





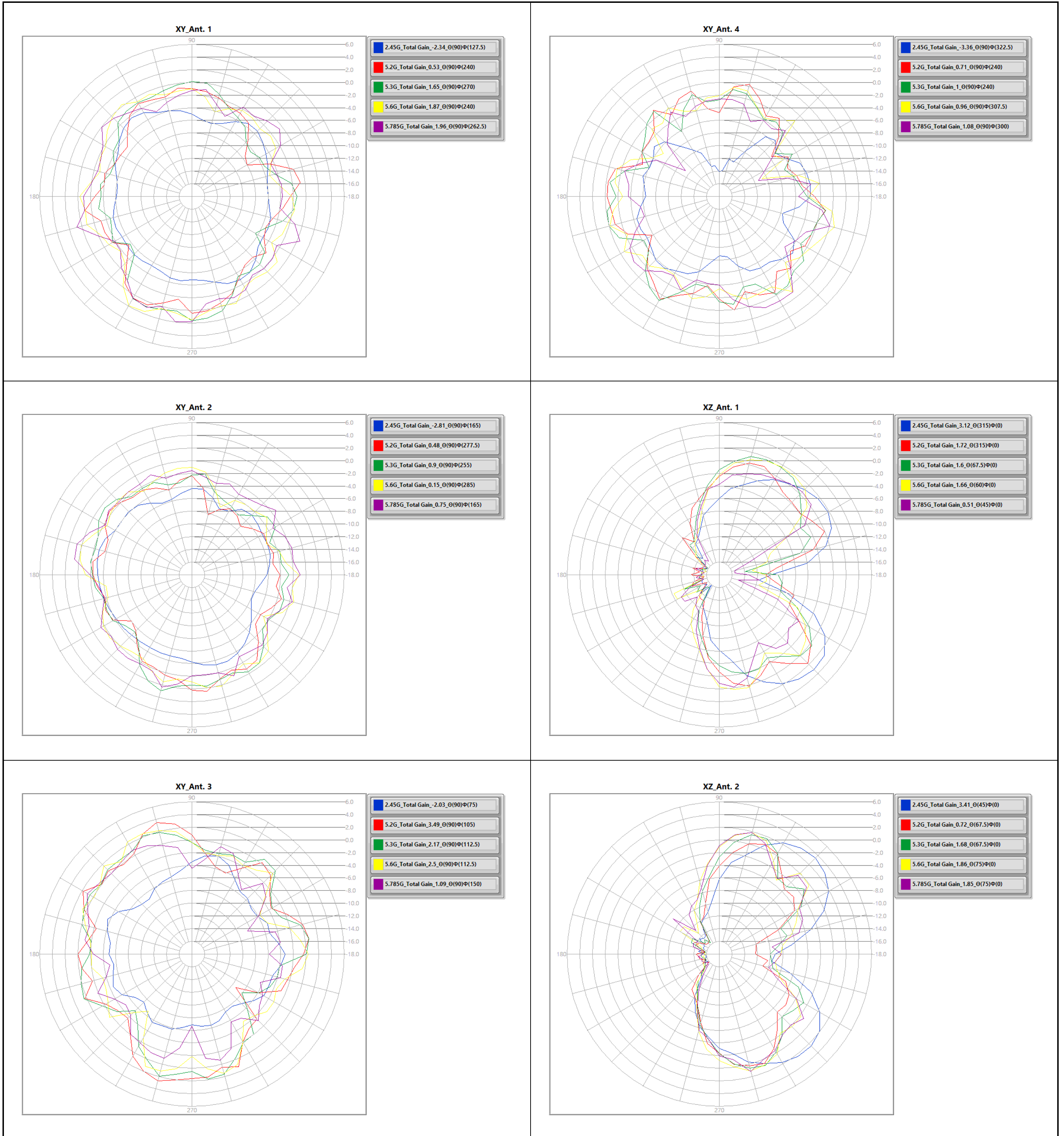


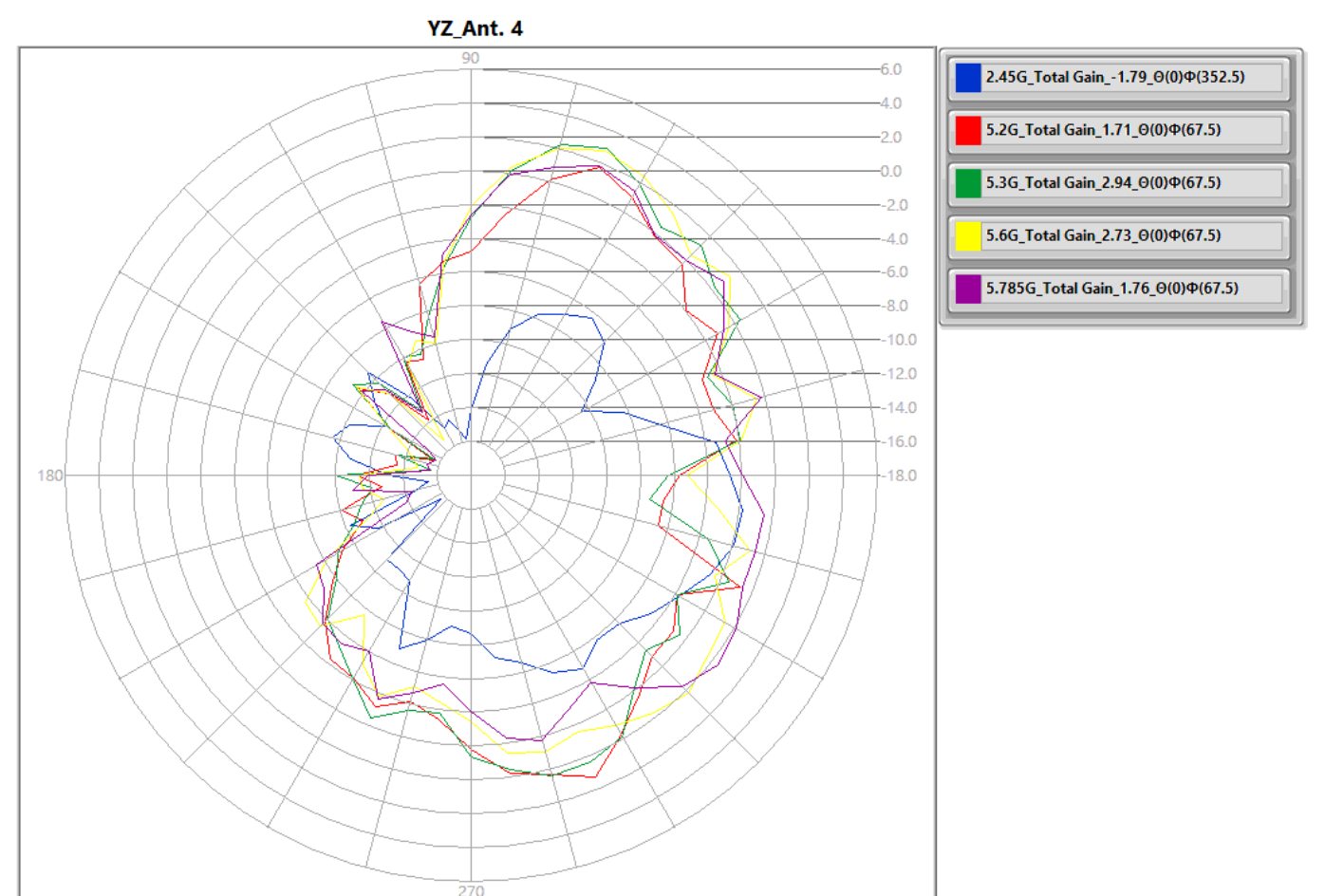
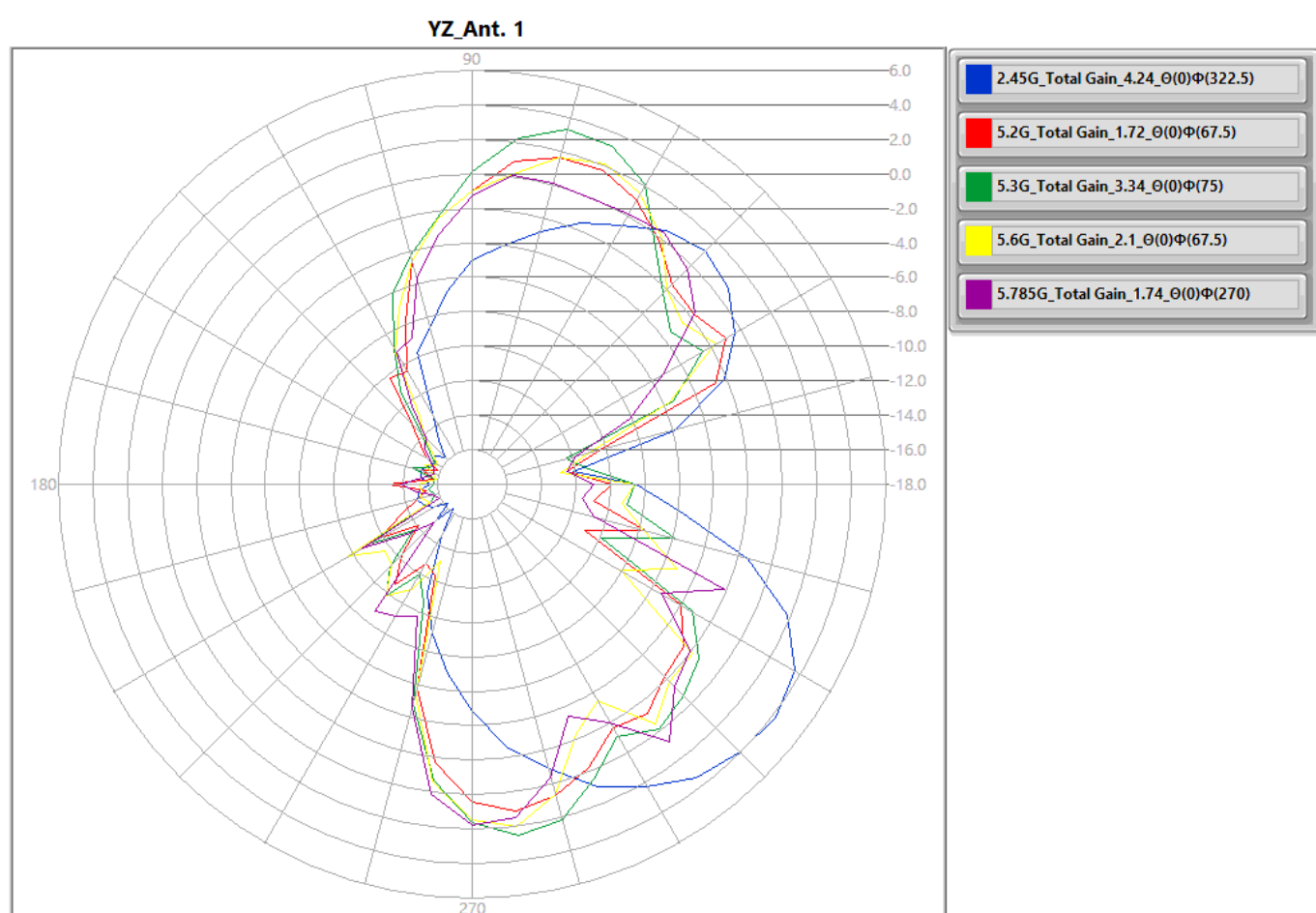
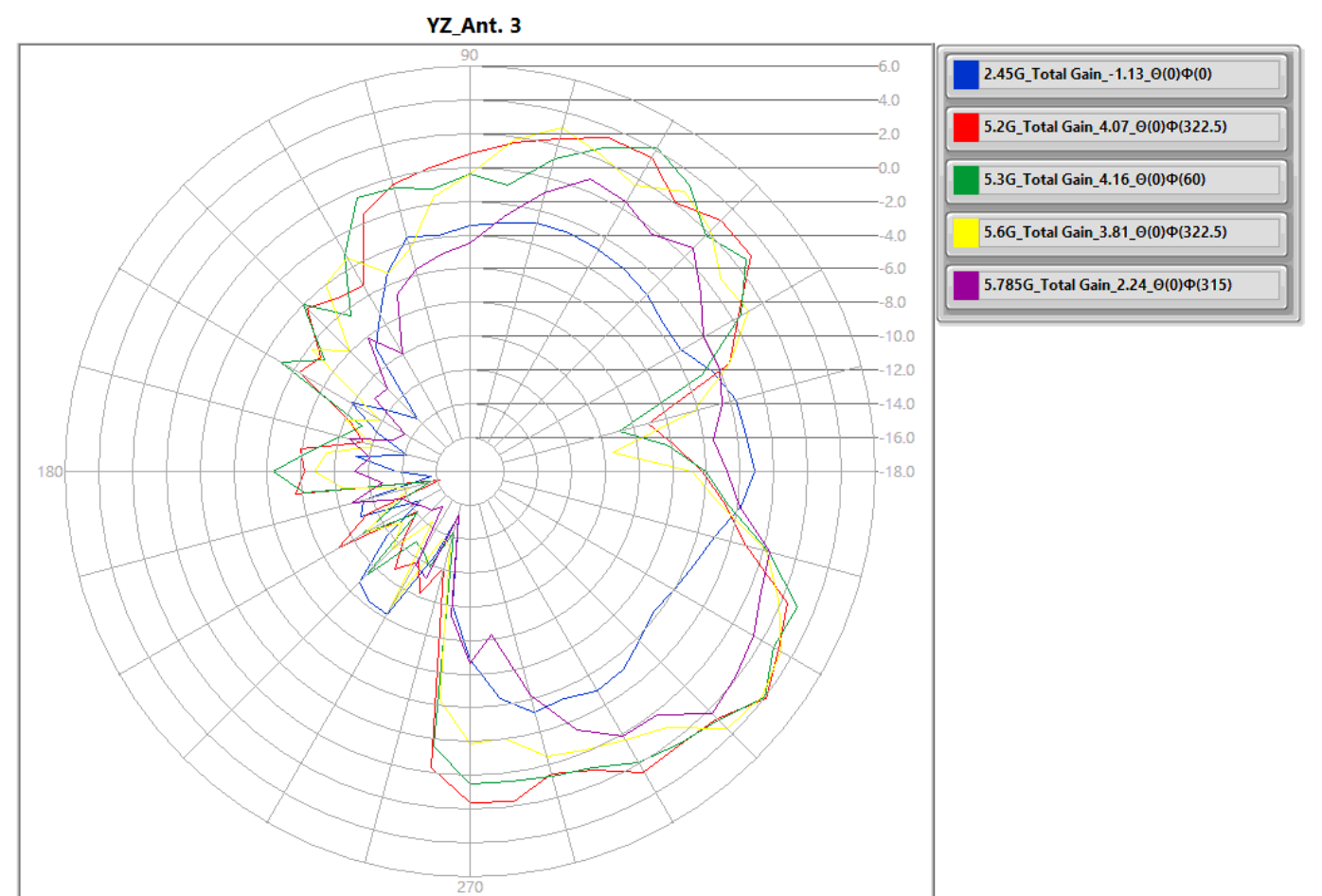
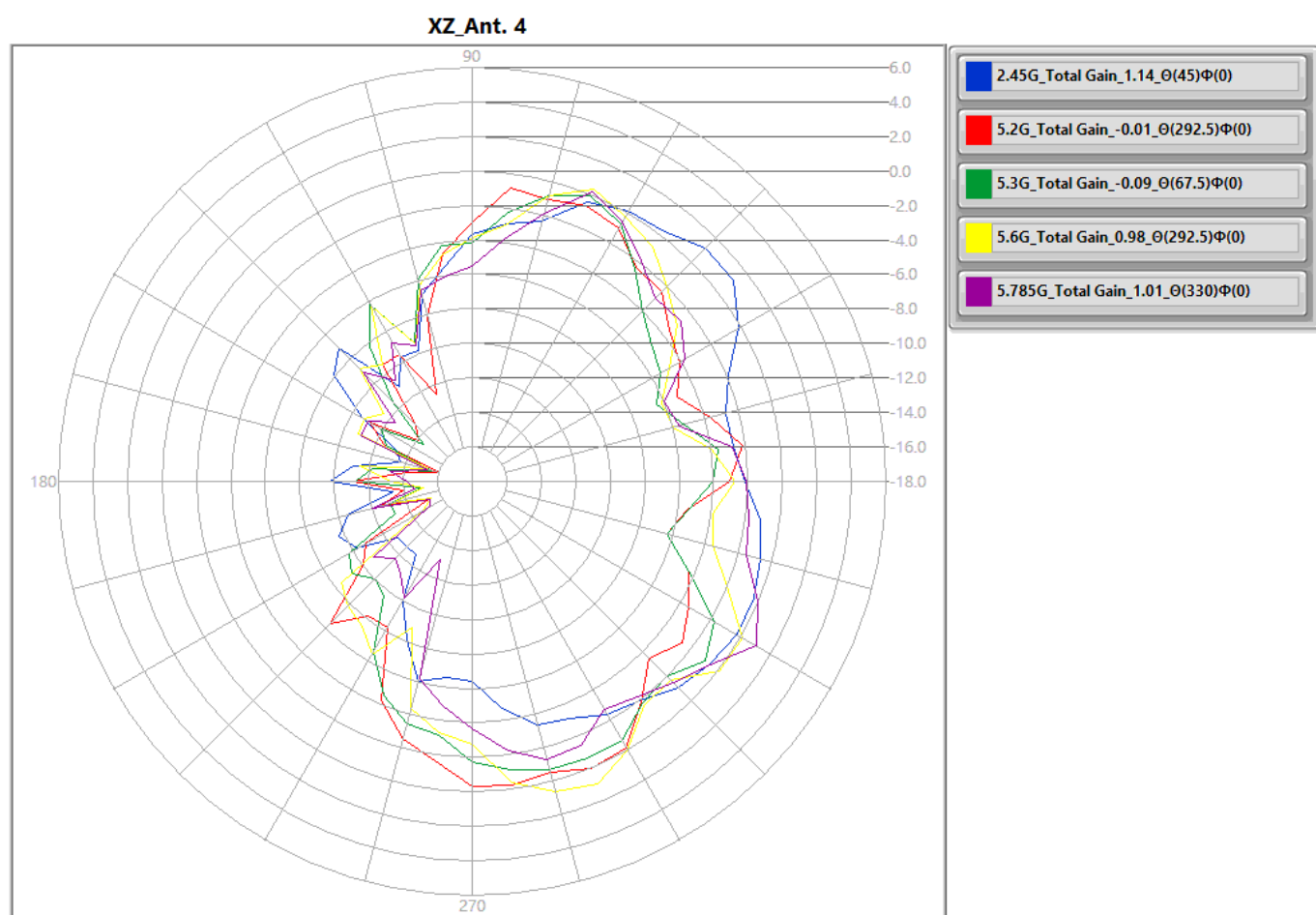
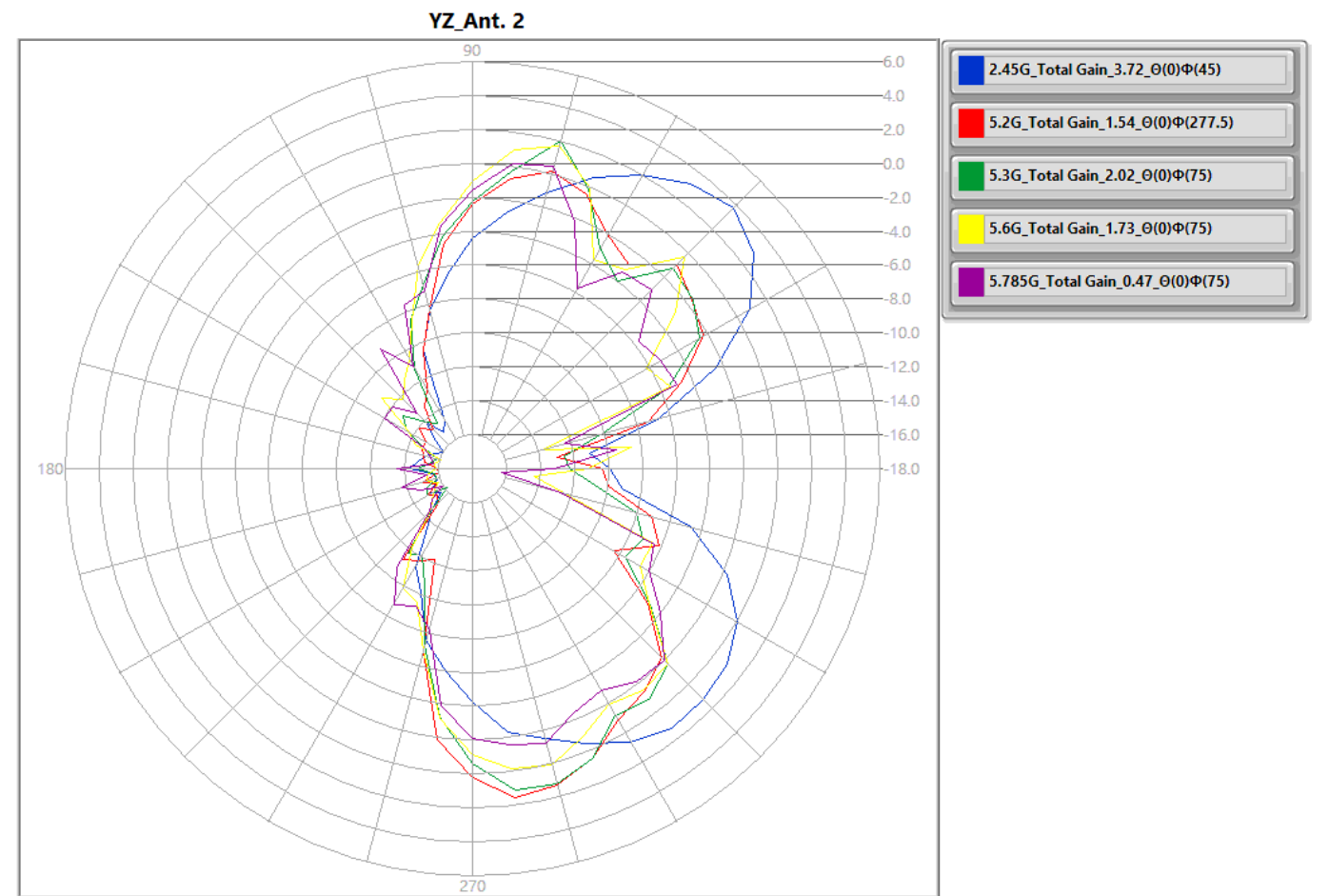
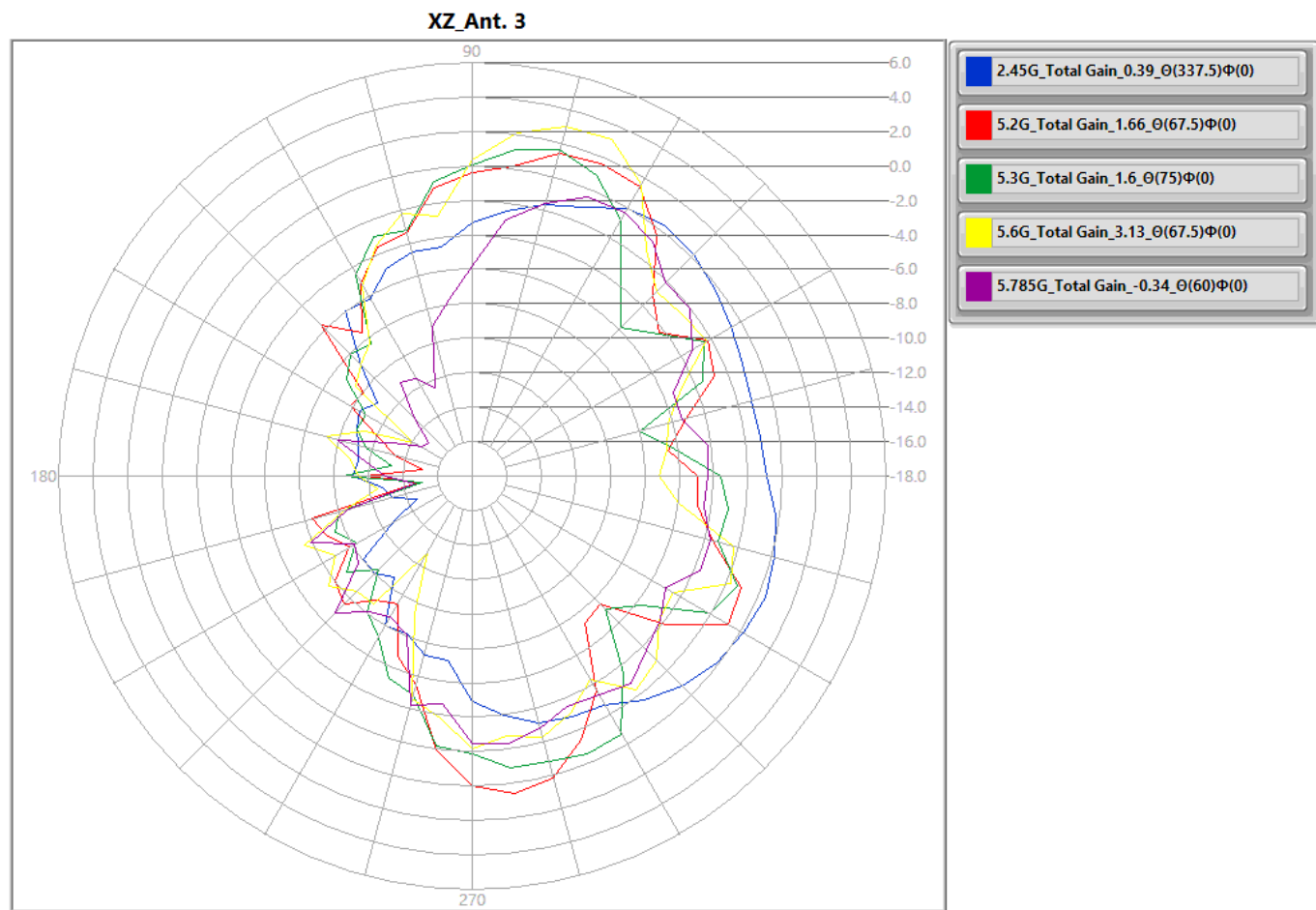






E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$







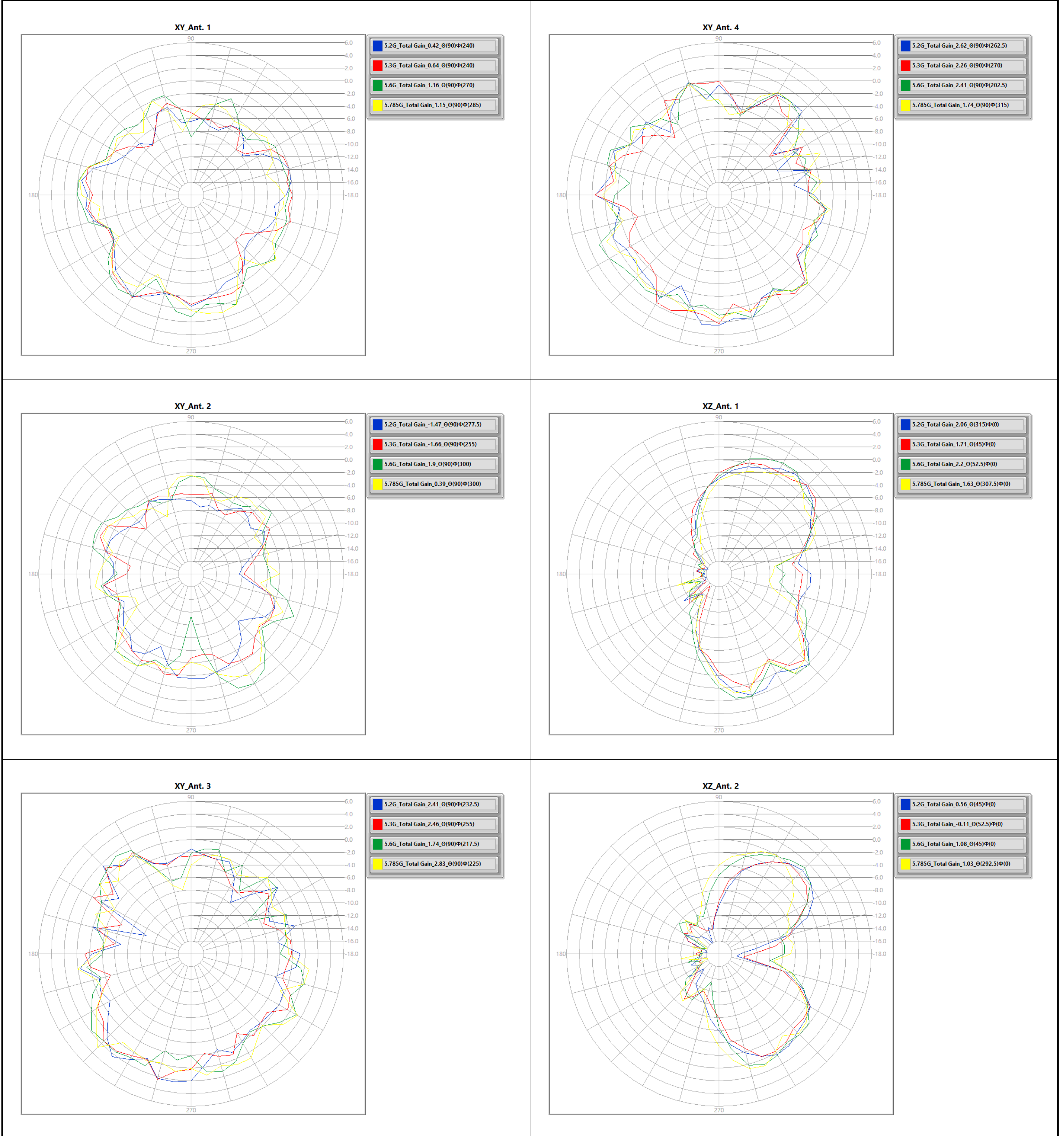
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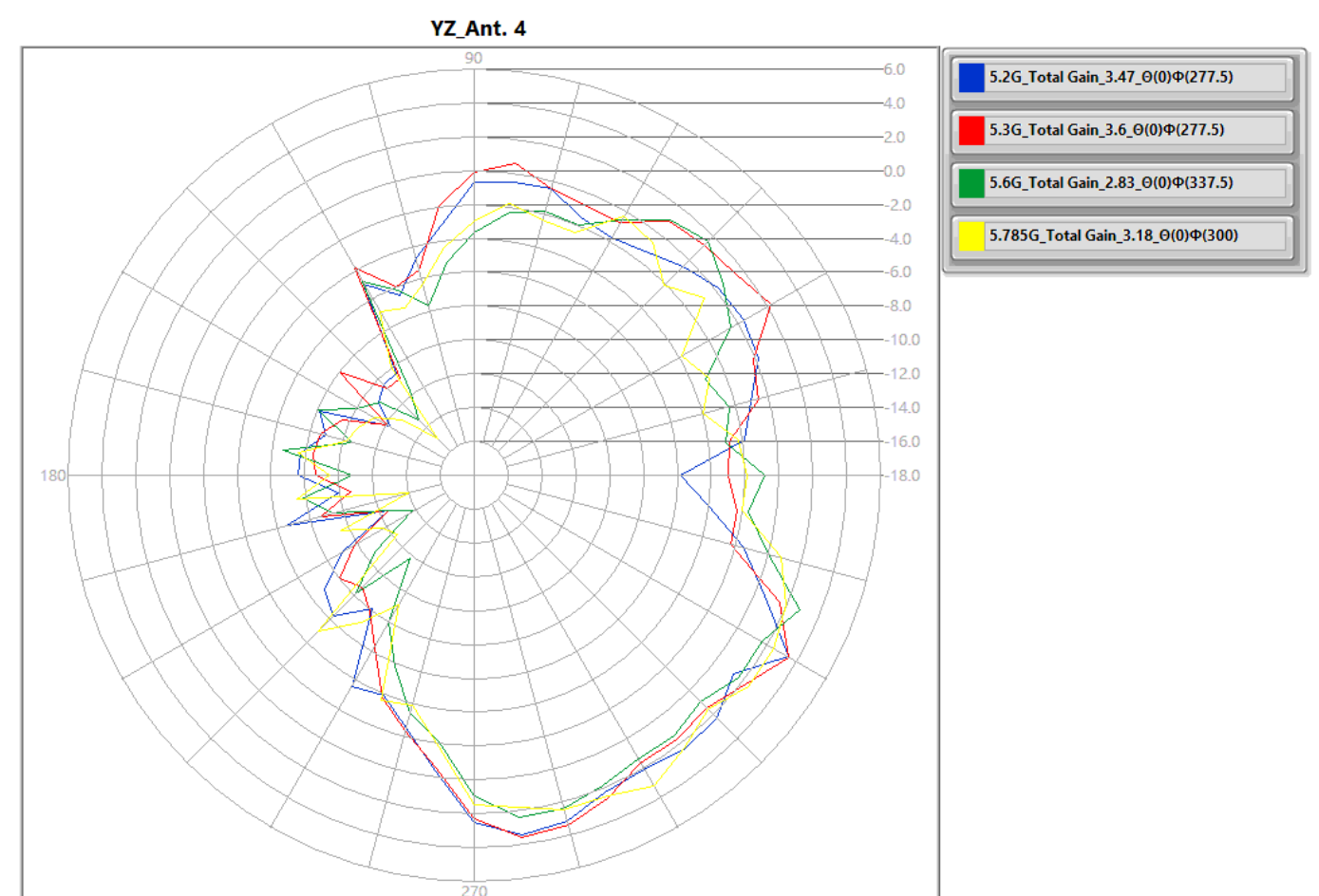
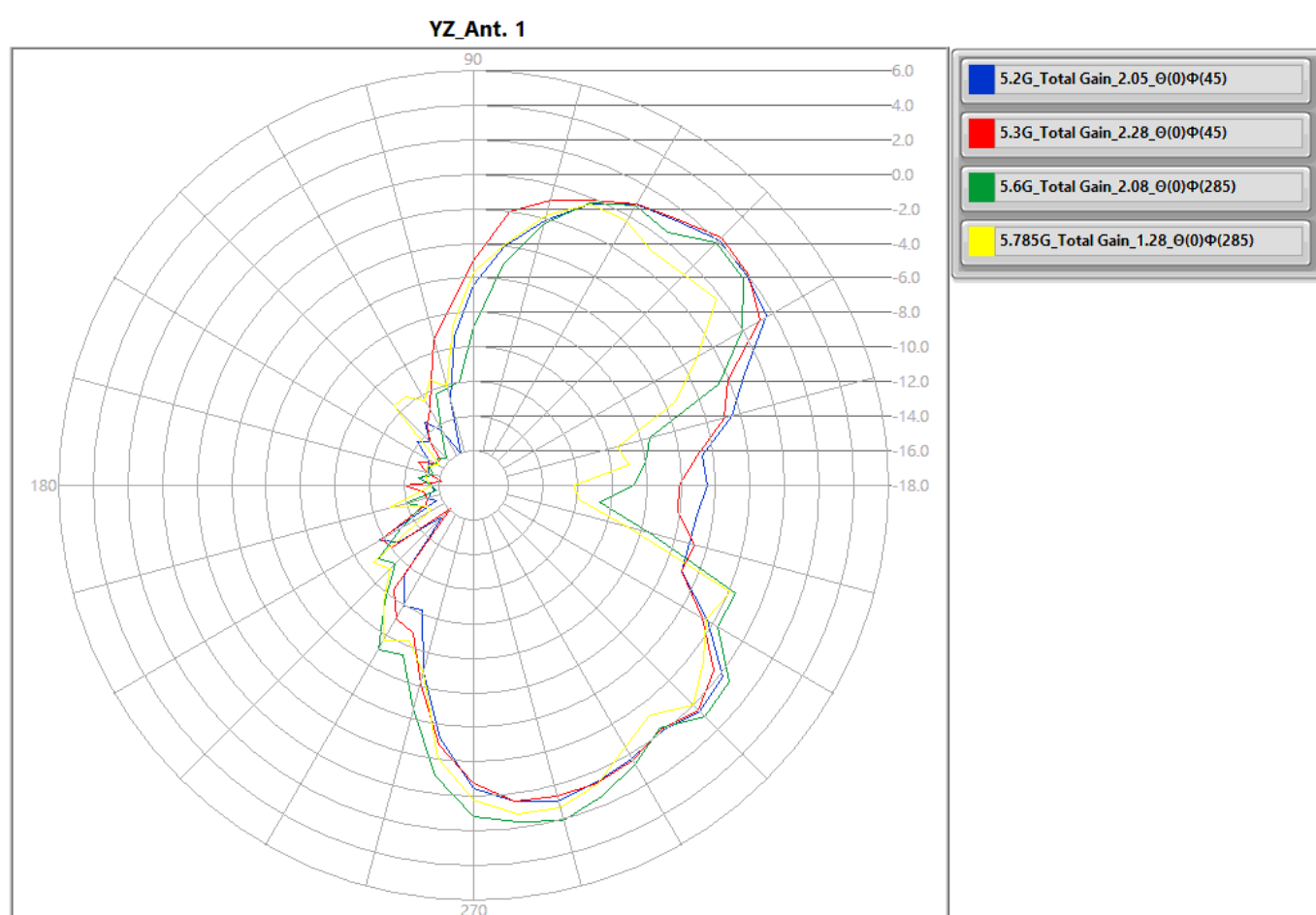
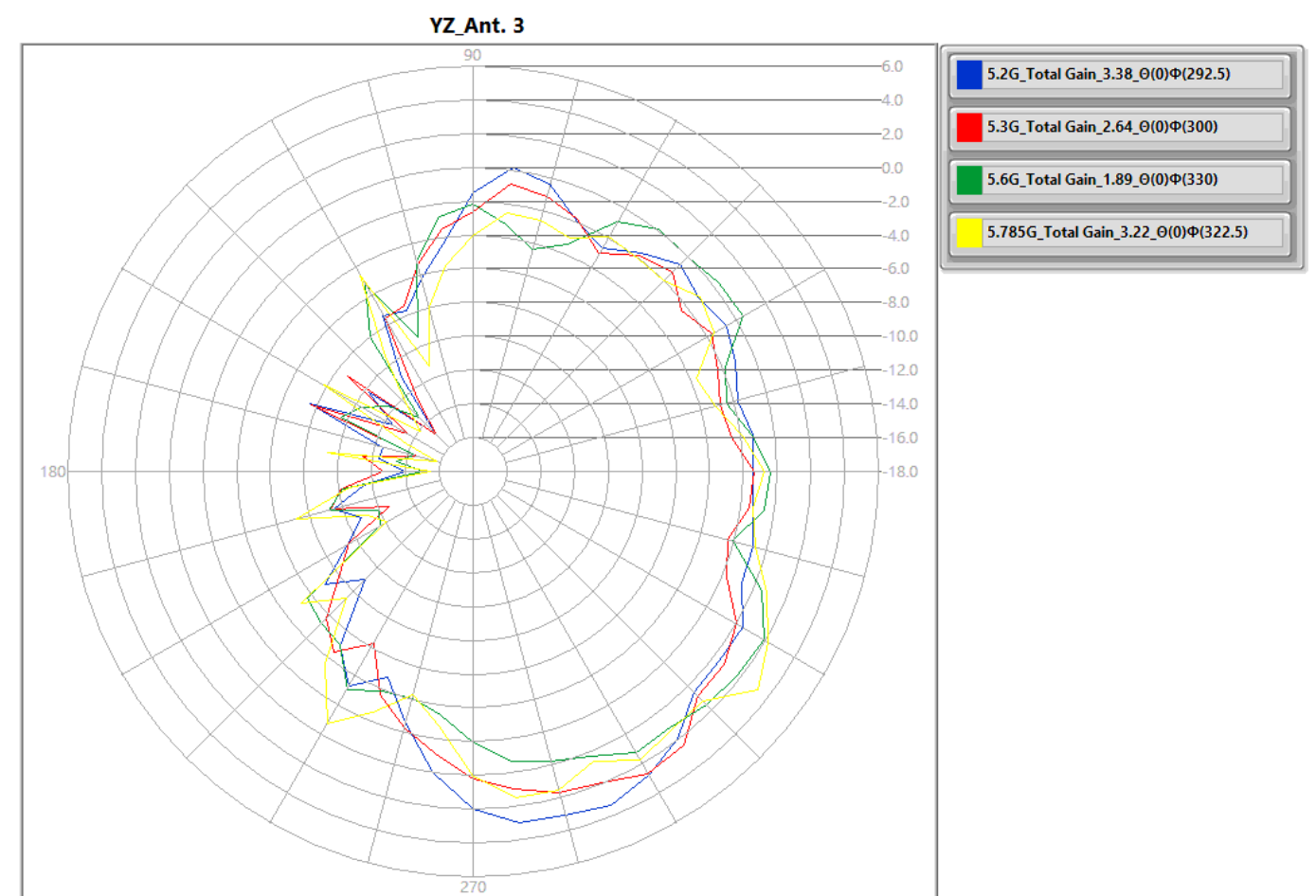
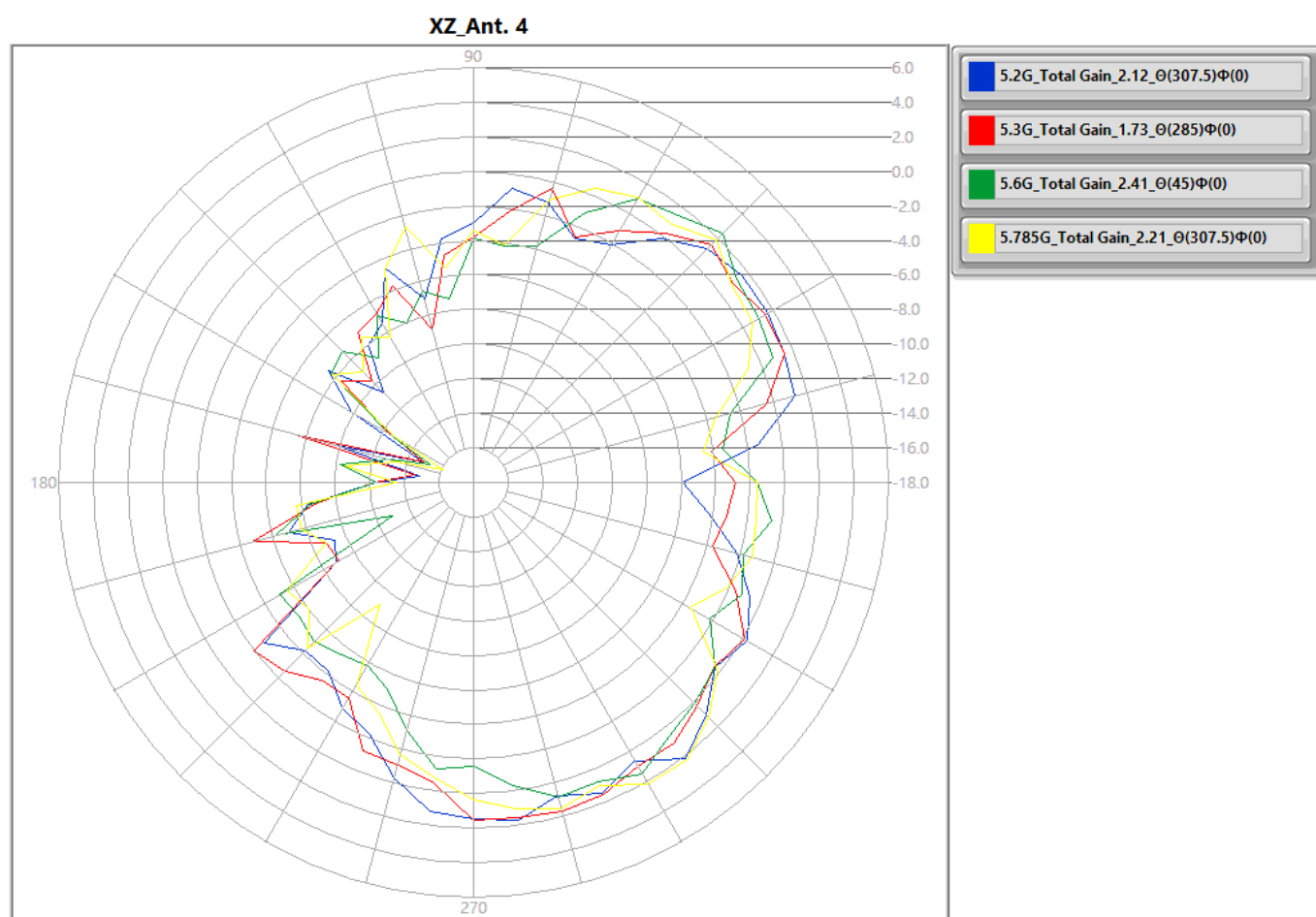
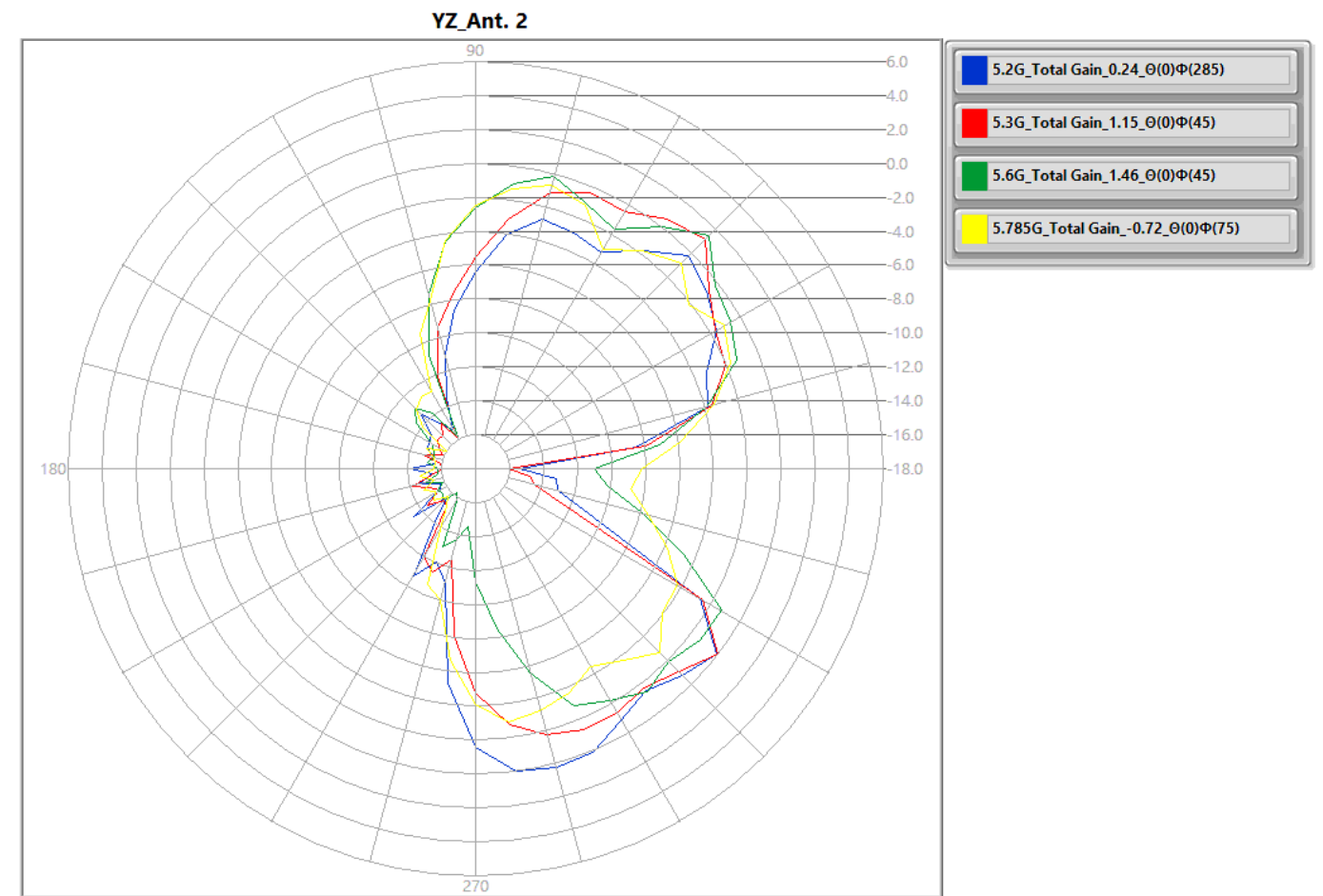
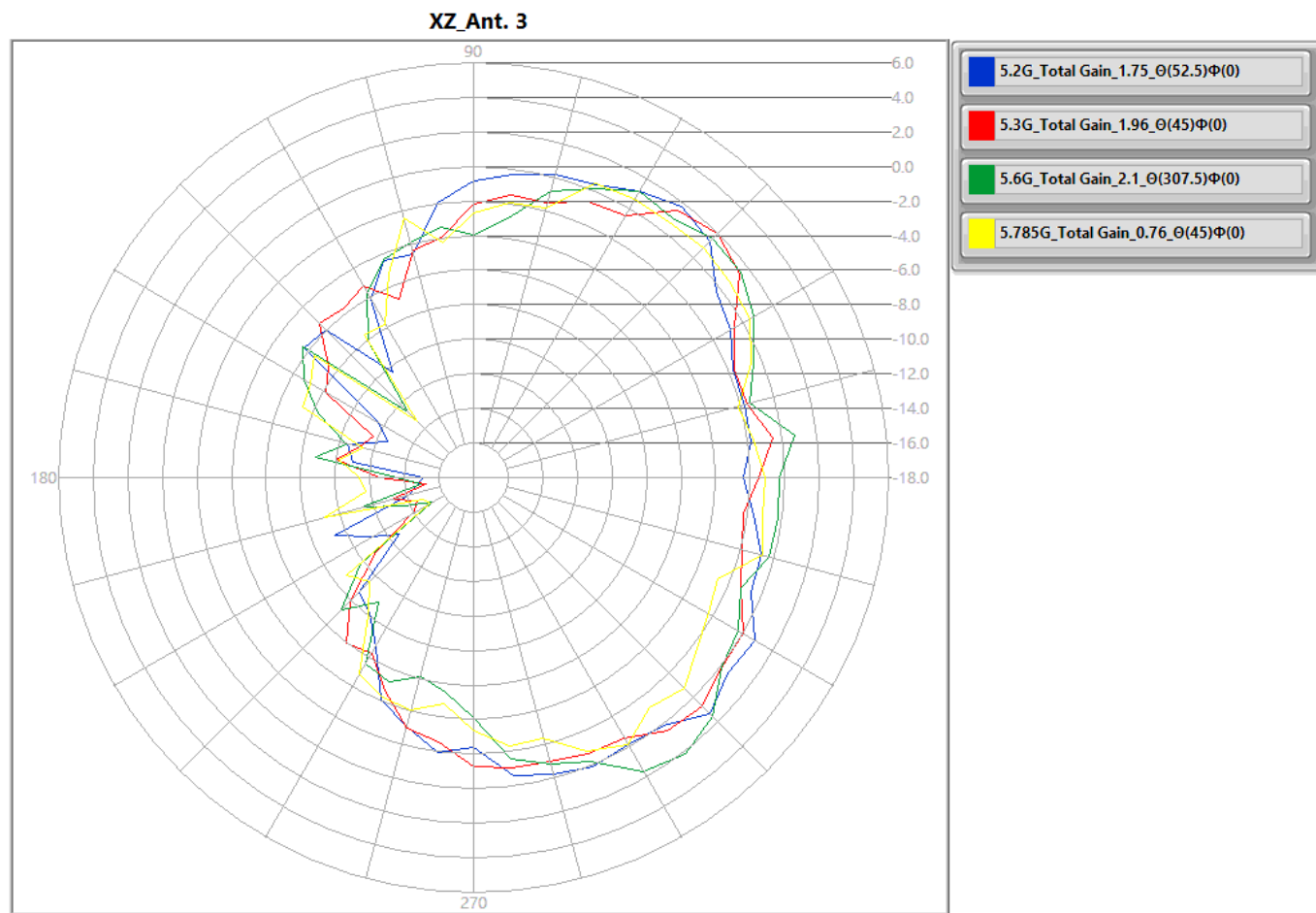






E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
 E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
 E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$





## Total Gain Data

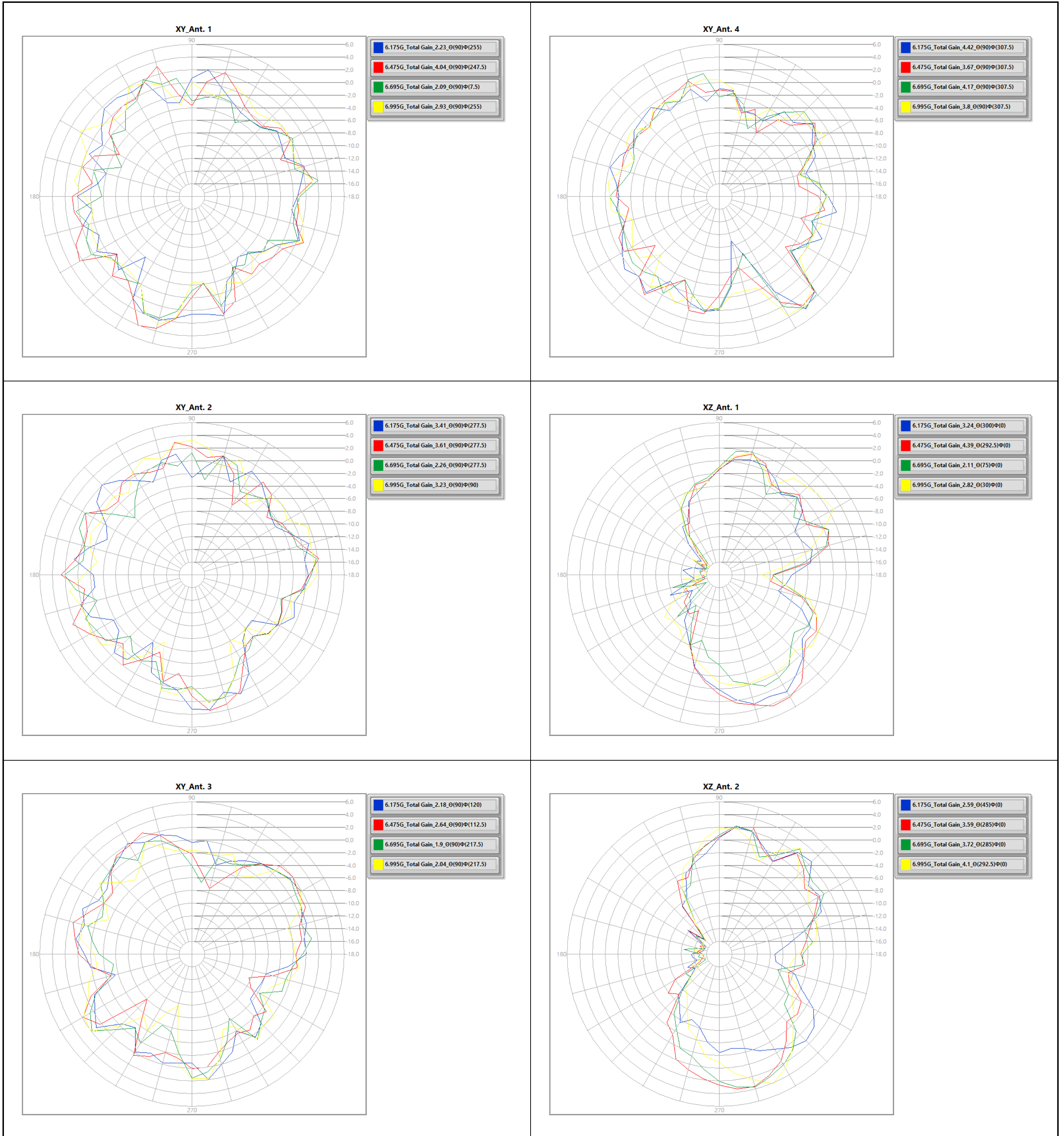
| Freq(Hz) | 6.175GPa      | TotalAnt.1      | +               | +               | +               | +               | +               | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 |                   |                   |                   |                   |
|----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Gain     | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)    | -6.59/-5.86   | -5.96/-5.80     | -5.64/-5.66     | -4.98/-4.73     | -4.89/-4.95     | -5.15/-4.53     | -4.53/-4.22     | -4.08/-4.65       | -4.49/-3.58       | -3.64/-4.10       | -3.88/-3.53       | -3.84/-4.39       | -4.39/-4.27       | -3.84/-3.92       | -4.39/-5.48       | -4.02/-3.62       | -4.19/-4.90       | -5.15/-4.95       | -6.12/-6.18       | -5.19/-5.66       | -7.53/-7.21       | -6.63/-6.41       | -6.51/-6.10       | -6.30/-7.15       |
| Θ(7.5°)  | -3.56/-3.39   | -3.76/-4.58     | -4.86/-4.56     | -5.34/-5.30     | -5.46/-6.25     | -5.74/-6.72     | -7.14/-7.62     | -7.56/-7.09       | -7.41/-6.58       | -6.25/-7.72       | -7.21/-7.83       | -7.34/-6.76       | -6.26/-6.26       | -5.68/-6.26       | -4.58/-5.58       | -5.68/-5.44       | -5.58/-5.46       | -5.80/-5.68       | -6.47/-4.73       | -4.48/-5.38       | -4.35/-4.17       | -3.33/-3.81       | -3.20/-2.97       | -3.48/-4.07       |
| Θ(15°)   | -2.85/-2.32   | -2.65/-3.74     | -4.38/-5.07     | -6.10/-6.61     | -6.61/-7.76     | -9.95/-11.05    | -10.45/-12.13   | -15.43/-13.42     | -14.46/-11.69     | -9.37/-8.41       | -7.50/-7.20       | -7.21/-7.95       | -8.37/-8.63       | -7.73/-7.34       | -6.93/-6.00       | -4.27/-3.24       | -2.32/-2.14       | -1.99/-1.80       | -1.71/-1.78       | -1.41/-1.24       | -1.84/-2.35       | -2.68/-3.17       | -3.51/-3.79       | -4.48/-3.60       |
| Θ(22.5°) | -3.96/-2.16   | -1.79/-2.55     | -3.34/-4.15     | -3.92/-3.52     | -3.82/-4.40     | -6.34/-7.72     | -7.90/-9.80     | -9.54/-9.85       | -11.58/-11.30     | -10.78/-8.59      | -6.02/-4.62       | -3.86/-3.62       | -3.91/-4.72       | -5.24/-3.71       | -1.78/-1.00       | -0.65/-0.50       | -0.34/-0.07       | 0.070/0.23        | 1.011/1.84        | 2.159/-1.56       | 0.47/-0.62        | -1.39/-2.41       | -3.78/-4.76       | -5.01/-4.72       |
| Θ(30°)   | -4.29/-2.88   | -2.16/-2.90     | -2.70/-2.29     | -1.52/-1.73     | -1.64/-3.91     | -1.07/-1.46     | -6.16/-4.13     | -2.51/-2.81       | -3.67/-3.65       | -4.48/-5.11       | -1.62/-1.62       | -1.32/-2.58       | -3.24/-3.39       | -3.49/-1.67       | -0.63/-1.78       | -2.83/-2.66       | 2.593/0.4         | 3.102/3.1         | 3.102/3.1         | -0.21/-1.97       | -1.19/-0.76       | -0.72/-0.31       | -1.29/-0.44       | -1.29/-0.44       |
| Θ(37.5°) | -1.39/-2.73   | -1.95/-1.58     | -2.00/-3.25     | -2.16/-1.30     | -1.70/-3.55     | -4.78/-3.80     | -2.69/-1.65     | -0.30/-0.03       | -0.58/-0.65       | -0.58/-1.34       | -1.65/-1.73       | -0.47/-1.07       | -1.48/-2.67       | -2.78/-3.70       | -1.23/-0.46       | -0.280/0.53       | 1.282/0.2         | 1.781/7.1         | 1.351/66          | 0.880/27          | 0.440/47          | 0.751/33          | 0.391/01          | 1.19/-0.12        |
| Θ(45°)   | -0.71/-1.17   | -0.40/-0.38     | -0.73/-1.39     | -1.76/-0.32     | -0.34/-1.76     | -2.23/-1.74     | -0.76/-0.70     | -1.00/-0.46       | -0.78/-0.77       | 0.220/38          | 0.50/-0.18        | 0.891/29          | 0.63/-0.67        | -0.65/-2.60       | -1.21/-1.91       | -1.12/-0.52       | 0.360/75          | 2.082/23          | 1.811/52          | -0.080/09         | 0.74/-0.37        | -0.011/0.4        | 1.390/92          | 0.780/71          |
| Θ(52.5°) | -2.02/-2.49   | -1.030/-1.7     | -0.10/-0.50     | 0.030/-0.45     | -0.48/-0.29     | 0.04/-0.12      | 0.360/75        | 0.270/71          | 1.030/52          | 1.11/86           | 2.101/41          | 1.872/63          | 1.881/34          | 0.890/48          | 0.900/49          | 0.915/55          | 2.070/98          | 0.20/-1.35        | -1.001/05         | 1.280/05          | -1.080/66         | 1.500/-0.77       | -1.491/-160       |                   |
| Θ(60°)   | -0.47/-1.02   | -0.070/0.52     | 0.940/7.1       | 0.510/-9.2      | -0.24/-0.48     | -0.252/1.0      | 2.911/77        | 0.941/53          | 2.622/07          | 1.902/23          | 3.523/16          | 1.463/34          | 3.242/90          | 1.960/79          | 1.27/-0.59        | -0.820/1.1        | 0.811/45          | 0.39/-0.80        | -1.26/-1.87       | -0.41/-1.44       | 0.41/-2.60        | -4.42/-4.21       | -1.98/-2.91       | -4.99/-4.41       |
| Θ(67.5°) | 0.631/89      | 2.220/49        | 0.901/75        | 1.100/78        | -0.32/-0.40     | 0.993/29        | 3.101/54        | 1.011/52          | 3.543/52          | 2.913/33          | <b>3.683/12</b>   | 0.192/46          | 2.771/91          | 1.131/41          | 1.78/-1.84        | -2.75/-1.28       | 1.371/80          | -2.26/-5.46       | -8.92/-8.98       | -3.31/-0.72       | -4.86/-5.70       | -5.56/-8.47       | -5.06/-0.28       | -0.18/-1.33       |
| Θ(75°)   | 0.792/45      | 2.7             |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |

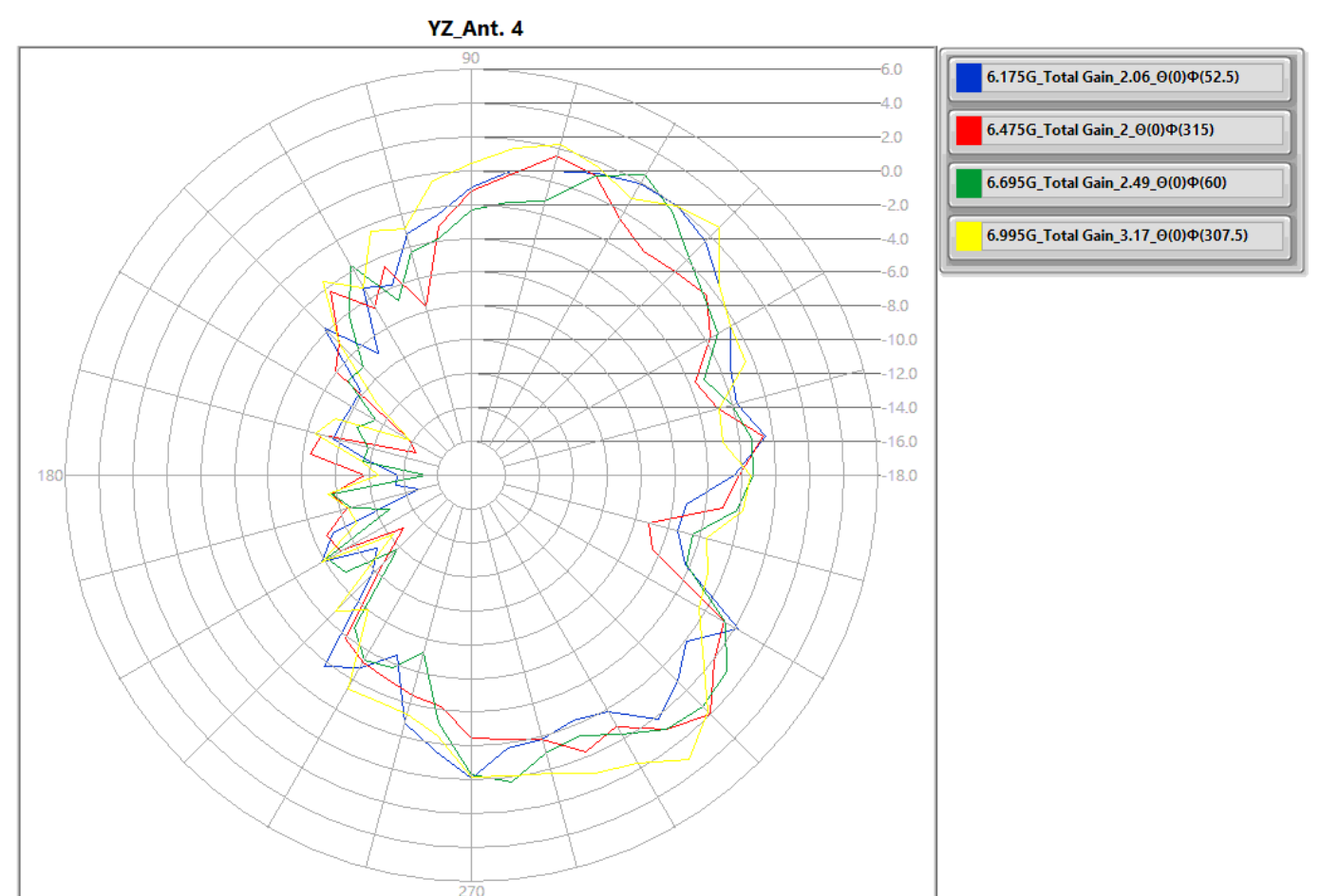
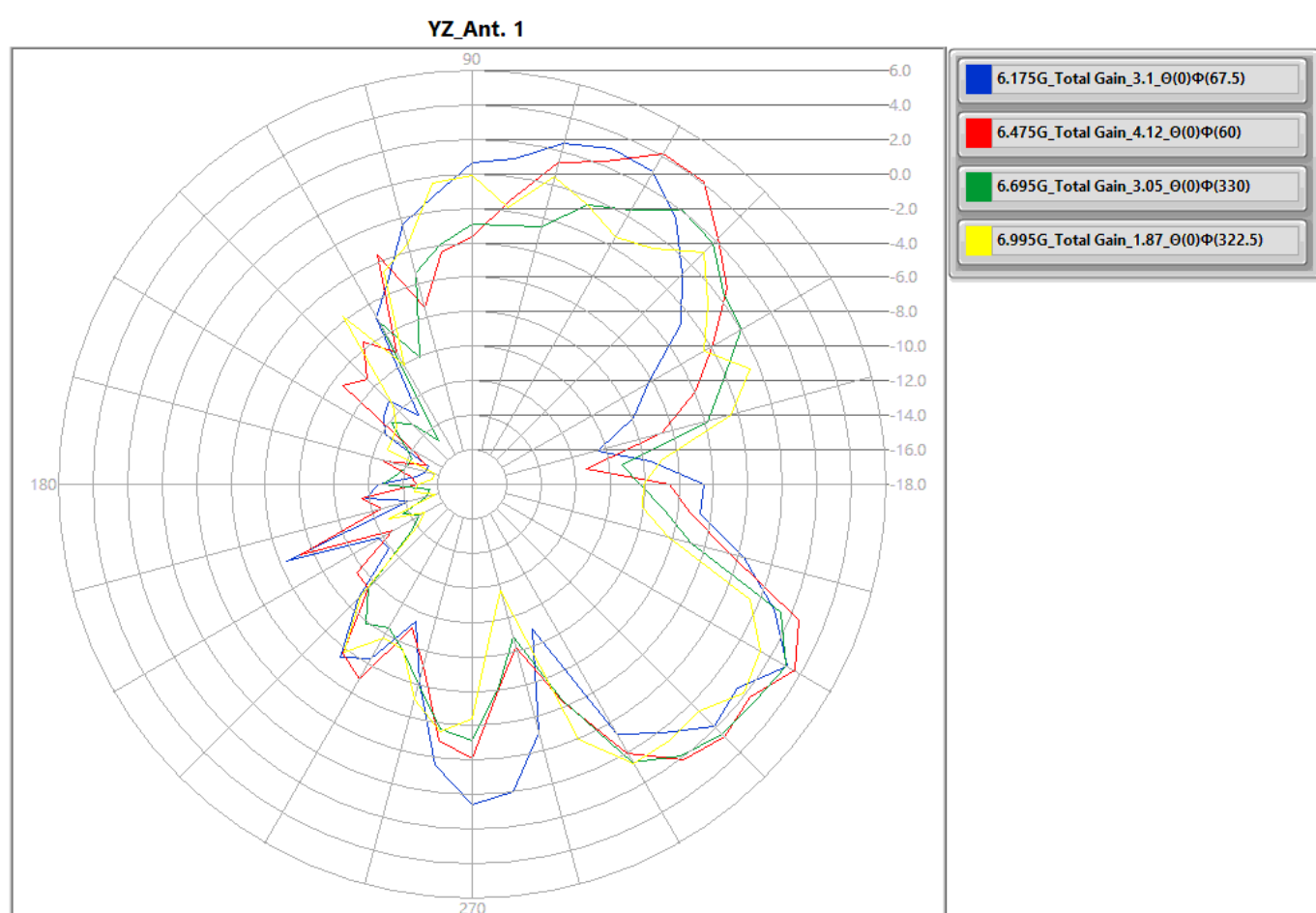
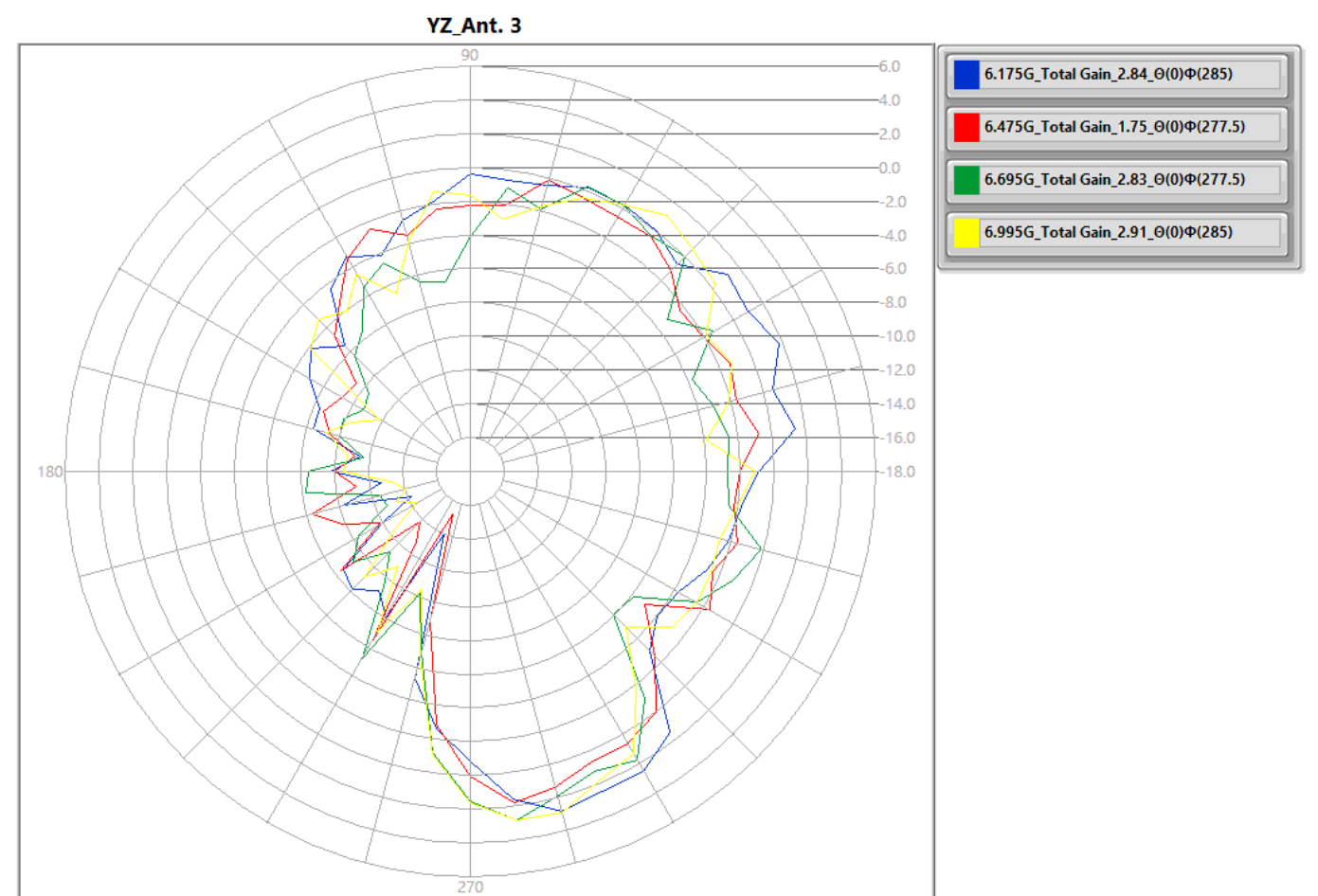
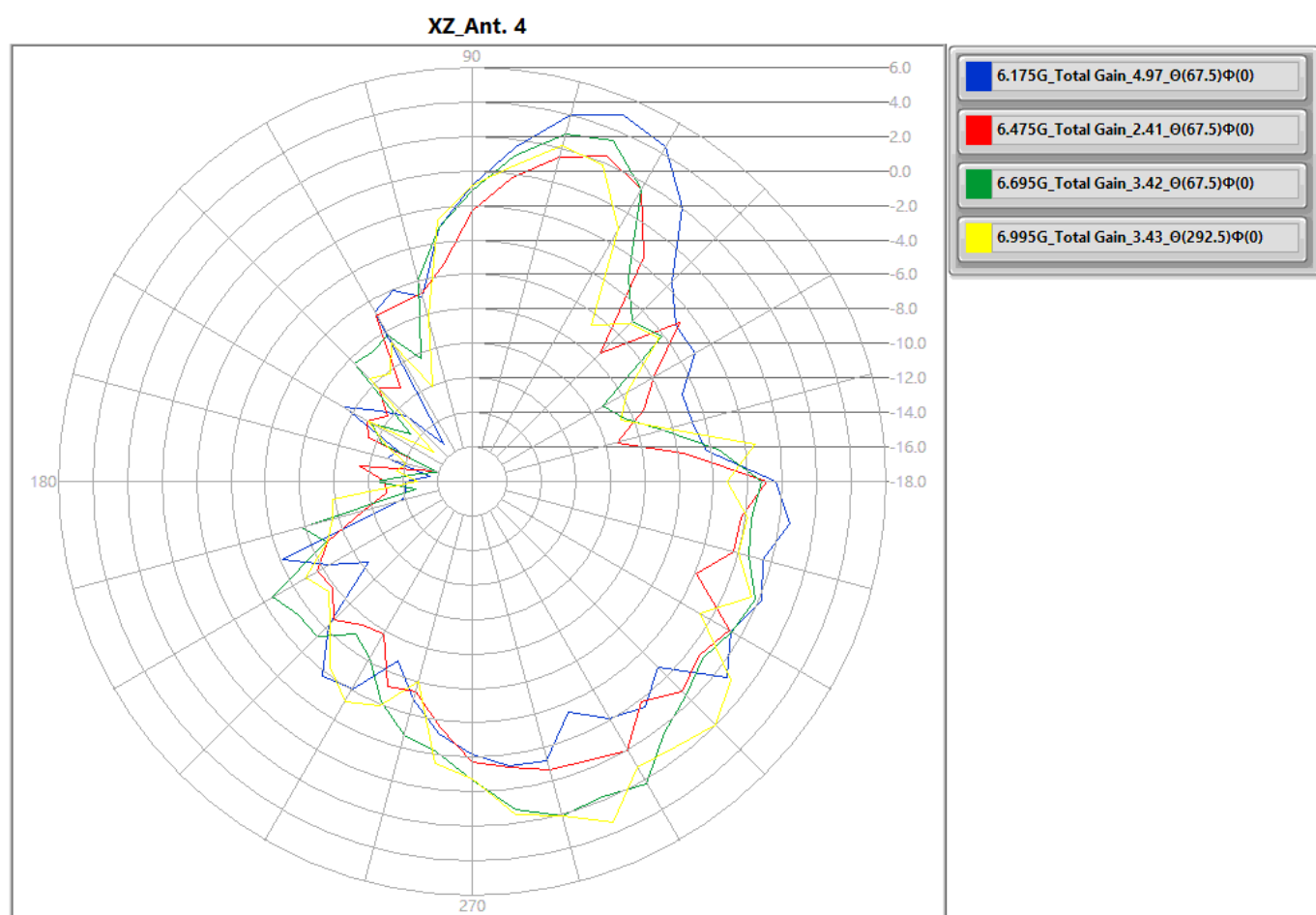
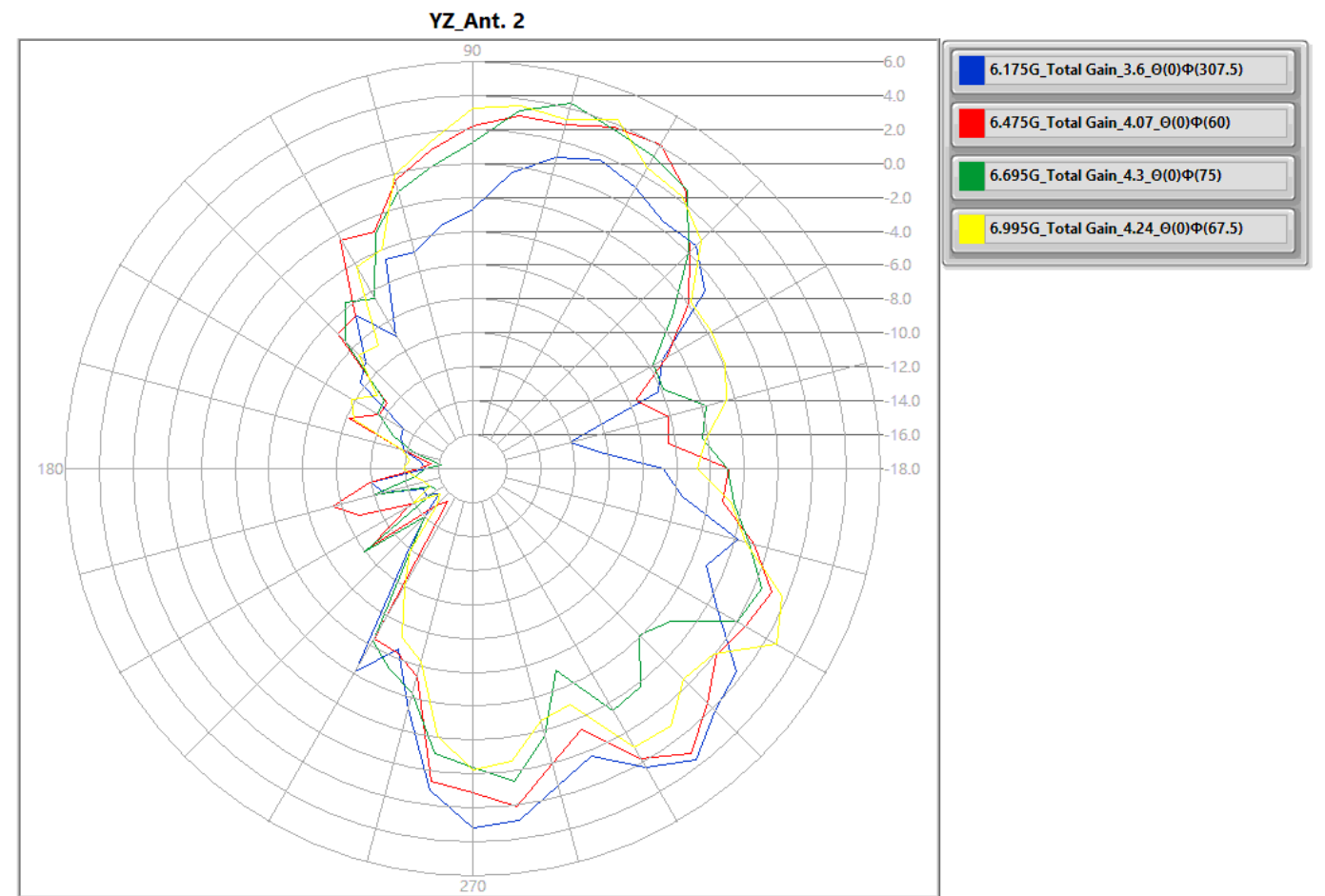
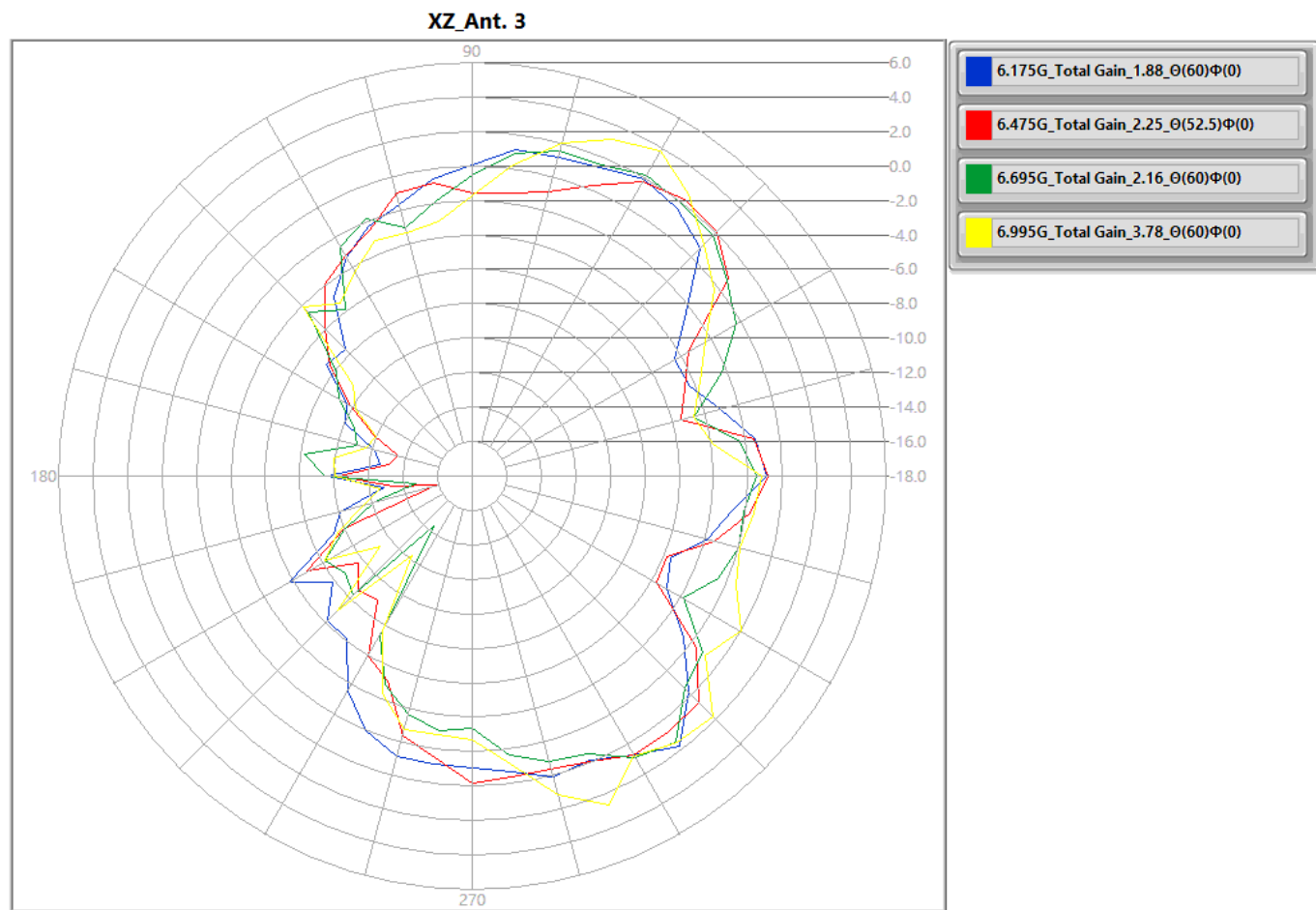






E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$







### ***Antenna Pattern of Radio 4 2.4GHz, 5GHz, 6GHz and Radio 5 Bluetooth/Zigbee (EUT 1)***

## Appendix R

## Total Gain Data

[illegible]

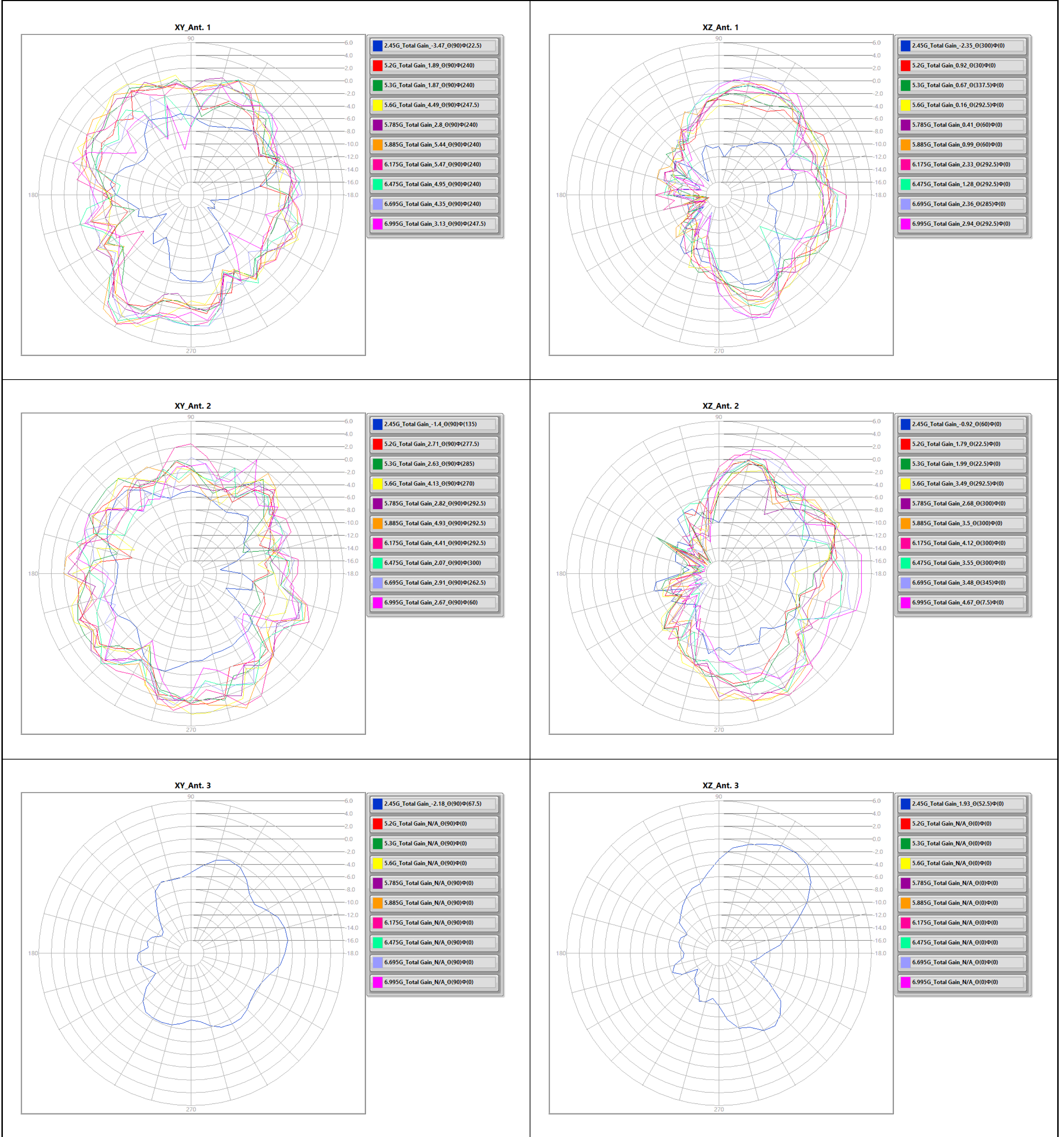


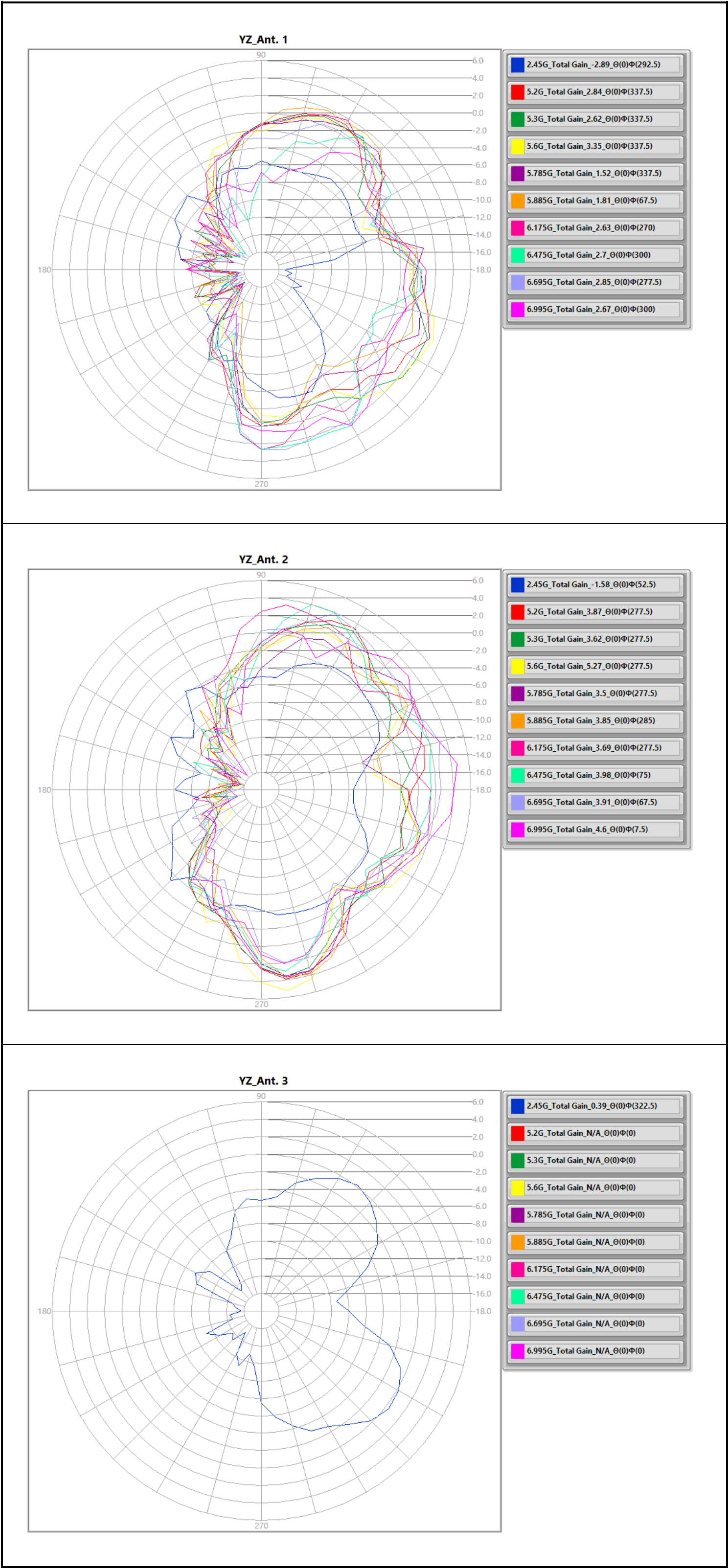






E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
 E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
 E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$







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