

# **GENERAL DYNAMICS**

## SATCOM Technologies

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

Series 3244

2209 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 Series 3244

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## Ka-Band Linear Rx/Tx

### Contents

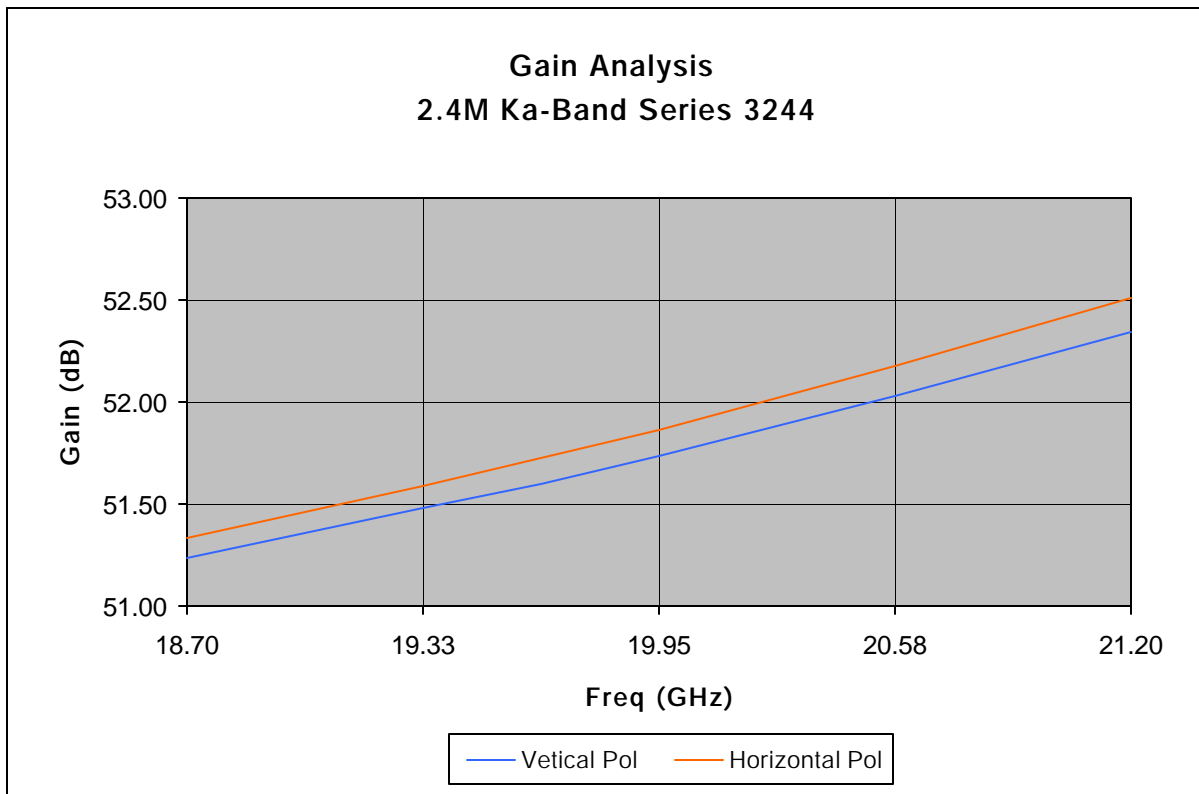
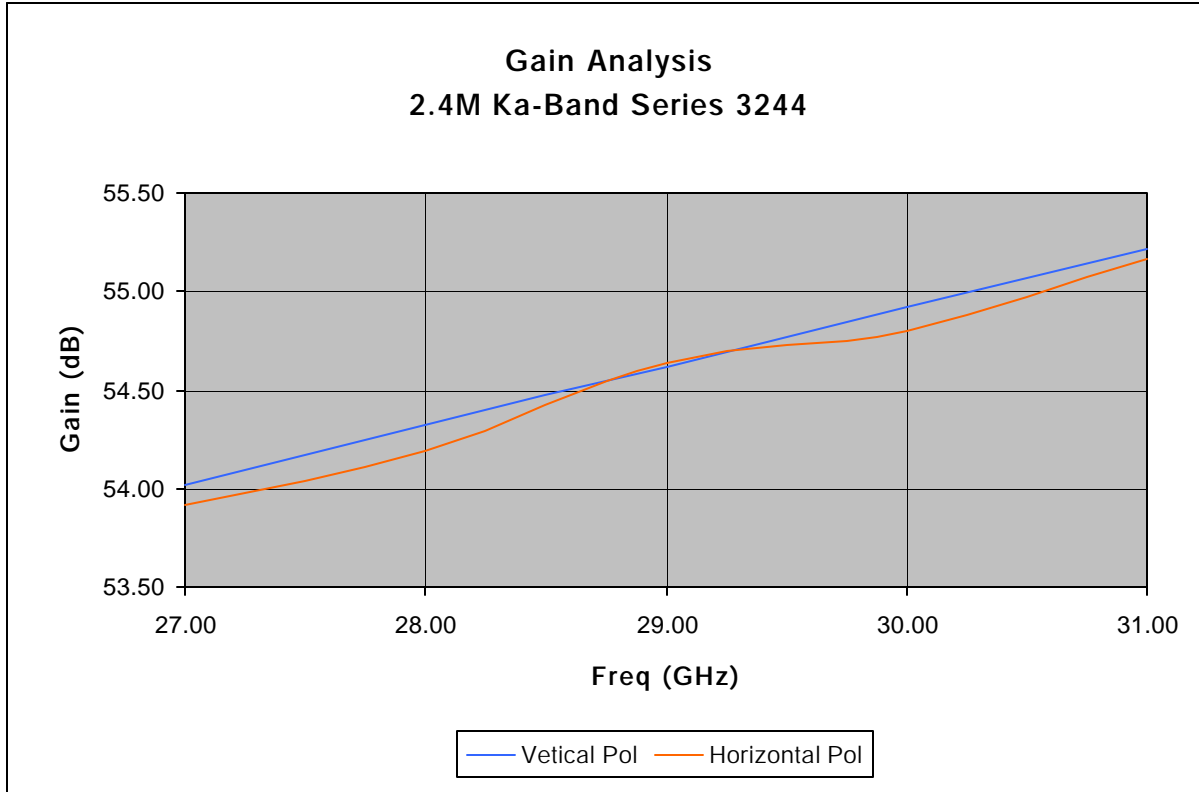
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Gain

Measured Gain 2.4m Ka-Band Series 3244

Test No. 2209



Vertical Polarity Radiation Patterns

**Transmit Frequencies**

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

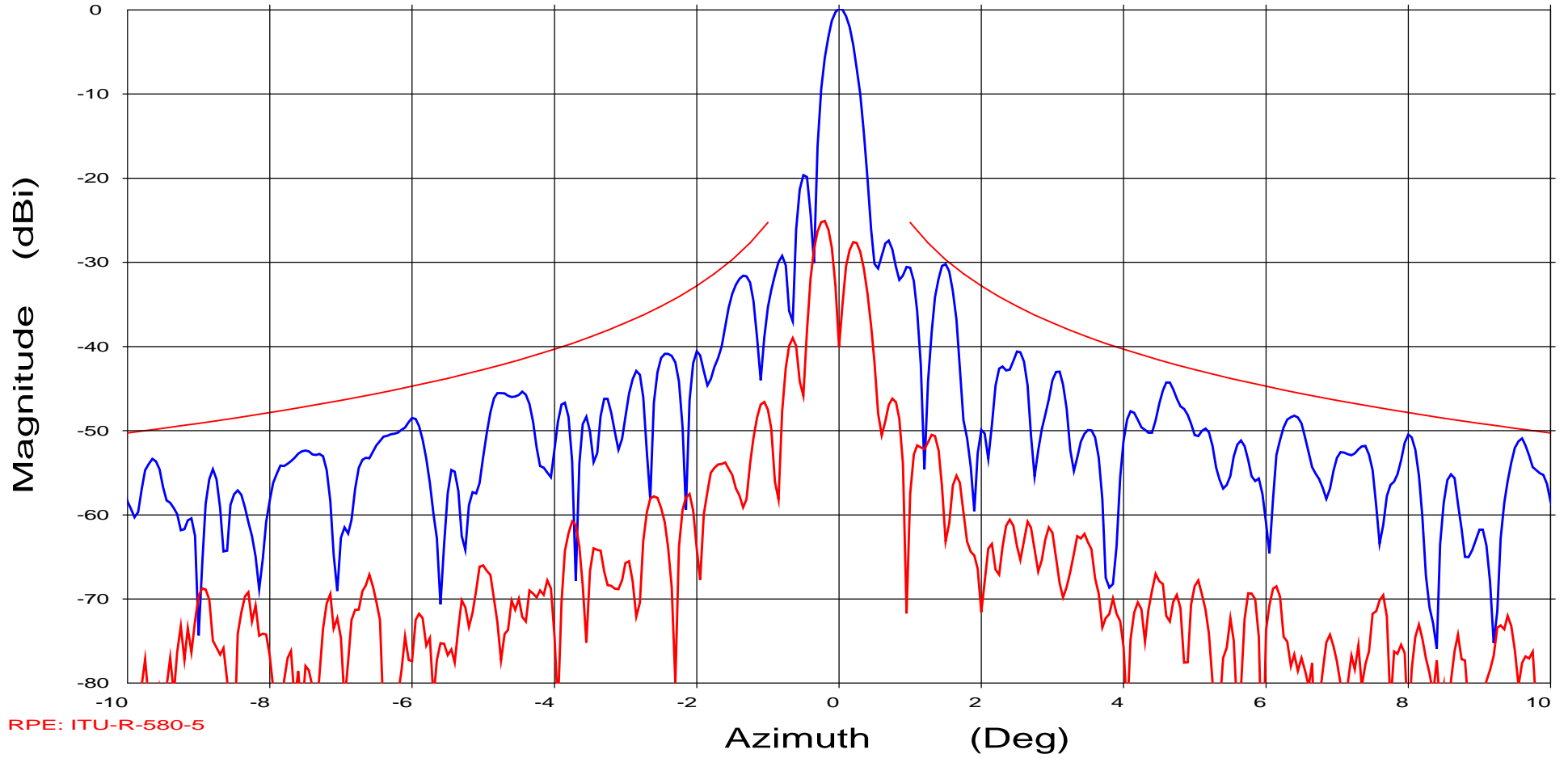
Frequency : 27.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

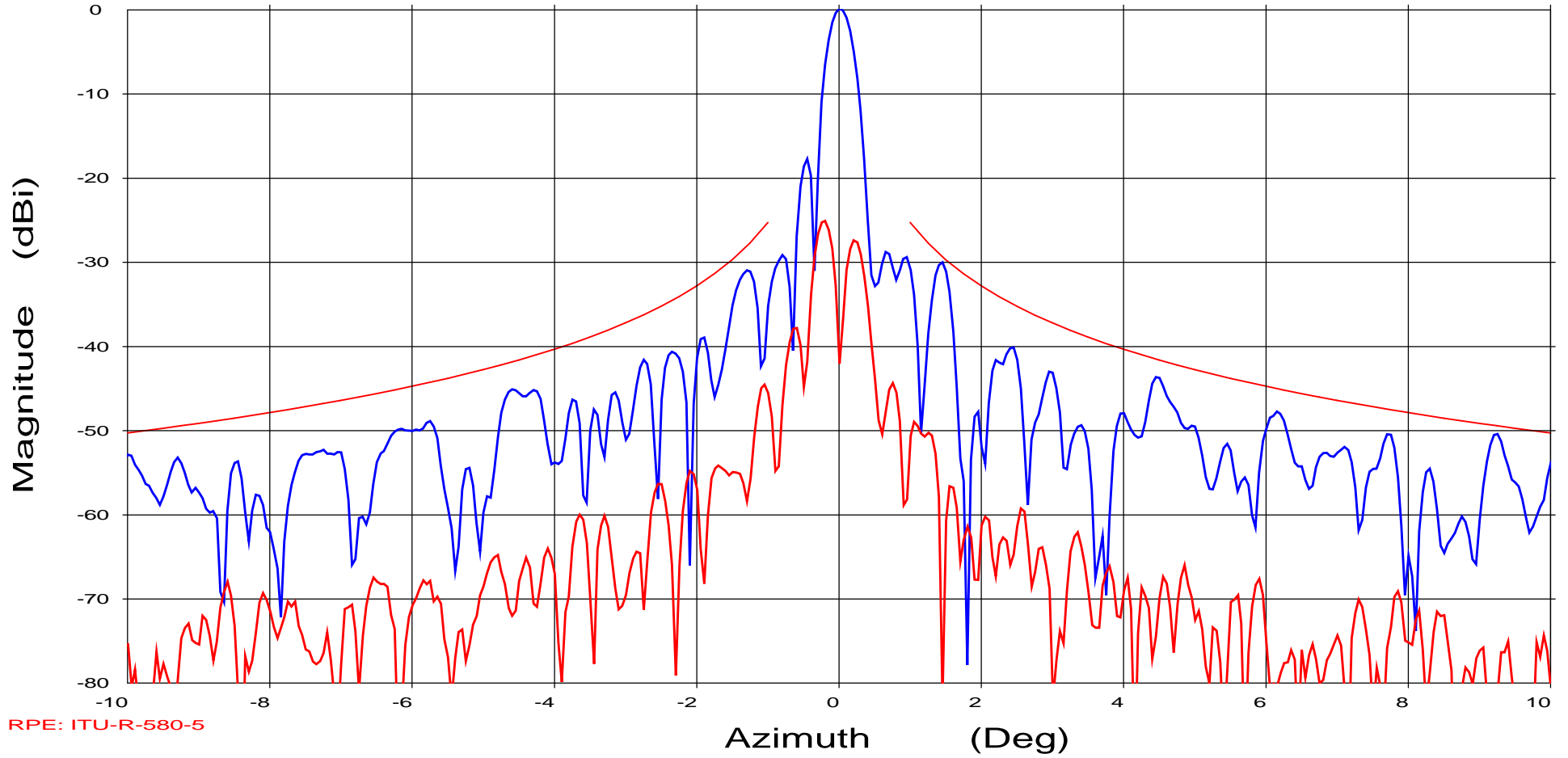
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2209-2190 08.dat-ant\_under\_test — blue line  
2209-2190 10.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays

- 2209-2190 08.dat-ant\_under\_test — blue line
- 2209-2190 10.dat-ant\_under\_test — red line

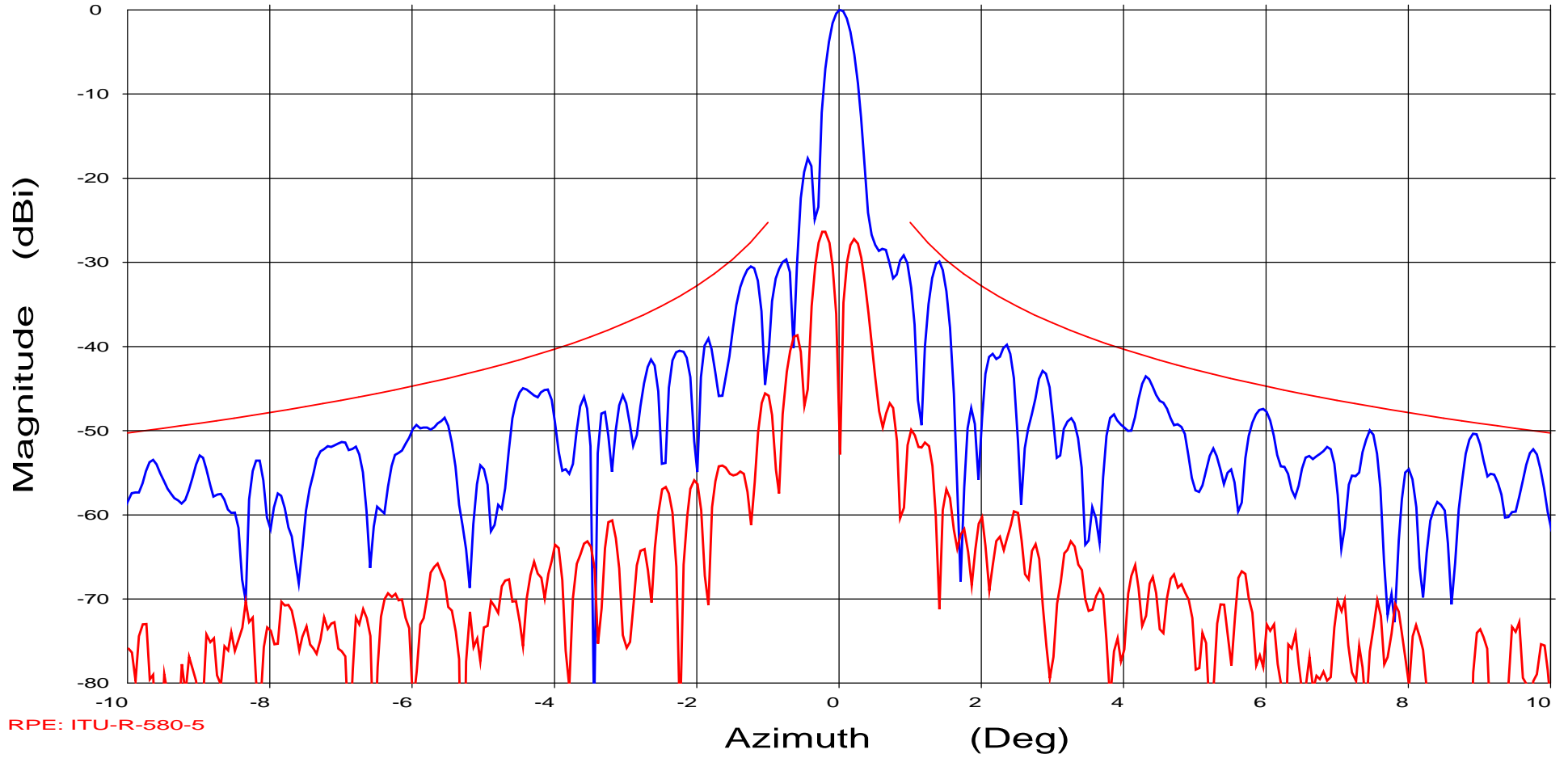


Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

Overlays

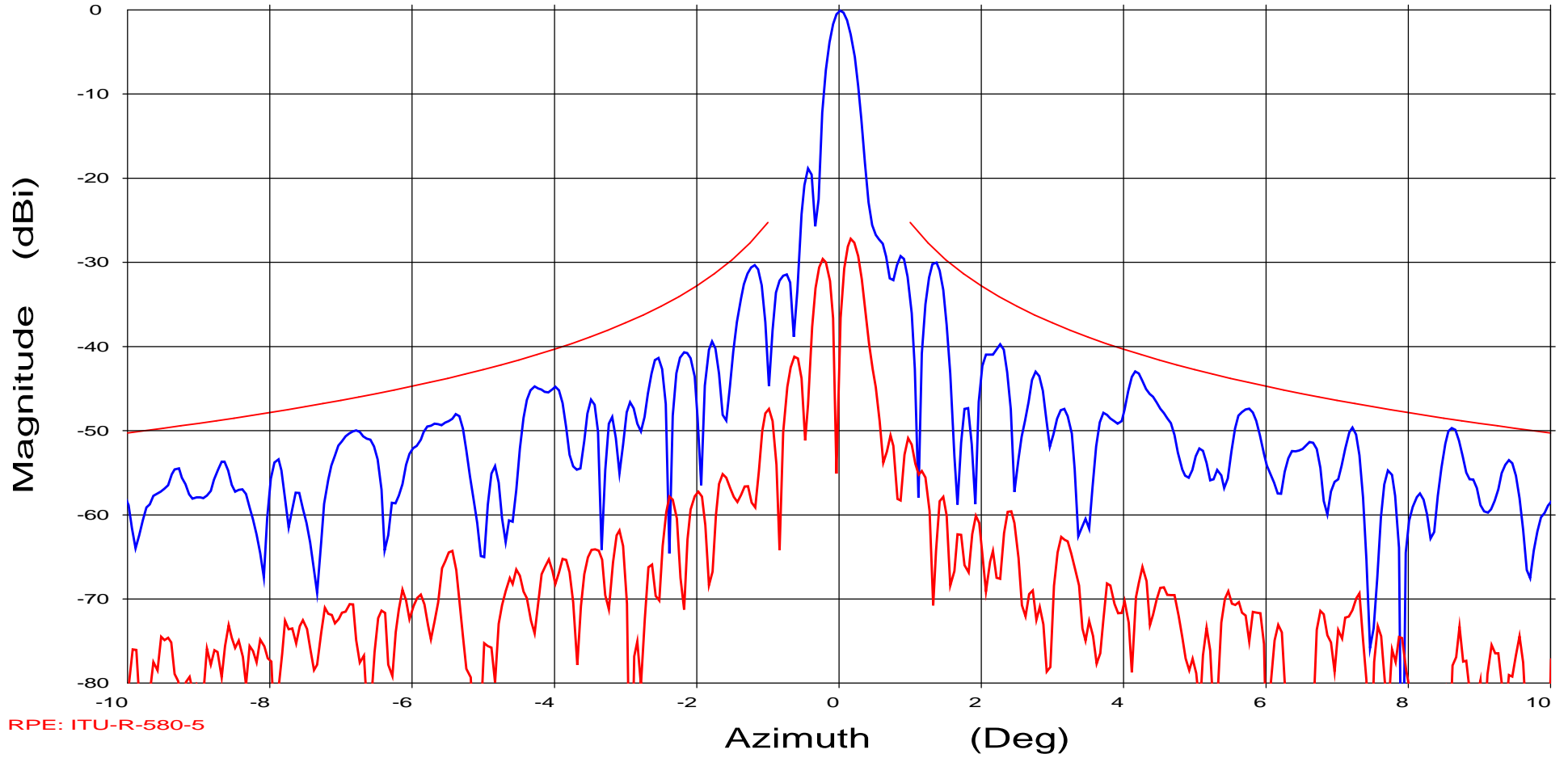
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Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

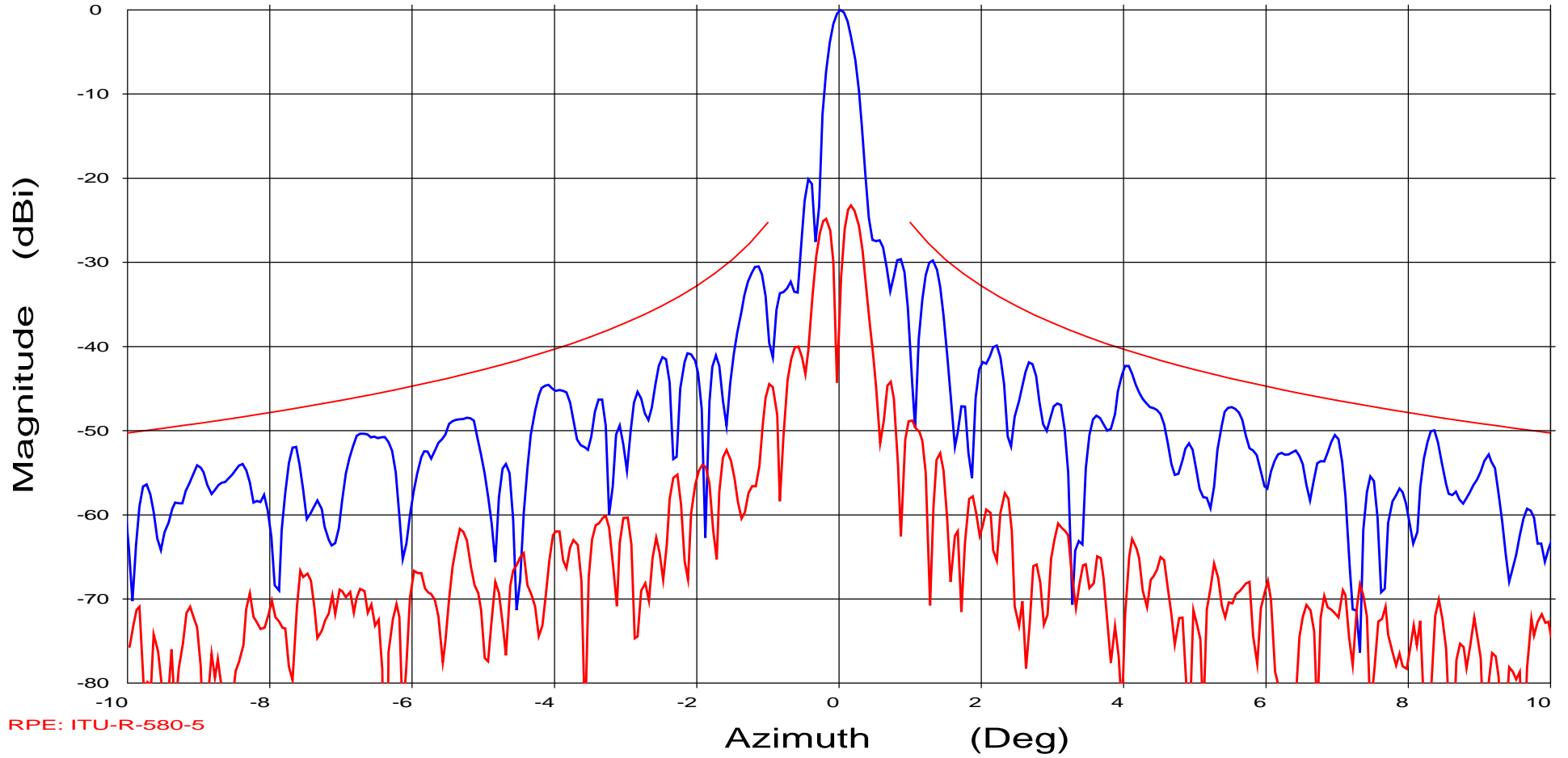
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2209-2190 10.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays

- 2209-2190 08.dat-ant\_under\_test — blue line
- 2209-2190 10.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

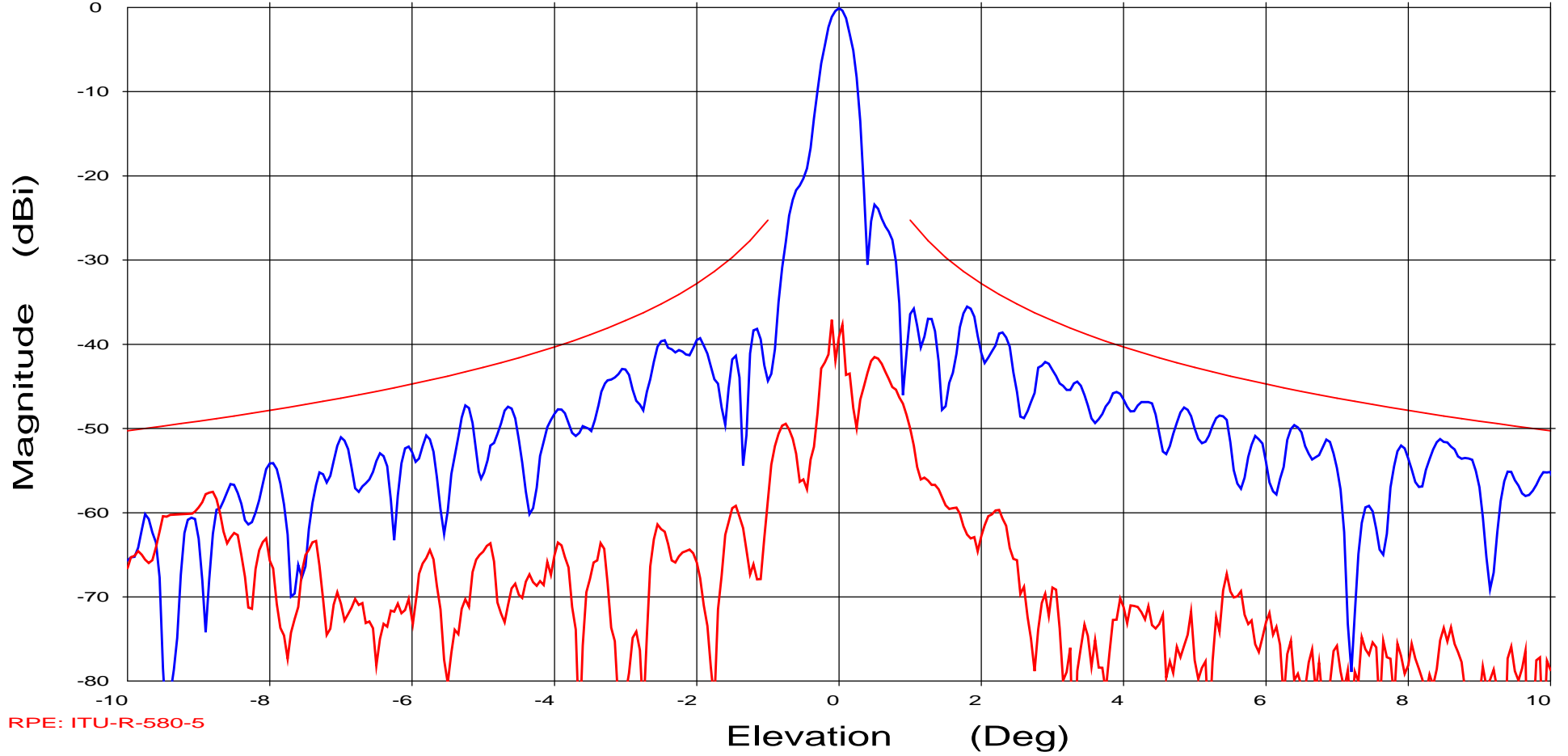
Frequency : 27.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

Overlays  
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2209-2190 11.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

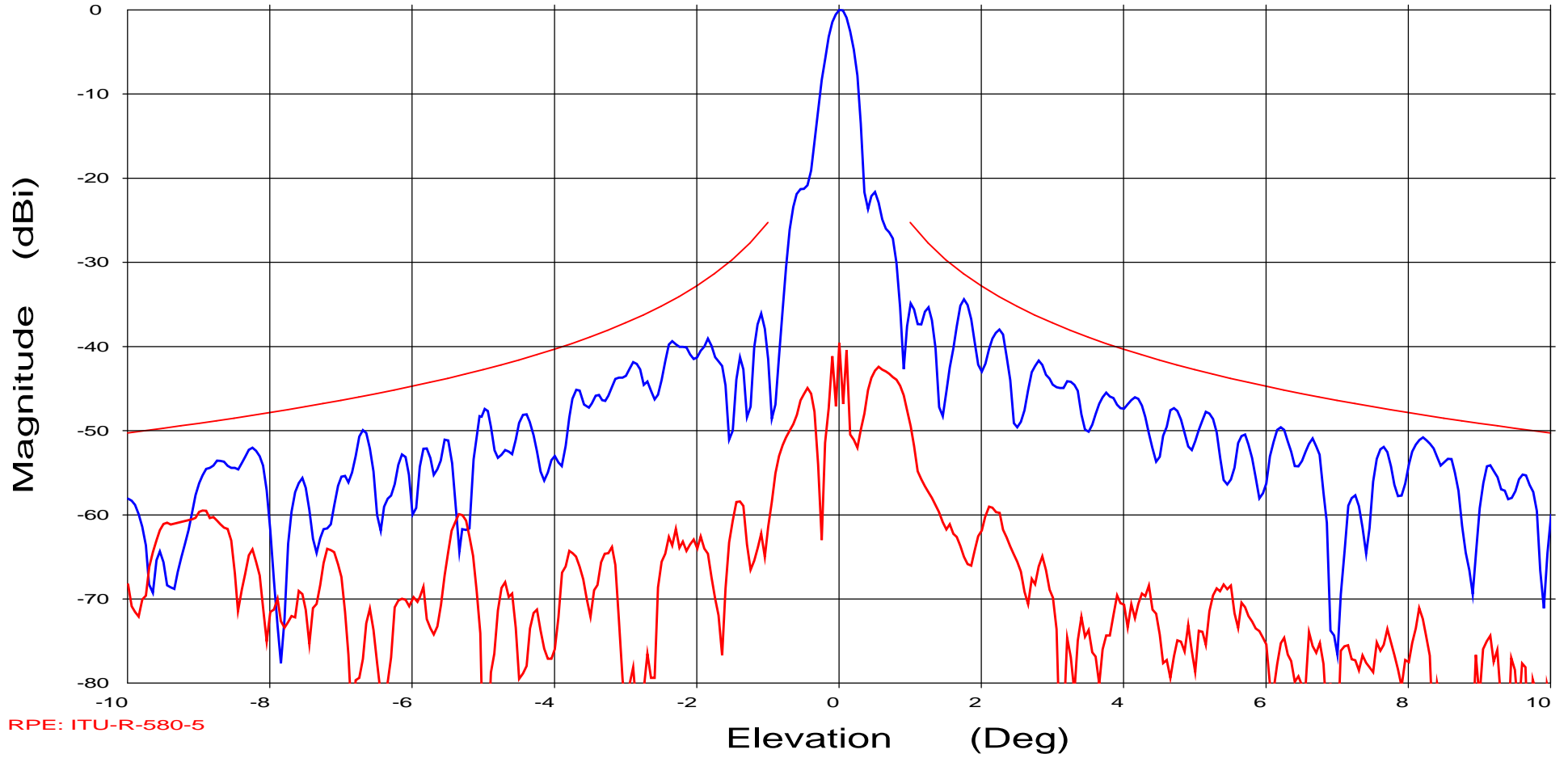
Frequency : 28.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

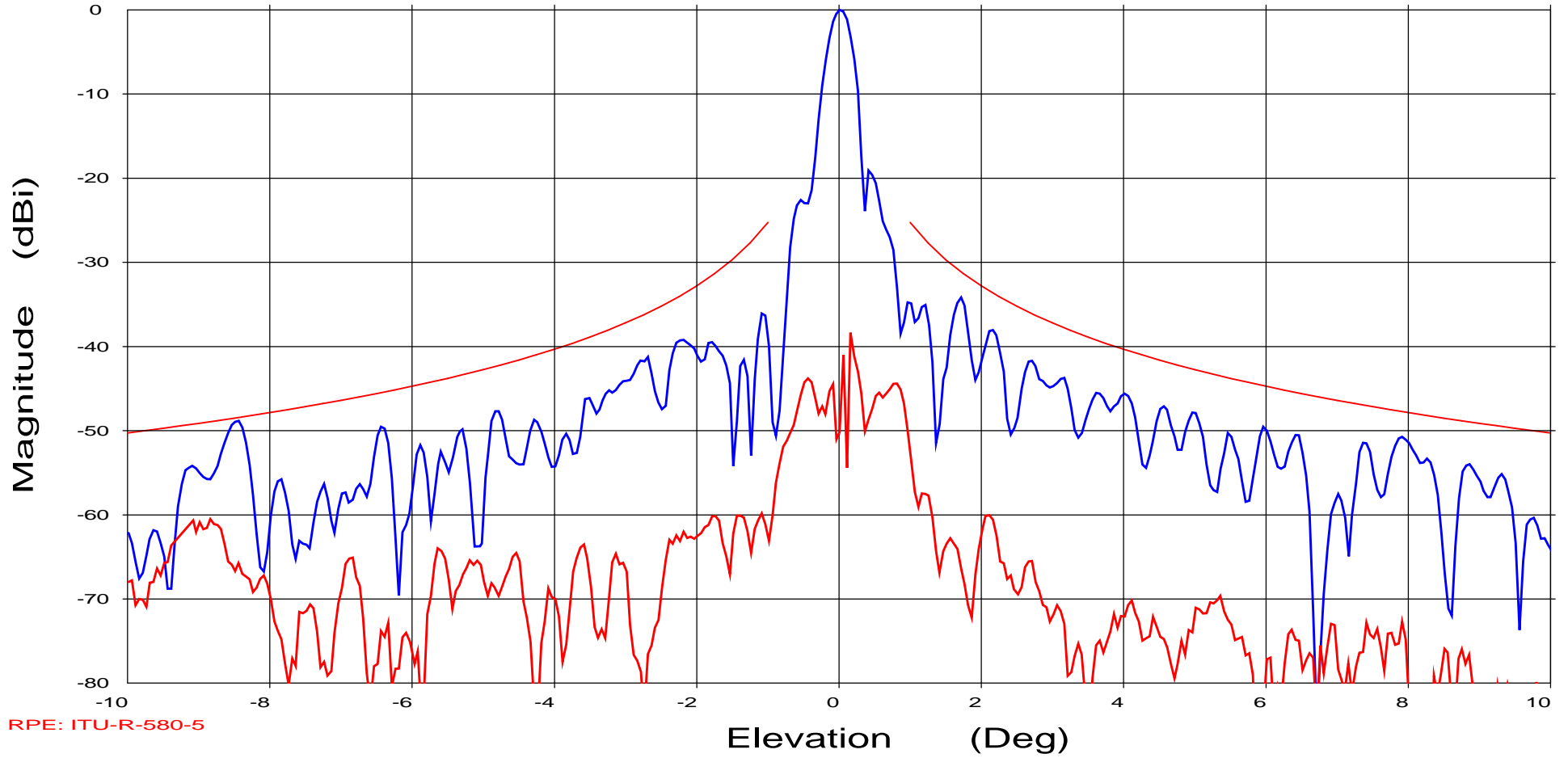
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Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

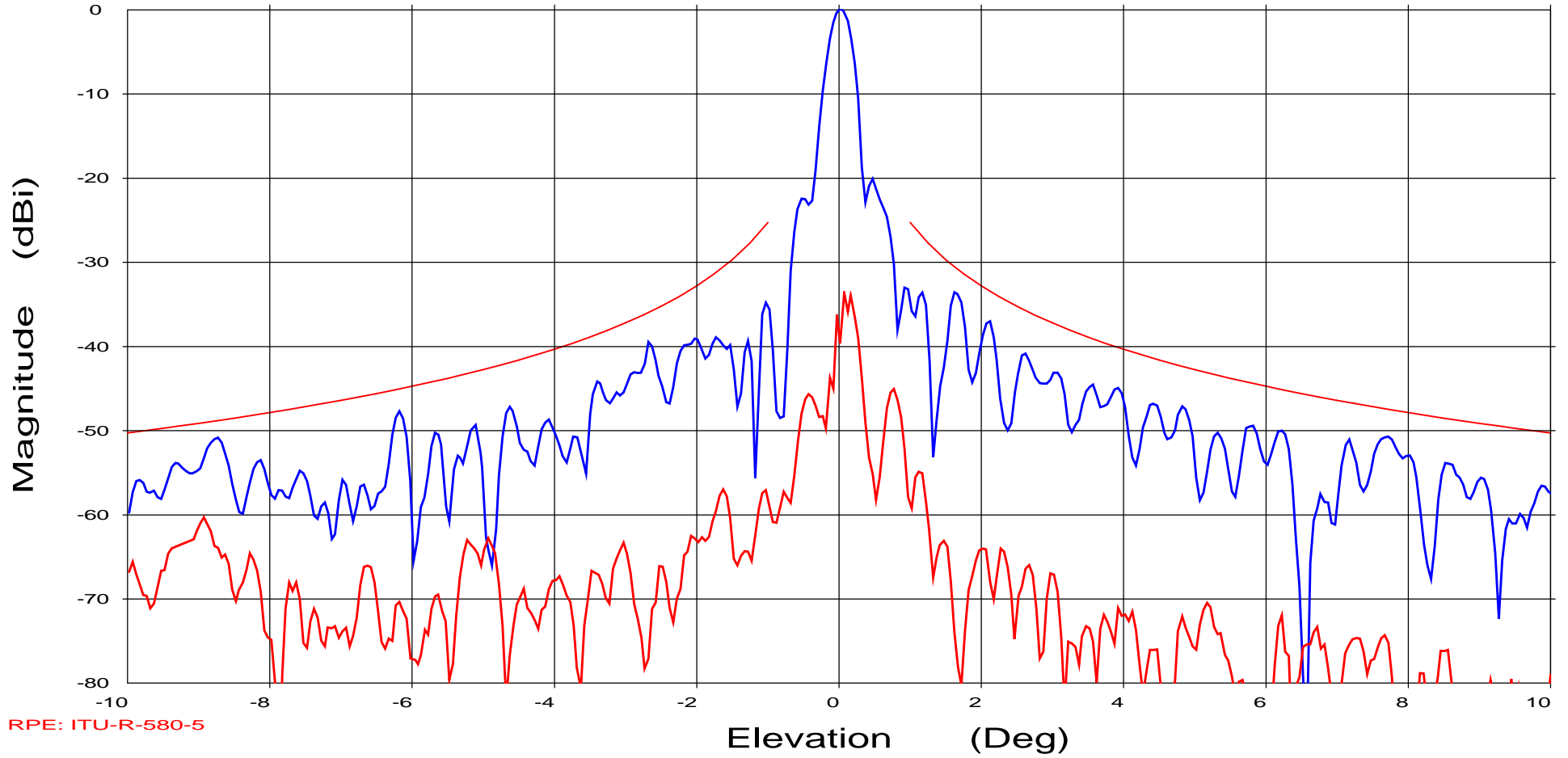
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2209-2190 11.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays  
2209-2190 09.dat-ant\_under\_test — blue line  
2209-2190 11.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

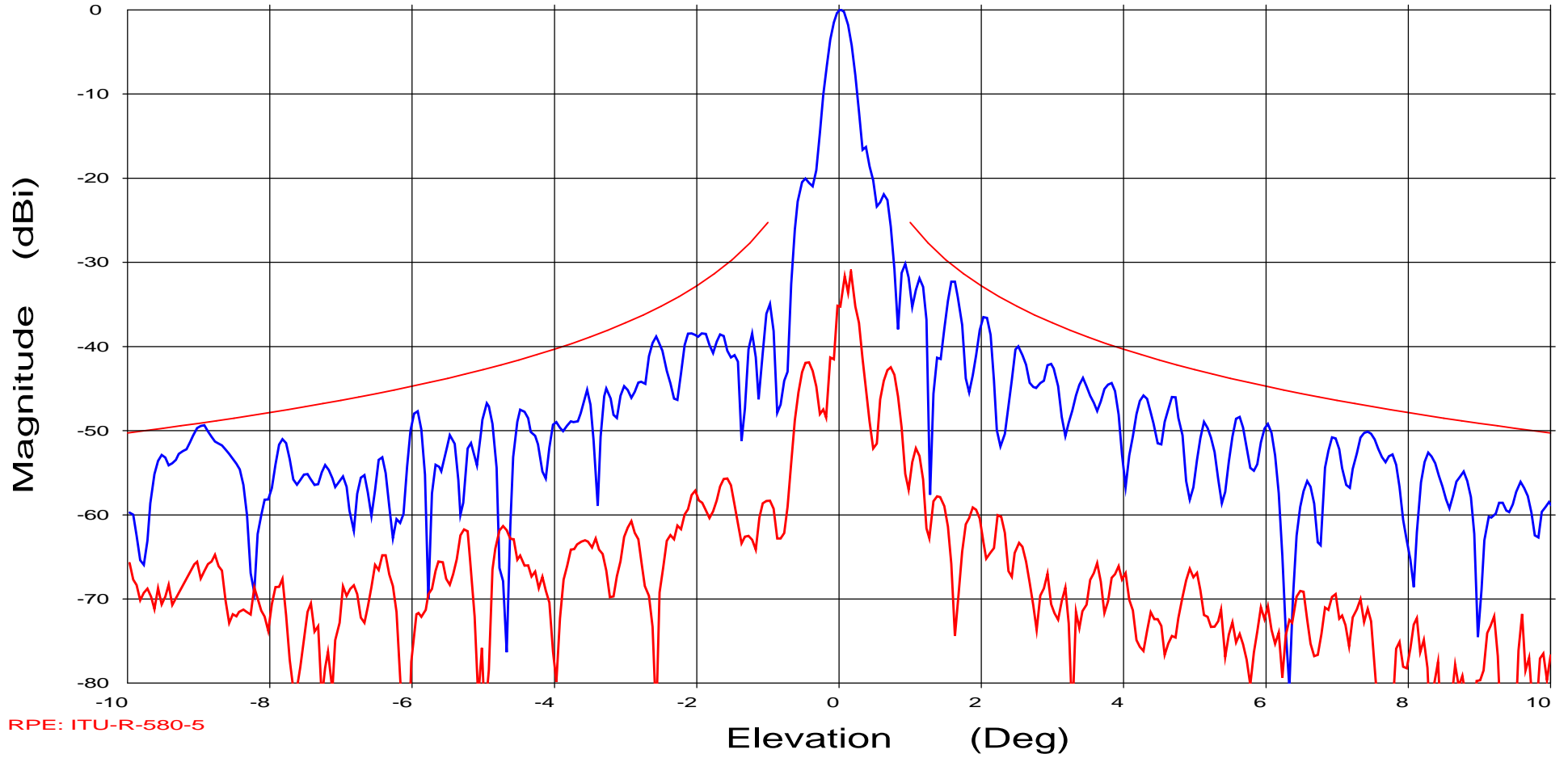
Frequency : 31.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays

2209-2190 09.dat-ant\_under\_test — blue line  
2209-2190 11.dat-ant\_under\_test — red line



File: 2209-2190 09.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

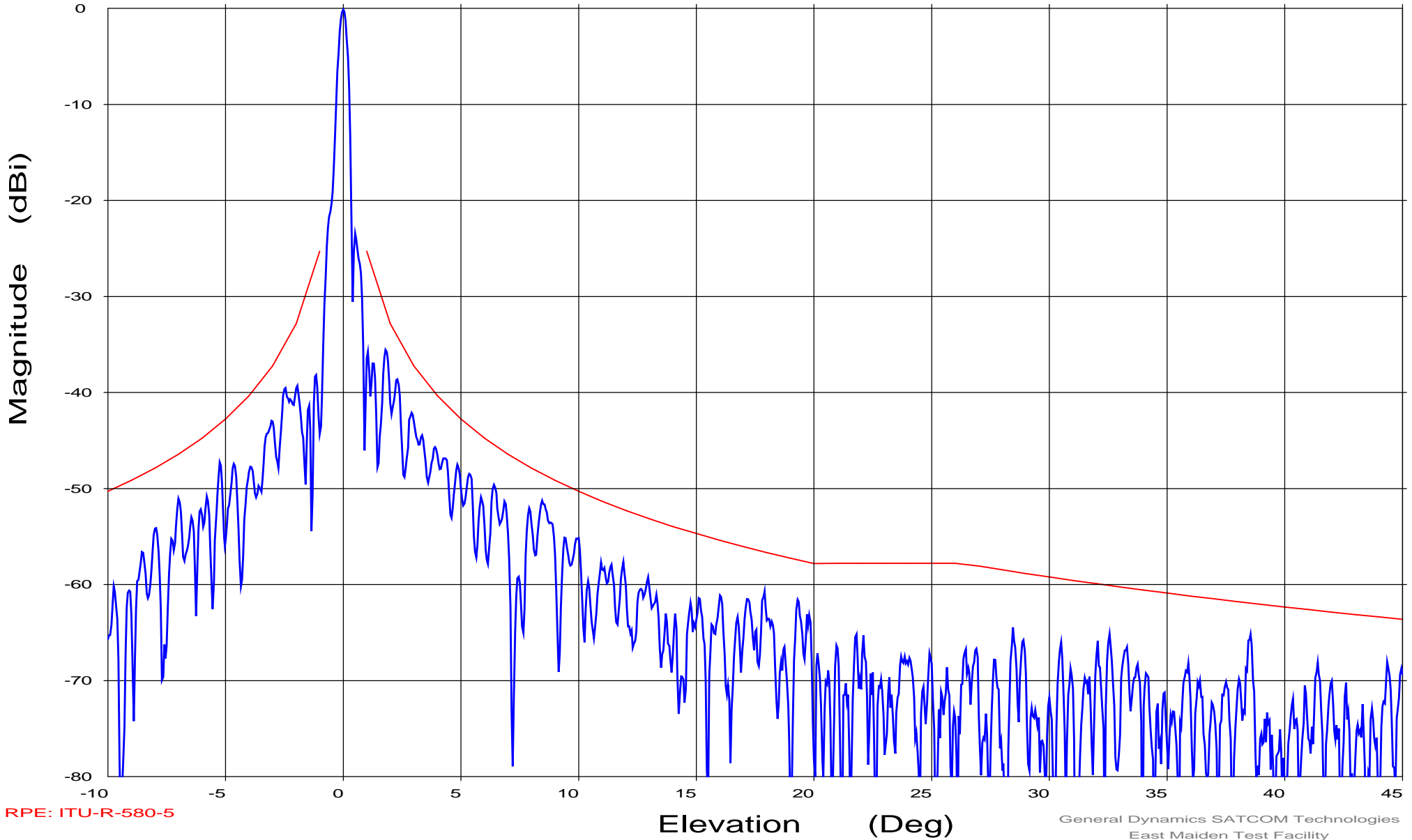
Frequency : 27.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

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Rx pol: Vert.



RPE: ITU-R-580-5

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

File: 2209-2190 09.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

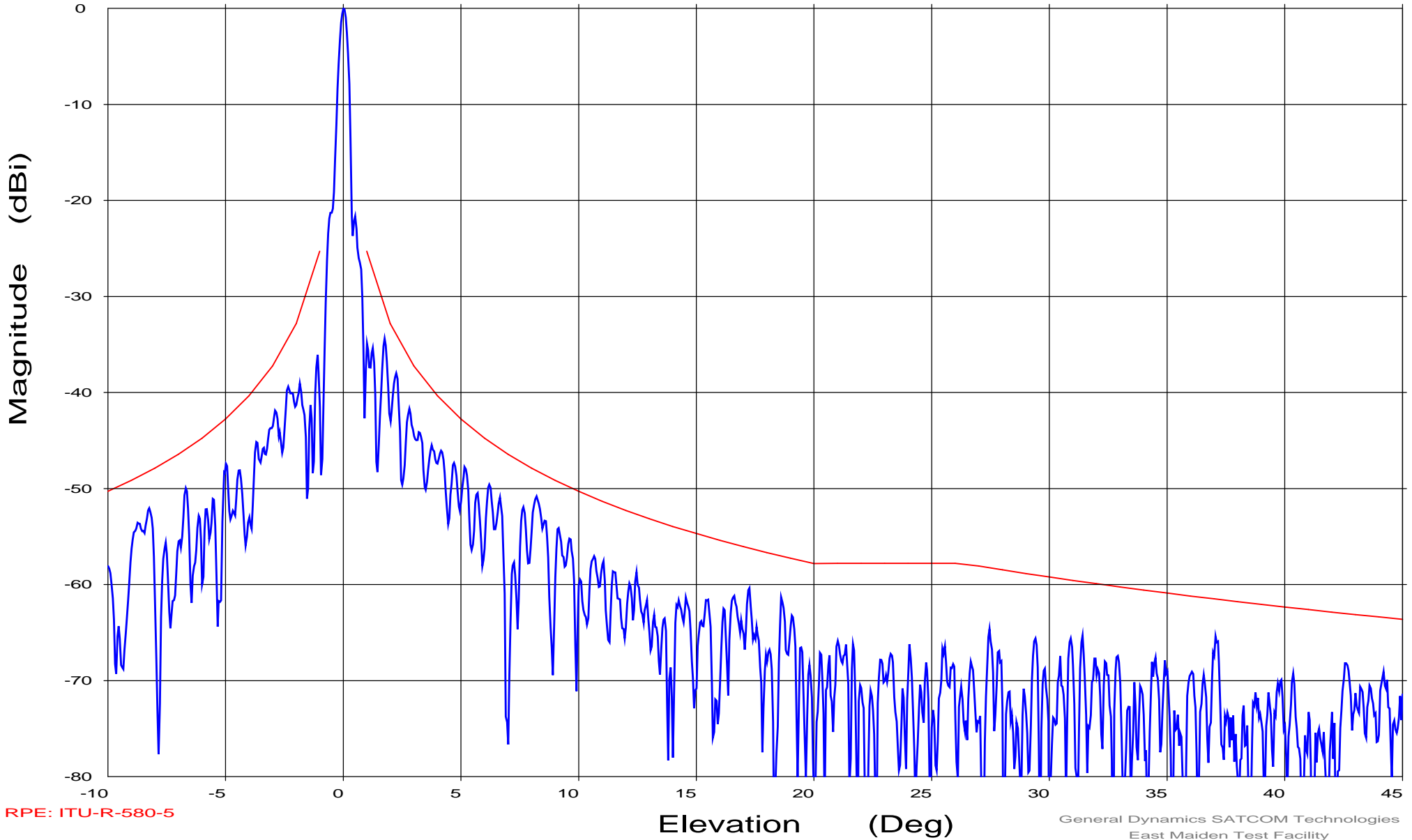
Frequency : 28.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

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Rx pol: Vert.



RPE: ITU-R-580-5

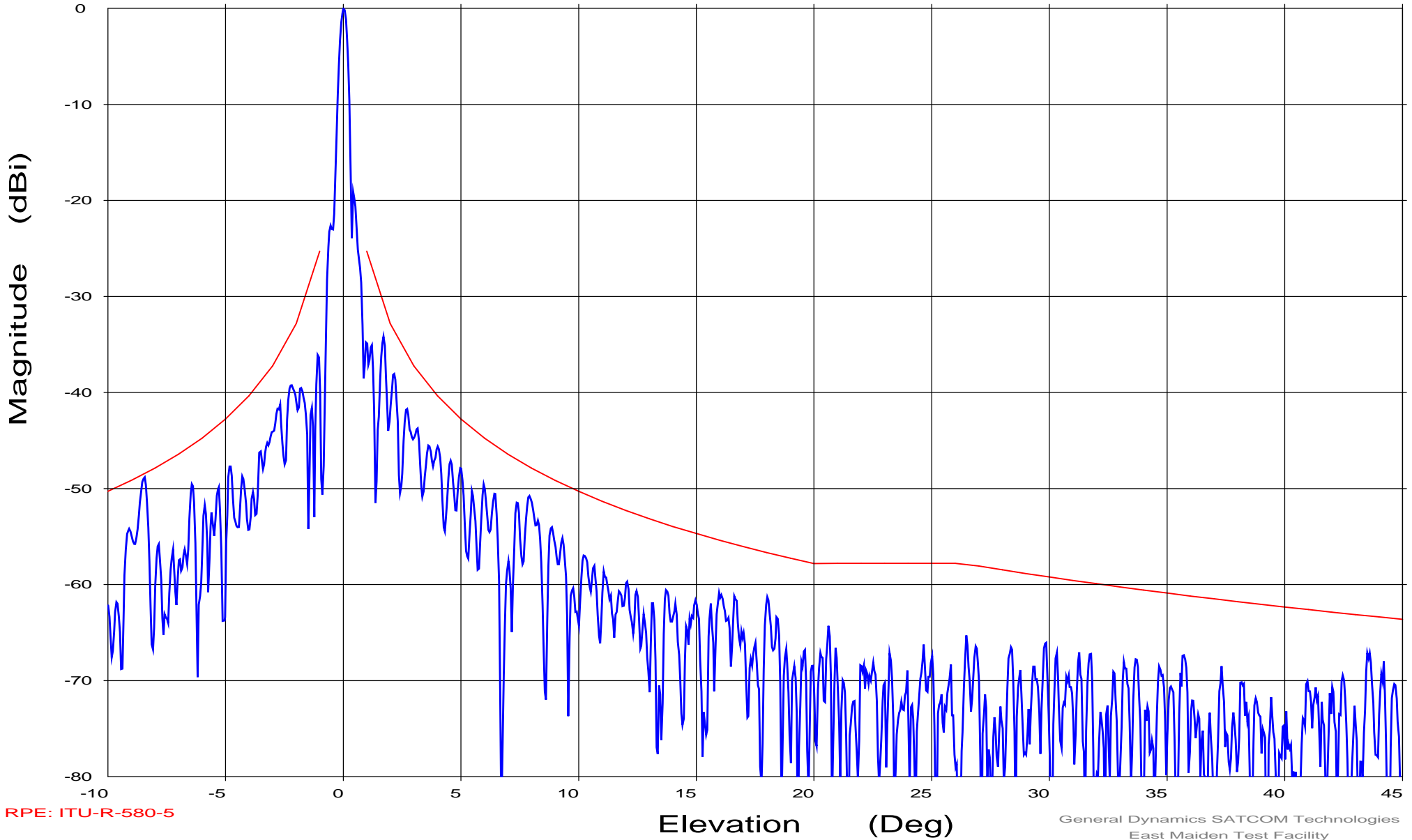
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East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

File: 2209-2190 09.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

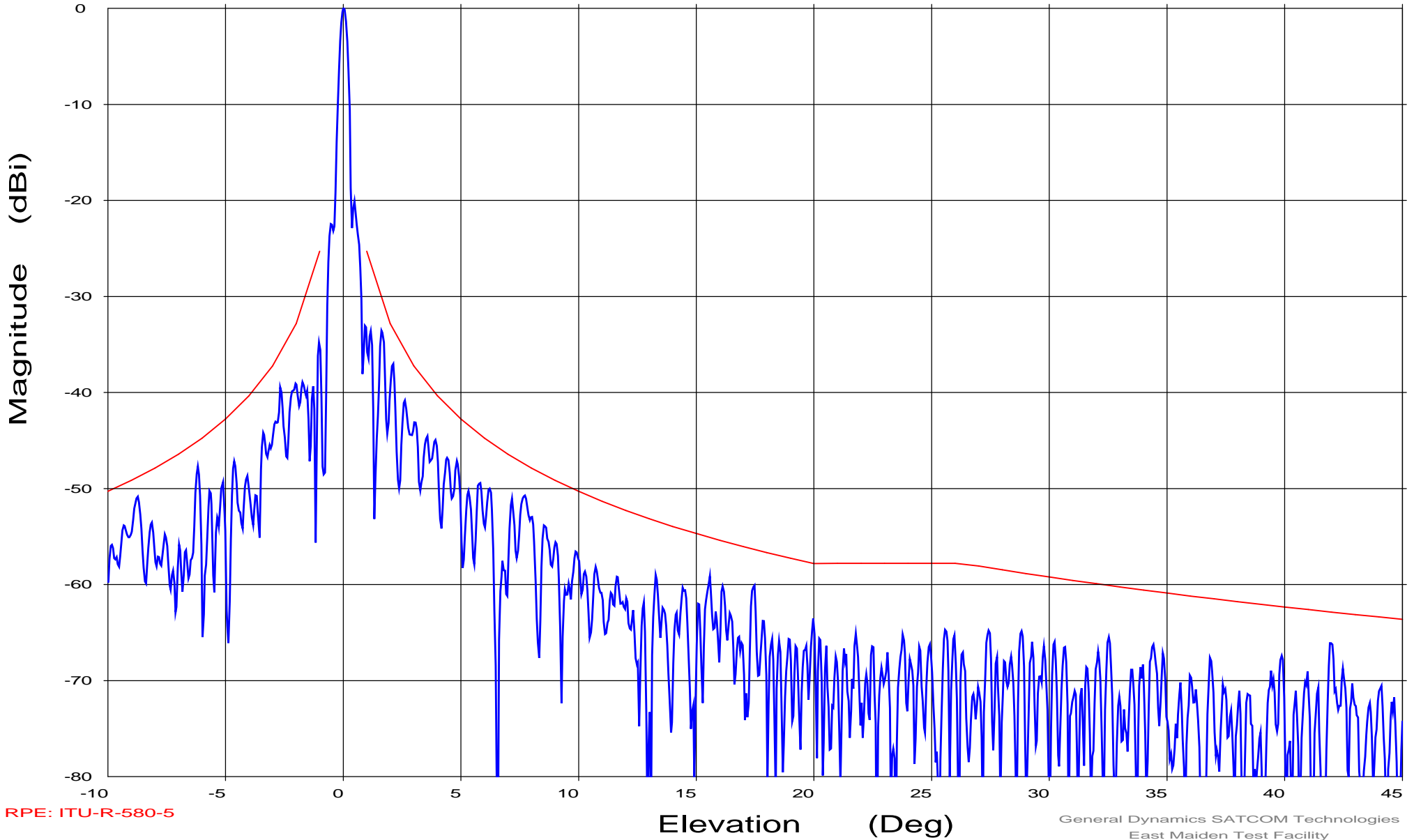
Frequency : 30.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

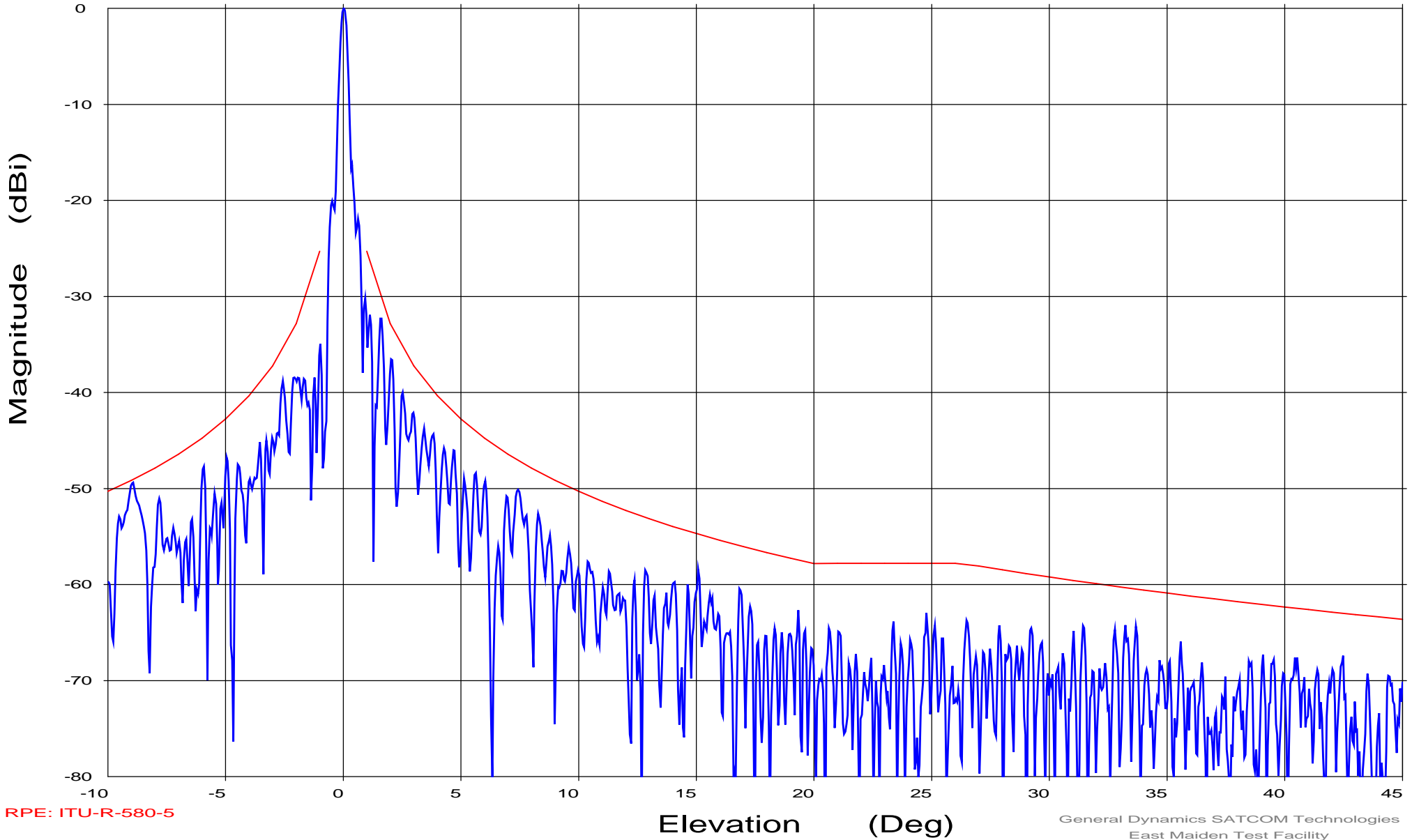
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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

File: 2209-2190 08.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

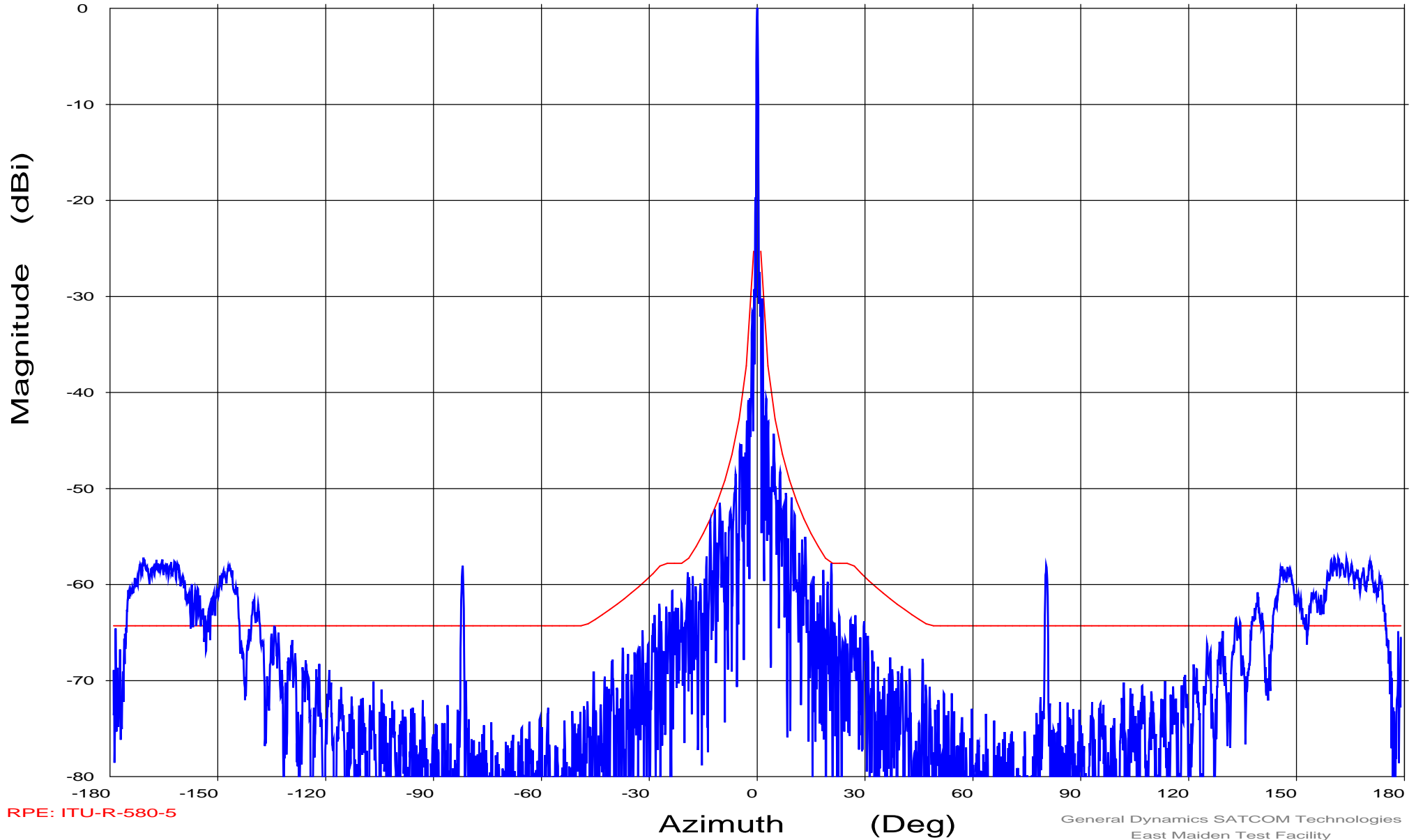
Frequency : 27.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



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File: 2209-2190 08.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

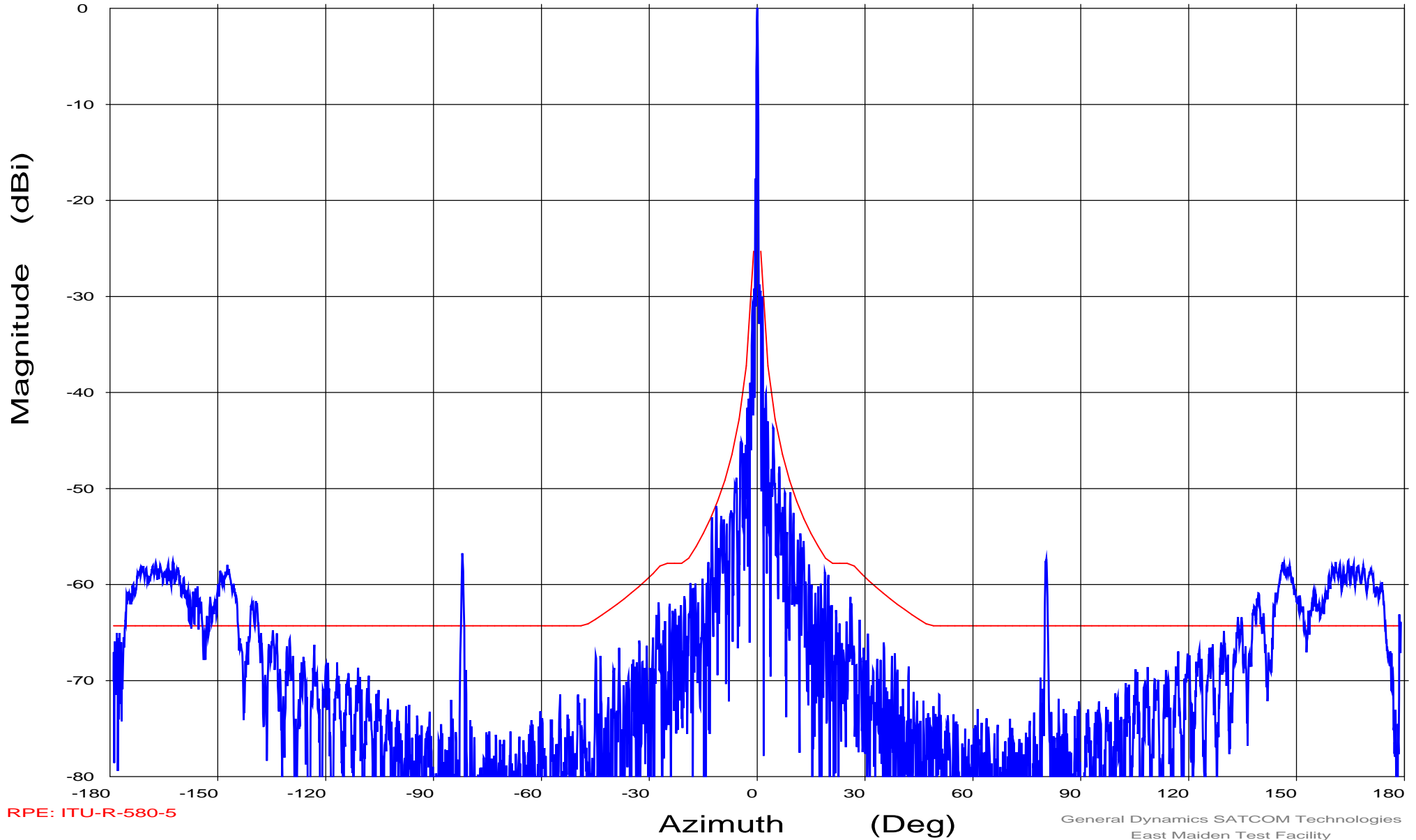
Frequency : 28.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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File: 2209-2190 08.dat

2.4m Ka-Band Antenna Rx/Tx  
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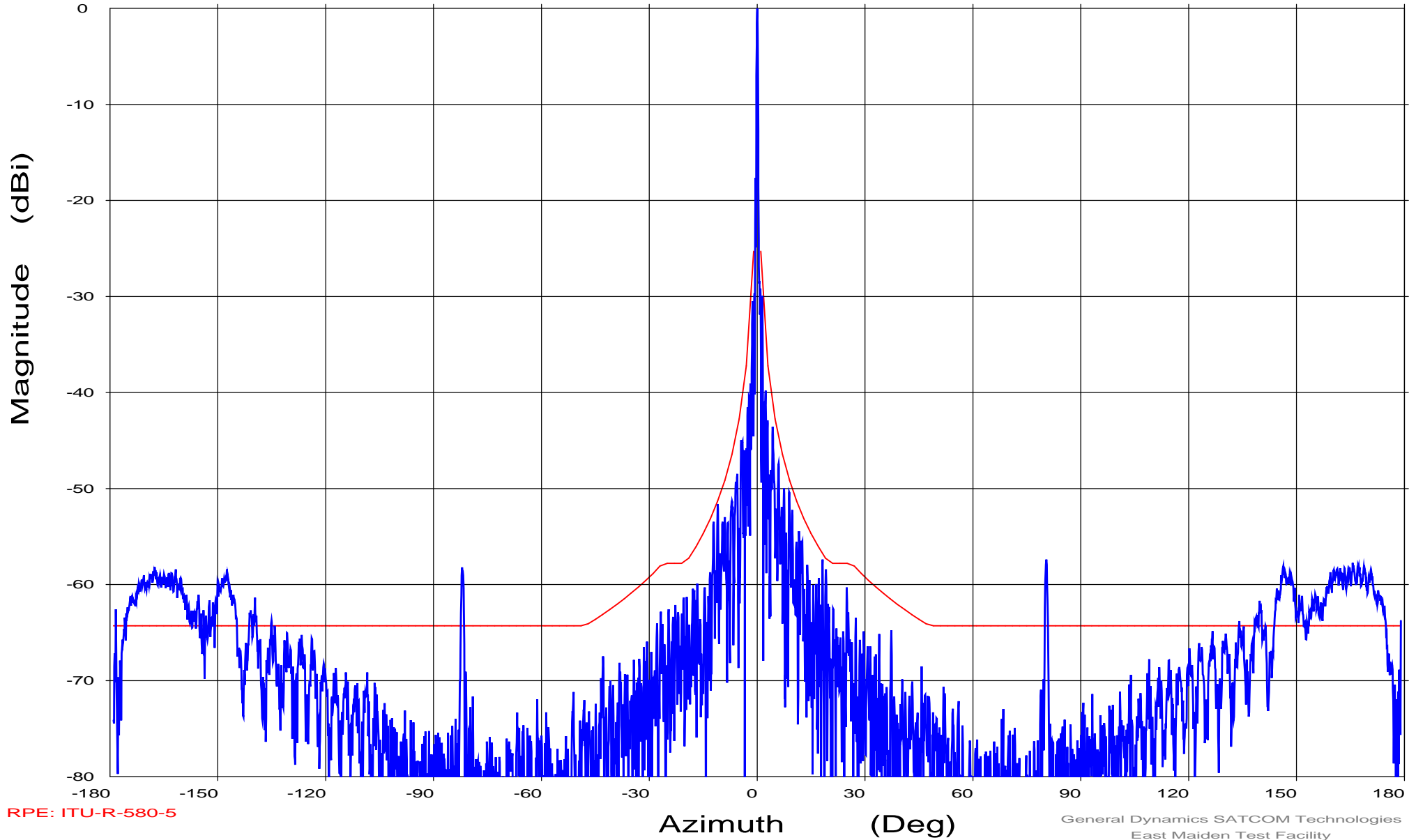
Frequency : 29.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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File: 2209-2190 08.dat

2.4m Ka-Band Antenna Rx/Tx  
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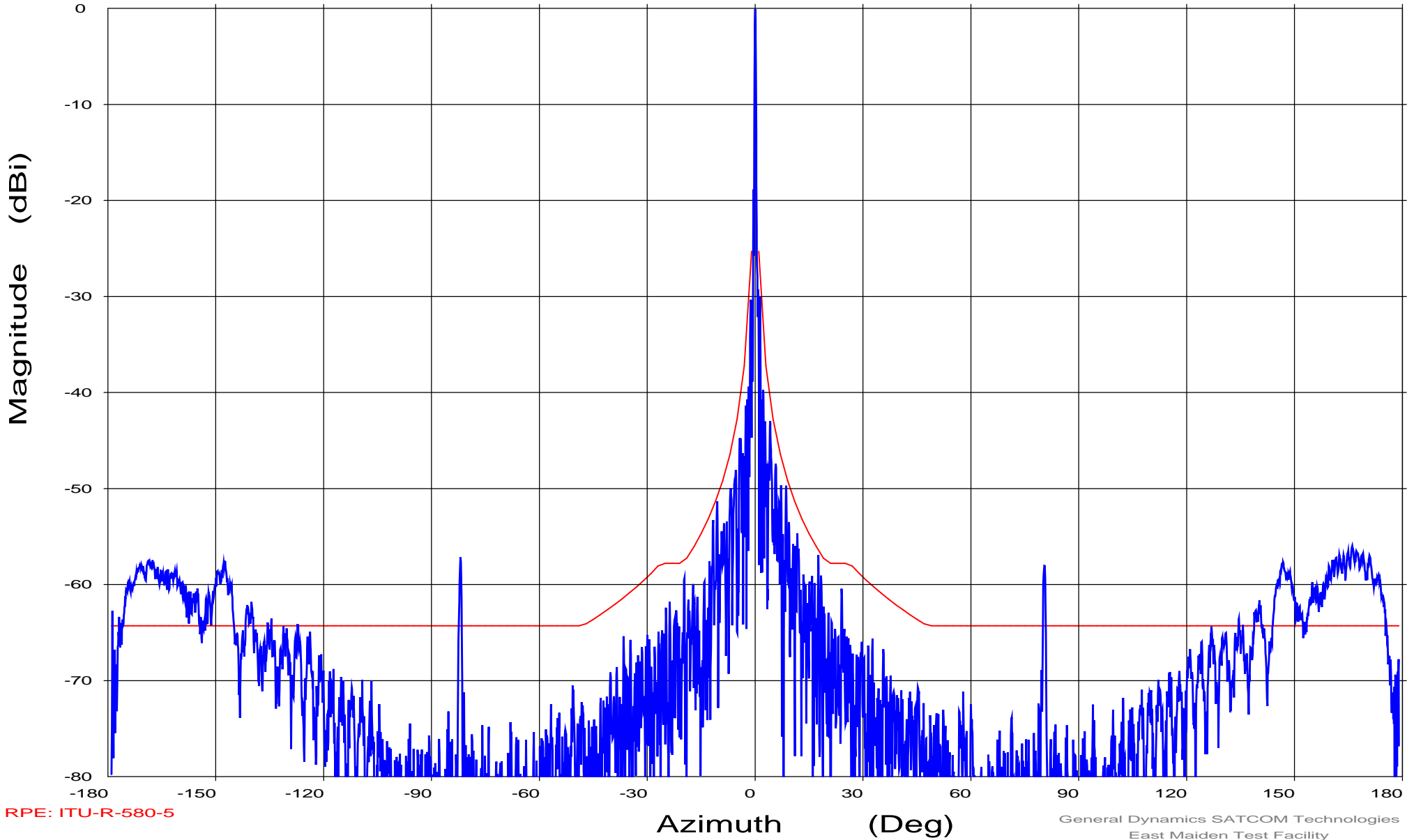
Frequency : 30.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



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File: 2209-2190 08.dat

2.4m Ka-Band Antenna Rx/Tx  
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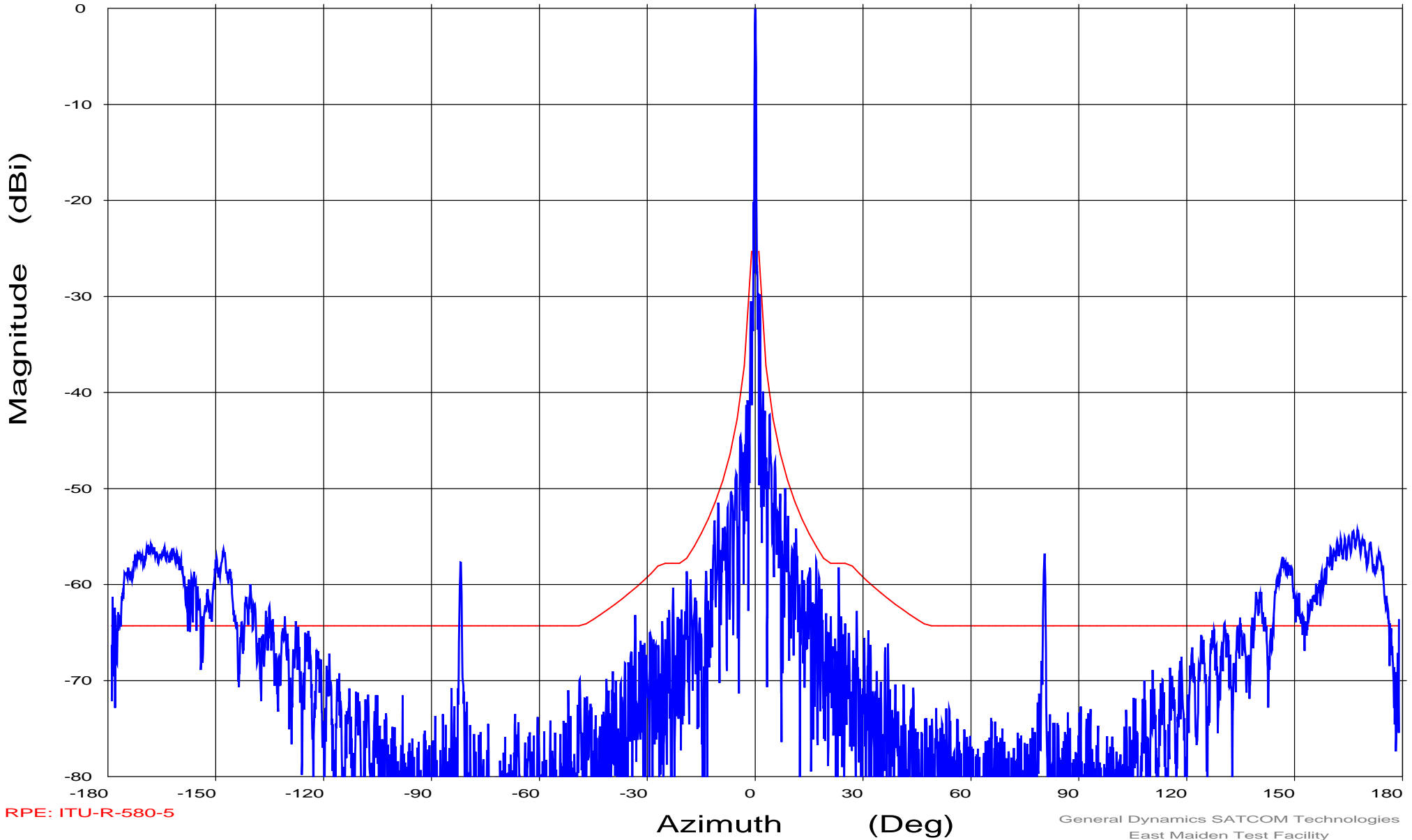
Frequency : 31.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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4488 Lawing Chapel Church Road  
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Horizontal Polarity Radiation Patterns

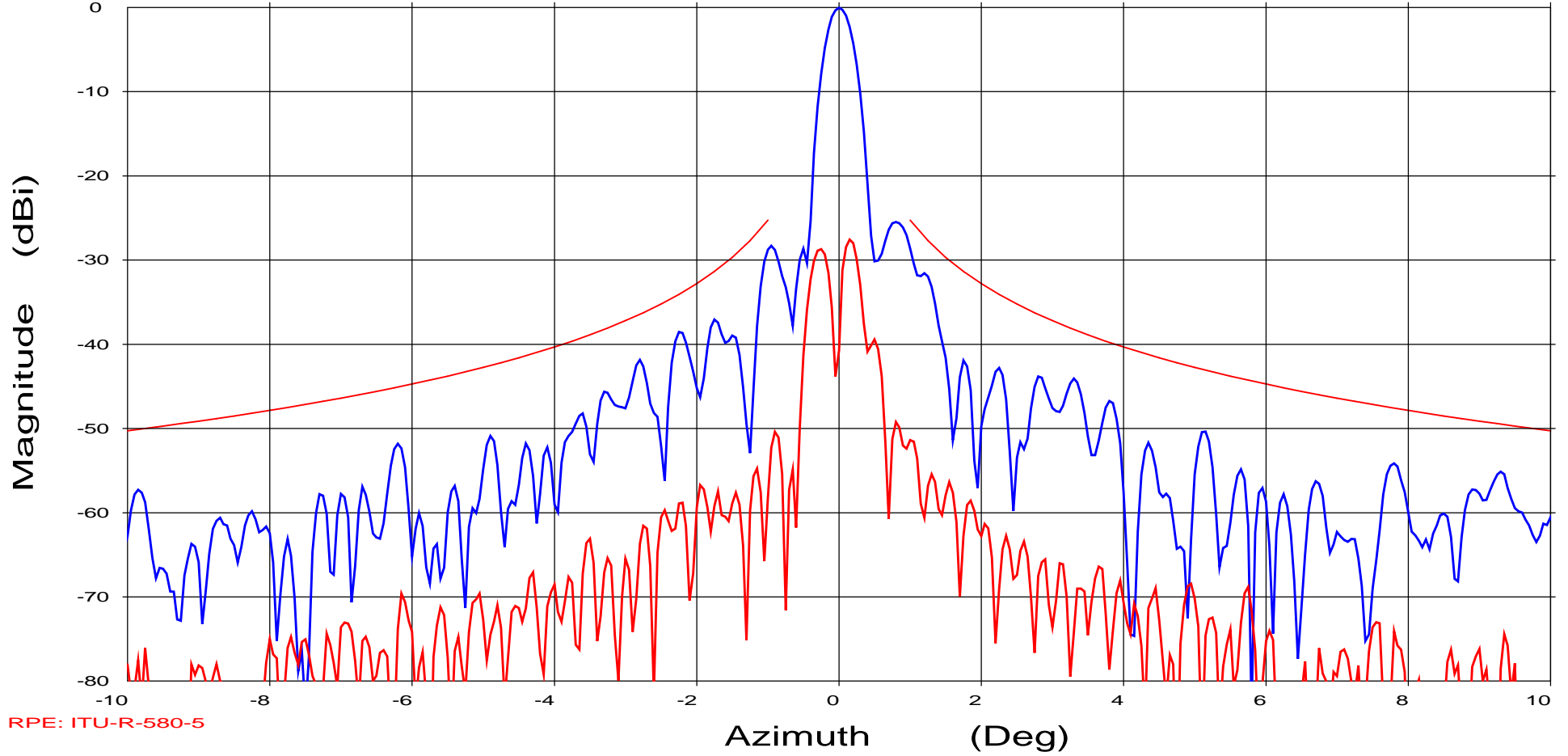
**Transmit Frequencies**

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



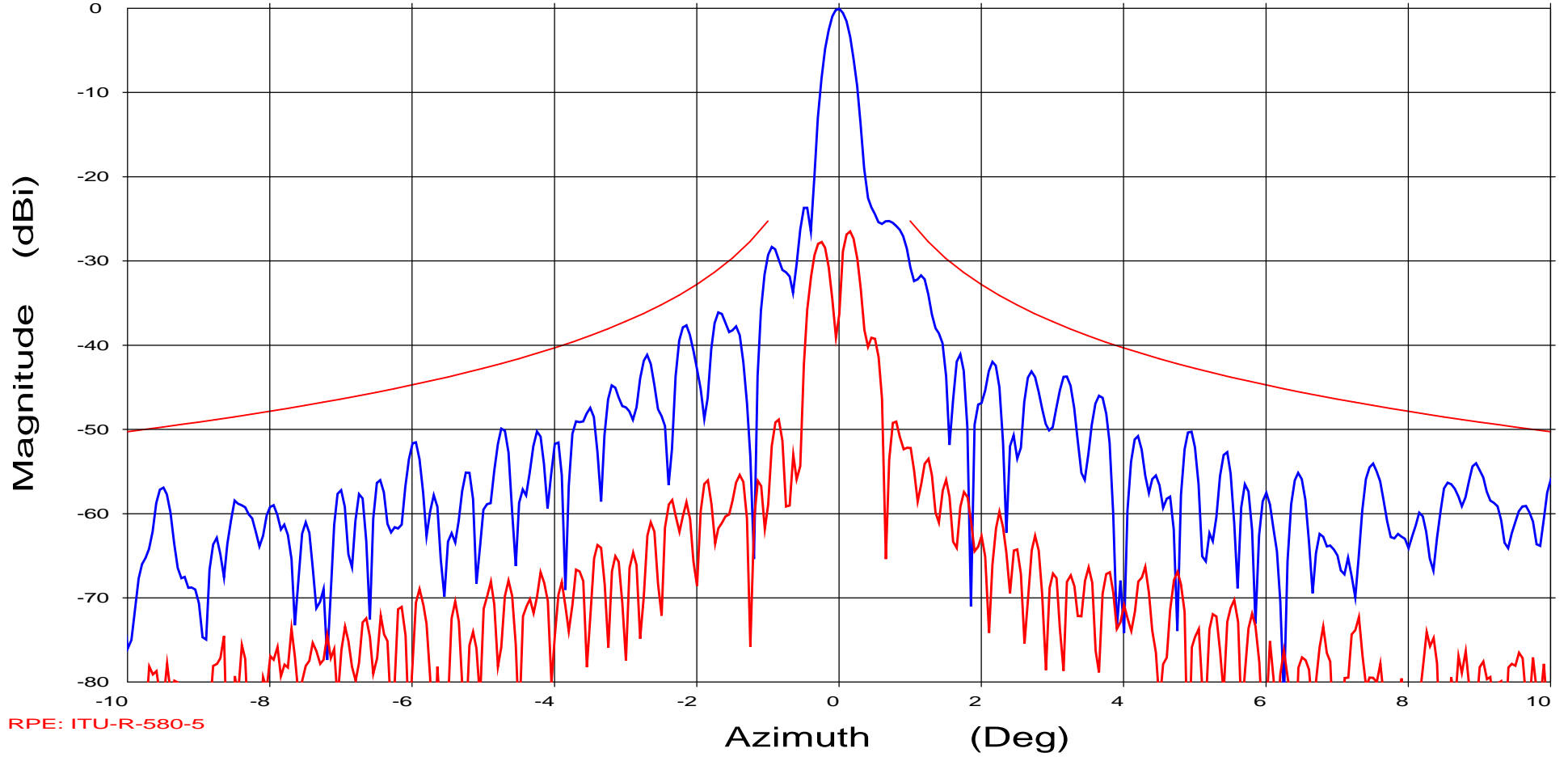
RPE: ITU-R-580-5

Overlays

- 2209-2191 12.dat-ant\_under\_test — blue line
- 2209-2191 14.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT Tx pol: Horiz. Rx pol: Horiz.



RPE: ITU-R-580-5

Overlays  
2209-2191 12.dat-ant\_under\_test — blue line  
2209-2191 14.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

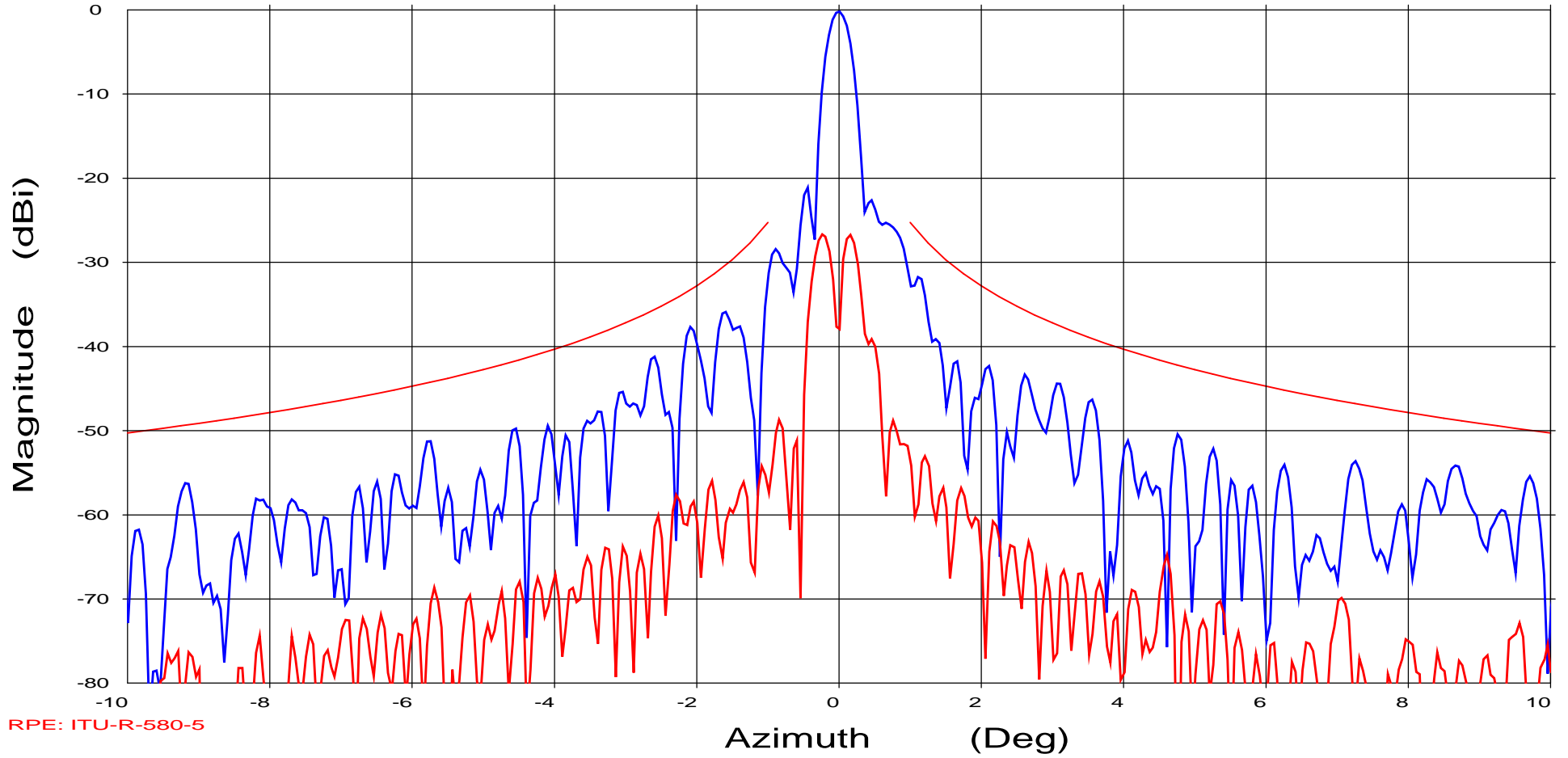
Frequency : 29.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

Overlays

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2209-2191 14.dat-ant\_under\_test —

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

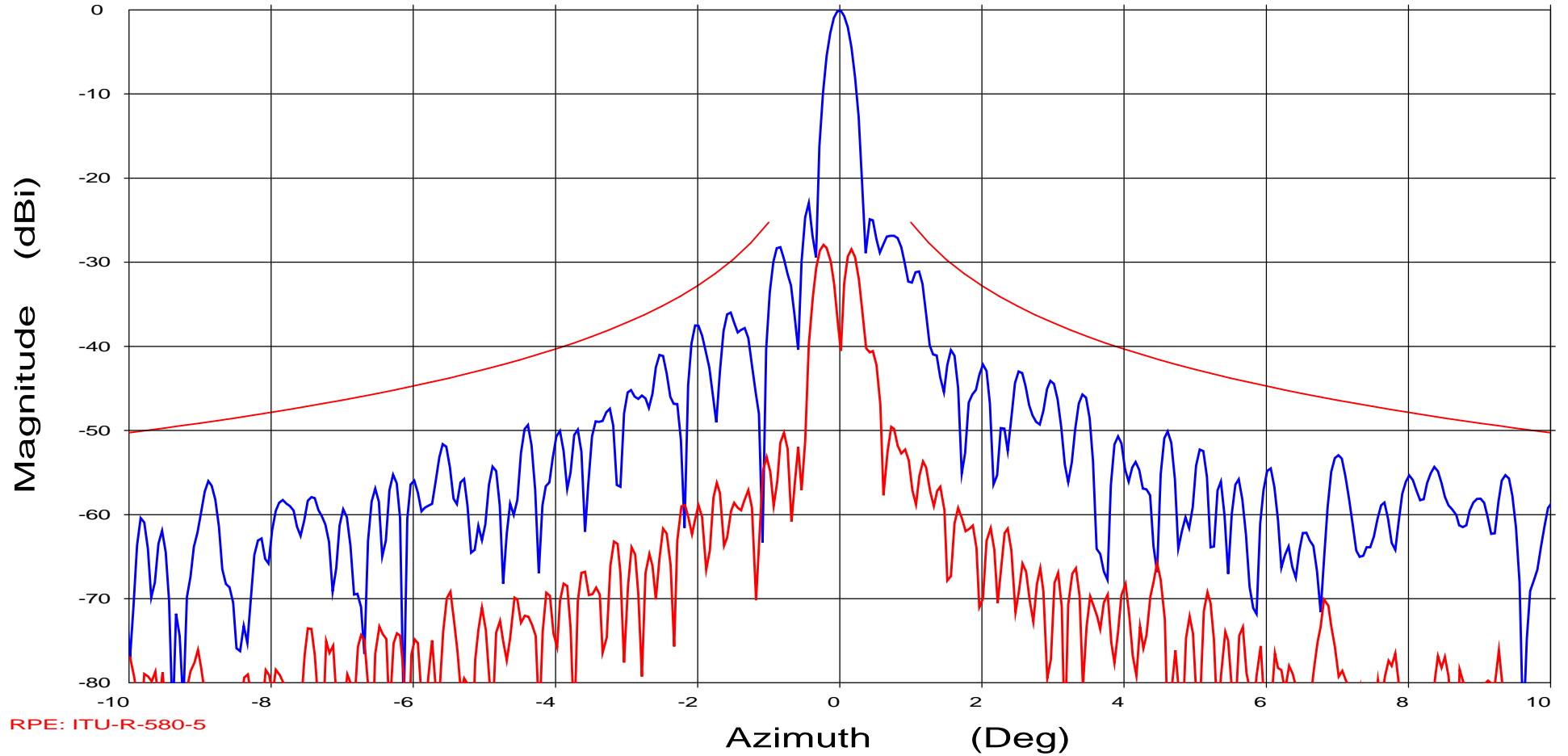
Frequency : 30.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



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Overlays  
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2209-2191 14.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

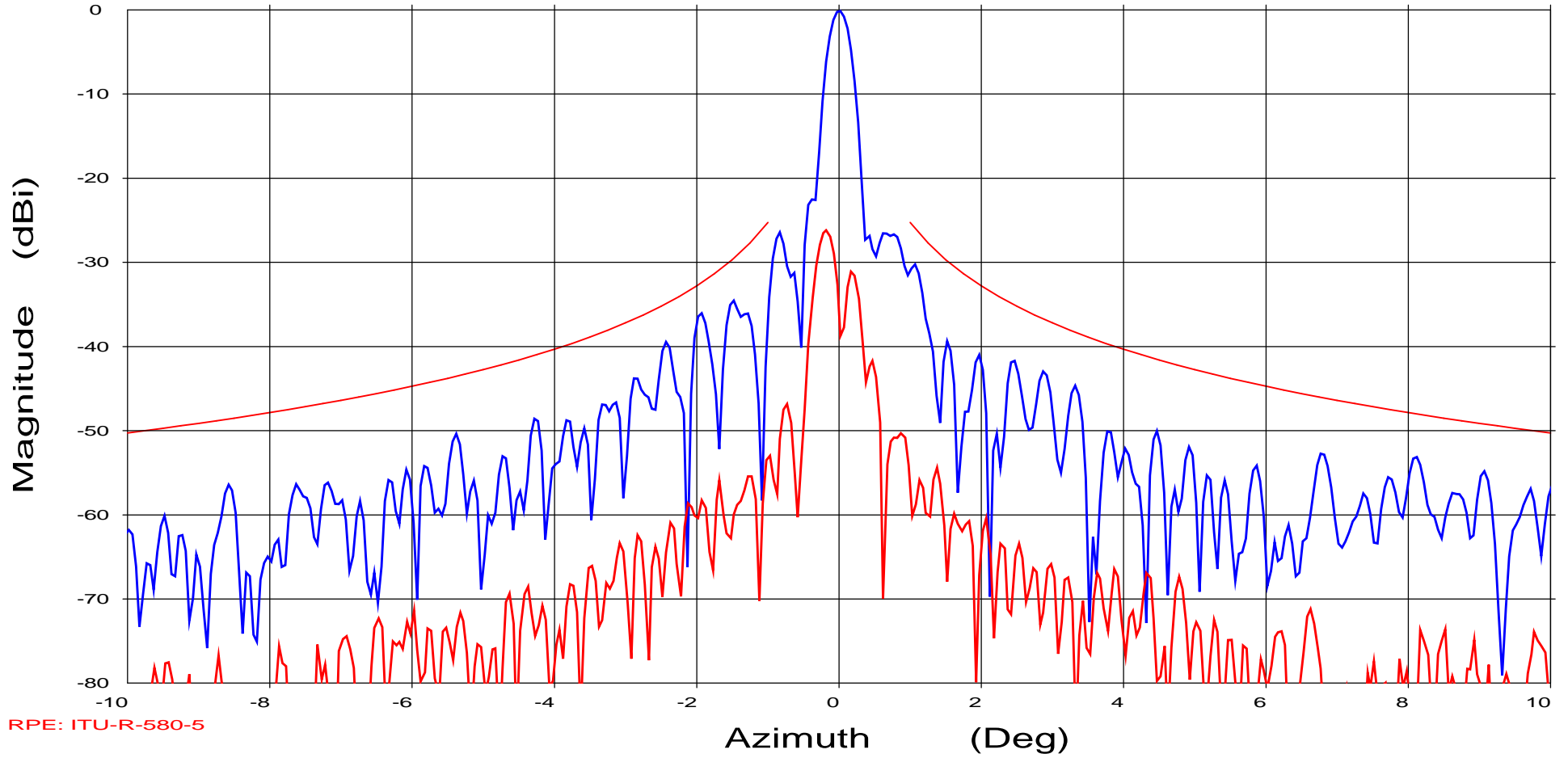
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Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

Overlays

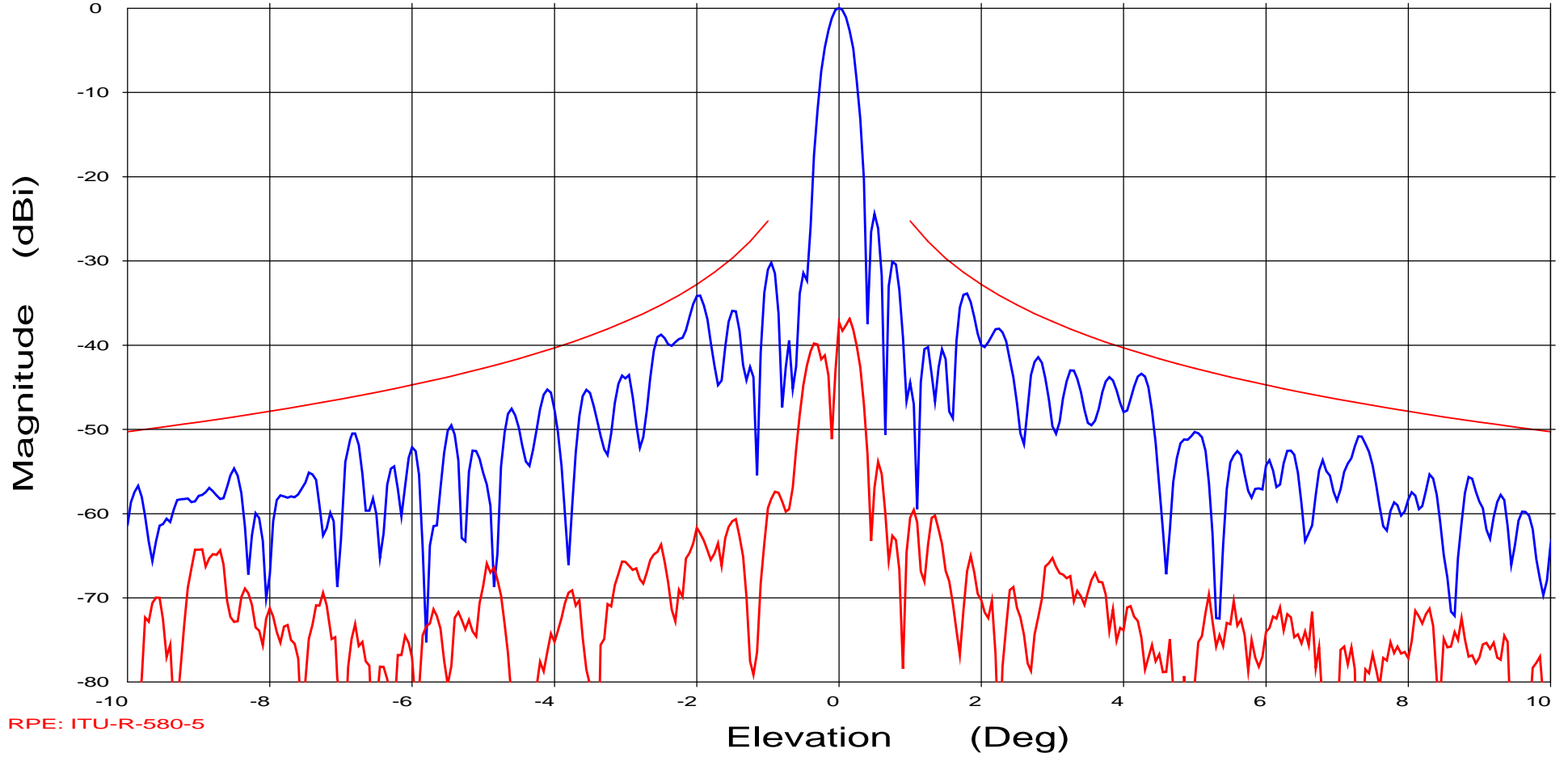
2209-2191 12.dat-ant\_under\_test — blue line

2209-2191 14.dat-ant\_under\_test — red line



Operator: Dwight B. Lutz

Channel: AUT Tx pol: Horiz. Rx pol: Horiz.



RPE: ITU-R-580-5

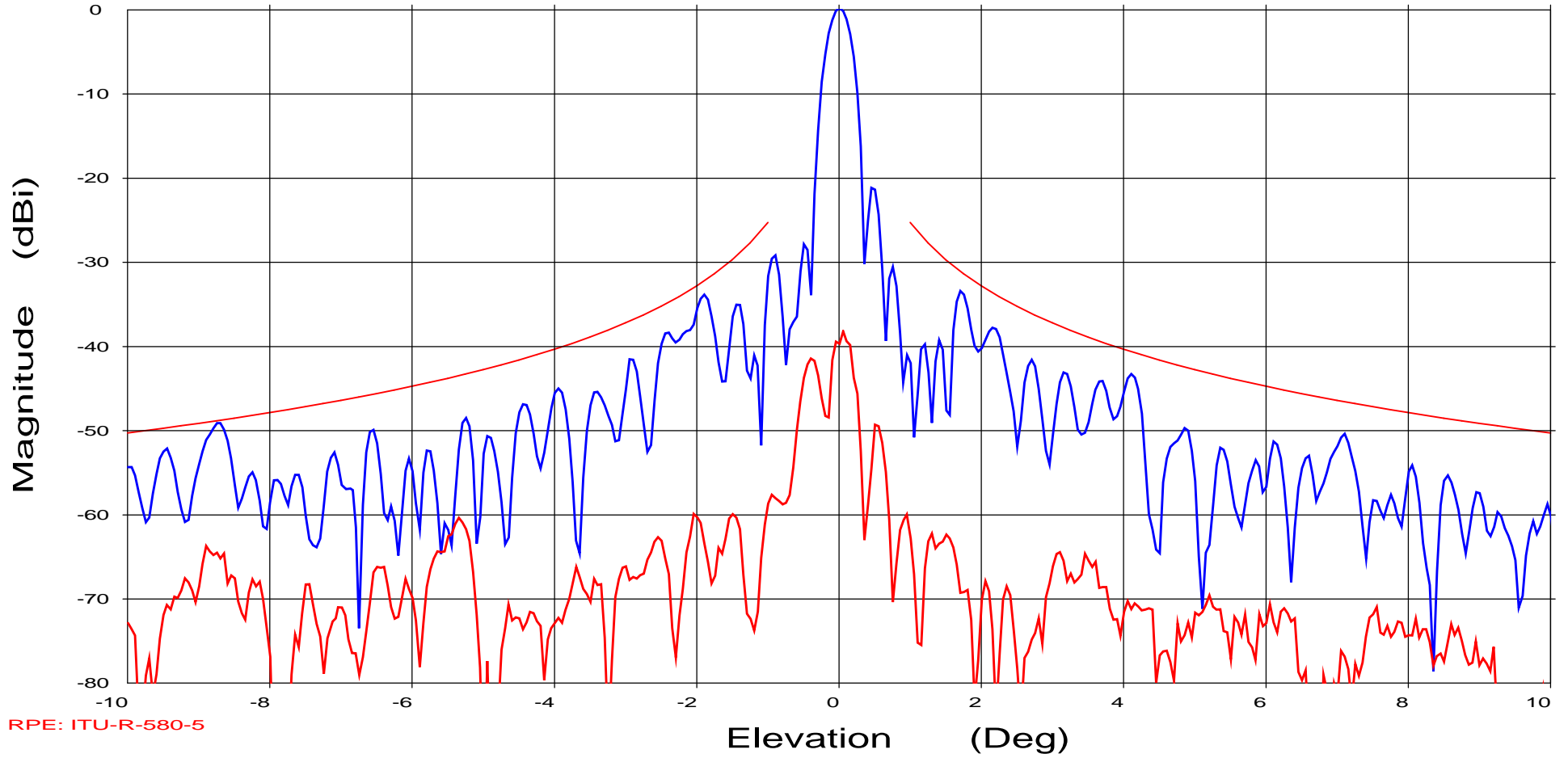
Overlays  
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Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

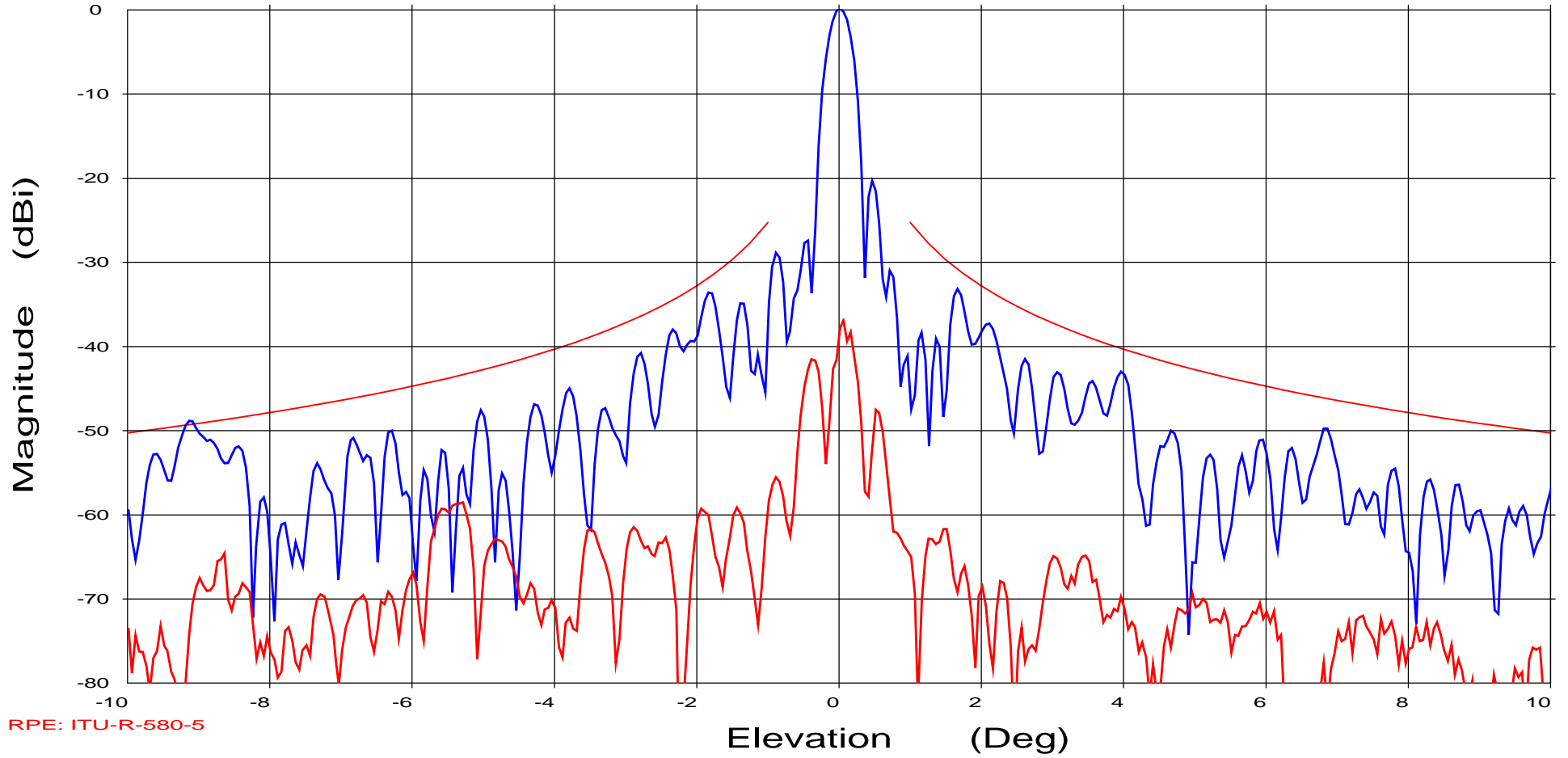
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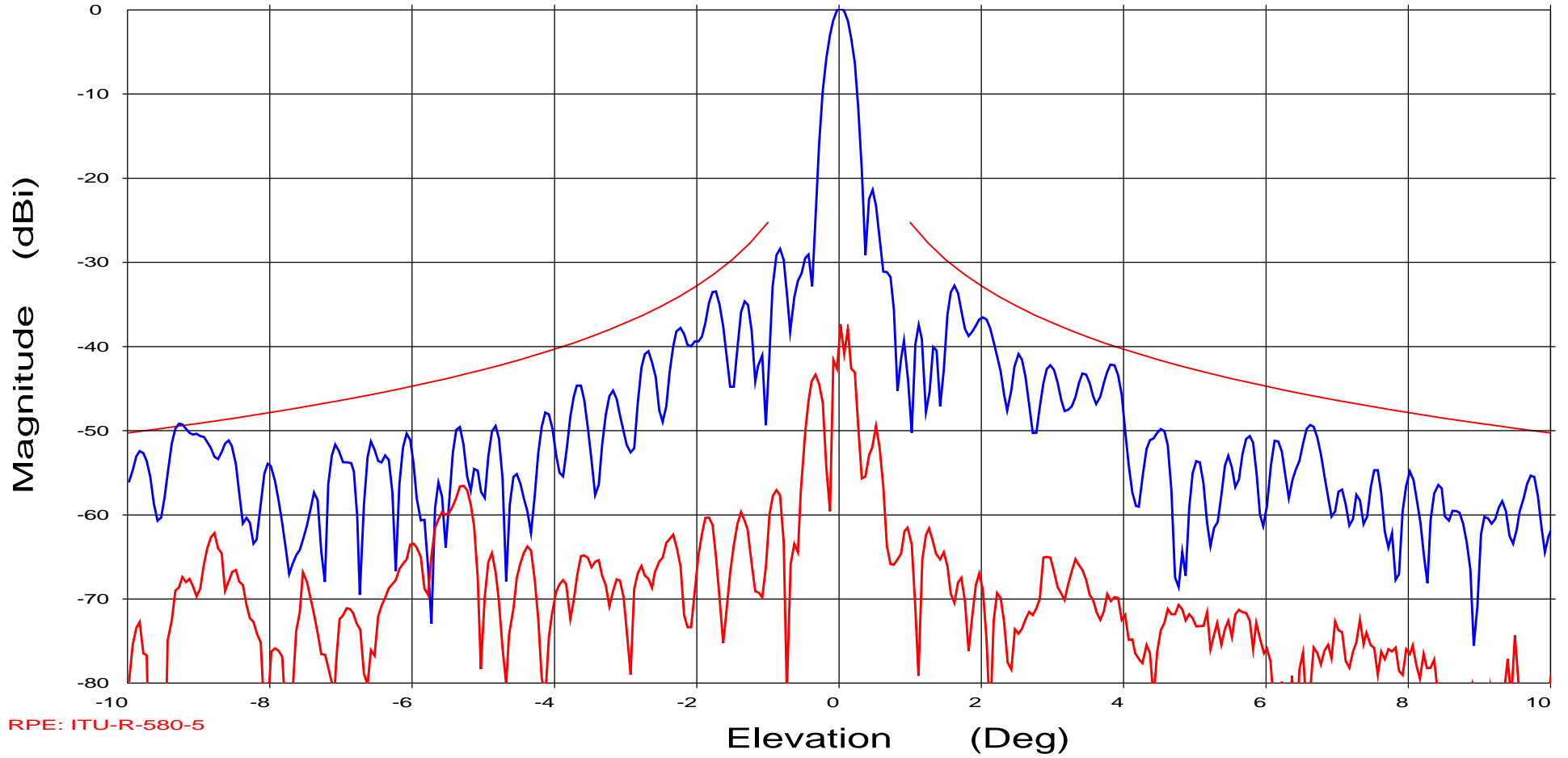
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2209-2191 13.dat-ant\_under\_test — blue line  
2209-2191 15.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

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Rx pol: Horiz.



Overlays

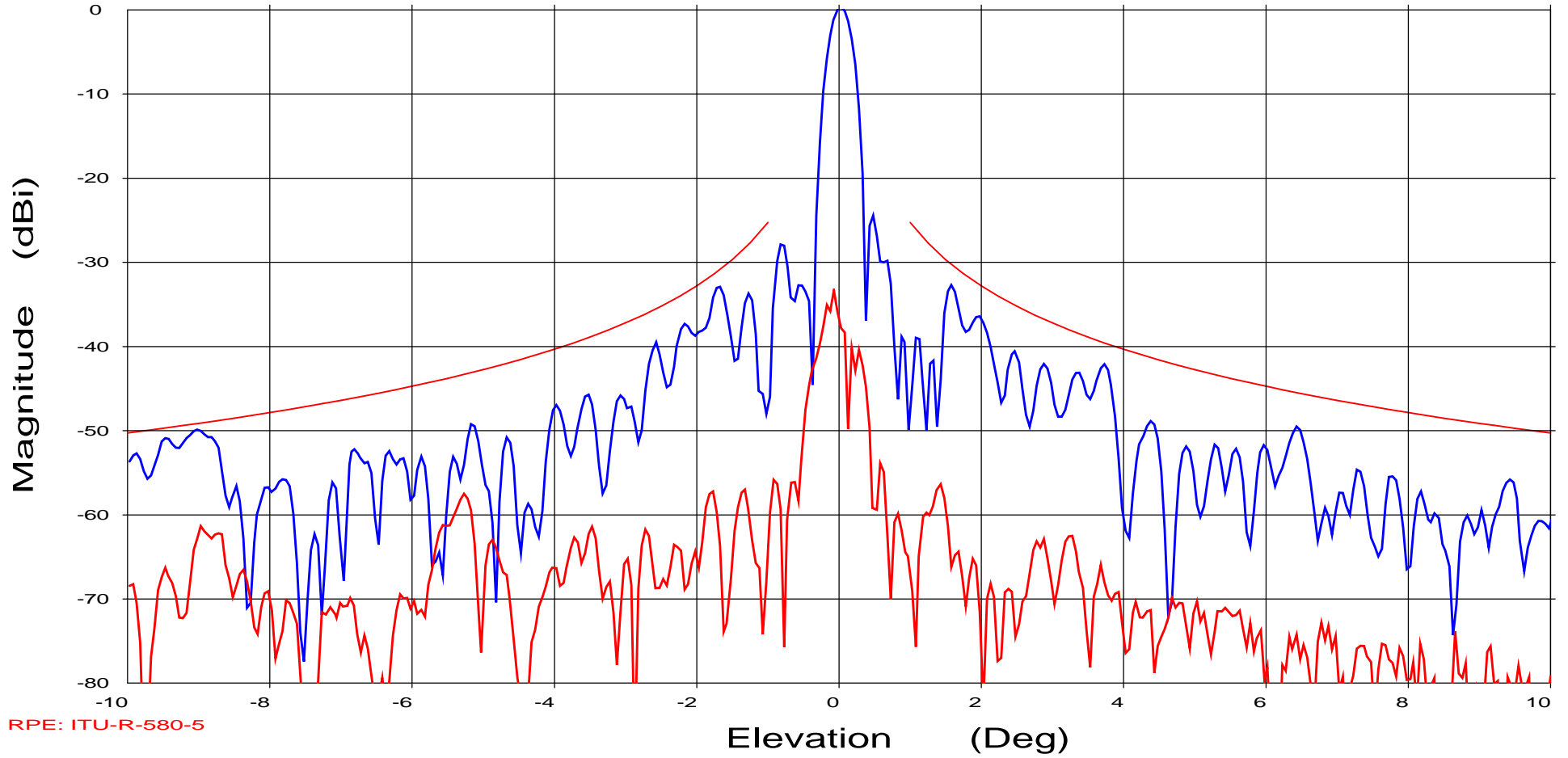
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Overlays

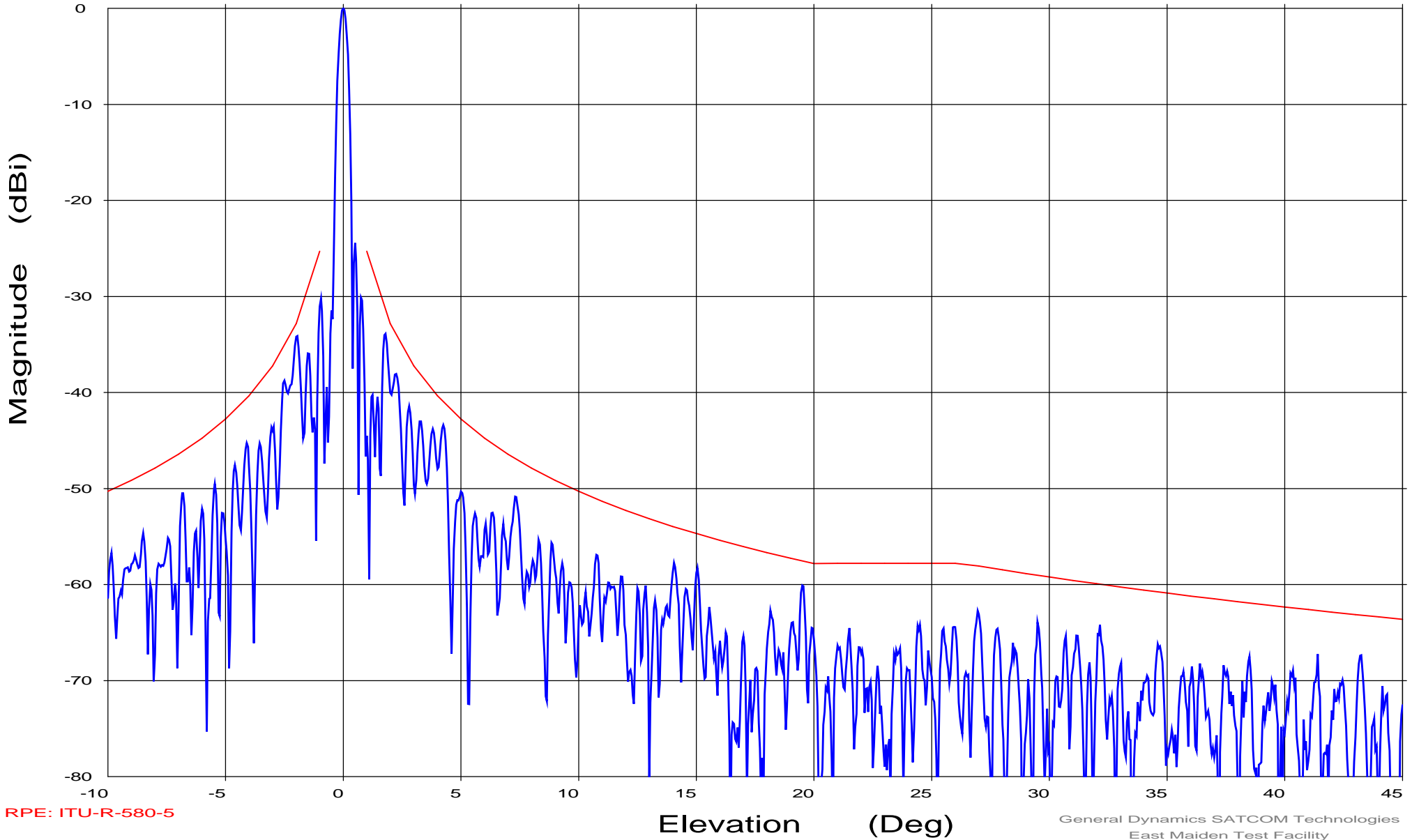
- 2209-2191 13.dat-ant\_under\_test — blue line
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Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

File: 2209-2191 13.dat

2.4m Ka-Band Antenna Rx/Tx  
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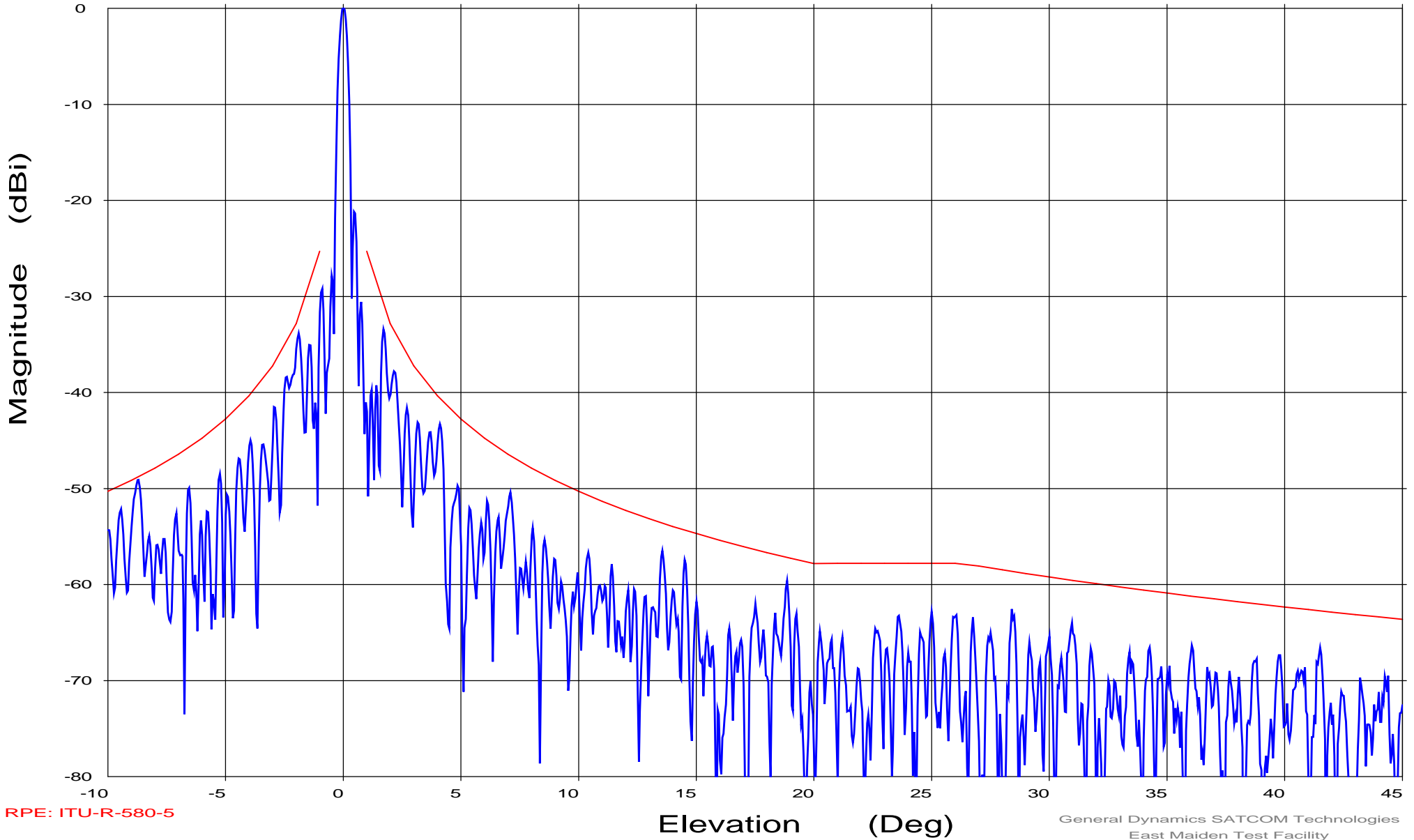
Frequency : 28.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

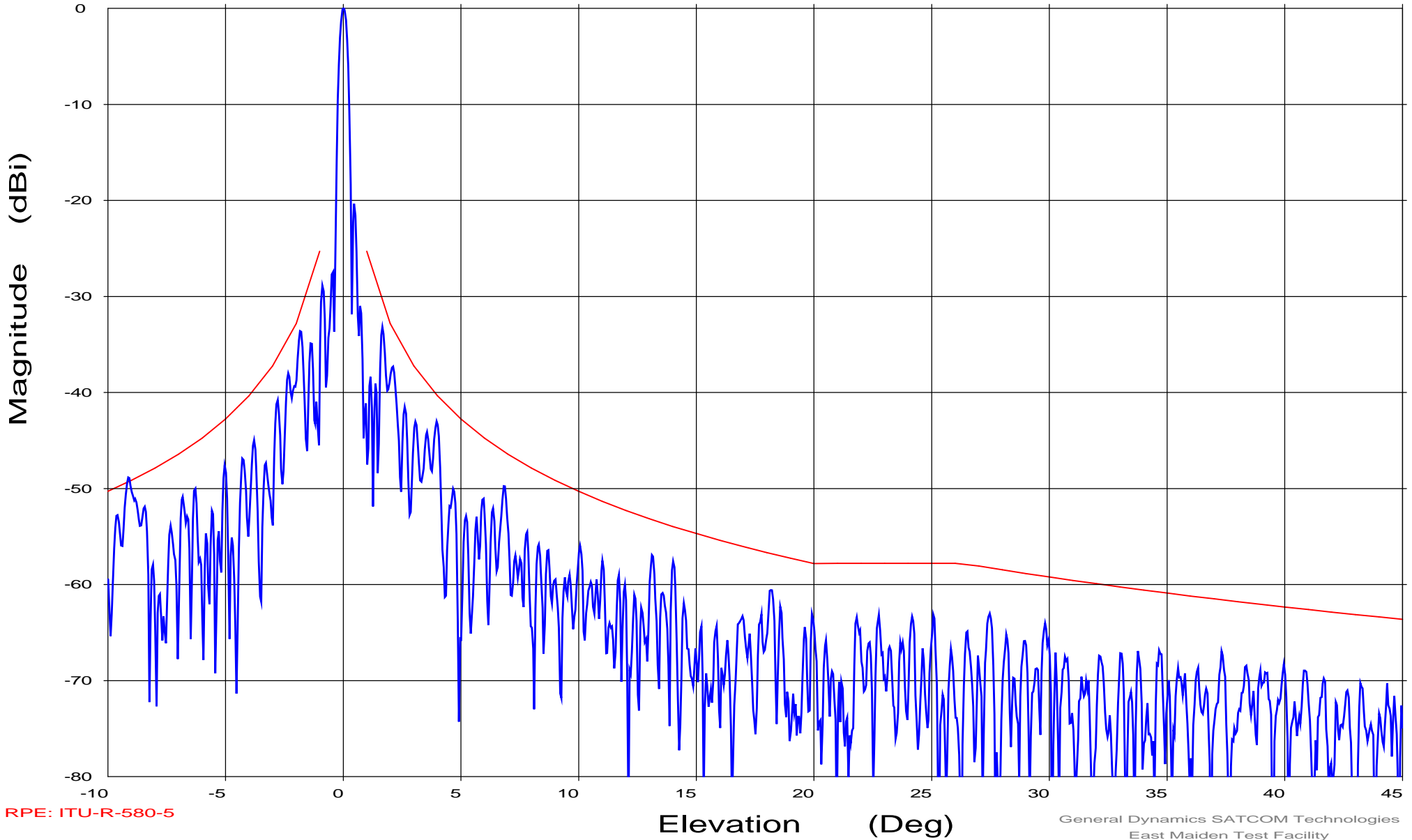
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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

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RPE: ITU-R-580-5



File: 2209-2191 13.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

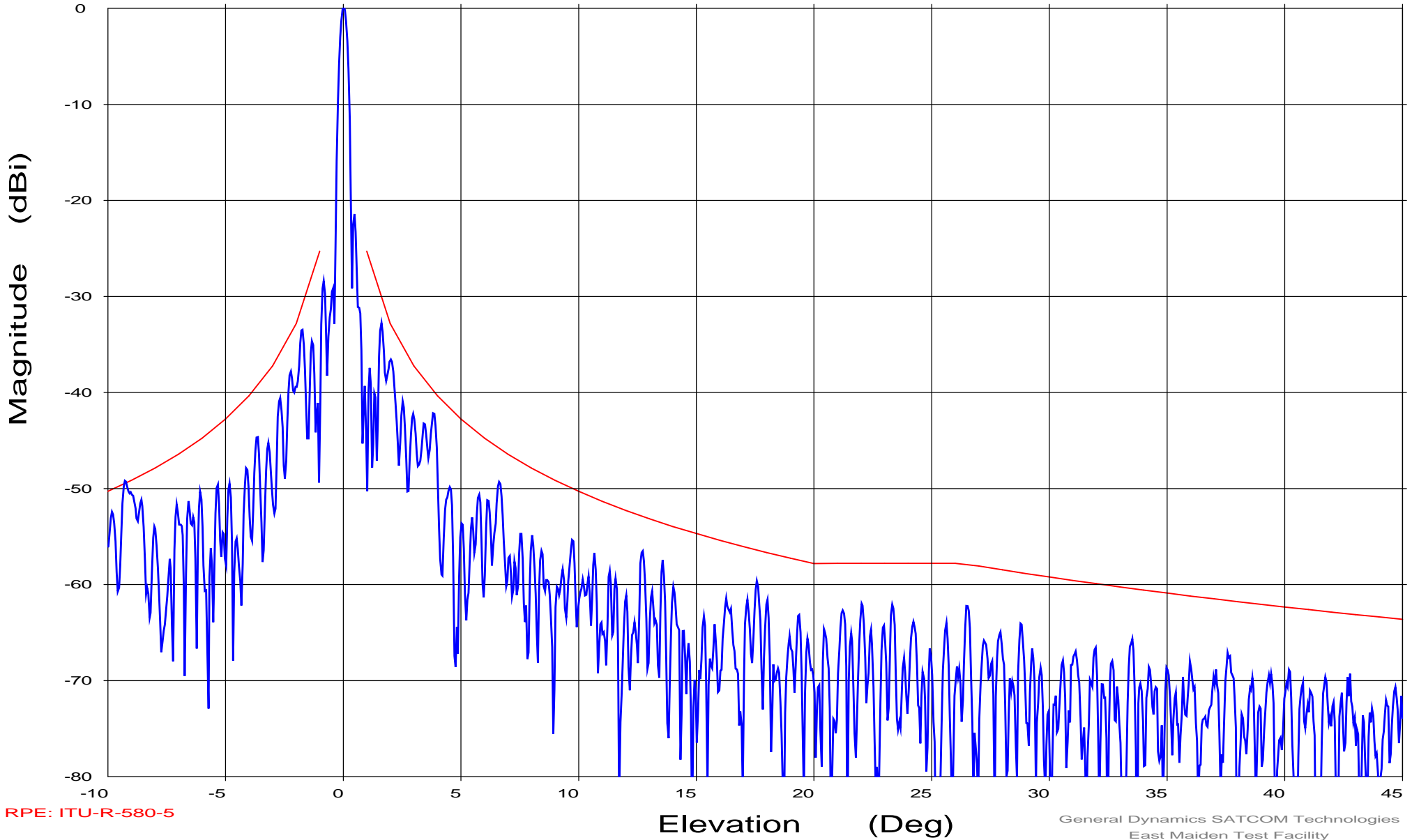
Frequency : 30.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

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File: 2209-2191 13.dat

2.4m Ka-Band Antenna Rx/Tx  
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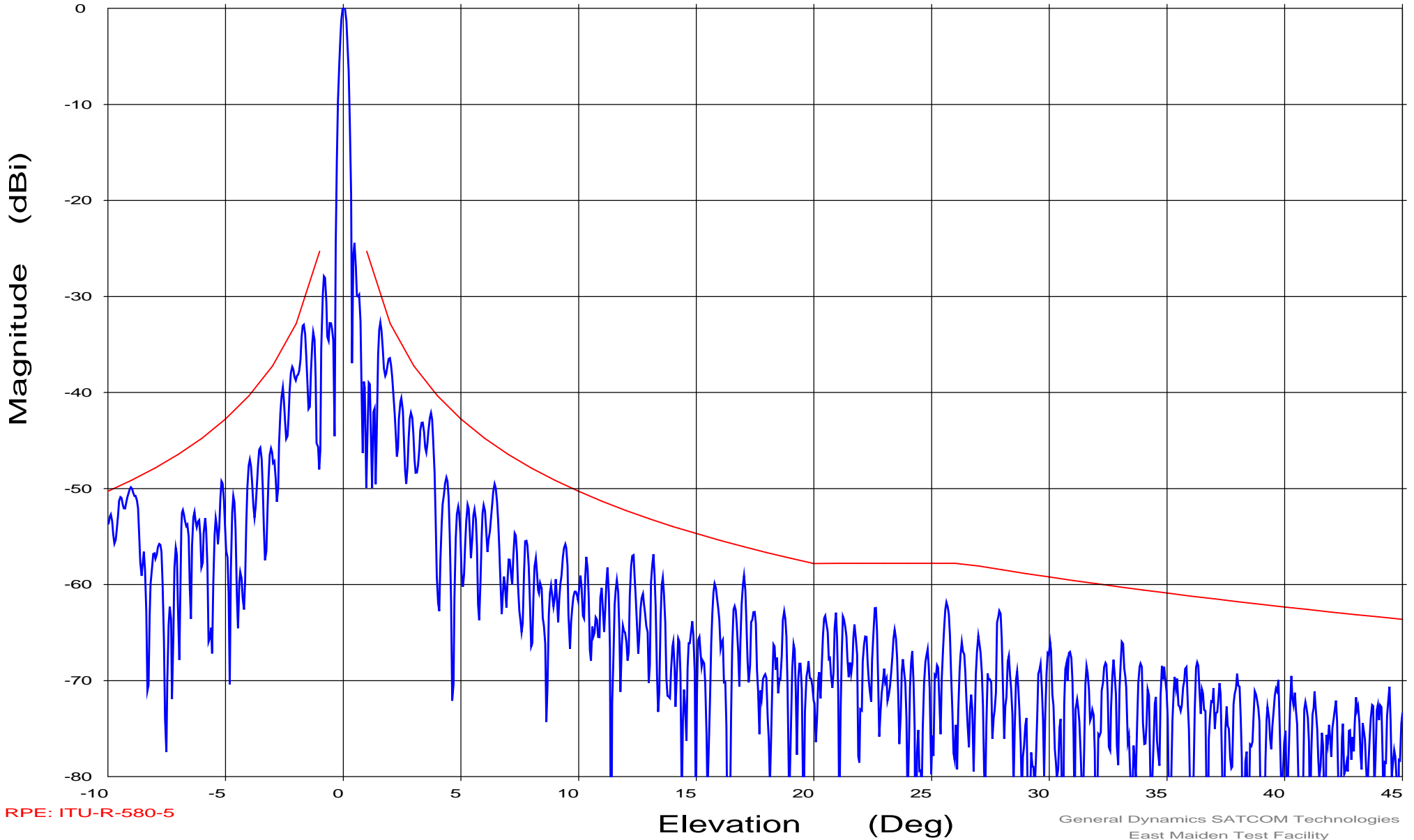
Frequency : 31.000 GHz

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File: 2209-2191 12.dat

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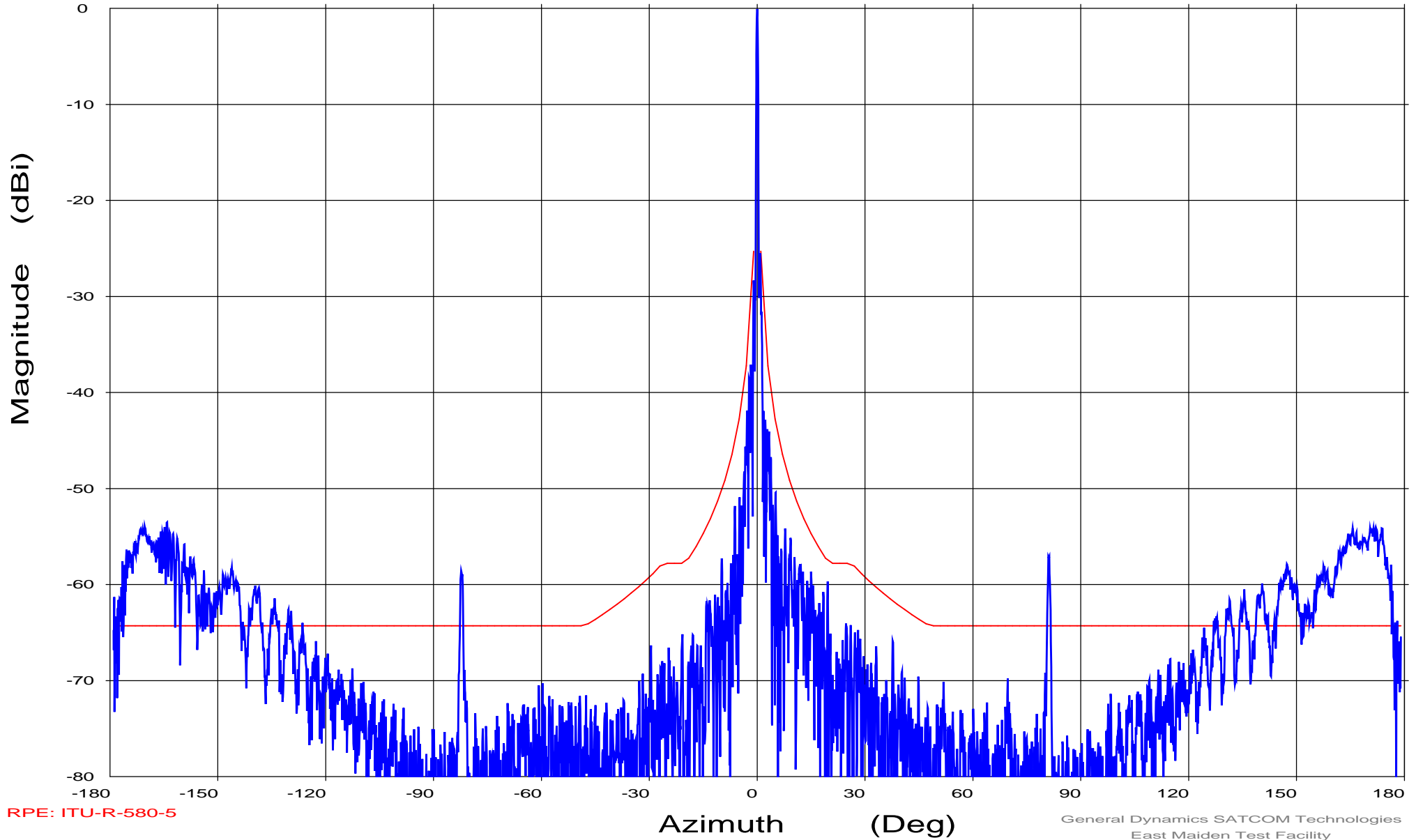
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Rx pol: Horiz.

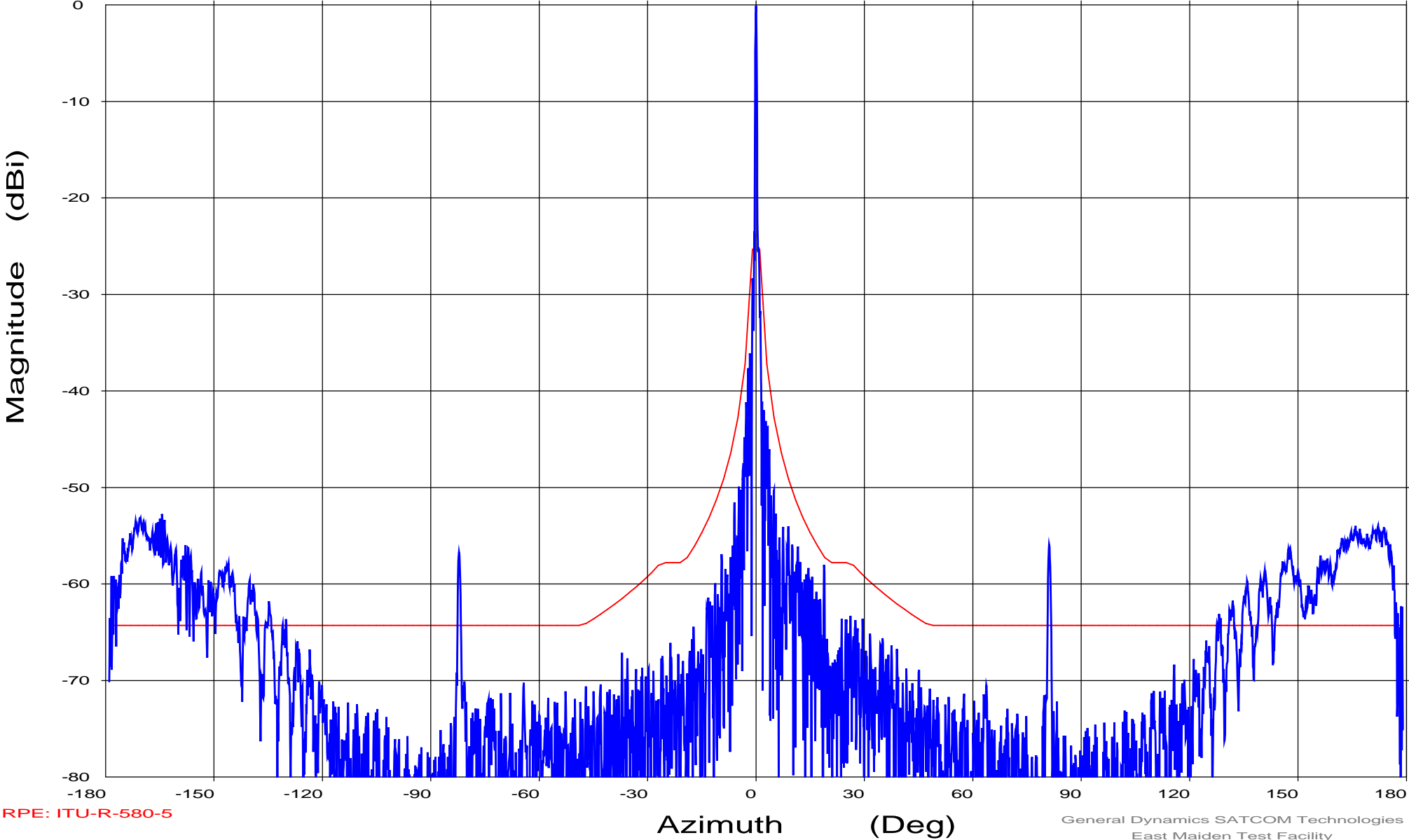


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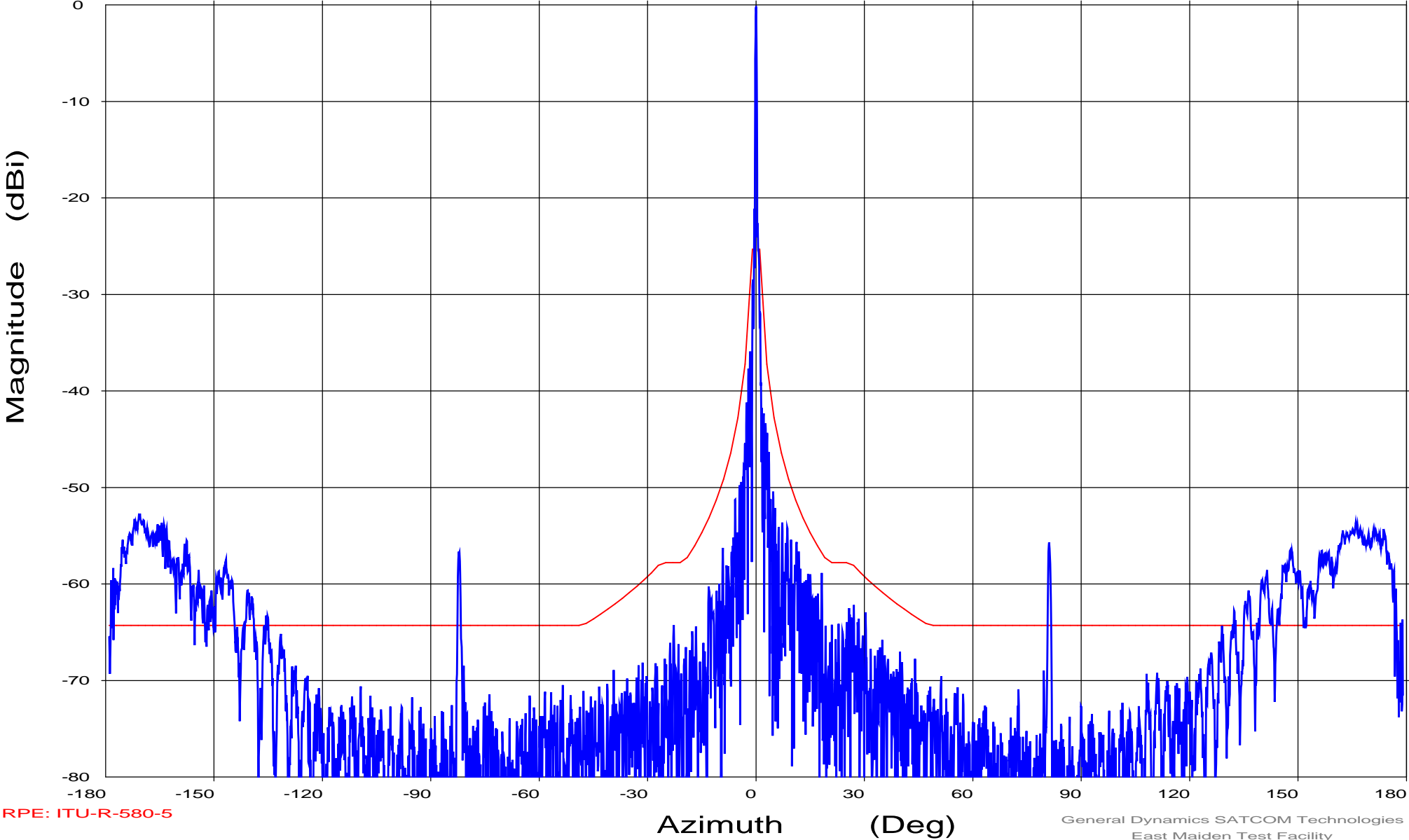
Channel: AUT      Tx pol: Horiz.      Rx pol: Horiz.



RPE: ITU-R-580-5

Operator: Dwight B. Lutz

Channel: AUT      Tx pol: Horiz.      Rx pol: Horiz.



RPE: ITU-R-580-5

File: 2209-2191 12.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

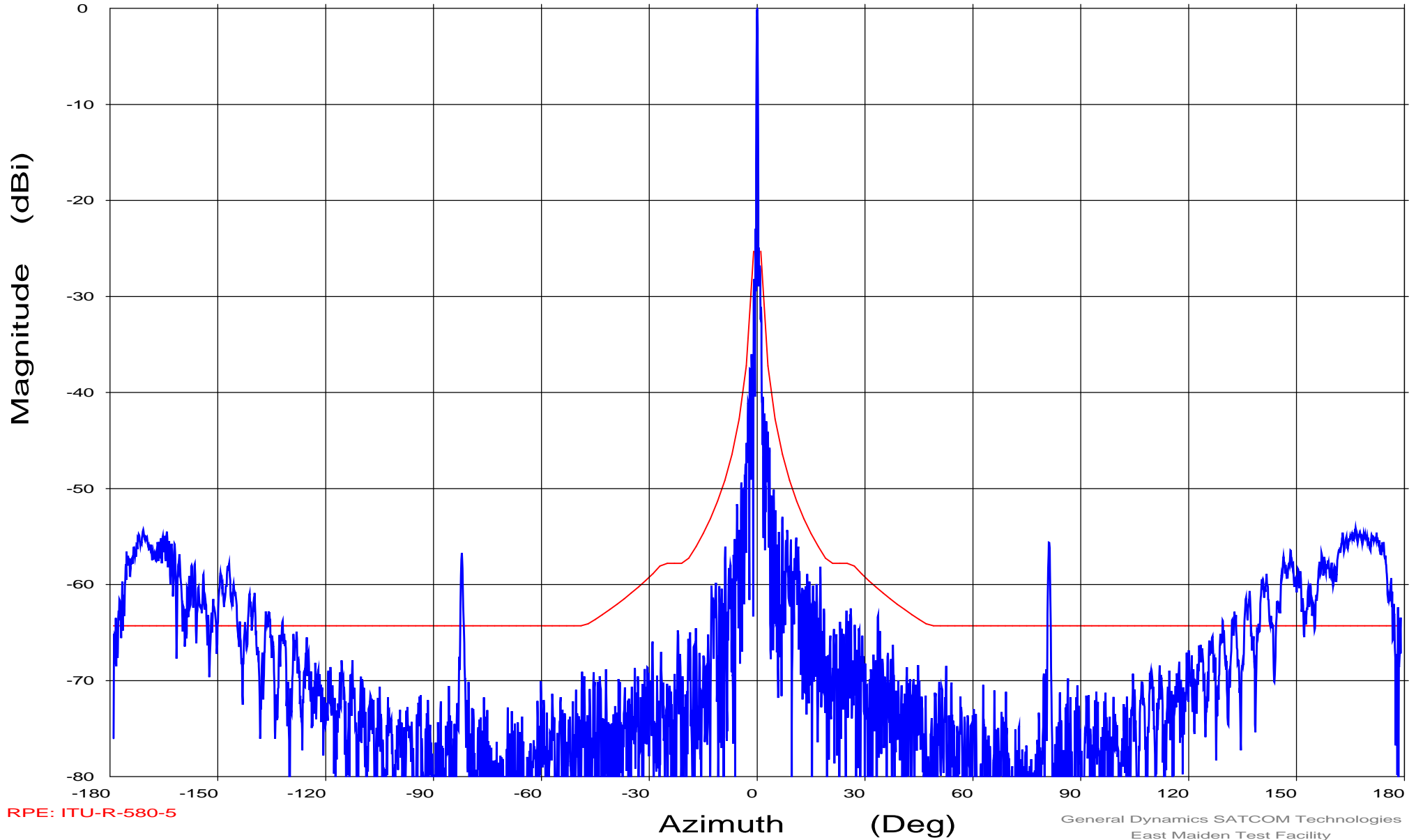
Frequency : 30.000 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.

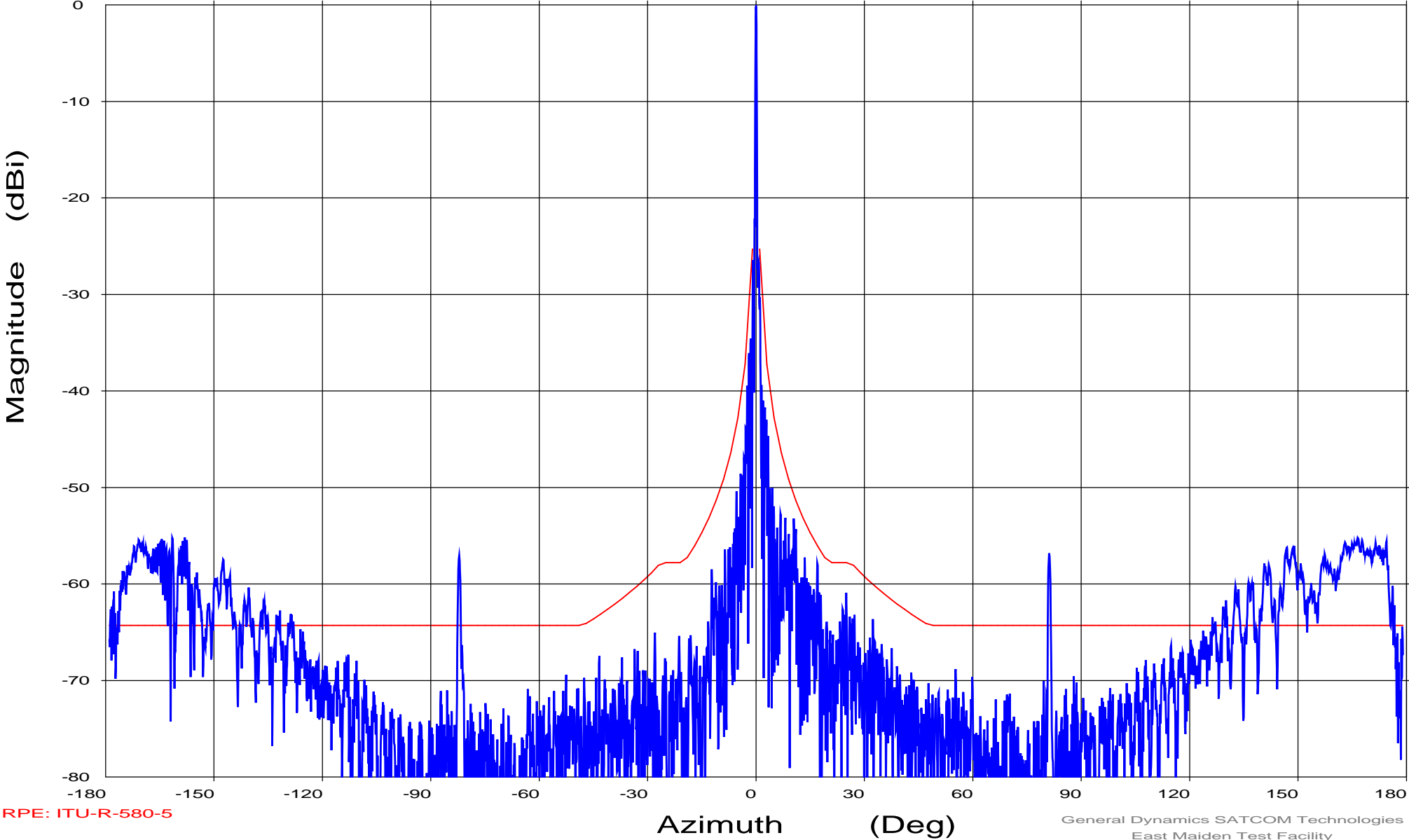


RPE: ITU-R-580-5

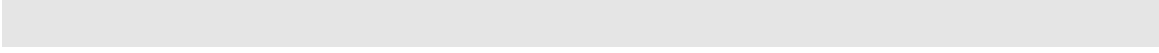
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Operator: Dwight B. Lutz

Channel: AUT      Tx pol: Horiz.      Rx pol: Horiz.



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Vertical Polarity Radiation Patterns

**Receive Frequencies**

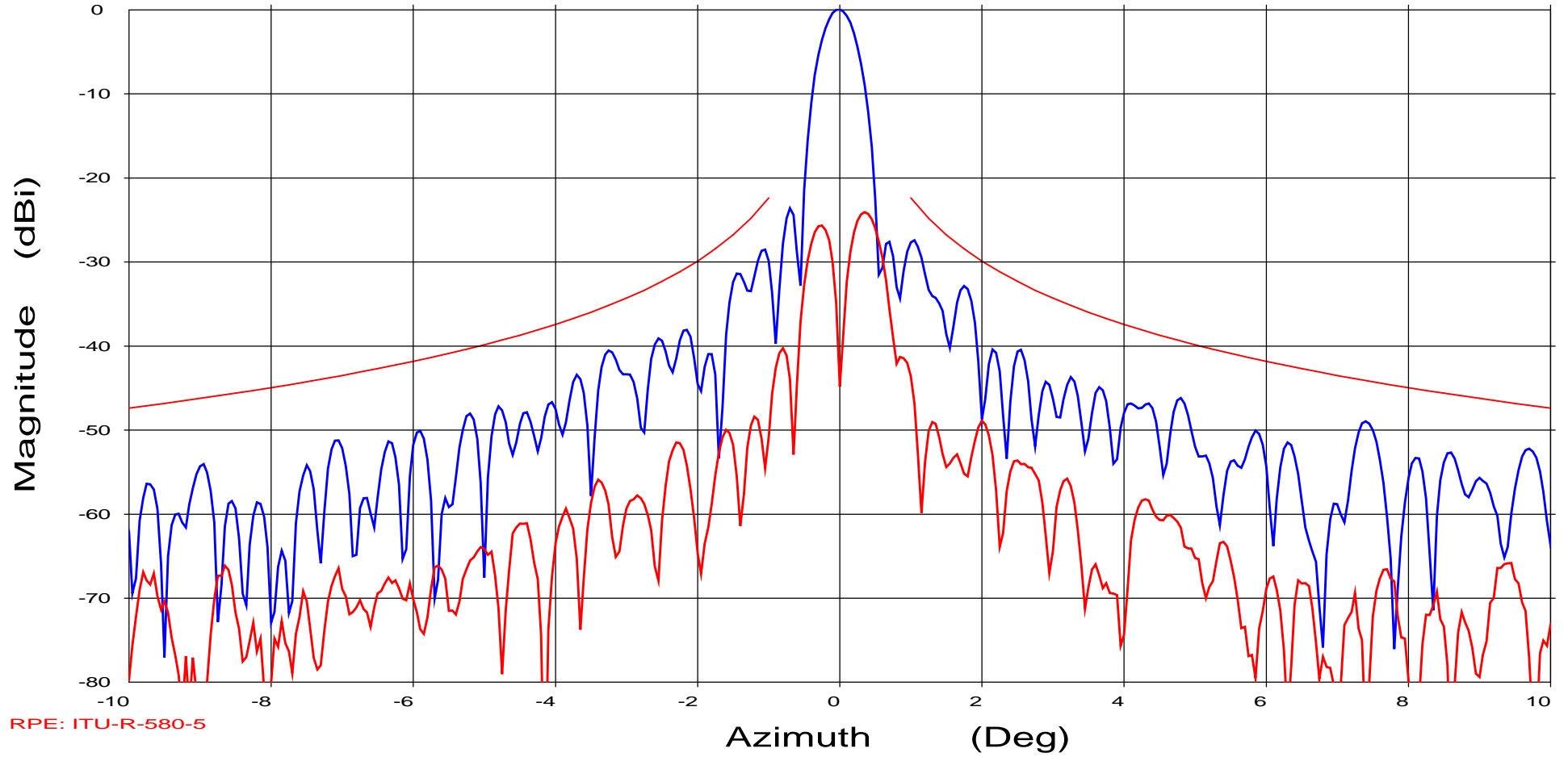


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Rx pol: Vert.



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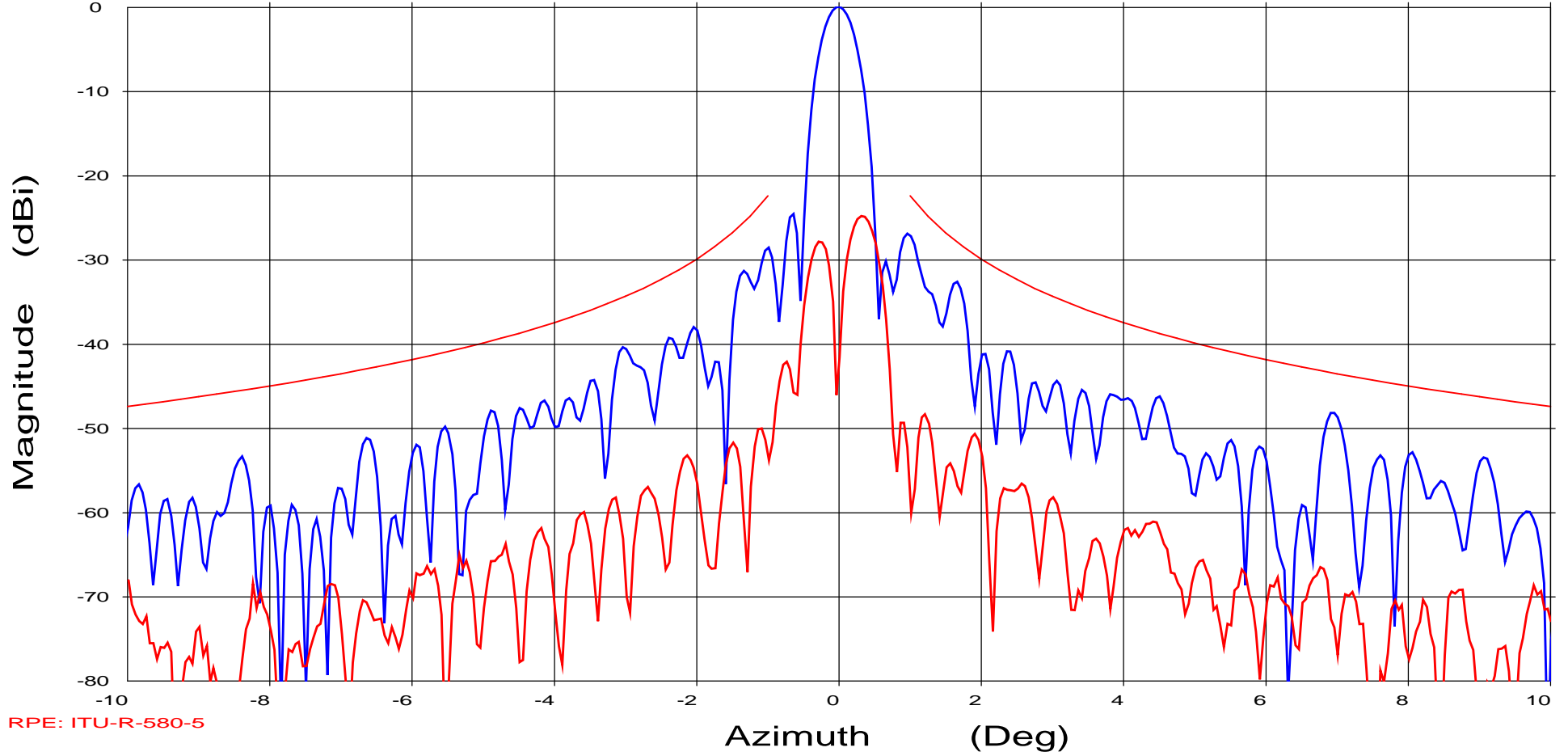
Overlays  
2209-2191 04.dat-ant\_under\_test — blue line  
2209-2191 06.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays

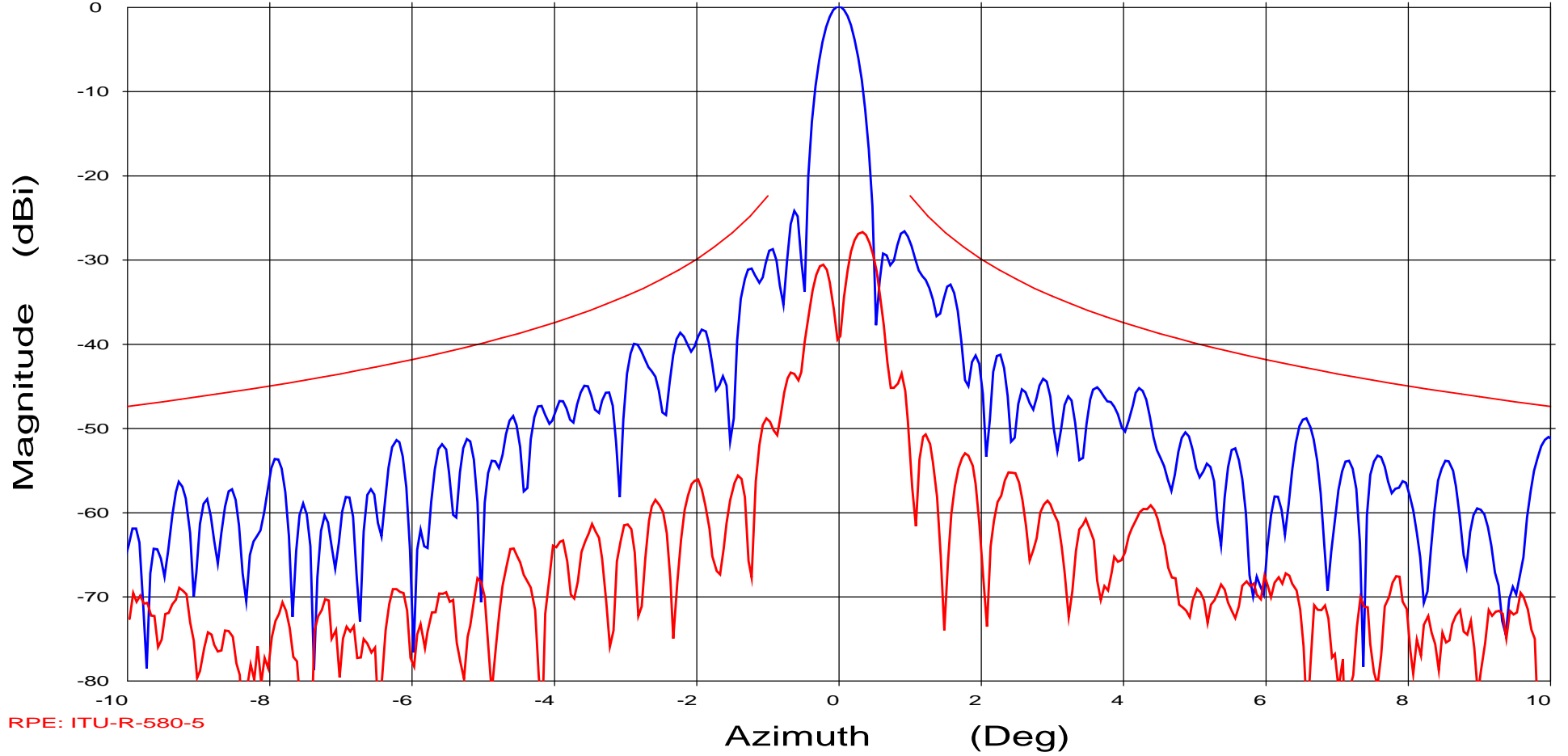
- 2209-2191 04.dat-ant\_under\_test — blue line
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Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



Overlays  
2209-2191 04.dat-ant\_under\_test — blue line  
2209-2191 06.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

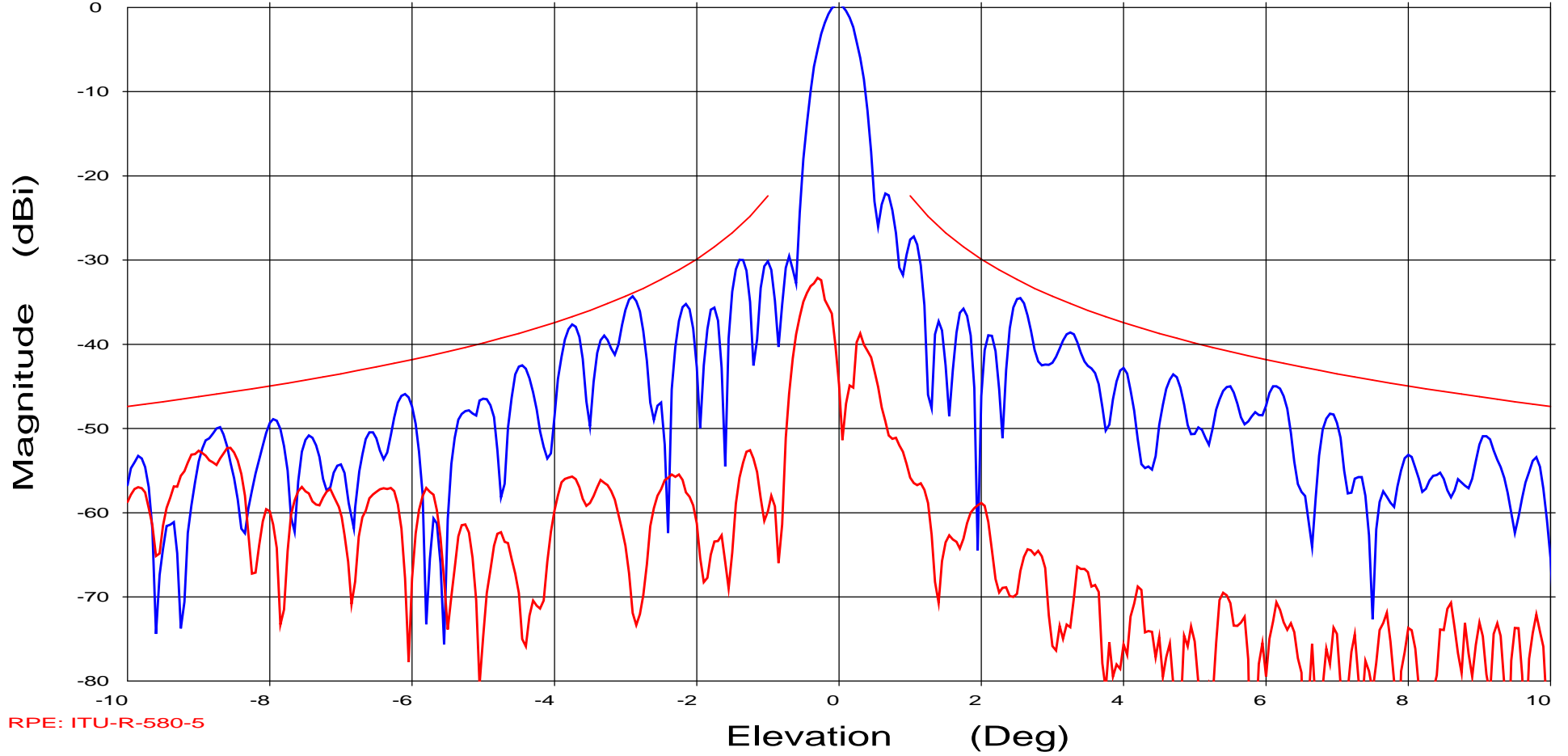
Frequency : 18.700 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

Overlays

2209-2191 05.dat-ant\_under\_test — blue line  
2209-2191 07.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

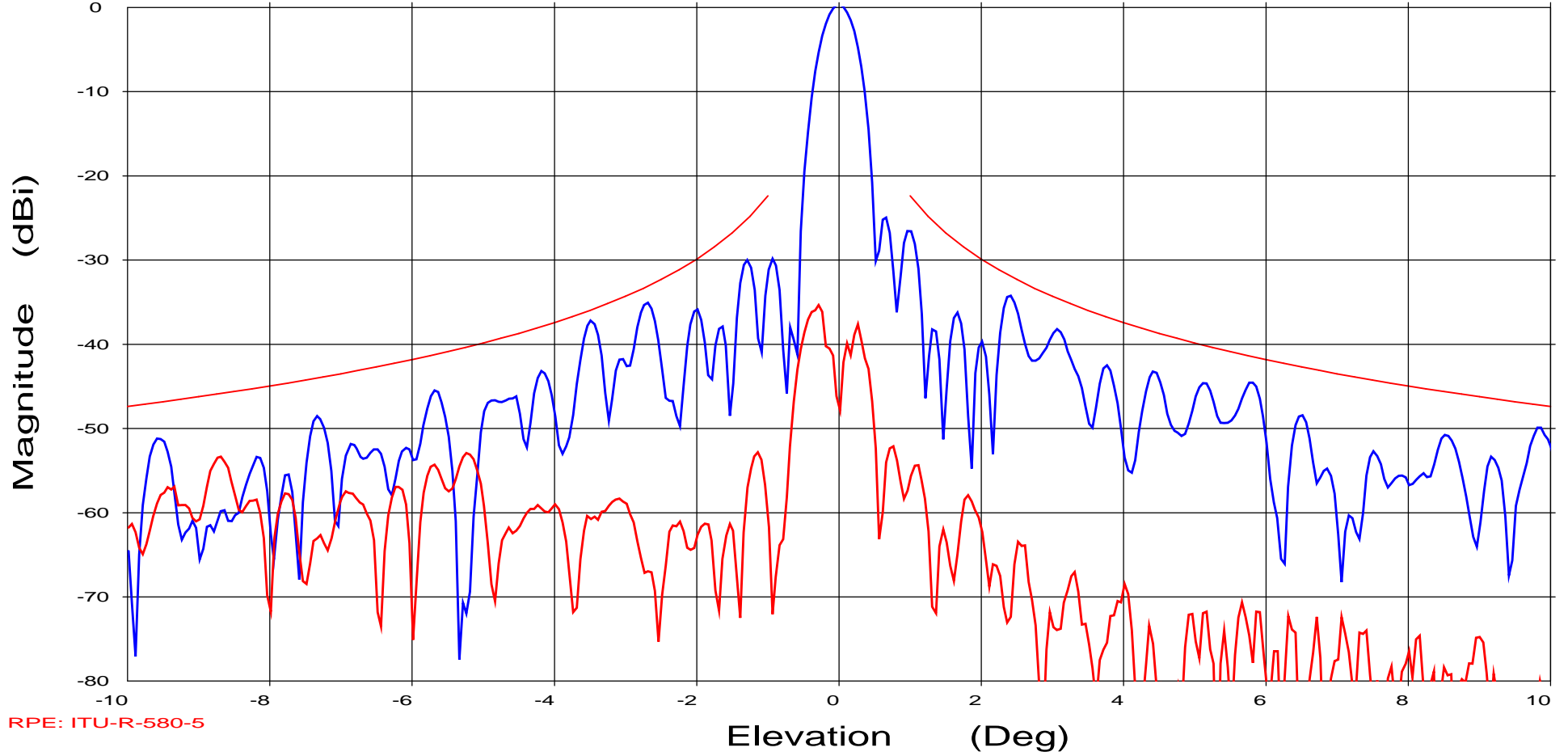
Frequency : 19.950 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

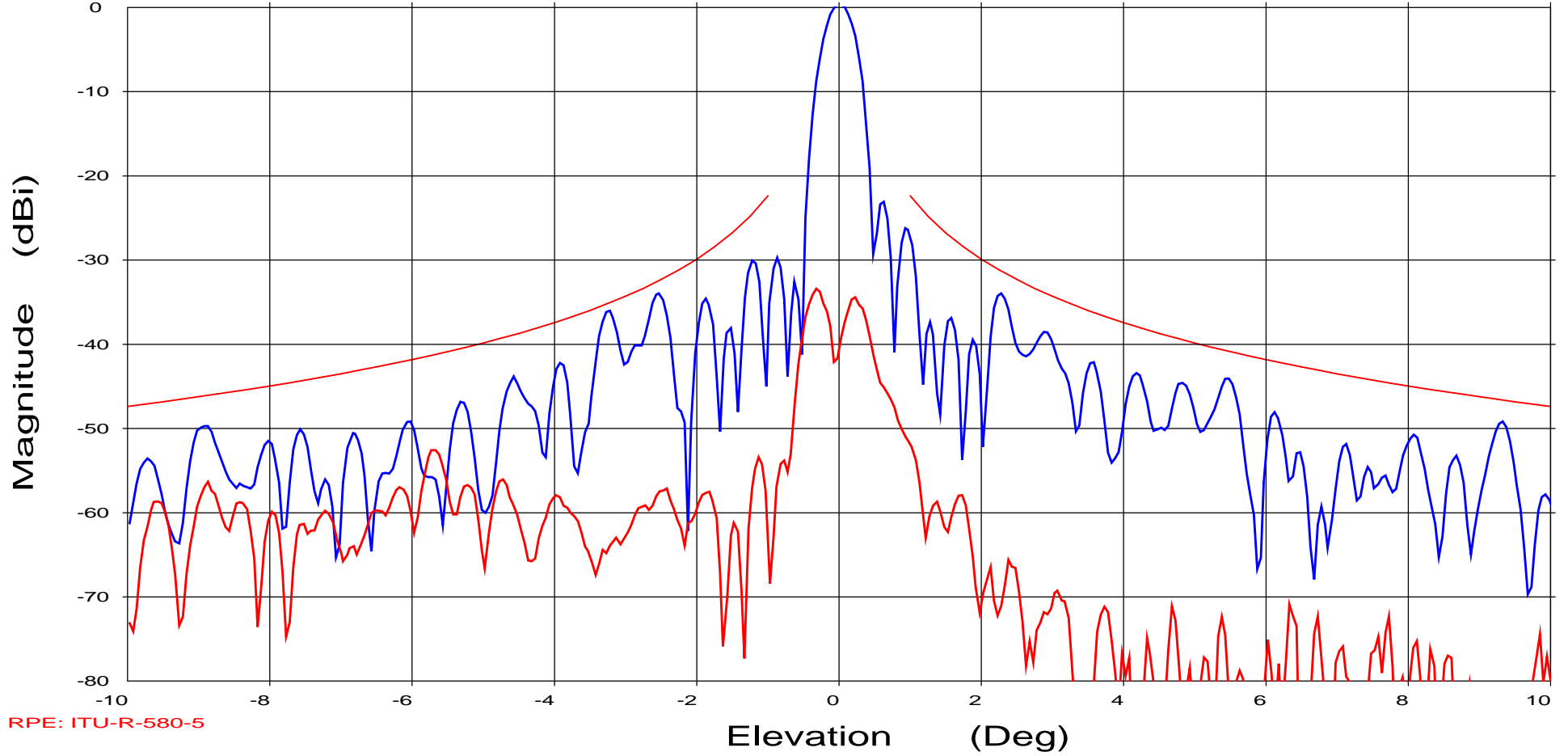
Overlays  
2209-2191 05.dat-ant\_under\_test — blue line  
2209-2191 07.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

Overlays

2209-2191 05.dat-ant\_under\_test —

2209-2191 07.dat-ant\_under\_test —

File: 2209-2191 05.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

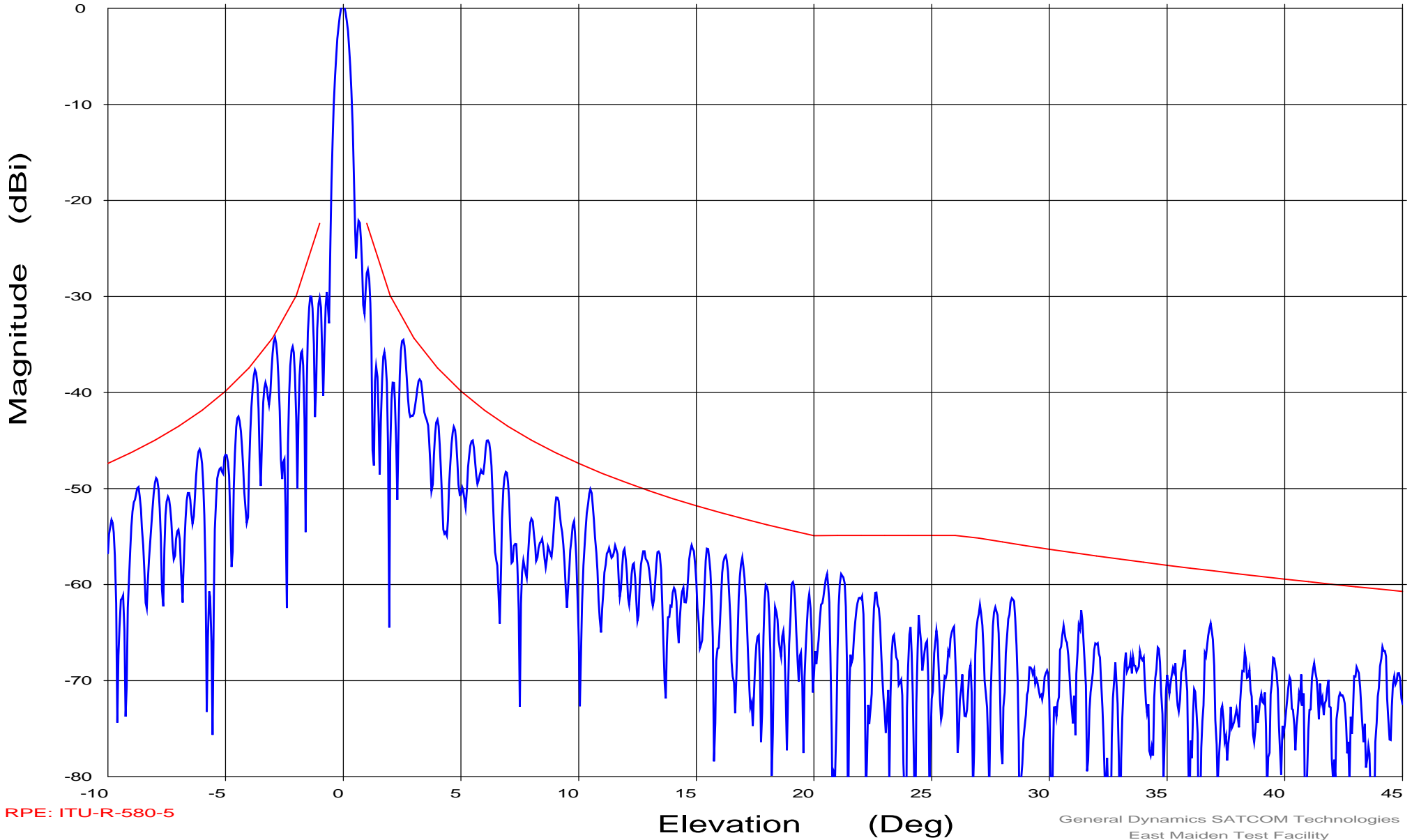
Frequency : 18.700 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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

File: 2209-2191 05.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

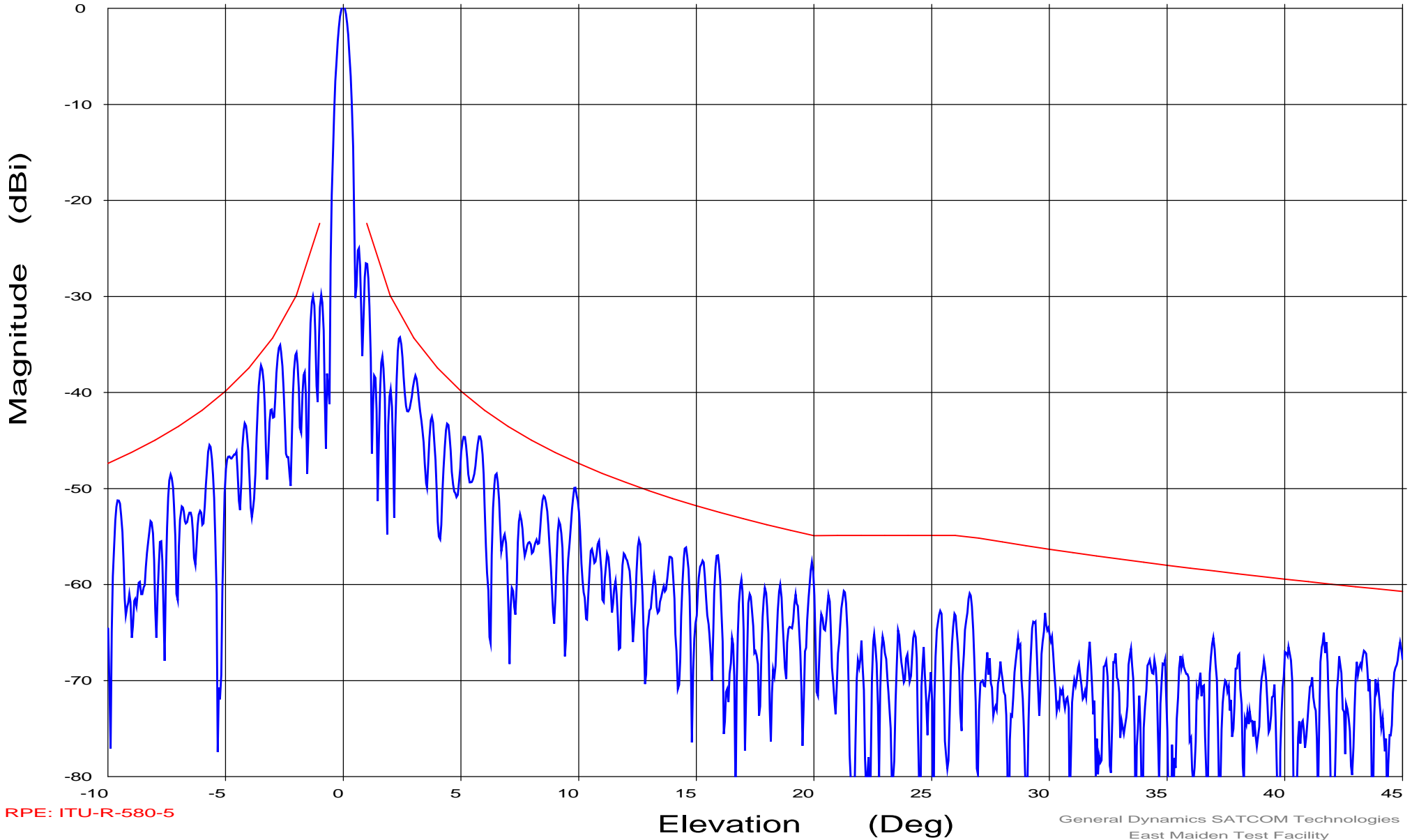
Frequency : 19.950 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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



File: 2209-2191 05.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

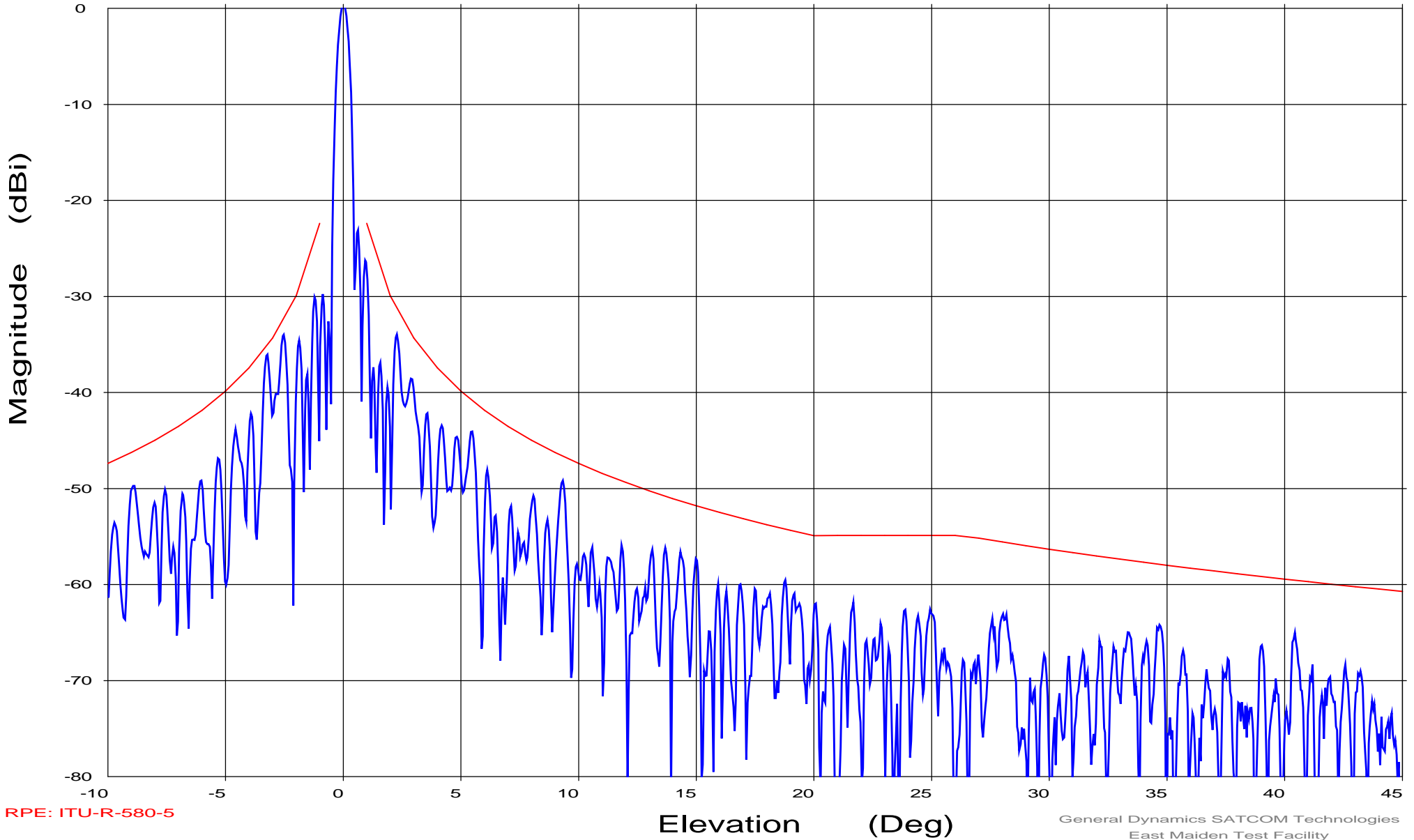
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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

File: 2209-2191 04.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

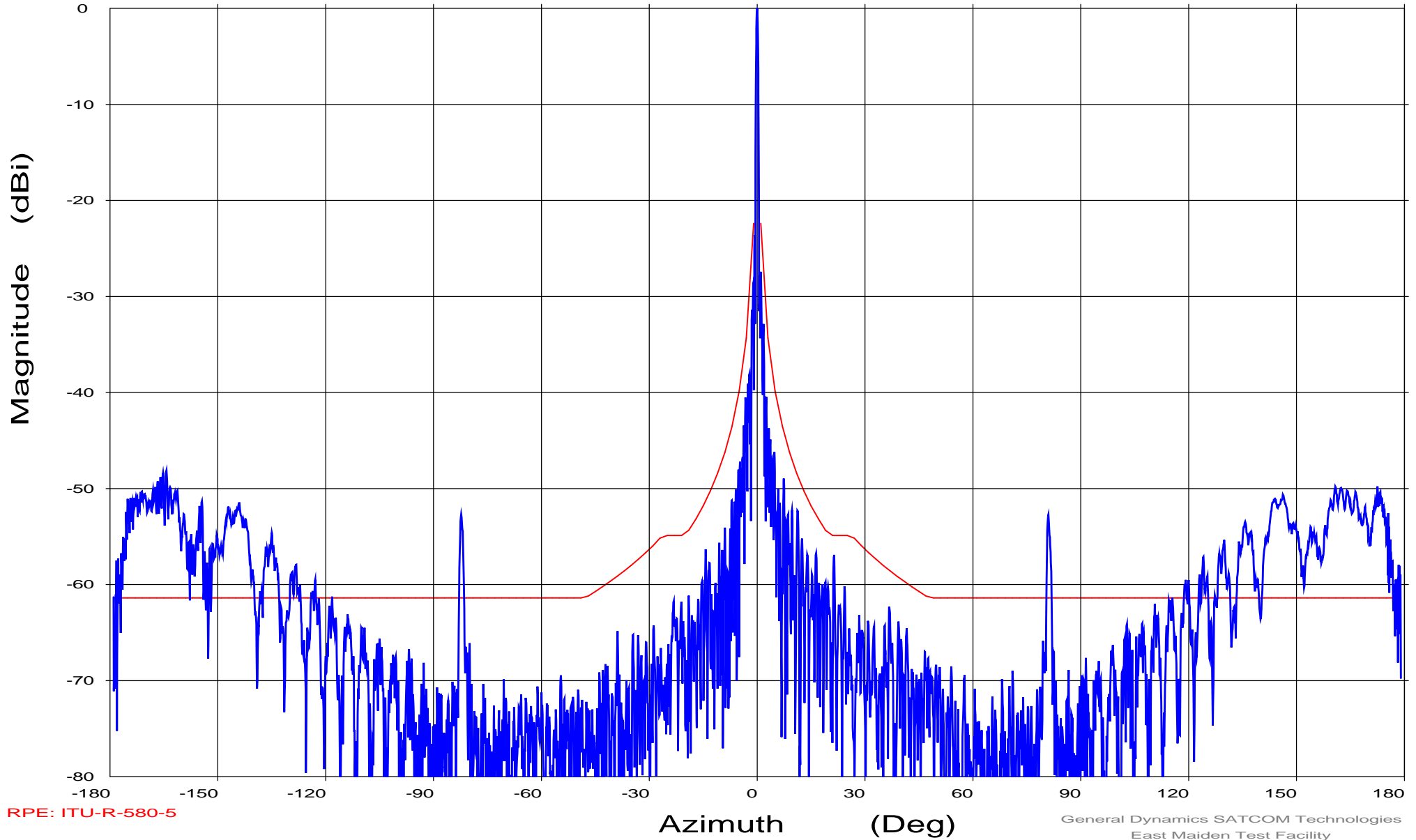
Frequency : 18.700 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

File: 2209-2191 04.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

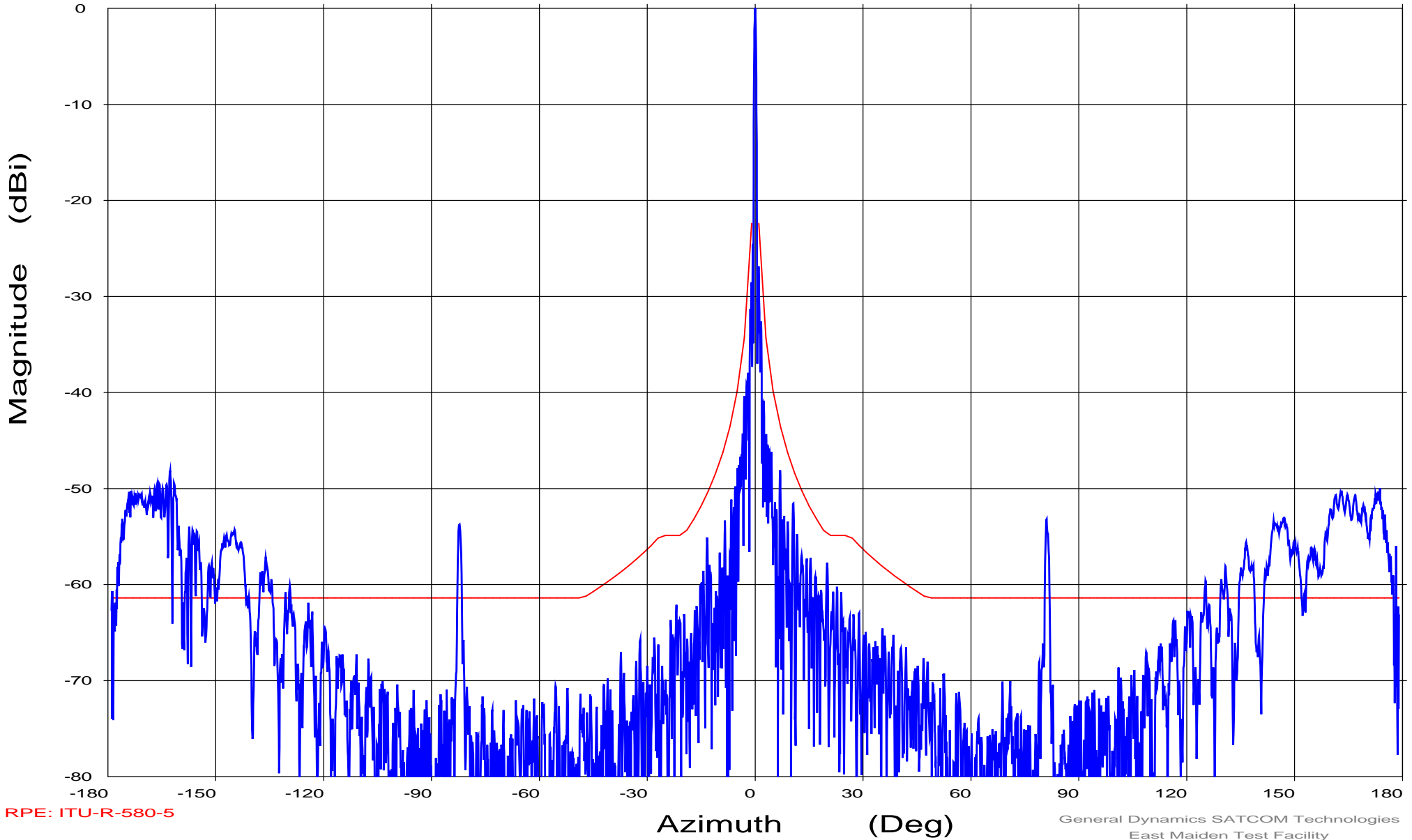
Frequency : 19.950 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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File: 2209-2191 04.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

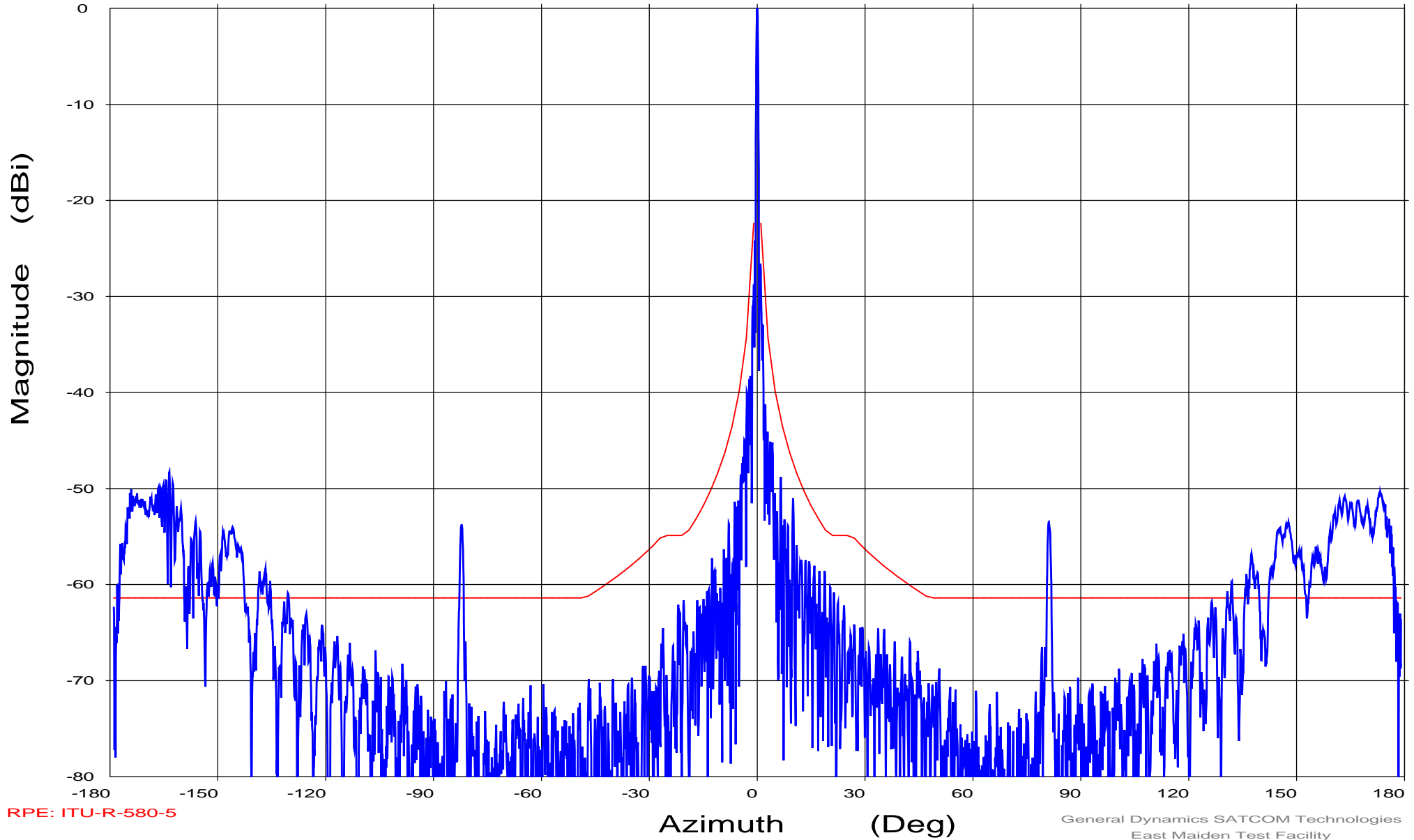
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Vert.

Rx pol: Vert.



RPE: ITU-R-580-5

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4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650



Horizontal Polarity Radiation Patterns

**Receive Frequencies**

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

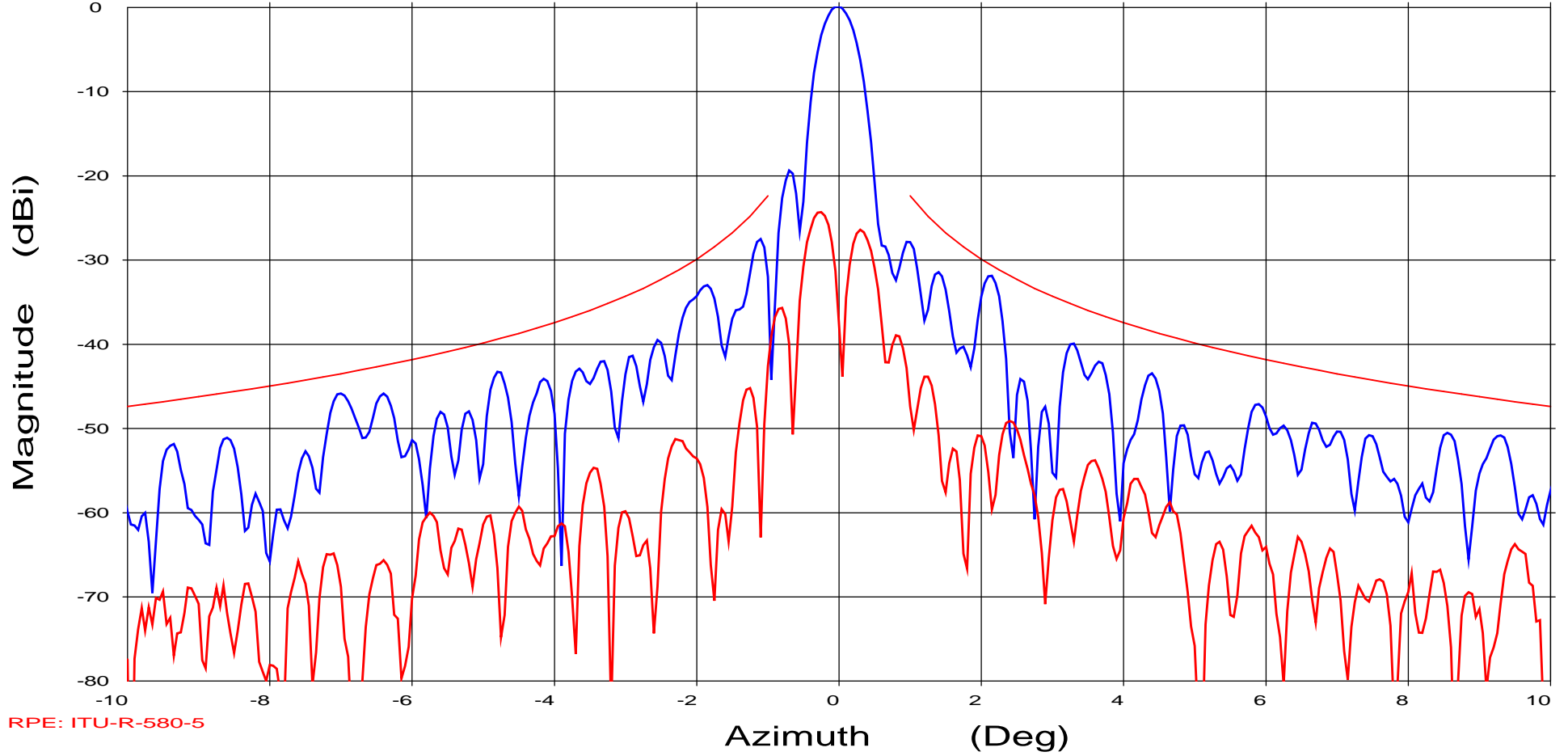
Frequency : 18.700 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.

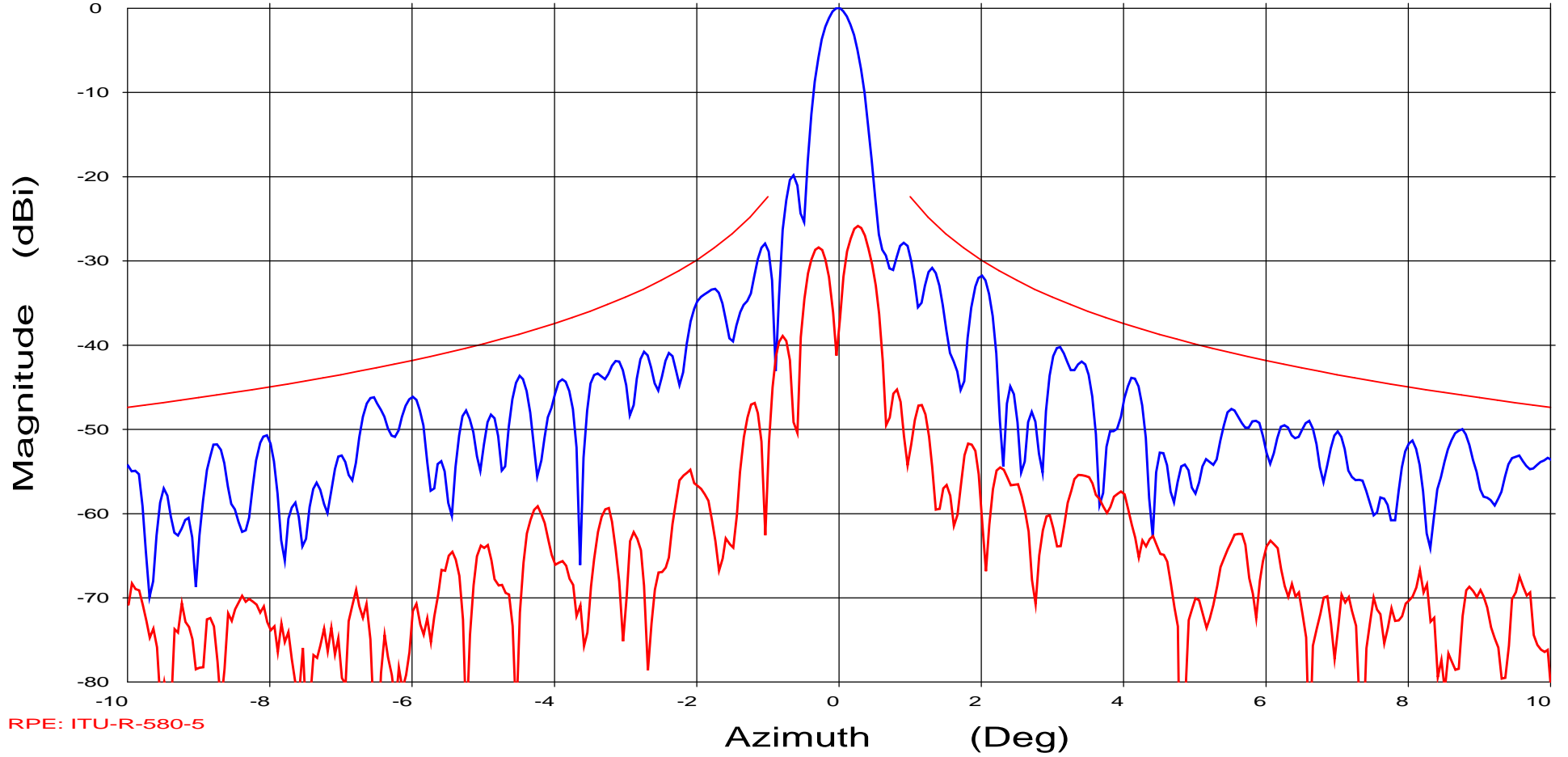


RPE: ITU-R-580-5

Overlays  
2209-2190 21.dat-ant\_under\_test — blue line  
2209-2190 24.dat-ant\_under\_test — red line

Operator: Dwight B. Lutz

Channel: AUT Tx pol: Horiz. Rx pol: Horiz.



RPE: ITU-R-580-5

Overlays  
2209-2190 21.dat-ant\_under\_test — blue line  
2209-2190 24.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

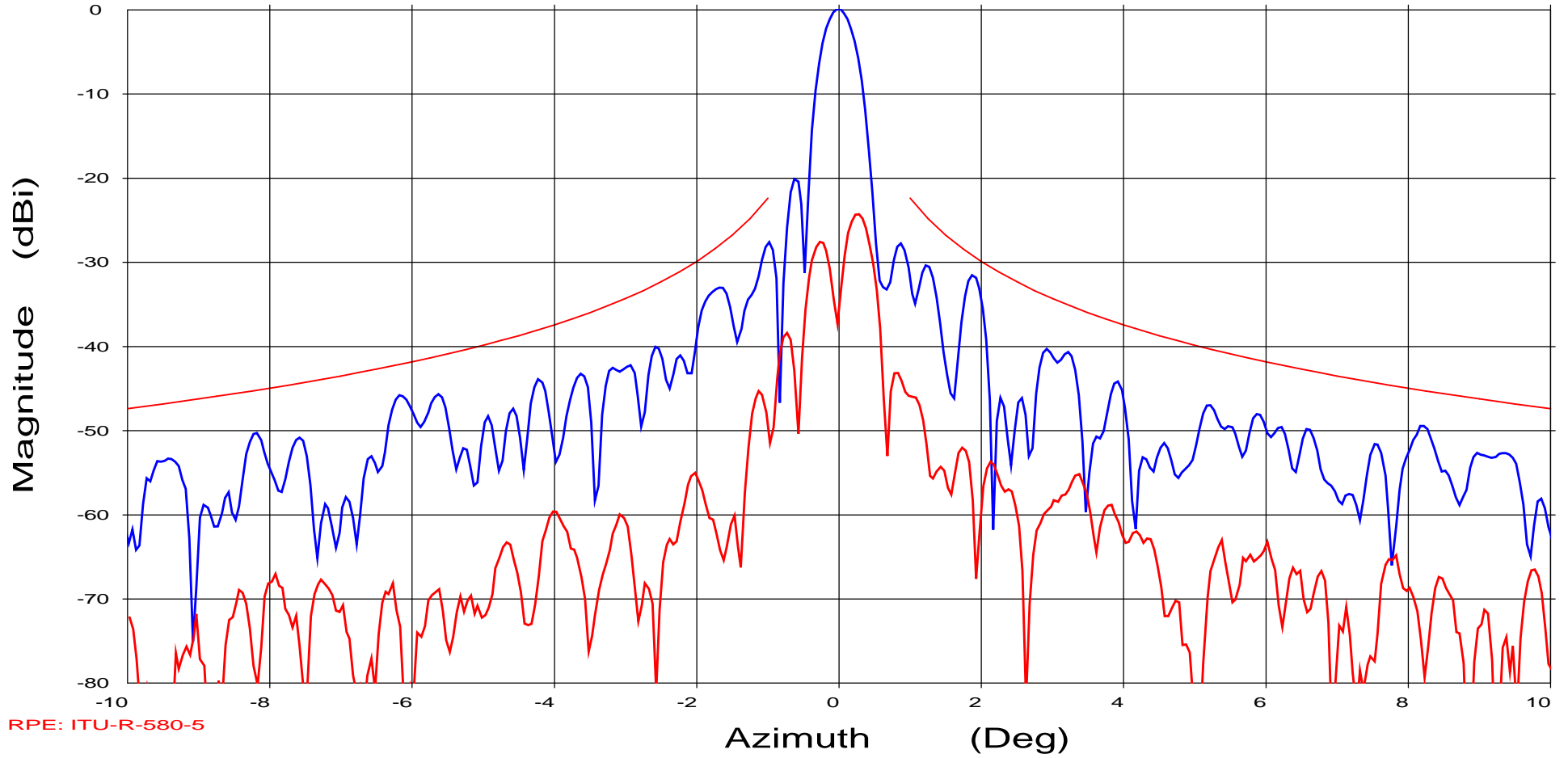
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



Overlays

2209-2190 21.dat-ant\_under\_test — blue line  
2209-2190 24.dat-ant\_under\_test — red line



2.4m Ka-Band Antenna Rx/Tx  
Series 3244

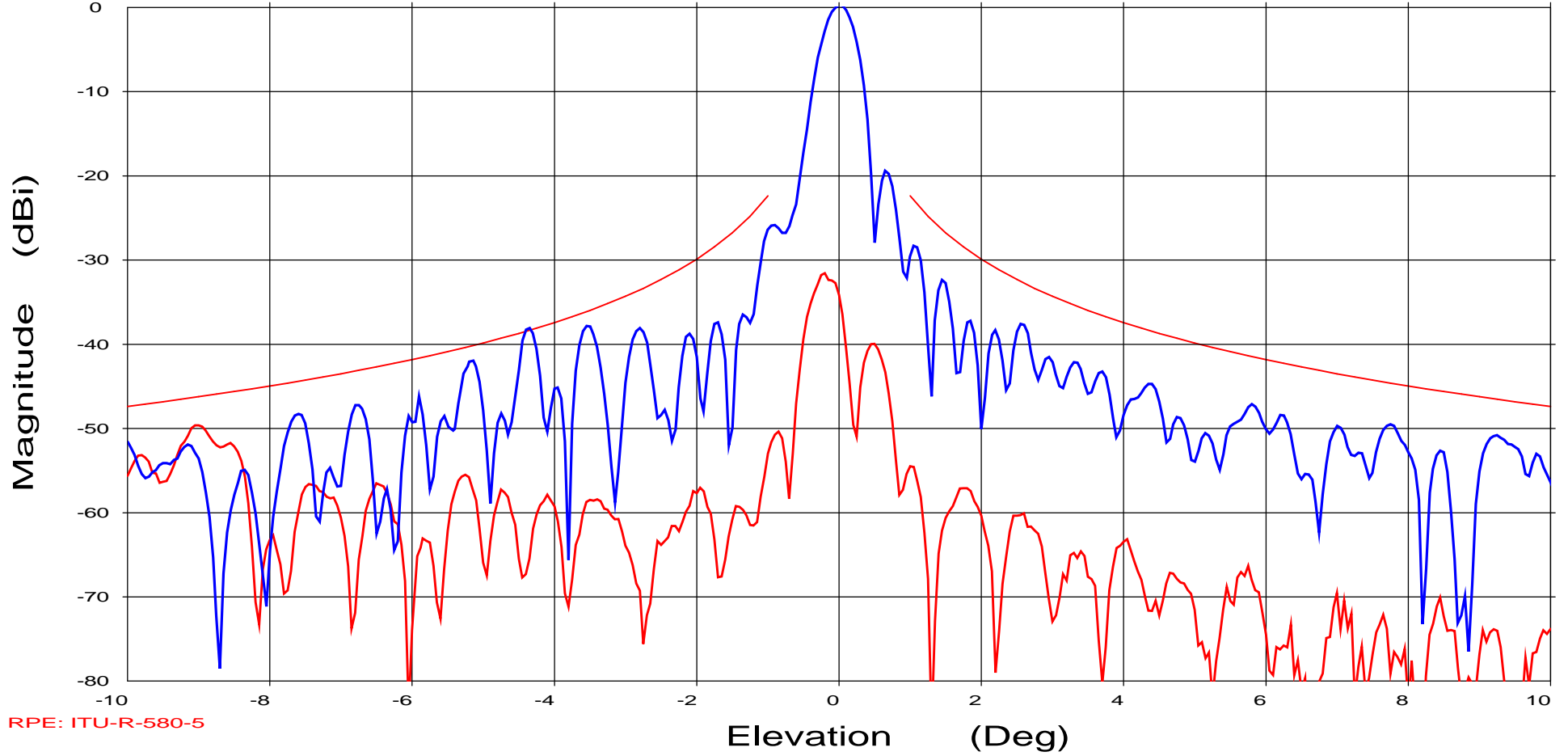
Frequency : 18.700 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



Overlays

2209-2190 29.dat-ant\_under\_test — blue line  
2209-2190 25.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

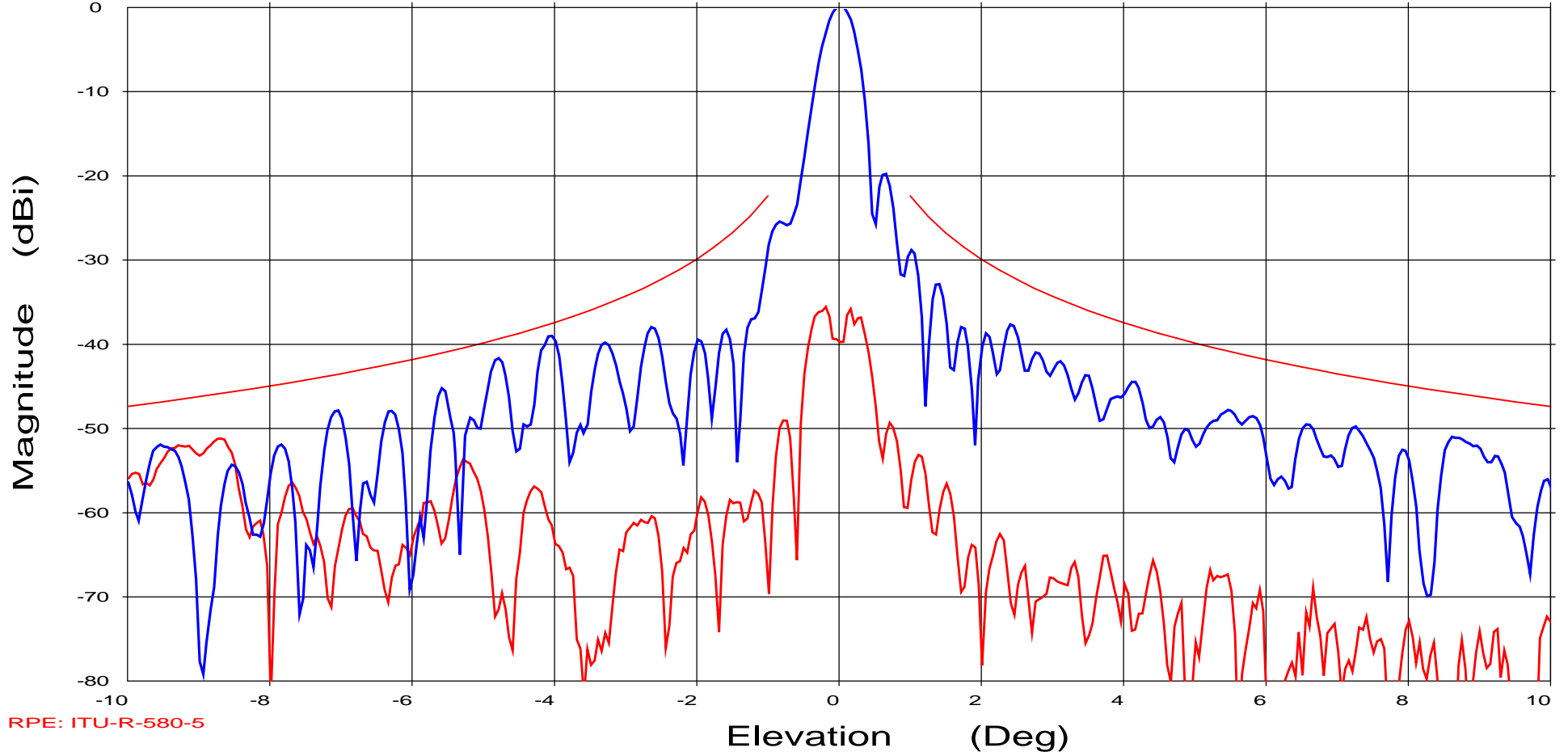
Frequency : 19.950 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



Overlays

2209-2190 29.dat-ant\_under\_test — blue line  
2209-2190 25.dat-ant\_under\_test — red line

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

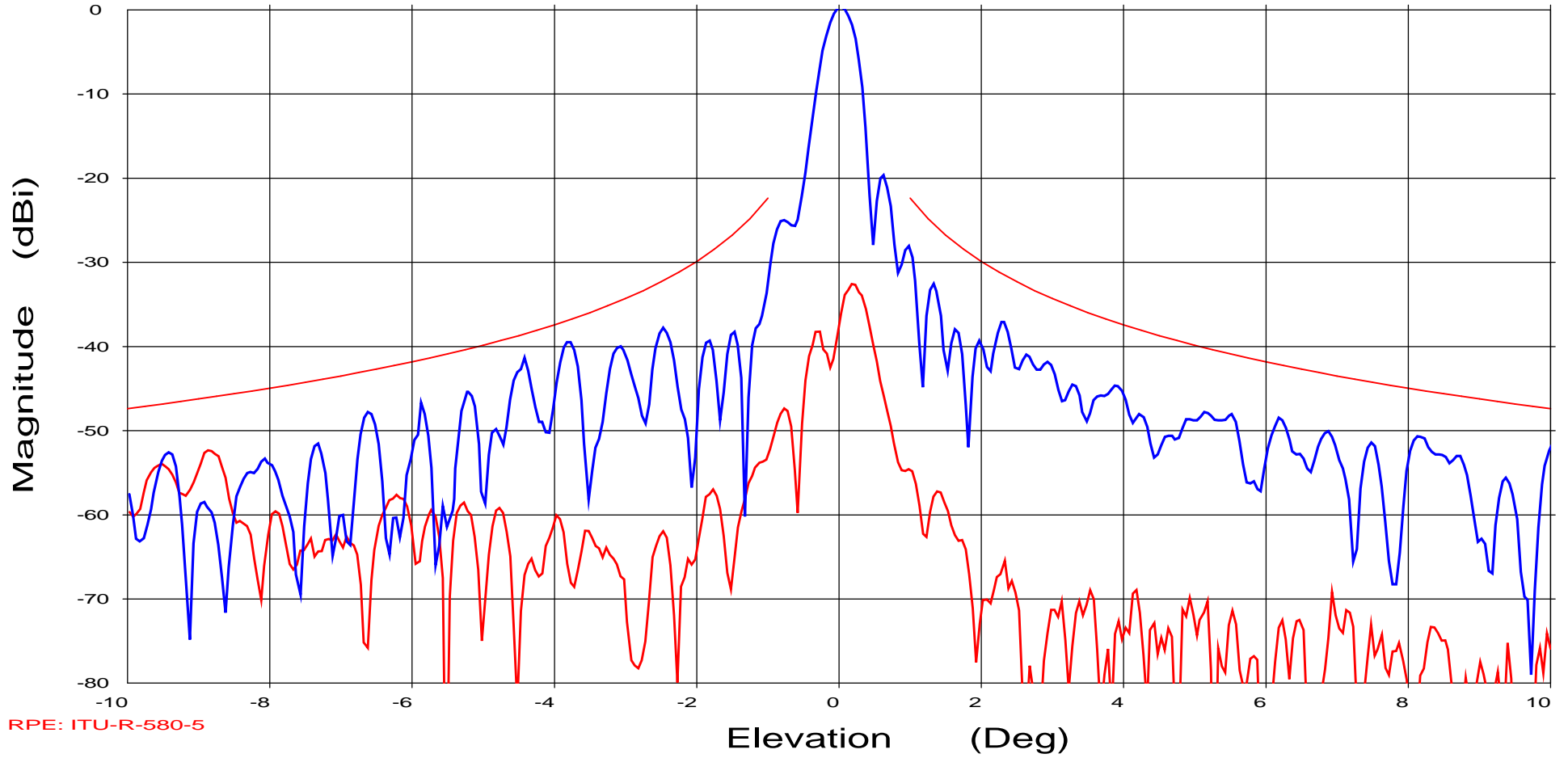
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



Overlays

2209-2190 29.dat-ant\_under\_test —

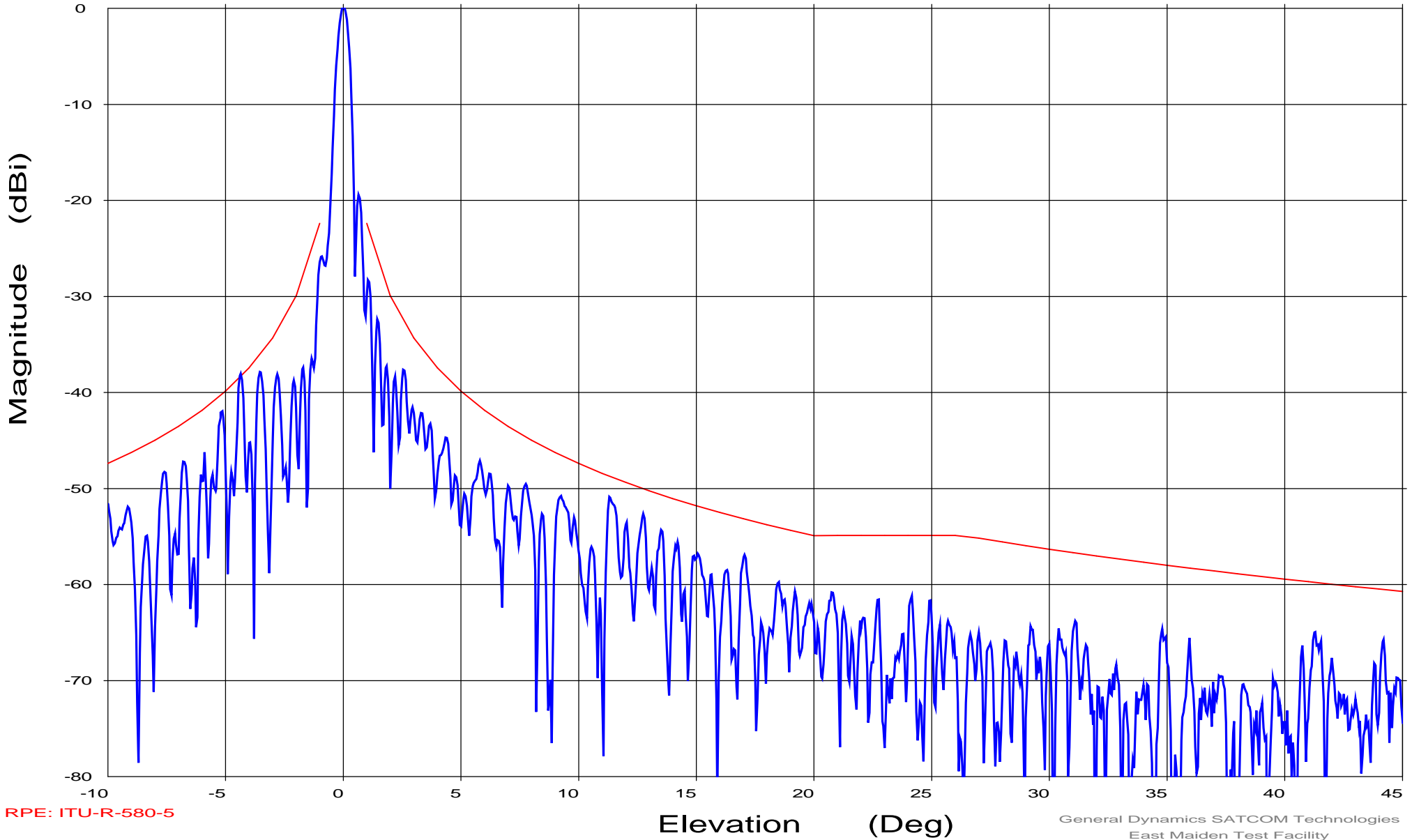
2209-2190 25.dat-ant\_under\_test —

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



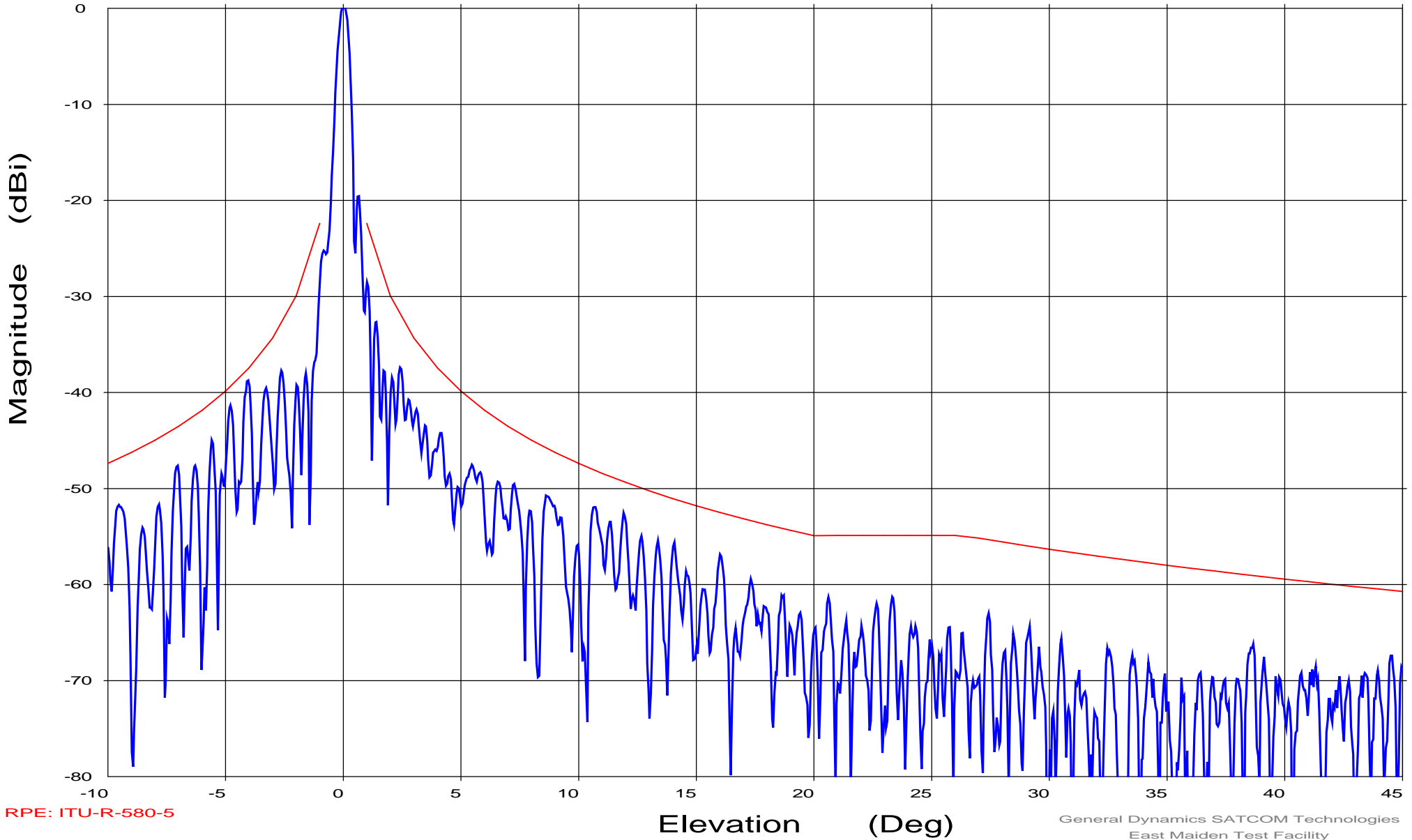
RPE: ITU-R-580-5

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

File: 2209-2190 29.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

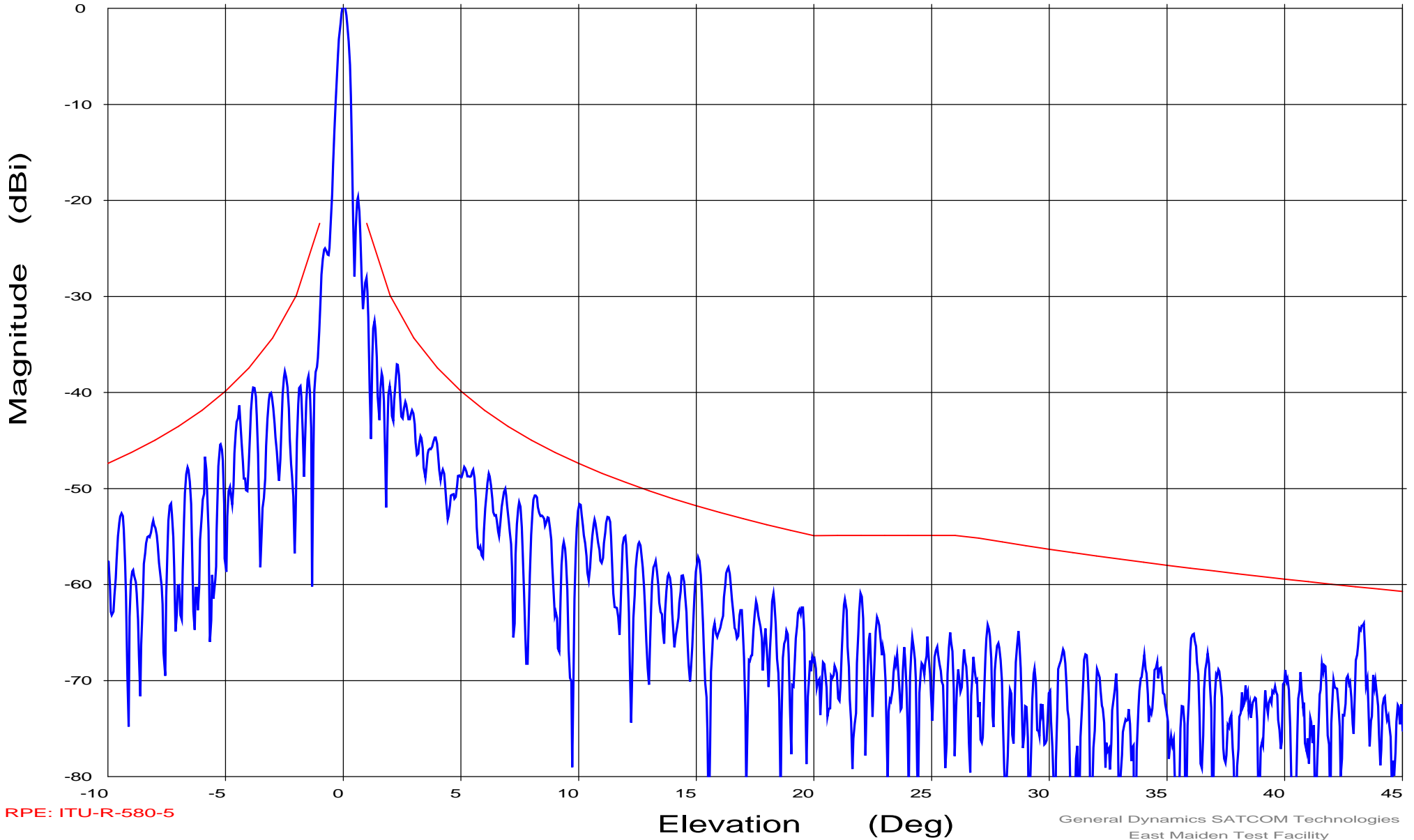
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

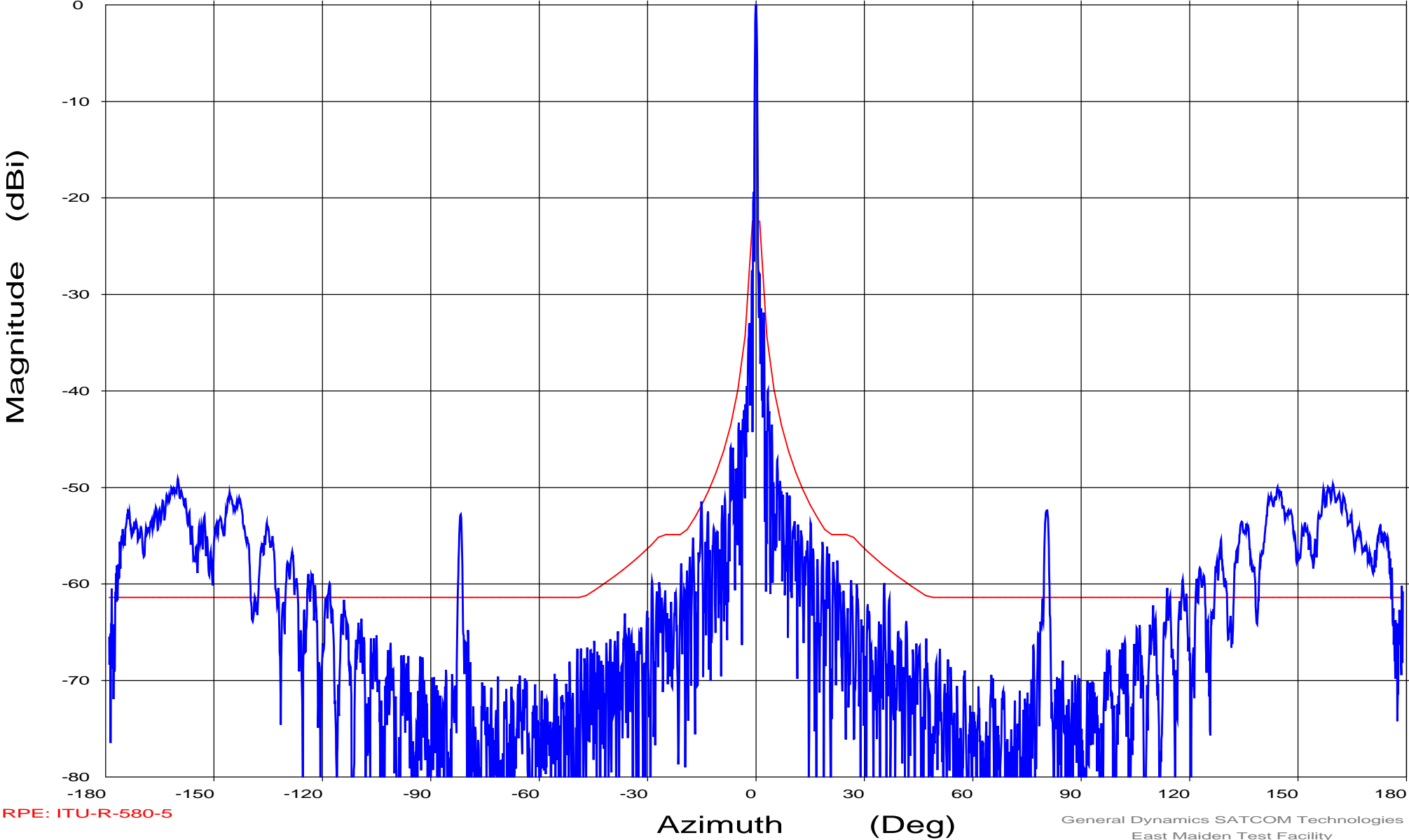
General Dynamics SATCOM Technologies  
East Maiden Test Facility  
4488 Lawing Chapel Church Road  
Maiden, North Carolina 28650

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

File: 2209-2190 21.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

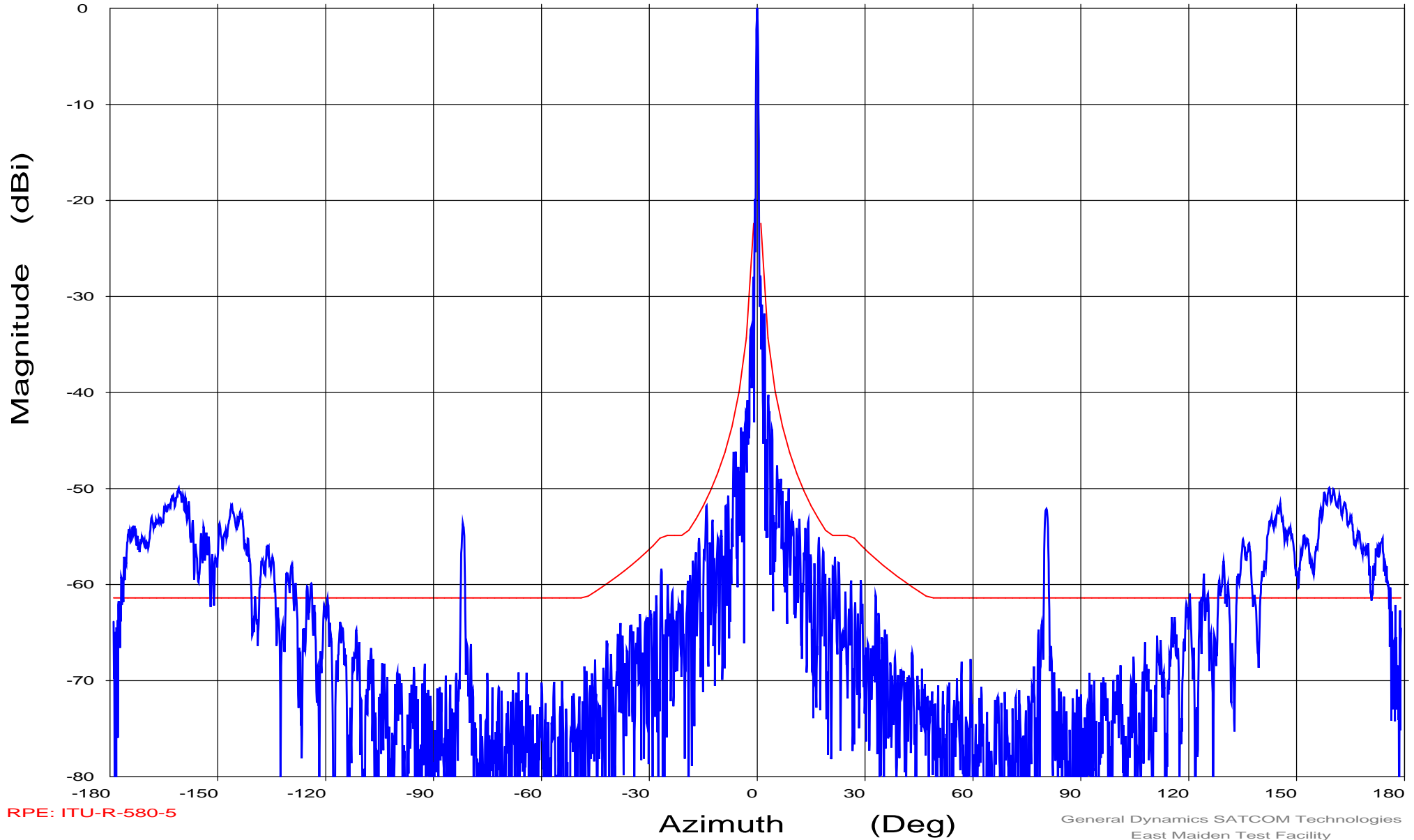
Frequency : 19.950 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

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File: 2209-2190 21.dat

2.4m Ka-Band Antenna Rx/Tx  
Series 3244

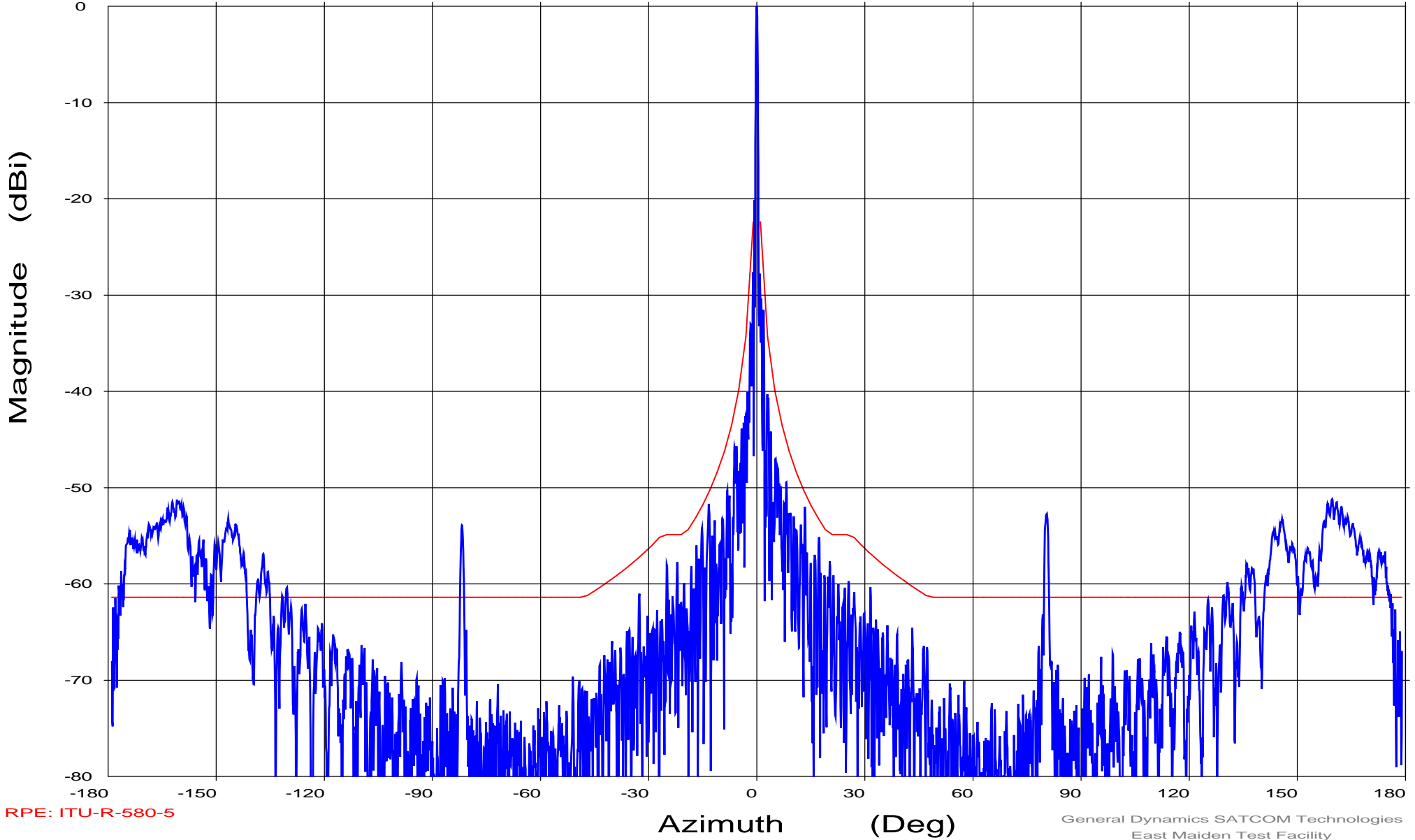
Frequency : 21.200 GHz

Operator: Dwight B. Lutz

Channel: AUT

Tx pol: Horiz.

Rx pol: Horiz.



RPE: ITU-R-580-5

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End of Report

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