.98 | -4.82  | -0.5   | -9.91  | -2.87 | -5.82  | -9.82  | -6.05  | -11.88 |
| 255 | -10.24 | -11.78 | -9.22  | -4.19  | -5.54 | -2.86  | -0.52  | -4.22  | -2.91 | -8.61  | -16.86 | -5.7   | -11.88 |
| 270 | -10.18 | -10.12 | -9.15  | -9.79  | -4.81 | -9.74  | -3.4   | -6     | -5.59 | -8.77  | -12.33 | -6.22  | -11.88 |
| 285 | -9.96  | -8.58  | -7.67  | -10.1  | -3.87 | -14.94 | -1.63  | -8.55  | -3.23 | -8.53  | -7.62  | -5.29  | -11.88 |
| 300 | -9.91  | -7.95  | -7.01  | -3.89  | -9.22 | -4.27  | -16.49 | -8.96  | -4.93 | -9.67  | -8.89  | -4.21  | -11.88 |
| 315 | -9.8   | -7.88  | -10.83 | -4.83  | -8.57 | -11.3  | -10.87 | -15.63 | -8.72 | -4.8   | -7.63  | -3.84  | -11.88 |
| 330 | -9.77  | -7.77  | -15.8  | -10.18 | -10   | -8.19  | -2.09  | -2.95  | -4.59 | -4.48  | -5.68  | -4.32  | -11.88 |
| 345 | -9.8   | -7.22  | -13.91 | -10.01 | -4.2  | -1.53  | -0.81  | -1.15  | -7.29 | -5.6   | -4.17  | -5.55  | -11.88 |

| Ant3         |       |        |         |       |       |        |       |       |       |        |        |        |        |
|--------------|-------|--------|---------|-------|-------|--------|-------|-------|-------|--------|--------|--------|--------|
| Polarization | Total |        | Channel | 13    |       | Freq   | 5750  |       |       |        |        |        |        |
| Phi\Theta    | 0     | 15     | 30      | 45    | 60    | 75     | 90    | 105   | 120   | 135    | 150    | 165    | 180    |
| 0            | -7.57 | -3.72  | -2.55   | -1.71 | -3.37 | -0.77  | -0.53 | 1.38  | 0.92  | -1.42  | -3.64  | -6.01  | -16.65 |
| 15           | -7.18 | -4.8   | -3.93   | -4.23 | -3.8  | 0.61   | -0.55 | 2.33  | 2.45  | 0.85   | -2.82  | -4.04  | -16.65 |
| 30           | -7.39 | -5.28  | -5.11   | -5.94 | -4.87 | 1.24   | -0.64 | 2.68  | 1.32  | 0.05   | -2.77  | -2.65  | -16.65 |
| 45           | -7.69 | -5.23  | -6.74   | -3.08 | -3.18 | 0.21   | 0.56  | 3.96  | 1.36  | -2.08  | -2.45  | -2.1   | -16.65 |
| 60           | -7.88 | -5.71  | -7.74   | -2.65 | -1.88 | -1.67  | -0.14 | 2.11  | 1.01  | -0.72  | -0.79  | -2.43  | -16.65 |
| 75           | -7.91 | -6.55  | -6.89   | -2.15 | 0.41  | -1.45  | -0.91 | 0.64  | 1.84  | 2.17   | -1.2   | -1.93  | -16.65 |
| 90           | -7.66 | -7.43  | -8.63   | -6.57 | -2.82 | -0.91  | -0.75 | -1.04 | -0.42 | -0.8   | -1.17  | 0.34   | -16.65 |
| 105          | -7.4  | -7.46  | -7.27   | -4.5  | -2.76 | -0.13  | -2.13 | -1.12 | -6.74 | -4.51  | -1.95  | 0.92   | -16.65 |
| 120          | -7.53 | -6.63  | -3.69   | -0.25 | -0.73 | -1.66  | 0.27  | -0.06 | -4.24 | -1.61  | -2.68  | 0.05   | -16.65 |
| 135          | -7.45 | -6.09  | -2.13   | 0.56  | 1.44  | 0.86   | 4.07  | 2.4   | 0.79  | -1.05  | -4.58  | -2.87  | -16.65 |
| 150          | -7.15 | -6.12  | -2.66   | 1.13  | 3.81  | 2.4    | 1.67  | -0.81 | -1.49 | -1.28  | -4.54  | -3.43  | -16.65 |
| 165          | -6.76 | -6.19  | -4.25   | -0.92 | -0.26 | -2.96  | 0.23  | -1.2  | -1.03 | -0.77  | -4.05  | -3.28  | -16.65 |
| 180          | -6.43 | -6.99  | -7.4    | -1.79 | -1.89 | -0.35  | 1.09  | -0.44 | -1.22 | -4.7   | -7.13  | -4.26  | -16.65 |
| 195          | -6.31 | -8.42  | -10.4   | -0.79 | -2.14 | -2.09  | 1.03  | 1.09  | 0.98  | -4.47  | -5.2   | -3.77  | -16.65 |
| 210          | -6.36 | -9.22  | -11.27  | -2.67 | -3.3  | -3.39  | -2.7  | -4.72 | -2.33 | -2.83  | -3.18  | -4.15  | -16.65 |
| 225          | -6.71 | -9.43  | -7.32   | -6.96 | -4.52 | -1.69  | -1.61 | -6.12 | -8.19 | -5.42  | -5.27  | -4.72  | -16.65 |
| 240          | -6.8  | -10.07 | -5.36   | -9.33 | -5.41 | -5.87  | -4.59 | -7.38 | -0.6  | -5.96  | -11.77 | -5.71  | -16.65 |
| 255          | -6.62 | -11.15 | -5.48   | -6.14 | -6.93 | -12.52 | -2.59 | -7.21 | -1.7  | -4.77  | -7.66  | -7.81  | -16.65 |
| 270          | -6.36 | -9.72  | -7.63   | -0.41 | -4    | -3.93  | -0.11 | -2.25 | -4.74 | -3.58  | -8.52  | -12.64 | -16.65 |
| 285          | -6.14 | -6.37  | -9.35   | -1.04 | -2.72 | 0.28   | -0.94 | -3.52 | -3.75 | -5.01  | -19.34 | -16.65 | -16.65 |
| 300          | -6.25 | -3.75  | -6.13   | -4.78 | -3.22 | 1.26   | -4.78 | -0.49 | -2.54 | -13.32 | -10.96 | -10.31 | -16.65 |
| 315          | -6.91 | -2.51  | -3.11   | -6.49 | -0.88 | -0.69  | -3.47 | -1.65 | -1.25 | -7.39  | -12.54 | -8.44  | -16.65 |
| 330          | -7.47 | -2.42  | -2      | -8.49 | -0.78 | -0.76  | -0.46 | 0.47  | -6.56 | -13.44 | -15.45 | -8.05  | -16.65 |
| 345          | -7.73 | -2.89  | -1.88   | -3.38 | -3.93 | -2.16  | -1.69 | -1.15 | -2.85 | -6.76  | -8.1   | -8.01  | -16.65 |

| Ant4         |       |        |         |       |       |       |       |       |       |       |       |       |        |
|--------------|-------|--------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization | Total |        | Channel | 13    |       | Freq  | 5750  |       |       |       |       |       |        |
| Phi\Theta    | 0     | 15     | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0            | -9.78 | -19.73 | -13.63  | -7.72 | -5.91 | -2.99 | -3.82 | -4.84 | -4.66 | -6.98 | -3.82 | -6.03 | -10.14 |

|     |        |        |        |        |       |       |       |       |       |       |        |        |        |
|-----|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 15  | -9.66  | -18.45 | -11.63 | -10.83 | -5.65 | -7.63 | -1.67 | -0.51 | -1.09 | -4.47 | -3.74  | -6.97  | -10.14 |
| 30  | -9.9   | -15.57 | -8.75  | -11.39 | -5.71 | -5.71 | -3.43 | -9.38 | -7.43 | -2.73 | -6.17  | -8.53  | -10.14 |
| 45  | -9.91  | -12.75 | -7.1   | -9.11  | -6.21 | -1.14 | -2.97 | -7.01 | -4.07 | -1.64 | -10.11 | -10.14 | -10.14 |
| 60  | -10.3  | -11.02 | -5.81  | -7.43  | -8.54 | -1.2  | -2.34 | -2.85 | -2.17 | -2.55 | -7.91  | -9.92  | -10.14 |
| 75  | -10.43 | -10.3  | -7.56  | -4.66  | -3.05 | -6.15 | -1.08 | -3.69 | -6.87 | -2.17 | -5.31  | -7.83  | -10.14 |
| 90  | -9.81  | -10.77 | -11.42 | -5.44  | 0.13  | -0.4  | -0.75 | 1.23  | -5.66 | -3.36 | -10.07 | -6.36  | -10.14 |
| 105 | -9.59  | -12.52 | -11.51 | -3.7   | -0.24 | -0.88 | 0.34  | -1.55 | -4.17 | -2.63 | -10.86 | -6.17  | -10.14 |
| 120 | -9.78  | -15.94 | -9.62  | -1.35  | 2.06  | 1.2   | 1.88  | -0.54 | -1.66 | -2    | -8.33  | -7.46  | -10.14 |
| 135 | -9.88  | -16.44 | -13.91 | -3.97  | 1     | -0.11 | 2.37  | -1.81 | 0.12  | -1    | -5.27  | -7.99  | -10.14 |
| 150 | -10.4  | -13.52 | -10.52 | -4.55  | 0.46  | 1.33  | 0.38  | 0.22  | -1.27 | -2.1  | -2.95  | -6.45  | -10.14 |
| 165 | -10.8  | -10.93 | -6.9   | -2.96  | -1.64 | 1.26  | -0.55 | 0.22  | -0.63 | -2.19 | -2.35  | -4.81  | -10.14 |
| 180 | -11.38 | -8.86  | -6.73  | -4.65  | -5.63 | 1.32  | -0.16 | 3.07  | 2.95  | 1.45  | -0.96  | -3.38  | -10.14 |
| 195 | -12.39 | -7.64  | -5.94  | -3.82  | -7.72 | -0.55 | -0.97 | 1.97  | 3.14  | 2.58  | -0.01  | -2.28  | -10.14 |
| 210 | -11.92 | -6.86  | -4.18  | -0.95  | -1.68 | -0.22 | 1.75  | -1.14 | -0.33 | 1.09  | 0.54   | -1.22  | -10.14 |
| 225 | -11.17 | -6.97  | -4.49  | -1.01  | -0.62 | 1.72  | 1.52  | 0.92  | -7.39 | -0.4  | -0.26  | -2.16  | -10.14 |
| 240 | -11.14 | -7.38  | -5.61  | -2.96  | -0.86 | -0.07 | 1.73  | 0.93  | -2.98 | -1.15 | -2.59  | -3.12  | -10.14 |
| 255 | -10.96 | -7.7   | -5.74  | -2.52  | -1.4  | -2.08 | 3.32  | -2.45 | 1.34  | -1.85 | -3.66  | -2.85  | -10.14 |
| 270 | -11.34 | -8.58  | -5.79  | -2.18  | -5.41 | -2.98 | -1.8  | -2.91 | -0.45 | -2.42 | -5.01  | -1.94  | -10.14 |
| 285 | -12.54 | -10.51 | -6.86  | -2.21  | -5.53 | -1.61 | -0.99 | 0.2   | -0.82 | -3.35 | -9.28  | -1.2   | -10.14 |
| 300 | -12.1  | -13.64 | -8.67  | -3.93  | -2.6  | -2.55 | 1.7   | 1.4   | -0.03 | -4.23 | -3.61  | -2.77  | -10.14 |
| 315 | -11.22 | -17.92 | -10.45 | -1.73  | 0.54  | 0.96  | 2.61  | 1.38  | 0.38  | -1.59 | -1.97  | -4.66  | -10.14 |
| 330 | -11.02 | -19.51 | -12.45 | -1.18  | 1.38  | 1.97  | 0.3   | -0.84 | -3.02 | -2.77 | -4.26  | -5.31  | -10.14 |
| 345 | -10.58 | -19.84 | -11.72 | -3.21  | -3.14 | -1.54 | 0.15  | -0.33 | -4.81 | -2.72 | -4.12  | -5.77  | -10.14 |

| 5750MHz Composite Gain |       |       |         |       |       |       |       |       |       |       |       |       |        |
|------------------------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Polarization           | Total |       | Channel | 13    |       | Freq  | 5750  | 7075  |       |       |       |       |        |
| Phi\Theta              | 0     | 15    | 30      | 45    | 60    | 75    | 90    | 105   | 120   | 135   | 150   | 165   | 180    |
| 0                      | -9.42 | -7.84 | -7.25   | -4.82 | -2.66 | -0.71 | 0.31  | 0.11  | -0.47 | -2.11 | -2.96 | -5.22 | -12.72 |
| 15                     | -9.28 | -8.81 | -7.90   | -5.01 | -1.93 | -0.80 | -0.16 | 0.09  | -0.21 | -1.55 | -3.42 | -4.73 | -12.72 |
| 30                     | -9.39 | -9.16 | -7.84   | -5.40 | -2.39 | 0.26  | 0.41  | -0.38 | -1.76 | -1.72 | -4.39 | -5.30 | -12.72 |
| 45                     | -9.41 | -8.75 | -8.16   | -4.10 | -2.36 | 0.39  | 0.30  | 0.09  | -2.04 | -1.93 | -4.91 | -5.90 | -12.72 |
| 60                     | -9.61 | -8.70 | -8.66   | -4.31 | -2.14 | 0.08  | -0.22 | -0.19 | -2.07 | -2.02 | -3.41 | -6.14 | -12.72 |
| 75                     | -9.67 | -8.65 | -8.21   | -4.22 | -1.88 | -1.12 | -0.77 | -1.13 | -2.75 | -1.17 | -2.04 | -4.93 | -12.72 |
| 90                     | -9.51 | -8.47 | -8.24   | -6.25 | -2.27 | -1.96 | -0.88 | -0.07 | -3.61 | -2.88 | -2.93 | -3.13 | -12.72 |
| 105                    | -9.38 | -8.28 | -7.84   | -4.88 | -2.94 | -1.65 | -0.91 | -1.23 | -2.69 | -3.81 | -4.85 | -2.89 | -12.72 |
| 120                    | -9.47 | -8.22 | -6.49   | -2.66 | -1.15 | -1.43 | 0.56  | -0.90 | -0.88 | -2.81 | -5.72 | -3.96 | -12.72 |
| 135                    | -9.37 | -8.34 | -6.60   | -2.94 | -0.69 | 0.06  | 2.10  | 1.60  | -0.13 | -1.97 | -6.16 | -6.45 | -12.72 |
| 150                    | -9.40 | -8.58 | -7.02   | -2.29 | 0.14  | 0.81  | 1.12  | -0.26 | -1.13 | -2.30 | -5.26 | -6.95 | -12.72 |
| 165                    | -9.38 | -8.58 | -7.26   | -2.85 | -2.47 | 0.62  | 0.14  | 0.00  | -0.50 | -1.92 | -4.36 | -6.44 | -12.72 |
| 180                    | -9.35 | -8.65 | -7.91   | -3.68 | -2.65 | 1.19  | -0.14 | 1.09  | -0.37 | -1.23 | -3.66 | -6.10 | -12.72 |
| 195                    | -9.40 | -9.21 | -7.69   | -2.76 | -1.19 | 0.82  | 0.23  | 0.85  | 0.15  | -0.97 | -2.71 | -5.31 | -12.72 |
| 210                    | -9.39 | -9.41 | -7.11   | -2.38 | -0.43 | -0.56 | 0.25  | -1.85 | -2.19 | -2.13 | -2.44 | -4.59 | -12.72 |
| 225                    | -9.39 | -9.77 | -7.41   | -3.24 | -0.92 | 0.36  | -0.19 | -1.10 | -4.96 | -3.50 | -3.94 | -4.96 | -12.72 |

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|     |       |        |       |       |       |       |       |       |       |       |       |       |        |
|-----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 240 | -9.41 | -10.29 | -7.81 | -4.75 | -2.70 | -1.71 | -0.19 | -1.40 | -1.14 | -3.59 | -5.68 | -4.42 | -12.72 |
| 255 | -9.29 | -10.50 | -7.05 | -4.47 | -3.58 | -2.64 | 0.69  | -2.22 | 0.06  | -2.61 | -5.00 | -3.81 | -12.72 |
| 270 | -9.26 | -10.22 | -7.67 | -2.99 | -4.06 | -3.12 | -1.31 | -1.35 | -0.98 | -3.47 | -6.92 | -4.19 | -12.72 |
| 285 | -9.31 | -9.23  | -8.30 | -3.51 | -3.81 | -1.76 | -1.18 | -1.35 | -0.92 | -3.99 | -5.23 | -4.25 | -12.72 |
| 300 | -9.30 | -7.97  | -7.72 | -4.29 | -4.40 | -0.95 | -0.95 | -0.60 | -0.71 | -6.11 | -4.42 | -4.20 | -12.72 |
| 315 | -9.44 | -7.27  | -7.23 | -4.37 | -2.18 | -1.13 | -0.67 | -1.12 | -1.16 | -3.48 | -4.81 | -4.78 | -12.72 |
| 330 | -9.62 | -7.24  | -7.19 | -5.62 | -2.07 | -0.96 | -0.50 | -0.69 | -2.12 | -2.62 | -5.11 | -5.07 | -12.72 |
| 345 | -9.57 | -7.38  | -6.80 | -5.11 | -4.25 | -1.38 | -0.36 | -0.22 | -1.20 | -1.43 | -3.87 | -5.86 | -12.72 |