

# **GENERAL DYNAMICS**

## SATCOM Technologies

### 2.4m Ka-Band Rx/Tx Antenna System

Series 3244

2310 Test Report



East Maiden Antenna Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650  
828-428-1485 / 828-428-1488 fax

# **GENERAL DYNAMICS**

## SATCOM Technologies

2.4m Ka Band CP Rx/Tx Antenna System / Series 3244



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2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

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## SECTION 1

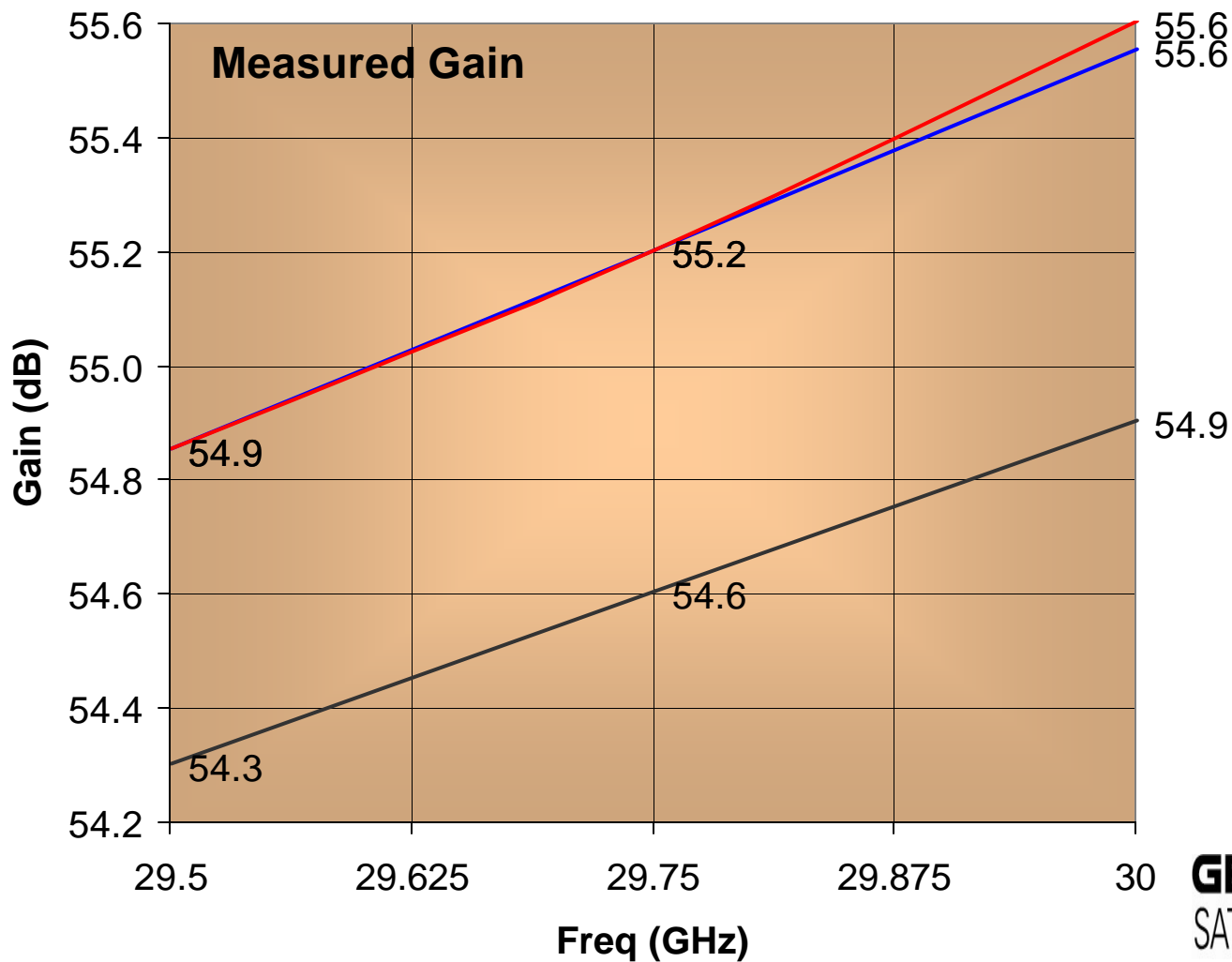
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2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

### Measured Gain

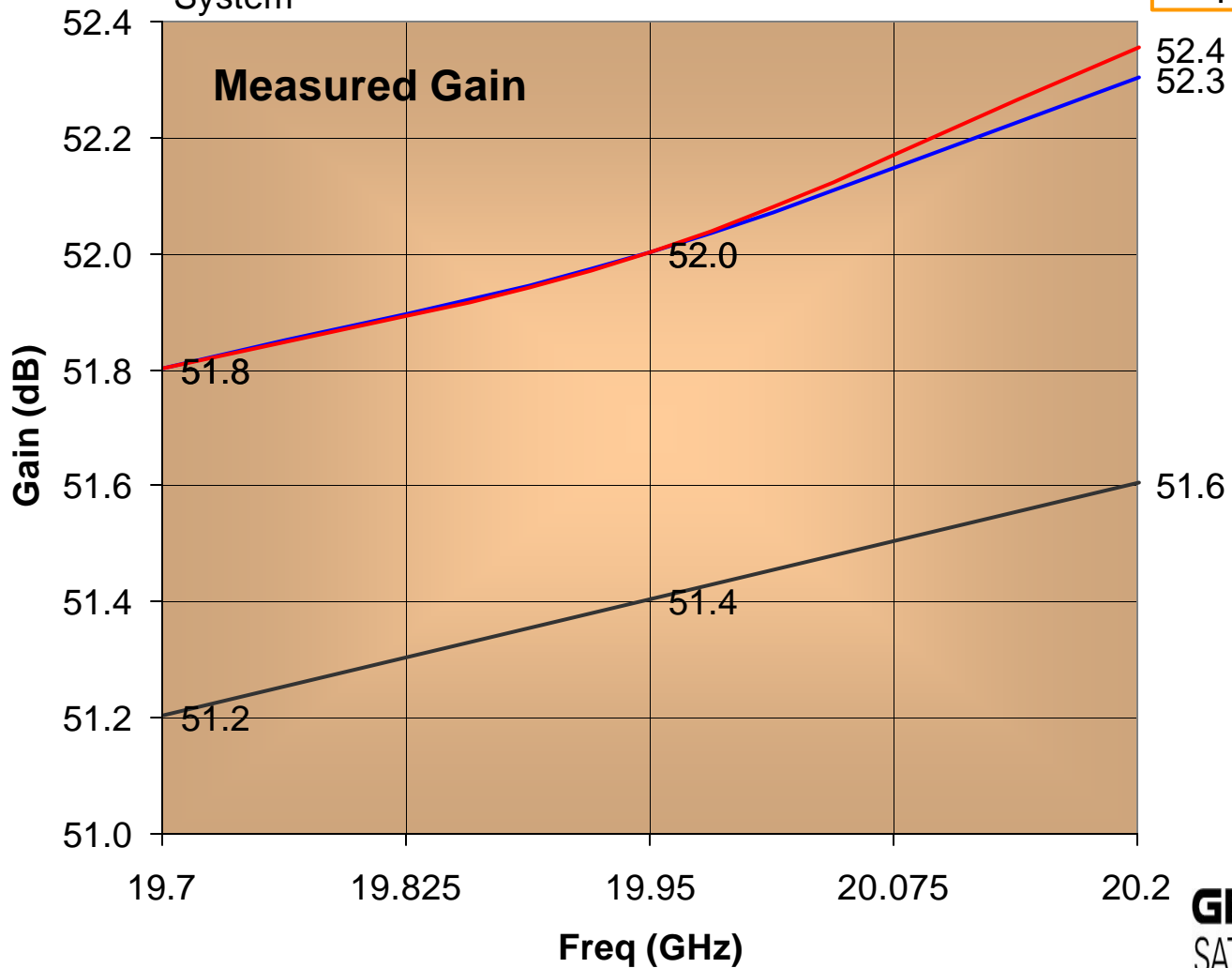
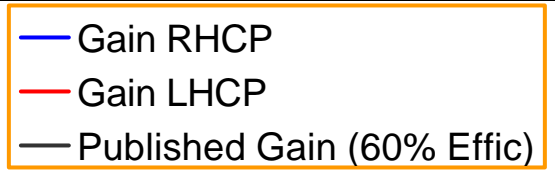
3244 Series  
2.4m Ka-Band Rx/Tx Antenna  
System

- Gain RHCP
- Gain LHCP
- Published Gain (60% Effic)



**GENERAL DYNAMICS**  
SATCOM Technologies

3244 Series  
2.4m Ka-Band Rx/Tx Antenna  
System



**GENERAL DYNAMICS**  
SATCOM Technologies

## SECTION 2

---

2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

### **RHCP Tx**

### Radiation Patterns

3244 Production KA system  
Ka CP Tx/Rx

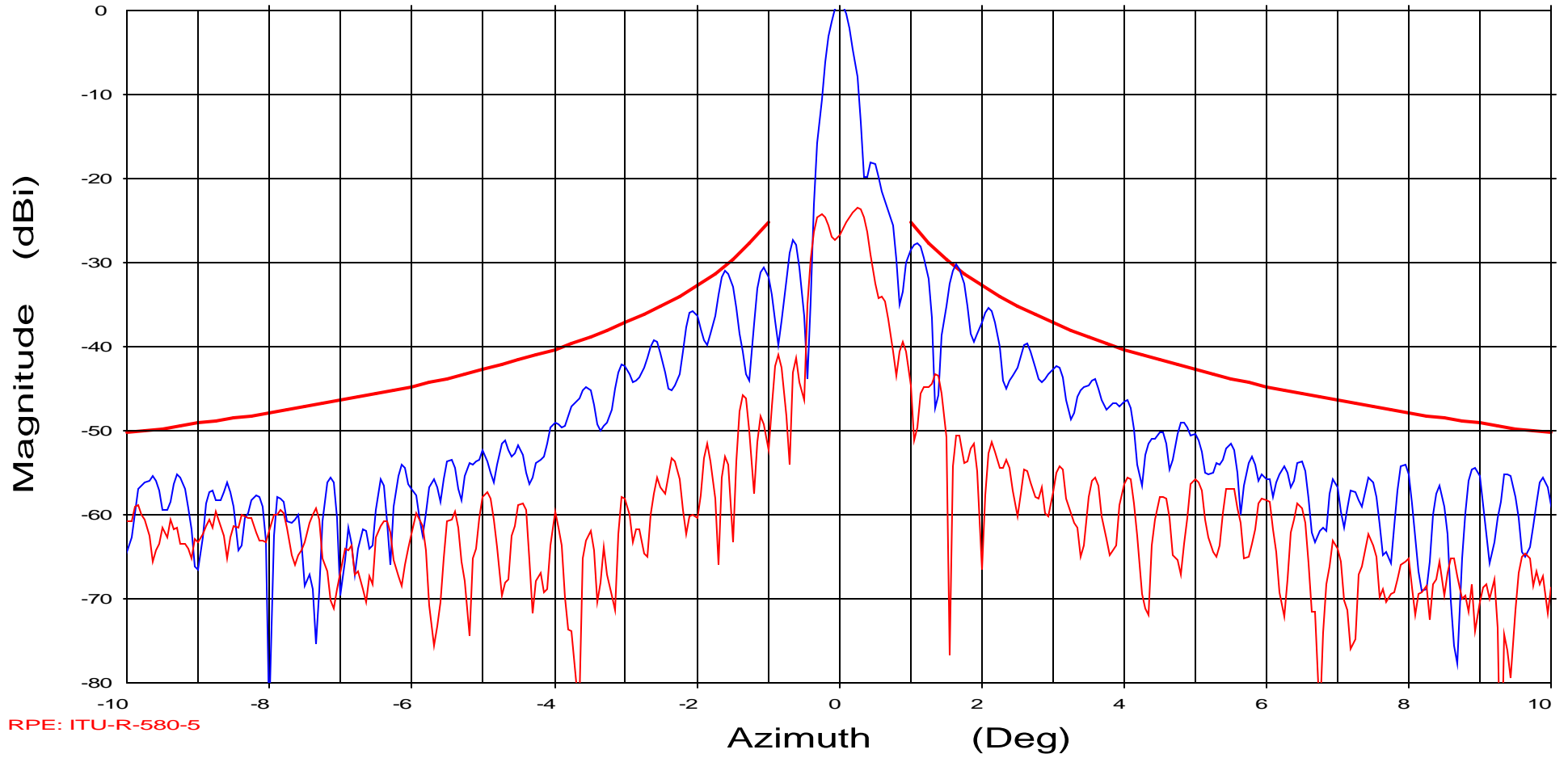
Frequency : 29.200 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

Overlays

2310 50.dat-ant\_under\_test — blue line  
2310 52.dat-ant\_under\_test — red line



3244 Production KA system  
Ka CP Tx/Rx

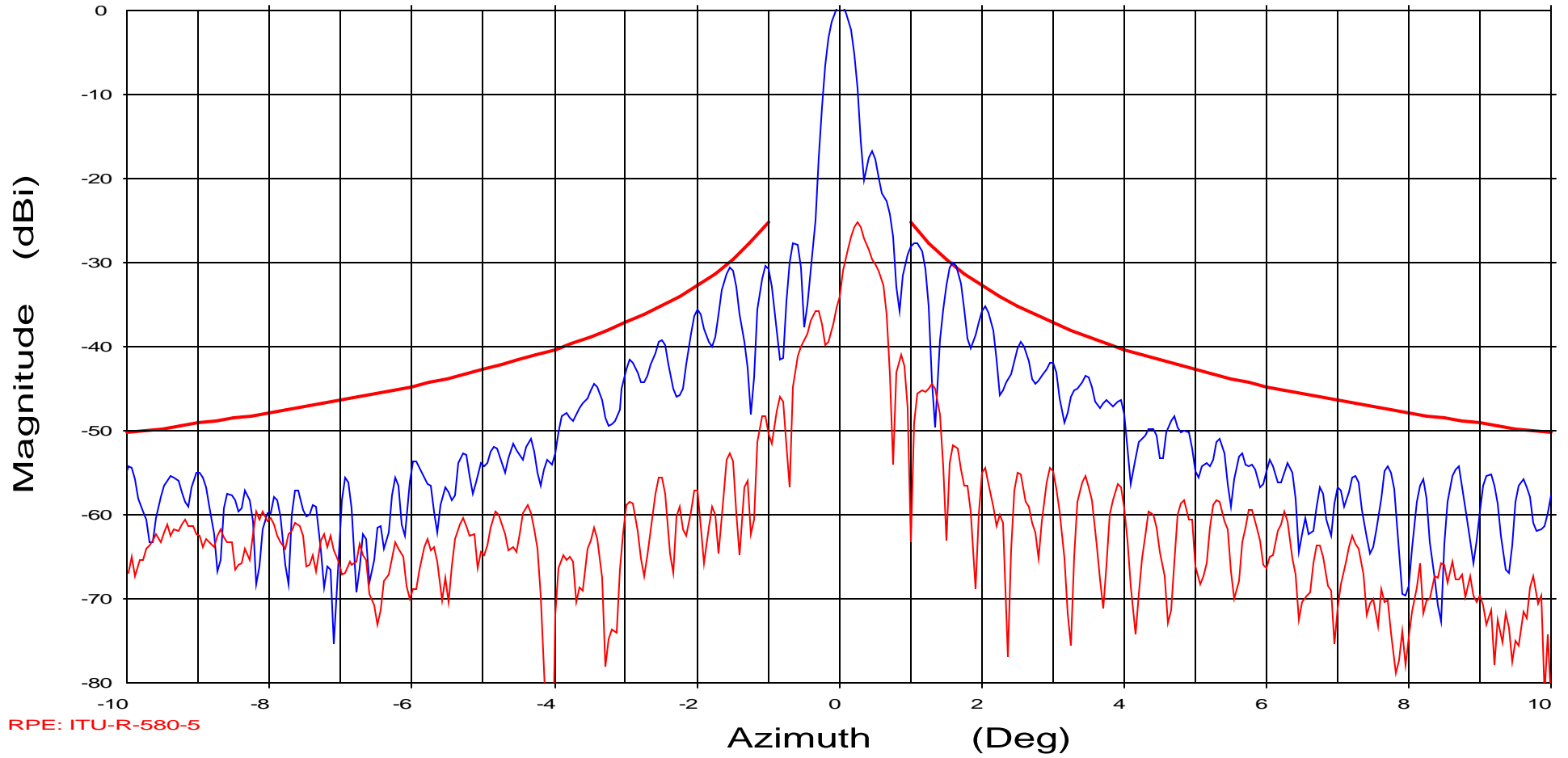
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays

2310 50.dat-ant\_under\_test — blue line  
2310 52.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

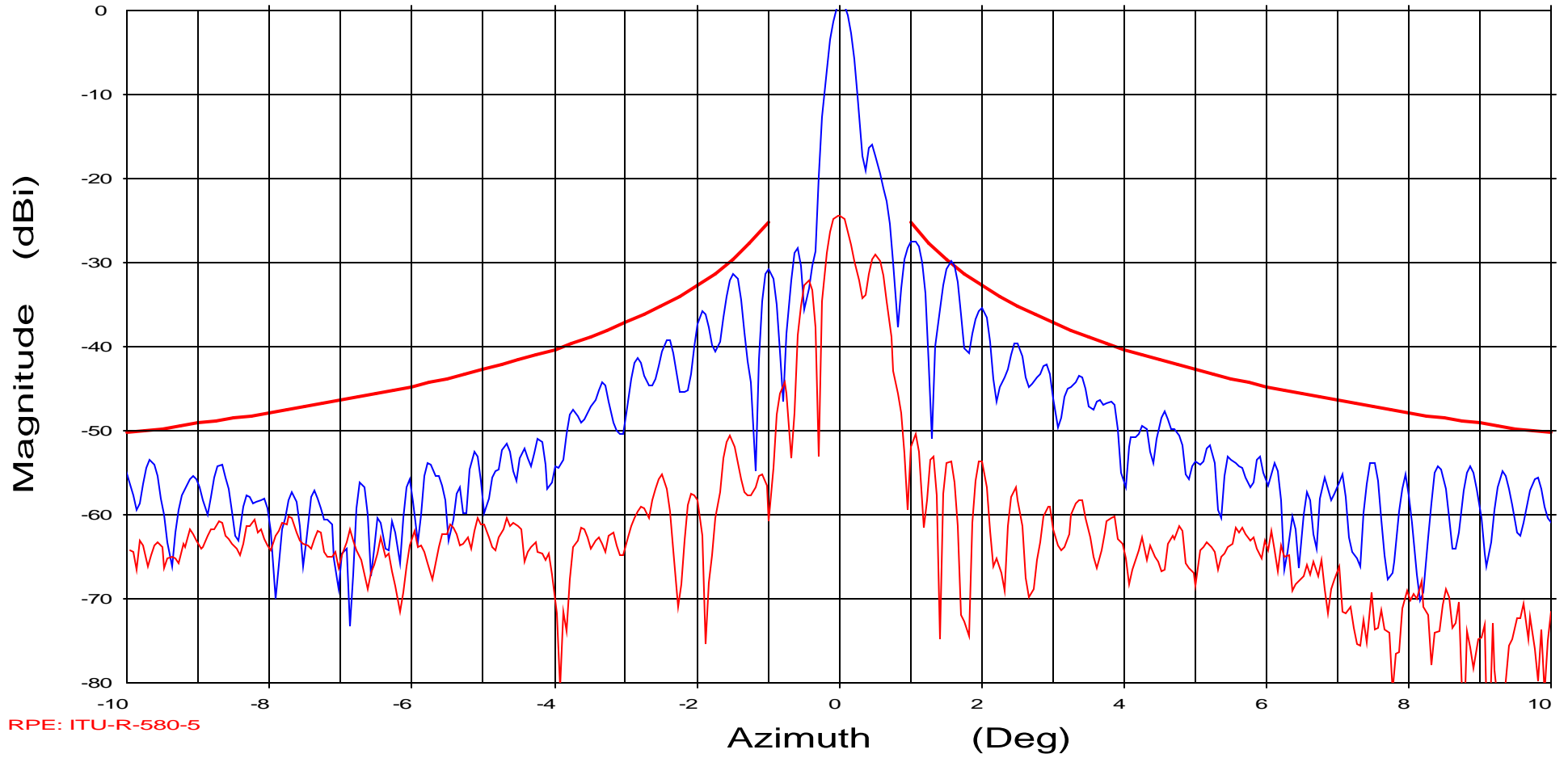
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays

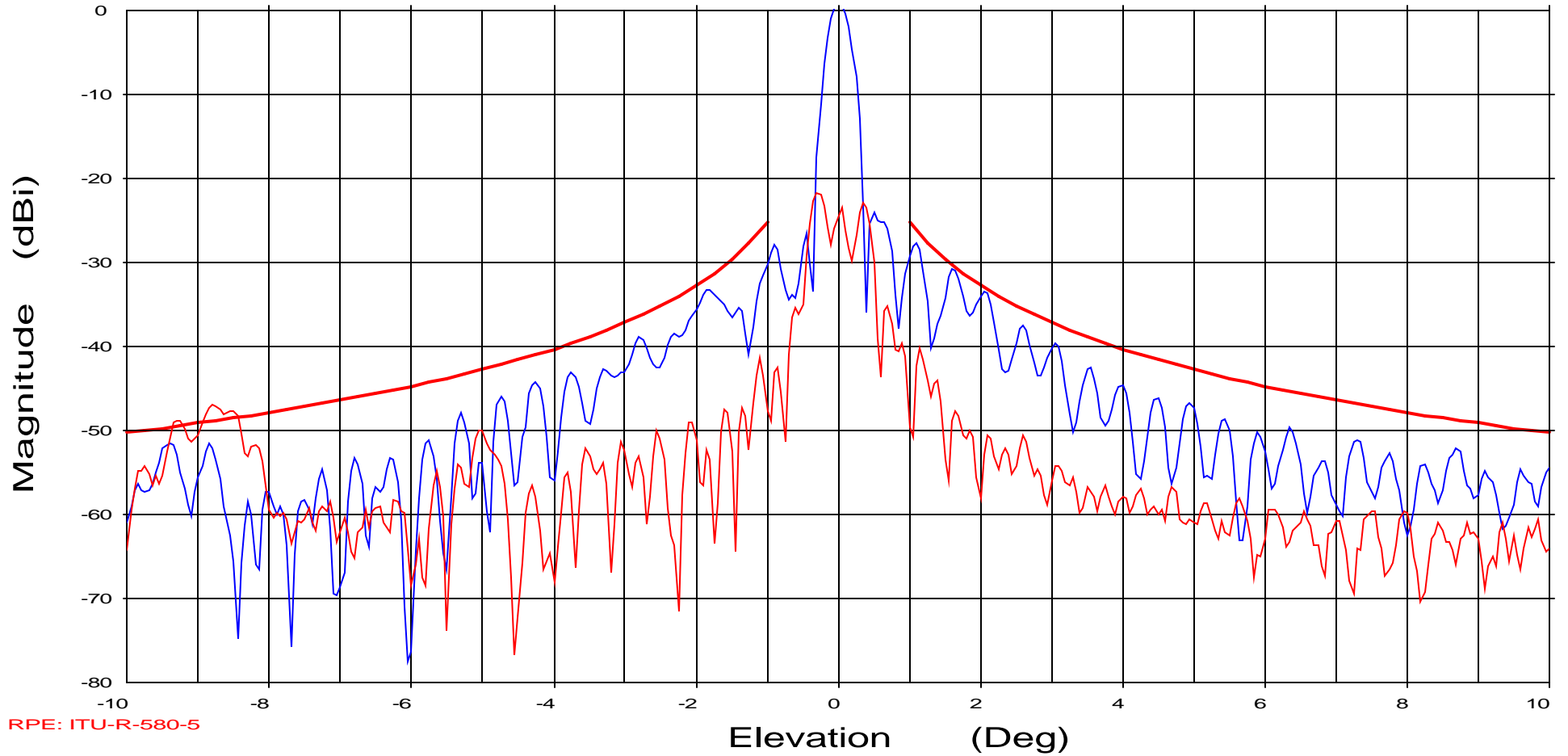
2310 50.dat-ant\_under\_test — blue line  
2310 52.dat-ant\_under\_test — red line

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

Overlays

- 2310 51.dat-ant\_under\_test — blue line
- 2310 53.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

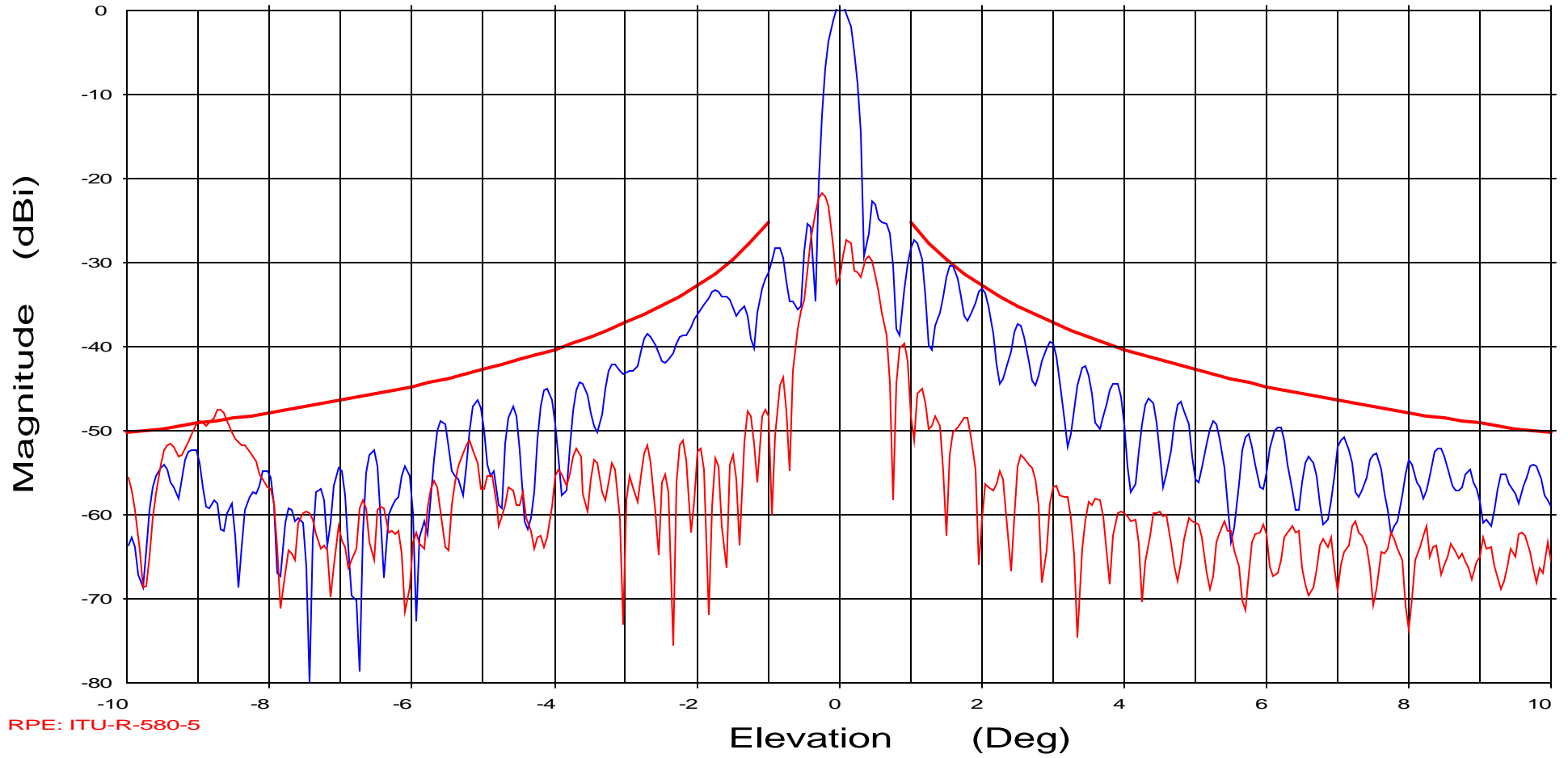
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays

2310 51.dat-ant\_under\_test — blue line  
2310 53.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

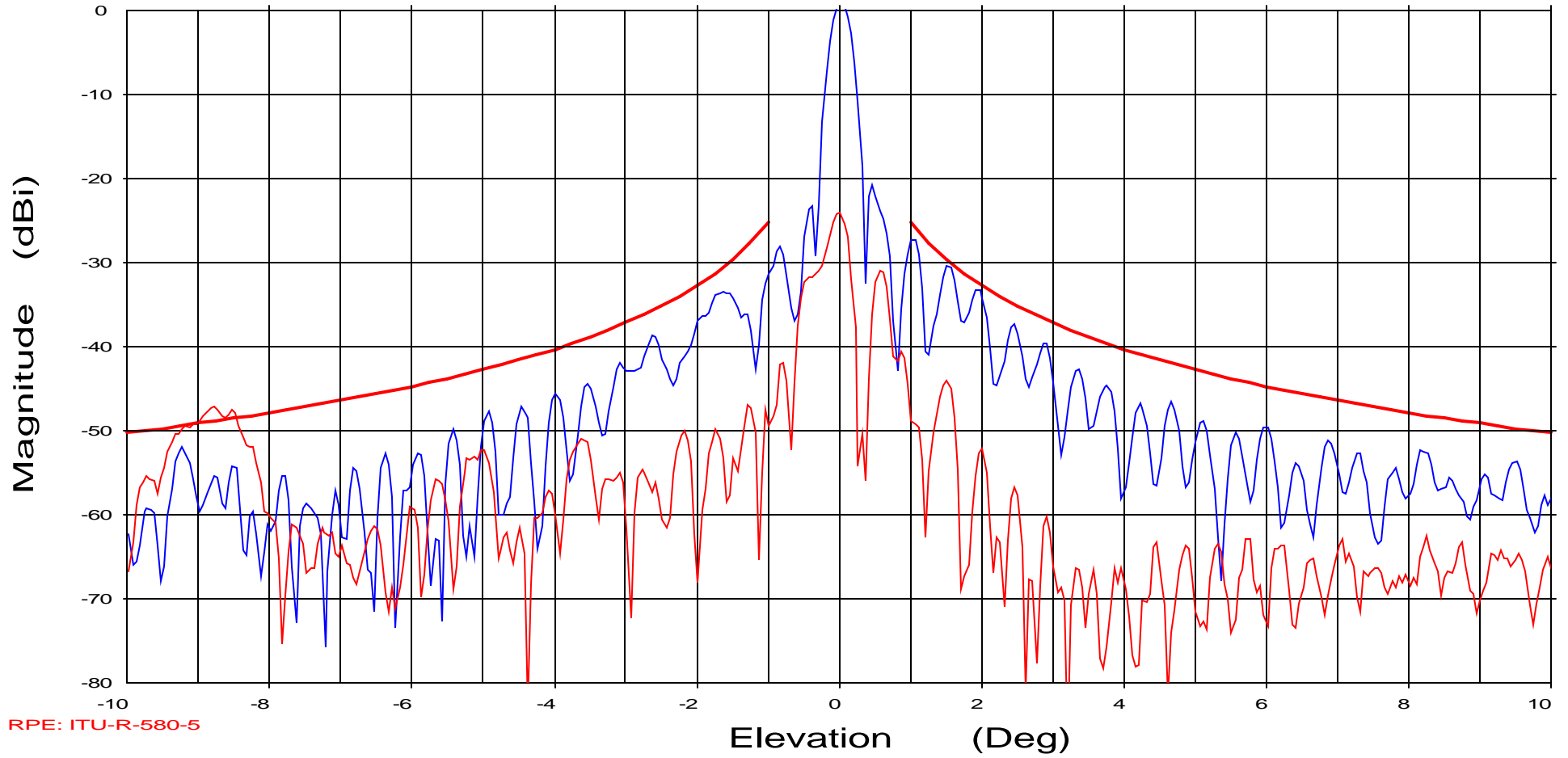
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

Overlays

2310 51.dat-ant\_under\_test — blue line  
2310 53.dat-ant\_under\_test — red line

File: 2310 51.dat

3244 Production KA system  
Ka CP Tx/Rx

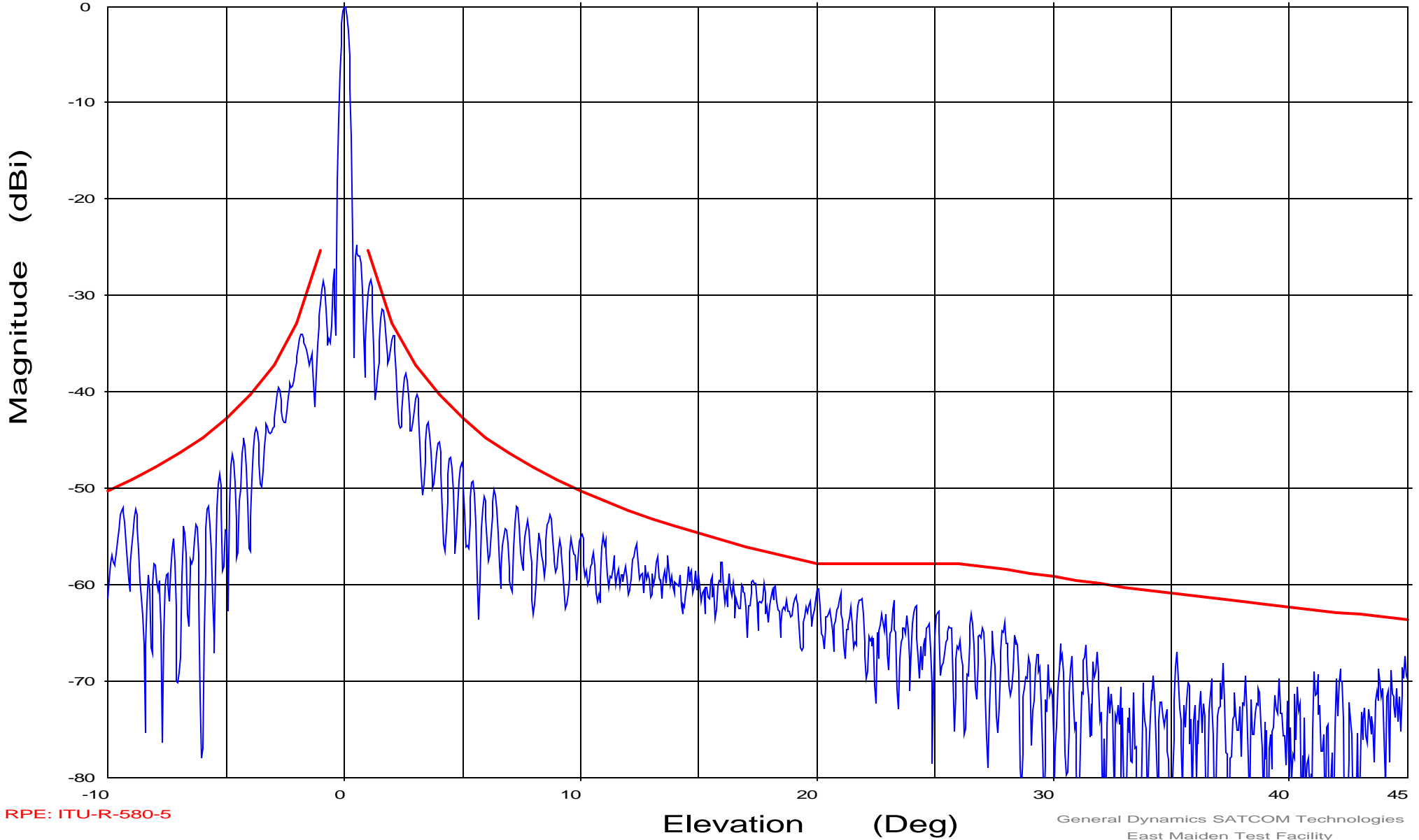
Frequency : 29.200 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

File: 2310 51.dat

3244 Production KA system  
Ka CP Tx/Rx

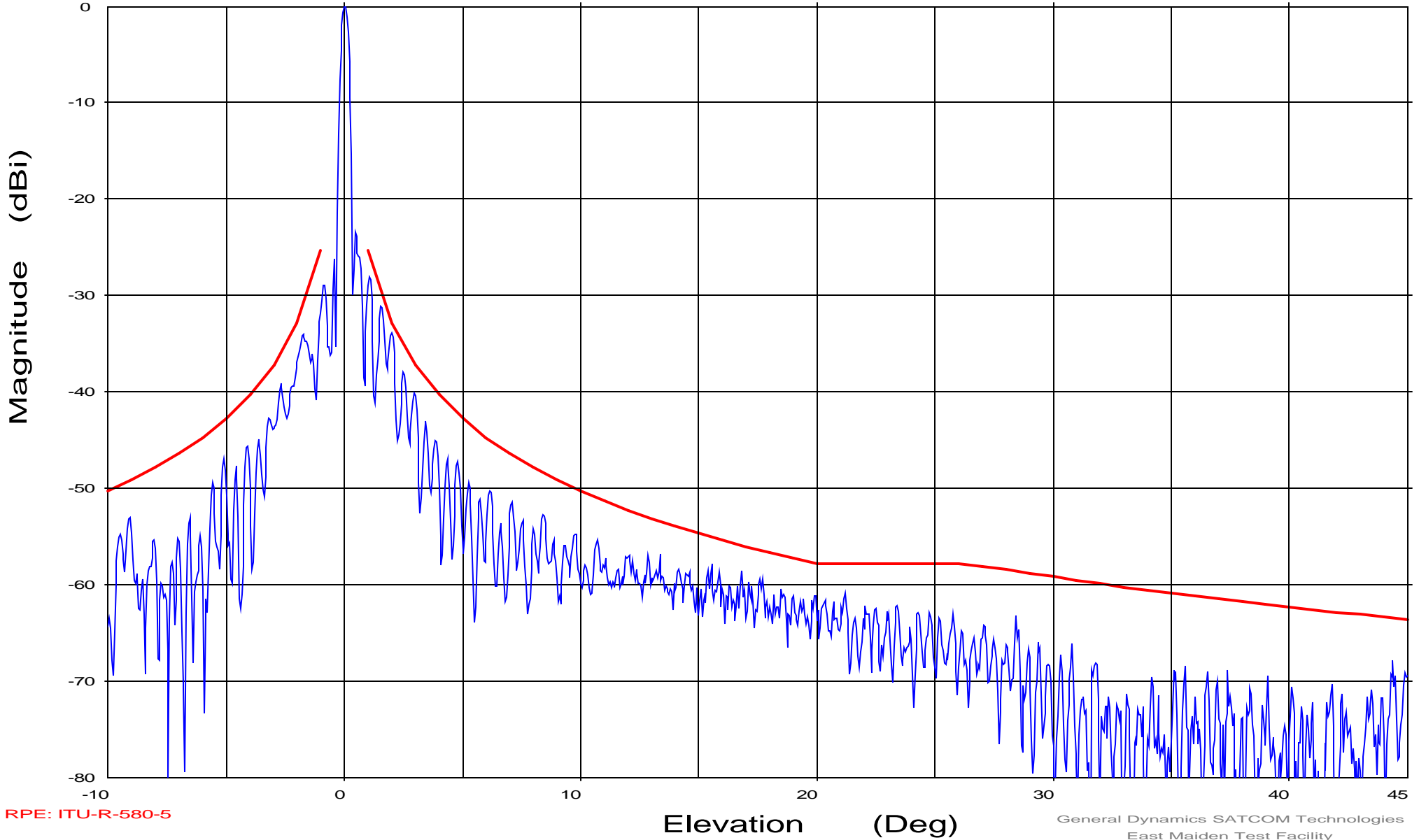
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

General Dynamics SATCOM Technologies  
East Maiden Test Facility  
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File: 2310 51.dat

3244 Production KA system  
Ka CP Tx/Rx

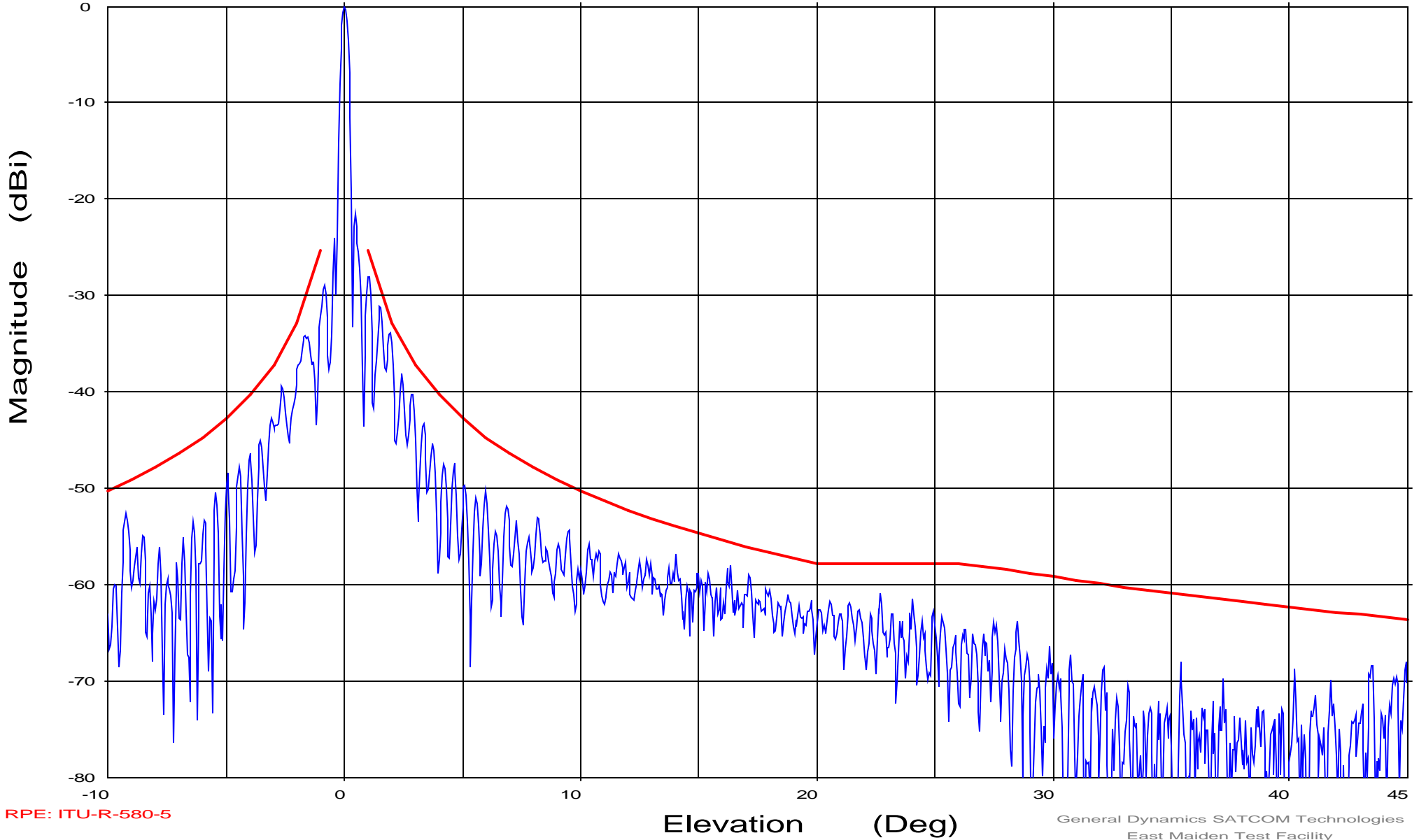
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

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File: 2310 50.dat

3244 Production KA system  
Ka CP Tx/Rx

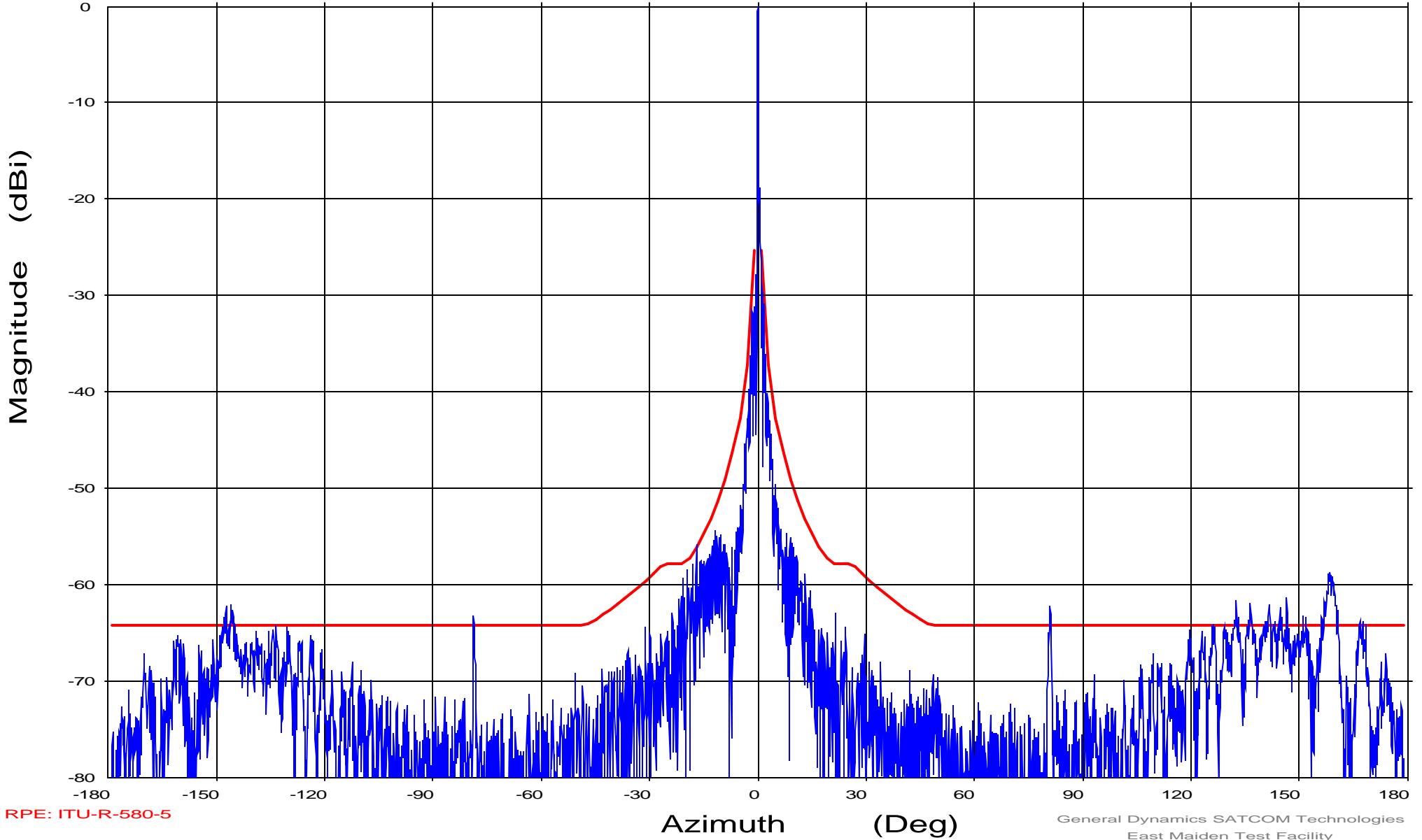
Frequency : 29.200 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

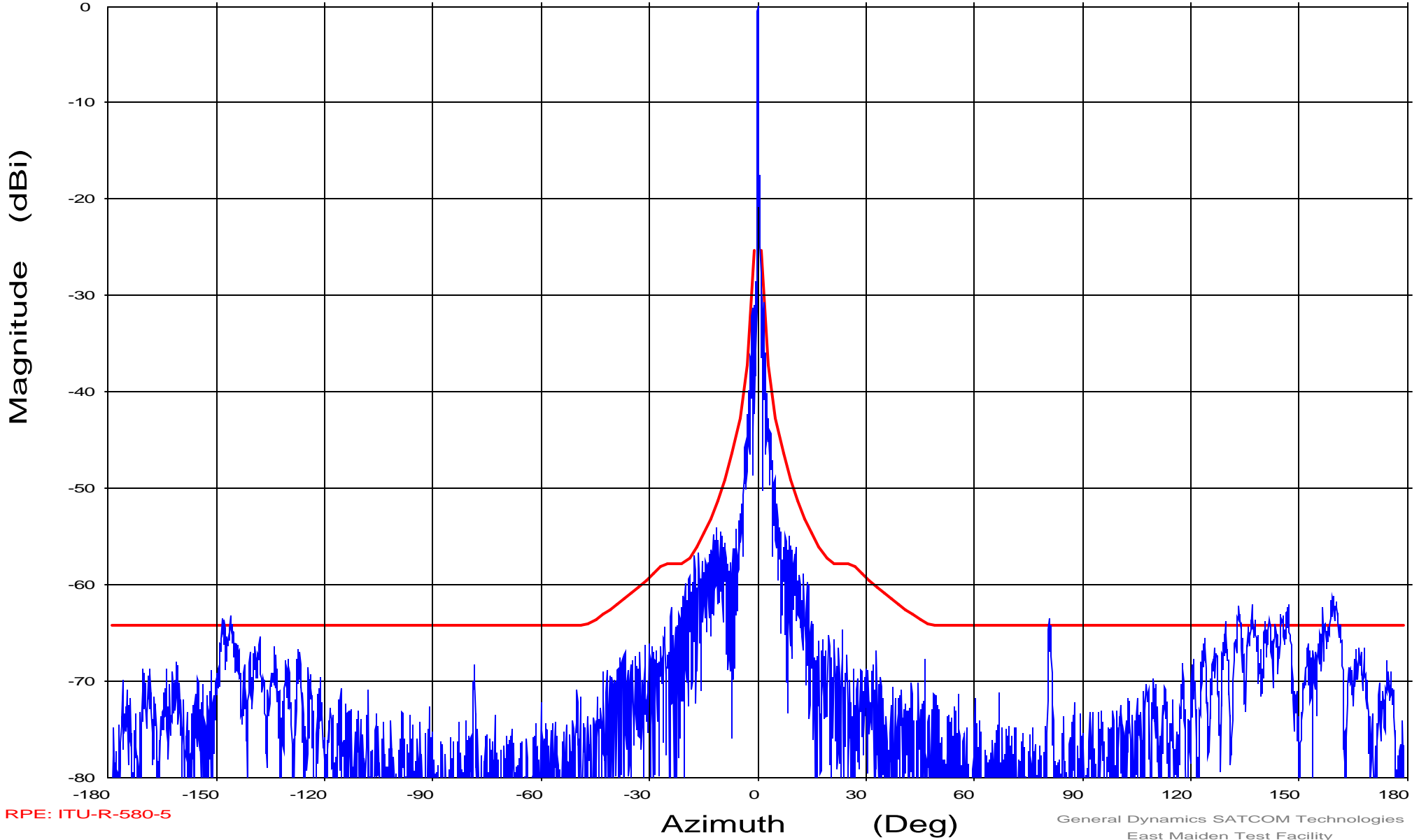
General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

File: 2310 50.dat

3244 Production KA system  
Ka CP Tx/Rx

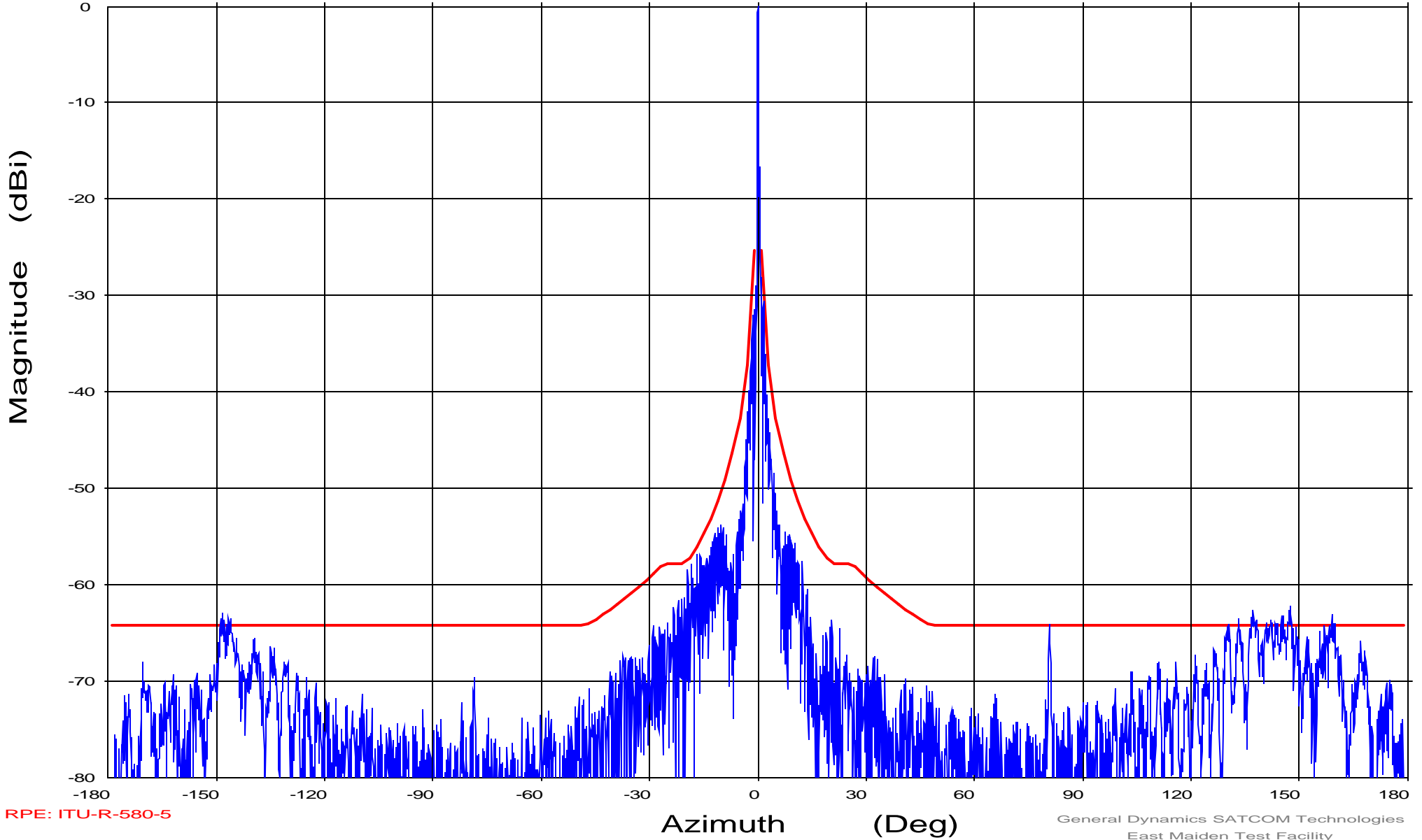
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

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Maiden, North Carolina 28650

## SECTION 3

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2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

### LHCP Tx

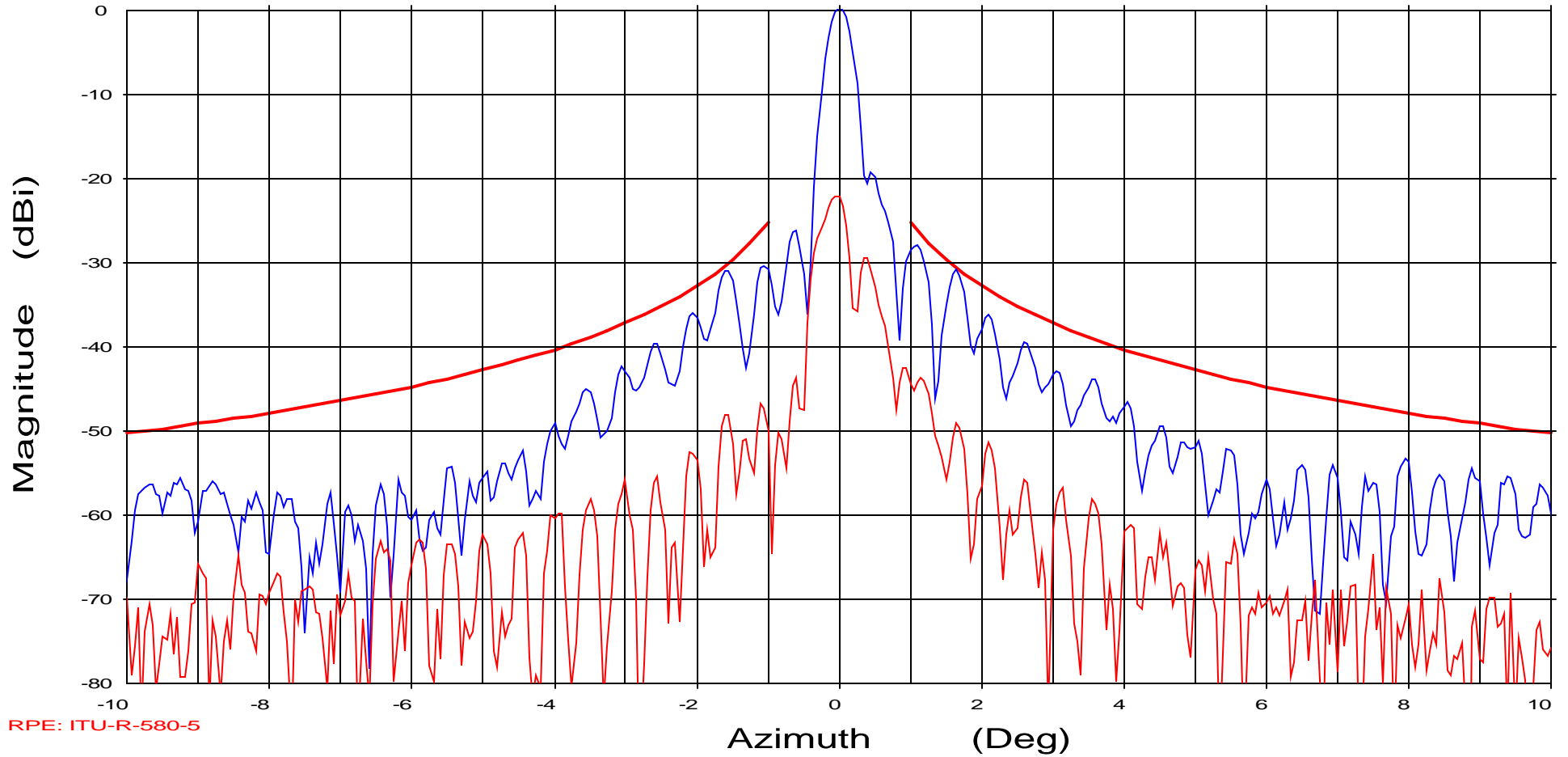
### Radiation Patterns

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

Overlays  
2310 42.dat-ant\_under\_test — blue line  
2310 45.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

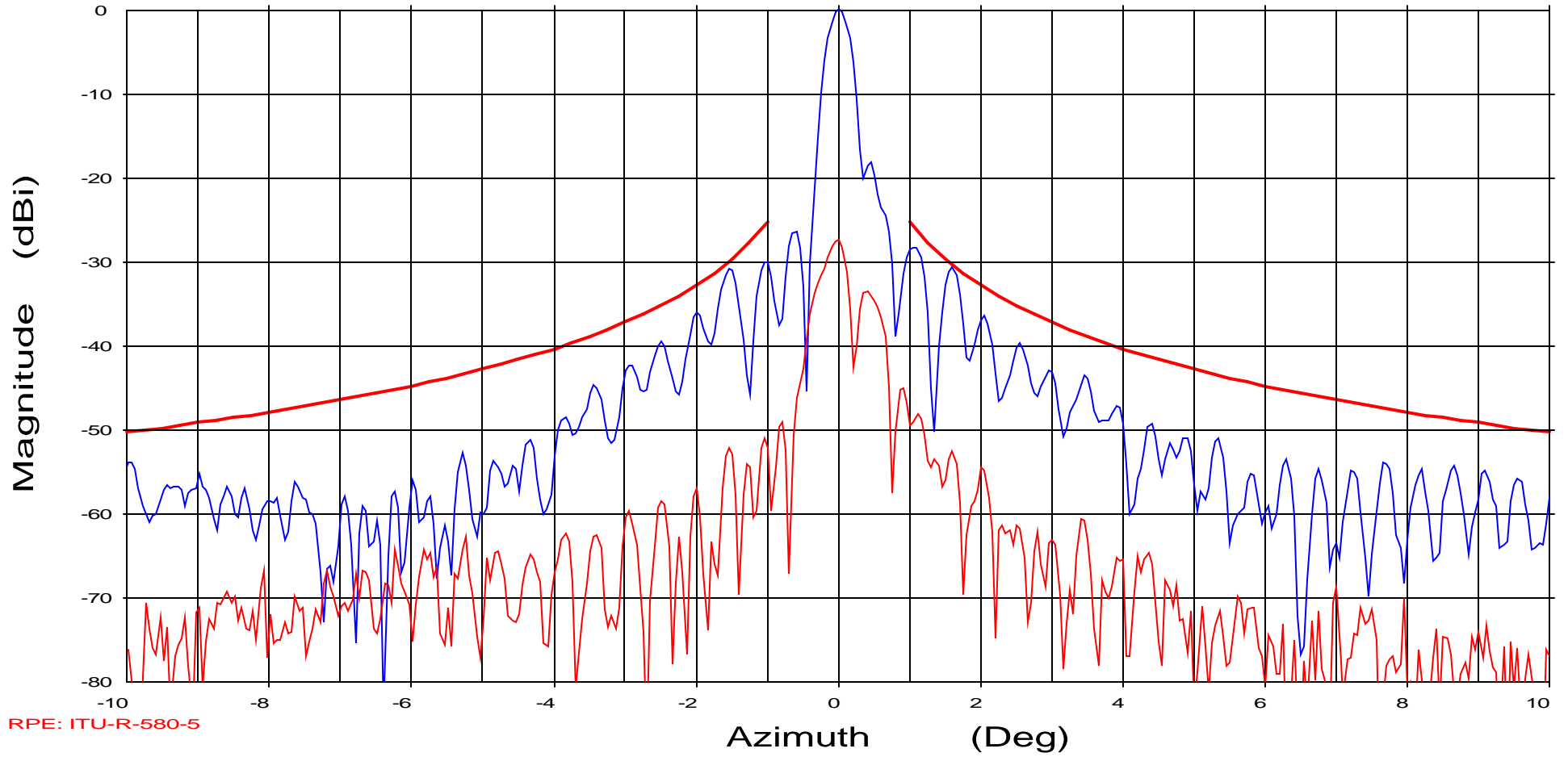
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays

2310 42.dat-ant\_under\_test — blue line  
2310 45.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

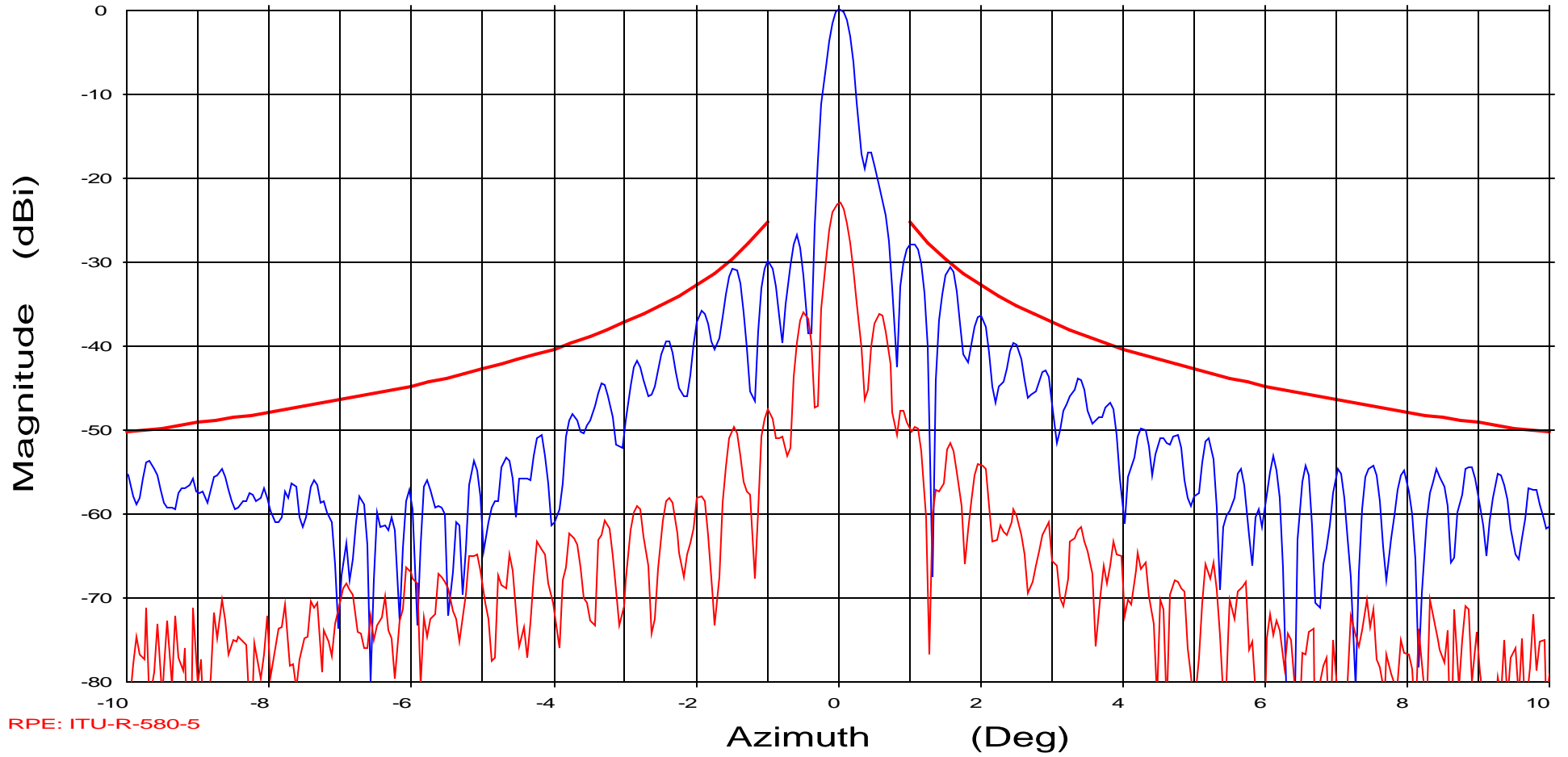
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays

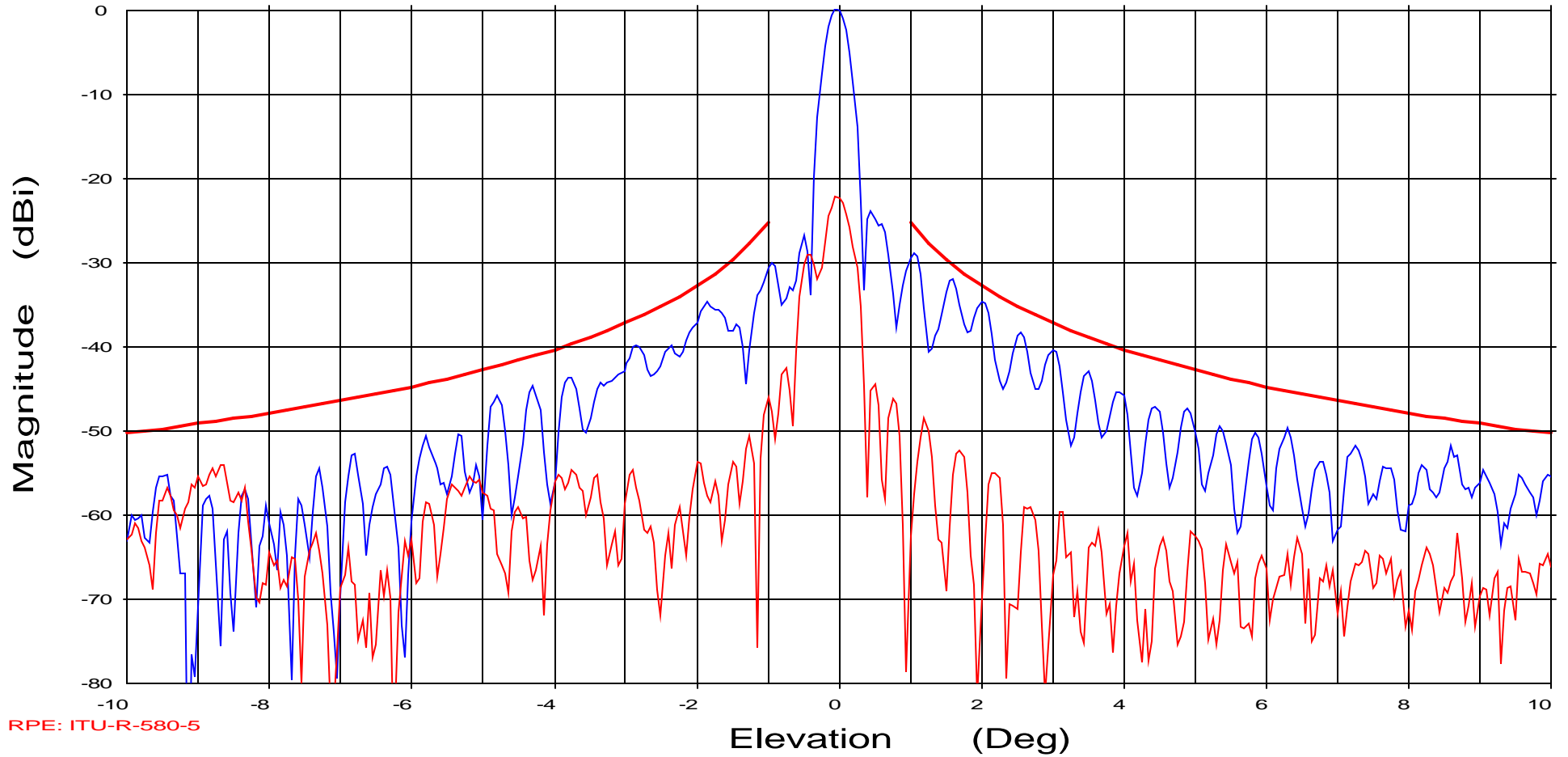
2310 42.dat-ant\_under\_test — blue  
2310 45.dat-ant\_under\_test — red

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays  
2310 43.dat-ant\_under\_test — blue line  
2310 47.dat-ant\_under\_test — red line



3244 Production KA system  
Ka CP Tx/Rx

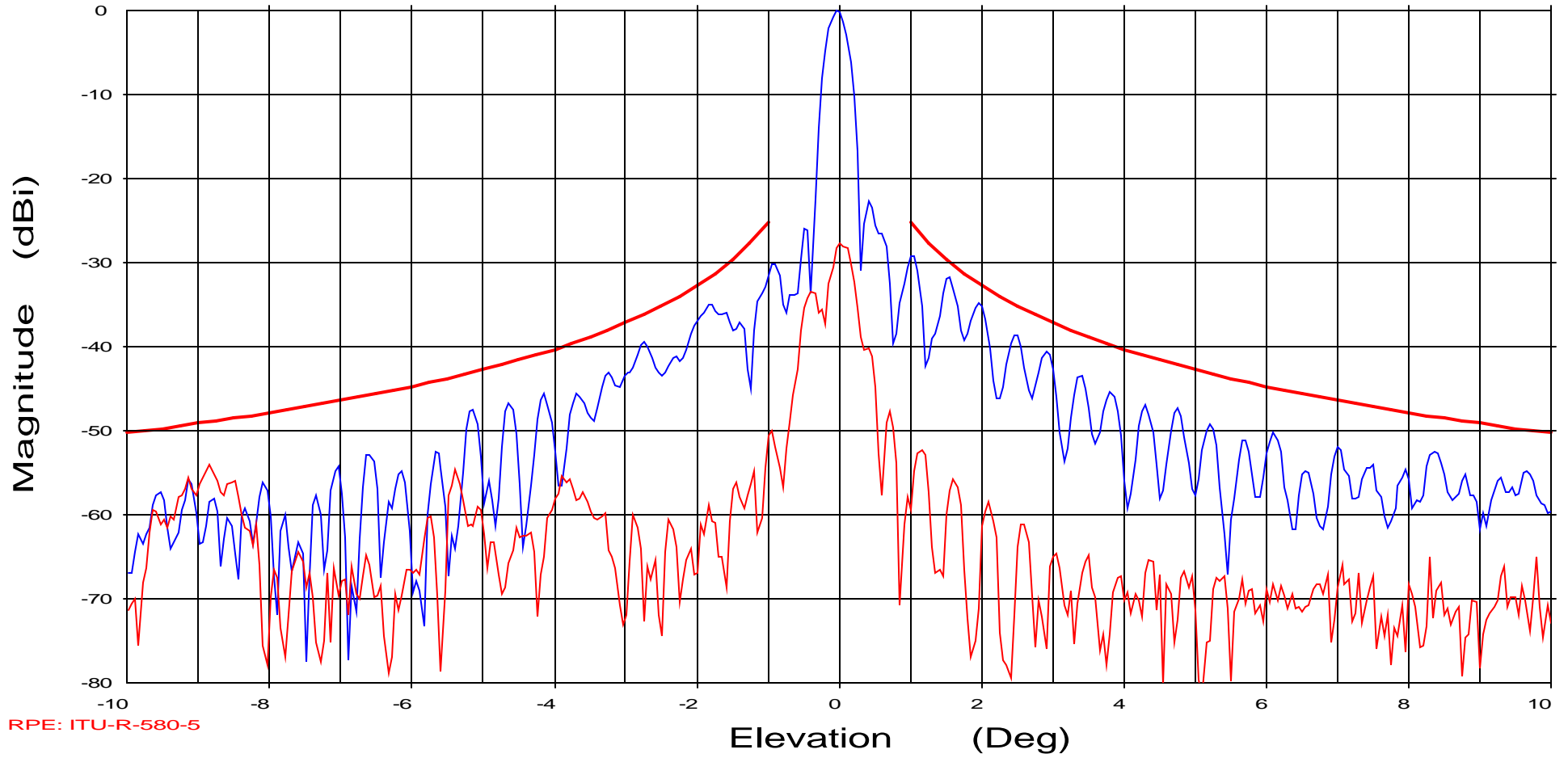
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

Overlays

2310 43.dat-ant\_under\_test — blue line  
2310 47.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

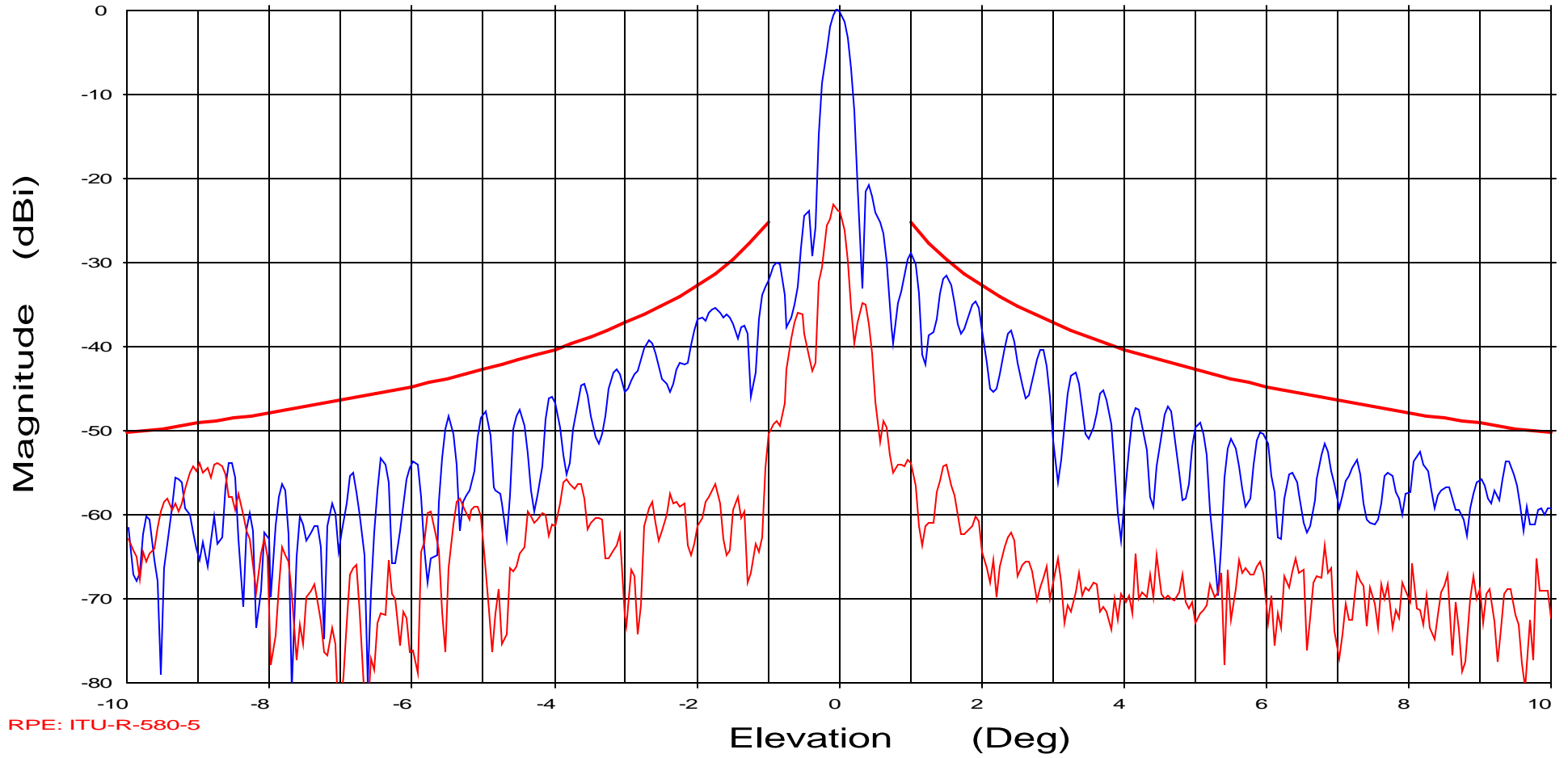
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays

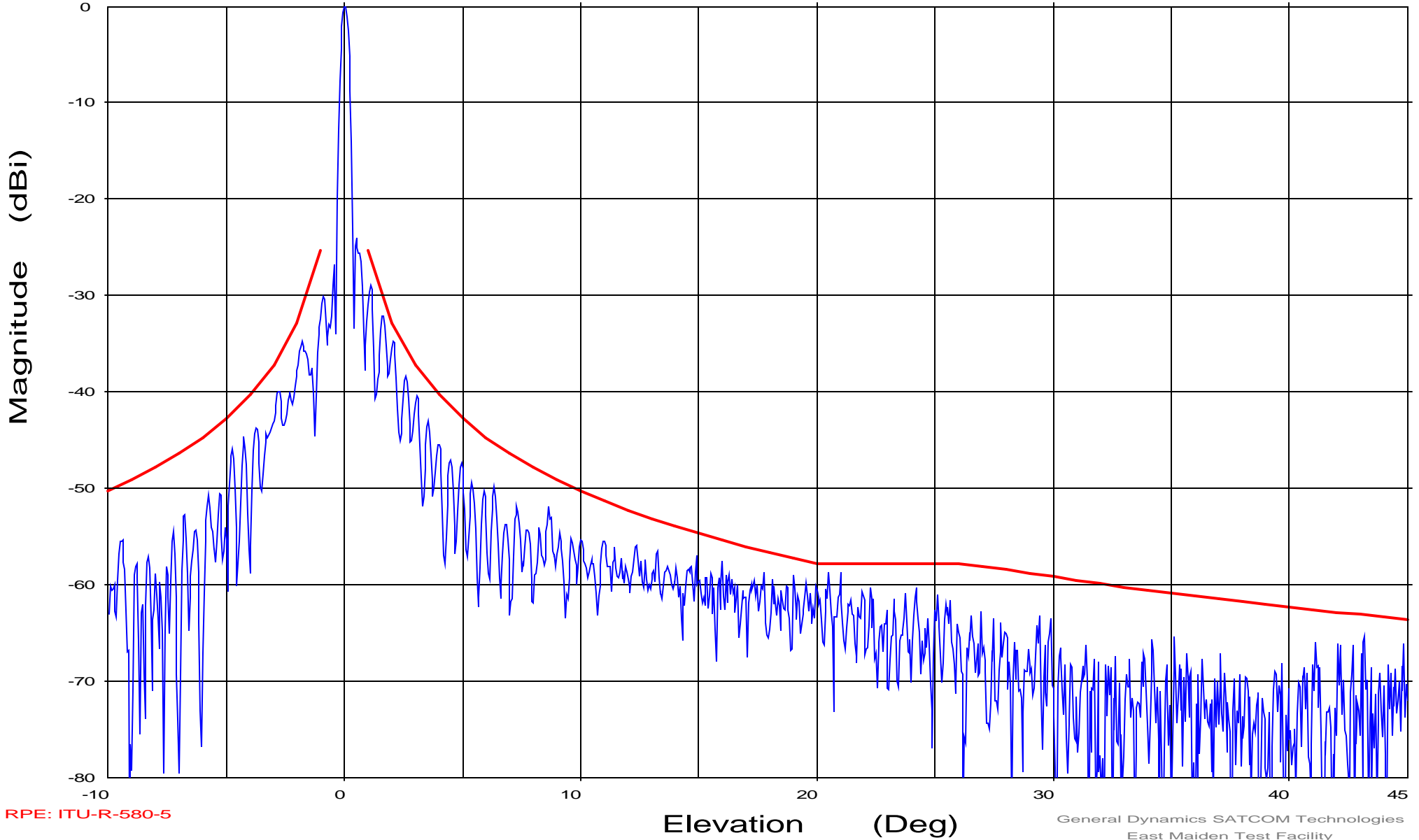
2310 43.dat-ant\_under\_test — blue line  
2310 47.dat-ant\_under\_test — red line

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

File: 2310 43.dat

3244 Production KA system  
Ka CP Tx/Rx

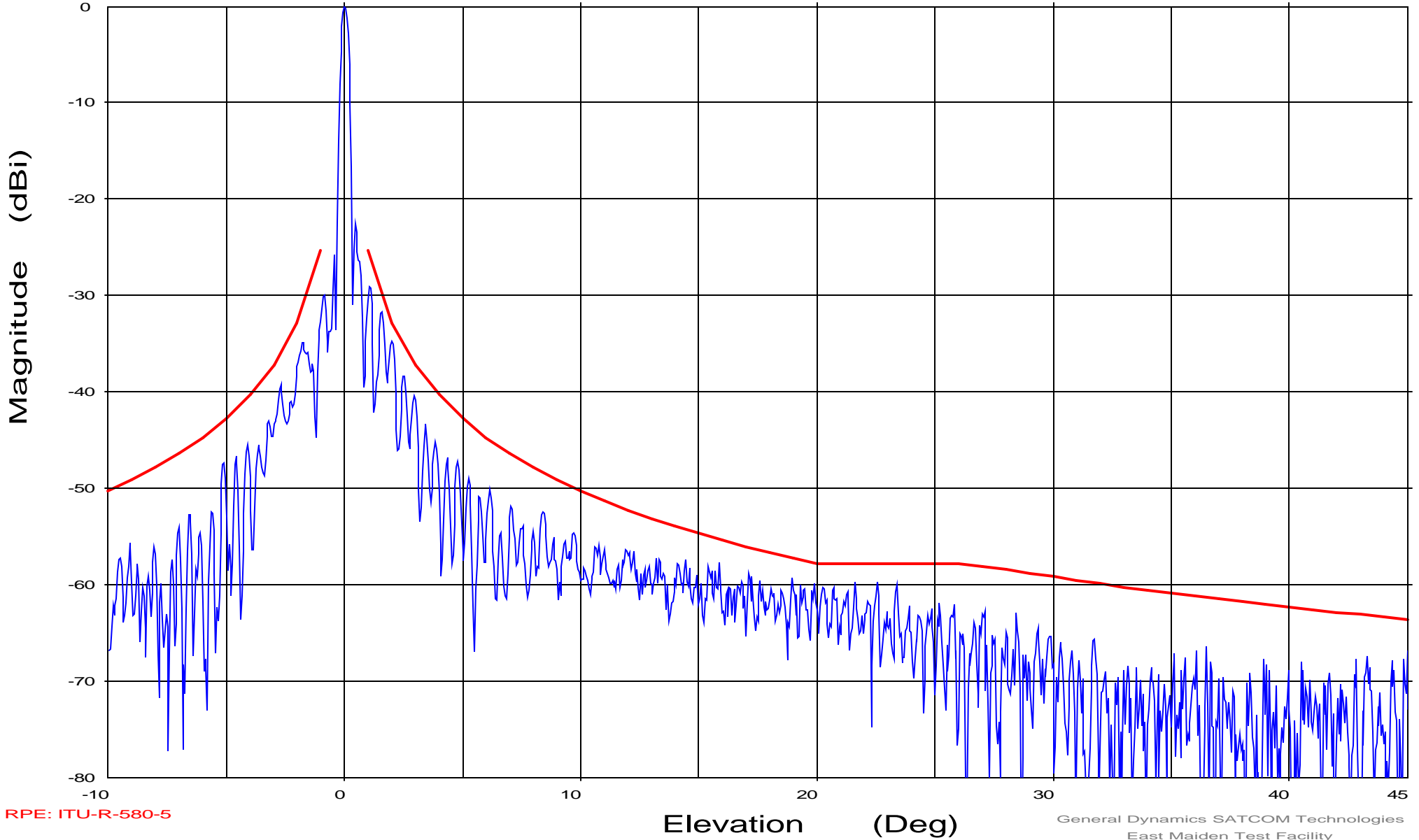
Frequency : 30.100 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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Maiden, North Carolina 28650

File: 2310 43.dat

3244 Production KA system  
Ka CP Tx/Rx

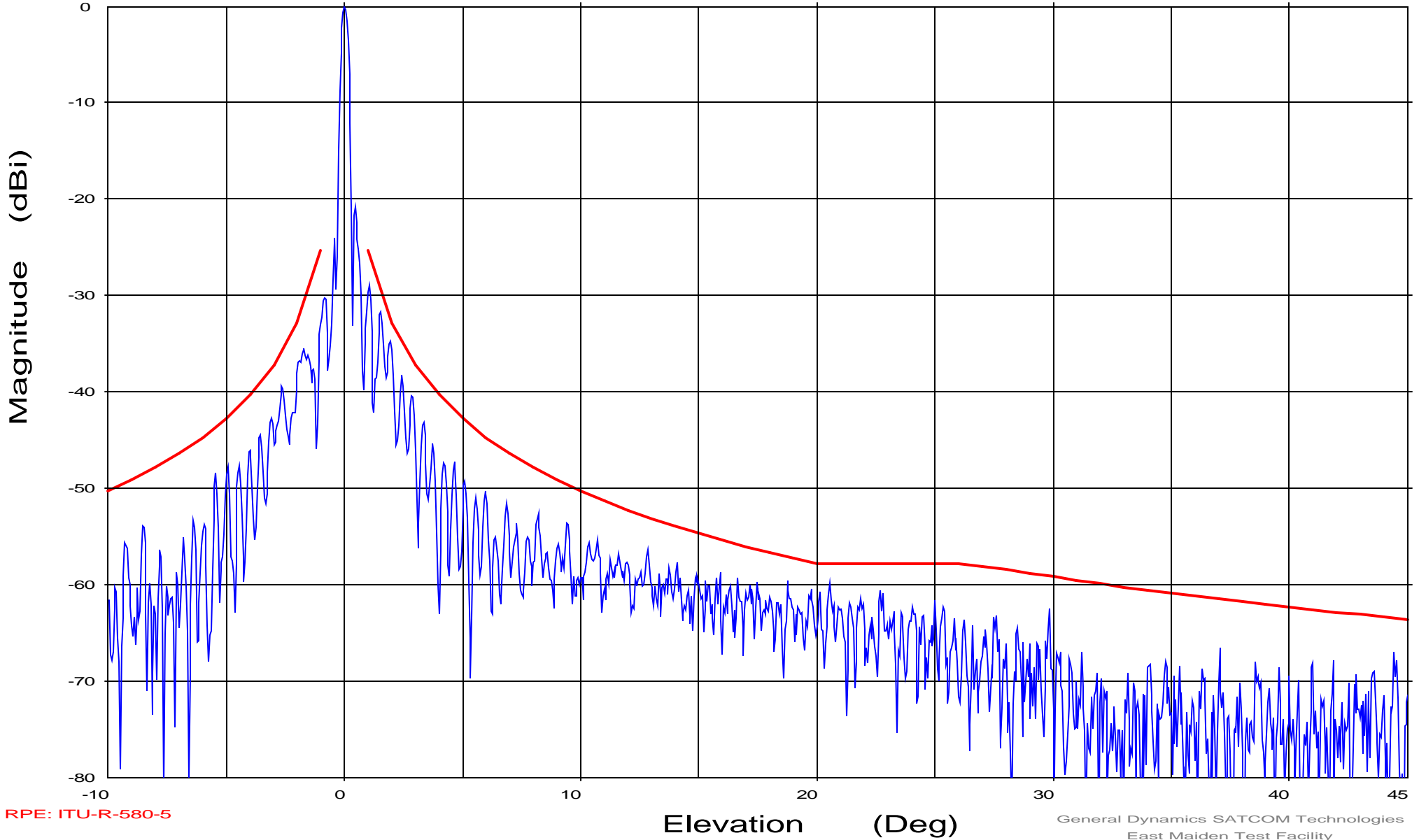
Frequency : 31.000 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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East Maiden Test Facility  
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Maiden, North Carolina 28650

File: 2310 42.dat

3244 Production KA system  
Ka CP Tx/Rx

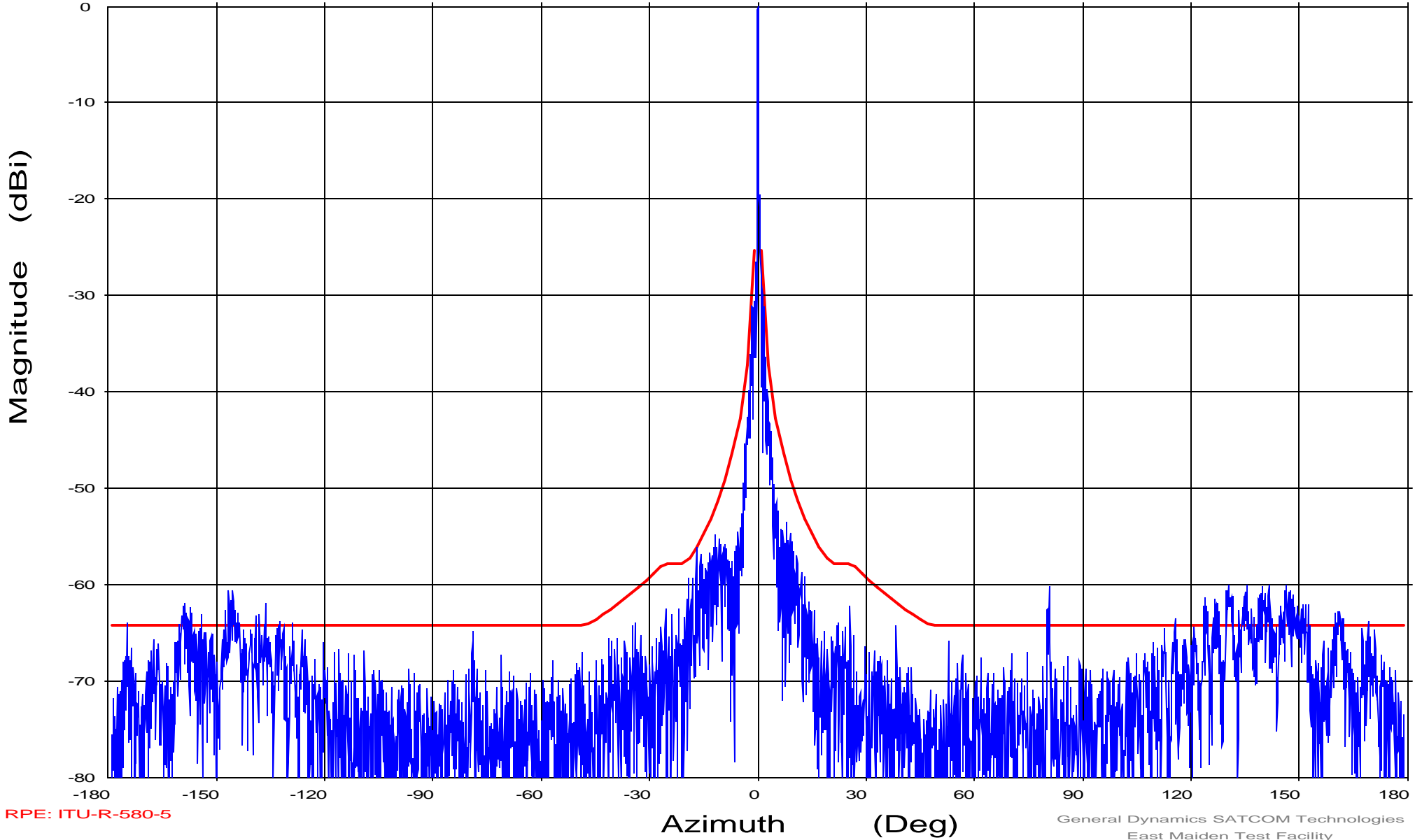
Frequency : 29.200 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

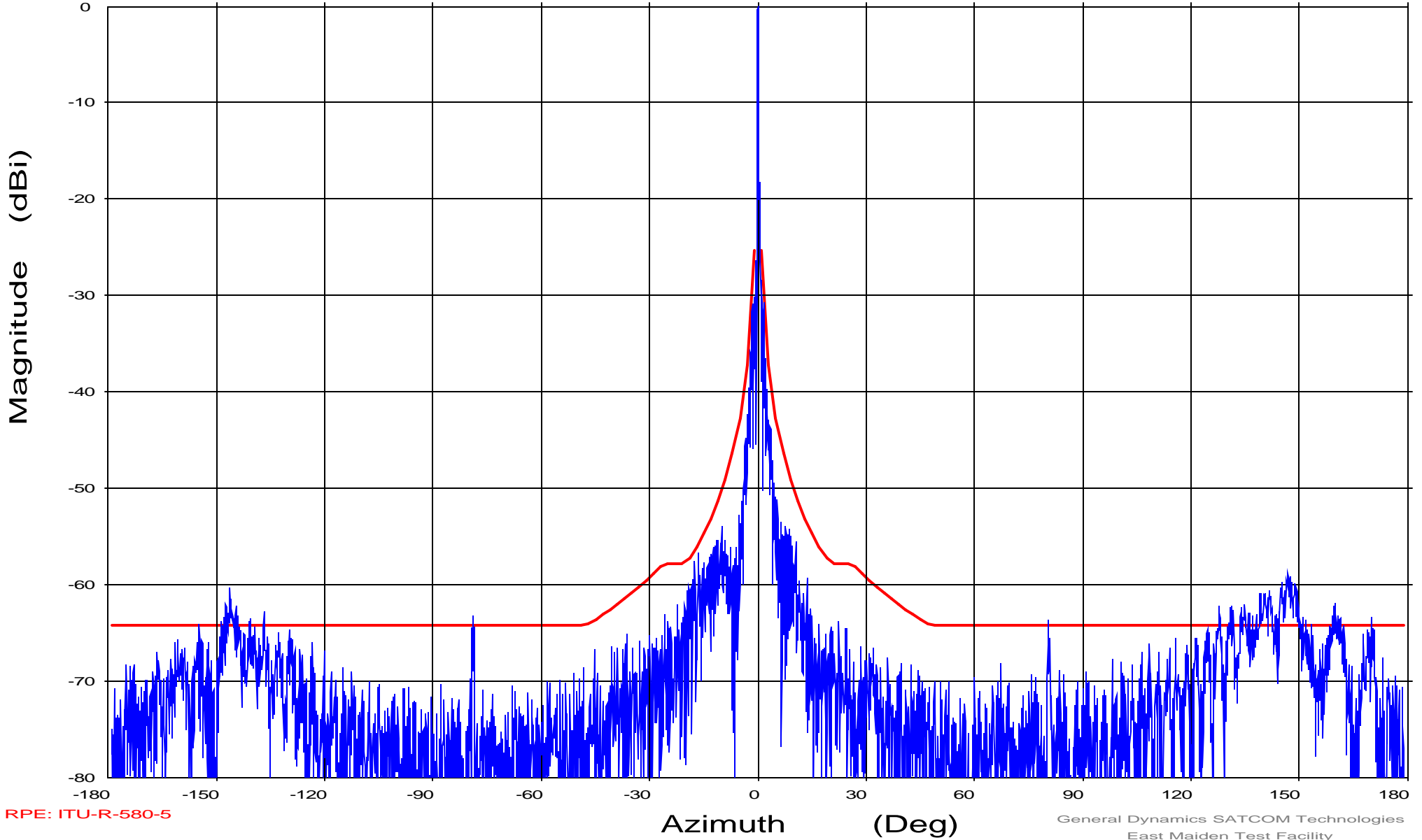
General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



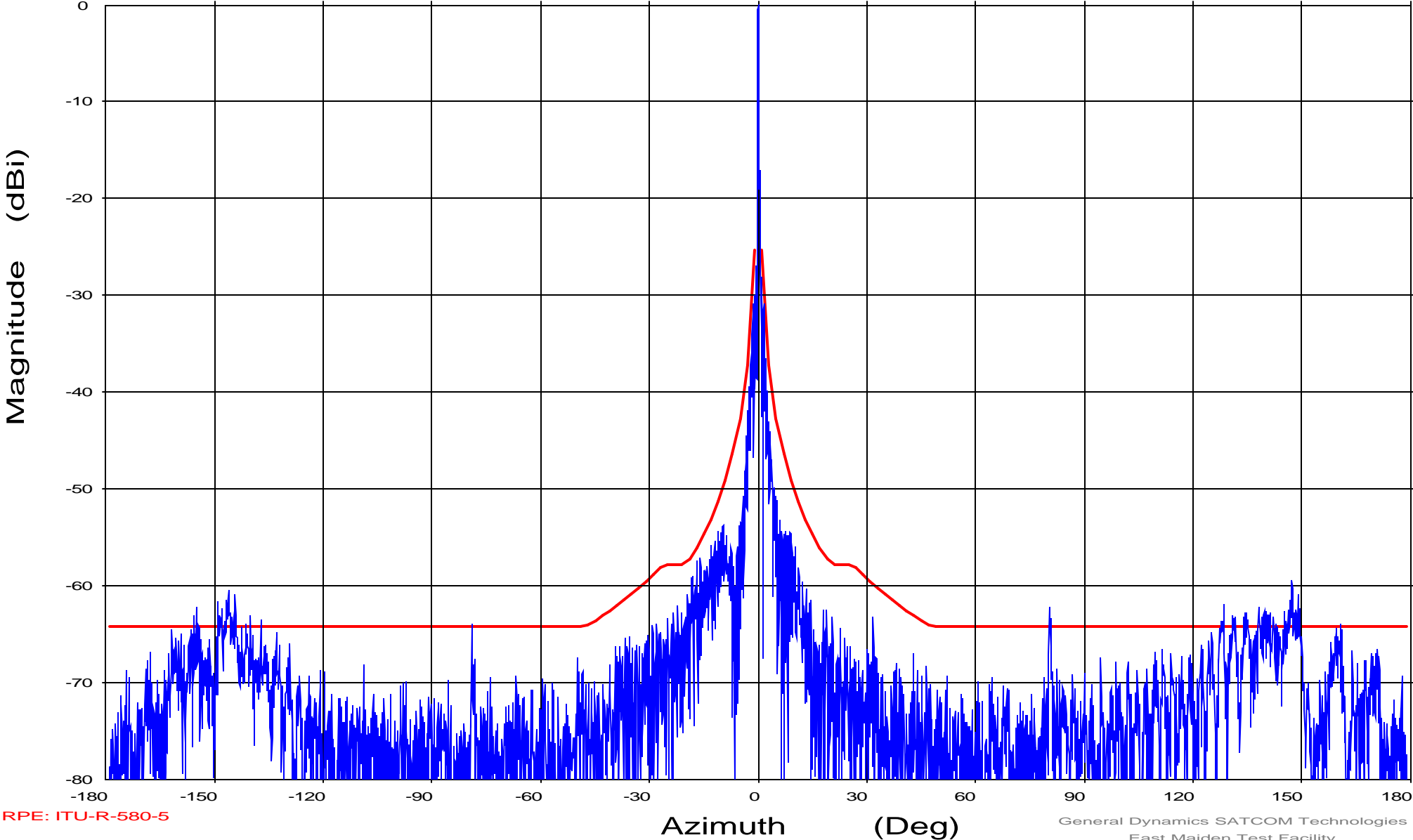
RPE: ITU-R-580-5

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5



## SECTION 4

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2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

### **RHCP Rx**

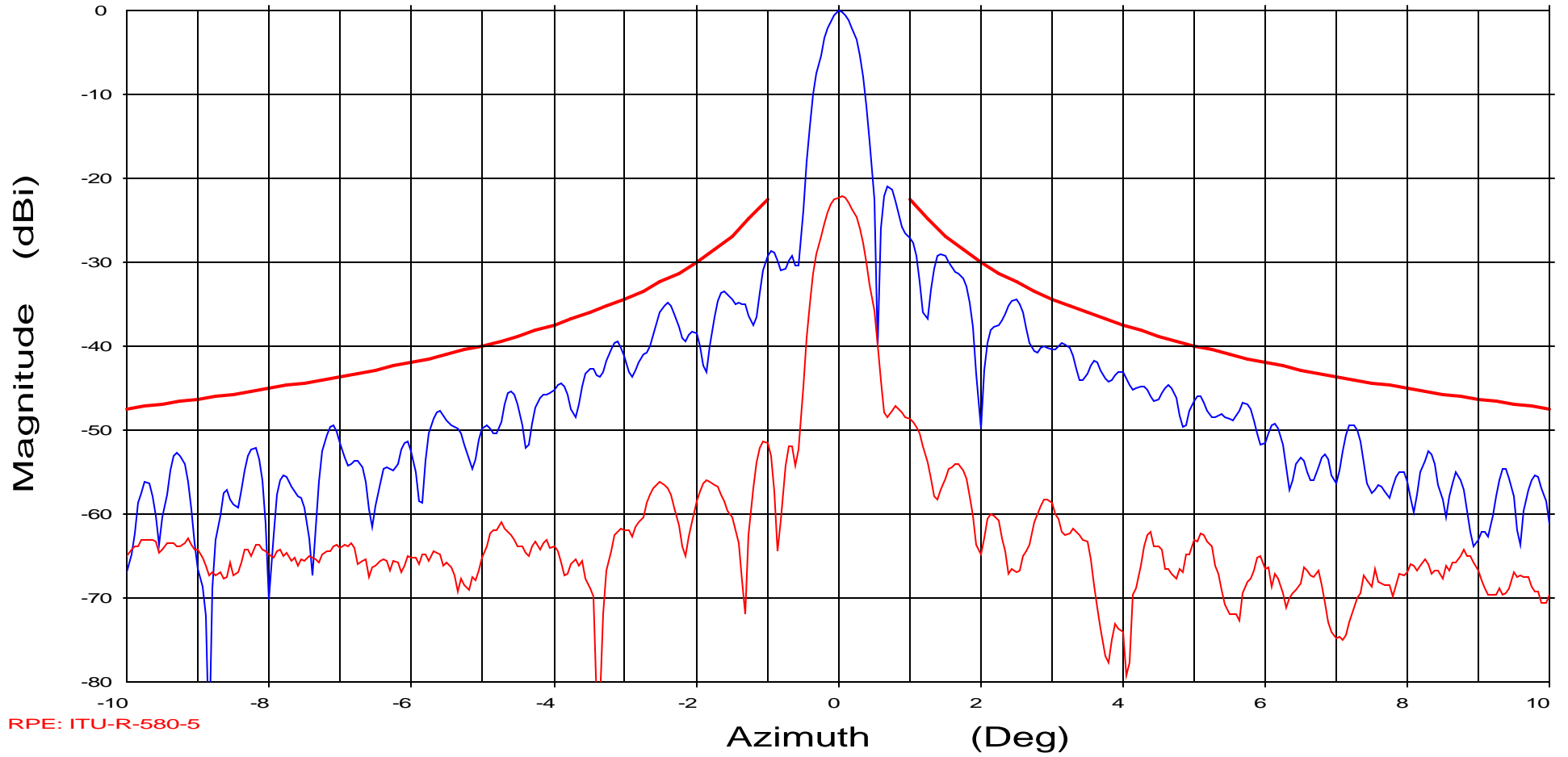
### Radiation Patterns

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays

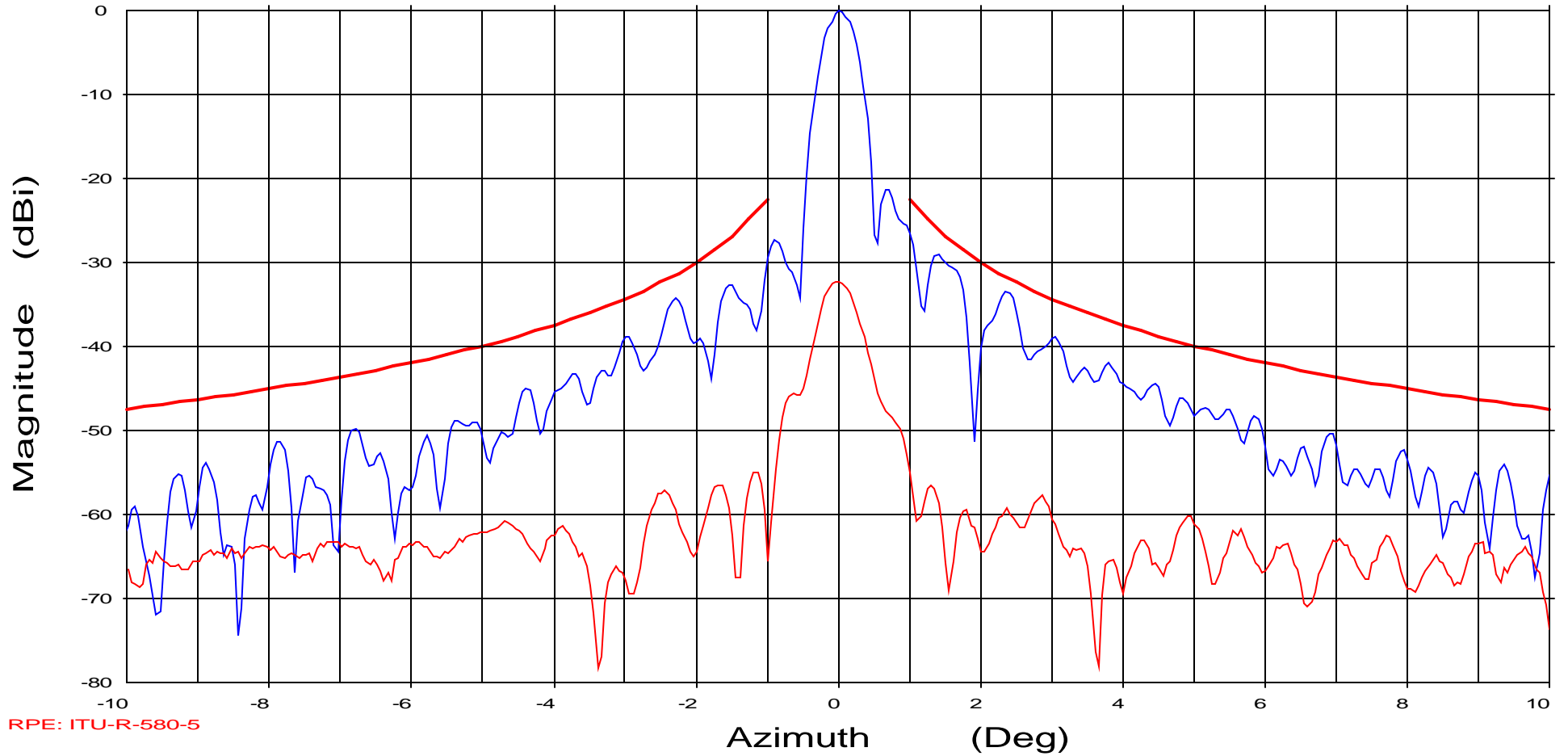
- 2310 56.dat-ant\_under\_test
- 2310 58.dat-ant\_under\_test

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



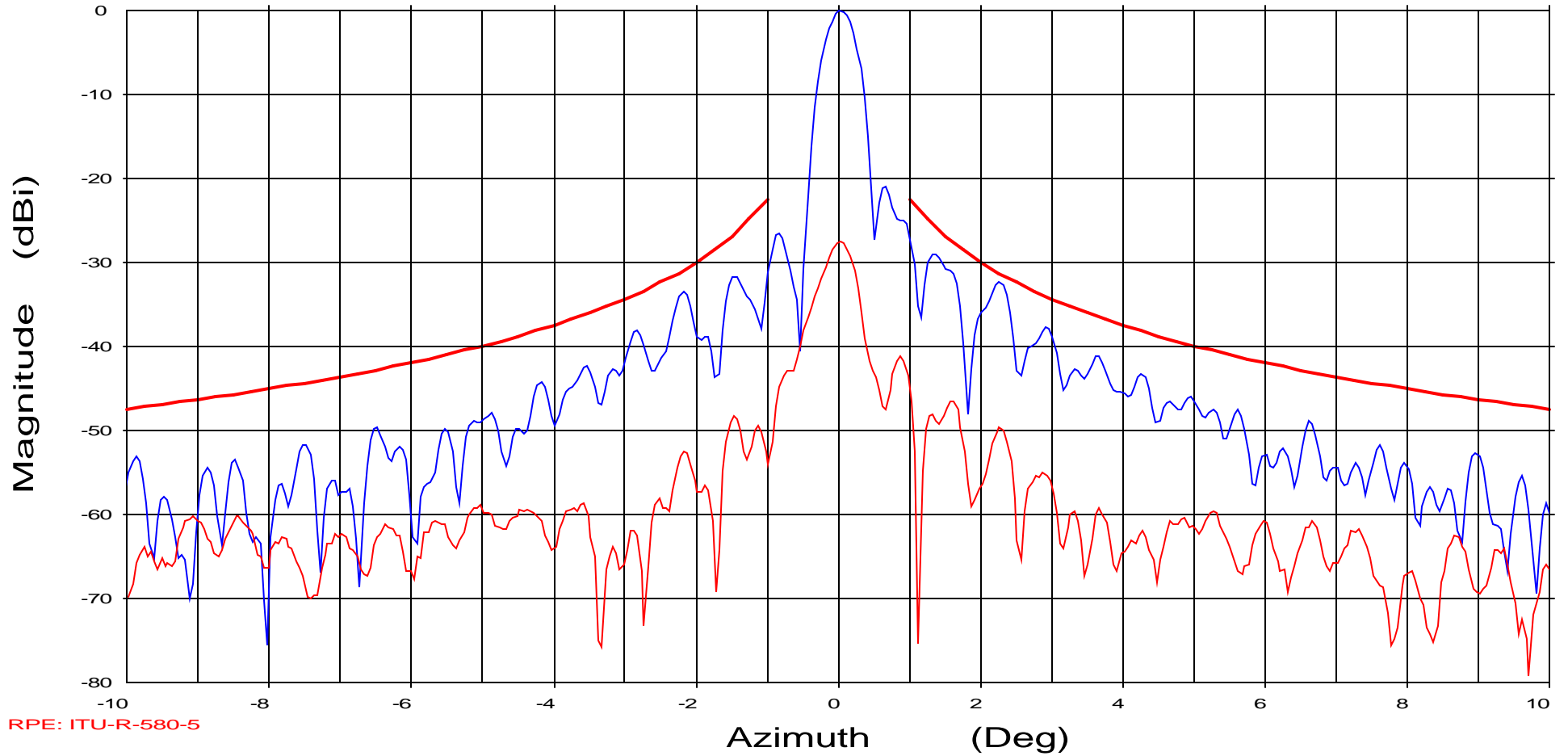
Overlays  
2310 56.dat-ant\_under\_test  
2310 58.dat-ant\_under\_test

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays  
2310 56.dat-ant\_under\_test — blue line  
2310 58.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

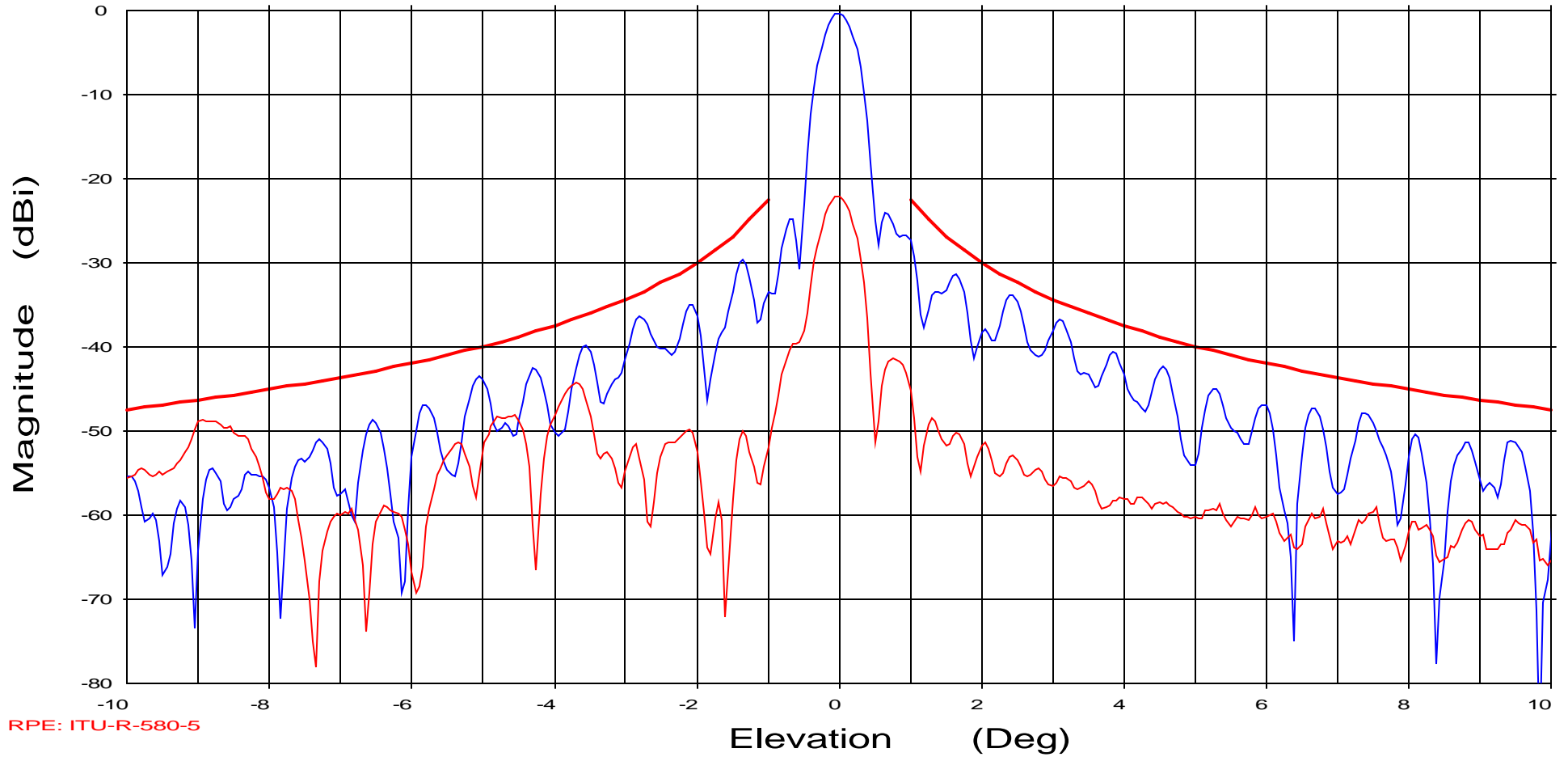
Frequency : 19.400 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays  
2310 57.dat-ant\_under\_test — blue line  
2310 59.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

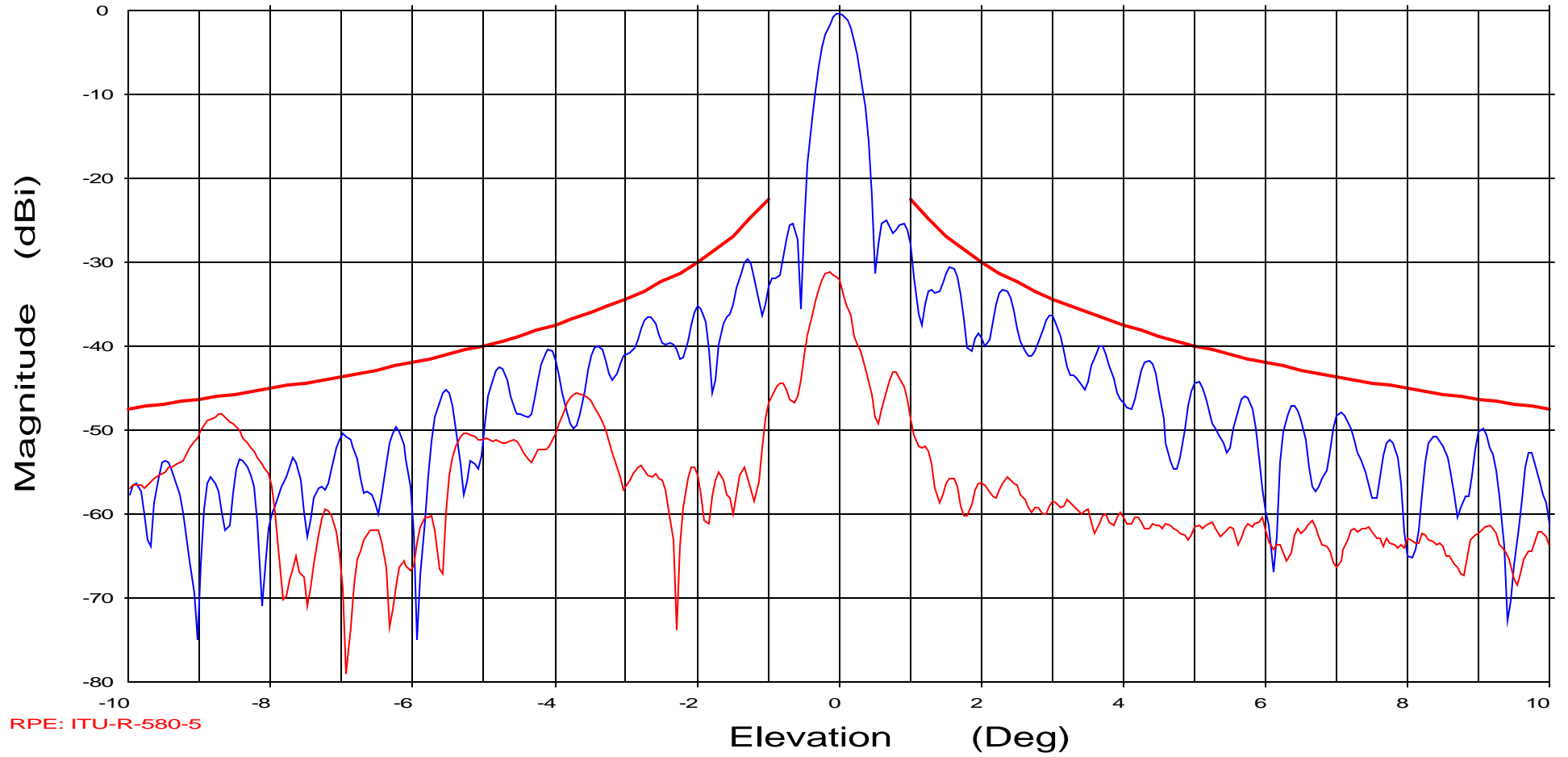
Frequency : 20.300 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

Overlays

2310 57.dat-ant\_under\_test — blue line  
2310 59.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

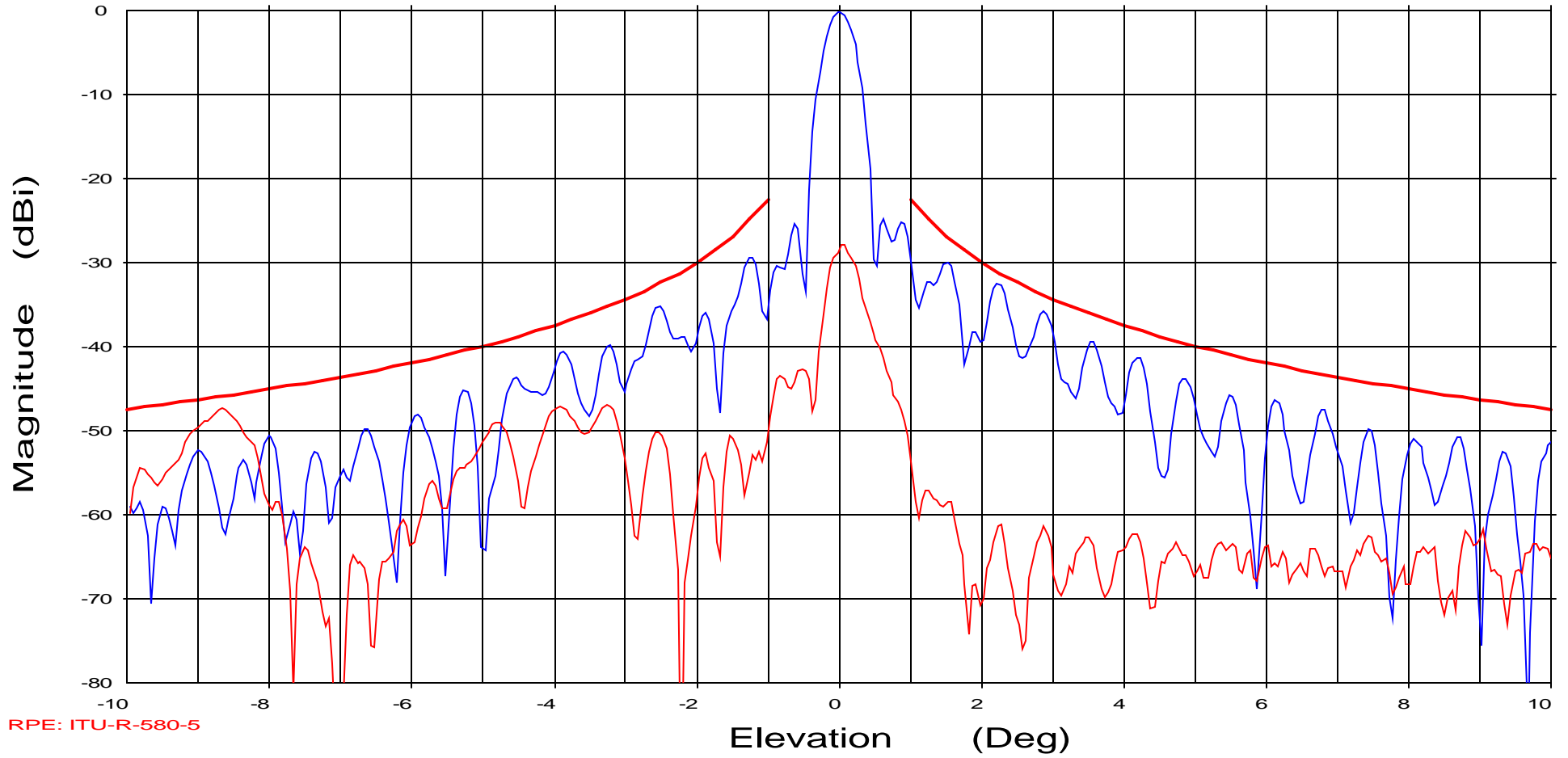
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



Overlays

2310 57.dat-ant\_under\_test — blue line  
2310 59.dat-ant\_under\_test — red line

File: 2310 57.dat

3244 Production KA system  
Ka CP Tx/Rx

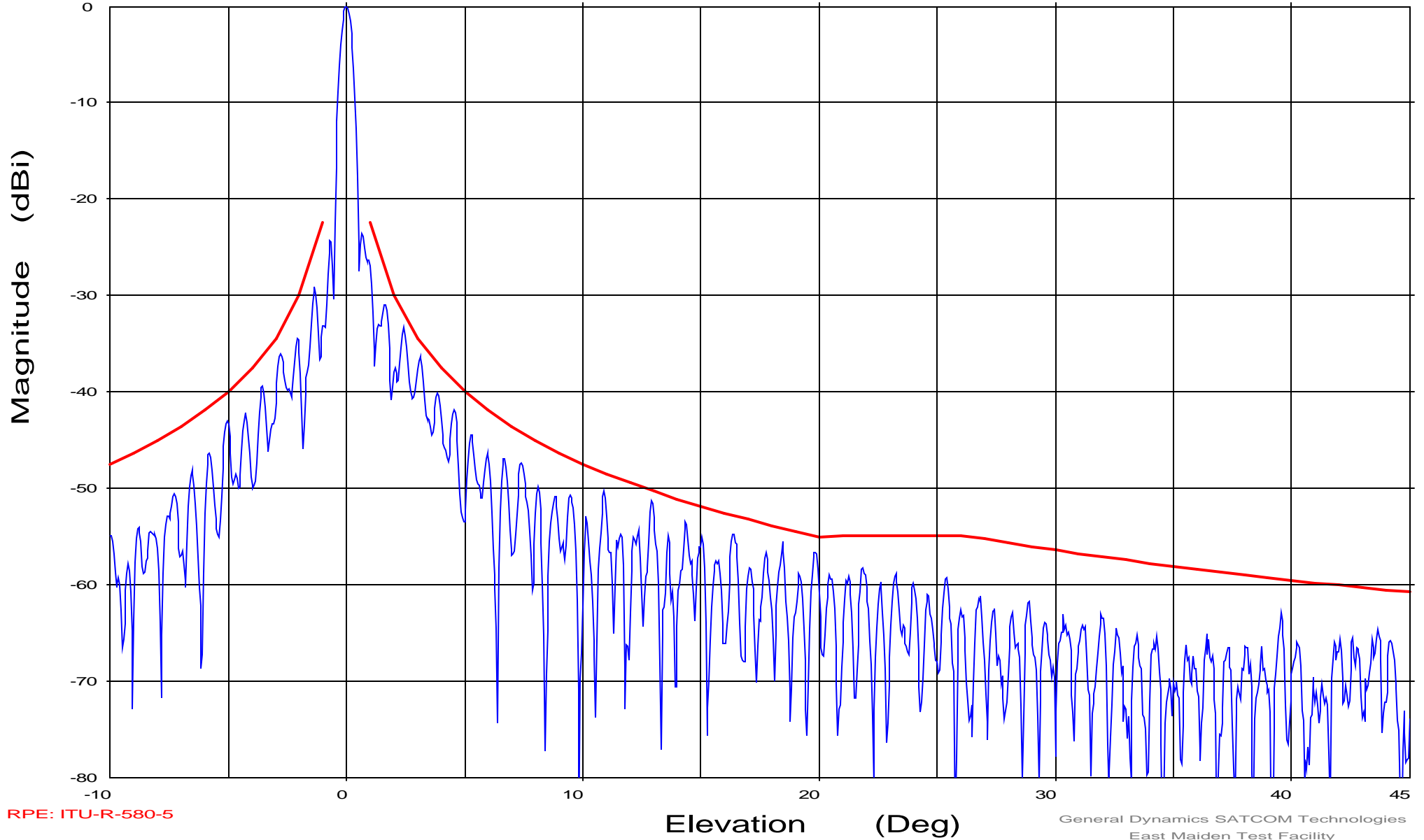
Frequency : 19.400 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

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East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650



File: 2310 57.dat

3244 Production KA system  
Ka CP Tx/Rx

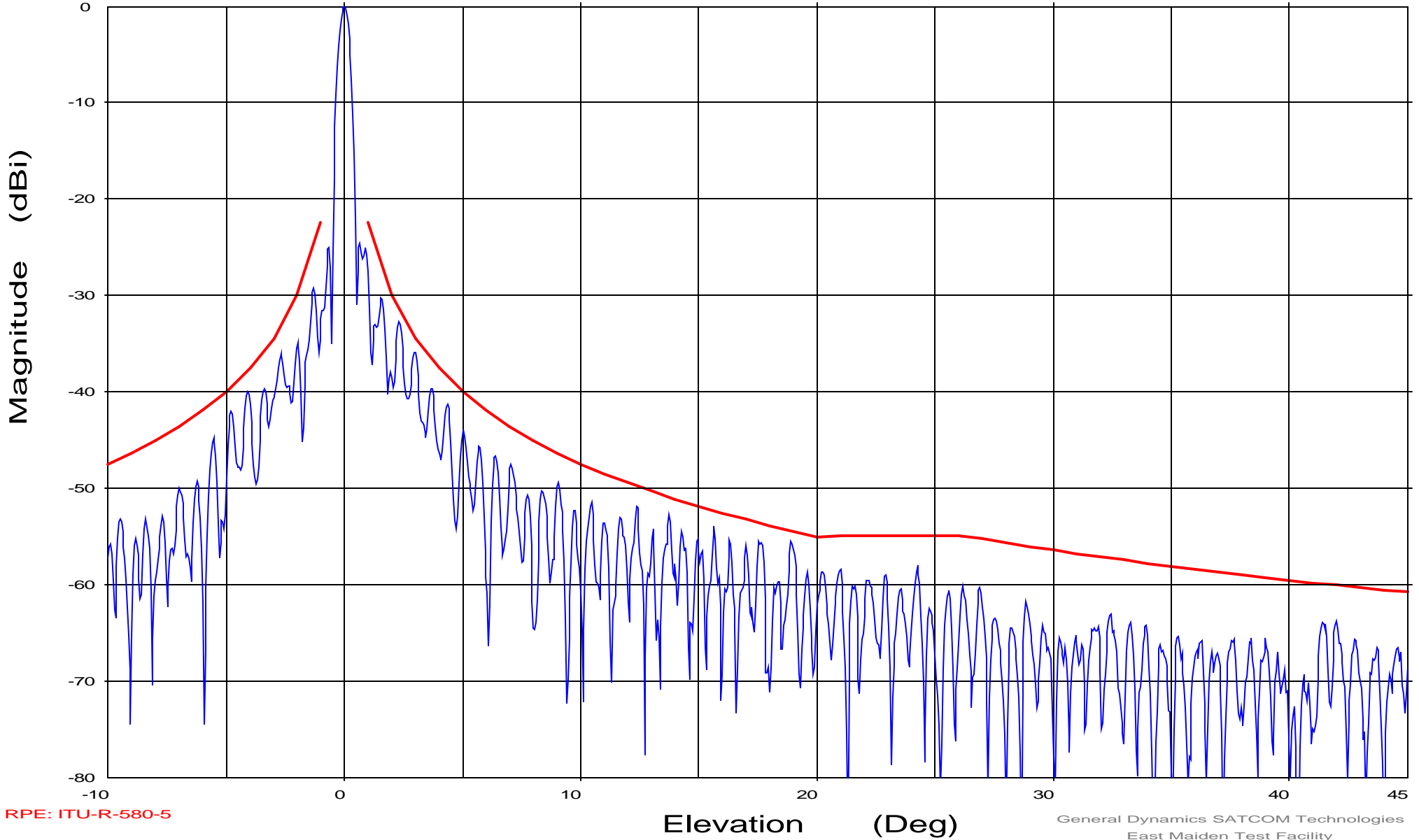
Frequency : 20.300 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

File: 2310 57.dat

3244 Production KA system  
Ka CP Tx/Rx

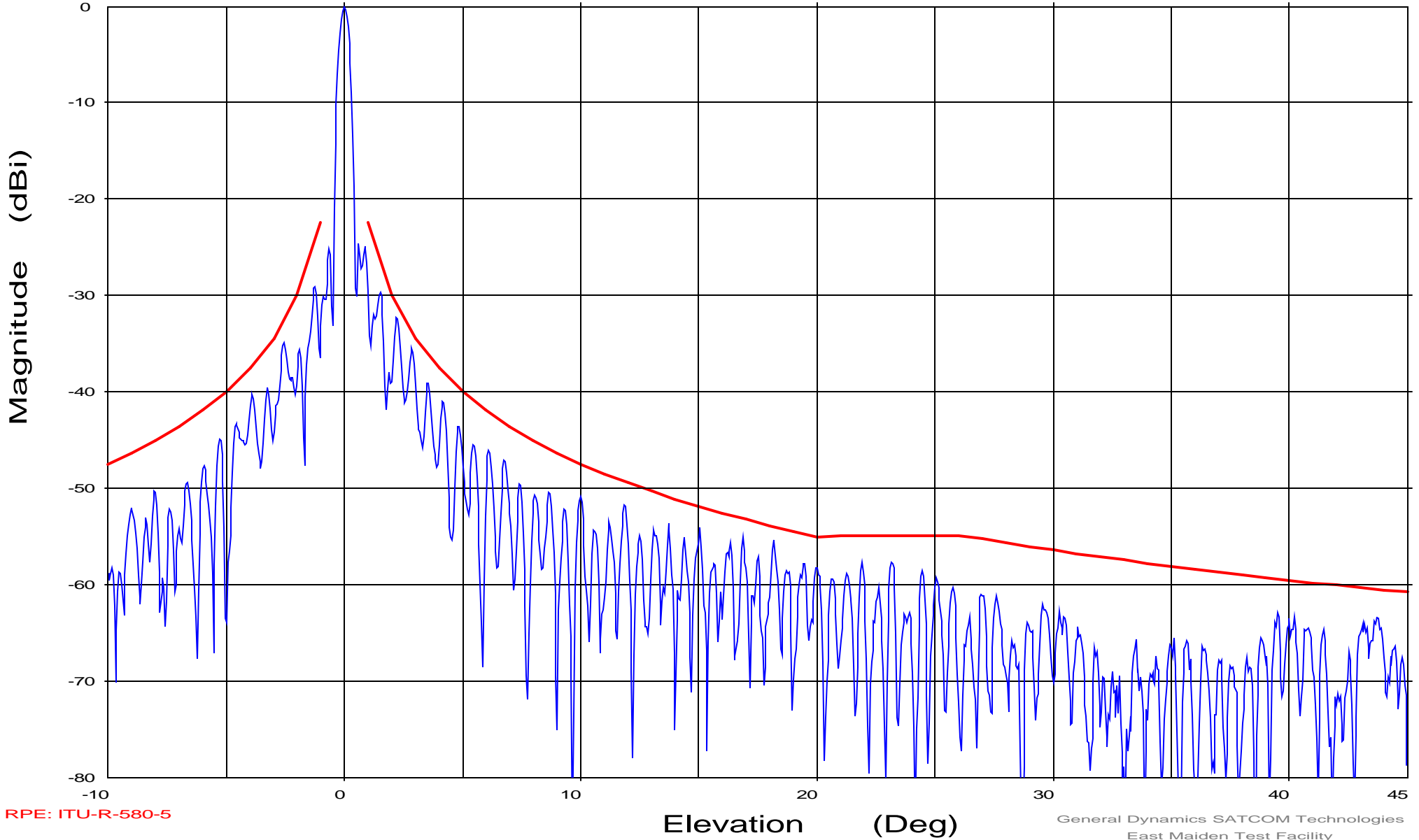
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

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East Maiden Test Facility  
4488 Lawing Chapel Church Road  
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File: 2310 56.dat

3244 Production KA system  
Ka CP Tx/Rx

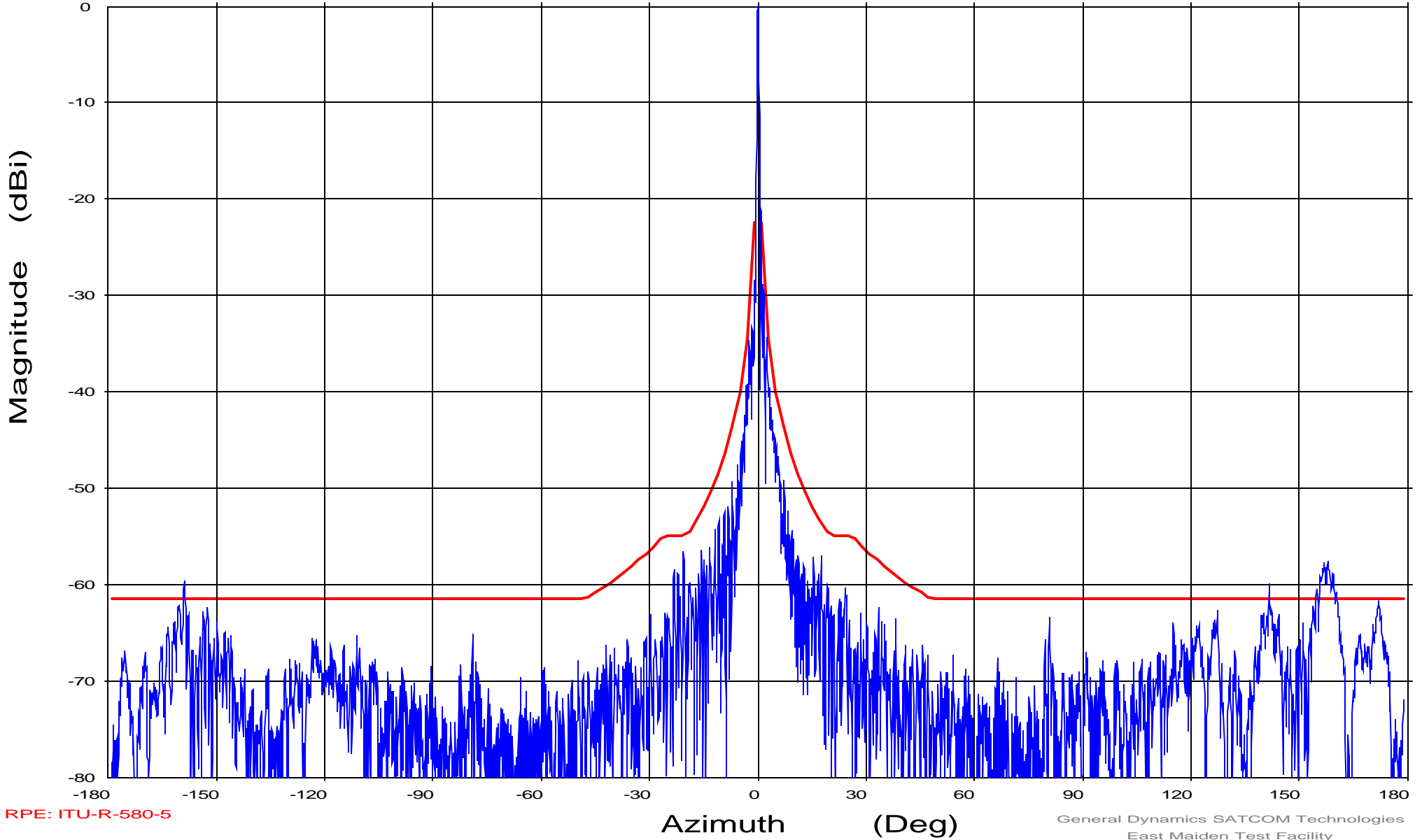
Frequency : 19.400 GHz

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

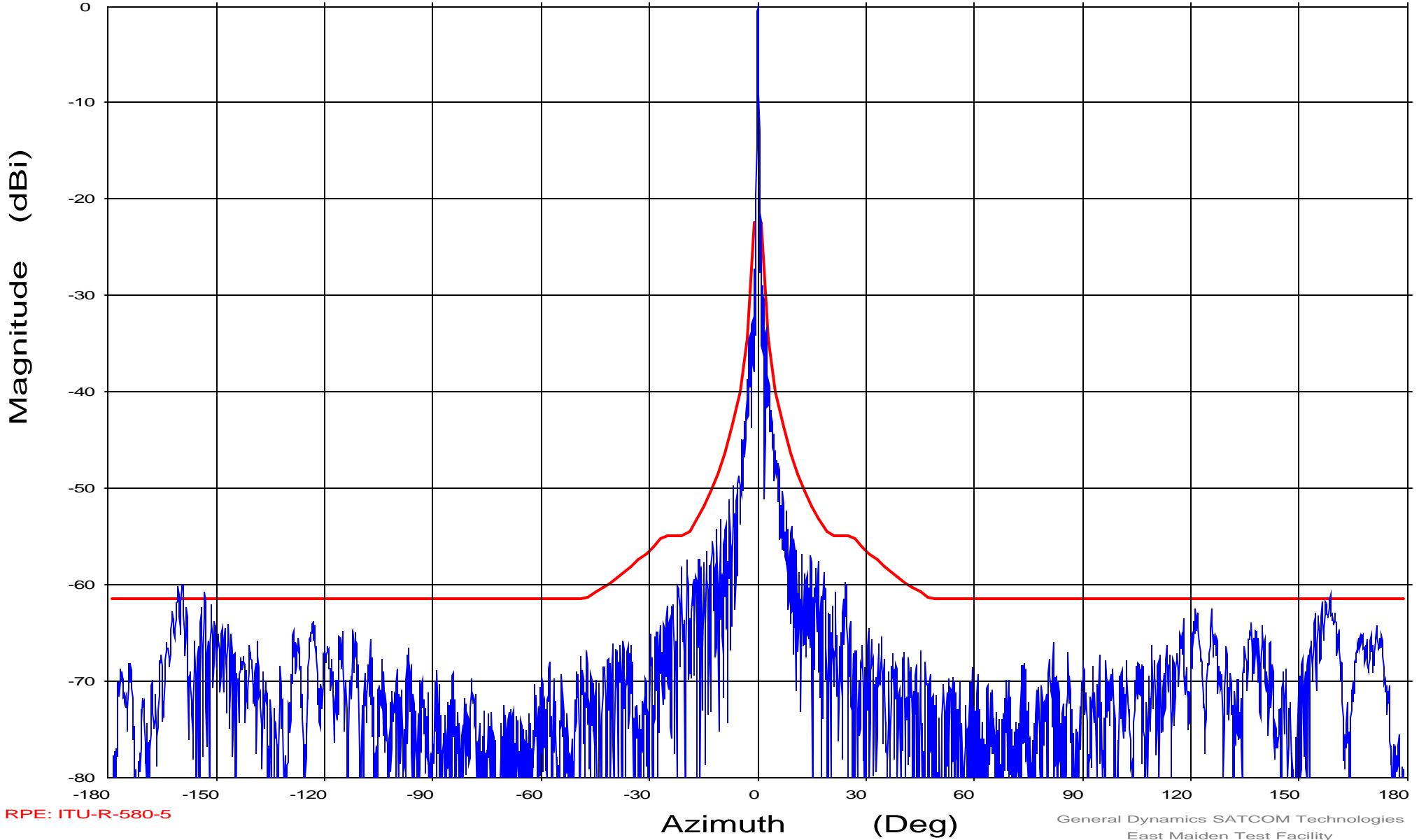
General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



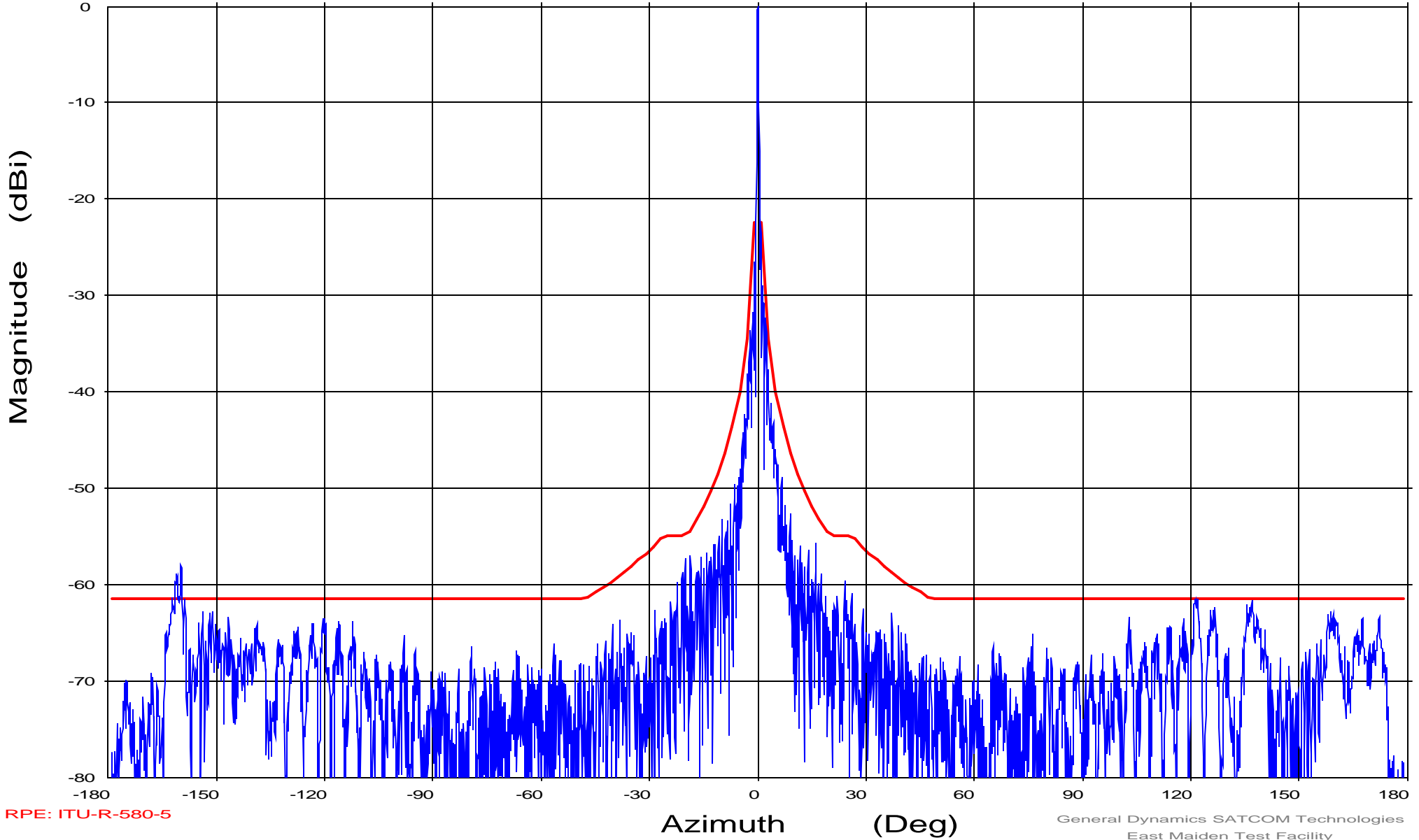
RPE: ITU-R-580-5

Operator: B Good

Channel: AUT

Tx pol: RHCP

Rx pol: RHCP



RPE: ITU-R-580-5

## SECTION 5

---

2.4m Ka-Band CP Rx / Tx Antenna System / Series 3244

### LHCP Rx

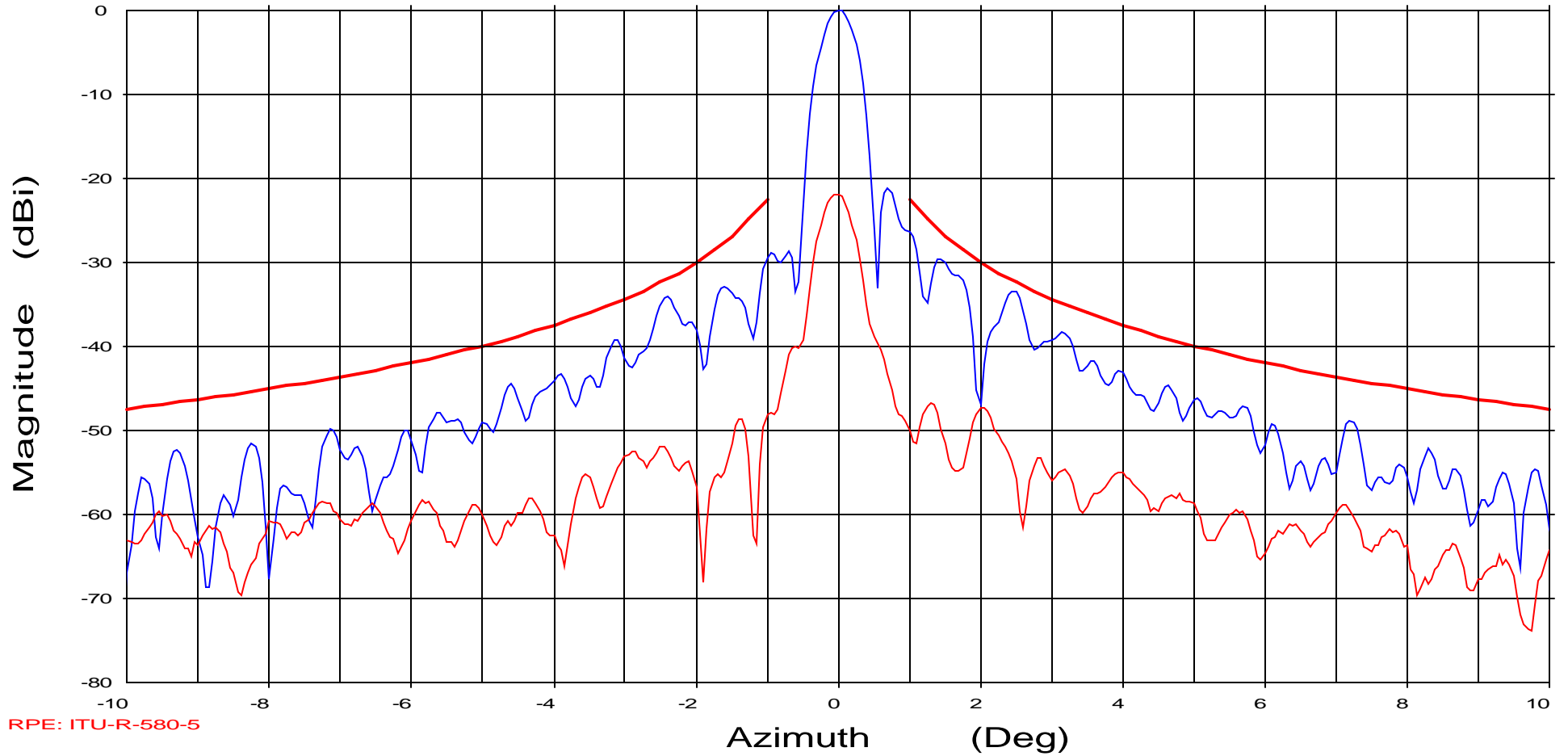
### Radiation Patterns

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays  
2310 62.dat-ant\_under\_test — blue line  
2310 64.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

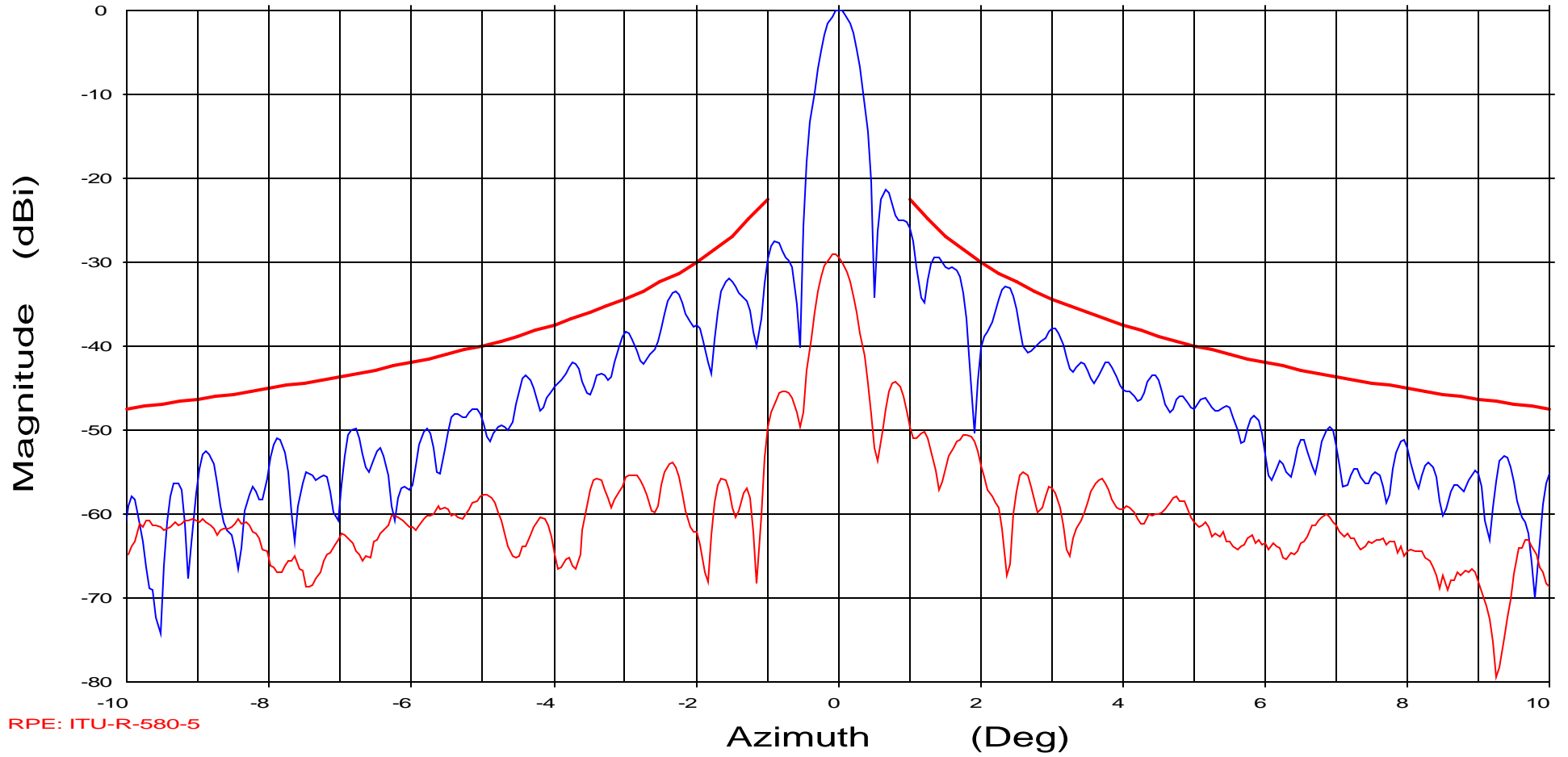
Frequency : 20.300 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays

2310 62.dat-ant\_under\_test — blue line  
2310 64.dat-ant\_under\_test — red line



3244 Production KA system  
Ka CP Tx/Rx

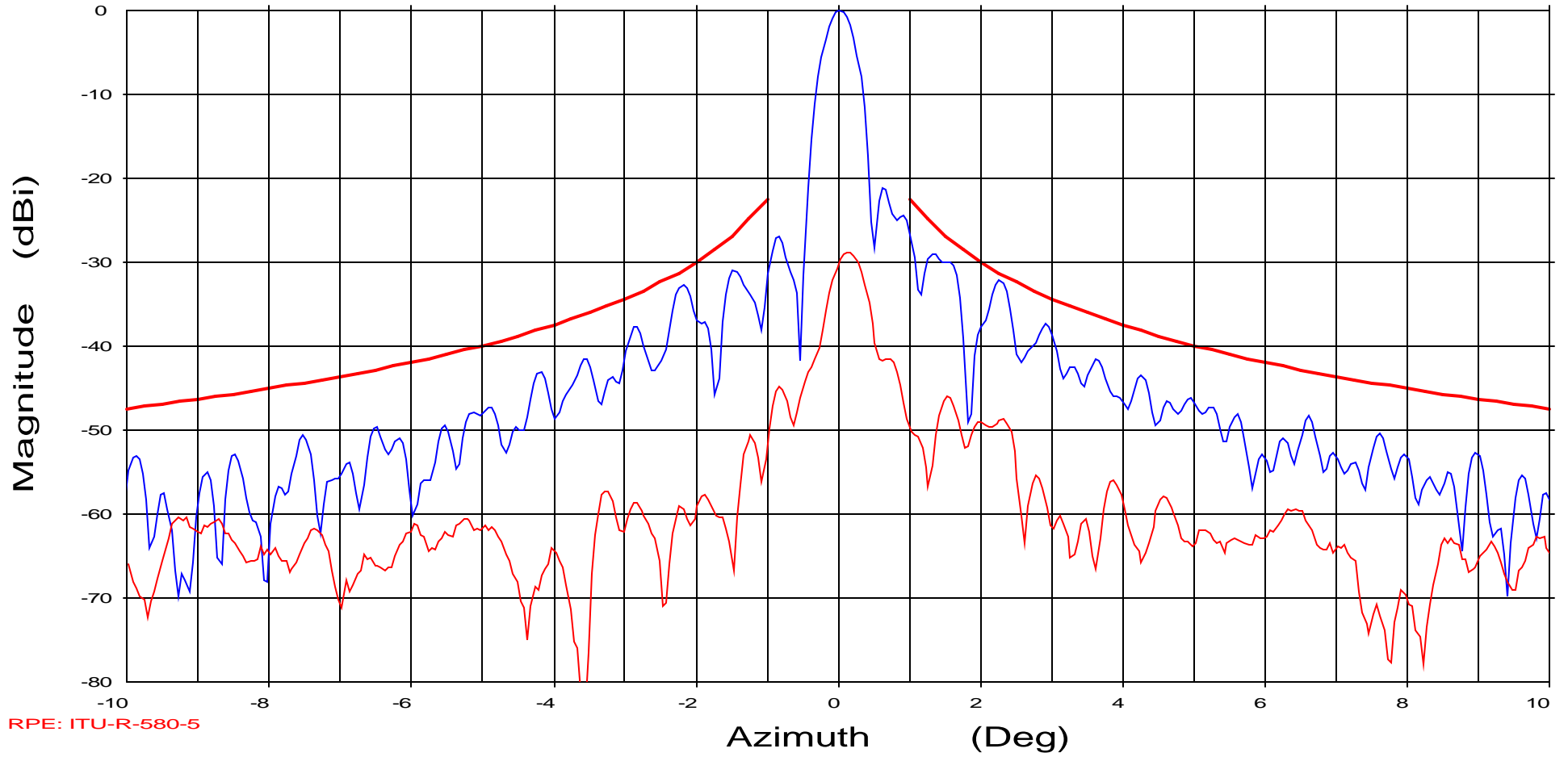
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays

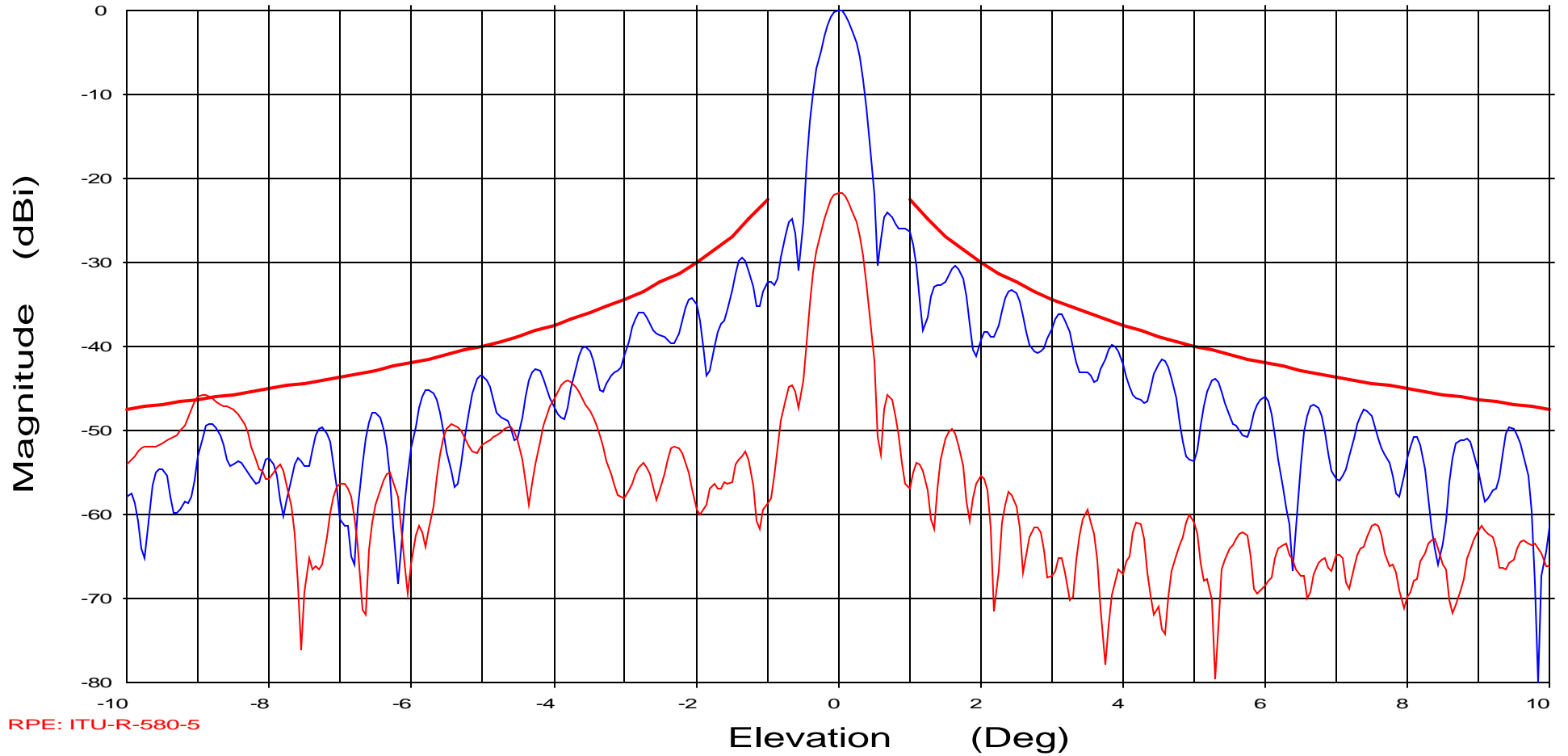
2310 62.dat-ant\_under\_test — blue line  
2310 64.dat-ant\_under\_test — red line

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays  
2310 63.dat-ant\_under\_test — blue line  
2310 65.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

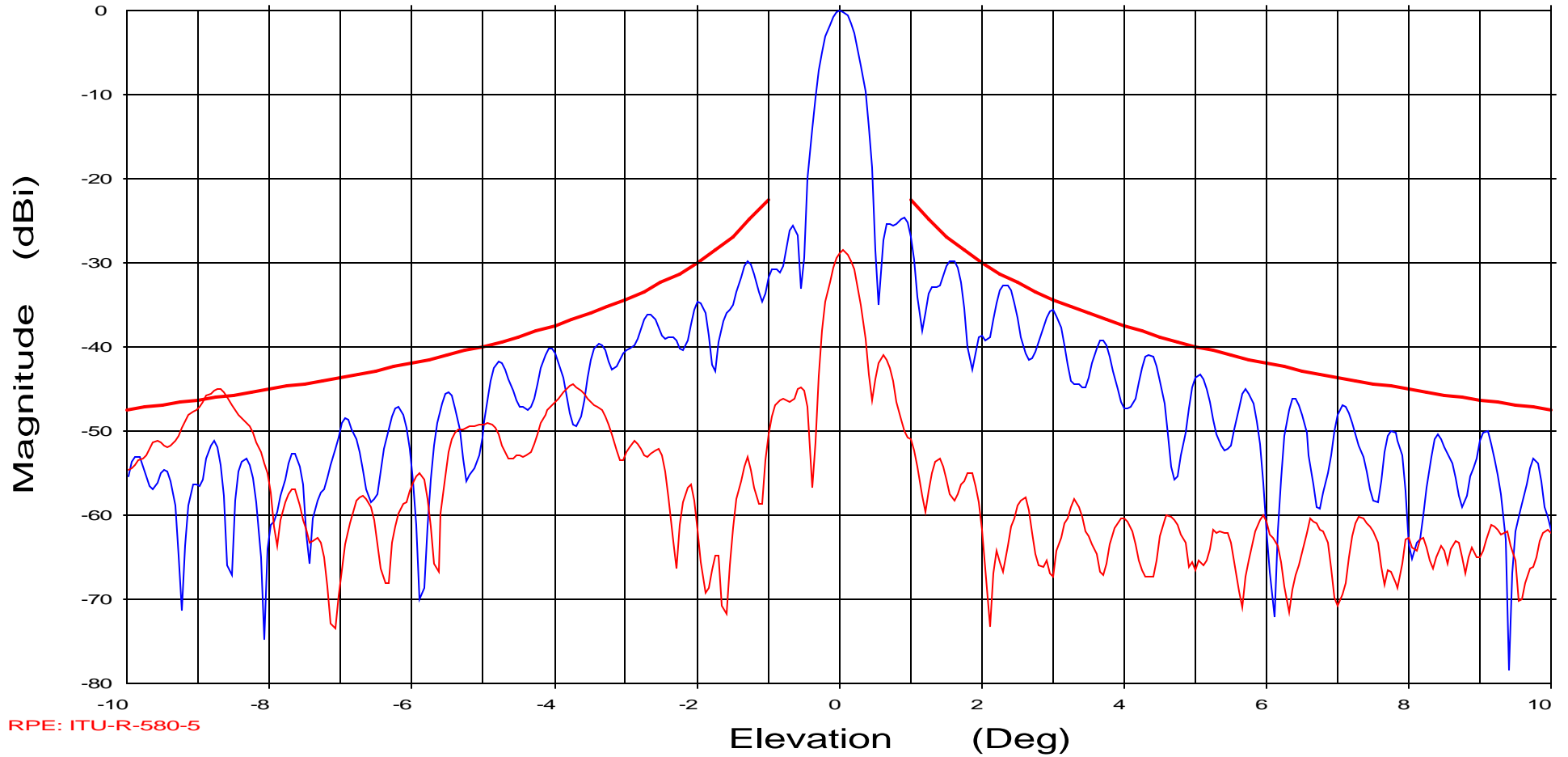
Frequency : 20.300 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

Overlays

2310 63.dat-ant\_under\_test — blue line  
2310 65.dat-ant\_under\_test — red line

3244 Production KA system  
Ka CP Tx/Rx

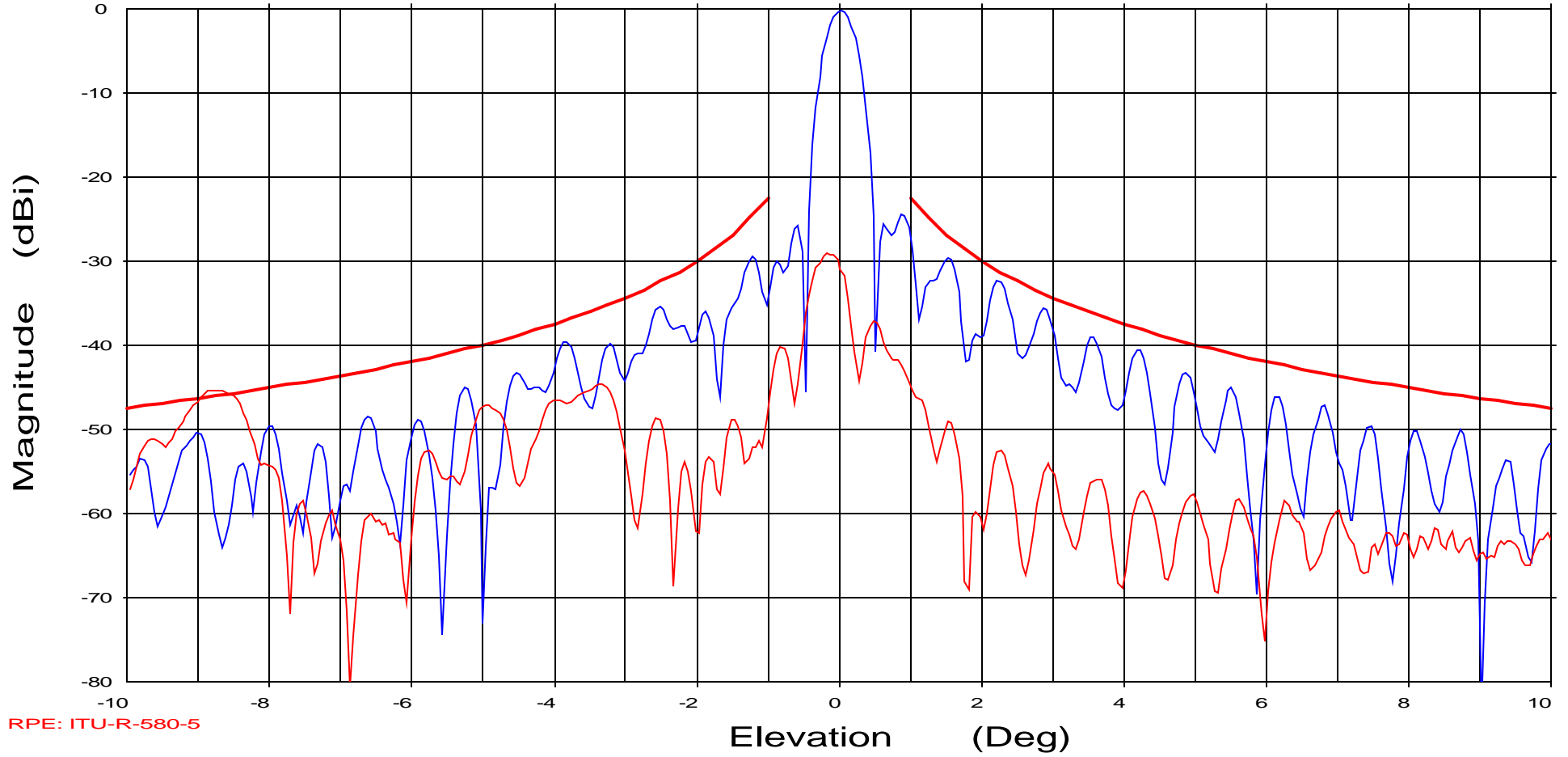
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



Overlays  
2310 63.dat-ant\_under\_test — blue line  
2310 65.dat-ant\_under\_test — red line

File: 2310 63.dat

3244 Production KA system  
Ka CP Tx/Rx

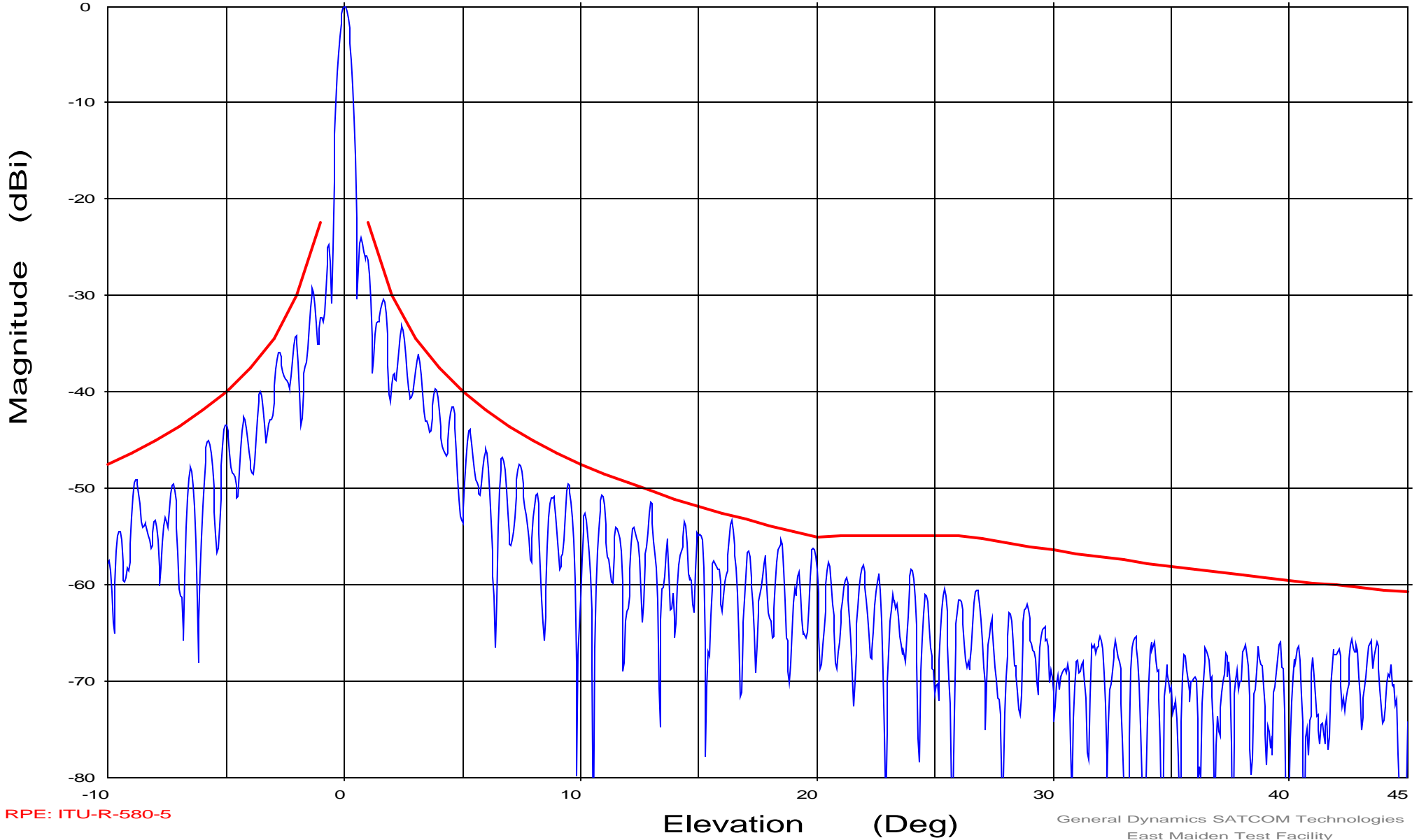
Frequency : 19.400 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

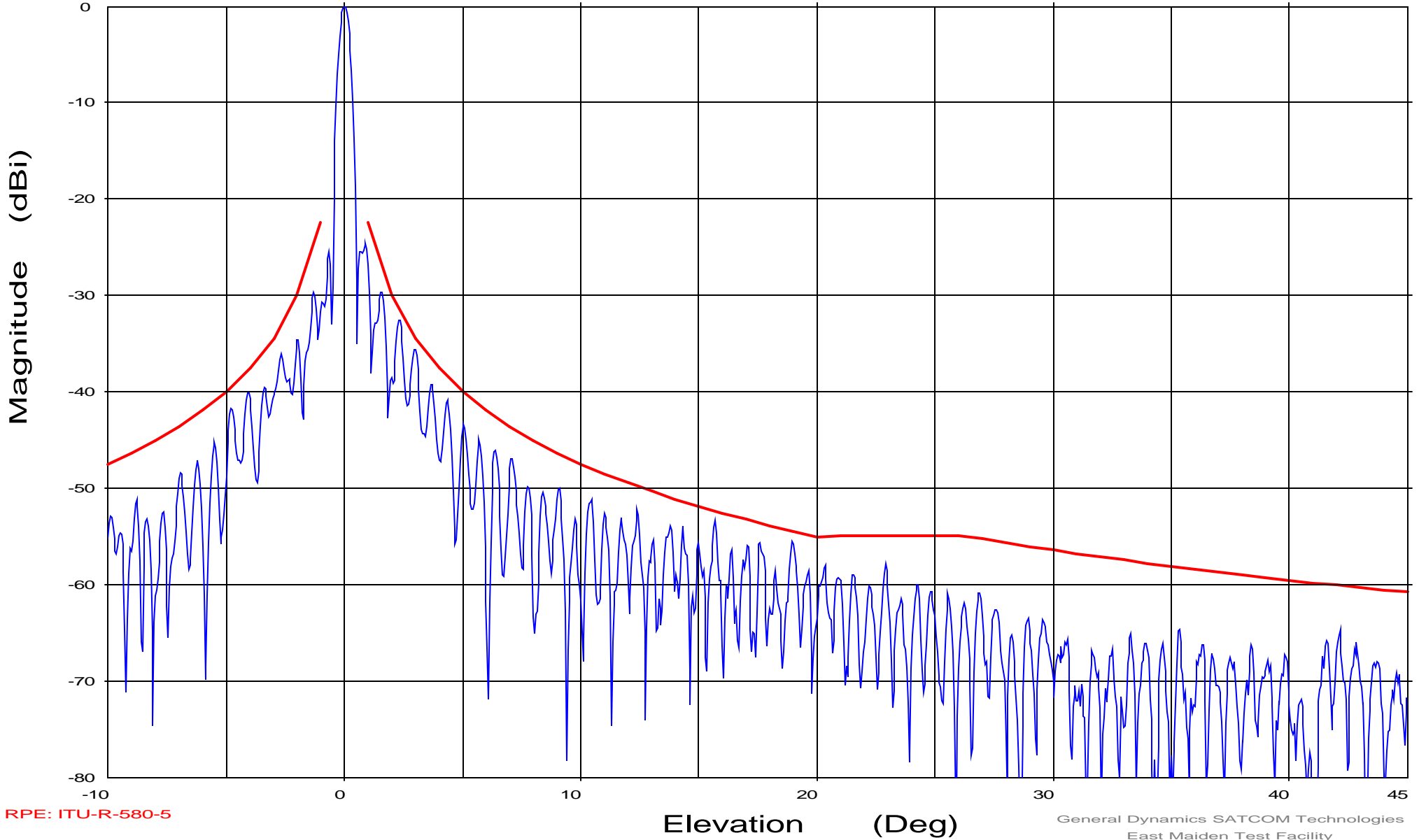
General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

File: 2310 63.dat

3244 Production KA system  
Ka CP Tx/Rx

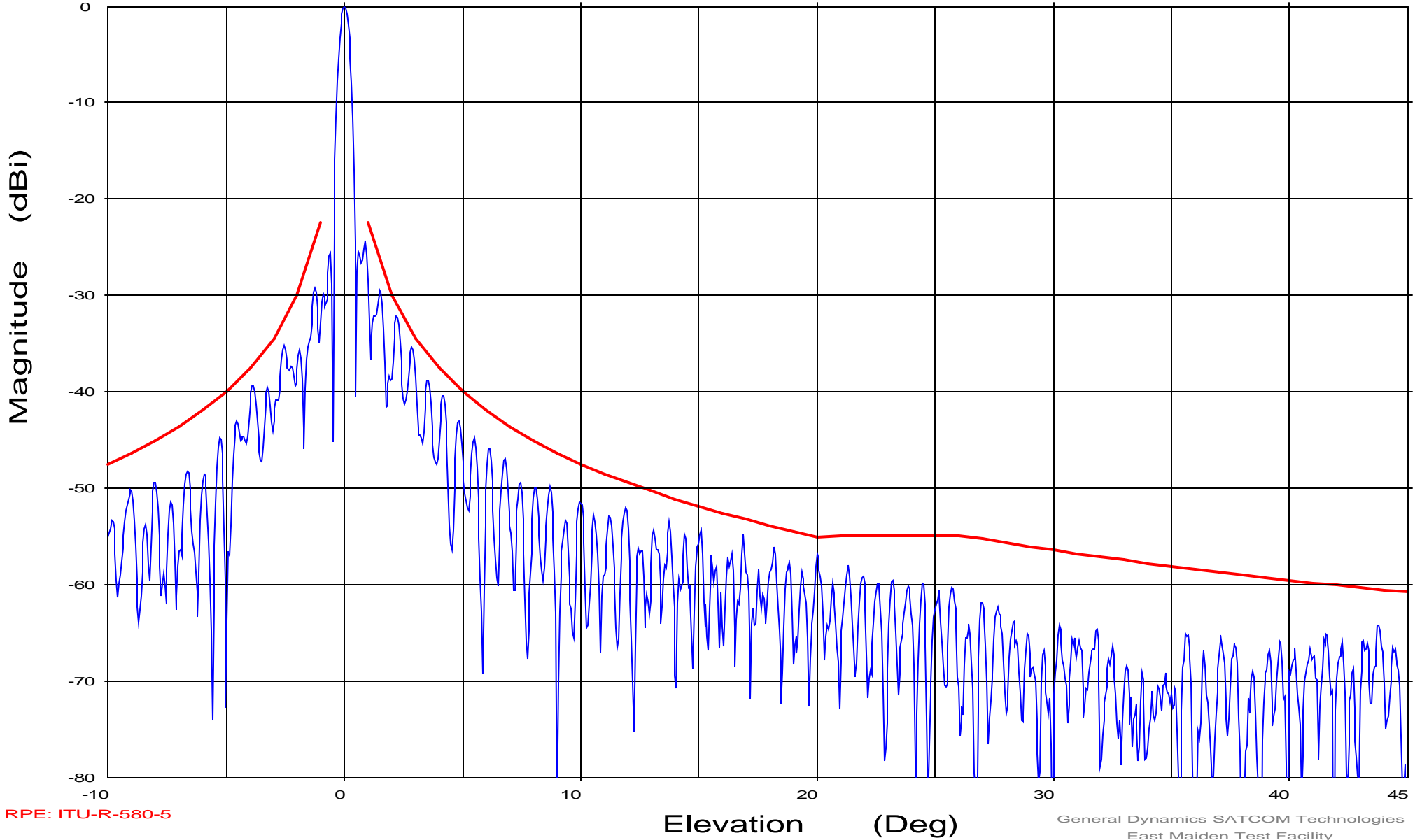
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

File: 2310 62.dat

3244 Production KA system  
Ka CP Tx/Rx

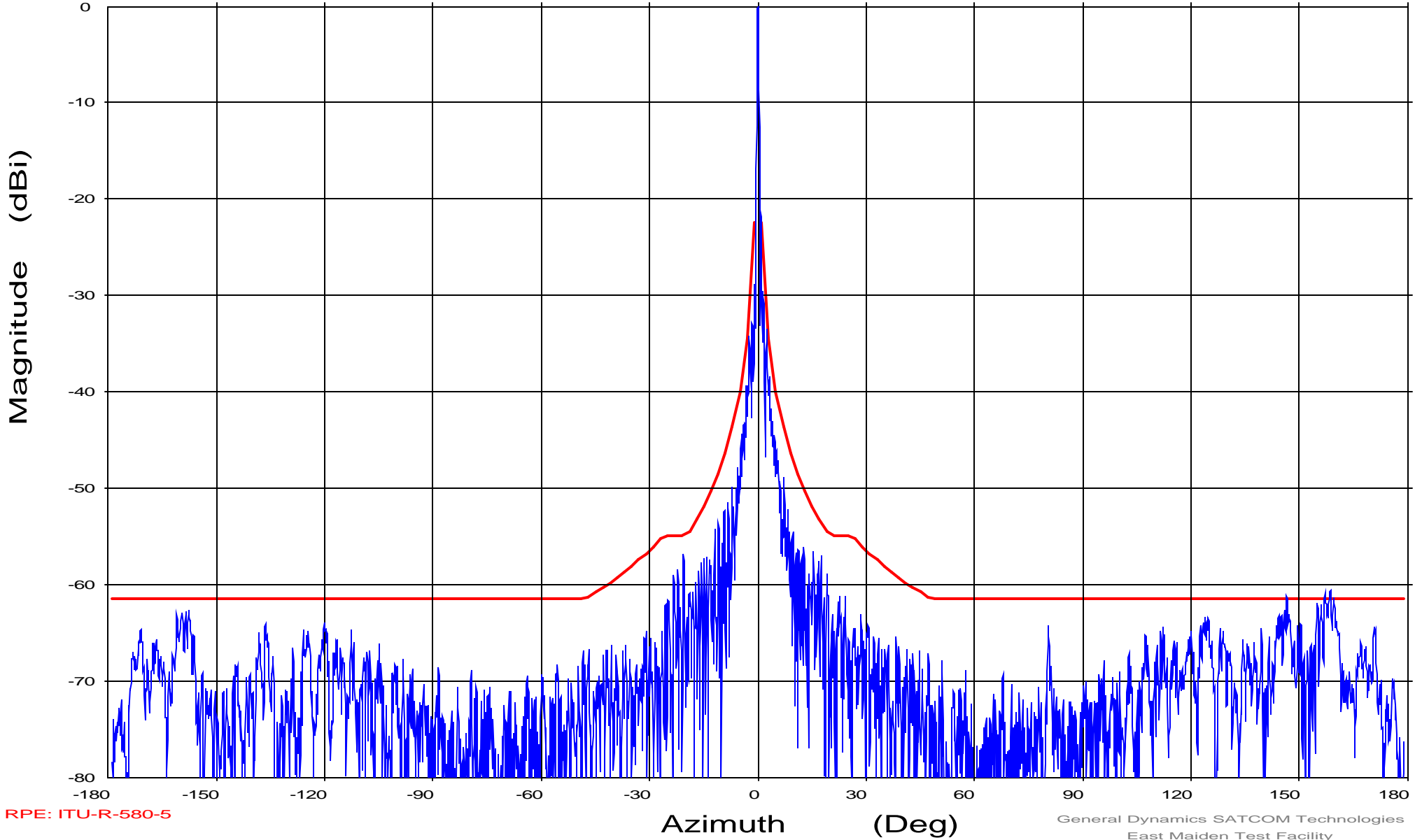
Frequency : 19.400 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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File: 2310 62.dat

3244 Production KA system  
Ka CP Tx/Rx

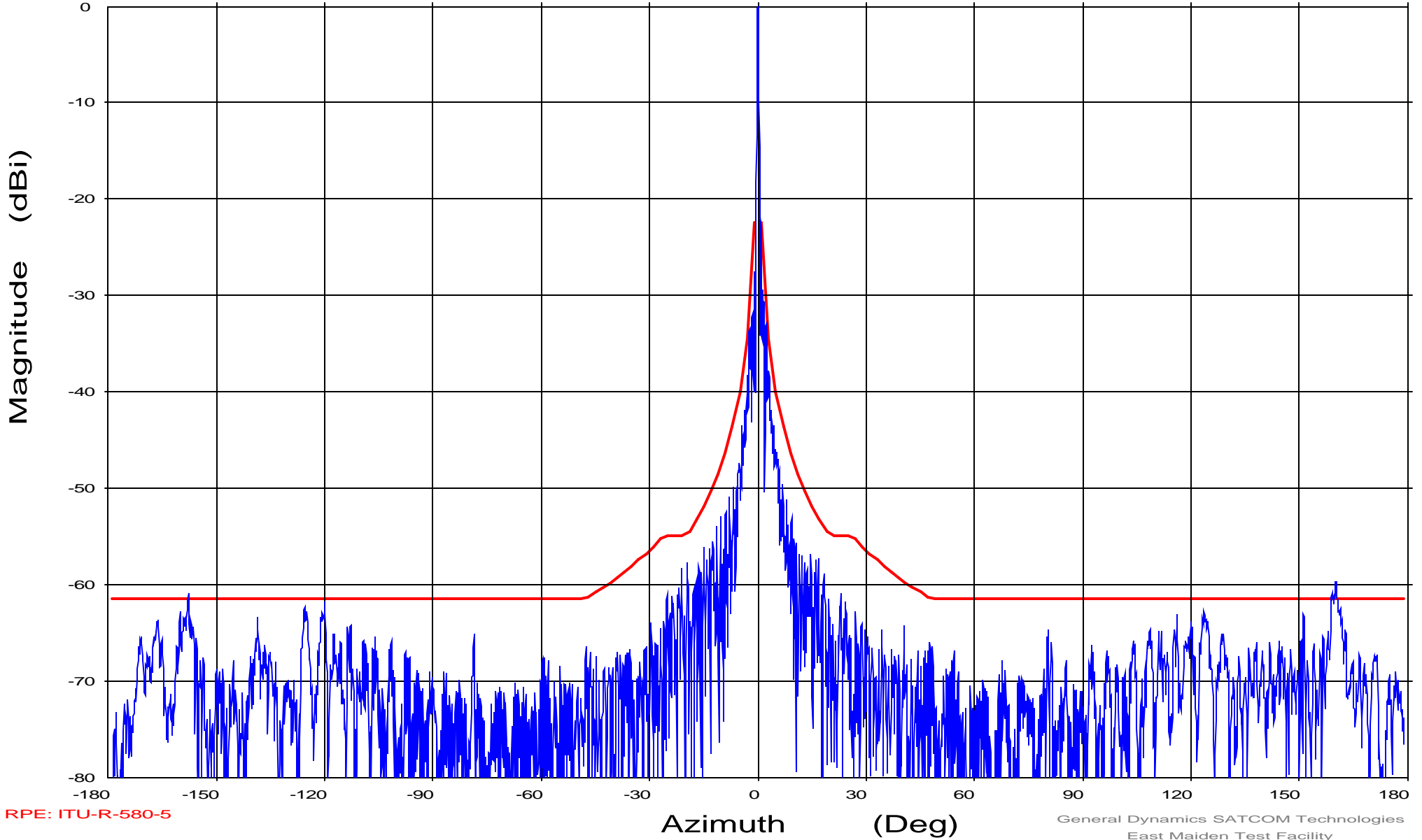
Frequency : 20.300 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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File: 2310 62.dat

3244 Production KA system  
Ka CP Tx/Rx

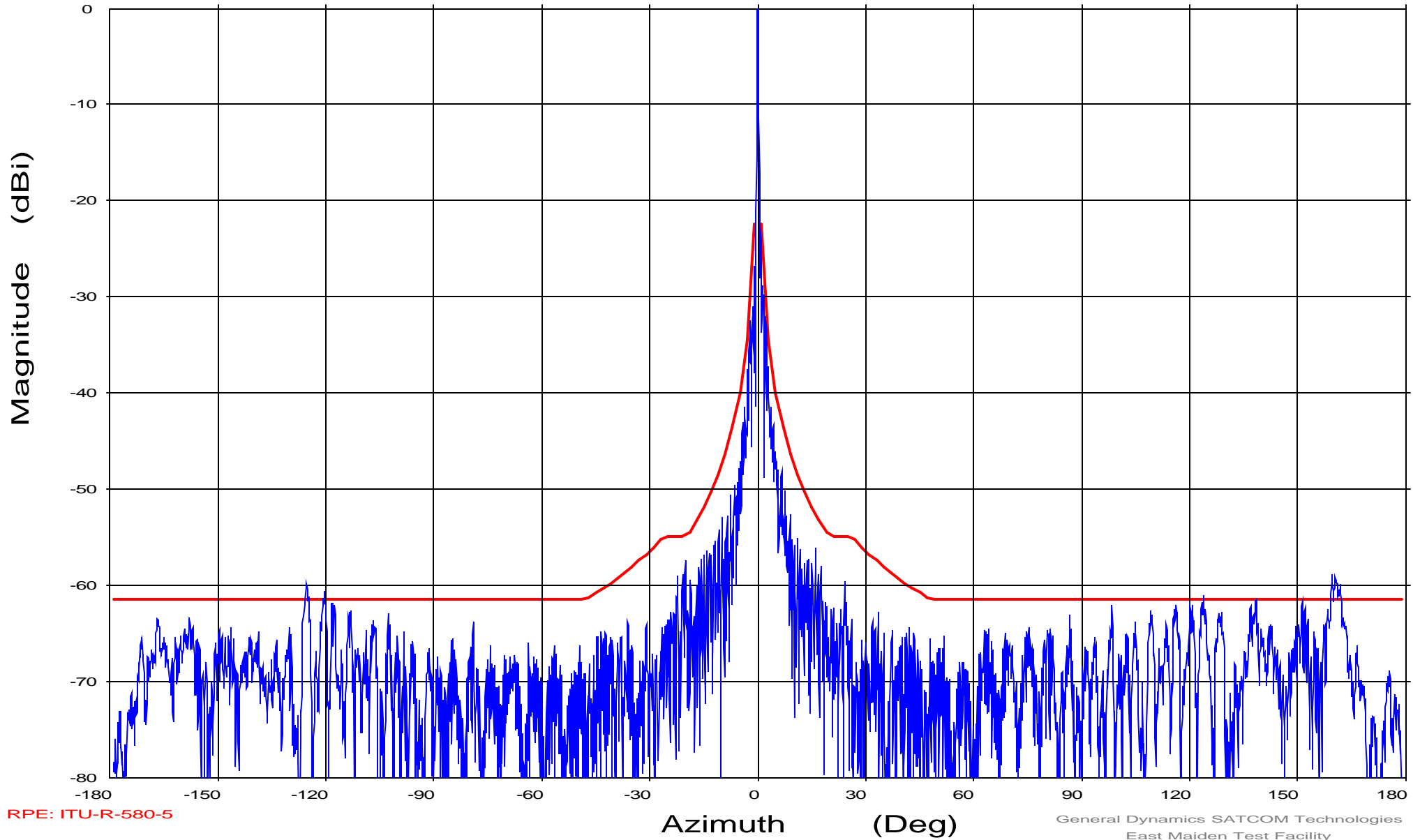
Frequency : 21.200 GHz

Operator: B Good

Channel: AUT

Tx pol: LHCP

Rx pol: LHCP



RPE: ITU-R-580-5

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End of Report

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