

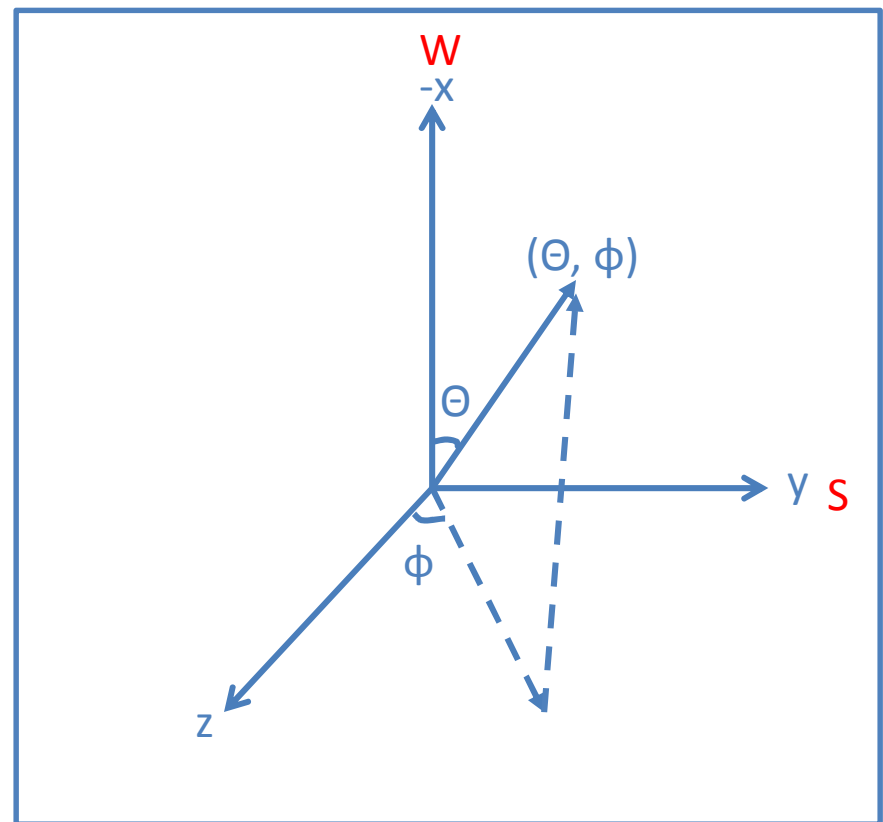
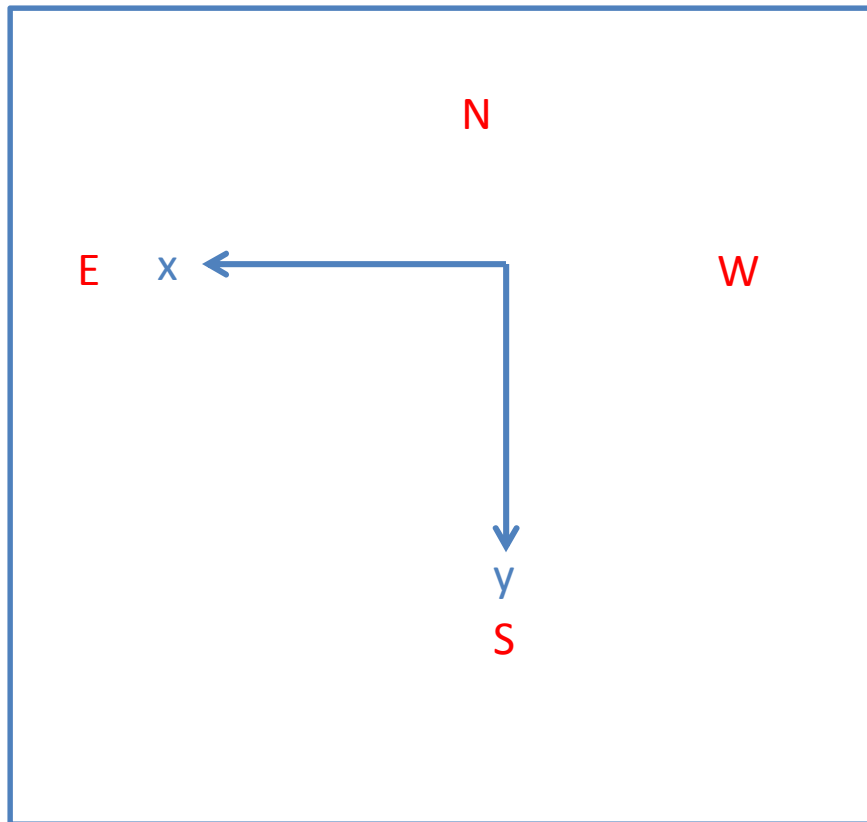
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 09

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



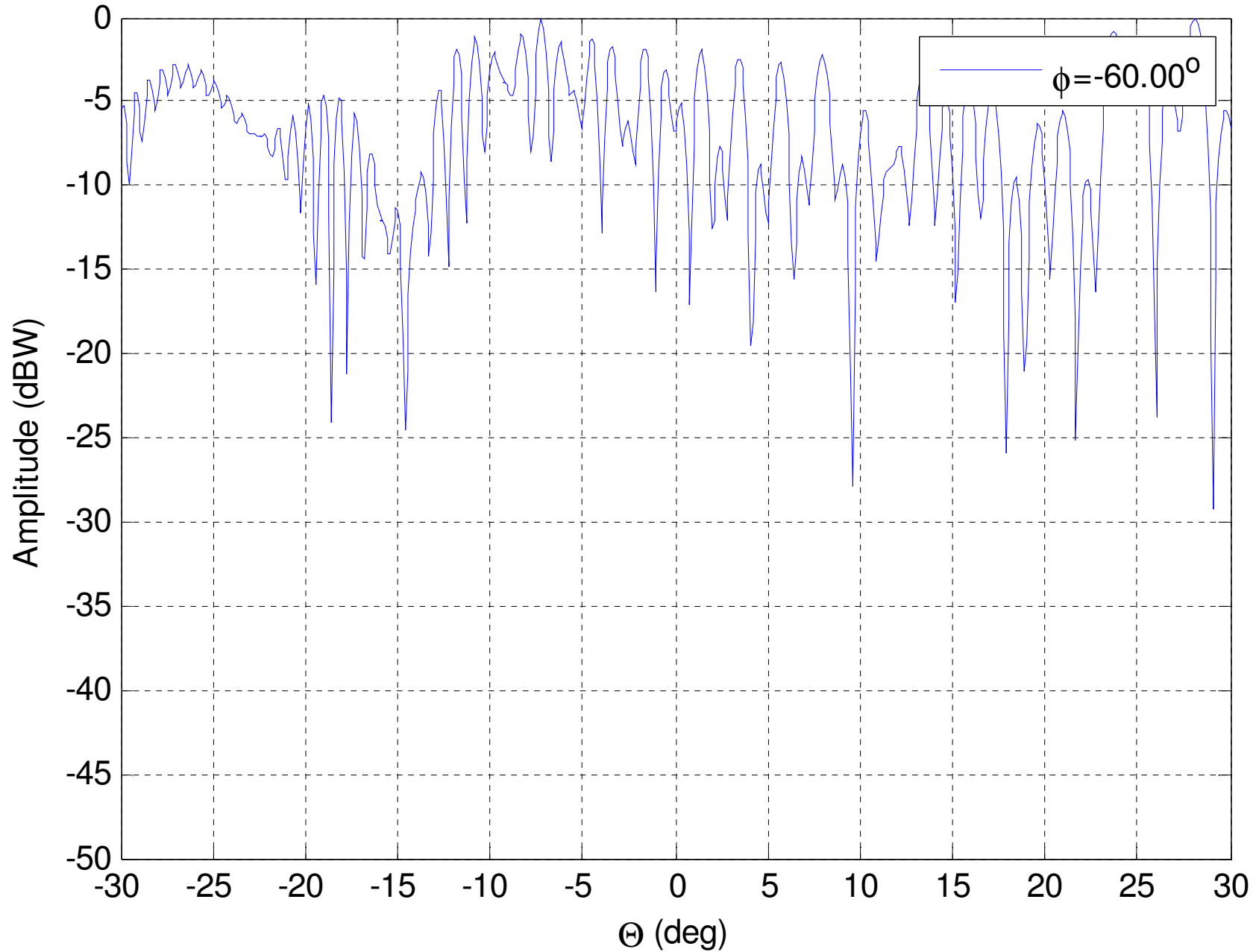
Spot Beam09, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

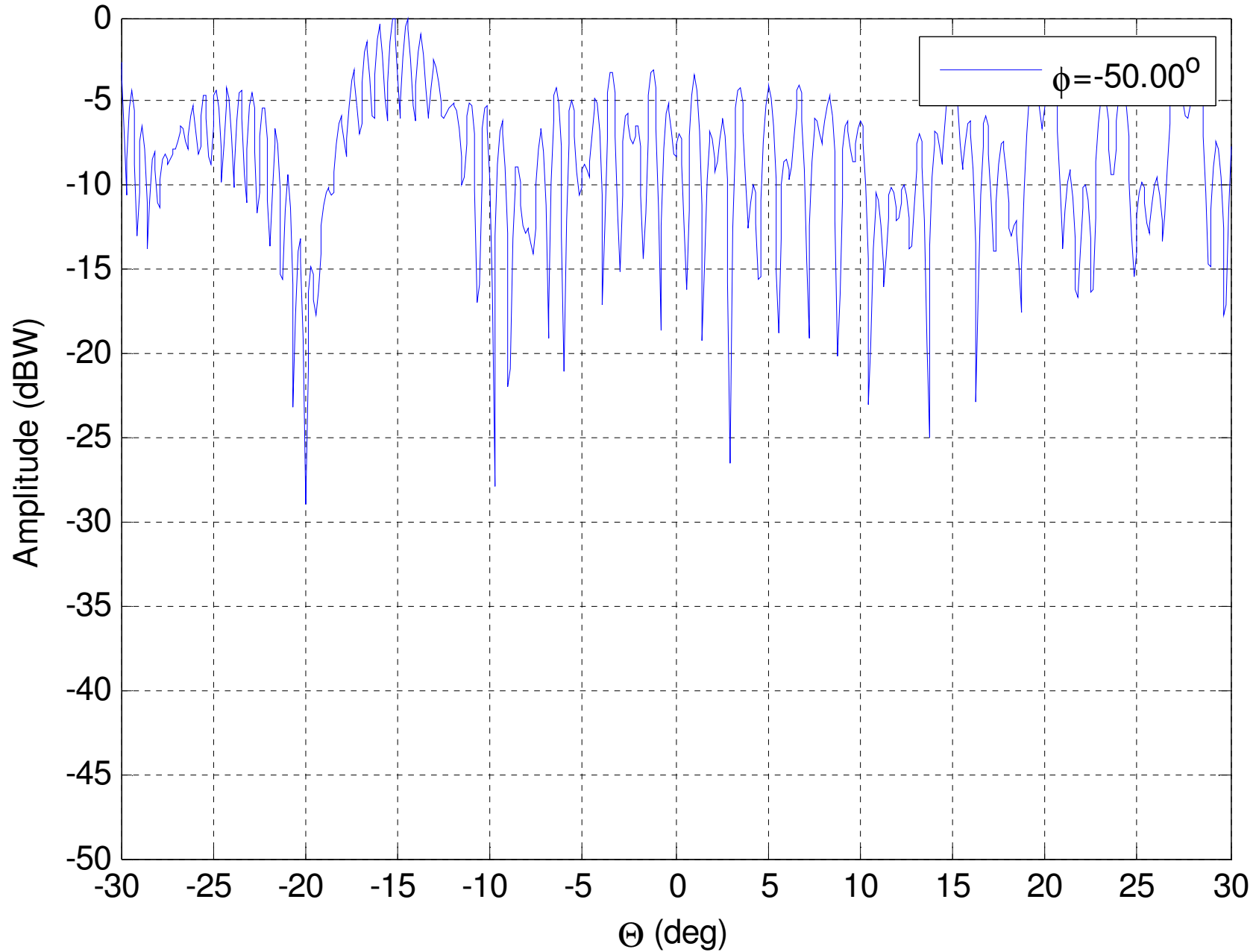
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.29 dBW, Date: 14-Dec-2011



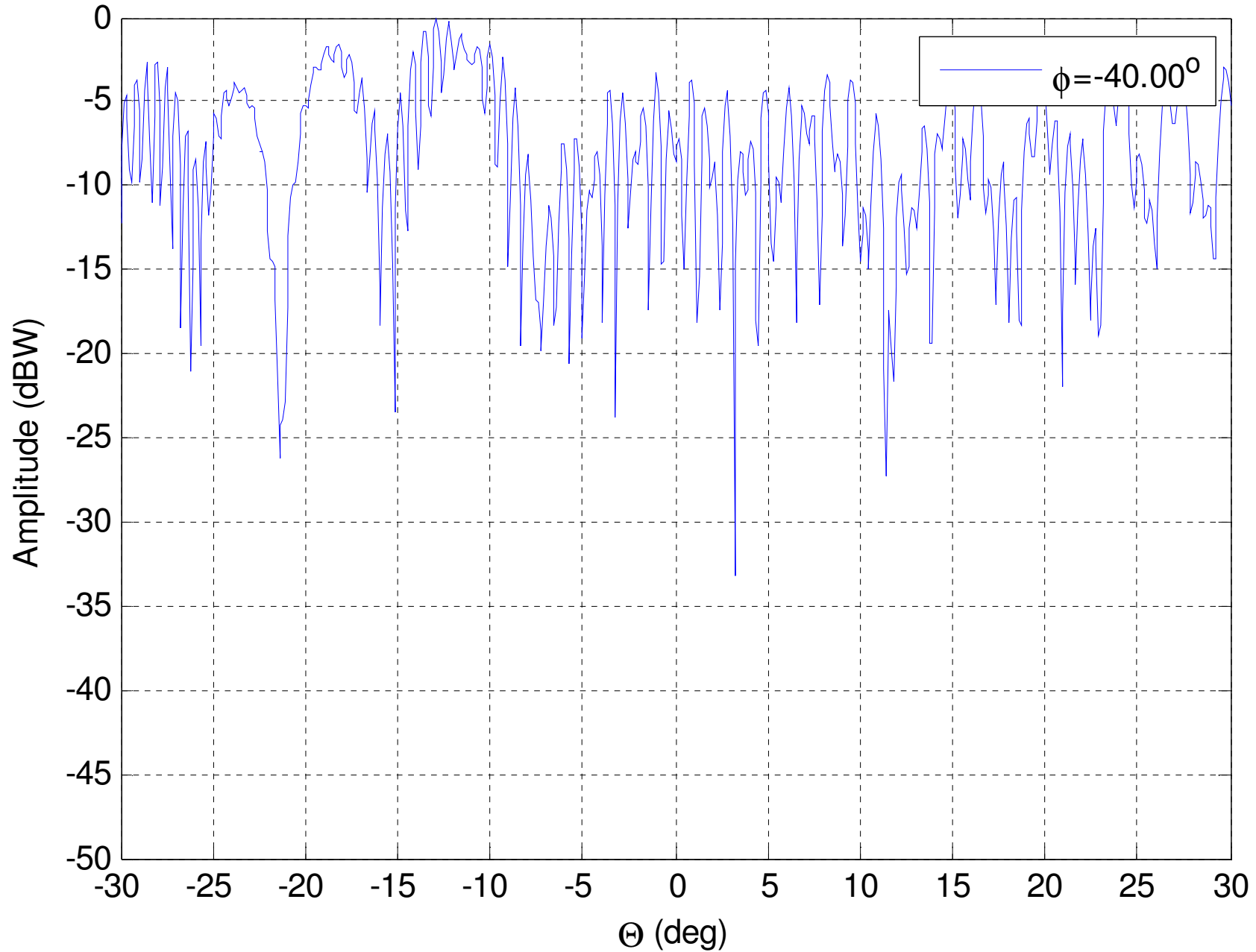
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -7.75 dBW, Date: 14-Dec-2011



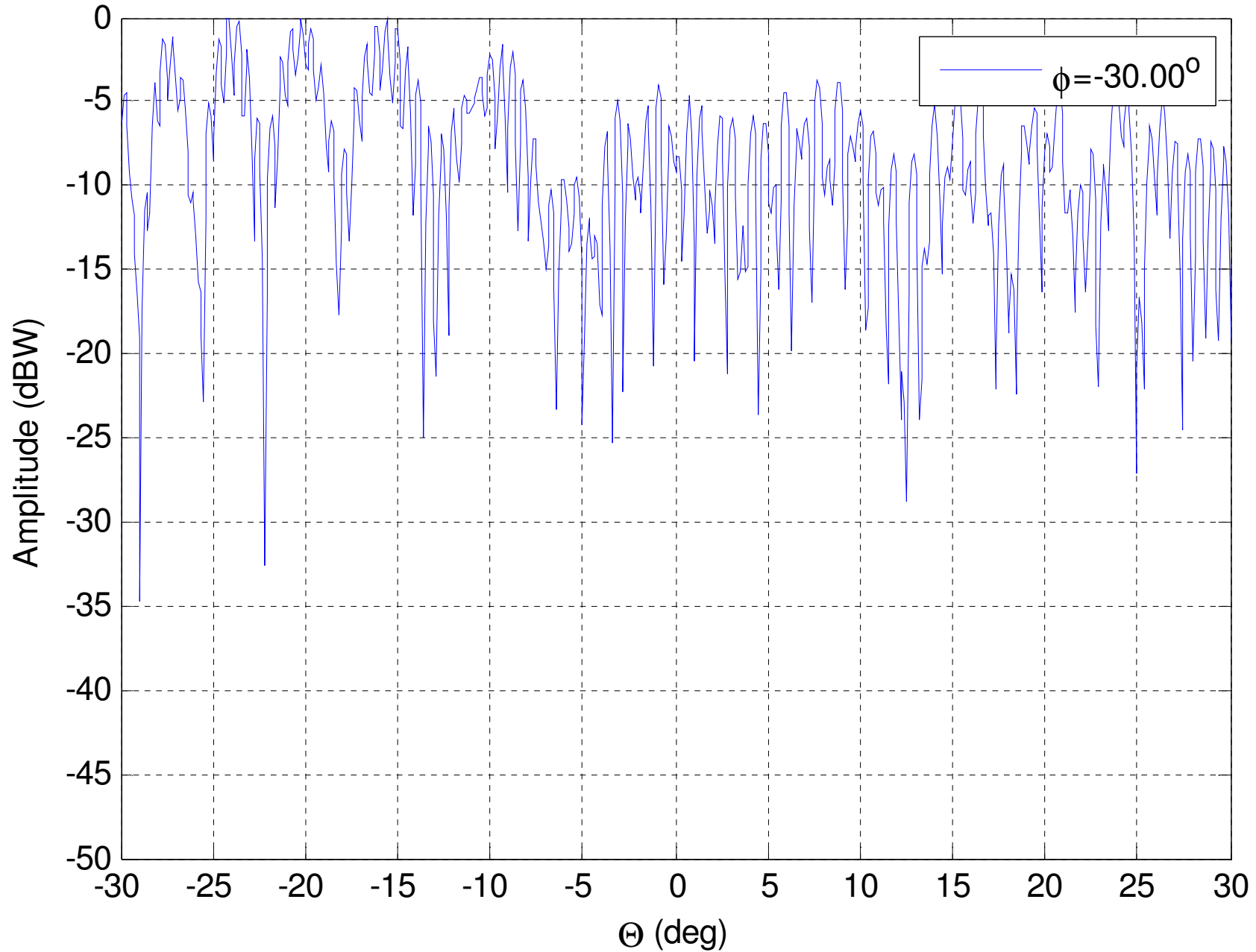
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -7.56 dBW, Date: 14-Dec-2011



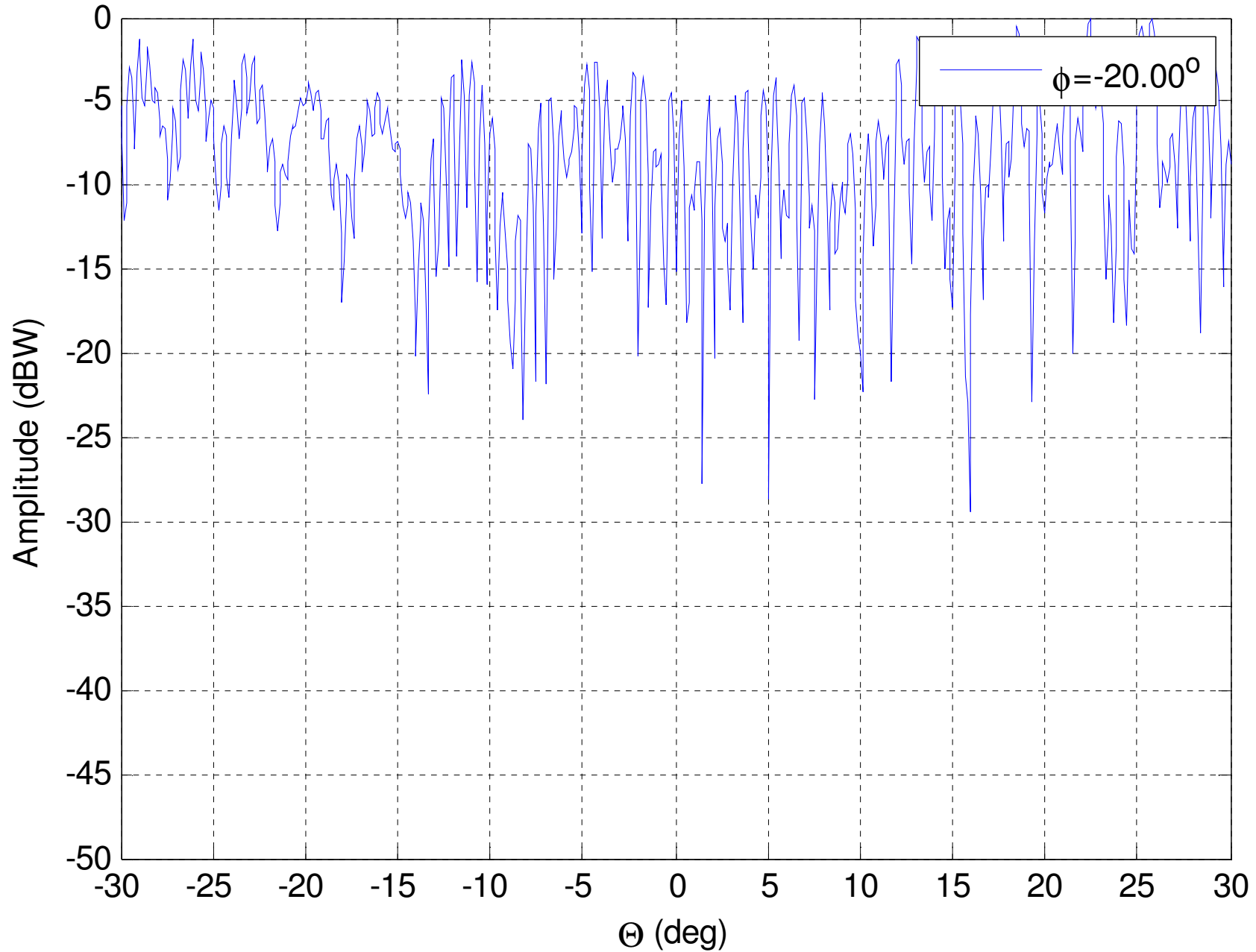
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.86 dBW, Date: 14-Dec-2011



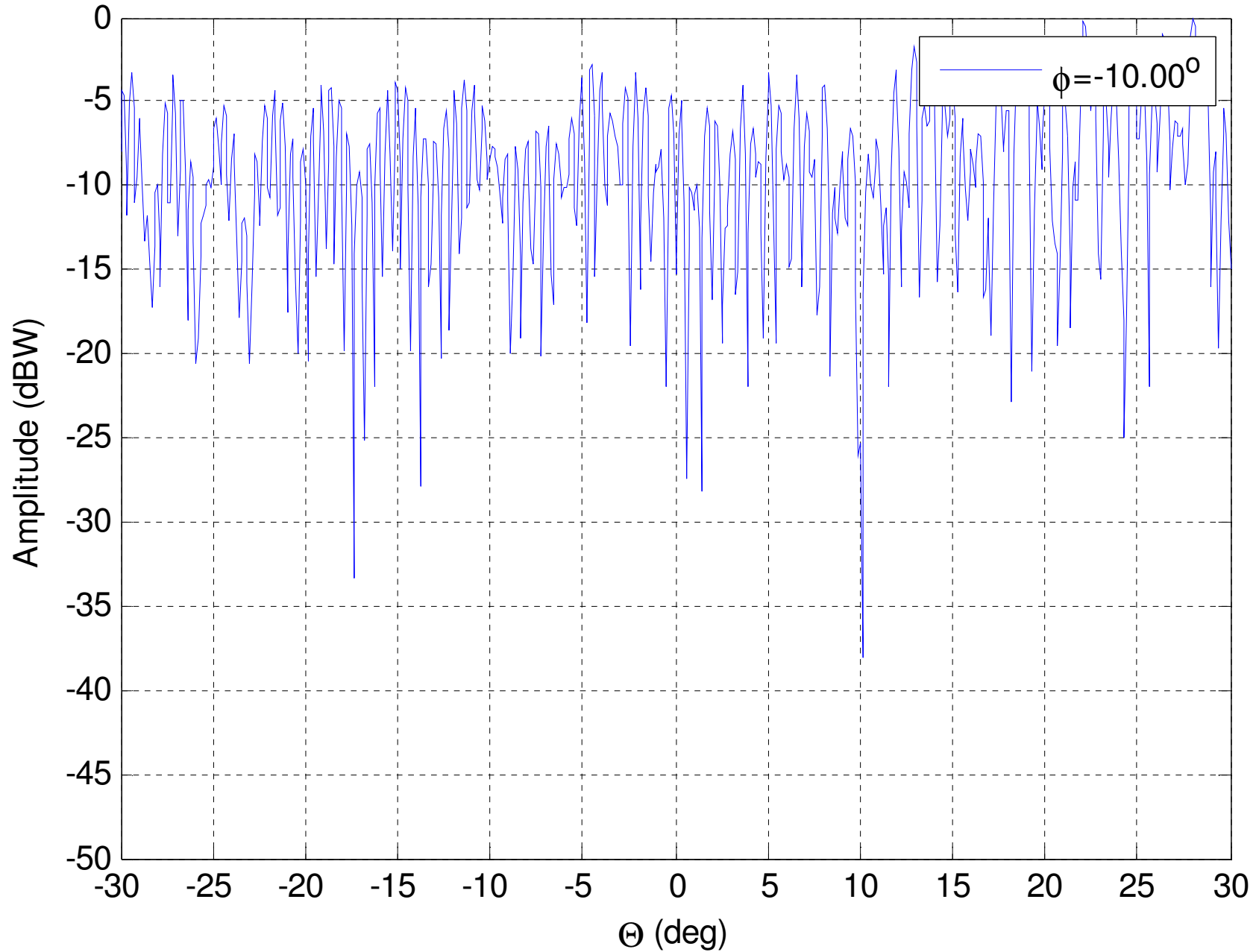
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -6.96 dBW, Date: 14-Dec-2011



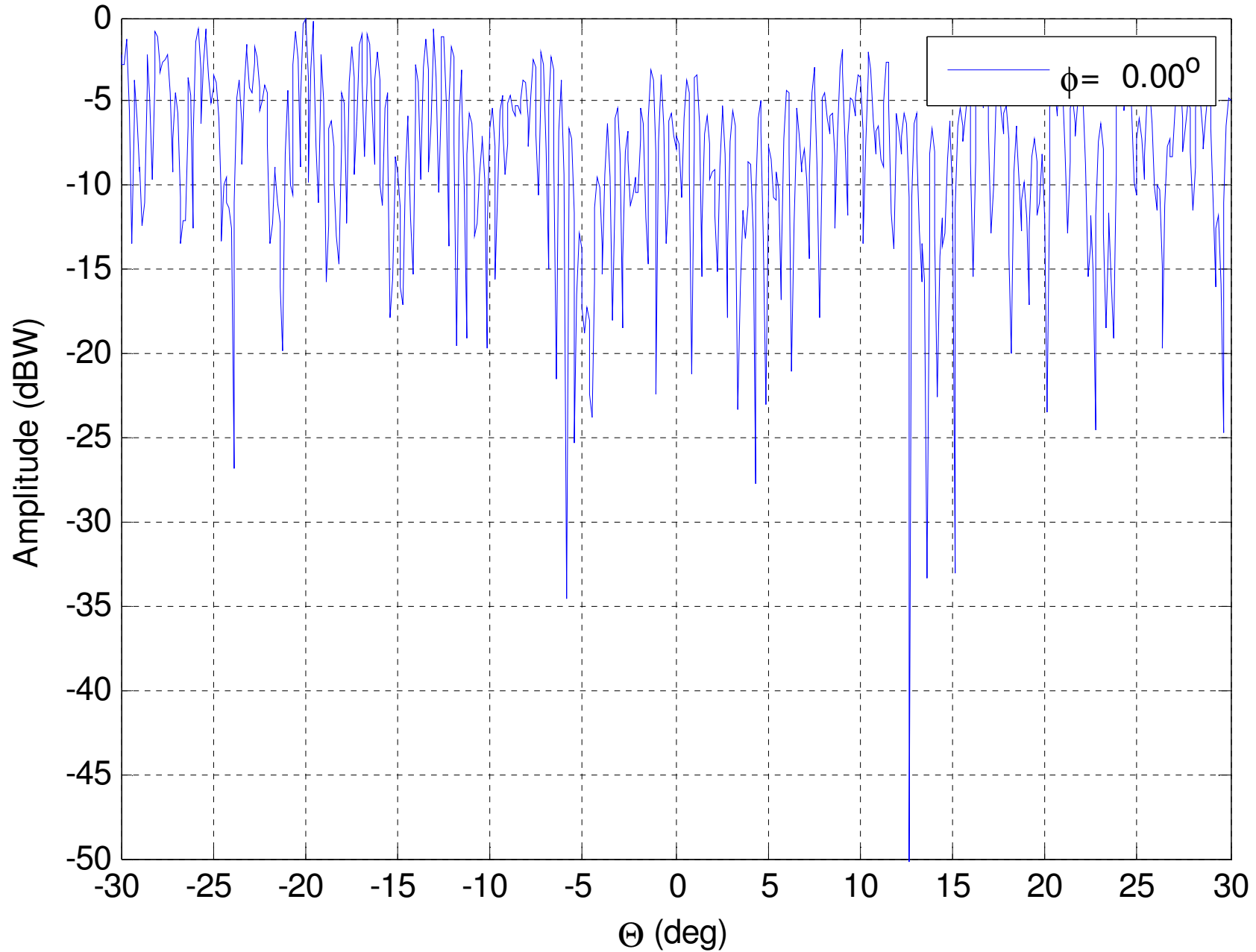
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



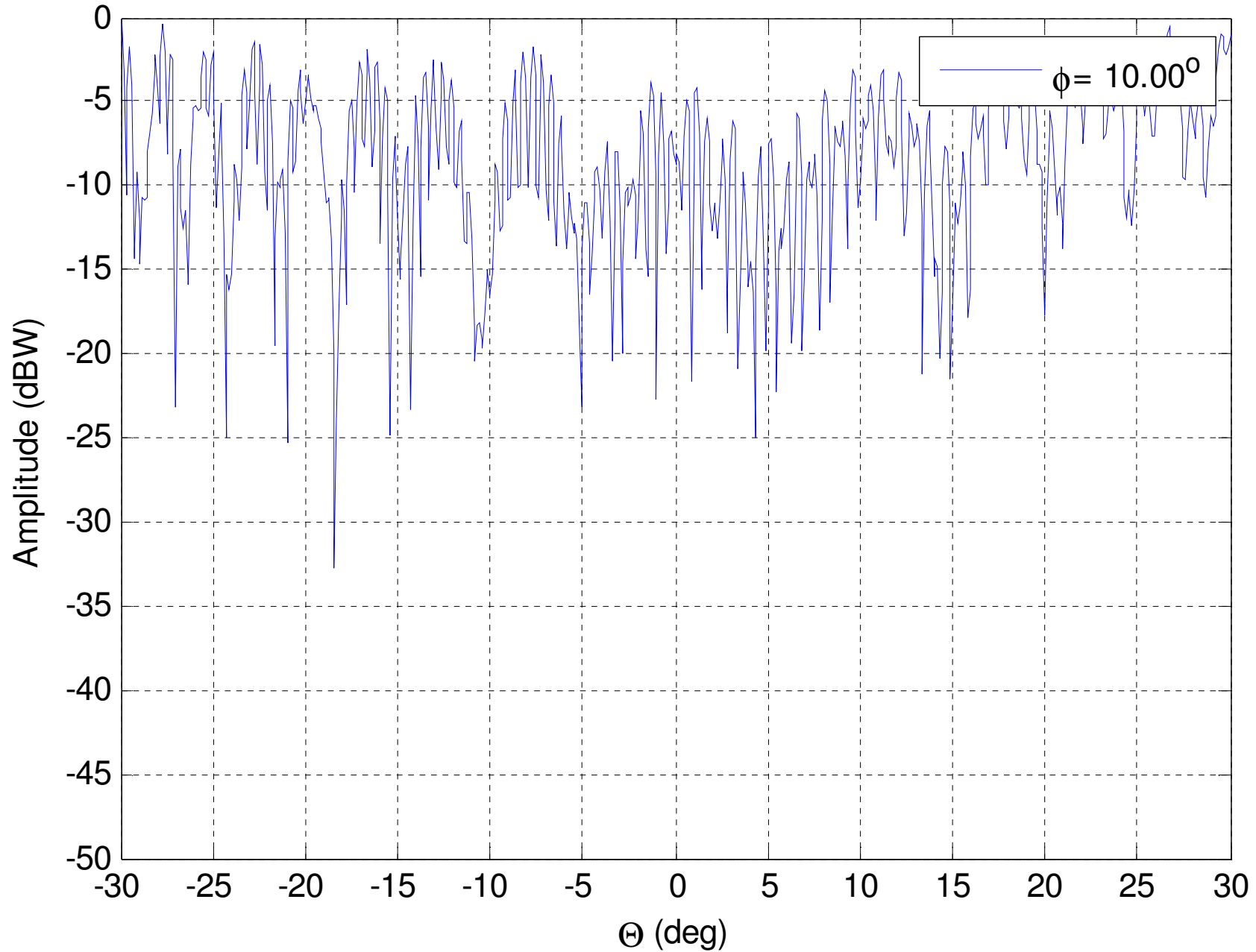
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -8.19 dBW, Date: 14-Dec-2011



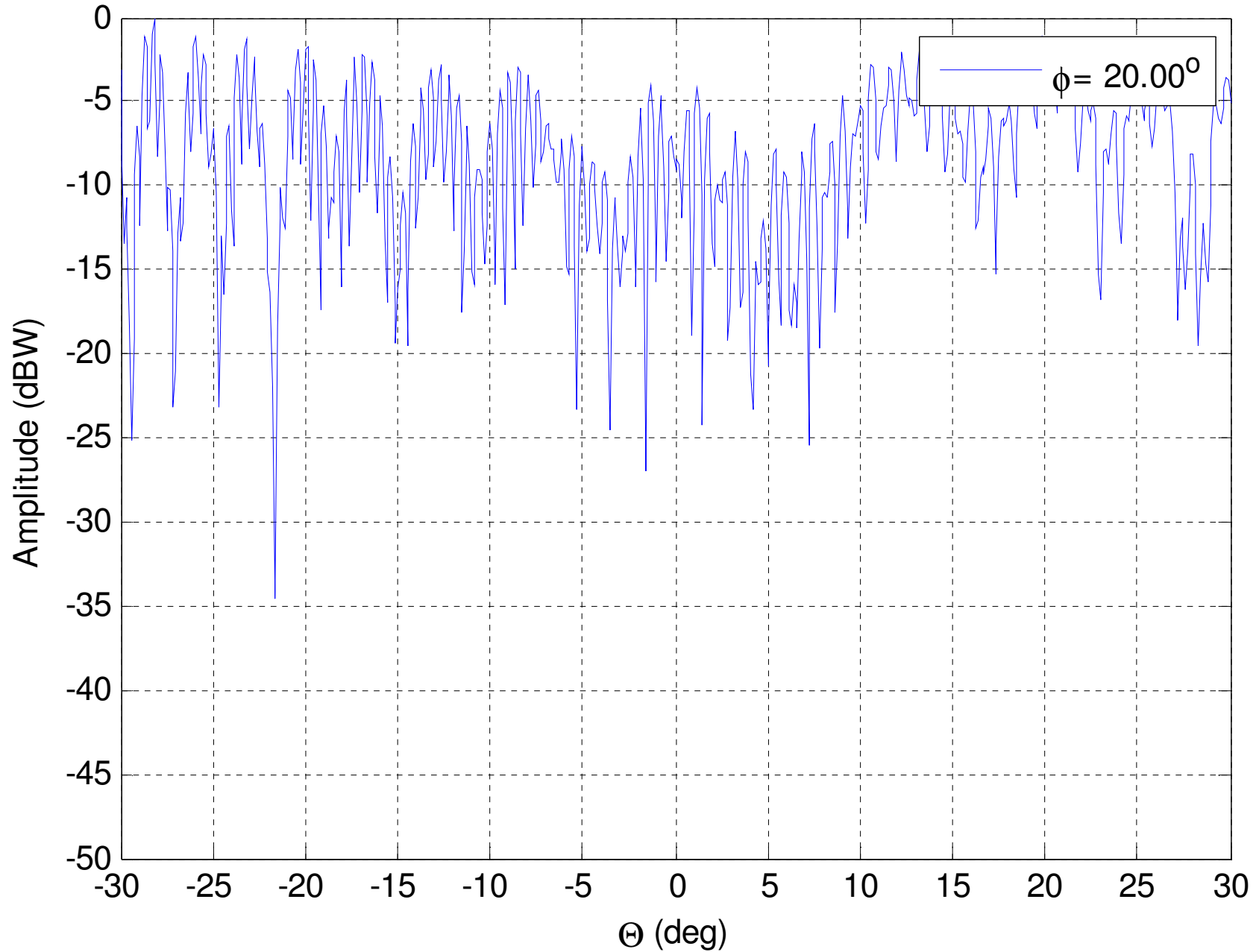
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -7.28 dBW, Date: 14-Dec-2011



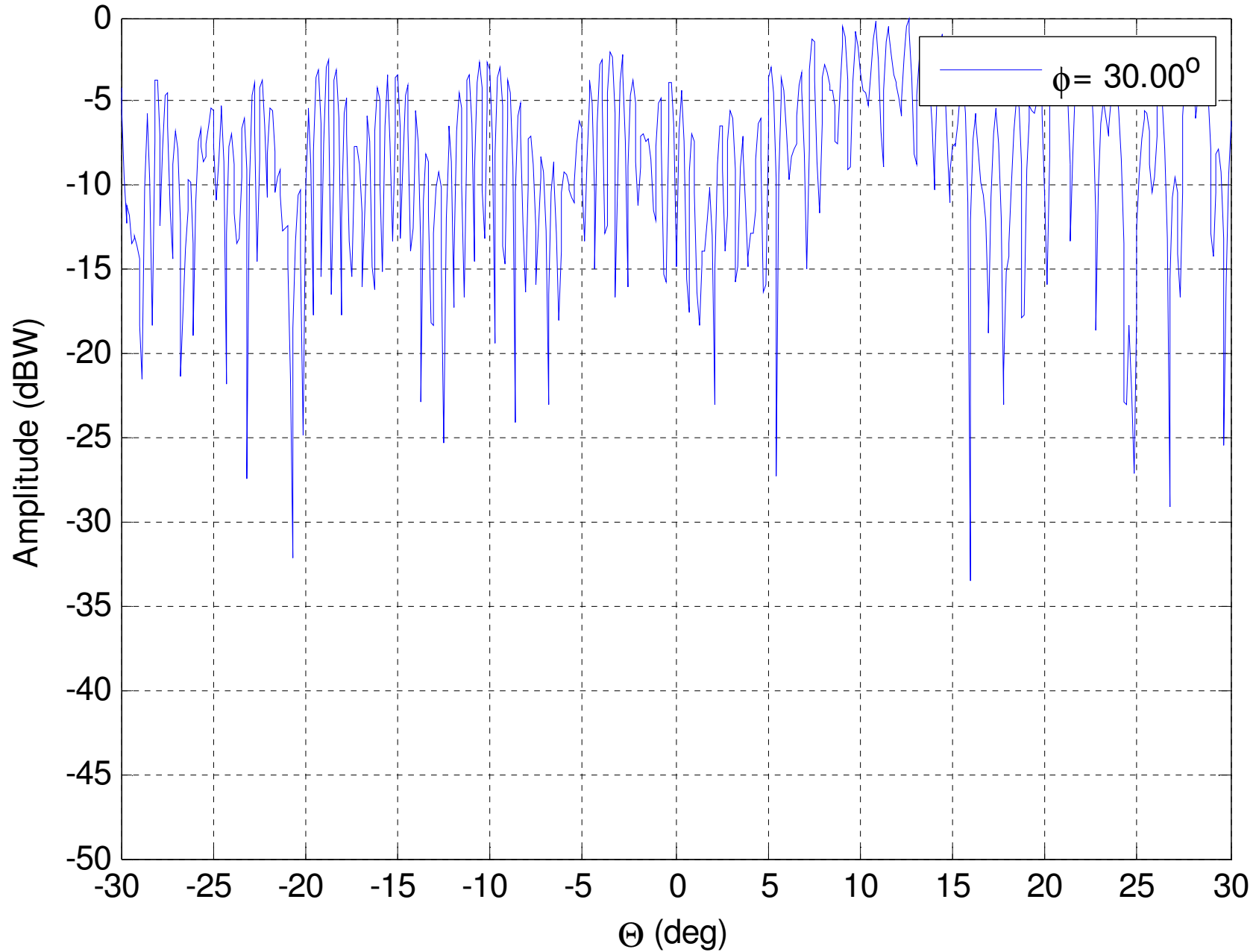
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.08 dBW, Date: 14-Dec-2011



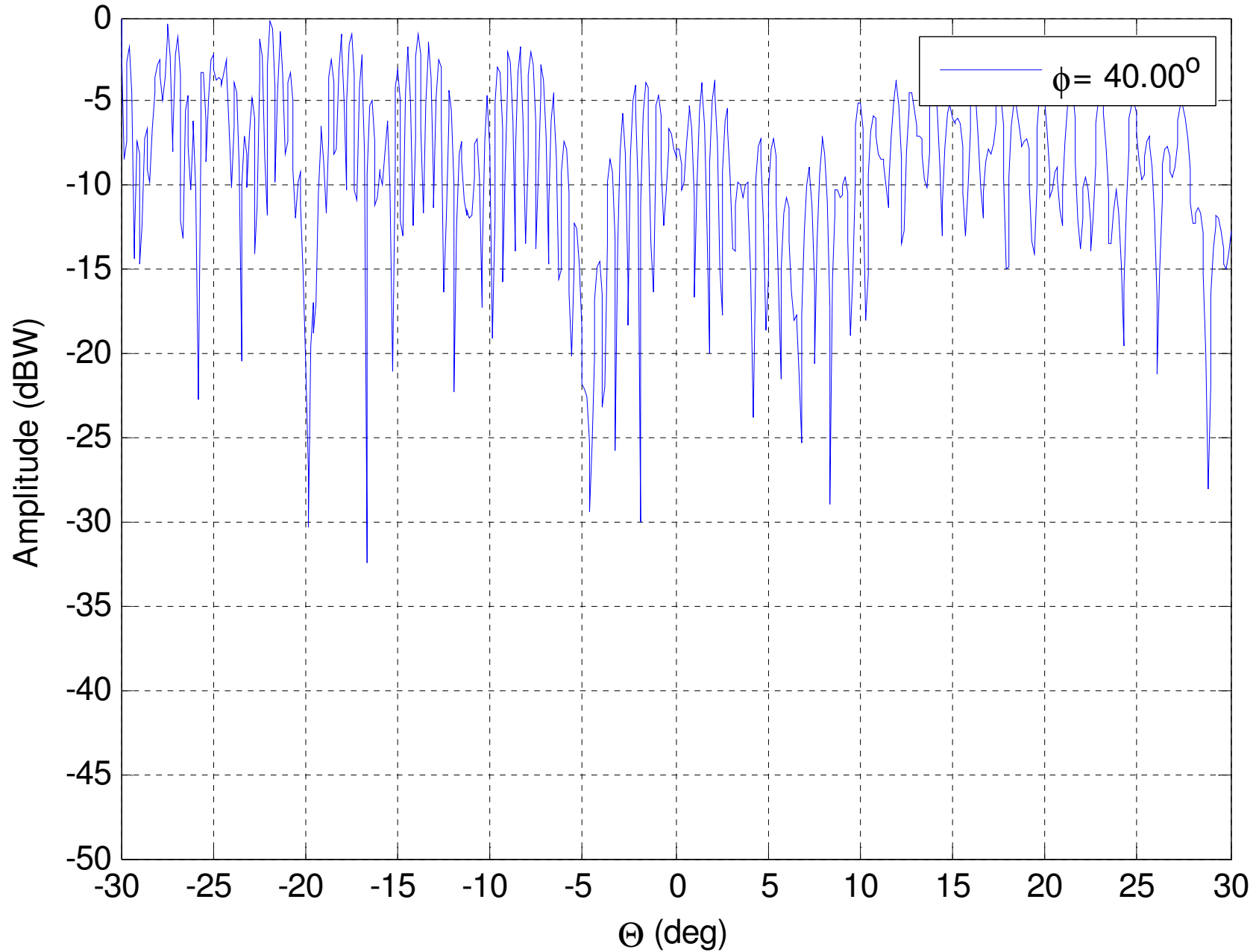
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -7.44 dBW, Date: 14-Dec-2011



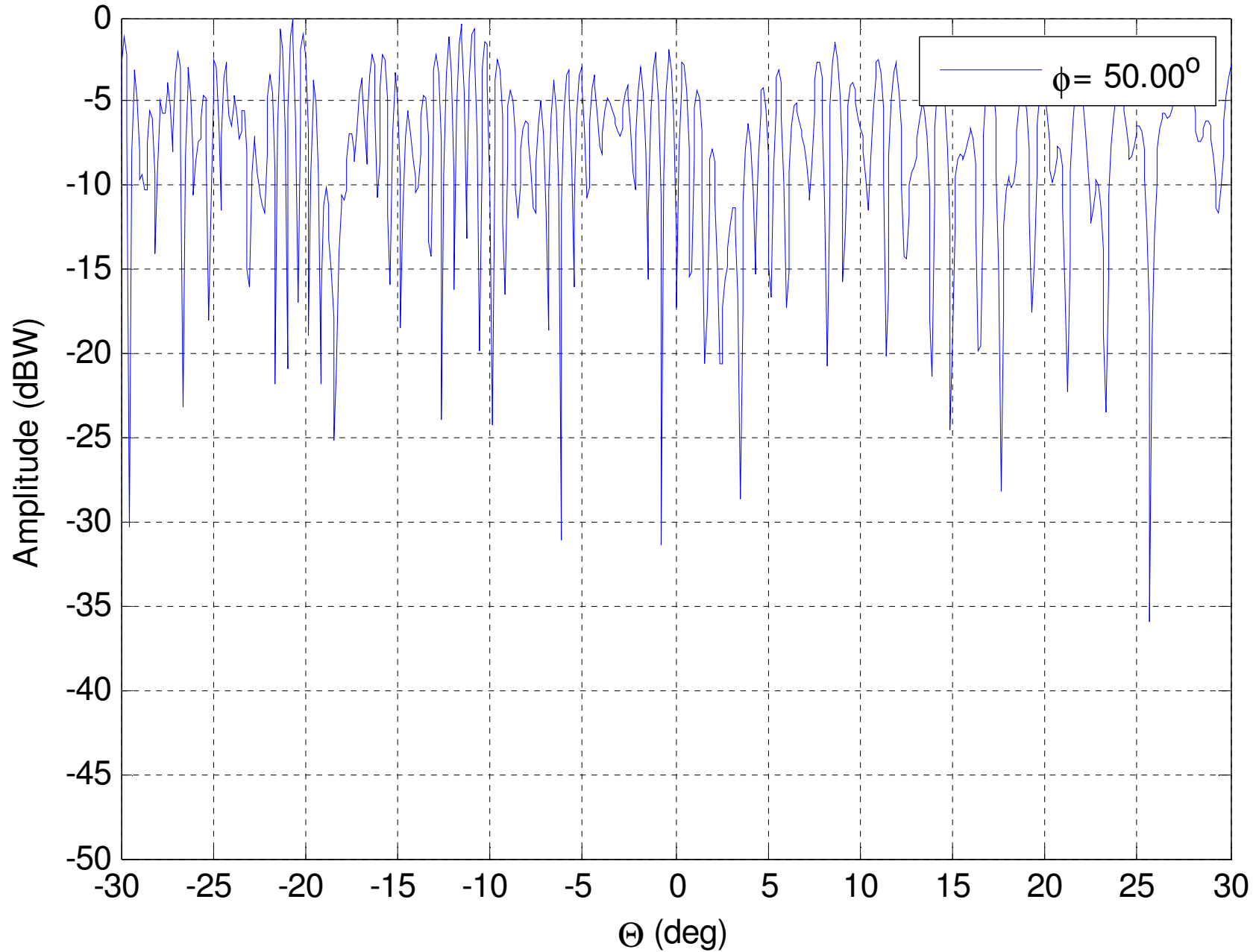
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.83 dBW, Date: 14-Dec-2011



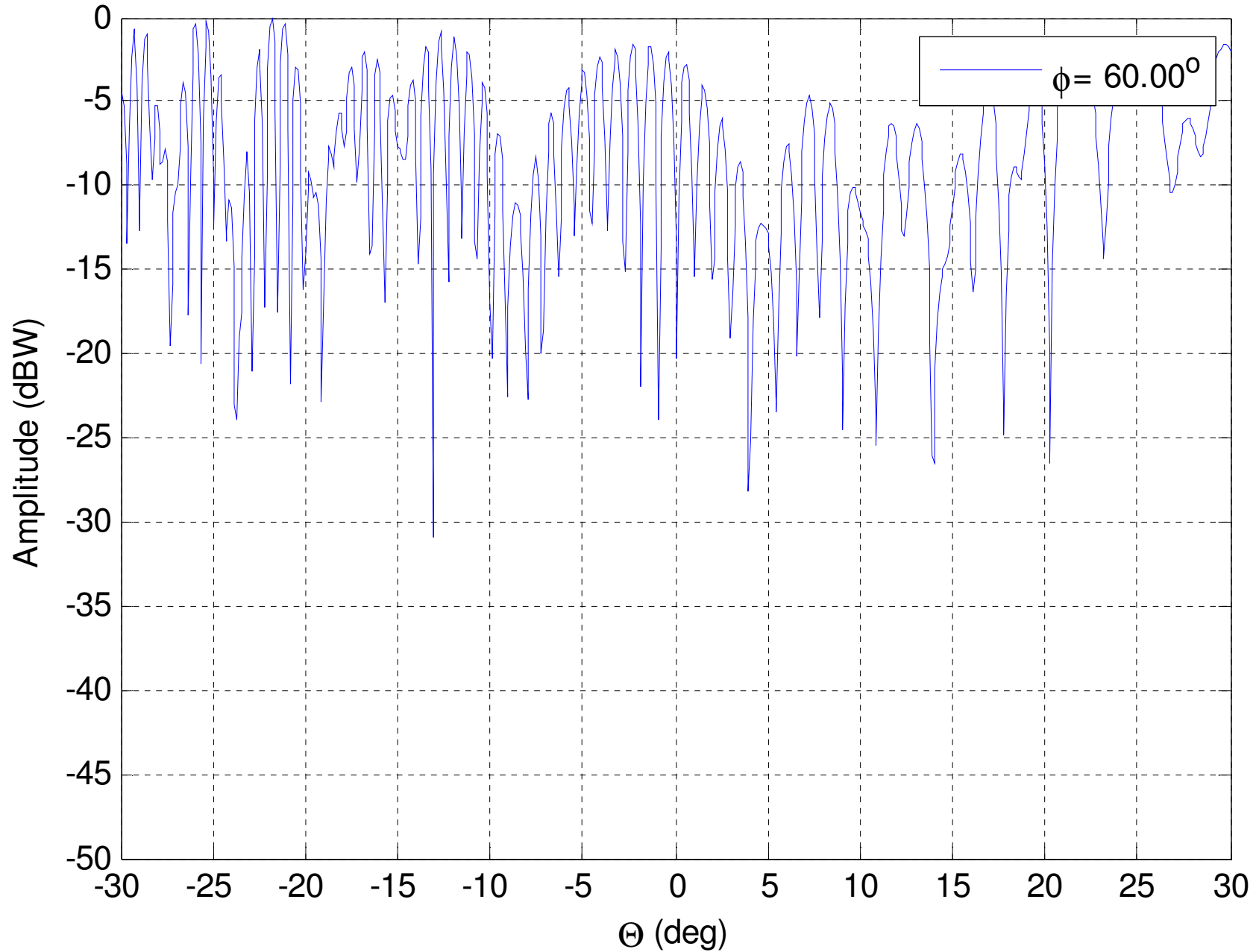
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -8.91 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

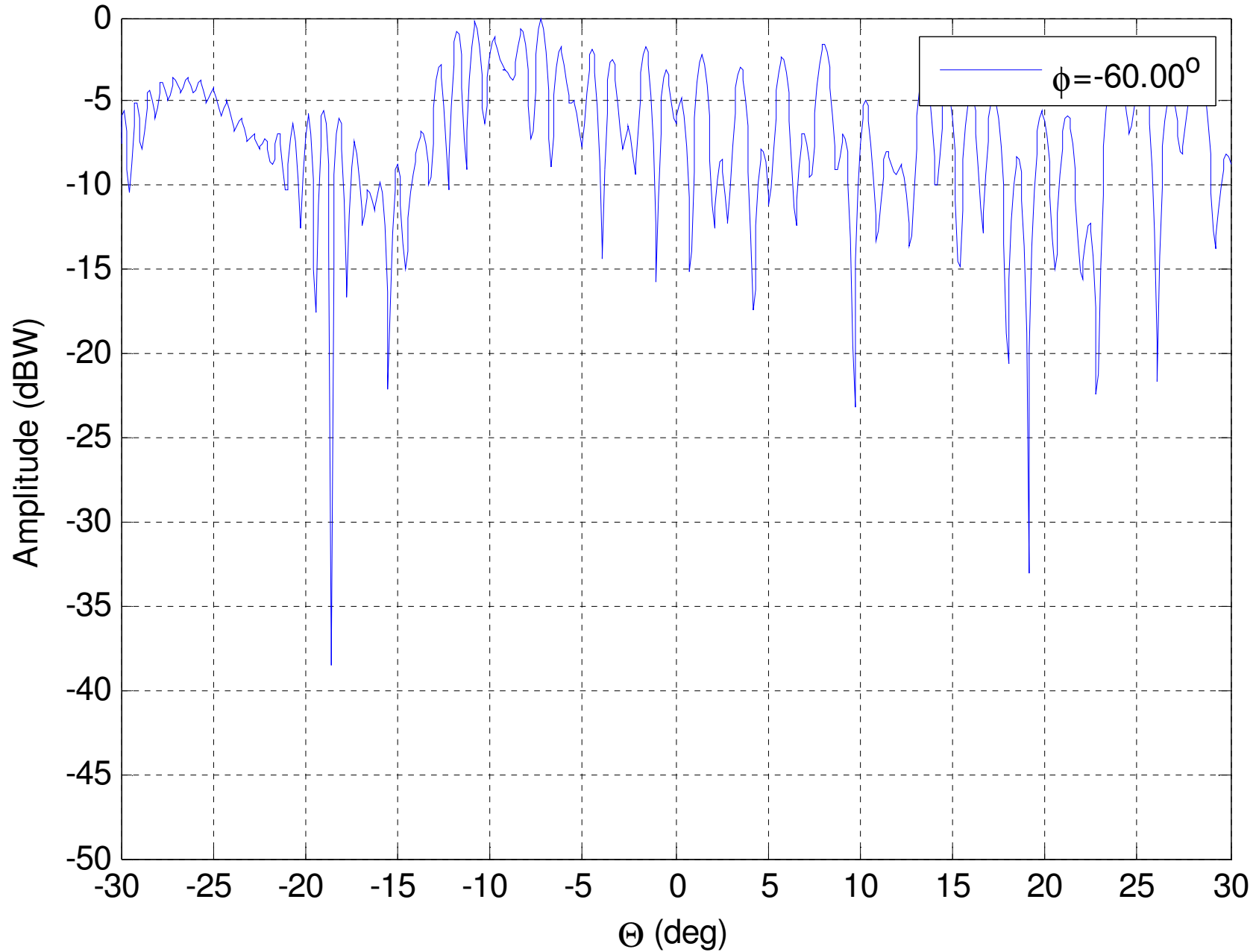
Input file: tx-17.3-rhcp-60.cut, Peak: -8.75 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

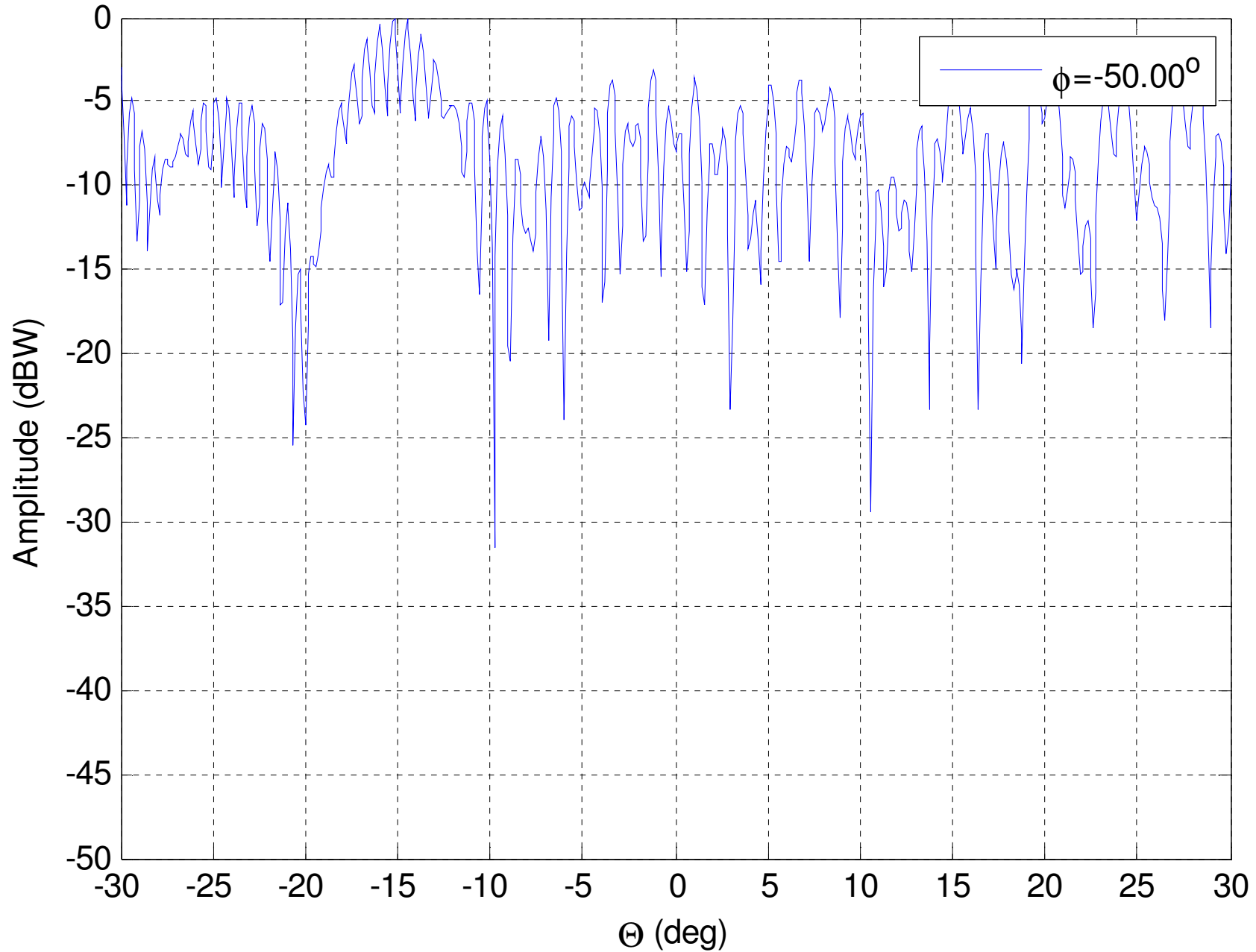
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.11 dBW, Date: 14-Dec-2011



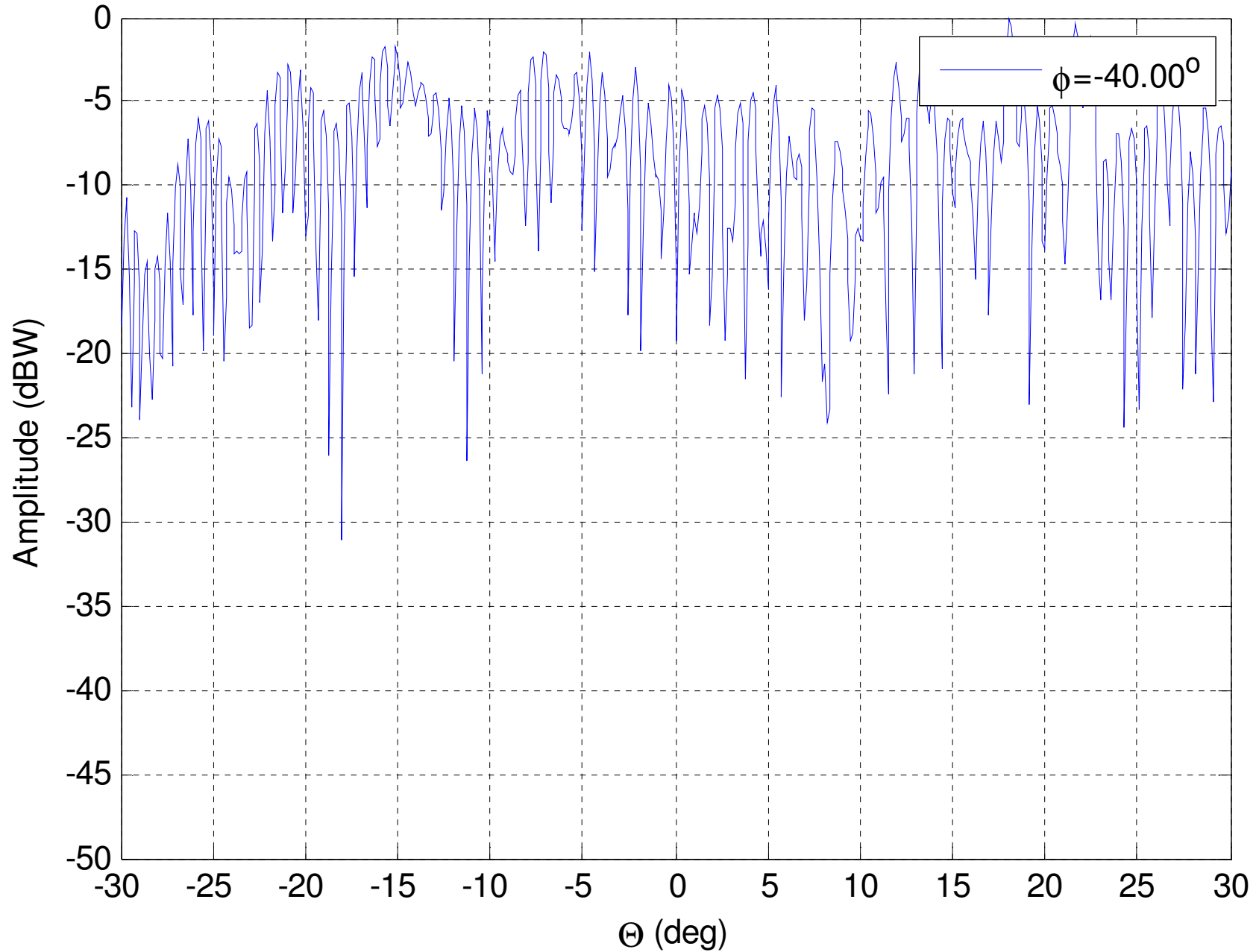
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -7.36 dBW, Date: 14-Dec-2011



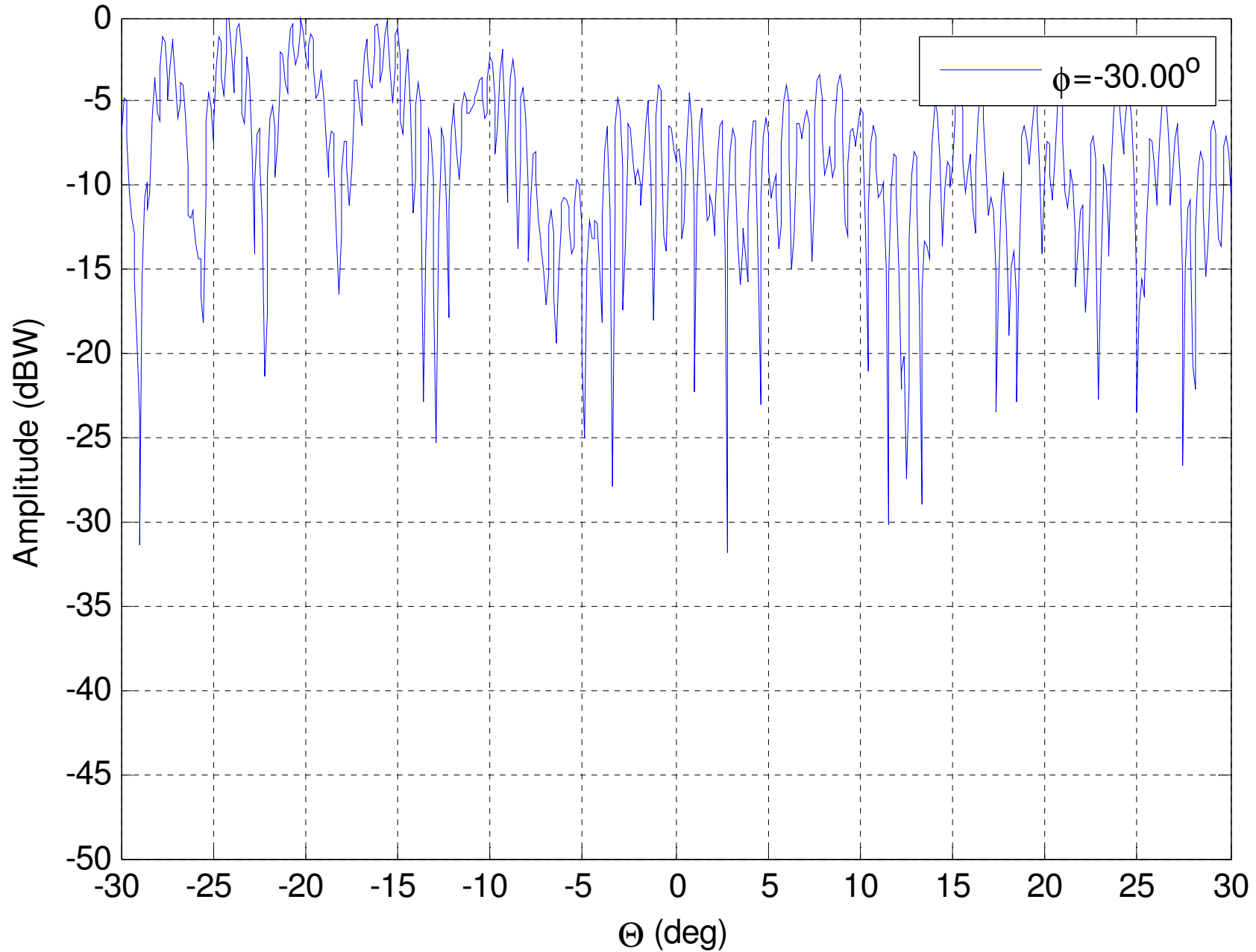
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.11 dBW, Date: 14-Dec-2011



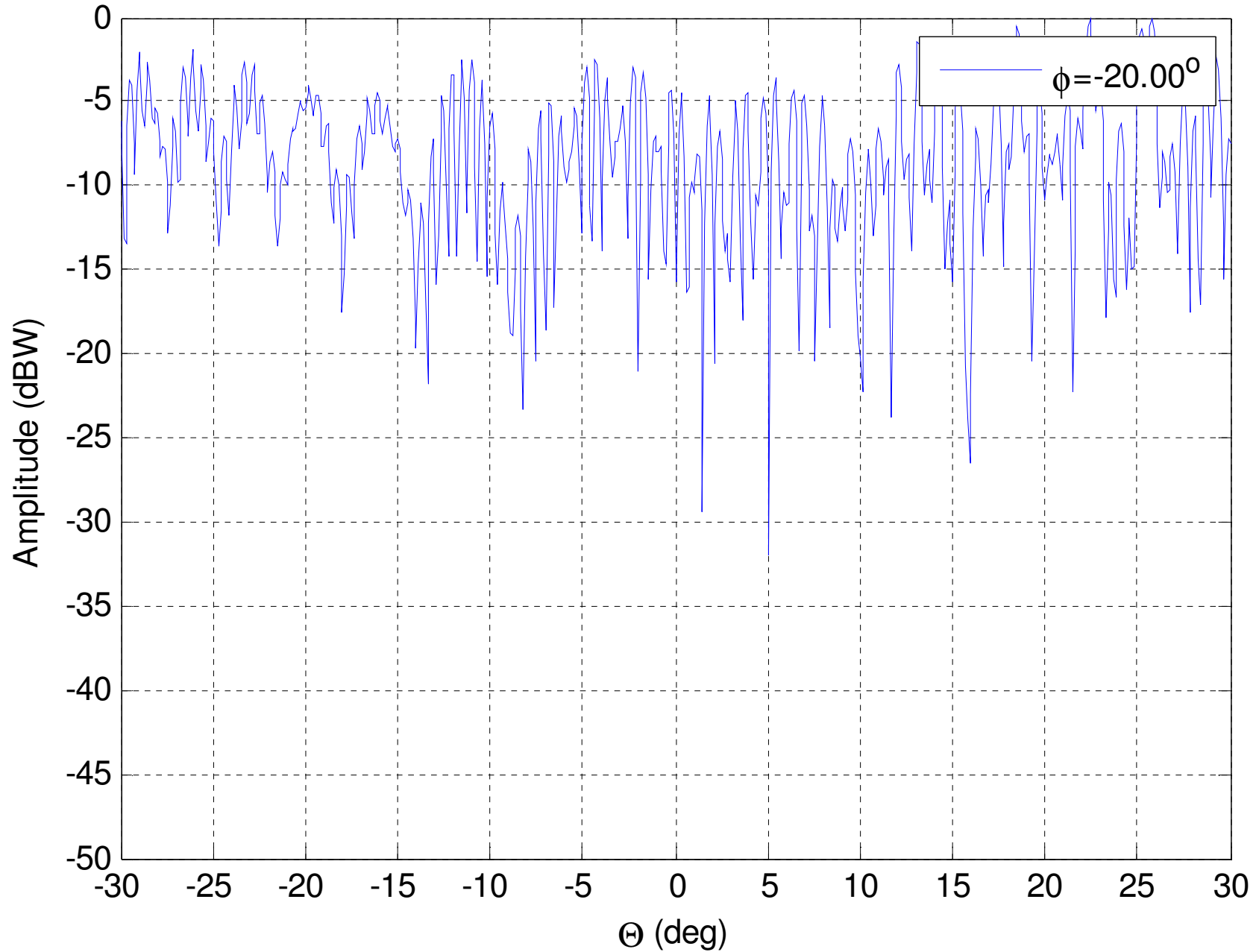
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -6.70 dBW, Date: 14-Dec-2011



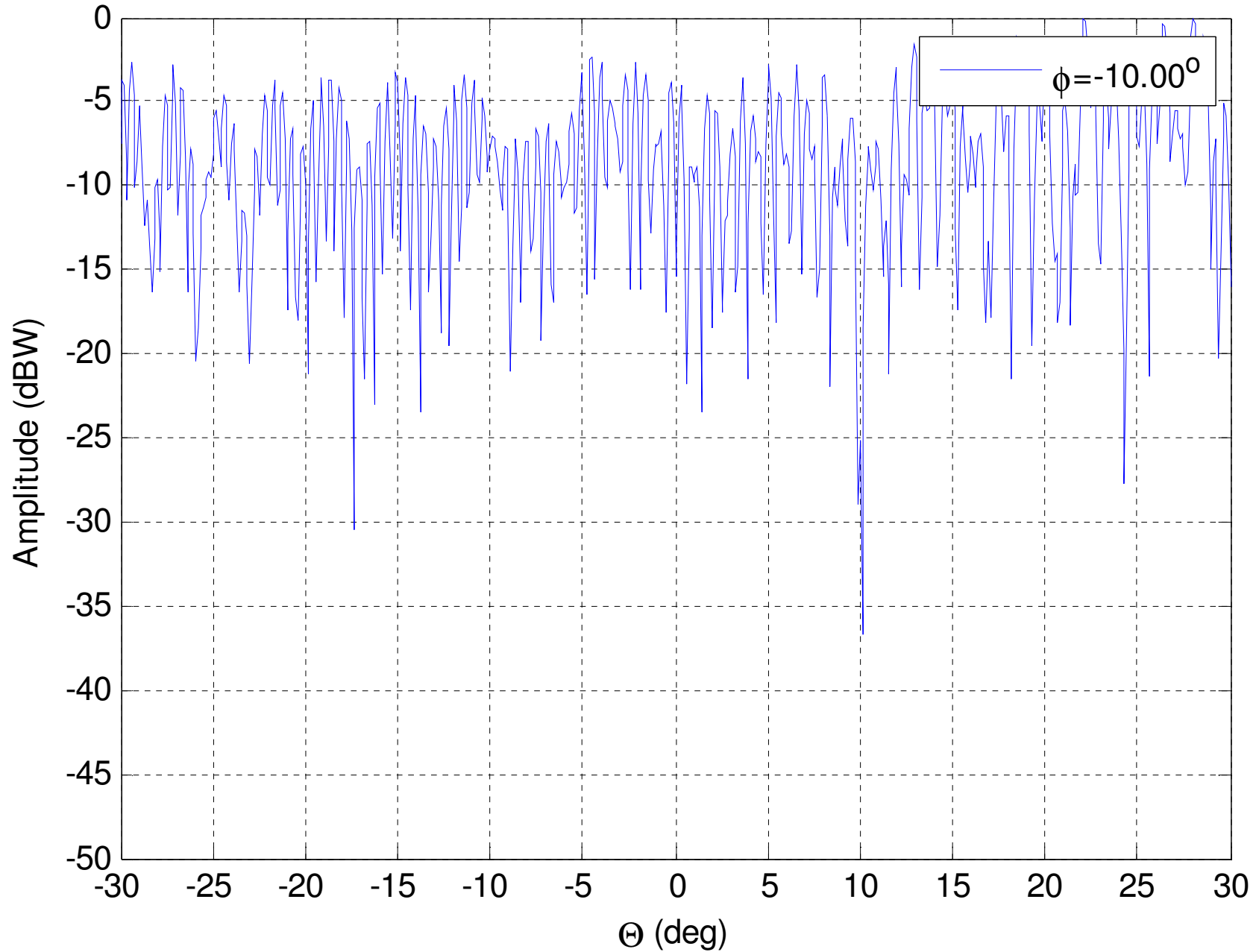
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.85 dBW, Date: 14-Dec-2011



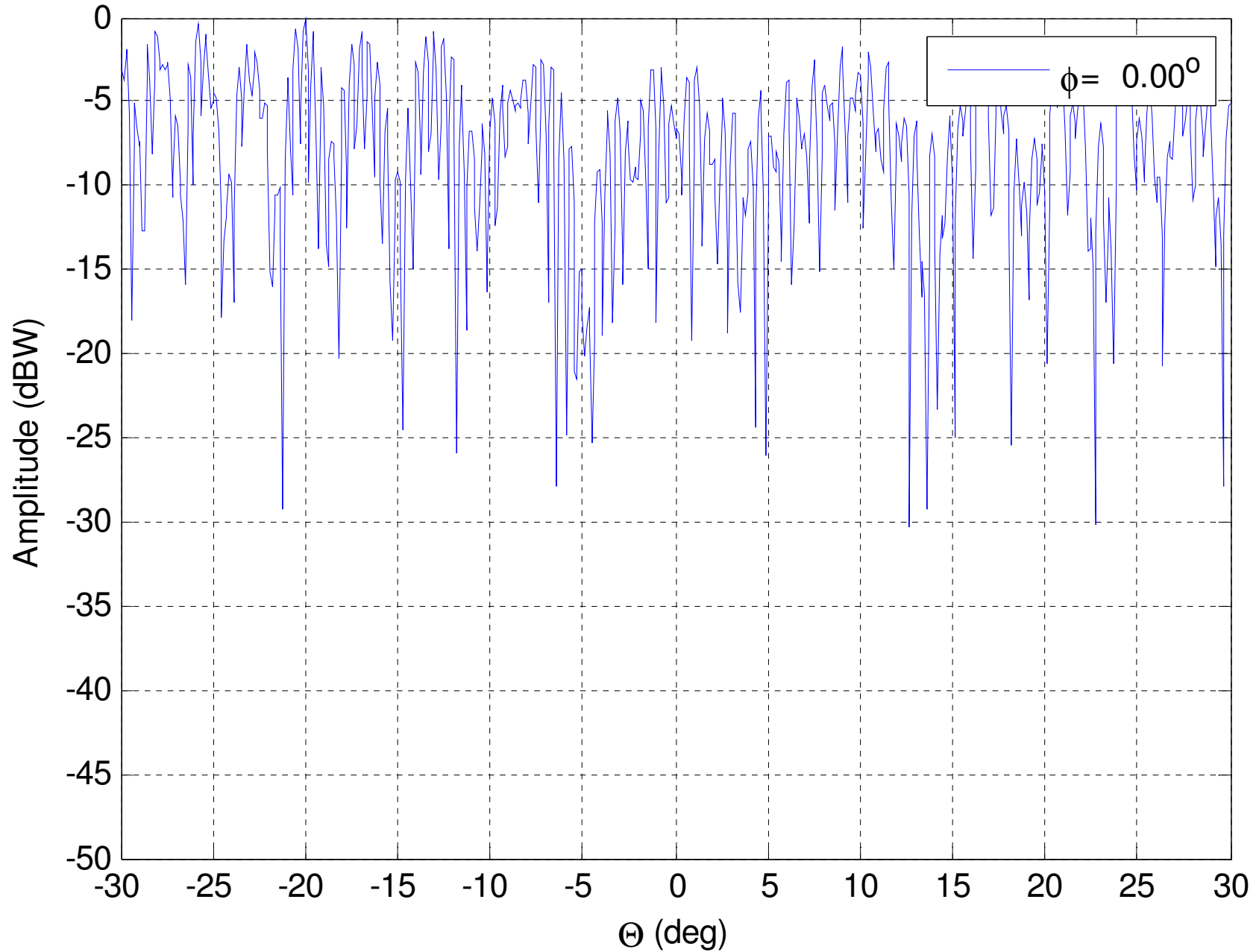
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -7.17 dBW, Date: 14-Dec-2011



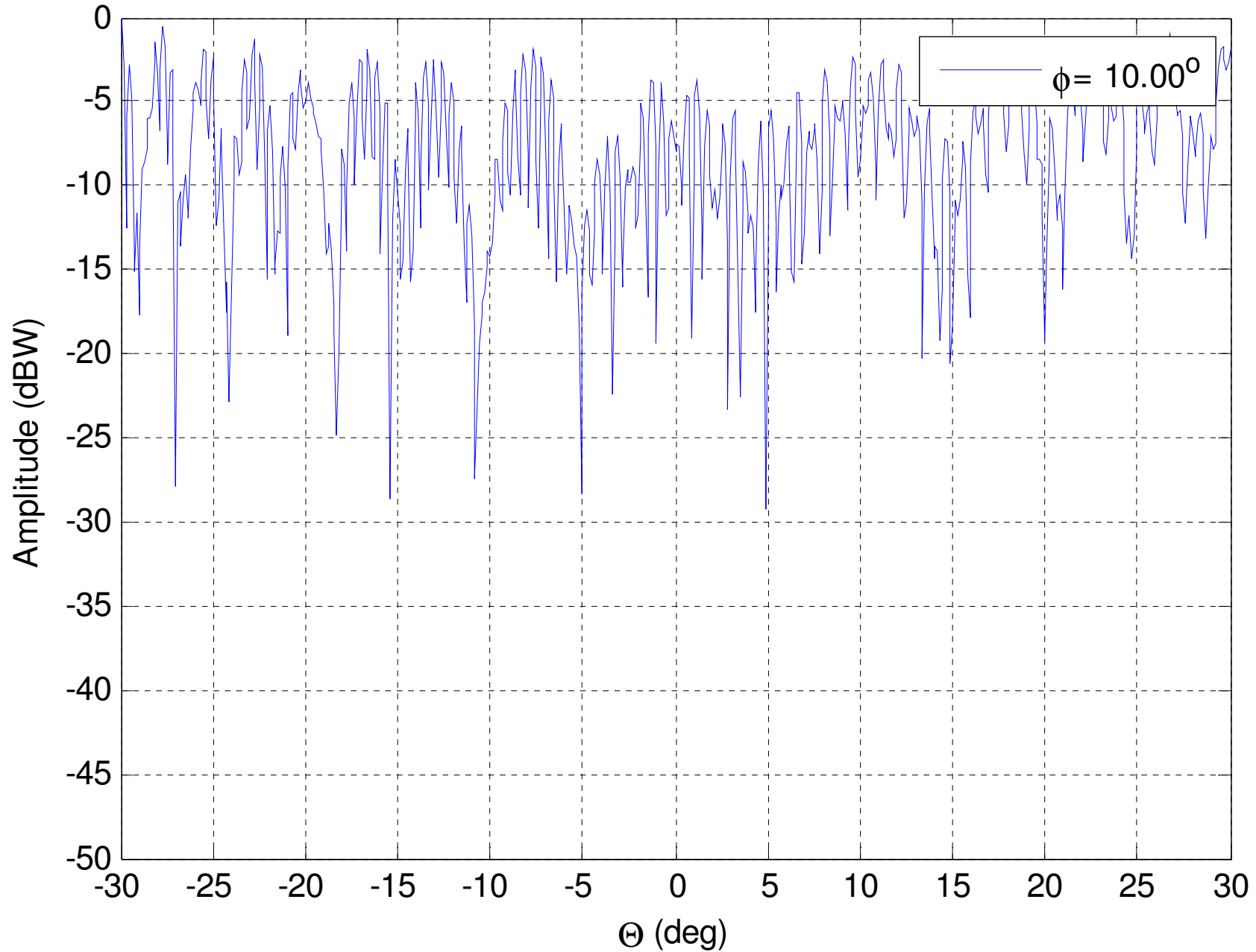
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -8.17 dBW, Date: 14-Dec-2011



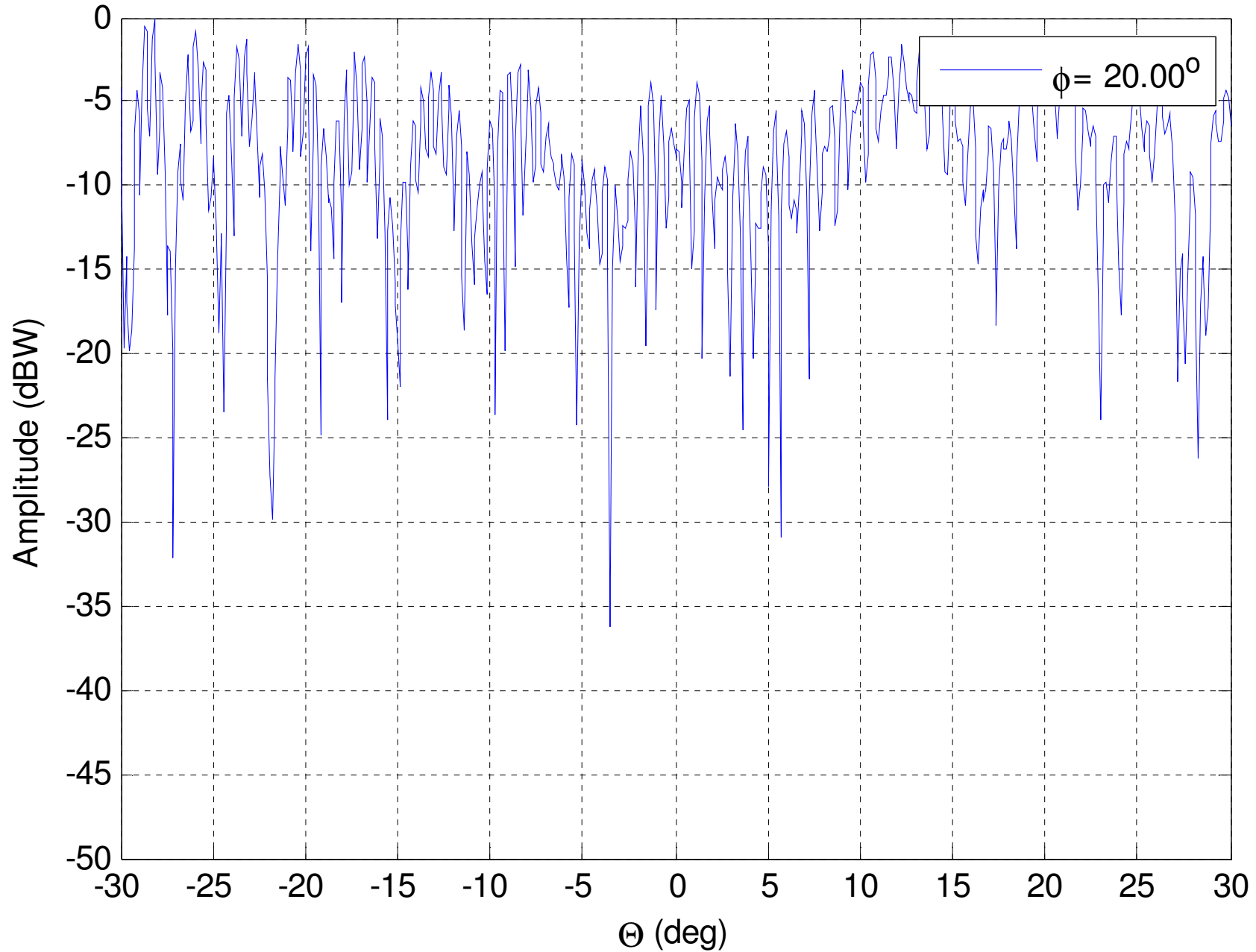
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -7.37 dBW, Date: 14-Dec-2011



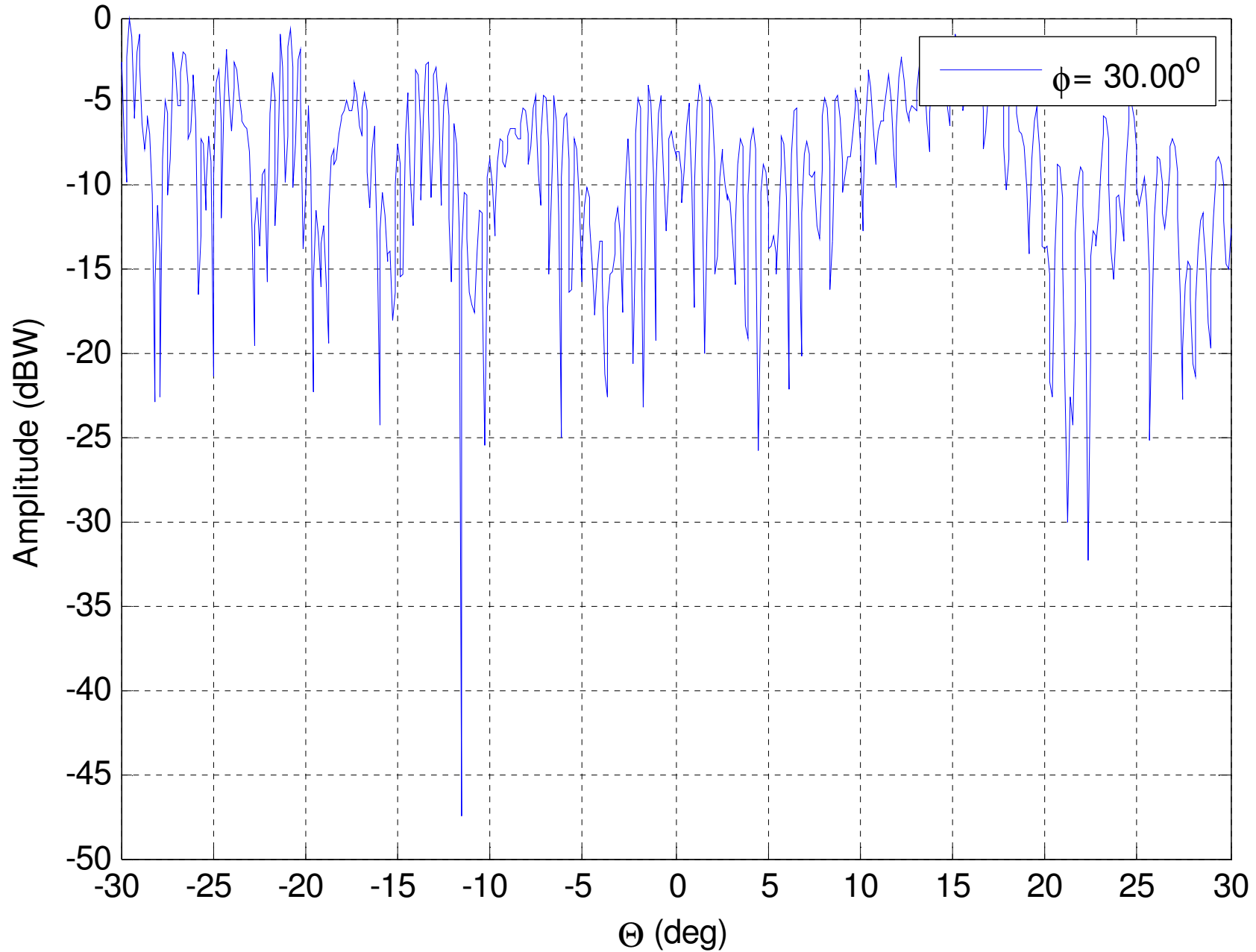
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.10 dBW, Date: 14-Dec-2011



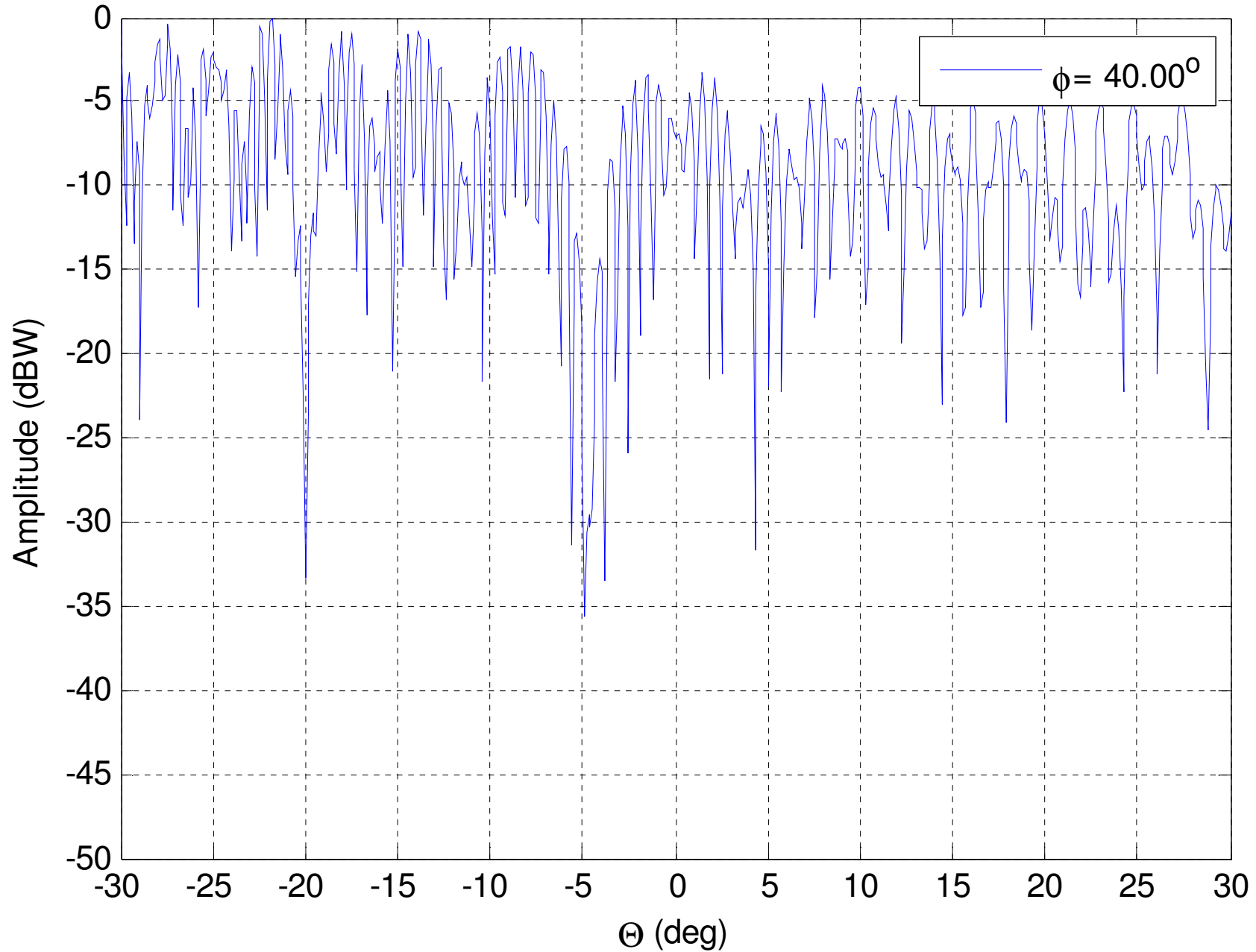
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -7.08 dBW, Date: 14-Dec-2011



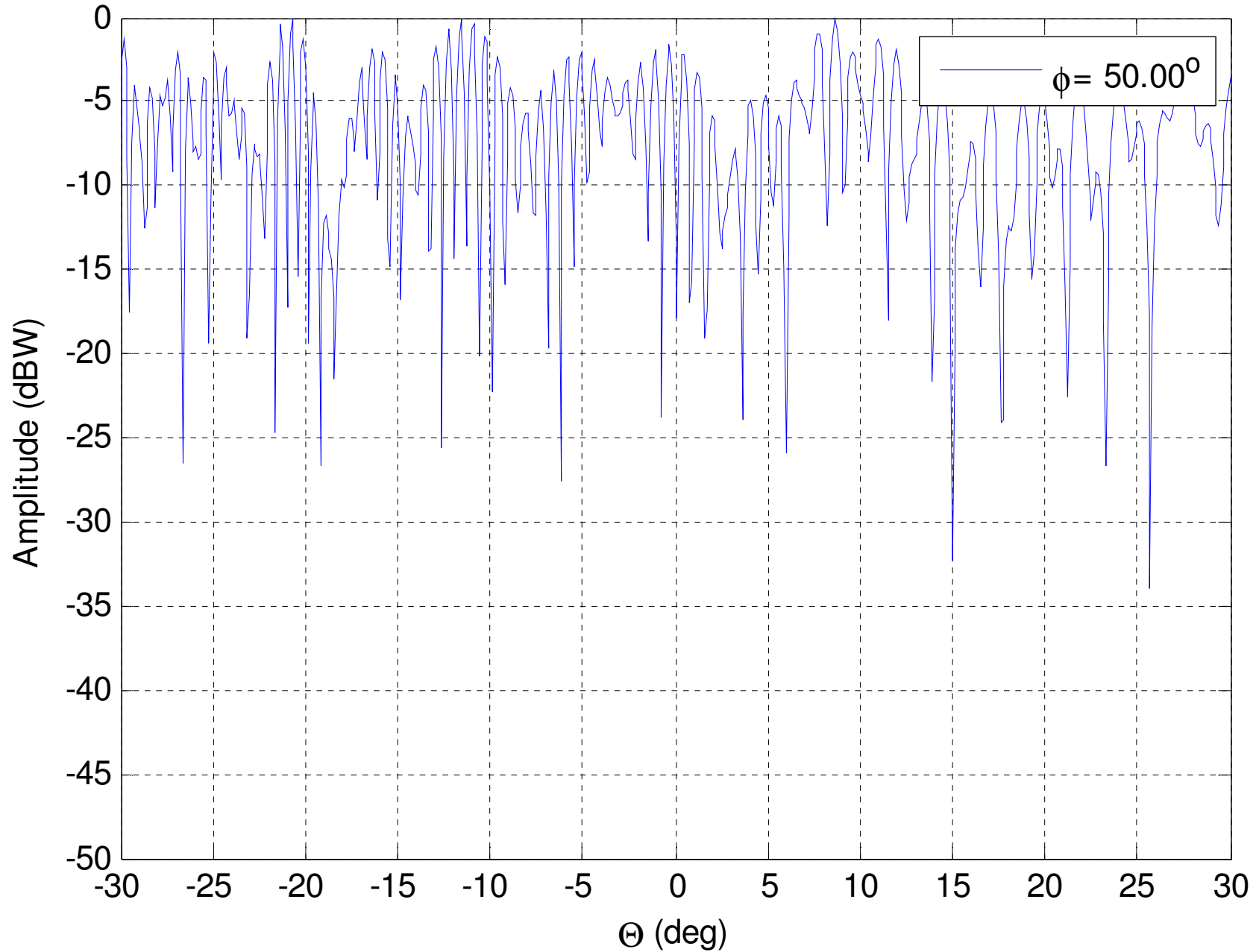
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -8.13 dBW, Date: 14-Dec-2011



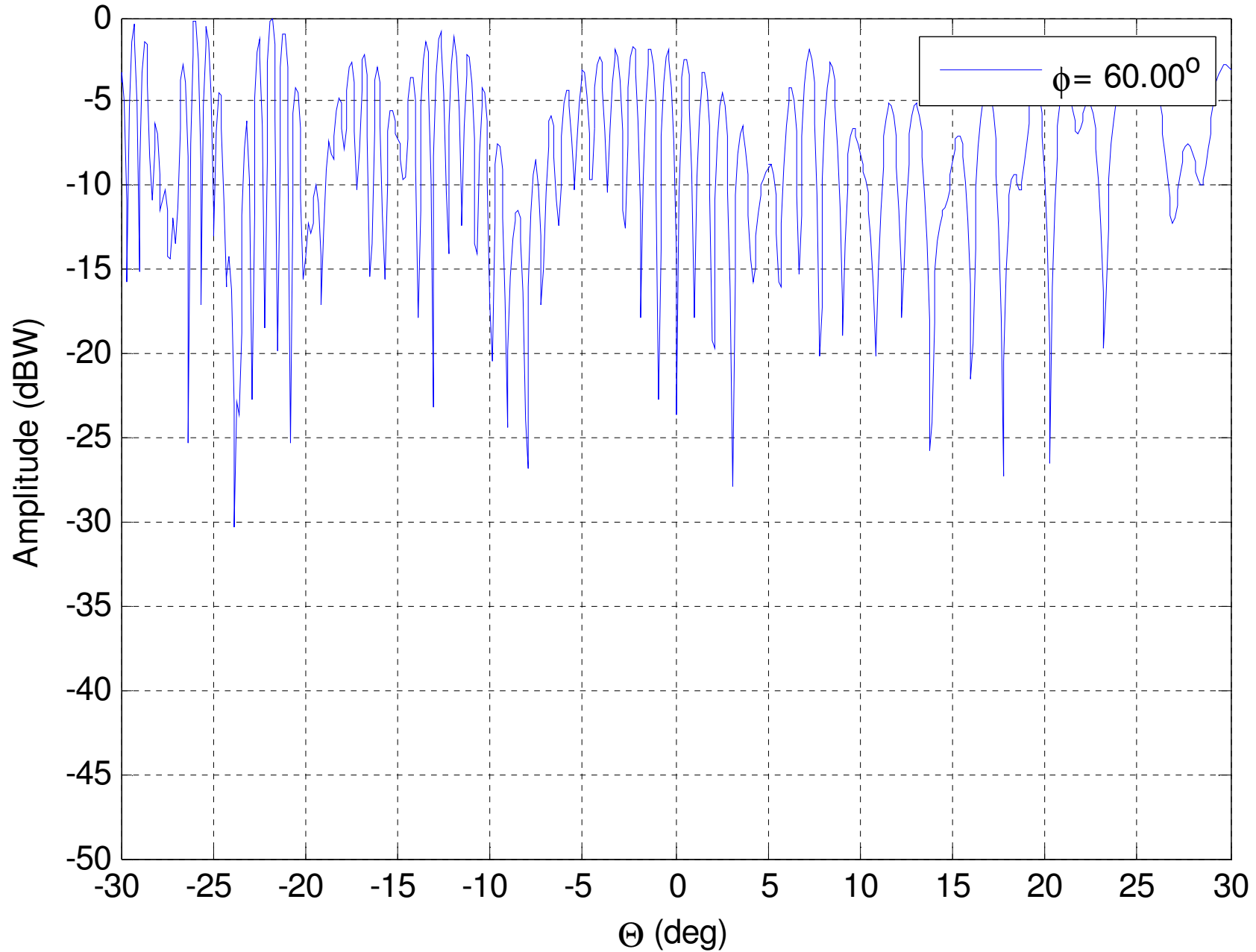
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -8.92 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

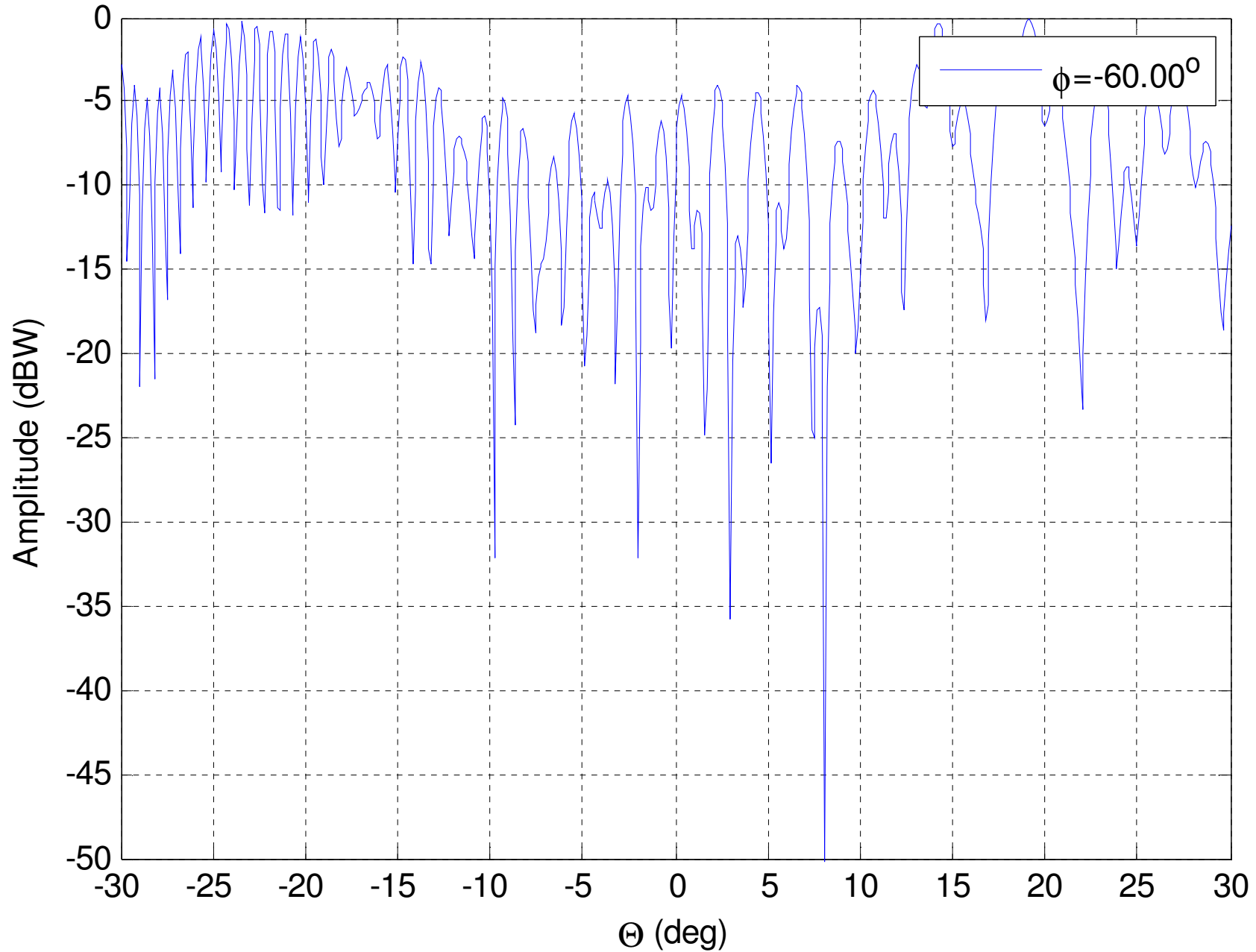
Input file: tx-17.3-lhcp-60.cut, Peak: -8.47 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

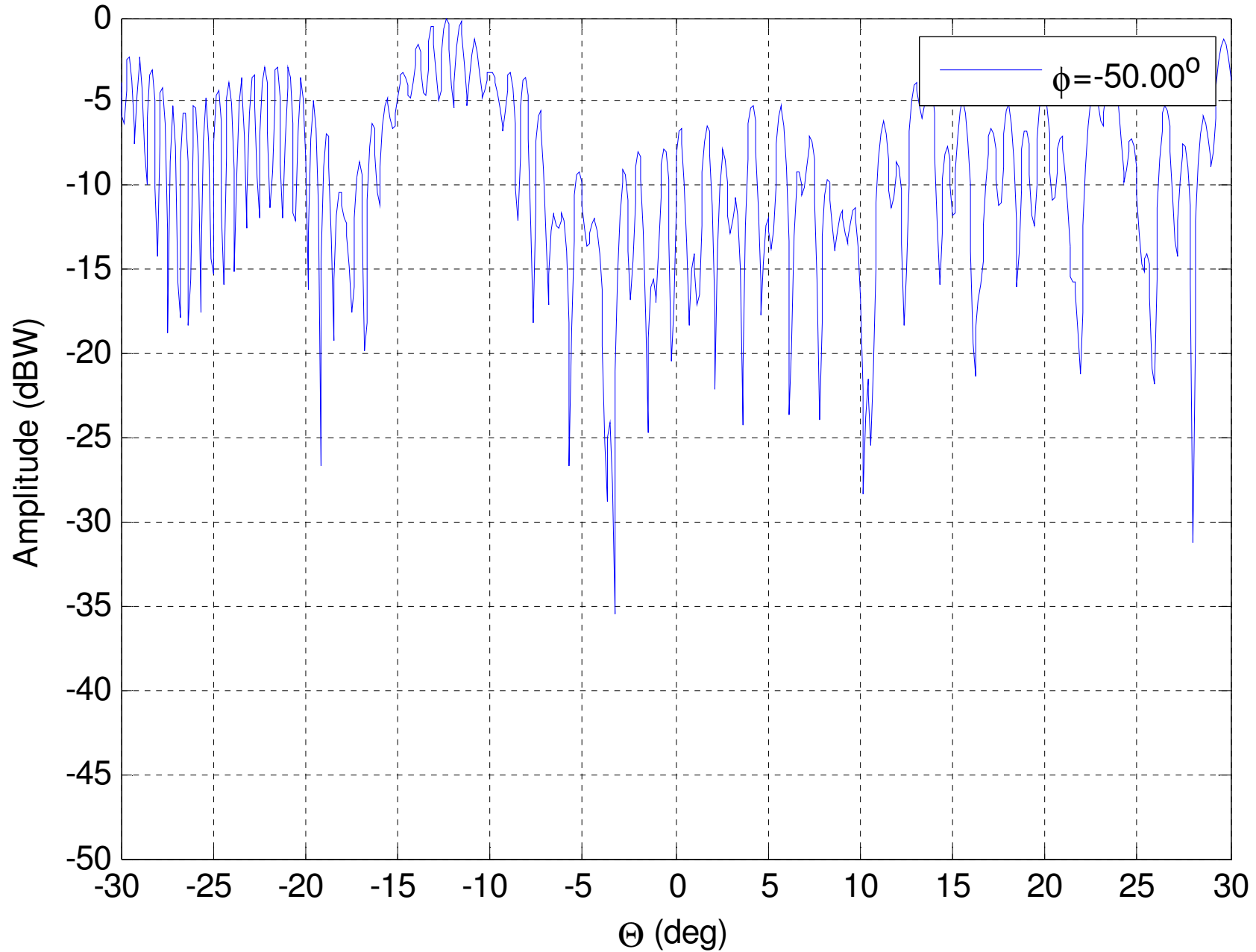
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.09 dBW, Date: 14-Dec-2011



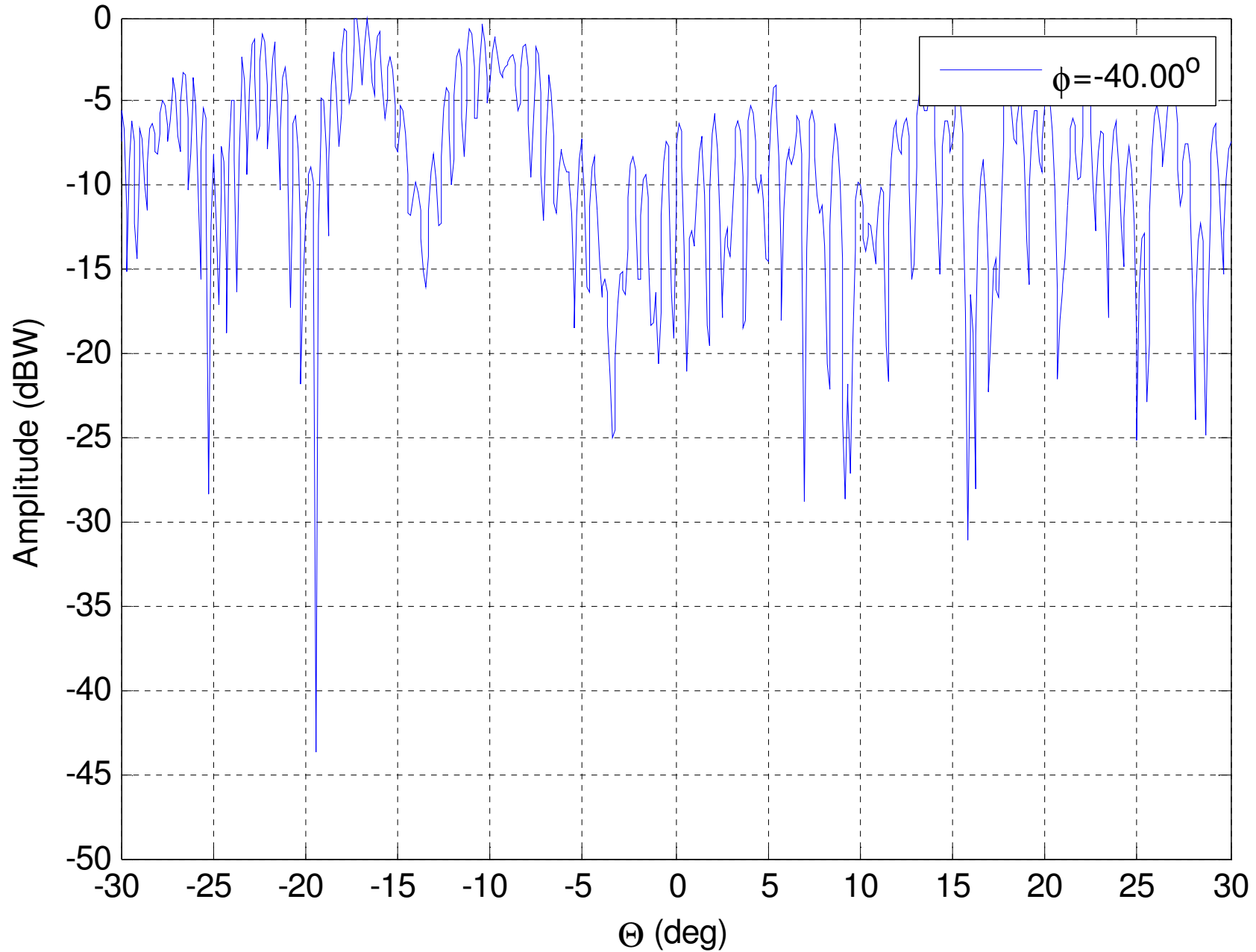
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -7.88 dBW, Date: 14-Dec-2011



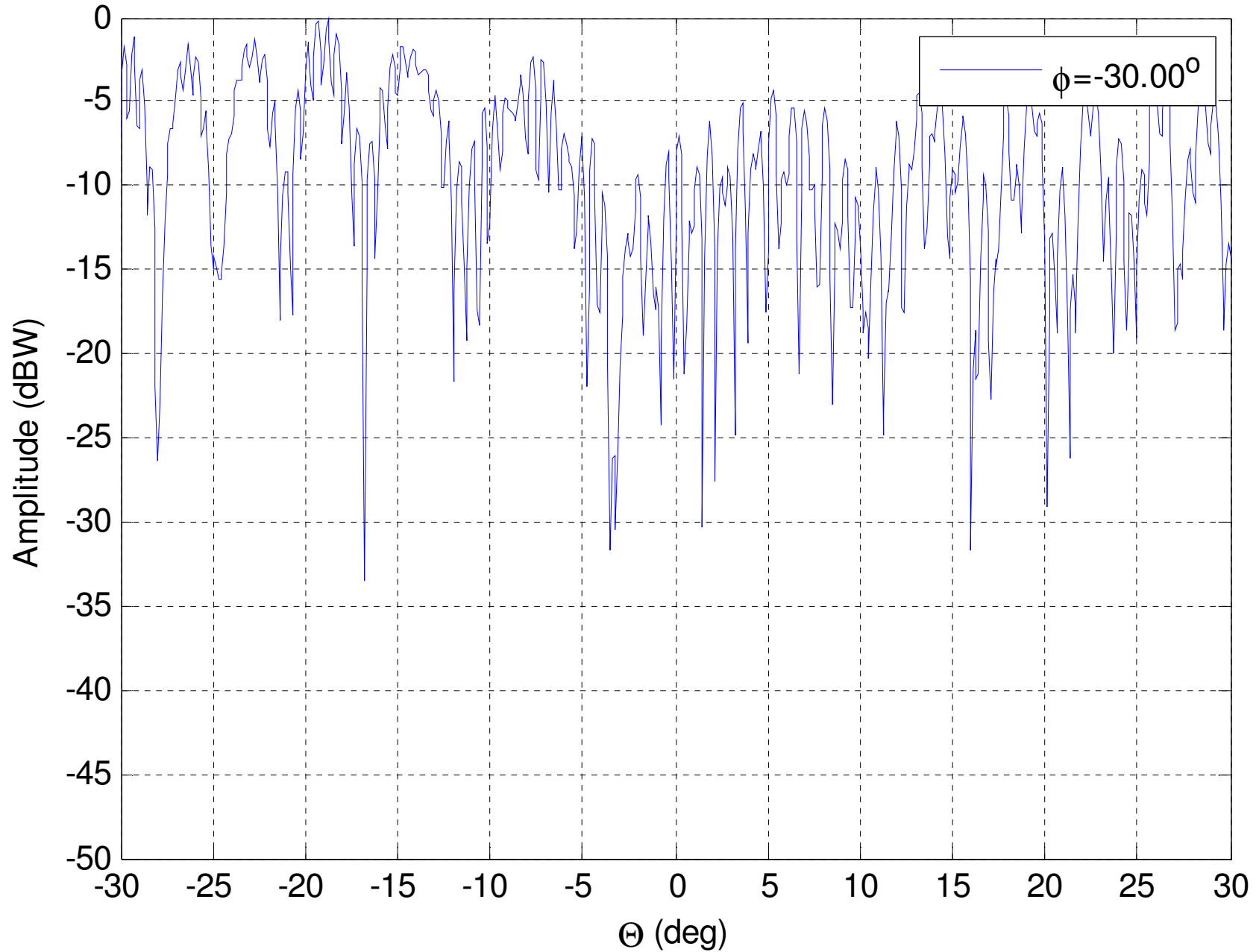
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -8.06 dBW, Date: 14-Dec-2011



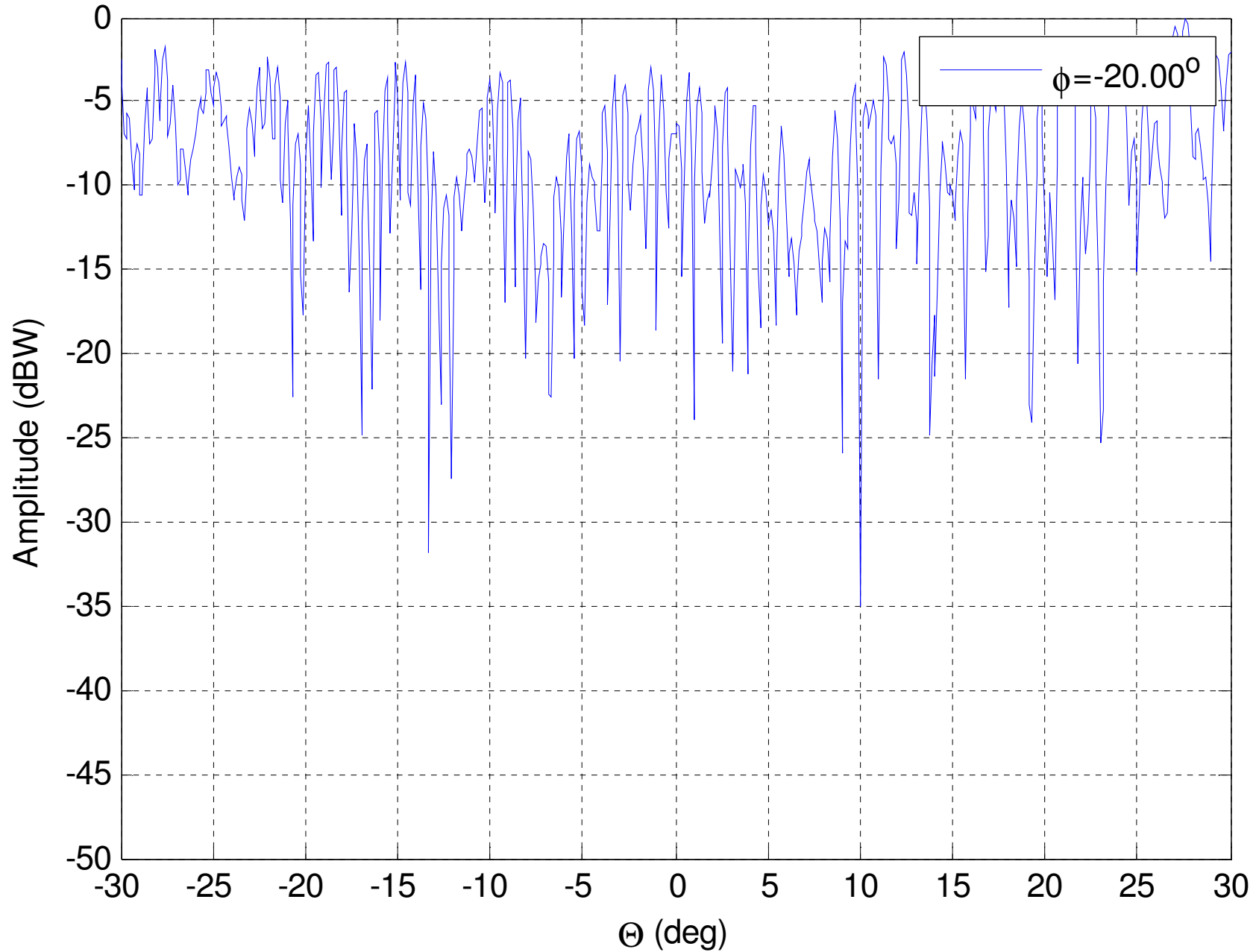
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.20 dBW, Date: 14-Dec-2011



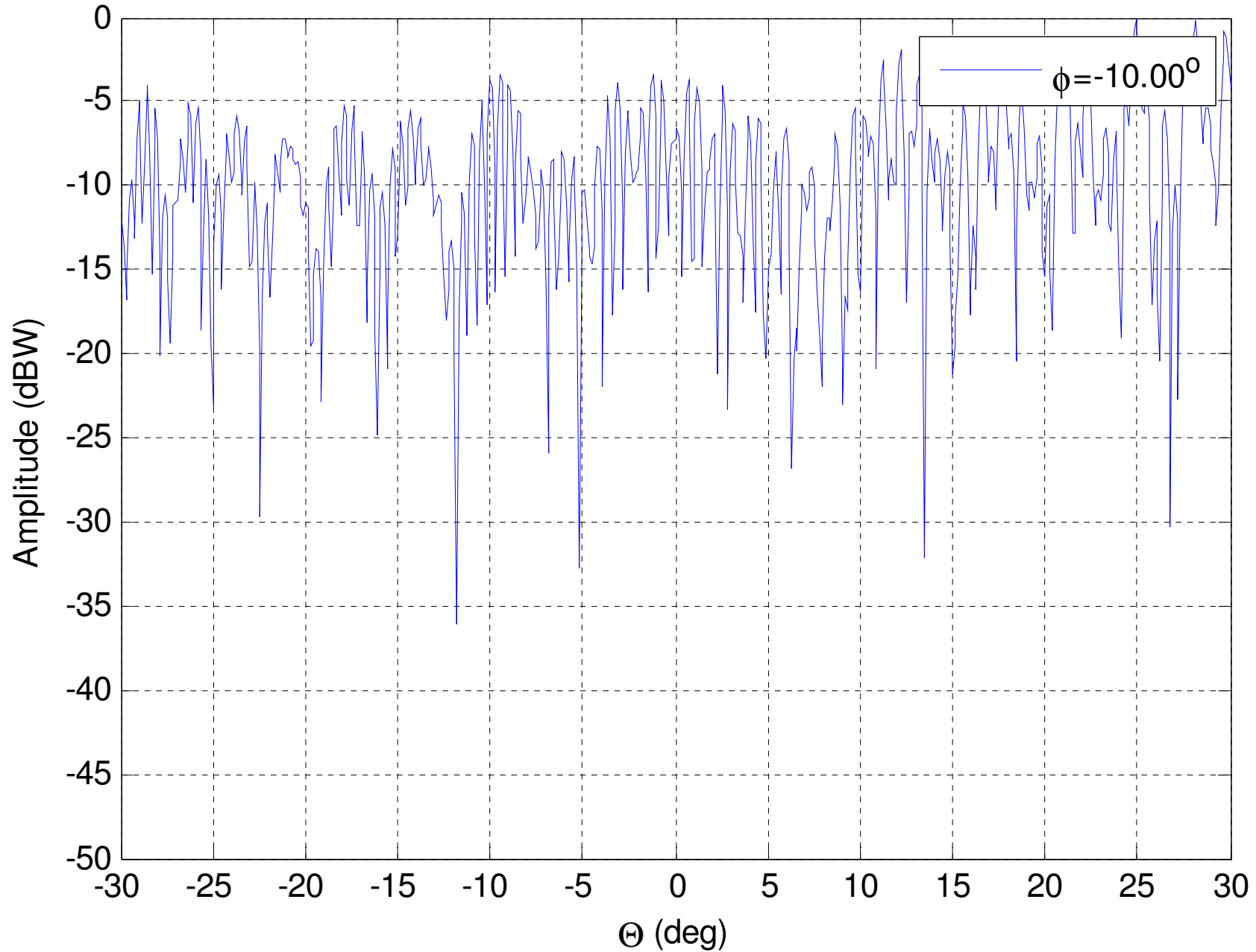
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -7.07 dBW, Date: 14-Dec-2011



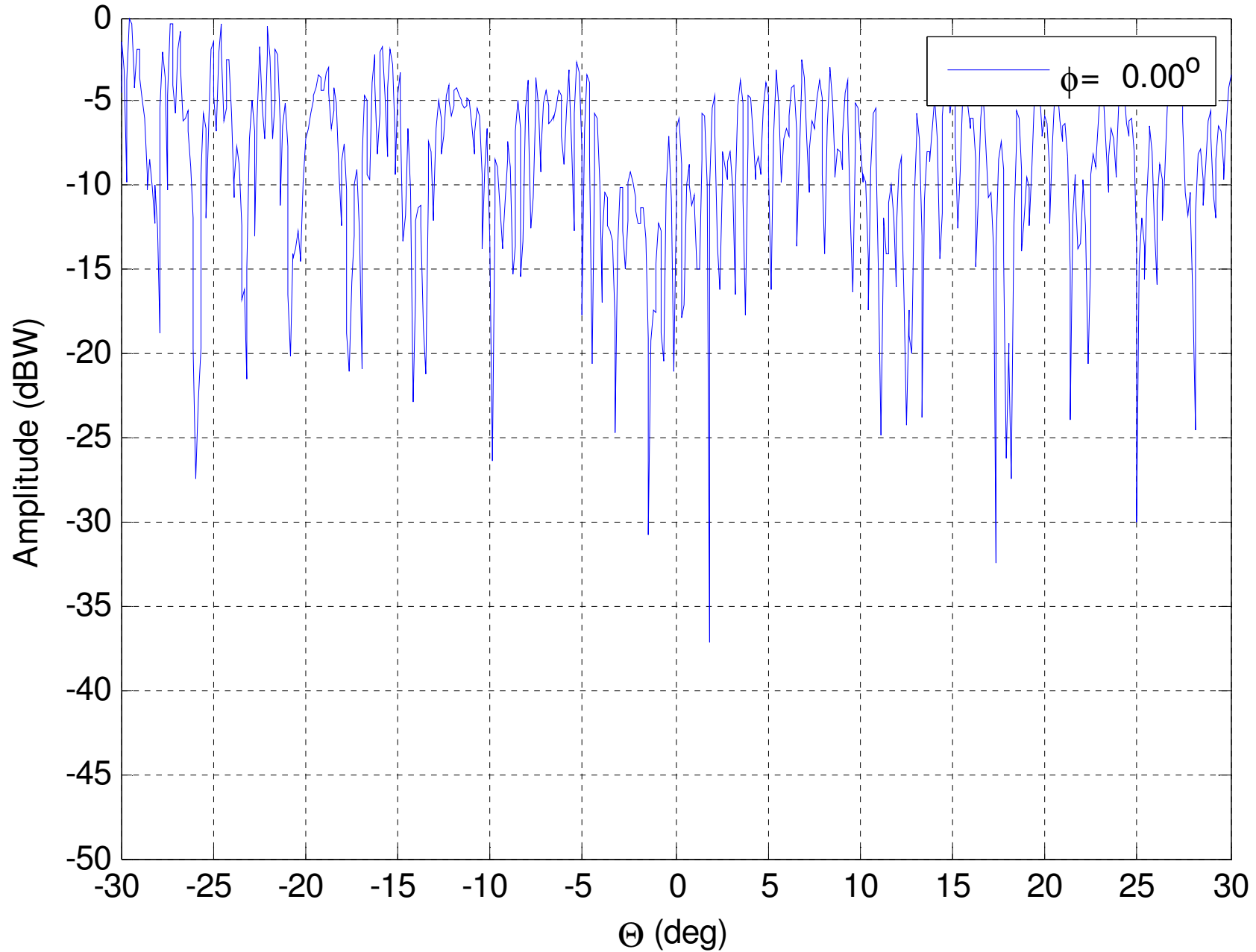
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -6.70 dBW, Date: 14-Dec-2011



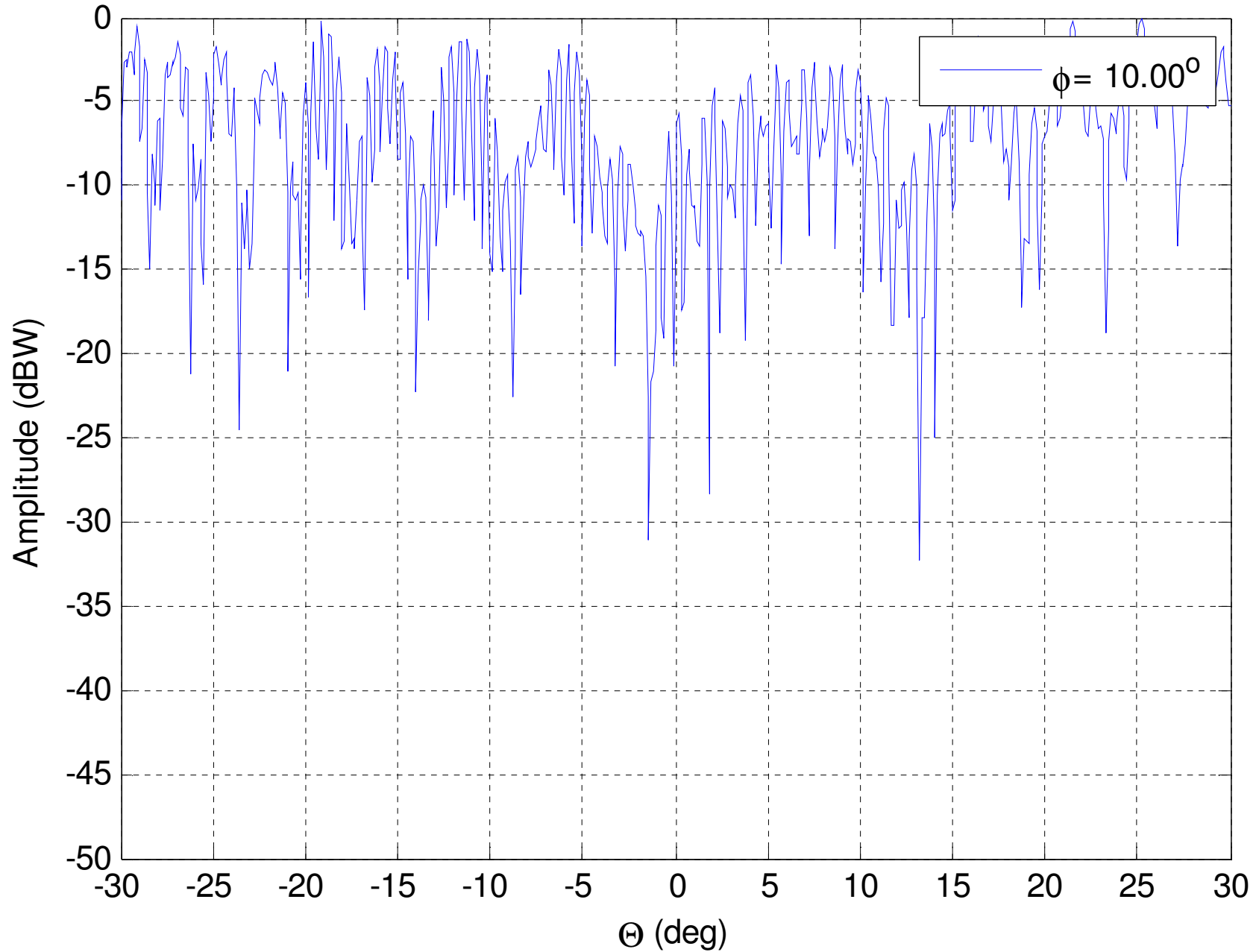
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -8.16 dBW, Date: 14-Dec-2011



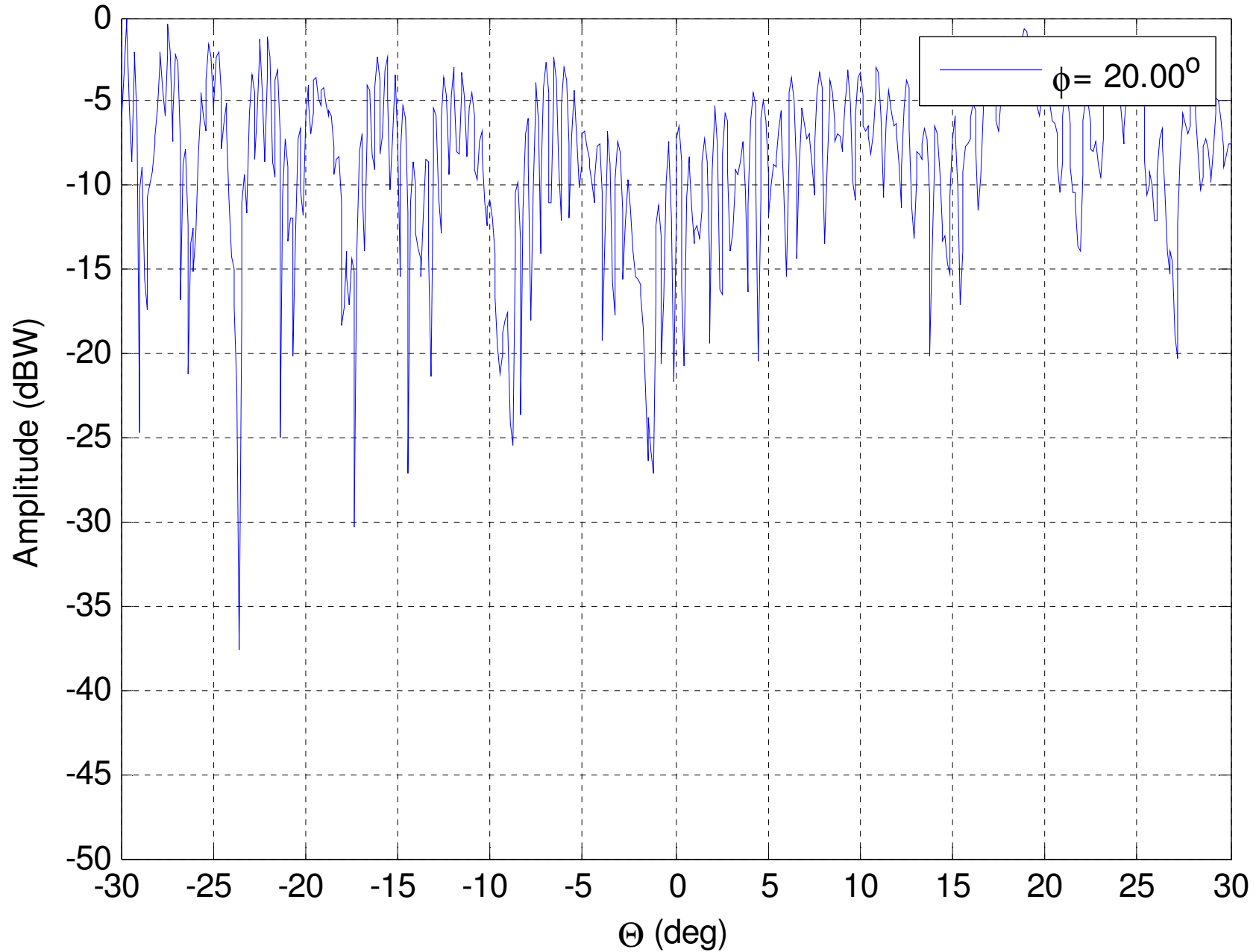
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -8.40 dBW, Date: 14-Dec-2011



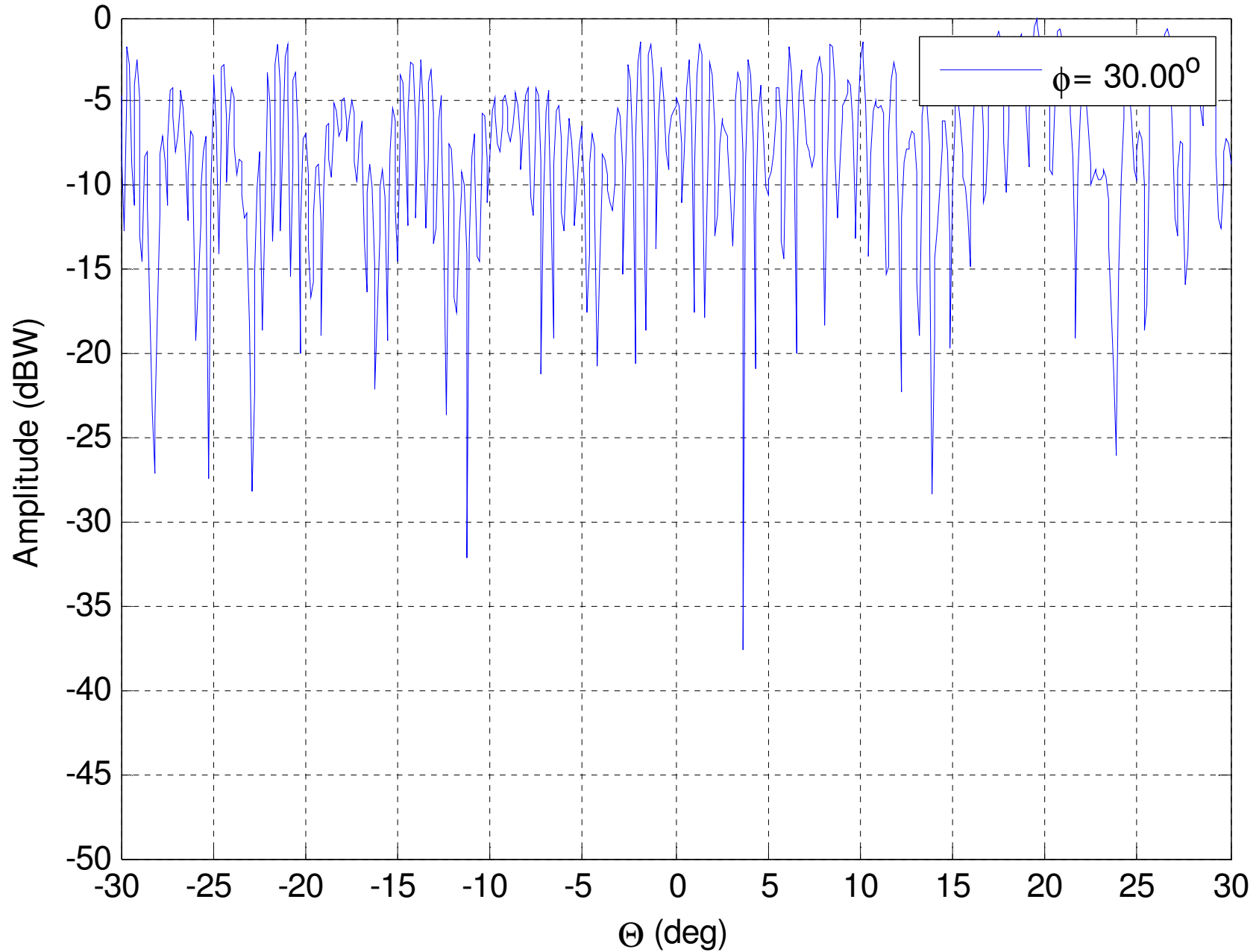
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -7.53 dBW, Date: 14-Dec-2011



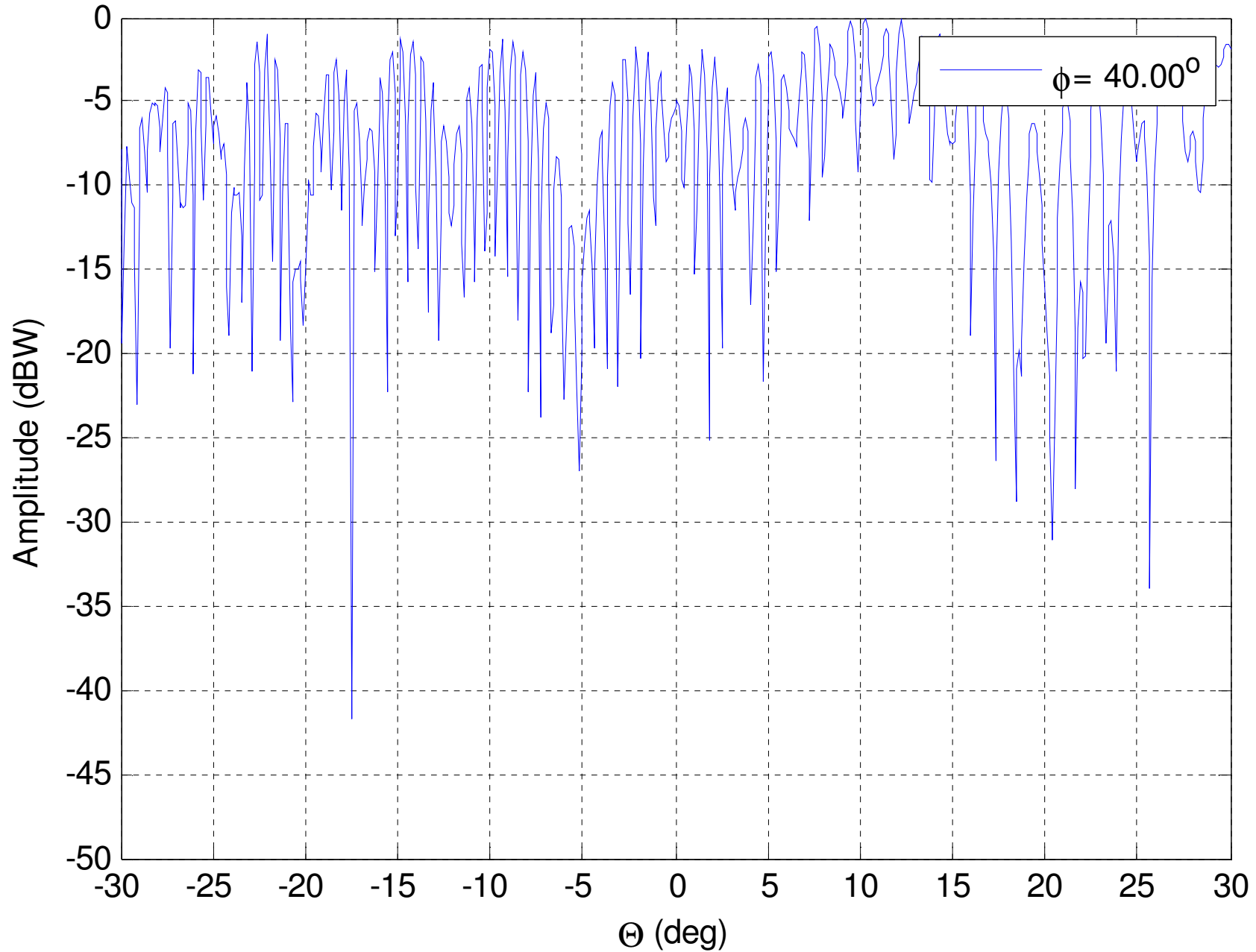
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -8.76 dBW, Date: 14-Dec-2011



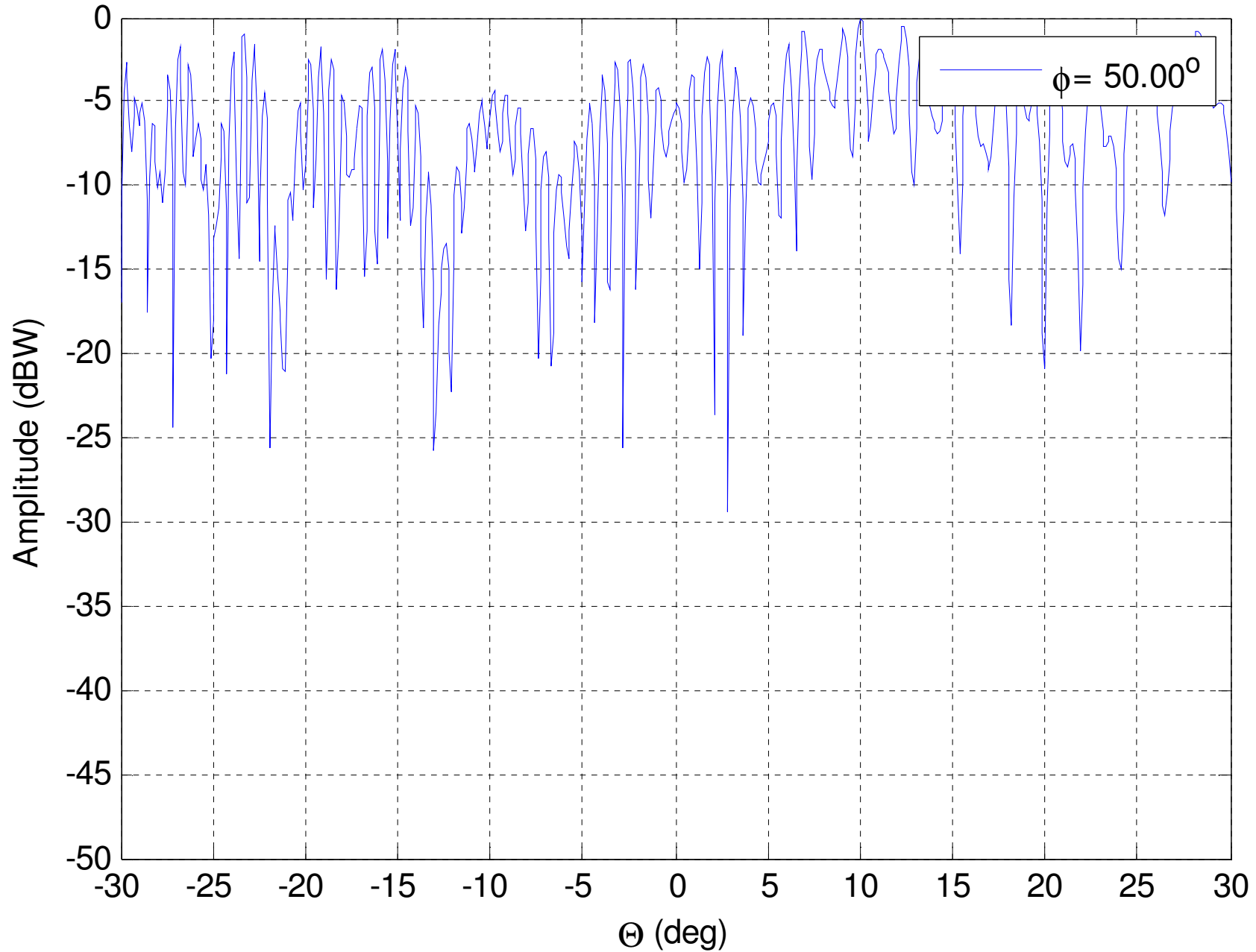
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -8.69 dBW, Date: 14-Dec-2011



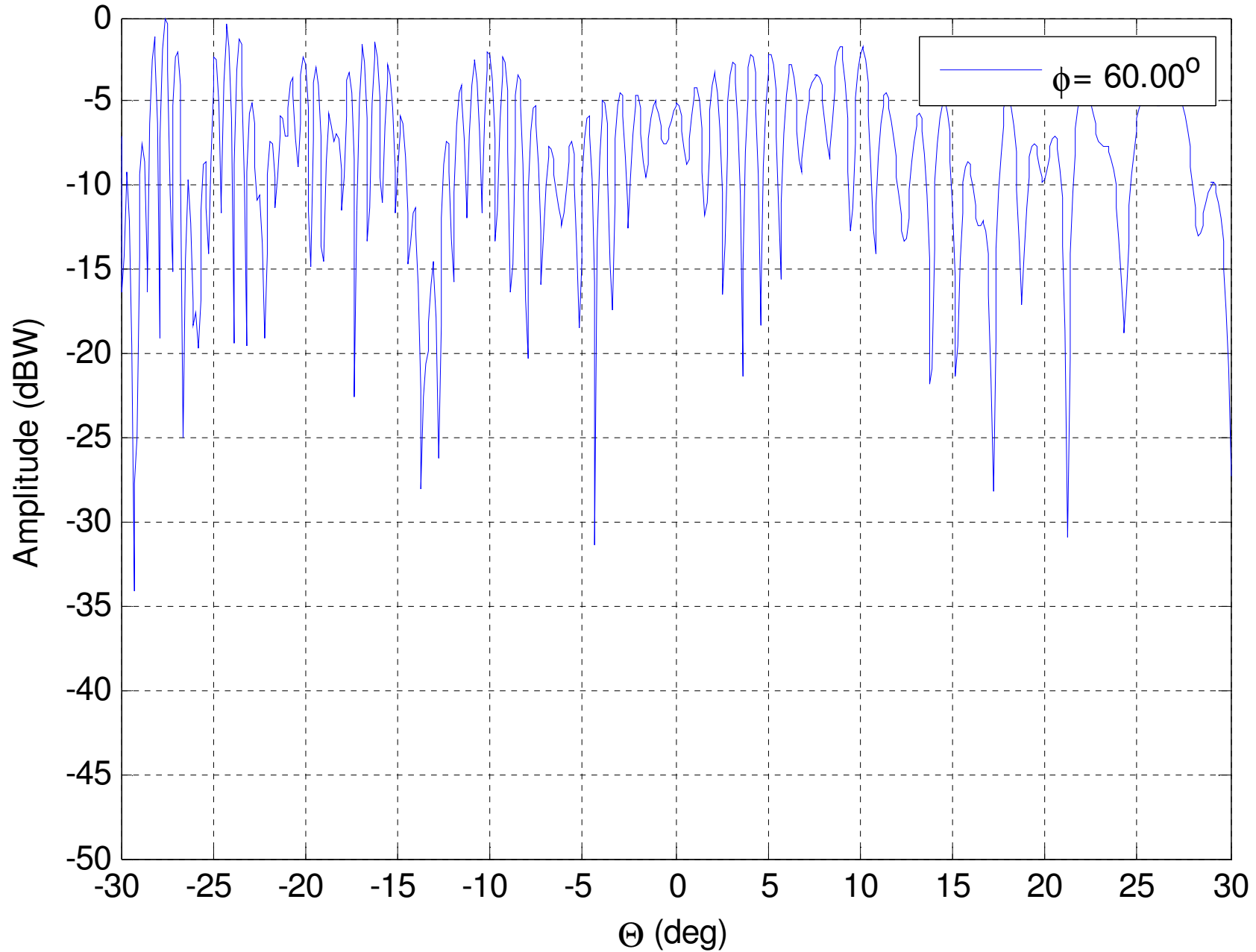
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -8.62 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

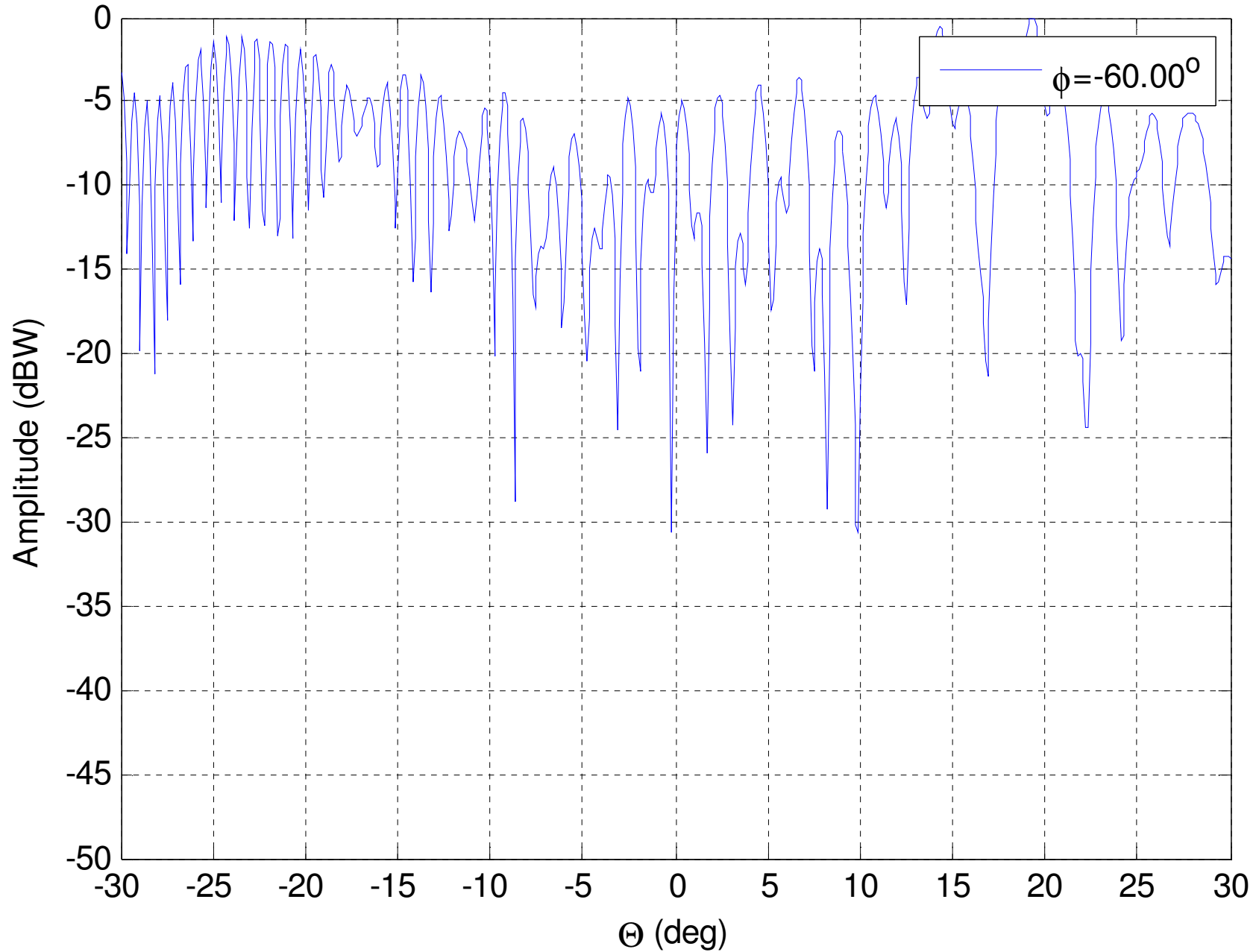
Input file: tx-17.5-rhcp-60.cut, Peak: -8.75 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

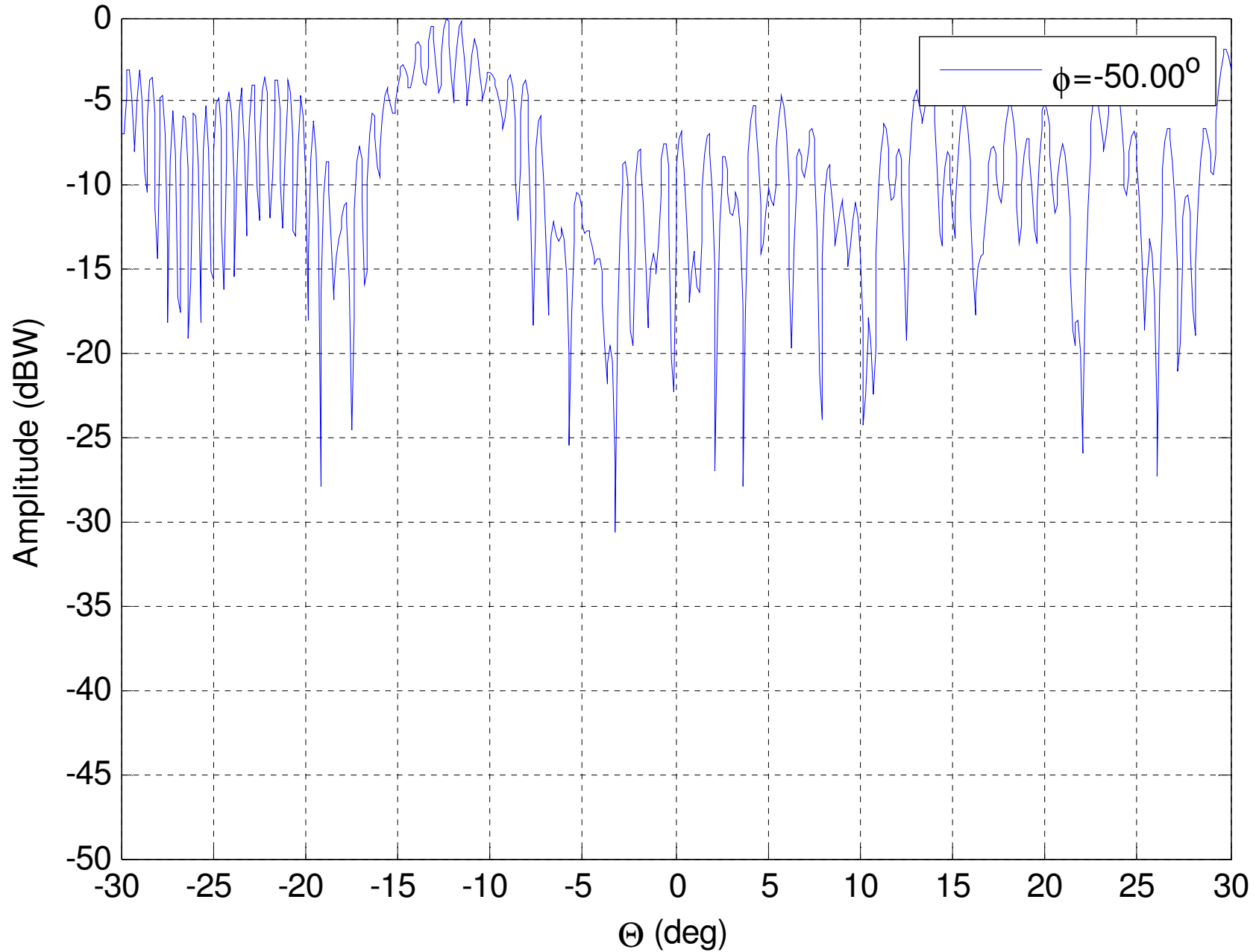
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -9.50 dBW, Date: 14-Dec-2011



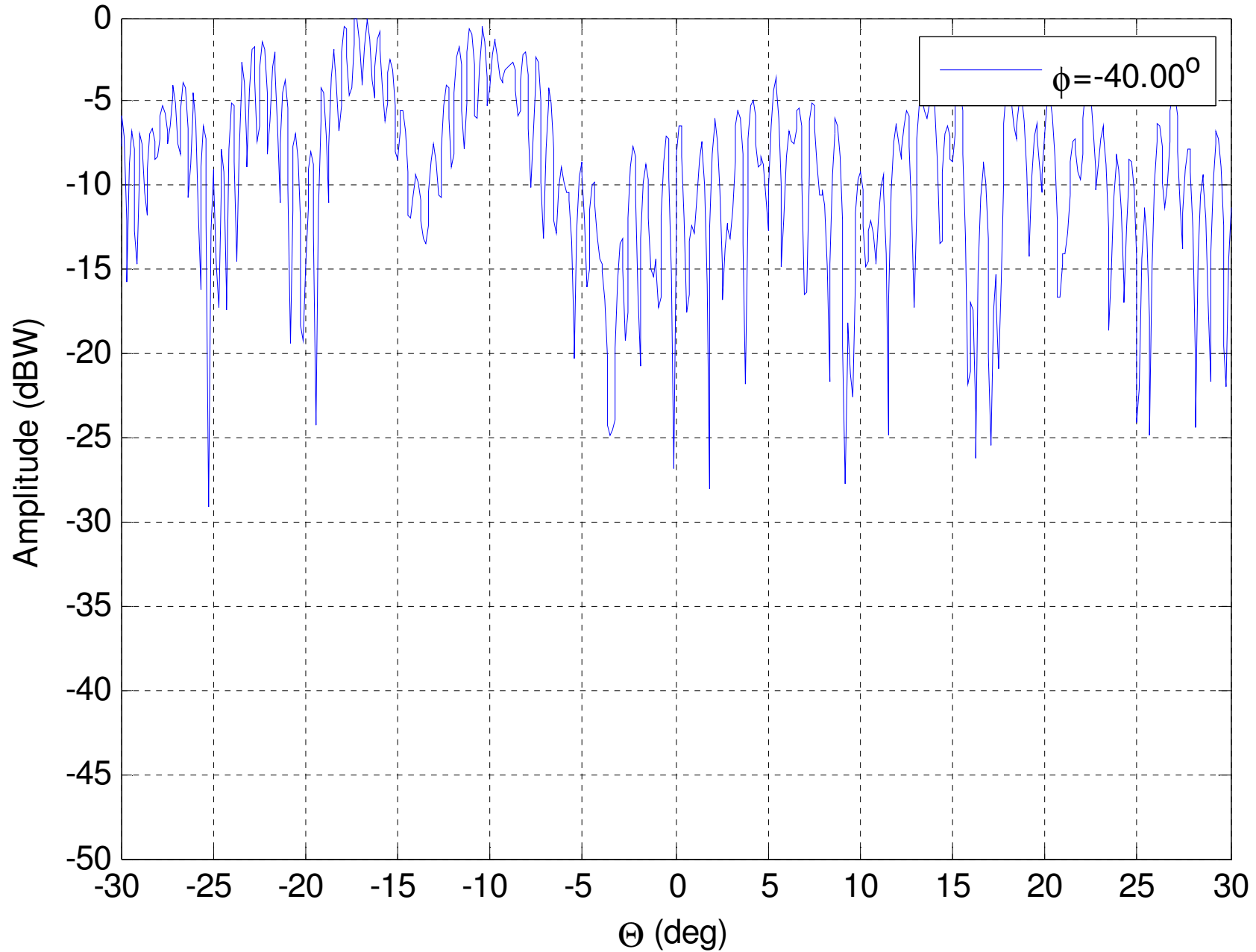
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.43 dBW, Date: 14-Dec-2011



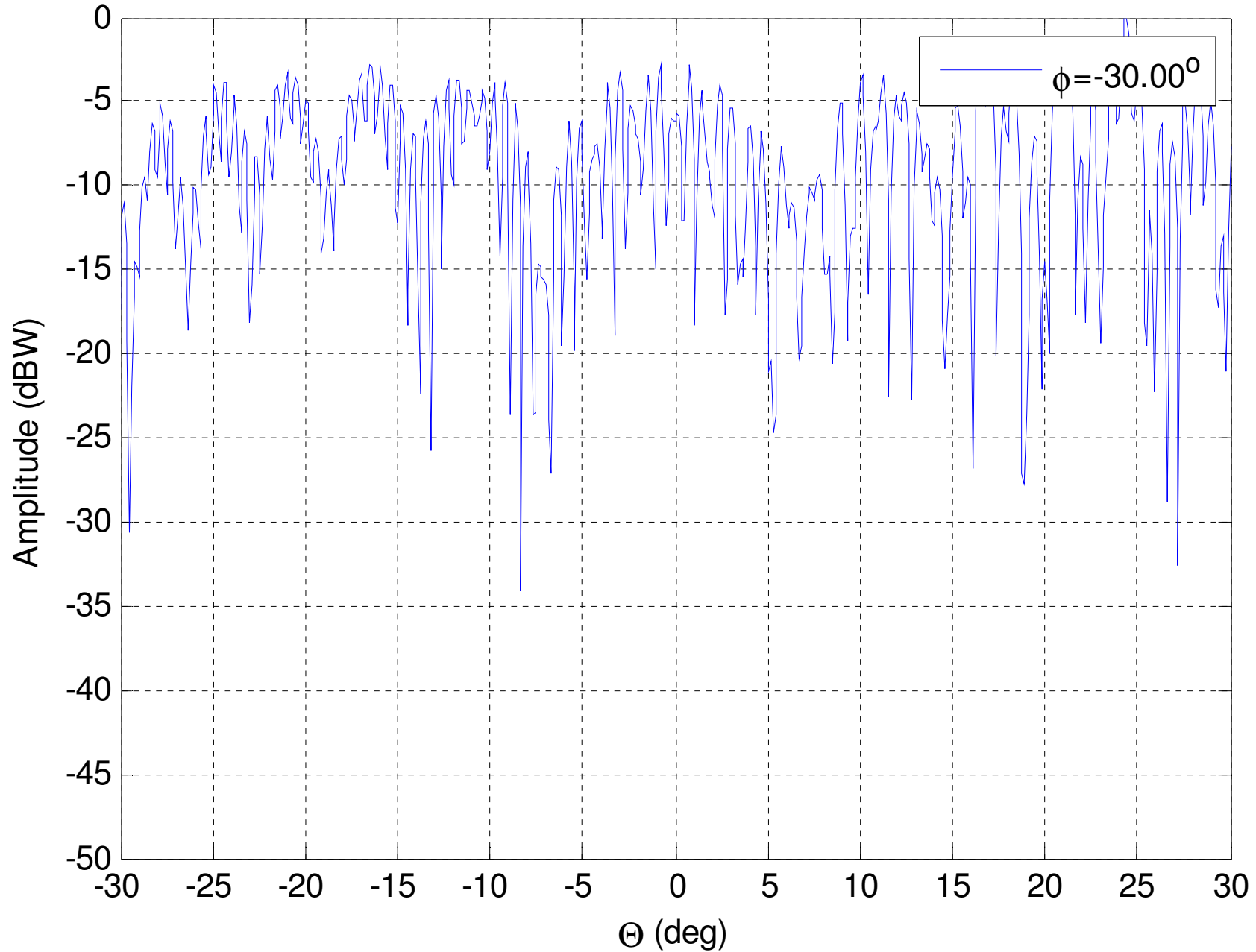
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.69 dBW, Date: 14-Dec-2011



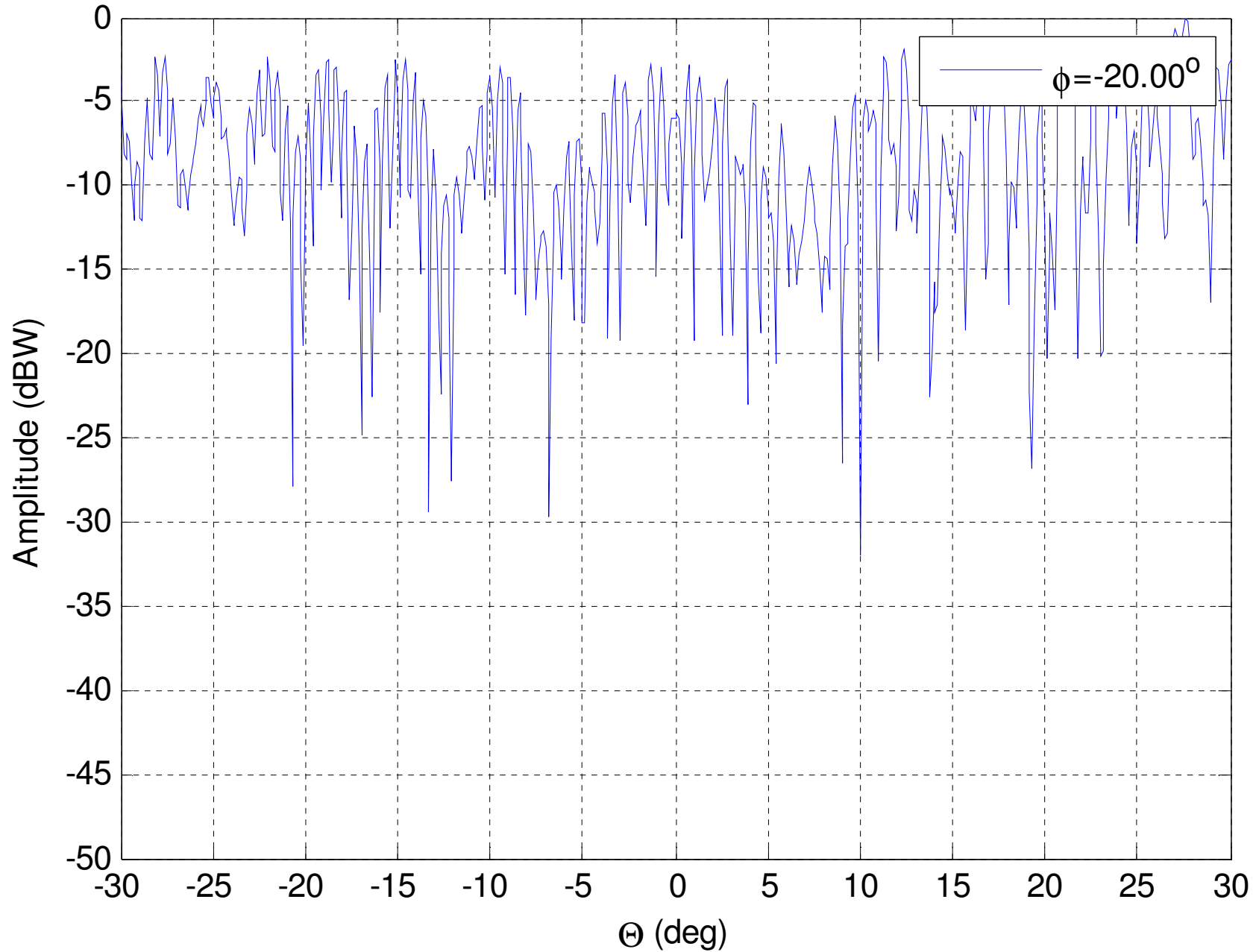
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.00 dBW, Date: 14-Dec-2011



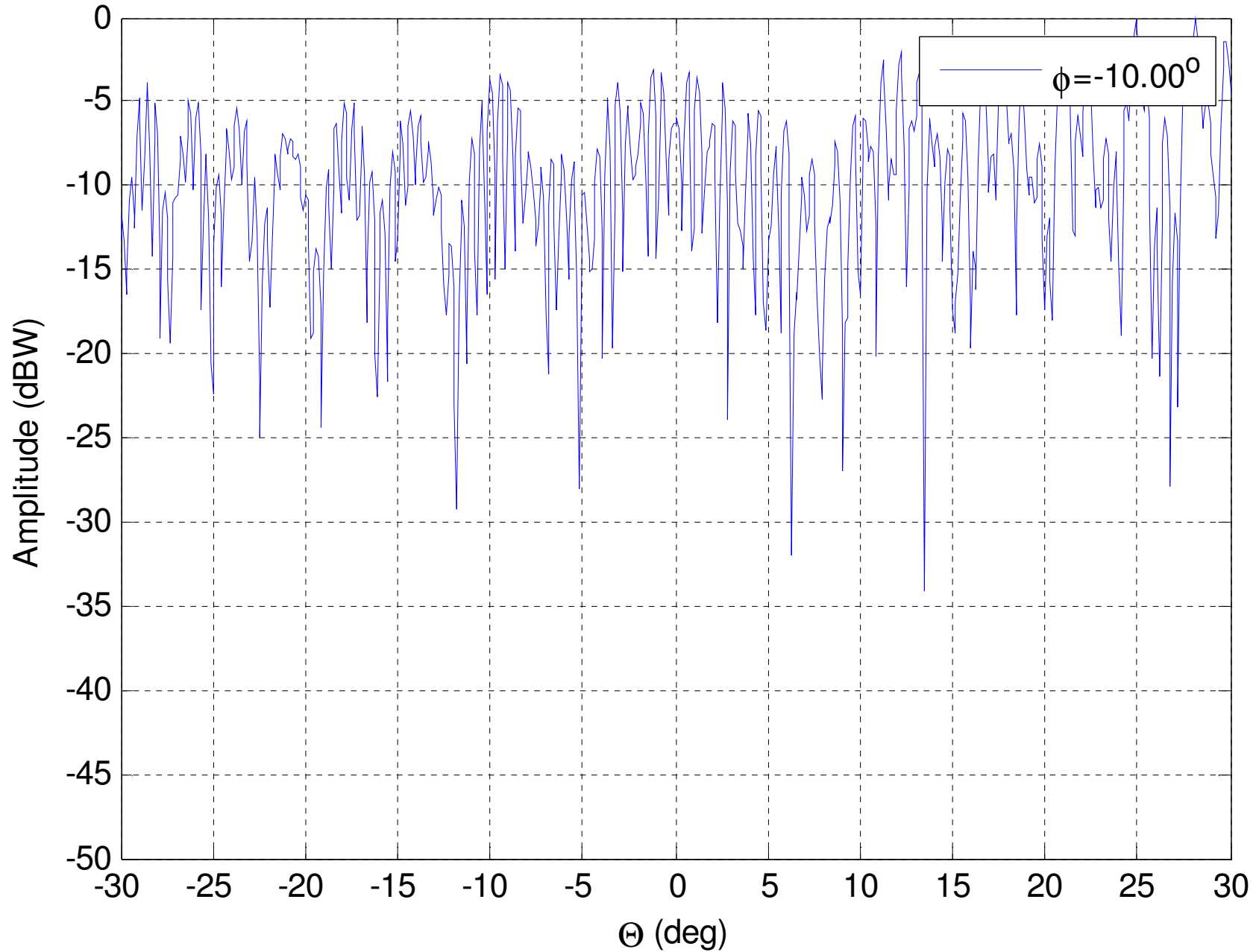
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -7.12 dBW, Date: 14-Dec-2011



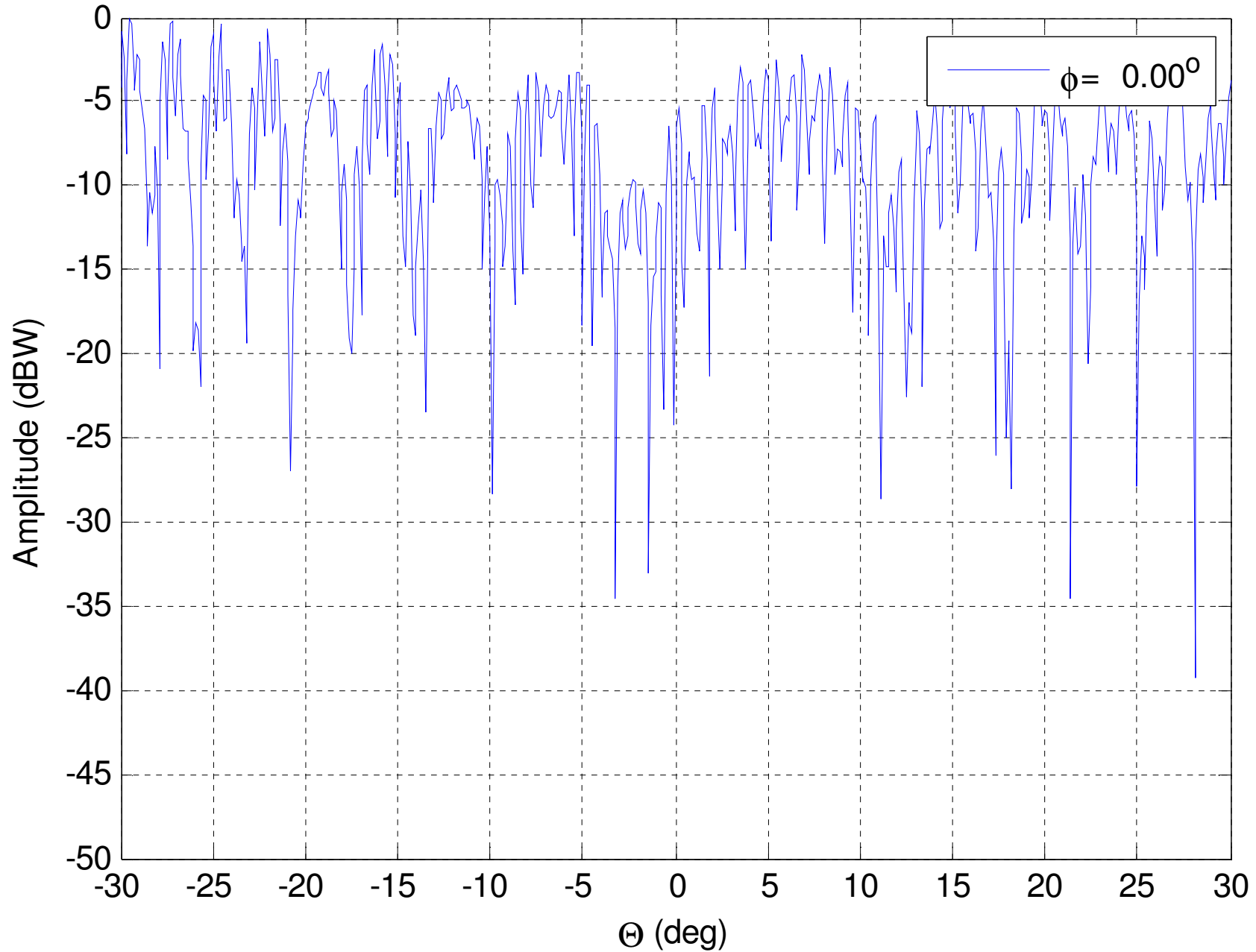
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -6.81 dBW, Date: 14-Dec-2011



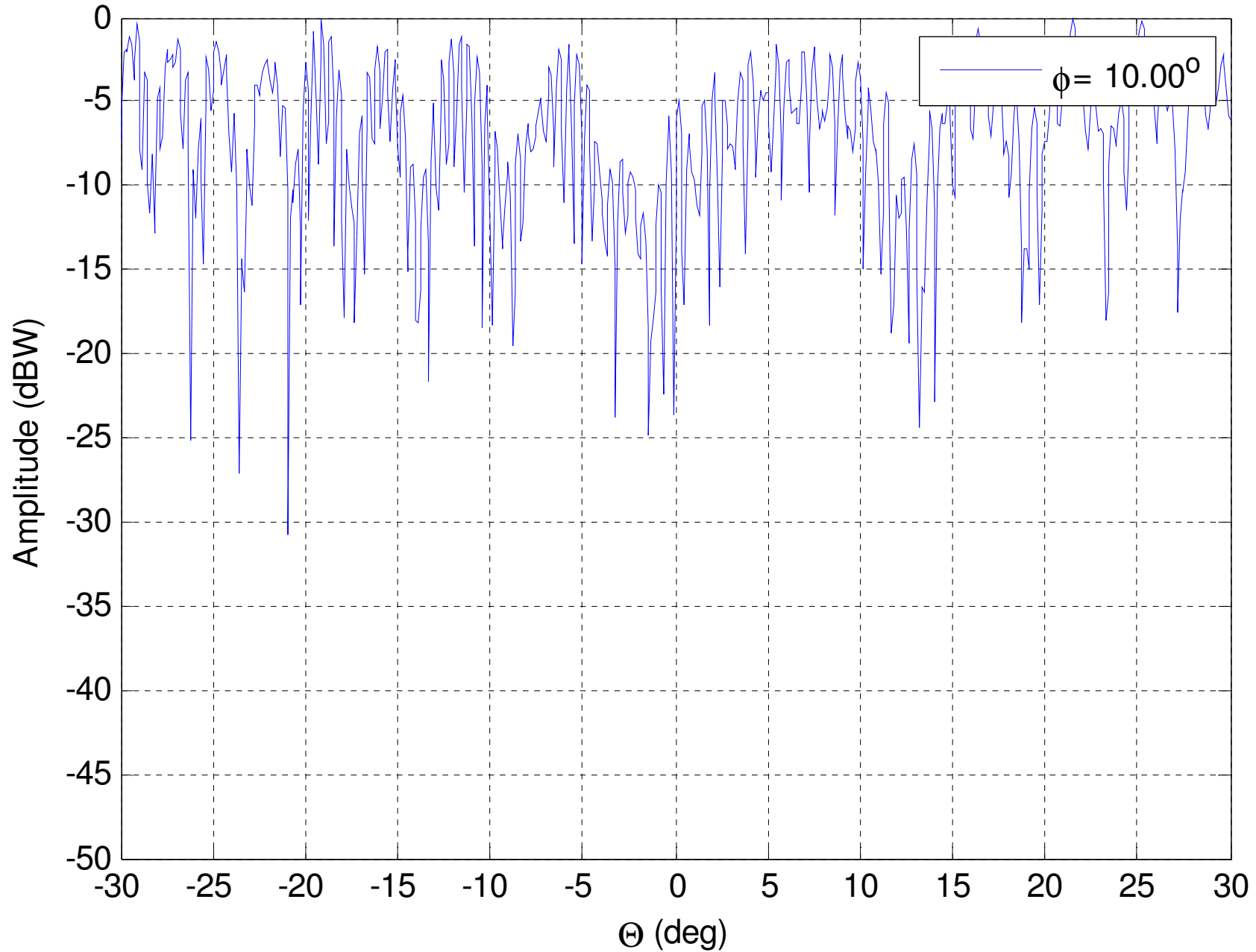
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -8.22 dBW, Date: 14-Dec-2011



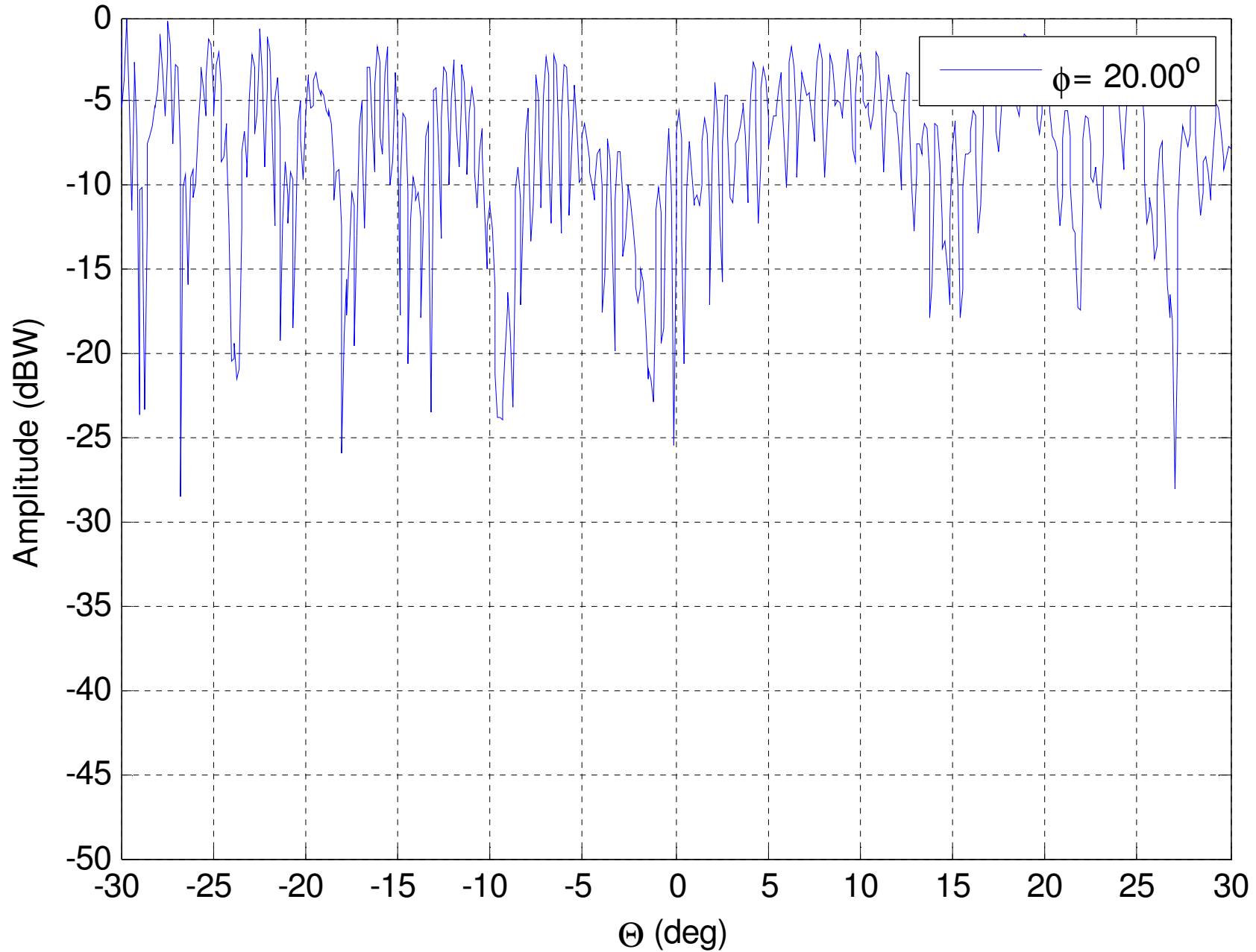
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -8.71 dBW, Date: 14-Dec-2011



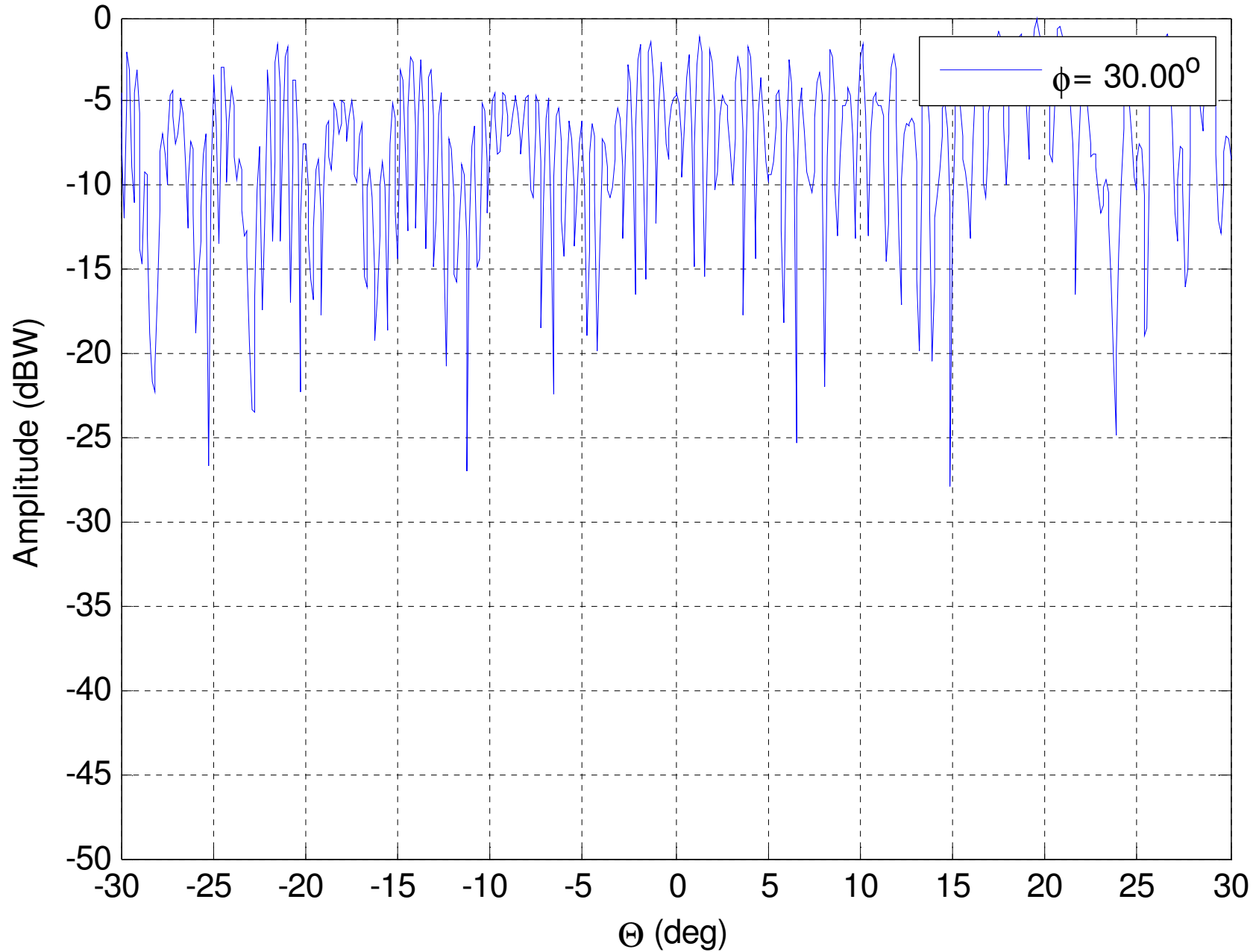
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.94 dBW, Date: 14-Dec-2011



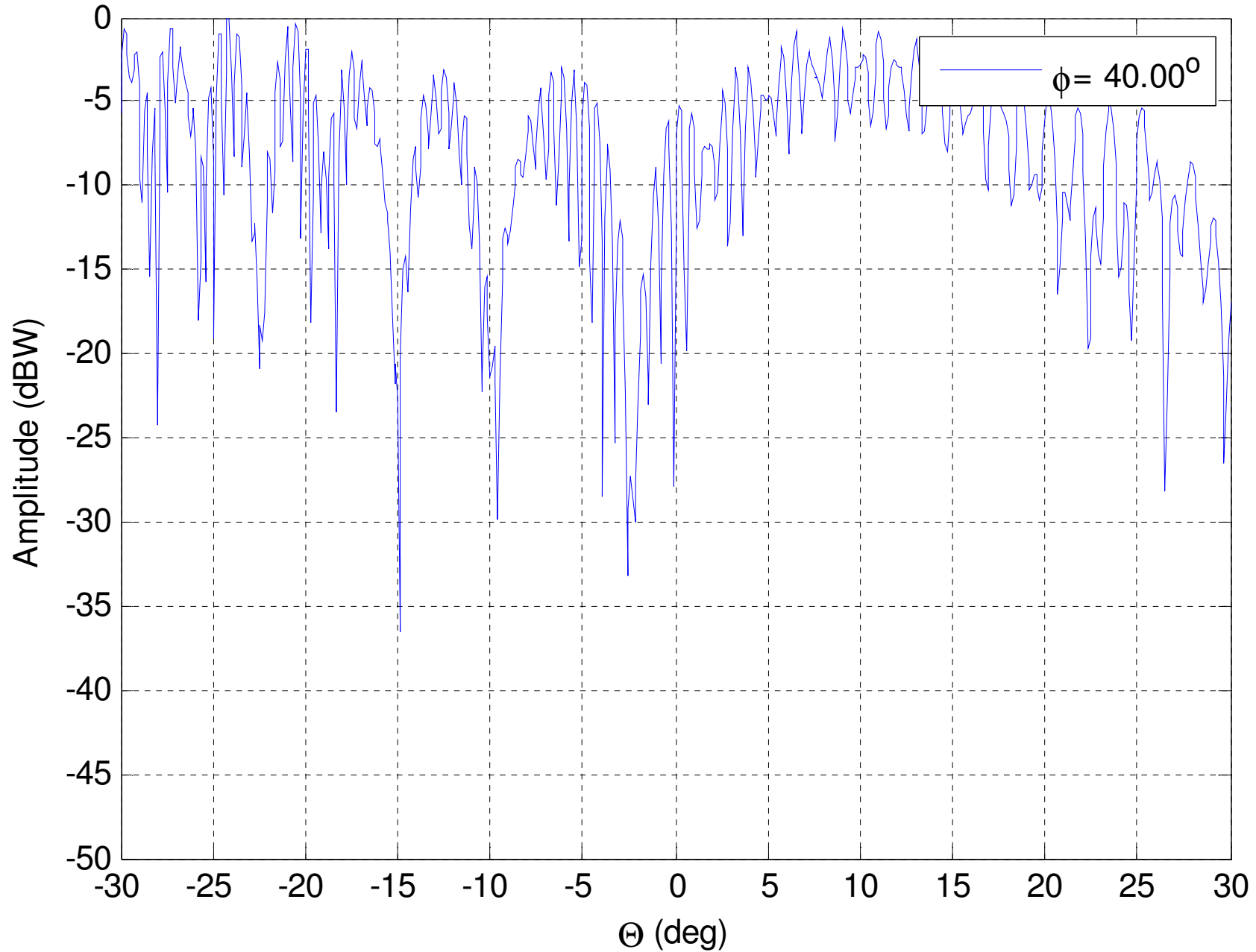
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -8.52 dBW, Date: 14-Dec-2011



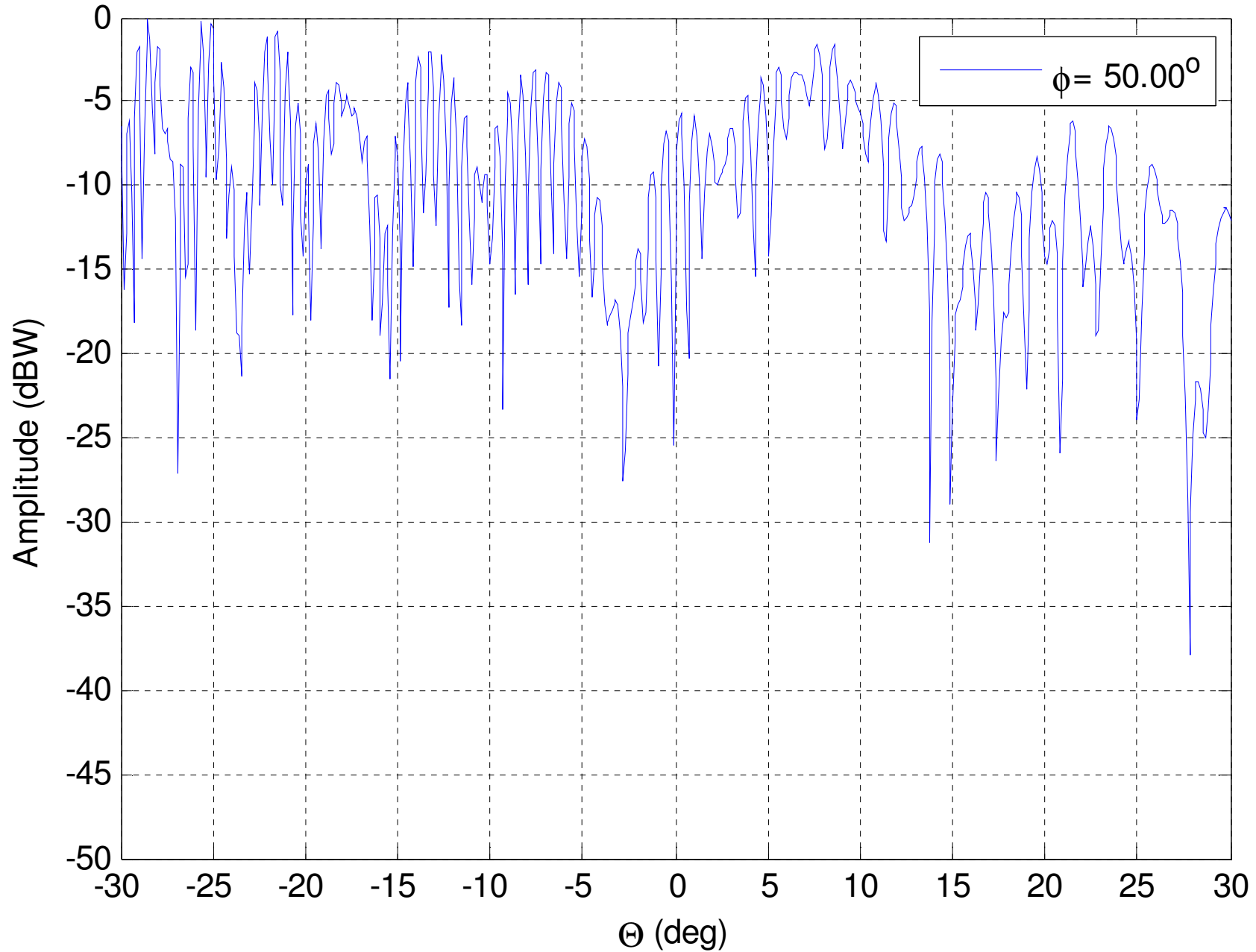
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -8.24 dBW, Date: 14-Dec-2011



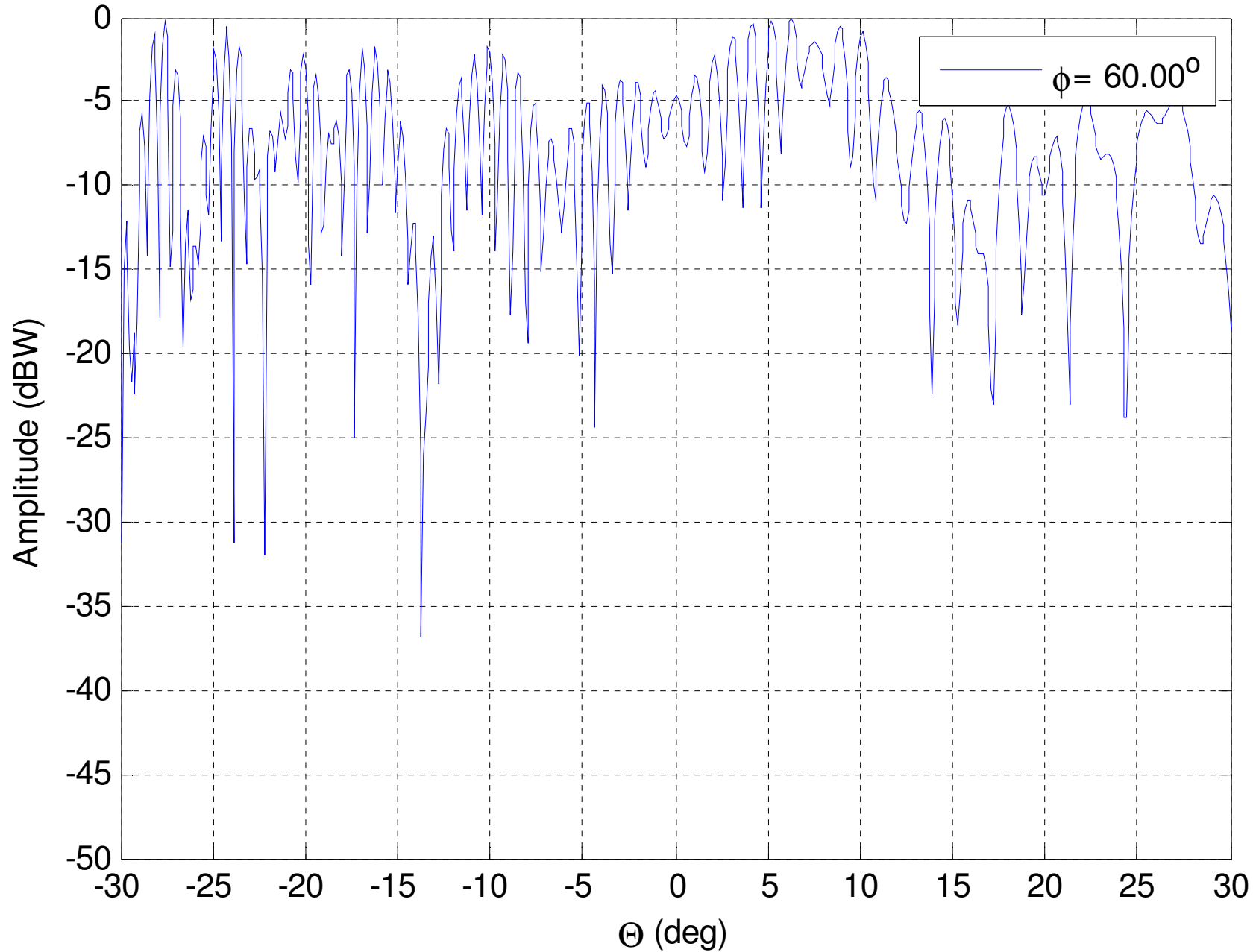
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -7.60 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

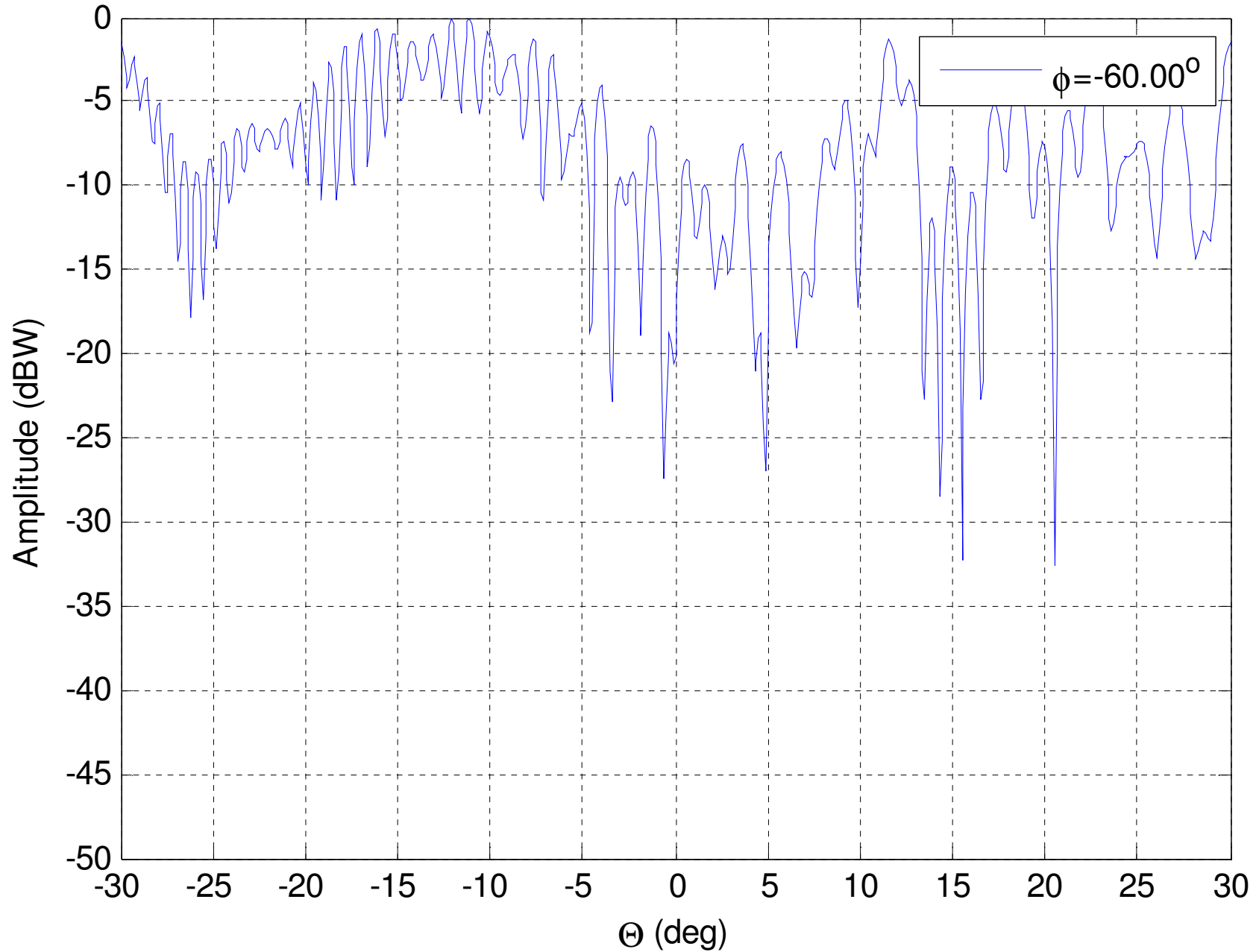
Input file: tx-17.5-lhcp-60.cut, Peak: -8.49 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

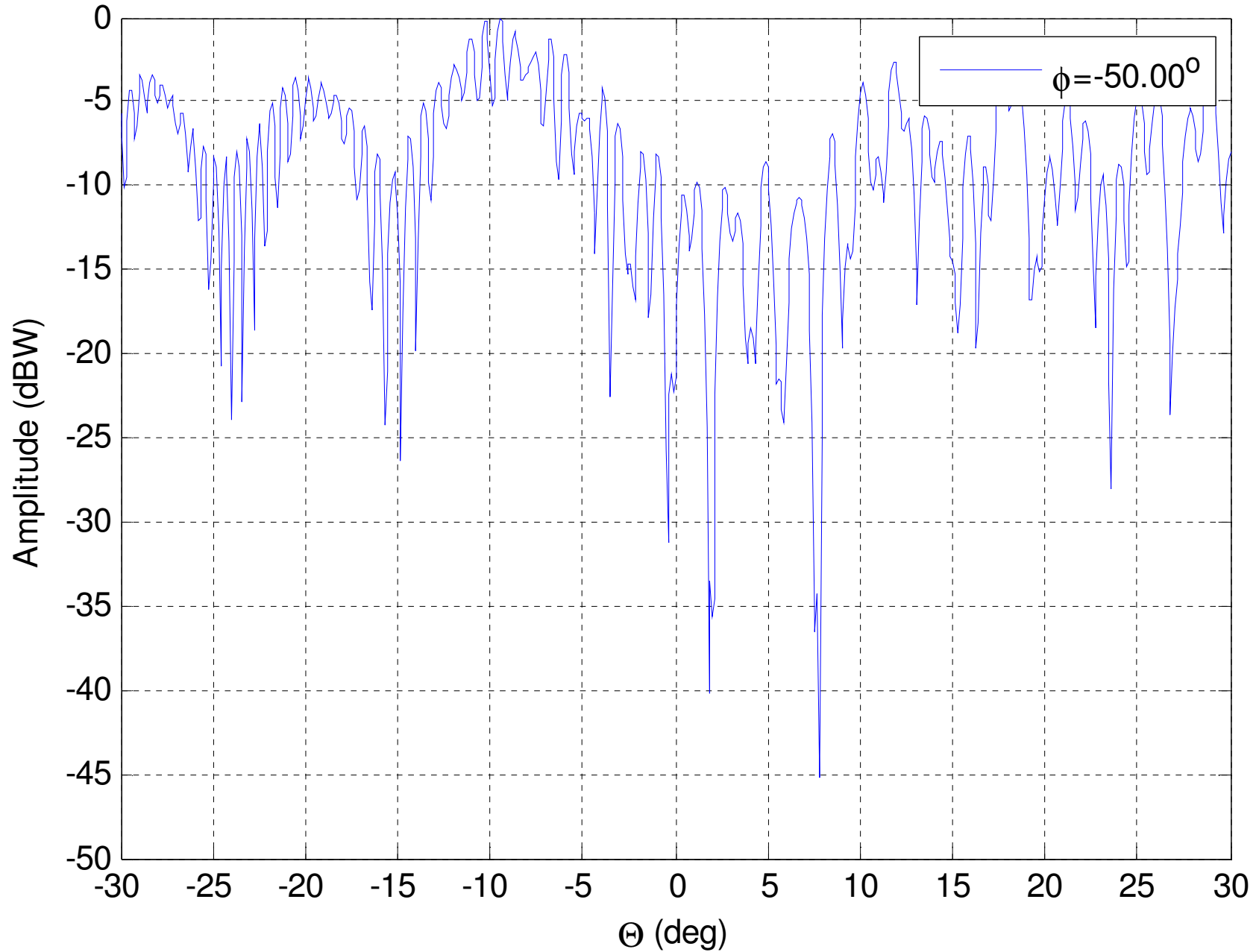
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.90 dBW, Date: 14-Dec-2011



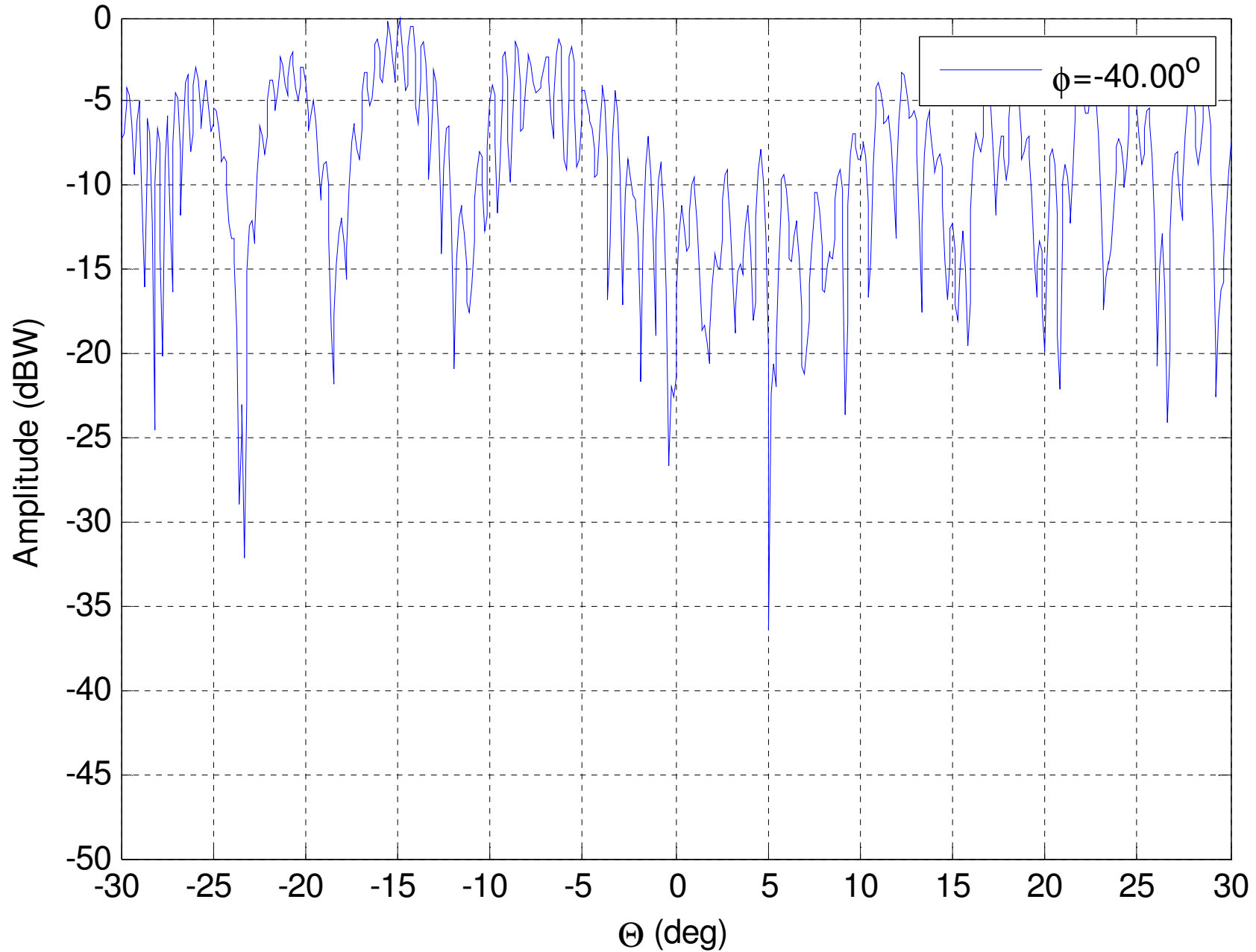
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.63 dBW, Date: 14-Dec-2011



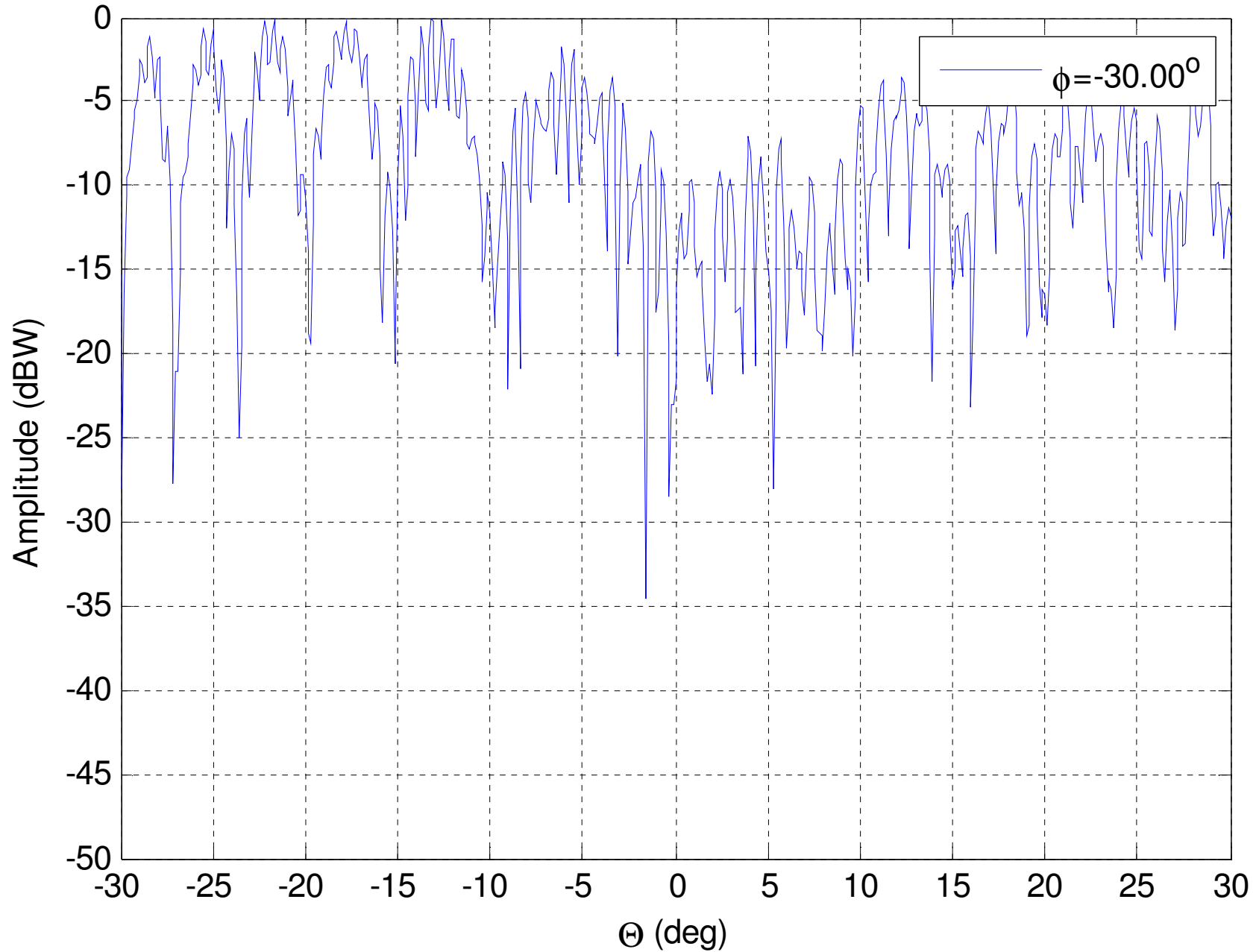
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -8.60 dBW, Date: 14-Dec-2011



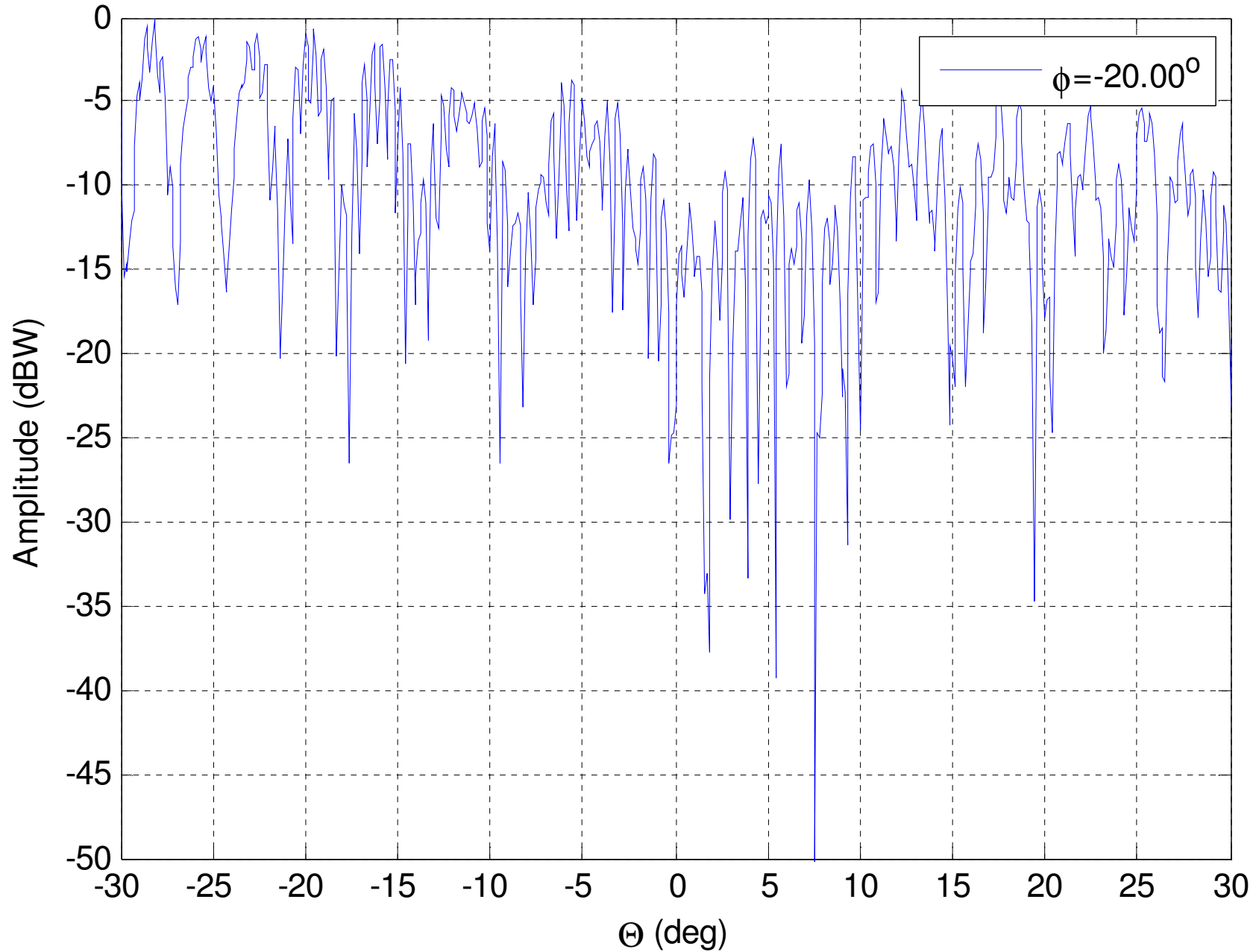
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -8.43 dBW, Date: 14-Dec-2011



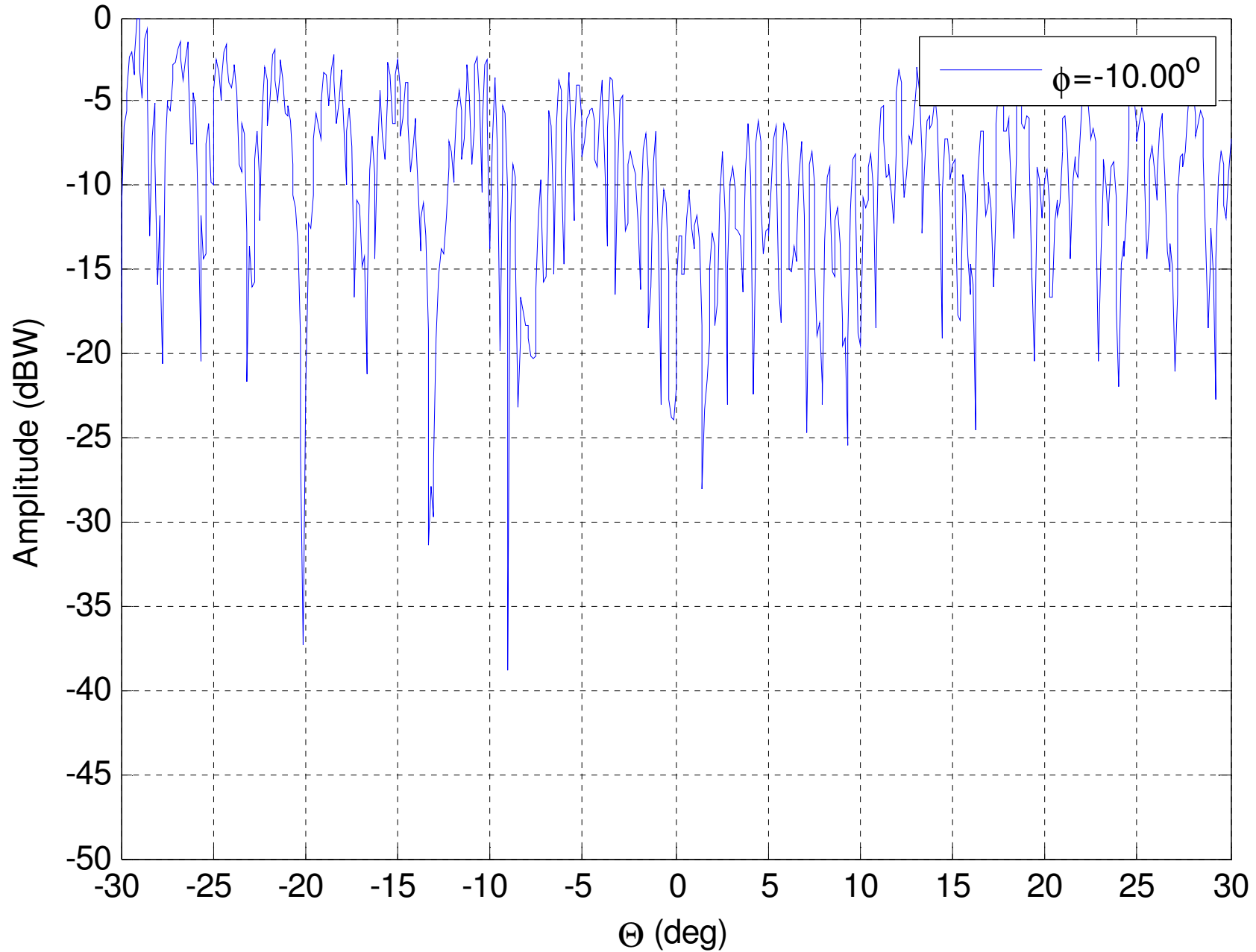
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -6.96 dBW, Date: 14-Dec-2011



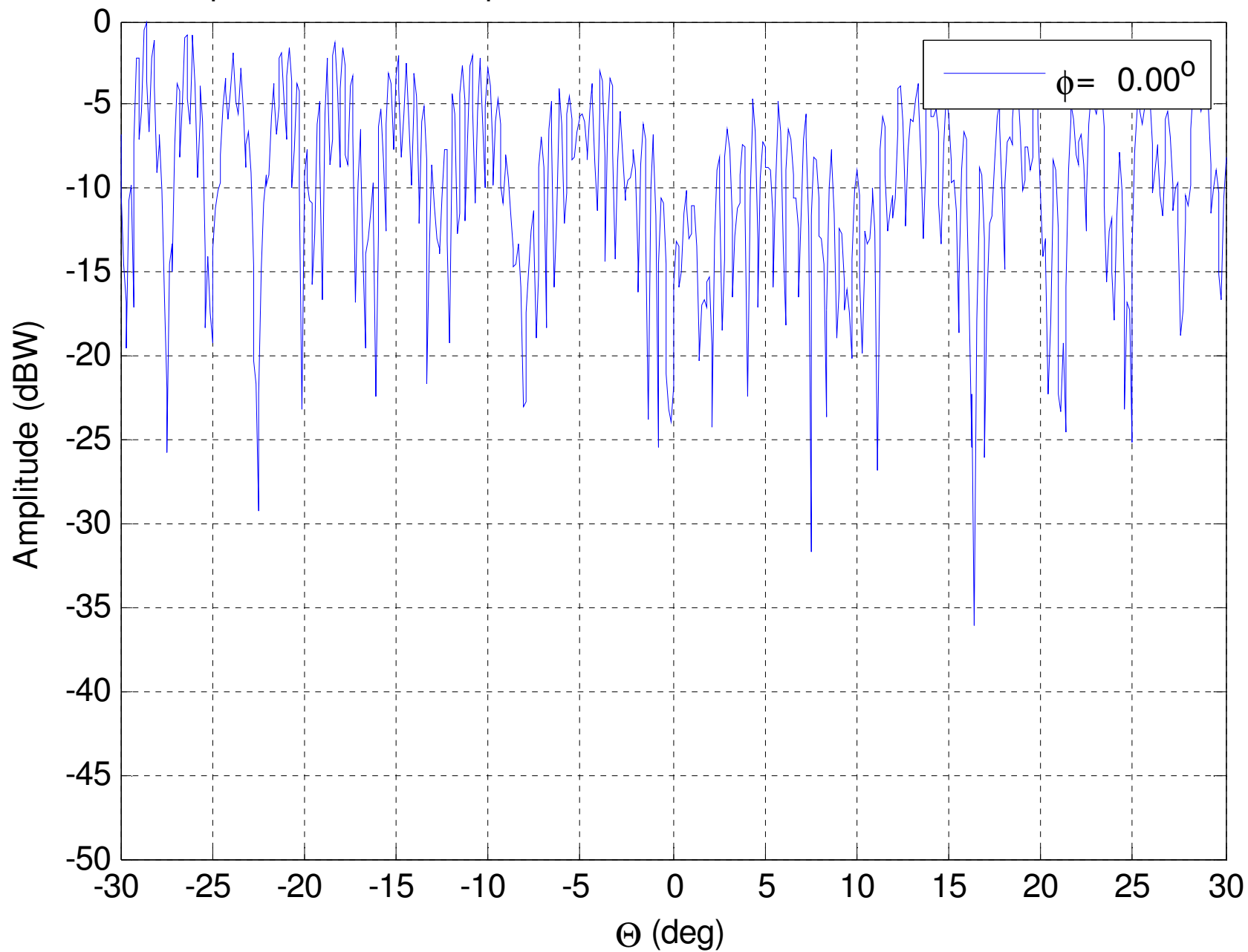
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -8.03 dBW, Date: 14-Dec-2011



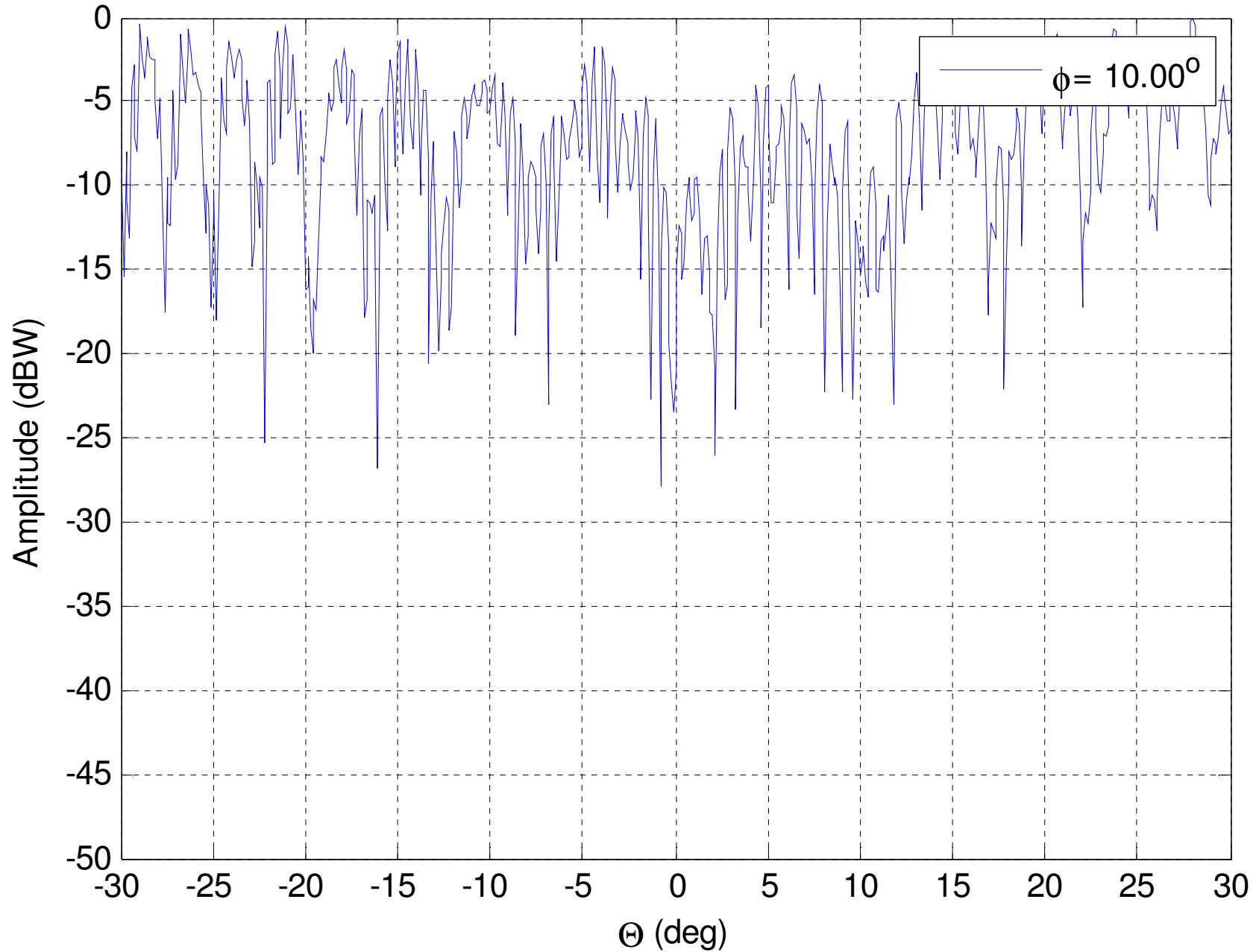
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -8.17 dBW, Date: 14-Dec-2011



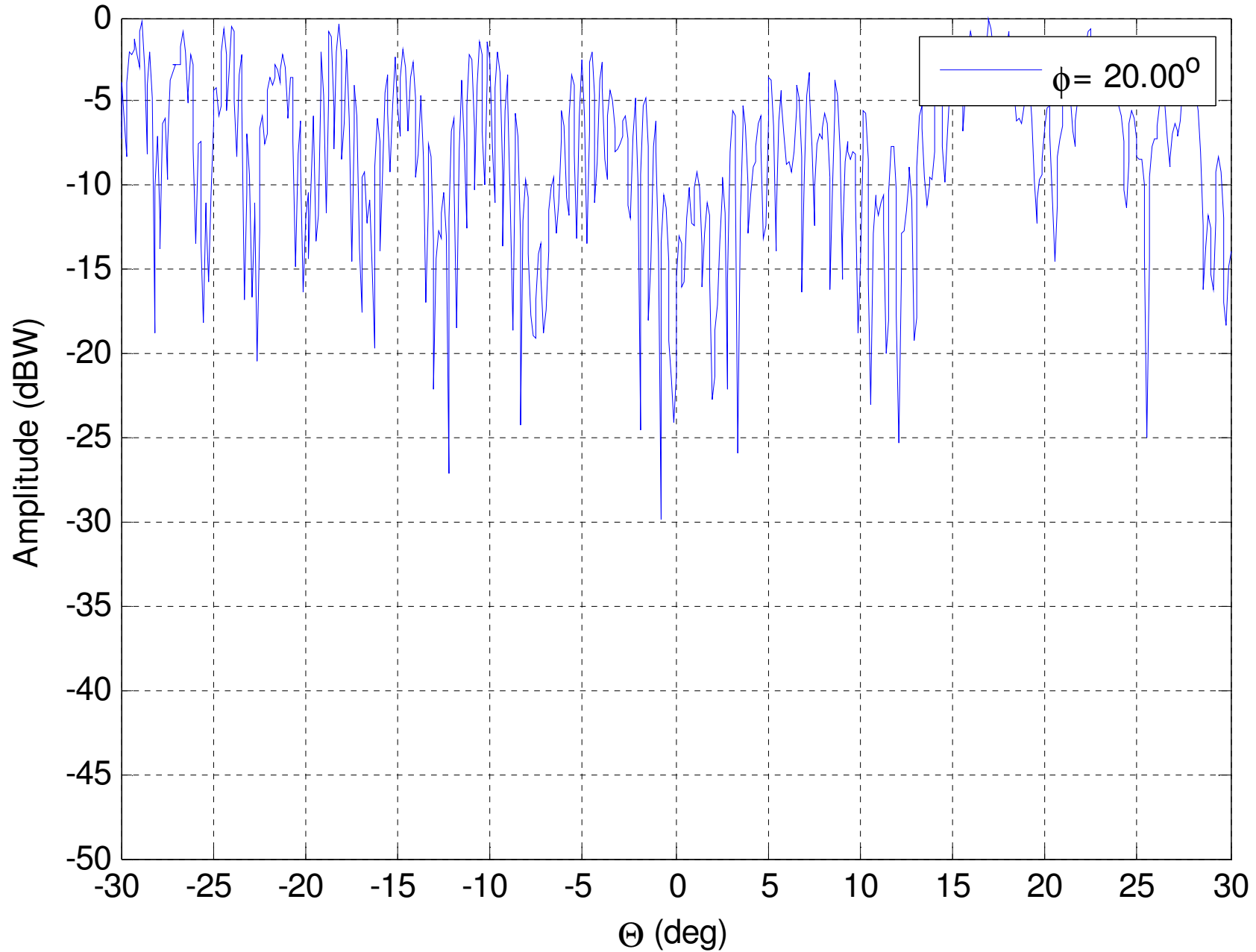
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -9.06 dBW, Date: 14-Dec-2011



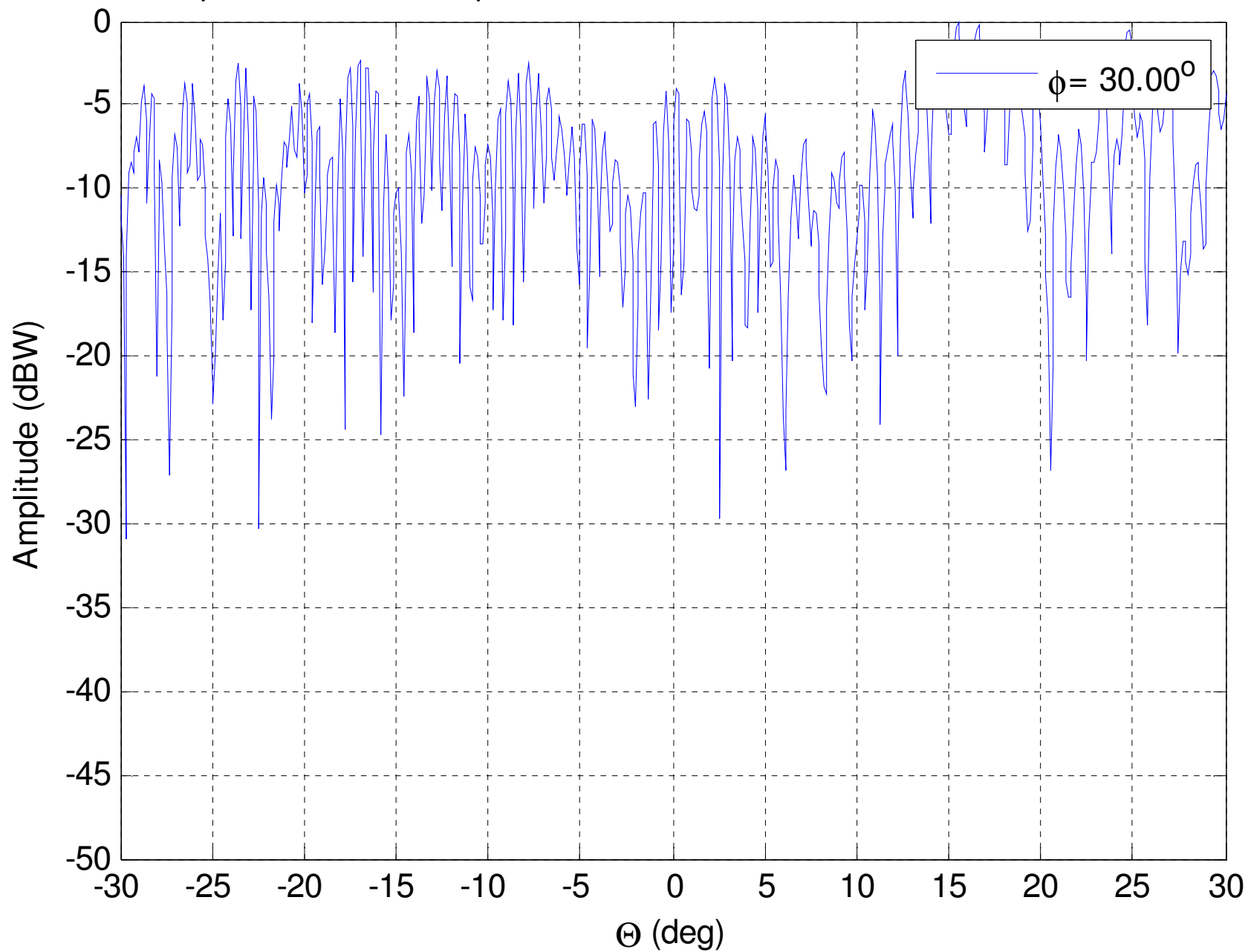
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.84 dBW, Date: 14-Dec-2011



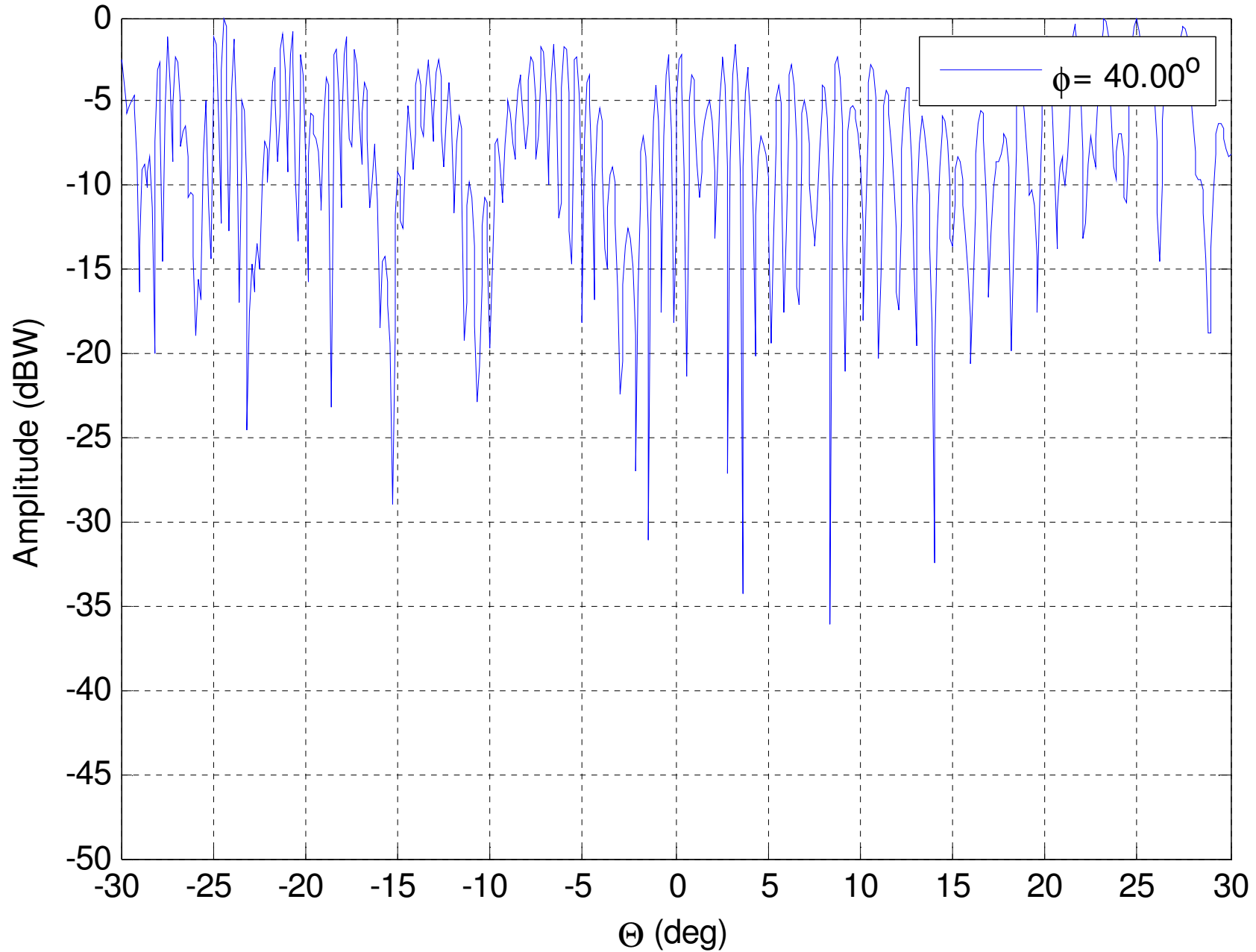
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -8.69 dBW, Date: 14-Dec-2011



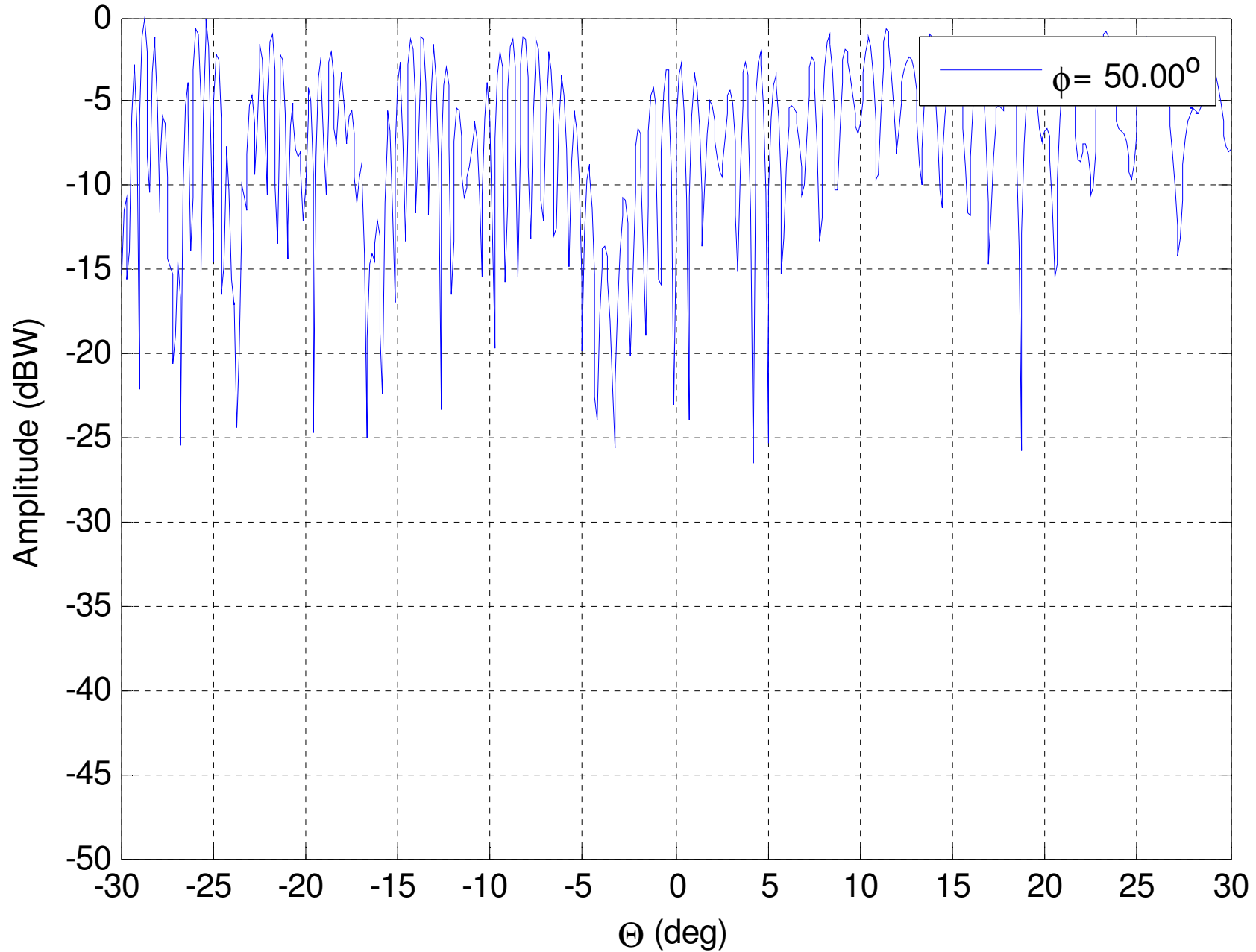
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -10.34 dBW, Date: 14-Dec-2011



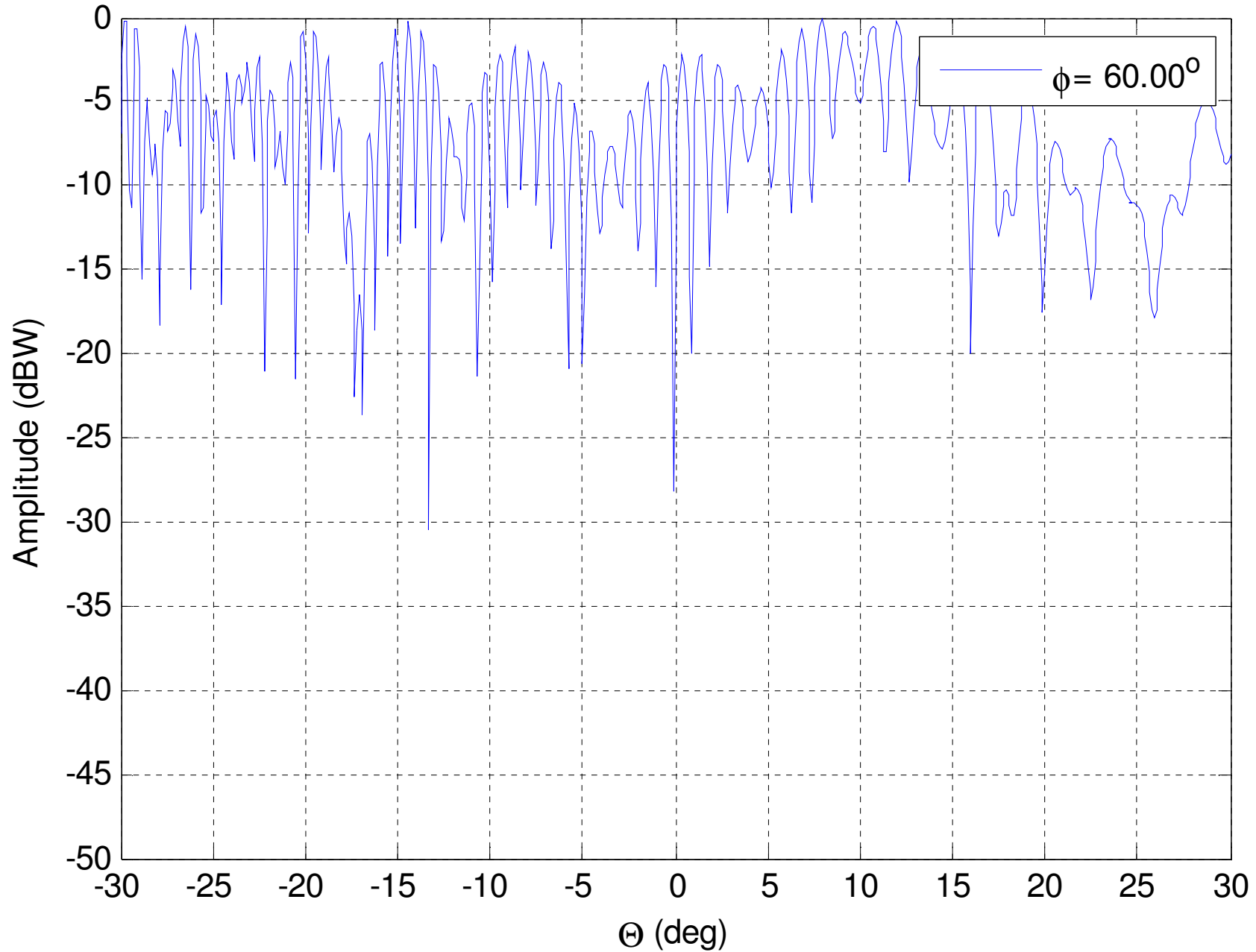
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.70 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

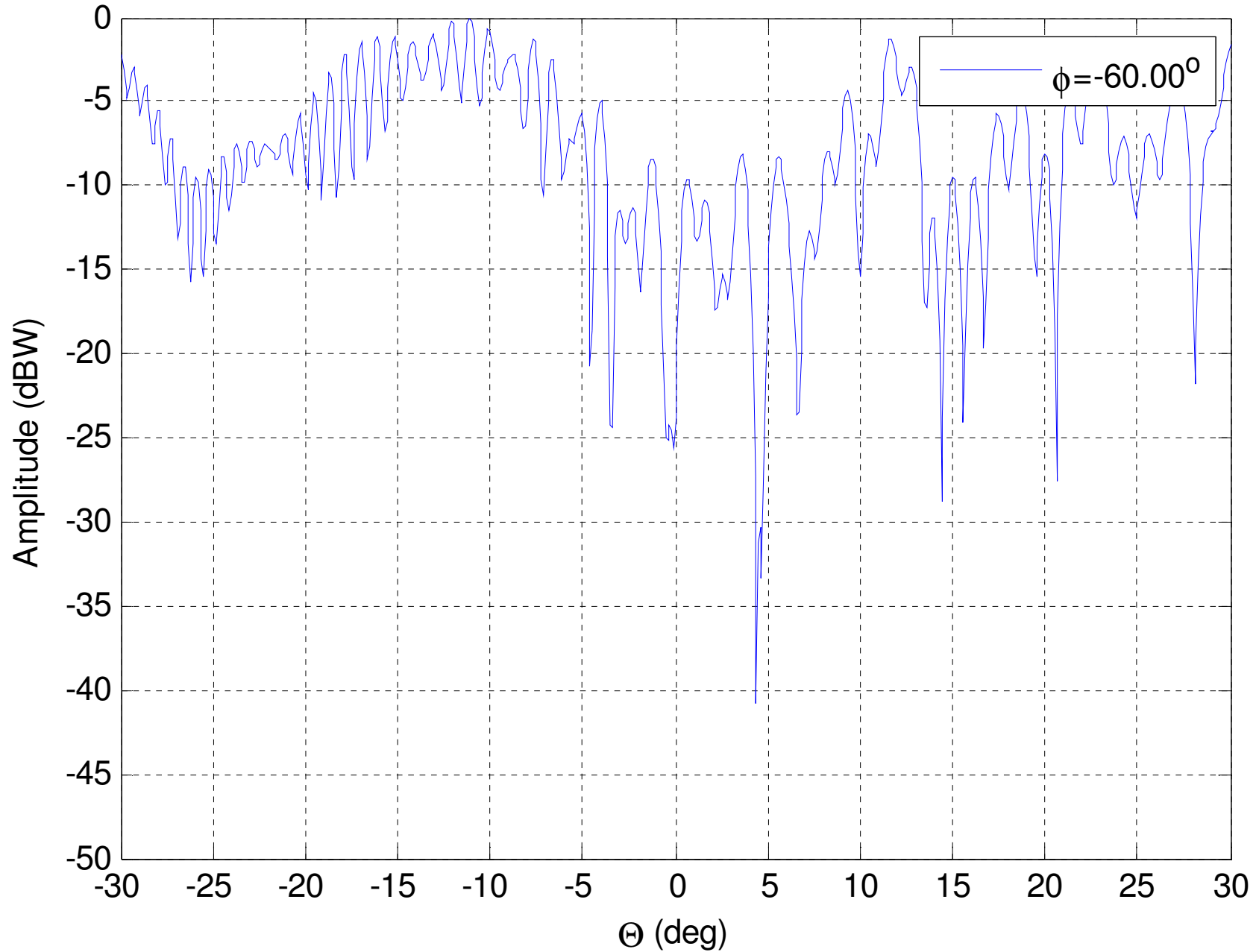
Input file: tx-17.7-rhcp-60.cut, Peak: -9.96 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

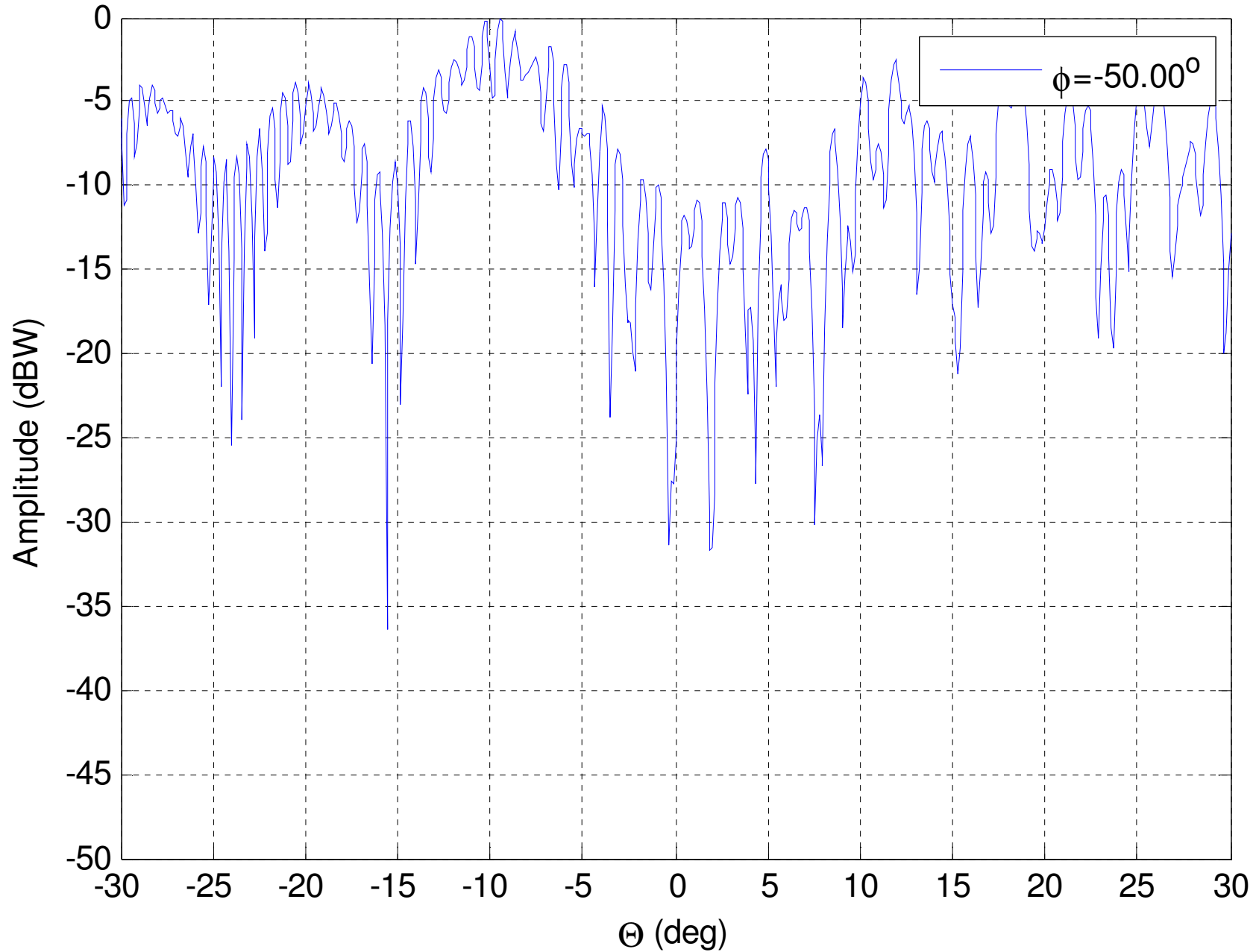
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -9.49 dBW, Date: 14-Dec-2011



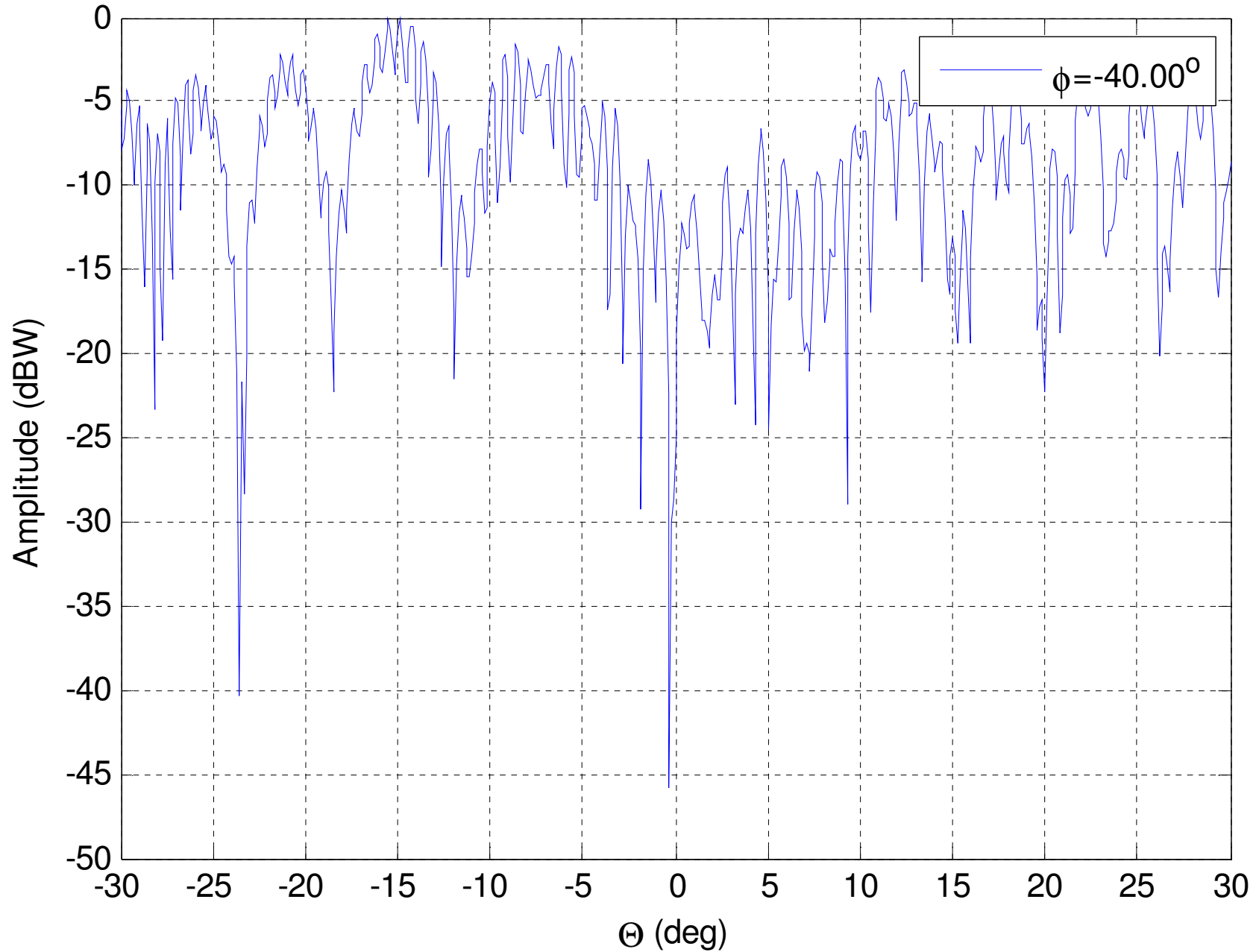
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -8.27 dBW, Date: 14-Dec-2011



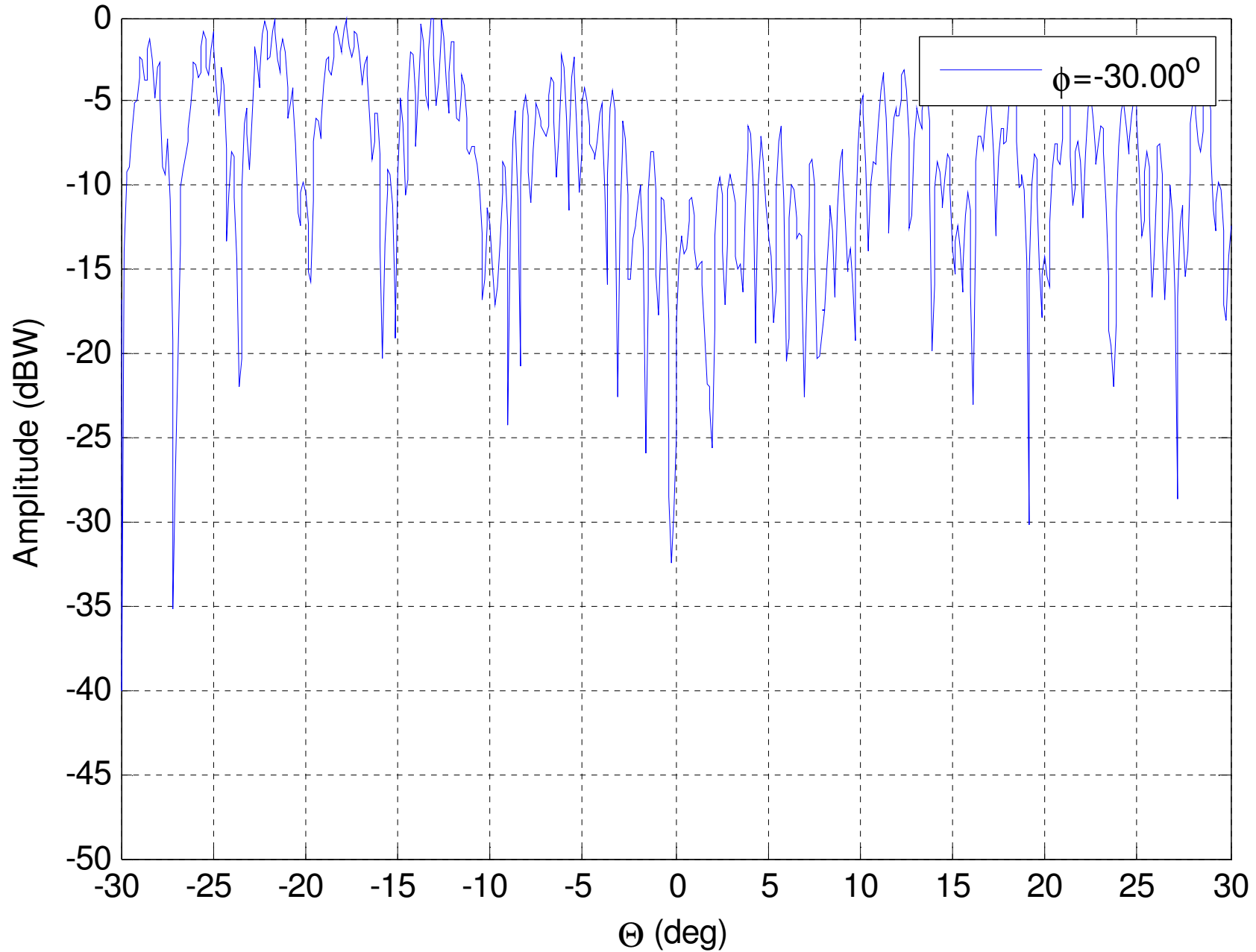
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -8.37 dBW, Date: 14-Dec-2011



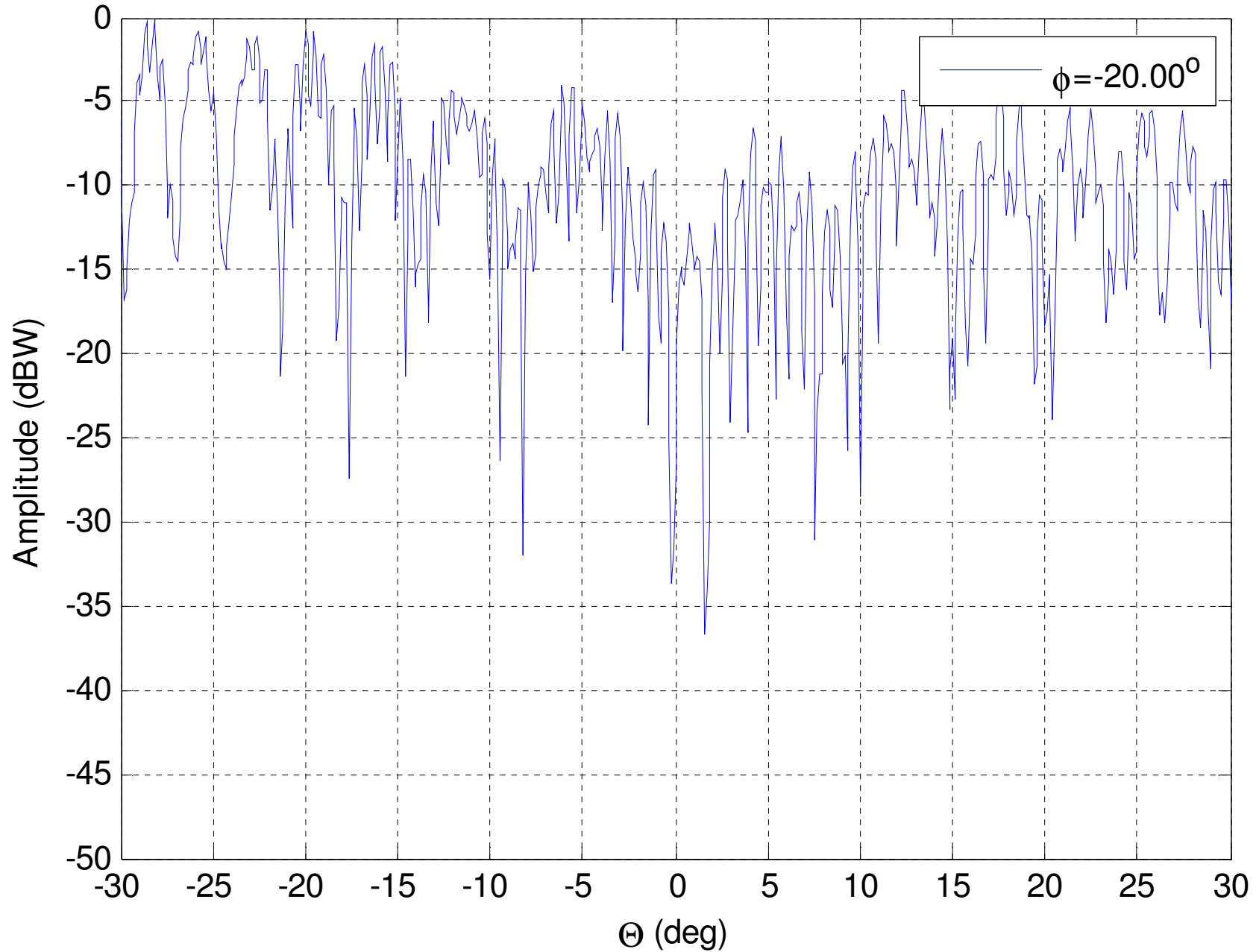
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -8.30 dBW, Date: 14-Dec-2011



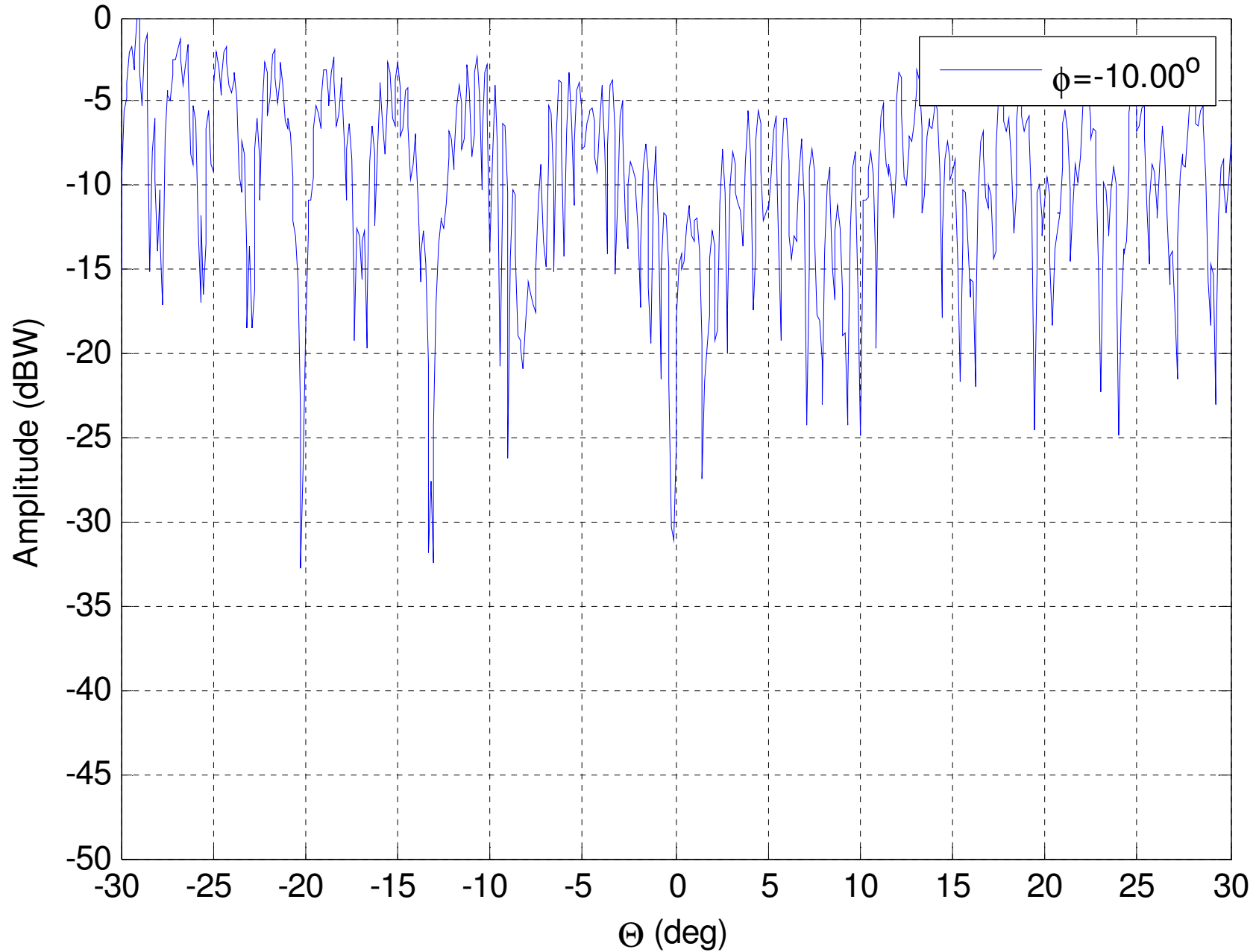
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -6.84 dBW, Date: 14-Dec-2011



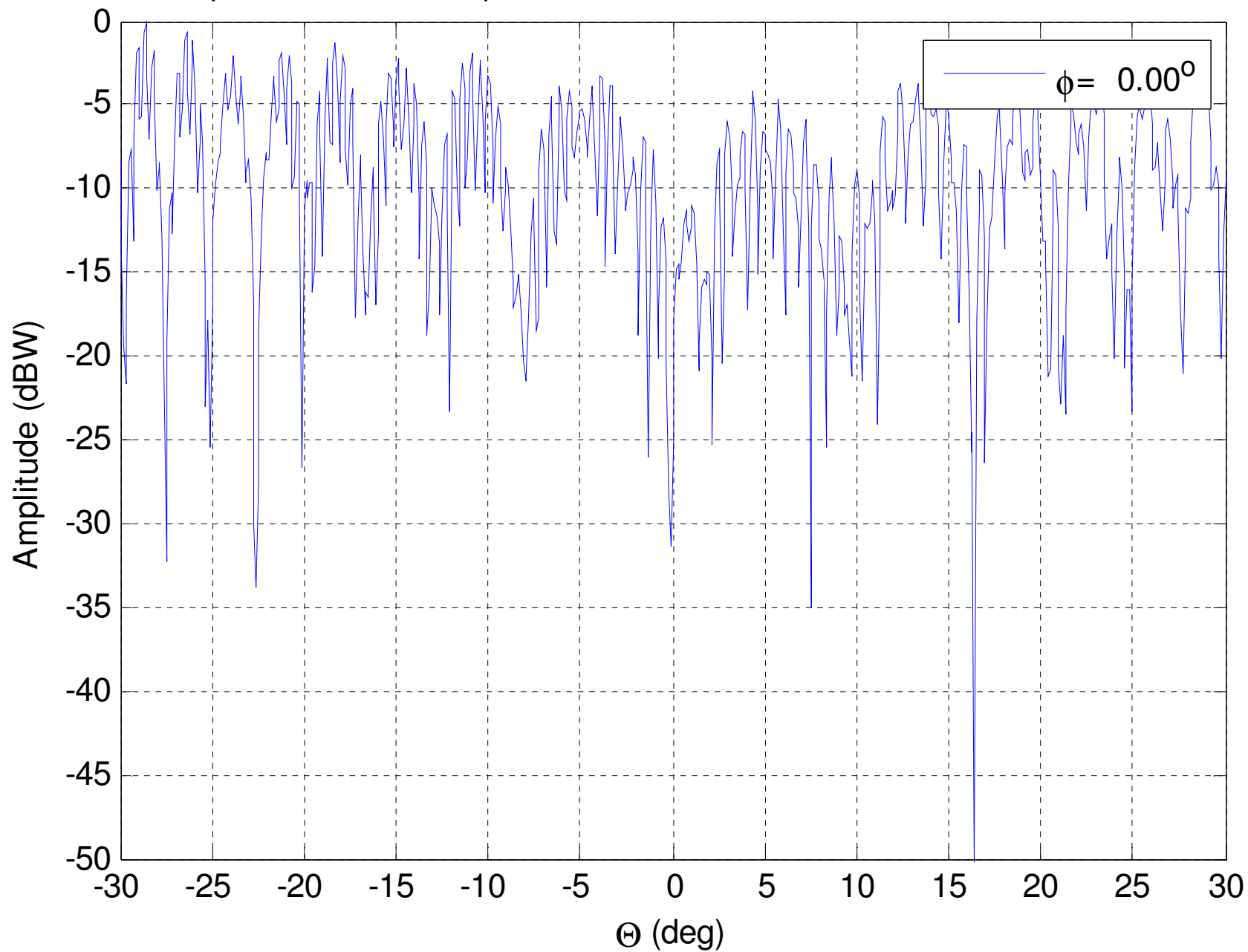
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -8.06 dBW, Date: 14-Dec-2011



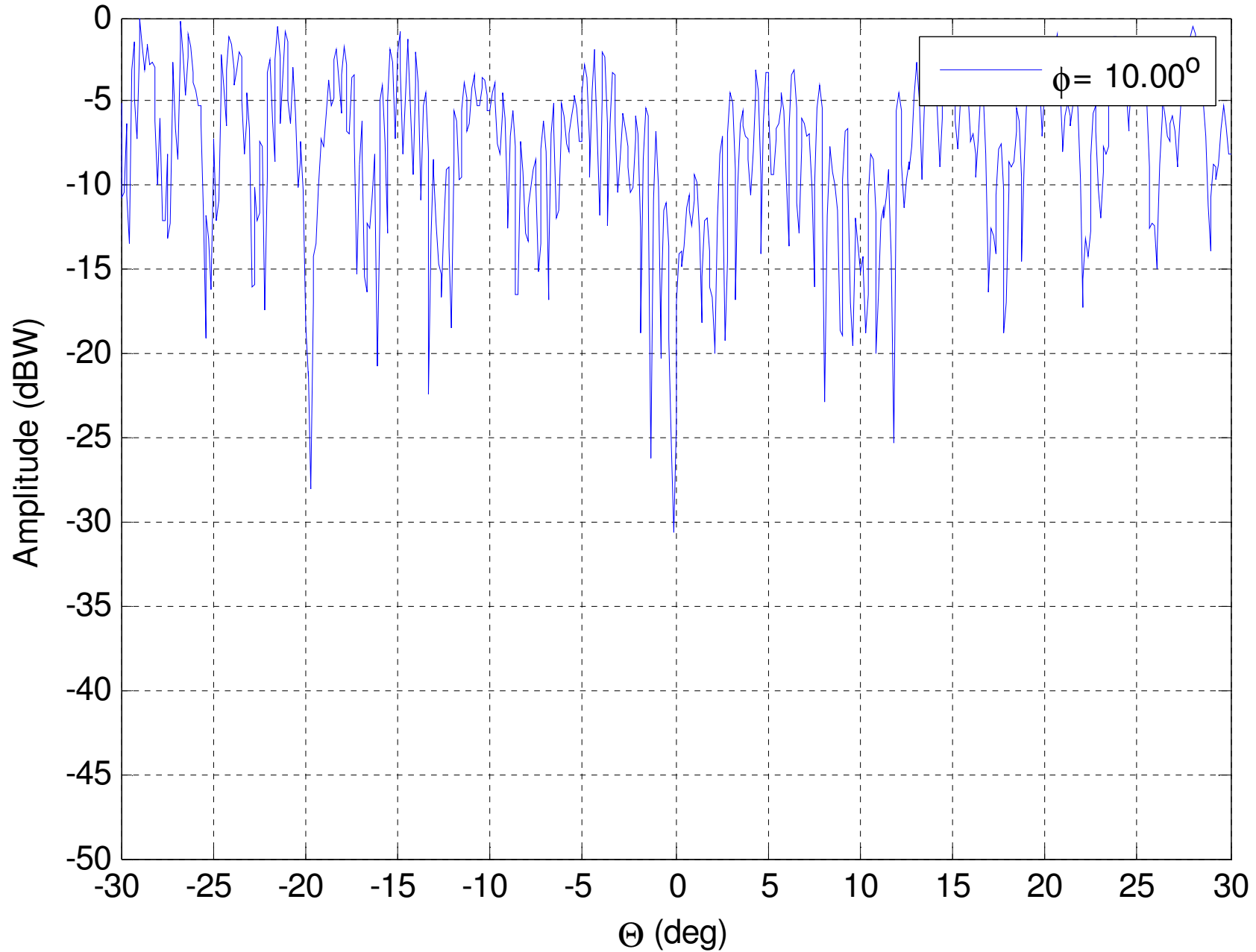
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -8.16 dBW, Date: 14-Dec-2011



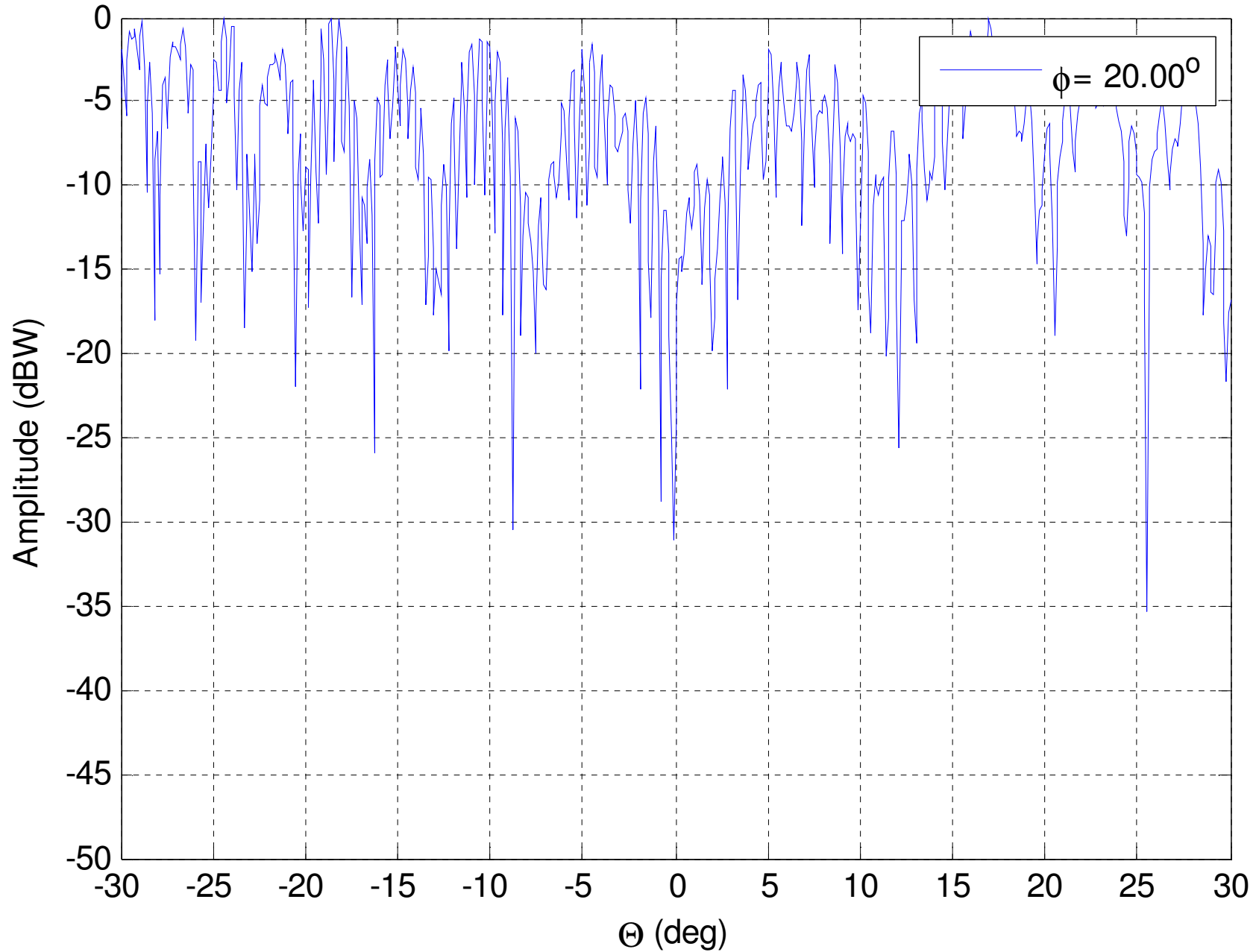
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -9.18 dBW, Date: 14-Dec-2011



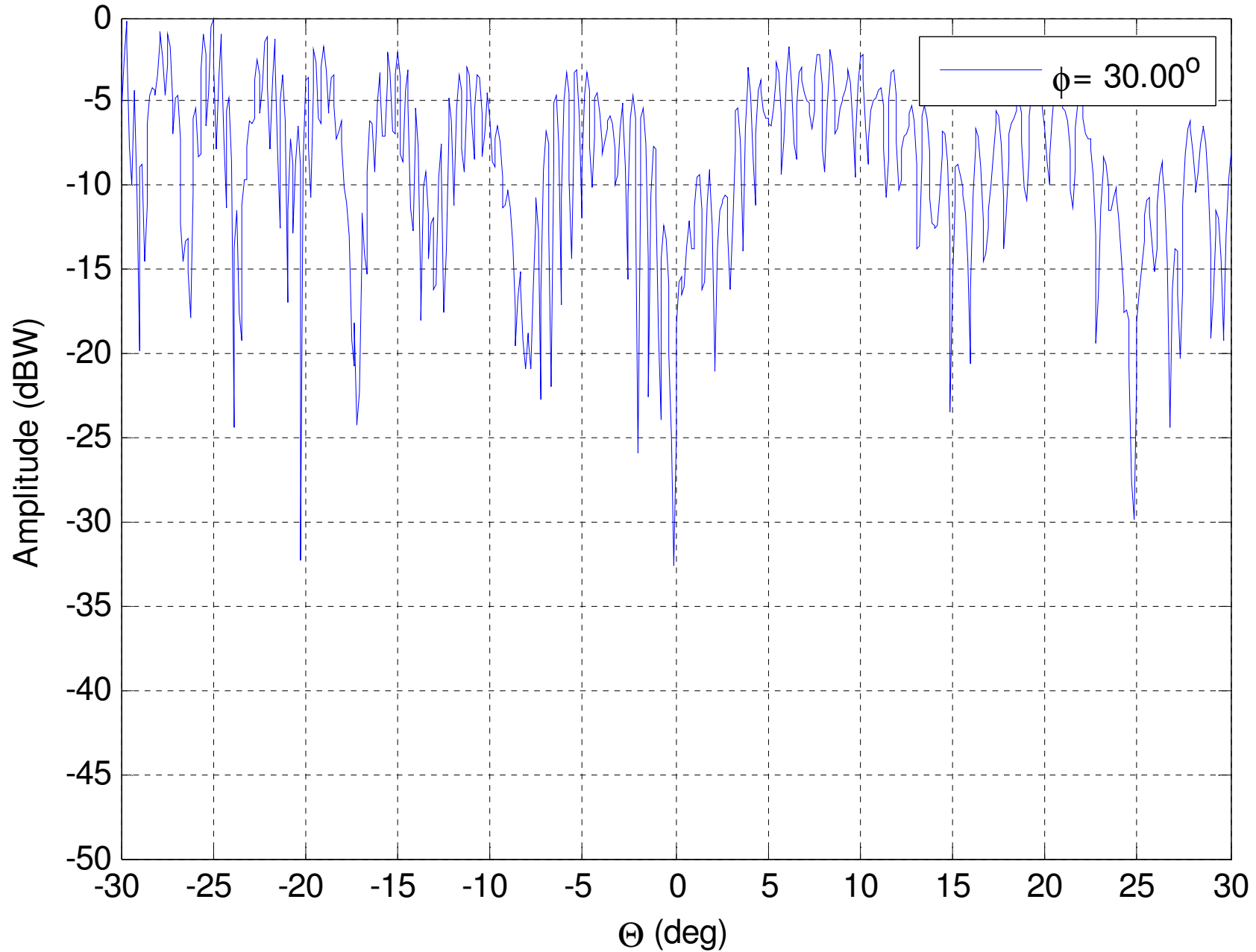
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -9.31 dBW, Date: 14-Dec-2011



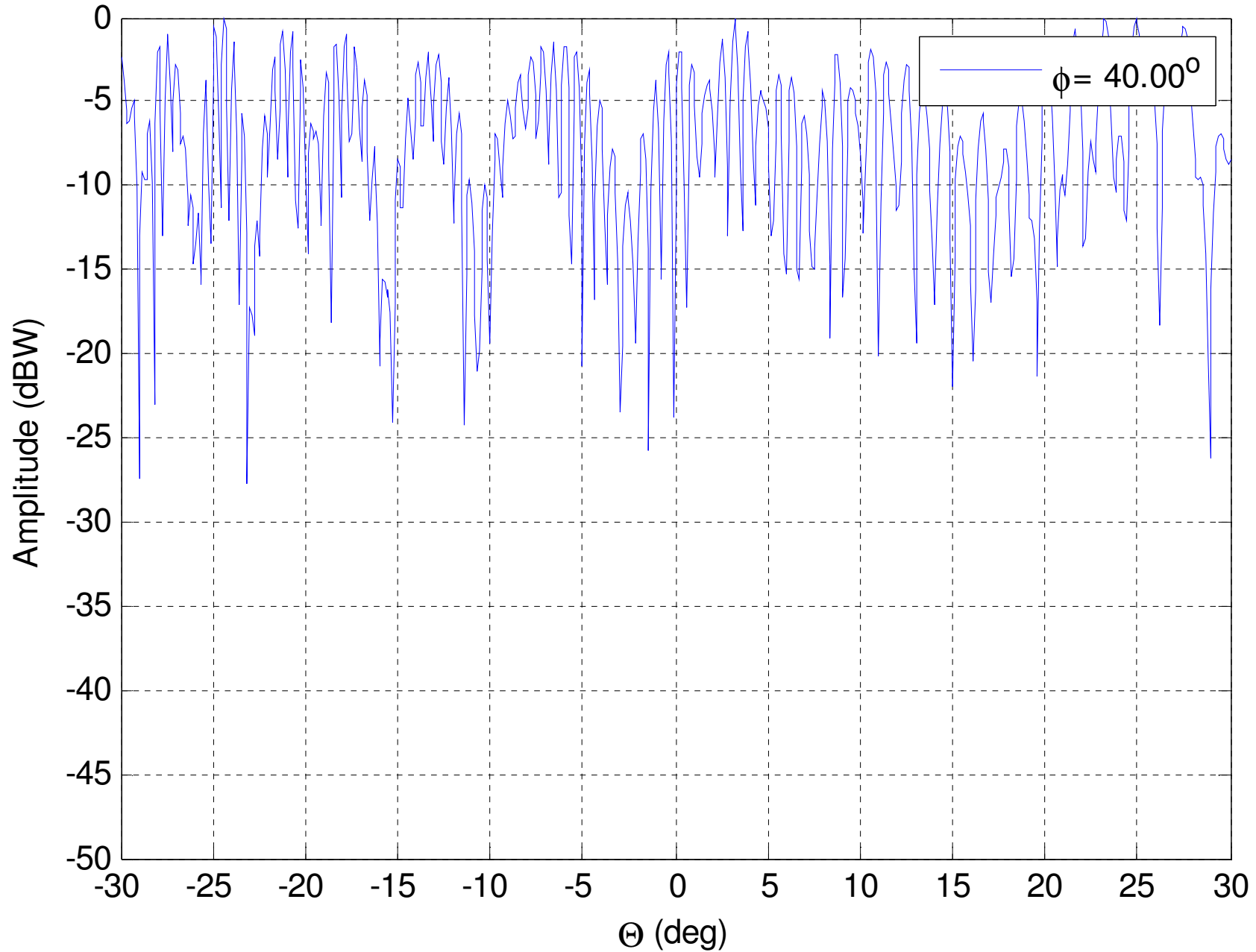
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -8.47 dBW, Date: 14-Dec-2011



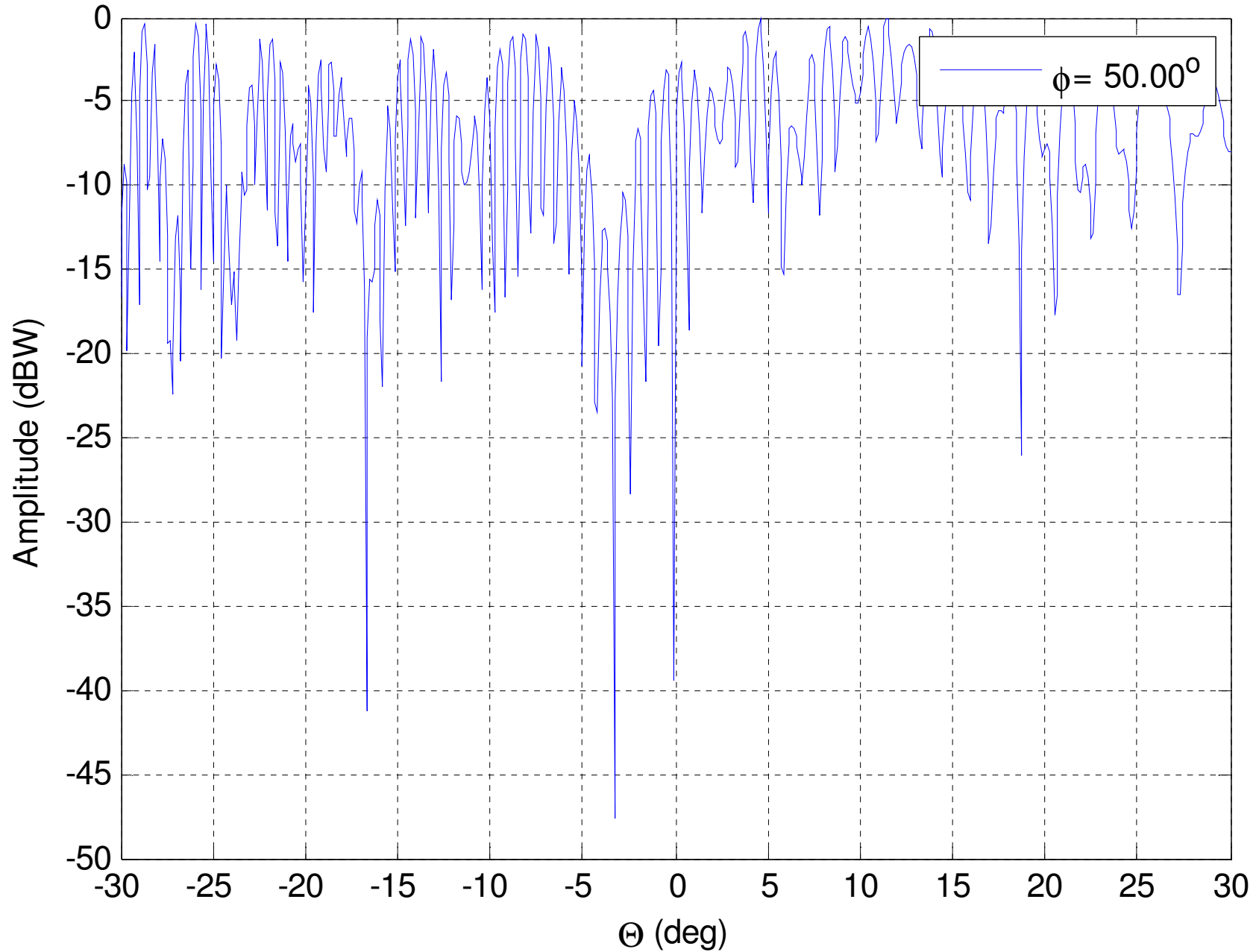
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -10.33 dBW, Date: 14-Dec-2011



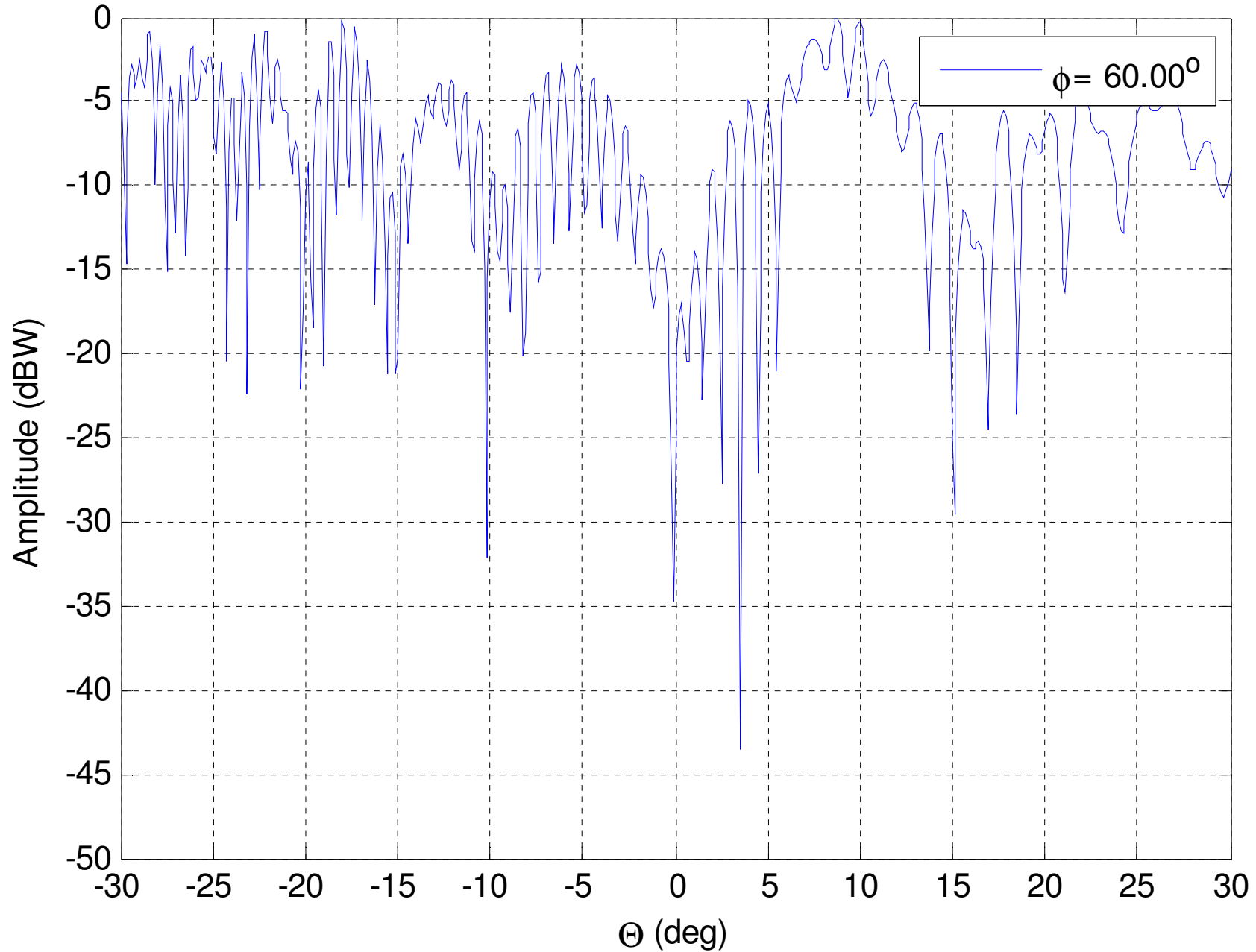
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -9.31 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -9.11 dBW, Date: 14-Dec-2011



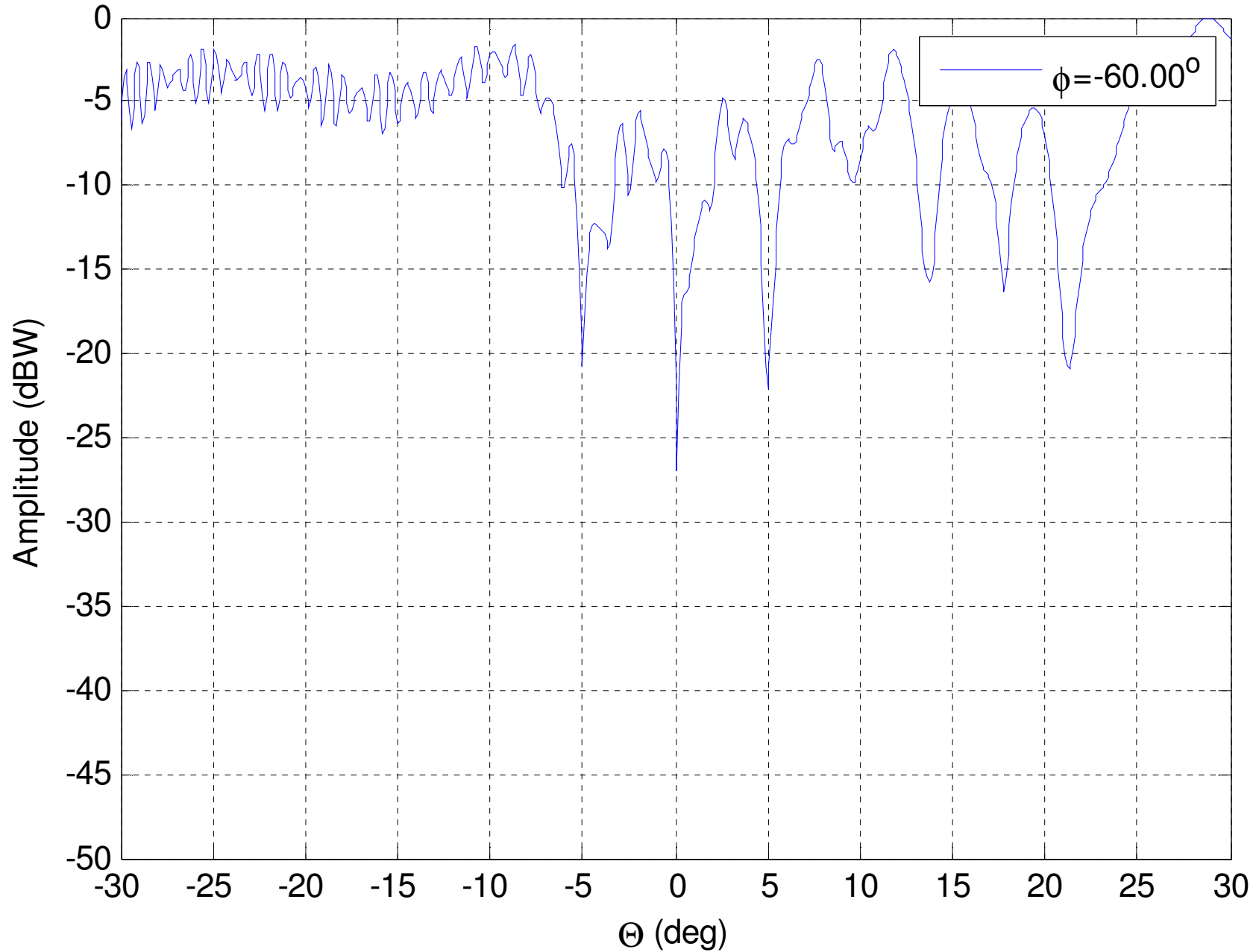
Spot Beam09, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

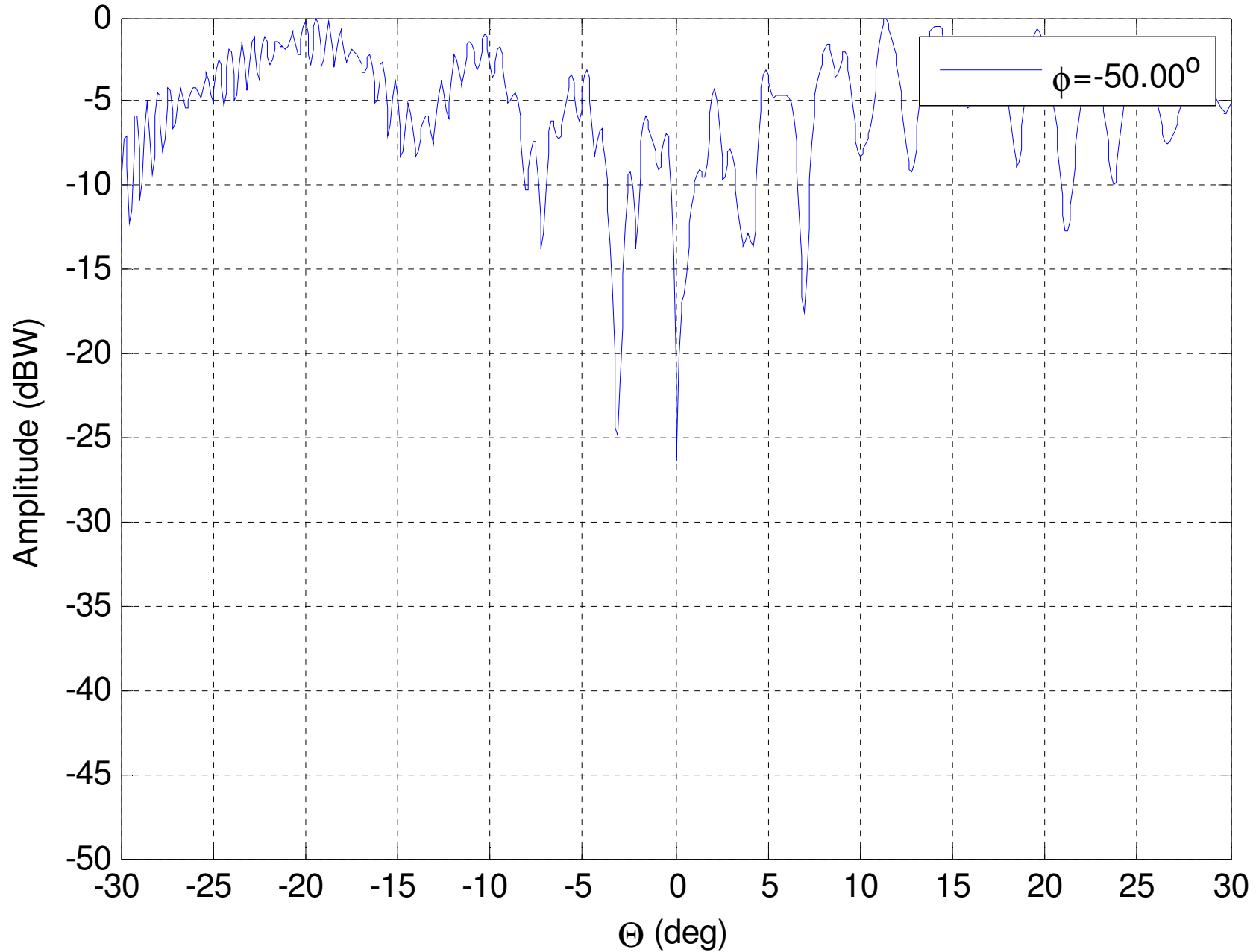
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -8.81 dBW, Date: 14-Dec-2011



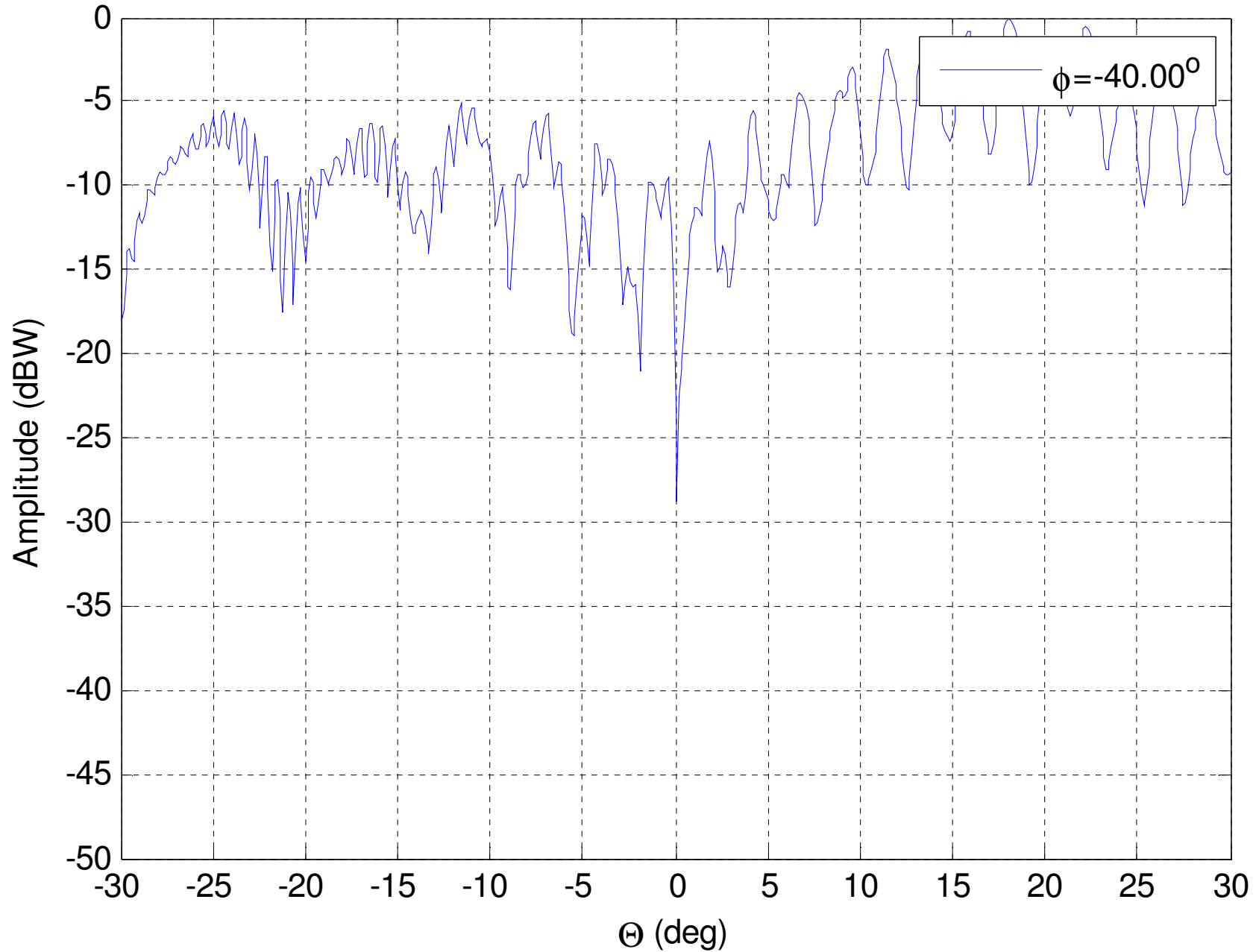
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -9.43 dBW, Date: 14-Dec-2011



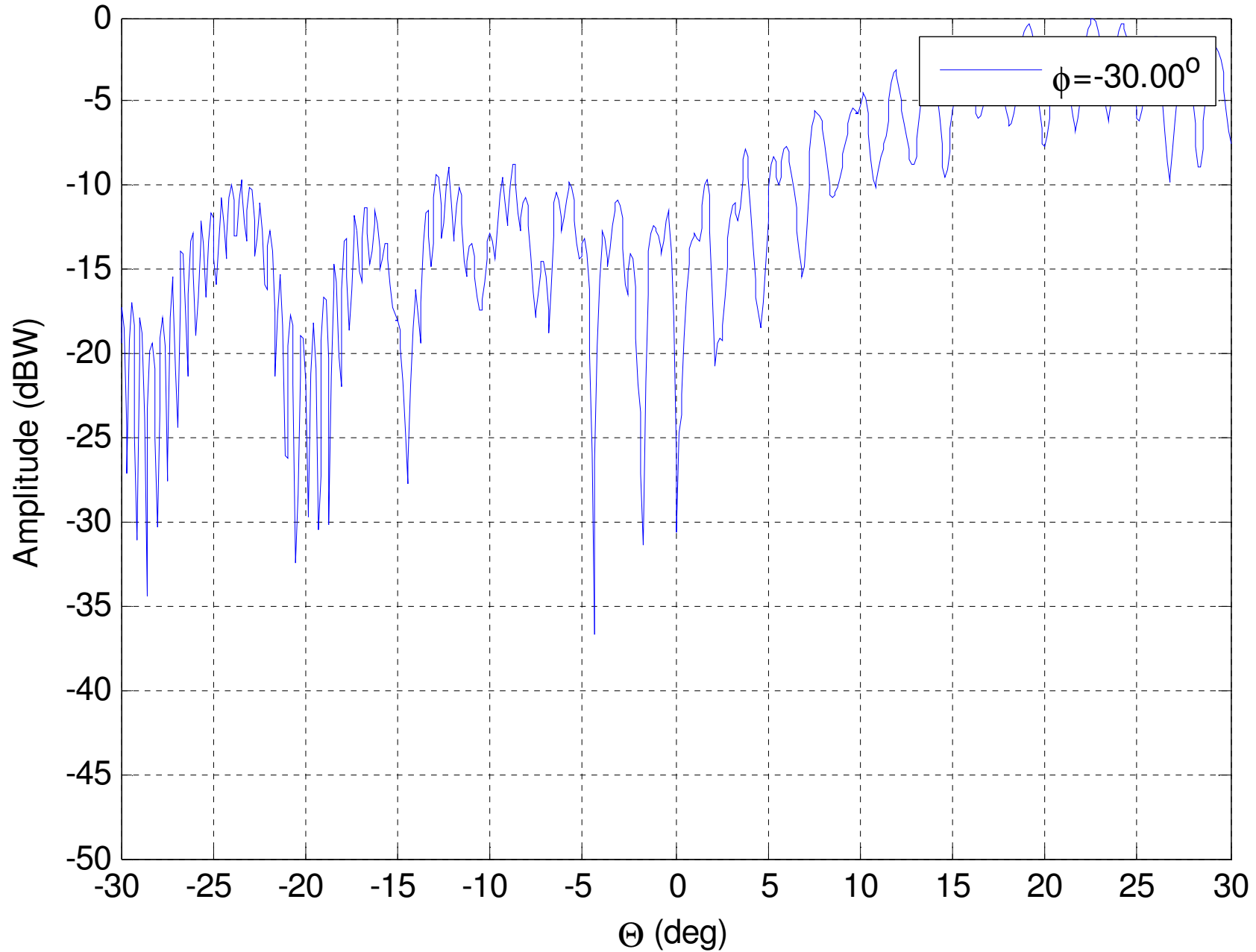
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -6.56 dBW, Date: 14-Dec-2011



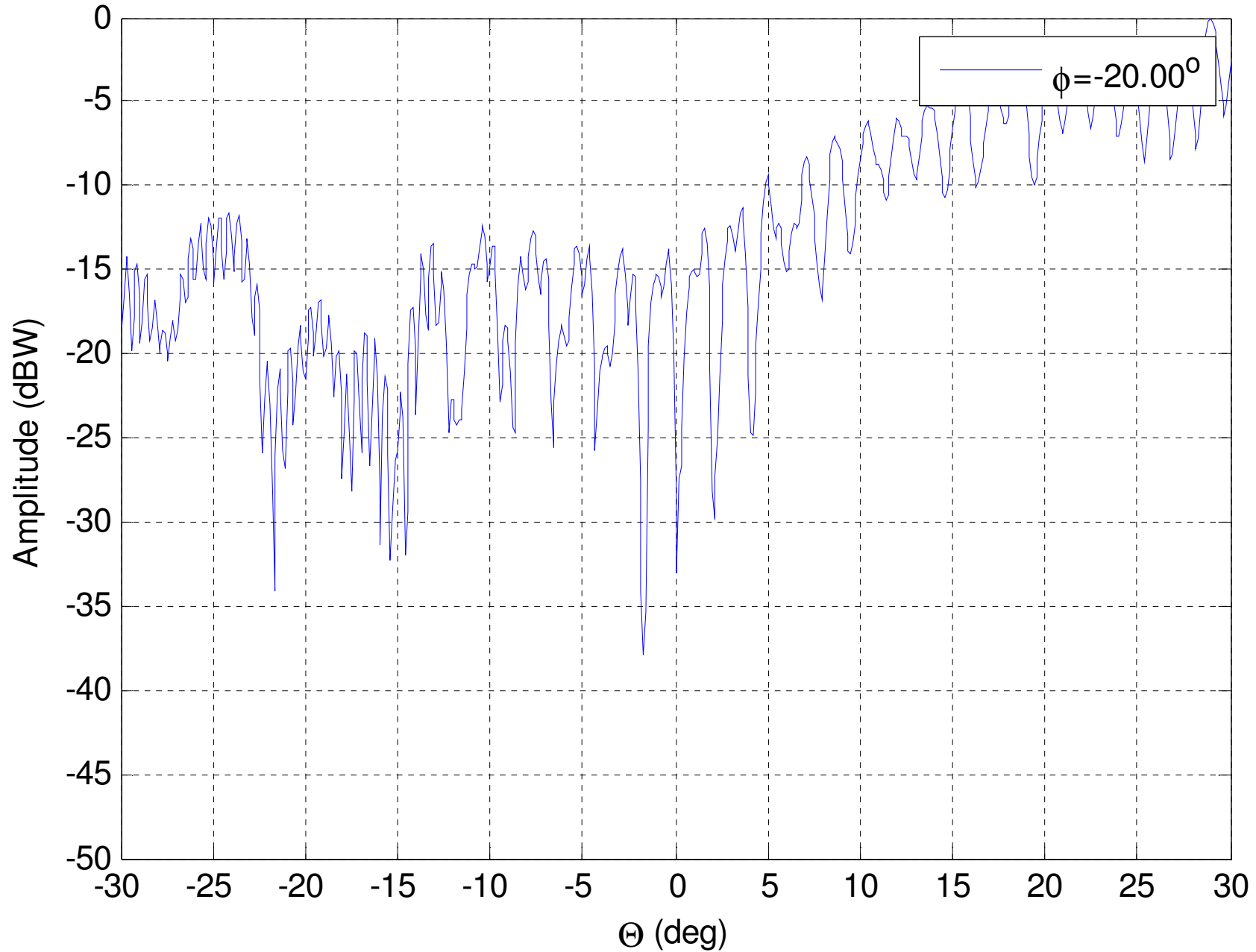
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -4.52 dBW, Date: 14-Dec-2011



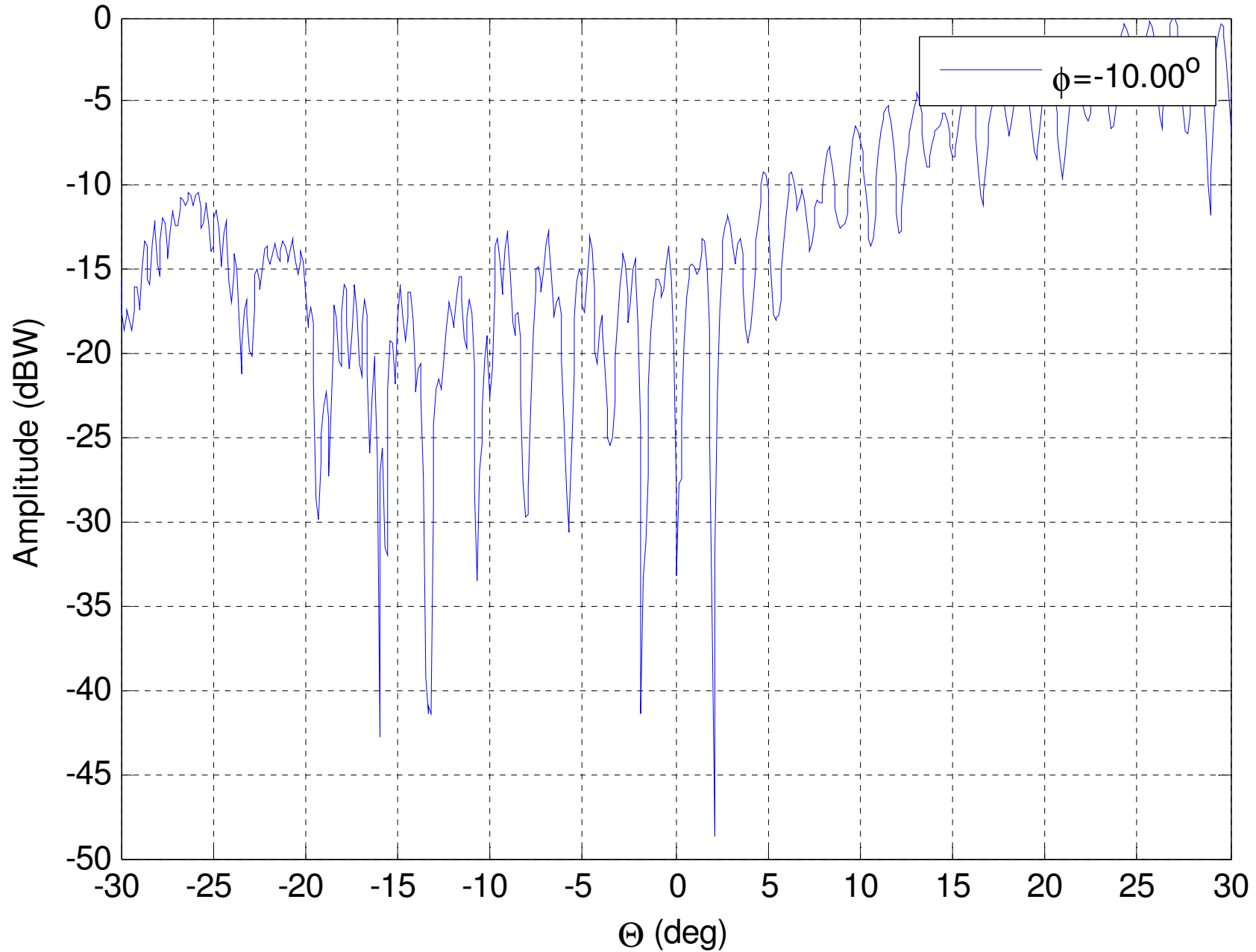
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -2.09 dBW, Date: 14-Dec-2011



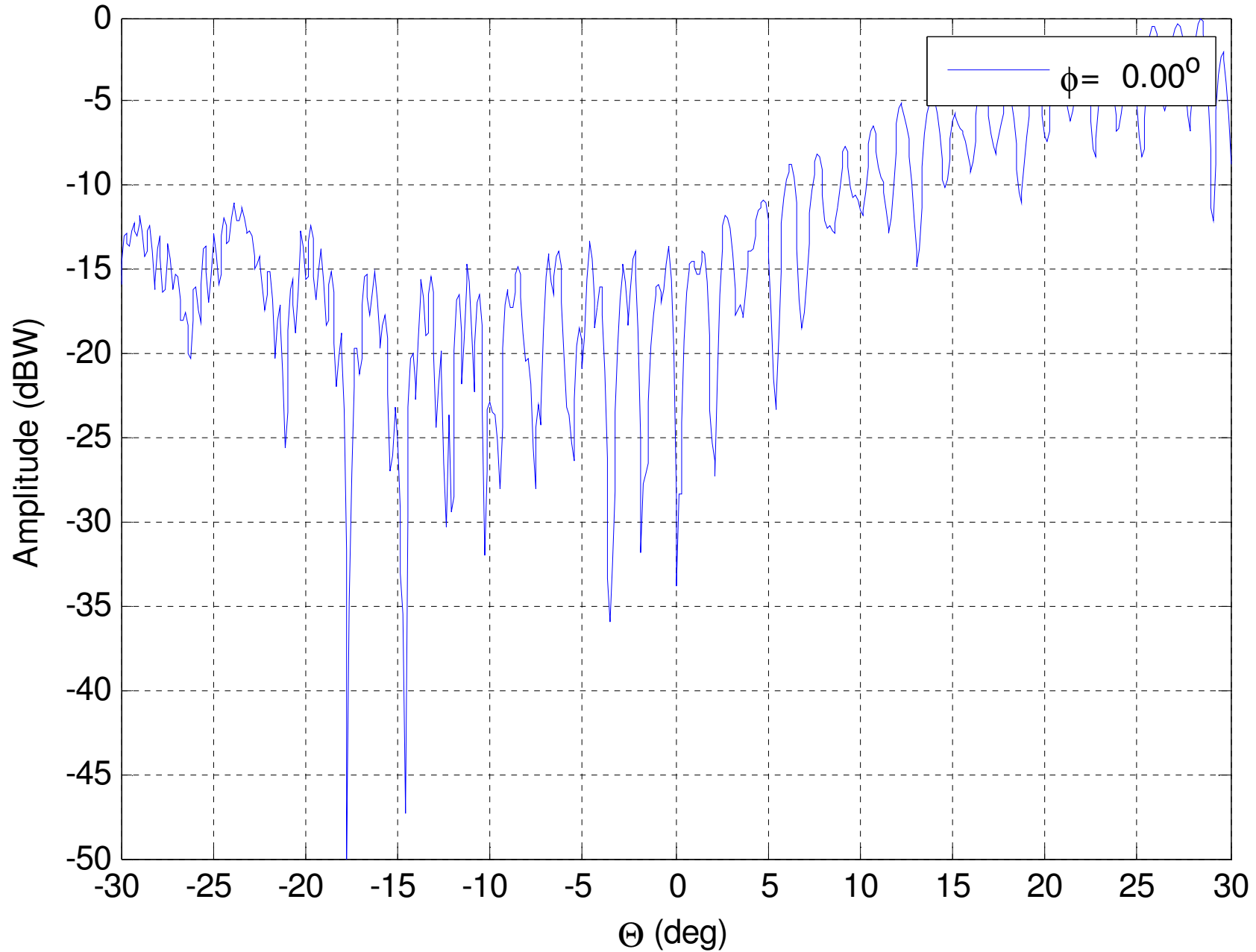
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -2.19 dBW, Date: 14-Dec-2011



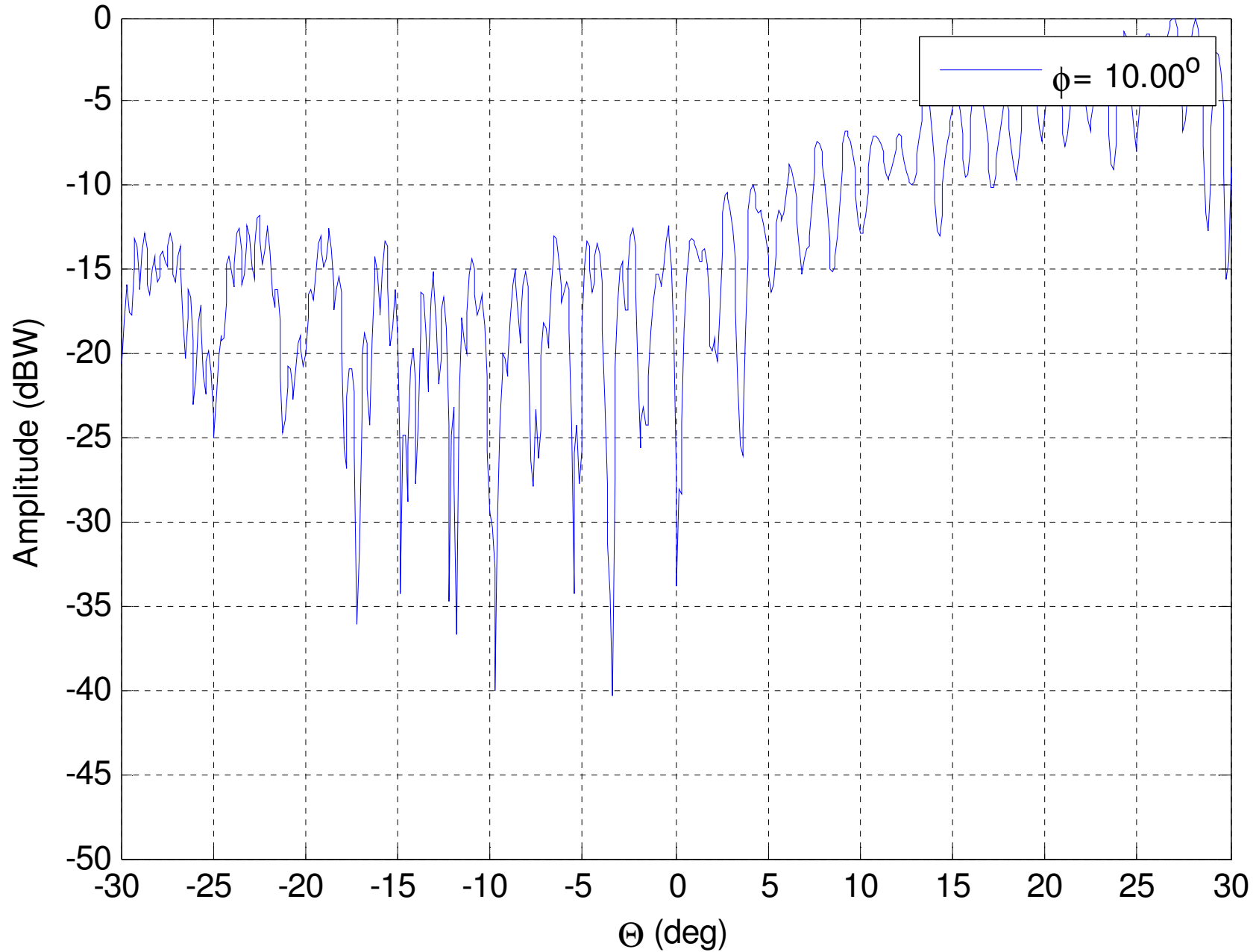
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -2.11 dBW, Date: 14-Dec-2011



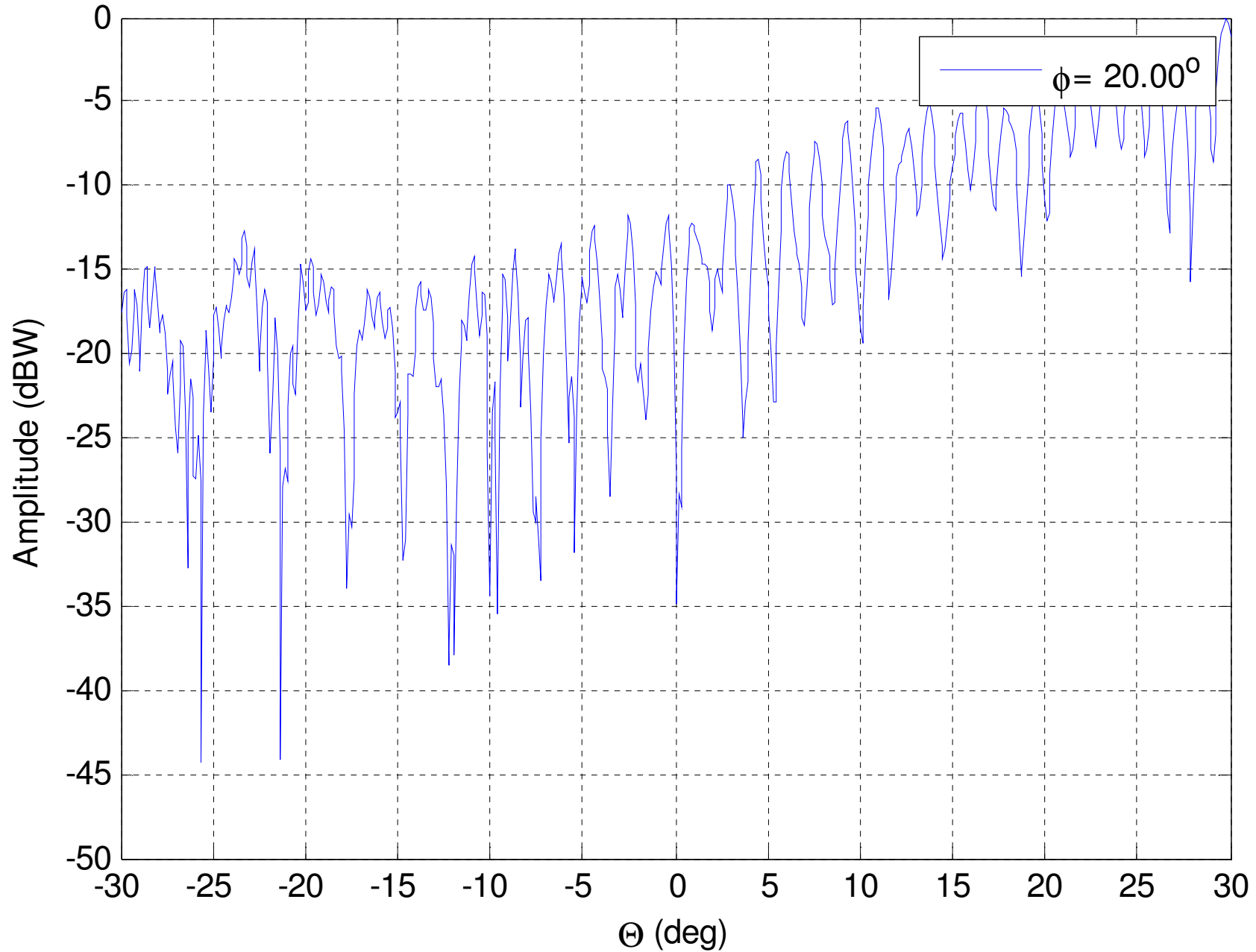
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -3.14 dBW, Date: 14-Dec-2011



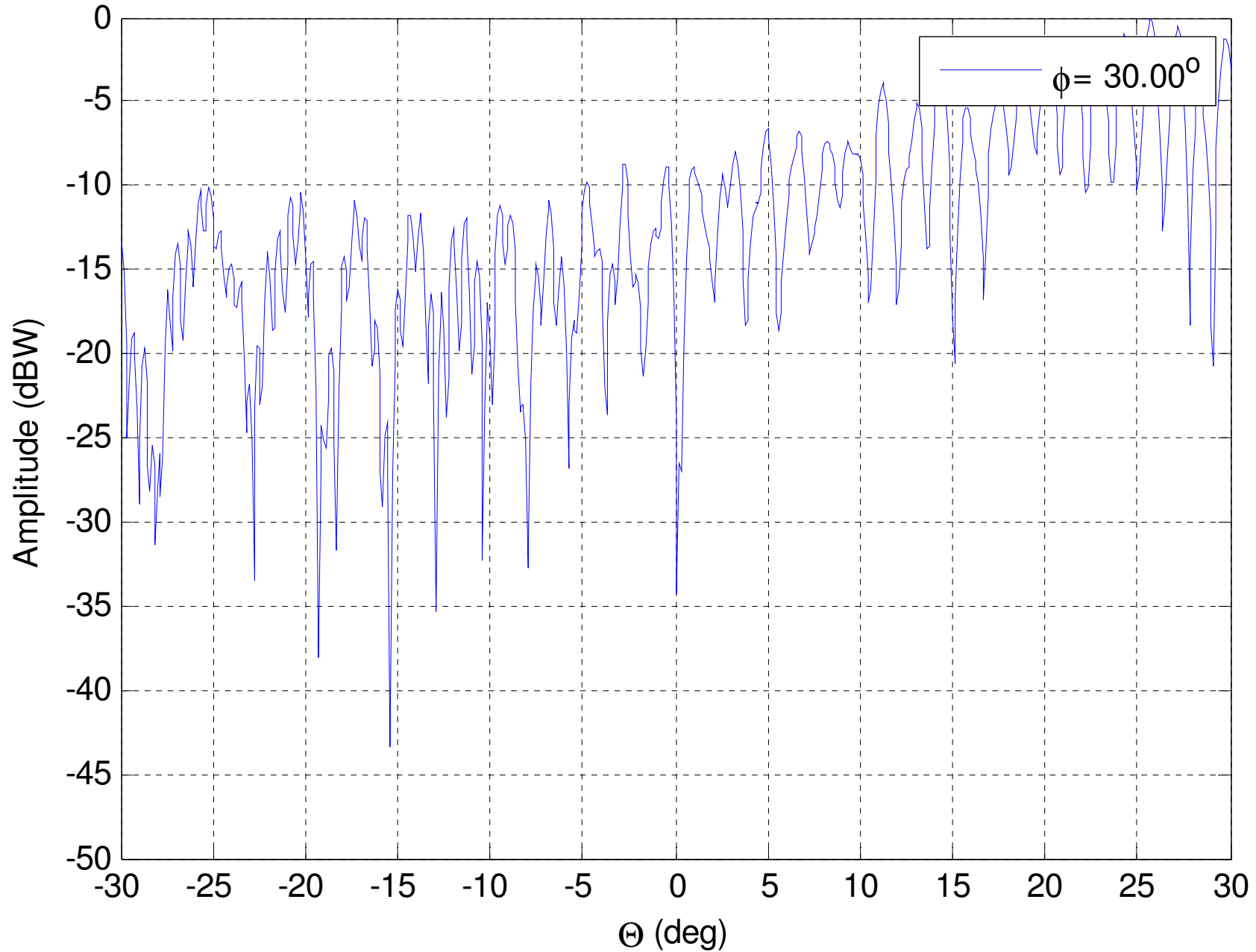
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -3.64 dBW, Date: 14-Dec-2011



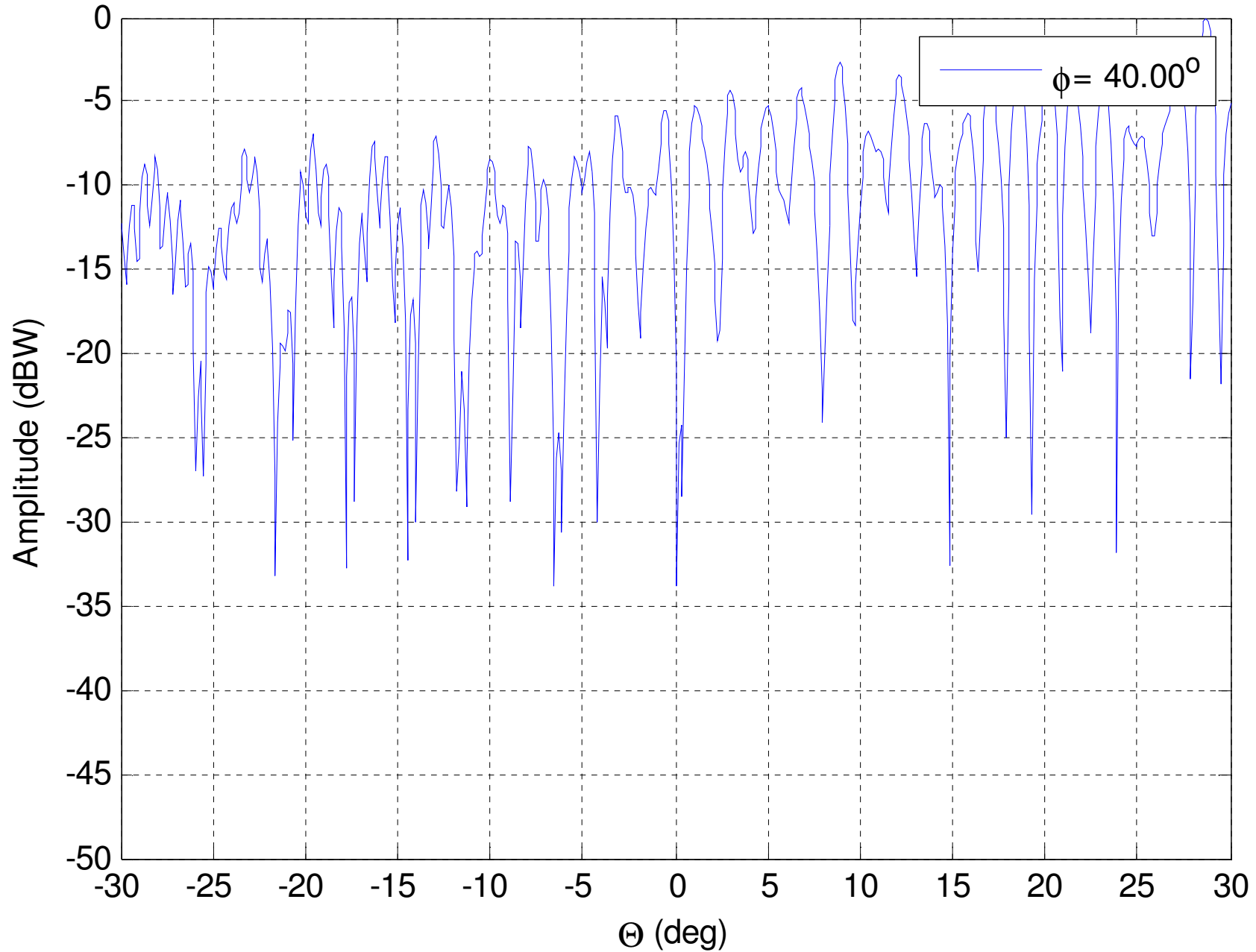
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -6.62 dBW, Date: 14-Dec-2011



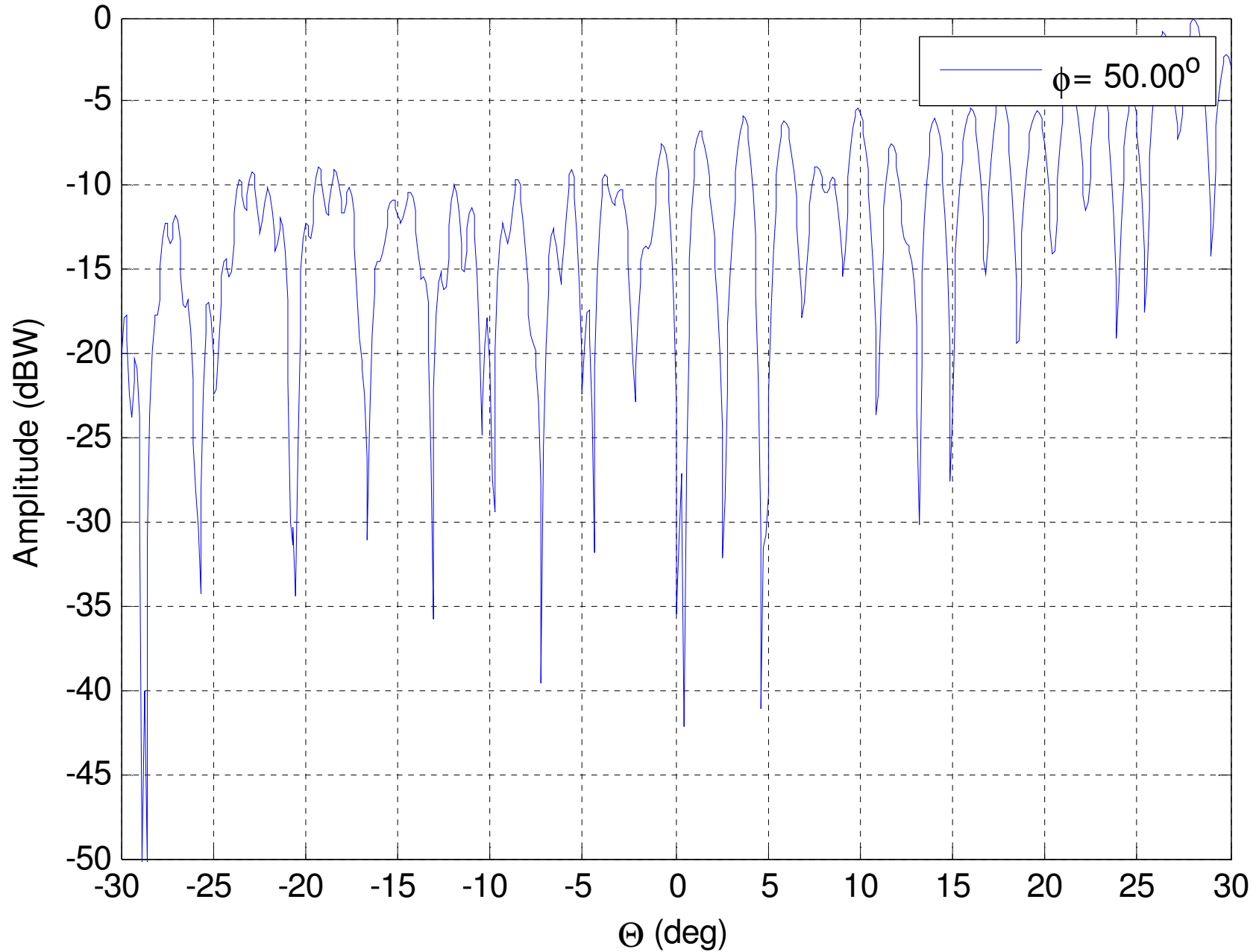
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -9.77 dBW, Date: 14-Dec-2011



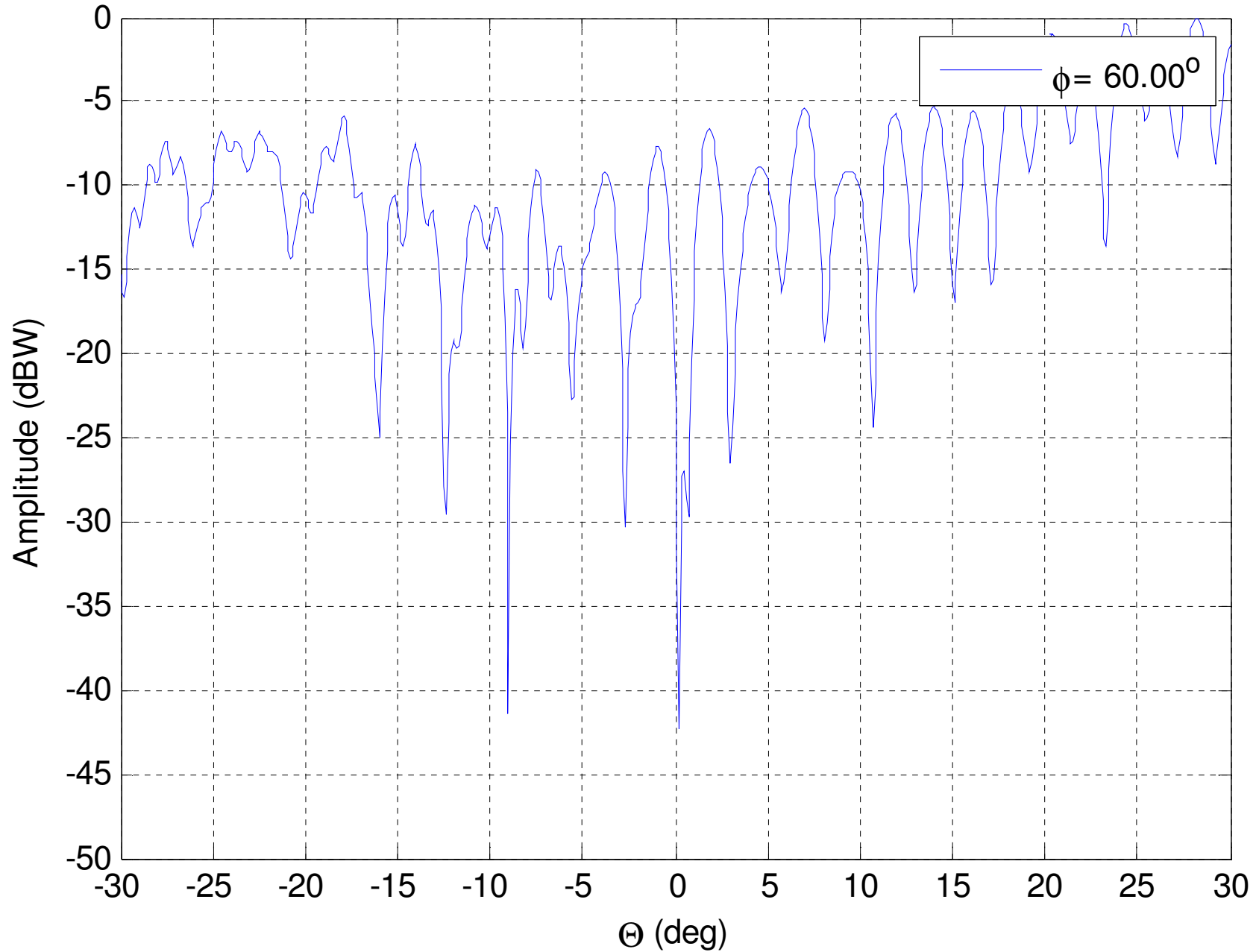
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -7.61 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

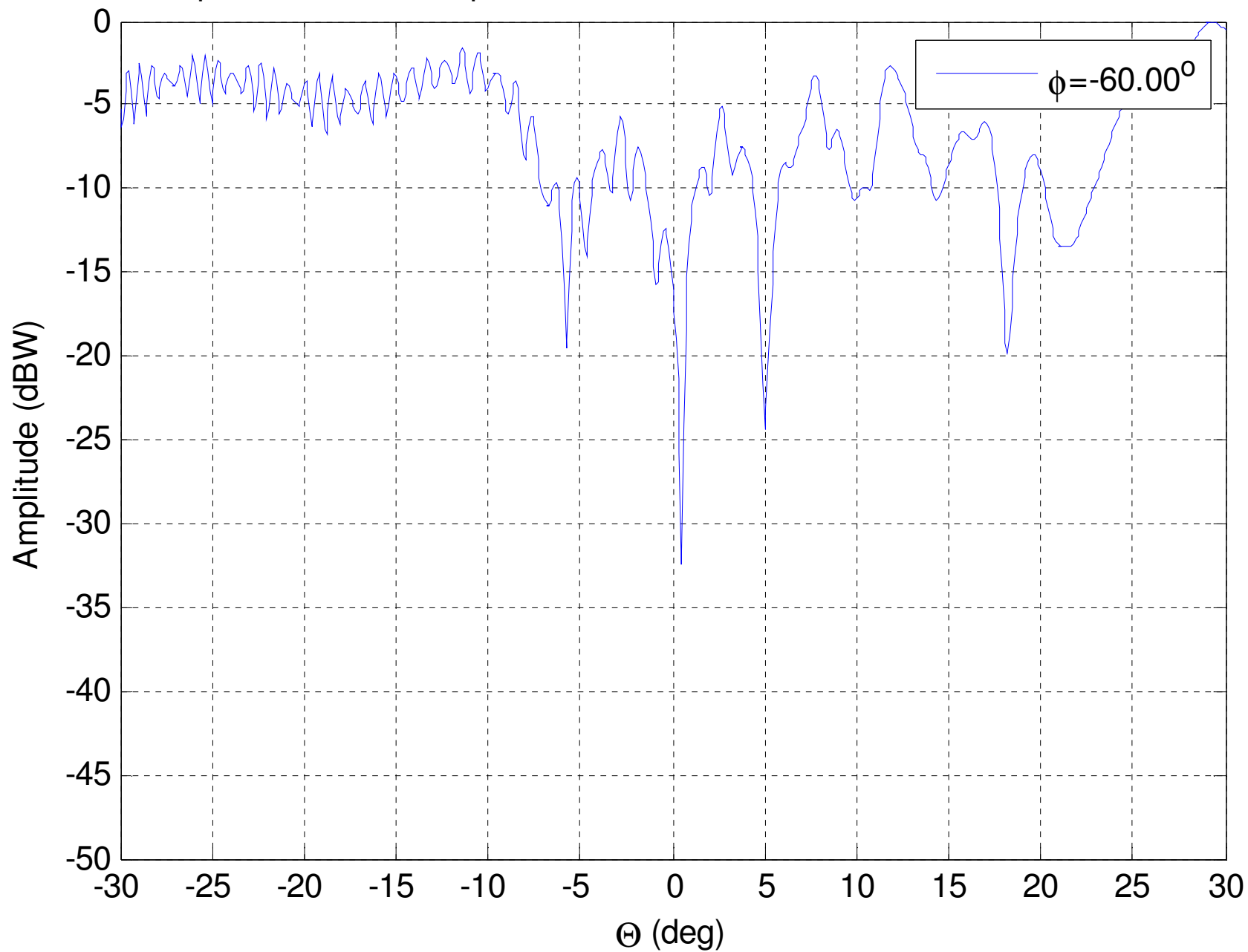
Input file: tx-17.3-rhcp-60.cut, Peak: -7.23 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

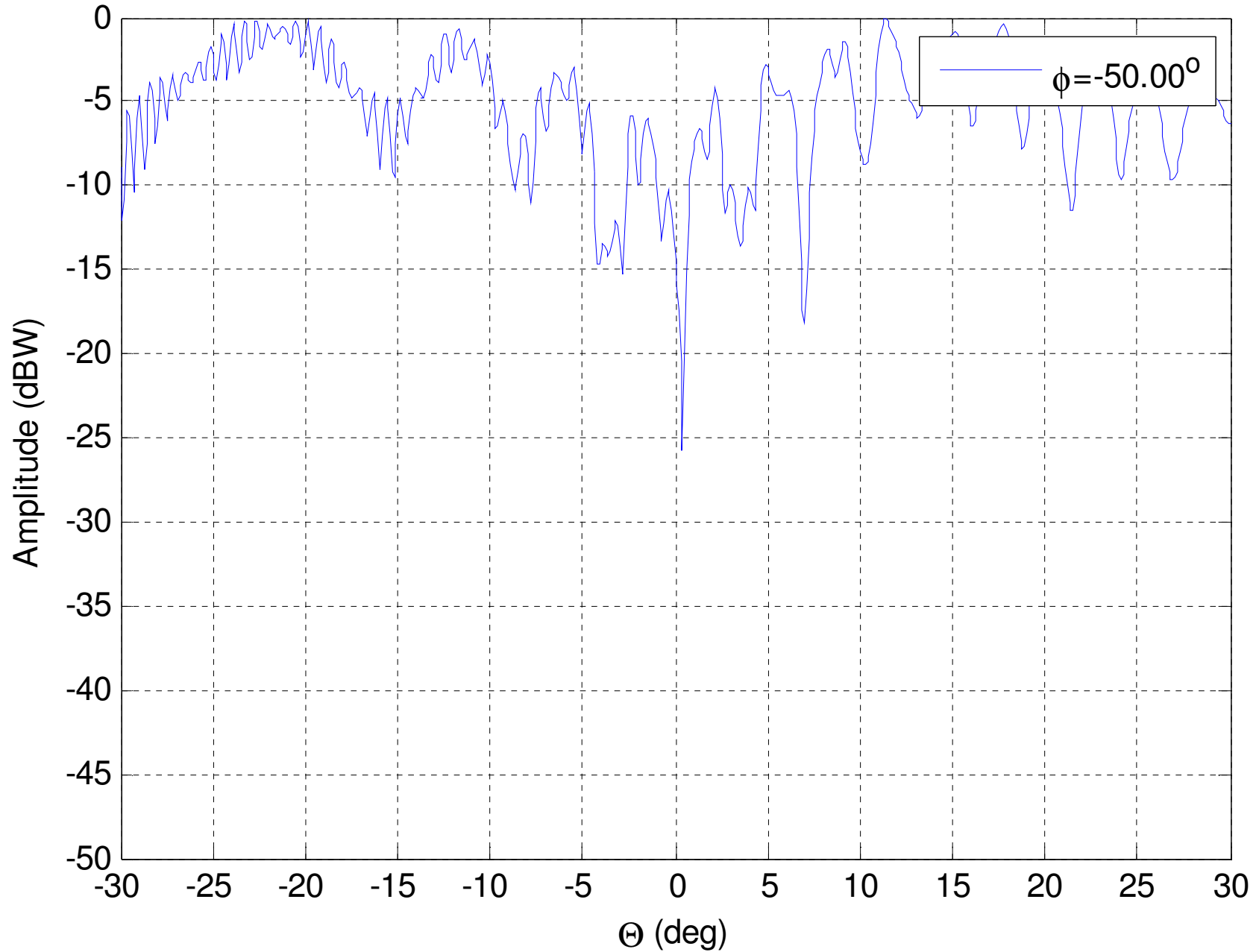
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -8.02 dBW, Date: 14-Dec-2011



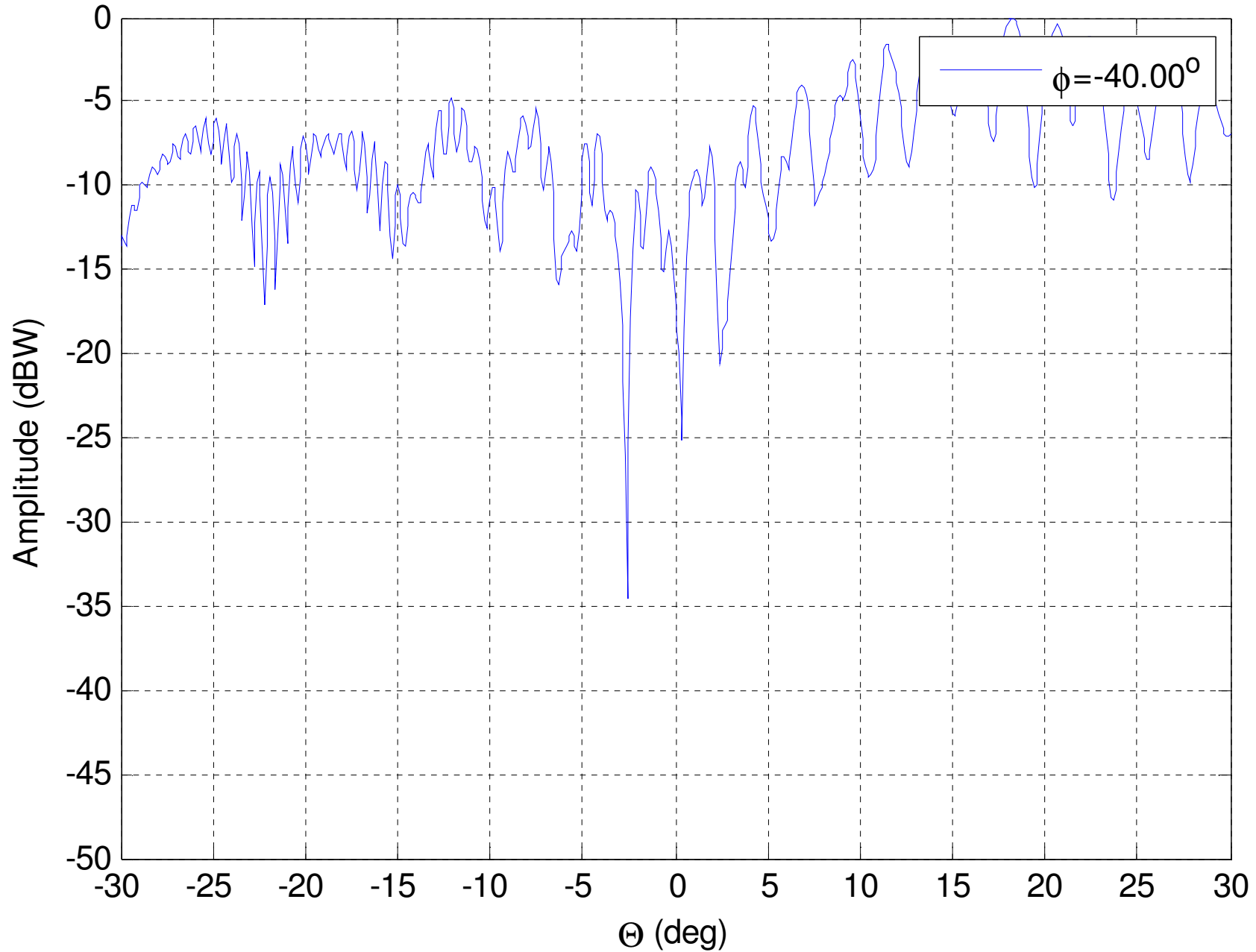
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -9.52 dBW, Date: 14-Dec-2011



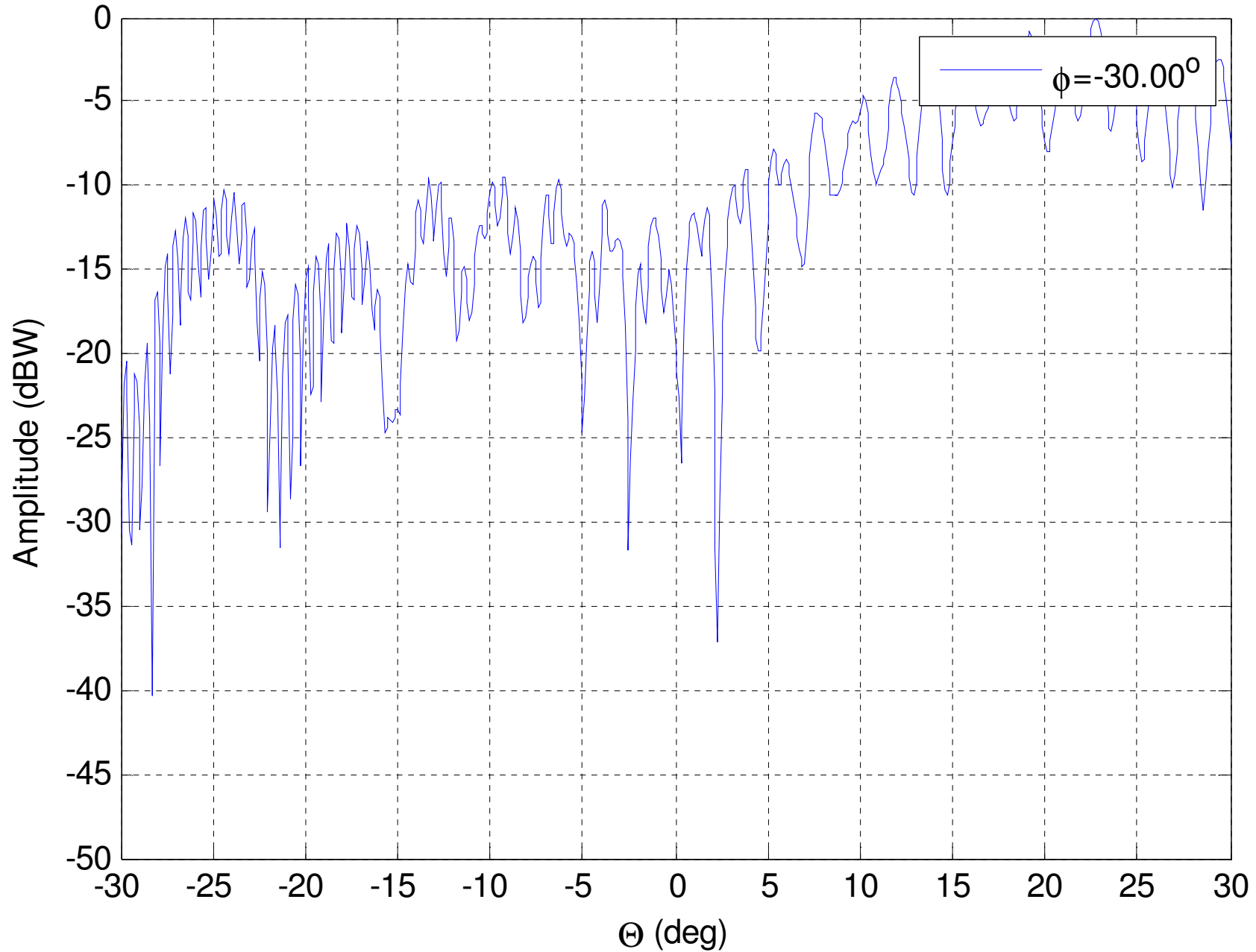
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -6.87 dBW, Date: 14-Dec-2011



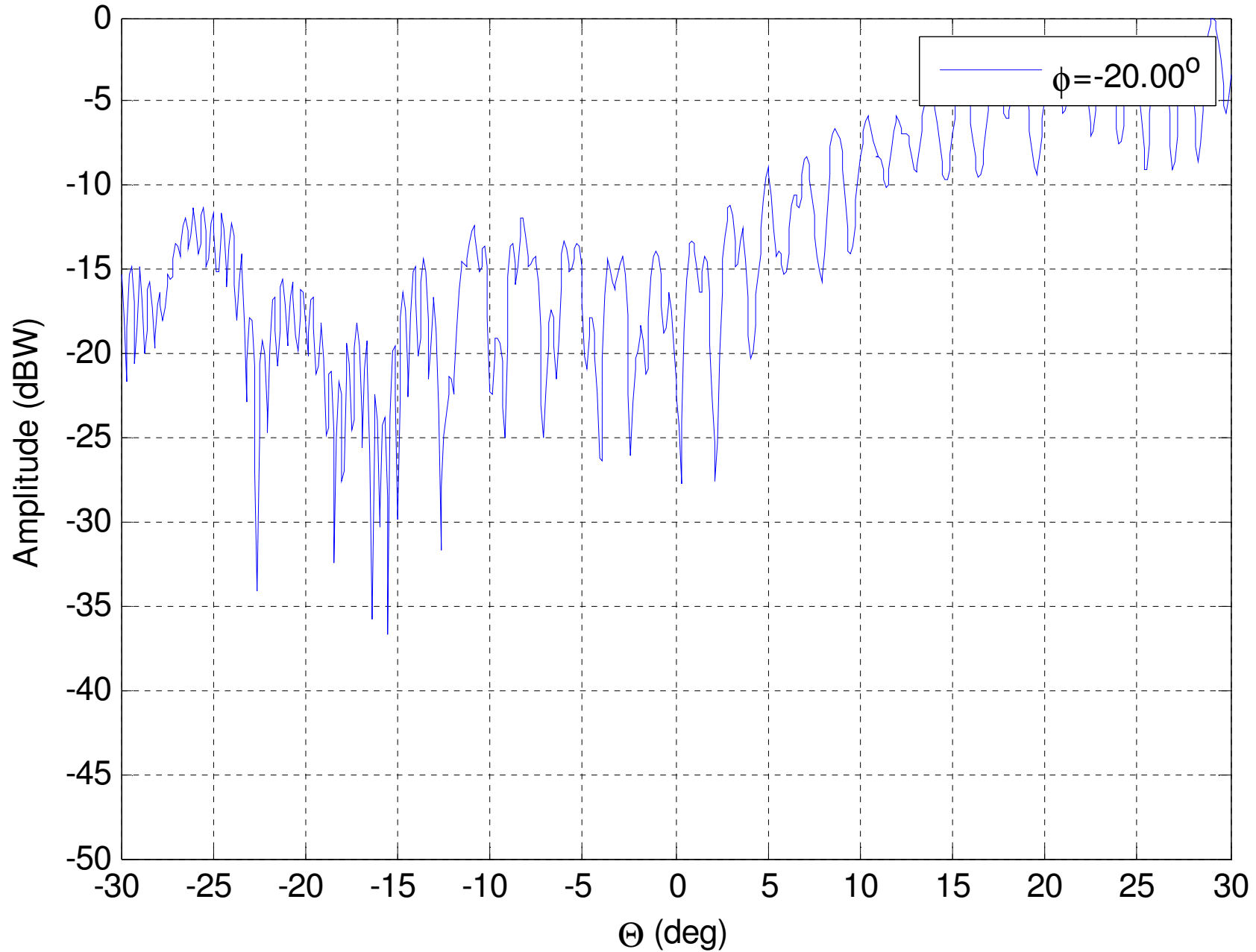
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -4.19 dBW, Date: 14-Dec-2011



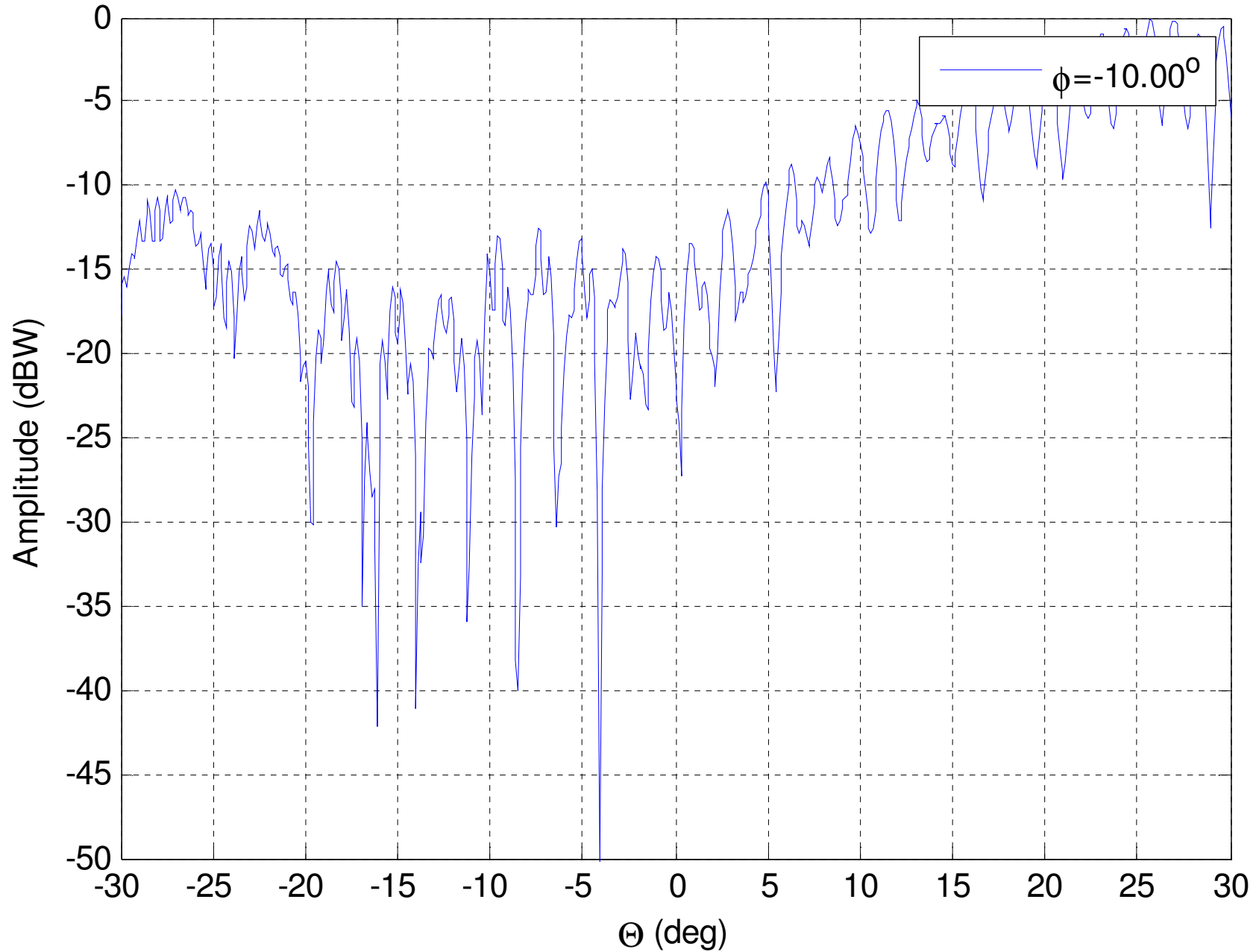
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.42 dBW, Date: 14-Dec-2011



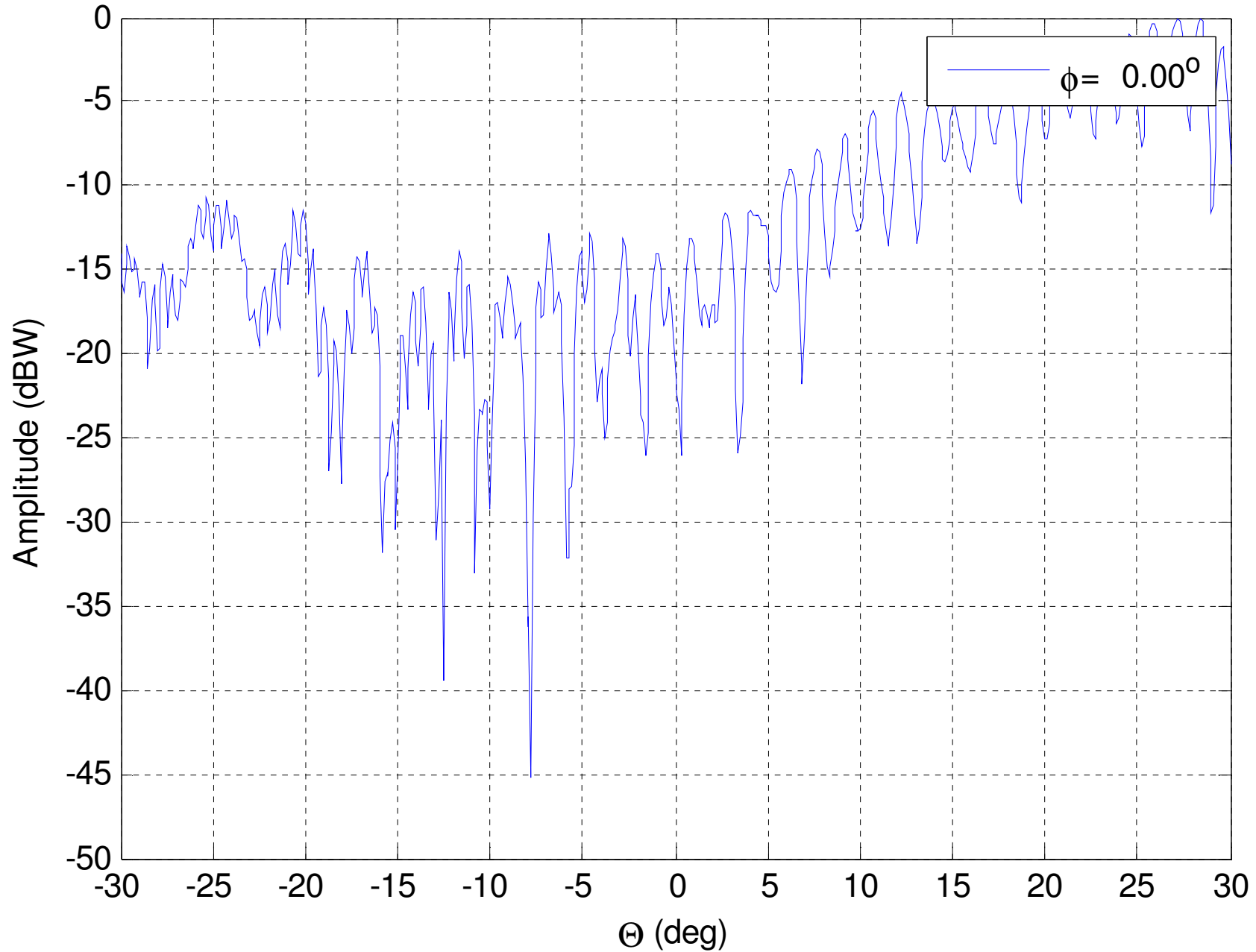
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -2.17 dBW, Date: 14-Dec-2011



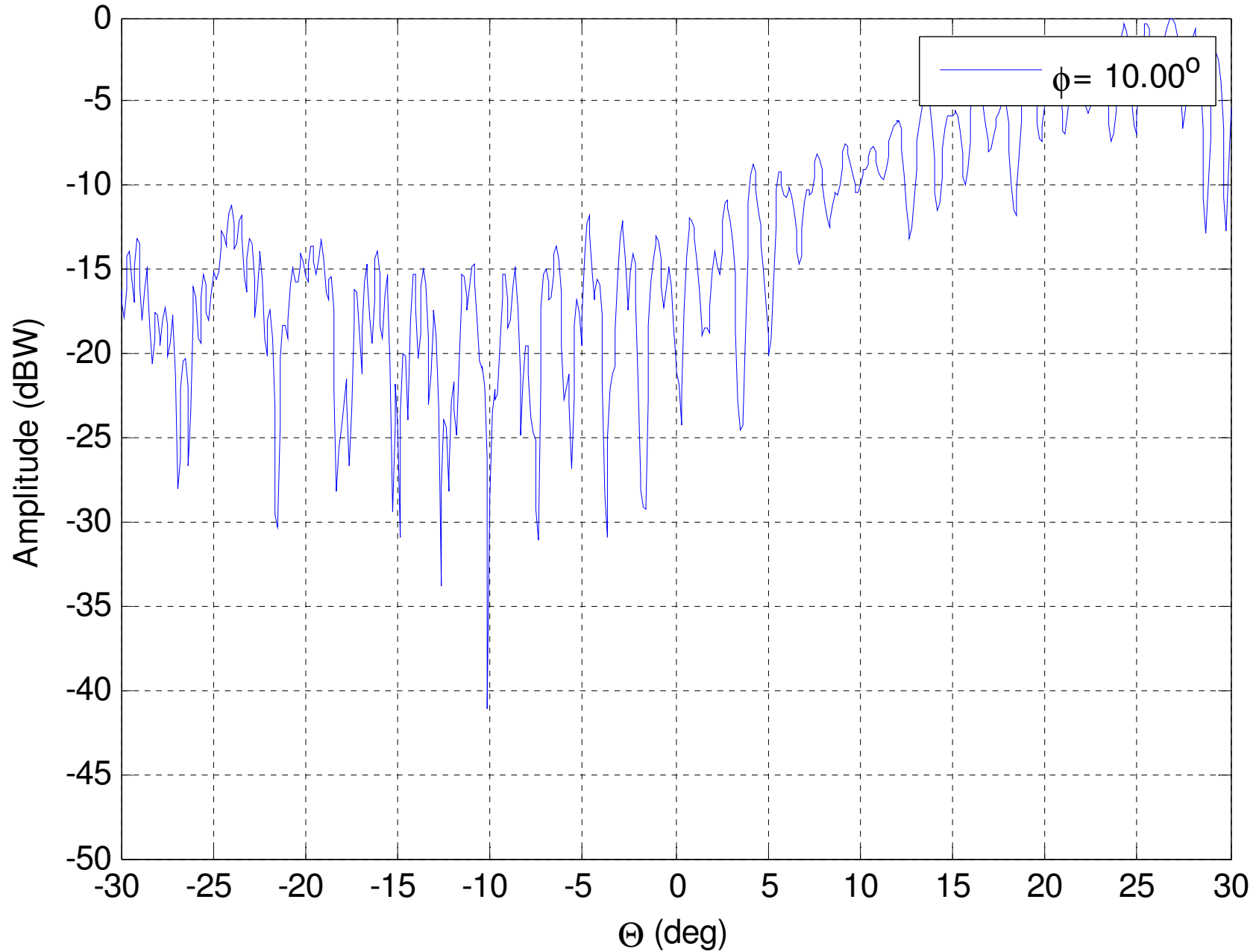
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -2.41 dBW, Date: 14-Dec-2011



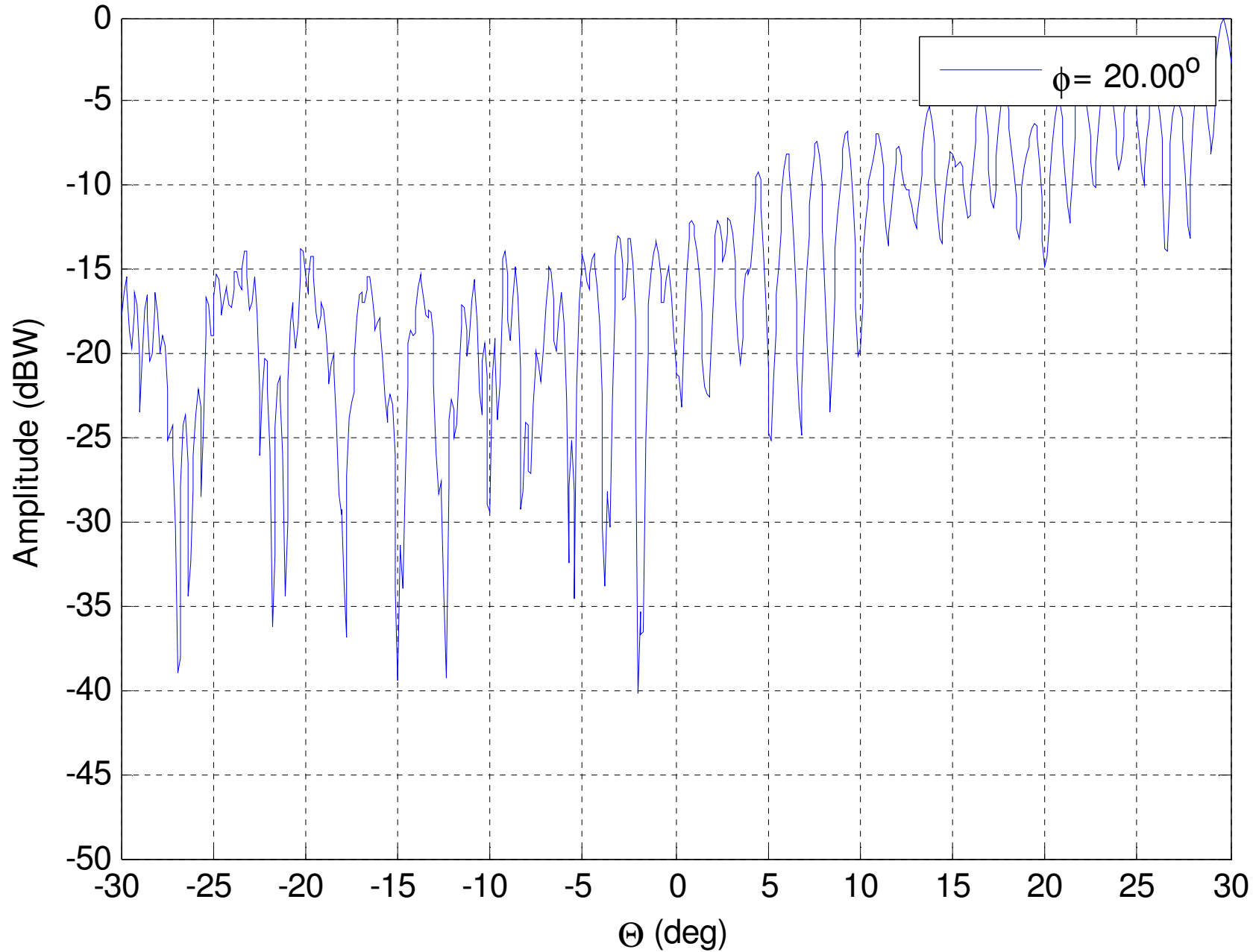
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -3.36 dBW, Date: 14-Dec-2011



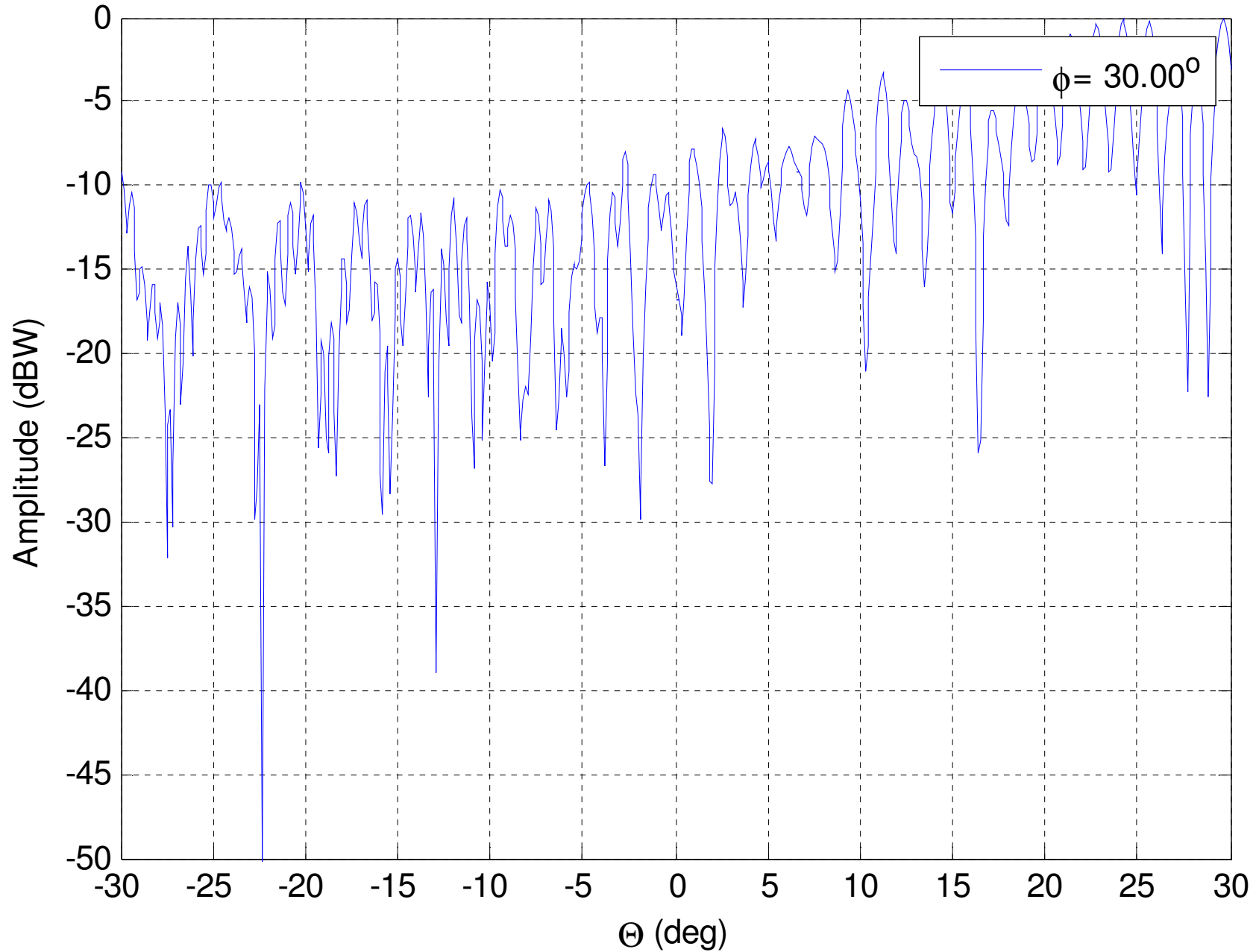
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -3.13 dBW, Date: 14-Dec-2011



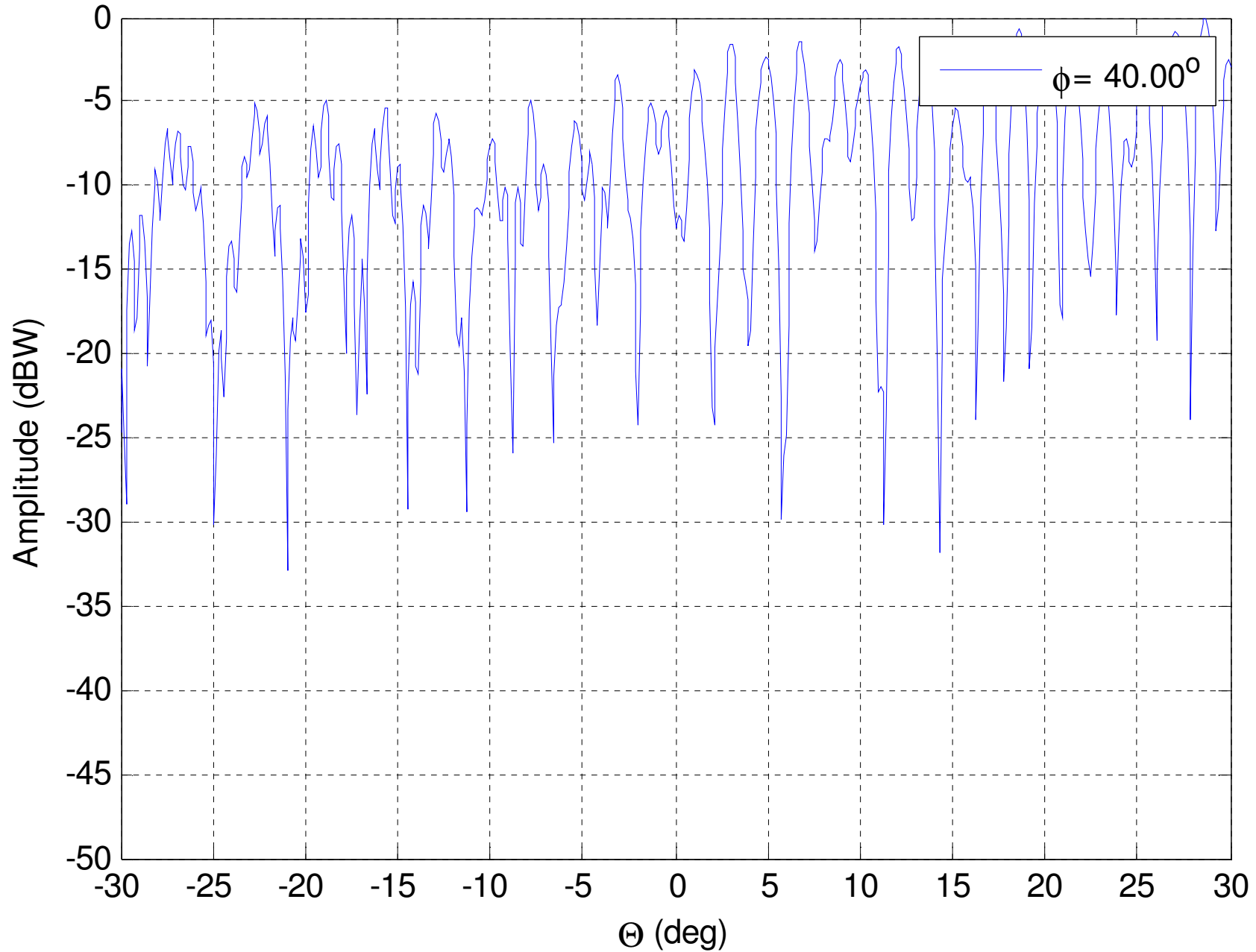
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



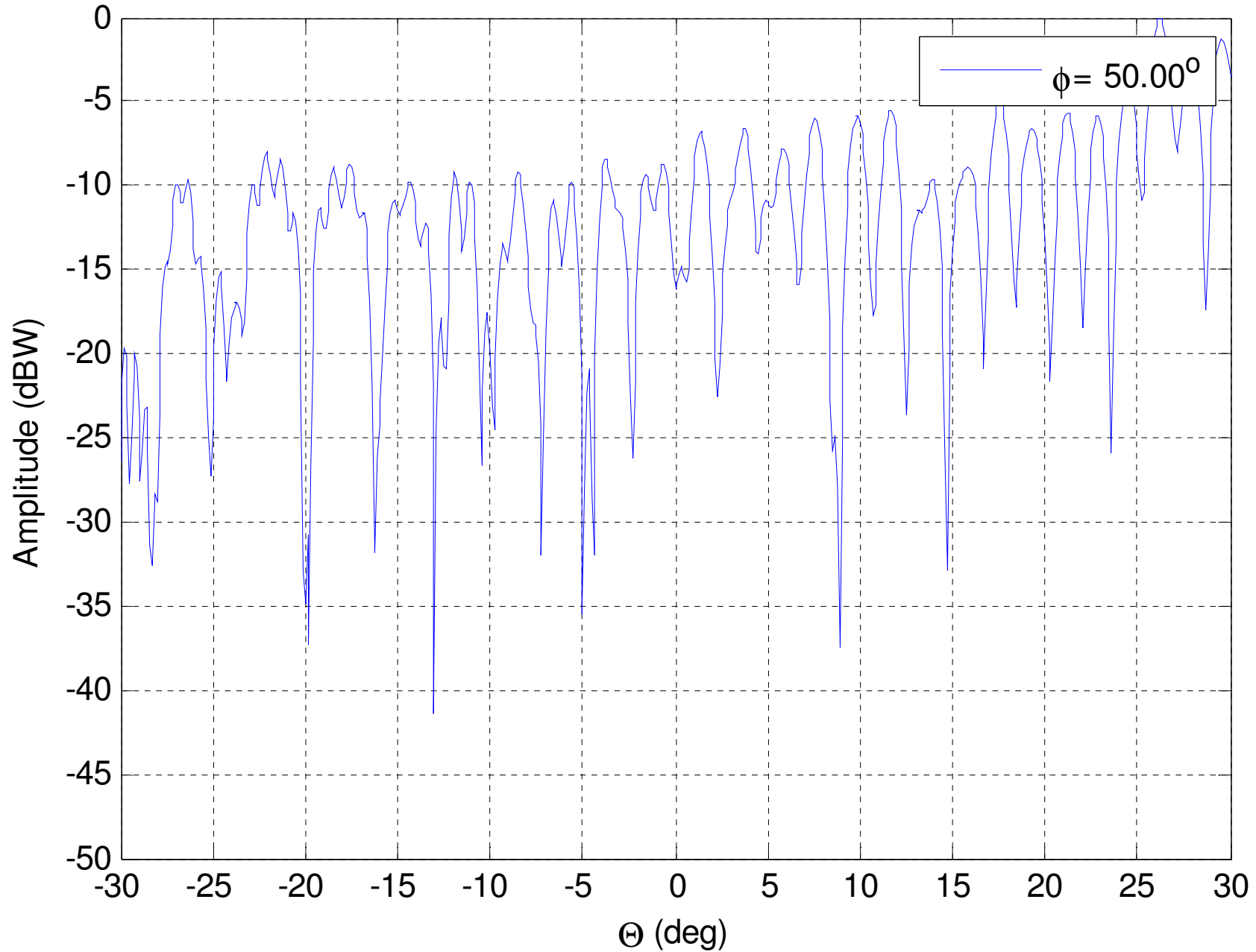
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.61 dBW, Date: 14-Dec-2011



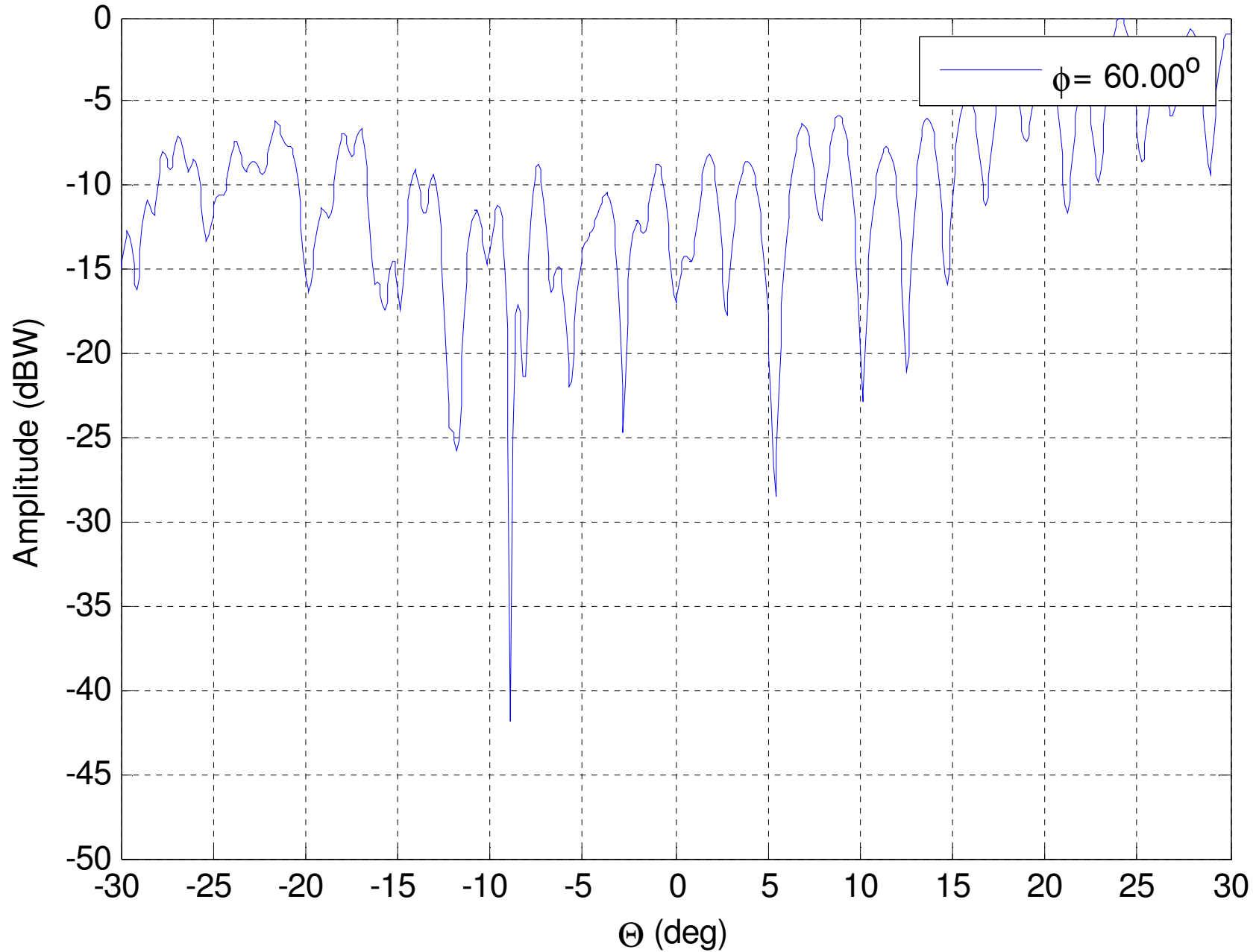
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -7.92 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

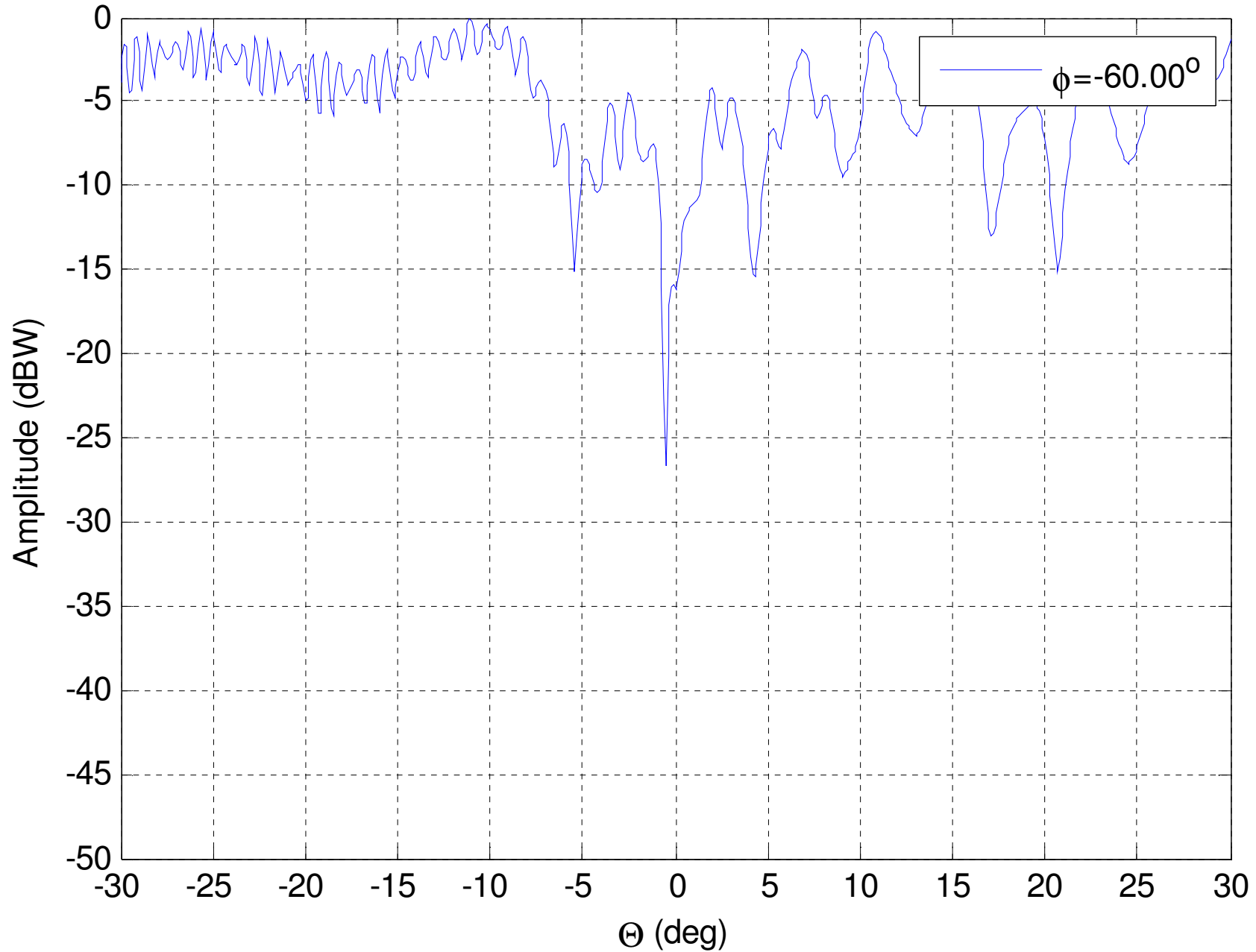
Input file: tx-17.3-lhcp-60.cut, Peak: -7.10 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

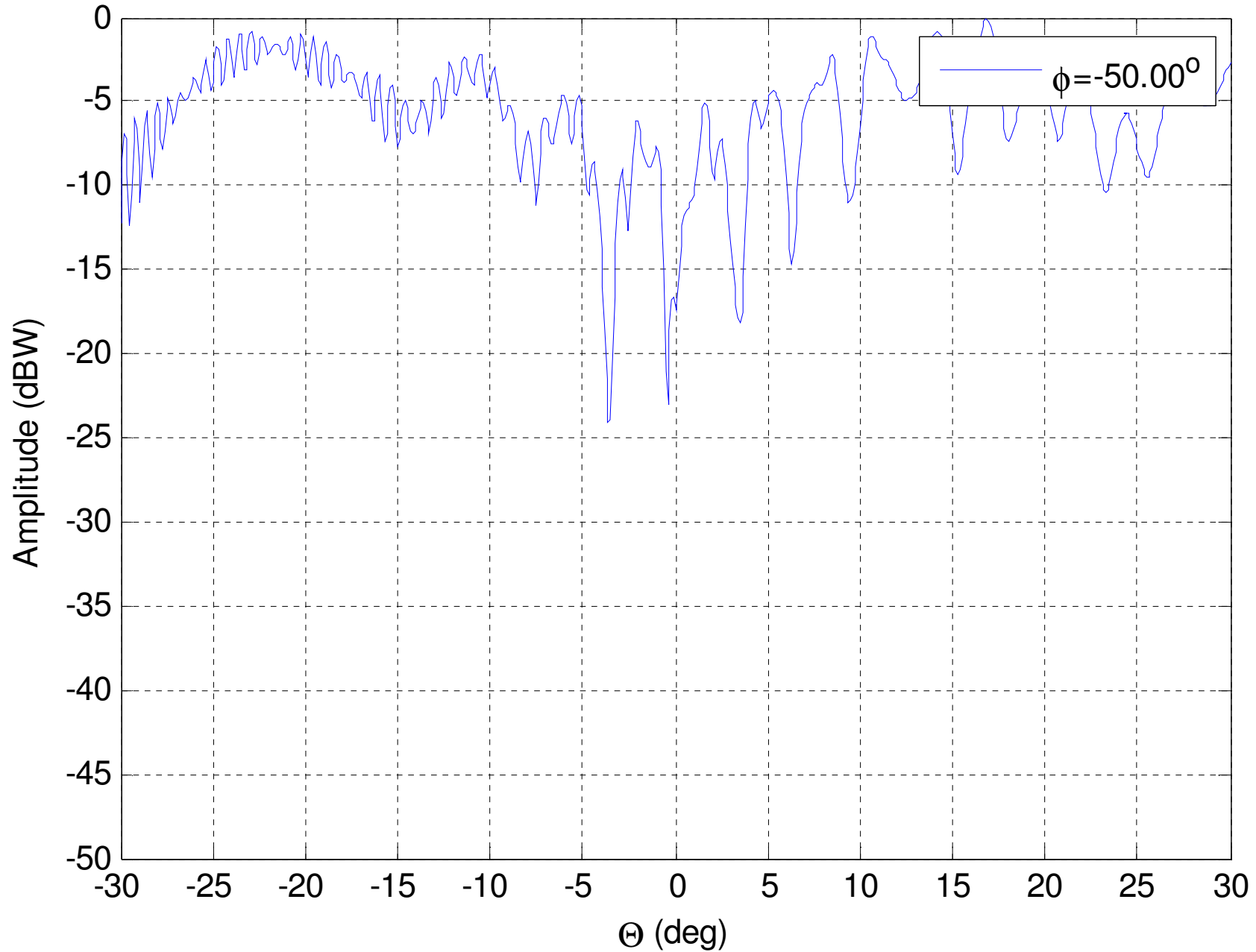
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.02 dBW, Date: 14-Dec-2011



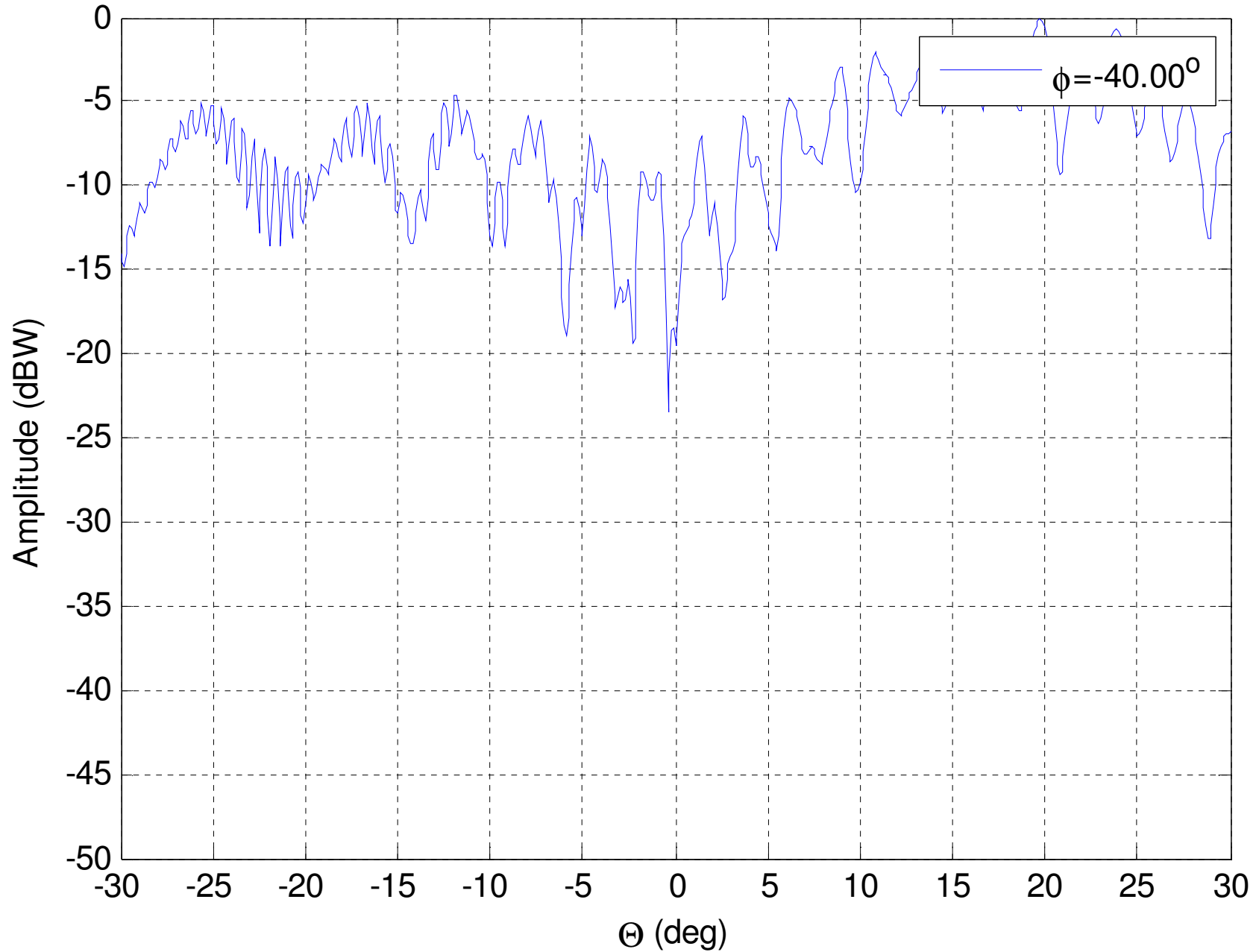
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.81 dBW, Date: 14-Dec-2011



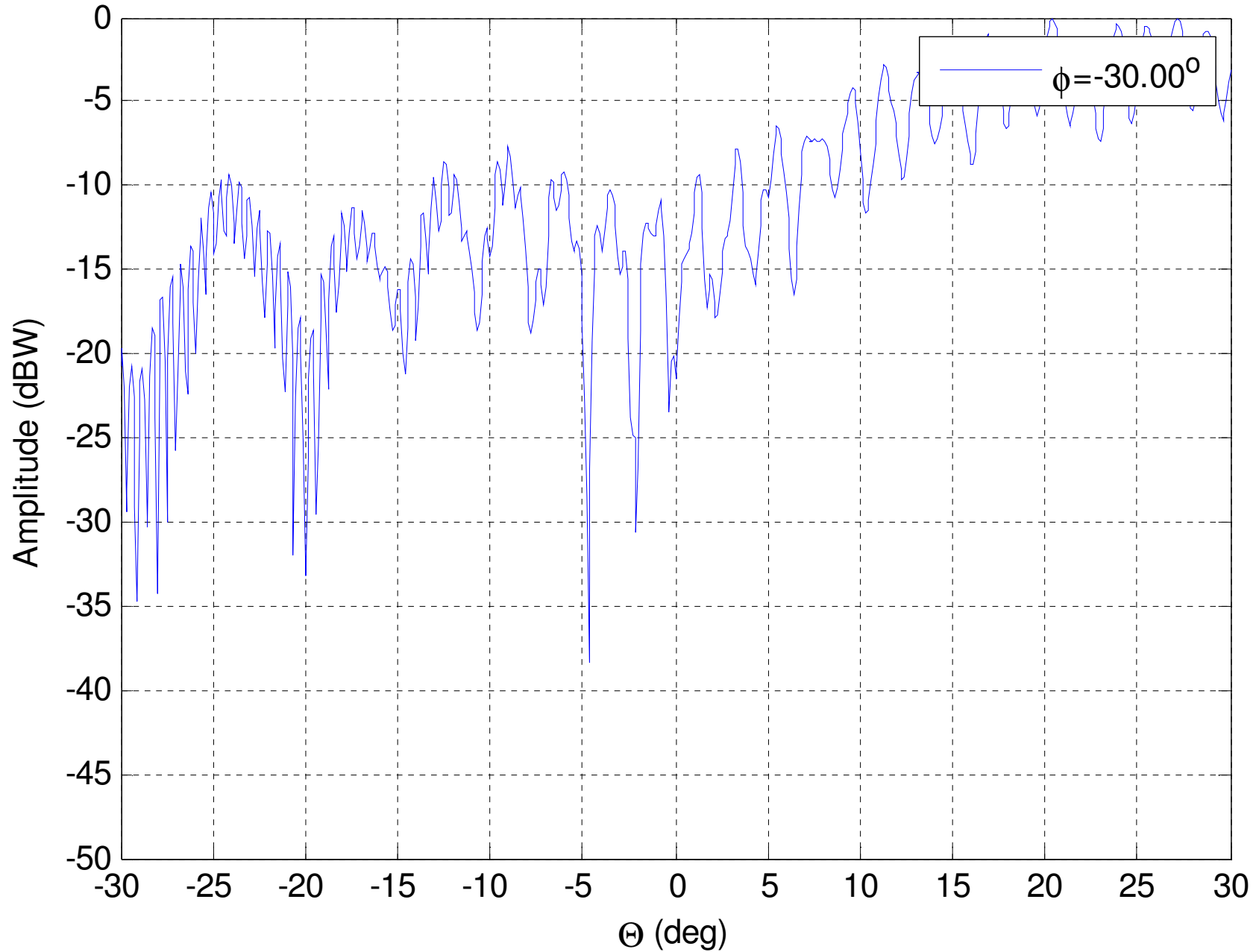
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



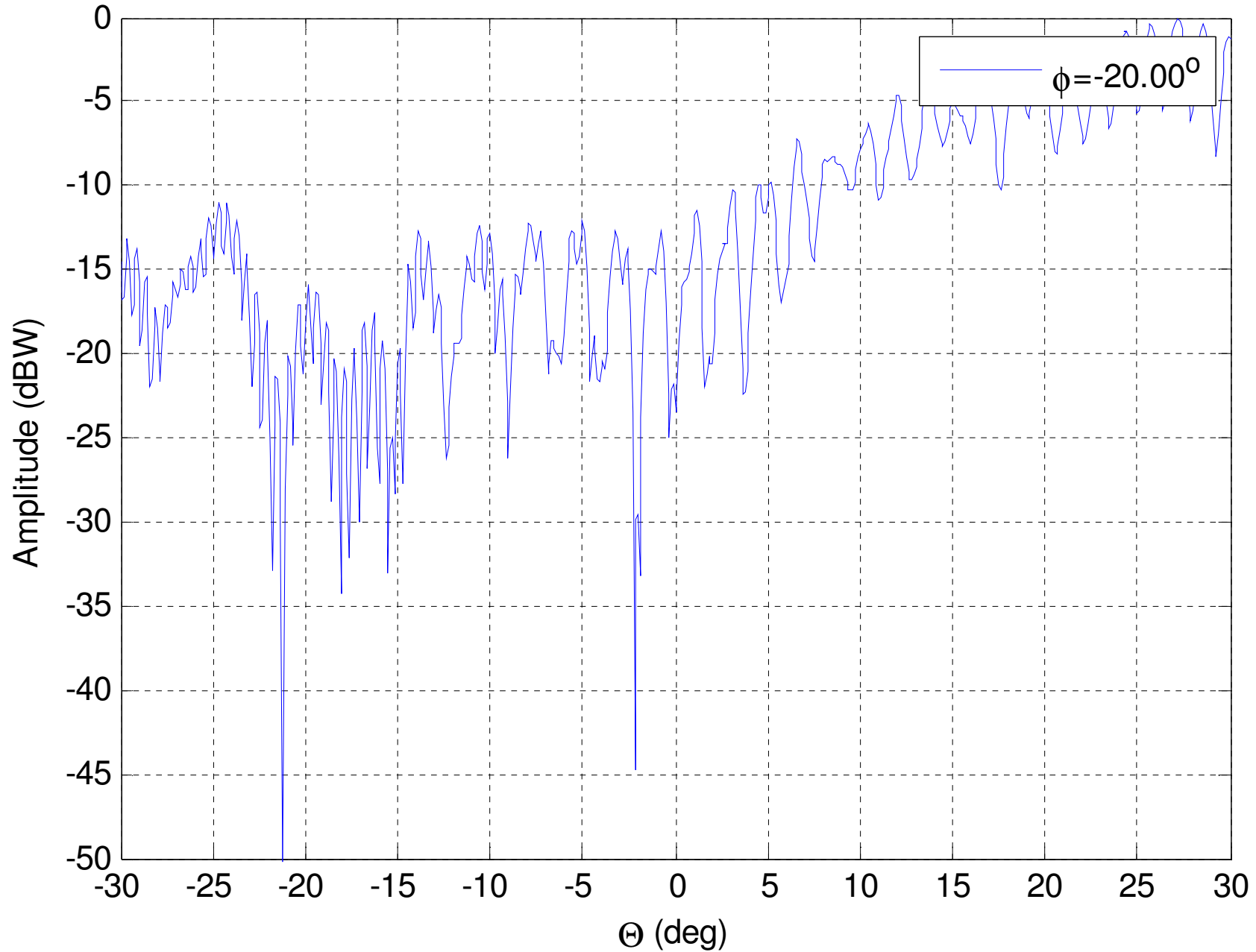
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -4.64 dBW, Date: 14-Dec-2011



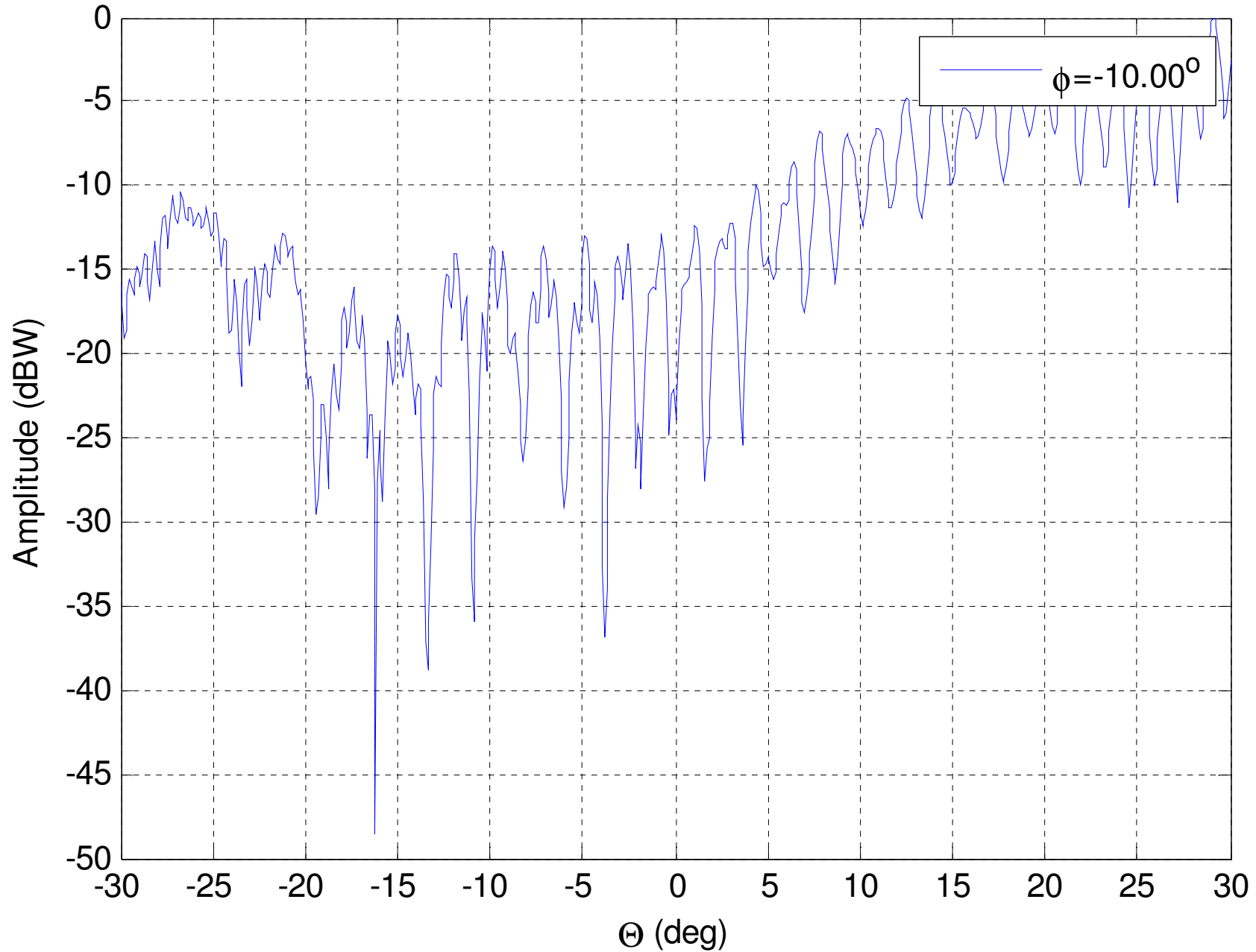
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -2.72 dBW, Date: 14-Dec-2011



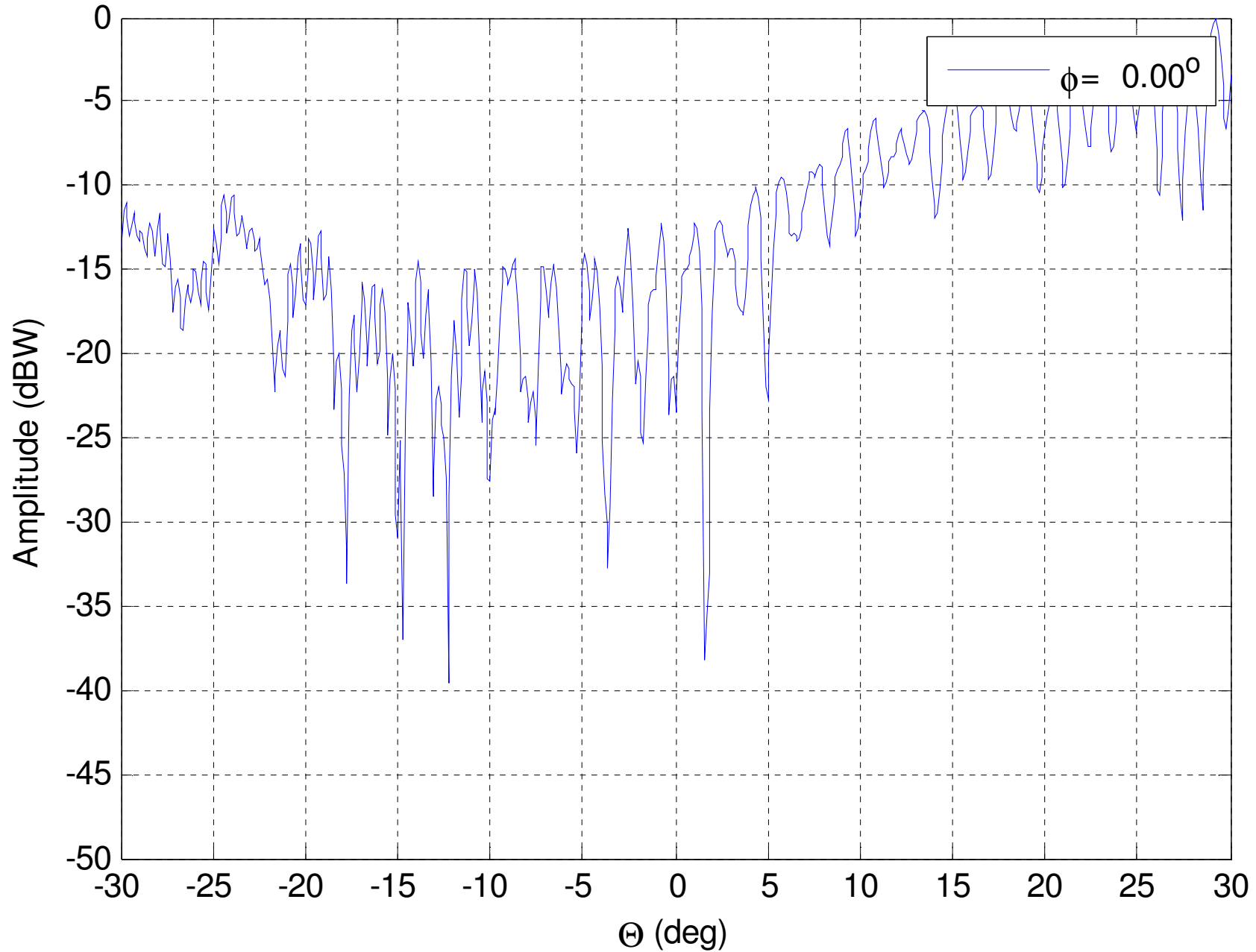
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.20 dBW, Date: 14-Dec-2011



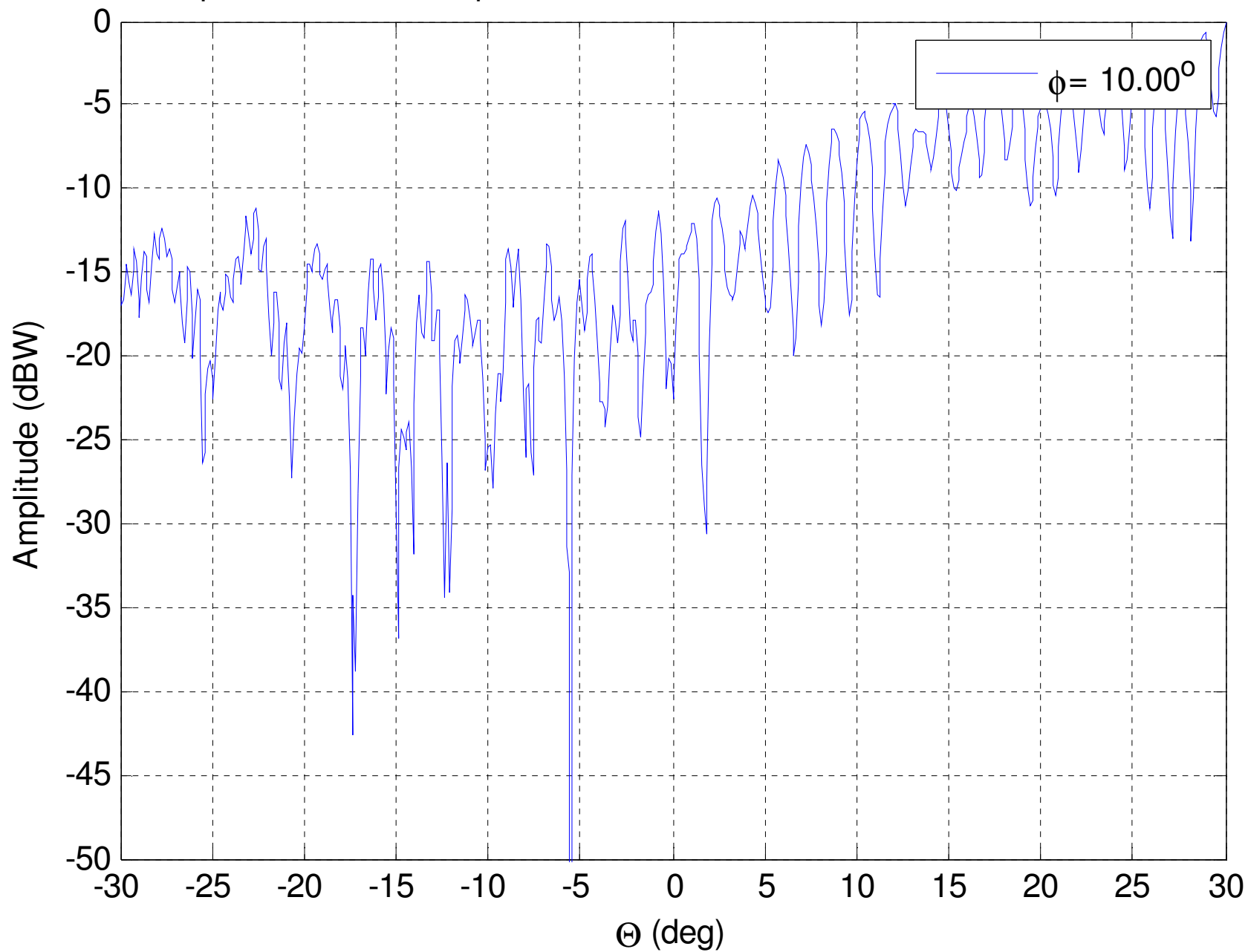
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -2.72 dBW, Date: 14-Dec-2011



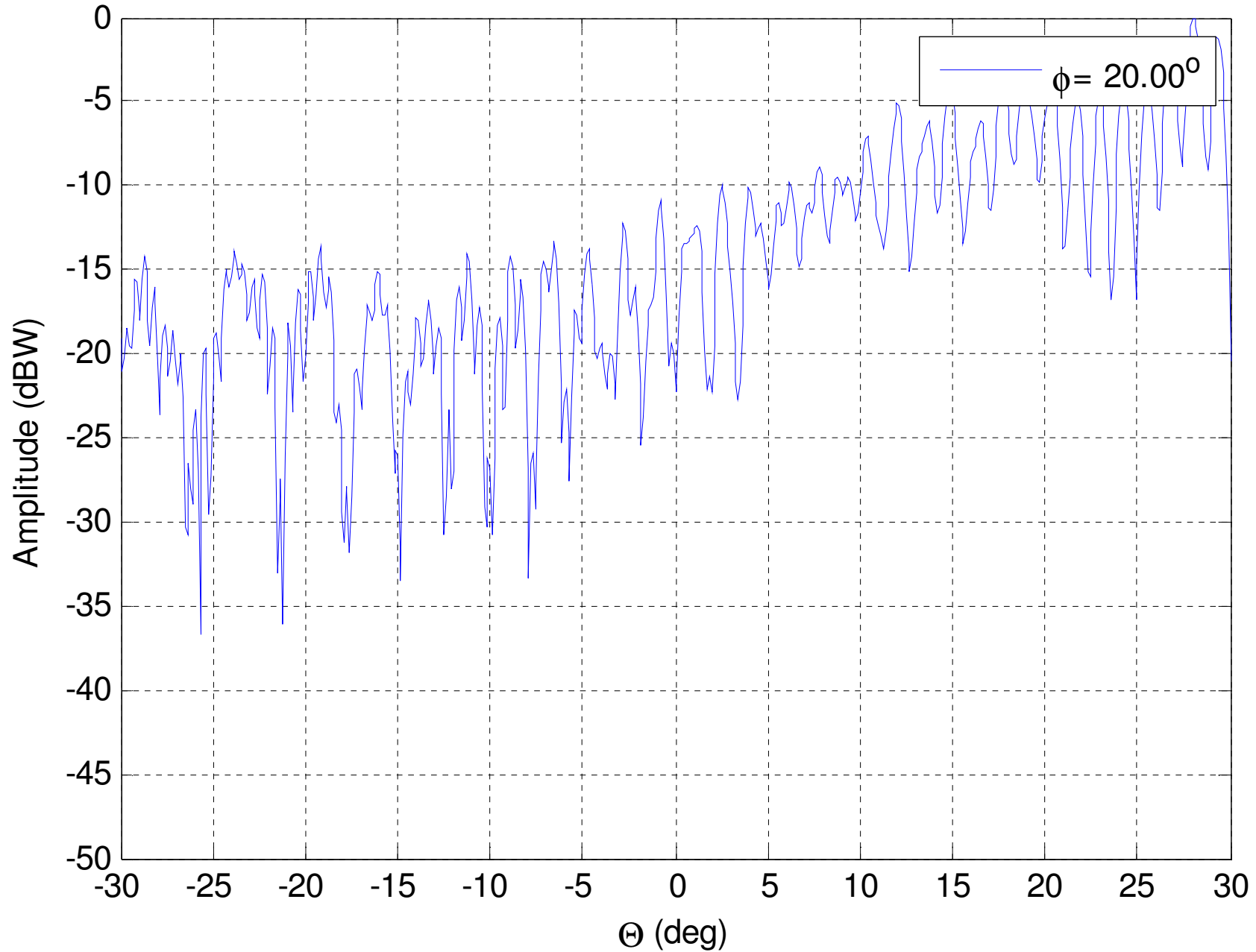
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.60 dBW, Date: 14-Dec-2011



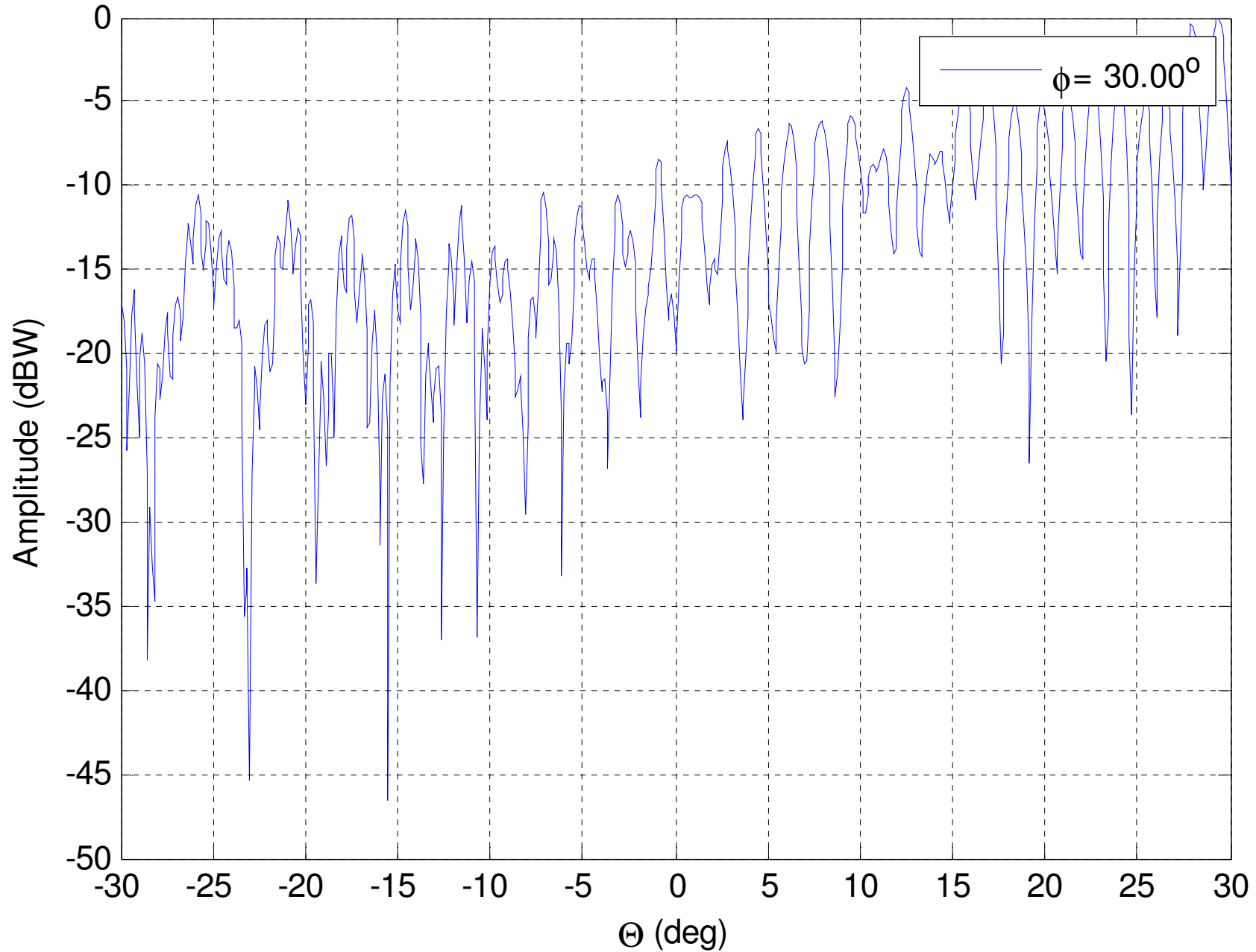
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -3.86 dBW, Date: 14-Dec-2011



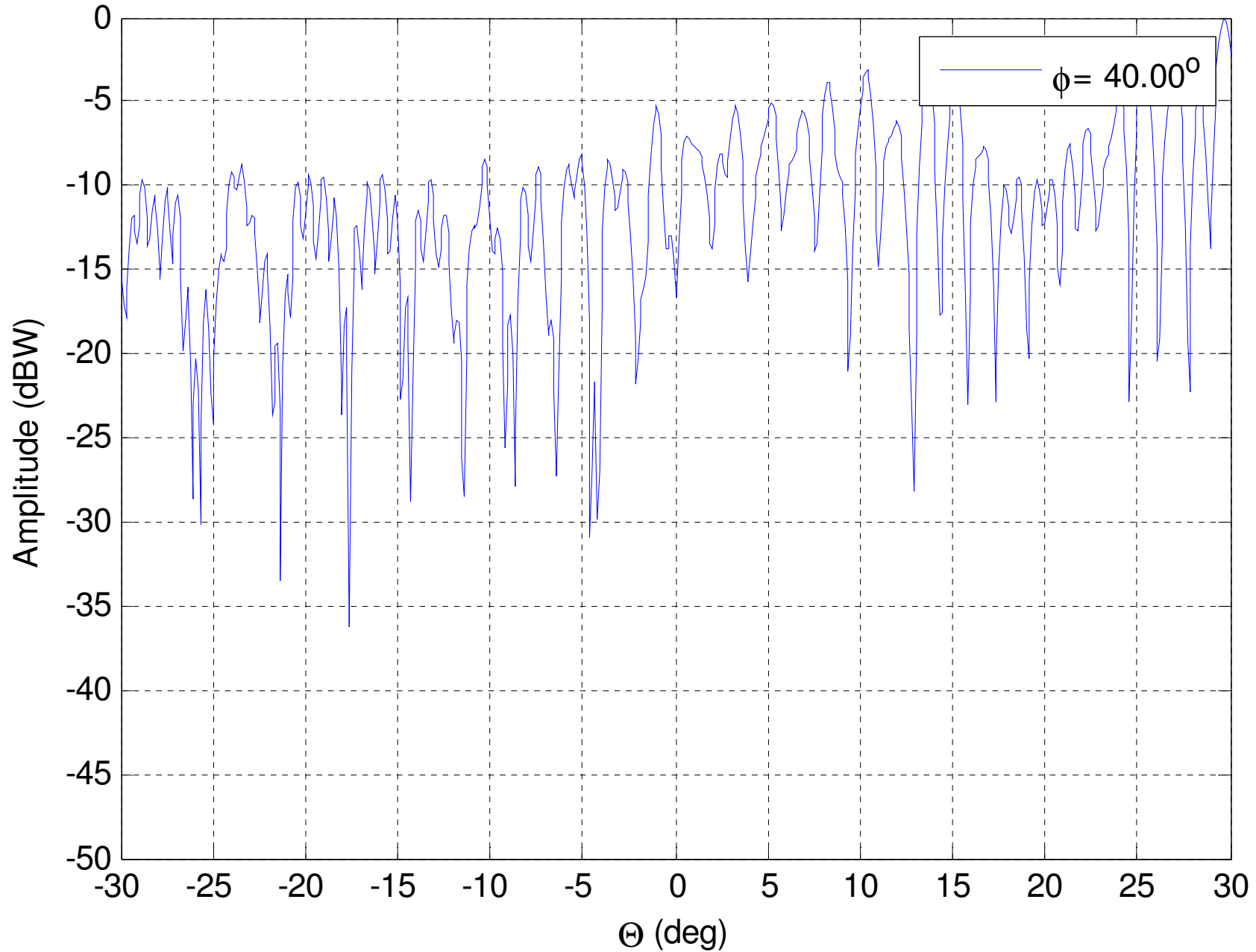
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -6.36 dBW, Date: 14-Dec-2011



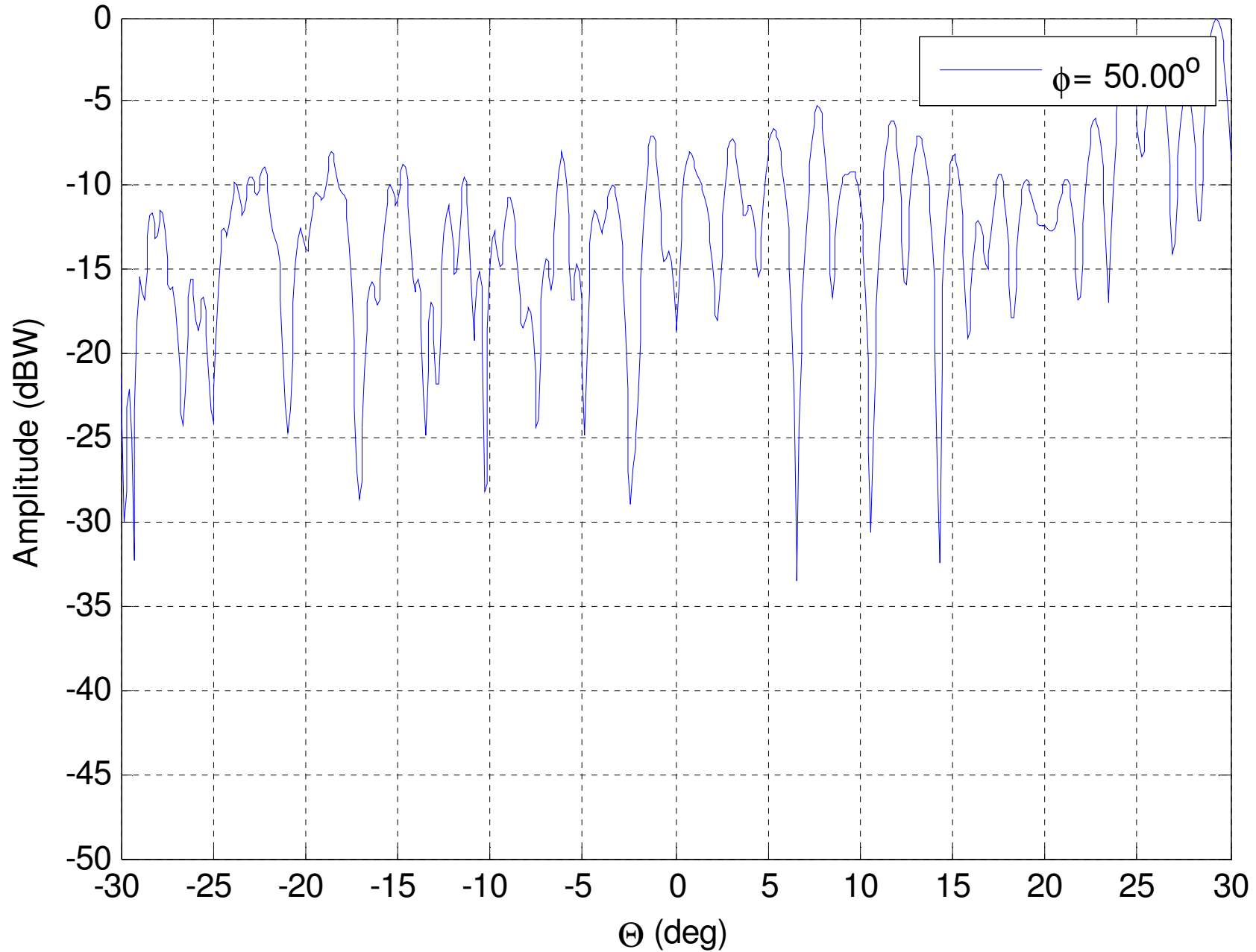
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -9.54 dBW, Date: 14-Dec-2011



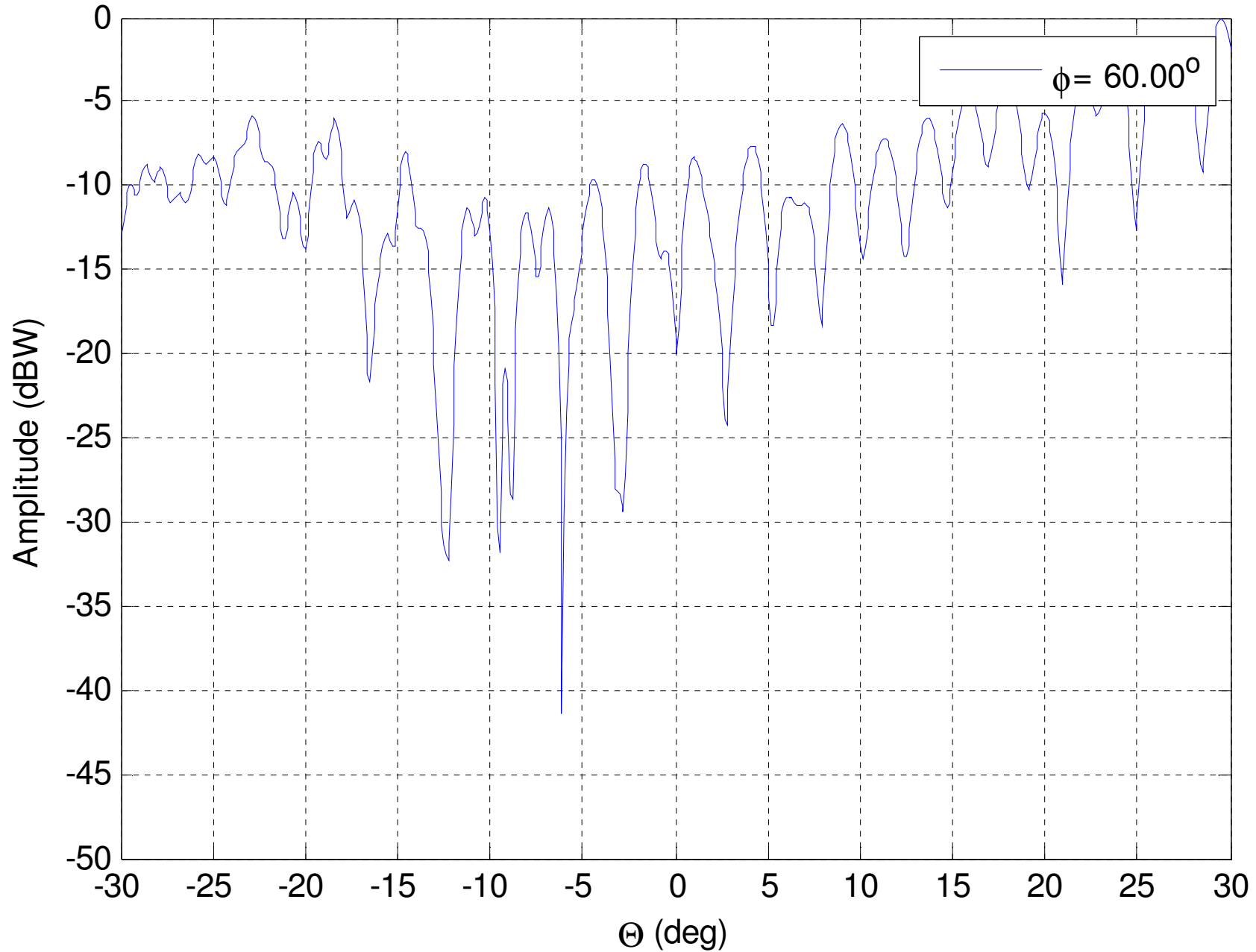
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -8.00 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

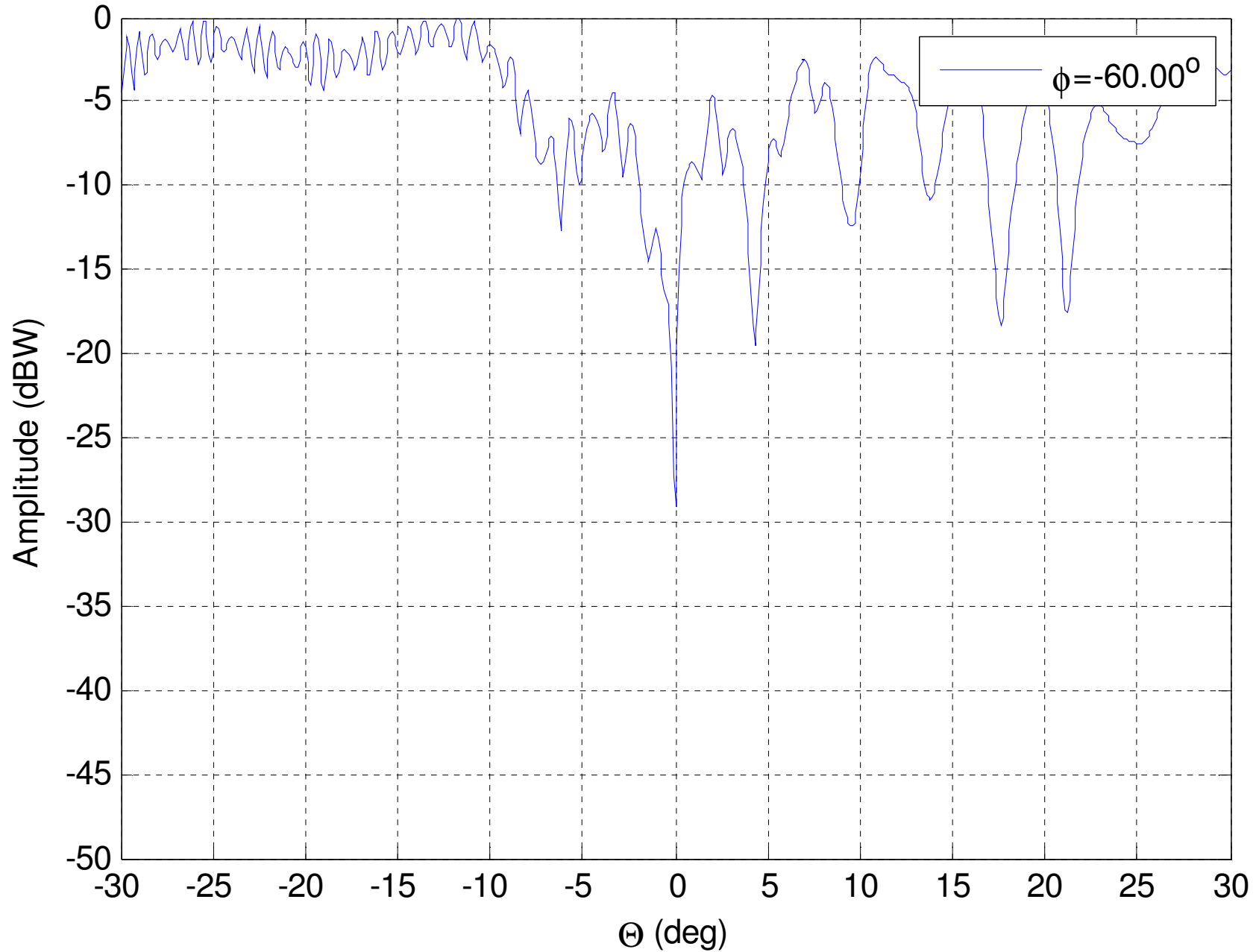
Input file: tx-17.5-rhcp-60.cut, Peak: -6.98 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

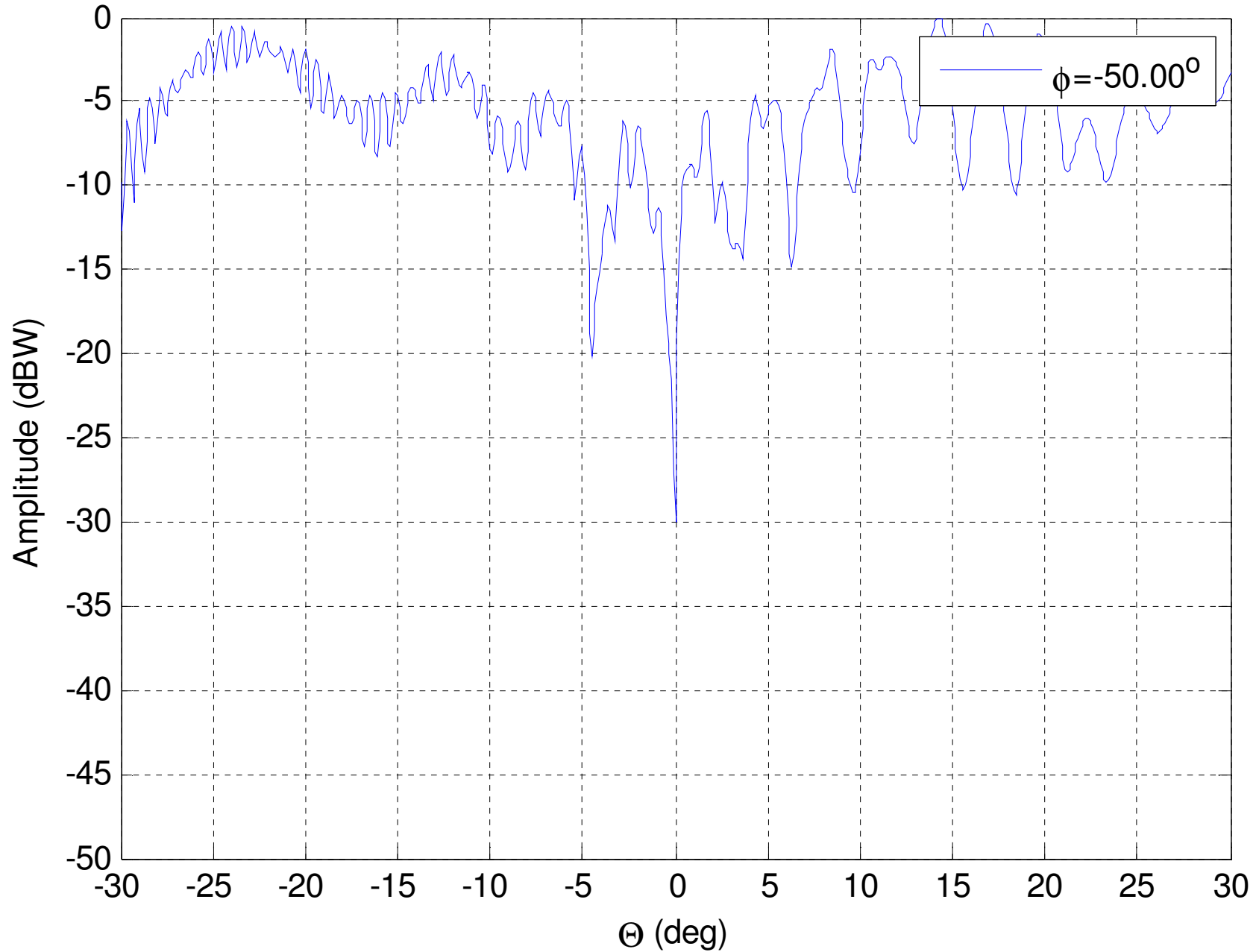
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -9.43 dBW, Date: 14-Dec-2011



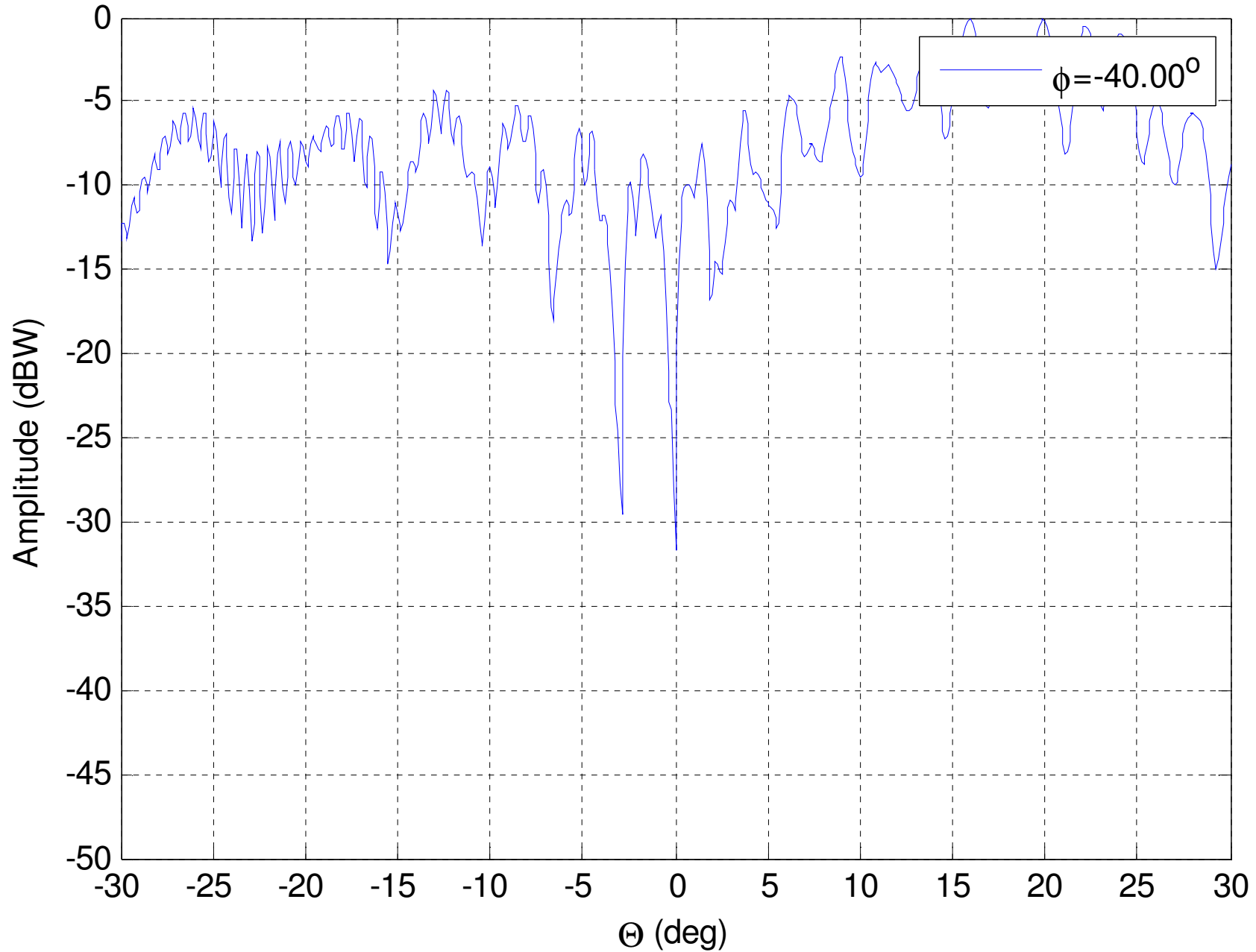
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -8.55 dBW, Date: 14-Dec-2011



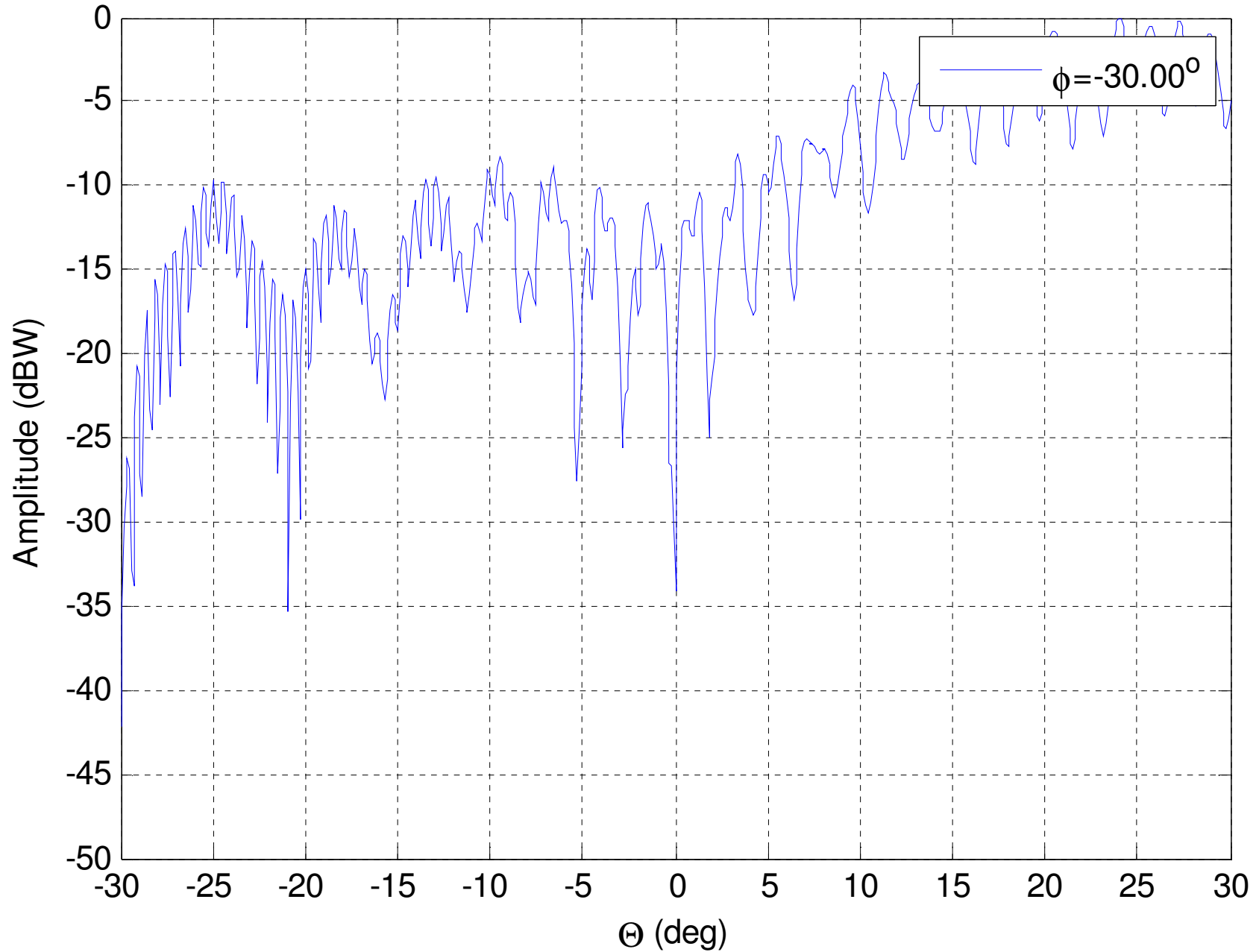
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -6.97 dBW, Date: 14-Dec-2011



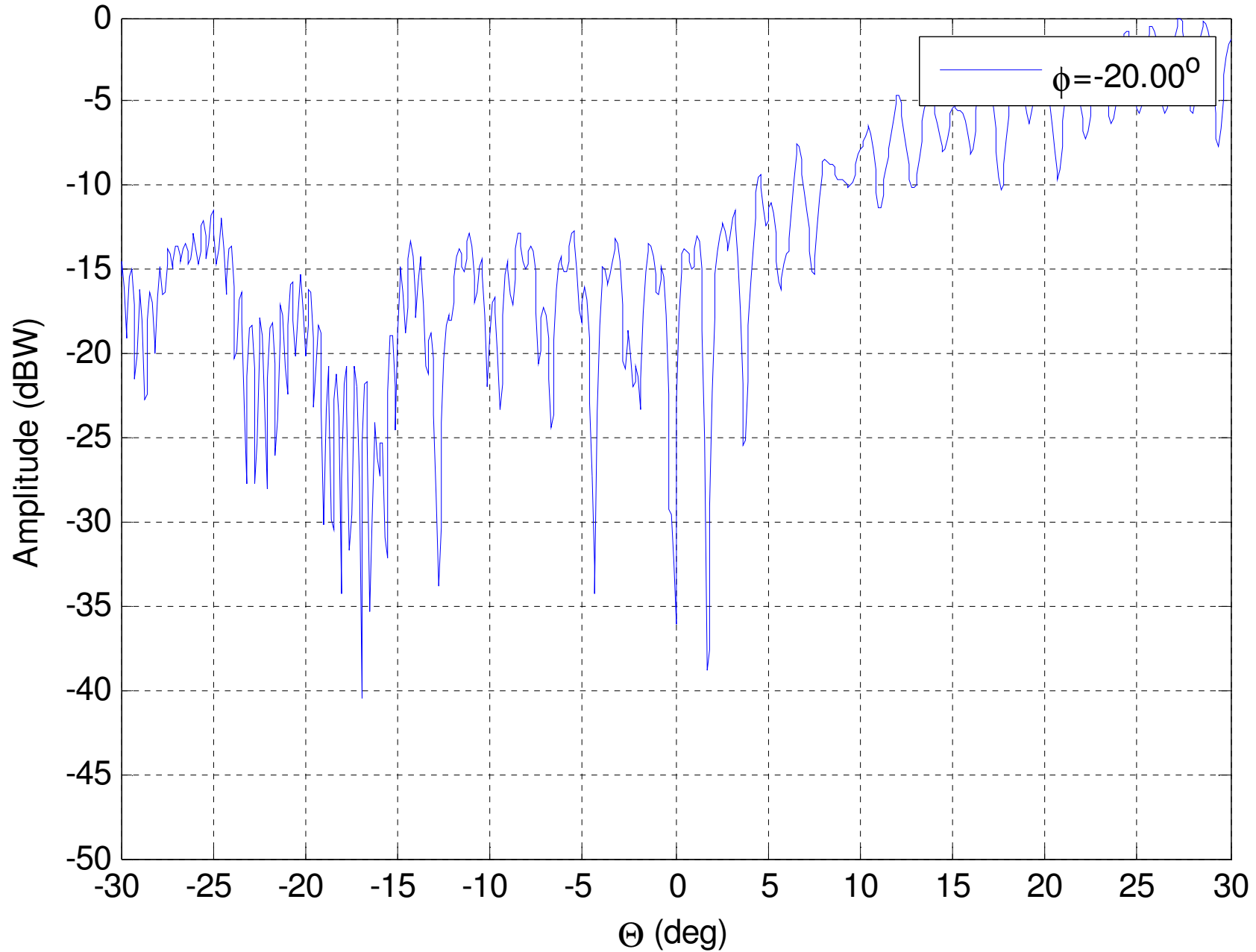
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -4.48 dBW, Date: 14-Dec-2011



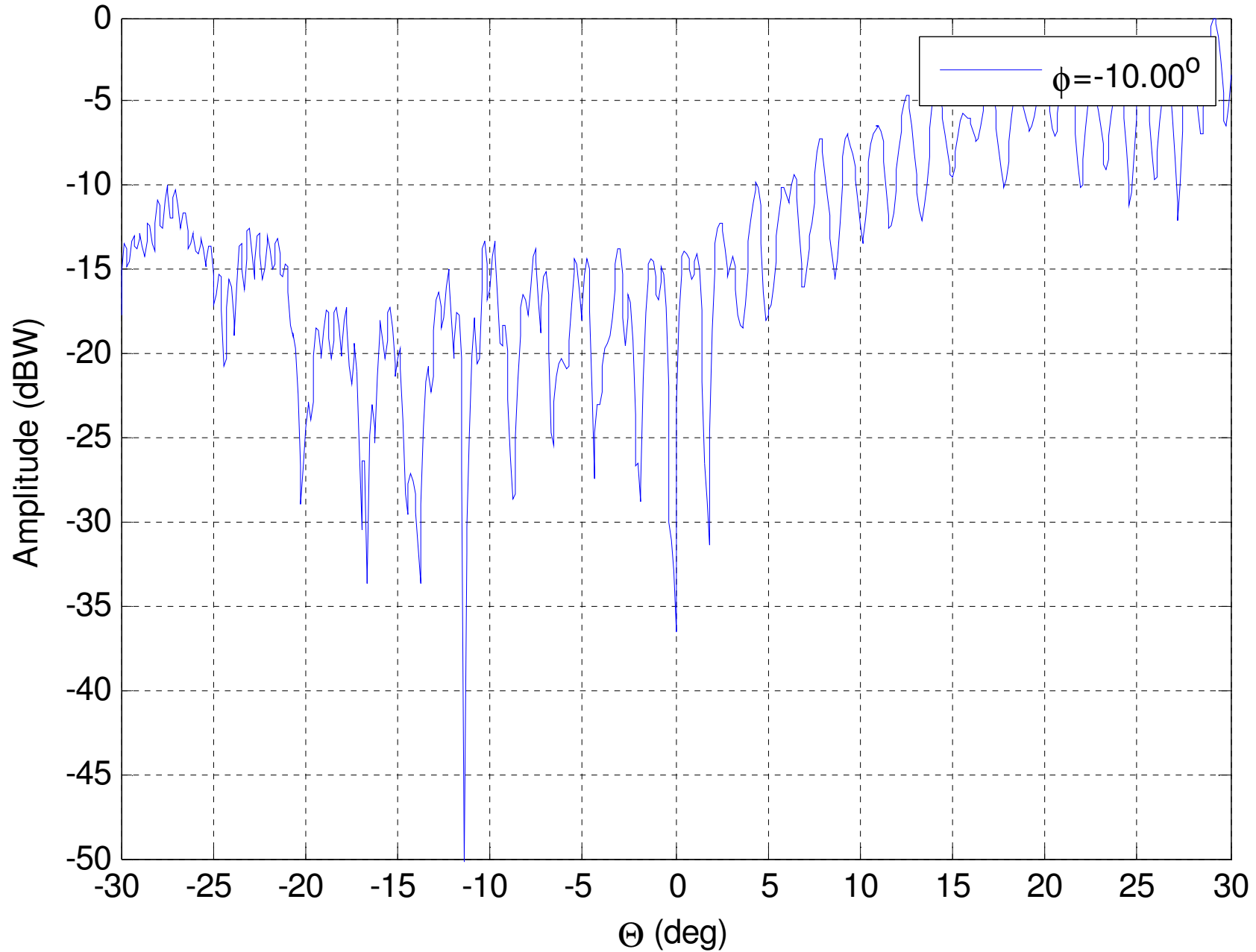
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -2.50 dBW, Date: 14-Dec-2011



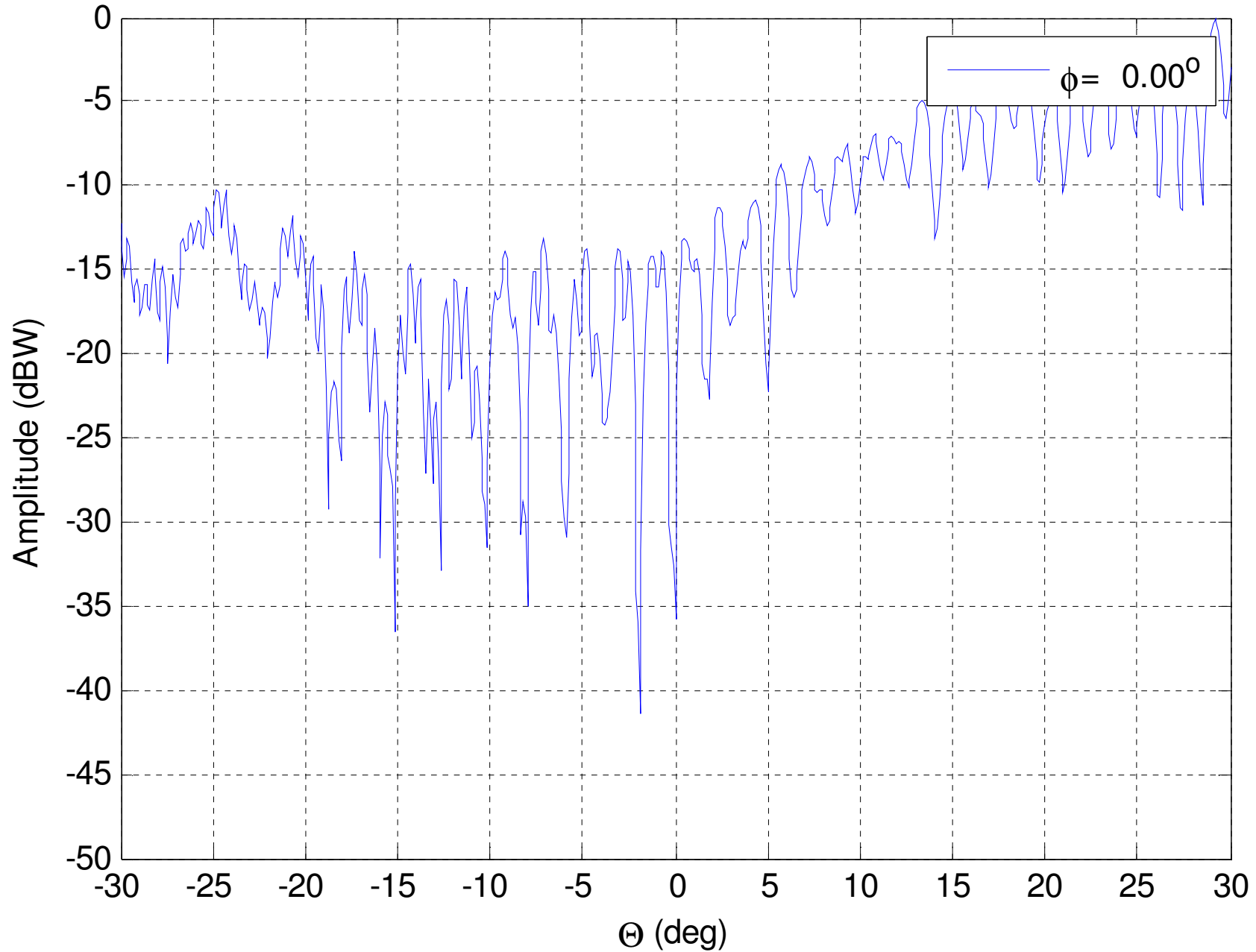
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -2.12 dBW, Date: 14-Dec-2011



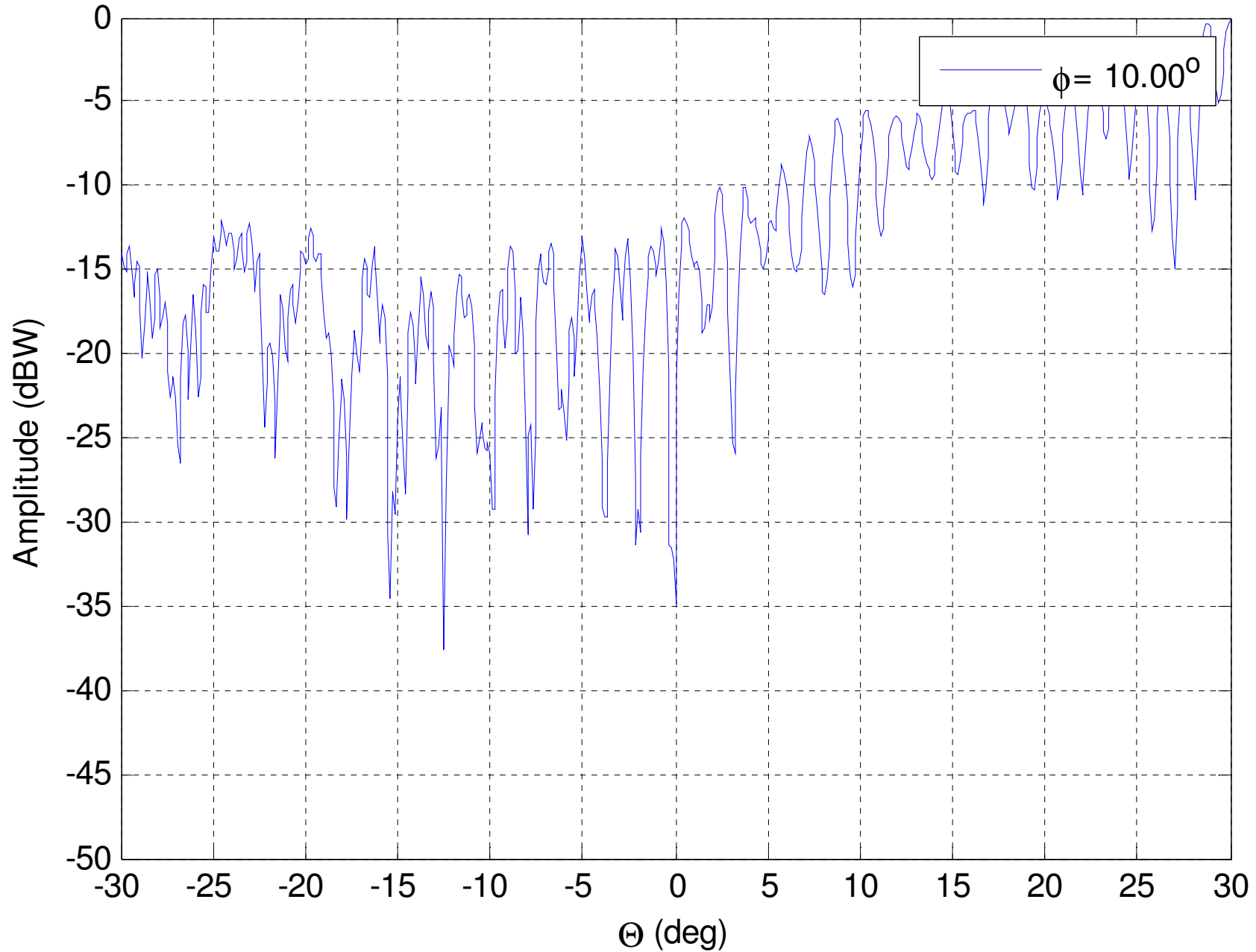
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -2.78 dBW, Date: 14-Dec-2011



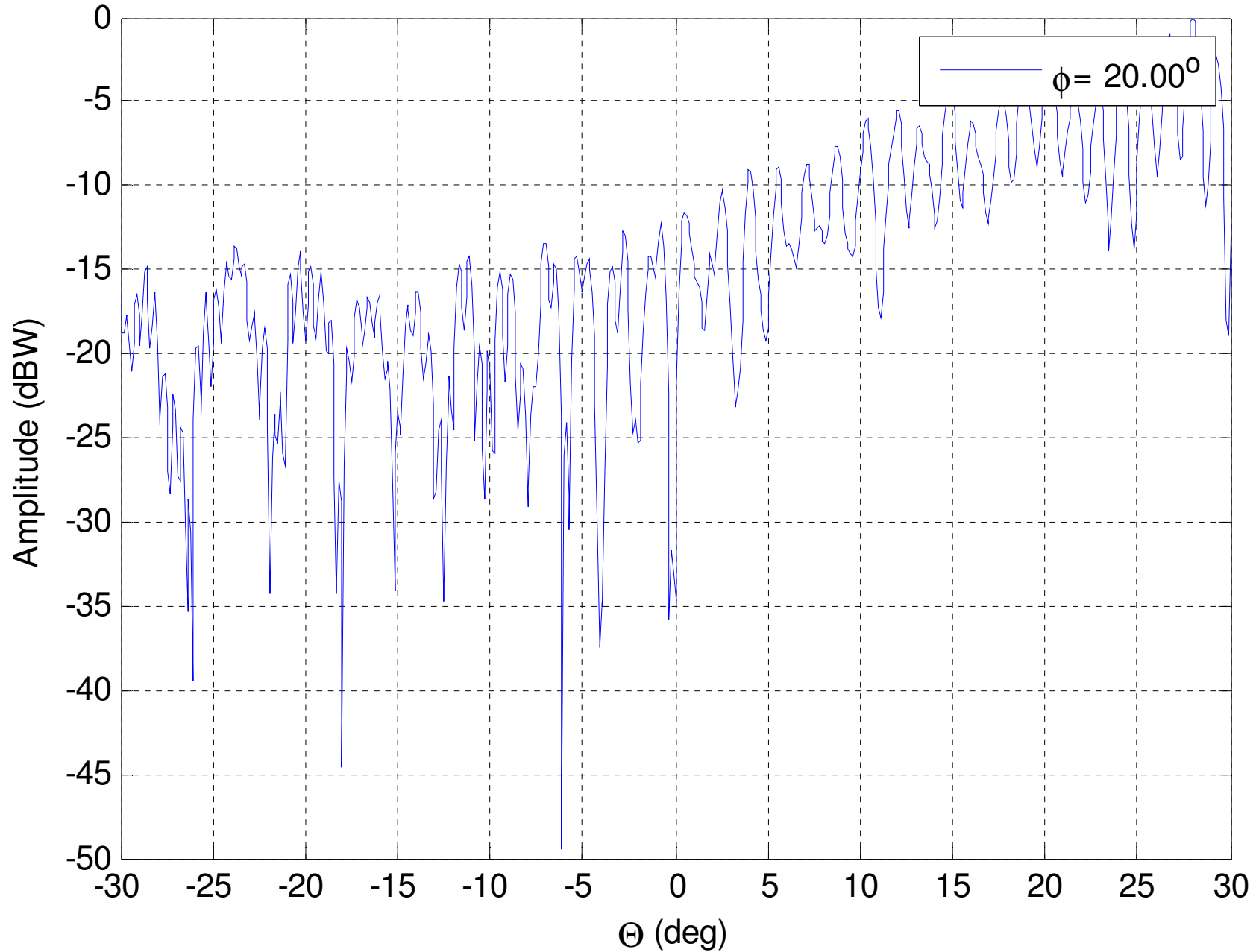
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -3.69 dBW, Date: 14-Dec-2011



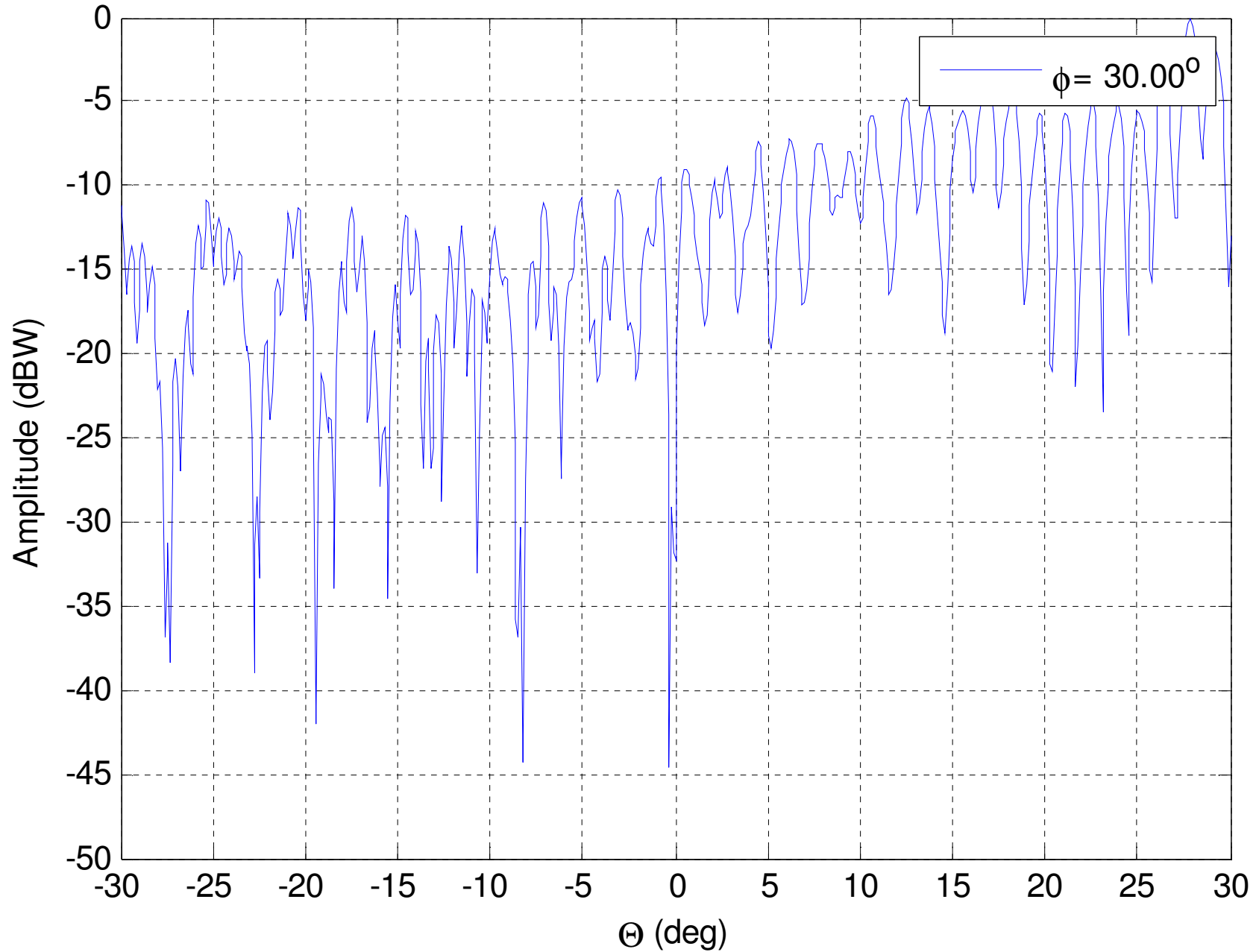
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -3.87 dBW, Date: 14-Dec-2011



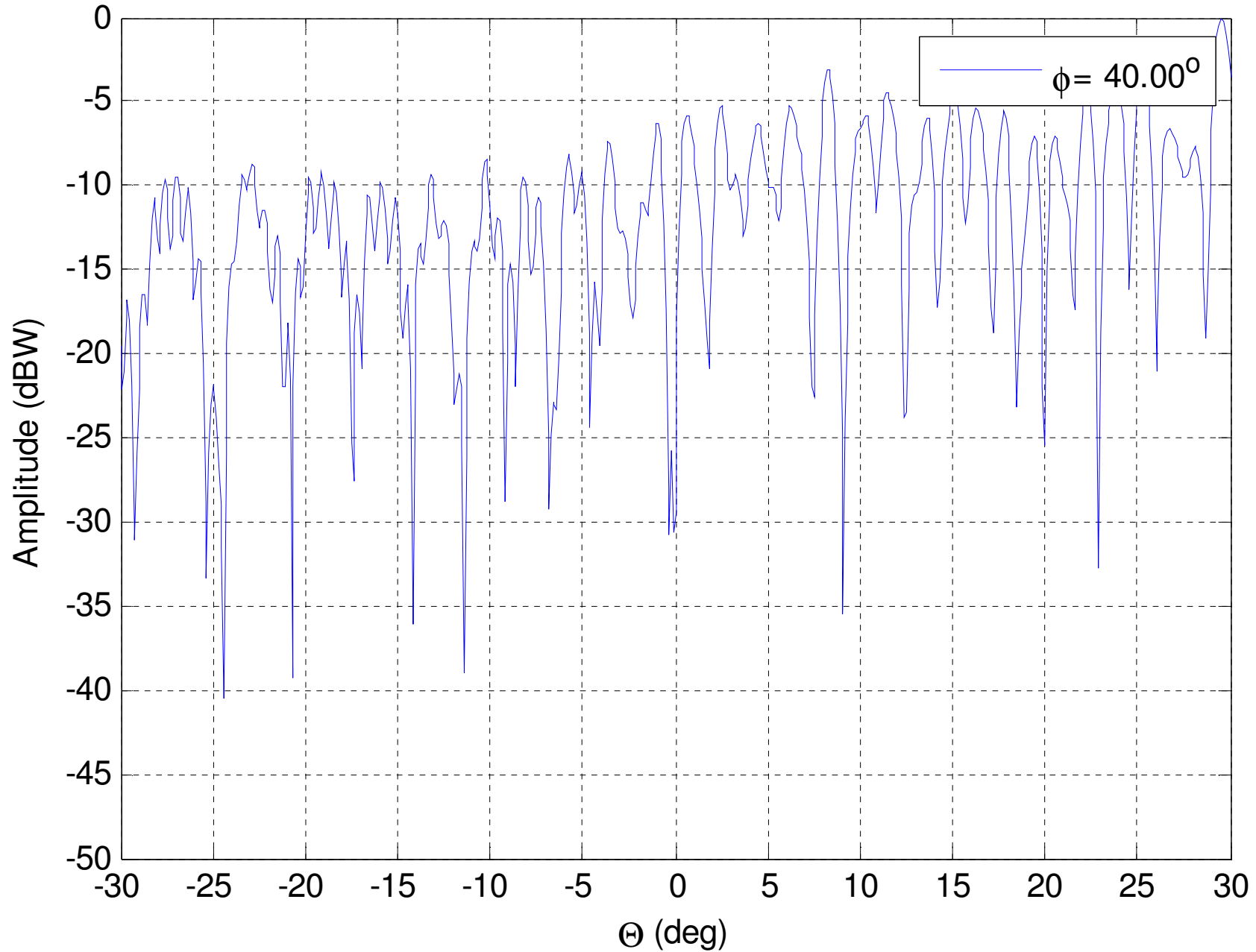
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -6.28 dBW, Date: 14-Dec-2011



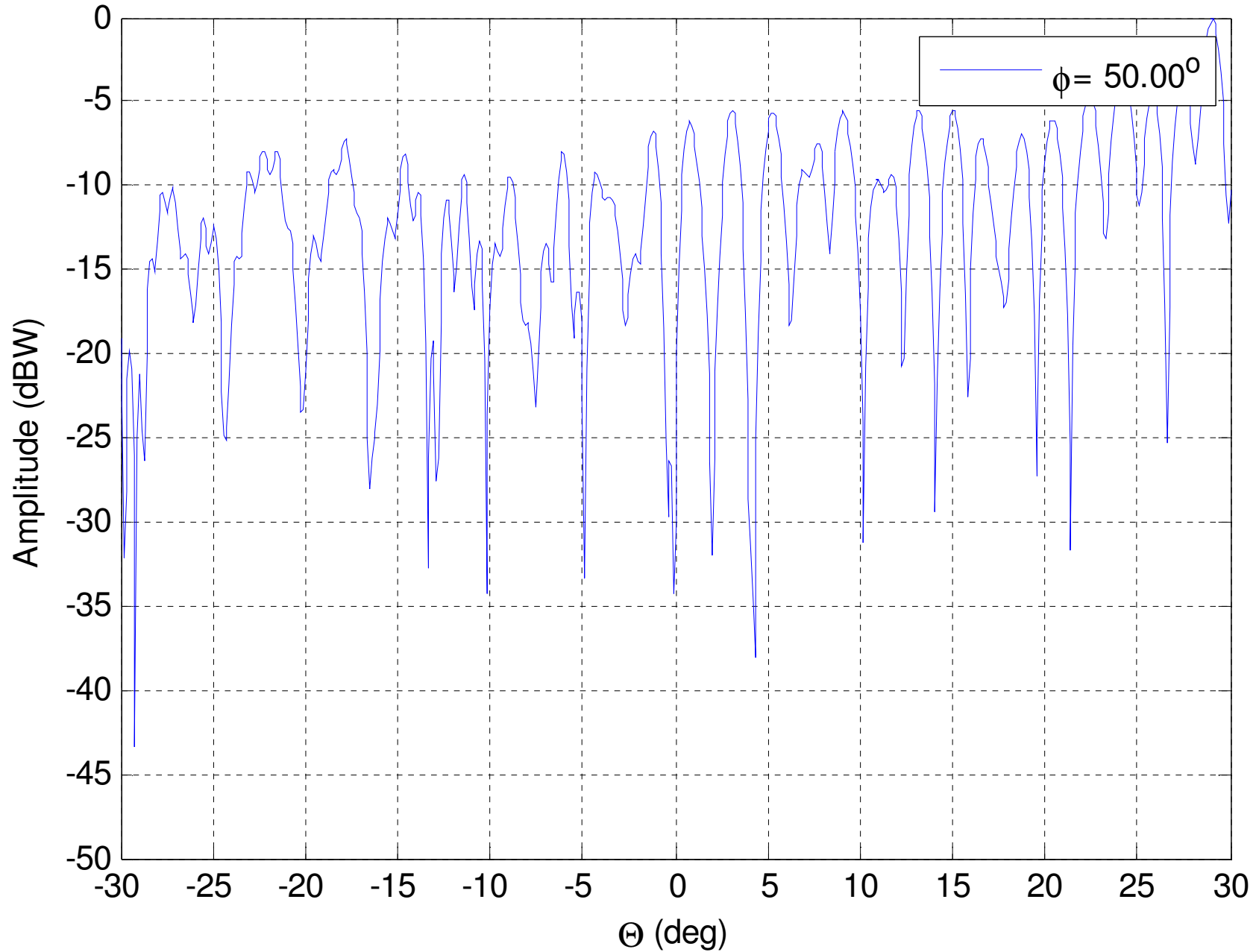
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -9.27 dBW, Date: 14-Dec-2011



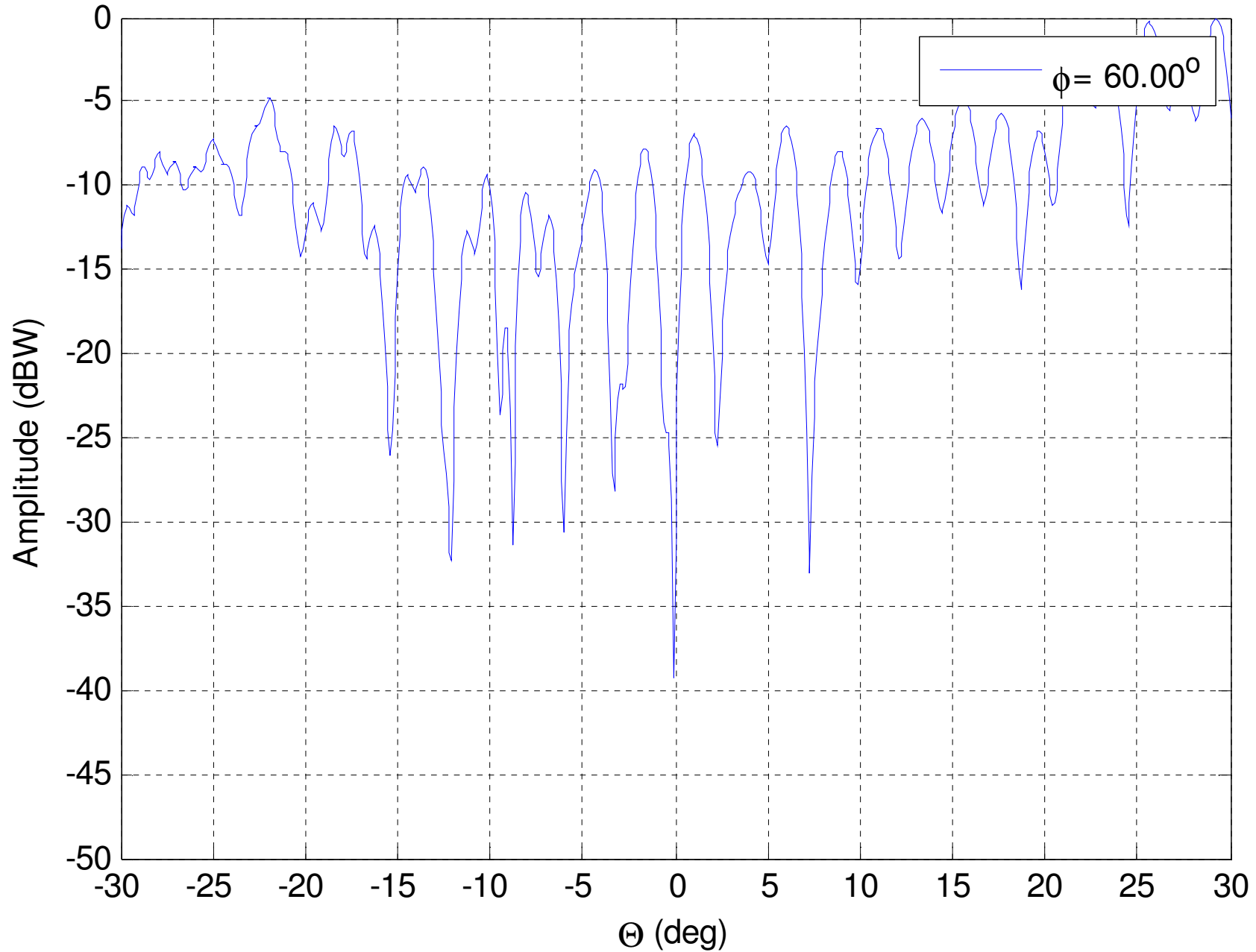
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -8.55 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

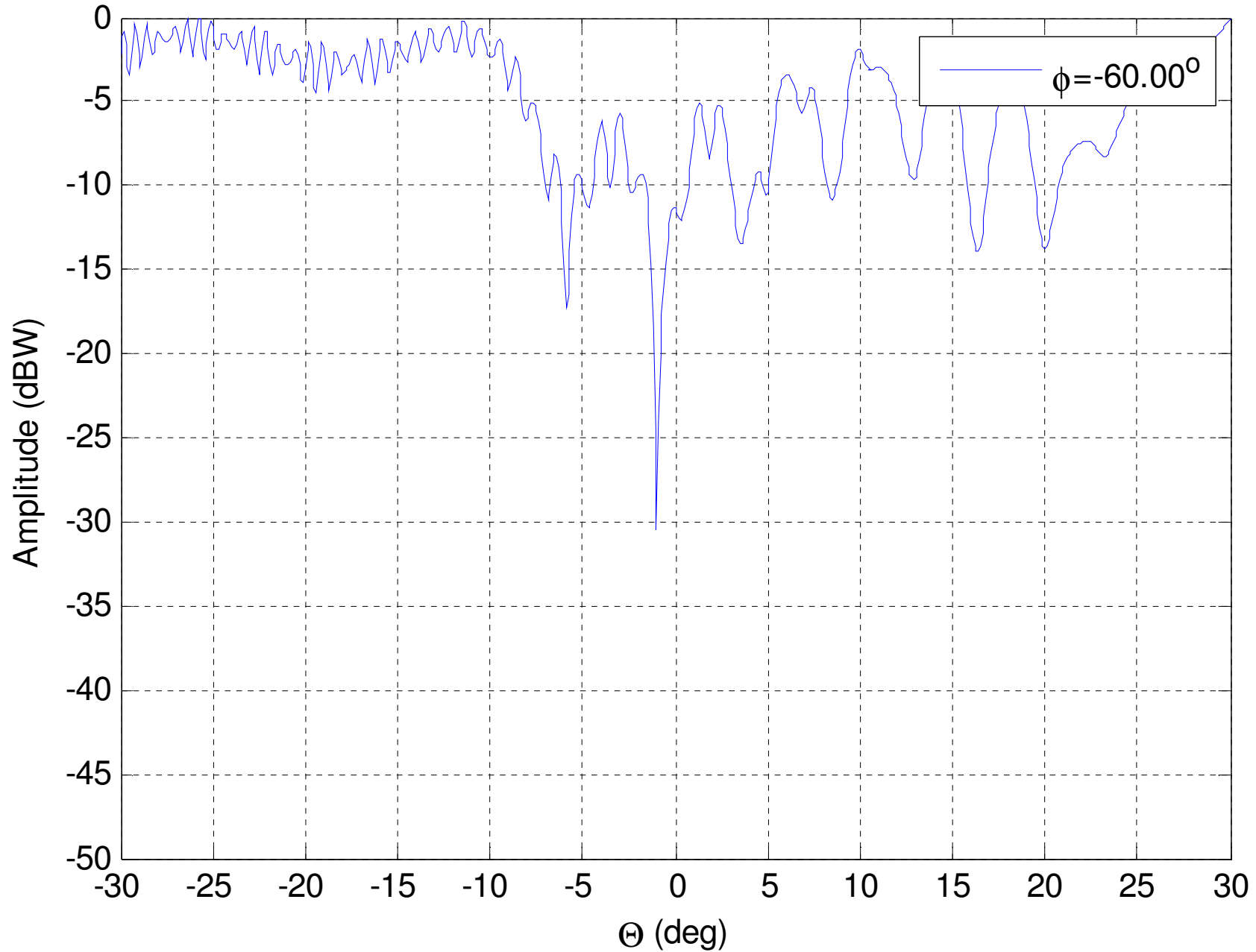
Input file: tx-17.5-lhcp-60.cut, Peak: -7.50 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

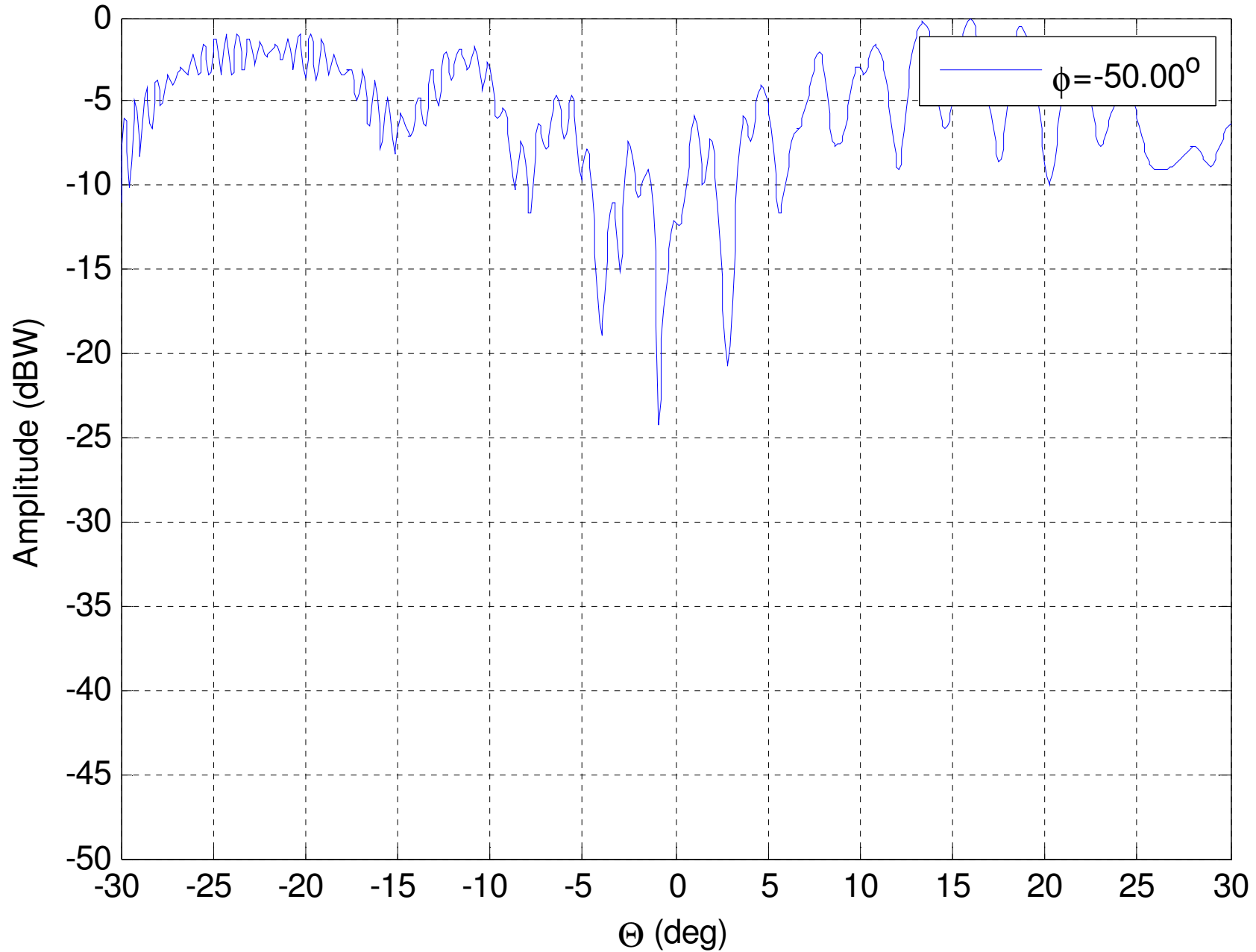
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.41 dBW, Date: 14-Dec-2011



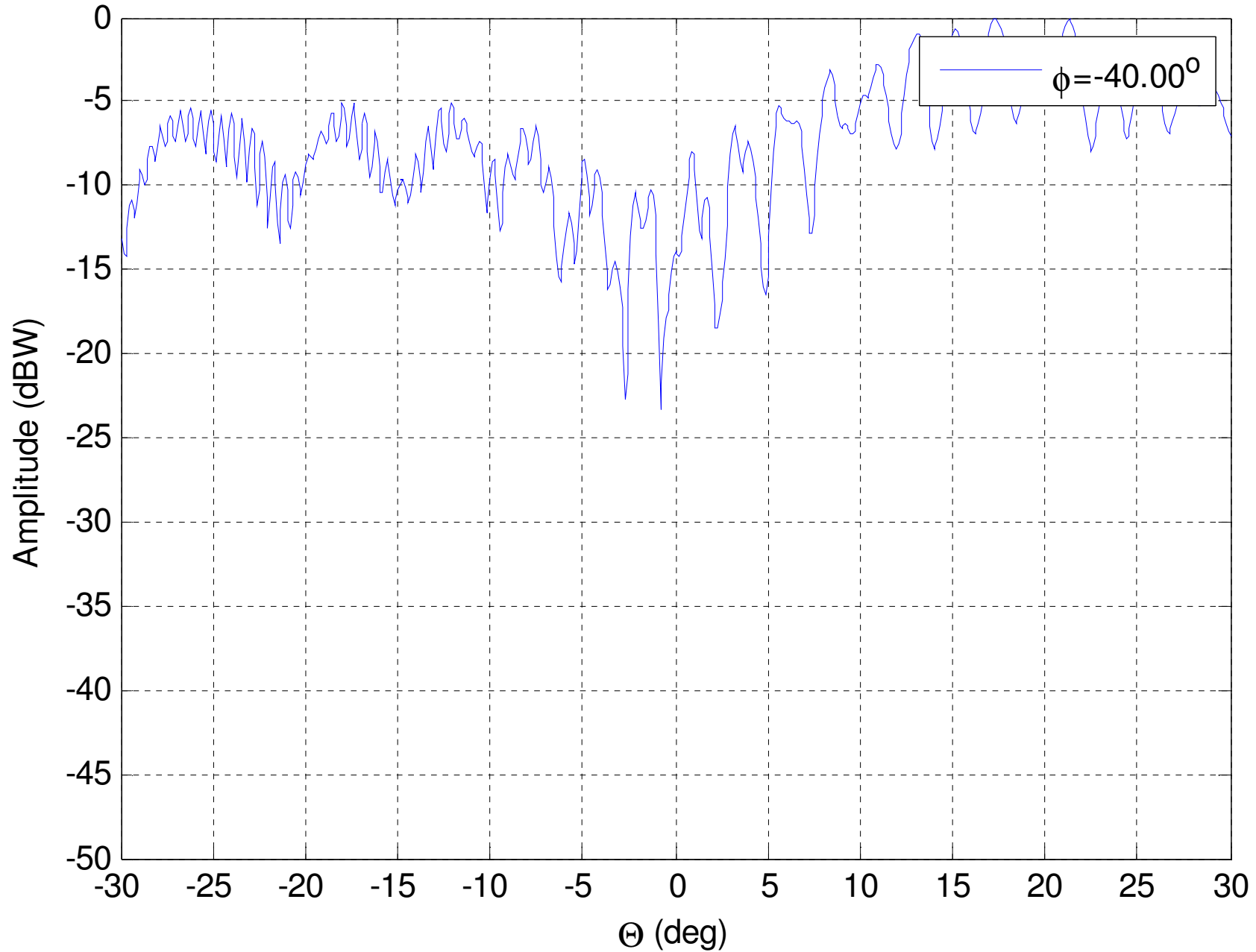
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.75 dBW, Date: 14-Dec-2011



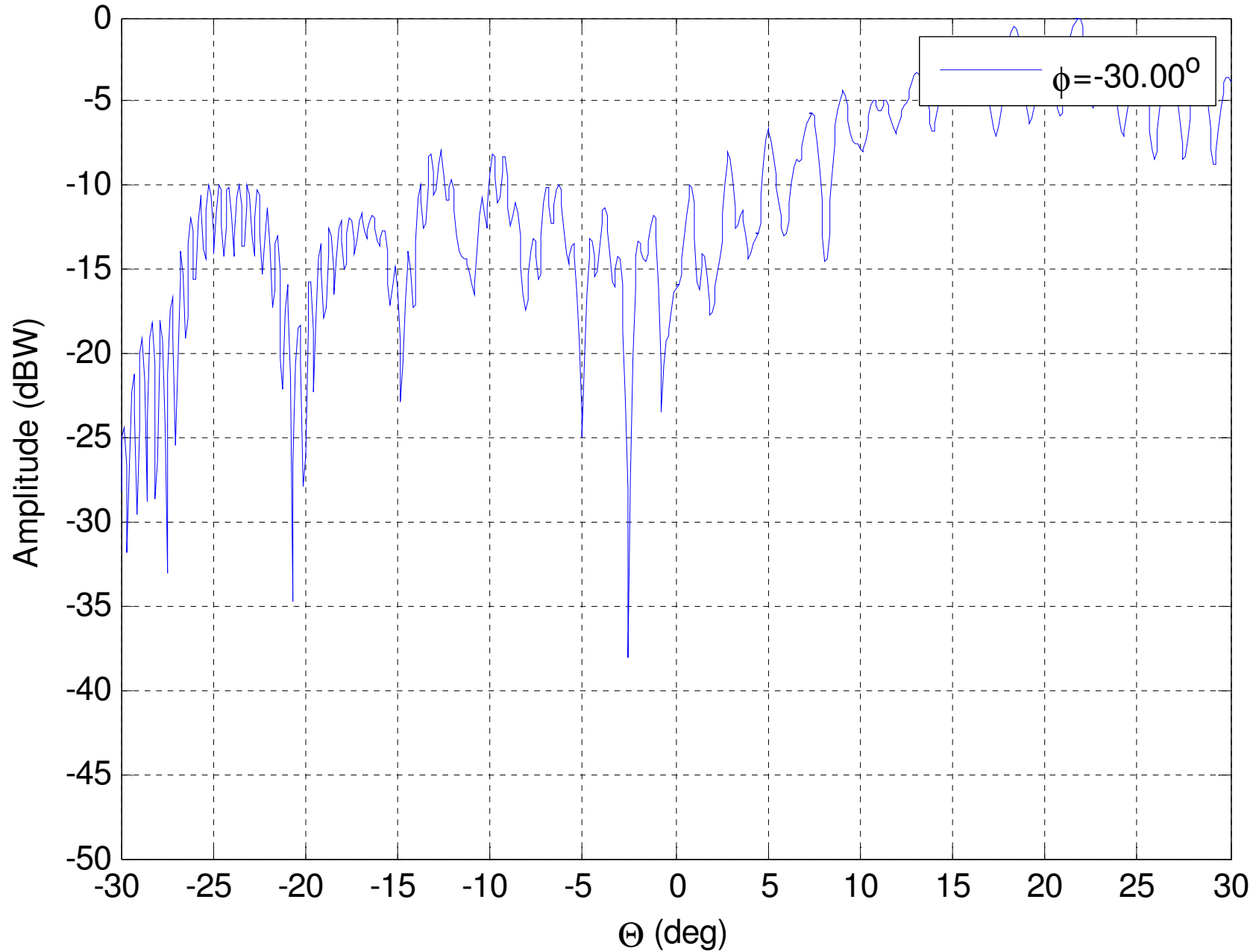
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -6.79 dBW, Date: 14-Dec-2011



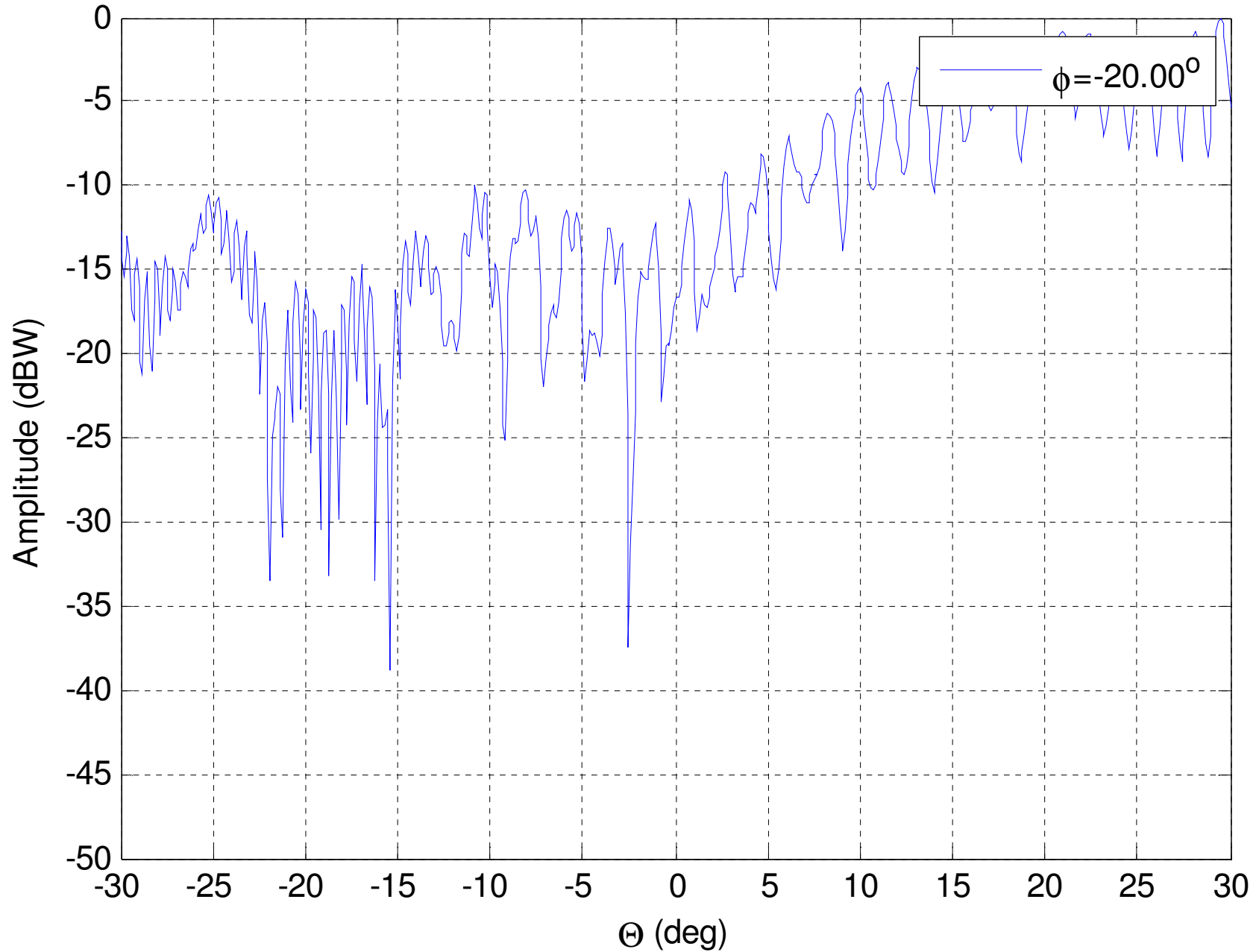
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -4.96 dBW, Date: 14-Dec-2011



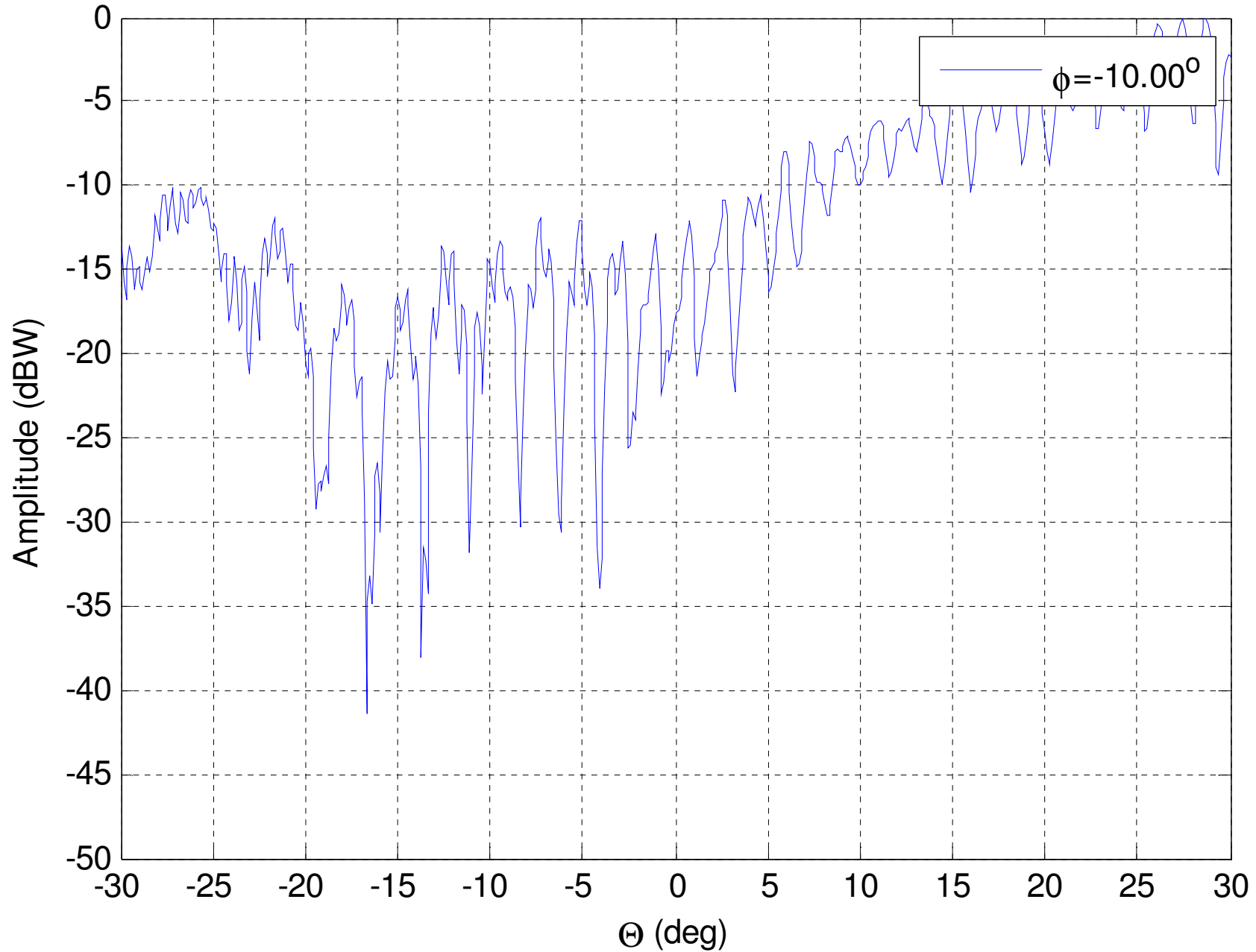
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -4.12 dBW, Date: 14-Dec-2011



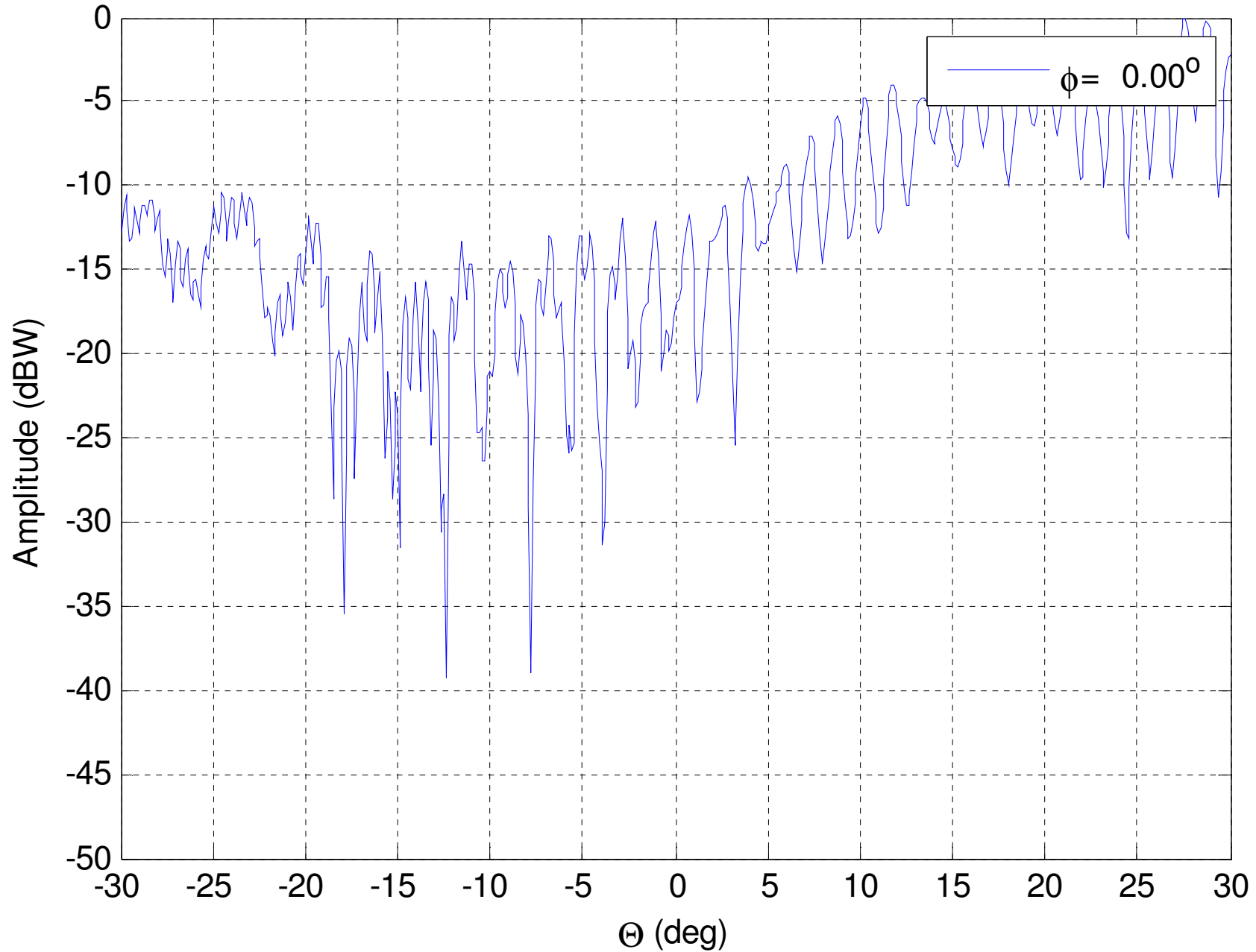
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -3.13 dBW, Date: 14-Dec-2011



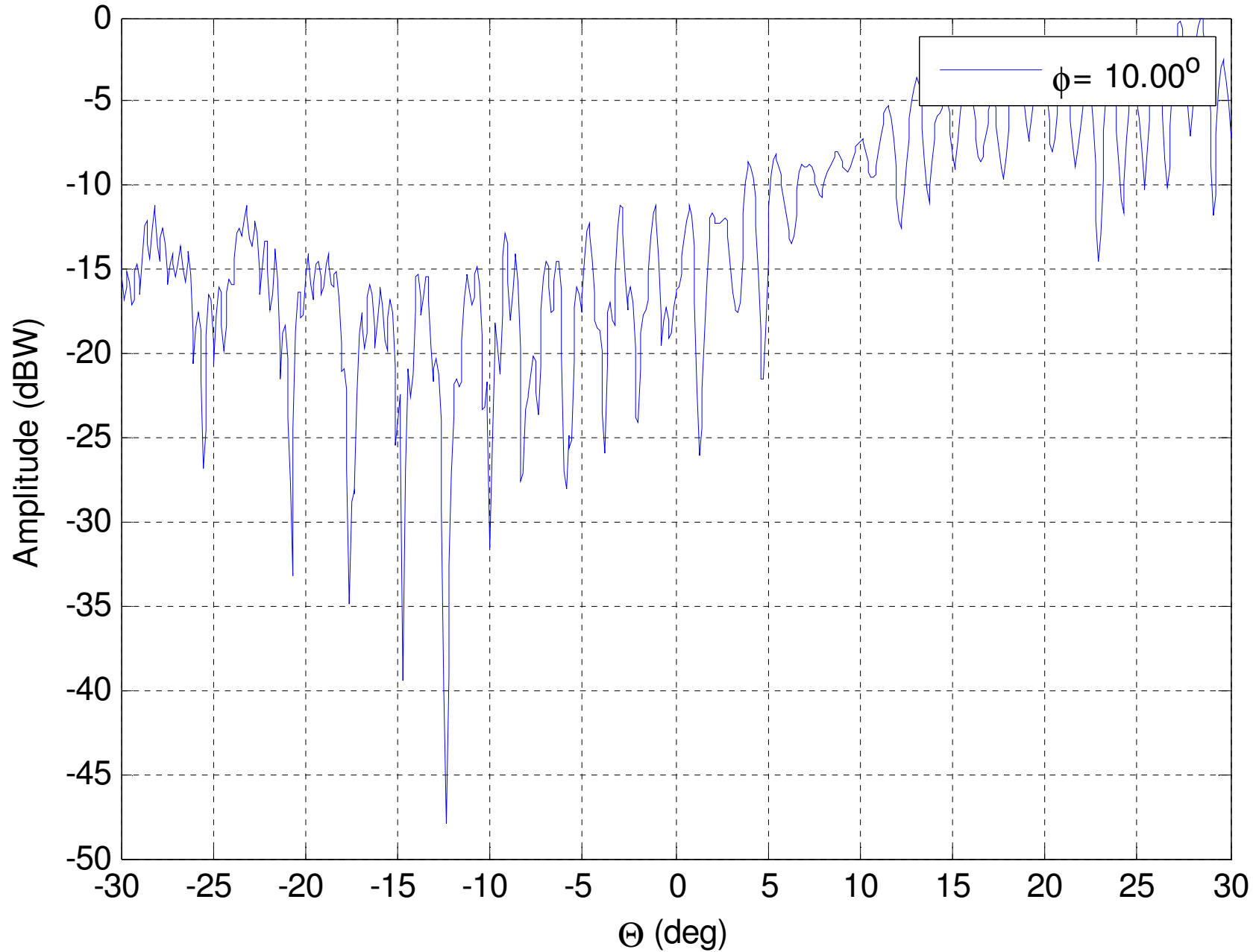
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -3.74 dBW, Date: 14-Dec-2011



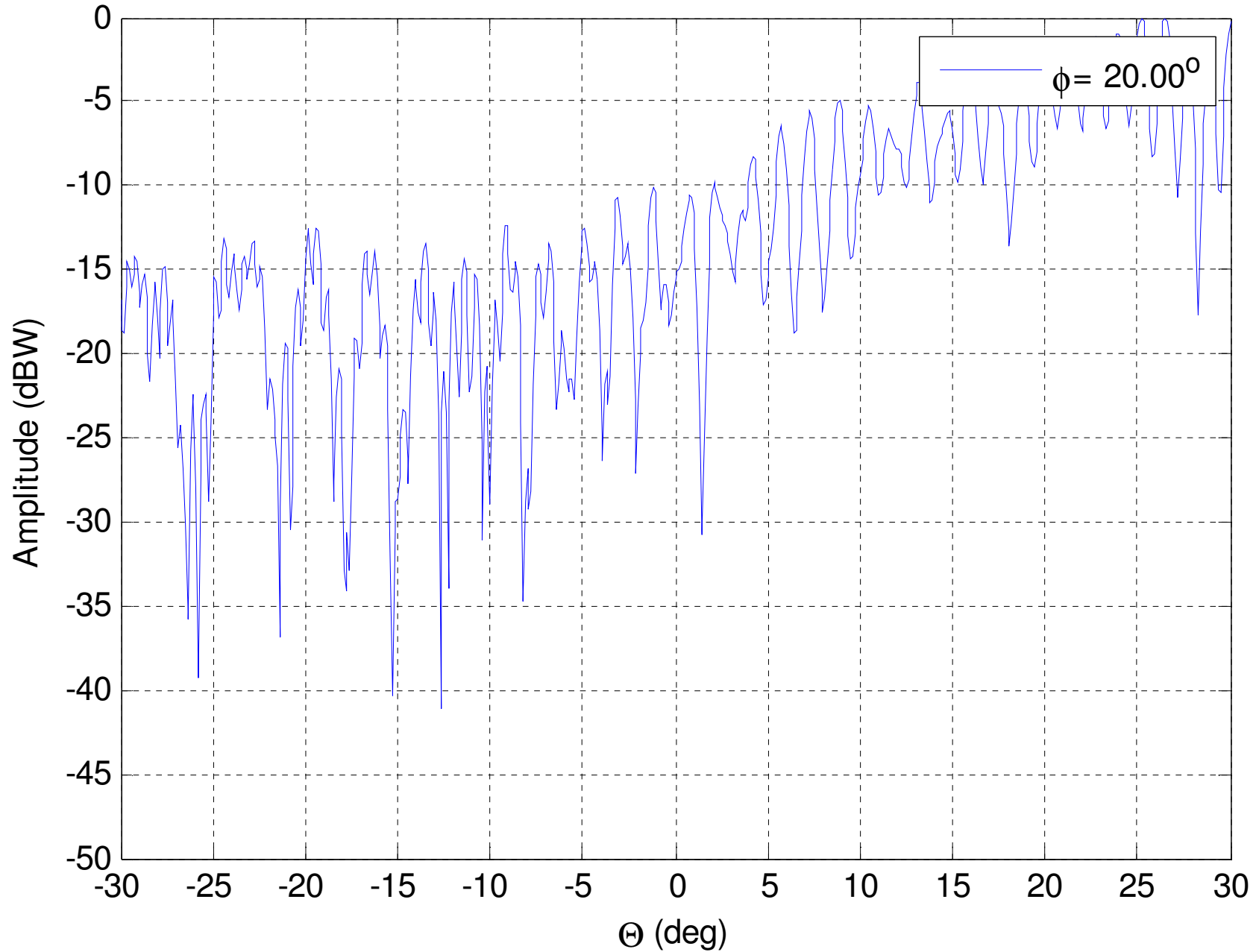
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -4.41 dBW, Date: 14-Dec-2011



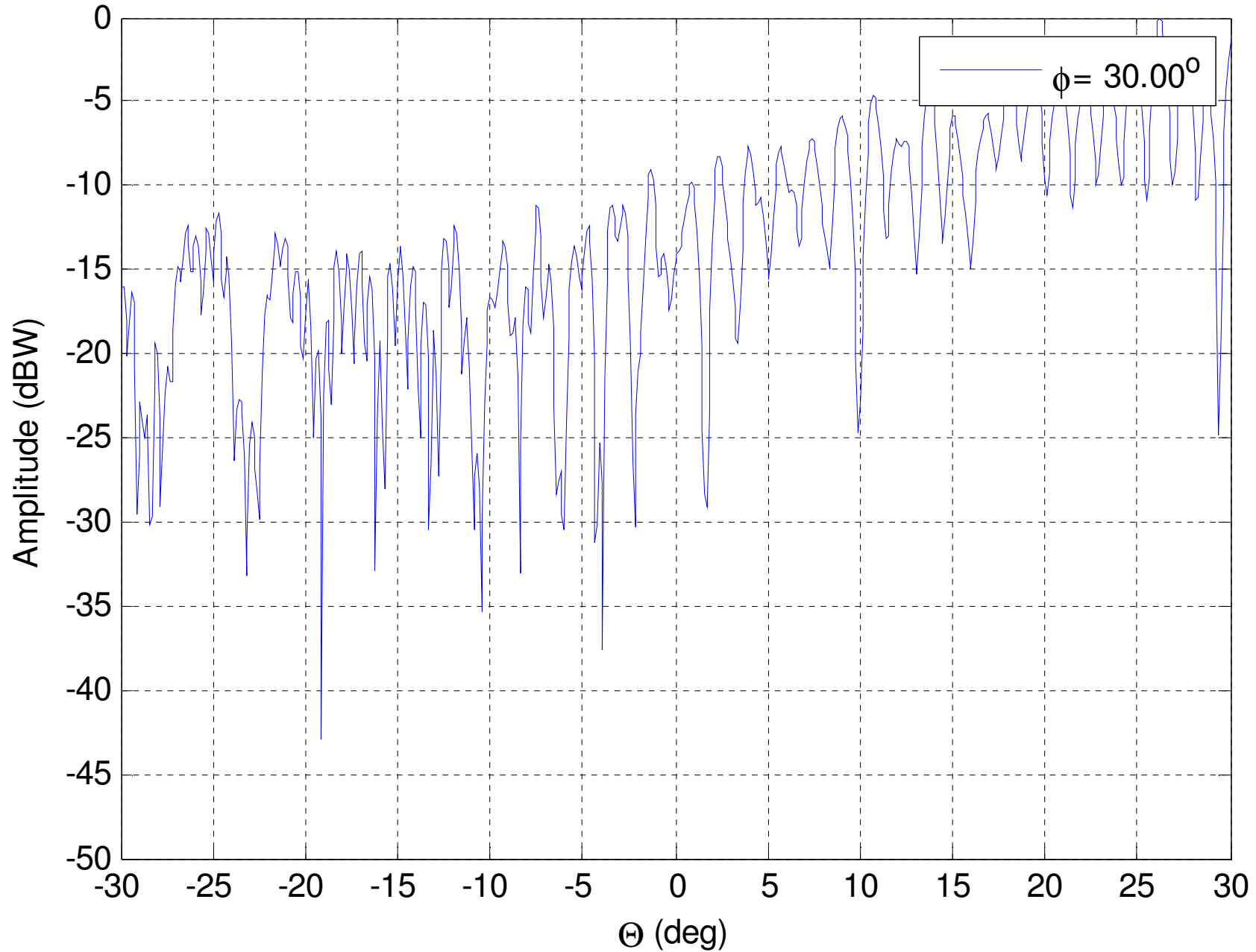
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -5.37 dBW, Date: 14-Dec-2011



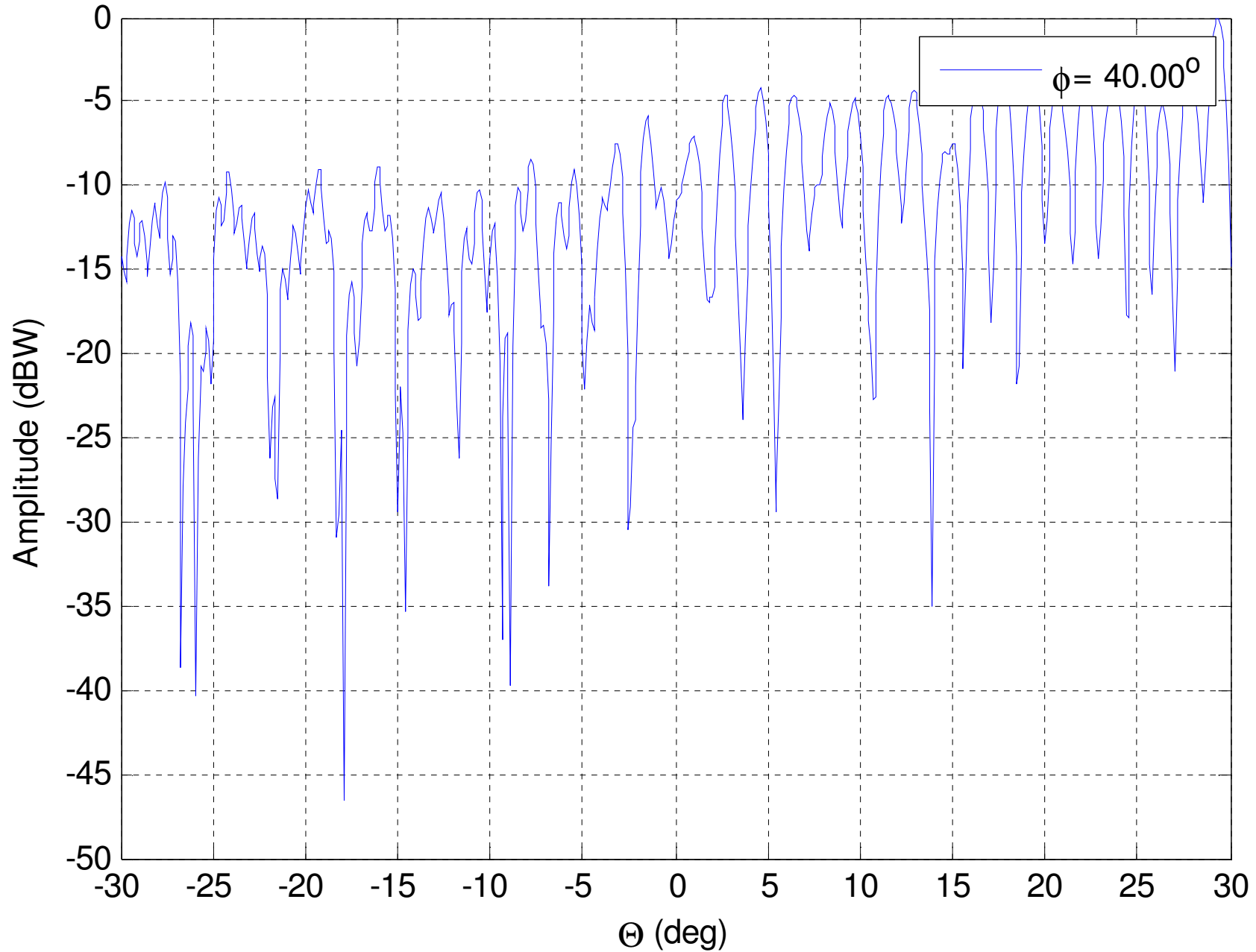
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -6.33 dBW, Date: 14-Dec-2011



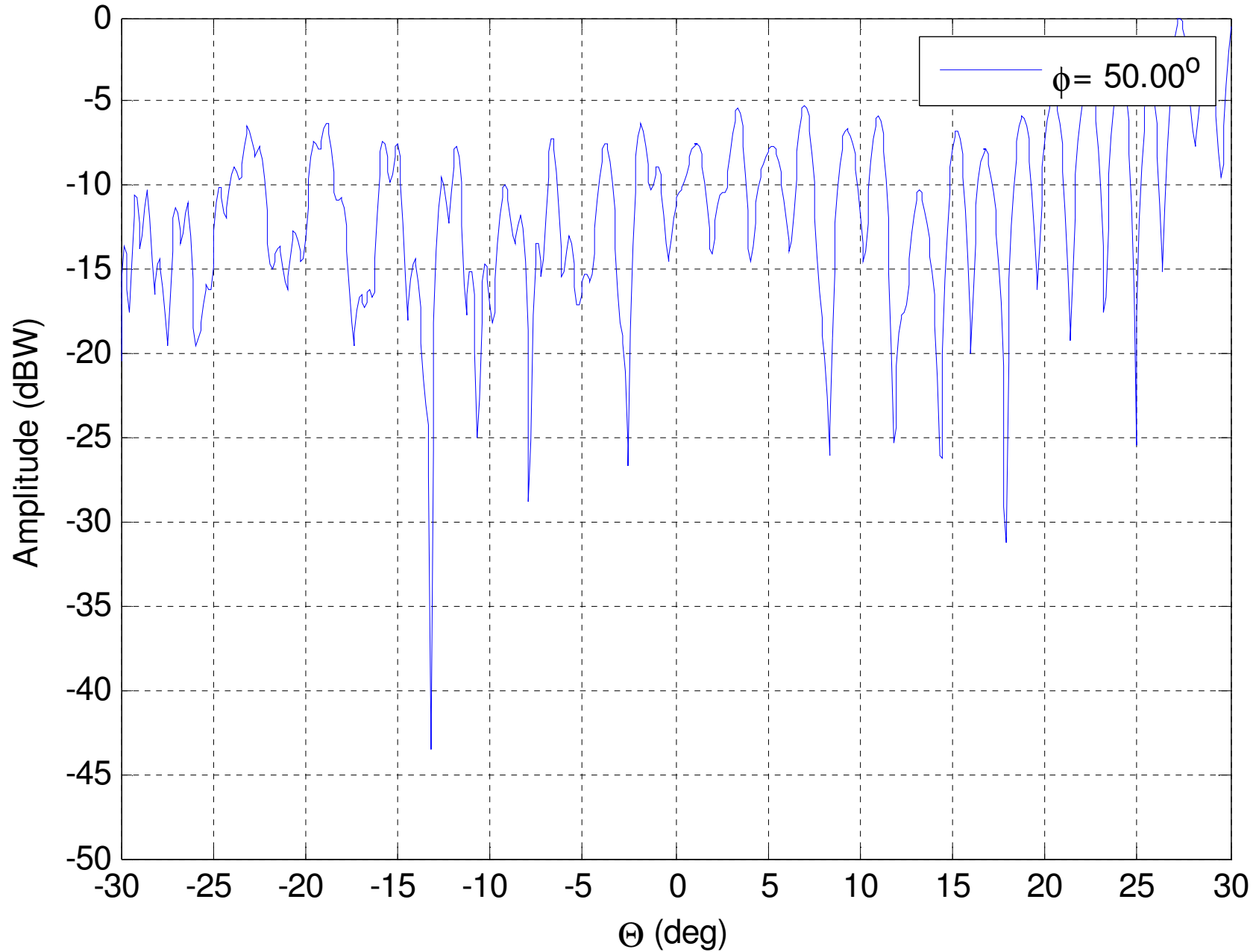
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -9.54 dBW, Date: 14-Dec-2011



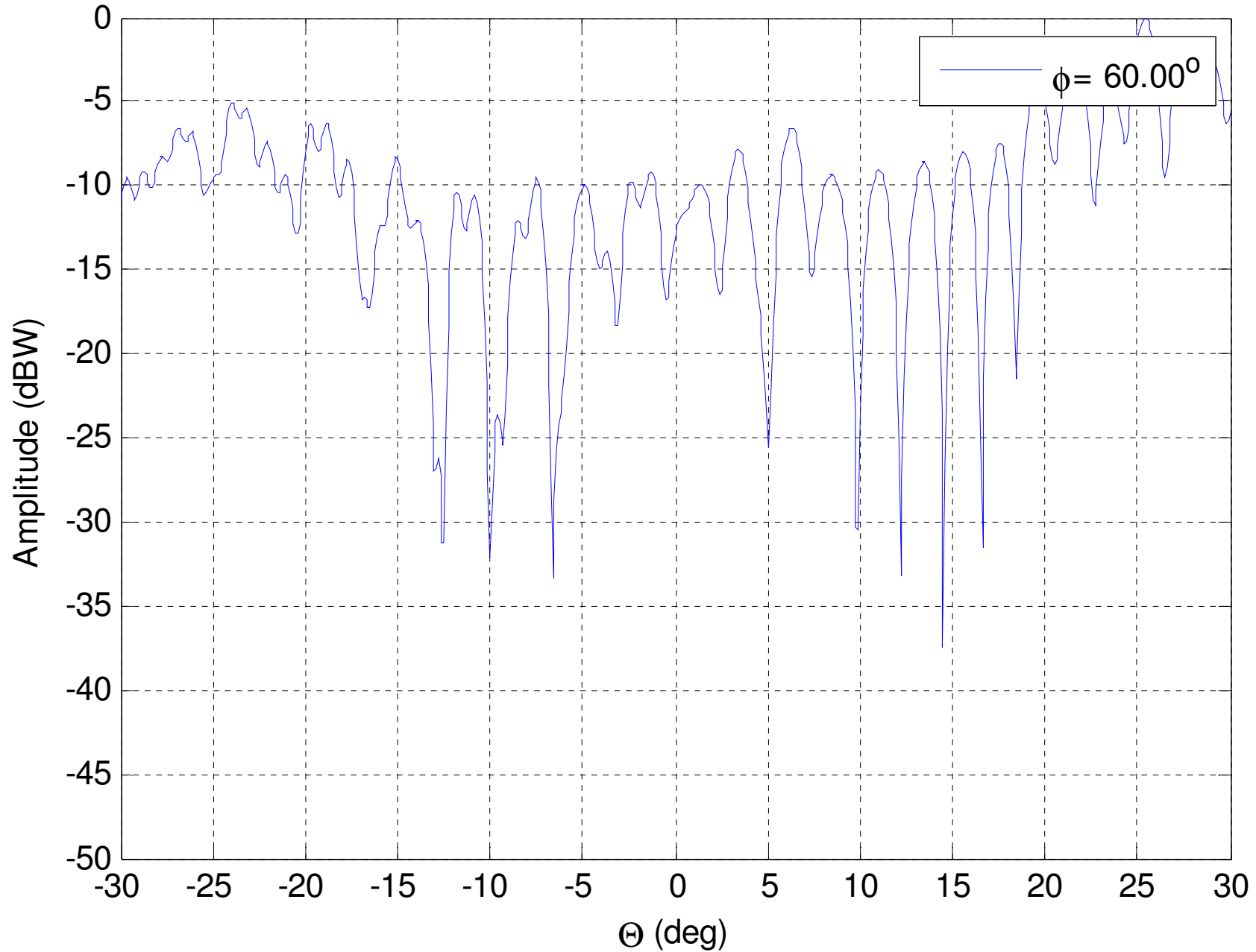
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.64 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

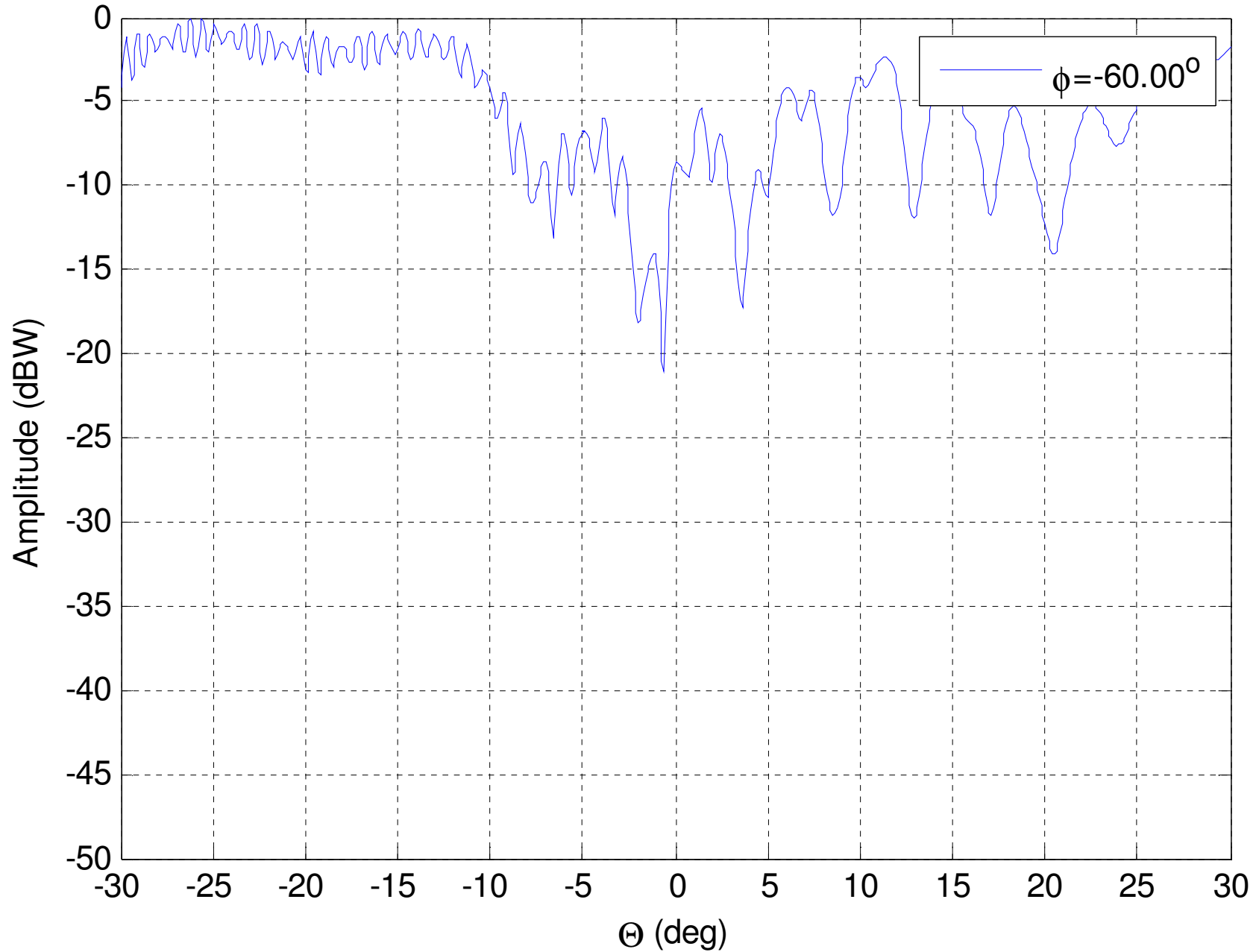
Input file: tx-17.7-rhcp-60.cut, Peak: -7.88 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

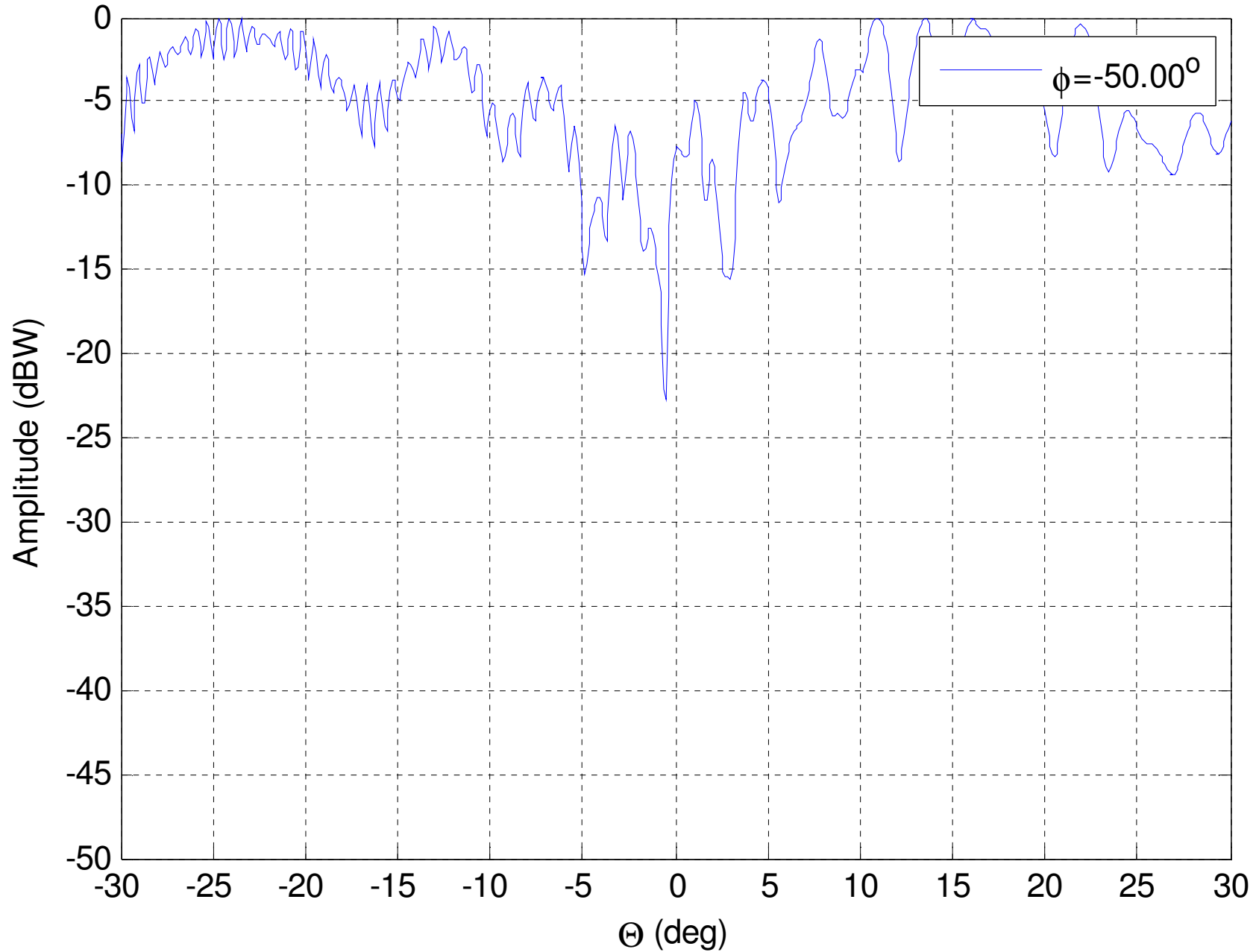
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -8.67 dBW, Date: 14-Dec-2011



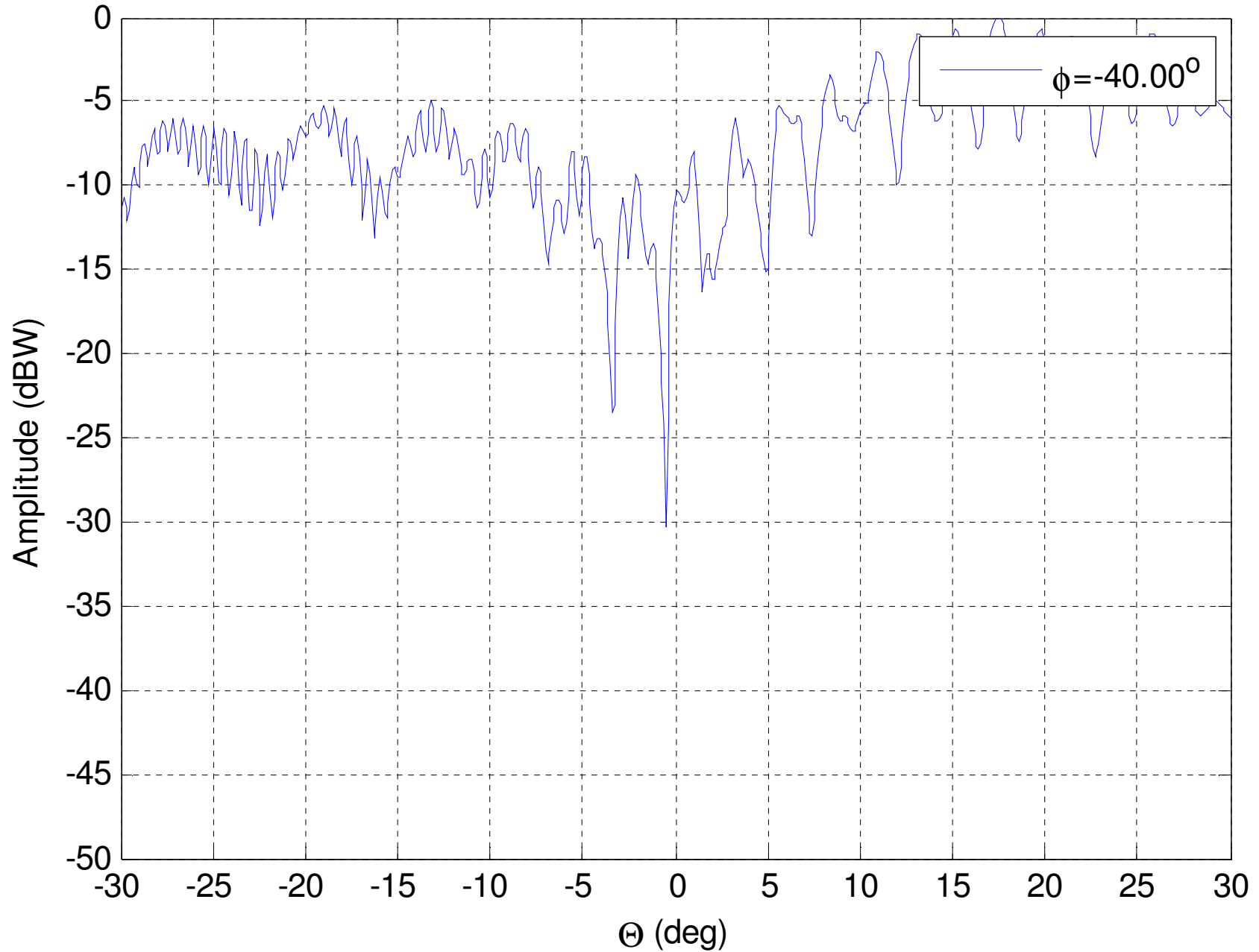
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.52 dBW, Date: 14-Dec-2011



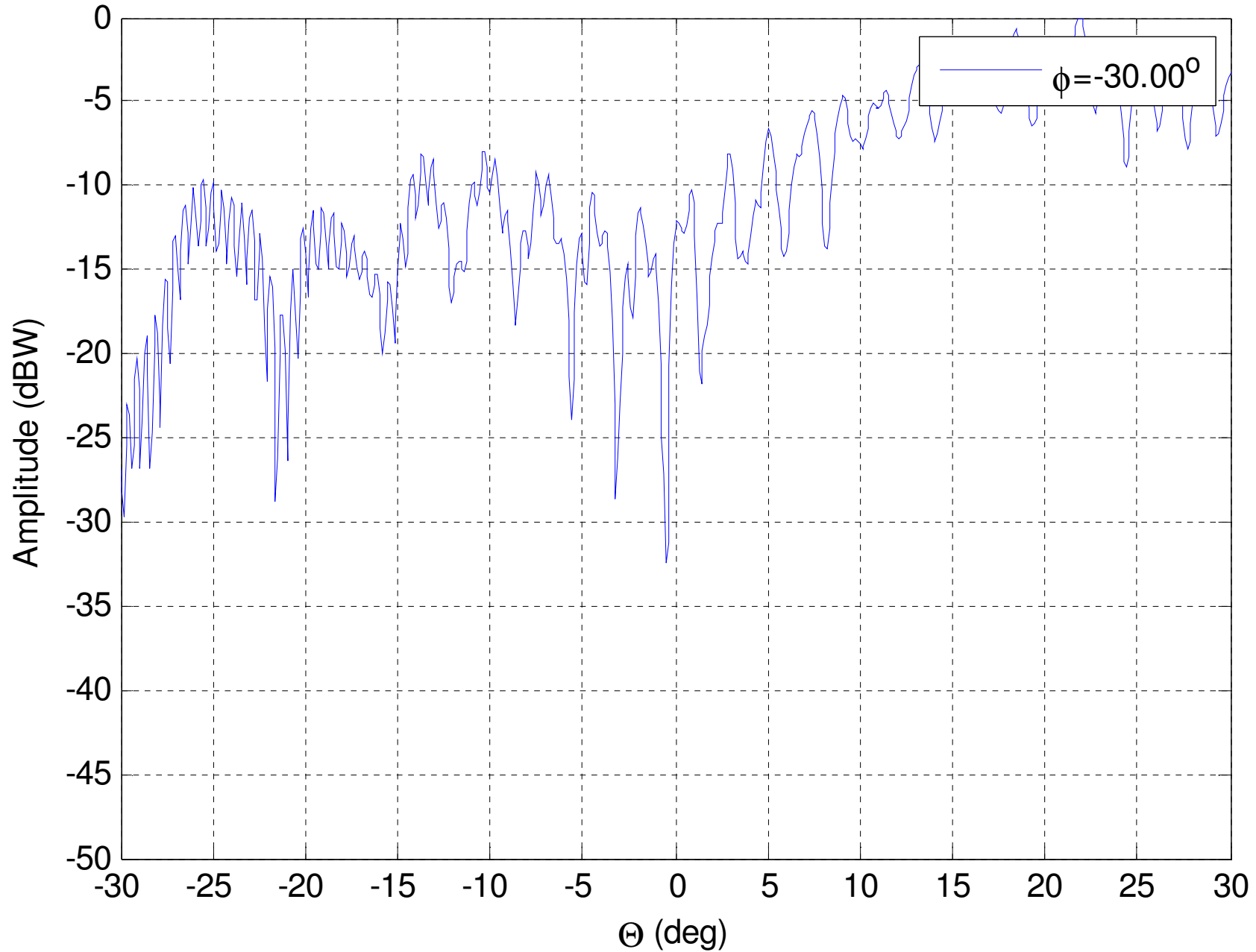
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -6.83 dBW, Date: 14-Dec-2011



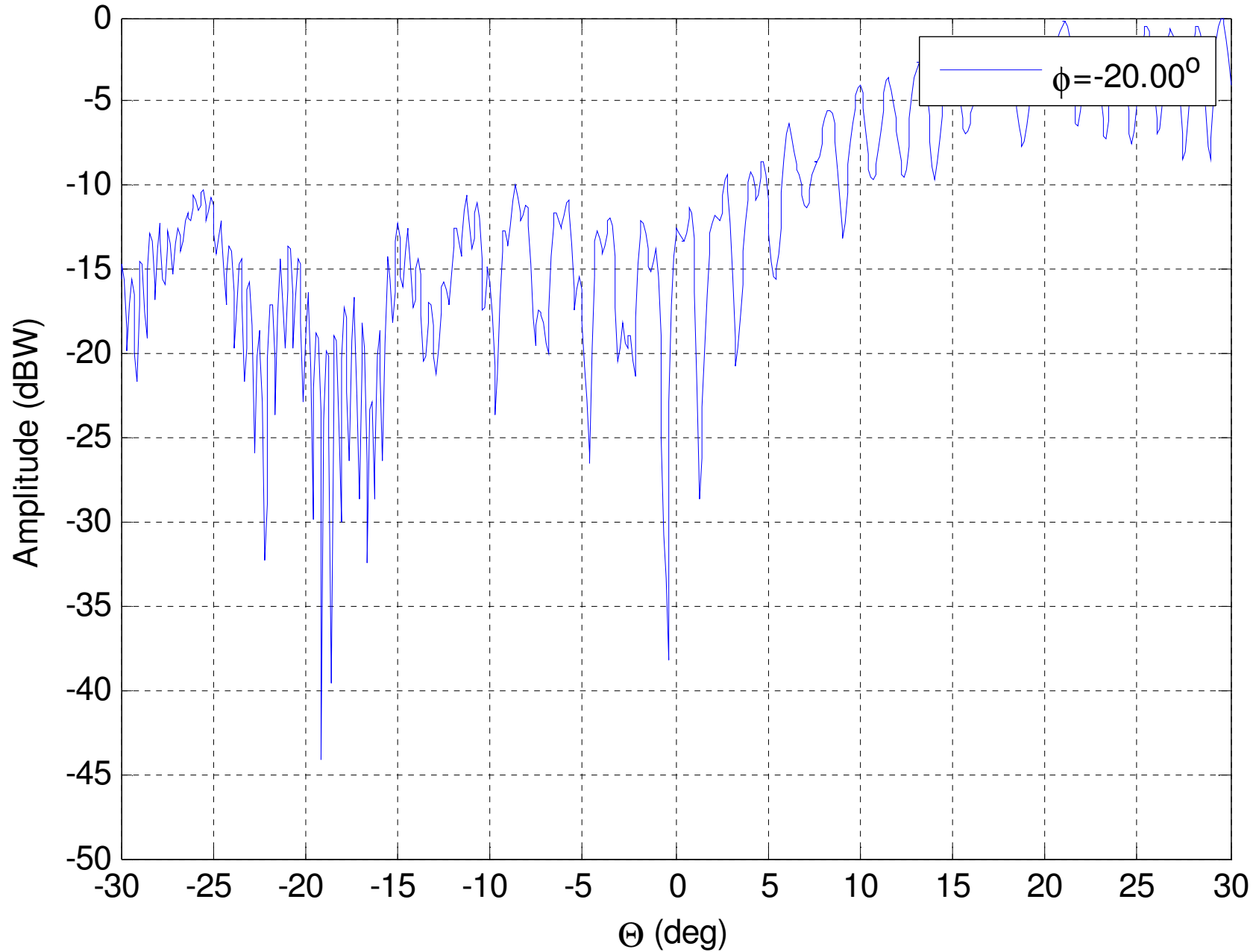
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -4.97 dBW, Date: 14-Dec-2011



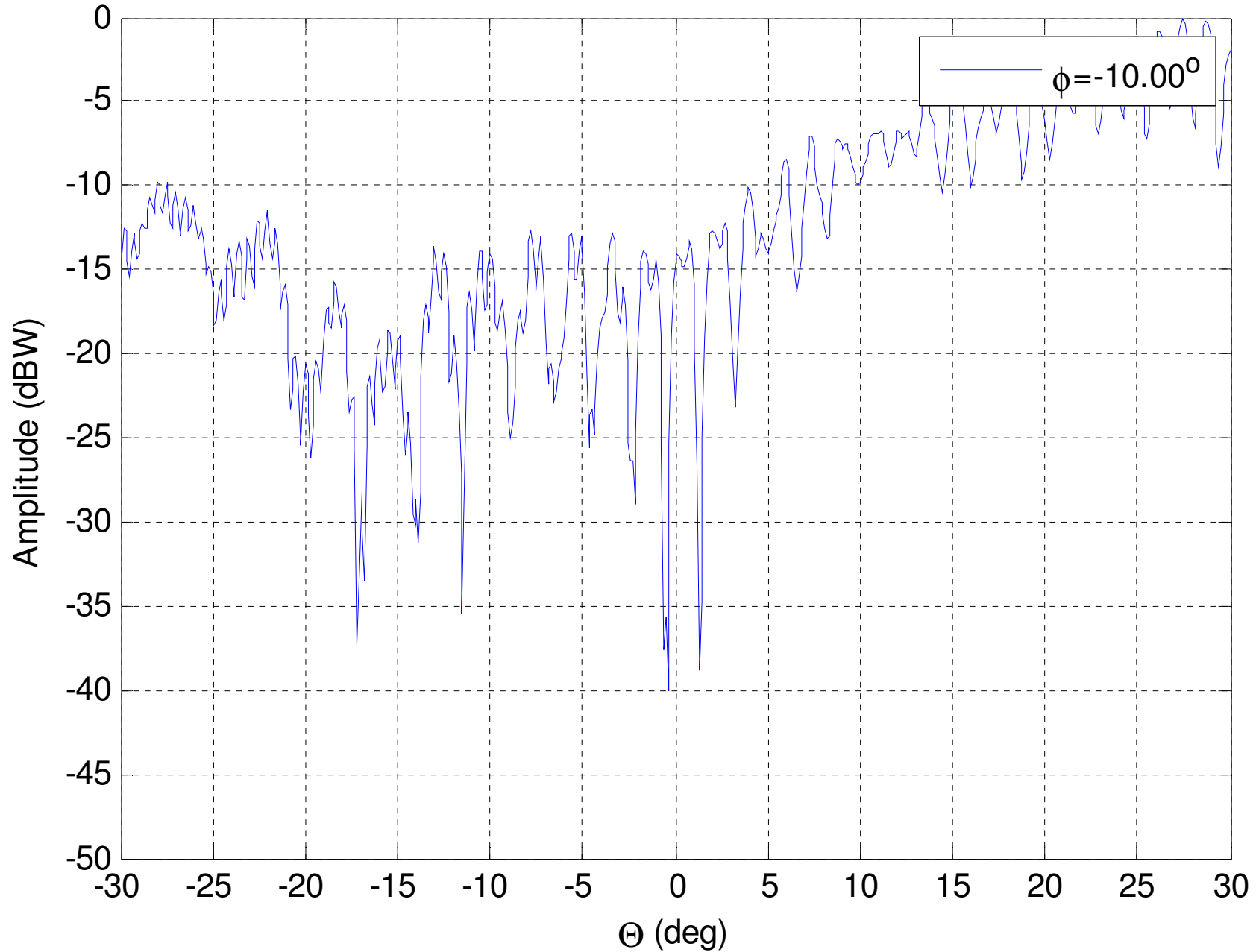
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -4.43 dBW, Date: 14-Dec-2011



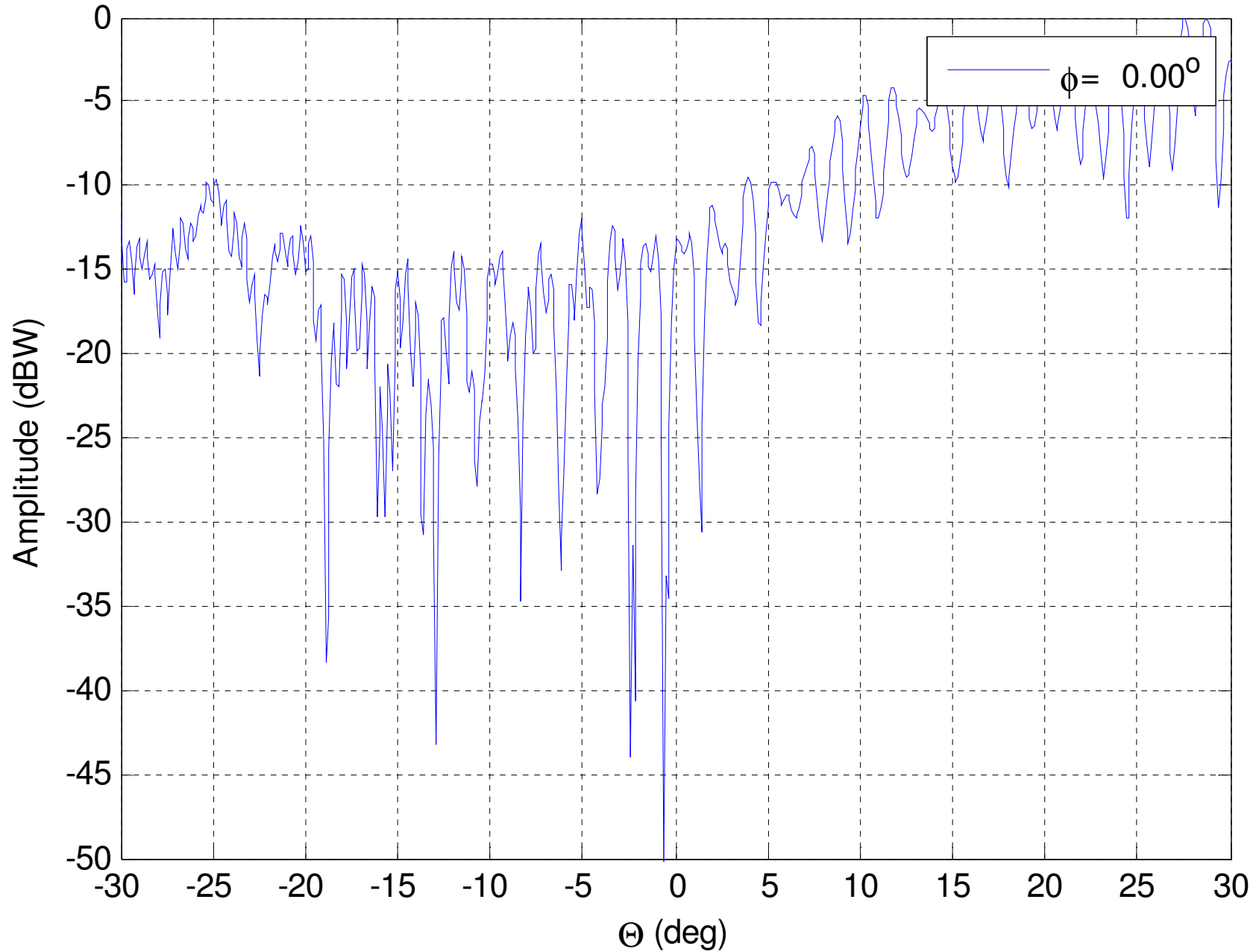
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -2.96 dBW, Date: 14-Dec-2011



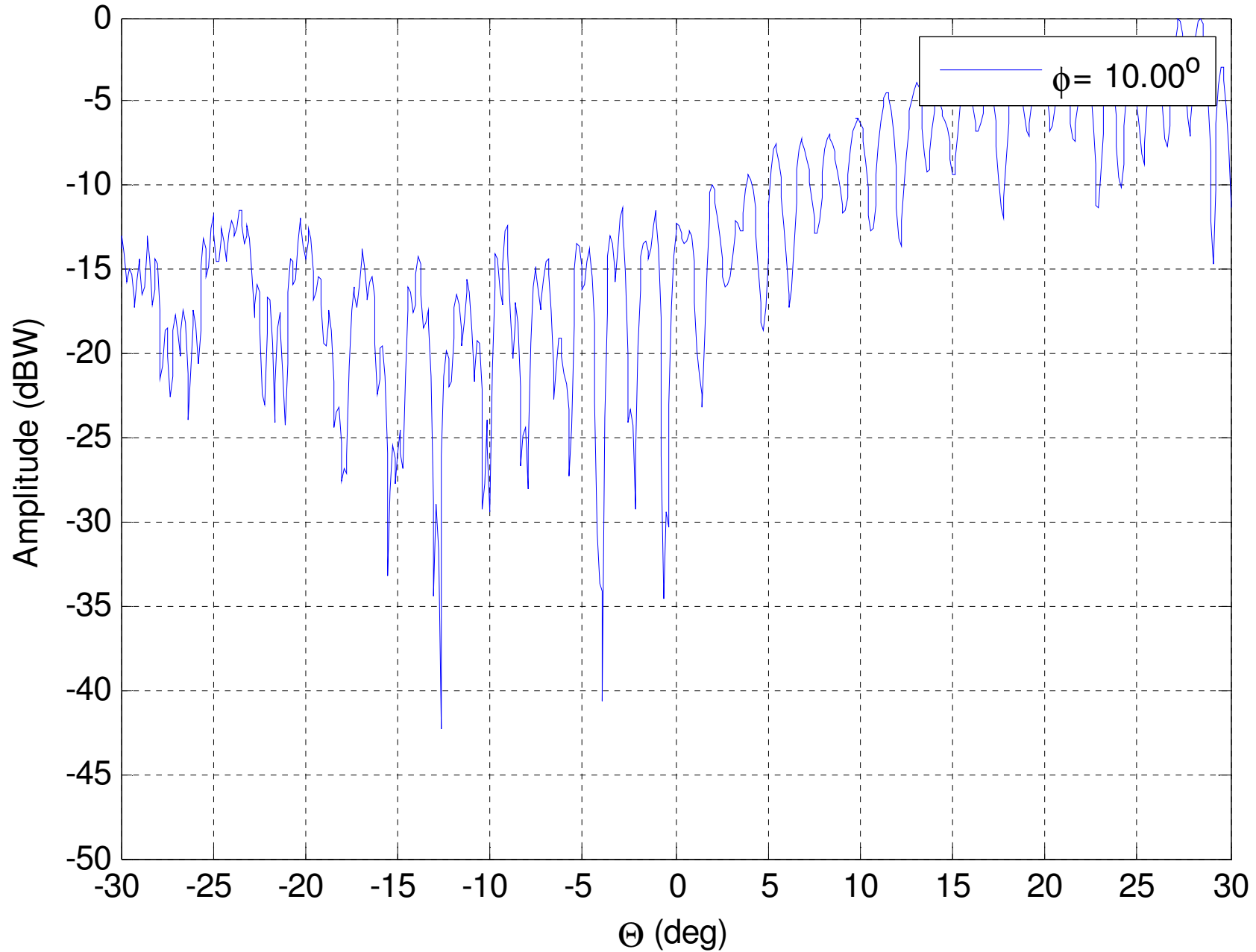
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -3.83 dBW, Date: 14-Dec-2011



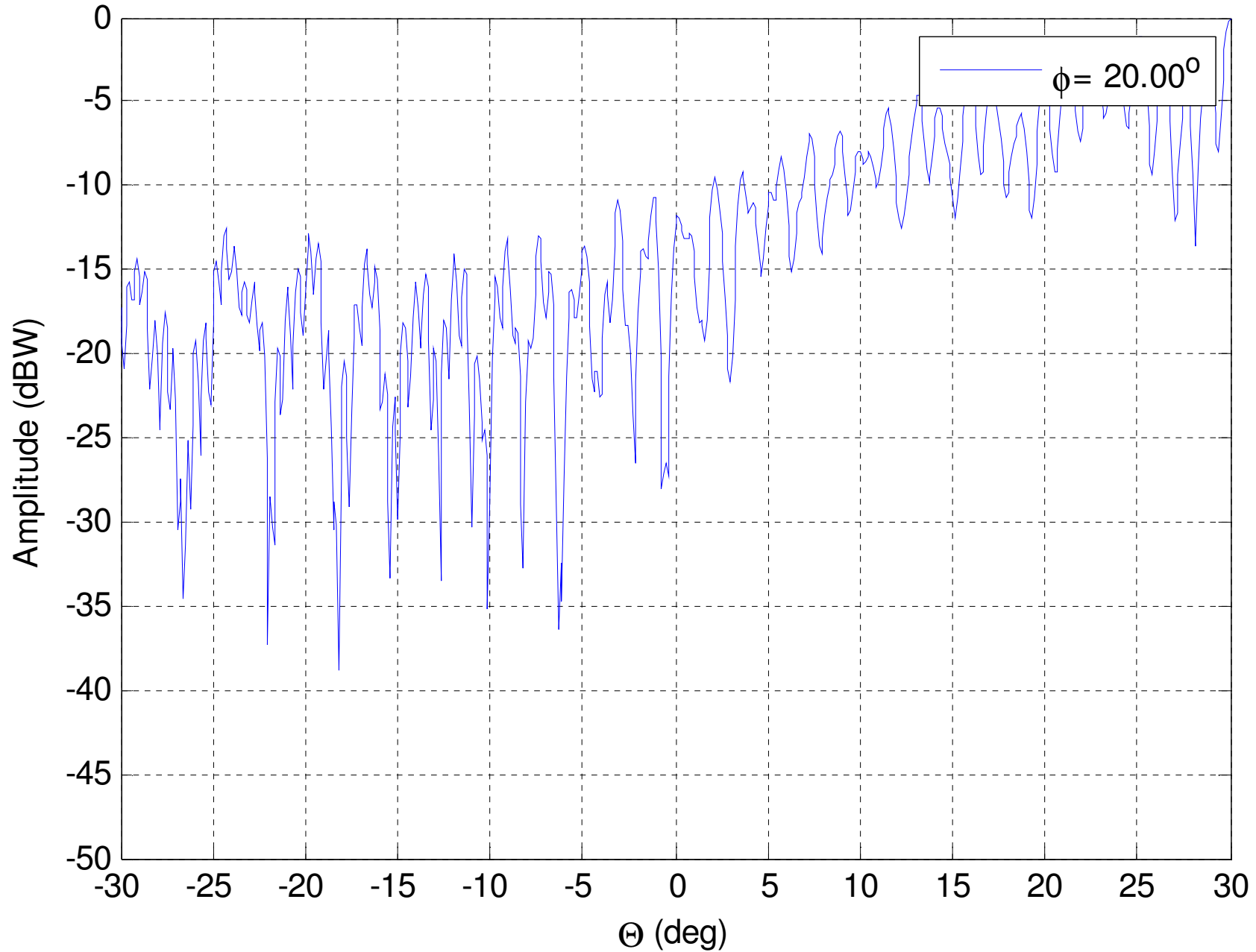
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -4.62 dBW, Date: 14-Dec-2011



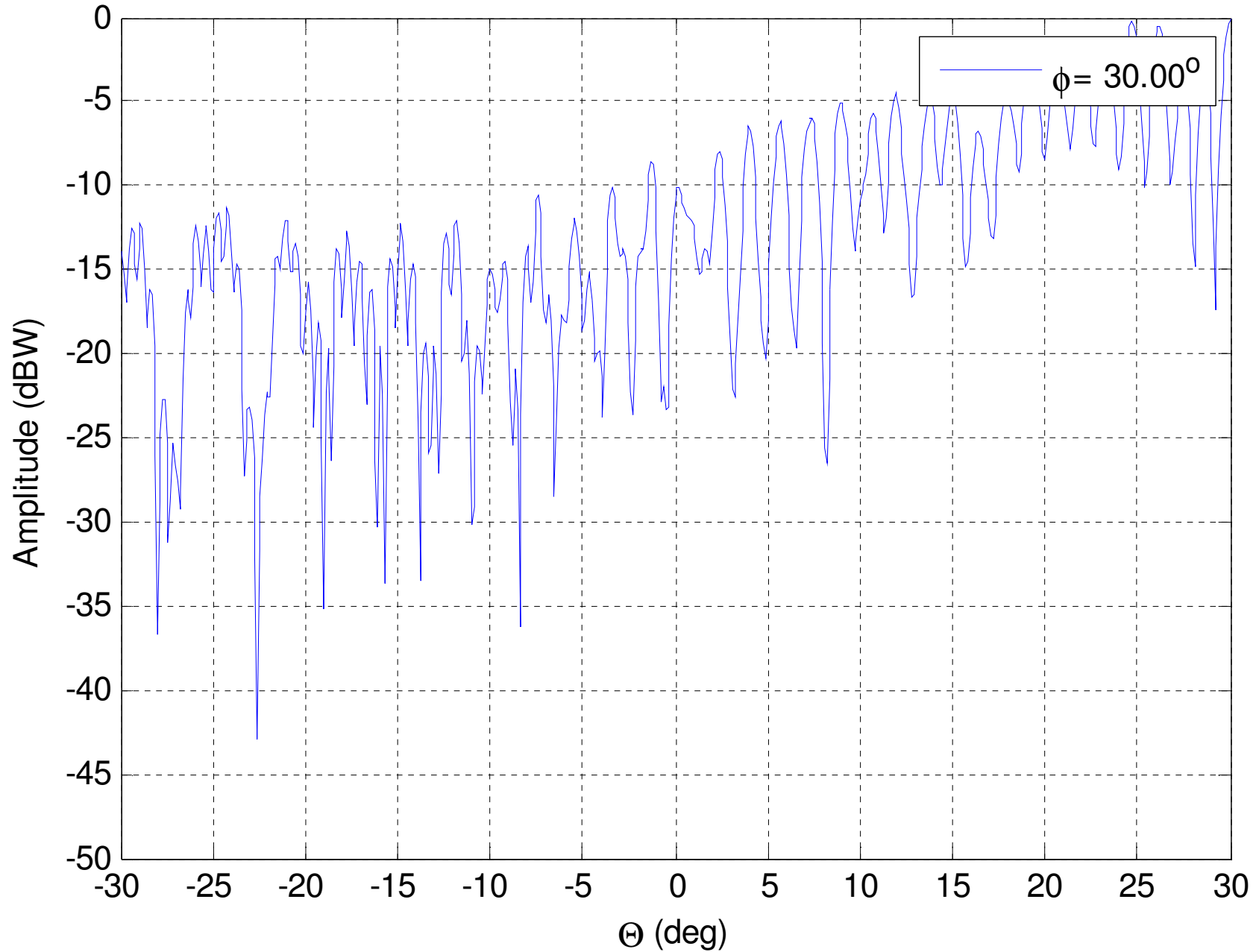
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



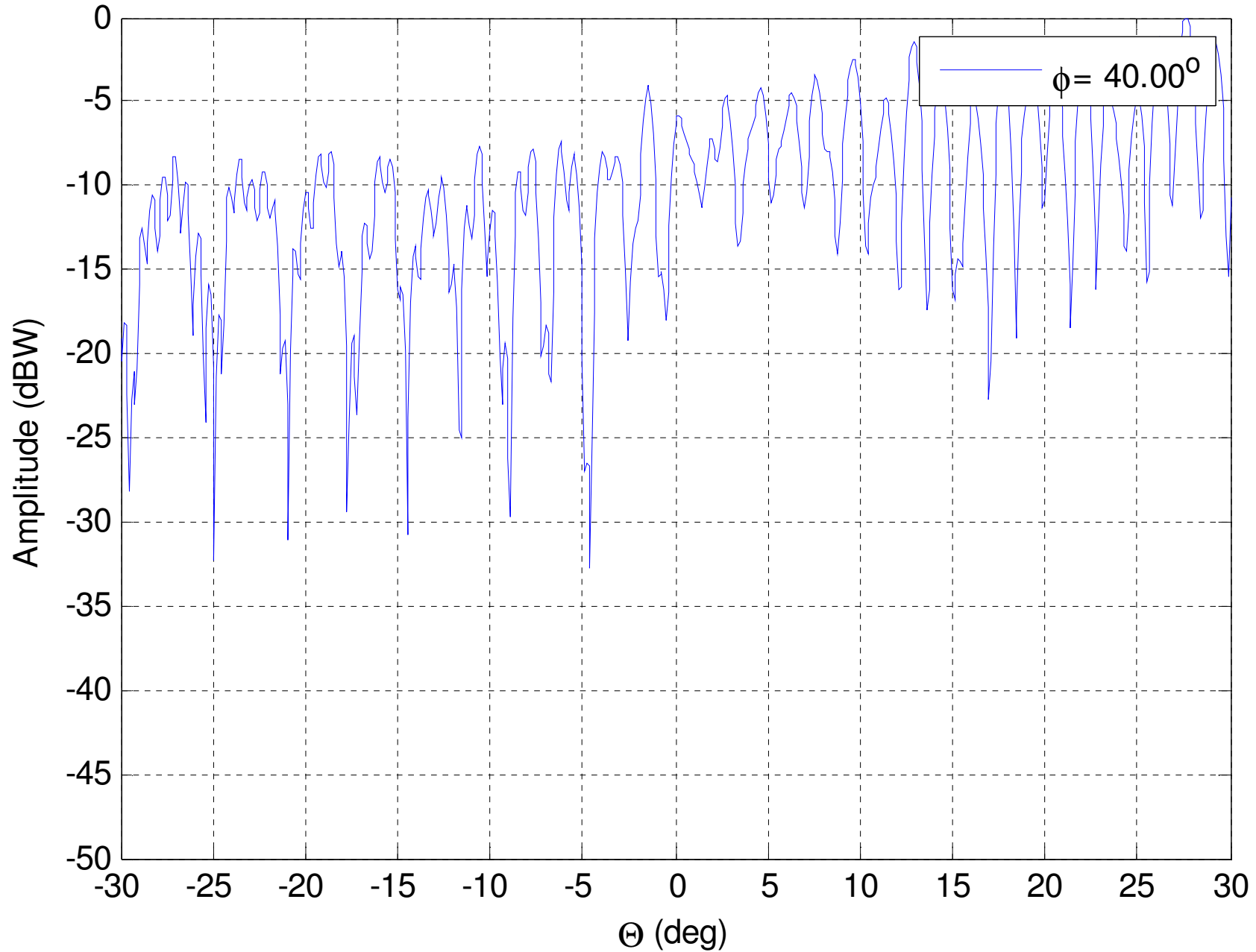
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.67 dBW, Date: 14-Dec-2011



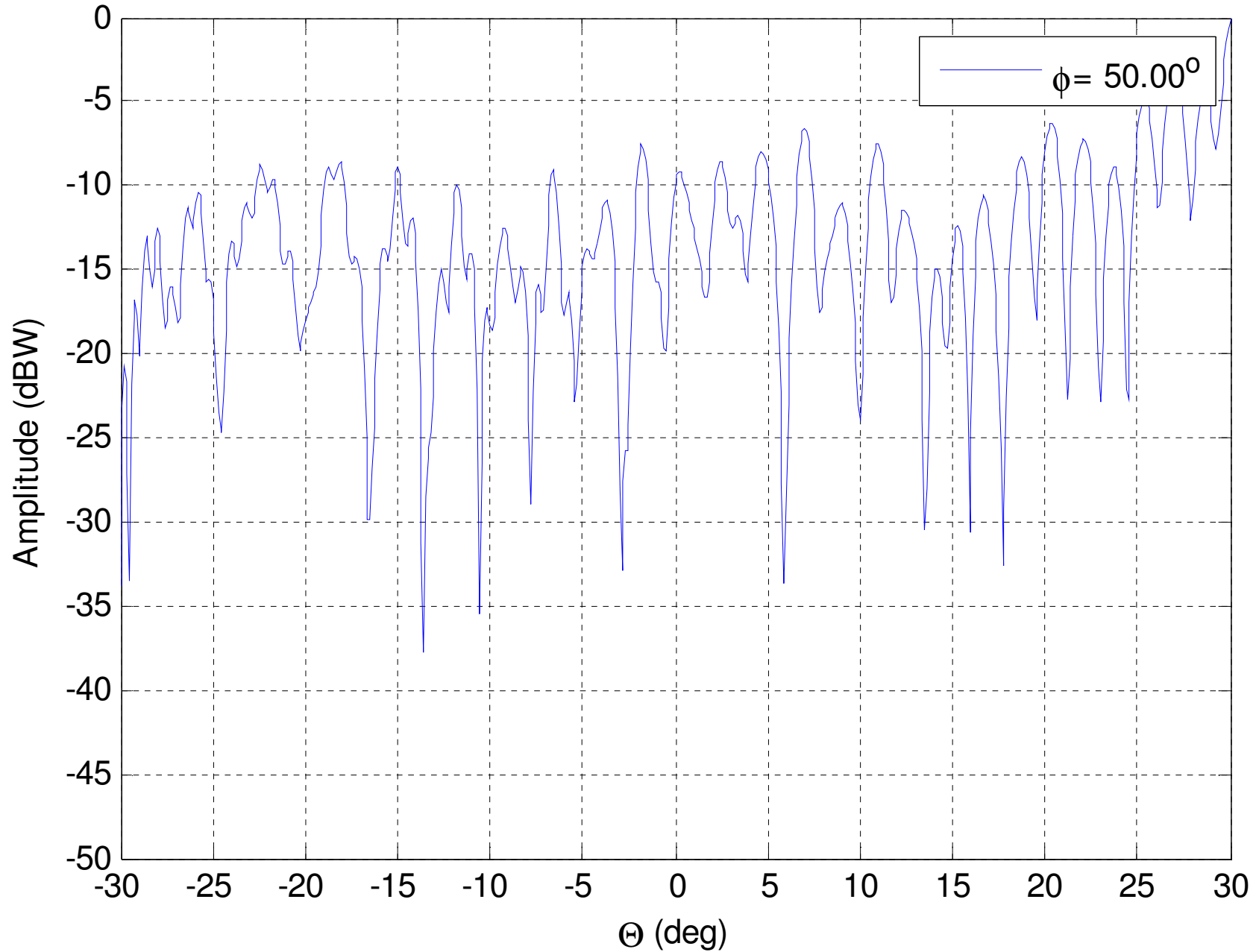
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -10.93 dBW, Date: 14-Dec-2011



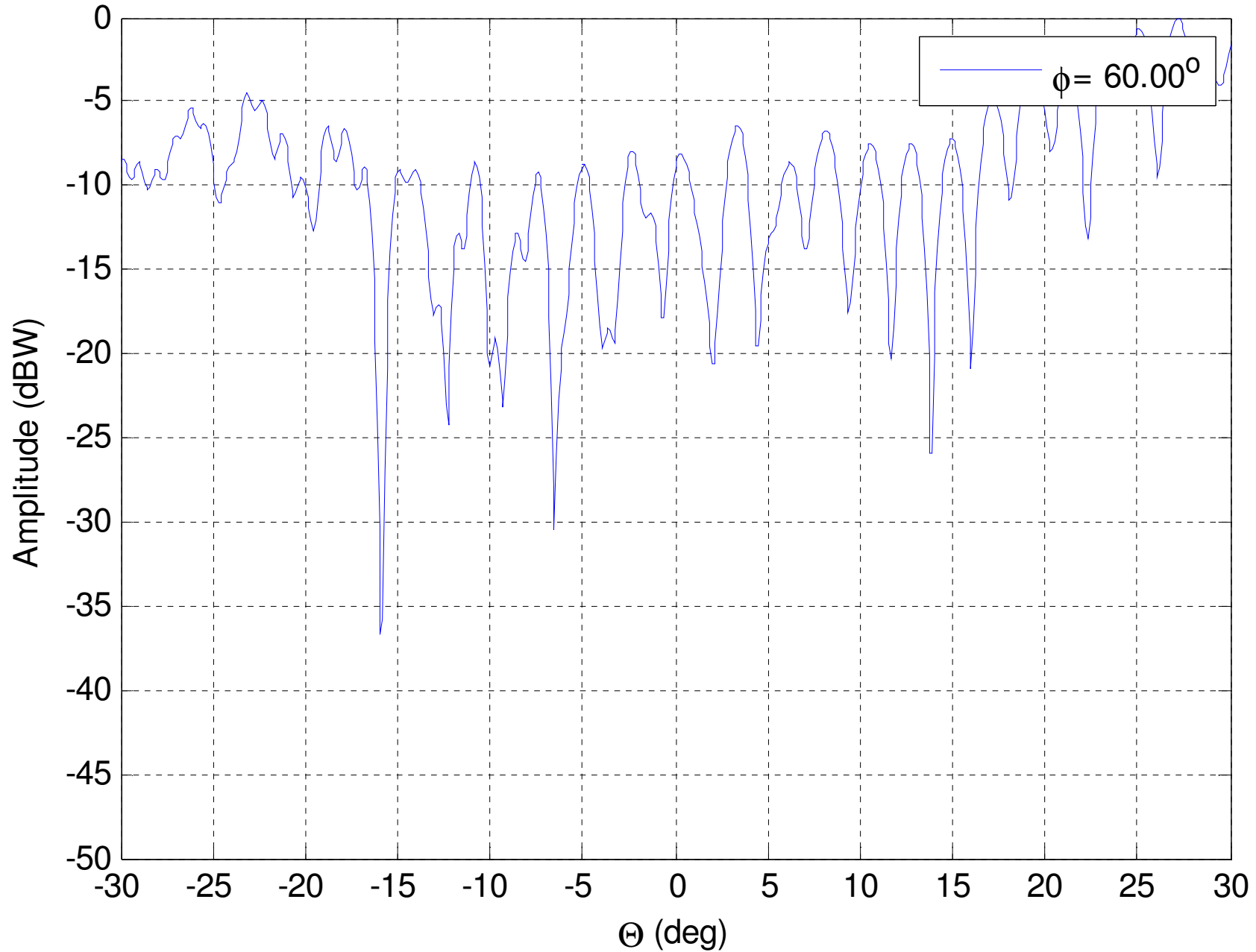
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.48 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -8.38 dBW, Date: 14-Dec-2011



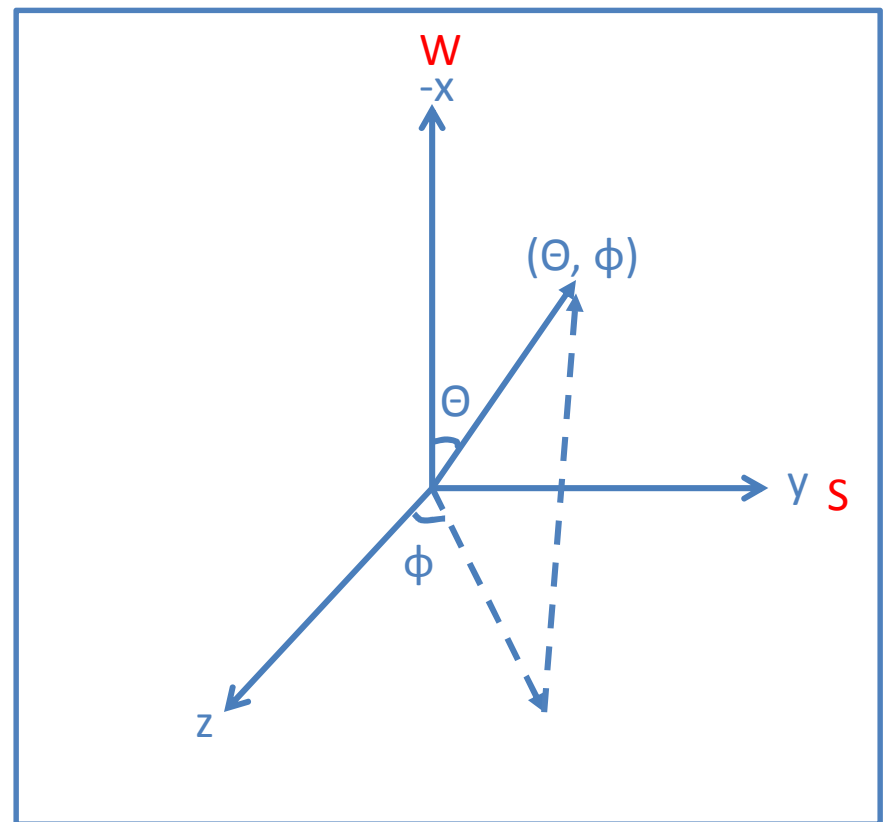
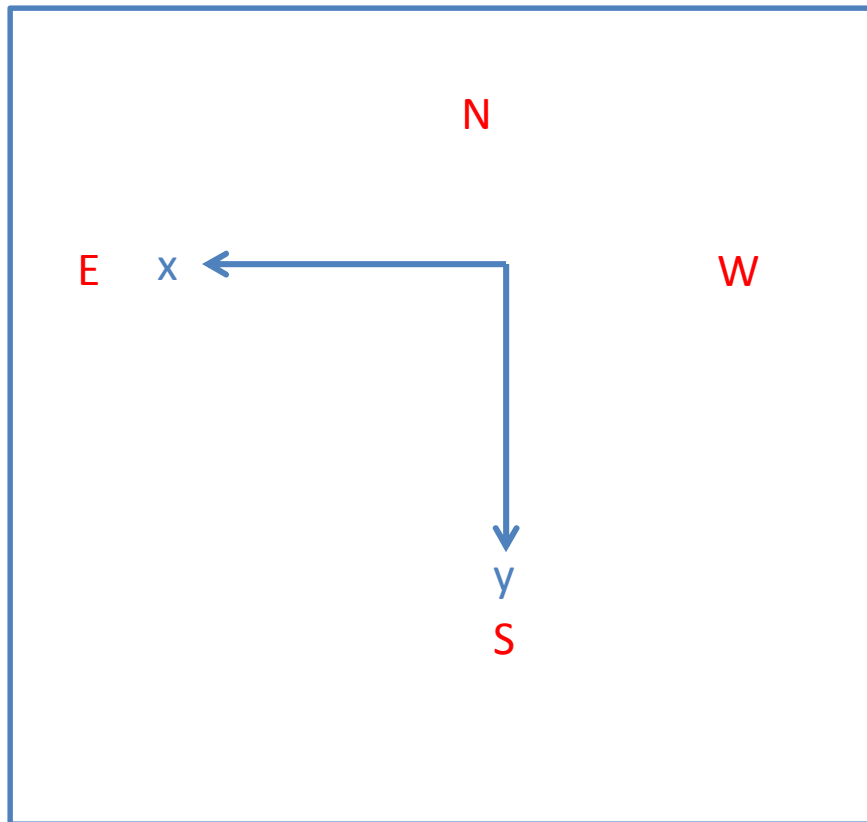
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 10

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



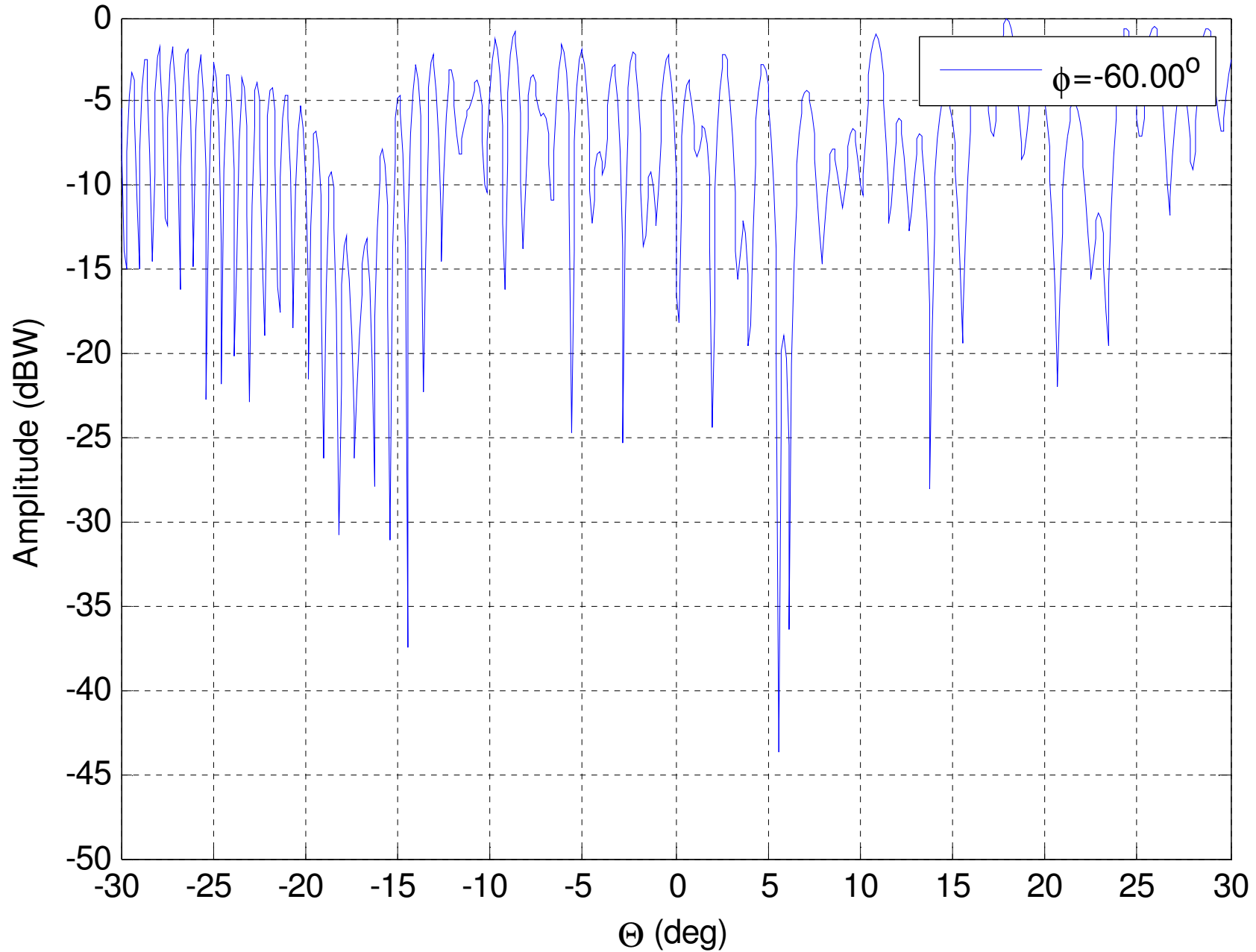
Spot Beam10, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

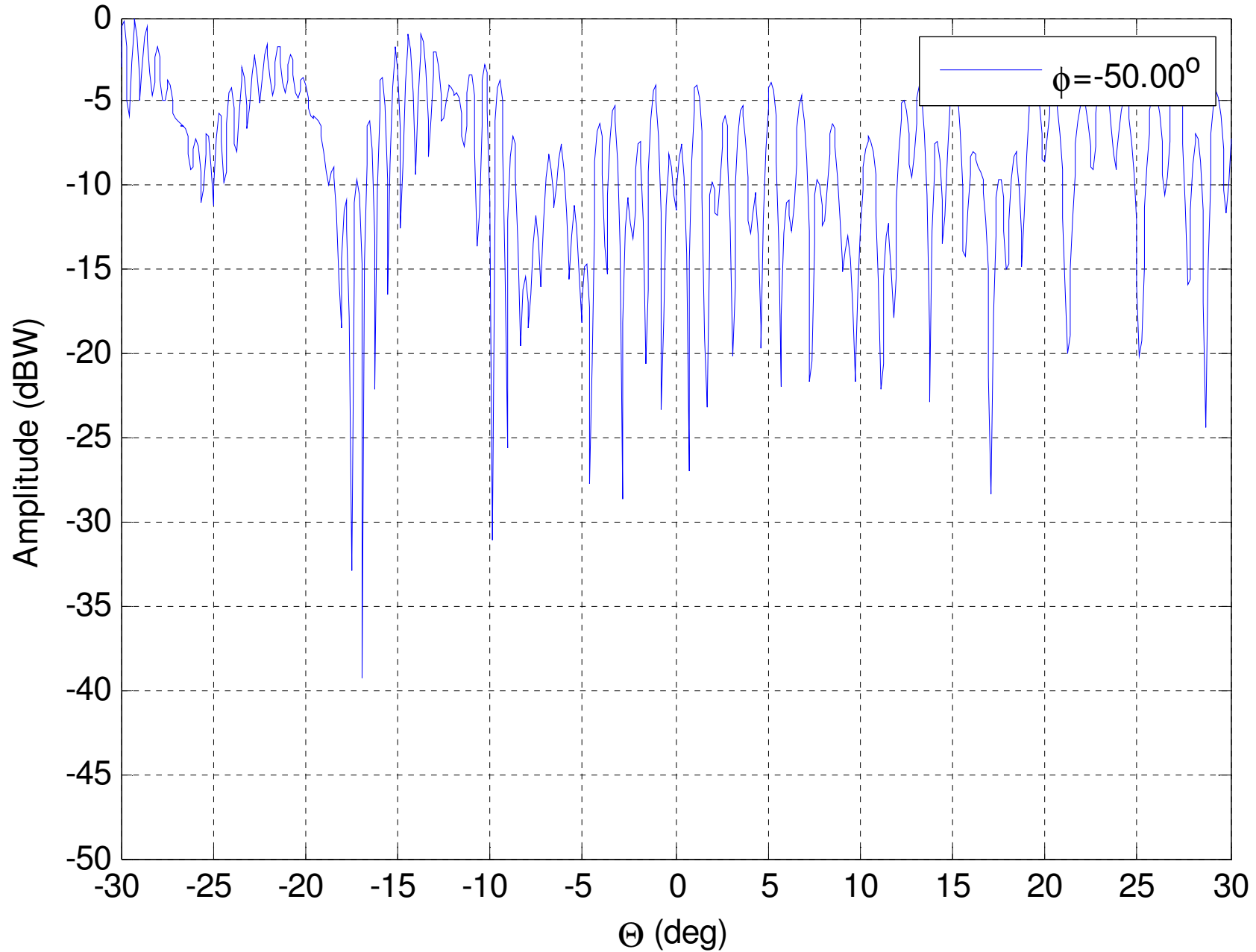
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -11.26 dBW, Date: 14-Dec-2011



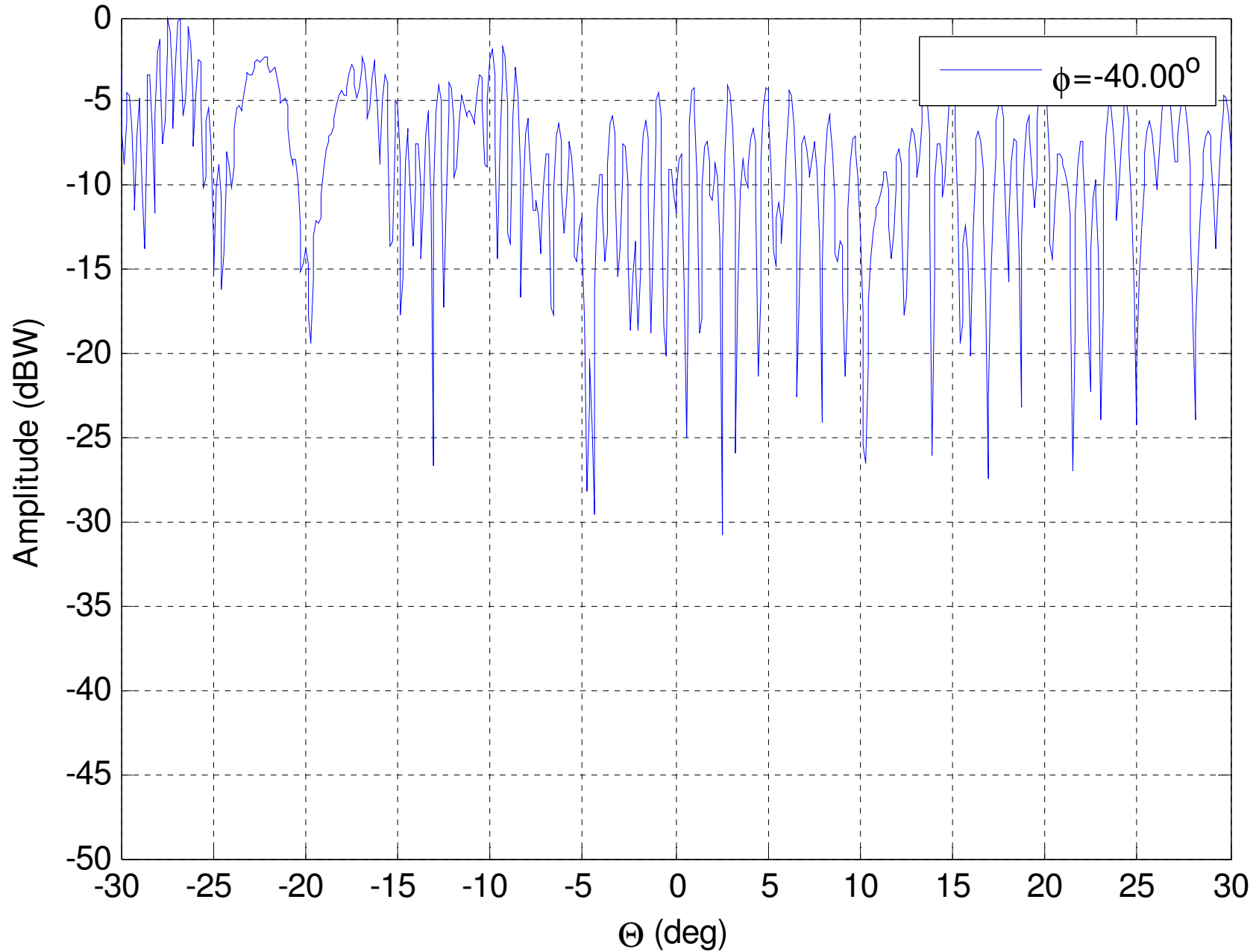
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -10.86 dBW, Date: 14-Dec-2011



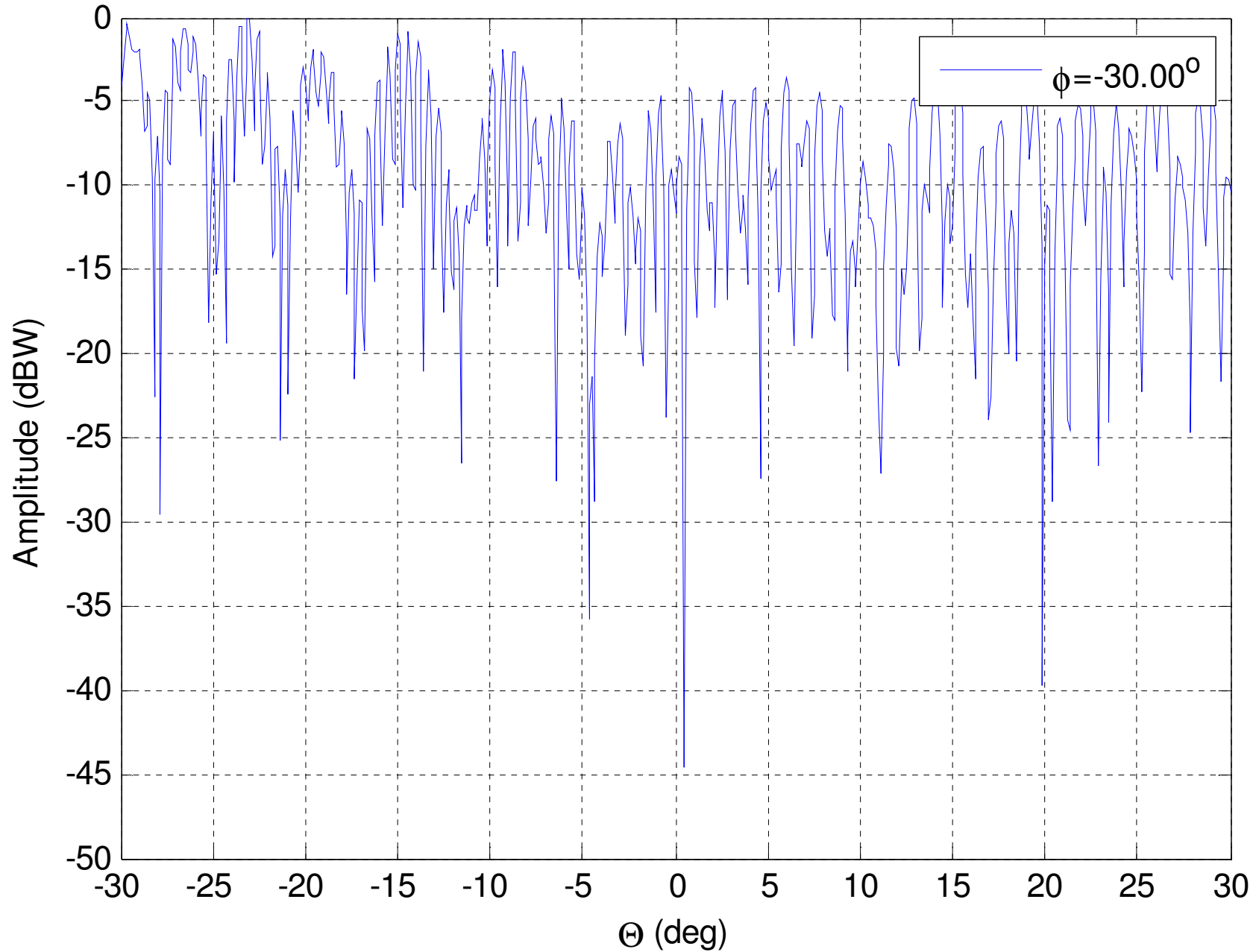
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.65 dBW, Date: 14-Dec-2011



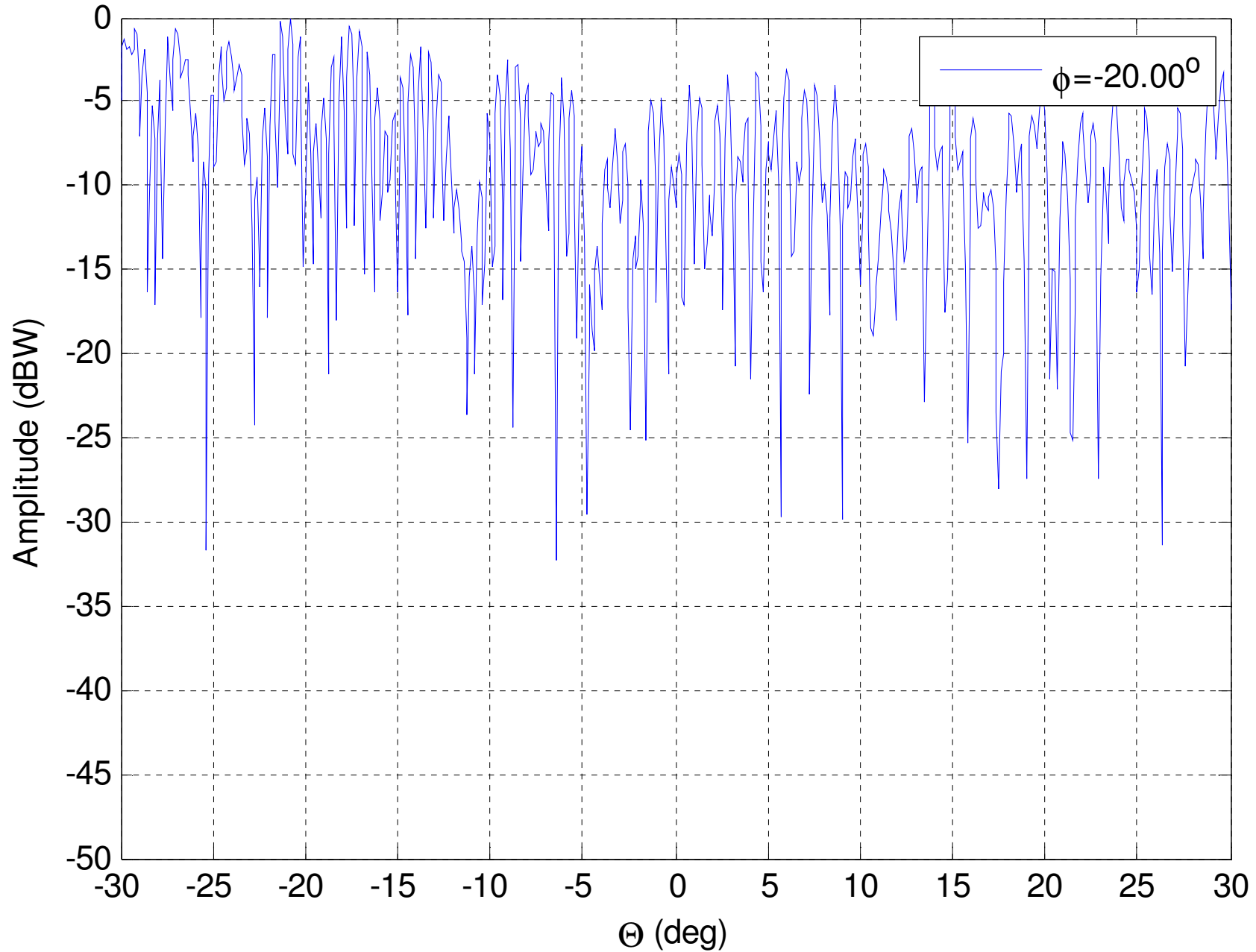
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -10.69 dBW, Date: 14-Dec-2011



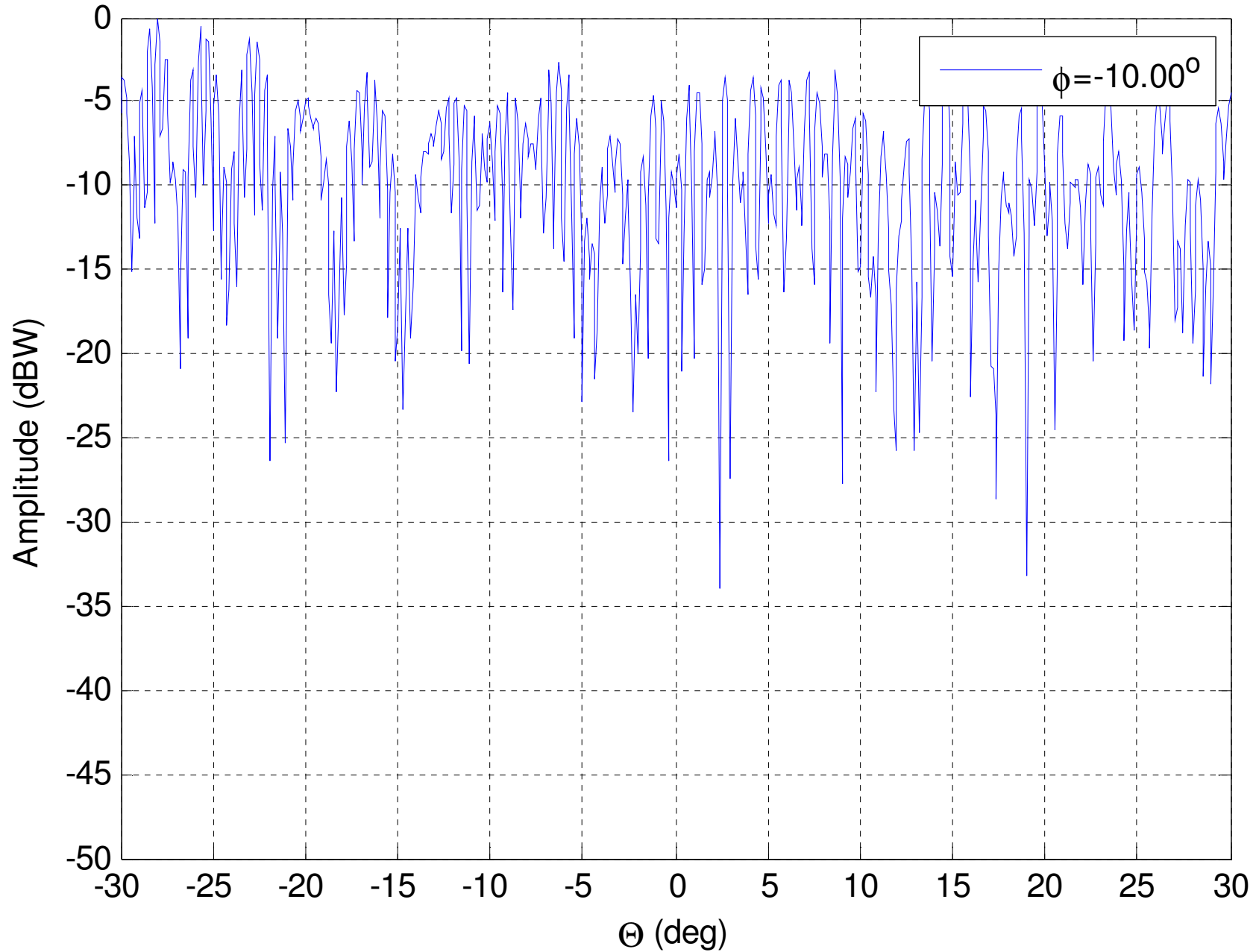
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -10.99 dBW, Date: 14-Dec-2011



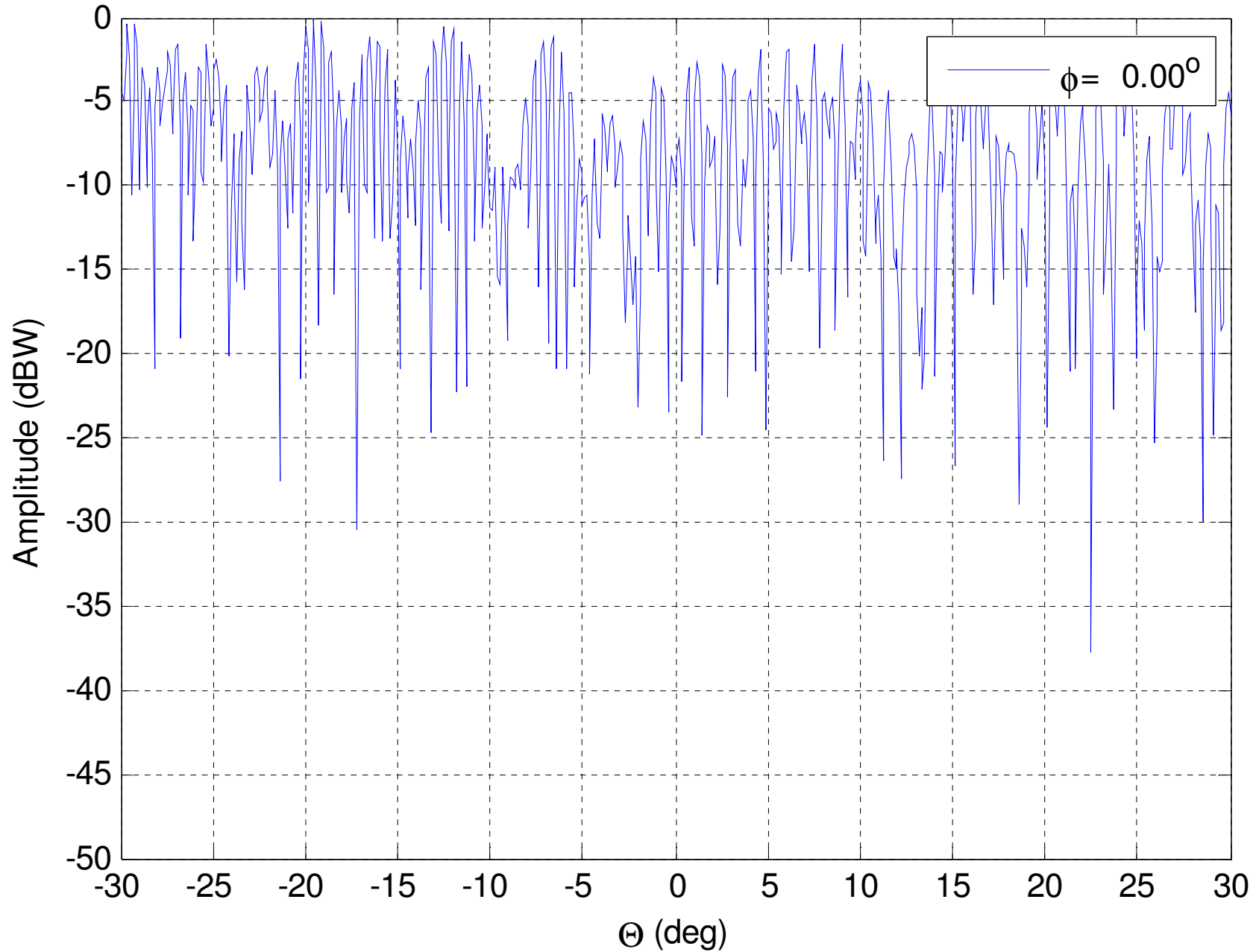
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -11.01 dBW, Date: 14-Dec-2011



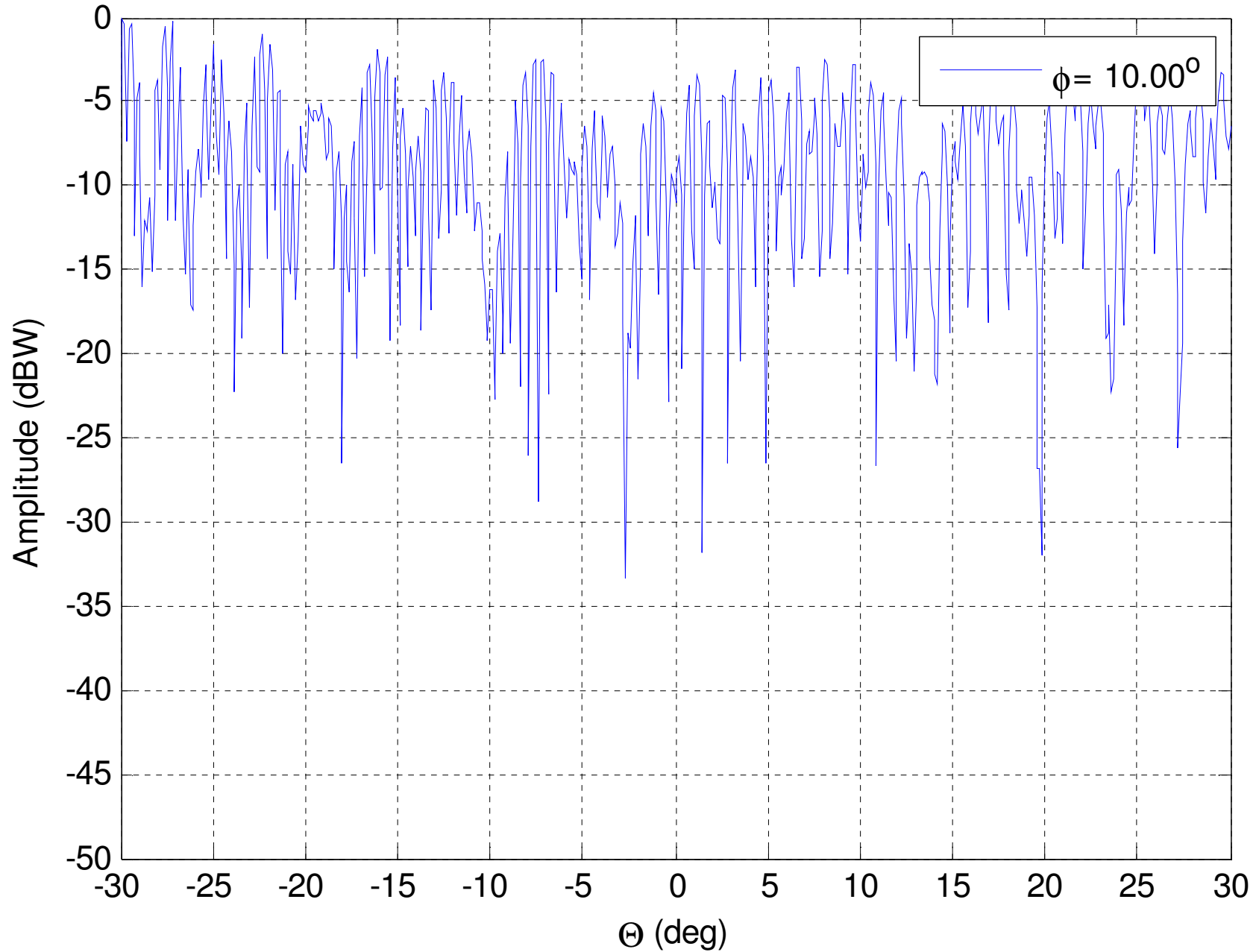
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -12.15 dBW, Date: 14-Dec-2011



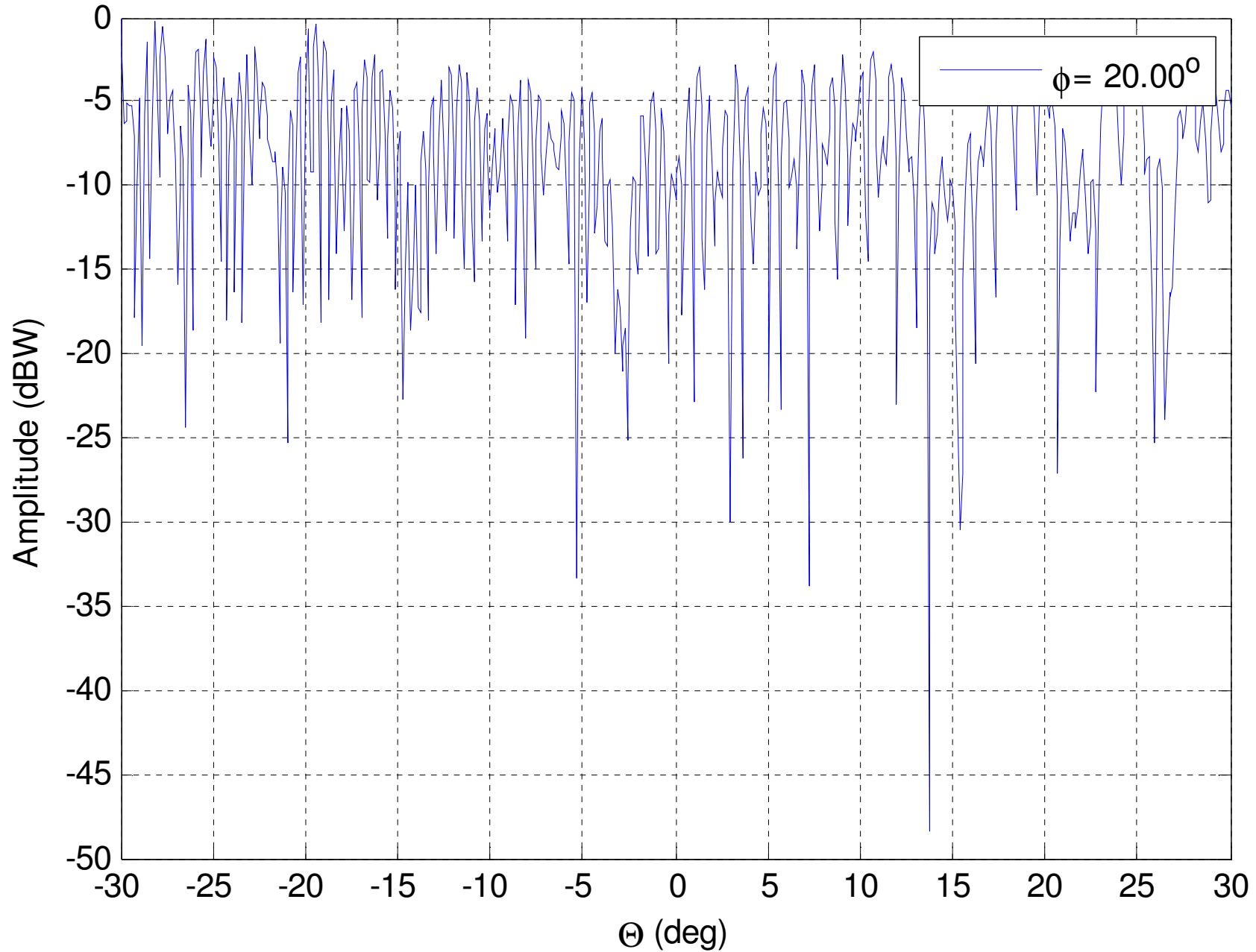
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -11.21 dBW, Date: 14-Dec-2011



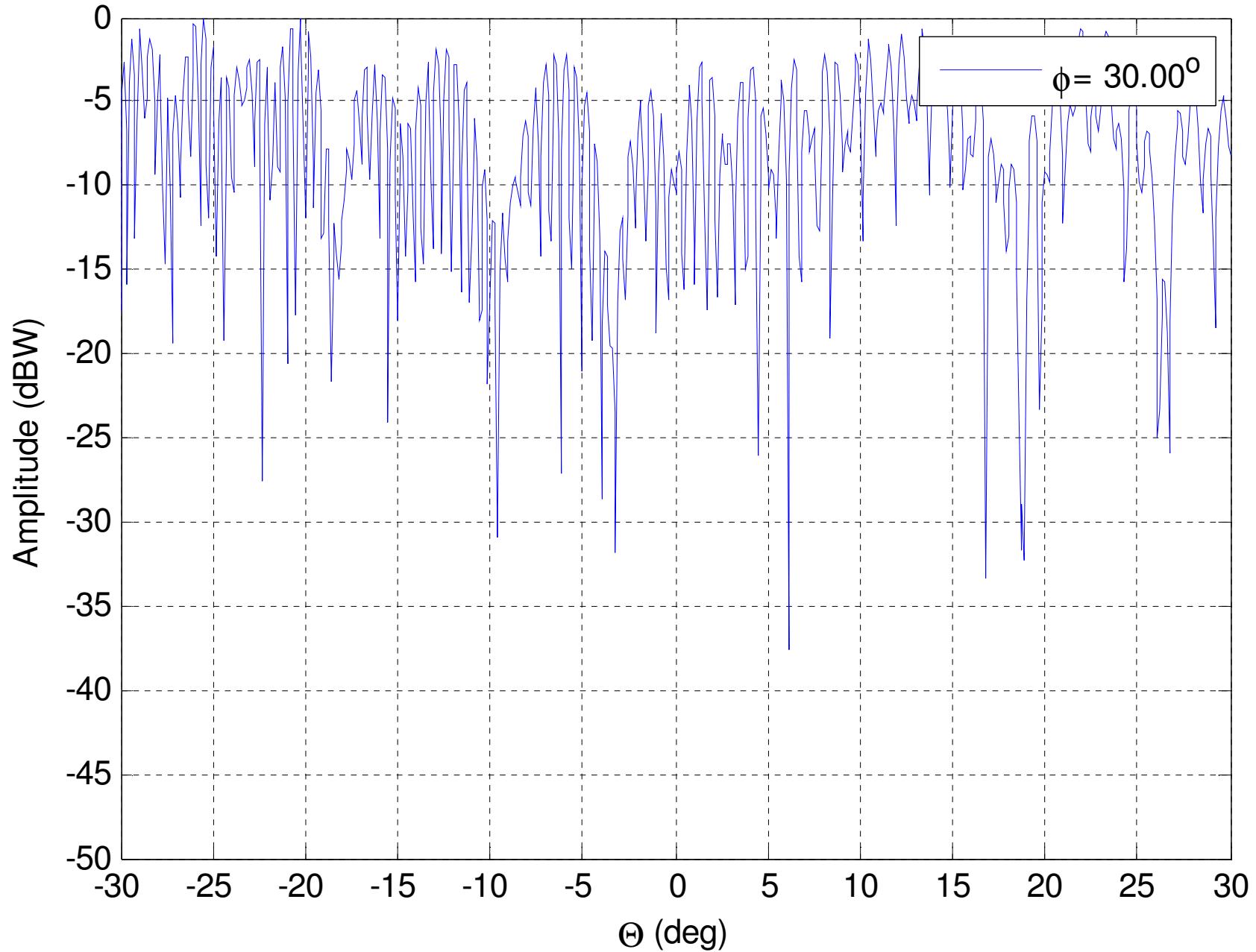
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -11.46 dBW, Date: 14-Dec-2011



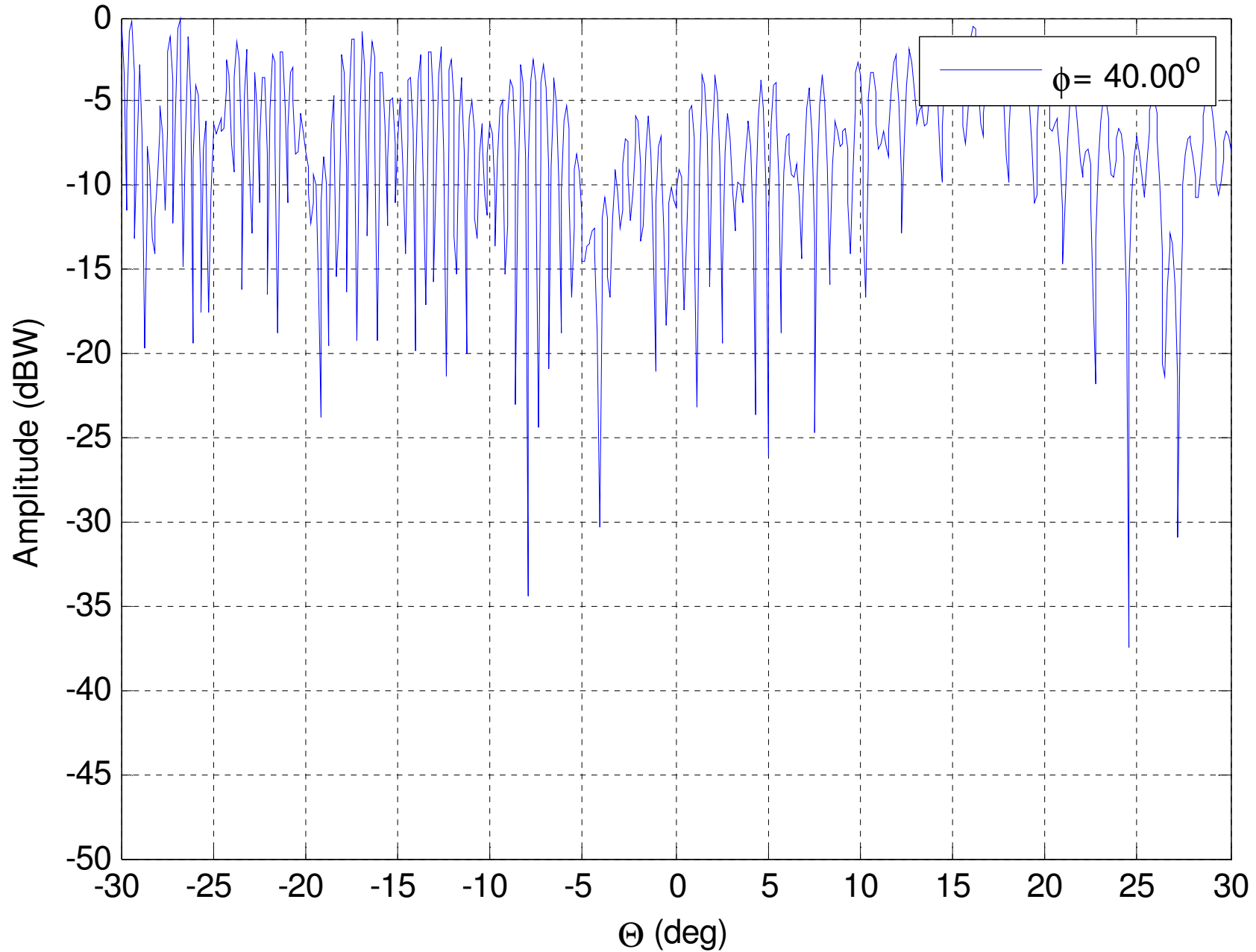
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -11.82 dBW, Date: 14-Dec-2011



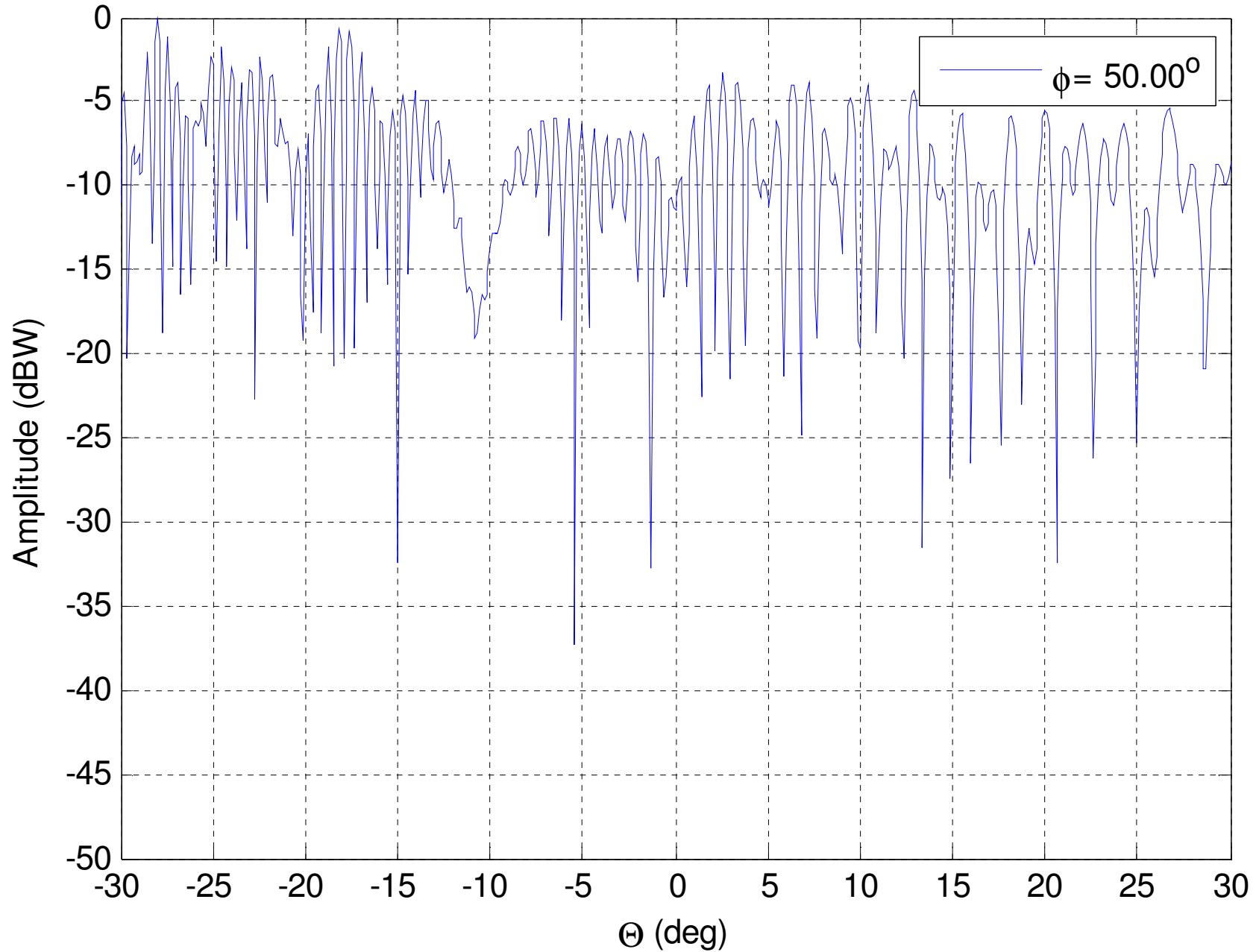
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -11.05 dBW, Date: 14-Dec-2011



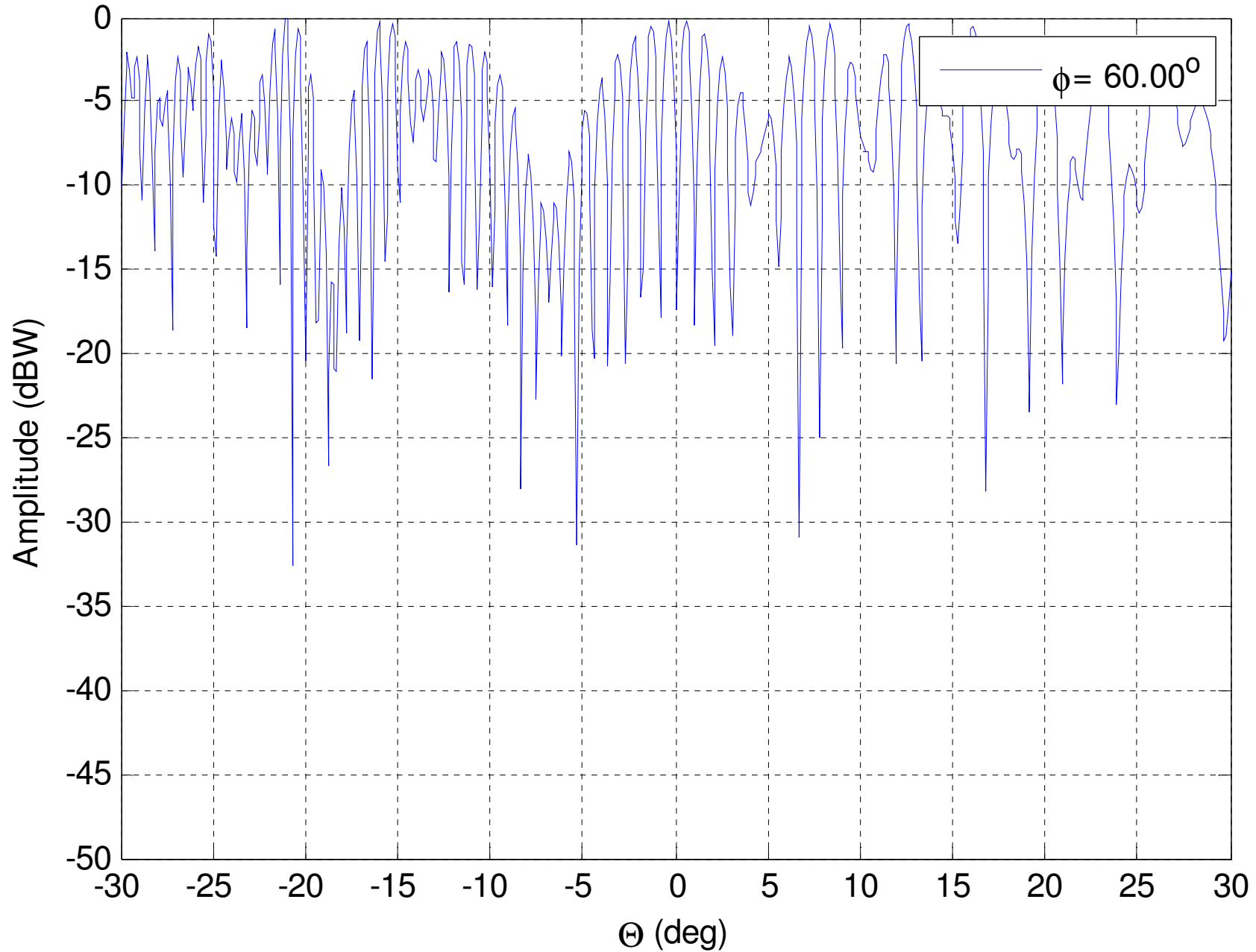
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.87 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

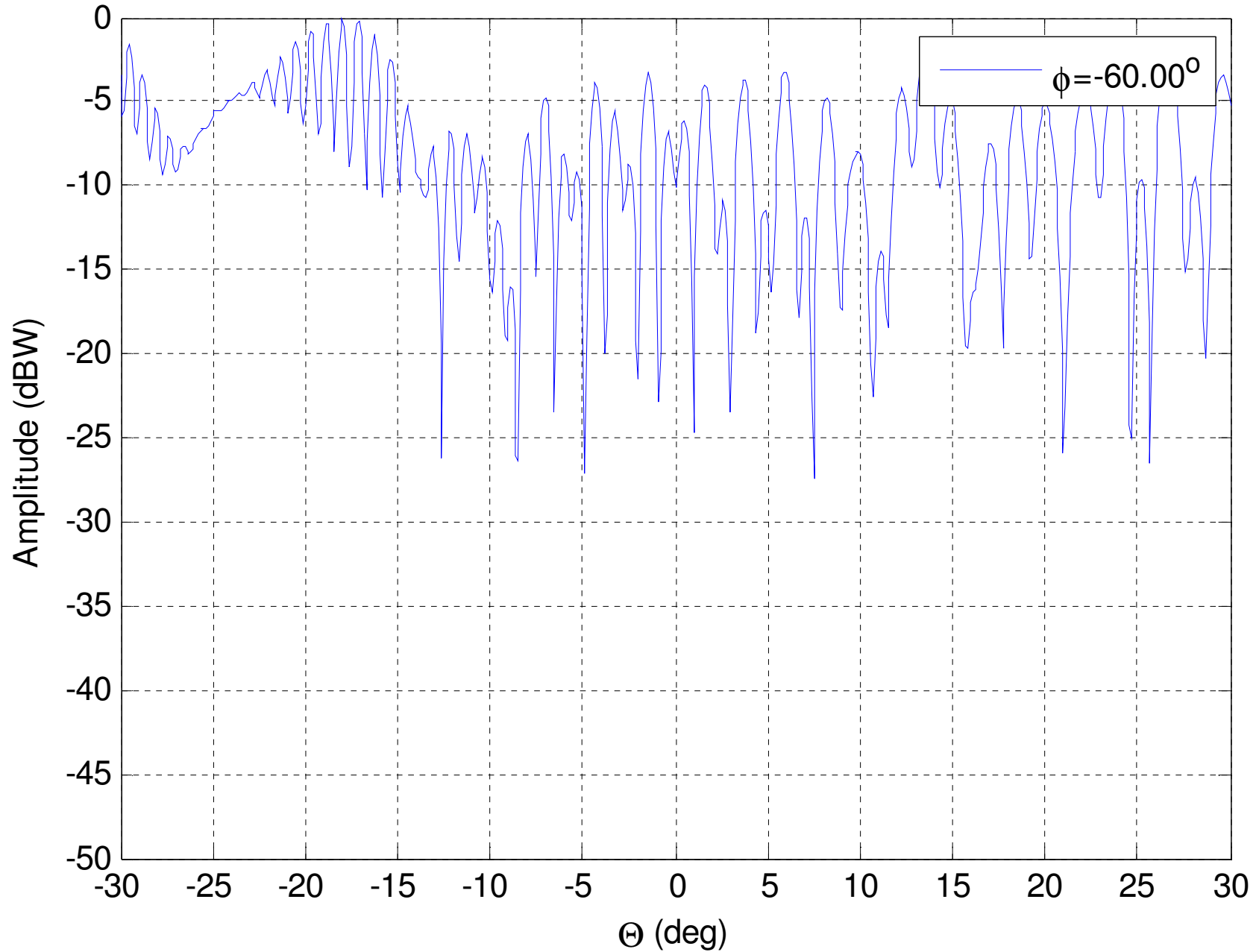
Input file: tx-17.3-rhcp-60.cut, Peak: -12.69 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

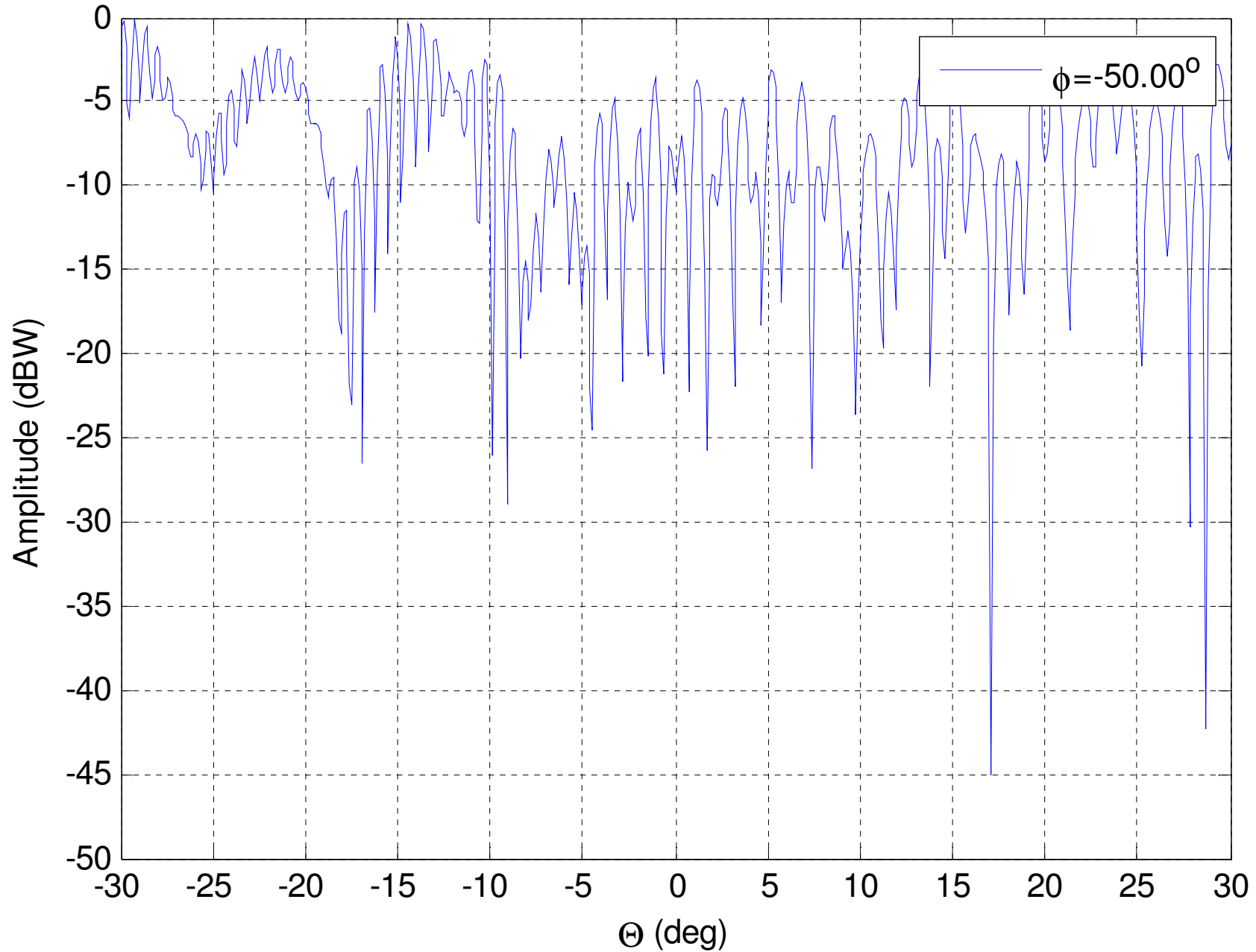
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -11.43 dBW, Date: 14-Dec-2011



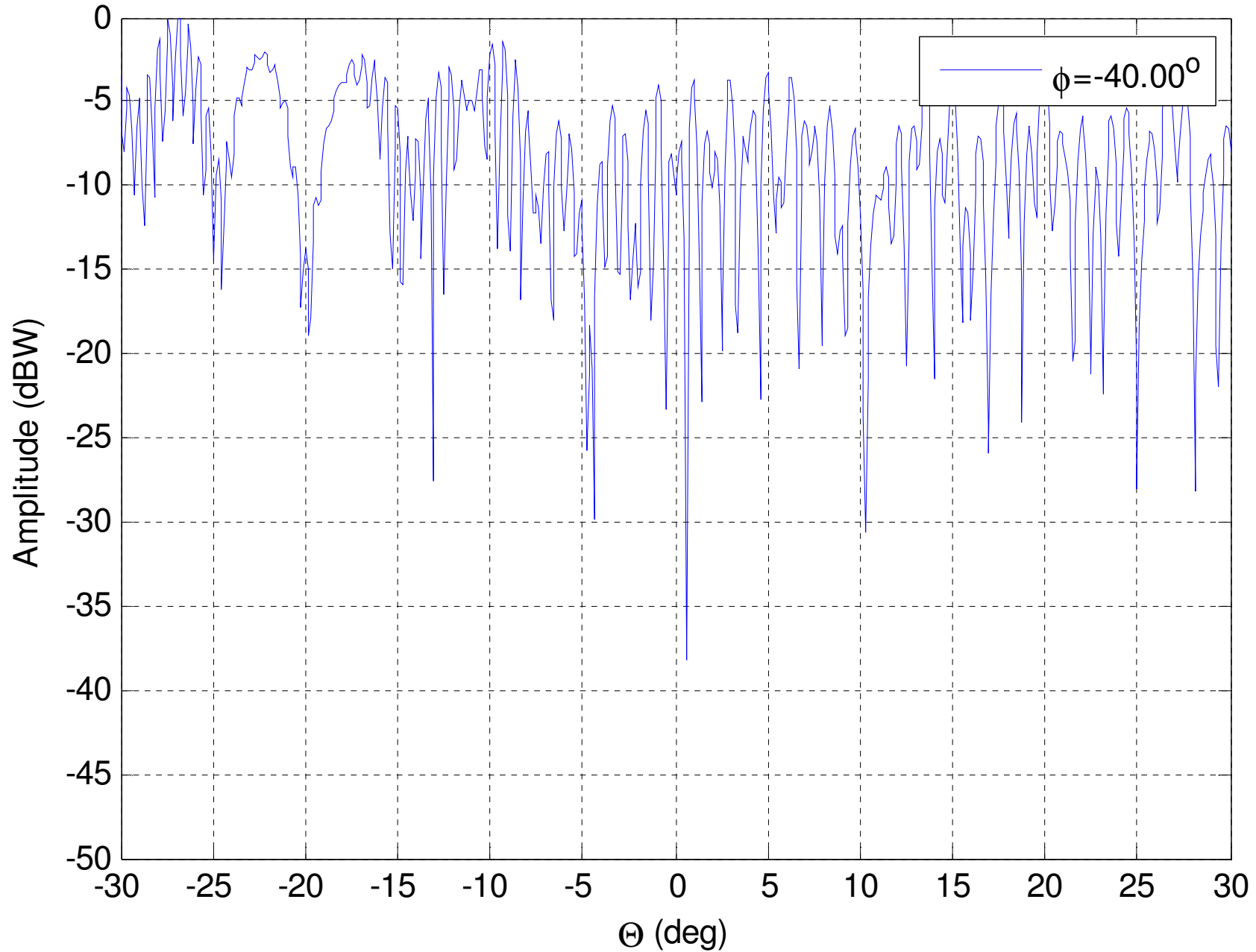
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -11.08 dBW, Date: 14-Dec-2011



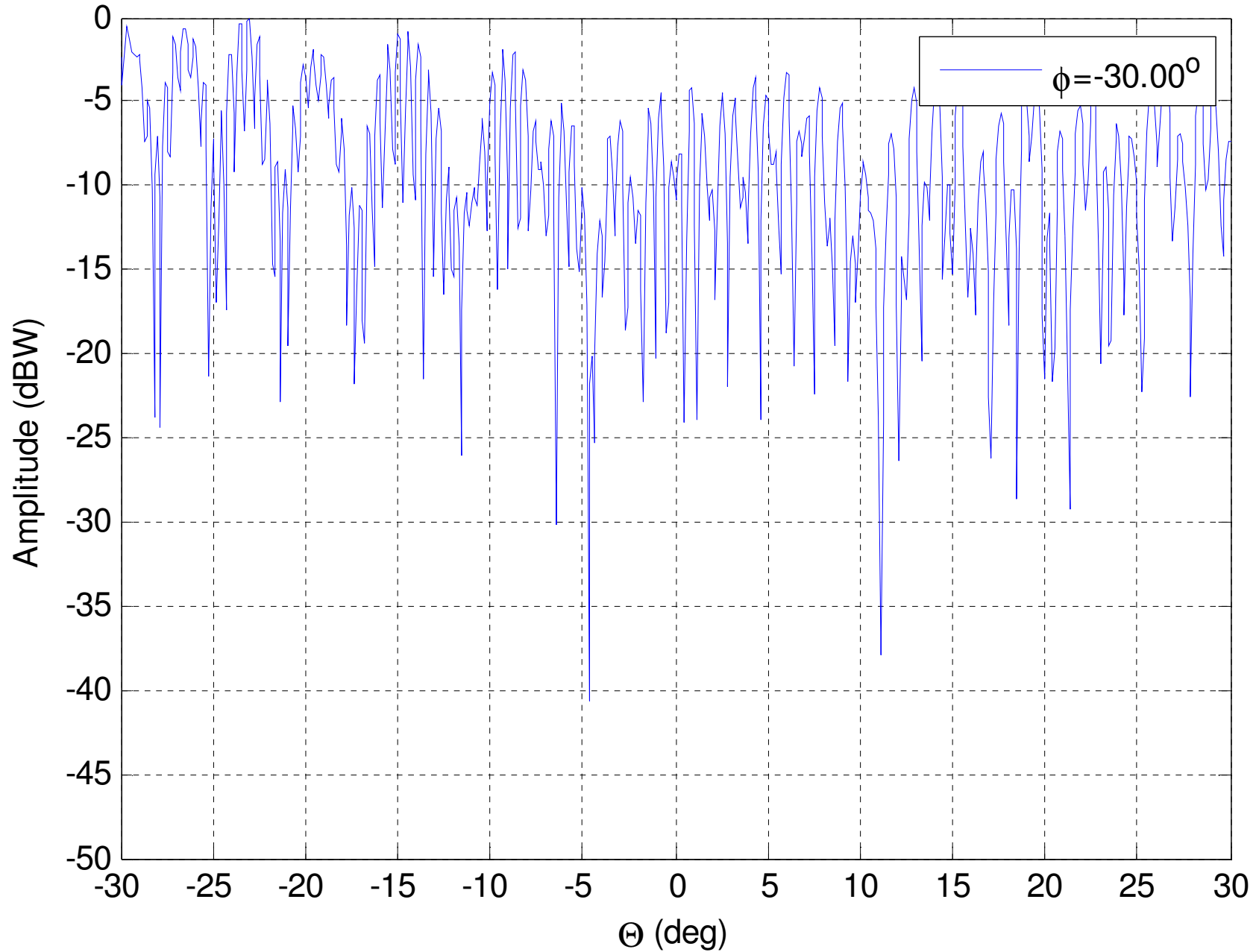
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.93 dBW, Date: 14-Dec-2011



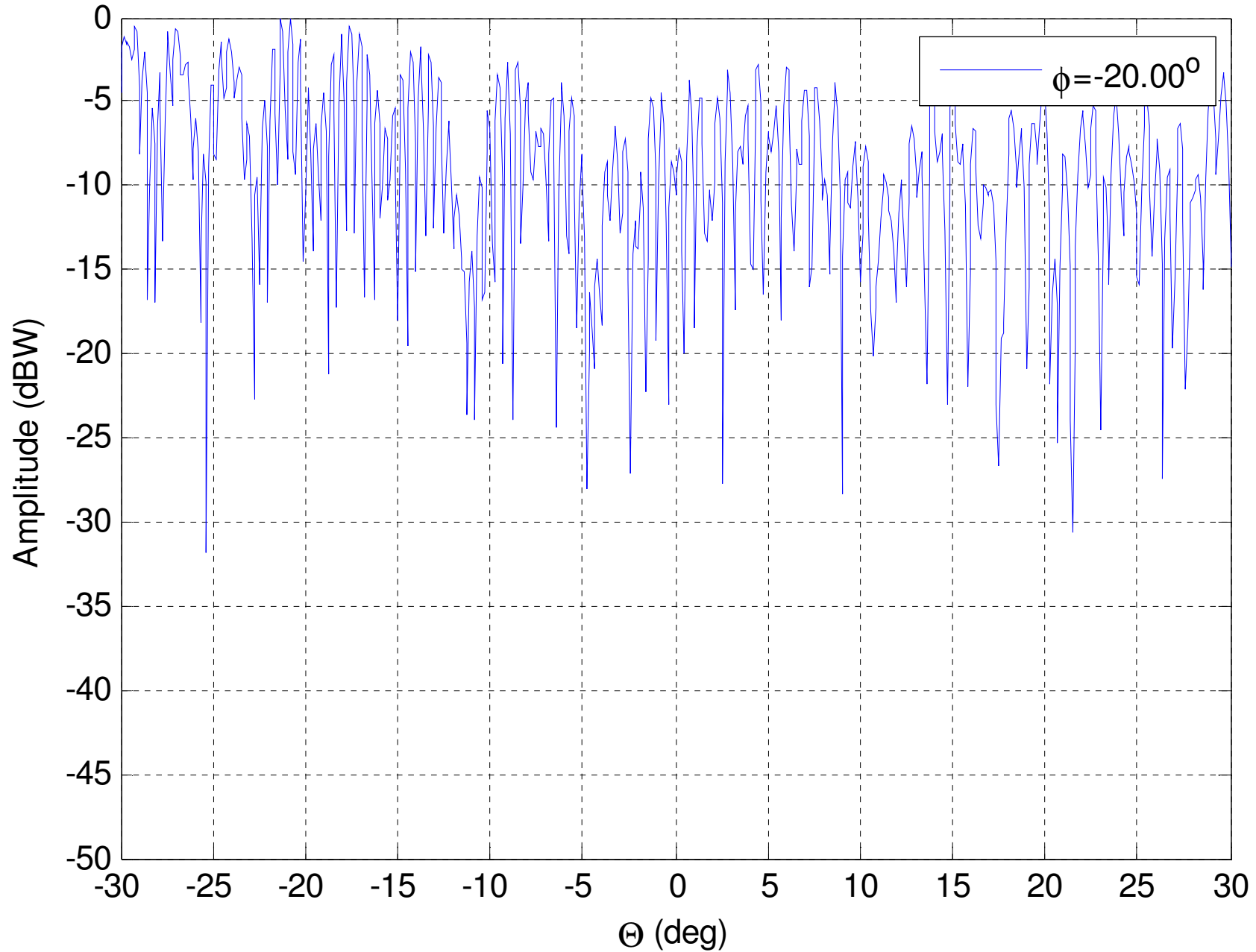
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -10.64 dBW, Date: 14-Dec-2011



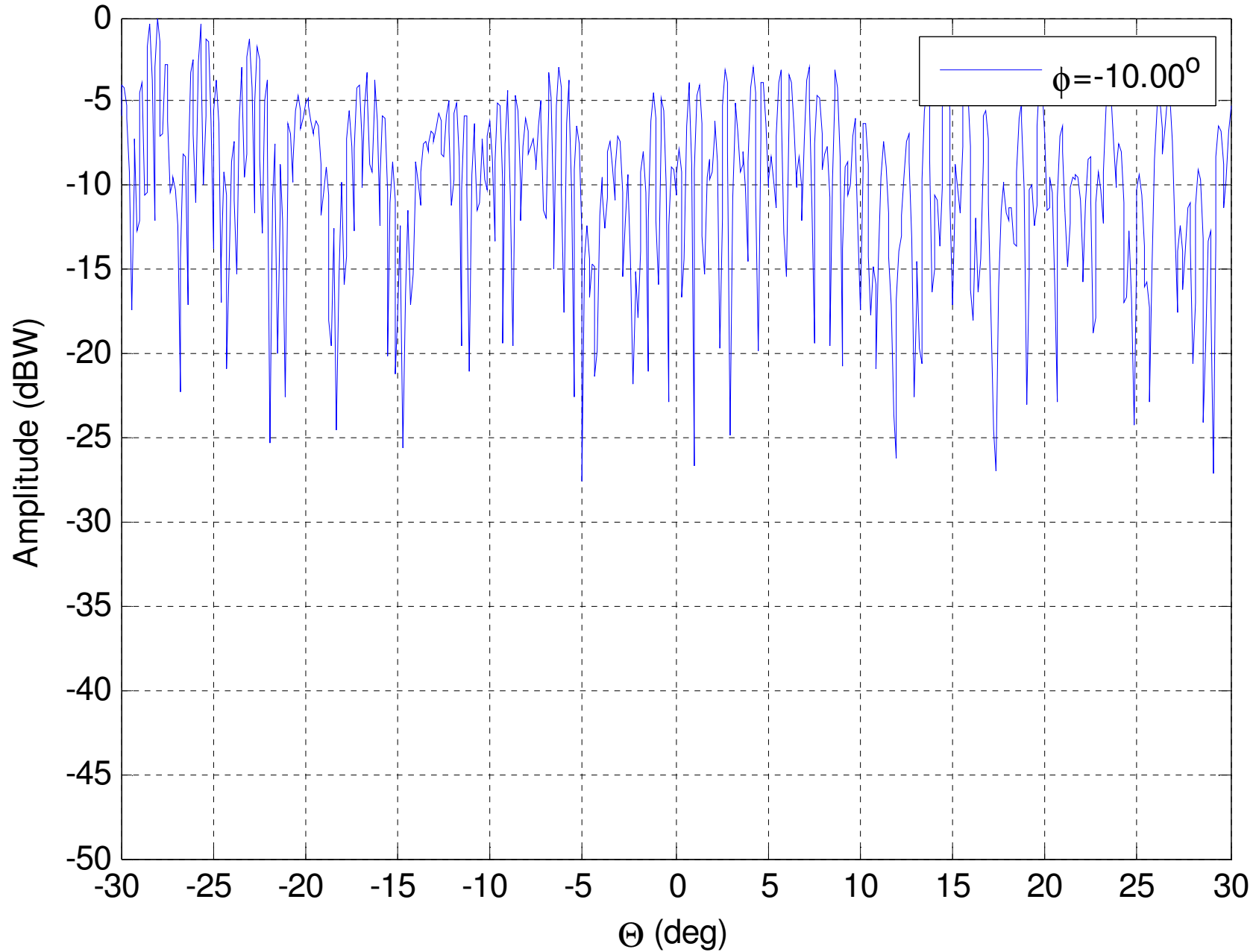
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -10.95 dBW, Date: 14-Dec-2011



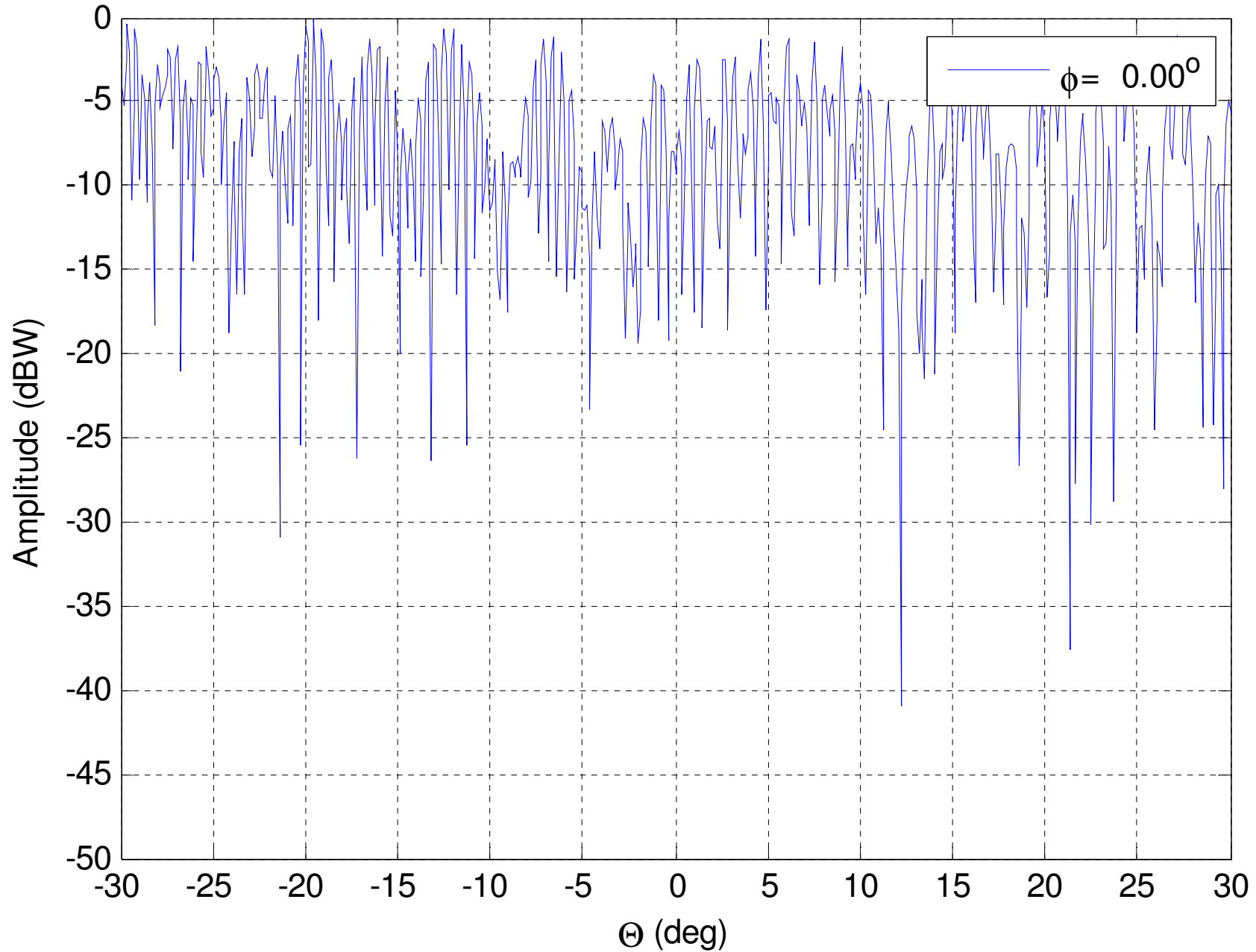
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -11.00 dBW, Date: 14-Dec-2011



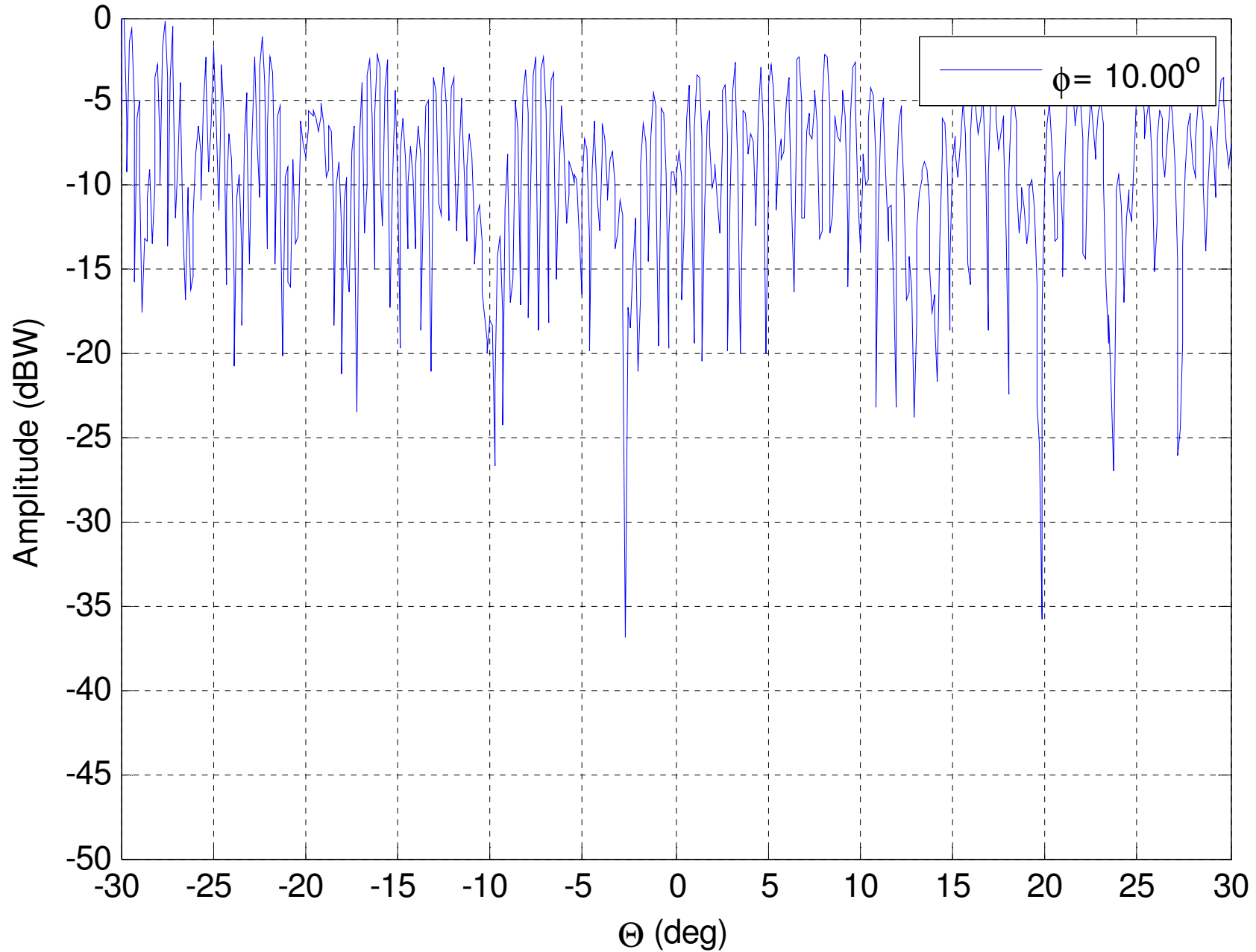
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -12.17 dBW, Date: 14-Dec-2011



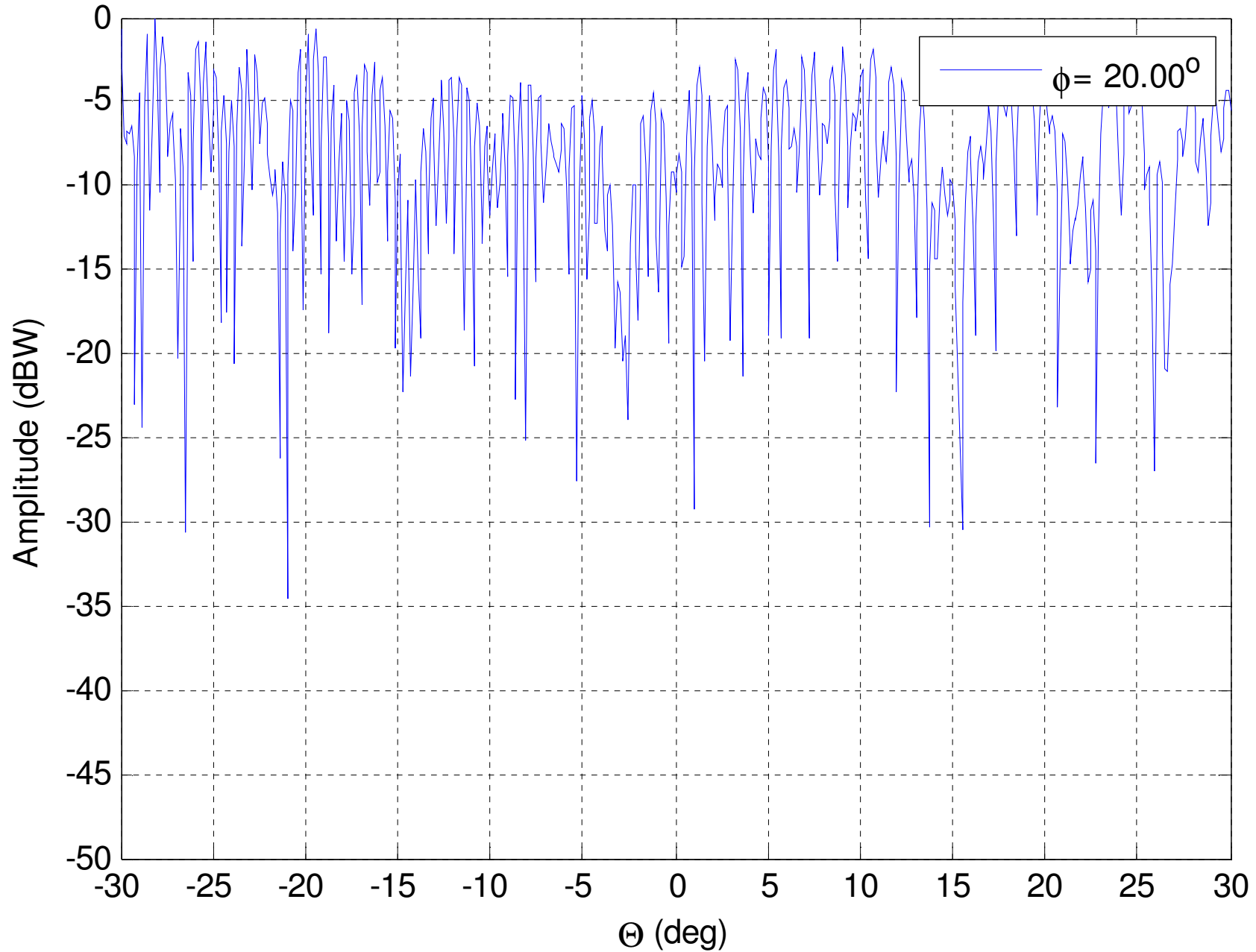
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -11.10 dBW, Date: 14-Dec-2011



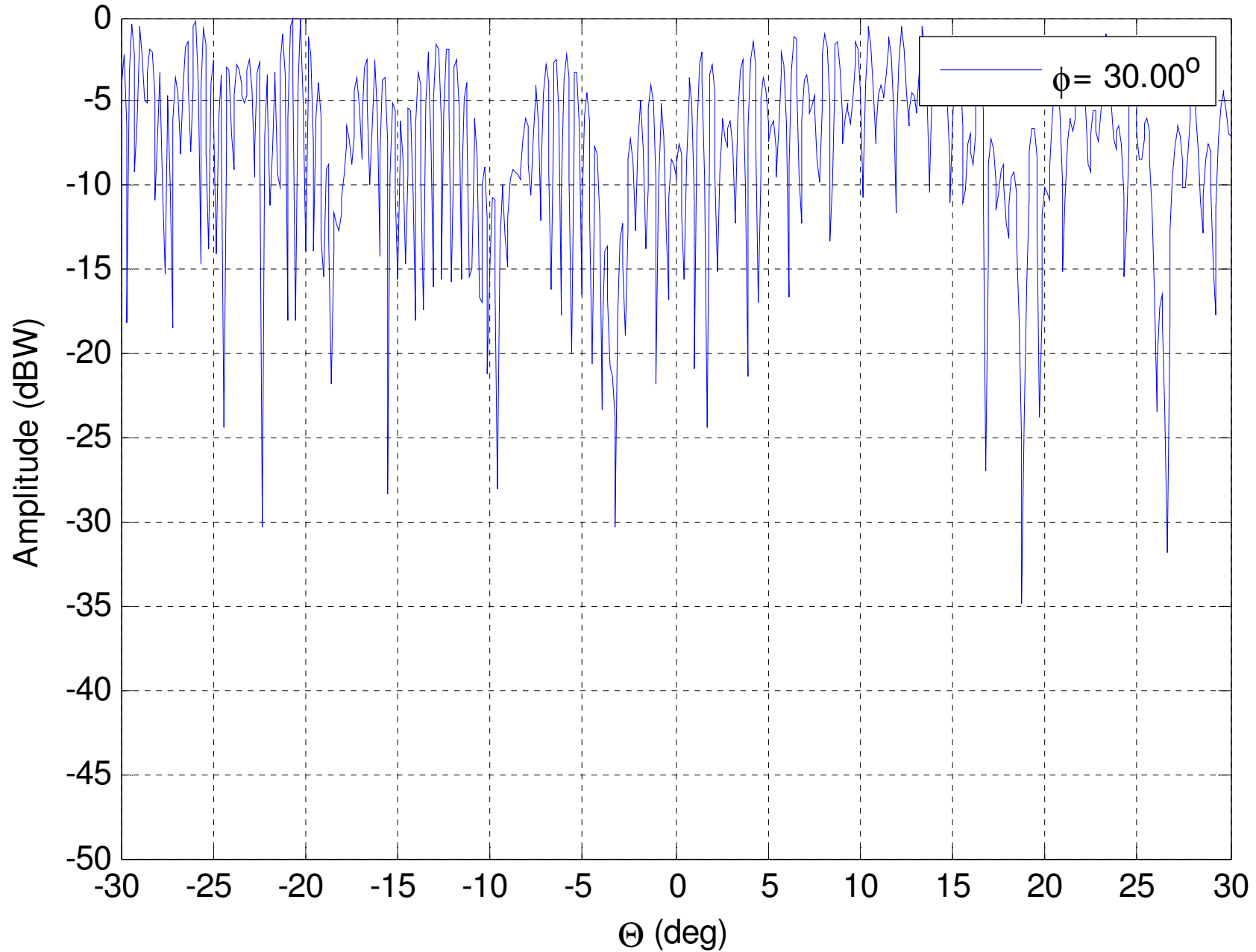
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -11.20 dBW, Date: 14-Dec-2011



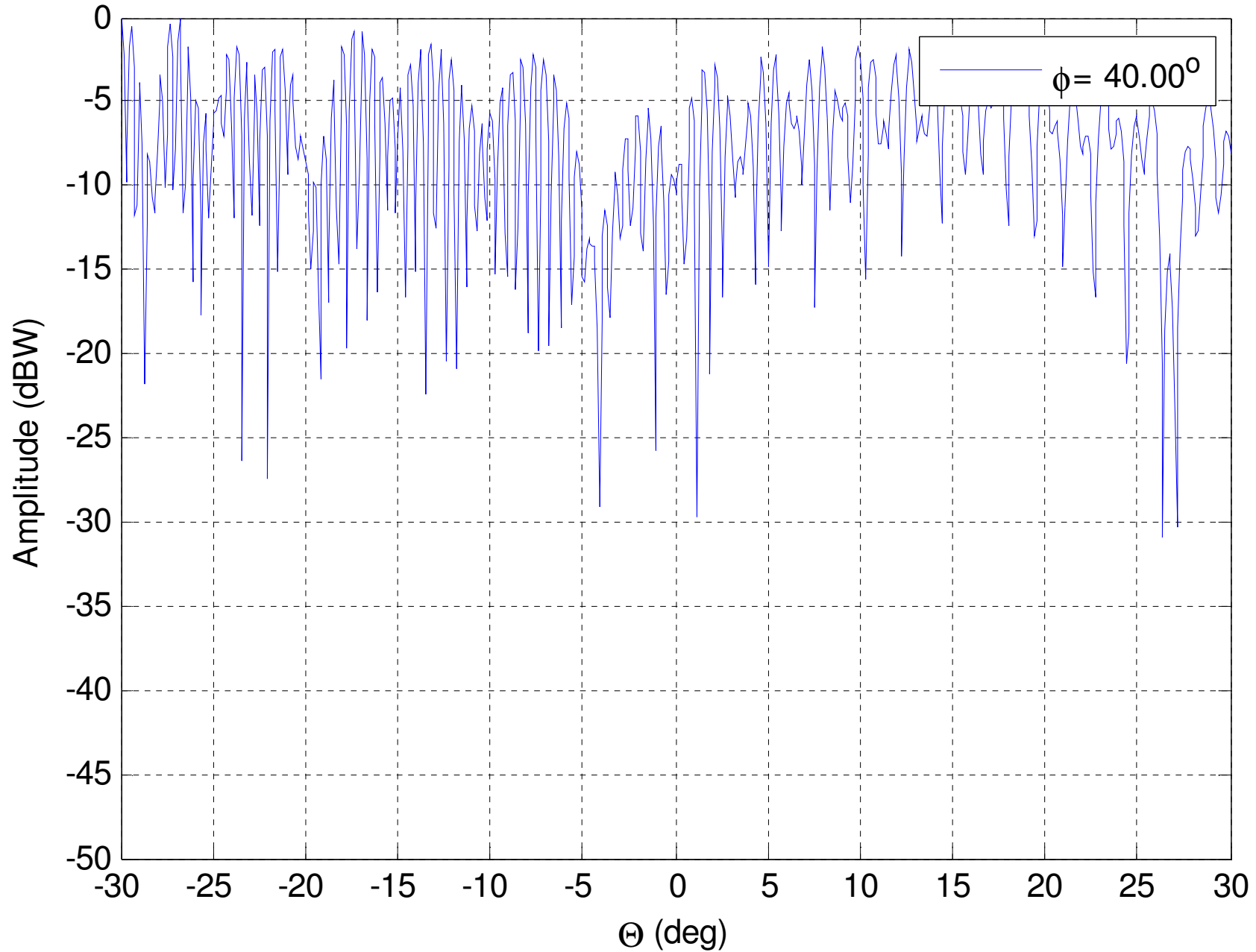
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -11.98 dBW, Date: 14-Dec-2011



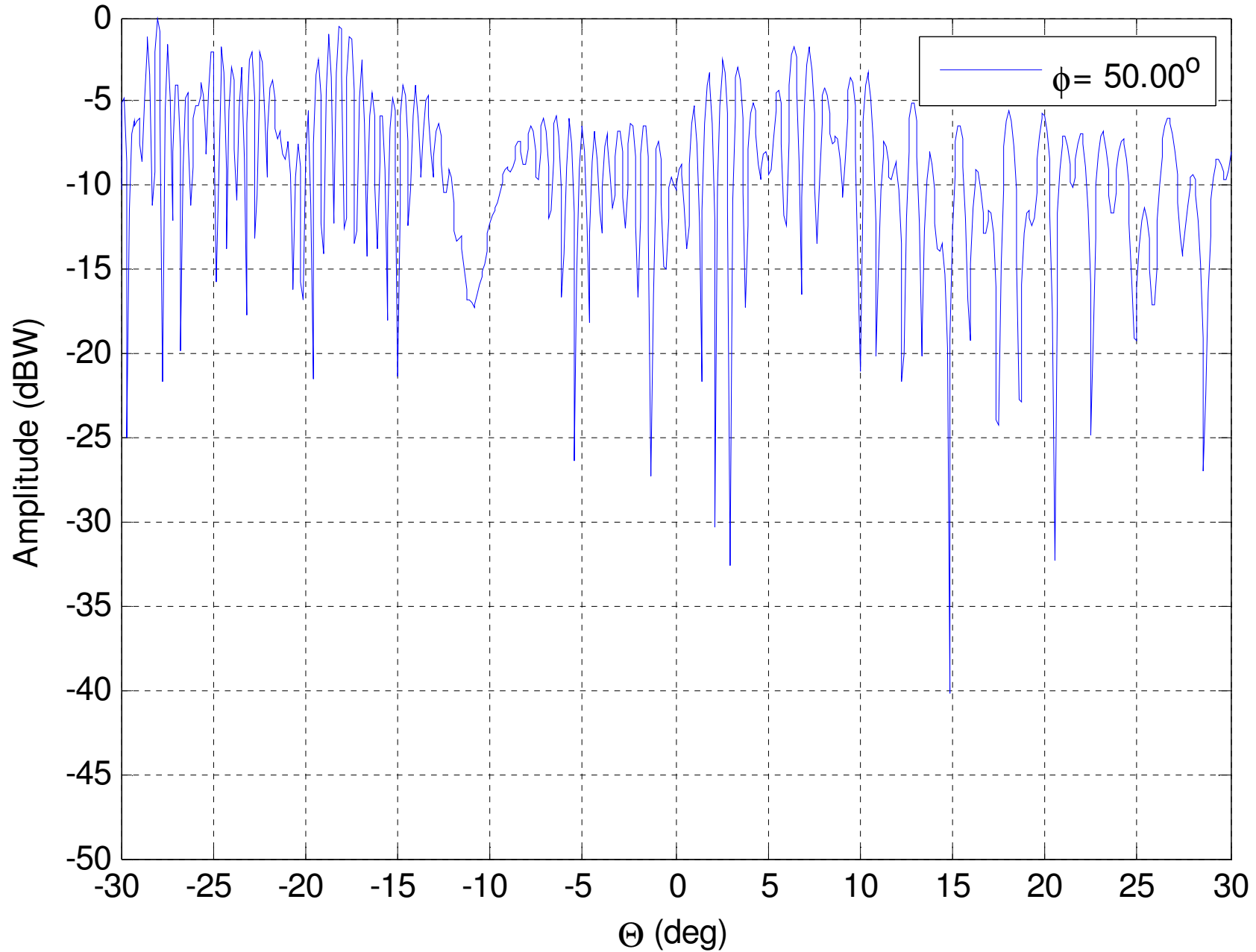
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.18 dBW, Date: 14-Dec-2011



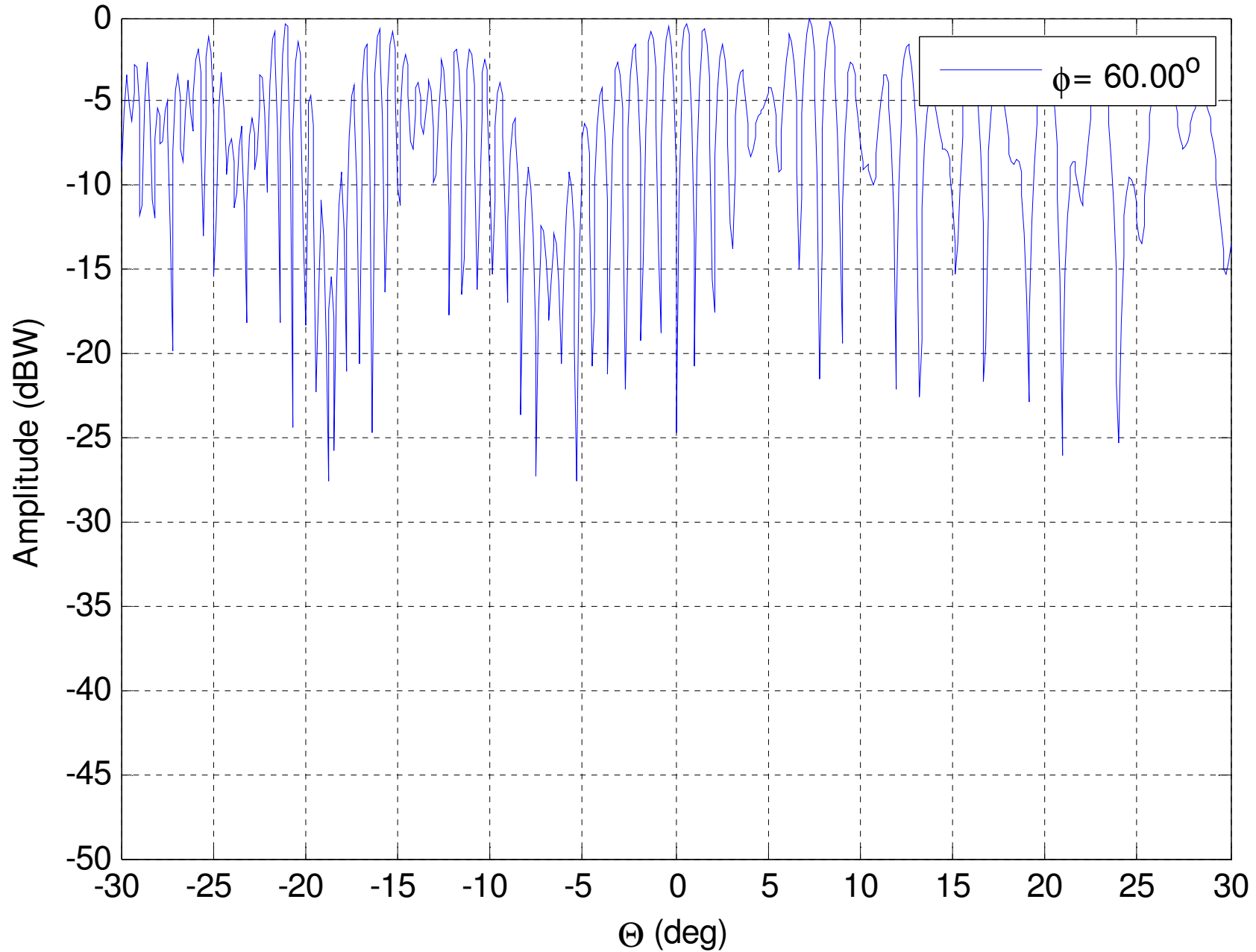
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

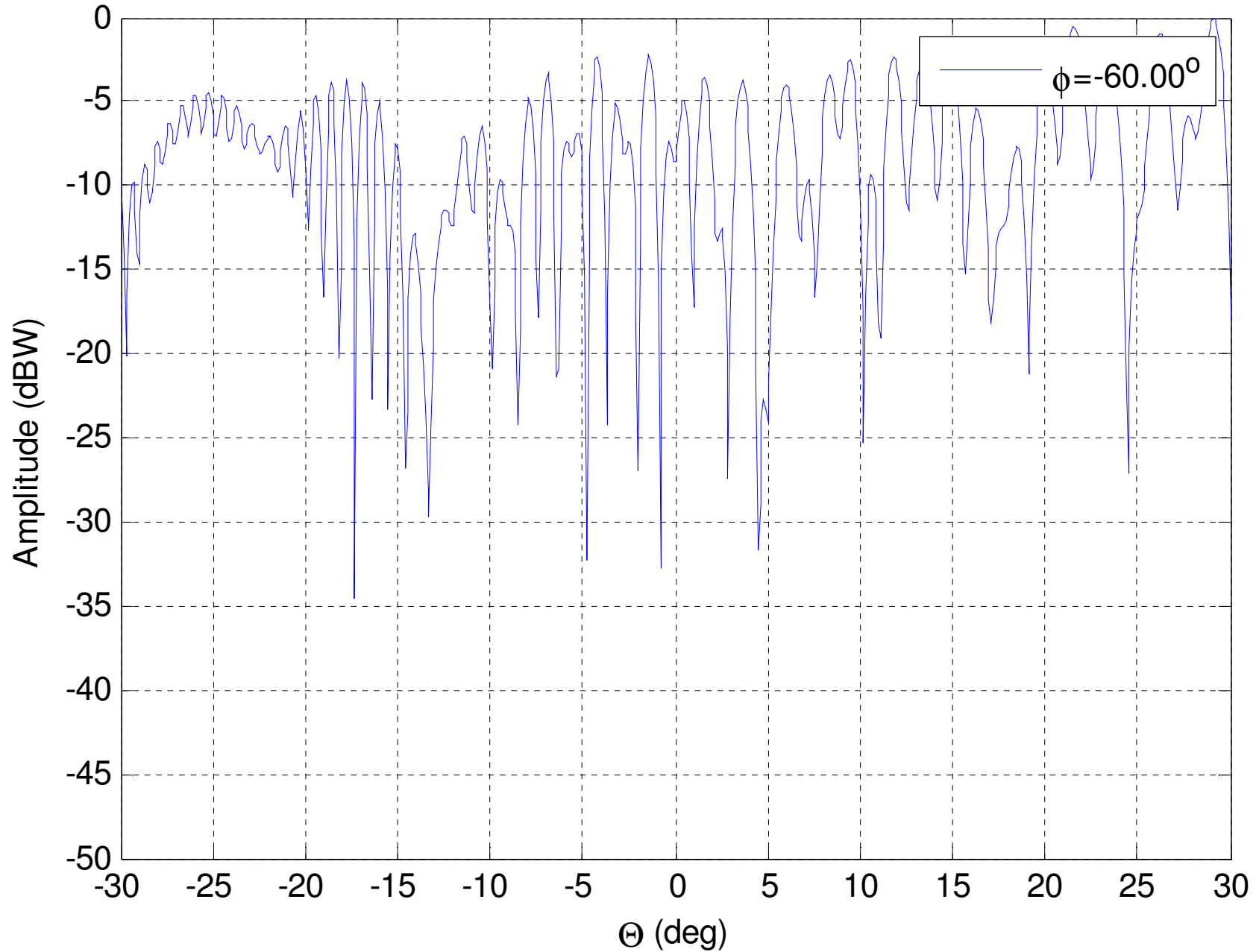
Input file: tx-17.3-lhcp-60.cut, Peak: -12.10 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

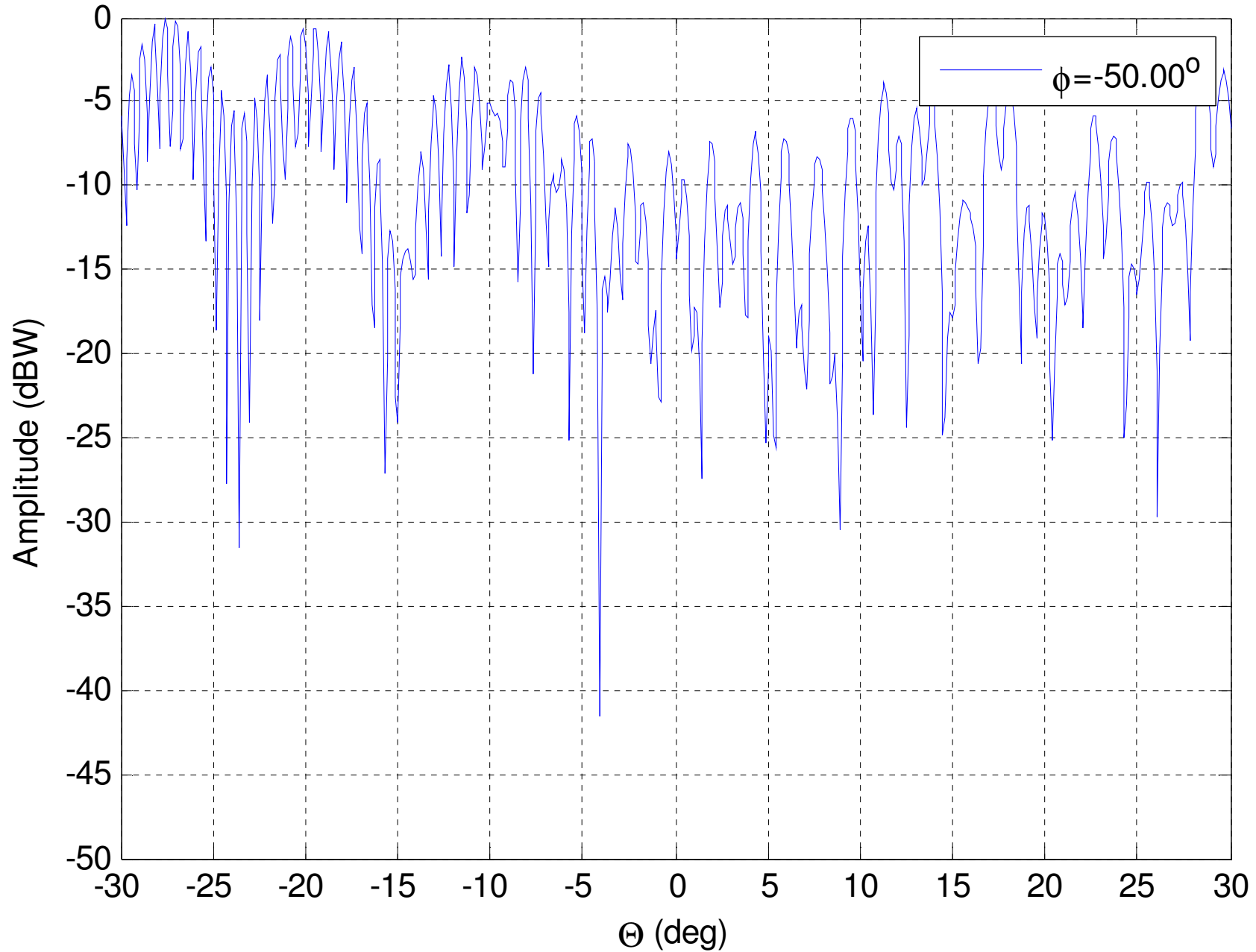
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.85 dBW, Date: 14-Dec-2011



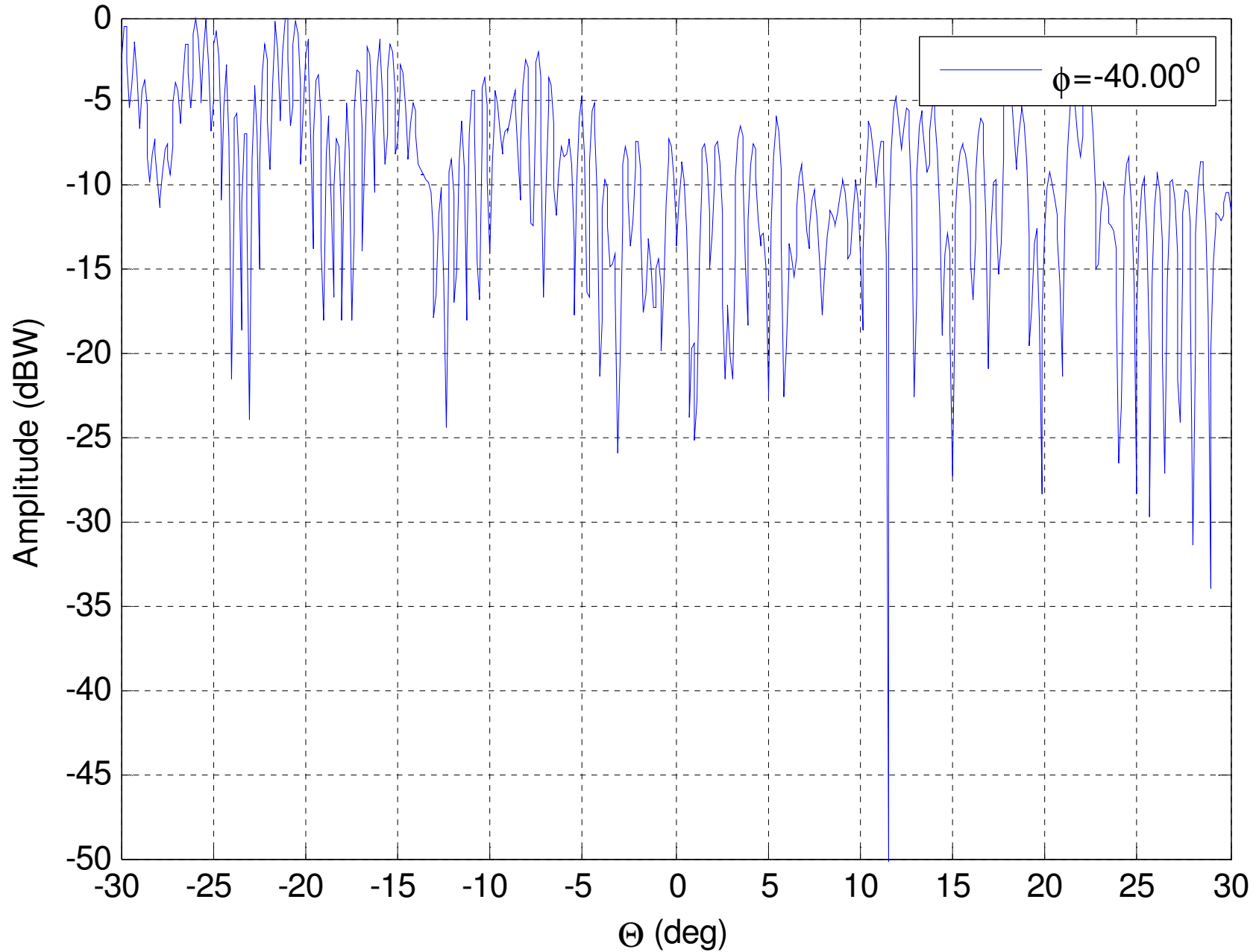
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.50 dBW, Date: 14-Dec-2011



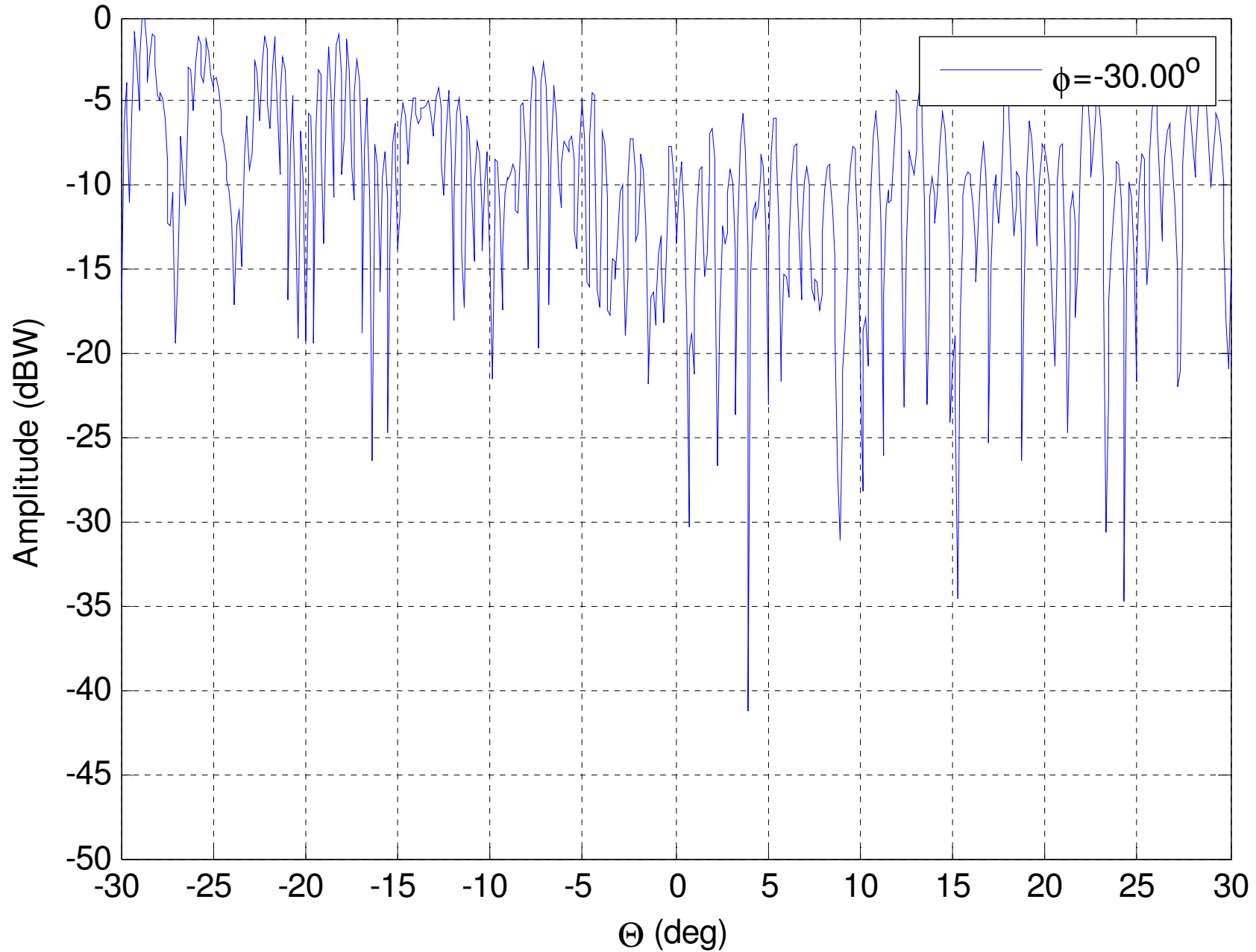
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -11.01 dBW, Date: 14-Dec-2011



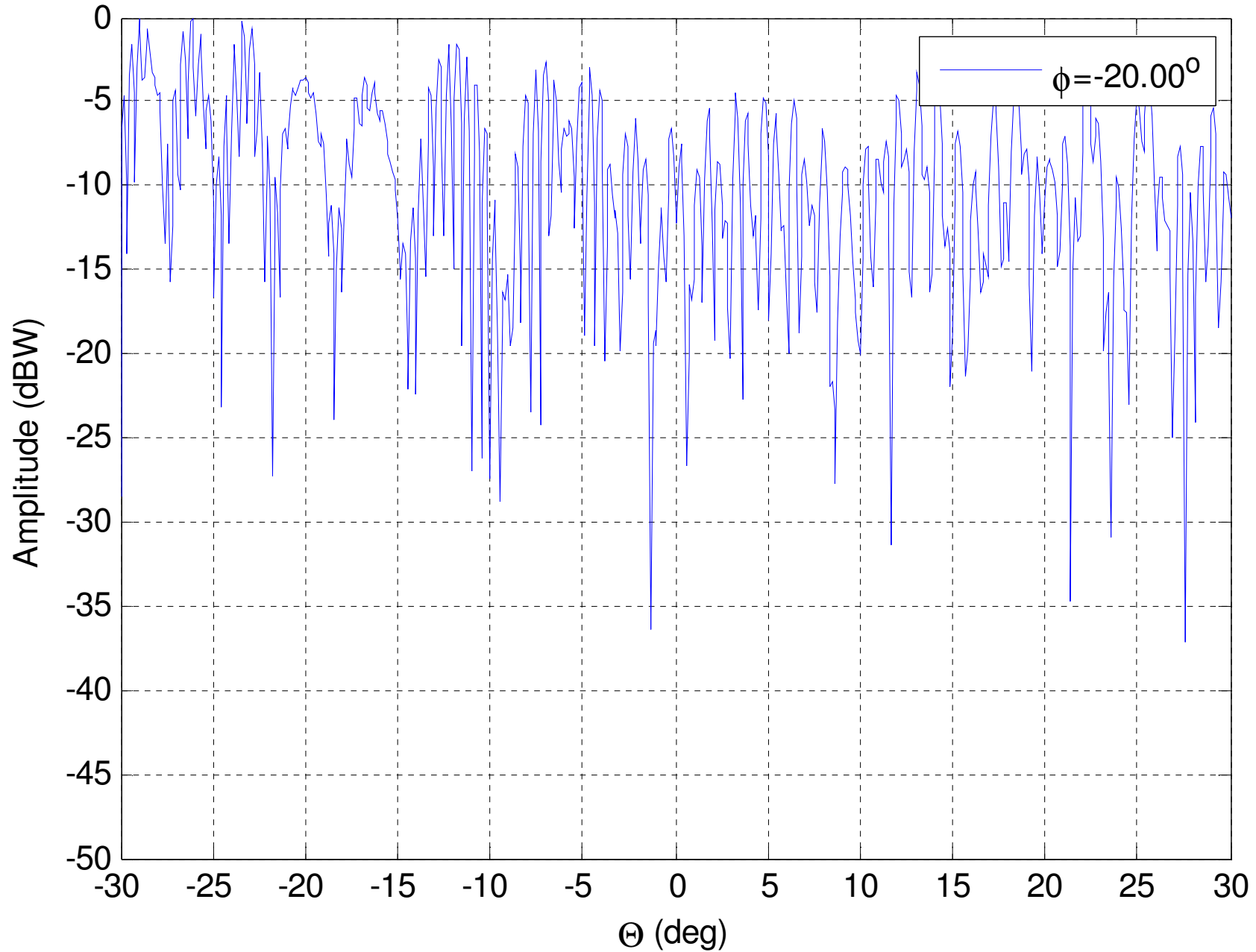
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -10.74 dBW, Date: 14-Dec-2011



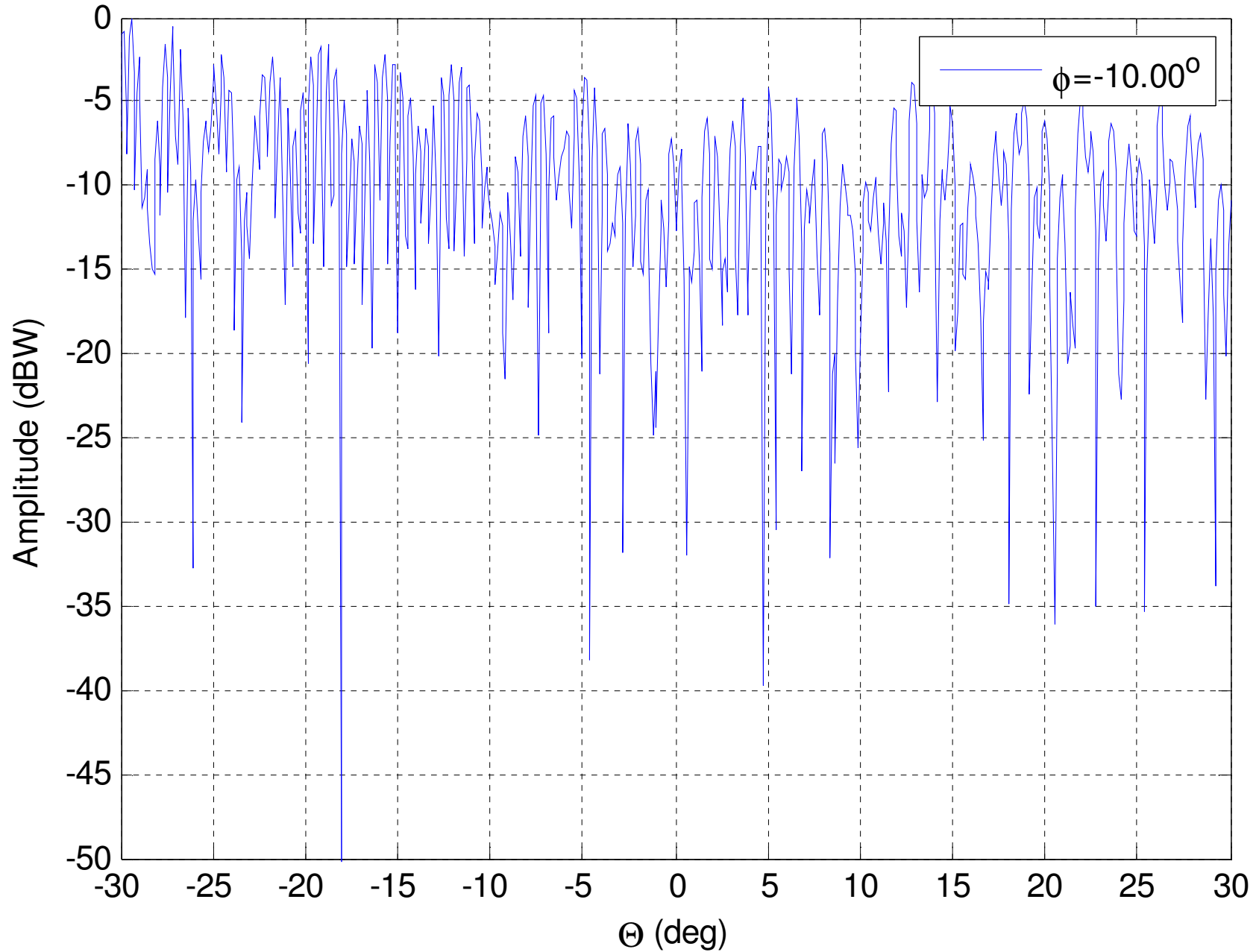
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -11.54 dBW, Date: 14-Dec-2011



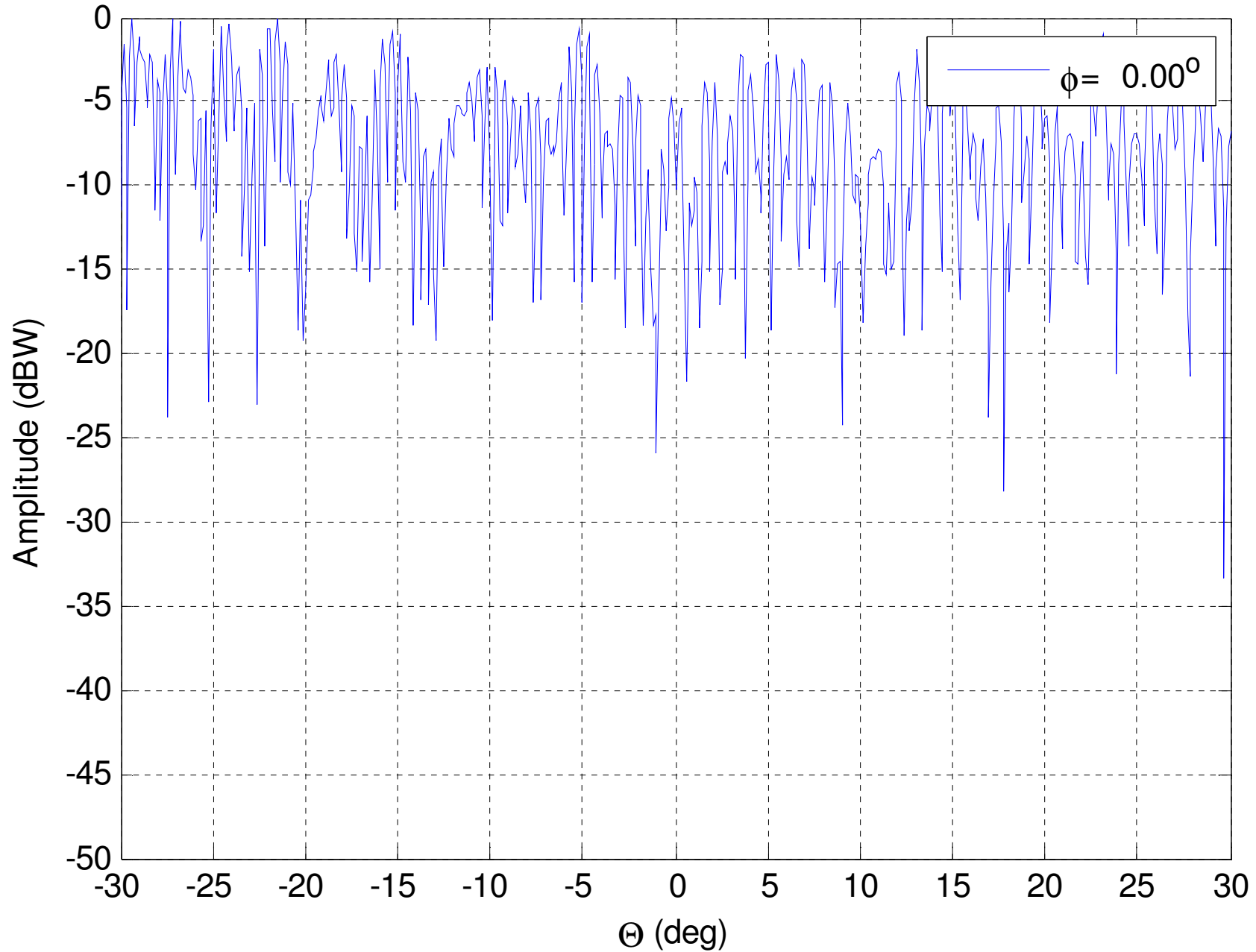
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -10.97 dBW, Date: 14-Dec-2011



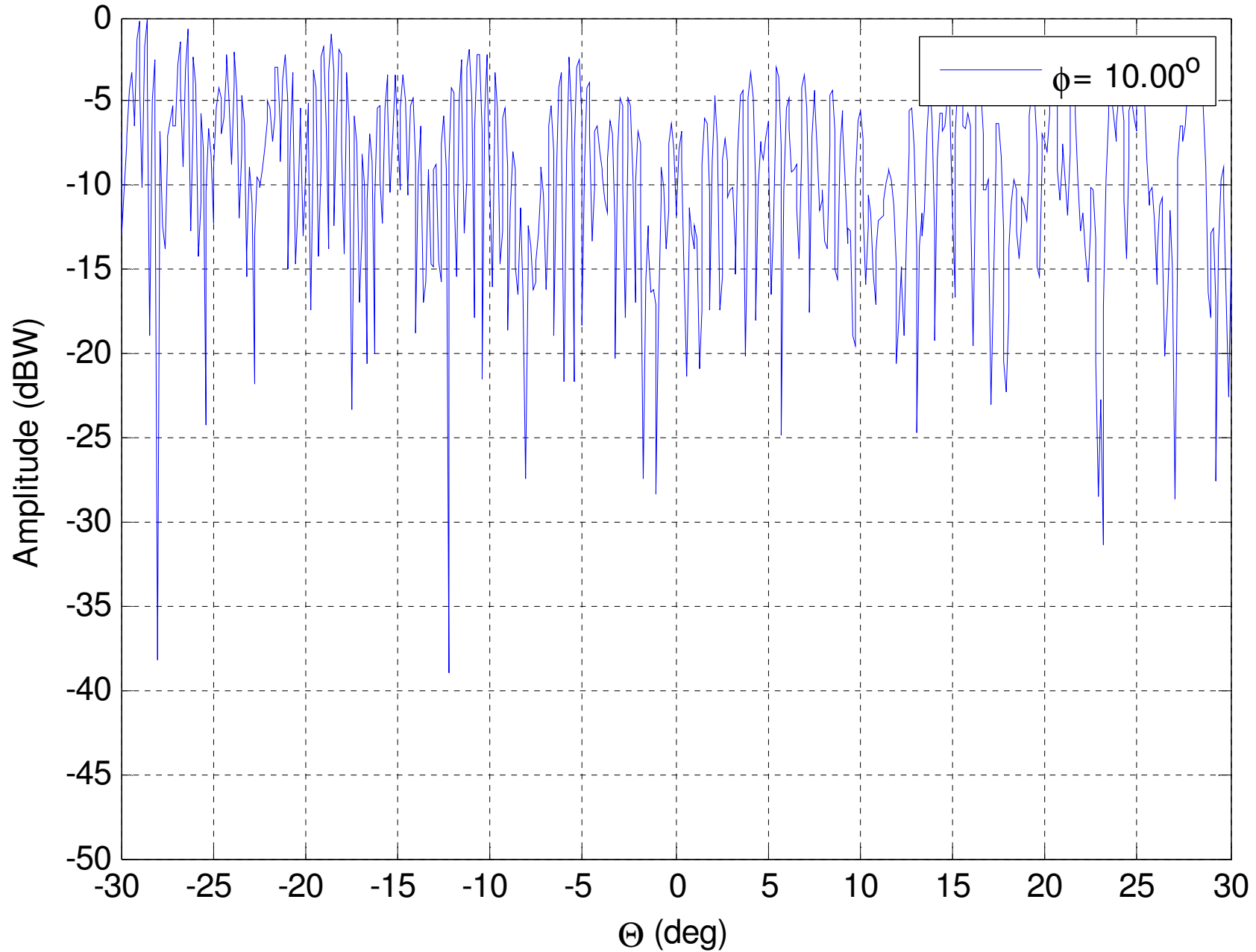
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -13.34 dBW, Date: 14-Dec-2011



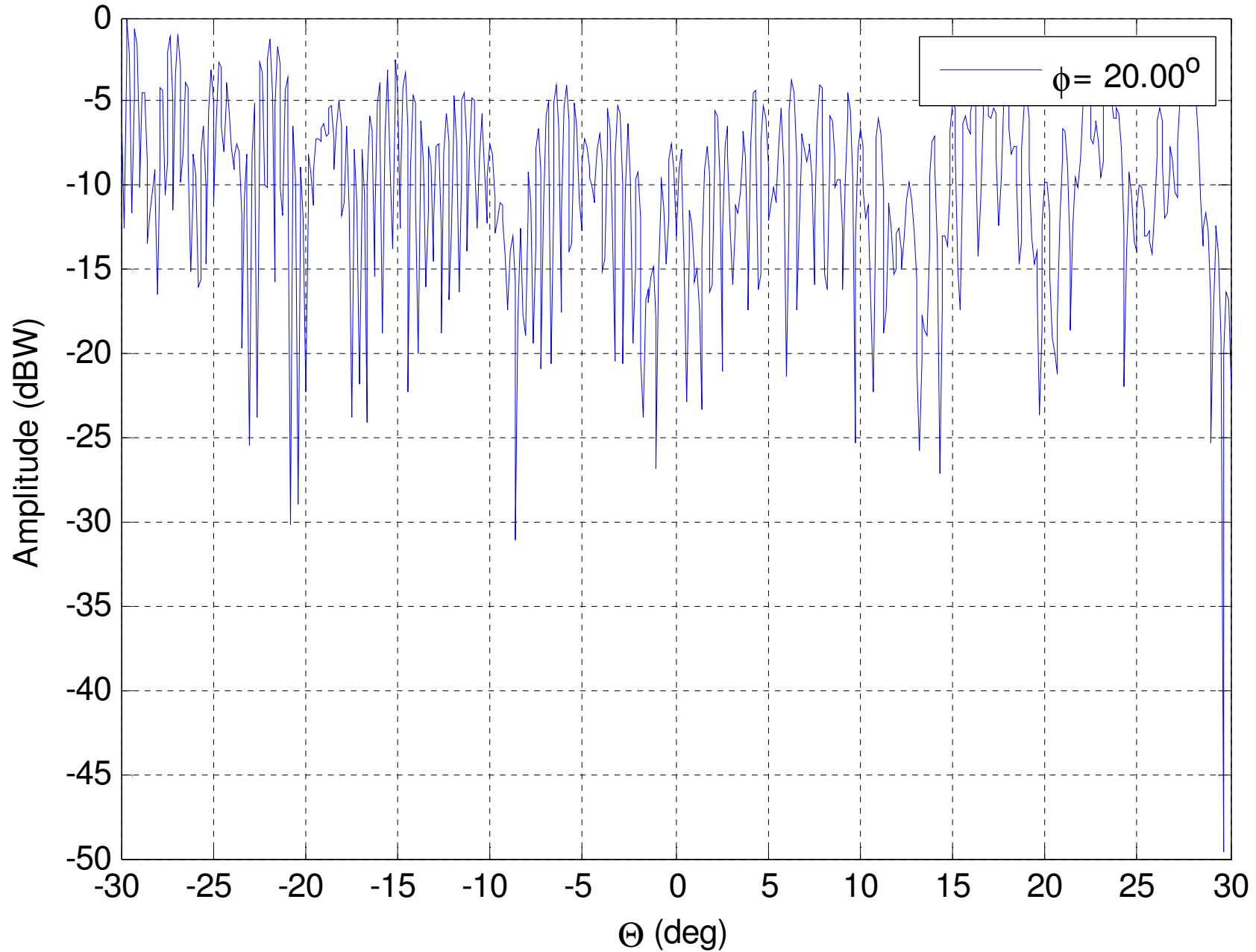
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -11.81 dBW, Date: 14-Dec-2011



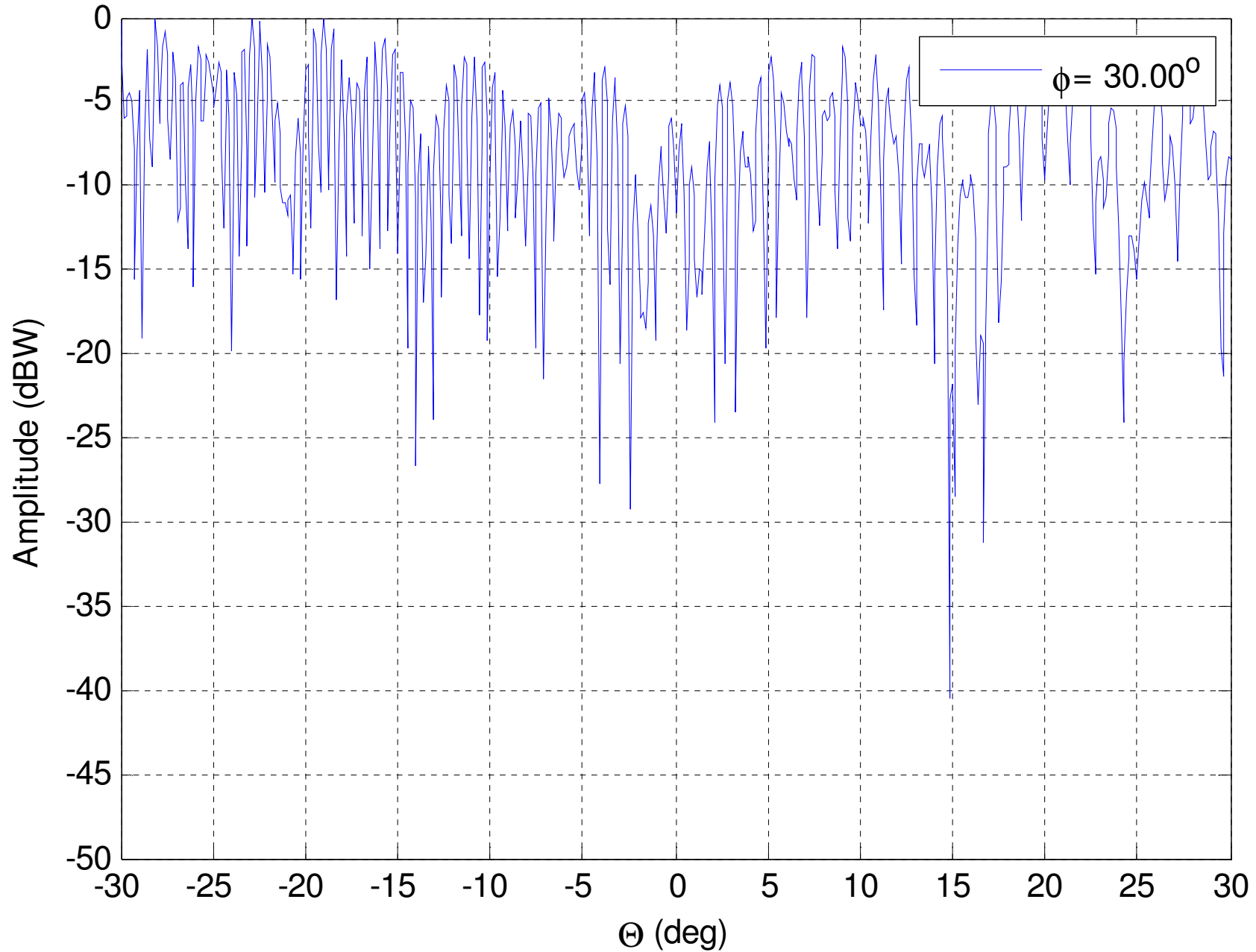
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -10.62 dBW, Date: 14-Dec-2011



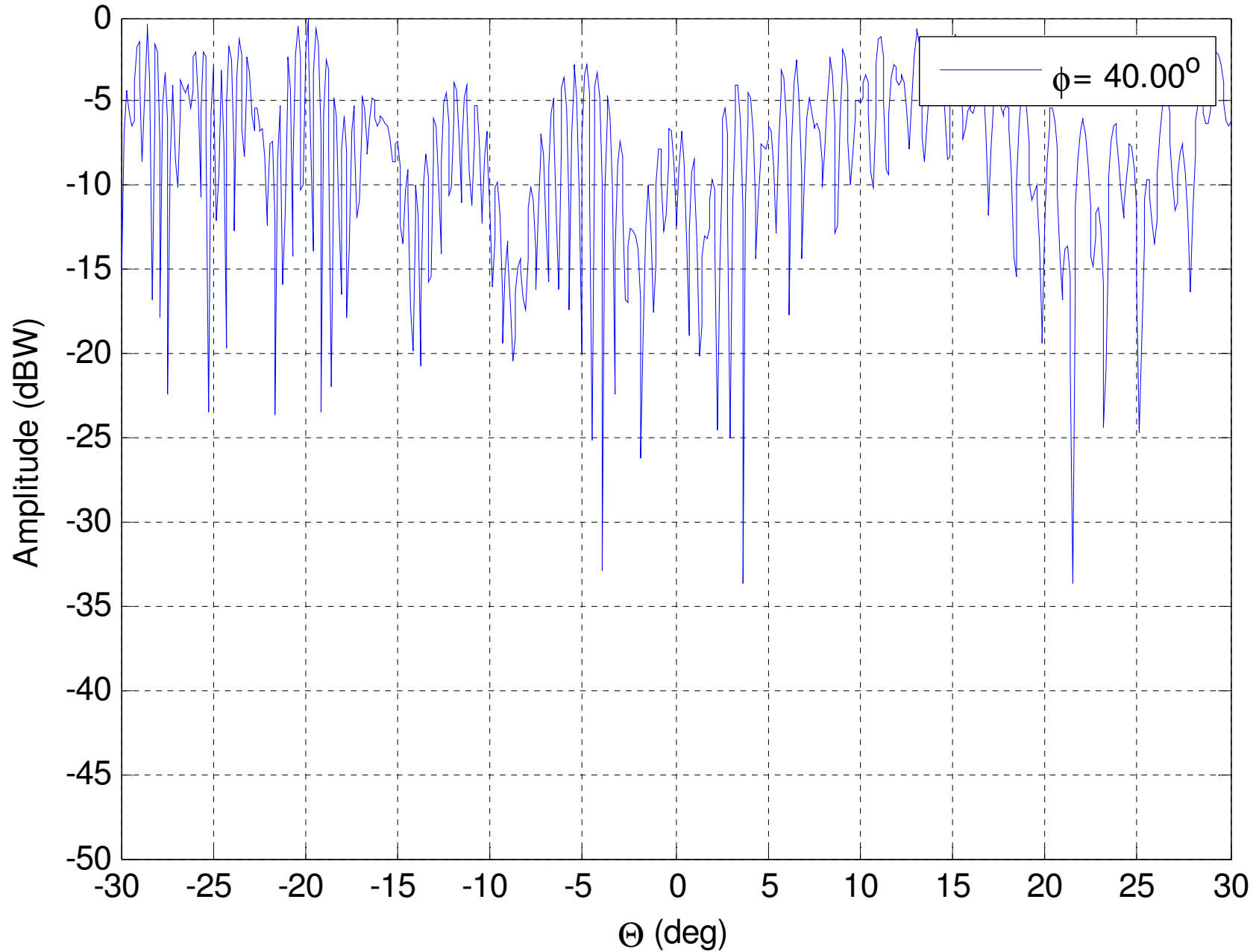
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -12.07 dBW, Date: 14-Dec-2011



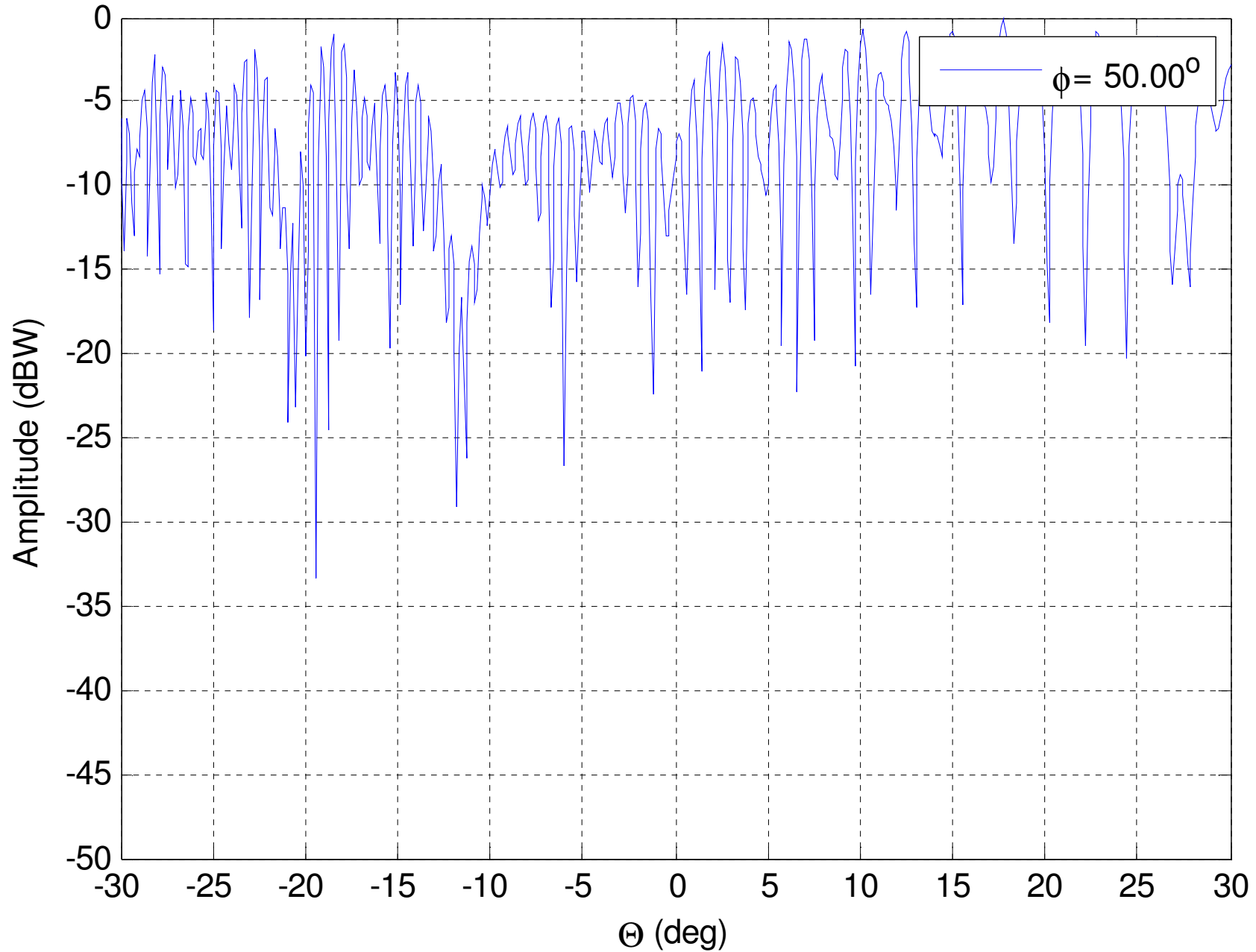
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -11.55 dBW, Date: 14-Dec-2011



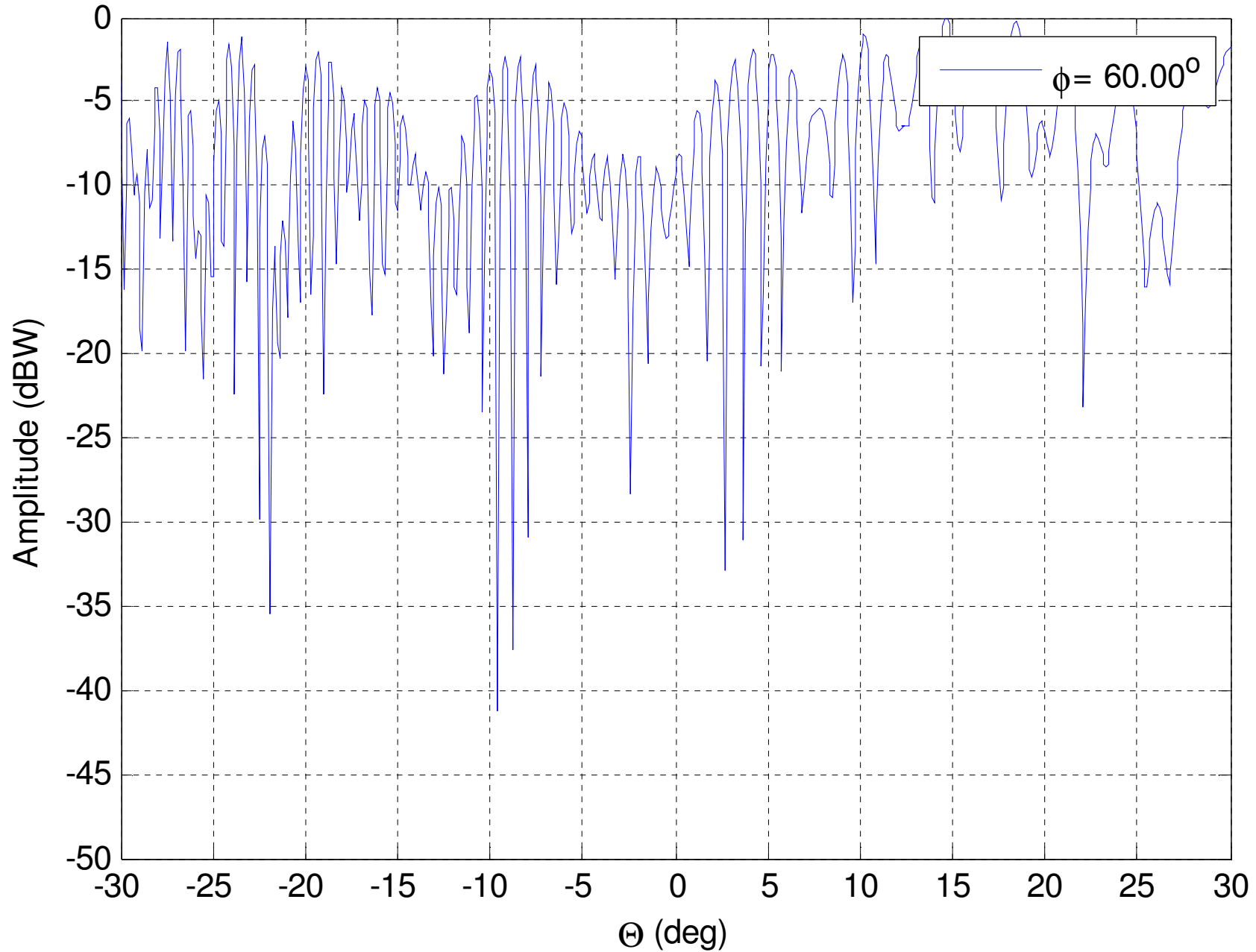
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -12.09 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

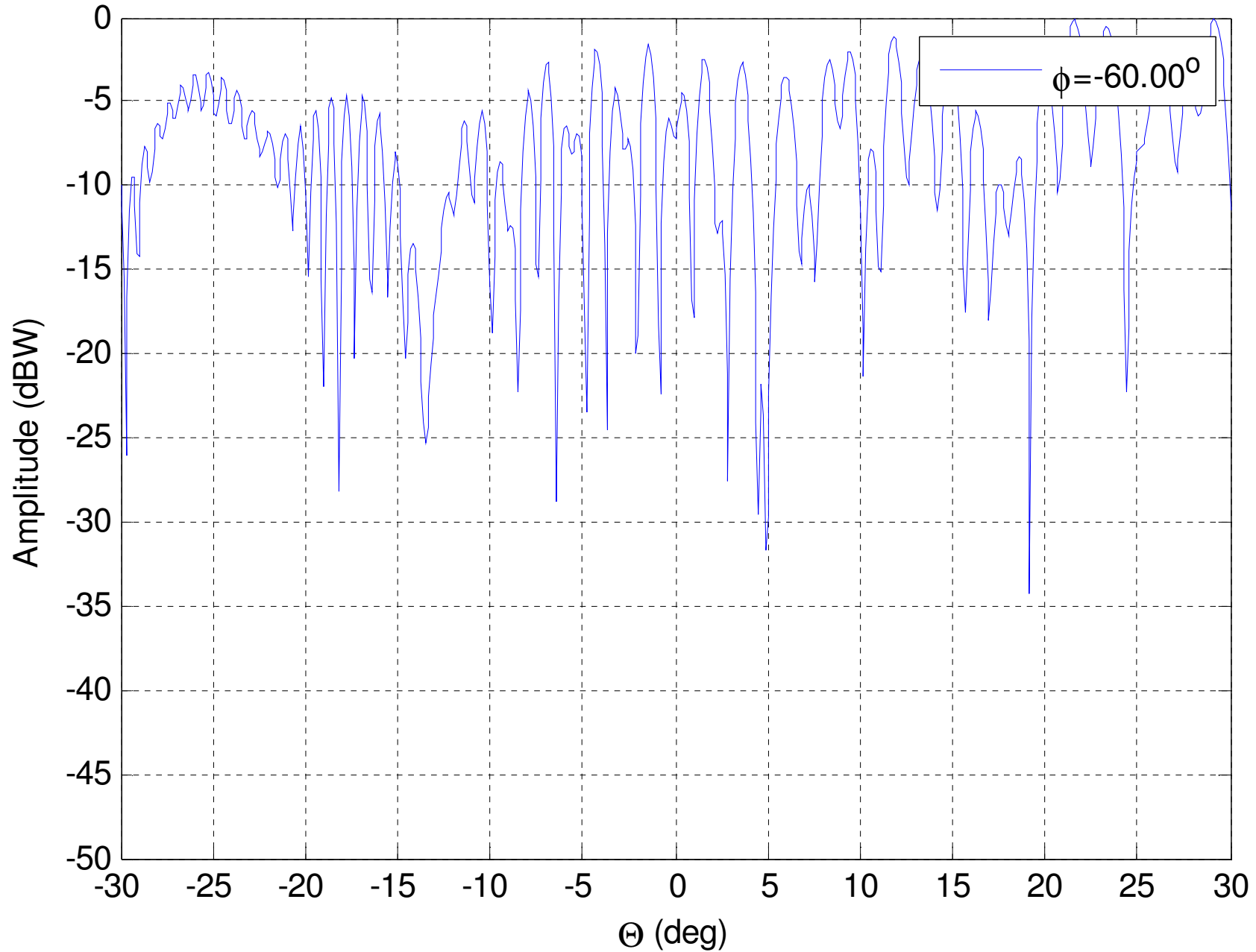
Input file: tx-17.5-rhcp-60.cut, Peak: -11.27 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

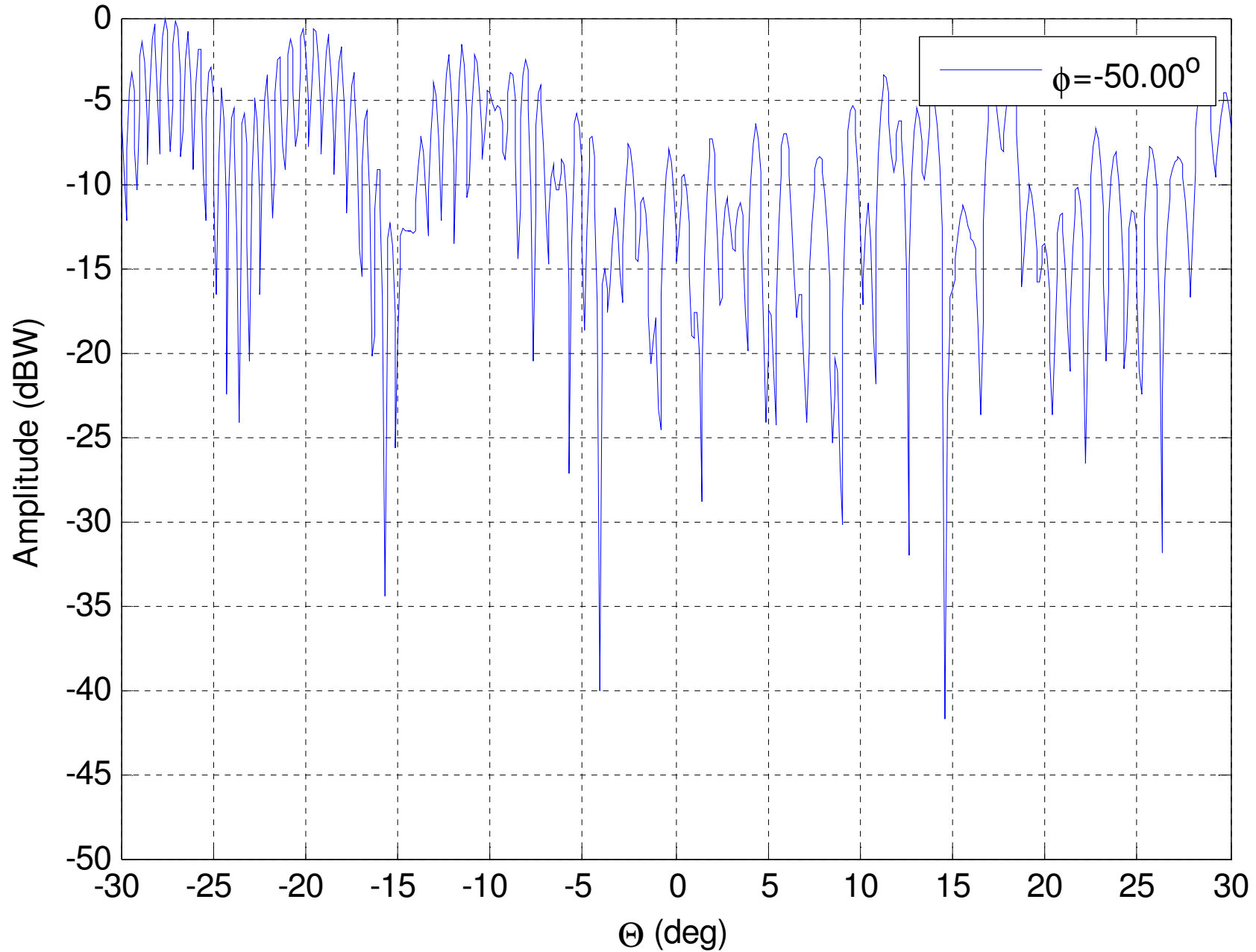
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -12.45 dBW, Date: 14-Dec-2011



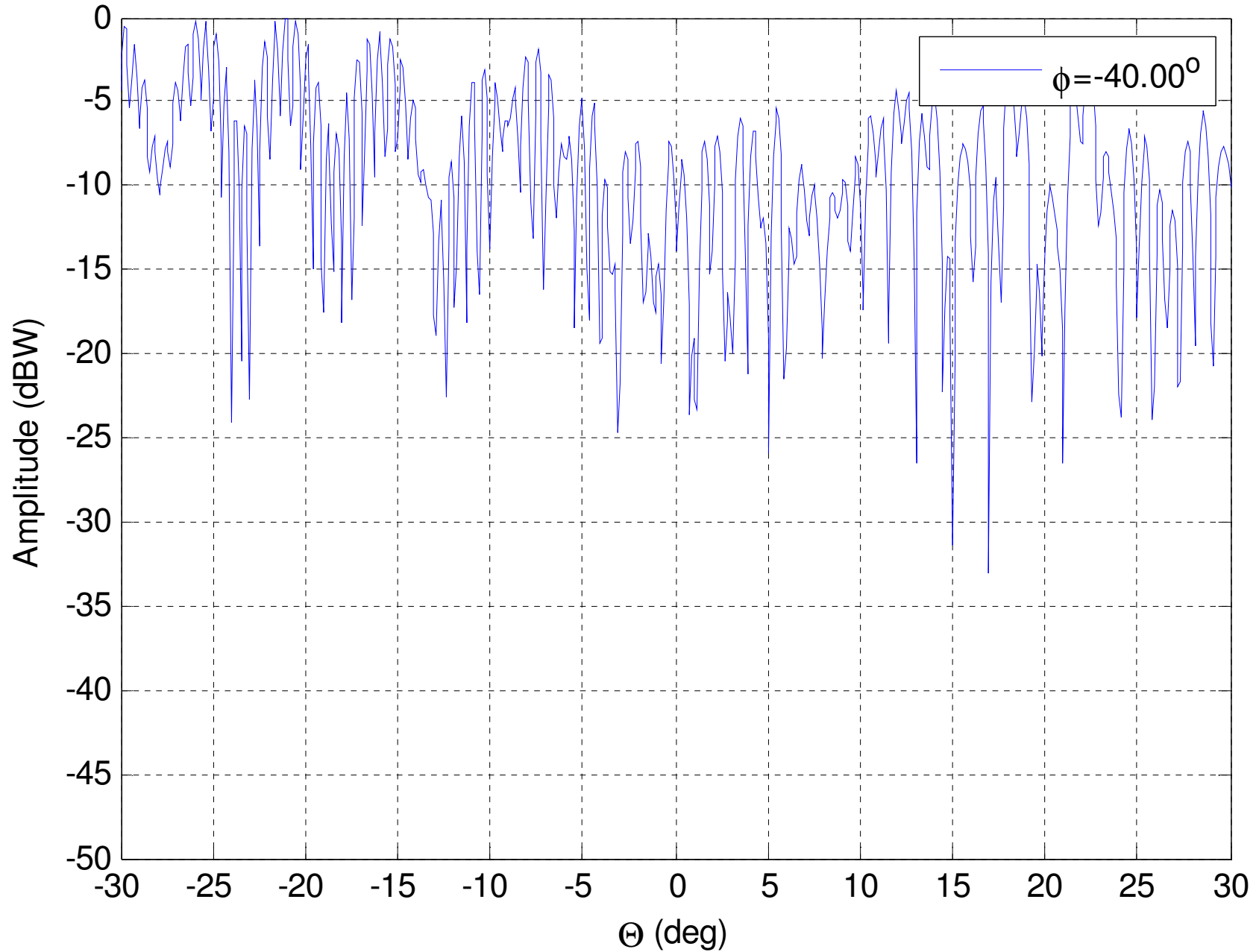
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -10.72 dBW, Date: 14-Dec-2011



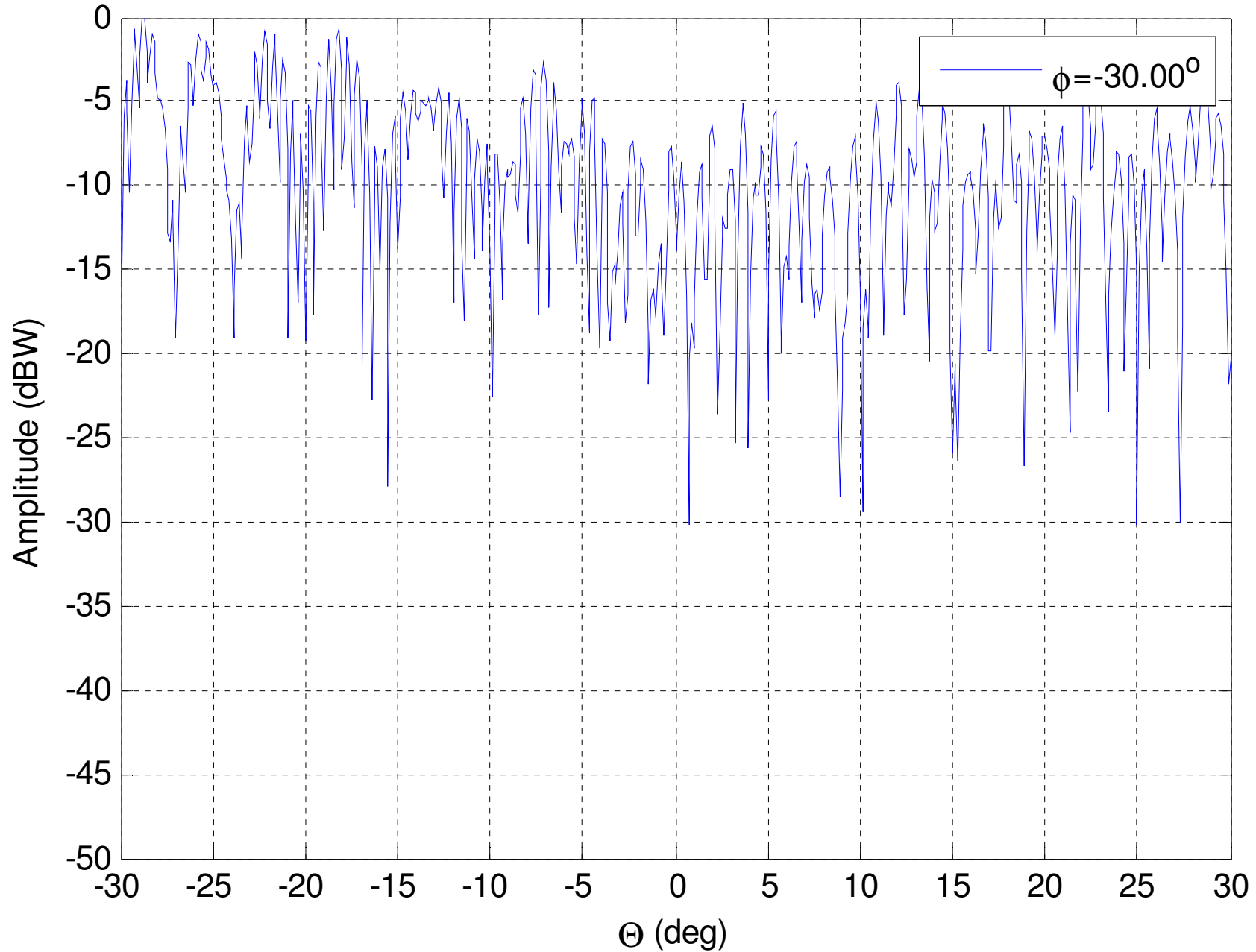
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -11.18 dBW, Date: 14-Dec-2011



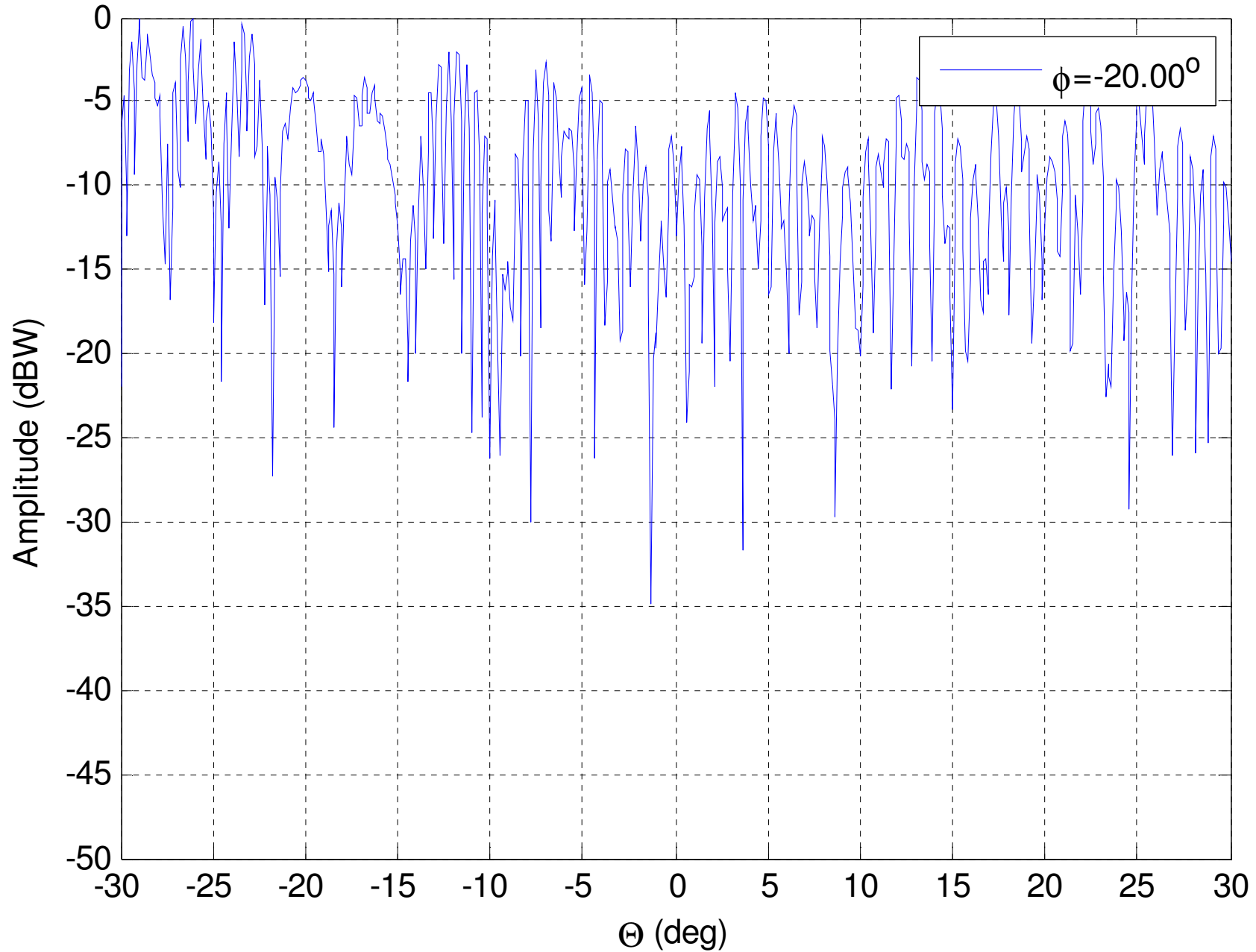
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.80 dBW, Date: 14-Dec-2011



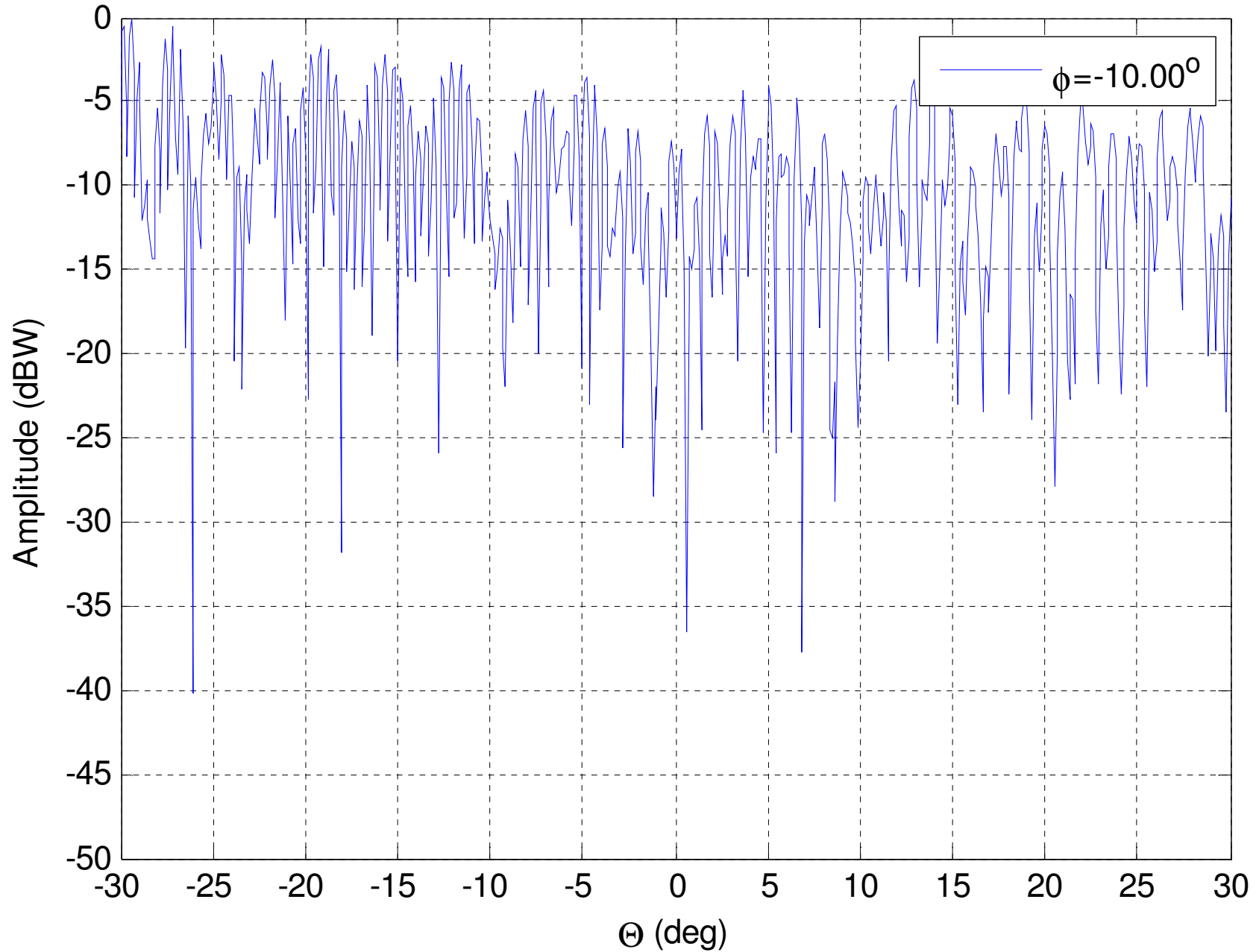
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -11.34 dBW, Date: 14-Dec-2011



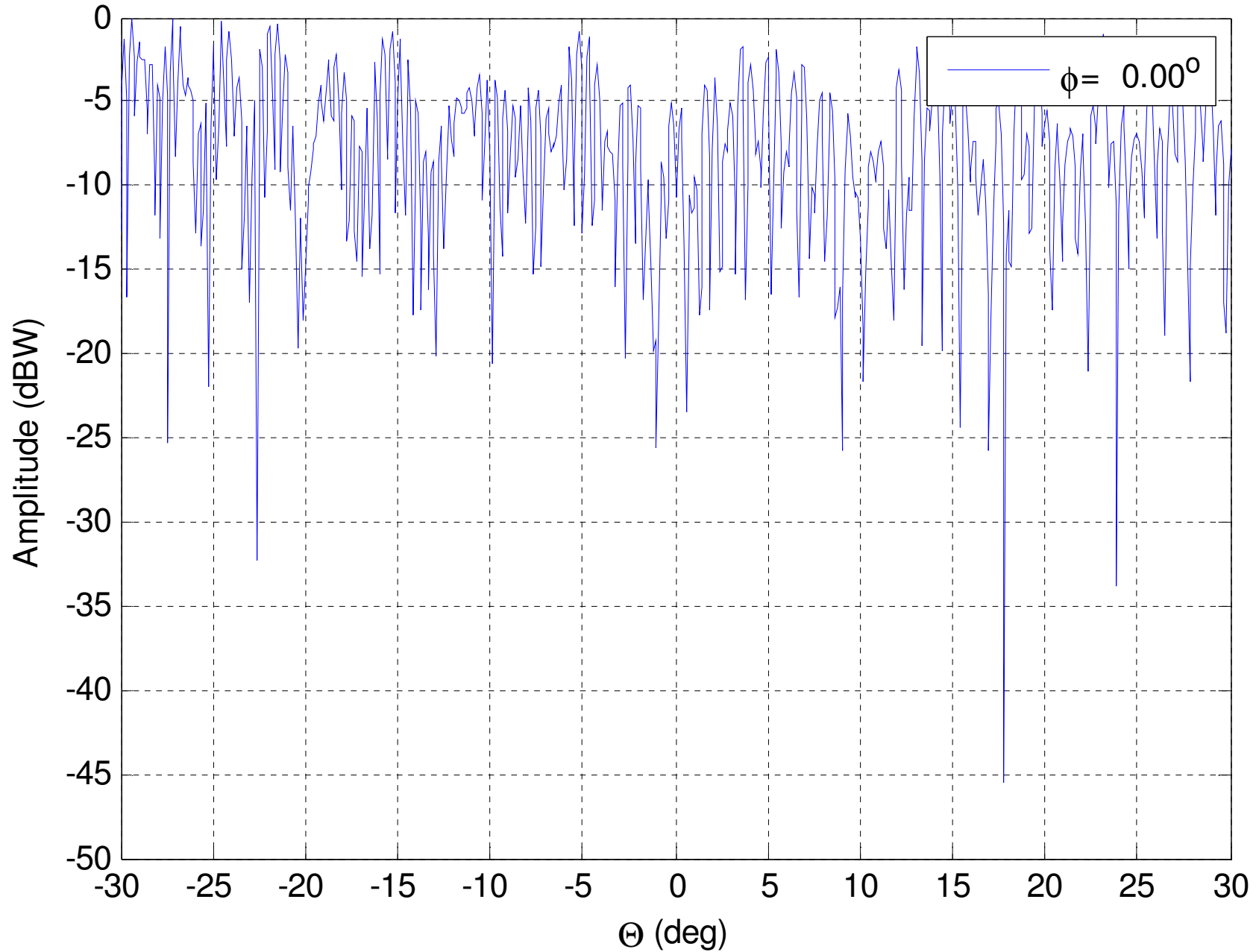
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -10.98 dBW, Date: 14-Dec-2011



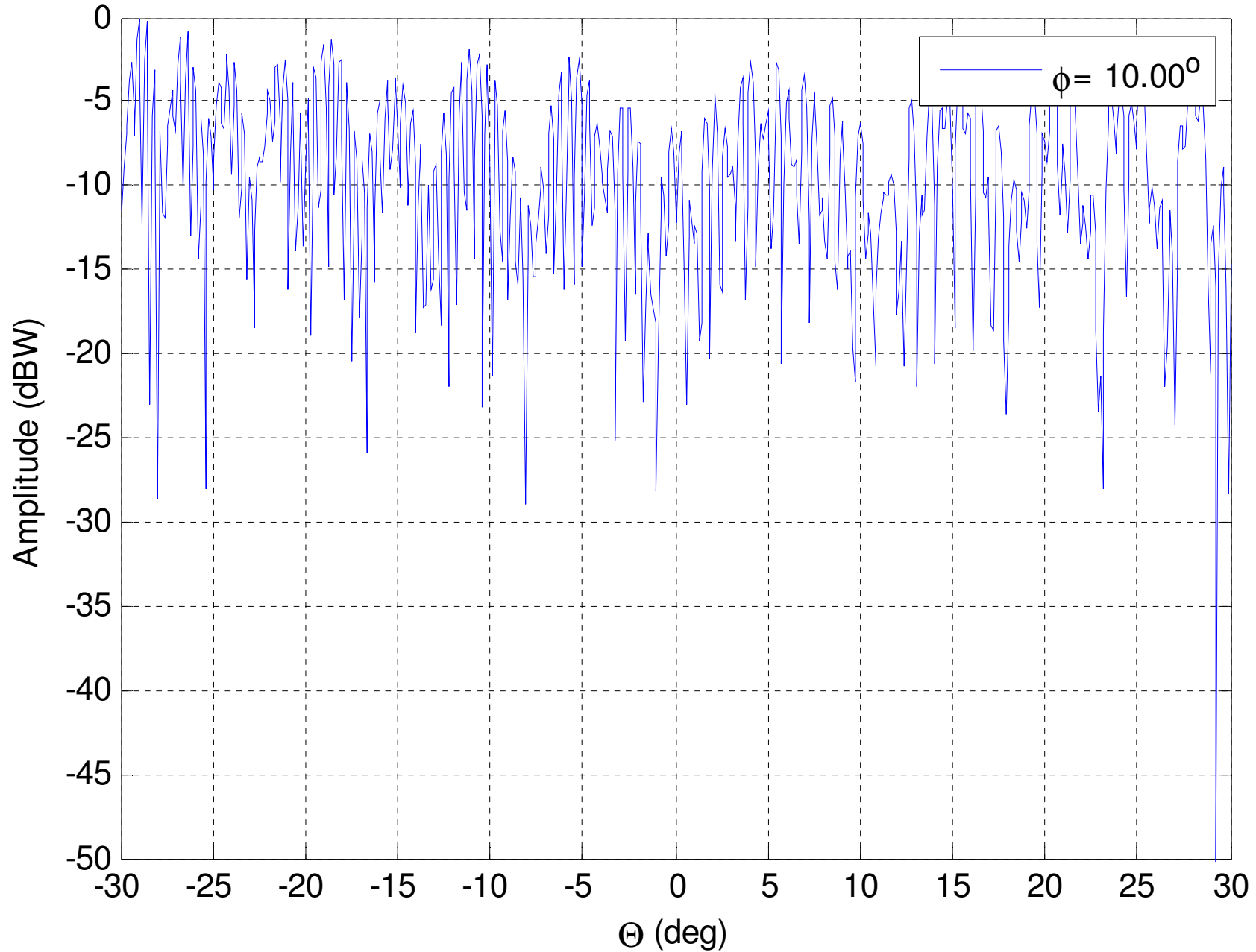
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -13.26 dBW, Date: 14-Dec-2011



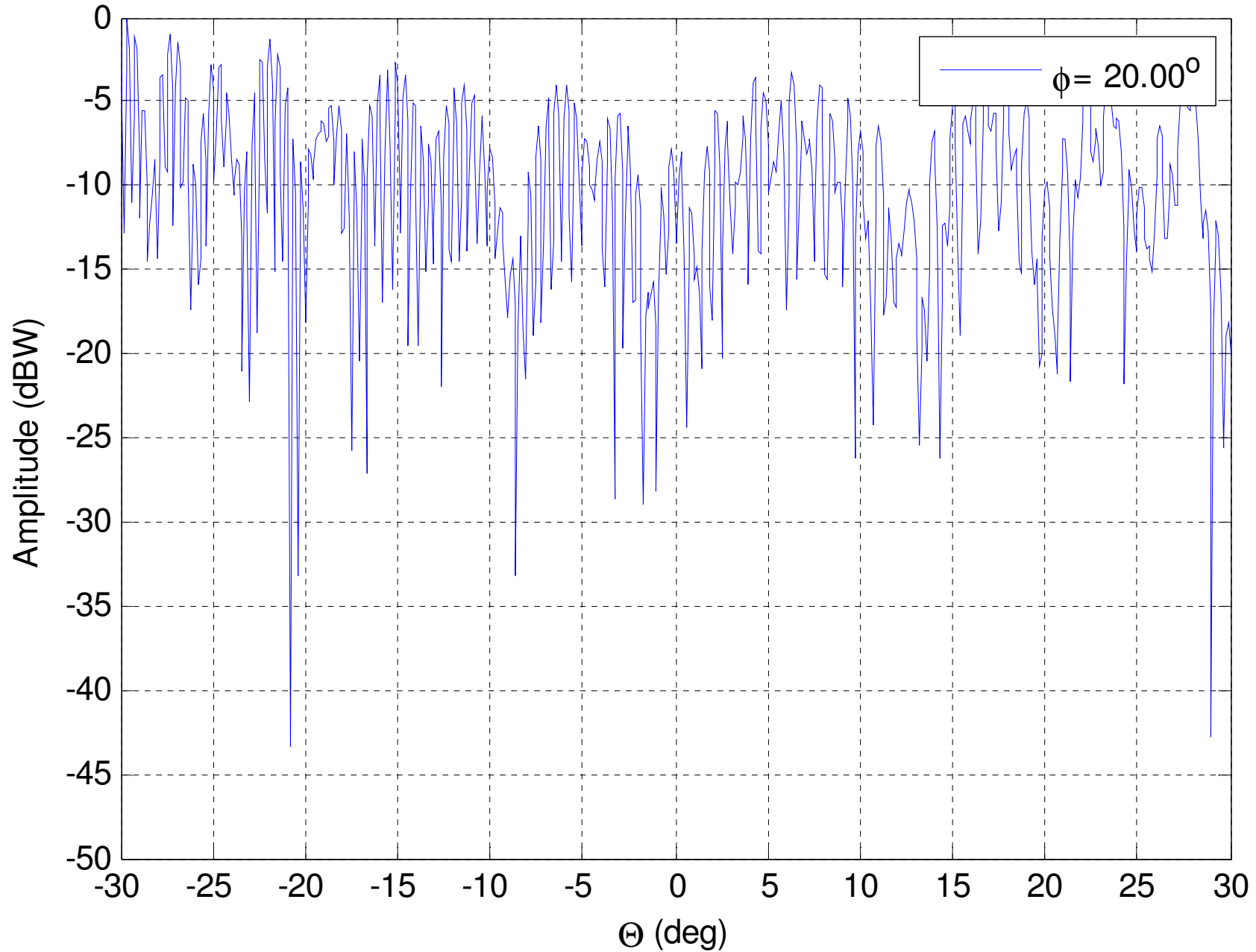
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -11.71 dBW, Date: 14-Dec-2011



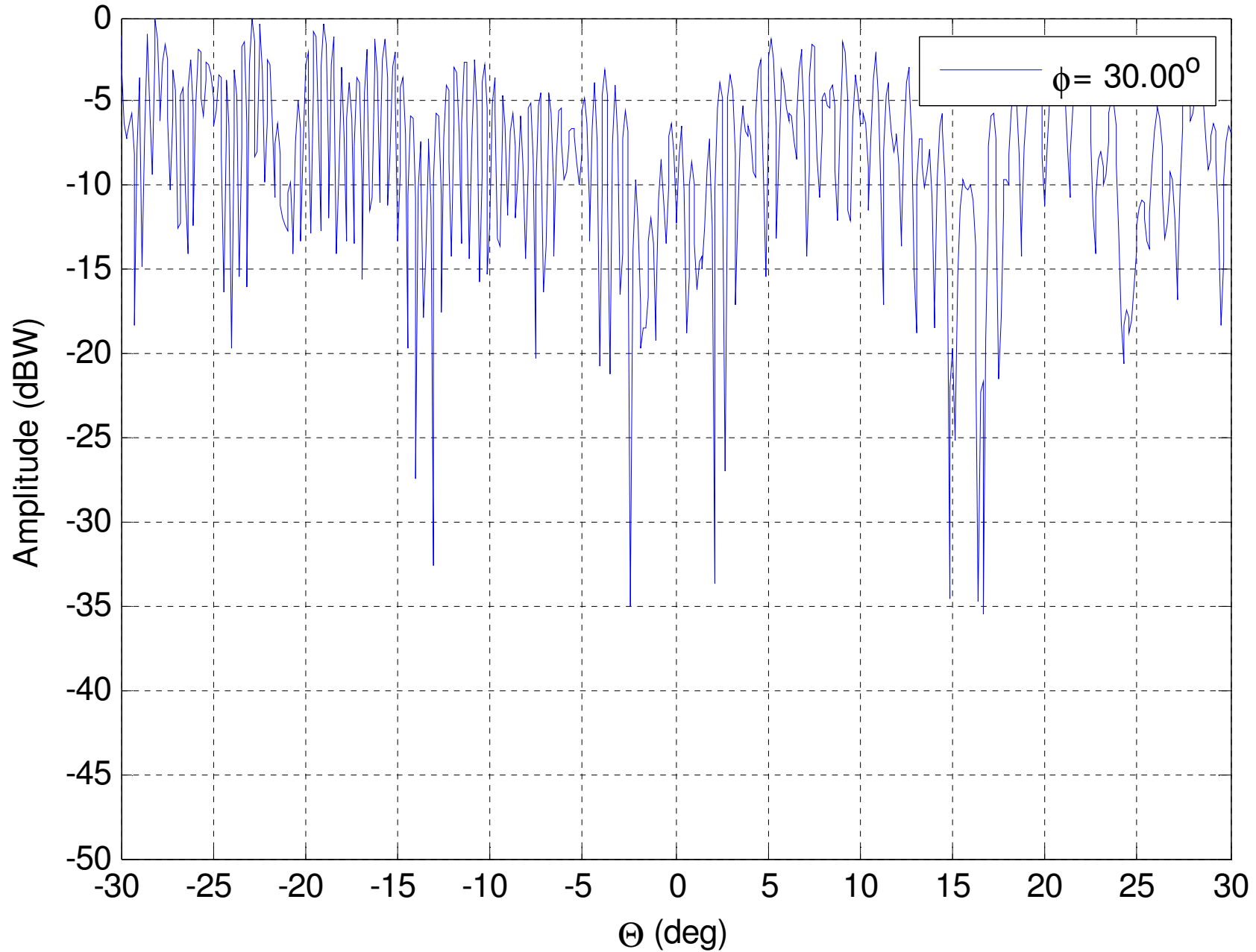
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -10.47 dBW, Date: 14-Dec-2011



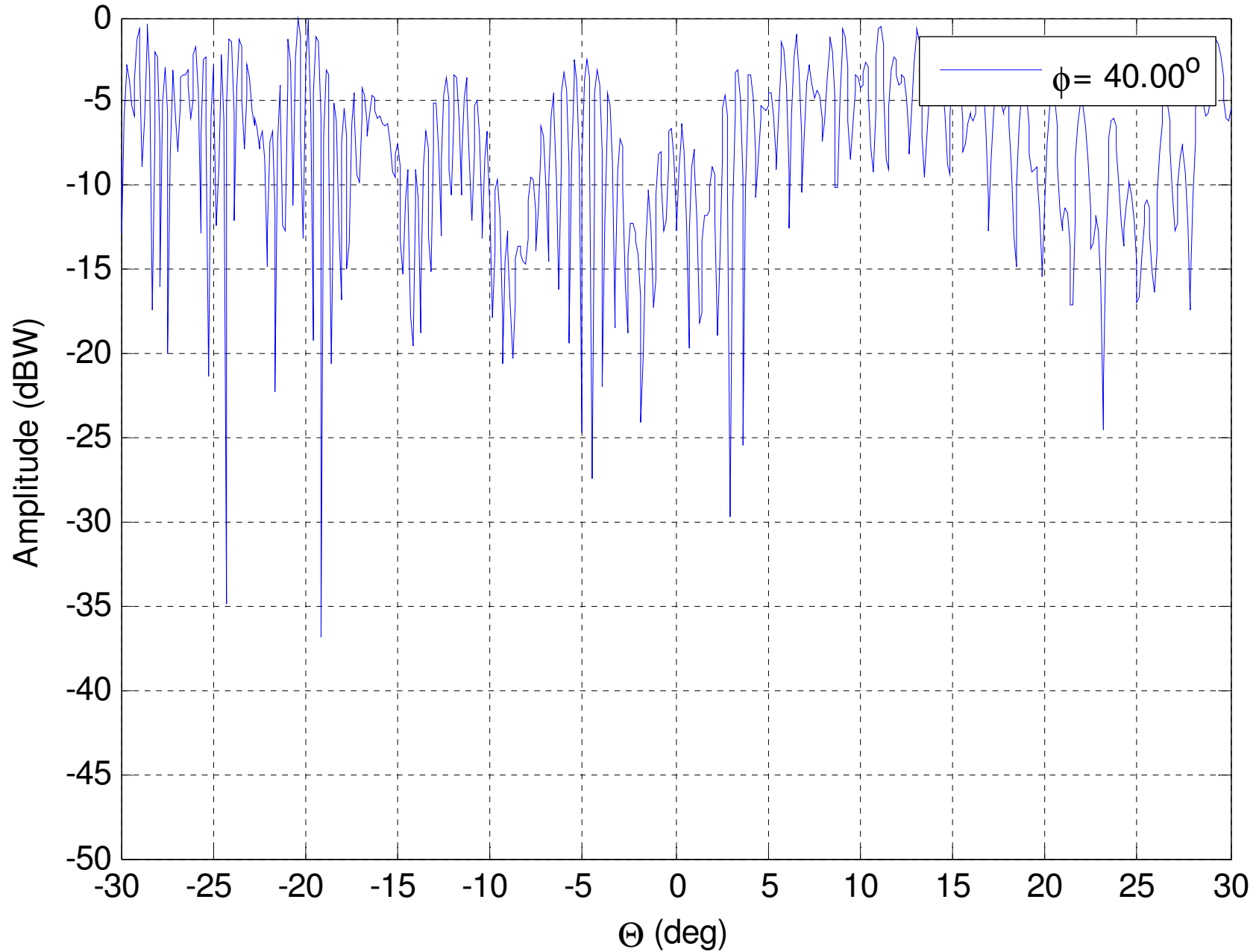
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.96 dBW, Date: 14-Dec-2011



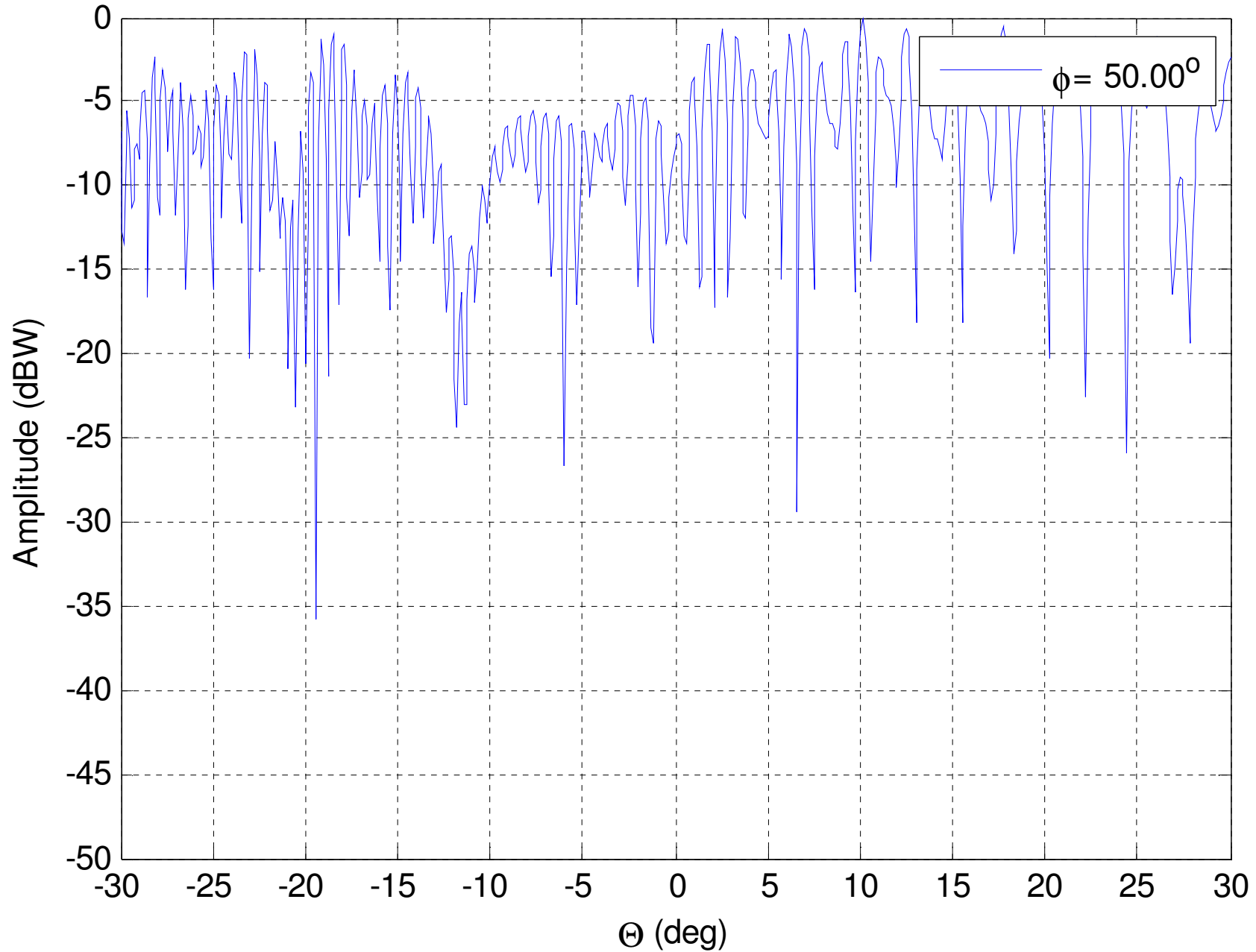
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -11.82 dBW, Date: 14-Dec-2011



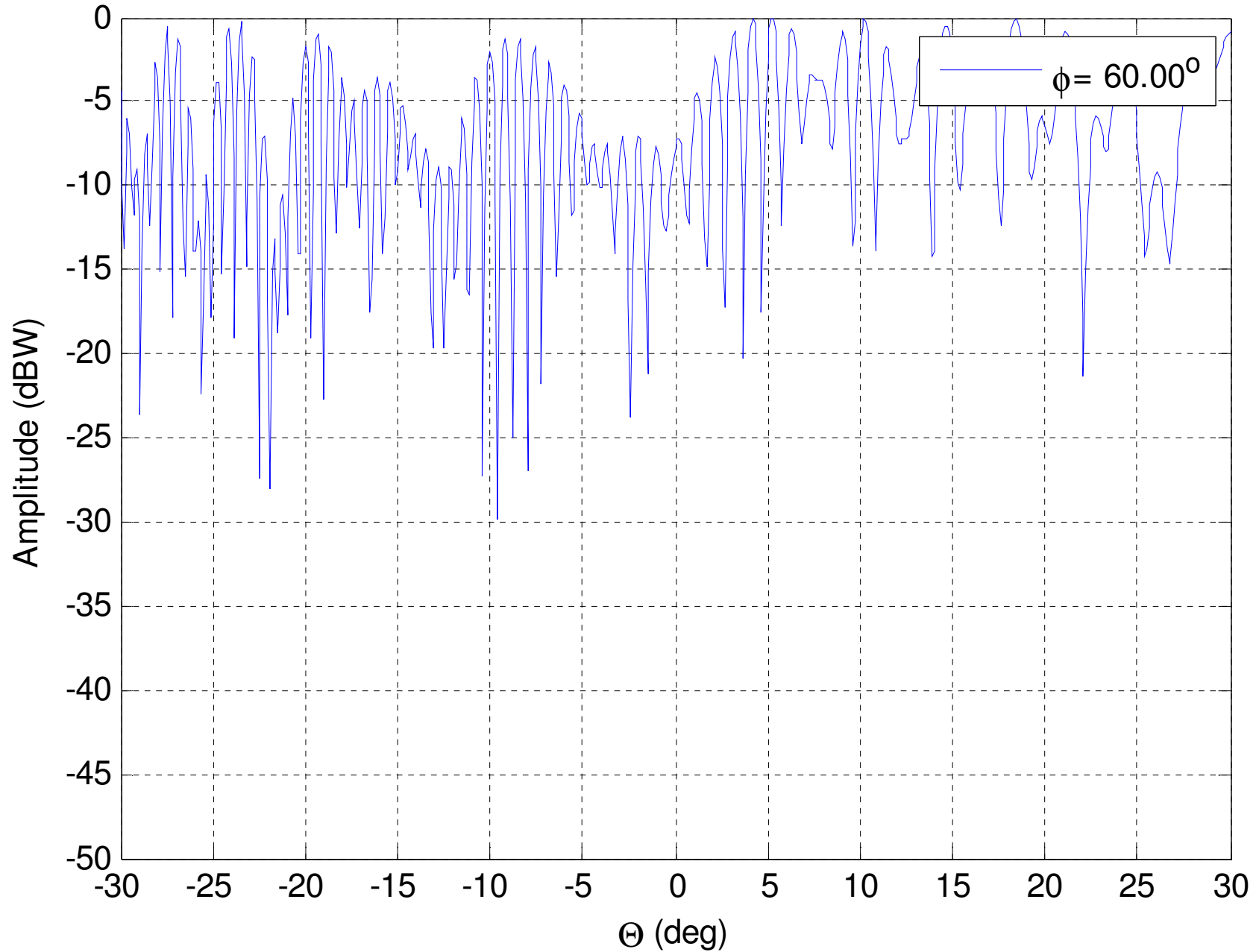
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.11 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

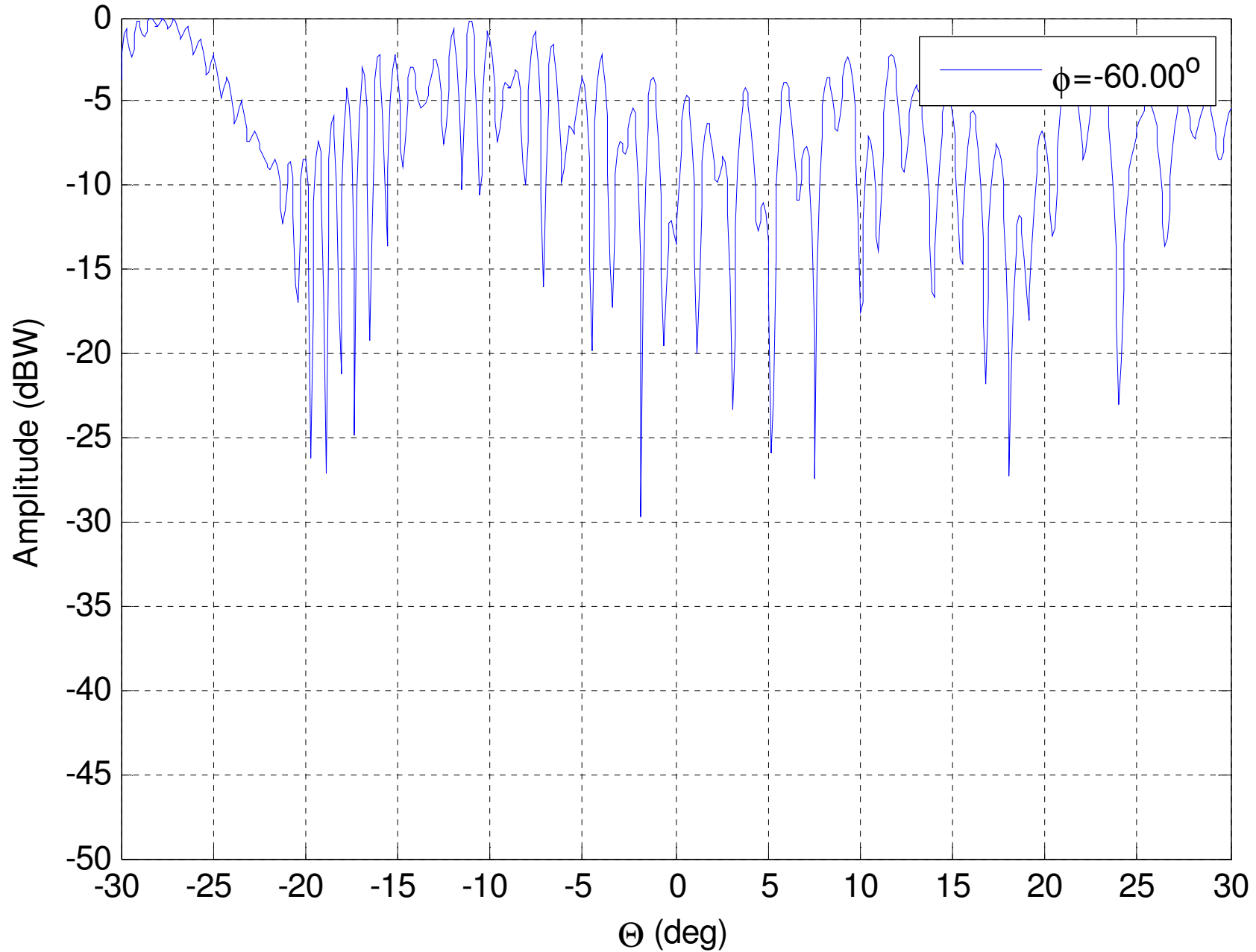
Input file: tx-17.5-lhcp-60.cut, Peak: -11.99 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

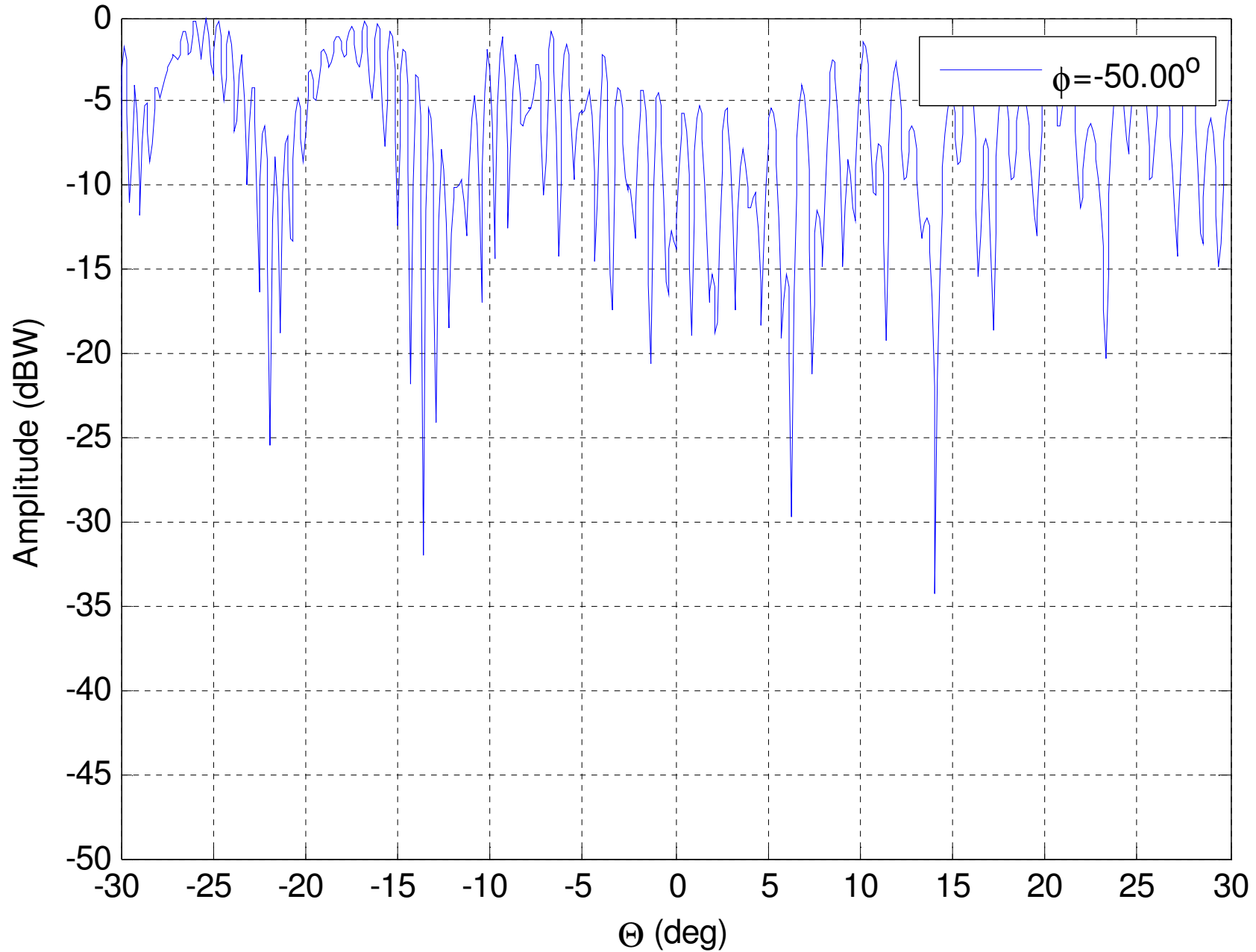
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -13.32 dBW, Date: 14-Dec-2011



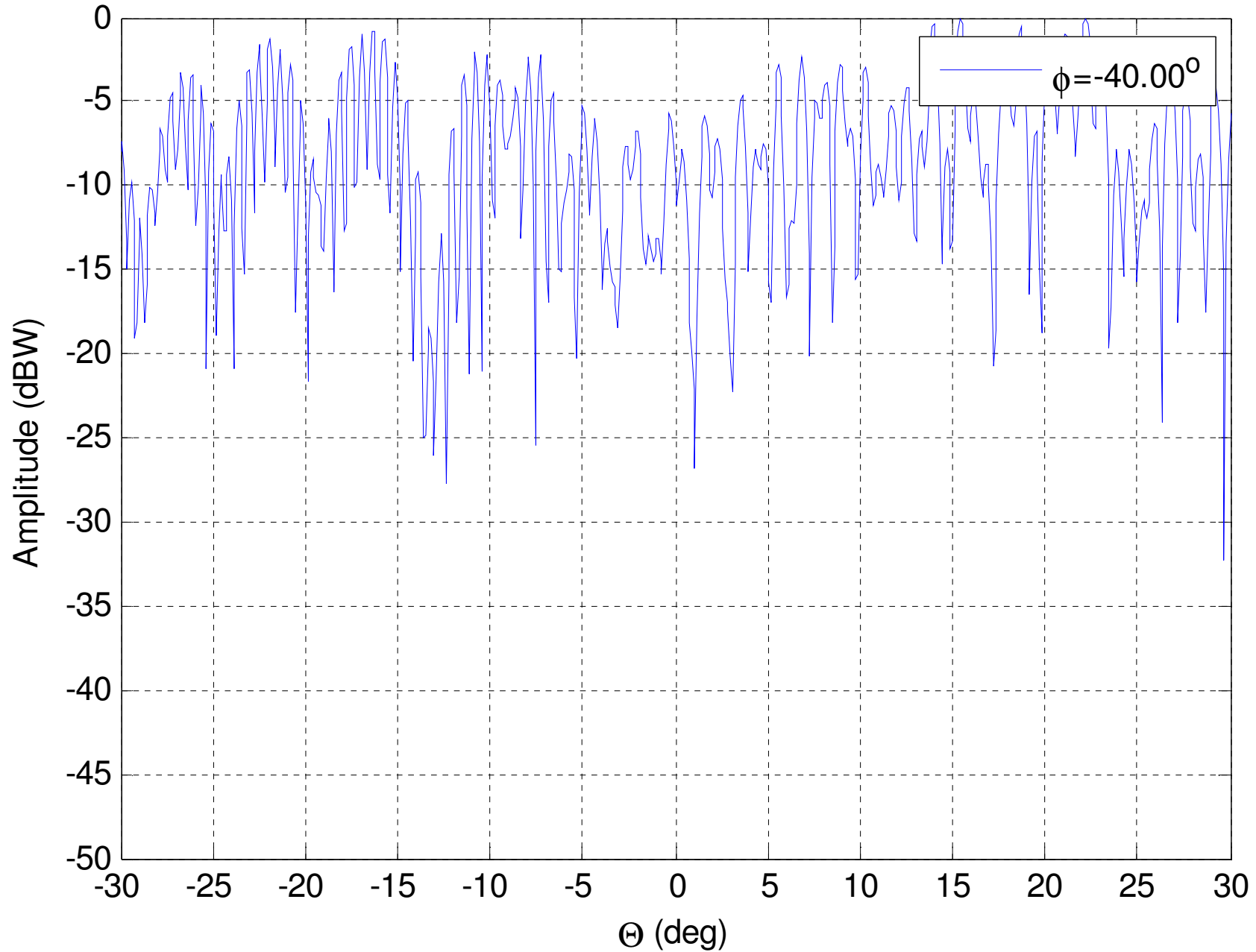
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.91 dBW, Date: 14-Dec-2011



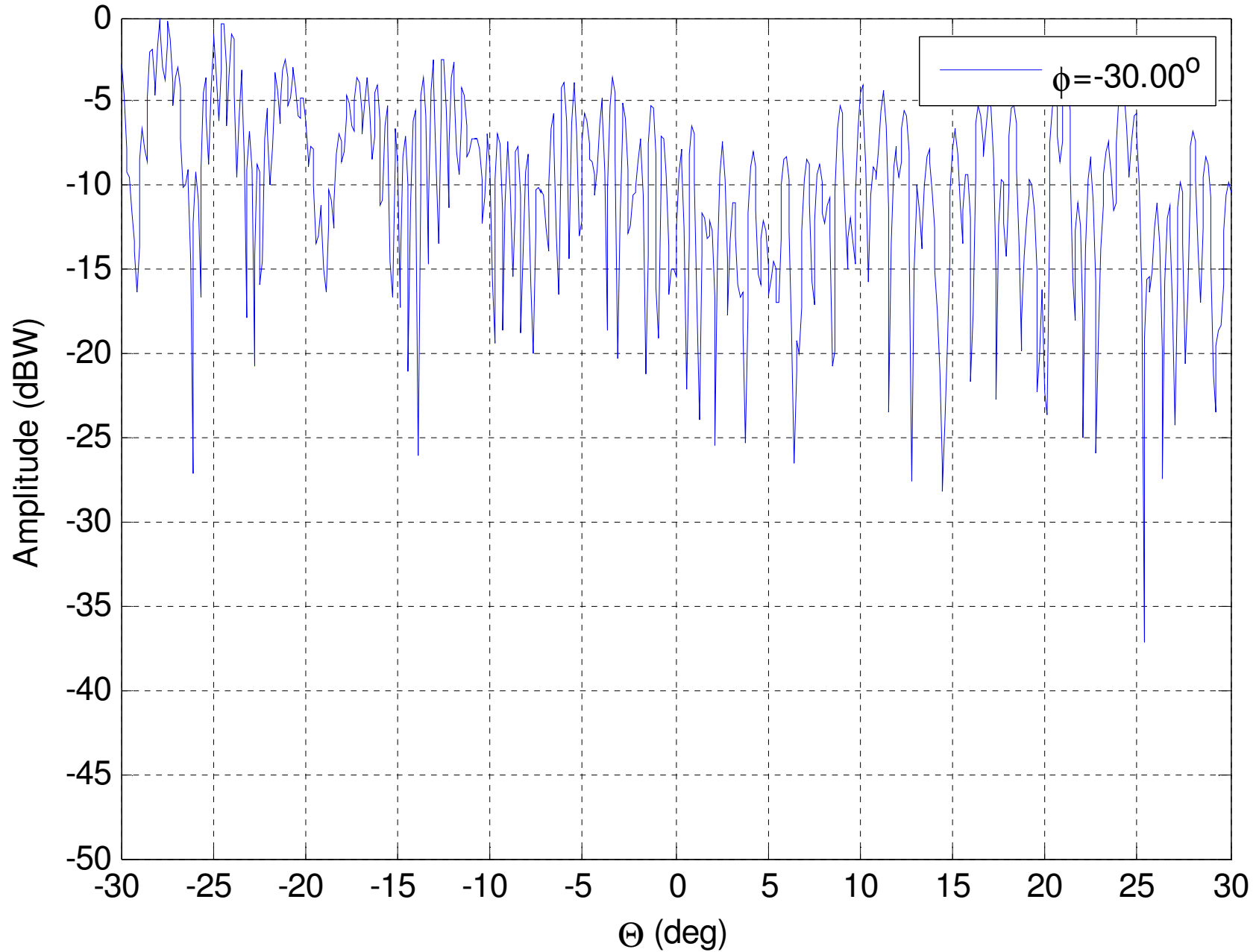
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -12.46 dBW, Date: 14-Dec-2011



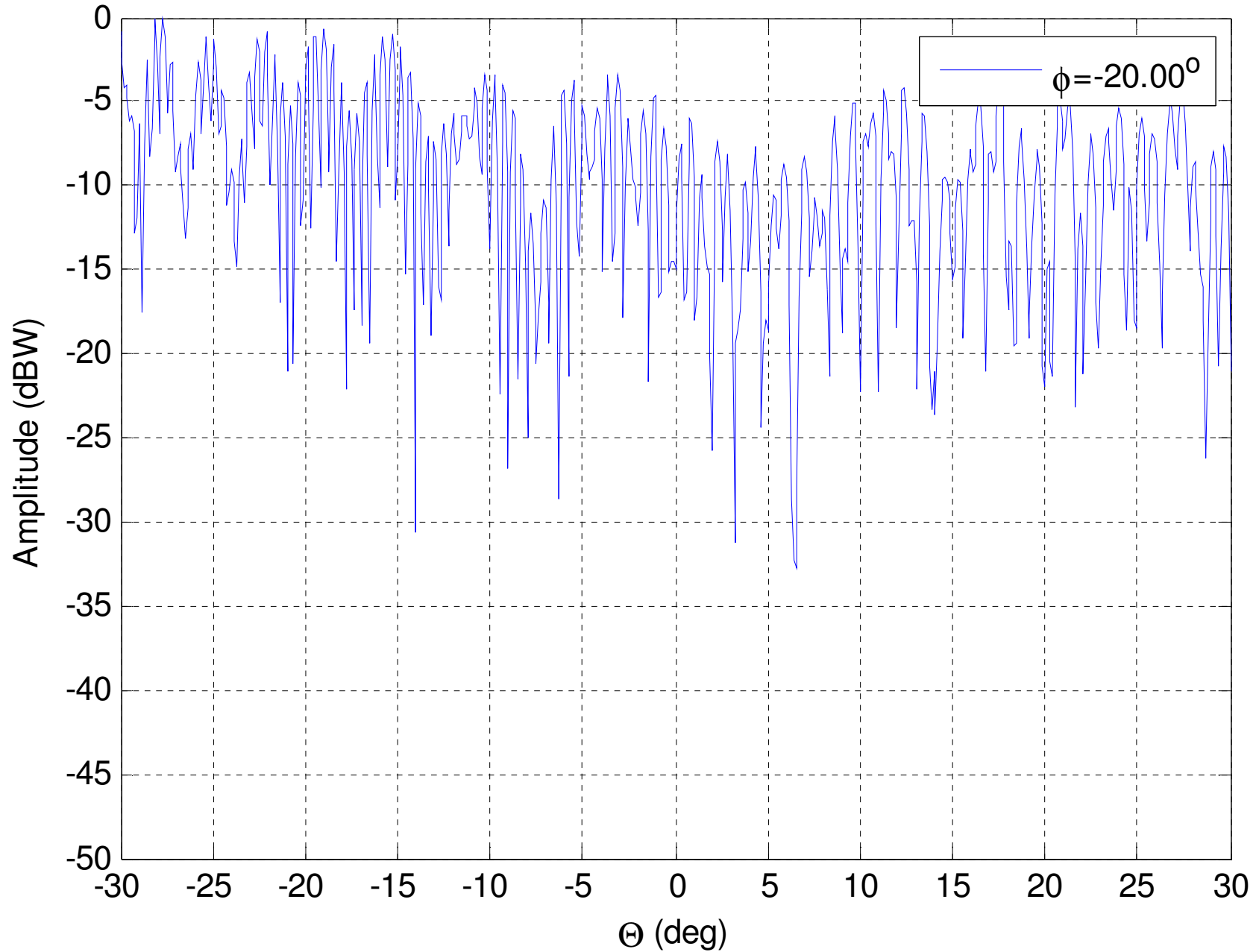
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -11.20 dBW, Date: 14-Dec-2011



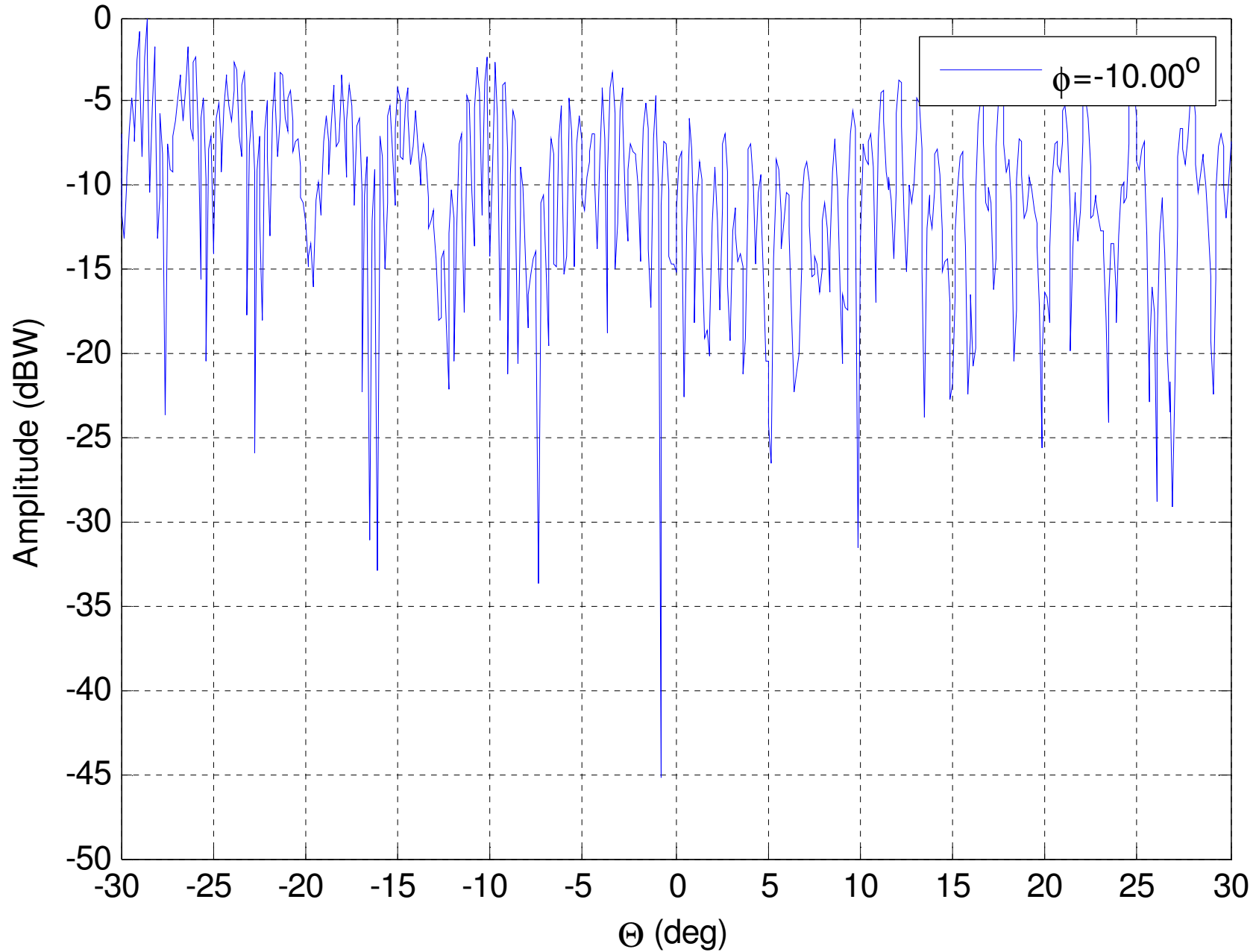
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -11.73 dBW, Date: 14-Dec-2011



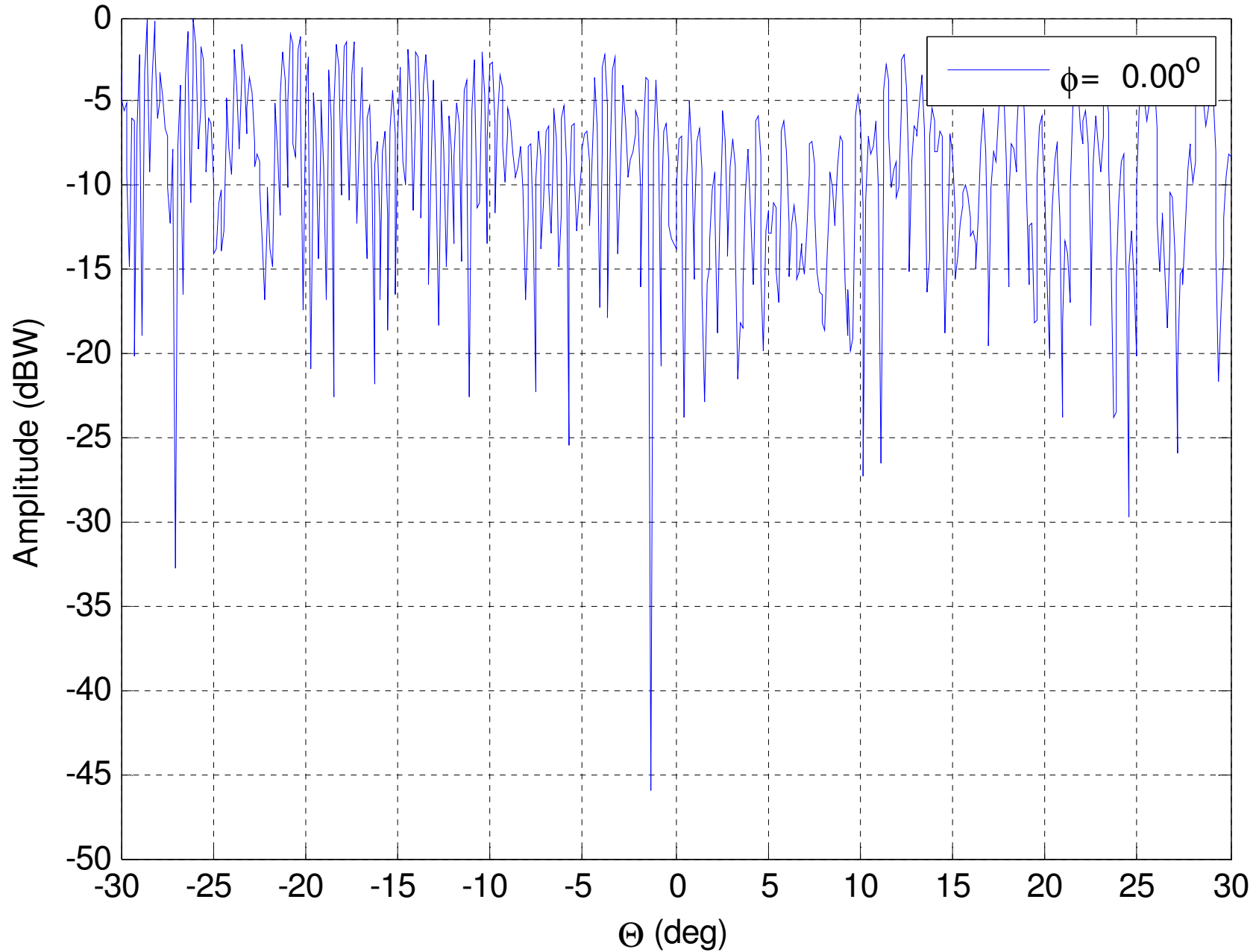
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -11.61 dBW, Date: 14-Dec-2011



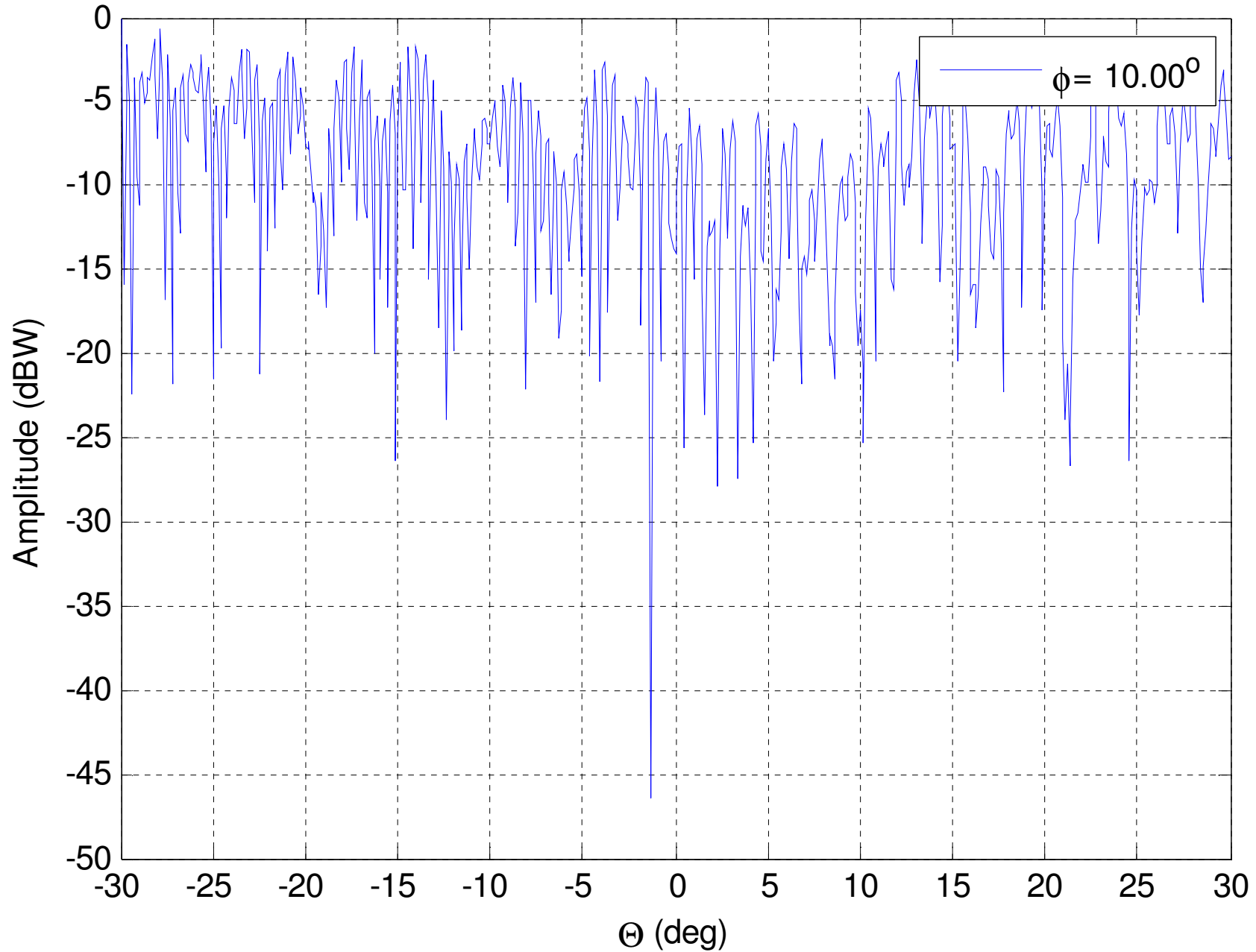
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -12.88 dBW, Date: 14-Dec-2011



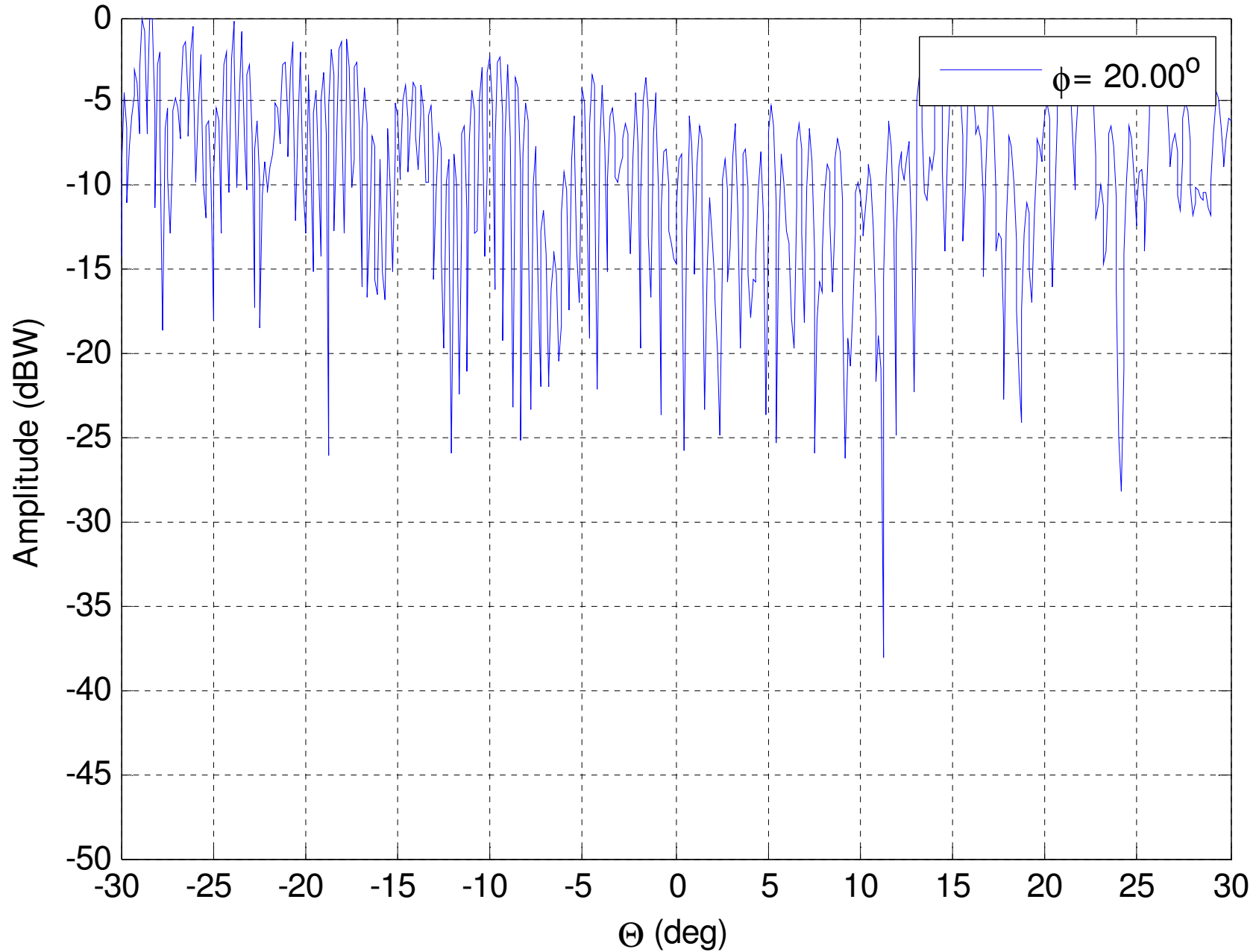
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -12.58 dBW, Date: 14-Dec-2011



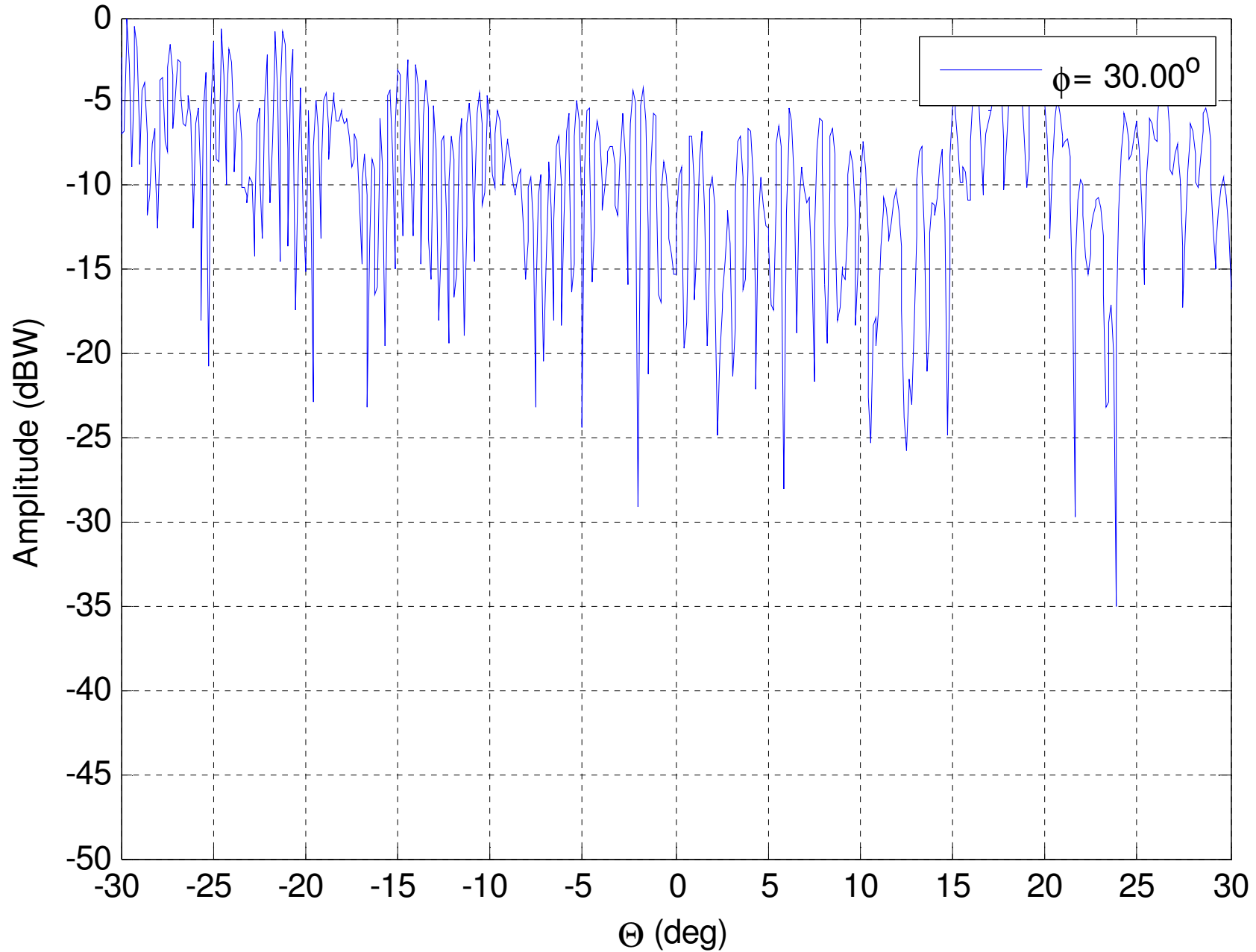
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -12.06 dBW, Date: 14-Dec-2011



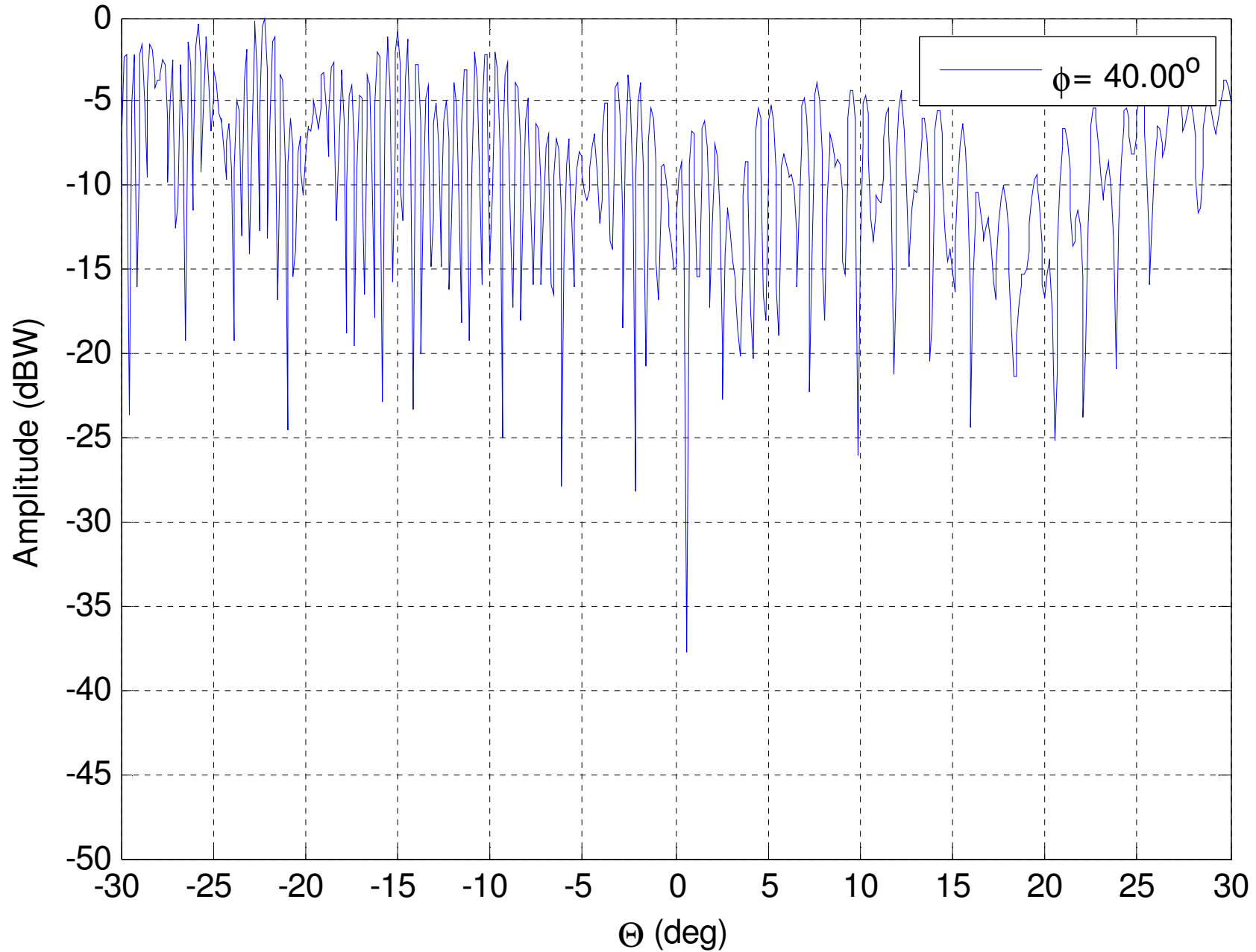
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -11.39 dBW, Date: 14-Dec-2011



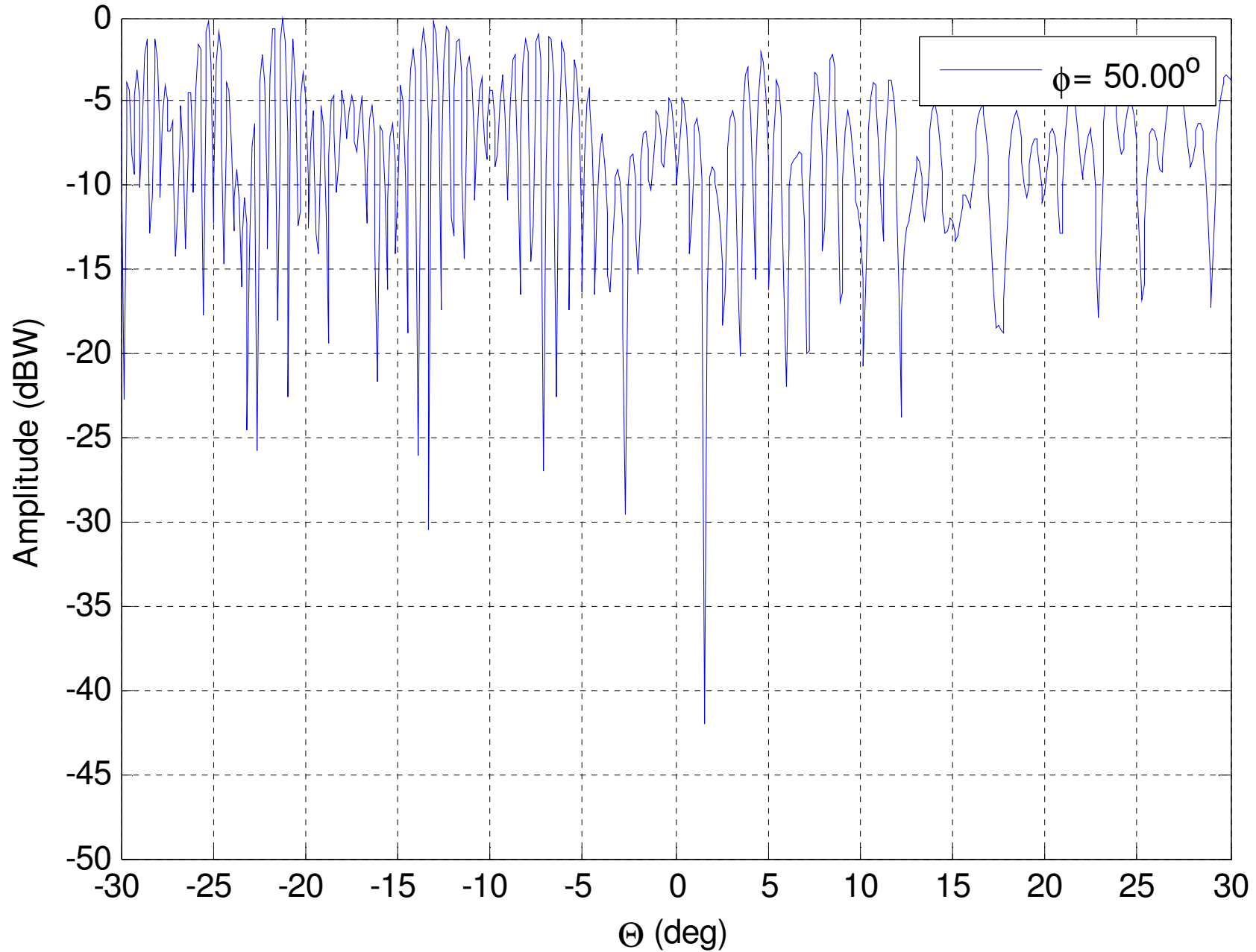
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.95 dBW, Date: 14-Dec-2011



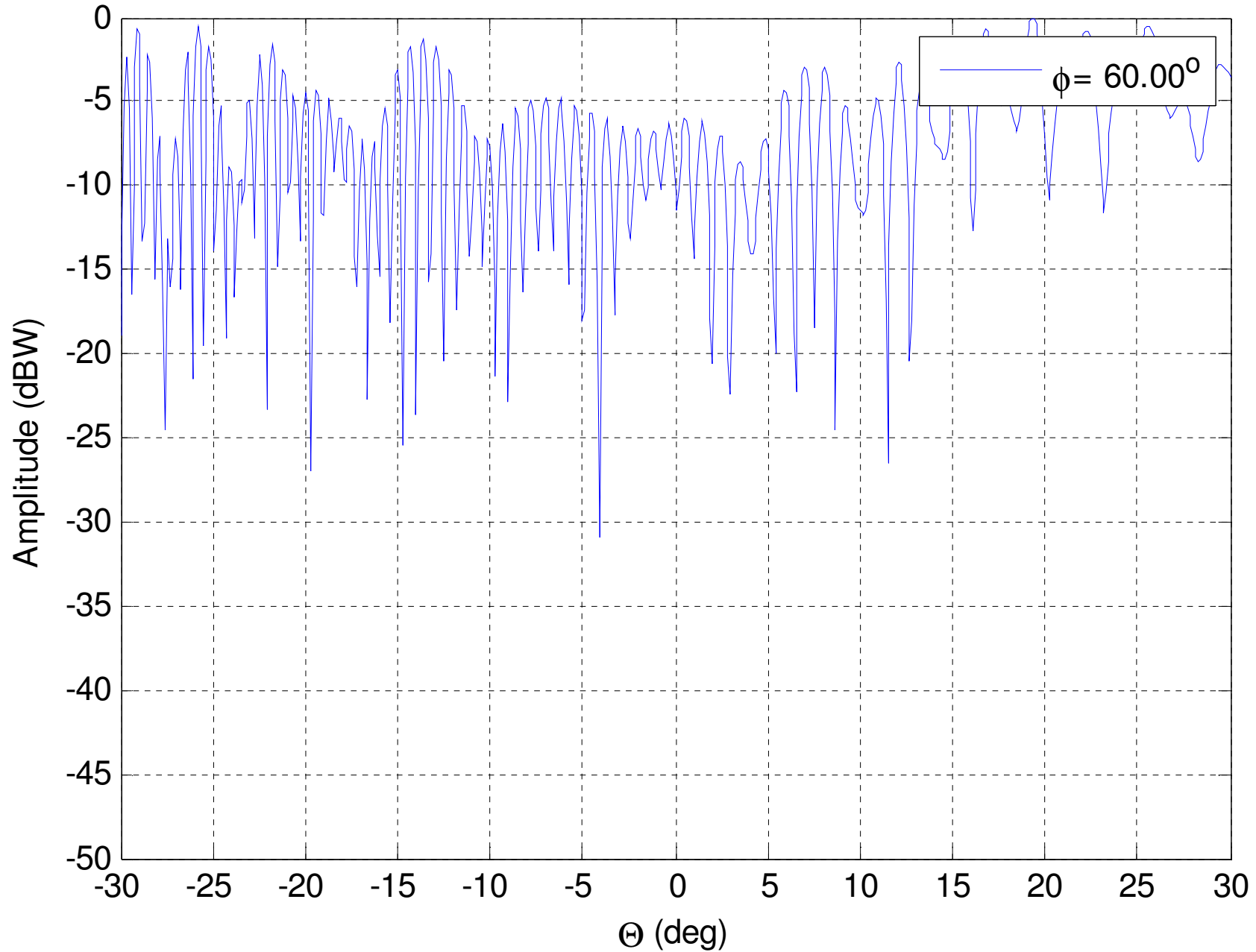
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -13.41 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

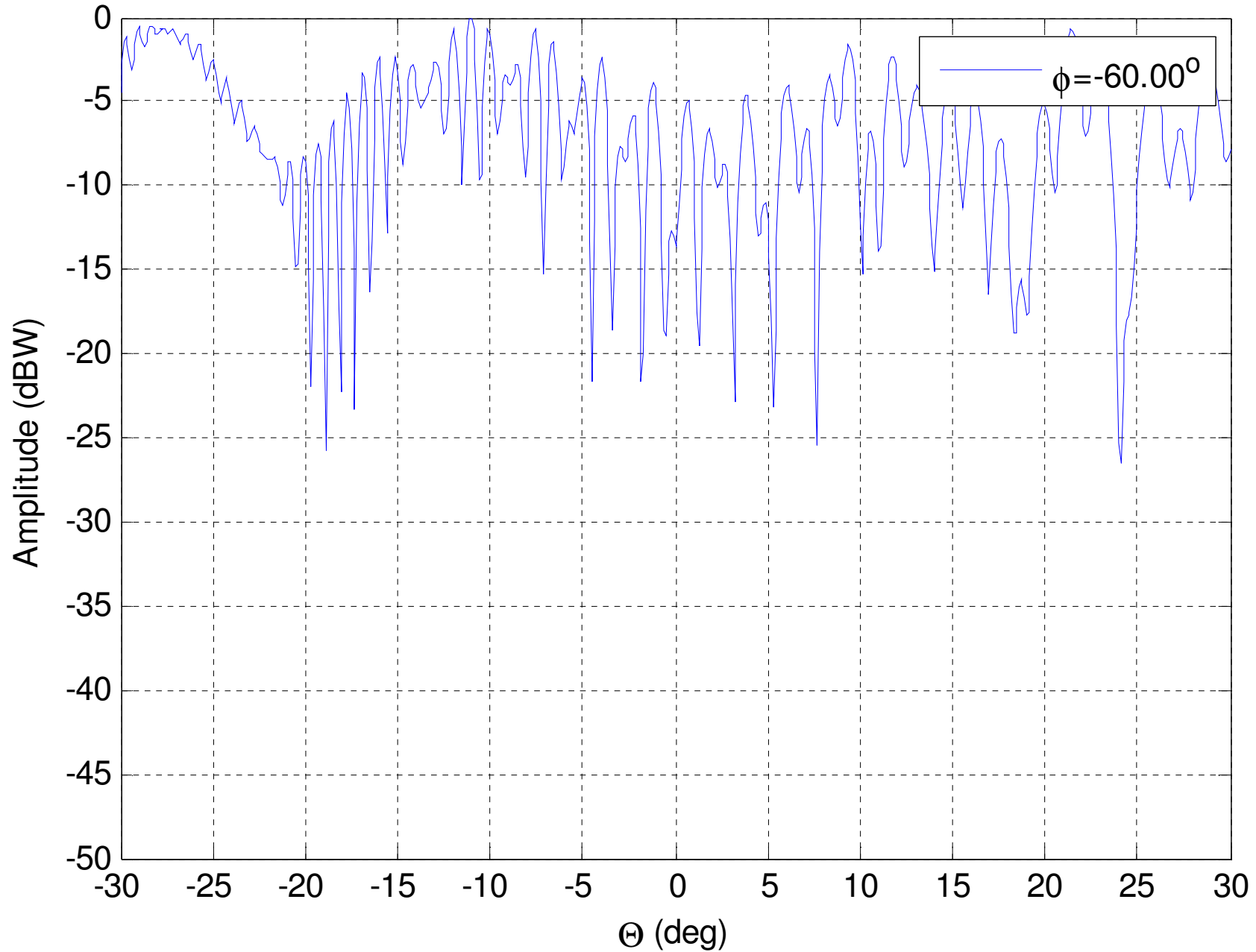
Input file: tx-17.7-rhcp-60.cut, Peak: -11.91 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

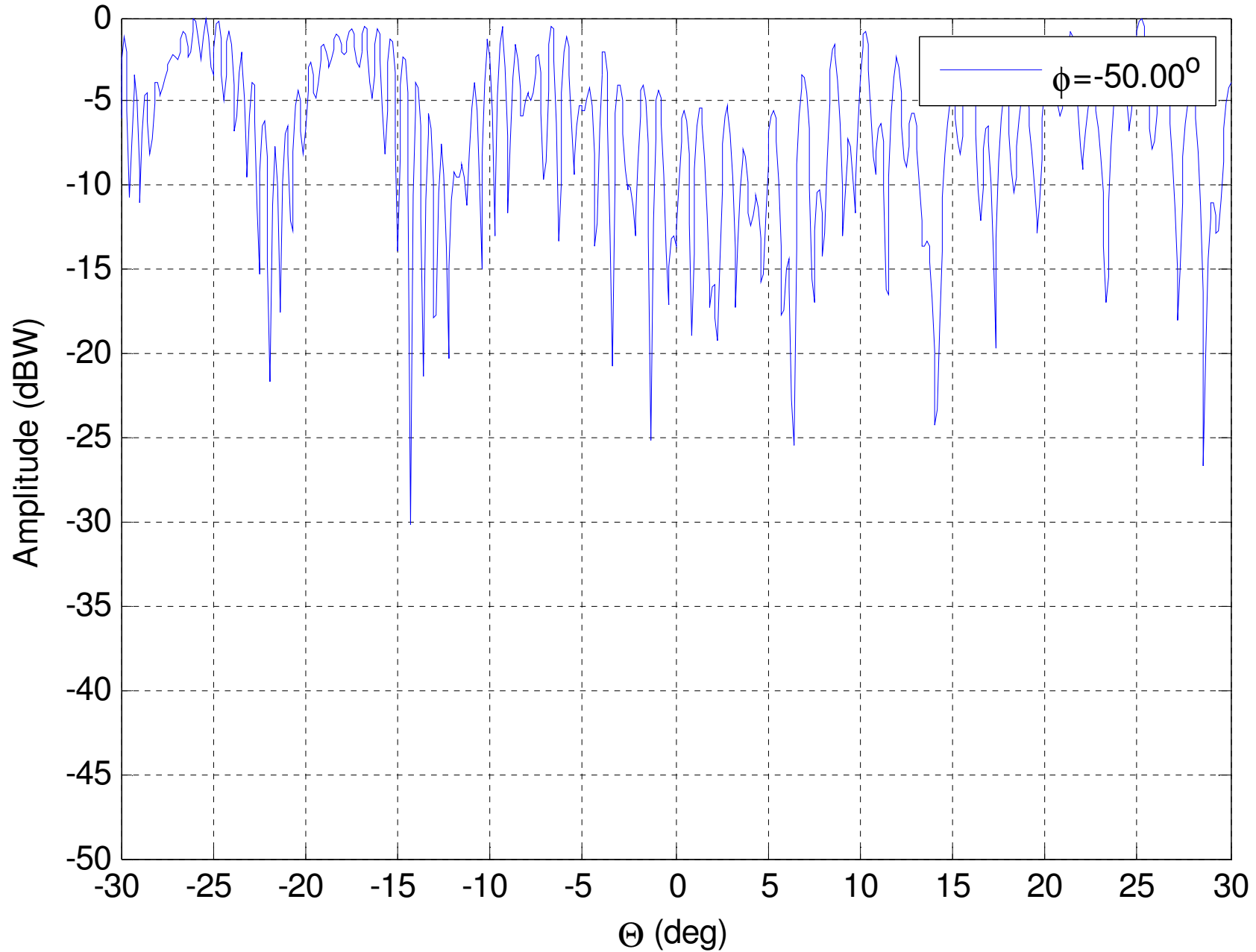
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -13.17 dBW, Date: 14-Dec-2011



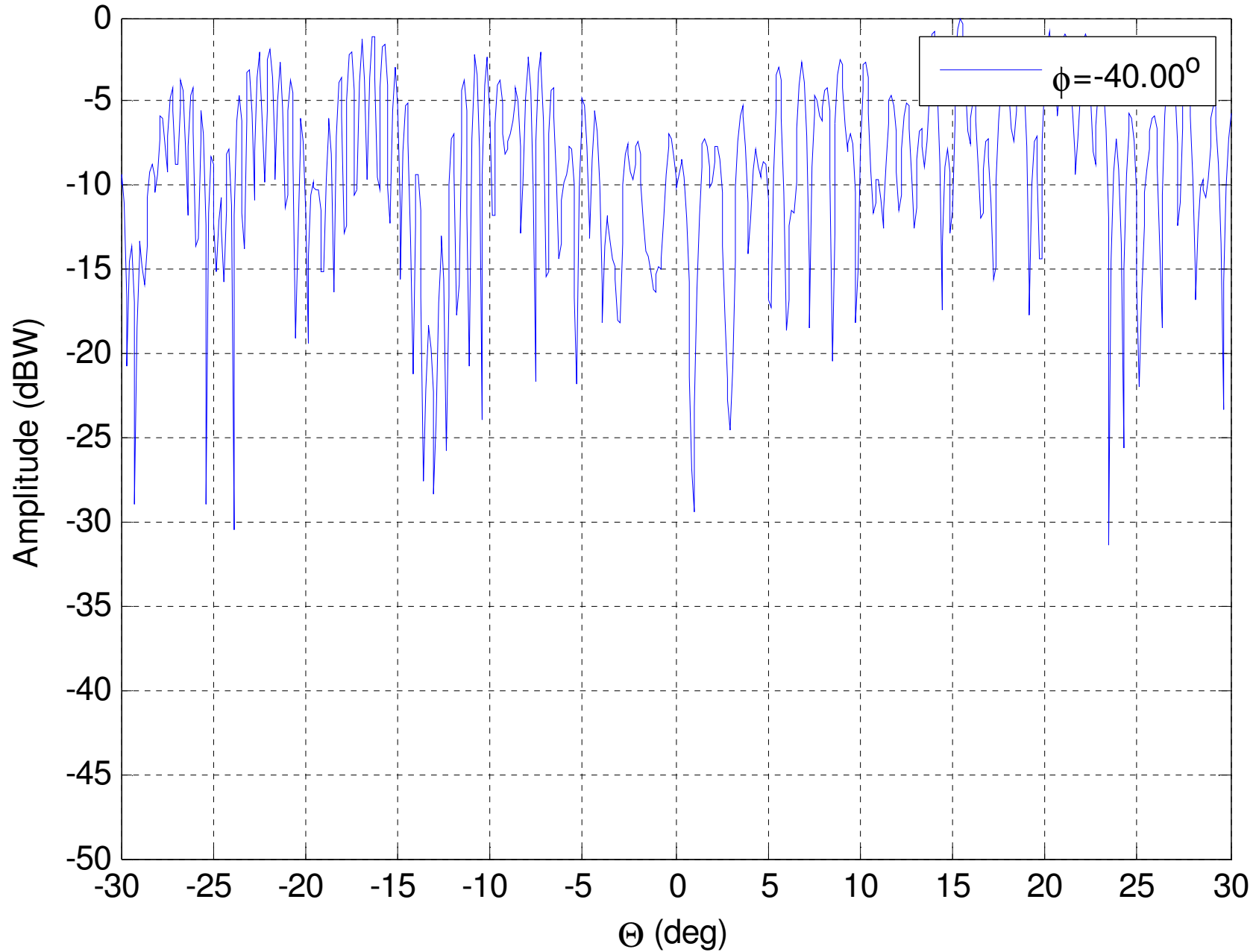
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -13.20 dBW, Date: 14-Dec-2011



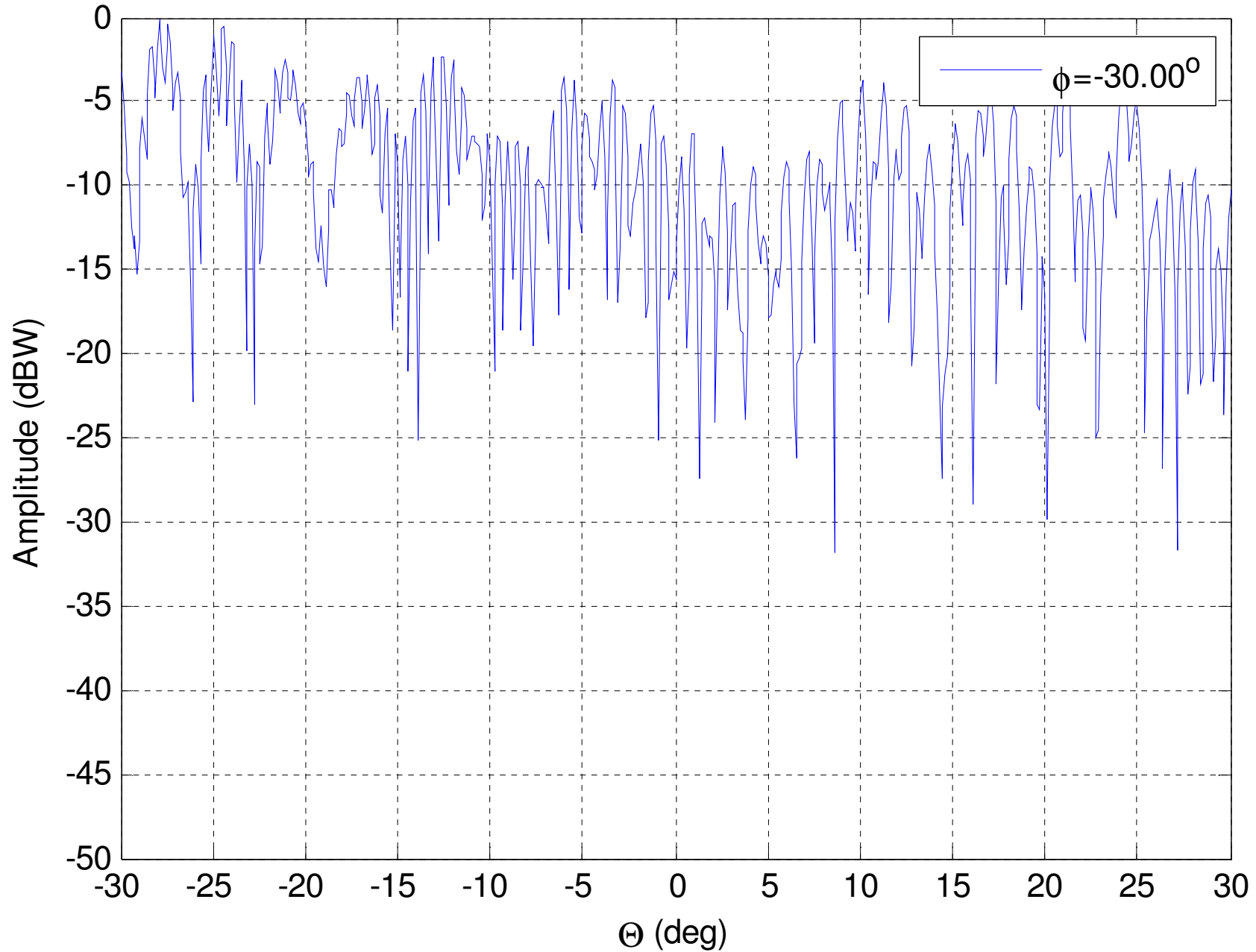
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -12.20 dBW, Date: 14-Dec-2011



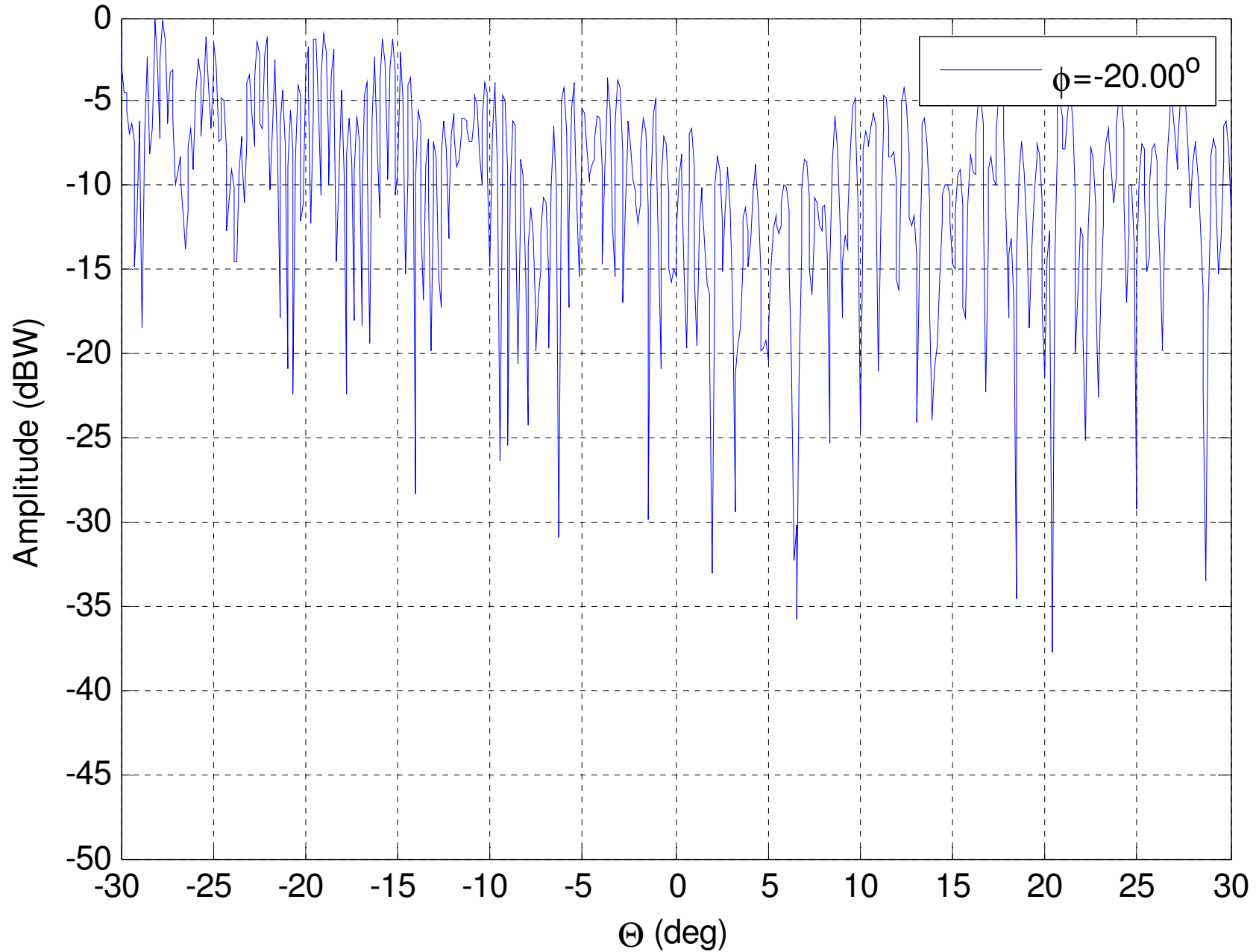
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -11.18 dBW, Date: 14-Dec-2011



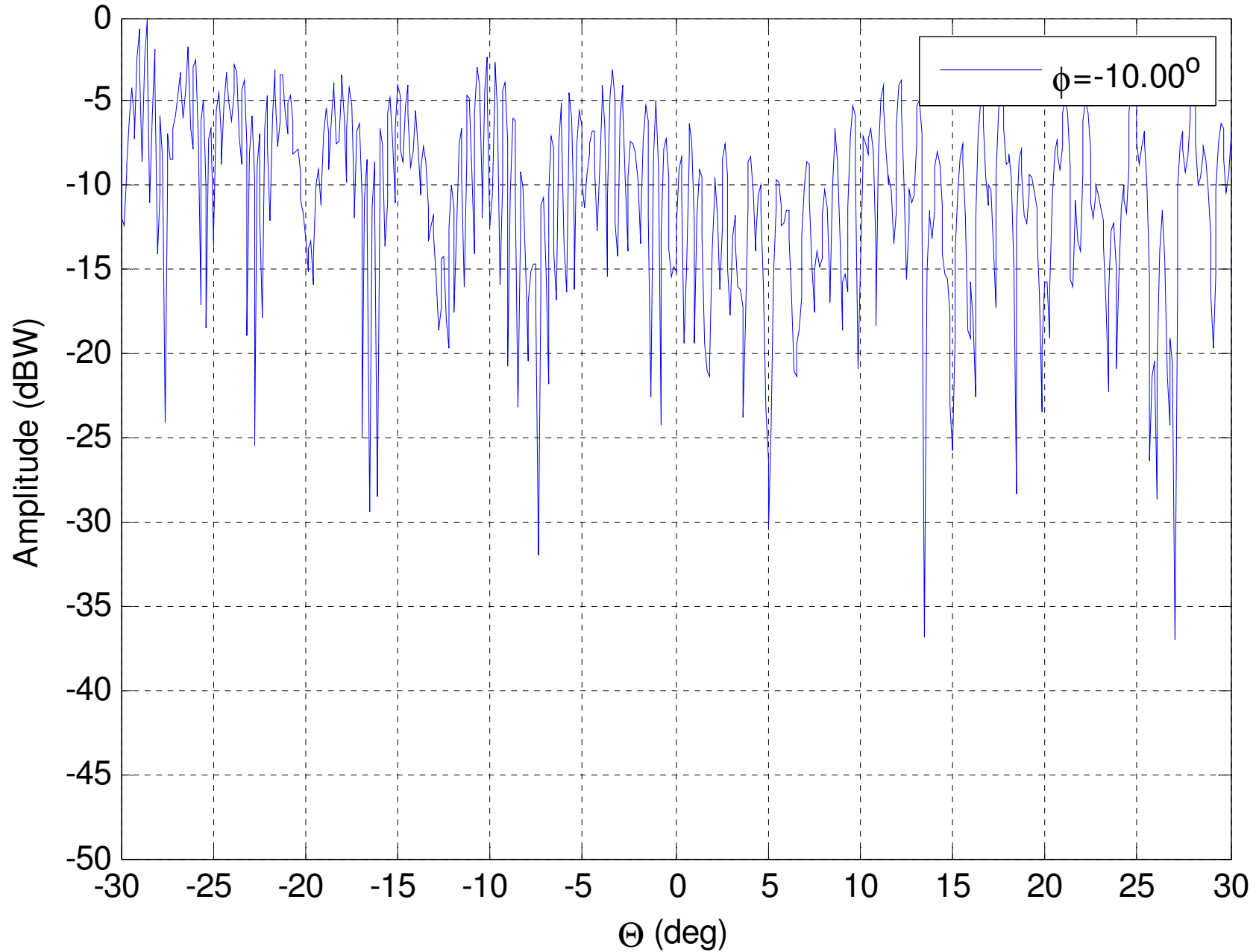
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -11.45 dBW, Date: 14-Dec-2011



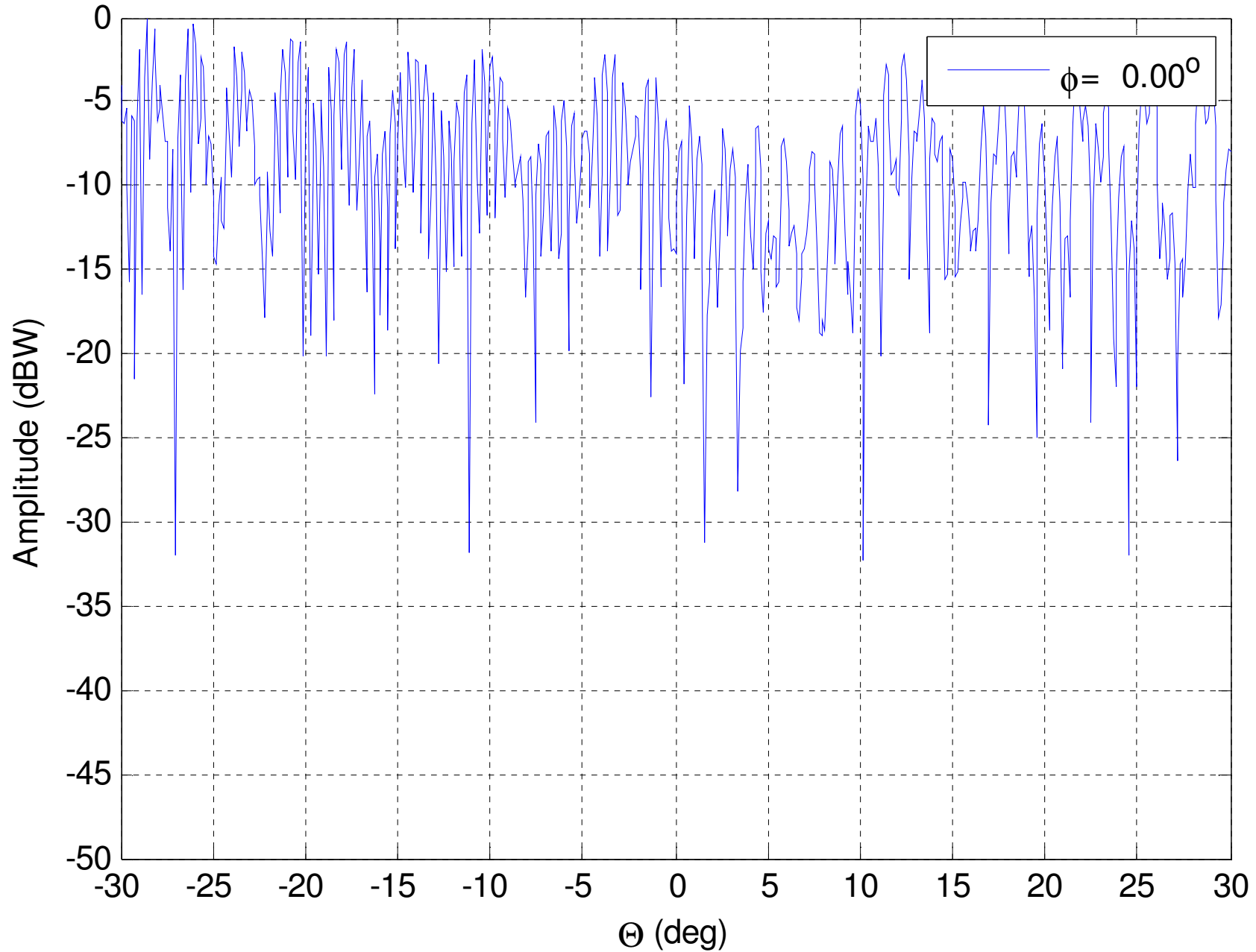
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -11.62 dBW, Date: 14-Dec-2011



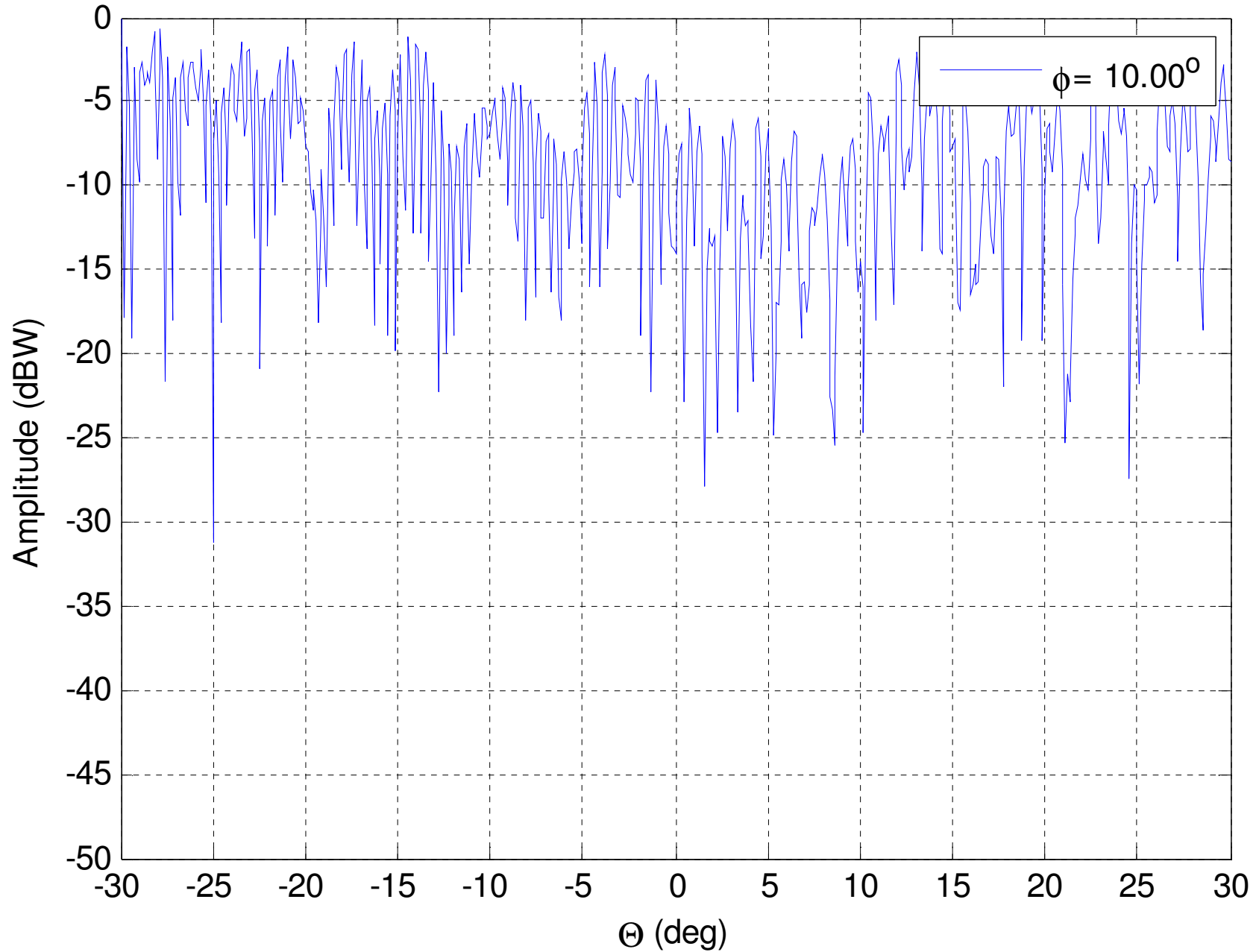
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -12.76 dBW, Date: 14-Dec-2011



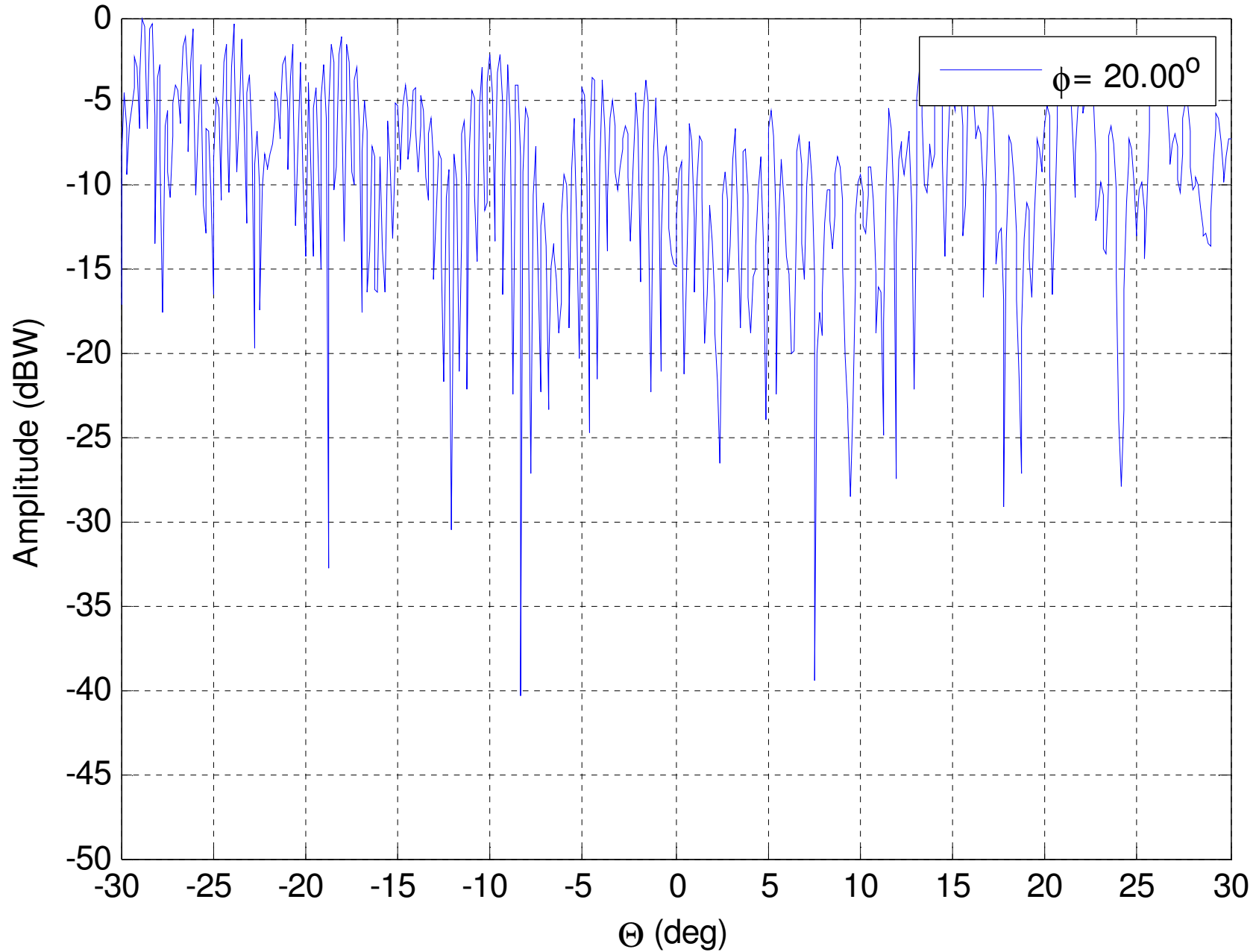
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -12.79 dBW, Date: 14-Dec-2011



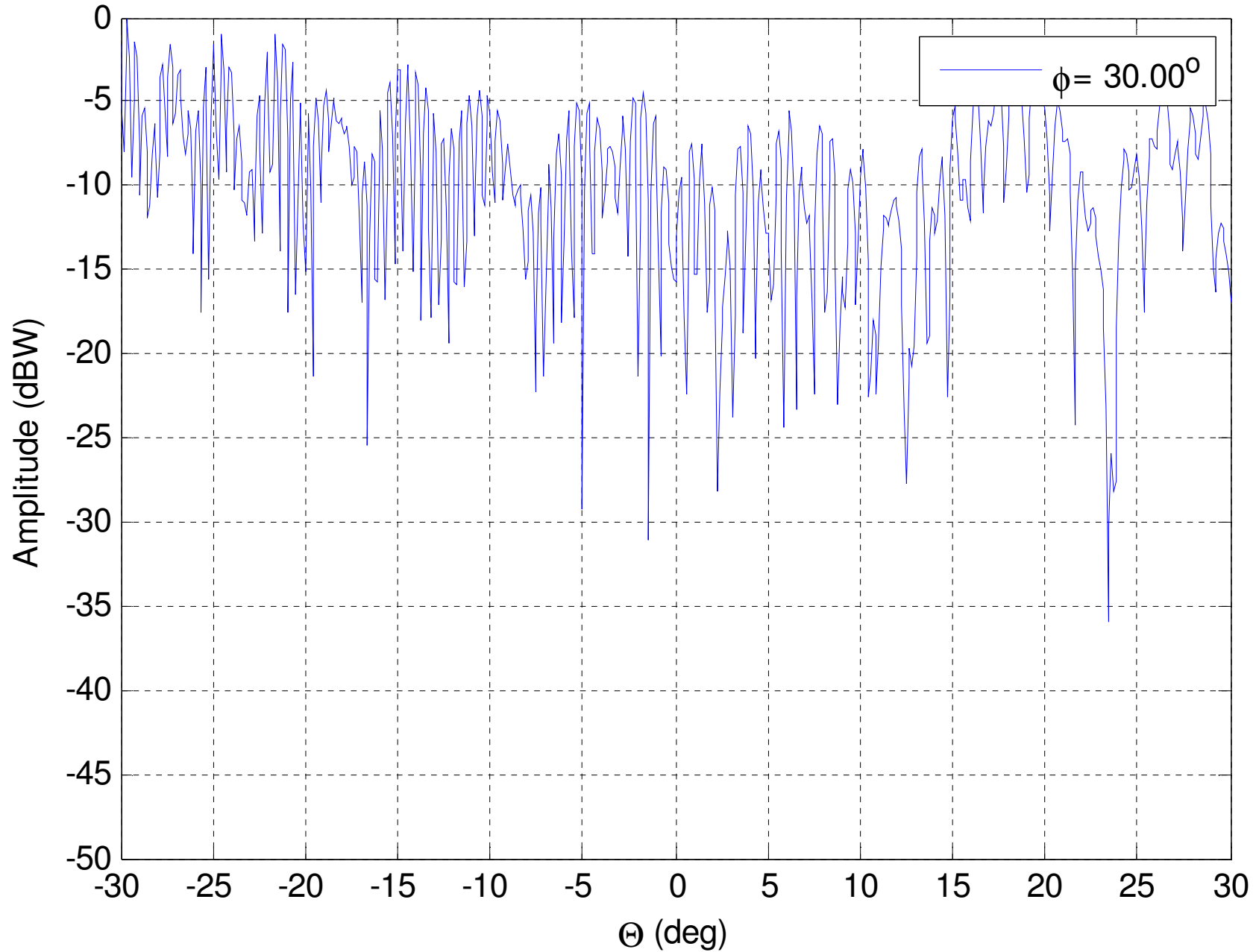
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -11.97 dBW, Date: 14-Dec-2011



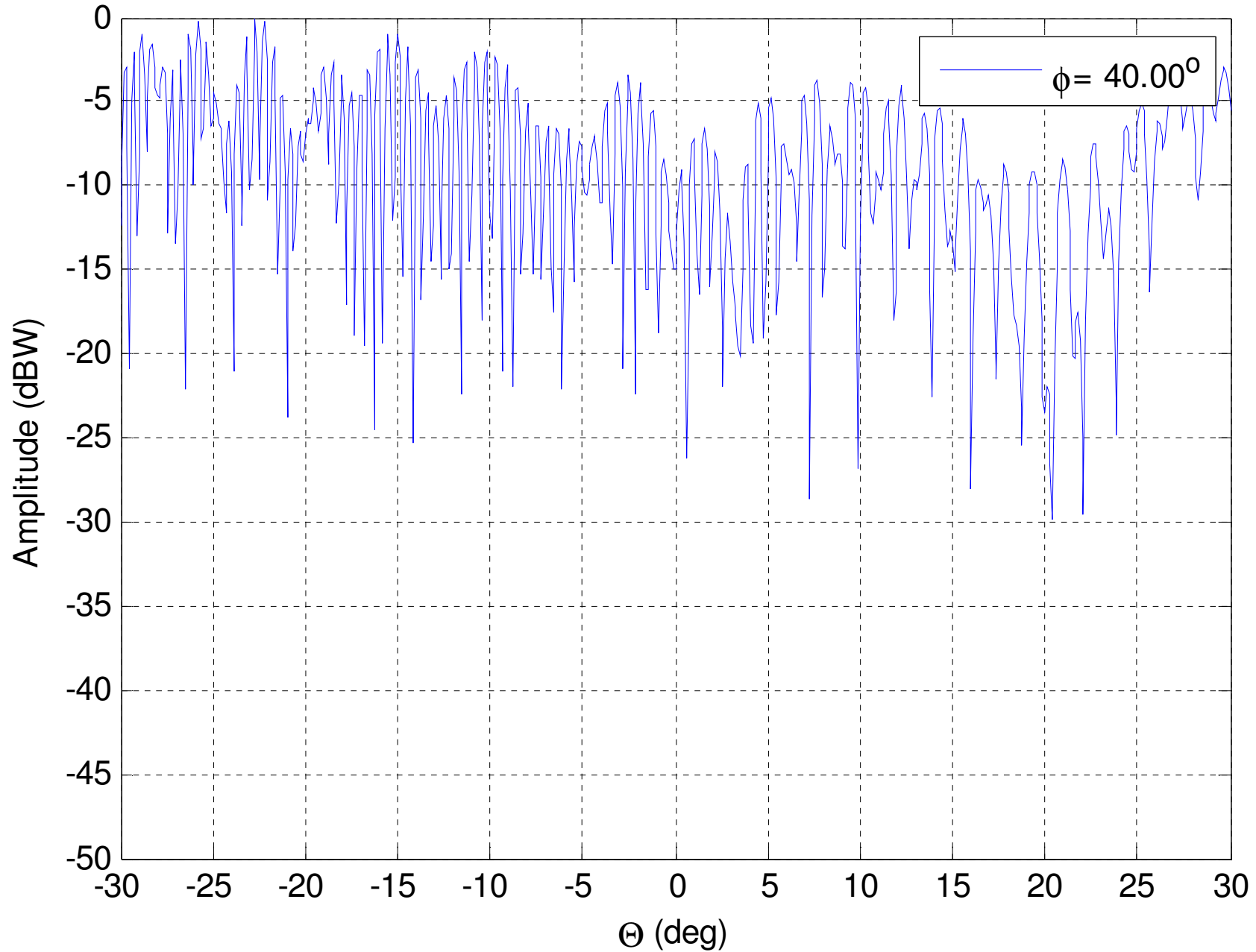
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -11.14 dBW, Date: 14-Dec-2011



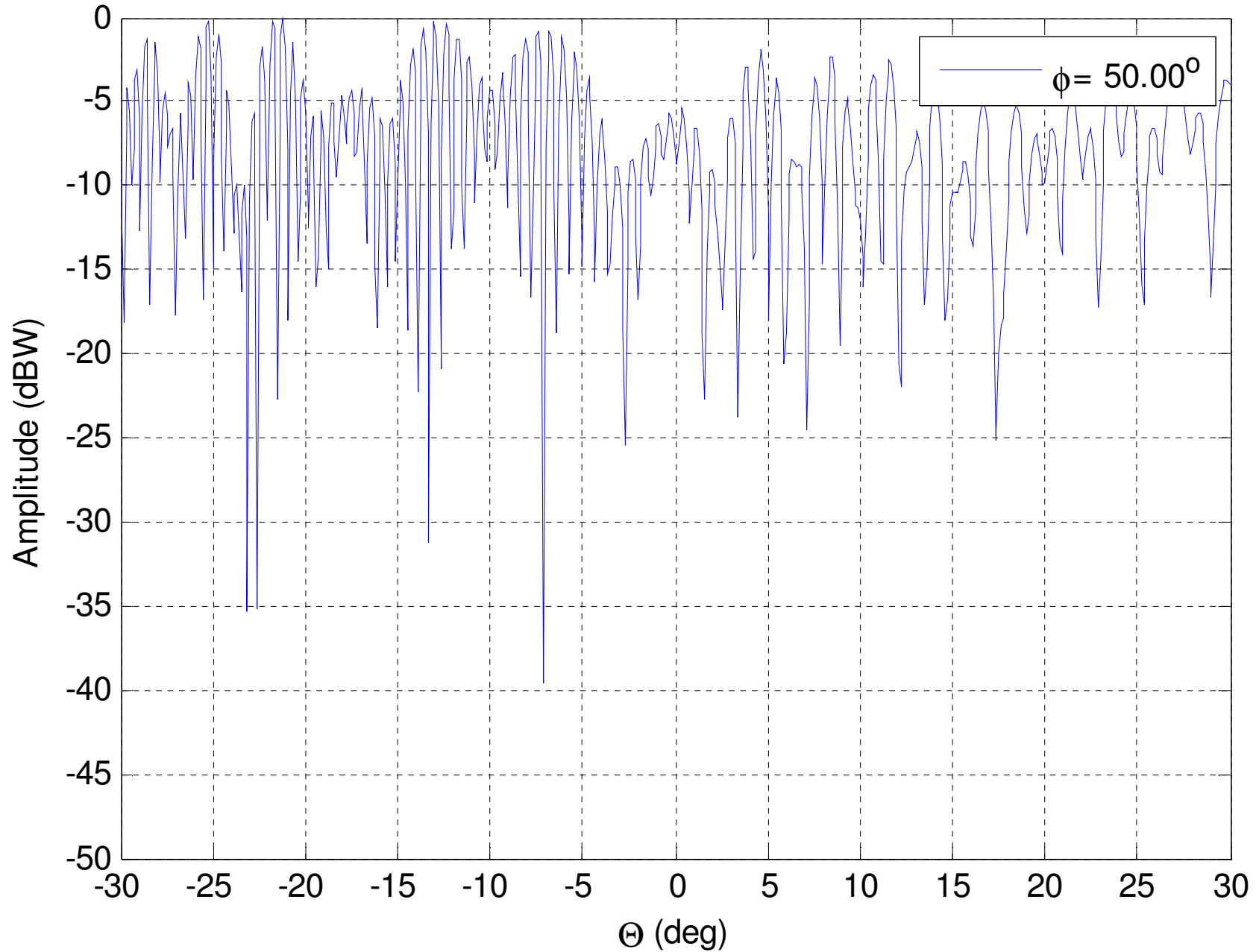
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -11.85 dBW, Date: 14-Dec-2011



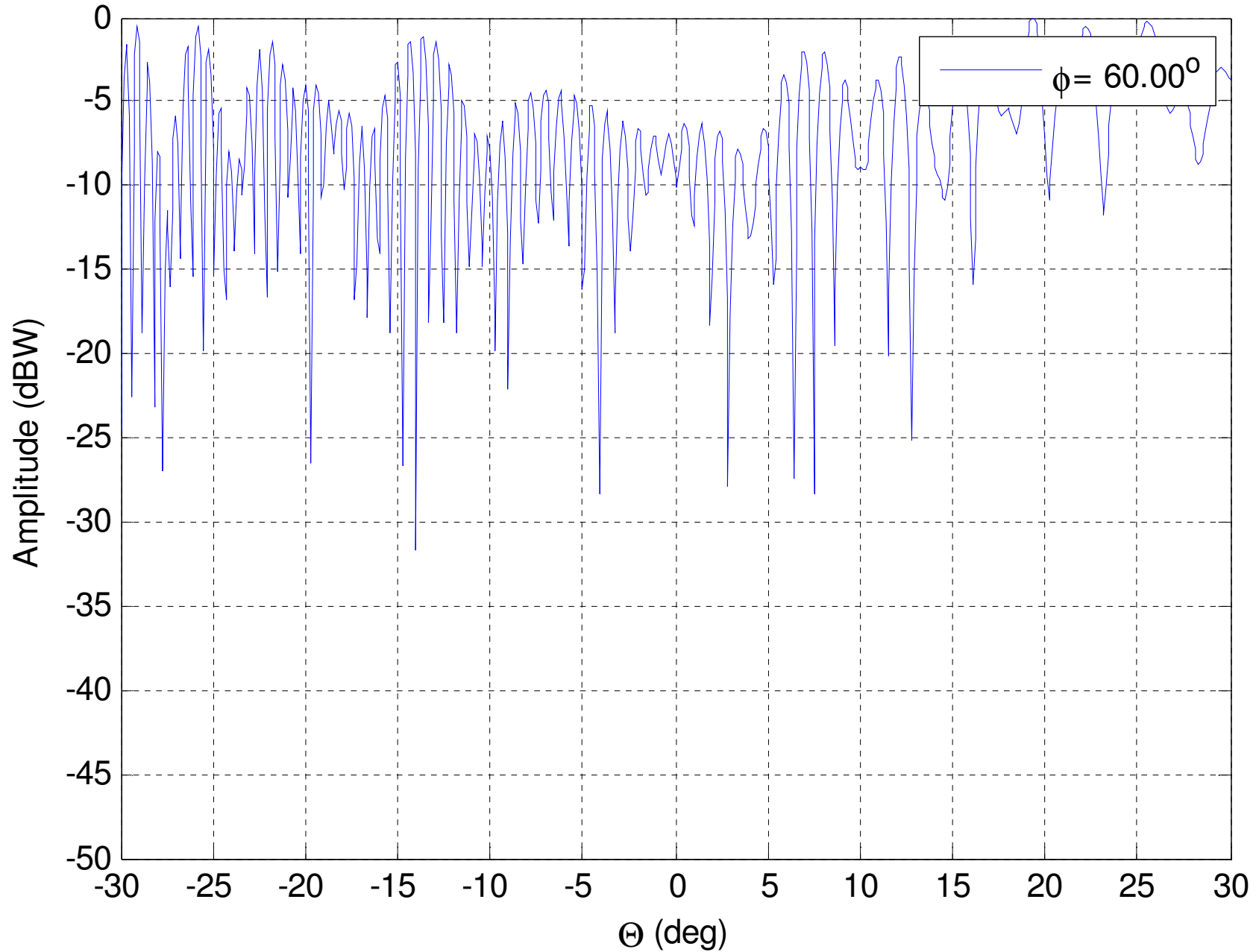
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -13.27 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -12.13 dBW, Date: 14-Dec-2011



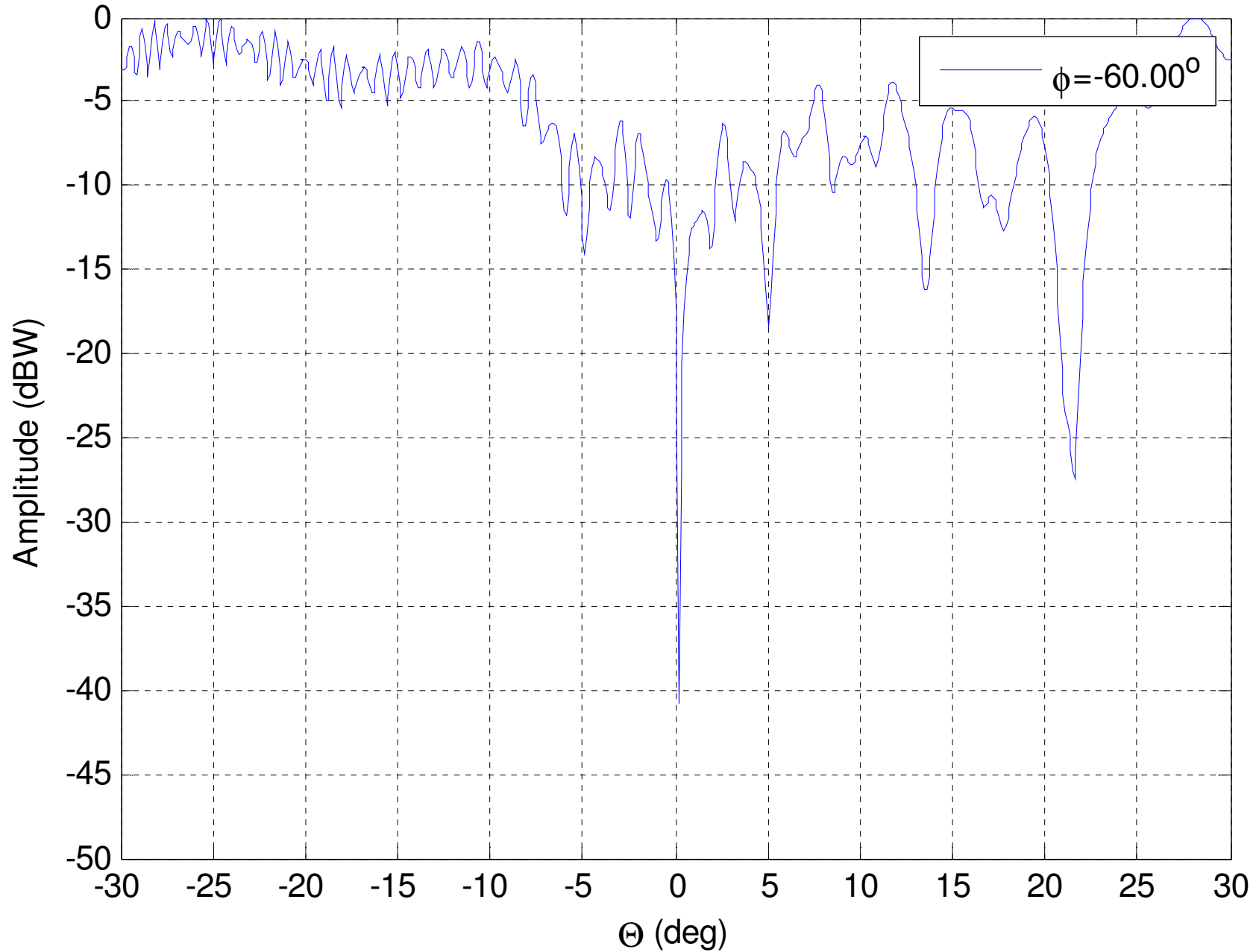
Spot Beam10, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

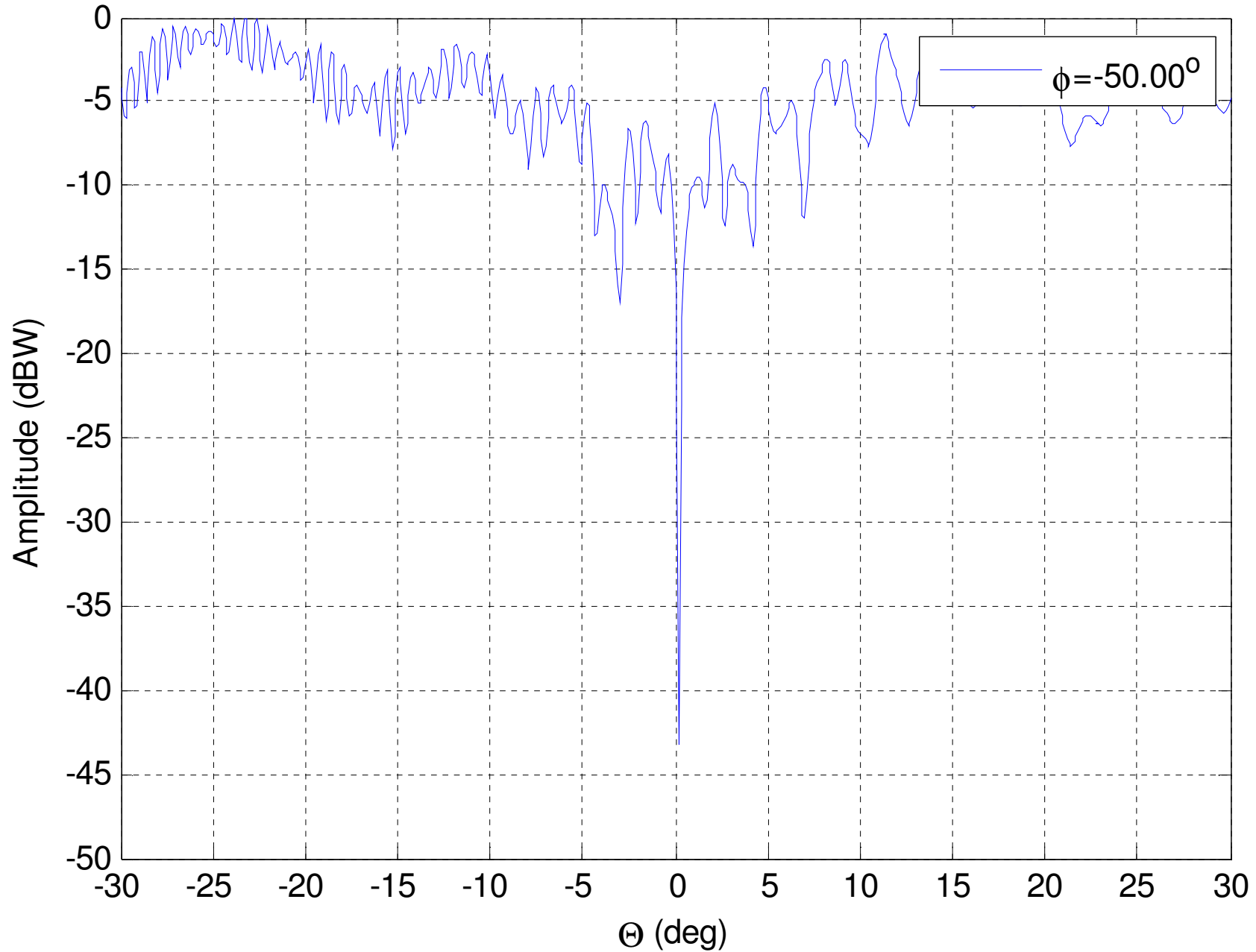
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -11.11 dBW, Date: 14-Dec-2011



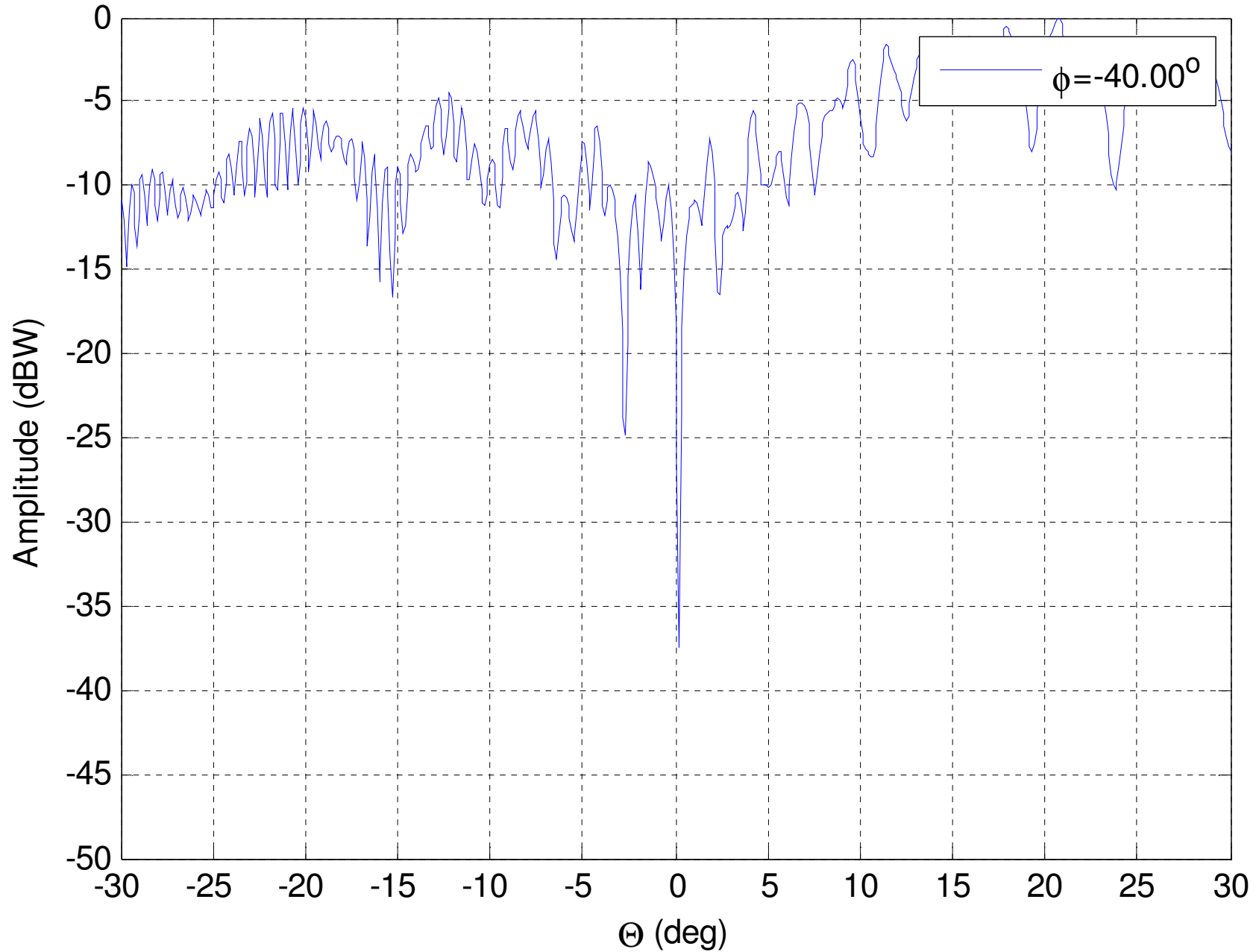
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -12.18 dBW, Date: 14-Dec-2011



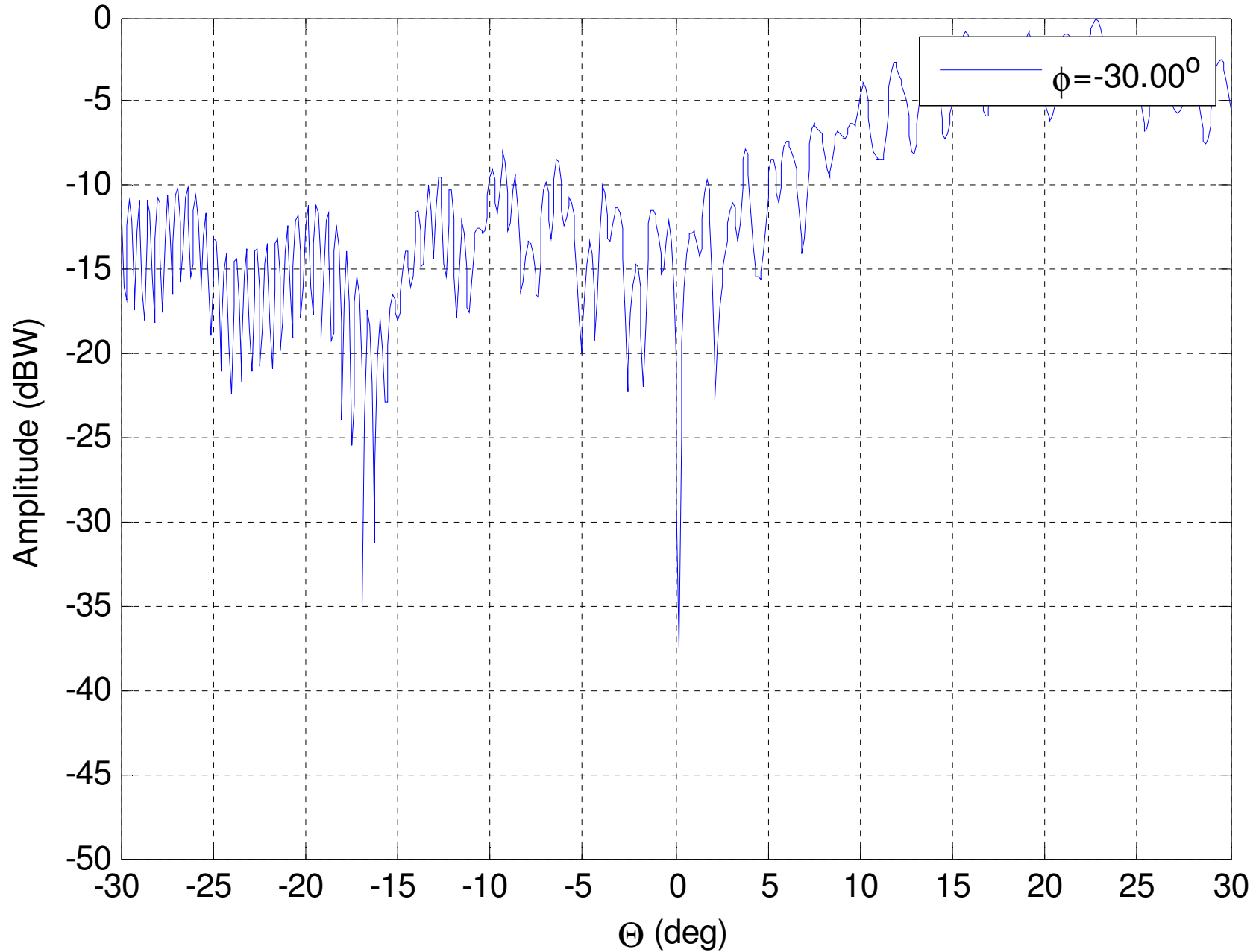
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.15 dBW, Date: 14-Dec-2011



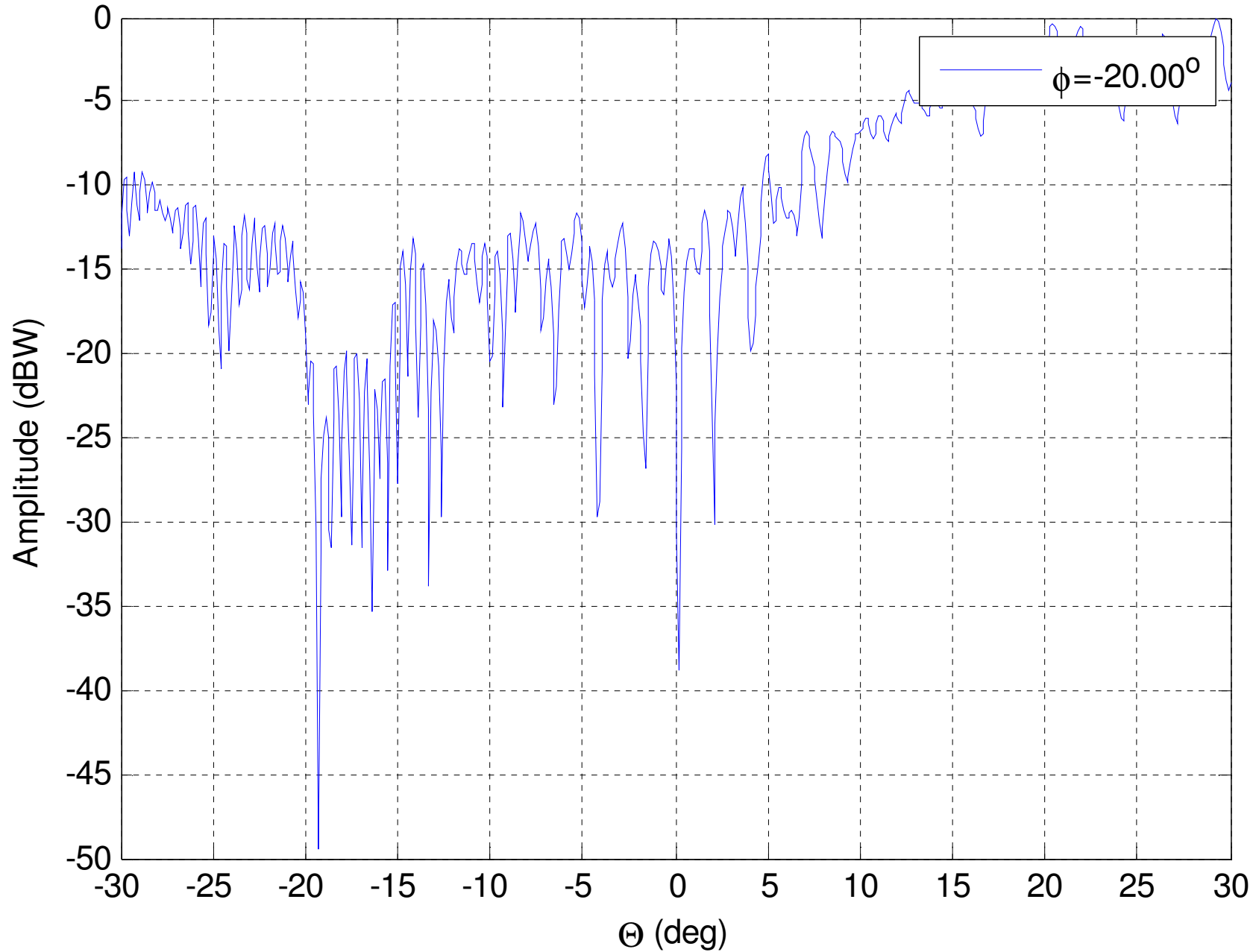
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -7.94 dBW, Date: 14-Dec-2011



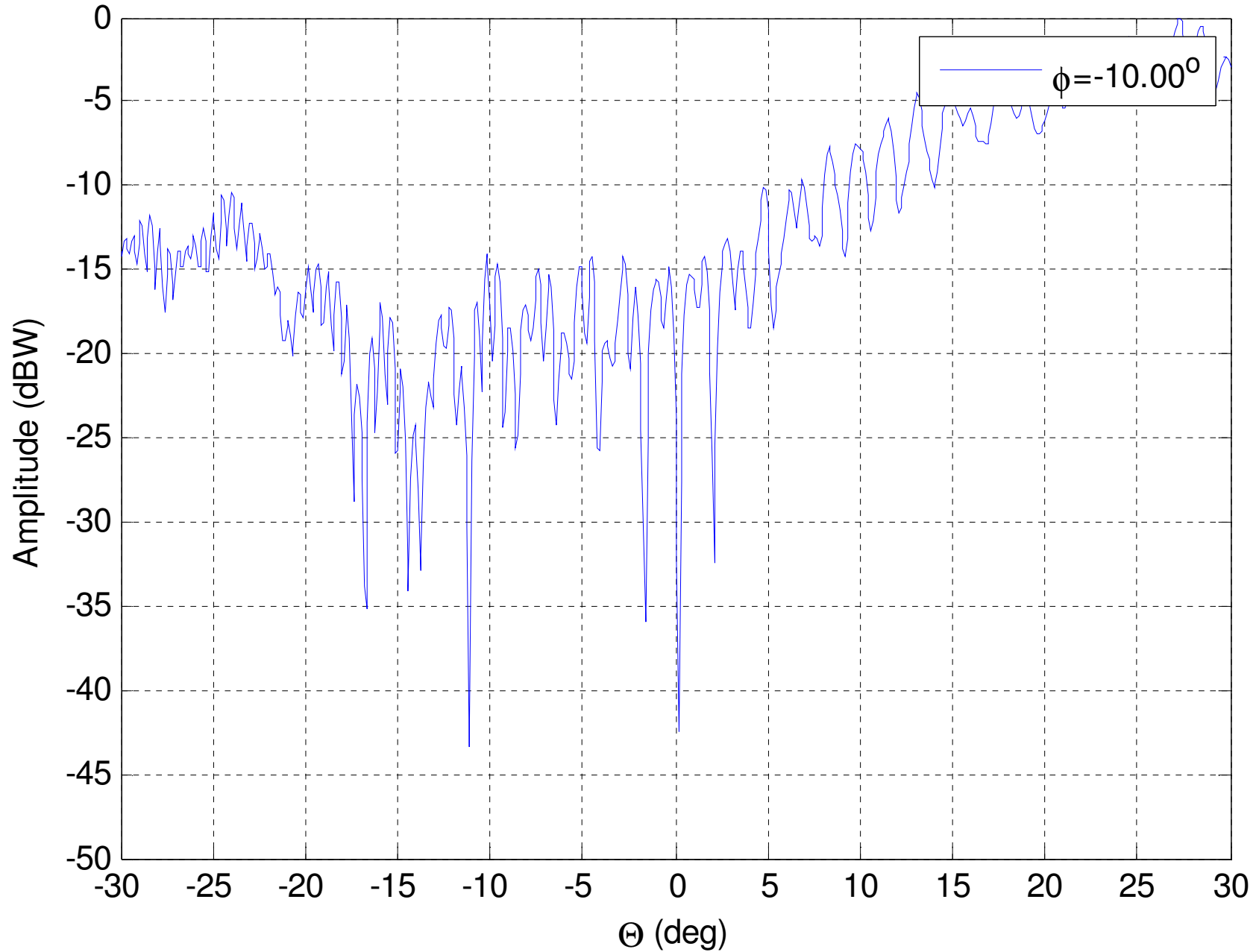
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -6.65 dBW, Date: 14-Dec-2011



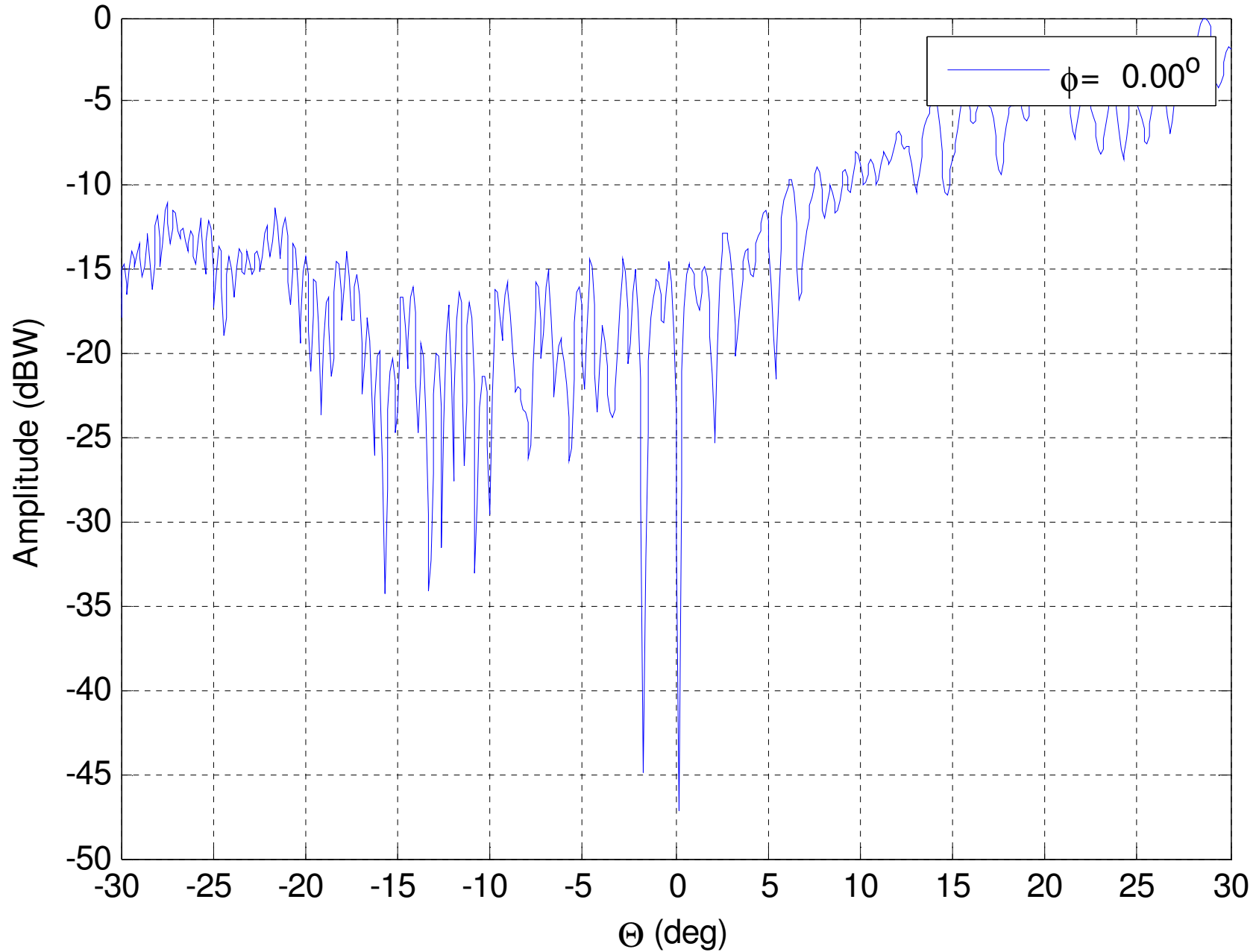
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -4.72 dBW, Date: 14-Dec-2011



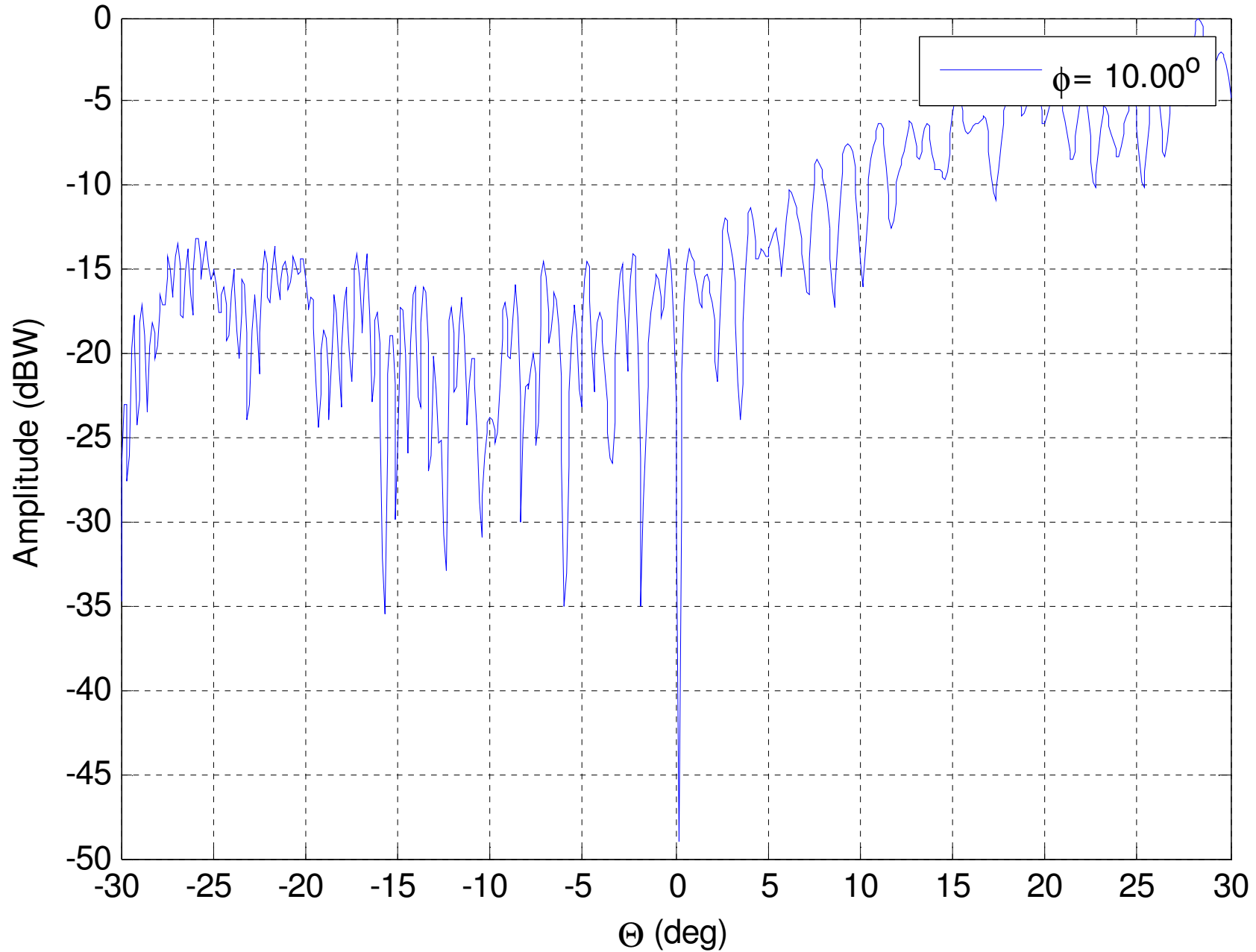
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -4.99 dBW, Date: 14-Dec-2011



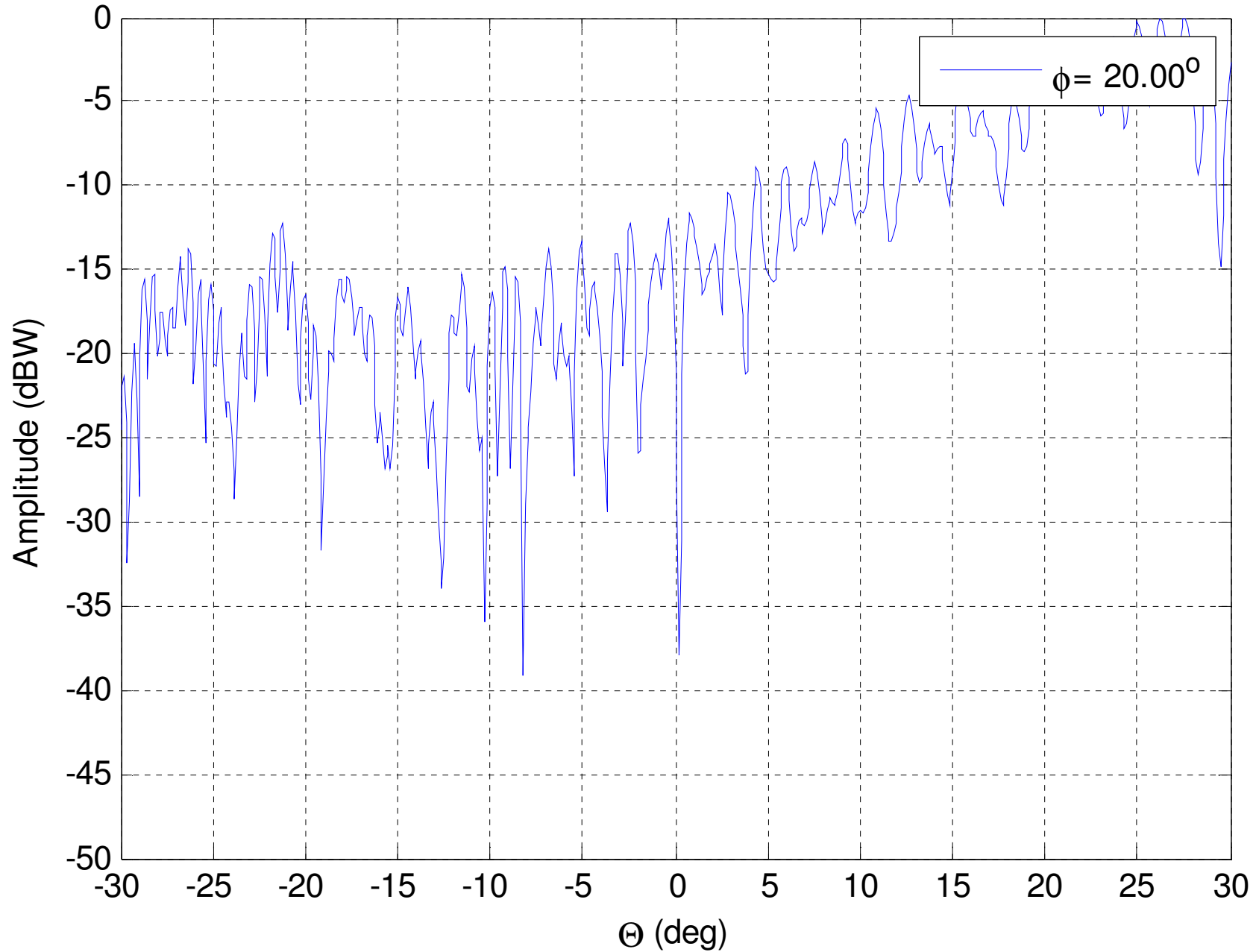
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -5.59 dBW, Date: 14-Dec-2011



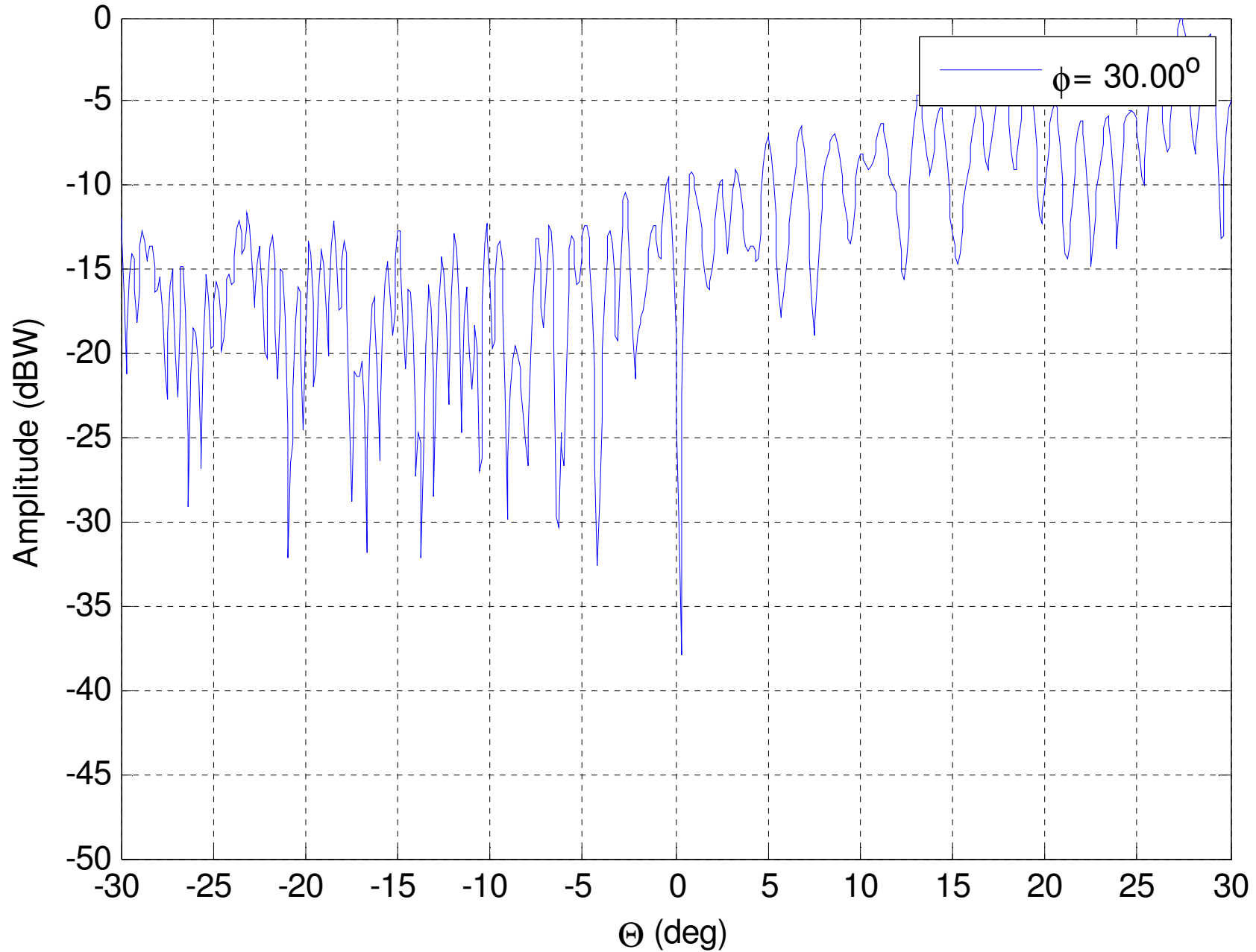
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.28 dBW, Date: 14-Dec-2011



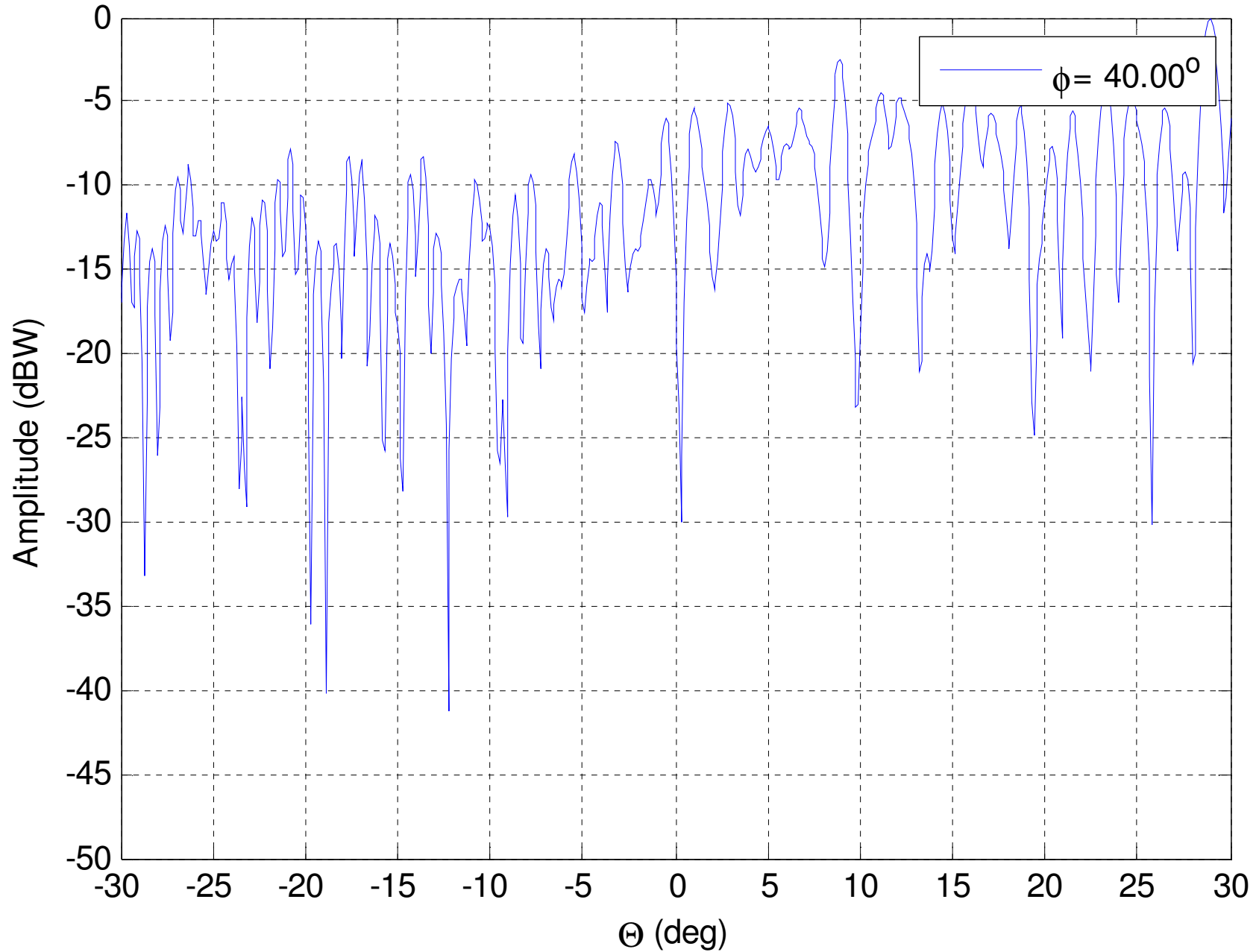
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -9.44 dBW, Date: 14-Dec-2011



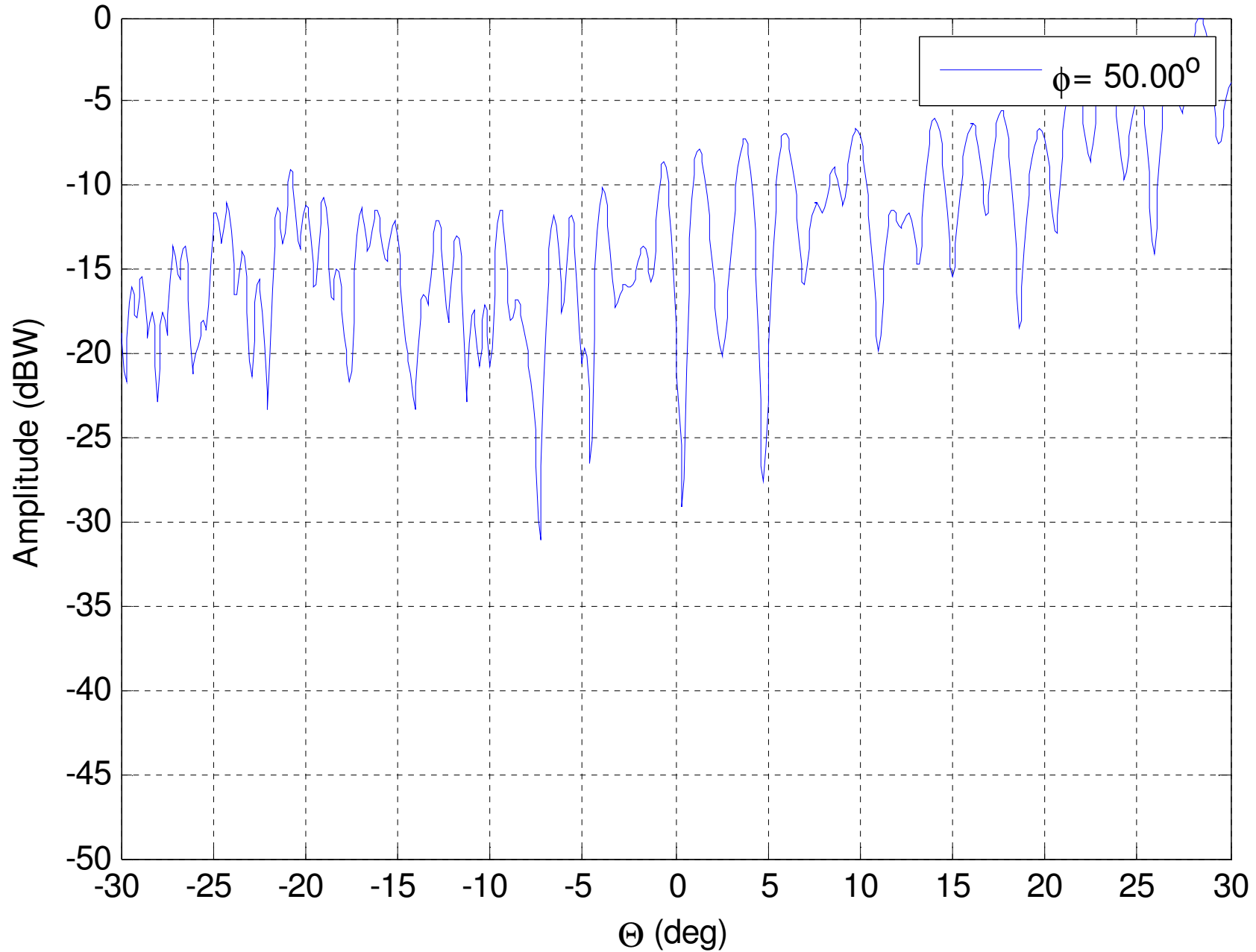
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -12.80 dBW, Date: 14-Dec-2011



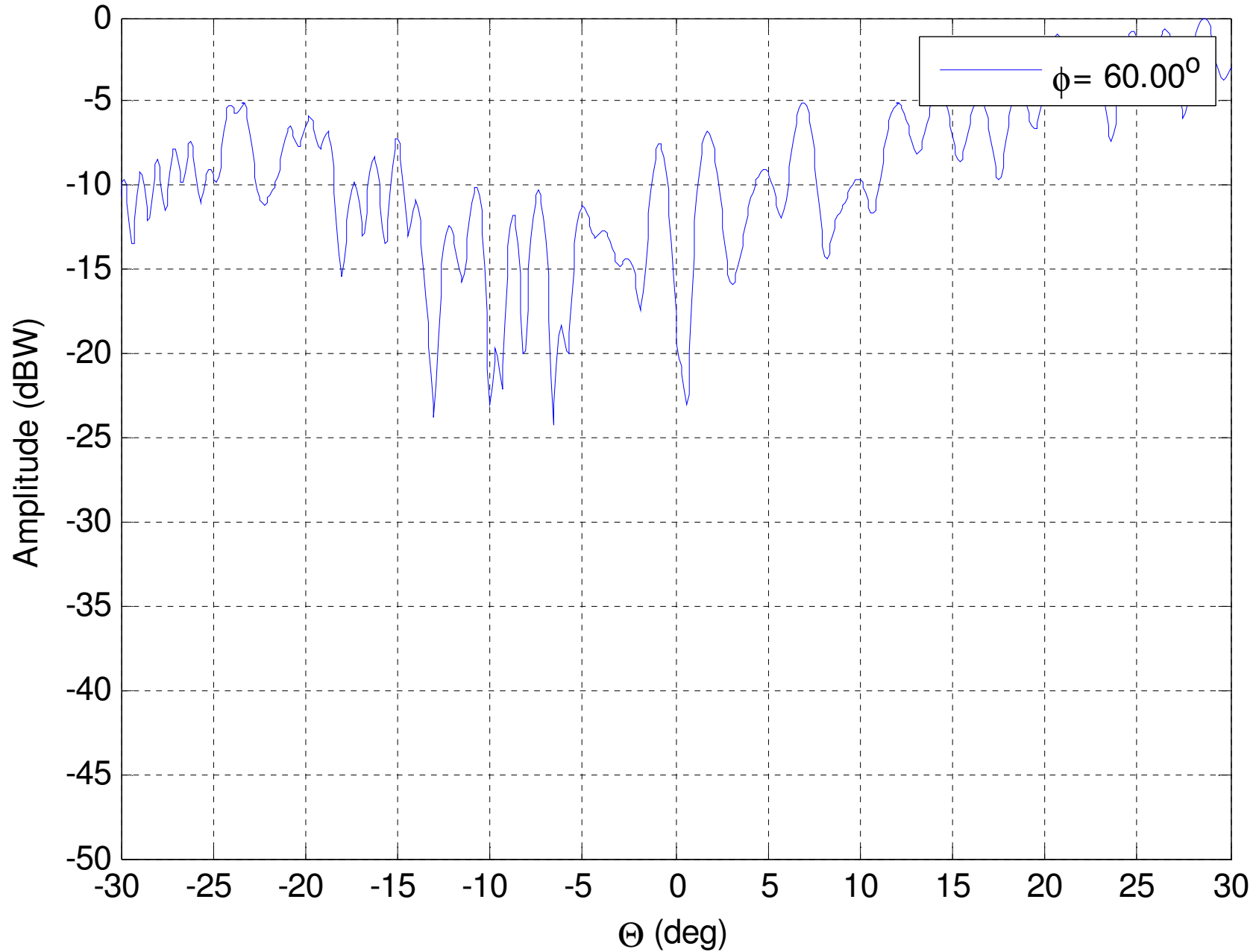
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.02 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

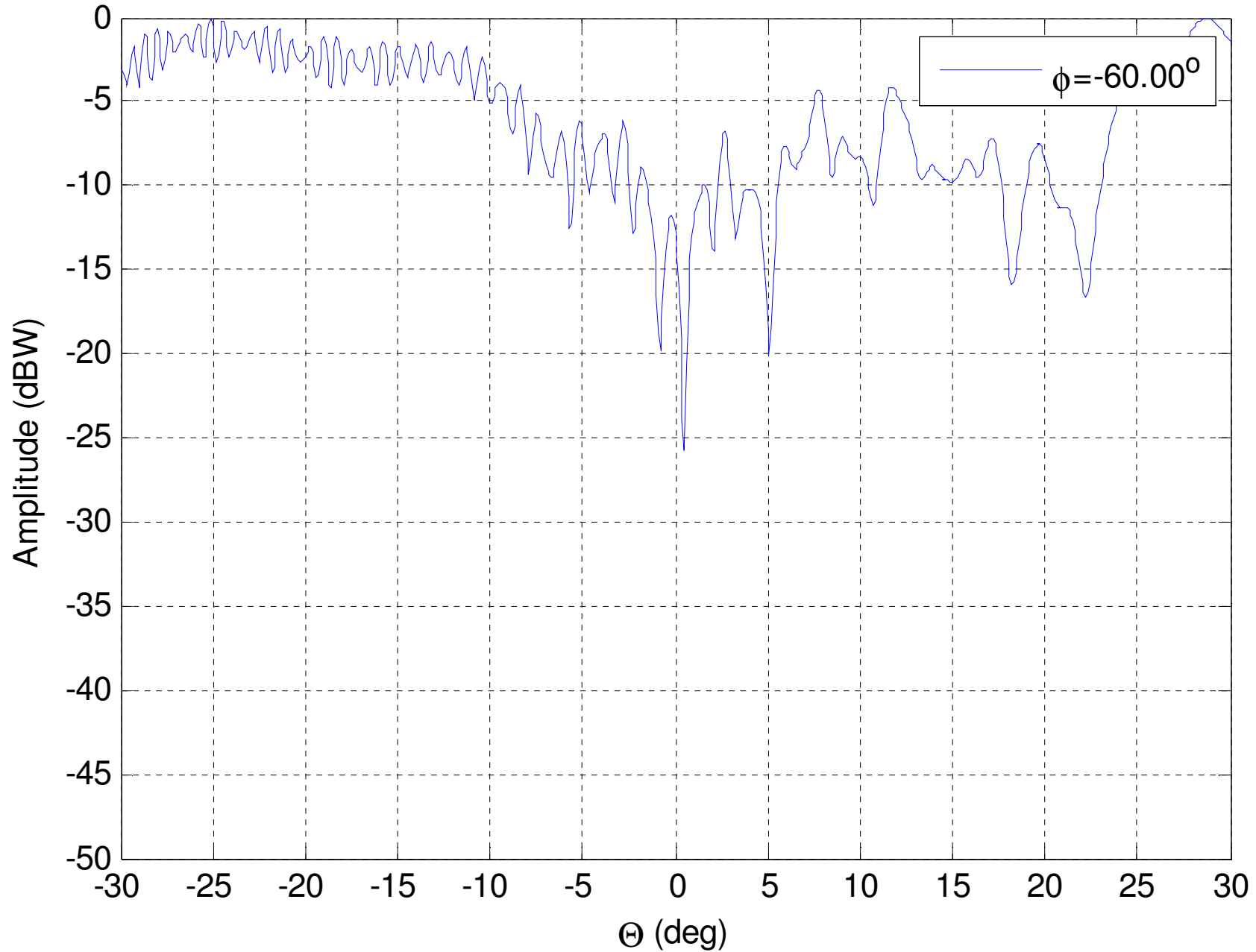
Input file: tx-17.3-rhcp-60.cut, Peak: -10.91 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

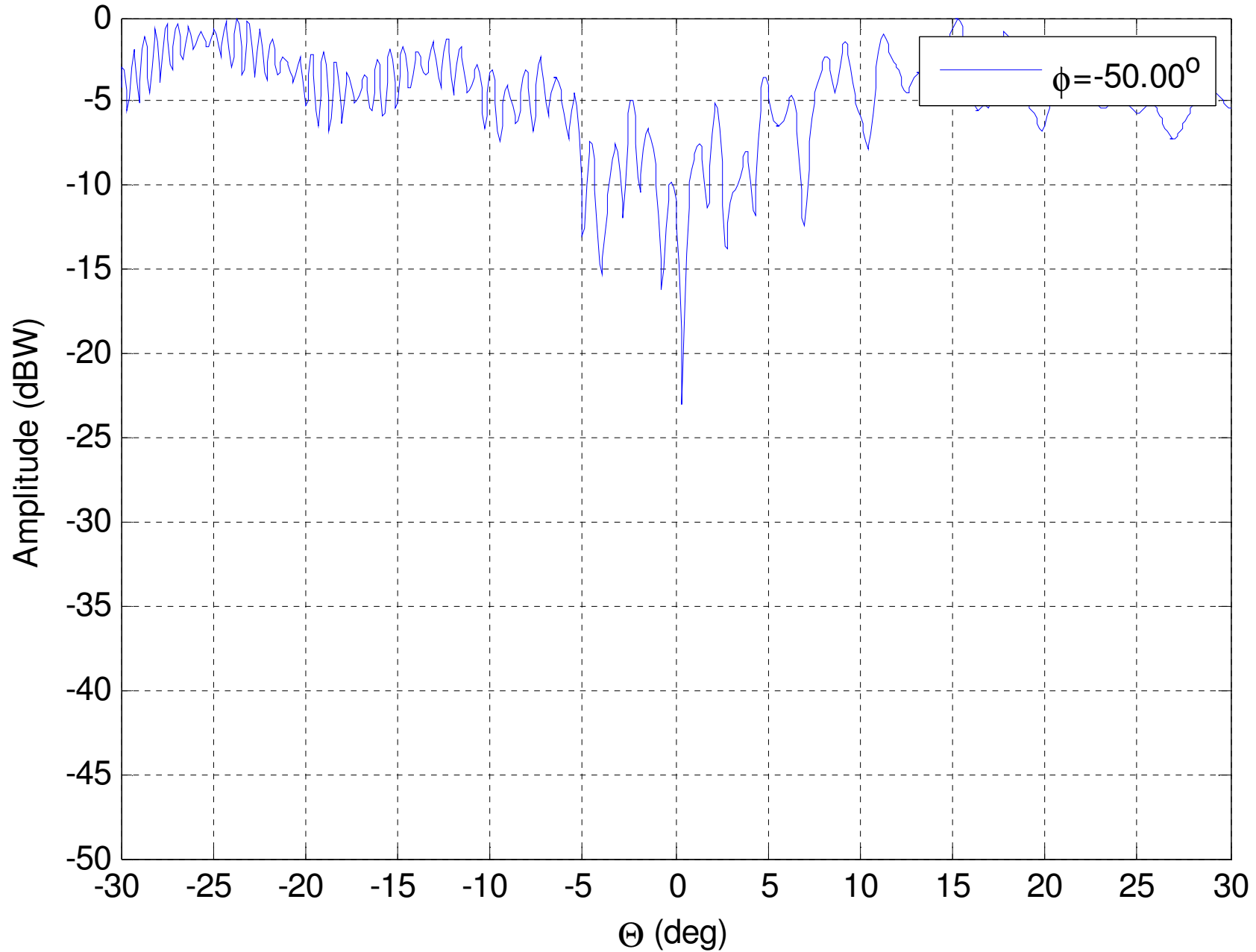
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -10.63 dBW, Date: 14-Dec-2011



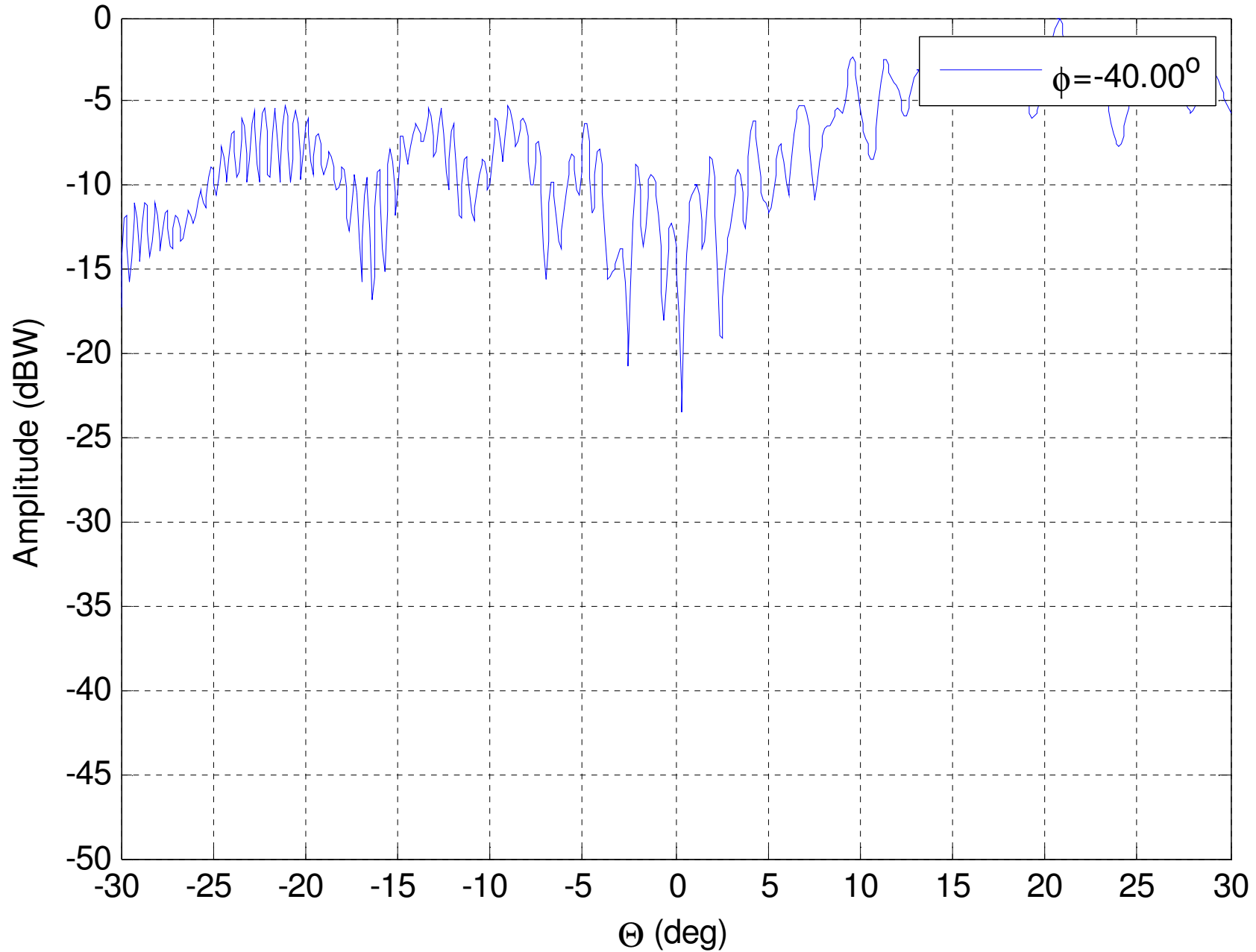
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -12.55 dBW, Date: 14-Dec-2011



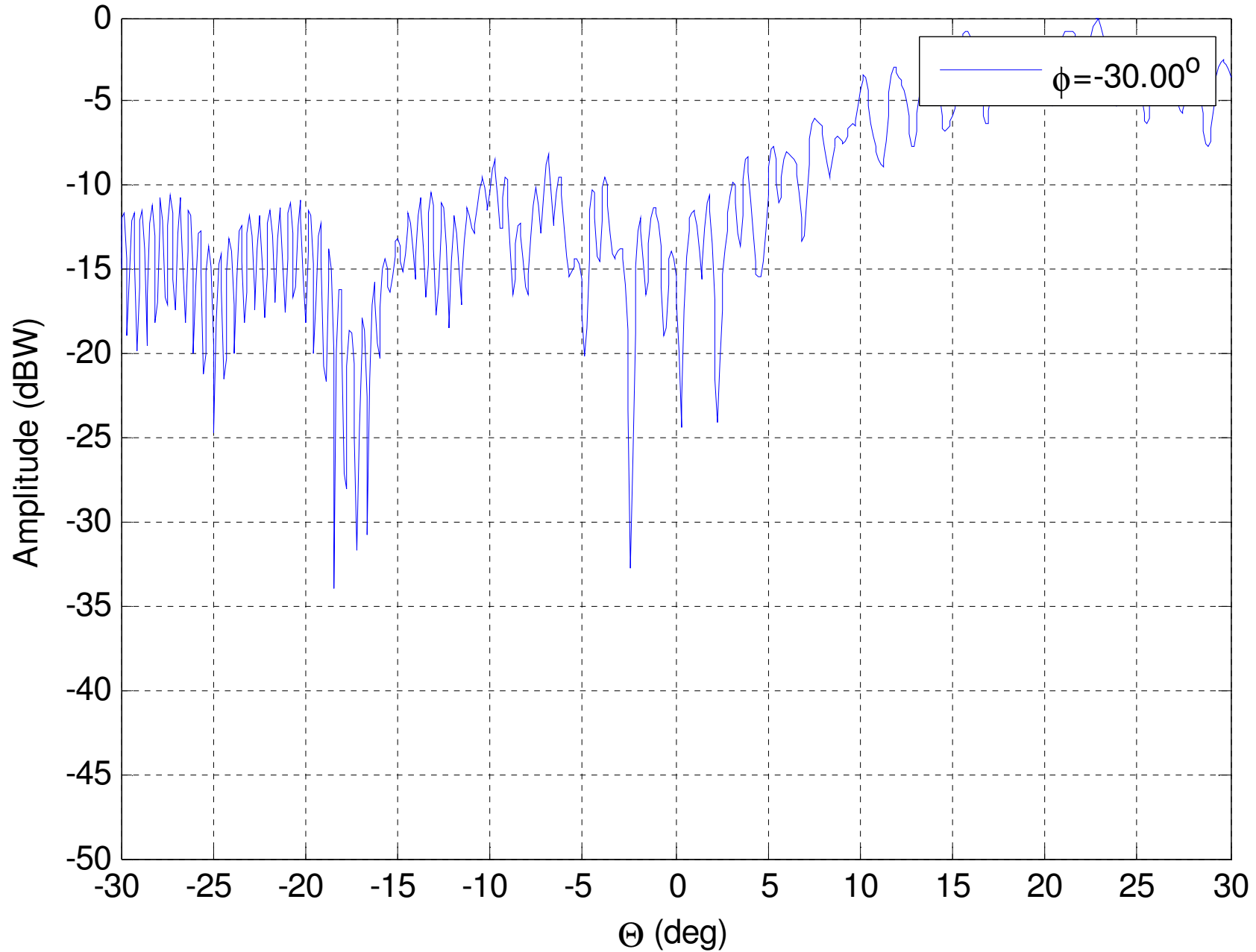
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.88 dBW, Date: 14-Dec-2011



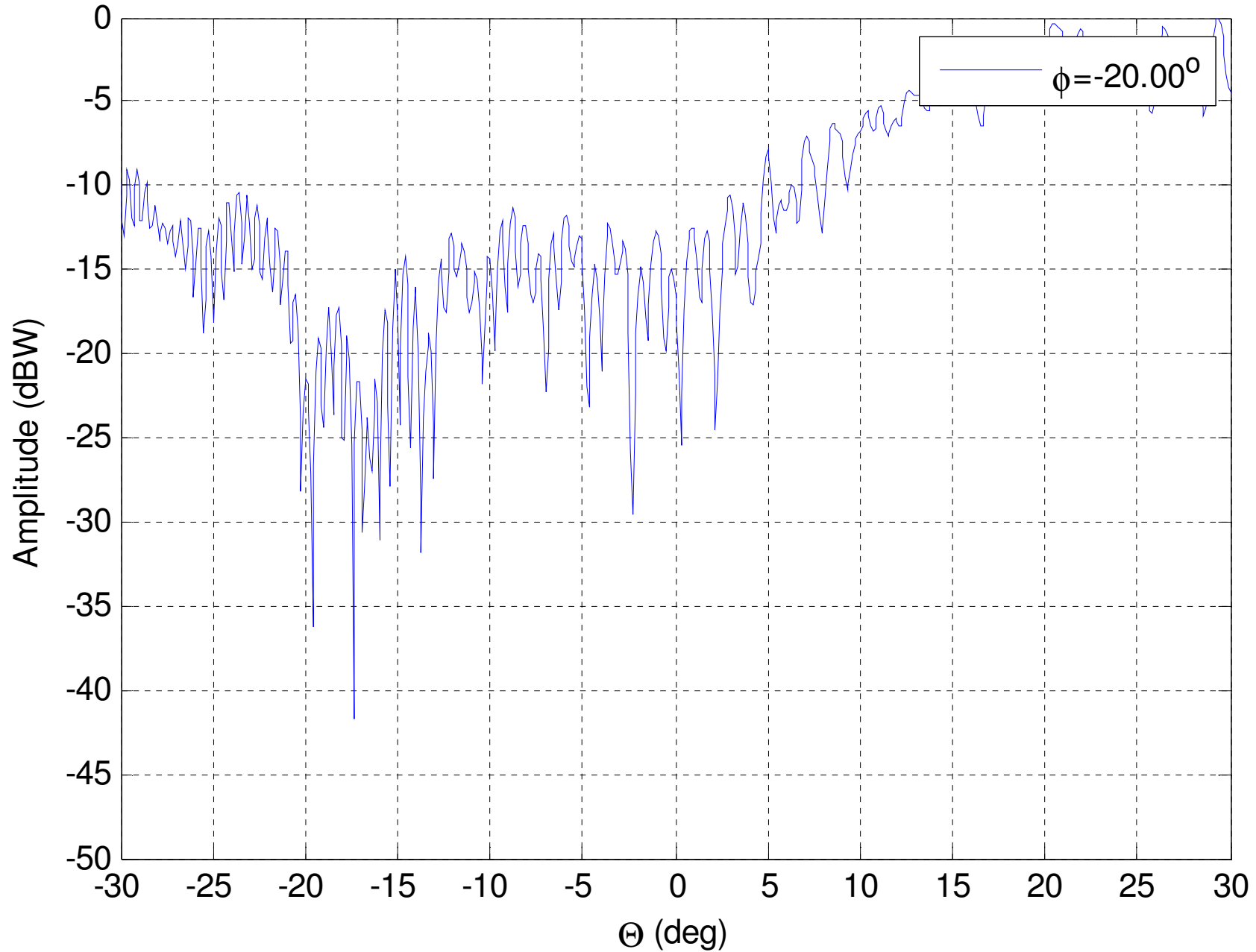
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -8.08 dBW, Date: 14-Dec-2011



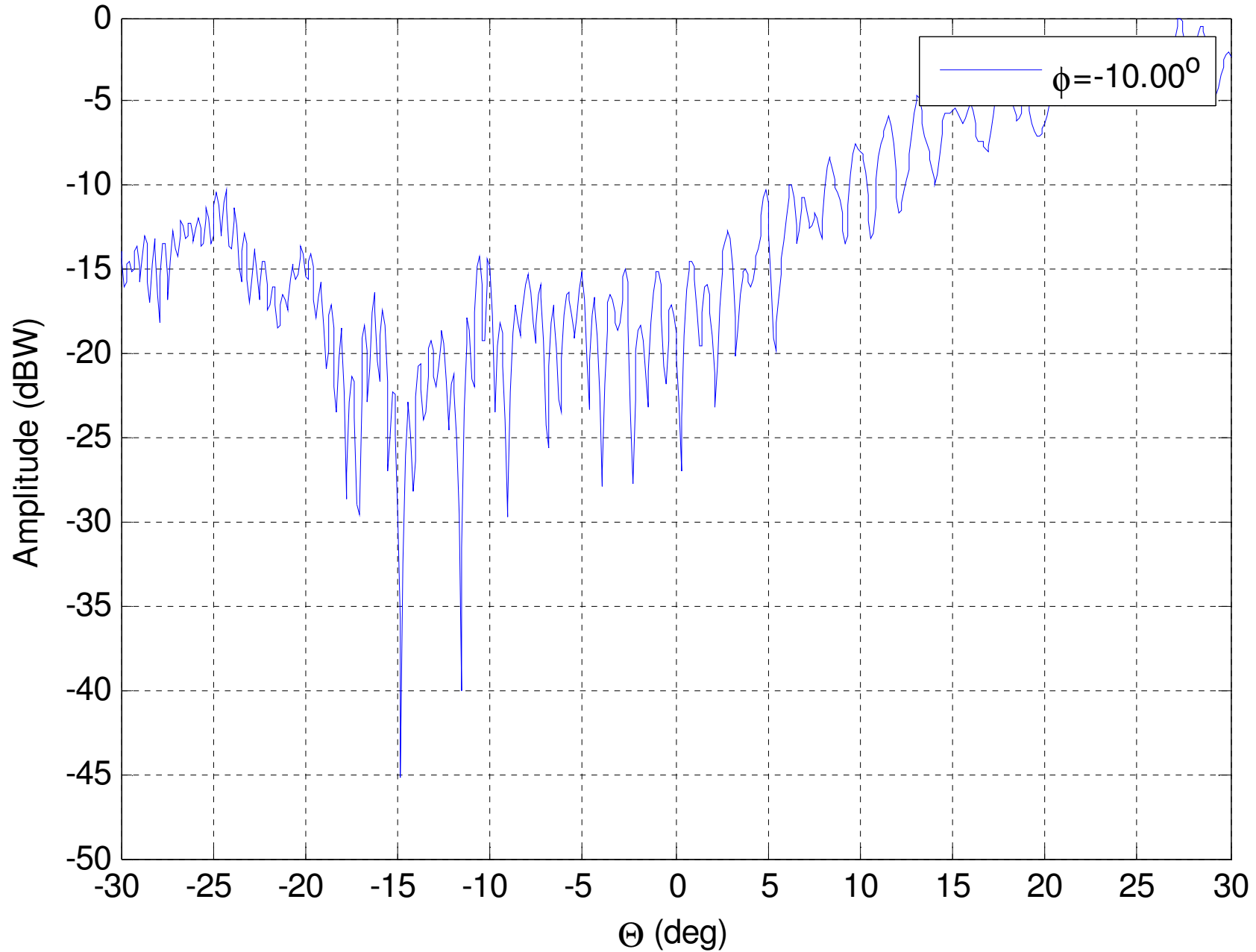
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.83 dBW, Date: 14-Dec-2011



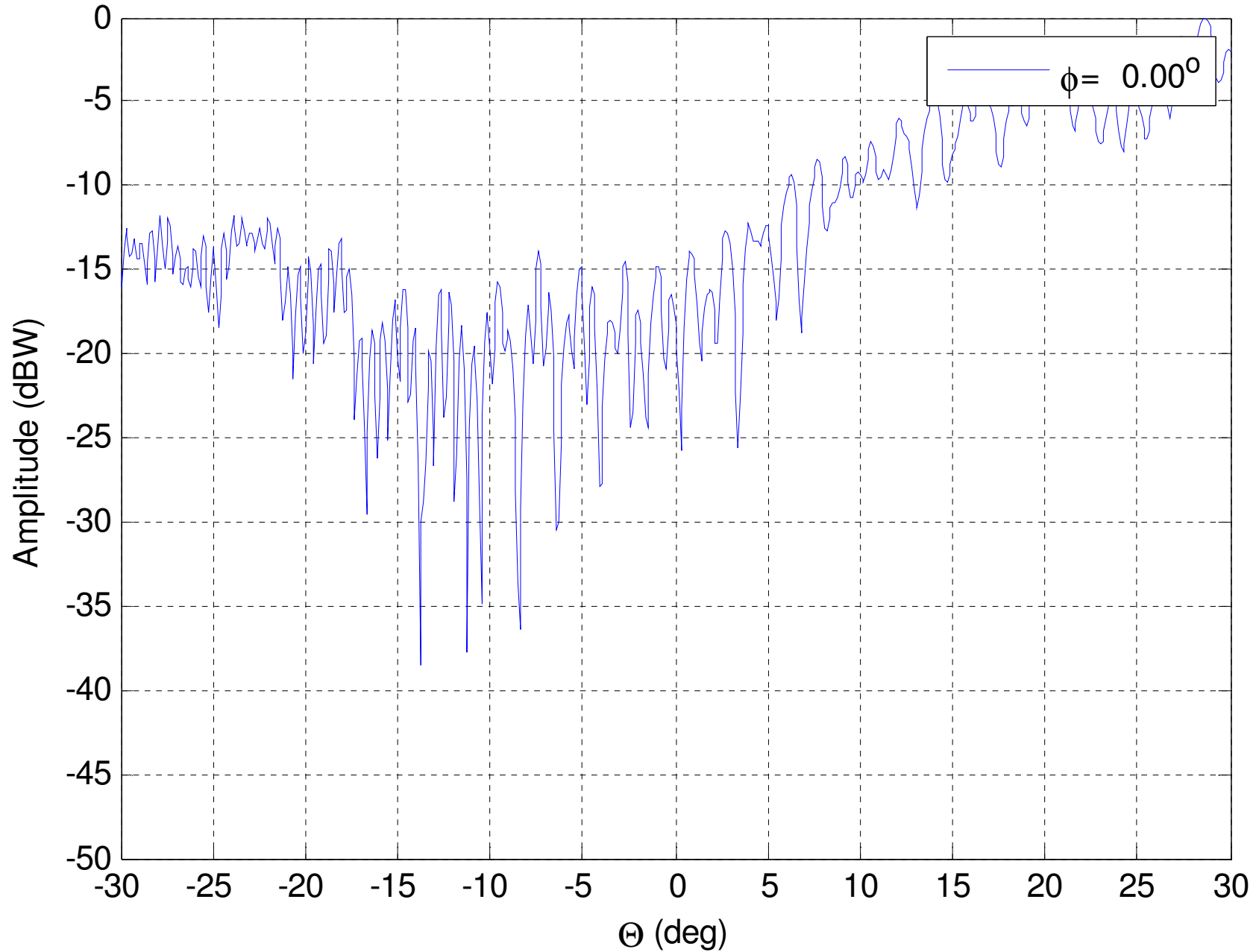
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -4.64 dBW, Date: 14-Dec-2011



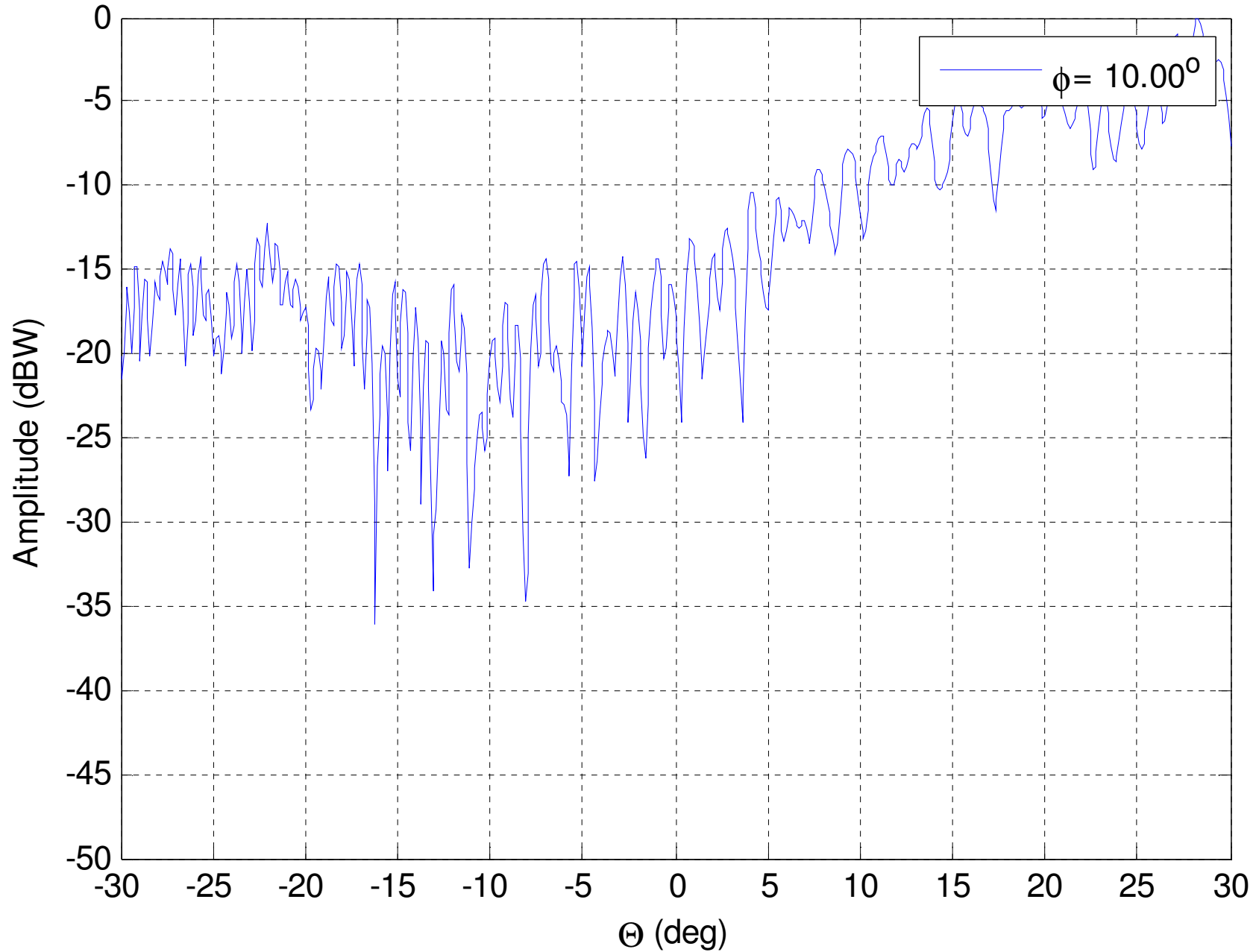
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.09 dBW, Date: 14-Dec-2011



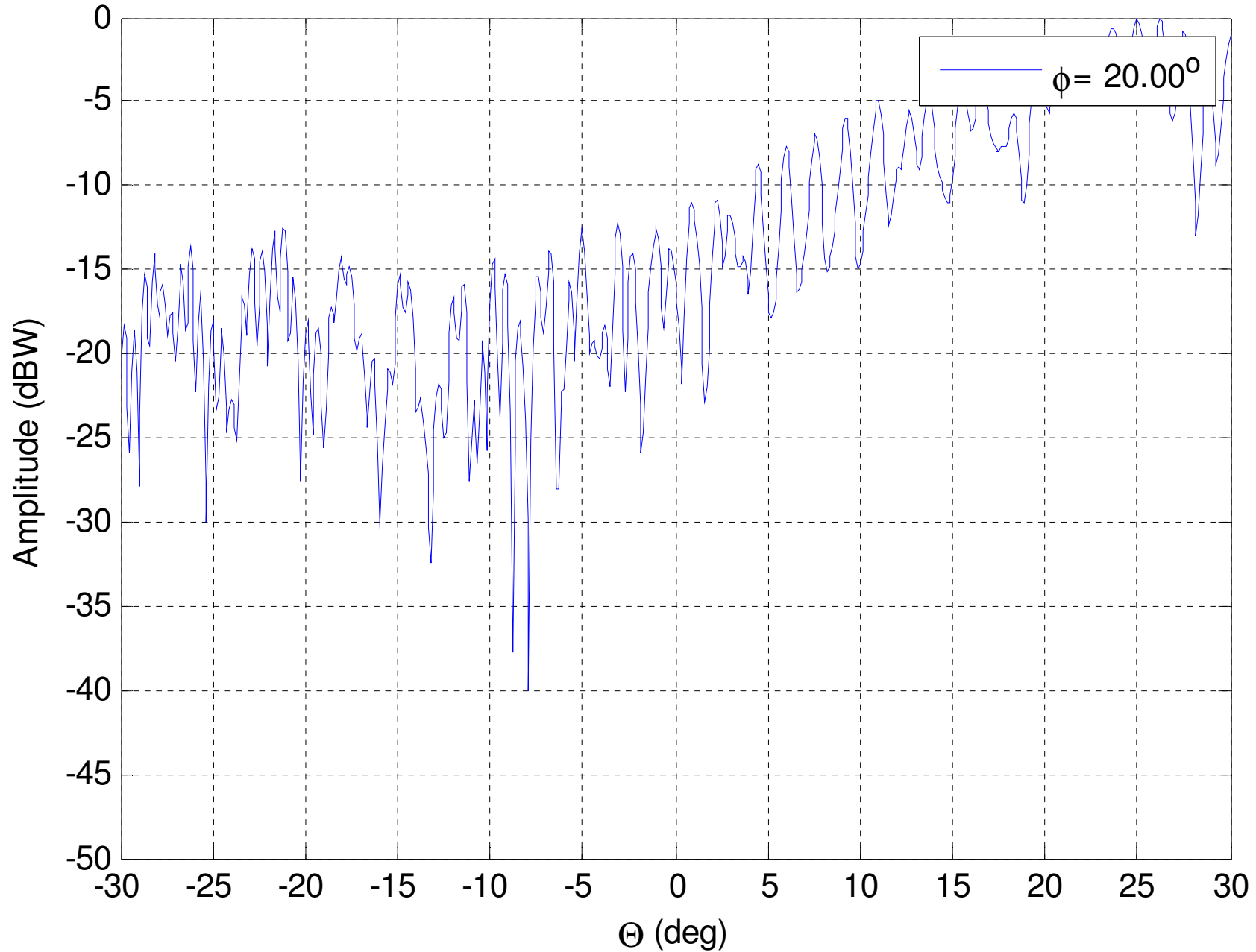
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.64 dBW, Date: 14-Dec-2011



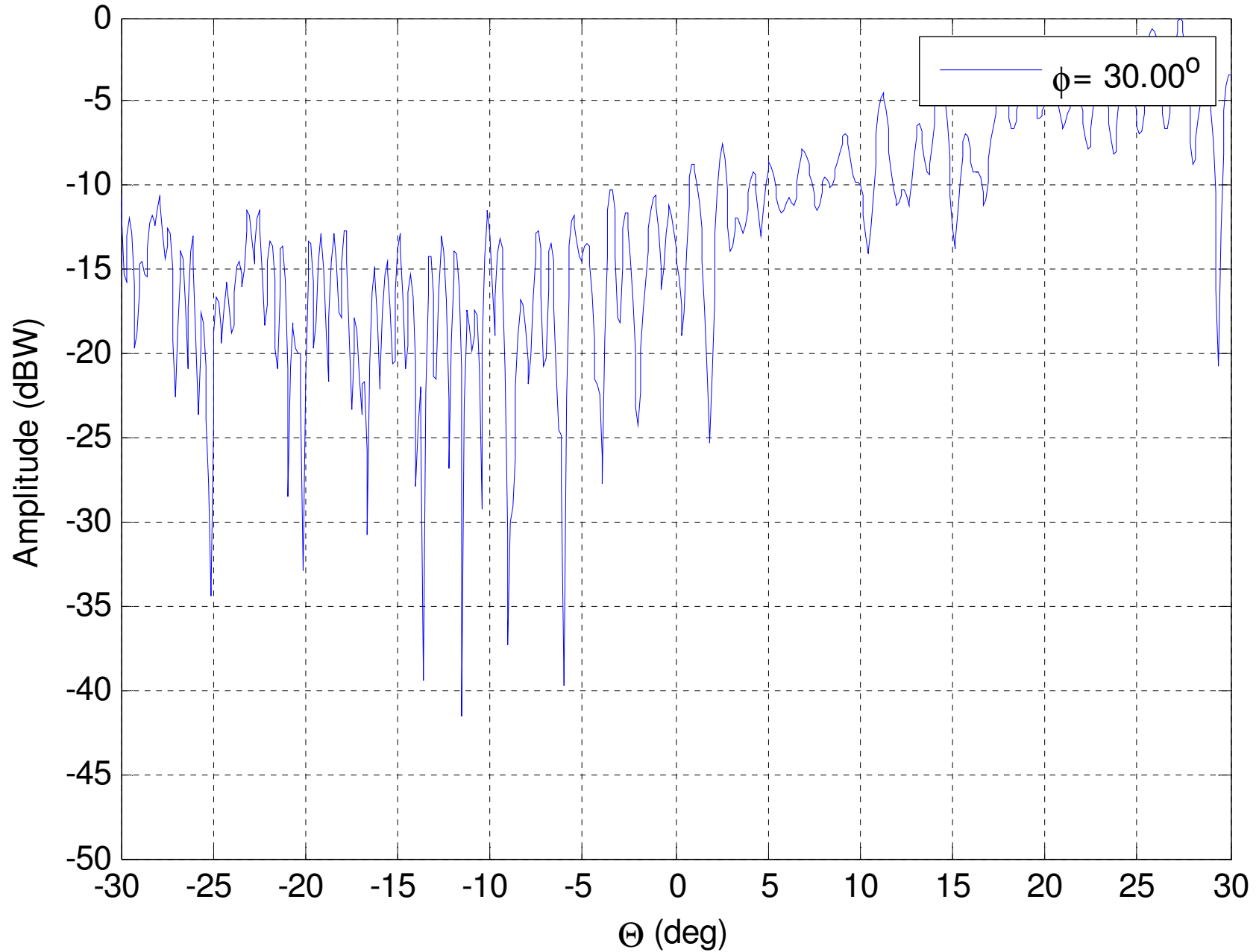
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.51 dBW, Date: 14-Dec-2011



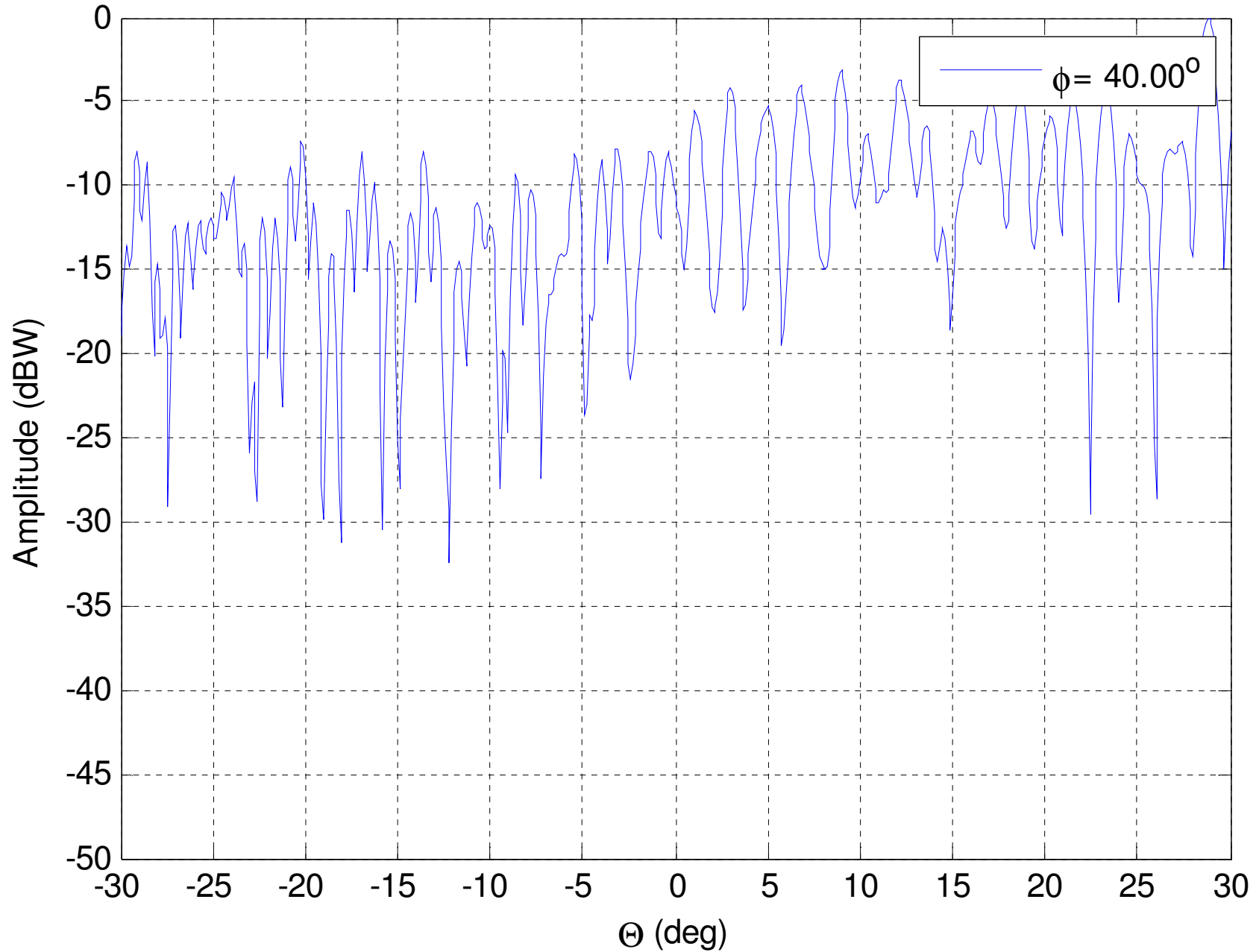
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -9.75 dBW, Date: 14-Dec-2011



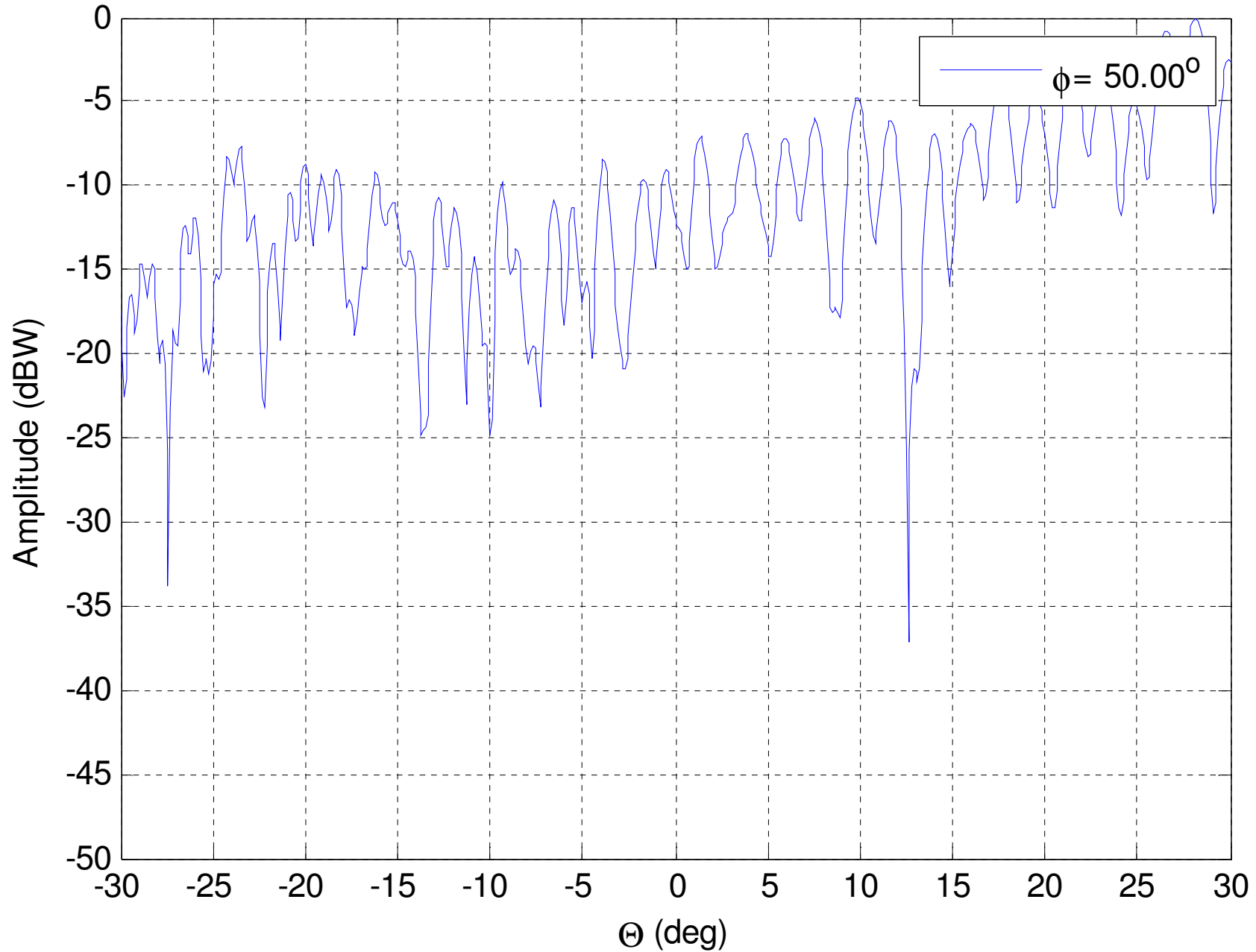
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -12.71 dBW, Date: 14-Dec-2011



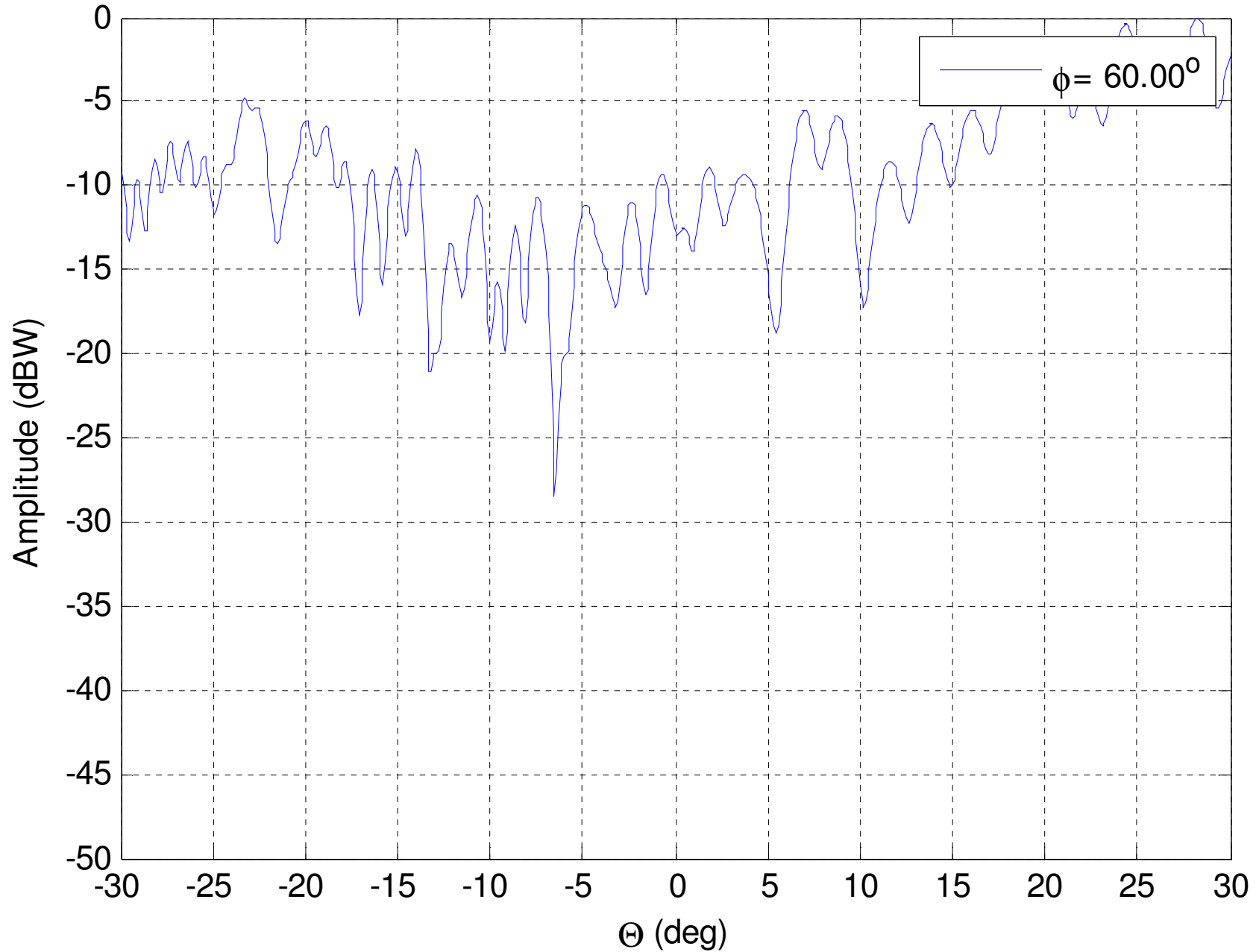
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.35 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

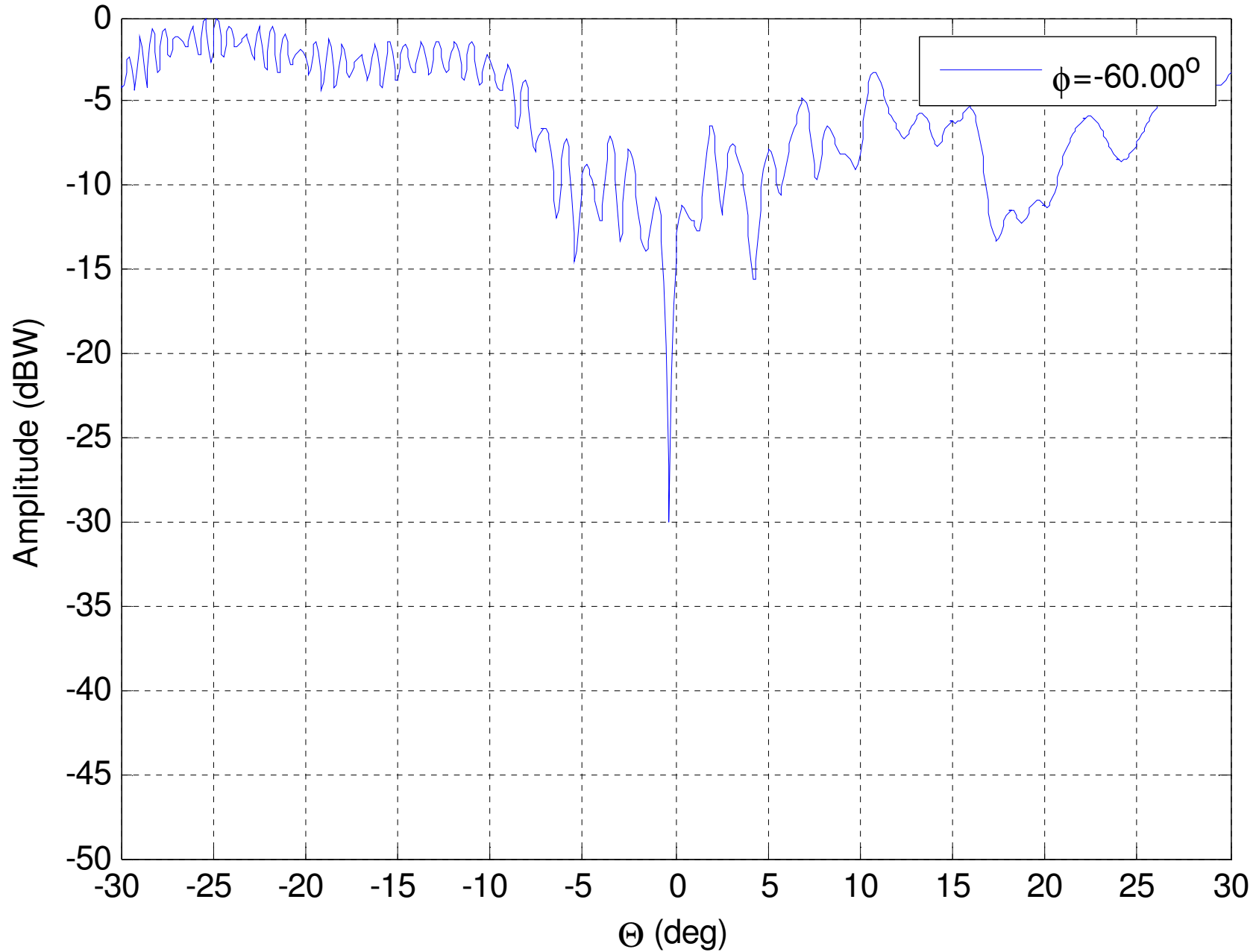
Input file: tx-17.3-lhcp-60.cut, Peak: -10.66 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

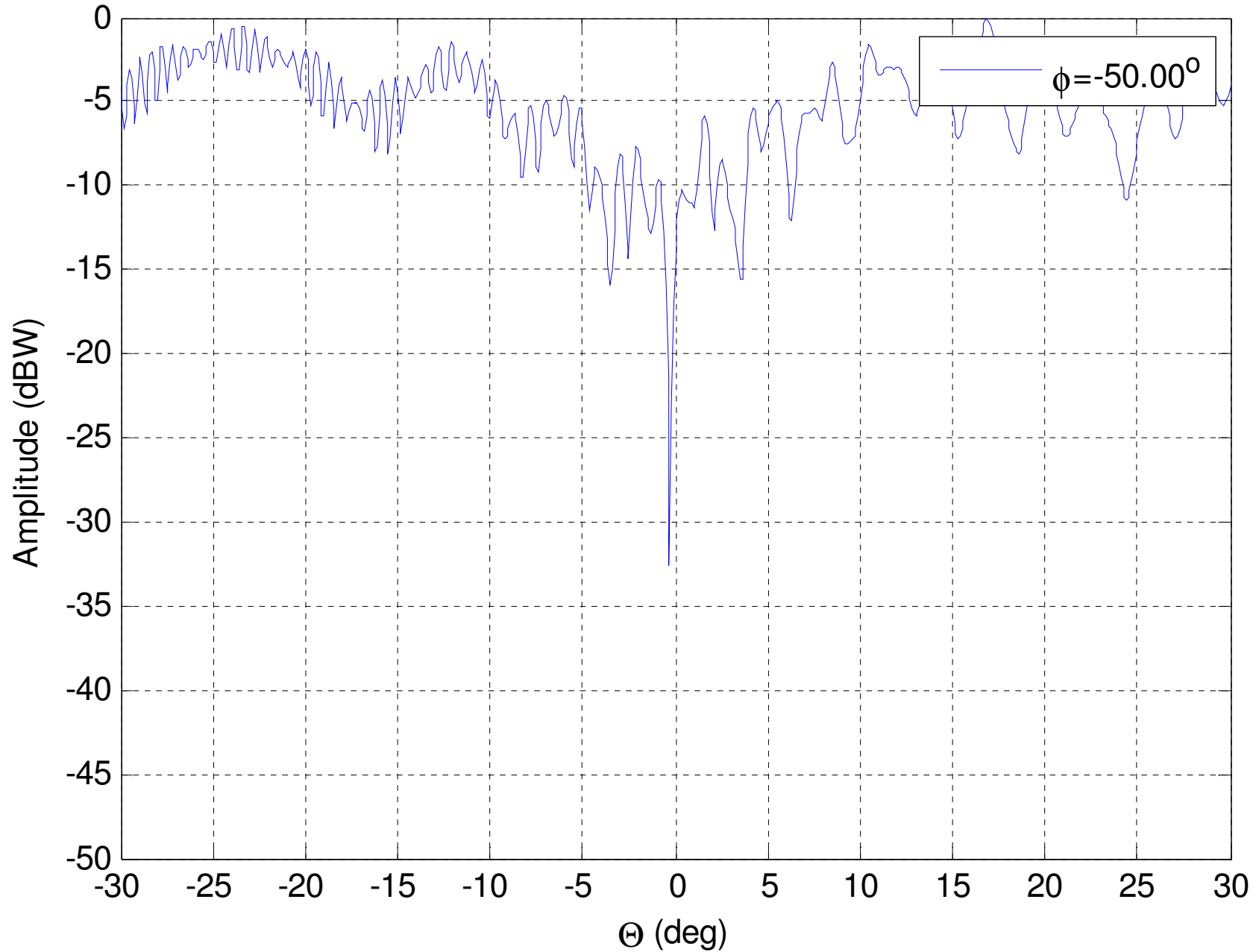
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.06 dBW, Date: 14-Dec-2011



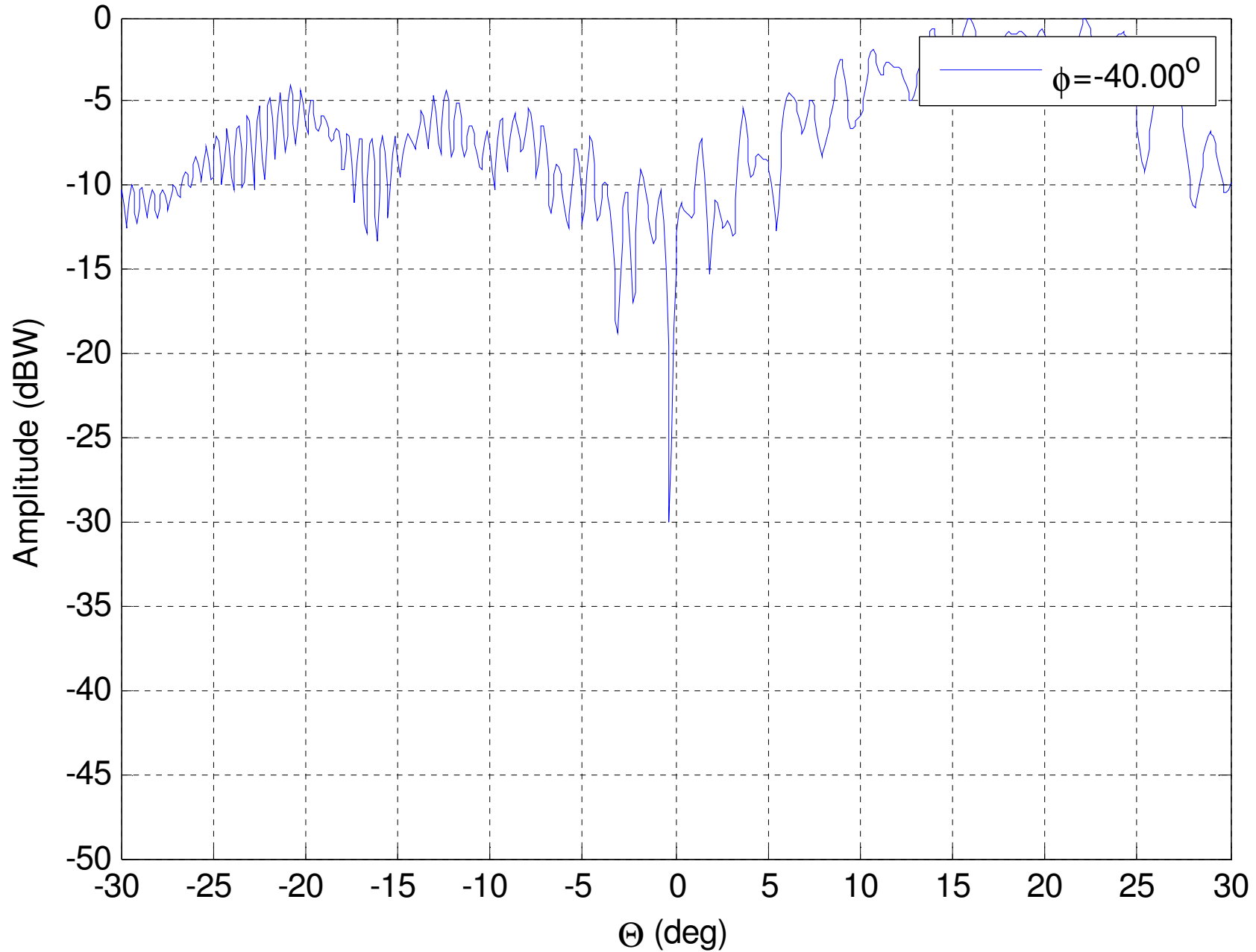
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -11.63 dBW, Date: 14-Dec-2011



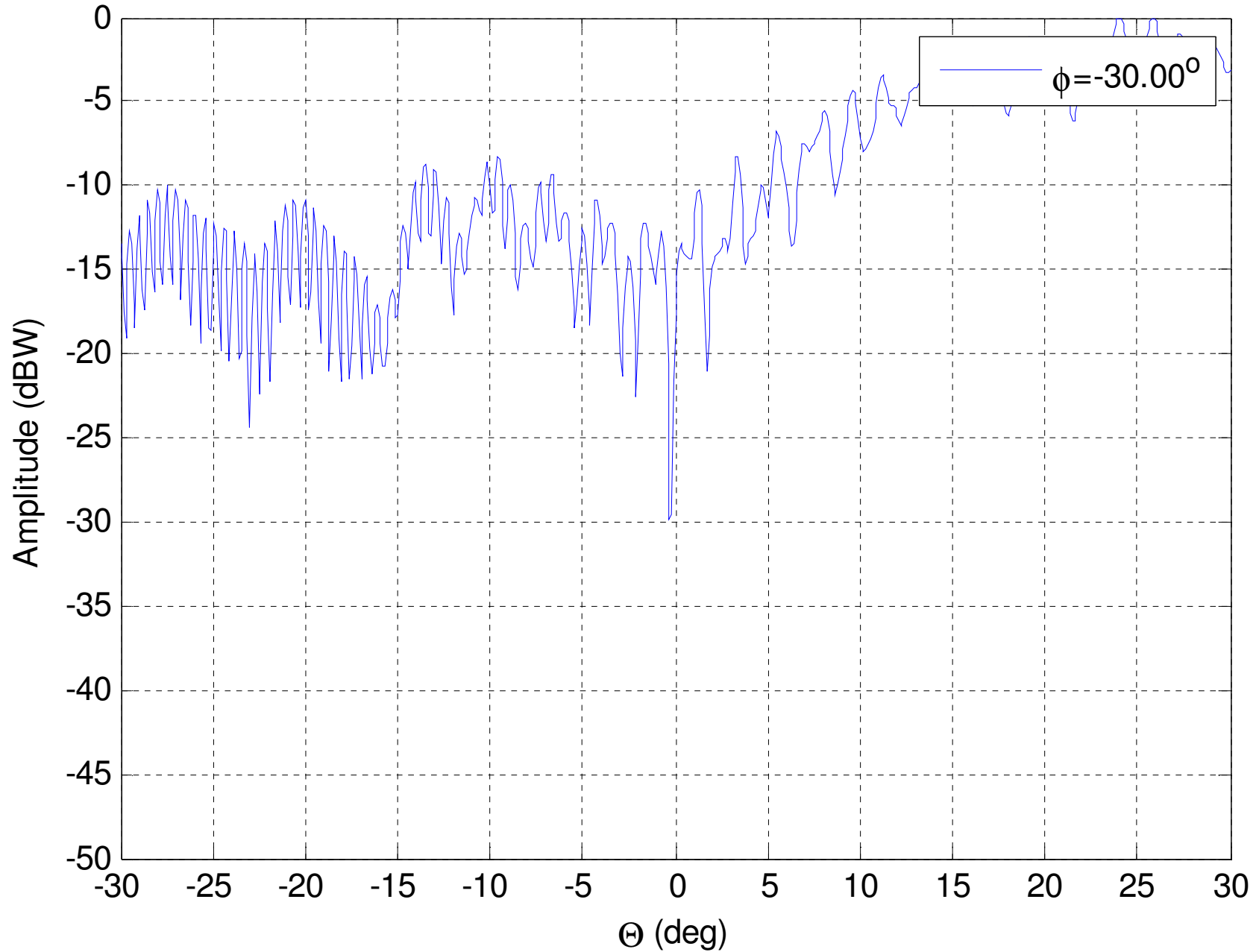
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.62 dBW, Date: 14-Dec-2011



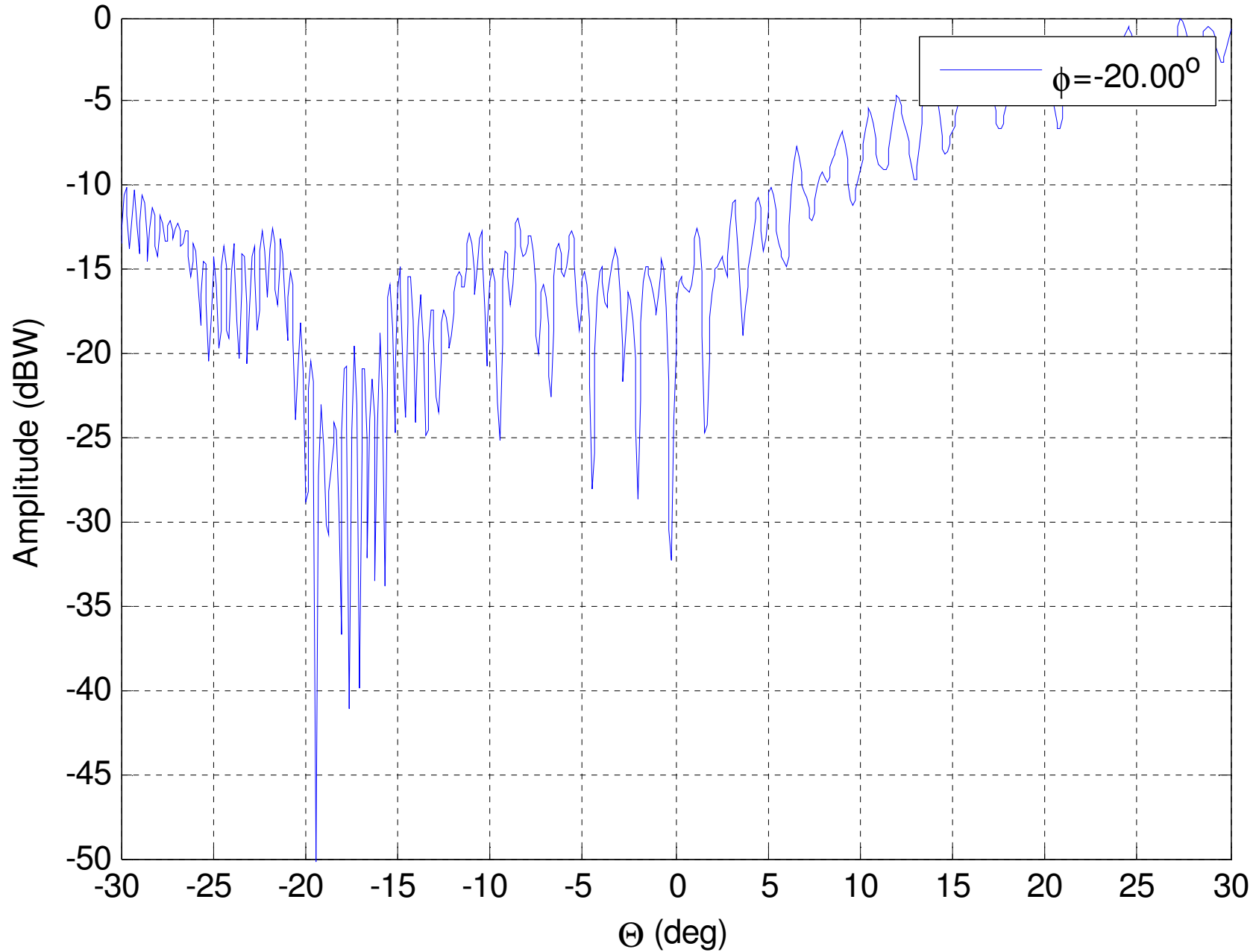
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.94 dBW, Date: 14-Dec-2011



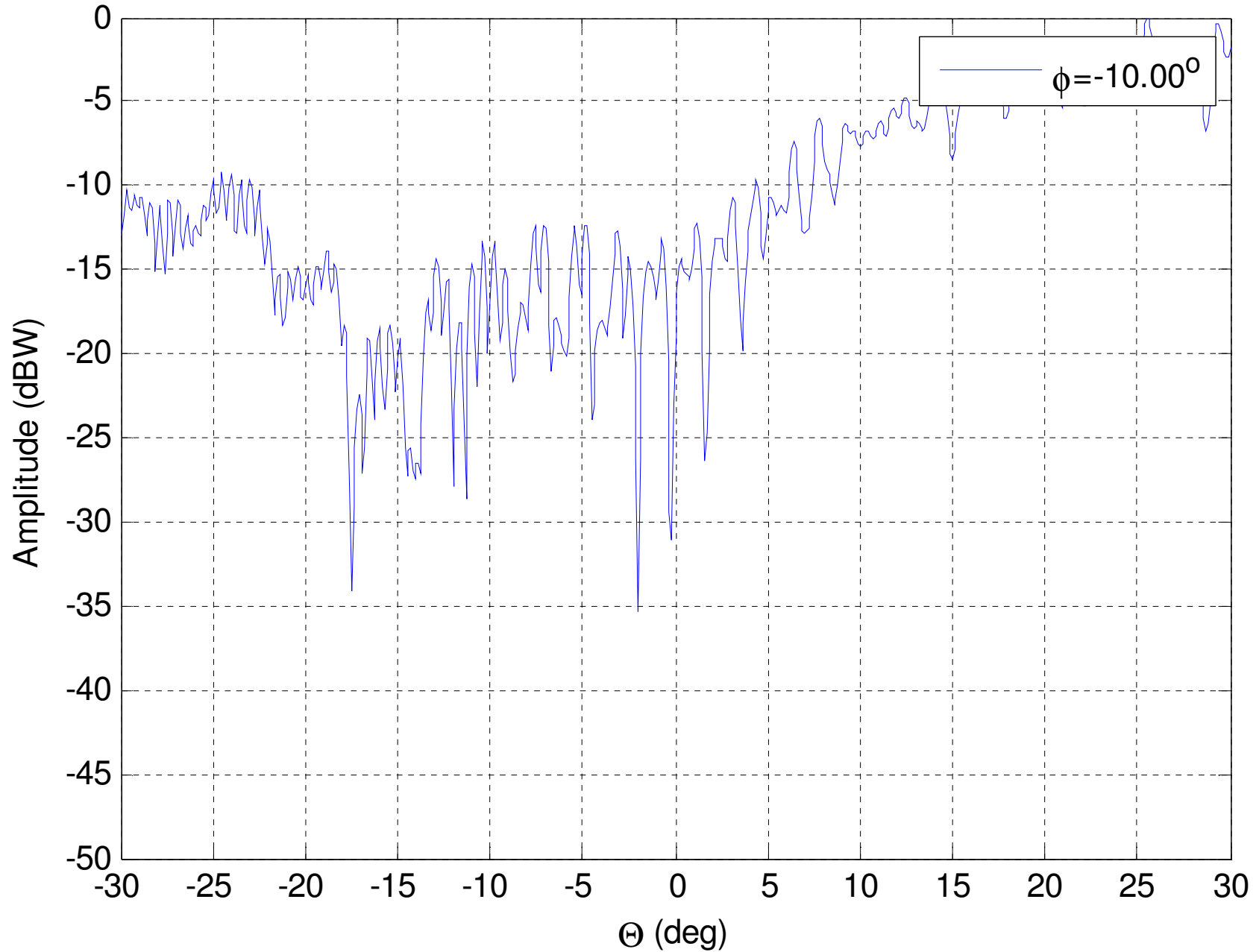
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -5.88 dBW, Date: 14-Dec-2011



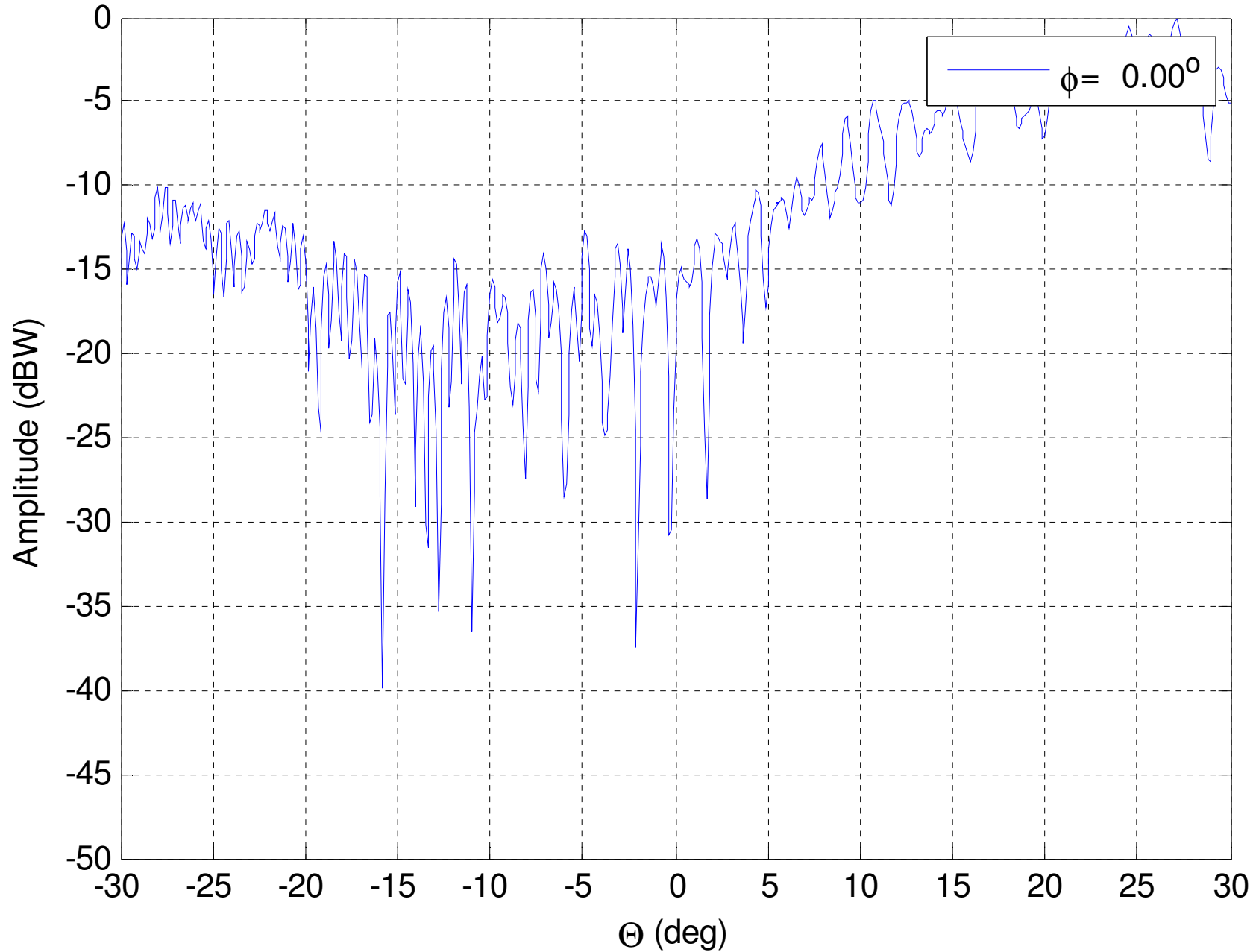
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -6.71 dBW, Date: 14-Dec-2011



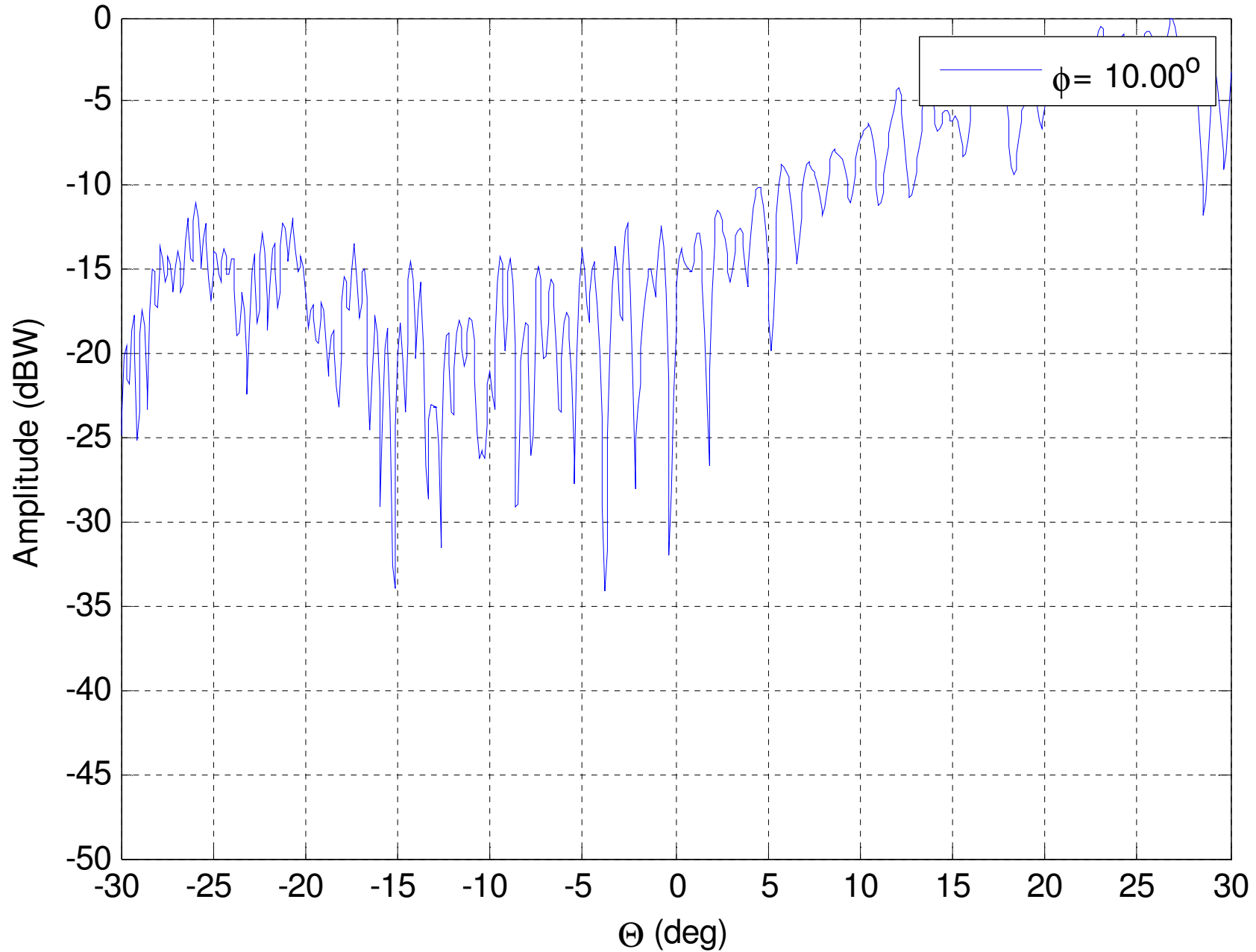
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -6.22 dBW, Date: 14-Dec-2011



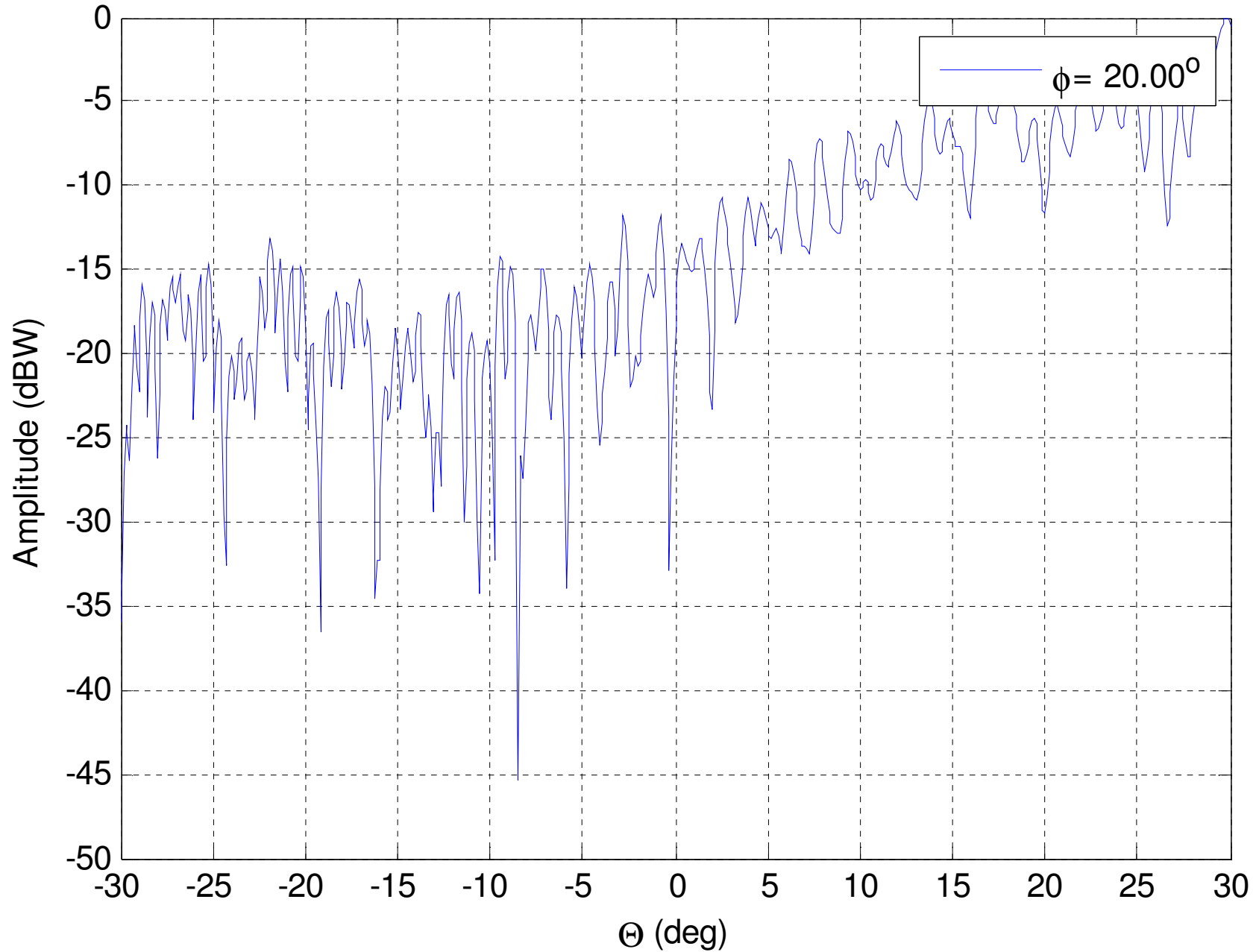
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -7.07 dBW, Date: 14-Dec-2011



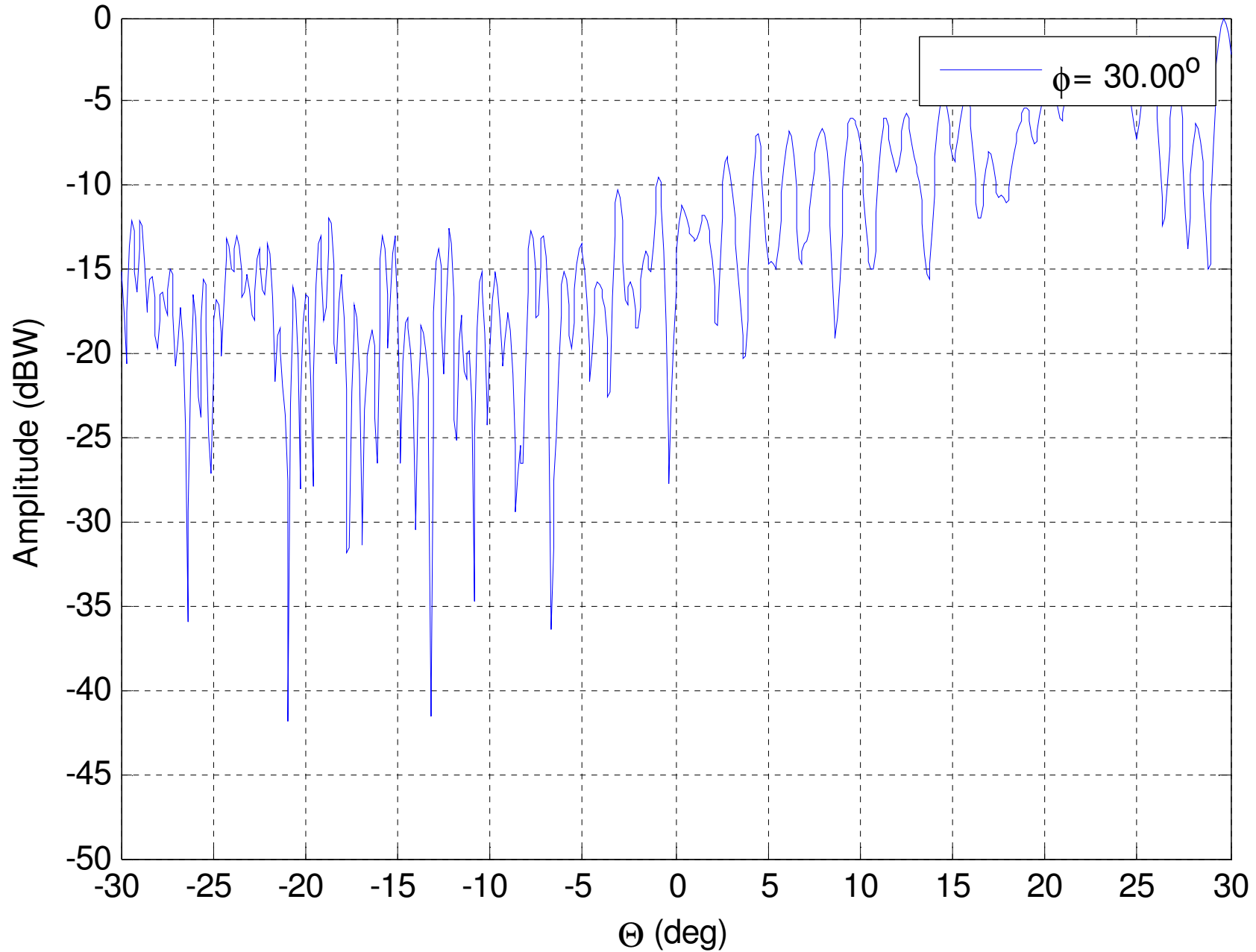
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -7.33 dBW, Date: 14-Dec-2011



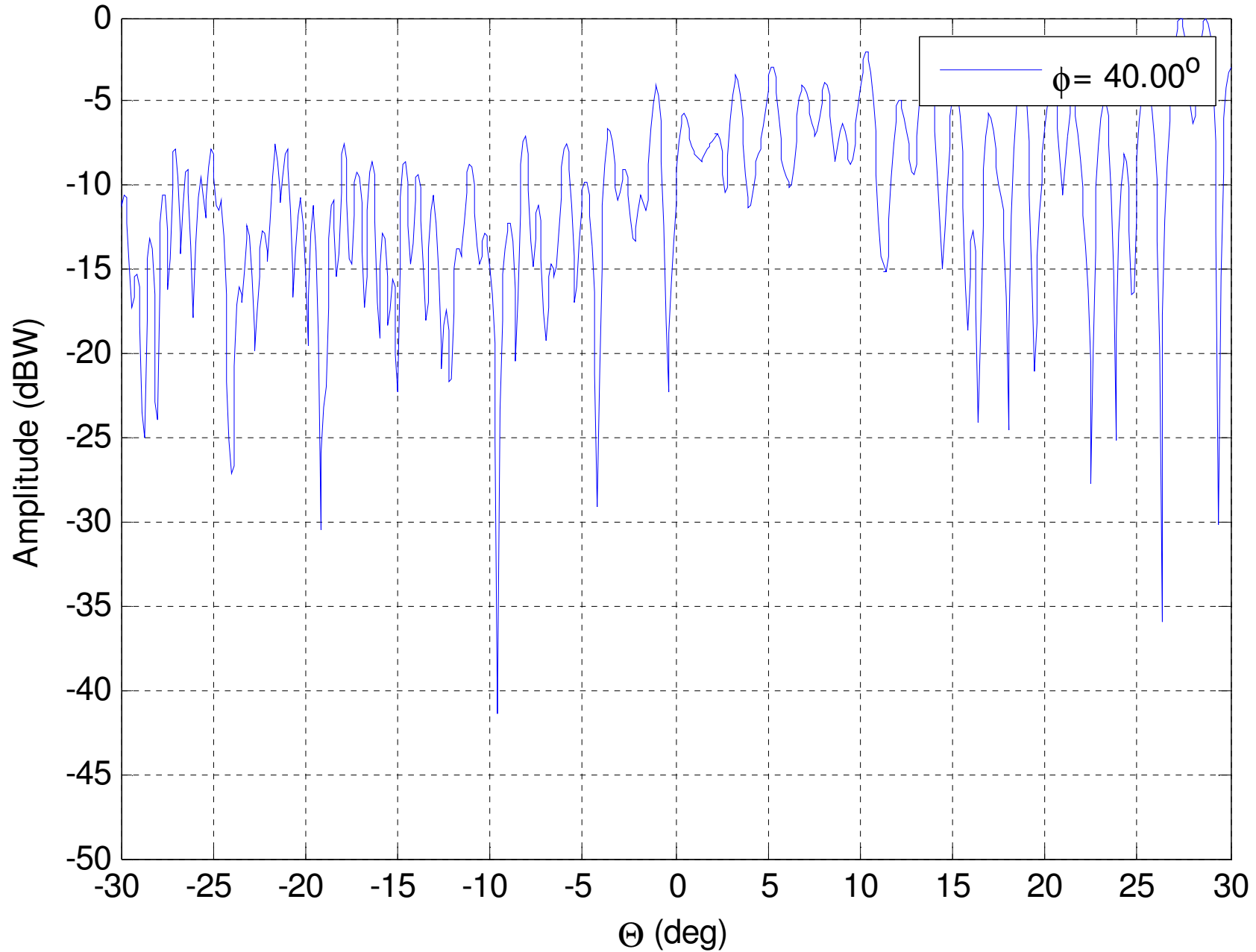
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -9.38 dBW, Date: 14-Dec-2011



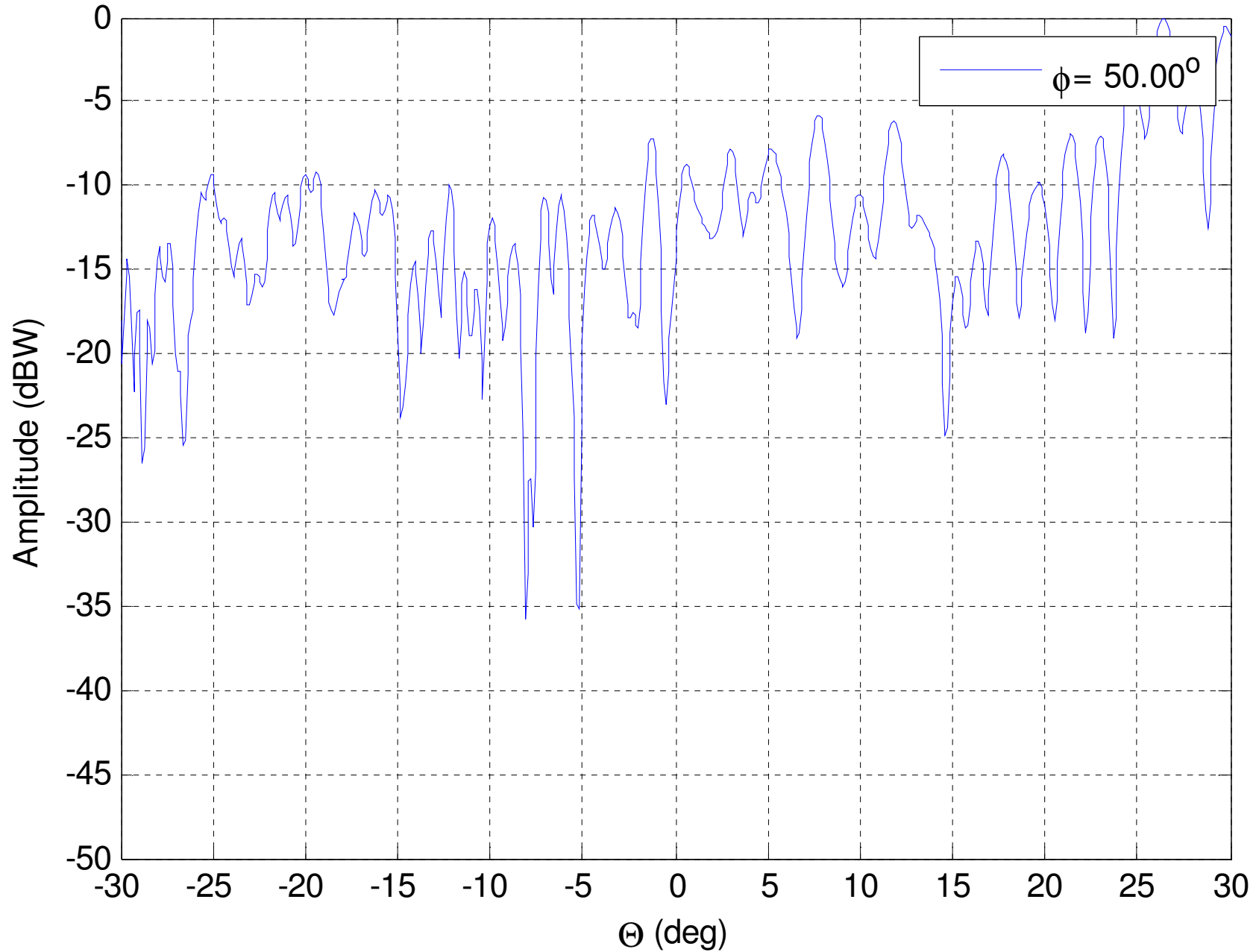
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -14.55 dBW, Date: 14-Dec-2011



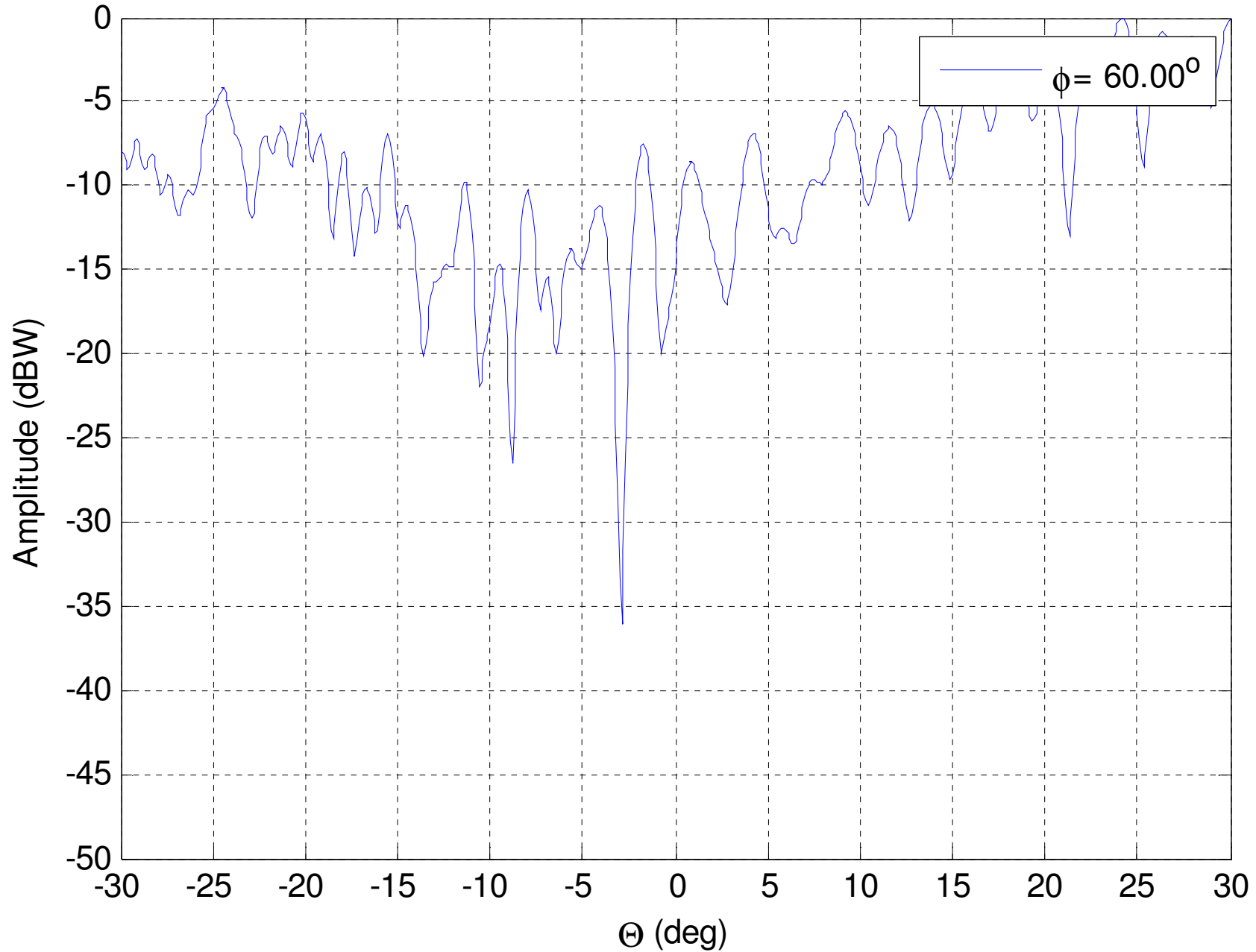
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

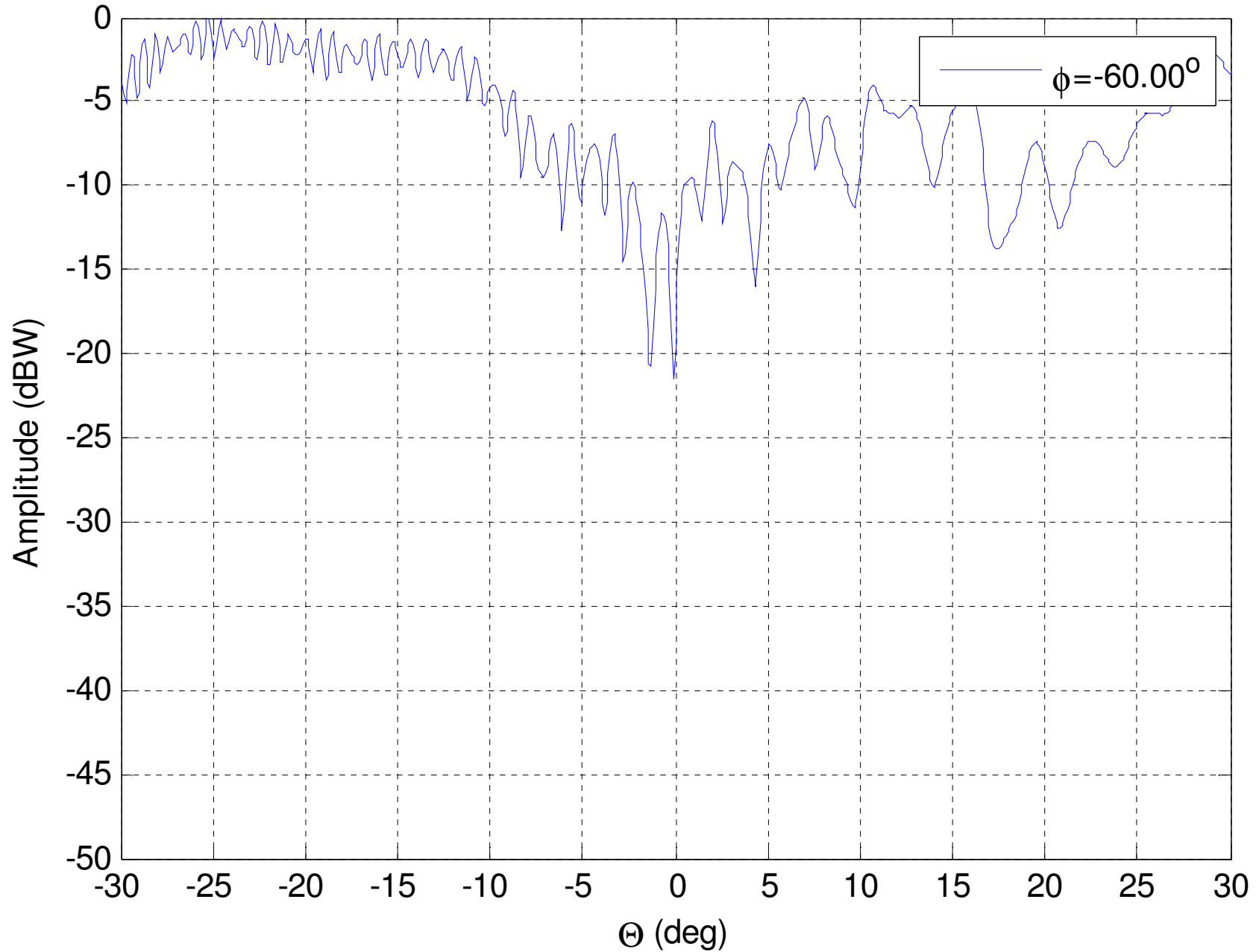
Input file: tx-17.5-rhcp-60.cut, Peak: -10.94 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

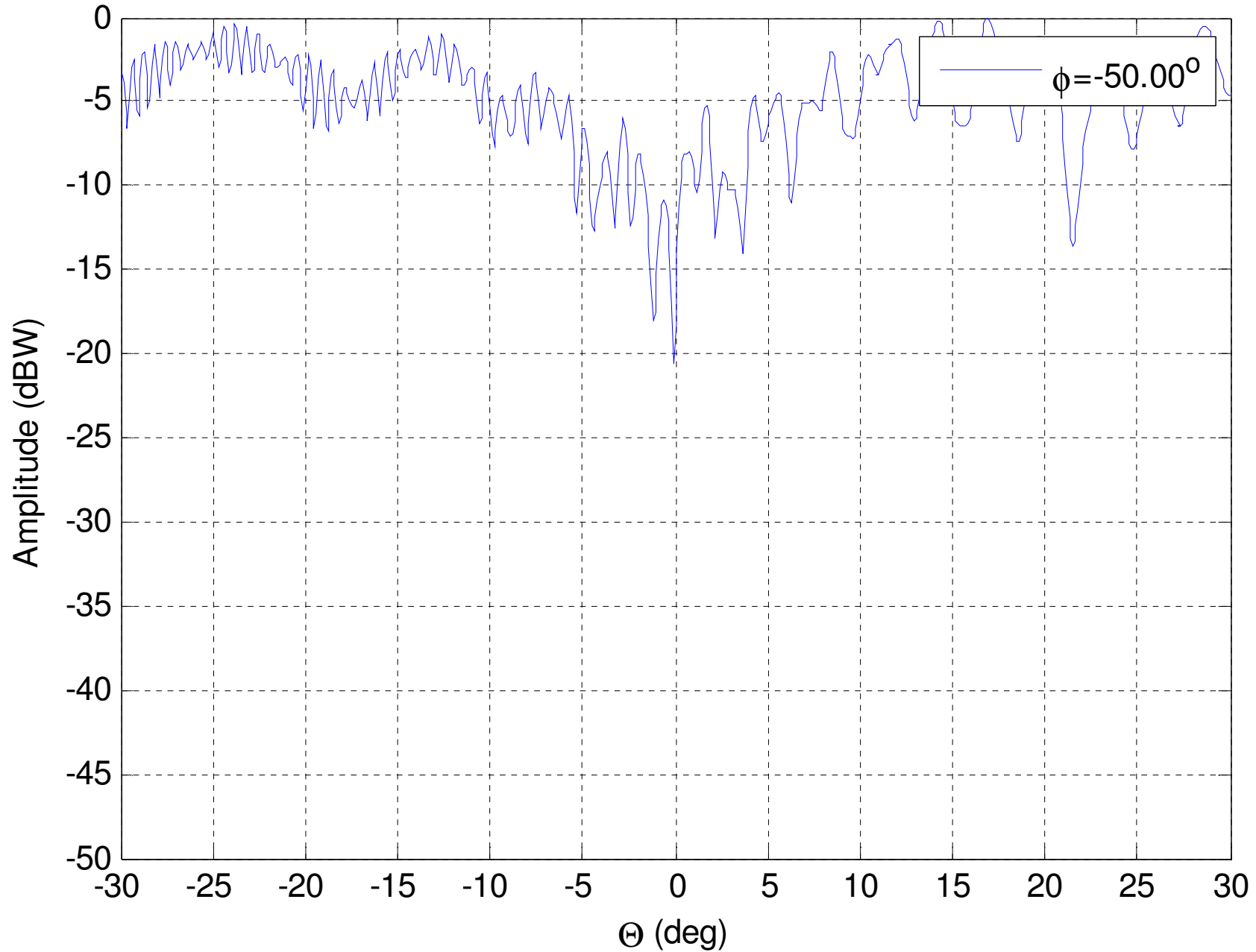
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -11.04 dBW, Date: 14-Dec-2011



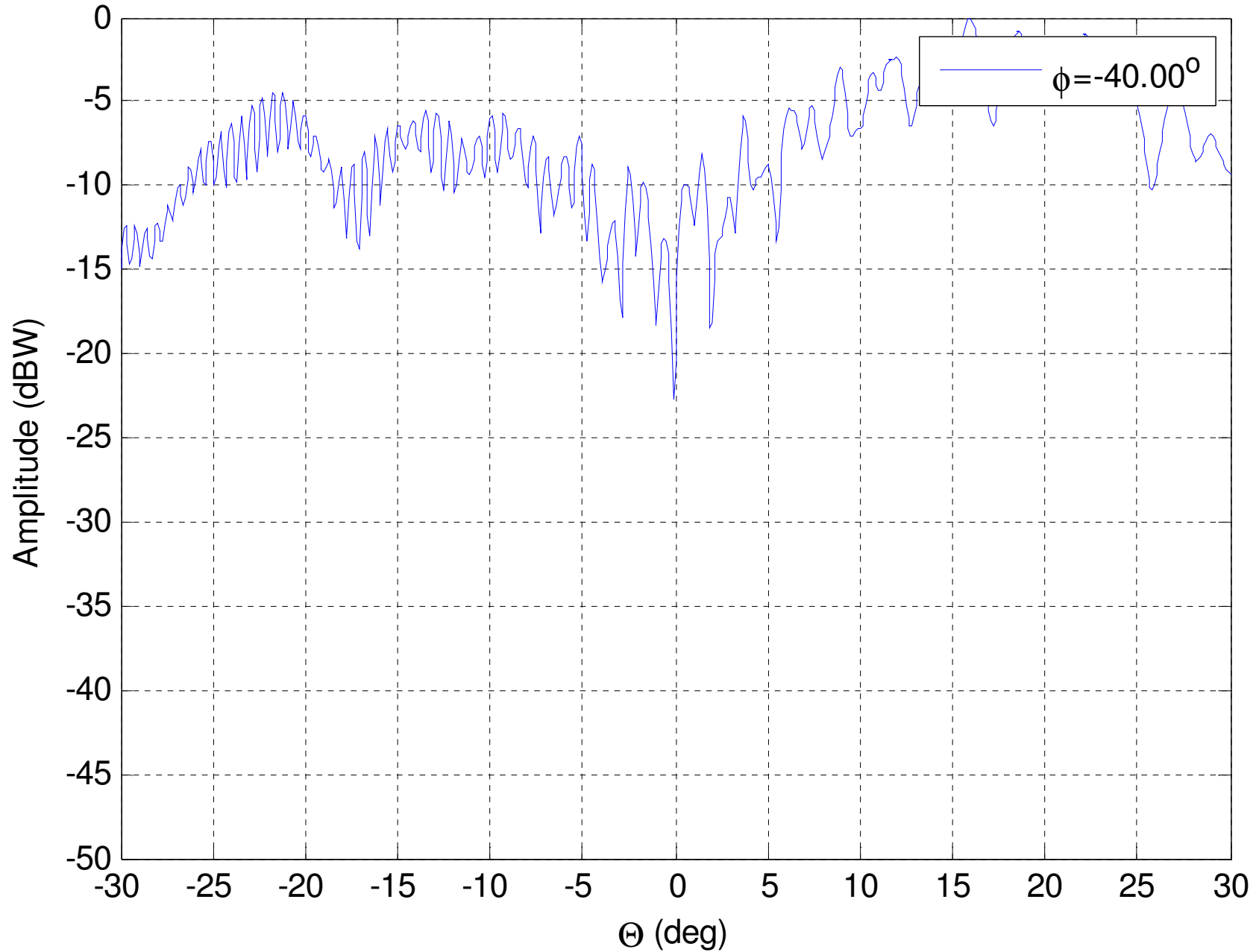
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -12.18 dBW, Date: 14-Dec-2011



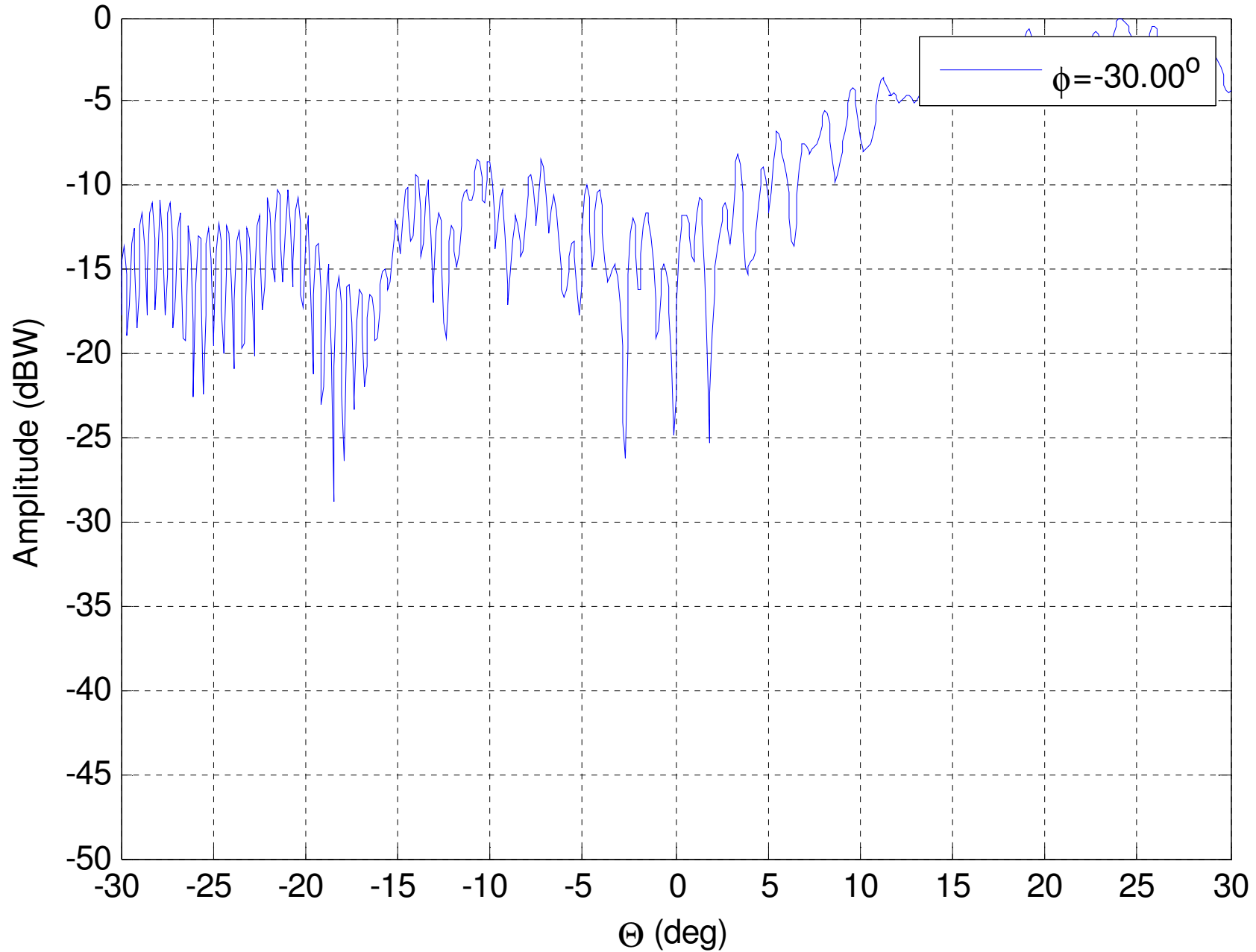
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.02 dBW, Date: 14-Dec-2011



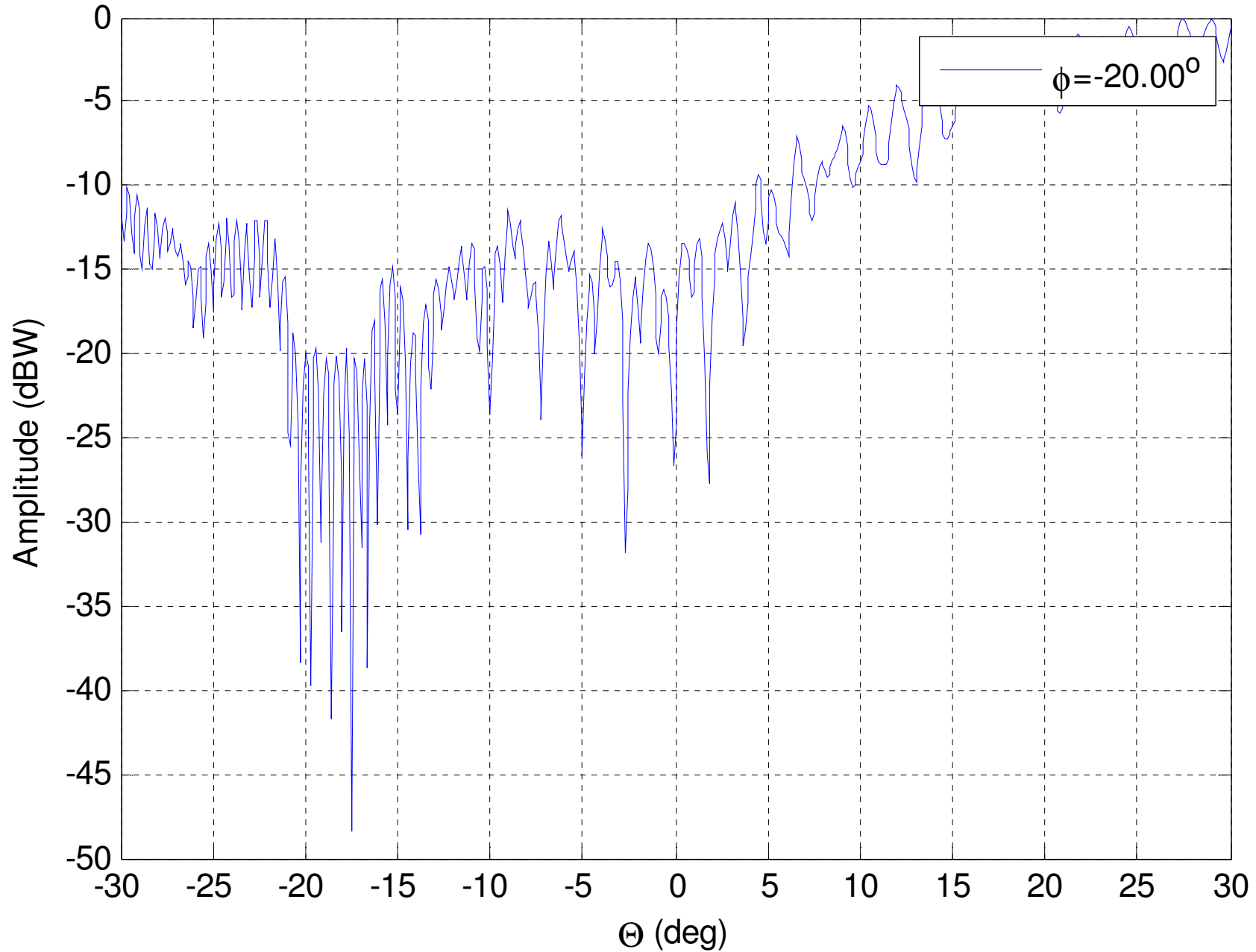
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -8.08 dBW, Date: 14-Dec-2011



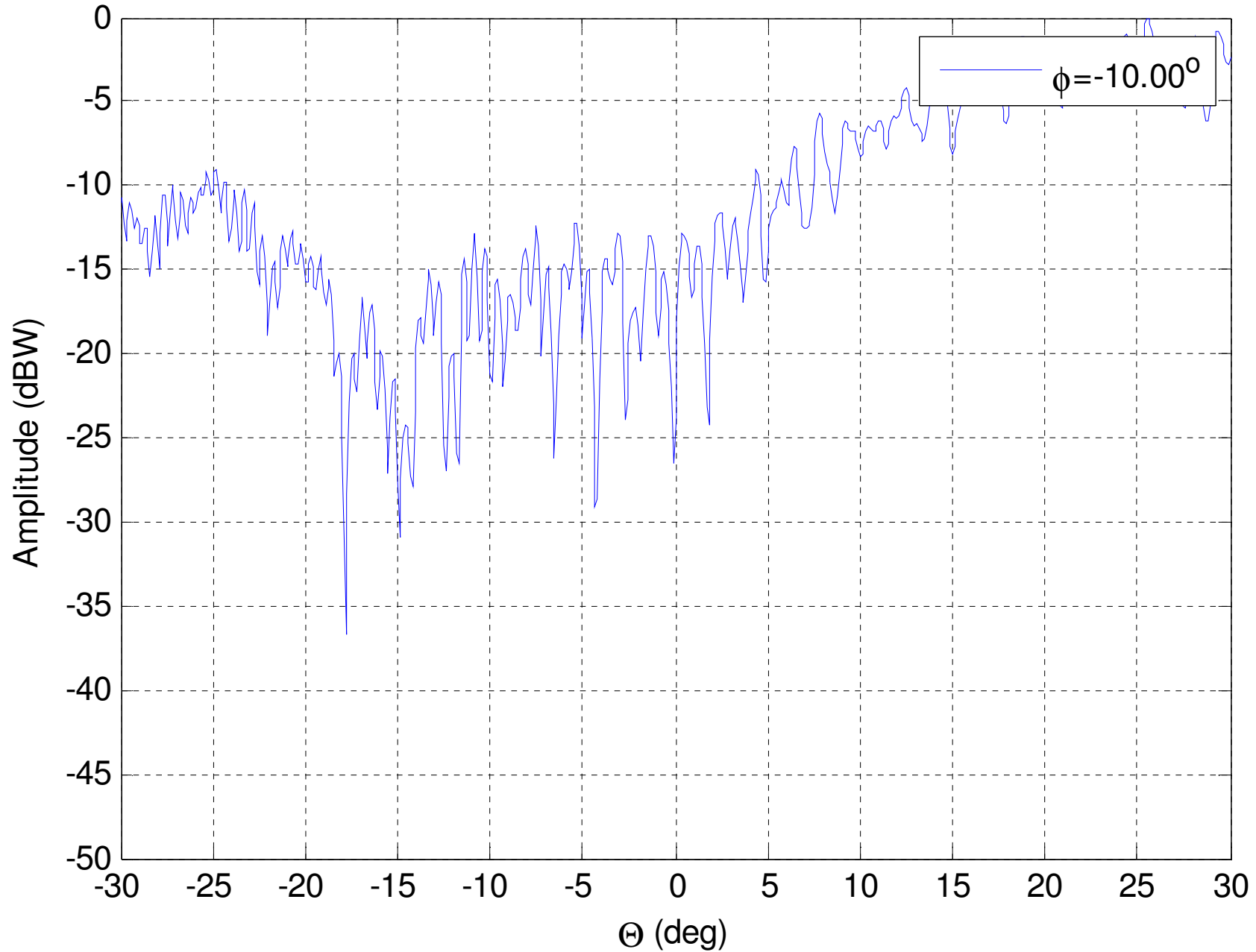
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -6.26 dBW, Date: 14-Dec-2011



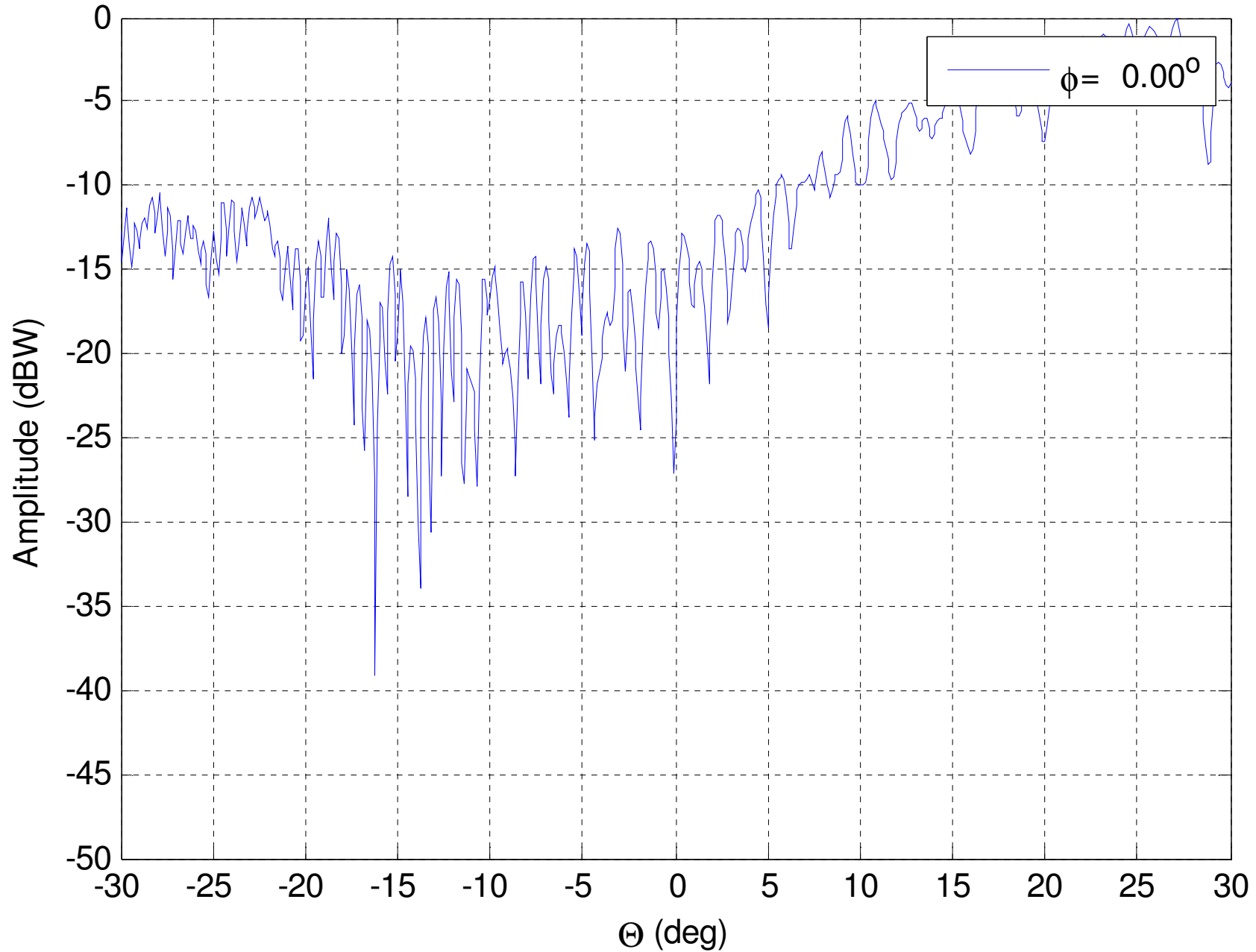
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -6.71 dBW, Date: 14-Dec-2011



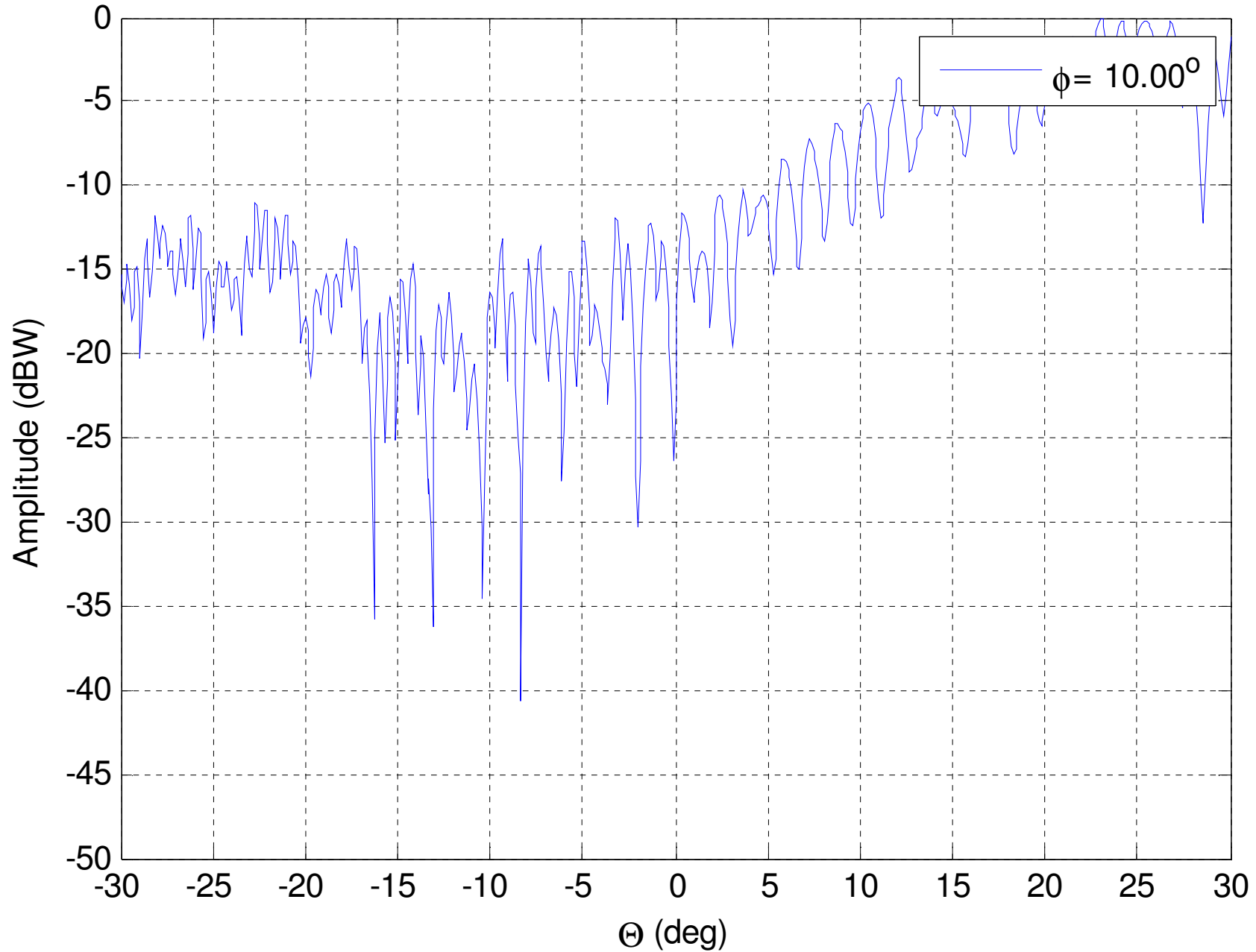
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -6.51 dBW, Date: 14-Dec-2011



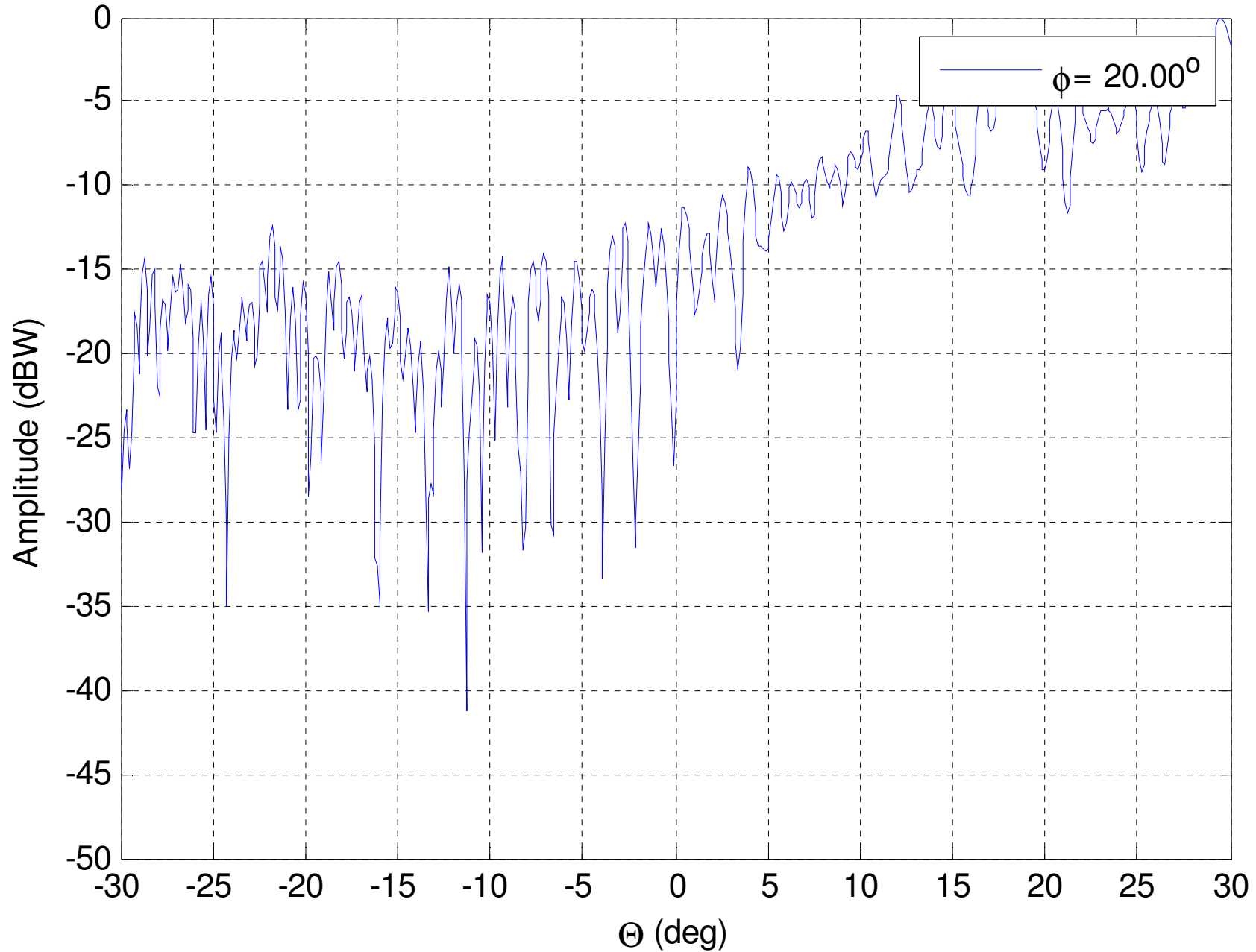
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -7.71 dBW, Date: 14-Dec-2011



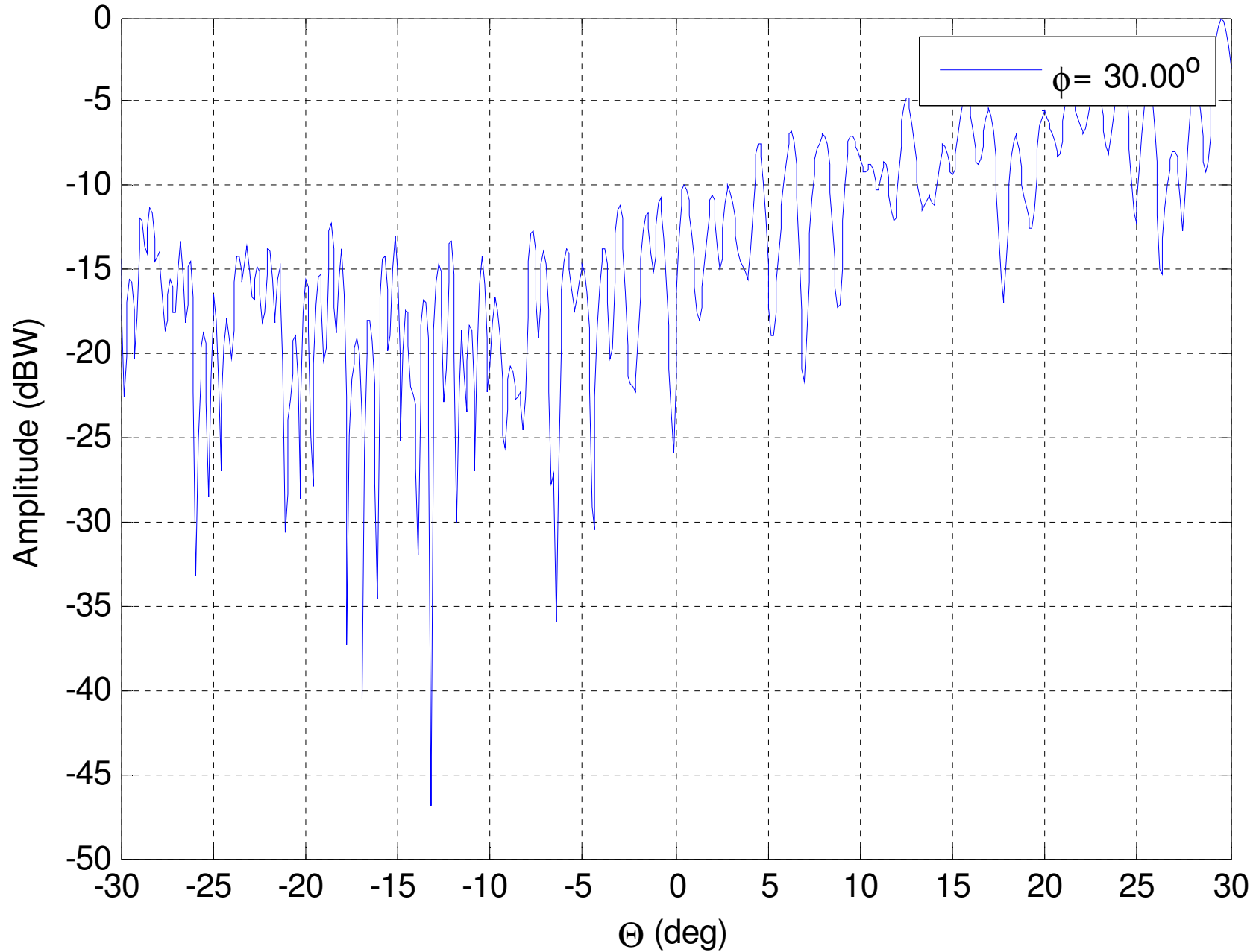
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.92 dBW, Date: 14-Dec-2011



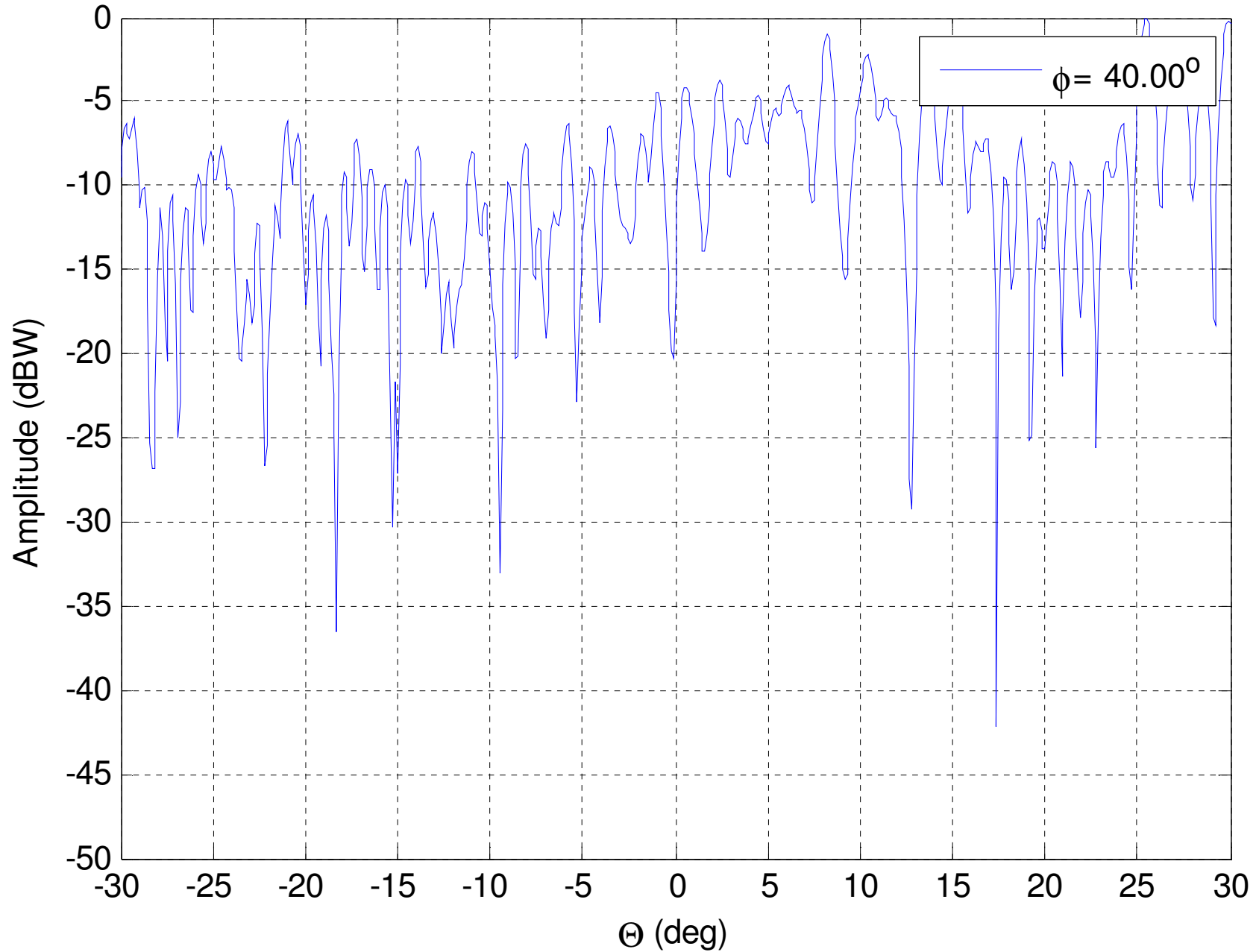
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -9.13 dBW, Date: 14-Dec-2011



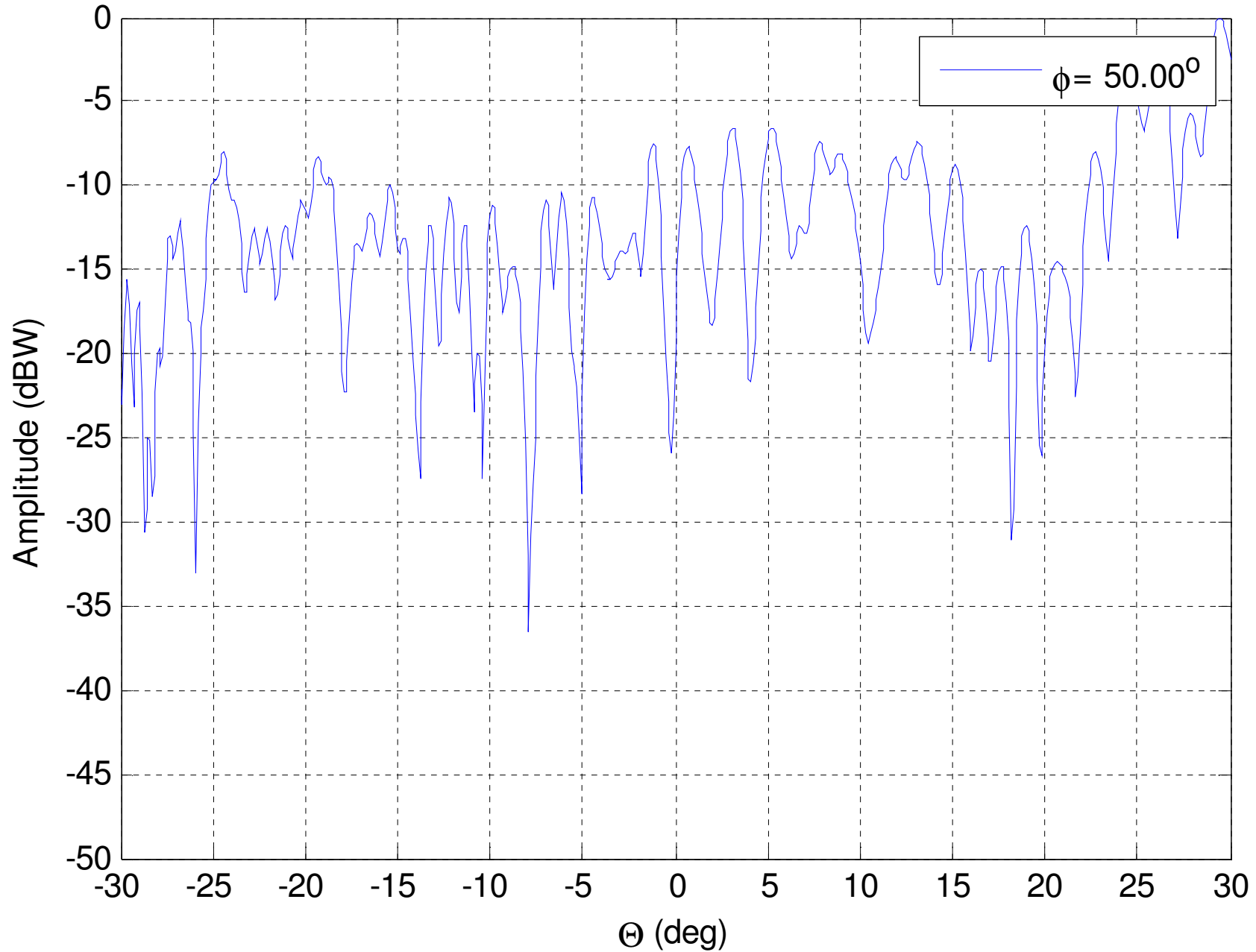
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -14.94 dBW, Date: 14-Dec-2011



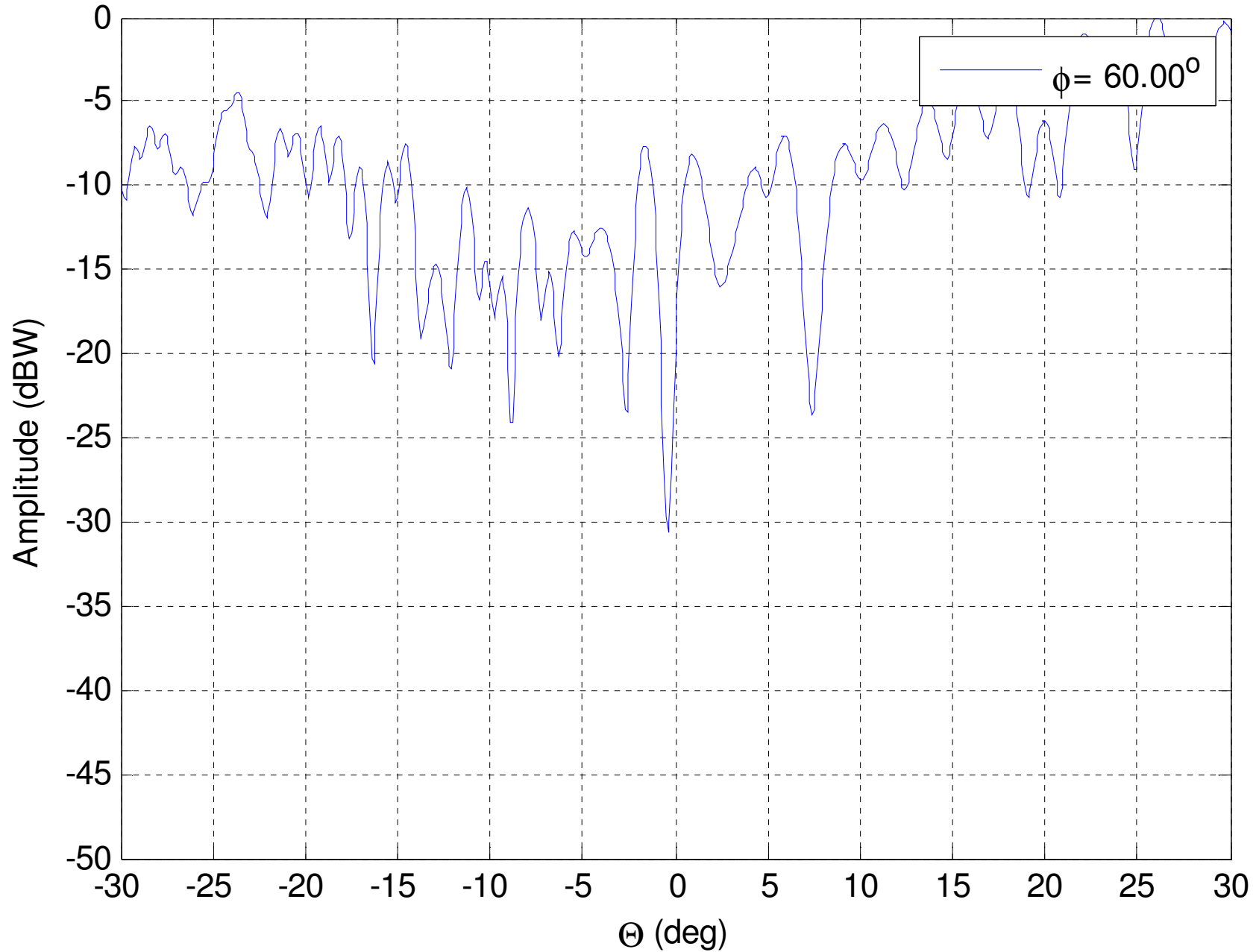
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.28 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

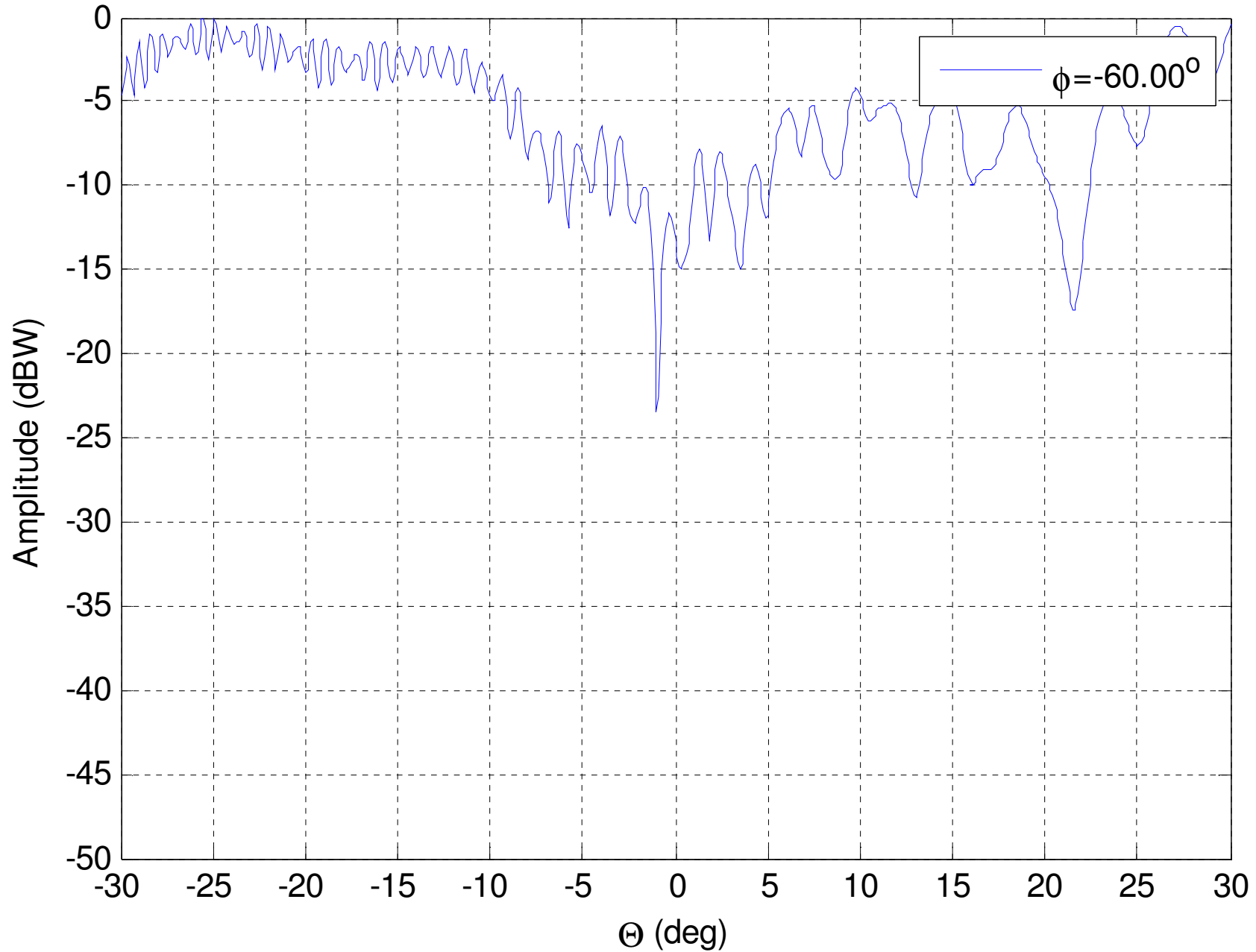
Input file: tx-17.5-lhcp-60.cut, Peak: -10.82 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

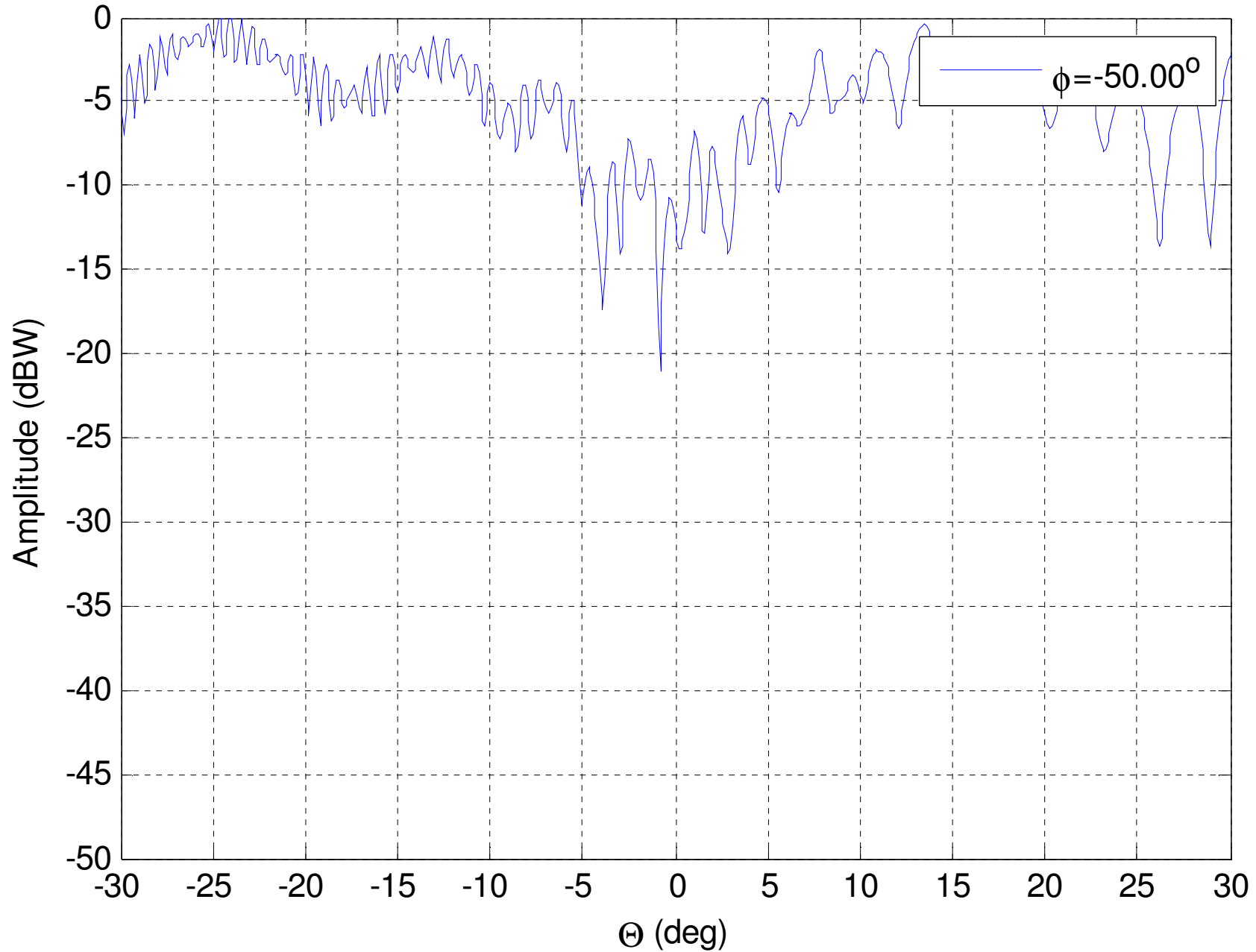
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.04 dBW, Date: 14-Dec-2011



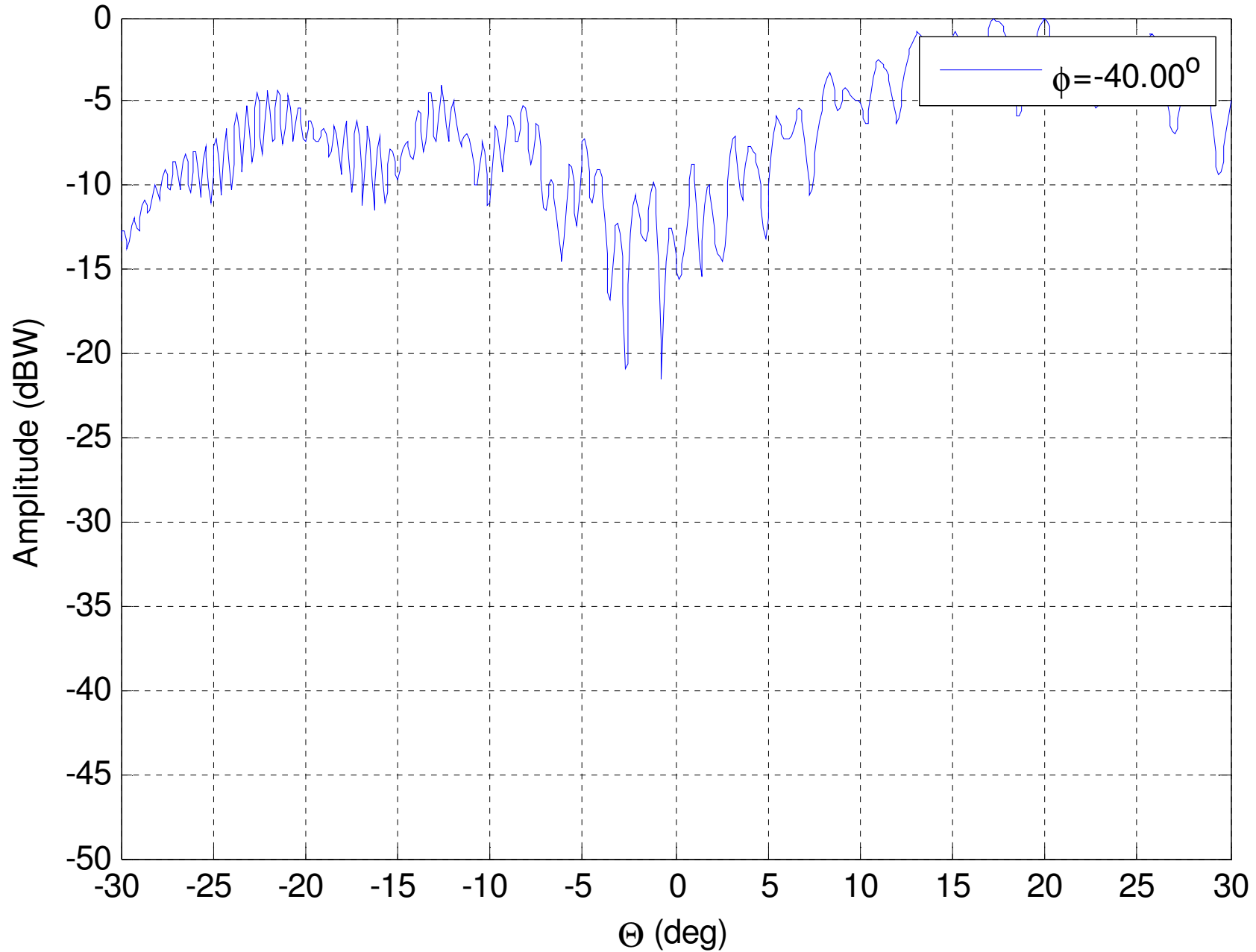
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.06 dBW, Date: 14-Dec-2011



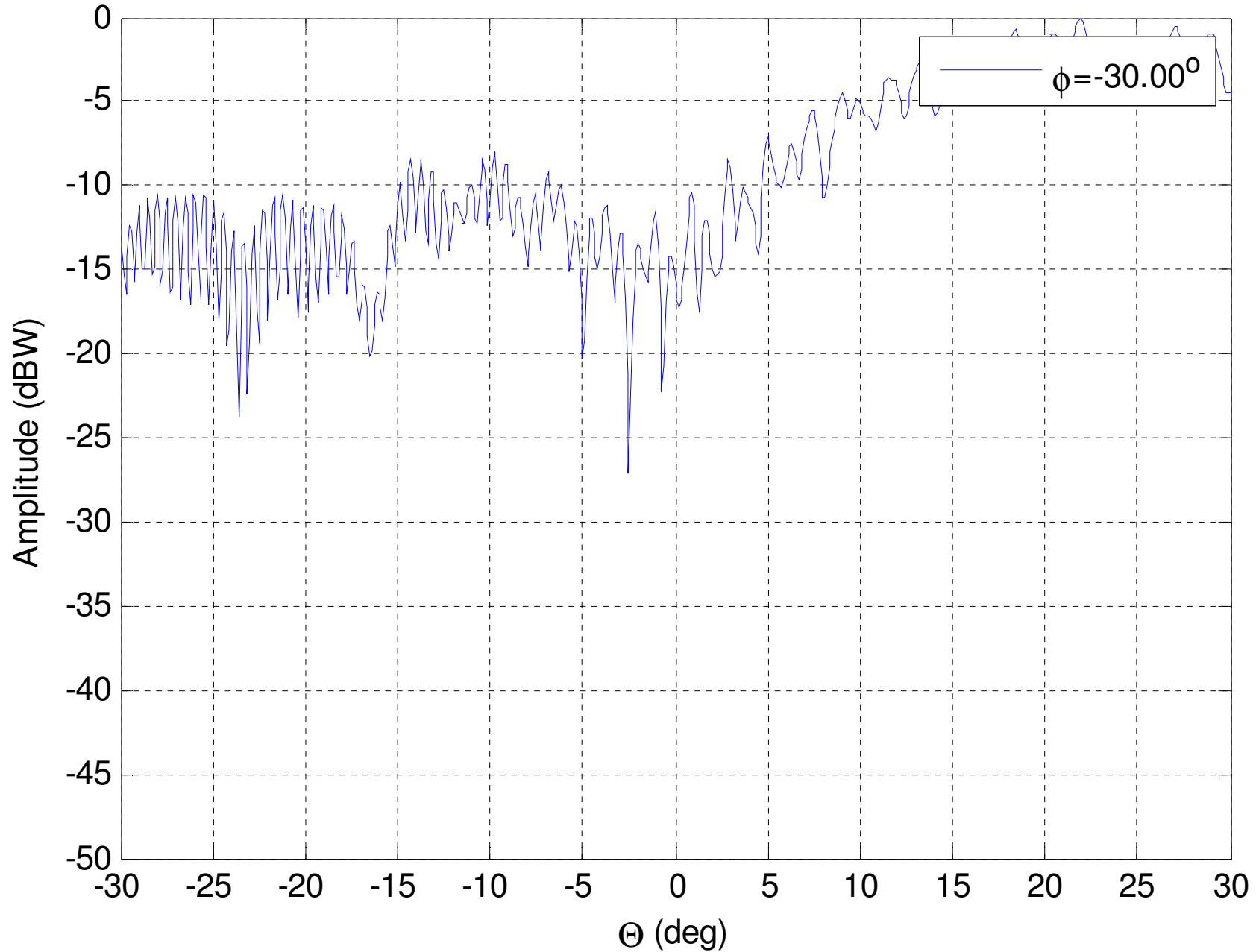
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -10.22 dBW, Date: 14-Dec-2011



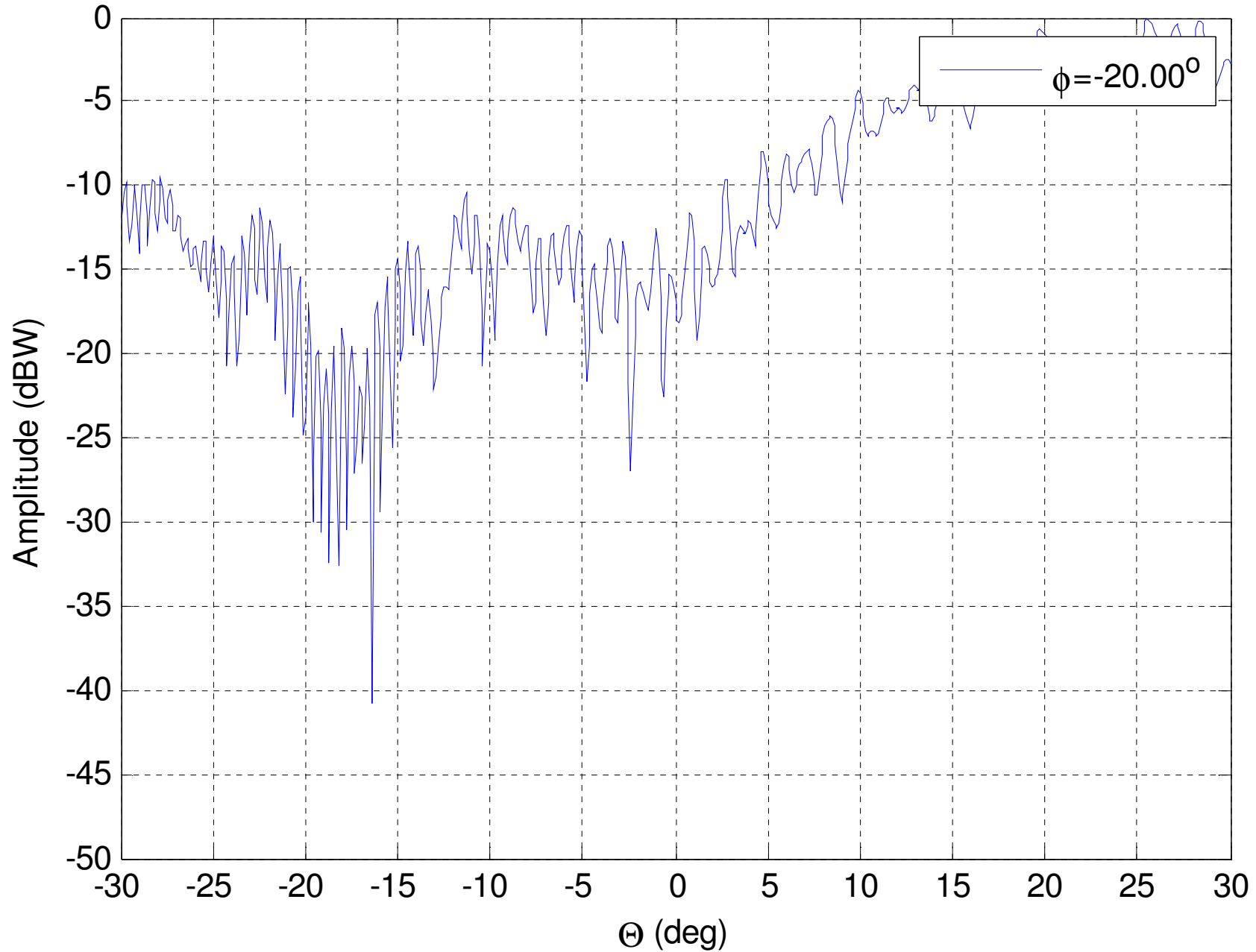
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -8.52 dBW, Date: 14-Dec-2011



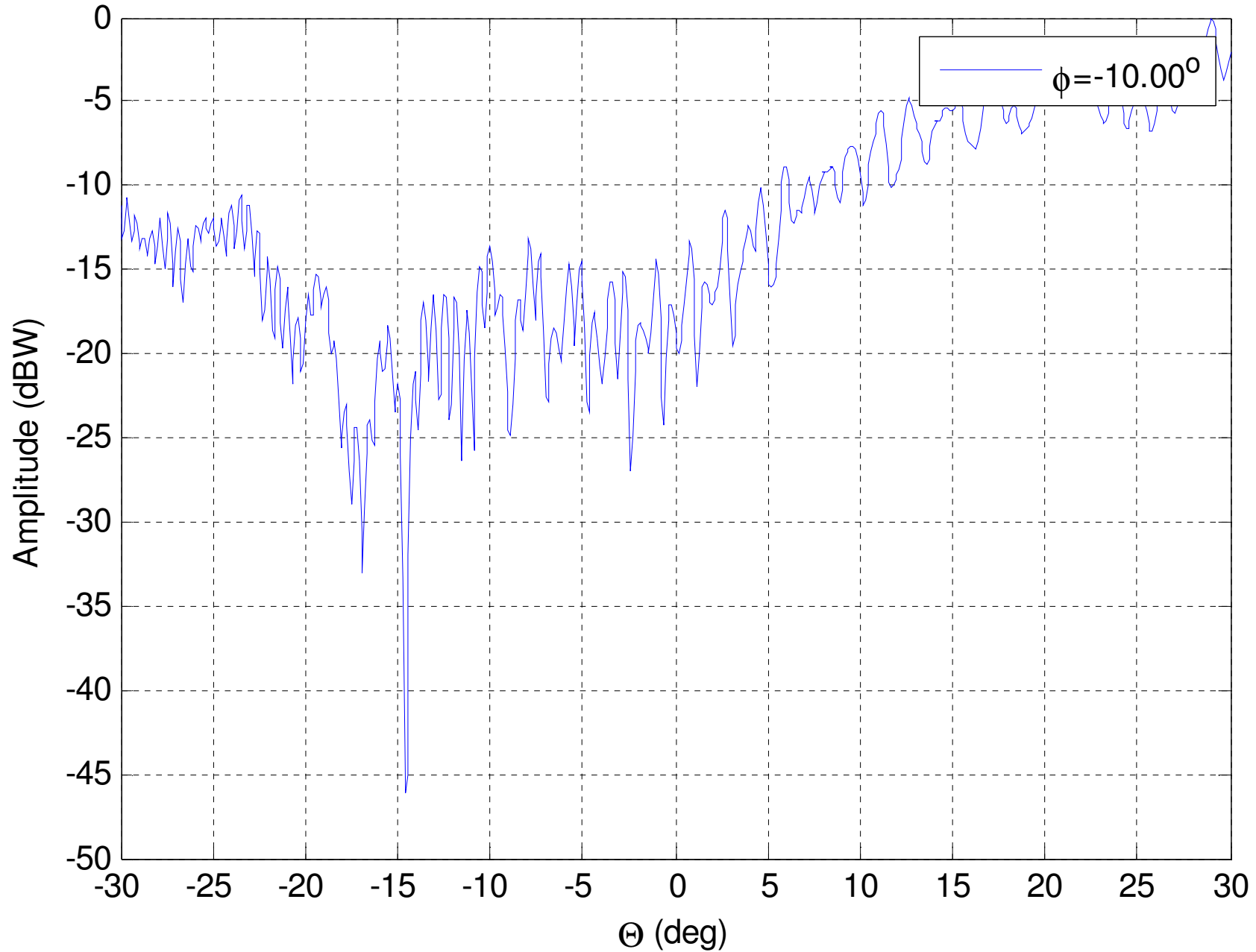
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -7.39 dBW, Date: 14-Dec-2011



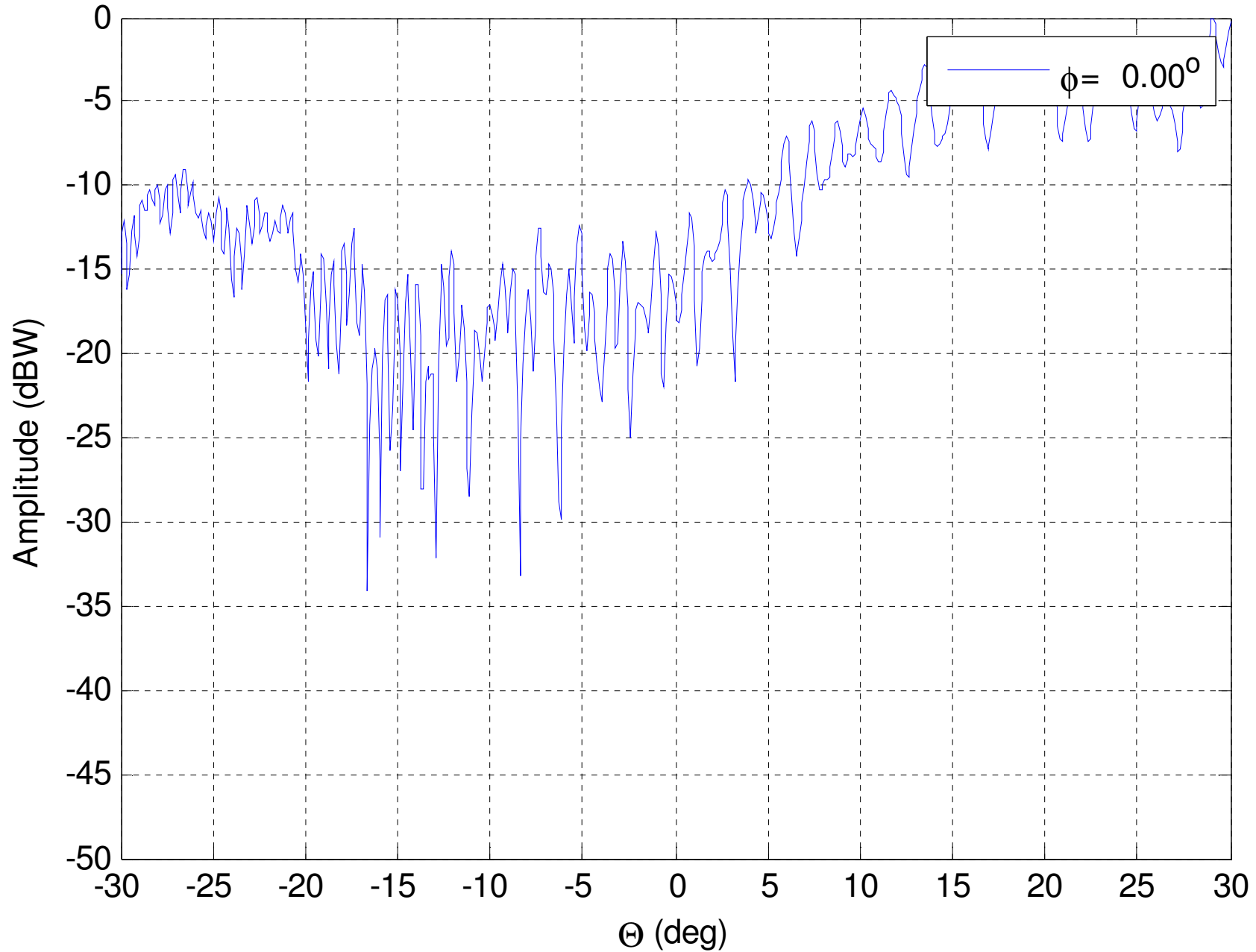
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -5.60 dBW, Date: 14-Dec-2011



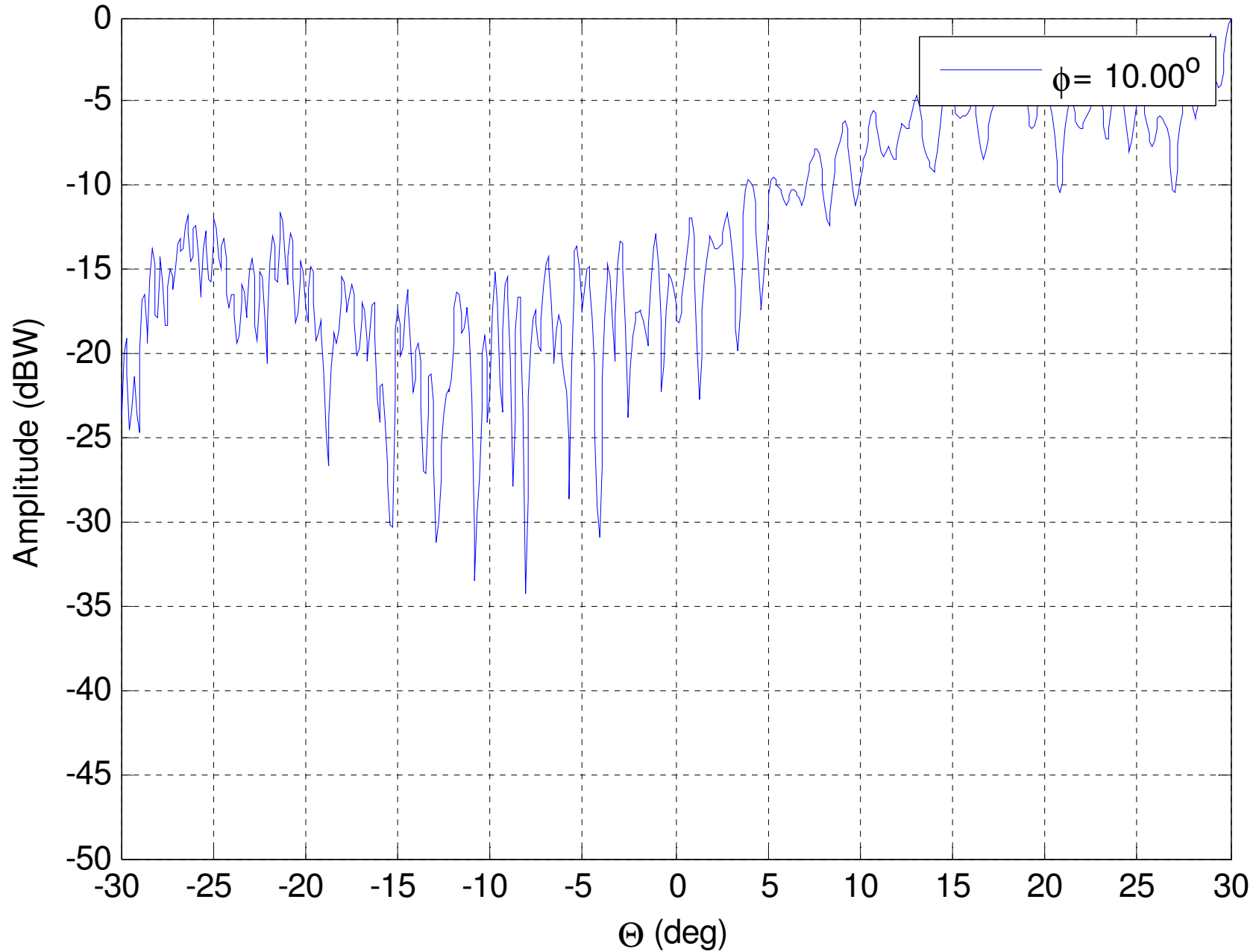
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -7.35 dBW, Date: 14-Dec-2011



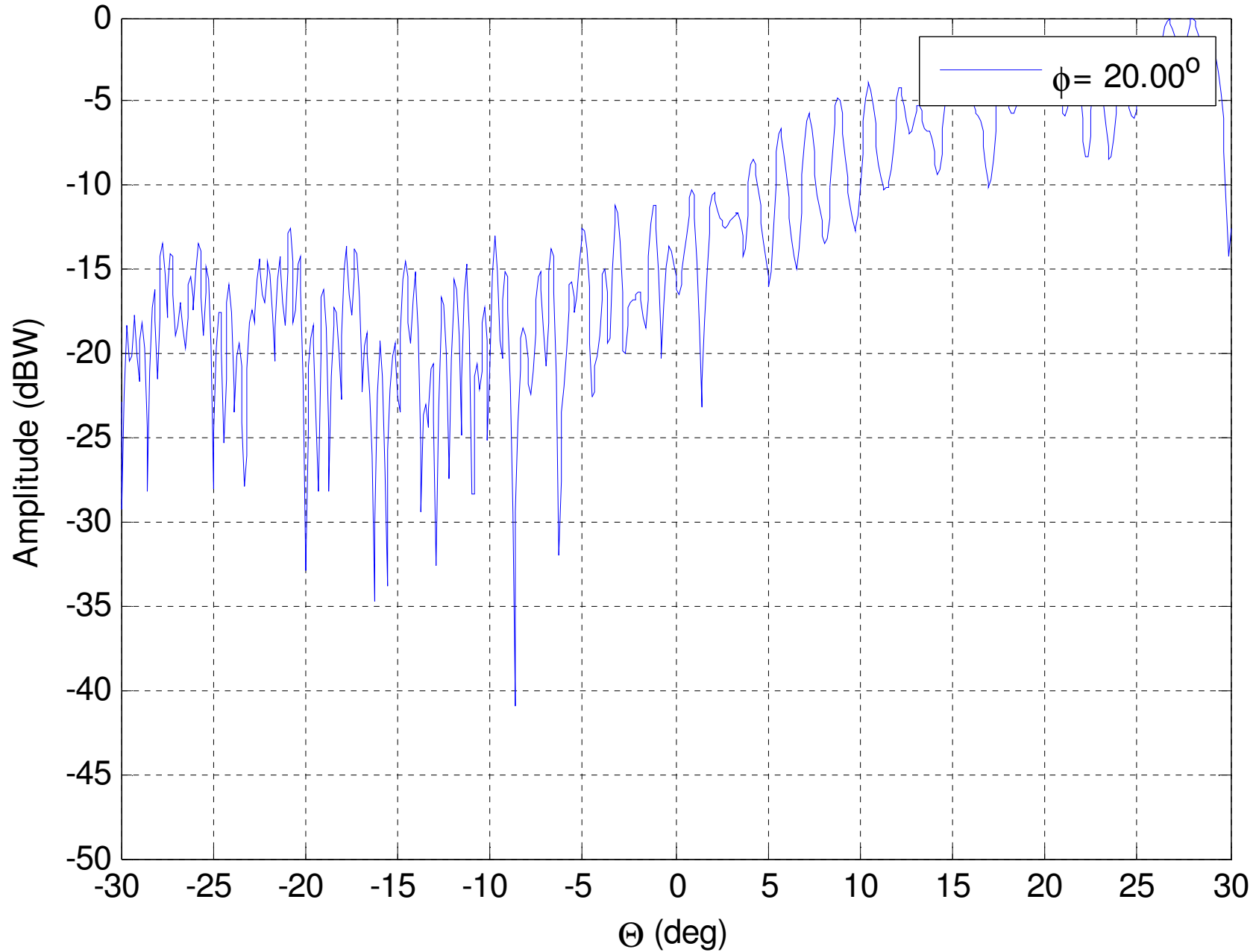
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.27 dBW, Date: 14-Dec-2011



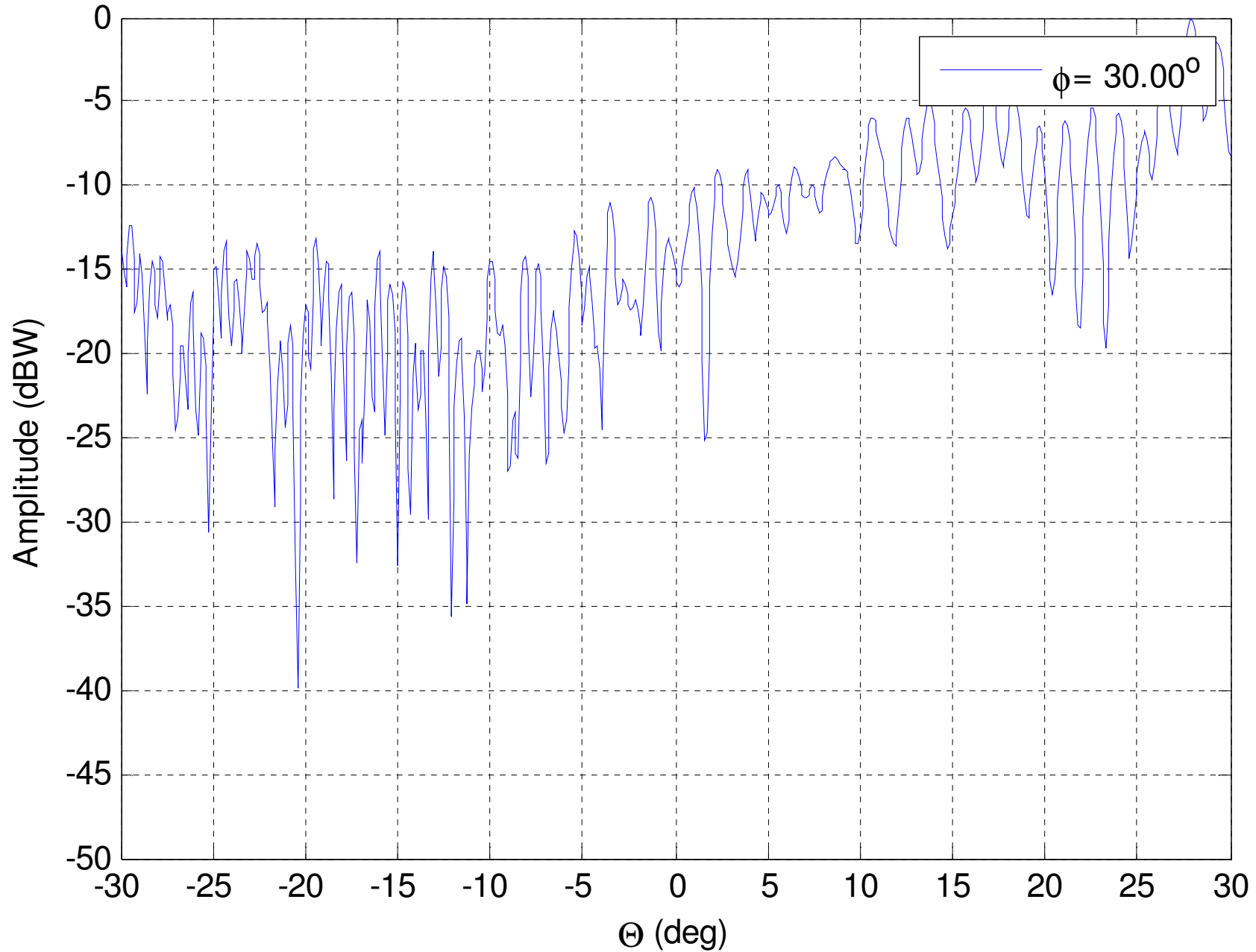
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.91 dBW, Date: 14-Dec-2011



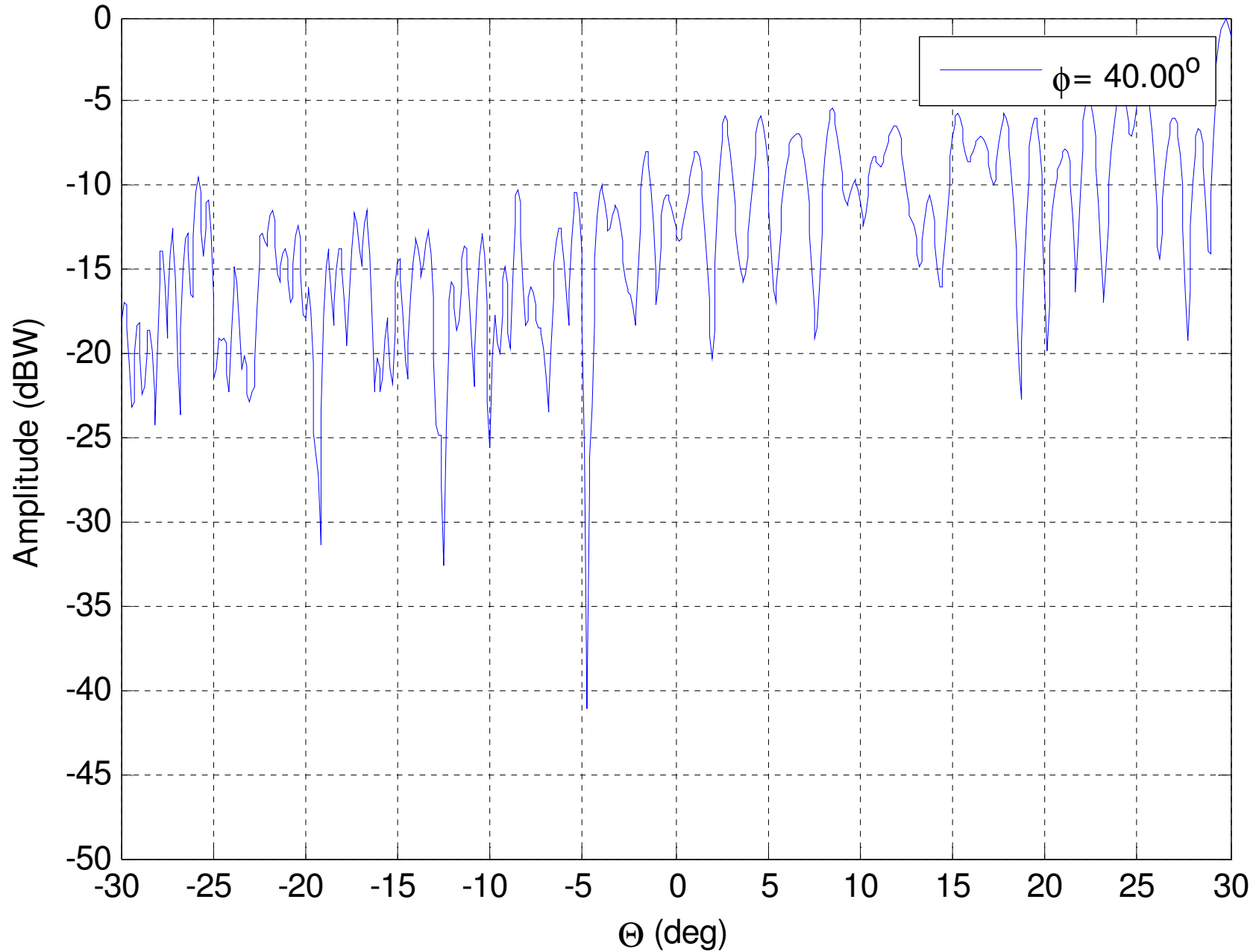
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.26 dBW, Date: 14-Dec-2011



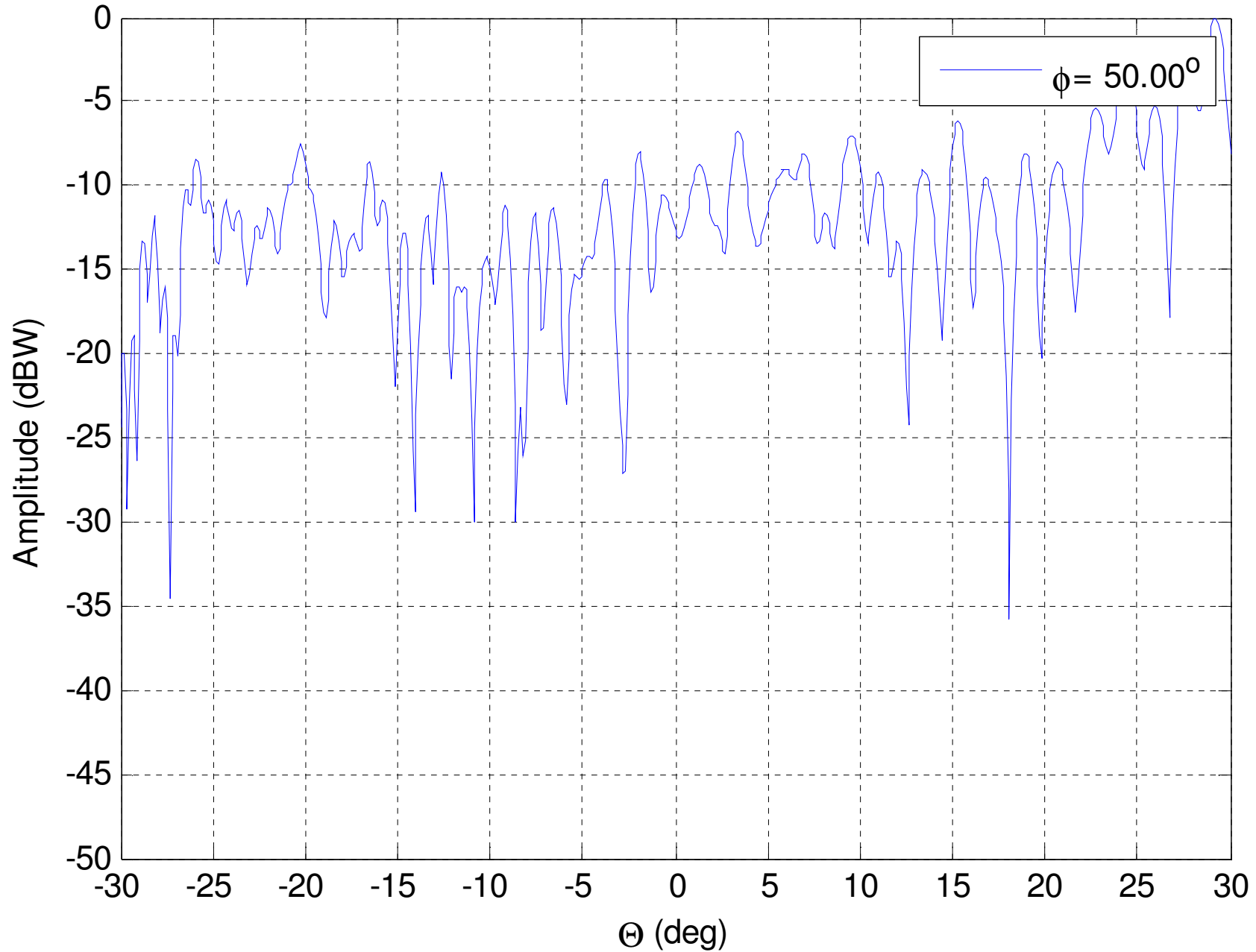
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.87 dBW, Date: 14-Dec-2011



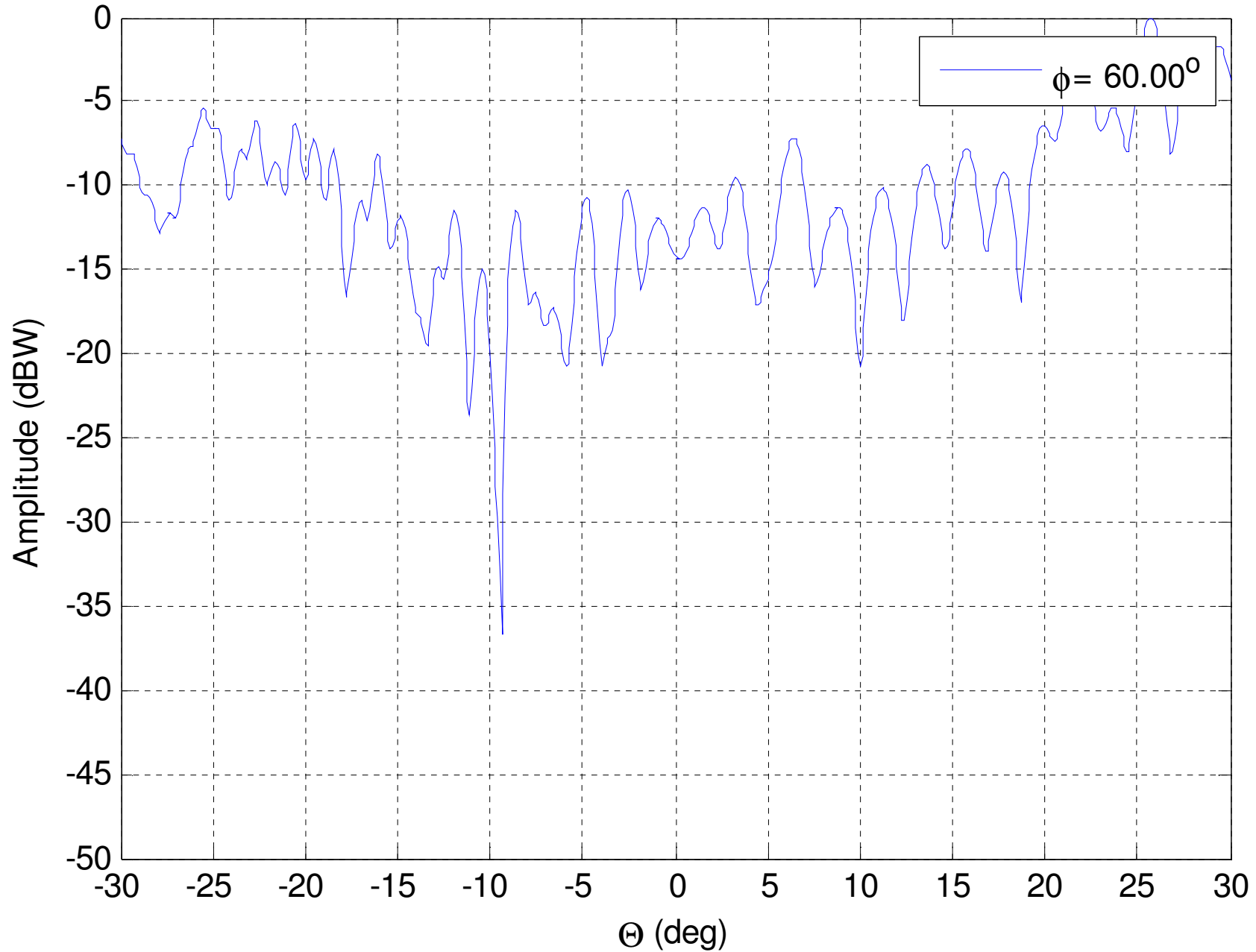
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.72 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

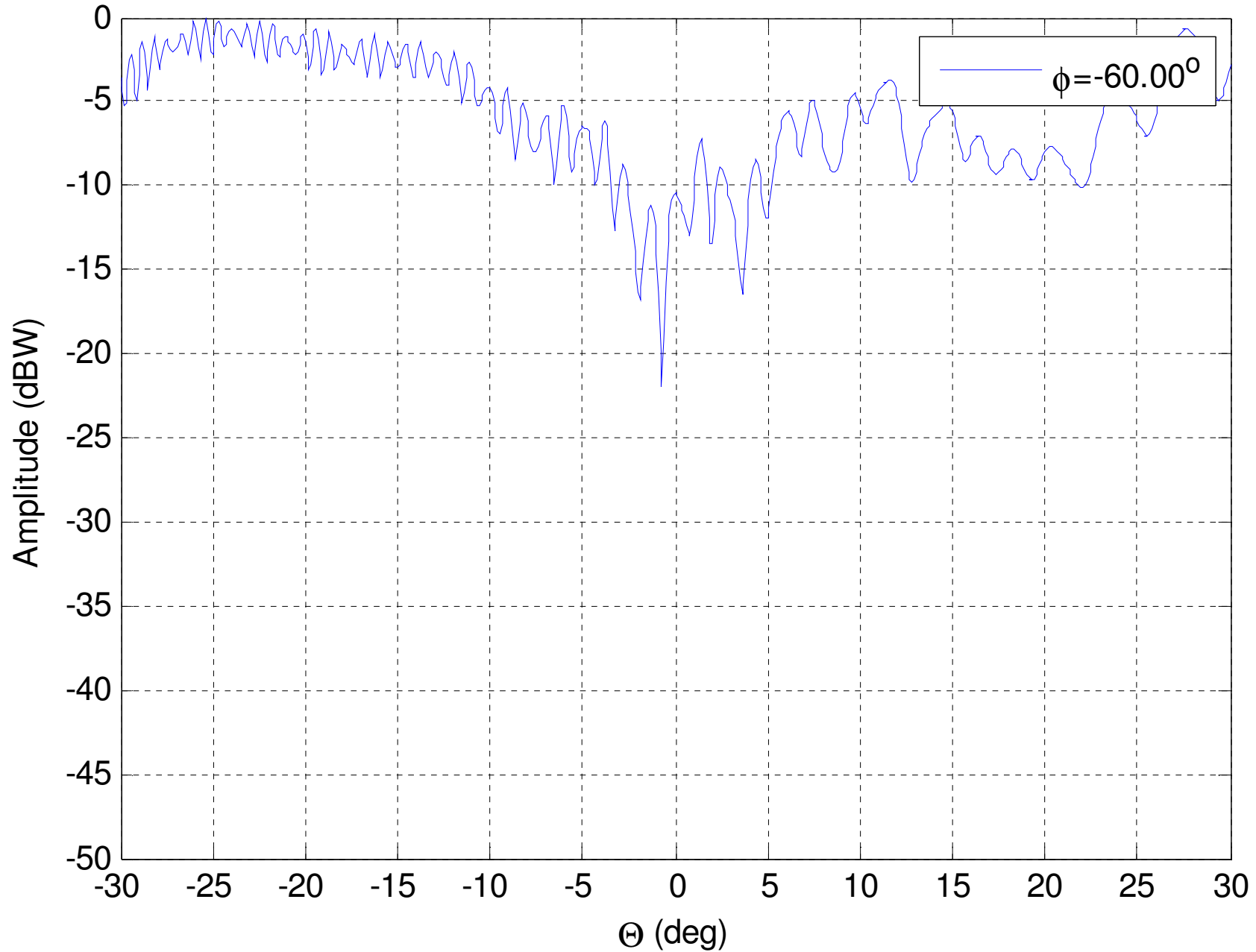
Input file: tx-17.7-rhcp-60.cut, Peak: -10.18 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

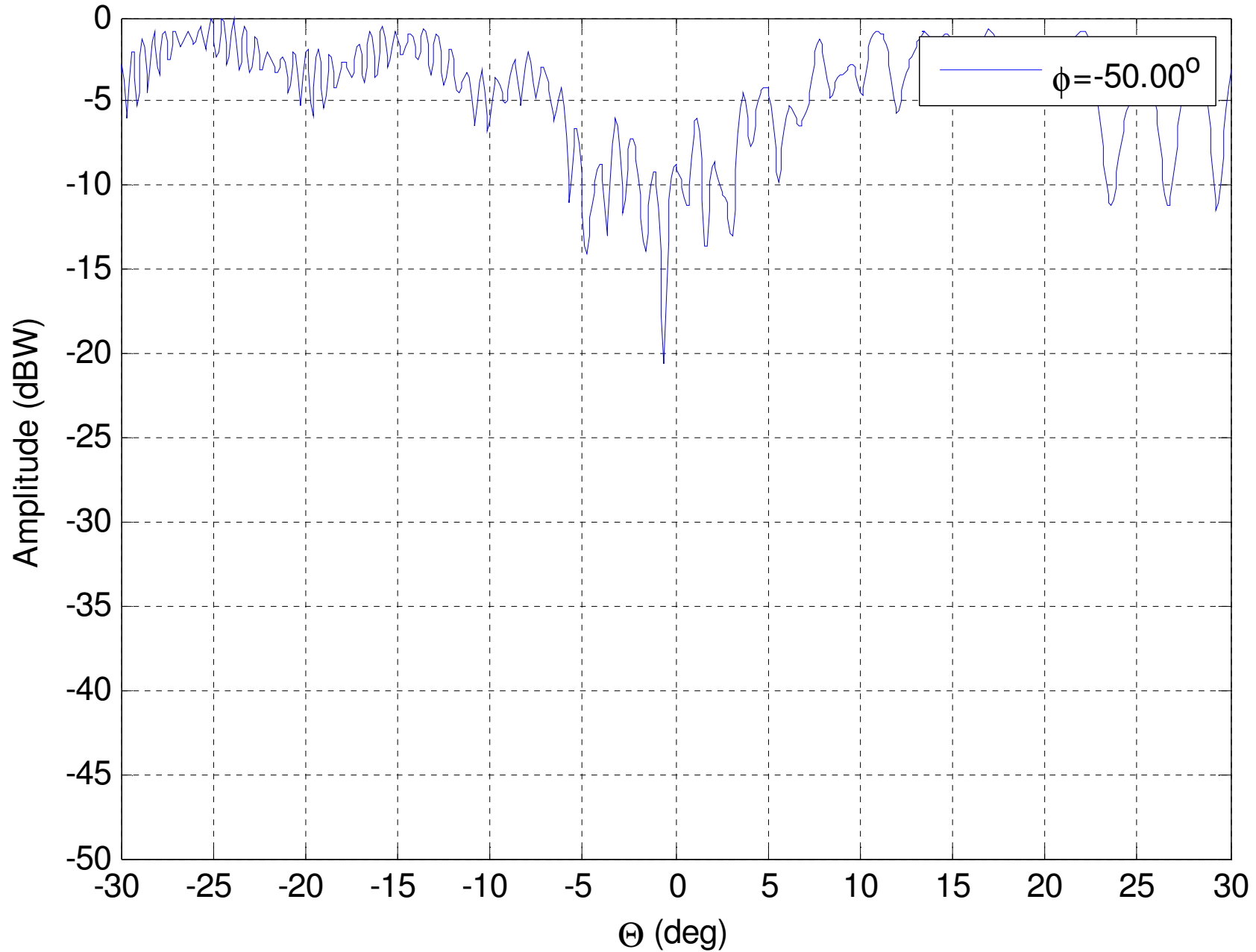
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.06 dBW, Date: 14-Dec-2011



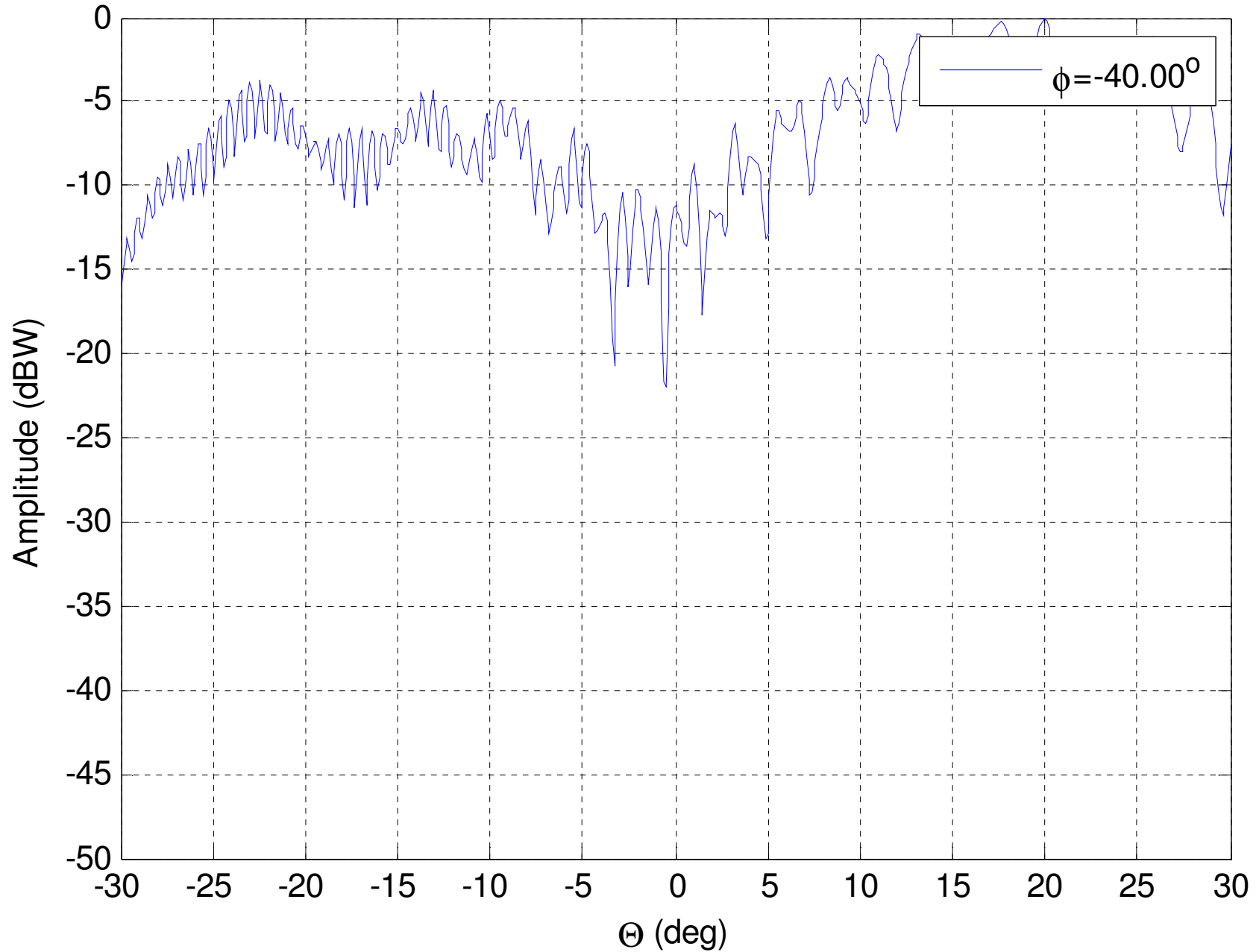
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -12.72 dBW, Date: 14-Dec-2011



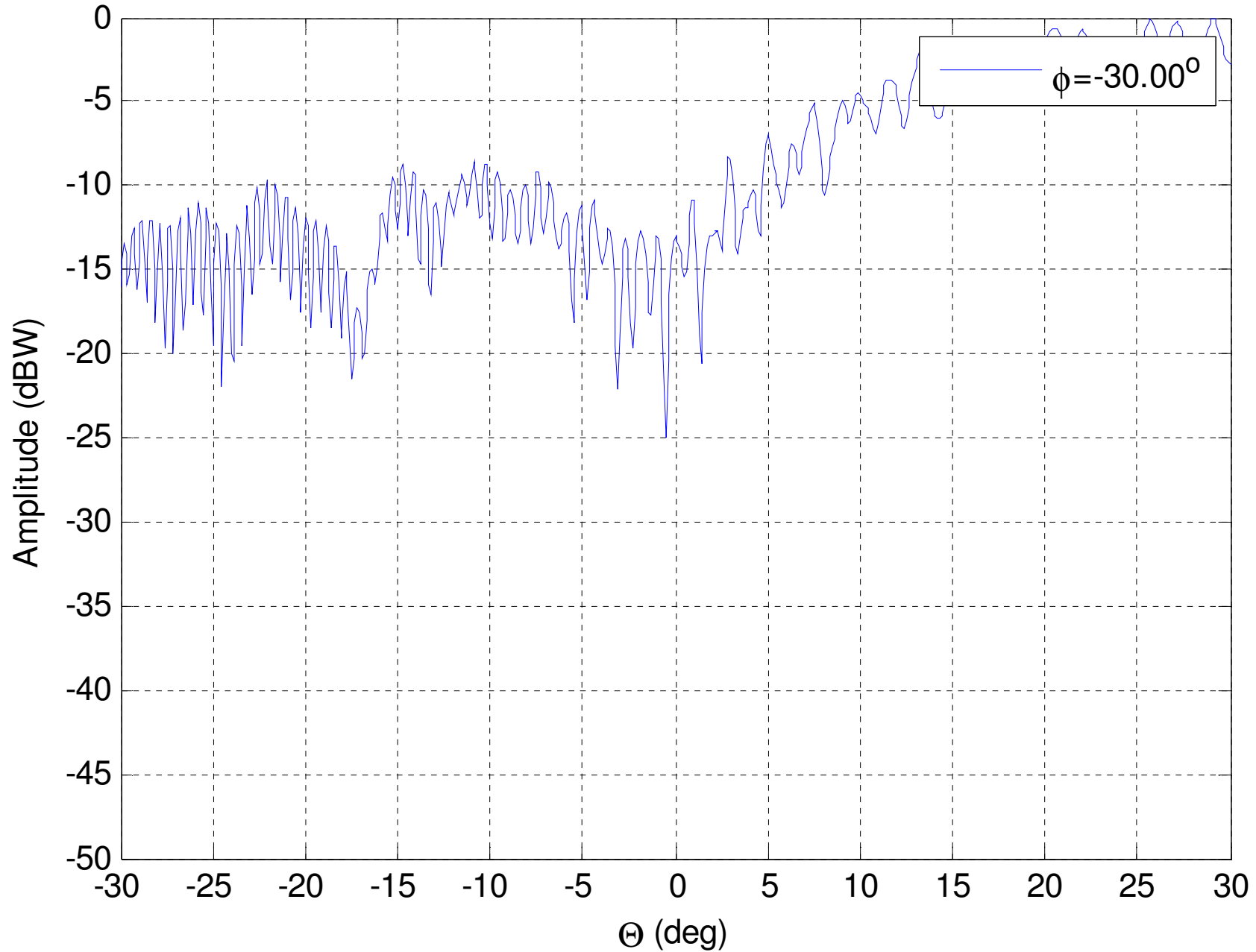
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.33 dBW, Date: 14-Dec-2011



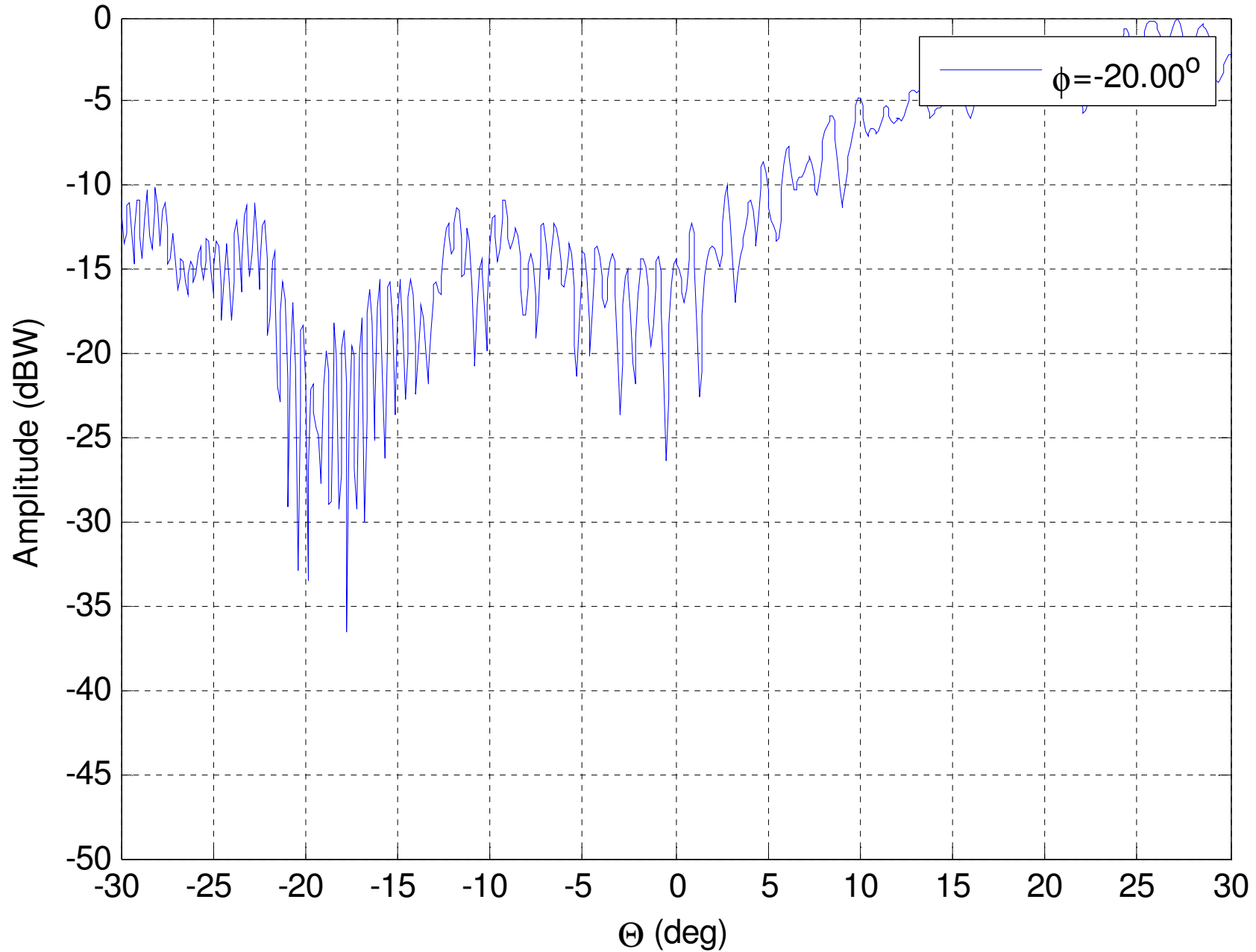
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -8.51 dBW, Date: 14-Dec-2011



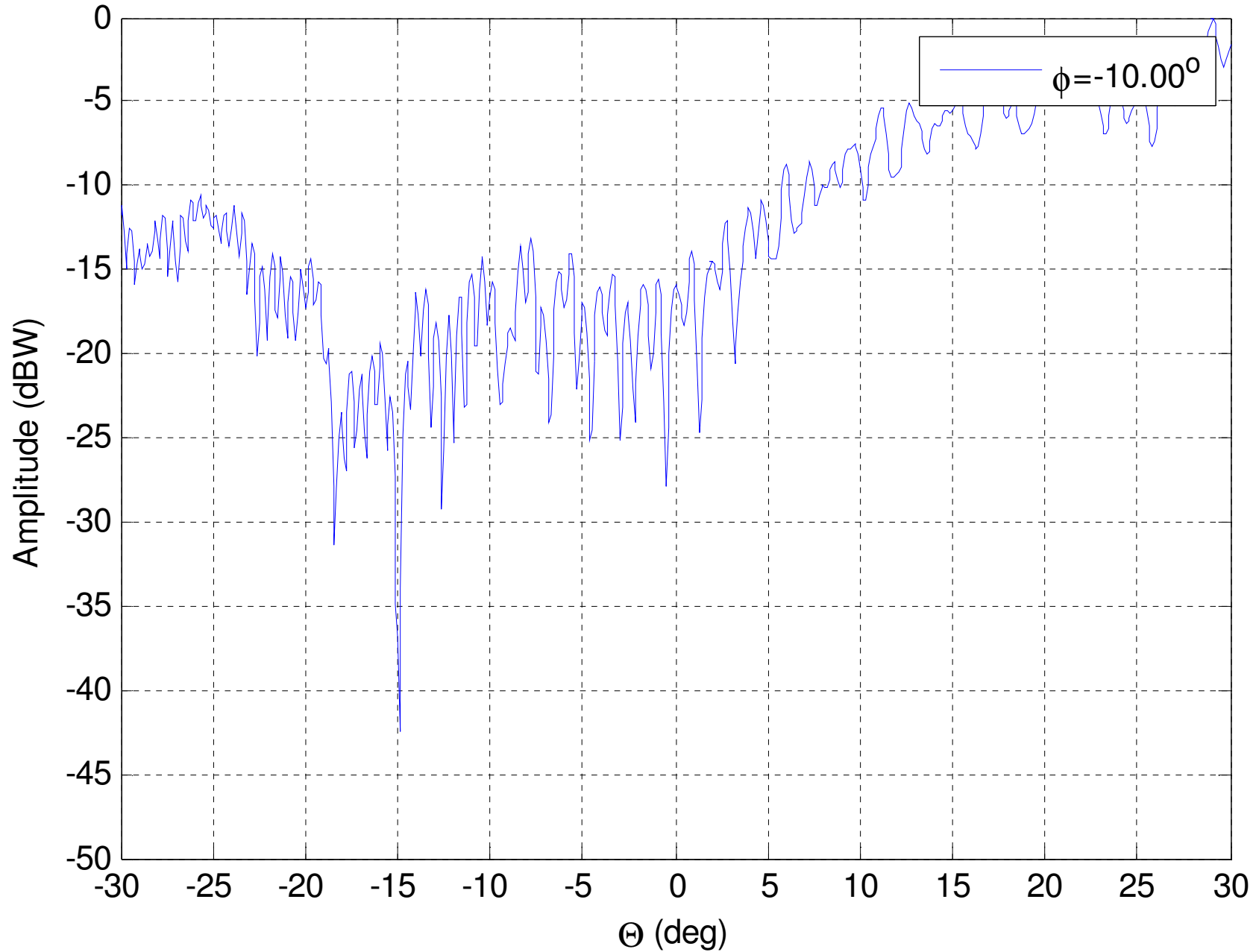
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -7.12 dBW, Date: 14-Dec-2011



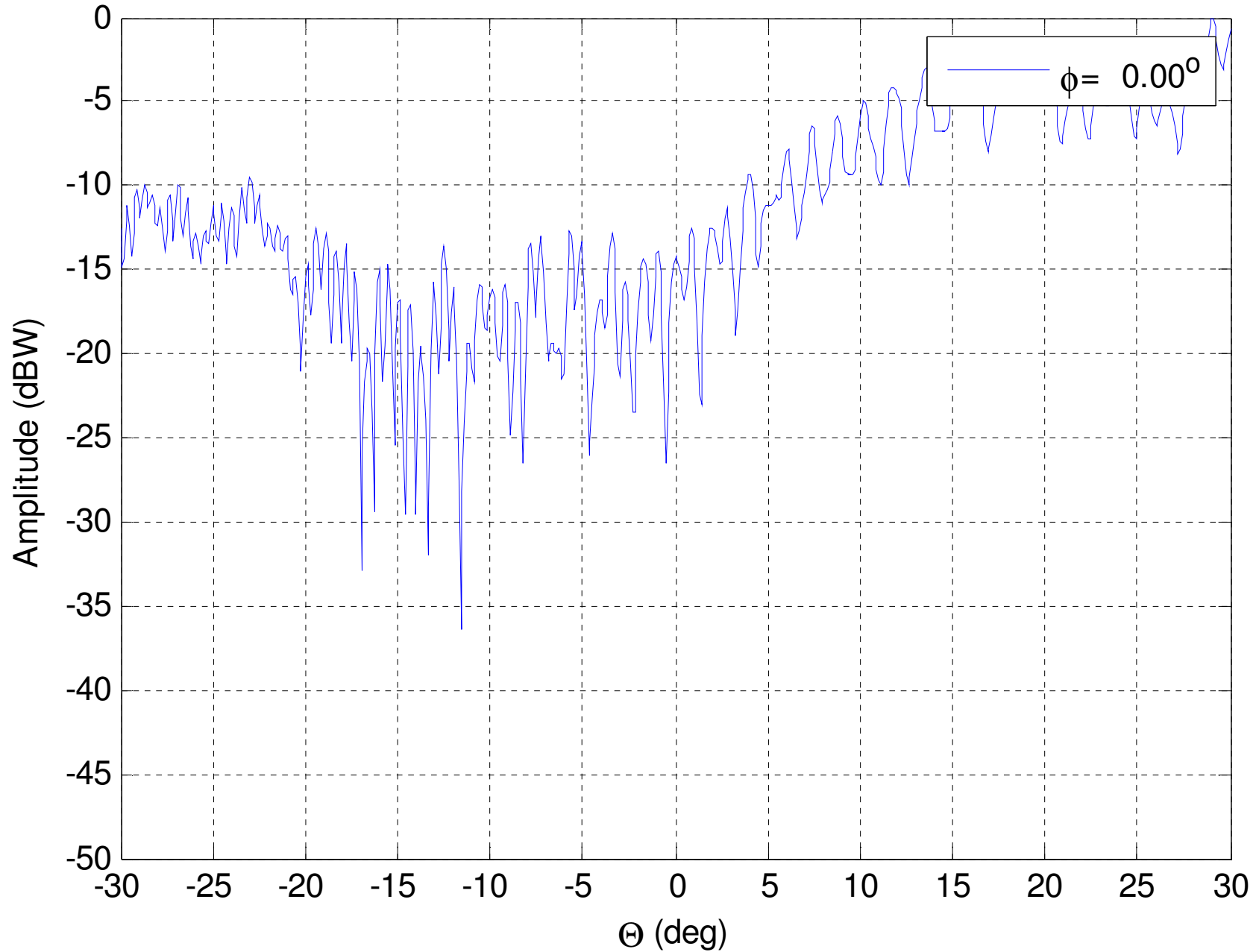
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -5.68 dBW, Date: 14-Dec-2011



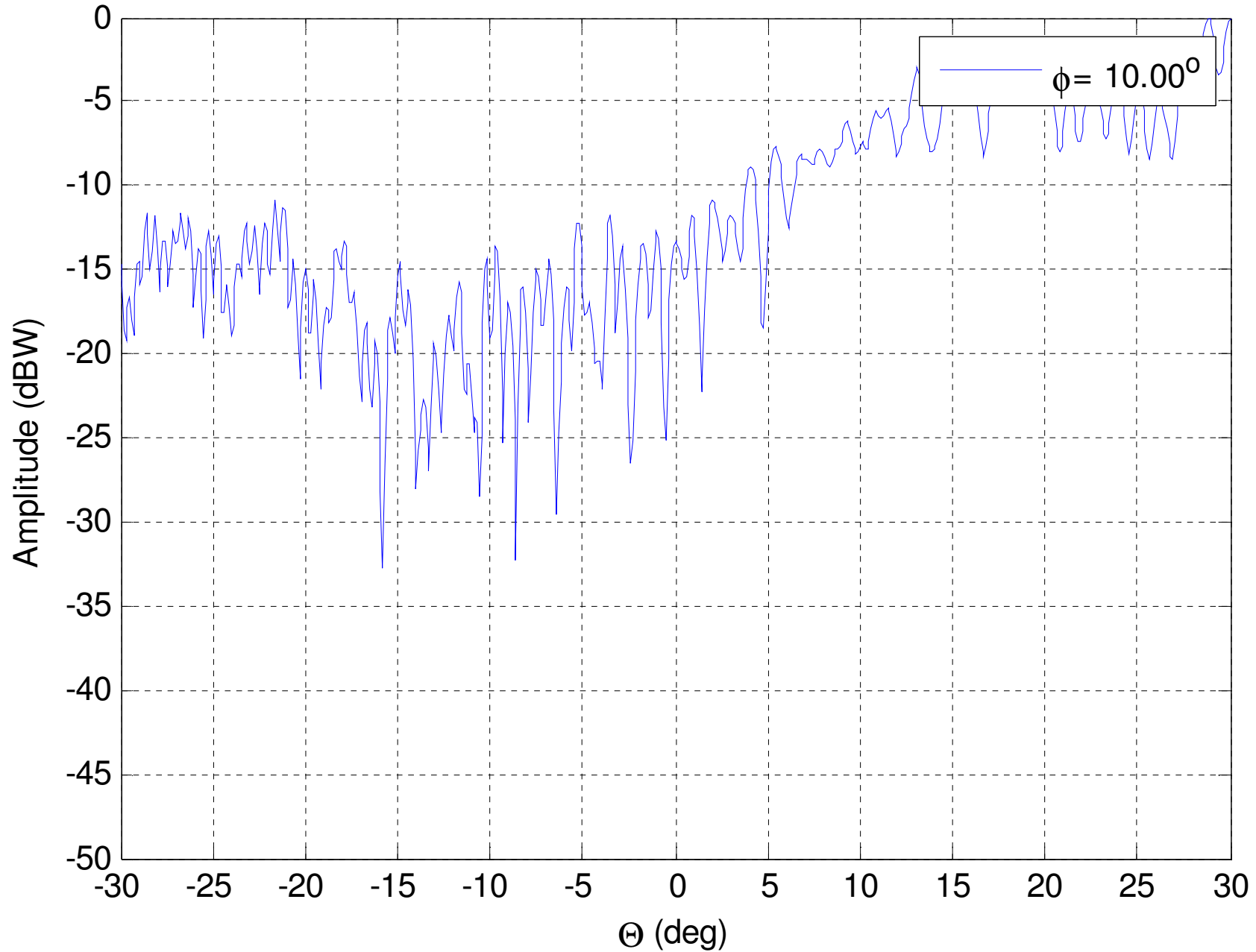
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -7.26 dBW, Date: 14-Dec-2011



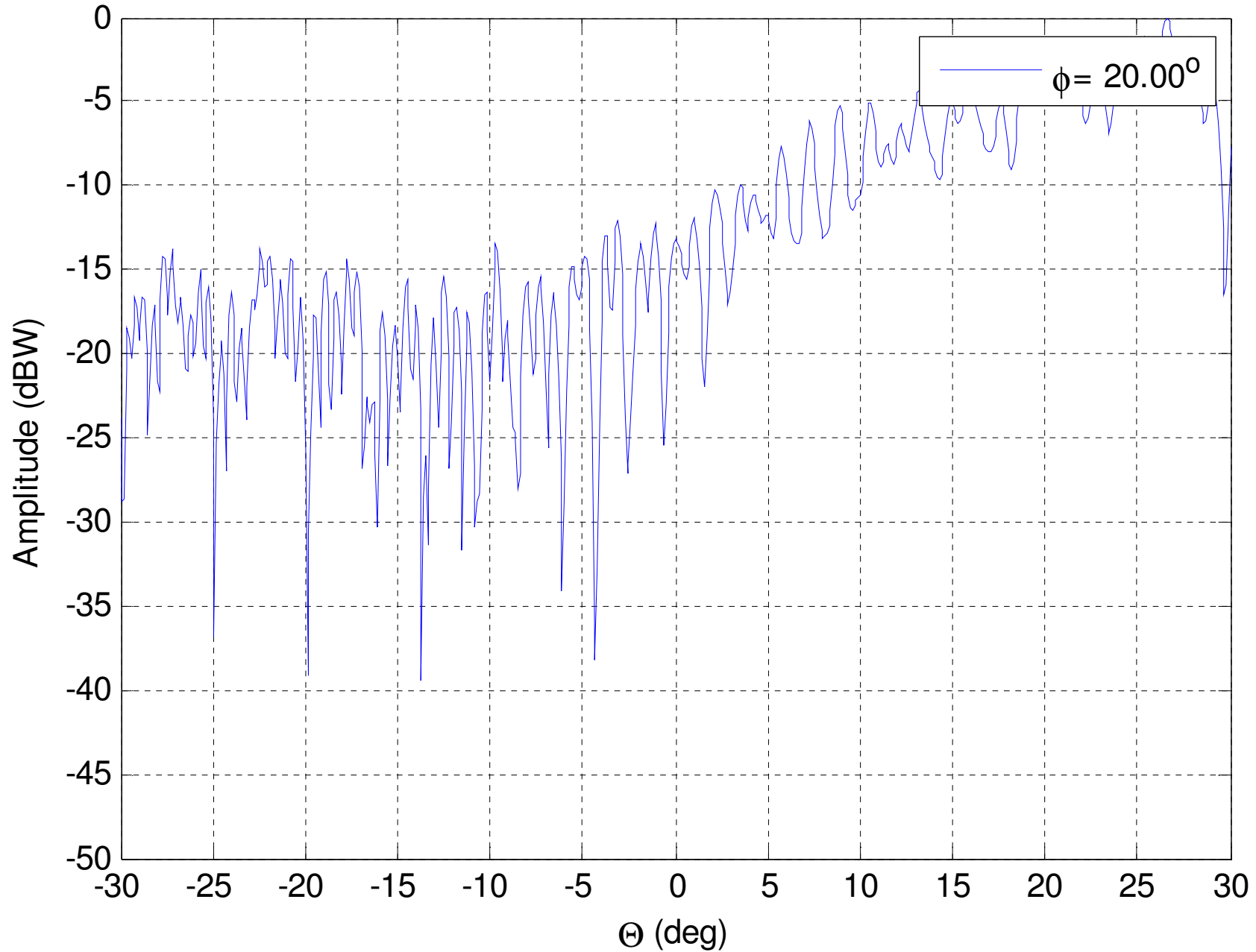
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.25 dBW, Date: 14-Dec-2011



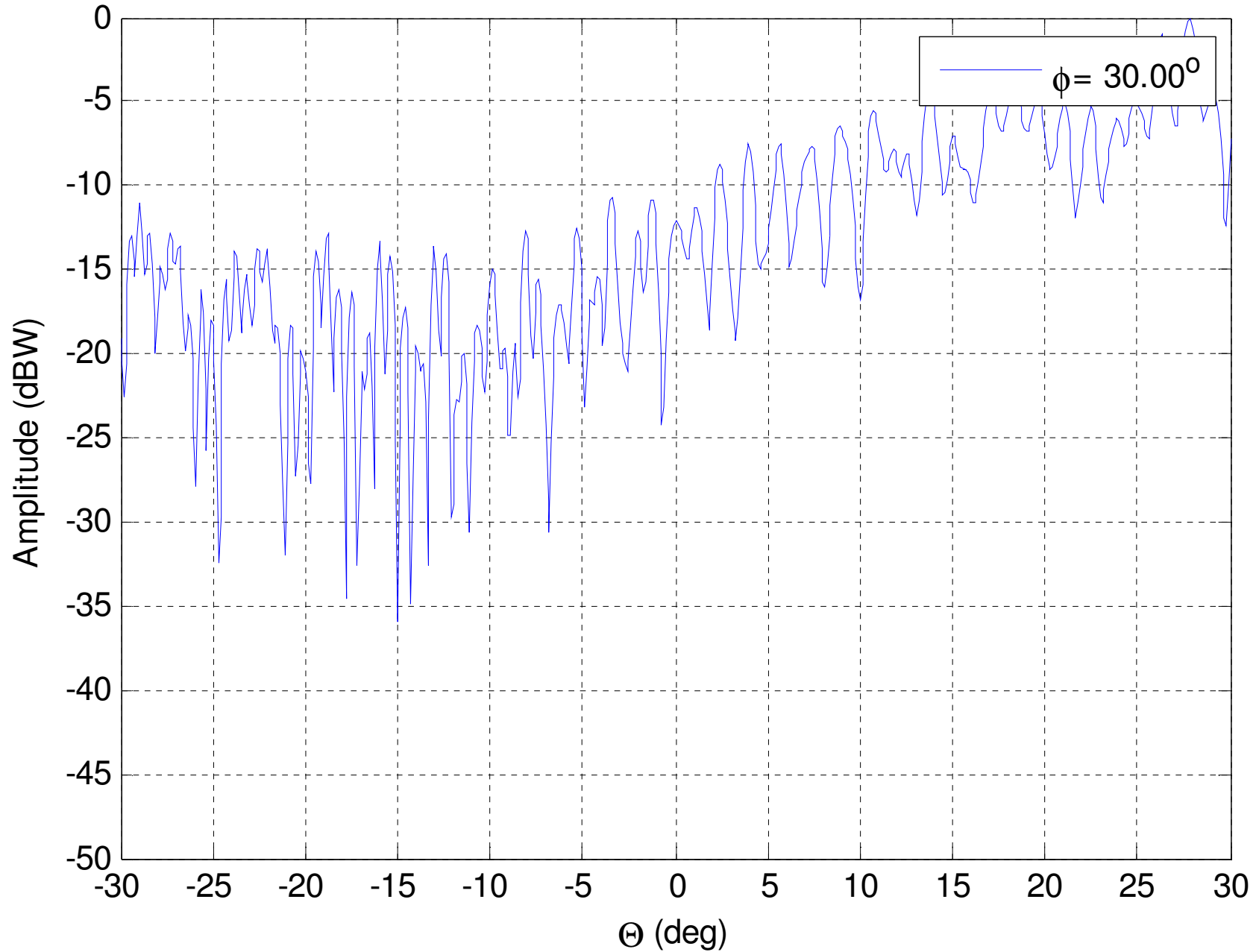
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -8.39 dBW, Date: 14-Dec-2011



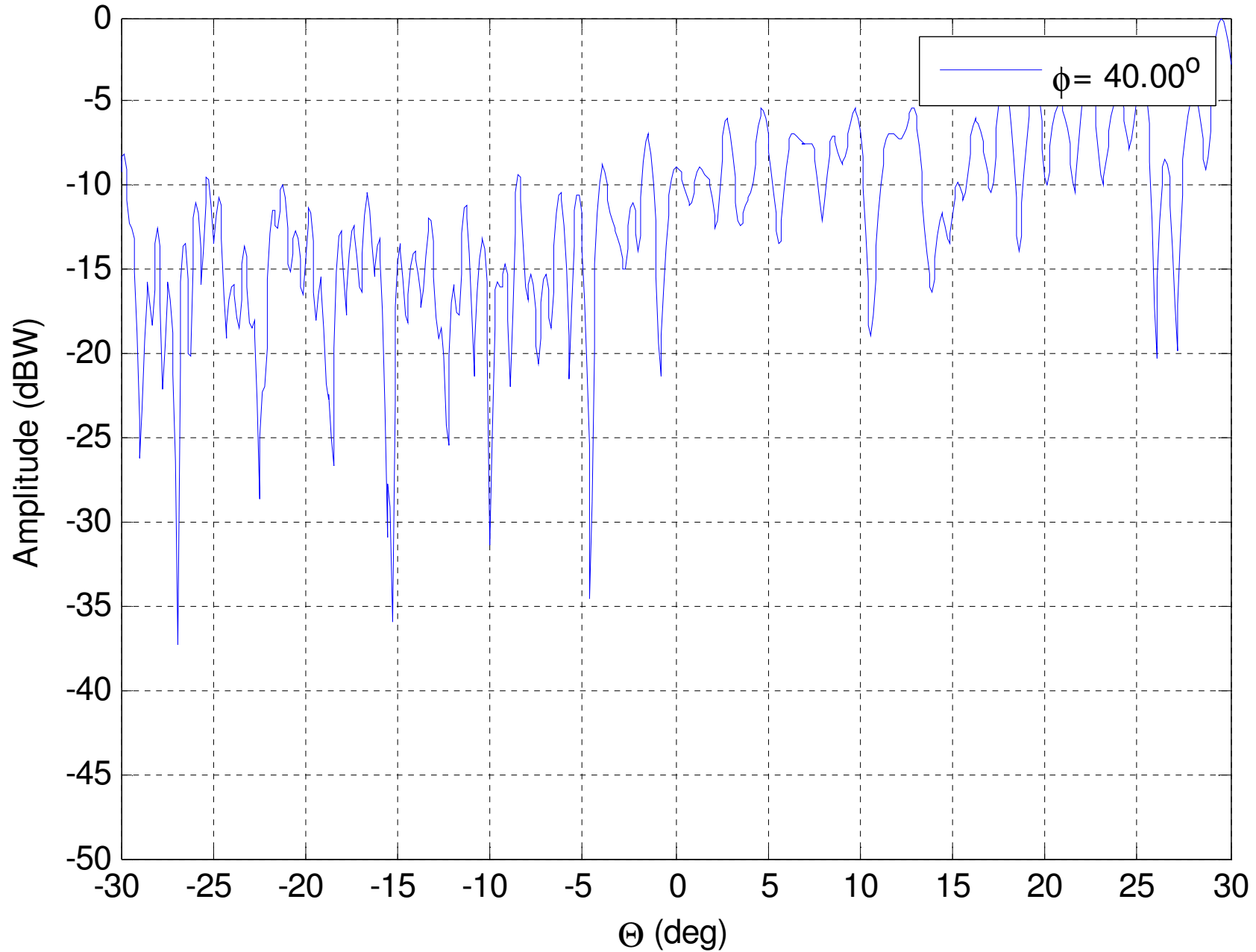
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.48 dBW, Date: 14-Dec-2011



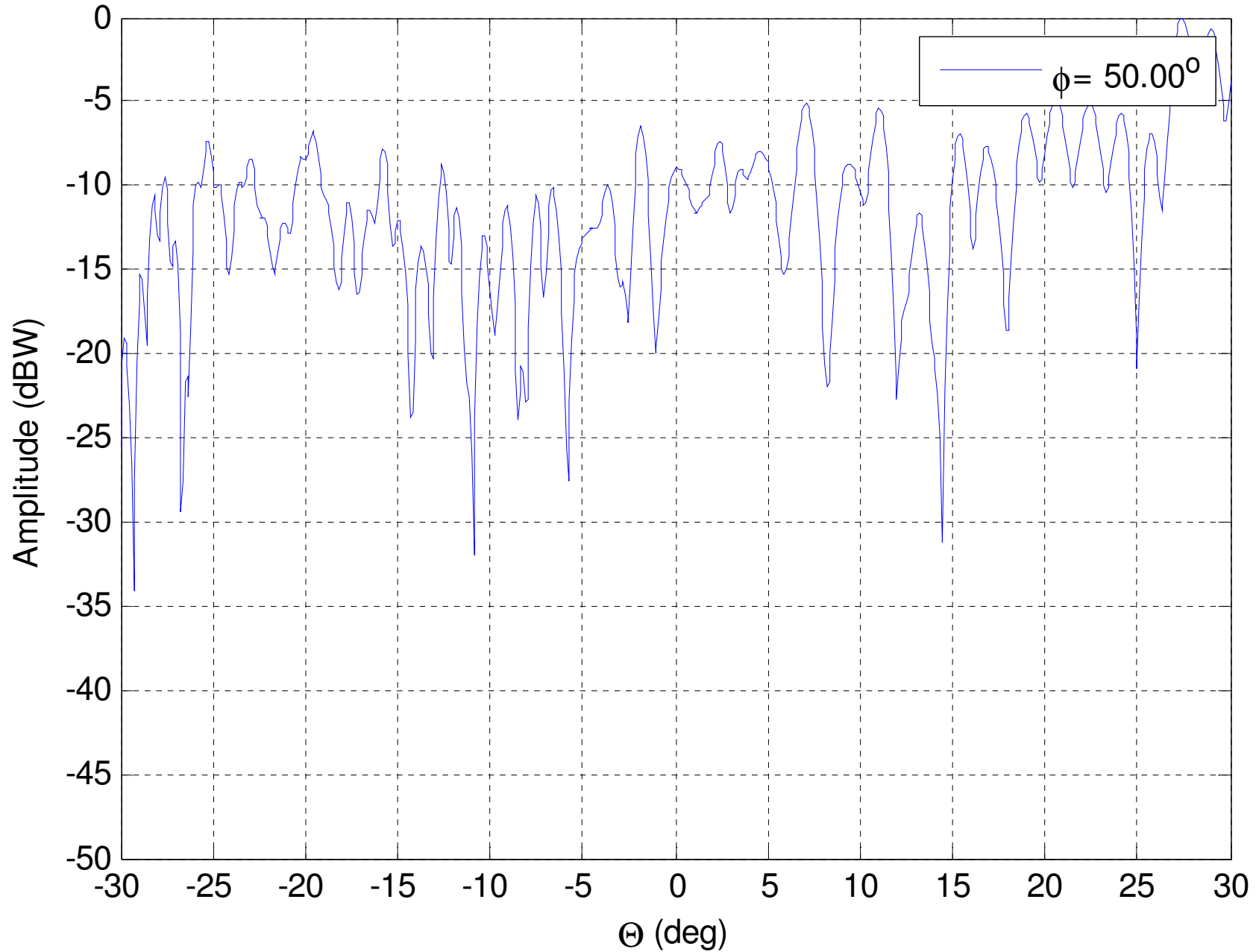
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -12.68 dBW, Date: 14-Dec-2011



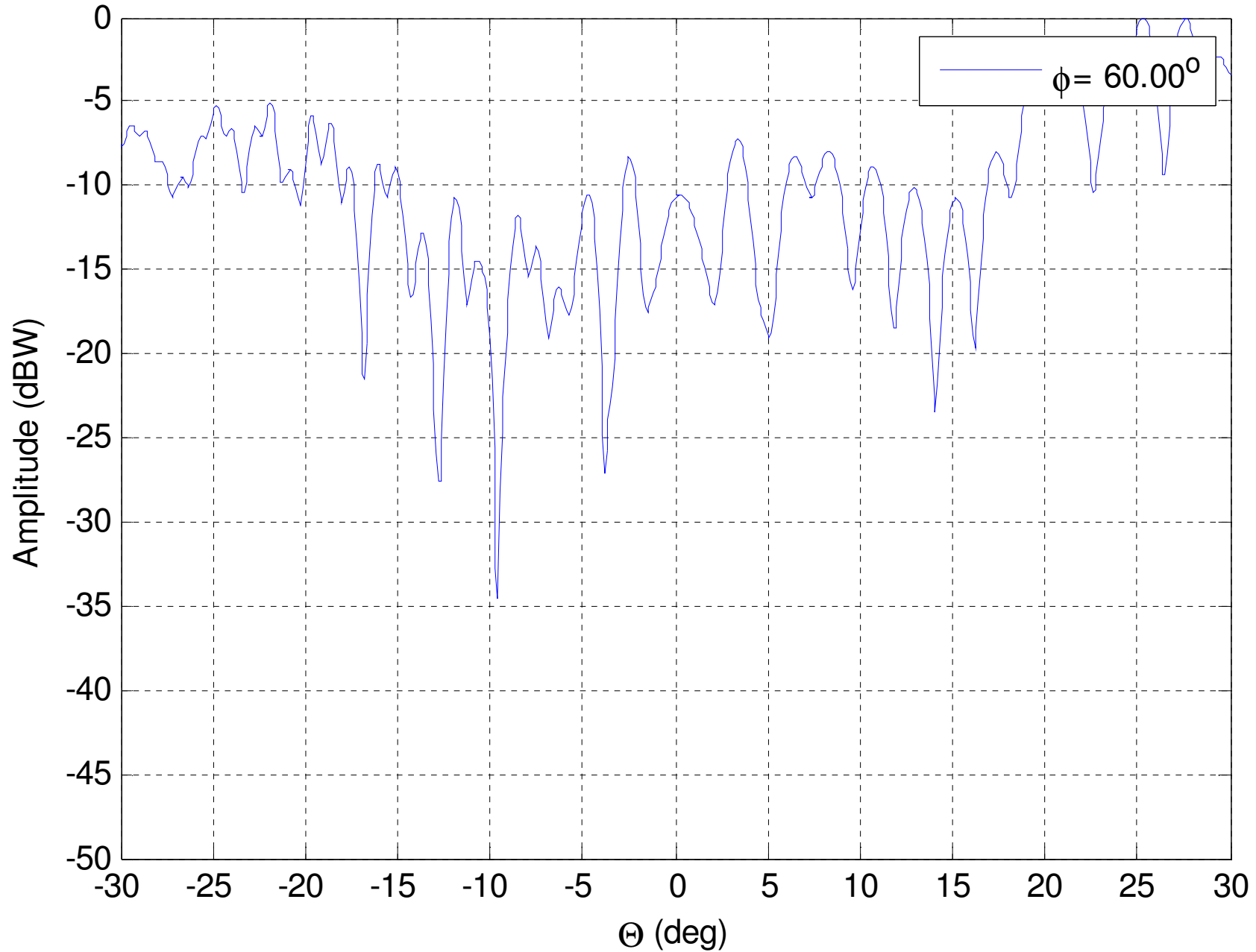
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.55 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.83 dBW, Date: 14-Dec-2011



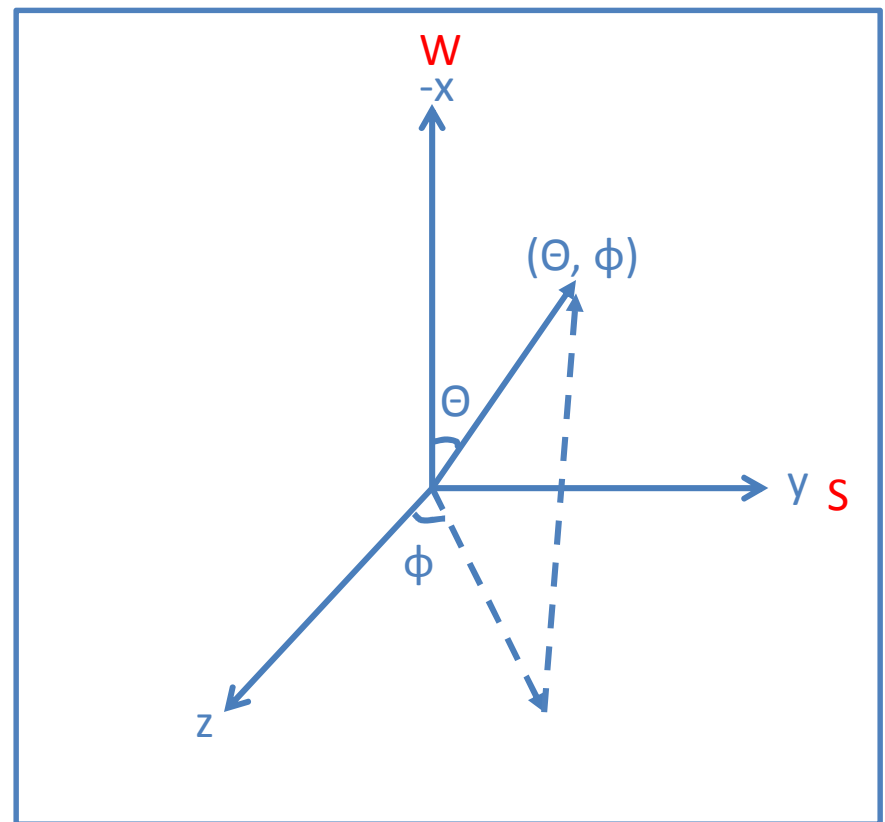
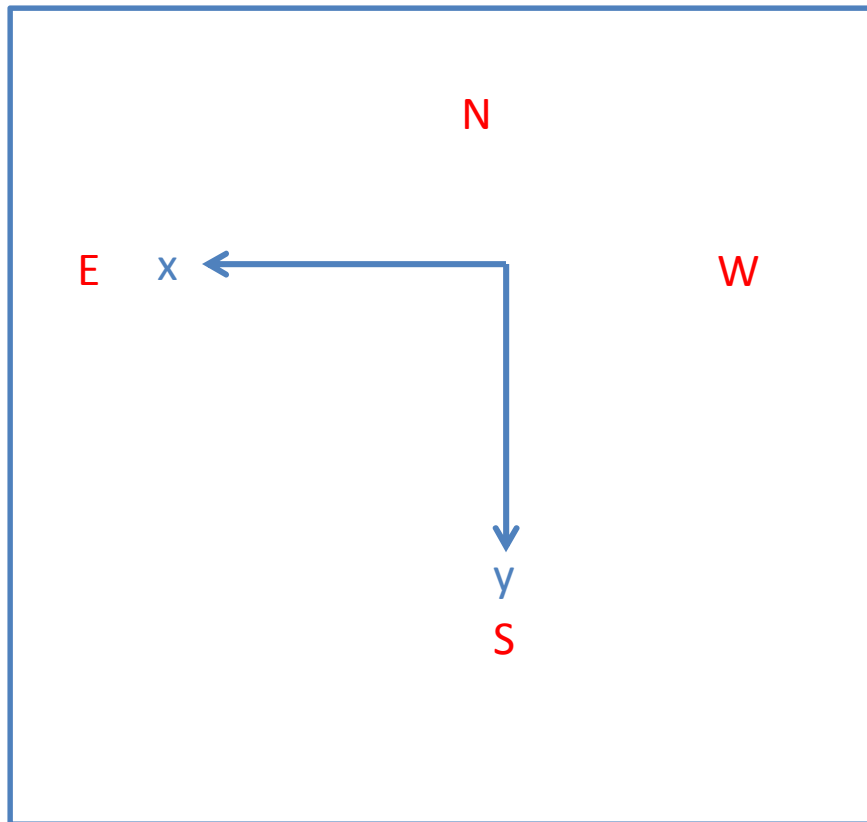
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 11

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



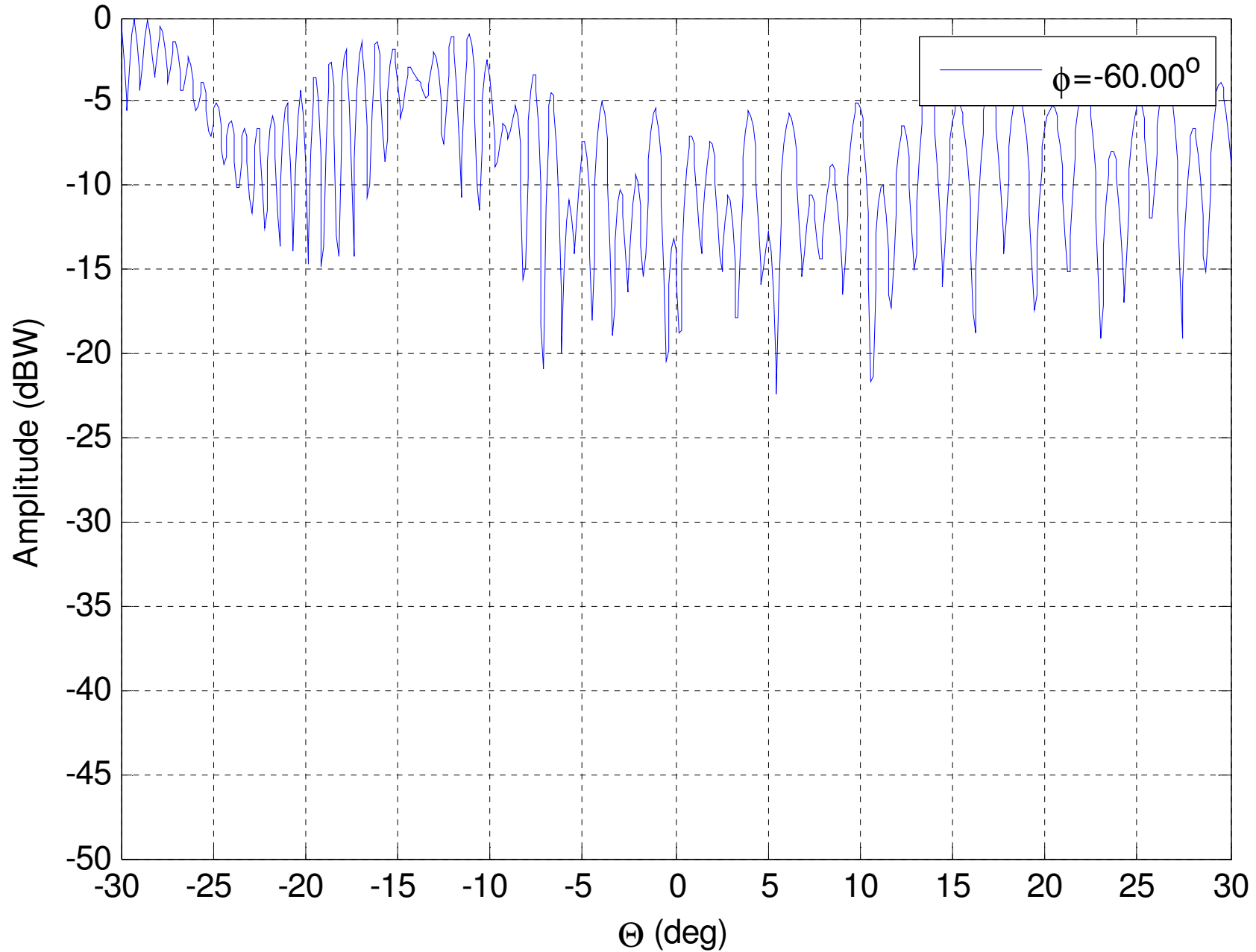
Spot Beam11, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

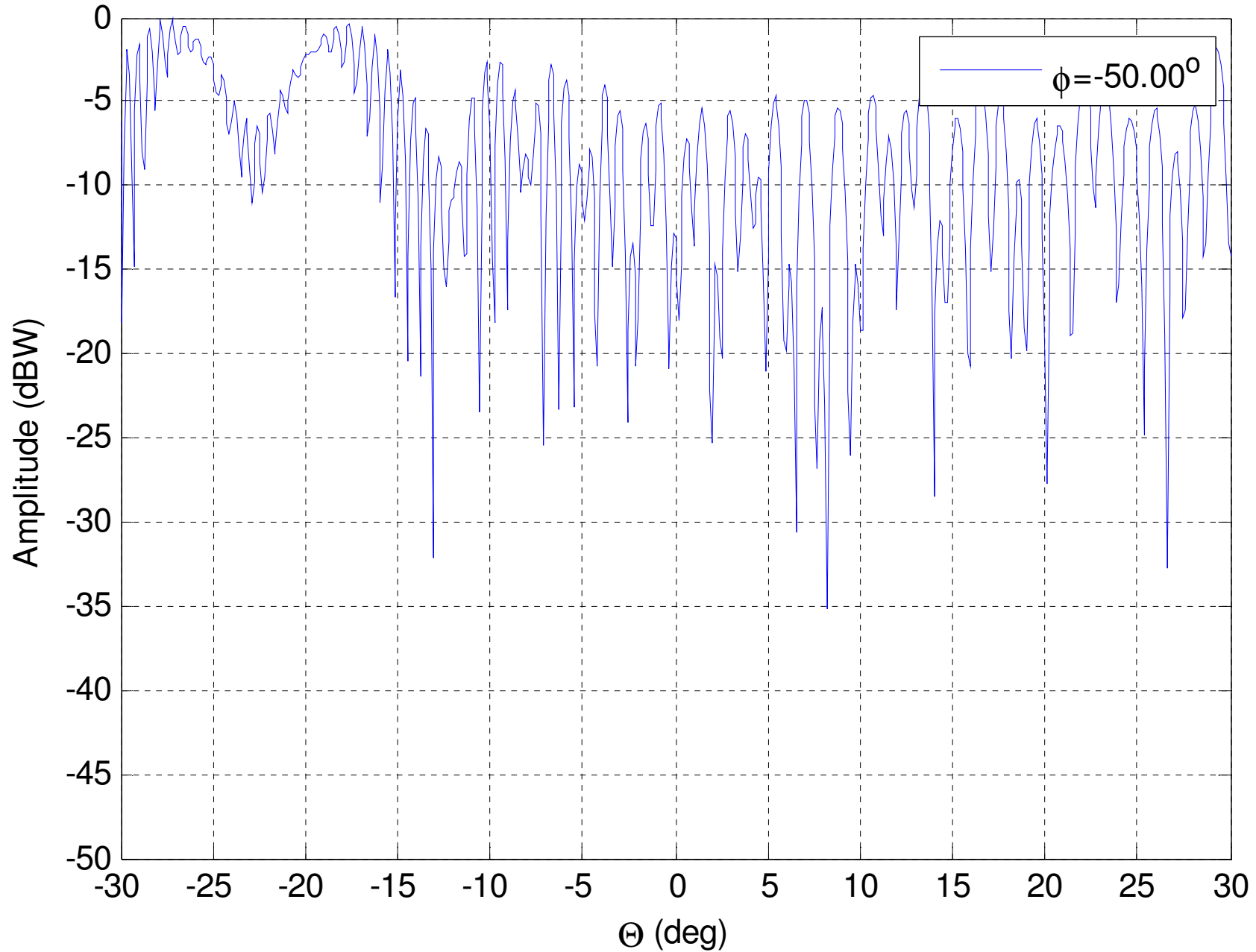
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -10.36 dBW, Date: 14-Dec-2011



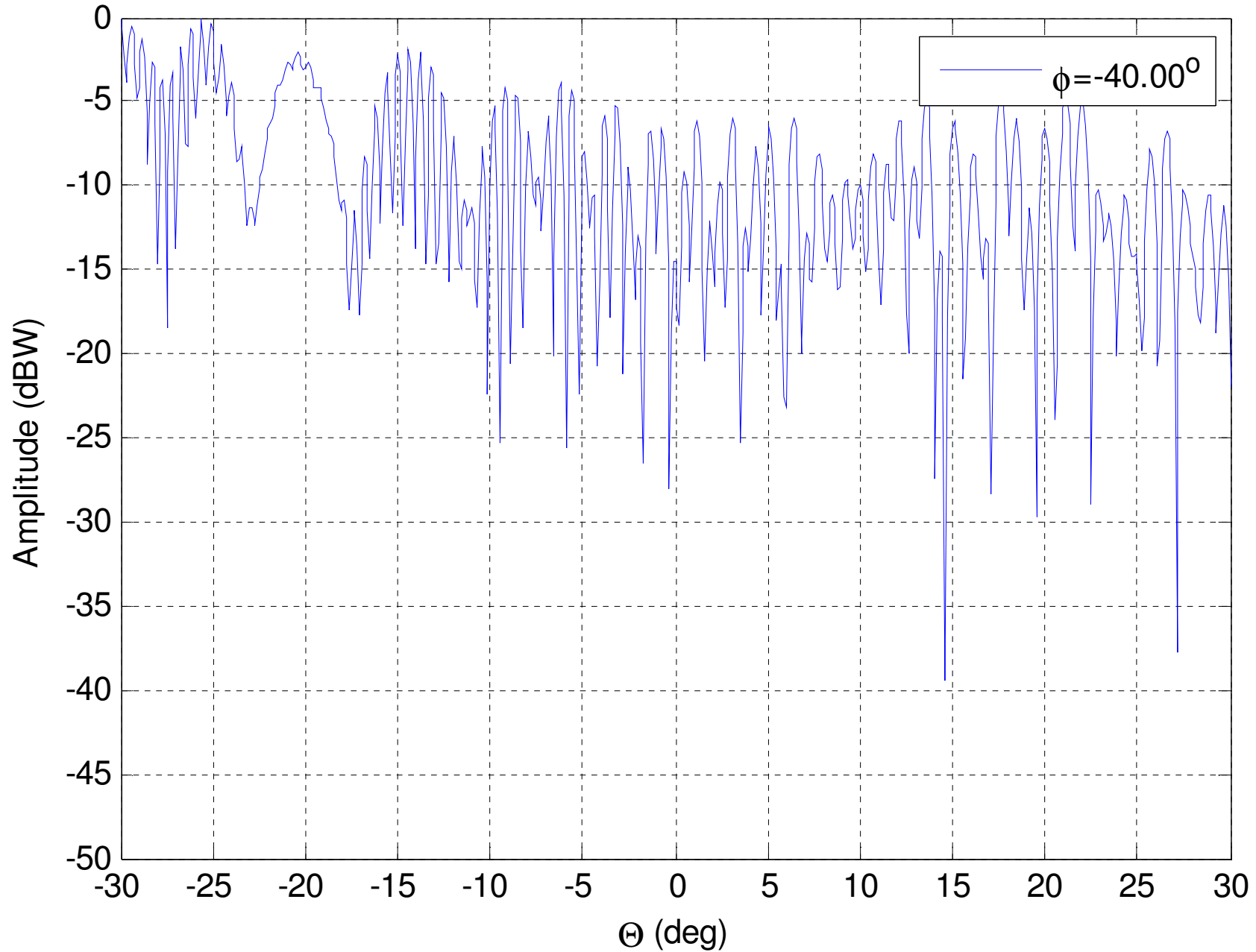
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -11.01 dBW, Date: 14-Dec-2011



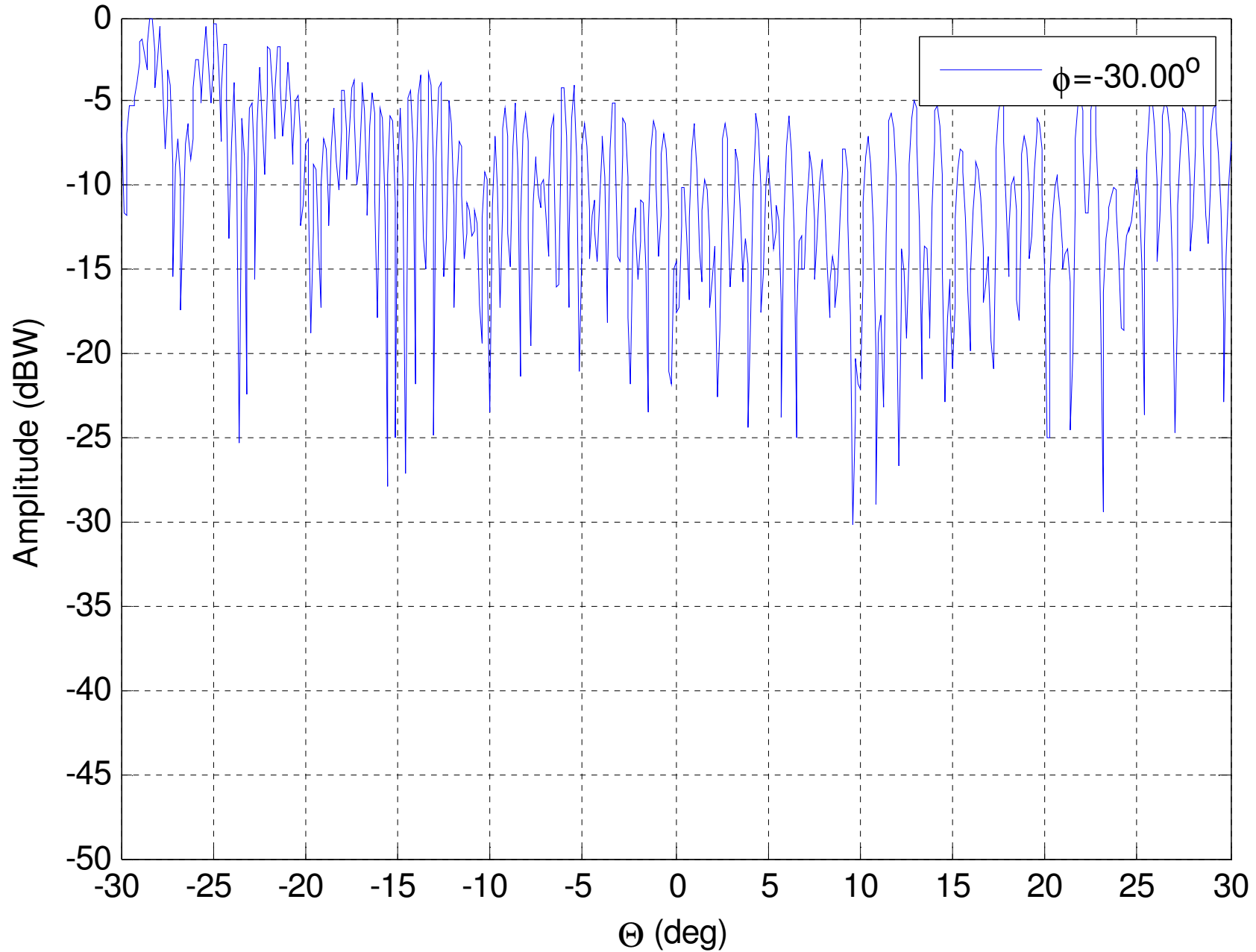
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -9.72 dBW, Date: 14-Dec-2011



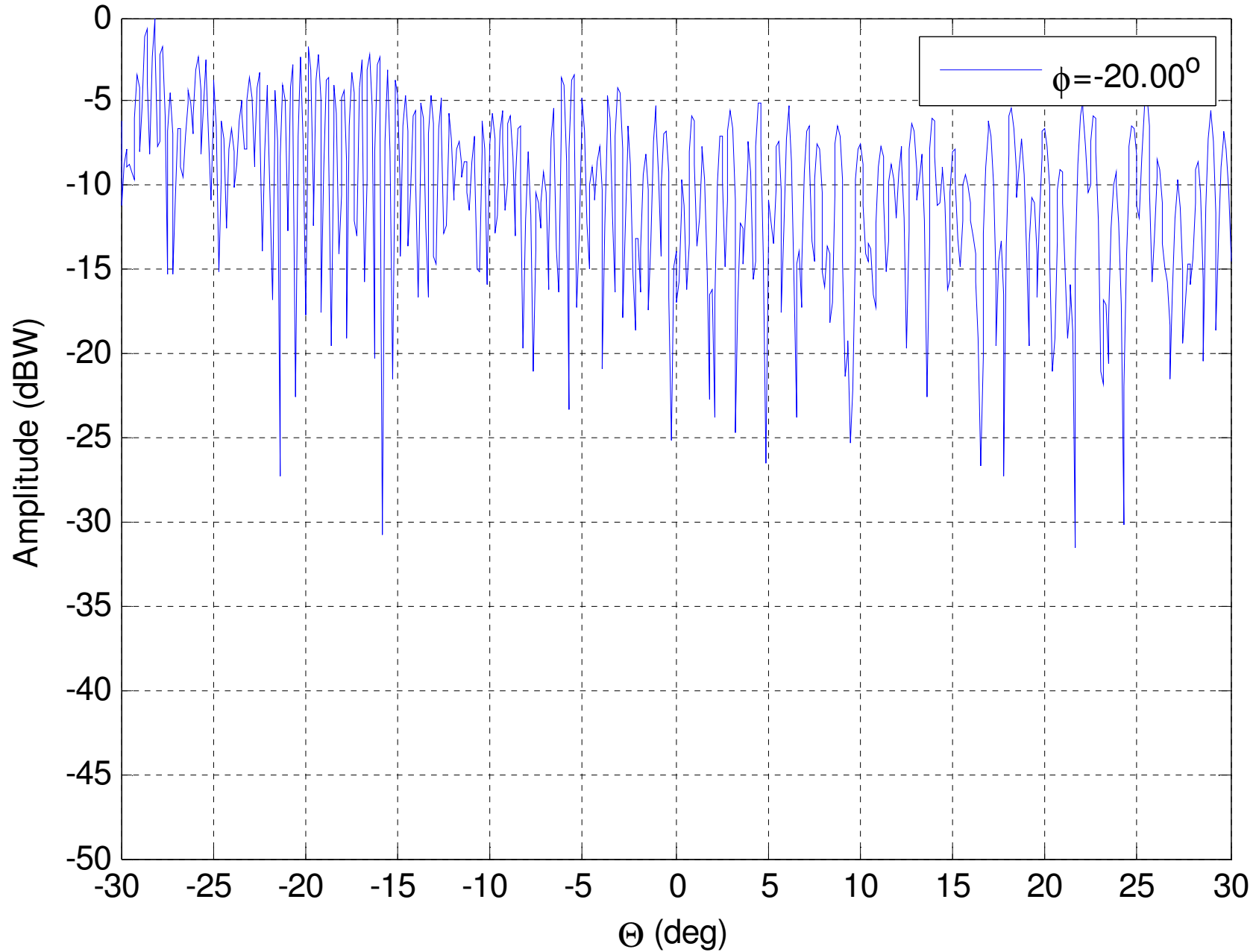
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -9.65 dBW, Date: 14-Dec-2011



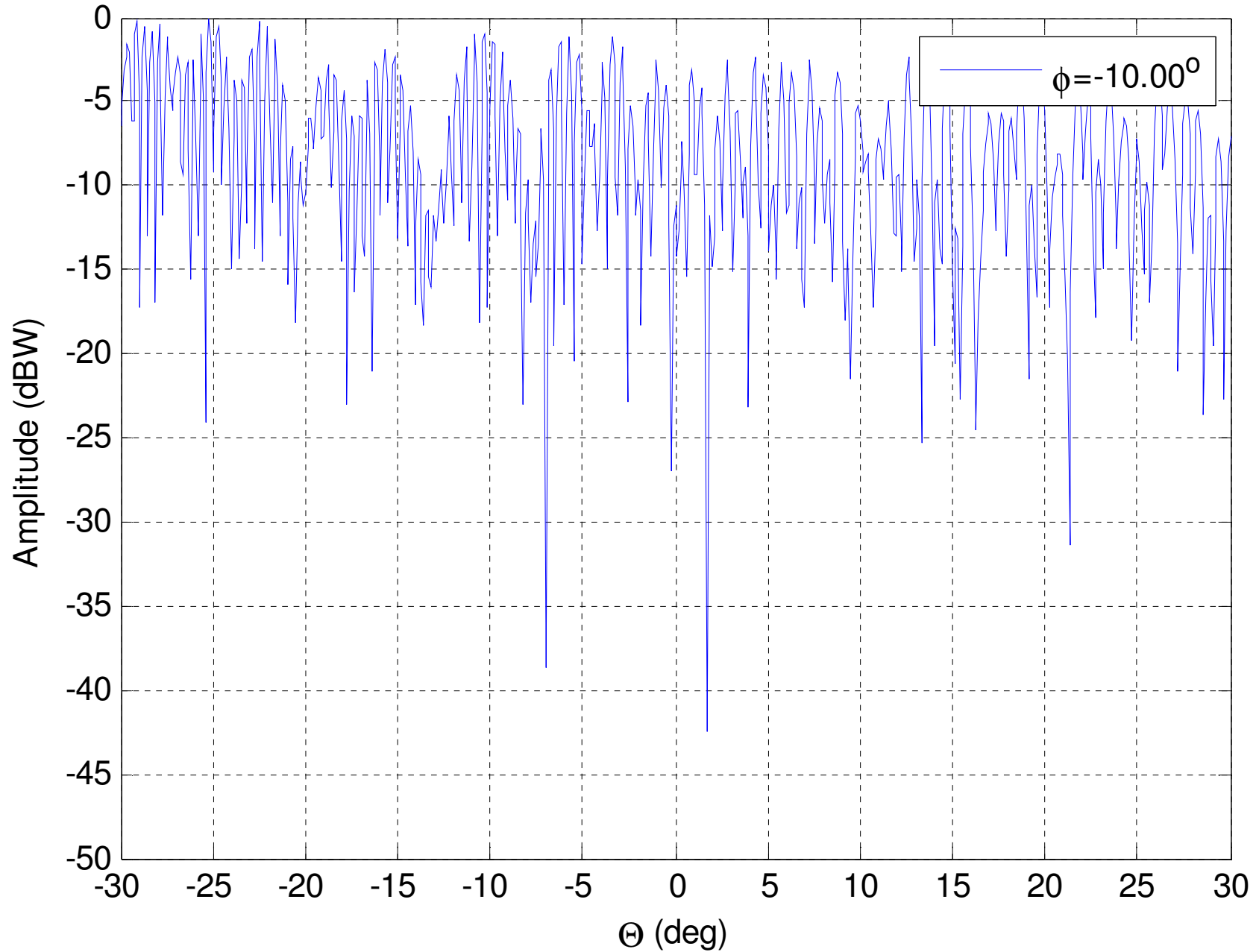
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -10.31 dBW, Date: 14-Dec-2011



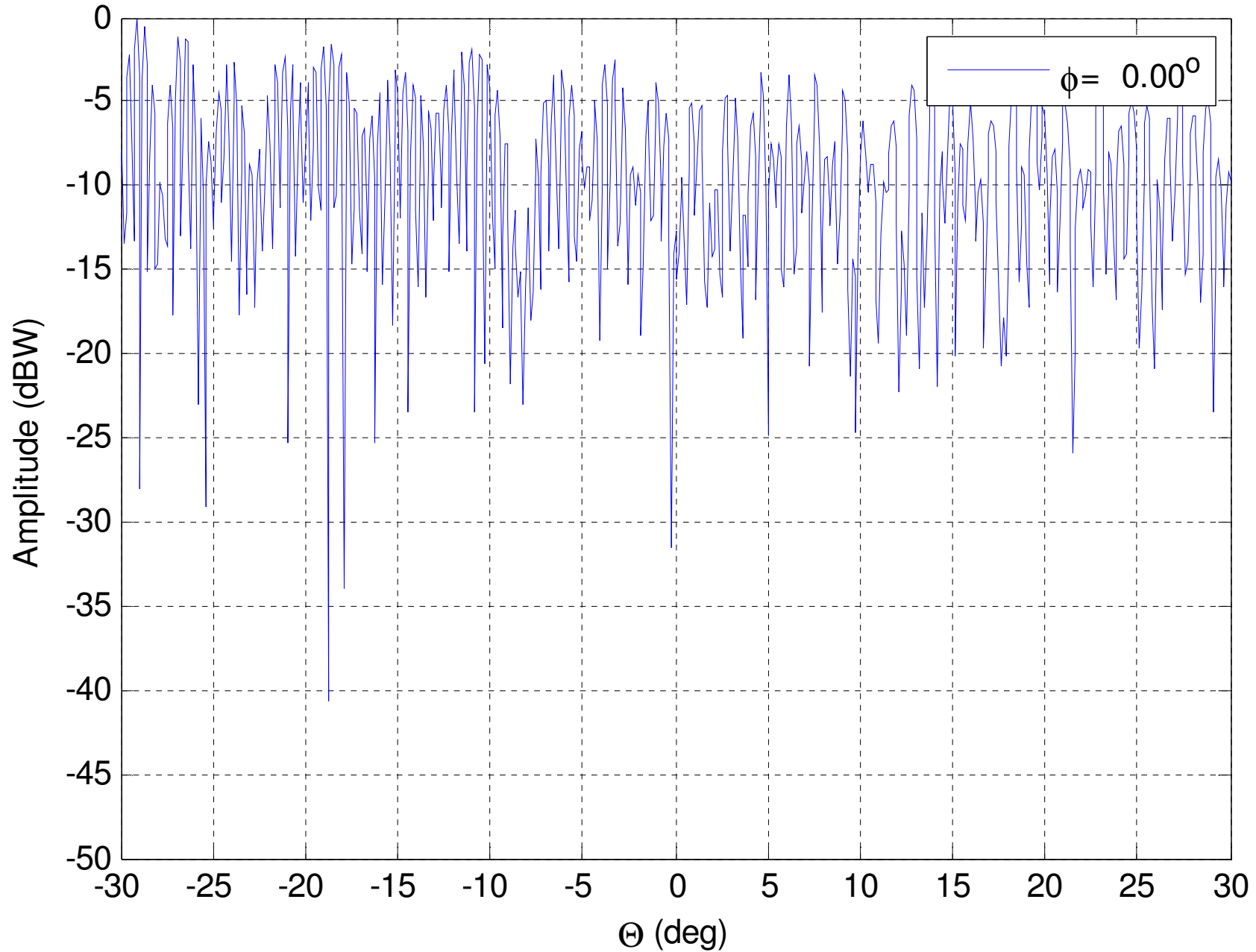
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -12.99 dBW, Date: 14-Dec-2011



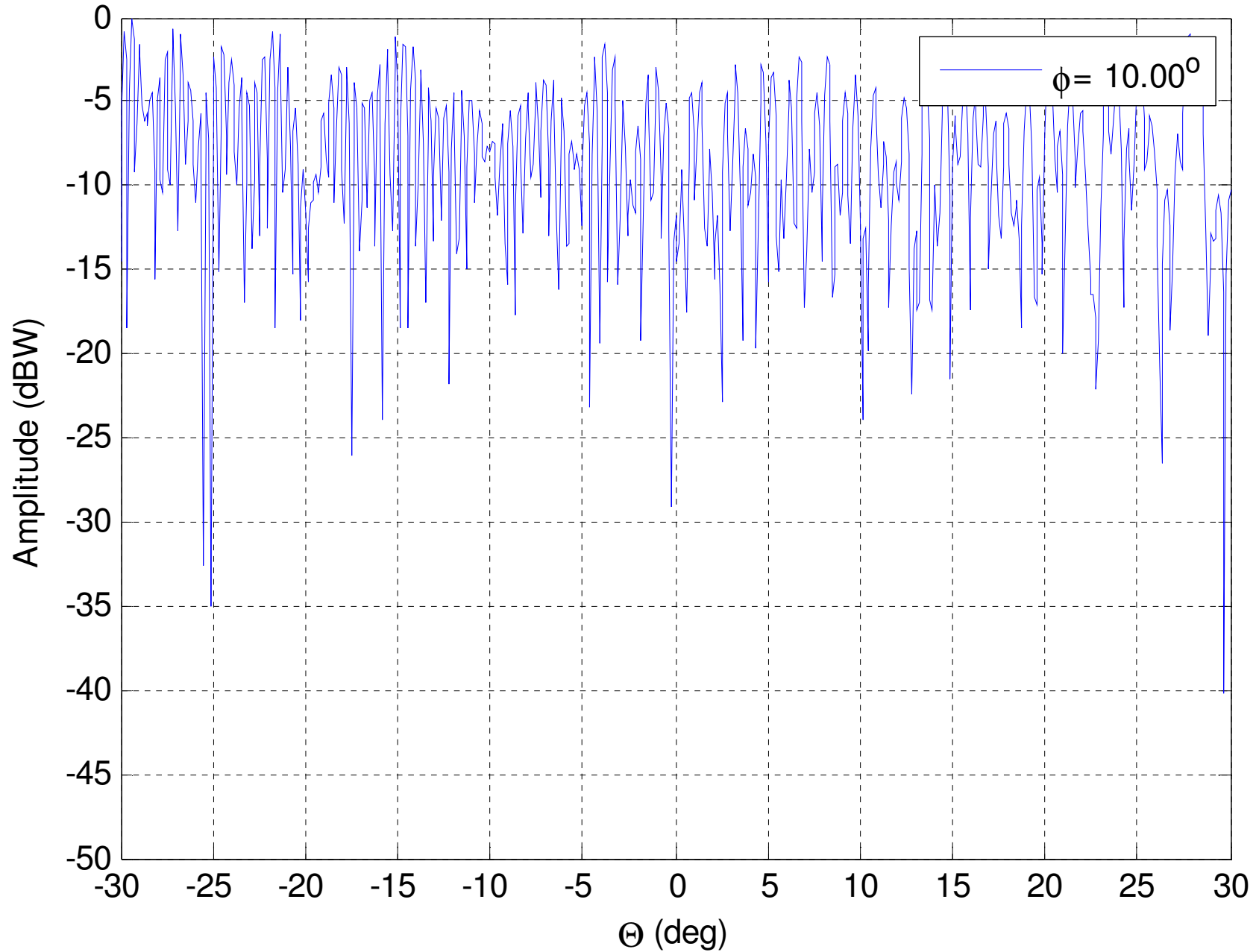
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -11.51 dBW, Date: 14-Dec-2011



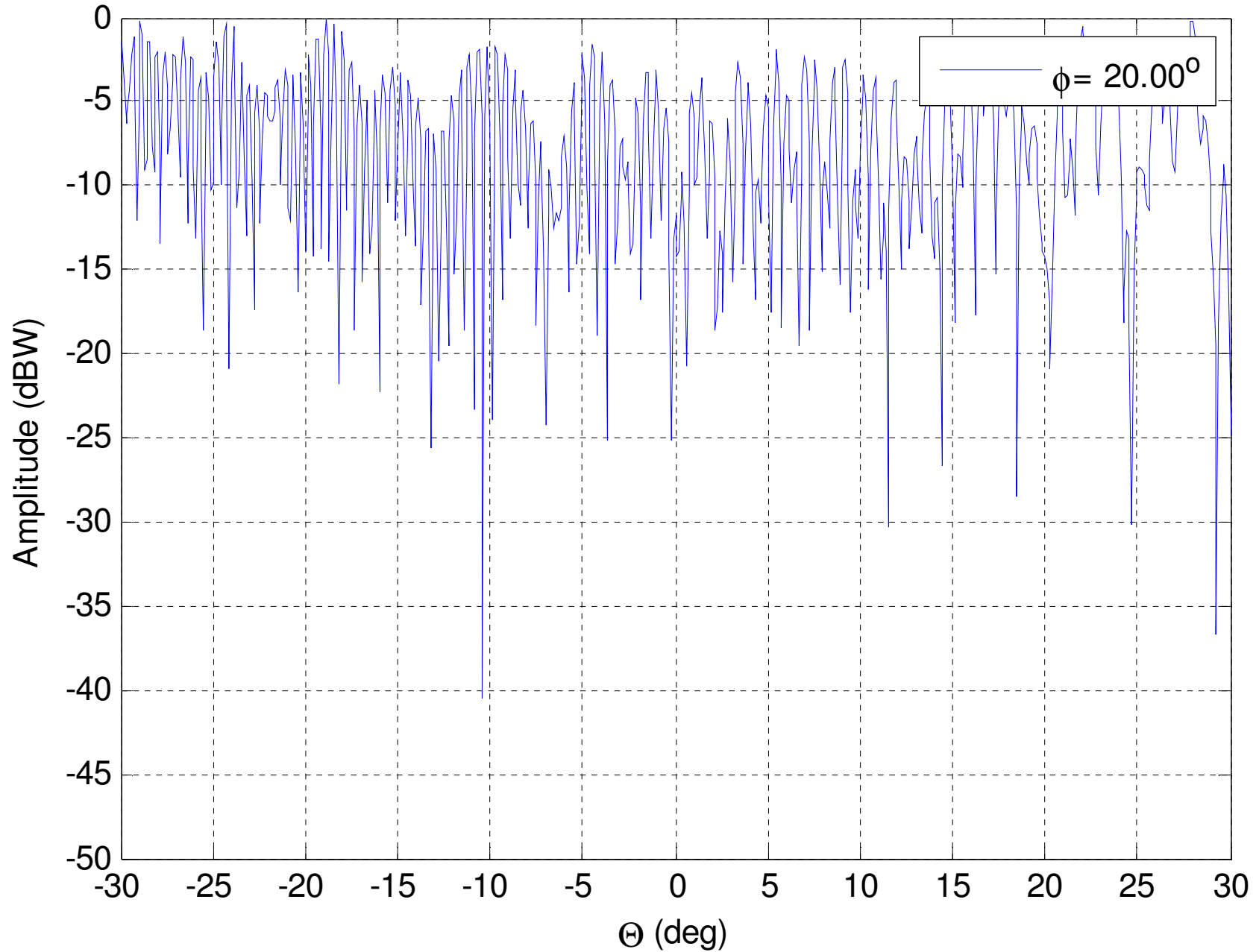
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -12.38 dBW, Date: 14-Dec-2011



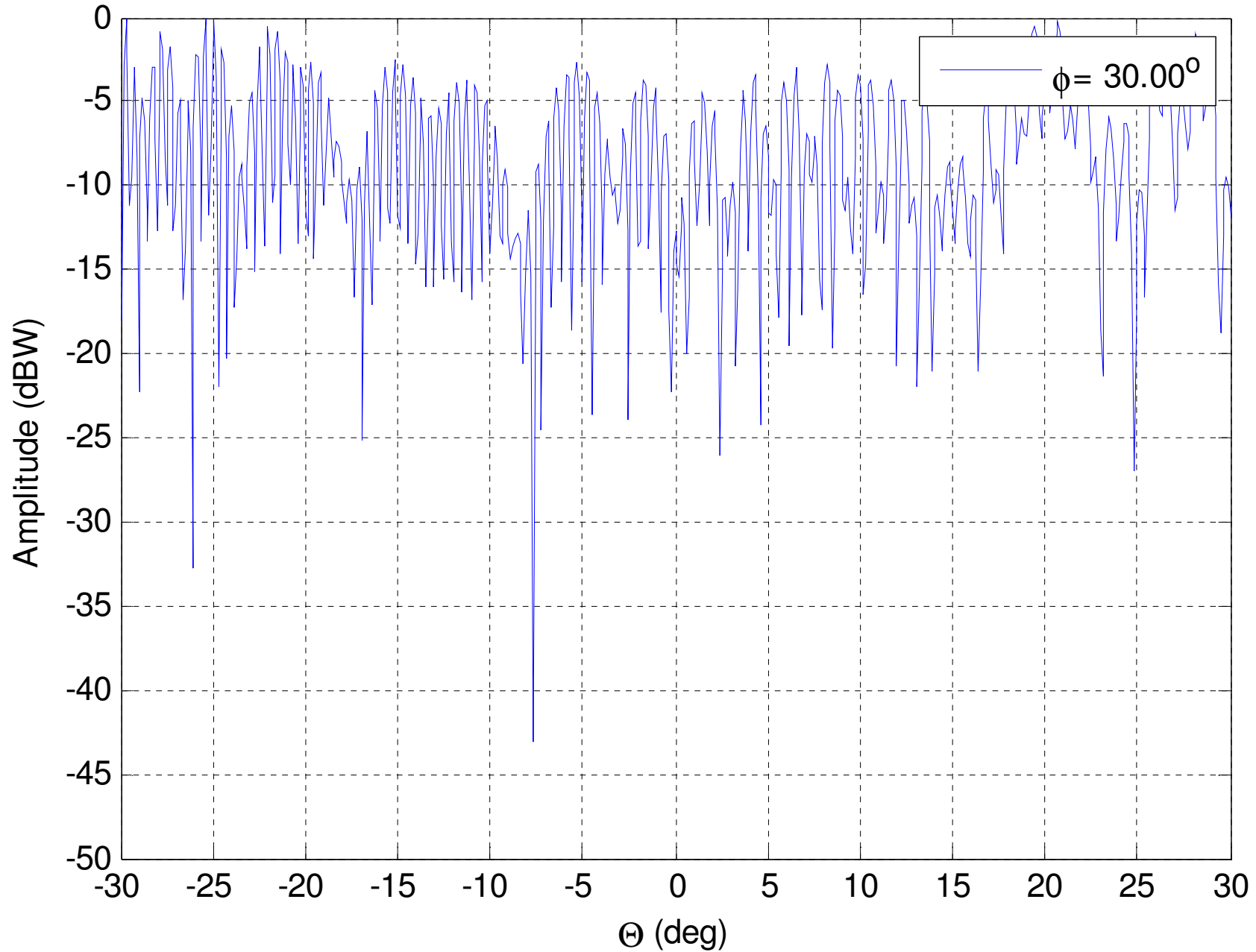
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -12.46 dBW, Date: 14-Dec-2011



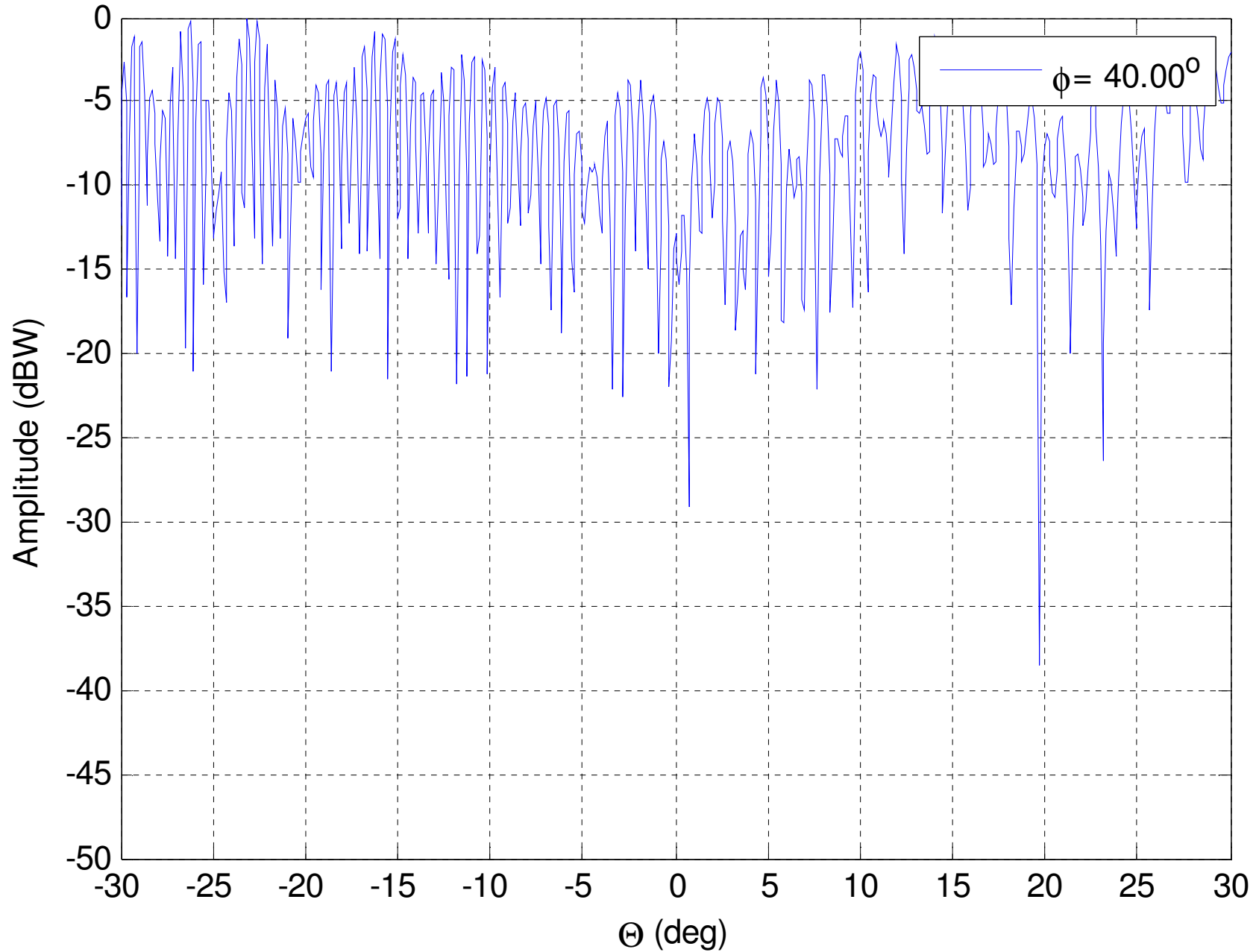
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -11.51 dBW, Date: 14-Dec-2011



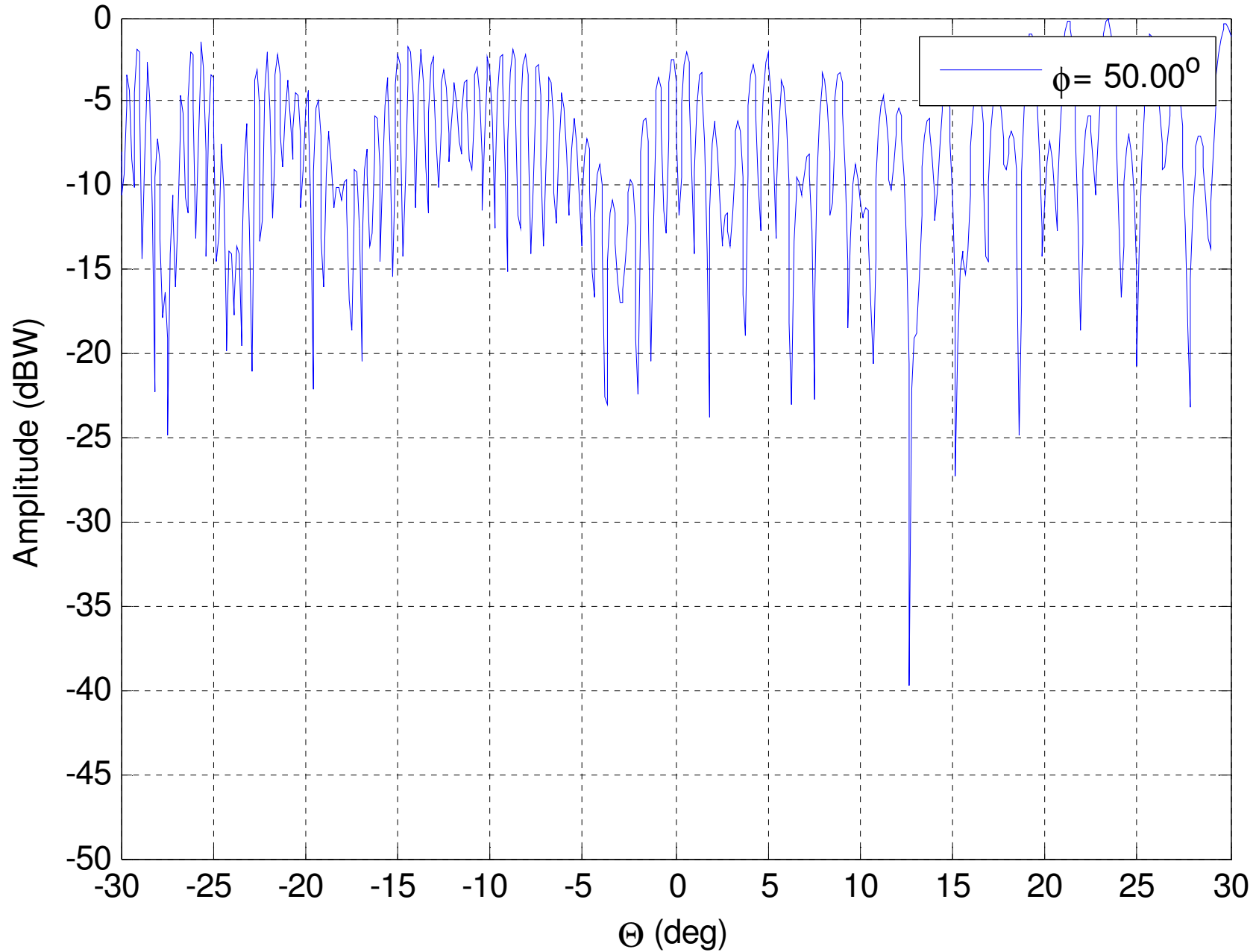
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -11.35 dBW, Date: 14-Dec-2011



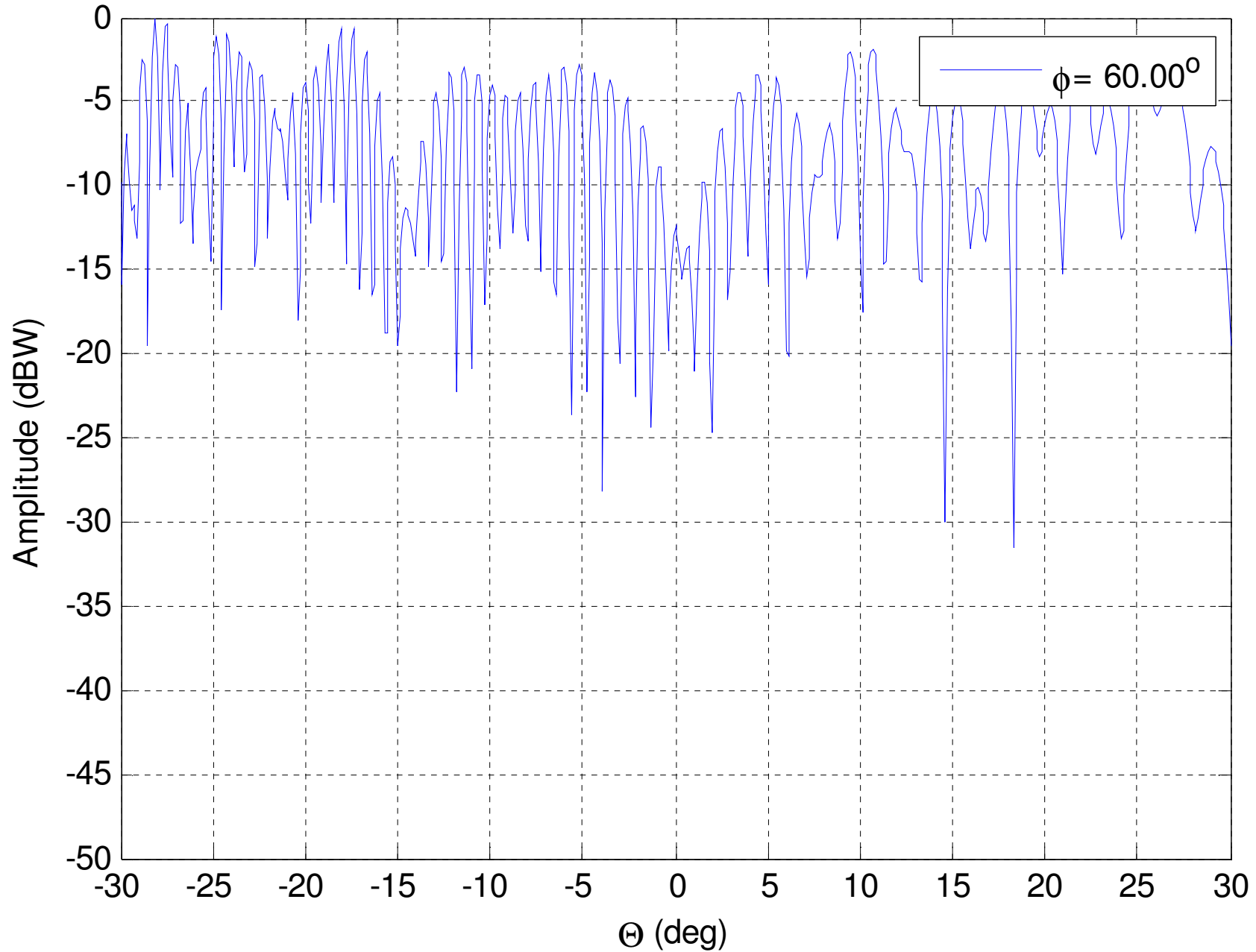
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -11.54 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

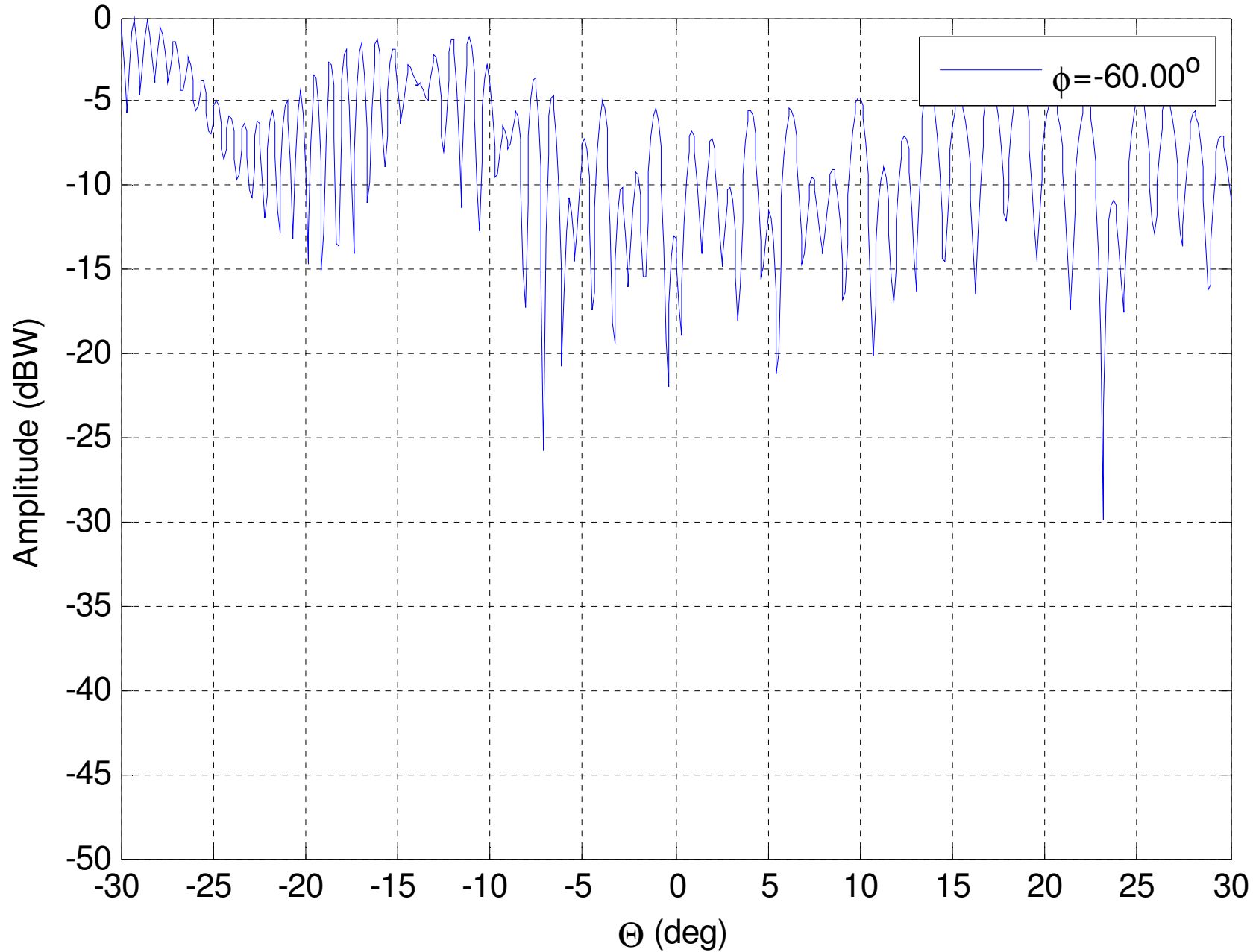
Input file: tx-17.3-rhcp-60.cut, Peak: -11.80 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

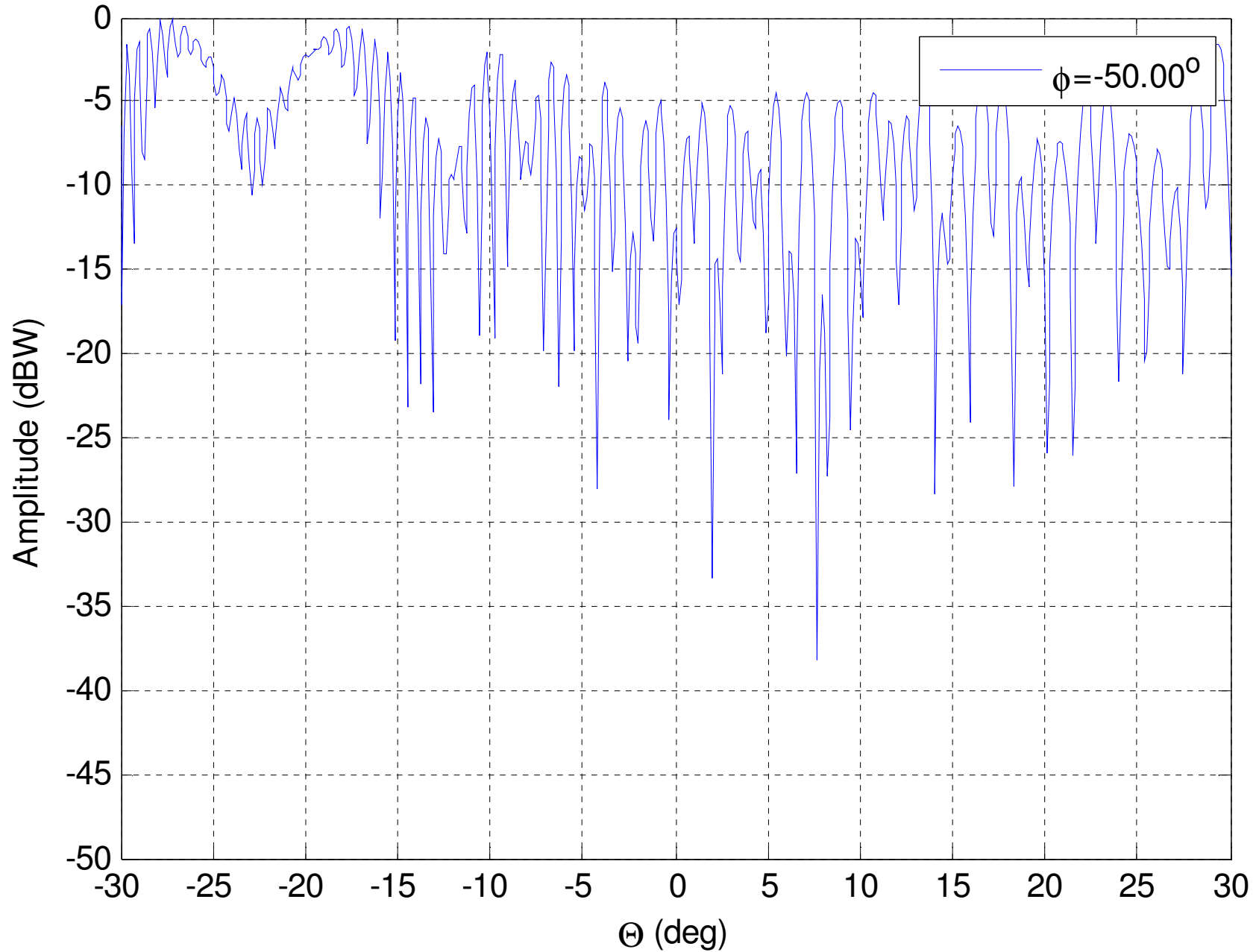
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -10.51 dBW, Date: 14-Dec-2011



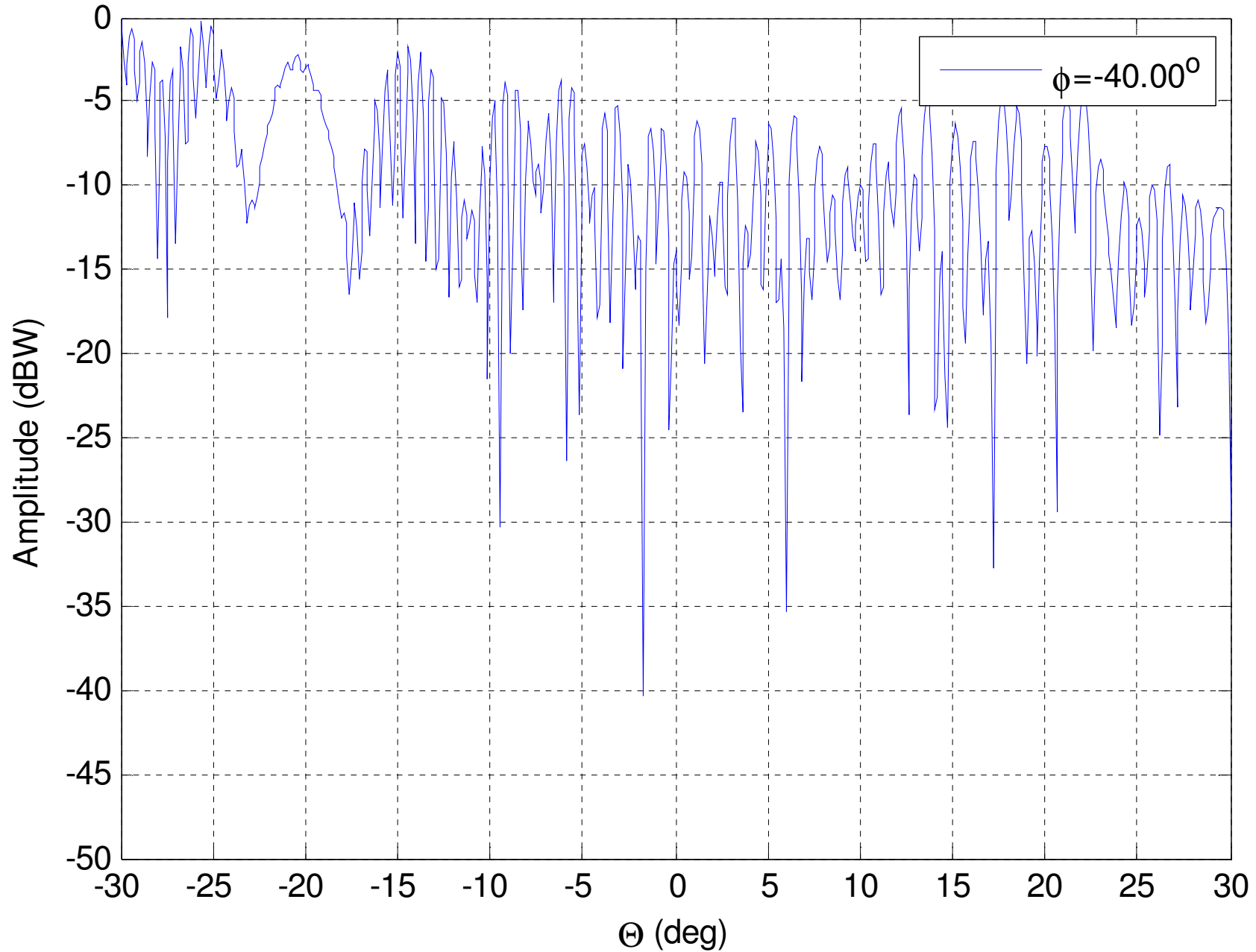
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -11.20 dBW, Date: 14-Dec-2011



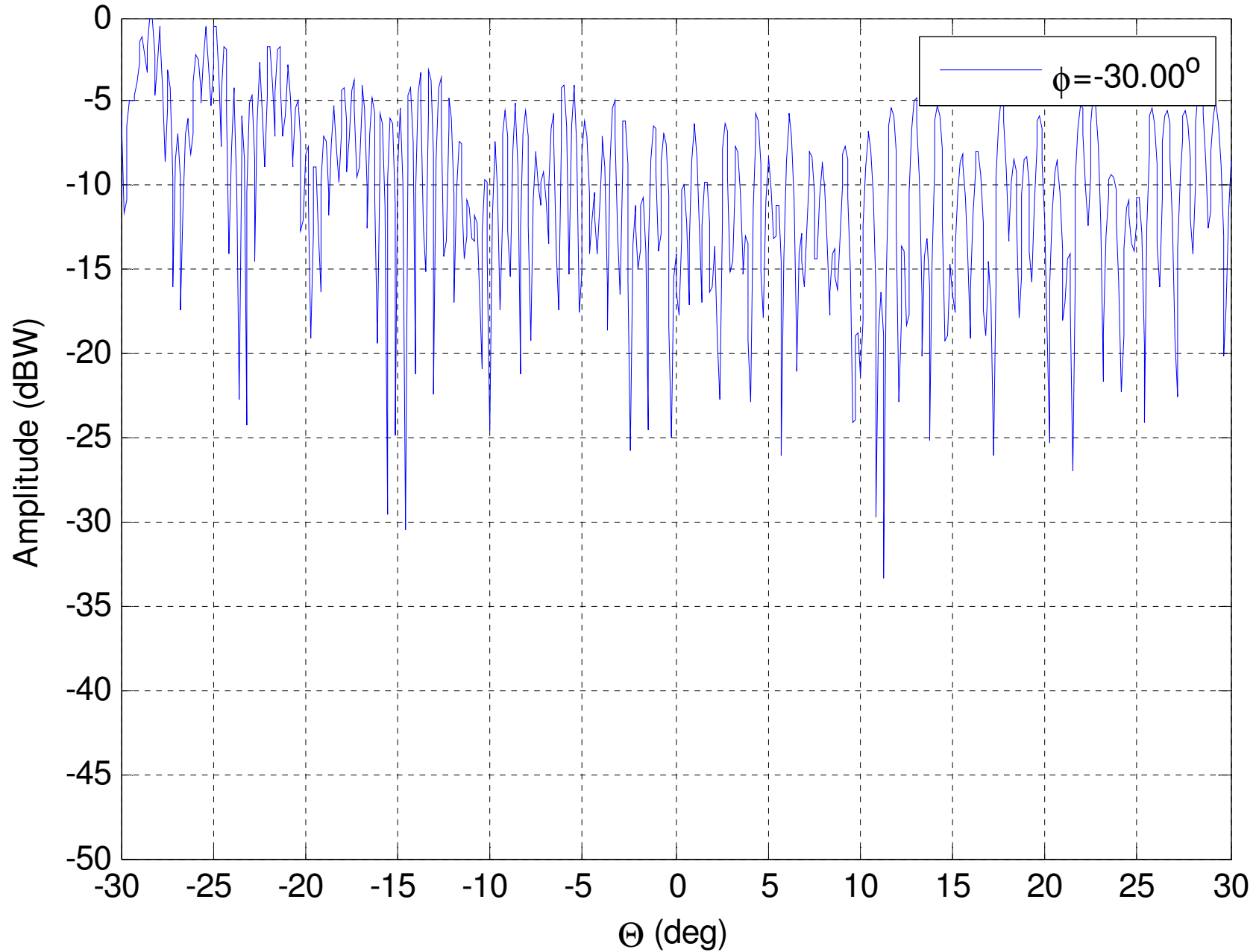
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.81 dBW, Date: 14-Dec-2011



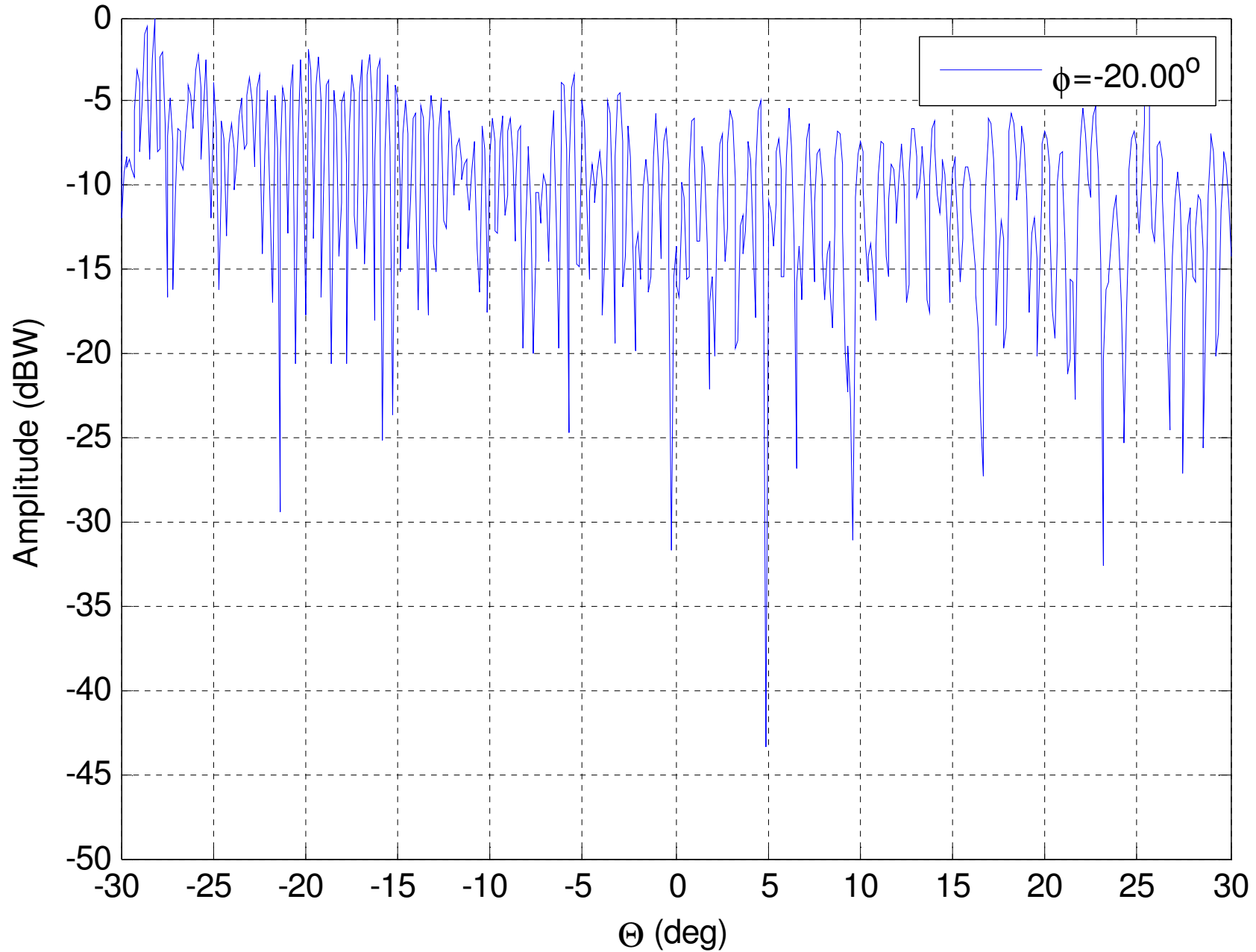
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -9.68 dBW, Date: 14-Dec-2011



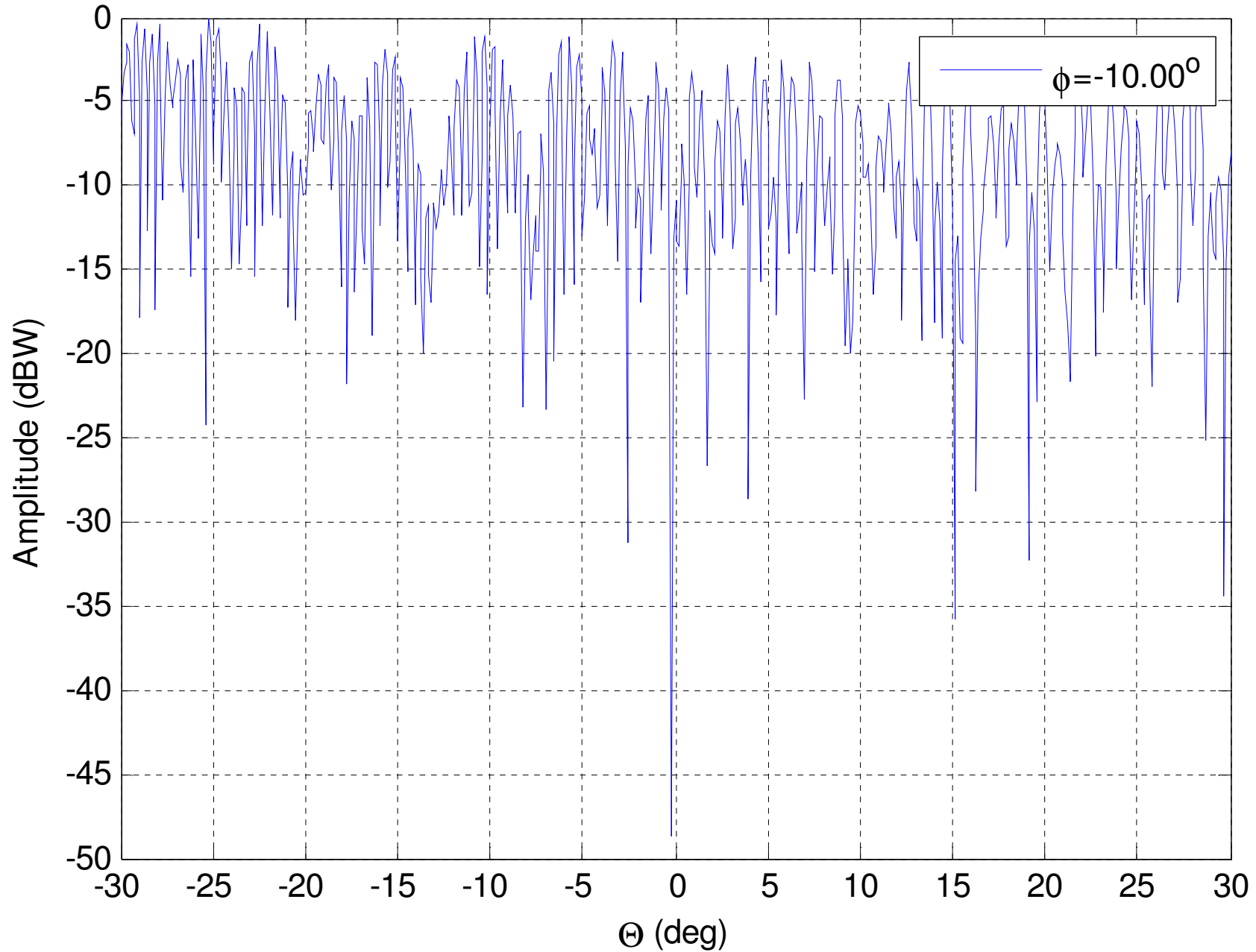
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -10.17 dBW, Date: 14-Dec-2011



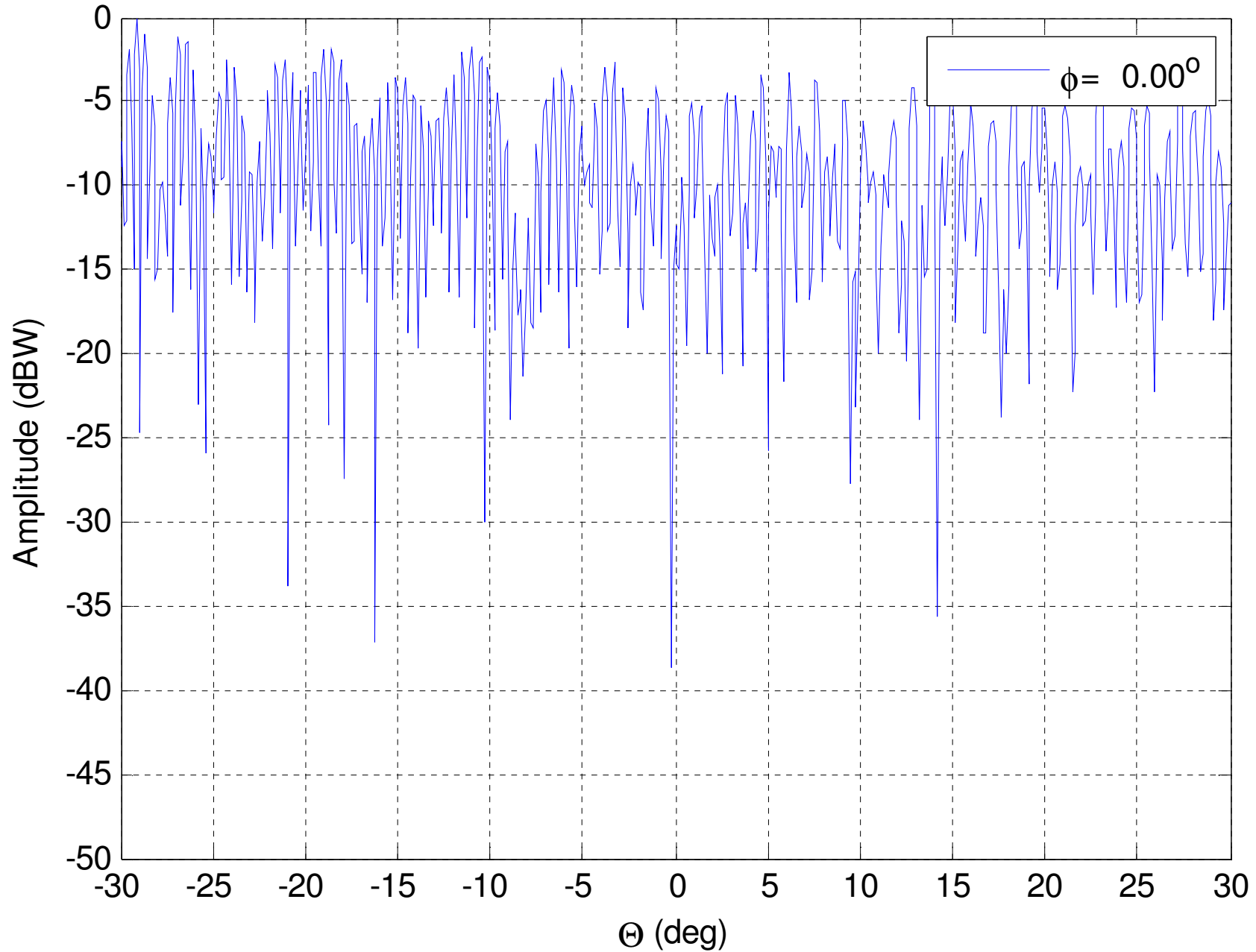
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -12.81 dBW, Date: 14-Dec-2011



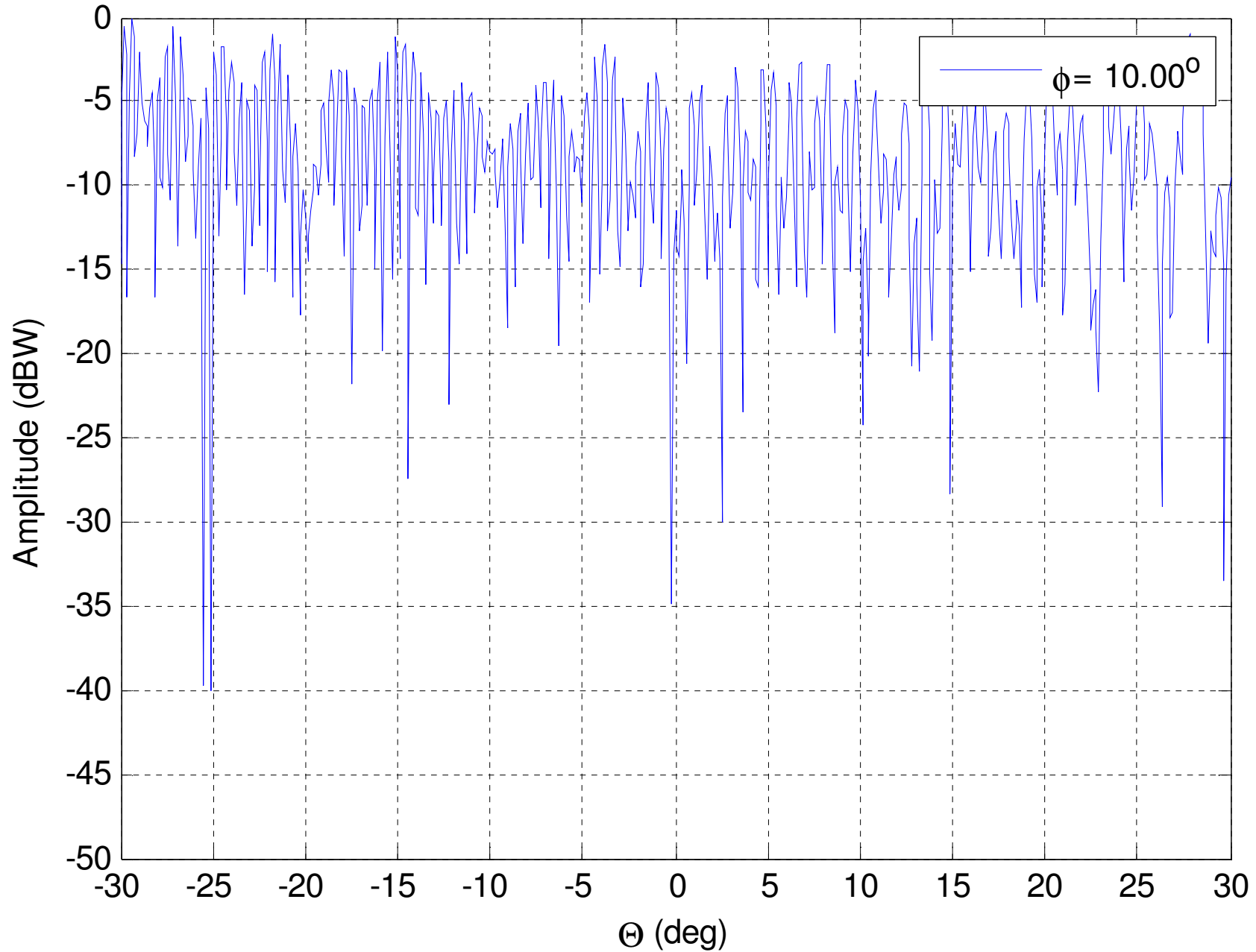
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -11.38 dBW, Date: 14-Dec-2011



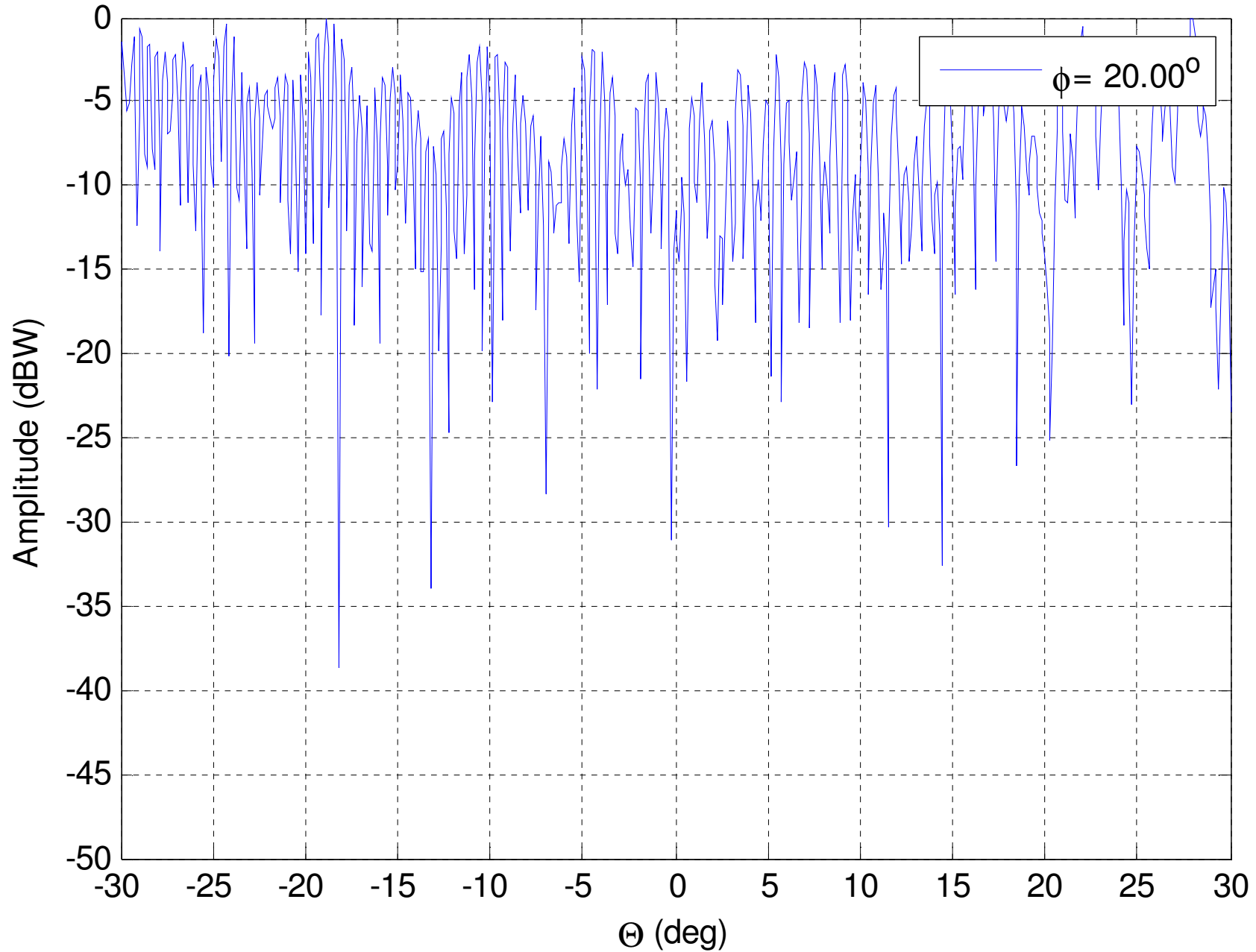
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -12.19 dBW, Date: 14-Dec-2011



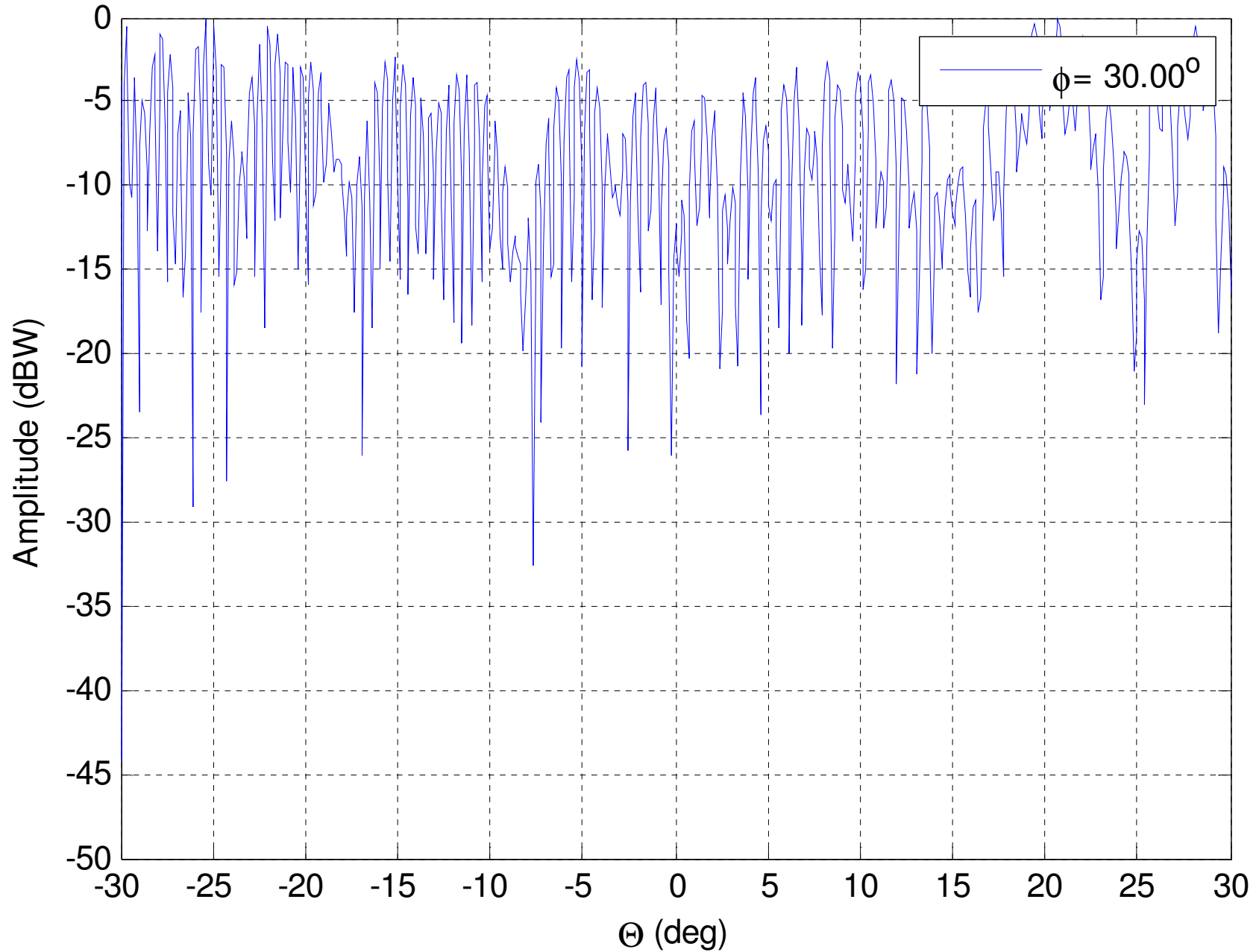
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -12.28 dBW, Date: 14-Dec-2011



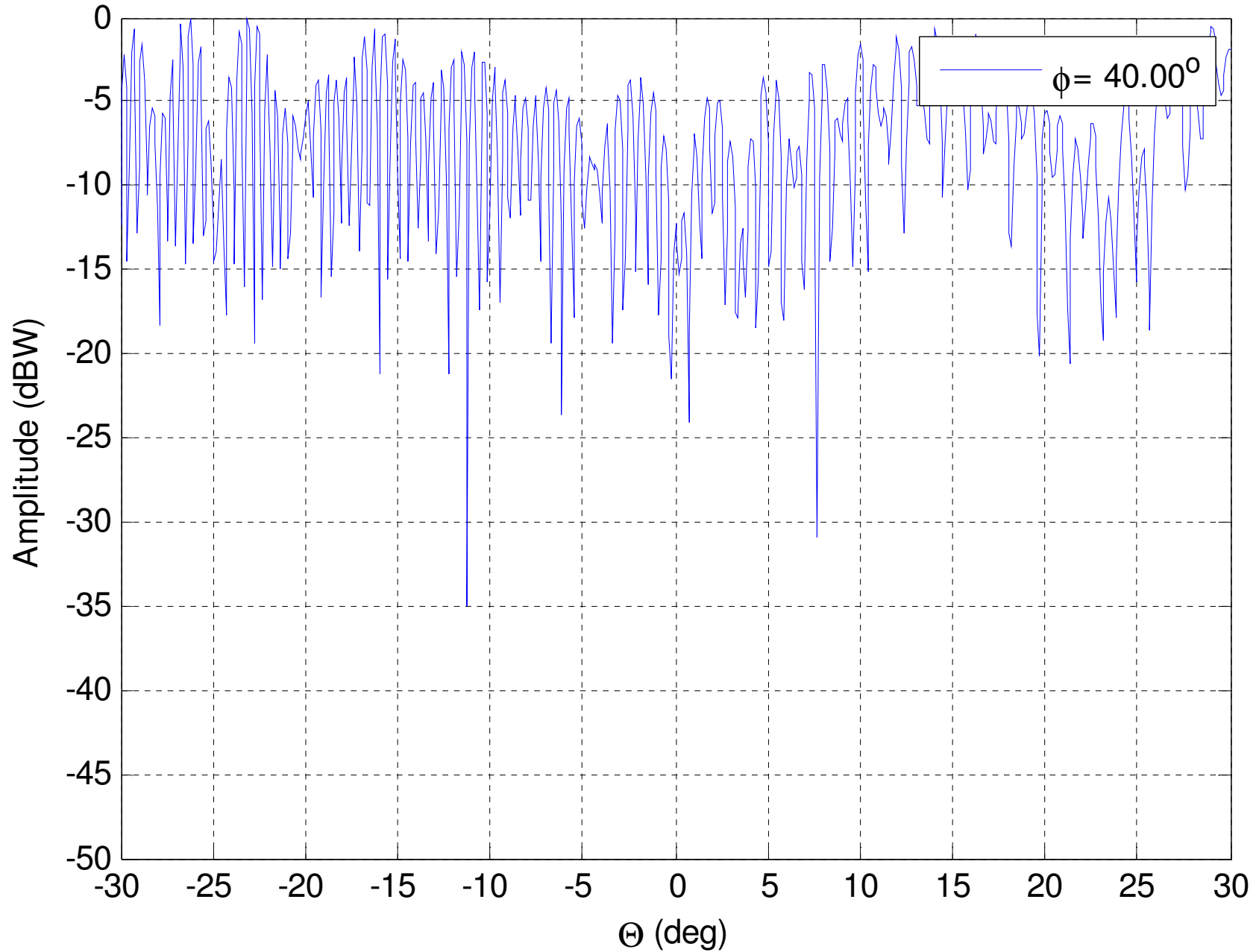
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -11.51 dBW, Date: 14-Dec-2011



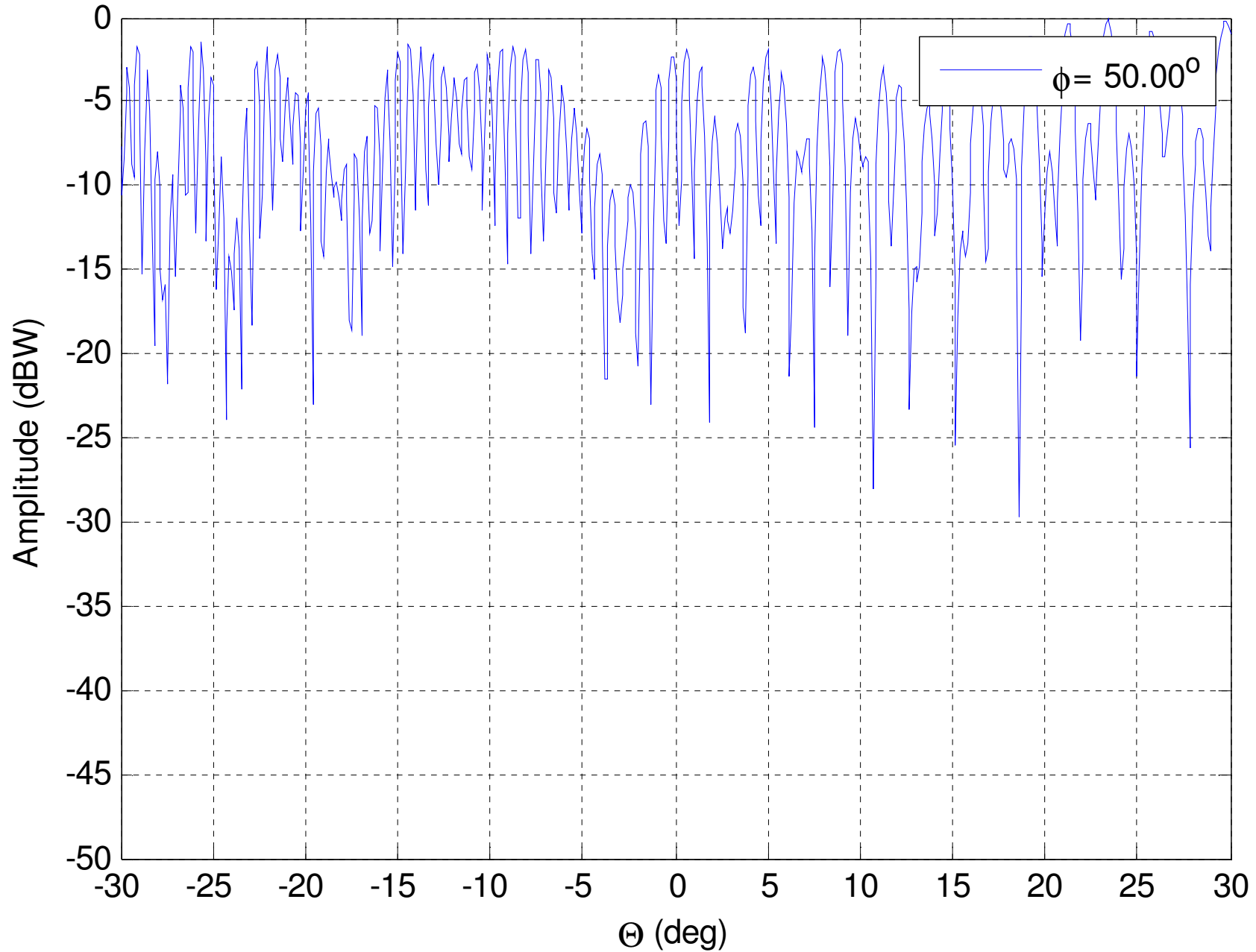
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.43 dBW, Date: 14-Dec-2011



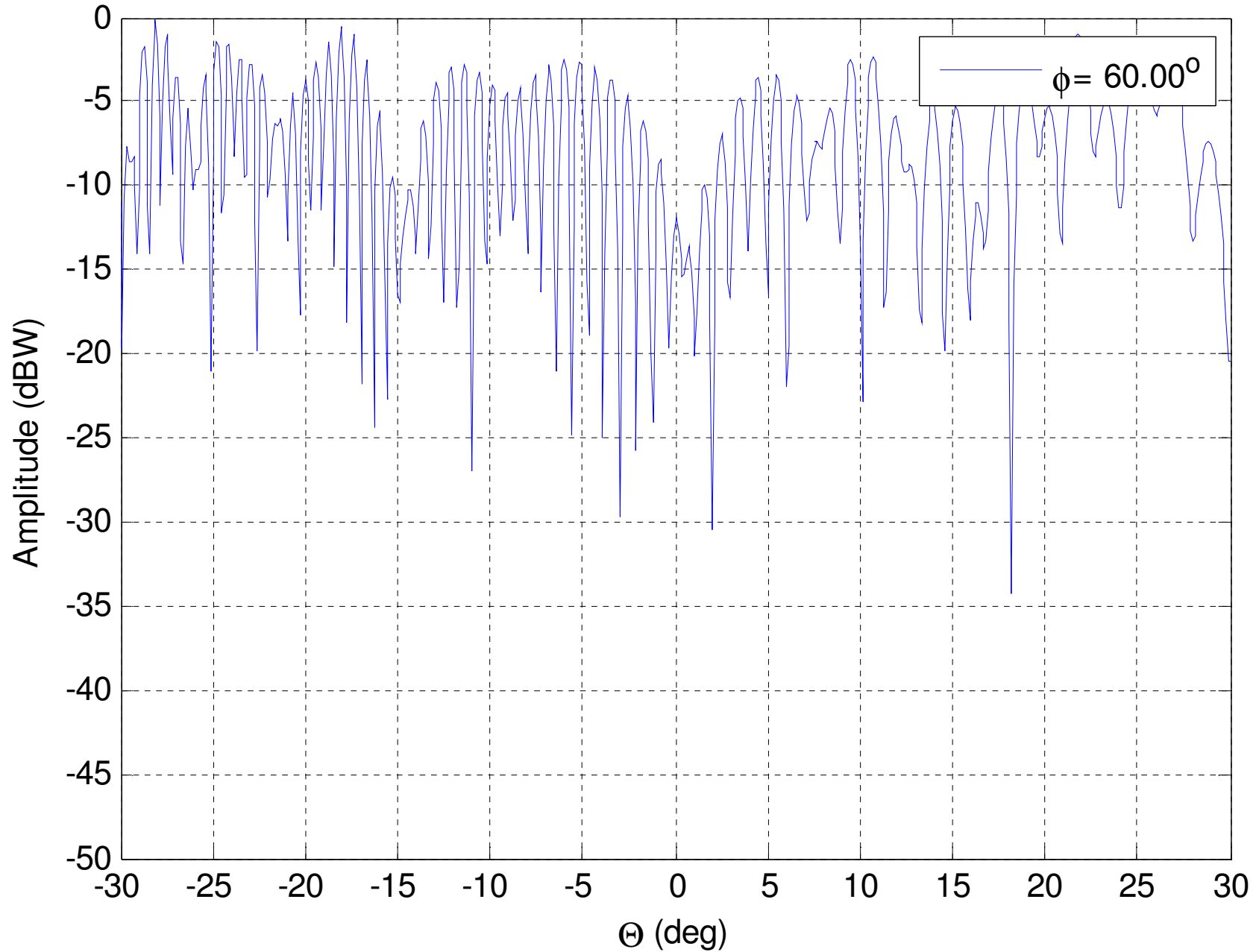
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.64 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

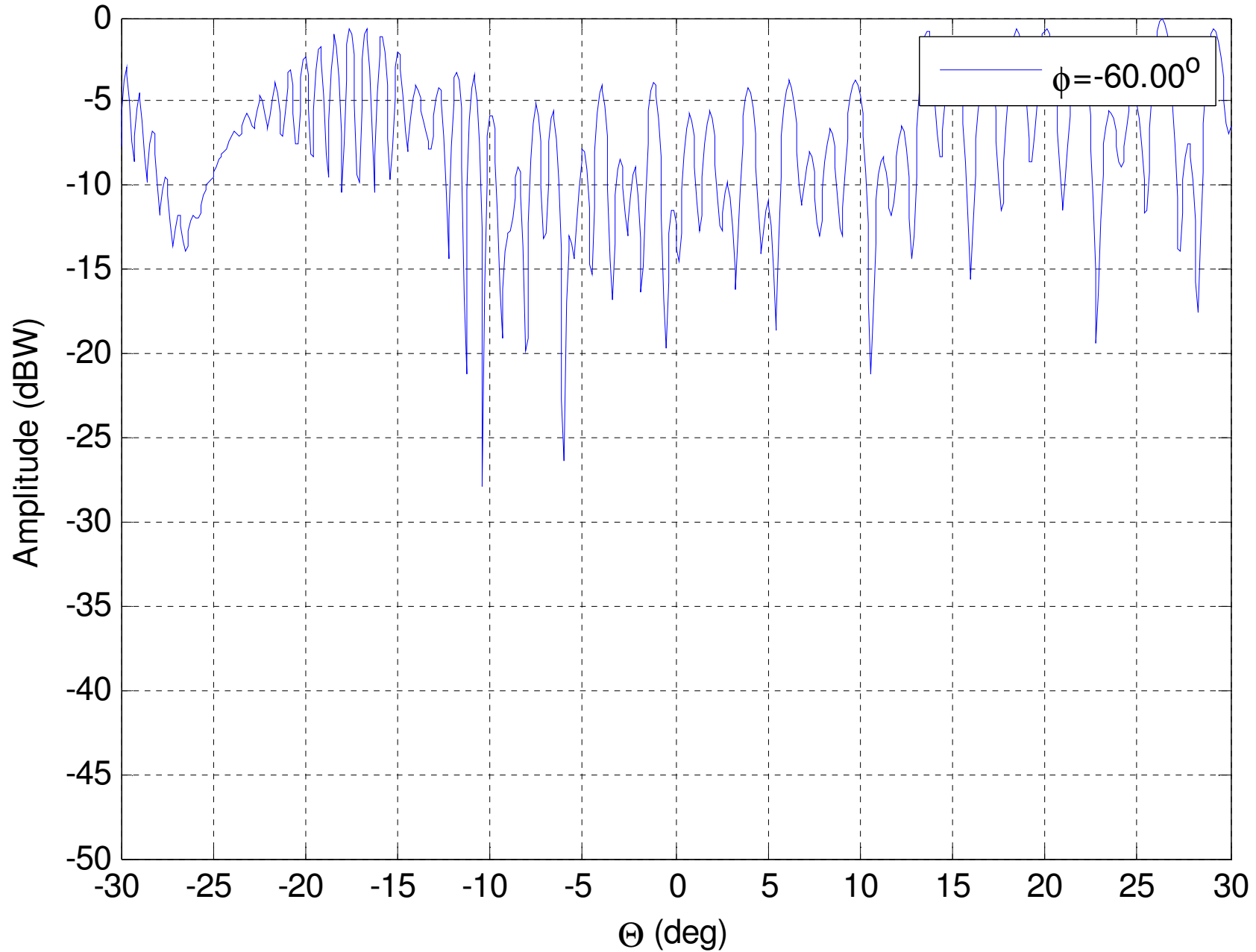
Input file: tx-17.3-lhcp-60.cut, Peak: -11.78 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

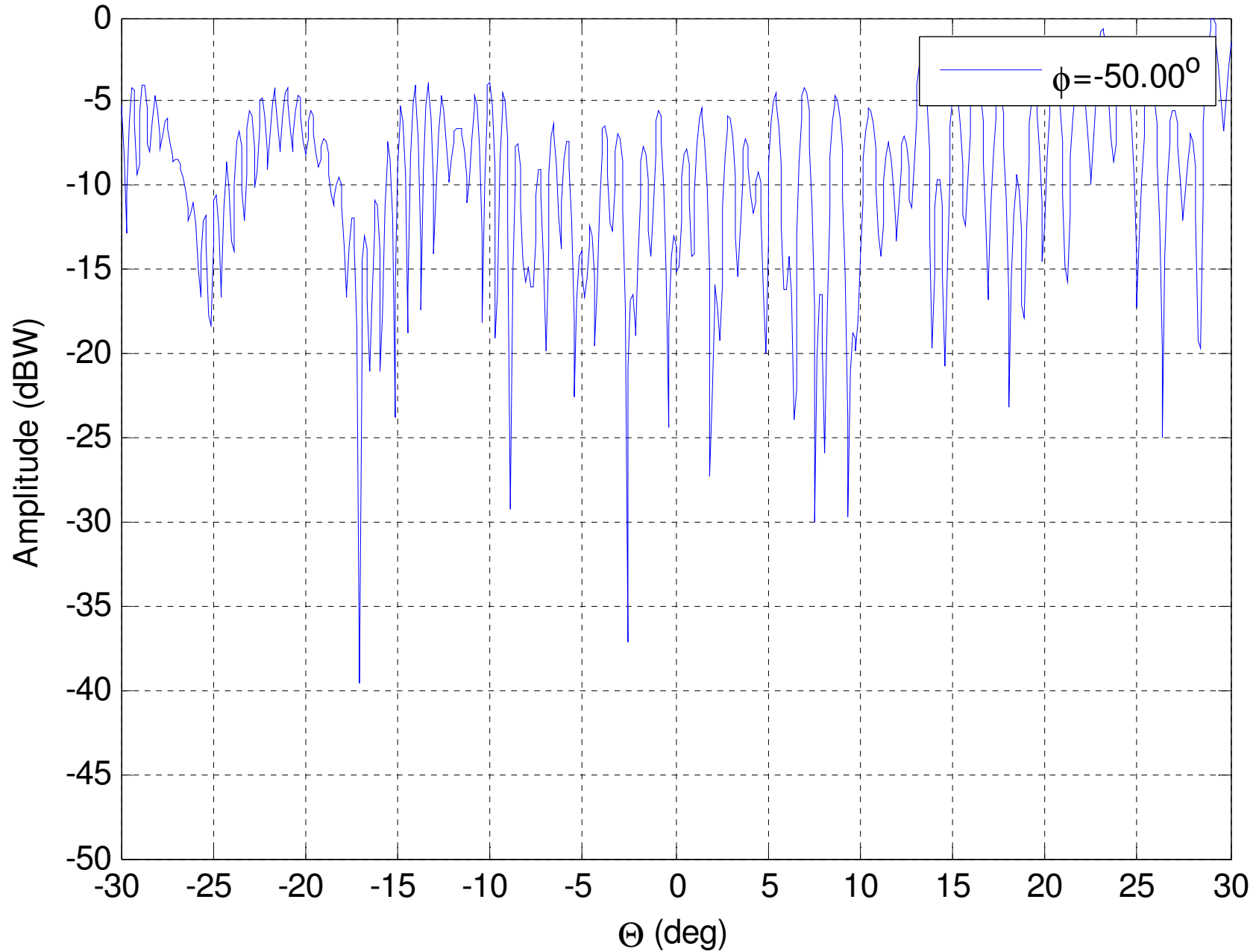
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.13 dBW, Date: 14-Dec-2011



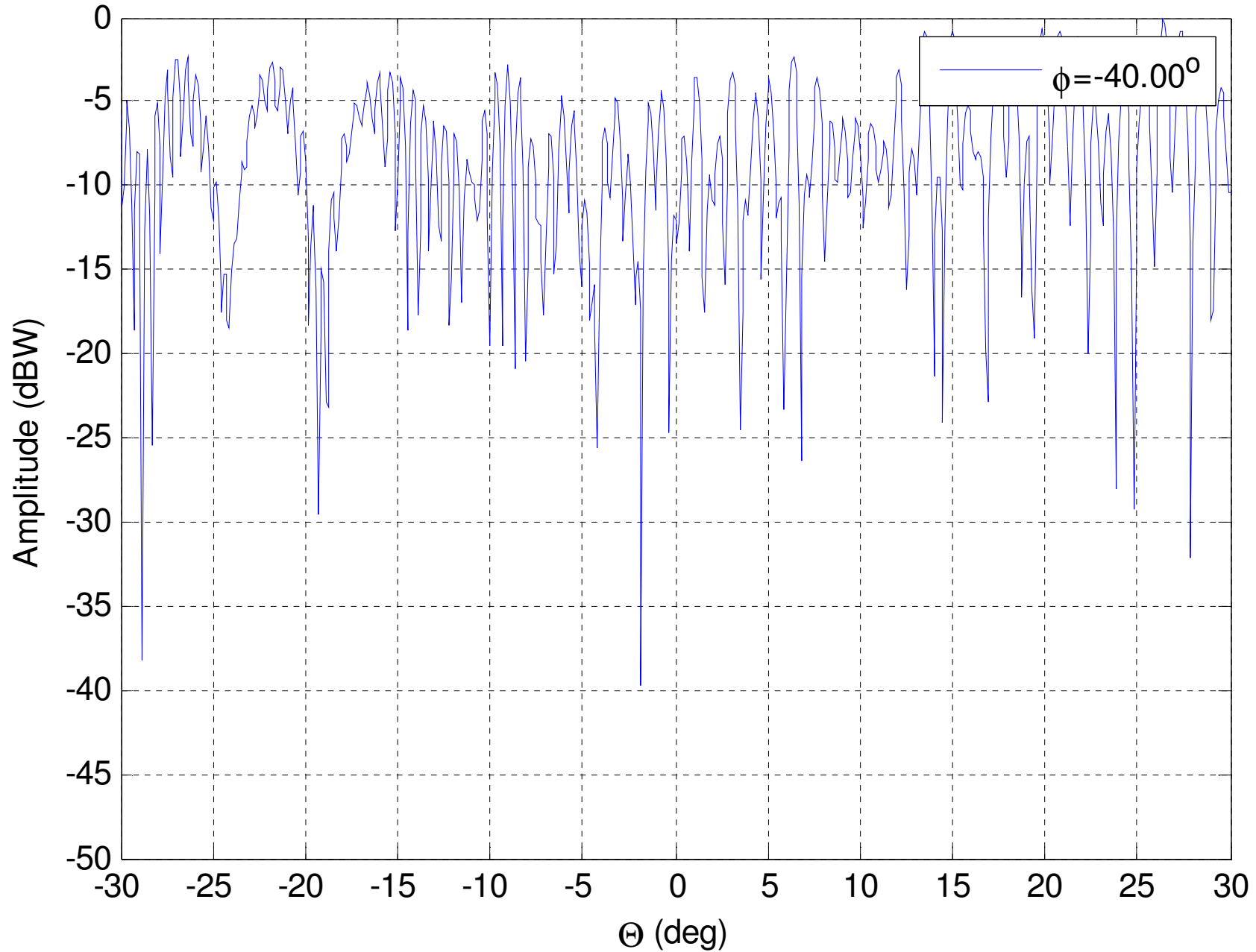
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -9.78 dBW, Date: 14-Dec-2011



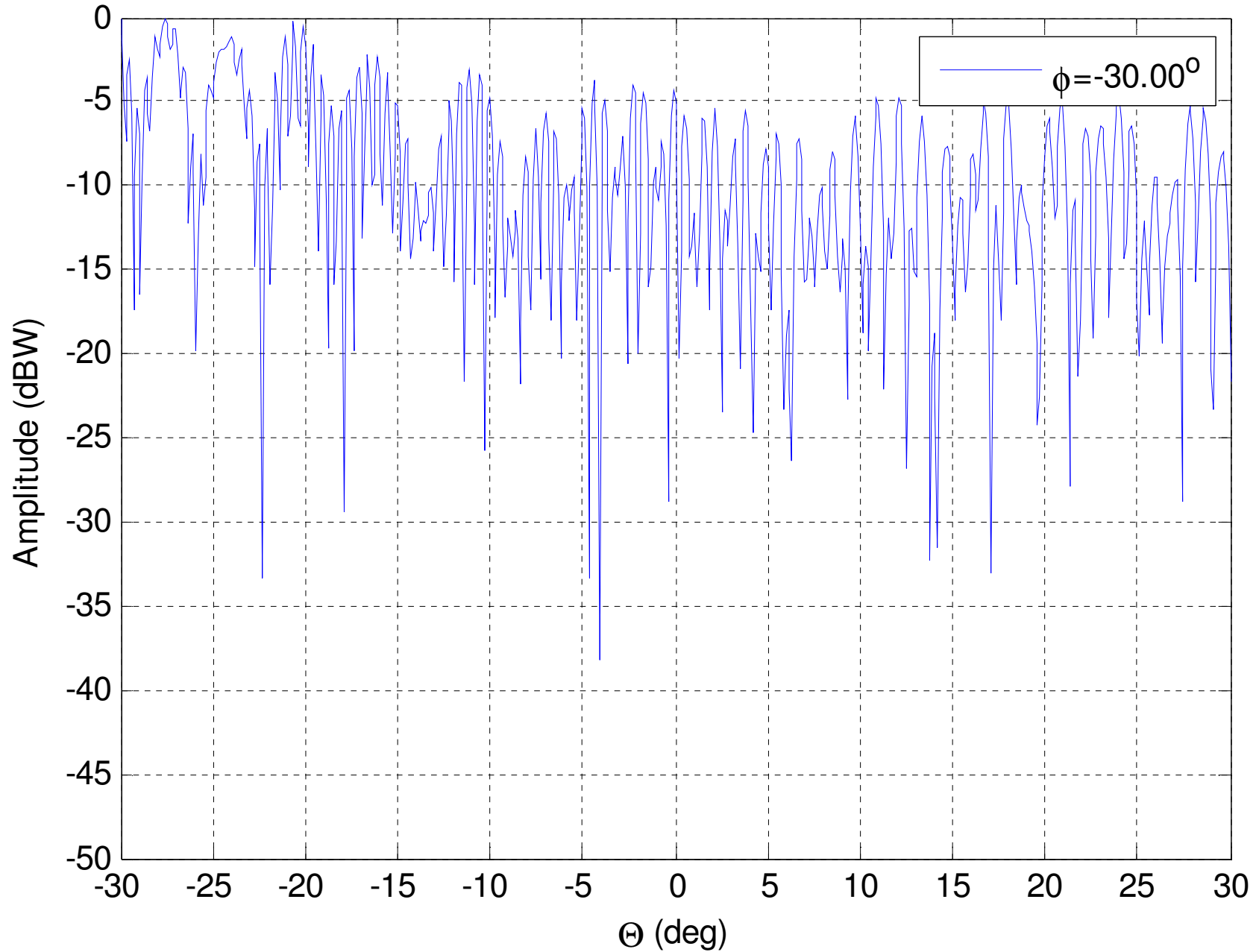
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -11.34 dBW, Date: 14-Dec-2011



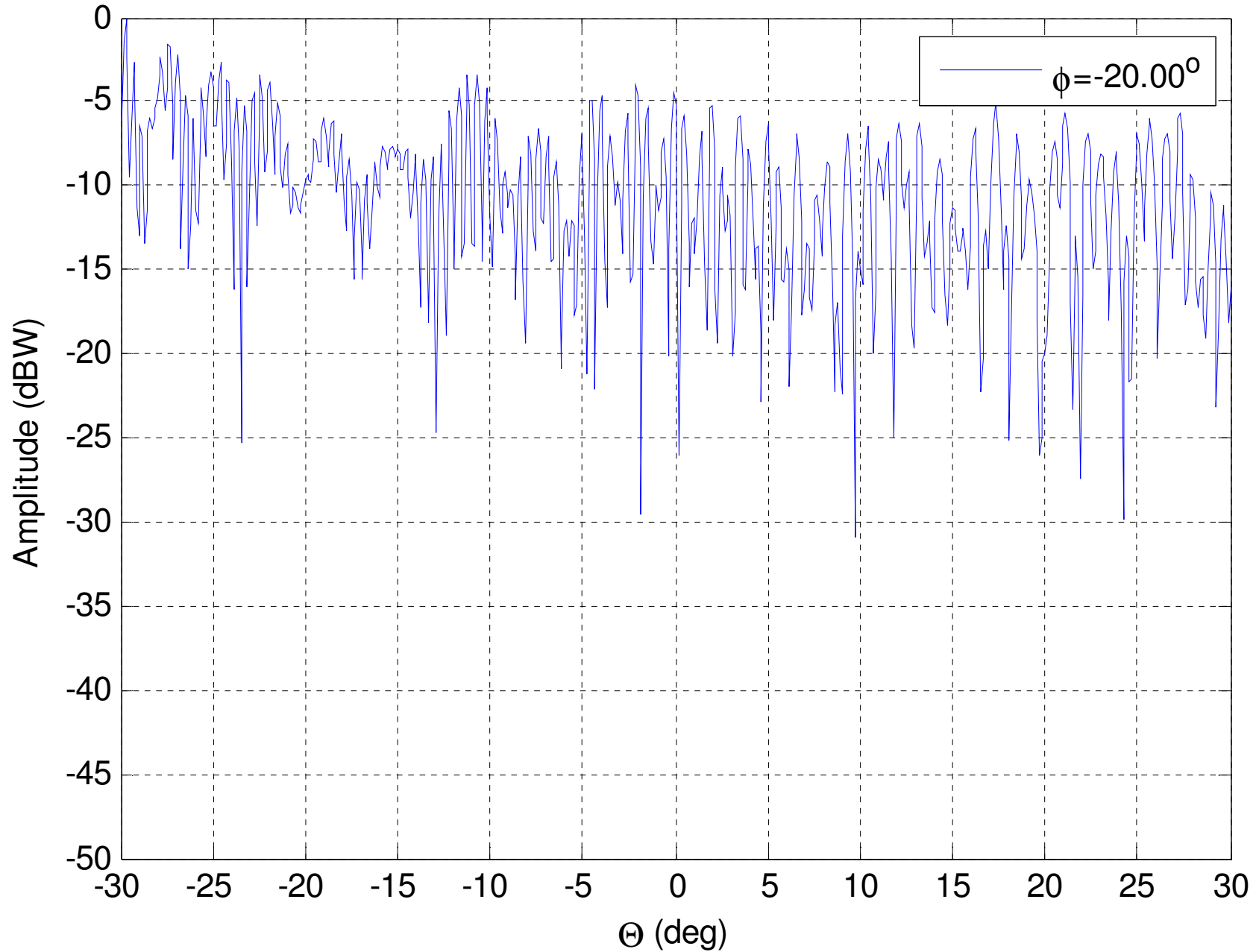
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -10.34 dBW, Date: 14-Dec-2011



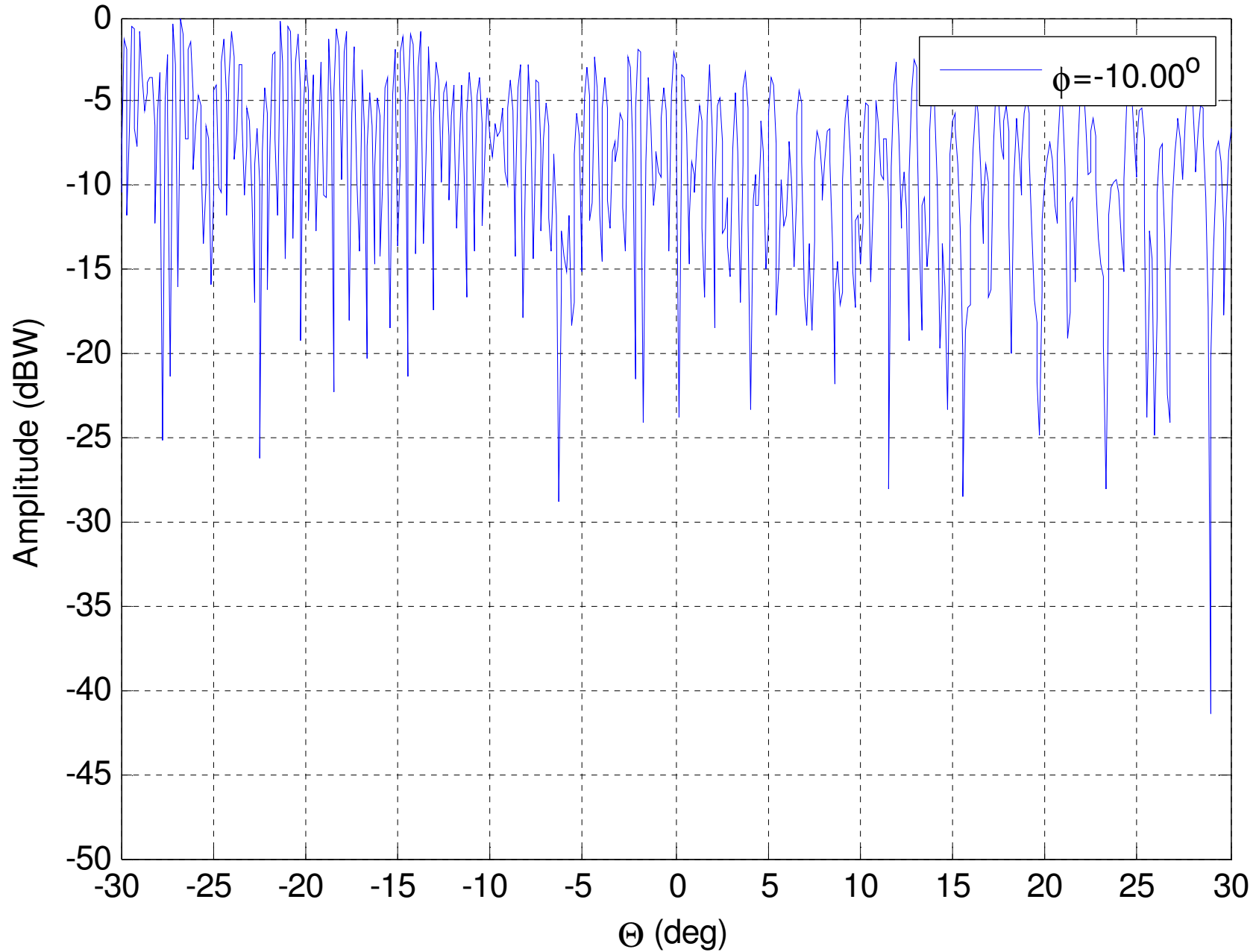
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -10.13 dBW, Date: 14-Dec-2011



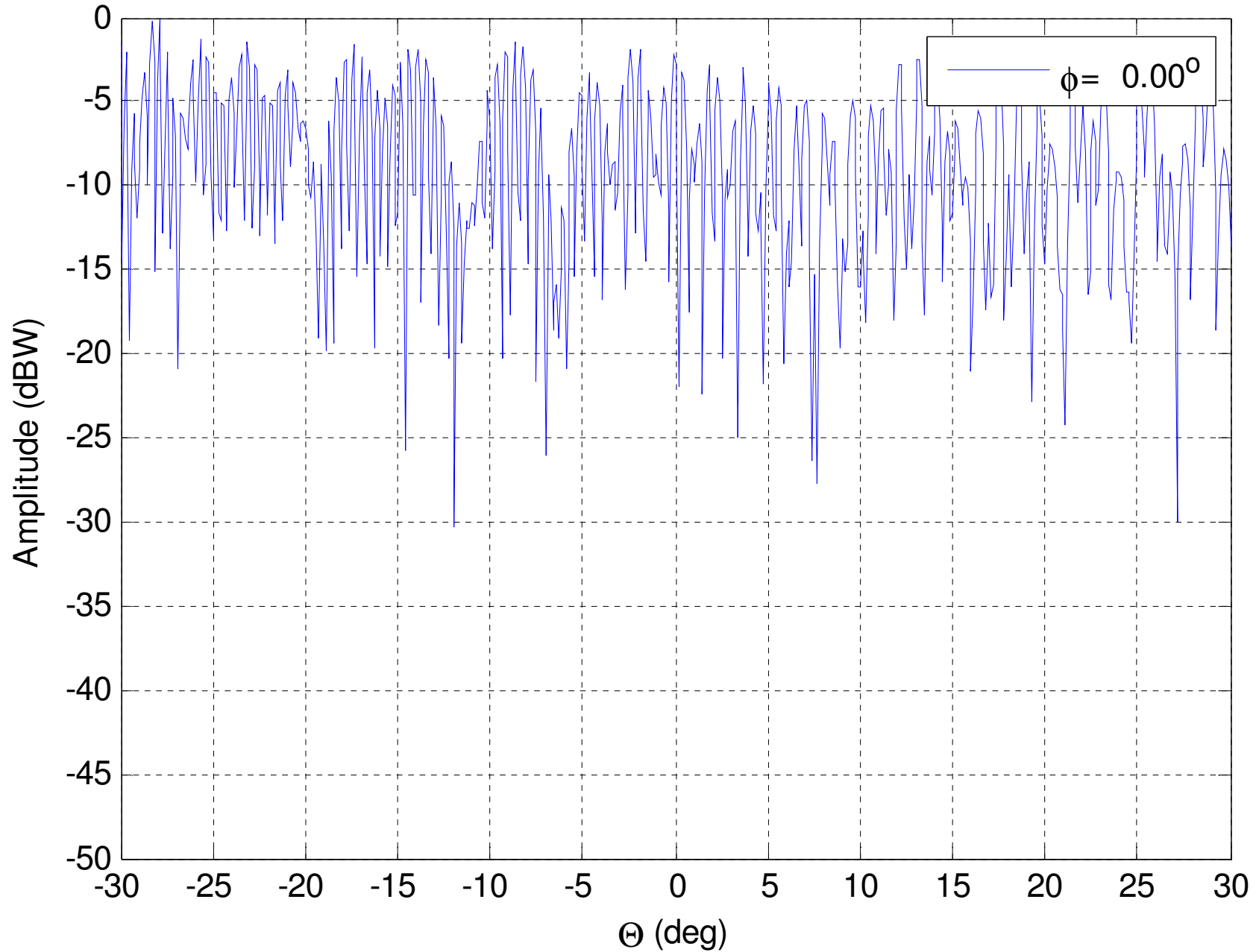
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -12.66 dBW, Date: 14-Dec-2011



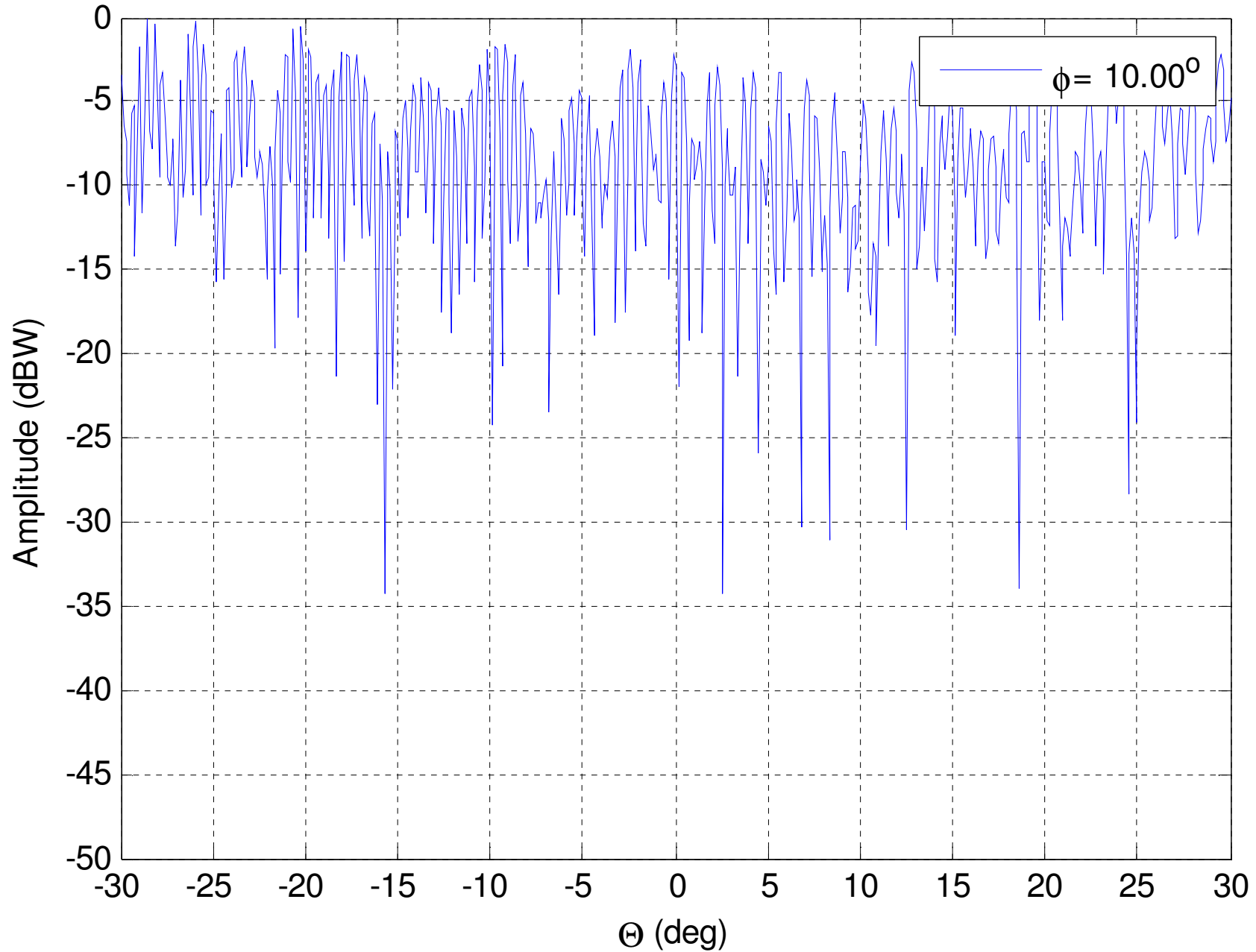
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -12.54 dBW, Date: 14-Dec-2011



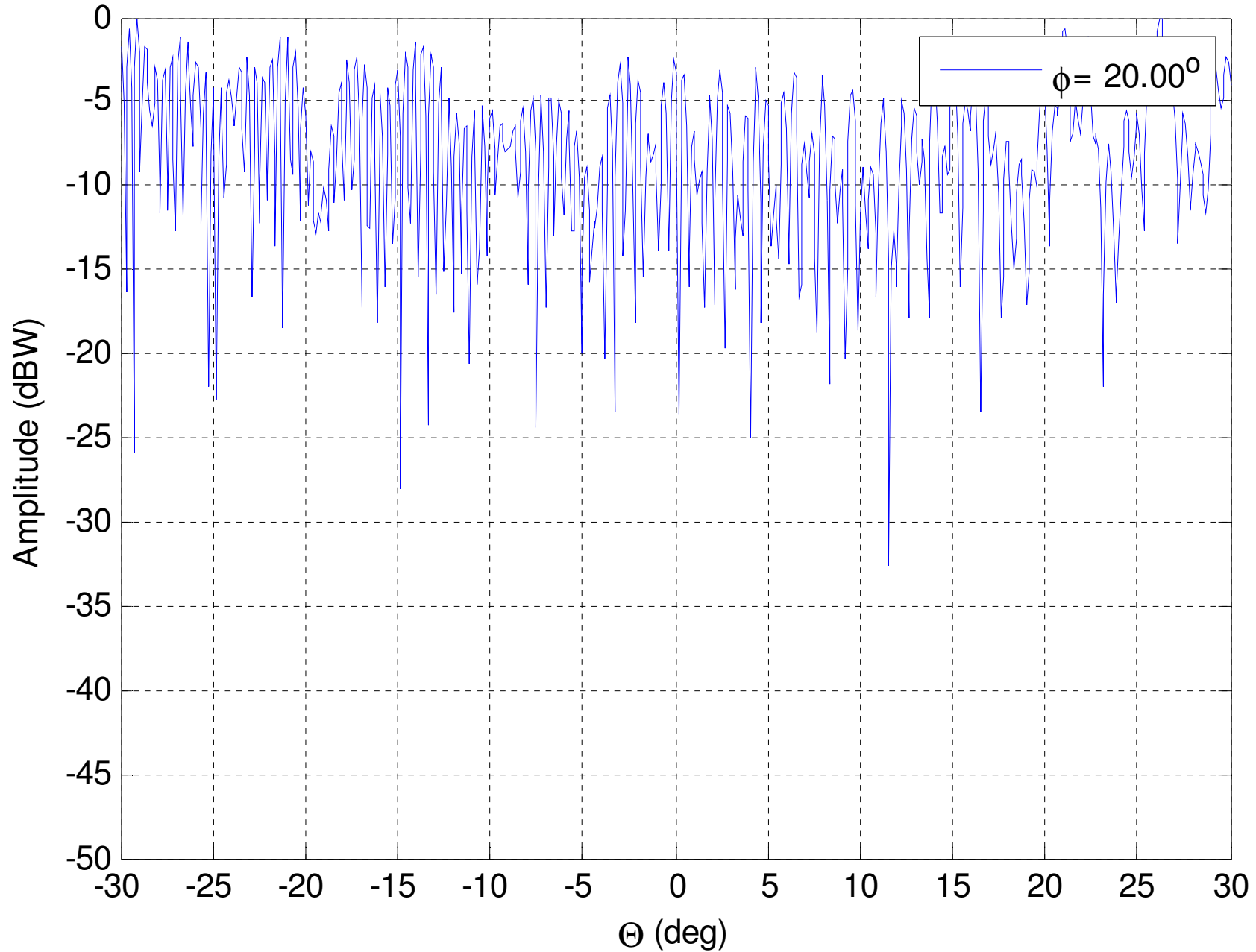
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -12.50 dBW, Date: 14-Dec-2011



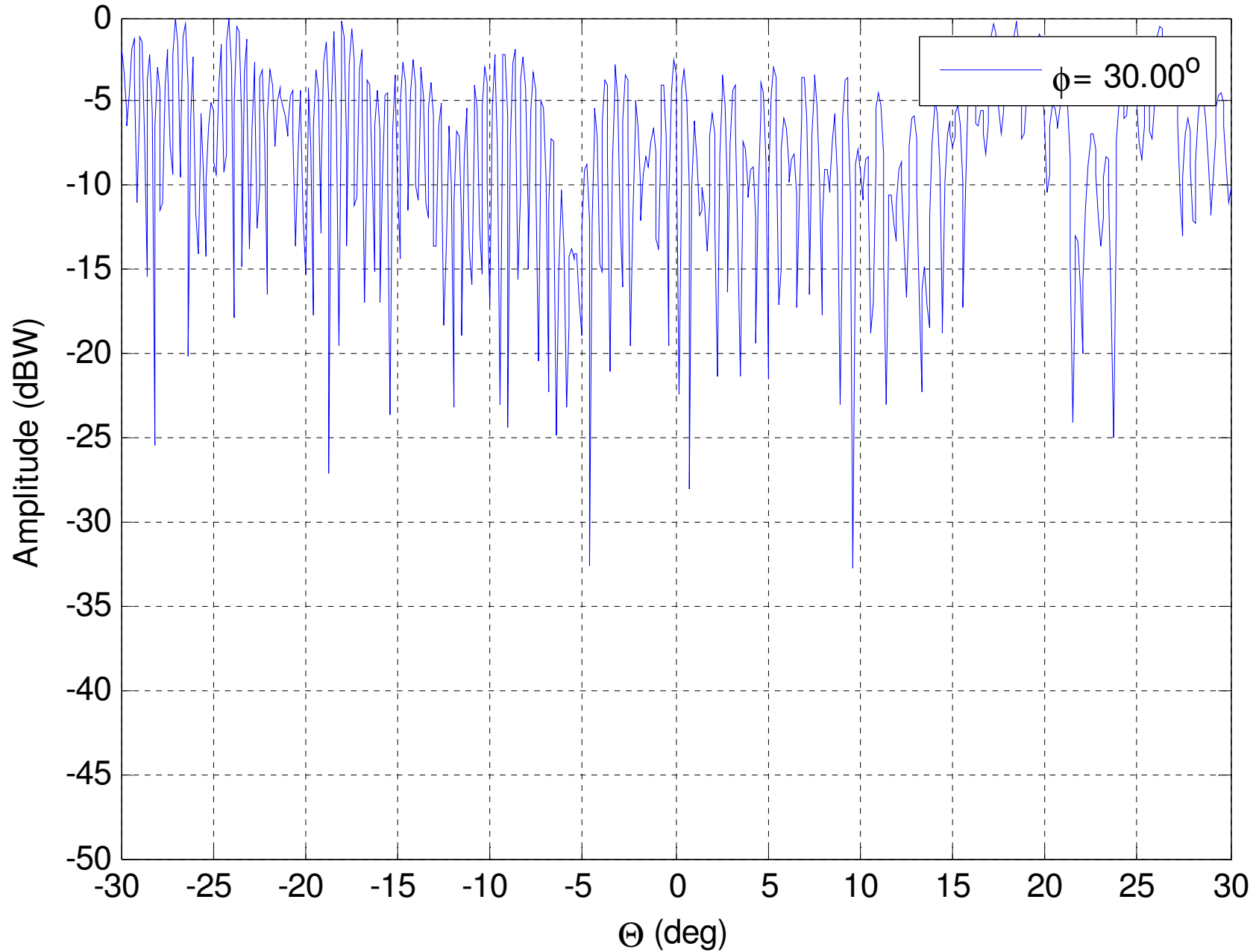
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -12.13 dBW, Date: 14-Dec-2011



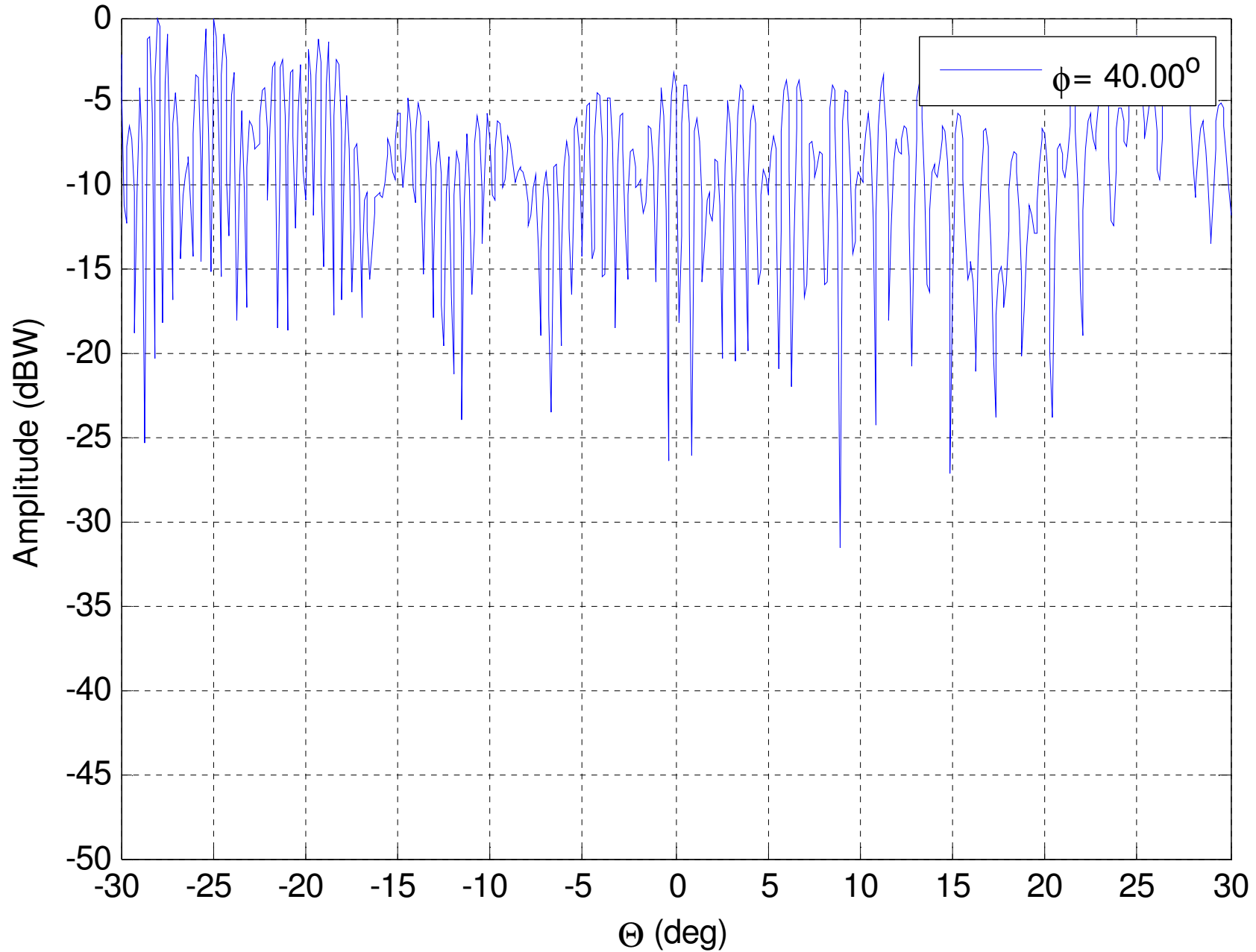
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -12.04 dBW, Date: 14-Dec-2011



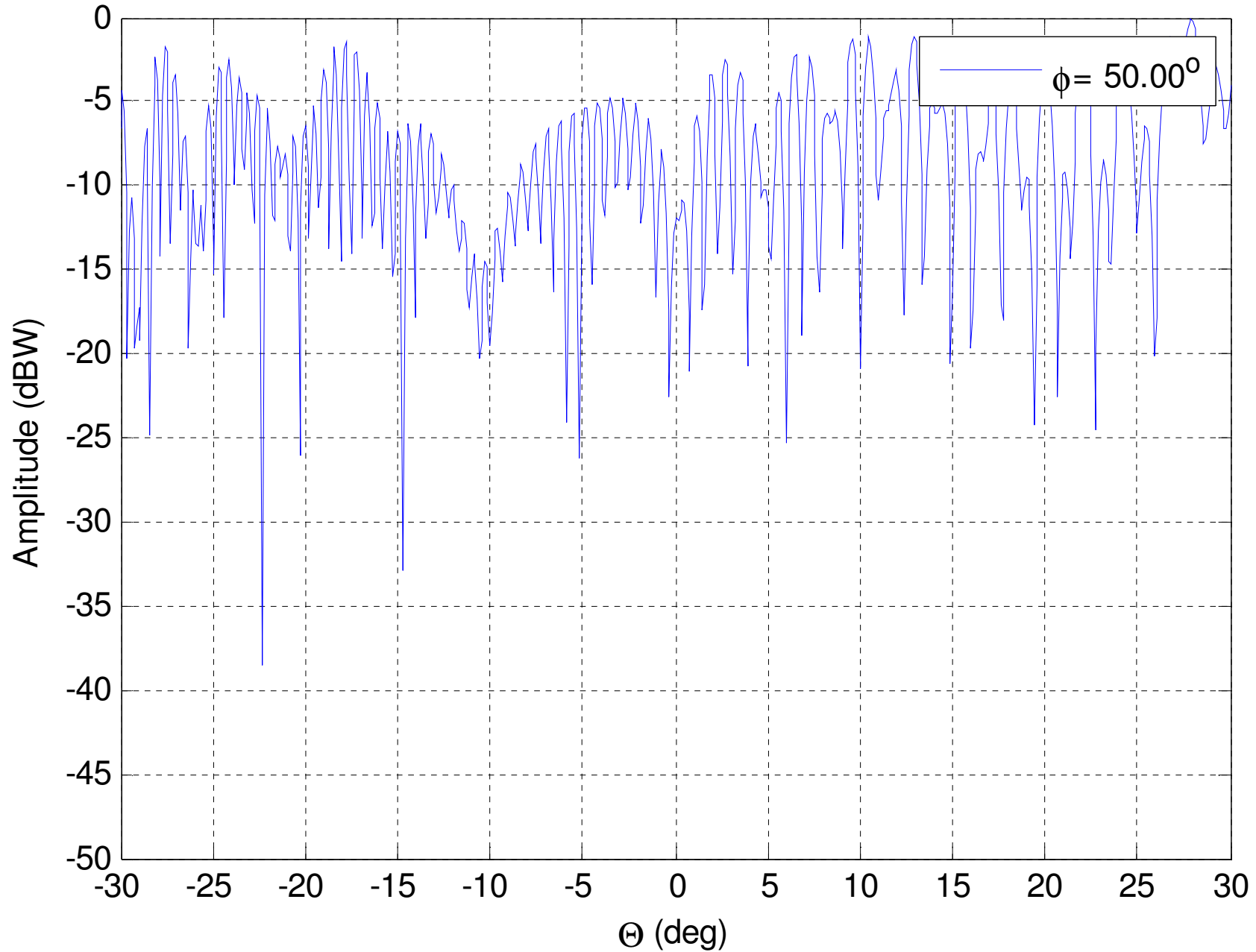
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -11.28 dBW, Date: 14-Dec-2011



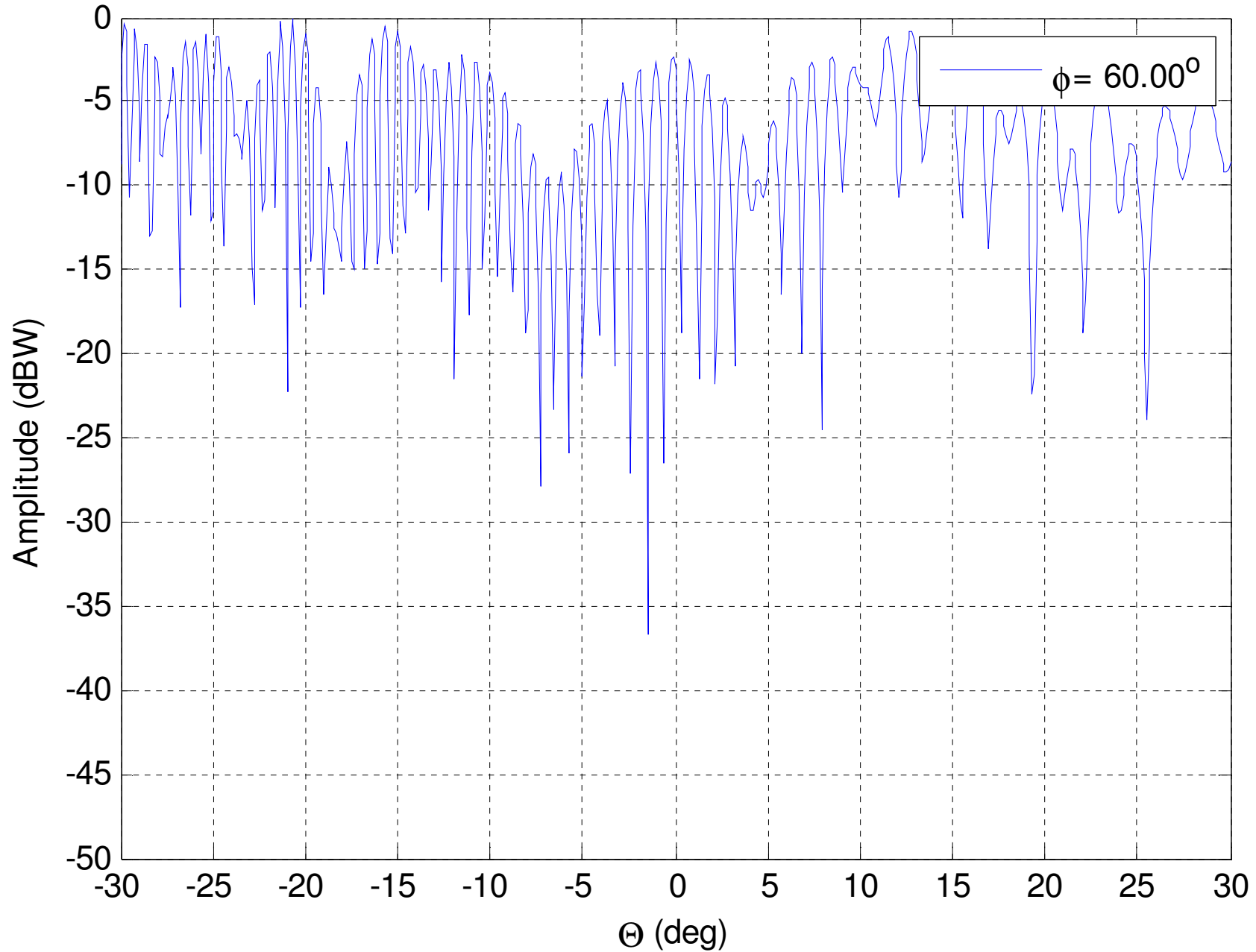
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.53 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

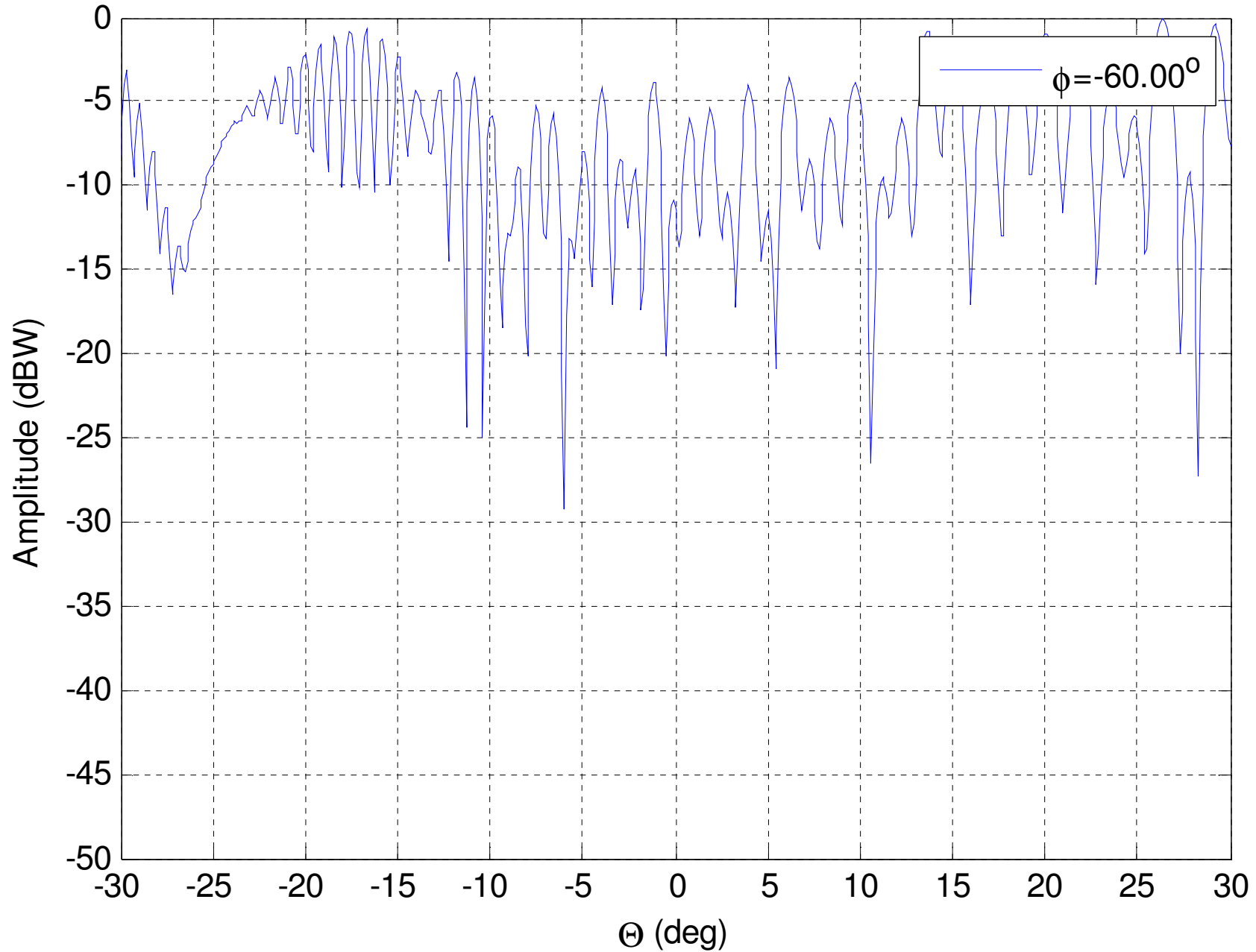
Input file: tx-17.5-rhcp-60.cut, Peak: -12.25 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

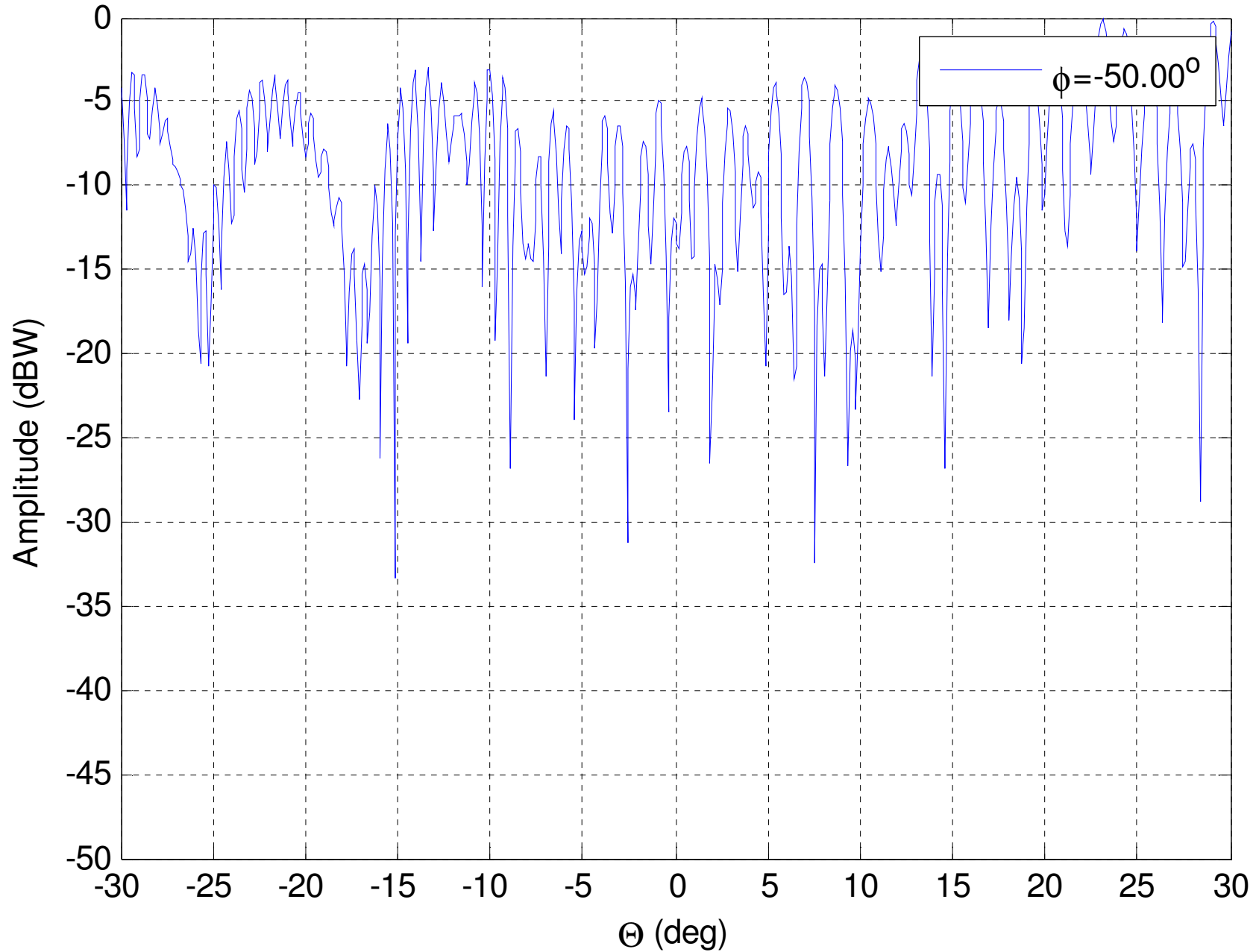
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -11.00 dBW, Date: 14-Dec-2011



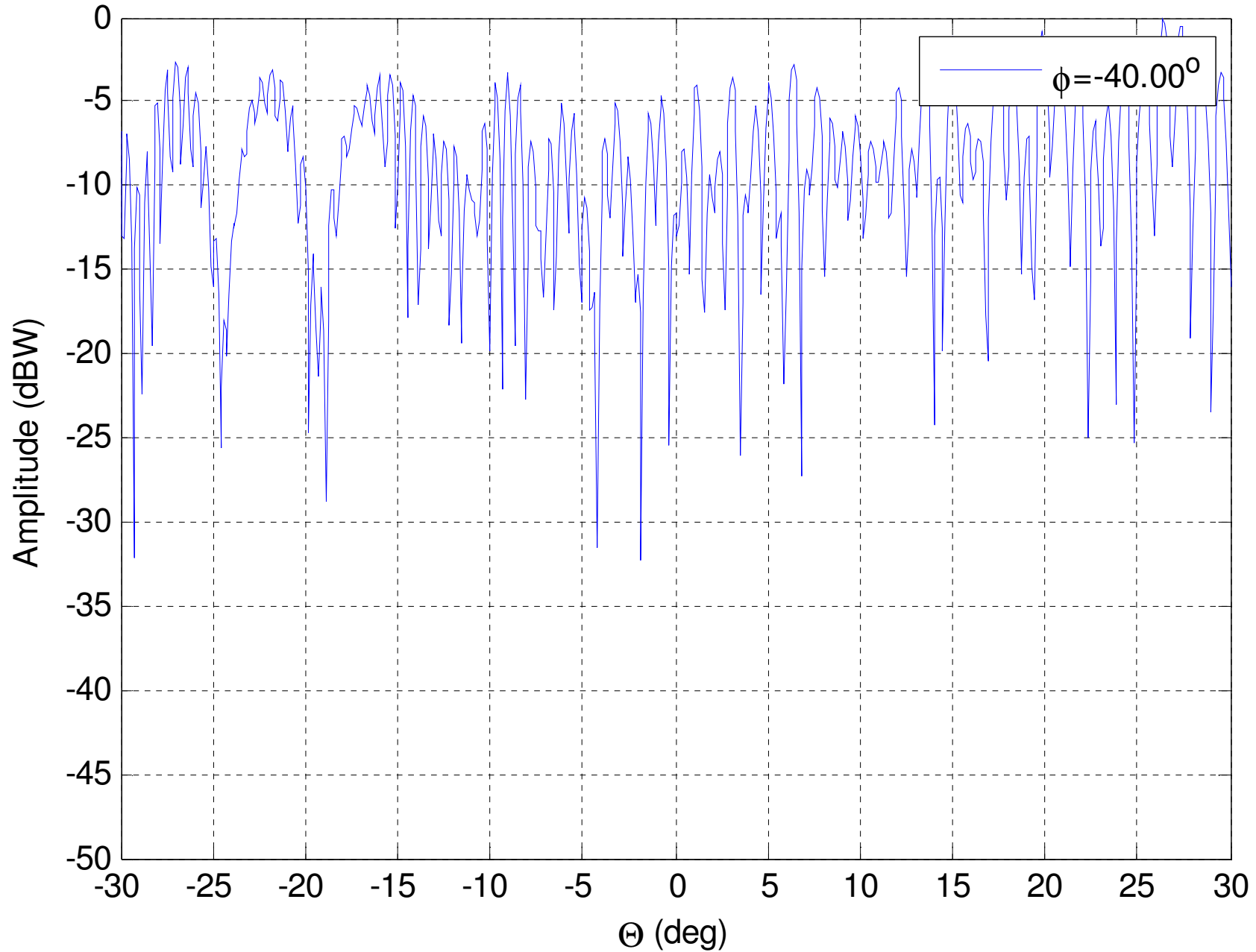
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -10.22 dBW, Date: 14-Dec-2011



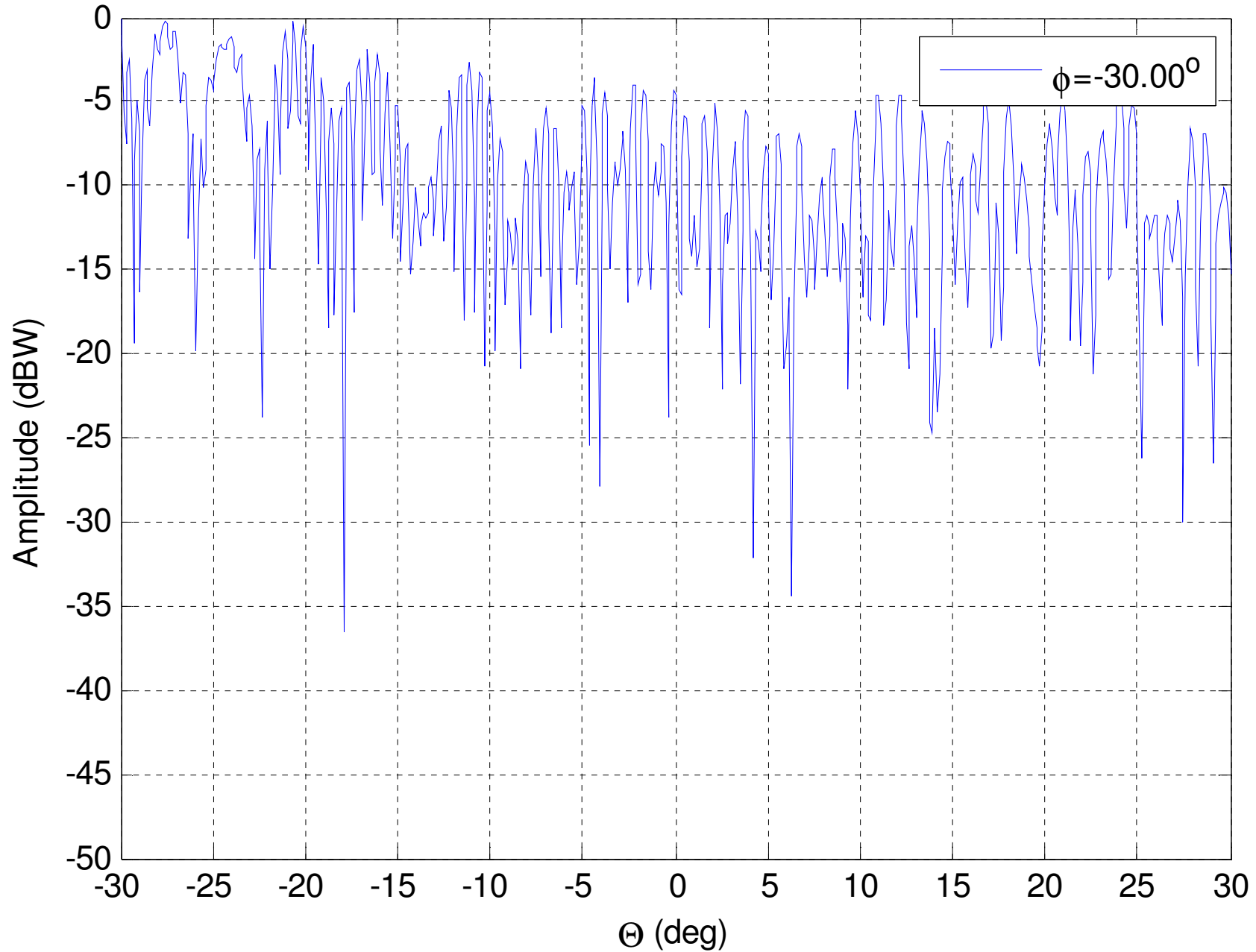
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.78 dBW, Date: 14-Dec-2011



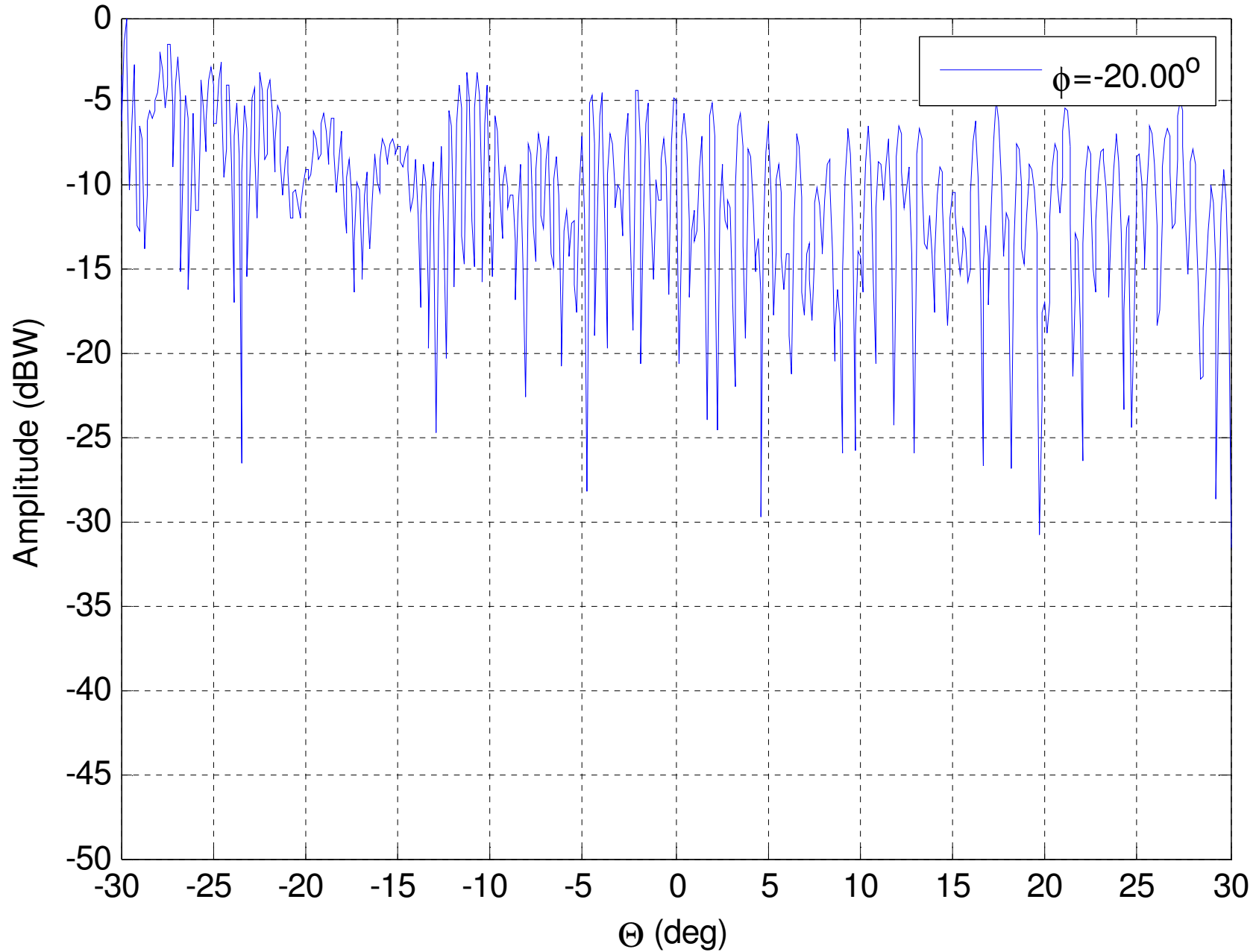
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.49 dBW, Date: 14-Dec-2011



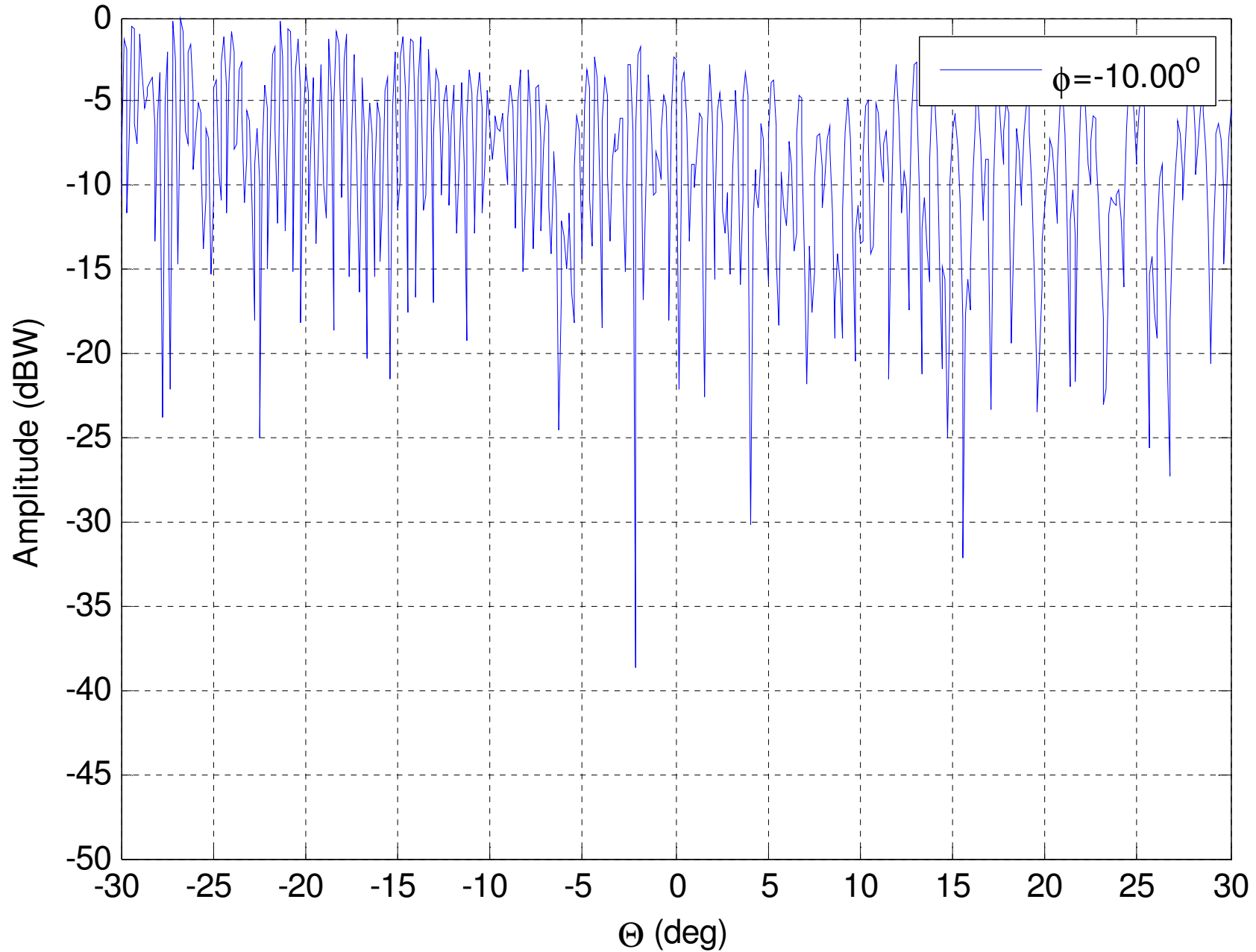
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -10.14 dBW, Date: 14-Dec-2011



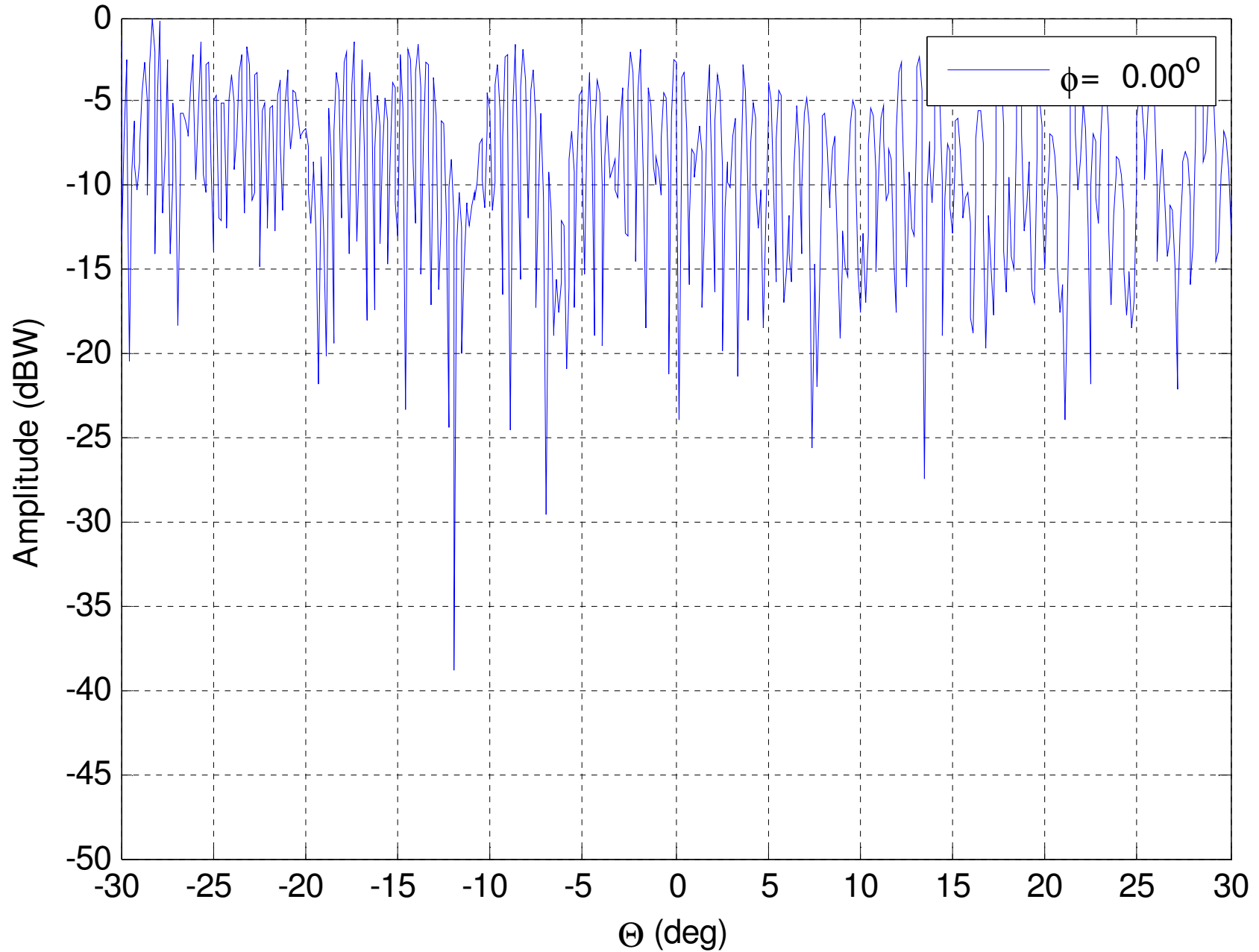
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -12.56 dBW, Date: 14-Dec-2011



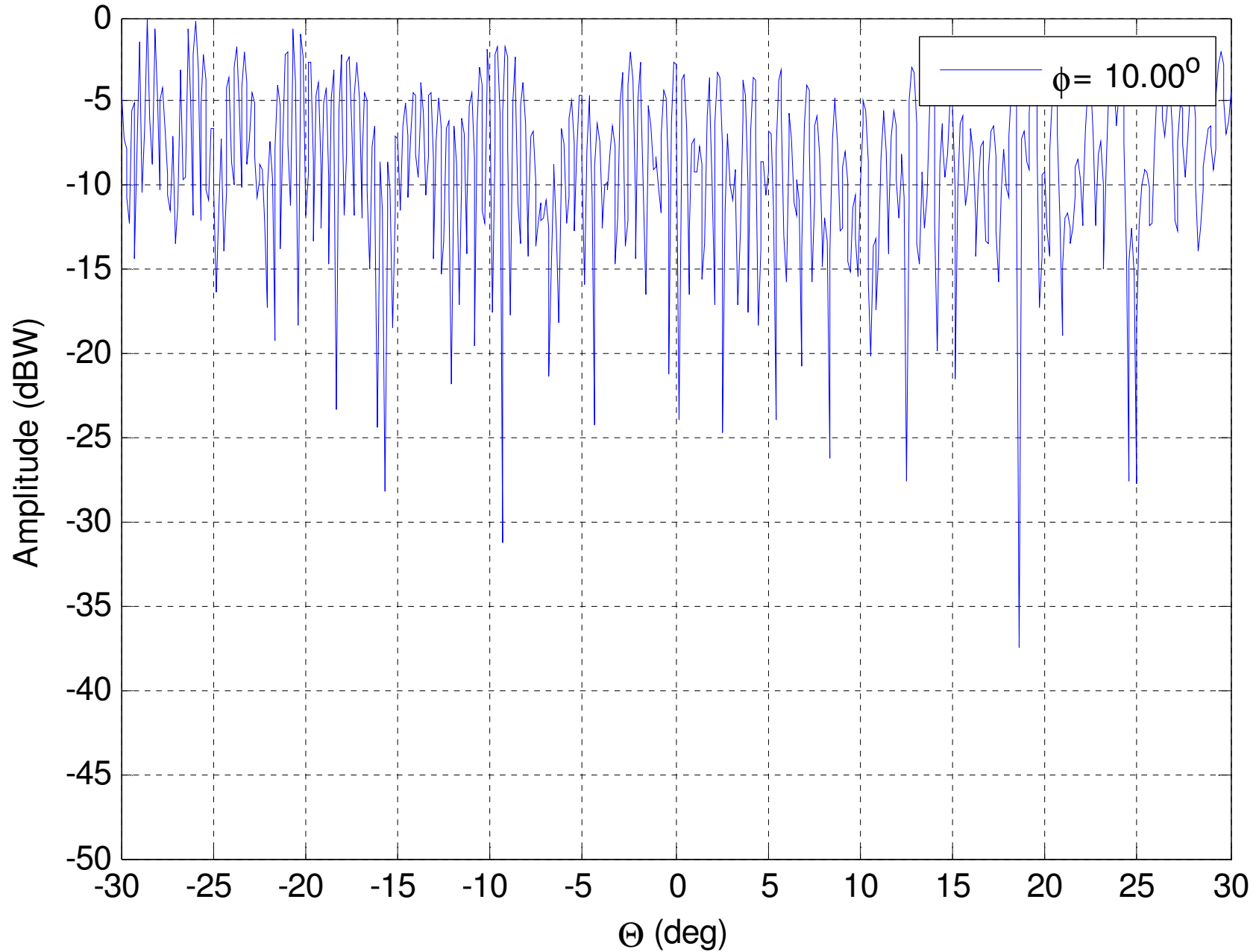
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -12.51 dBW, Date: 14-Dec-2011



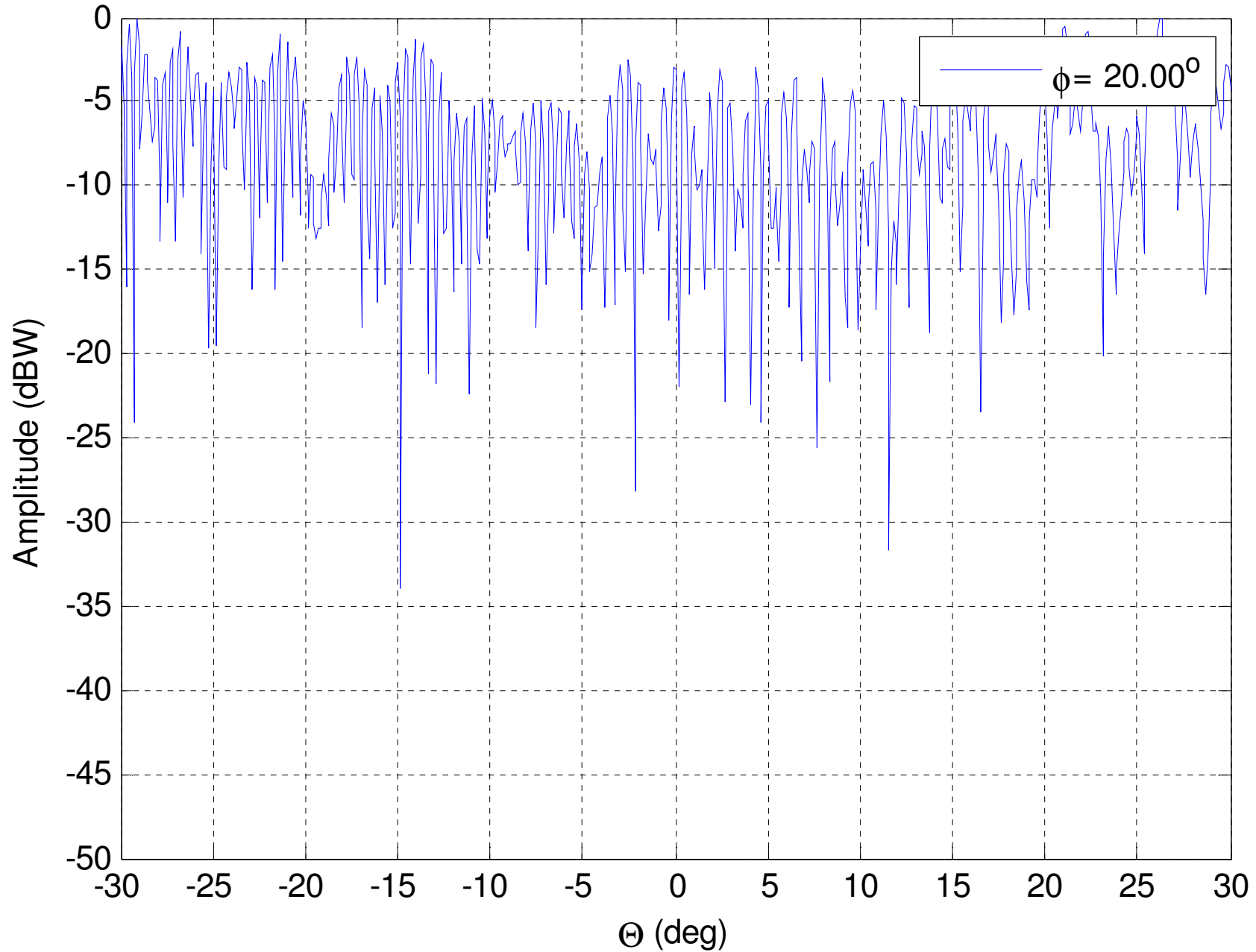
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -12.28 dBW, Date: 14-Dec-2011



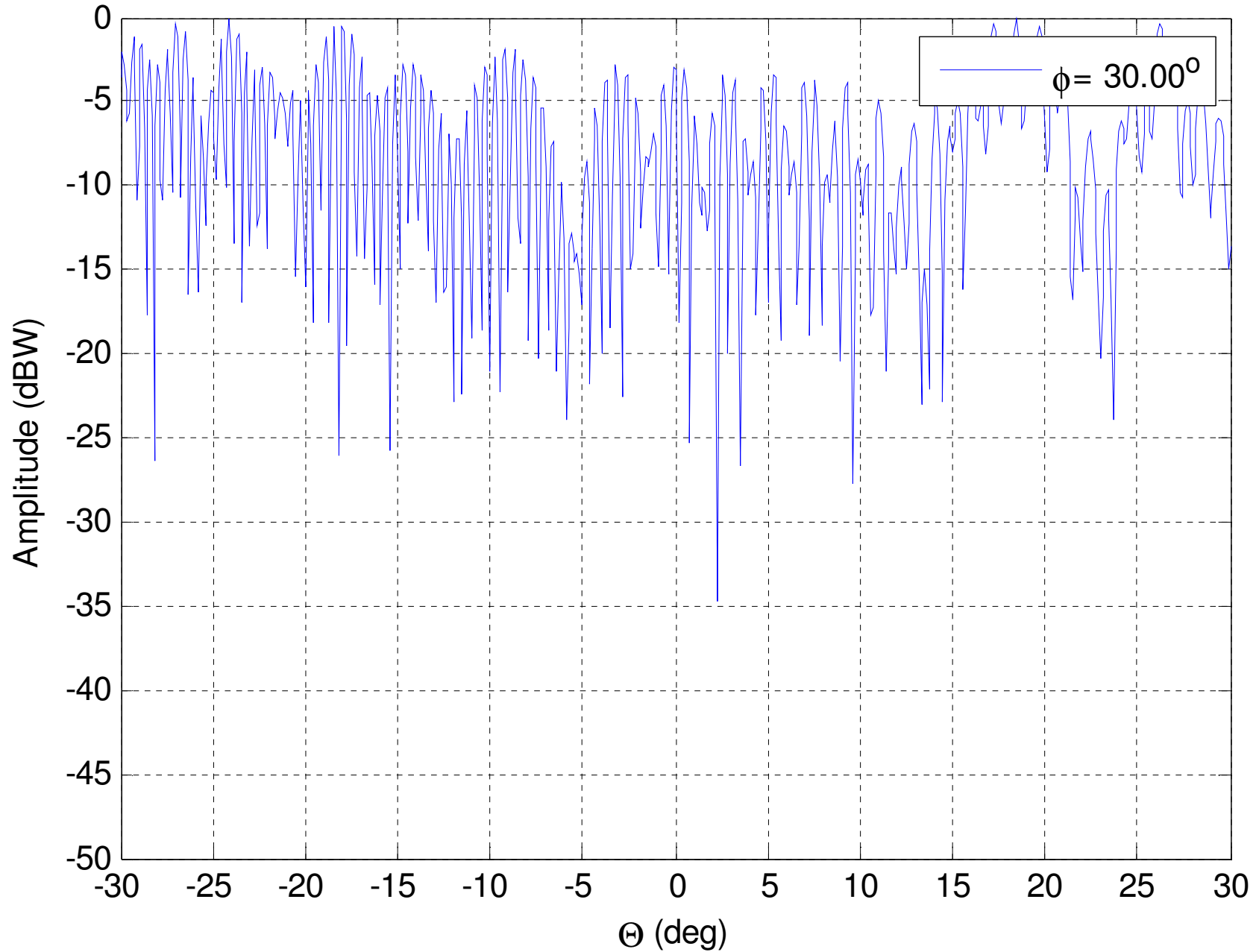
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -12.01 dBW, Date: 14-Dec-2011



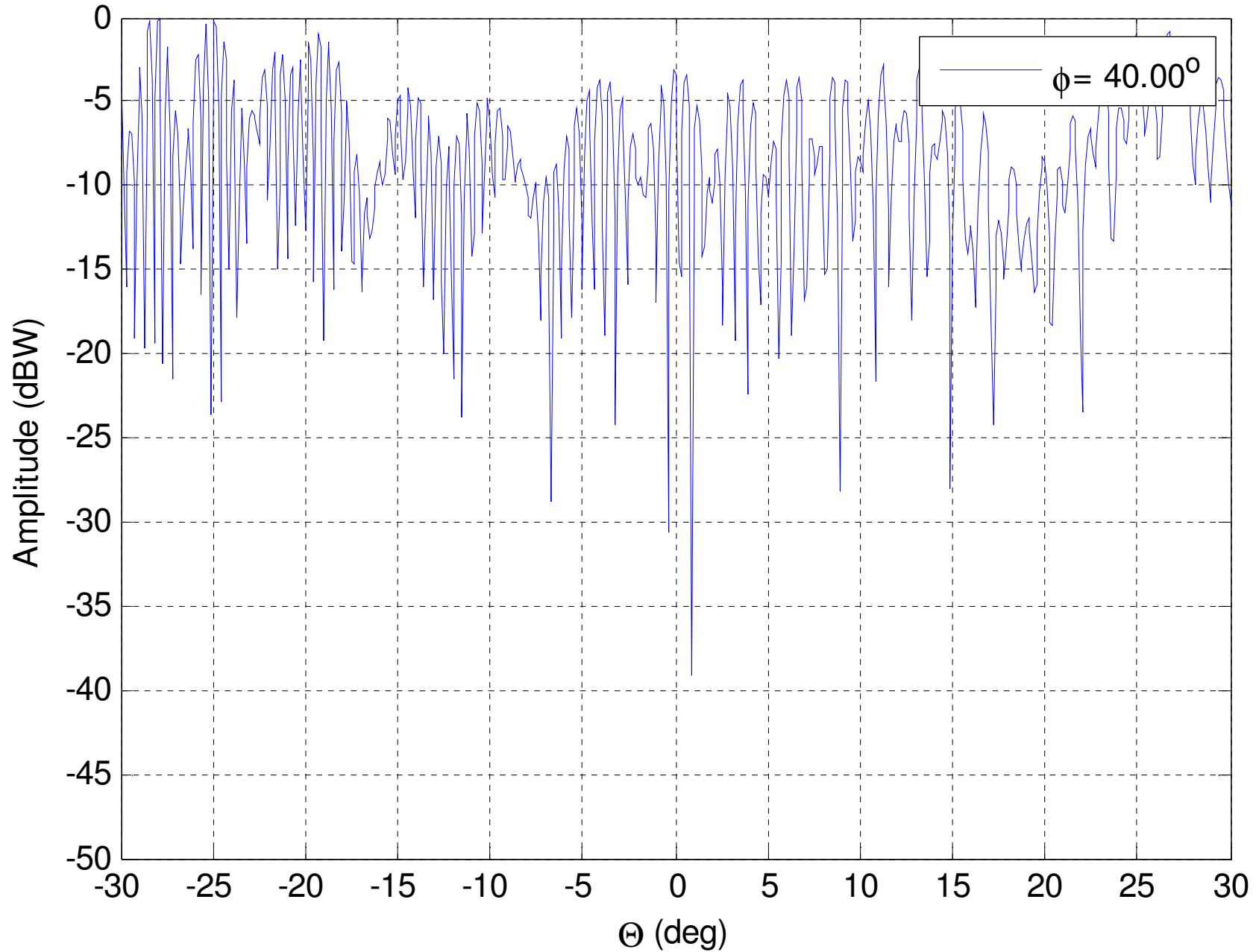
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.94 dBW, Date: 14-Dec-2011



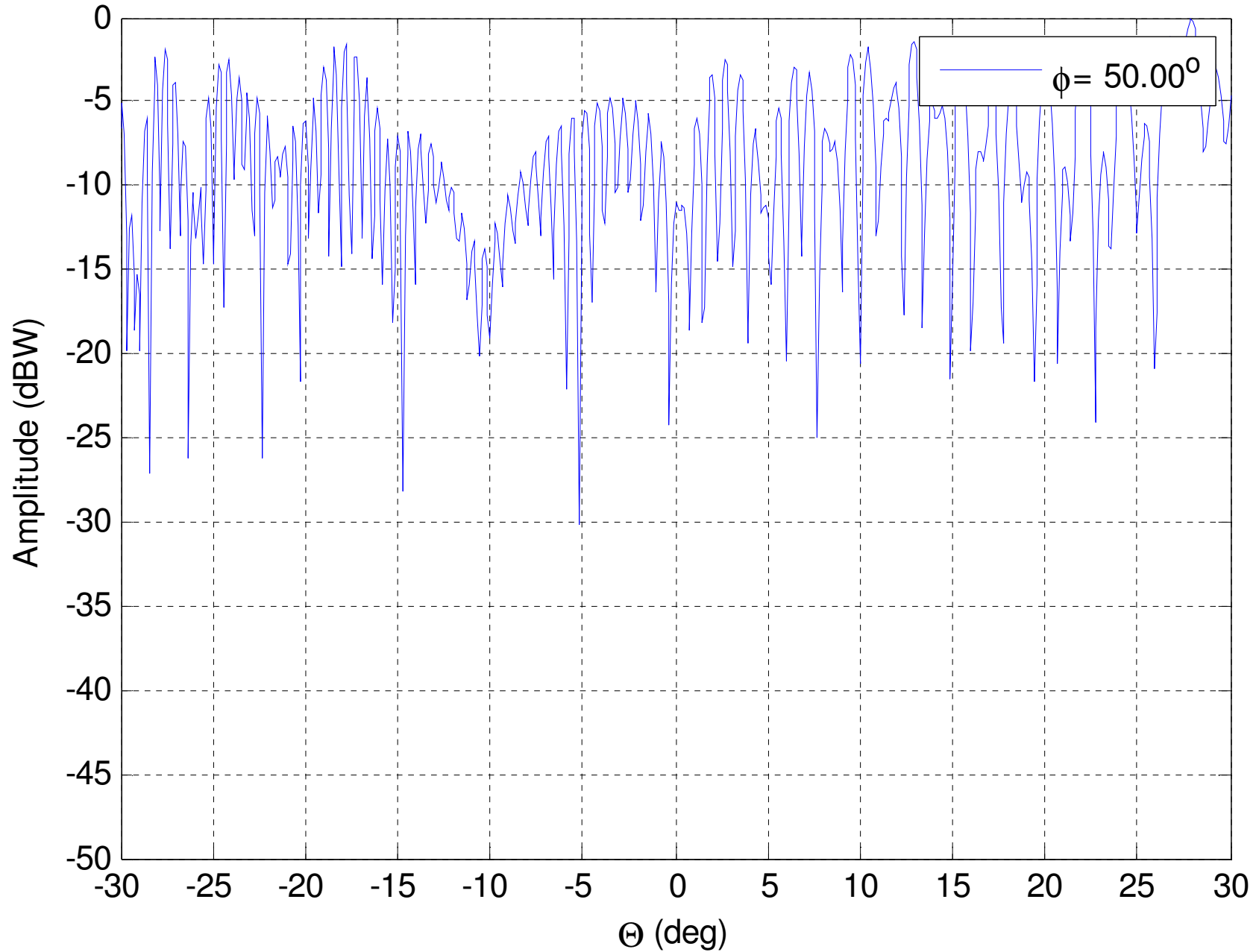
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -11.62 dBW, Date: 14-Dec-2011



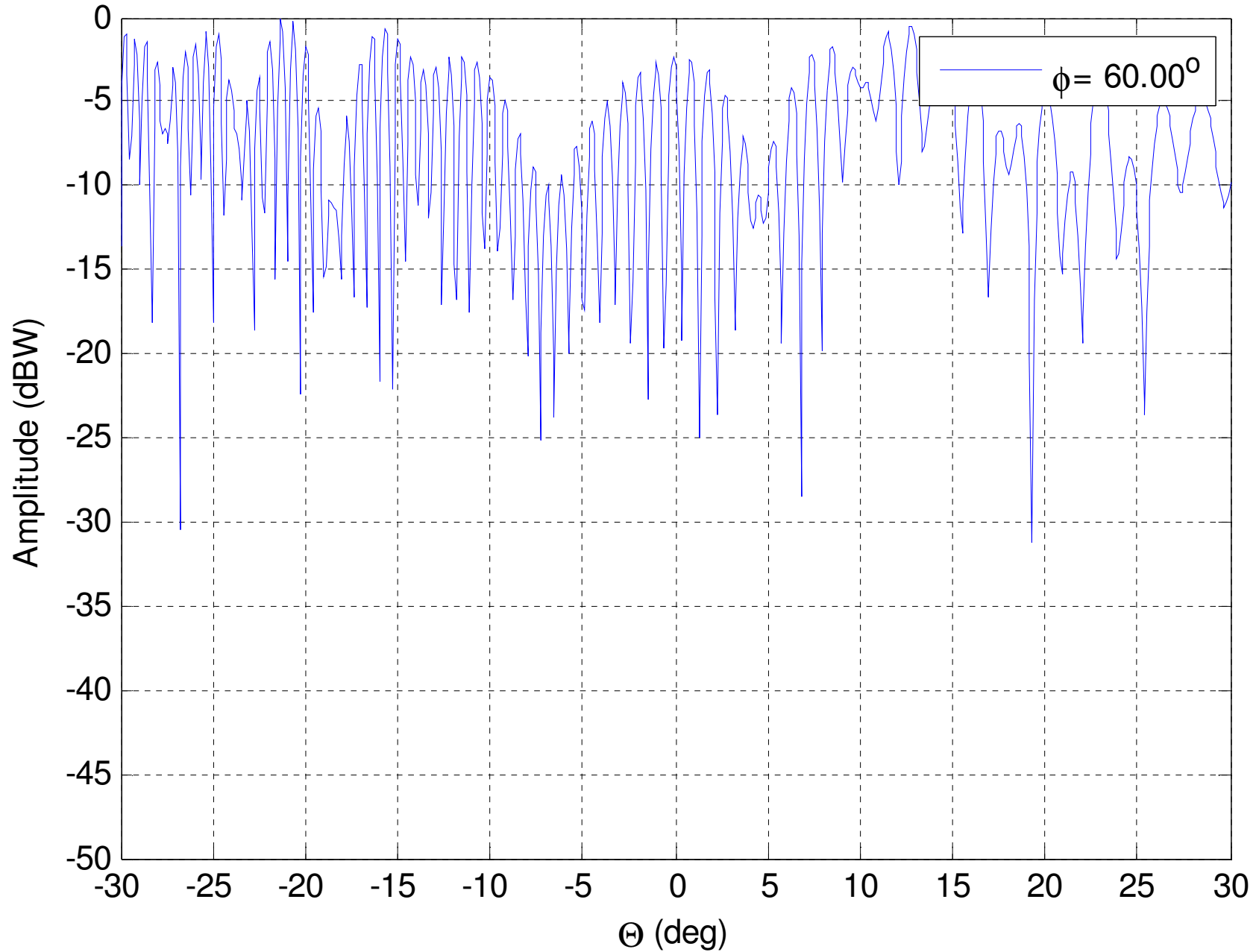
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.41 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

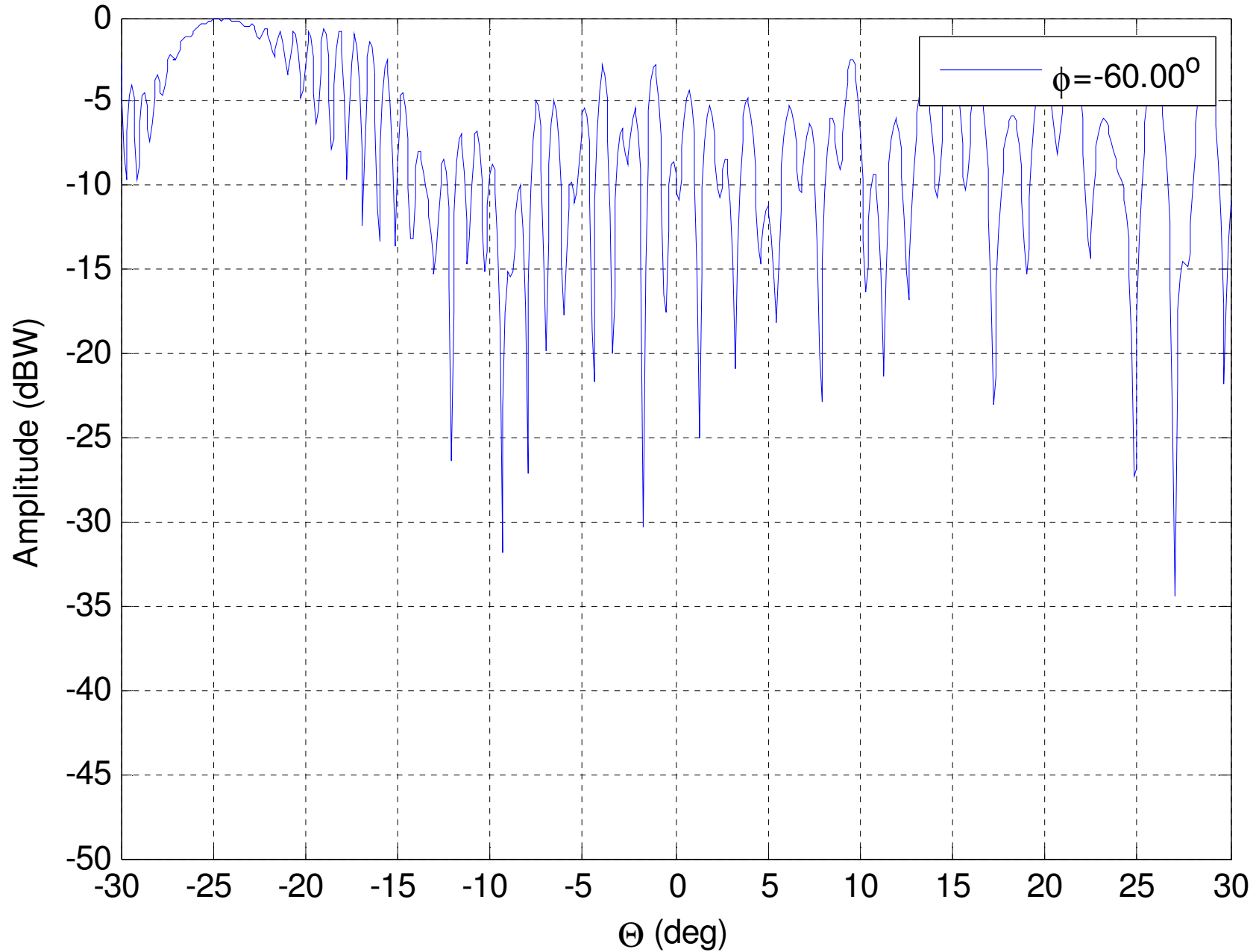
Input file: tx-17.5-lhcp-60.cut, Peak: -12.21 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

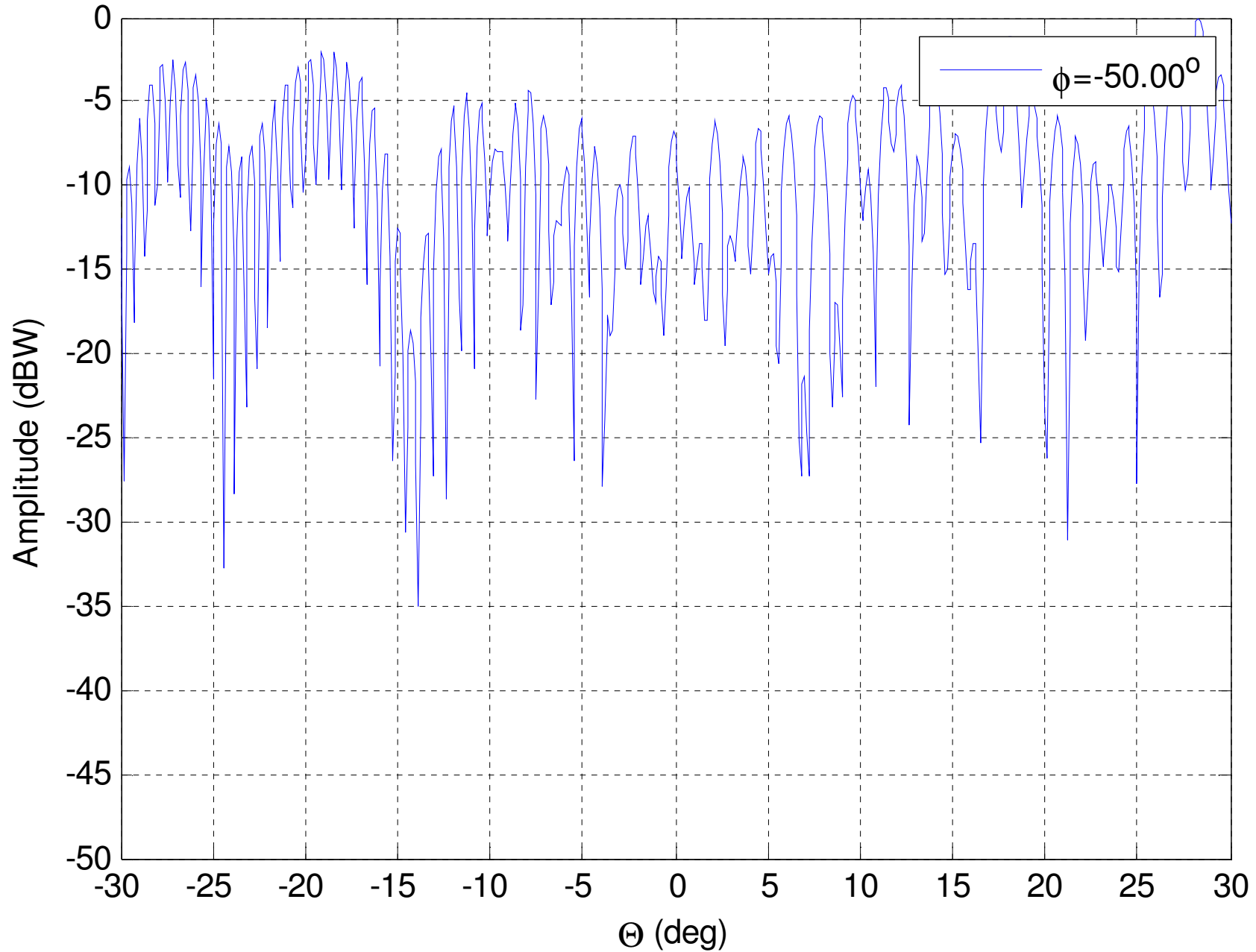
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -12.44 dBW, Date: 14-Dec-2011



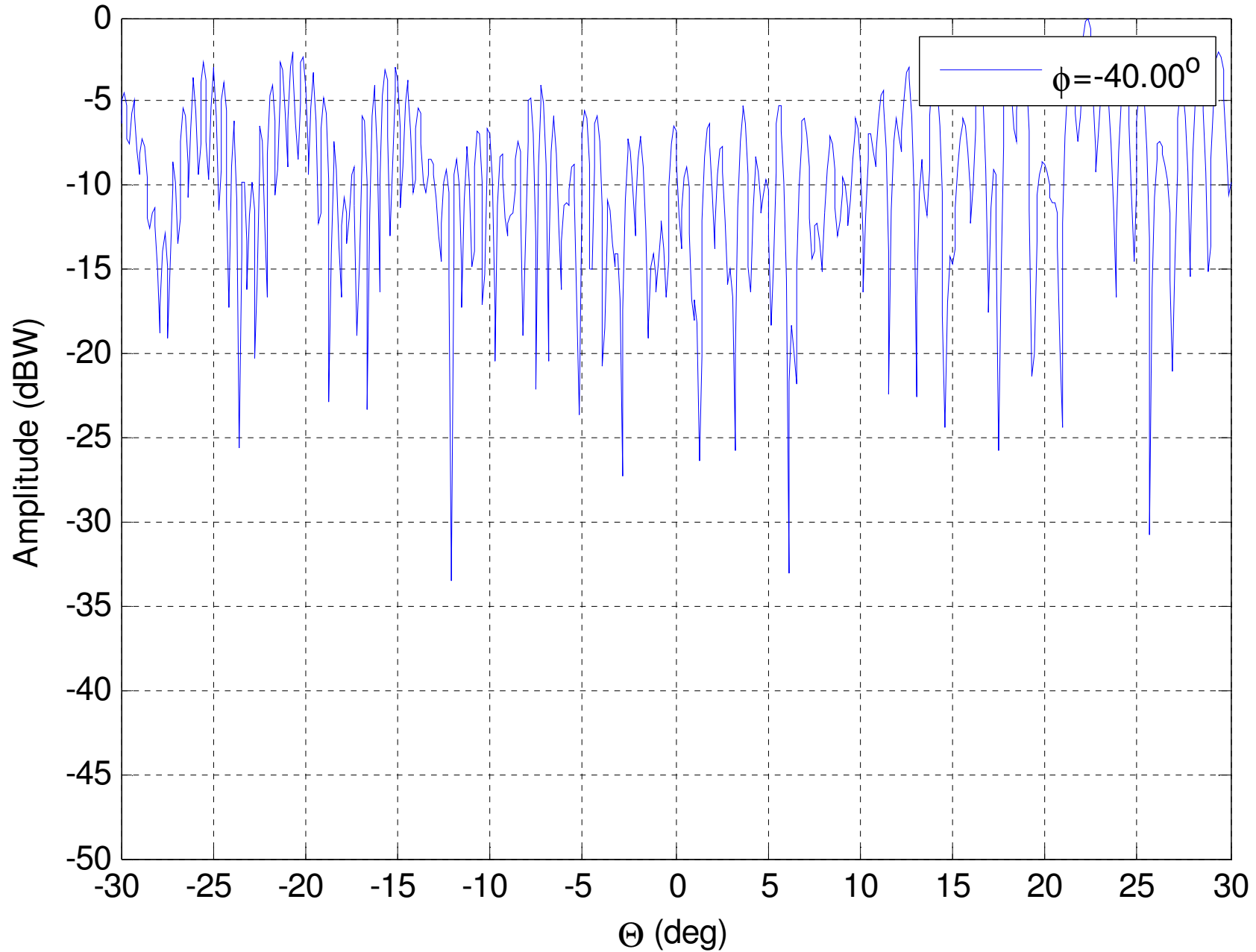
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -10.04 dBW, Date: 14-Dec-2011



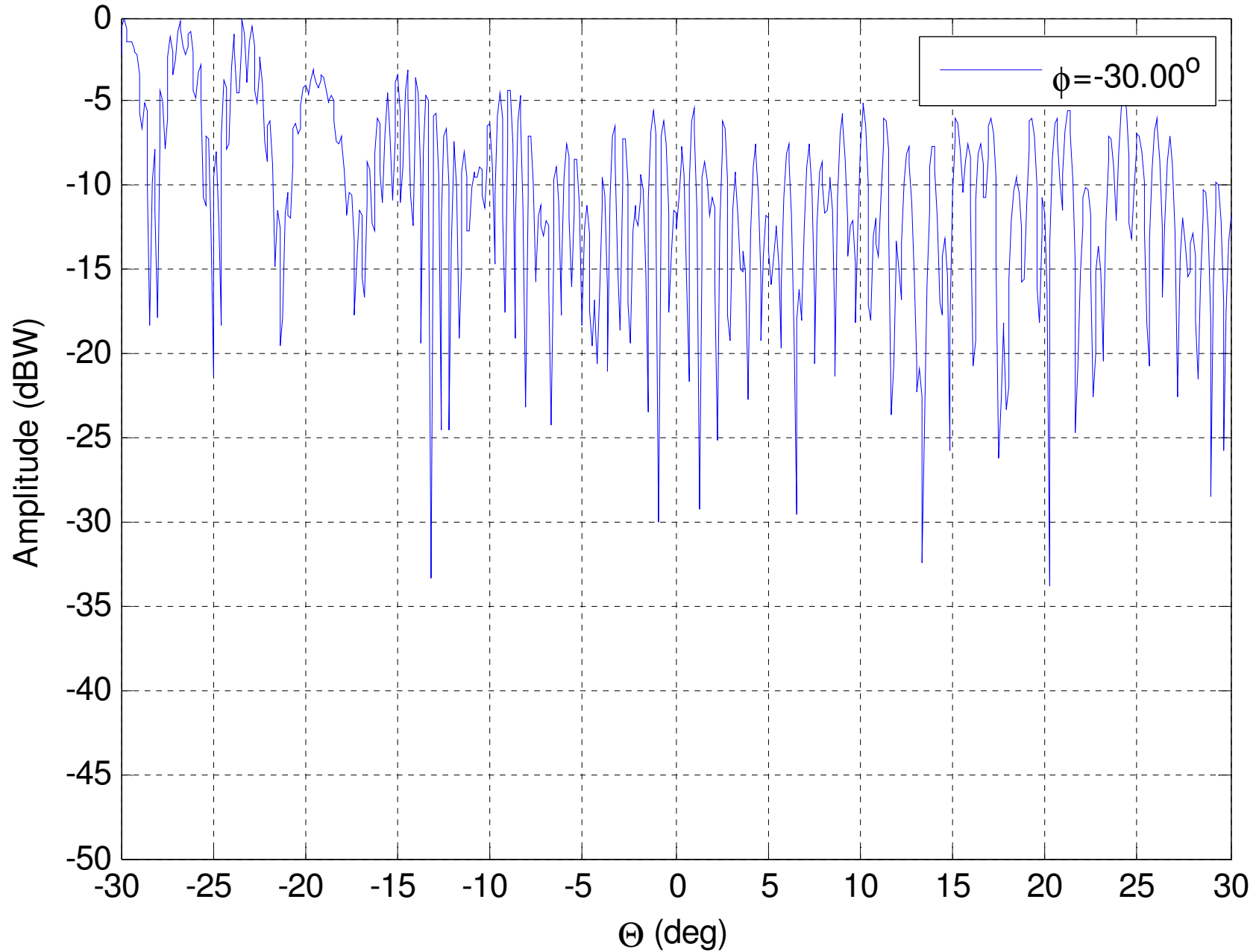
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -10.39 dBW, Date: 14-Dec-2011



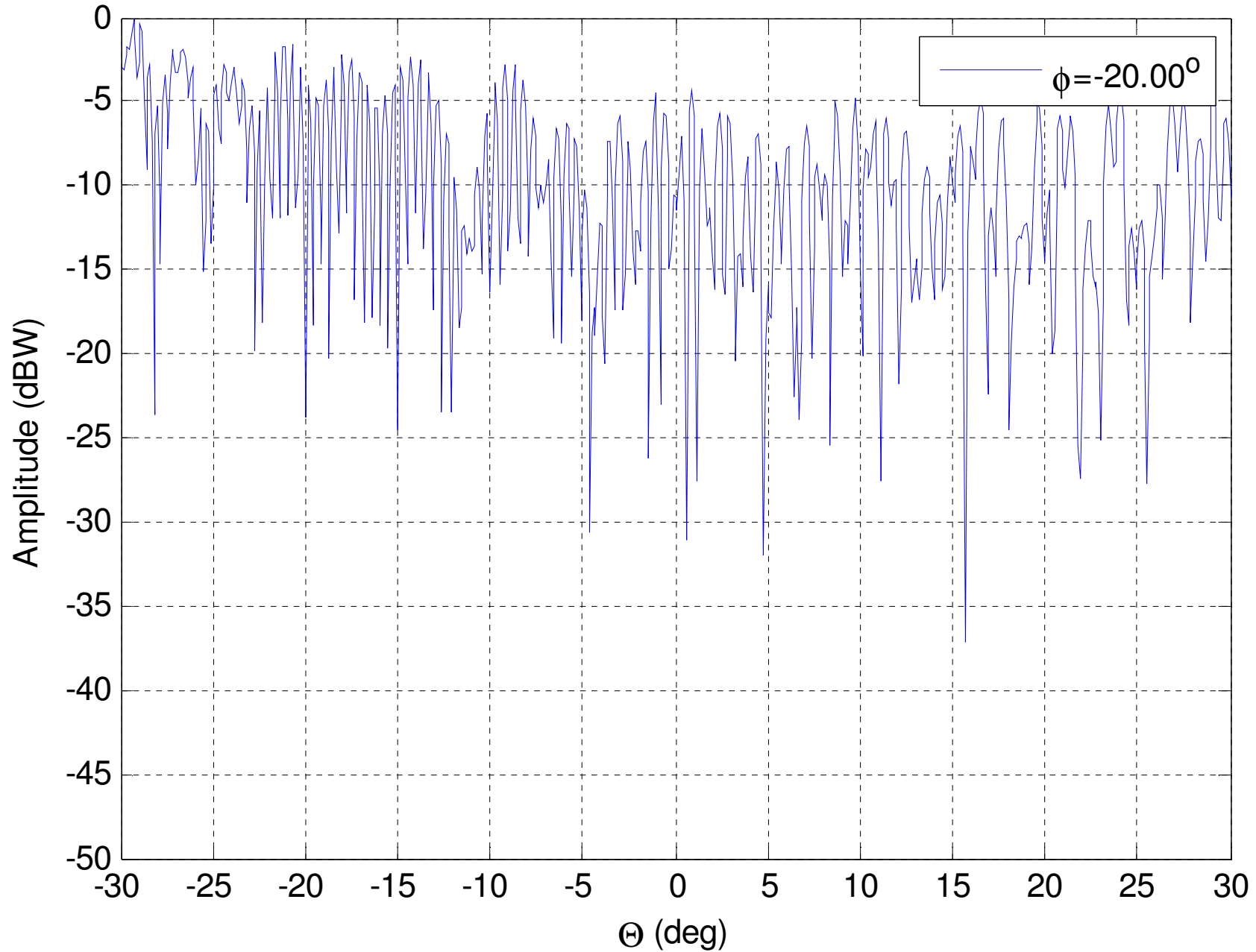
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -10.08 dBW, Date: 14-Dec-2011



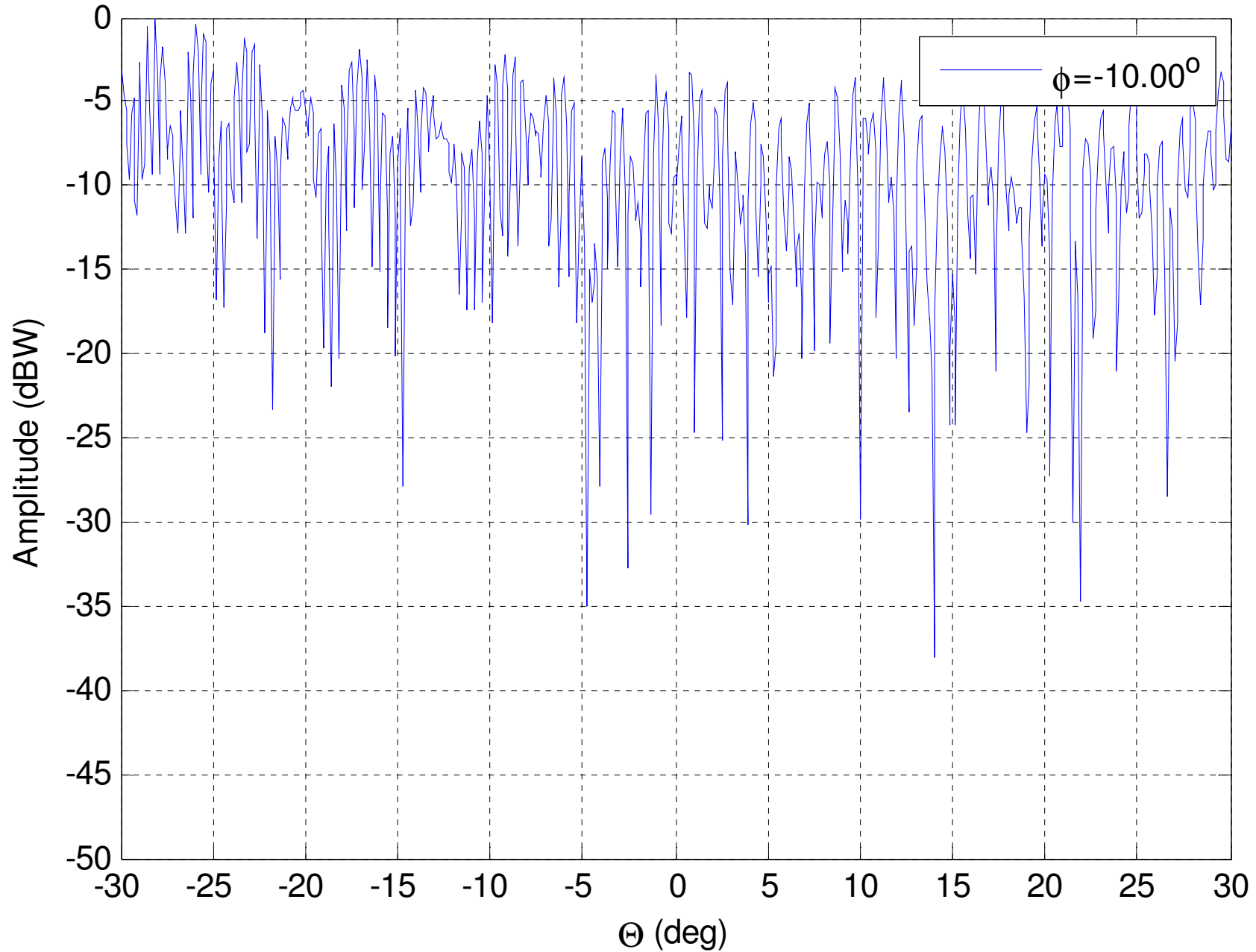
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -11.08 dBW, Date: 14-Dec-2011



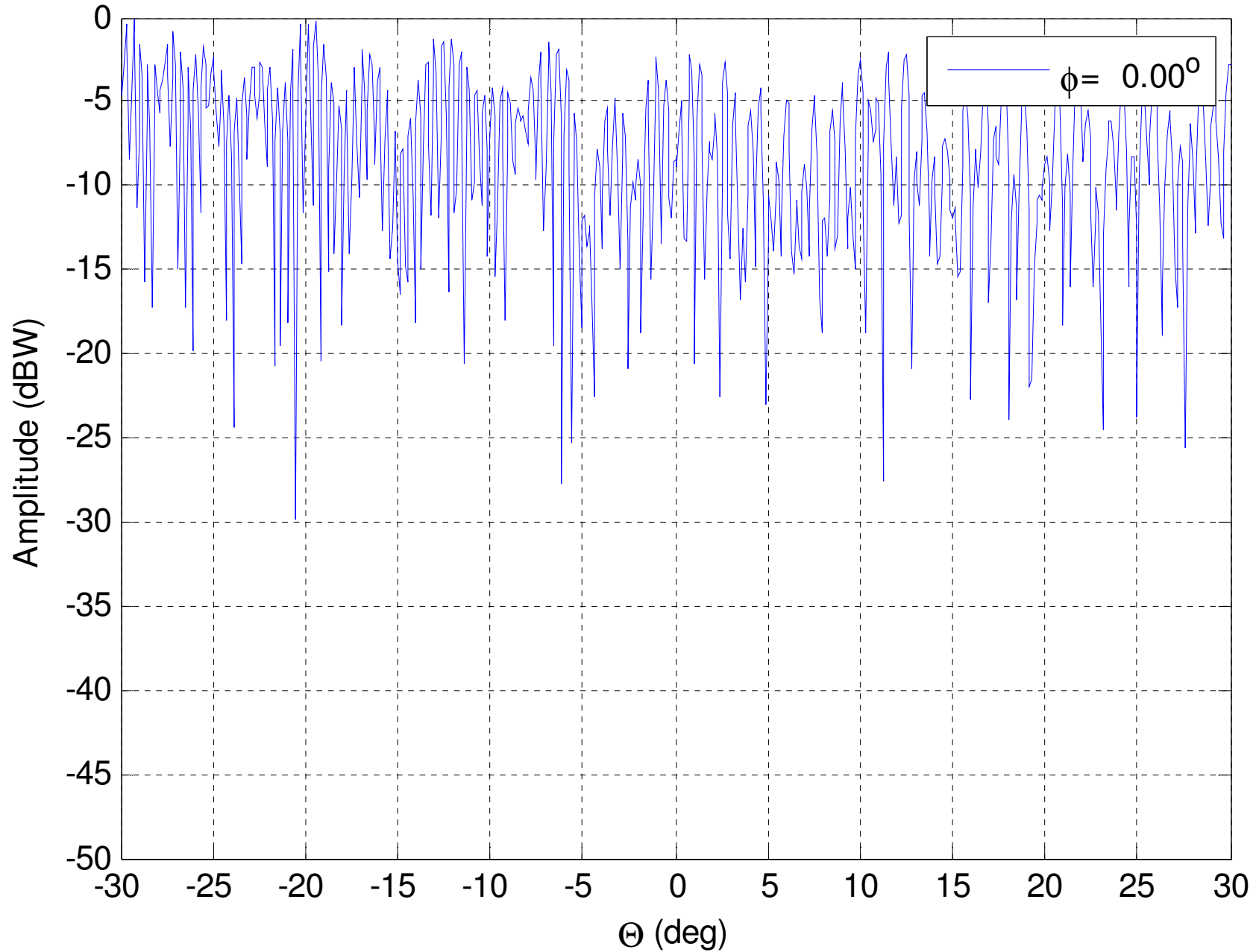
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -12.40 dBW, Date: 14-Dec-2011



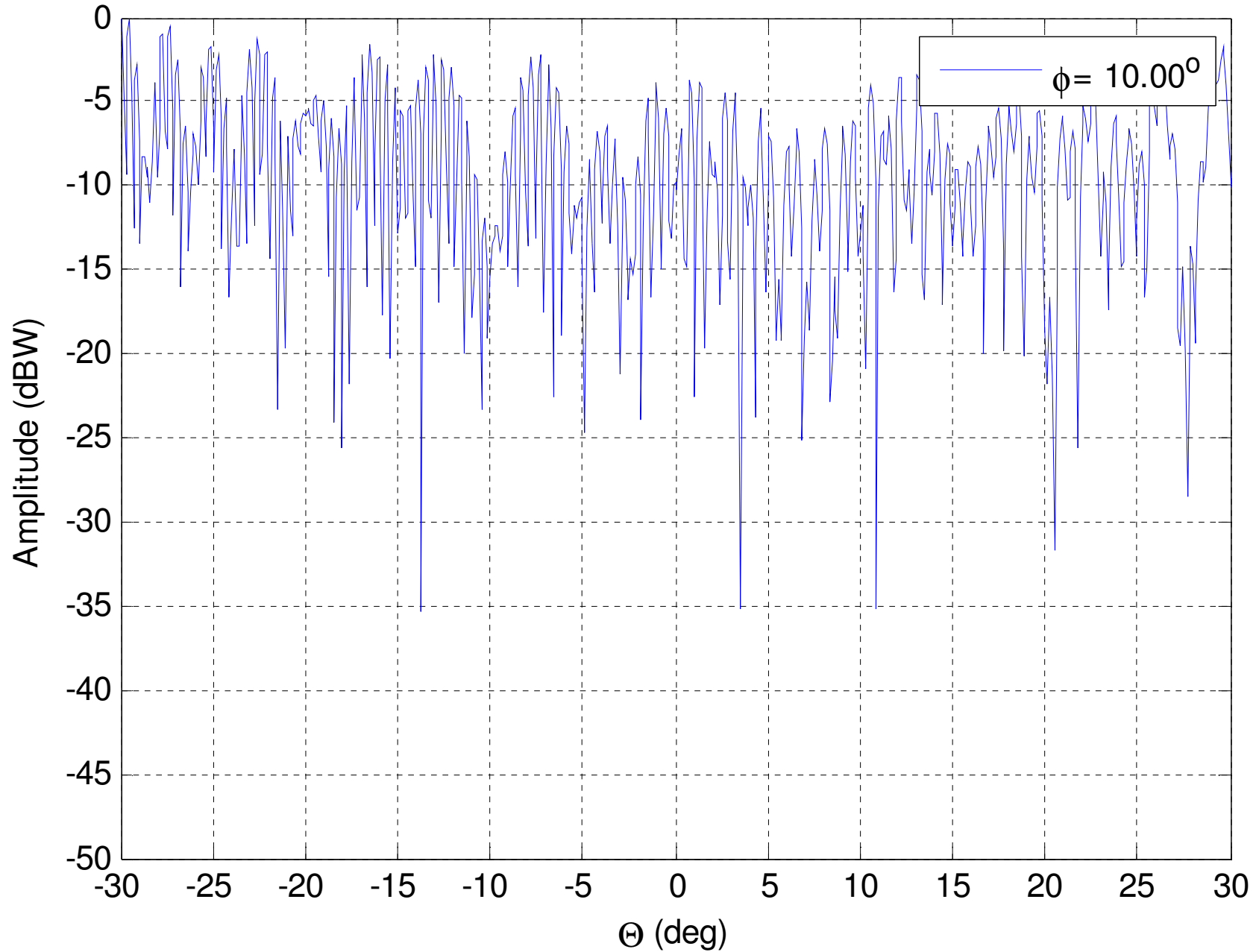
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -13.35 dBW, Date: 14-Dec-2011



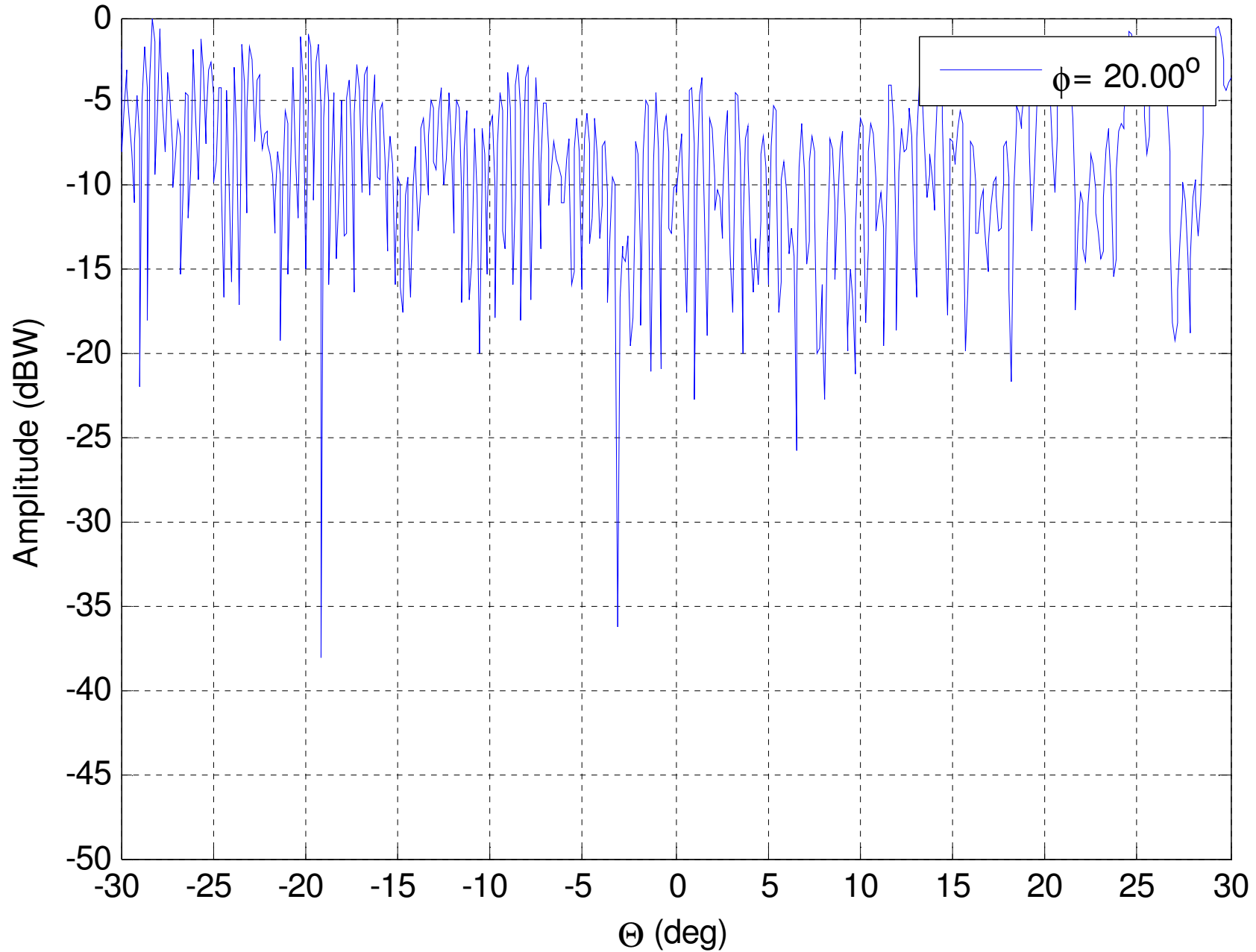
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -11.95 dBW, Date: 14-Dec-2011



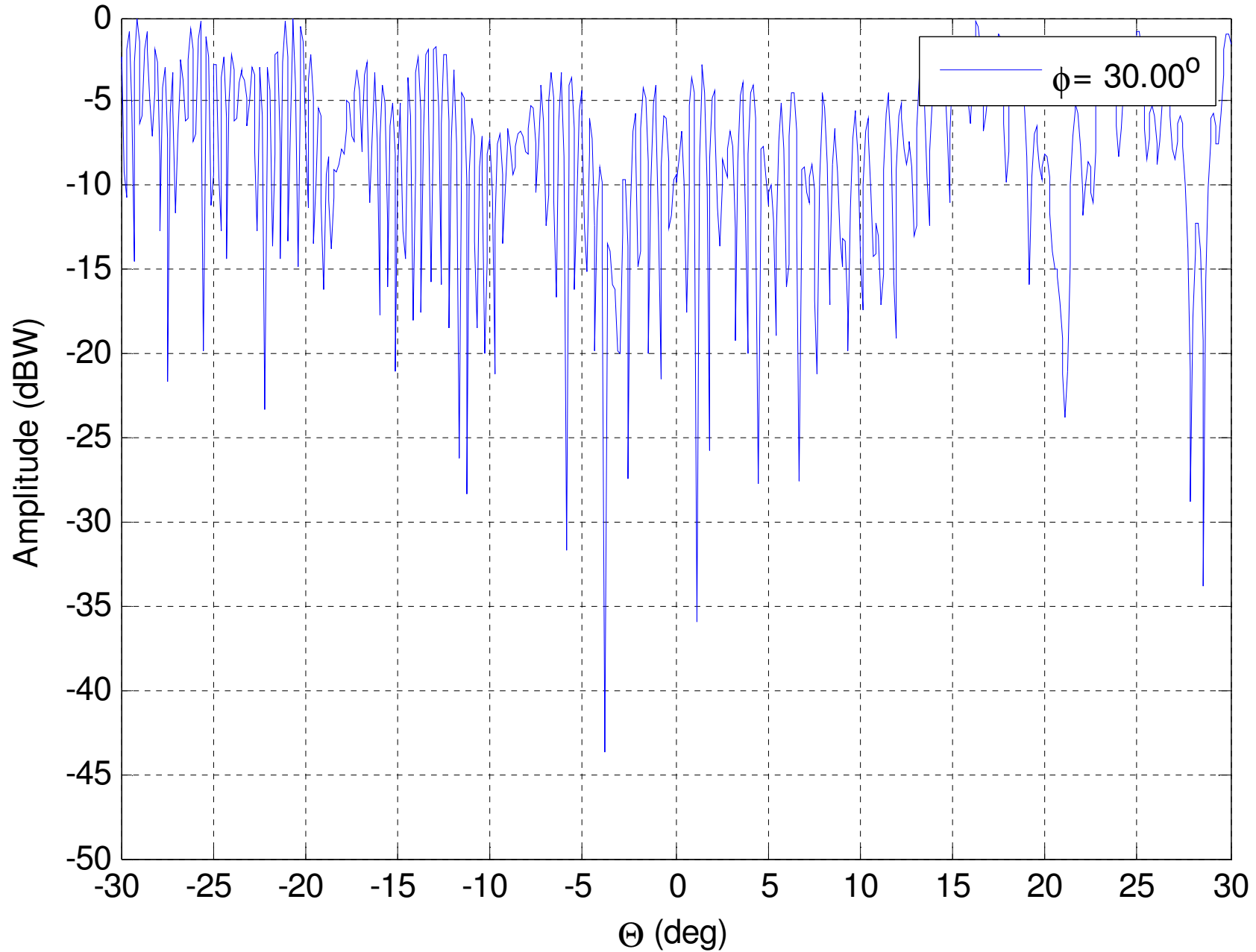
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -11.81 dBW, Date: 14-Dec-2011



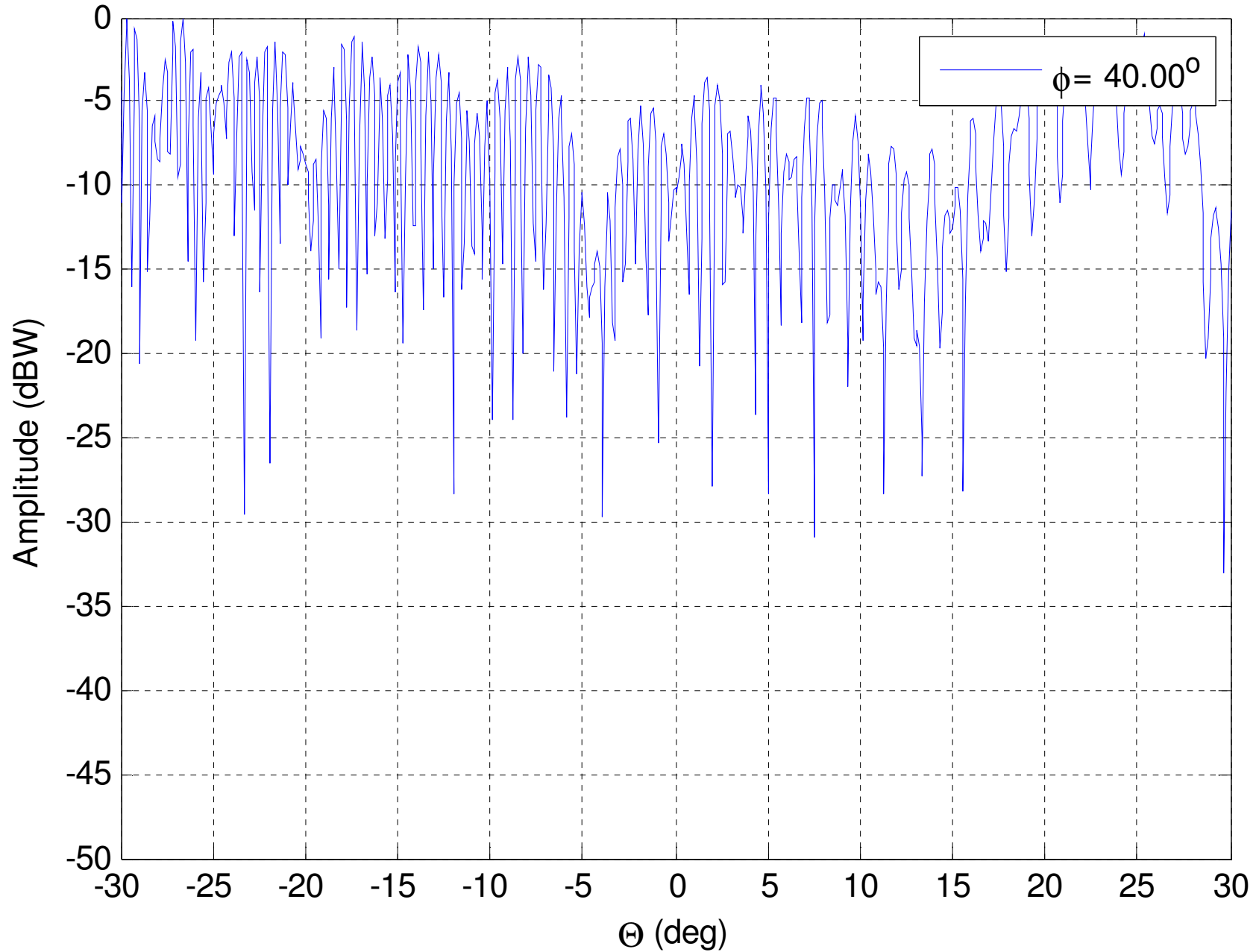
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -12.33 dBW, Date: 14-Dec-2011



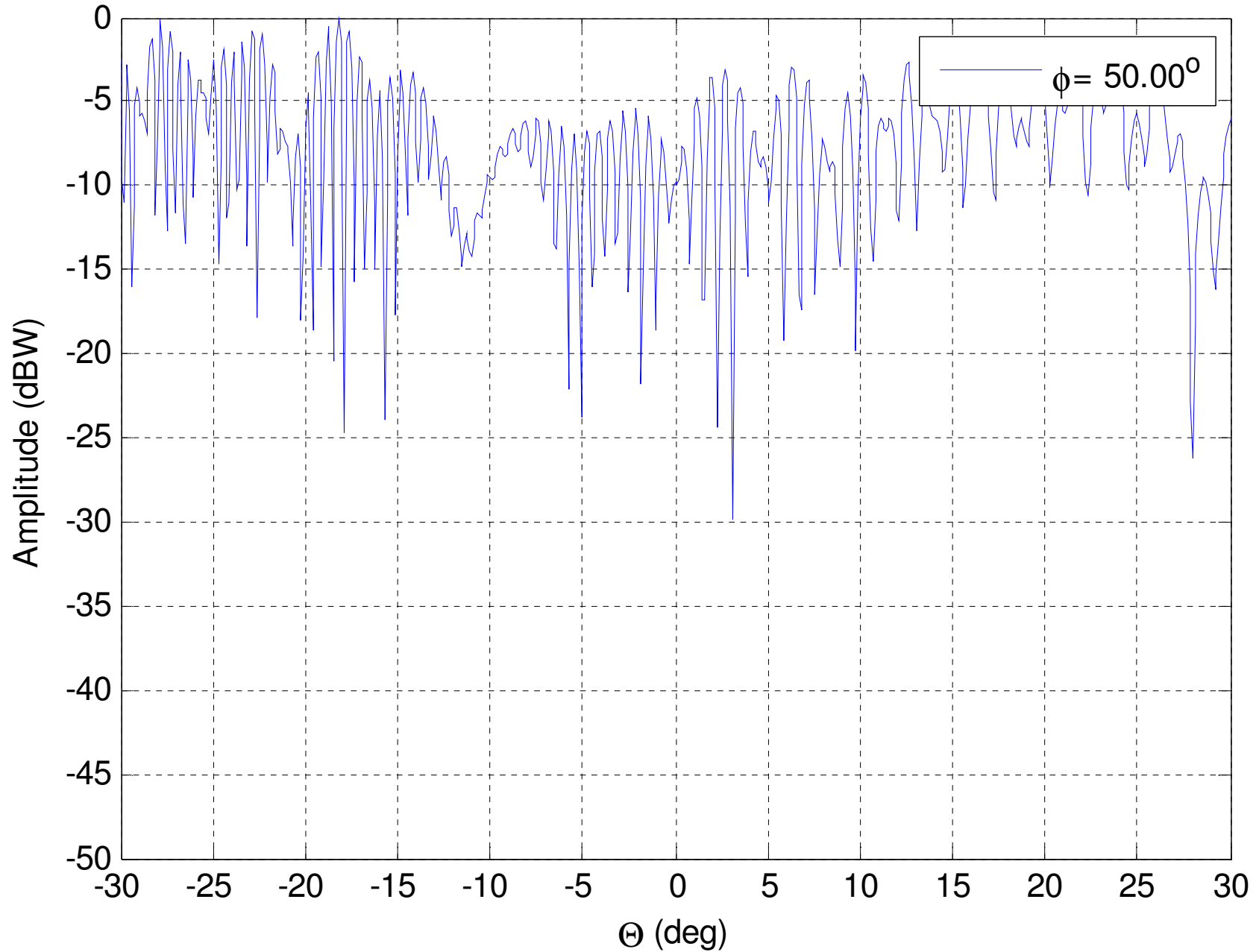
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.61 dBW, Date: 14-Dec-2011



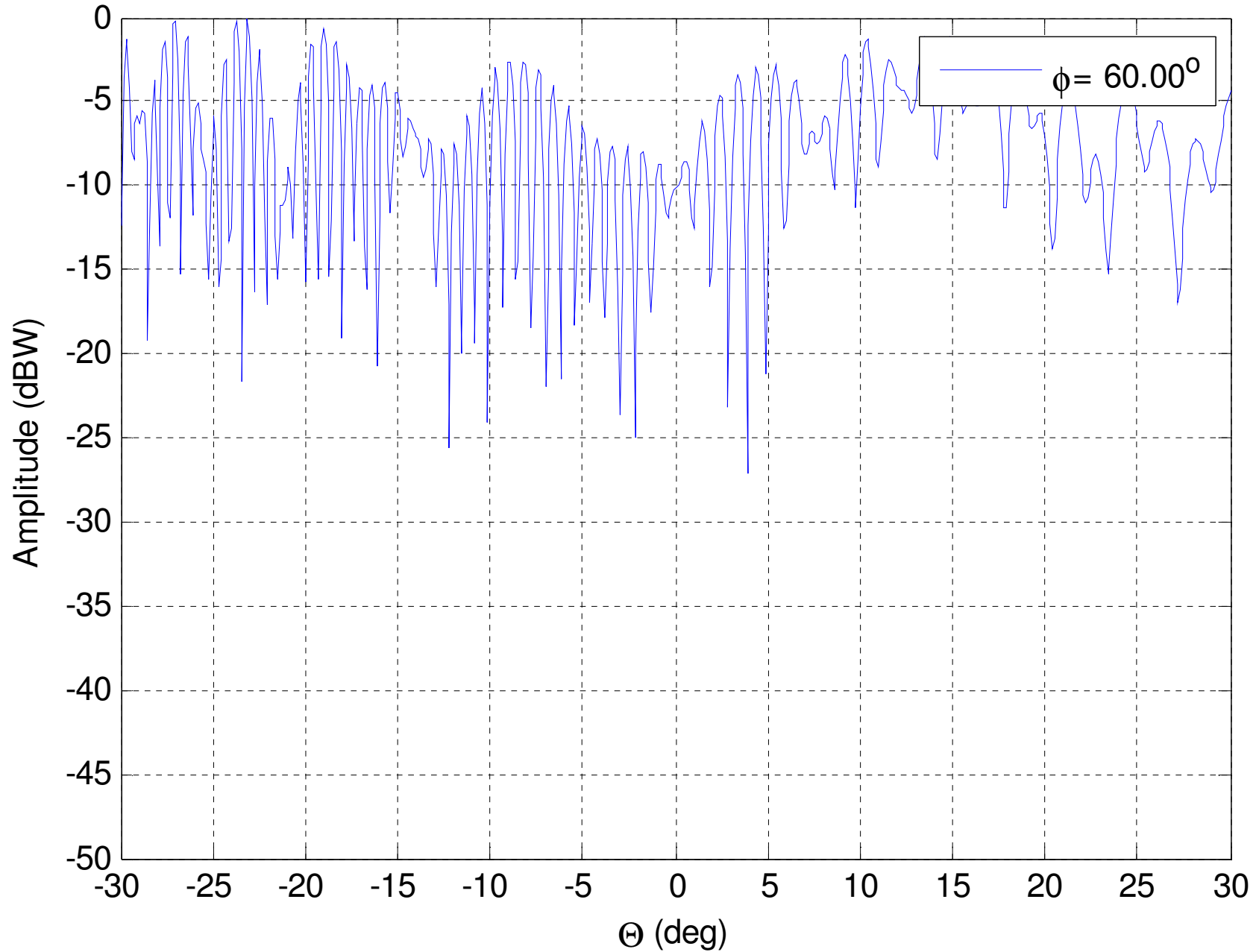
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.91 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

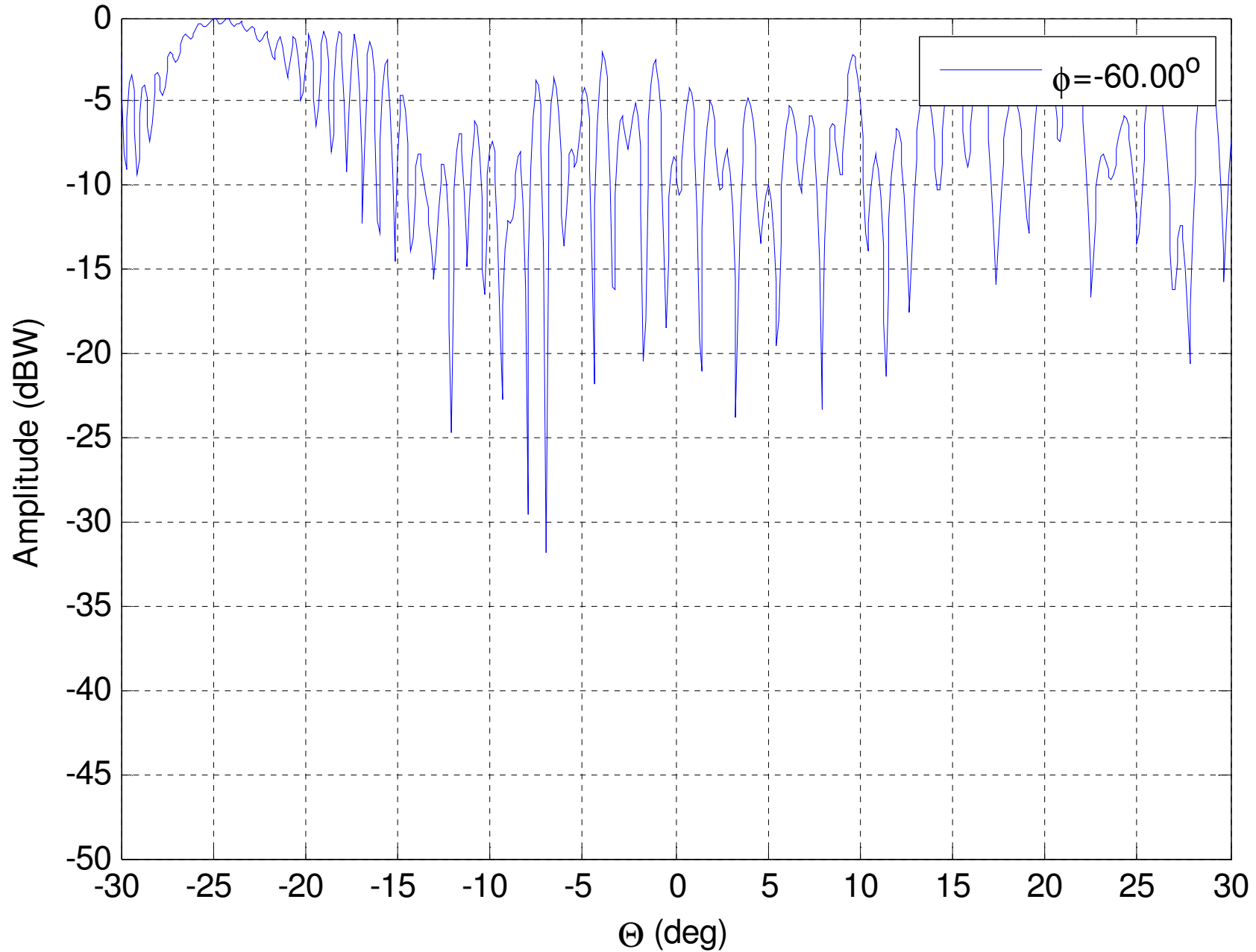
Input file: tx-17.7-rhcp-60.cut, Peak: -11.65 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

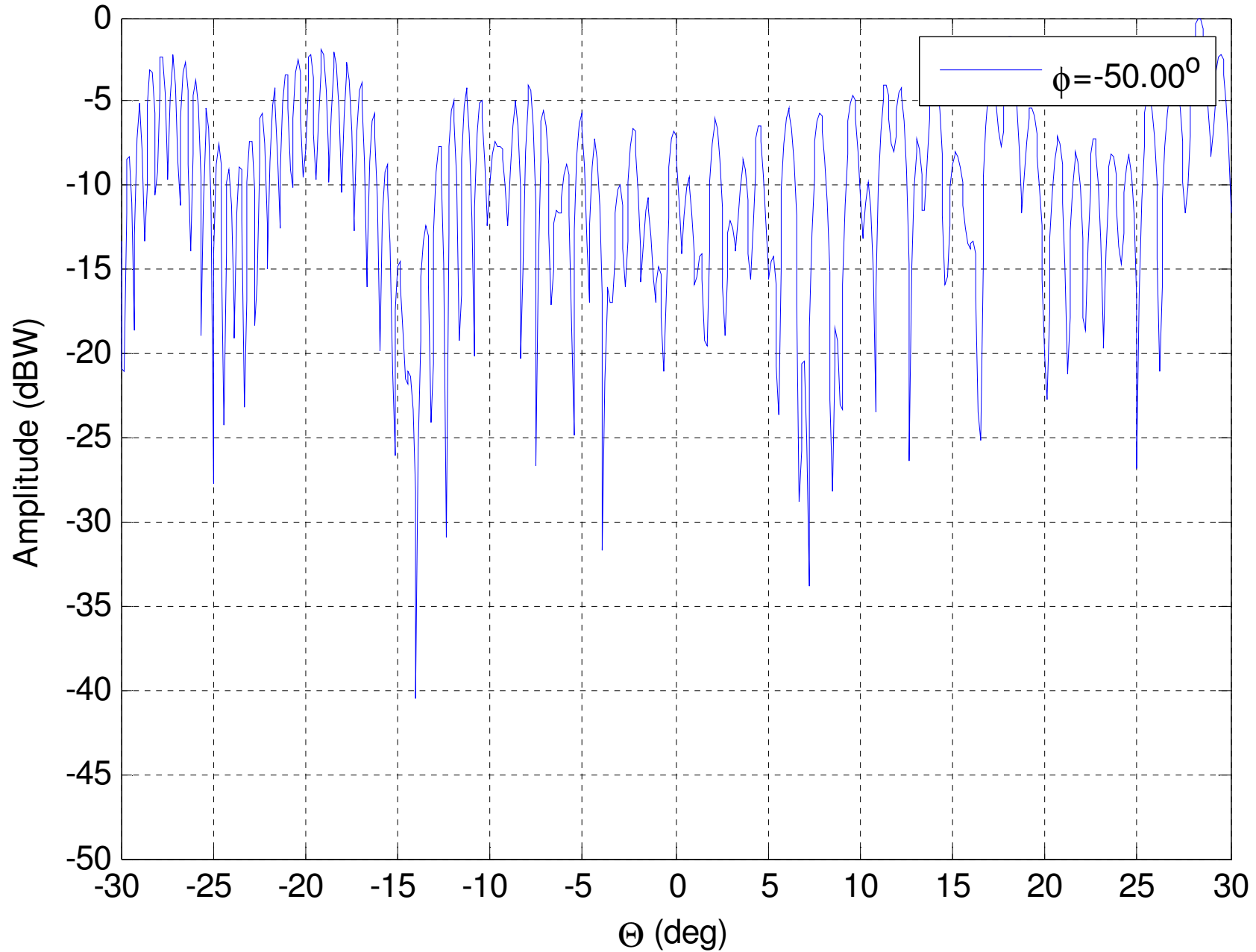
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -12.58 dBW, Date: 14-Dec-2011



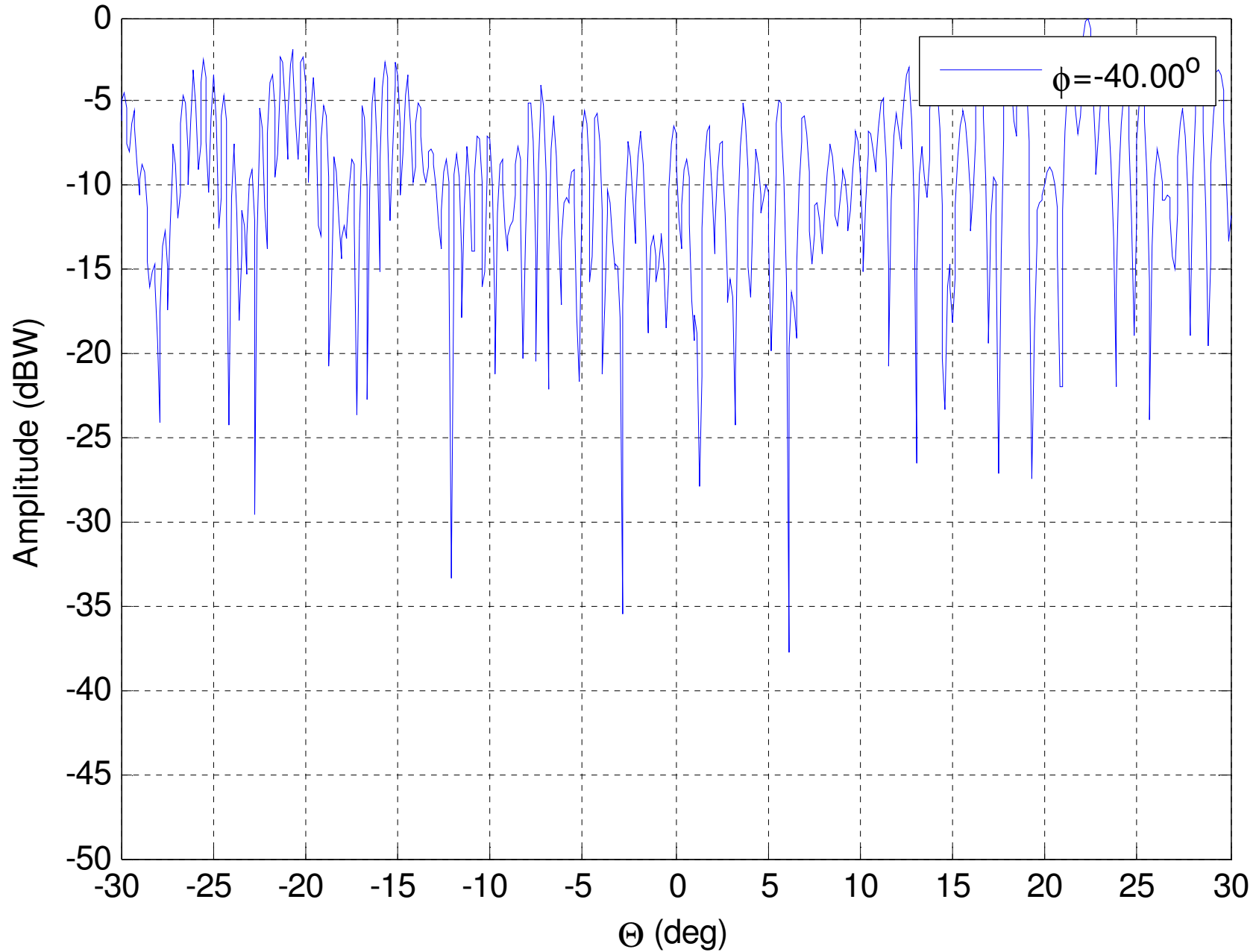
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -10.09 dBW, Date: 14-Dec-2011



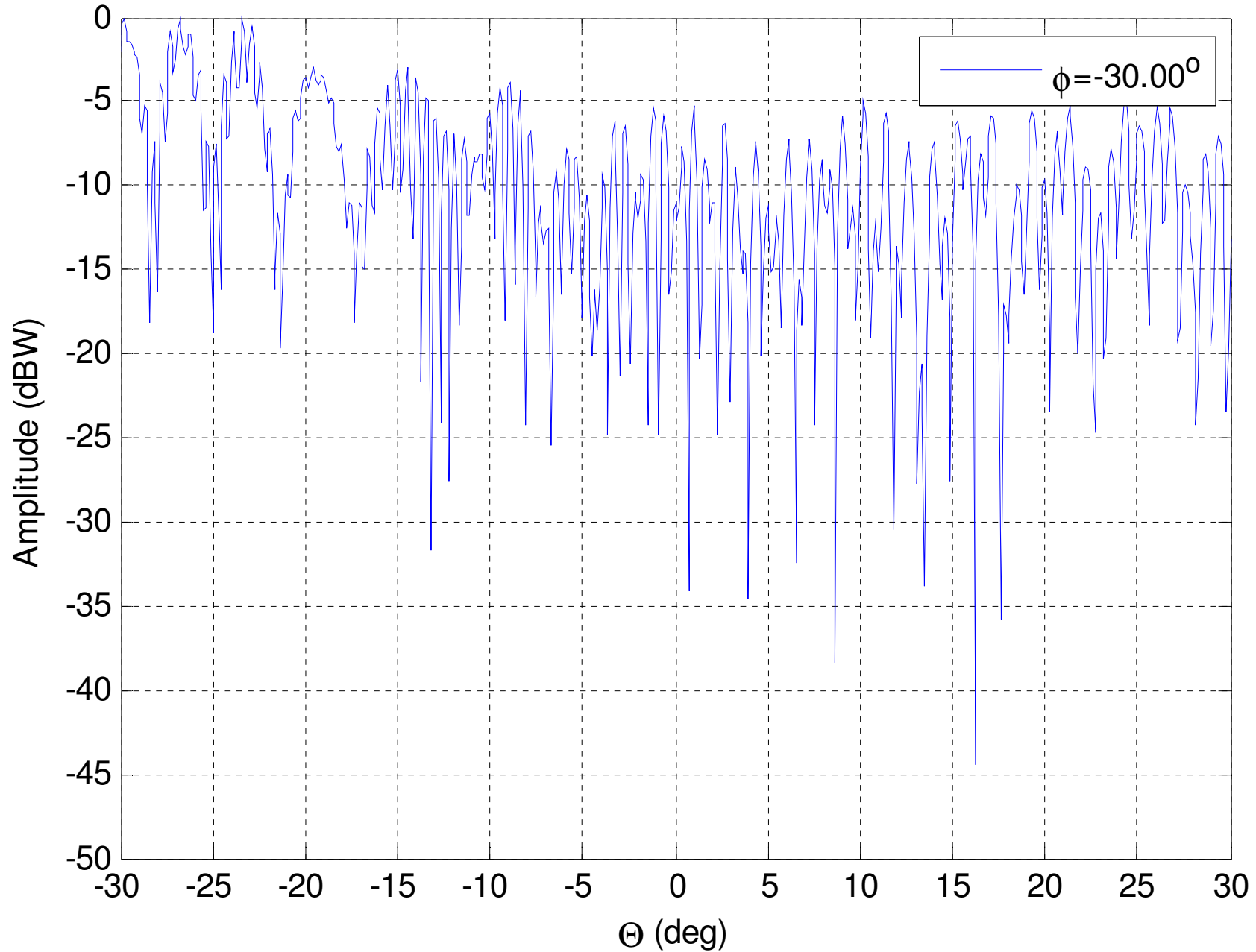
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.33 dBW, Date: 14-Dec-2011



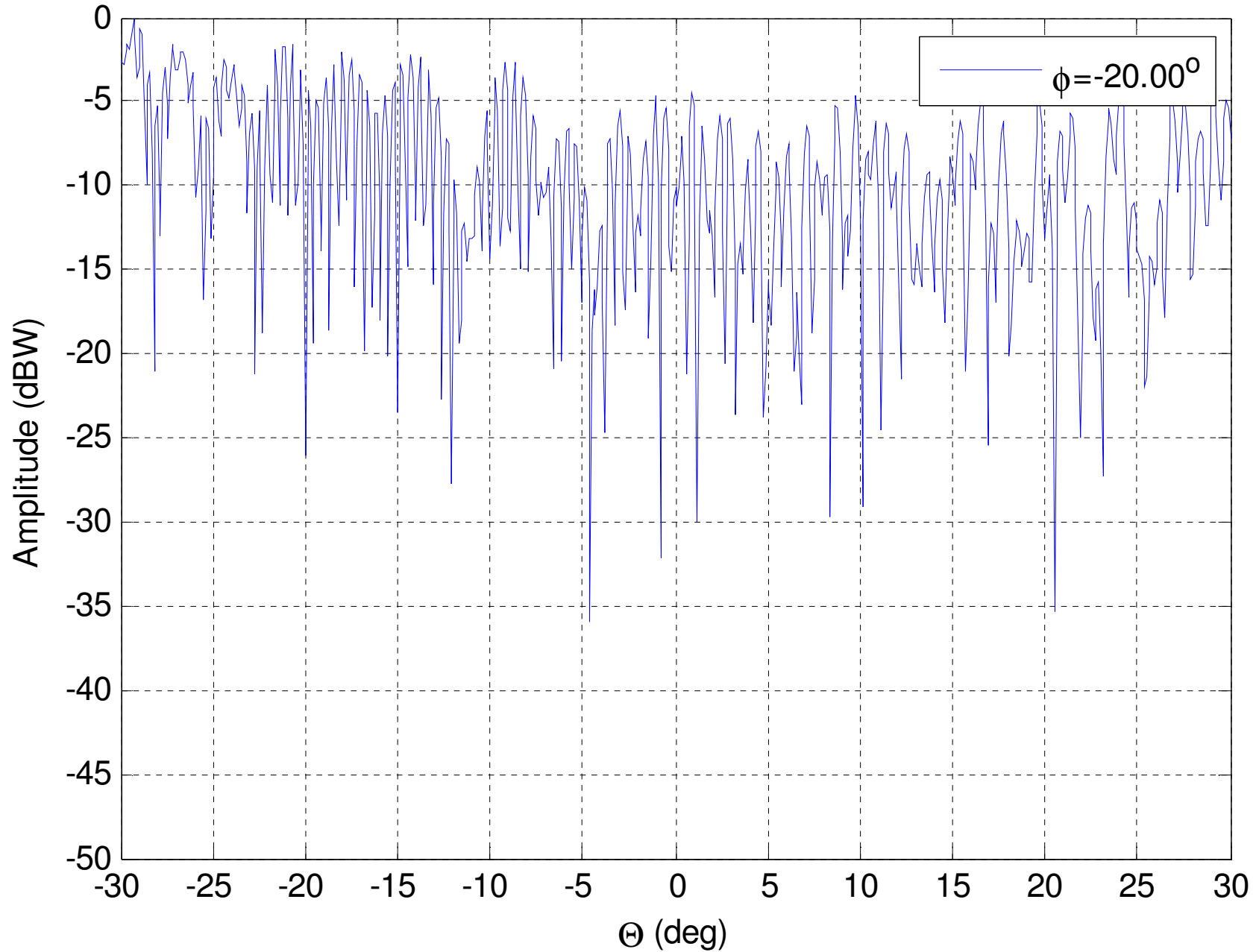
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -10.22 dBW, Date: 14-Dec-2011



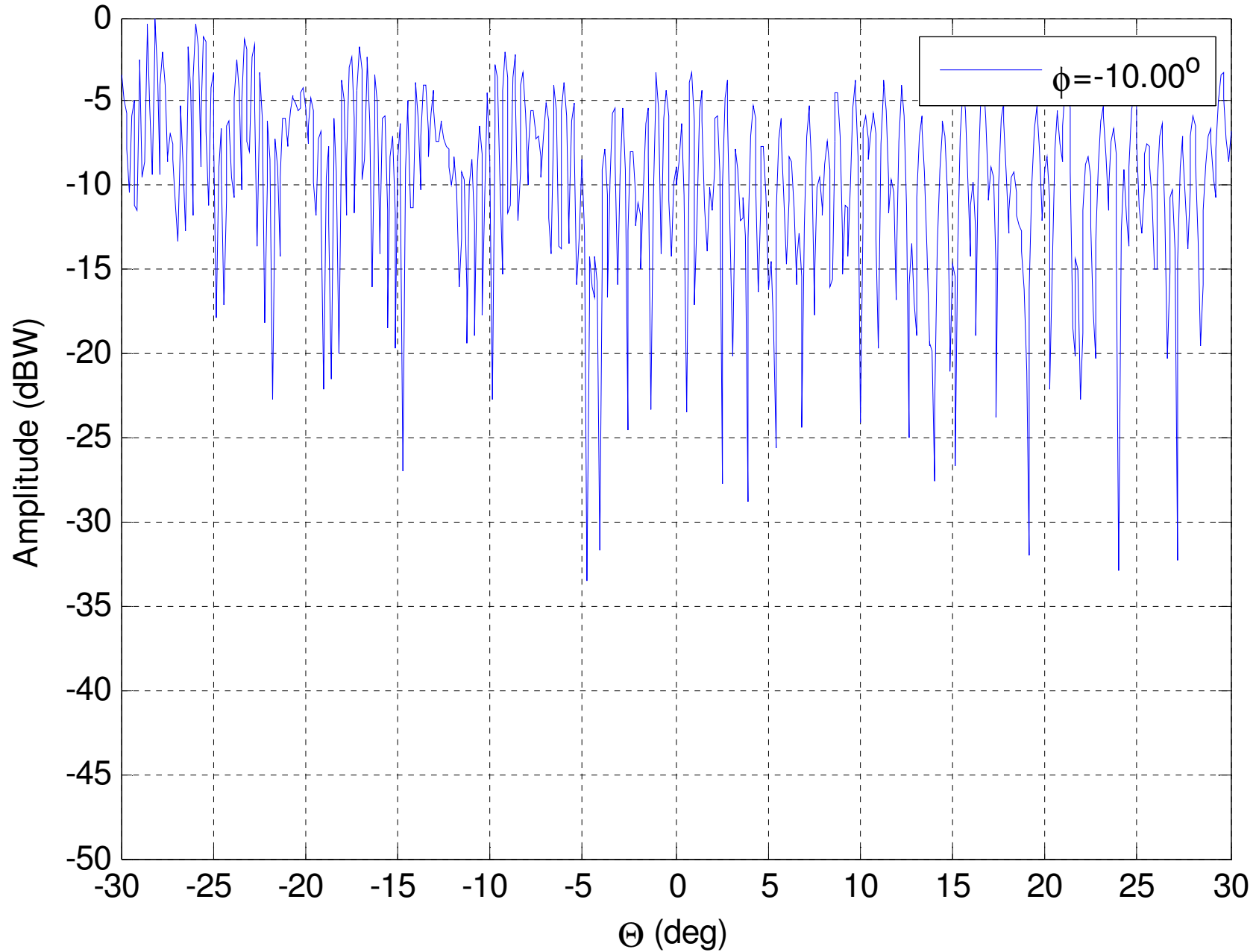
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -11.02 dBW, Date: 14-Dec-2011



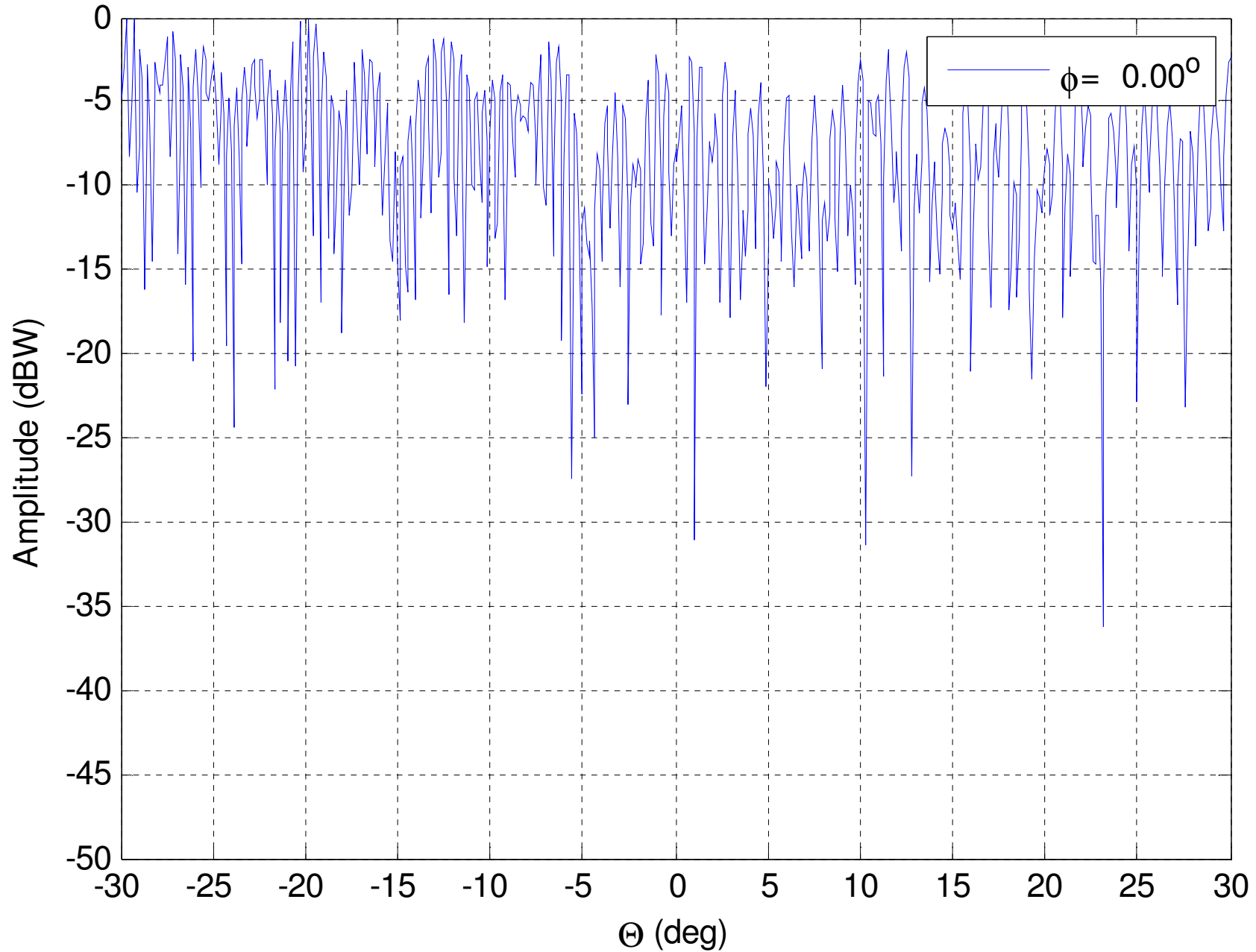
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -12.28 dBW, Date: 14-Dec-2011



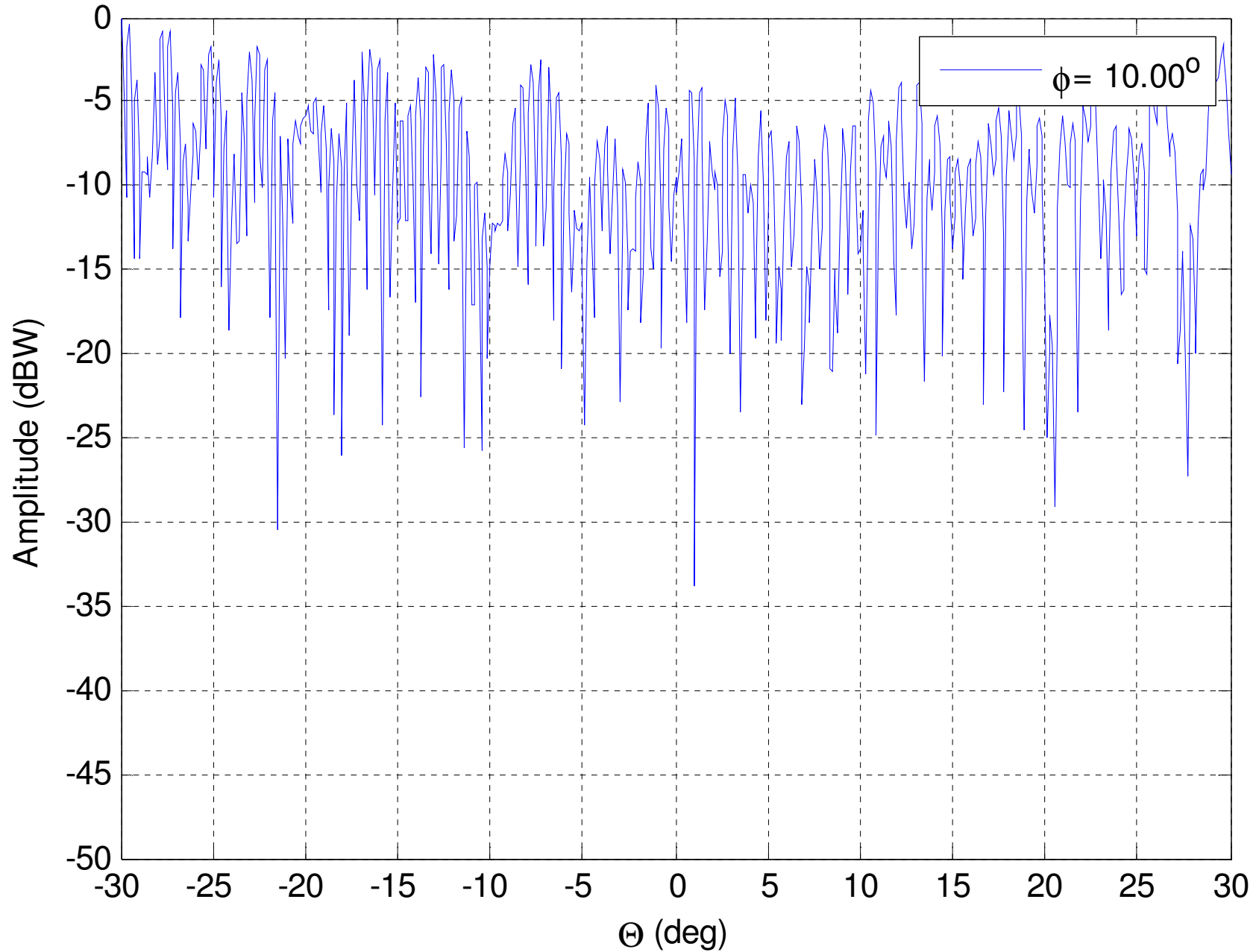
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -13.43 dBW, Date: 14-Dec-2011



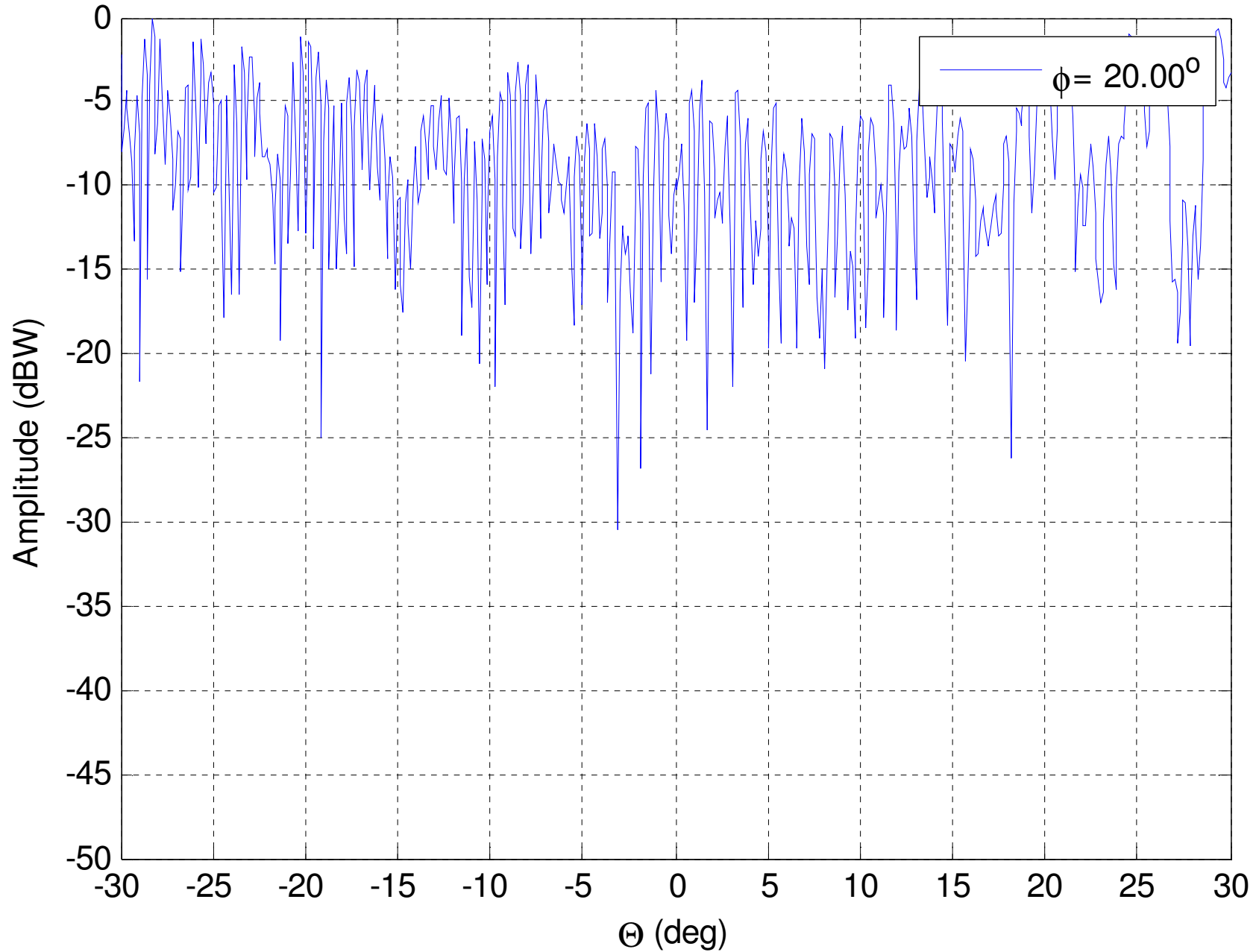
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -11.63 dBW, Date: 14-Dec-2011



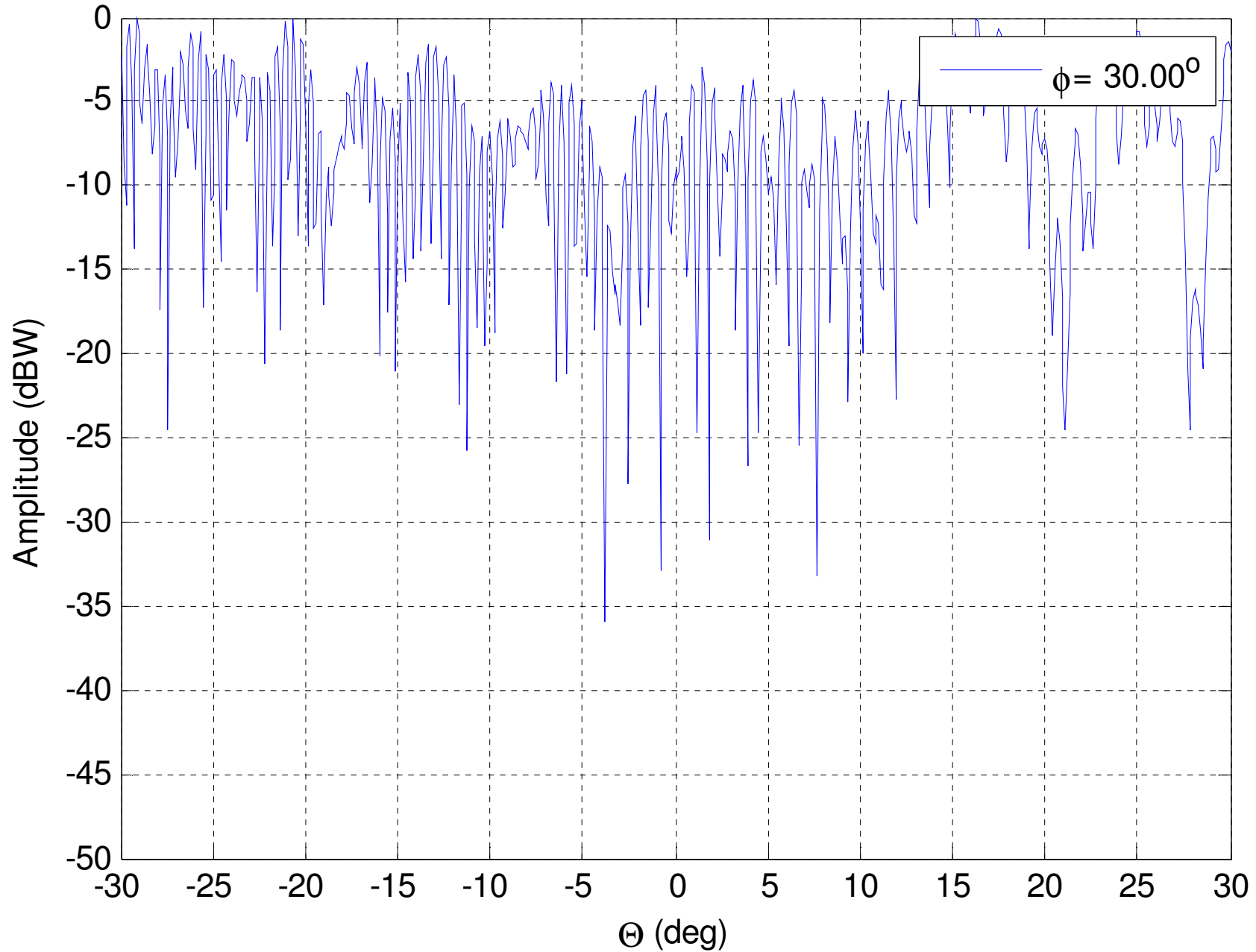
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -11.57 dBW, Date: 14-Dec-2011



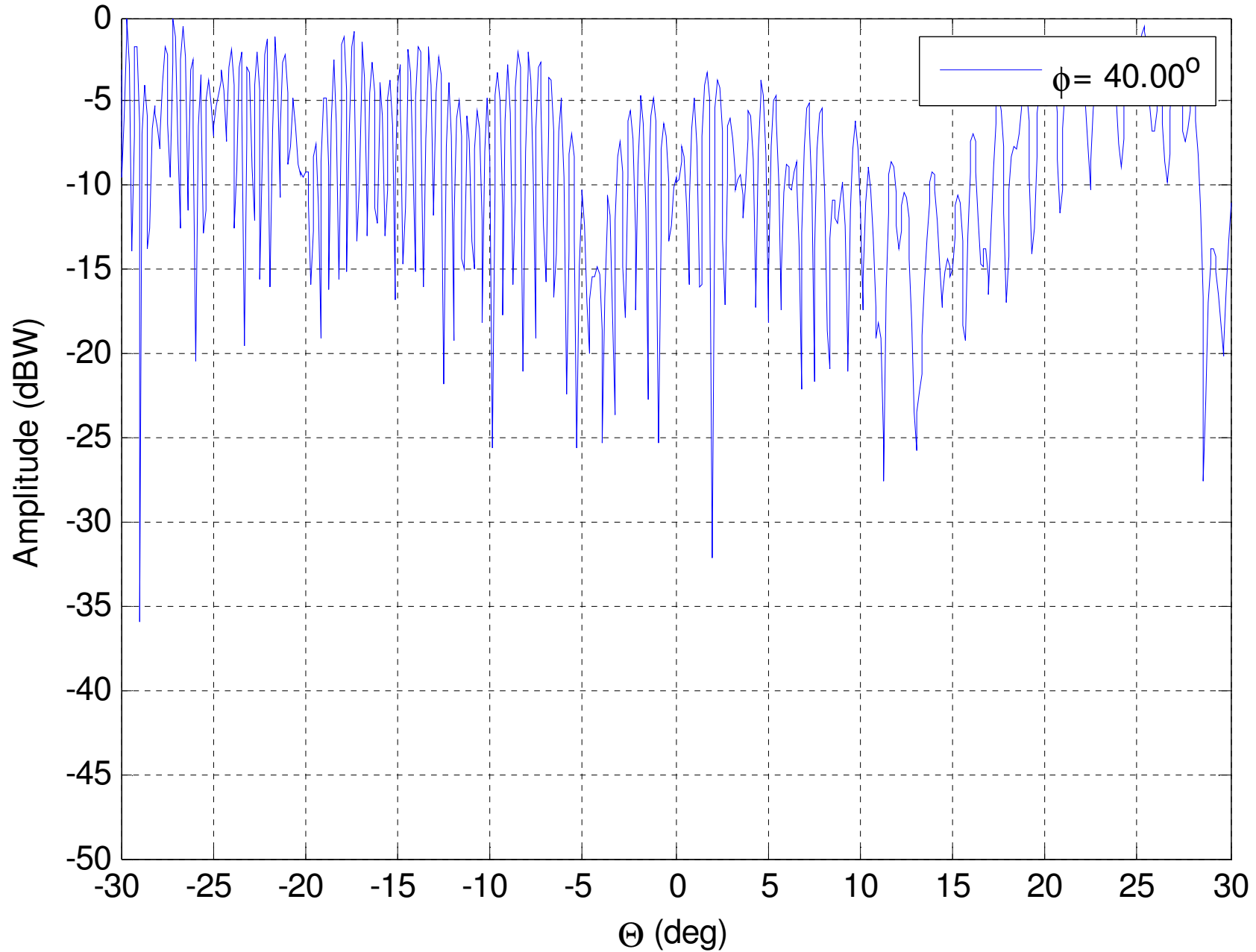
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -12.11 dBW, Date: 14-Dec-2011



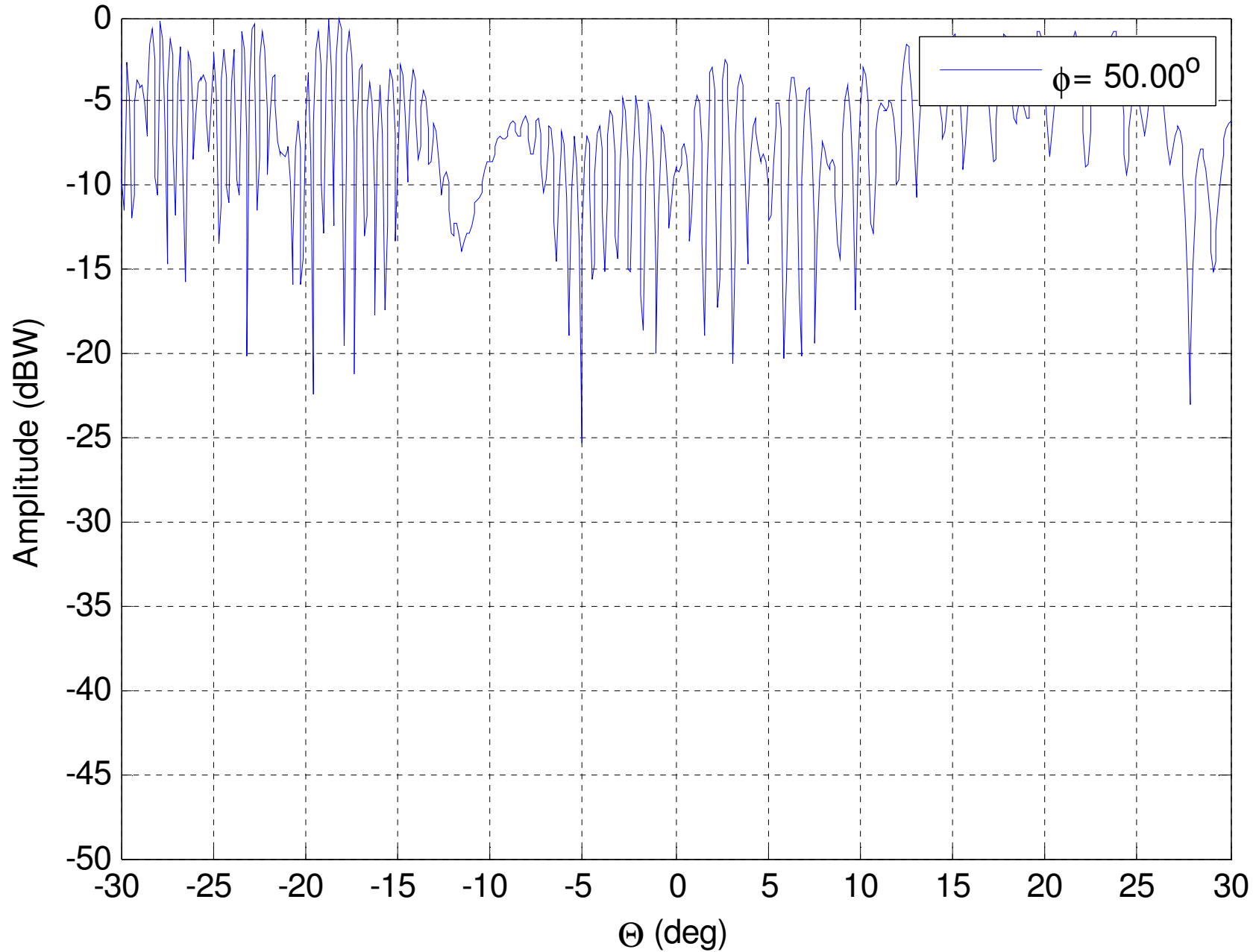
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -11.72 dBW, Date: 14-Dec-2011



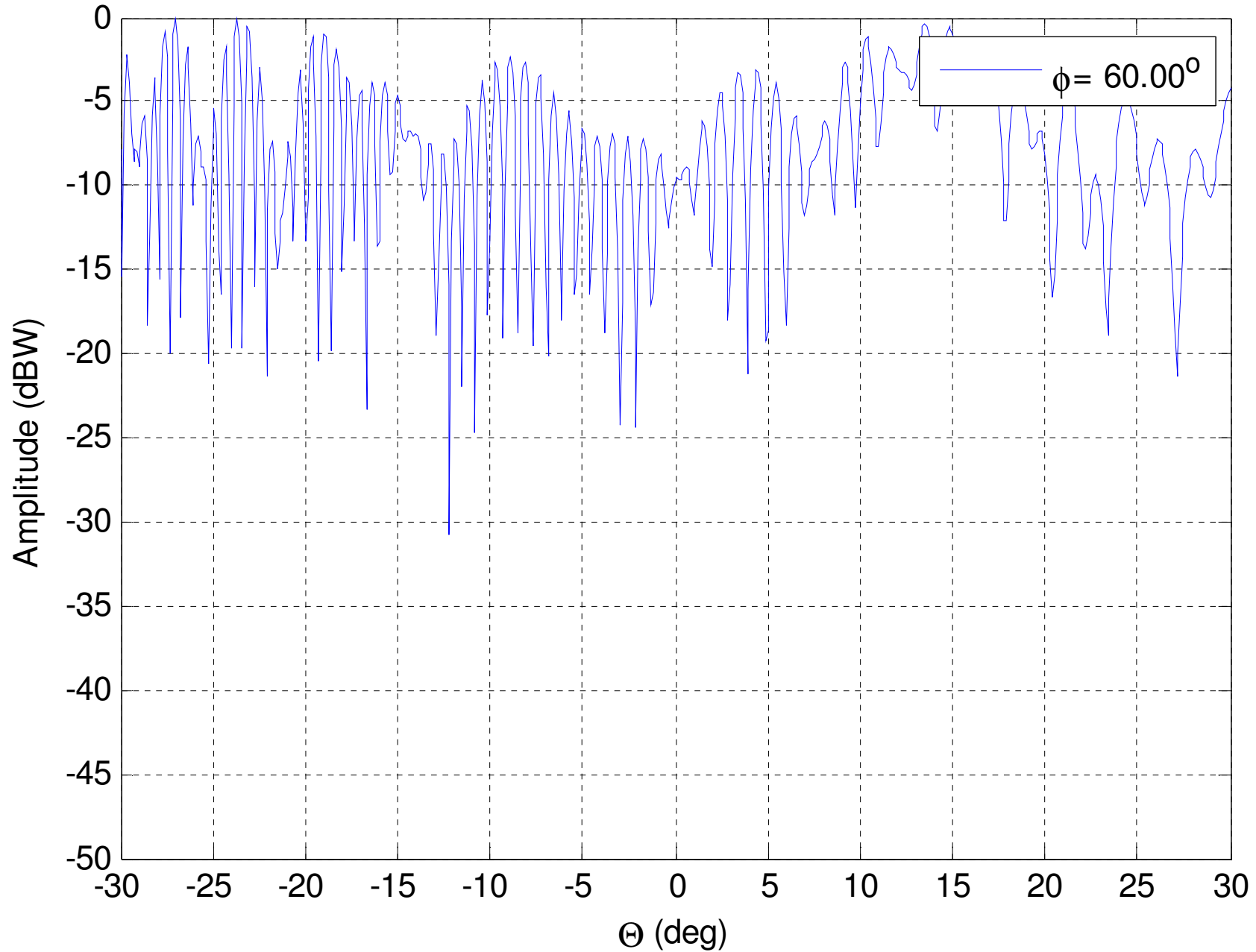
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -11.59 dBW, Date: 14-Dec-2011



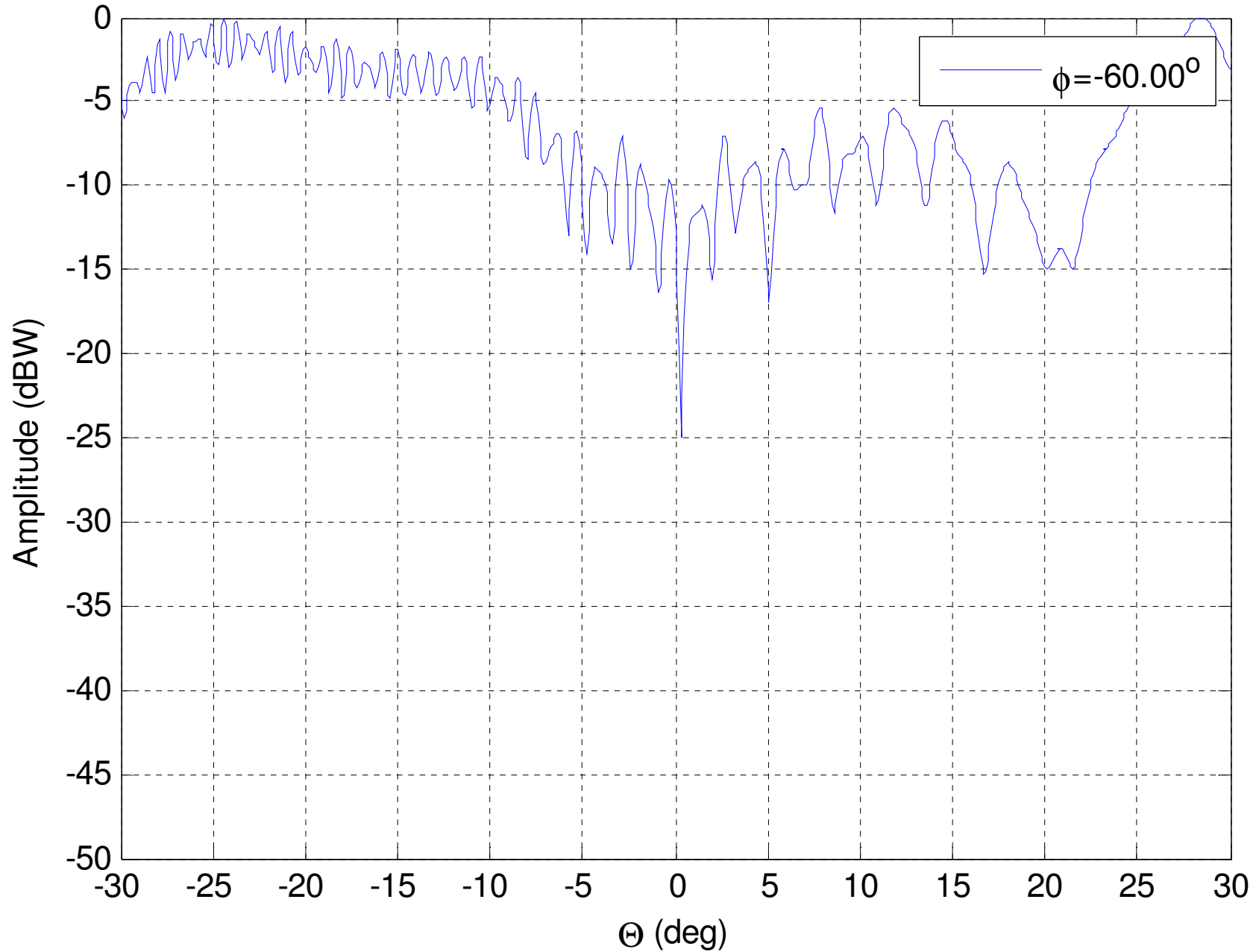
Spot Beam11, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

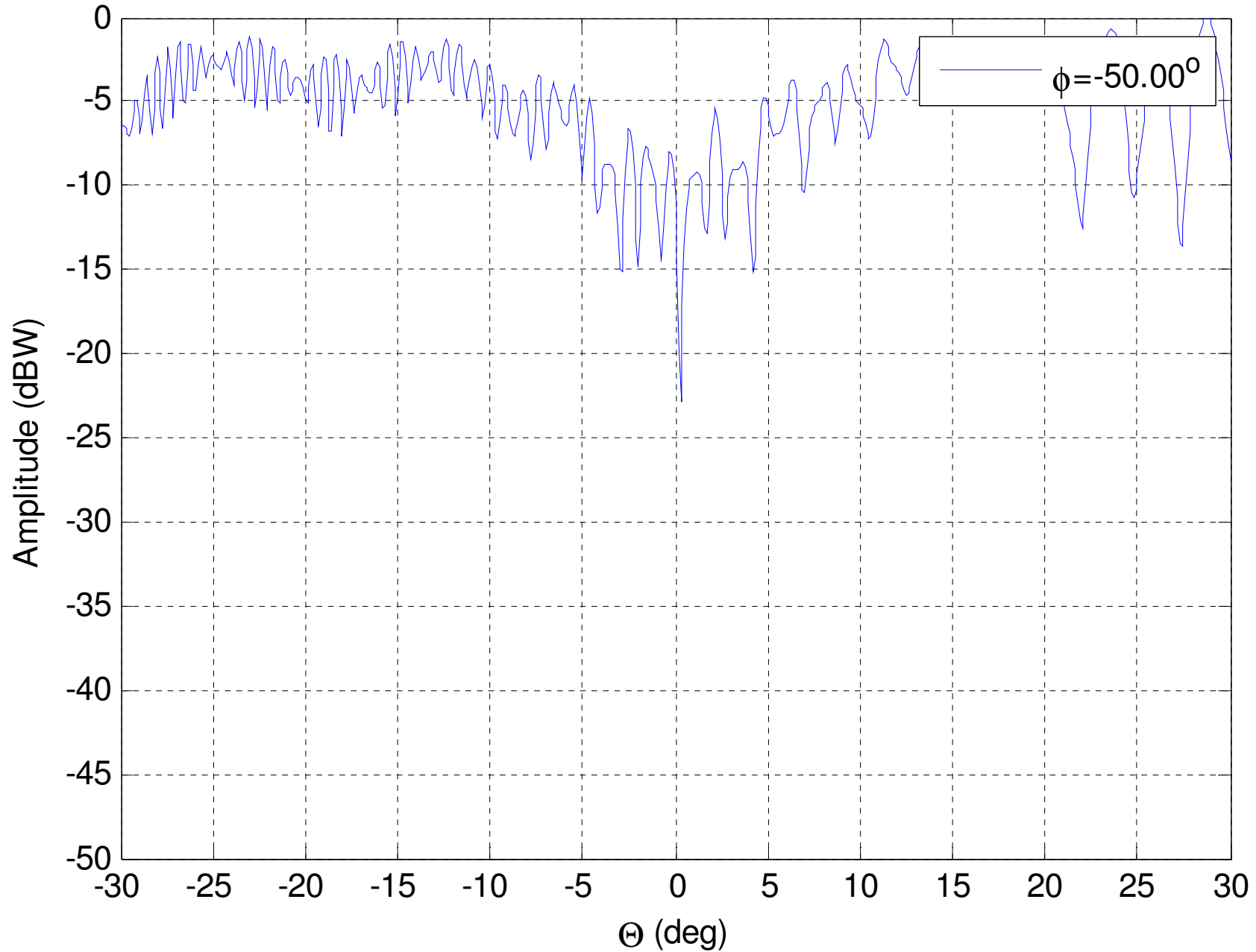
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -10.46 dBW, Date: 14-Dec-2011



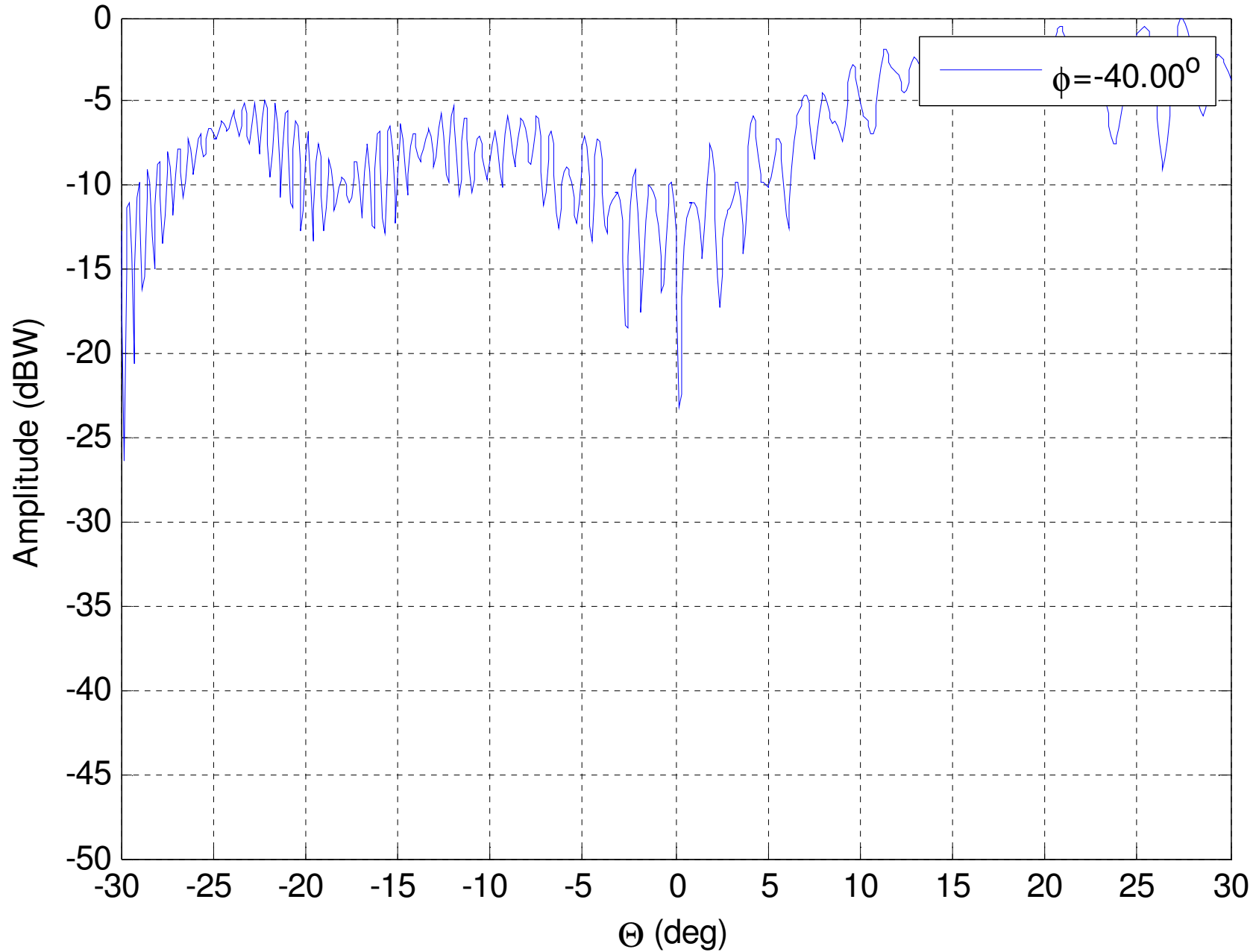
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -12.11 dBW, Date: 14-Dec-2011



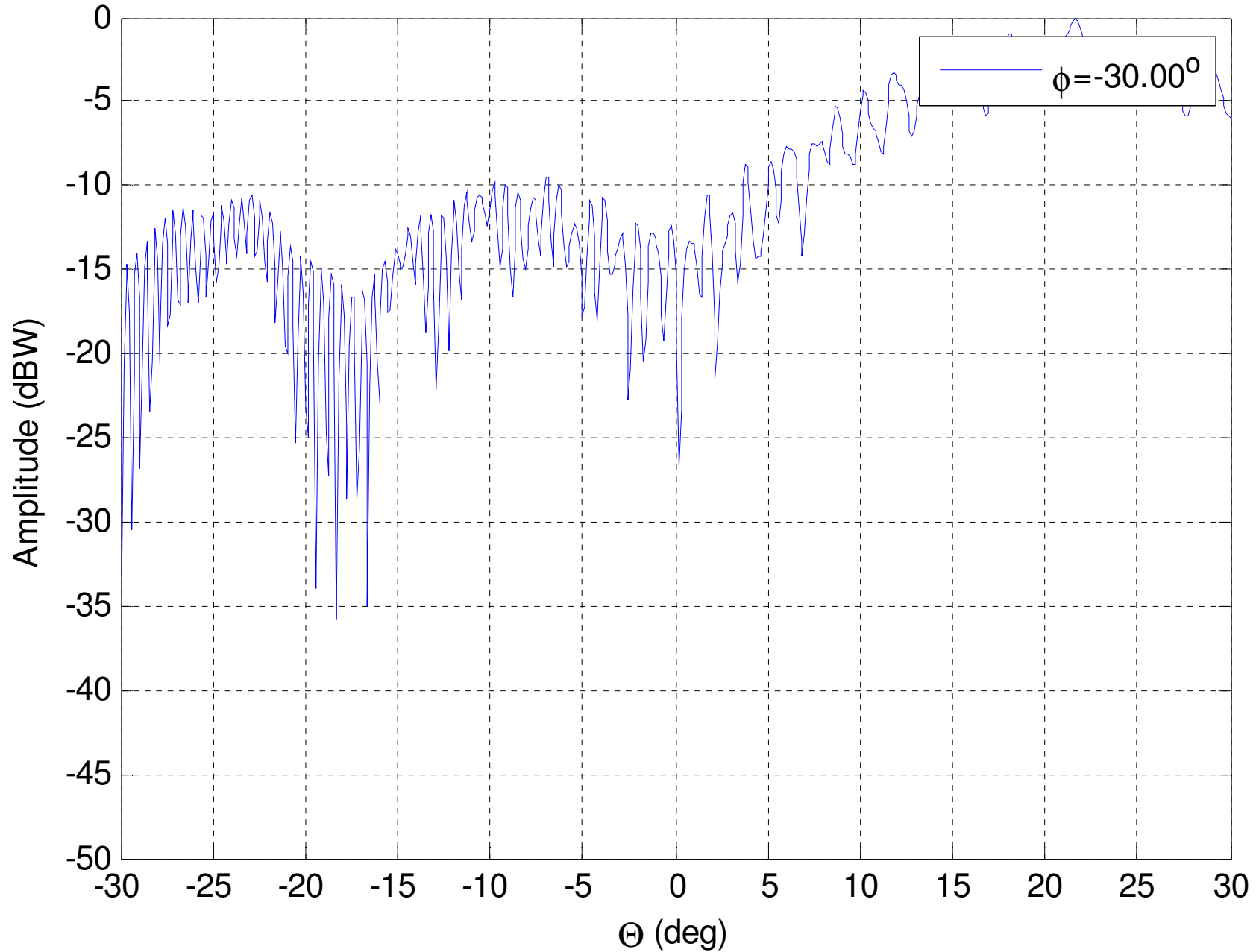
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.26 dBW, Date: 14-Dec-2011



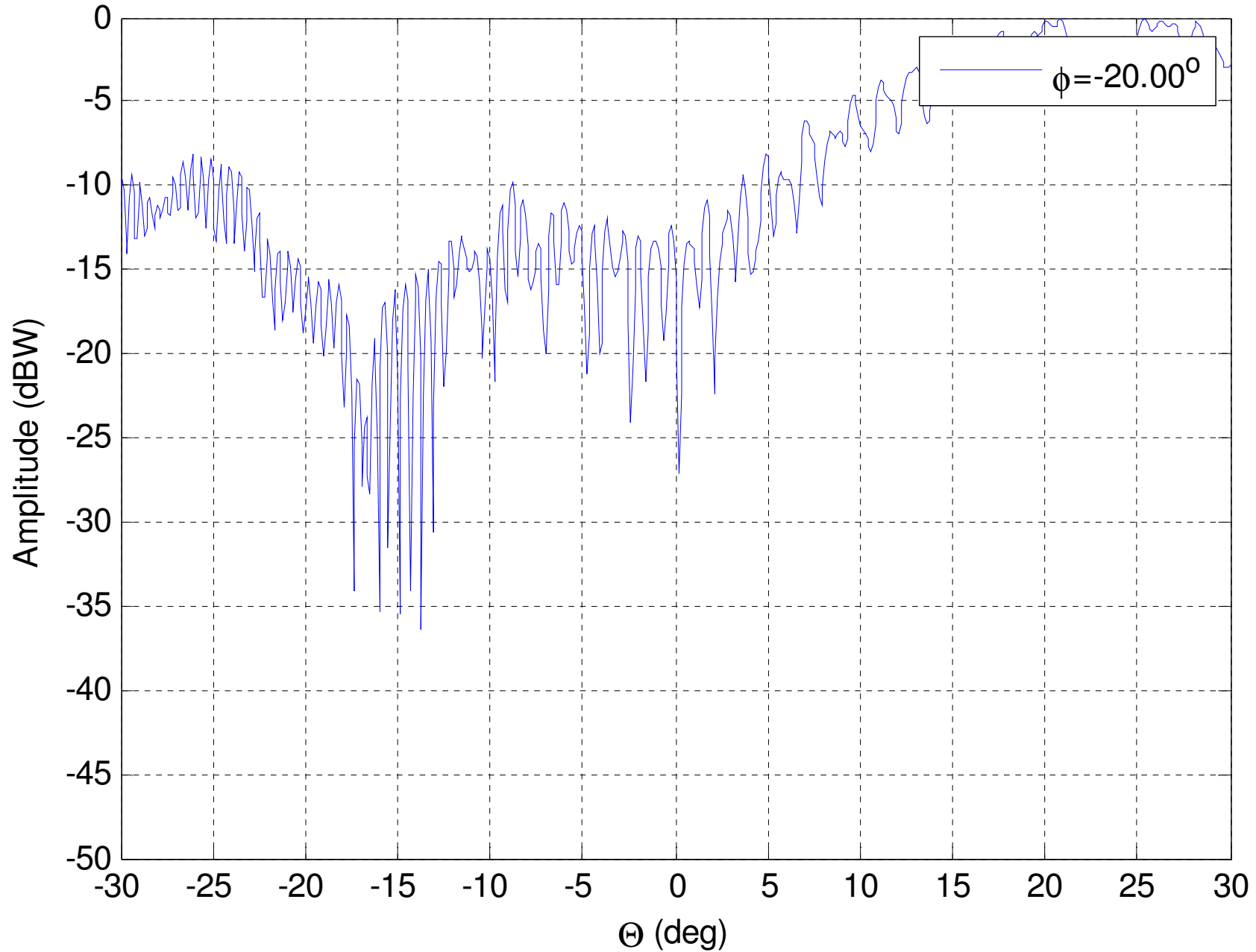
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -7.72 dBW, Date: 14-Dec-2011



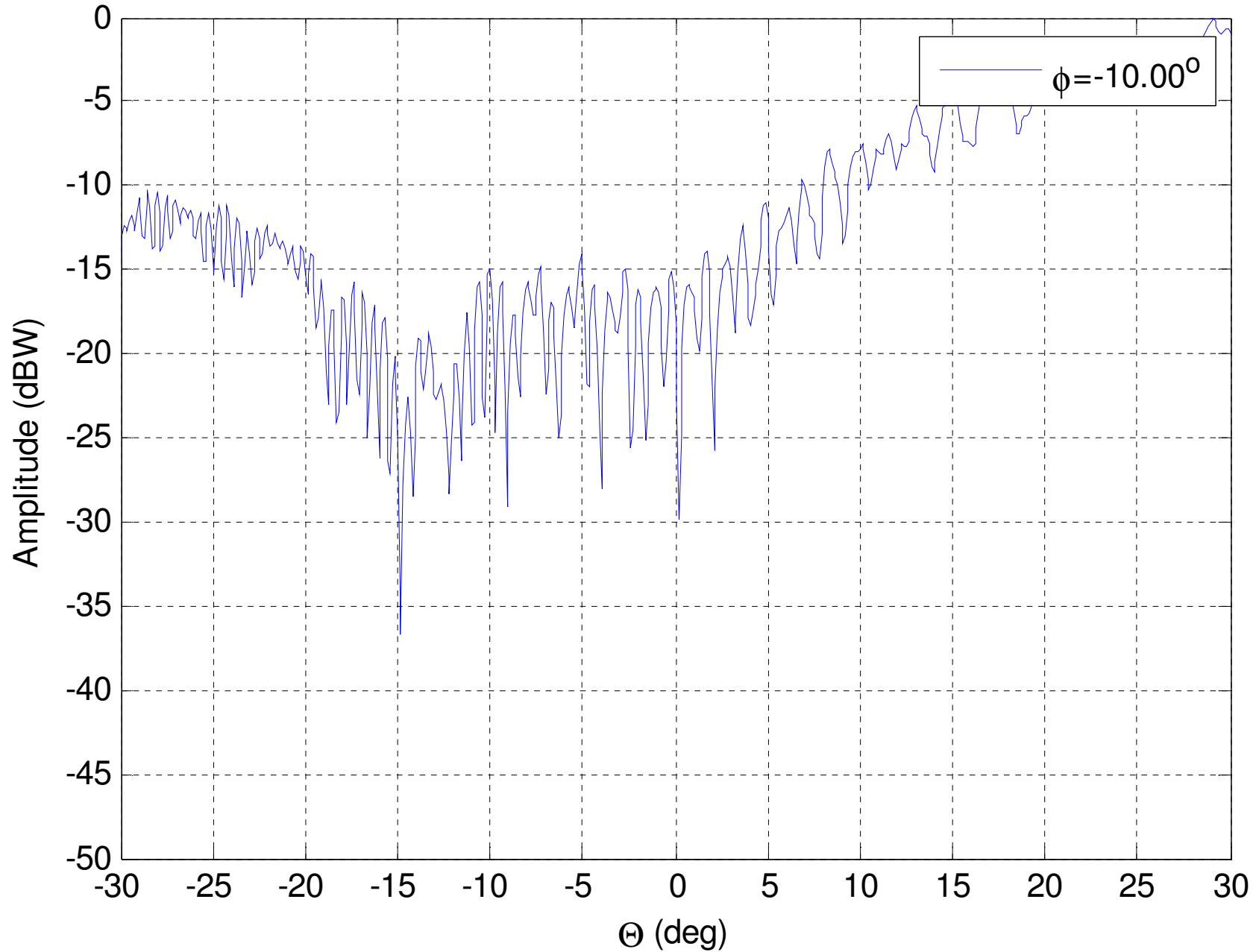
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -7.57 dBW, Date: 14-Dec-2011



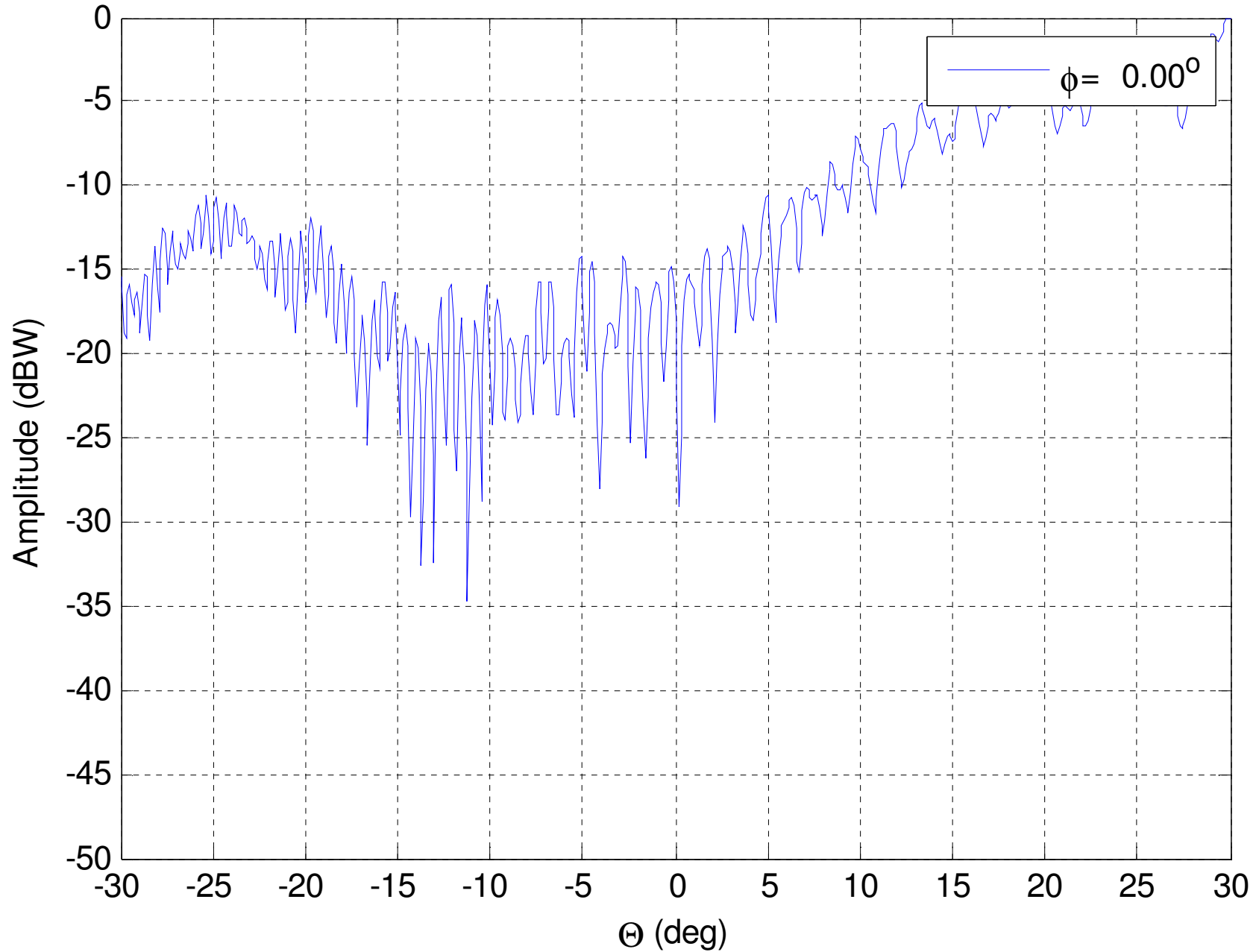
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -4.80 dBW, Date: 14-Dec-2011



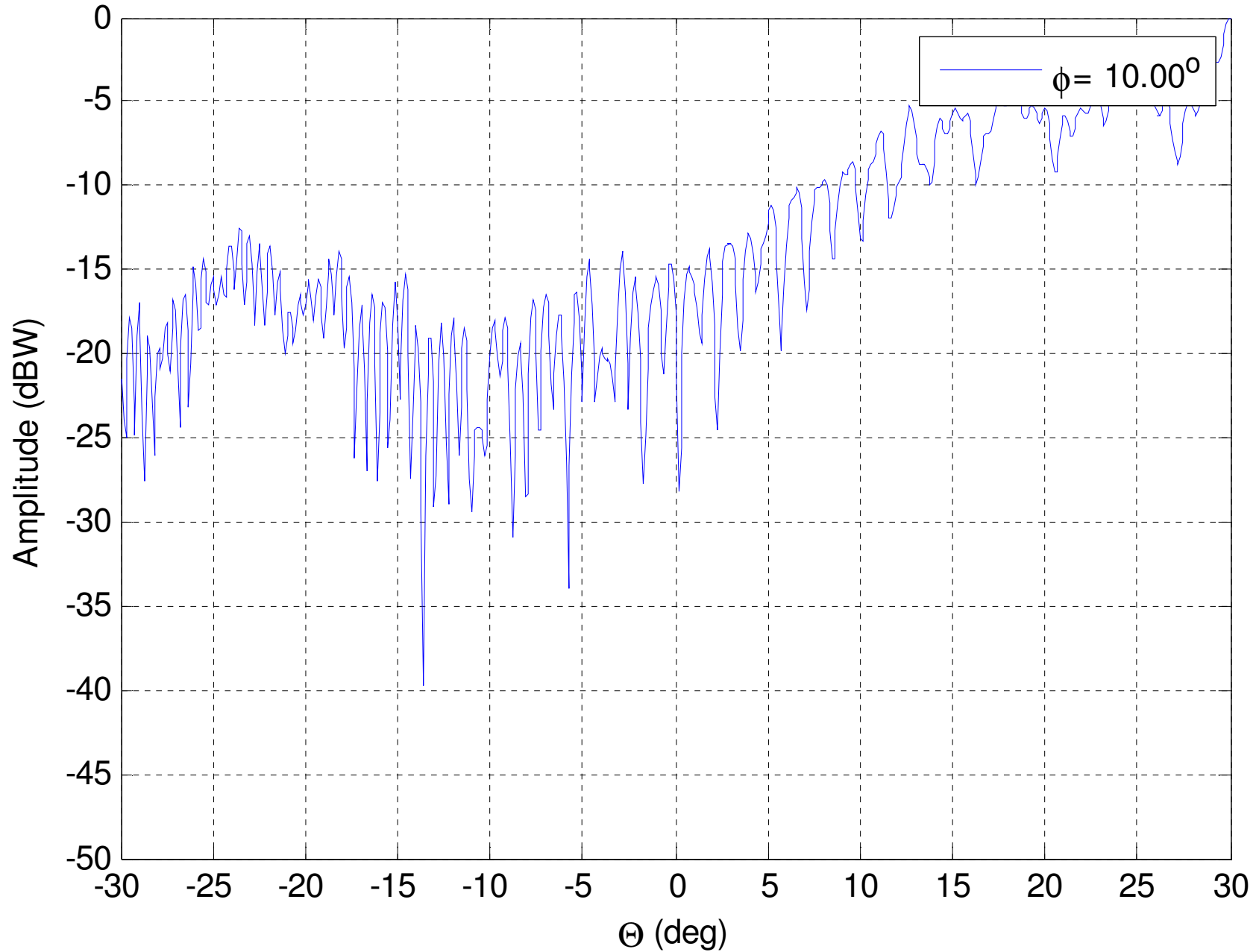
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -5.19 dBW, Date: 14-Dec-2011



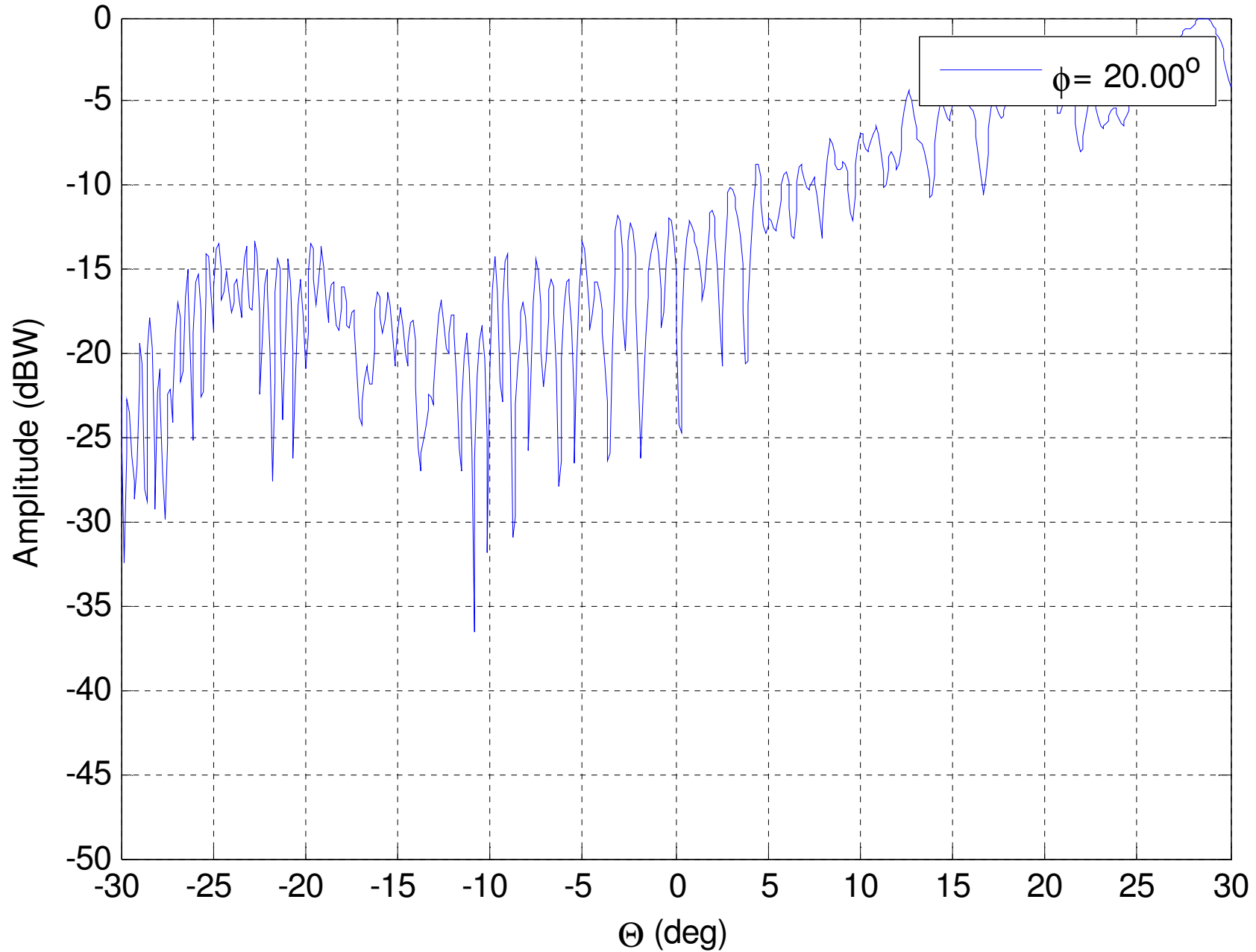
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -5.40 dBW, Date: 14-Dec-2011



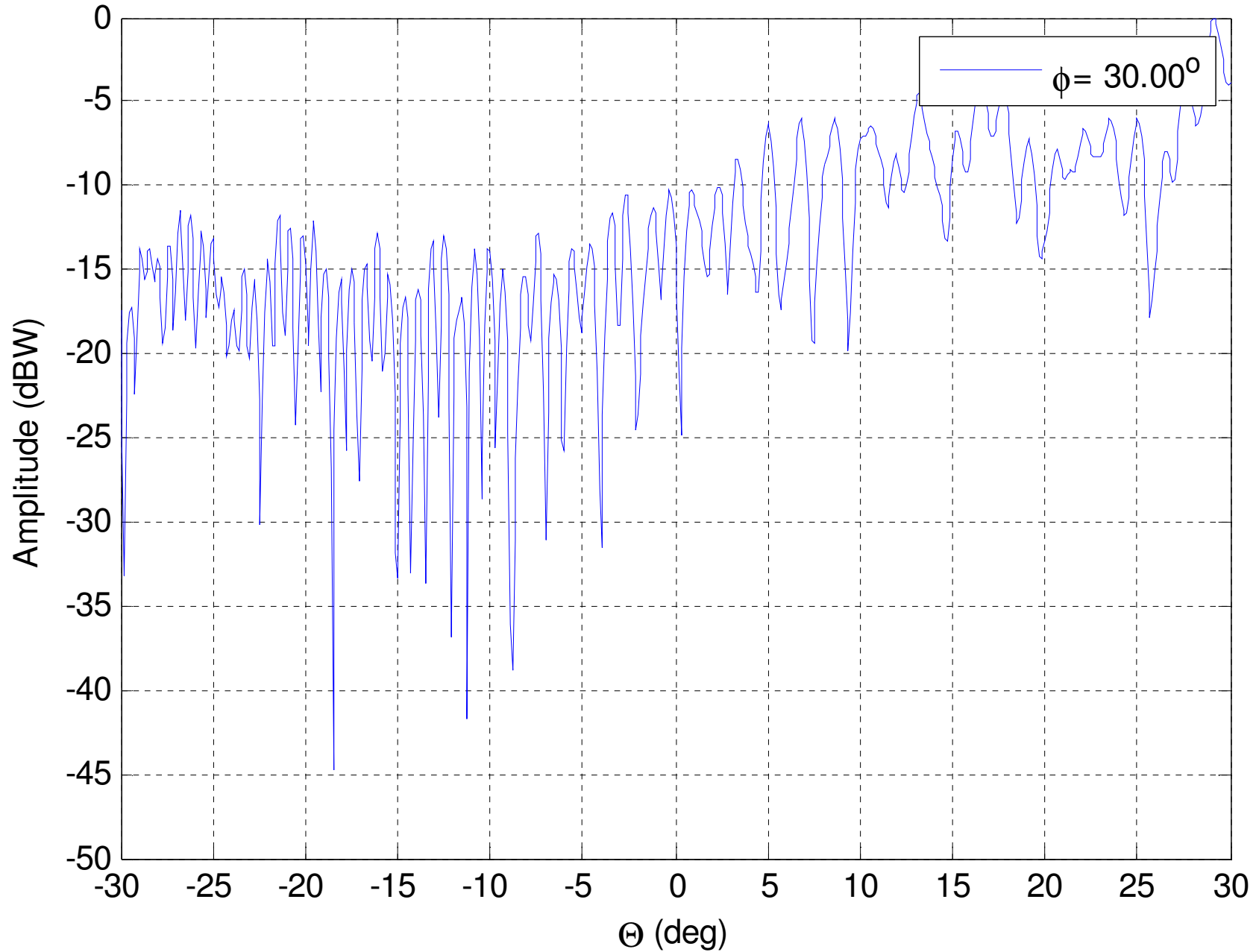
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -8.05 dBW, Date: 14-Dec-2011



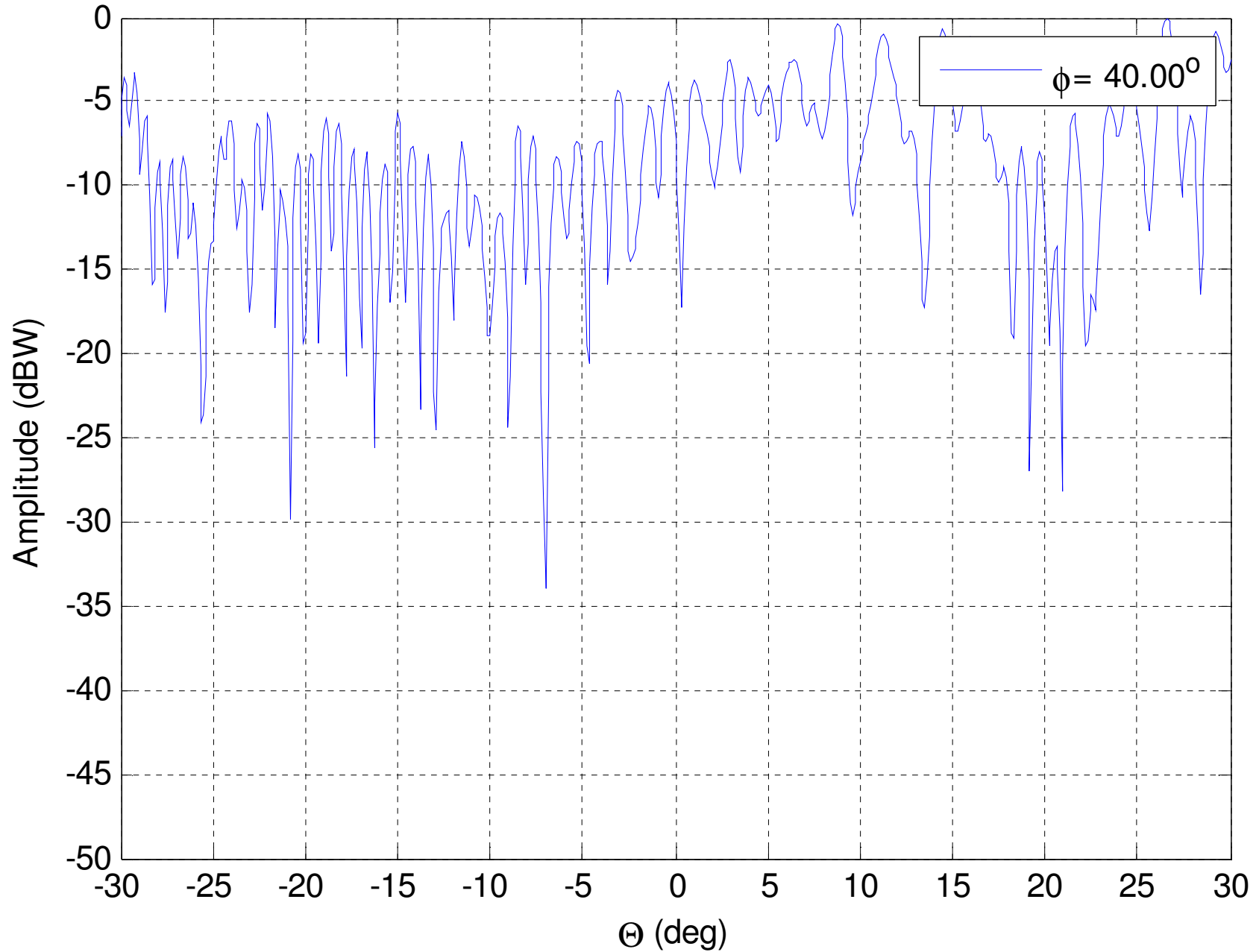
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -9.53 dBW, Date: 14-Dec-2011



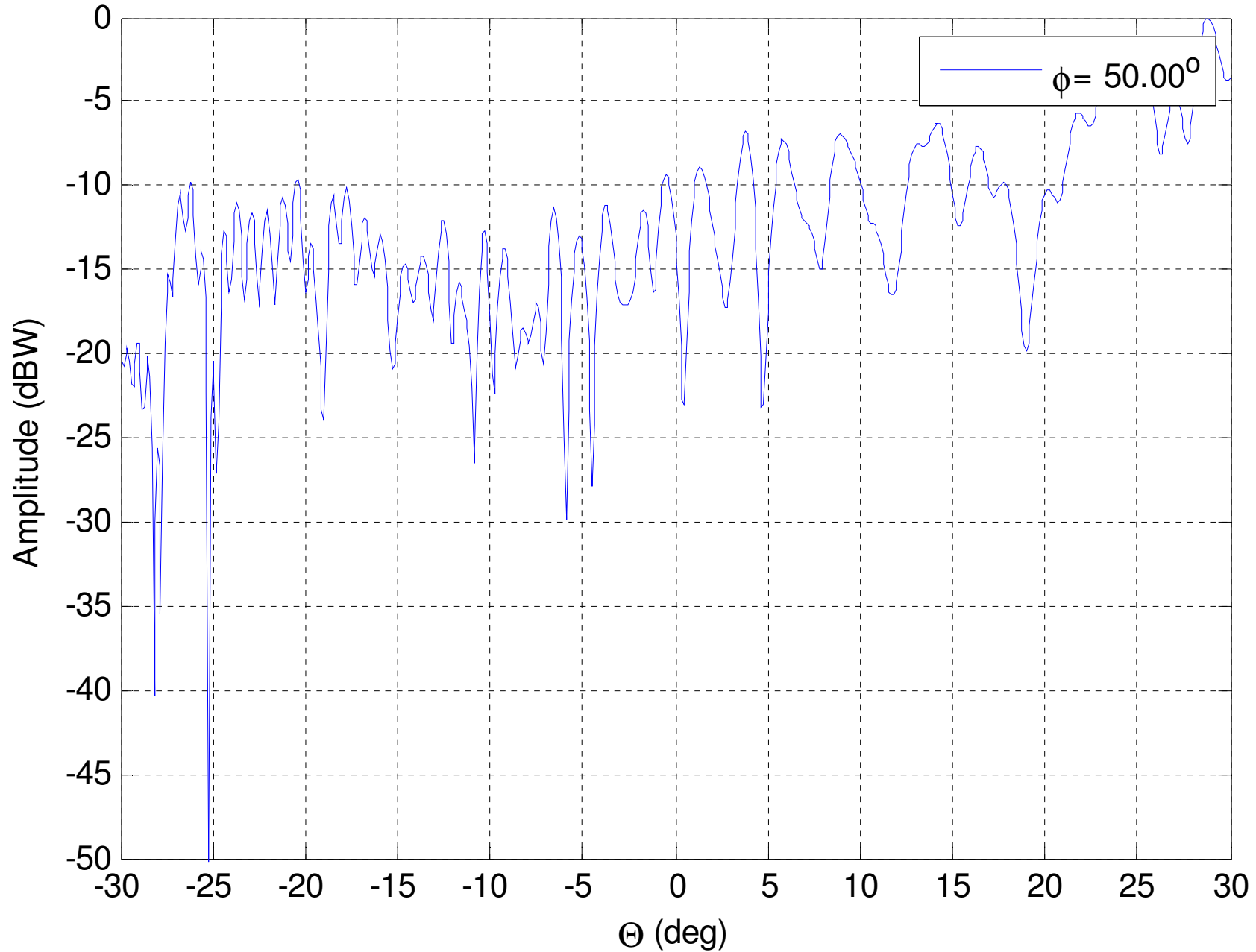
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -15.83 dBW, Date: 14-Dec-2011



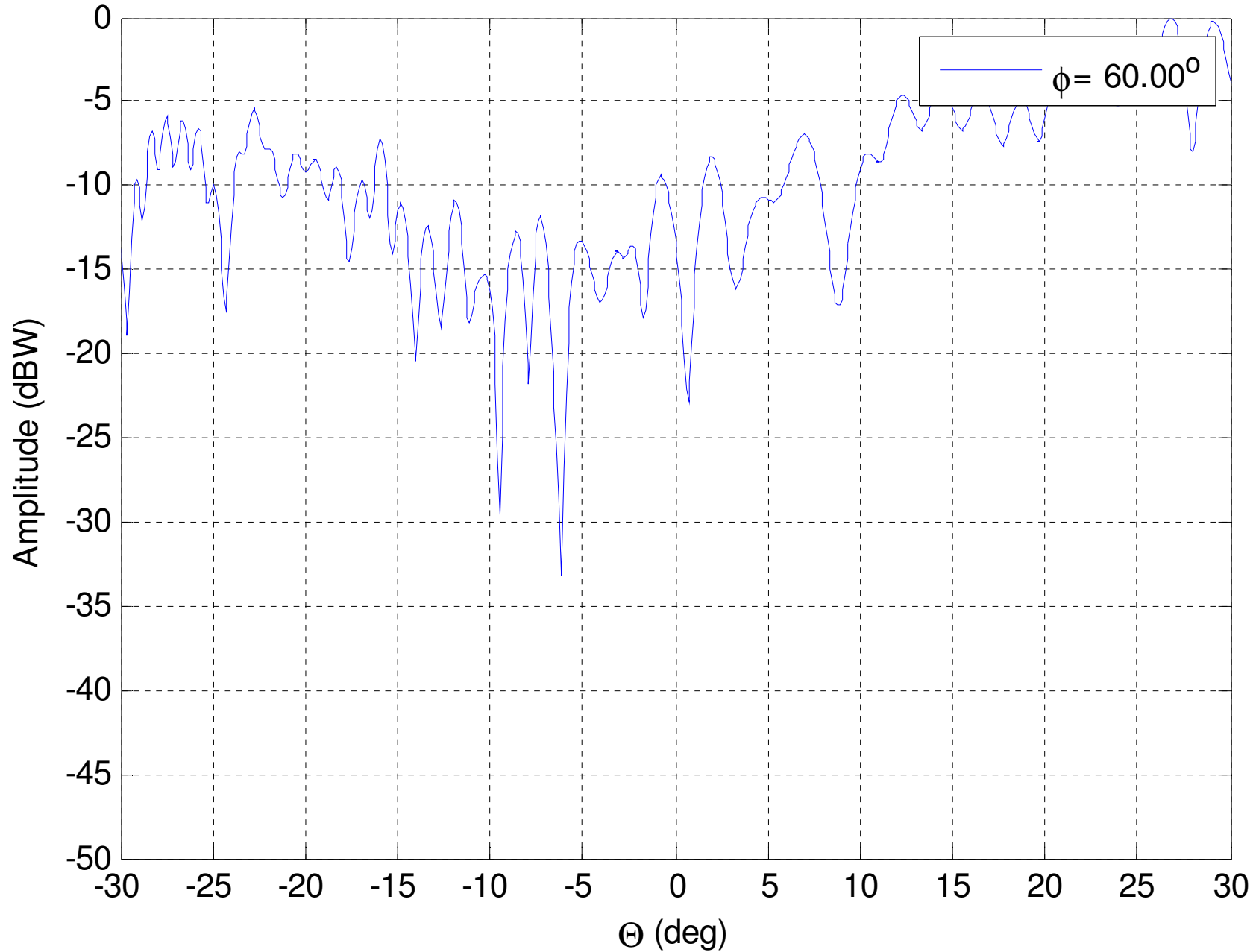
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.20 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

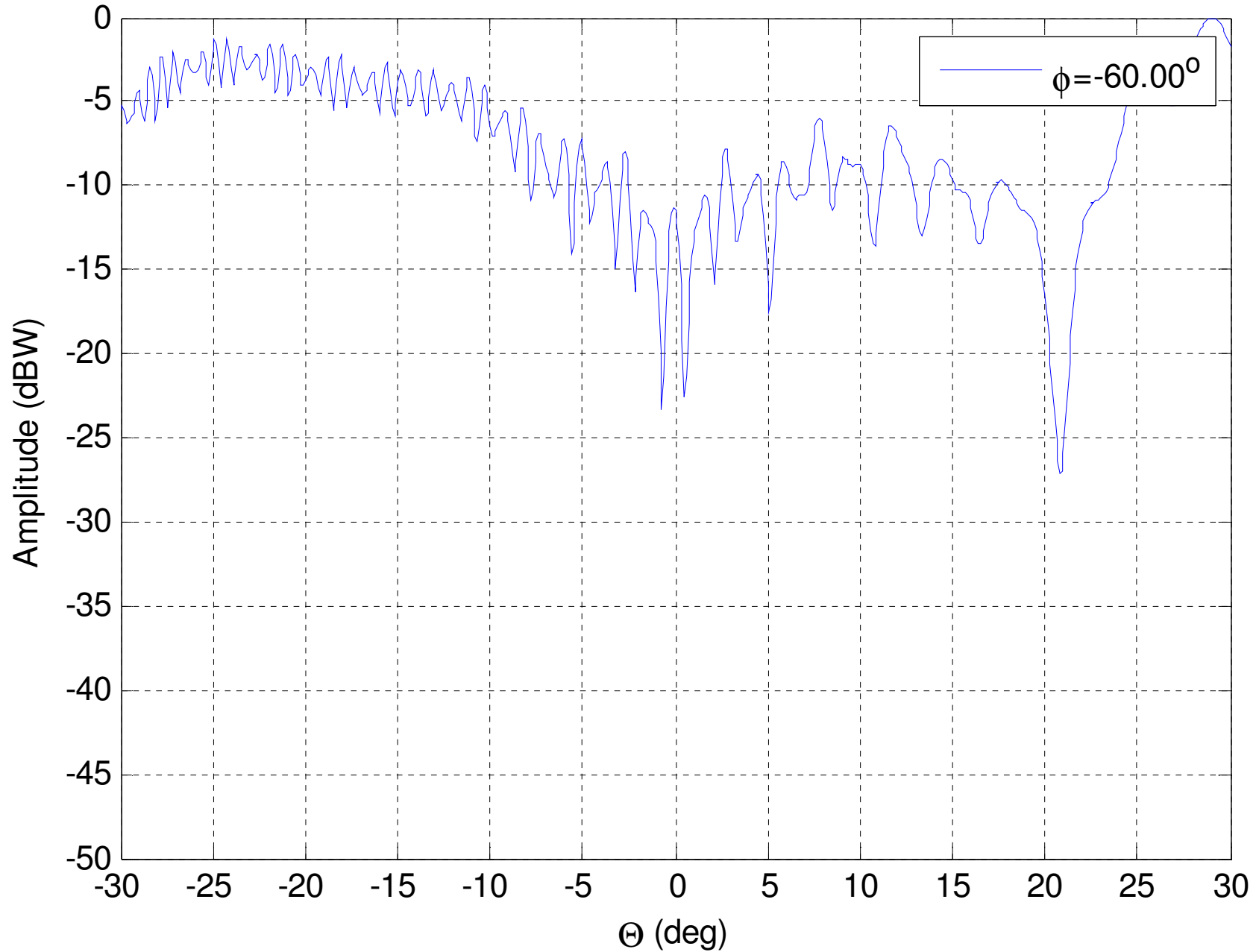
Input file: tx-17.3-rhcp-60.cut, Peak: -9.91 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

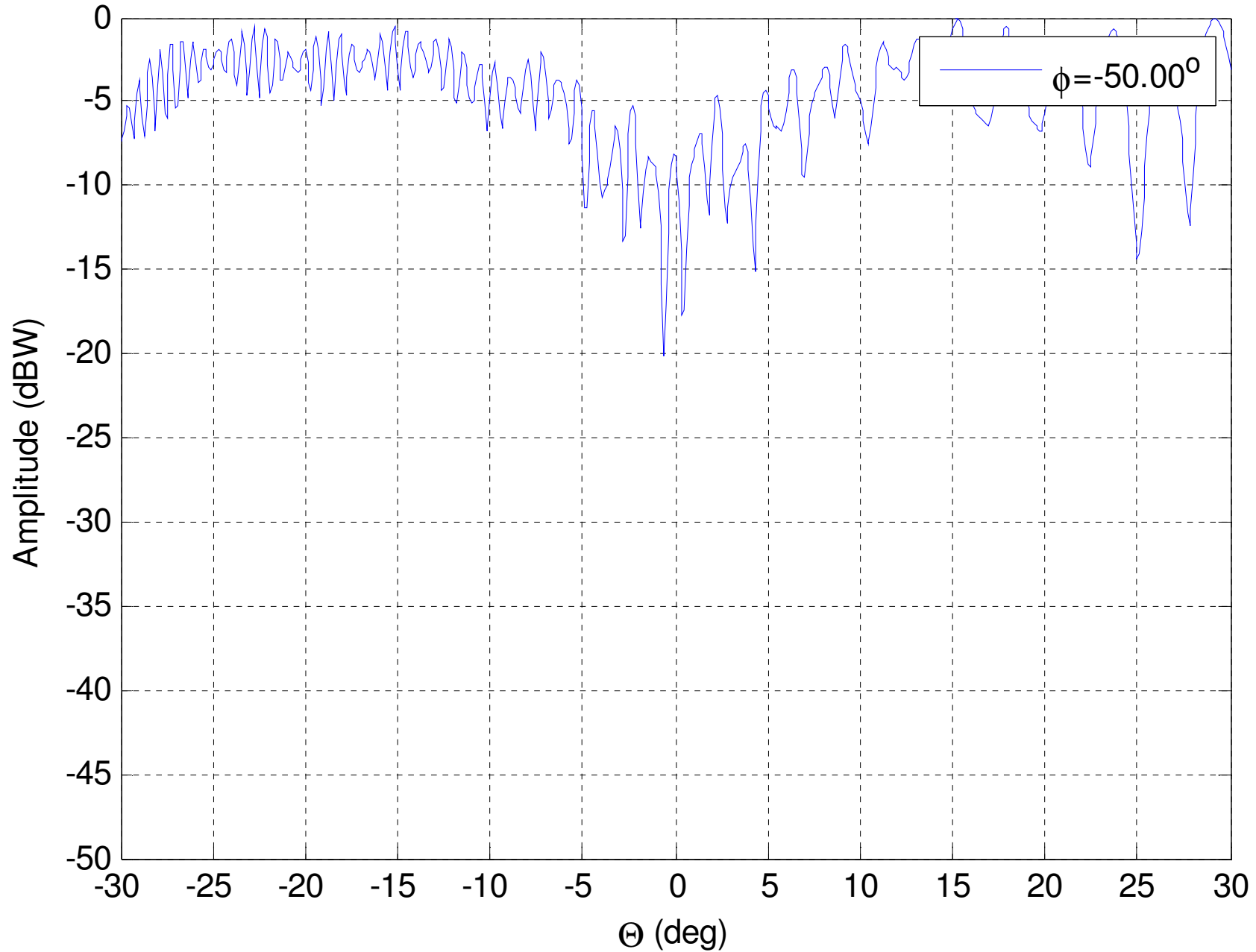
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.49 dBW, Date: 14-Dec-2011



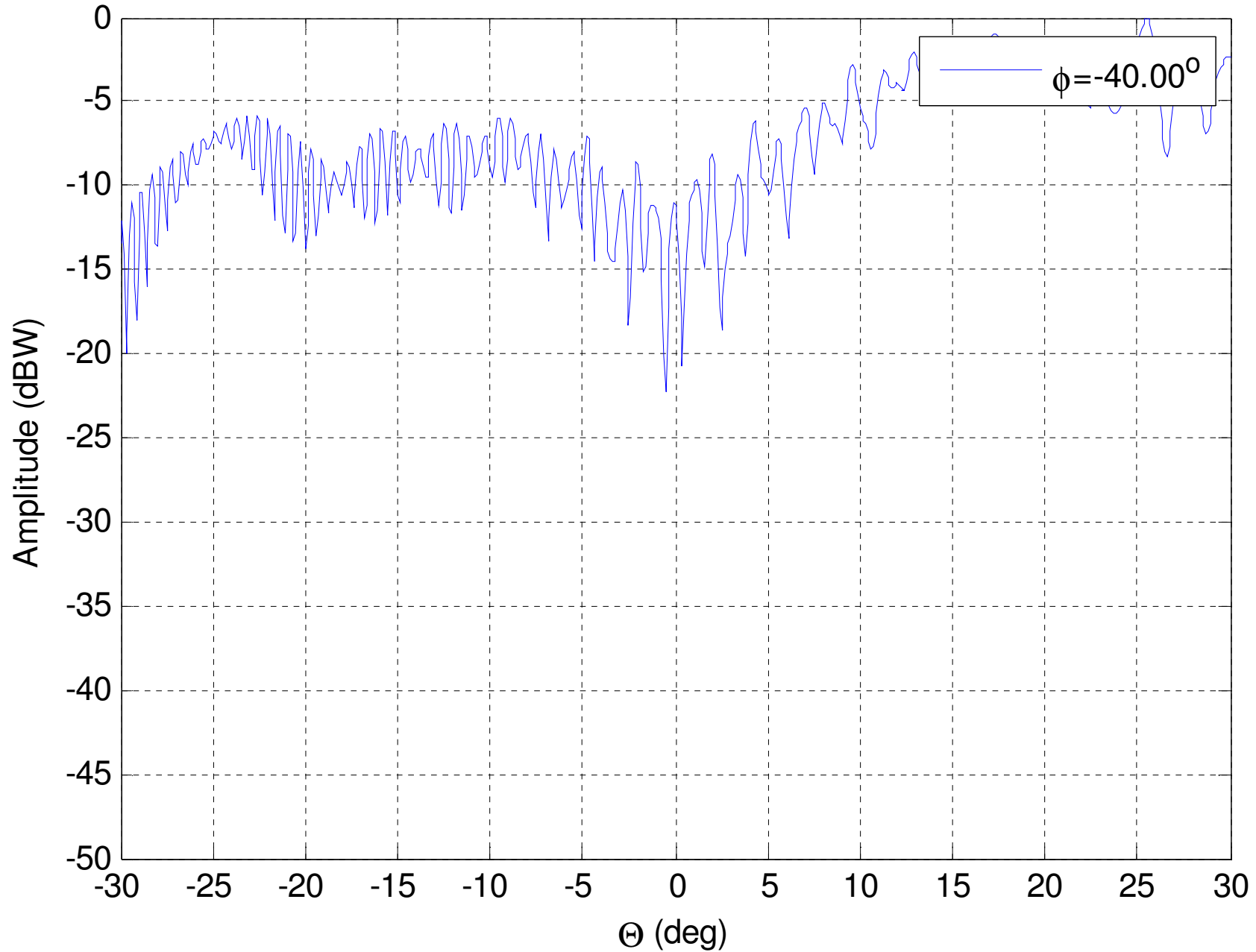
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -12.73 dBW, Date: 14-Dec-2011



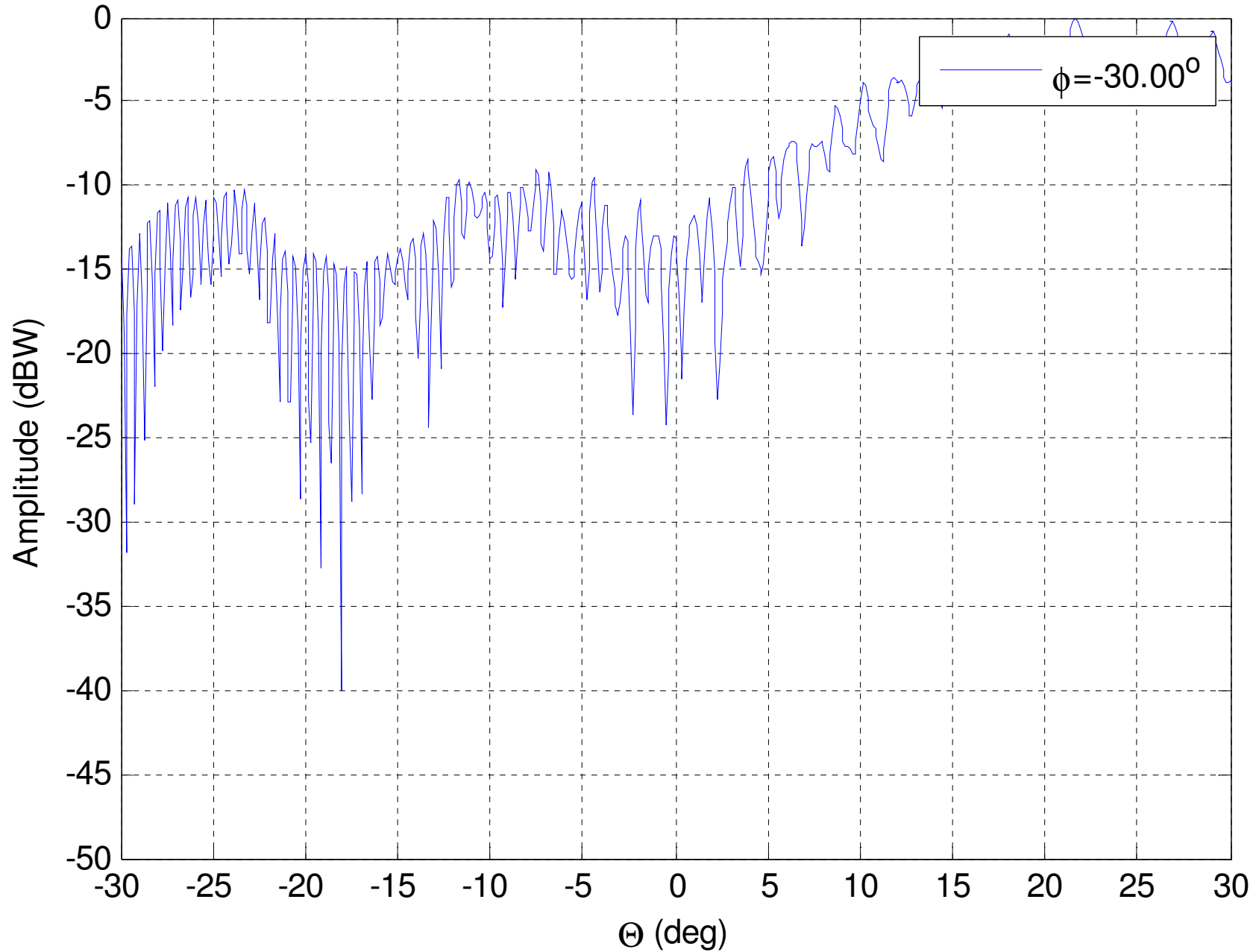
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.82 dBW, Date: 14-Dec-2011



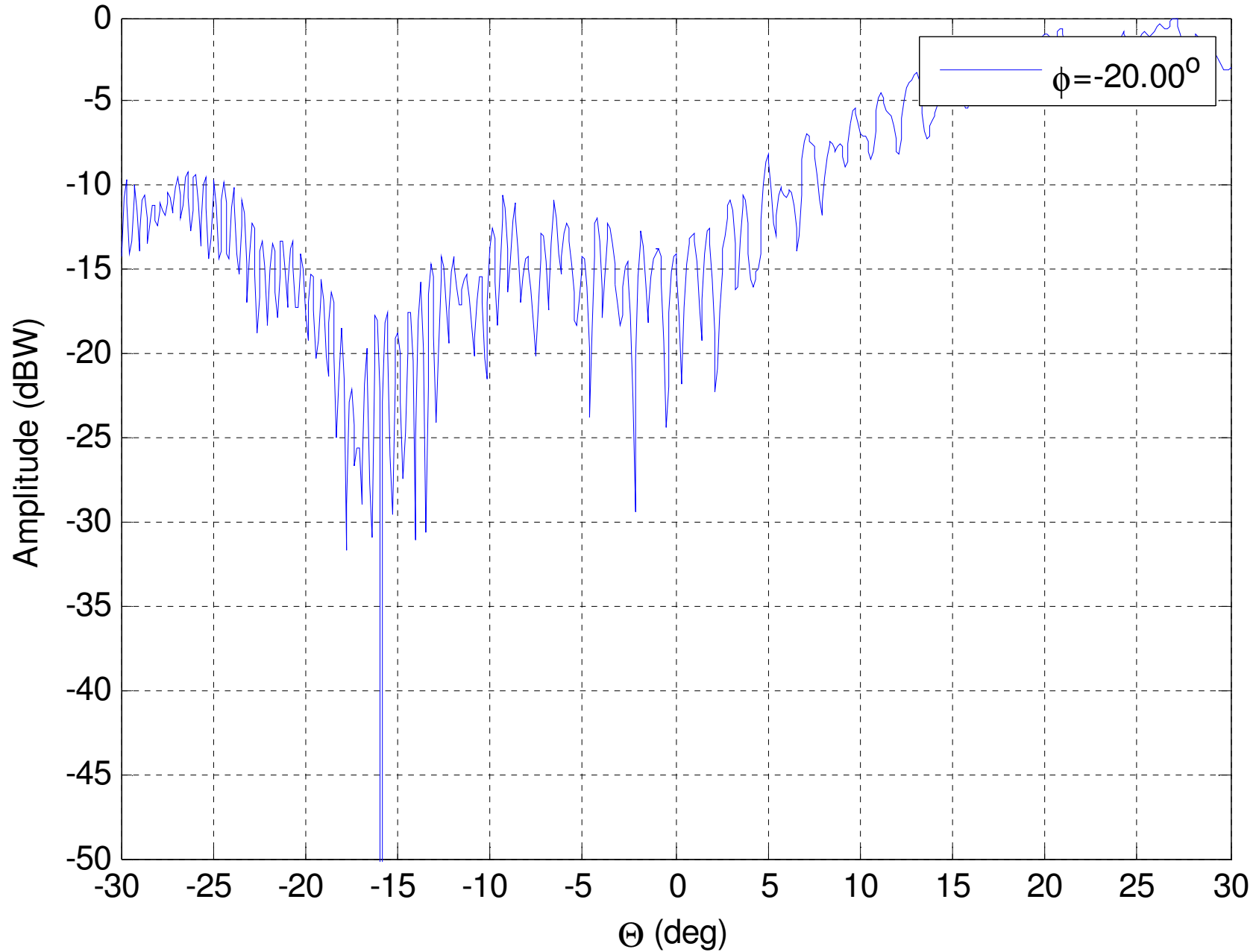
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -7.89 dBW, Date: 14-Dec-2011



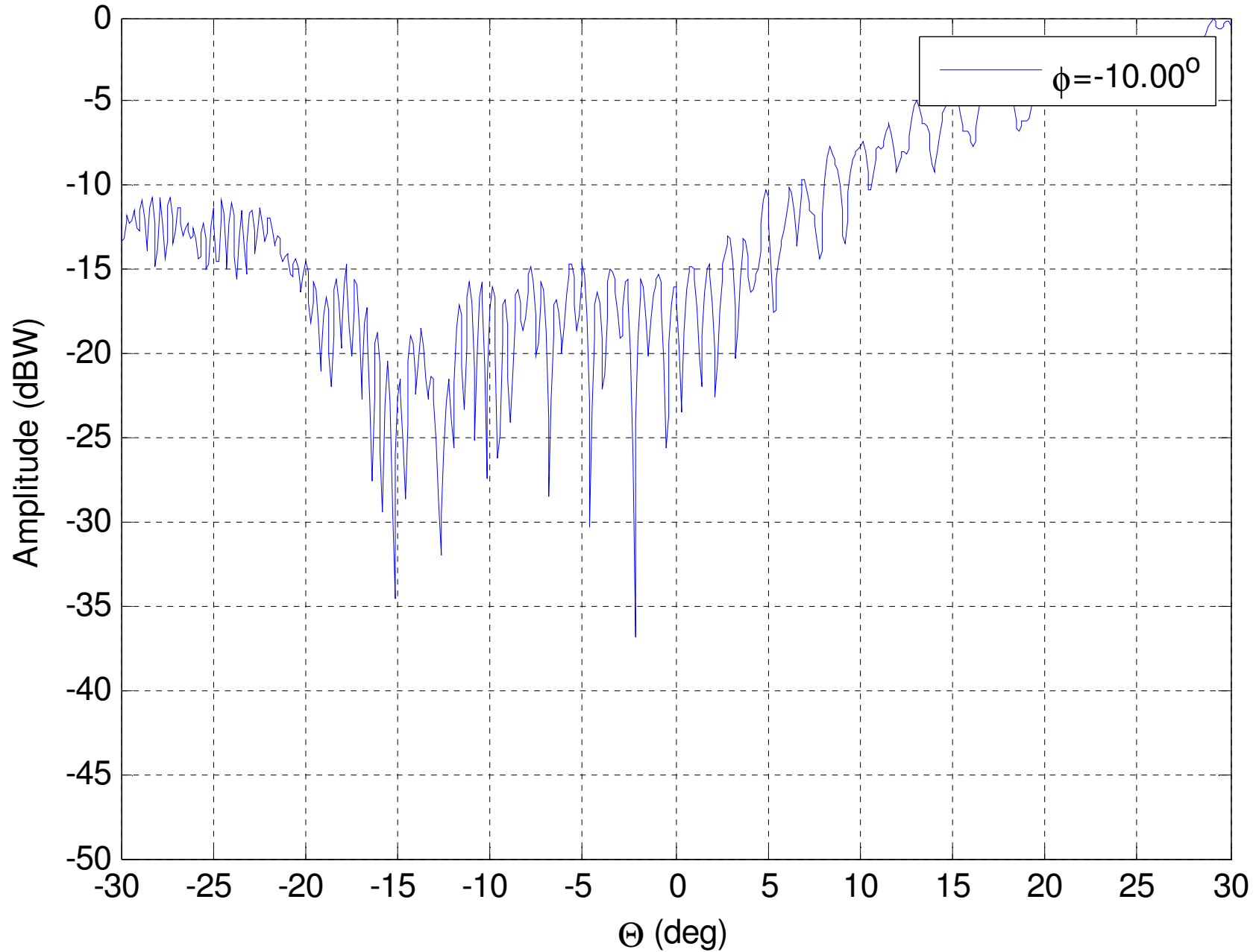
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.84 dBW, Date: 14-Dec-2011



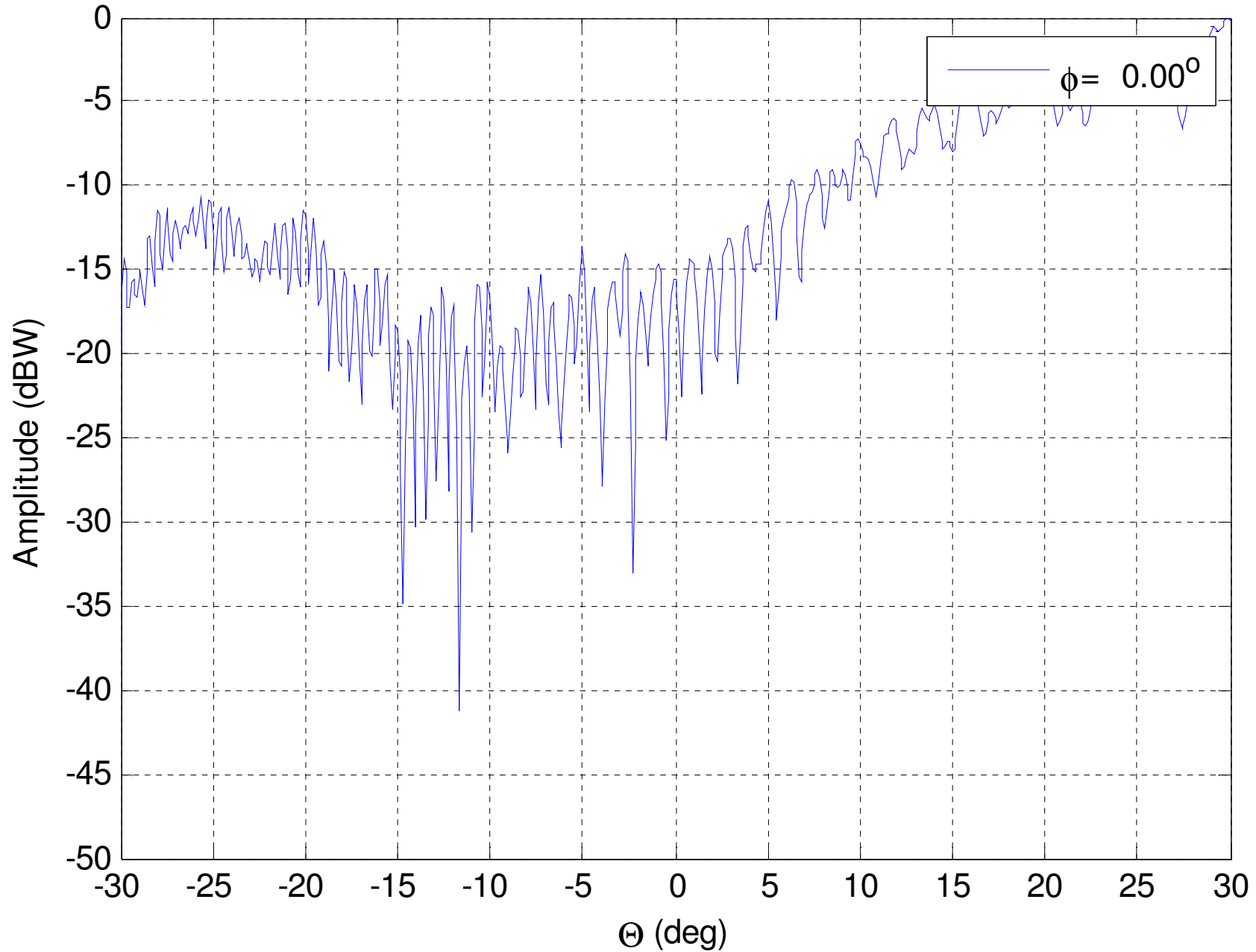
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -4.98 dBW, Date: 14-Dec-2011



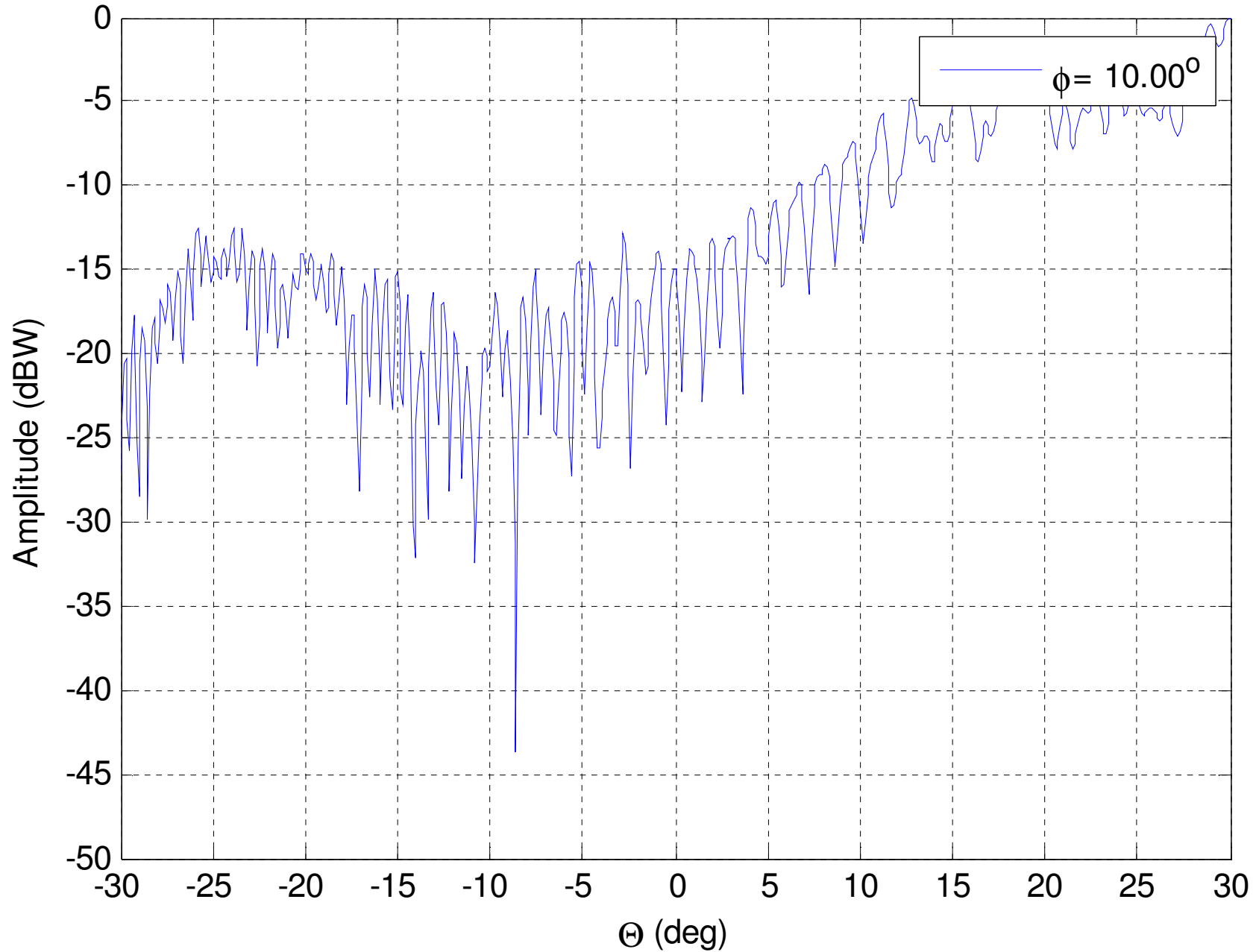
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.36 dBW, Date: 14-Dec-2011



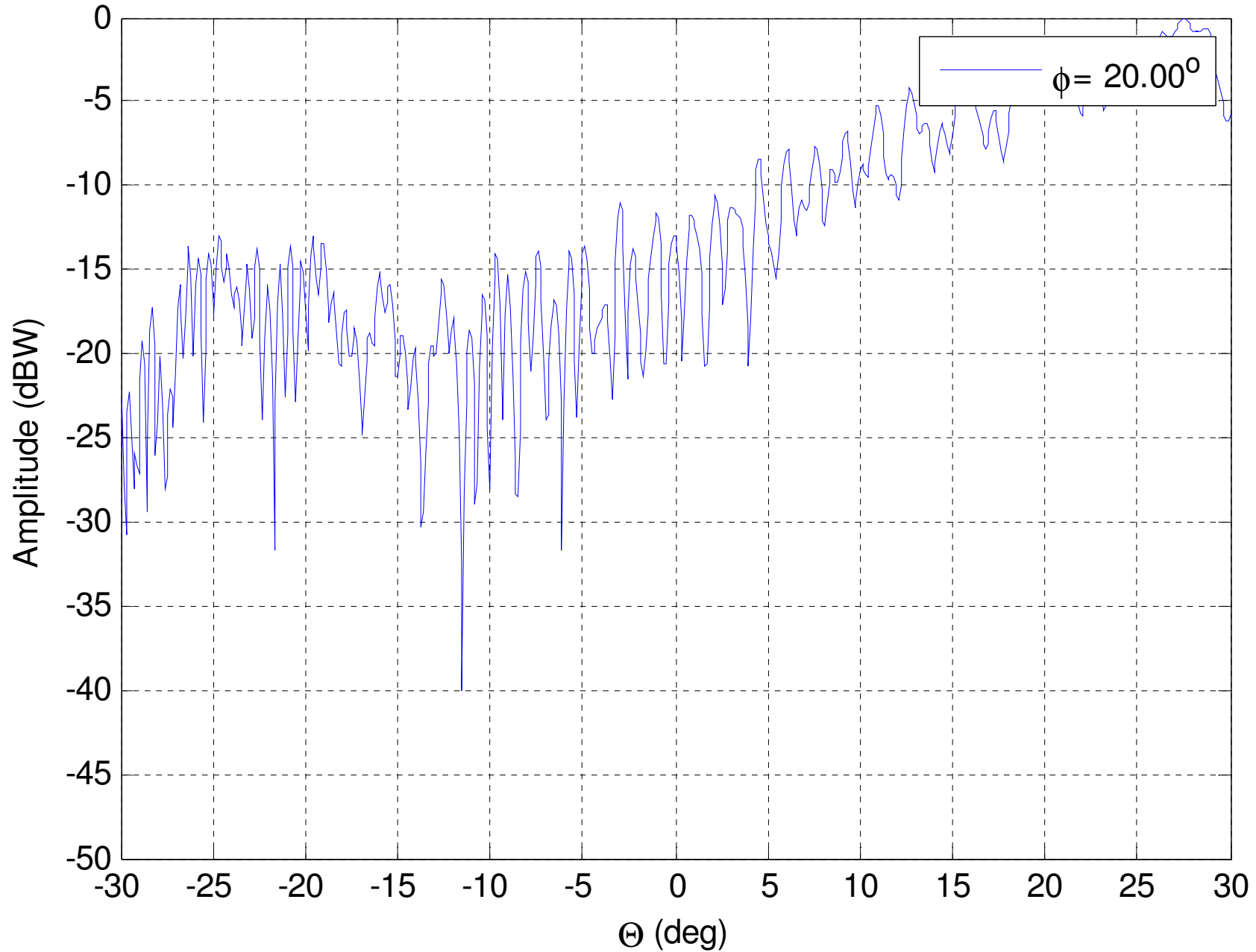
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.99 dBW, Date: 14-Dec-2011



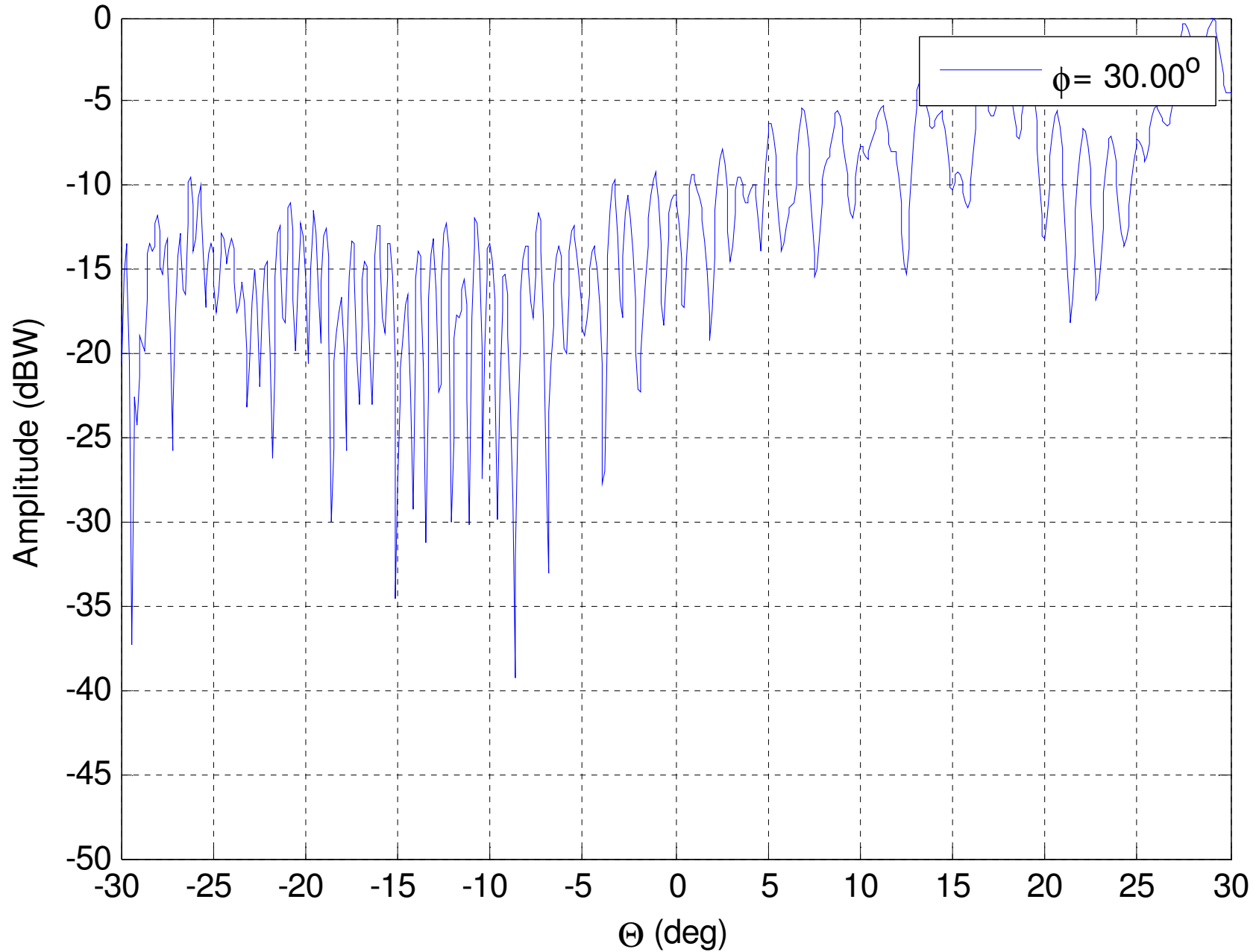
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -8.04 dBW, Date: 14-Dec-2011



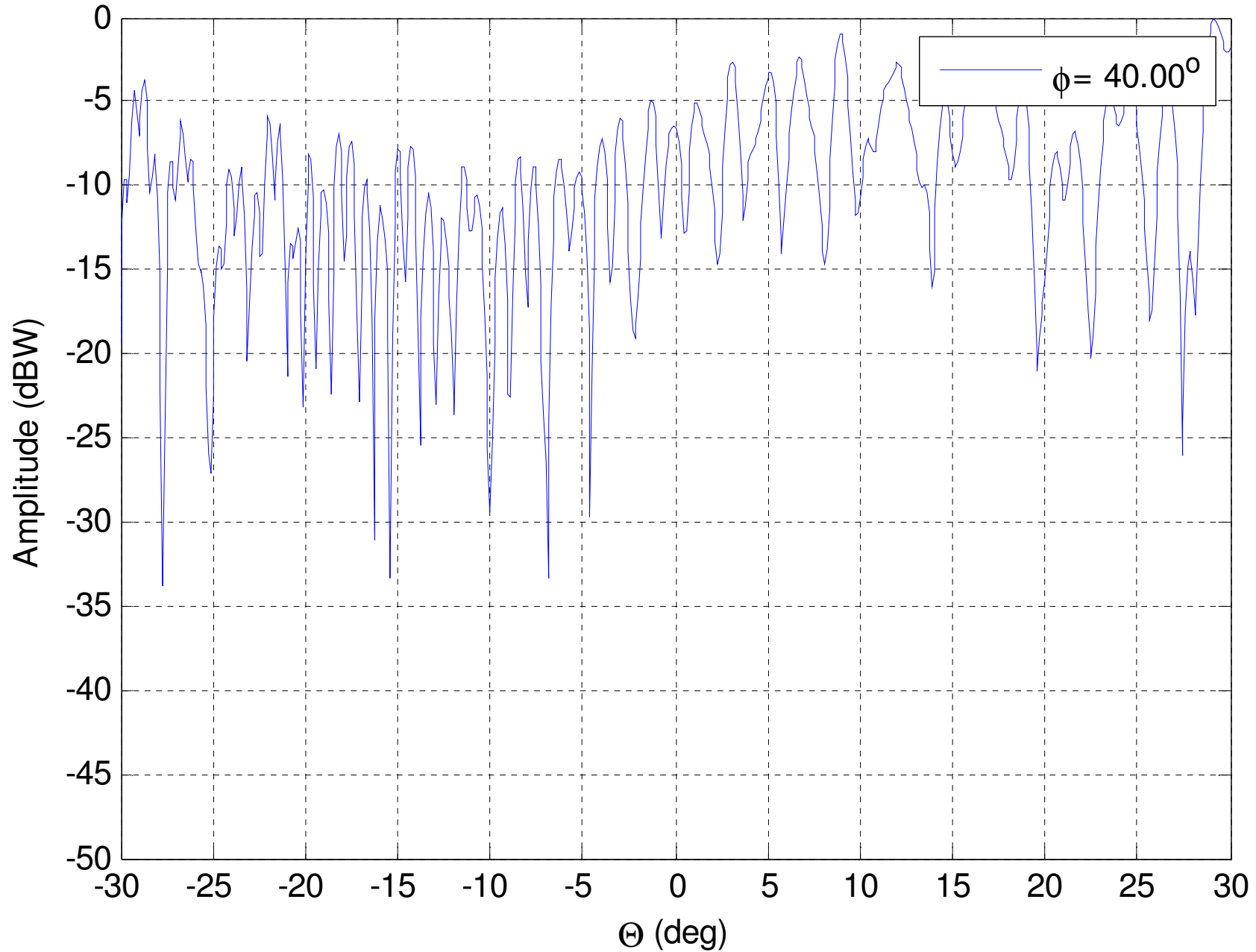
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -10.36 dBW, Date: 14-Dec-2011



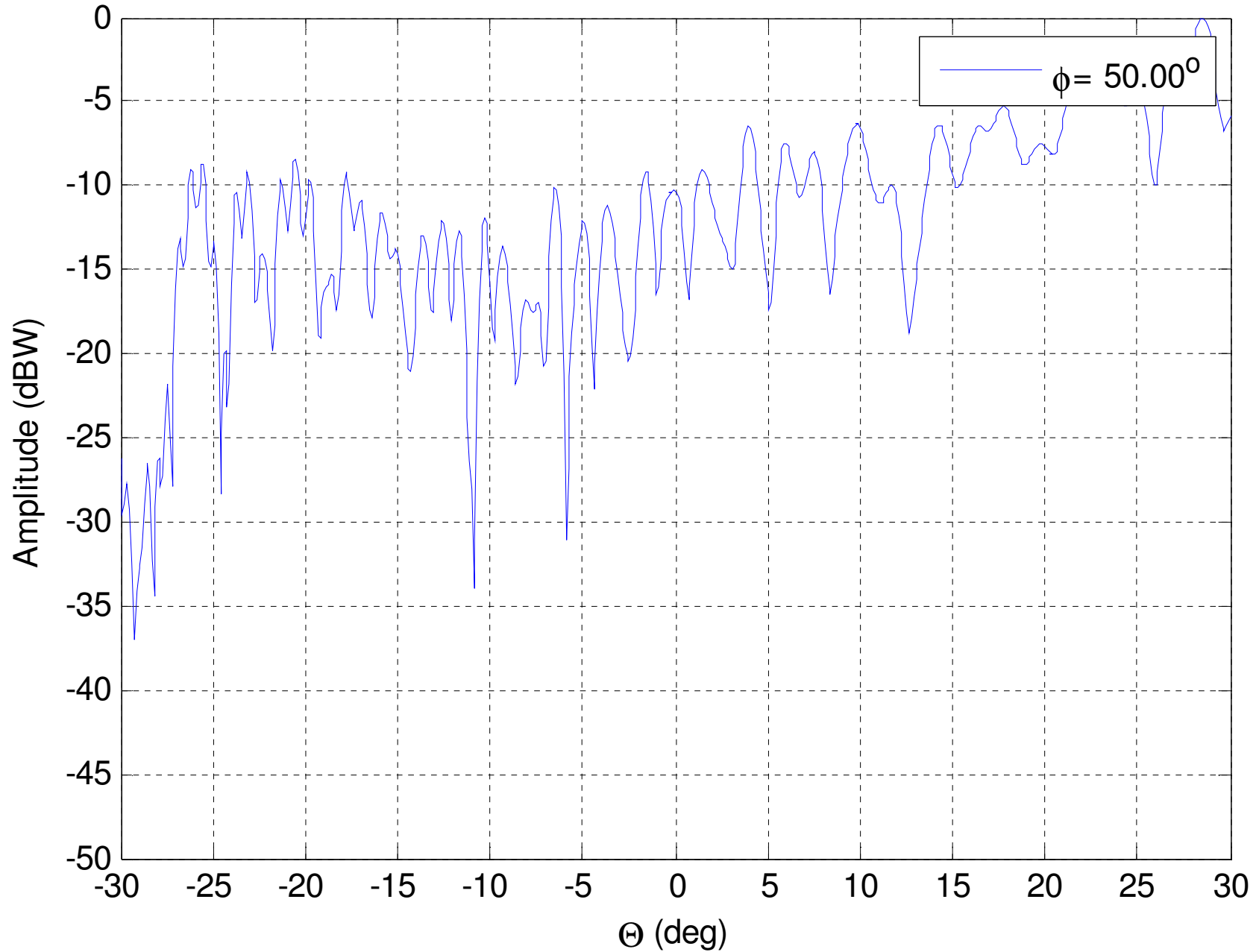
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -14.59 dBW, Date: 14-Dec-2011



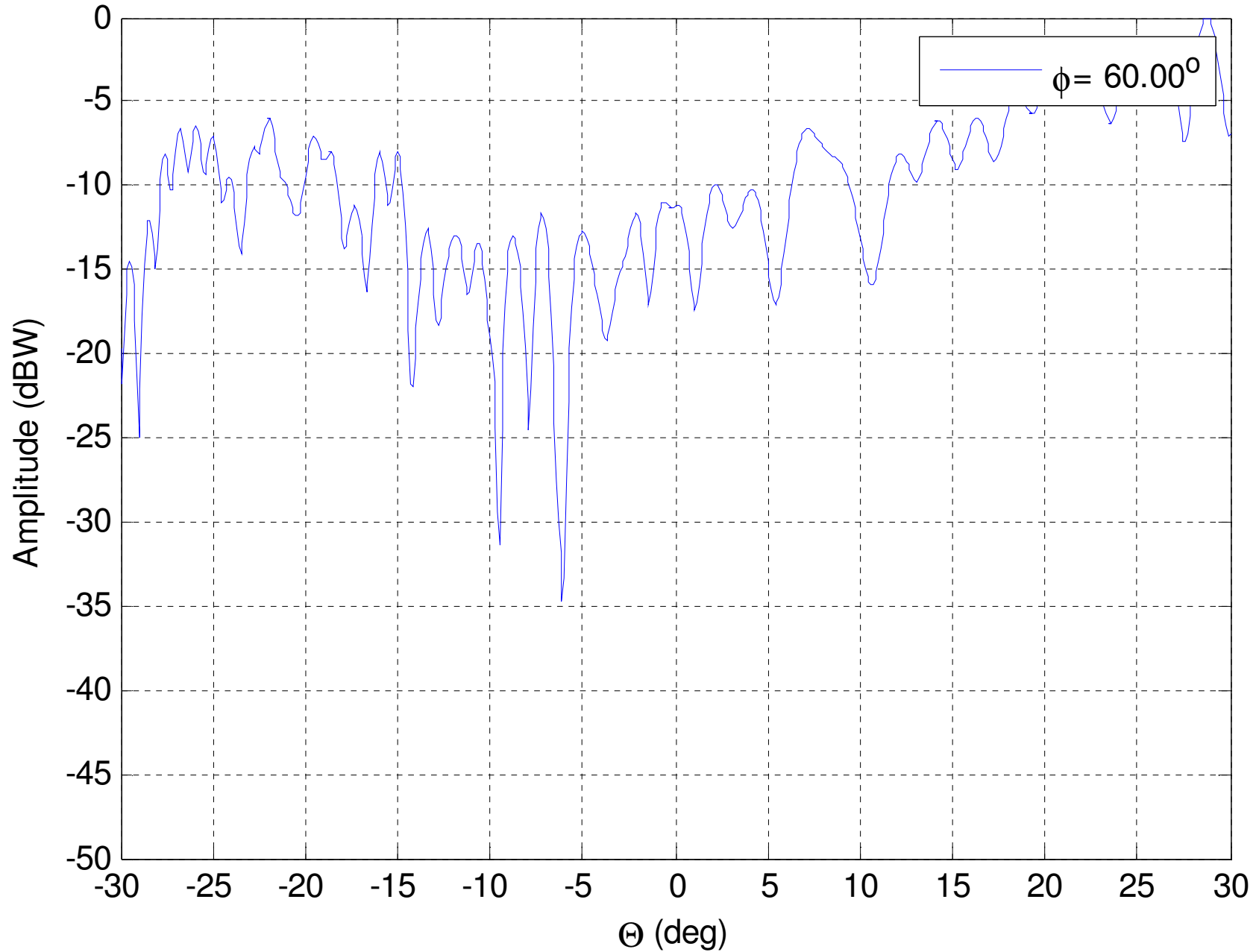
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -10.68 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

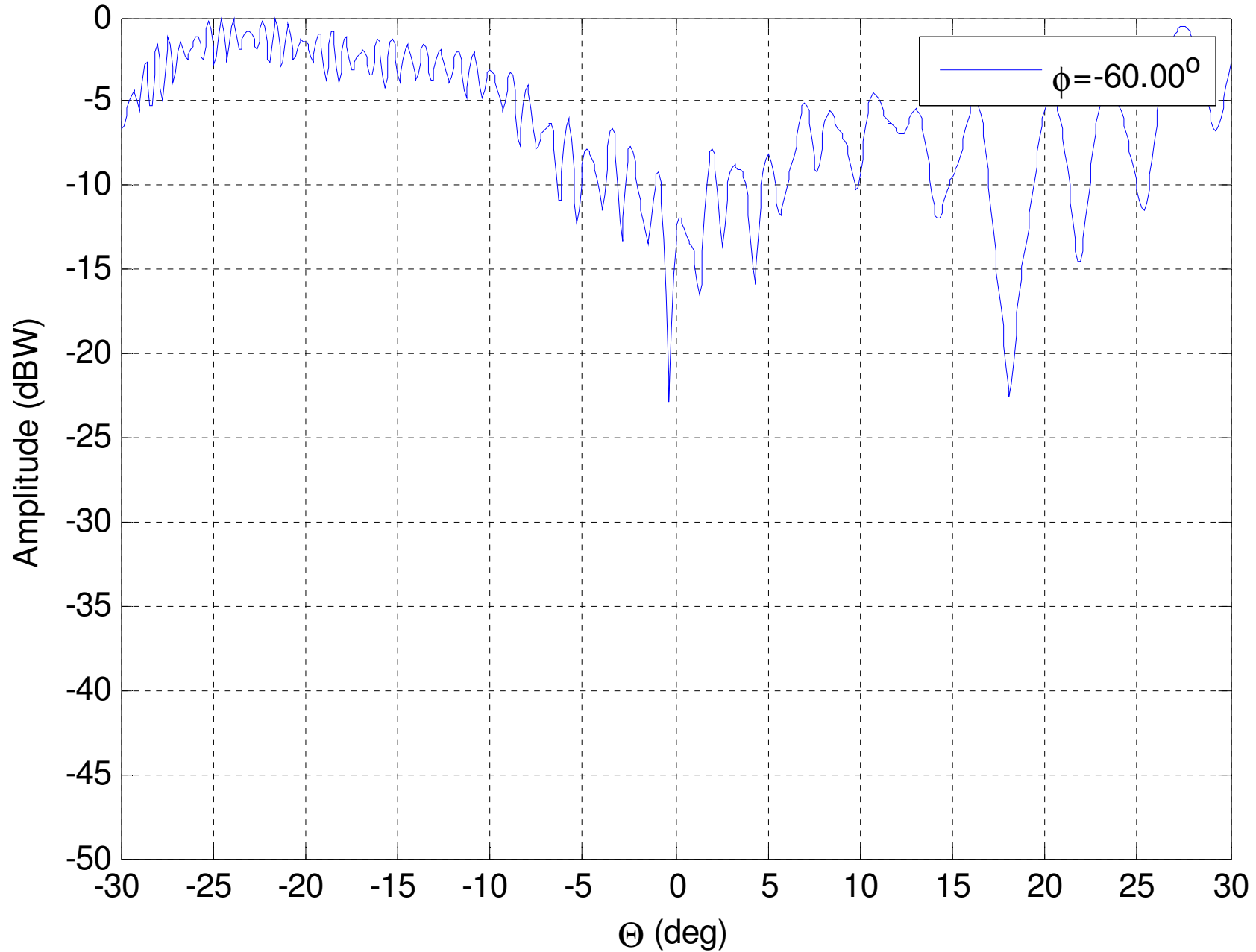
Input file: tx-17.3-lhcp-60.cut, Peak: -9.69 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

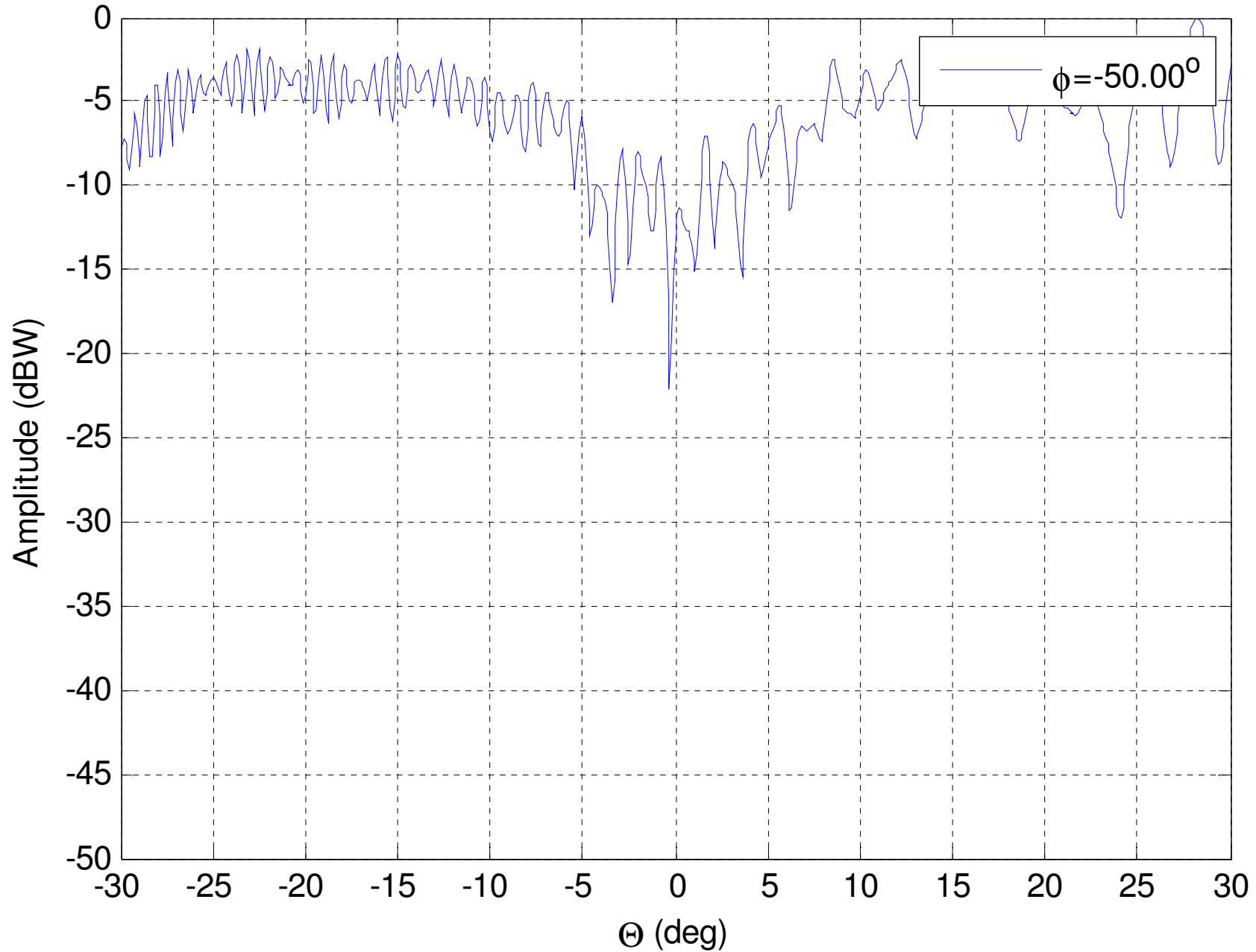
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.66 dBW, Date: 14-Dec-2011



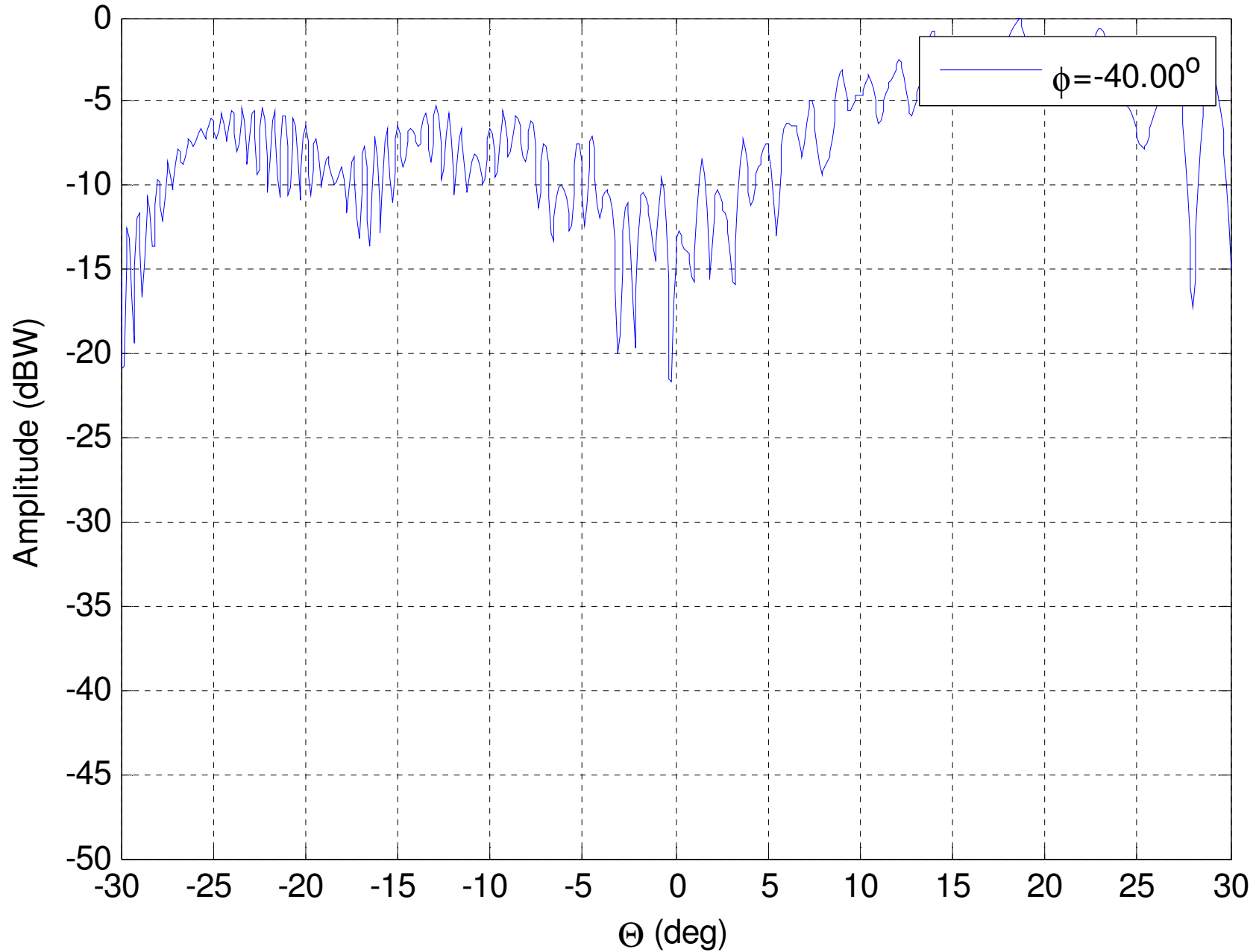
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -11.21 dBW, Date: 14-Dec-2011



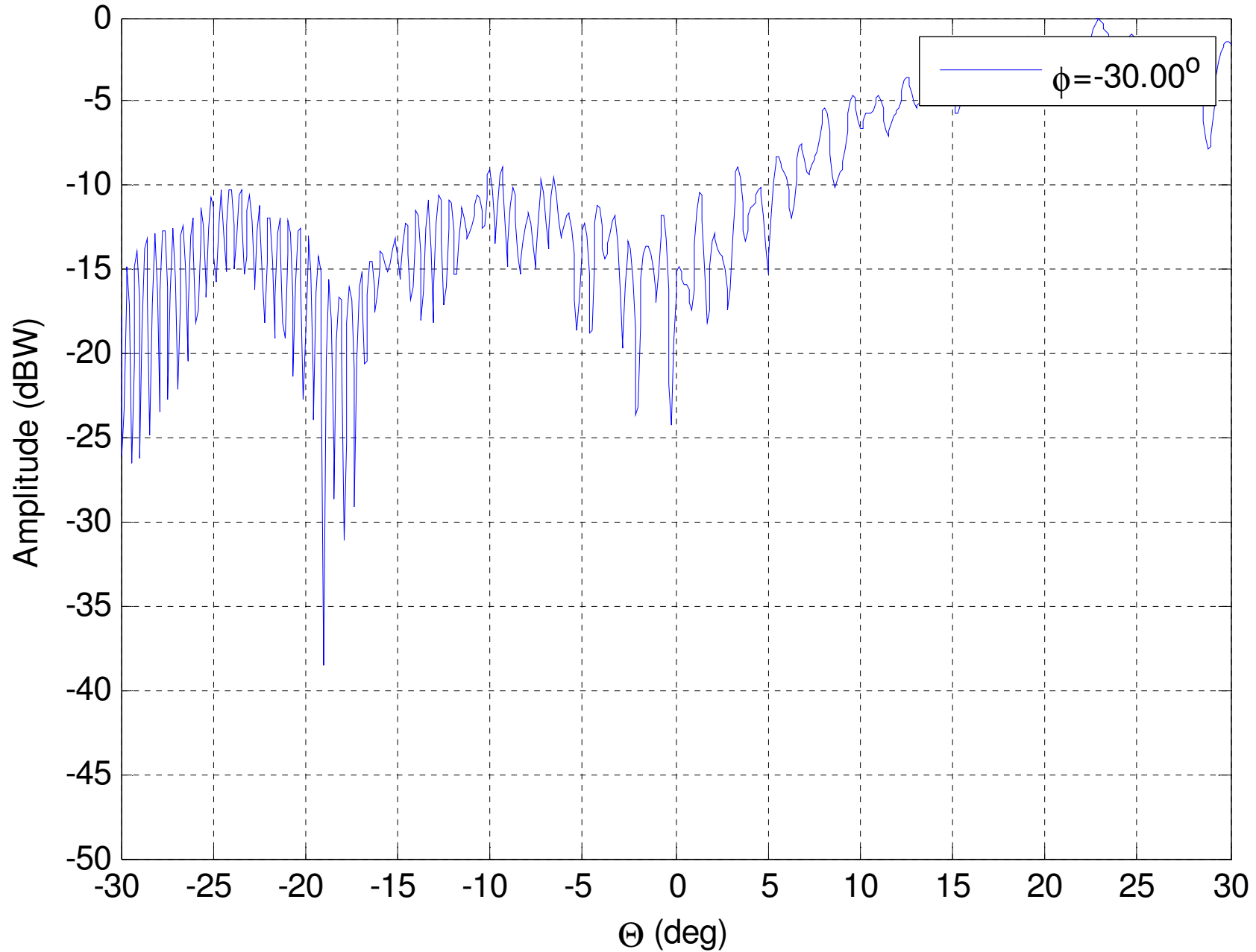
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.81 dBW, Date: 14-Dec-2011



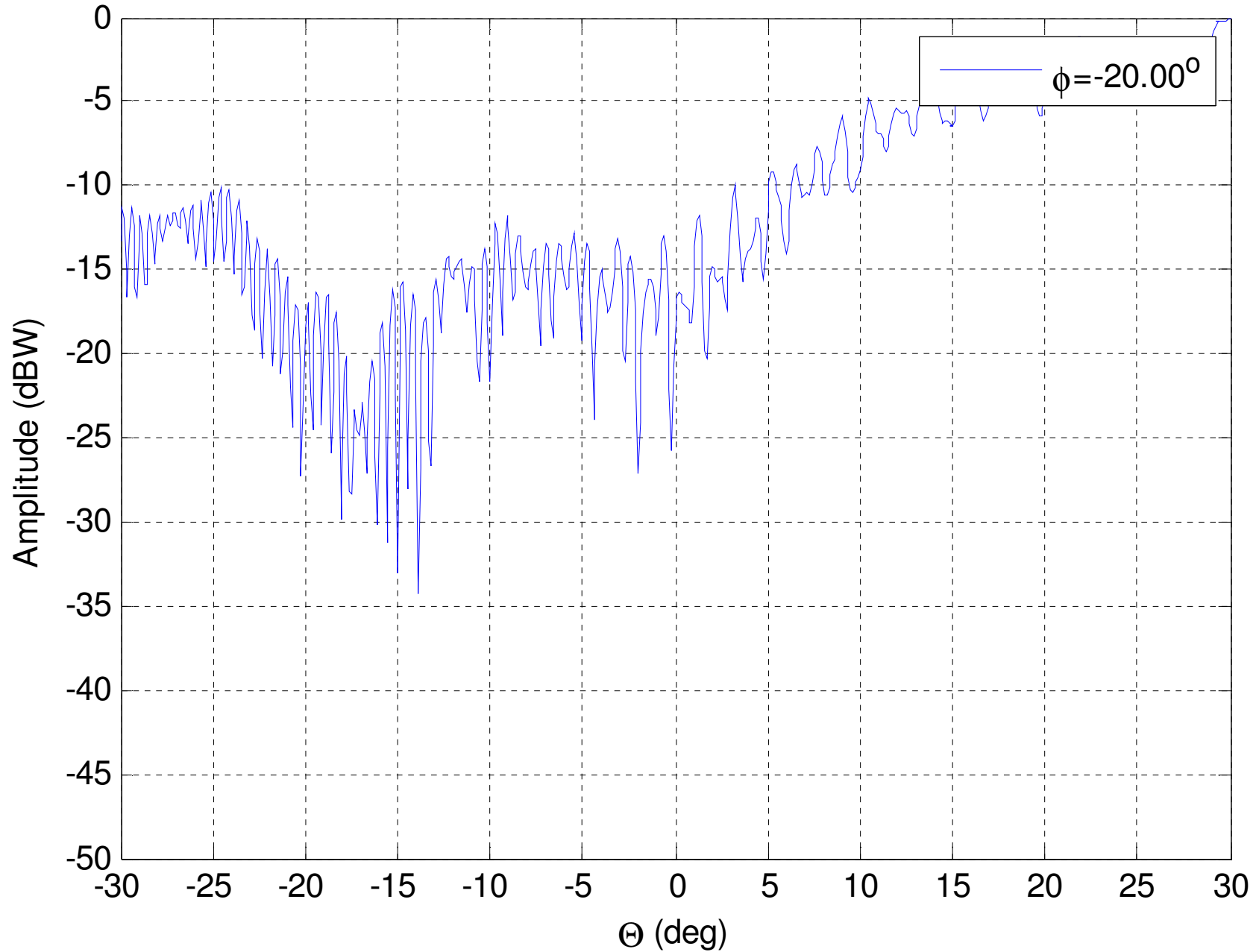
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.66 dBW, Date: 14-Dec-2011



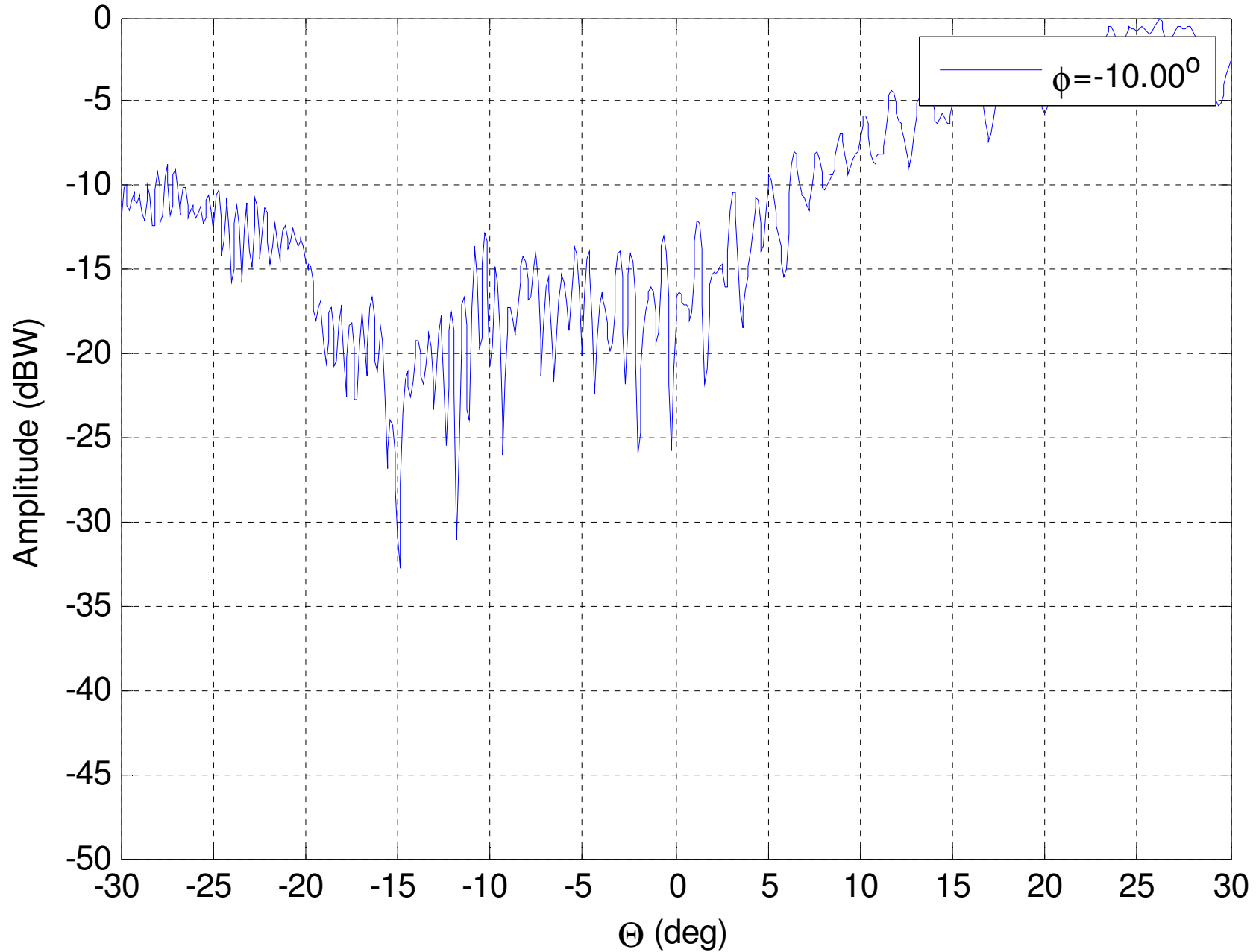
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -6.24 dBW, Date: 14-Dec-2011



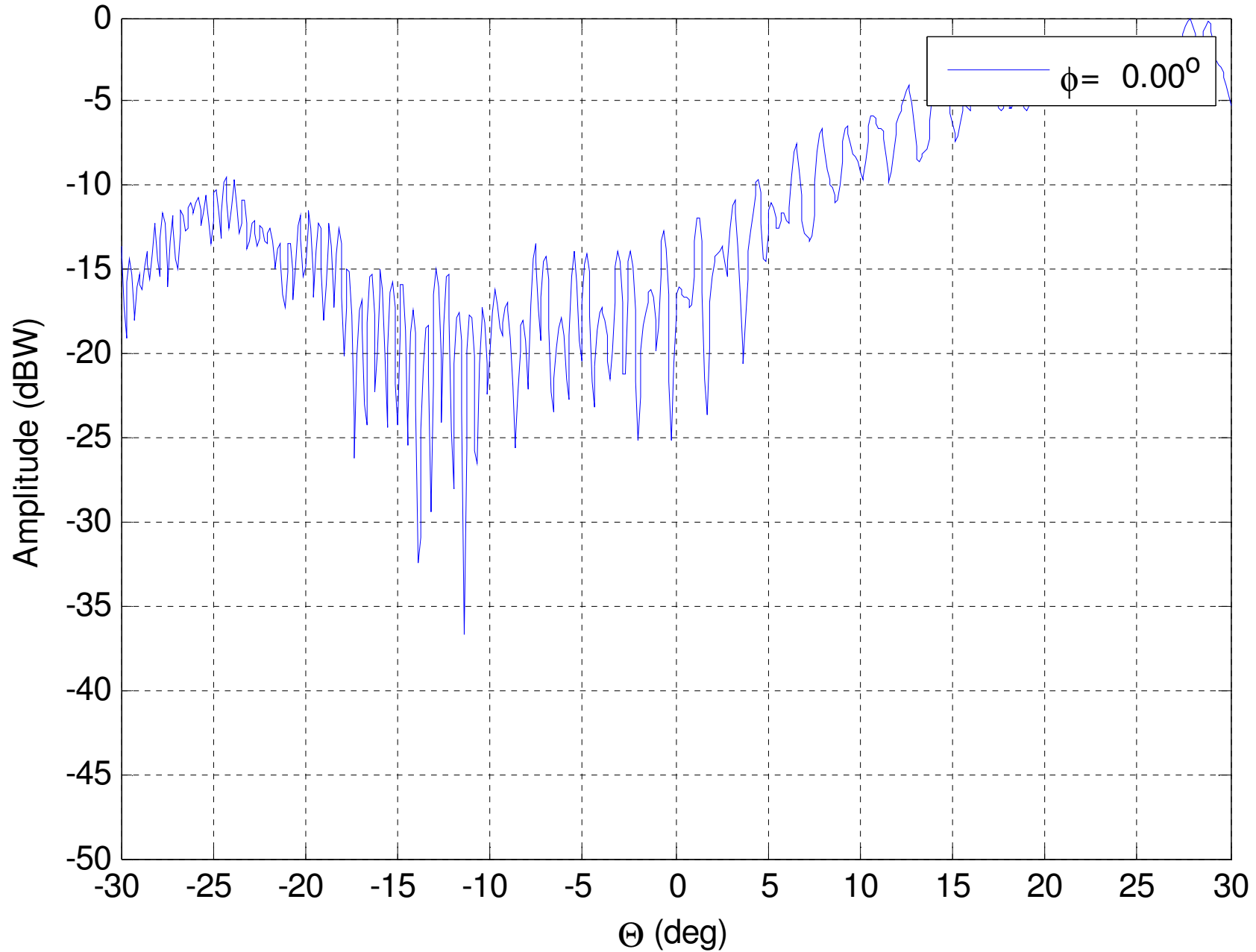
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -6.12 dBW, Date: 14-Dec-2011



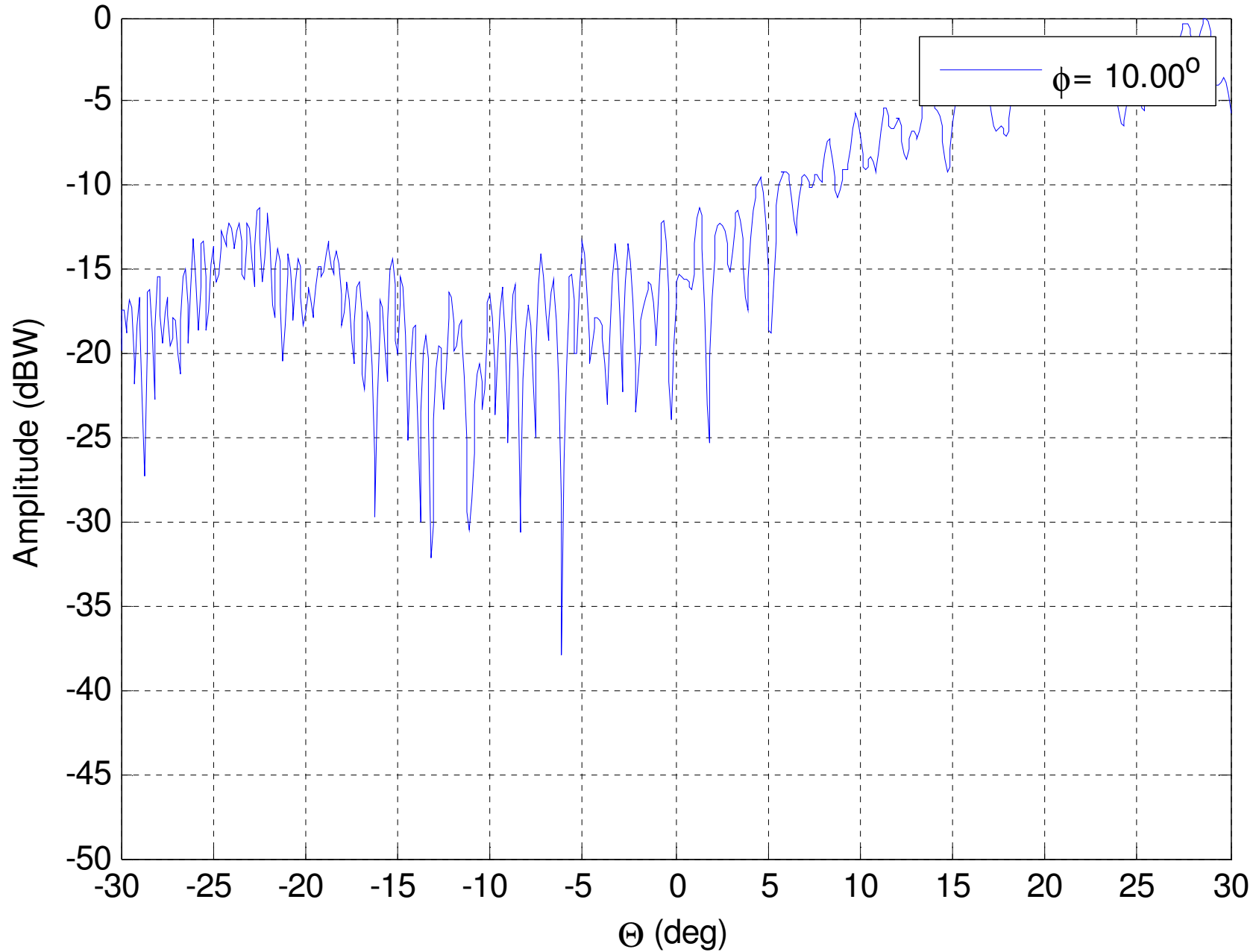
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -6.40 dBW, Date: 14-Dec-2011



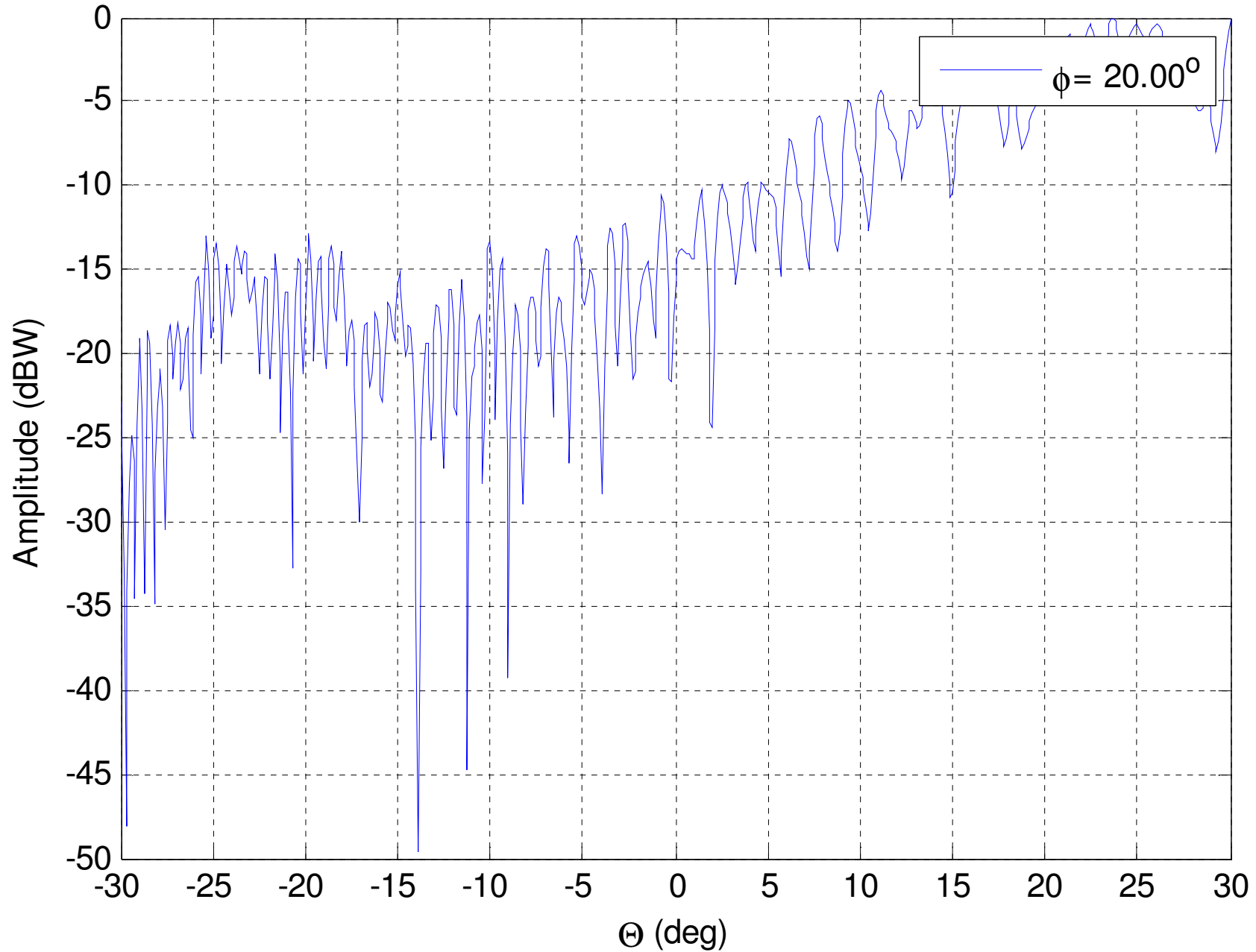
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -7.16 dBW, Date: 14-Dec-2011



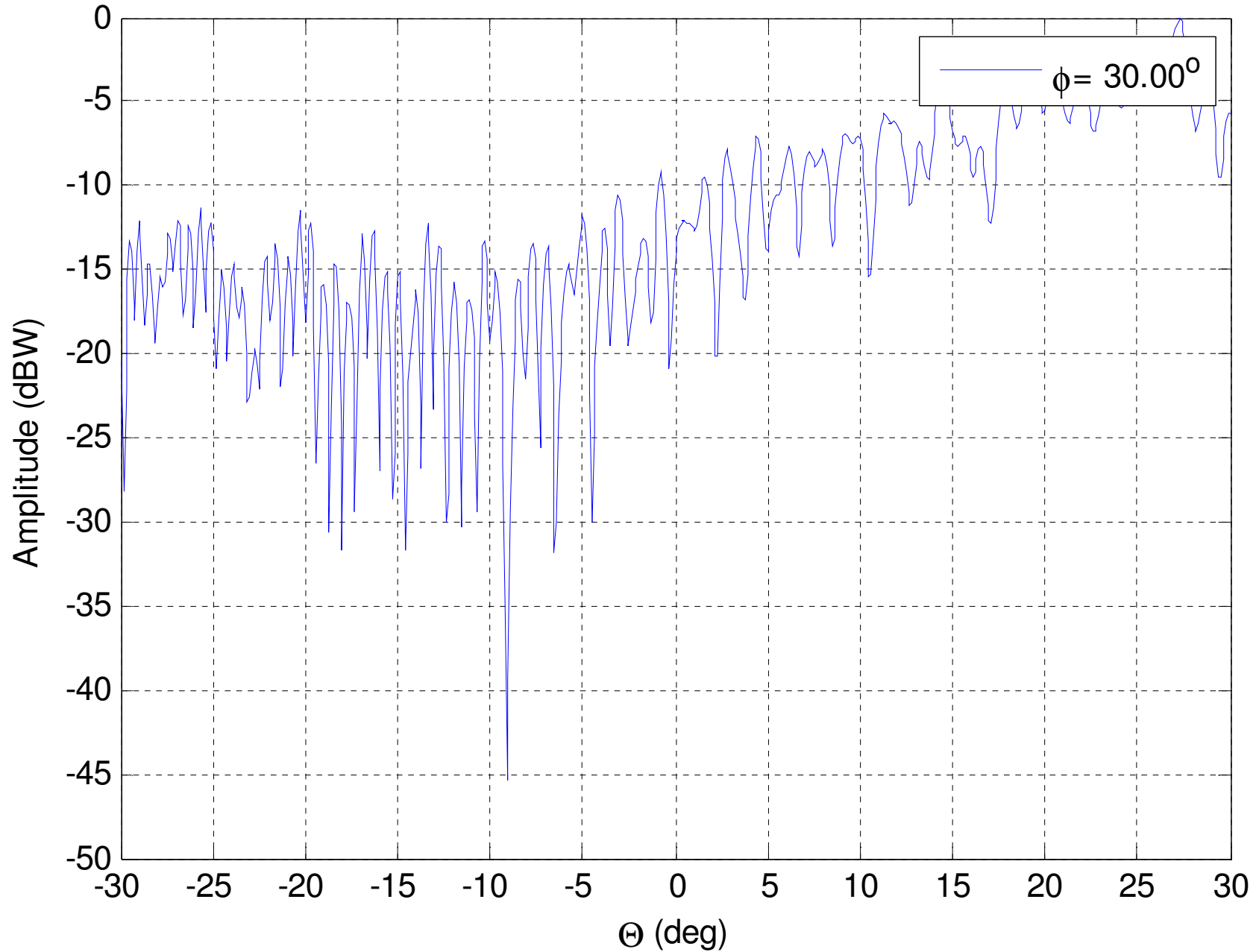
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -8.55 dBW, Date: 14-Dec-2011



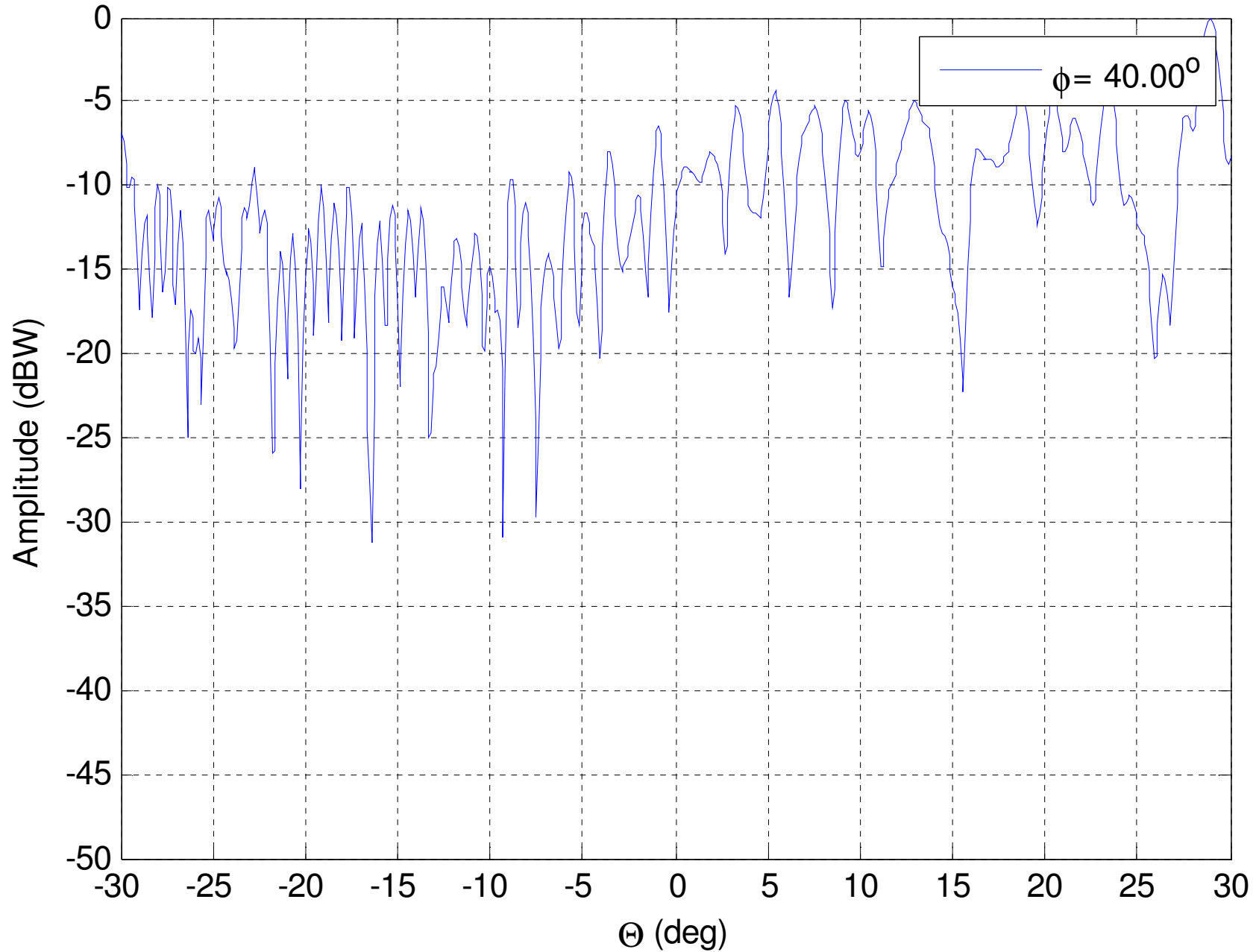
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.02 dBW, Date: 14-Dec-2011



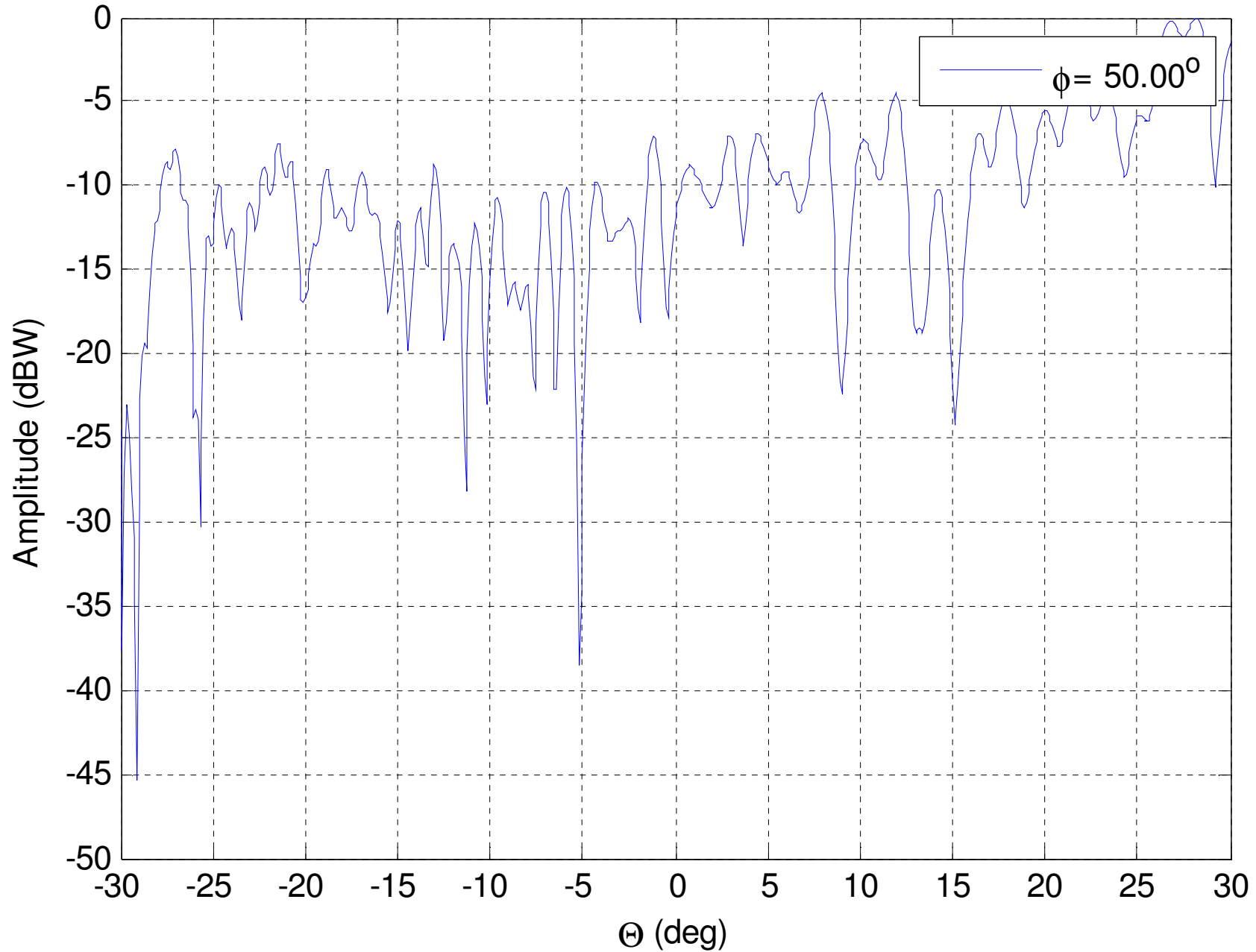
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -12.76 dBW, Date: 14-Dec-2011



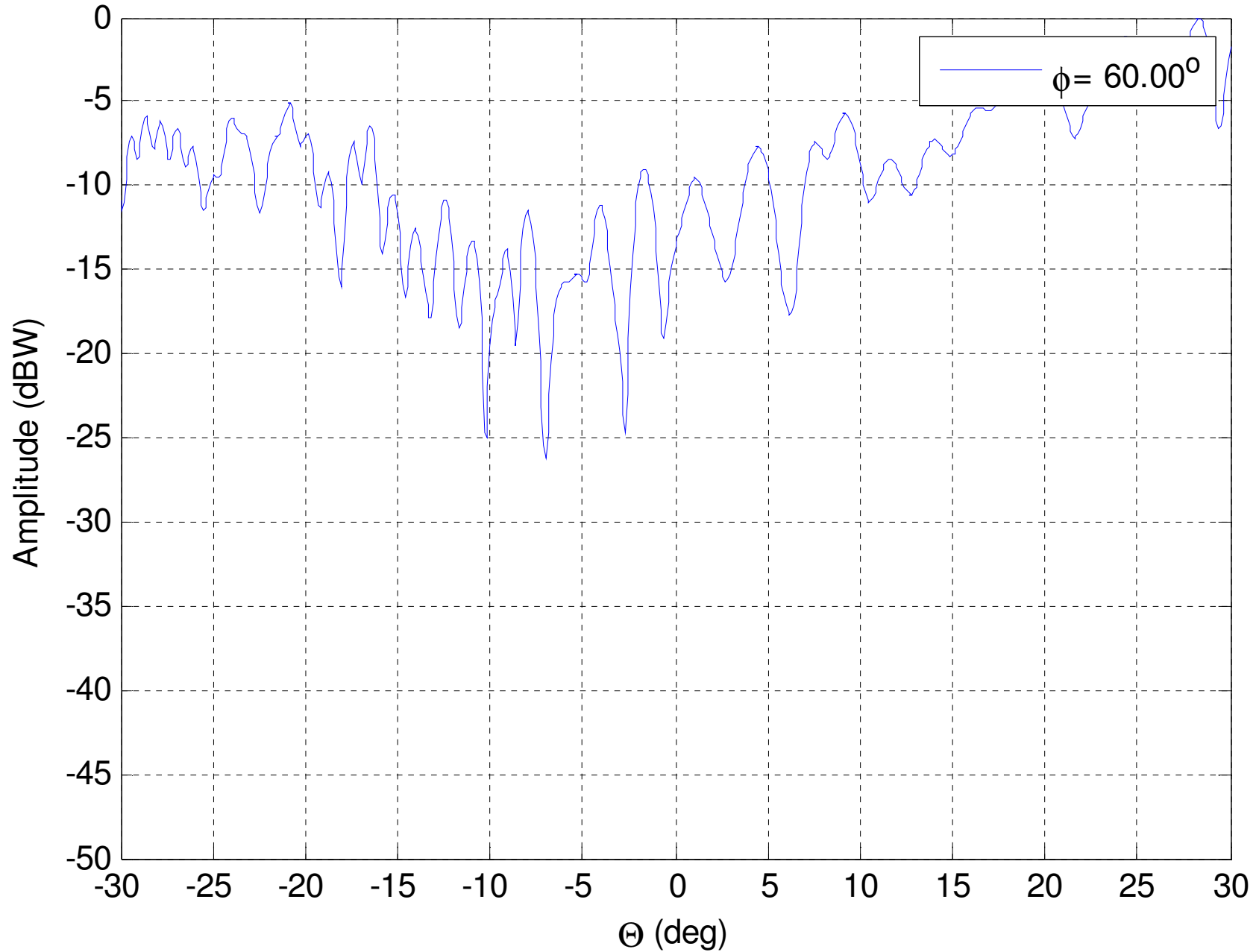
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -12.26 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

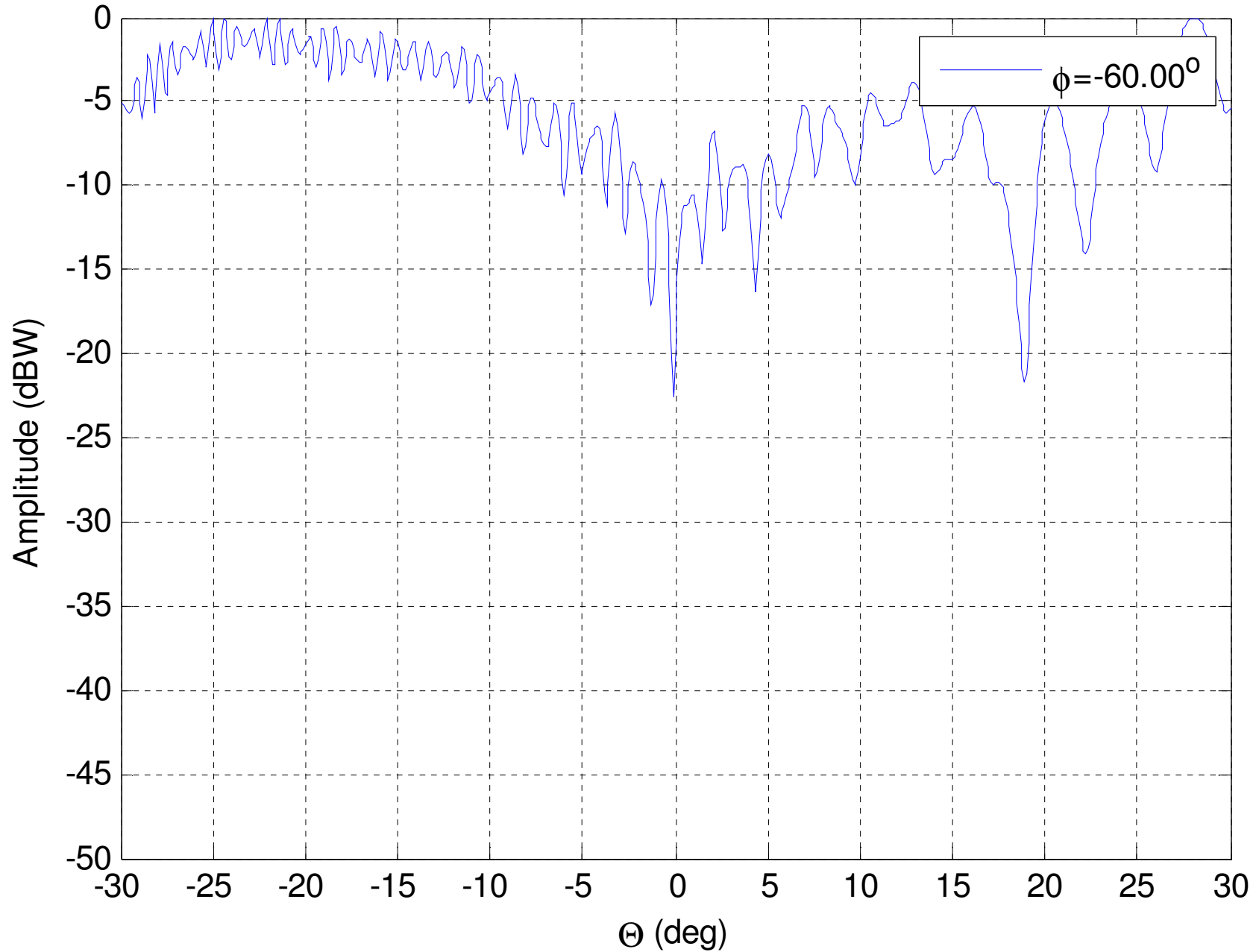
Input file: tx-17.5-rhcp-60.cut, Peak: -10.48 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

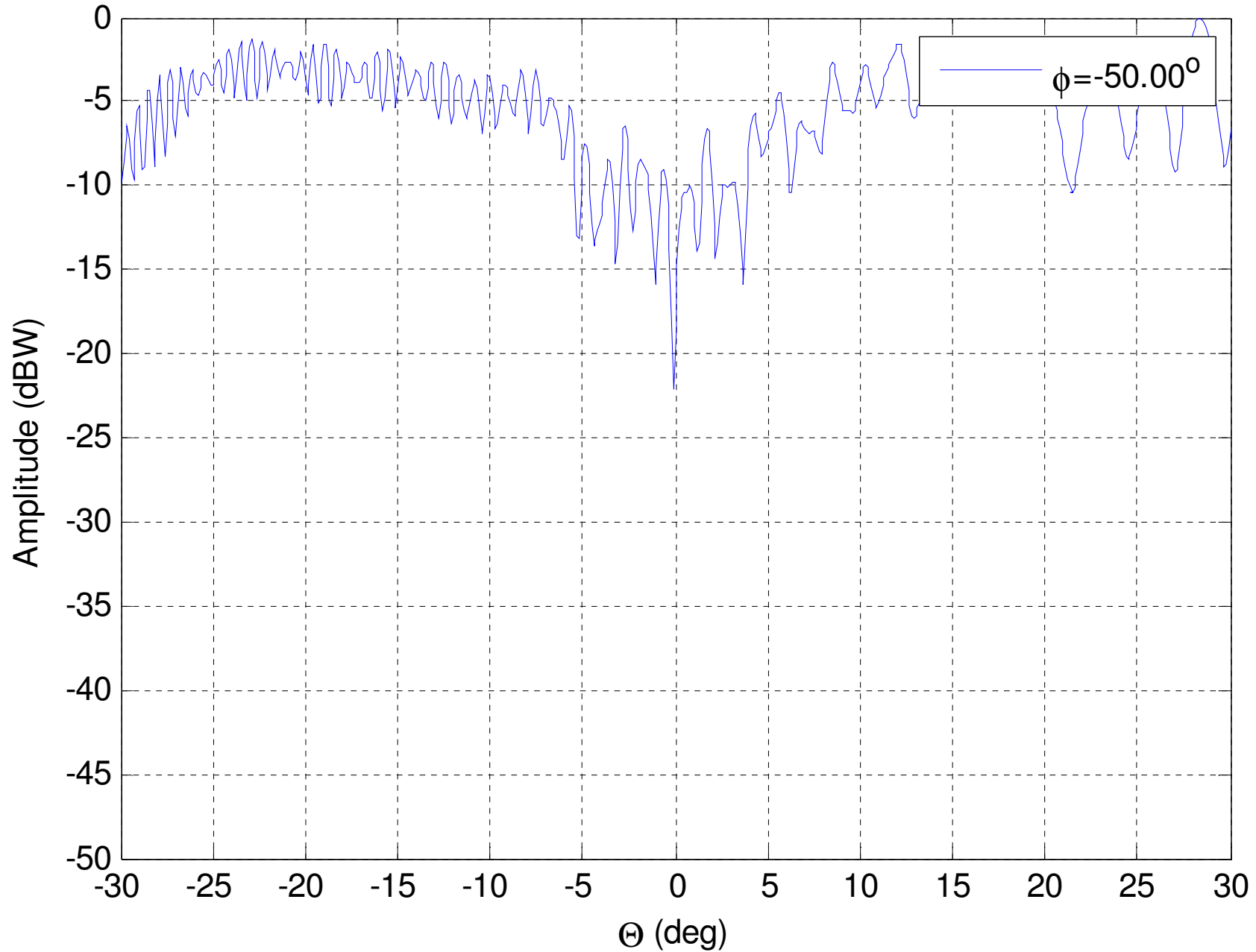
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -11.00 dBW, Date: 14-Dec-2011



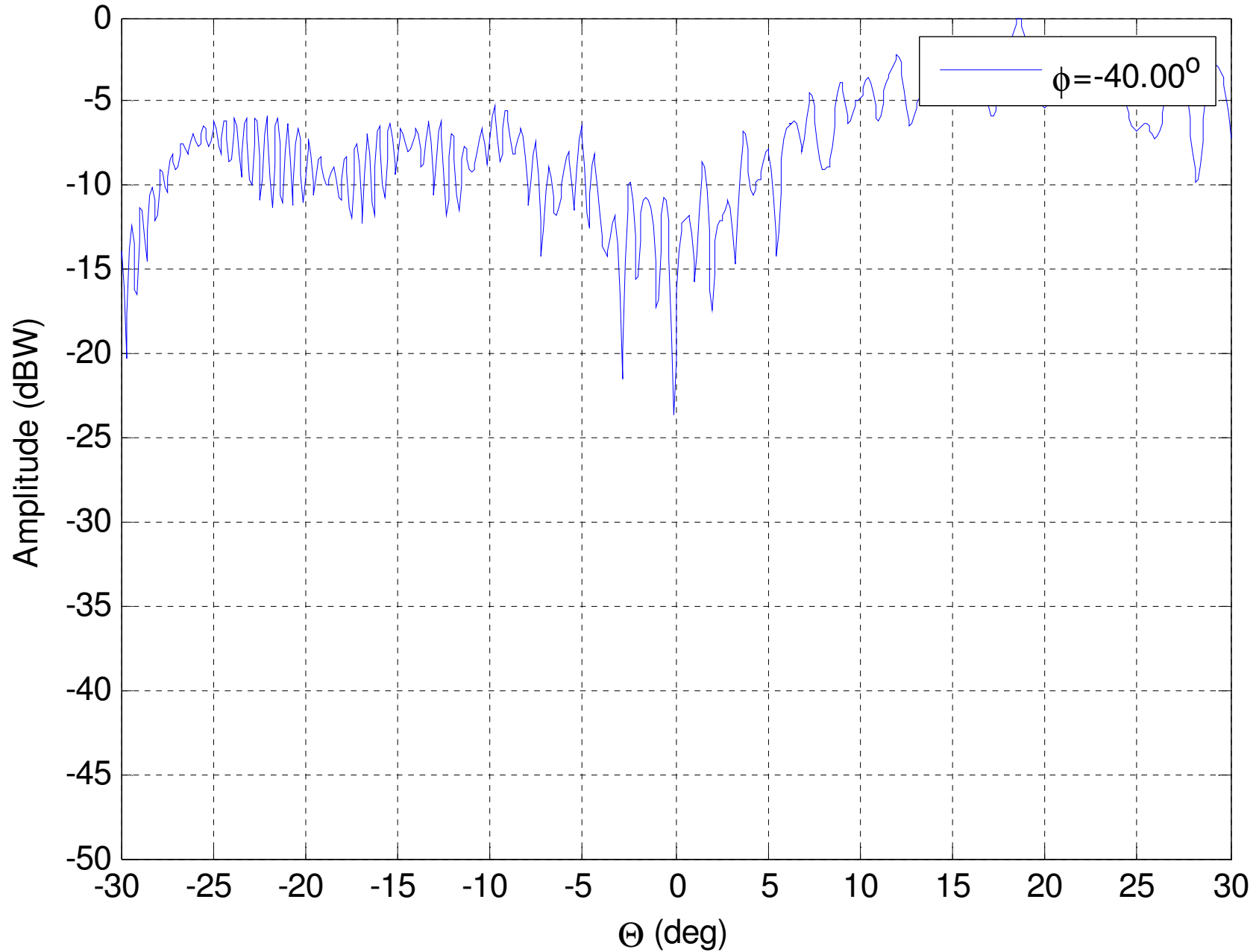
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.48 dBW, Date: 14-Dec-2011



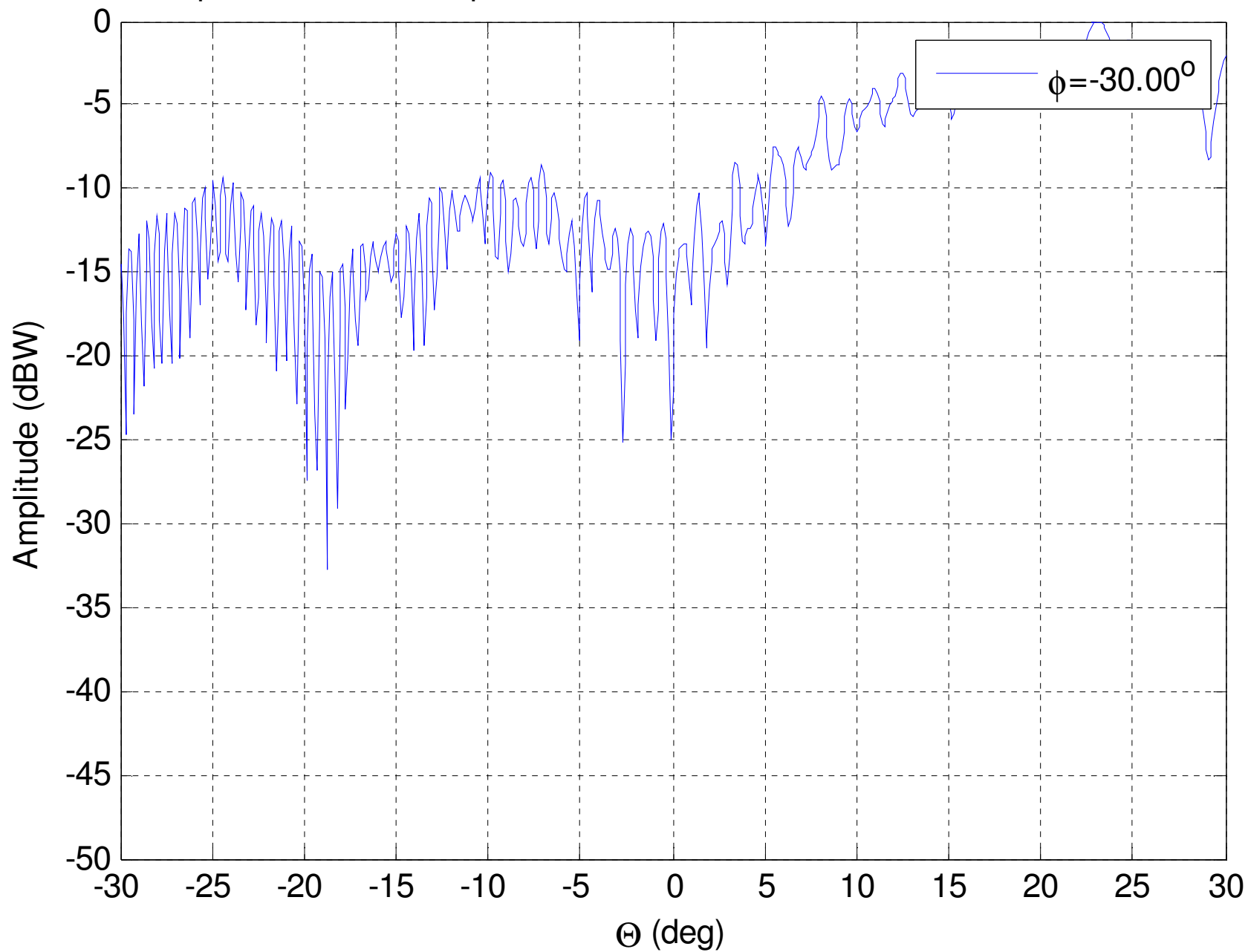
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.67 dBW, Date: 14-Dec-2011



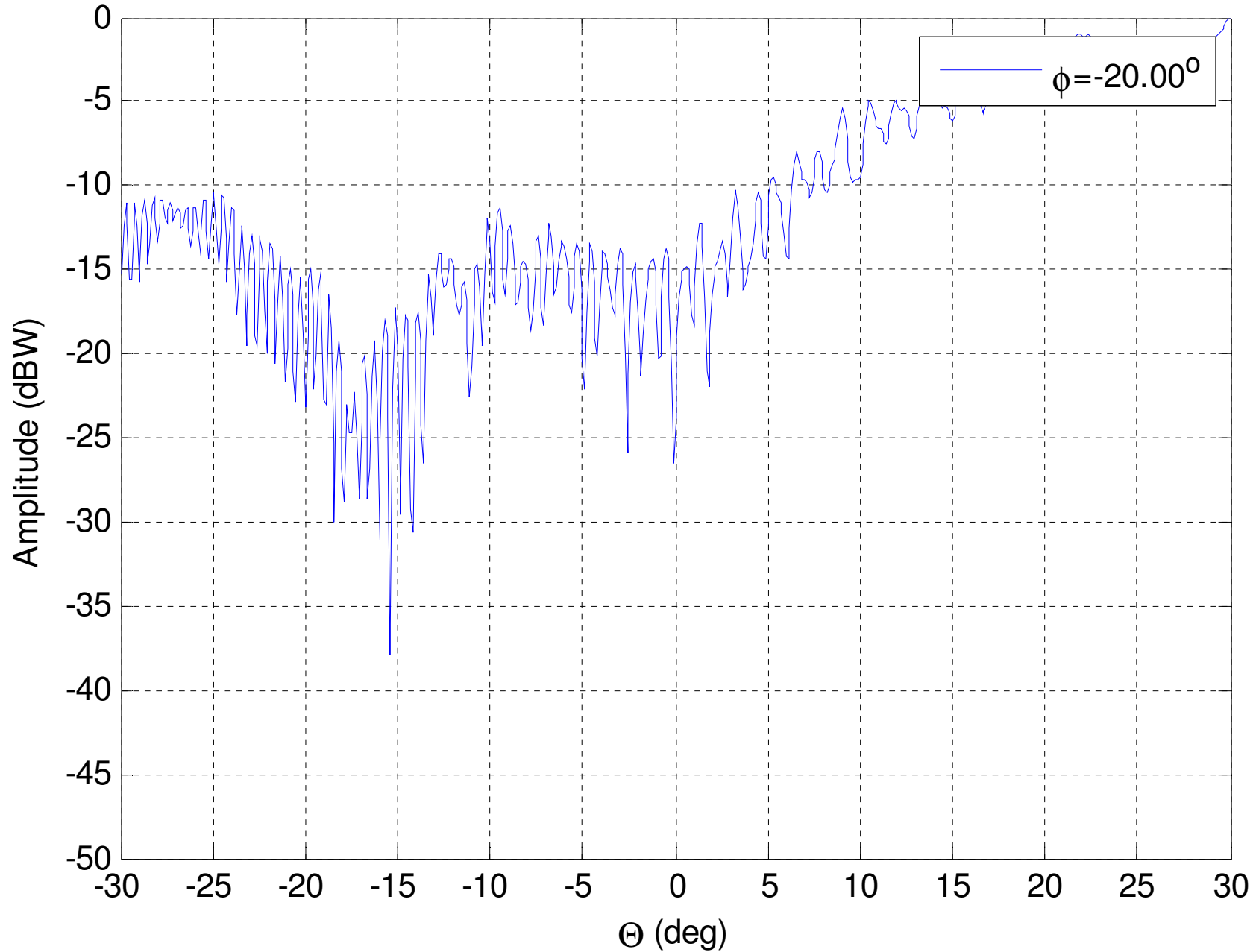
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -8.14 dBW, Date: 14-Dec-2011



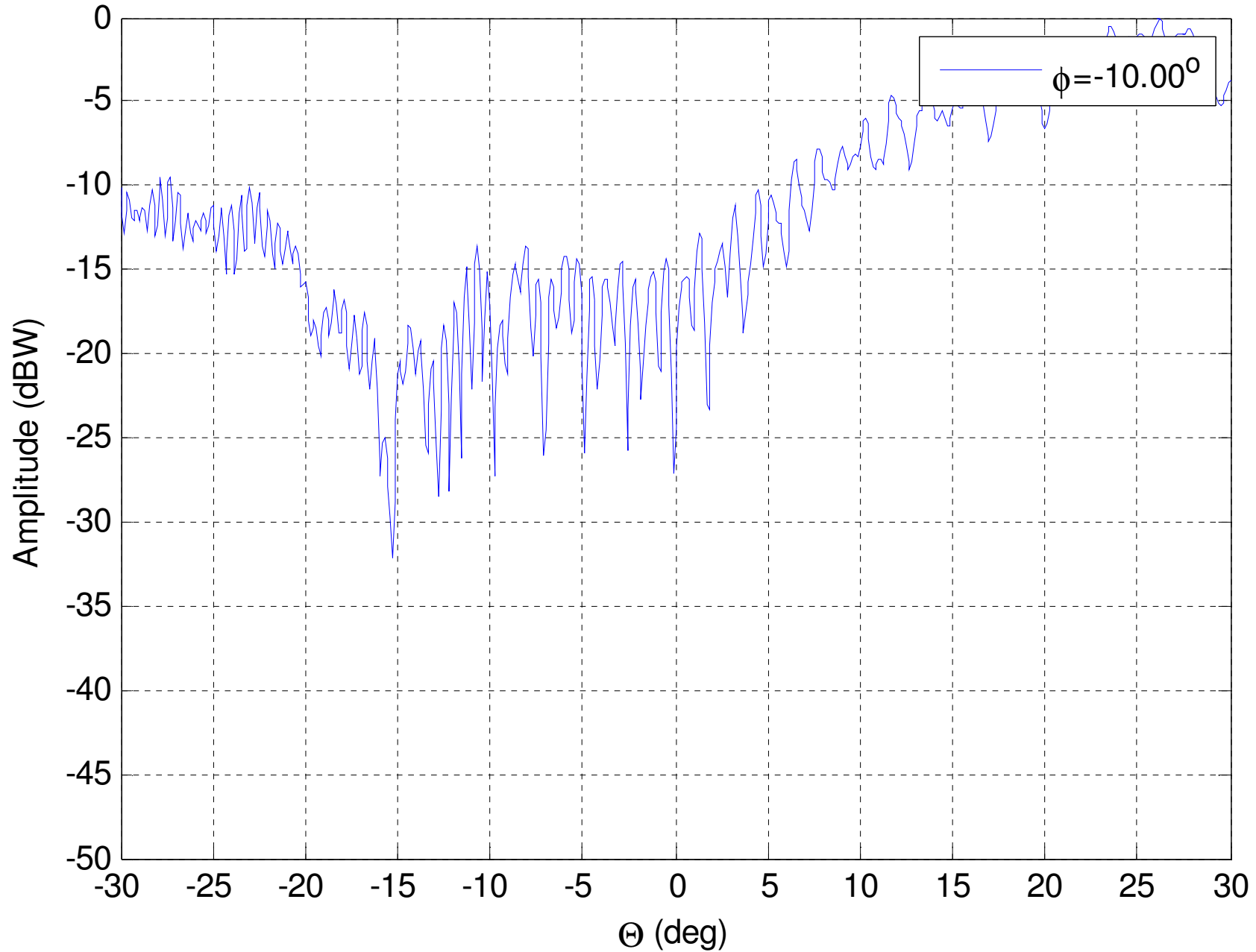
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -6.44 dBW, Date: 14-Dec-2011



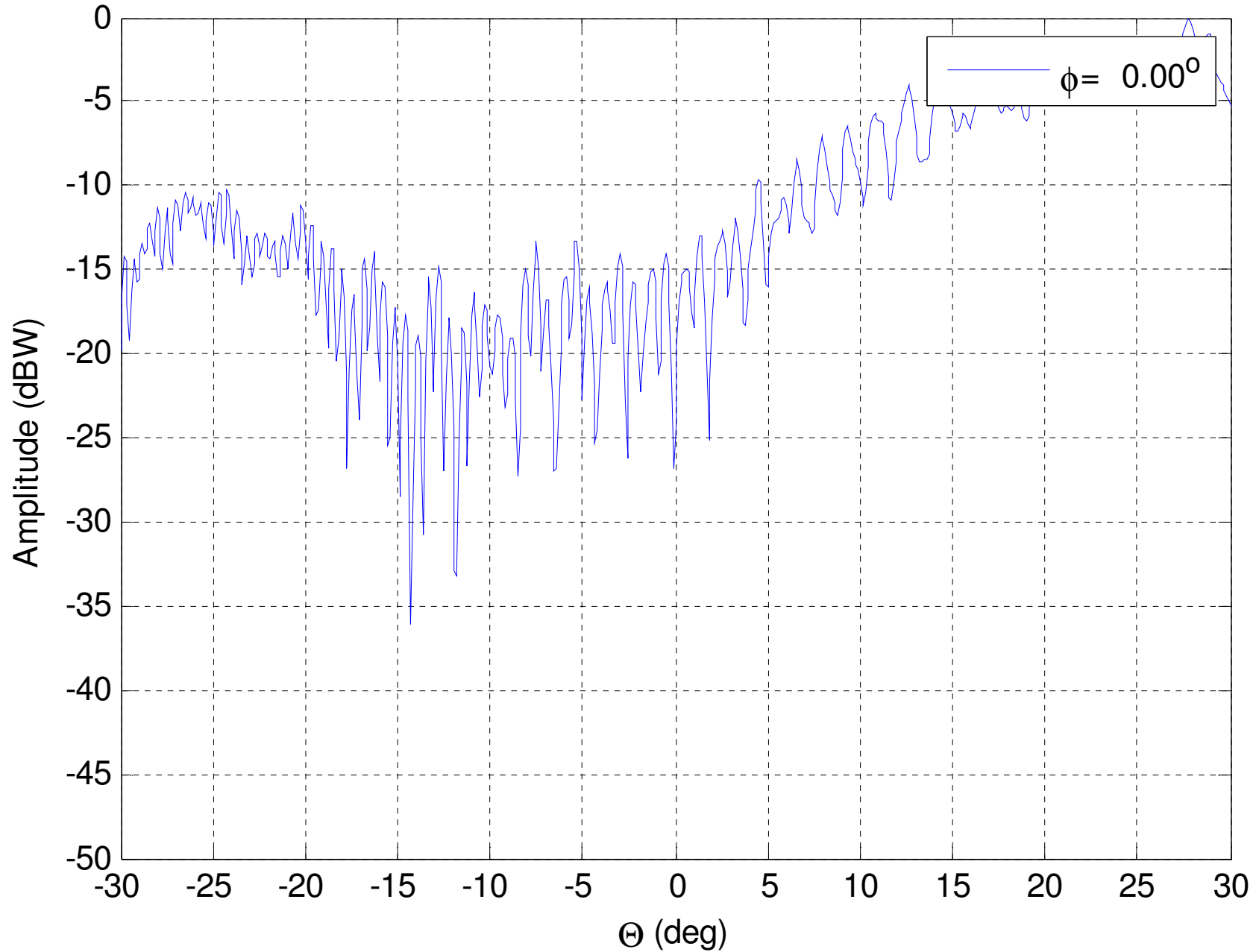
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -5.80 dBW, Date: 14-Dec-2011



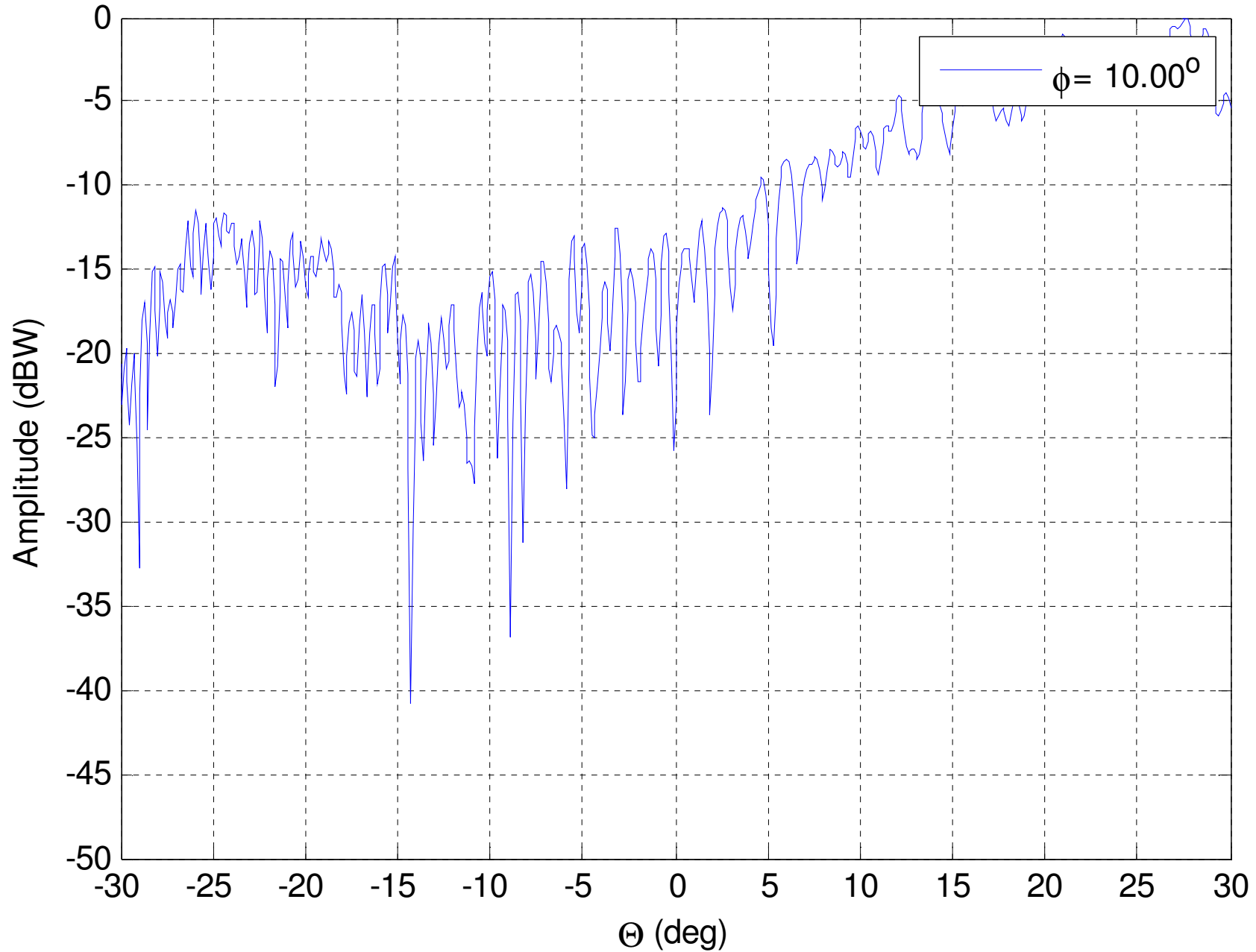
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -6.07 dBW, Date: 14-Dec-2011



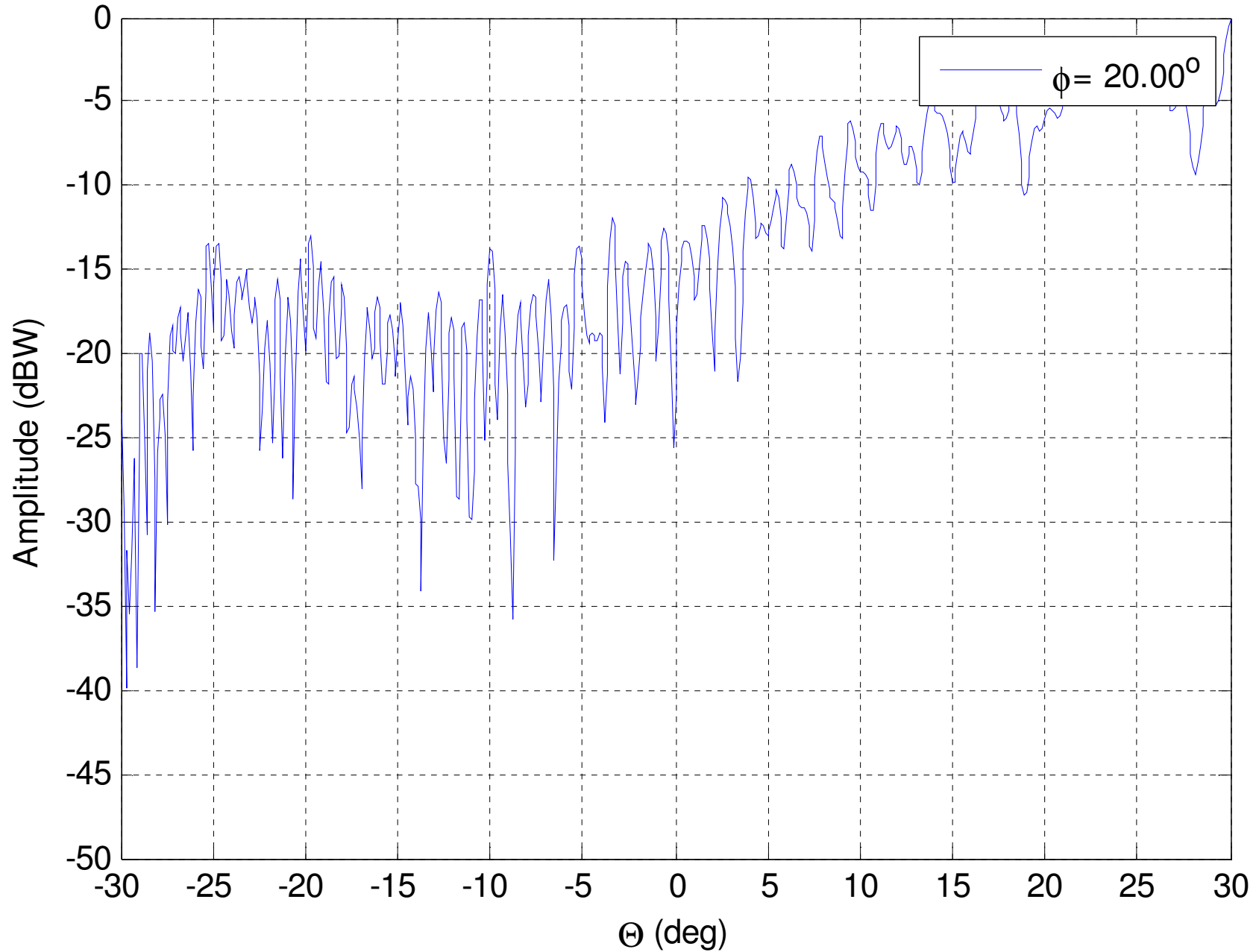
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -7.27 dBW, Date: 14-Dec-2011



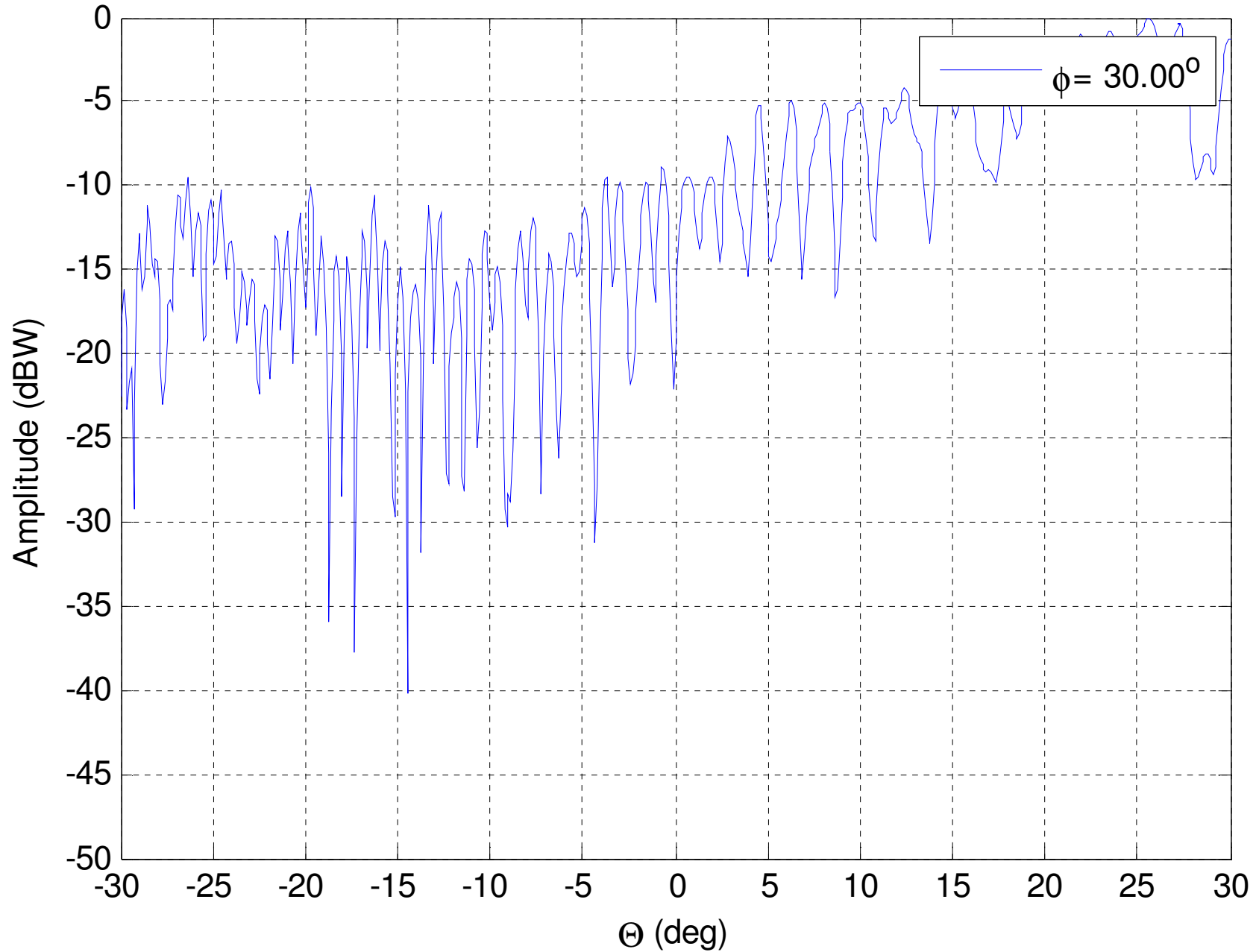
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.58 dBW, Date: 14-Dec-2011



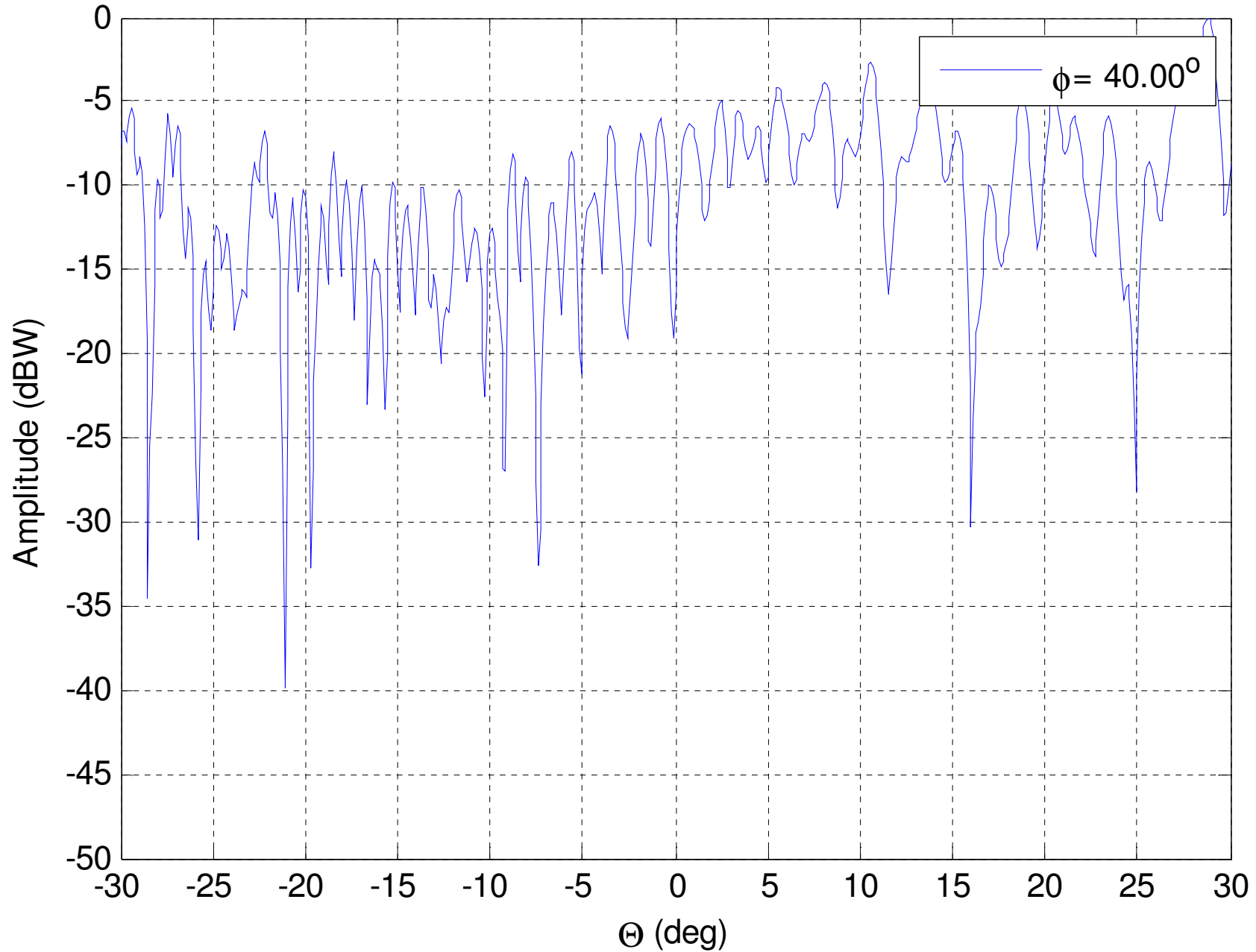
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.12 dBW, Date: 14-Dec-2011



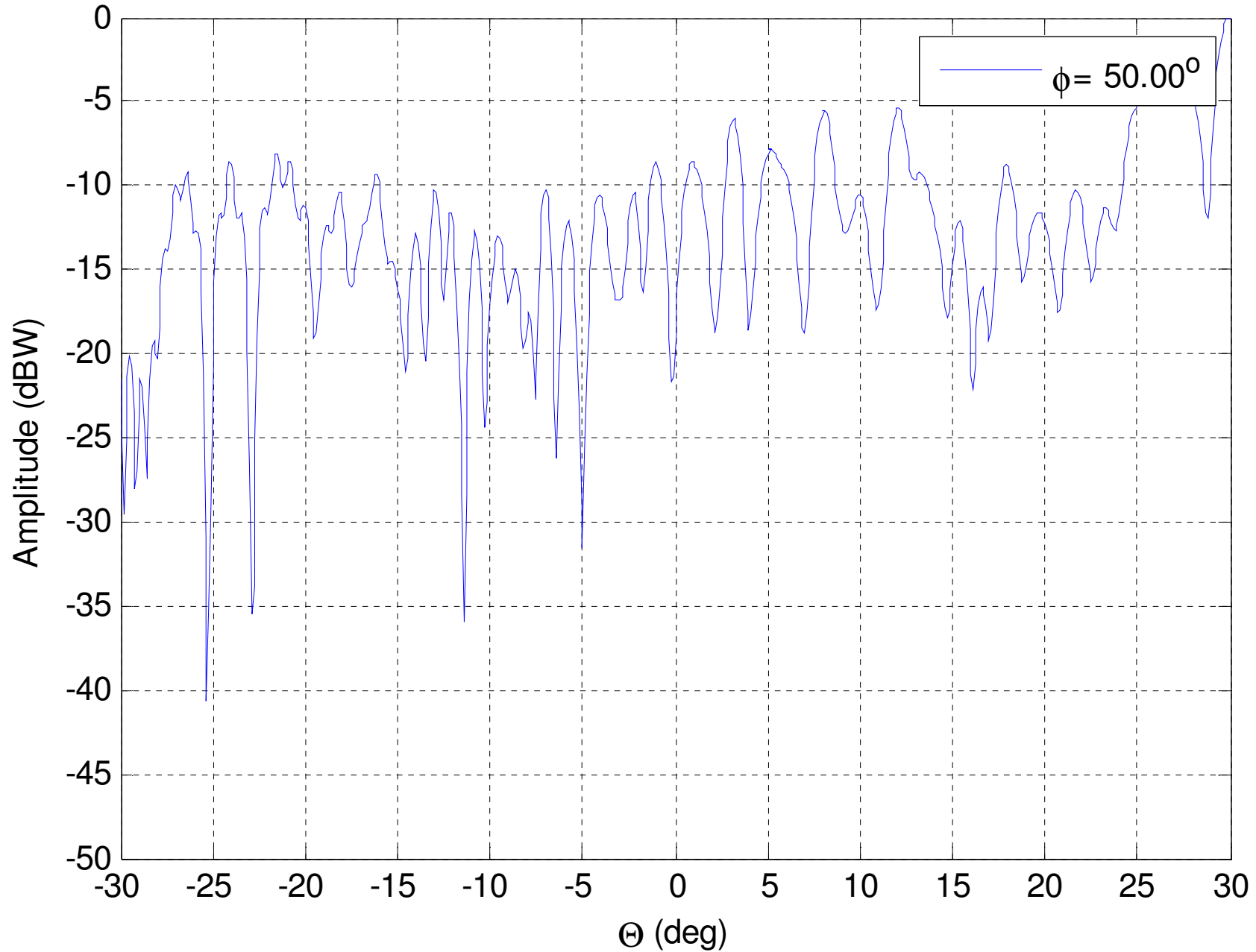
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -13.98 dBW, Date: 14-Dec-2011



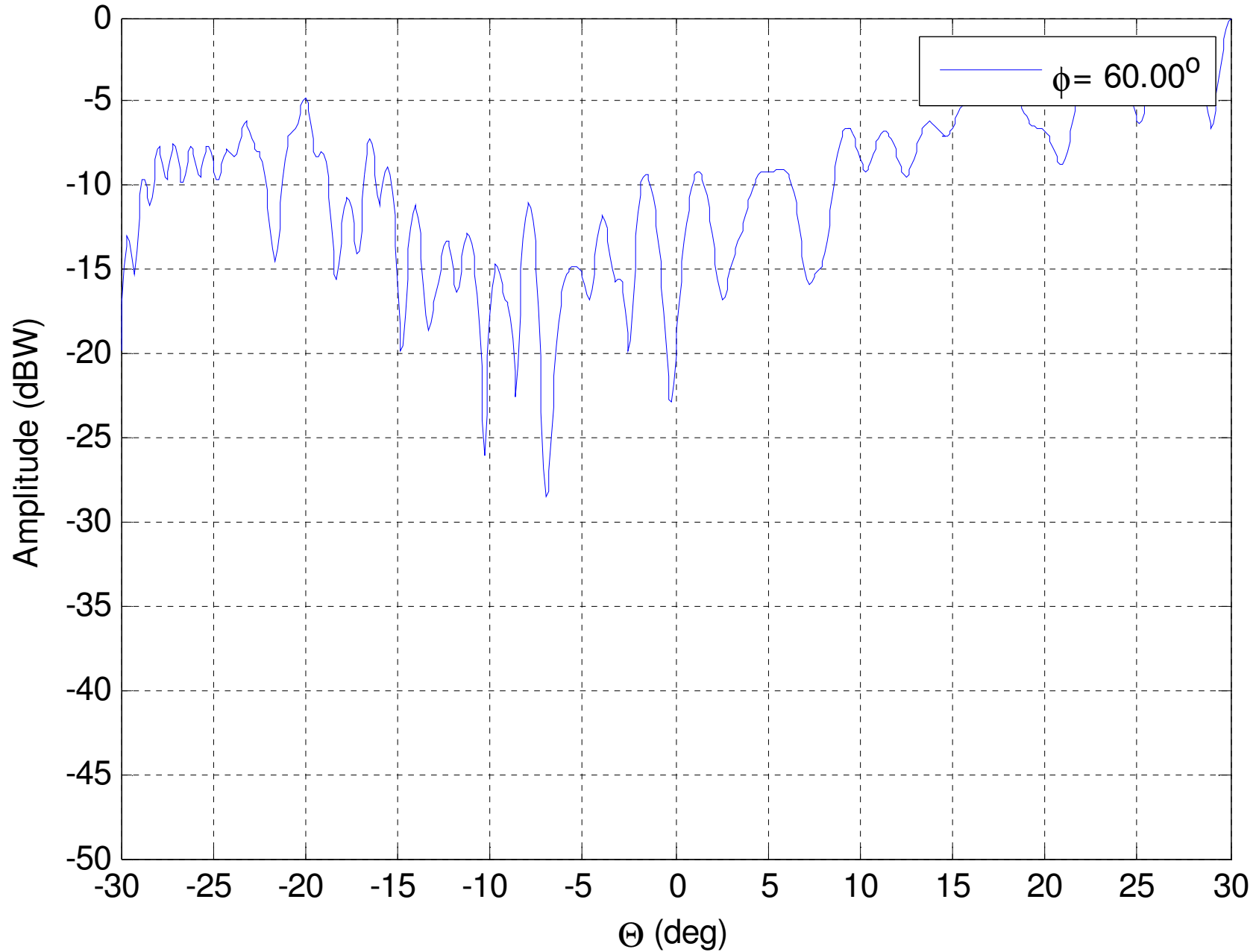
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.25 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

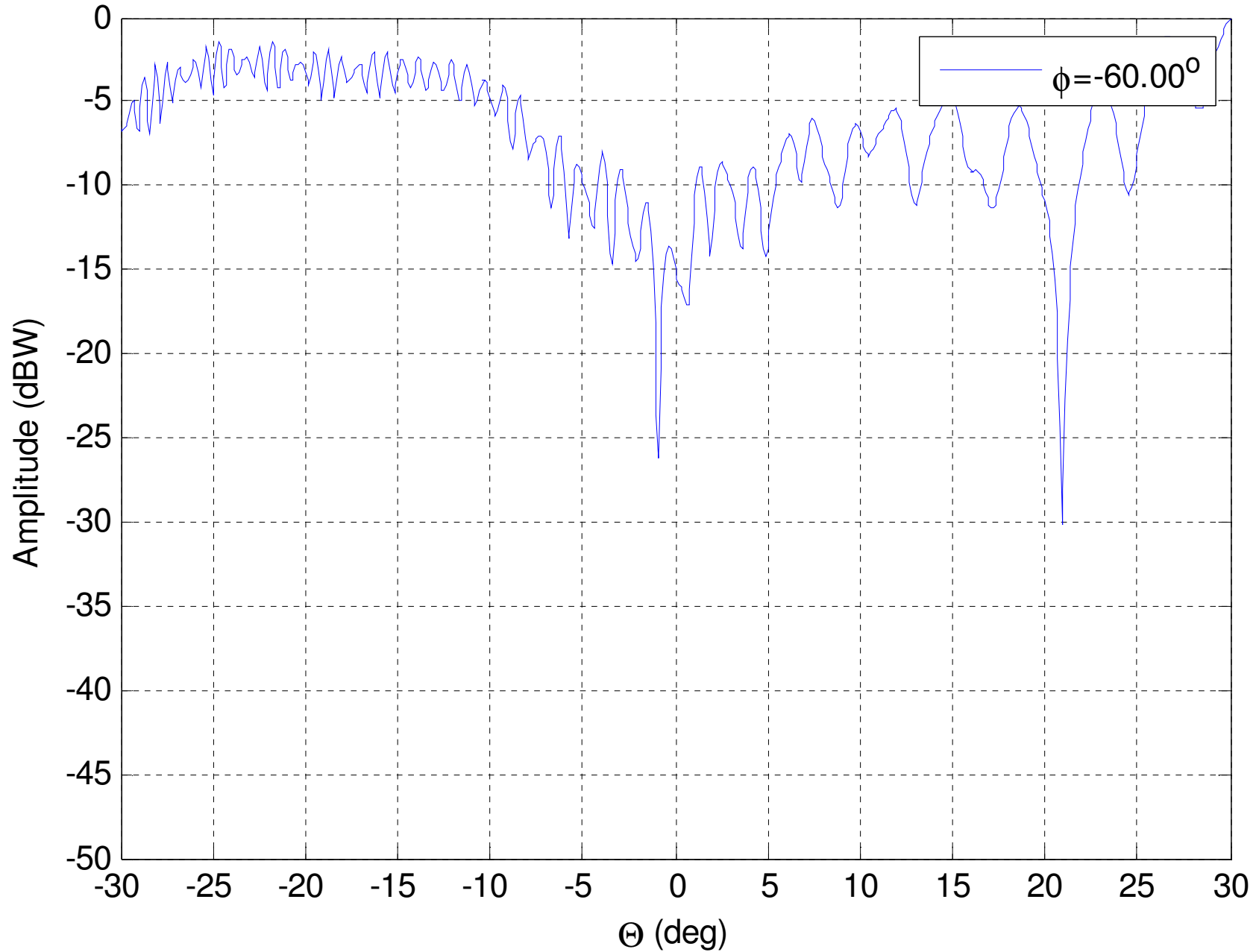
Input file: tx-17.5-lhcp-60.cut, Peak: -9.99 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

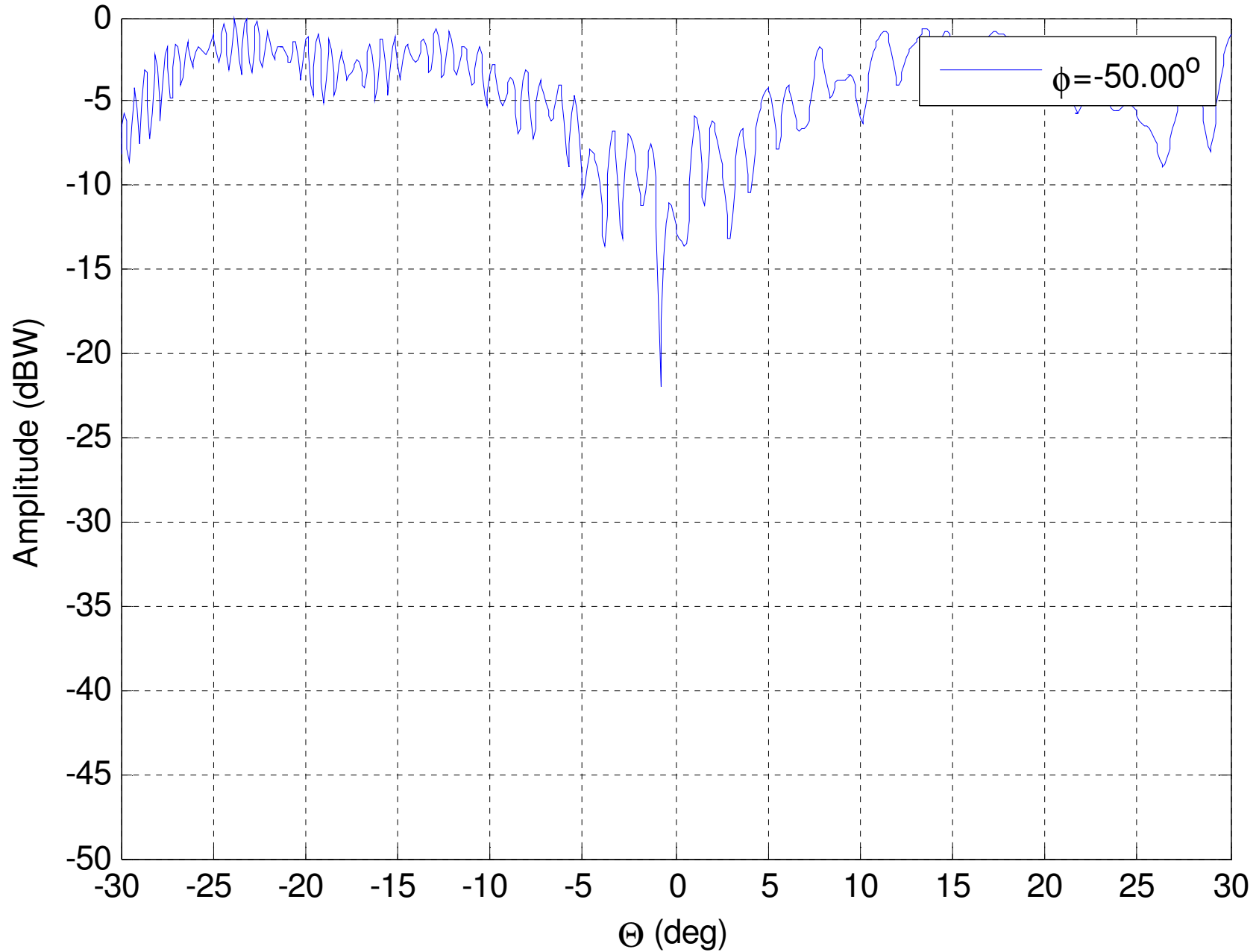
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.89 dBW, Date: 14-Dec-2011



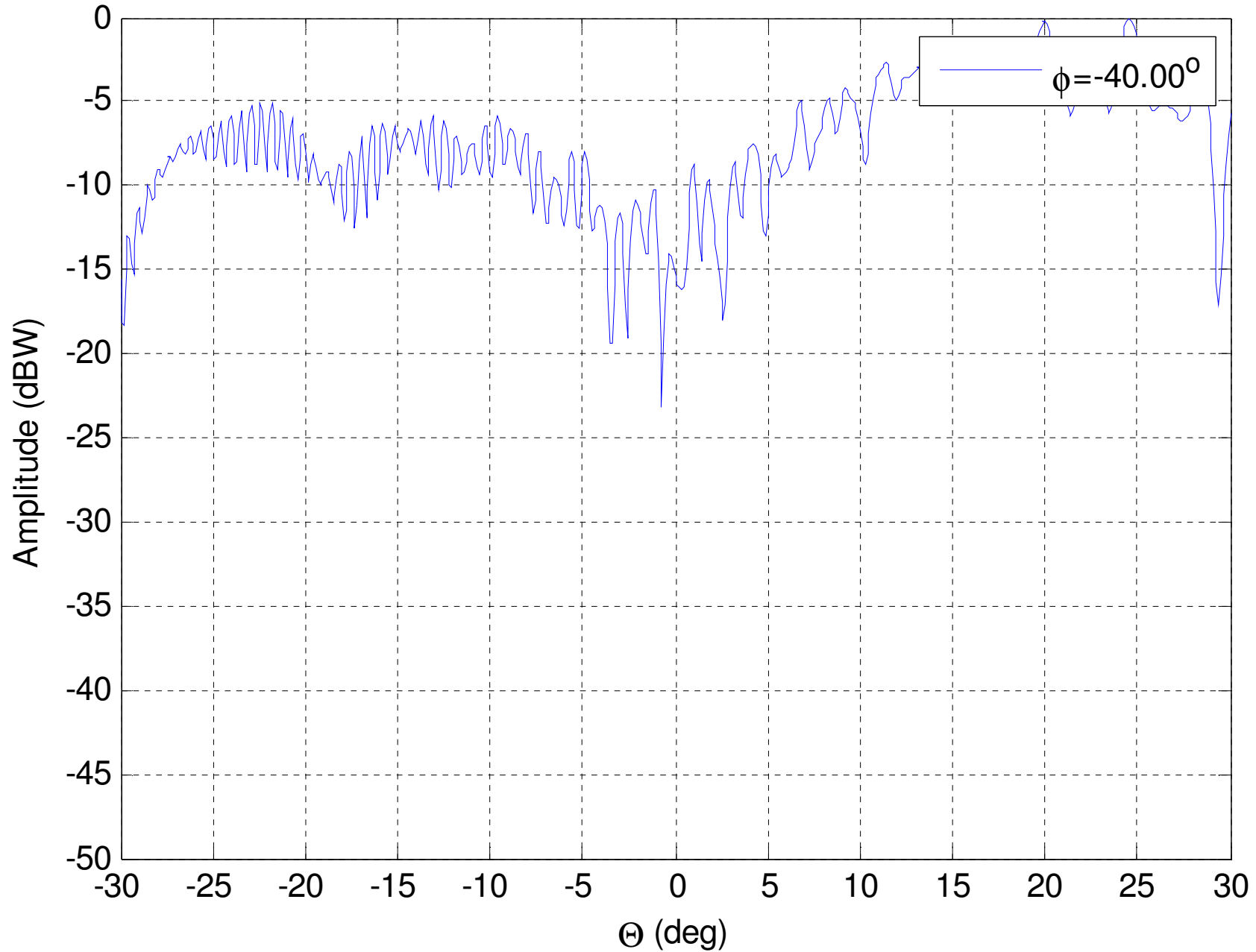
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.46 dBW, Date: 14-Dec-2011



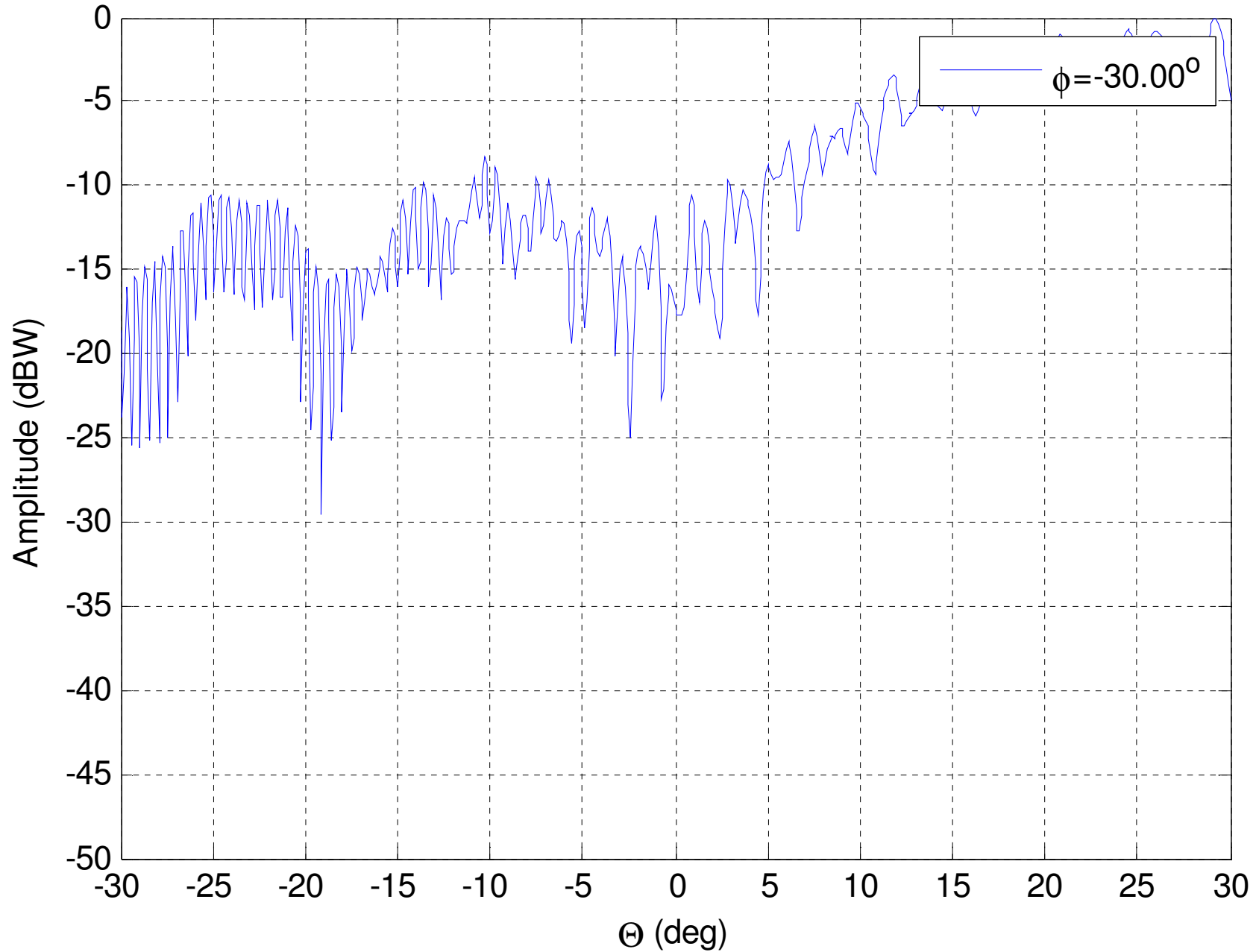
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -9.40 dBW, Date: 14-Dec-2011



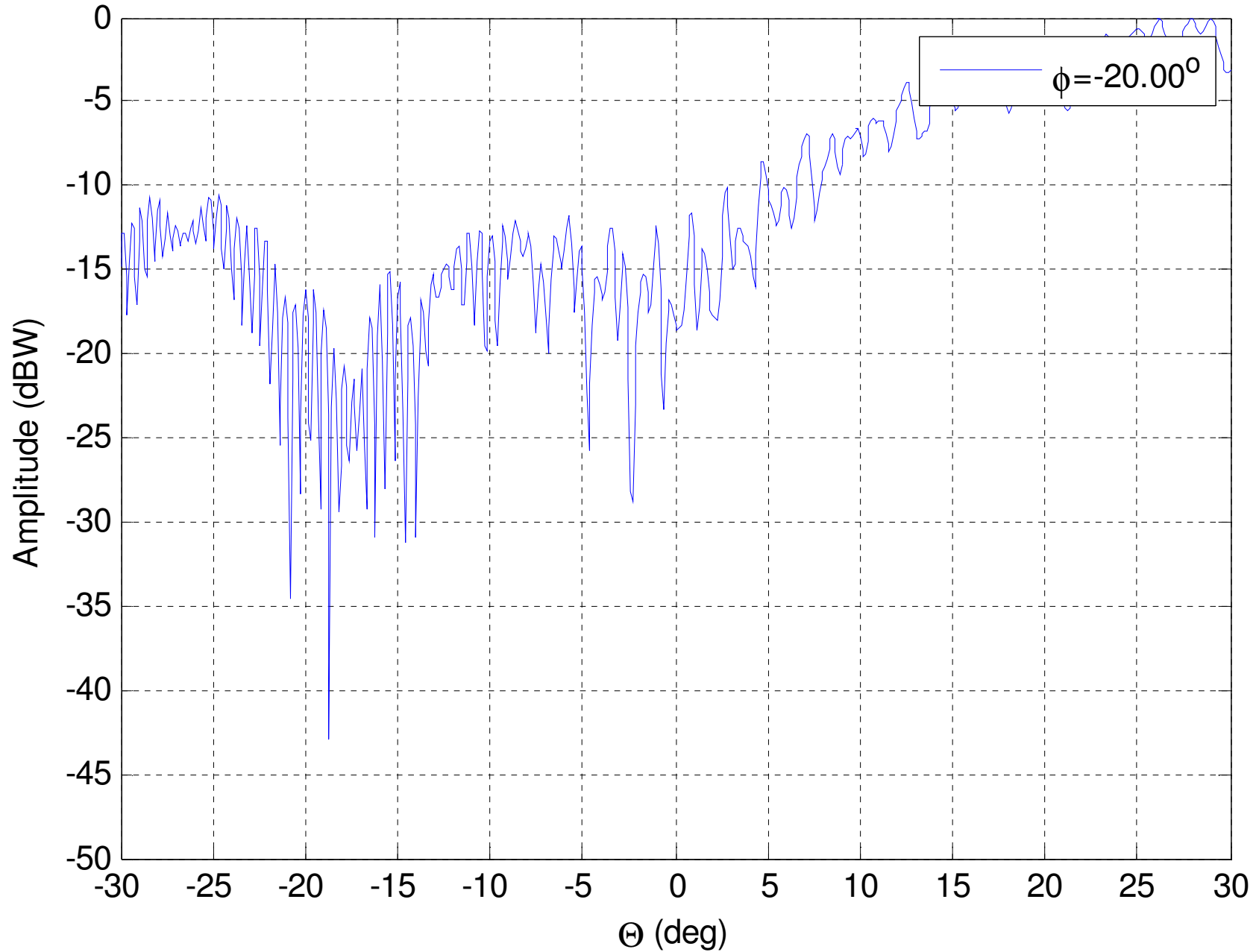
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.46 dBW, Date: 14-Dec-2011



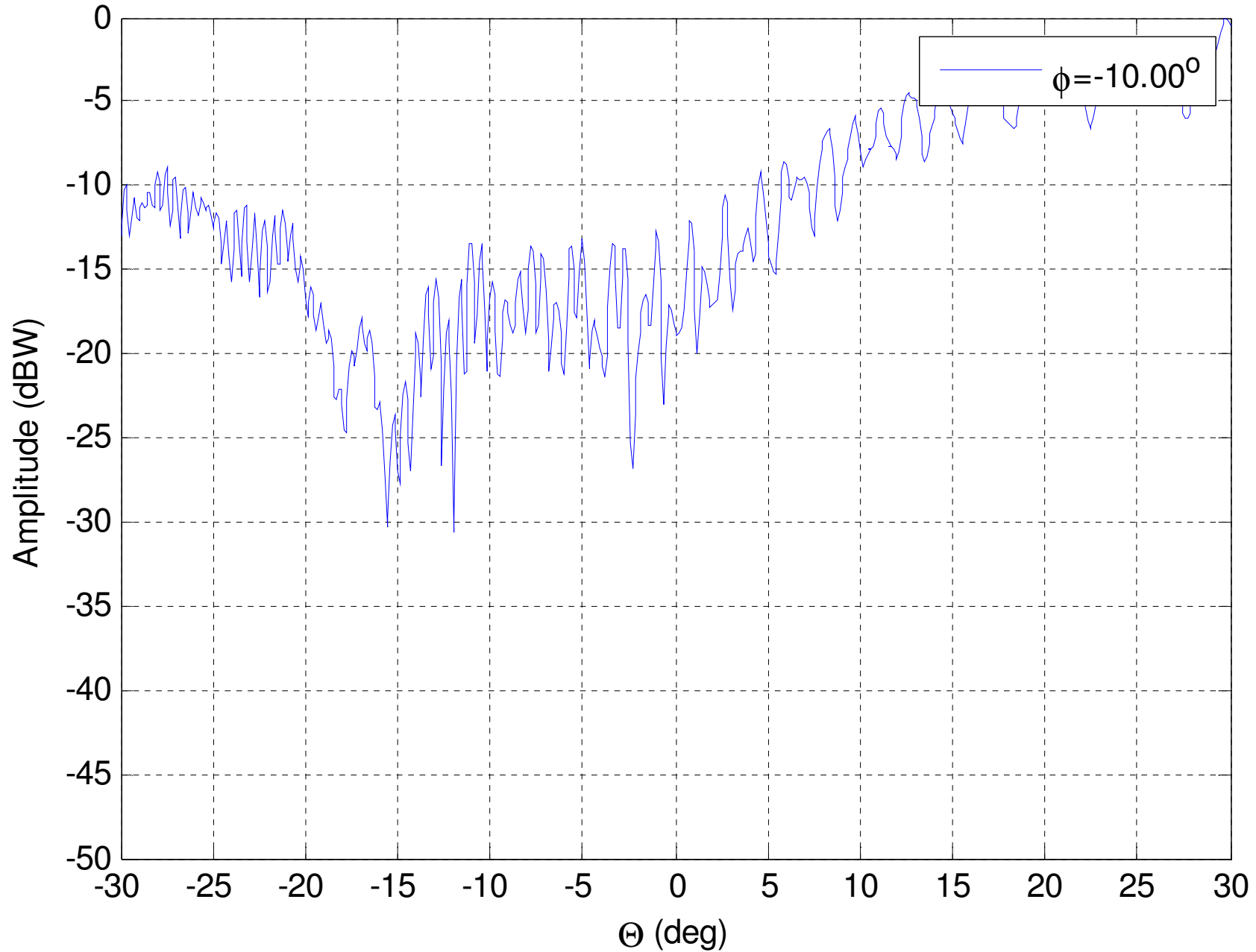
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -6.52 dBW, Date: 14-Dec-2011



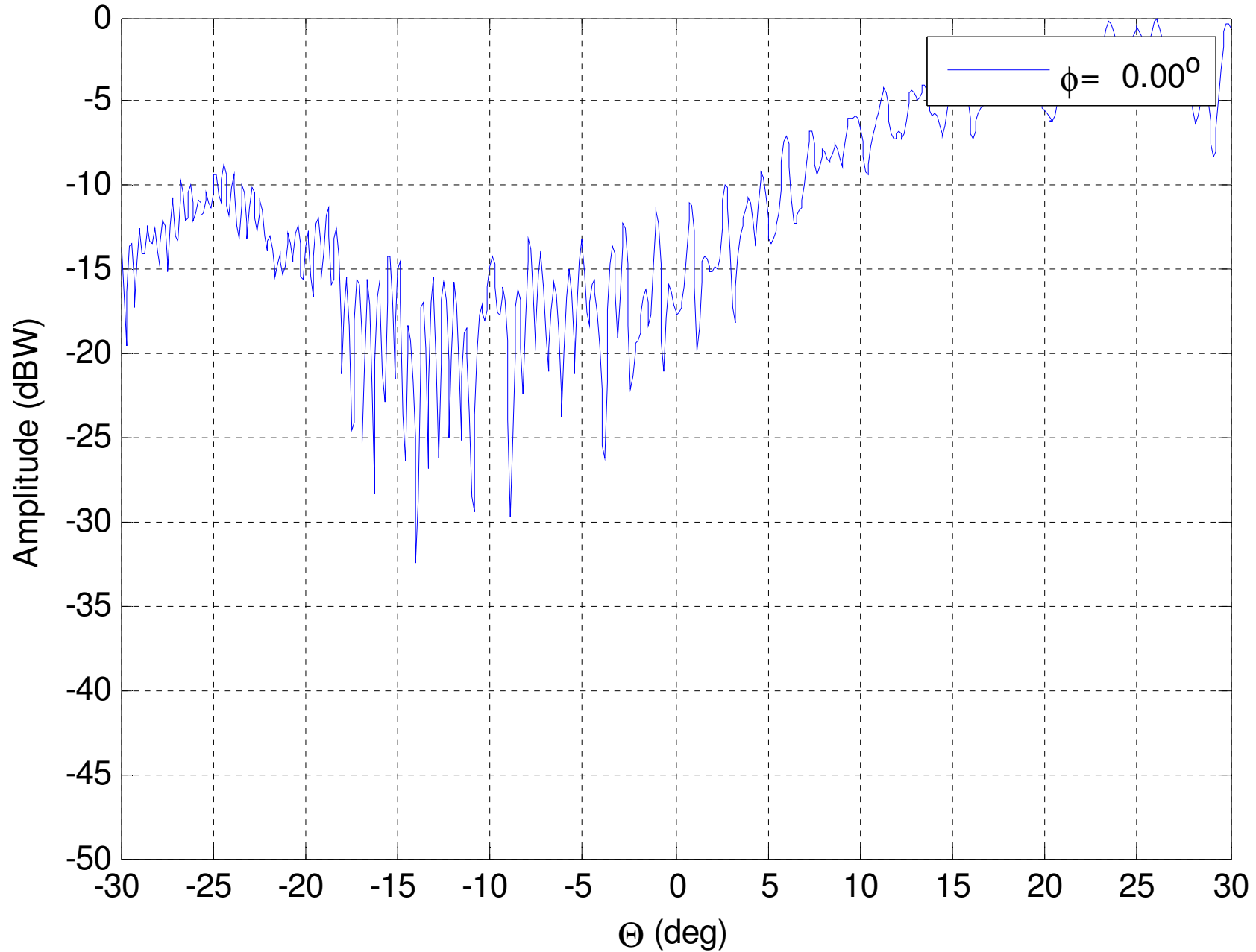
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -6.14 dBW, Date: 14-Dec-2011



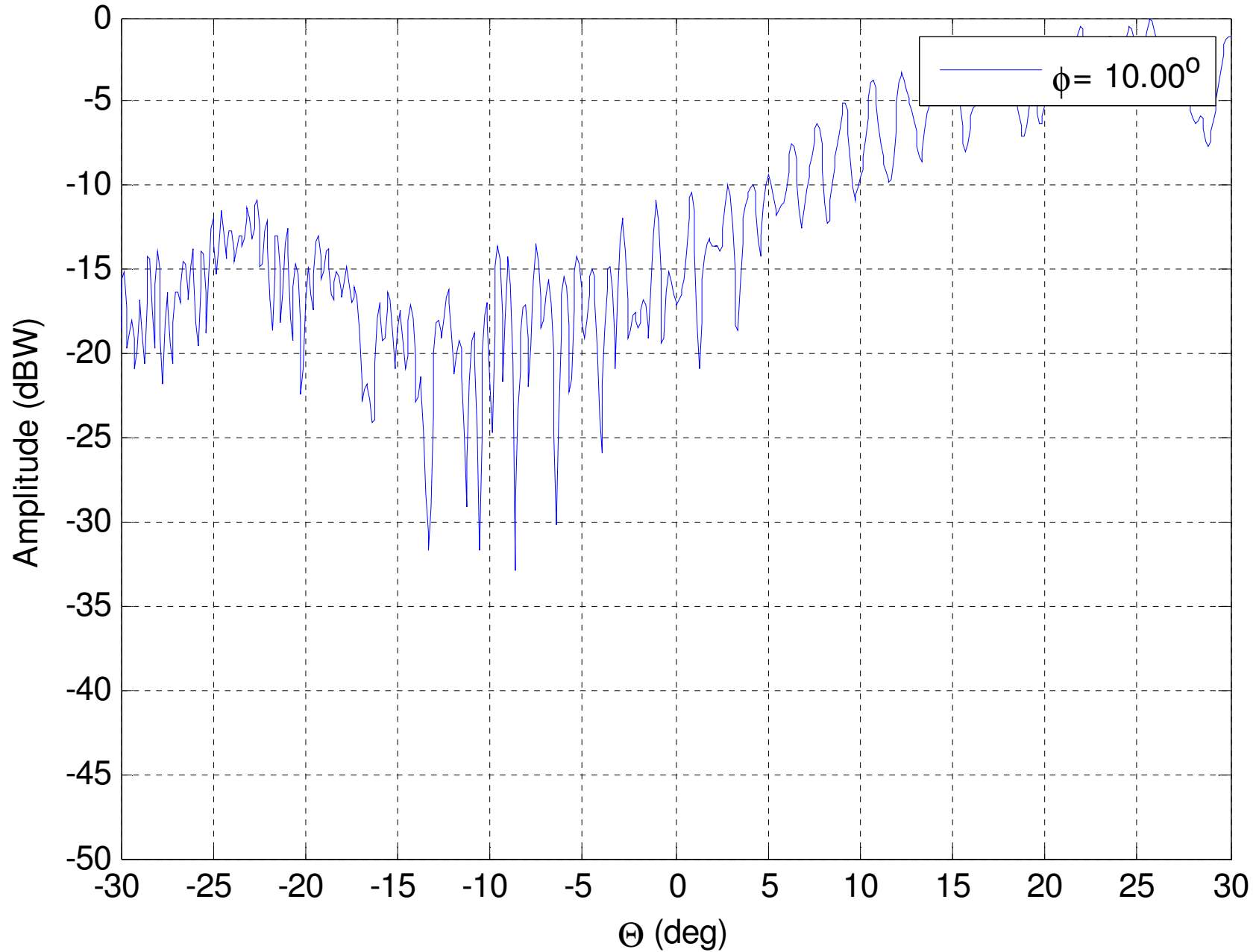
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -7.28 dBW, Date: 14-Dec-2011



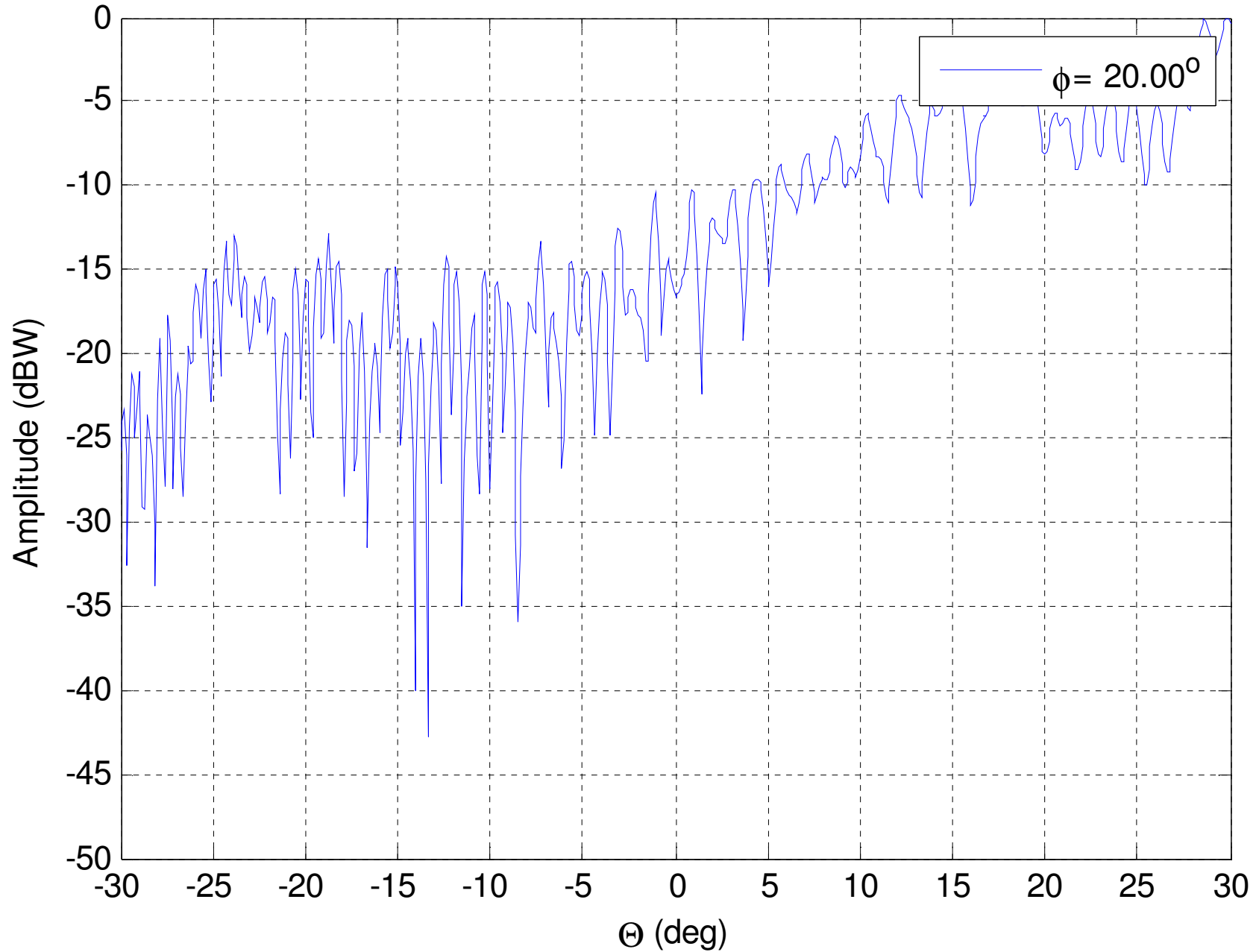
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.91 dBW, Date: 14-Dec-2011



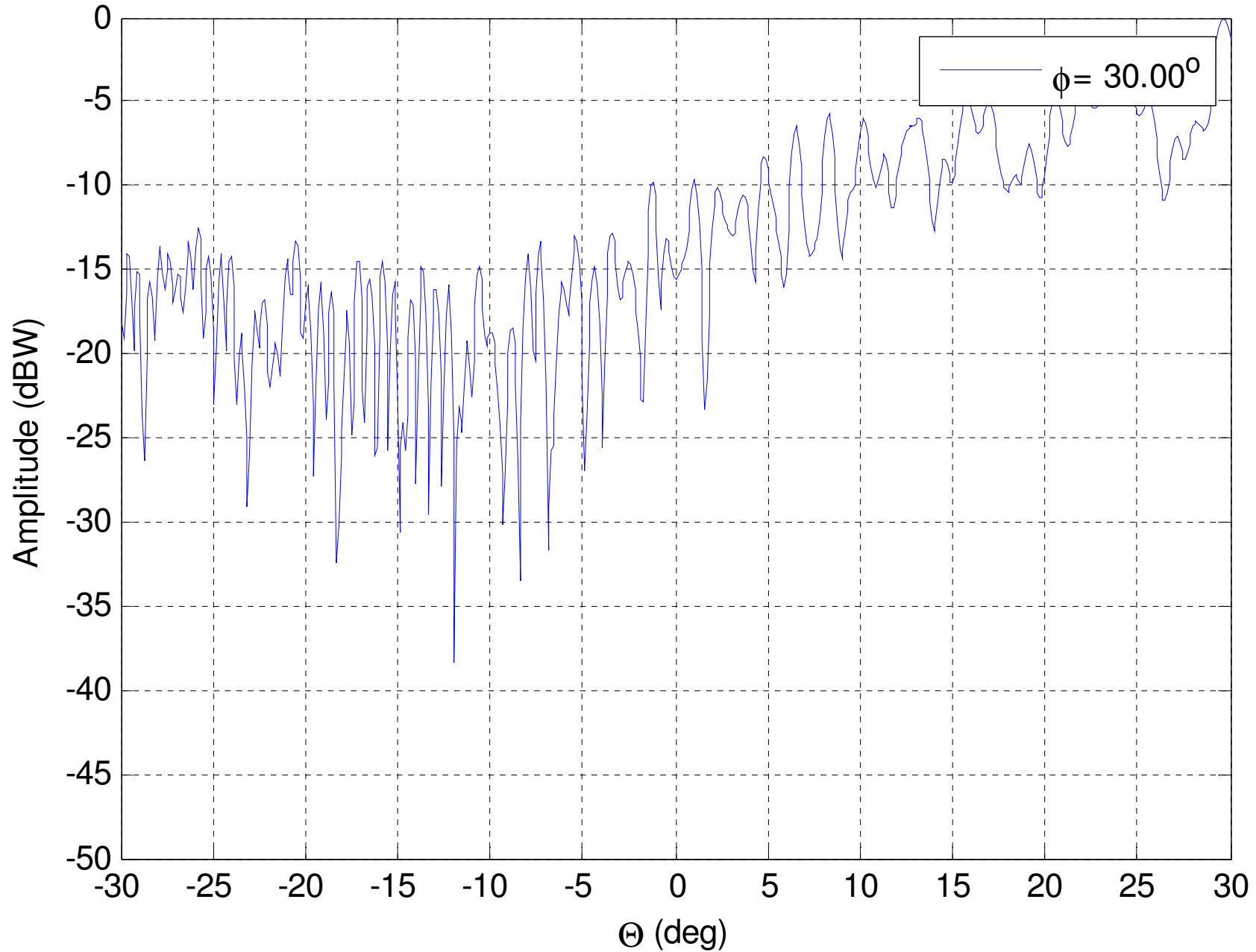
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.29 dBW, Date: 14-Dec-2011



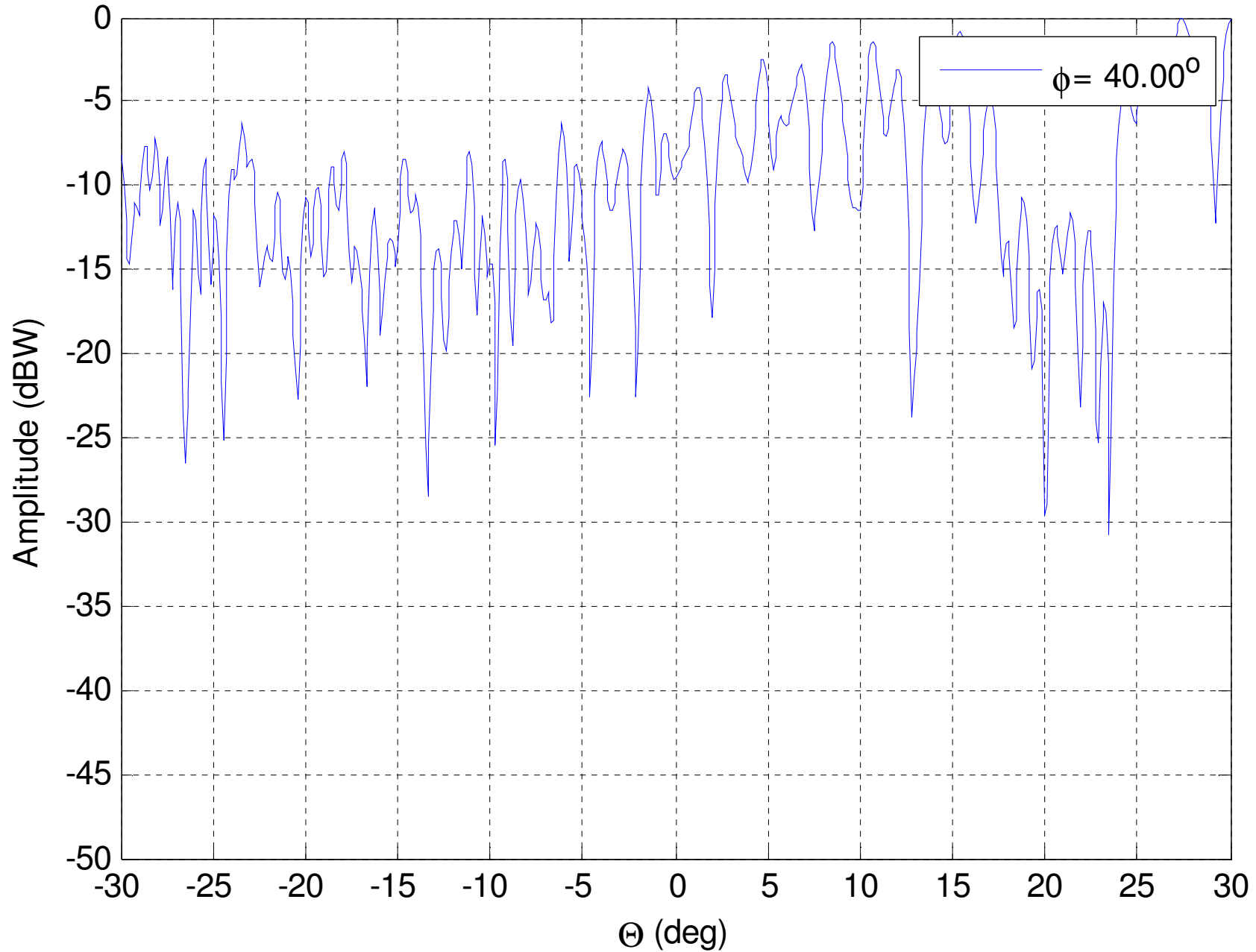
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.22 dBW, Date: 14-Dec-2011



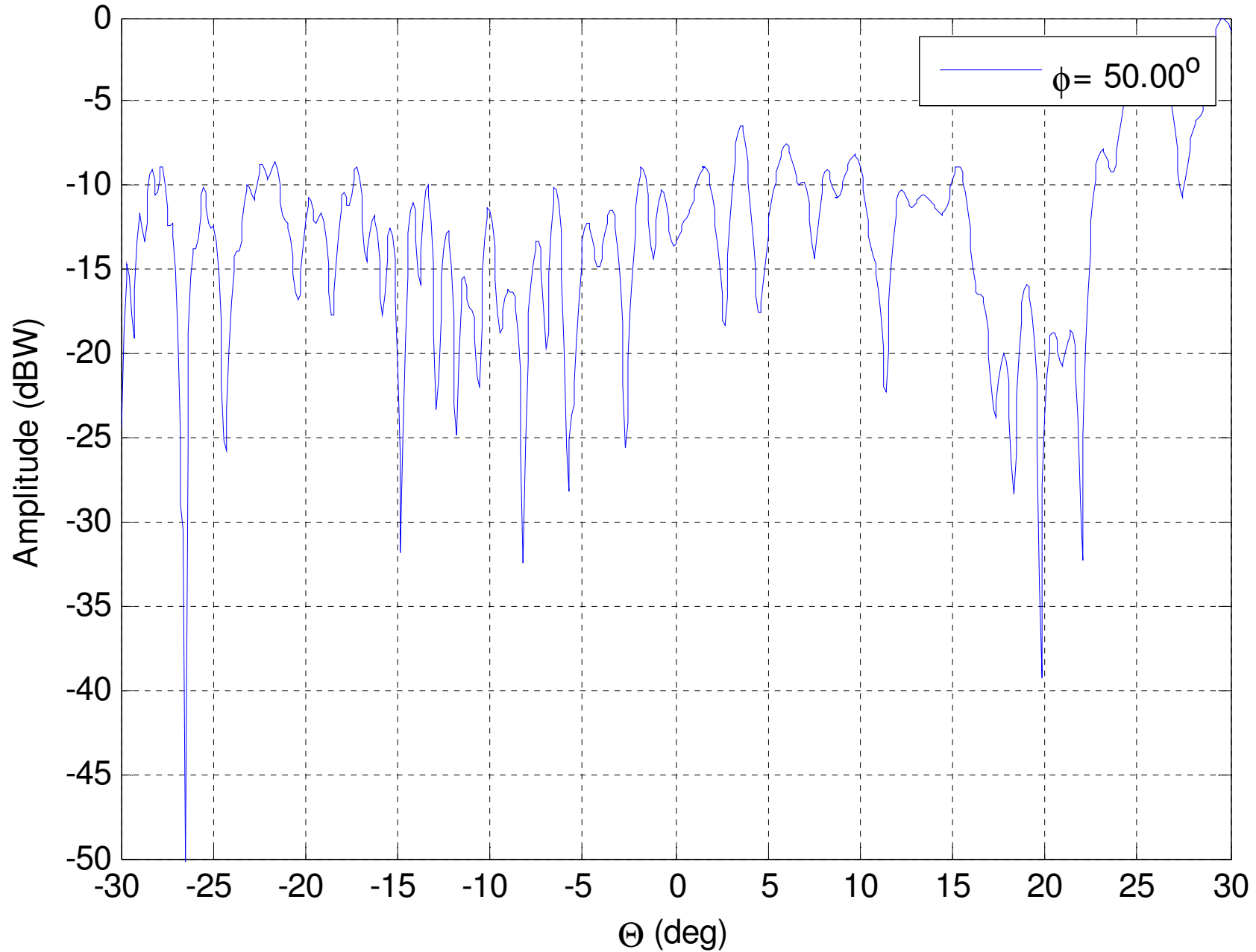
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -15.18 dBW, Date: 14-Dec-2011



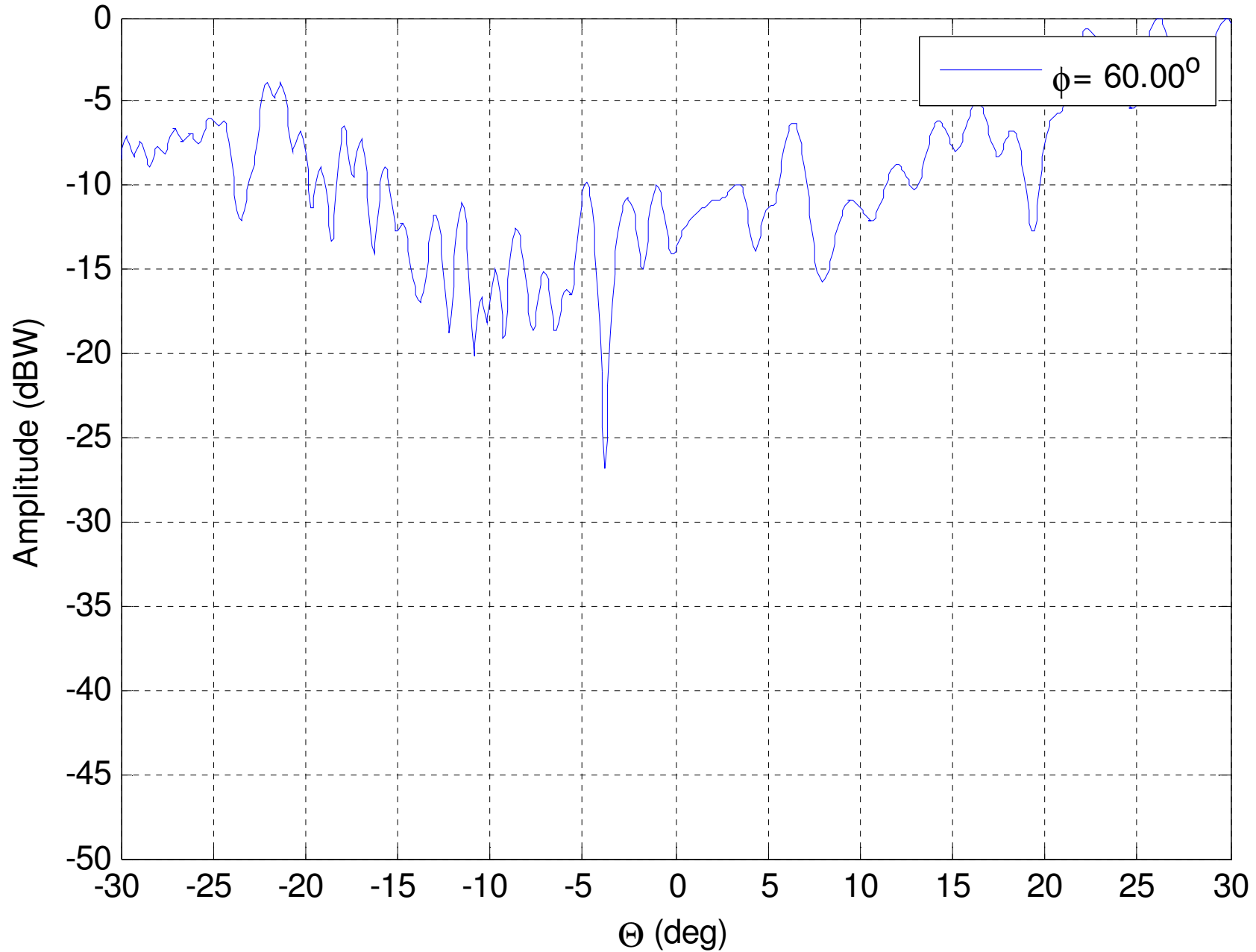
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.35 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

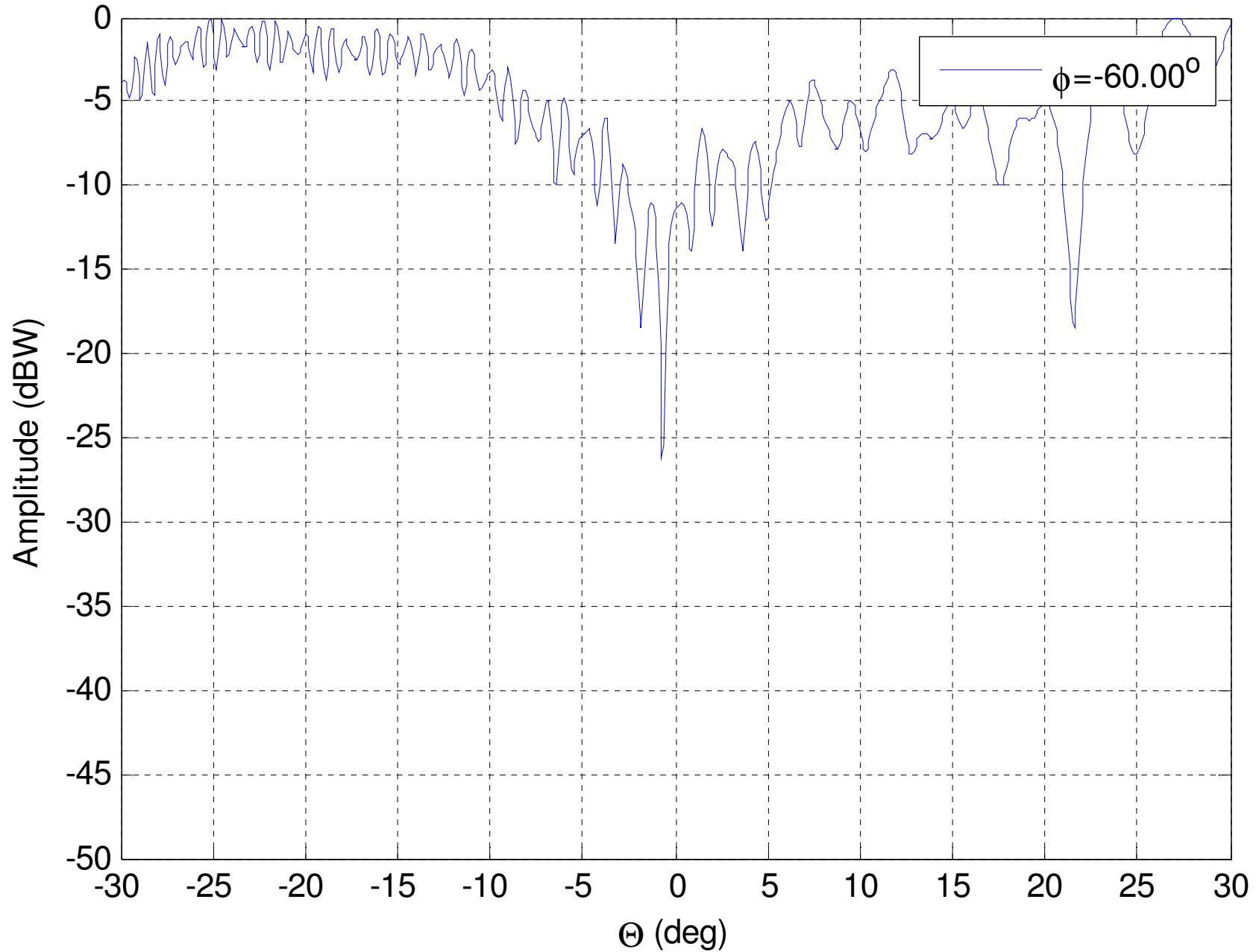
Input file: tx-17.7-rhcp-60.cut, Peak: -10.95 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

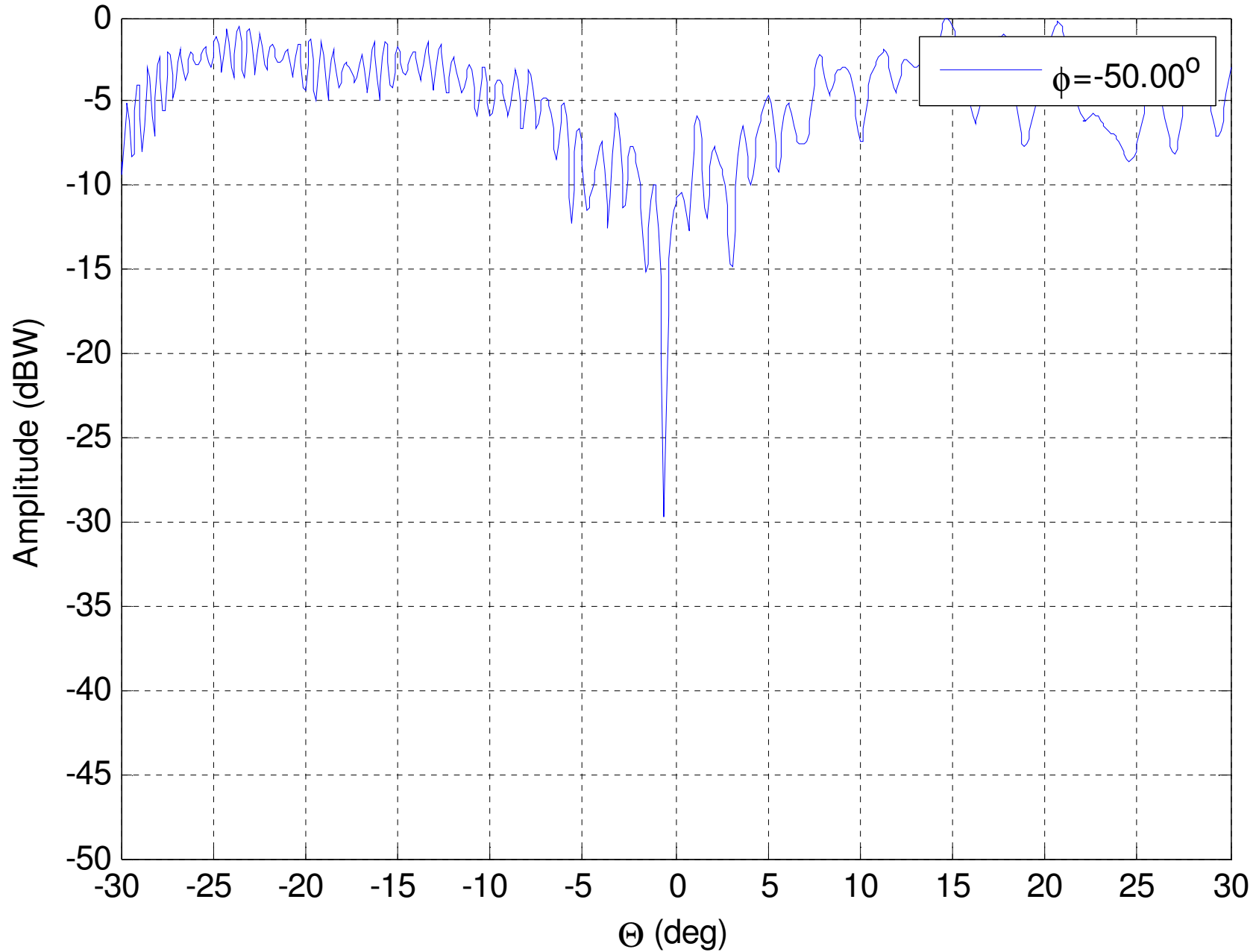
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.58 dBW, Date: 14-Dec-2011



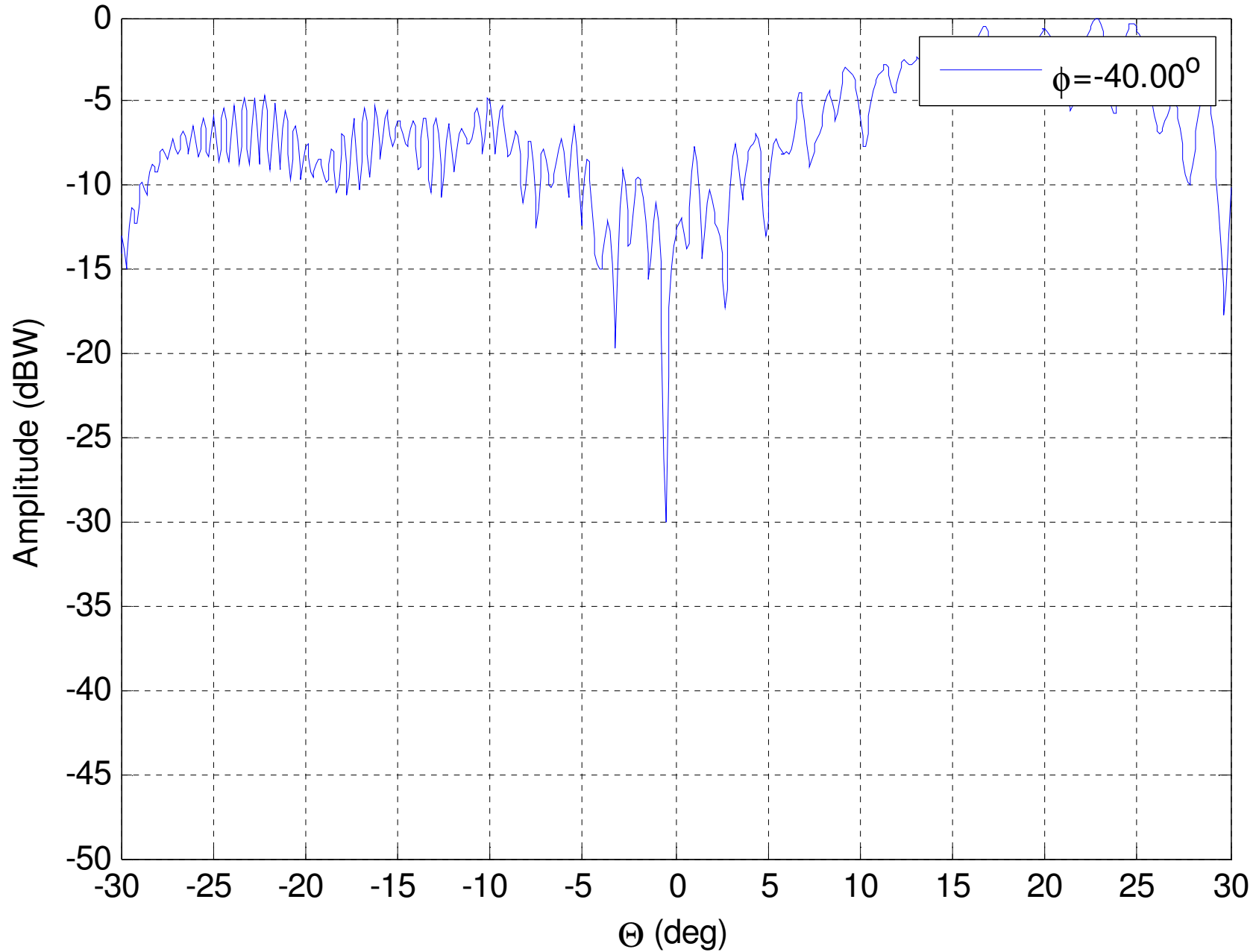
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -11.93 dBW, Date: 14-Dec-2011



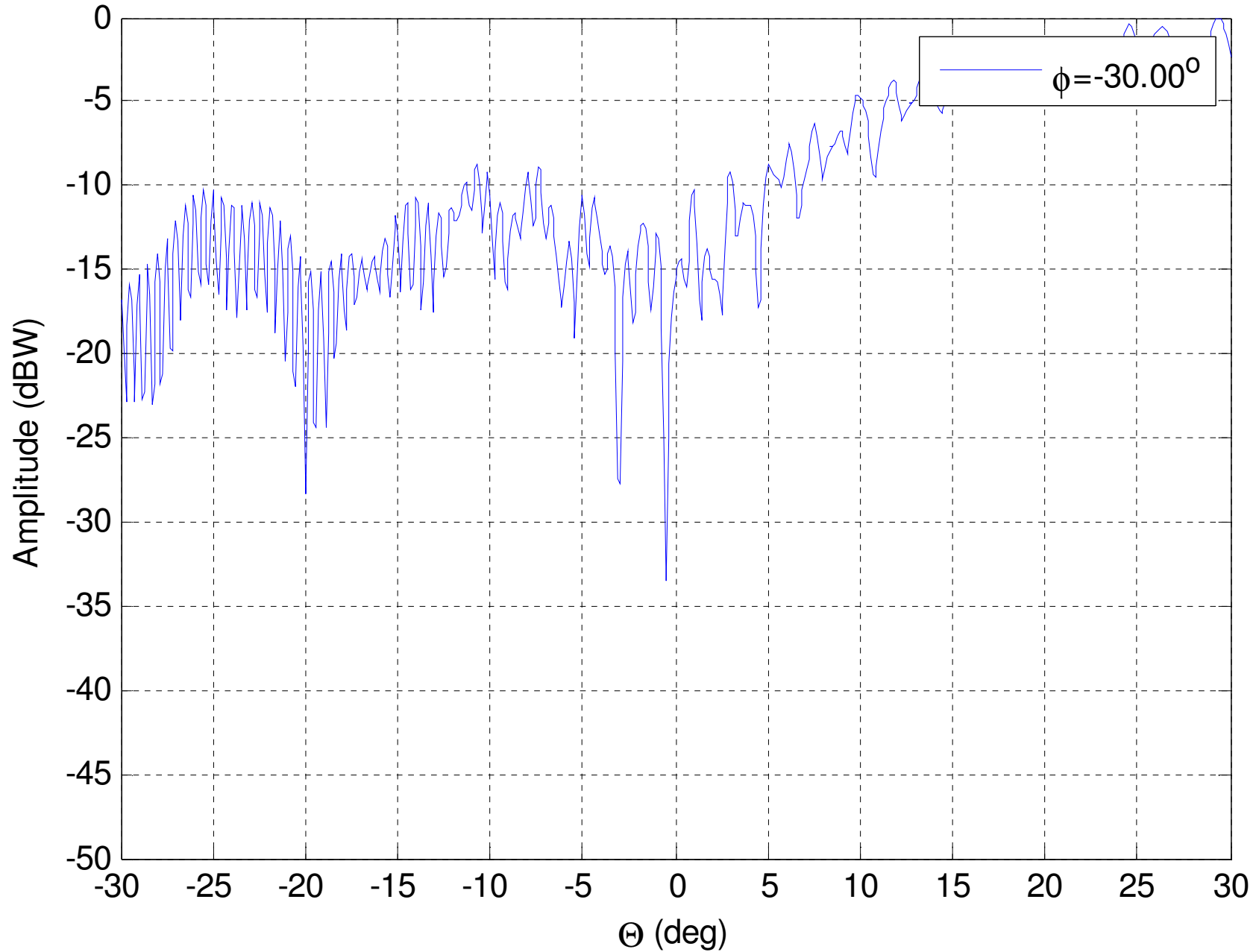
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.04 dBW, Date: 14-Dec-2011



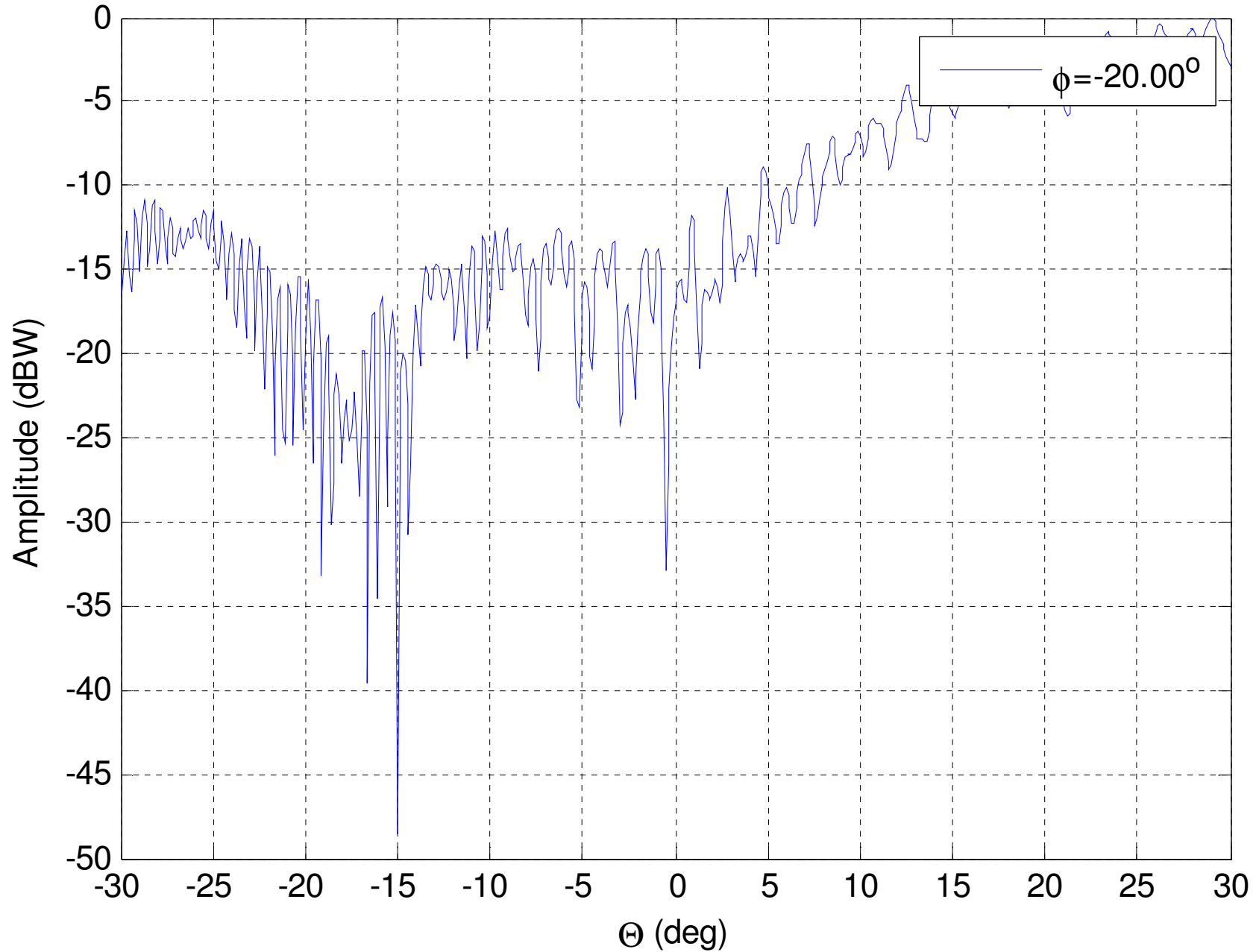
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.47 dBW, Date: 14-Dec-2011



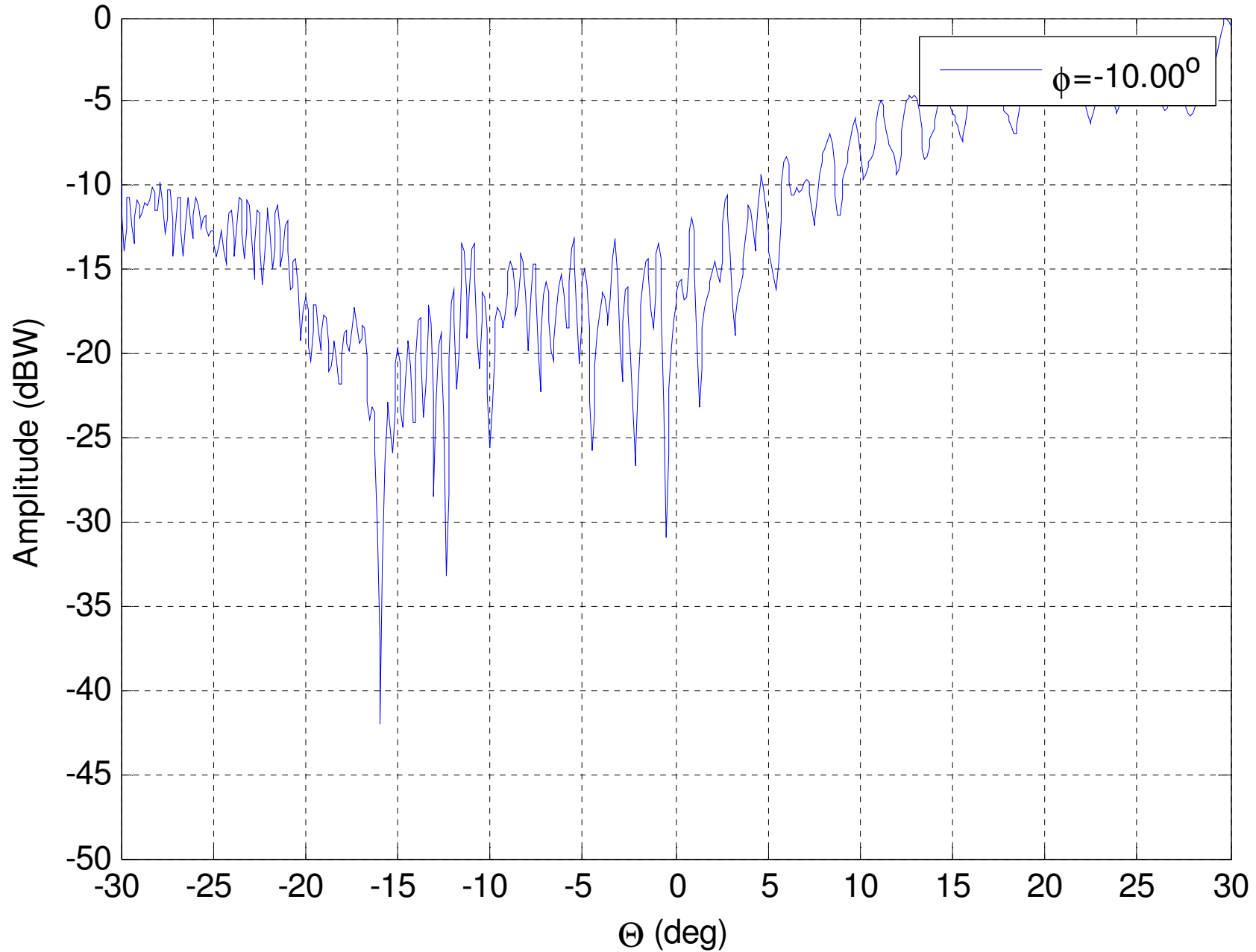
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -6.12 dBW, Date: 14-Dec-2011



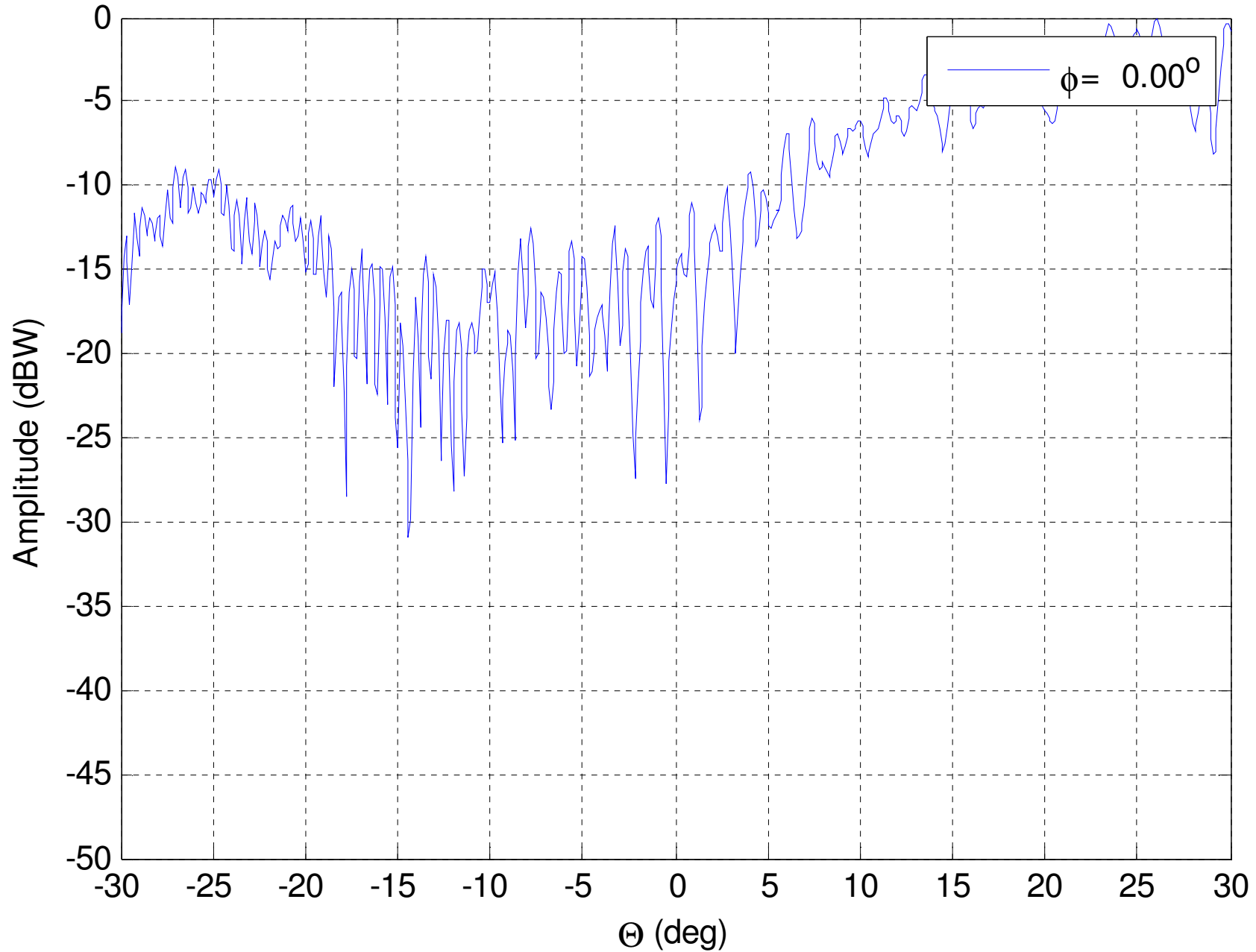
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -5.98 dBW, Date: 14-Dec-2011



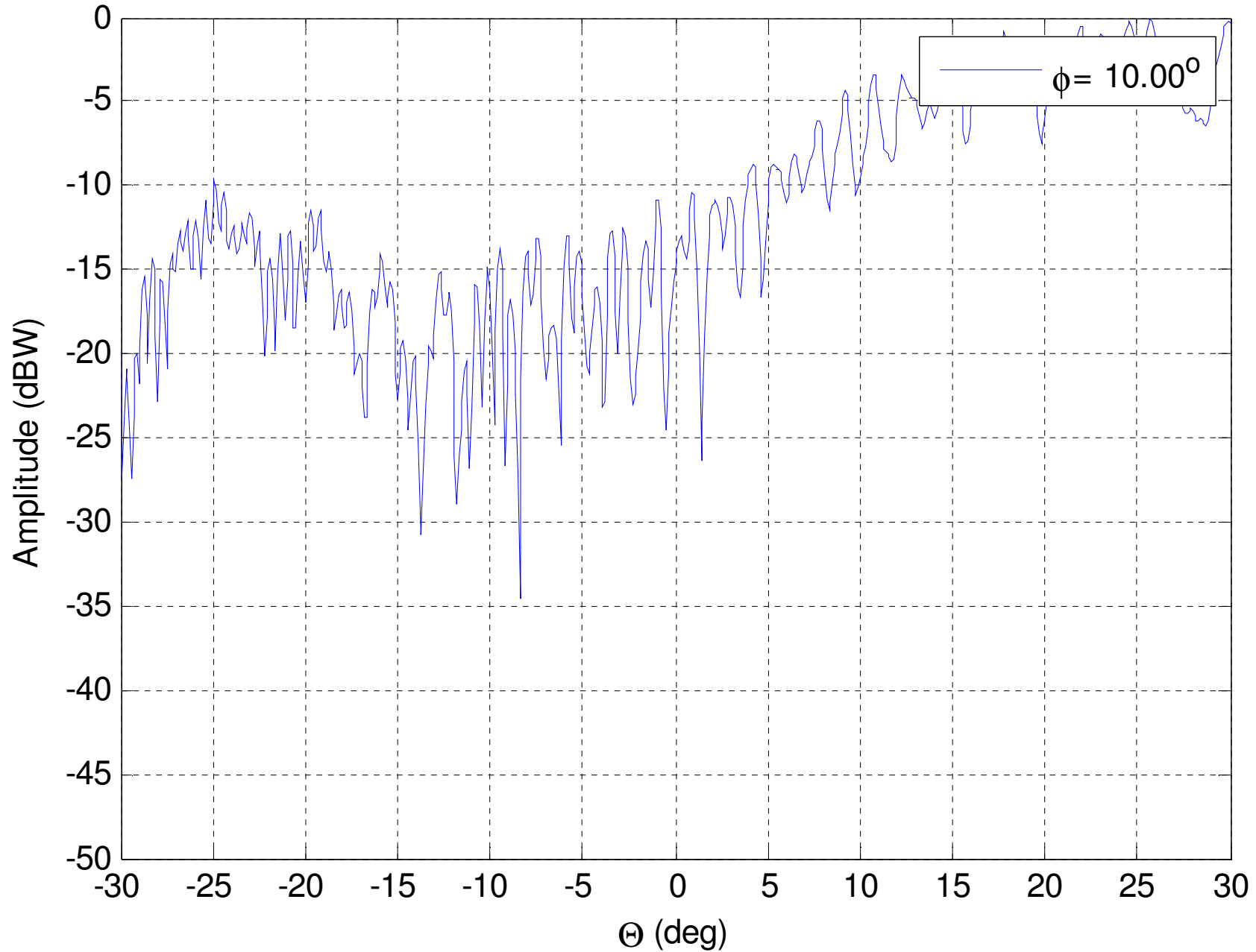
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -7.24 dBW, Date: 14-Dec-2011



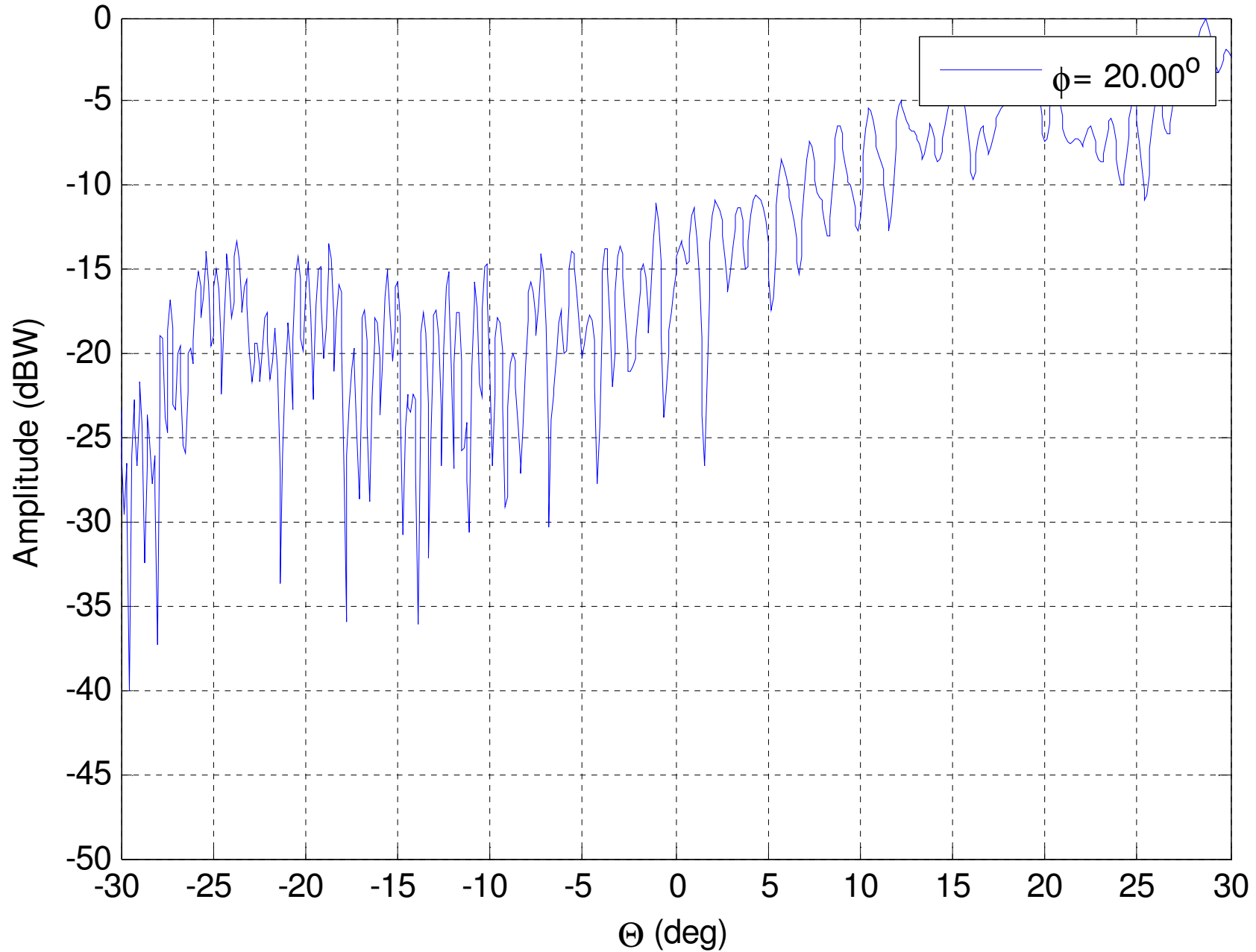
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.28 dBW, Date: 14-Dec-2011



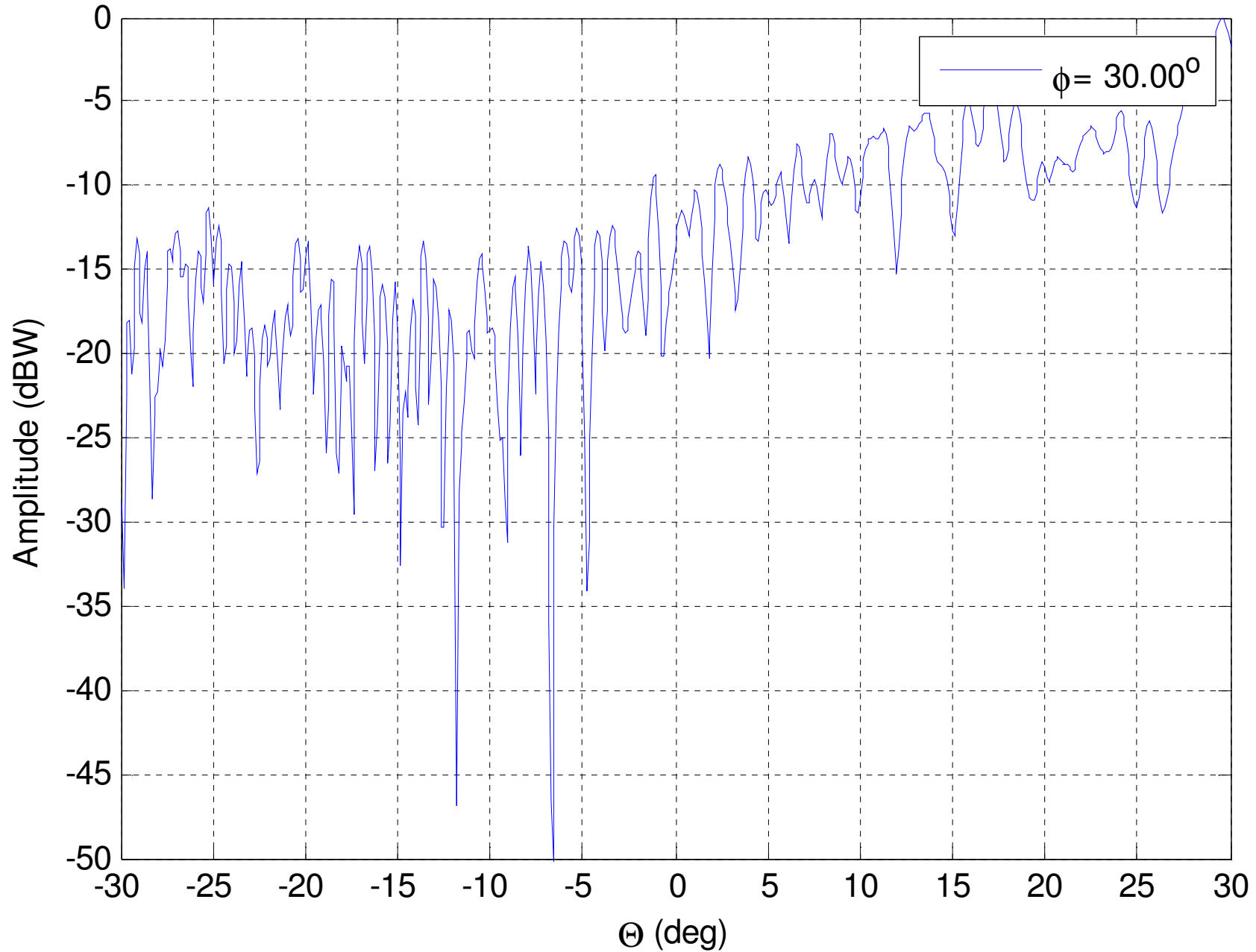
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -7.81 dBW, Date: 14-Dec-2011



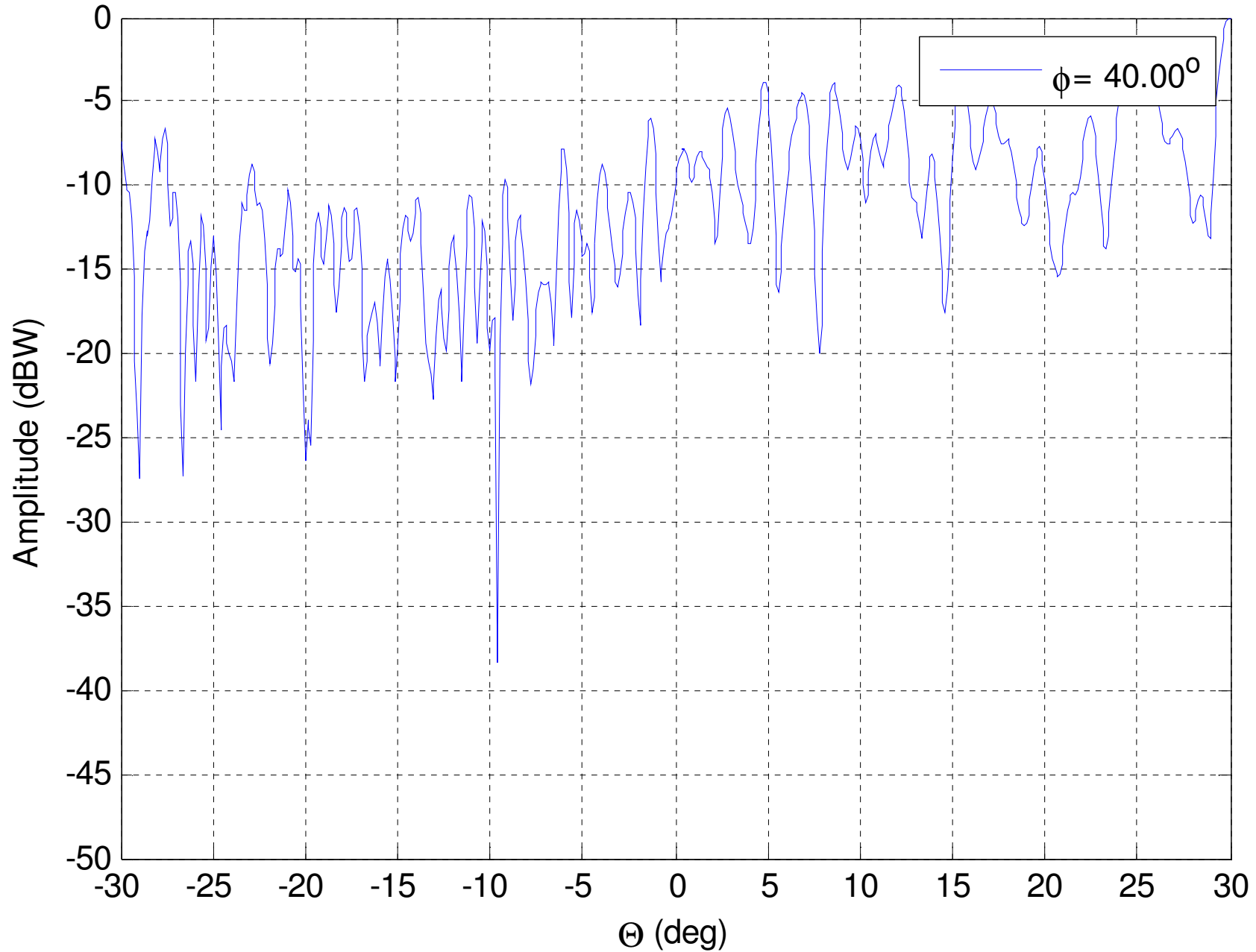
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.54 dBW, Date: 14-Dec-2011



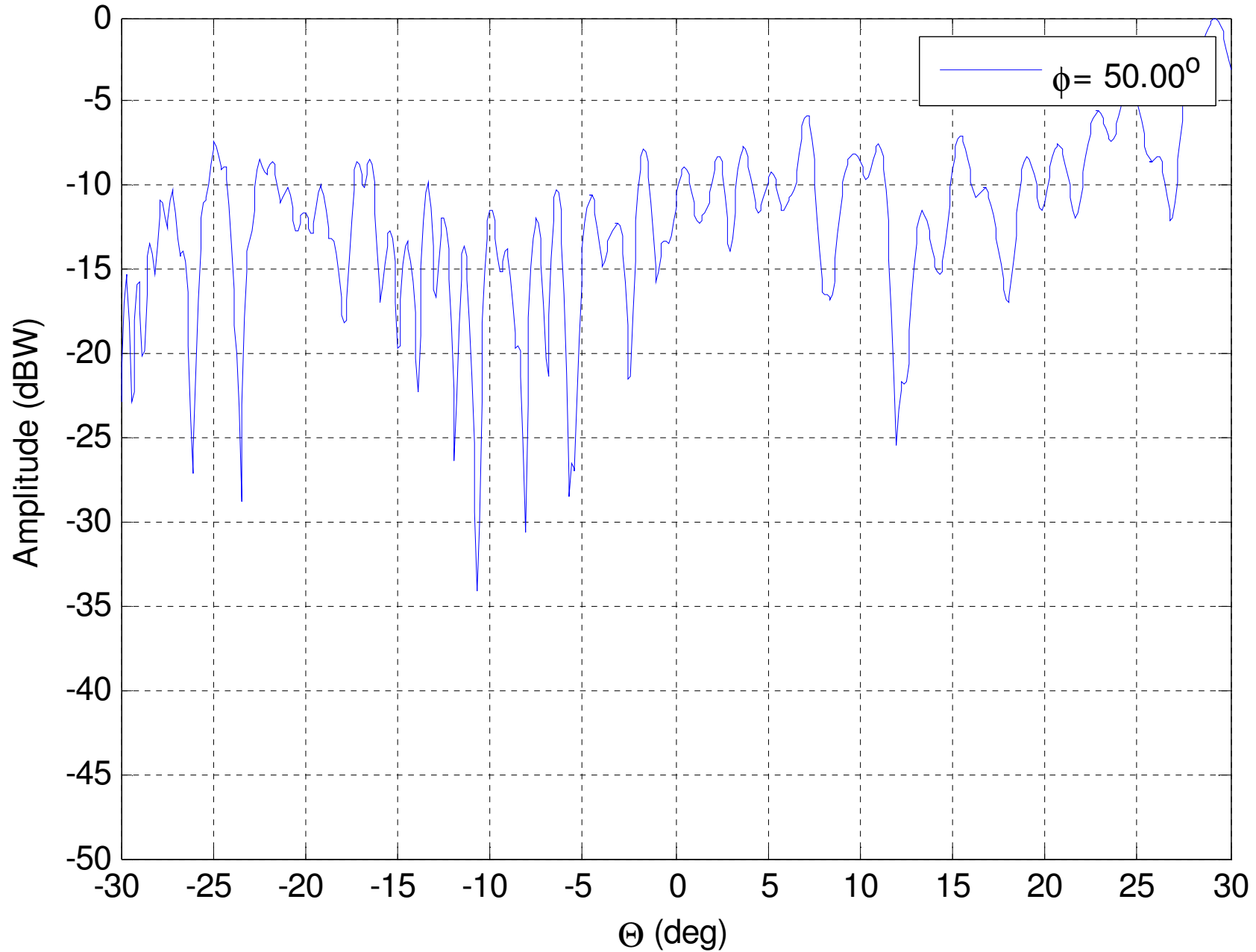
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -13.05 dBW, Date: 14-Dec-2011



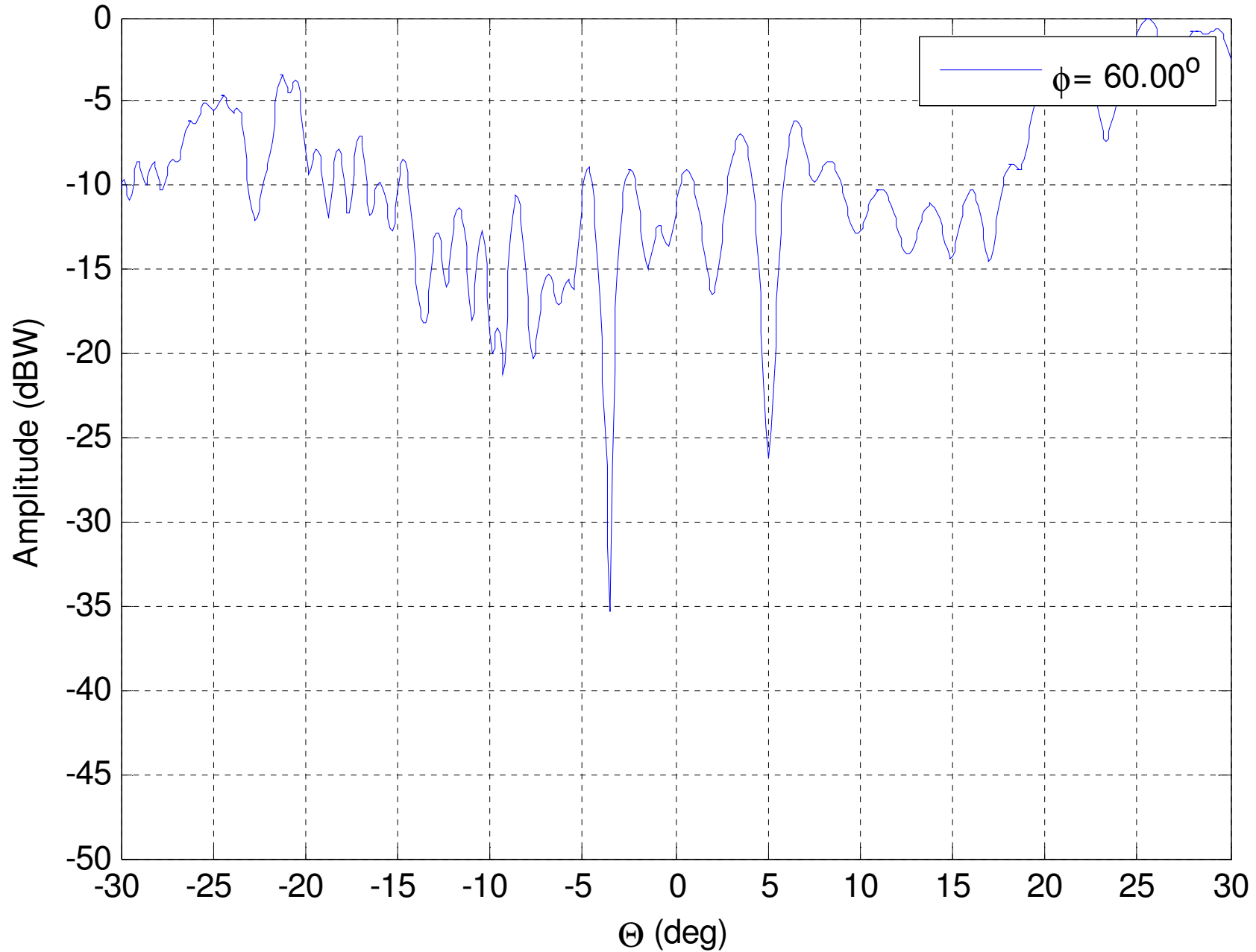
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -11.67 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -11.30 dBW, Date: 14-Dec-2011



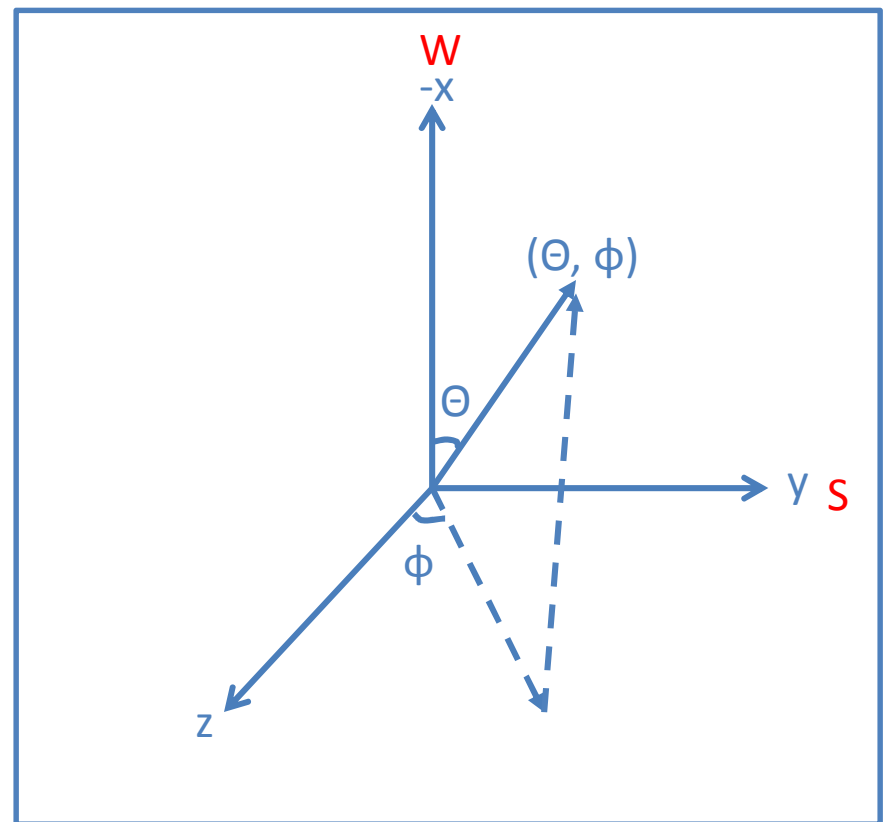
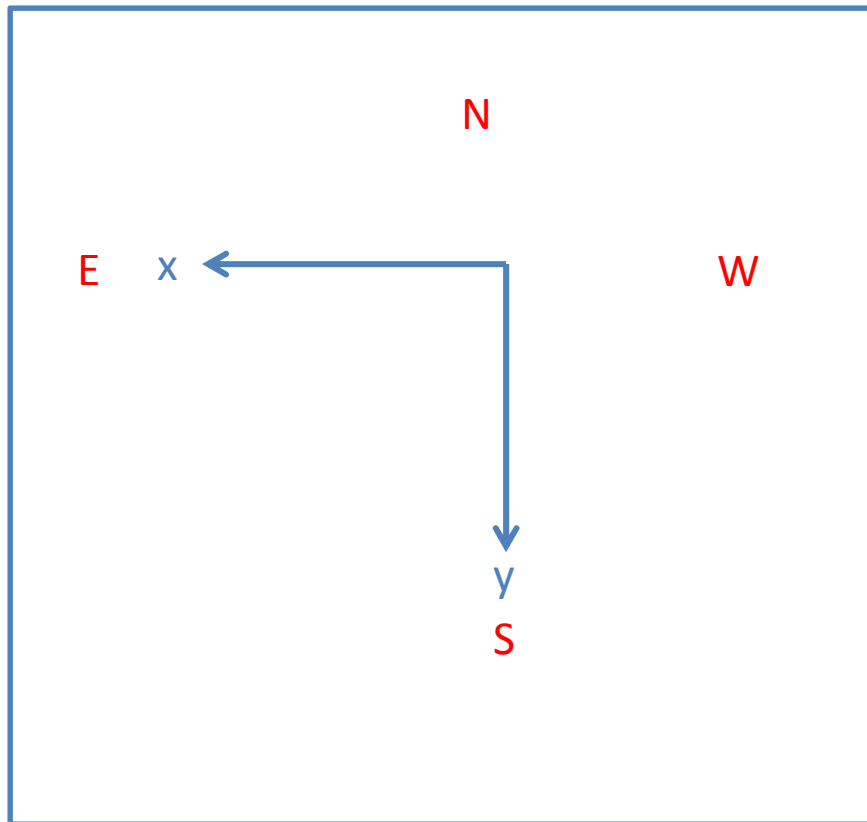
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 12

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



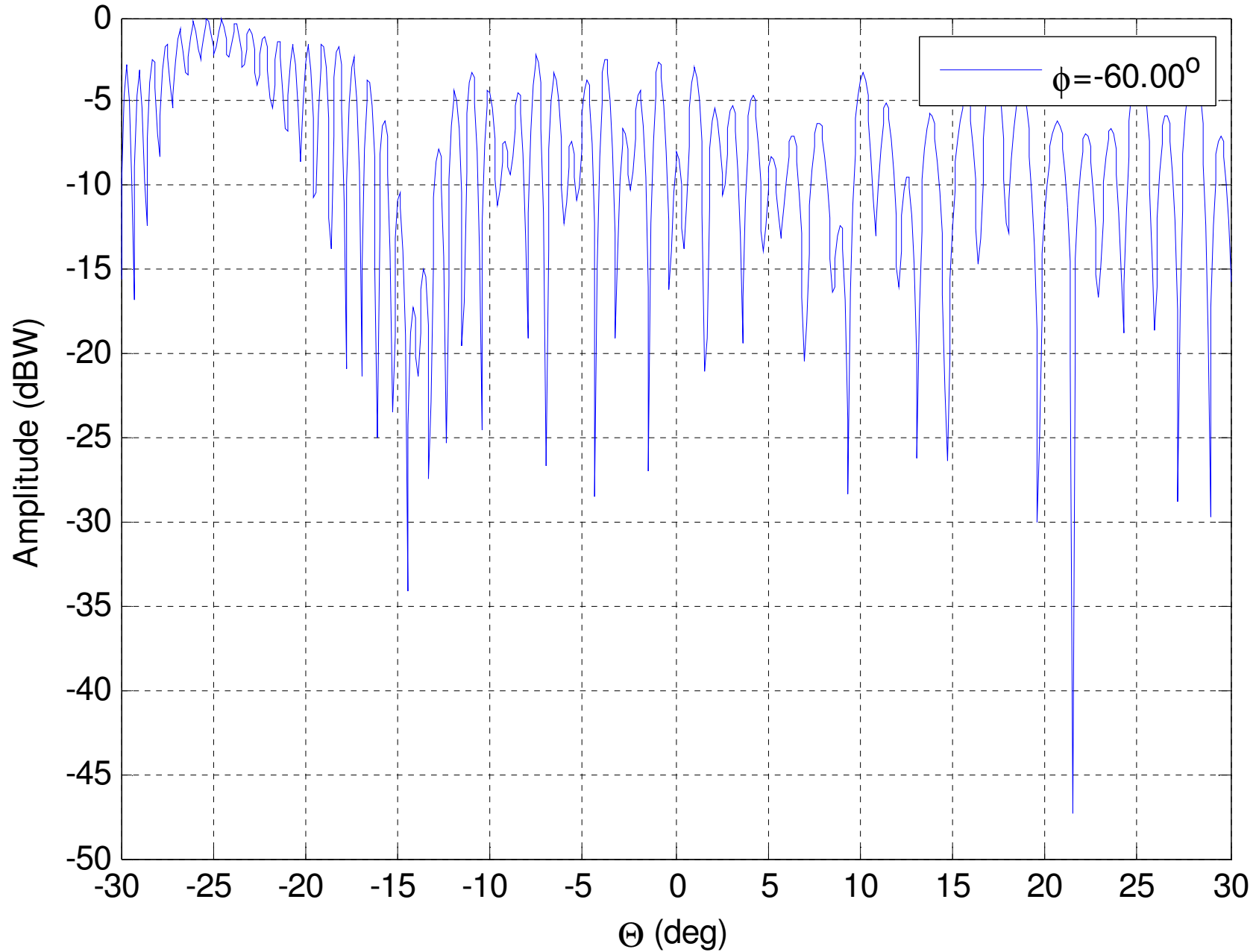
Spot Beam12, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

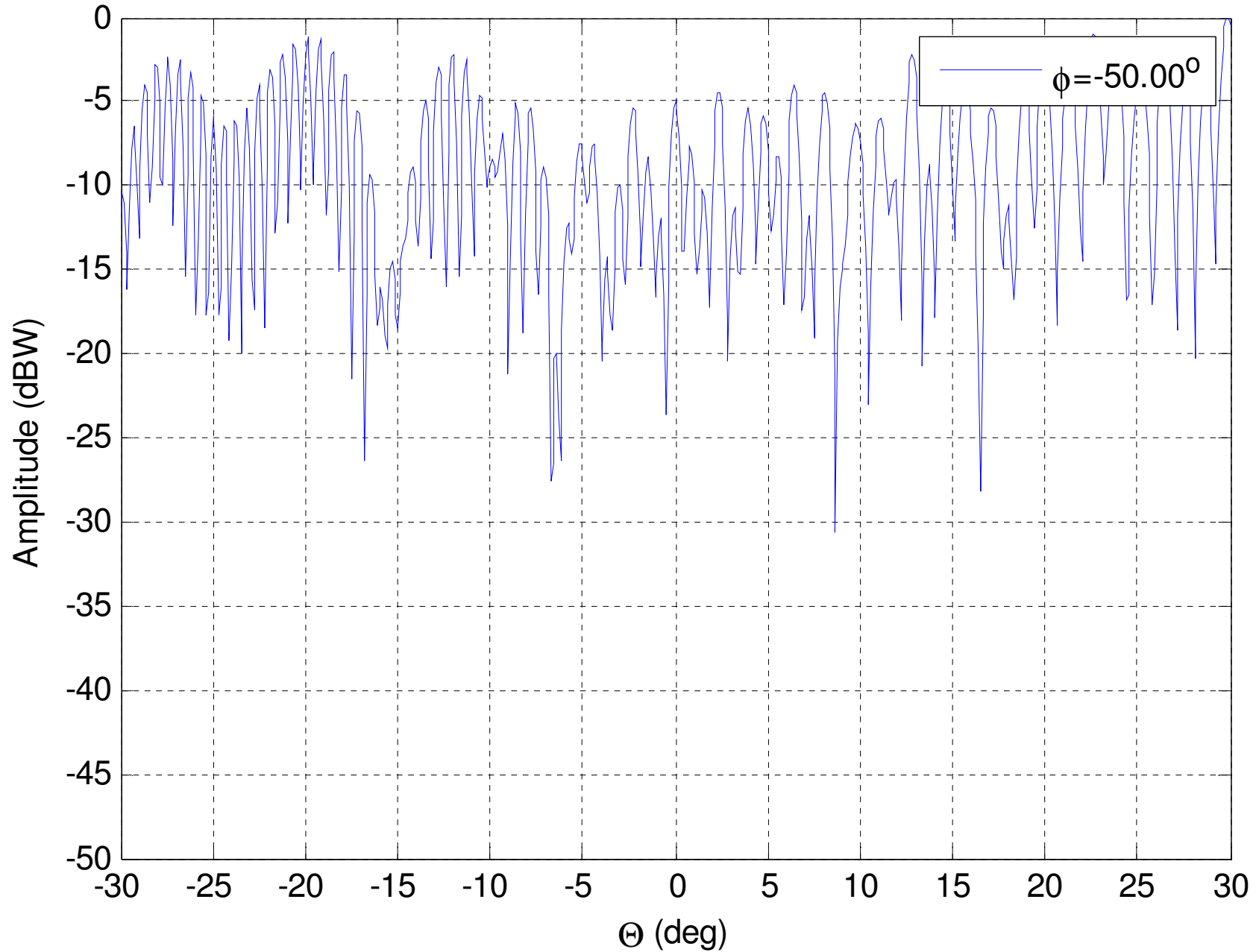
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -10.08 dBW, Date: 14-Dec-2011



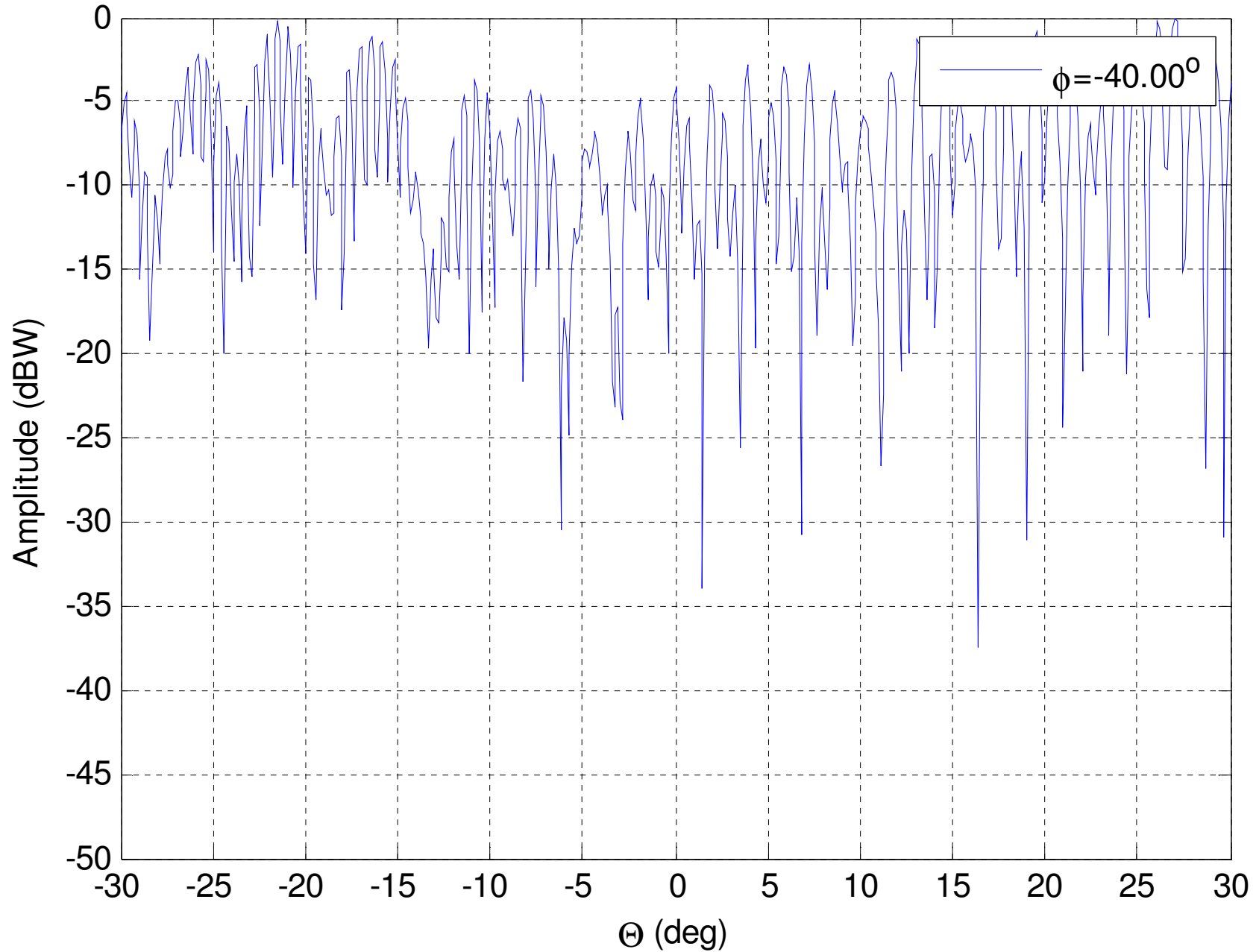
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -8.38 dBW, Date: 14-Dec-2011



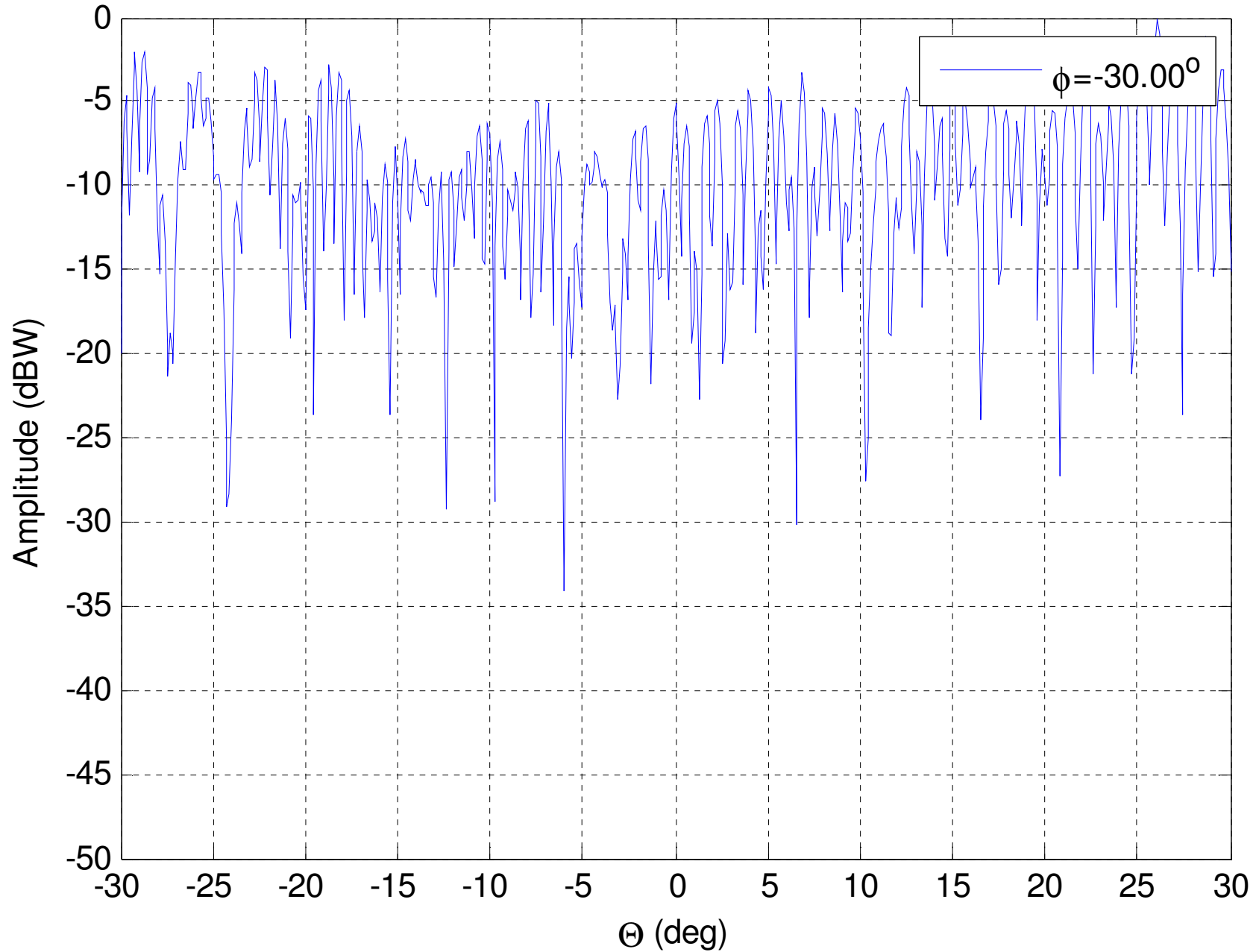
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -9.21 dBW, Date: 14-Dec-2011



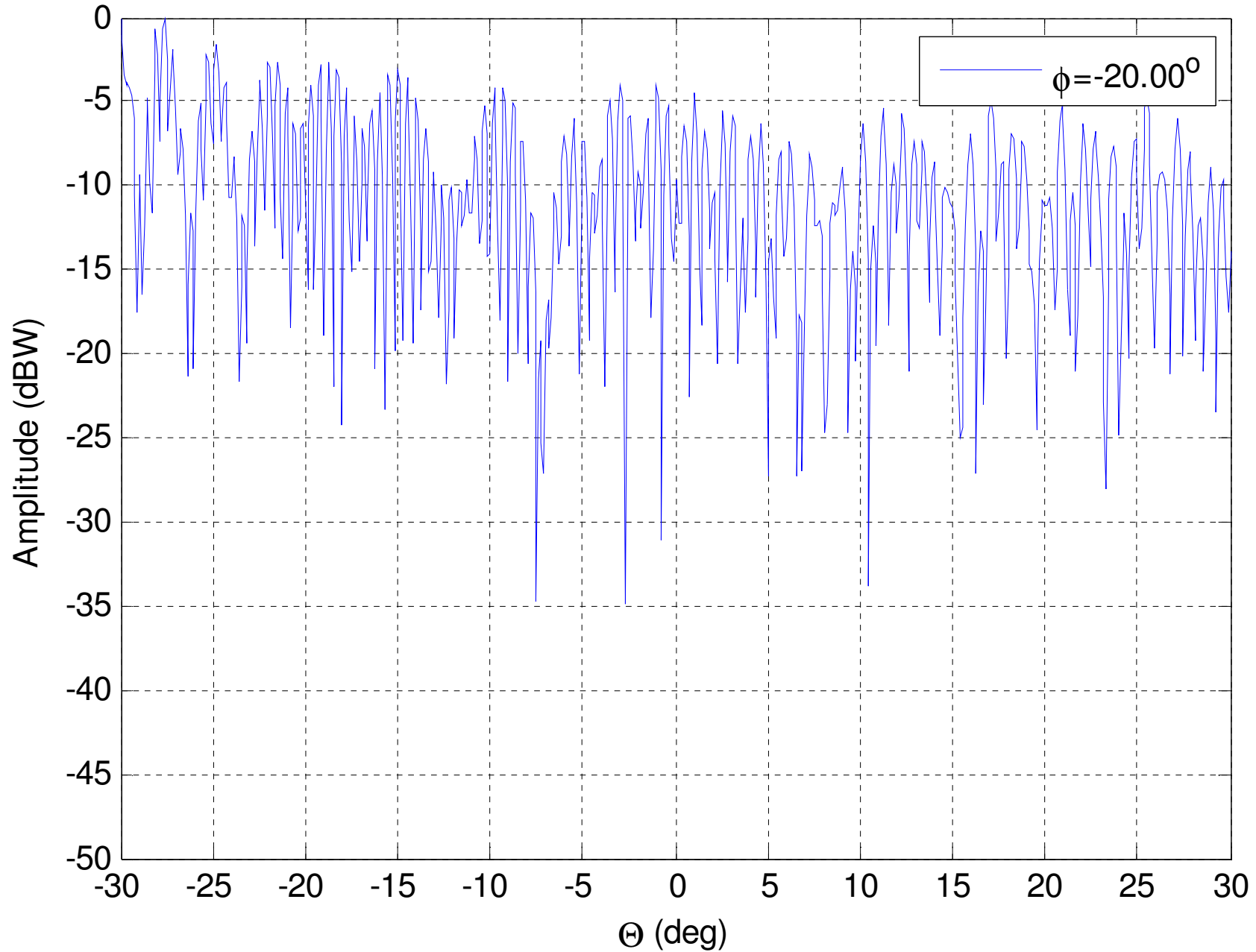
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -8.24 dBW, Date: 14-Dec-2011



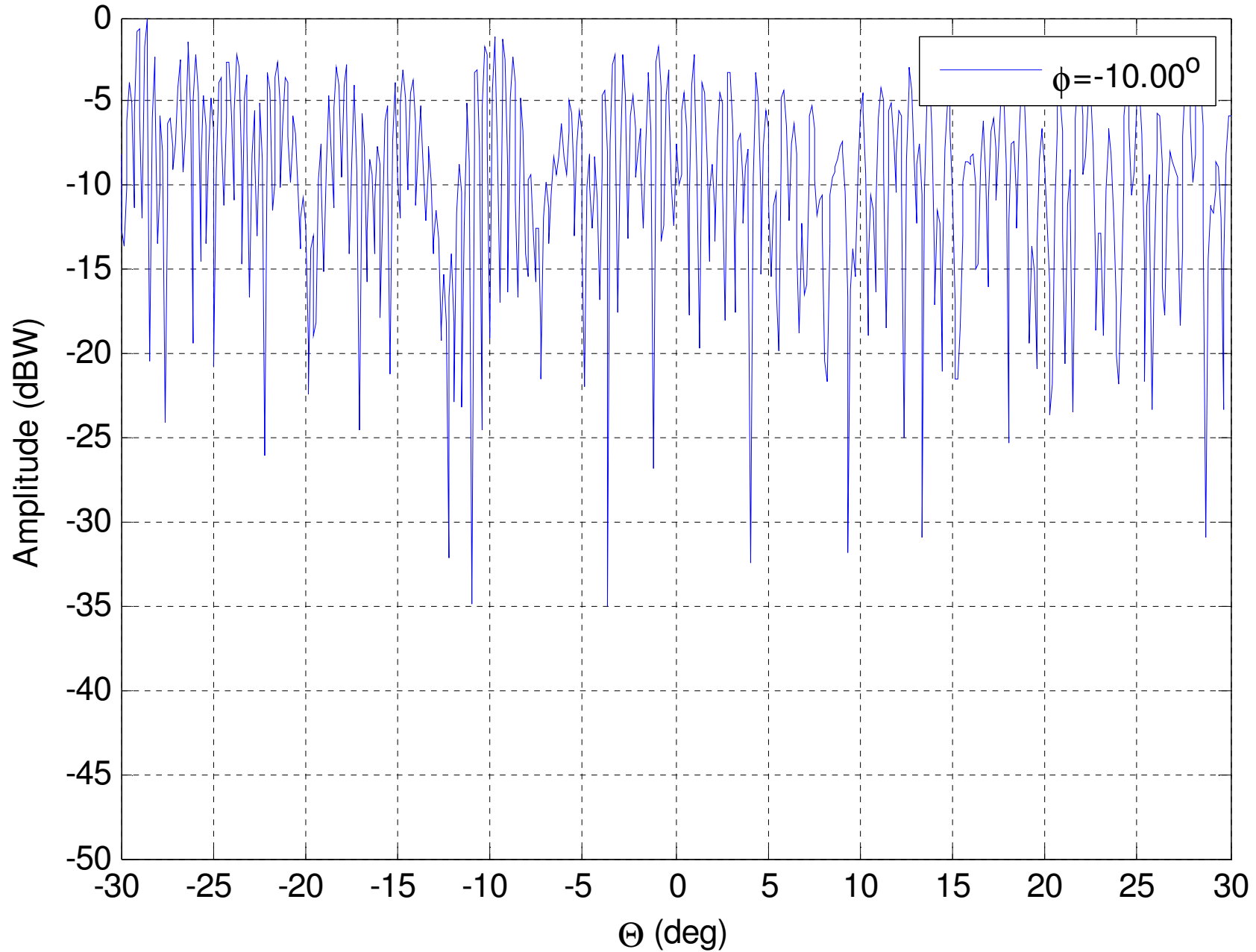
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -8.42 dBW, Date: 14-Dec-2011



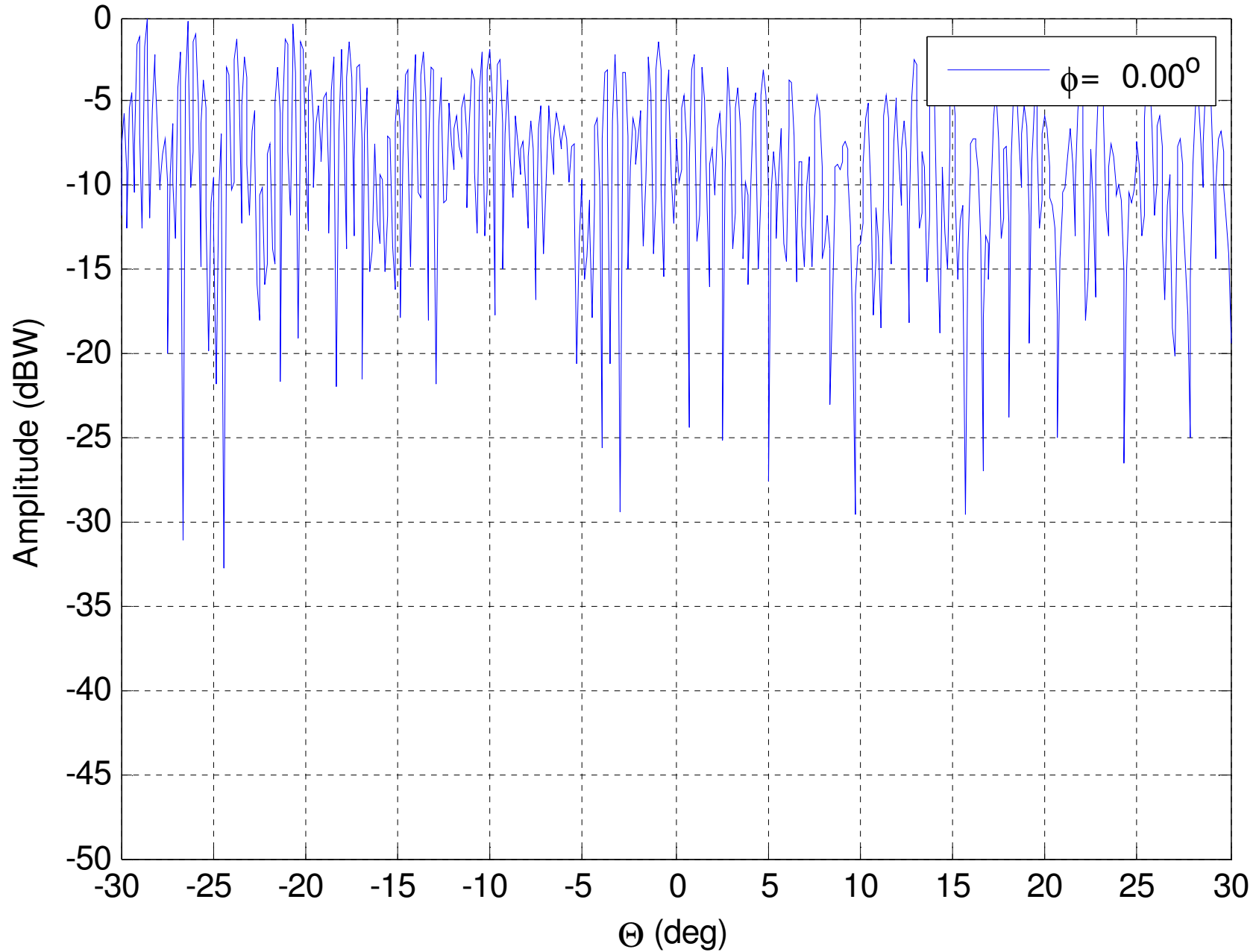
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -10.66 dBW, Date: 14-Dec-2011



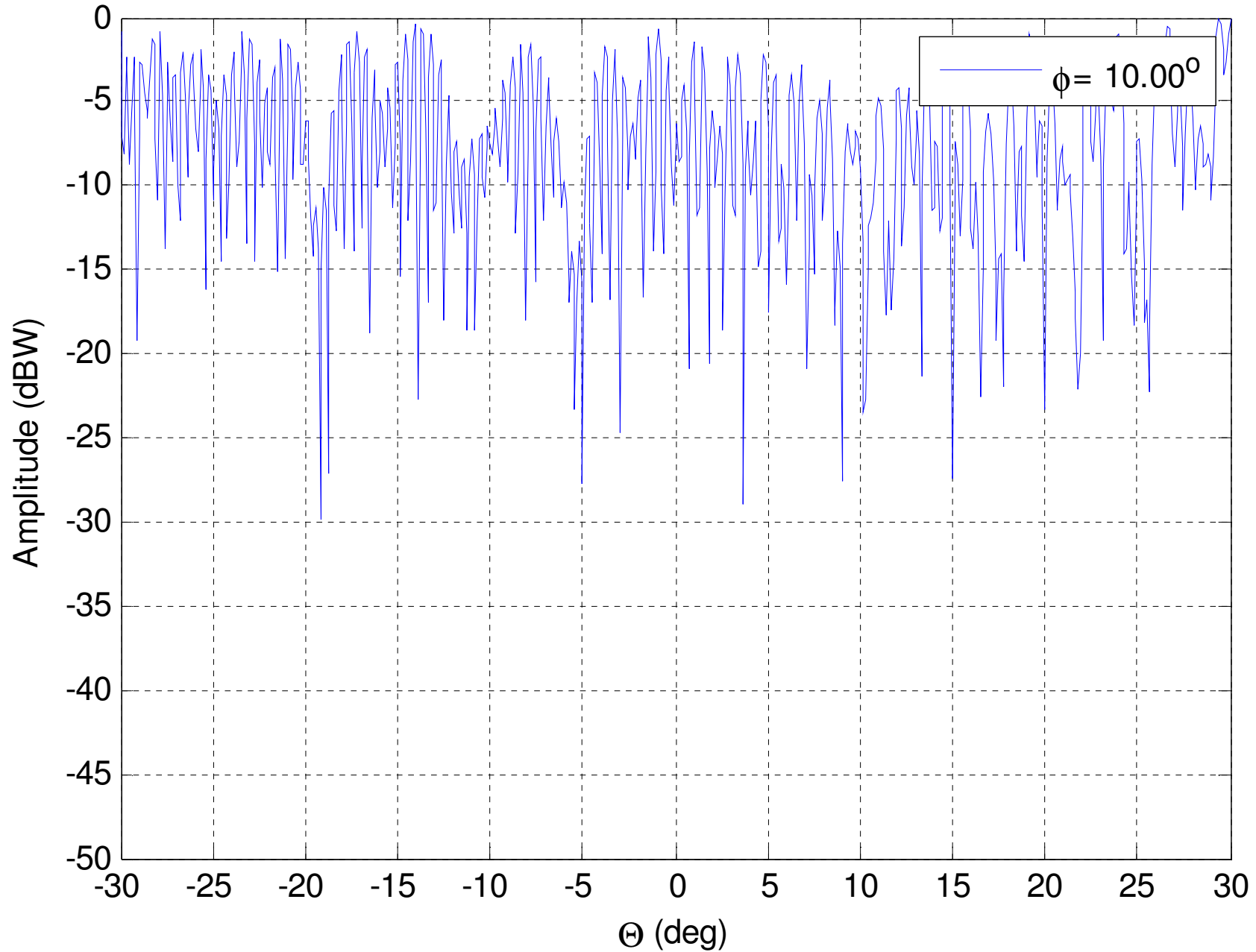
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -10.83 dBW, Date: 14-Dec-2011



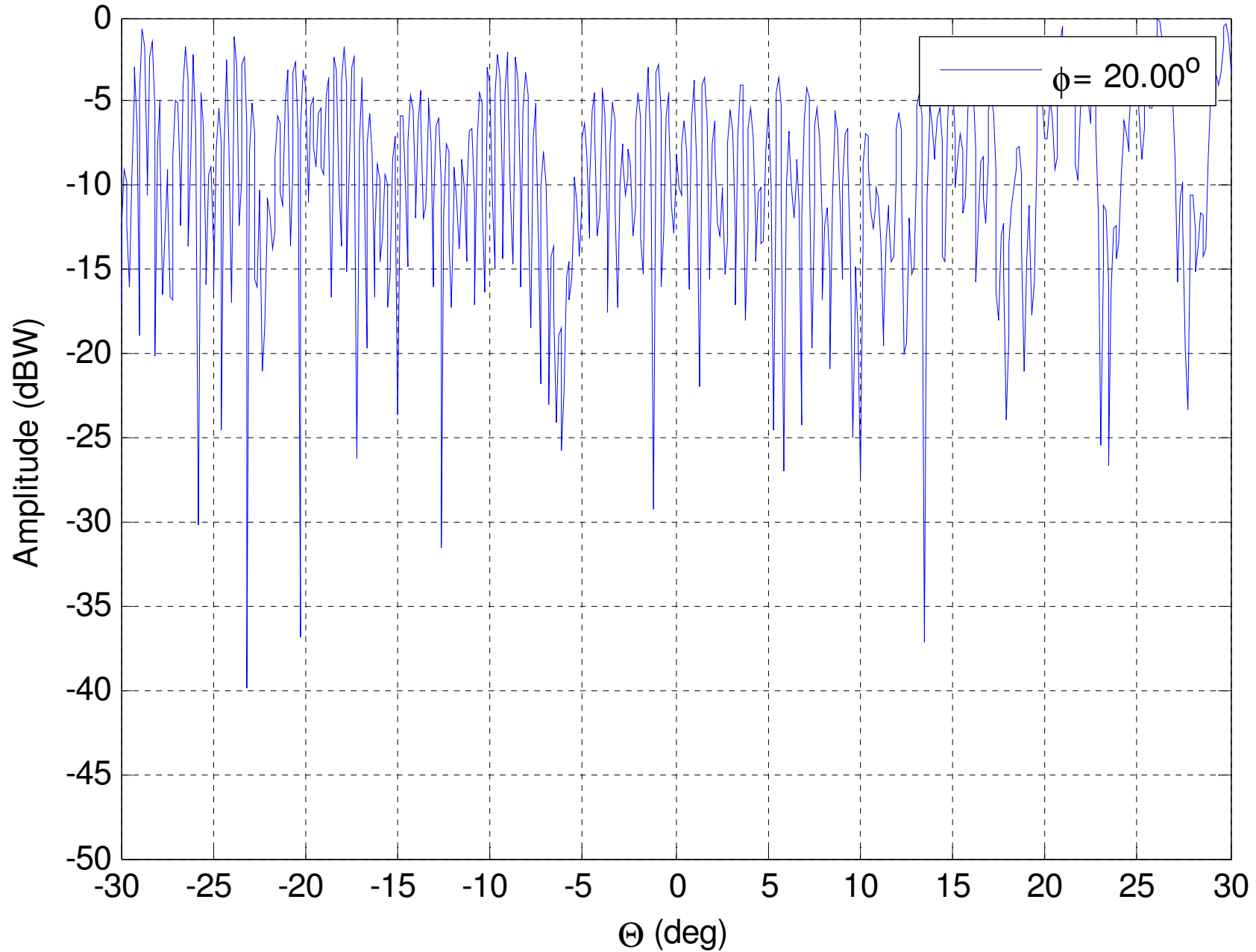
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -11.67 dBW, Date: 14-Dec-2011



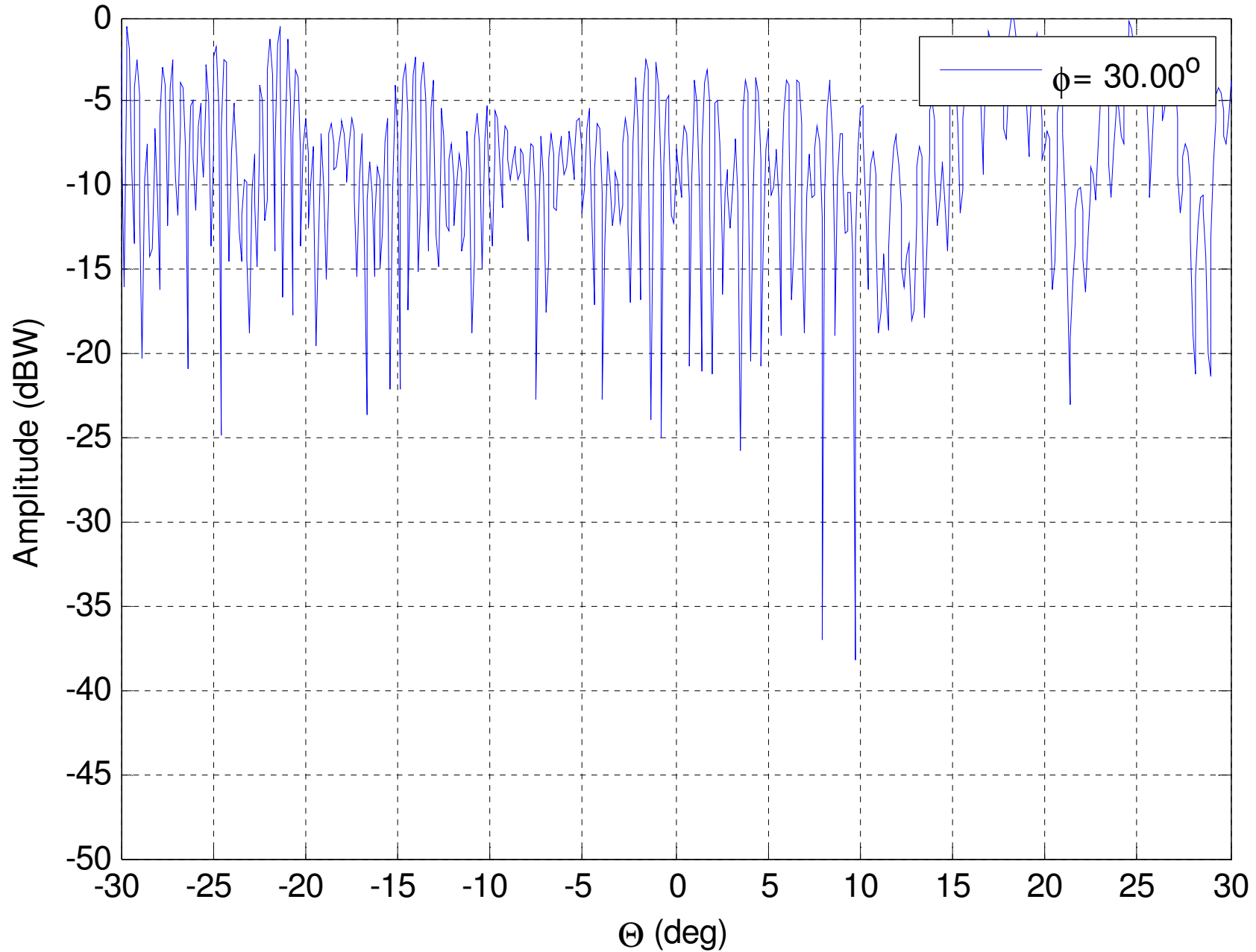
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -9.77 dBW, Date: 14-Dec-2011



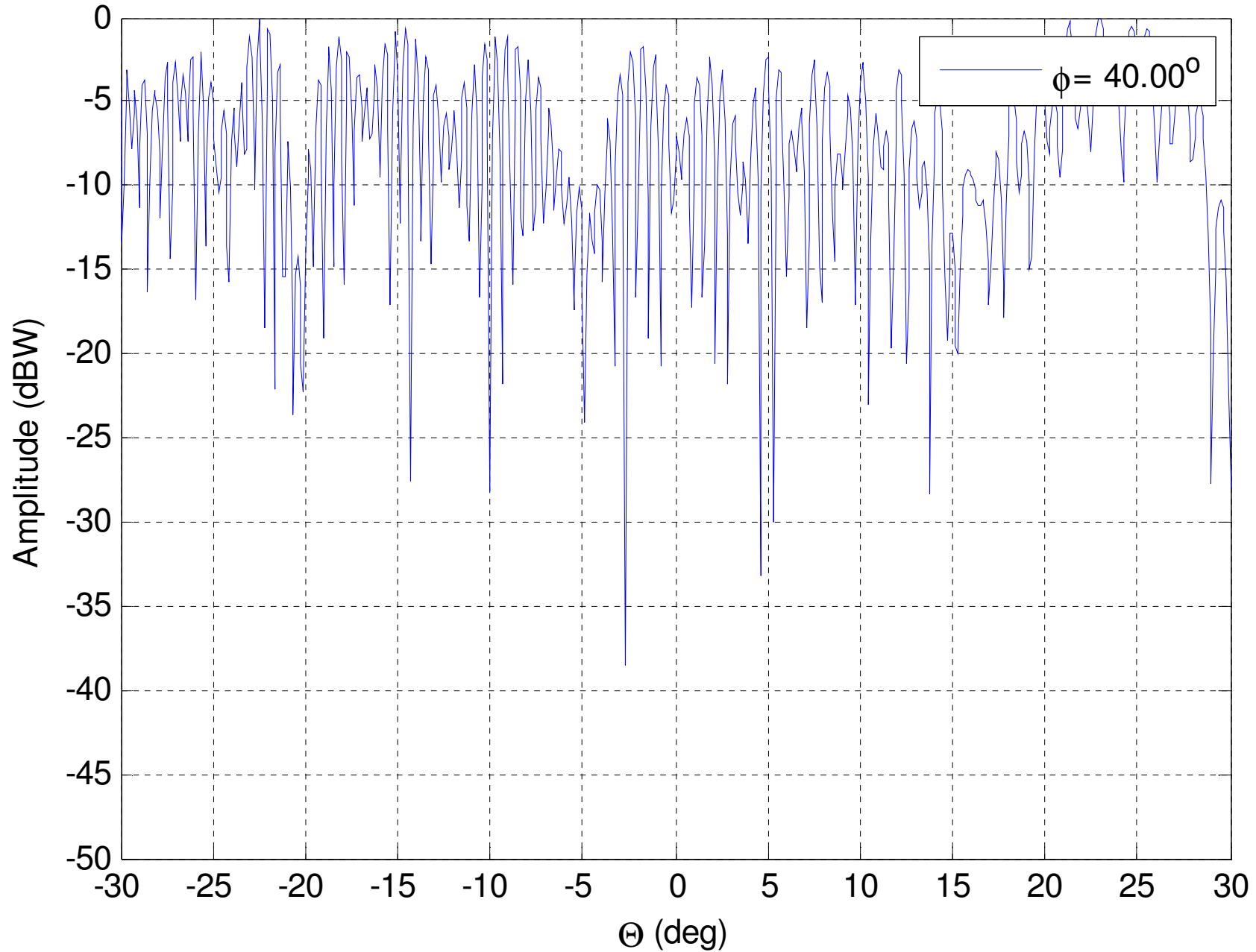
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -9.97 dBW, Date: 14-Dec-2011



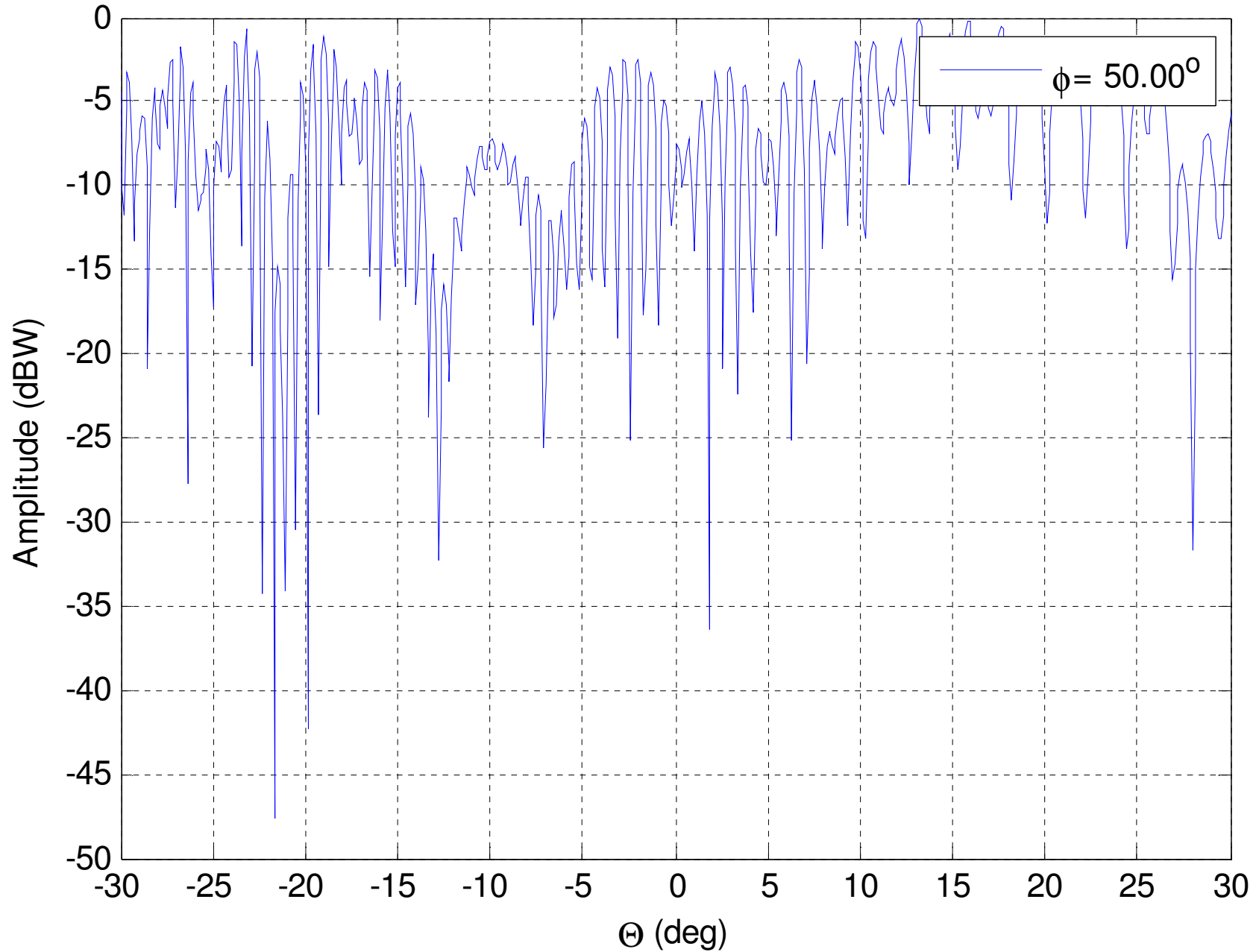
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -10.75 dBW, Date: 14-Dec-2011



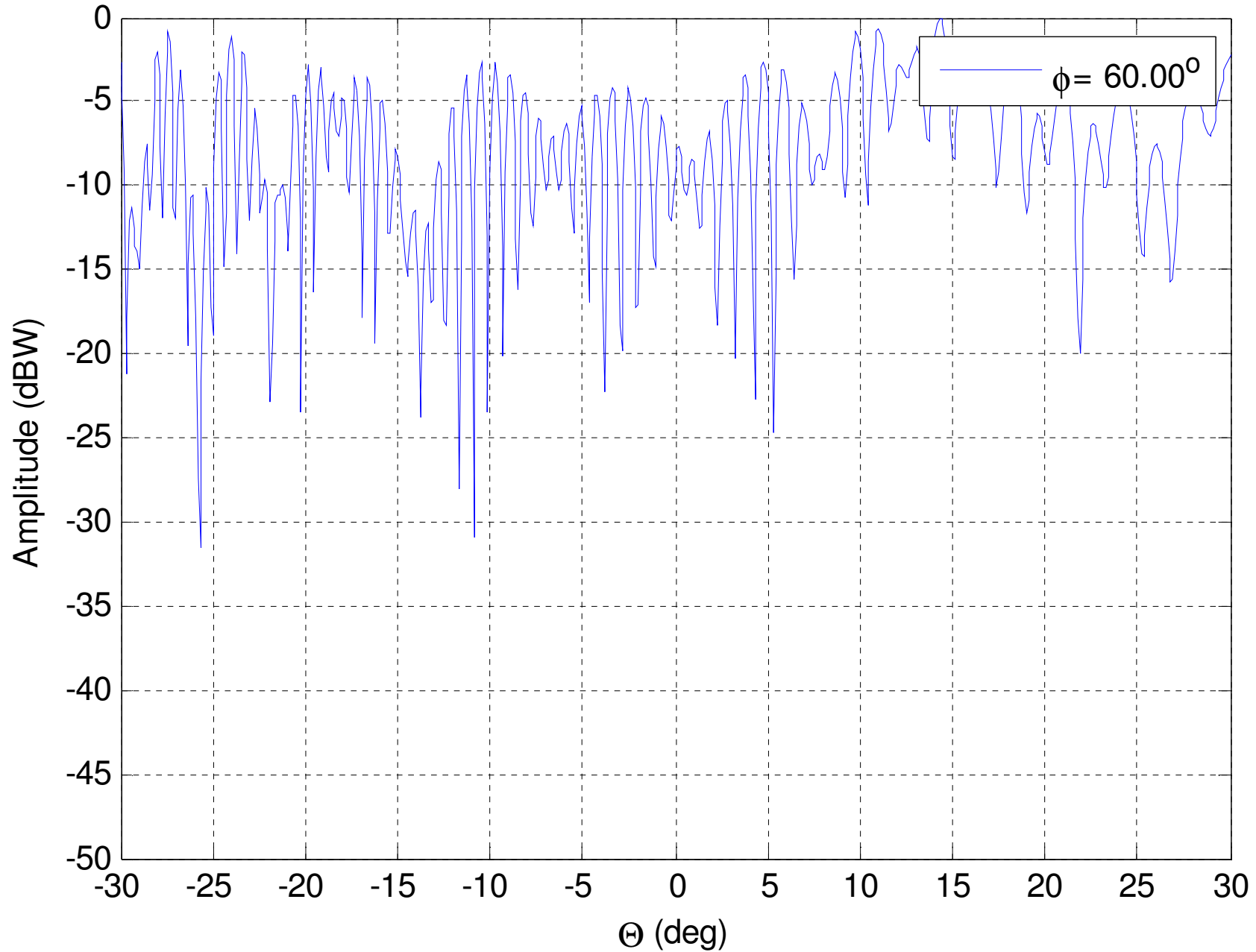
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.23 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

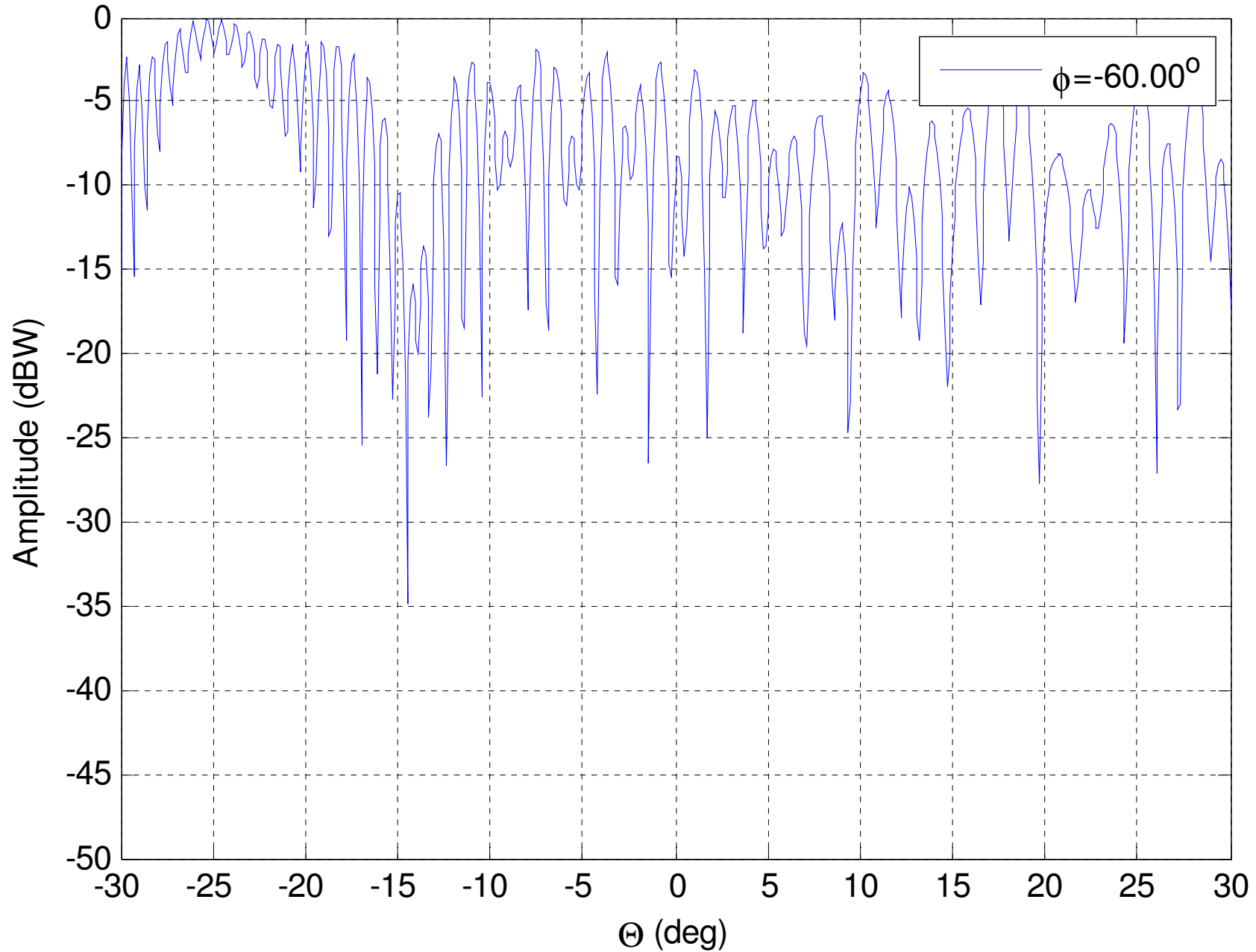
Input file: tx-17.3-rhcp-60.cut, Peak: -9.84 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

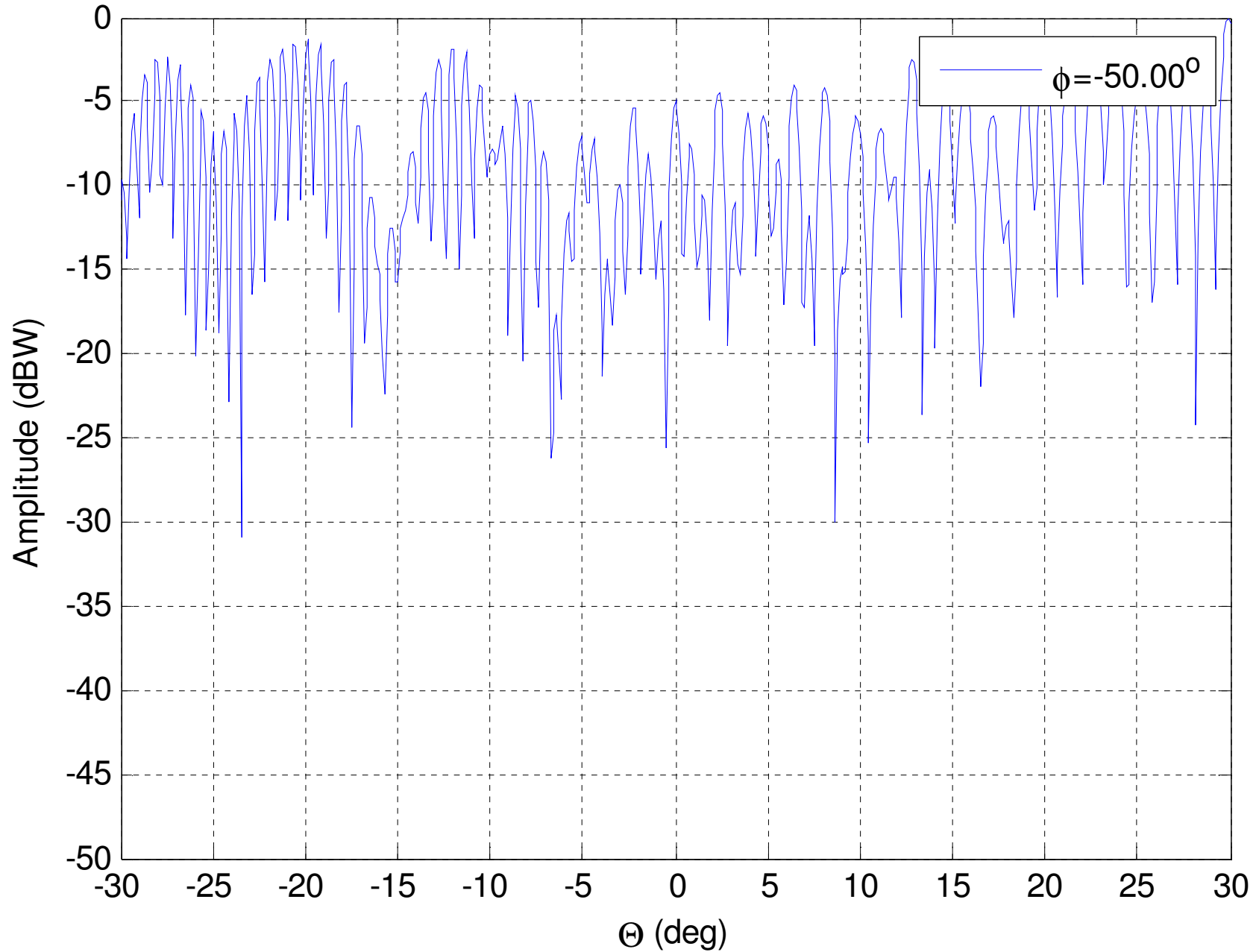
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -10.27 dBW, Date: 14-Dec-2011



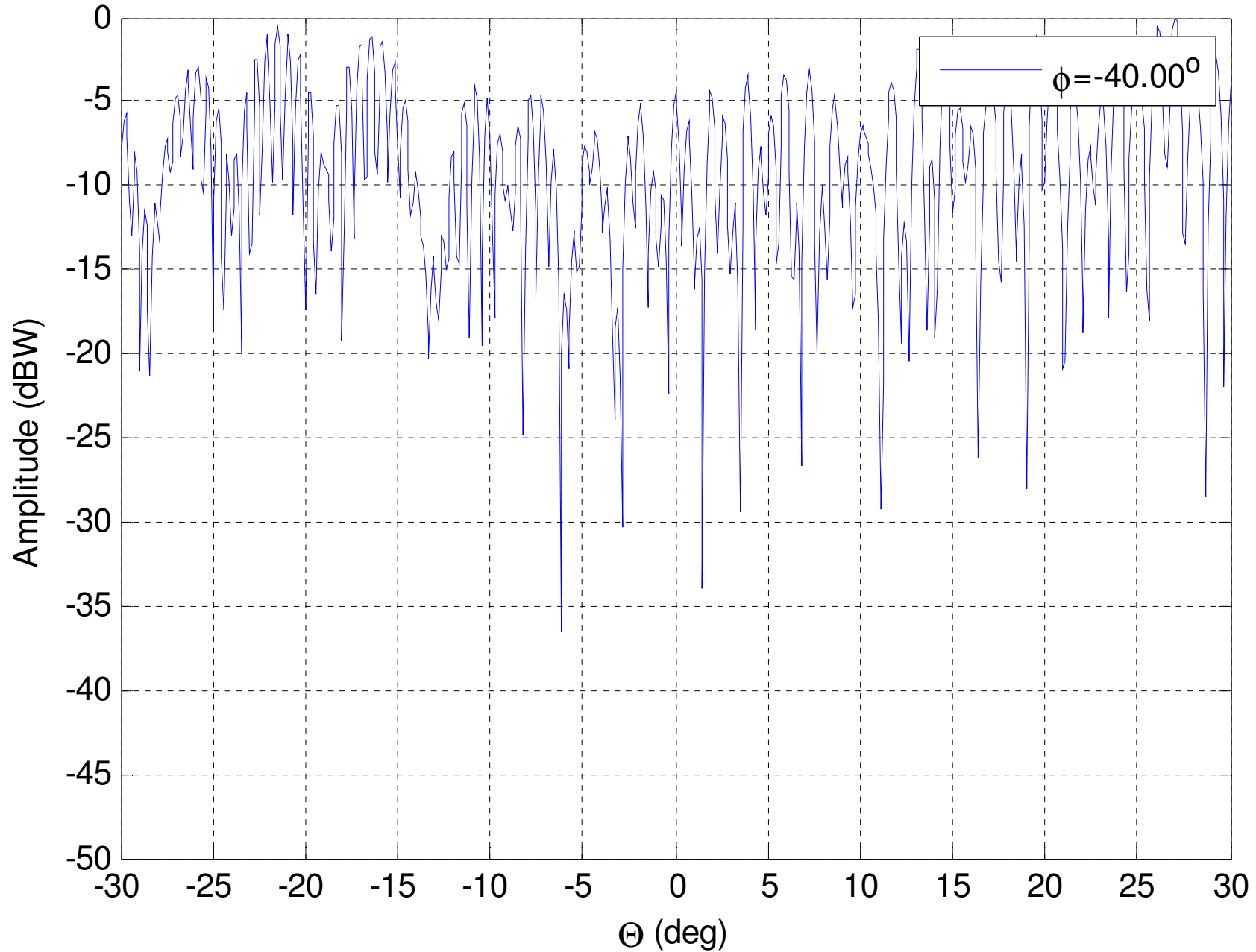
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -8.41 dBW, Date: 14-Dec-2011



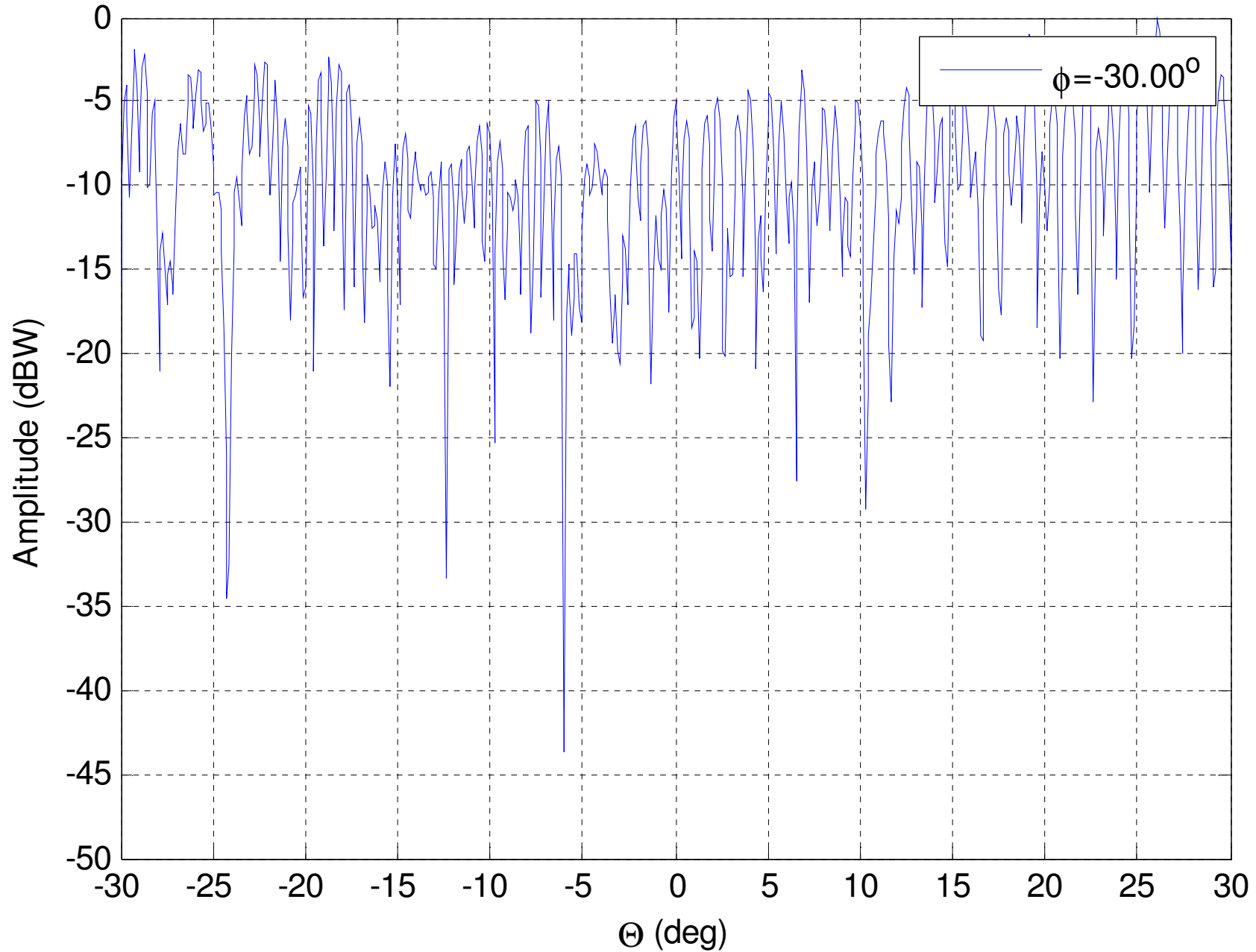
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -8.87 dBW, Date: 14-Dec-2011



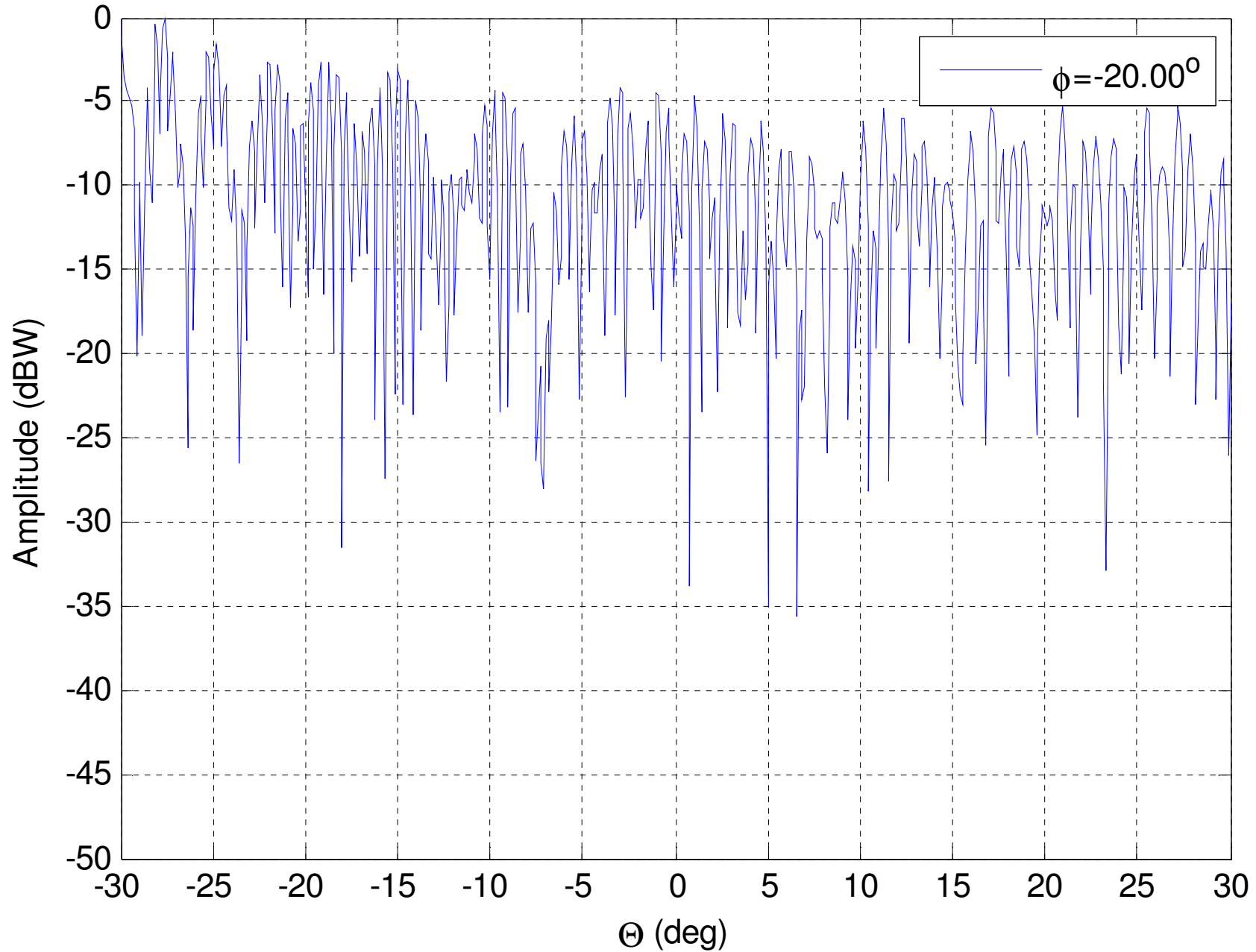
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -8.35 dBW, Date: 14-Dec-2011



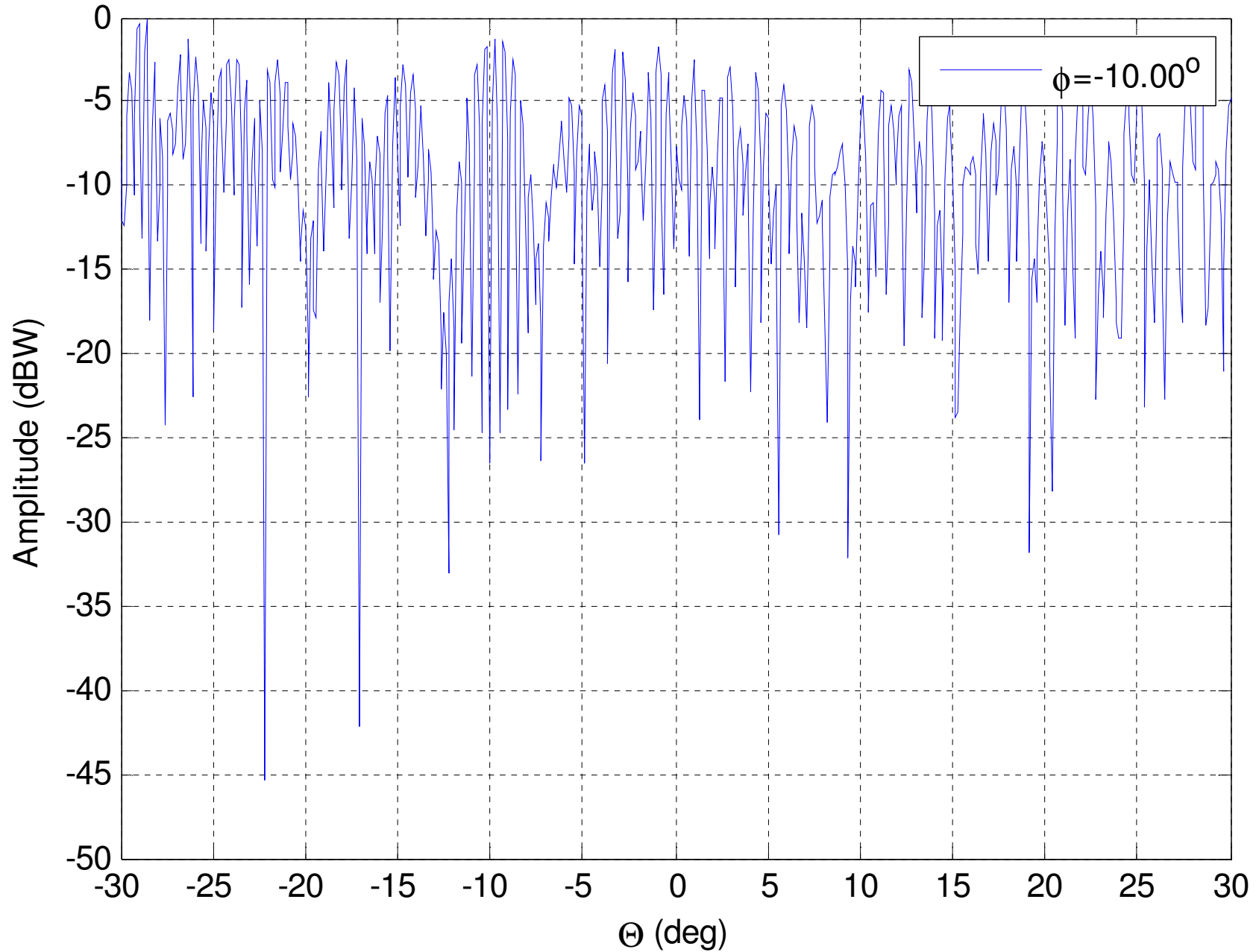
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -8.32 dBW, Date: 14-Dec-2011



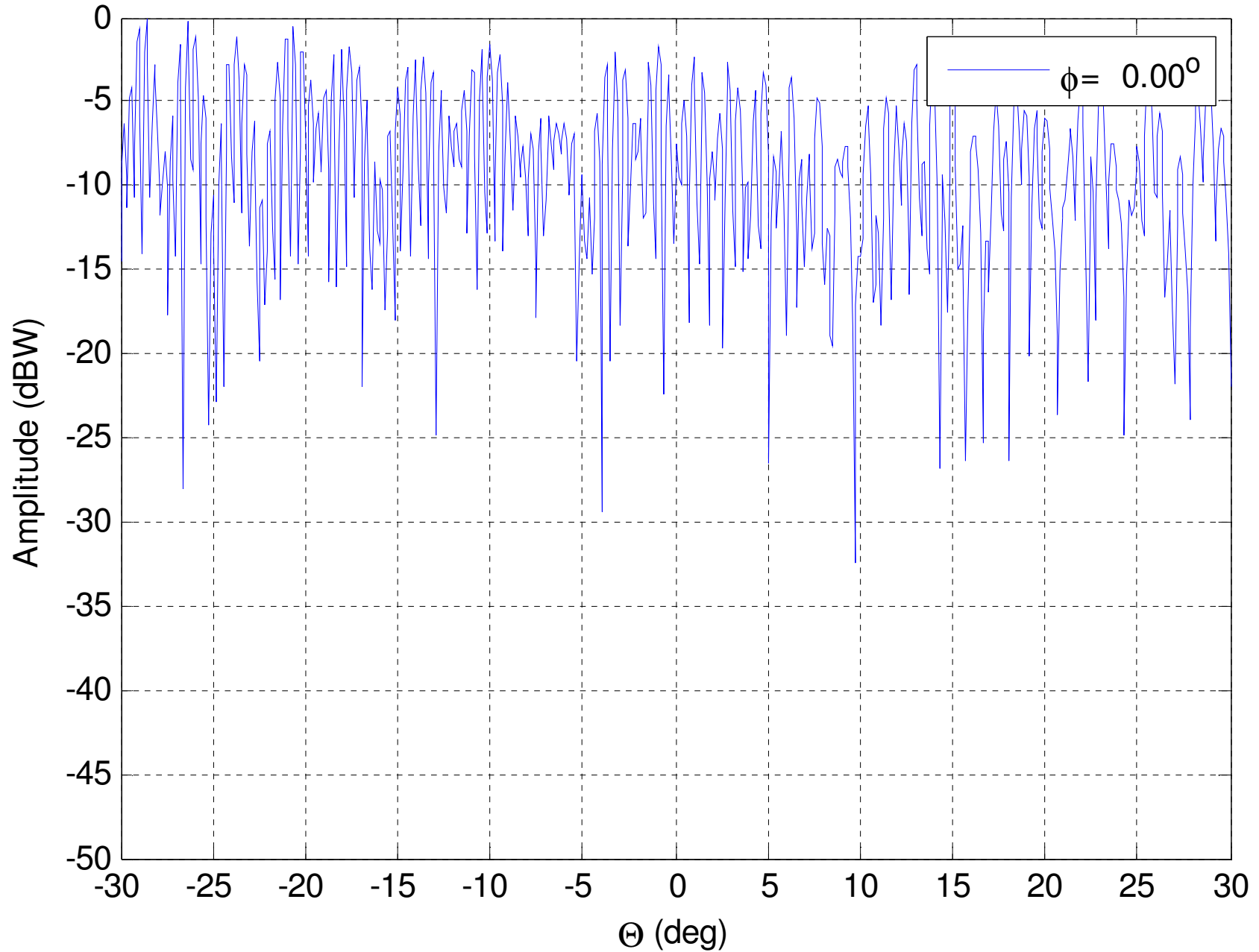
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -10.65 dBW, Date: 14-Dec-2011



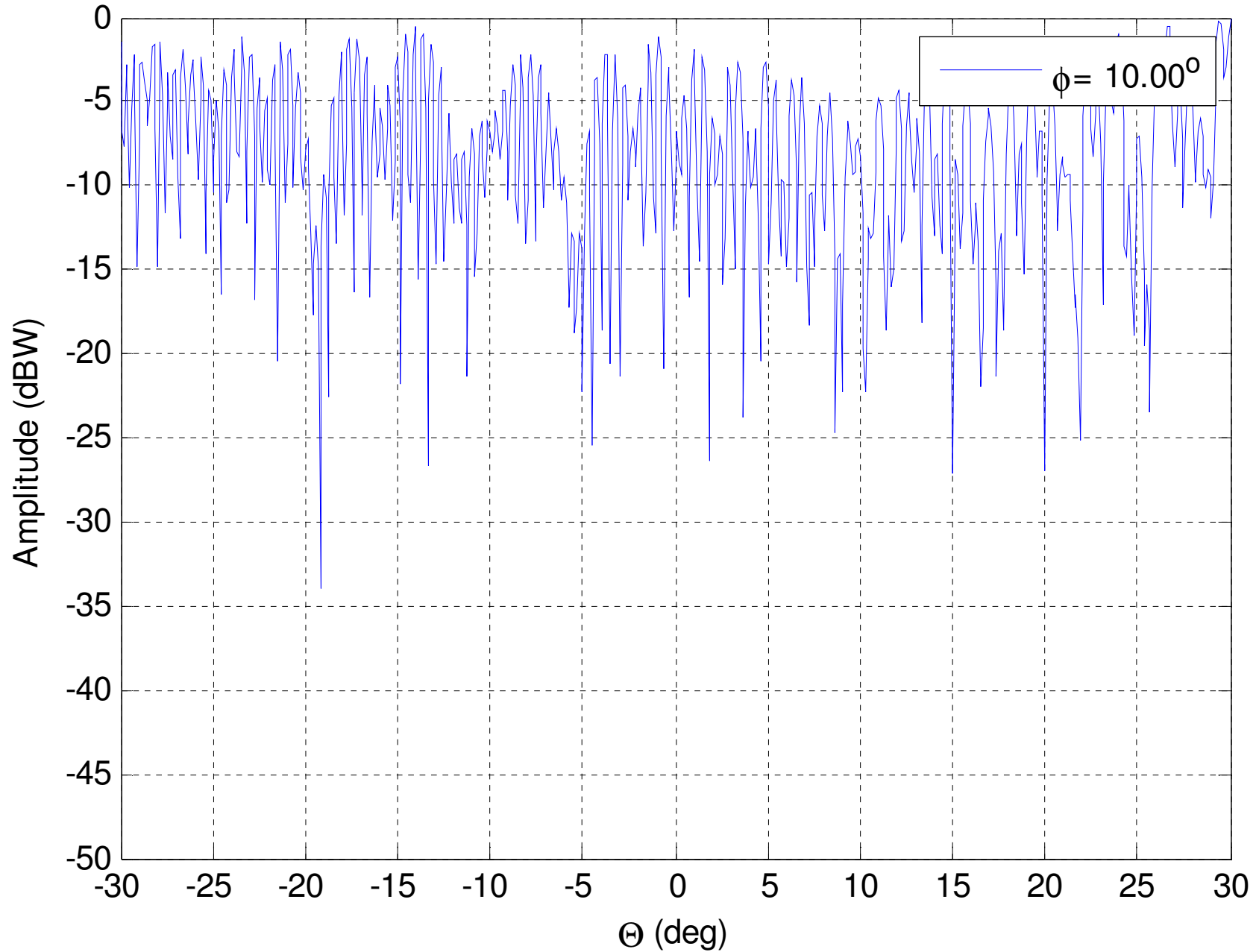
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -10.74 dBW, Date: 14-Dec-2011



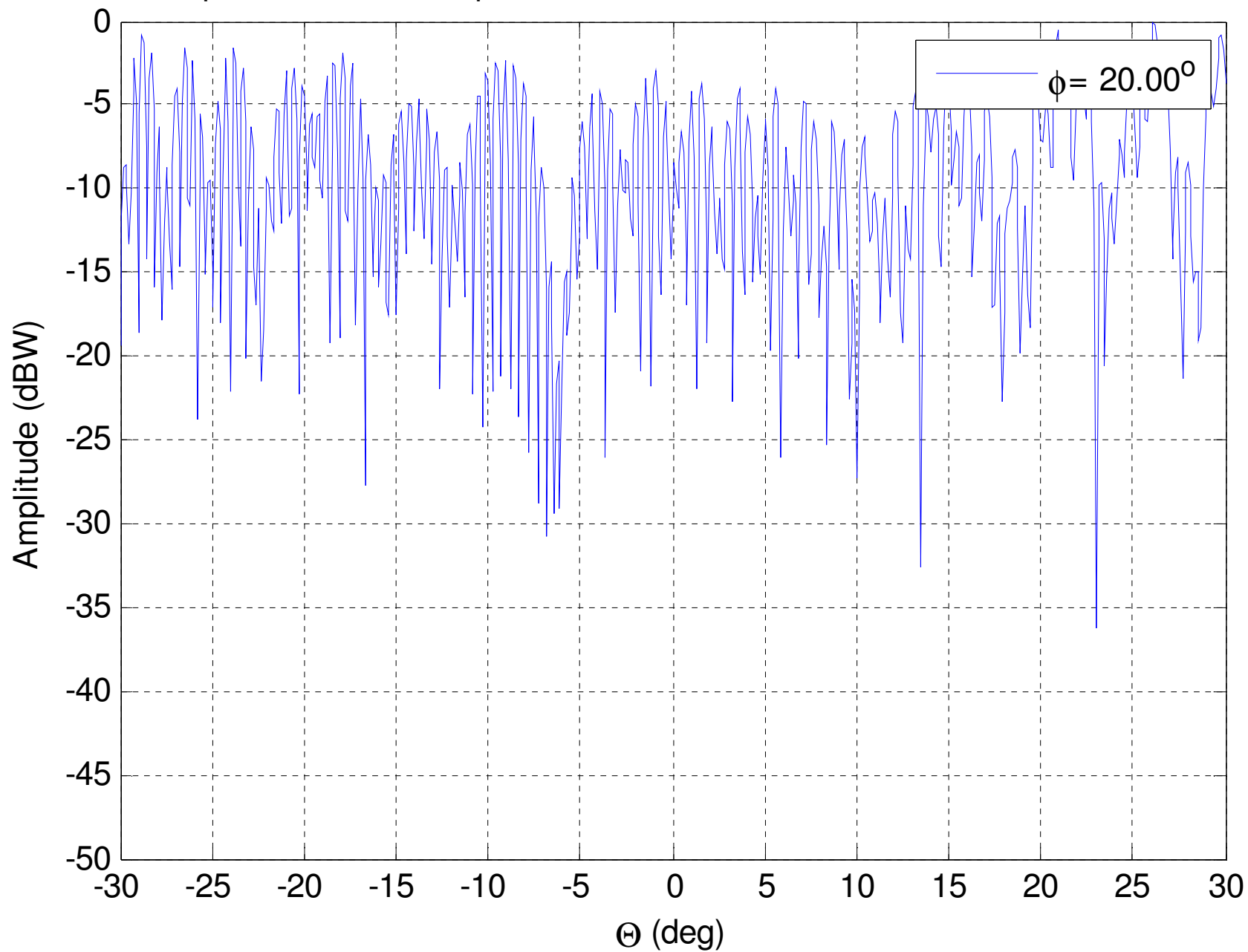
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -11.35 dBW, Date: 14-Dec-2011



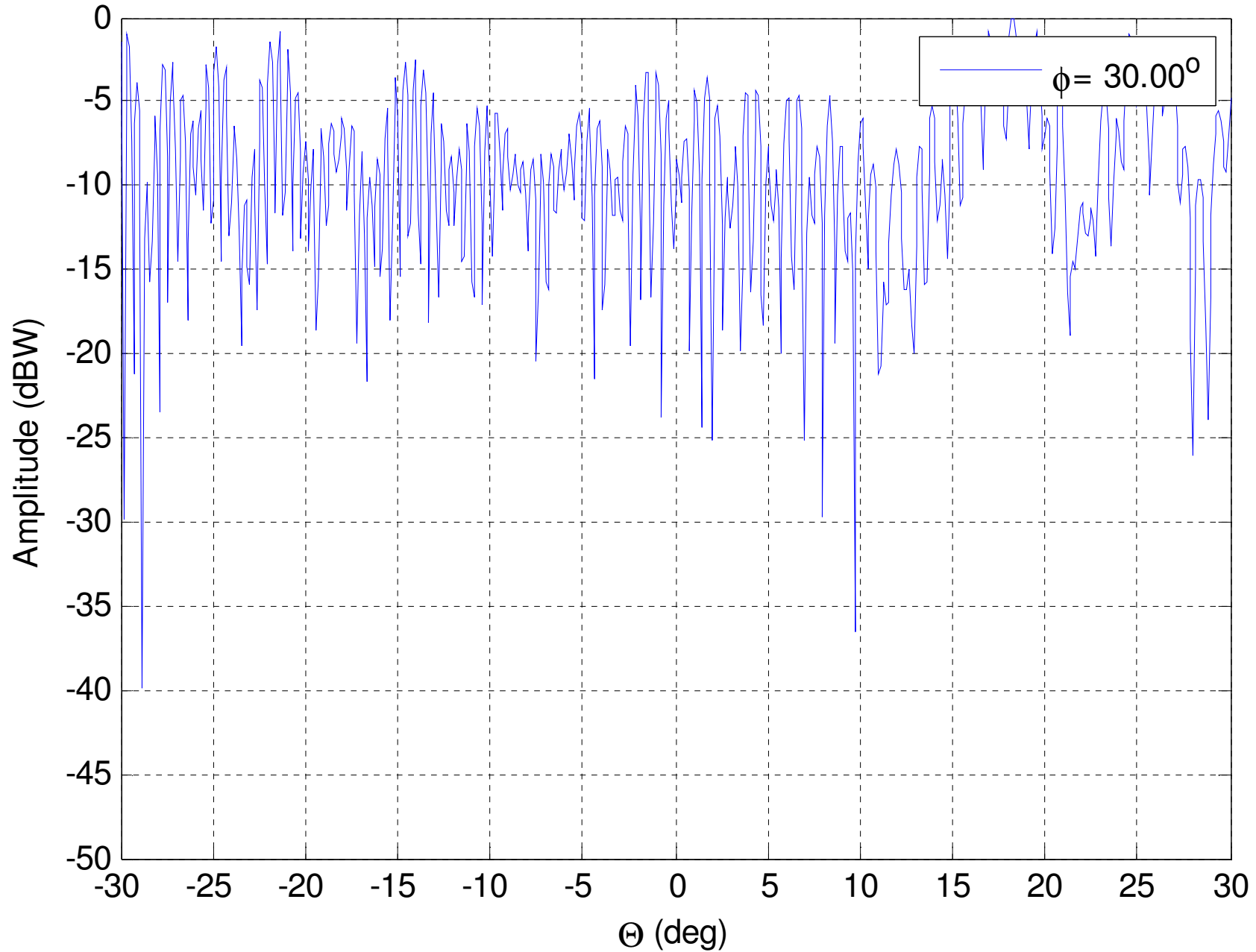
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -9.62 dBW, Date: 14-Dec-2011



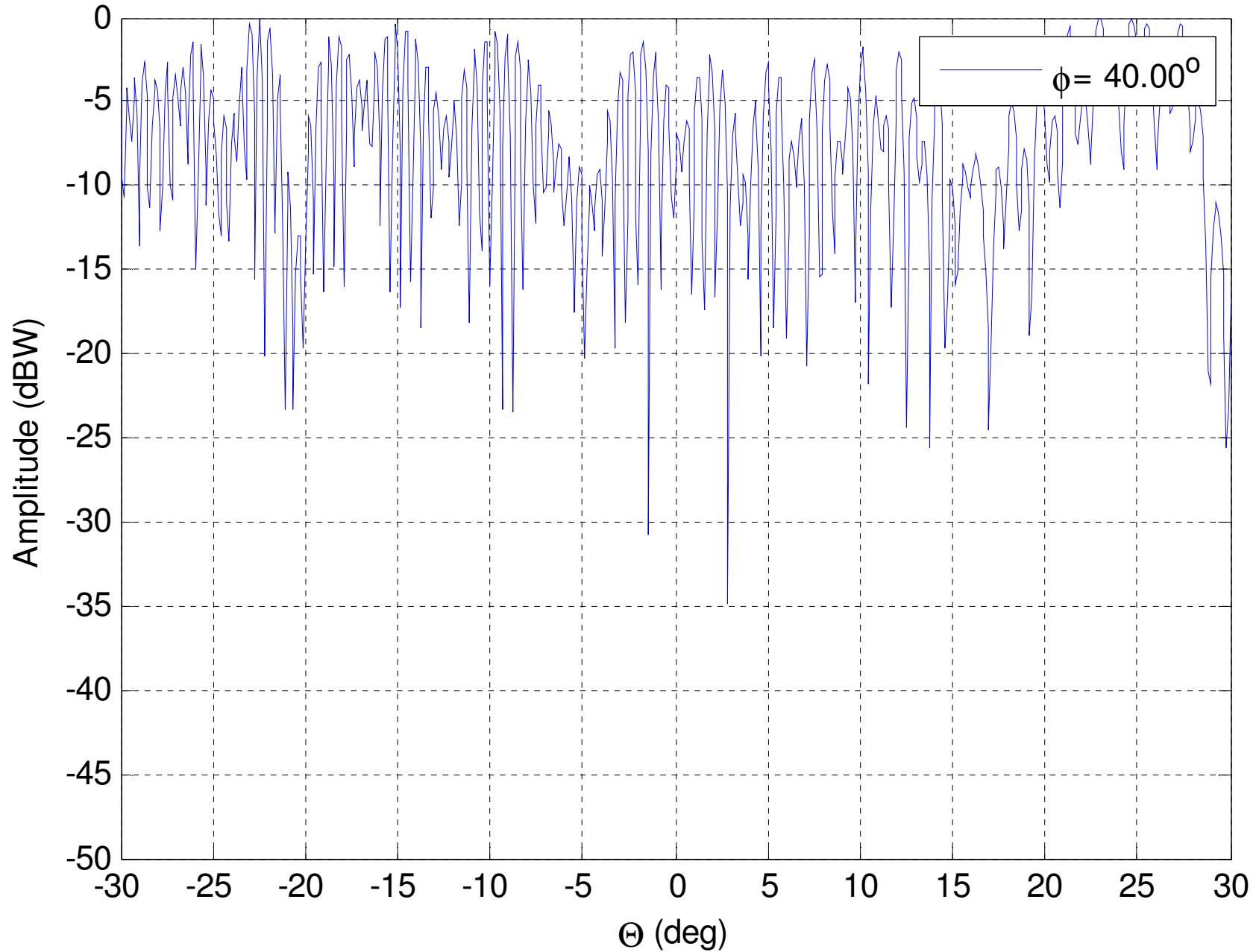
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -9.63 dBW, Date: 14-Dec-2011



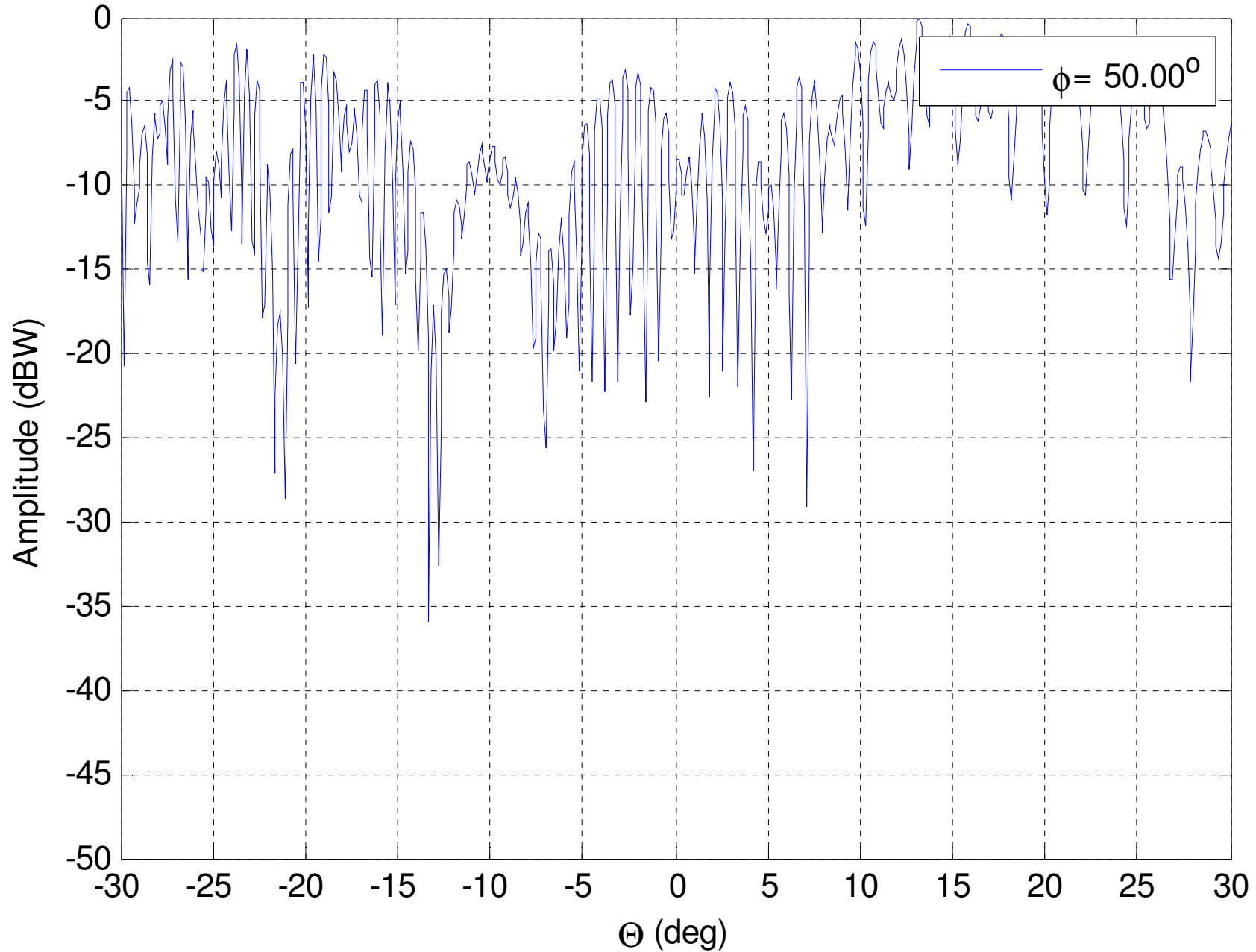
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.06 dBW, Date: 14-Dec-2011



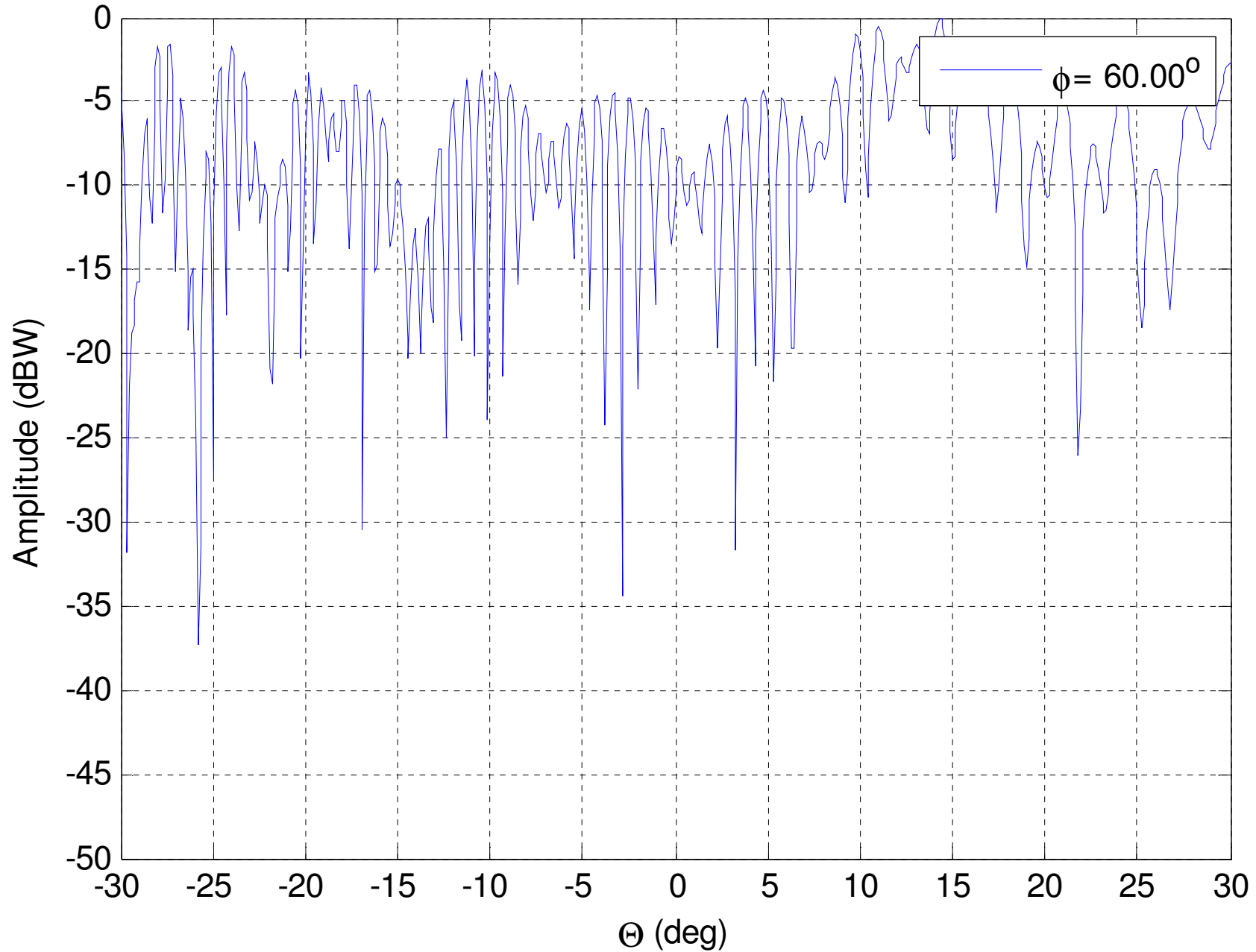
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -9.58 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

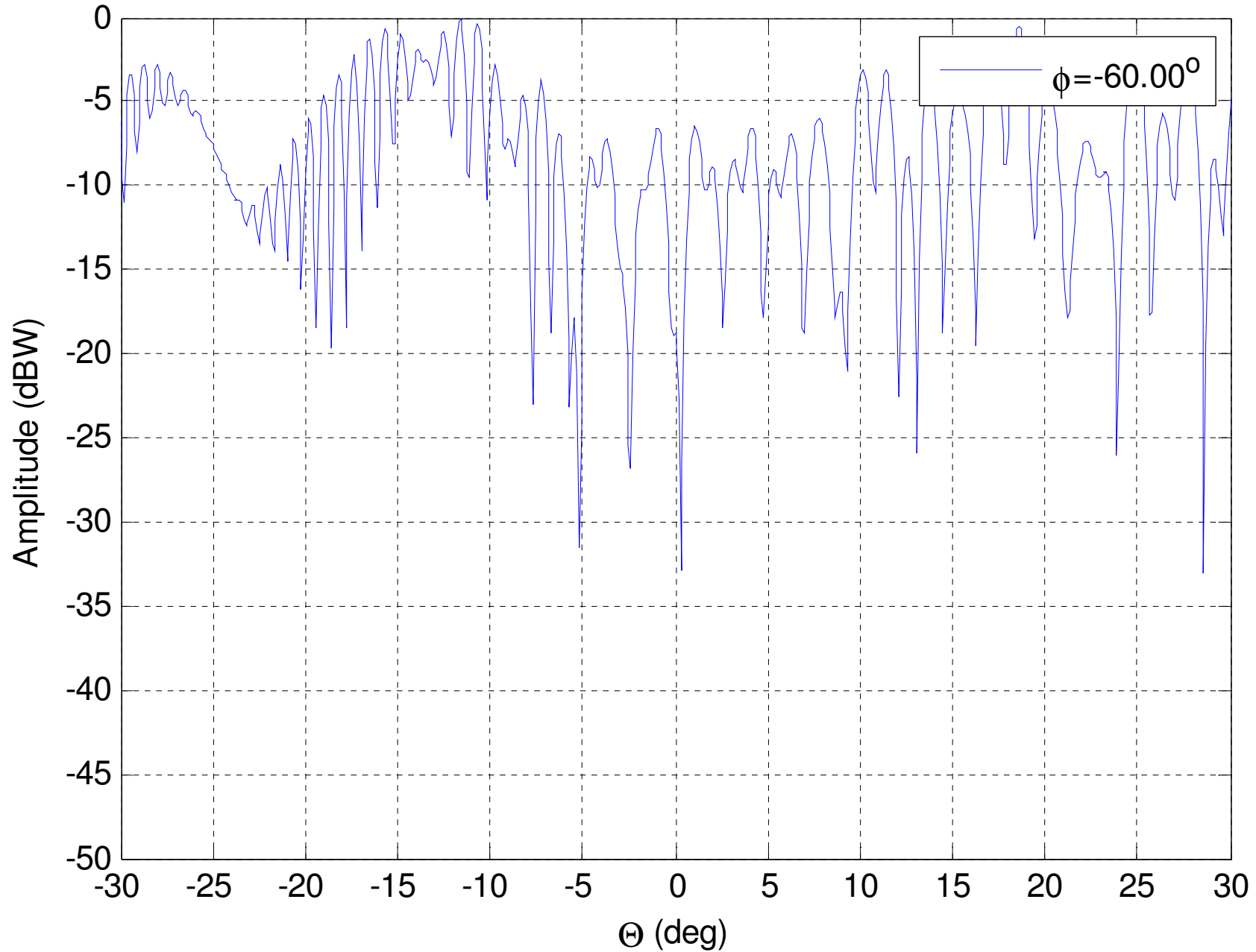
Input file: tx-17.3-lhcp-60.cut, Peak: -9.39 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

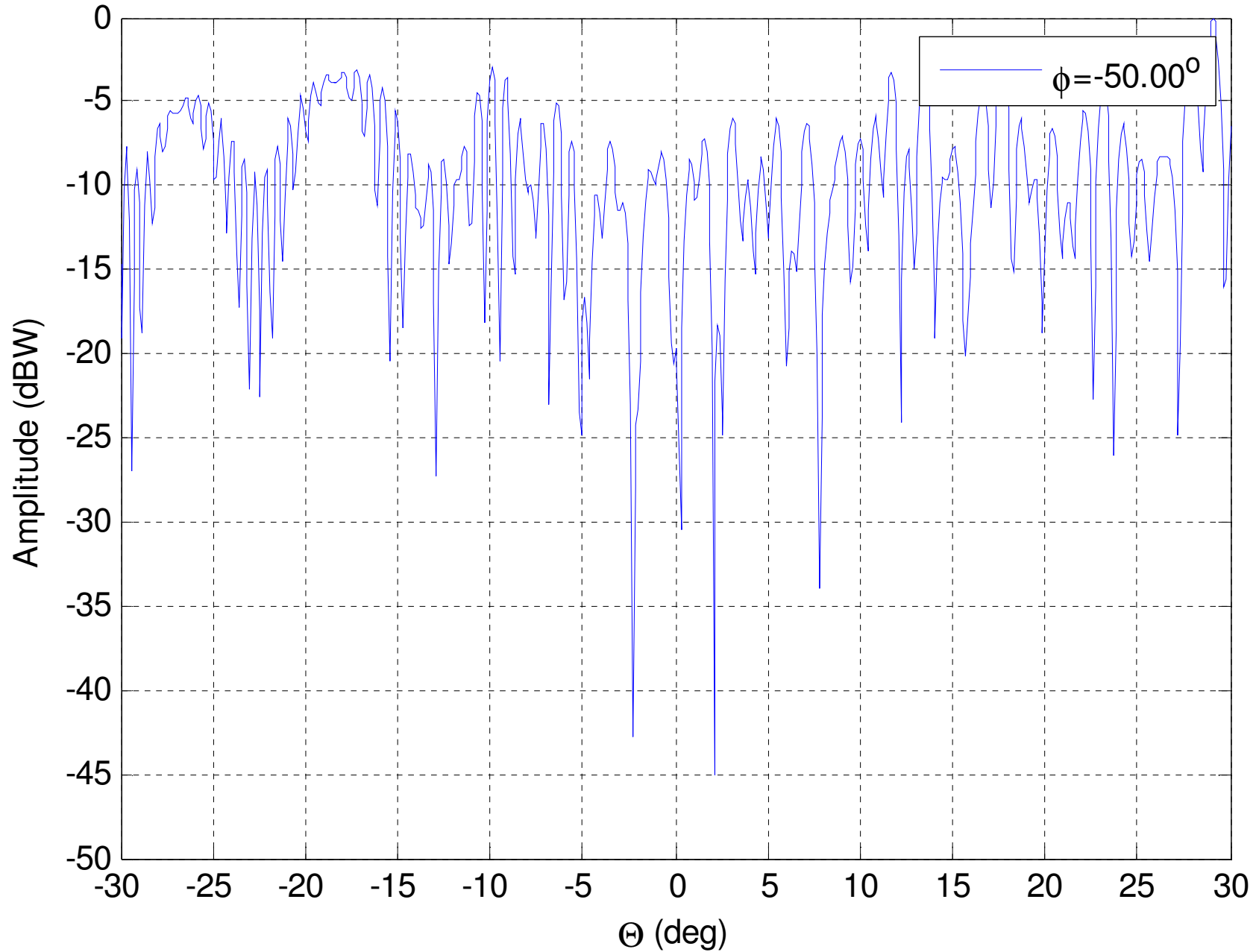
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -9.68 dBW, Date: 14-Dec-2011



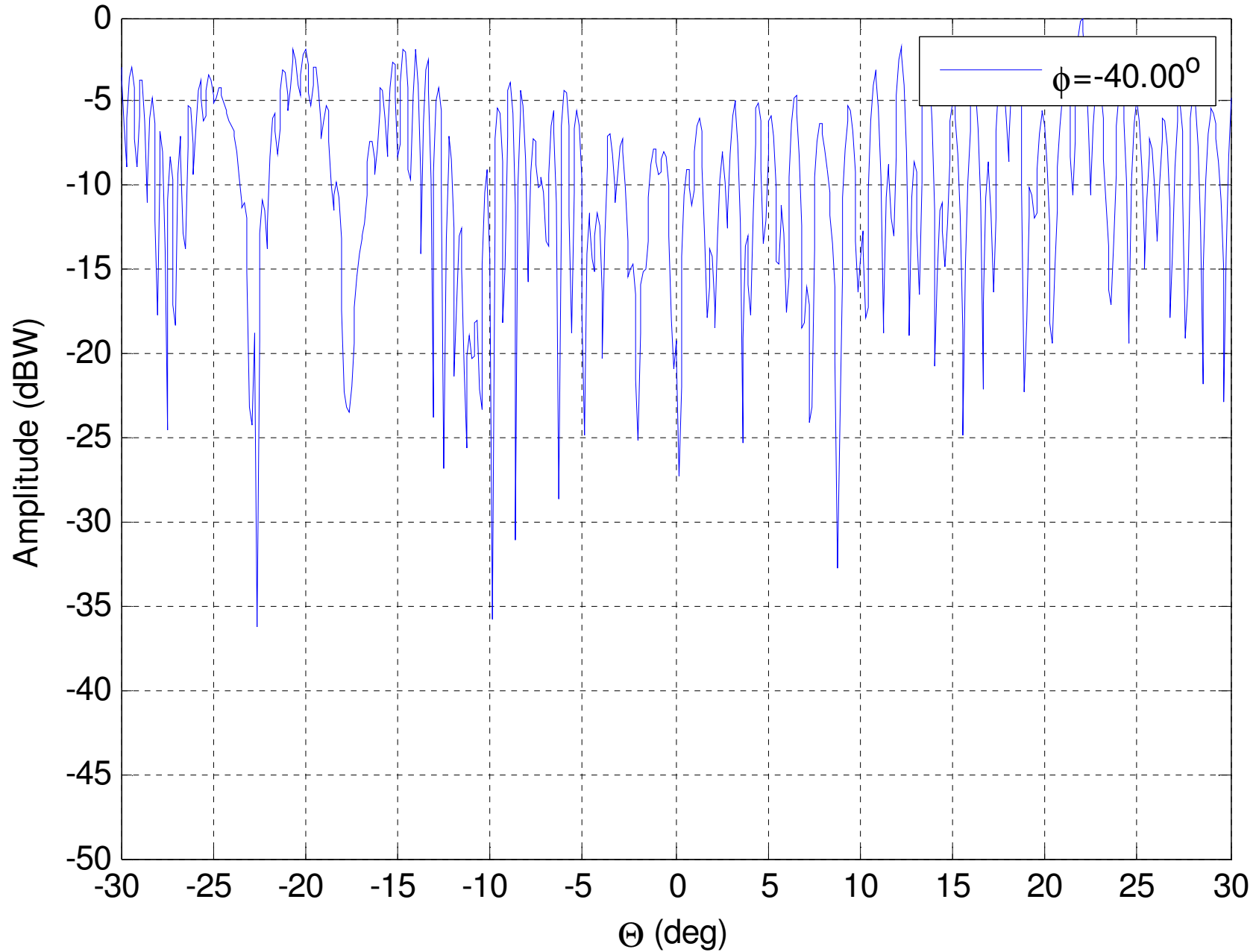
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.69 dBW, Date: 14-Dec-2011



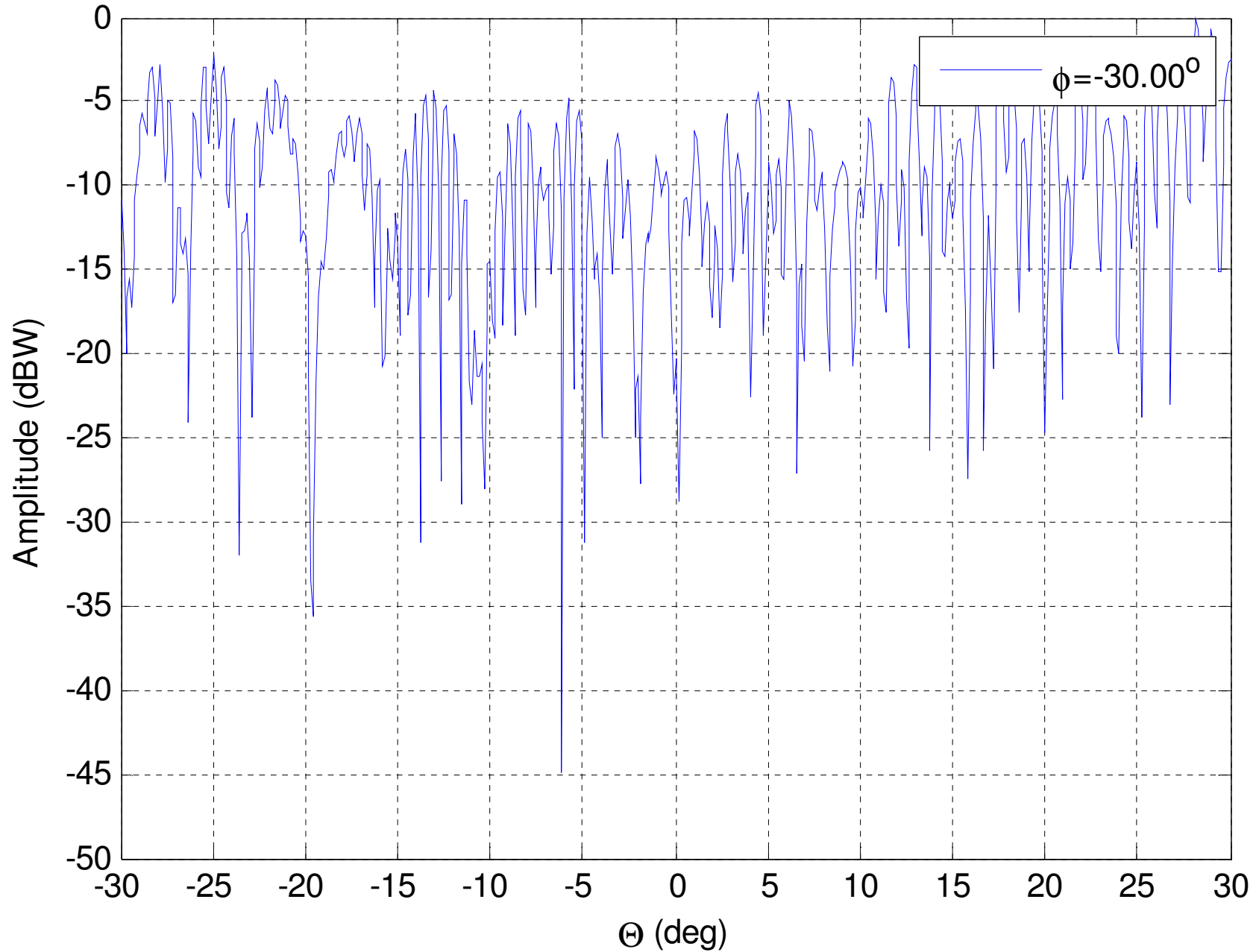
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.14 dBW, Date: 14-Dec-2011



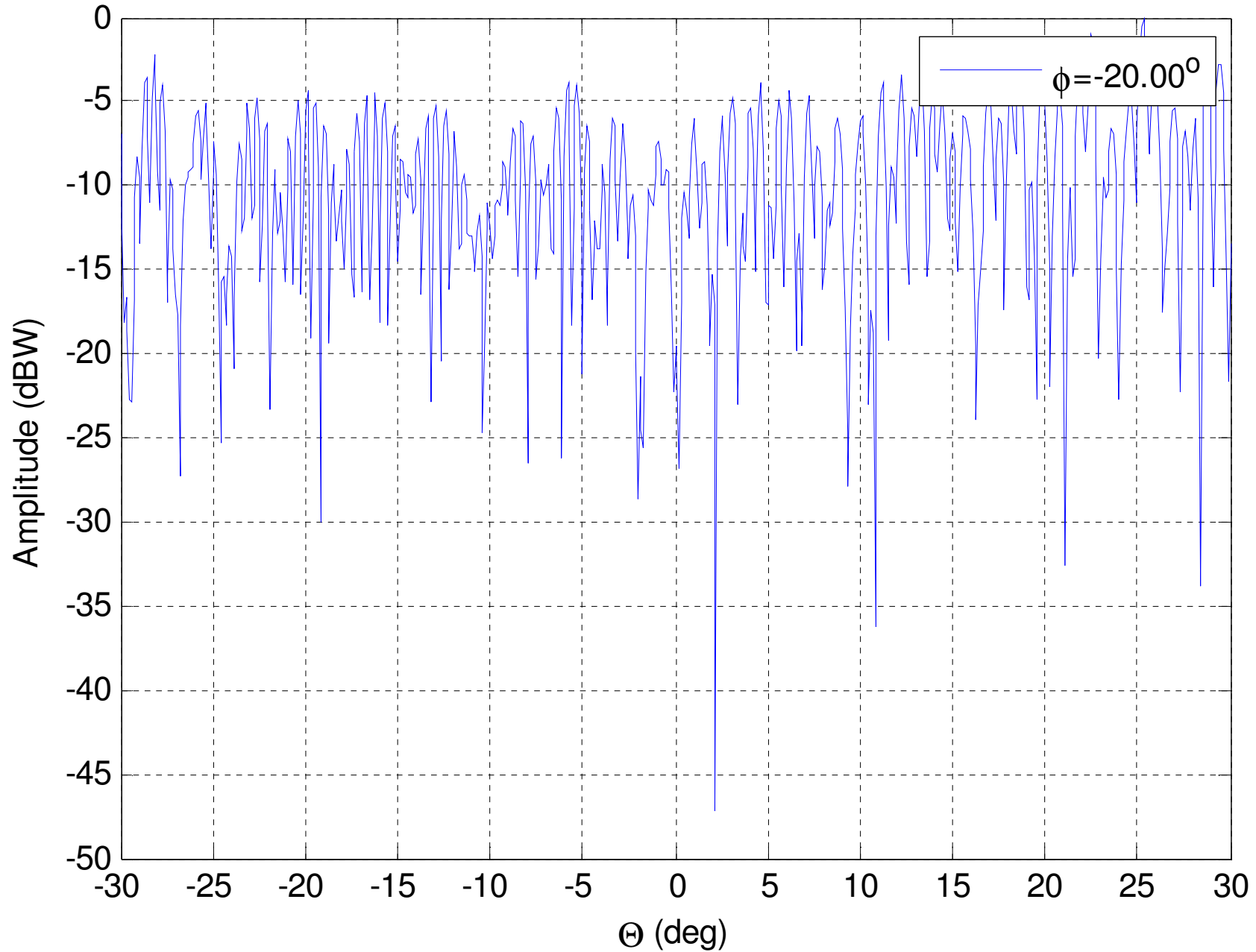
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -8.16 dBW, Date: 14-Dec-2011



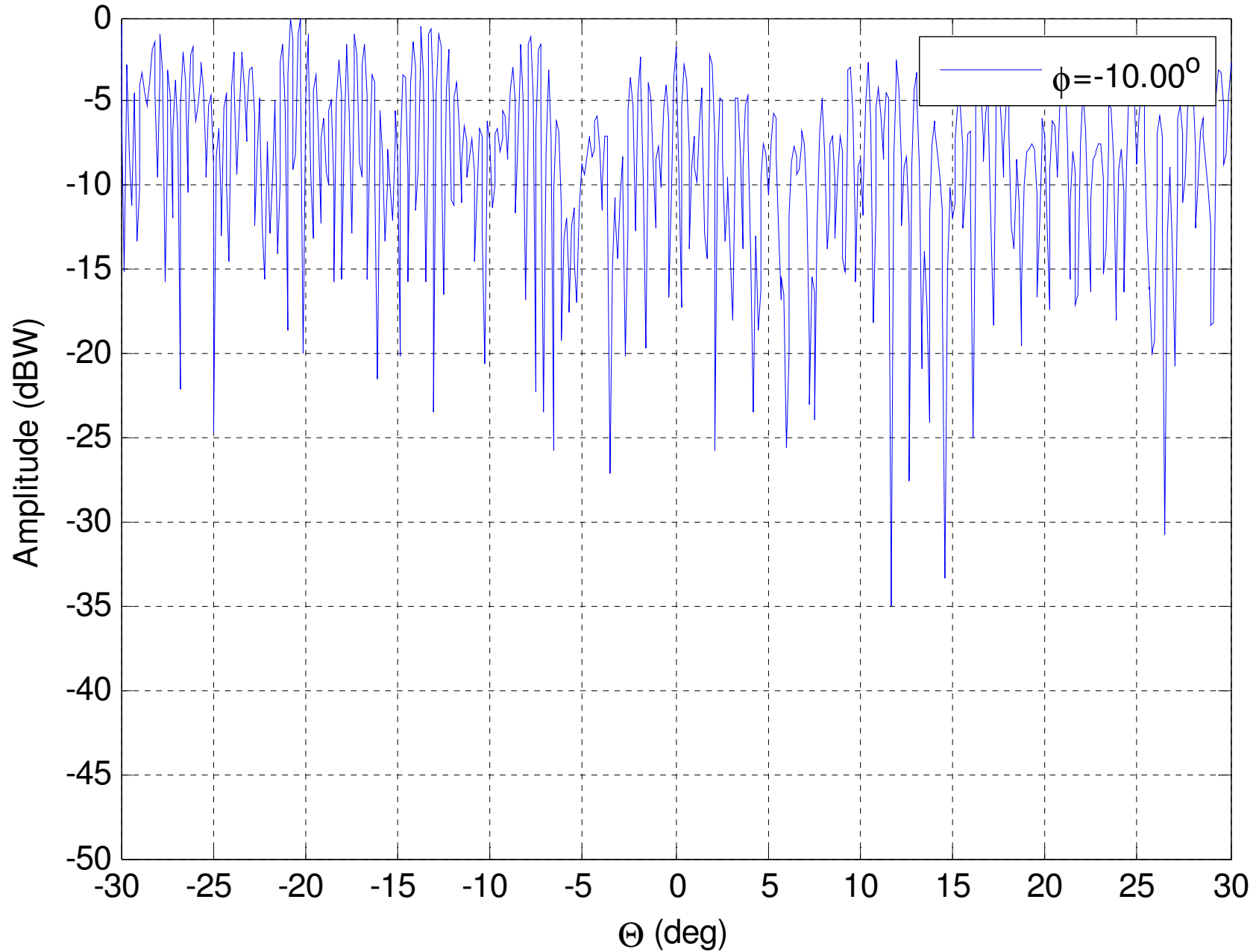
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -8.89 dBW, Date: 14-Dec-2011



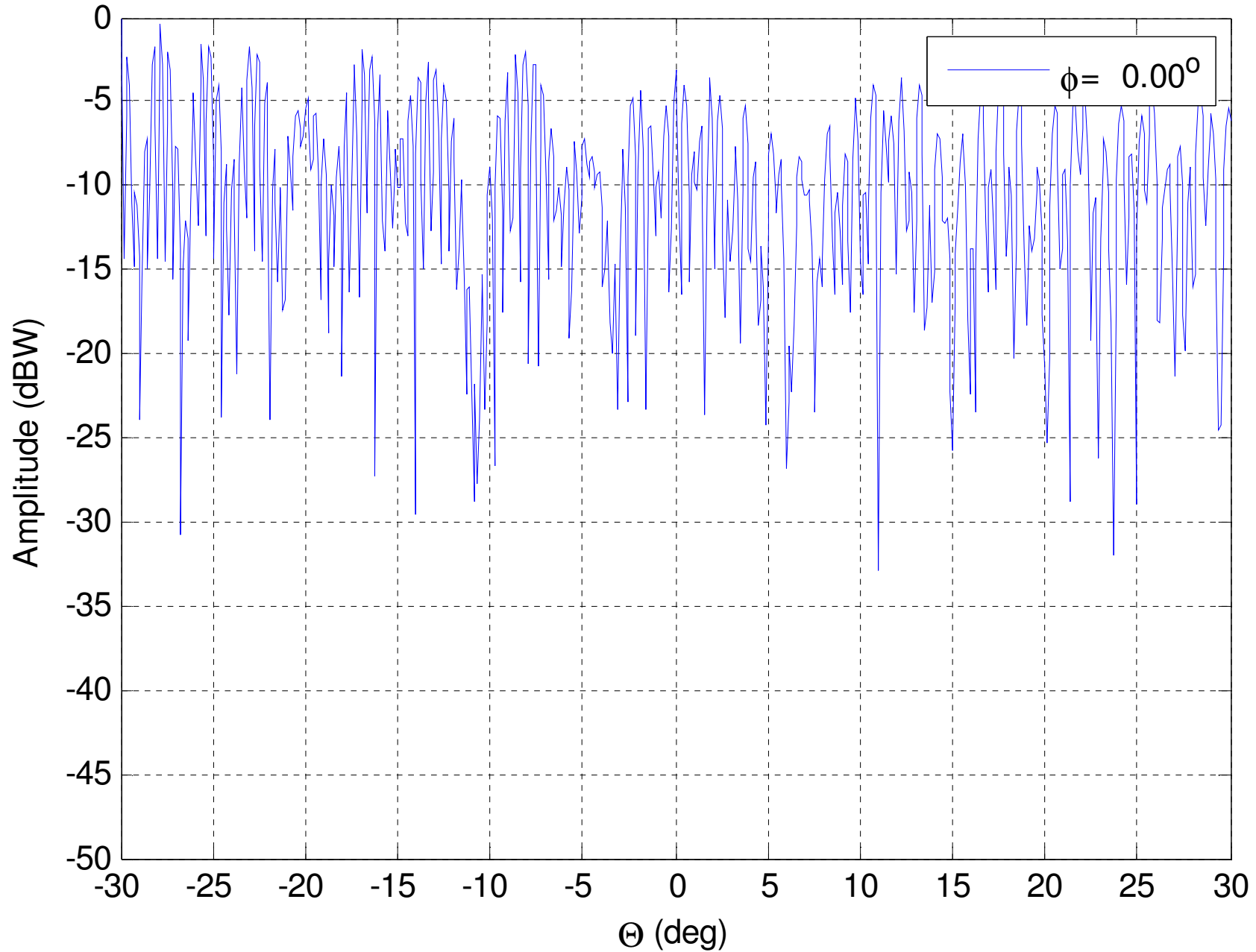
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -11.43 dBW, Date: 14-Dec-2011



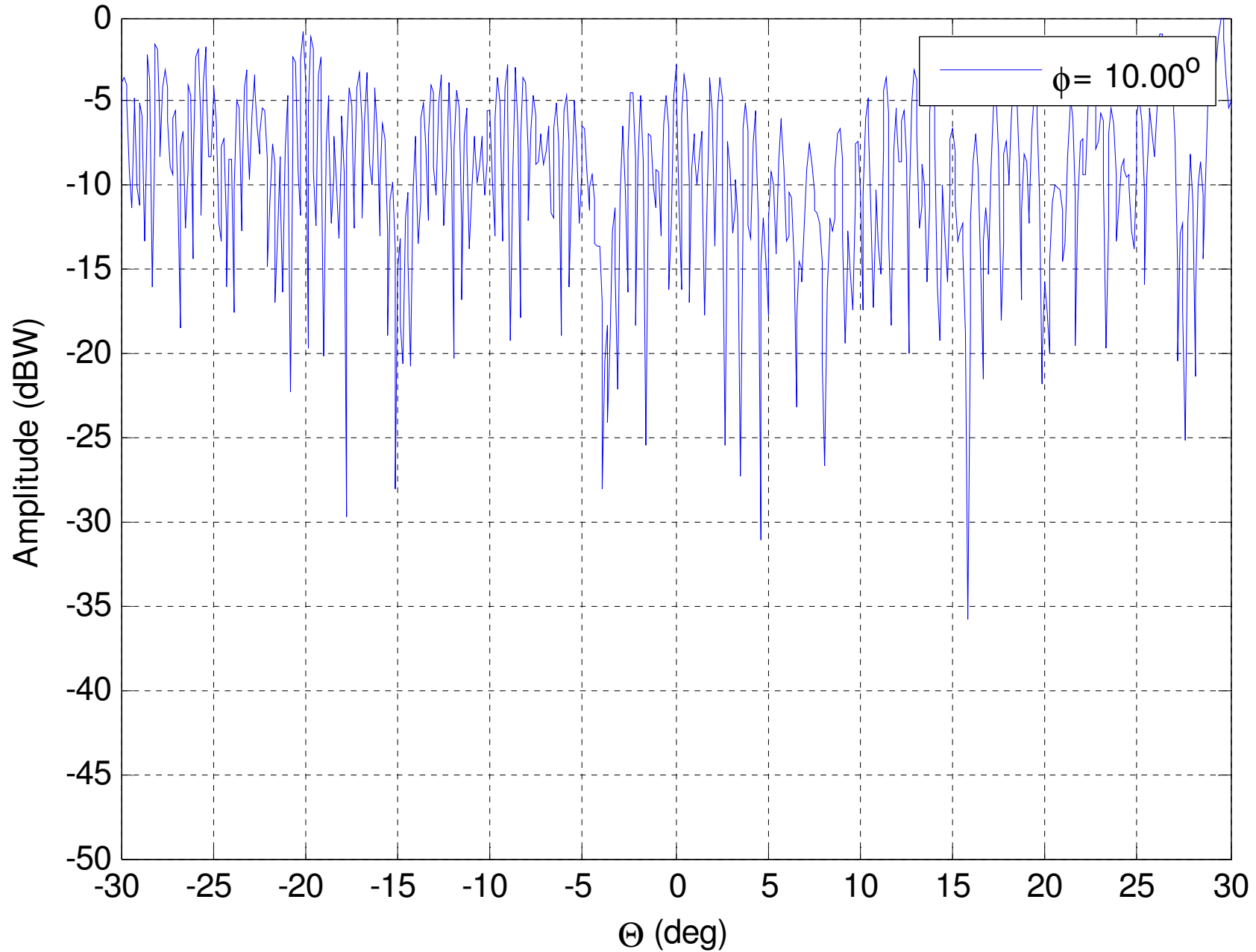
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -10.02 dBW, Date: 14-Dec-2011



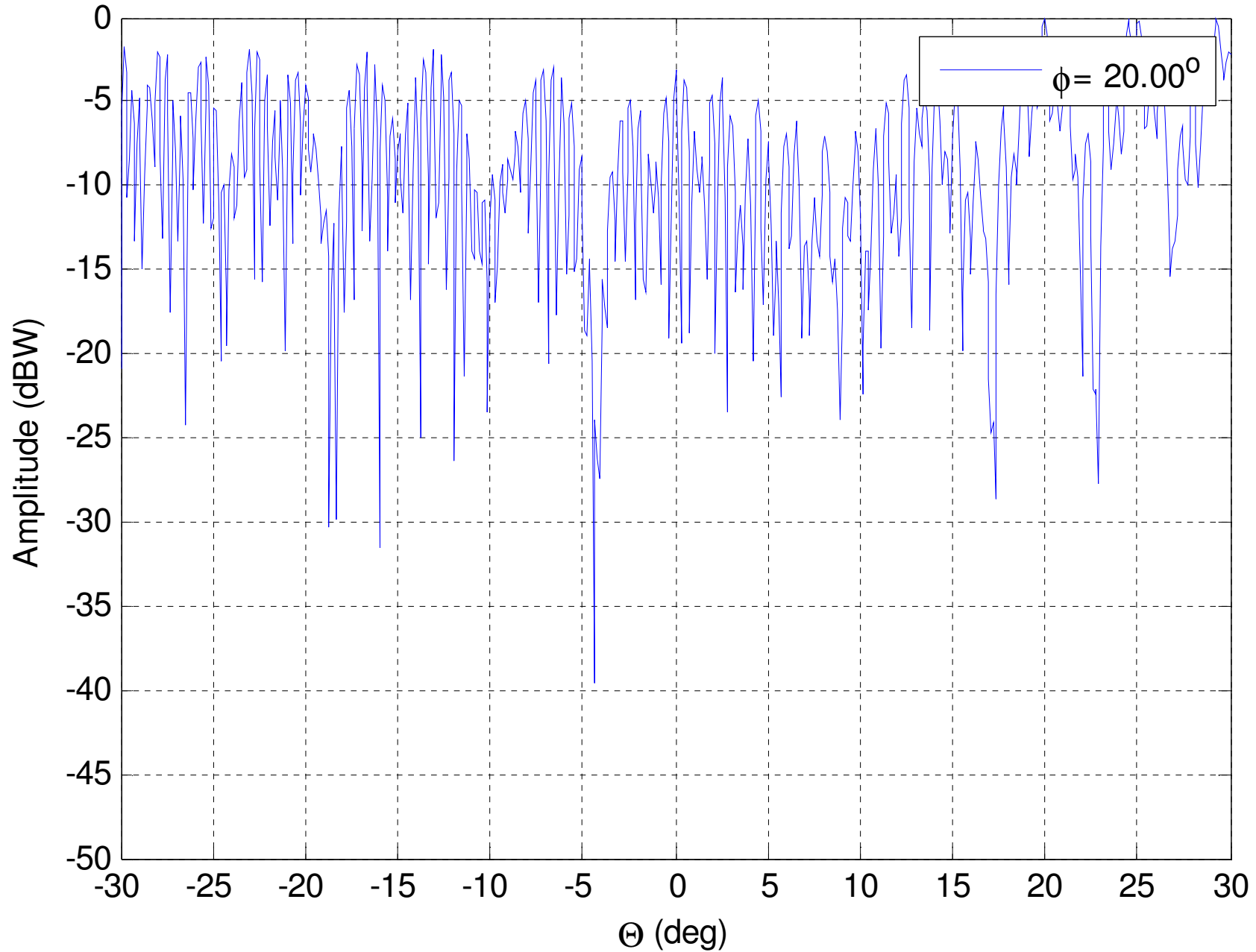
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -10.41 dBW, Date: 14-Dec-2011



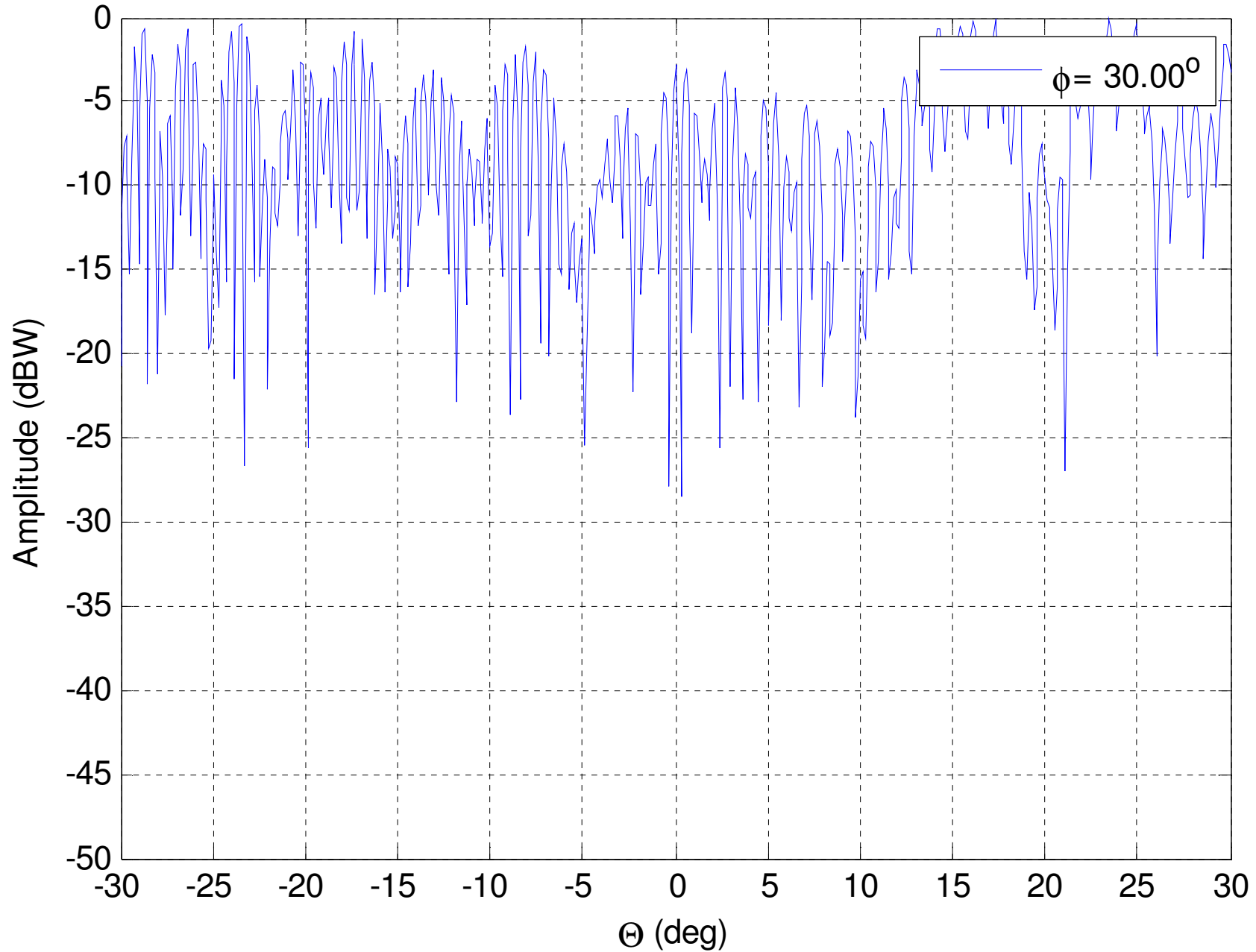
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -10.06 dBW, Date: 14-Dec-2011



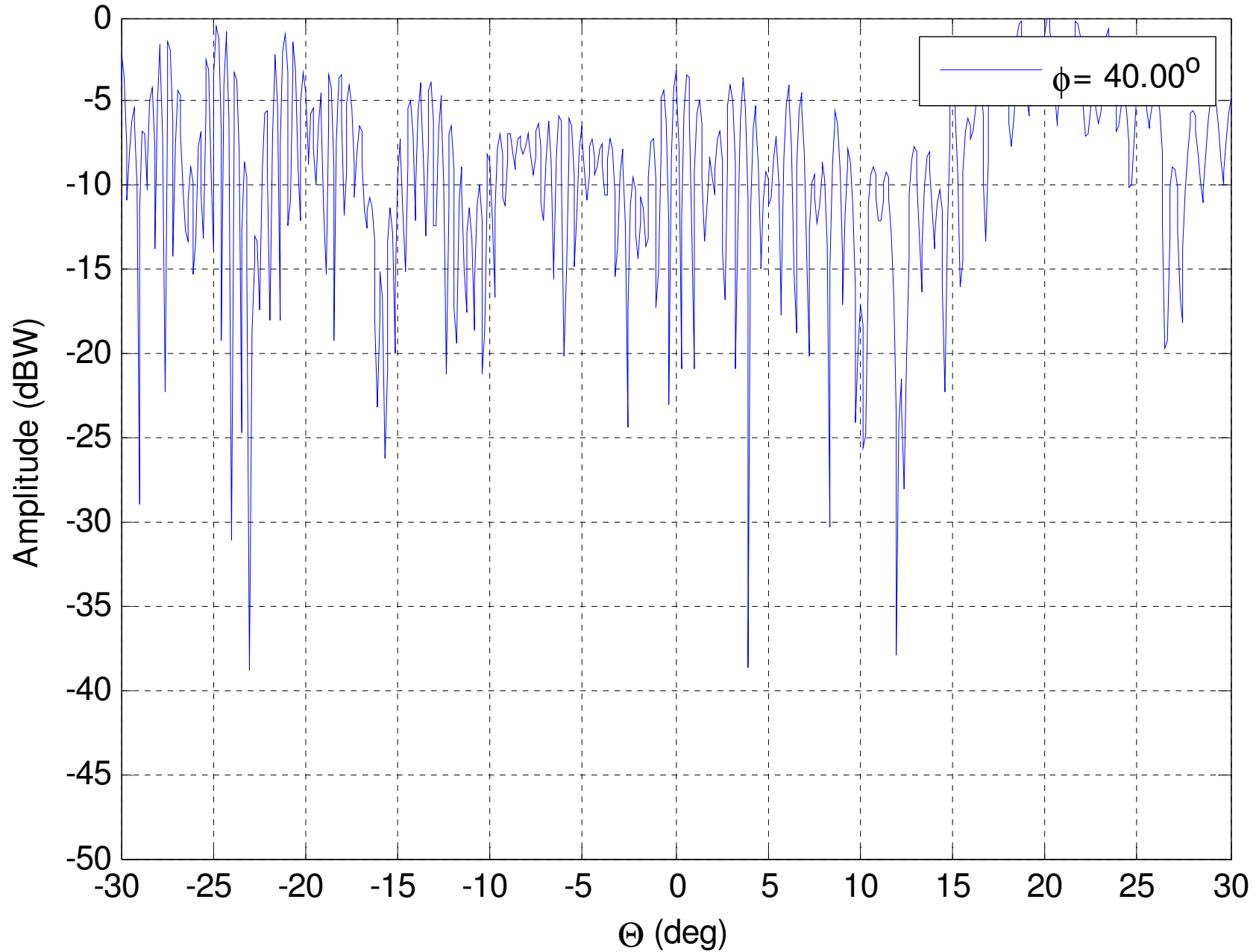
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.37 dBW, Date: 14-Dec-2011



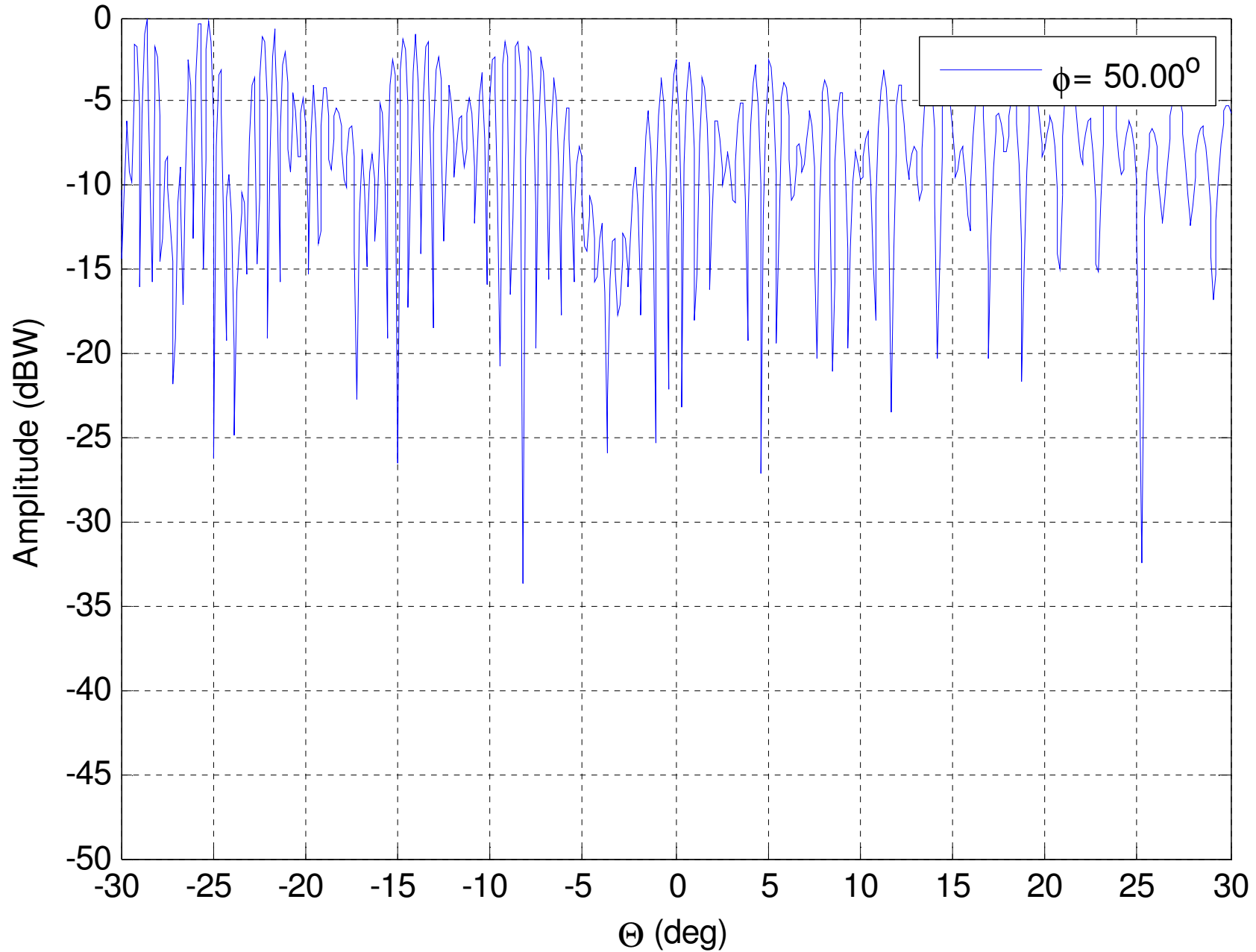
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.11 dBW, Date: 14-Dec-2011



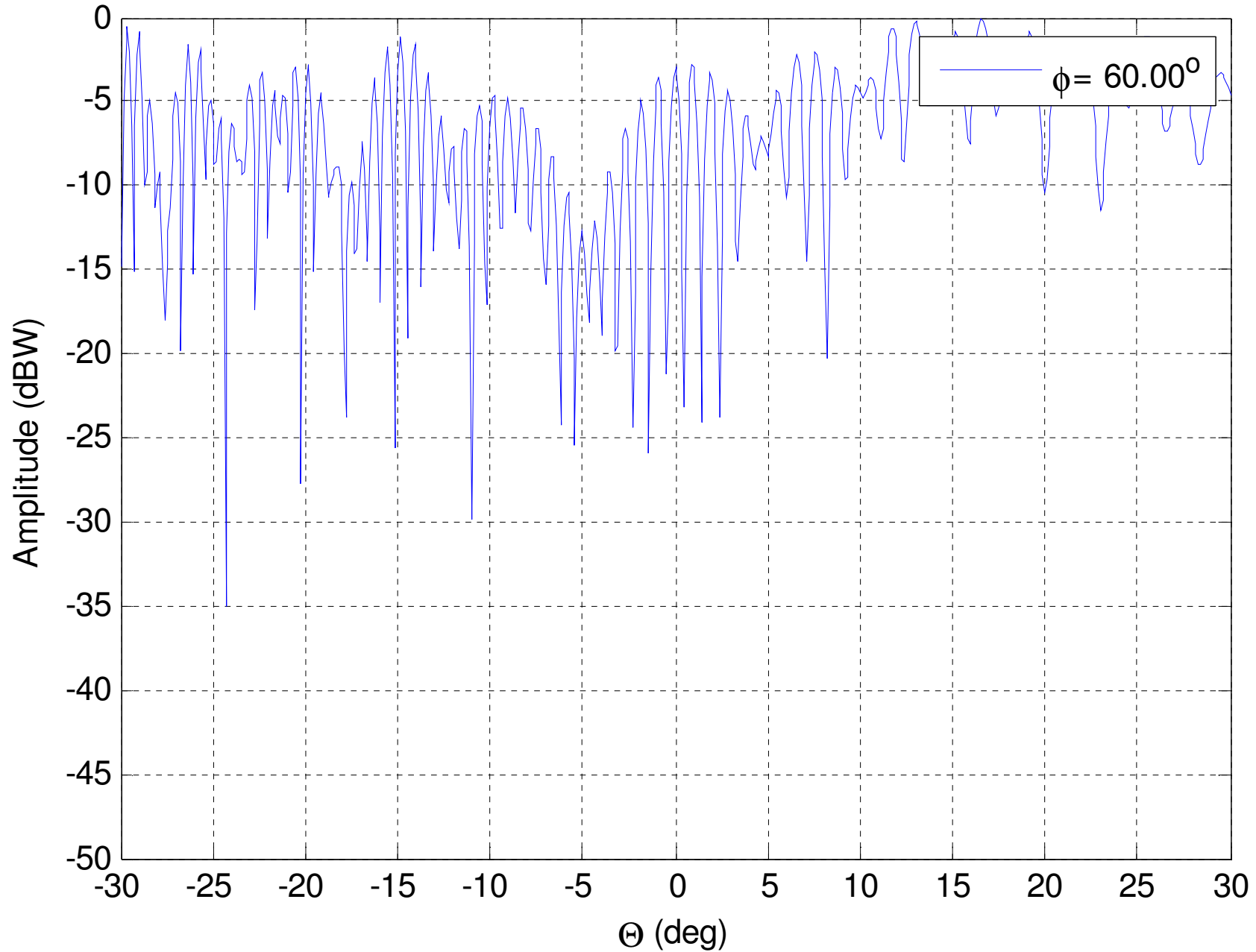
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -10.65 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

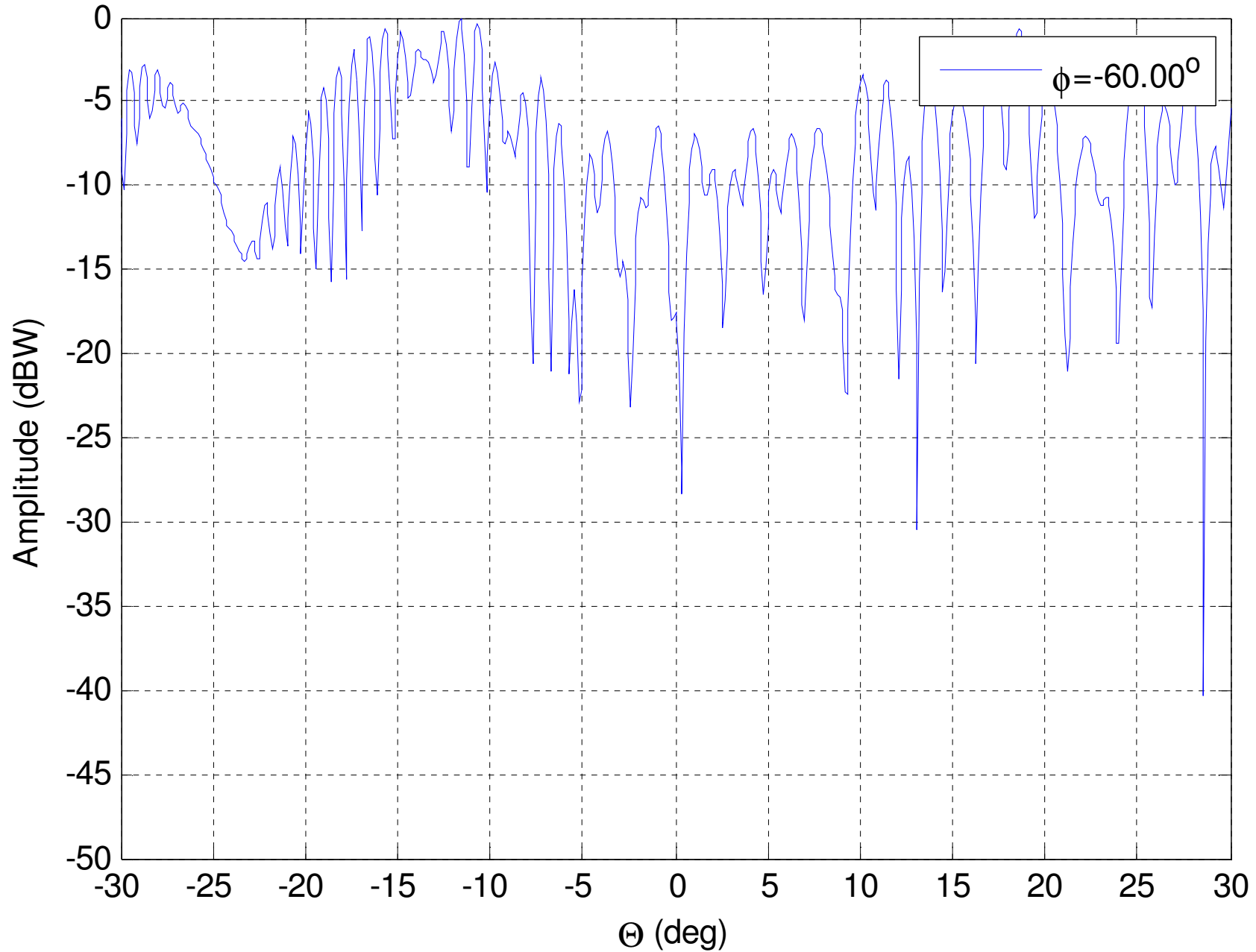
Input file: tx-17.5-rhcp-60.cut, Peak: -10.23 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

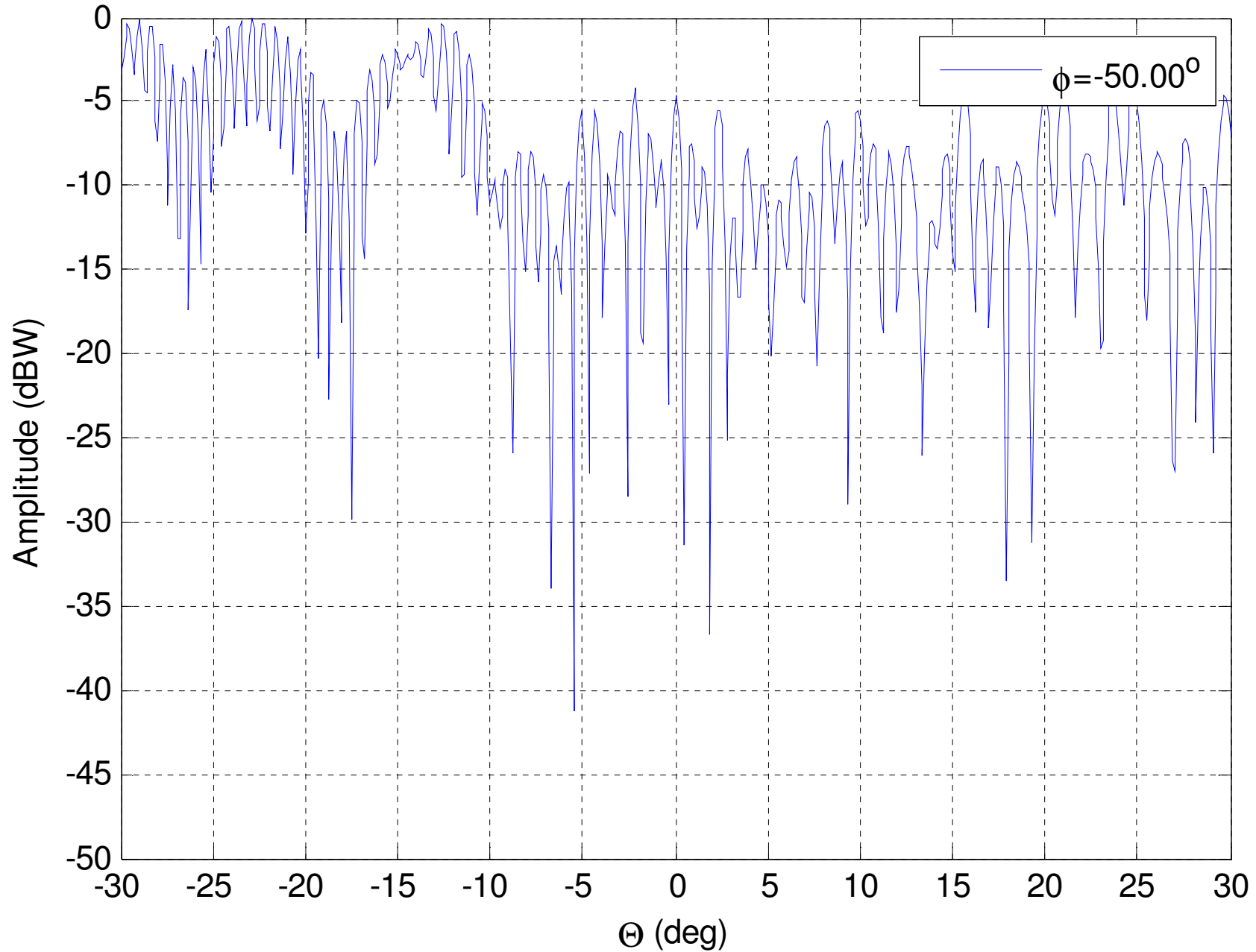
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -9.40 dBW, Date: 14-Dec-2011



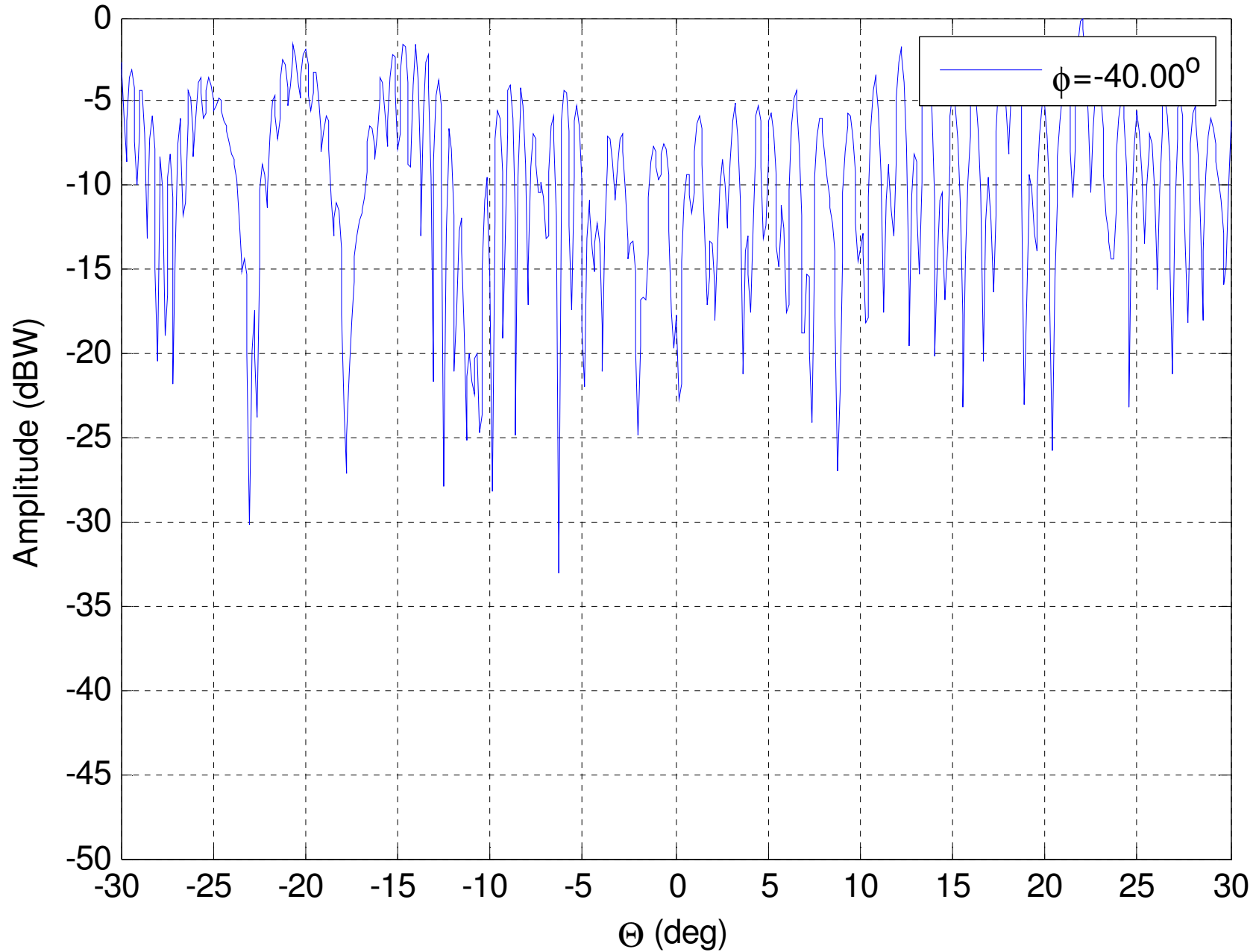
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -8.73 dBW, Date: 14-Dec-2011



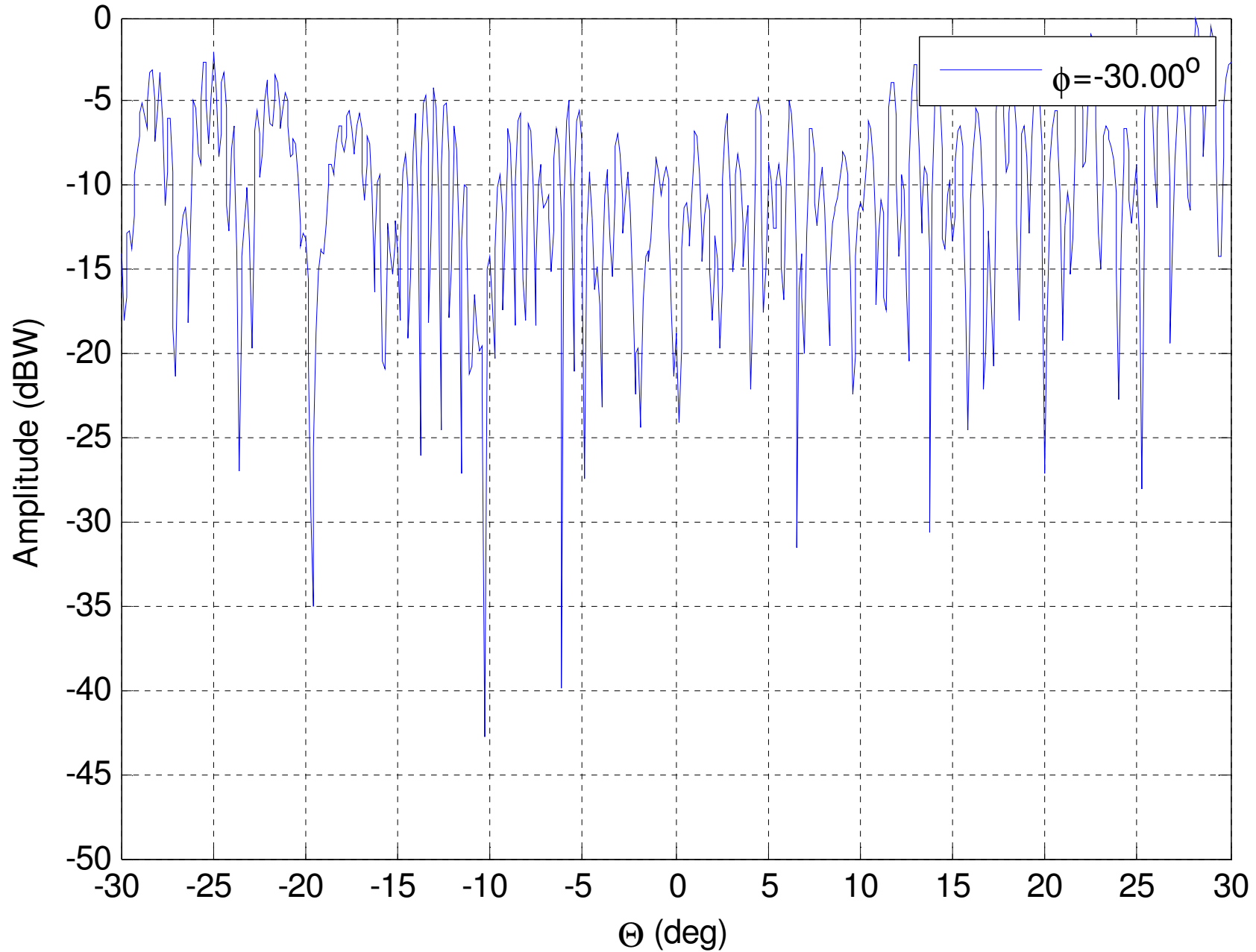
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.22 dBW, Date: 14-Dec-2011



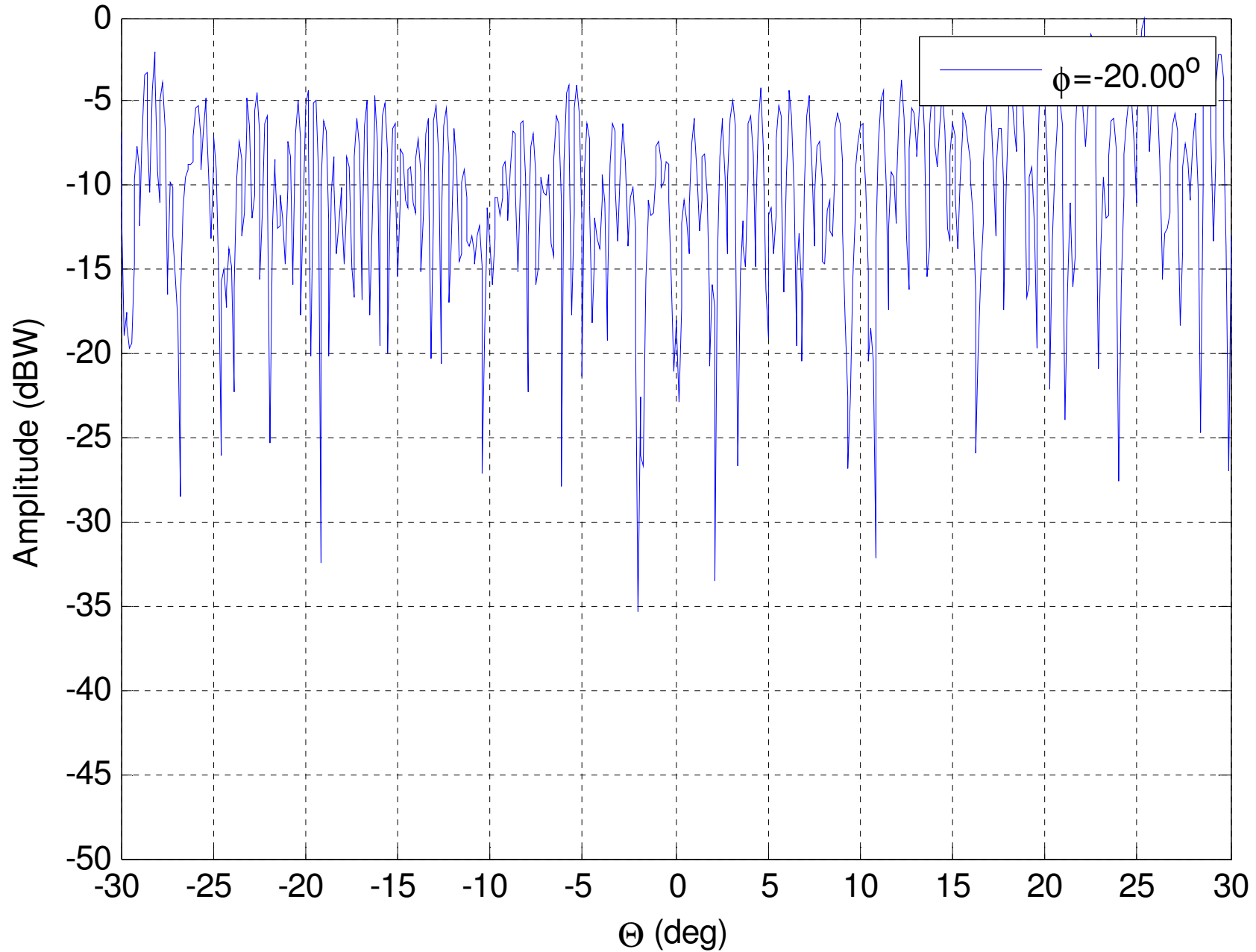
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -8.16 dBW, Date: 14-Dec-2011



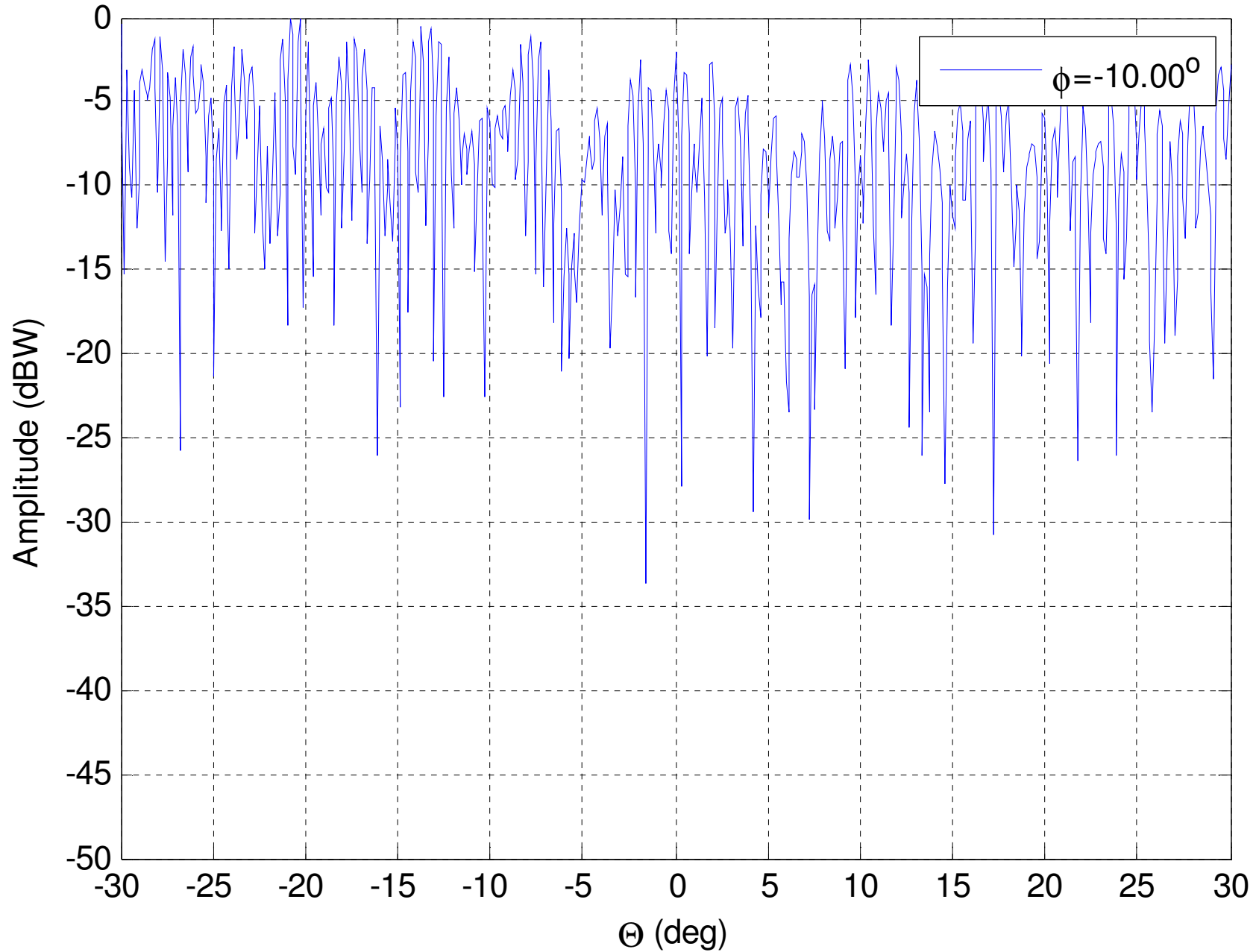
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -8.90 dBW, Date: 14-Dec-2011



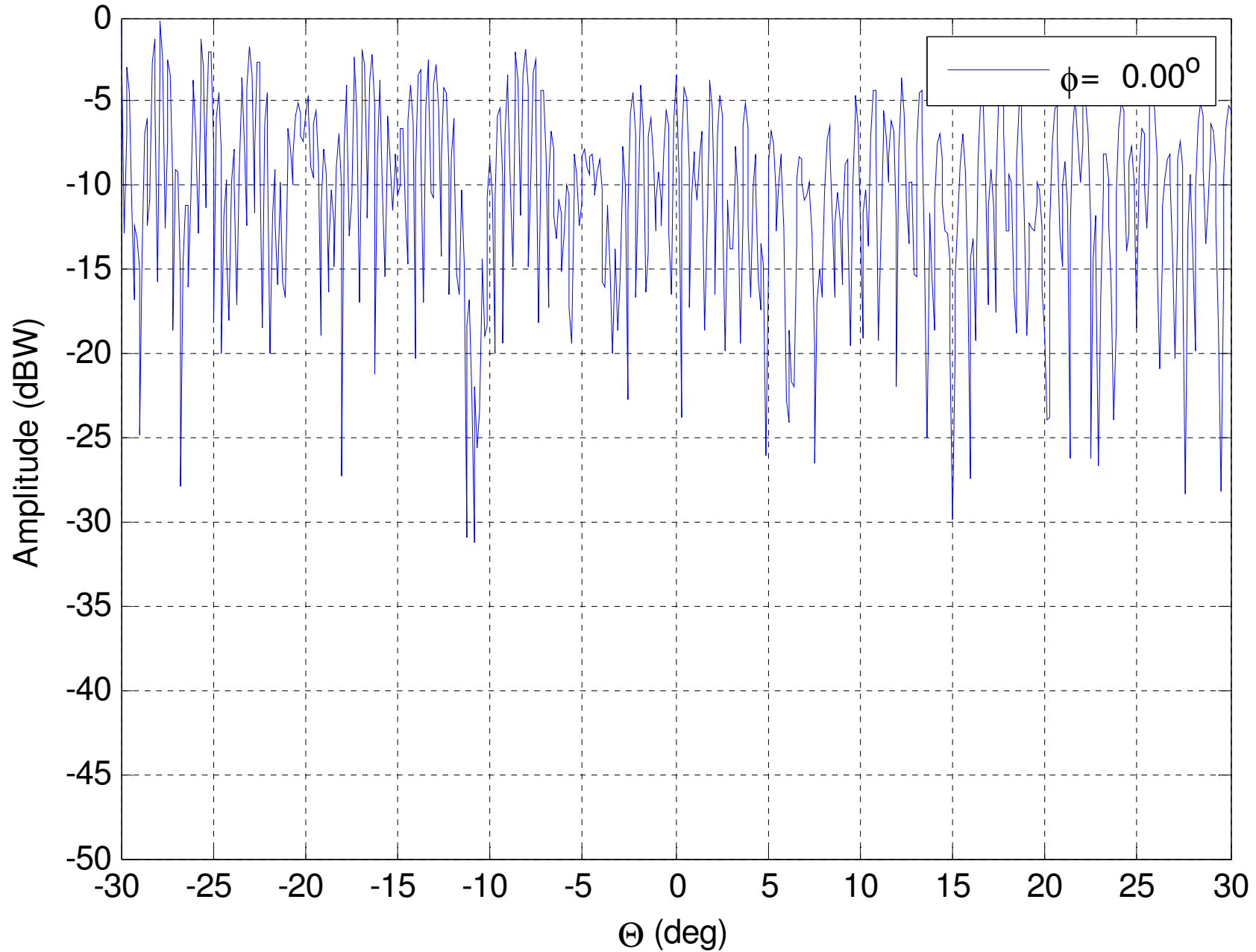
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -11.34 dBW, Date: 14-Dec-2011



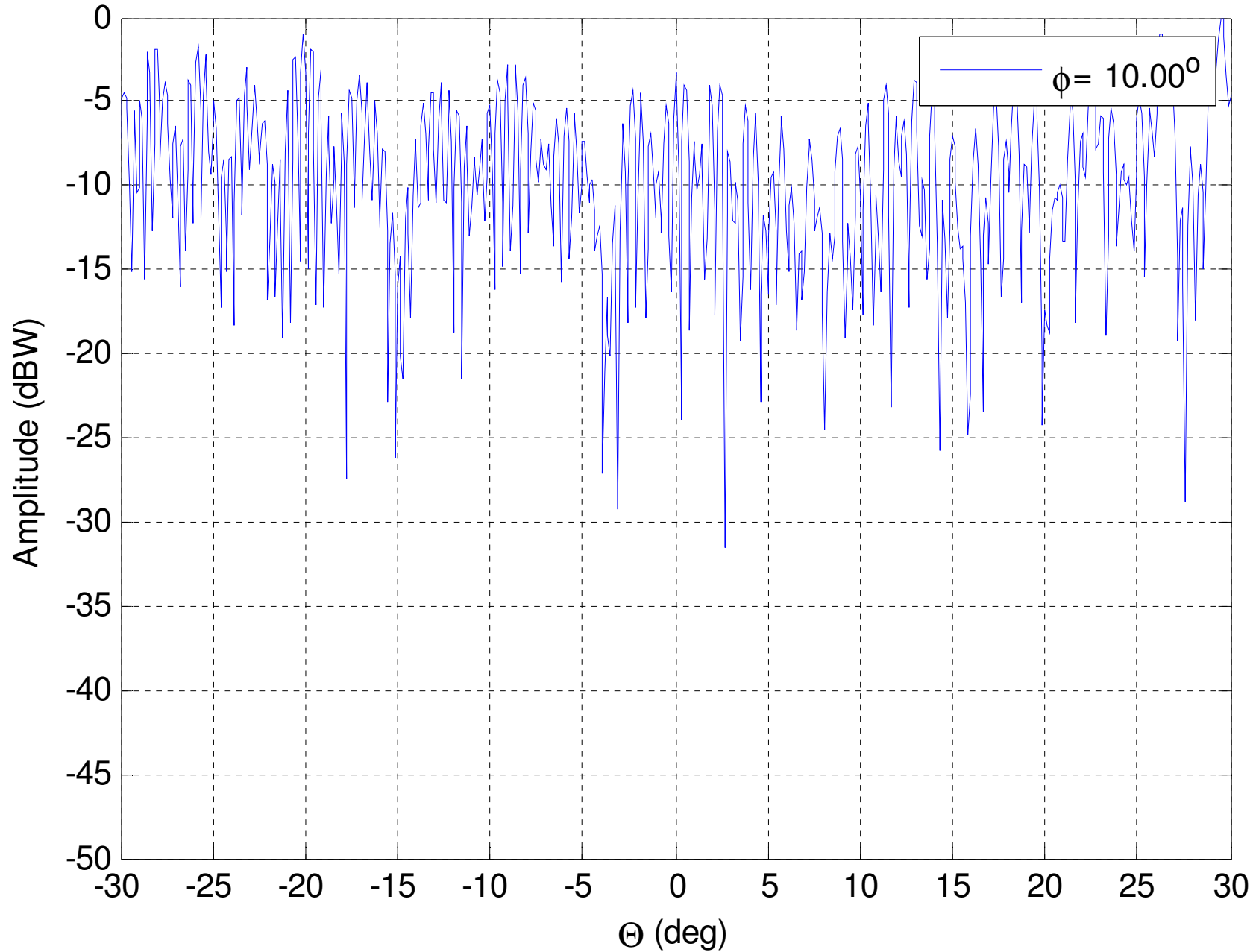
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -10.04 dBW, Date: 14-Dec-2011



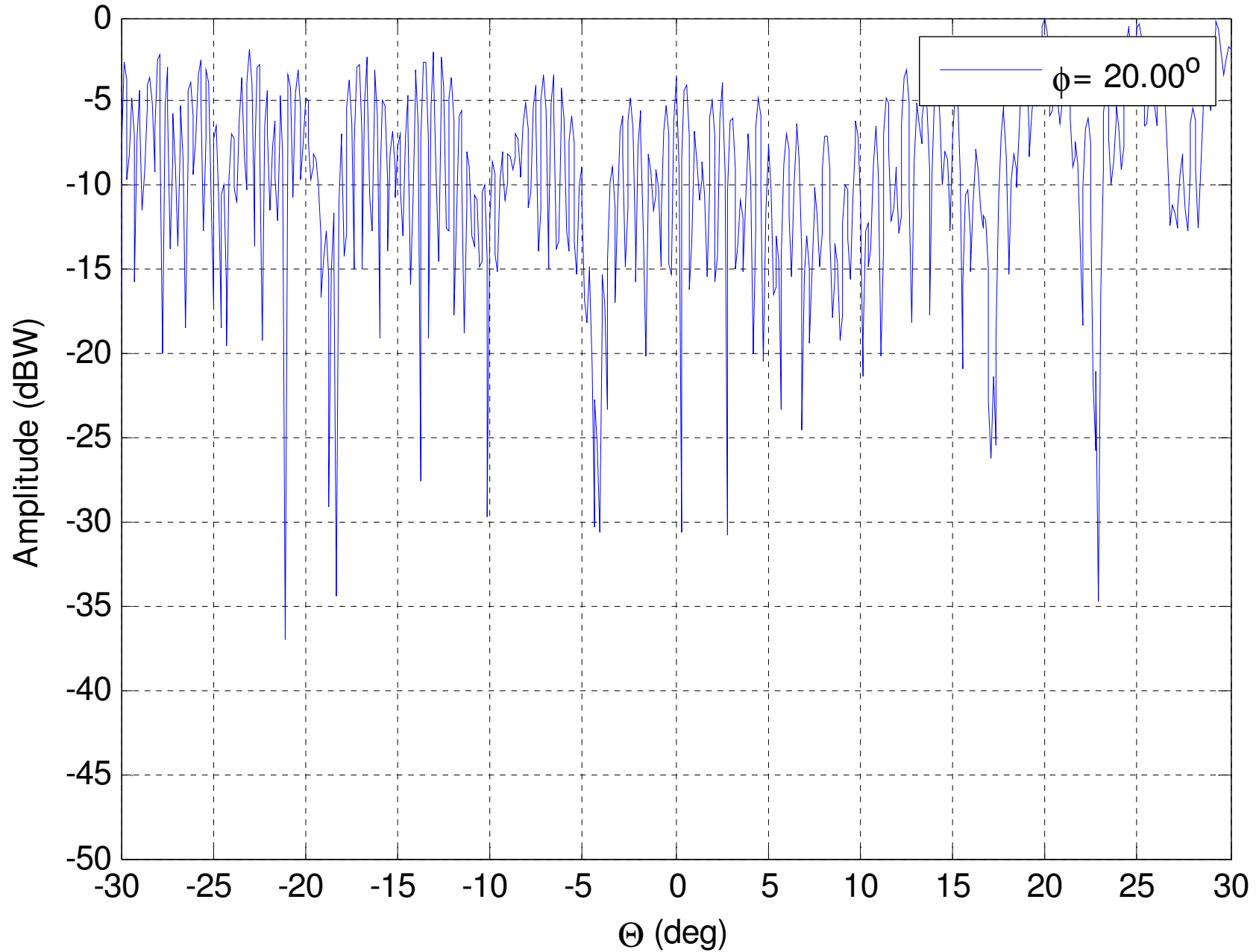
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -10.11 dBW, Date: 14-Dec-2011



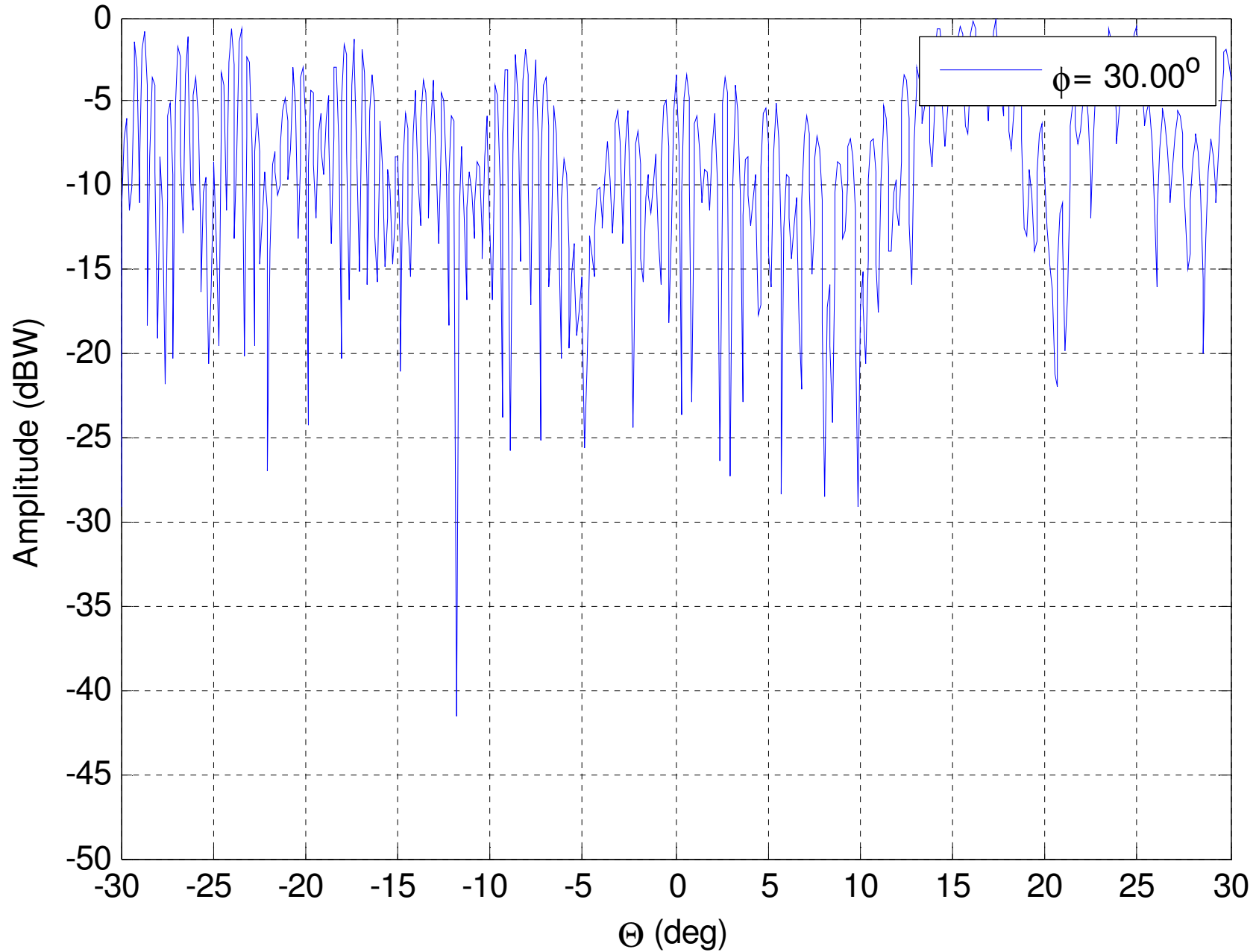
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -9.86 dBW, Date: 14-Dec-2011



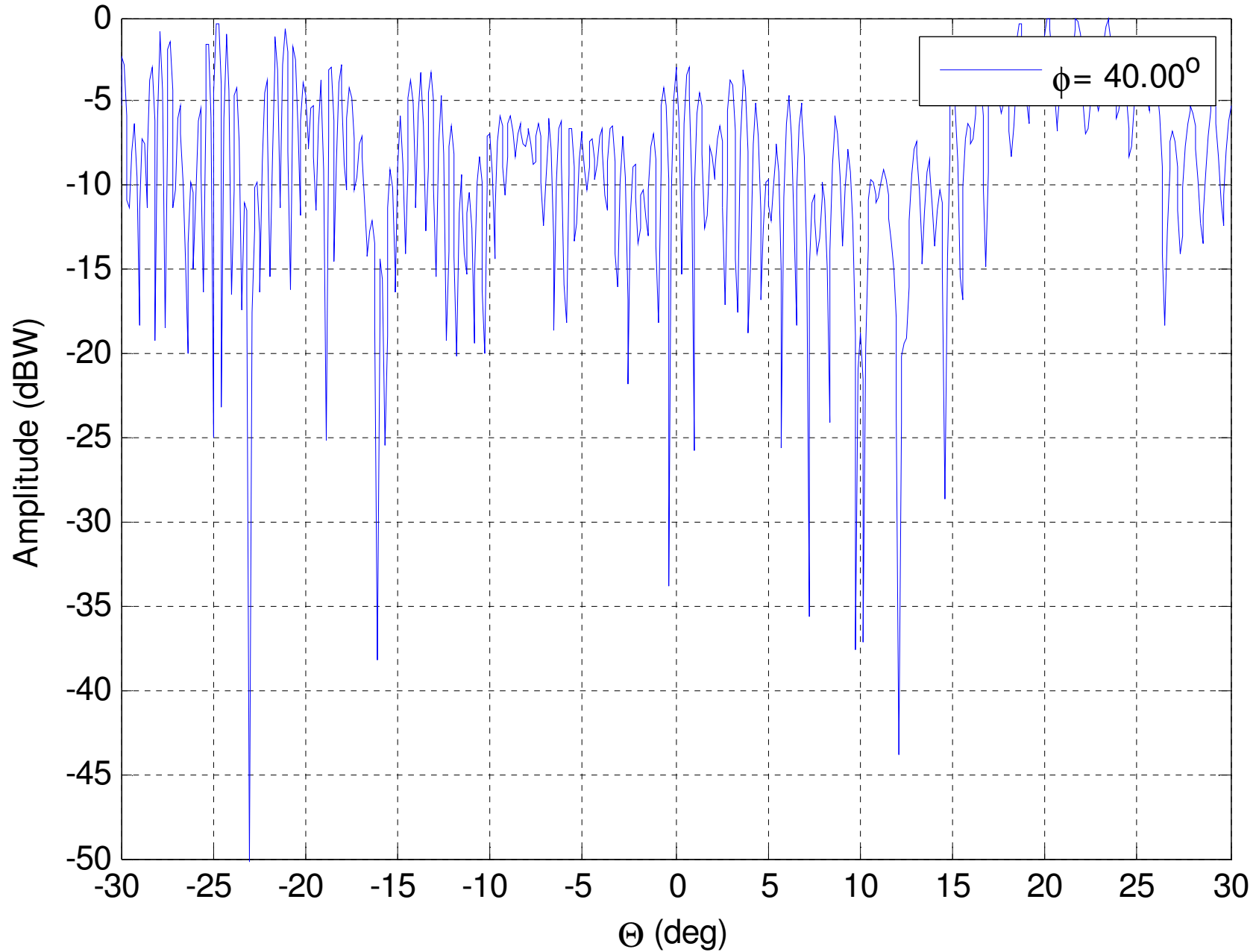
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.07 dBW, Date: 14-Dec-2011



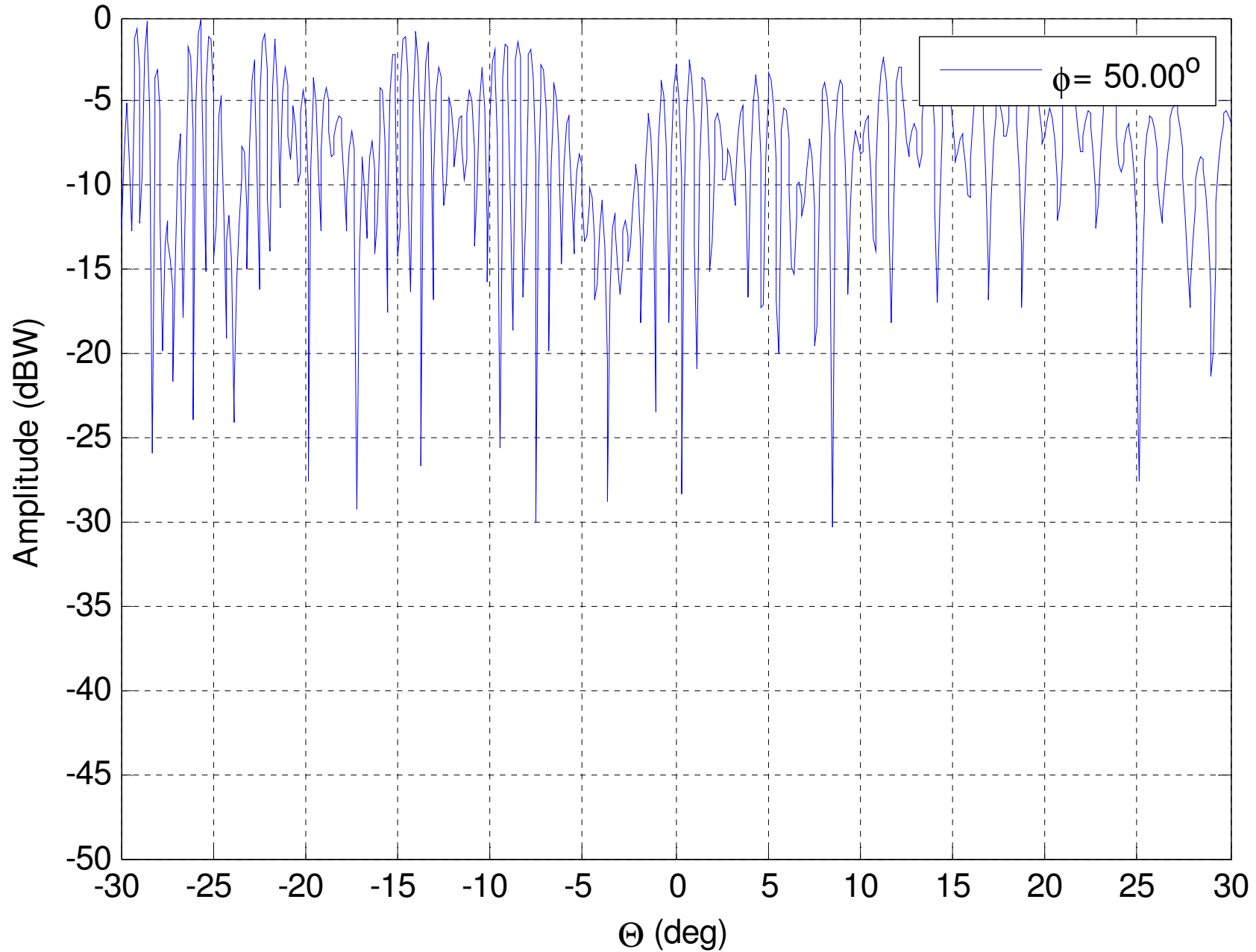
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -10.49 dBW, Date: 14-Dec-2011



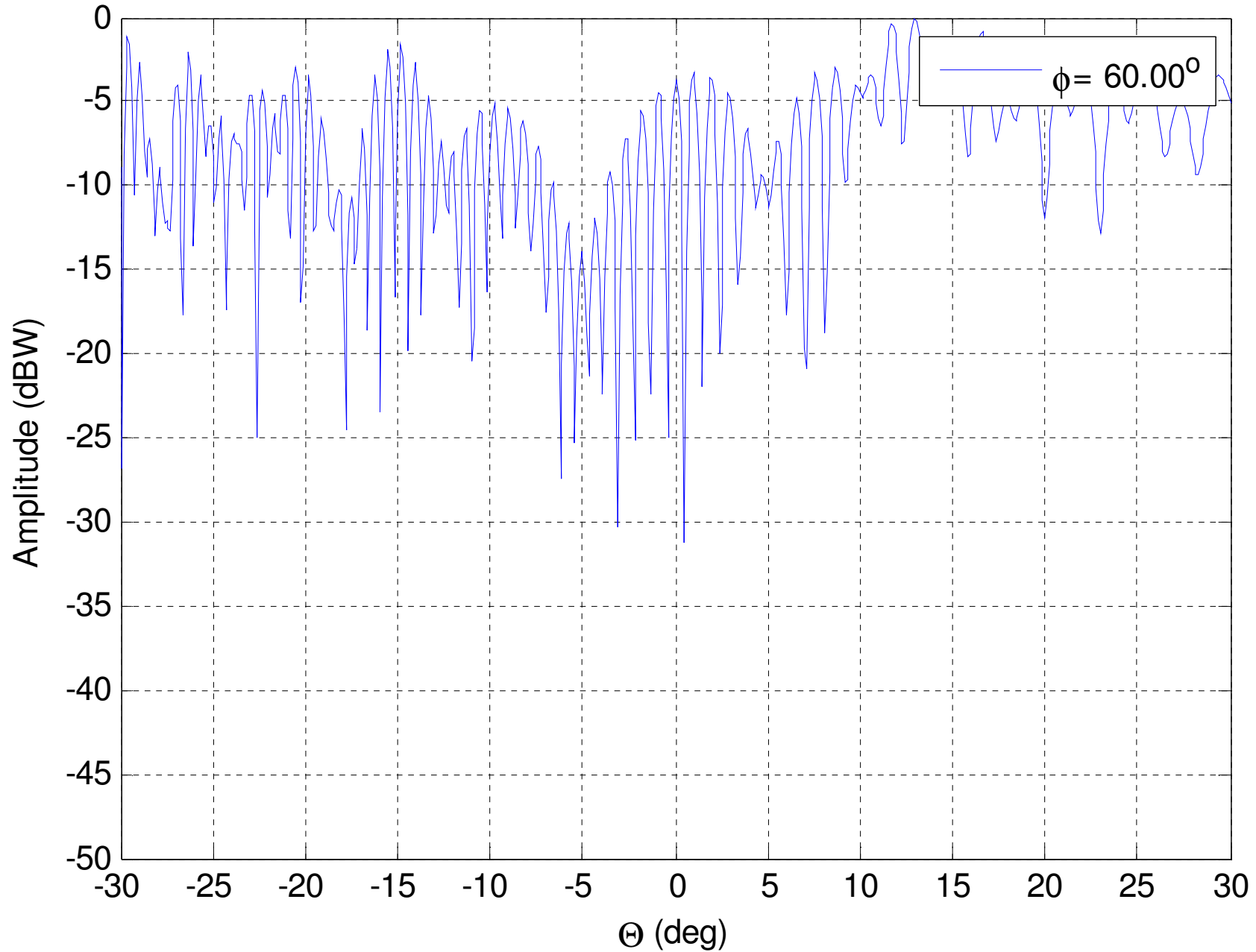
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -10.63 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

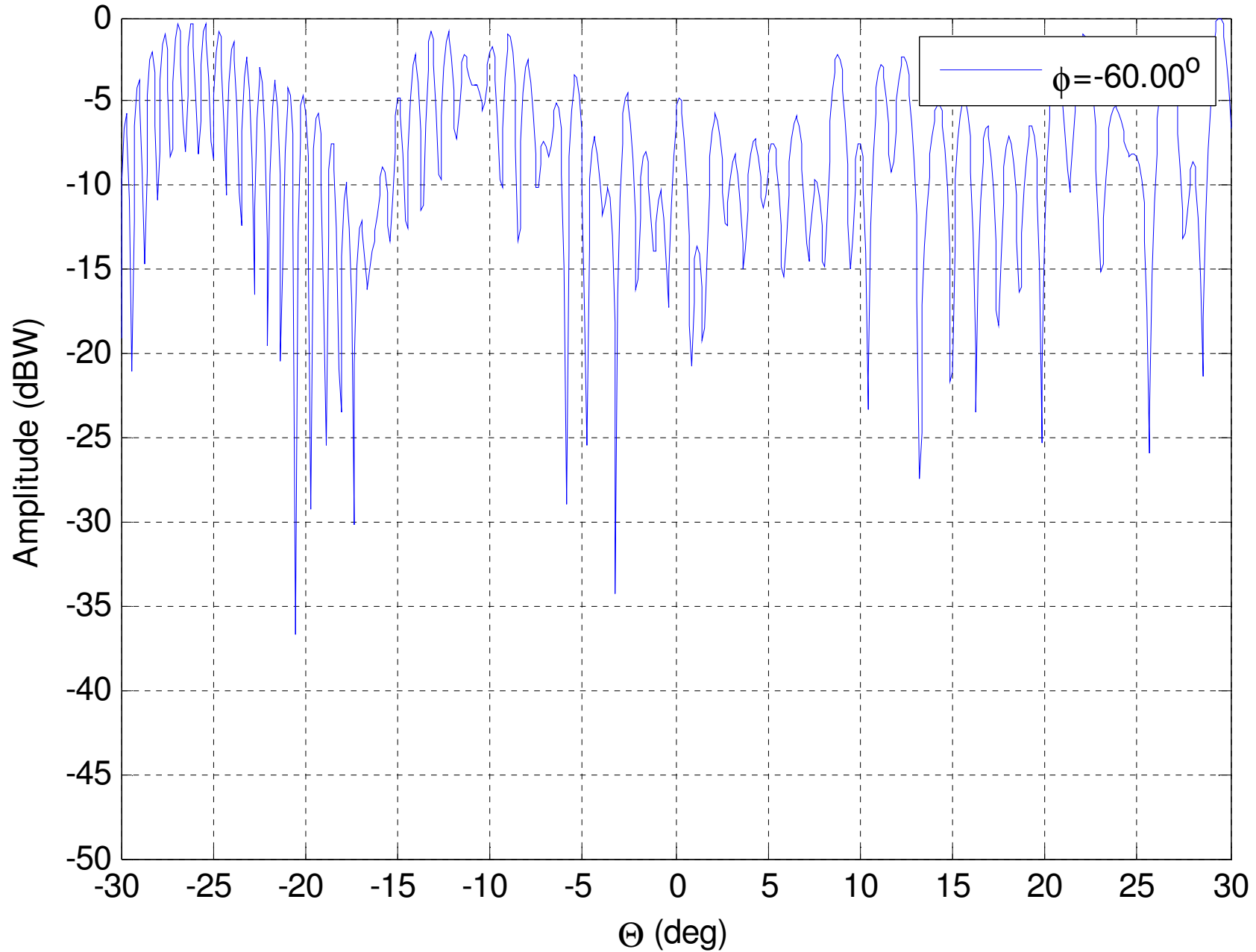
Input file: tx-17.5-lhcp-60.cut, Peak: -9.69 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

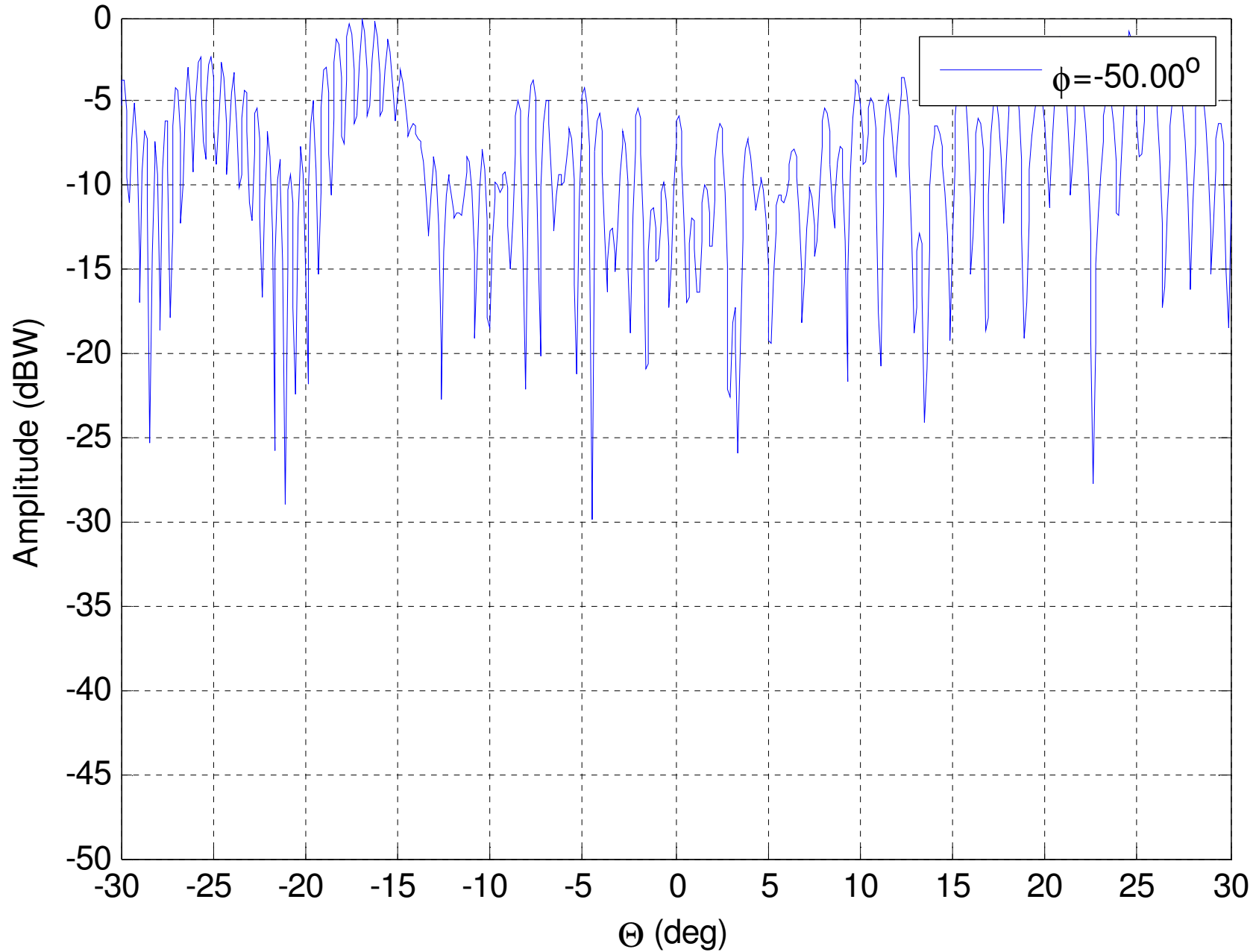
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -10.21 dBW, Date: 14-Dec-2011



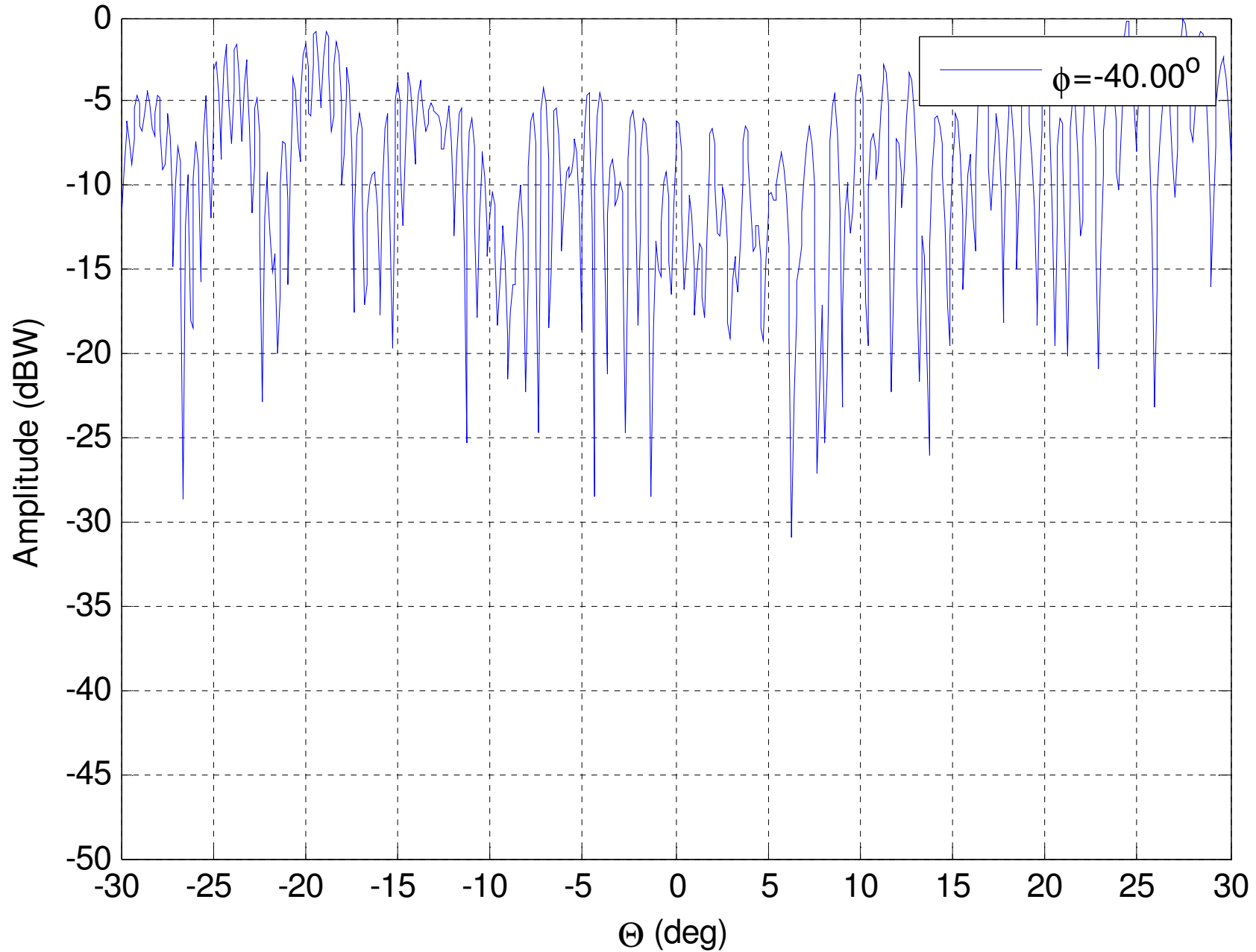
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -9.13 dBW, Date: 14-Dec-2011



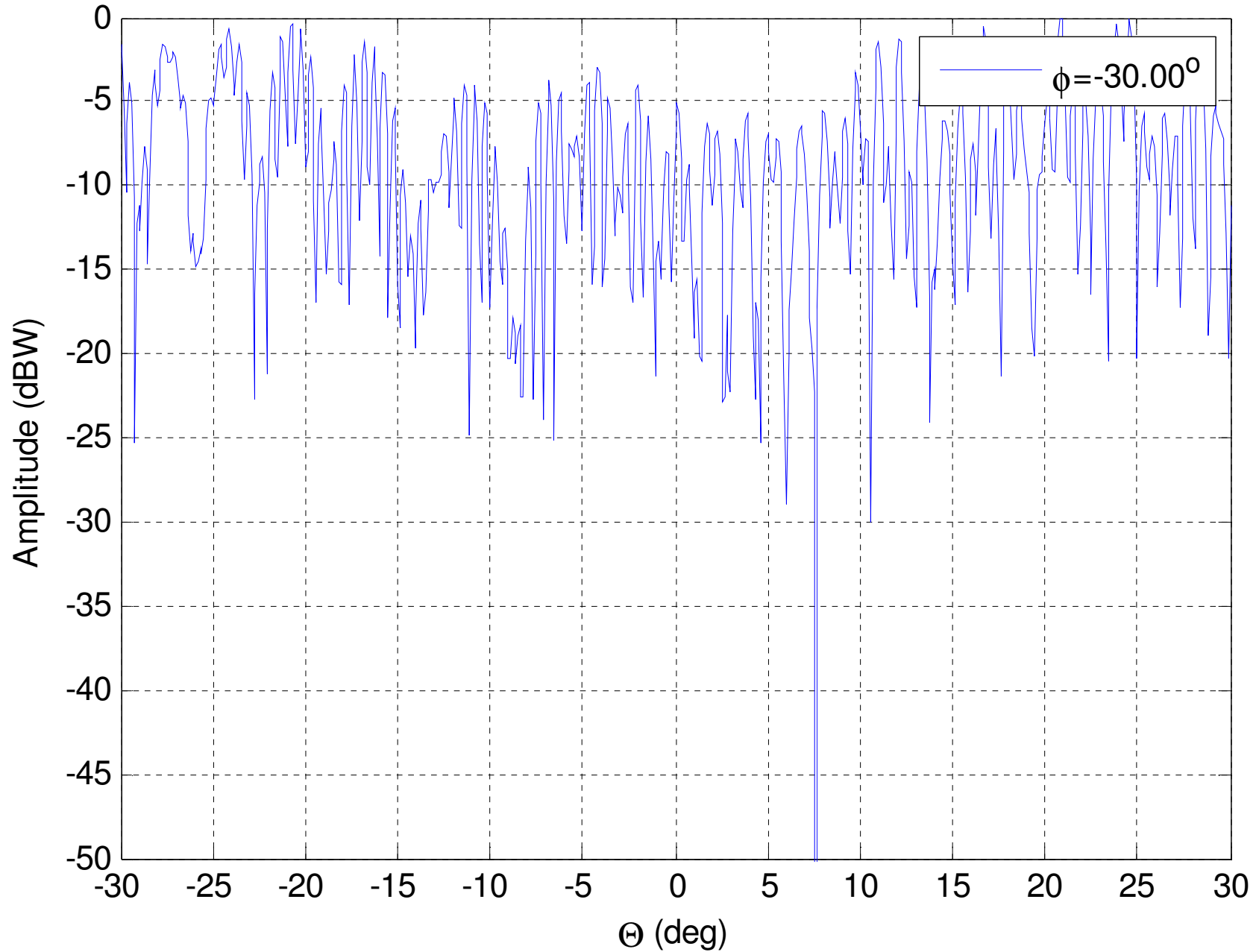
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -8.96 dBW, Date: 14-Dec-2011



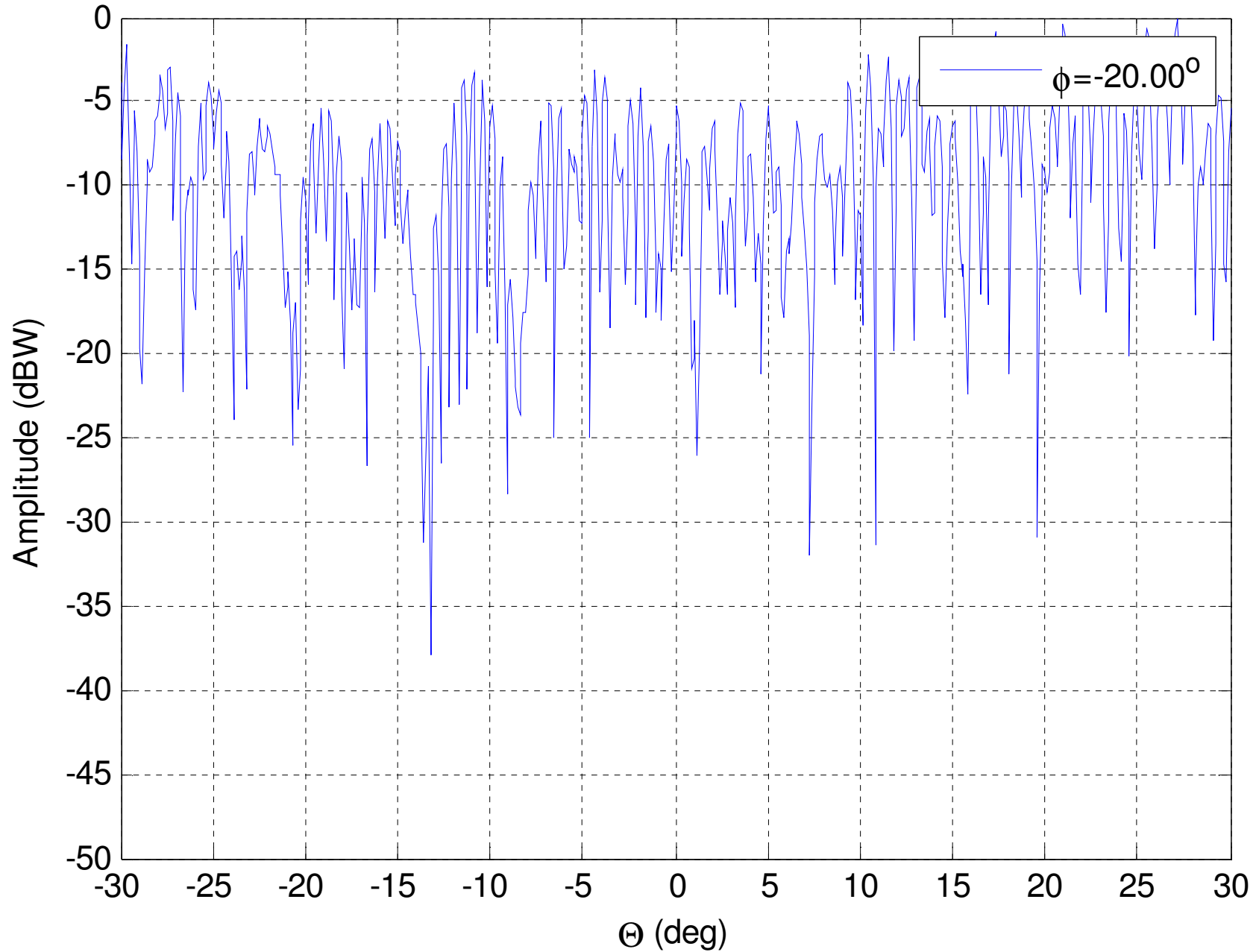
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -9.95 dBW, Date: 14-Dec-2011



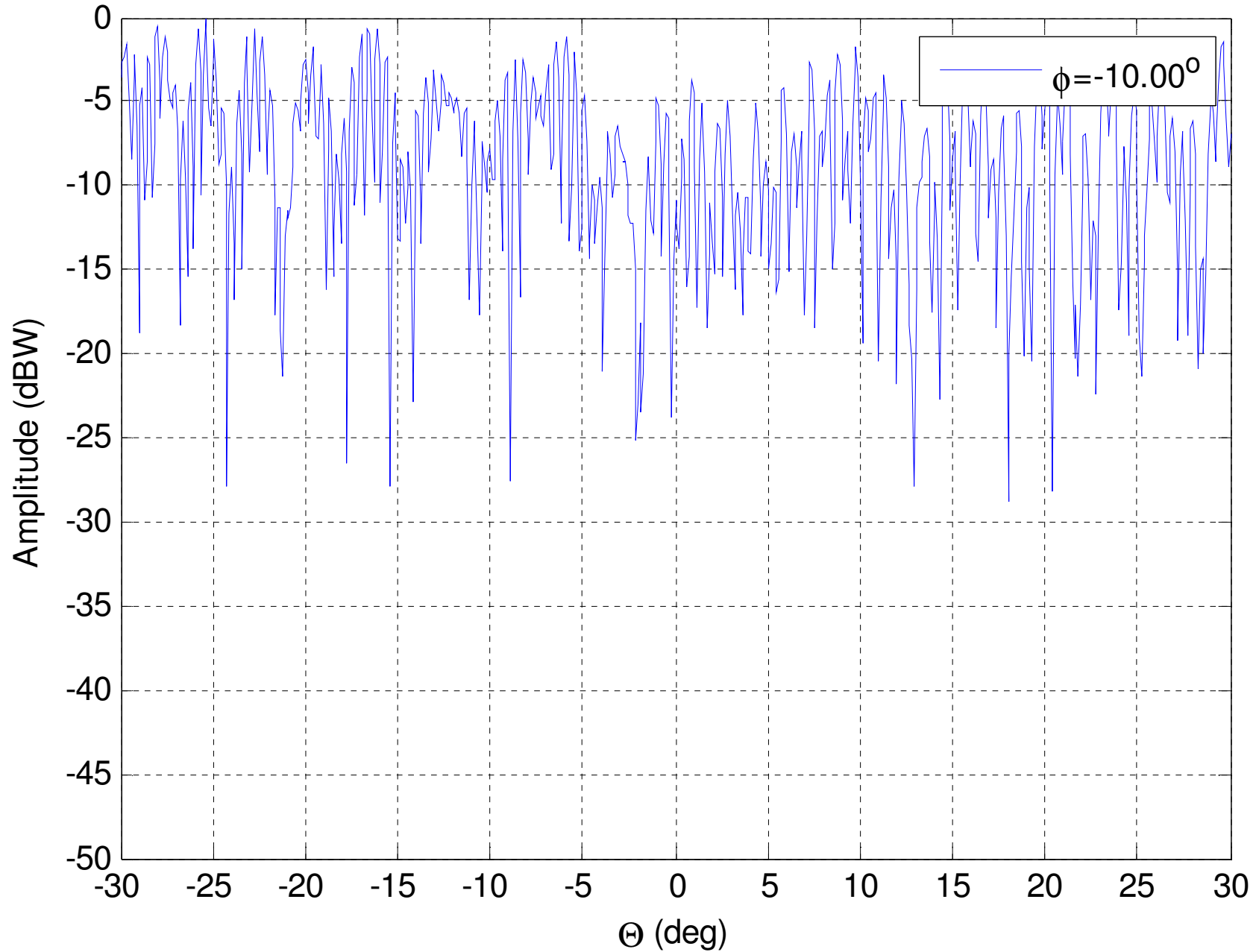
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -9.80 dBW, Date: 14-Dec-2011



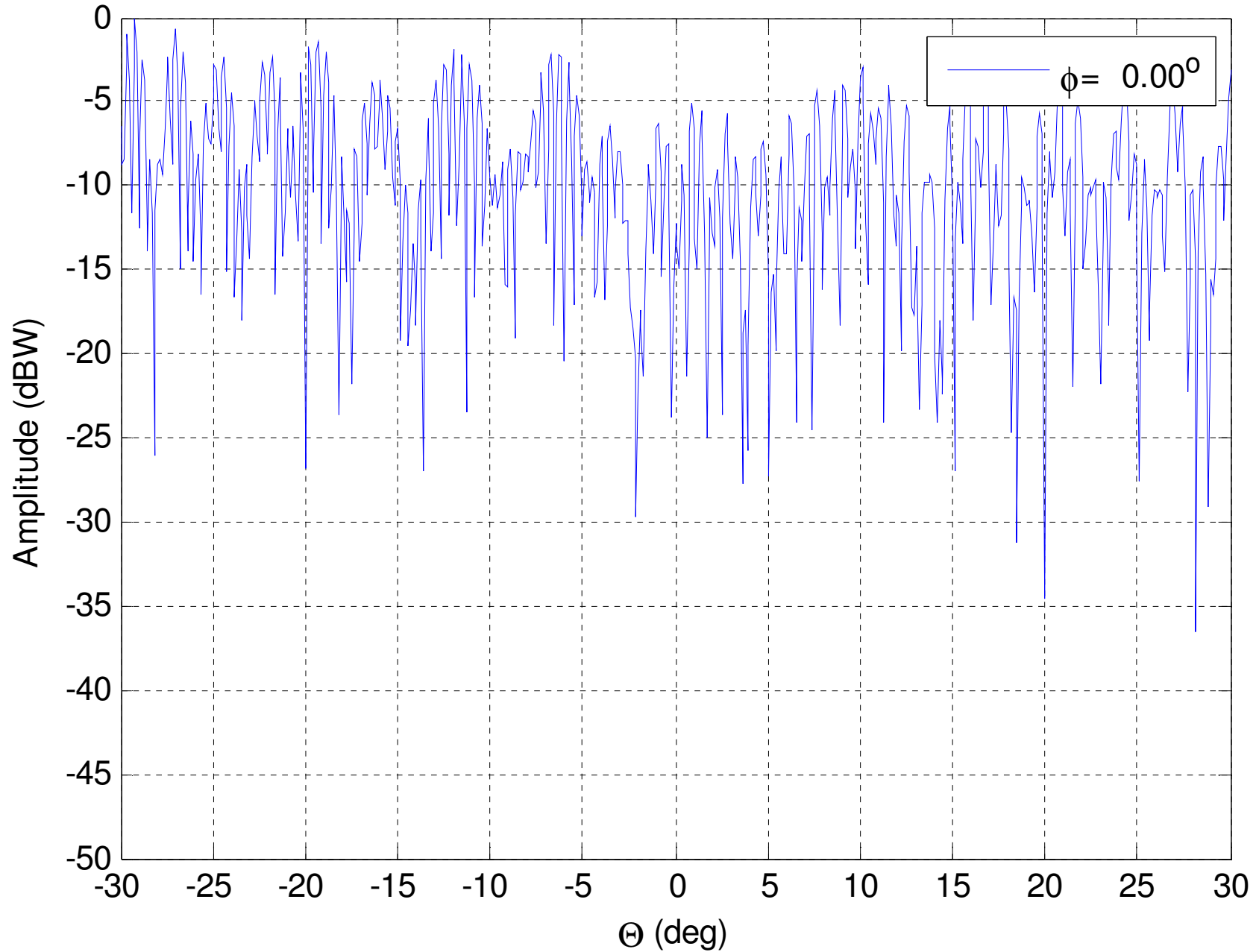
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -11.90 dBW, Date: 14-Dec-2011



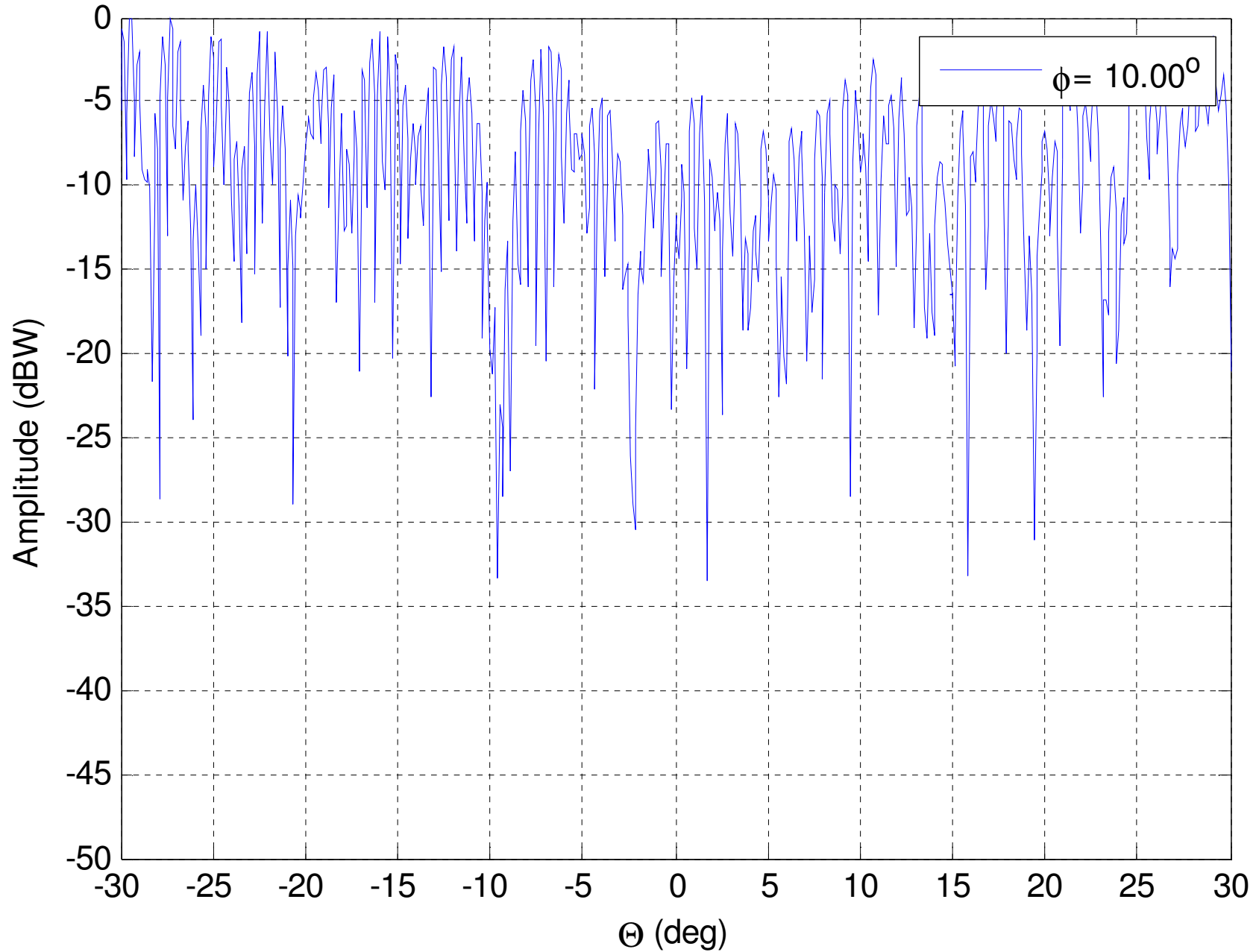
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -10.50 dBW, Date: 14-Dec-2011



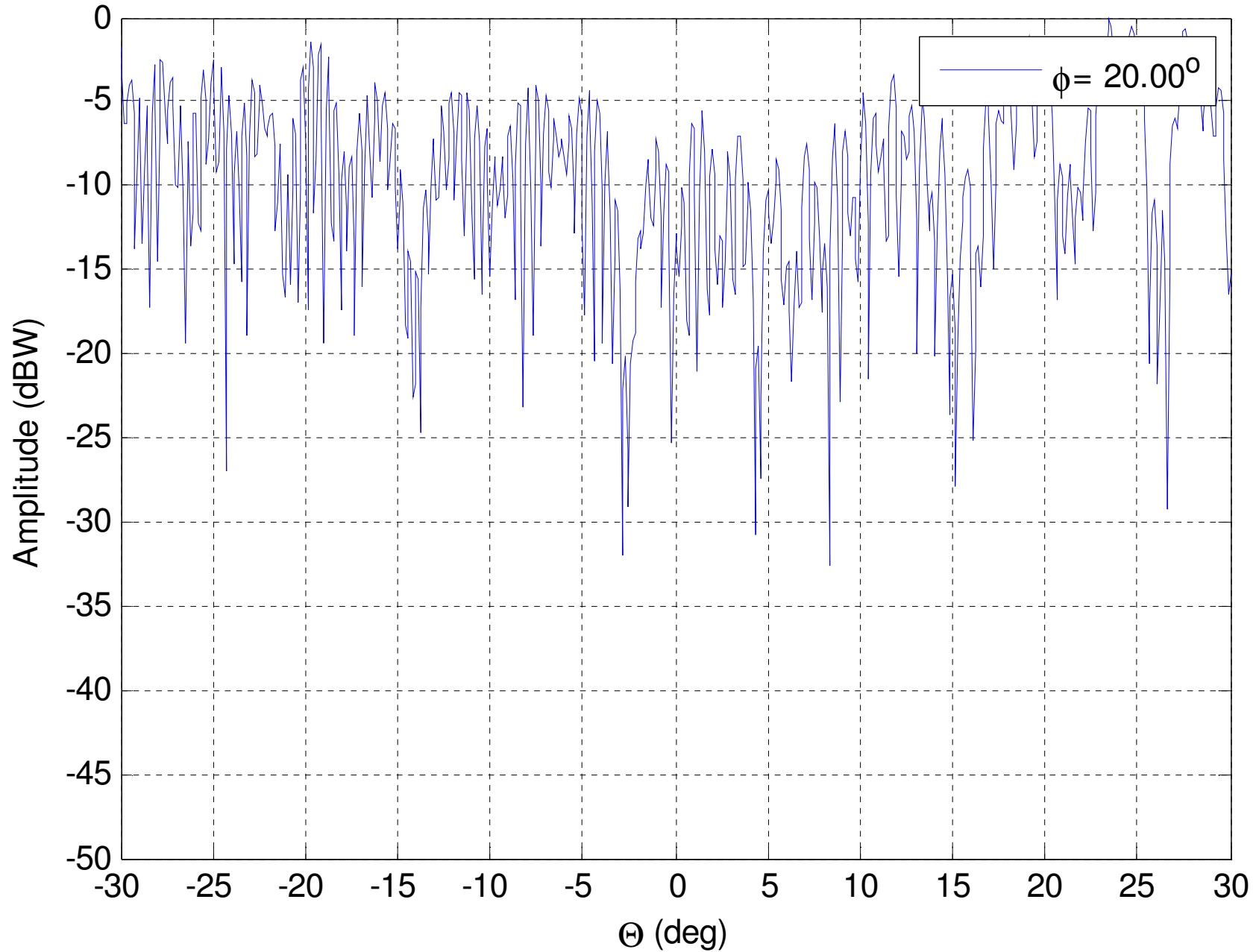
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -10.89 dBW, Date: 14-Dec-2011



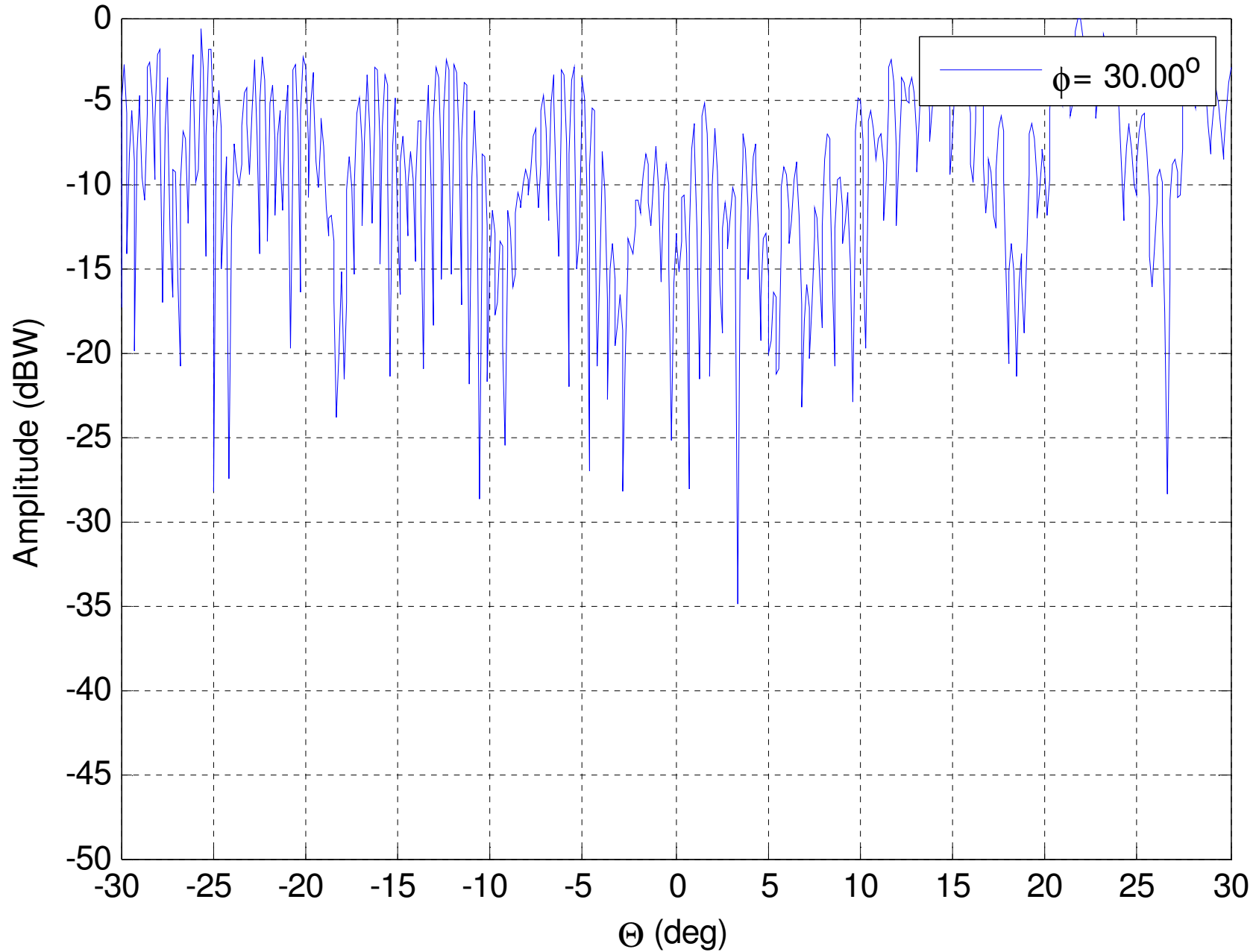
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -9.80 dBW, Date: 14-Dec-2011



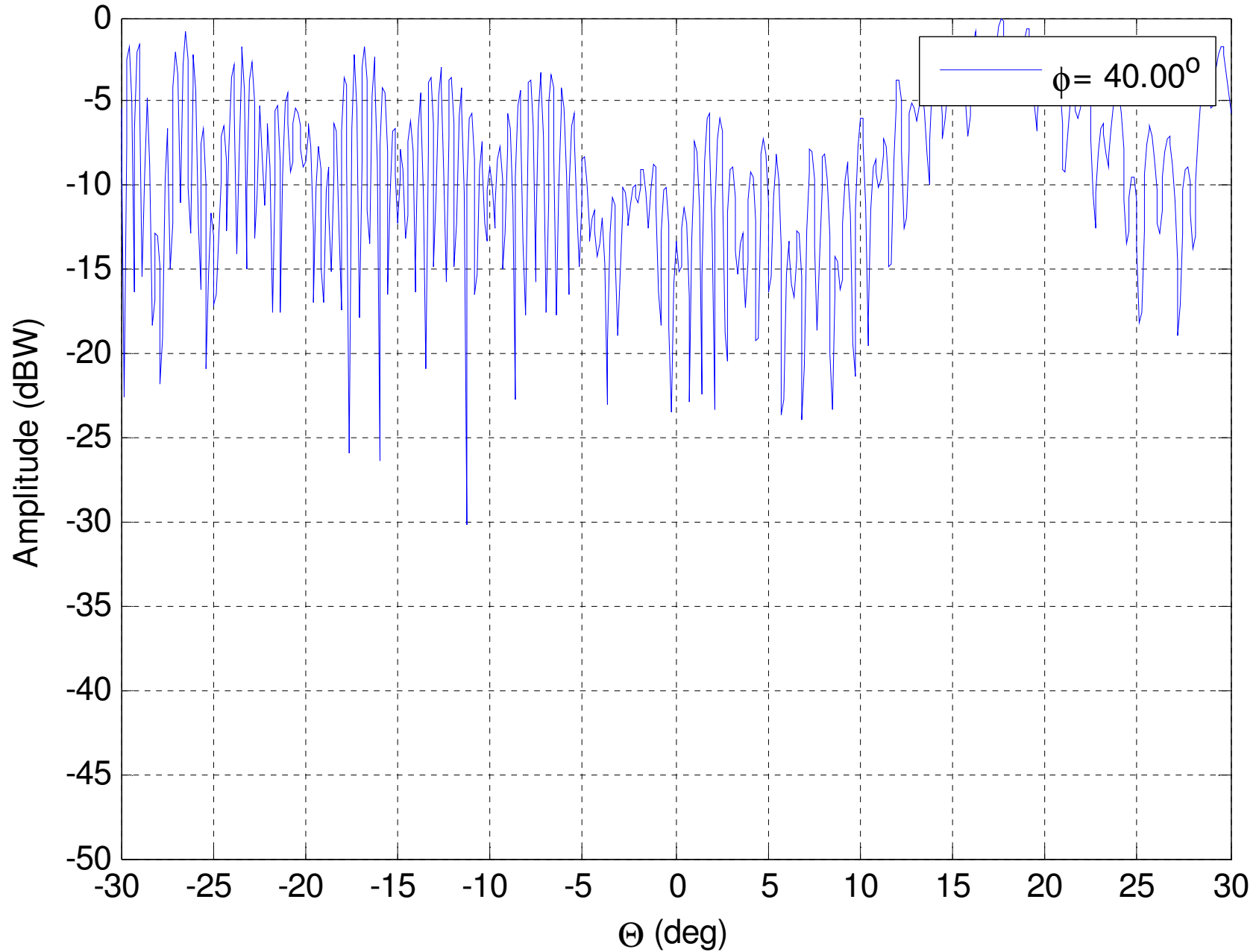
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.93 dBW, Date: 14-Dec-2011



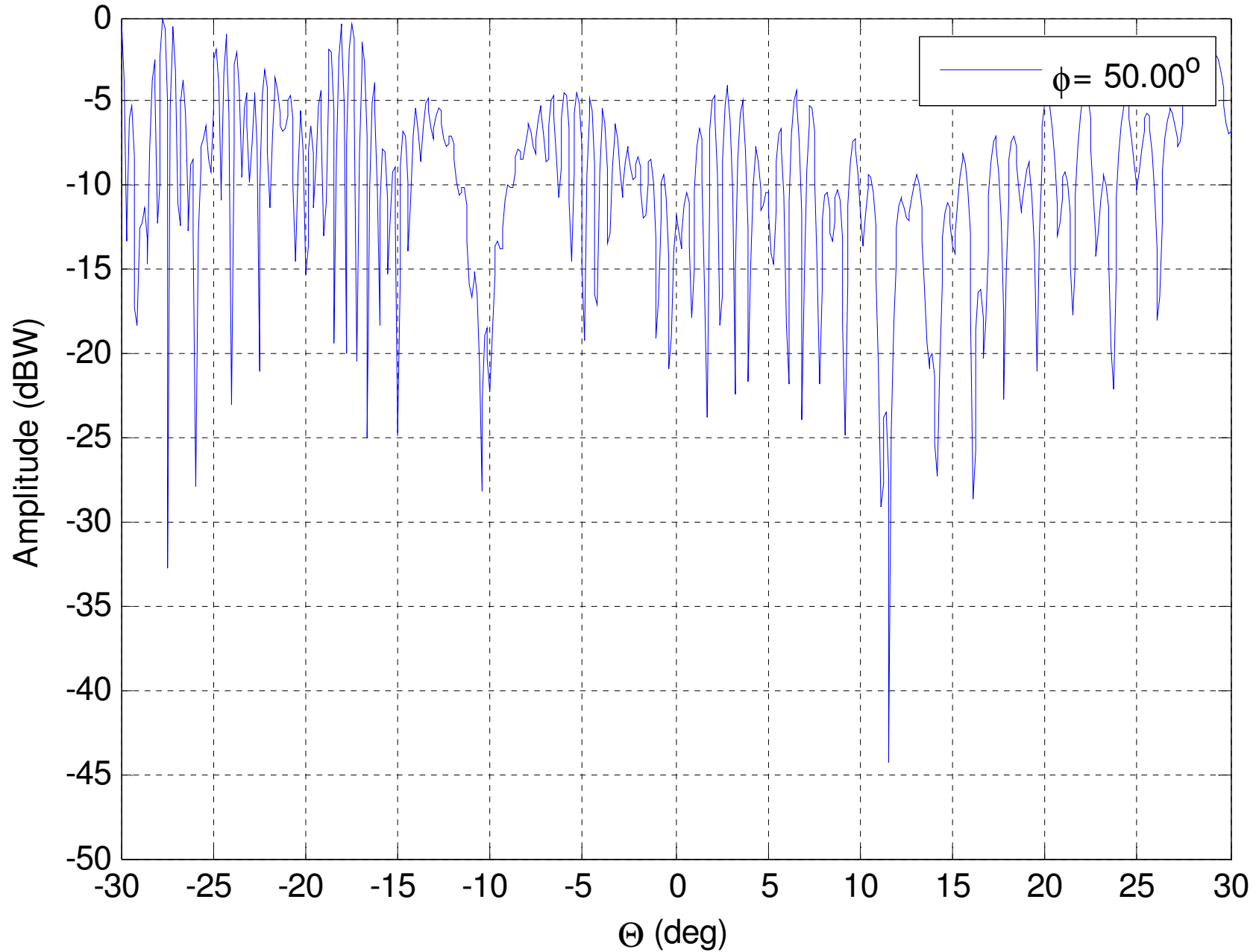
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -9.34 dBW, Date: 14-Dec-2011



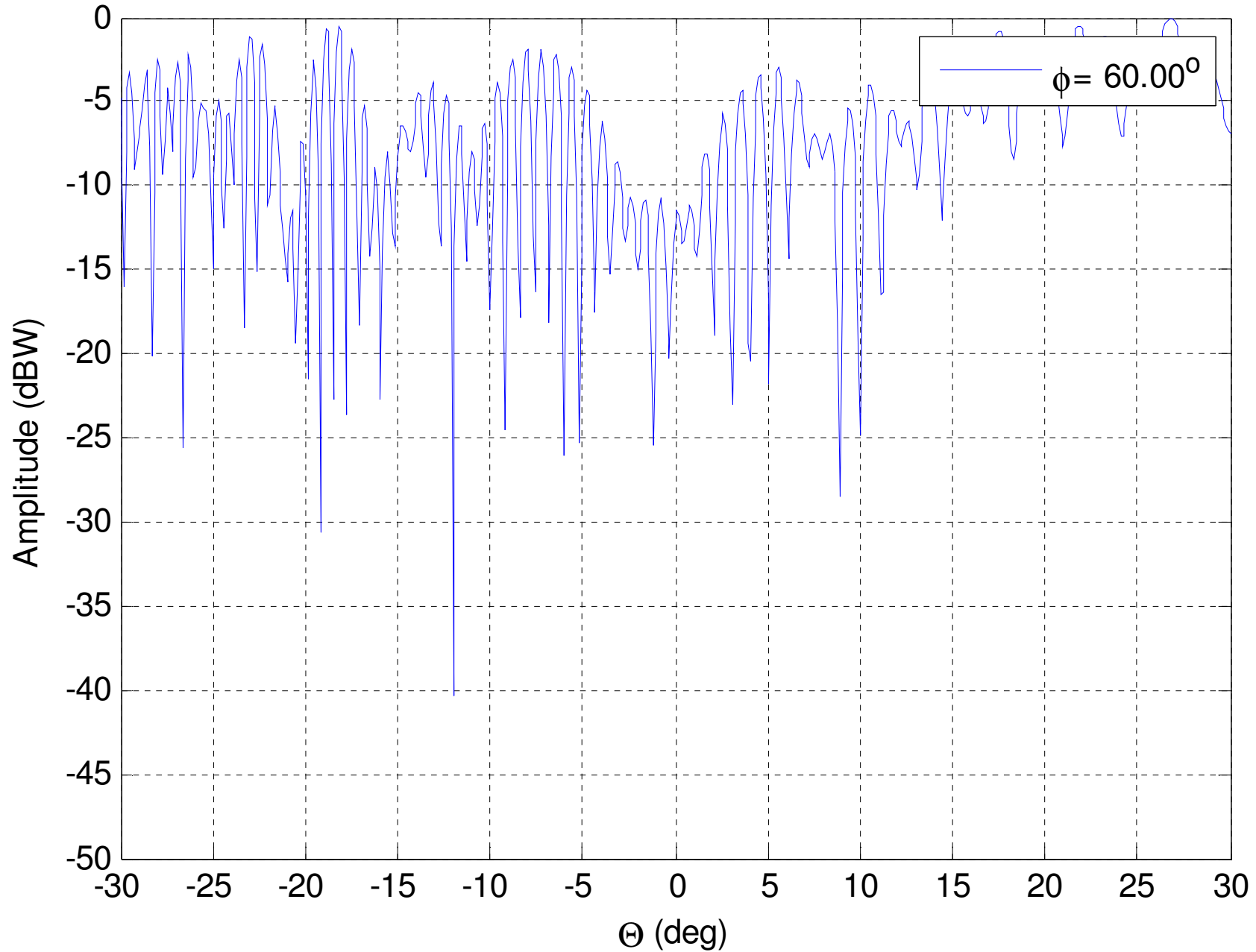
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -10.78 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

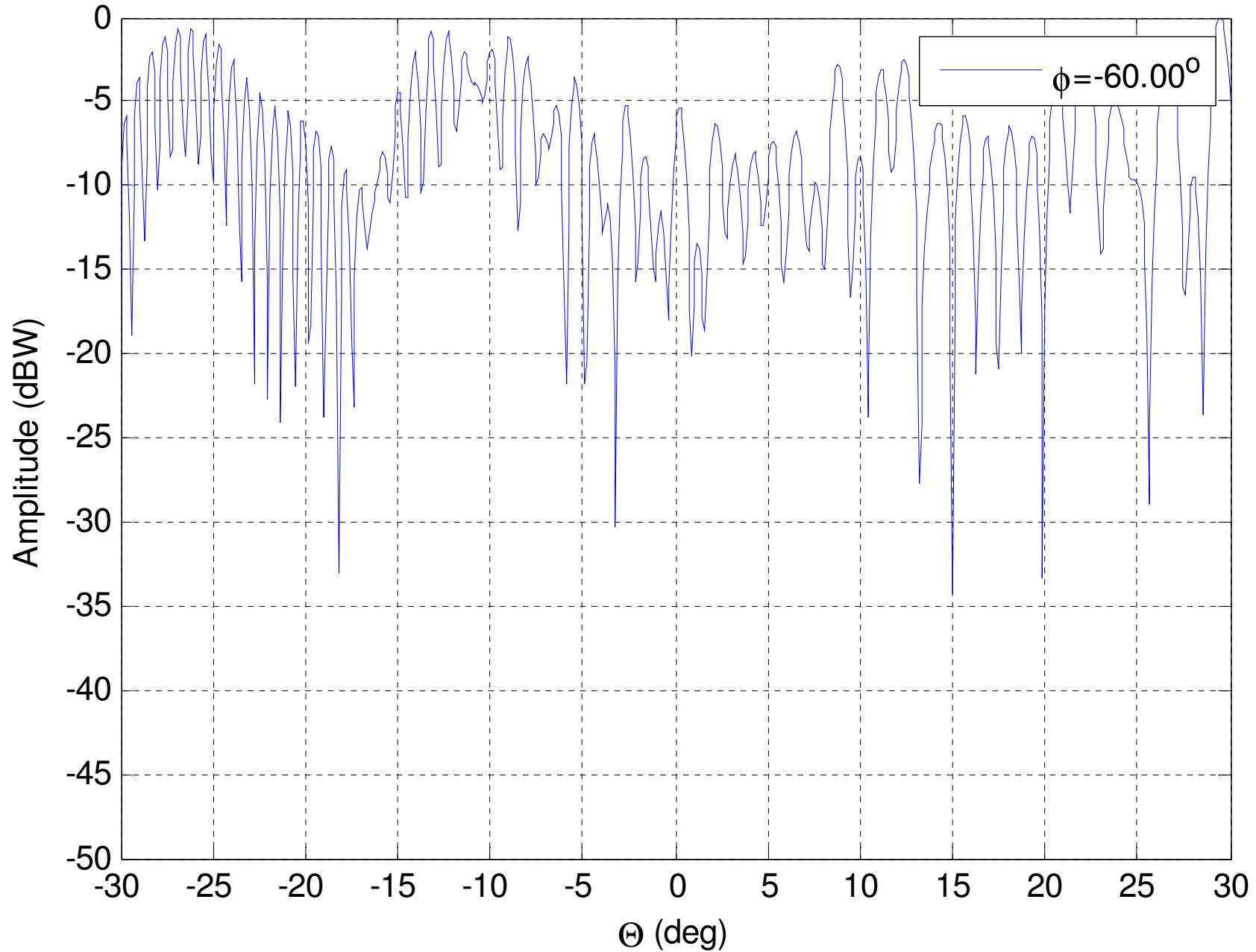
Input file: tx-17.7-rhcp-60.cut, Peak: -10.81 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

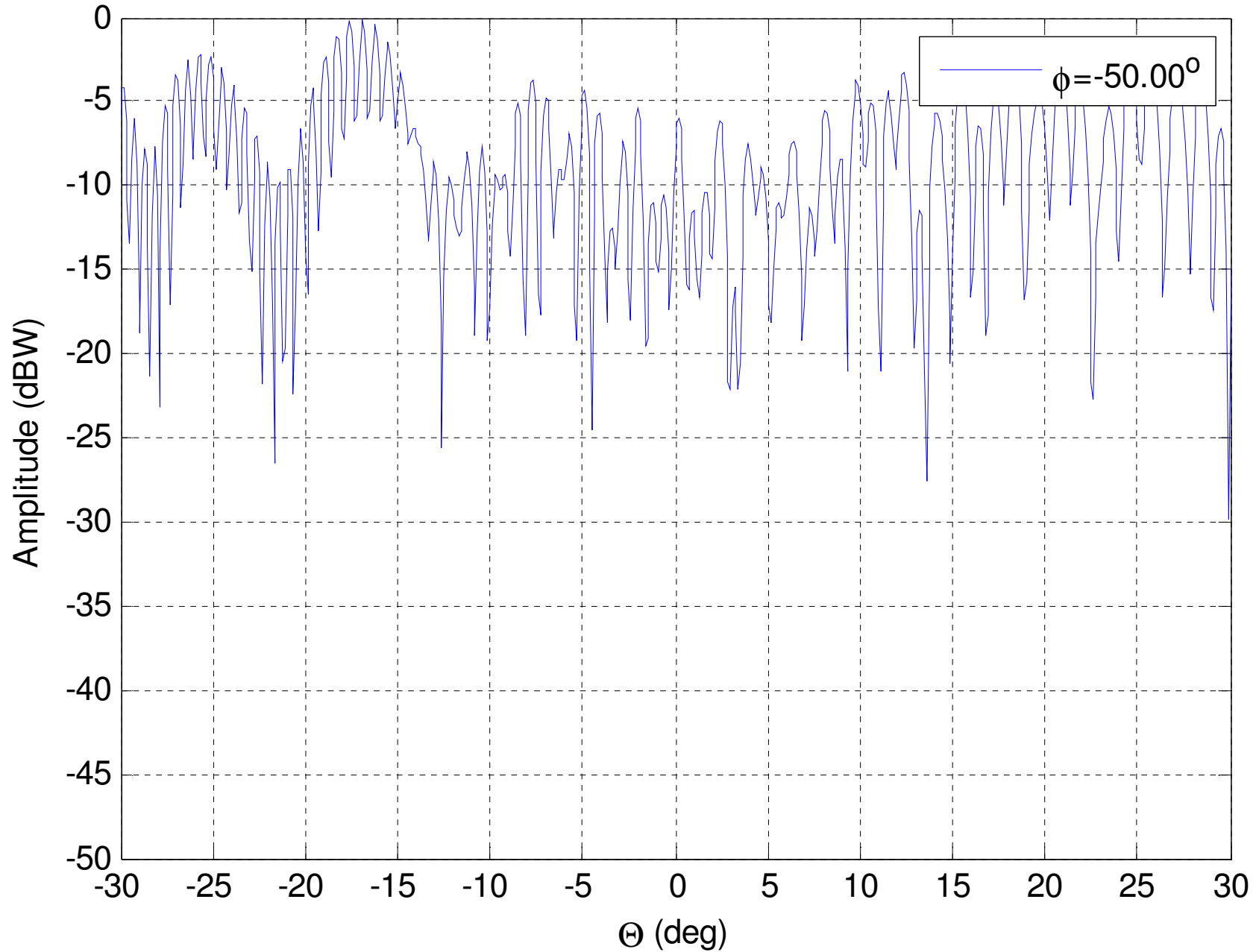
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -9.77 dBW, Date: 14-Dec-2011



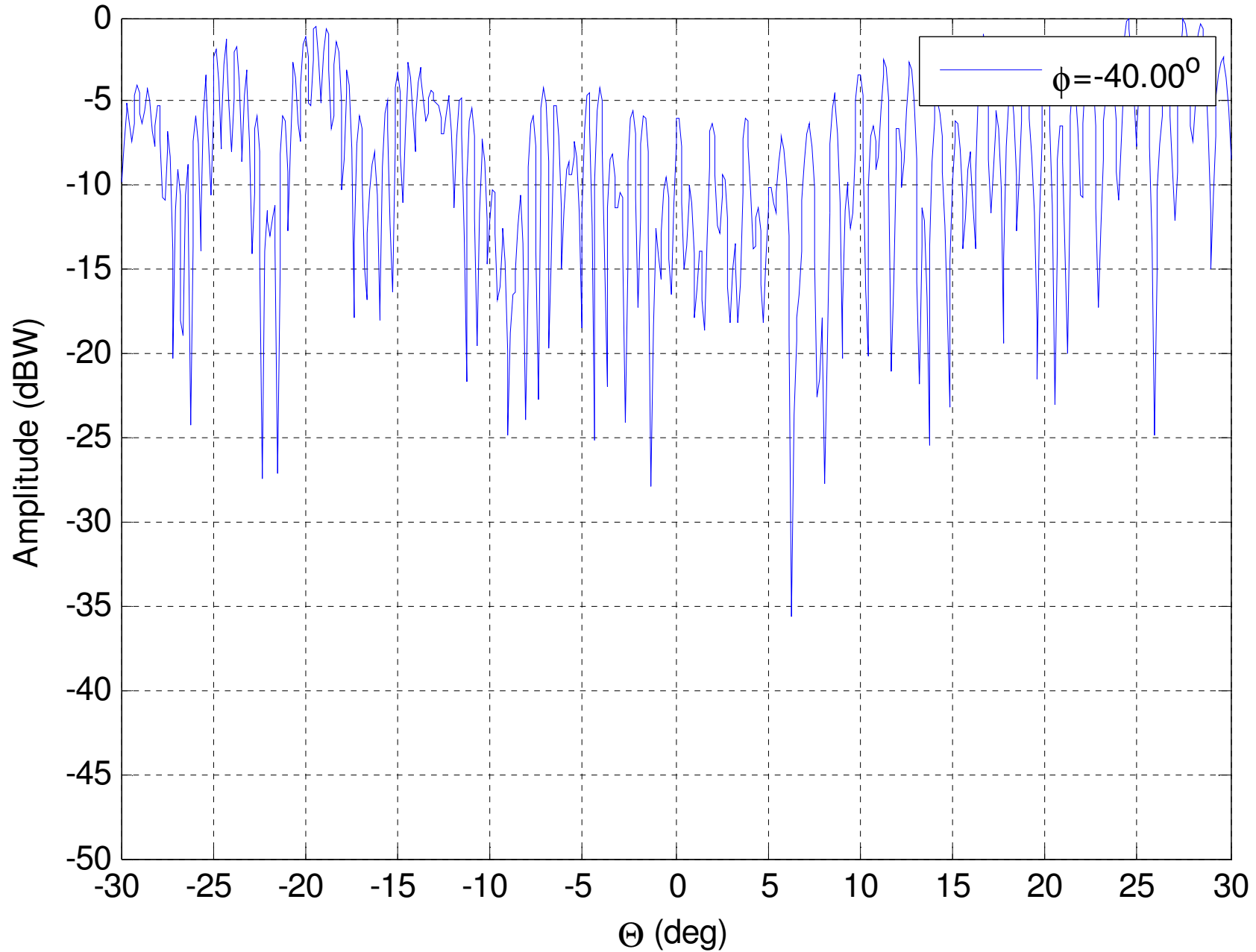
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.15 dBW, Date: 14-Dec-2011



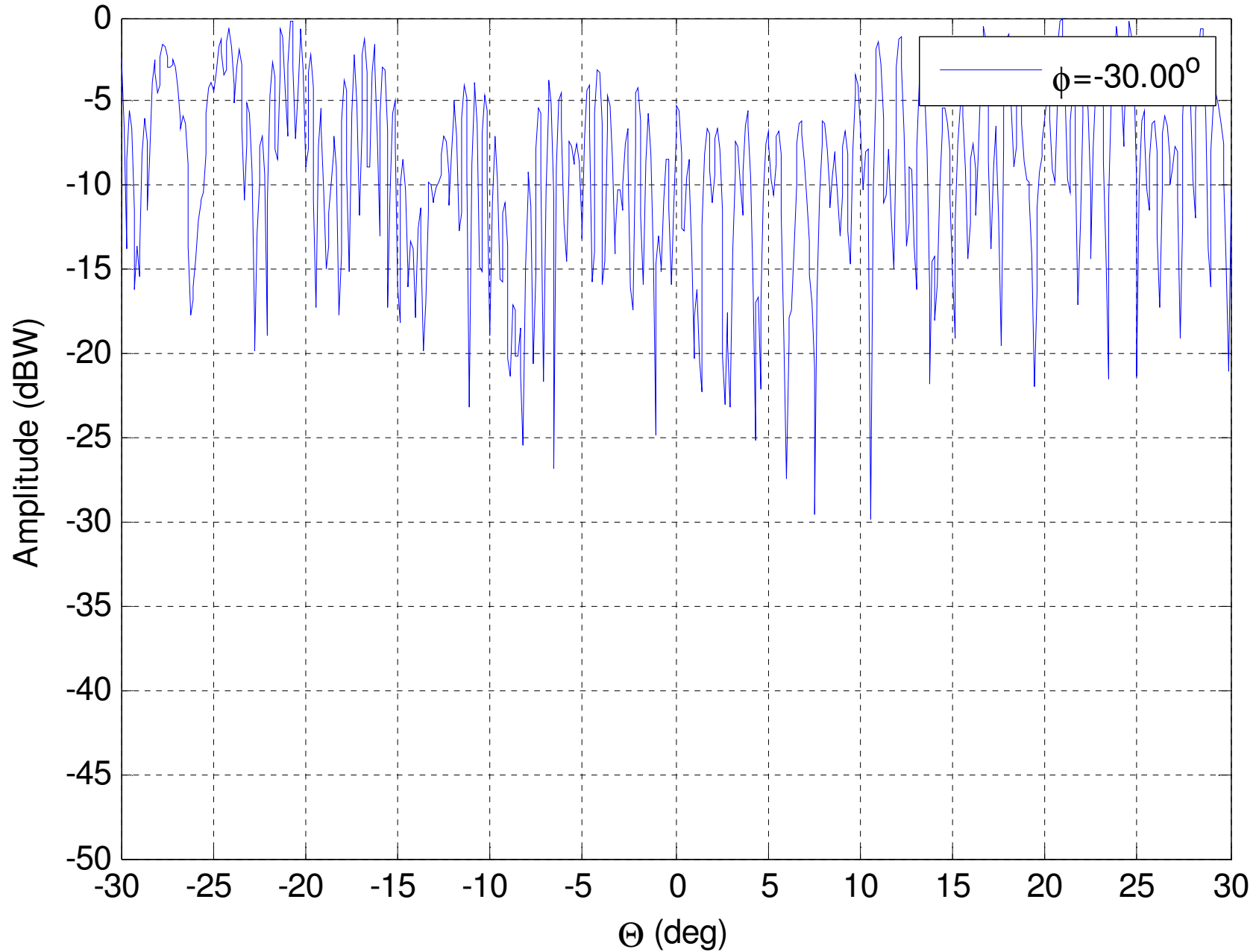
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -9.27 dBW, Date: 14-Dec-2011



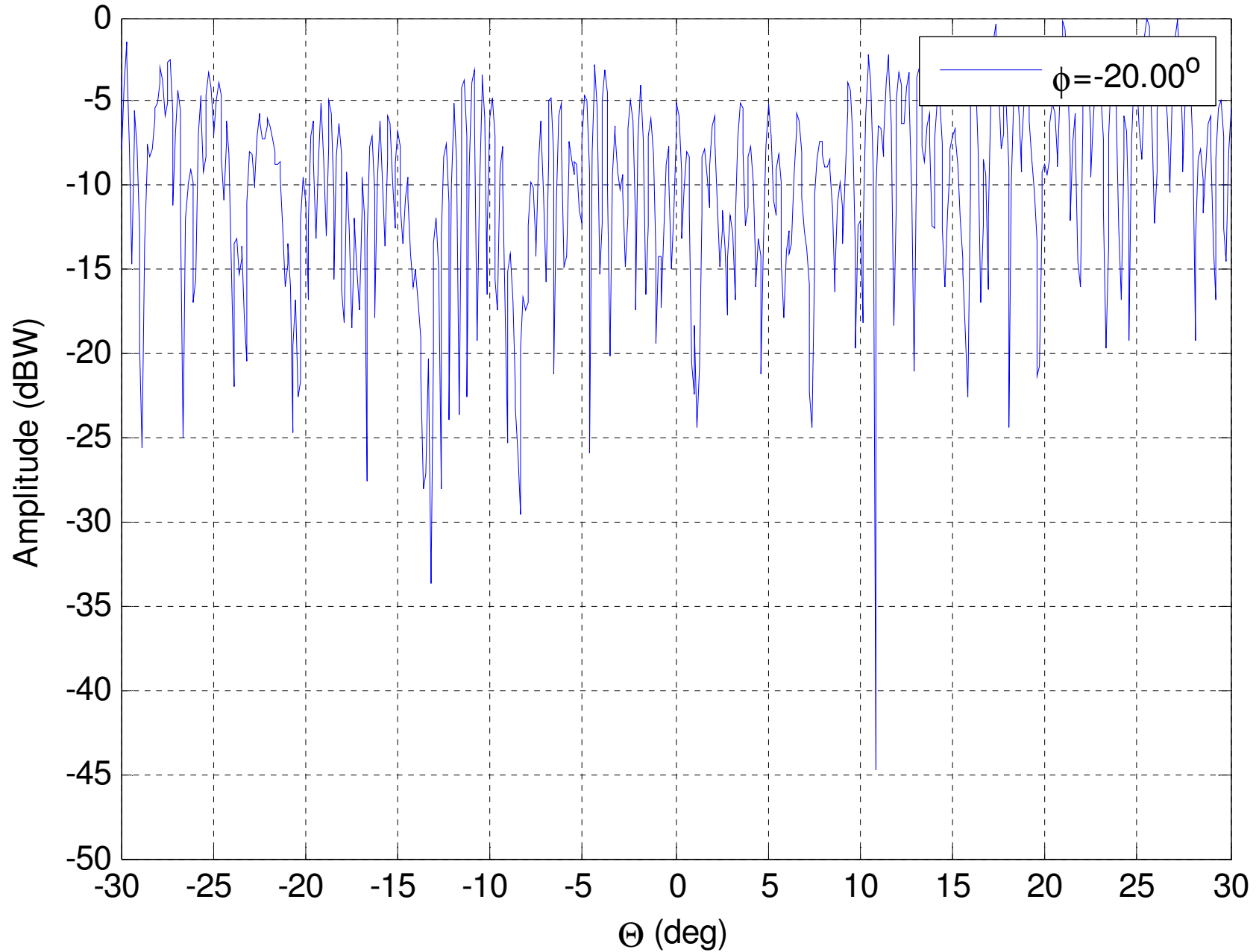
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -10.01 dBW, Date: 14-Dec-2011



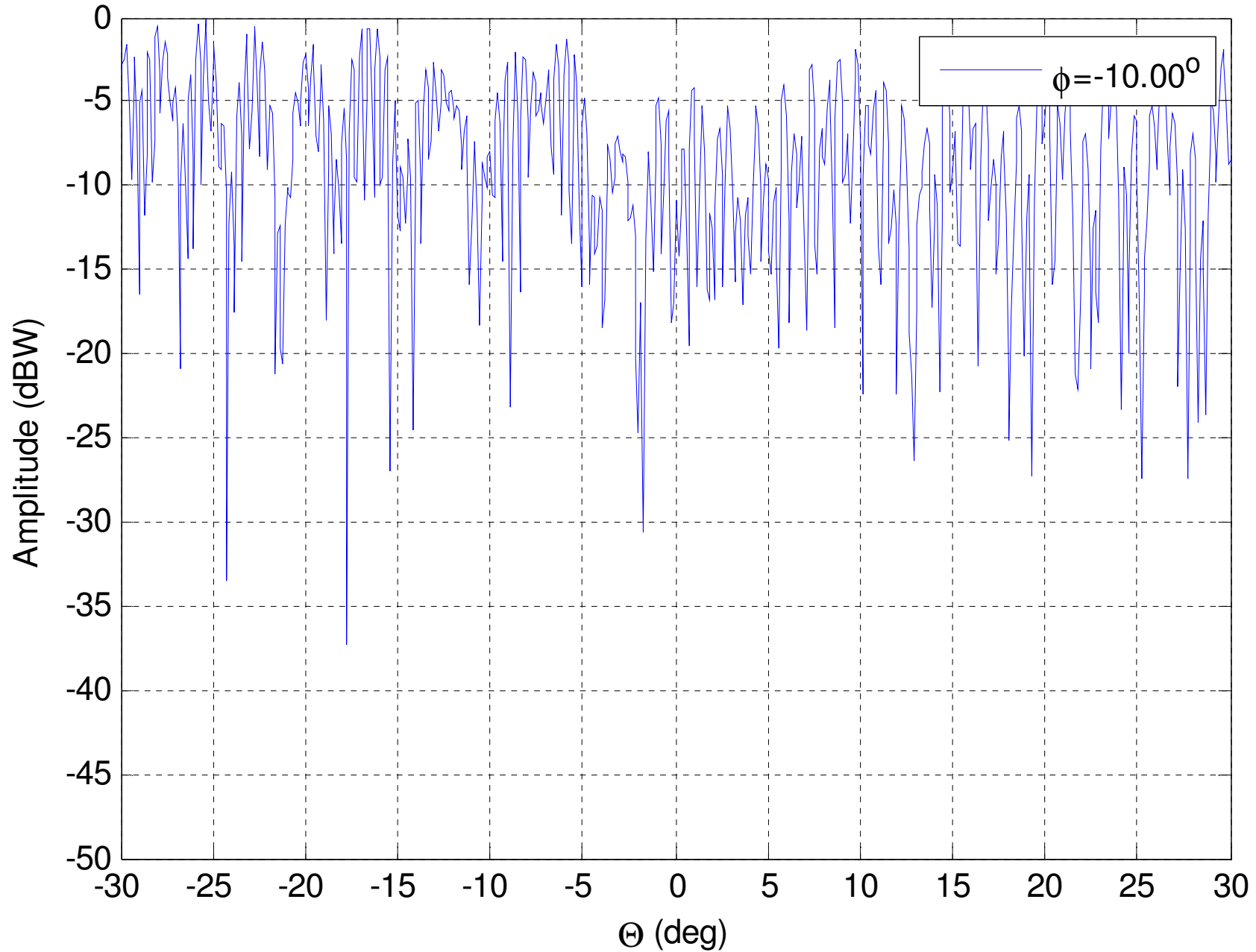
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -10.08 dBW, Date: 14-Dec-2011



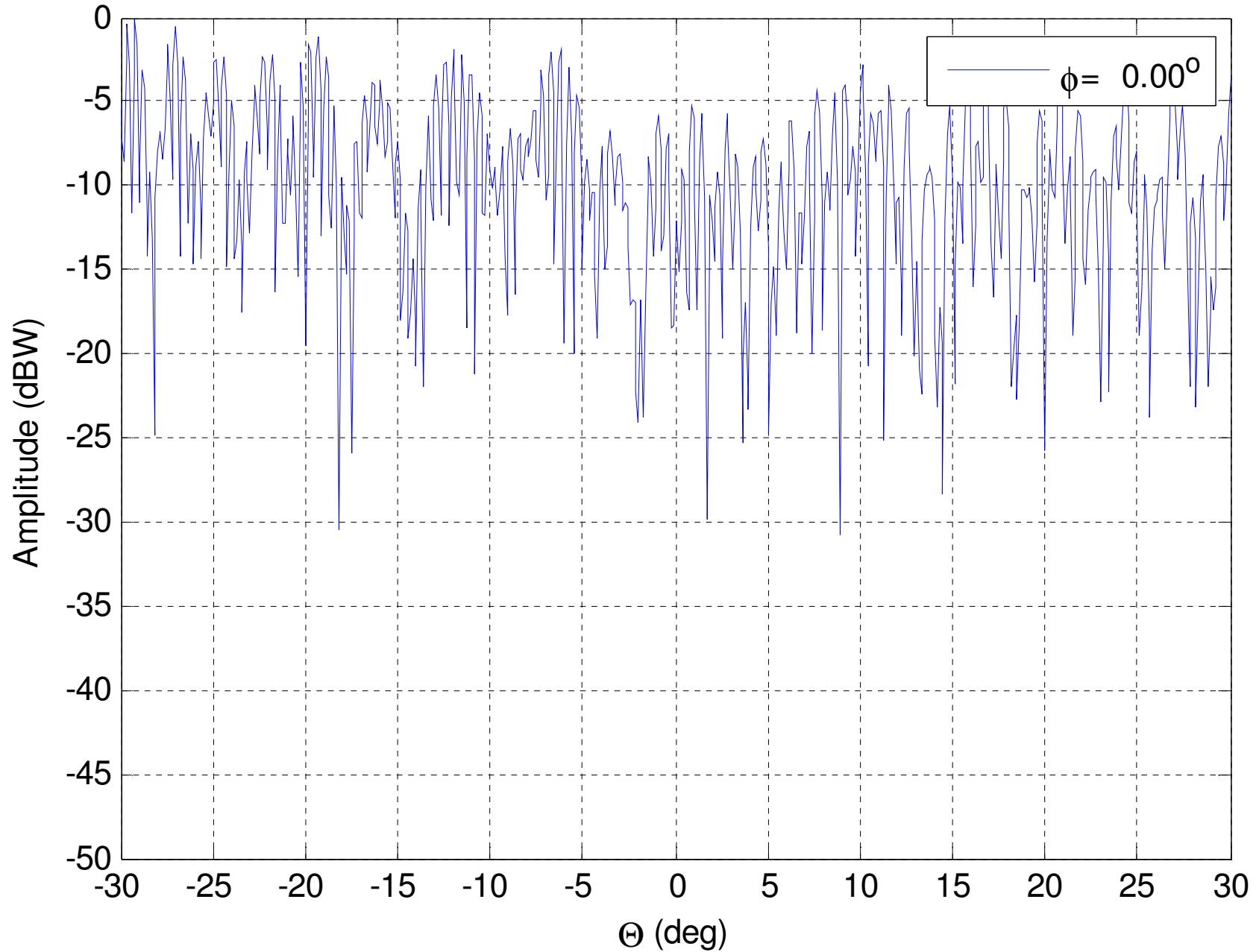
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -11.77 dBW, Date: 14-Dec-2011



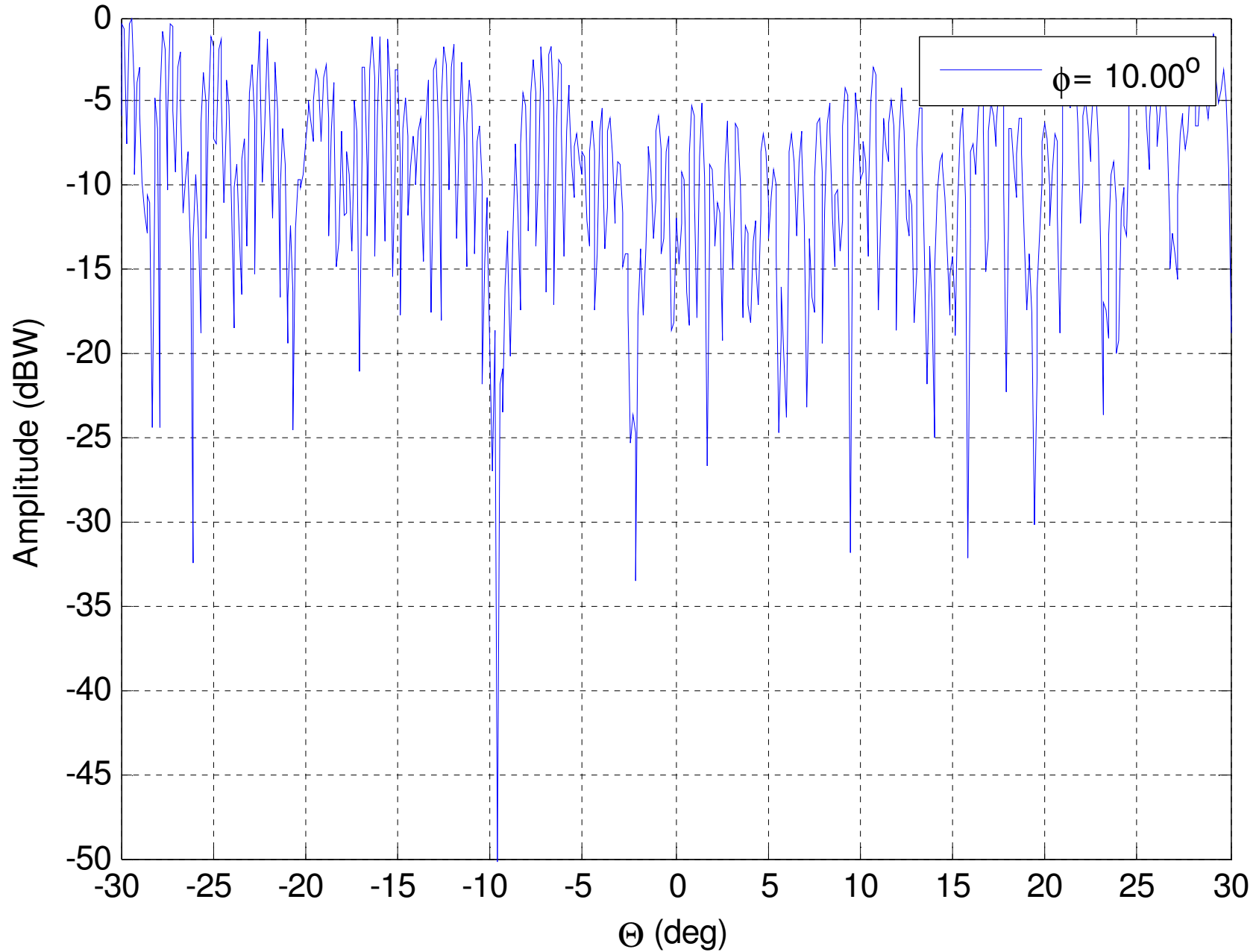
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -10.61 dBW, Date: 14-Dec-2011



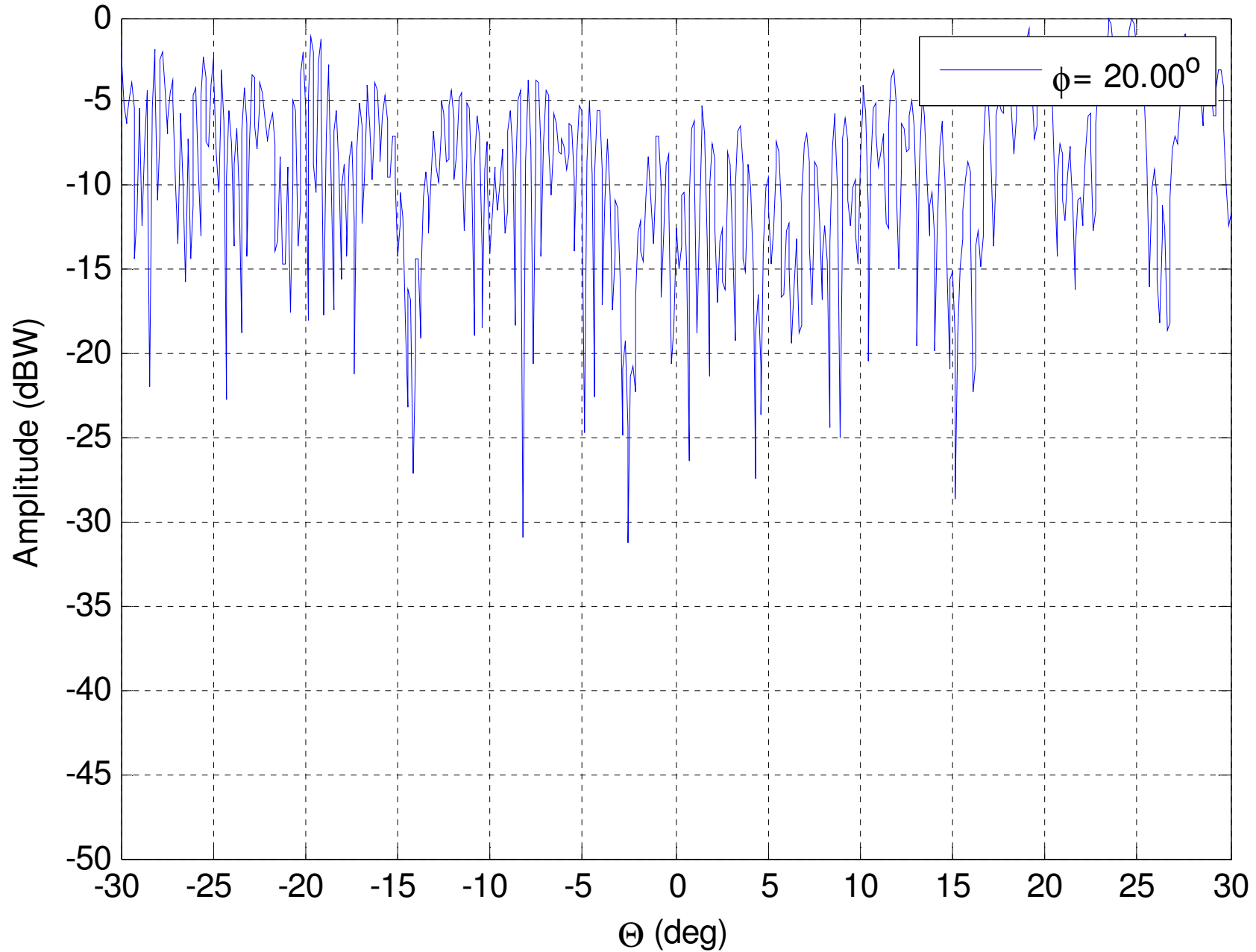
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -10.74 dBW, Date: 14-Dec-2011



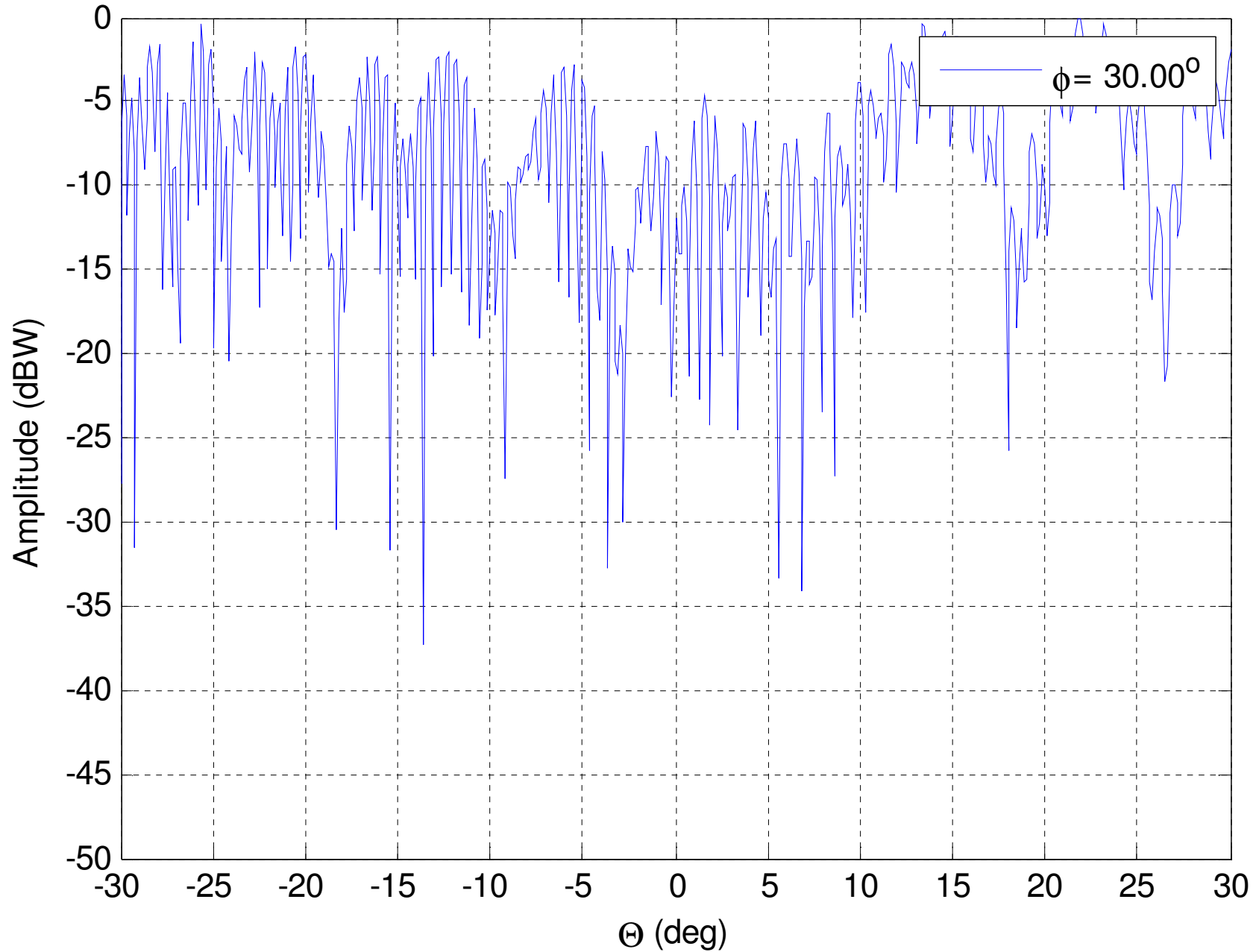
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -10.01 dBW, Date: 14-Dec-2011



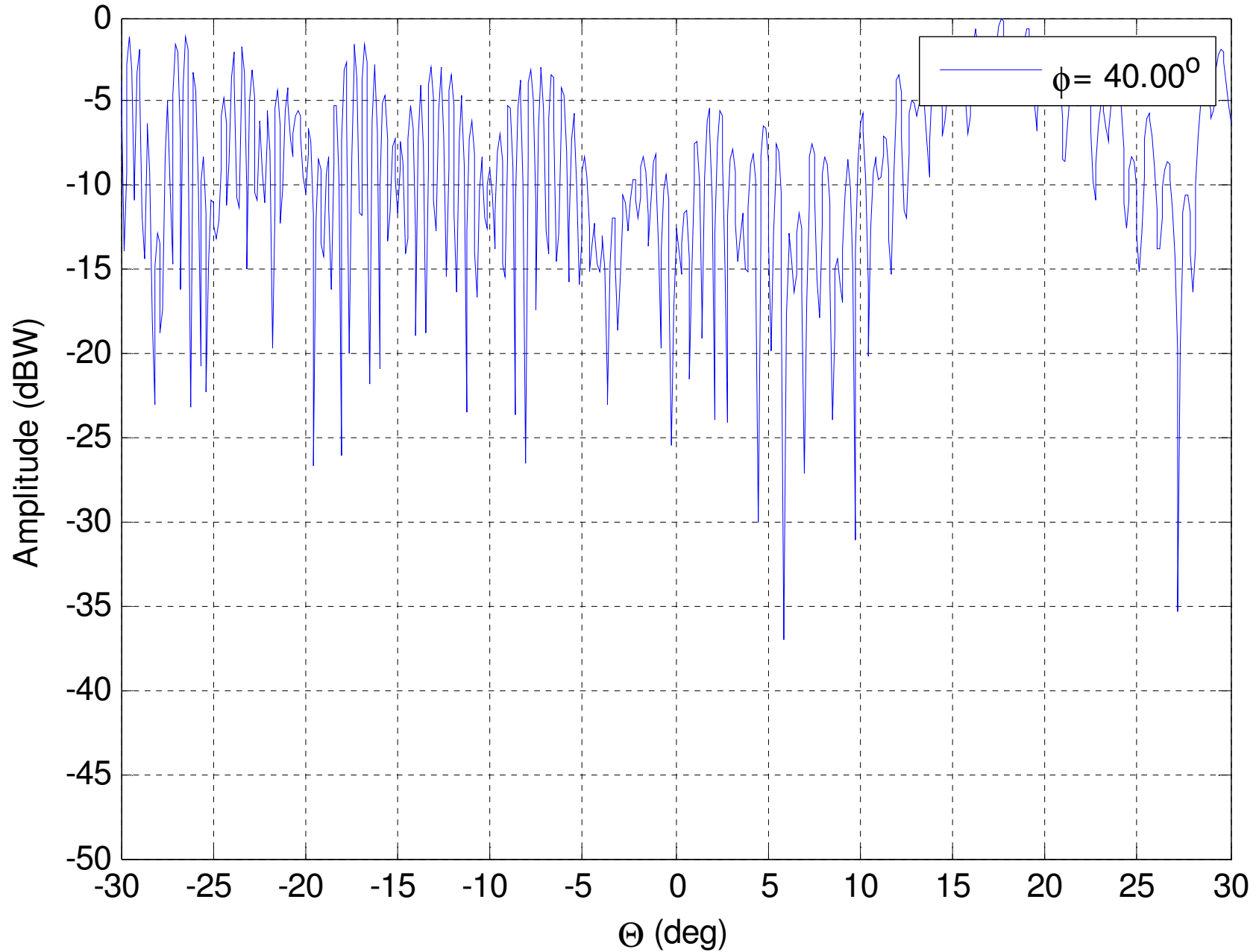
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -10.30 dBW, Date: 14-Dec-2011



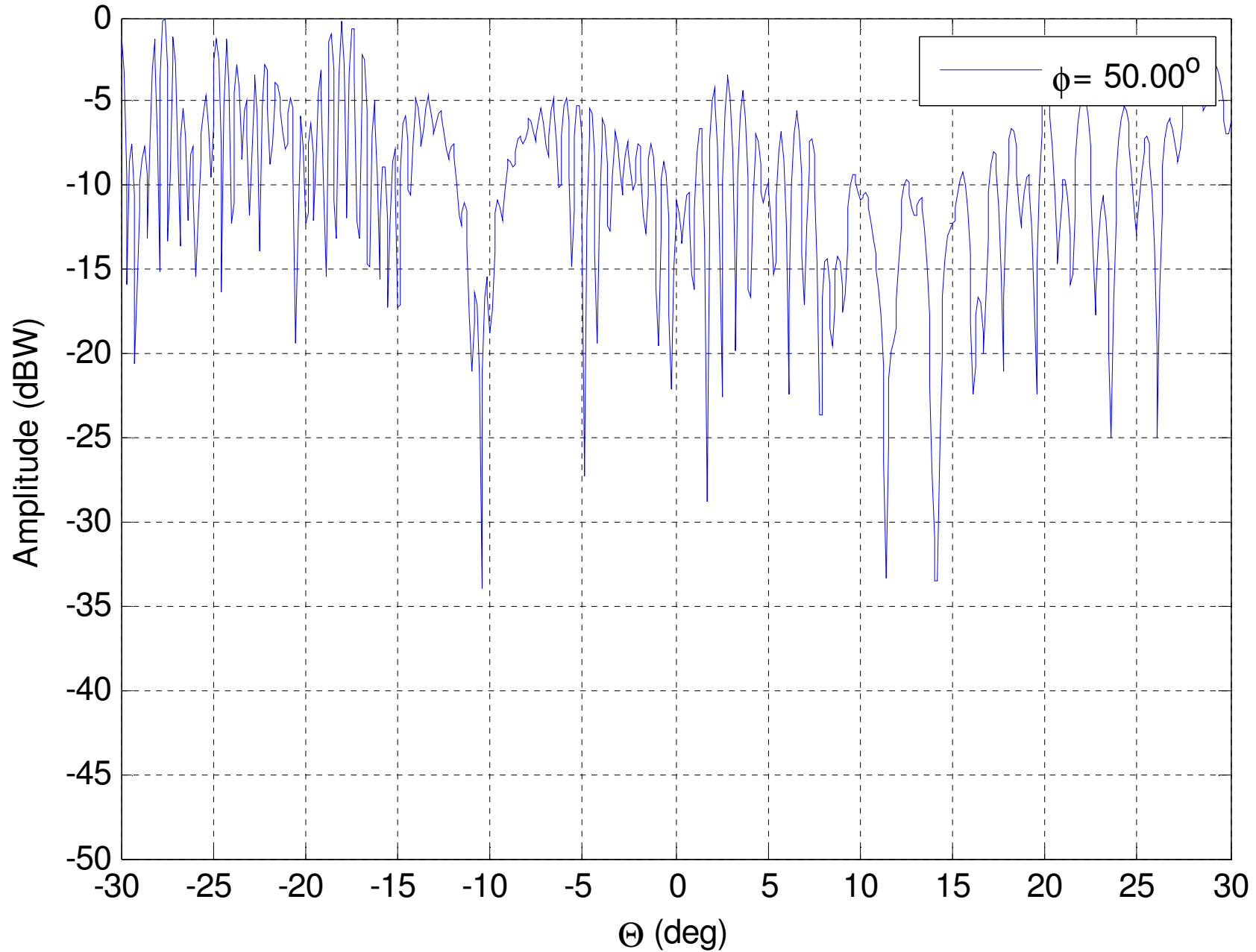
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -9.51 dBW, Date: 14-Dec-2011



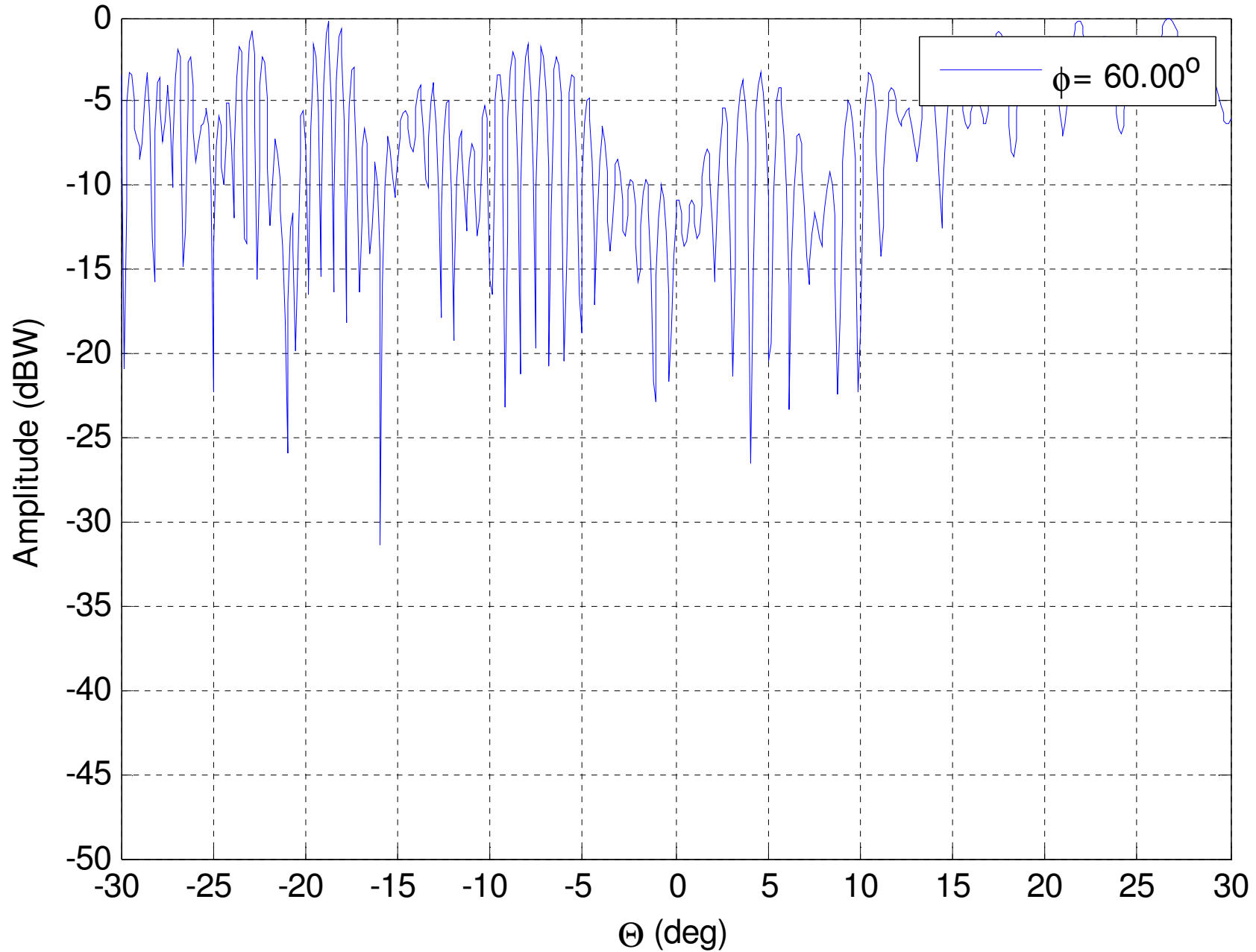
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -10.93 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.86 dBW, Date: 14-Dec-2011



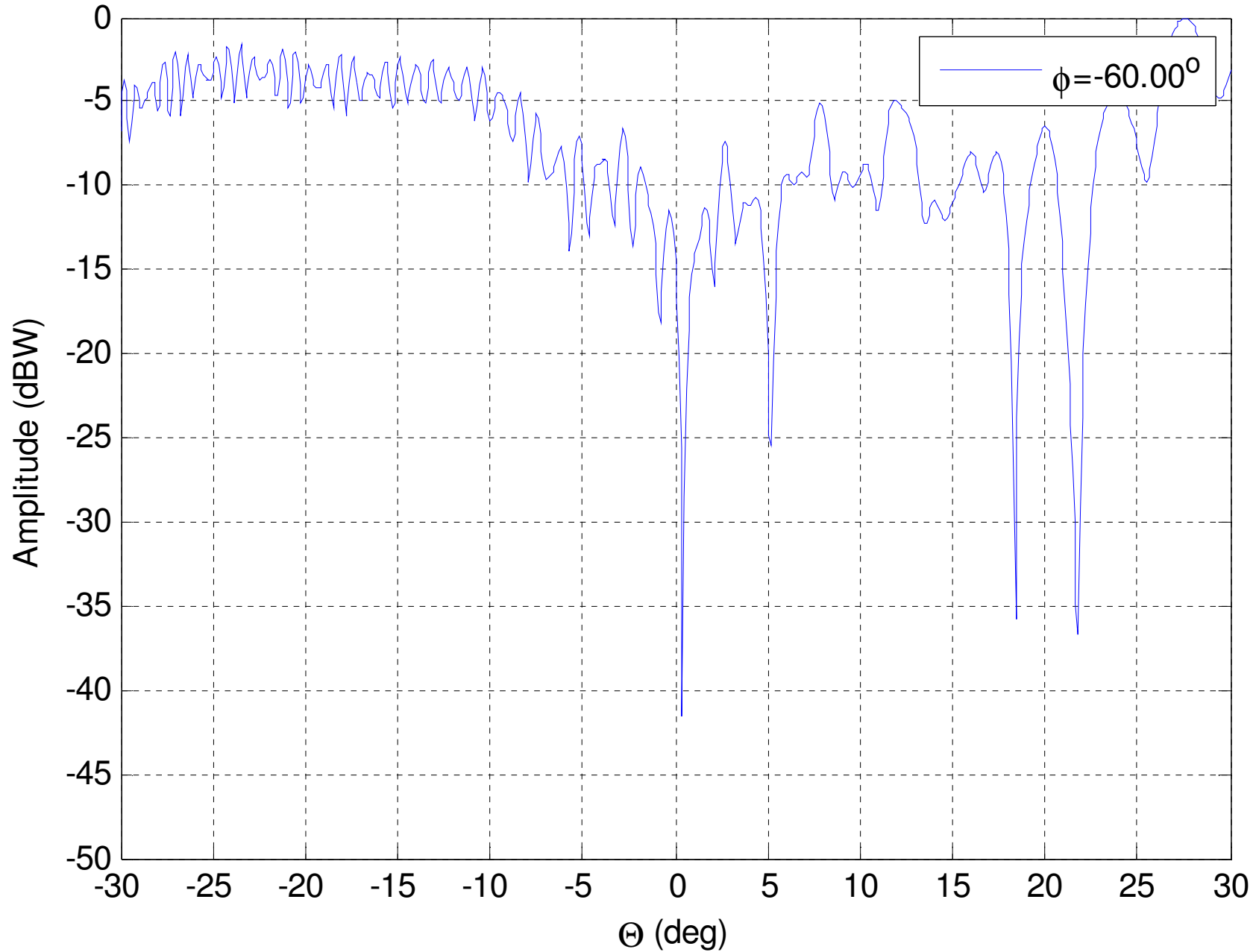
Spot Beam12, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

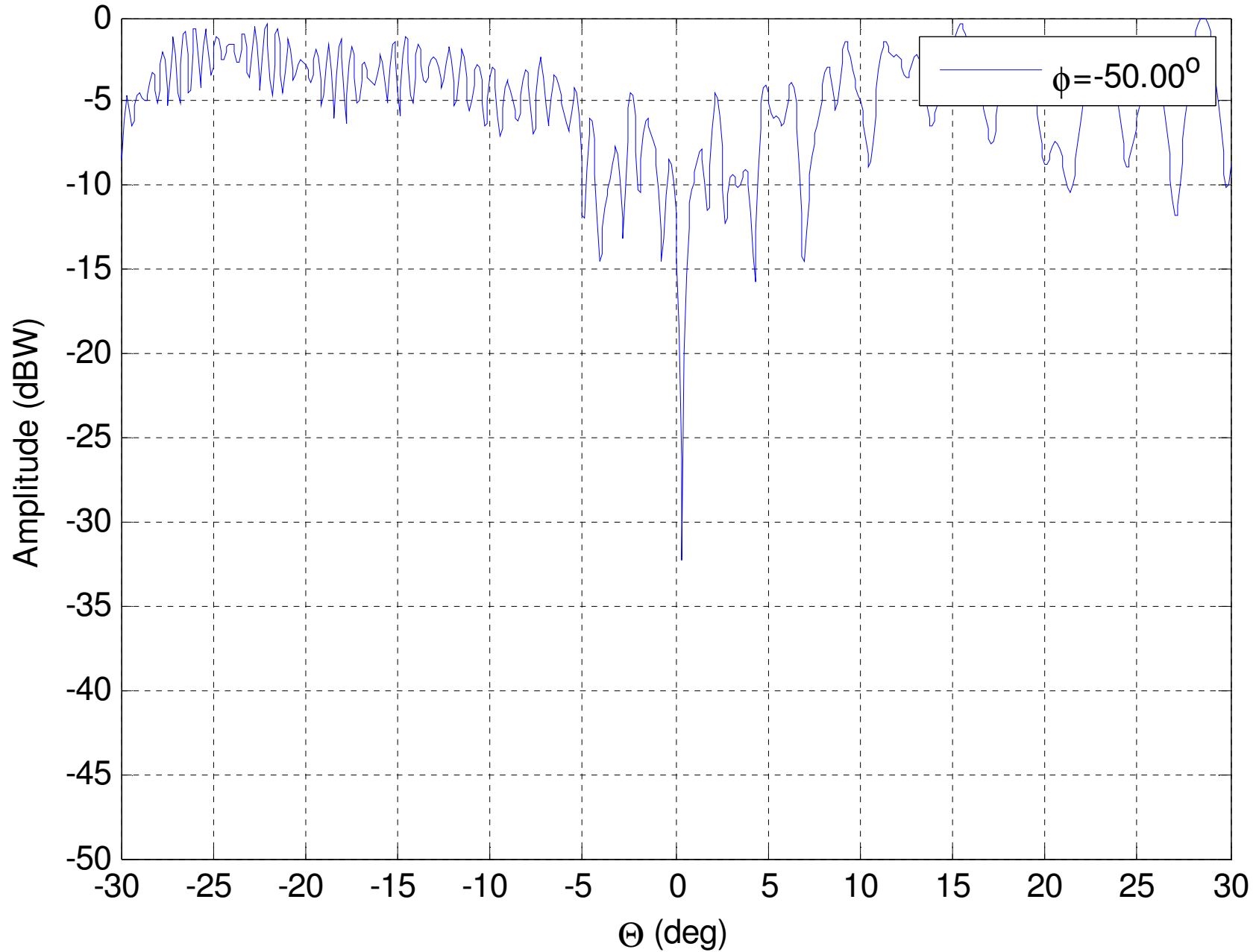
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -8.73 dBW, Date: 14-Dec-2011



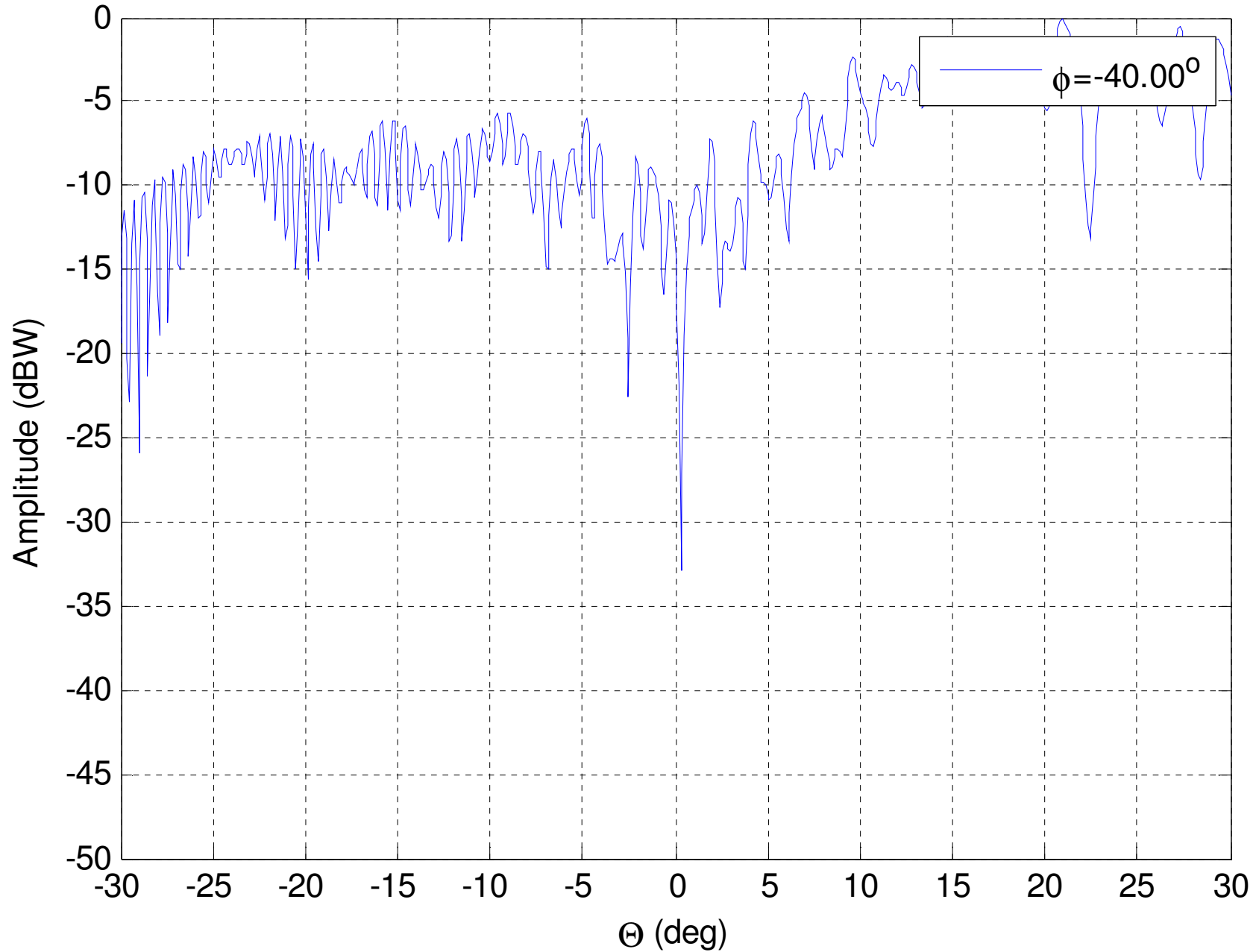
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -11.52 dBW, Date: 14-Dec-2011



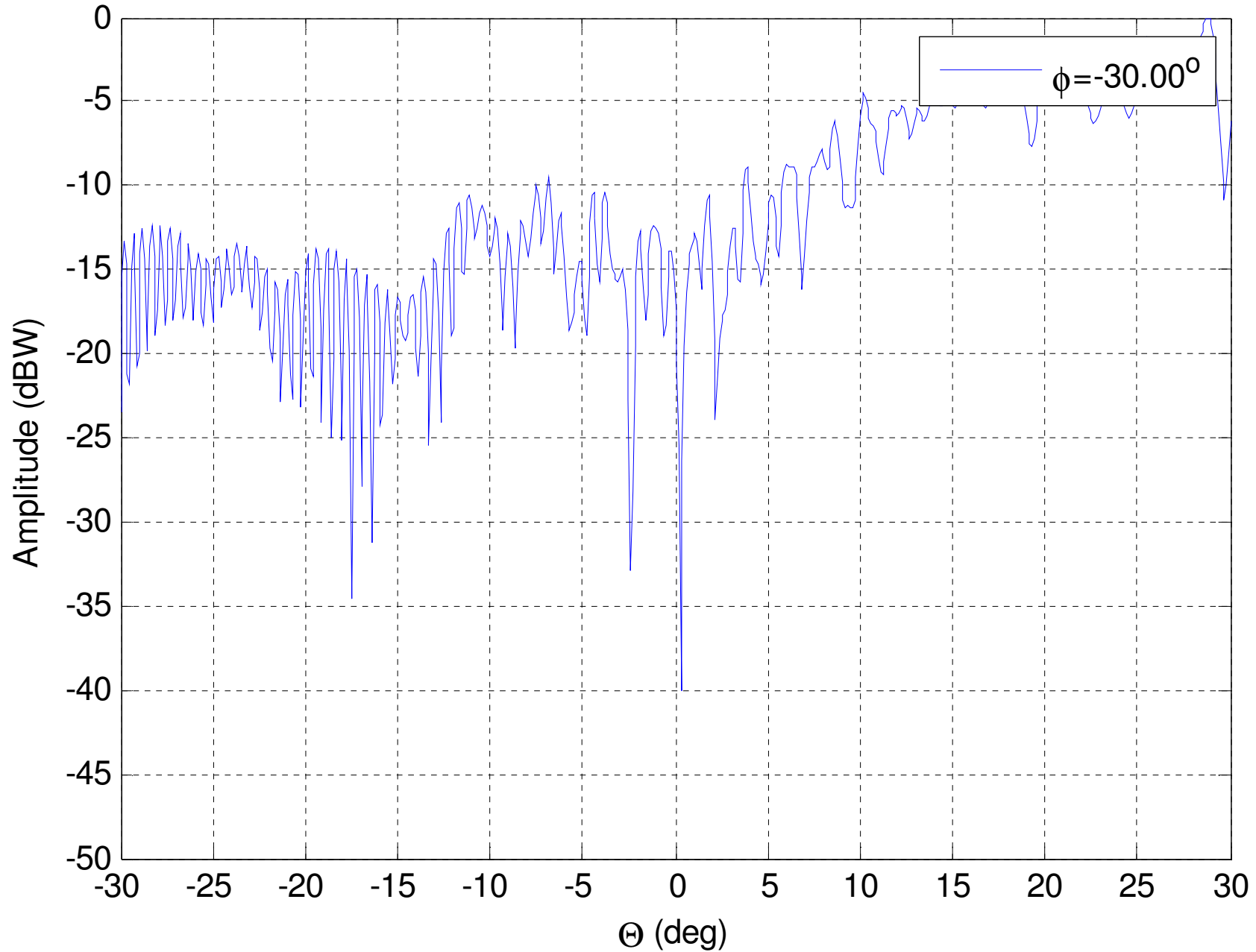
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -8.92 dBW, Date: 14-Dec-2011



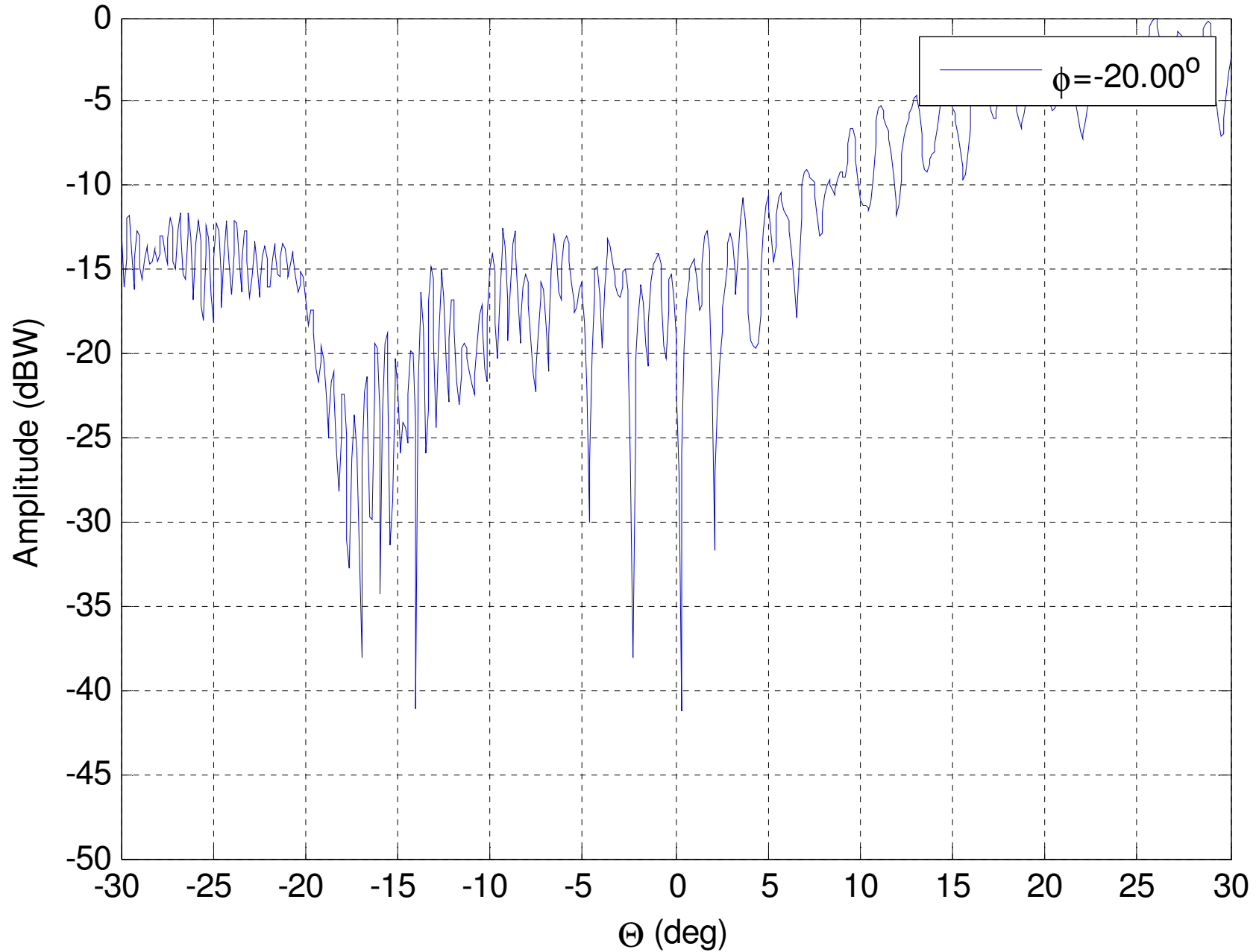
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -5.83 dBW, Date: 14-Dec-2011



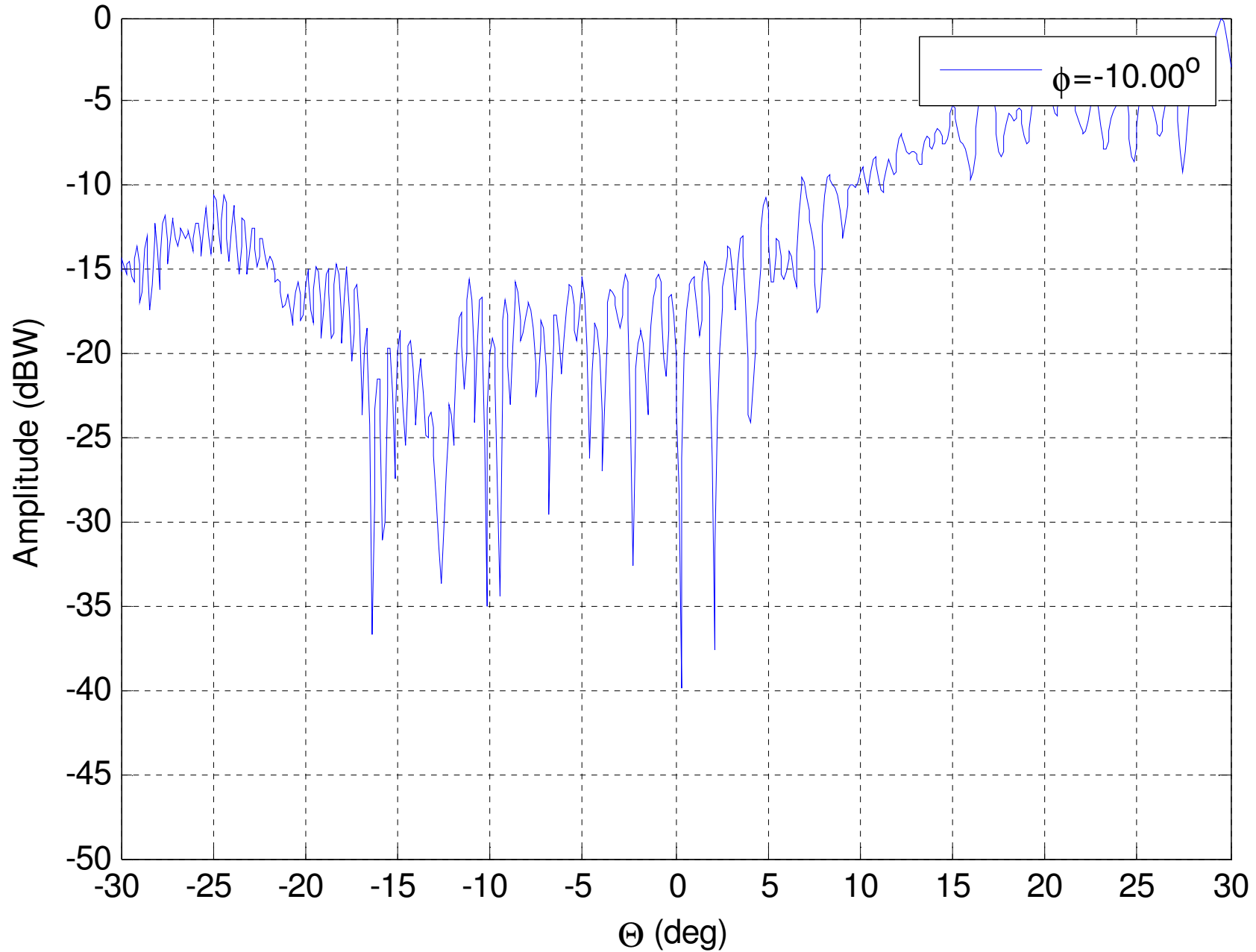
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -4.21 dBW, Date: 14-Dec-2011



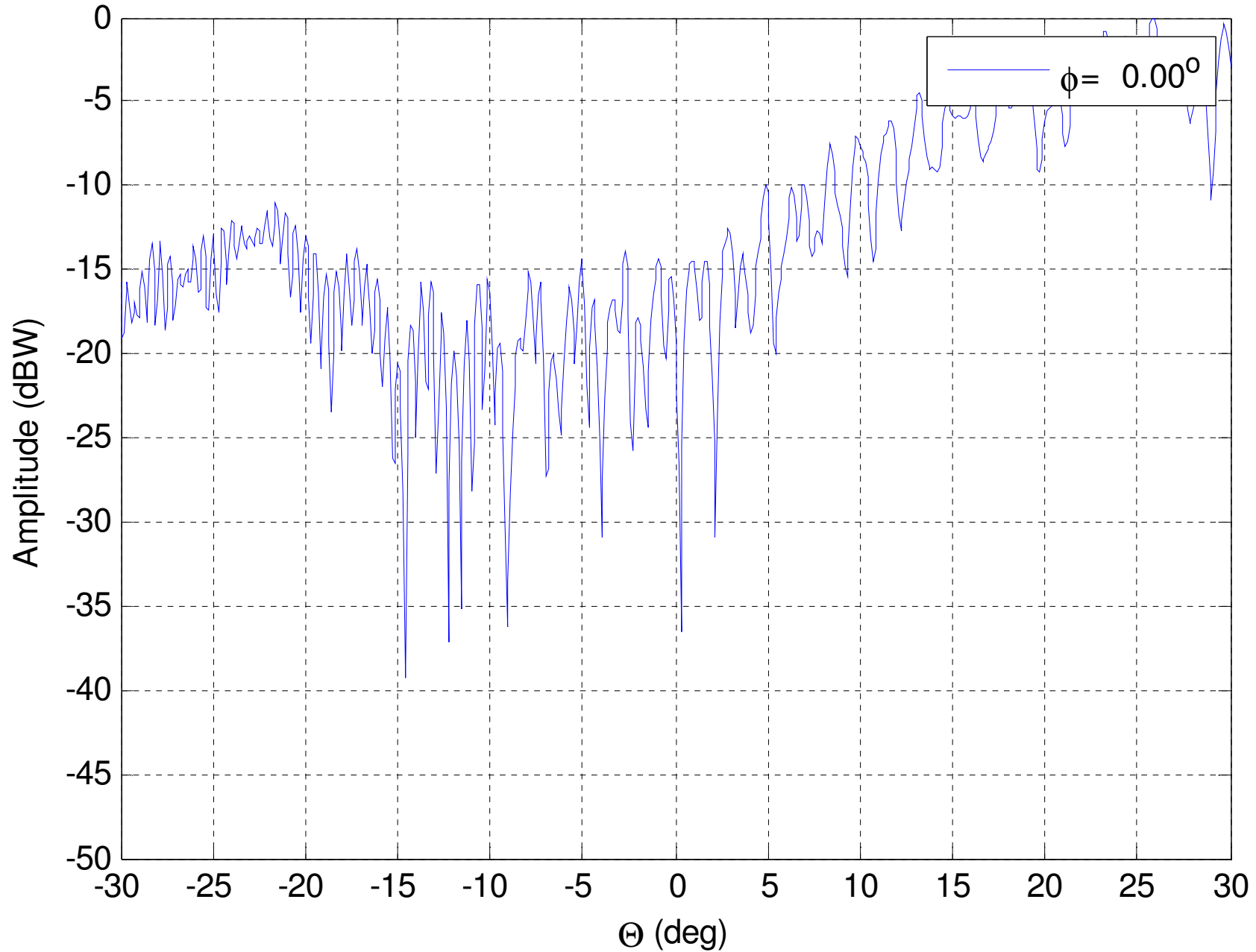
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -2.98 dBW, Date: 14-Dec-2011



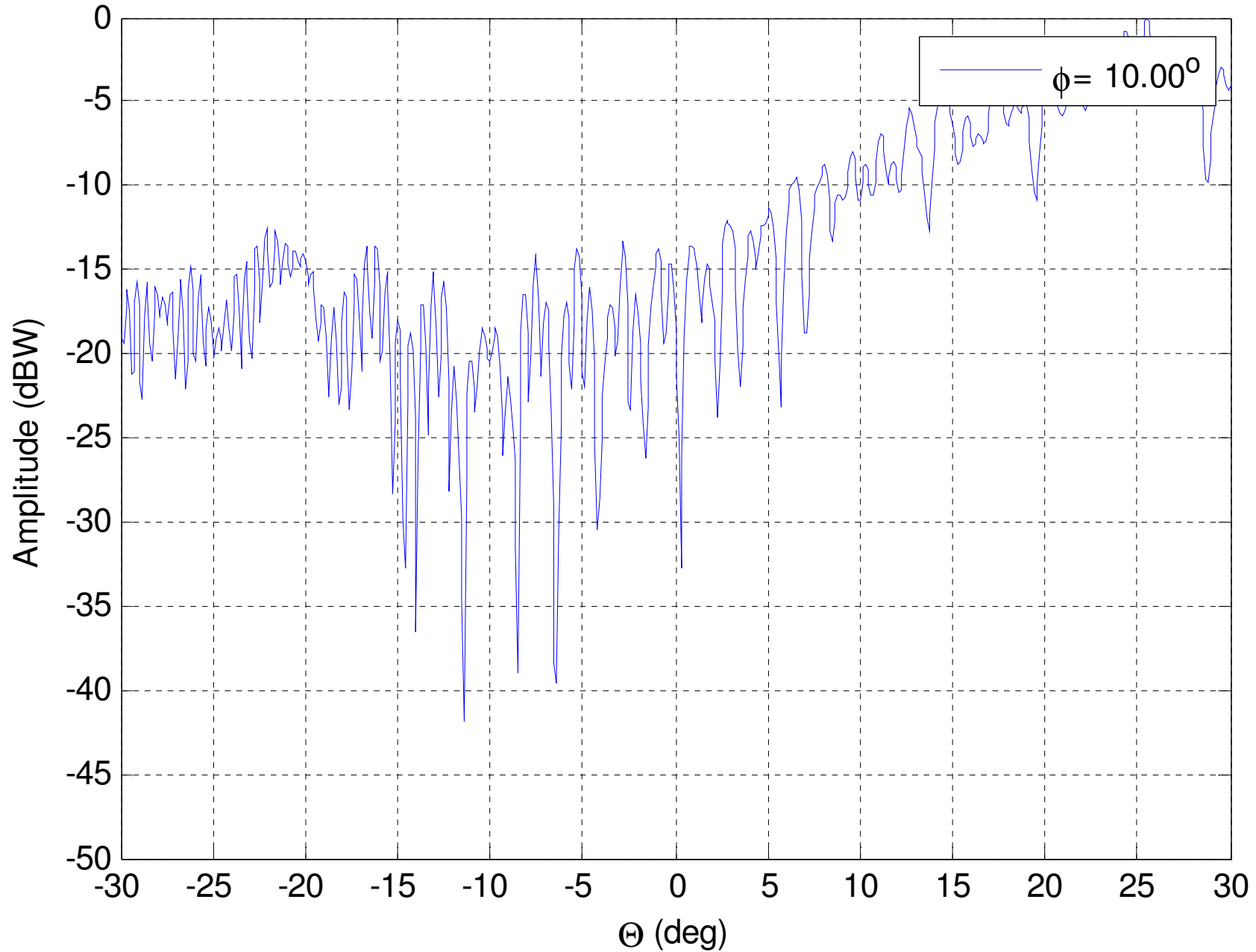
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -3.86 dBW, Date: 14-Dec-2011



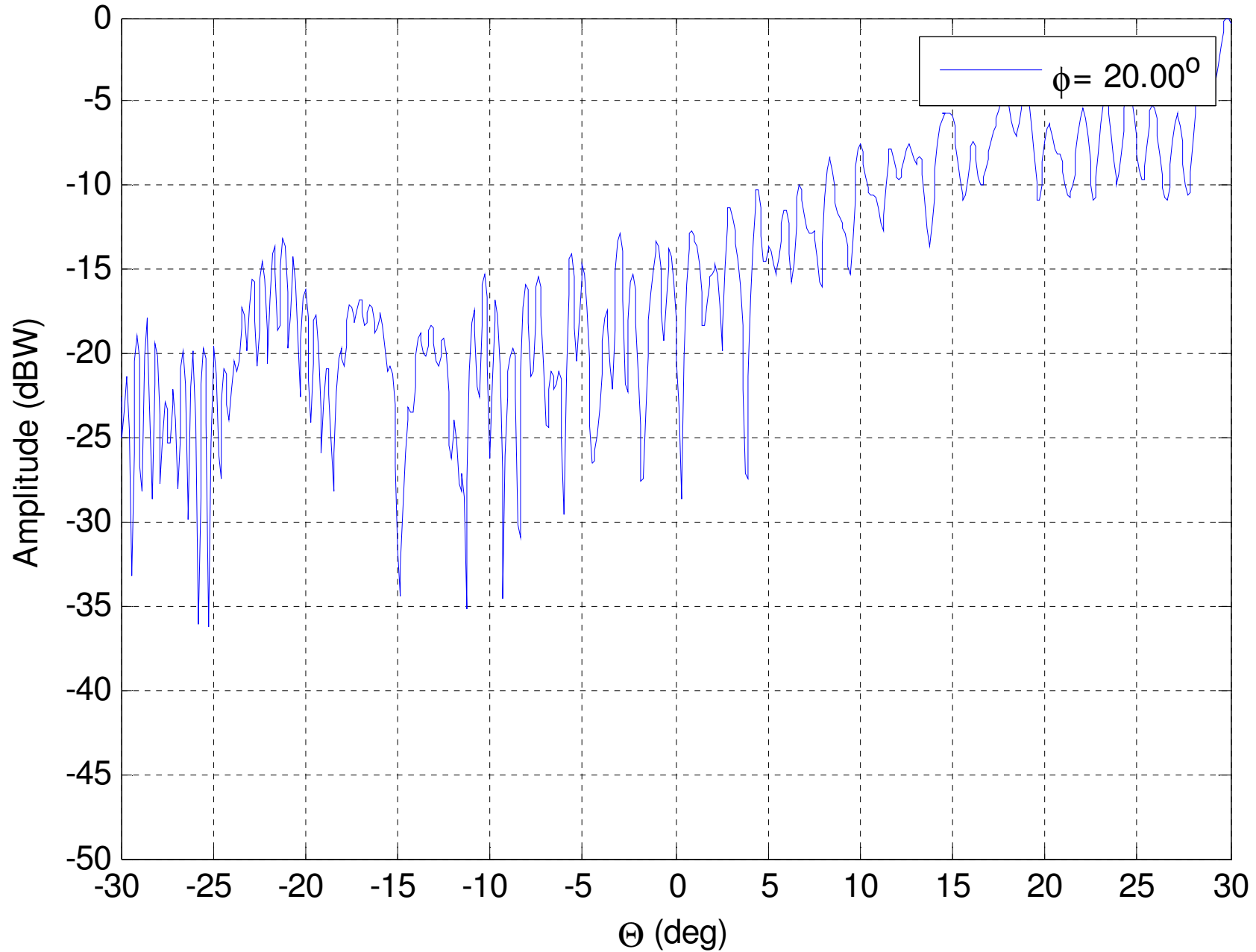
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -4.59 dBW, Date: 14-Dec-2011



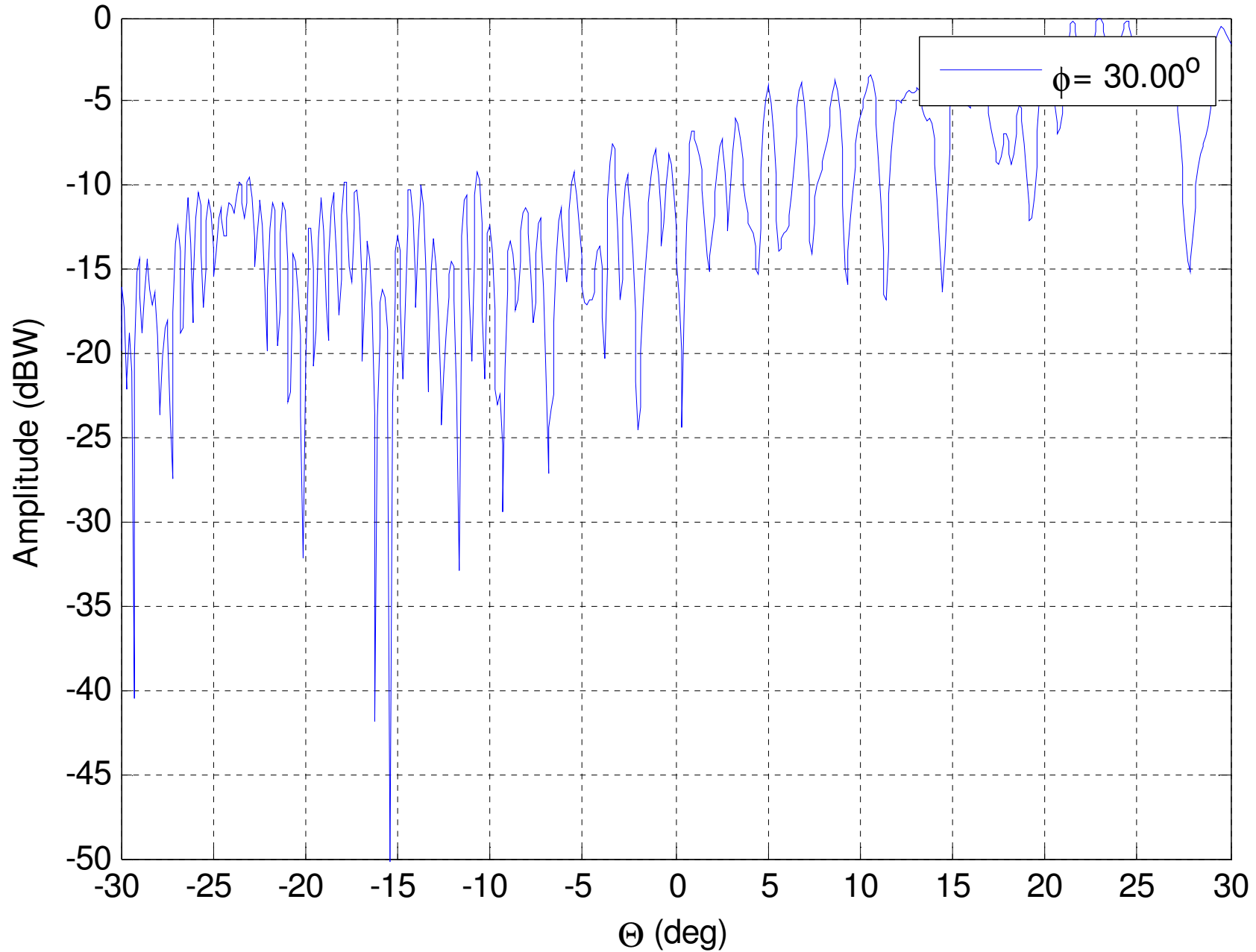
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -5.16 dBW, Date: 14-Dec-2011



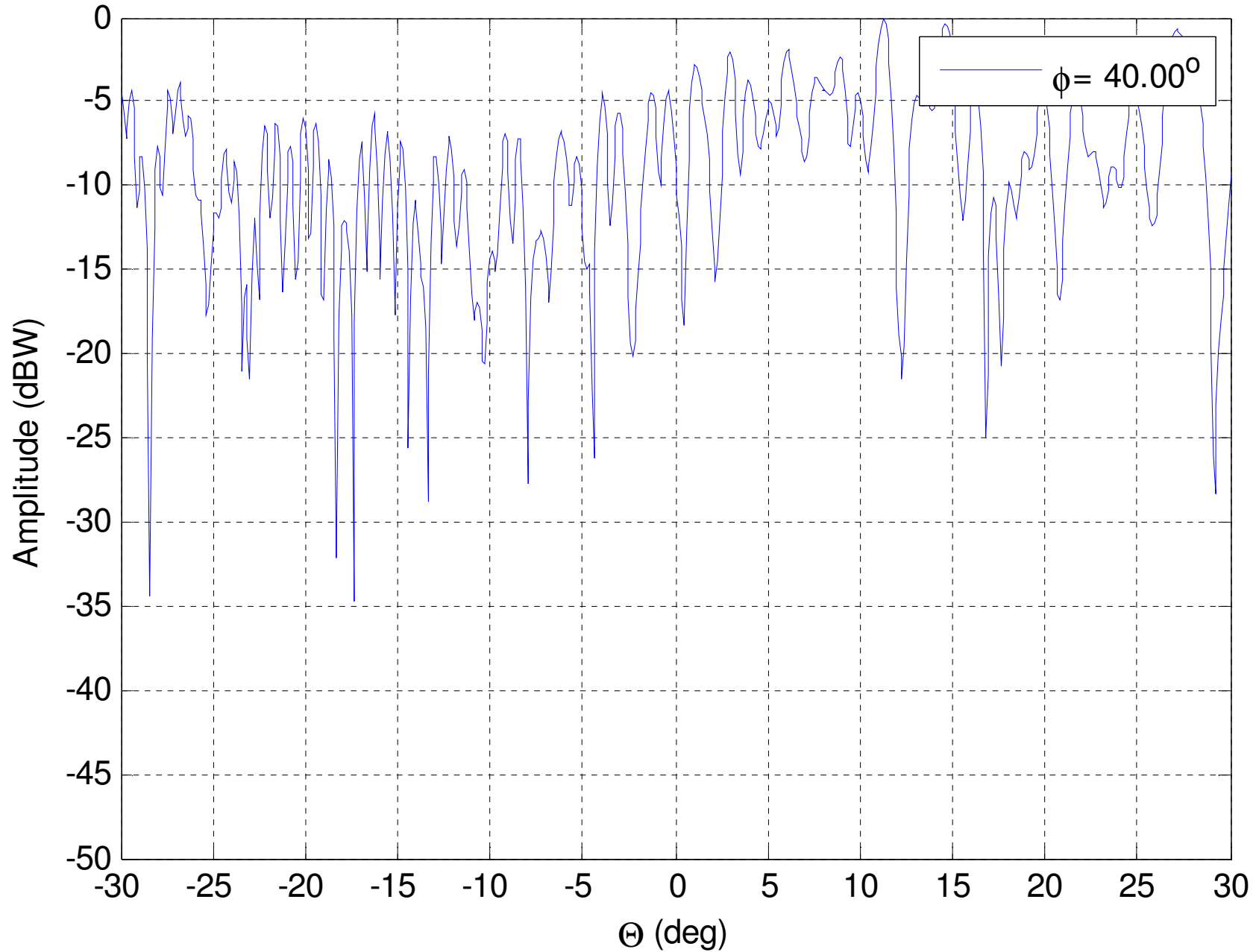
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.73 dBW, Date: 14-Dec-2011



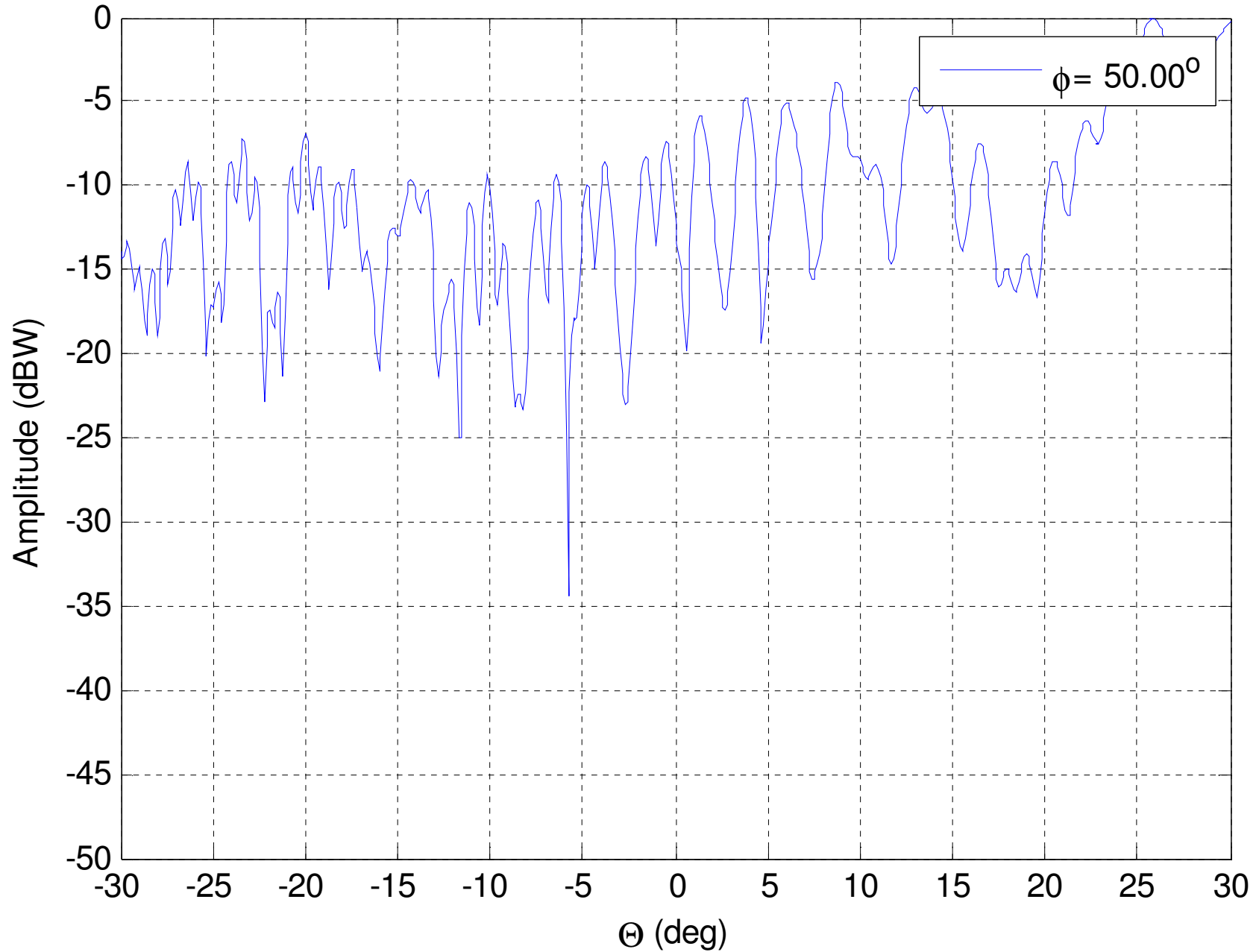
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -14.32 dBW, Date: 14-Dec-2011



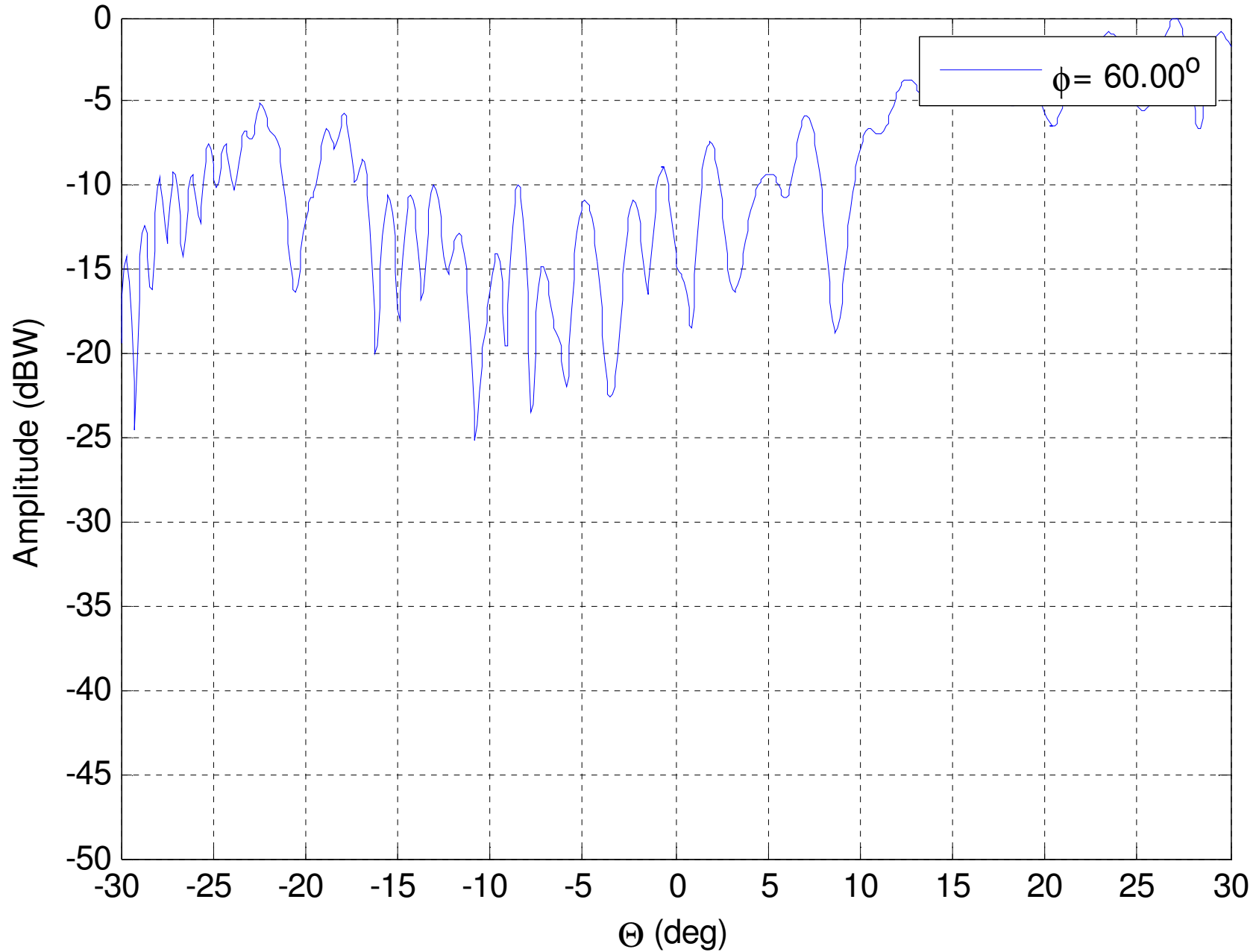
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.93 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

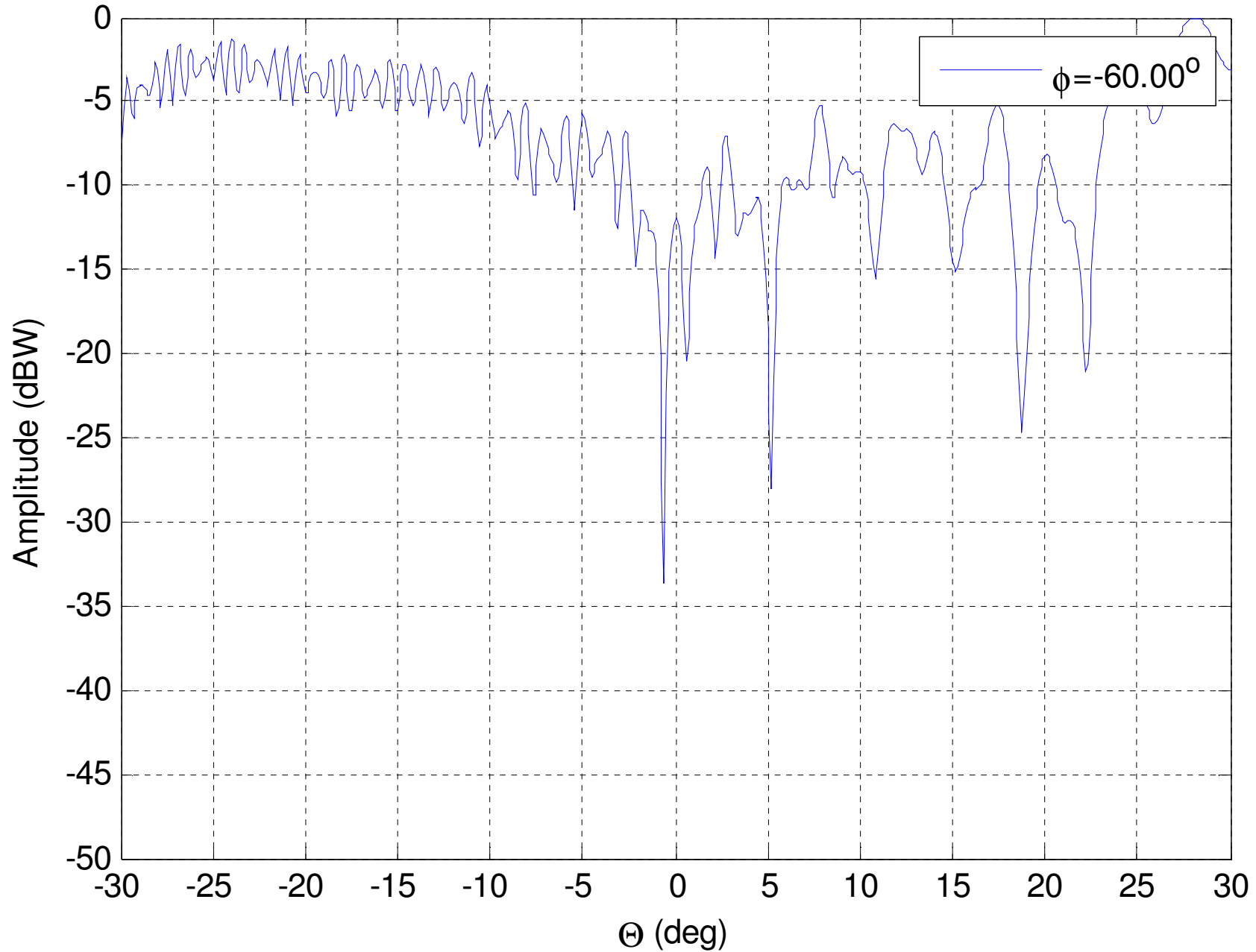
Input file: tx-17.3-rhcp-60.cut, Peak: -9.14 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

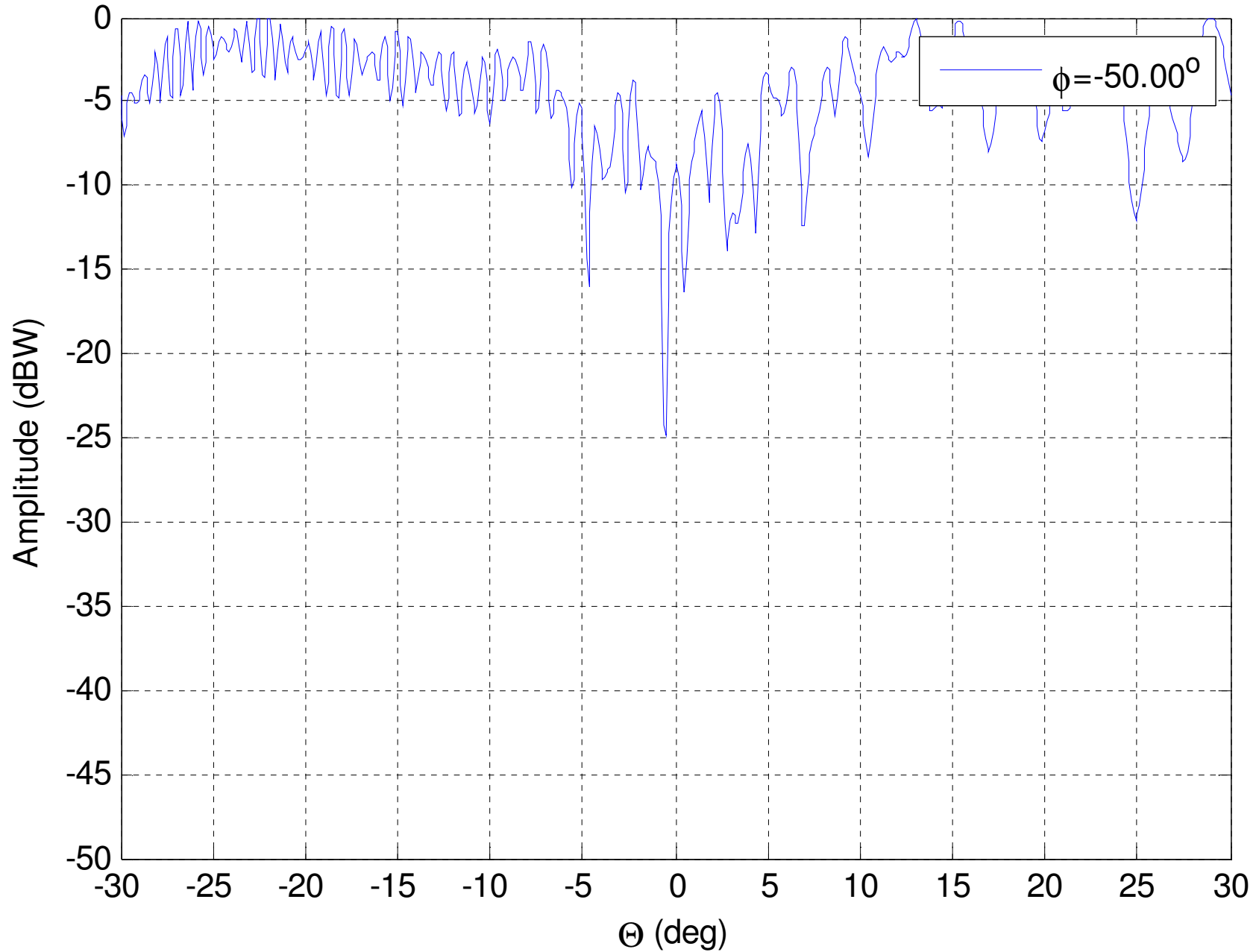
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -8.97 dBW, Date: 14-Dec-2011



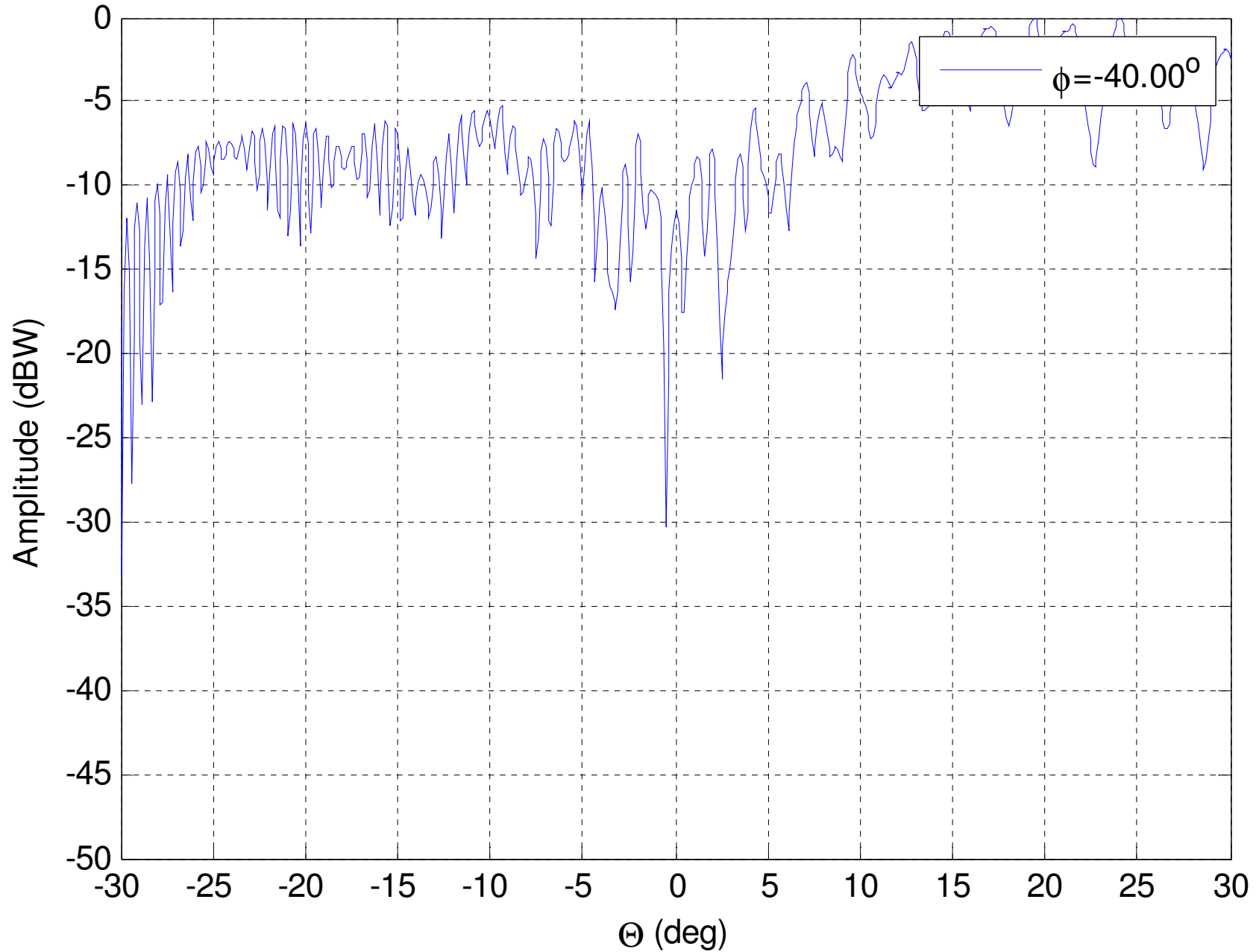
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -12.04 dBW, Date: 14-Dec-2011



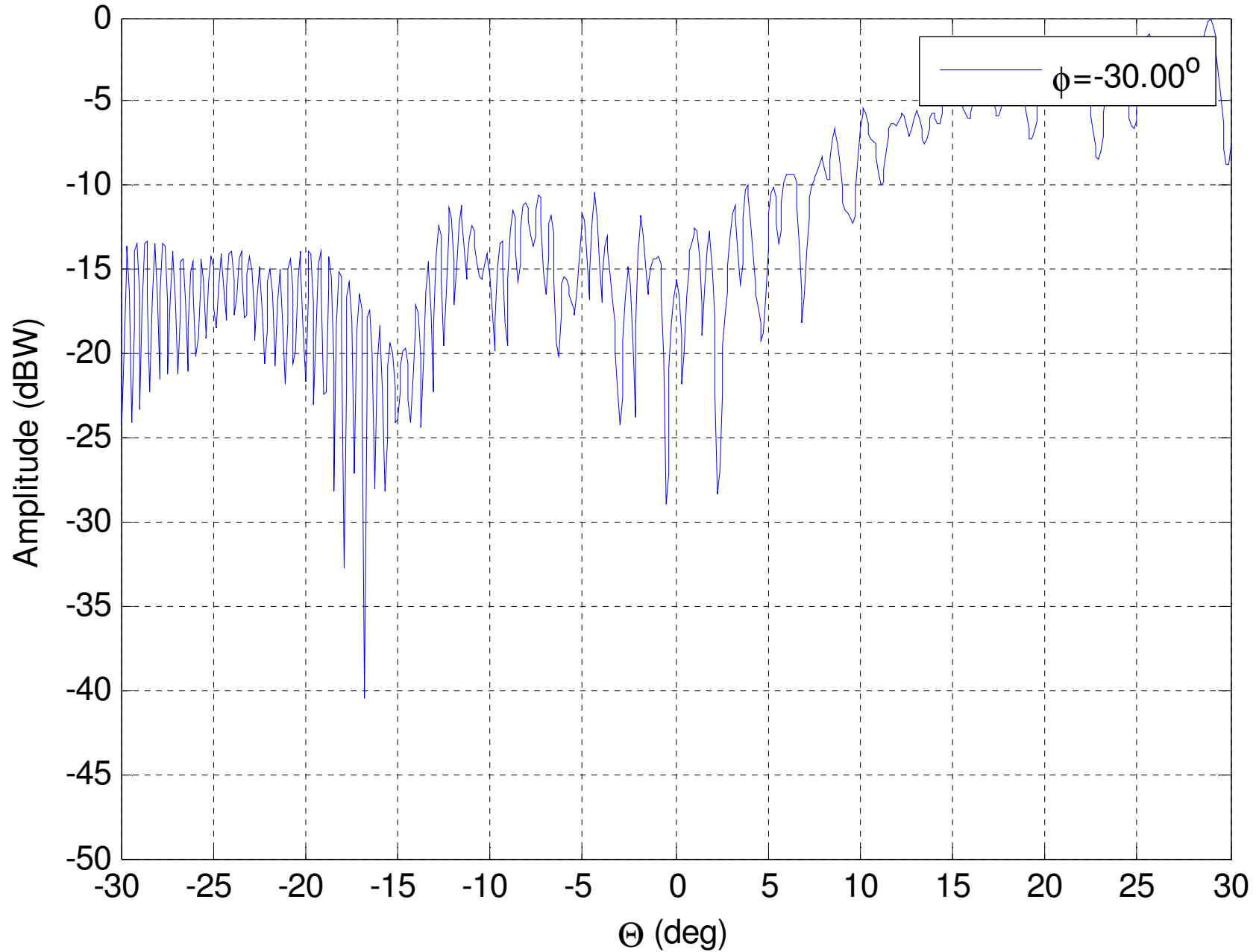
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.32 dBW, Date: 14-Dec-2011



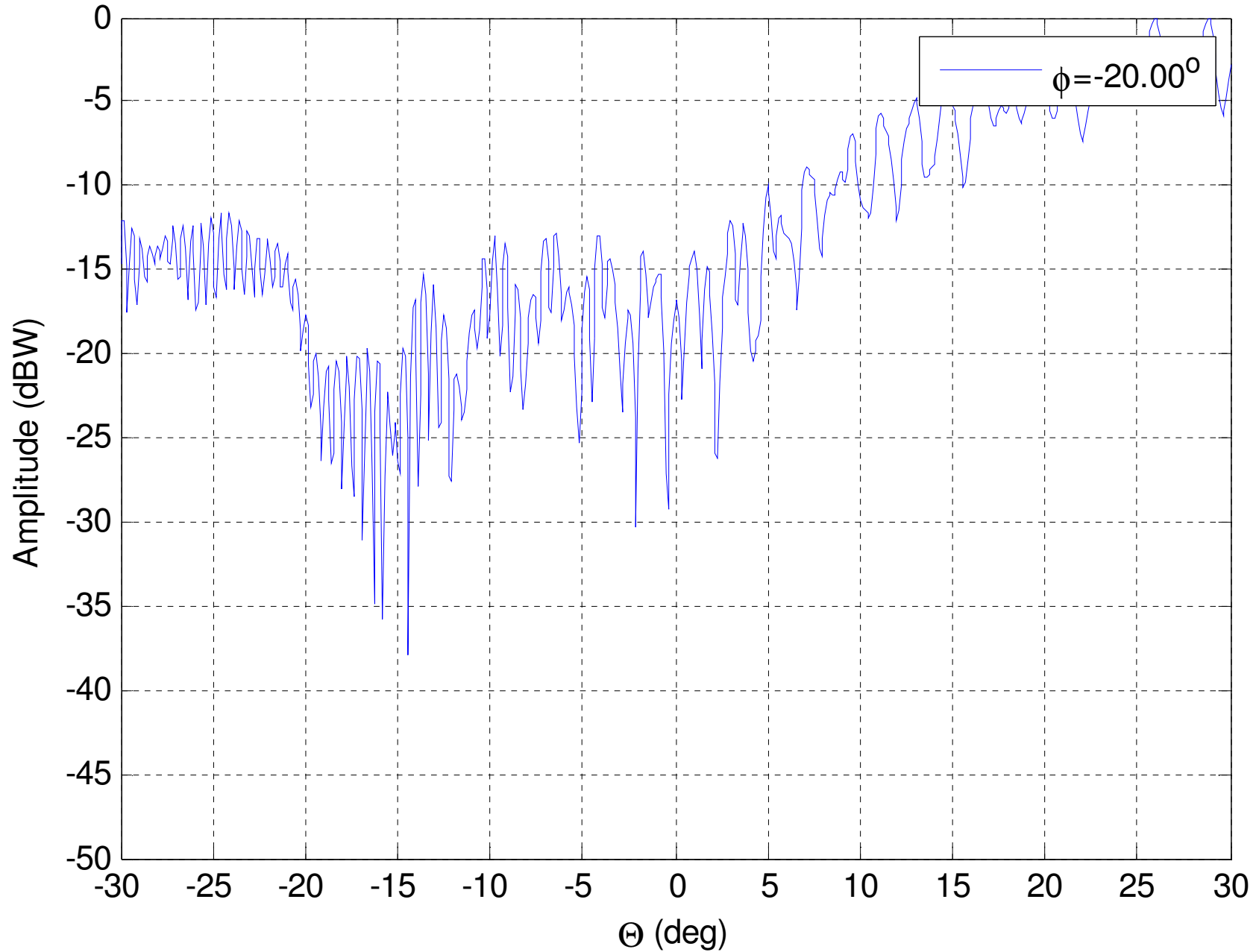
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -5.16 dBW, Date: 14-Dec-2011



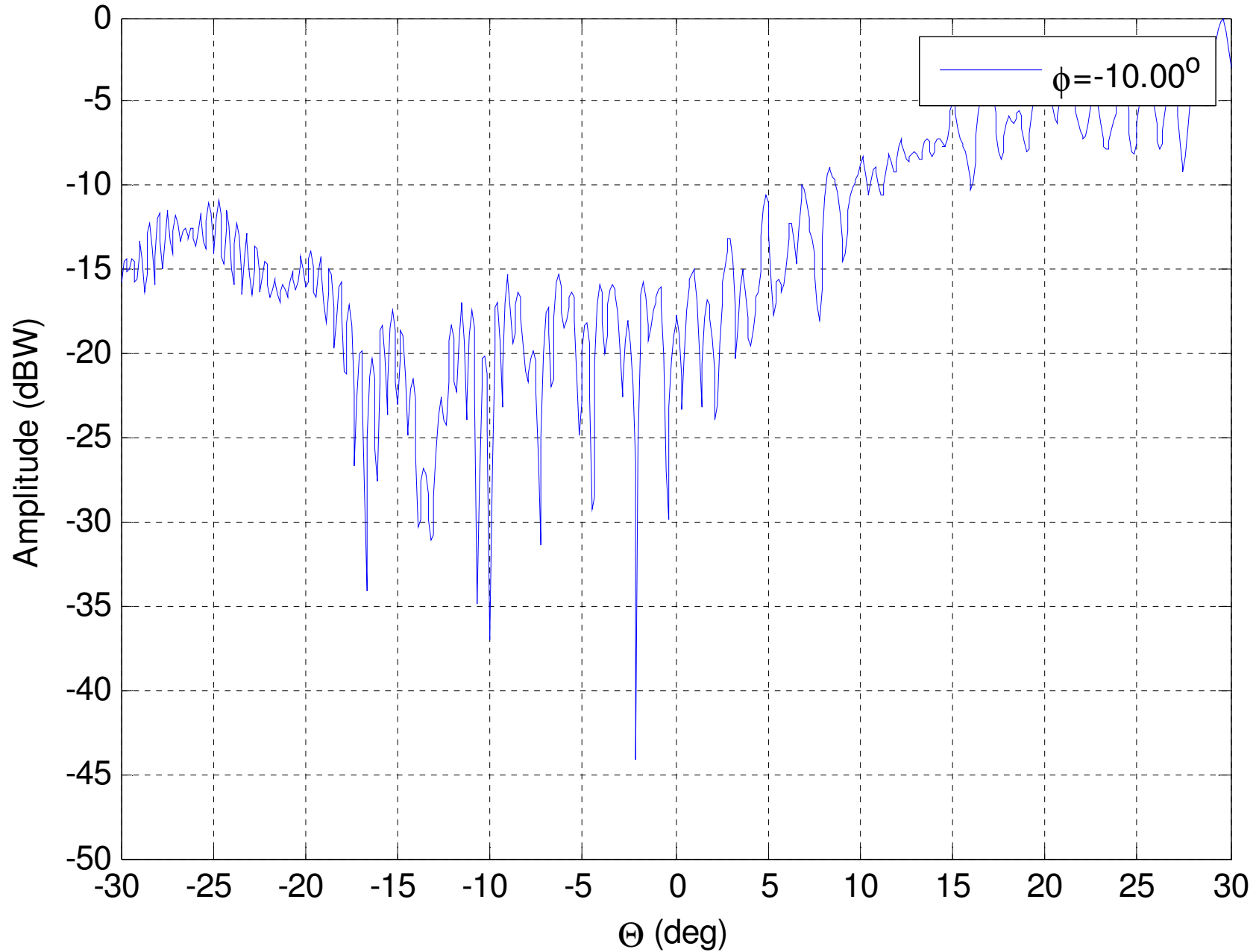
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -3.87 dBW, Date: 14-Dec-2011



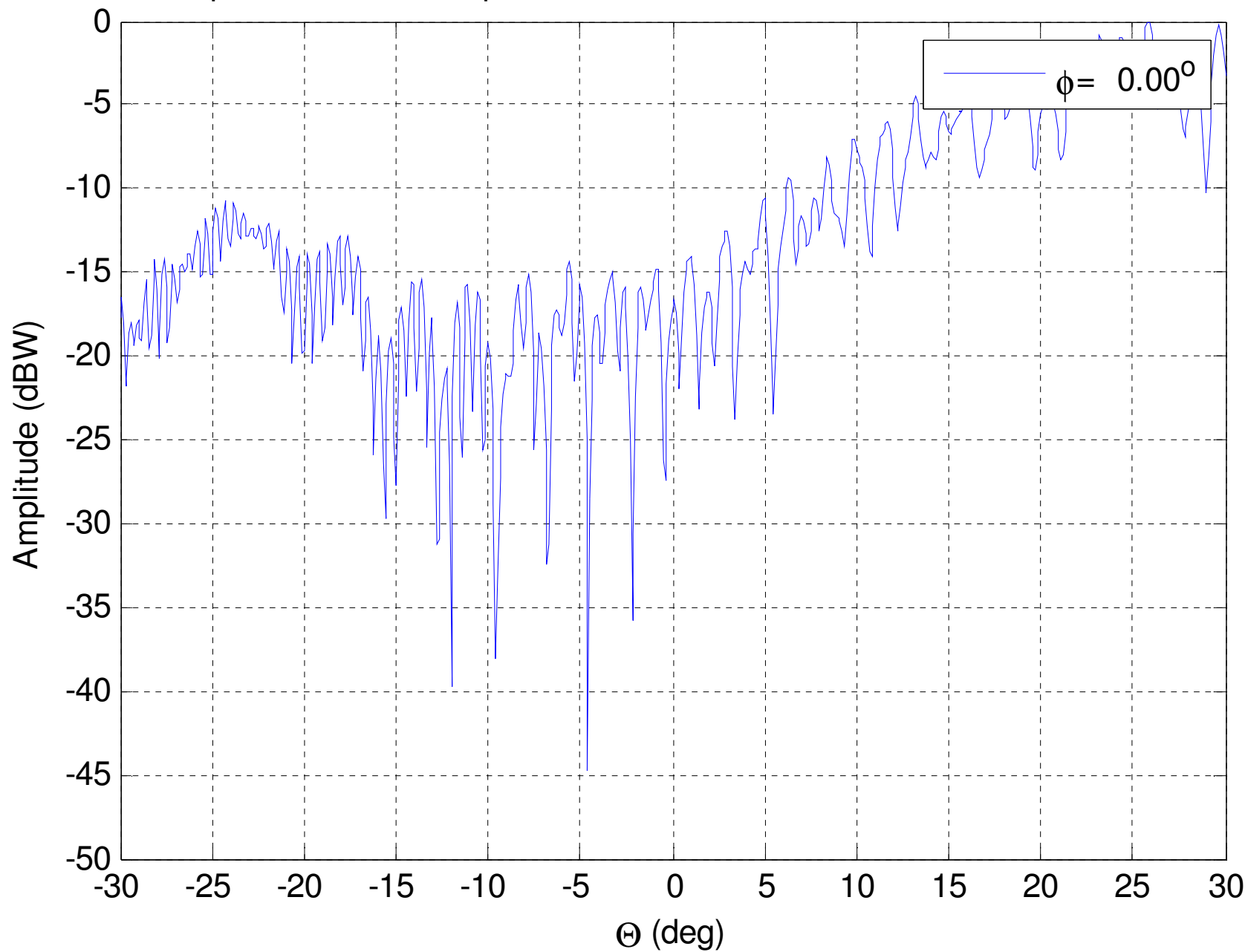
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -2.84 dBW, Date: 14-Dec-2011



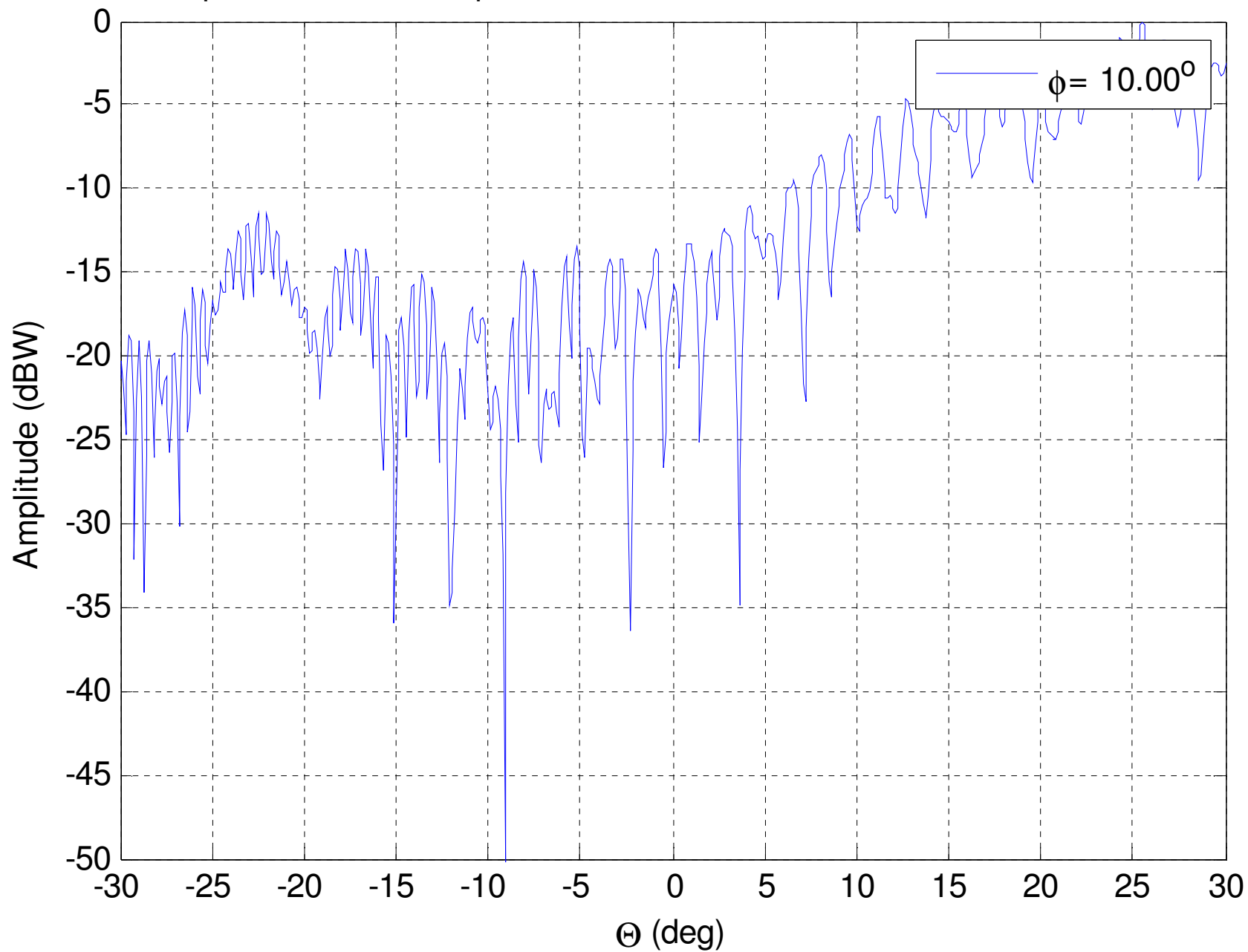
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -3.88 dBW, Date: 14-Dec-2011



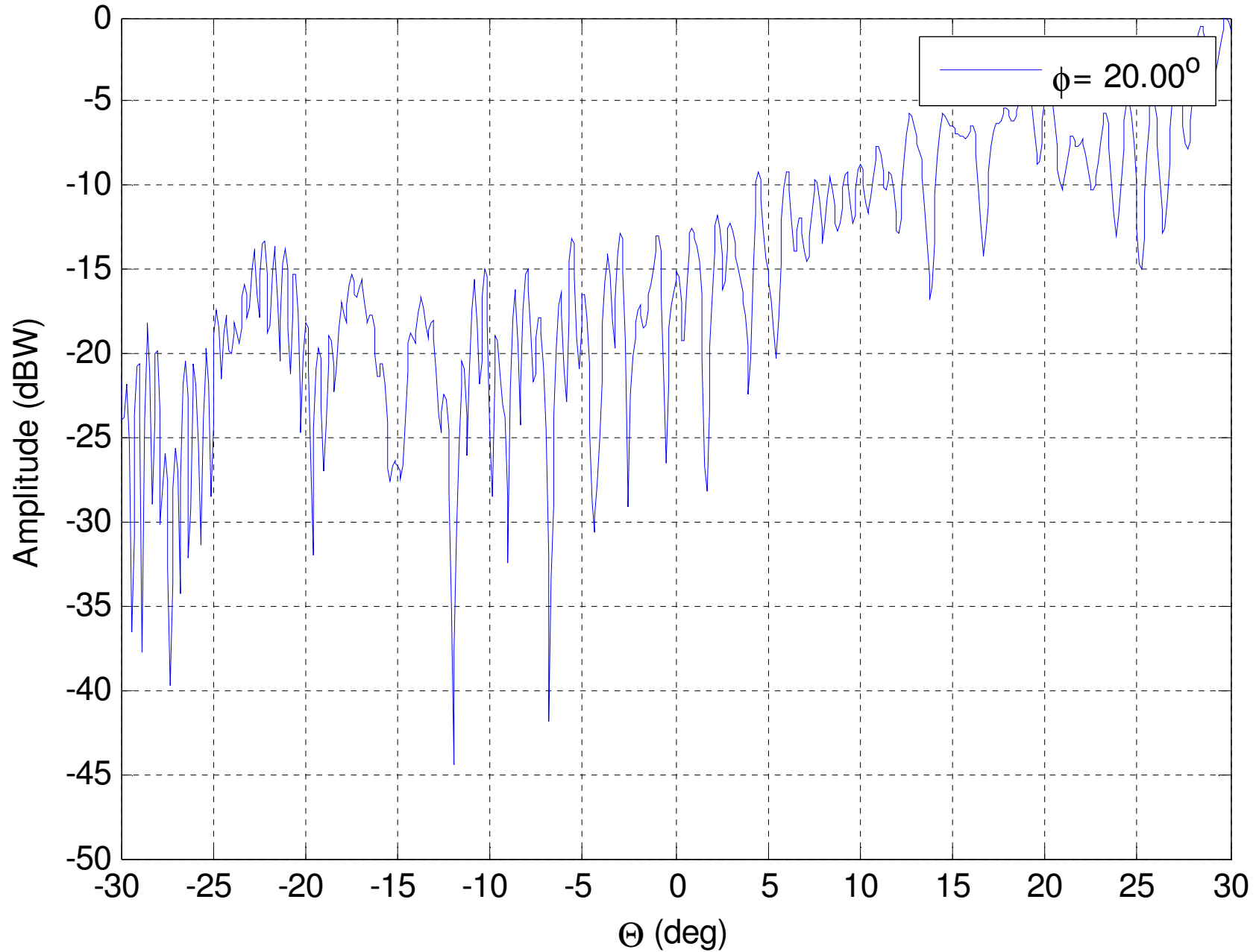
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -4.78 dBW, Date: 14-Dec-2011



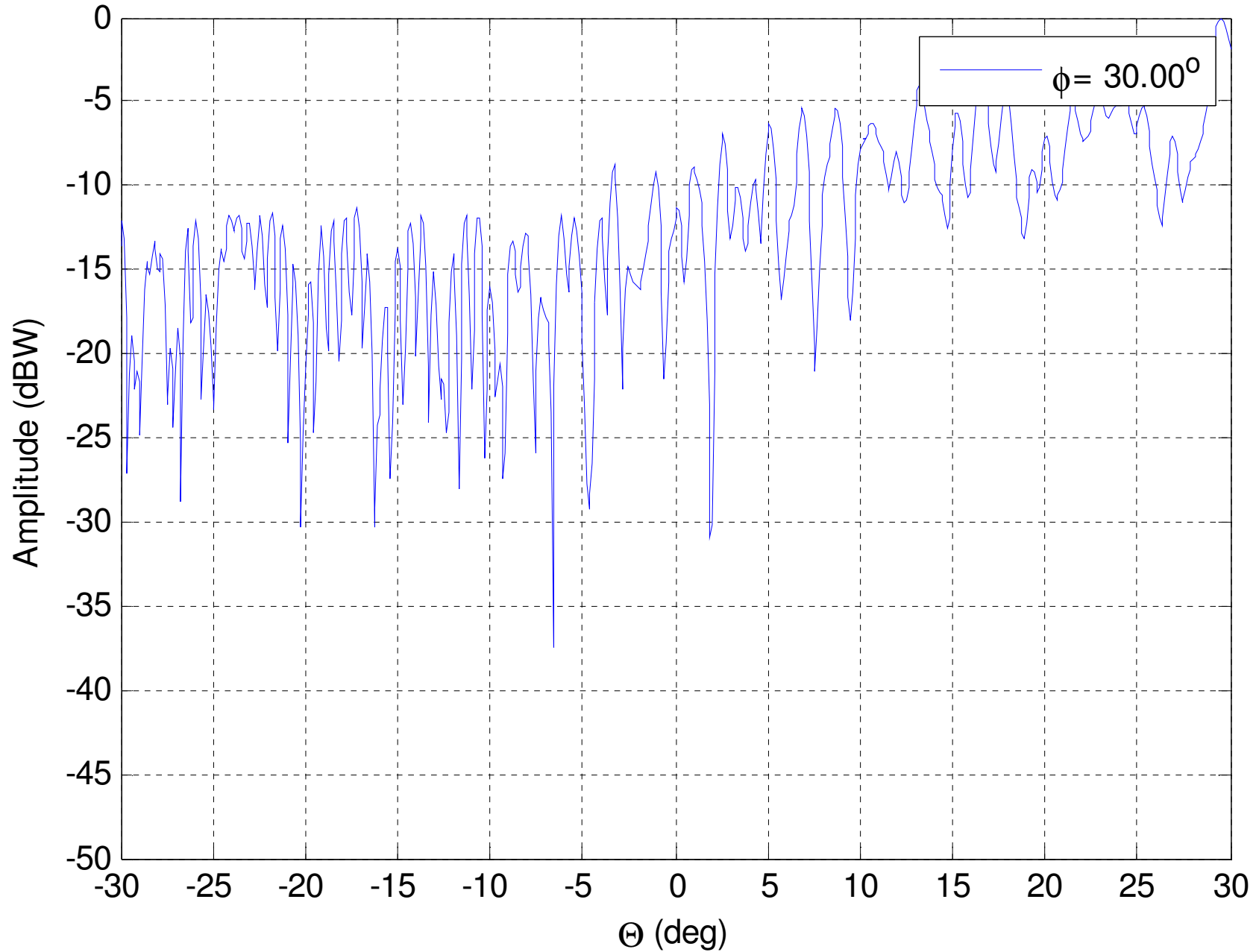
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -5.31 dBW, Date: 14-Dec-2011



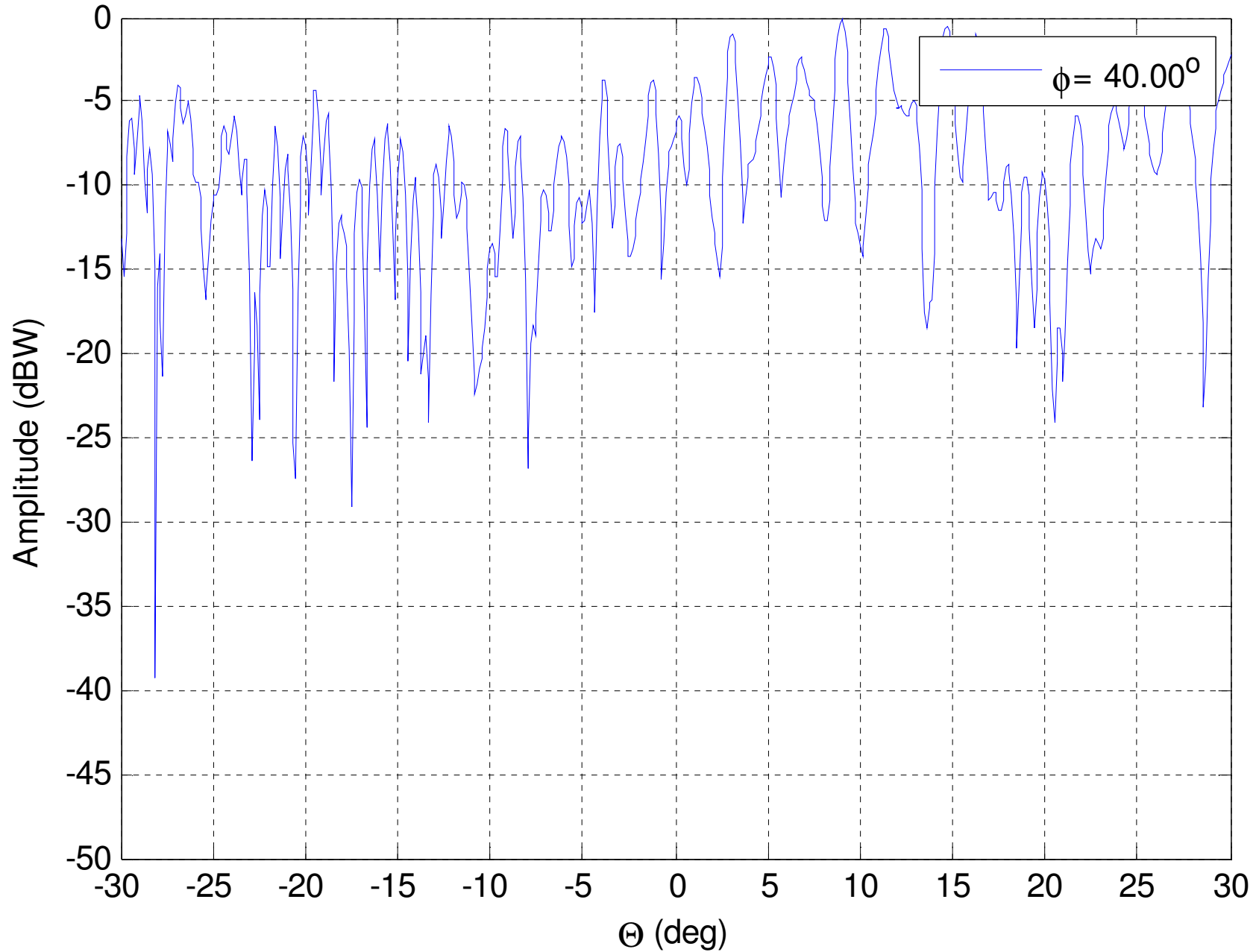
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -8.91 dBW, Date: 14-Dec-2011



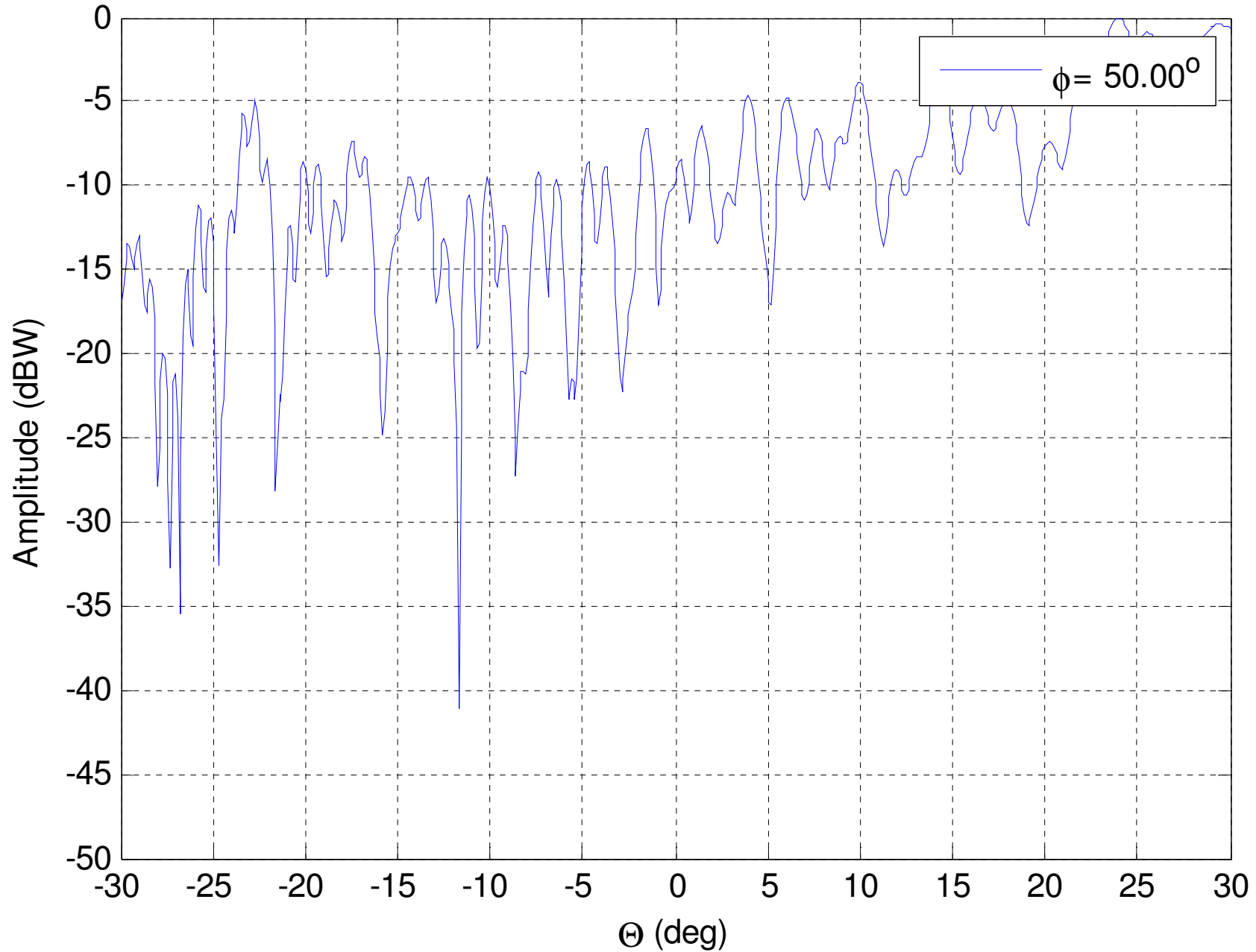
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -14.18 dBW, Date: 14-Dec-2011



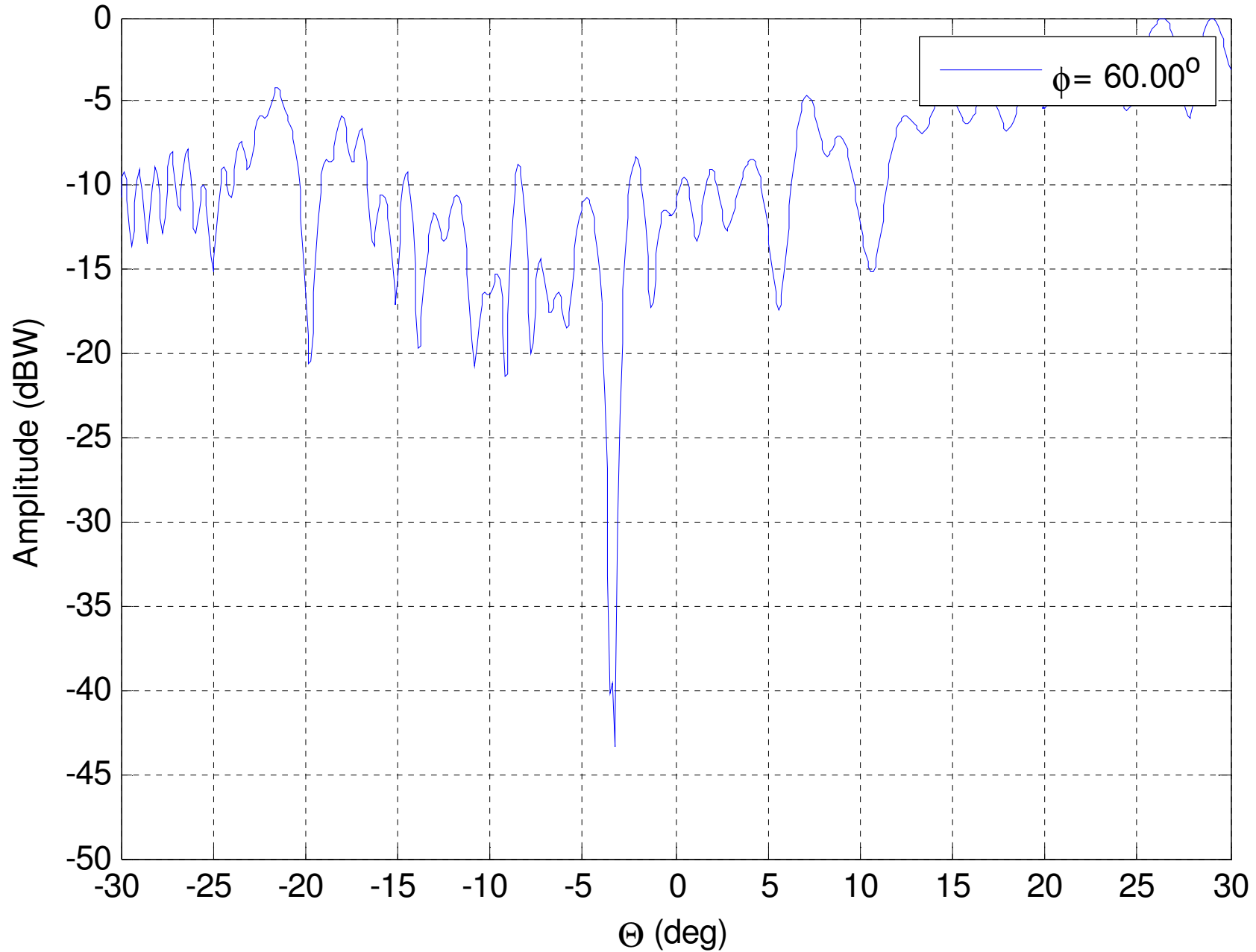
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

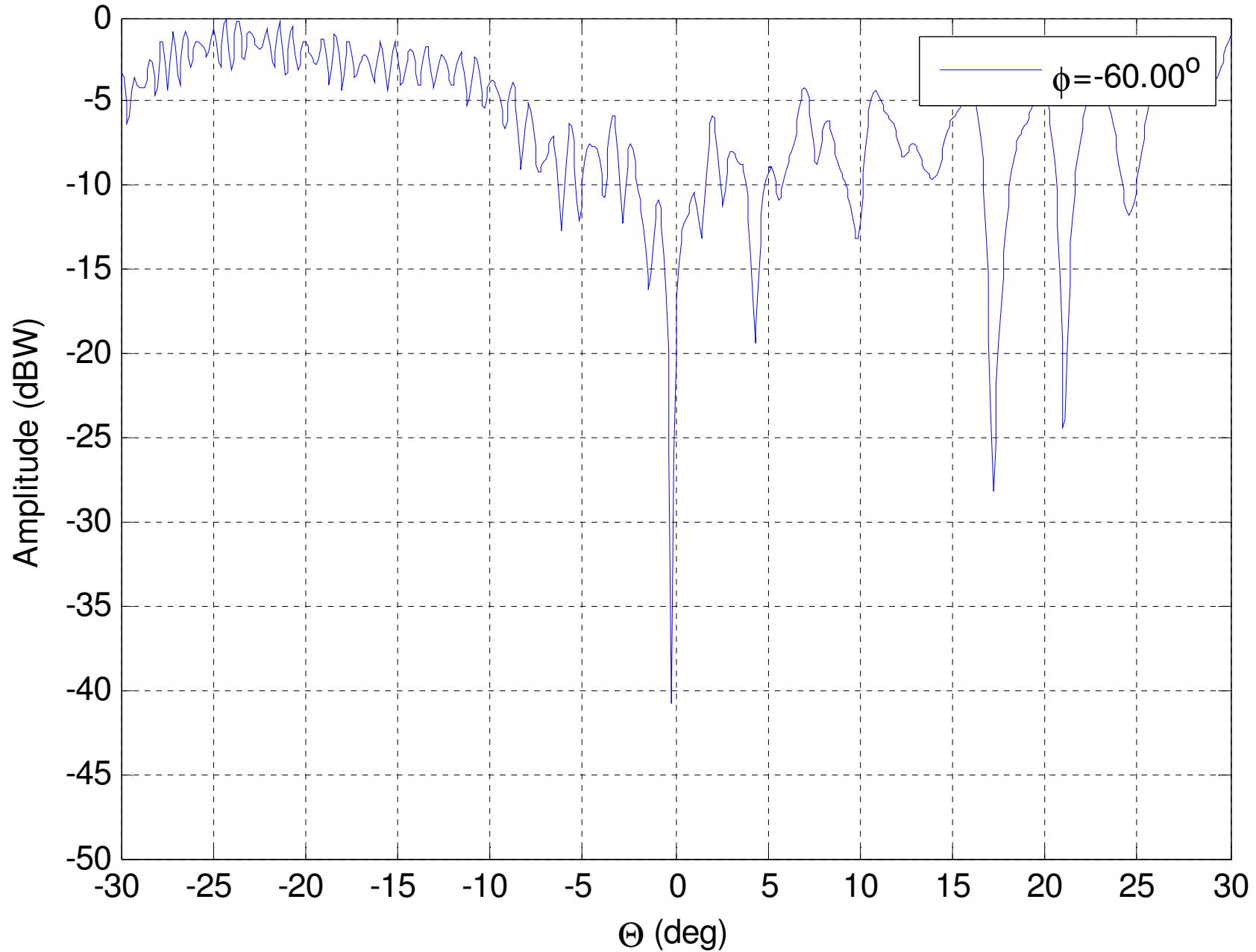
Input file: tx-17.3-lhcp-60.cut, Peak: -9.59 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

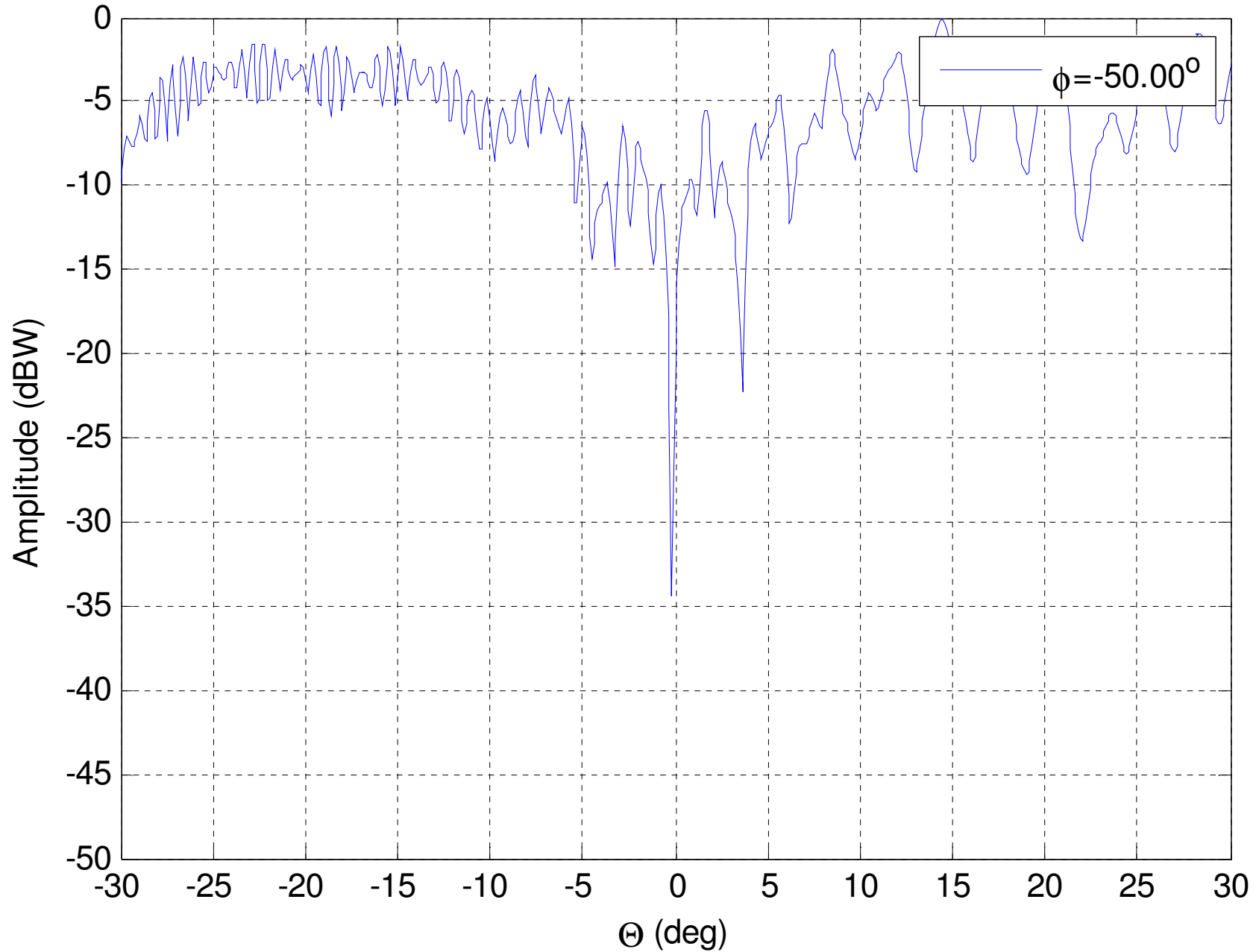
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -9.96 dBW, Date: 14-Dec-2011



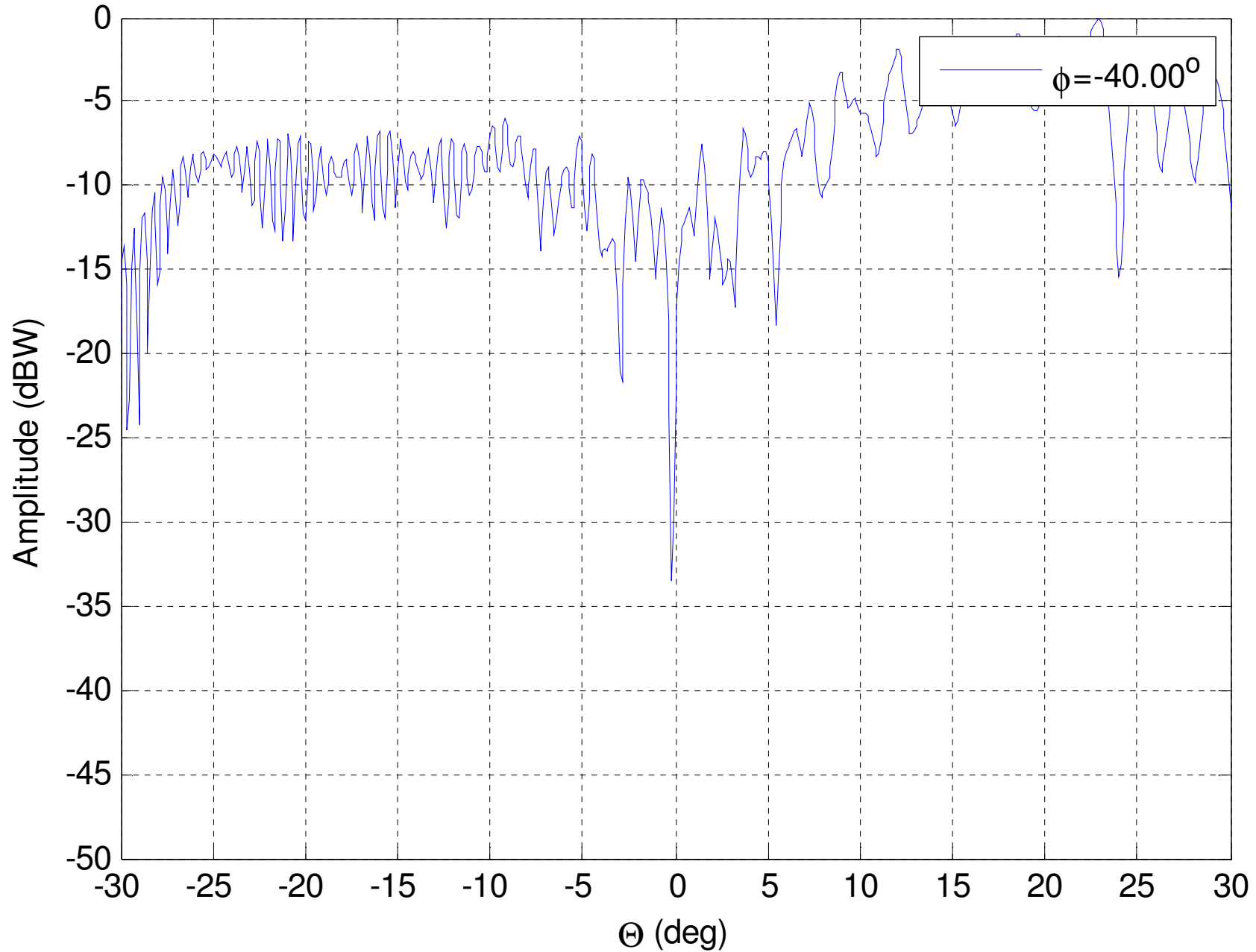
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.30 dBW, Date: 14-Dec-2011



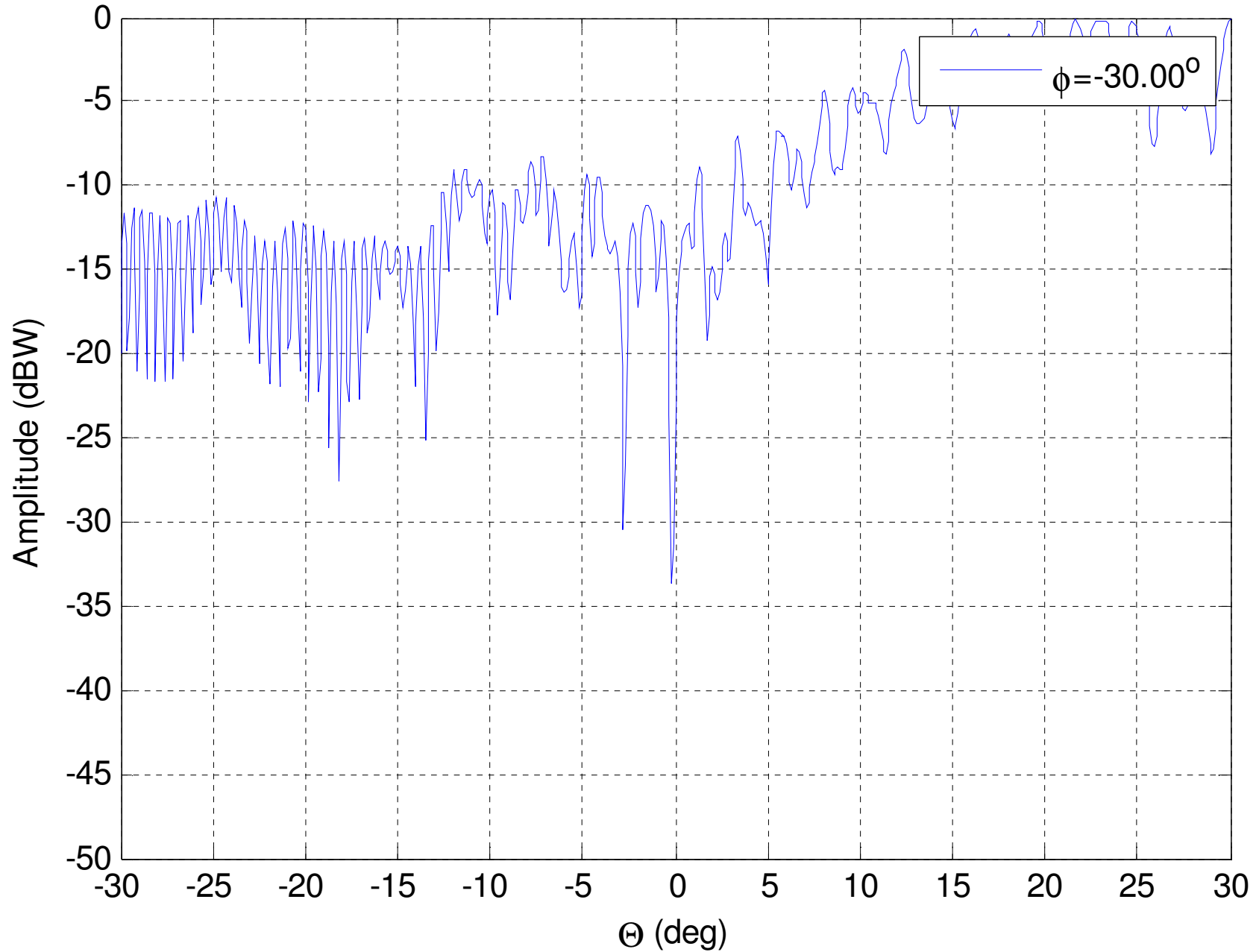
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -8.40 dBW, Date: 14-Dec-2011



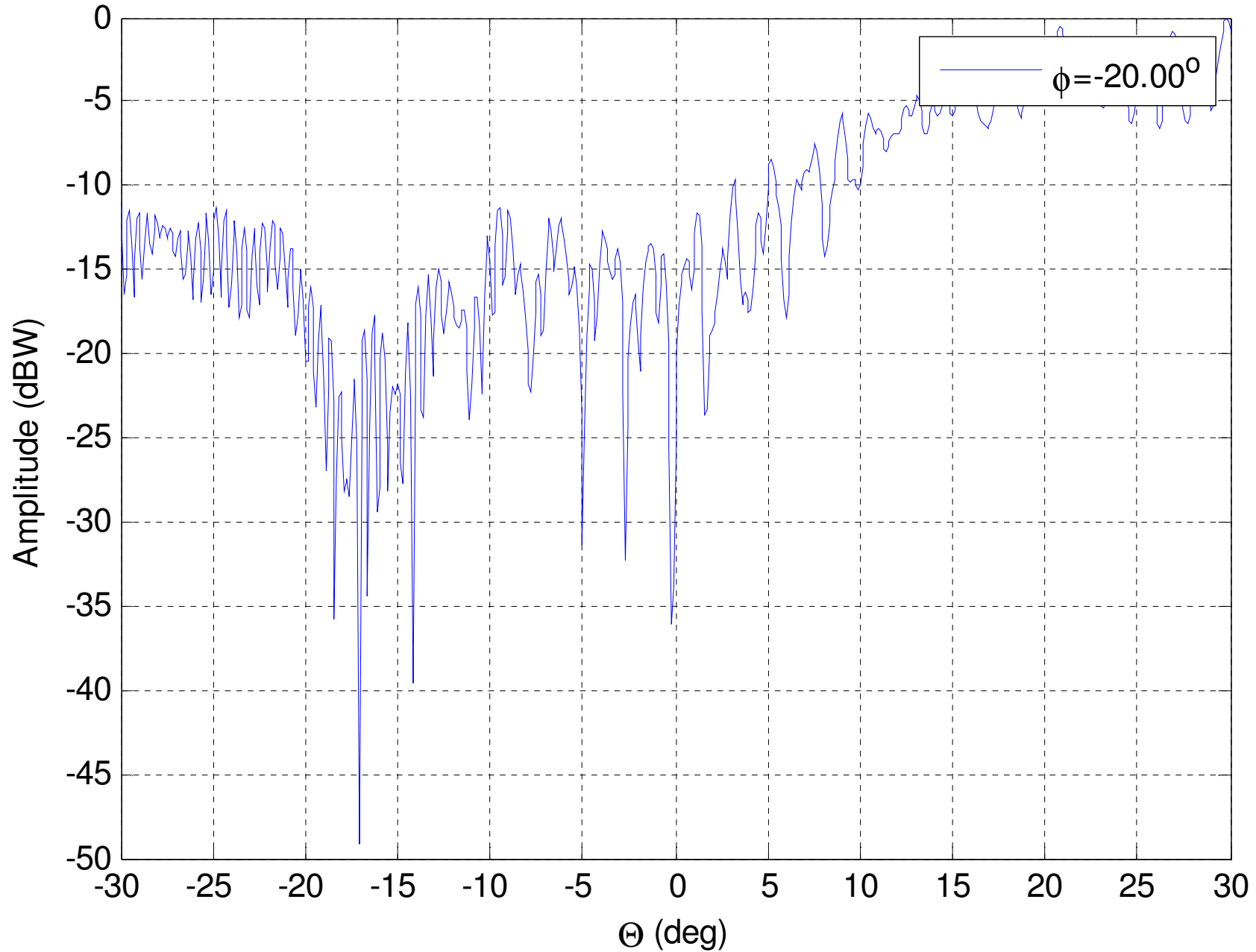
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.28 dBW, Date: 14-Dec-2011



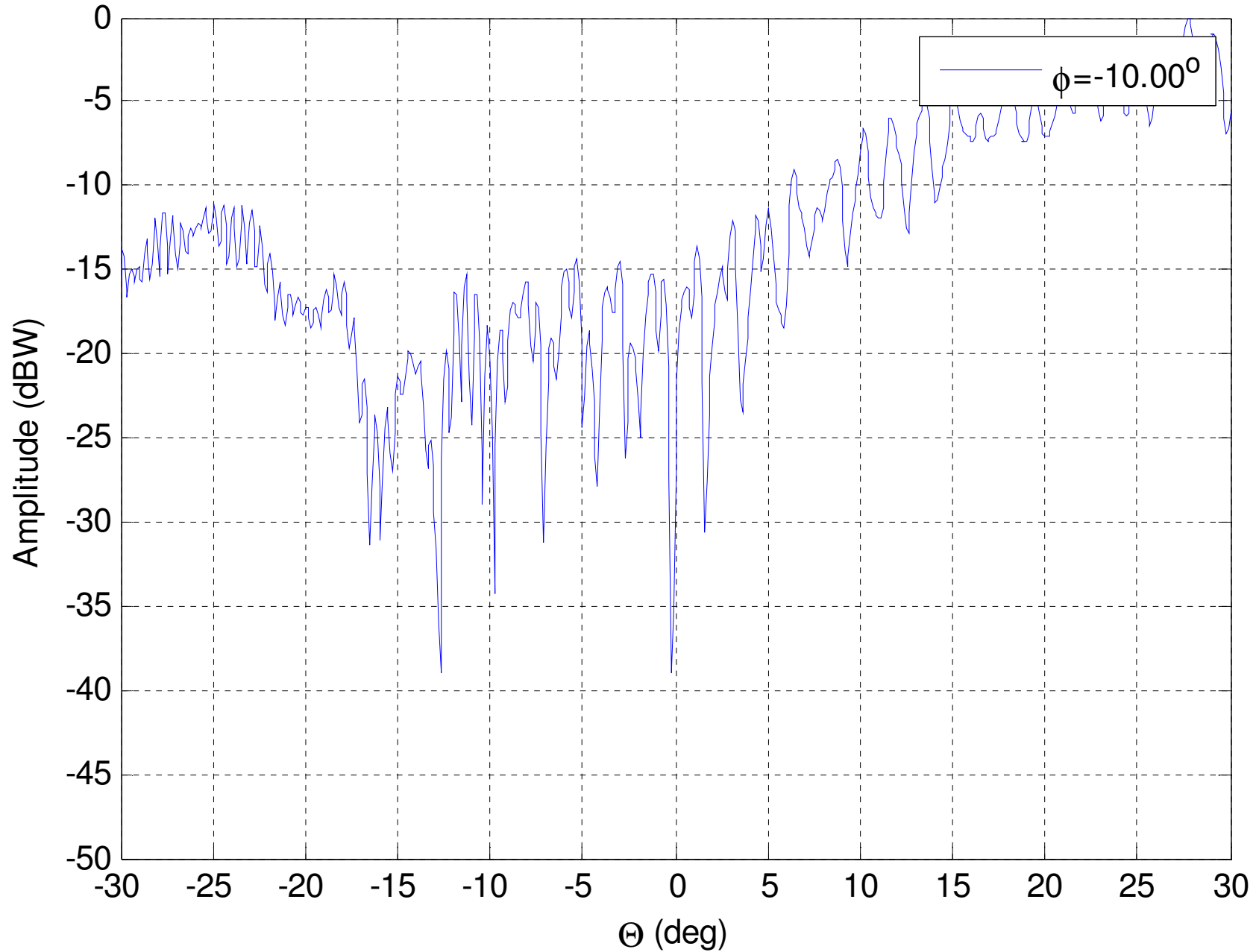
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -4.98 dBW, Date: 14-Dec-2011



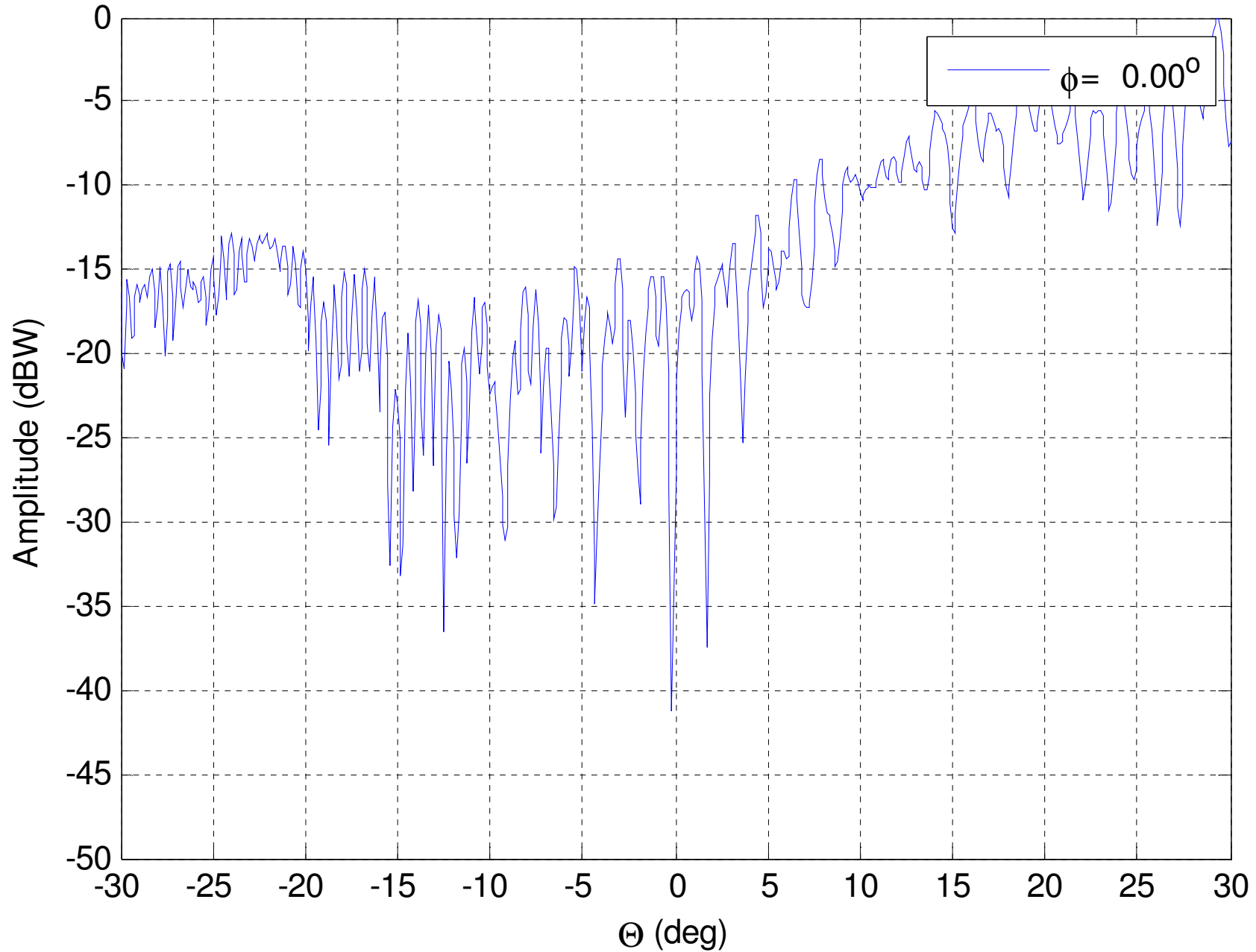
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -3.20 dBW, Date: 14-Dec-2011



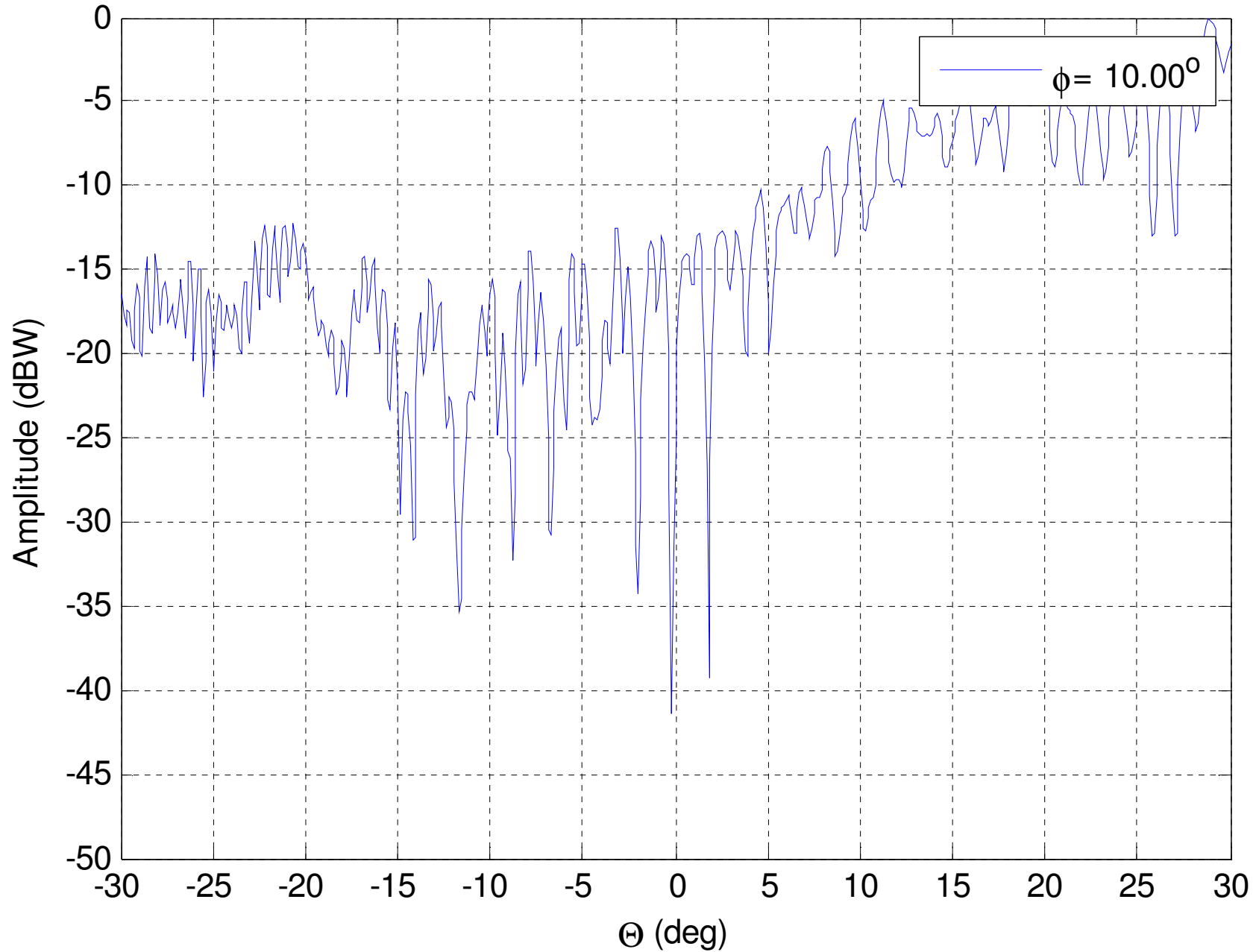
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -3.10 dBW, Date: 14-Dec-2011



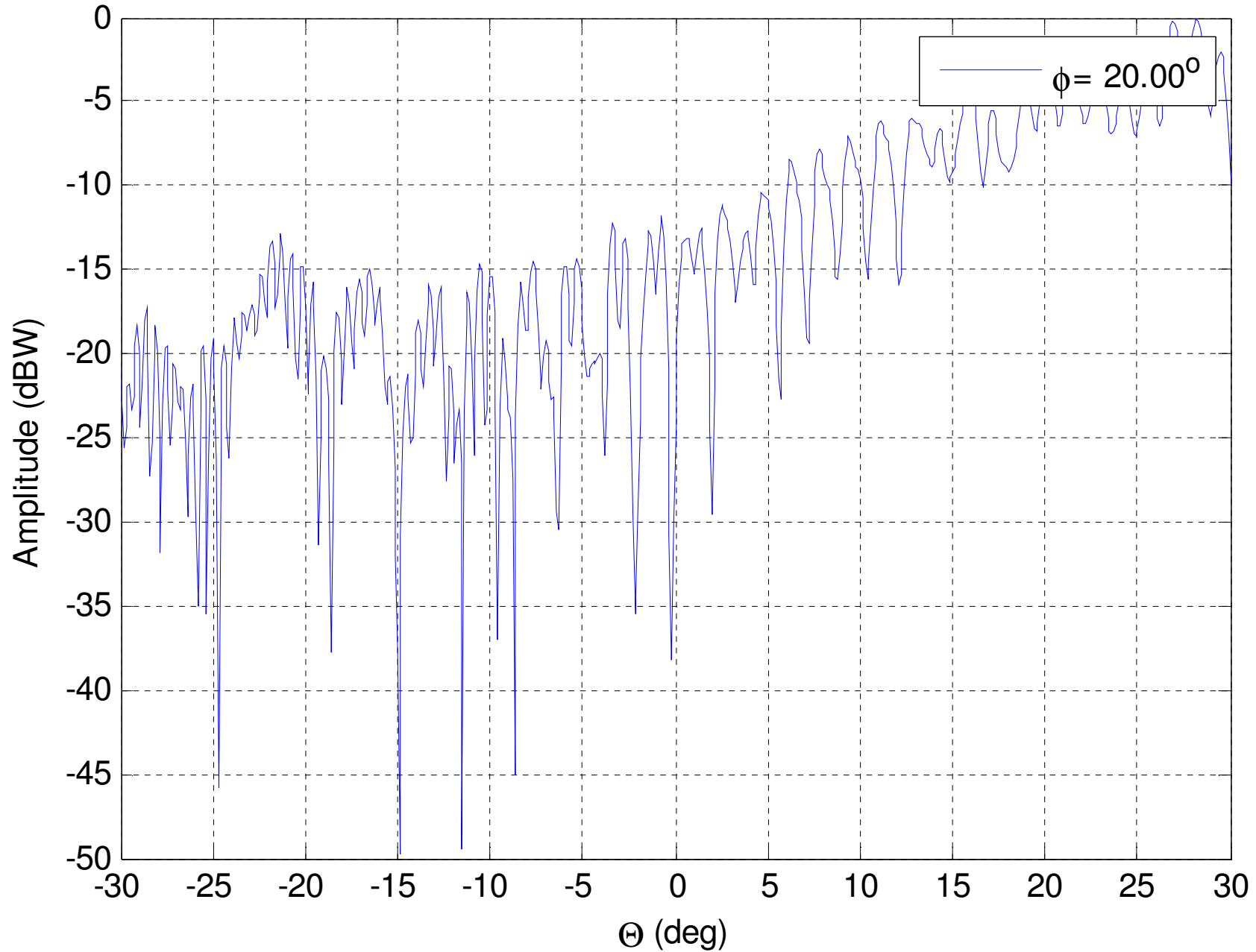
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -5.11 dBW, Date: 14-Dec-2011



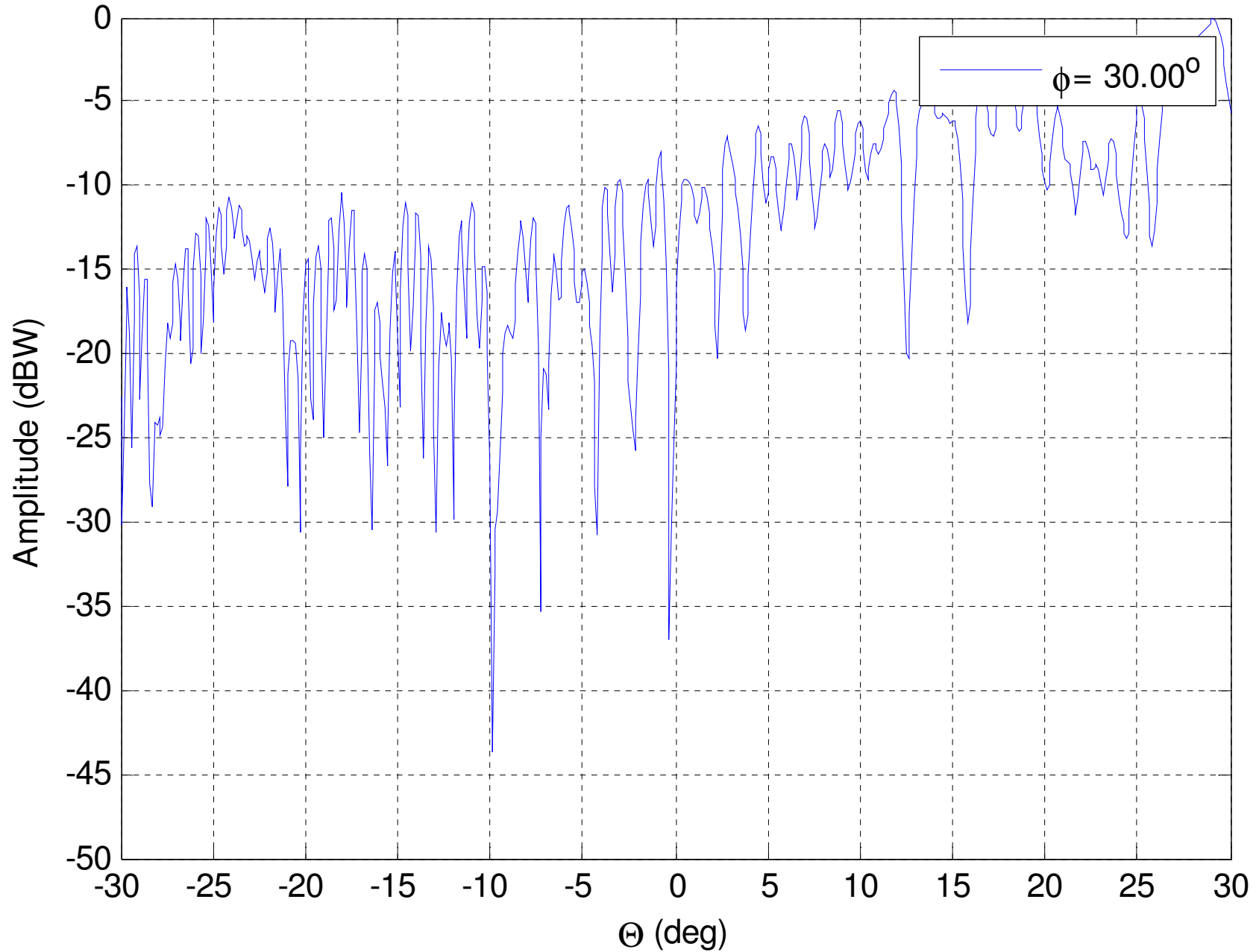
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -5.99 dBW, Date: 14-Dec-2011



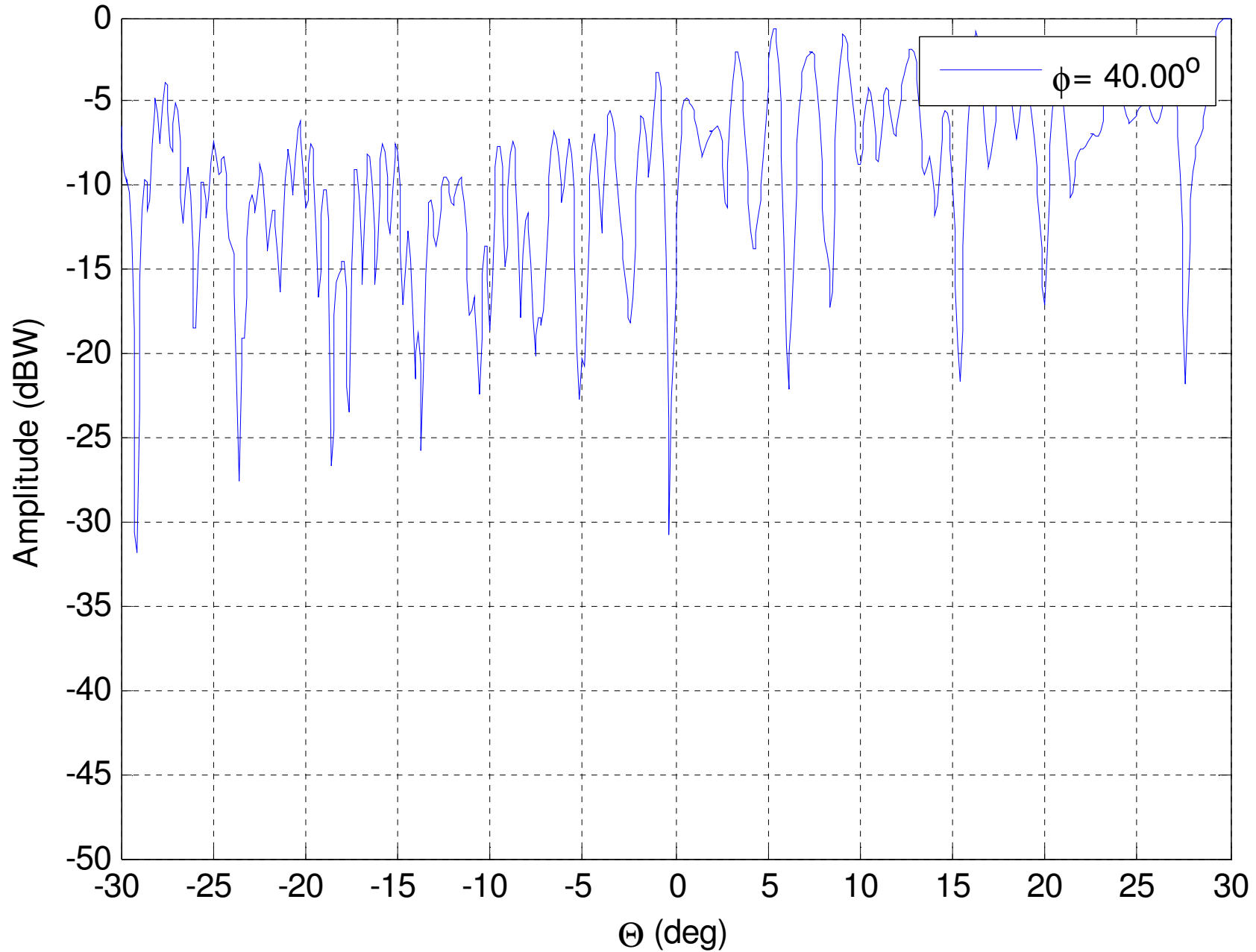
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -9.47 dBW, Date: 14-Dec-2011



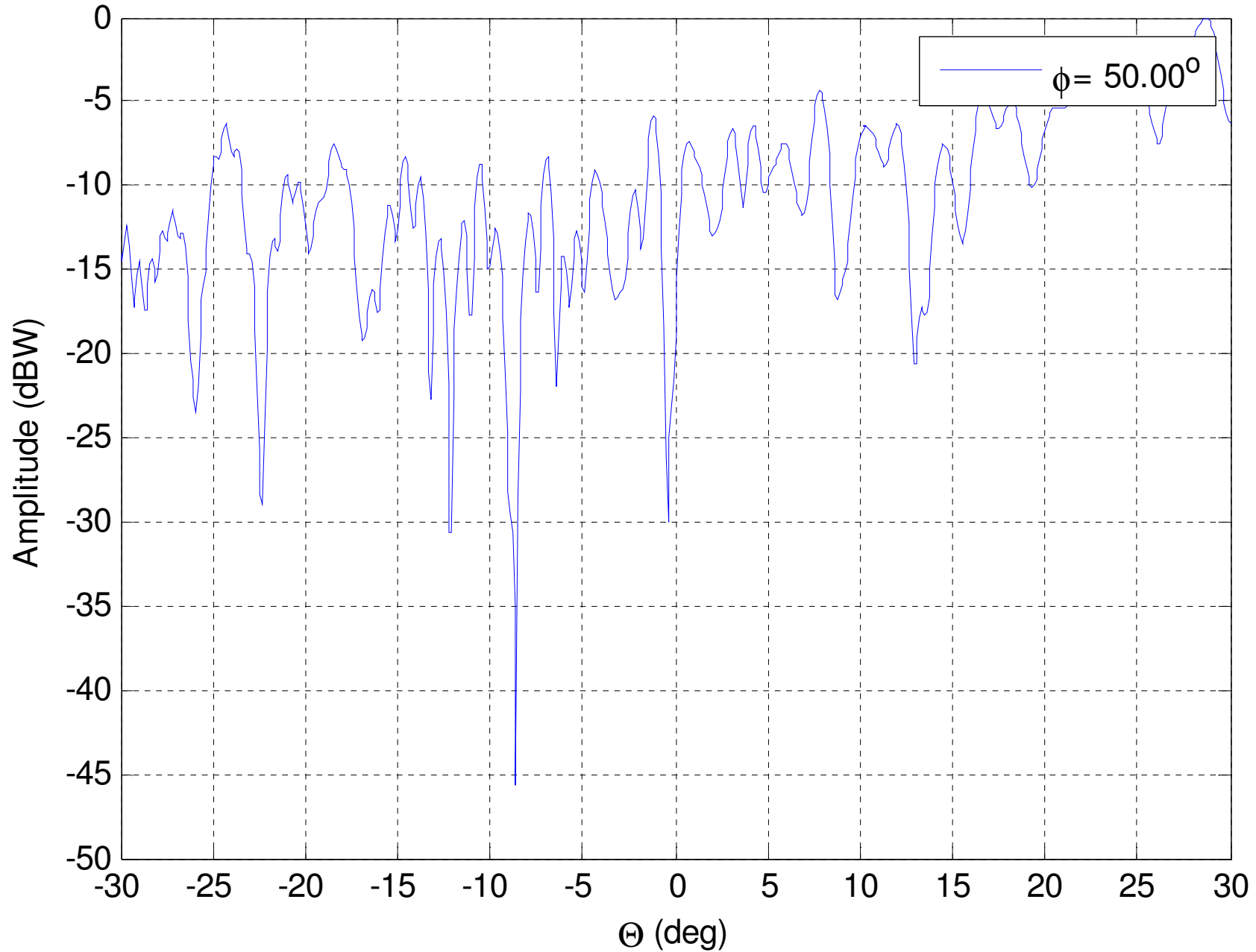
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -14.03 dBW, Date: 14-Dec-2011



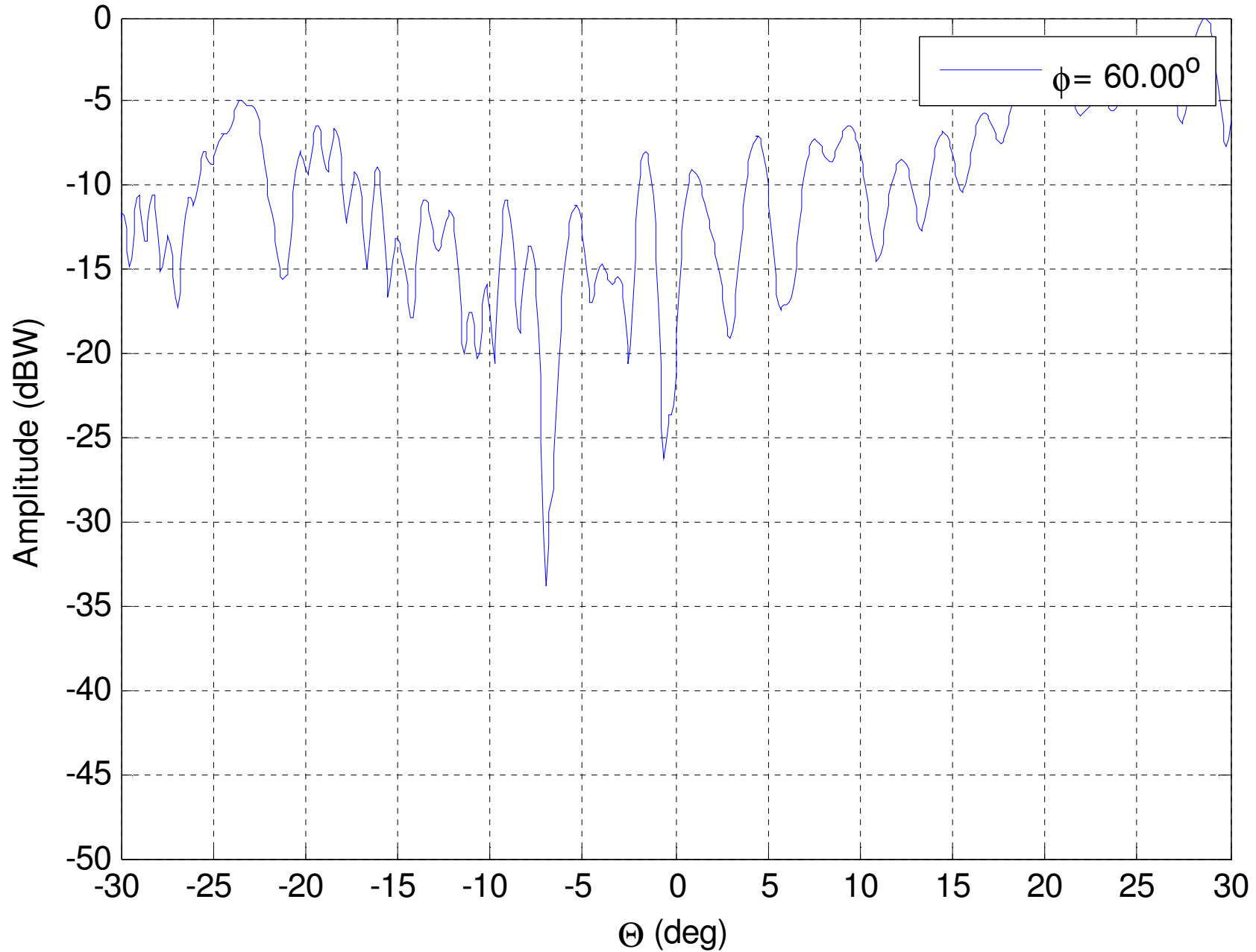
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.13 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

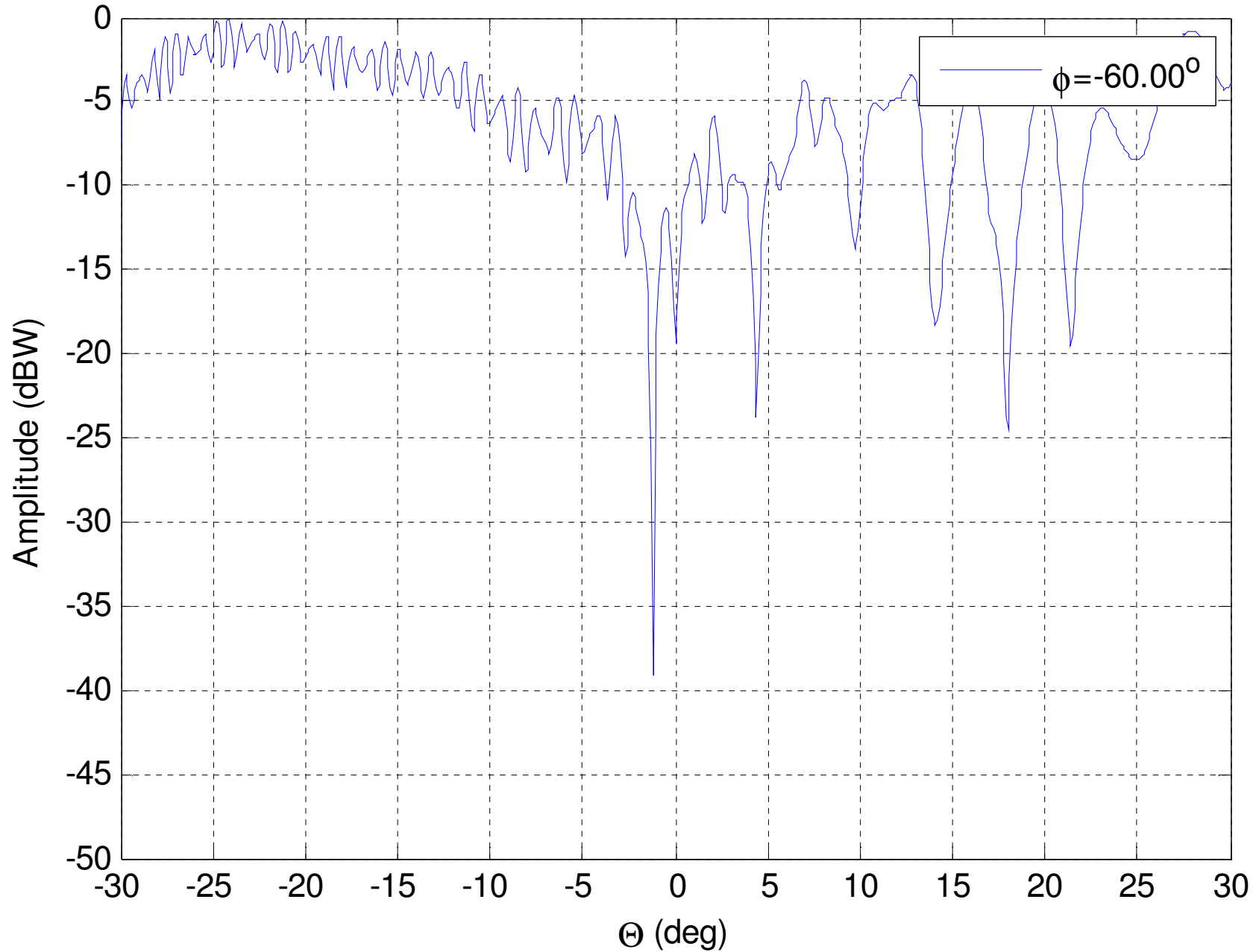
Input file: tx-17.5-rhcp-60.cut, Peak: -8.88 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

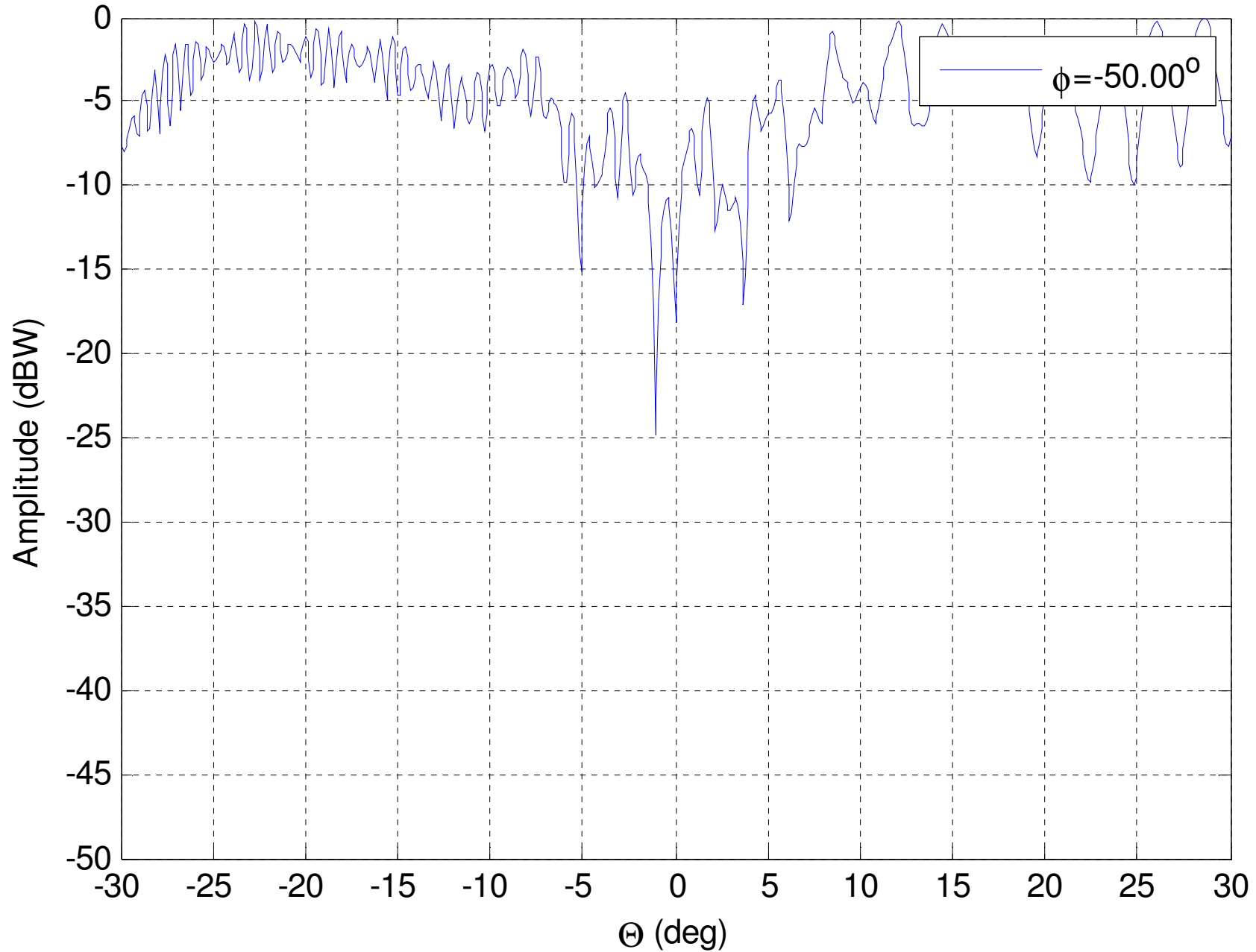
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -10.05 dBW, Date: 14-Dec-2011



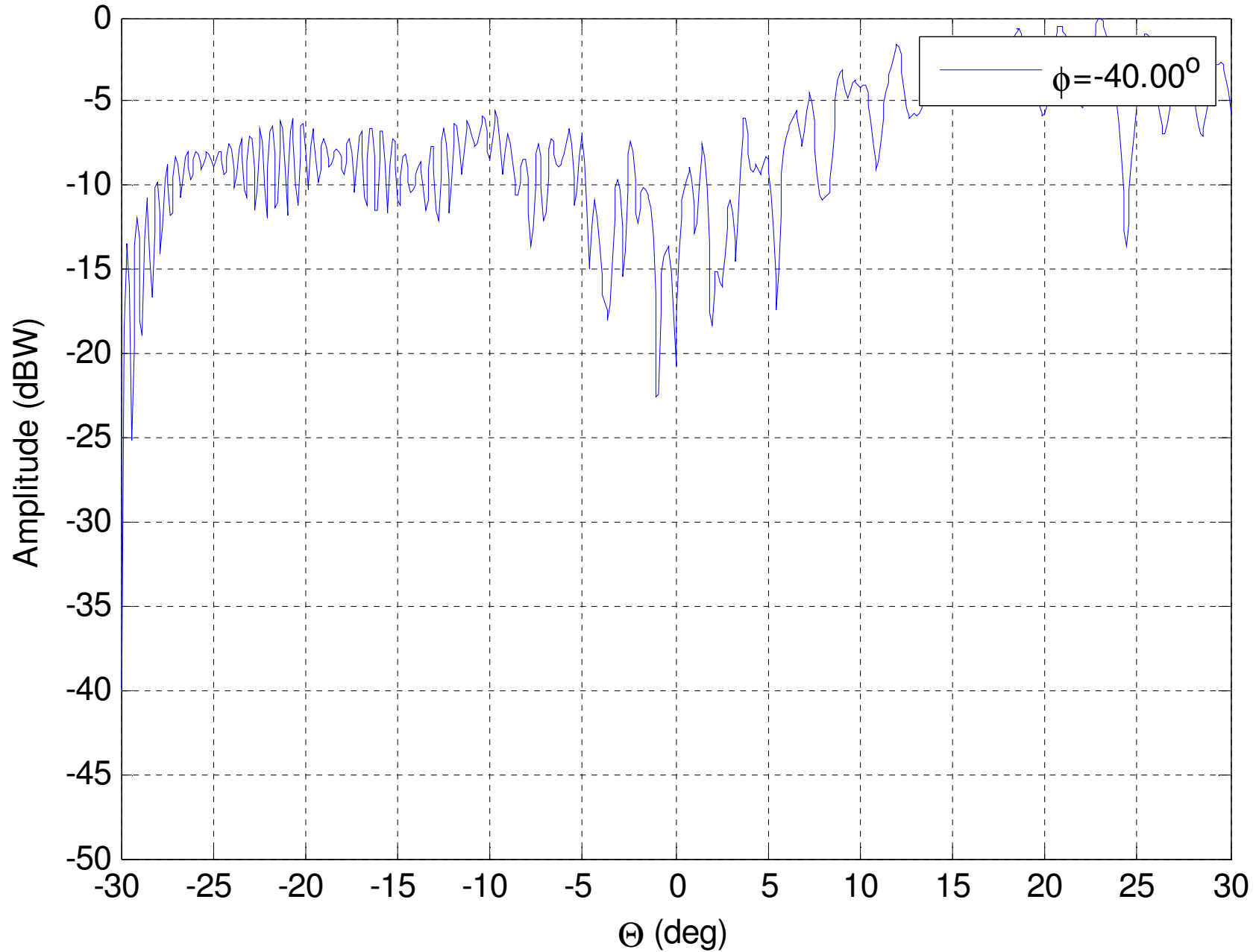
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.28 dBW, Date: 14-Dec-2011



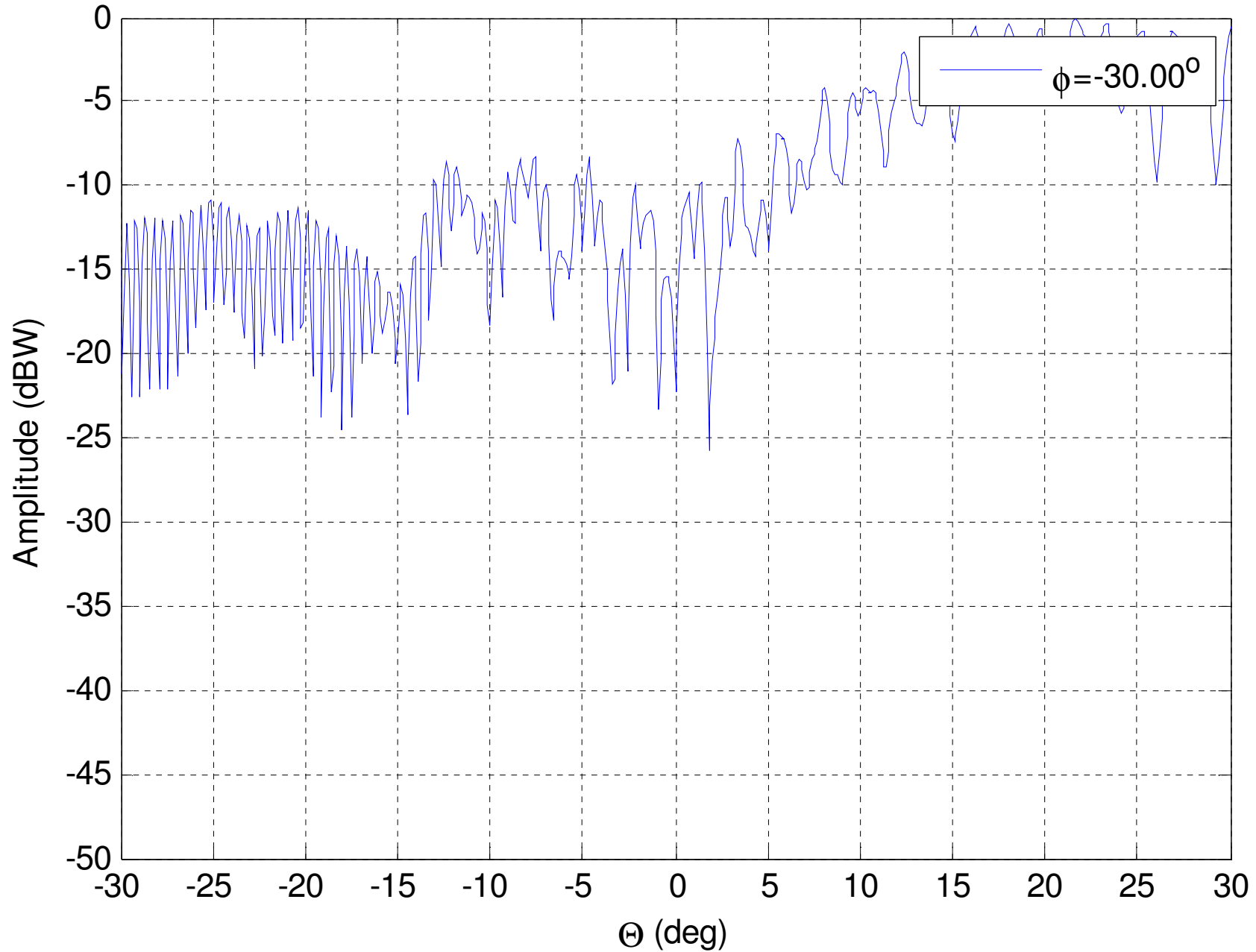
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -8.81 dBW, Date: 14-Dec-2011



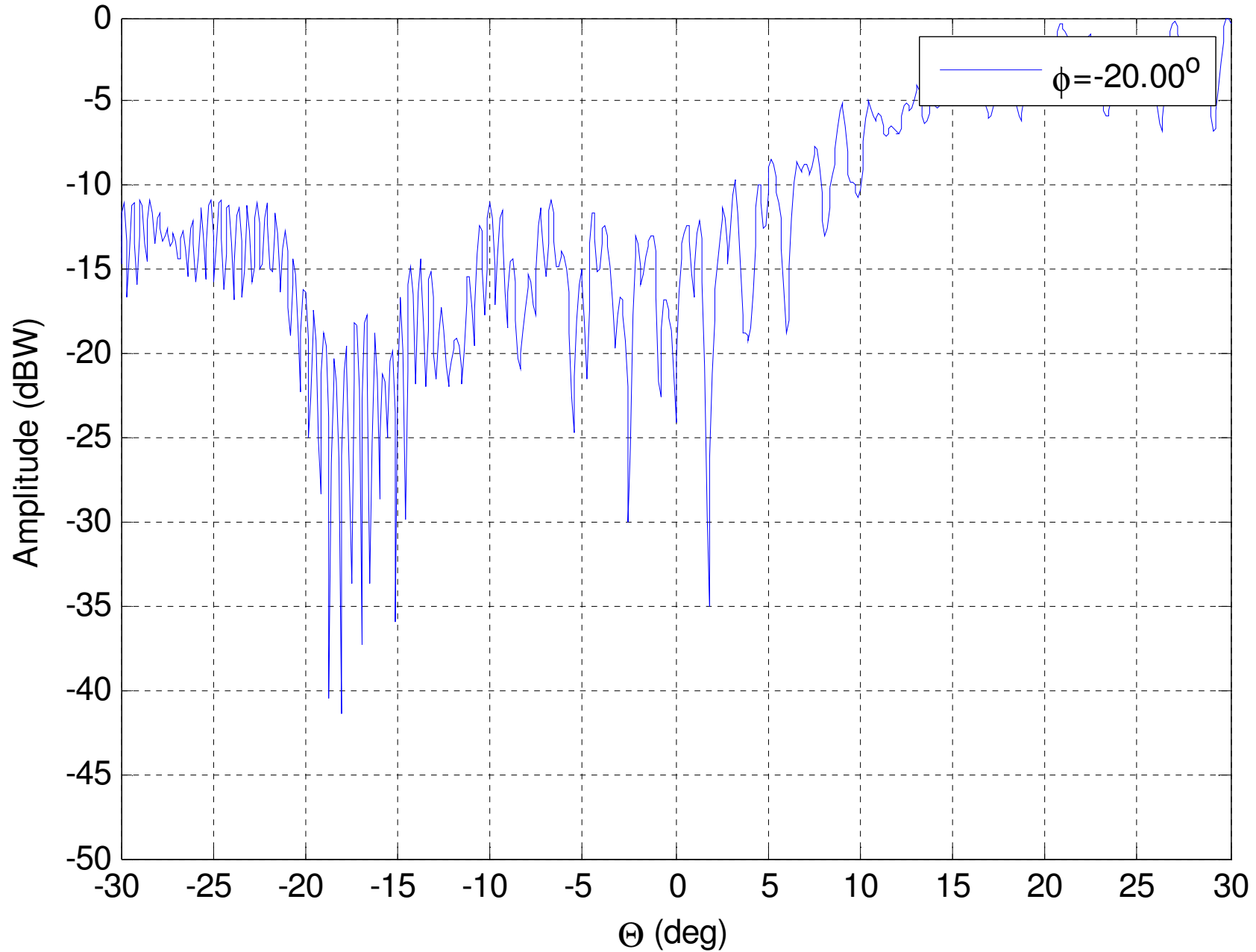
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



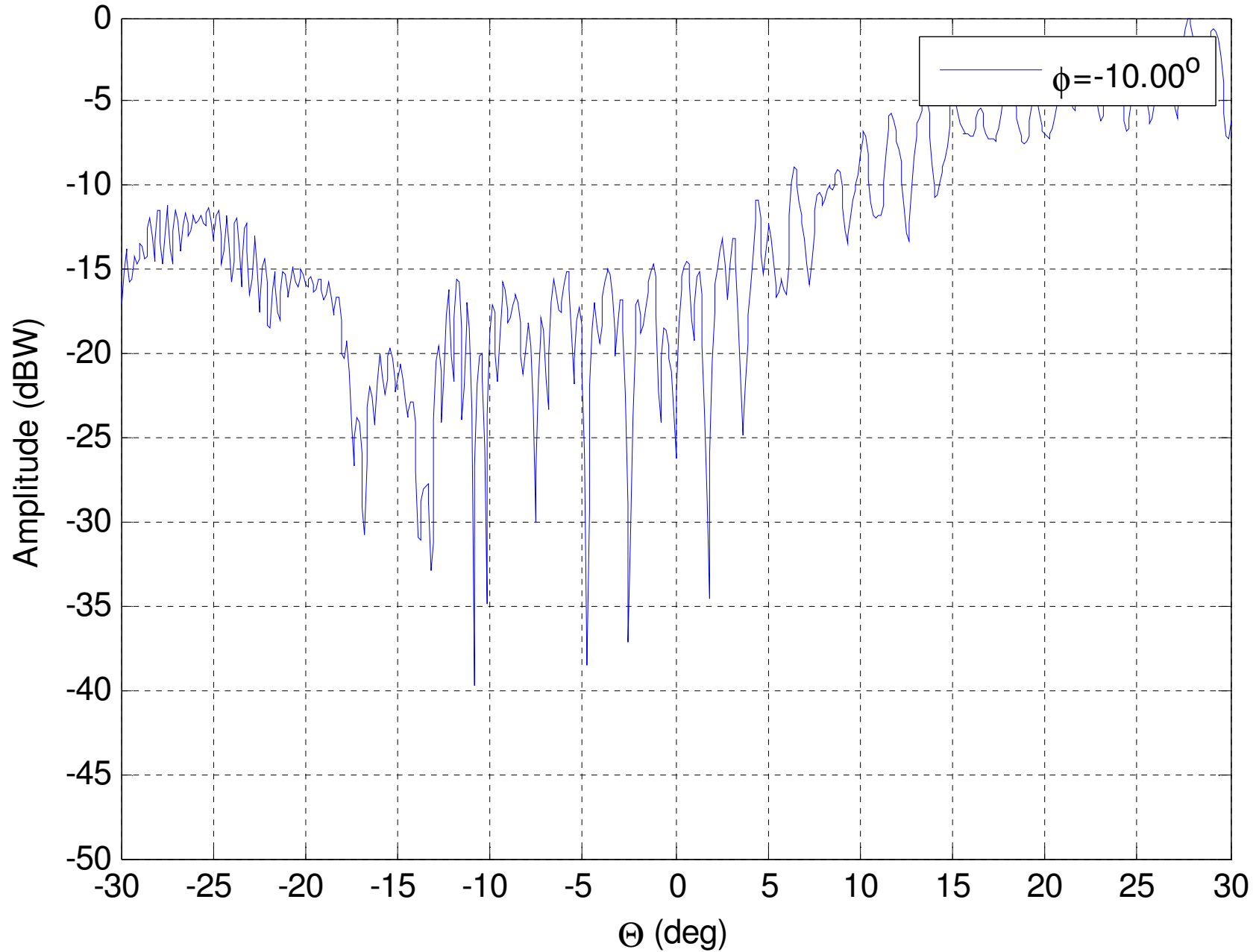
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -5.41 dBW, Date: 14-Dec-2011



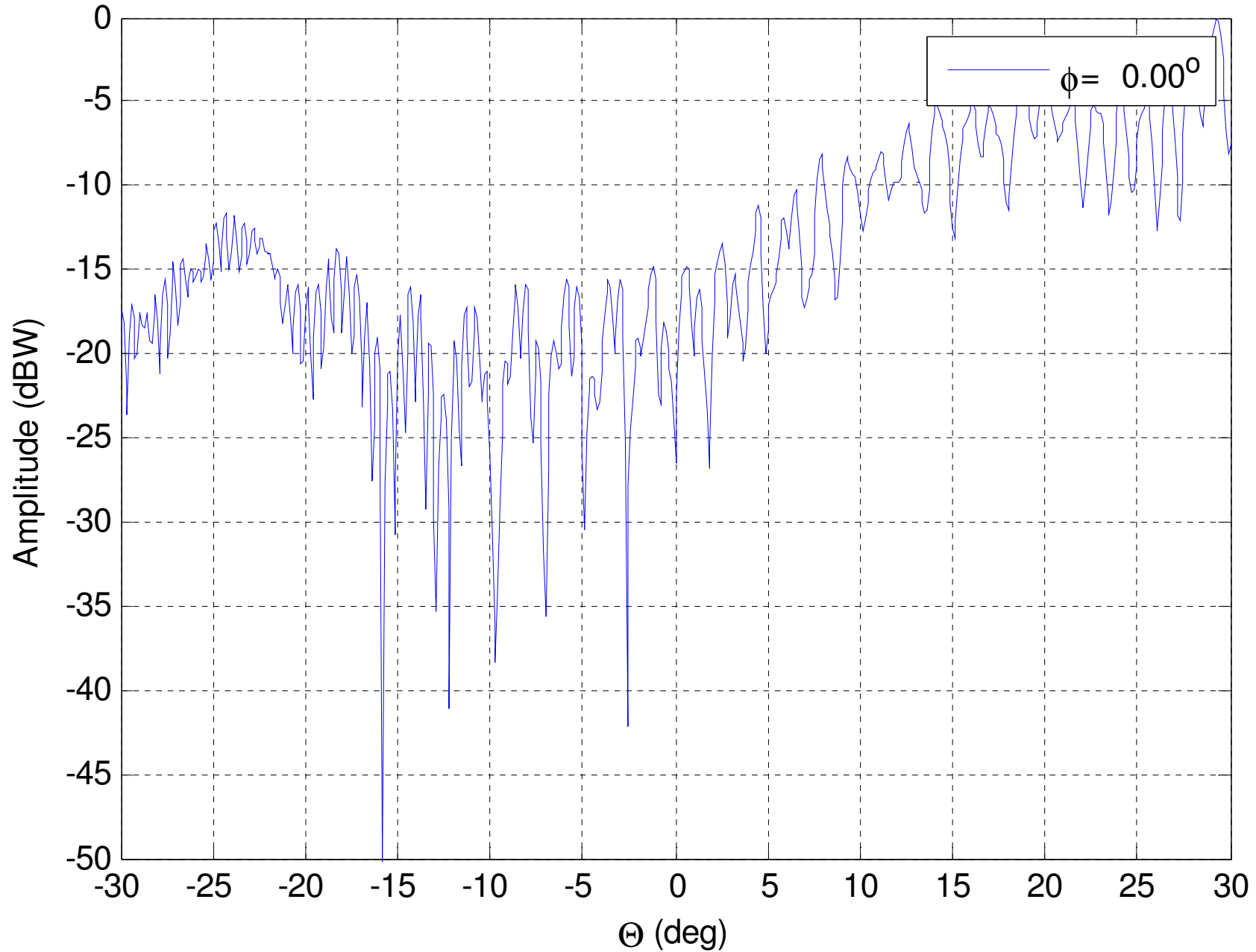
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -3.23 dBW, Date: 14-Dec-2011



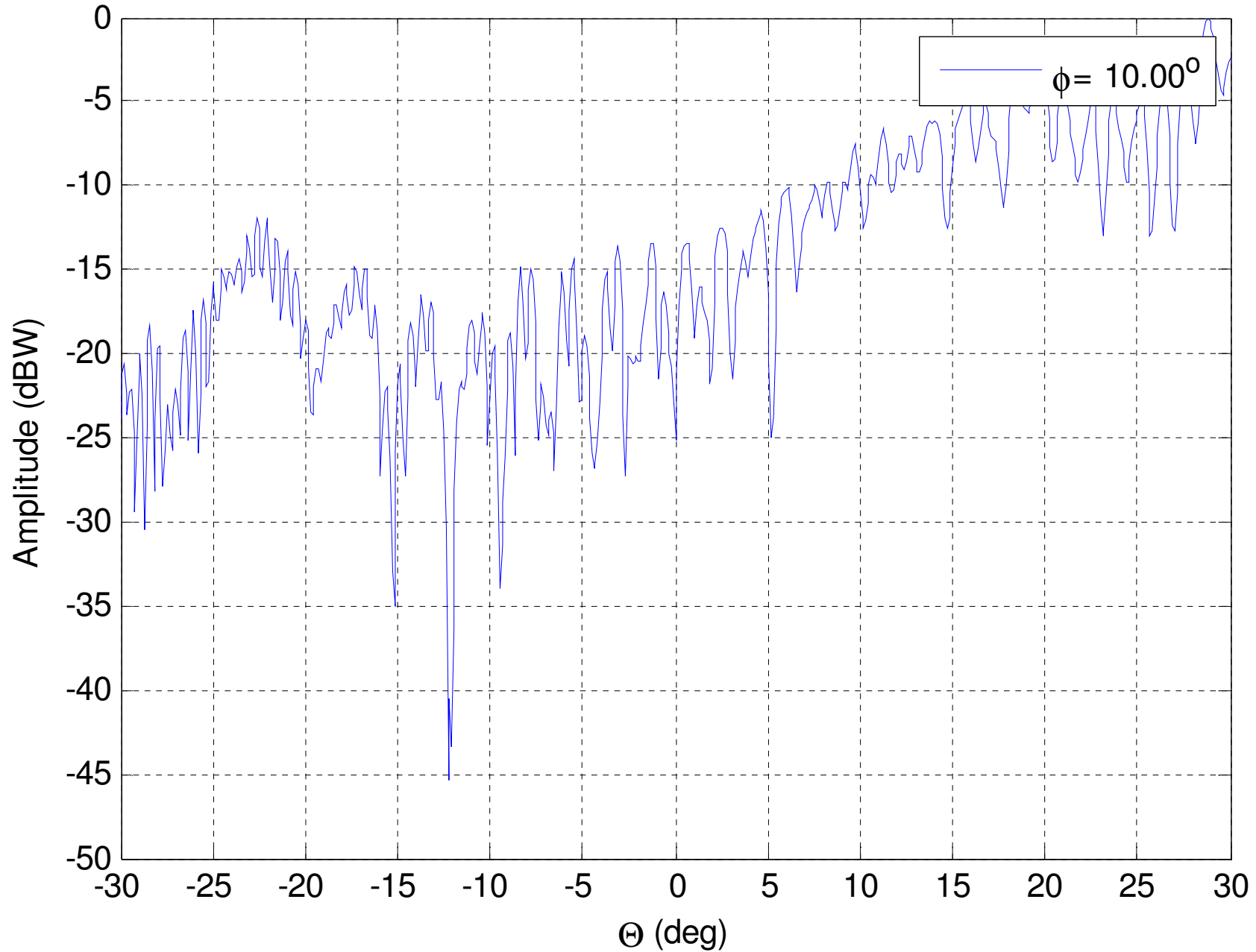
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -2.96 dBW, Date: 14-Dec-2011



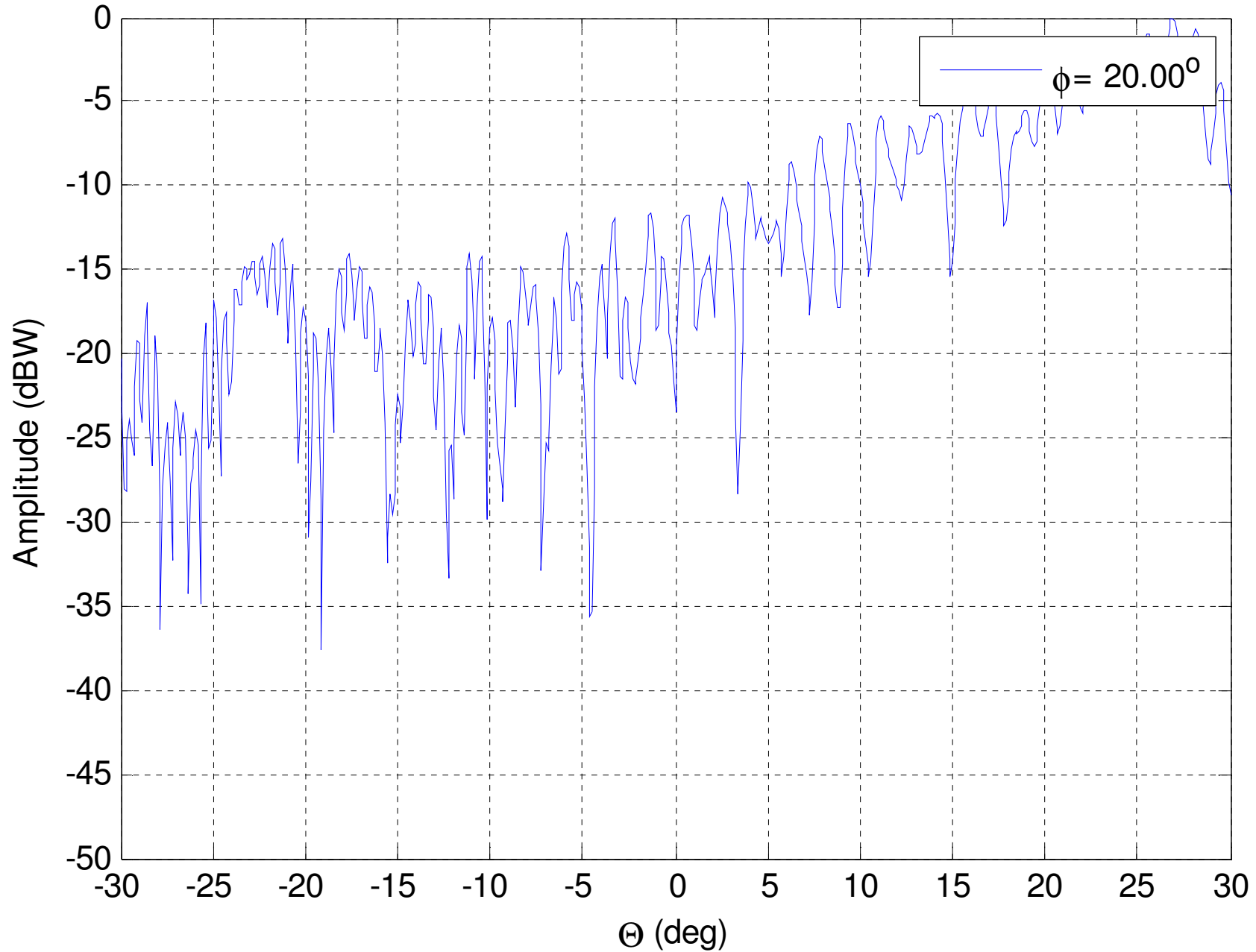
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -4.34 dBW, Date: 14-Dec-2011



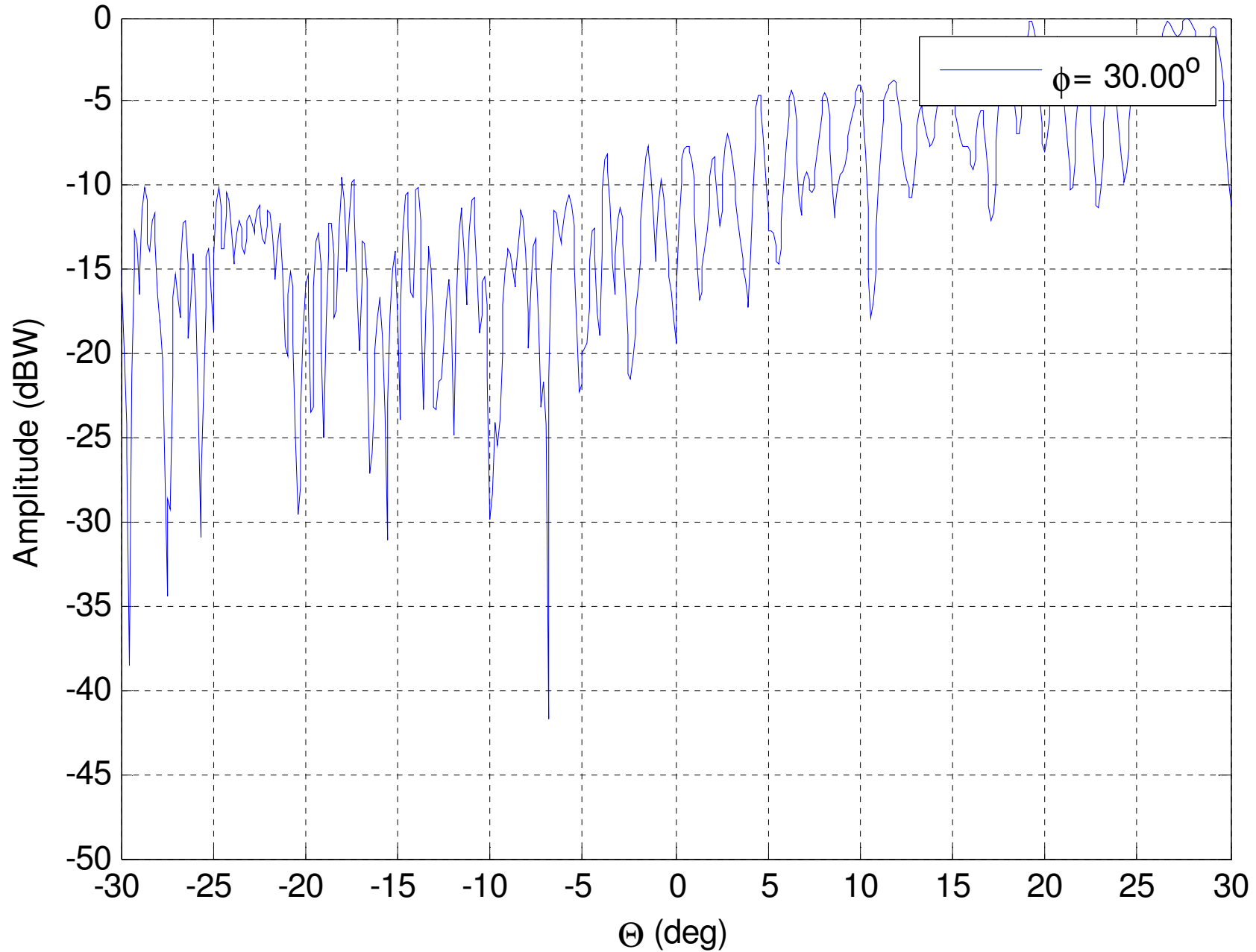
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -6.07 dBW, Date: 14-Dec-2011



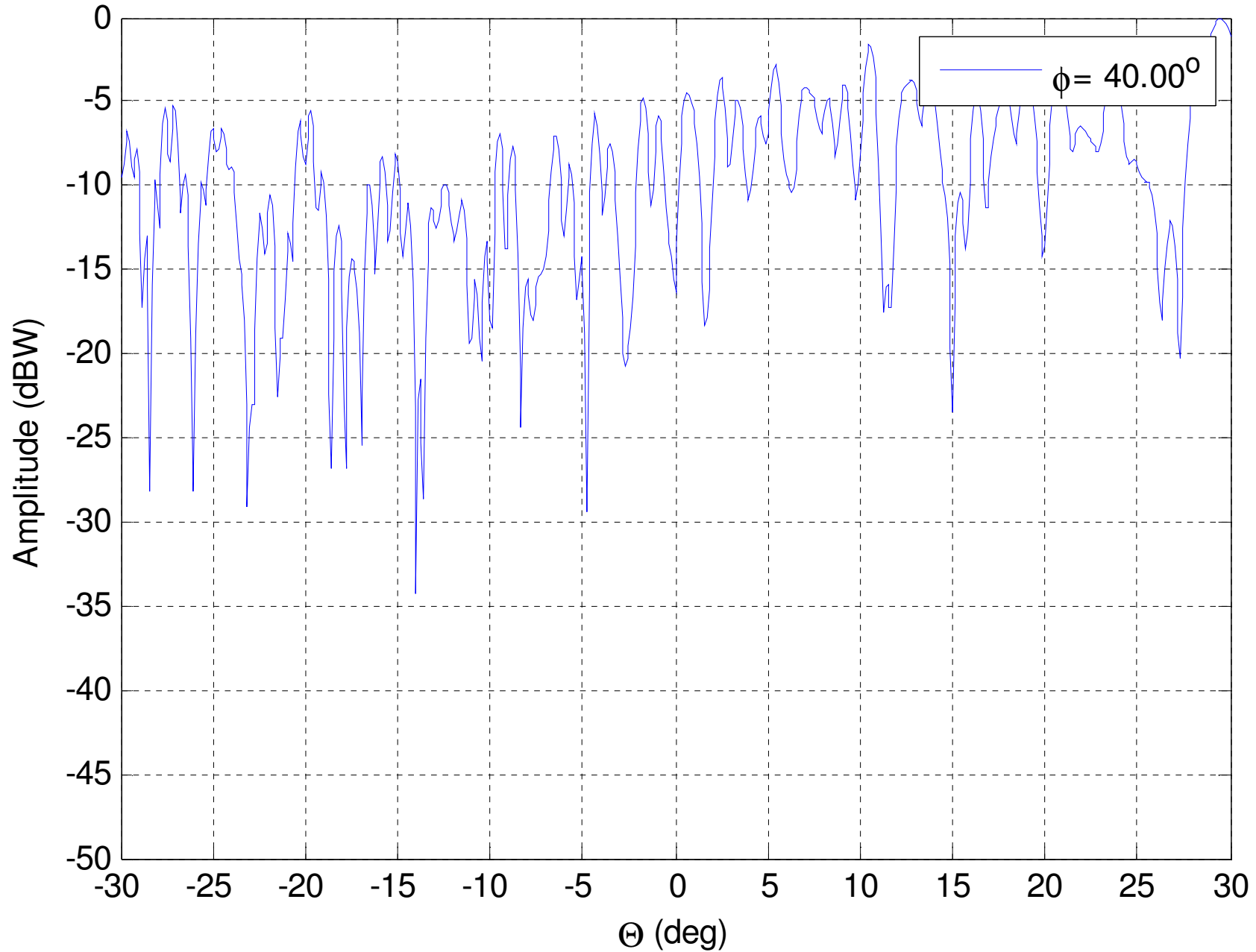
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.13 dBW, Date: 14-Dec-2011



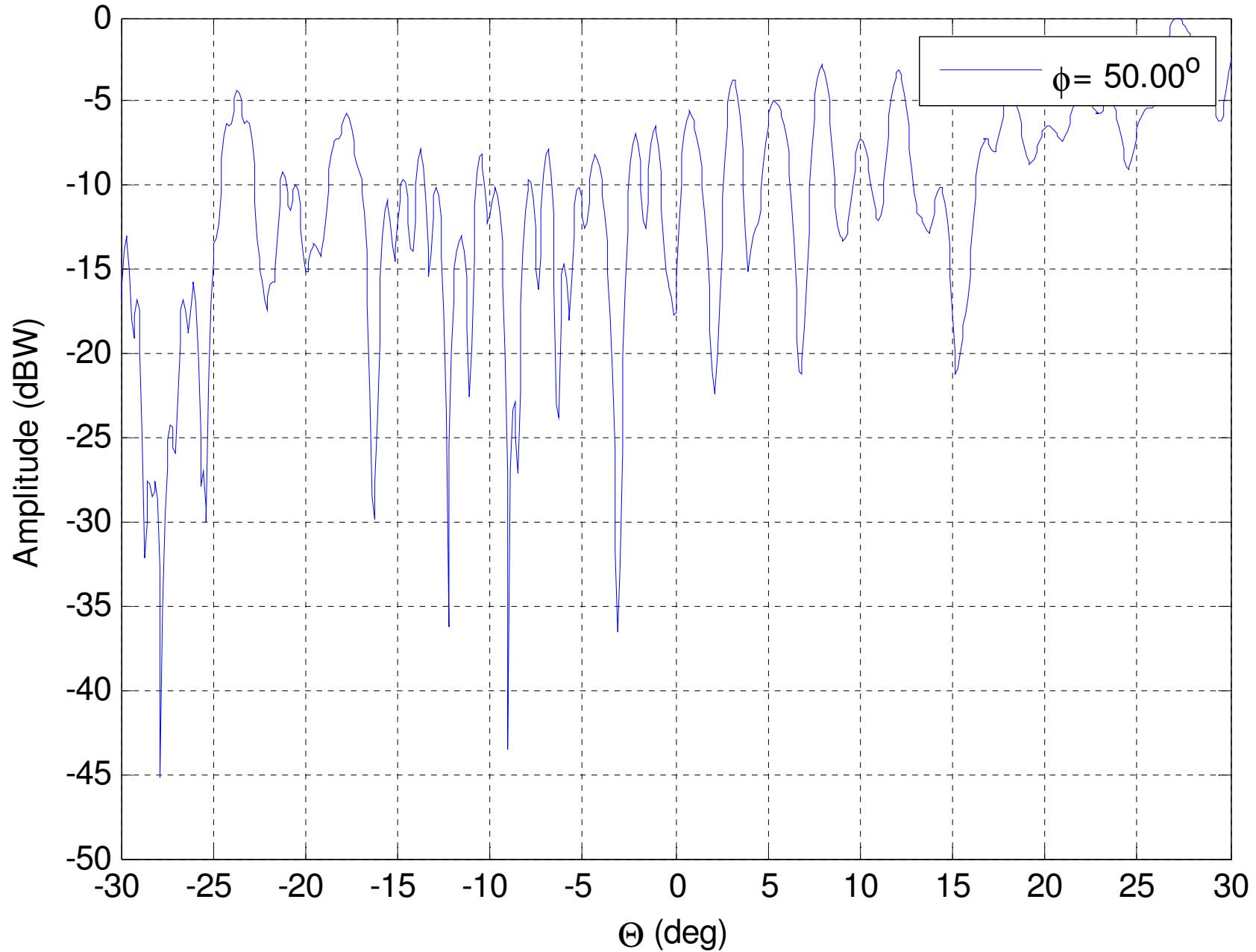
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -13.20 dBW, Date: 14-Dec-2011



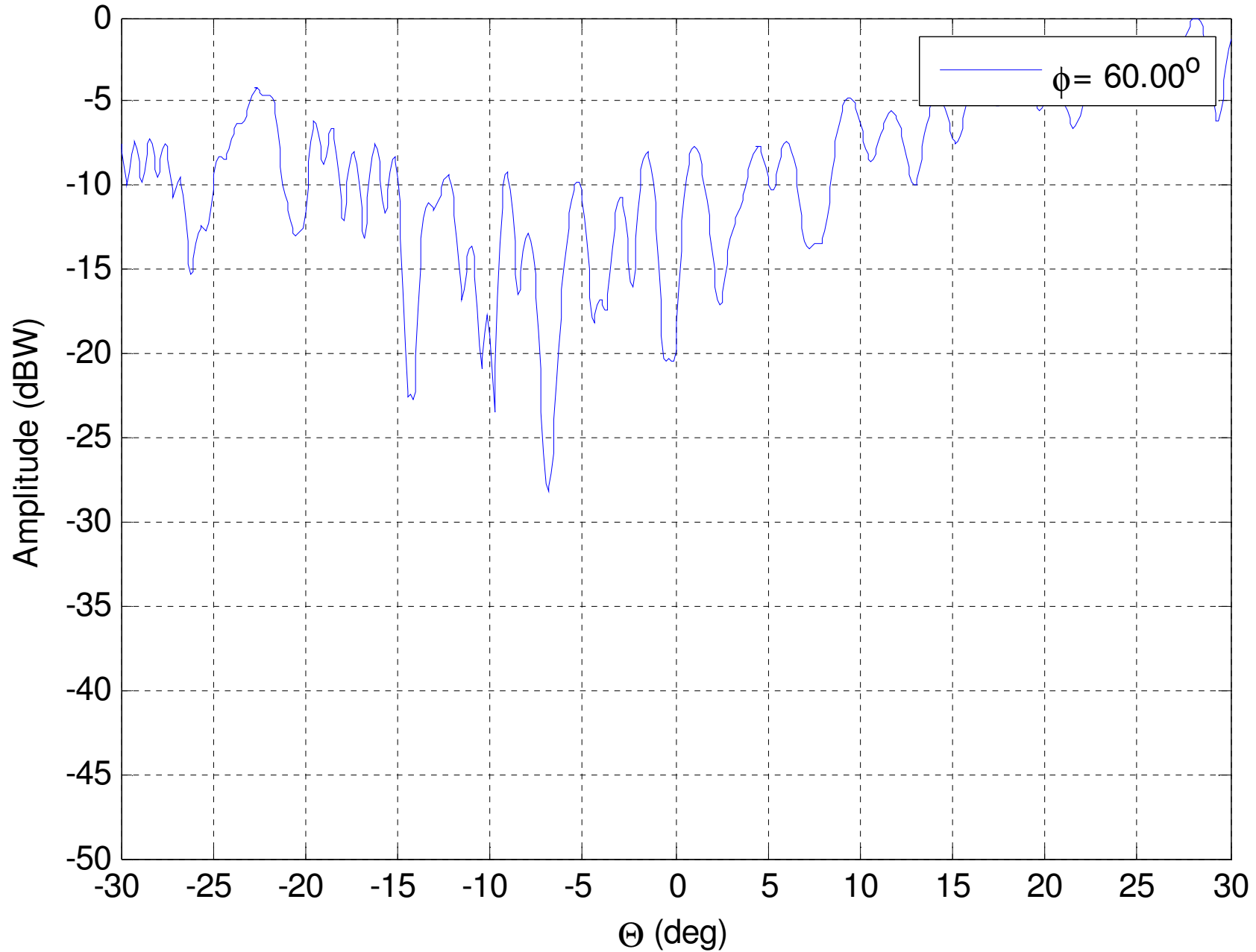
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.90 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

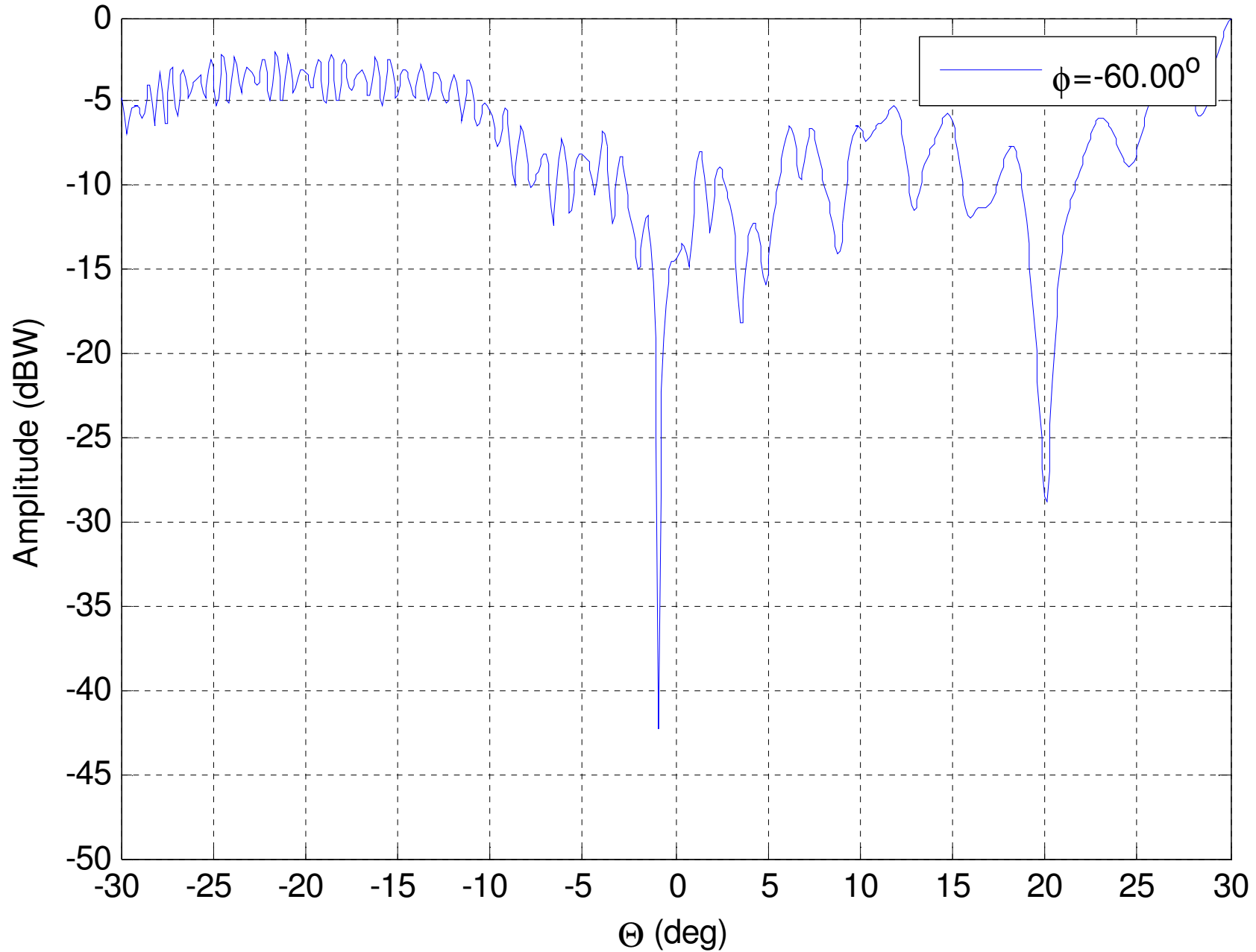
Input file: tx-17.5-lhcp-60.cut, Peak: -9.73 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

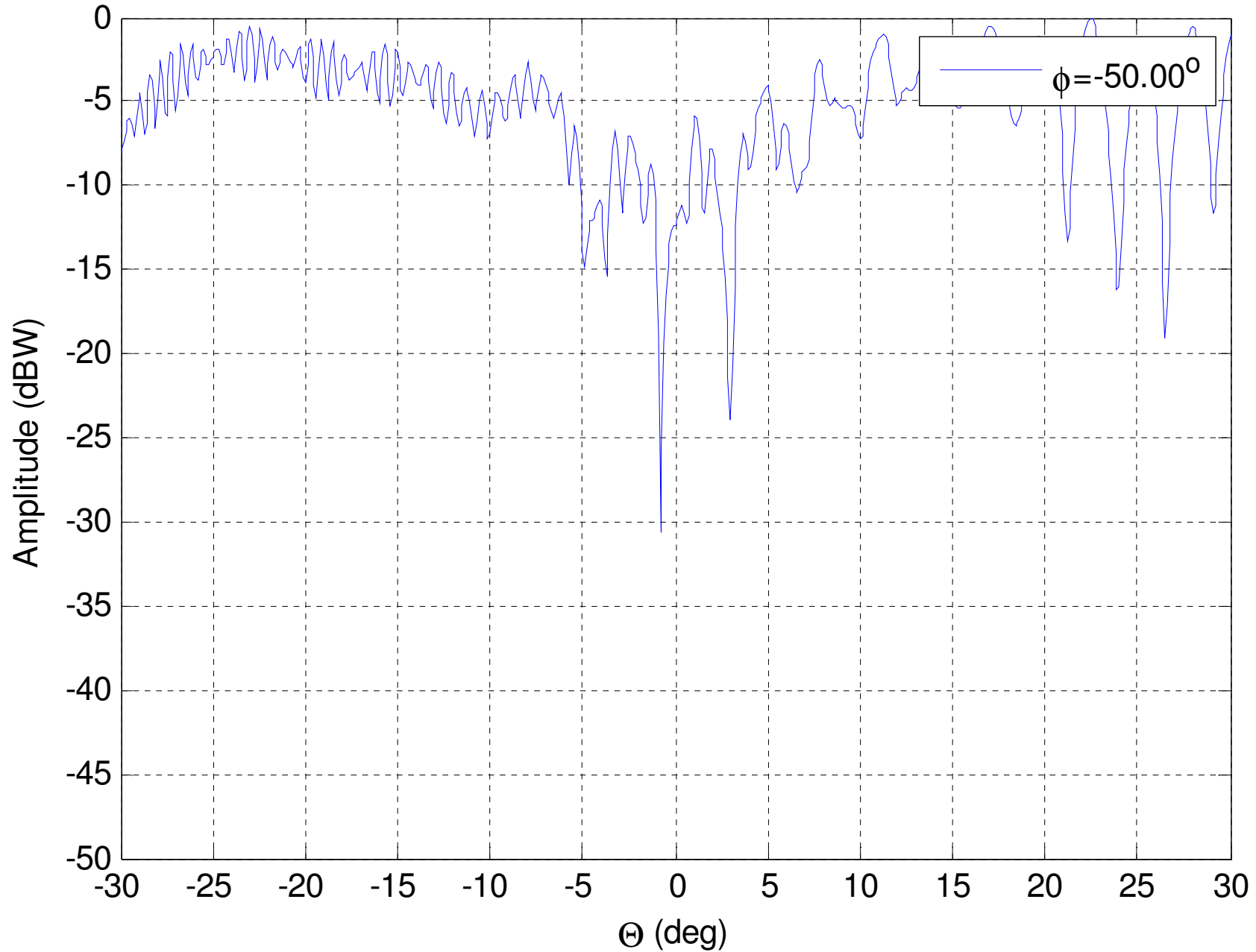
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -8.42 dBW, Date: 14-Dec-2011



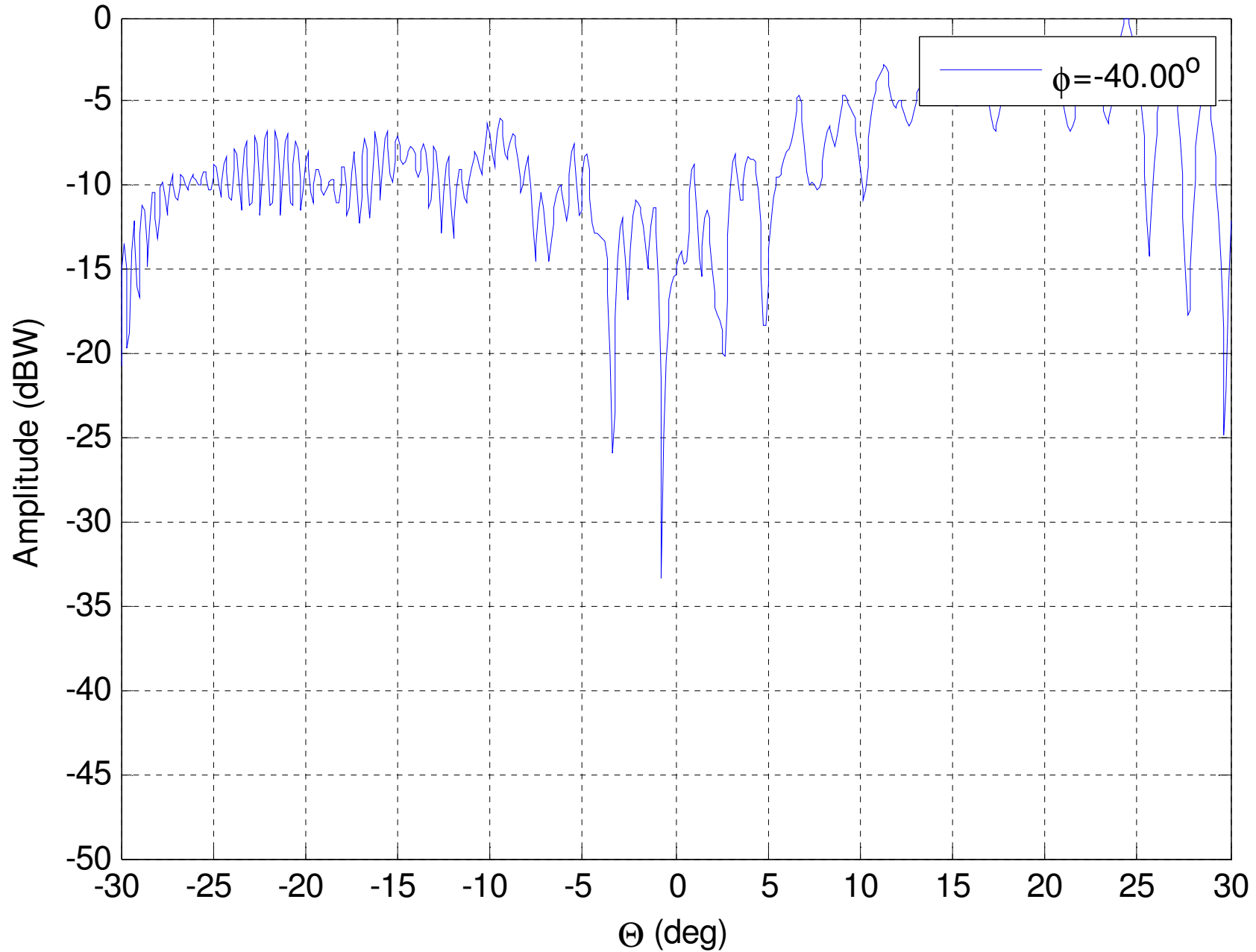
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -10.54 dBW, Date: 14-Dec-2011



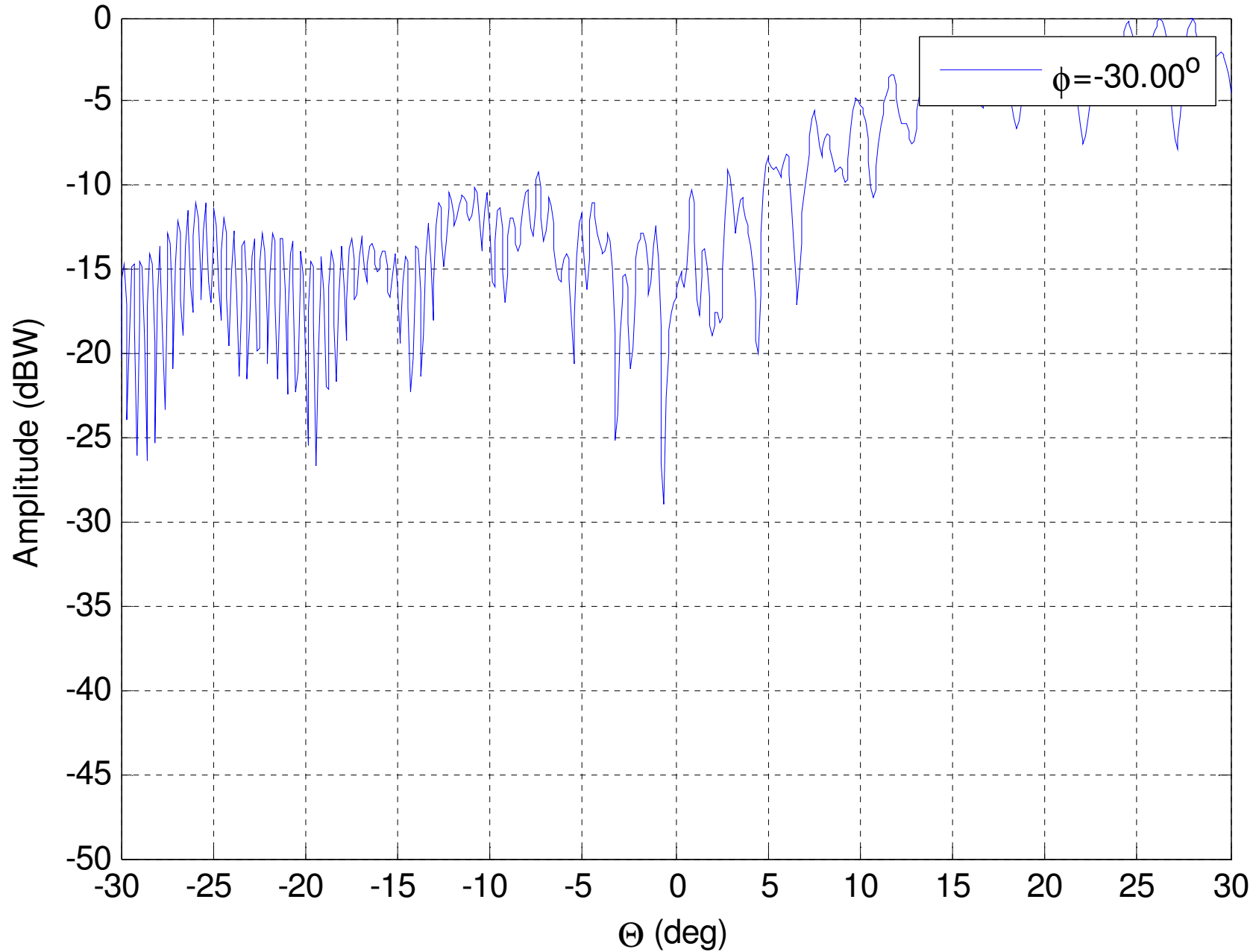
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.70 dBW, Date: 14-Dec-2011



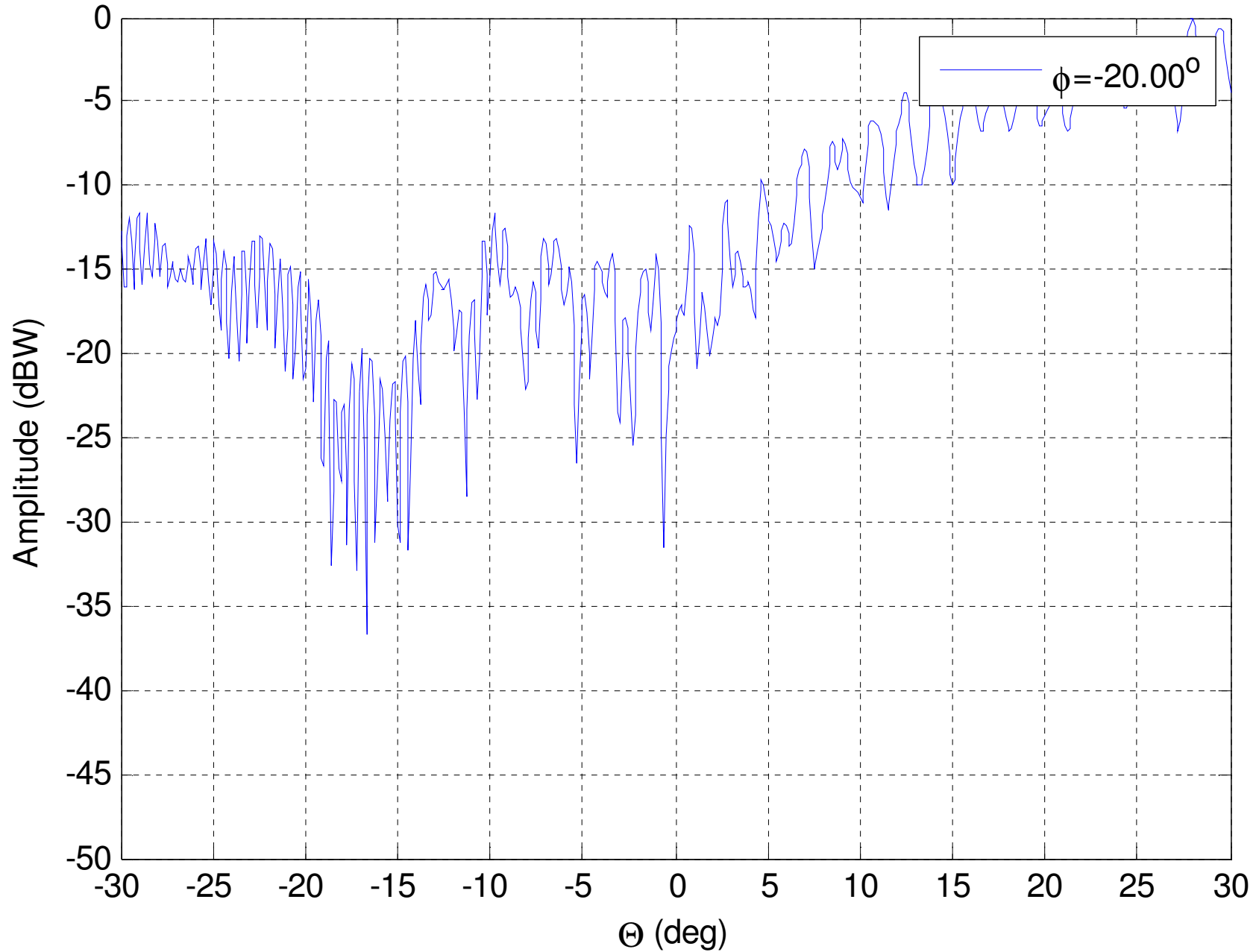
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -6.25 dBW, Date: 14-Dec-2011



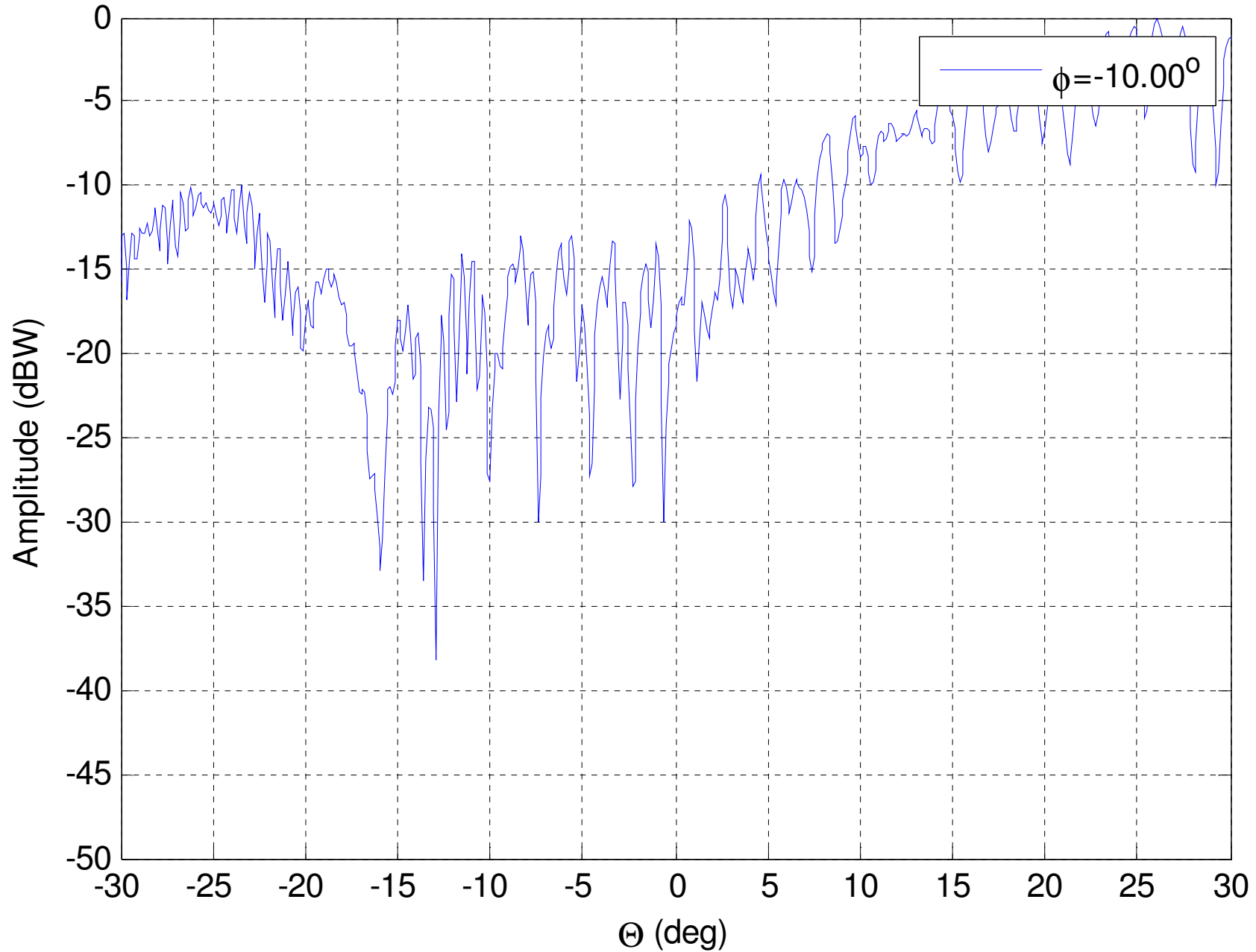
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -4.30 dBW, Date: 14-Dec-2011



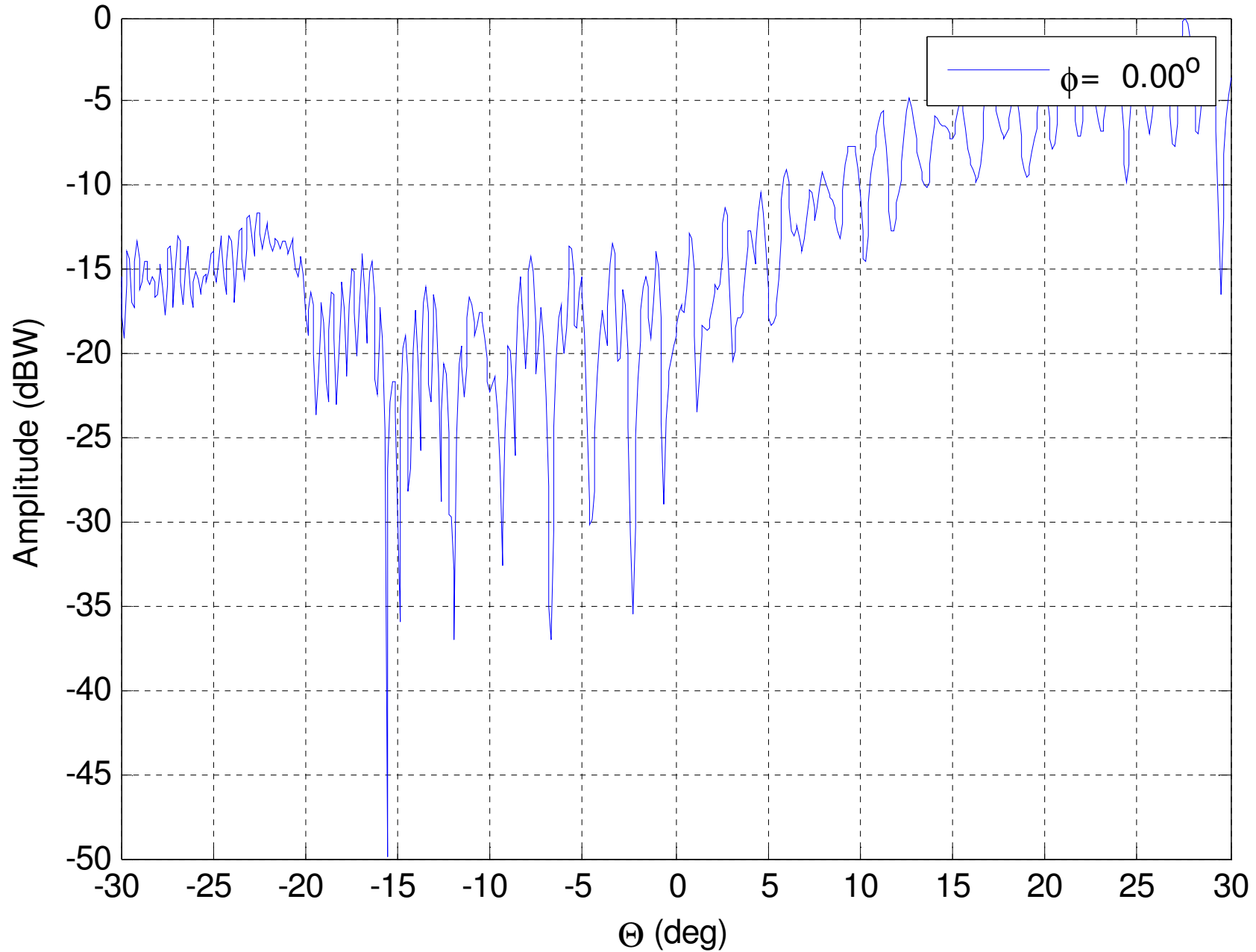
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -4.59 dBW, Date: 14-Dec-2011



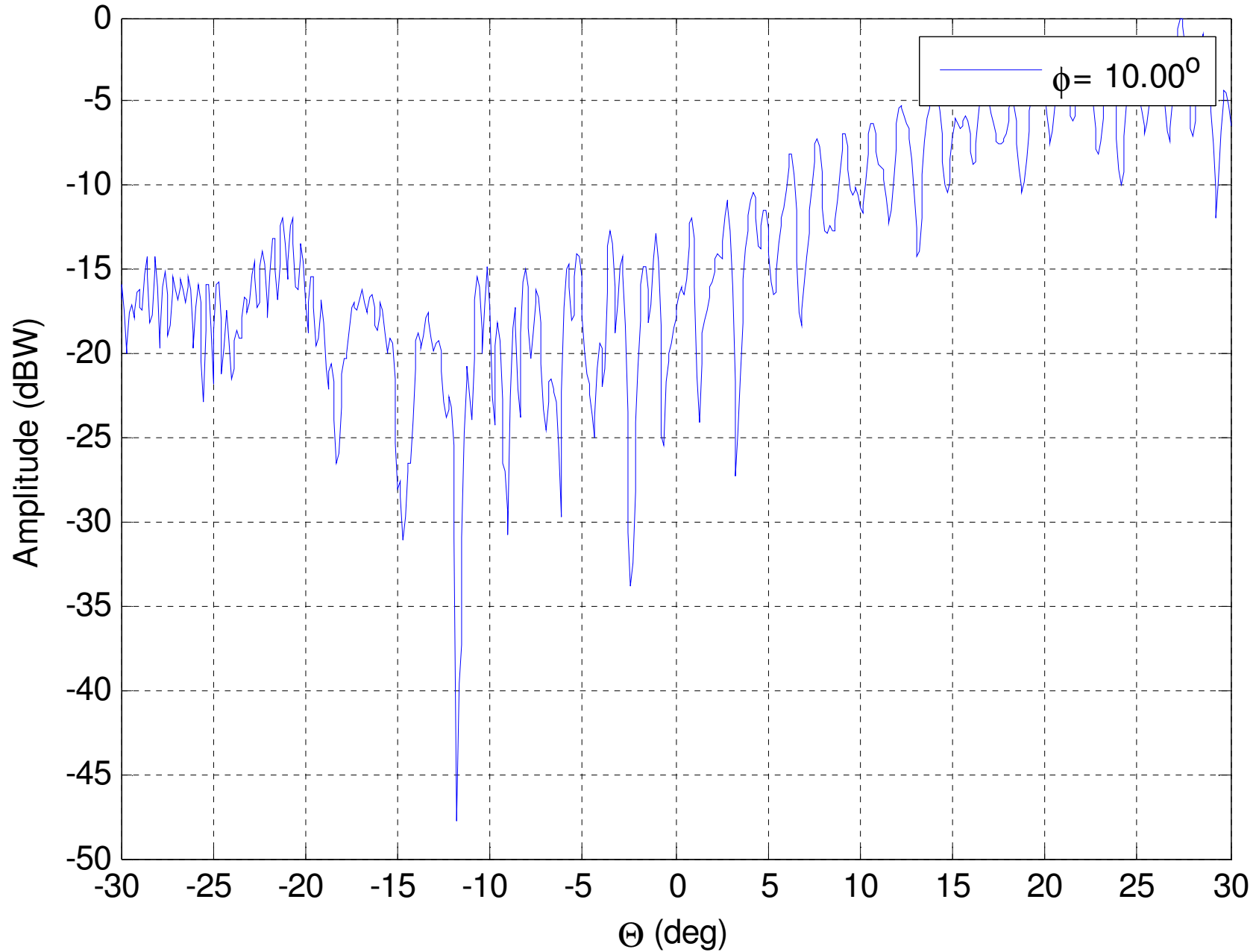
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -4.00 dBW, Date: 14-Dec-2011



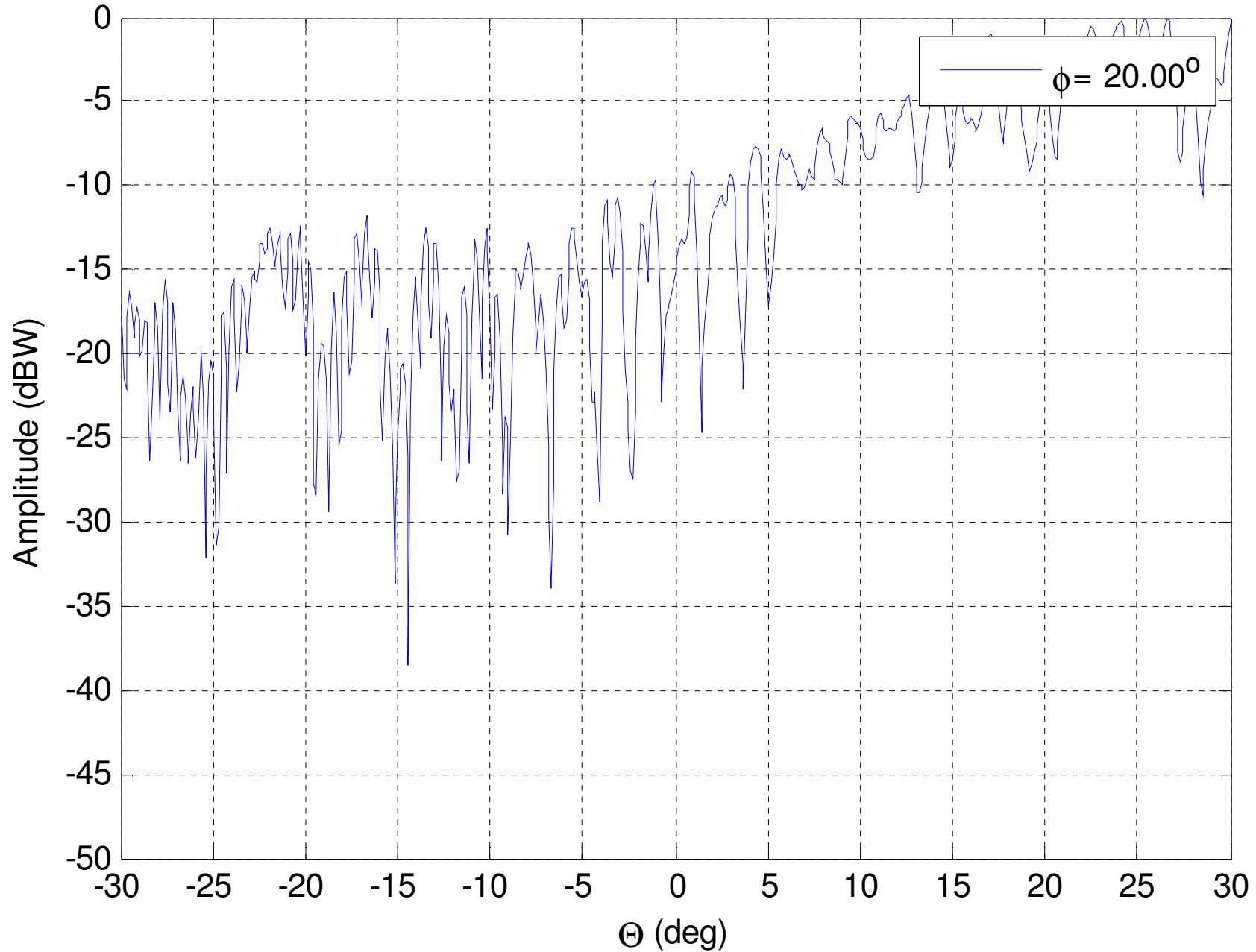
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -5.03 dBW, Date: 14-Dec-2011



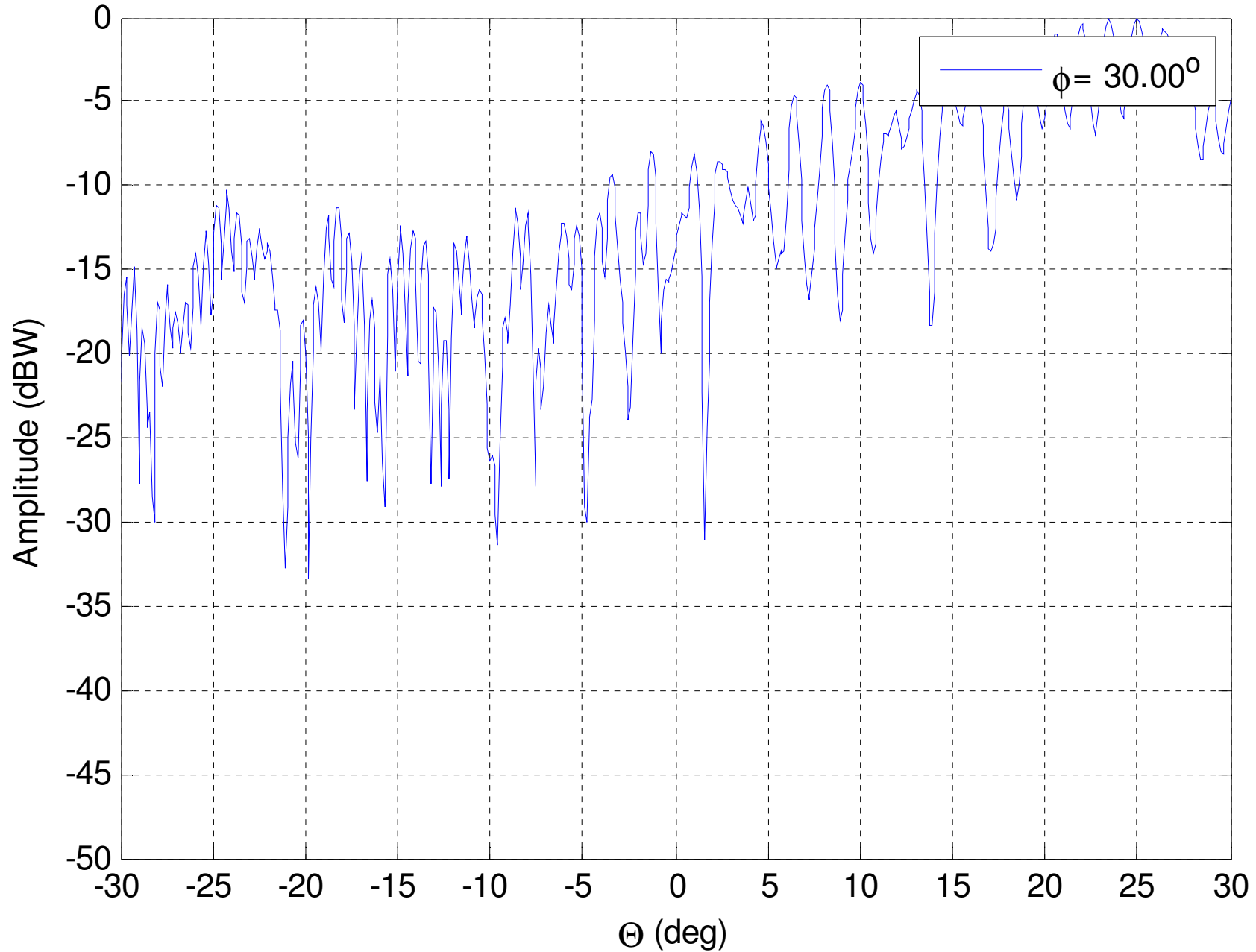
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.88 dBW, Date: 14-Dec-2011



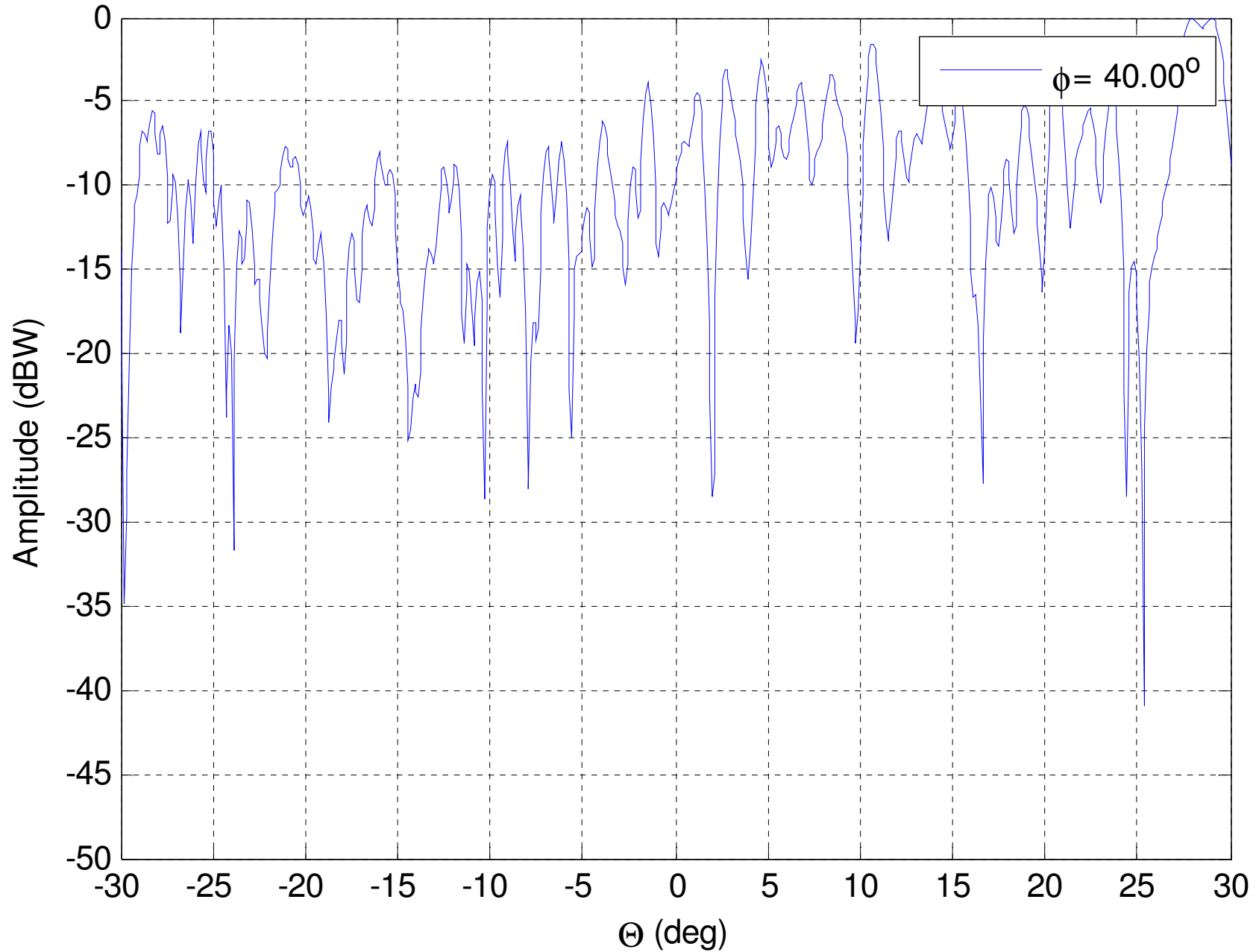
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.27 dBW, Date: 14-Dec-2011



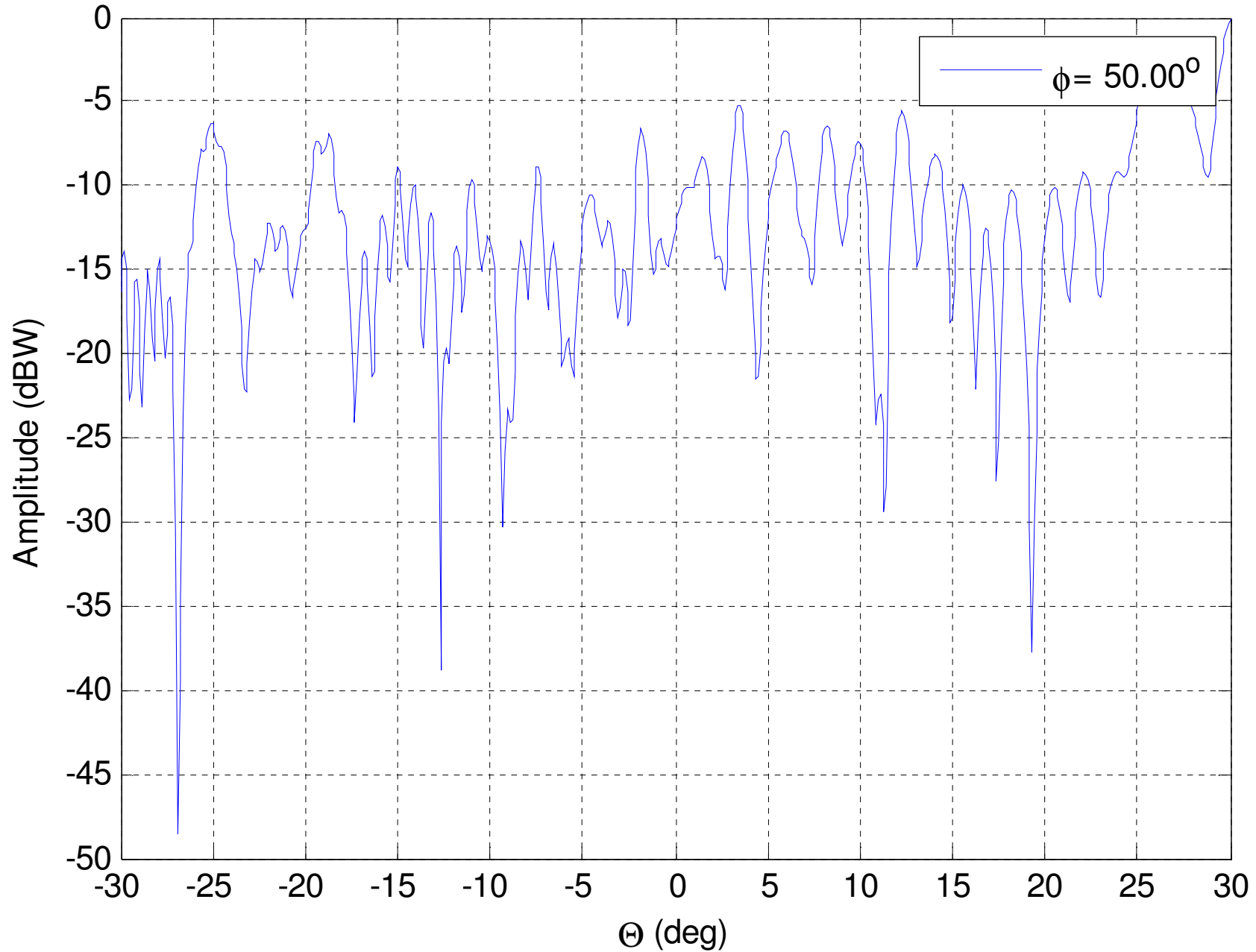
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -13.27 dBW, Date: 14-Dec-2011



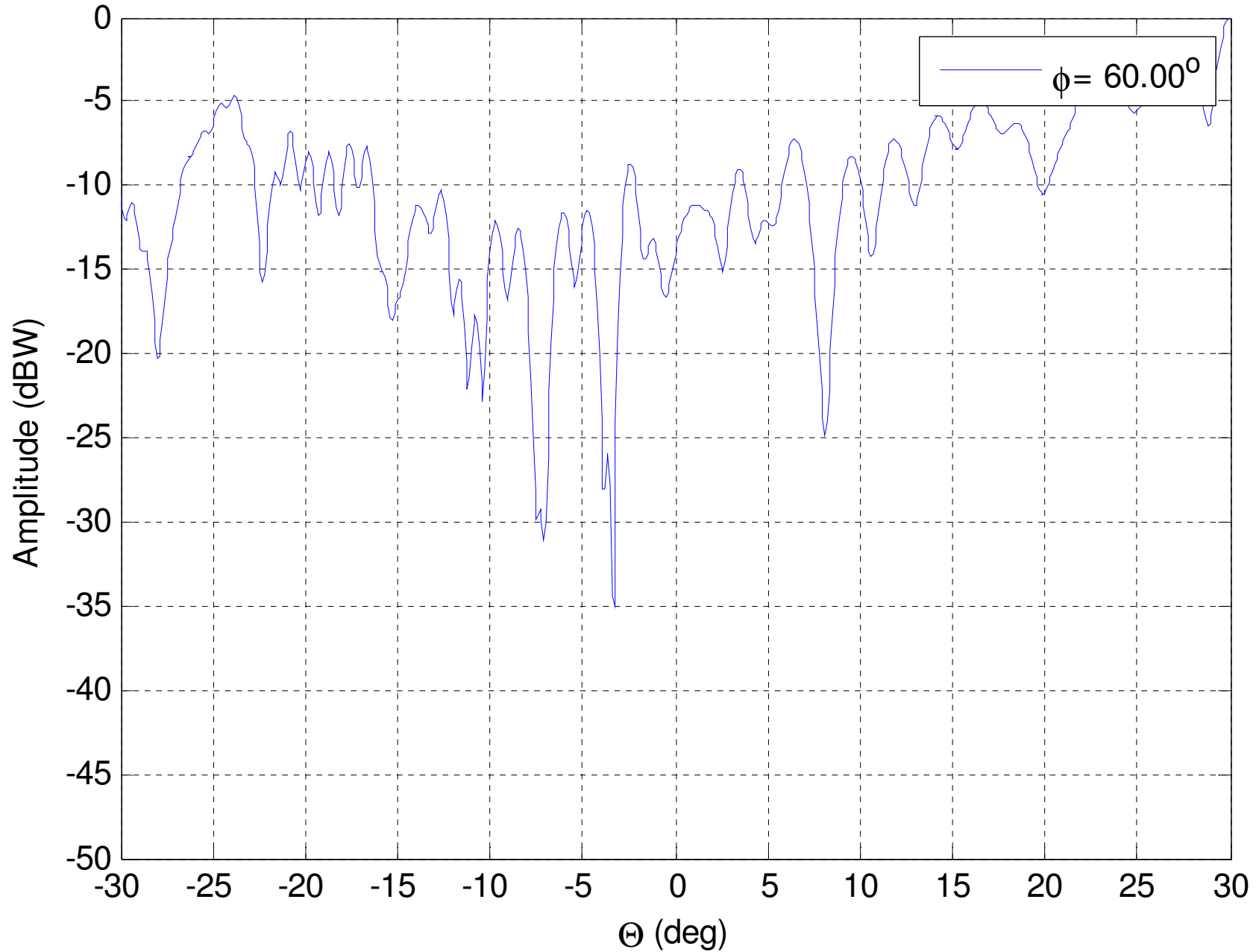
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -10.38 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

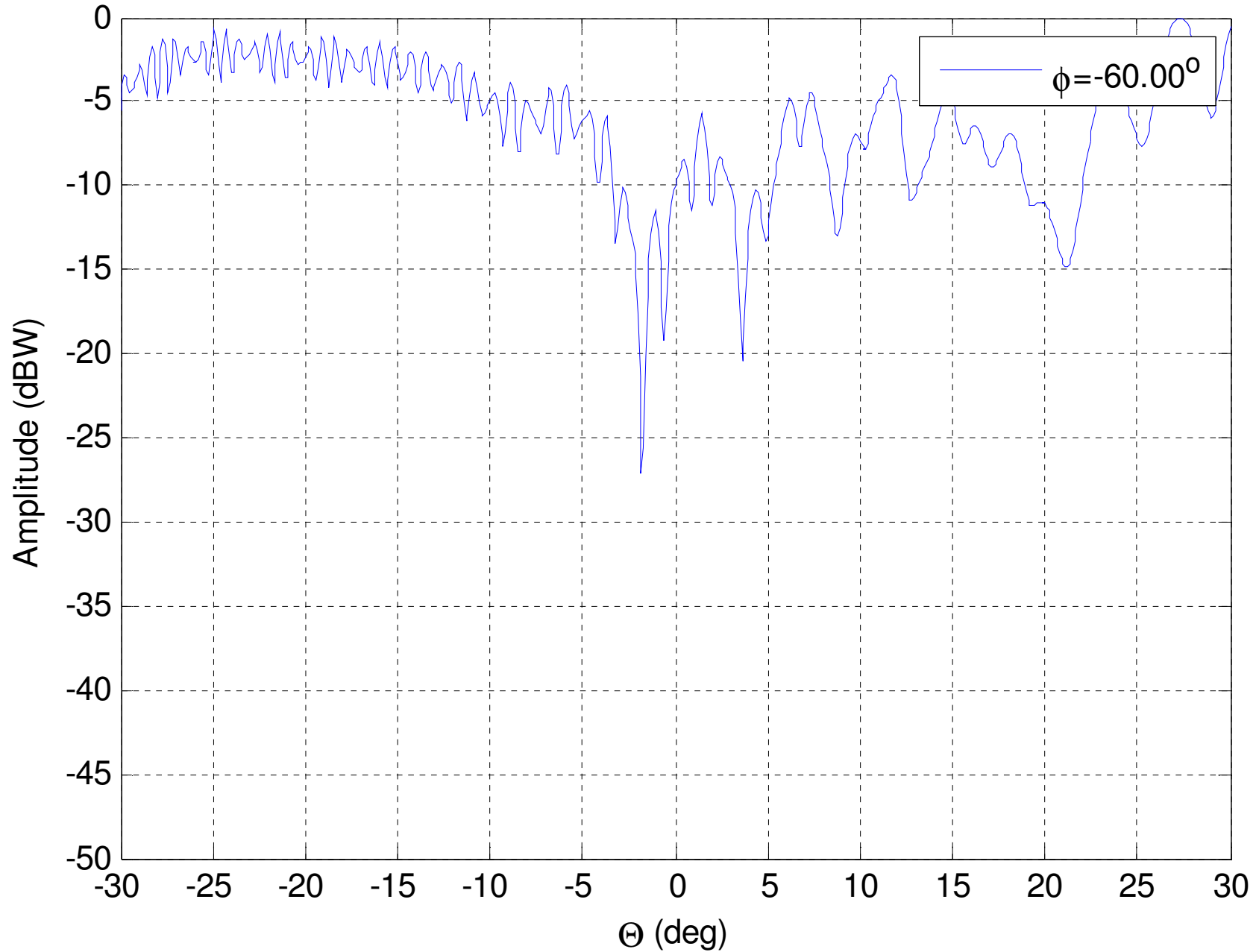
Input file: tx-17.7-rhcp-60.cut, Peak: -8.89 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

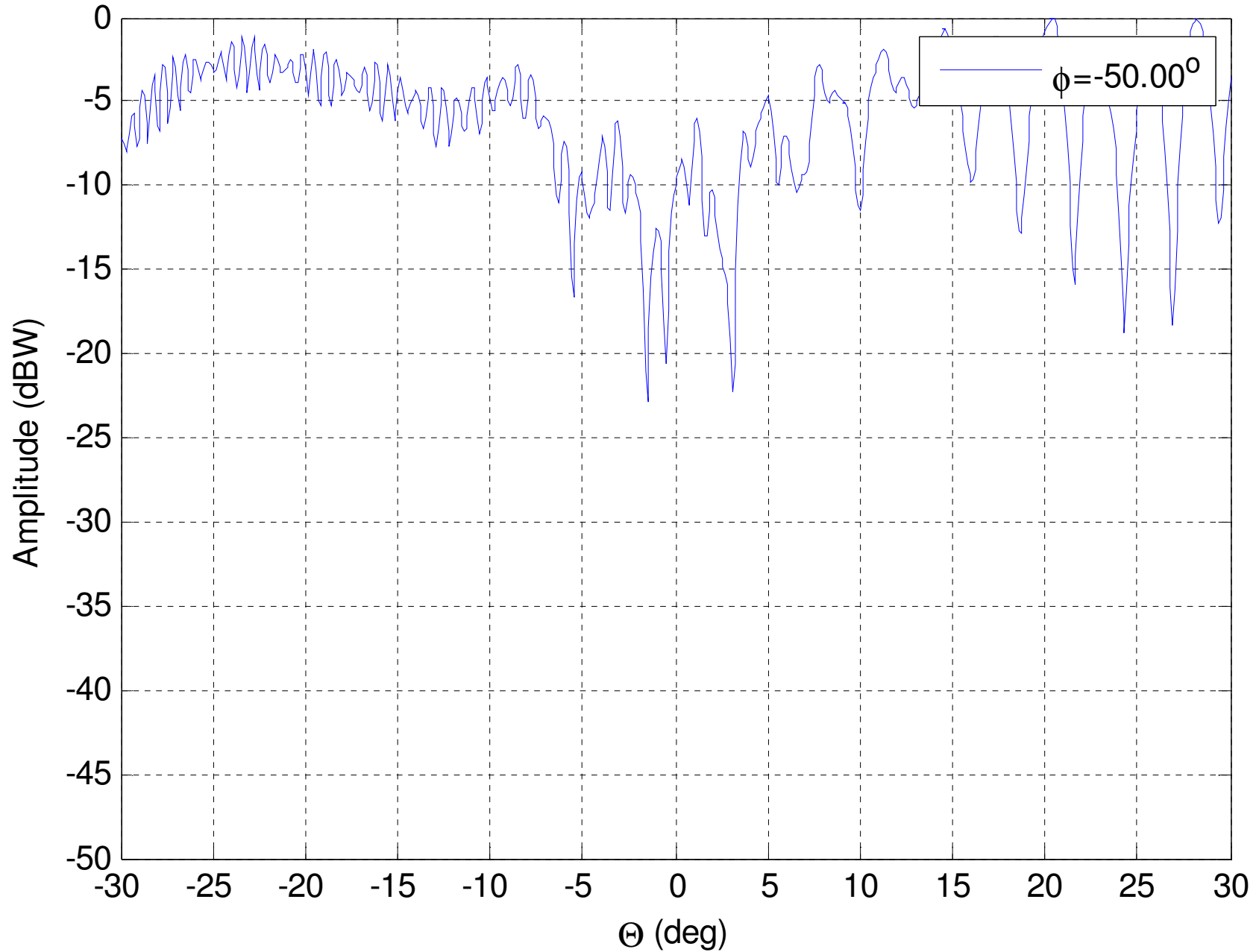
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -9.93 dBW, Date: 14-Dec-2011



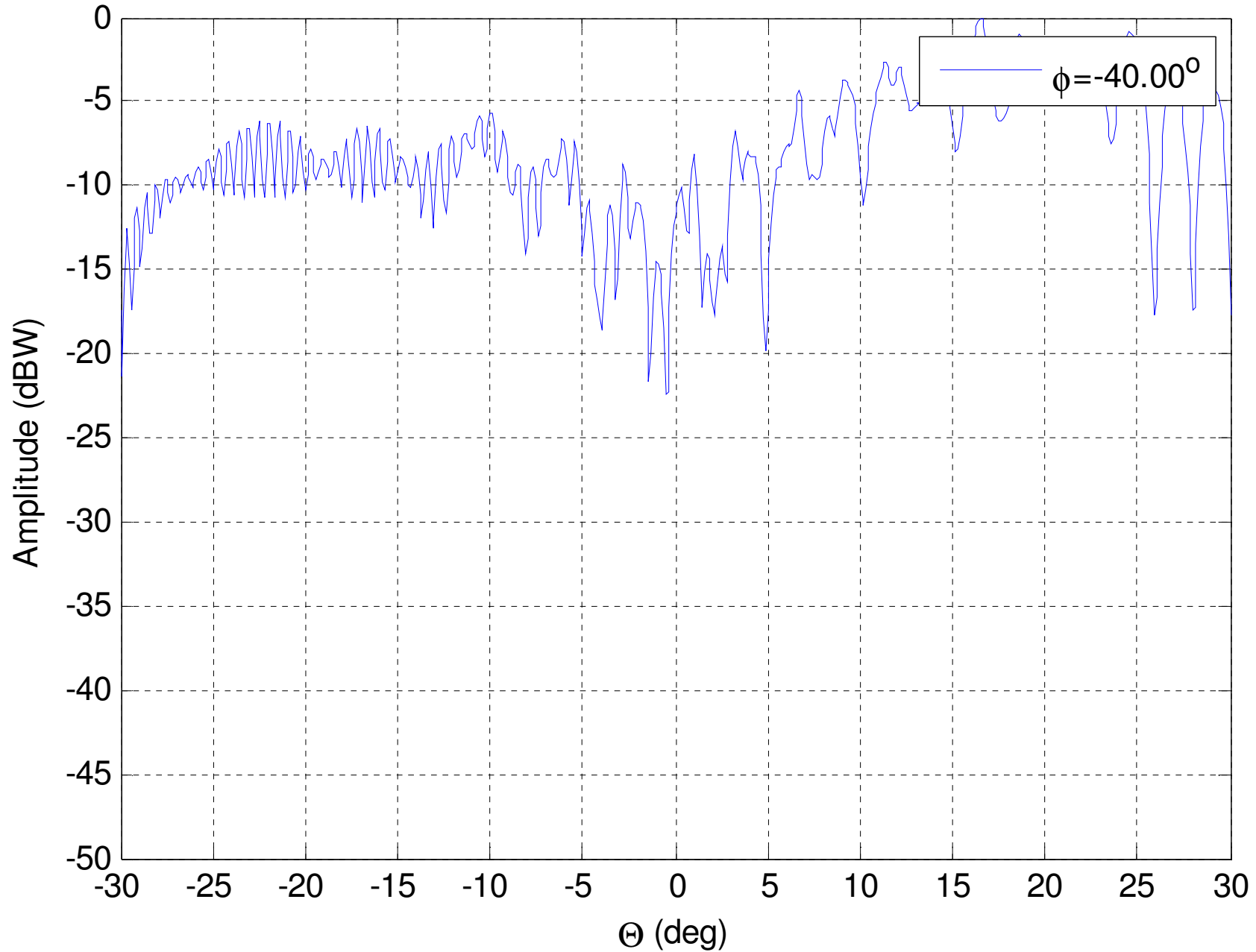
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.95 dBW, Date: 14-Dec-2011



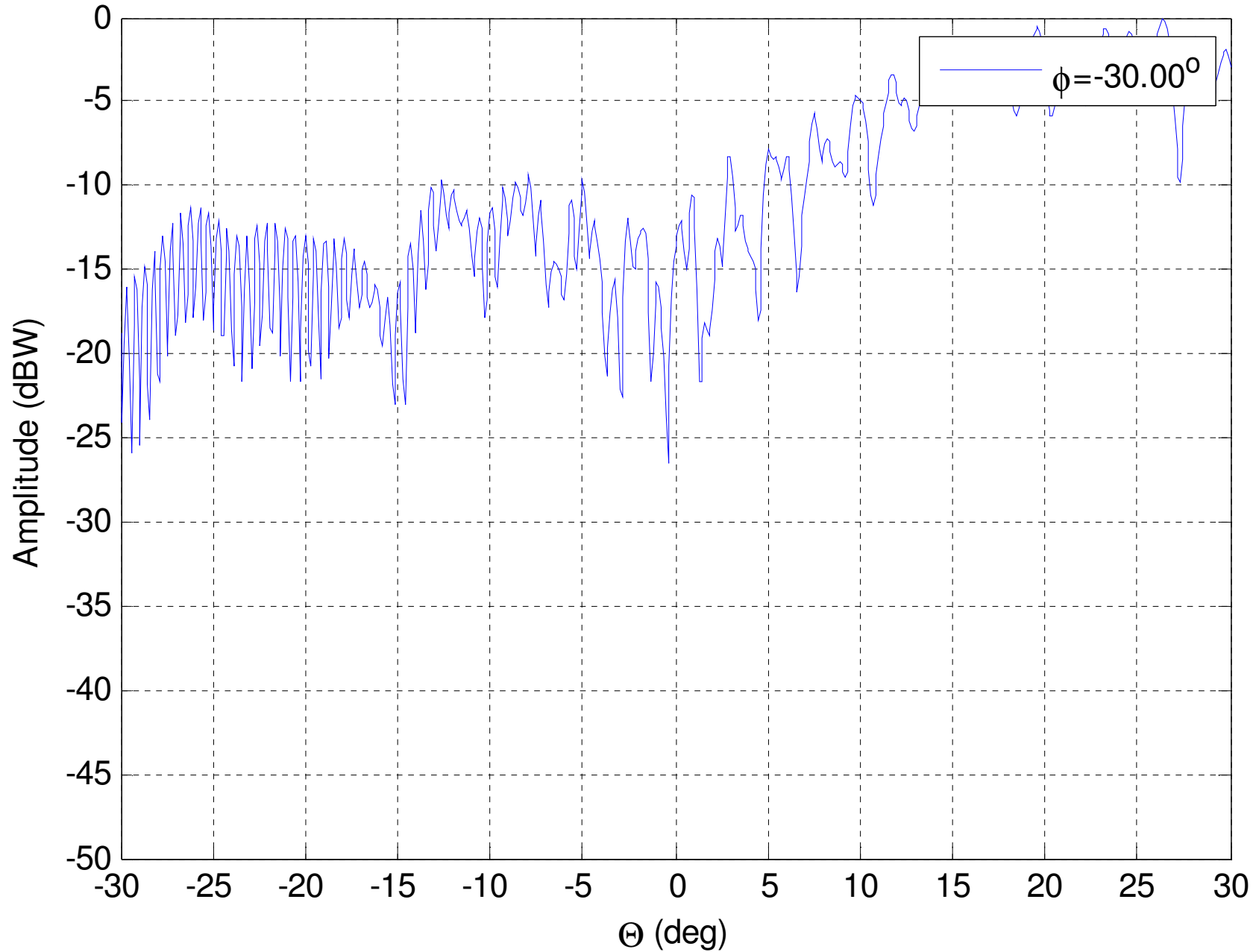
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -8.18 dBW, Date: 14-Dec-2011



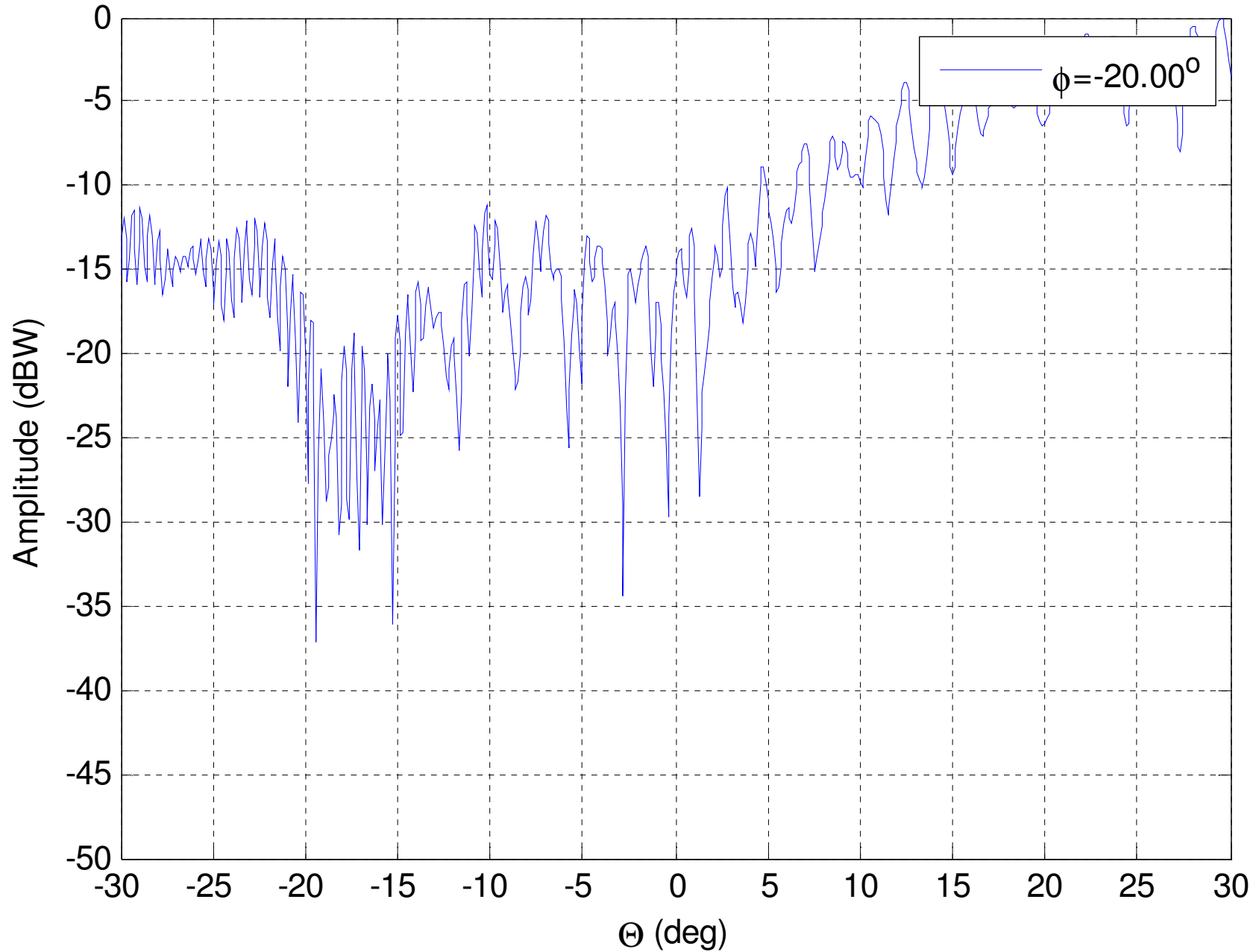
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -6.25 dBW, Date: 14-Dec-2011



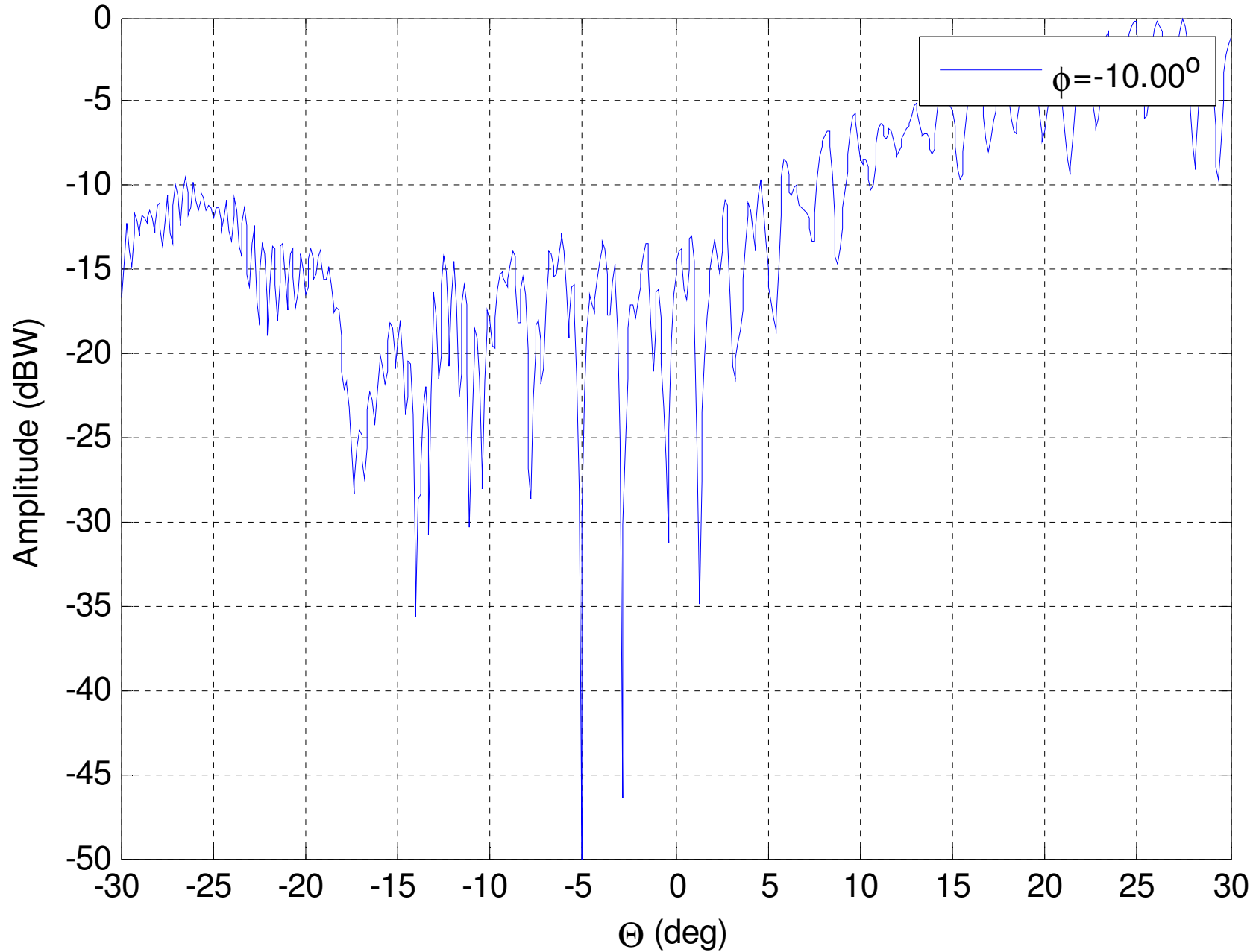
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -4.60 dBW, Date: 14-Dec-2011



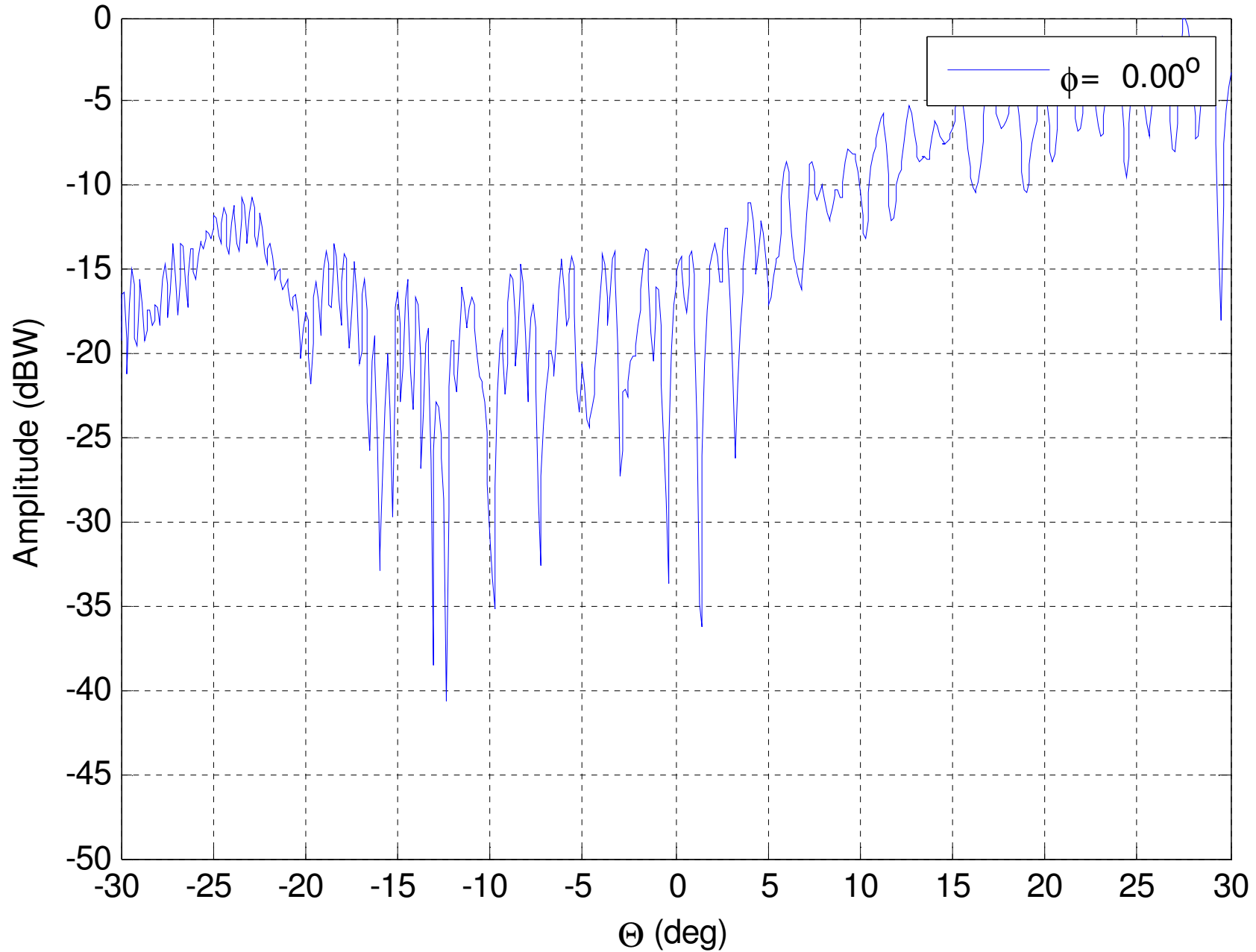
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -4.56 dBW, Date: 14-Dec-2011



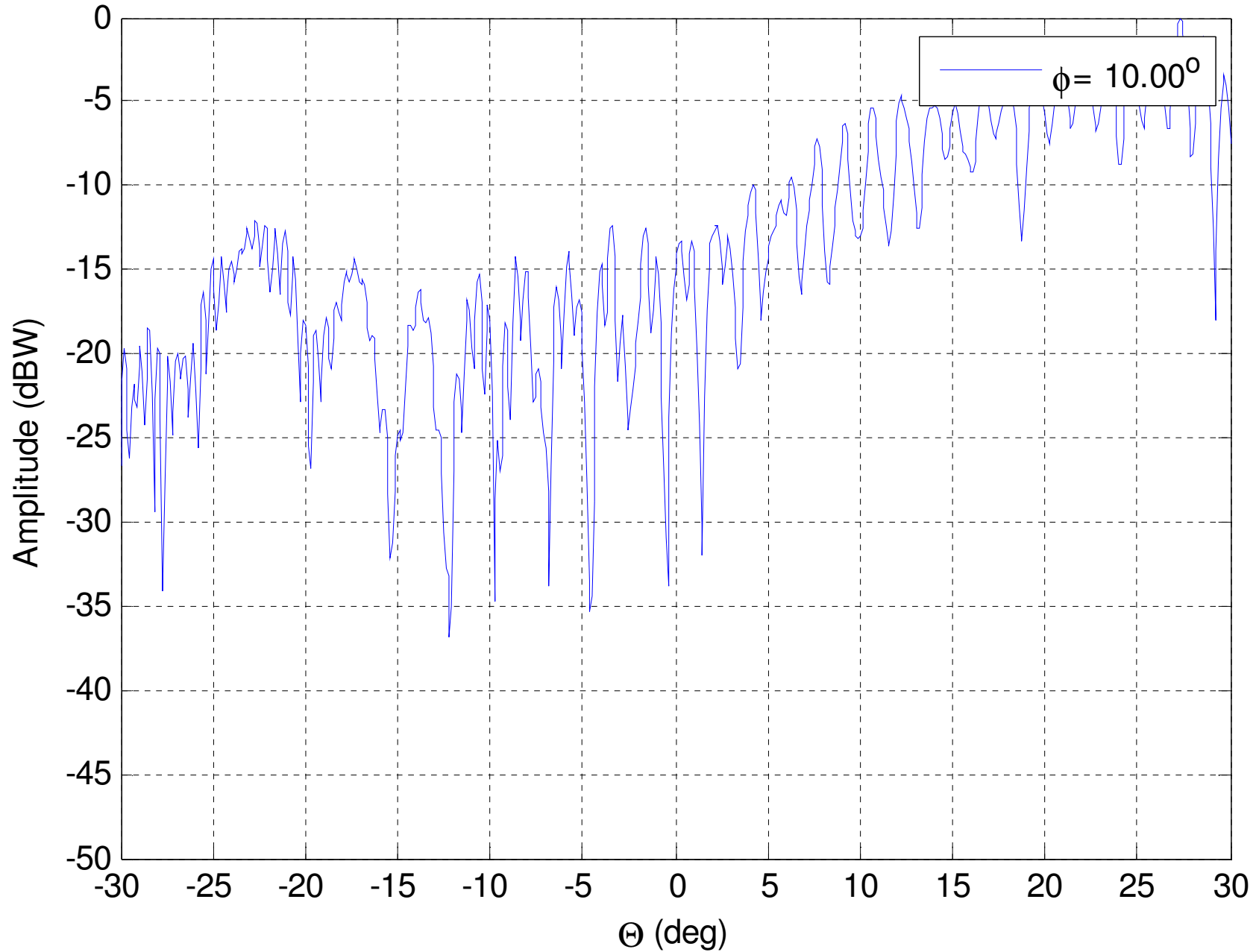
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -4.02 dBW, Date: 14-Dec-2011



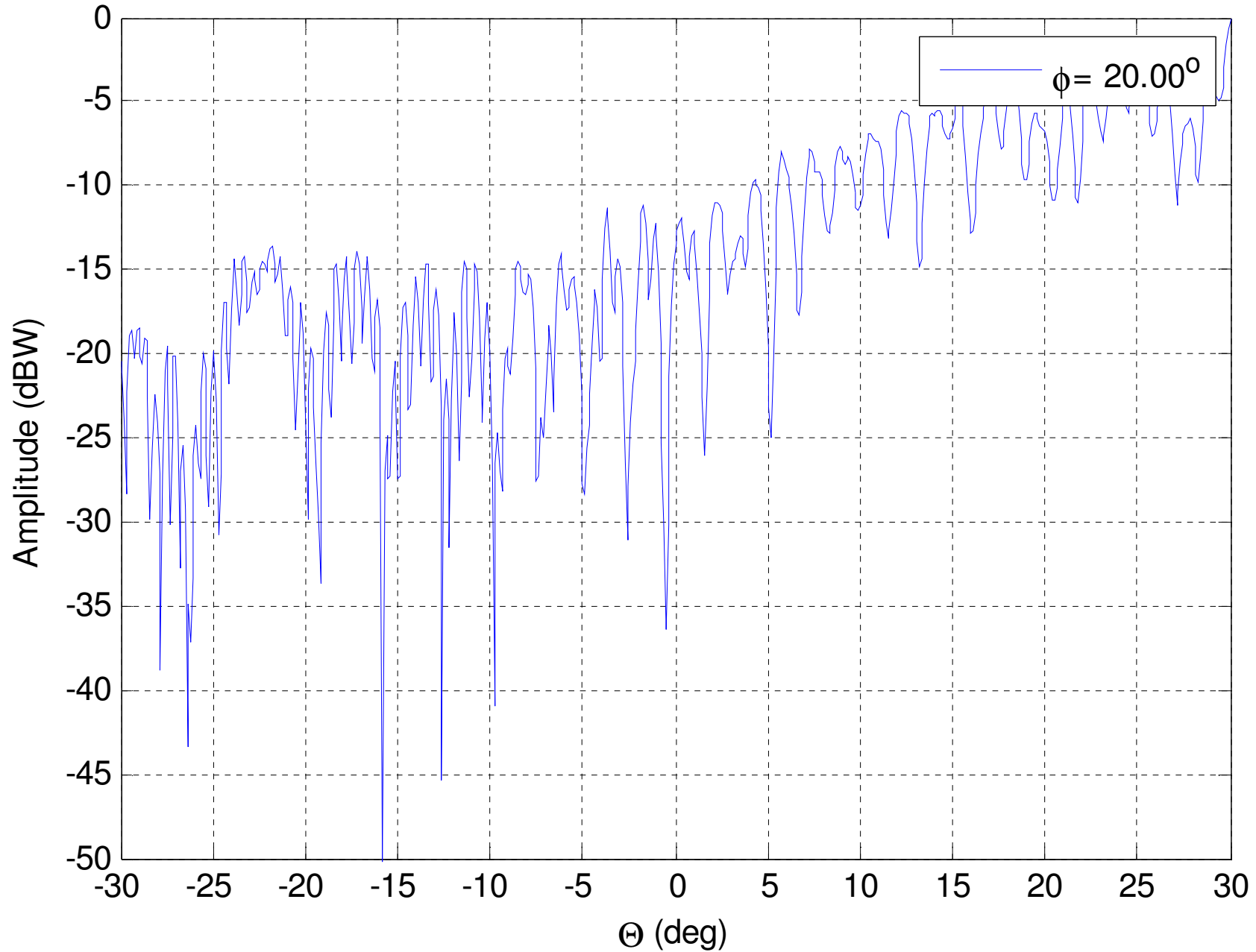
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



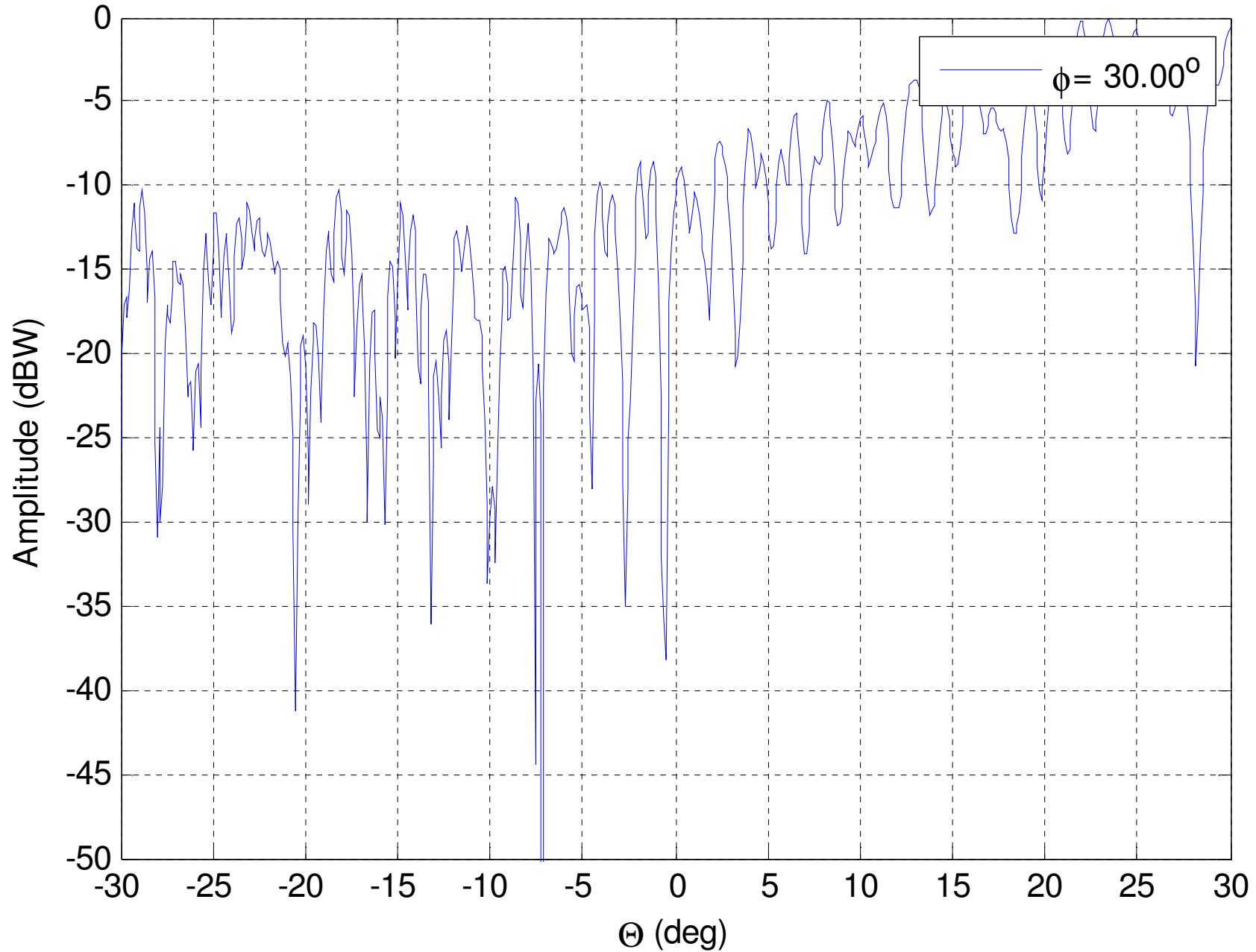
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -6.35 dBW, Date: 14-Dec-2011



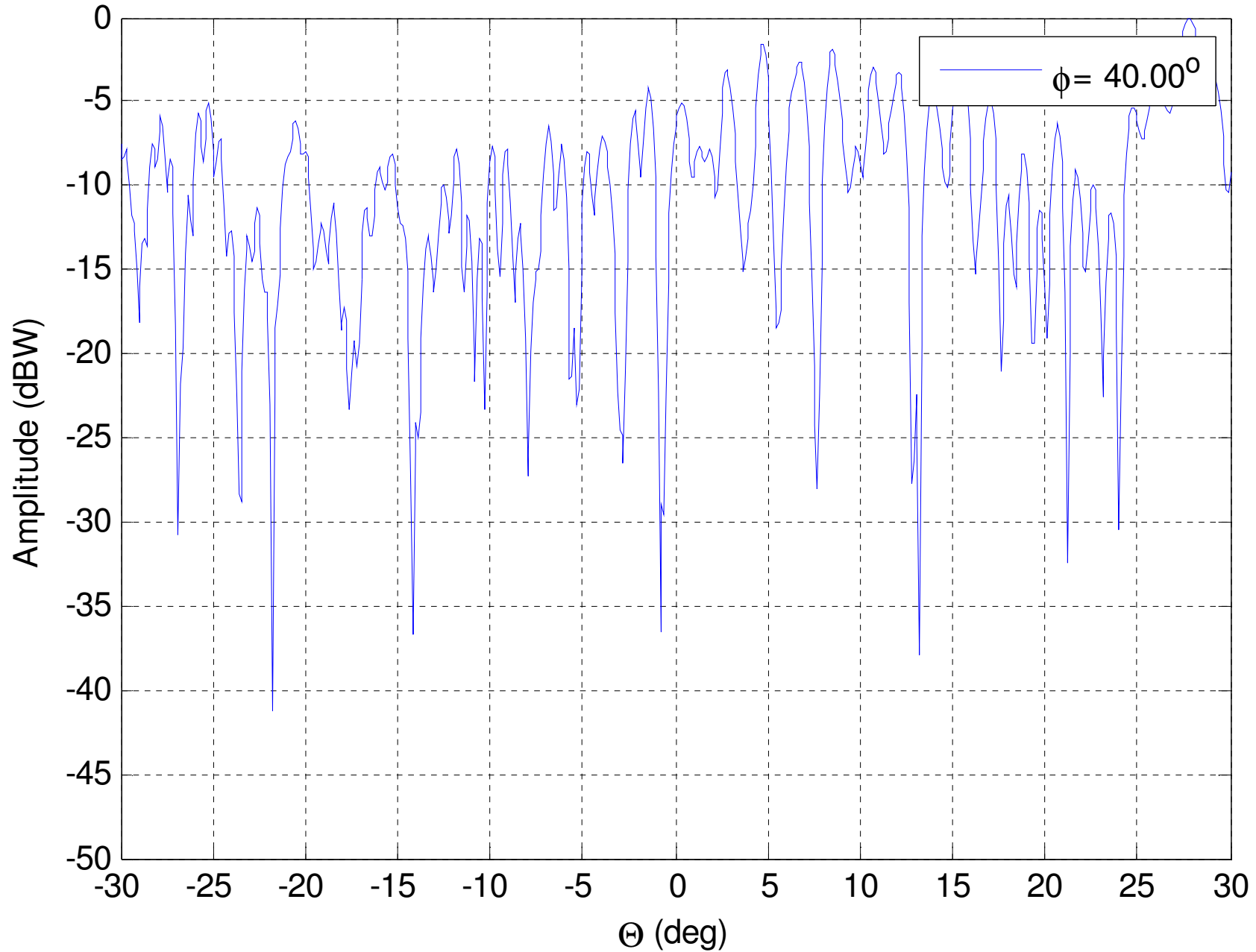
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.39 dBW, Date: 14-Dec-2011



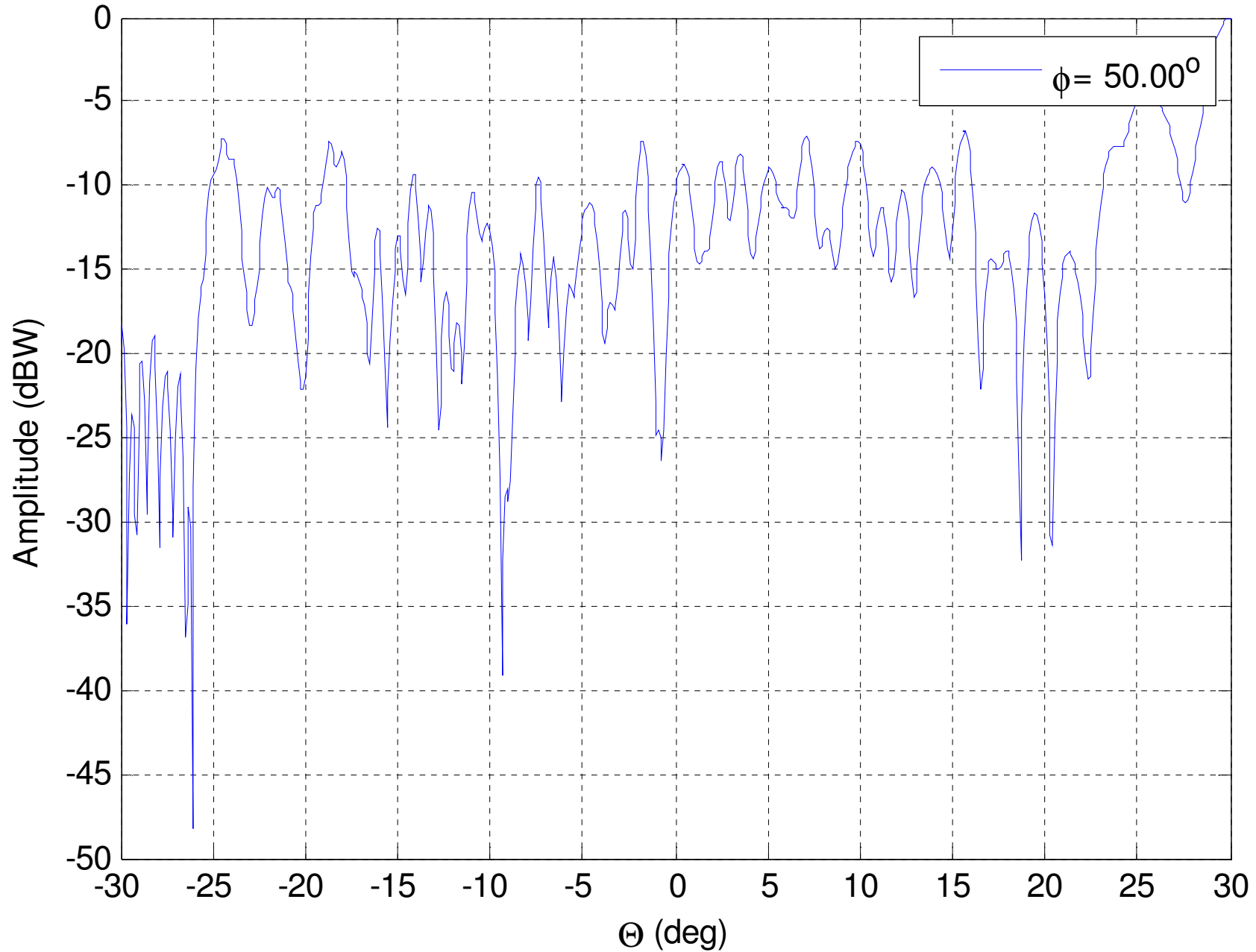
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -13.32 dBW, Date: 14-Dec-2011



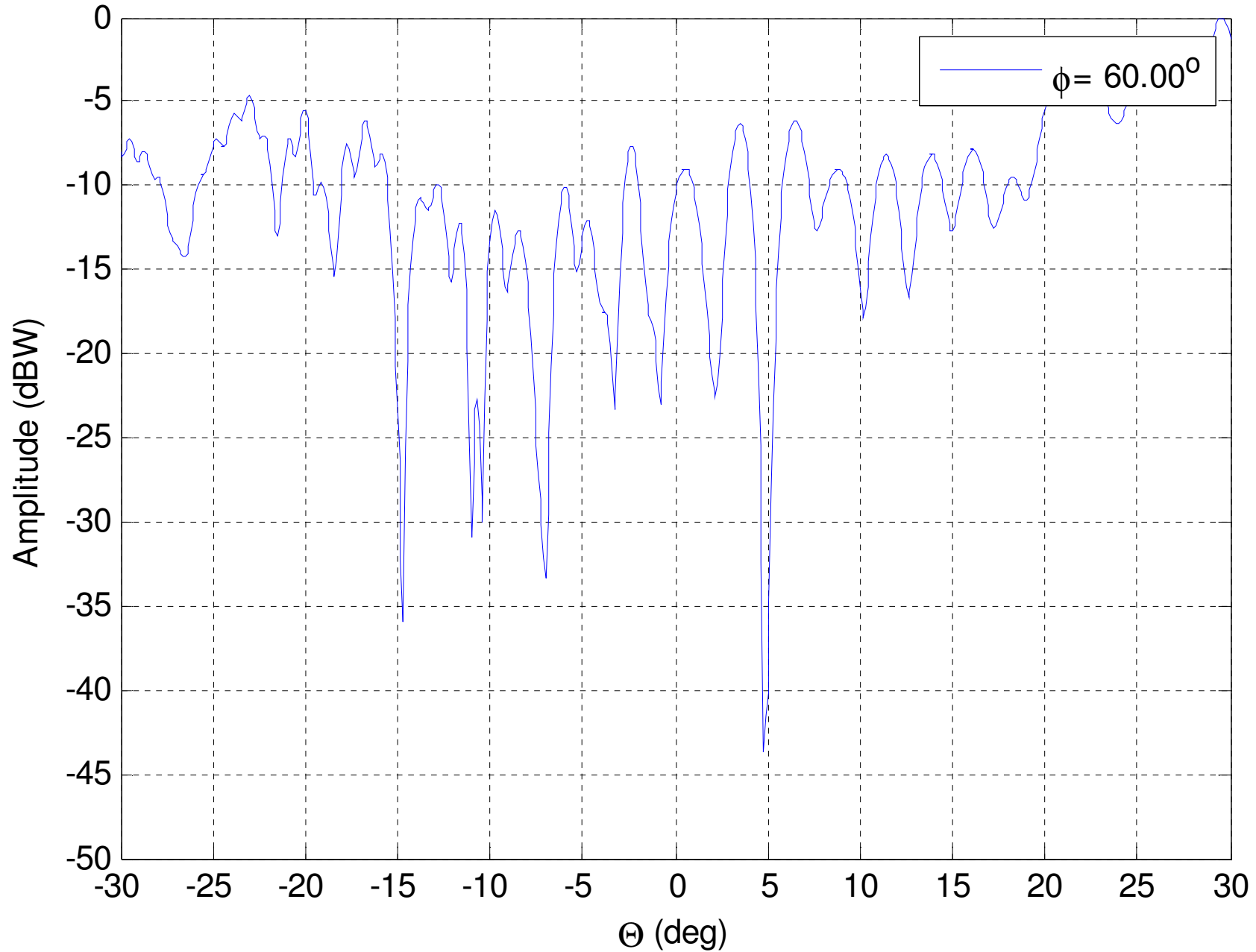
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -9.64 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -9.43 dBW, Date: 14-Dec-2011



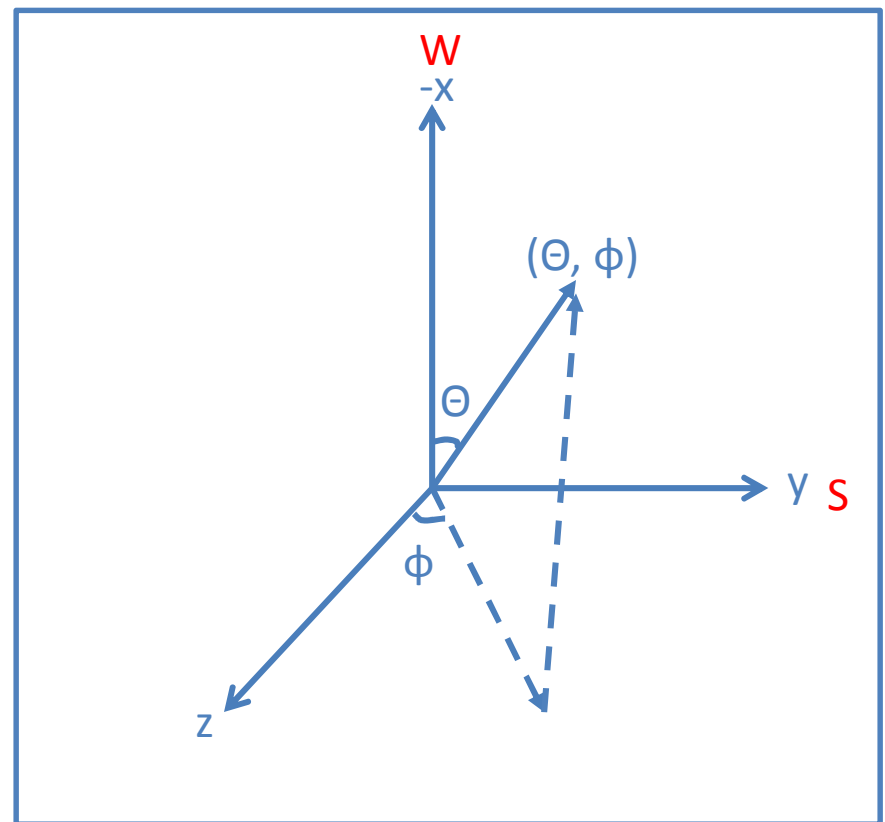
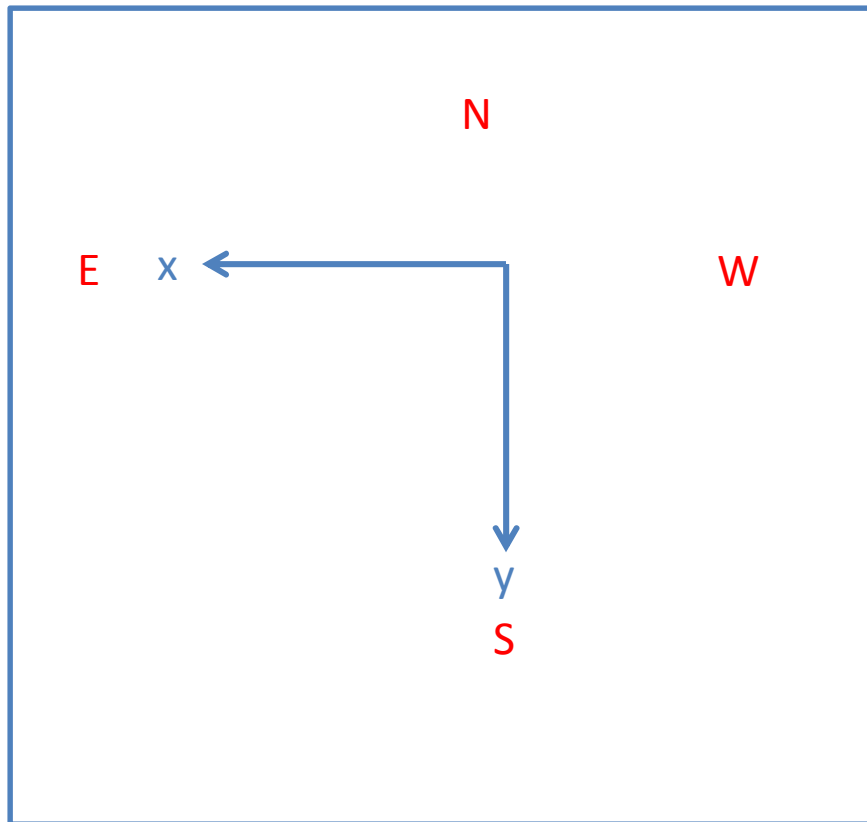
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 13

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



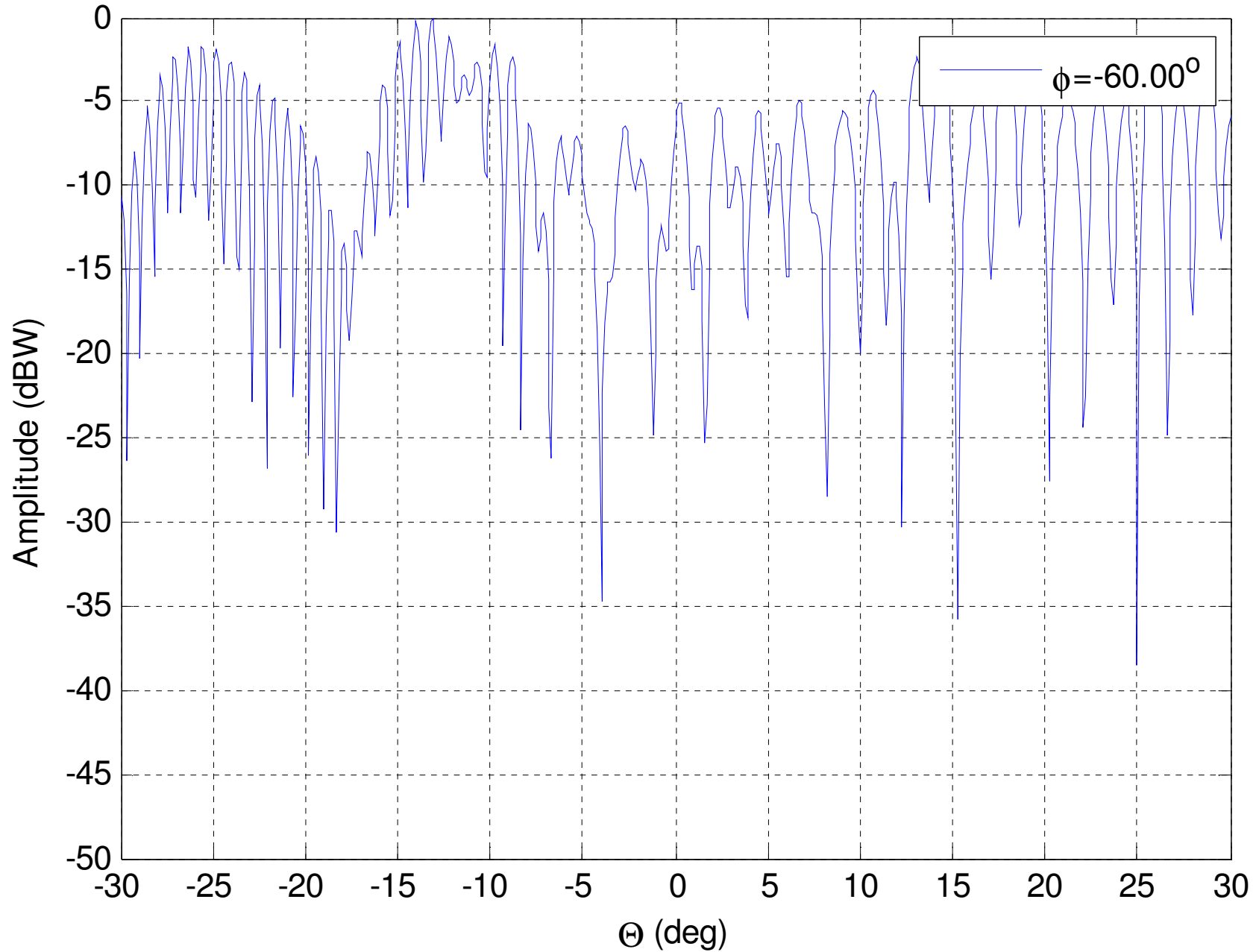
Spot Beam13, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

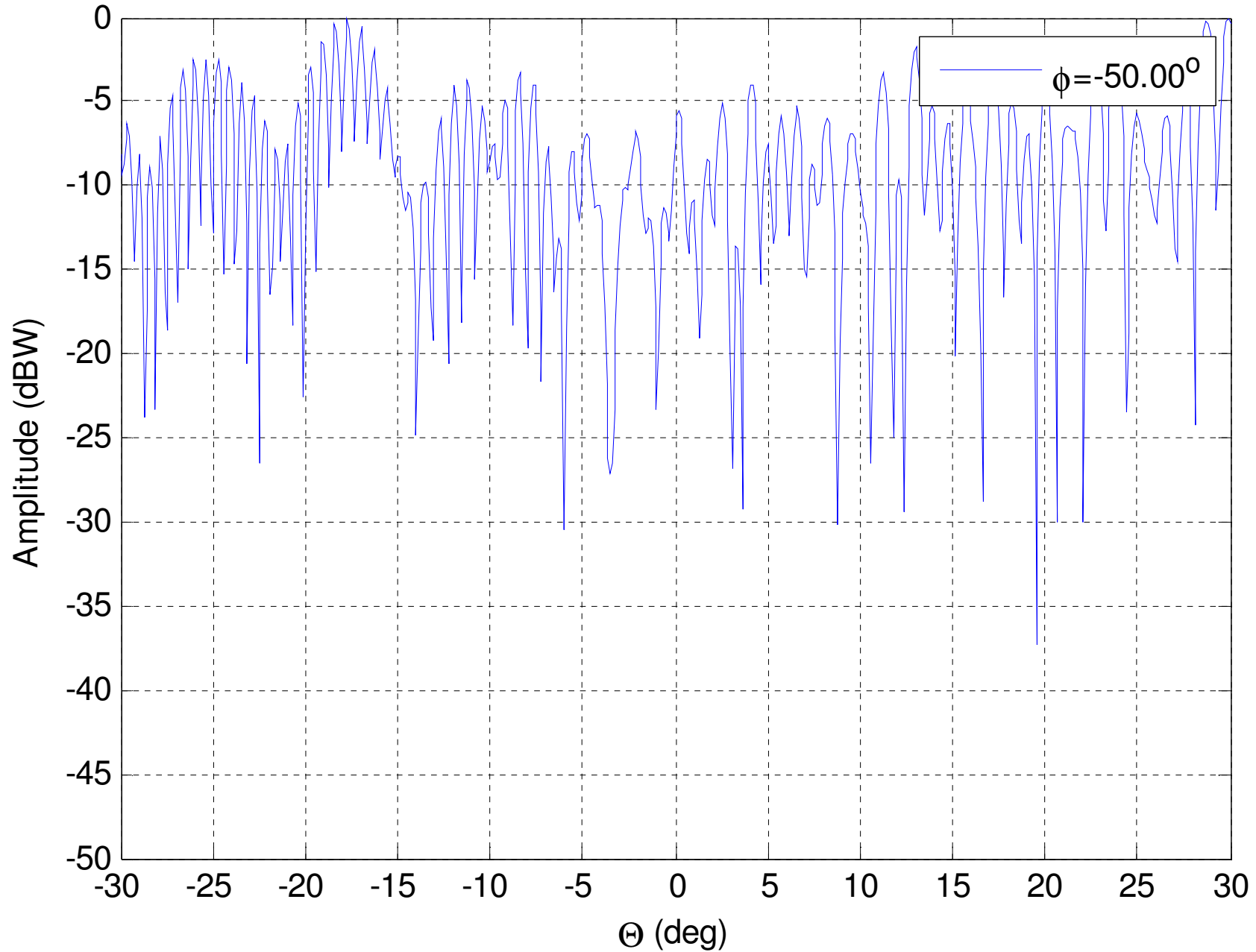
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -7.46 dBW, Date: 14-Dec-2011



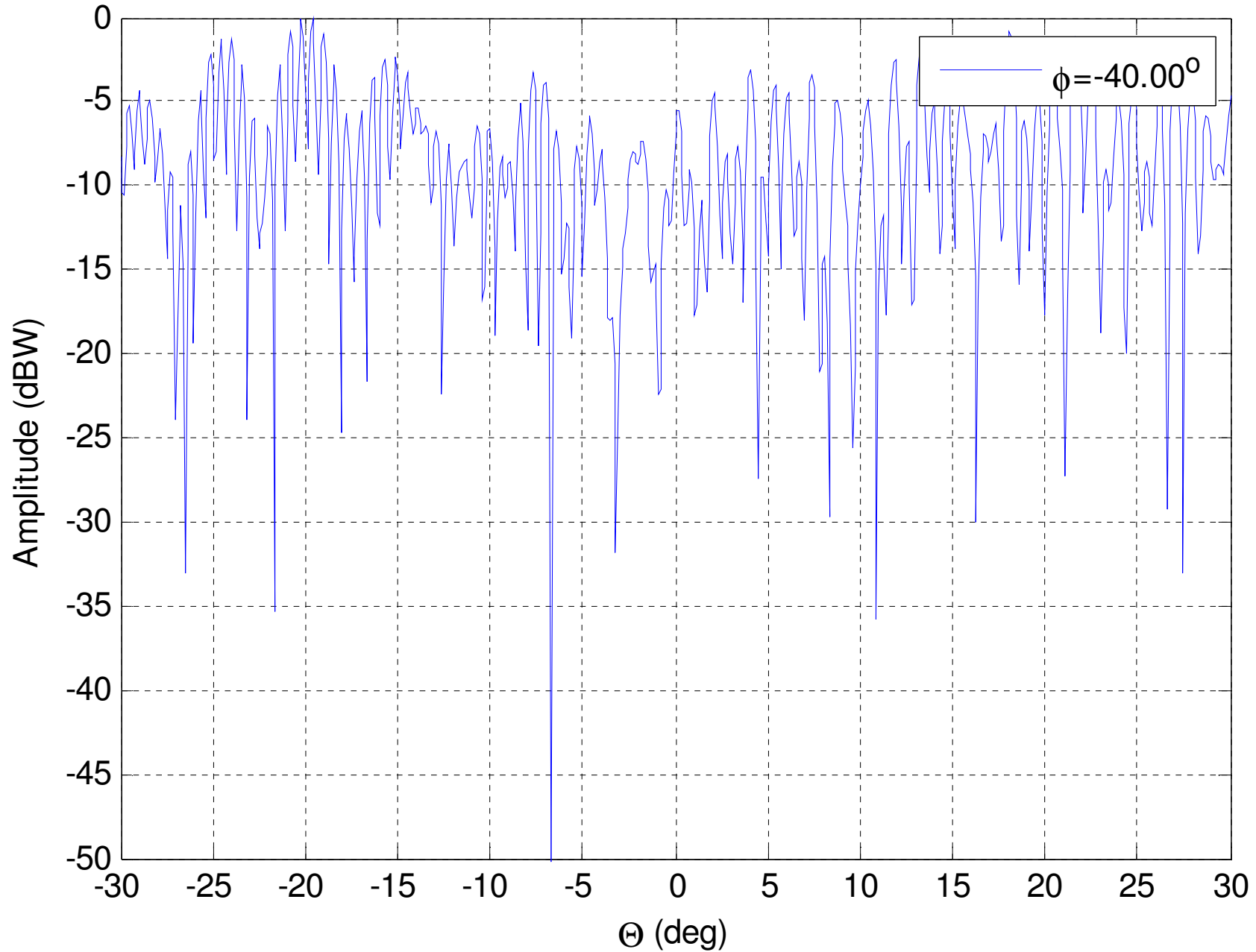
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.99 dBW, Date: 14-Dec-2011



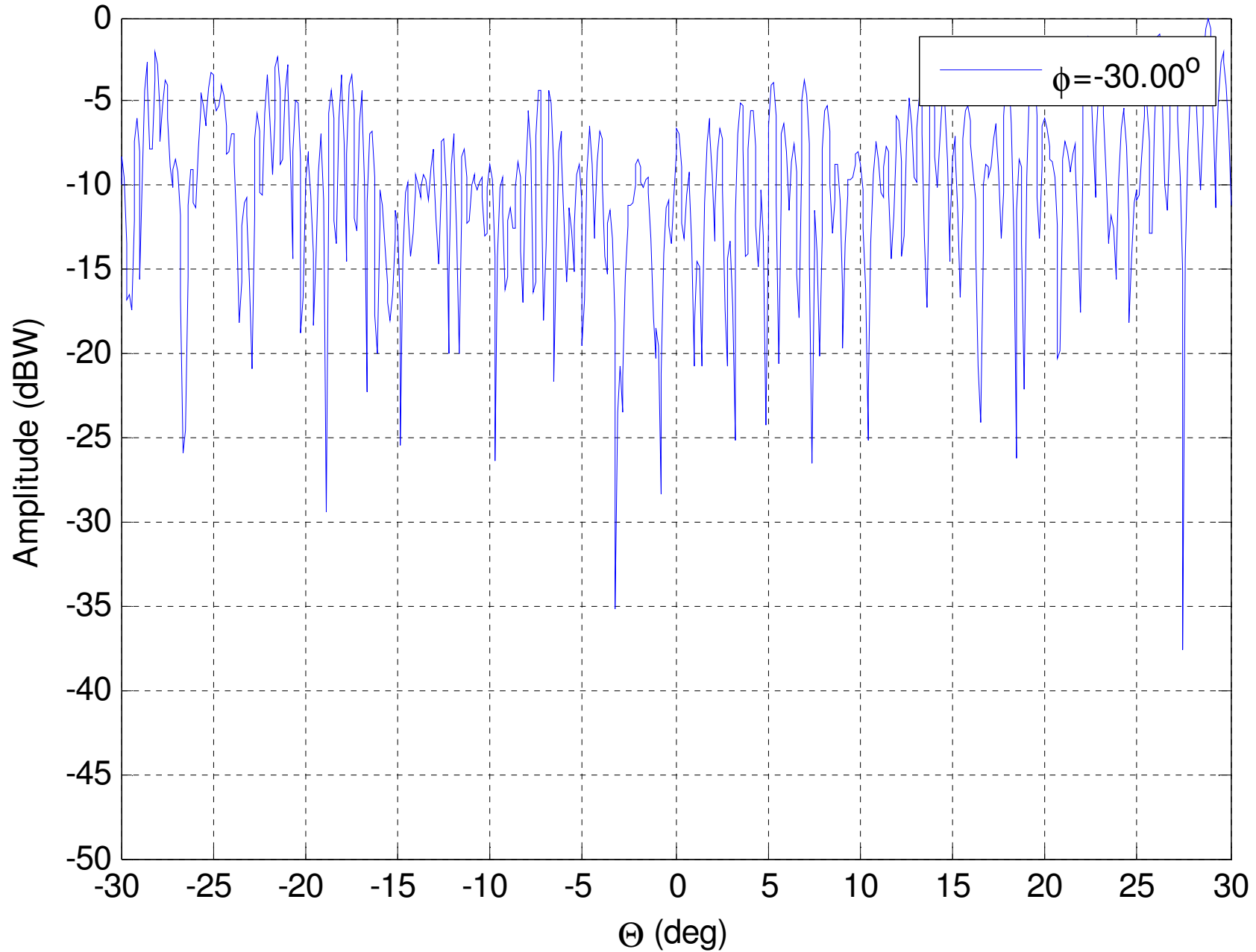
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -7.14 dBW, Date: 14-Dec-2011



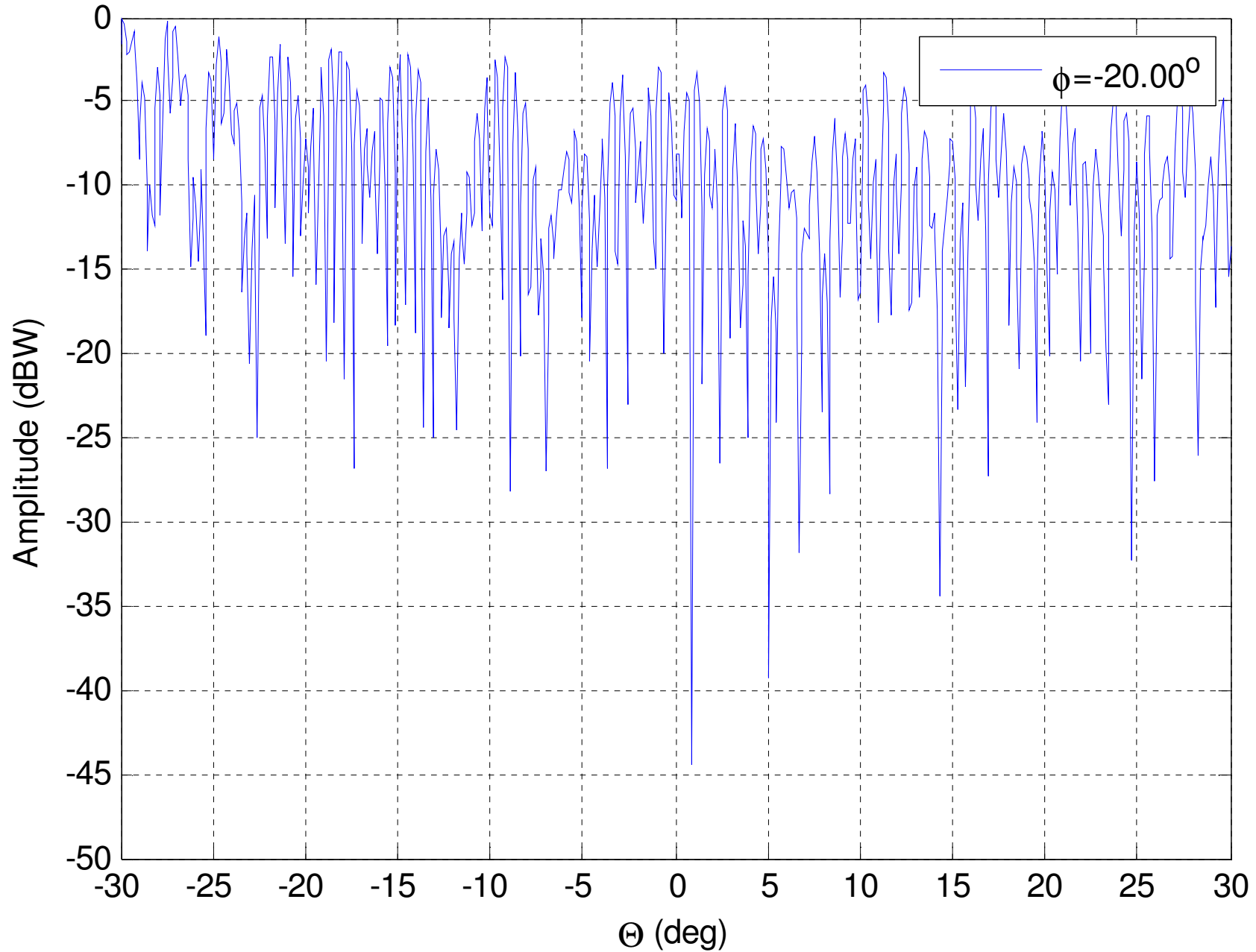
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.03 dBW, Date: 14-Dec-2011



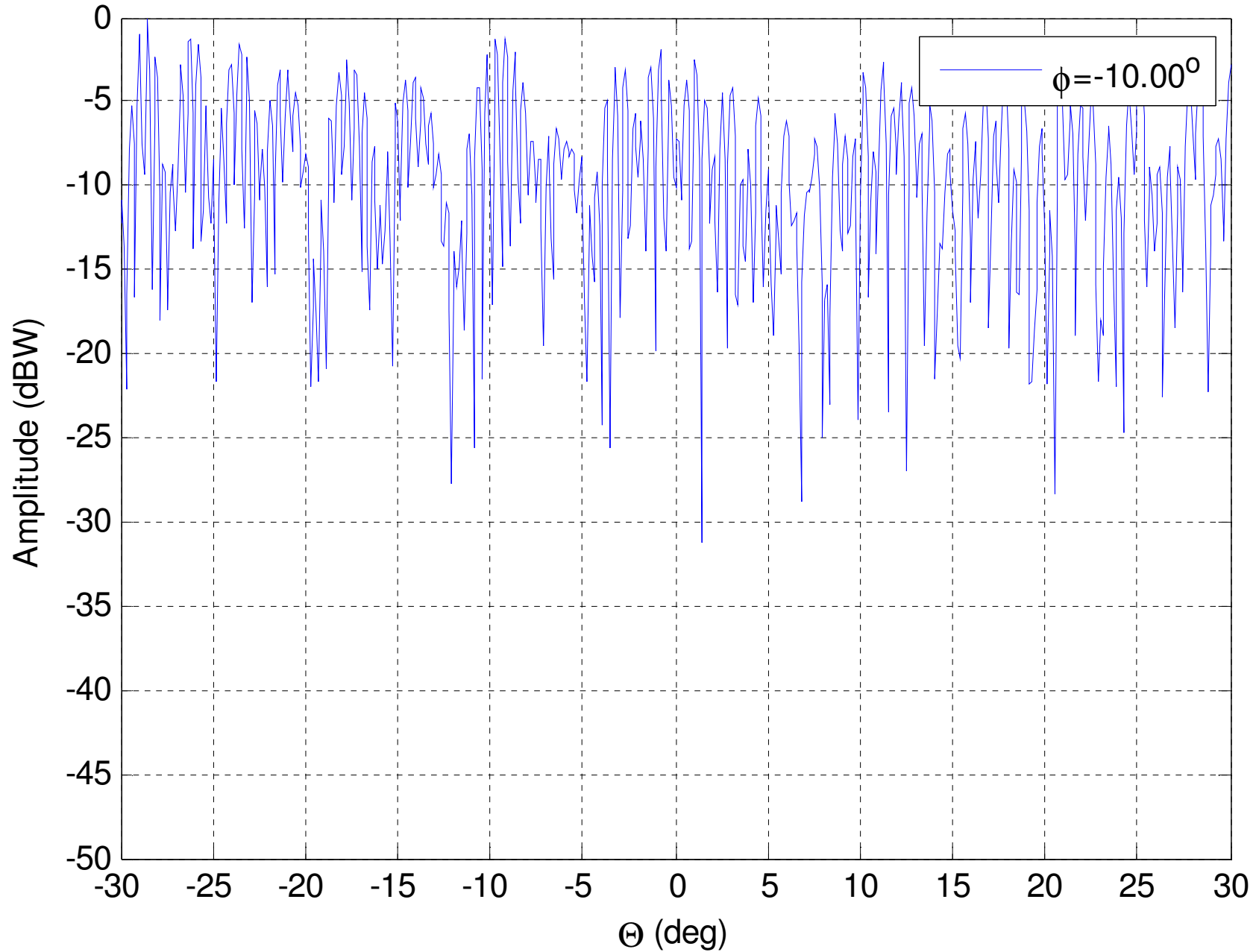
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -7.29 dBW, Date: 14-Dec-2011



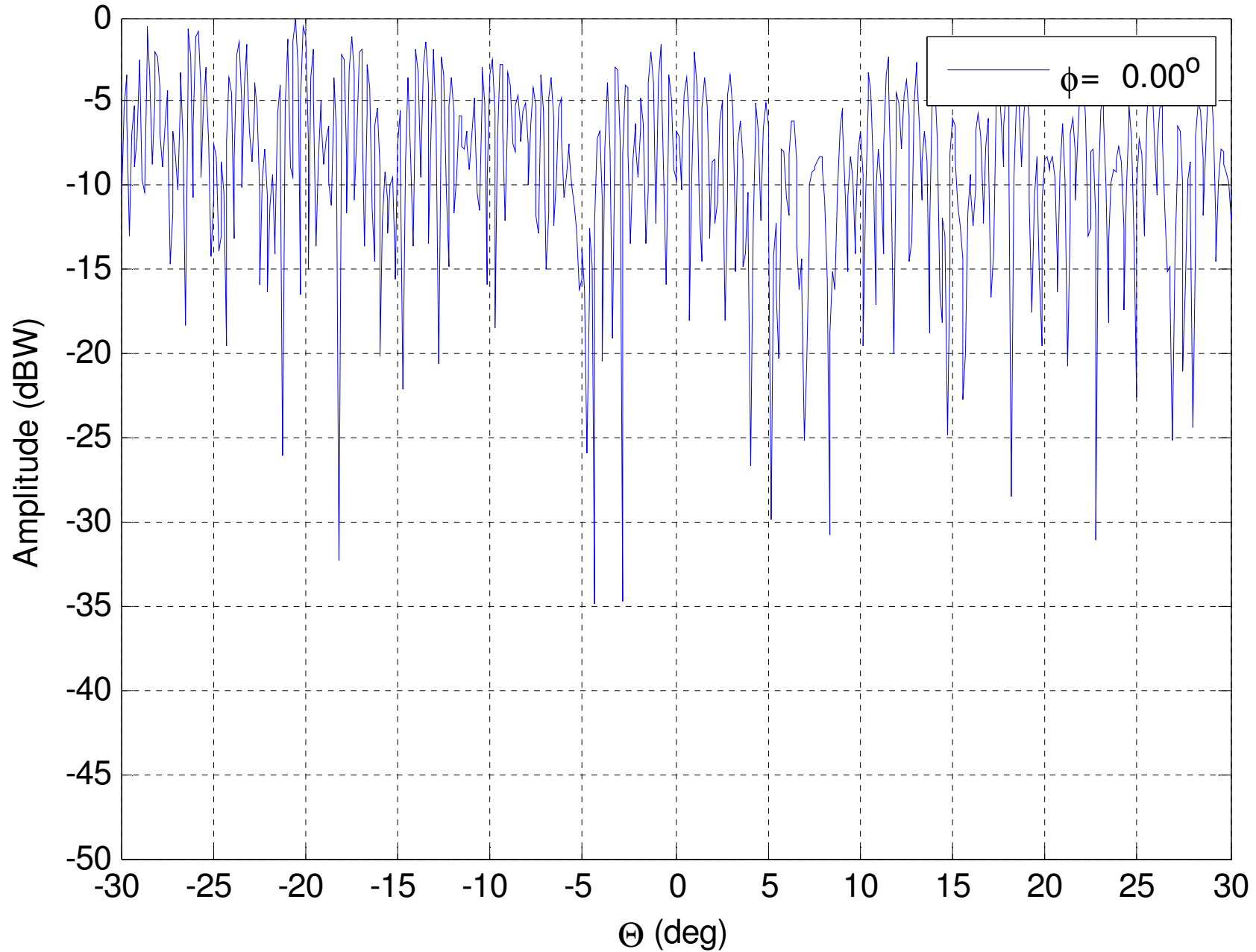
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -8.09 dBW, Date: 14-Dec-2011



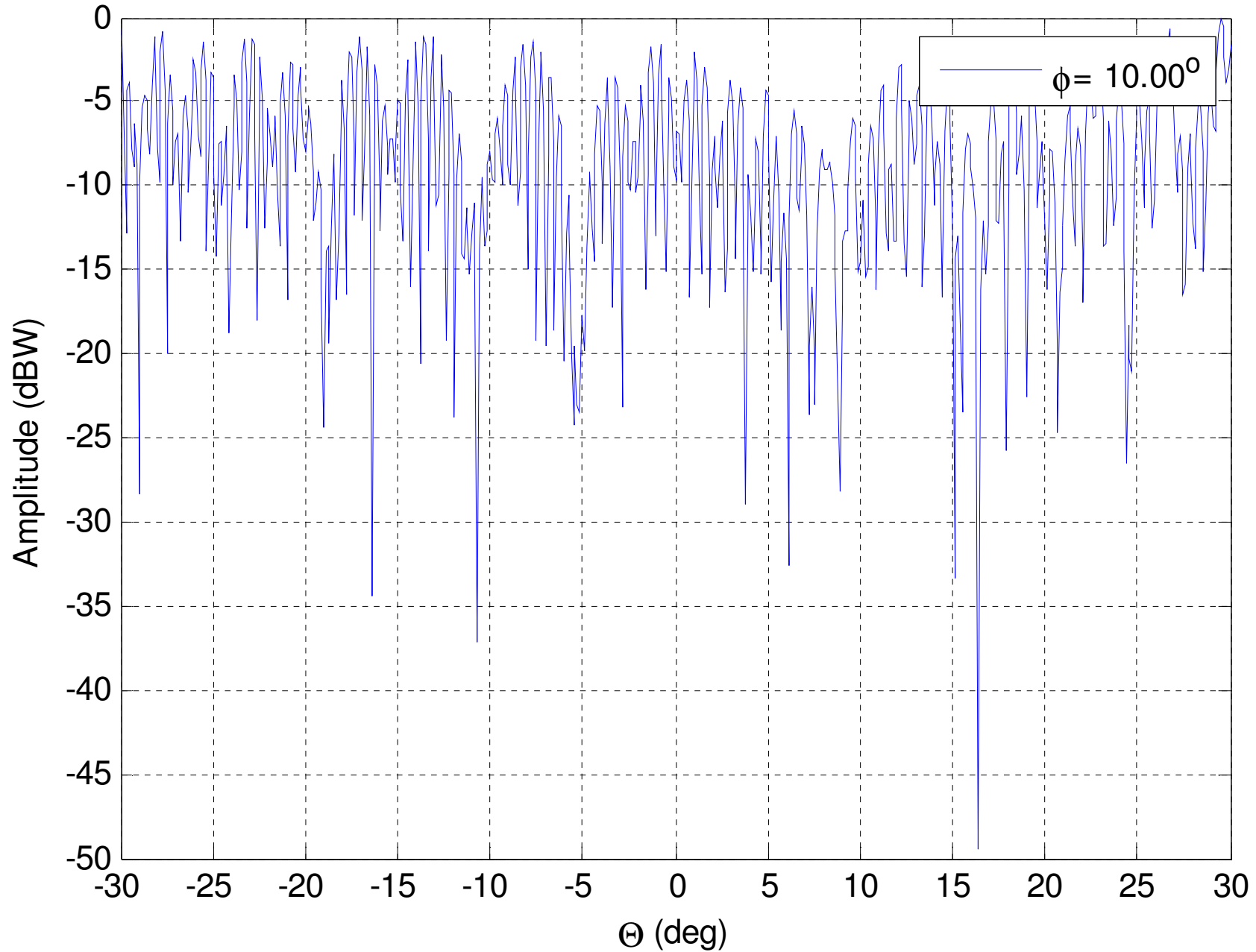
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -8.51 dBW, Date: 14-Dec-2011



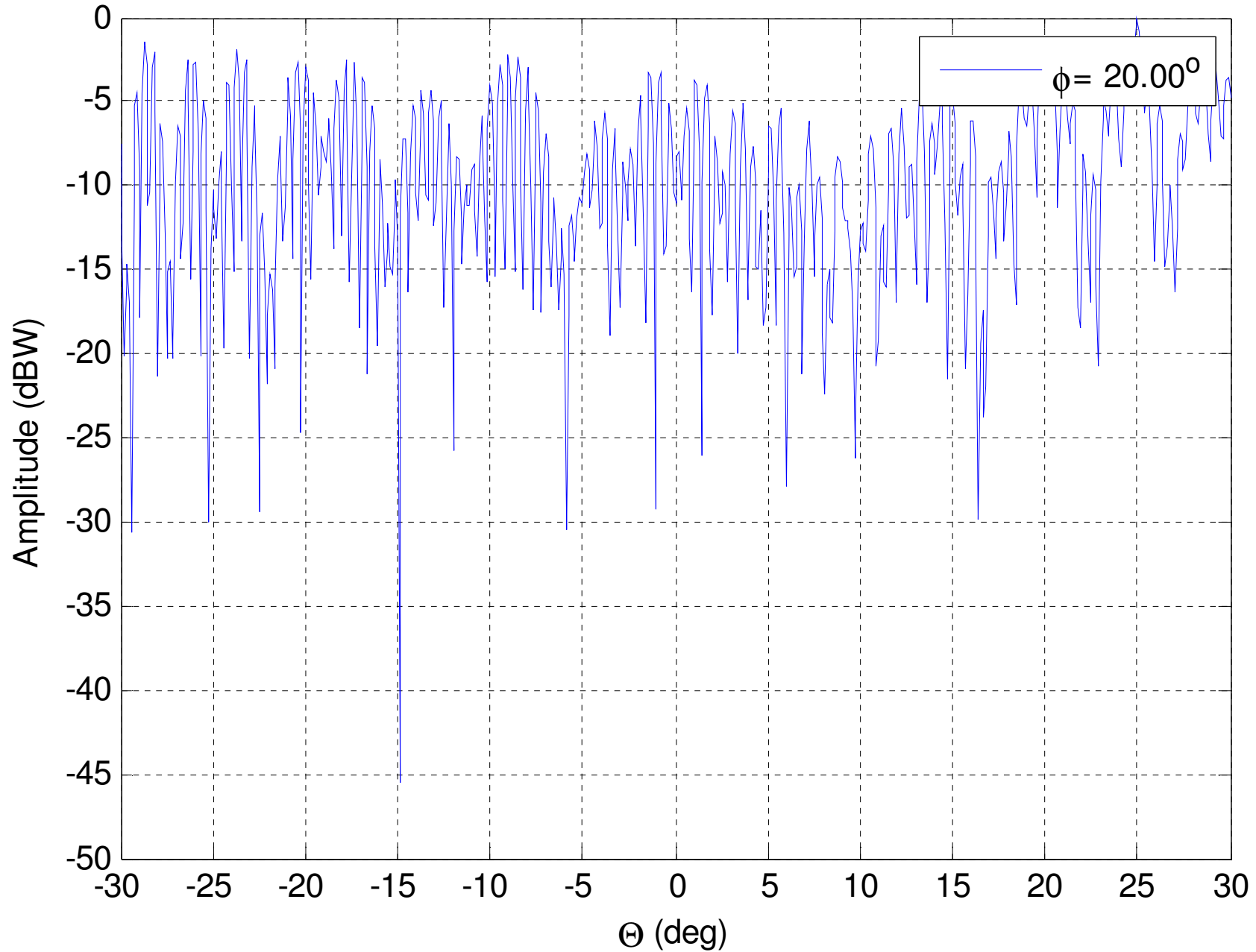
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -8.59 dBW, Date: 14-Dec-2011



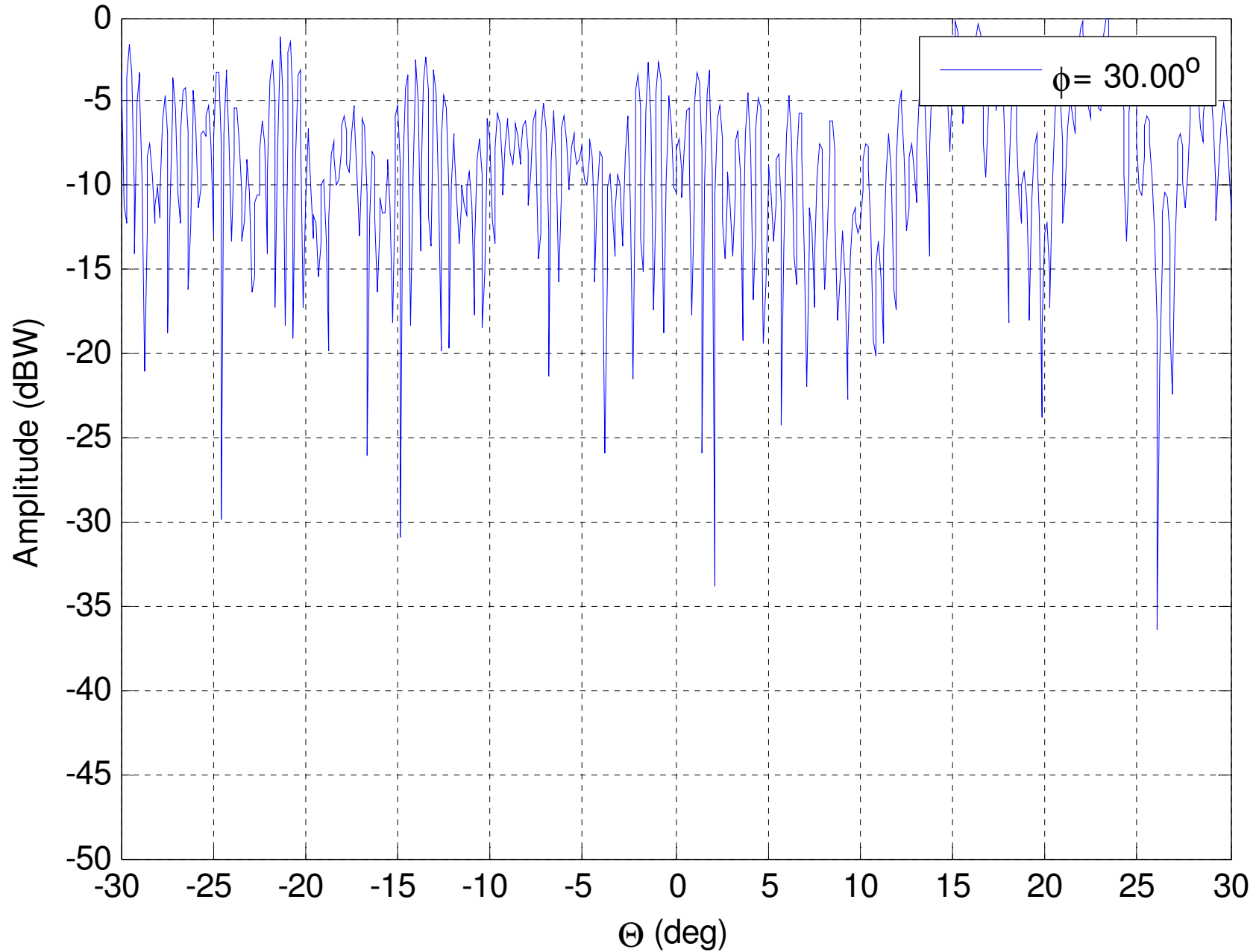
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



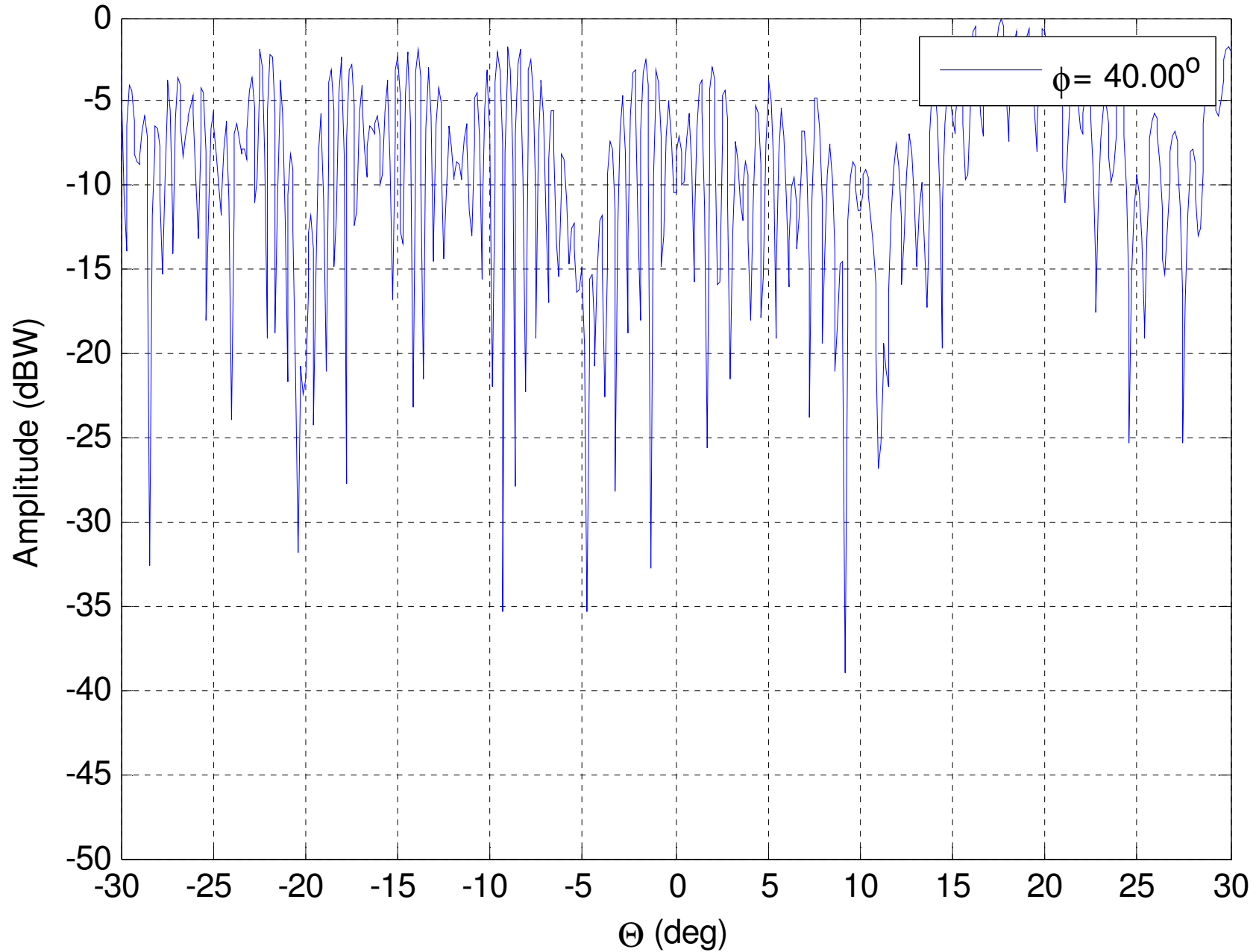
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -7.85 dBW, Date: 14-Dec-2011



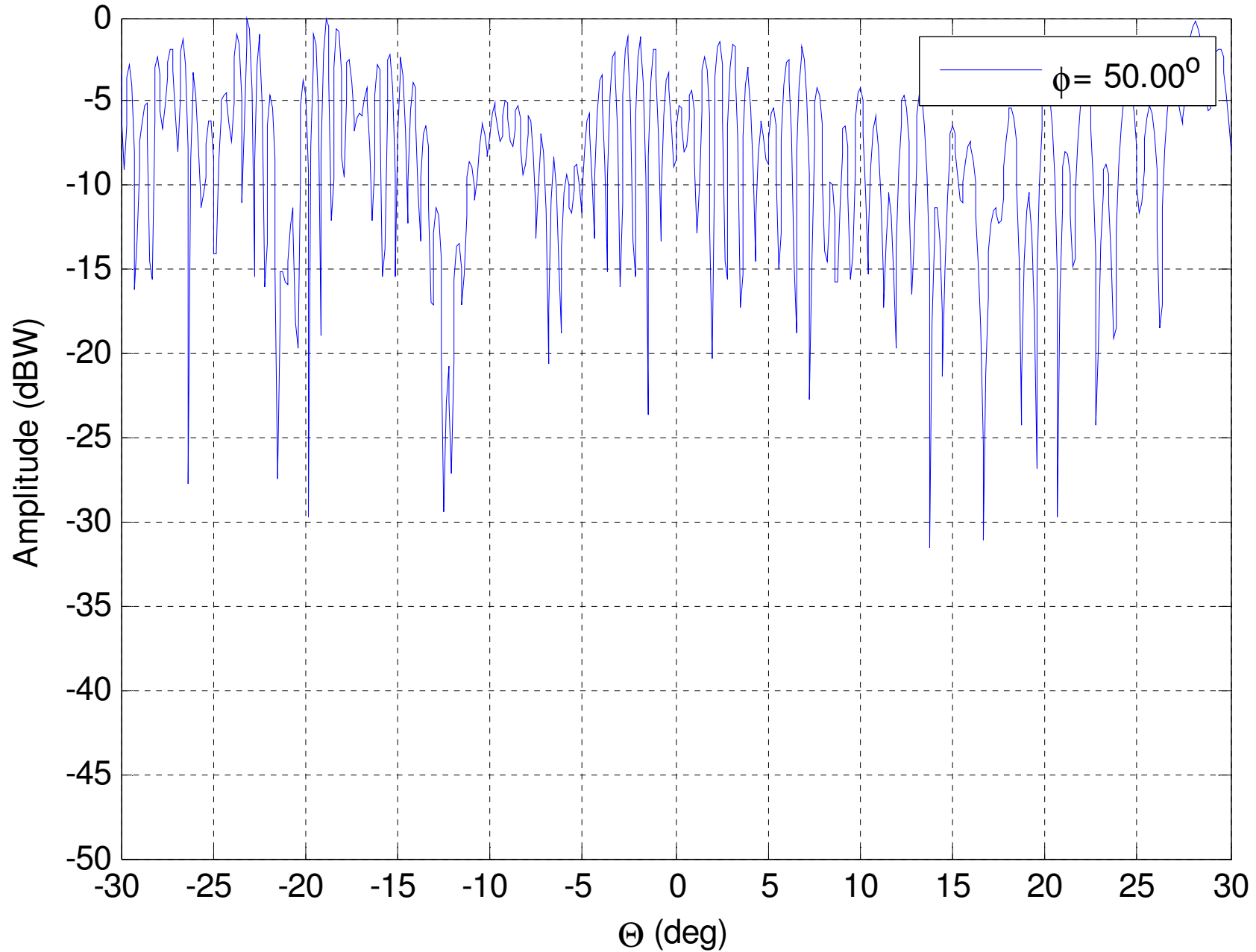
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.82 dBW, Date: 14-Dec-2011



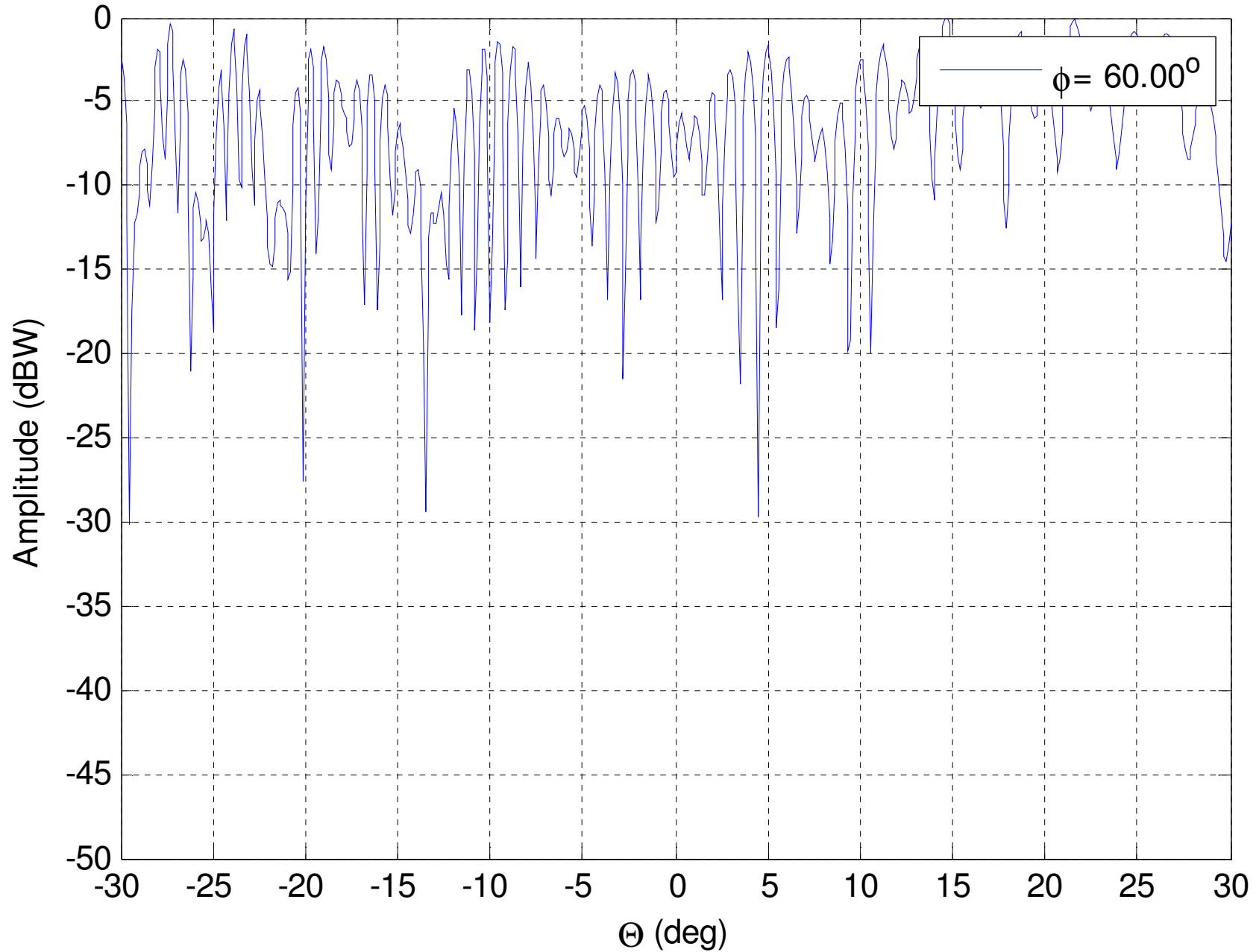
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -9.70 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

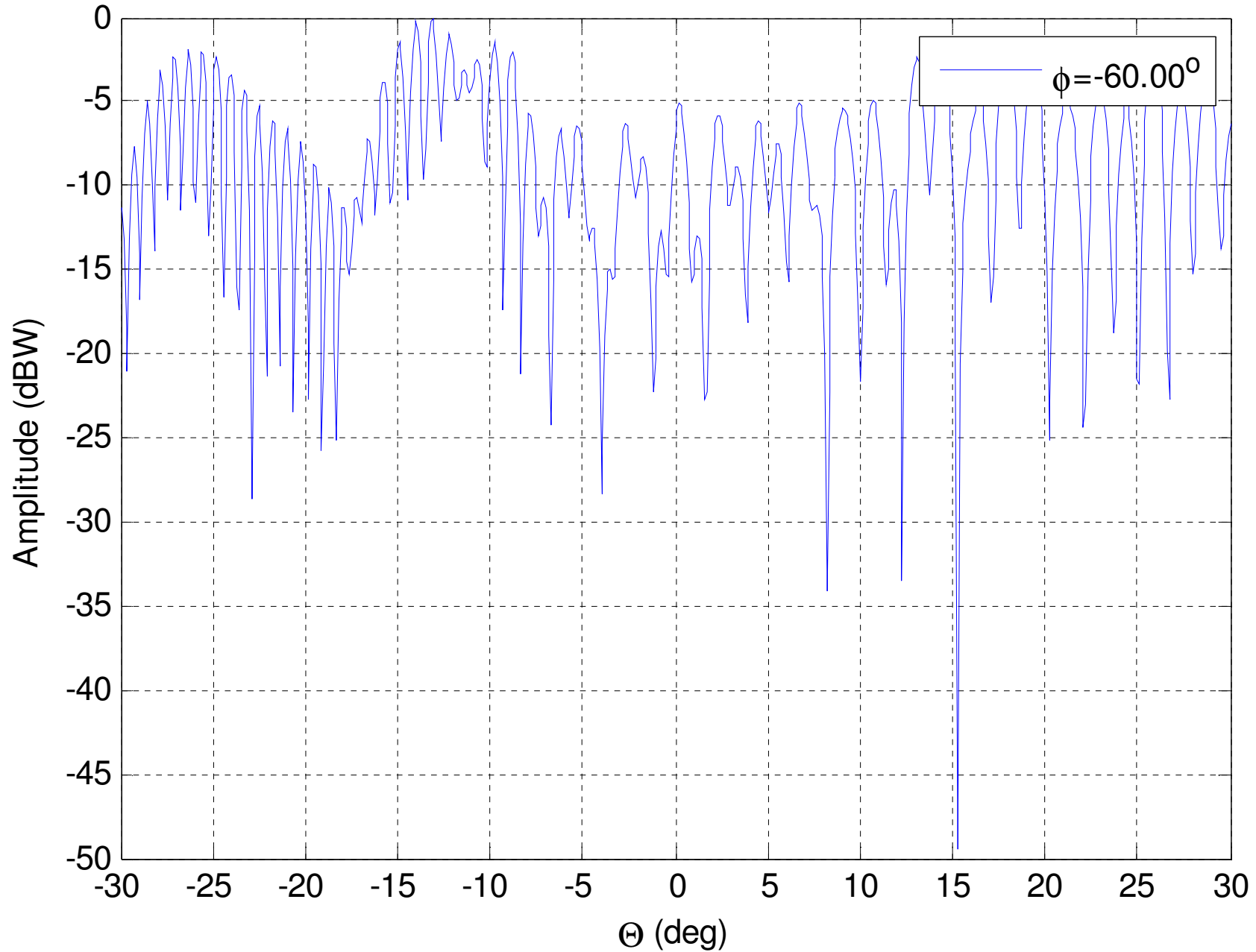
Input file: tx-17.3-rhcp-60.cut, Peak: -9.07 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

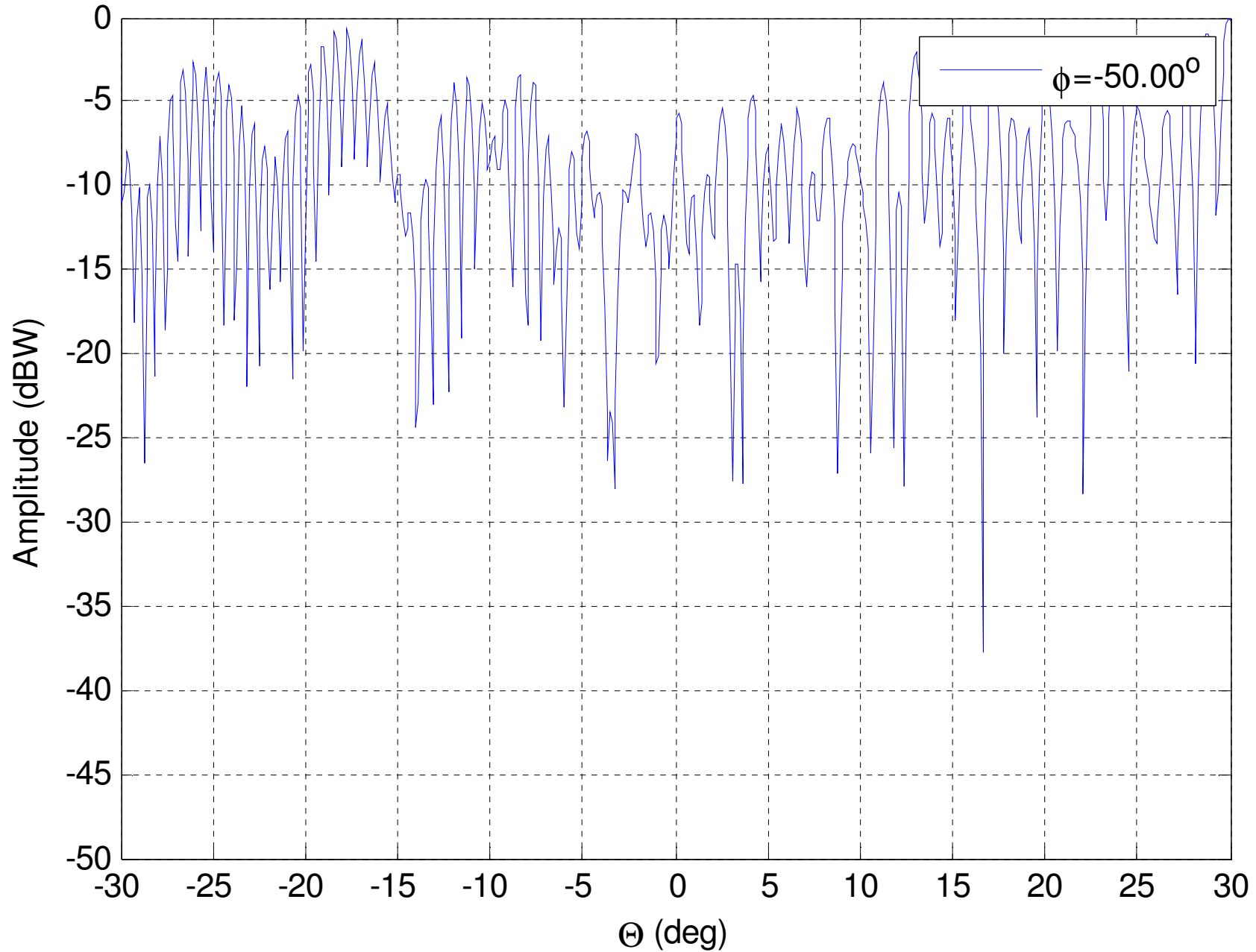
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -7.32 dBW, Date: 14-Dec-2011



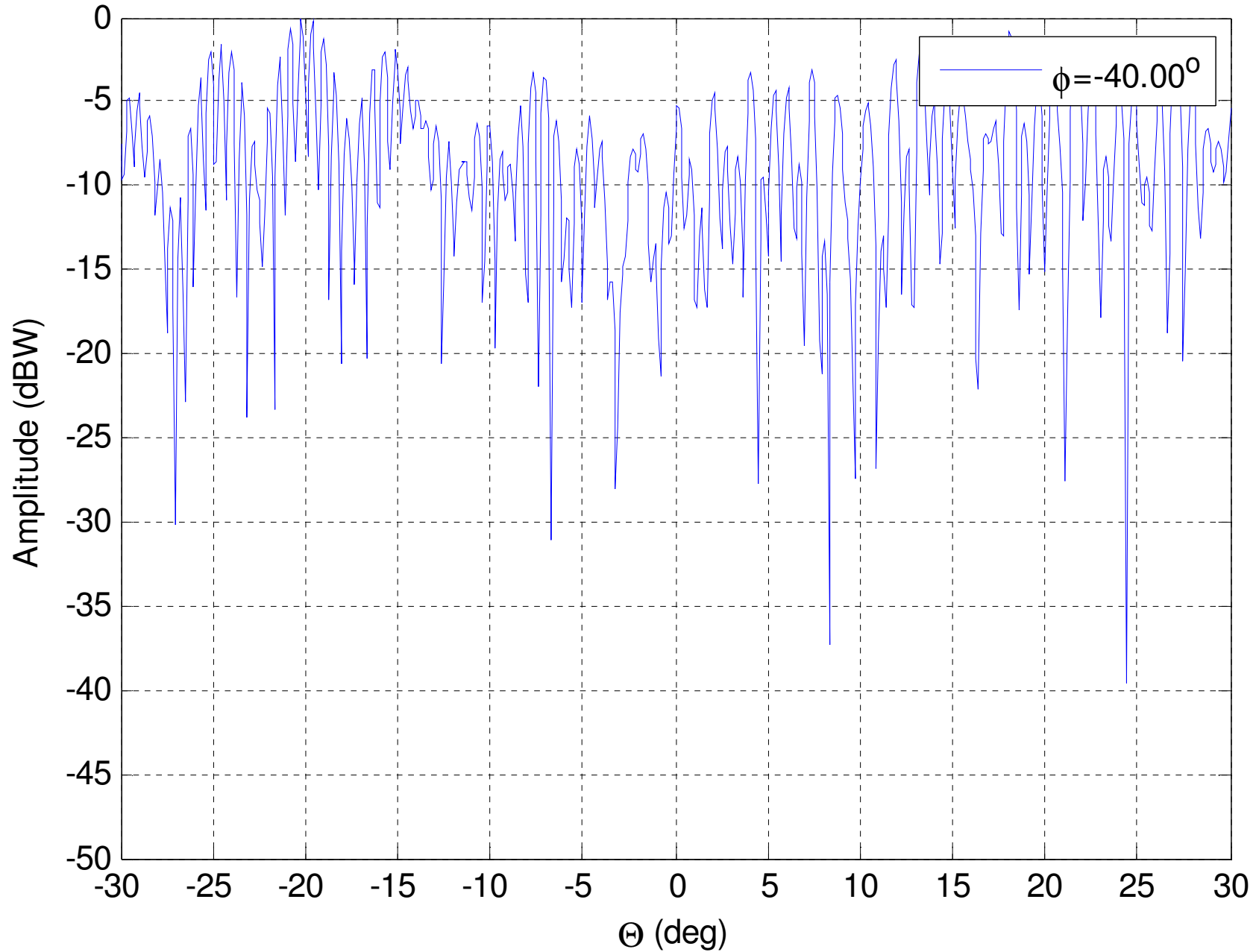
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -6.65 dBW, Date: 14-Dec-2011



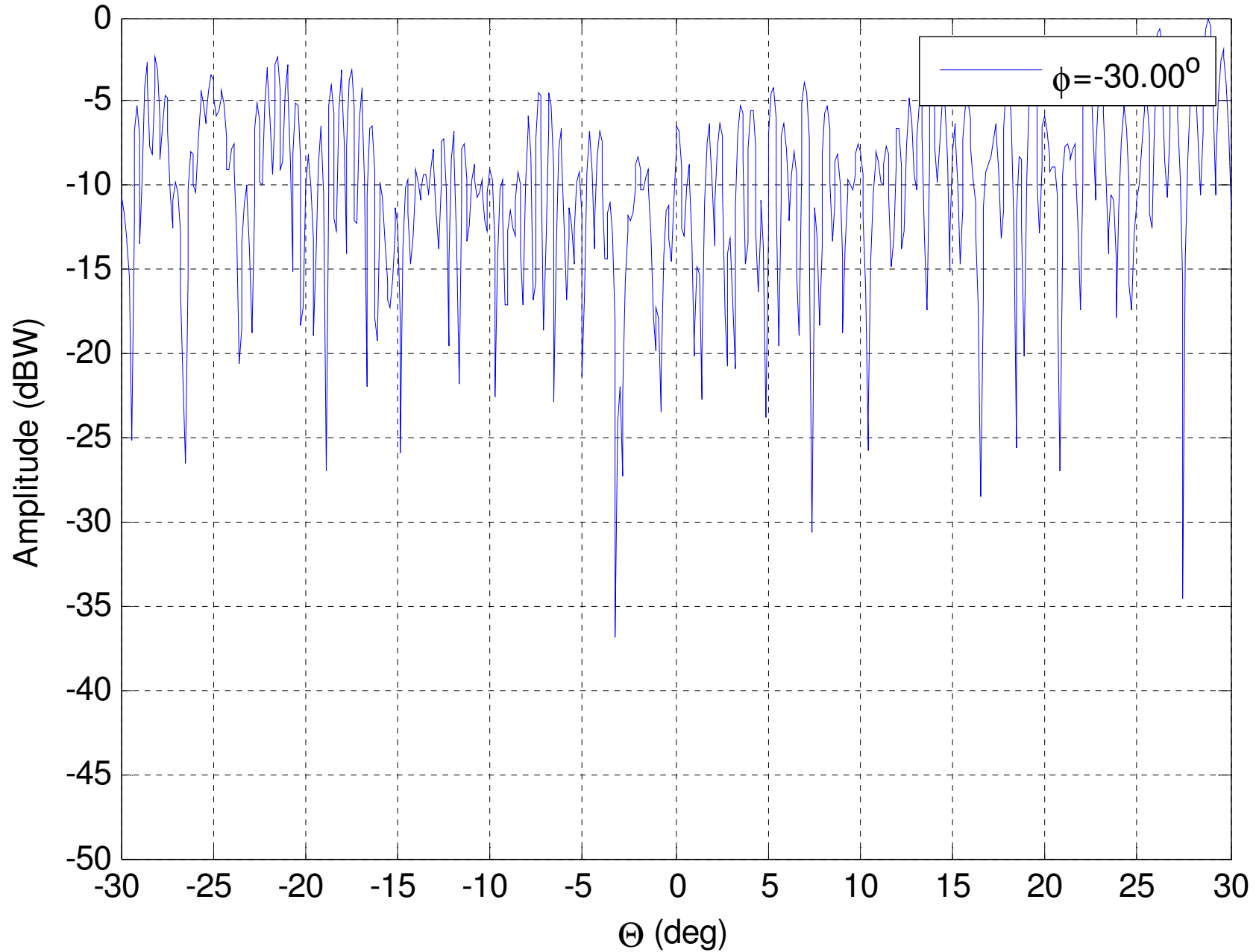
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.24 dBW, Date: 14-Dec-2011



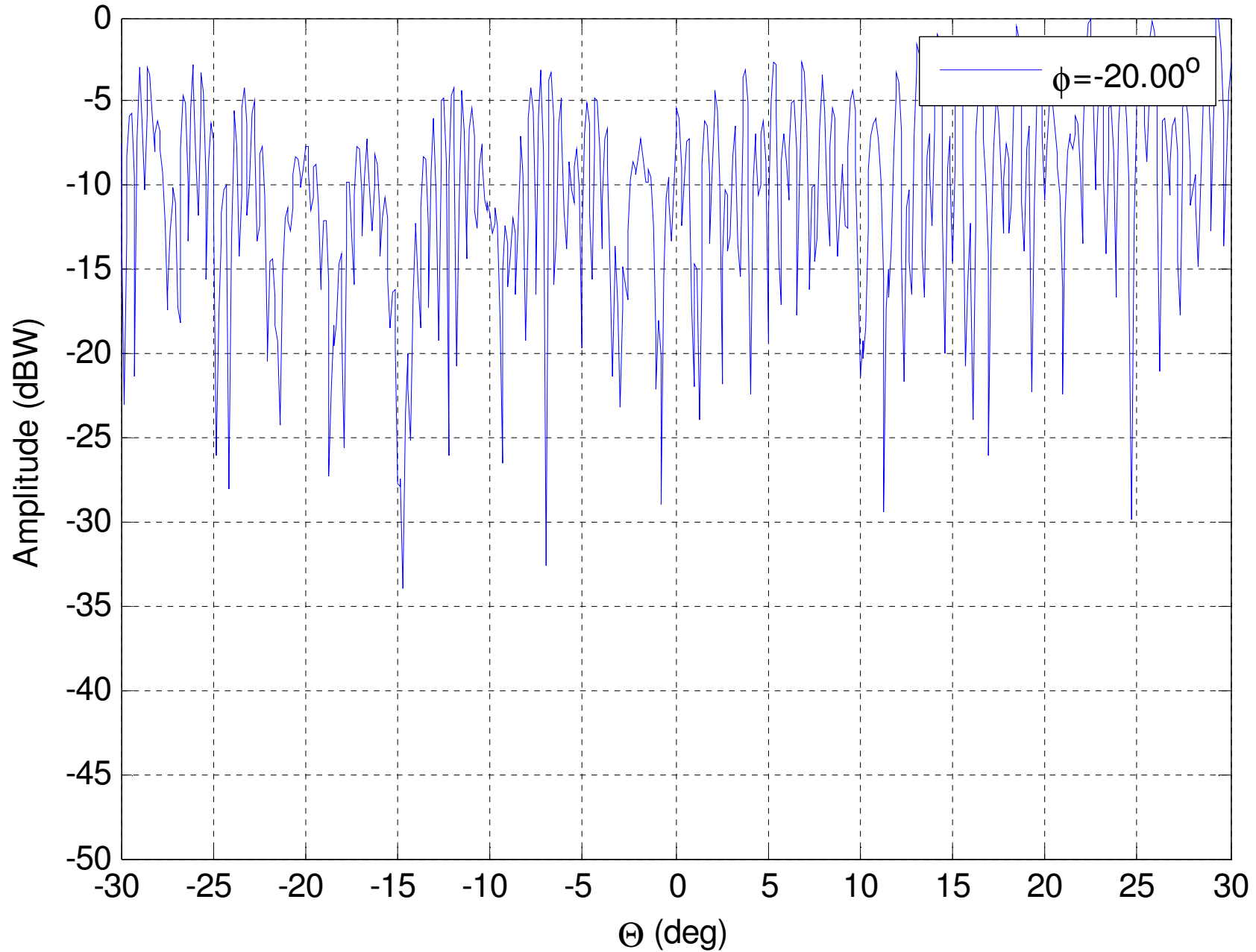
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -6.00 dBW, Date: 14-Dec-2011



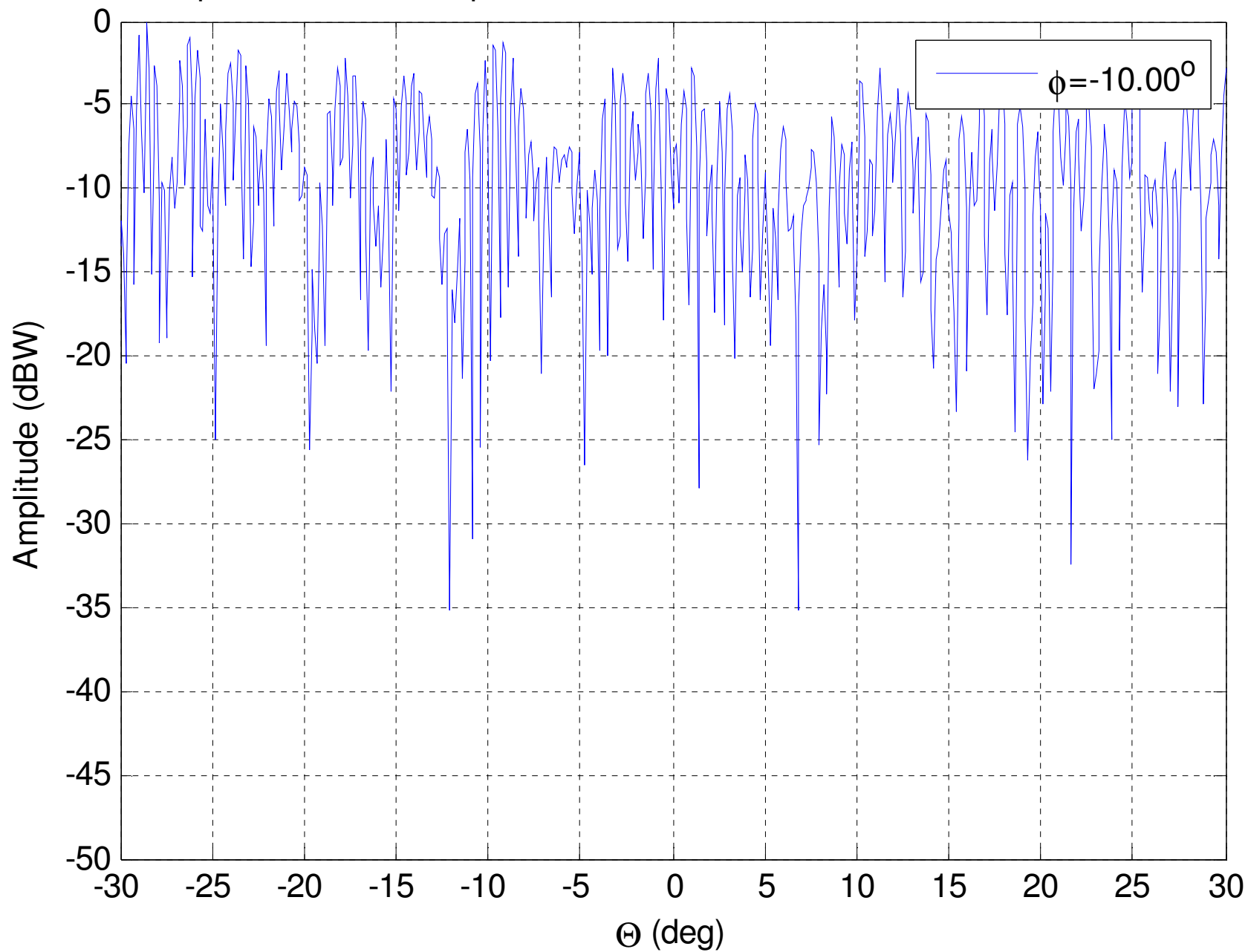
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -7.09 dBW, Date: 14-Dec-2011



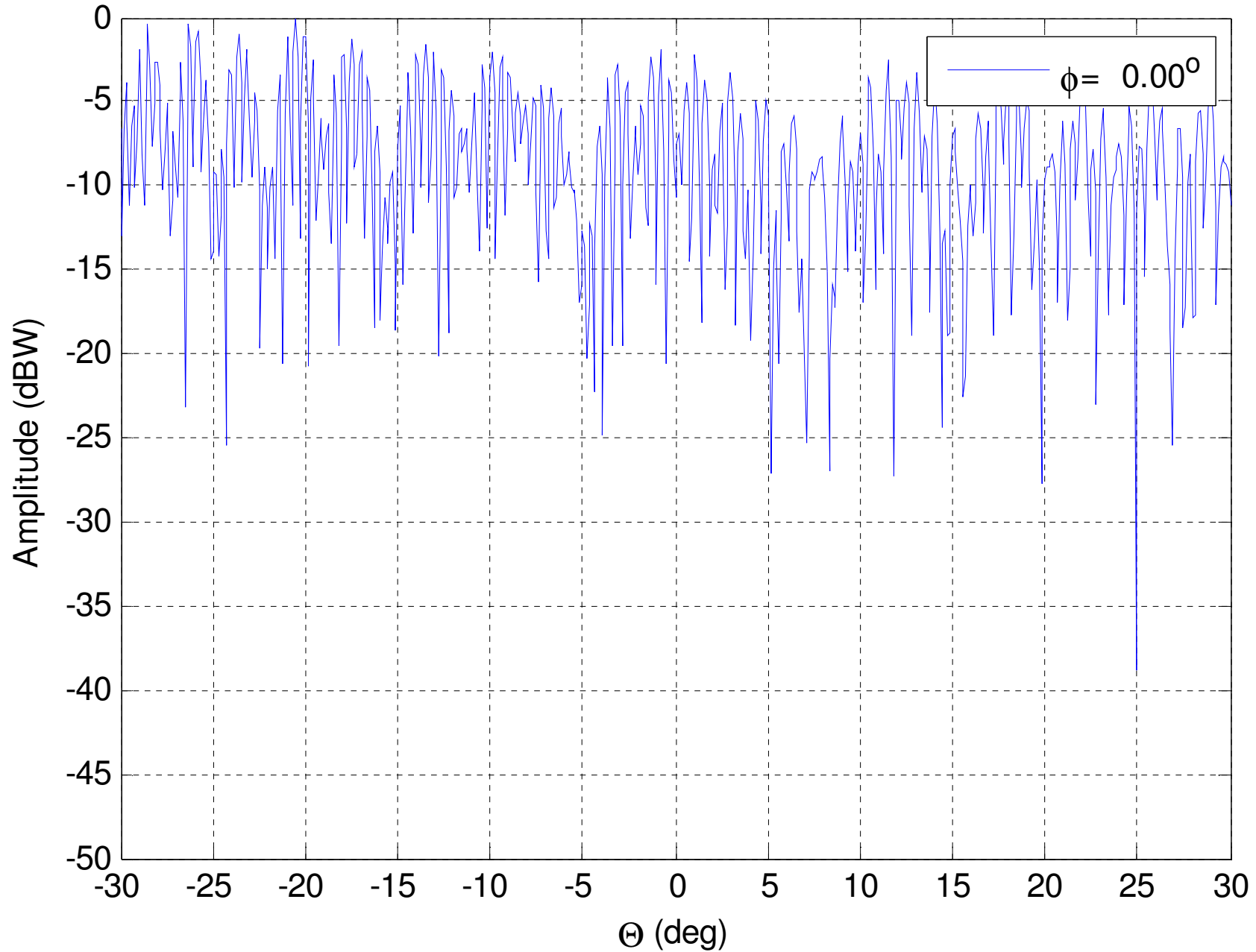
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -8.00 dBW, Date: 14-Dec-2011



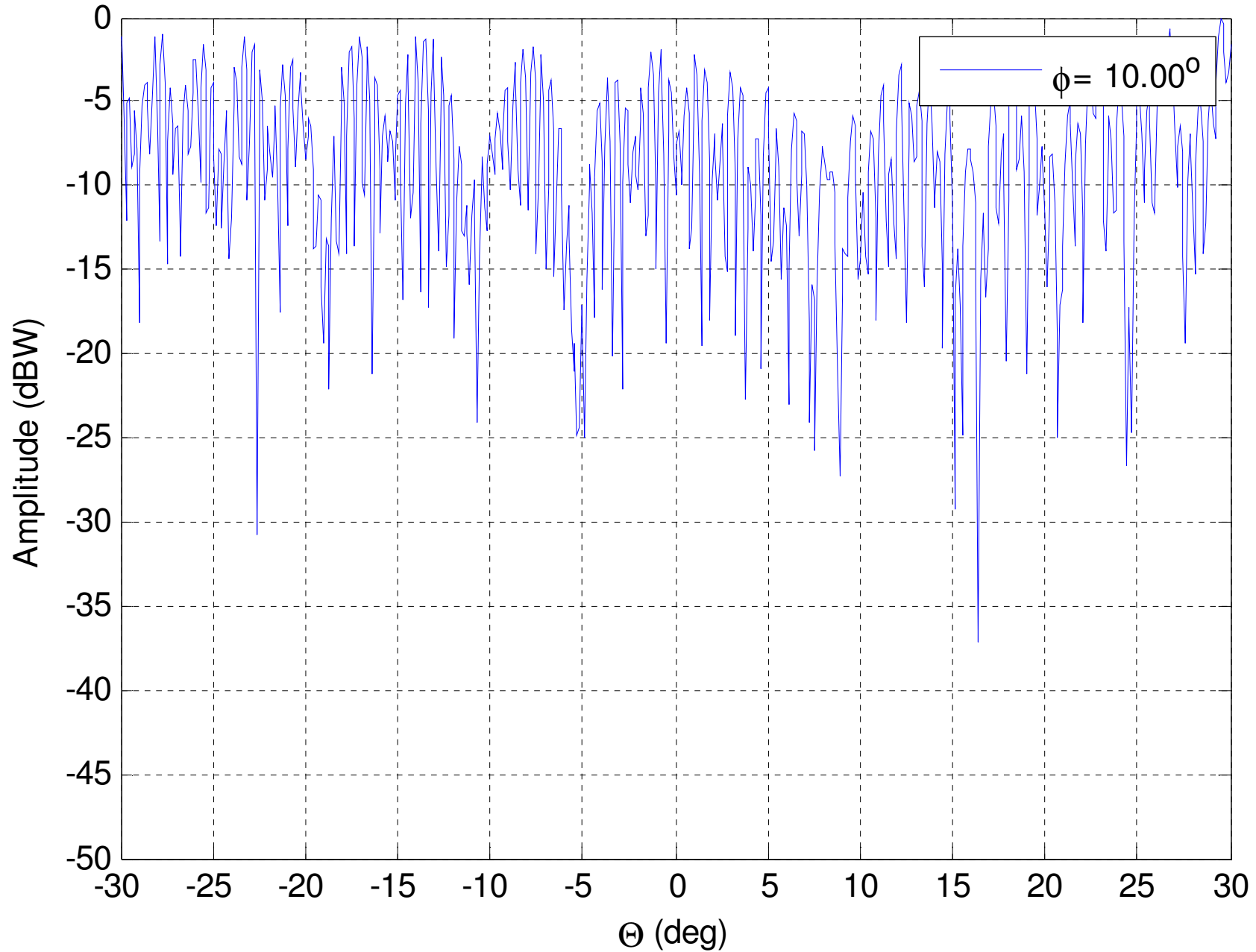
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -8.42 dBW, Date: 14-Dec-2011



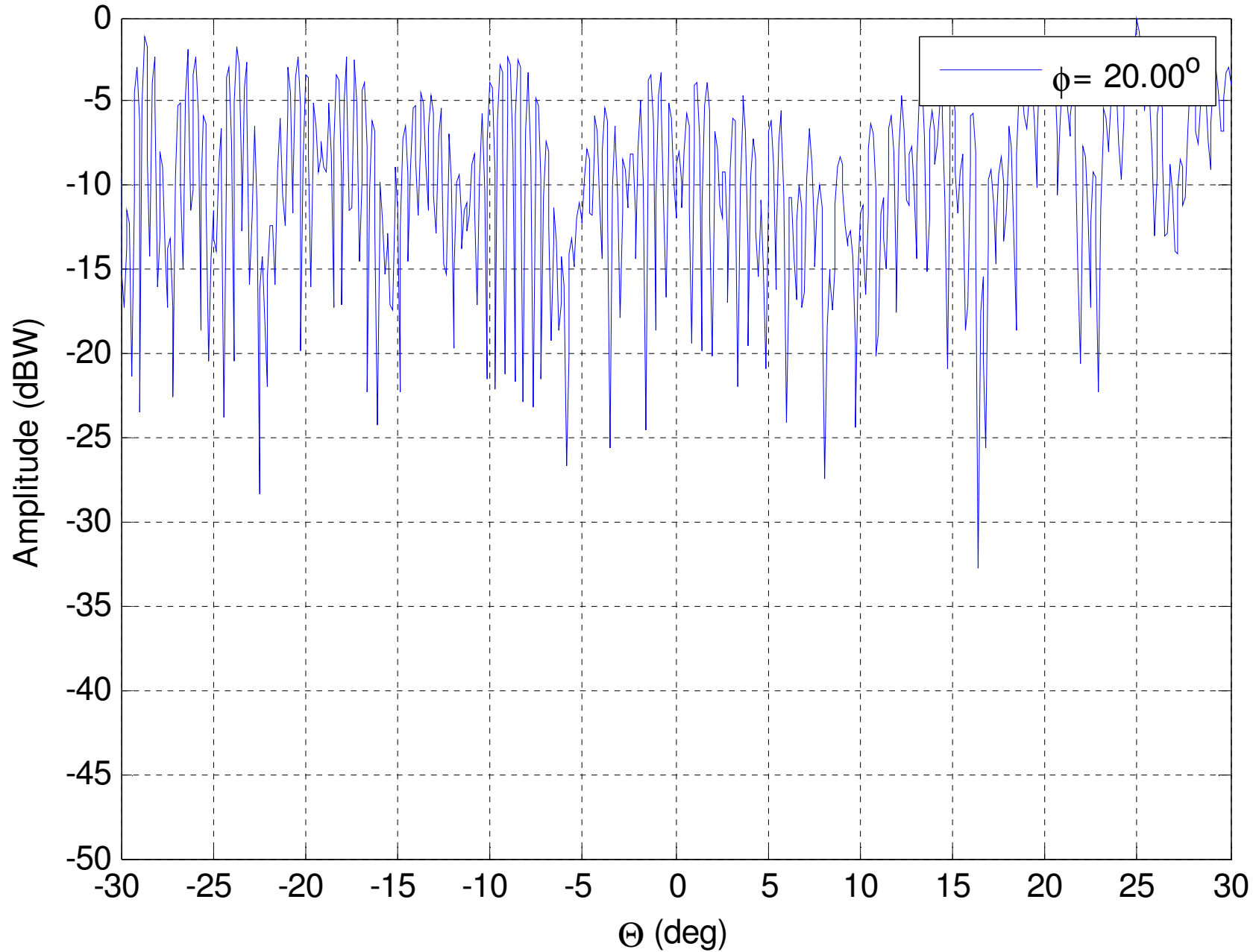
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -8.51 dBW, Date: 14-Dec-2011



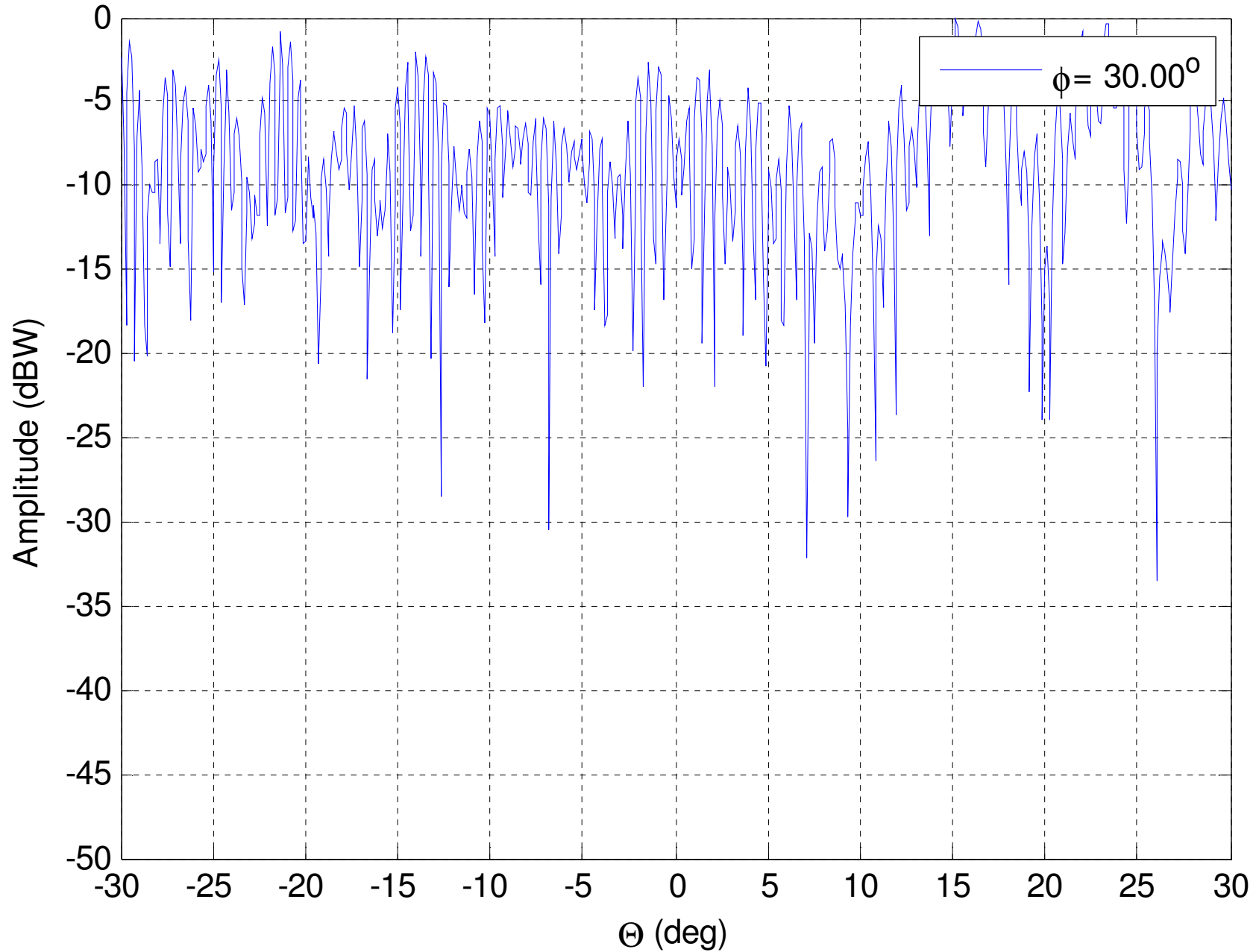
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.27 dBW, Date: 14-Dec-2011



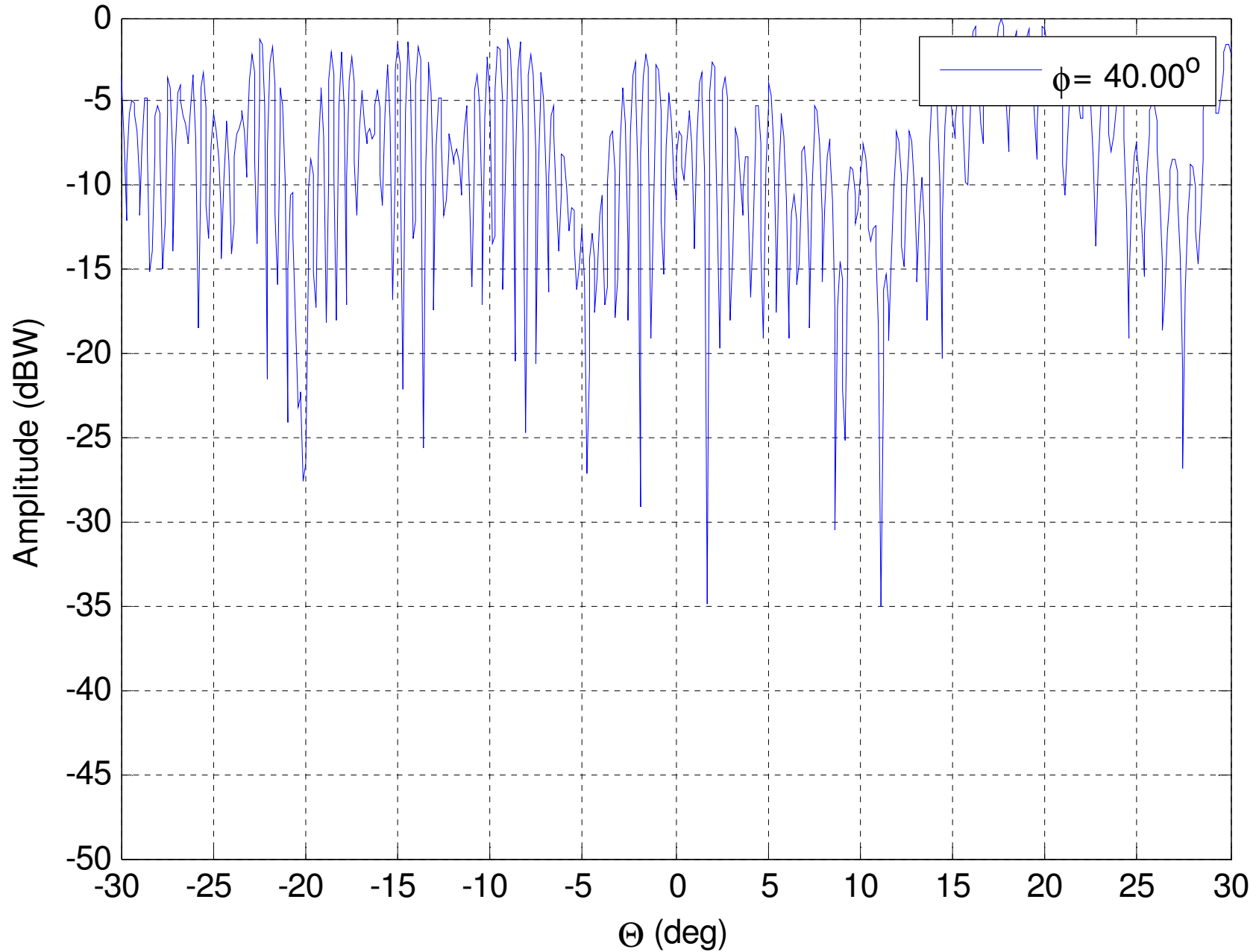
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -7.84 dBW, Date: 14-Dec-2011



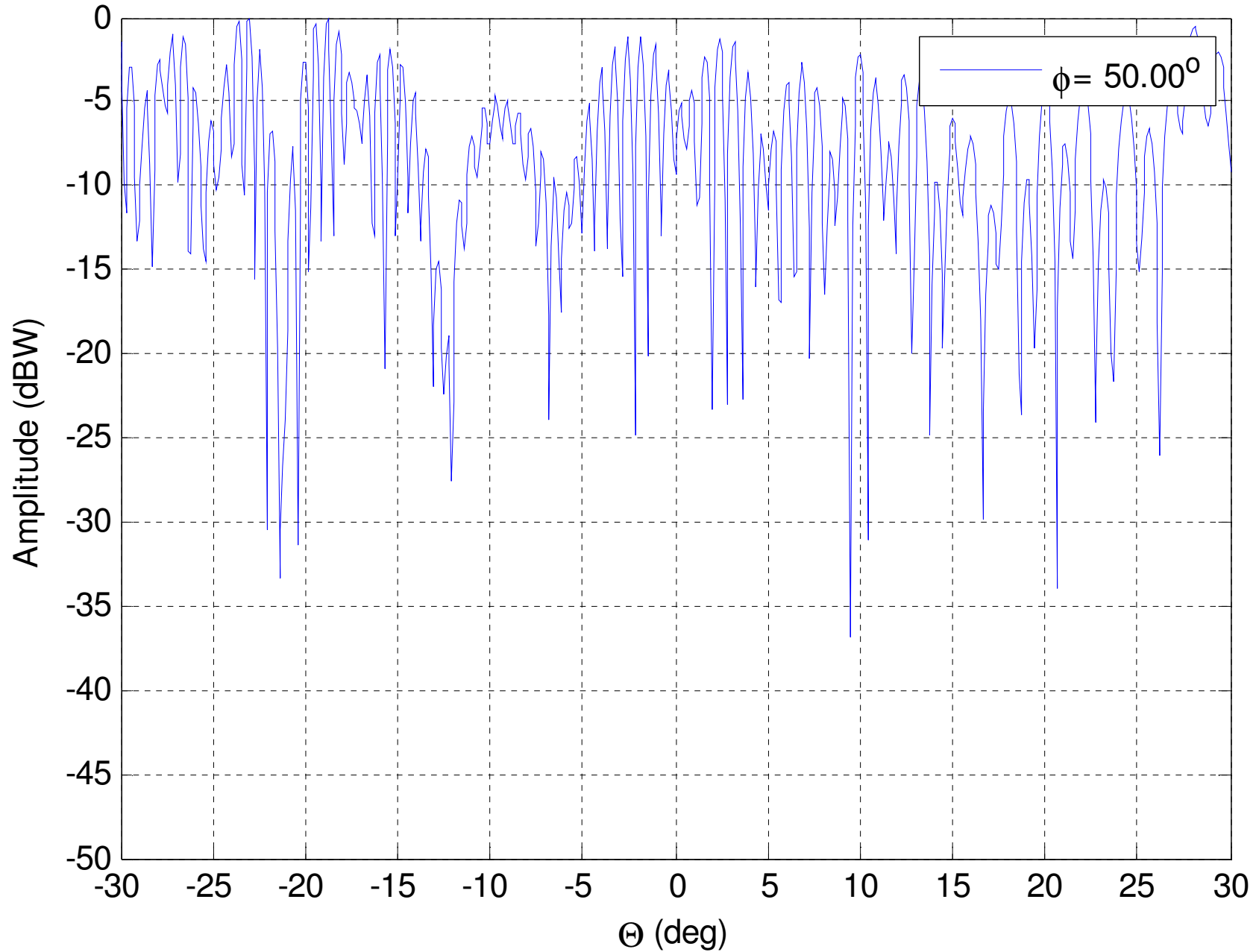
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -8.33 dBW, Date: 14-Dec-2011



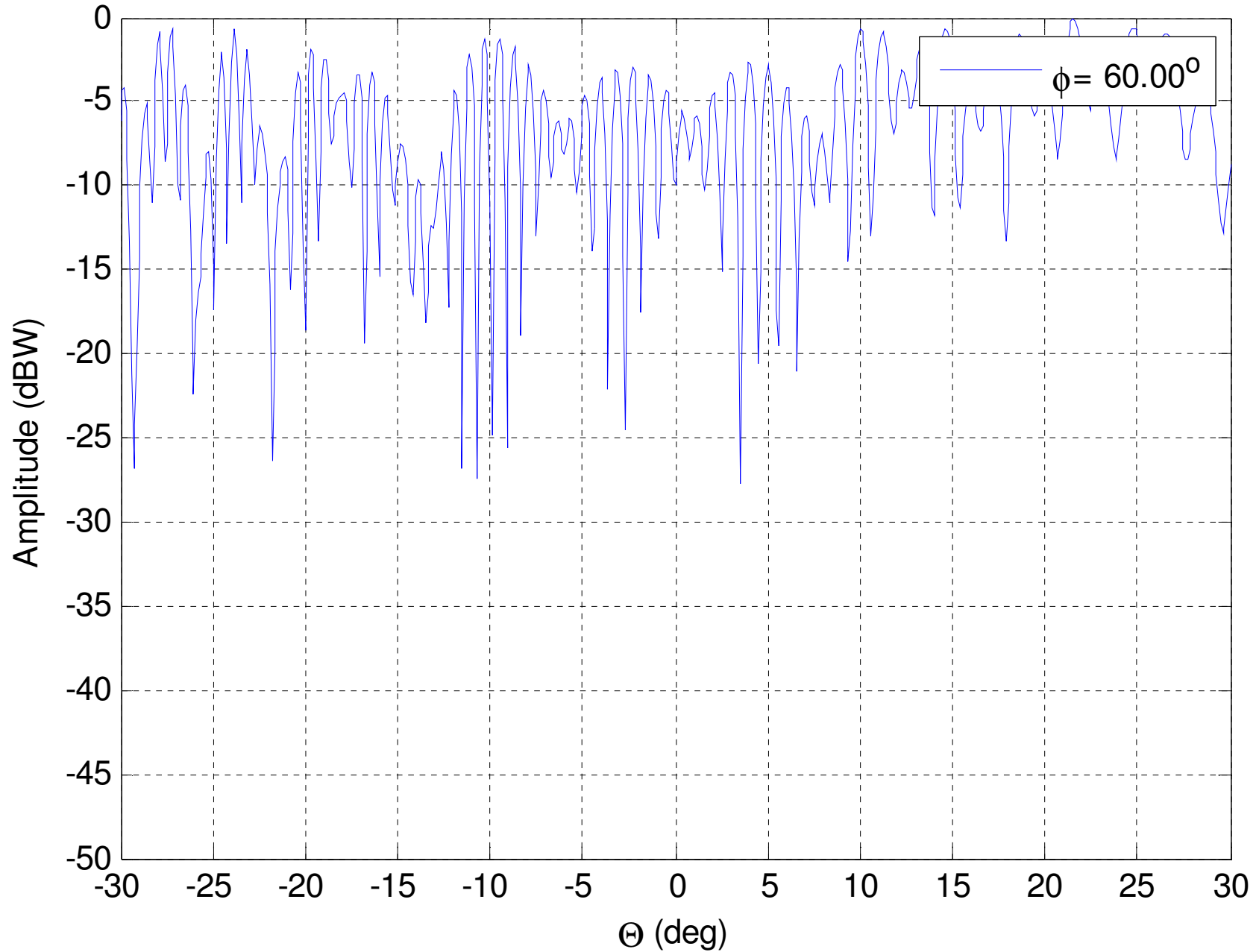
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -9.87 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

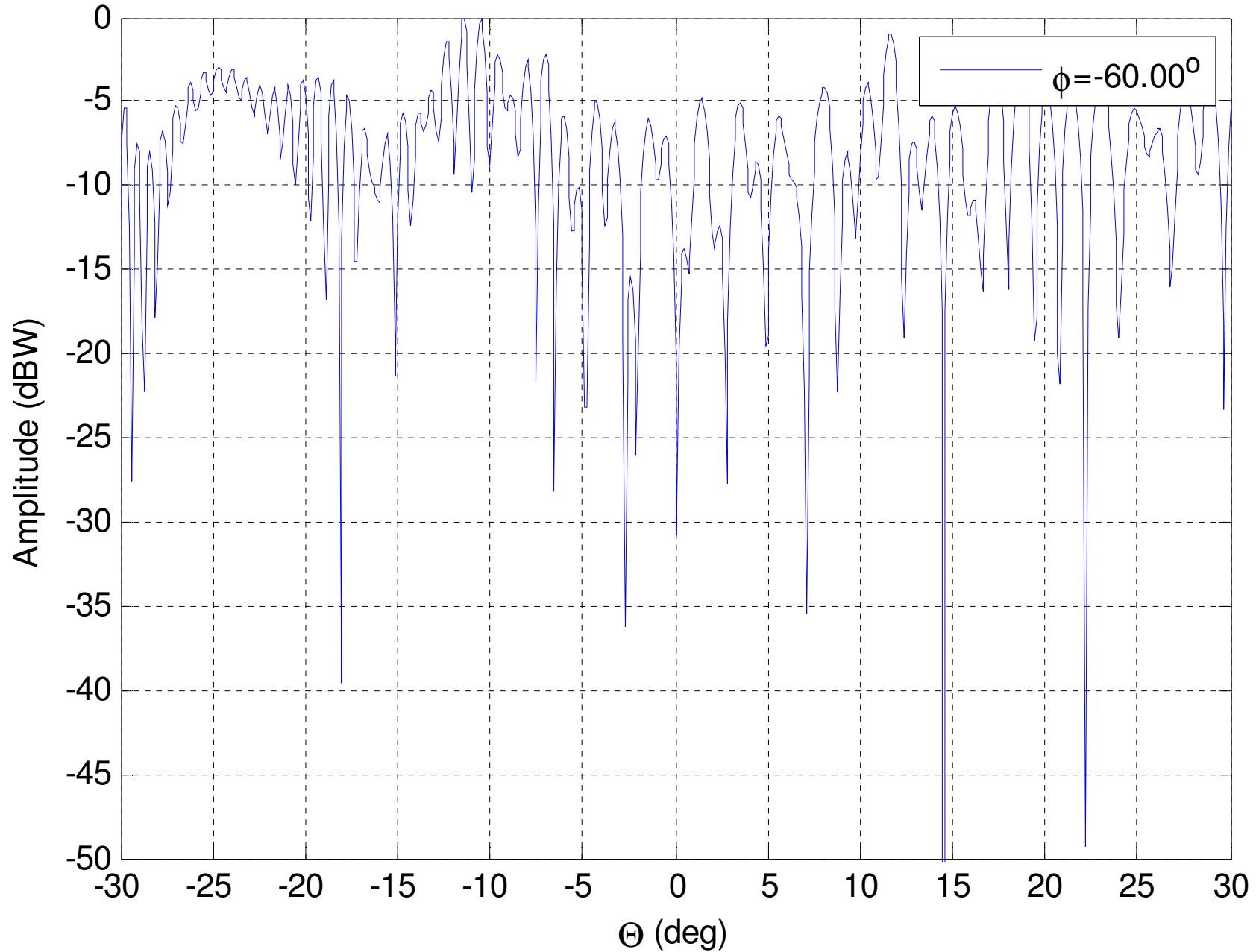
Input file: tx-17.3-lhcp-60.cut, Peak: -9.11 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

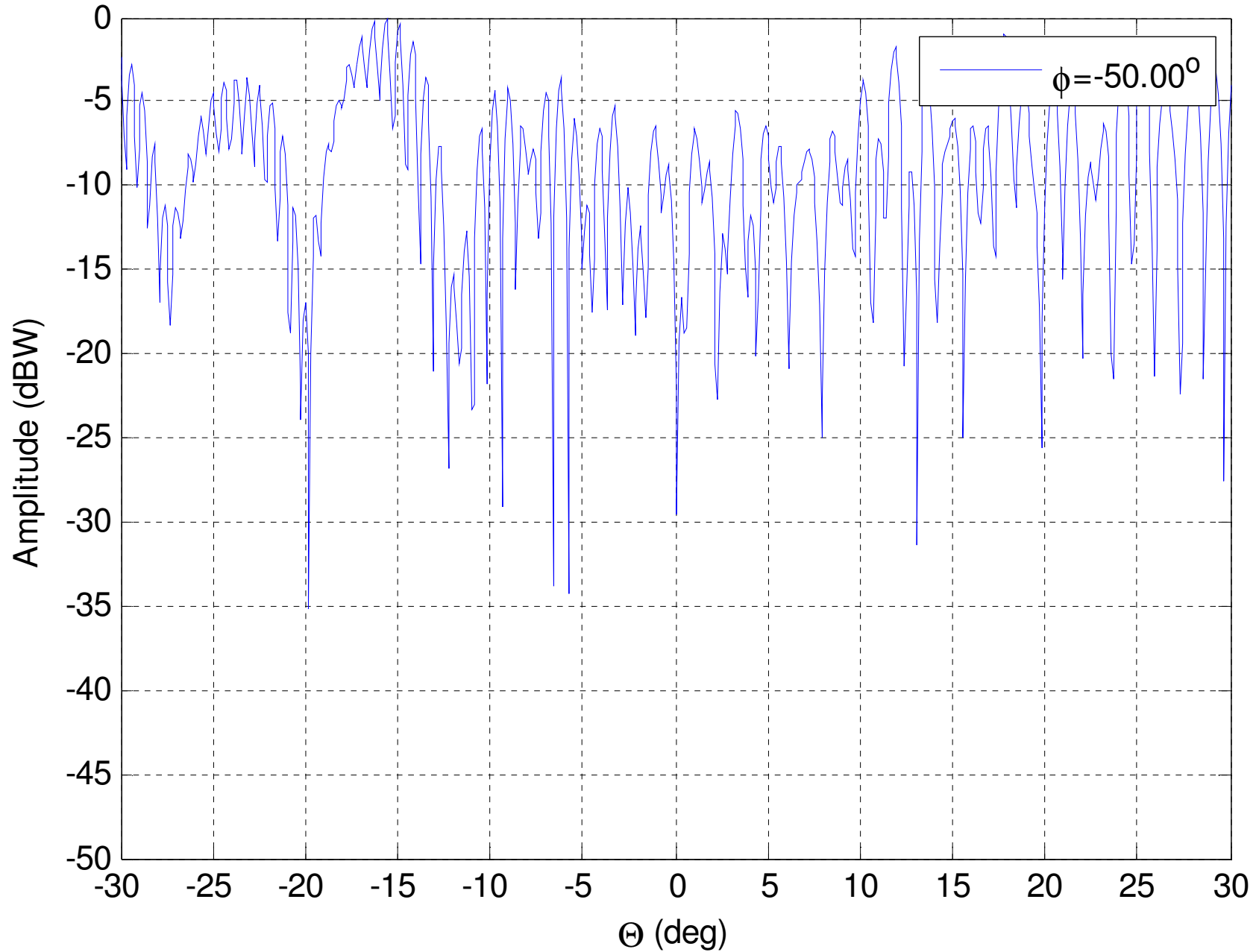
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -8.75 dBW, Date: 14-Dec-2011



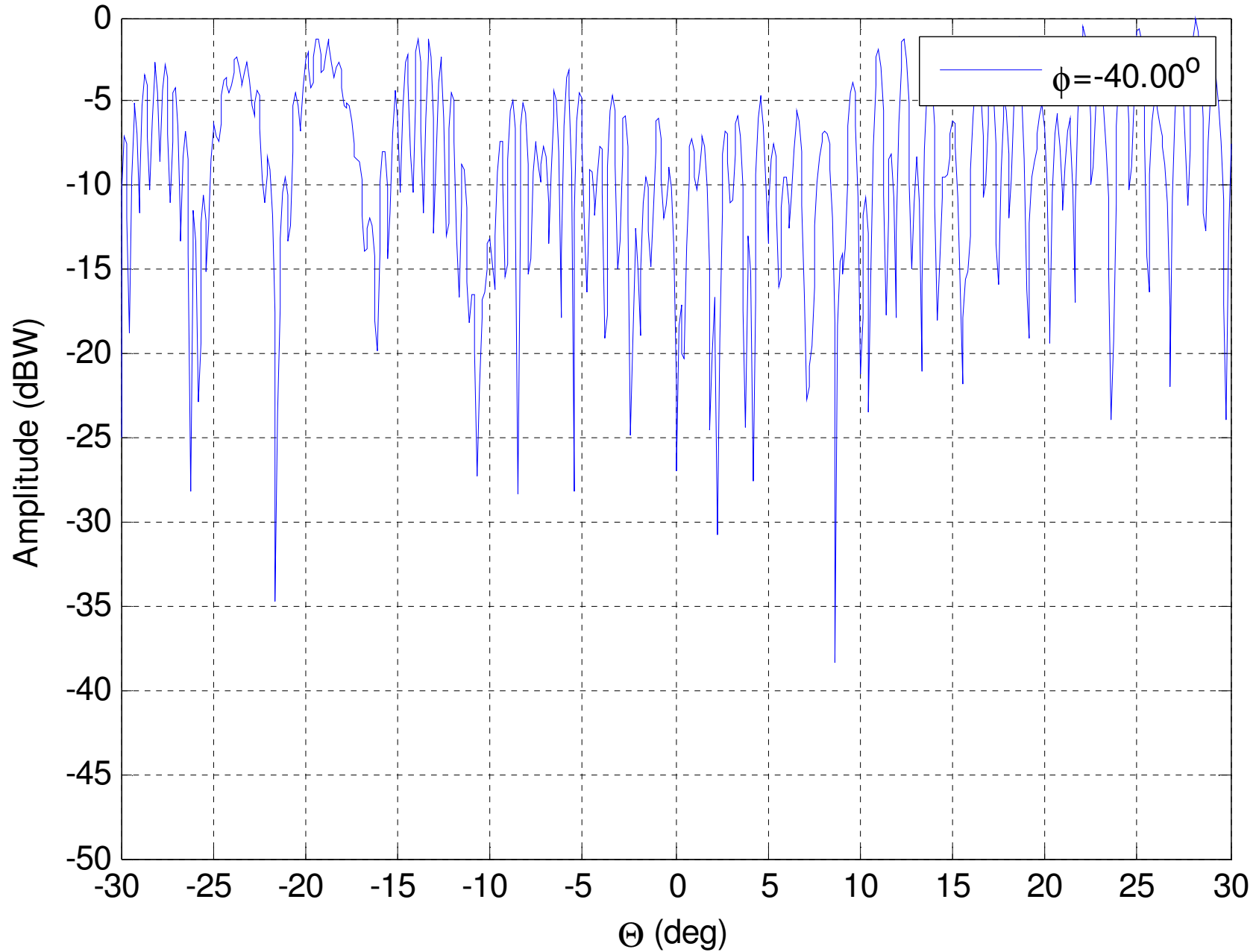
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -7.50 dBW, Date: 14-Dec-2011



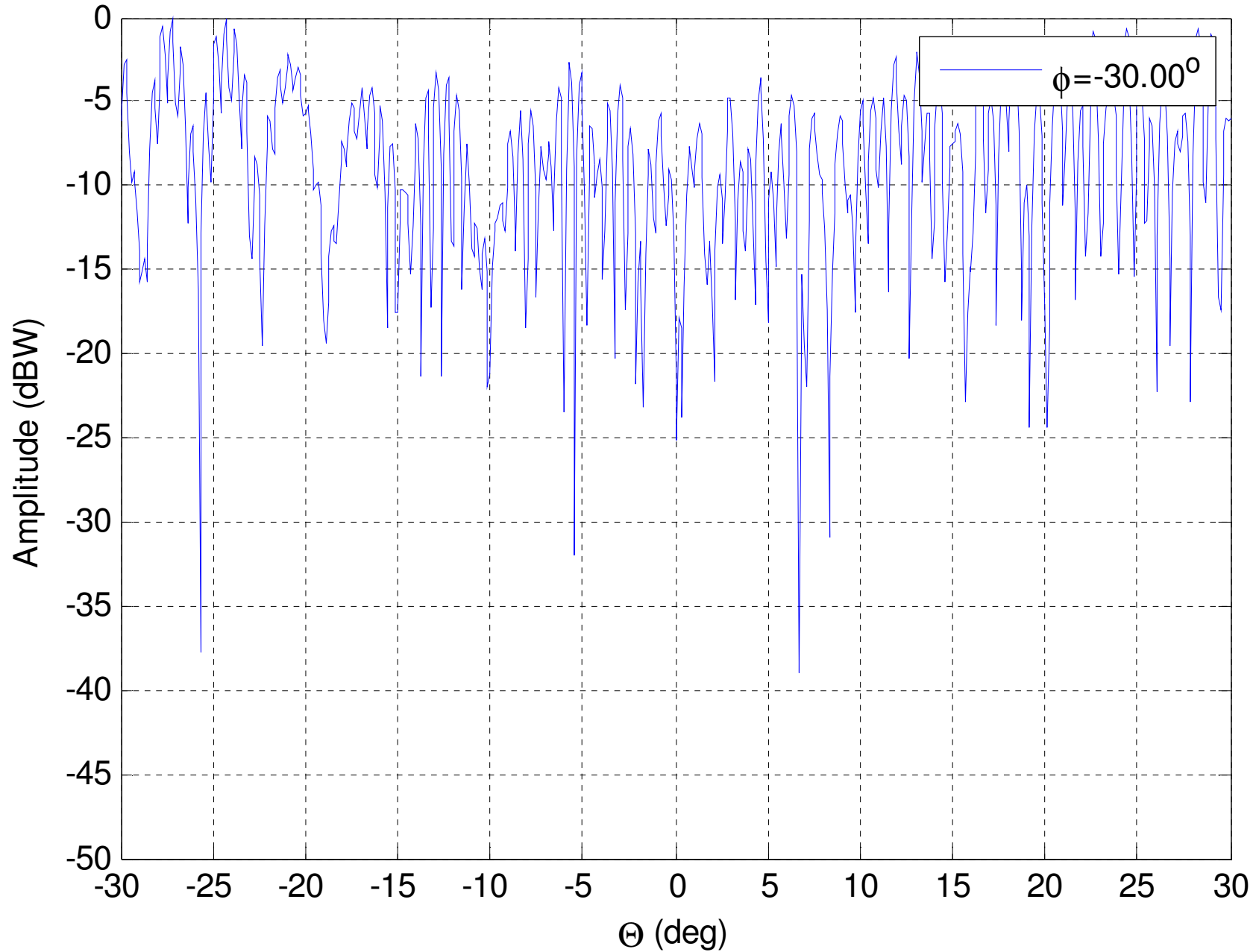
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -7.62 dBW, Date: 14-Dec-2011



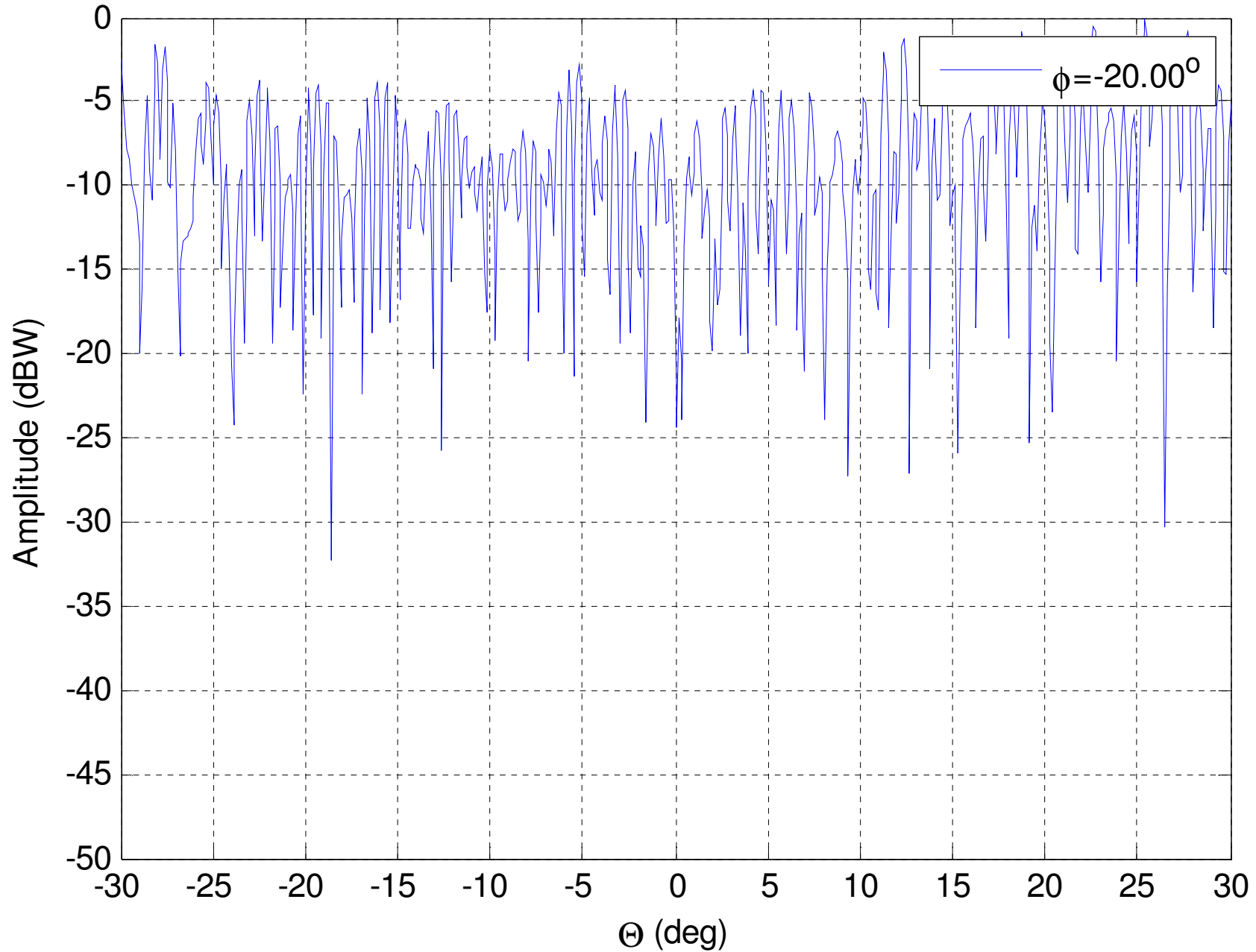
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.78 dBW, Date: 14-Dec-2011



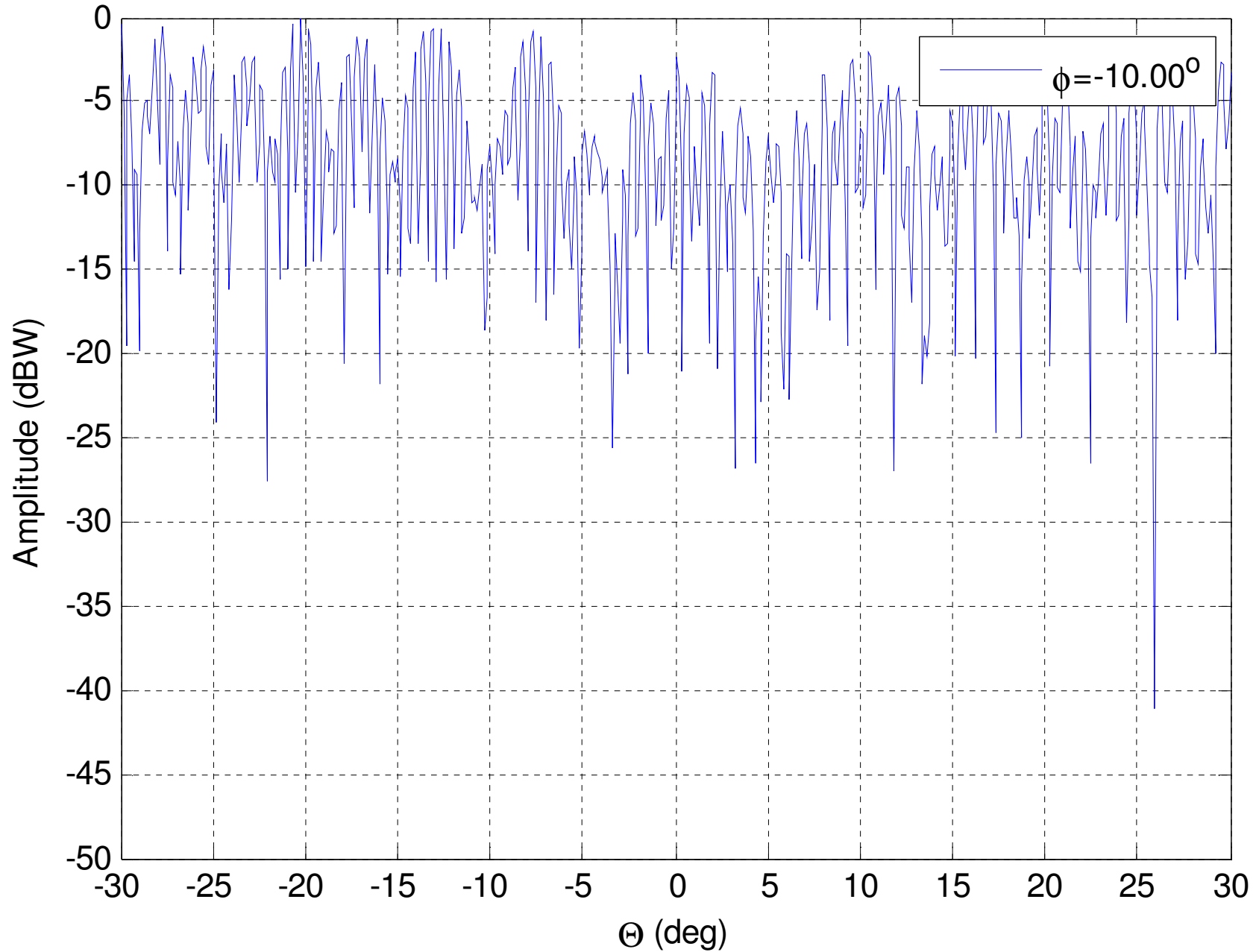
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -7.69 dBW, Date: 14-Dec-2011



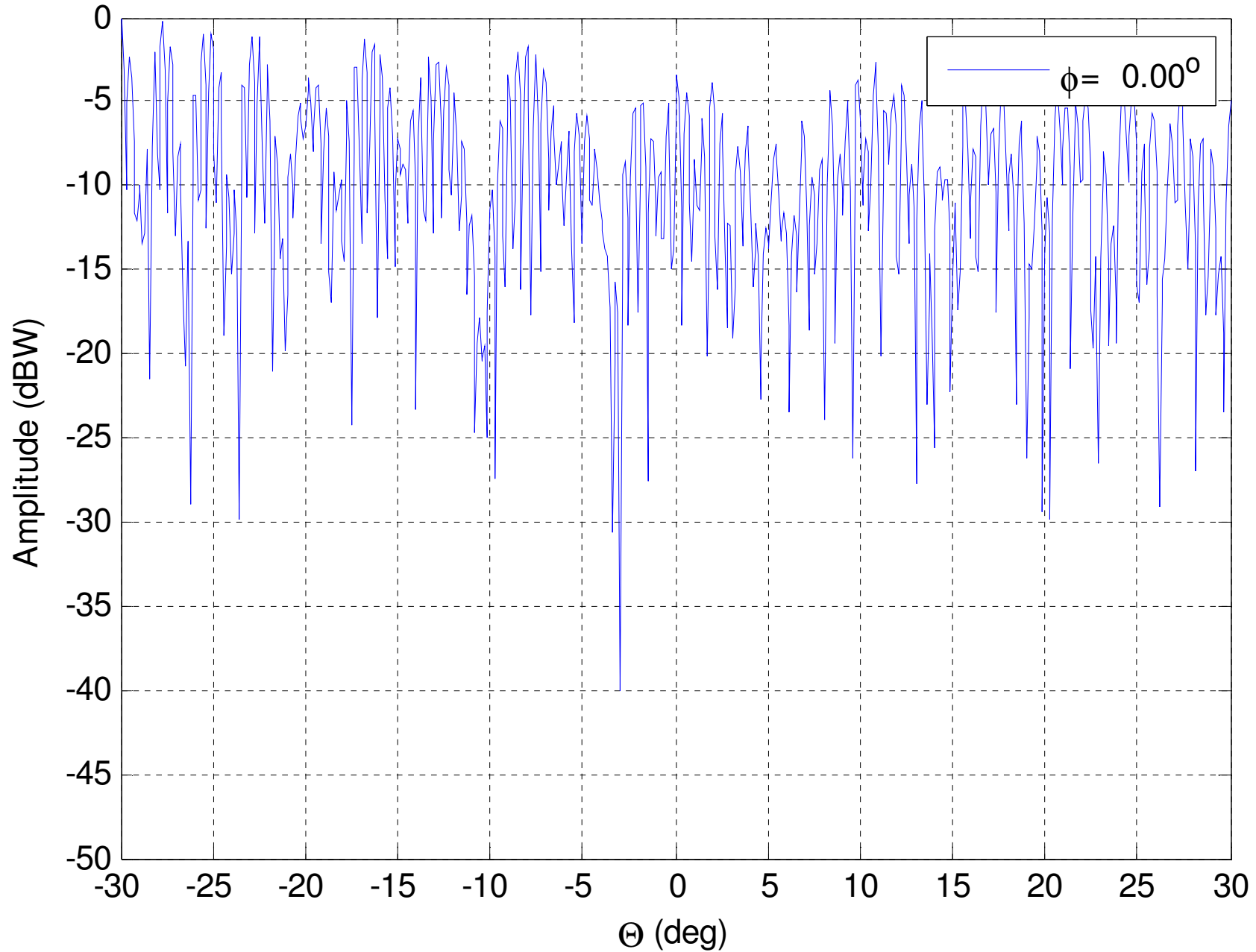
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -9.17 dBW, Date: 14-Dec-2011



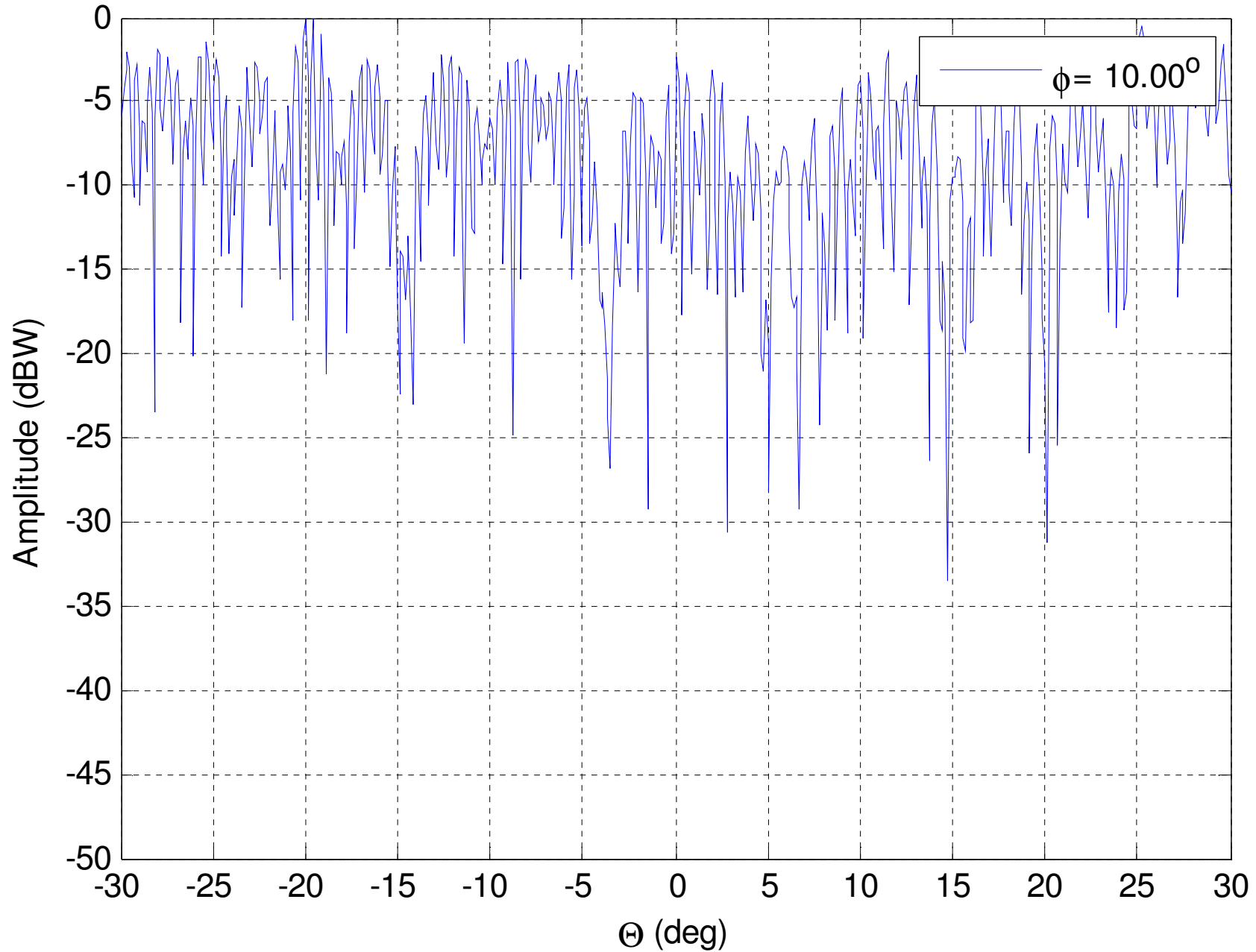
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -8.24 dBW, Date: 14-Dec-2011



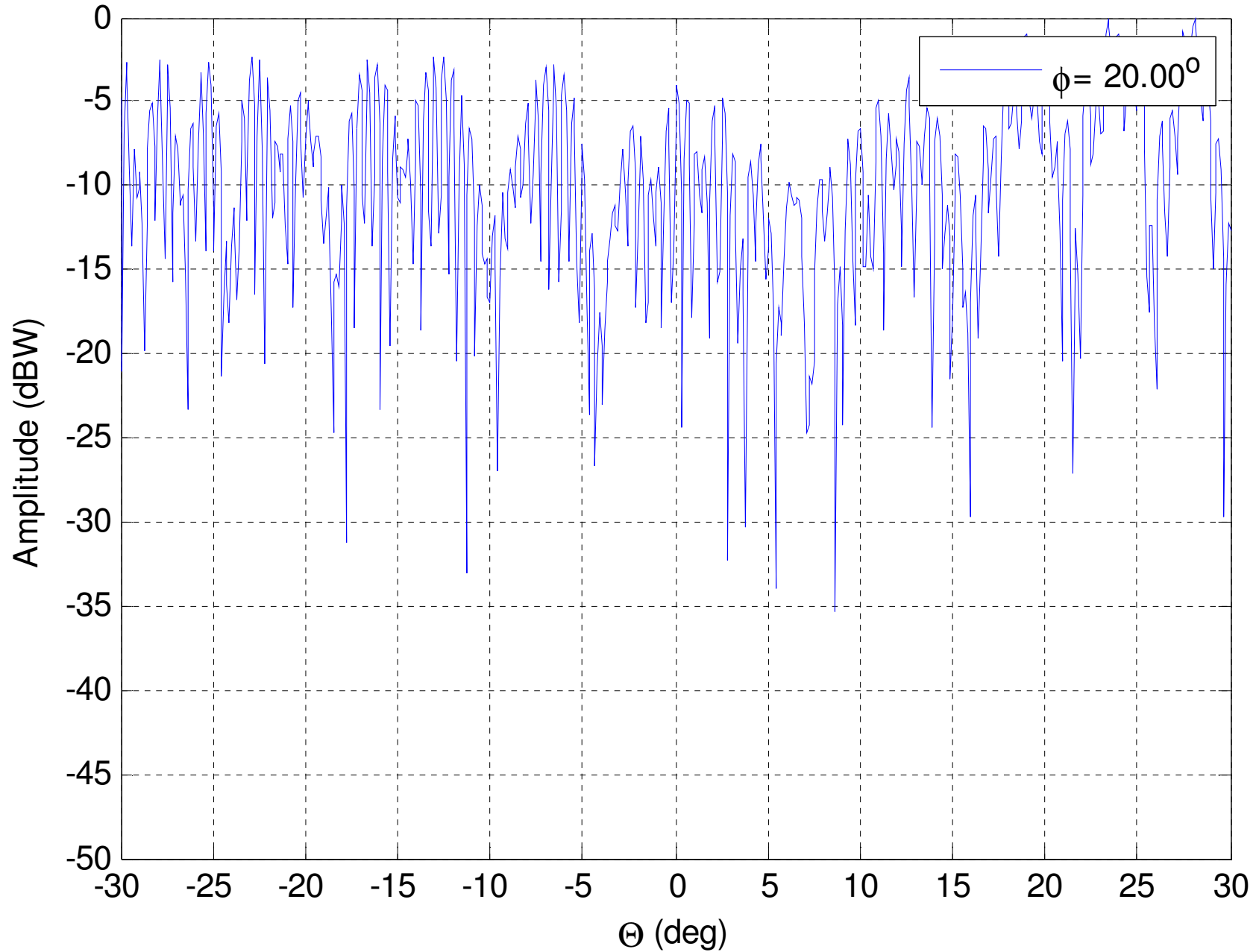
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -9.17 dBW, Date: 14-Dec-2011



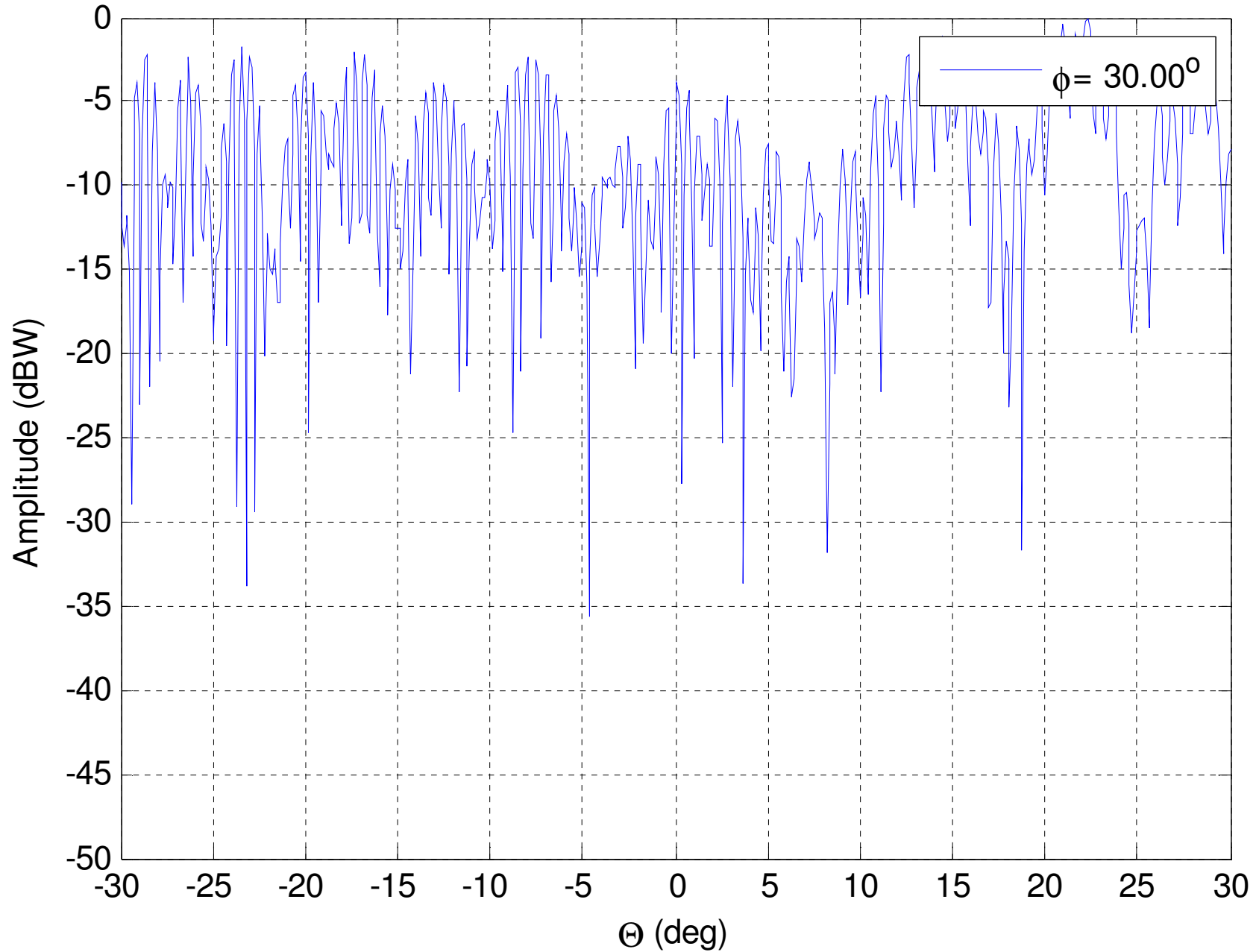
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -7.59 dBW, Date: 14-Dec-2011



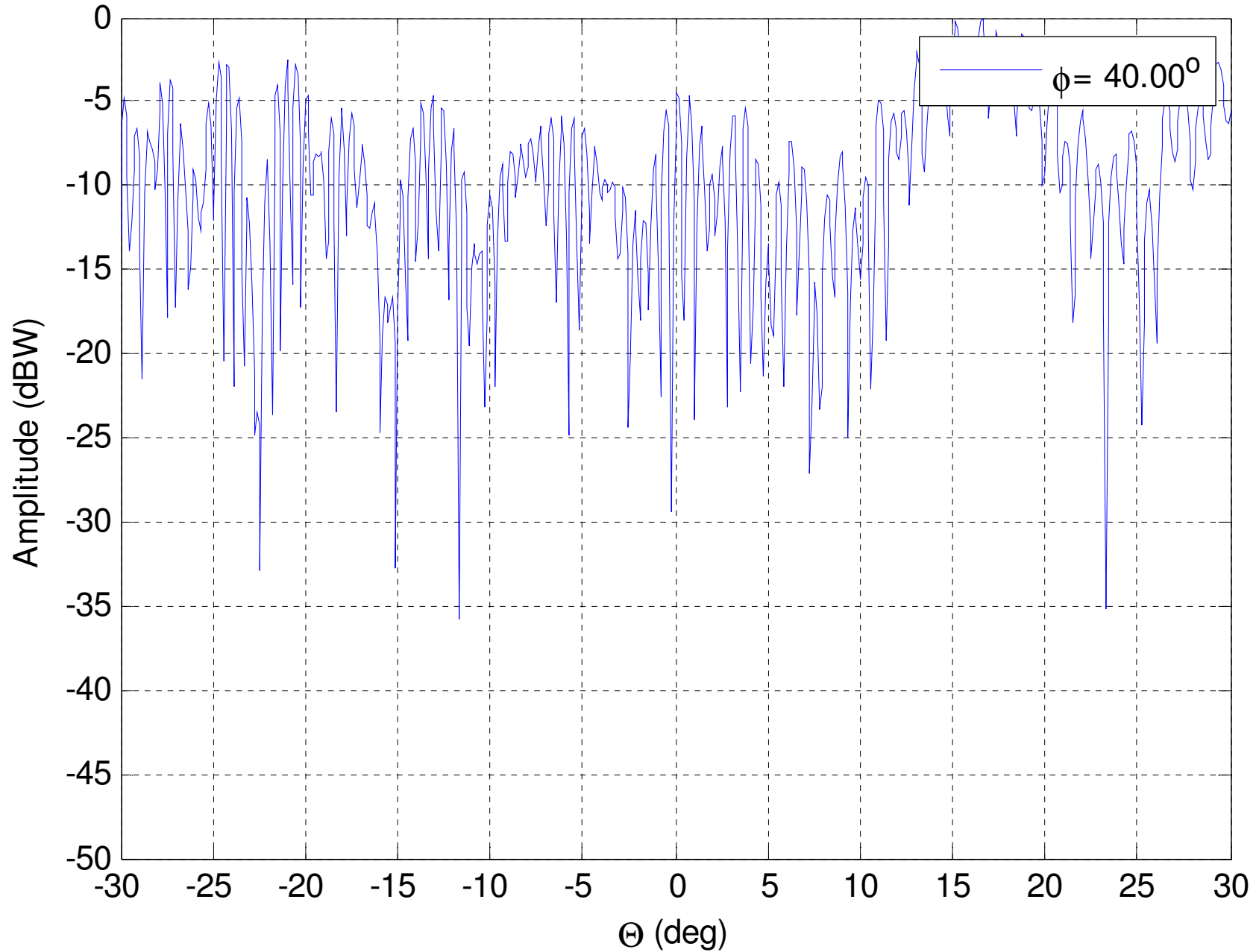
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -7.79 dBW, Date: 14-Dec-2011



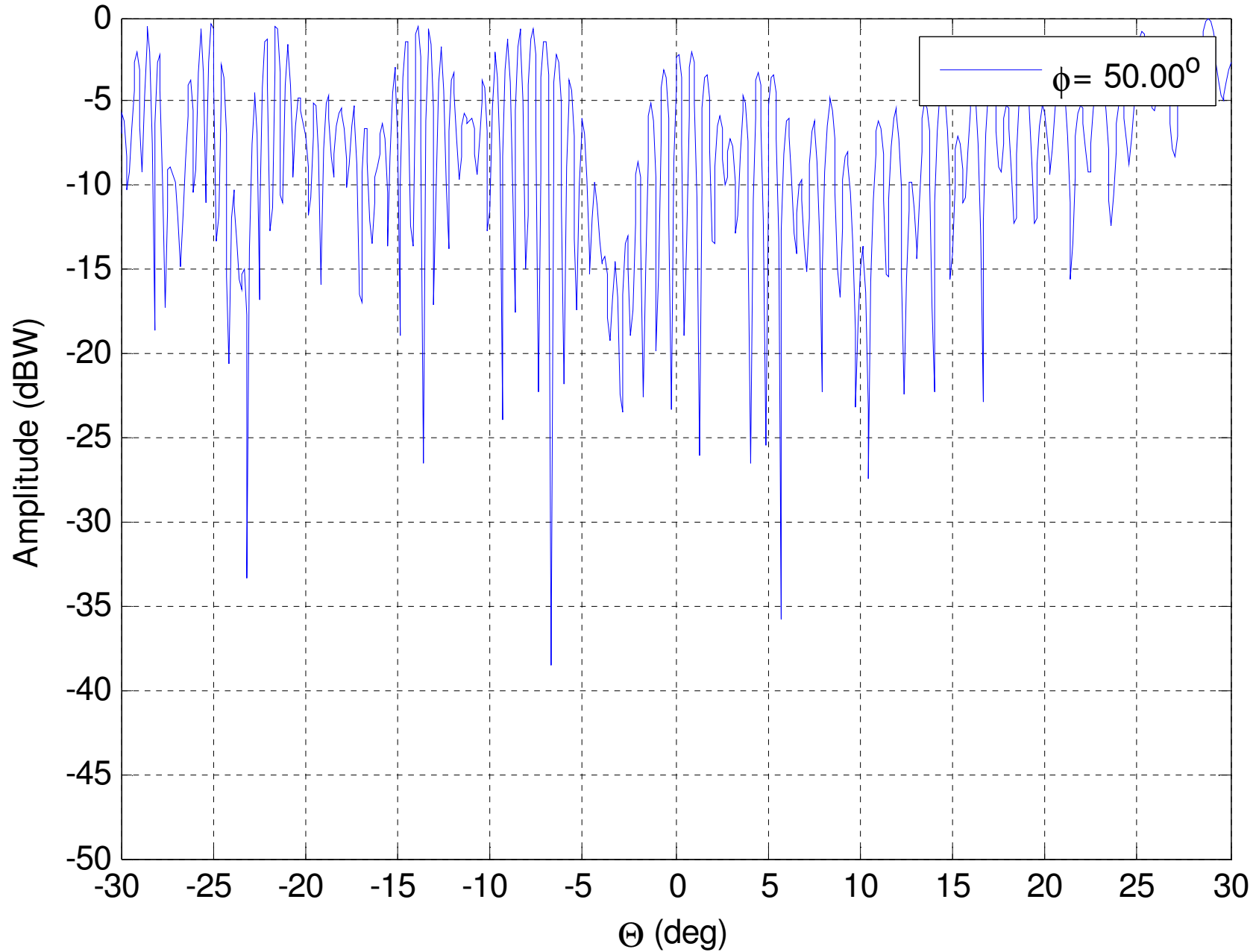
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.24 dBW, Date: 14-Dec-2011



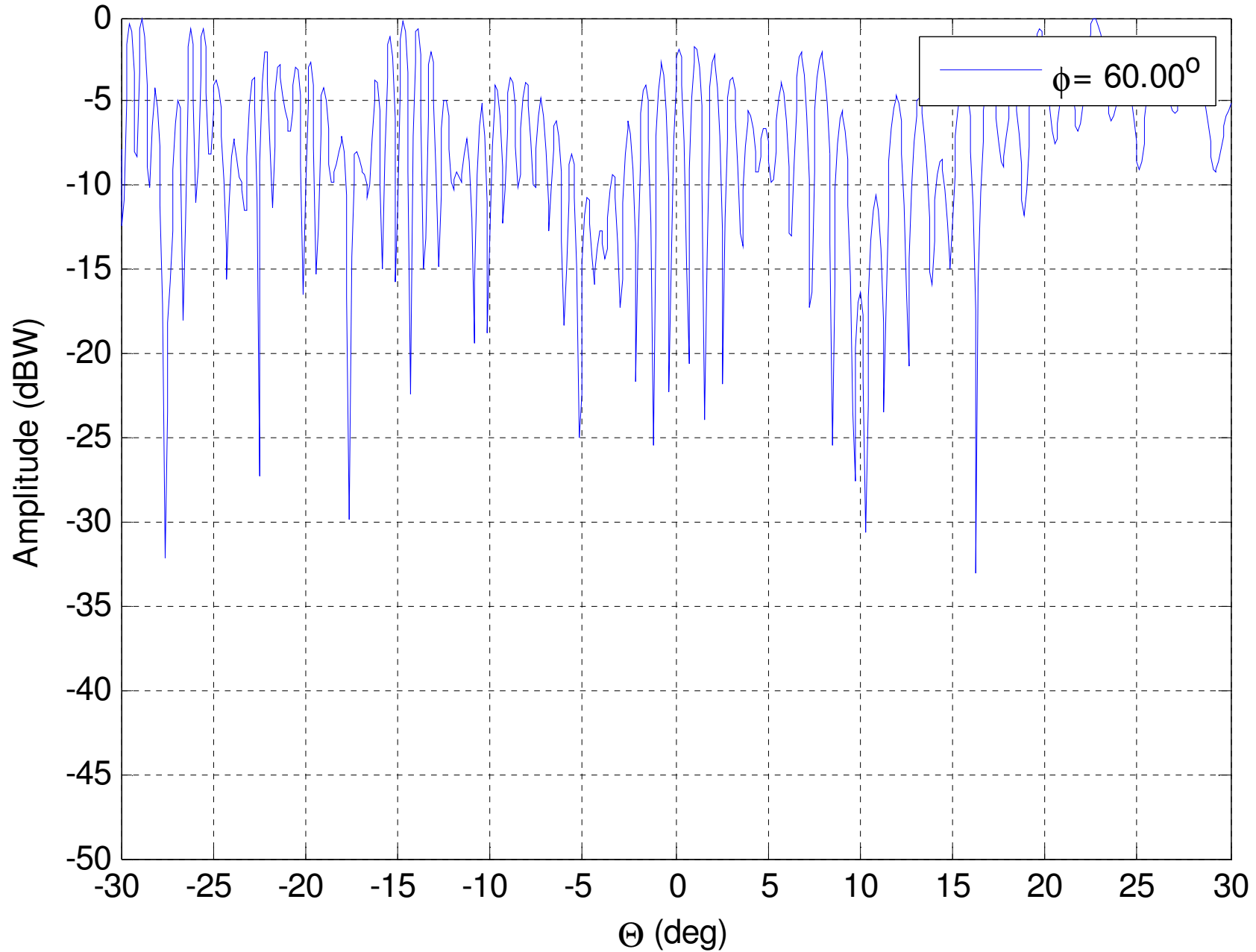
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -9.52 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

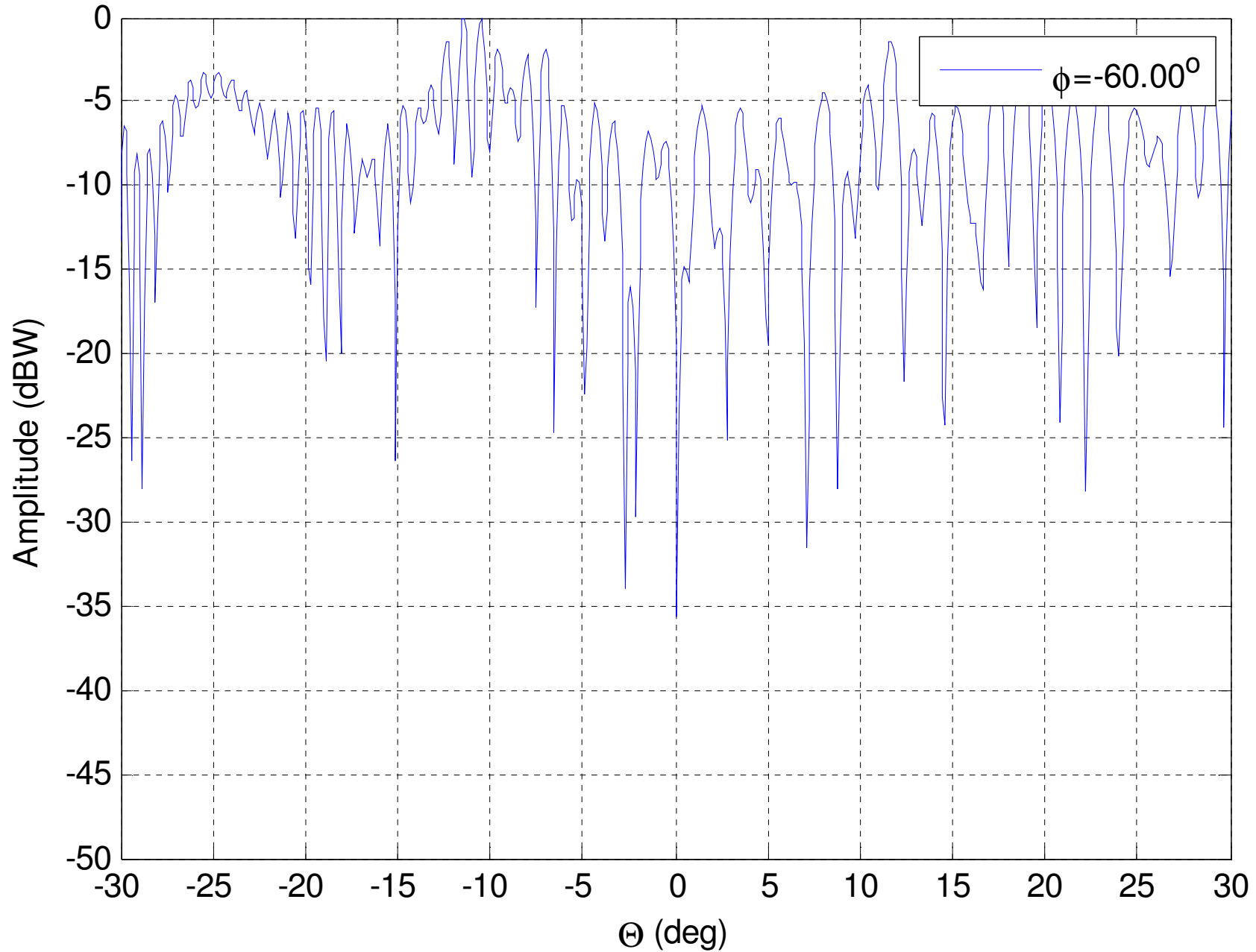
Input file: tx-17.5-rhcp-60.cut, Peak: -9.75 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

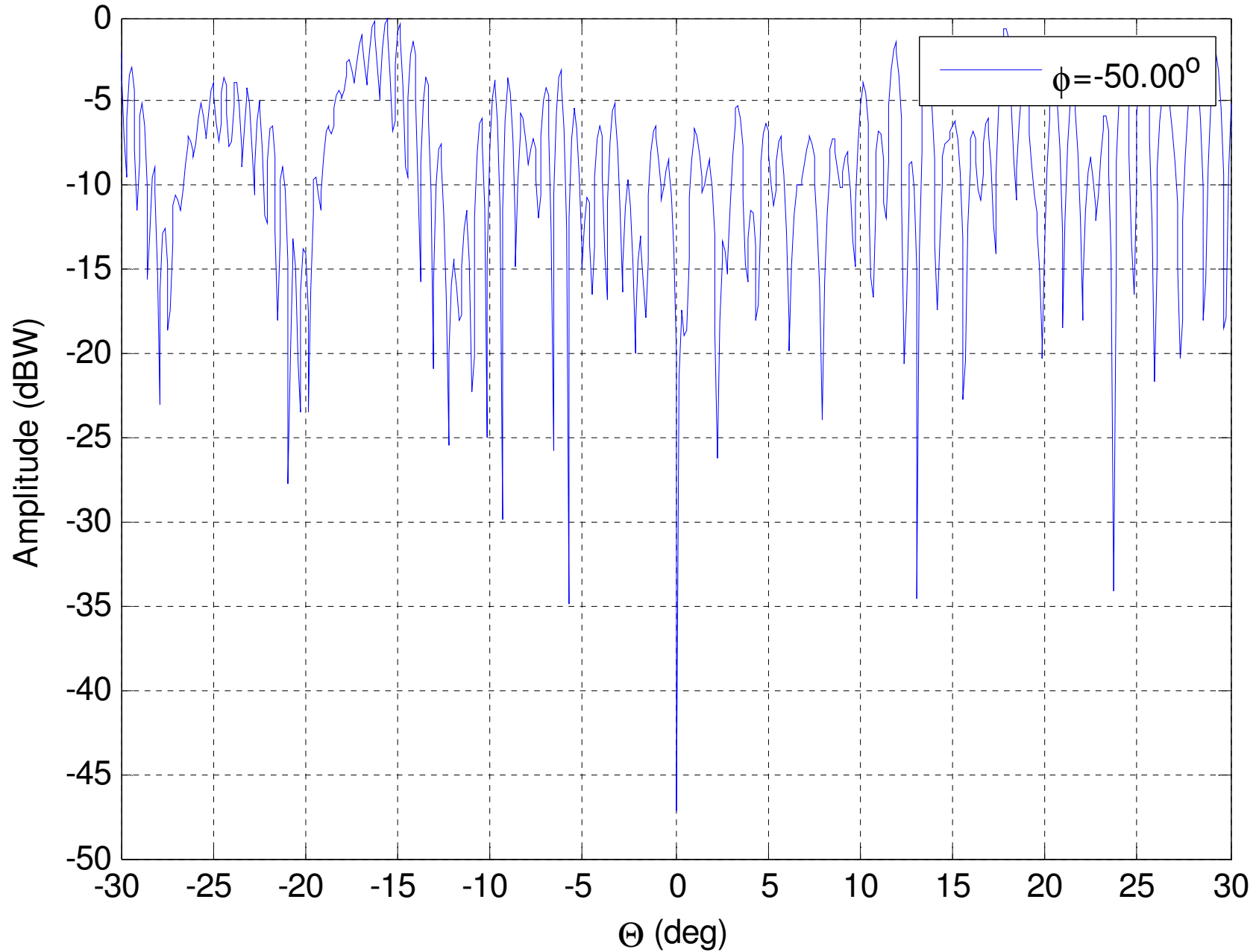
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.45 dBW, Date: 14-Dec-2011



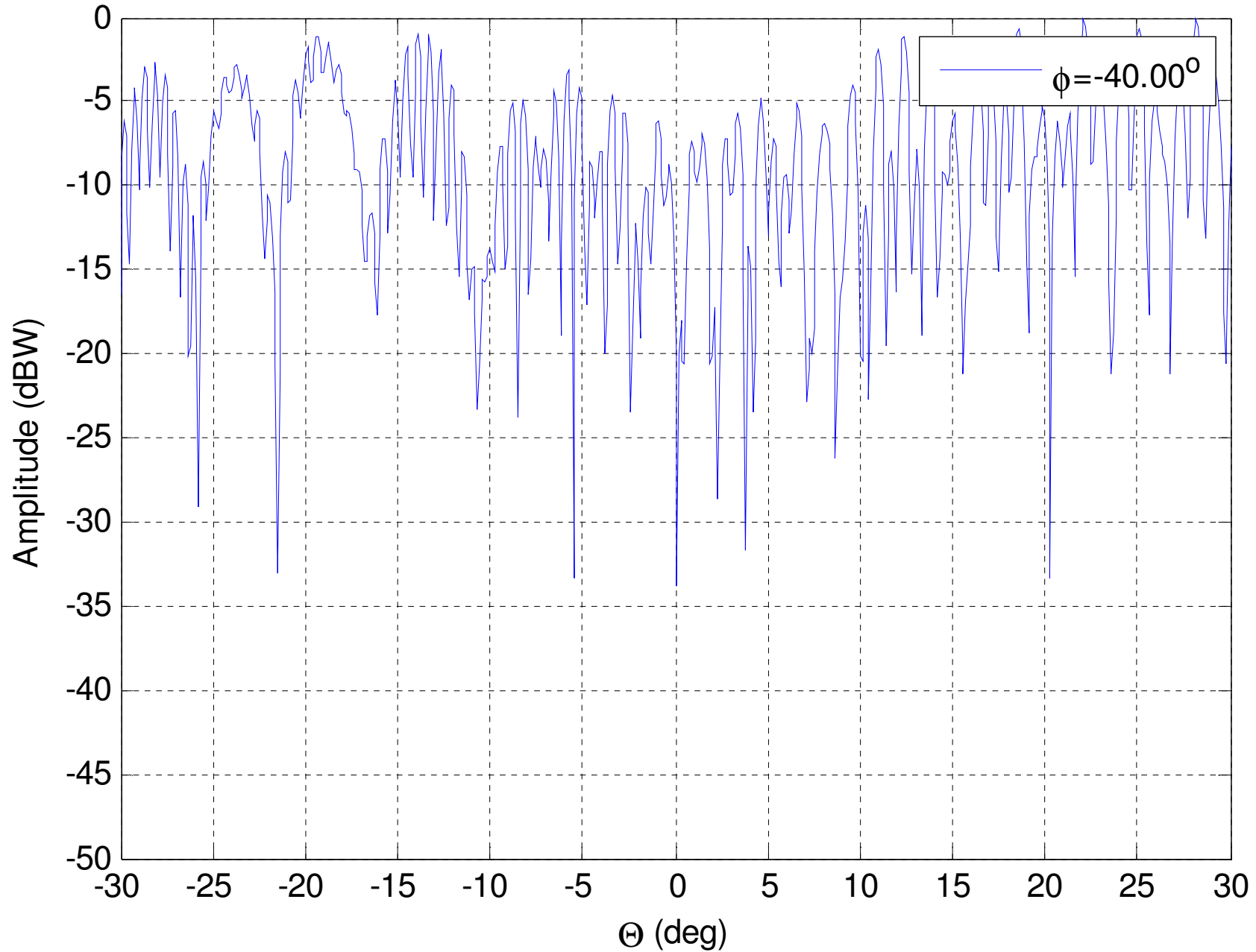
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.76 dBW, Date: 14-Dec-2011



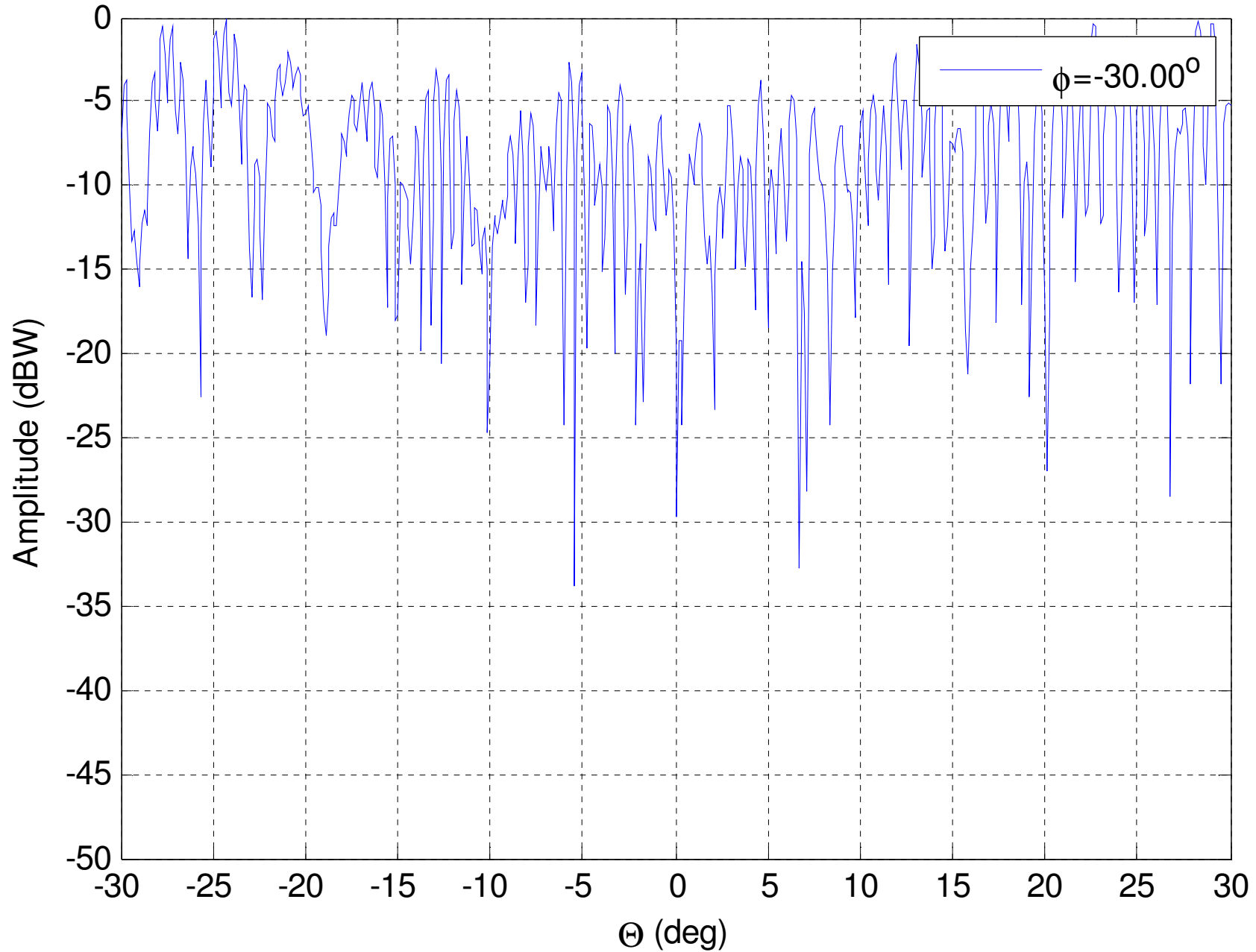
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.80 dBW, Date: 14-Dec-2011



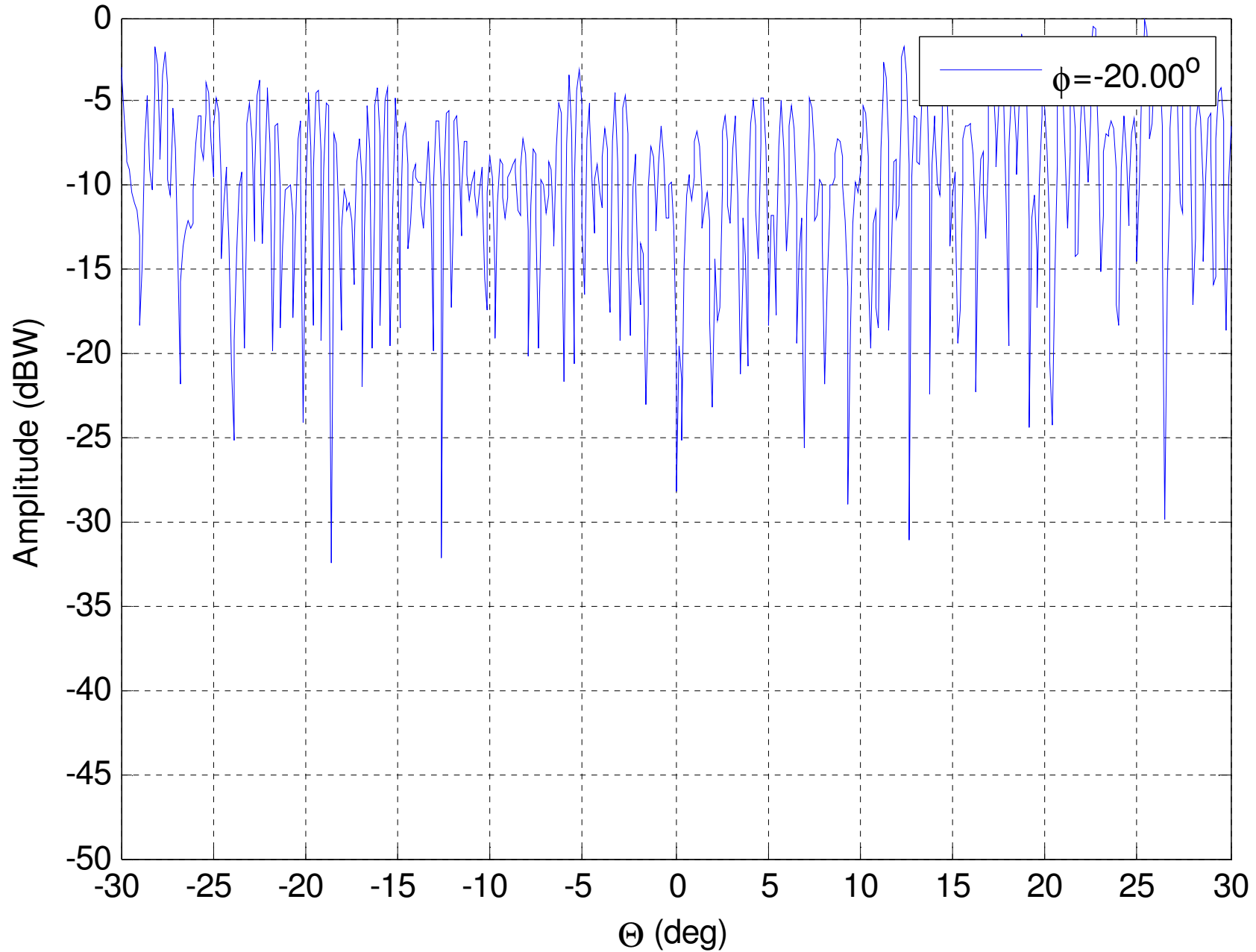
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.87 dBW, Date: 14-Dec-2011



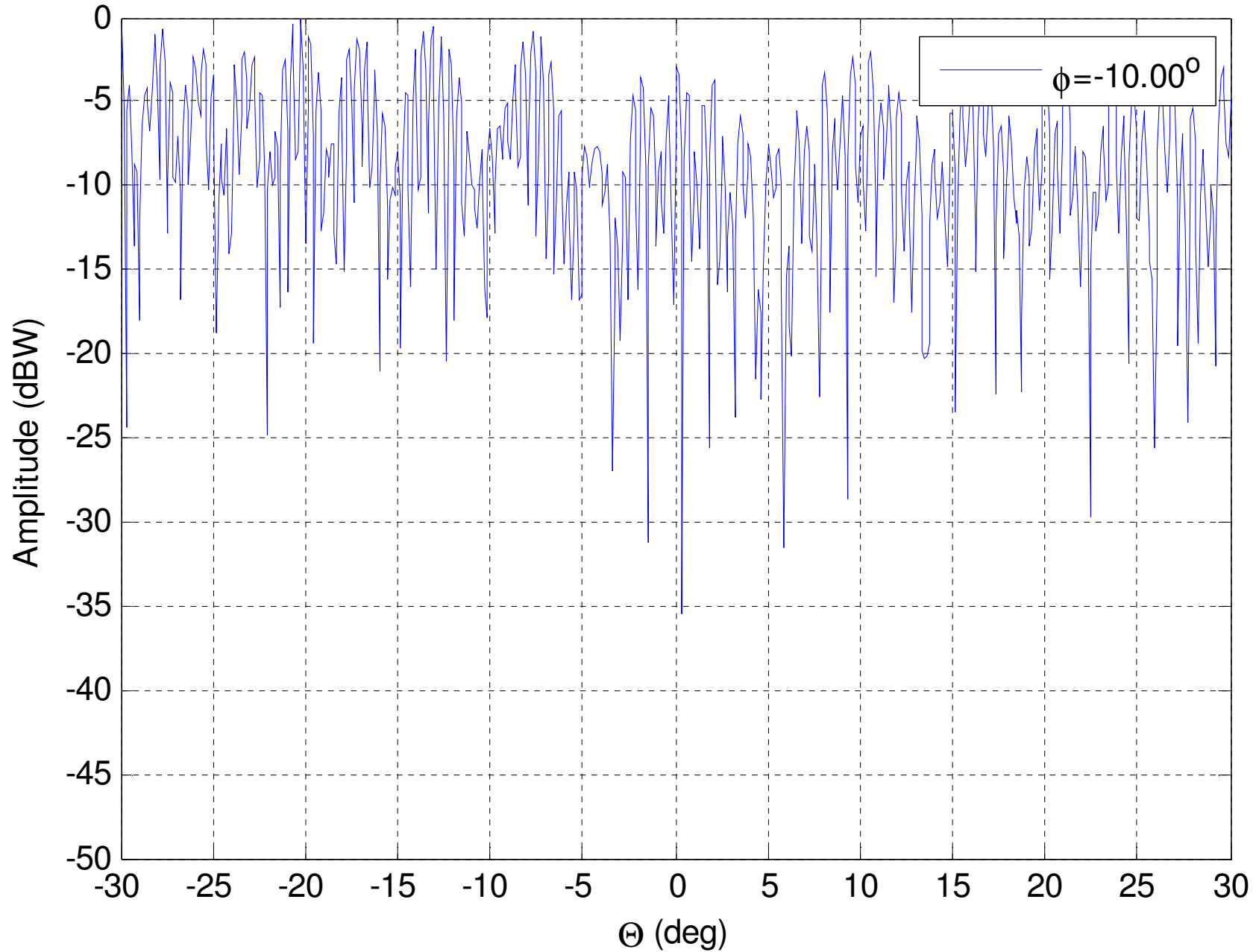
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -7.39 dBW, Date: 14-Dec-2011



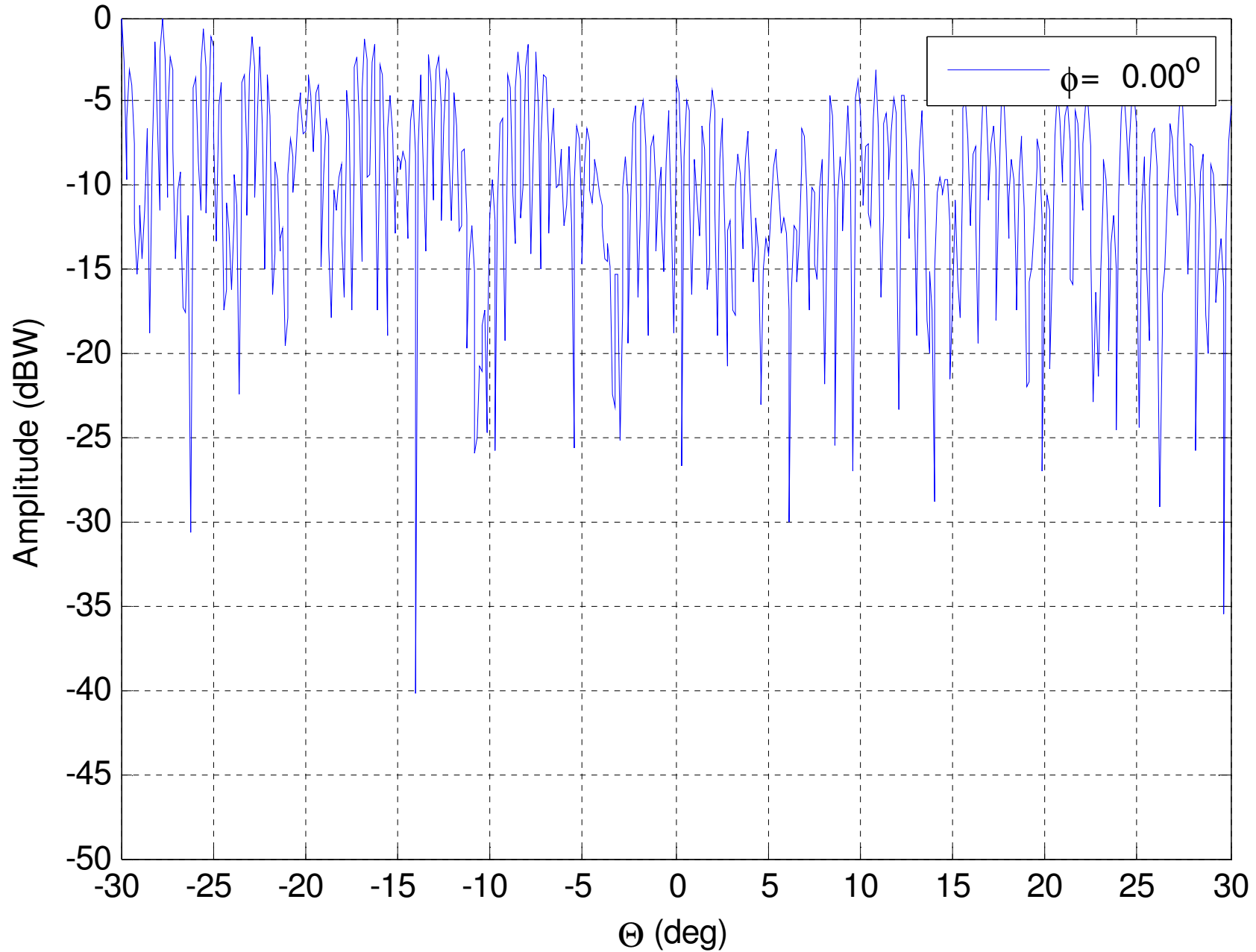
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -9.05 dBW, Date: 14-Dec-2011



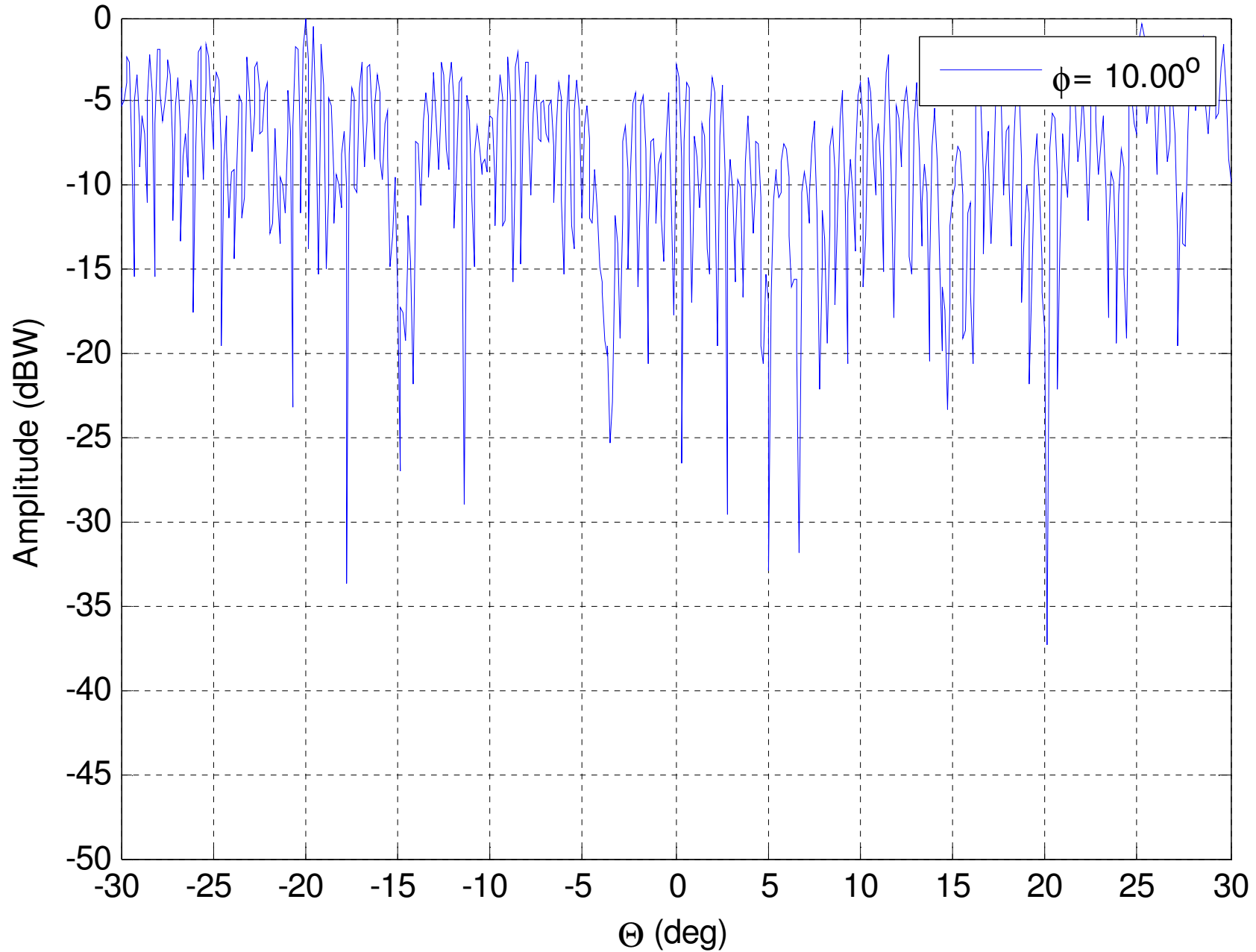
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -8.13 dBW, Date: 14-Dec-2011



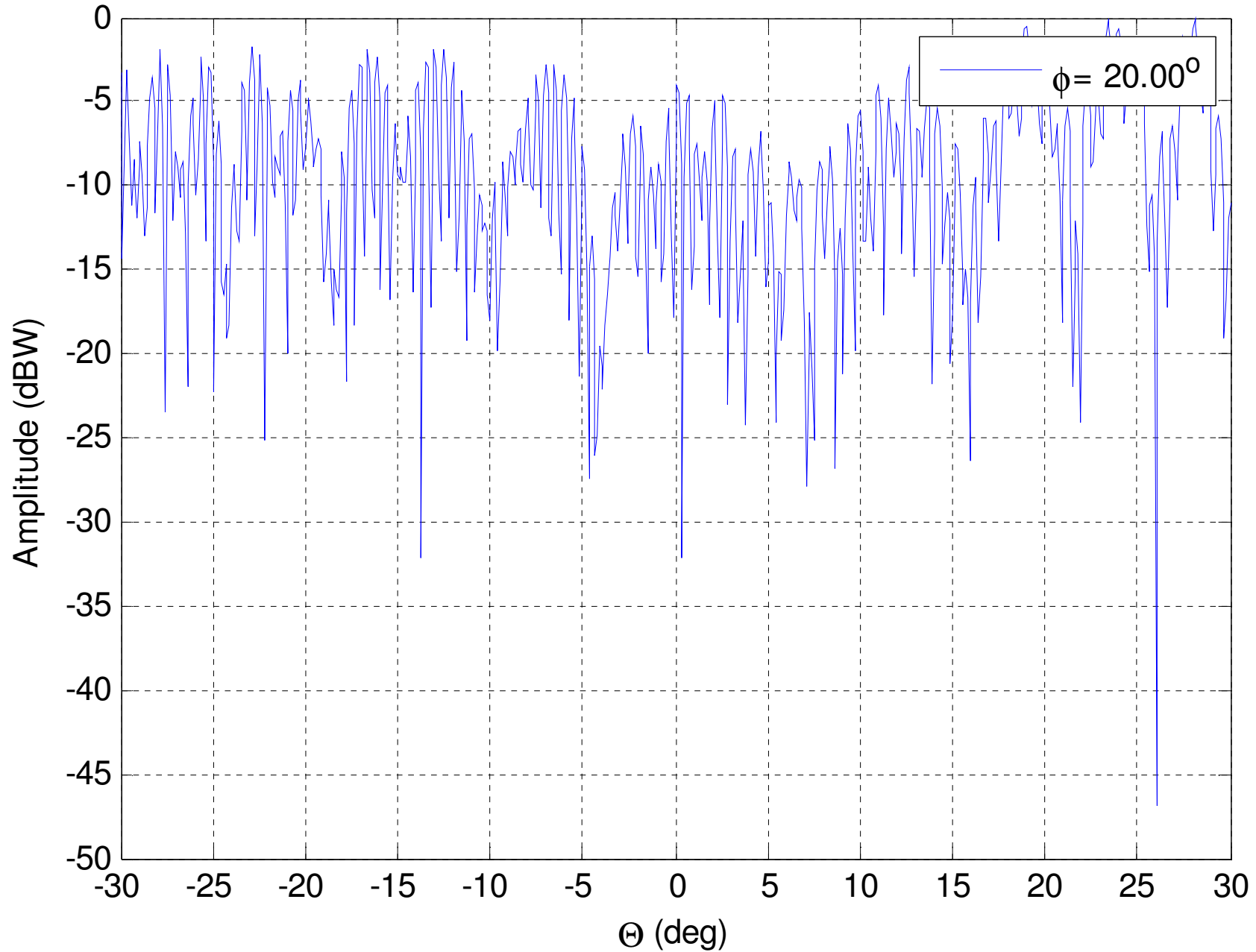
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -9.05 dBW, Date: 14-Dec-2011



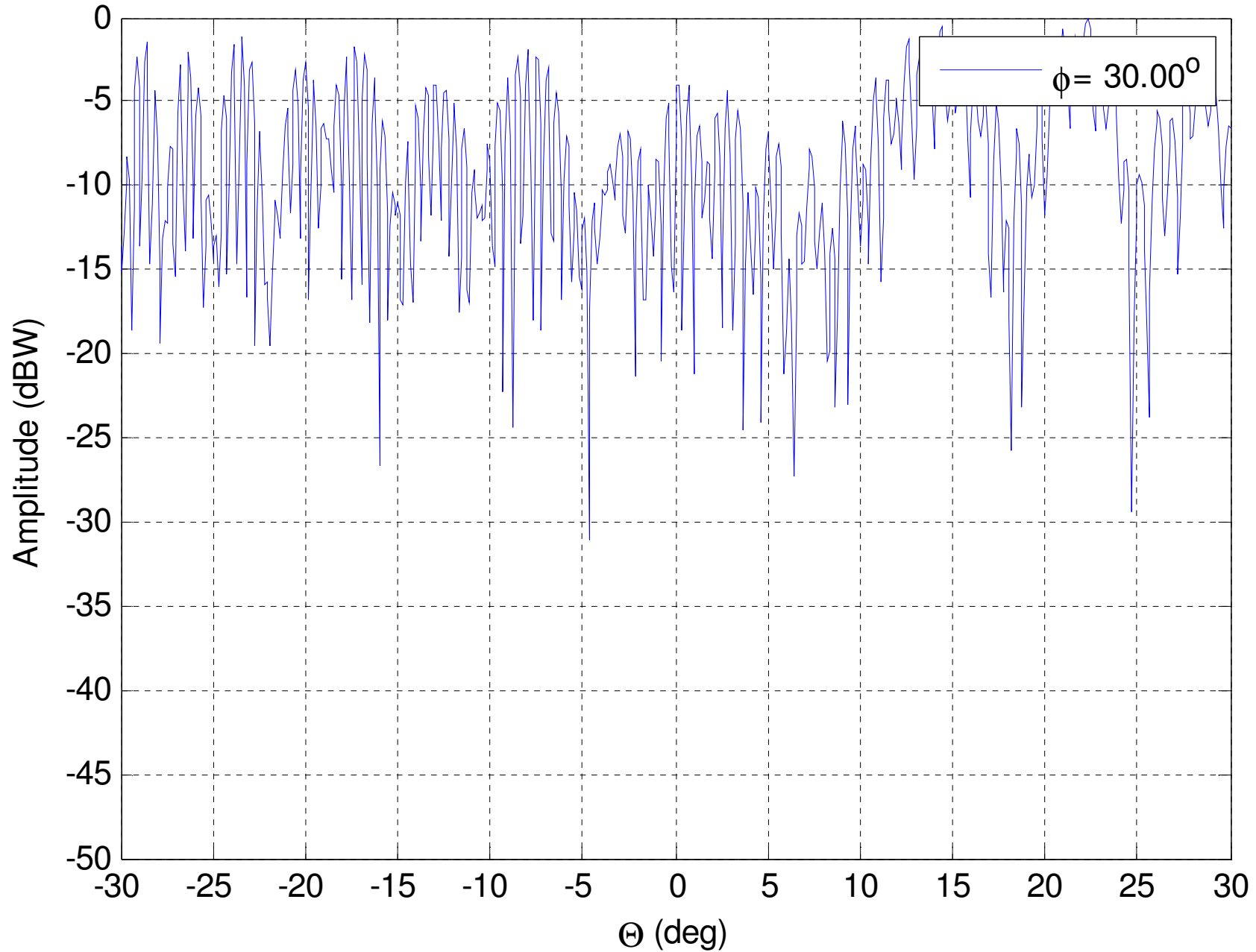
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.94 dBW, Date: 14-Dec-2011



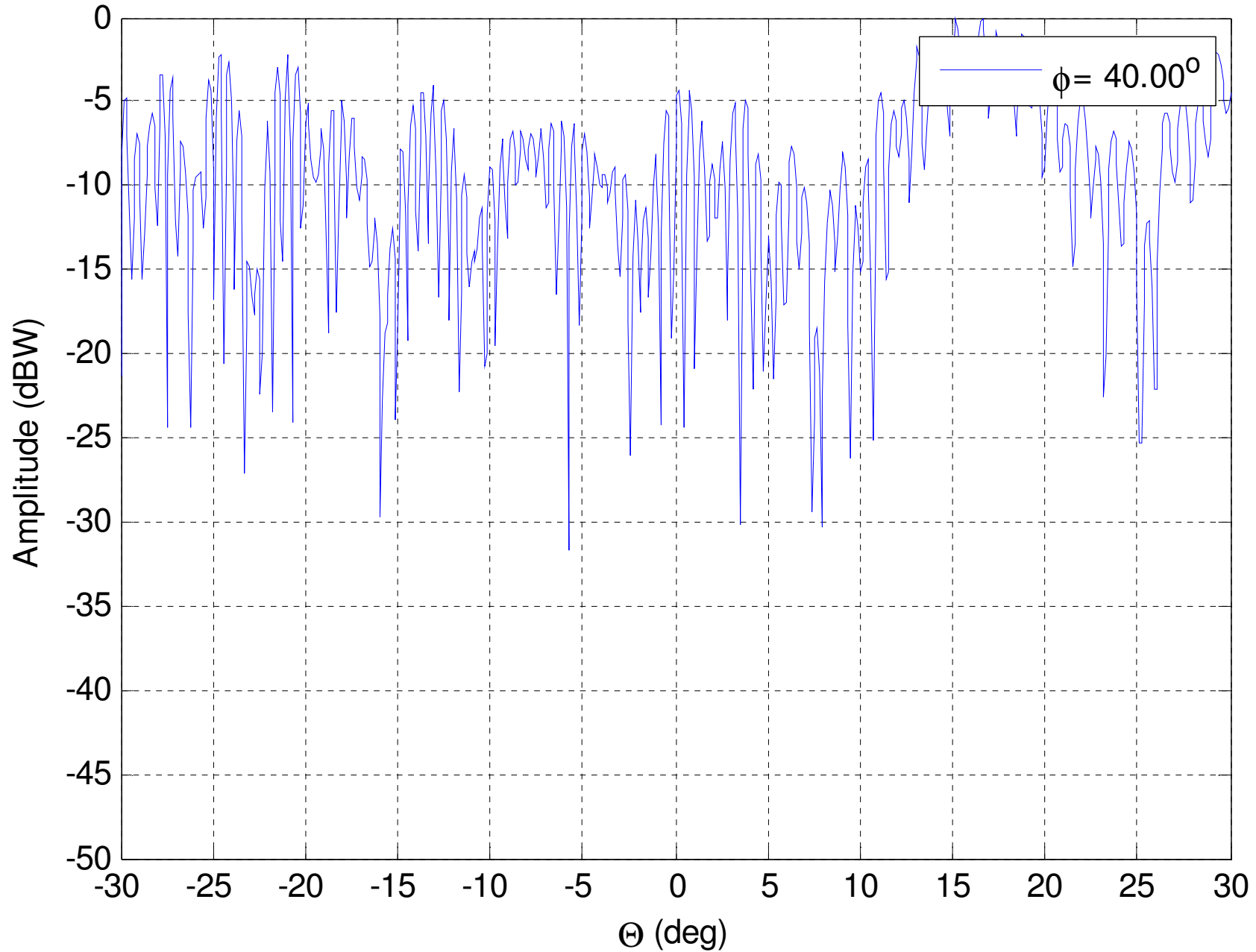
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -8.09 dBW, Date: 14-Dec-2011



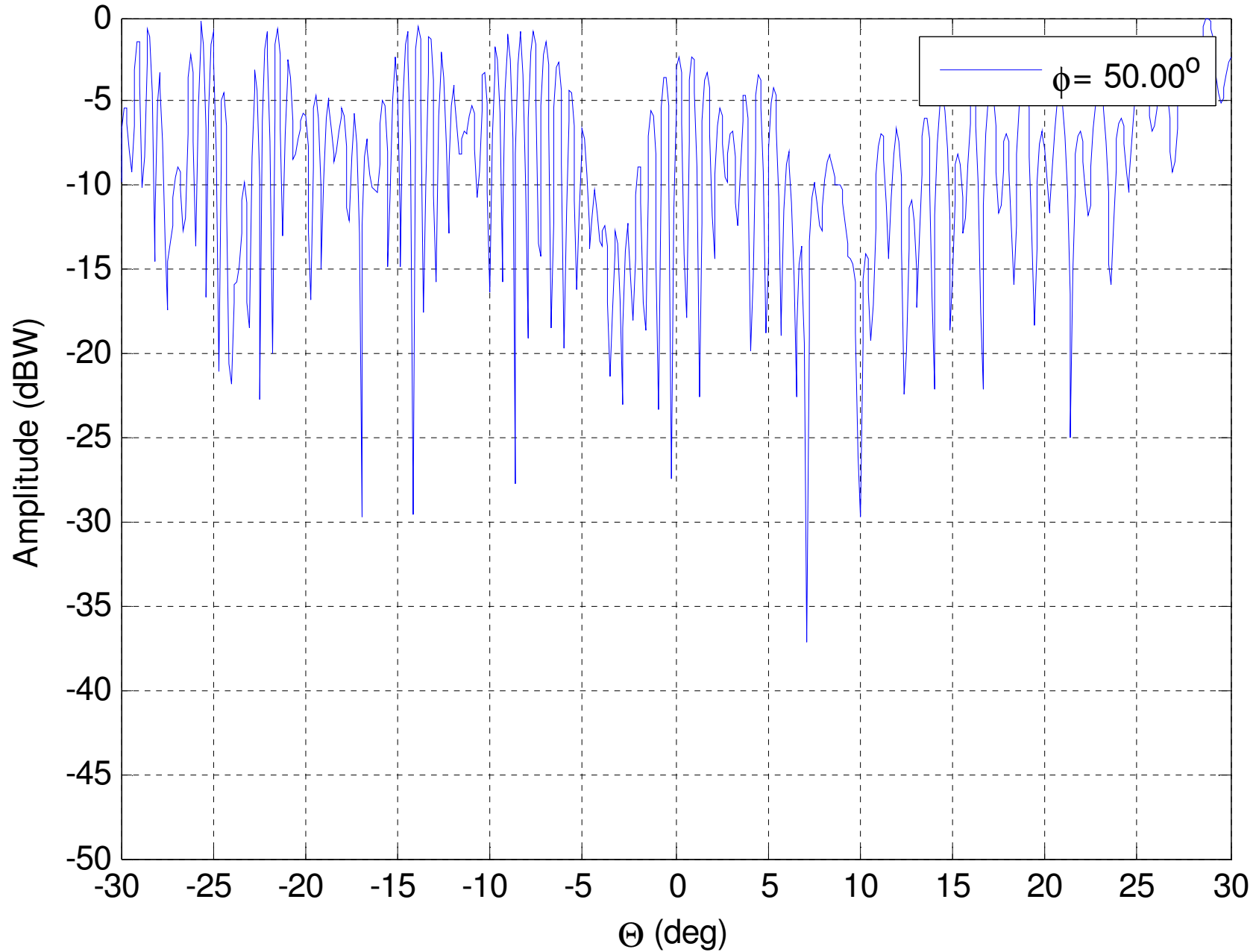
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.55 dBW, Date: 14-Dec-2011



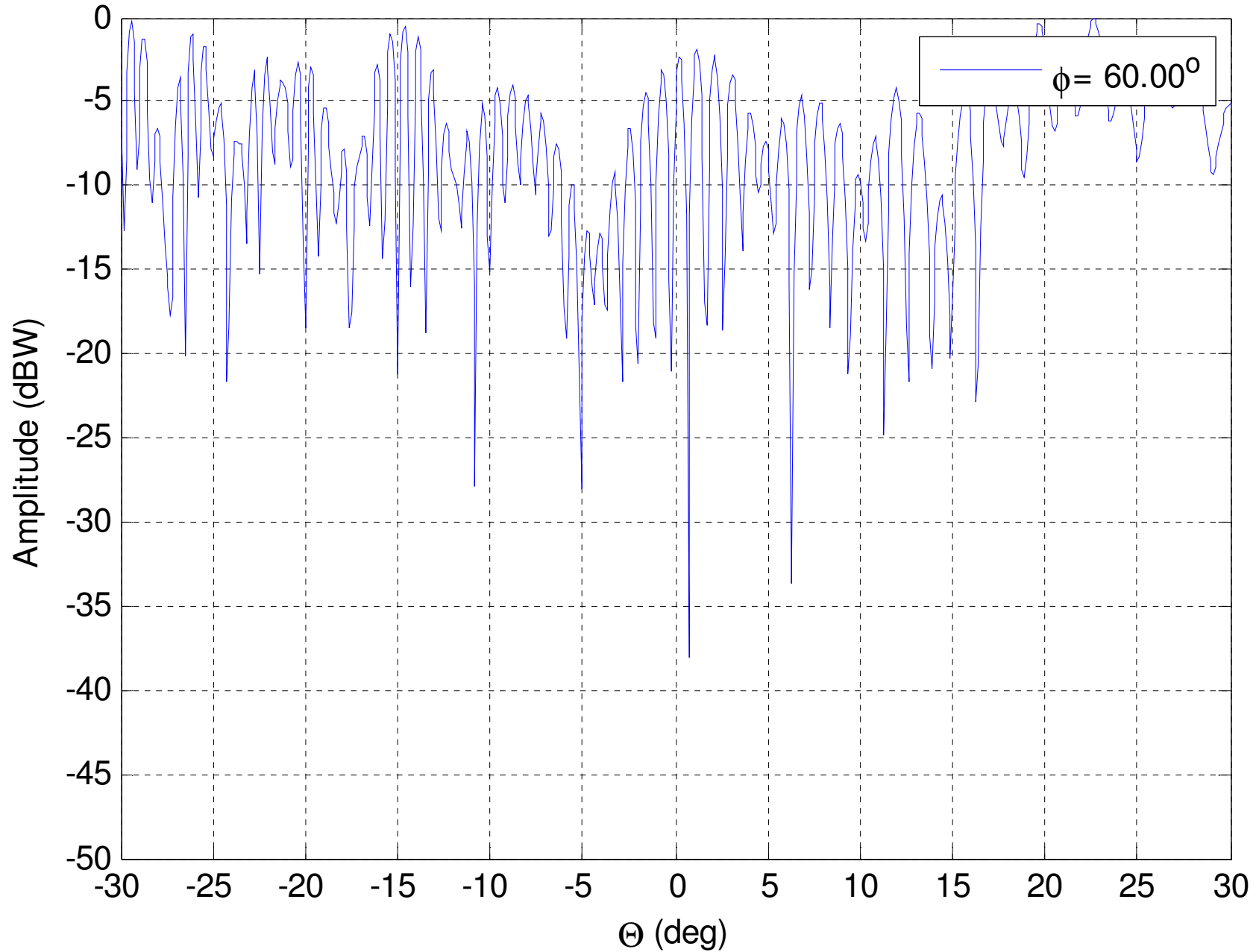
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -9.43 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

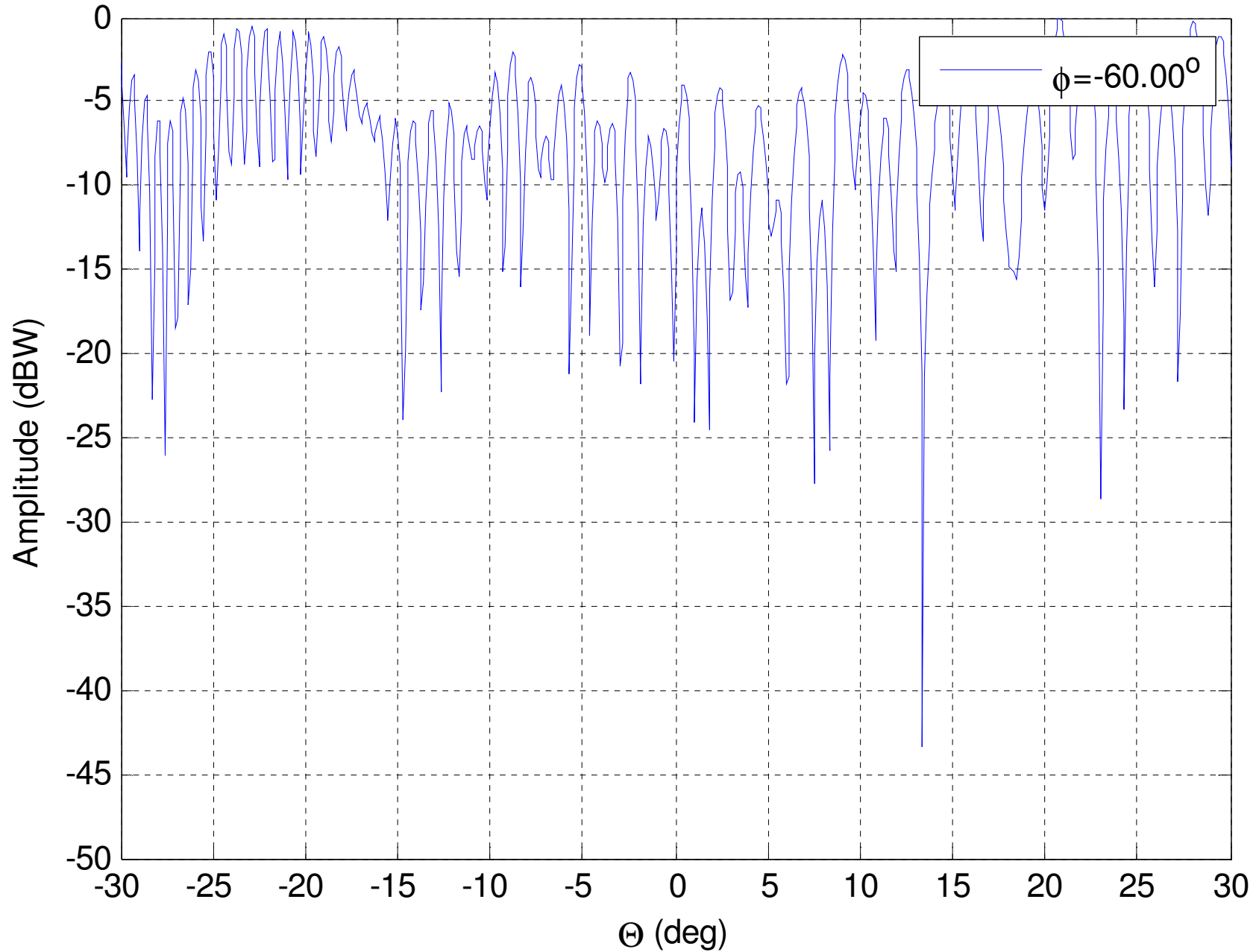
Input file: tx-17.5-lhcp-60.cut, Peak: -9.51 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

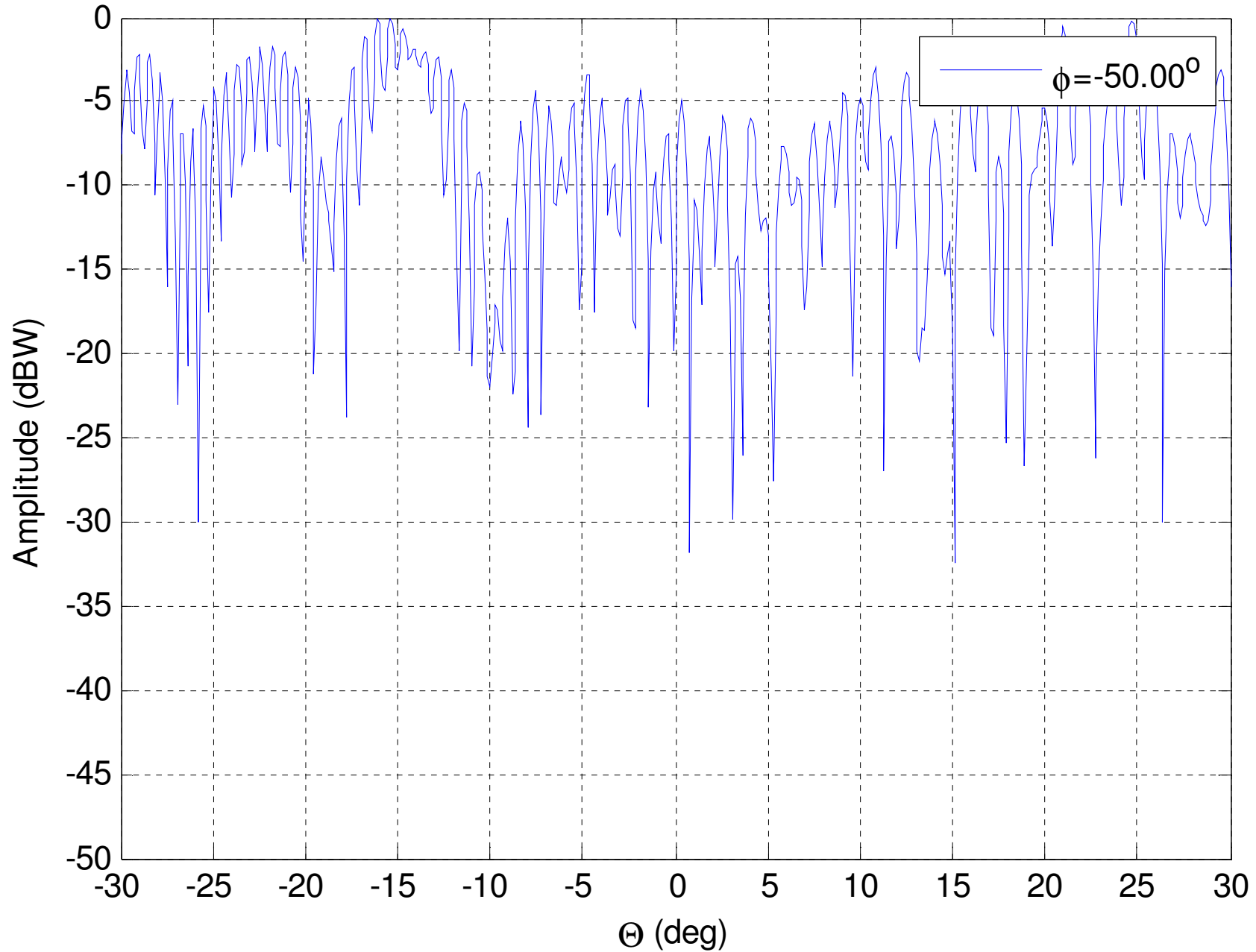
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -8.73 dBW, Date: 14-Dec-2011



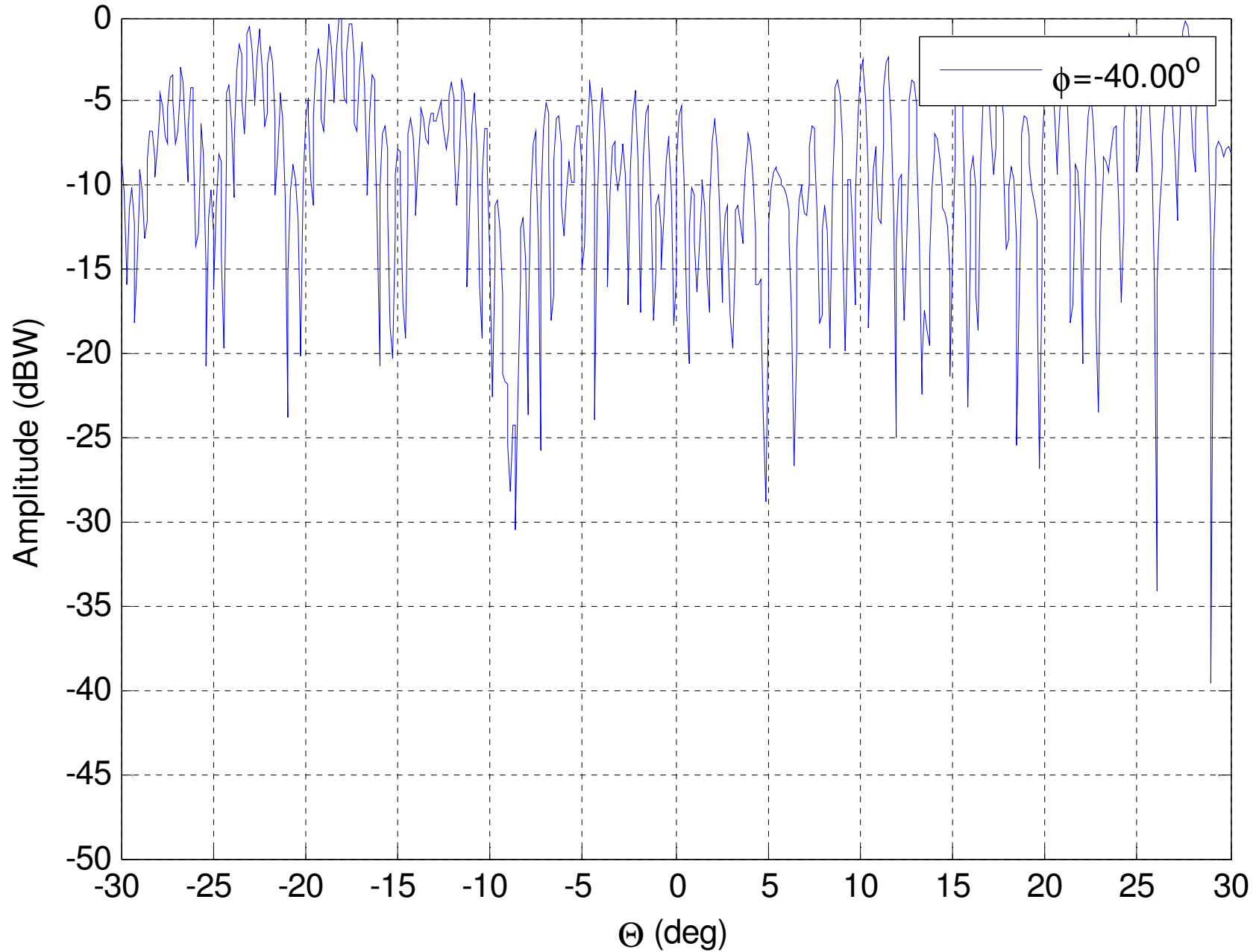
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -7.89 dBW, Date: 14-Dec-2011



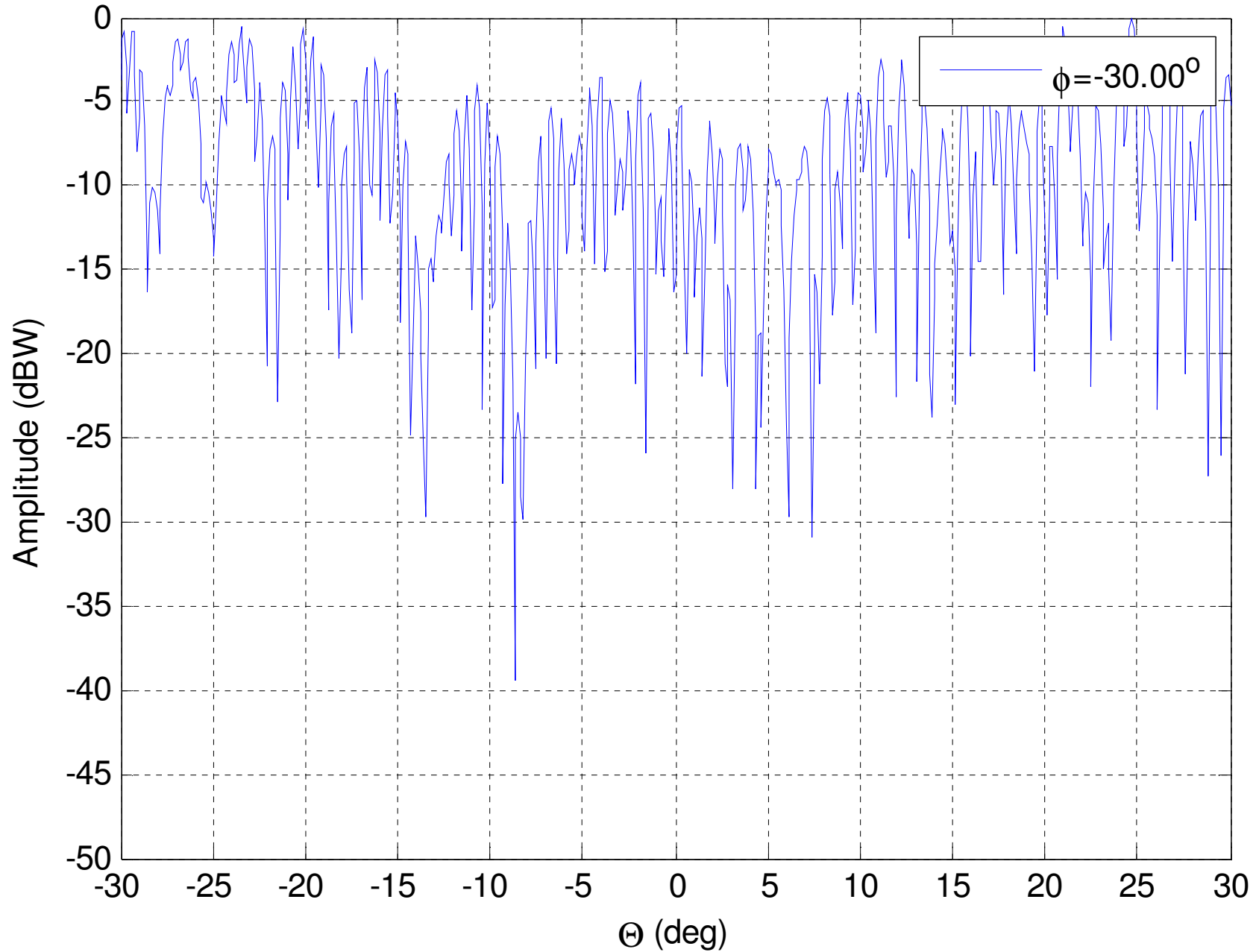
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.38 dBW, Date: 14-Dec-2011



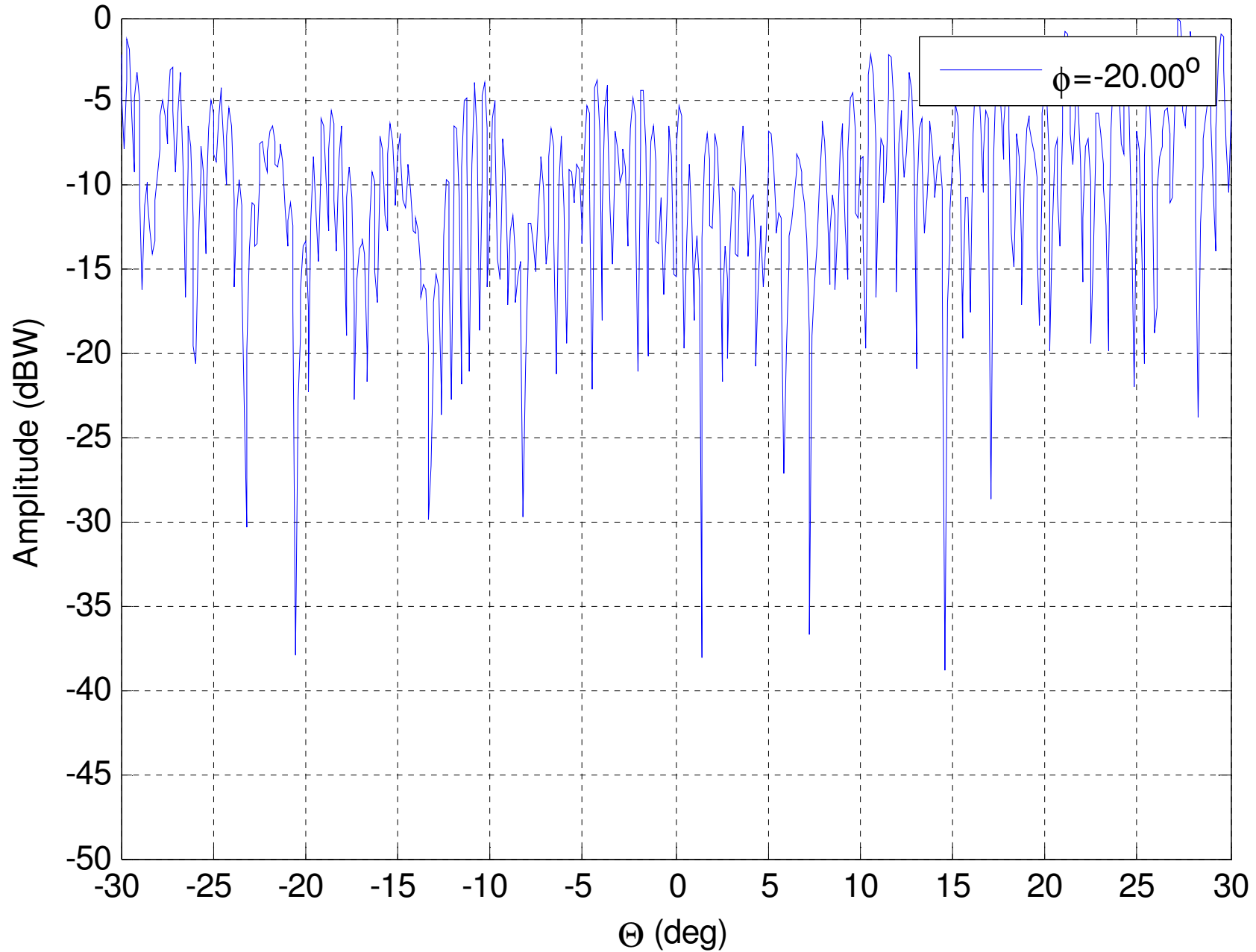
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.57 dBW, Date: 14-Dec-2011



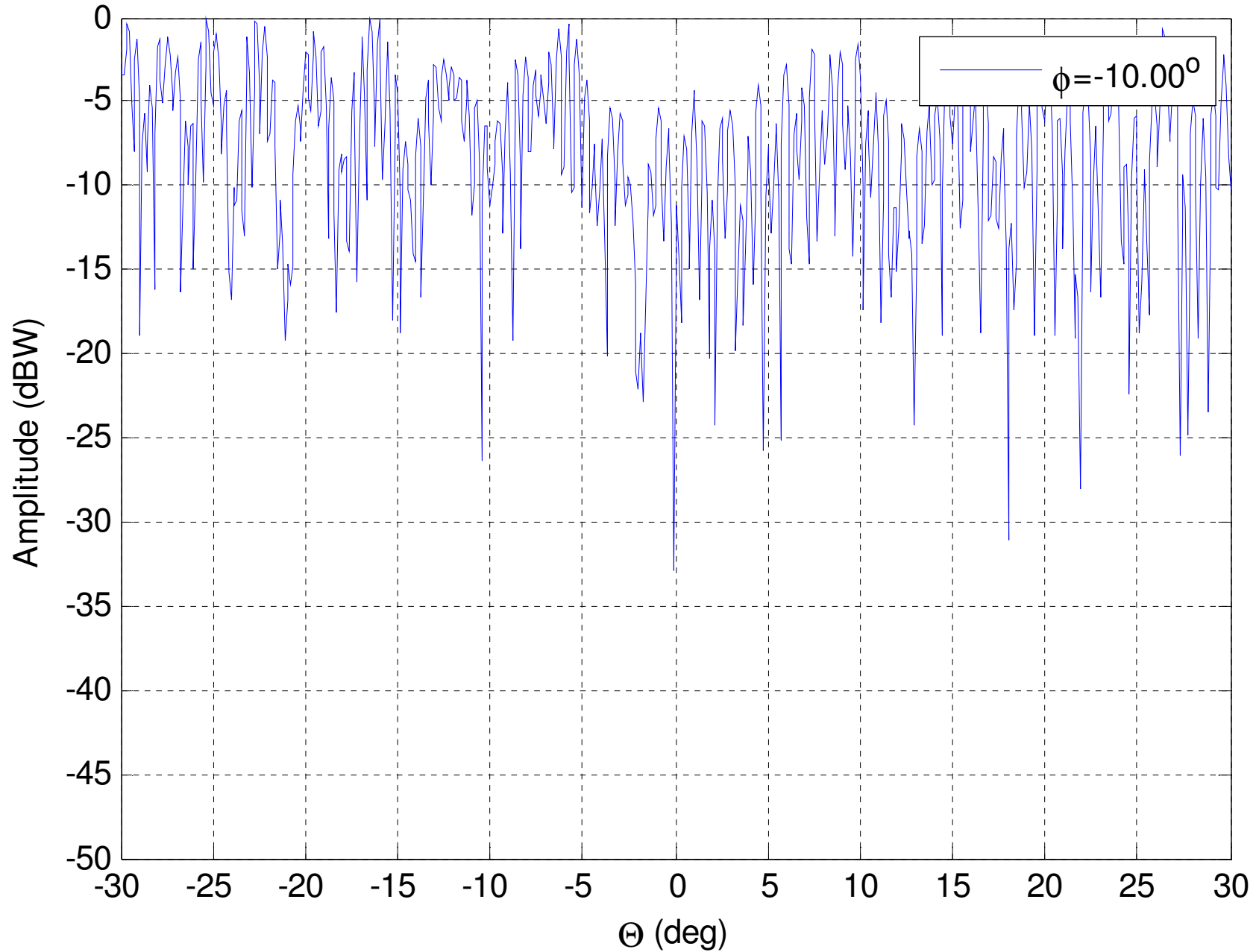
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -7.42 dBW, Date: 14-Dec-2011



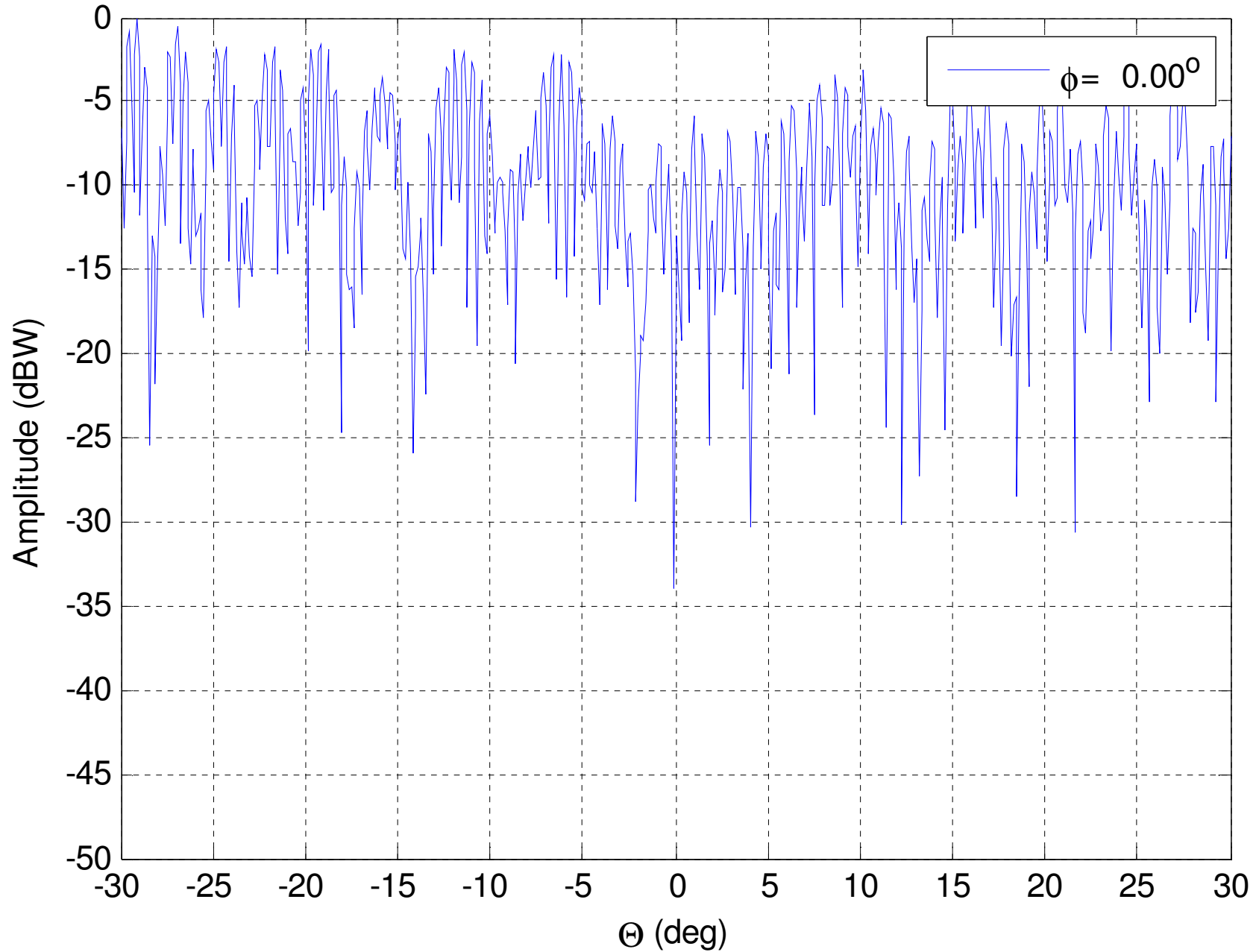
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -10.34 dBW, Date: 14-Dec-2011



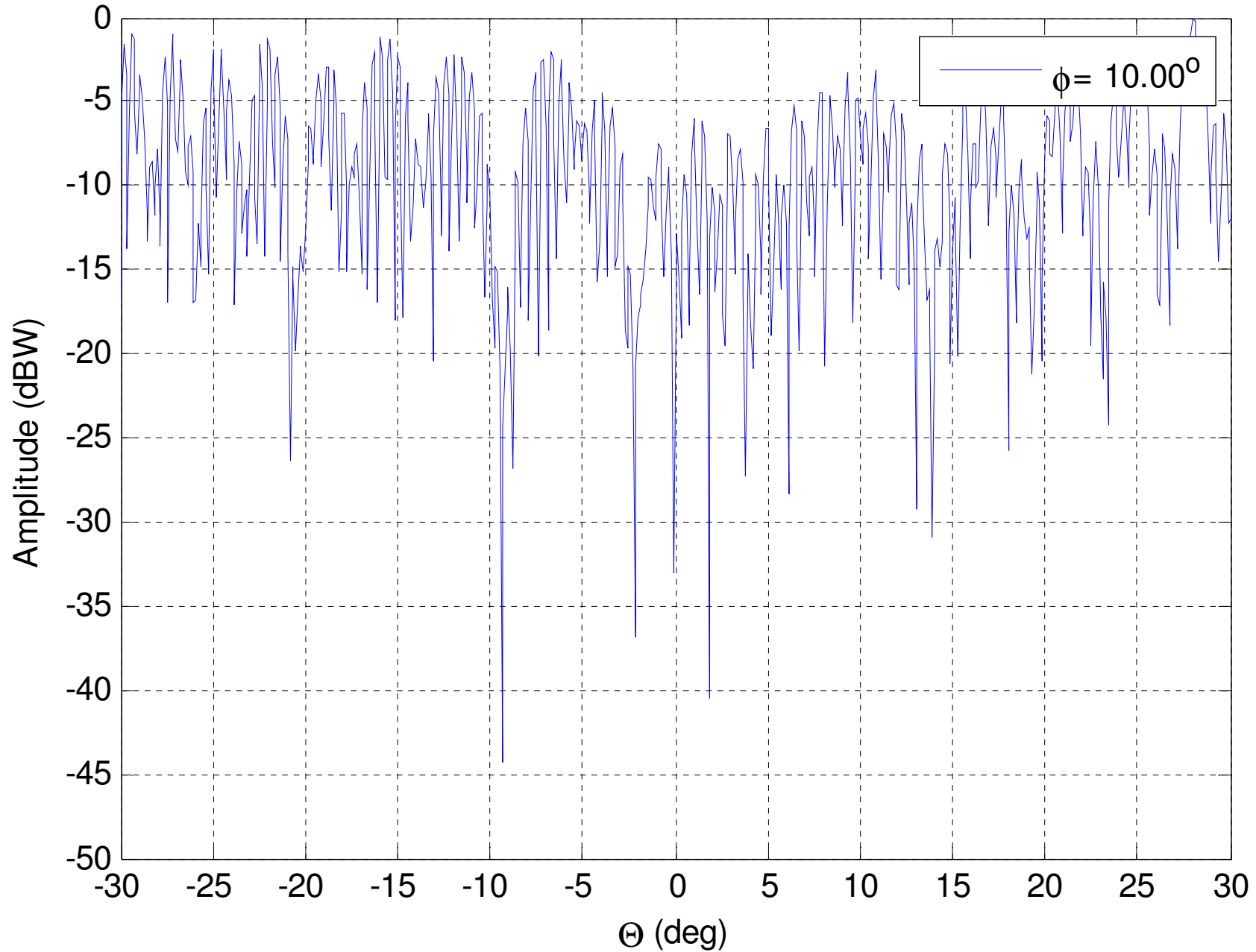
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -8.51 dBW, Date: 14-Dec-2011



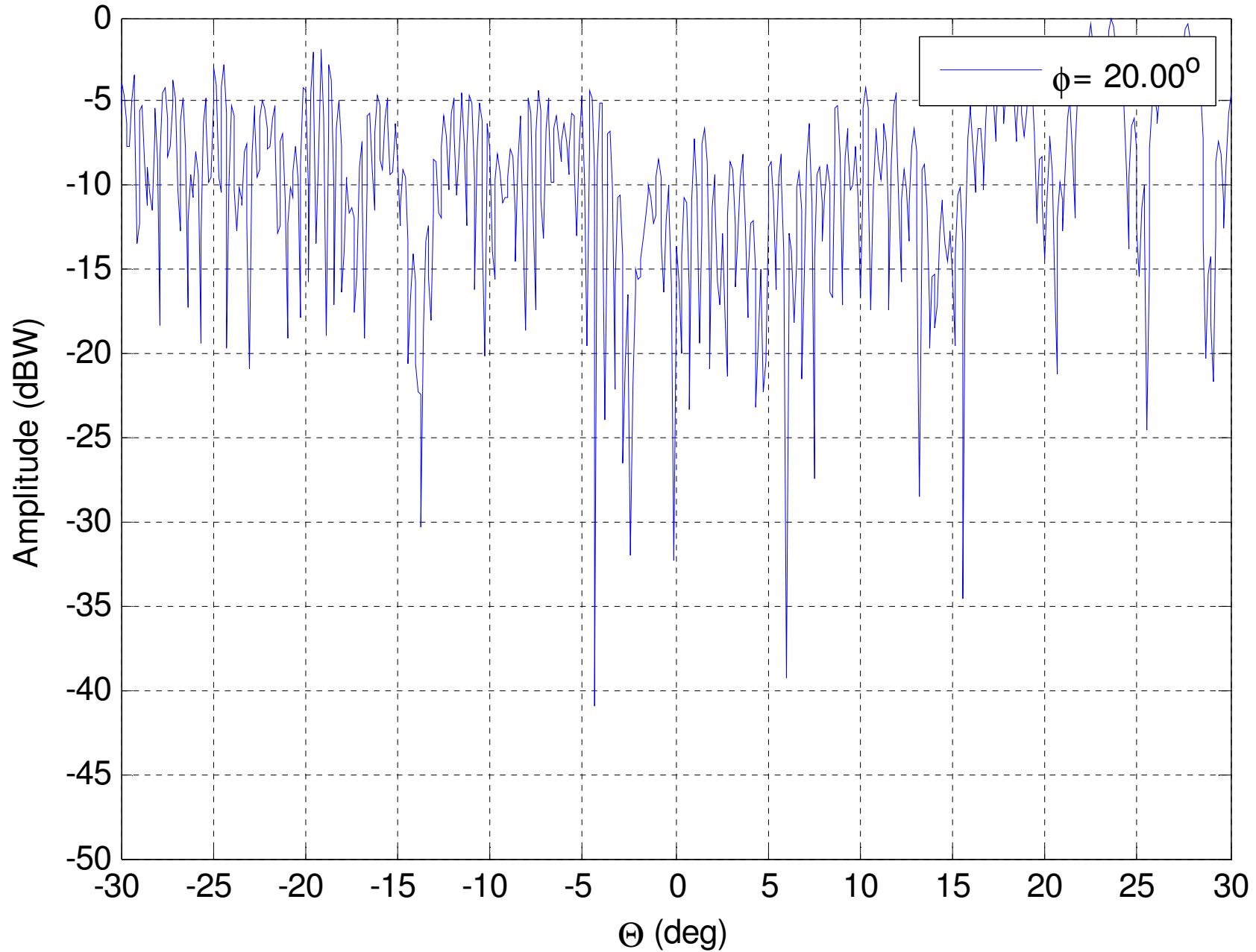
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -8.59 dBW, Date: 14-Dec-2011



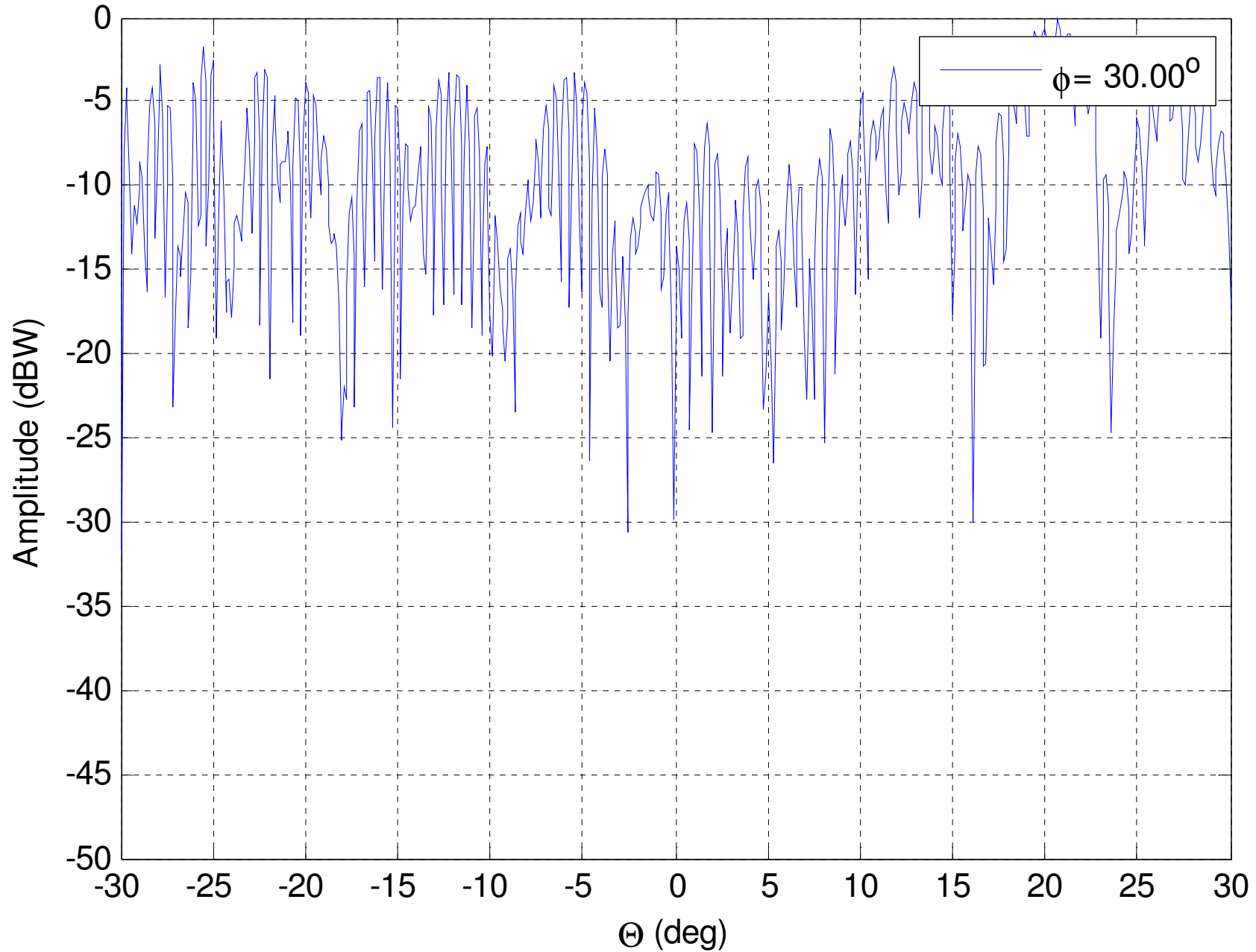
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.74 dBW, Date: 14-Dec-2011



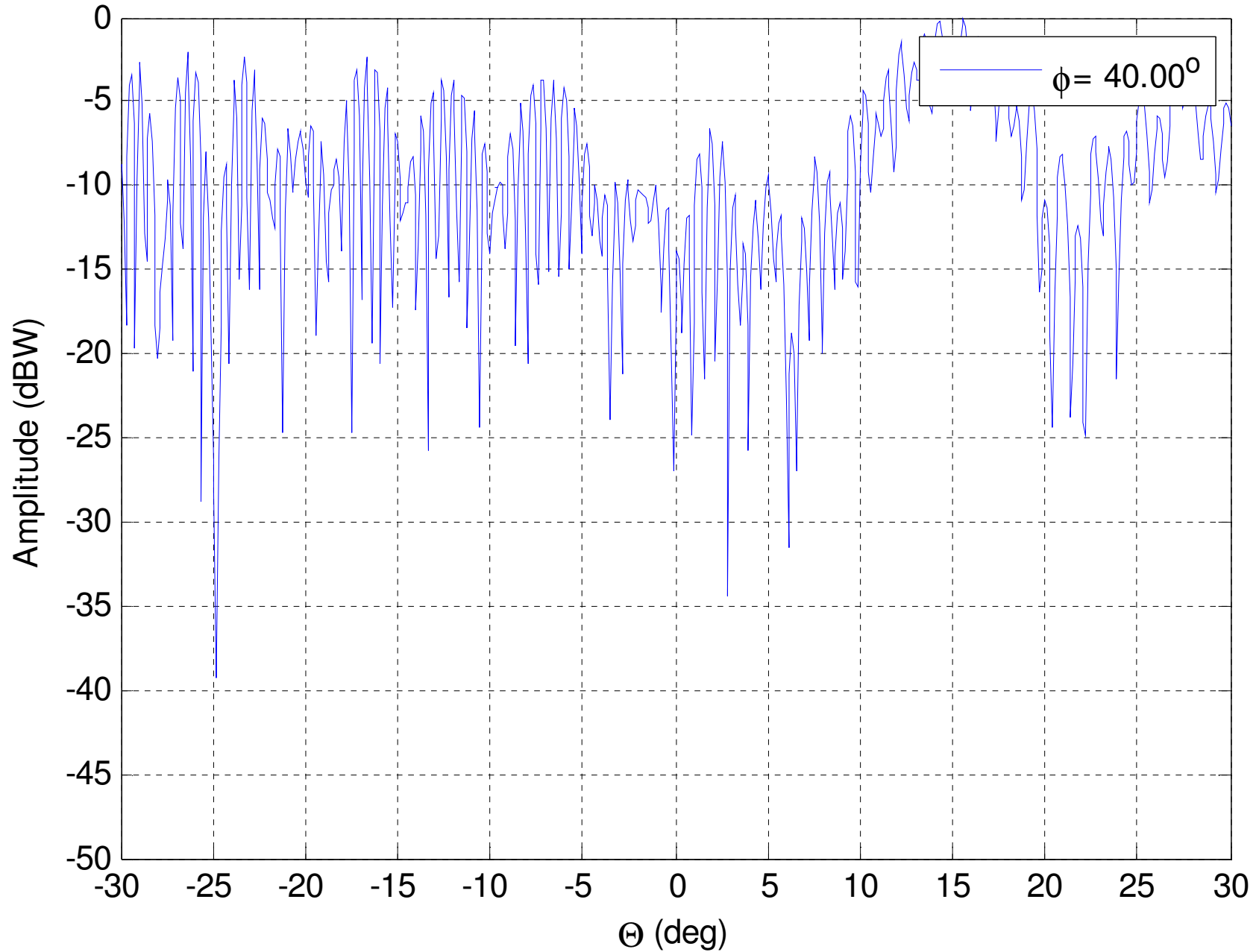
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -7.58 dBW, Date: 14-Dec-2011



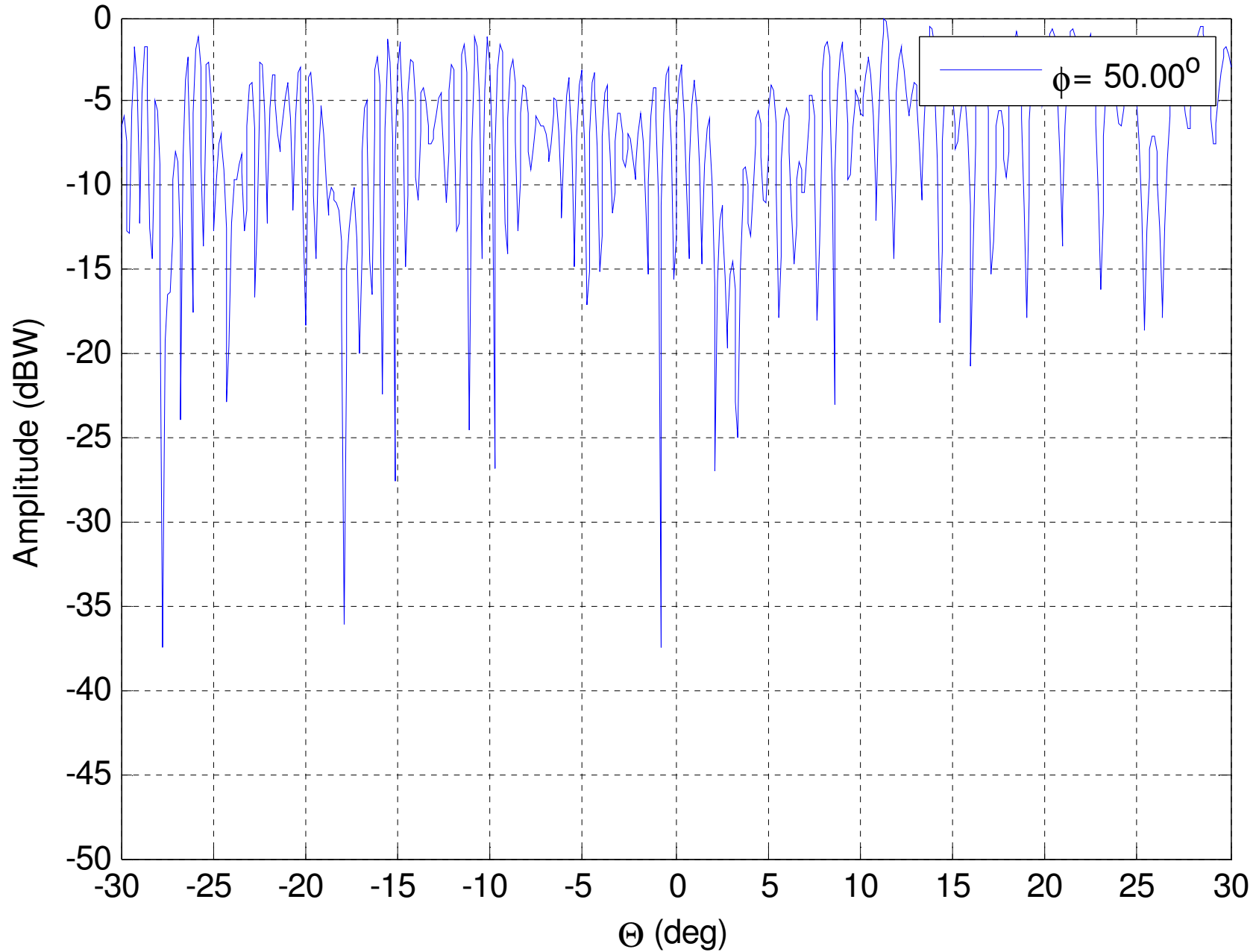
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -7.35 dBW, Date: 14-Dec-2011



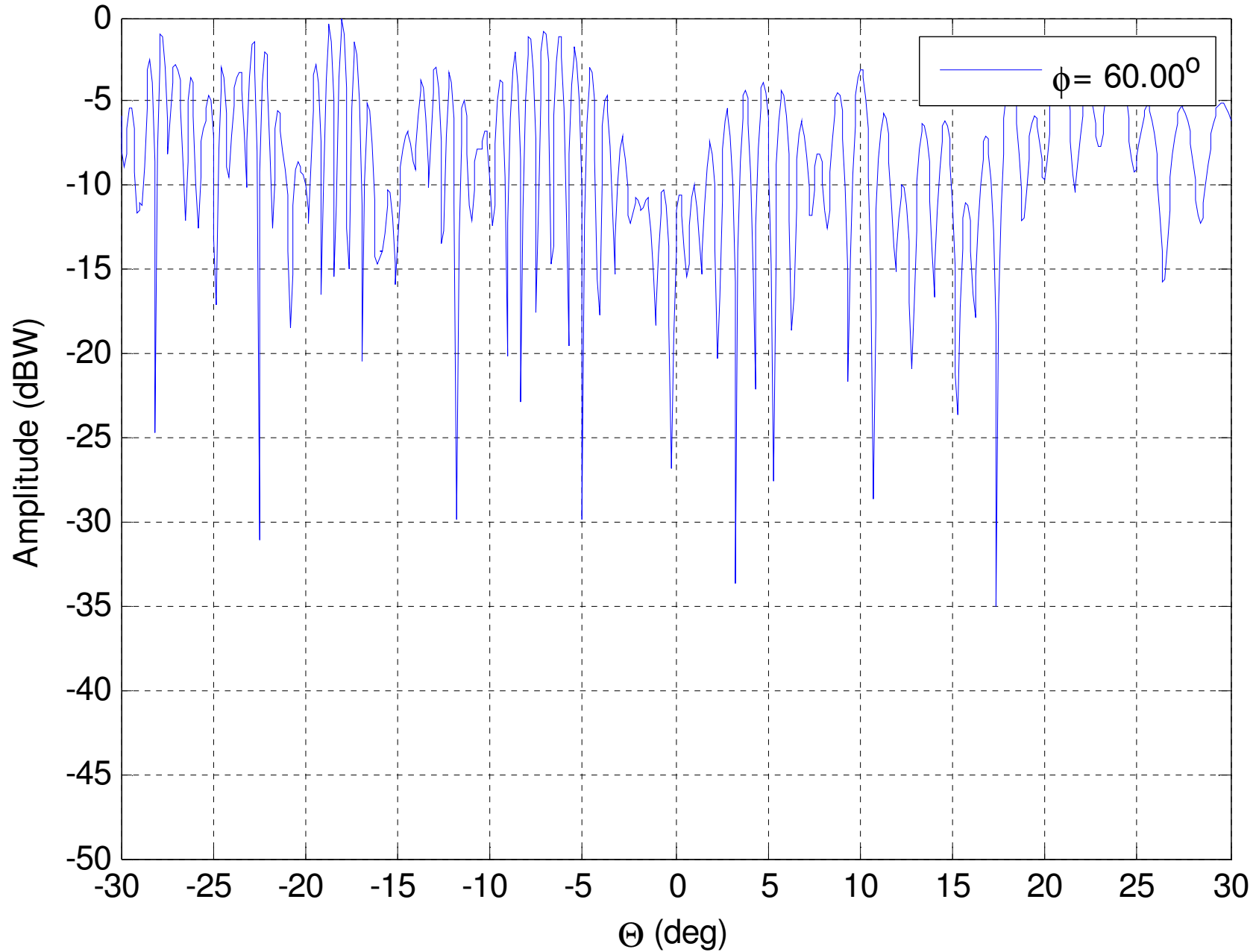
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.87 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

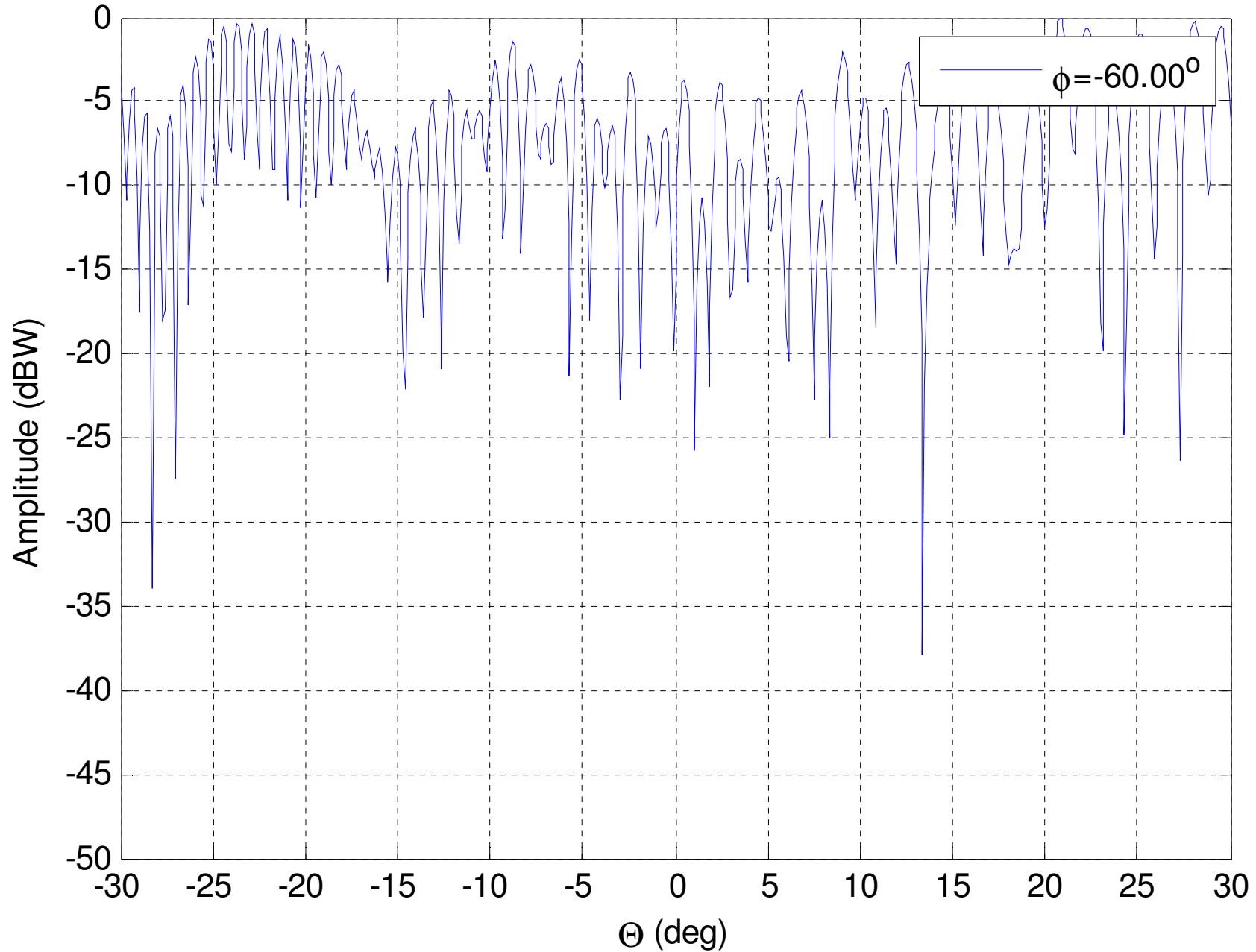
Input file: tx-17.7-rhcp-60.cut, Peak: -10.11 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

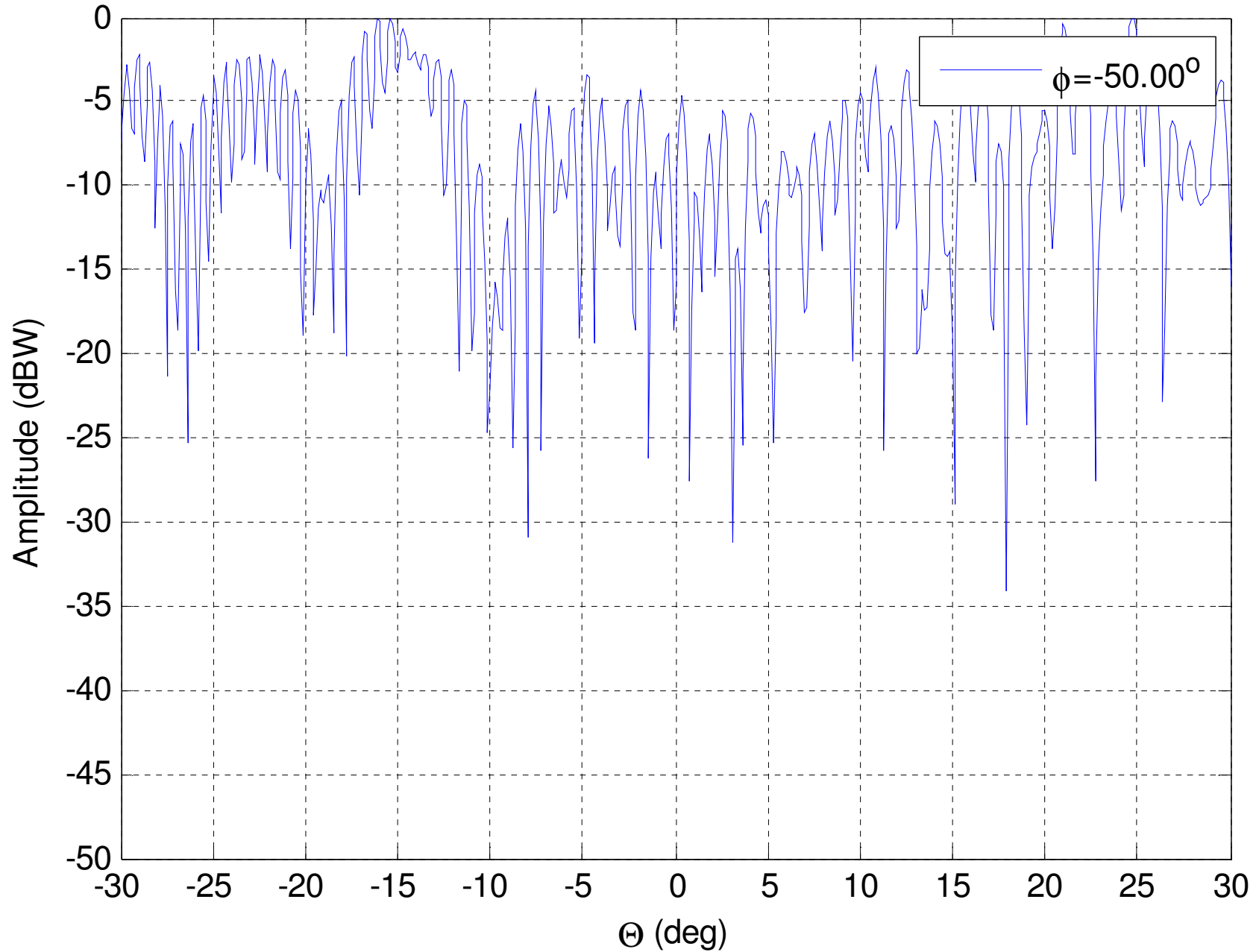
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -8.82 dBW, Date: 14-Dec-2011



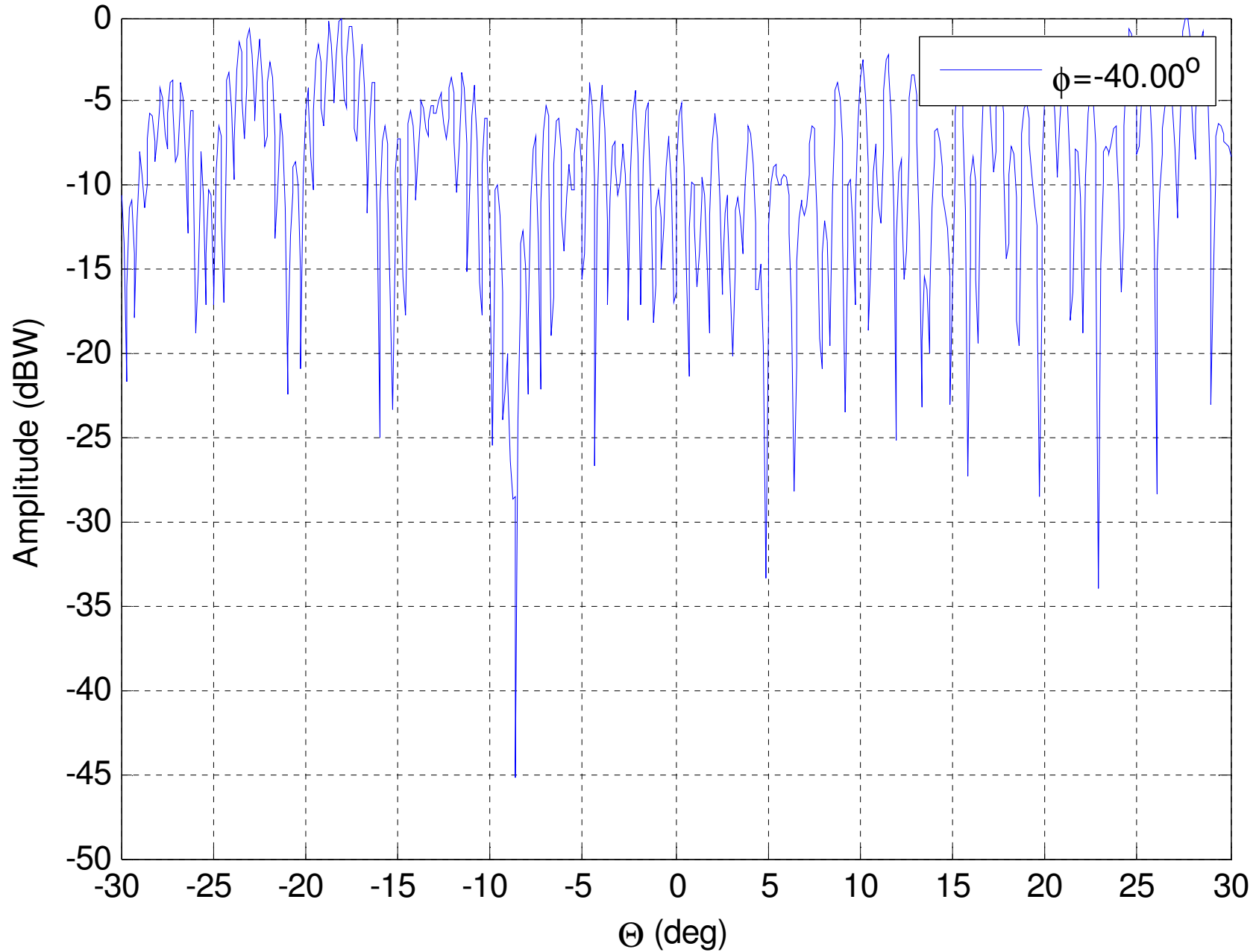
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.94 dBW, Date: 14-Dec-2011



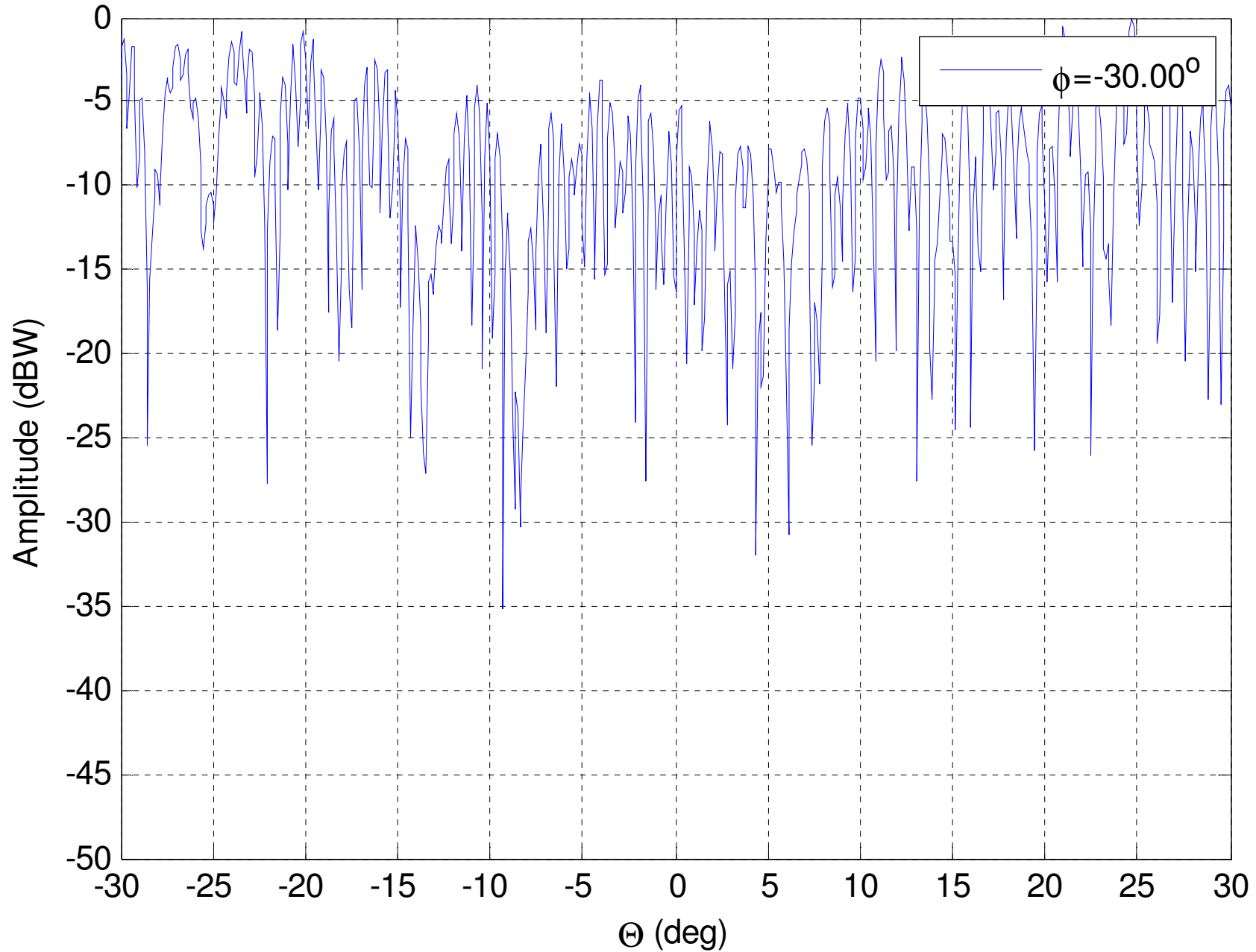
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -7.47 dBW, Date: 14-Dec-2011



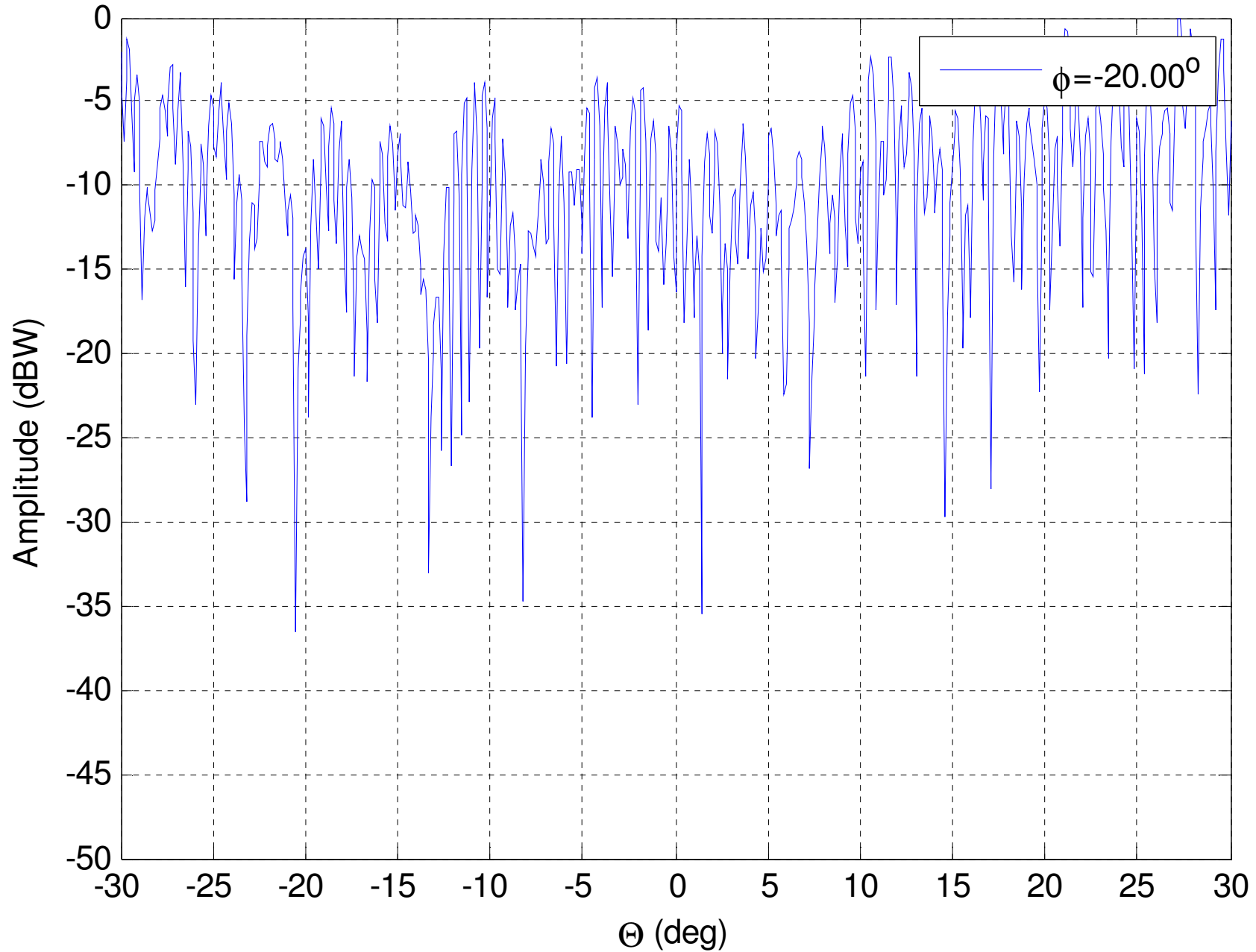
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.45 dBW, Date: 14-Dec-2011



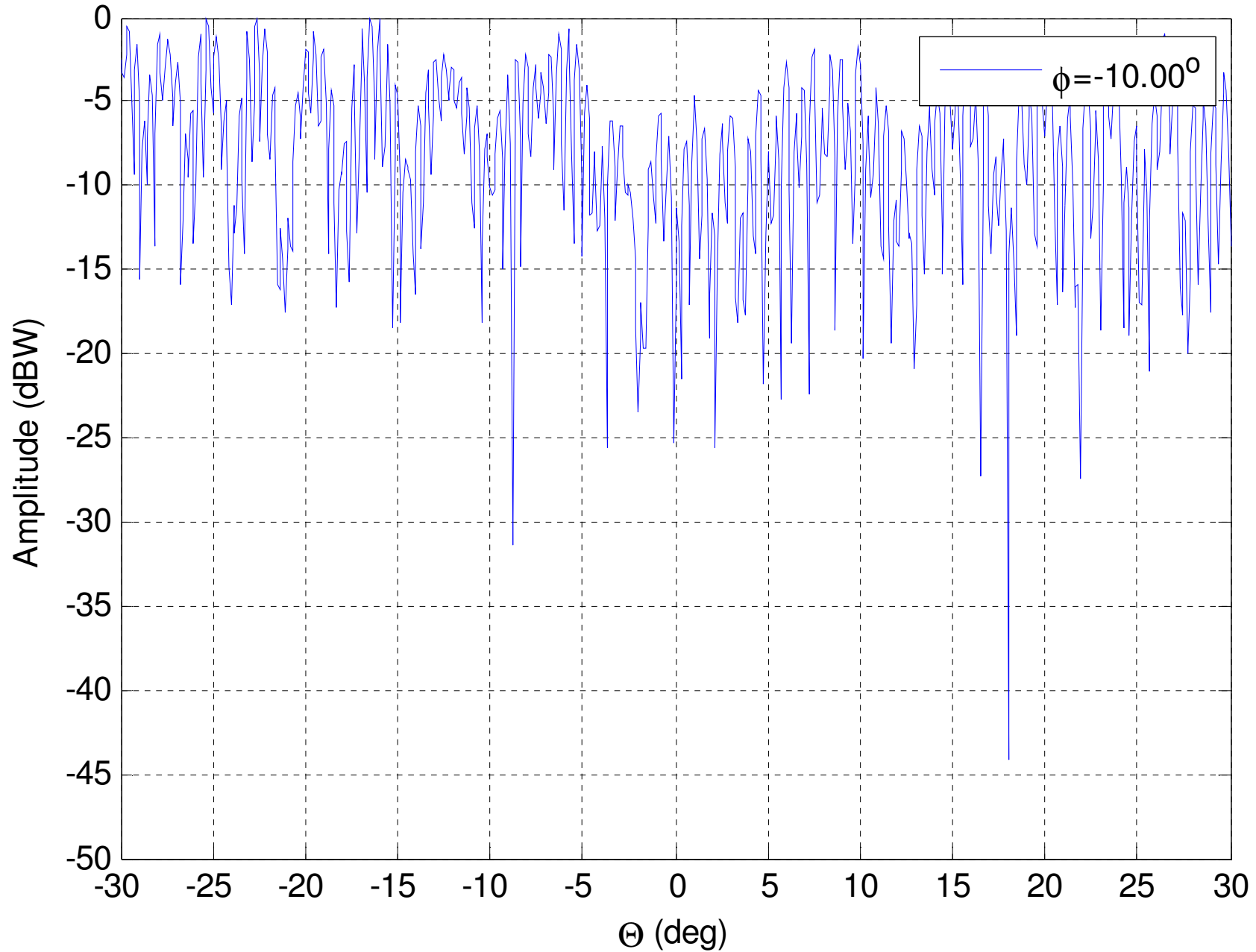
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -7.44 dBW, Date: 14-Dec-2011



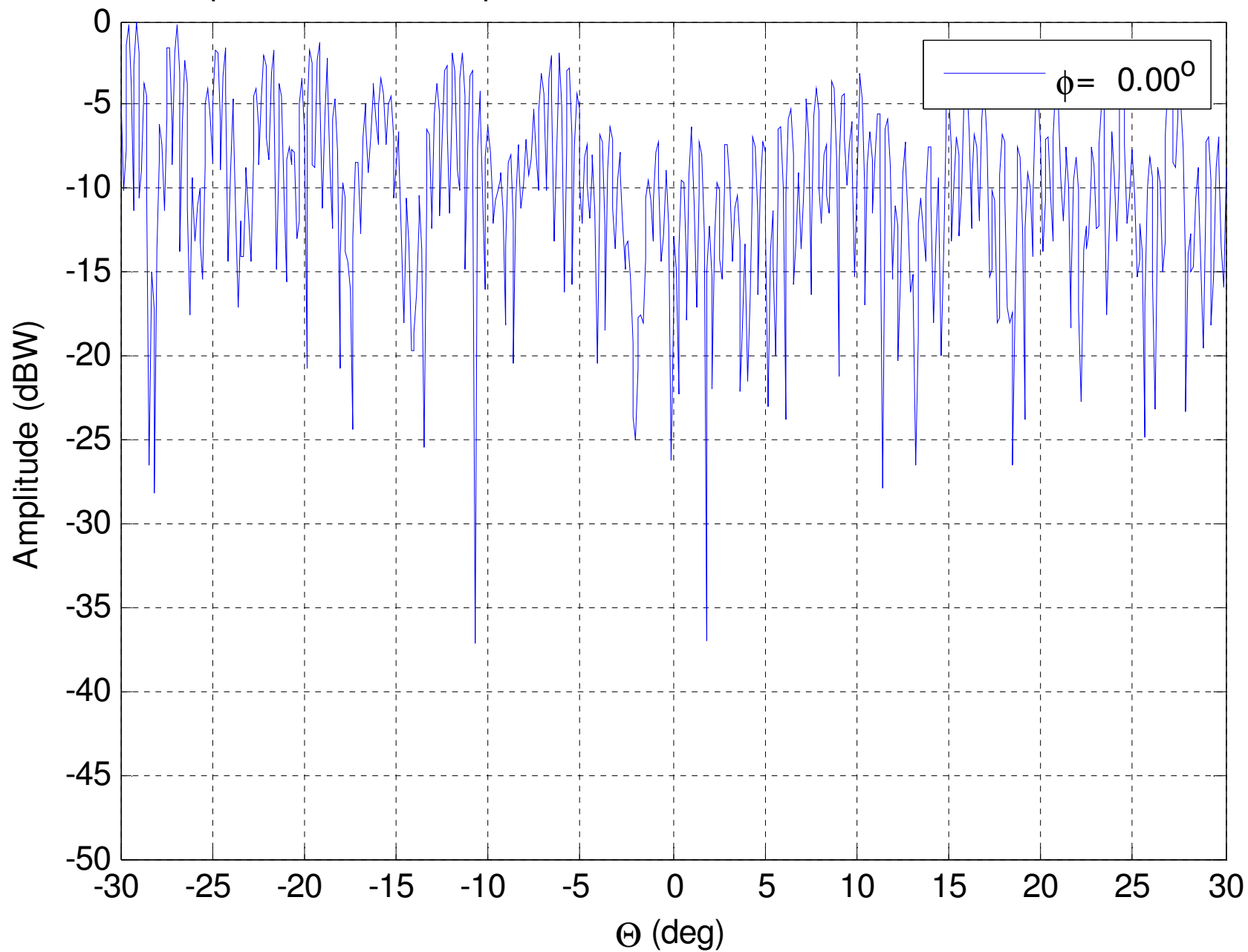
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -10.16 dBW, Date: 14-Dec-2011



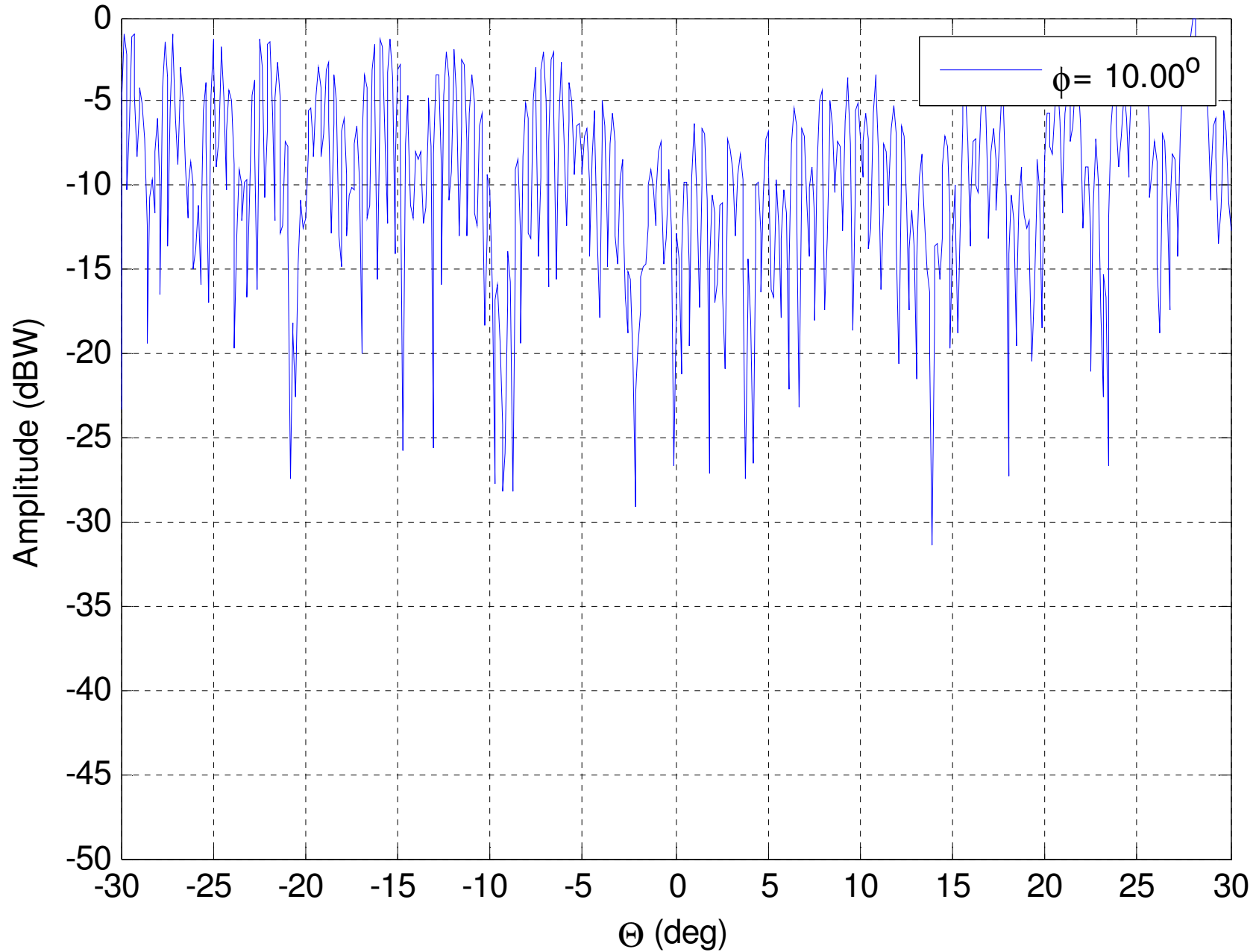
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -8.54 dBW, Date: 14-Dec-2011



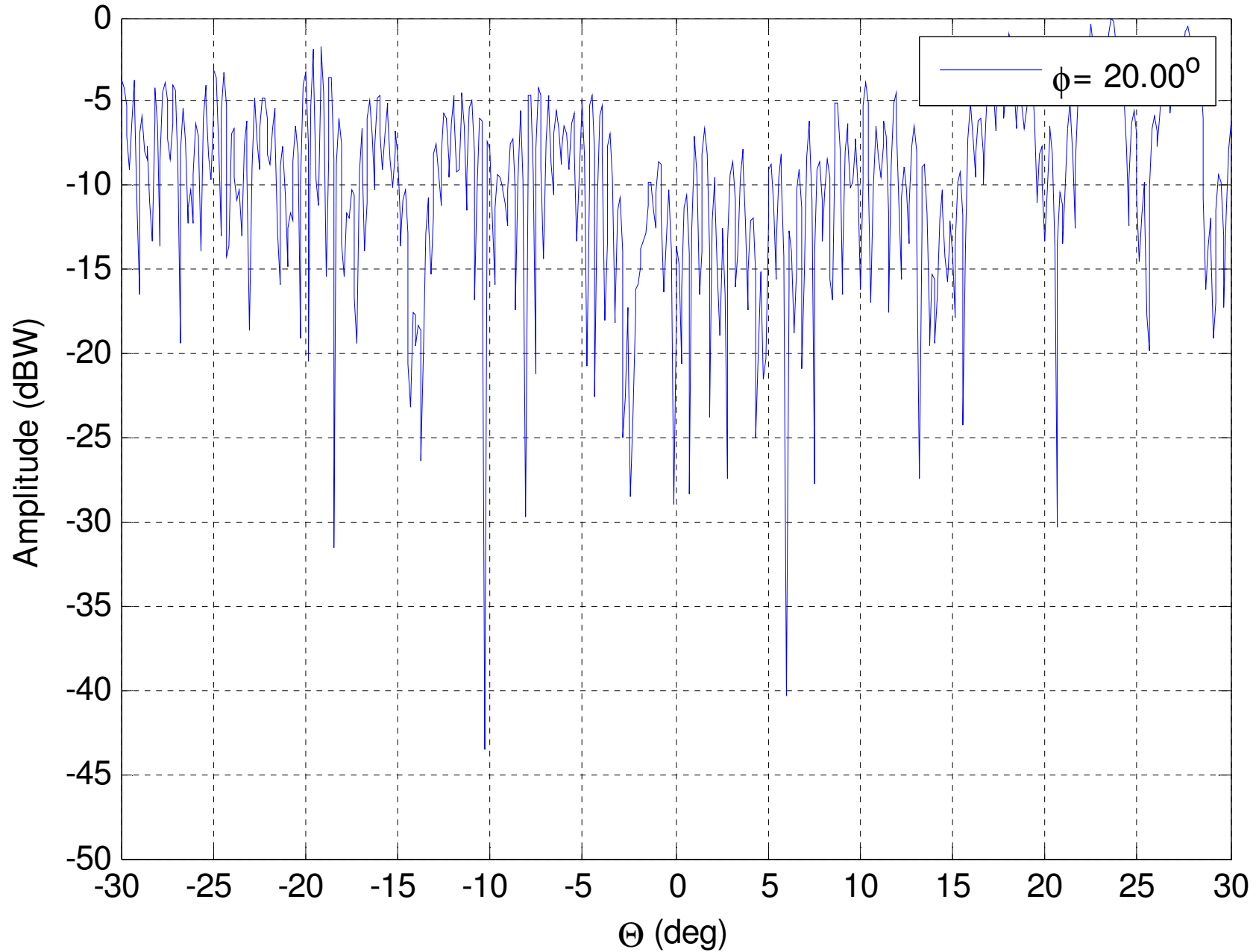
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.57 dBW, Date: 14-Dec-2011



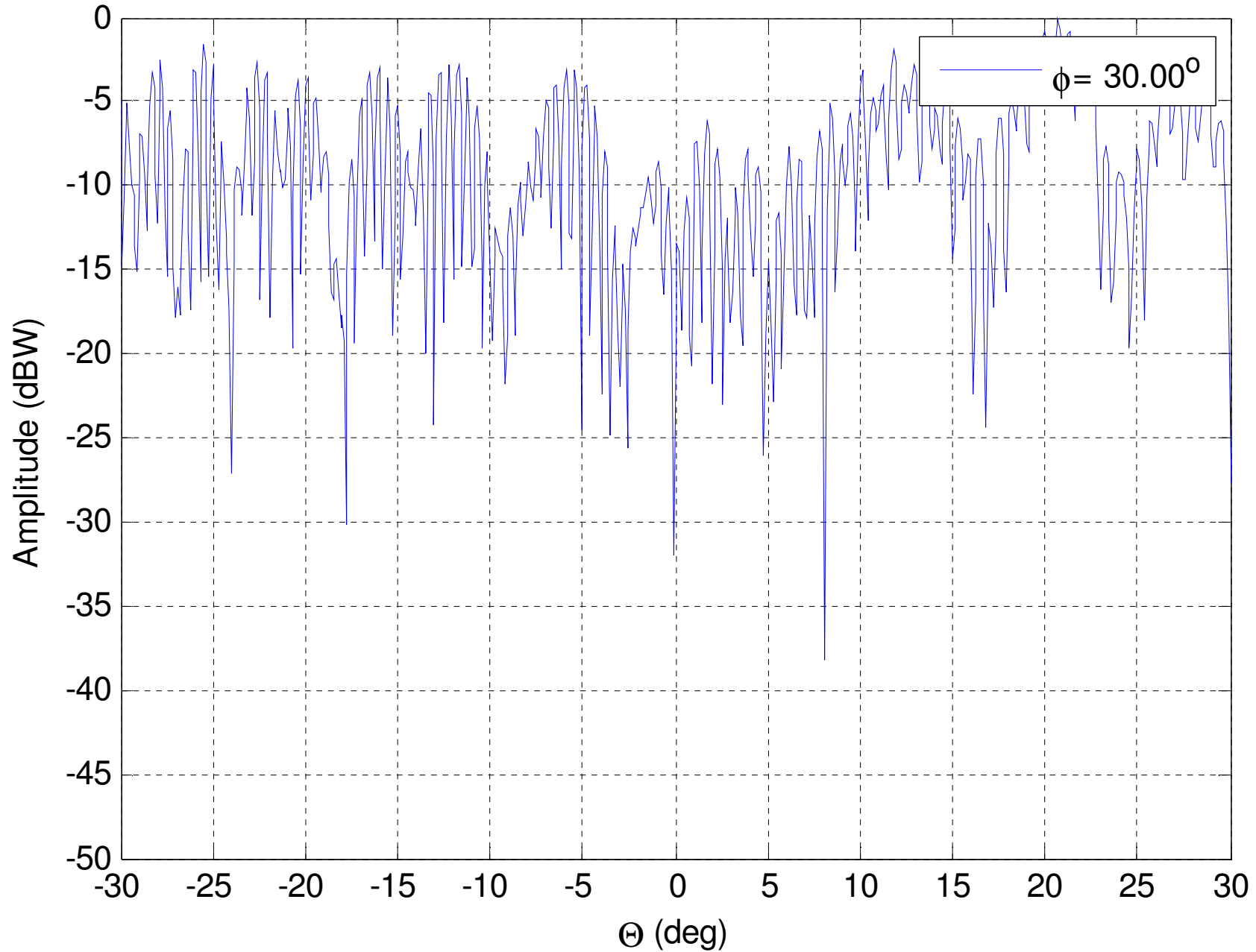
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -7.77 dBW, Date: 14-Dec-2011



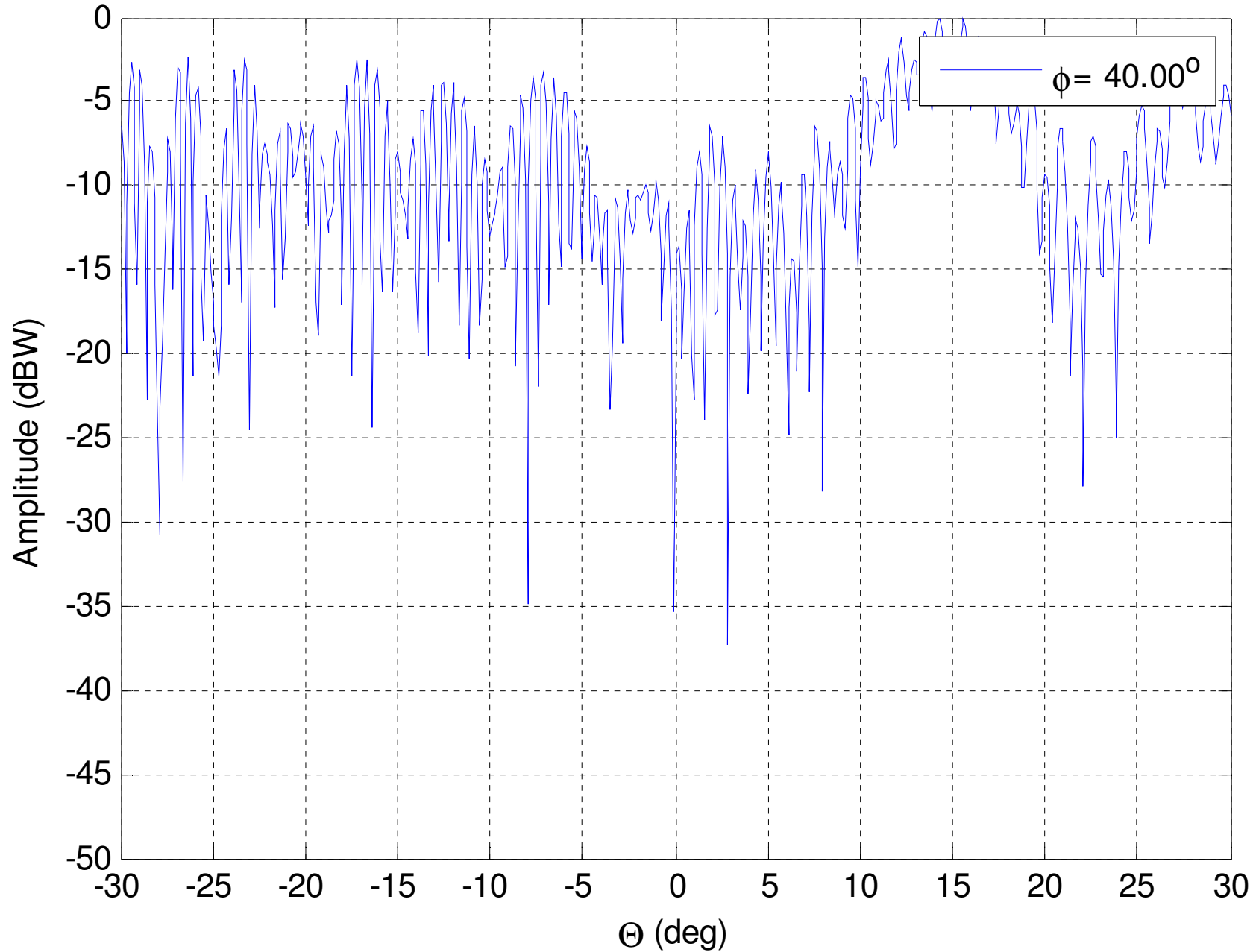
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -7.90 dBW, Date: 14-Dec-2011



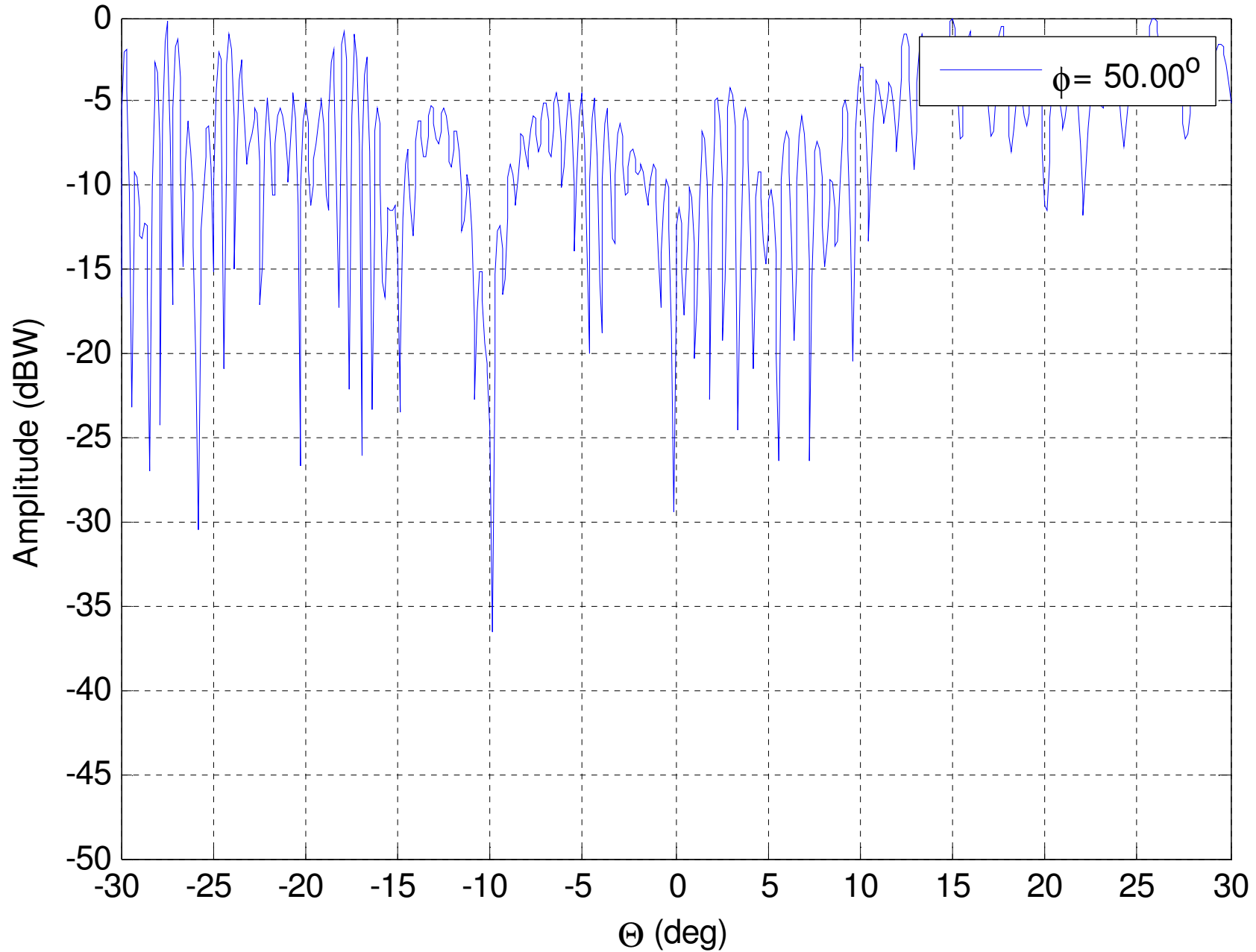
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -7.44 dBW, Date: 14-Dec-2011



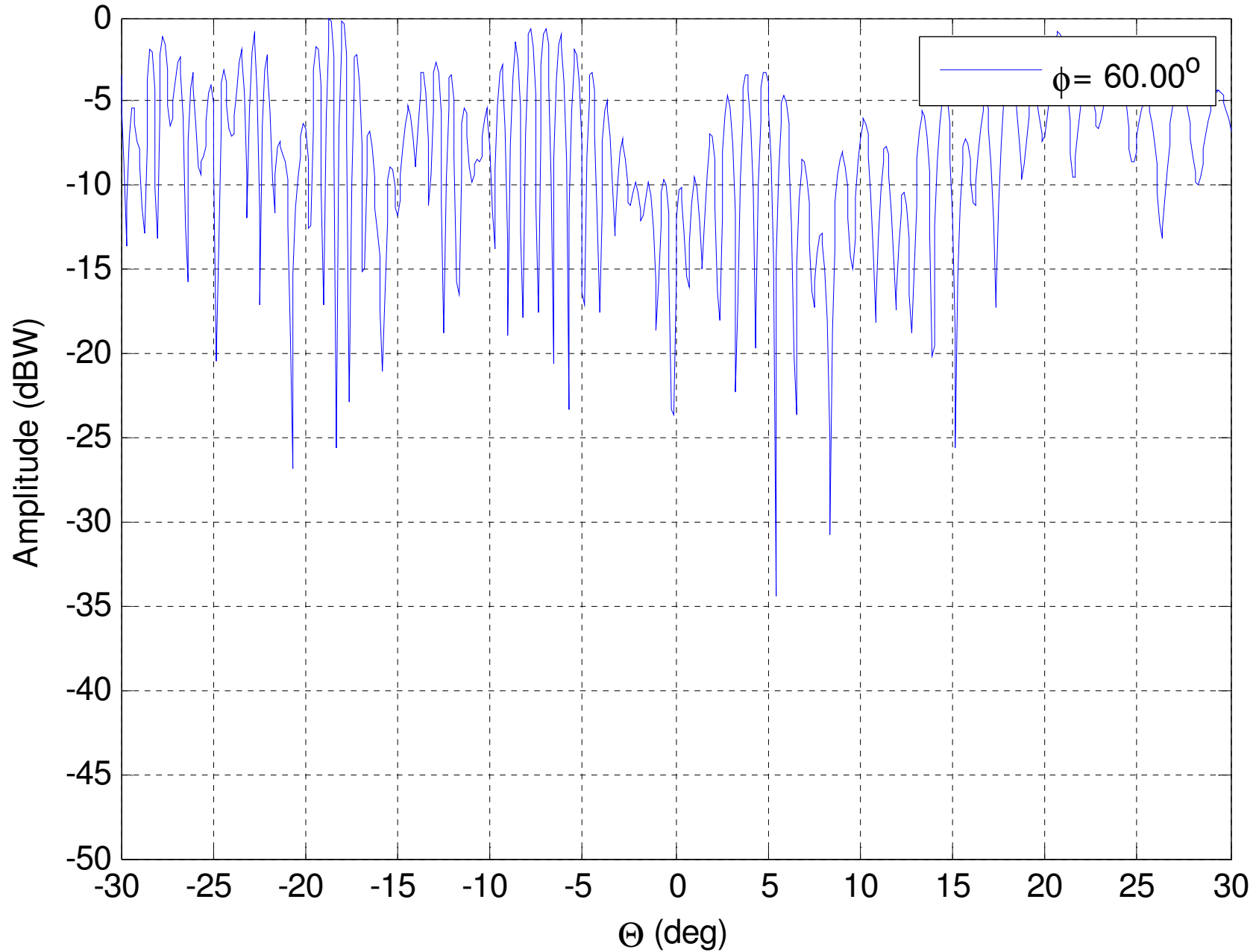
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -9.32 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.30 dBW, Date: 14-Dec-2011



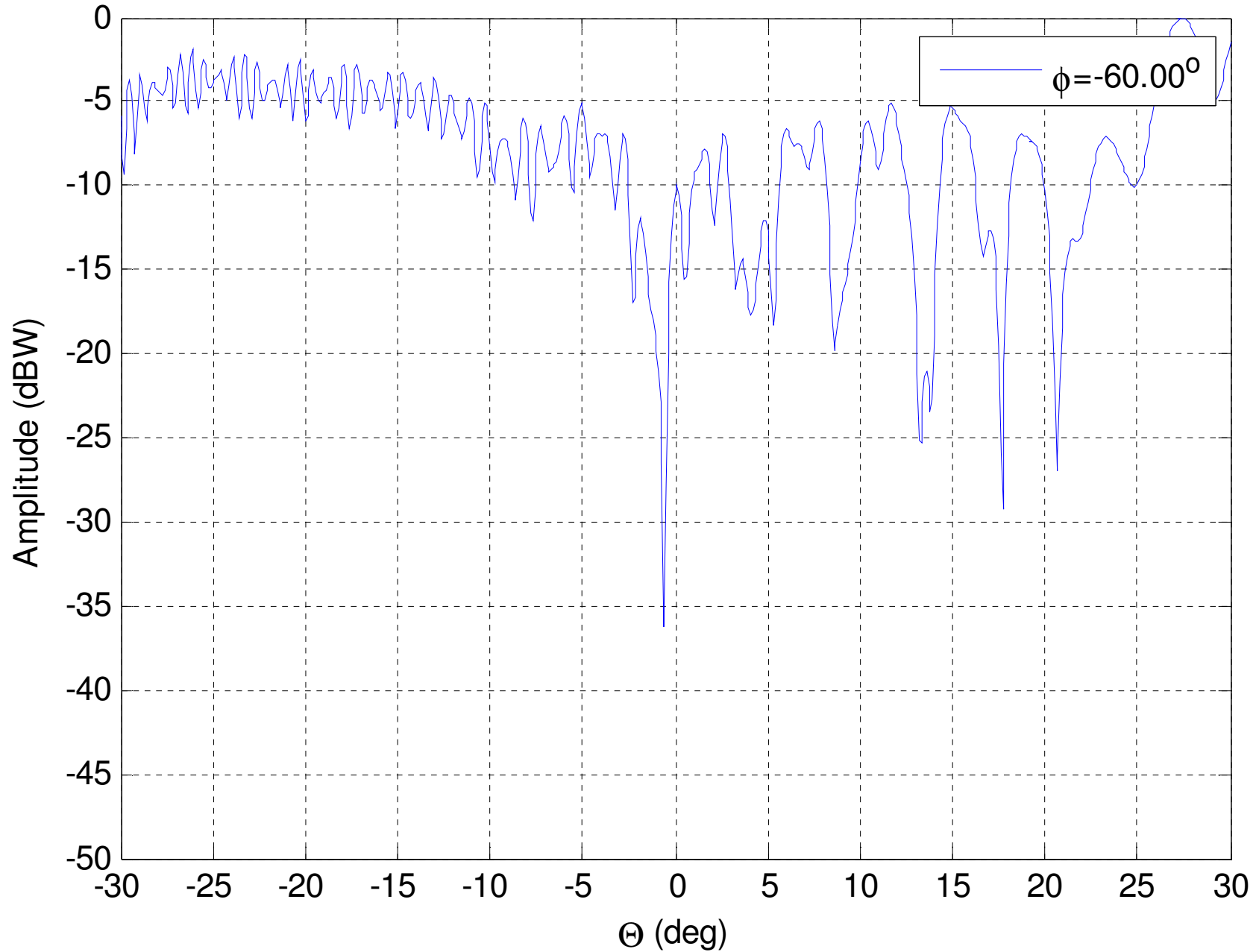
Spot Beam13, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

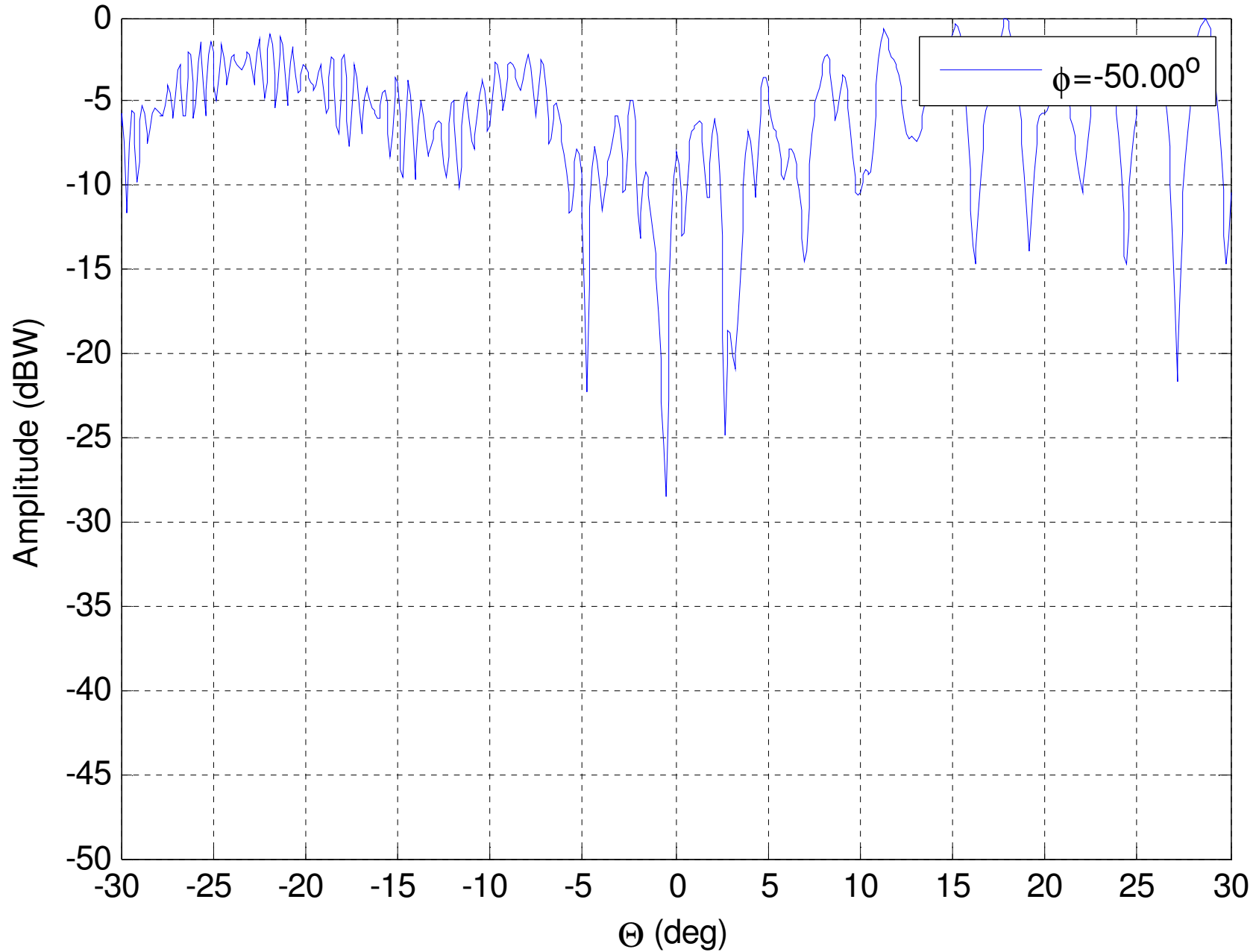
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -7.33 dBW, Date: 14-Dec-2011



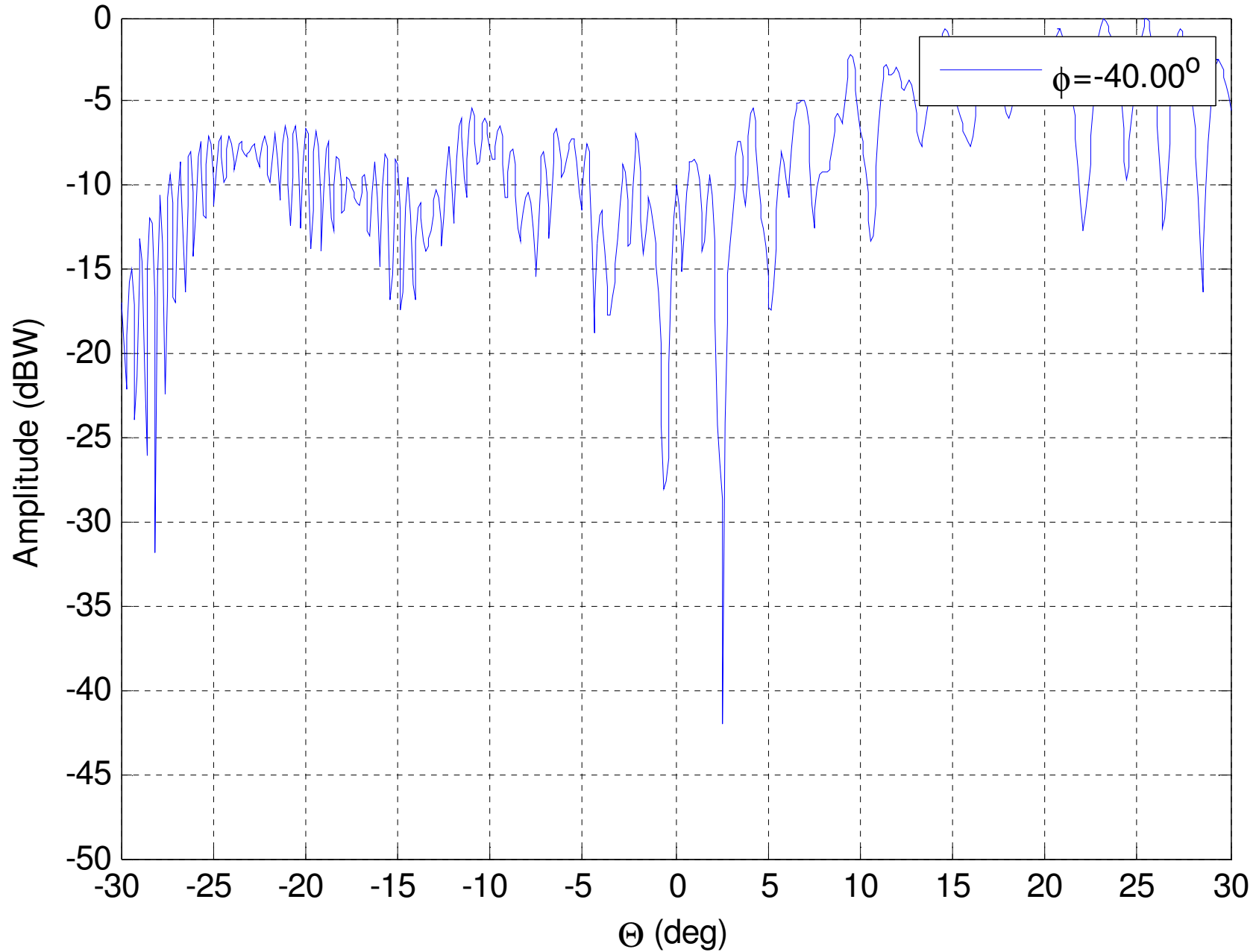
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -9.32 dBW, Date: 14-Dec-2011



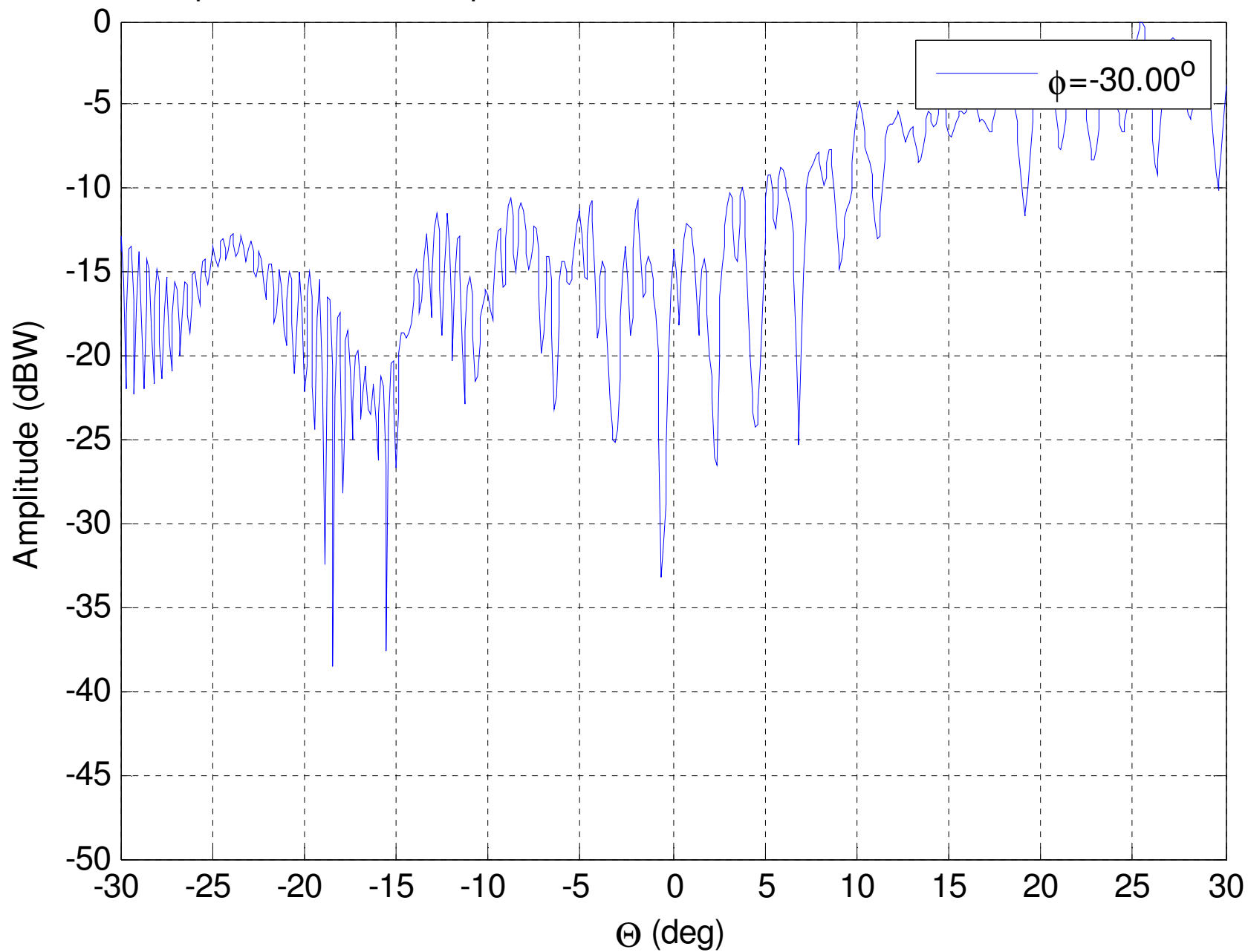
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -7.29 dBW, Date: 14-Dec-2011



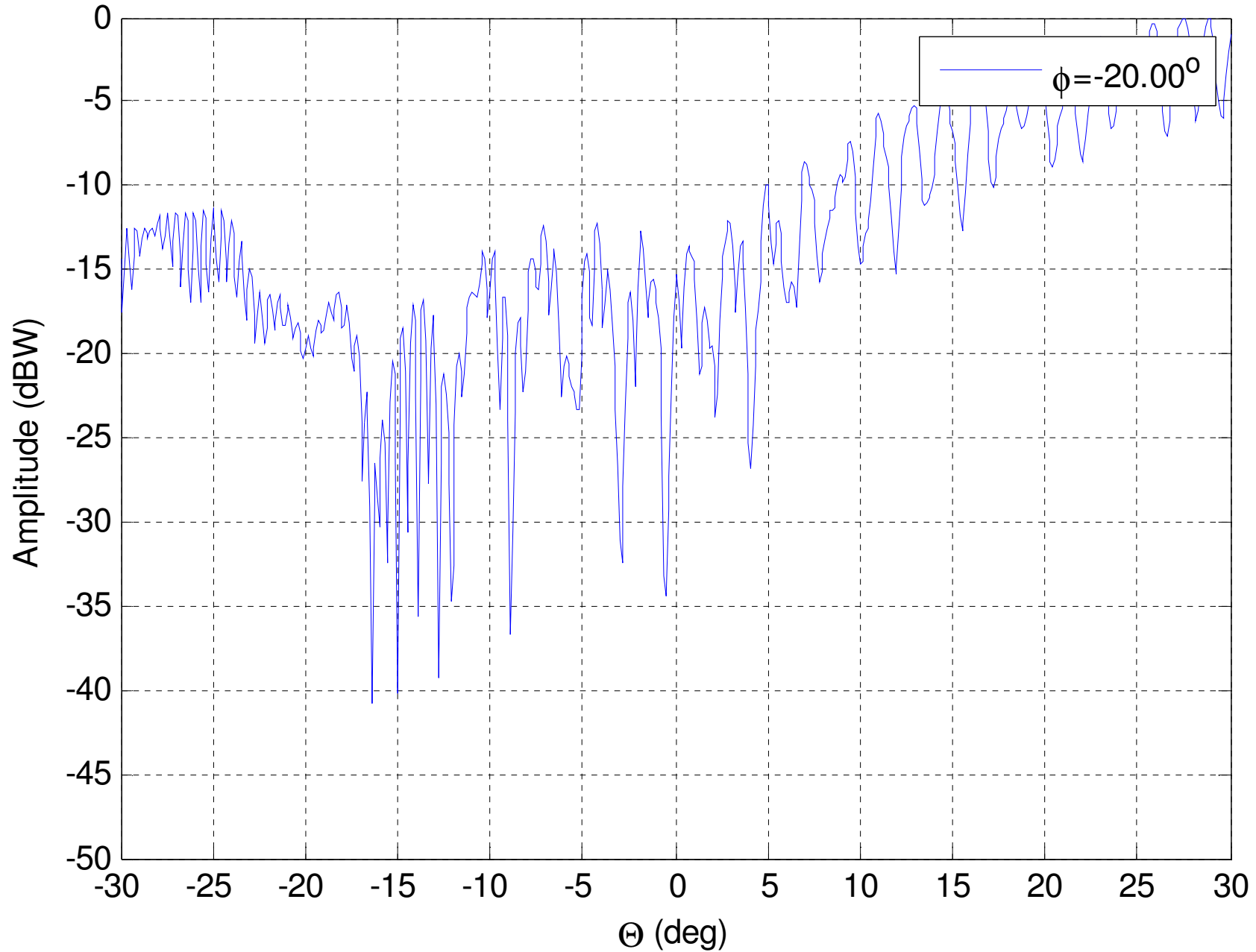
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -3.67 dBW, Date: 14-Dec-2011



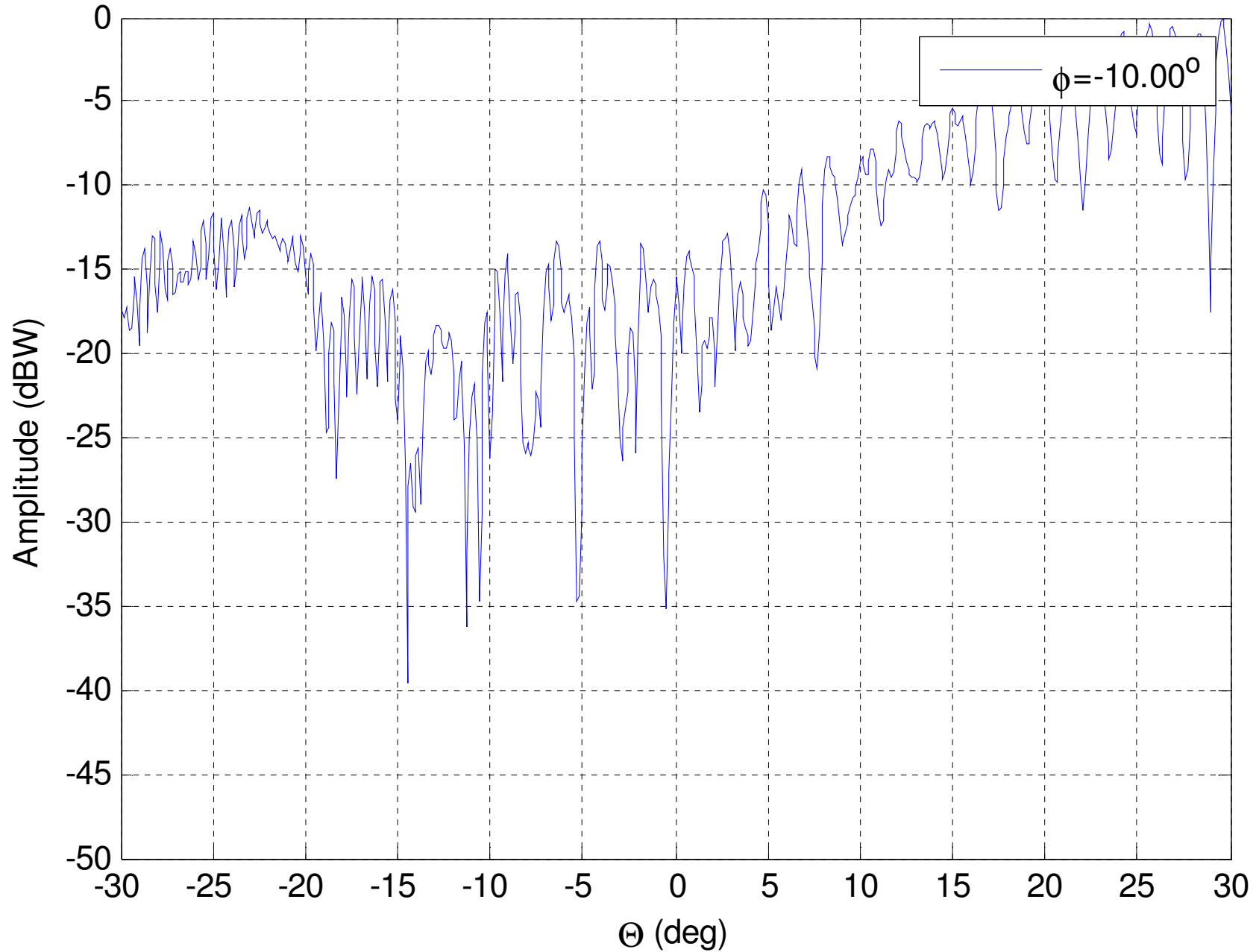
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -1.98 dBW, Date: 14-Dec-2011



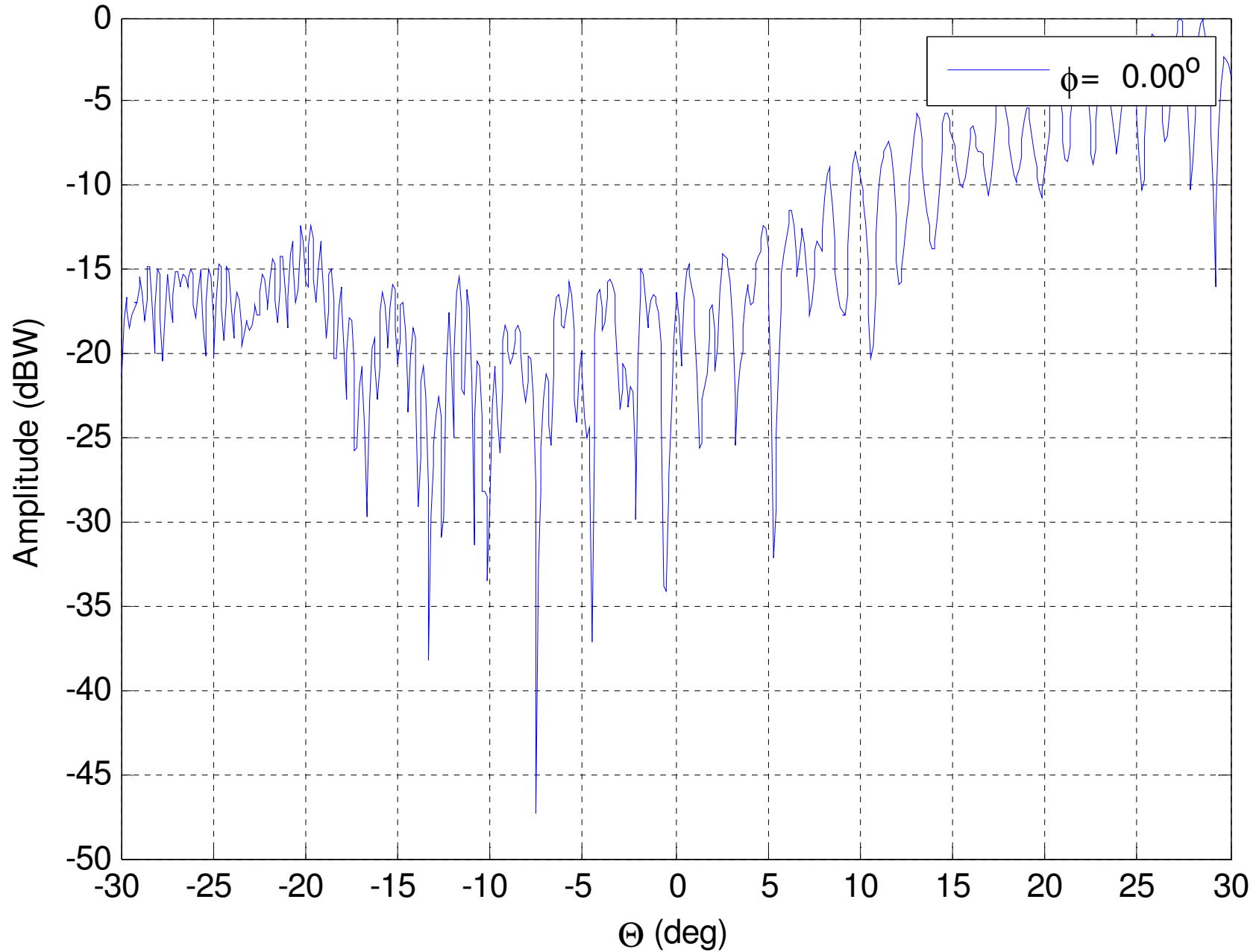
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -1.71 dBW, Date: 14-Dec-2011



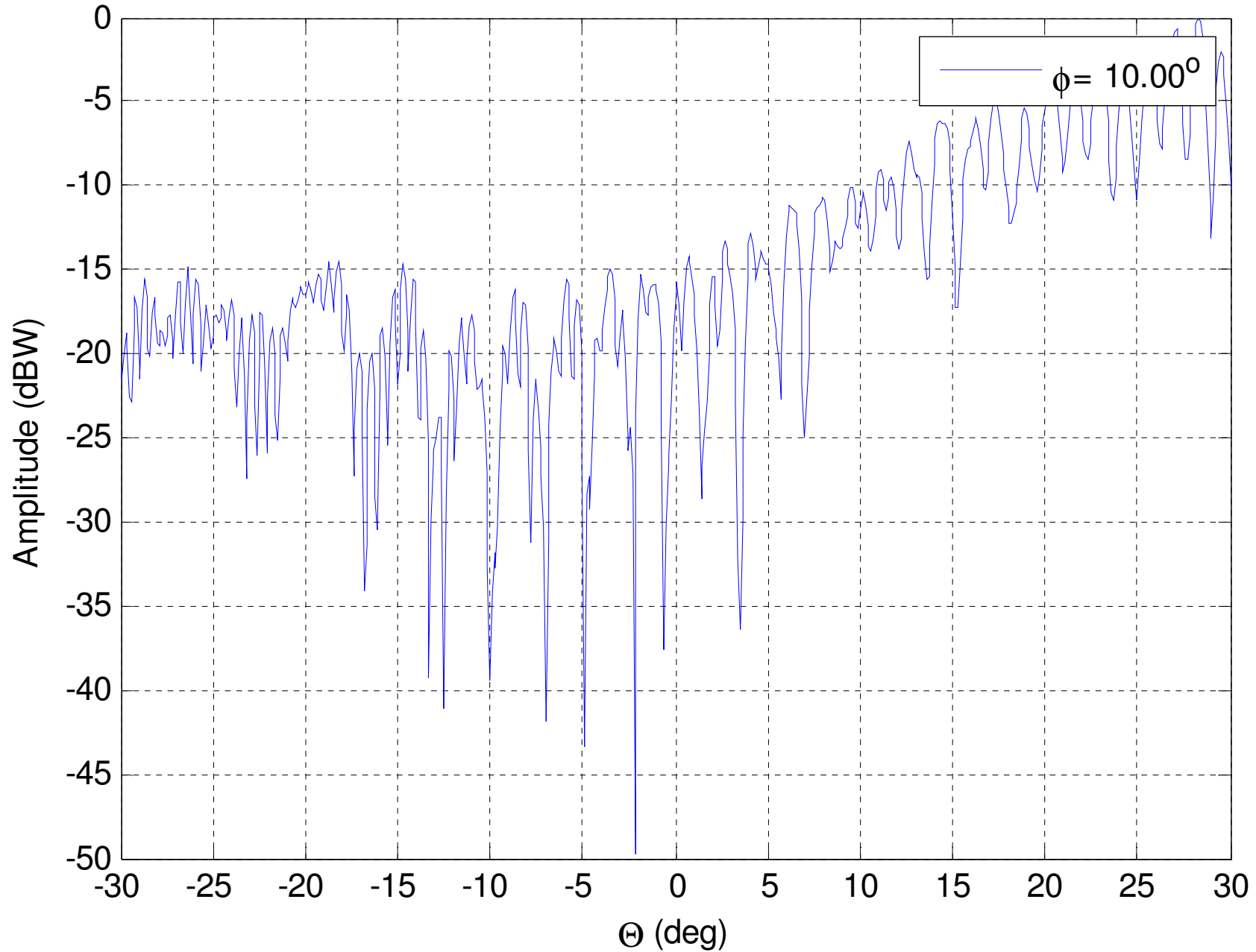
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -0.77 dBW, Date: 14-Dec-2011



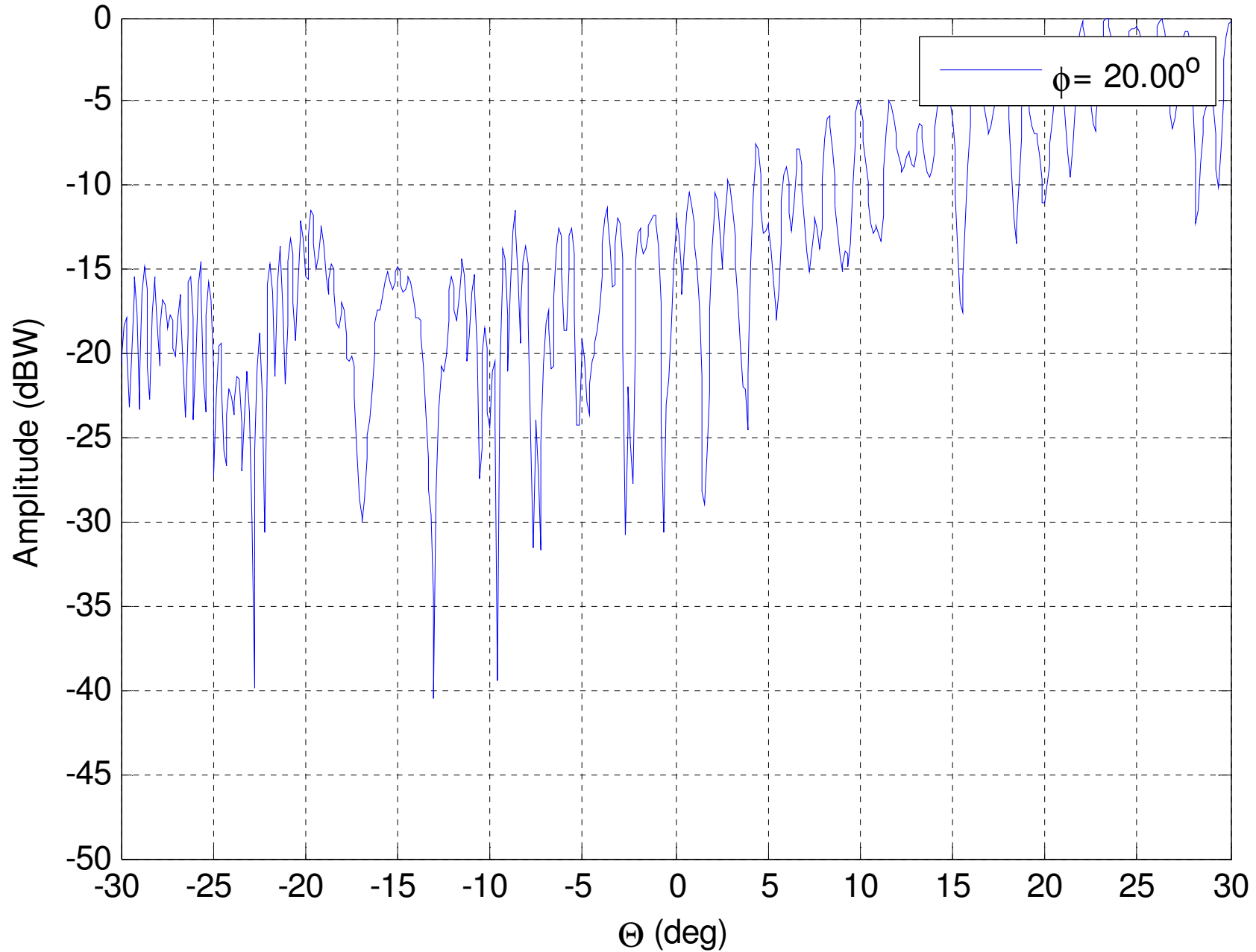
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -1.28 dBW, Date: 14-Dec-2011



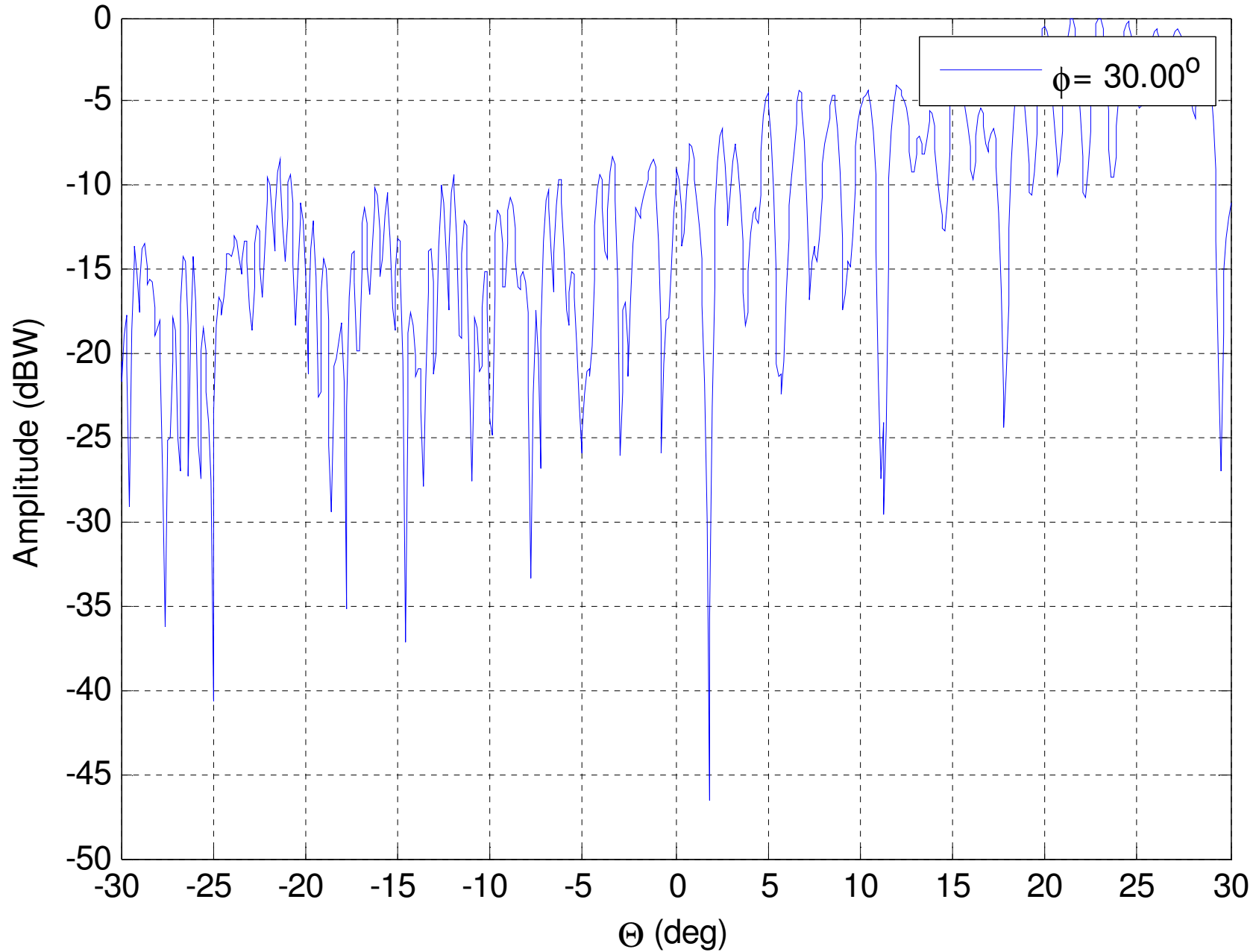
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -5.10 dBW, Date: 14-Dec-2011



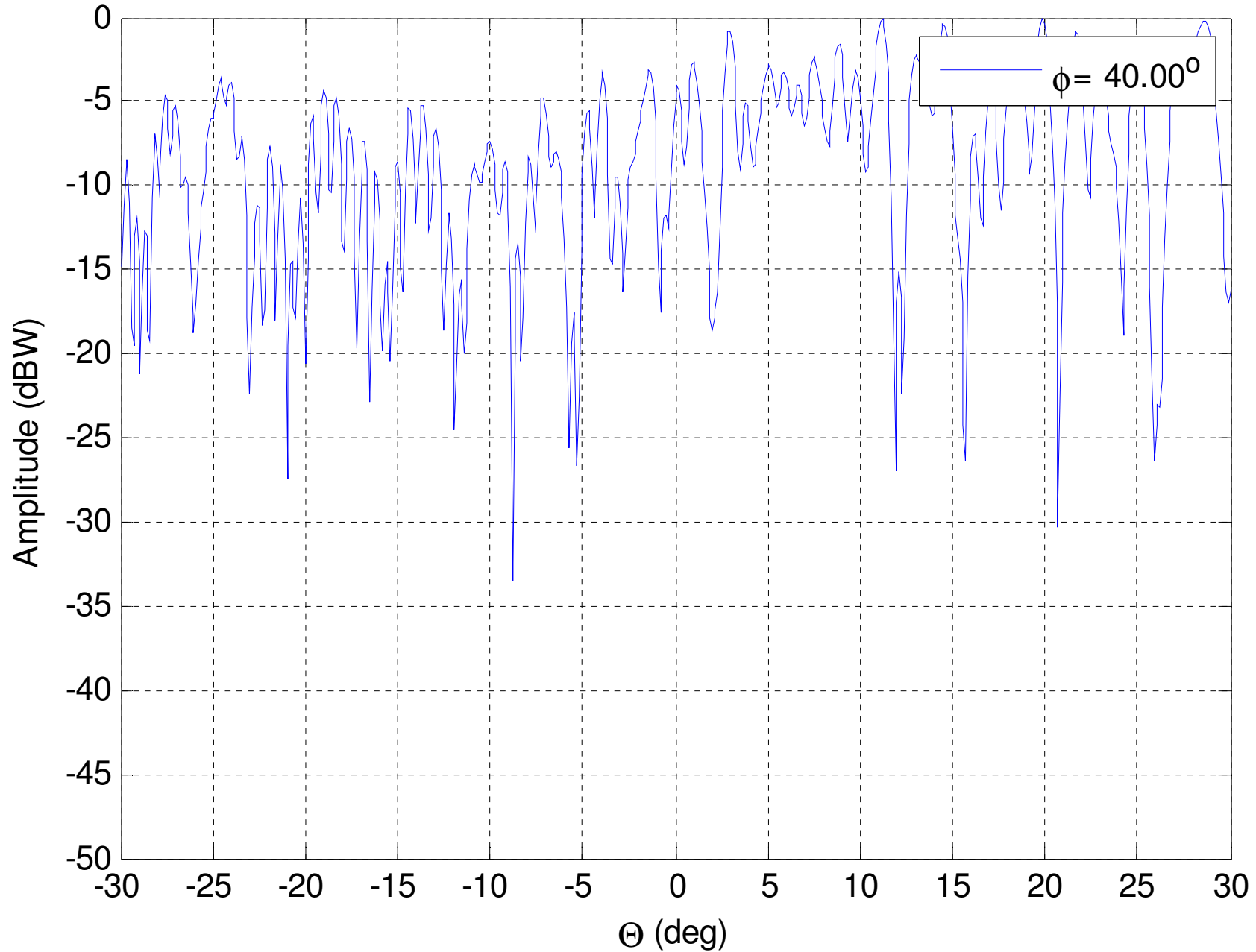
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -7.88 dBW, Date: 14-Dec-2011



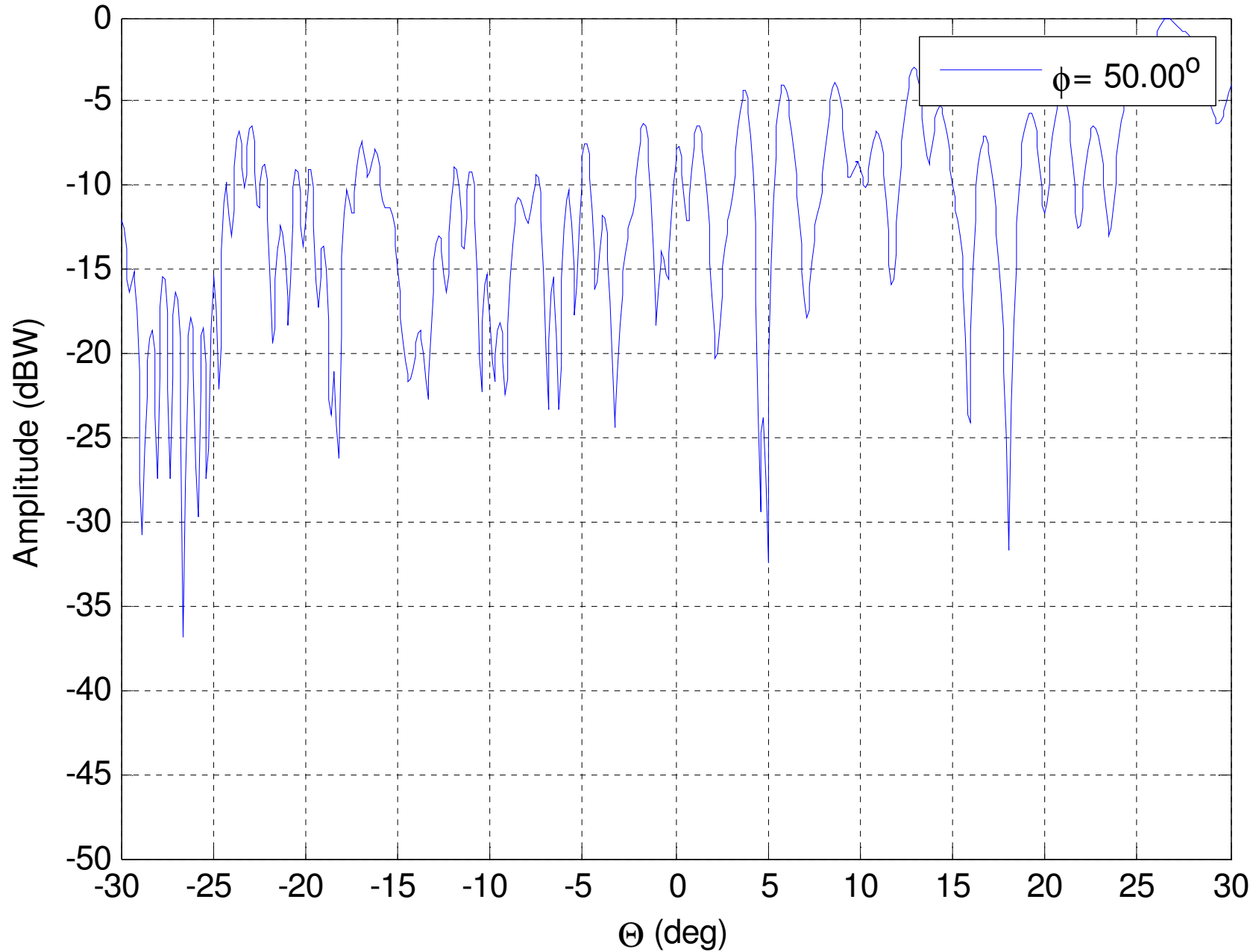
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -12.82 dBW, Date: 14-Dec-2011



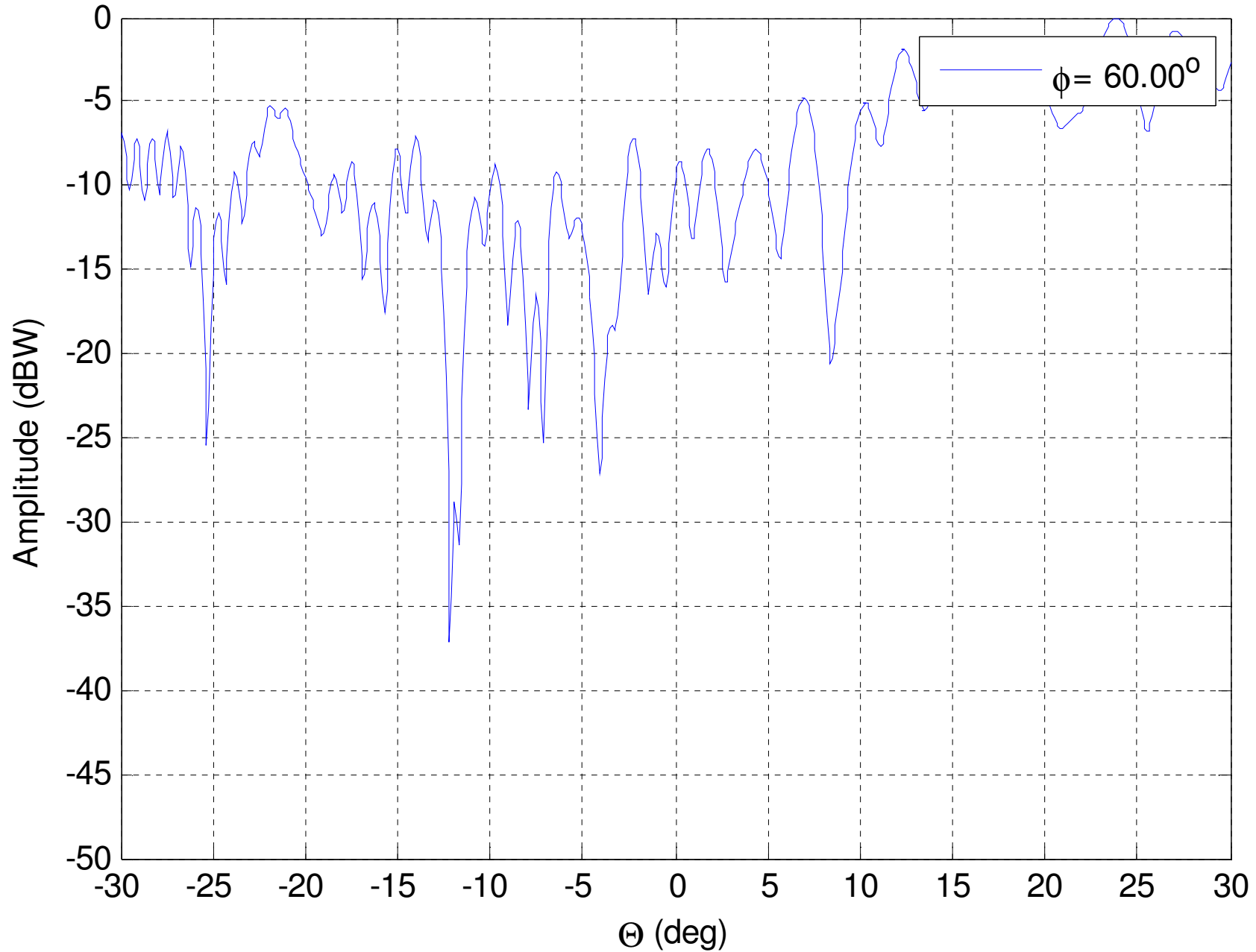
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -9.06 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

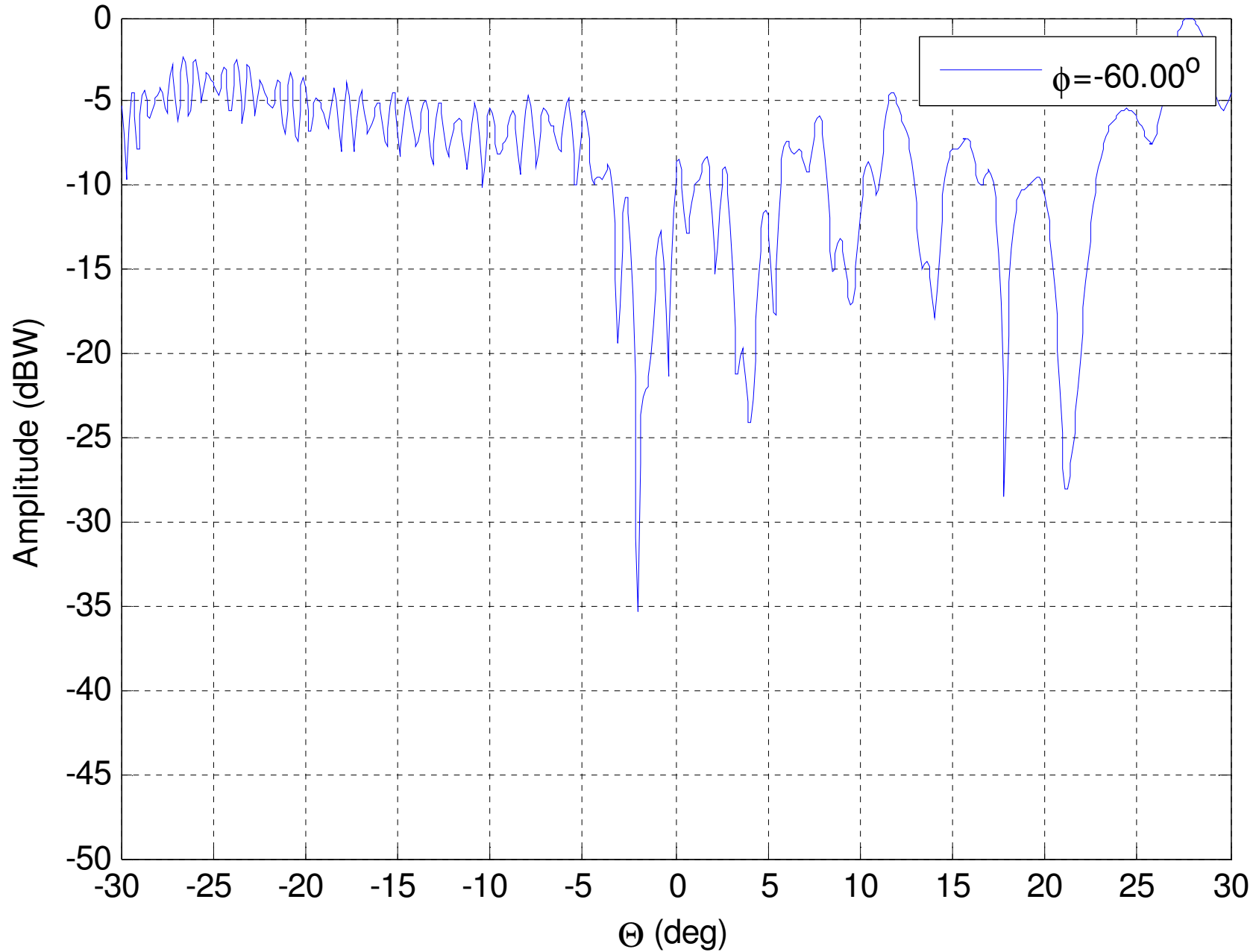
Input file: tx-17.3-rhcp-60.cut, Peak: -8.02 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

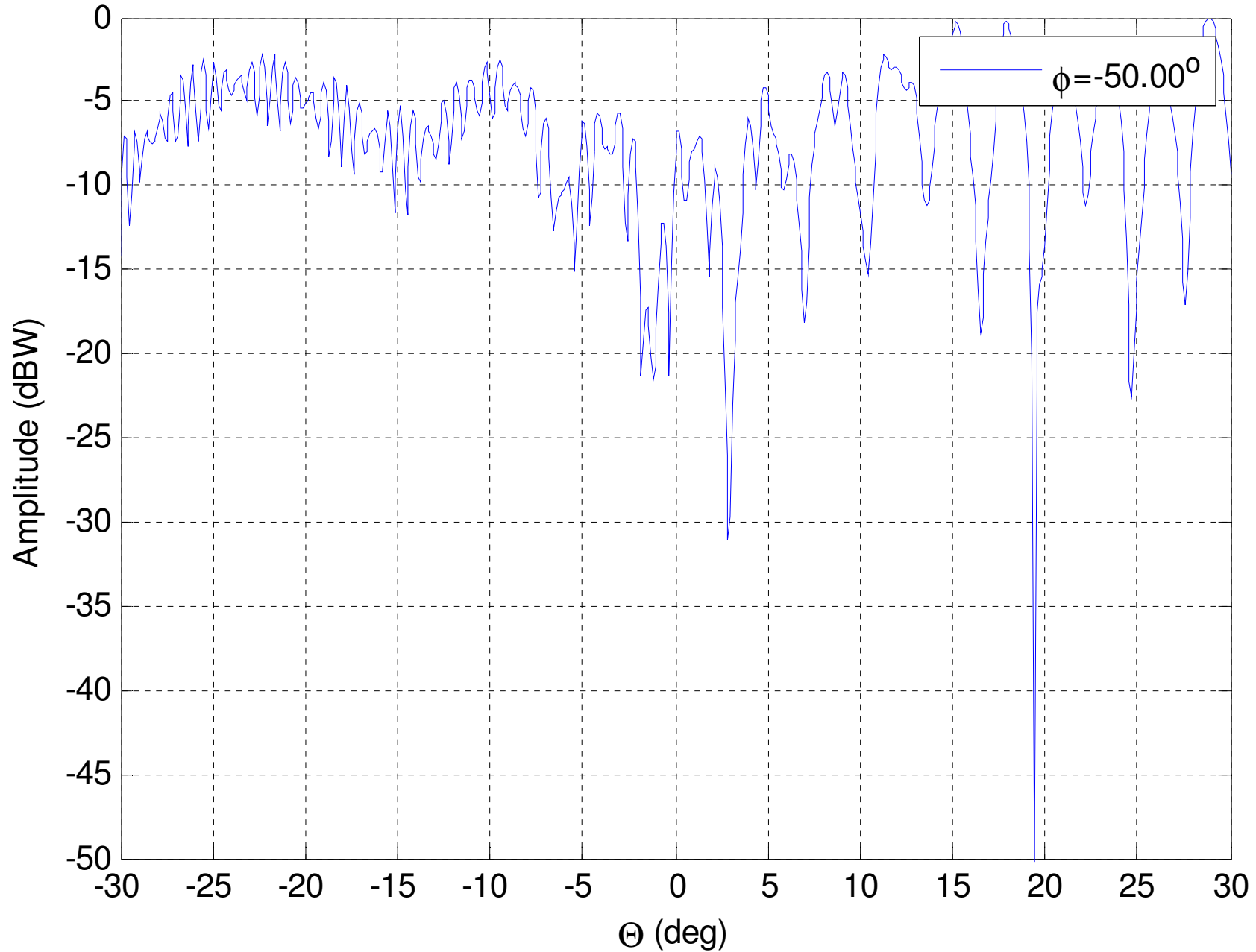
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -6.85 dBW, Date: 14-Dec-2011



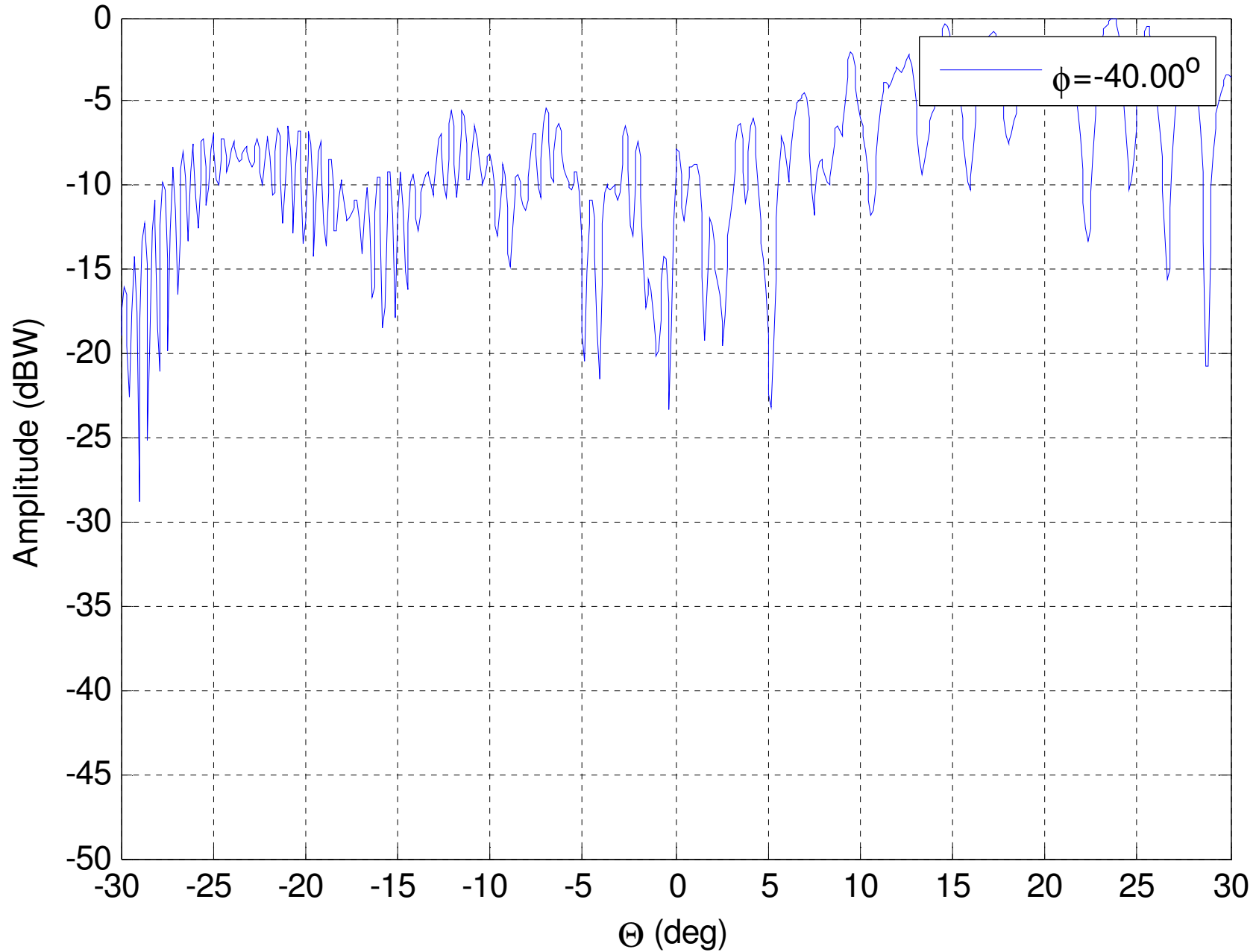
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -8.51 dBW, Date: 14-Dec-2011



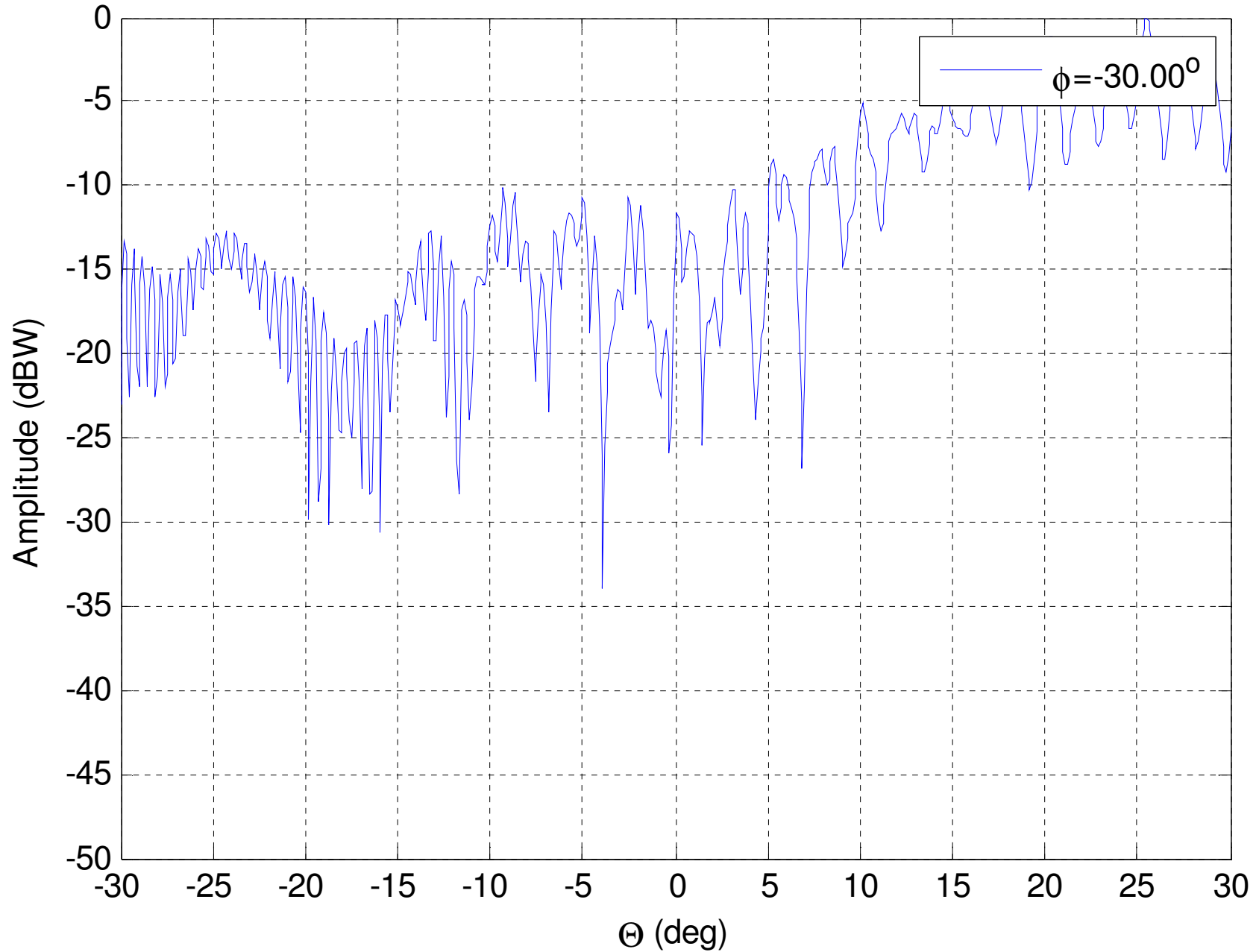
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.34 dBW, Date: 14-Dec-2011



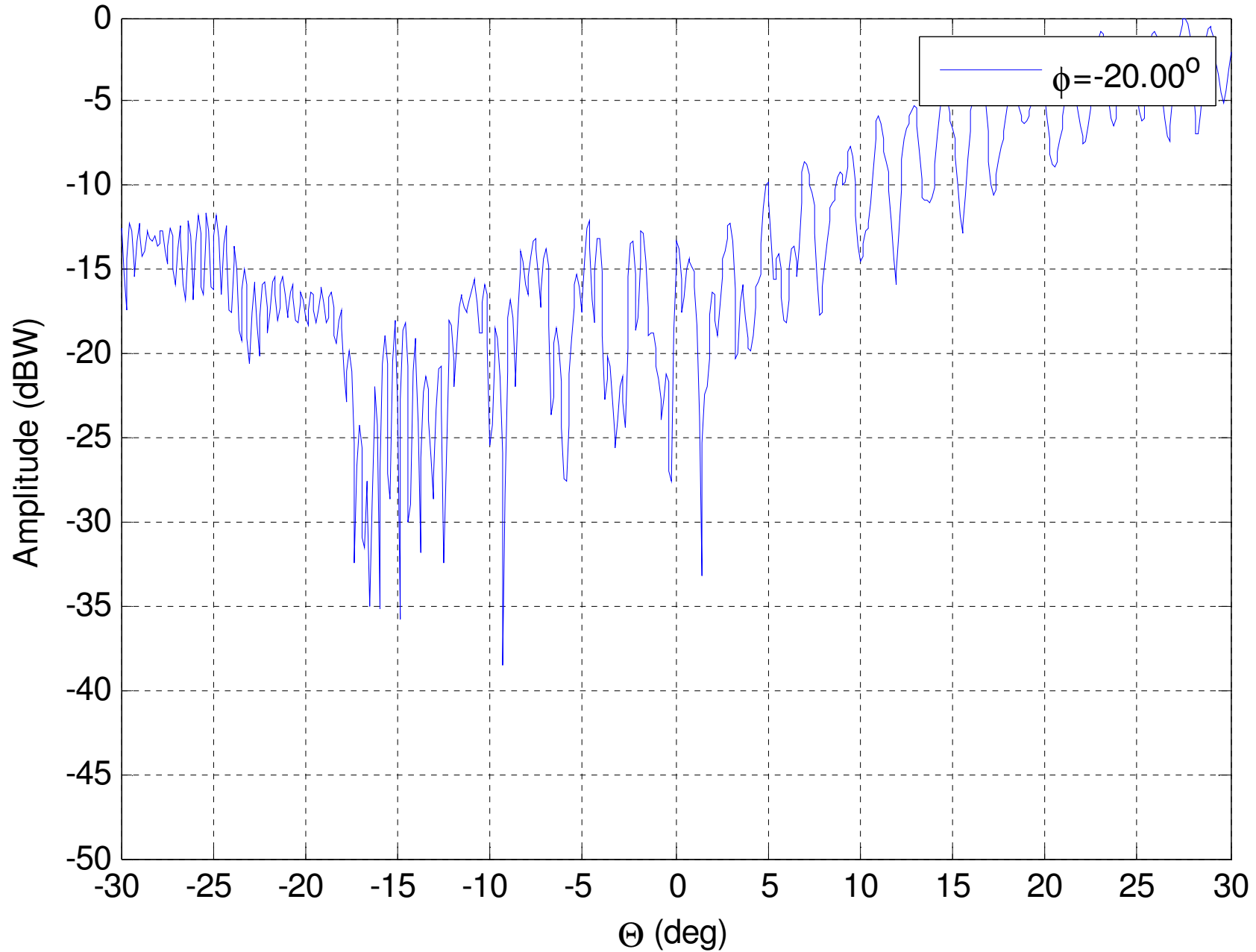
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -3.46 dBW, Date: 14-Dec-2011



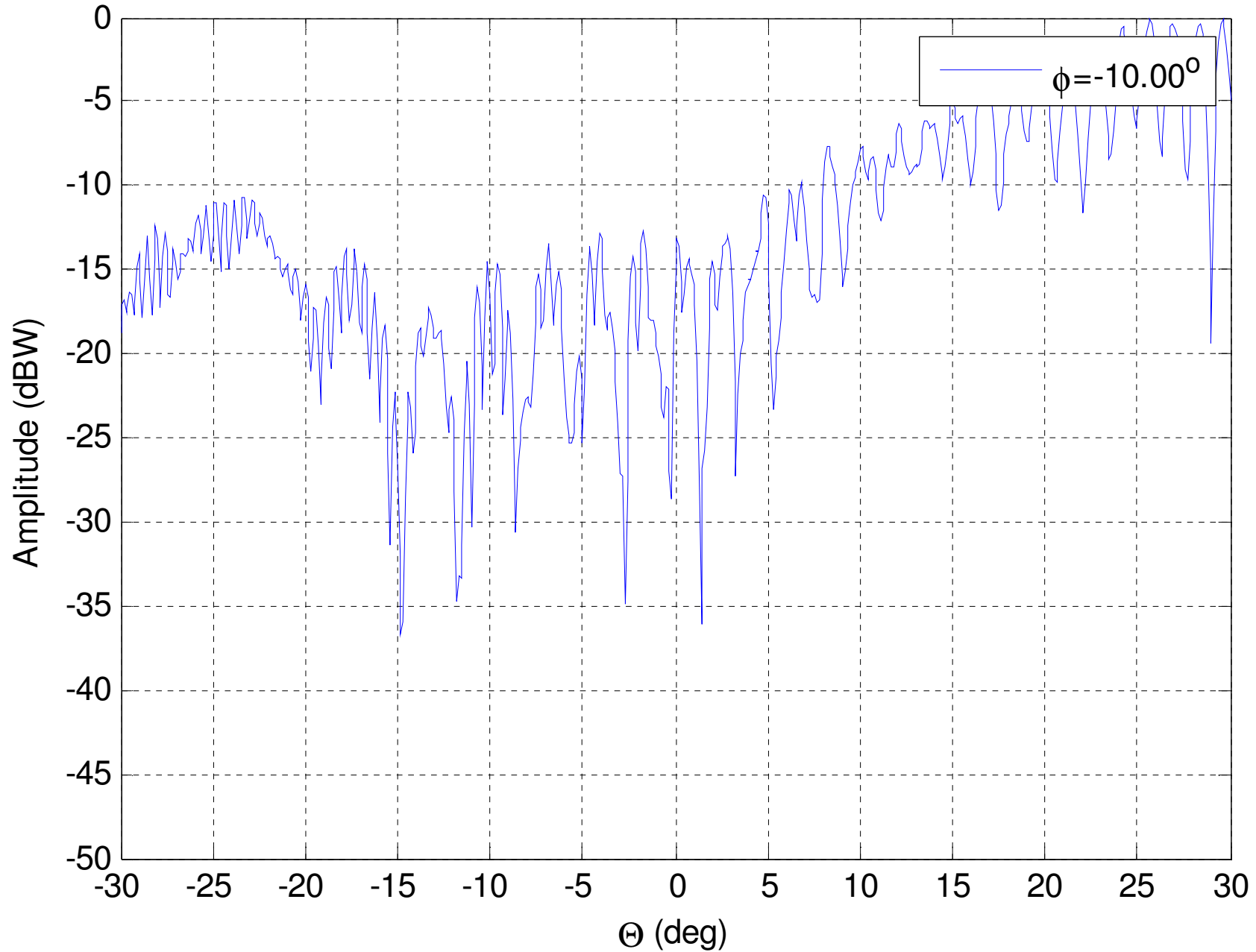
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -1.79 dBW, Date: 14-Dec-2011



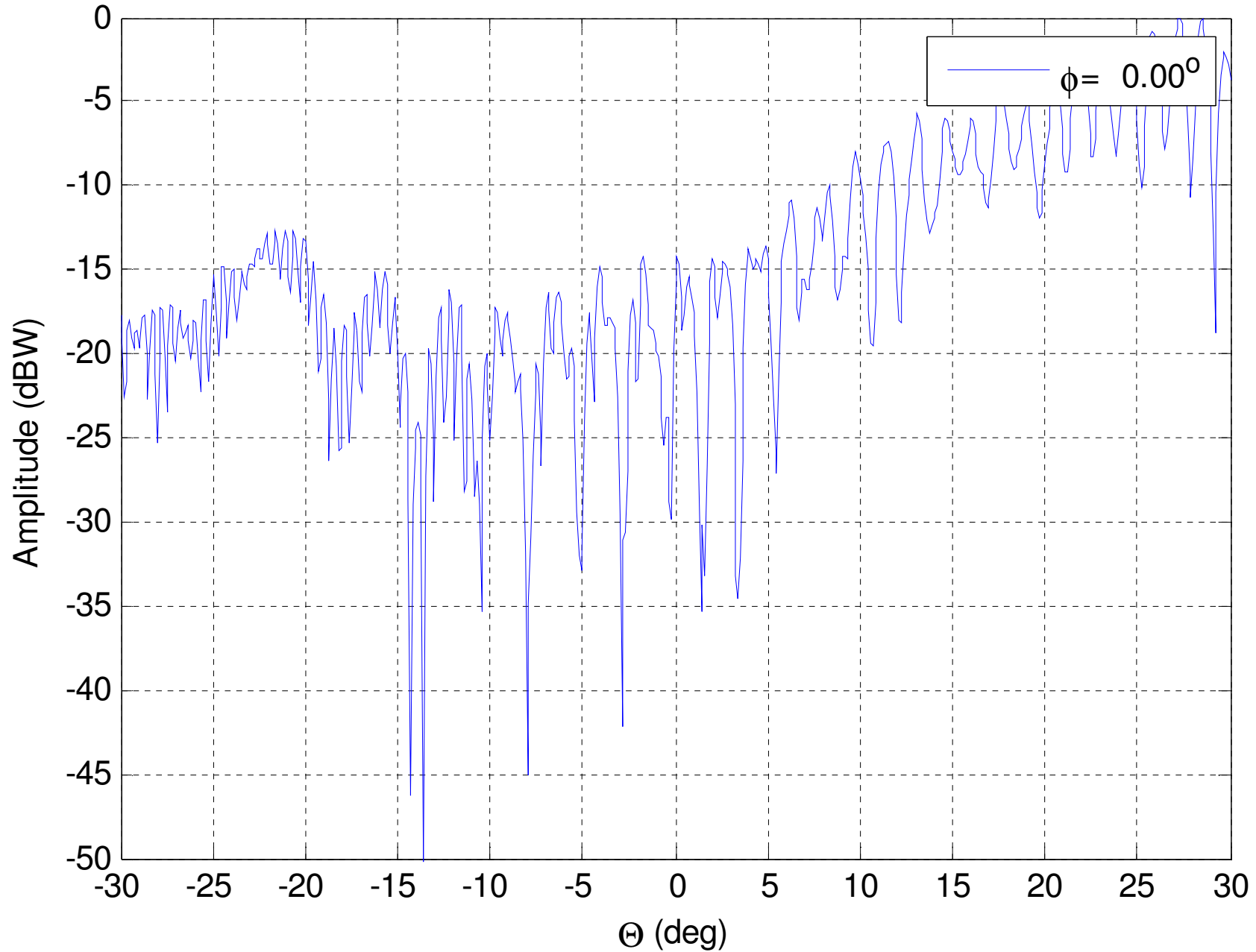
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -1.80 dBW, Date: 14-Dec-2011



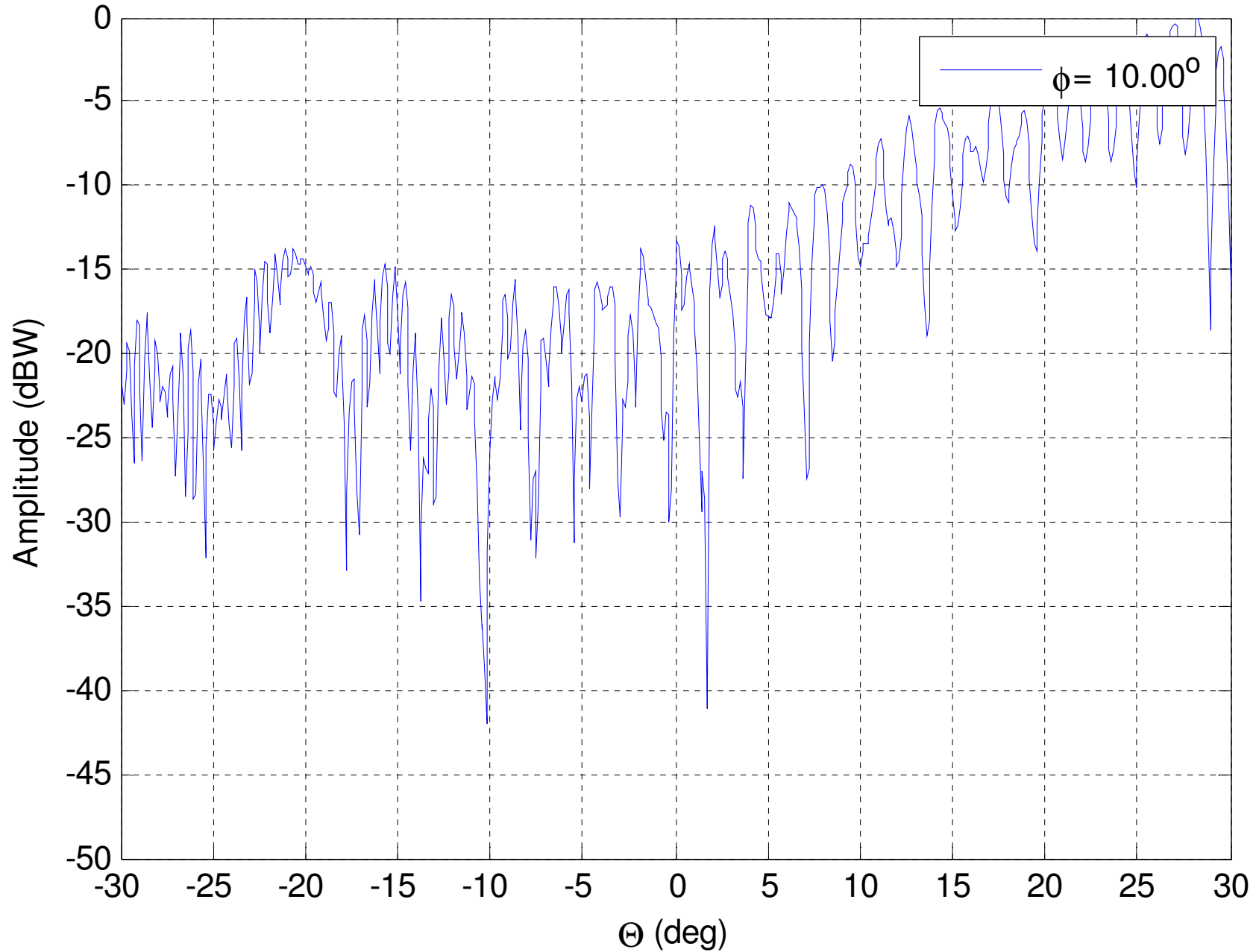
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -0.70 dBW, Date: 14-Dec-2011



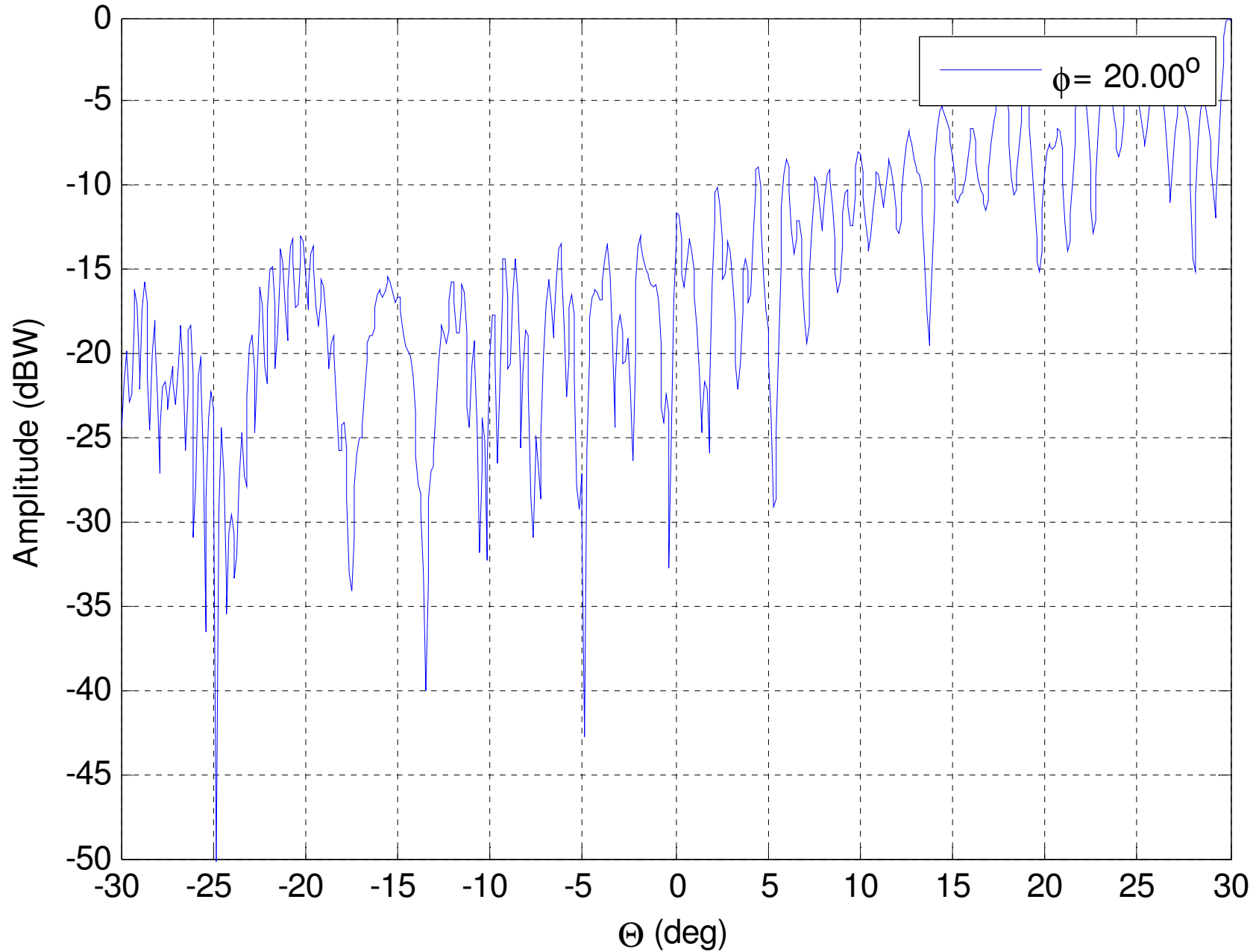
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -1.63 dBW, Date: 14-Dec-2011



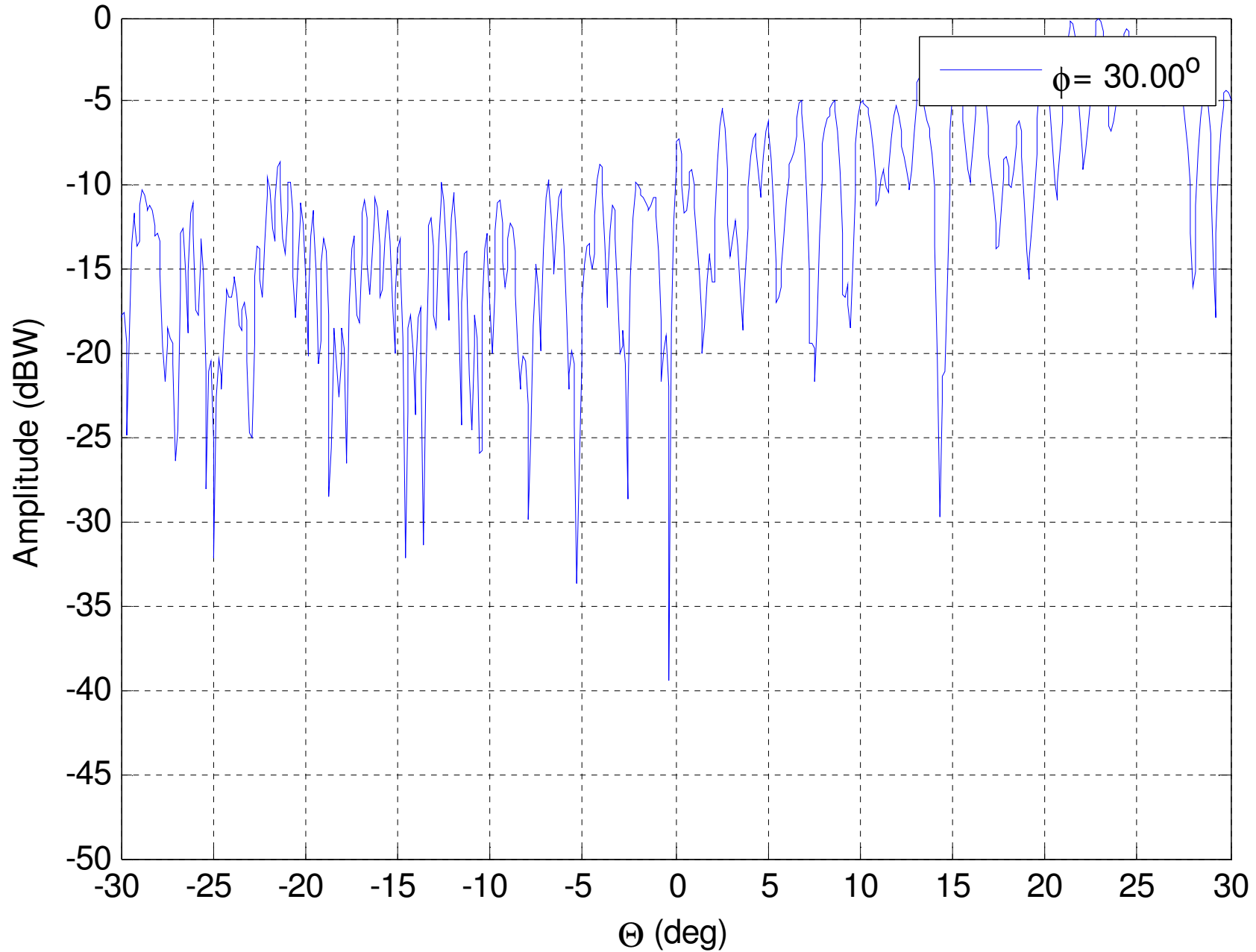
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -3.24 dBW, Date: 14-Dec-2011



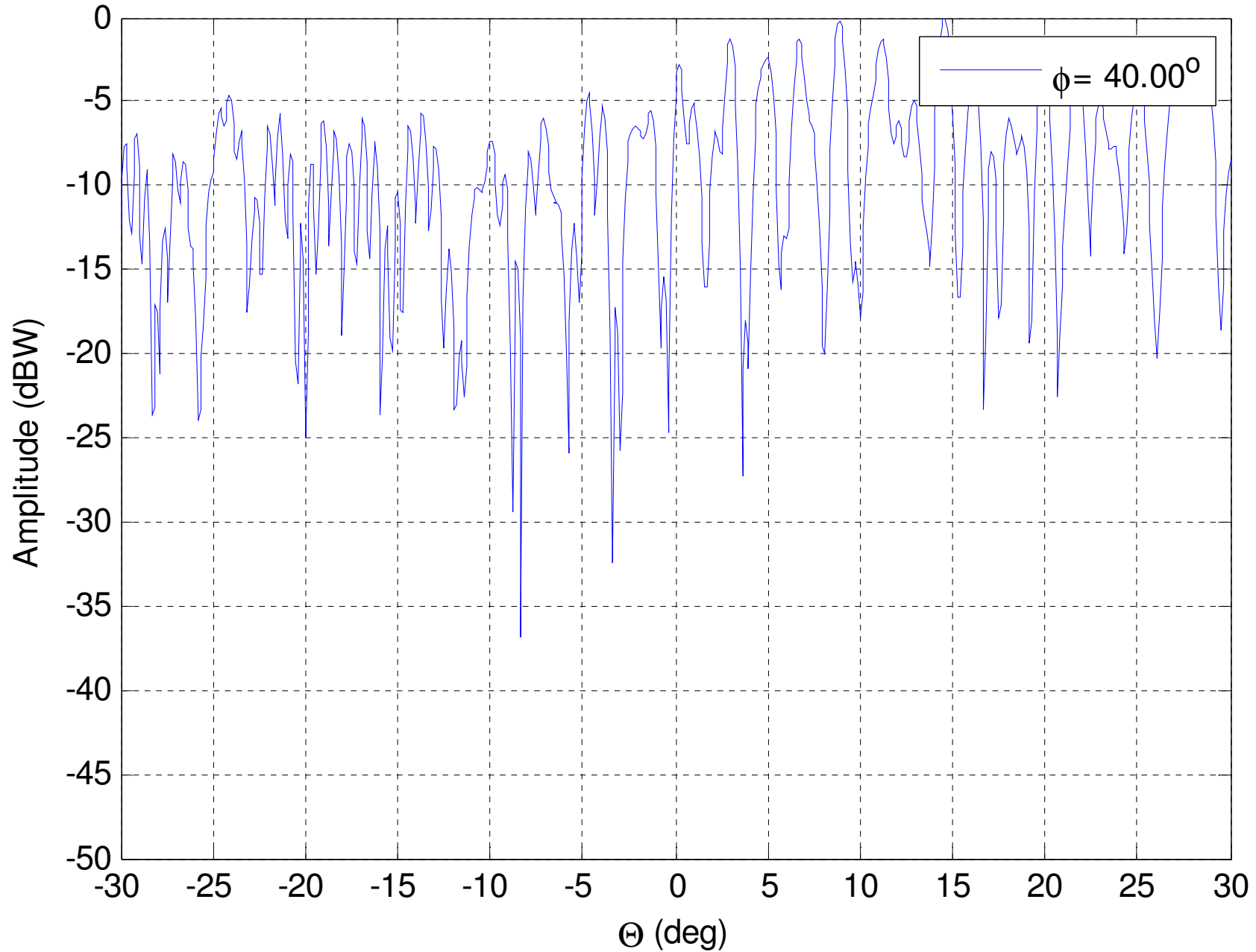
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -7.51 dBW, Date: 14-Dec-2011



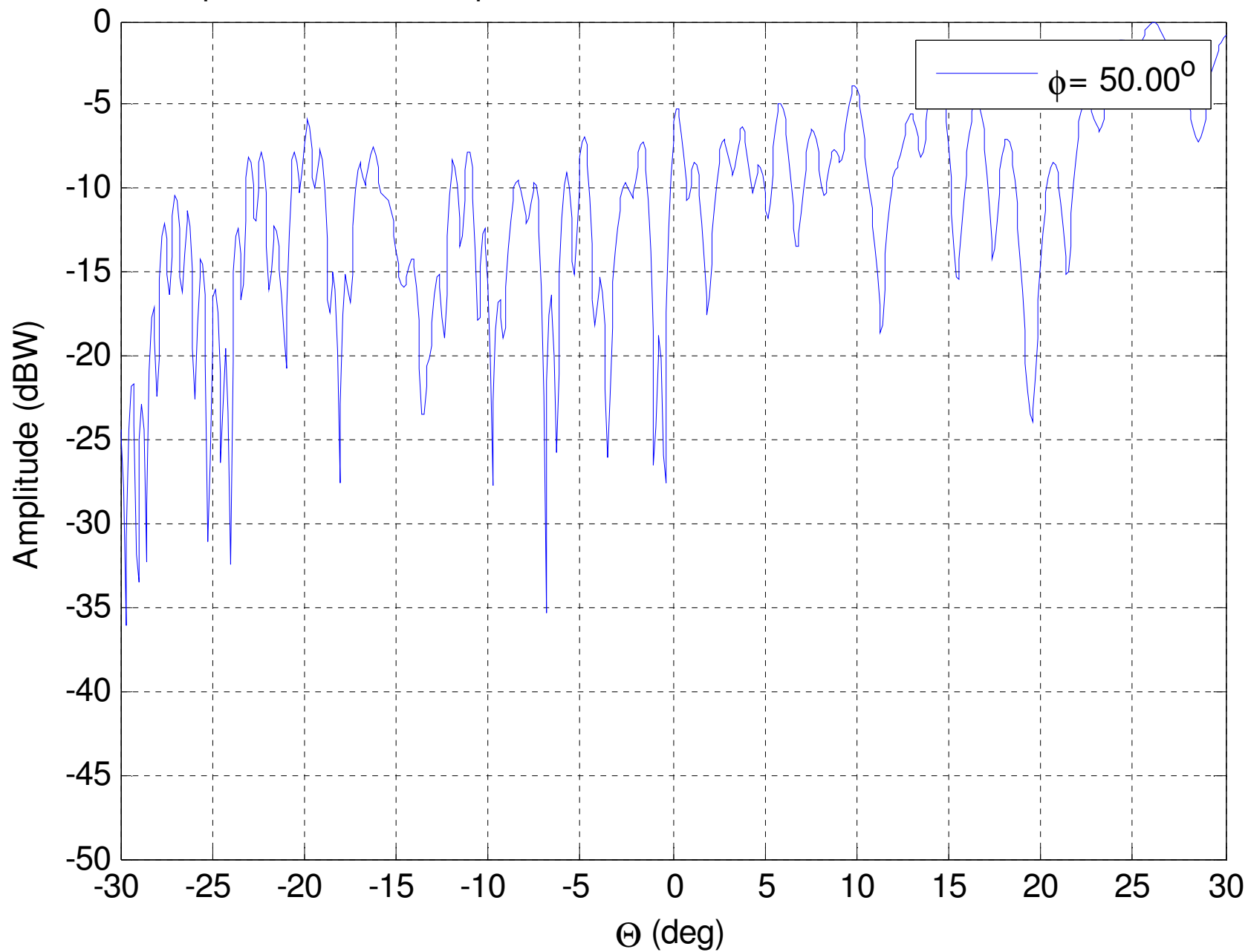
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.83 dBW, Date: 14-Dec-2011



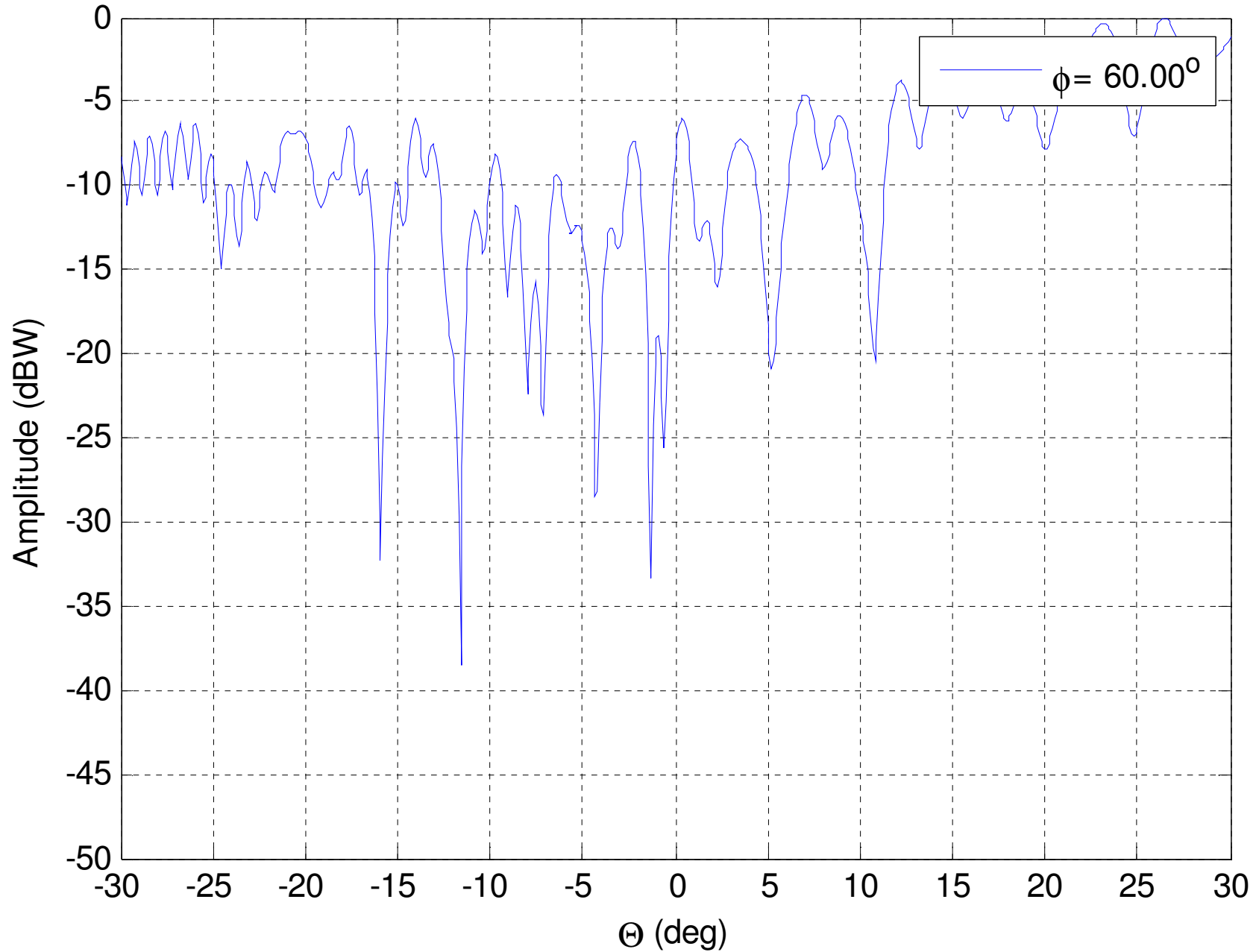
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -9.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

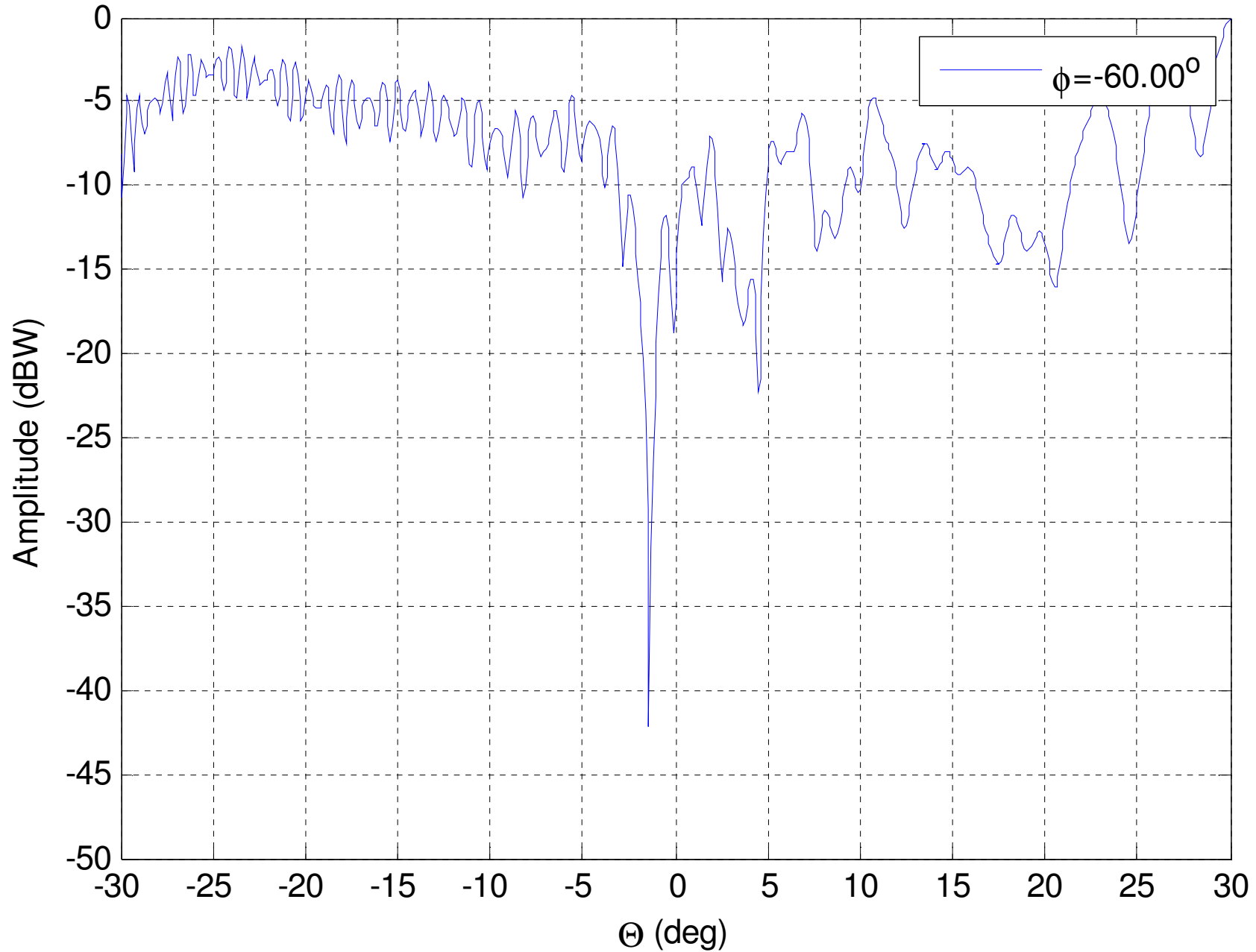
Input file: tx-17.3-lhcp-60.cut, Peak: -8.23 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

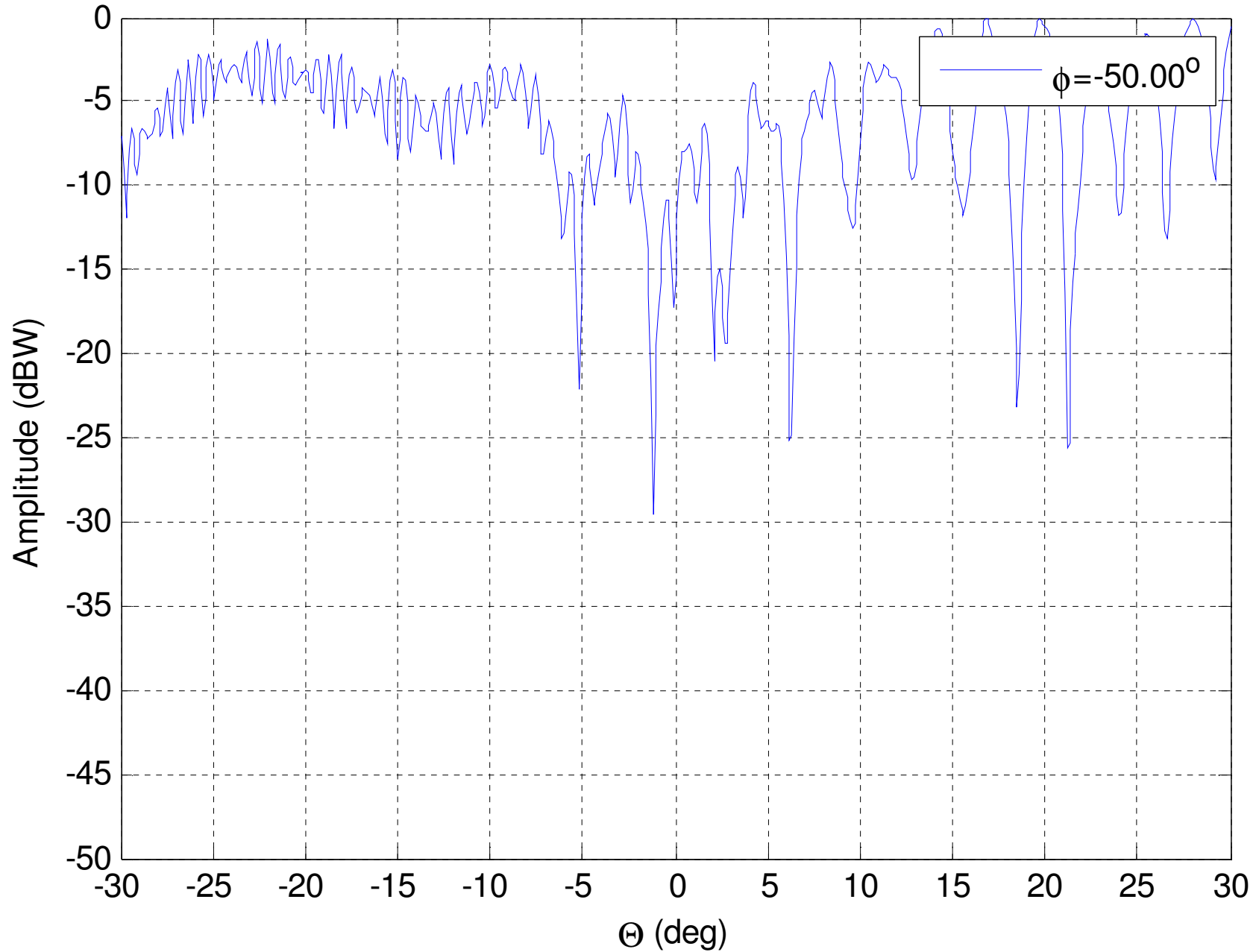
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -7.37 dBW, Date: 14-Dec-2011



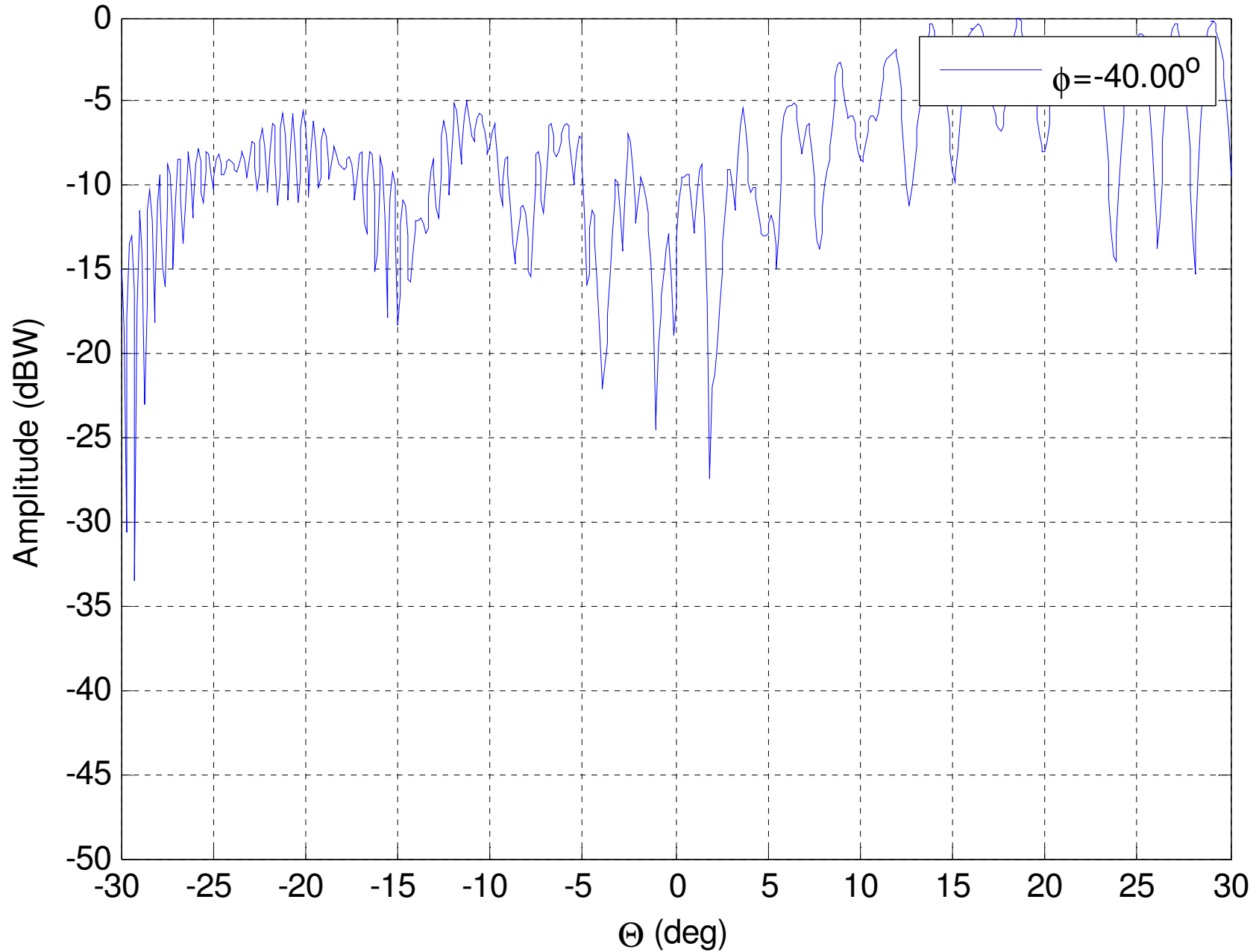
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.87 dBW, Date: 14-Dec-2011



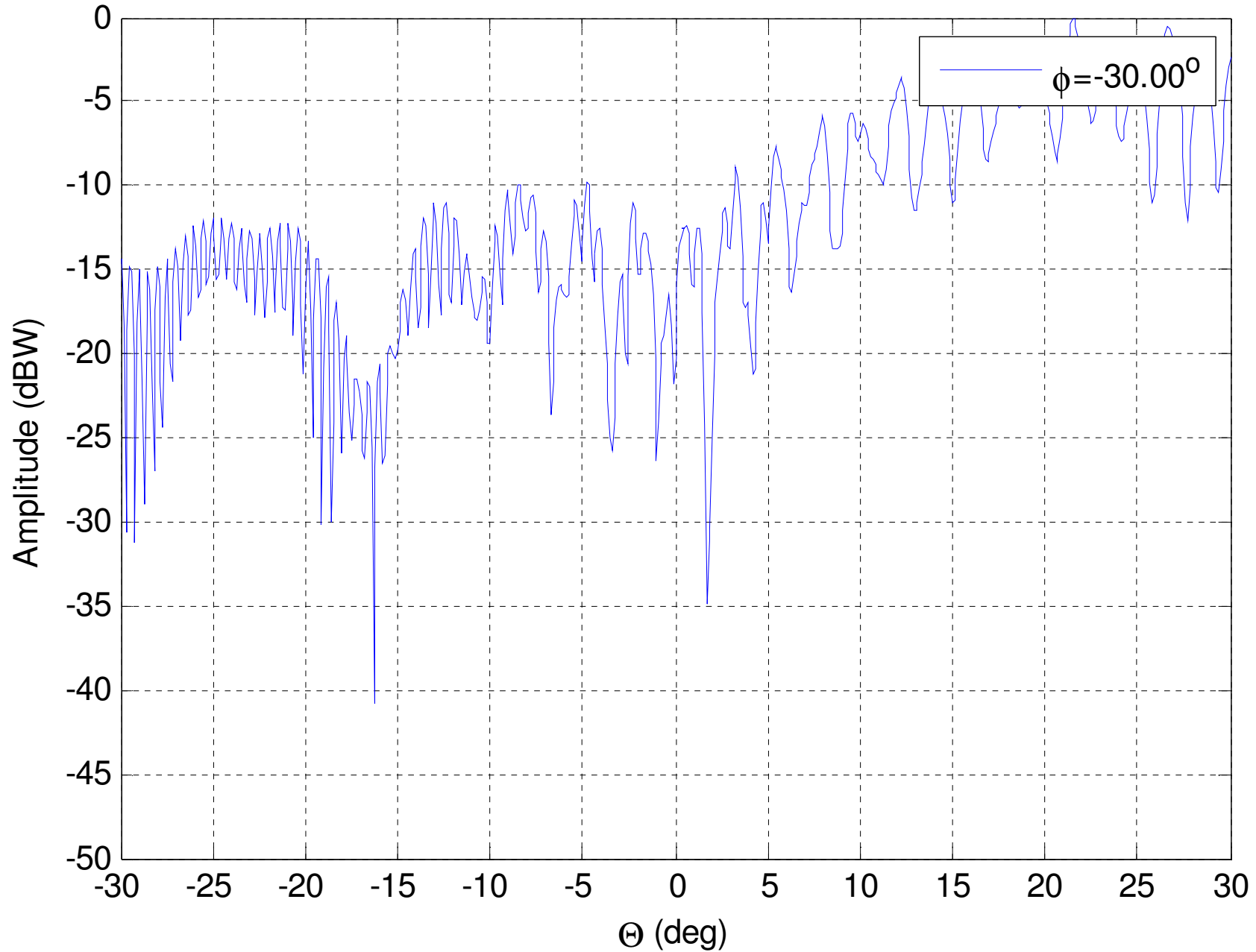
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -7.17 dBW, Date: 14-Dec-2011



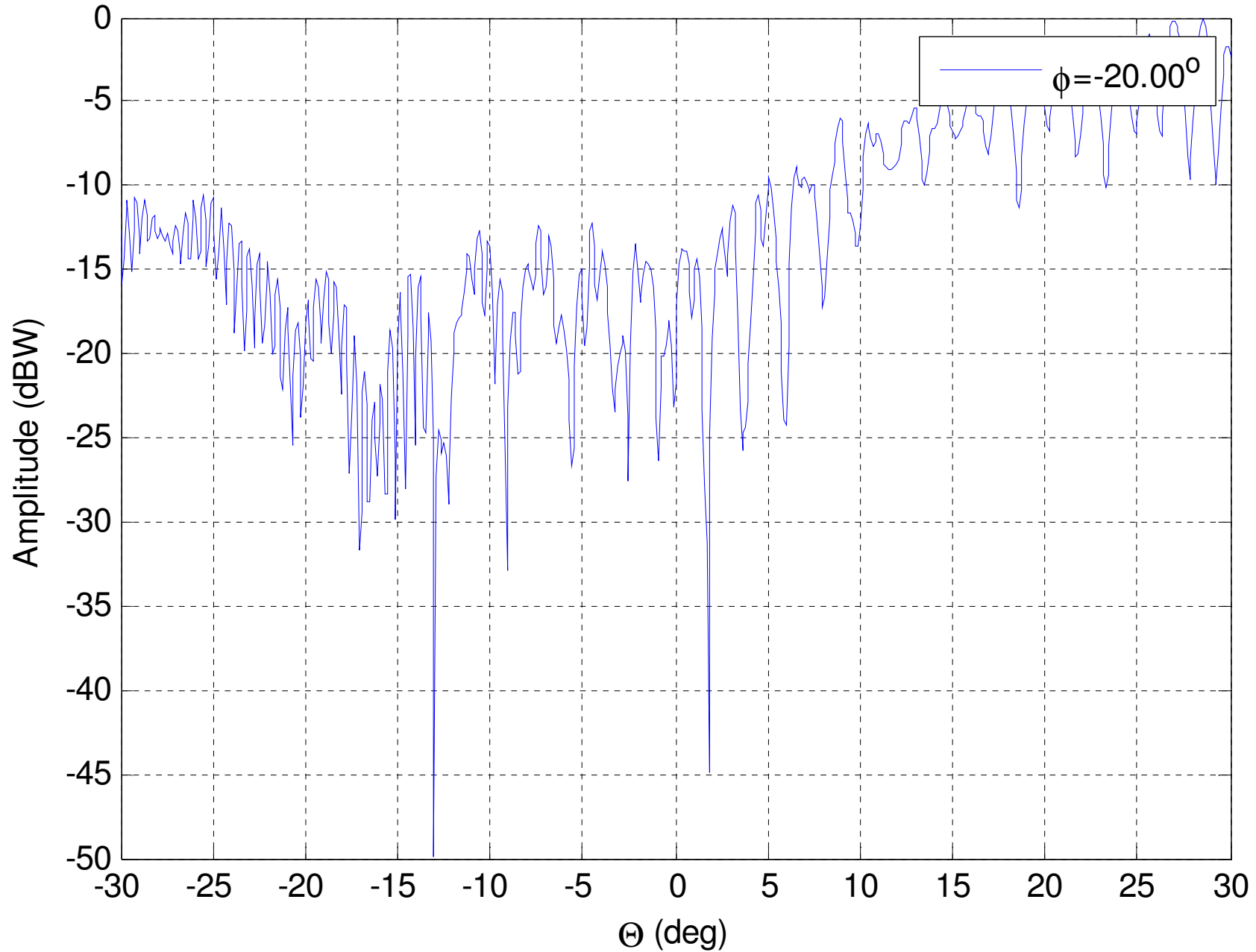
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -4.07 dBW, Date: 14-Dec-2011



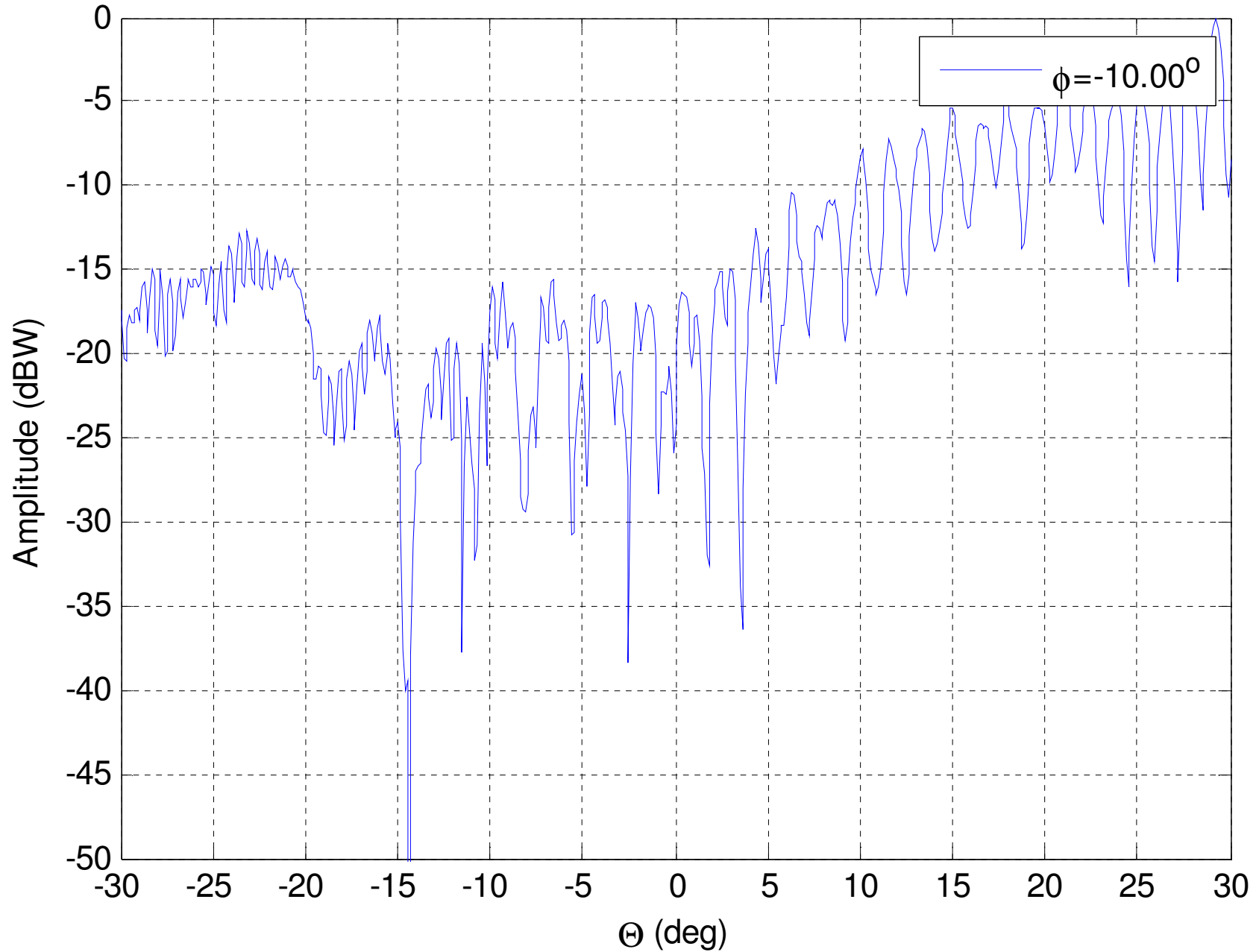
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -2.69 dBW, Date: 14-Dec-2011



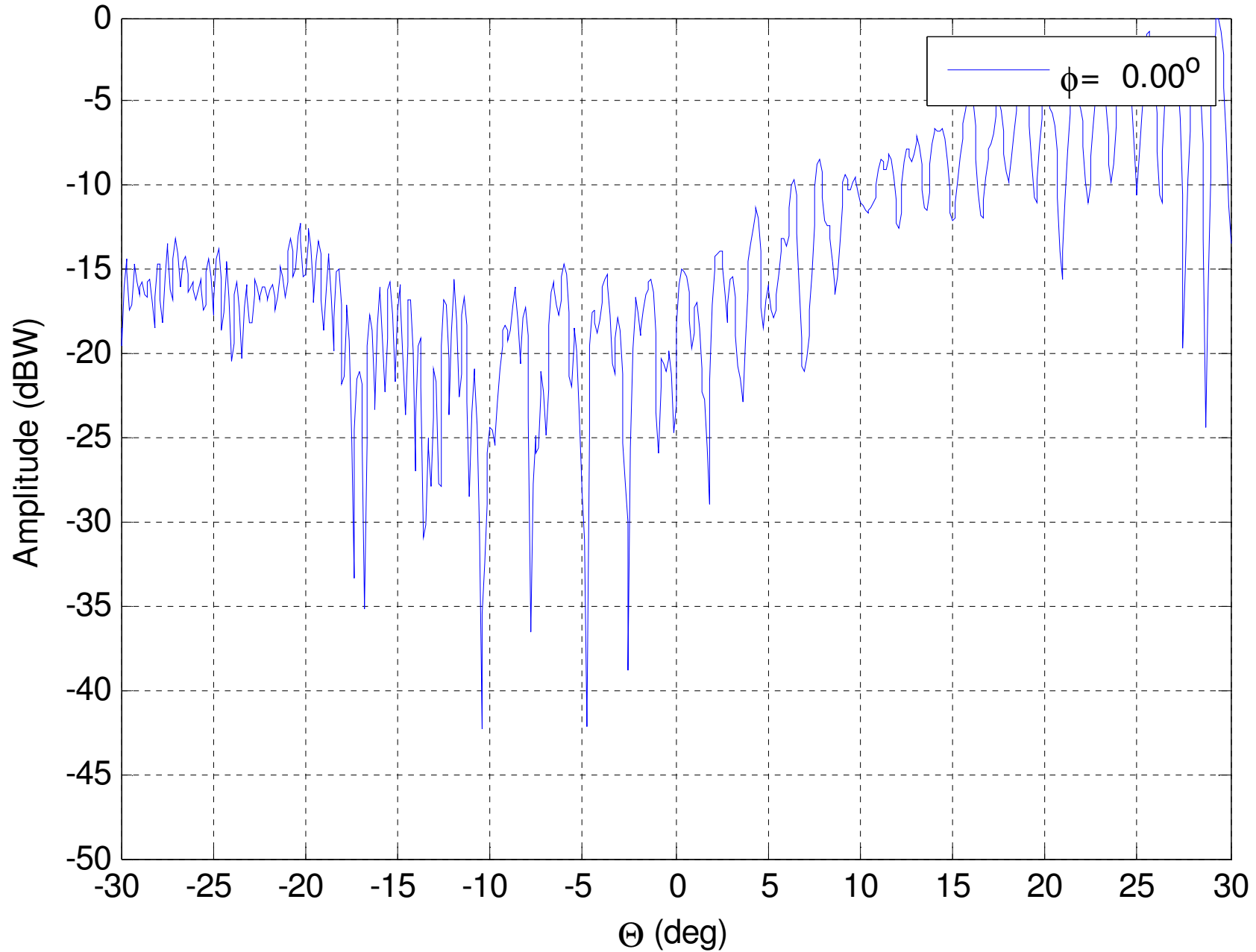
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -0.08 dBW, Date: 14-Dec-2011



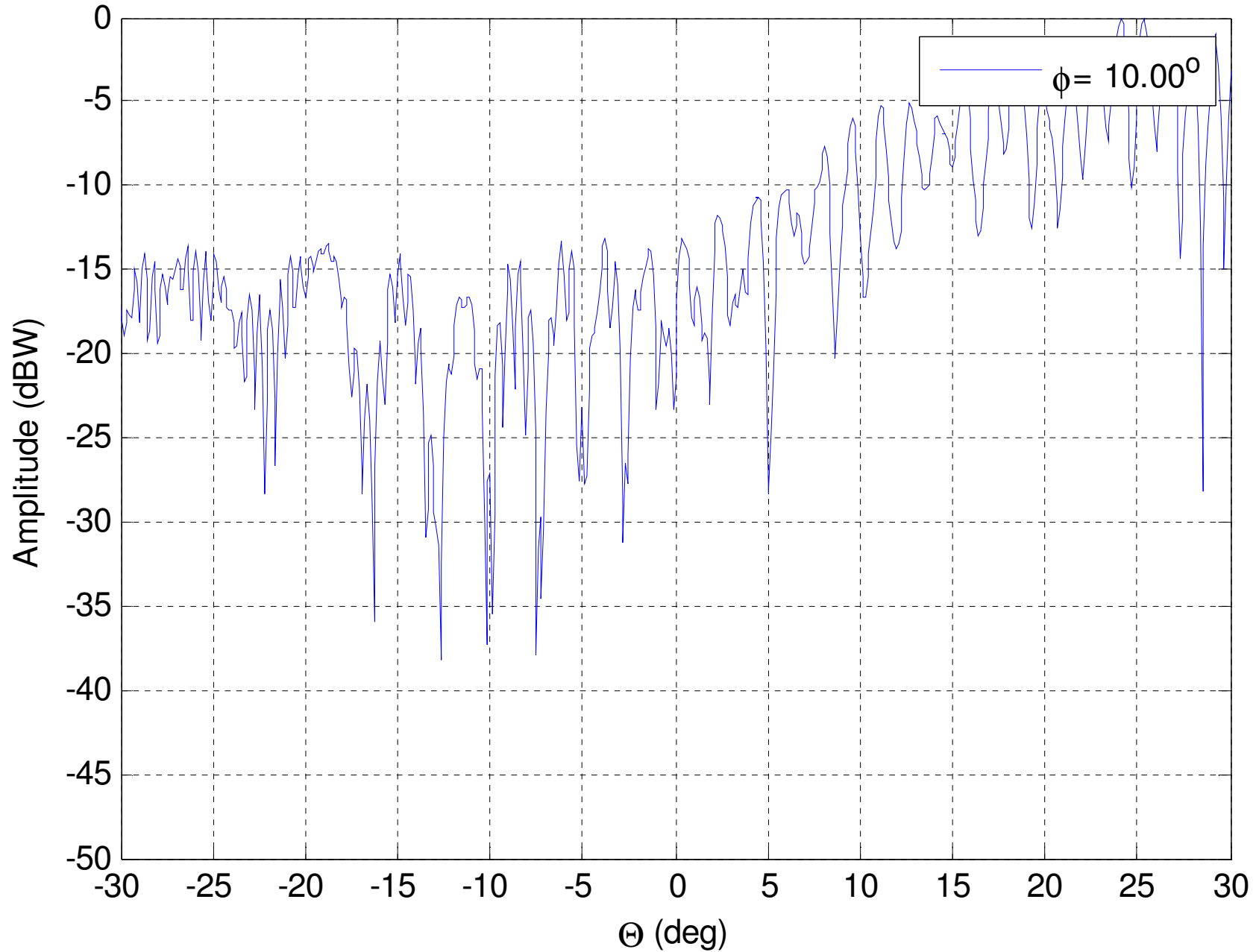
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -1.36 dBW, Date: 14-Dec-2011



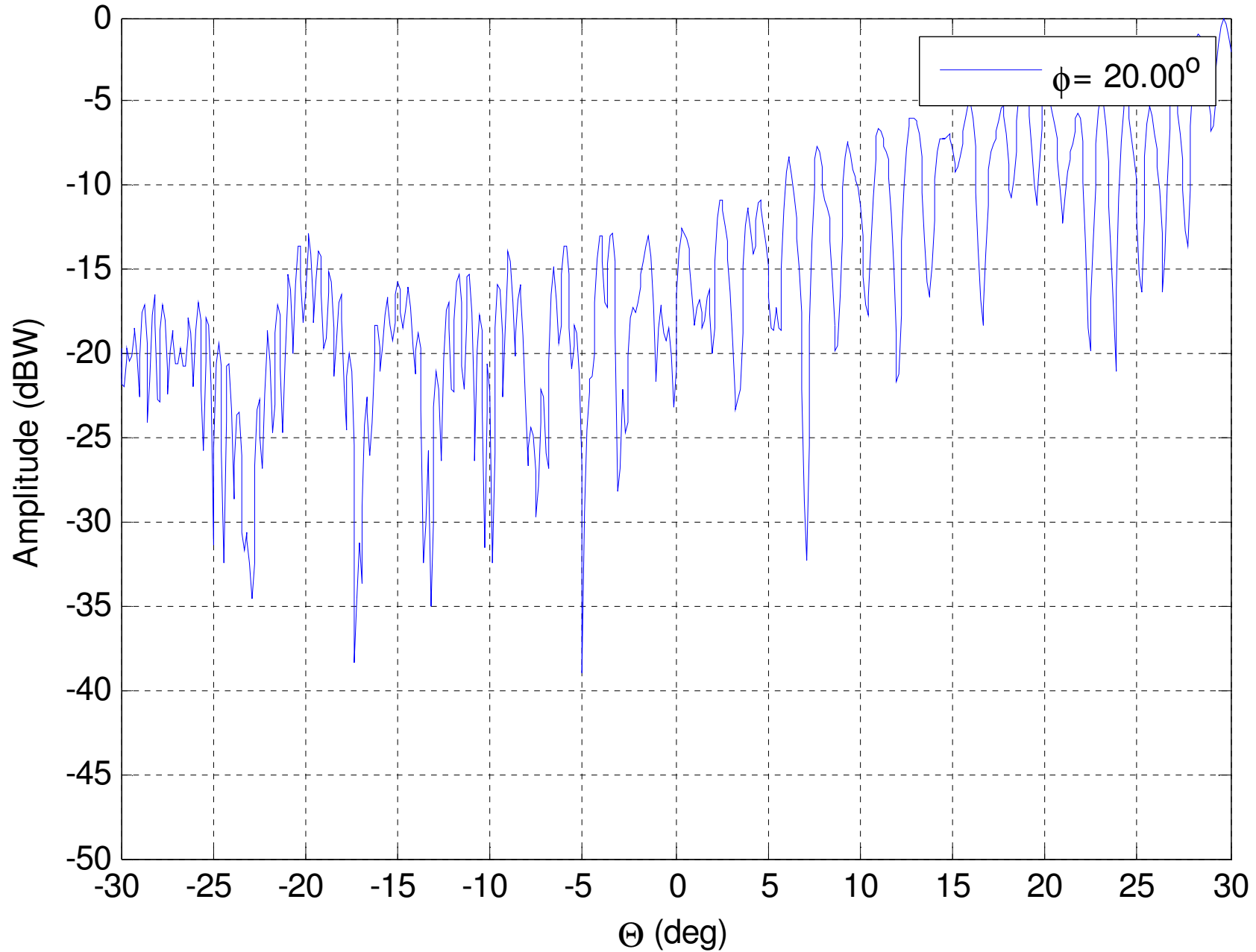
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.04 dBW, Date: 14-Dec-2011



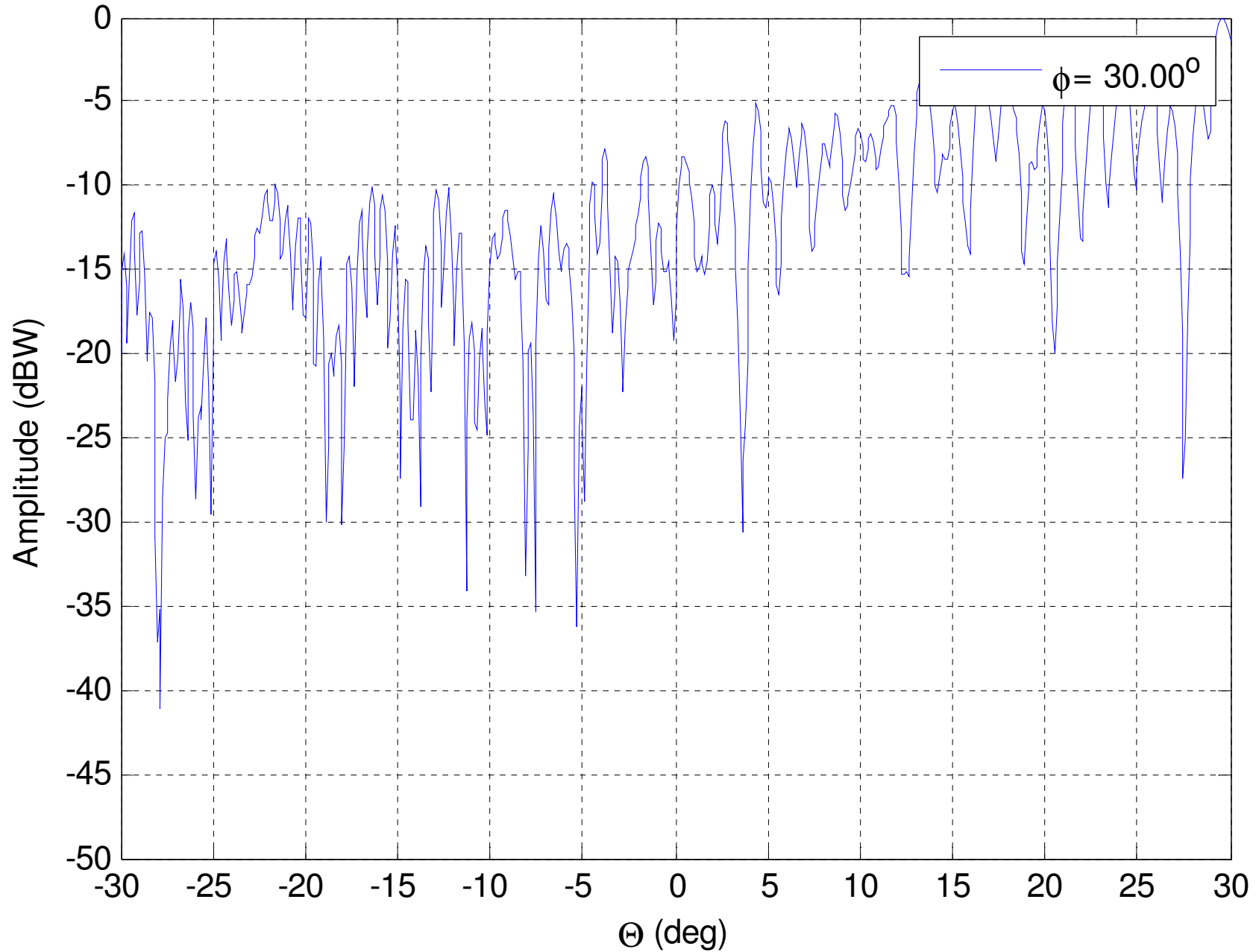
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -3.48 dBW, Date: 14-Dec-2011



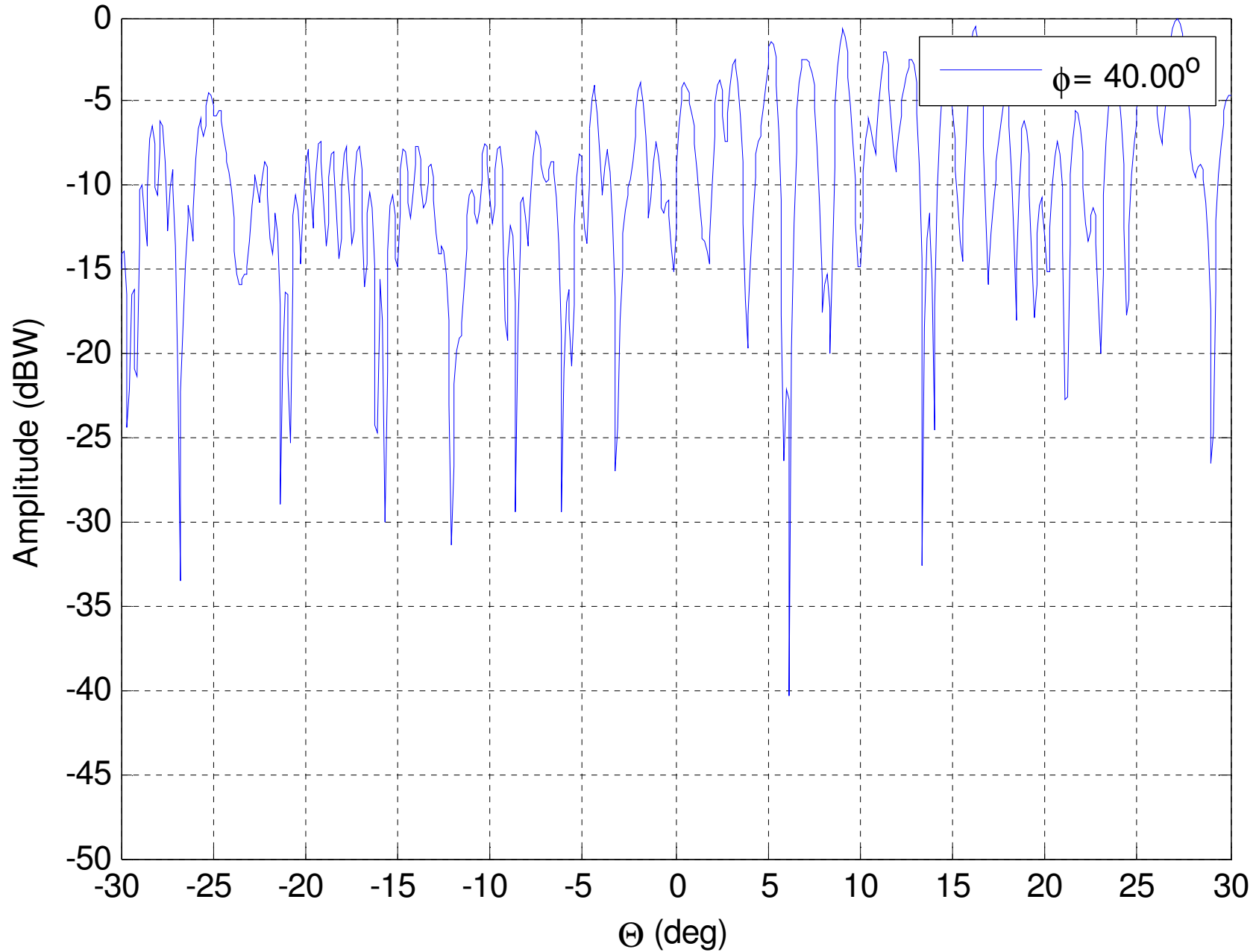
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -7.72 dBW, Date: 14-Dec-2011



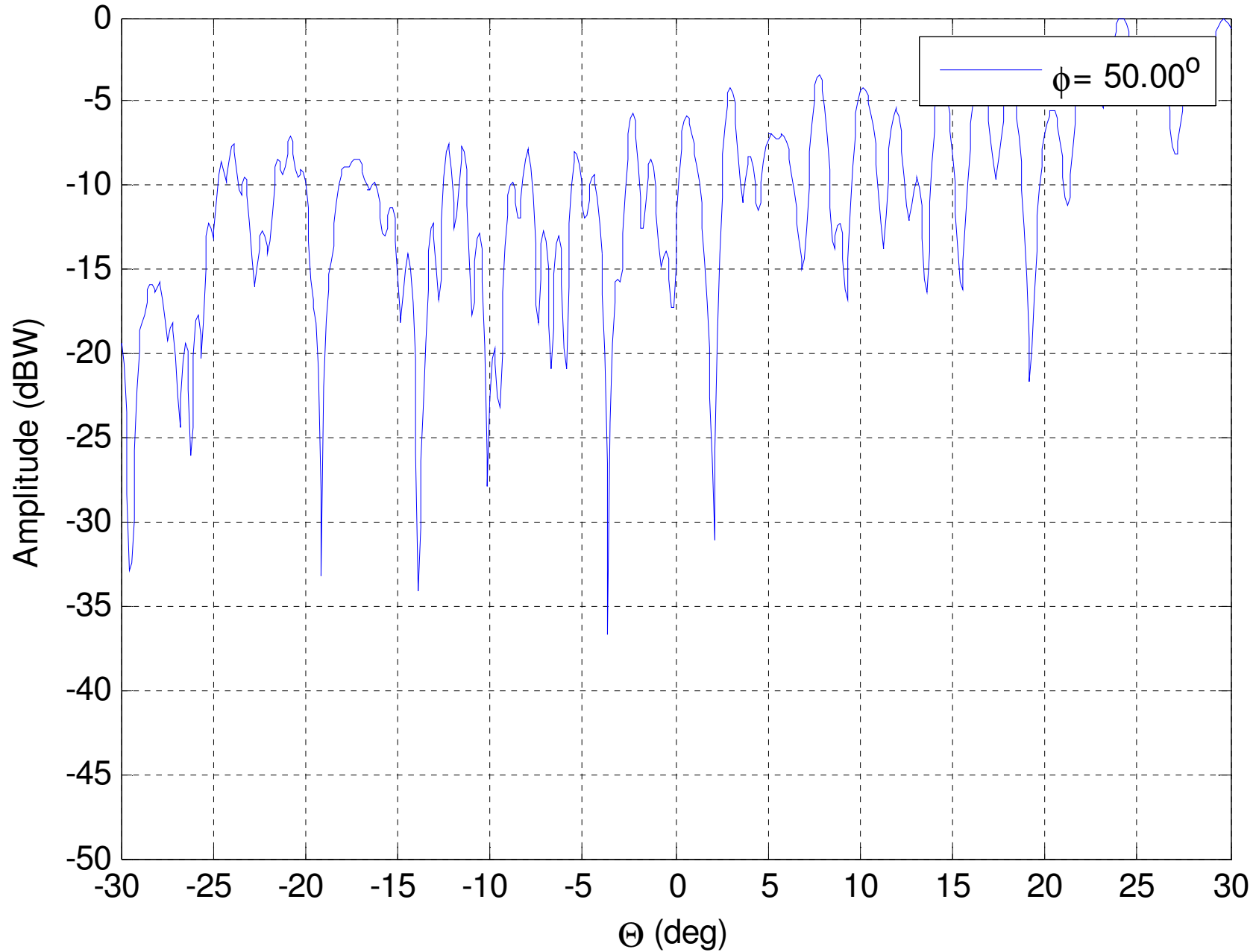
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -11.85 dBW, Date: 14-Dec-2011



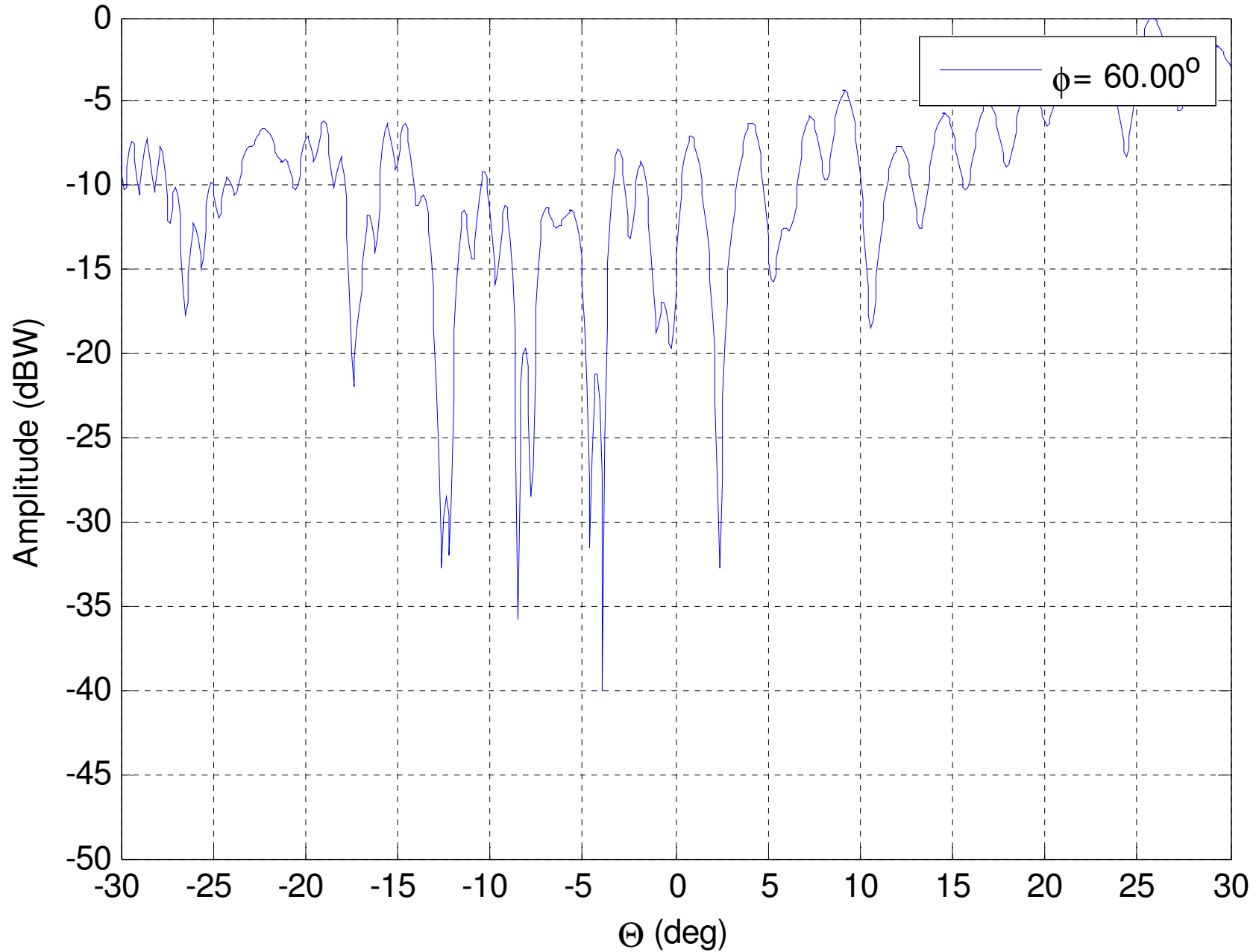
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -9.63 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

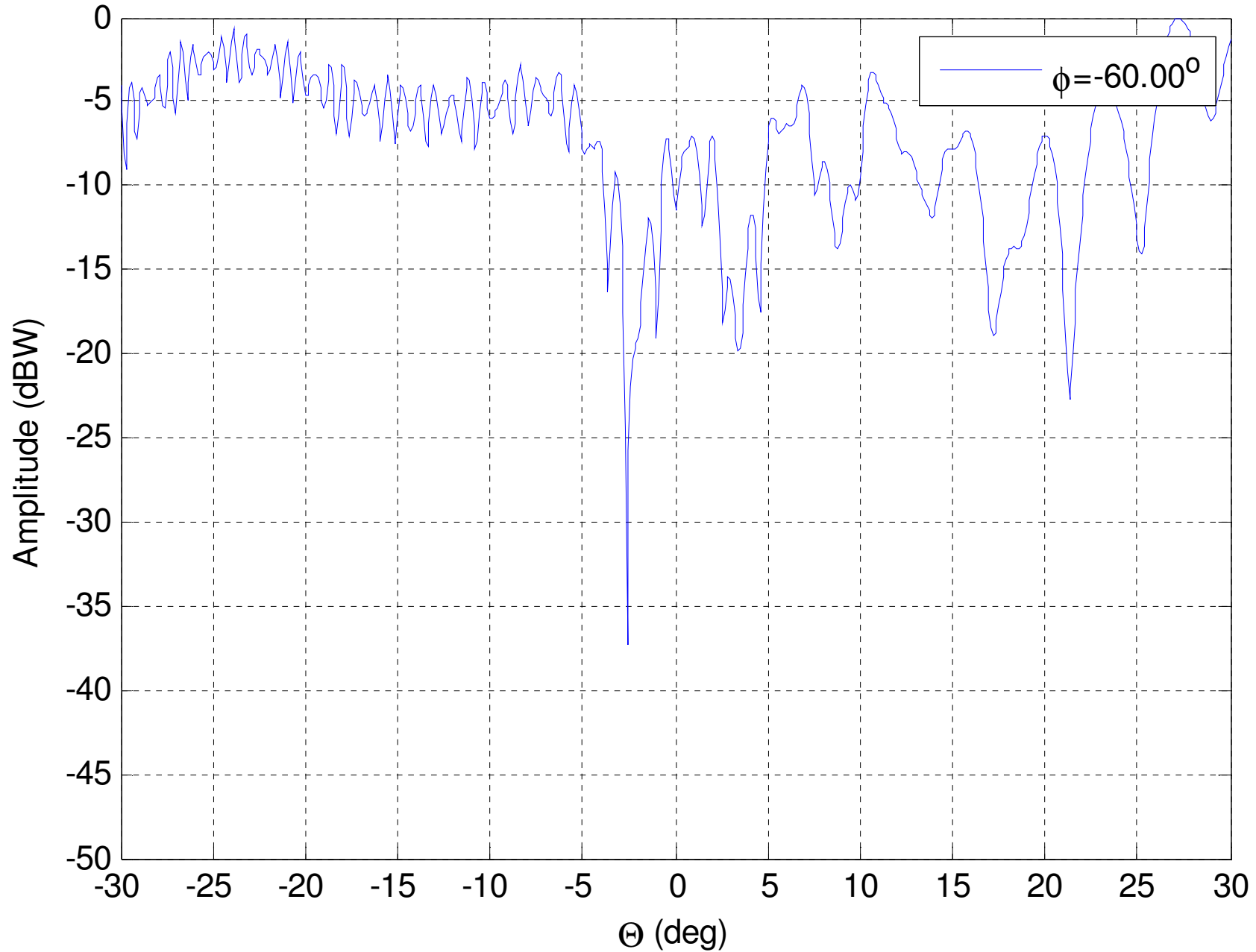
Input file: tx-17.5-rhcp-60.cut, Peak: -8.05 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

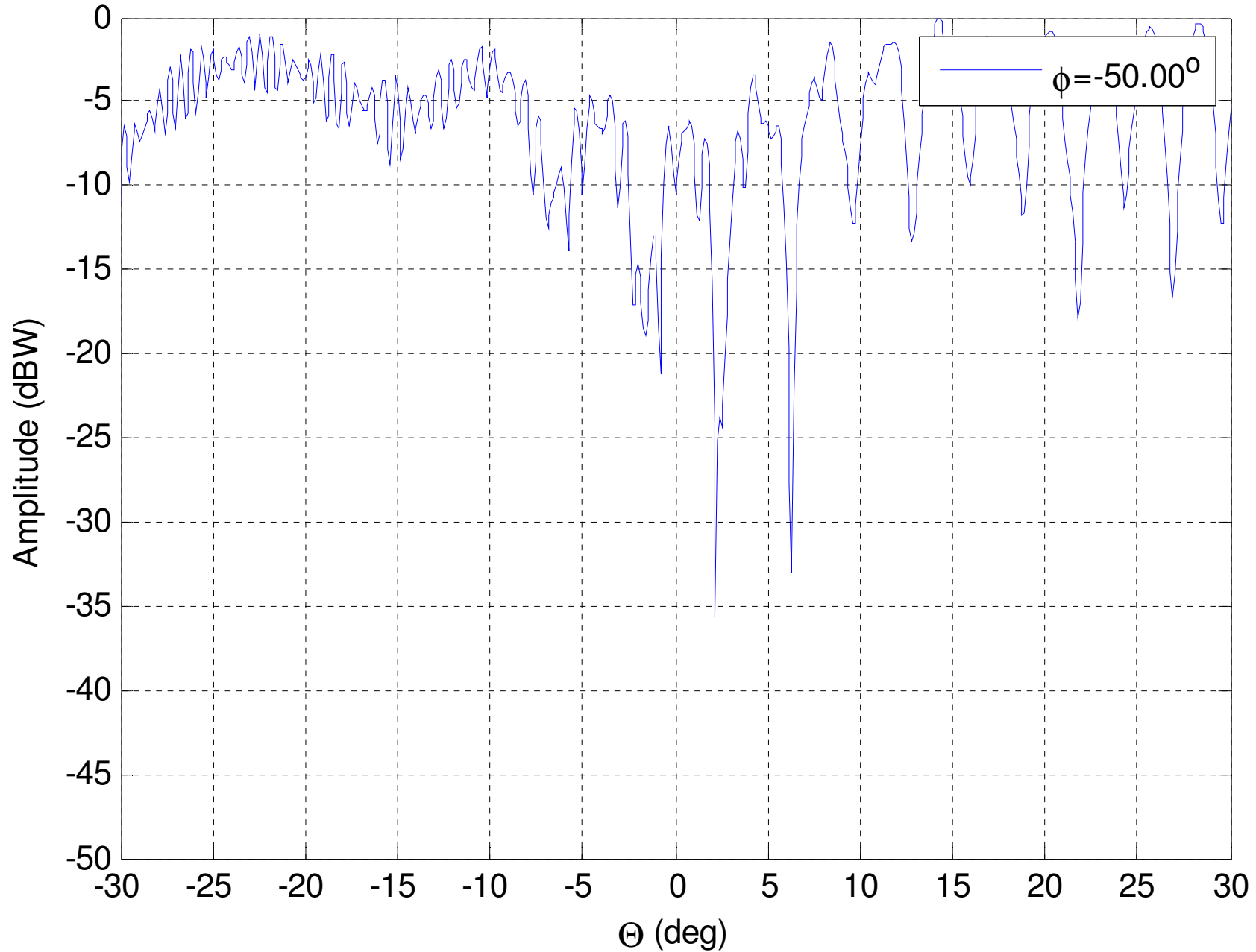
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.24 dBW, Date: 14-Dec-2011



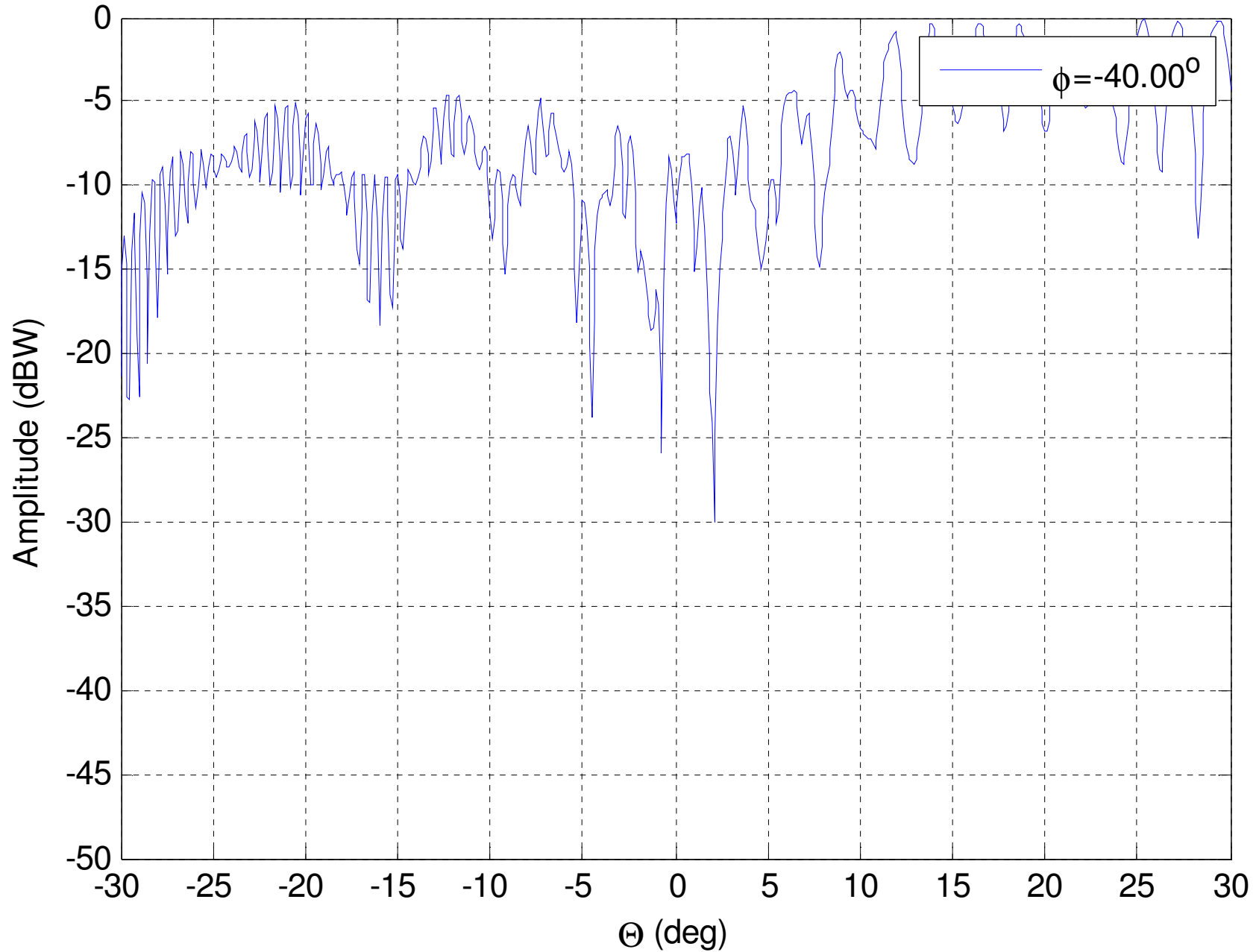
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -9.28 dBW, Date: 14-Dec-2011



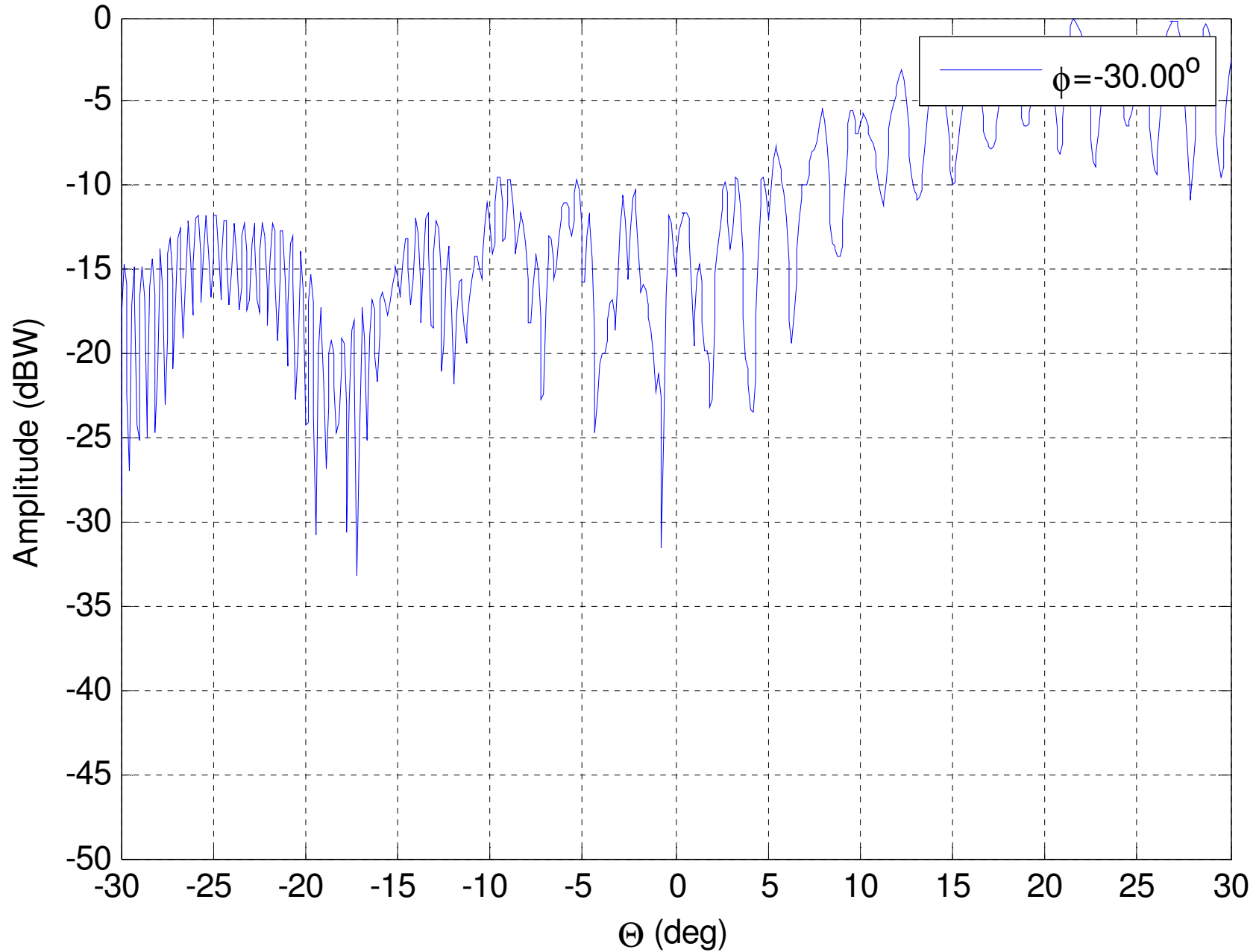
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.61 dBW, Date: 14-Dec-2011



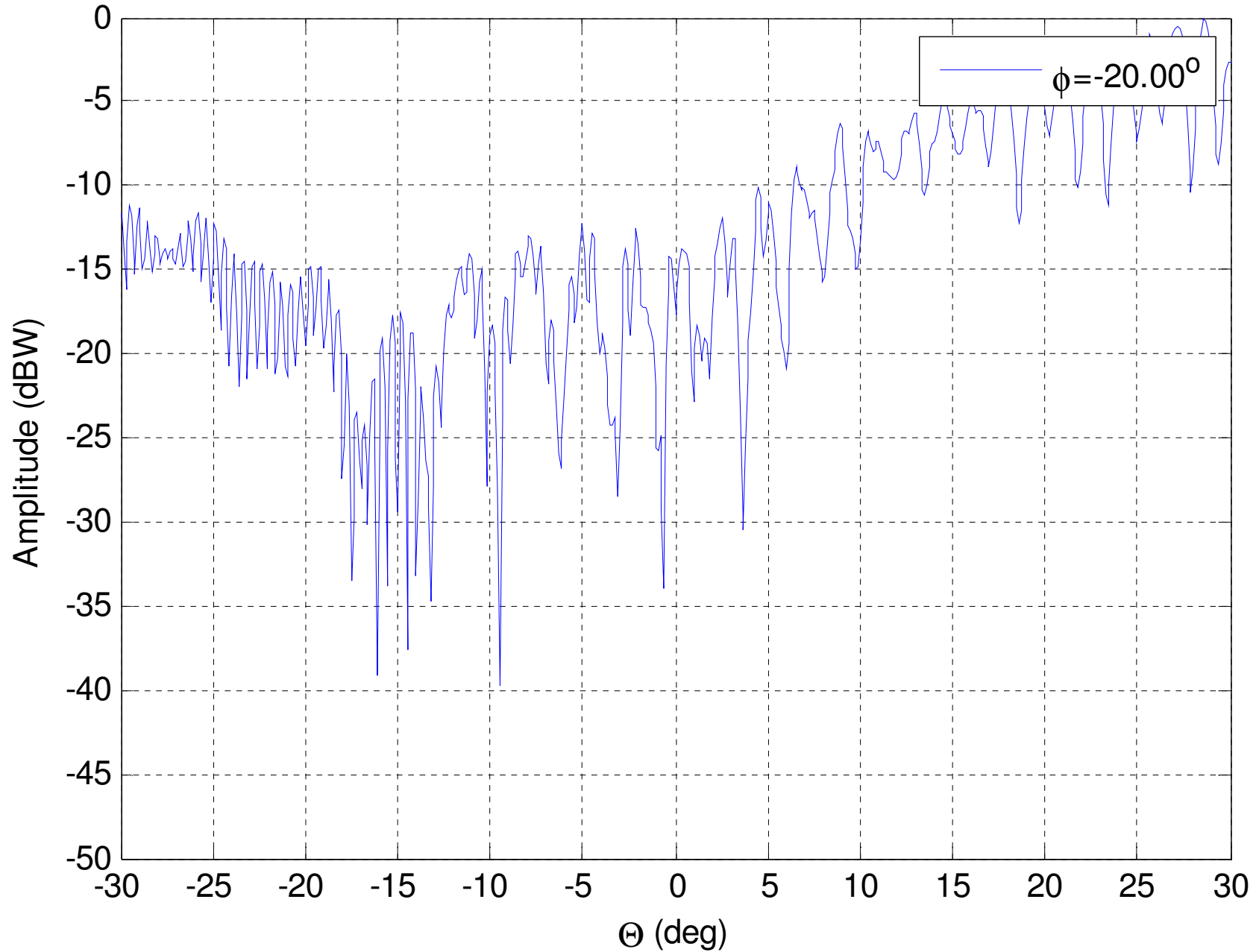
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -4.30 dBW, Date: 14-Dec-2011



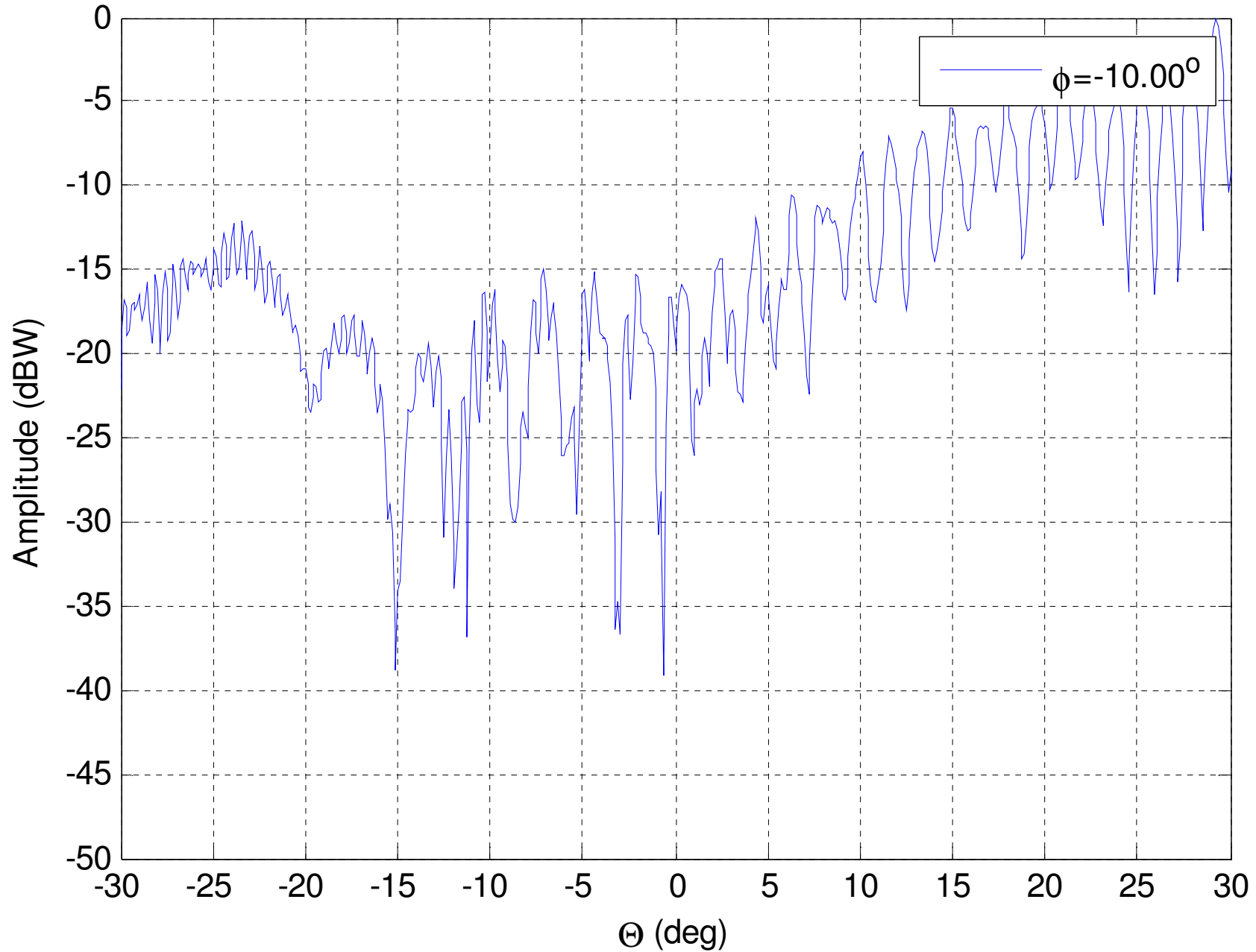
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -2.16 dBW, Date: 14-Dec-2011



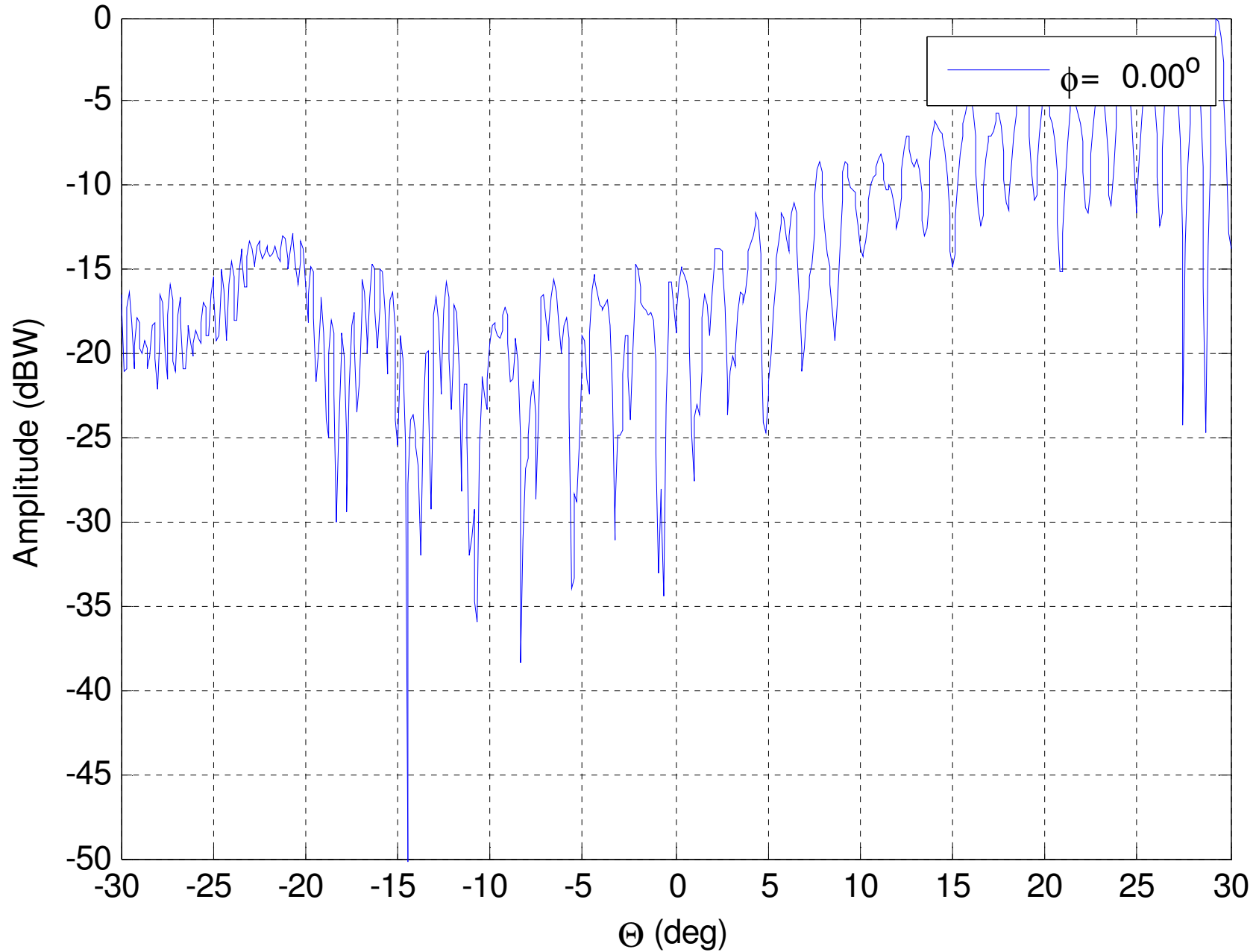
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 0.02 dBW, Date: 14-Dec-2011



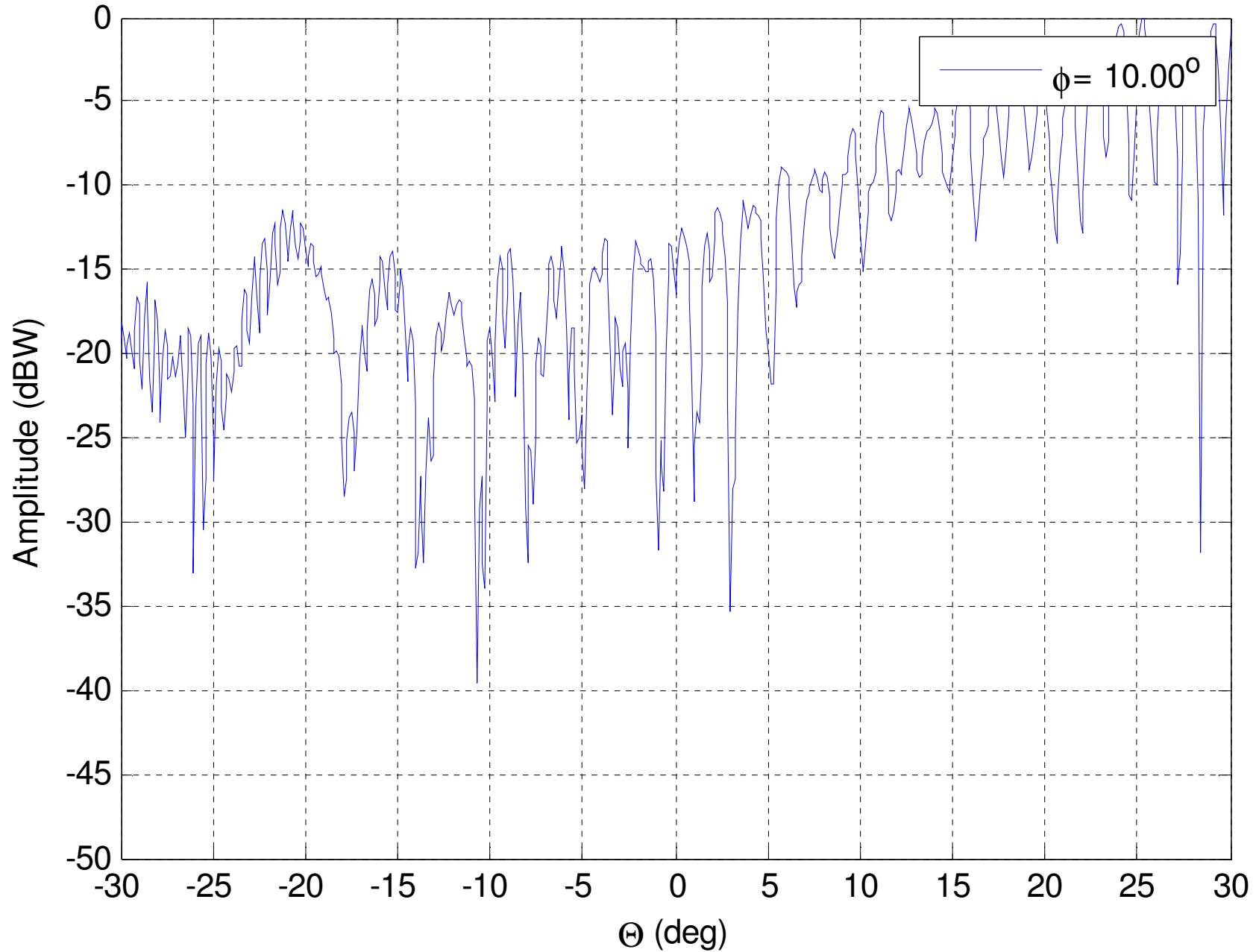
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -1.01 dBW, Date: 14-Dec-2011



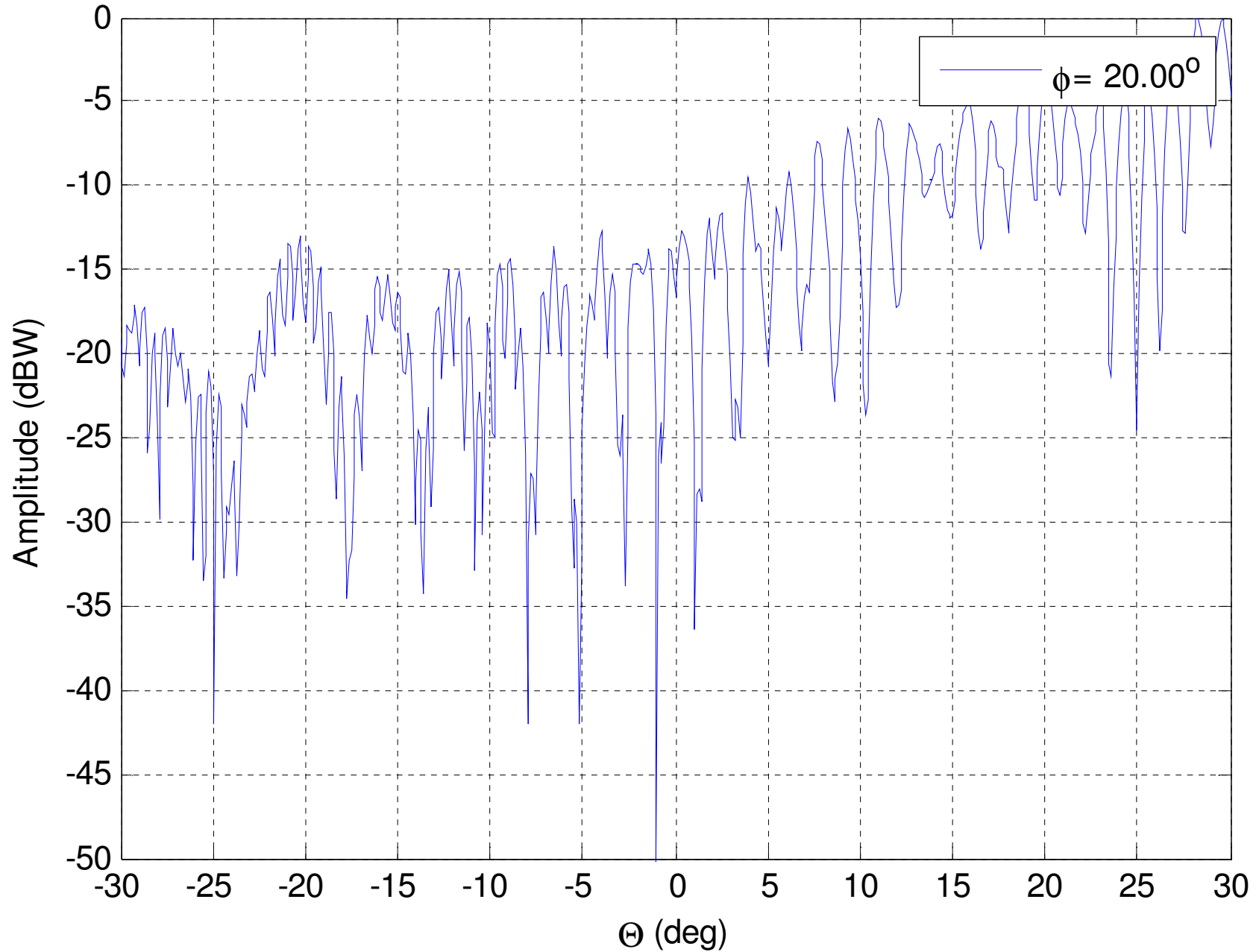
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -3.32 dBW, Date: 14-Dec-2011



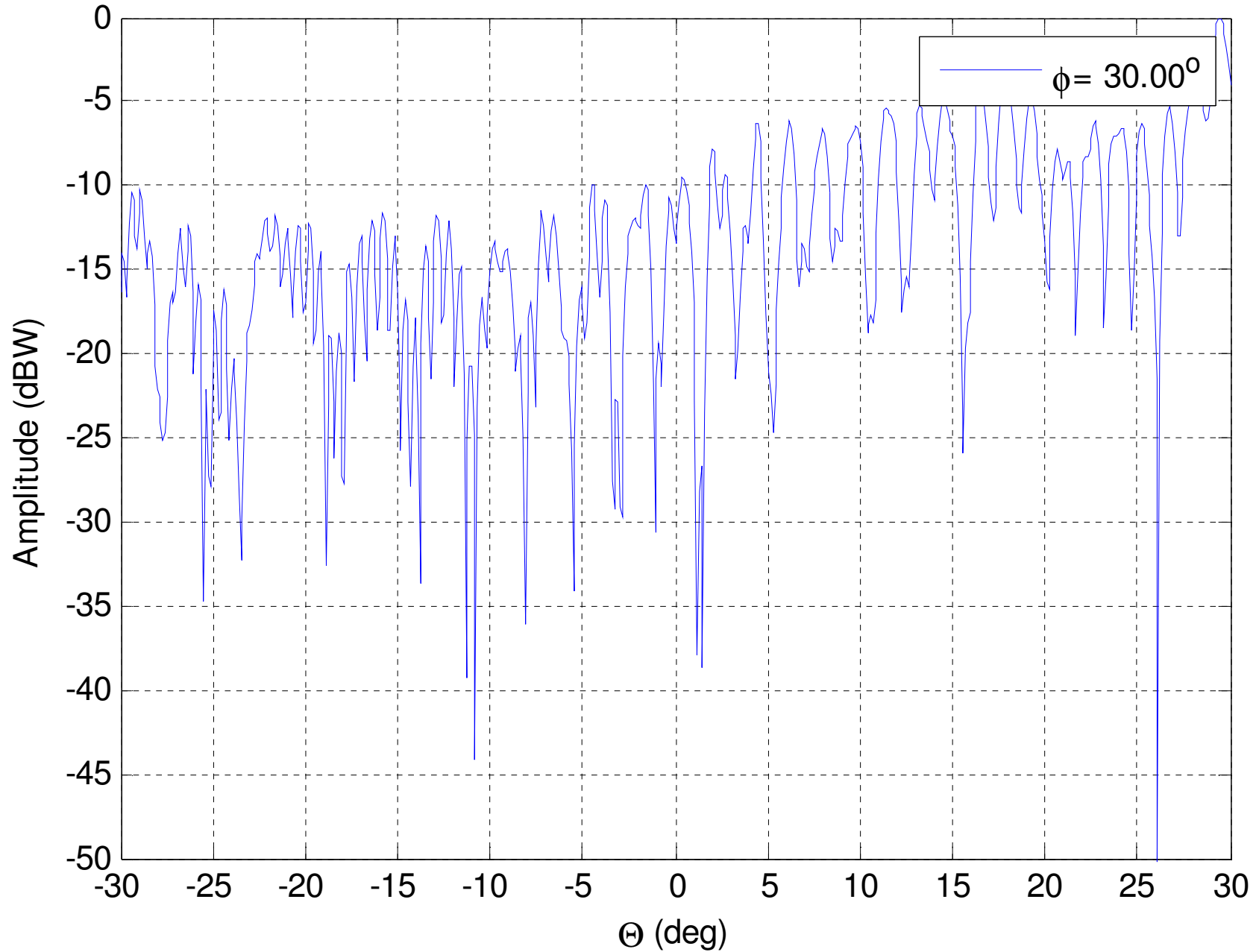
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -3.19 dBW, Date: 14-Dec-2011



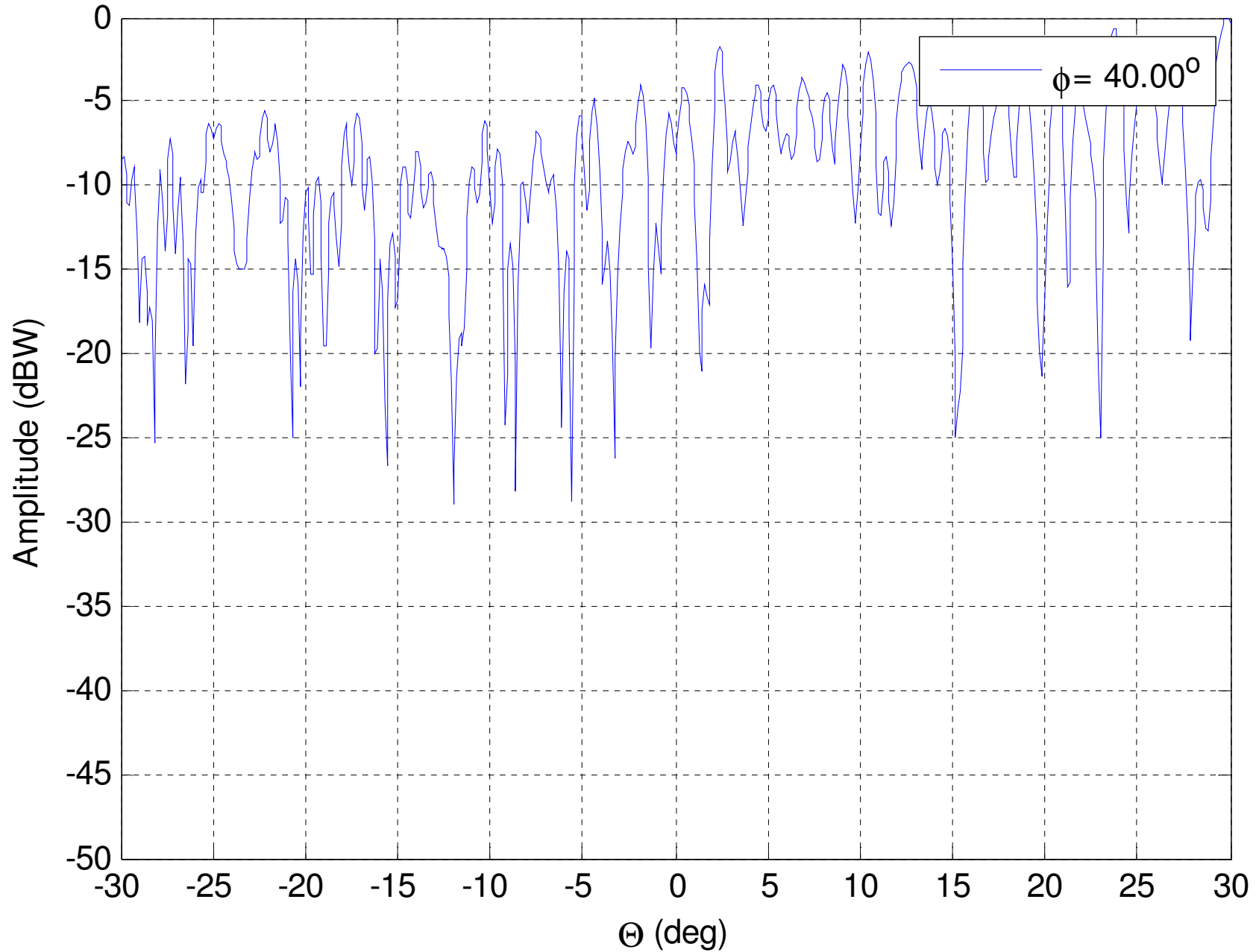
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -6.31 dBW, Date: 14-Dec-2011



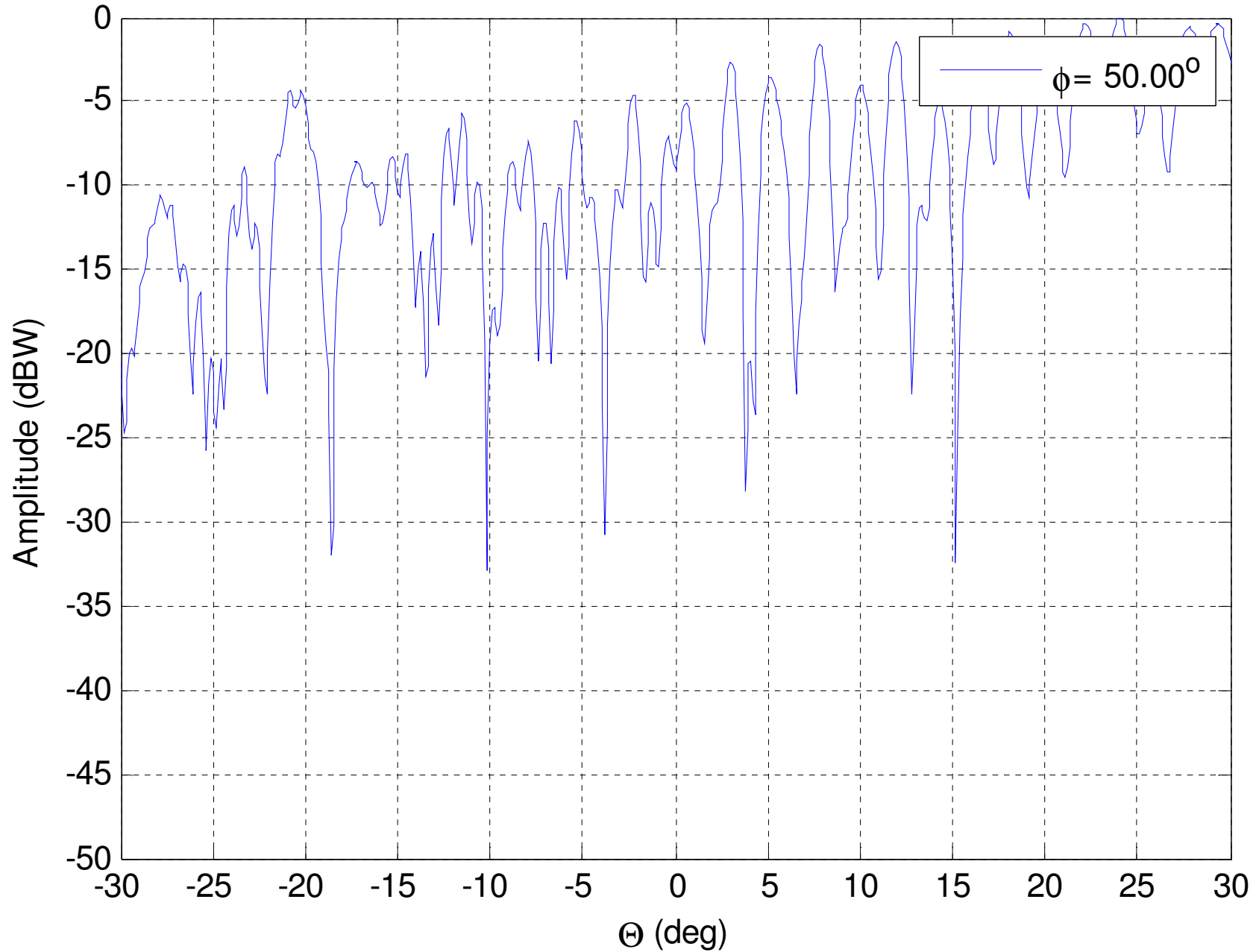
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -11.67 dBW, Date: 14-Dec-2011



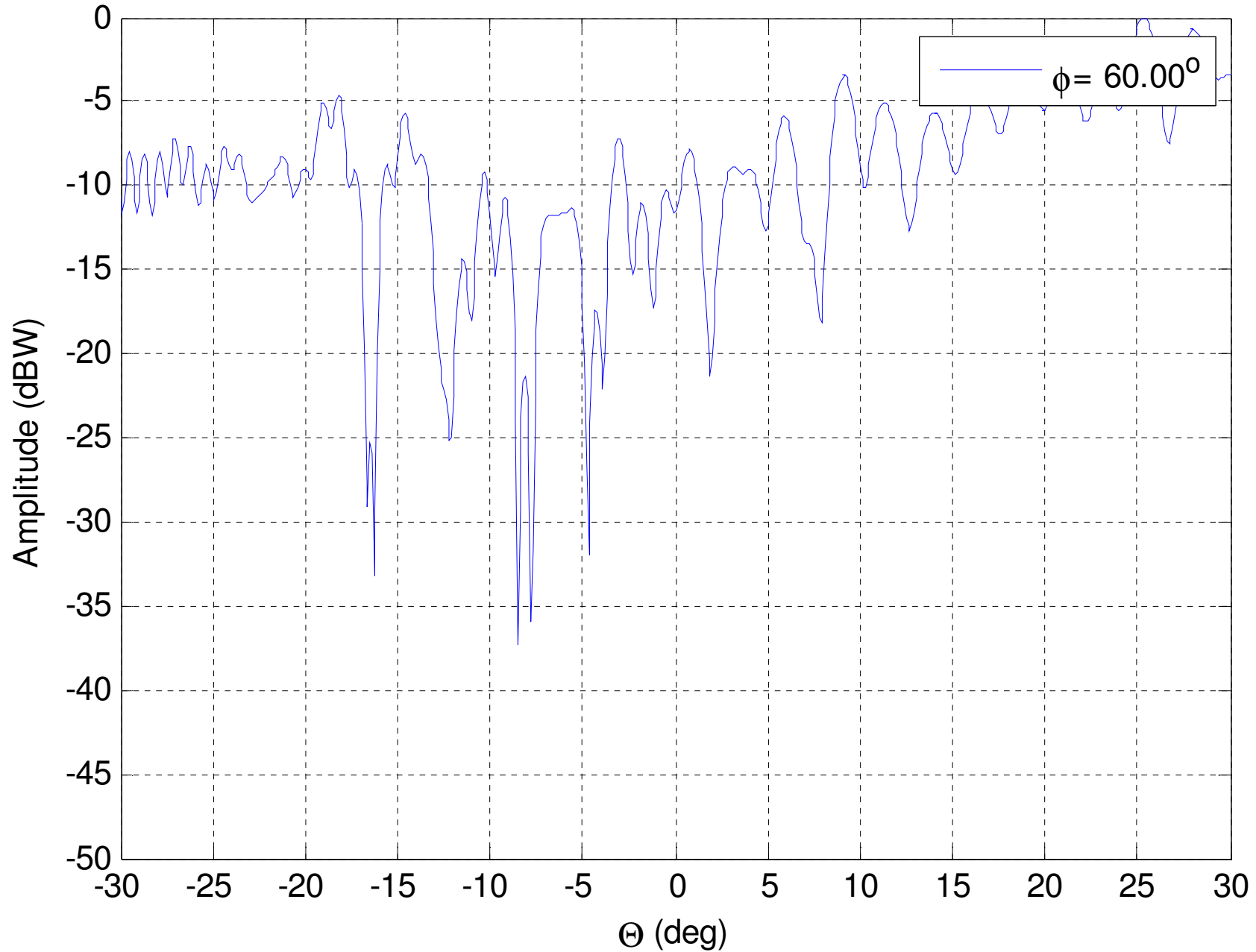
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -10.68 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

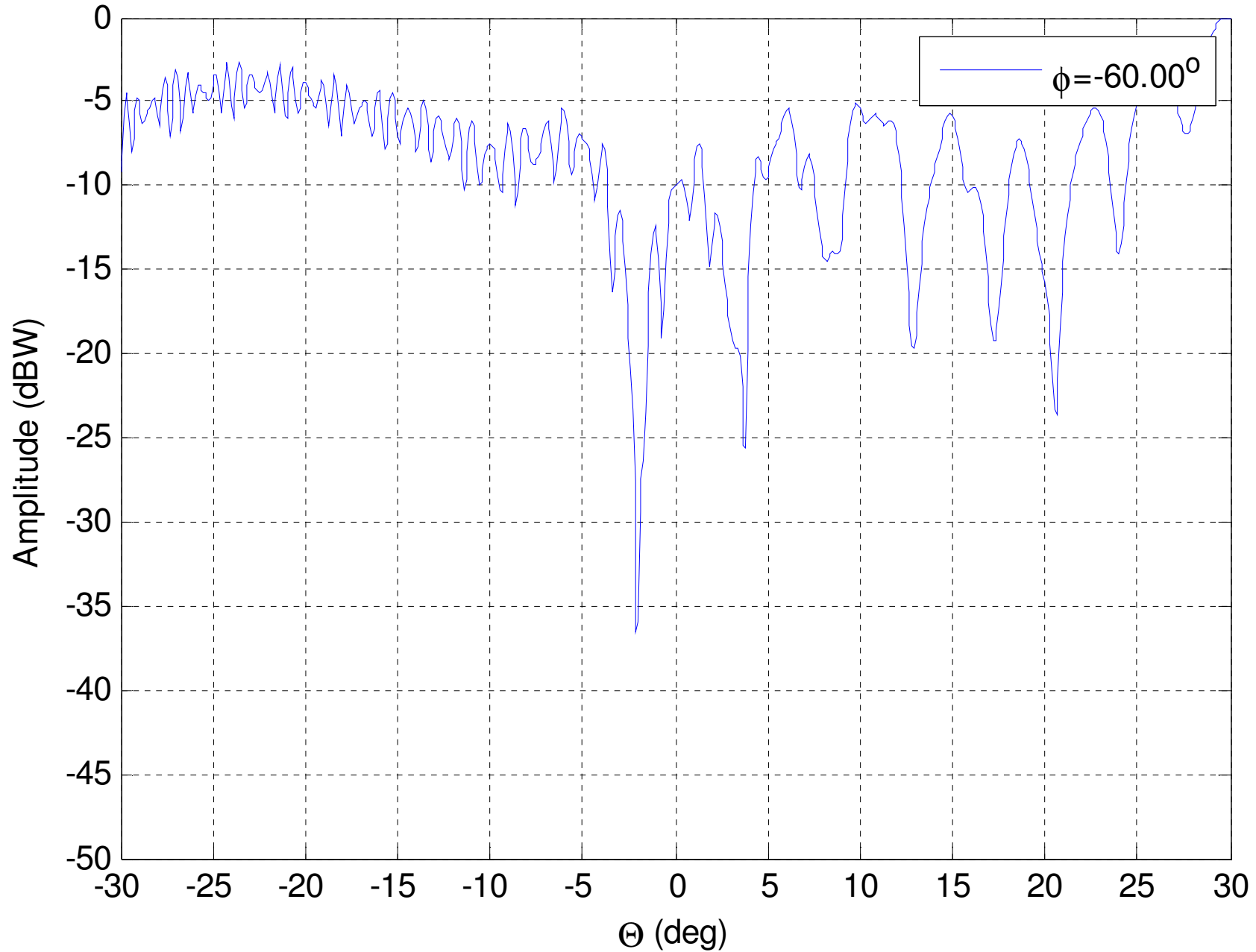
Input file: tx-17.5-lhcp-60.cut, Peak: -8.09 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

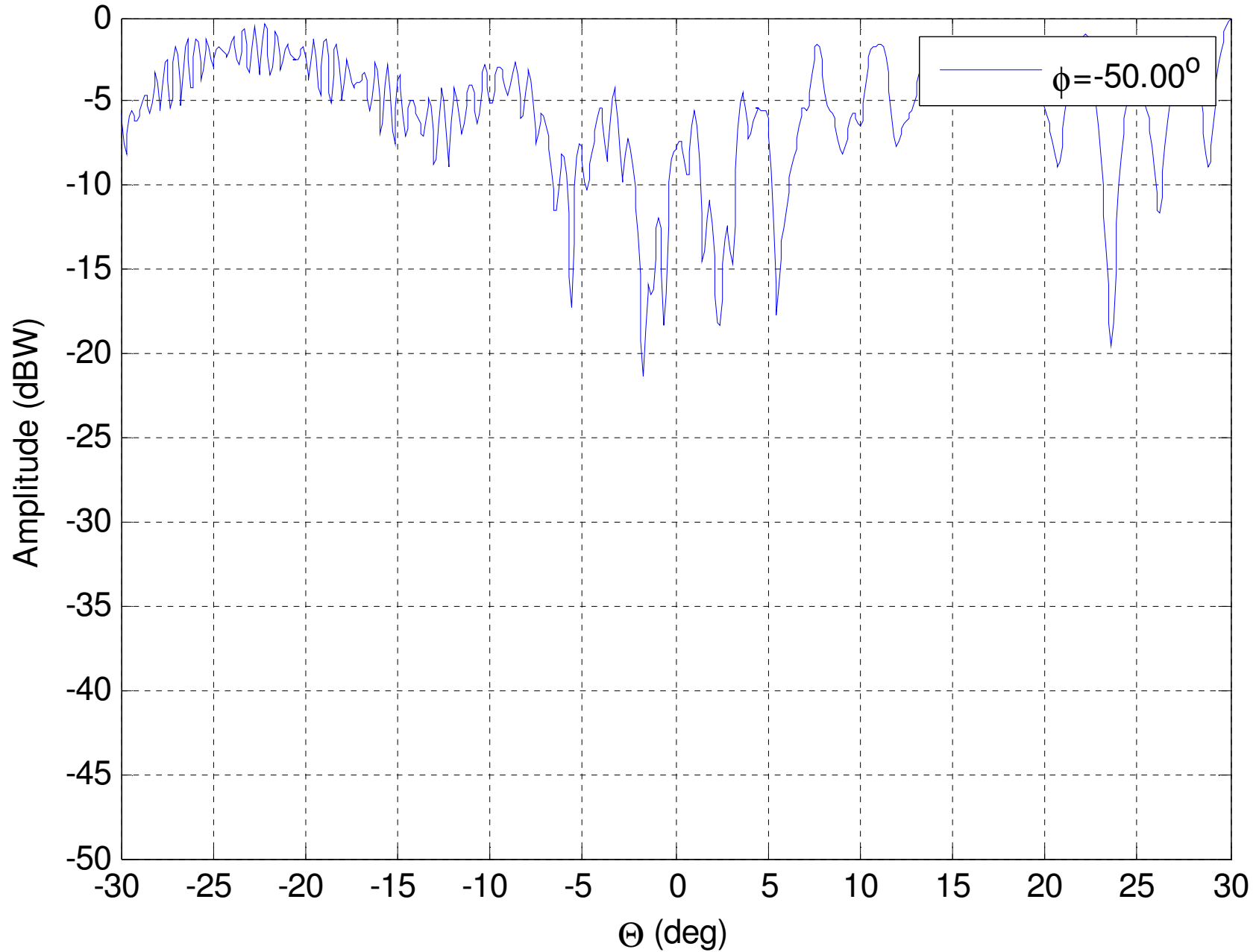
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.93 dBW, Date: 14-Dec-2011



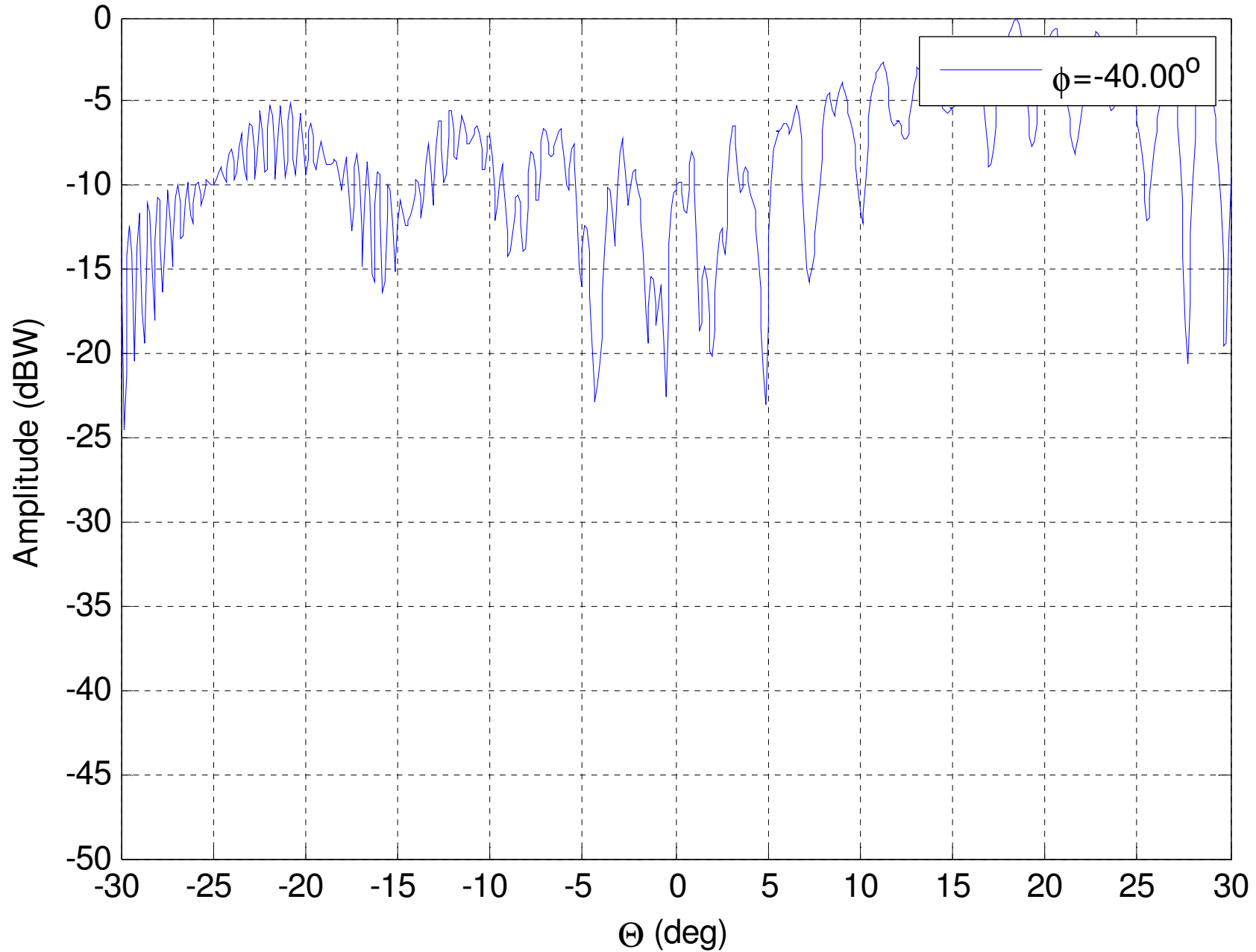
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -9.15 dBW, Date: 14-Dec-2011



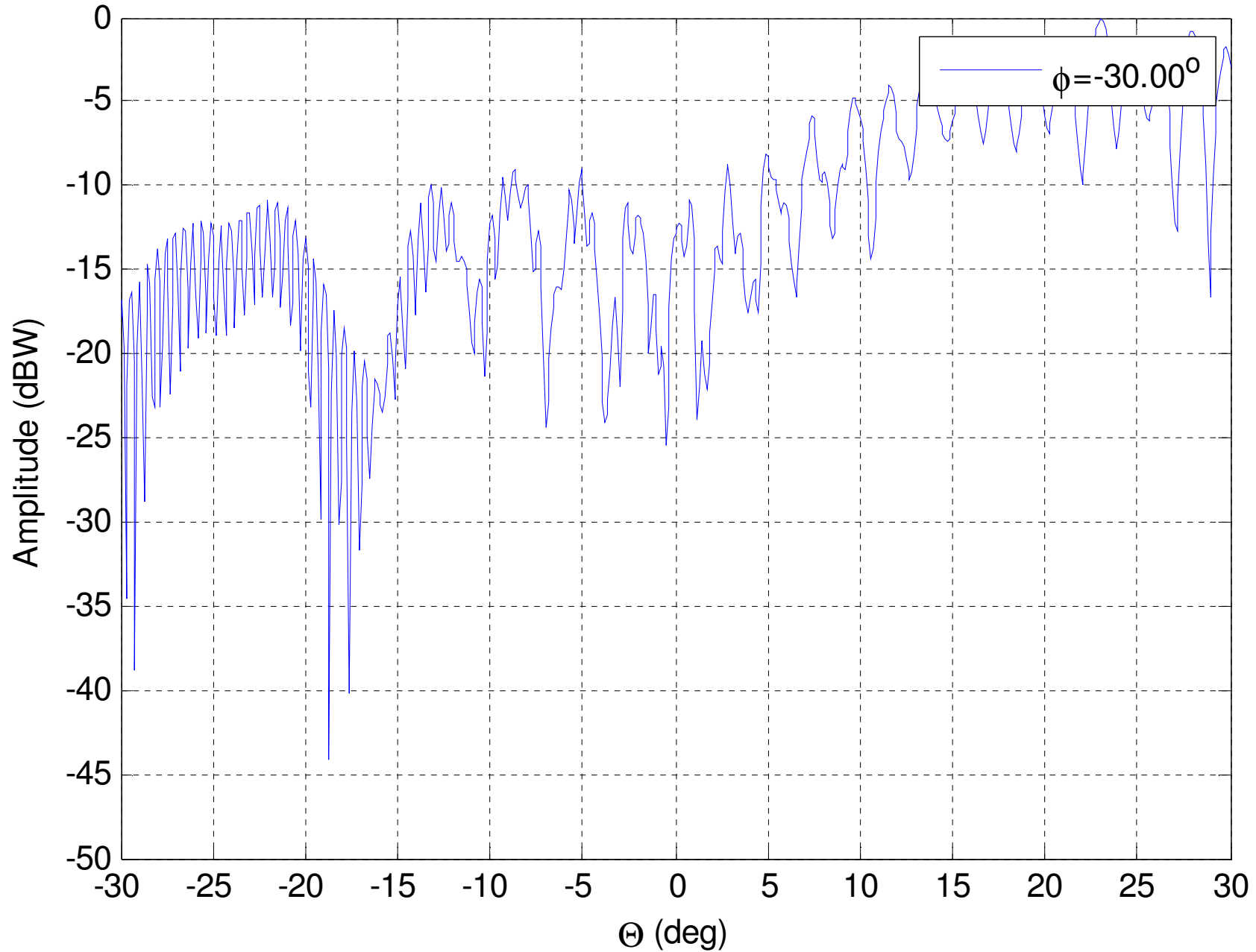
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -6.75 dBW, Date: 14-Dec-2011



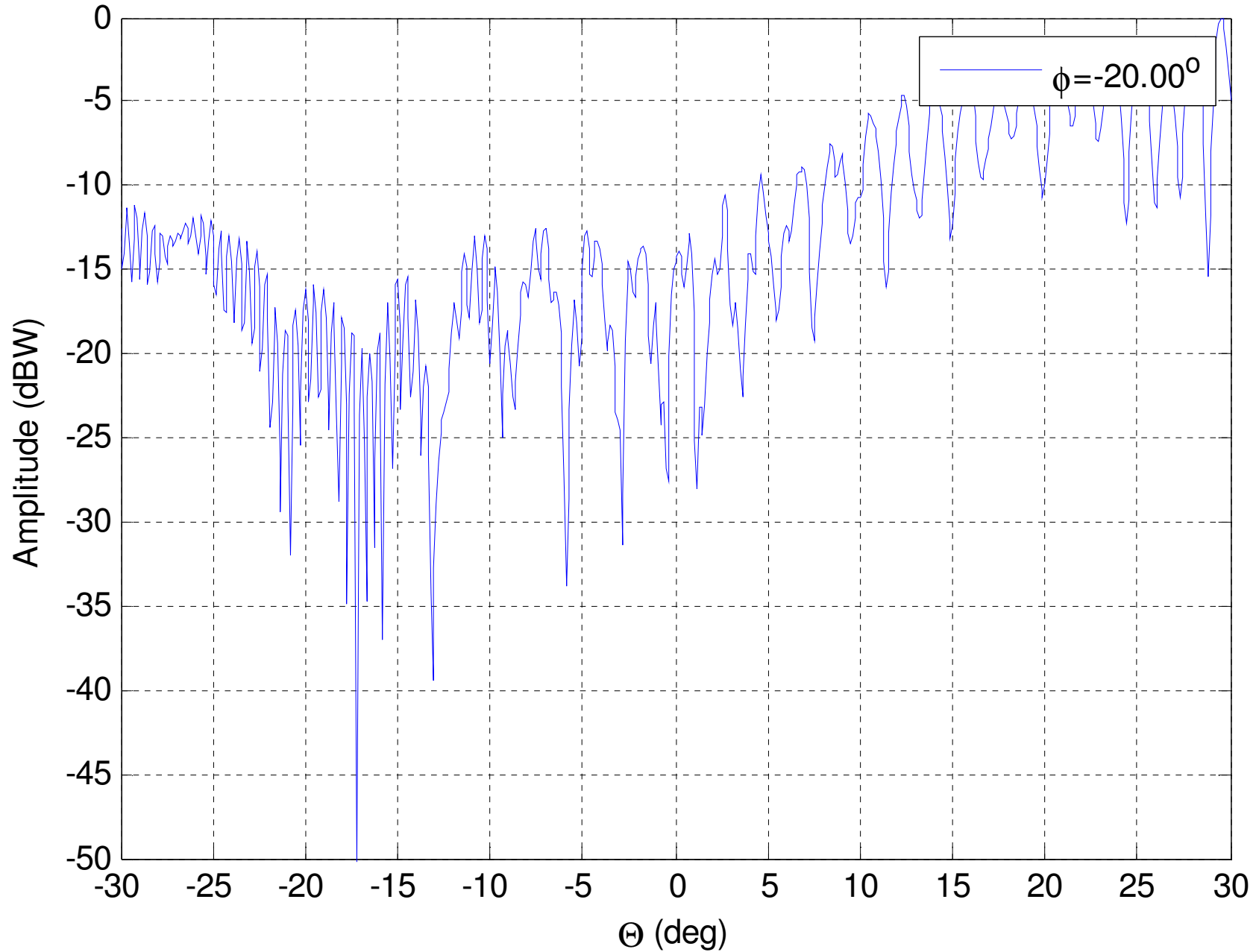
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -4.19 dBW, Date: 14-Dec-2011



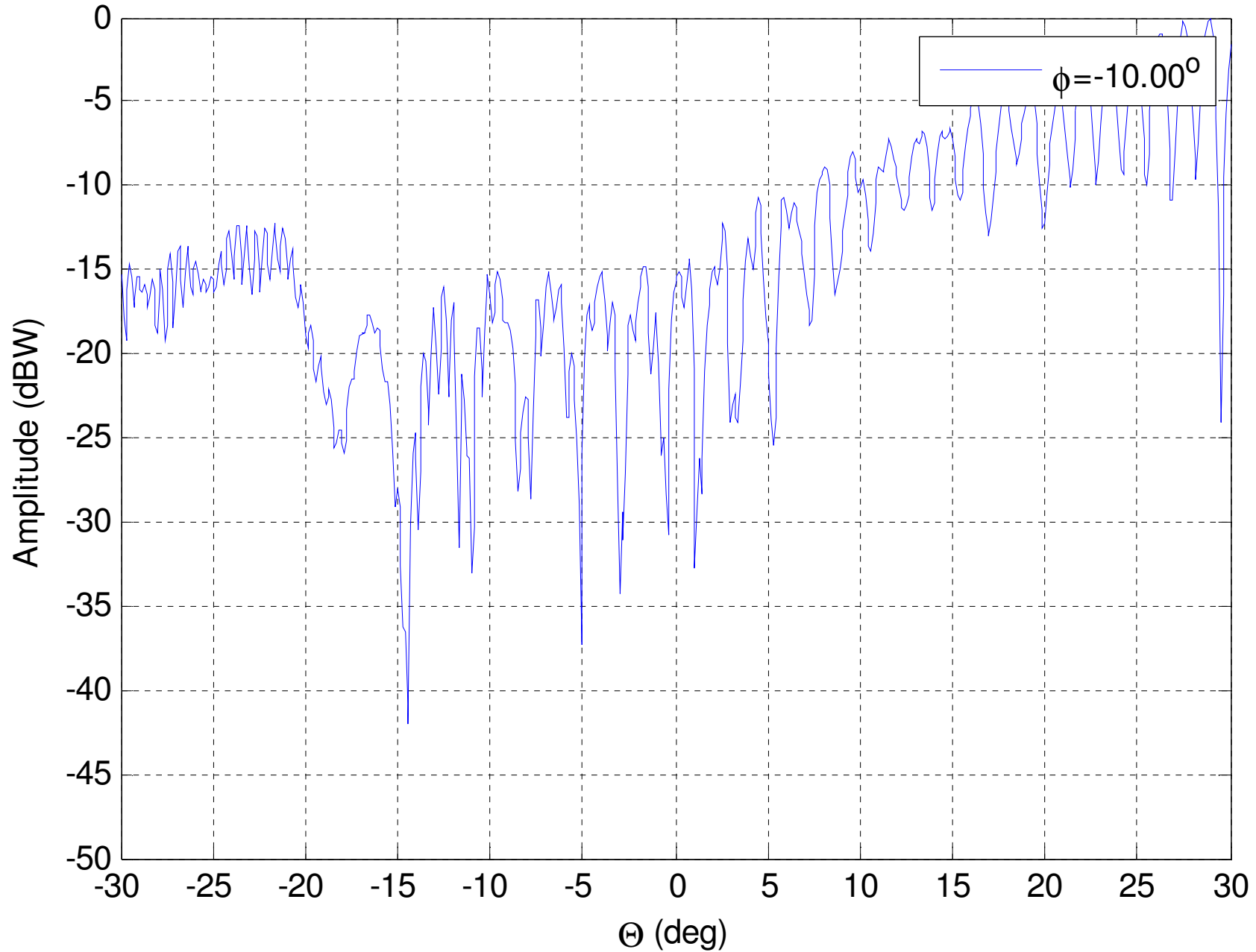
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -2.41 dBW, Date: 14-Dec-2011



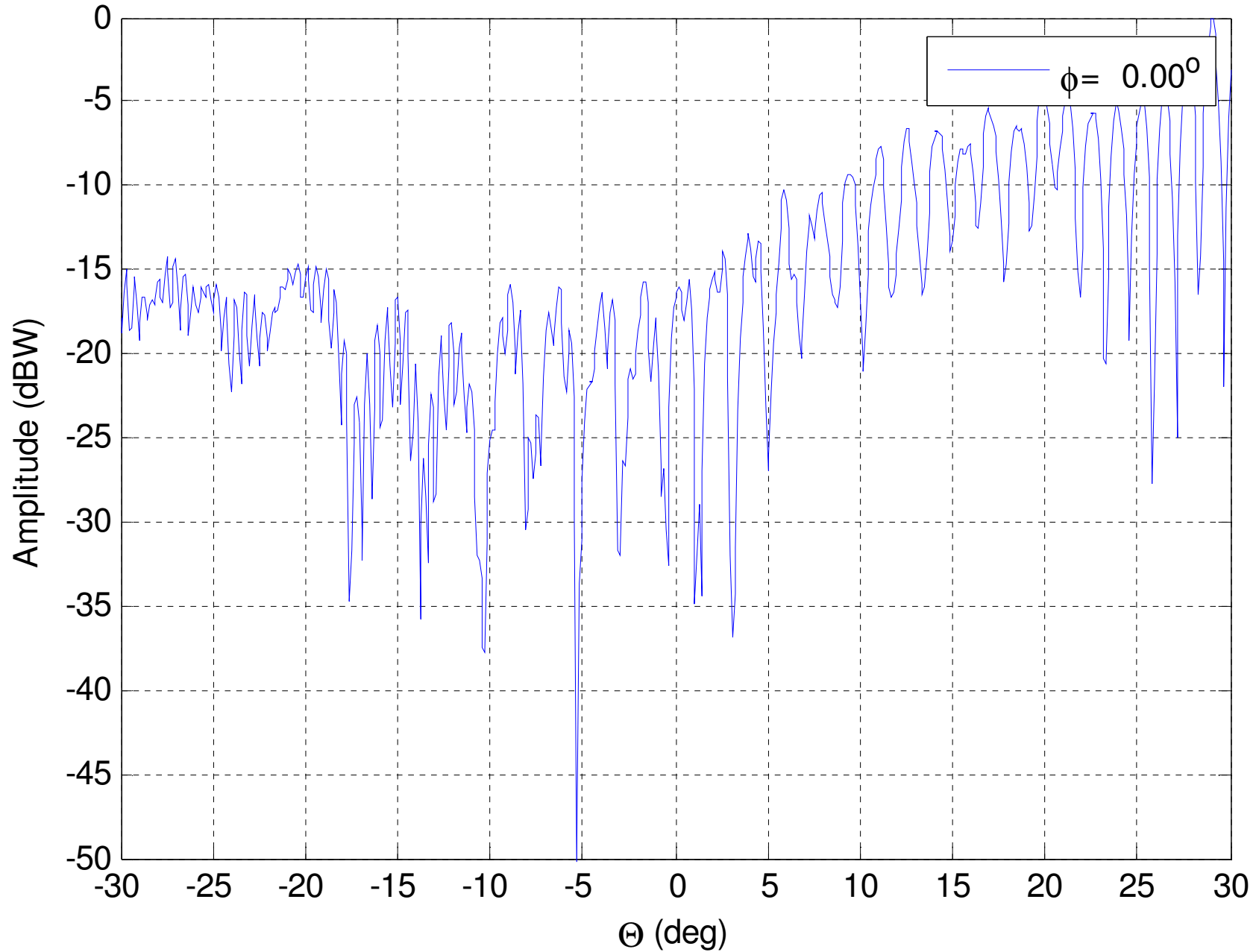
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -1.16 dBW, Date: 14-Dec-2011



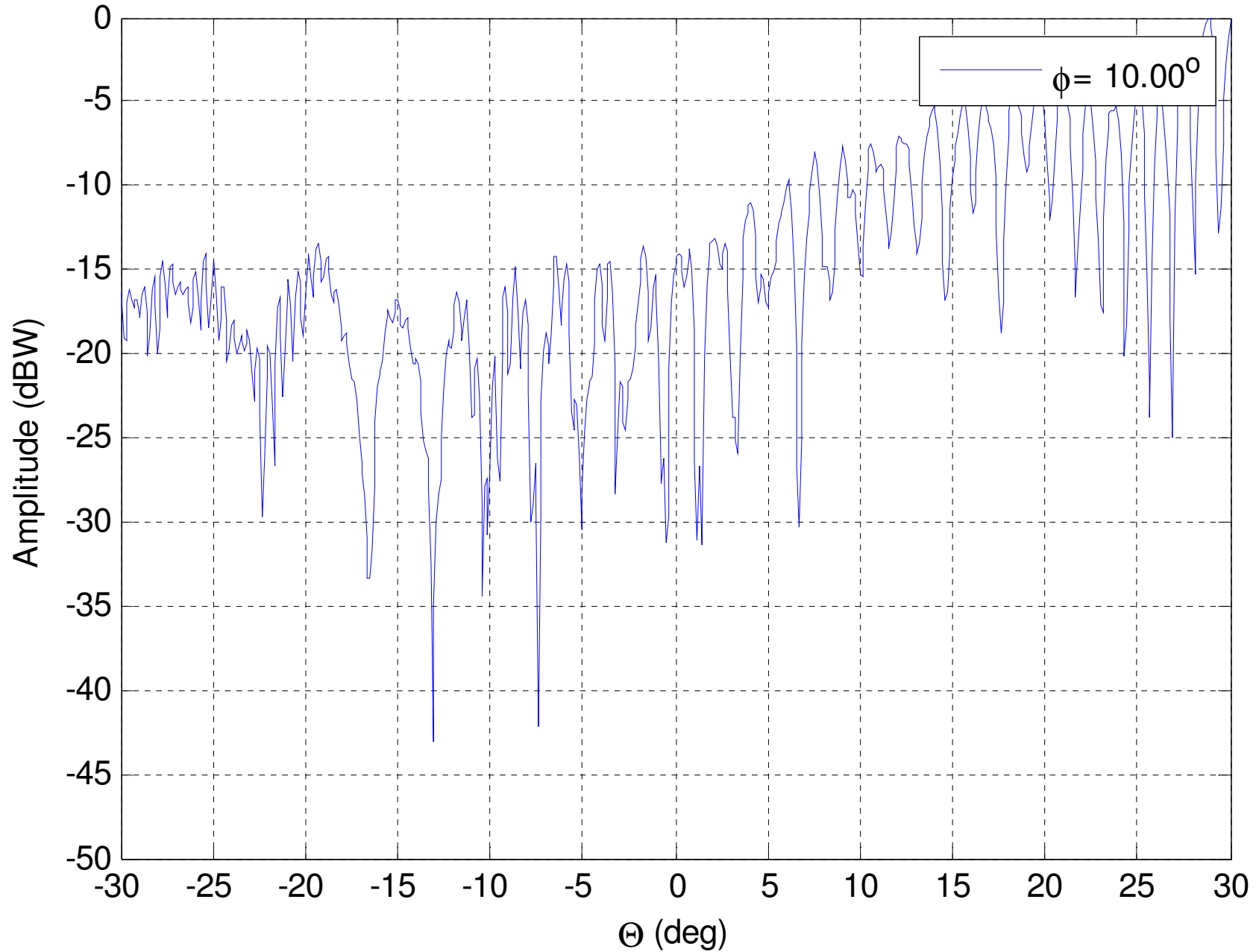
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -0.32 dBW, Date: 14-Dec-2011



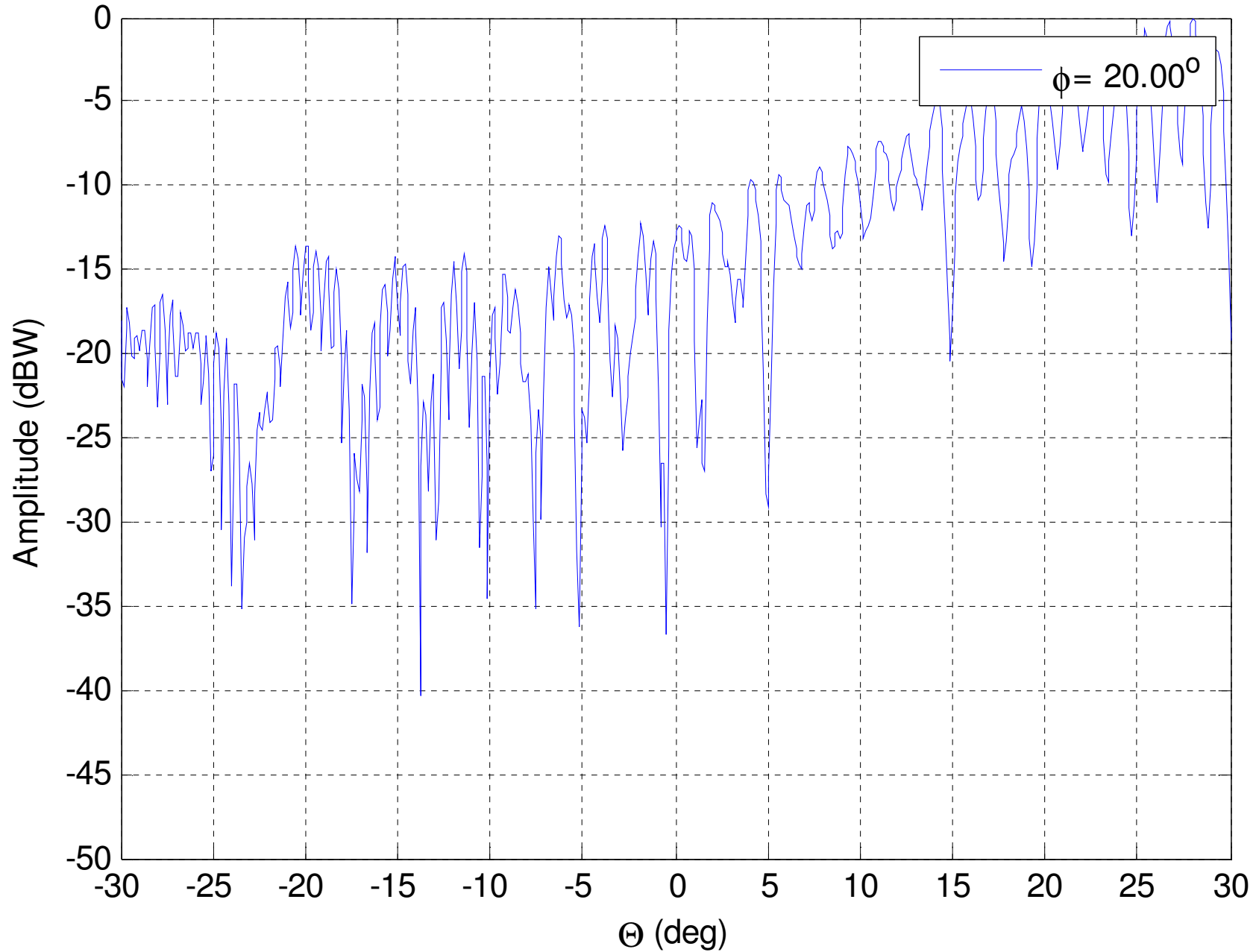
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -2.29 dBW, Date: 14-Dec-2011



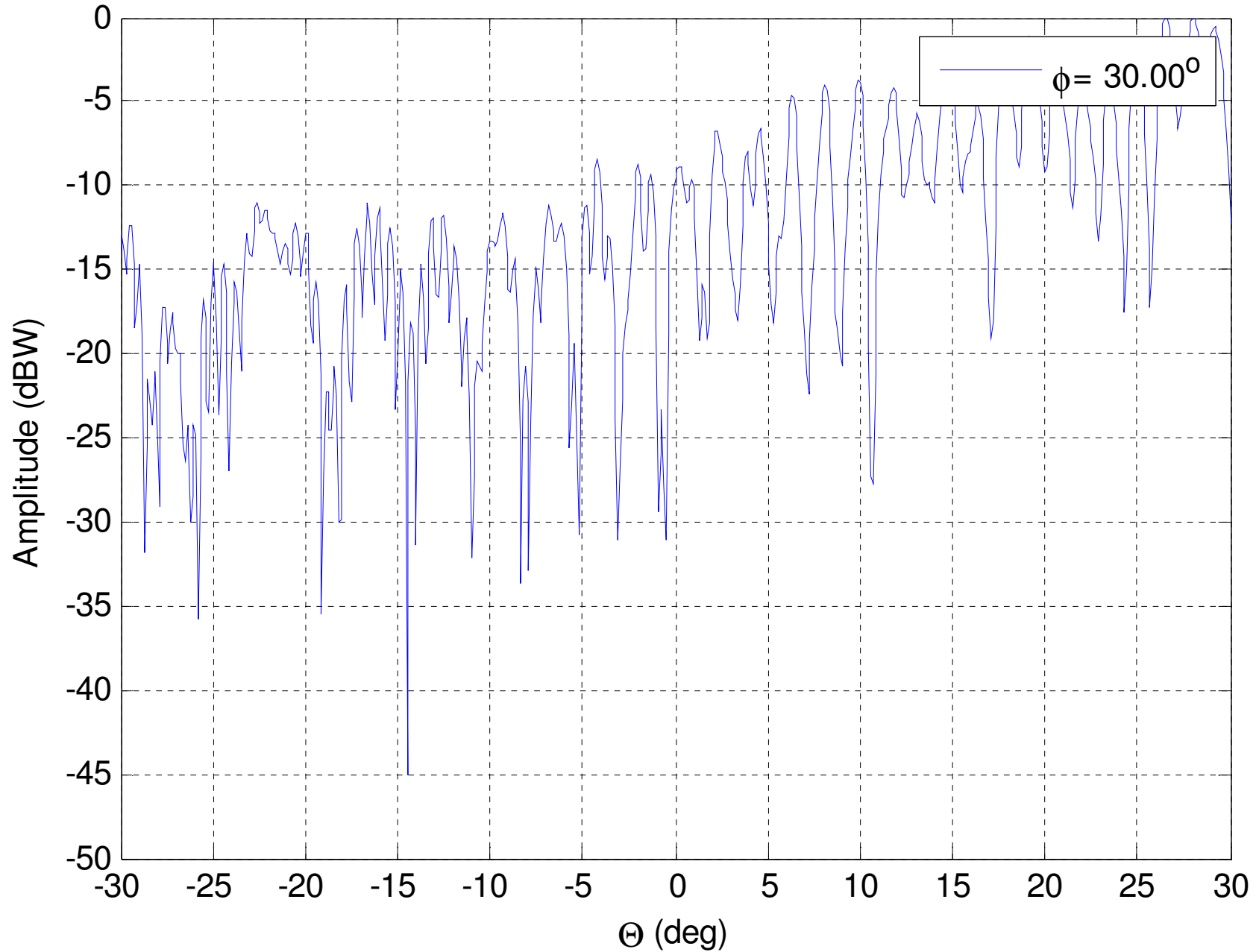
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -3.83 dBW, Date: 14-Dec-2011



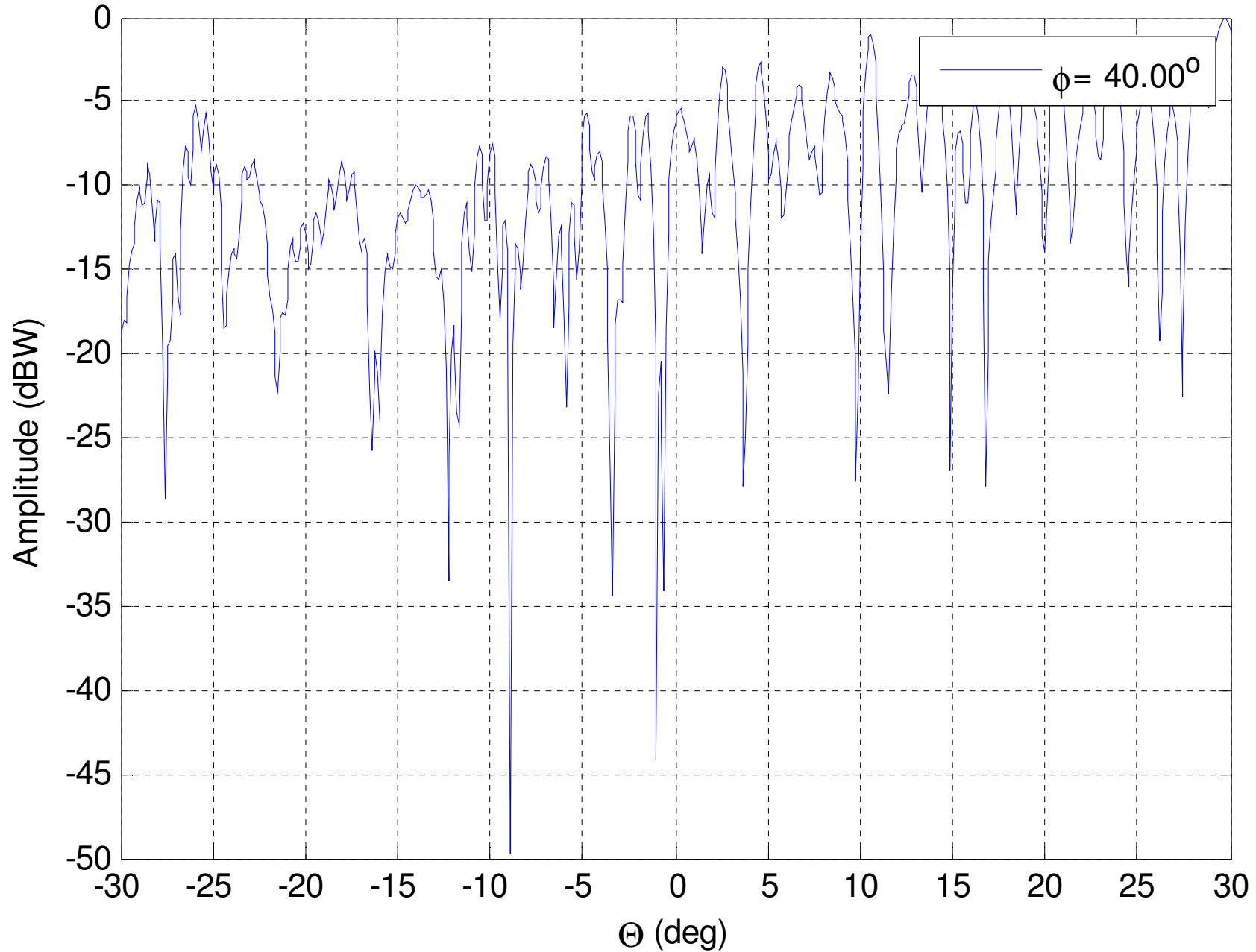
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -7.46 dBW, Date: 14-Dec-2011



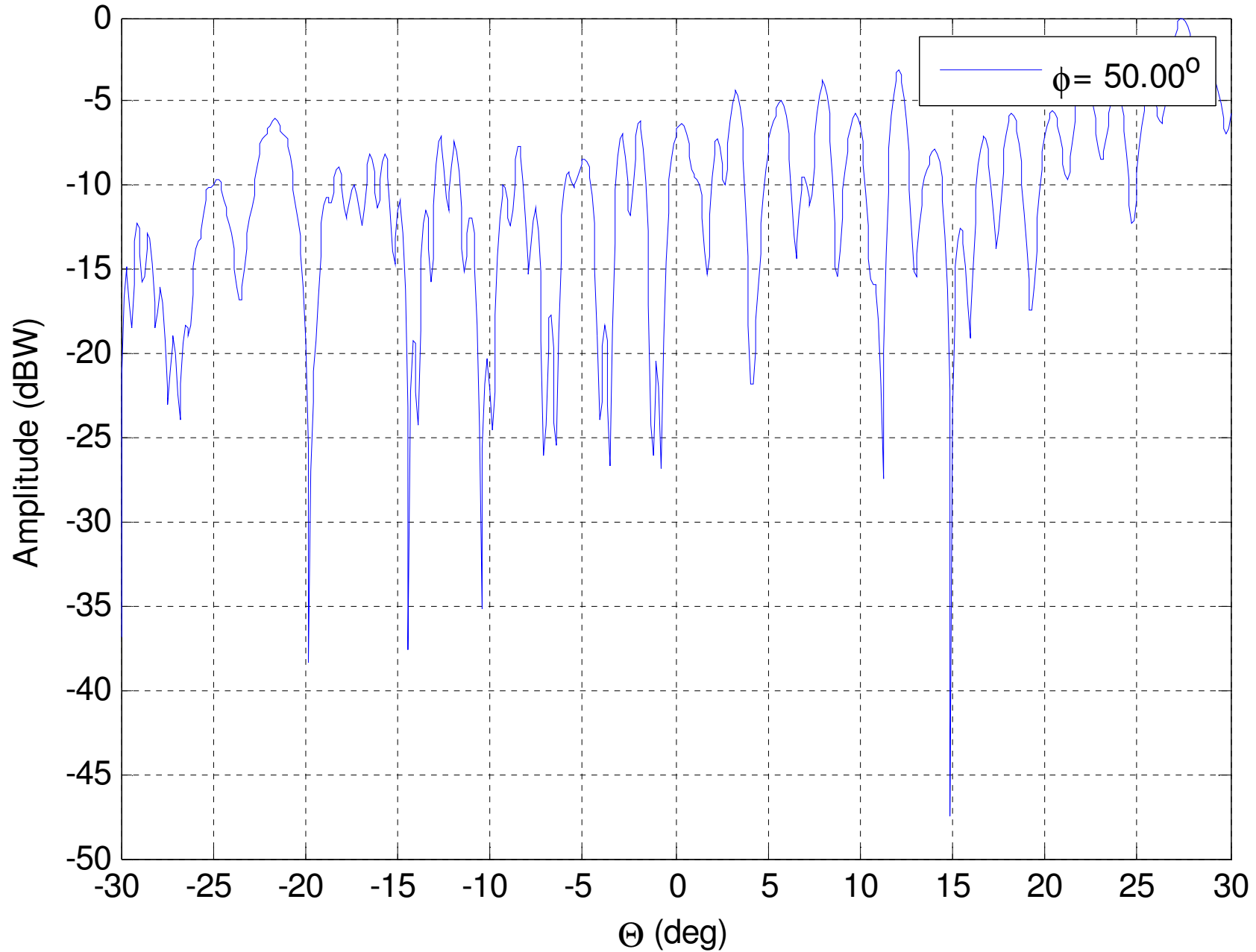
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -10.78 dBW, Date: 14-Dec-2011



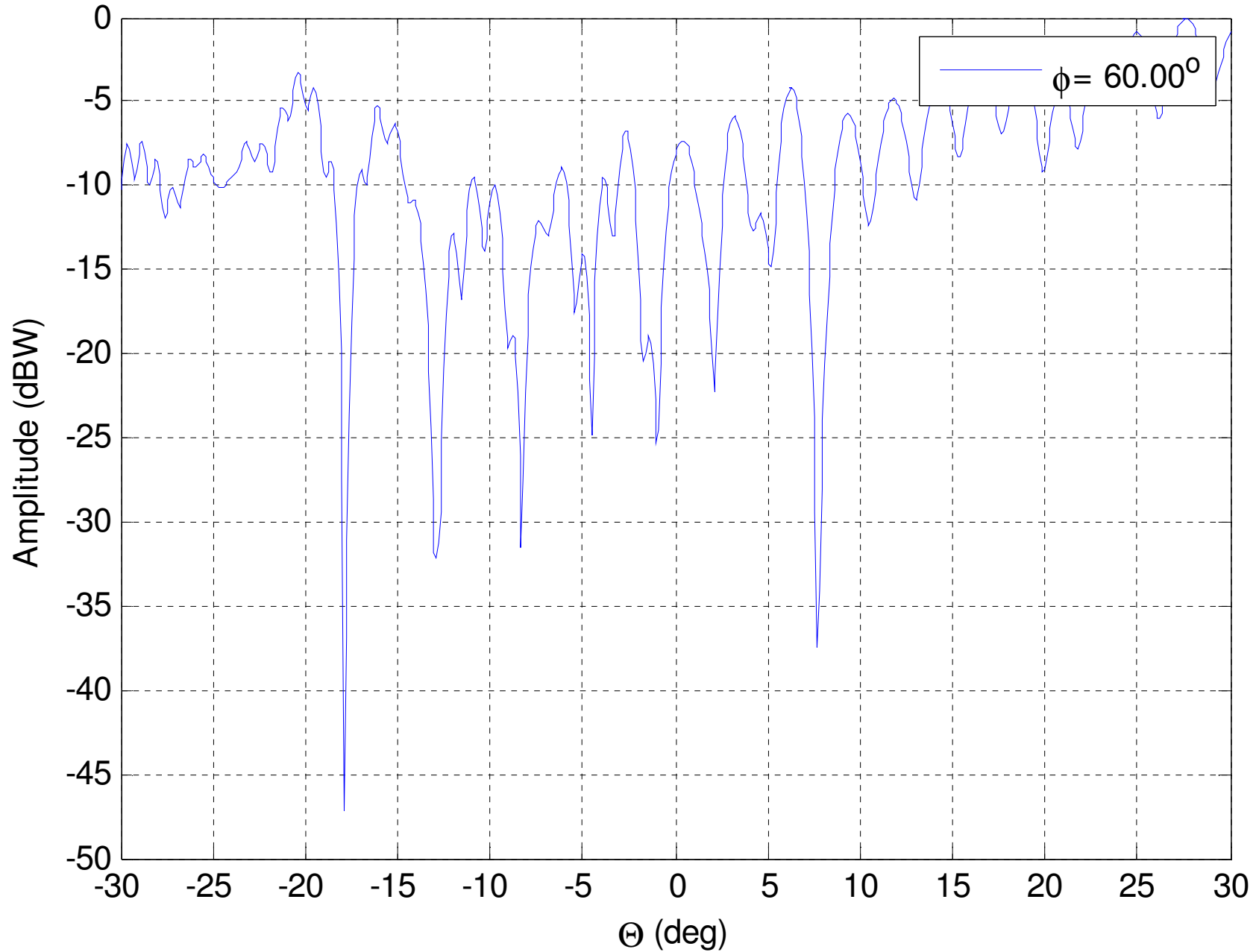
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.94 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

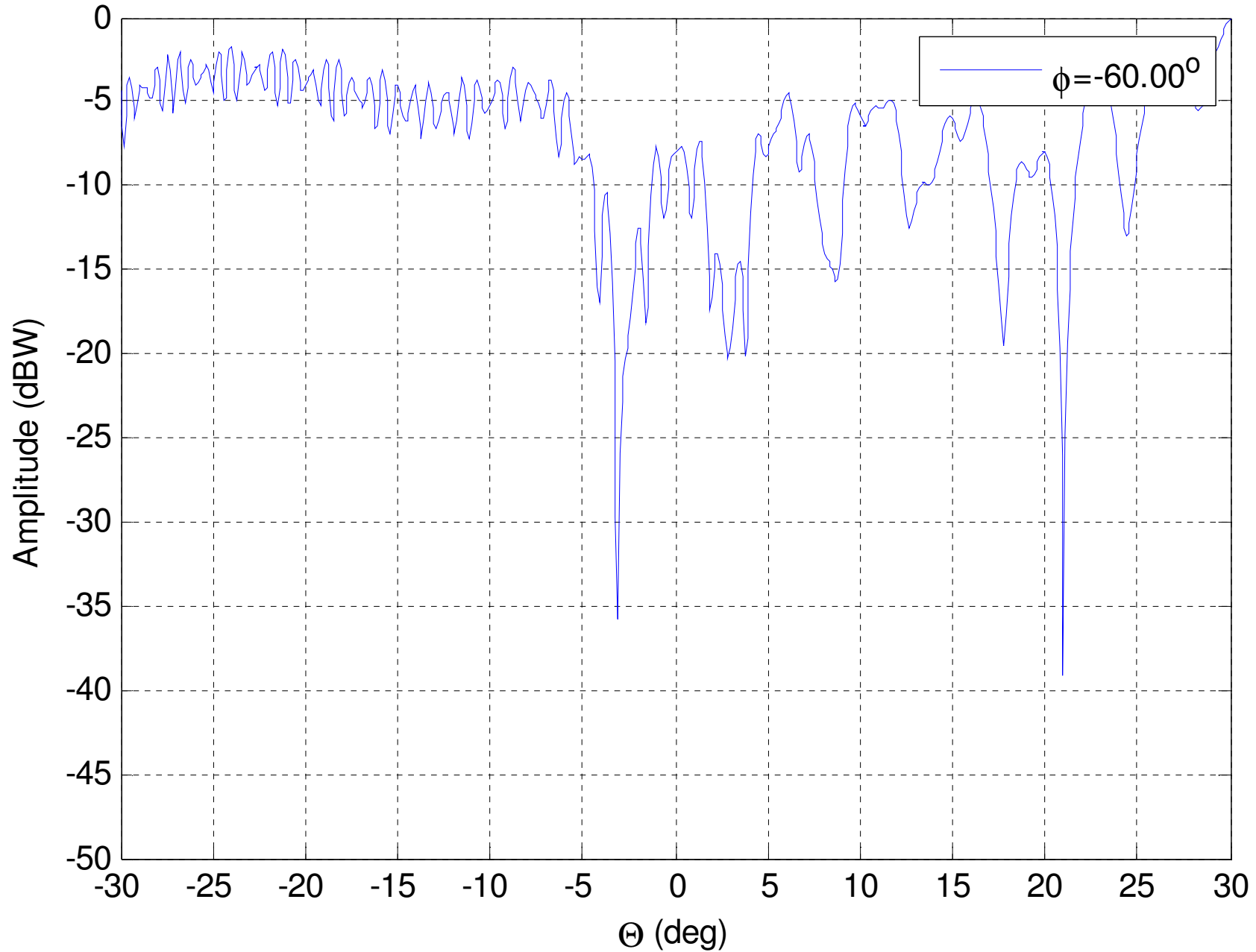
Input file: tx-17.7-rhcp-60.cut, Peak: -8.84 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

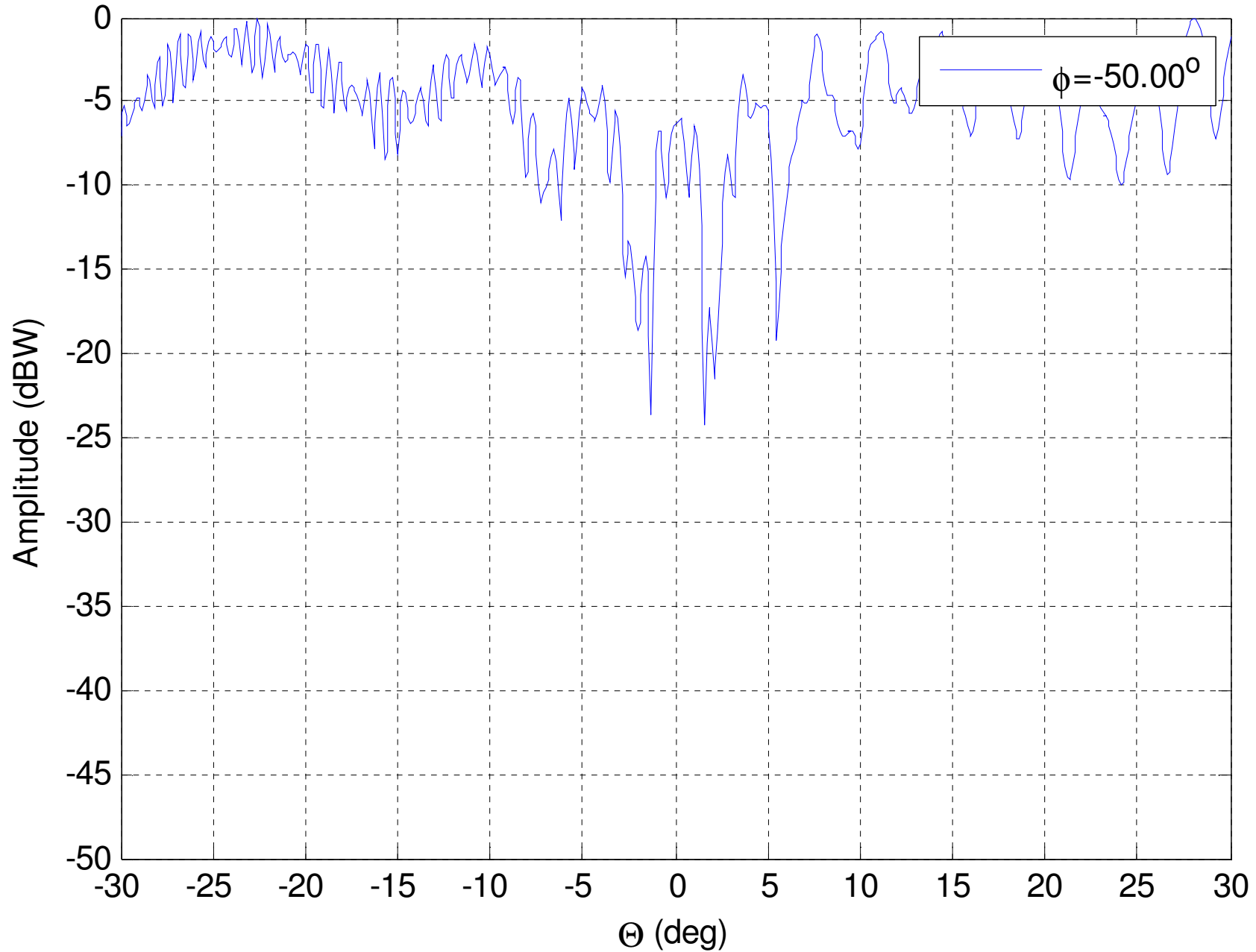
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.92 dBW, Date: 14-Dec-2011



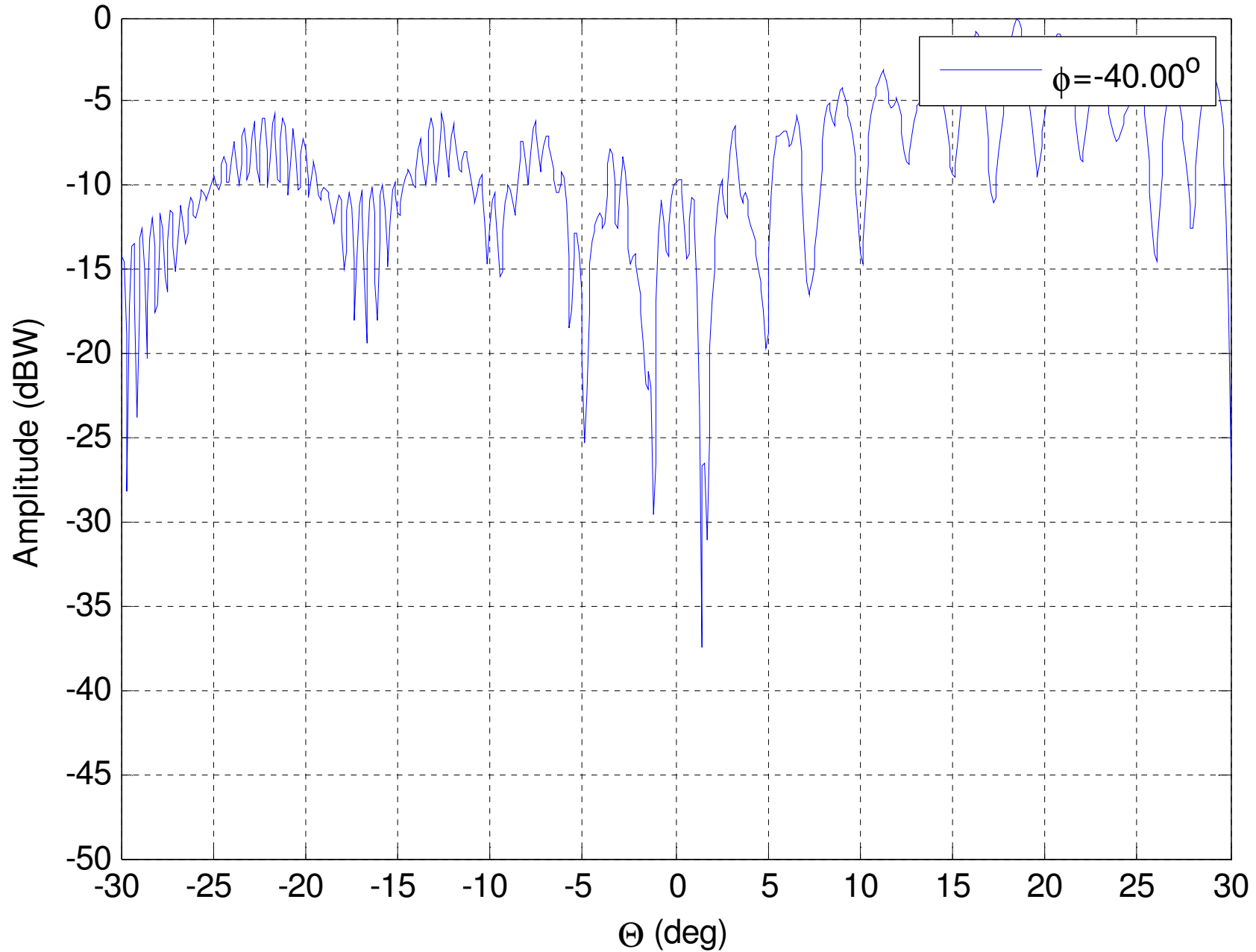
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.58 dBW, Date: 14-Dec-2011



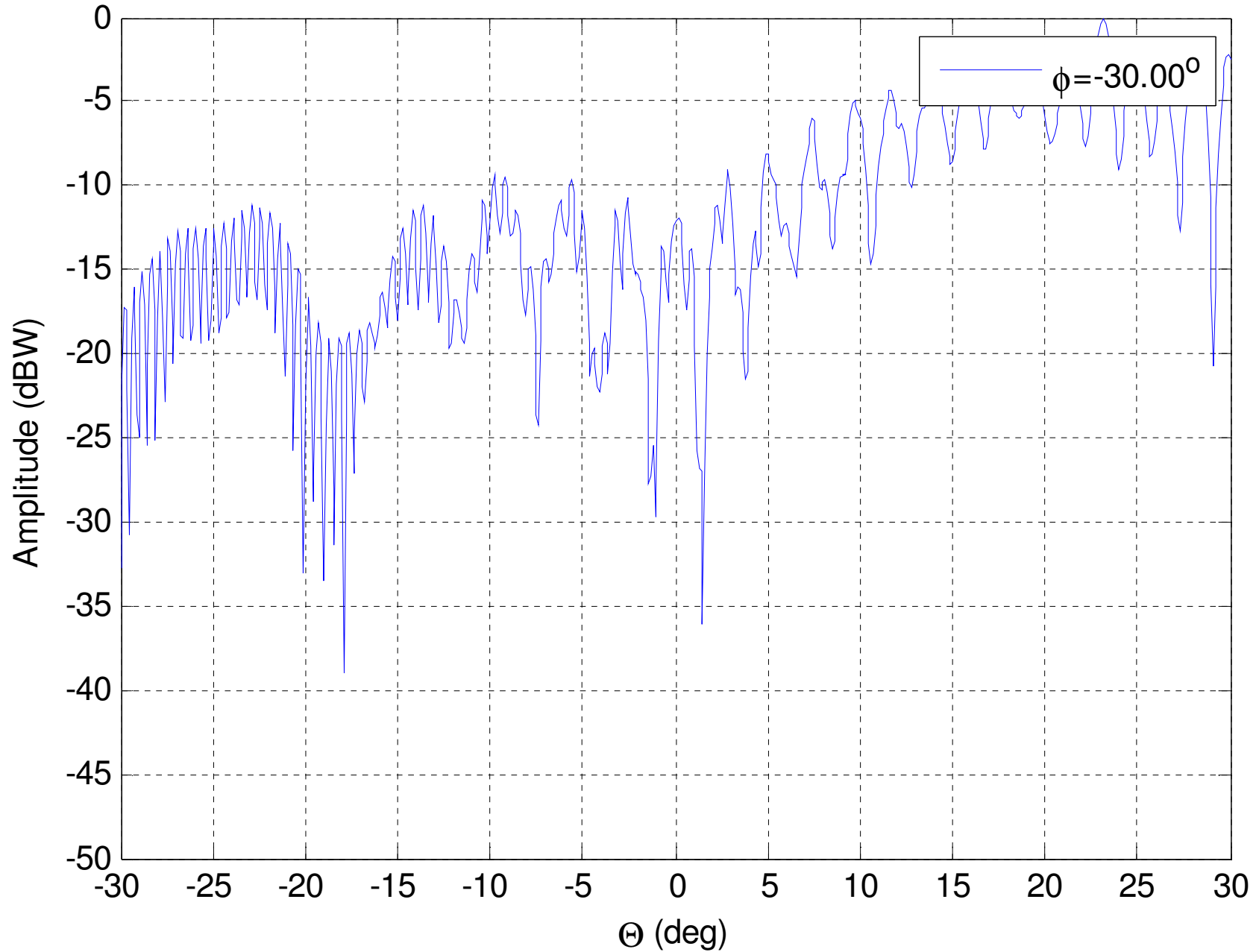
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -6.11 dBW, Date: 14-Dec-2011



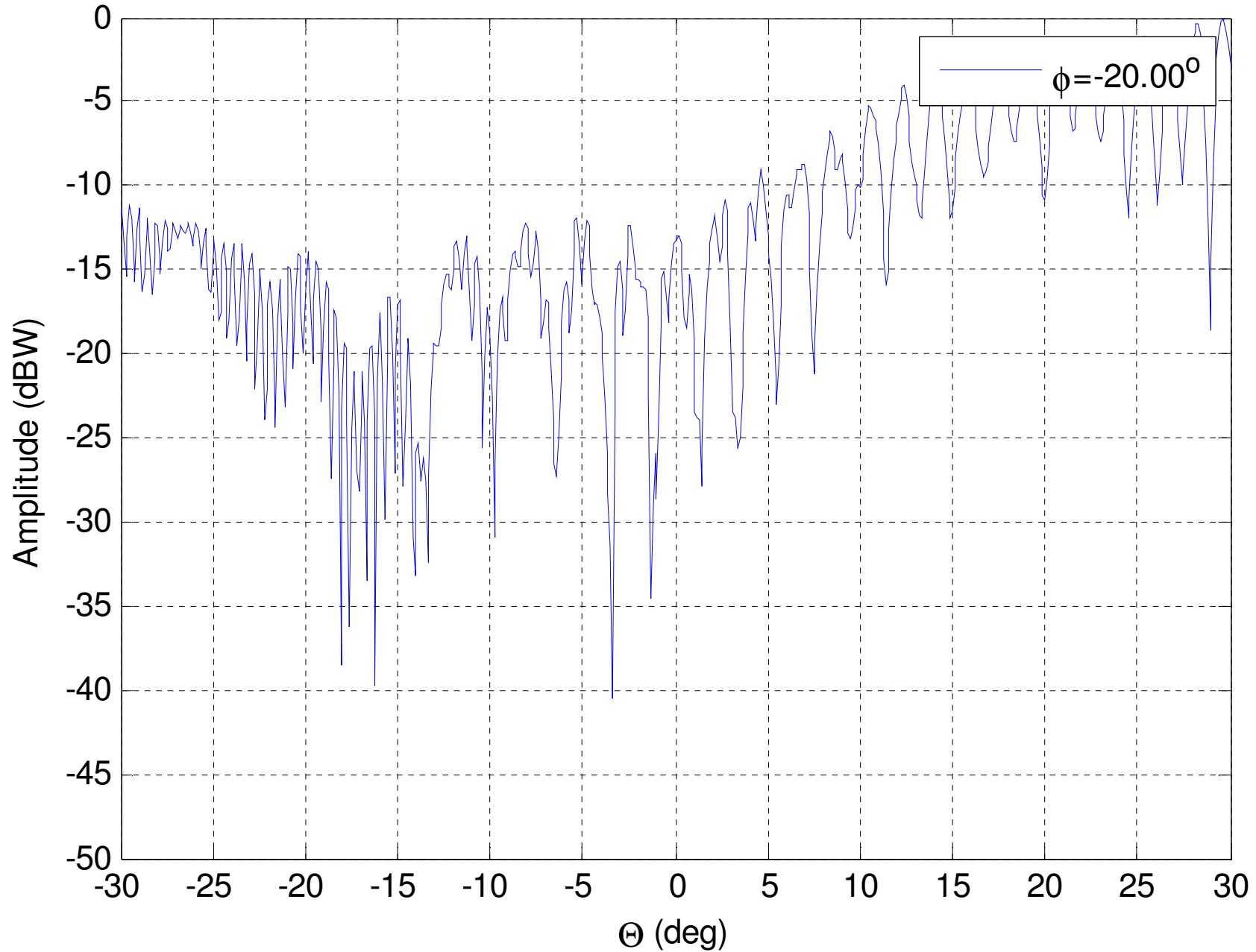
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -3.83 dBW, Date: 14-Dec-2011



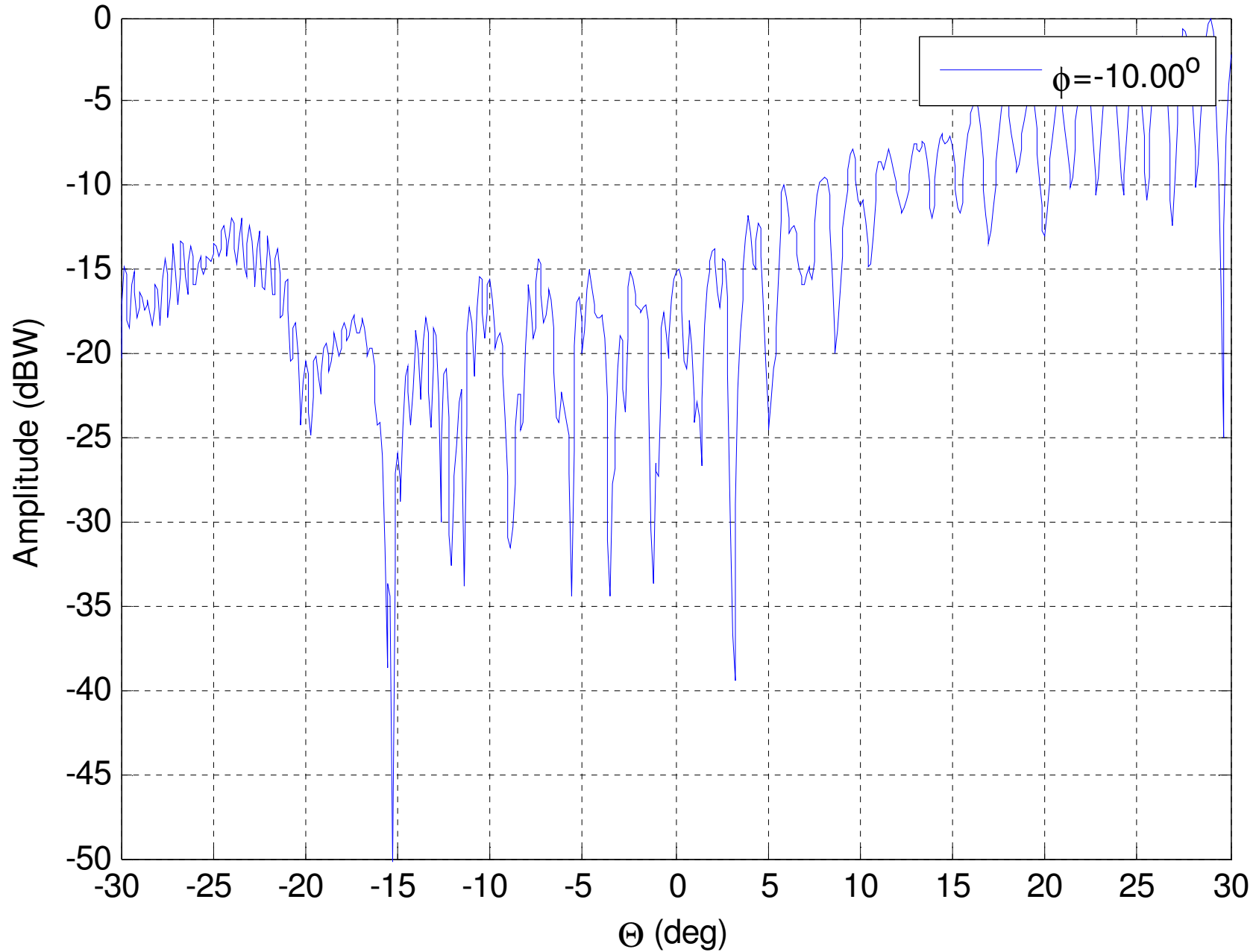
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -2.80 dBW, Date: 14-Dec-2011



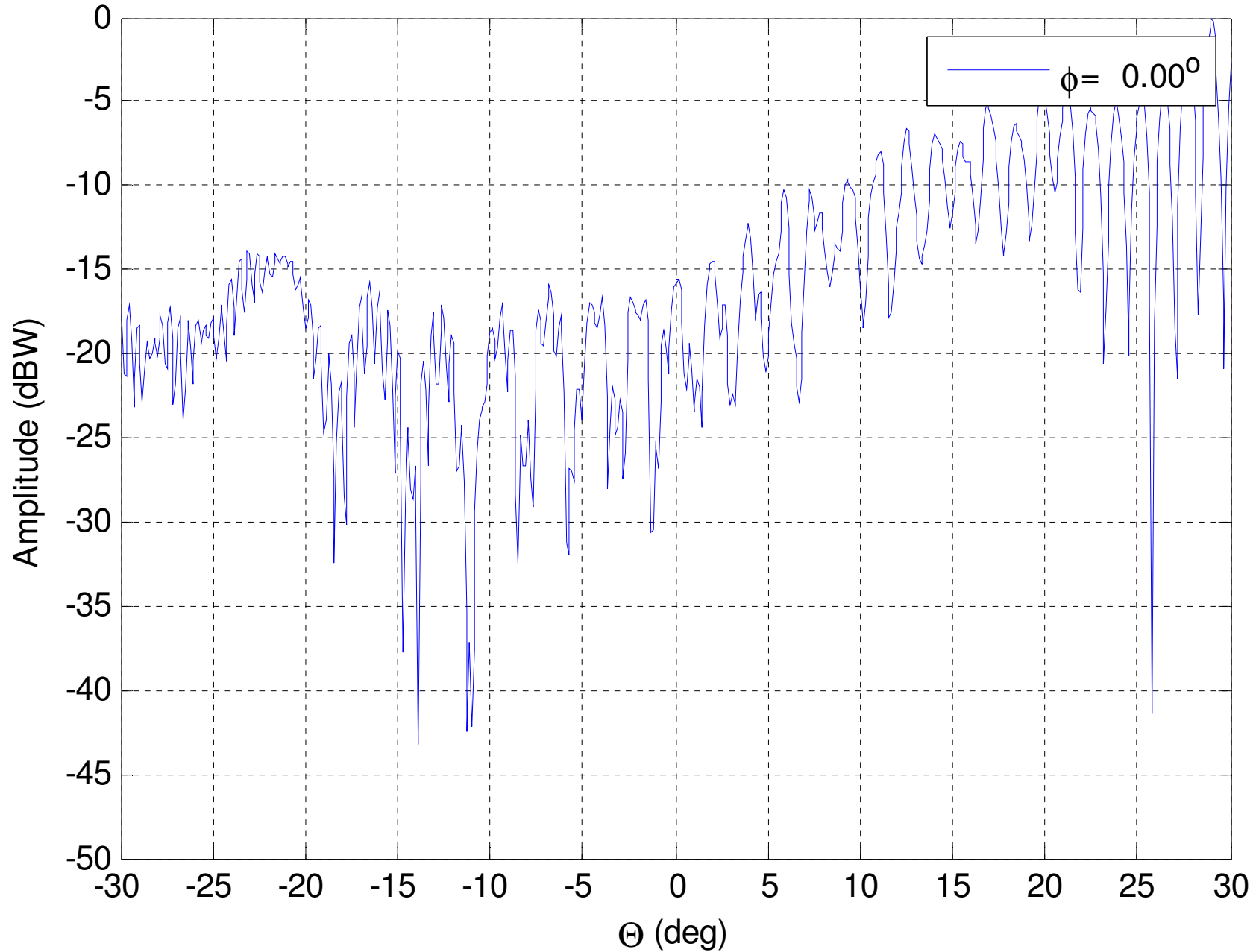
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -0.78 dBW, Date: 14-Dec-2011



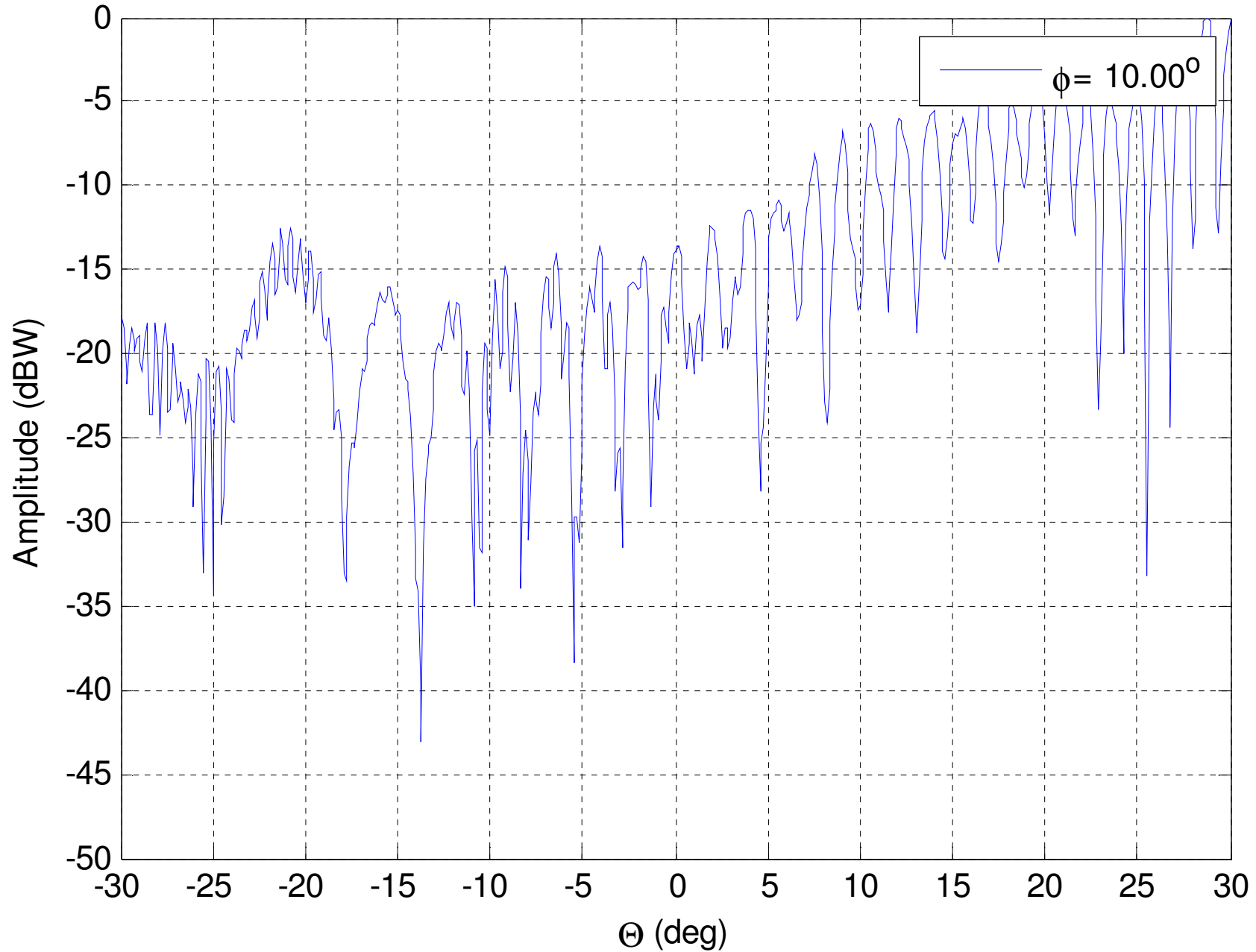
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -0.23 dBW, Date: 14-Dec-2011



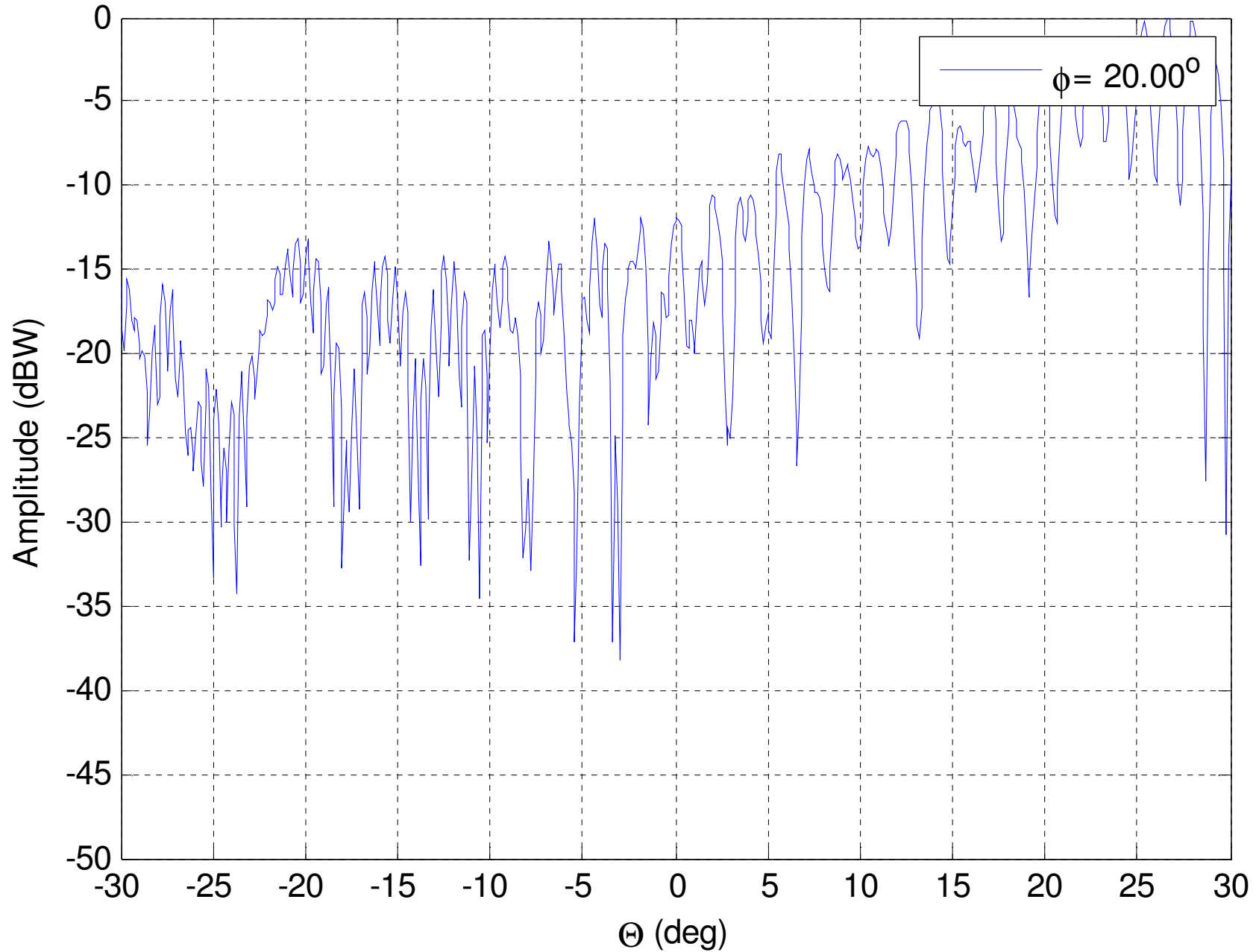
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -2.25 dBW, Date: 14-Dec-2011



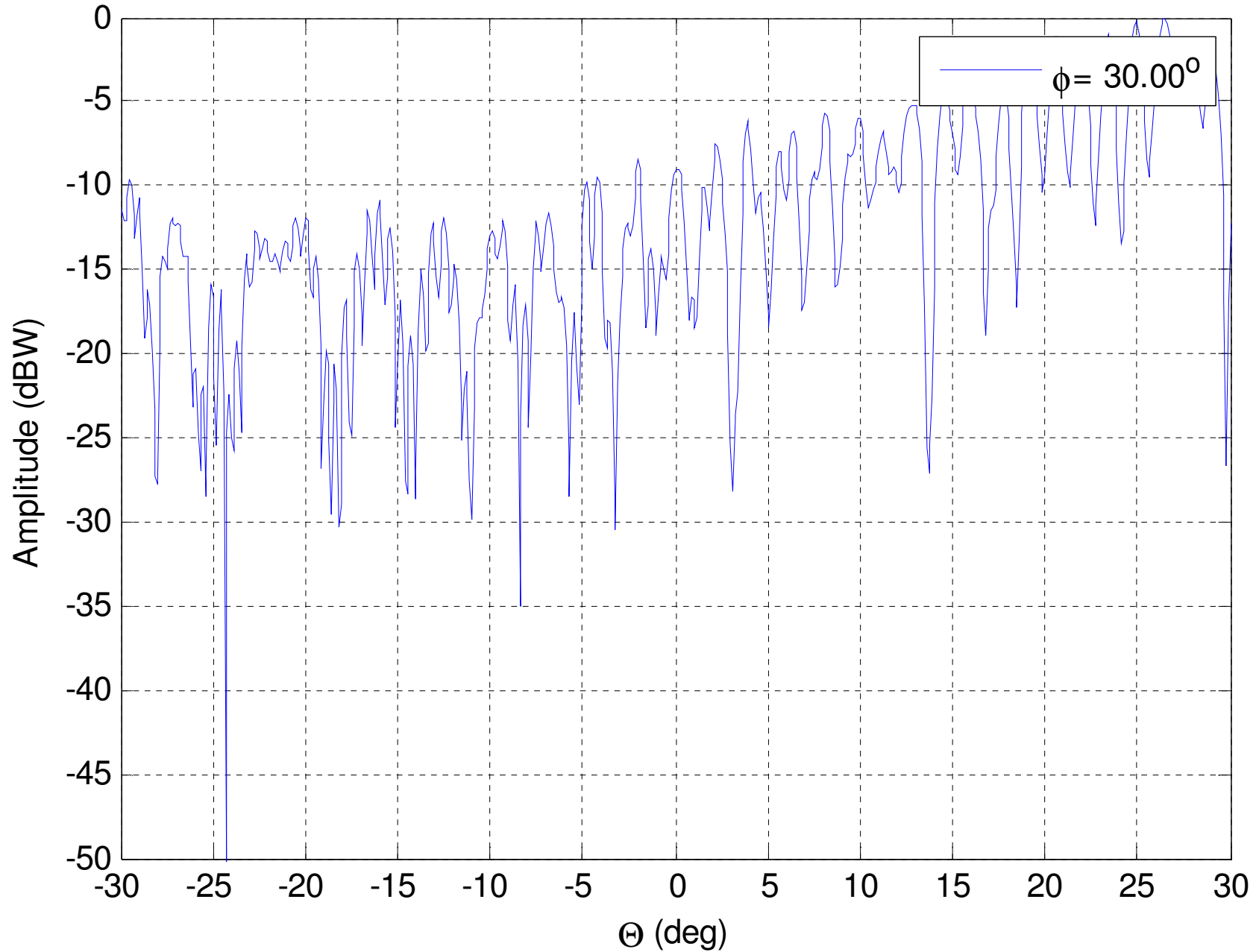
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -3.89 dBW, Date: 14-Dec-2011



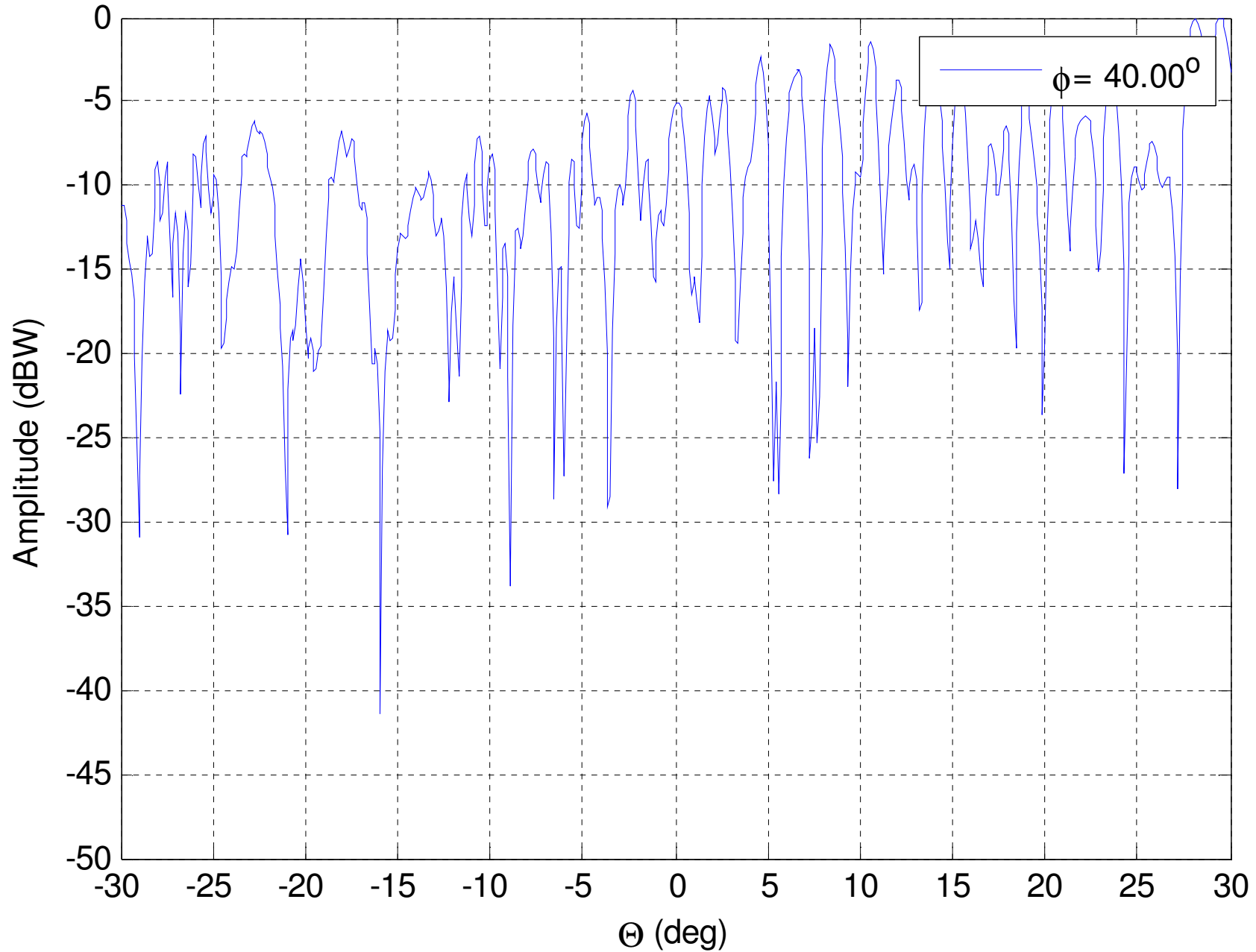
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.88 dBW, Date: 14-Dec-2011



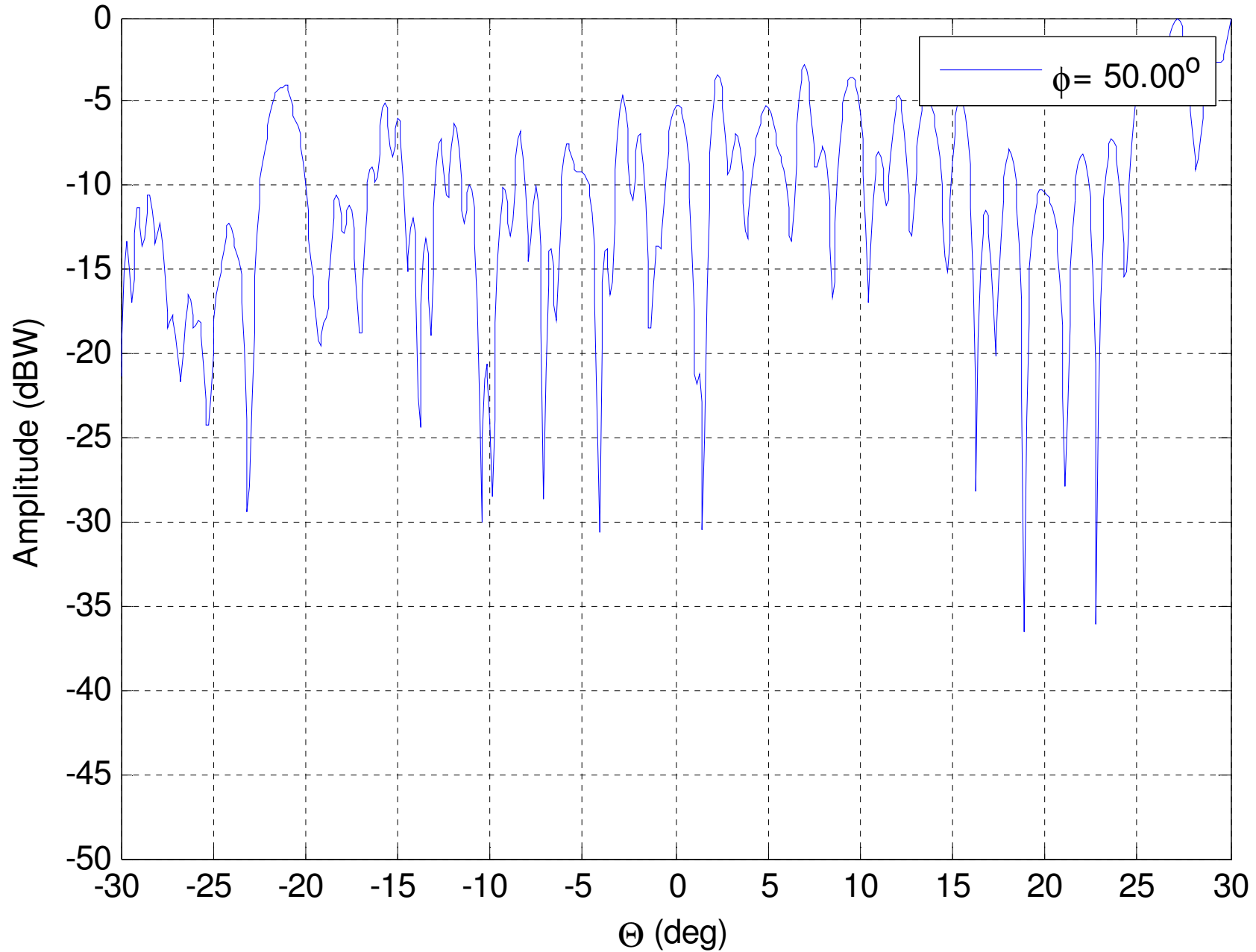
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -10.81 dBW, Date: 14-Dec-2011



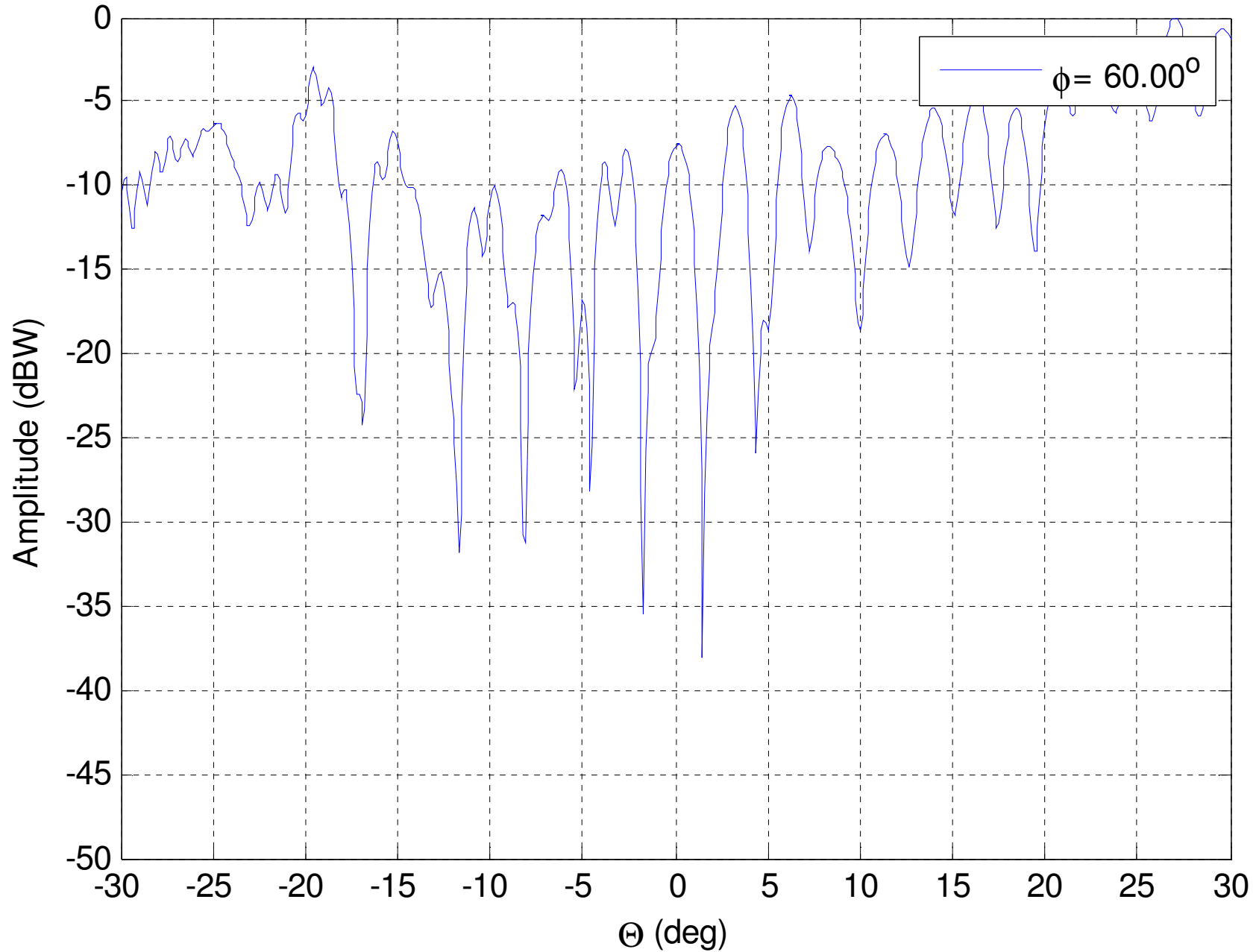
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -10.71 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -8.34 dBW, Date: 14-Dec-2011



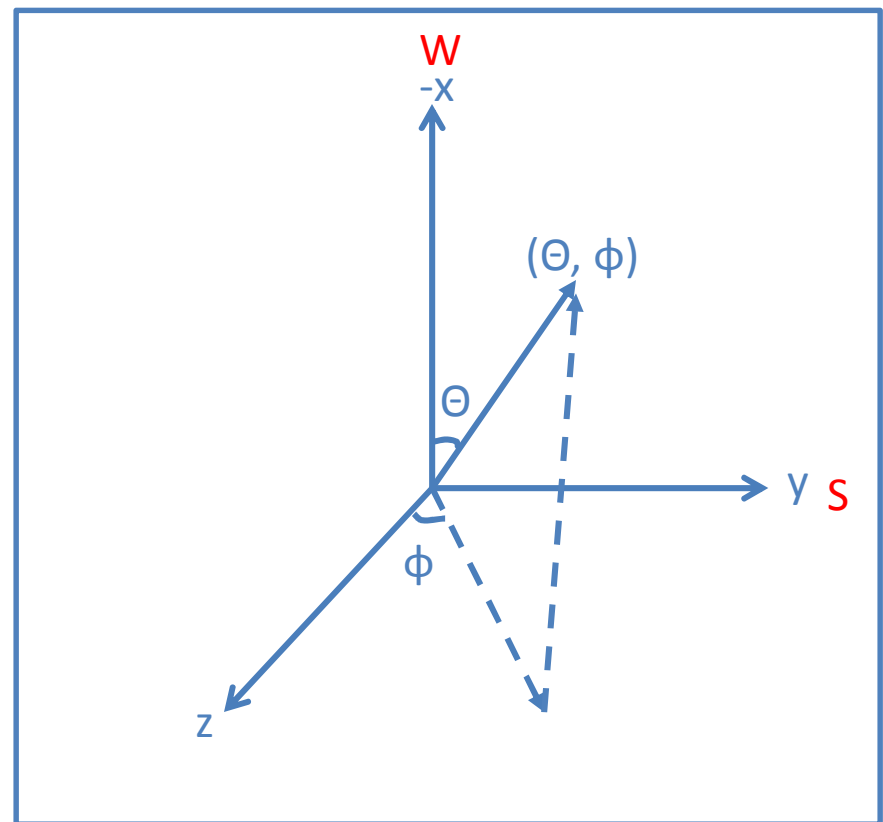
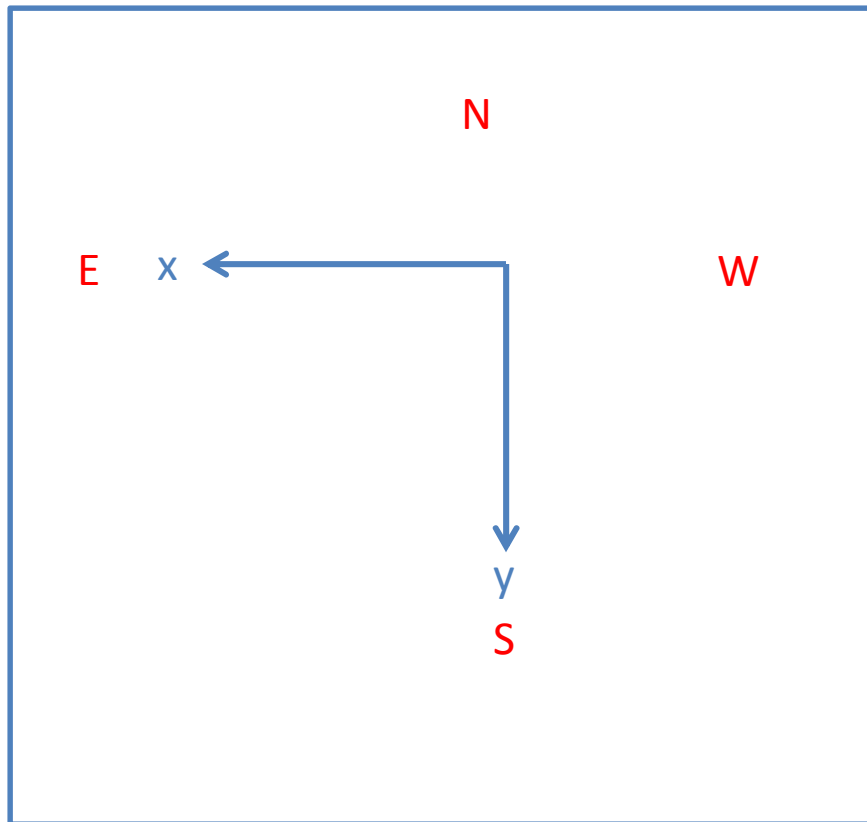
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 14

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



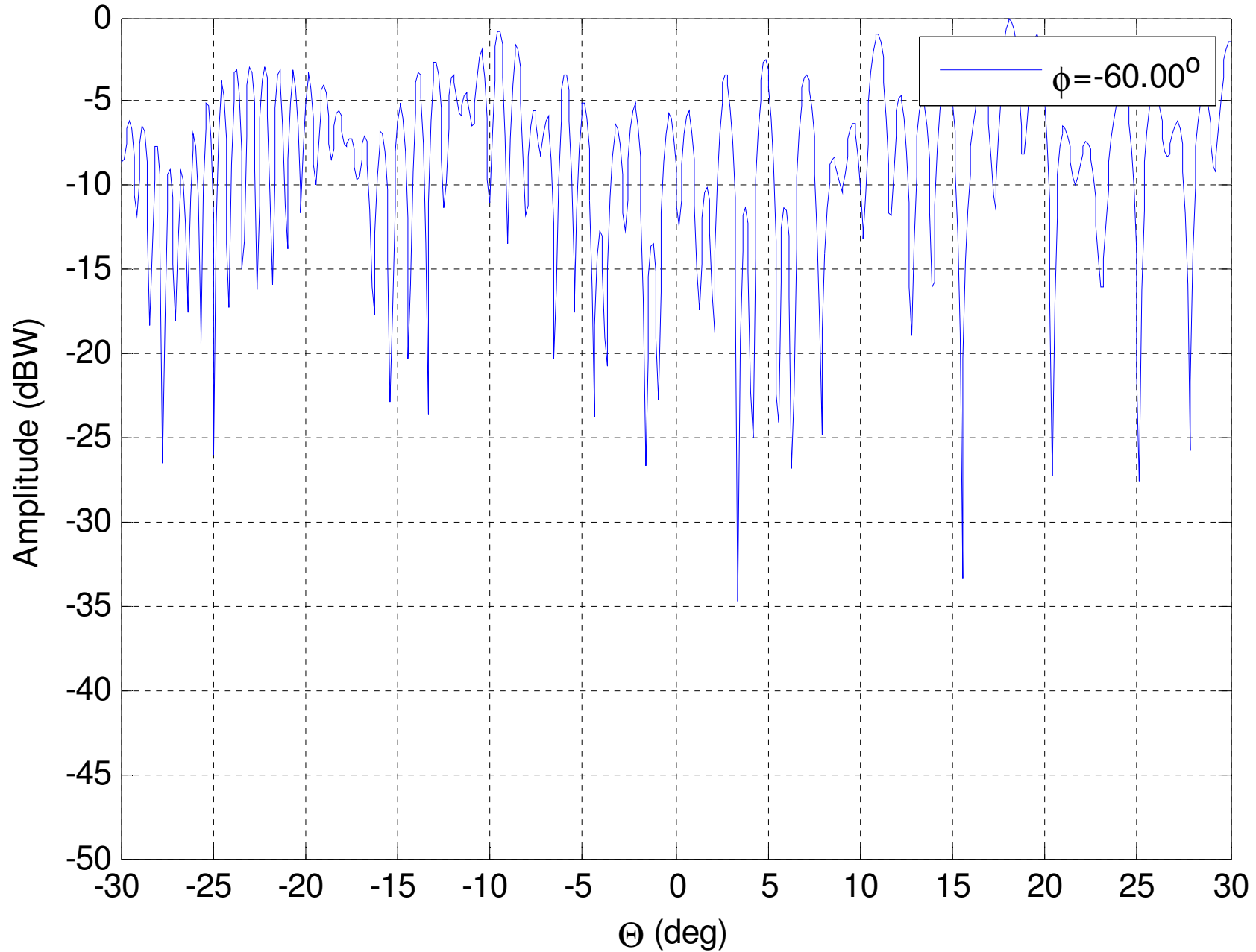
Spot Beam14, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

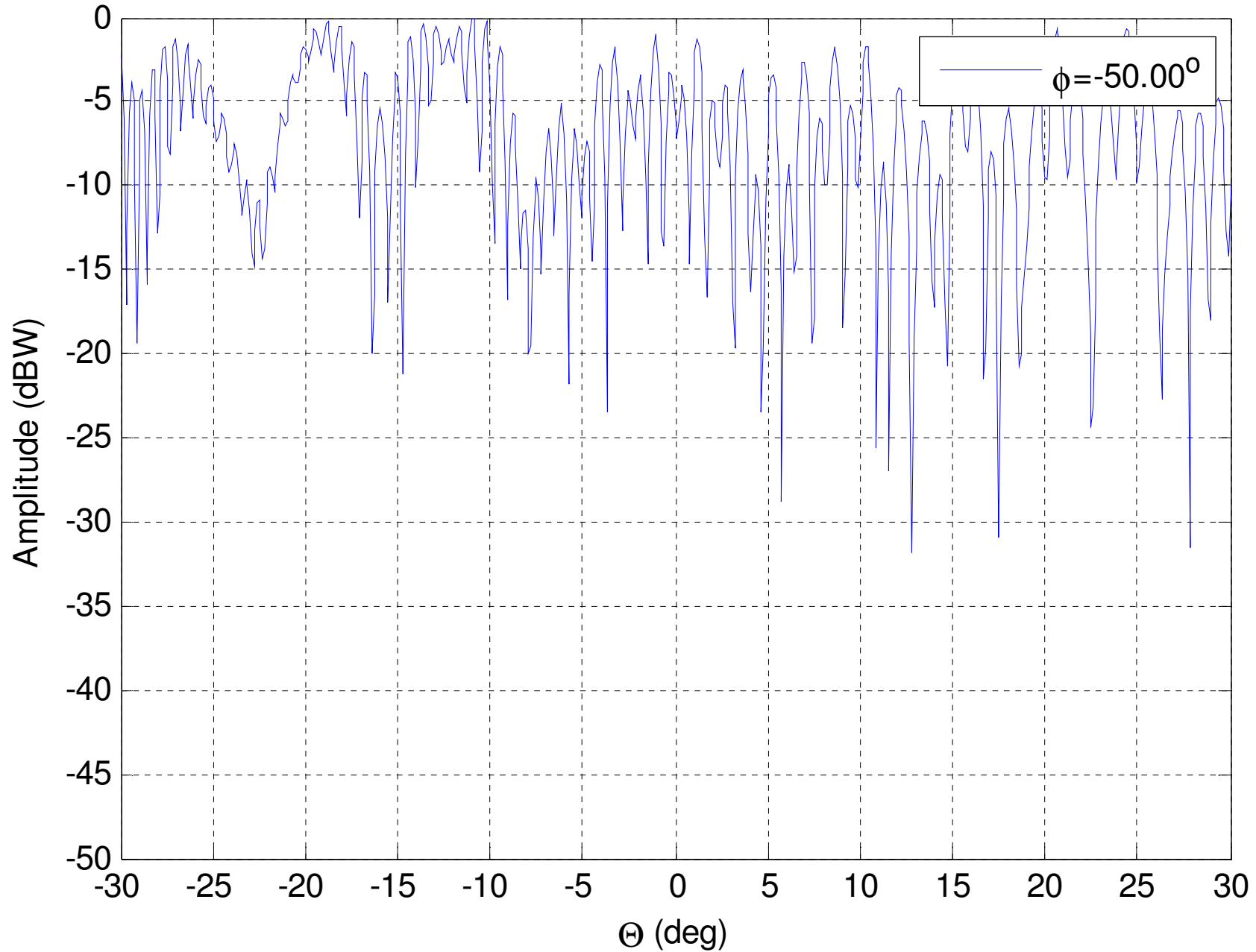
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.93 dBW, Date: 14-Dec-2011



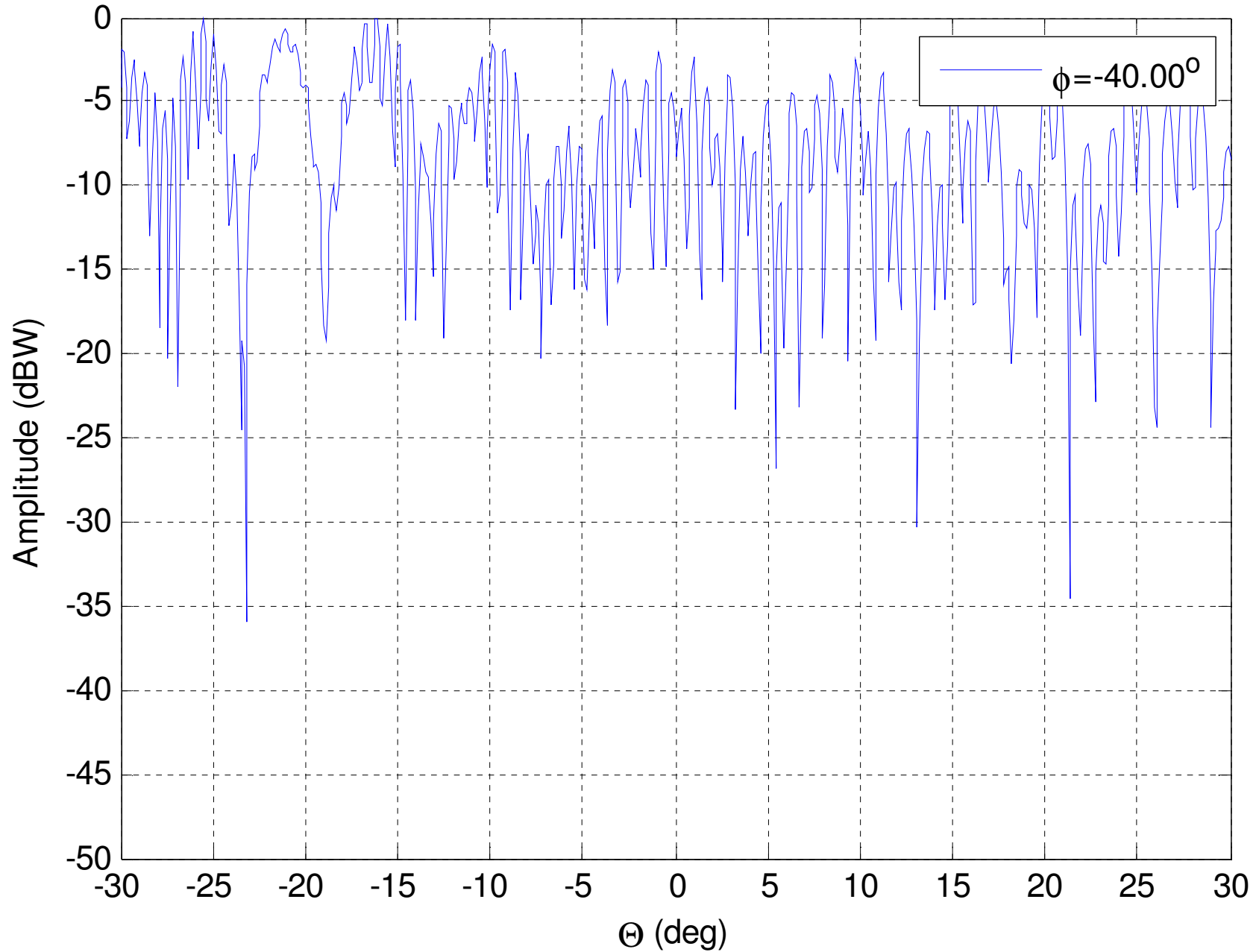
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.62 dBW, Date: 14-Dec-2011



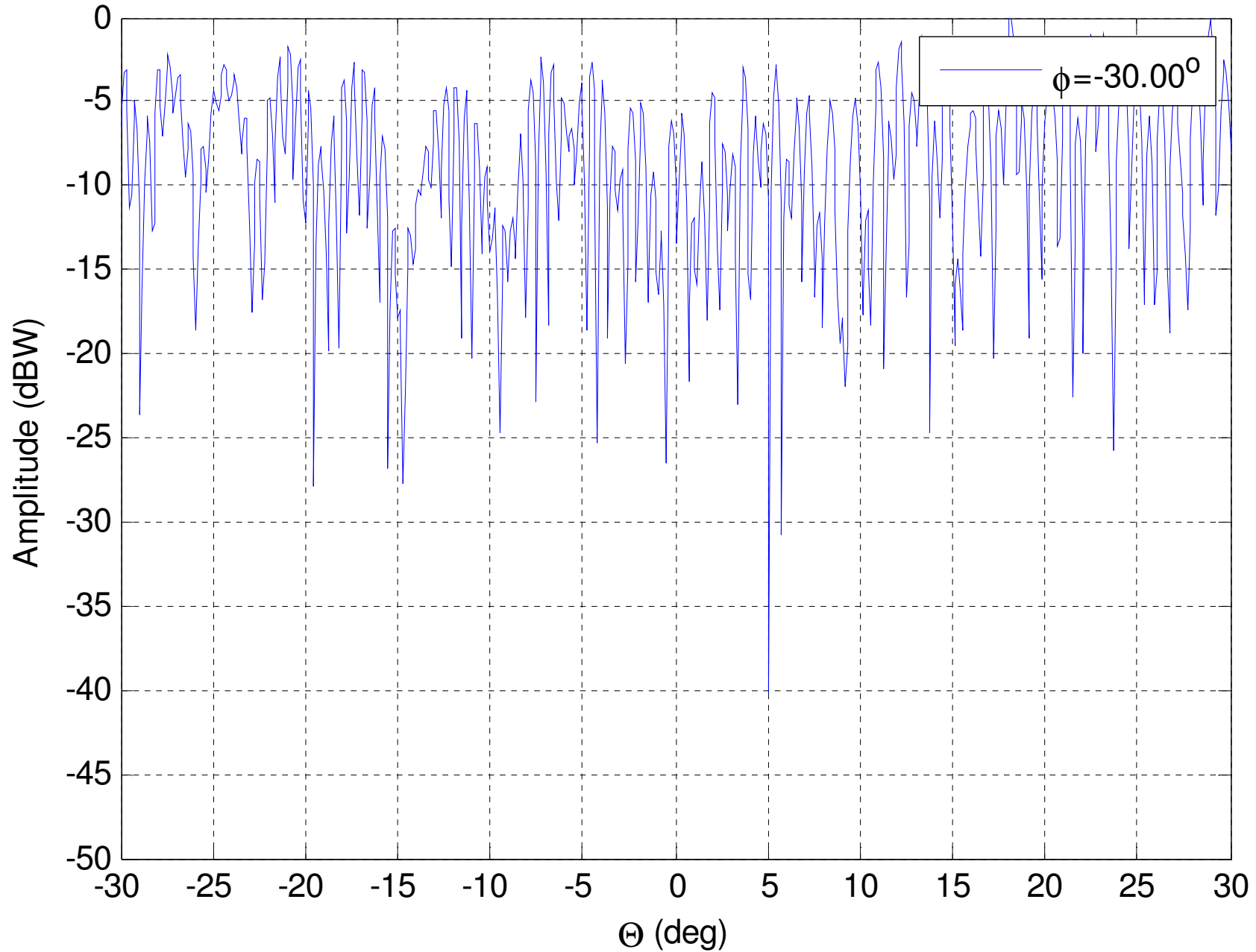
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -5.56 dBW, Date: 14-Dec-2011



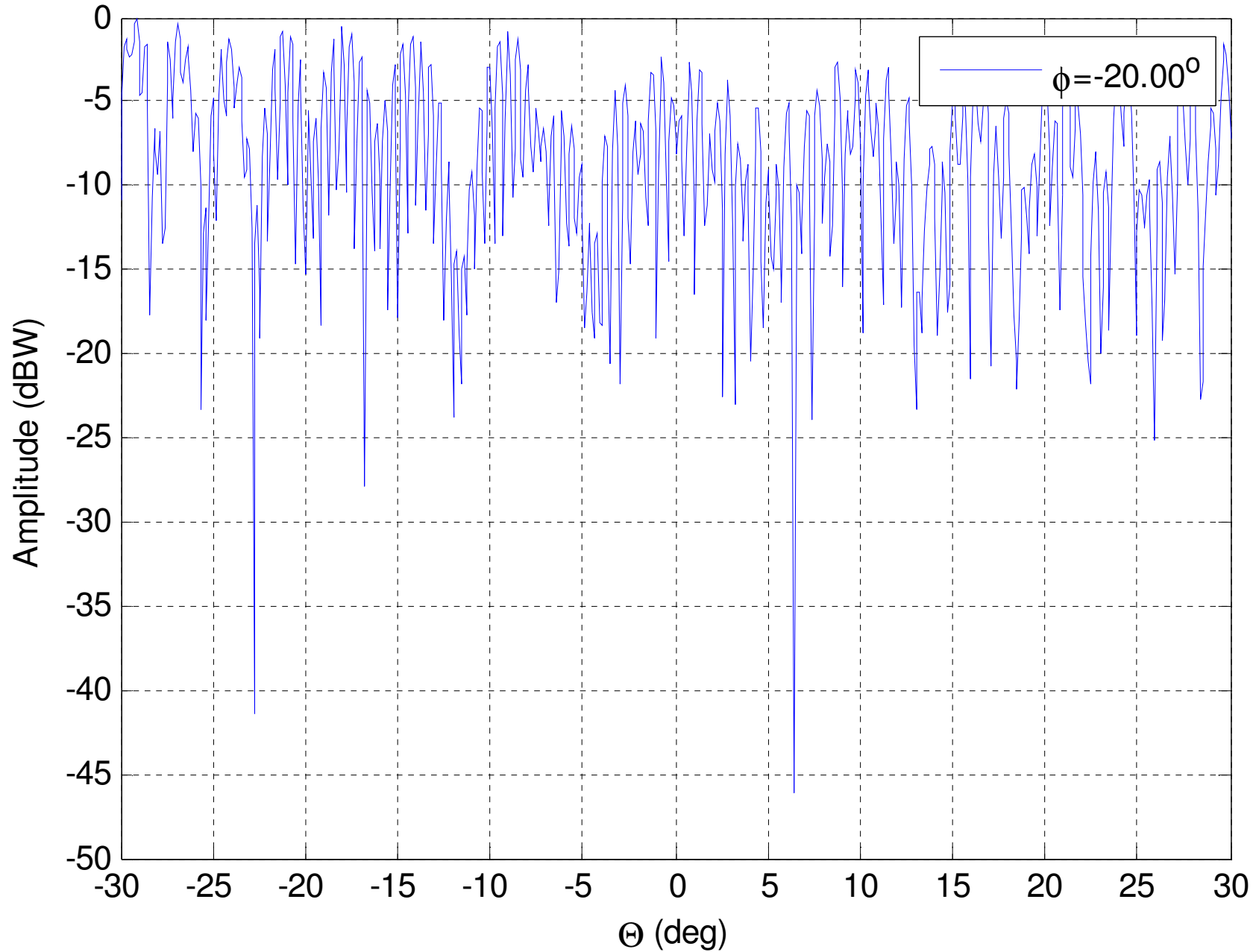
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -4.83 dBW, Date: 14-Dec-2011



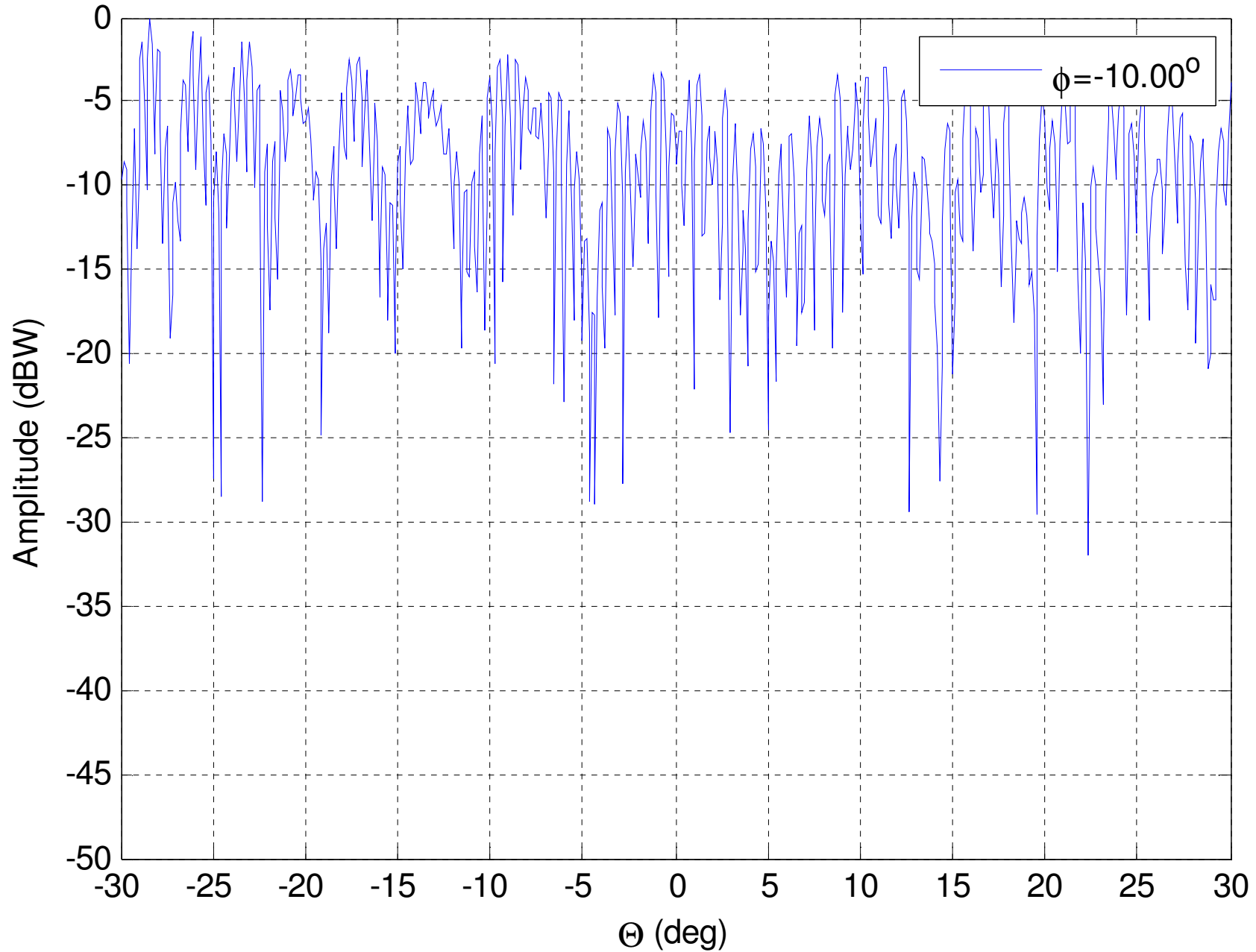
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -5.49 dBW, Date: 14-Dec-2011



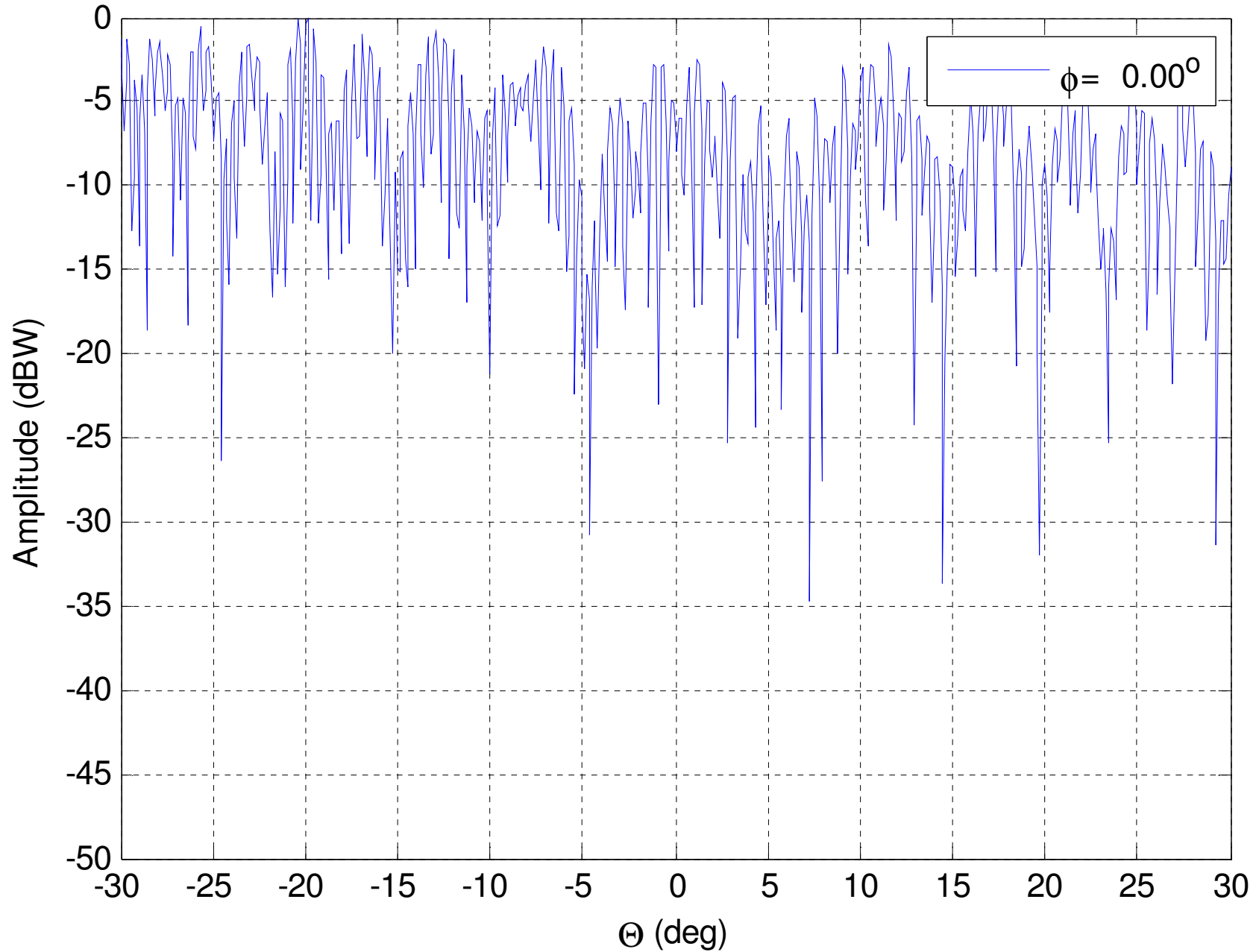
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -4.86 dBW, Date: 14-Dec-2011



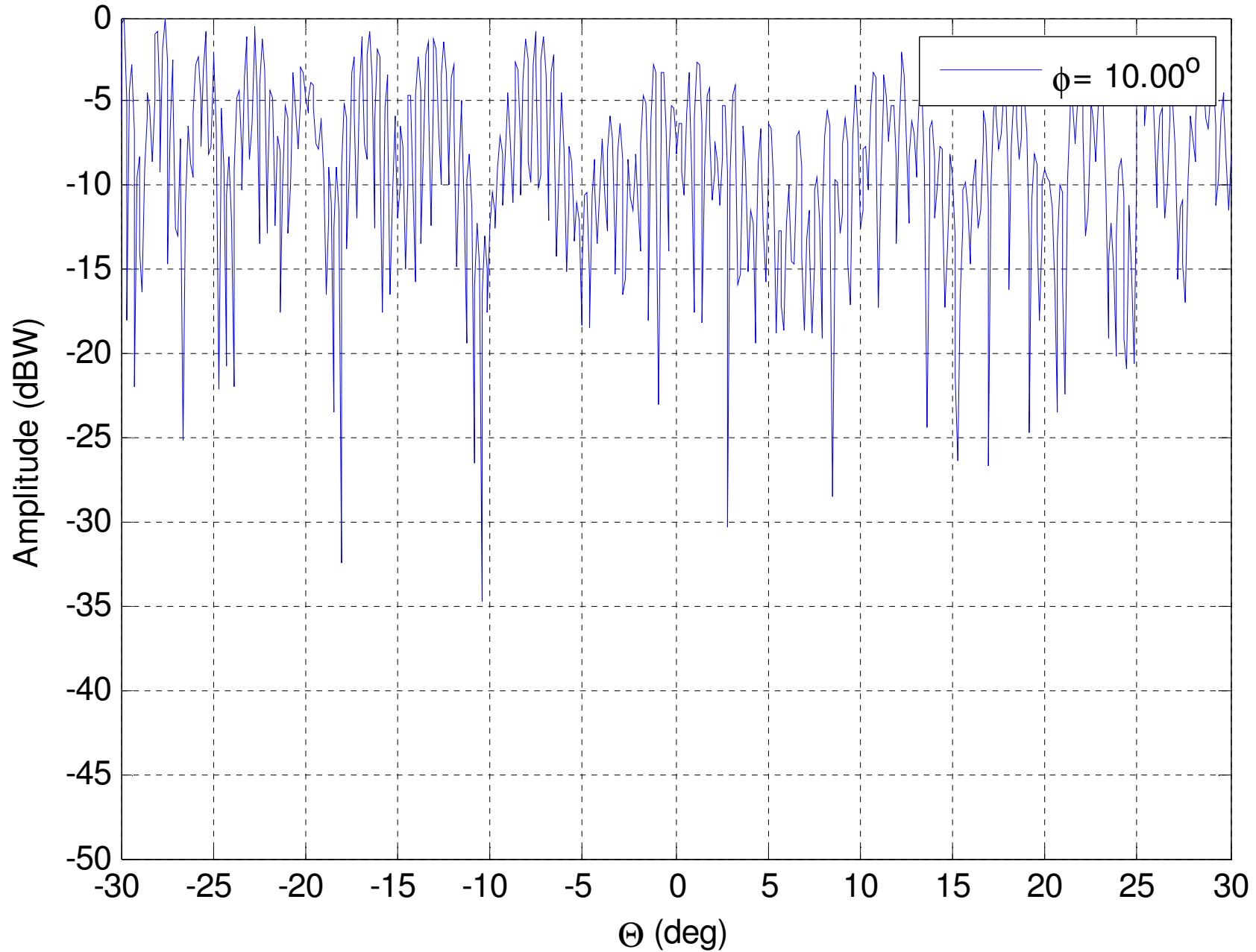
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -5.67 dBW, Date: 14-Dec-2011



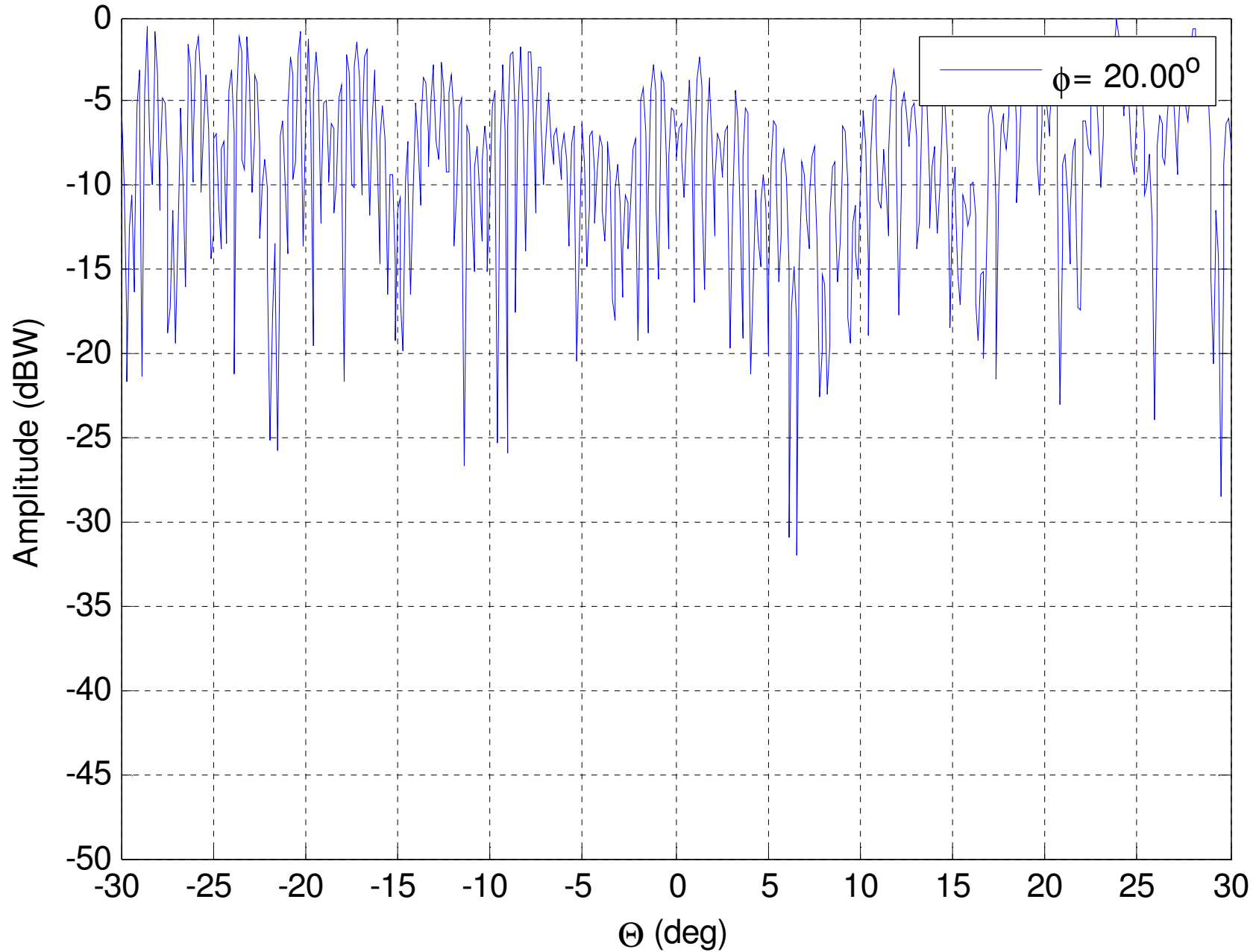
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -5.50 dBW, Date: 14-Dec-2011



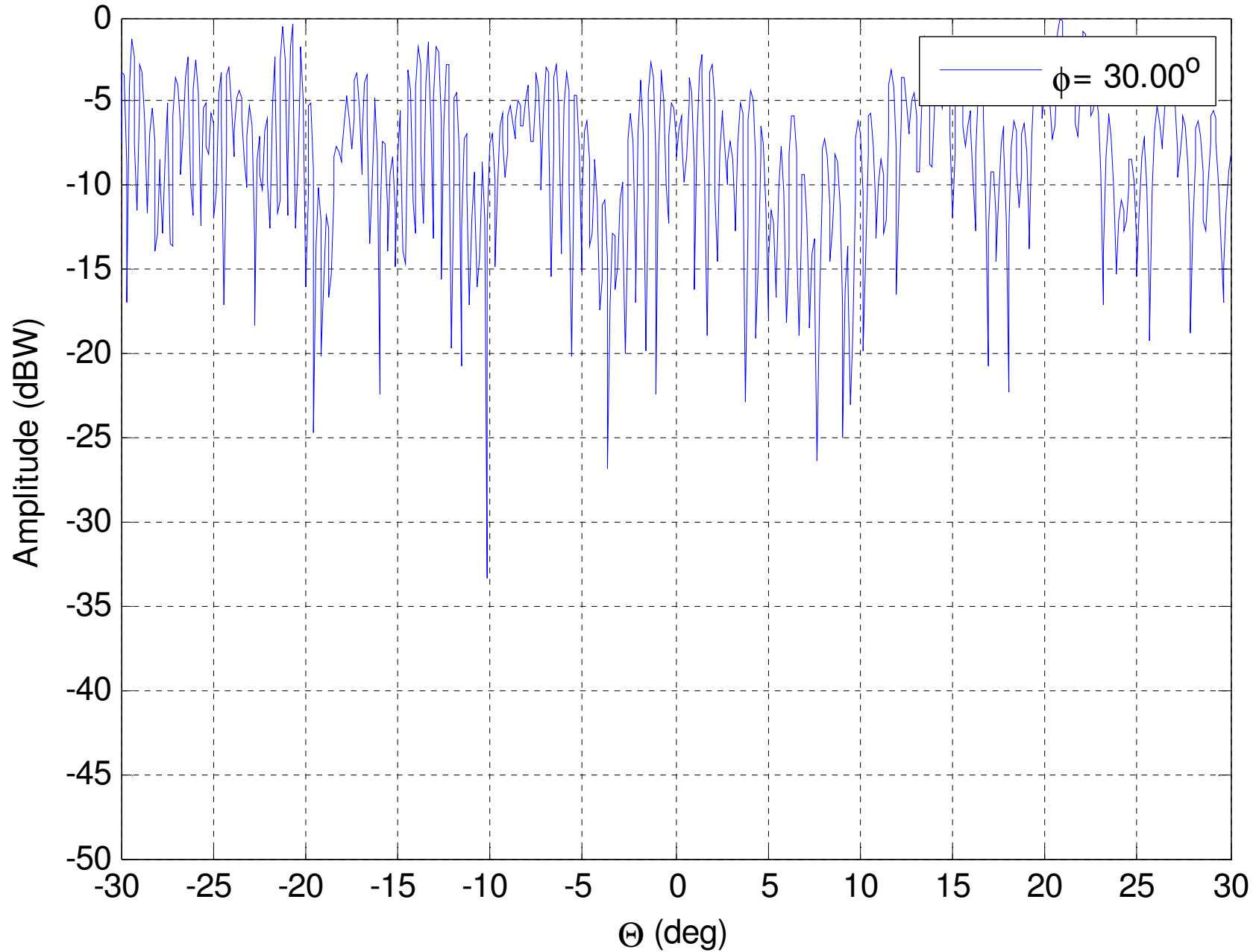
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -5.39 dBW, Date: 14-Dec-2011



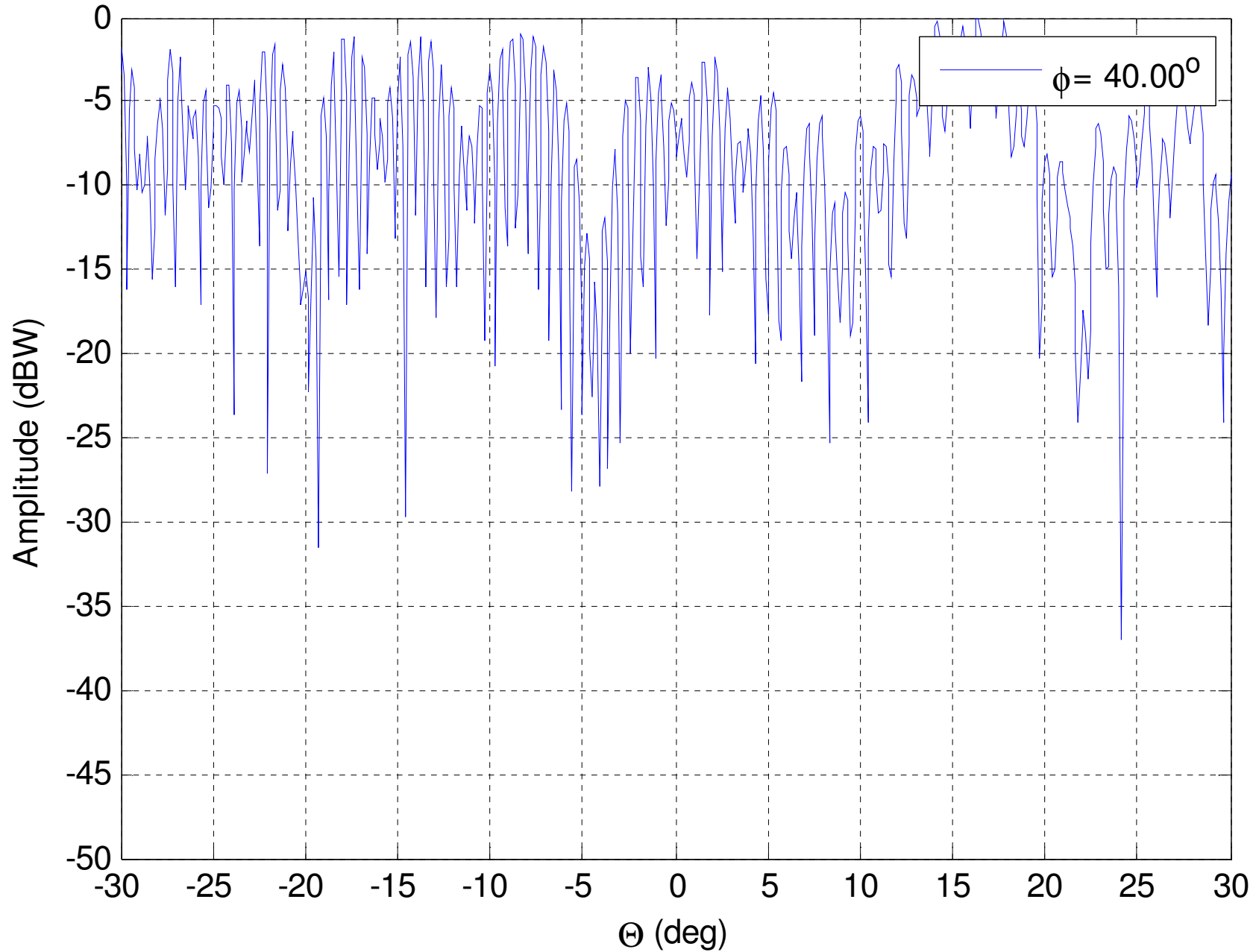
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -5.66 dBW, Date: 14-Dec-2011



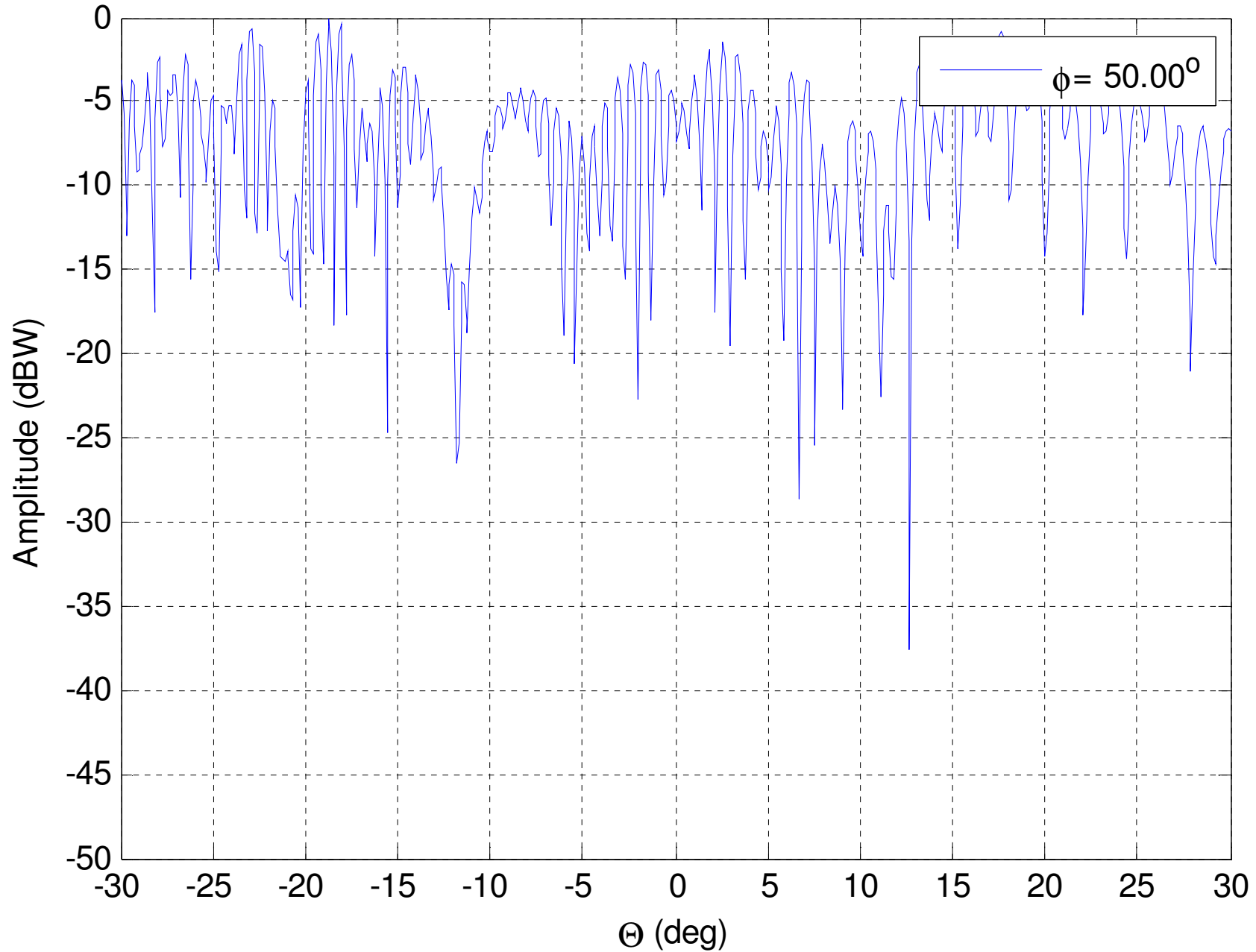
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -5.71 dBW, Date: 14-Dec-2011



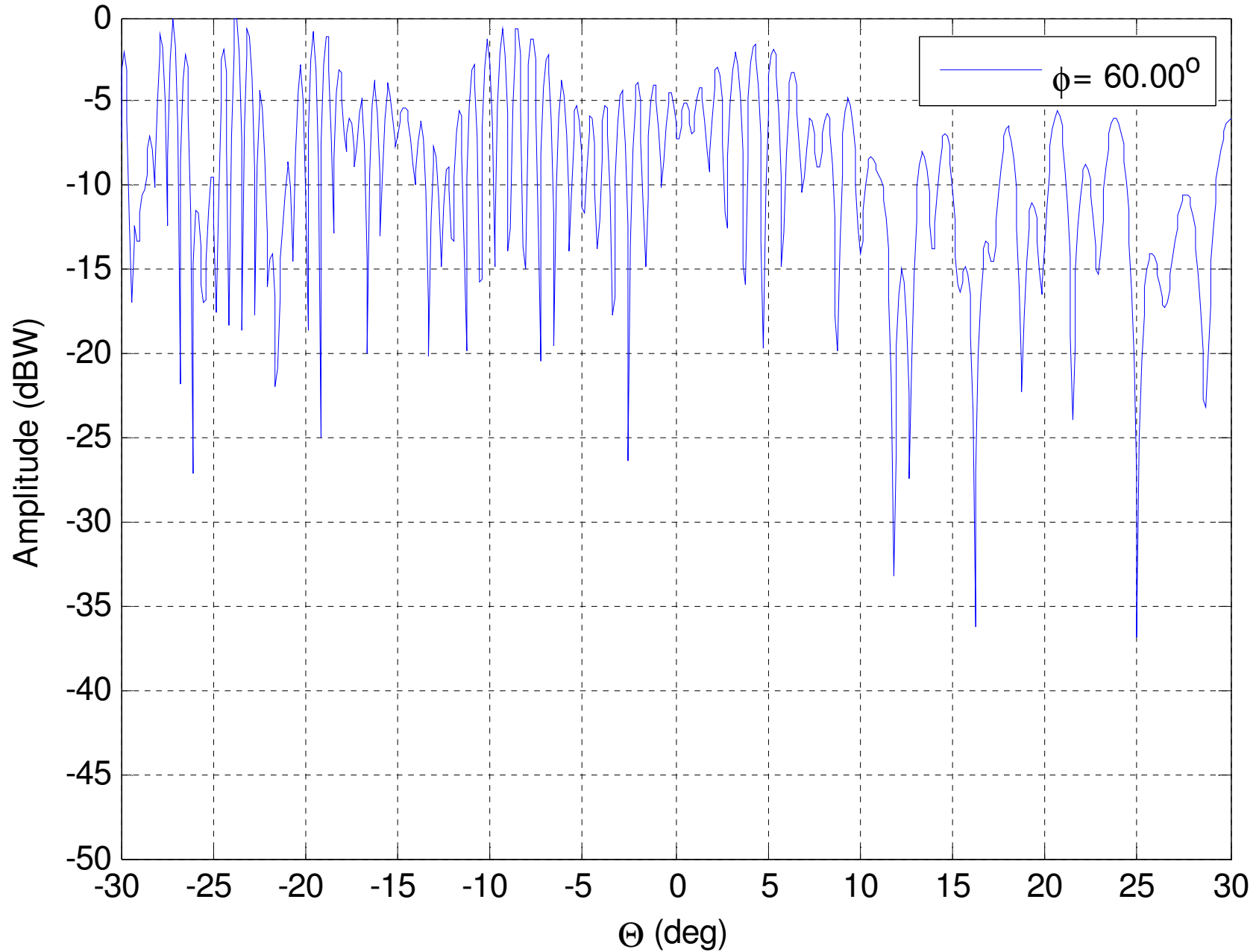
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -6.61 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

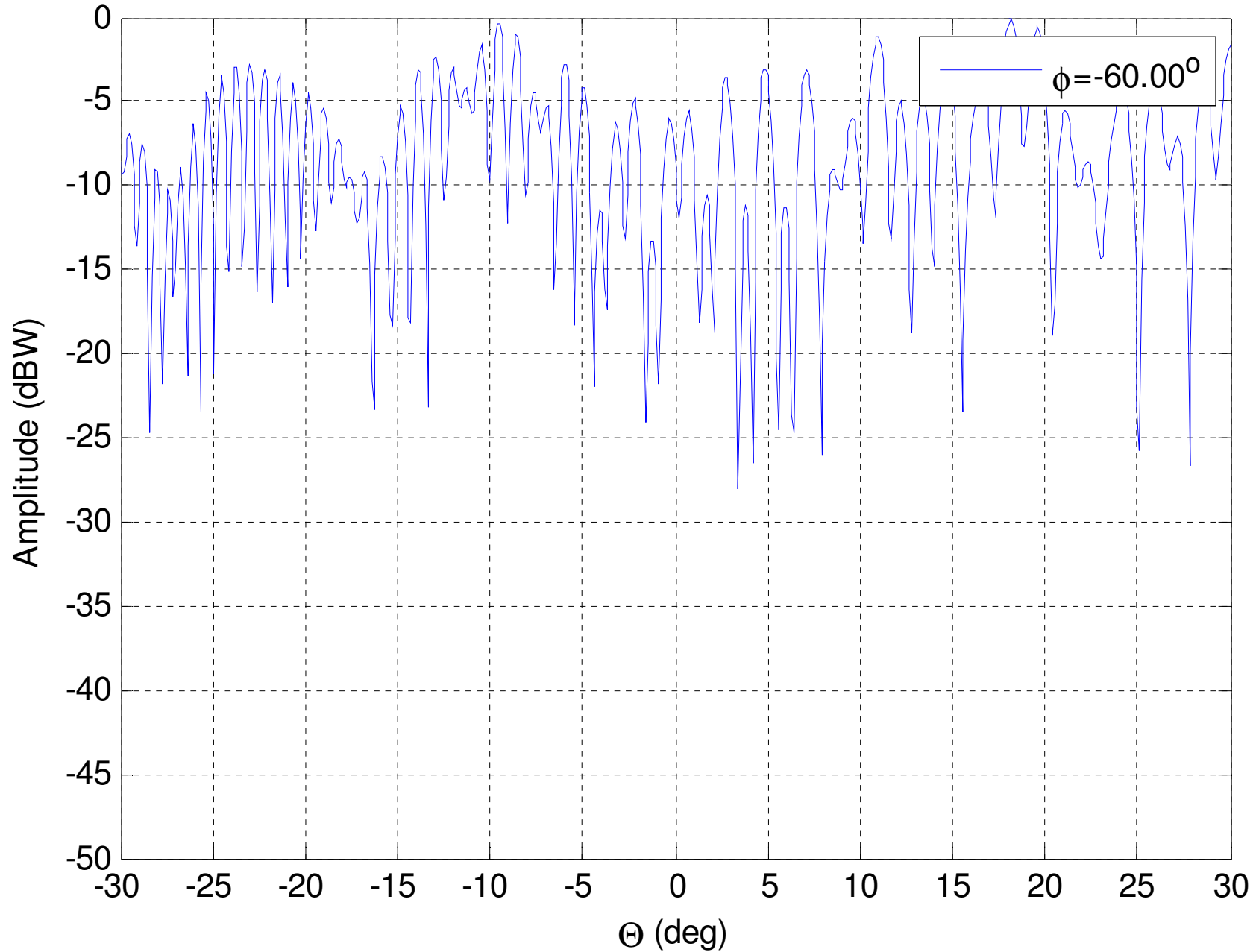
Input file: tx-17.3-rhcp-60.cut, Peak: -6.70 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

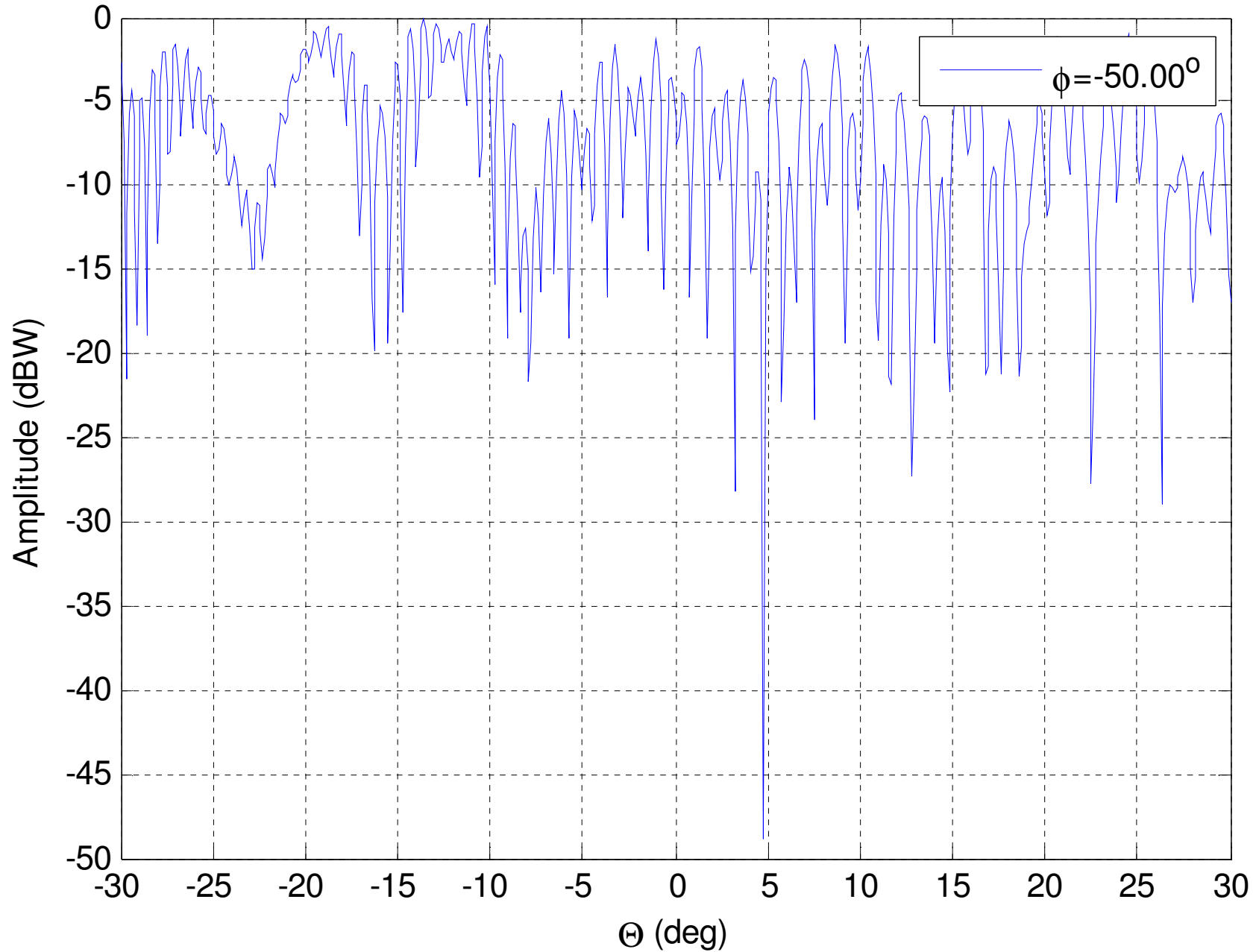
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -5.90 dBW, Date: 14-Dec-2011



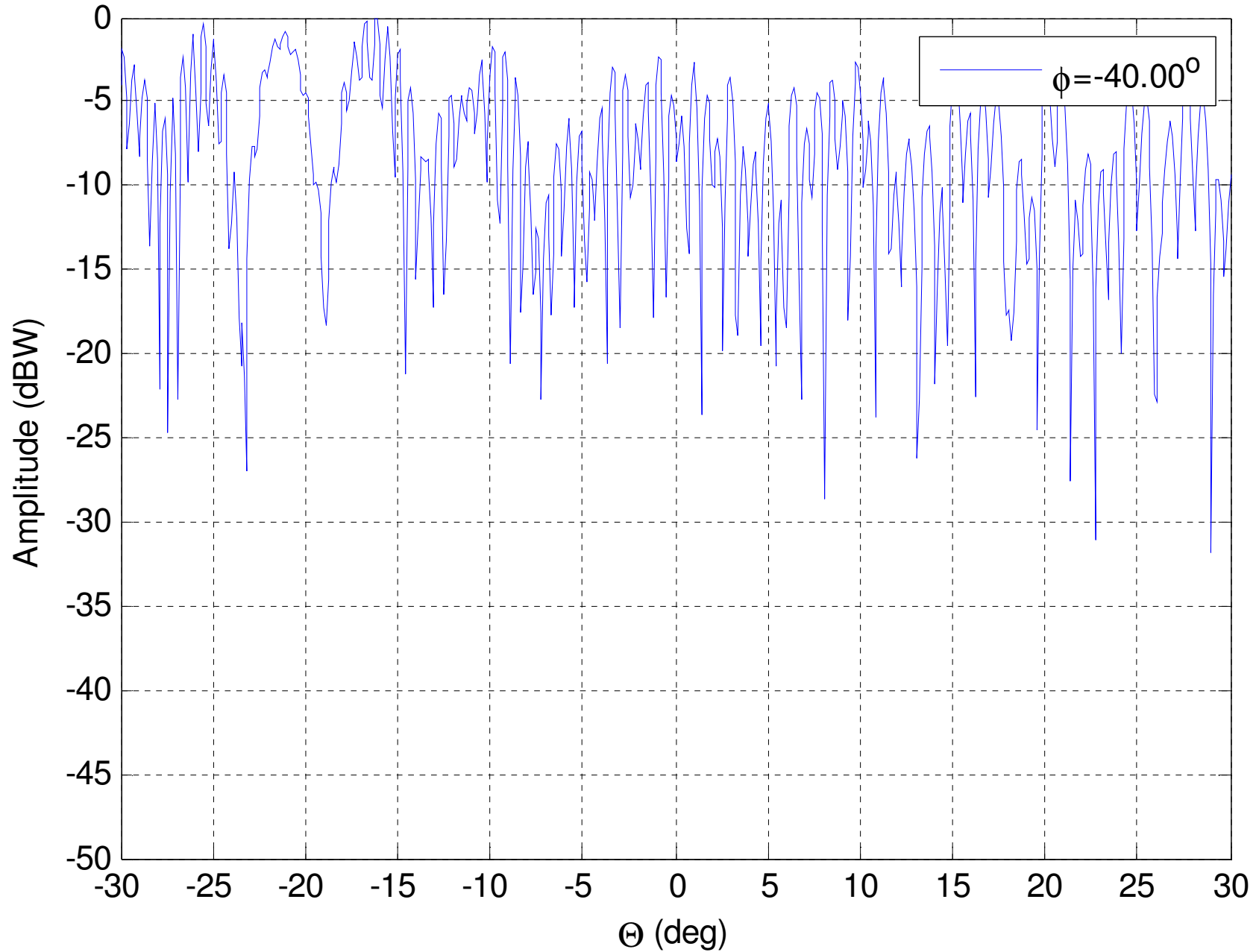
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -6.42 dBW, Date: 14-Dec-2011



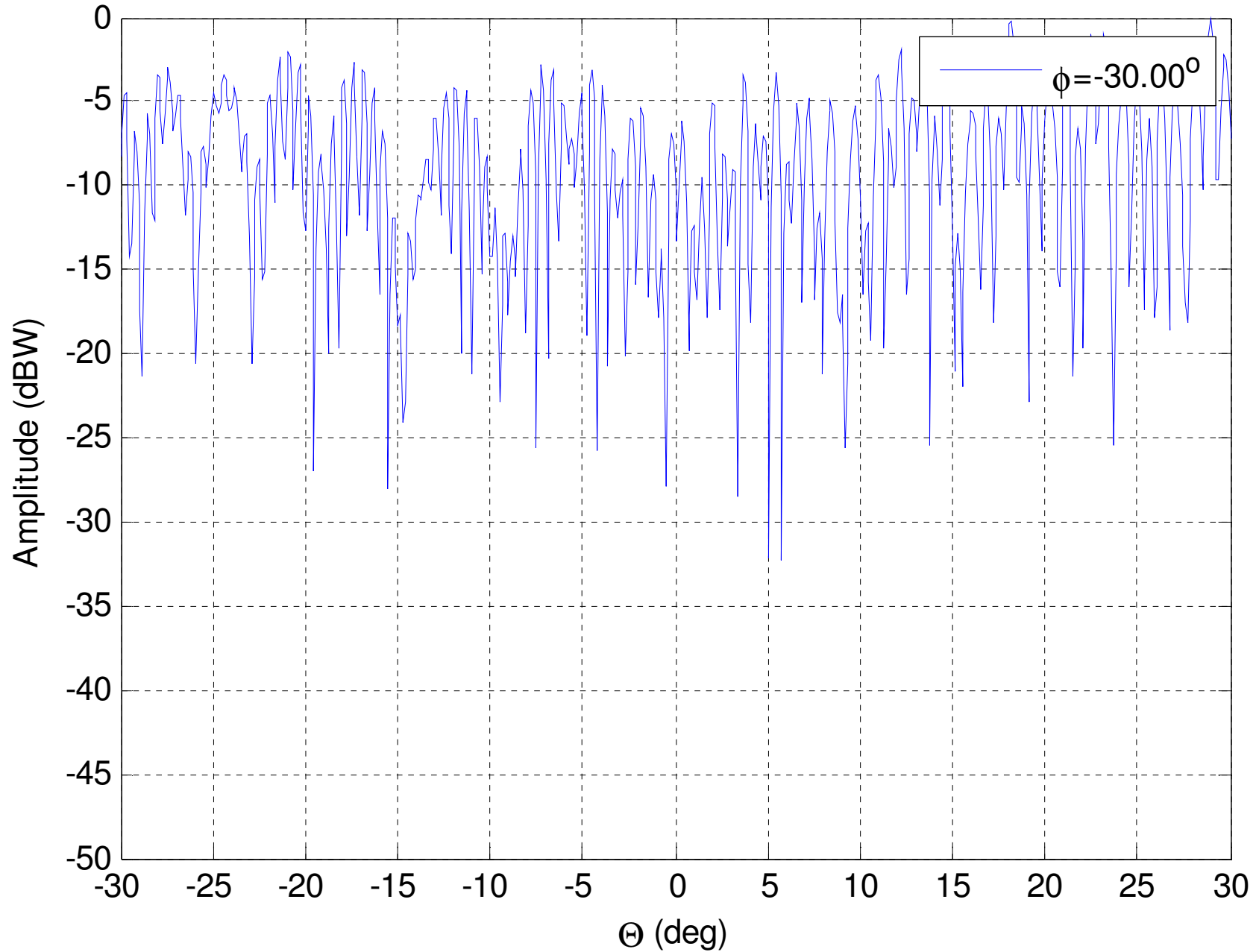
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -5.45 dBW, Date: 14-Dec-2011



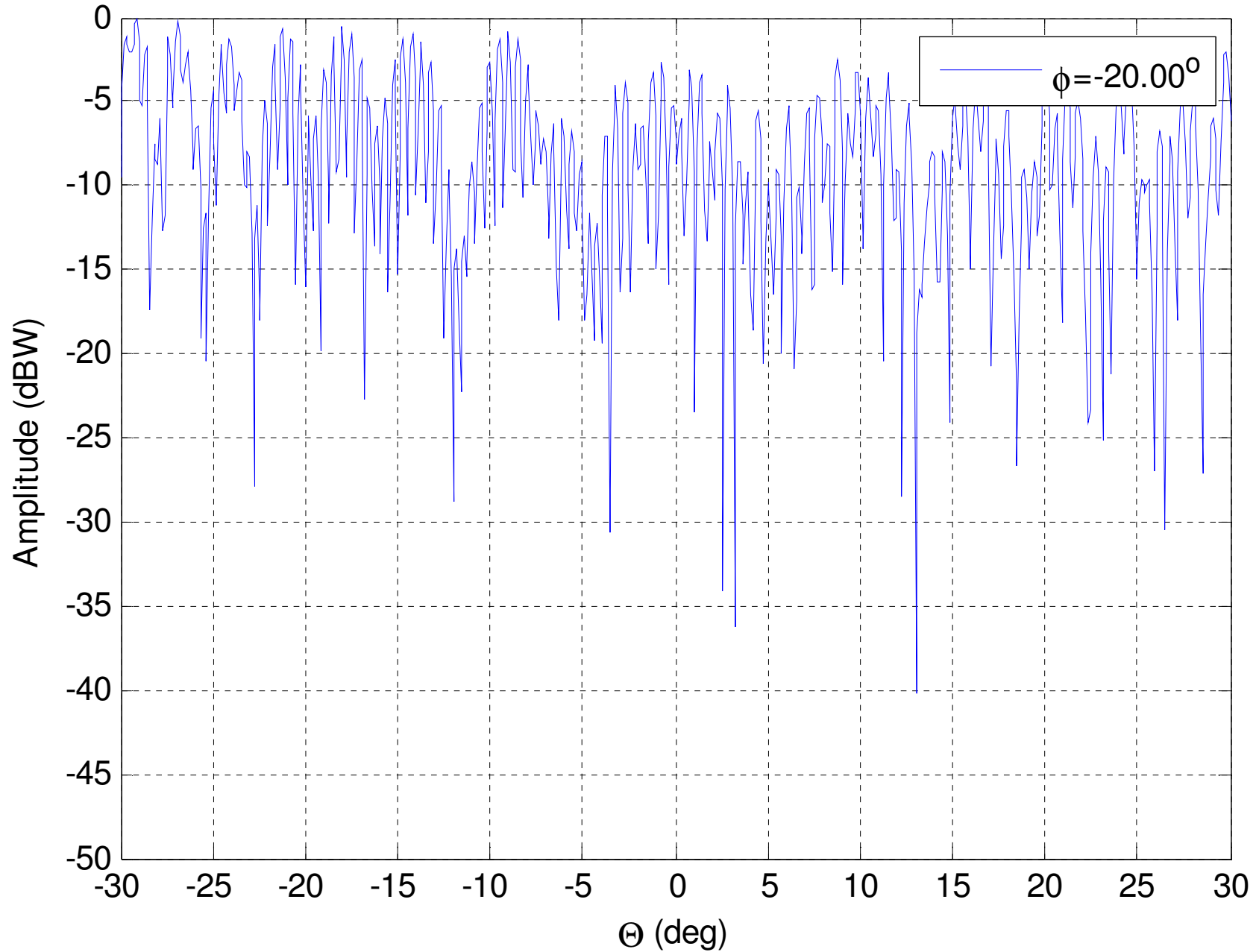
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -4.44 dBW, Date: 14-Dec-2011



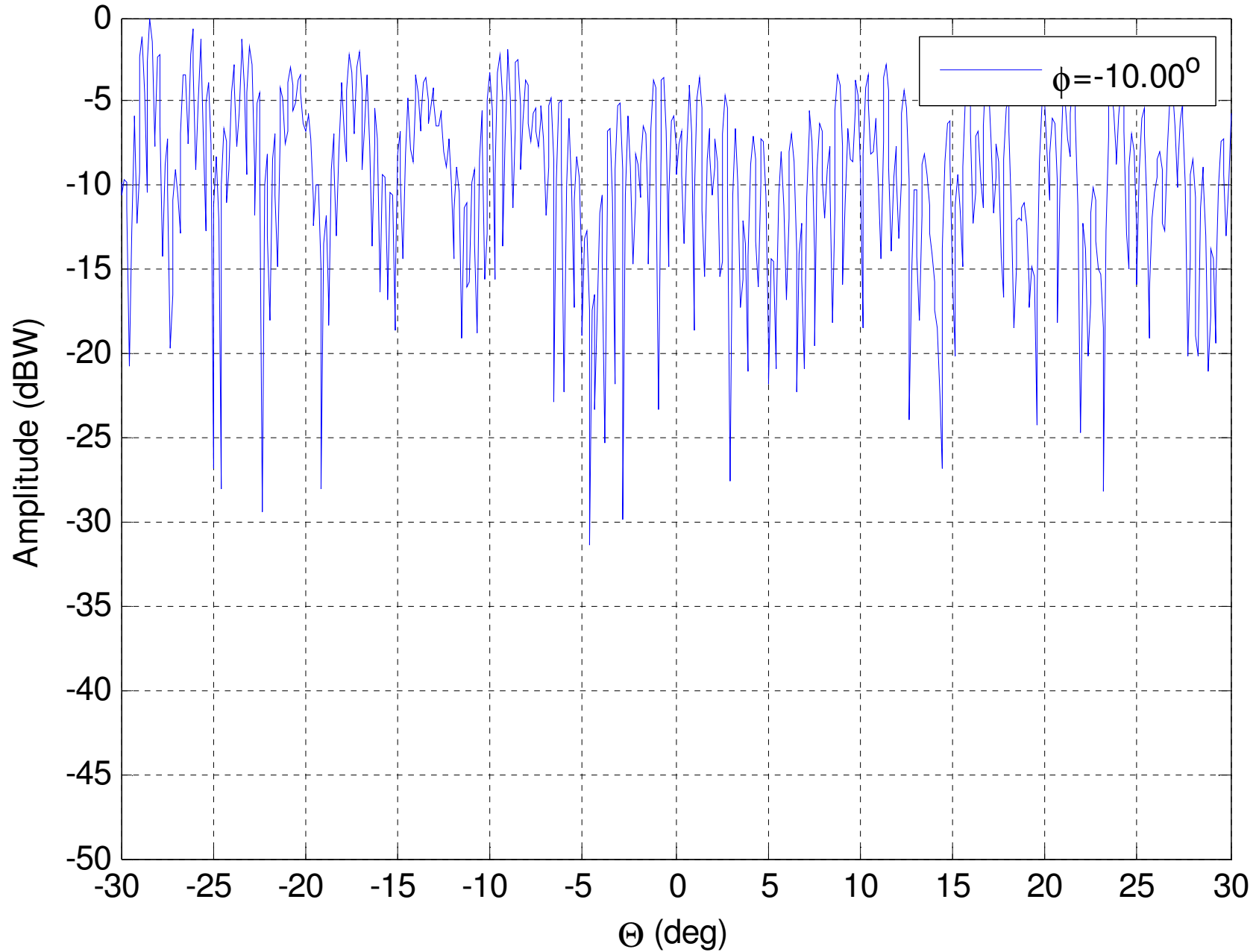
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -5.31 dBW, Date: 14-Dec-2011



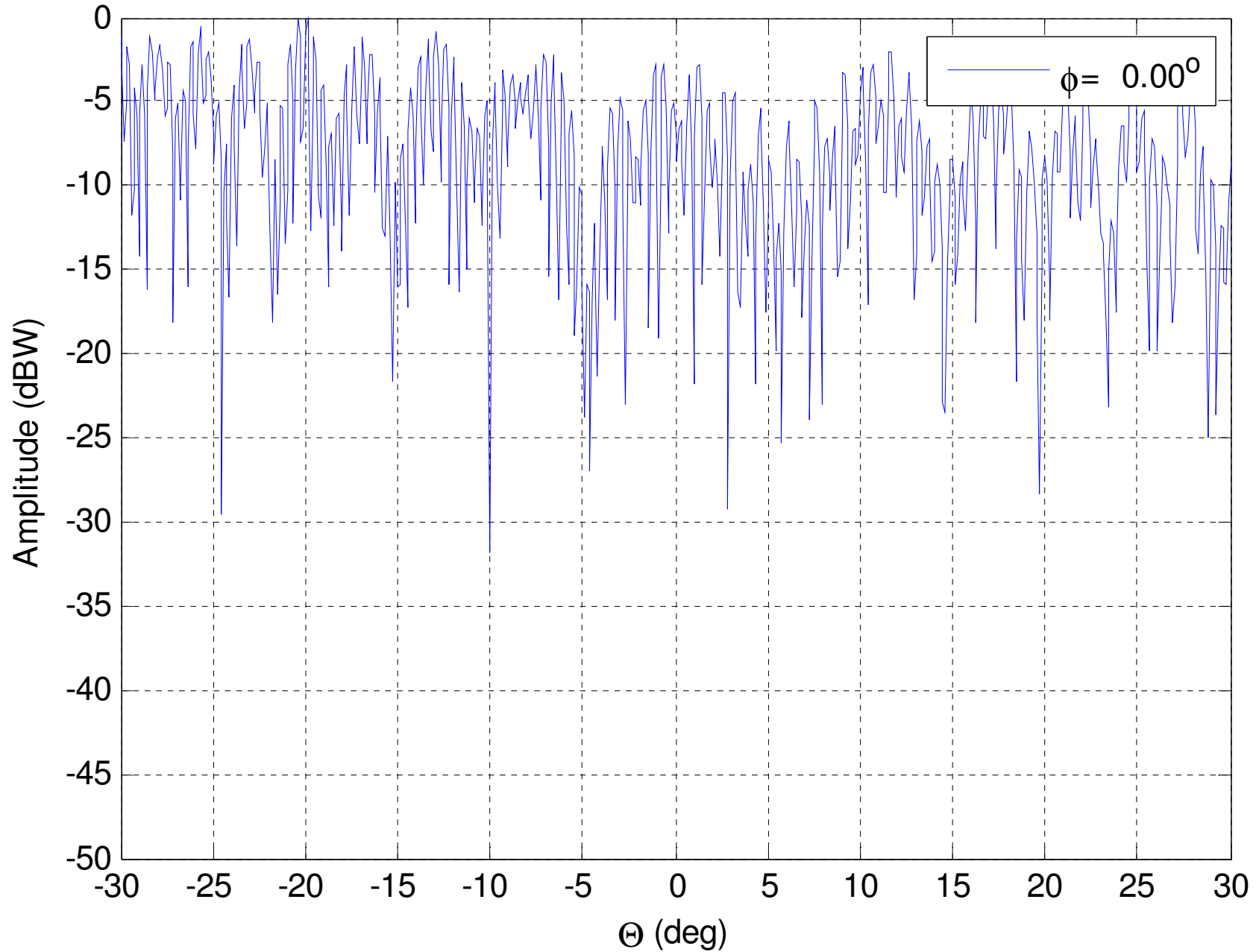
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -4.73 dBW, Date: 14-Dec-2011



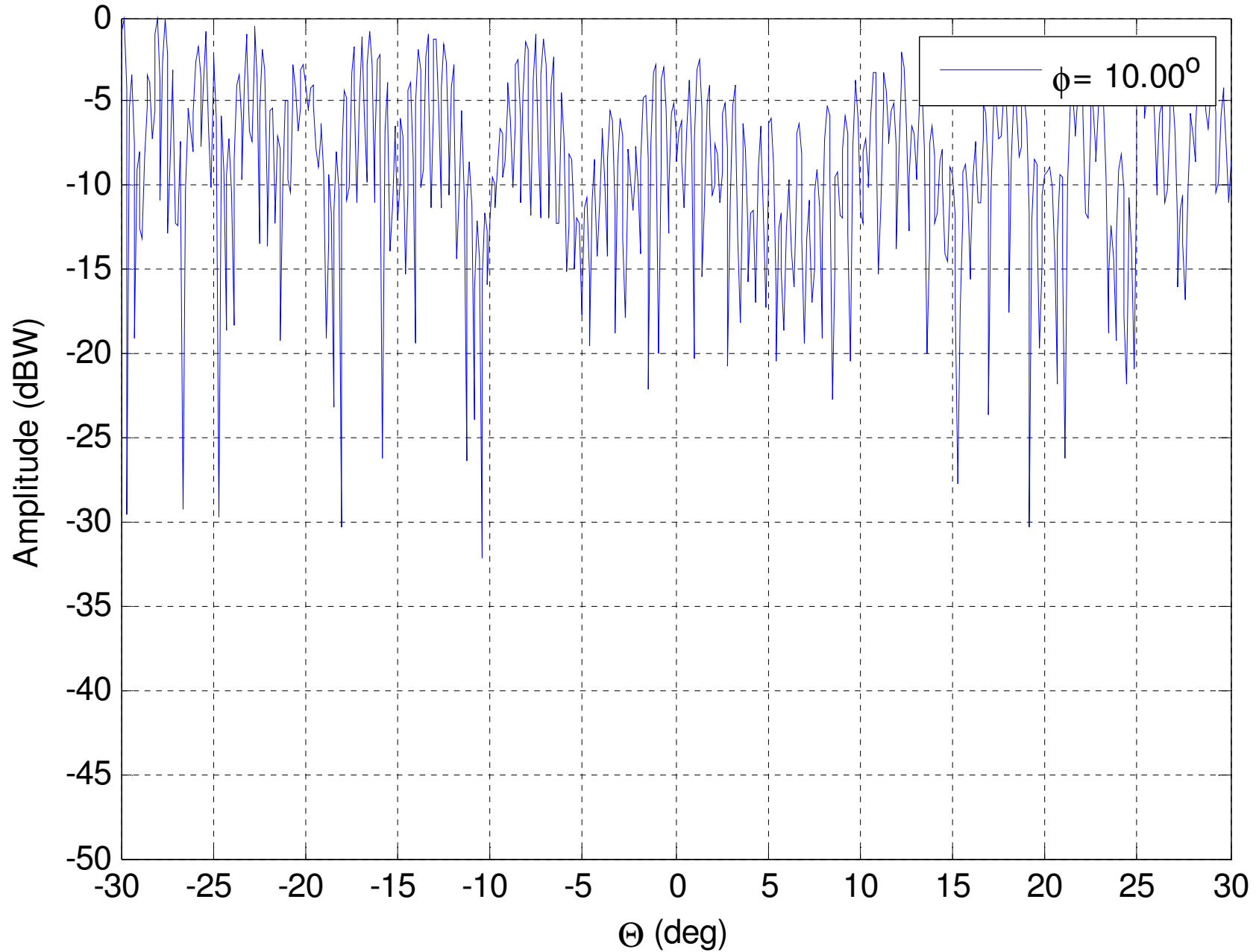
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.54 dBW, Date: 14-Dec-2011



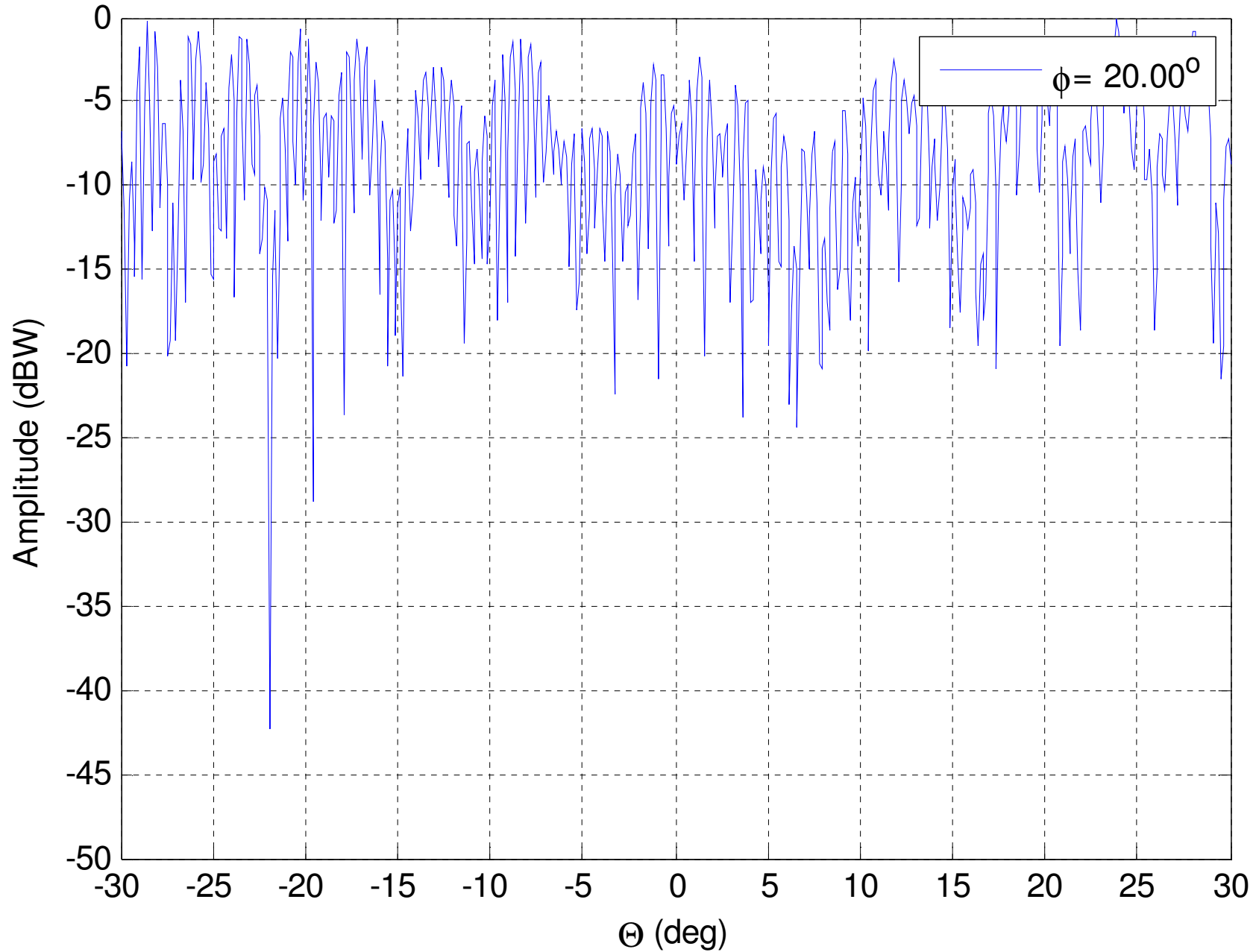
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.52 dBW, Date: 14-Dec-2011



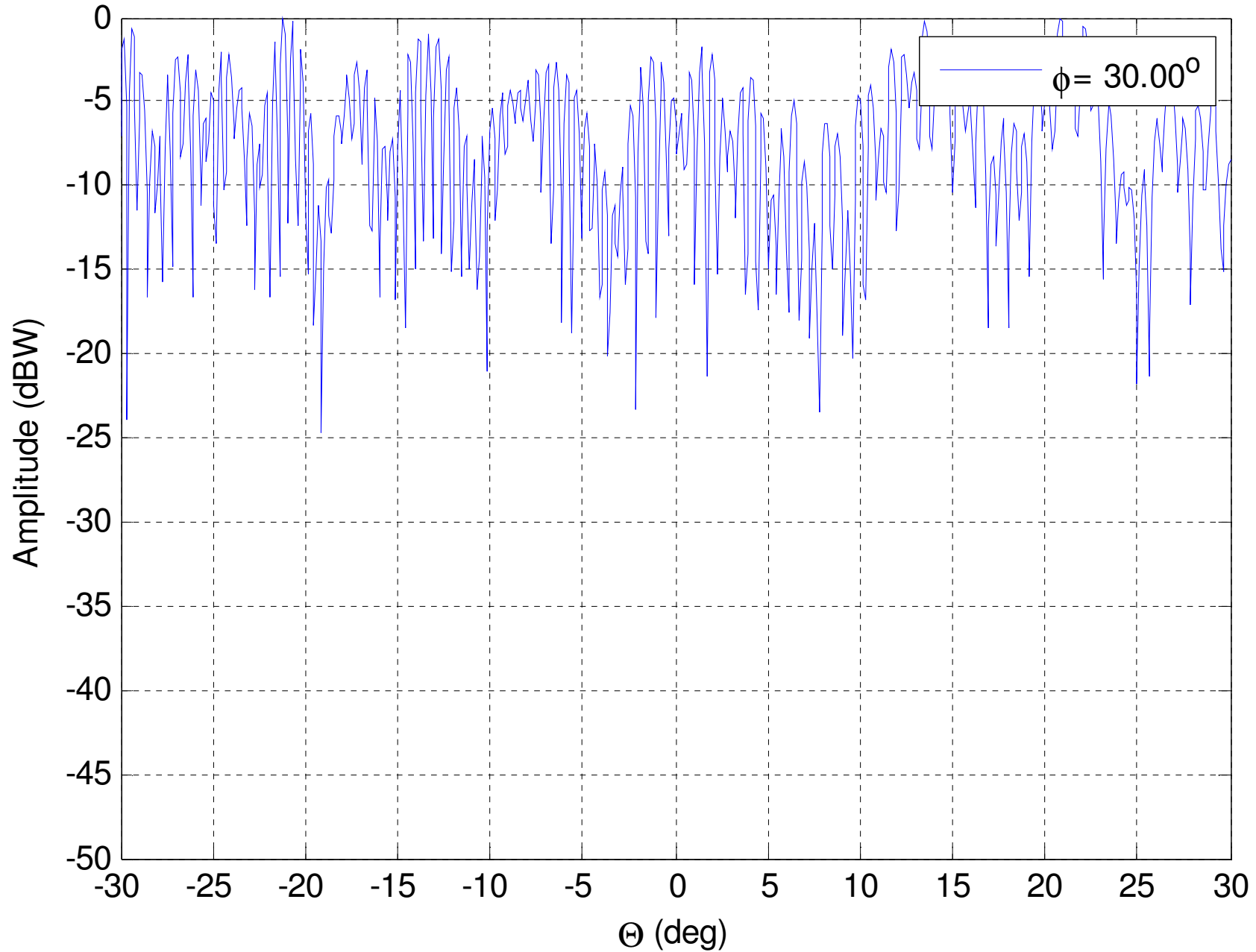
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -5.47 dBW, Date: 14-Dec-2011



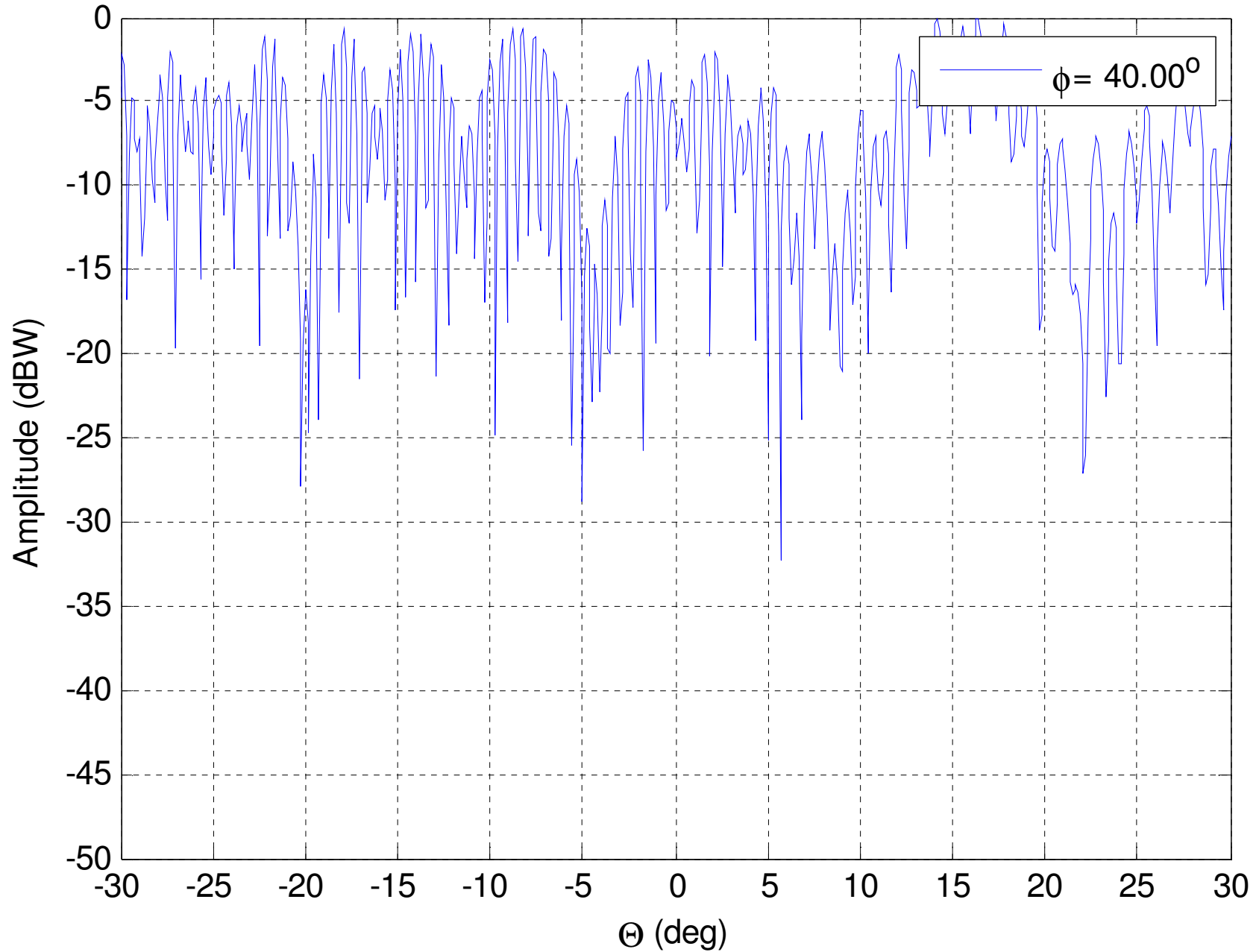
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -6.11 dBW, Date: 14-Dec-2011



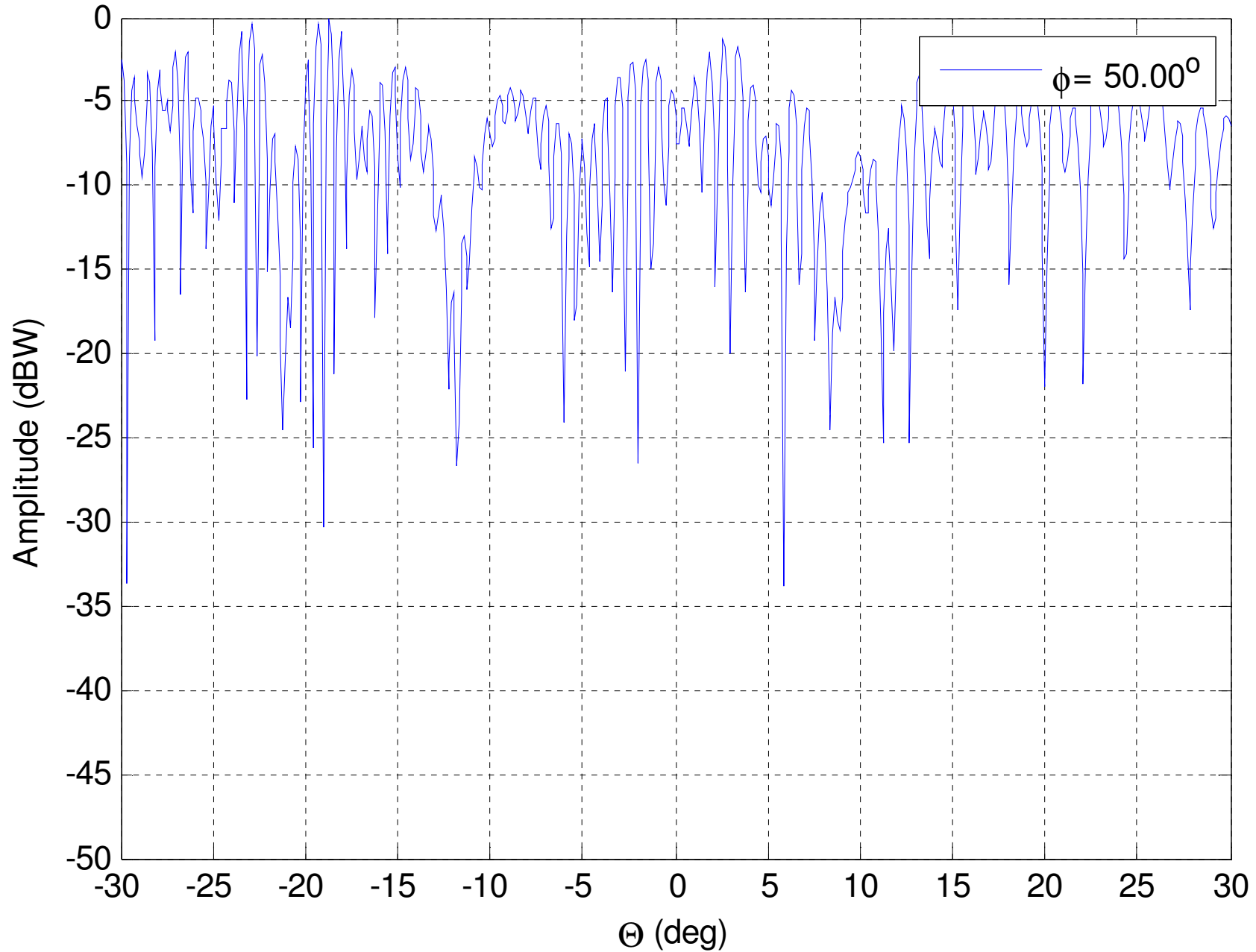
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -5.95 dBW, Date: 14-Dec-2011



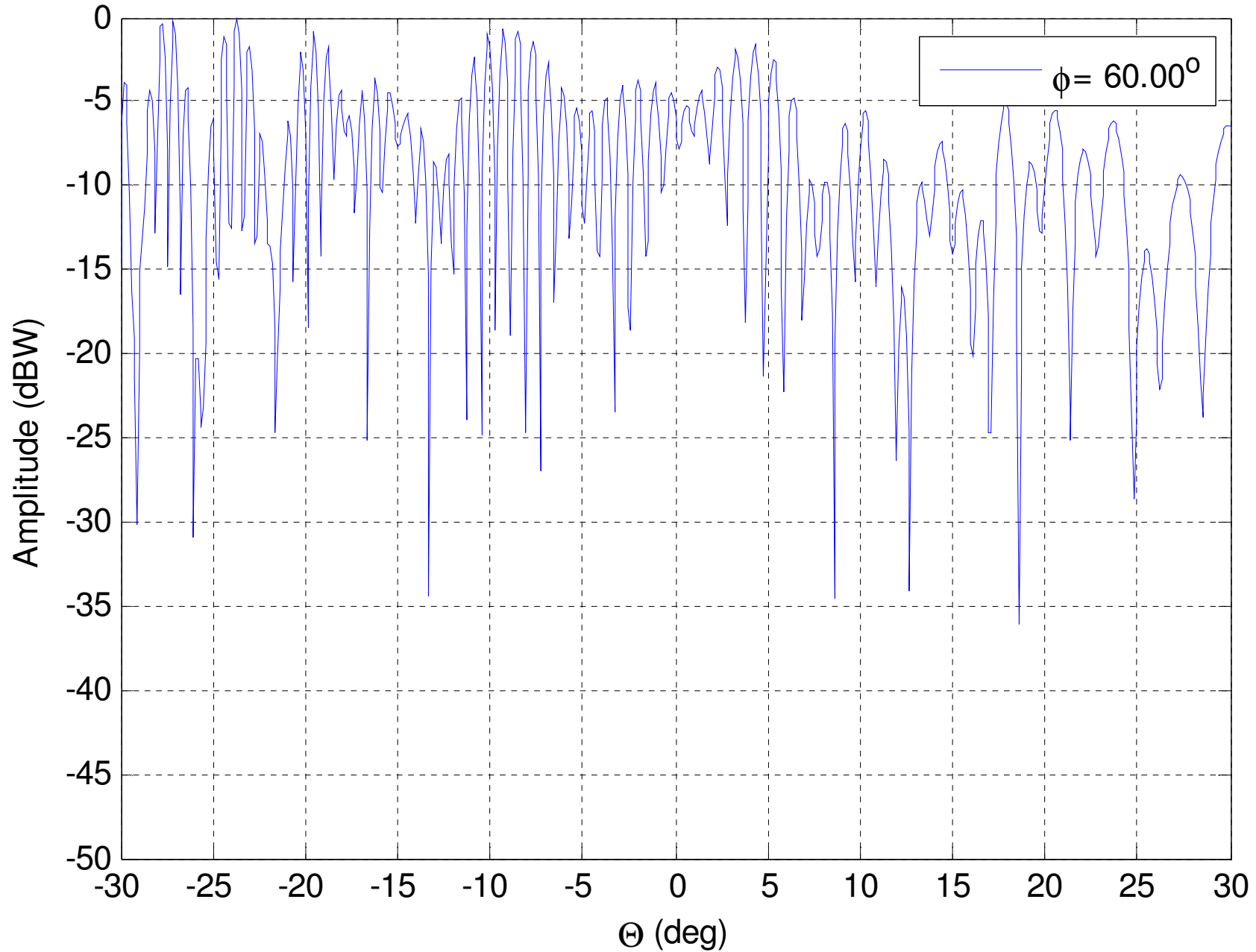
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -6.59 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

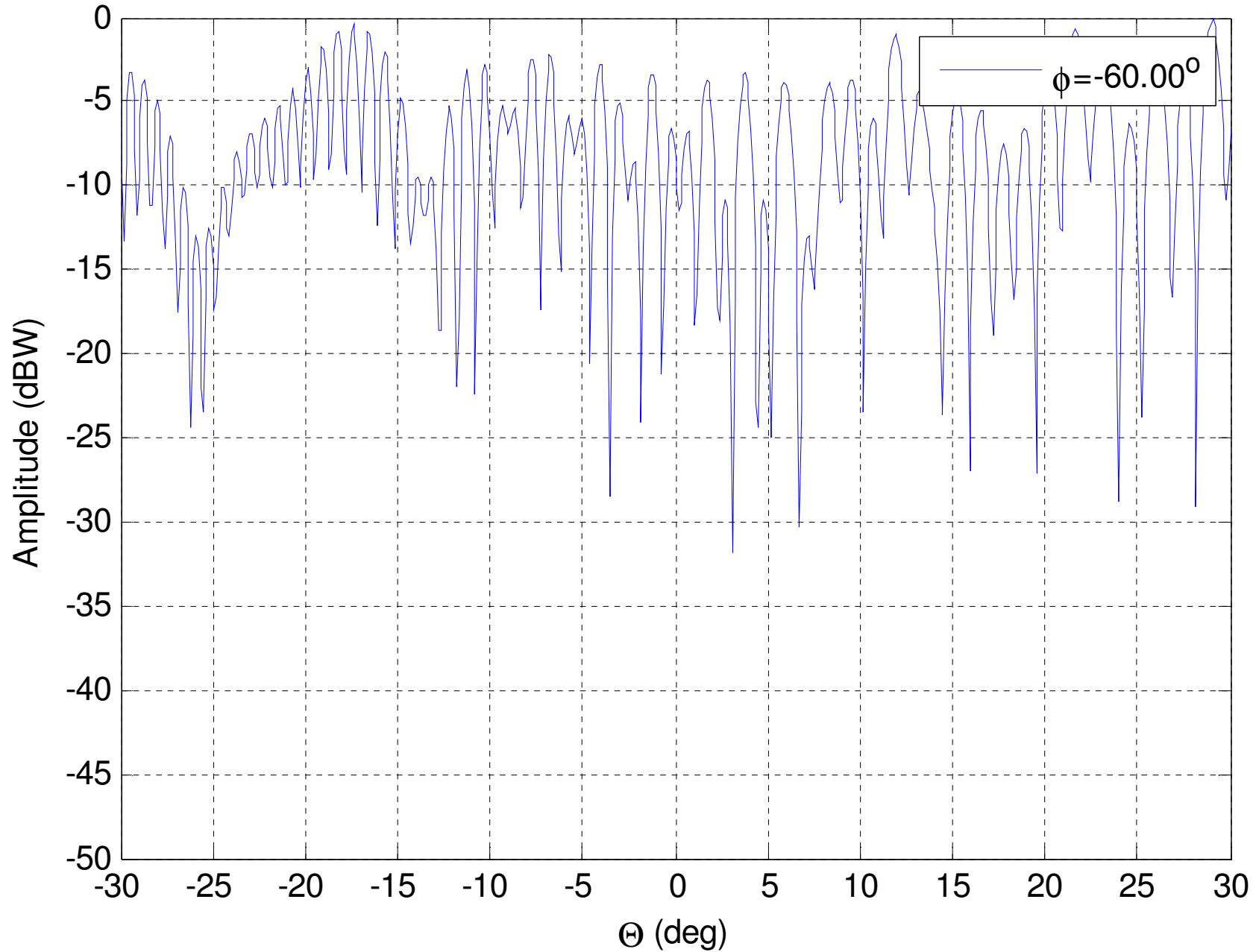
Input file: tx-17.3-lhcp-60.cut, Peak: -6.56 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

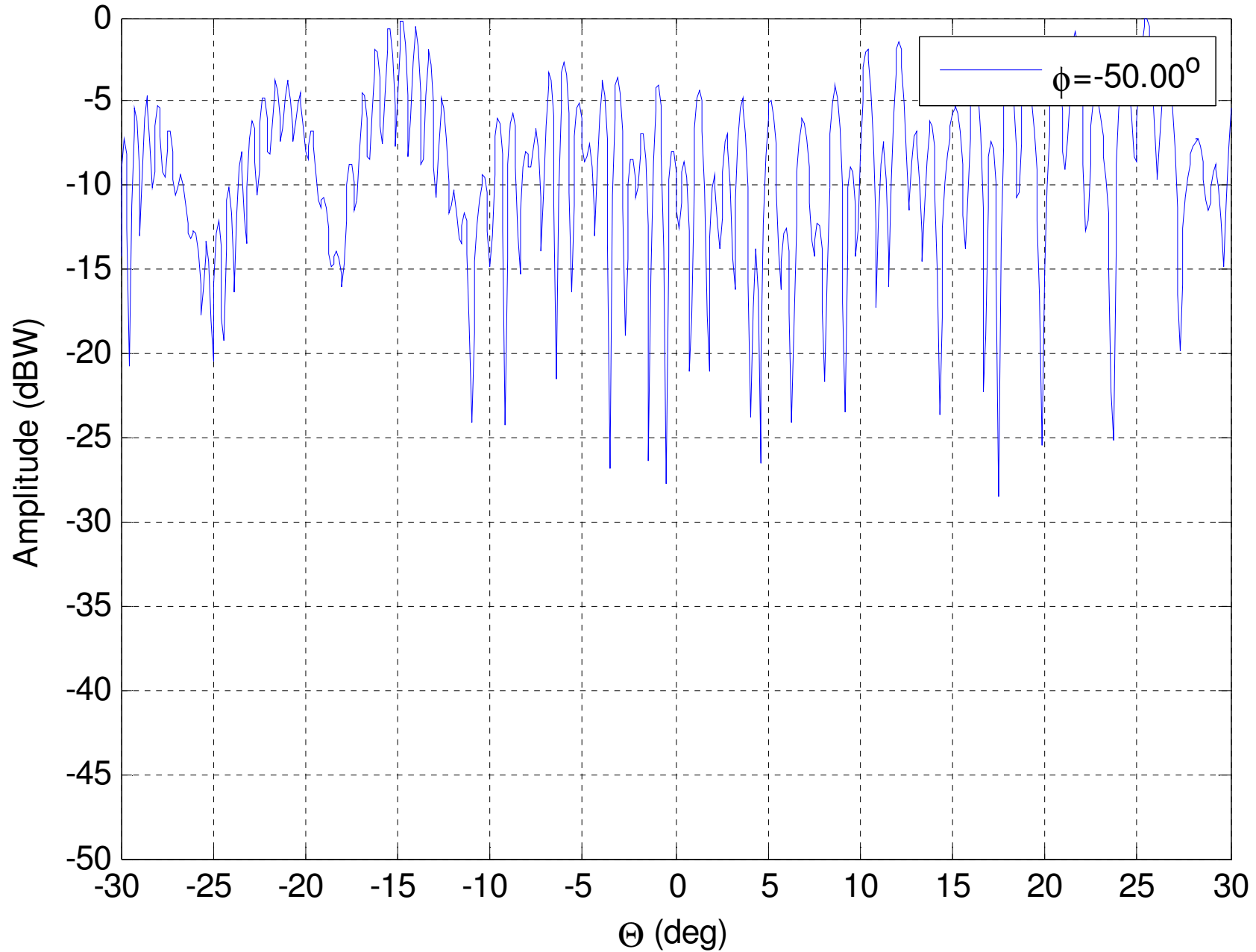
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -6.06 dBW, Date: 14-Dec-2011



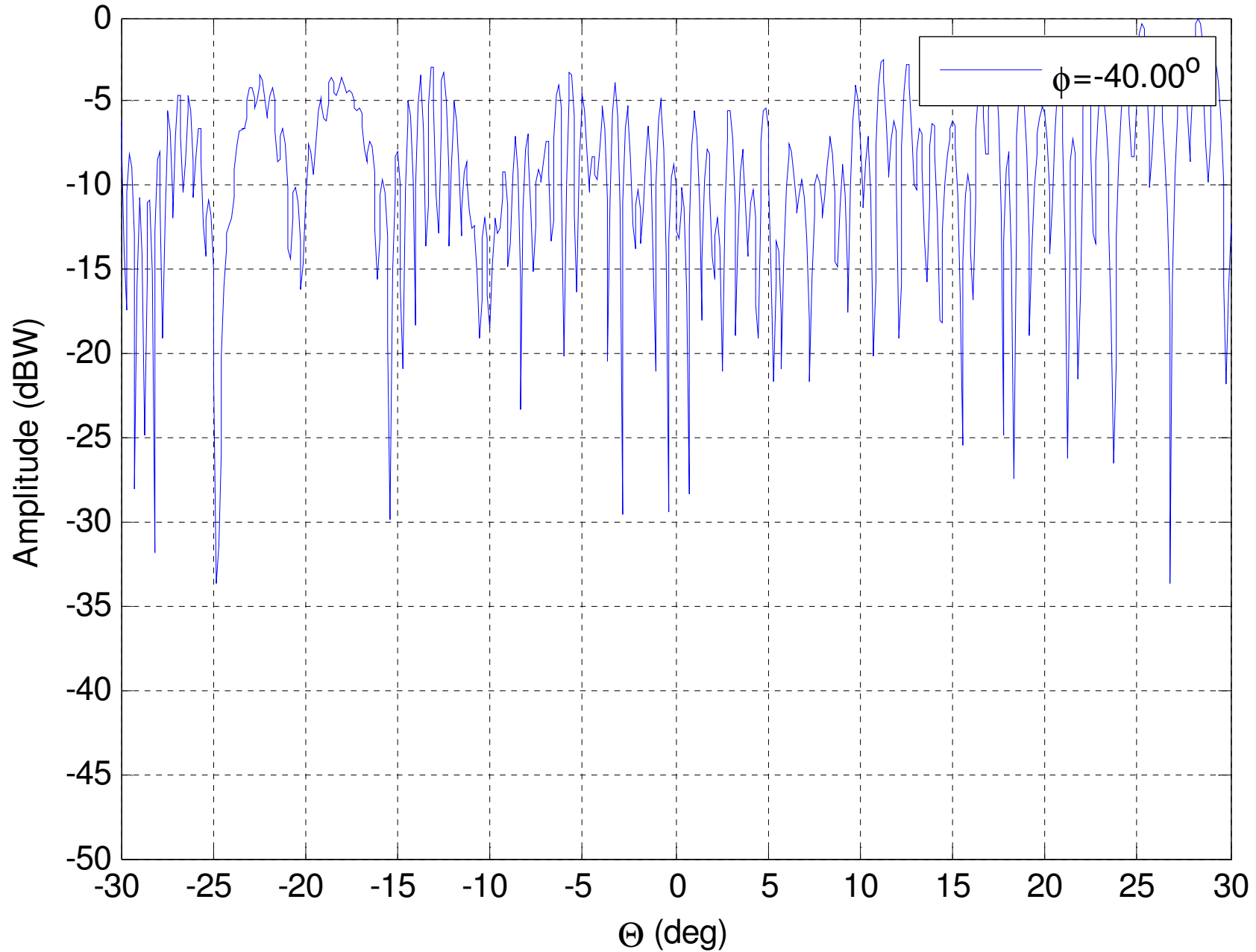
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -5.19 dBW, Date: 14-Dec-2011



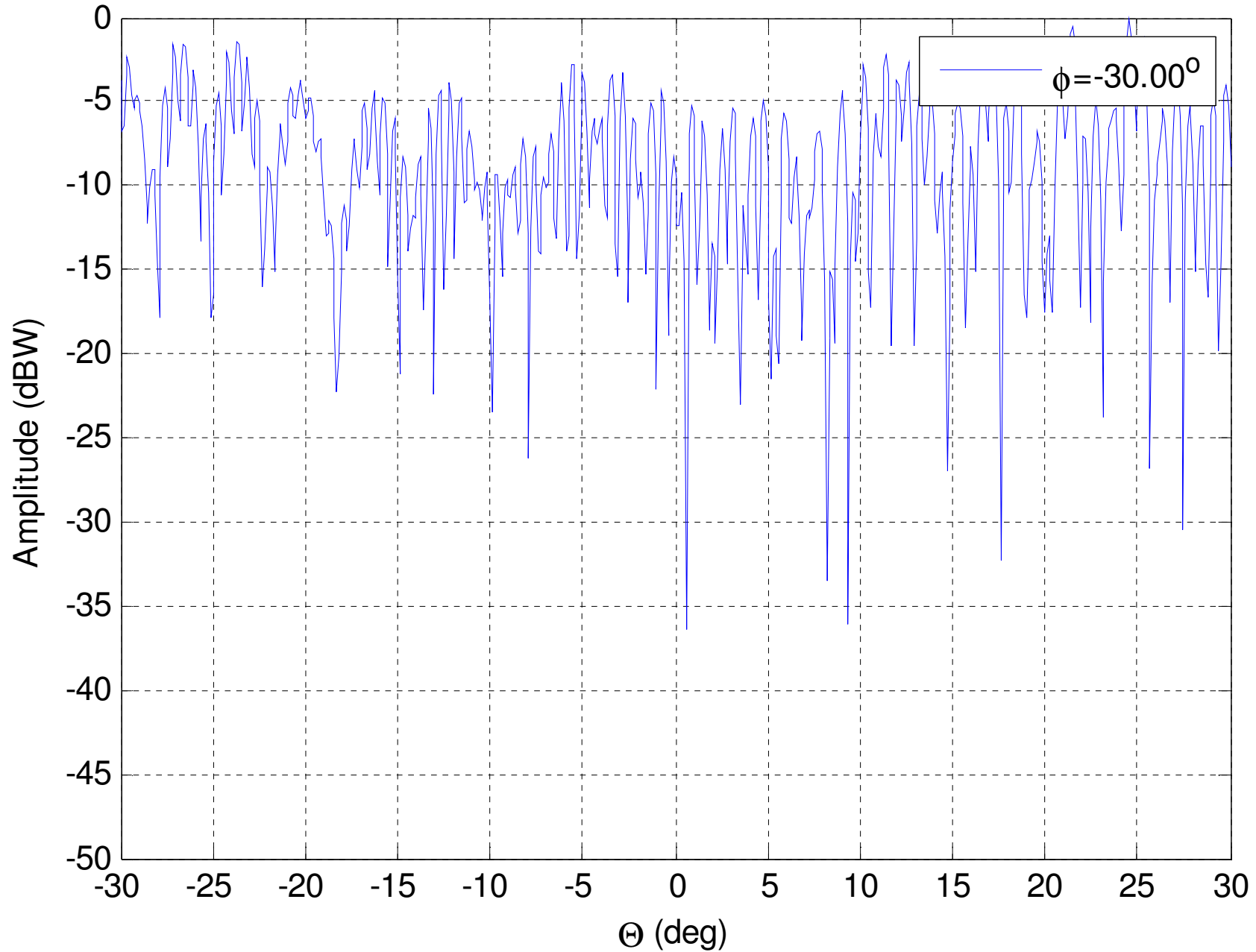
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.35 dBW, Date: 14-Dec-2011



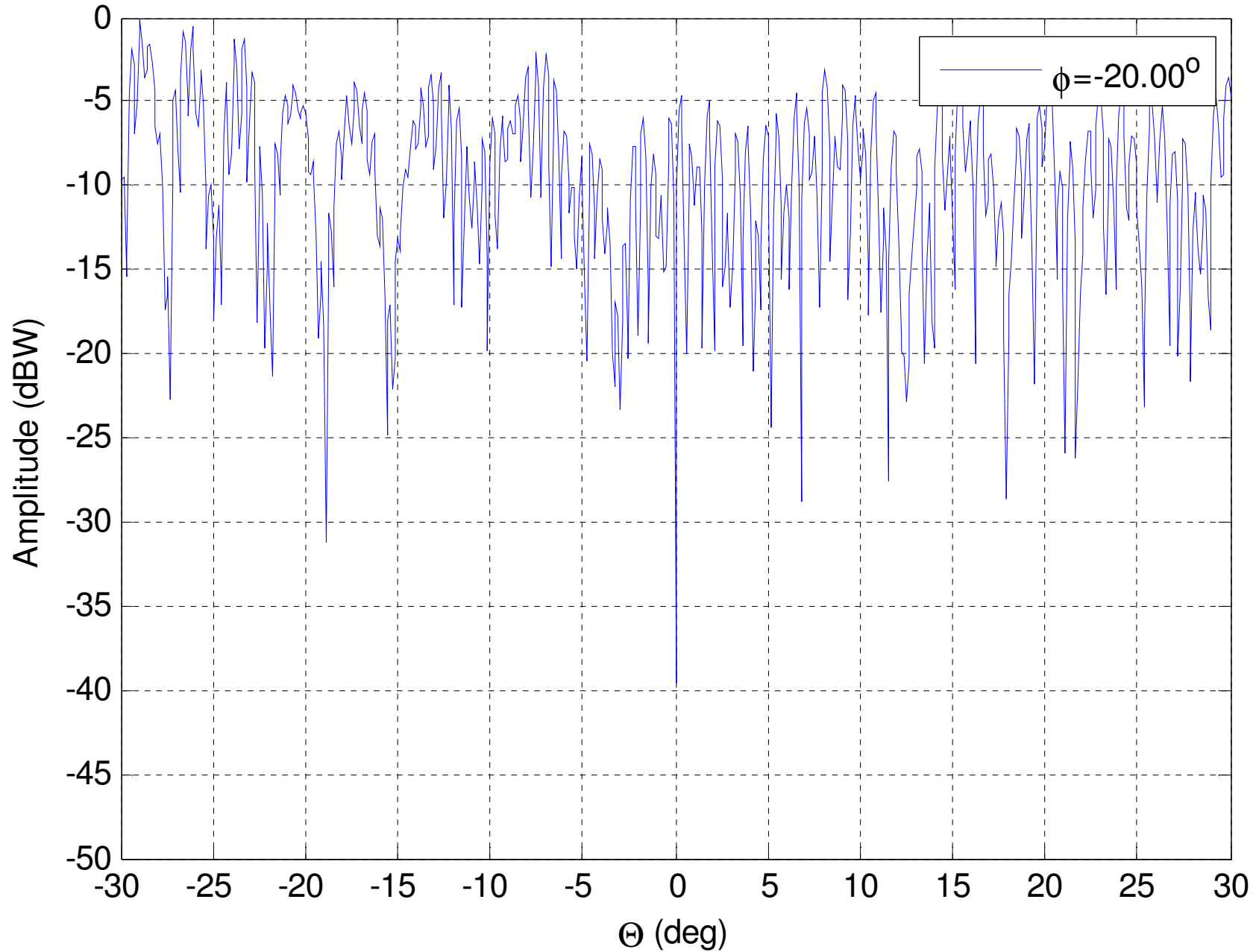
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -4.91 dBW, Date: 14-Dec-2011



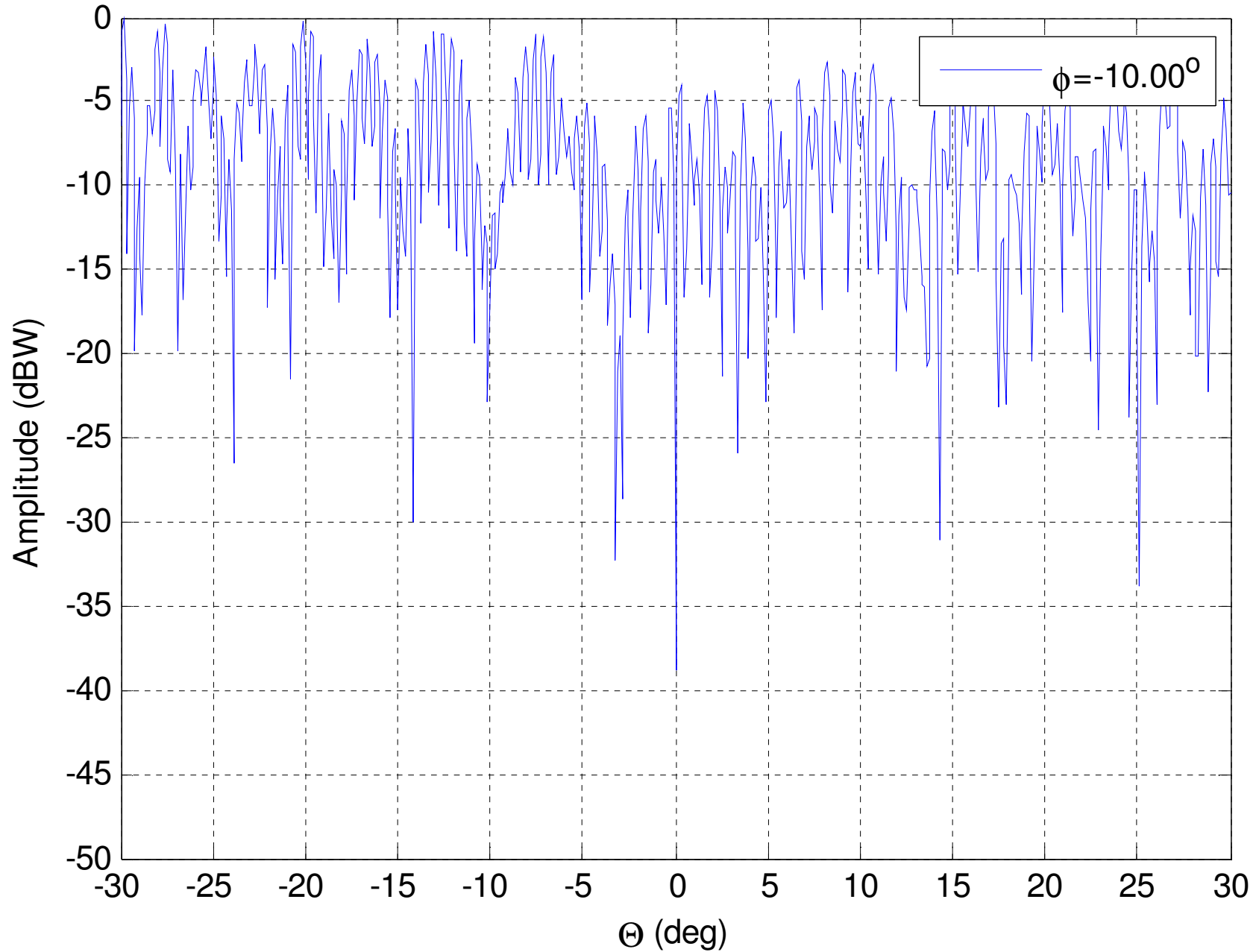
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -5.07 dBW, Date: 14-Dec-2011



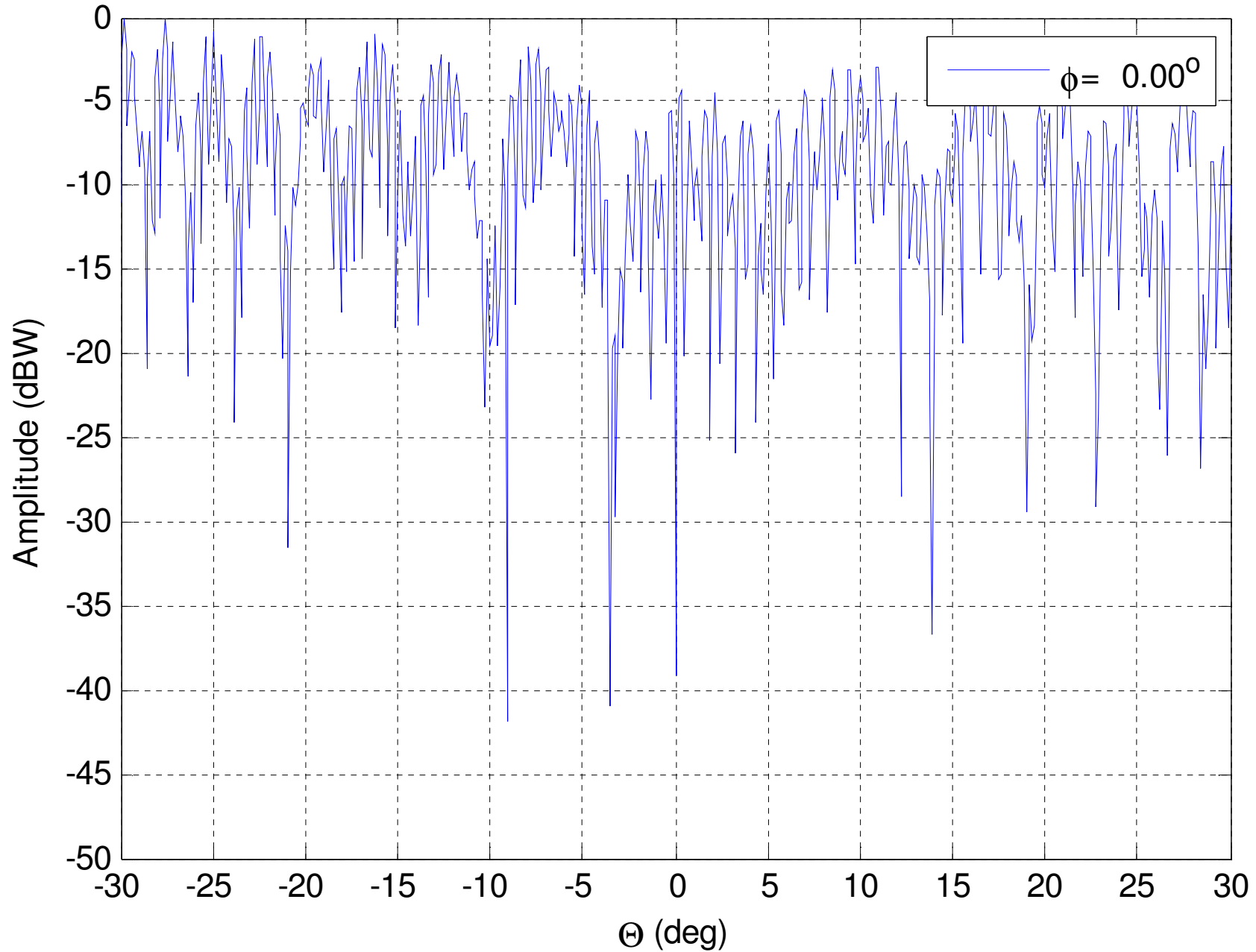
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -5.78 dBW, Date: 14-Dec-2011



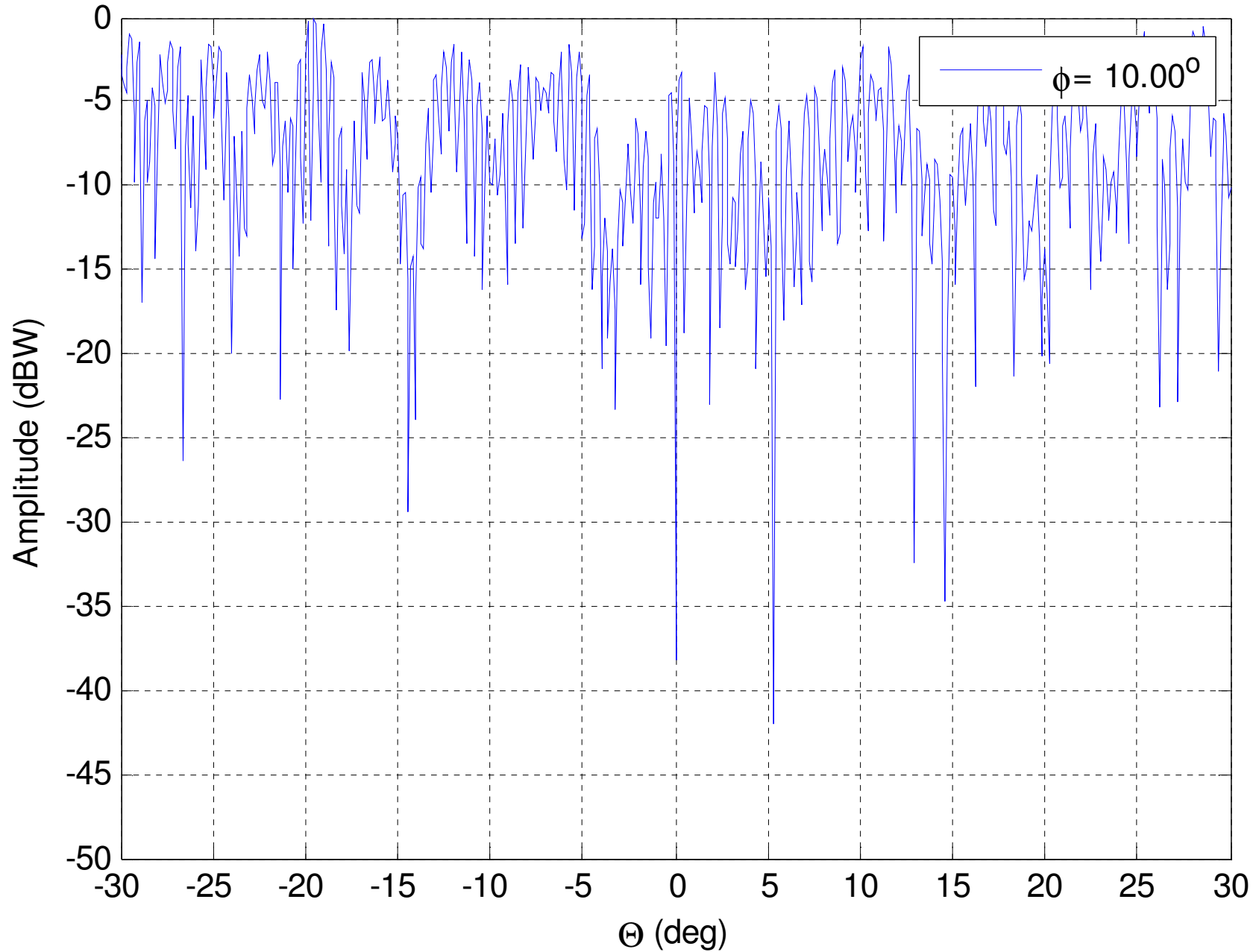
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -5.48 dBW, Date: 14-Dec-2011



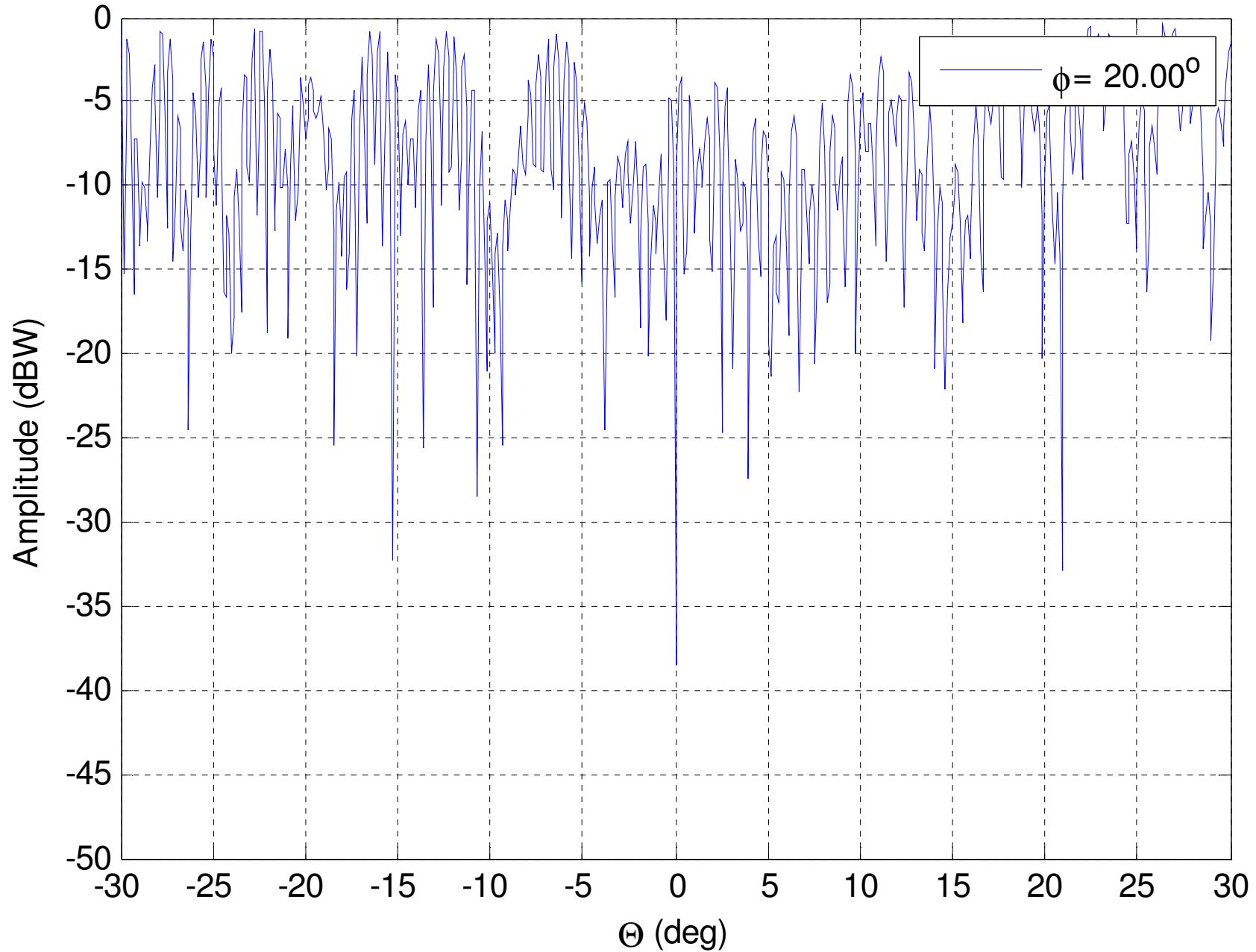
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -6.44 dBW, Date: 14-Dec-2011



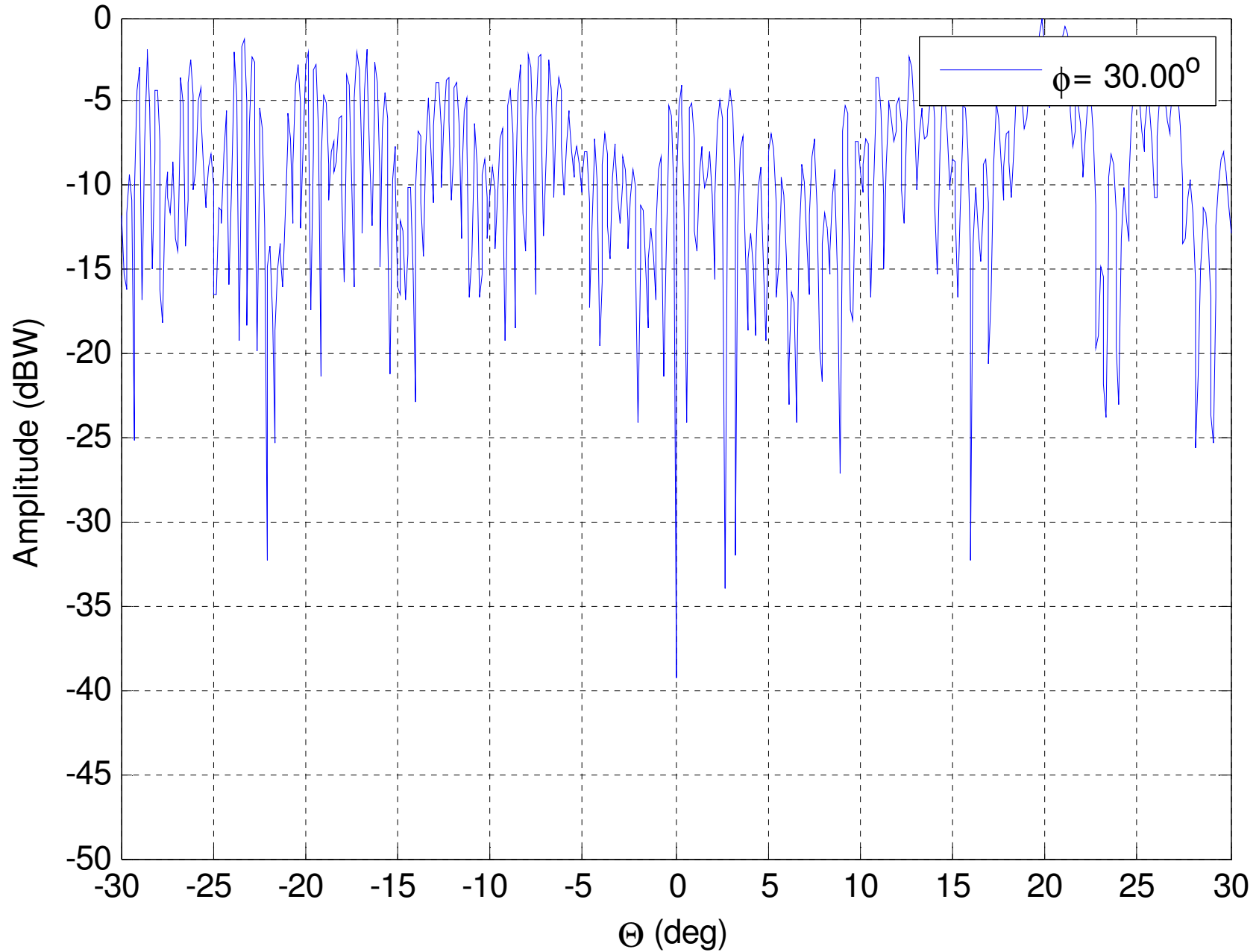
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -6.08 dBW, Date: 14-Dec-2011



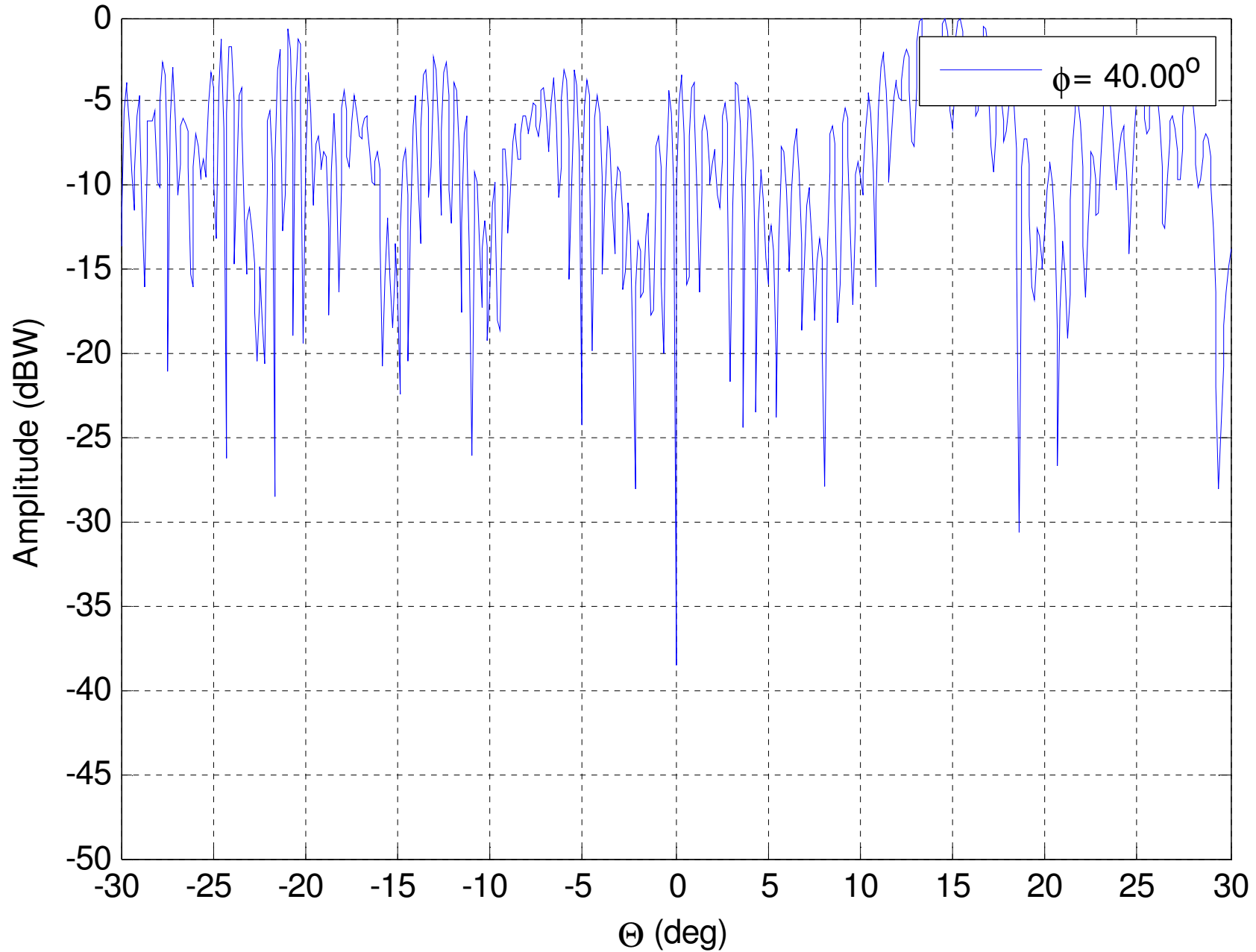
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -5.41 dBW, Date: 14-Dec-2011



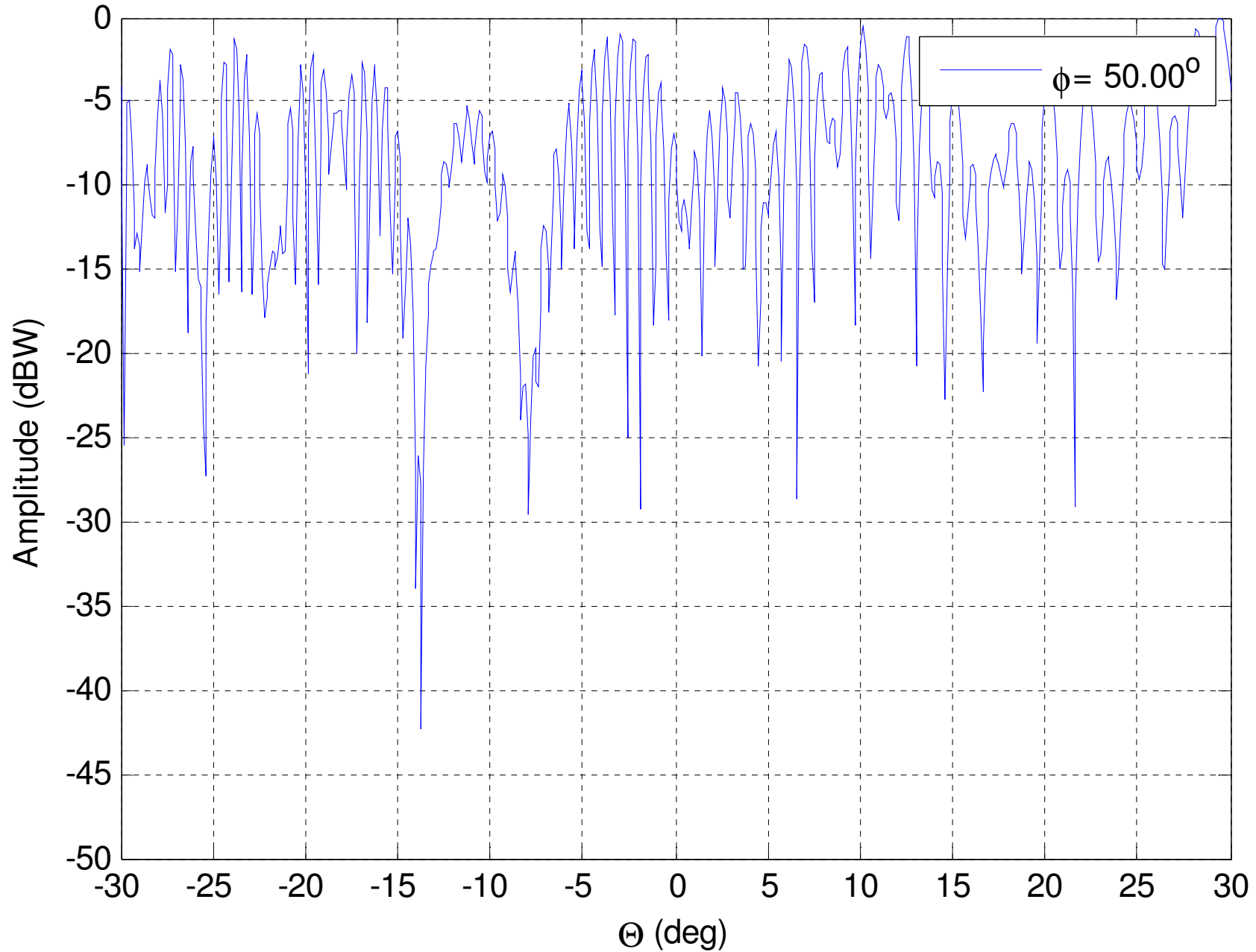
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -6.14 dBW, Date: 14-Dec-2011



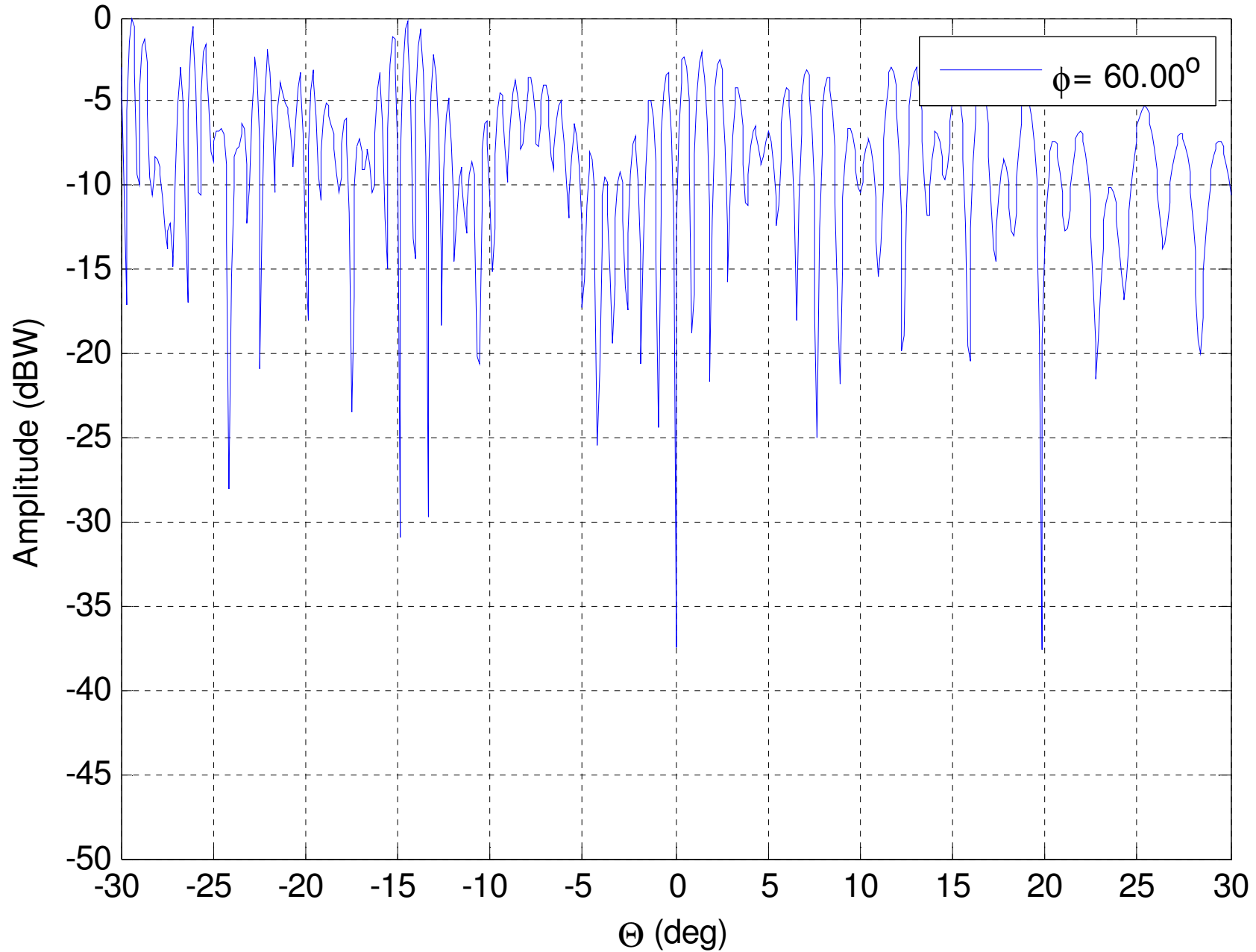
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -6.78 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

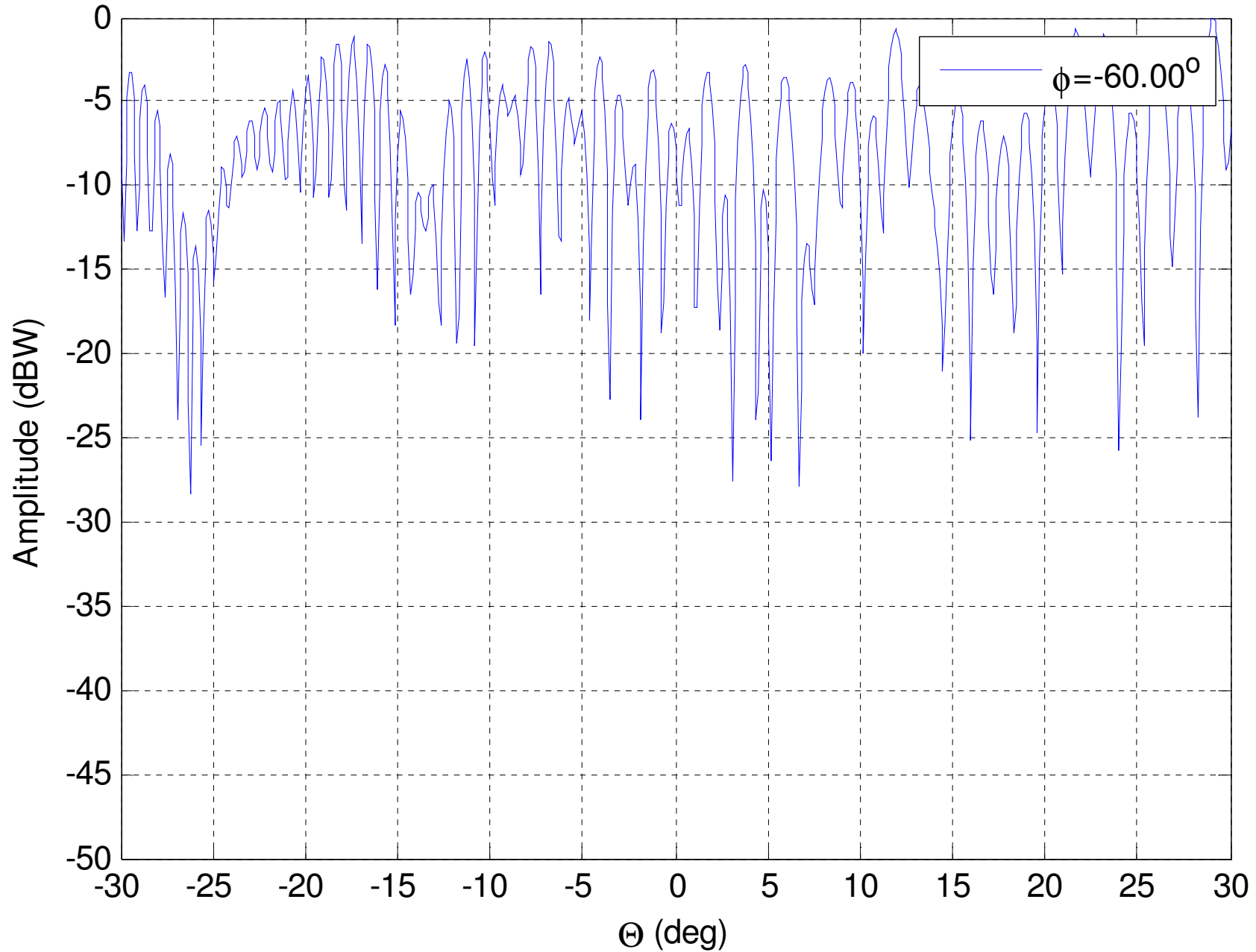
Input file: tx-17.5-rhcp-60.cut, Peak: -7.14 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

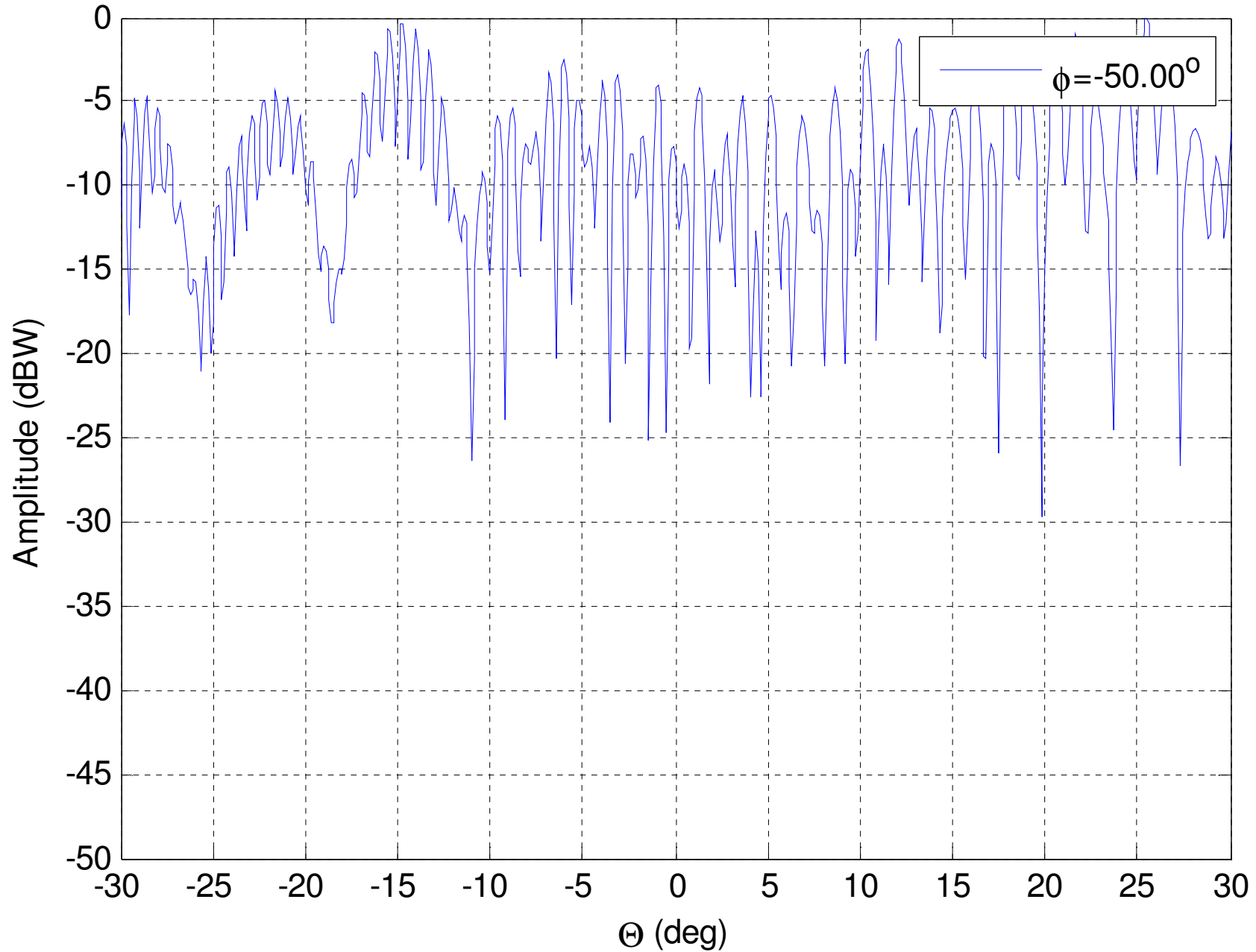
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -6.23 dBW, Date: 14-Dec-2011



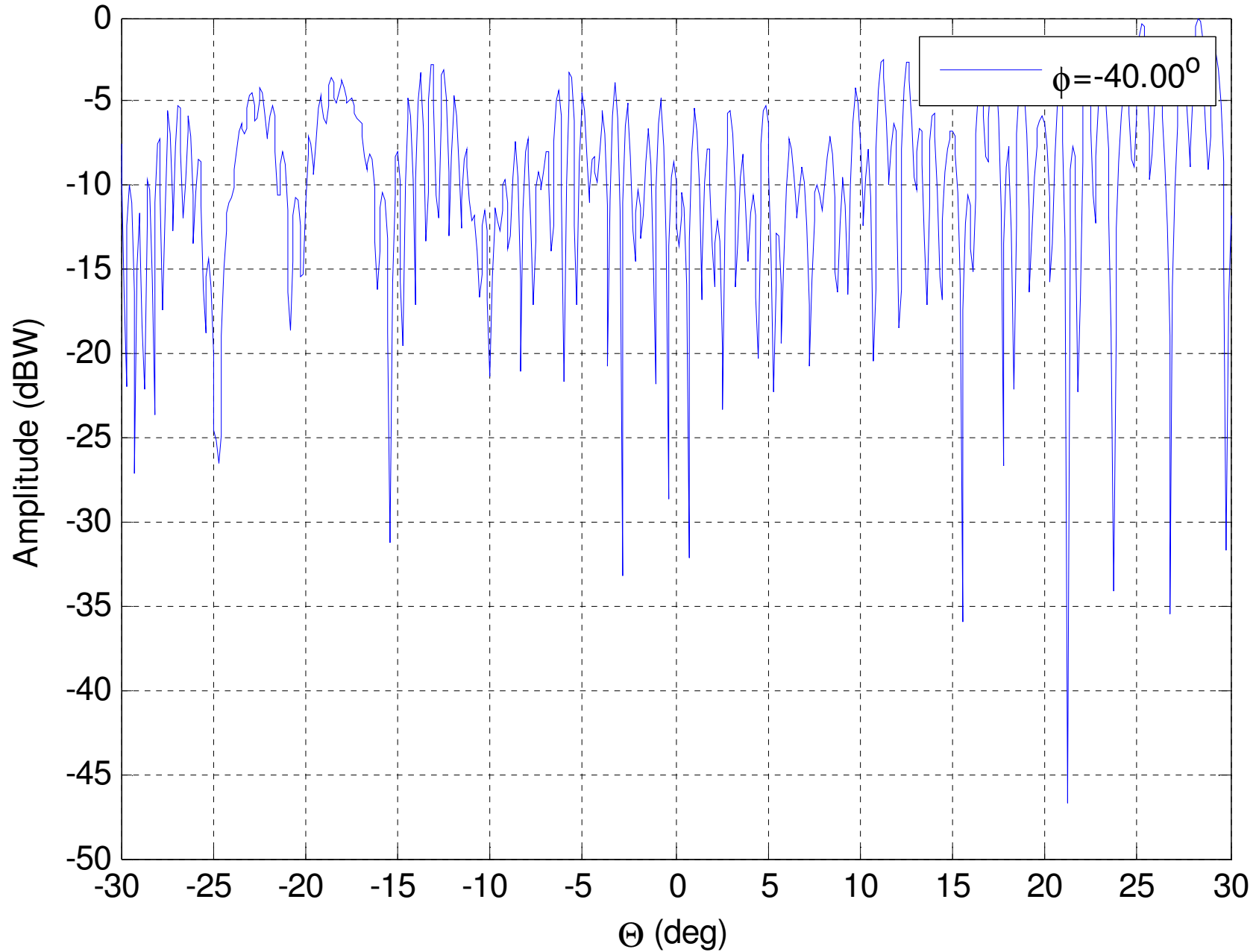
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -5.19 dBW, Date: 14-Dec-2011



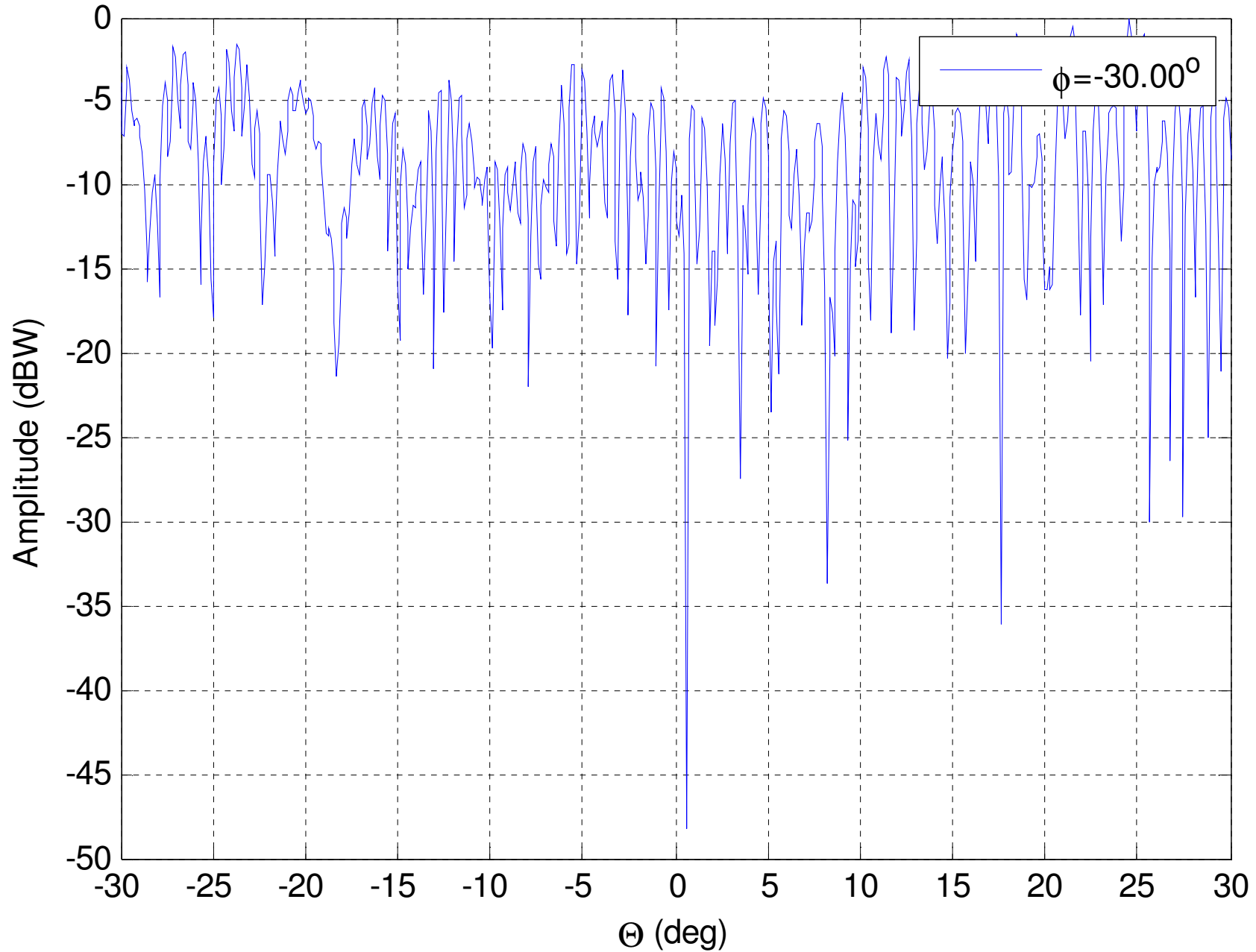
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -4.25 dBW, Date: 14-Dec-2011



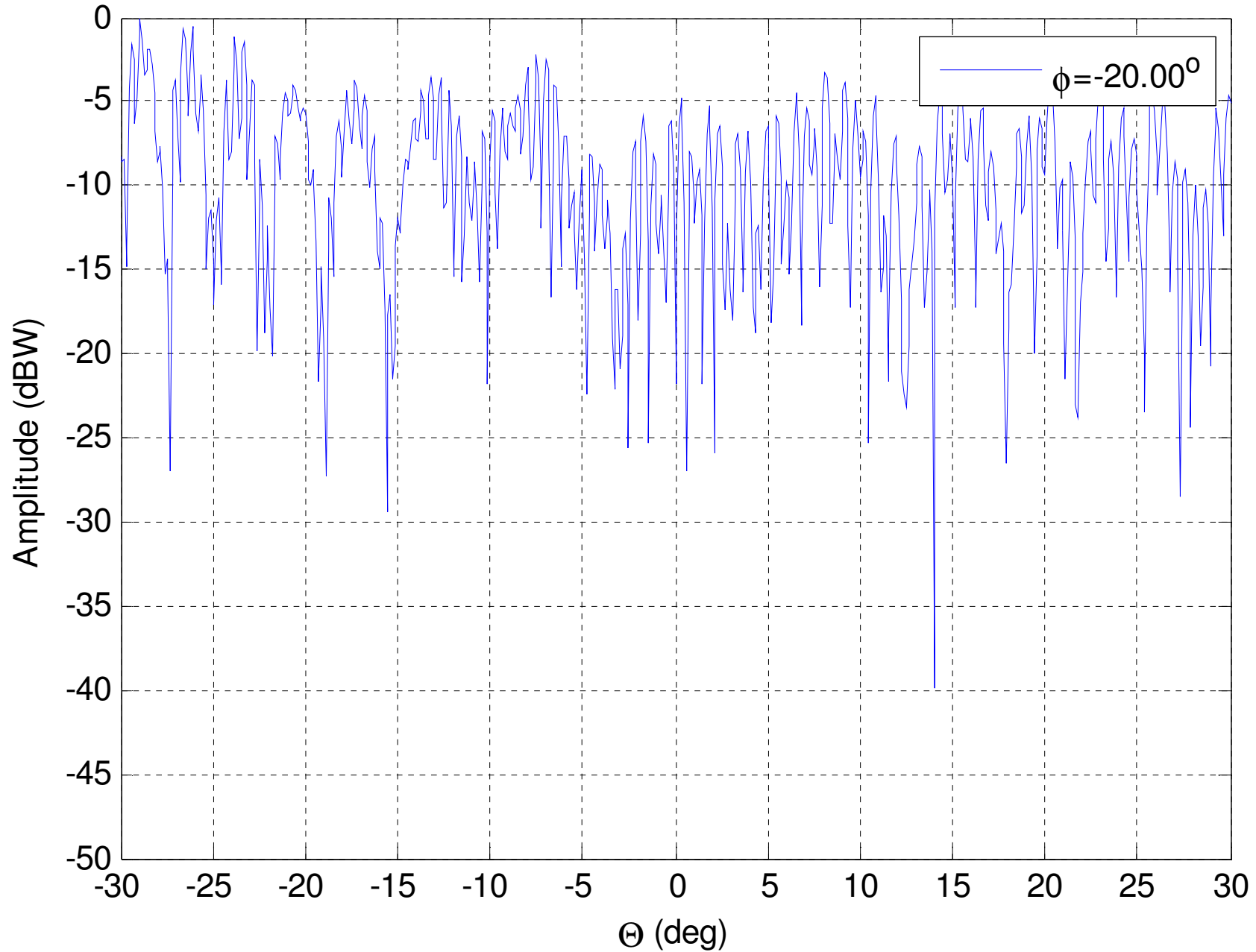
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -4.90 dBW, Date: 14-Dec-2011



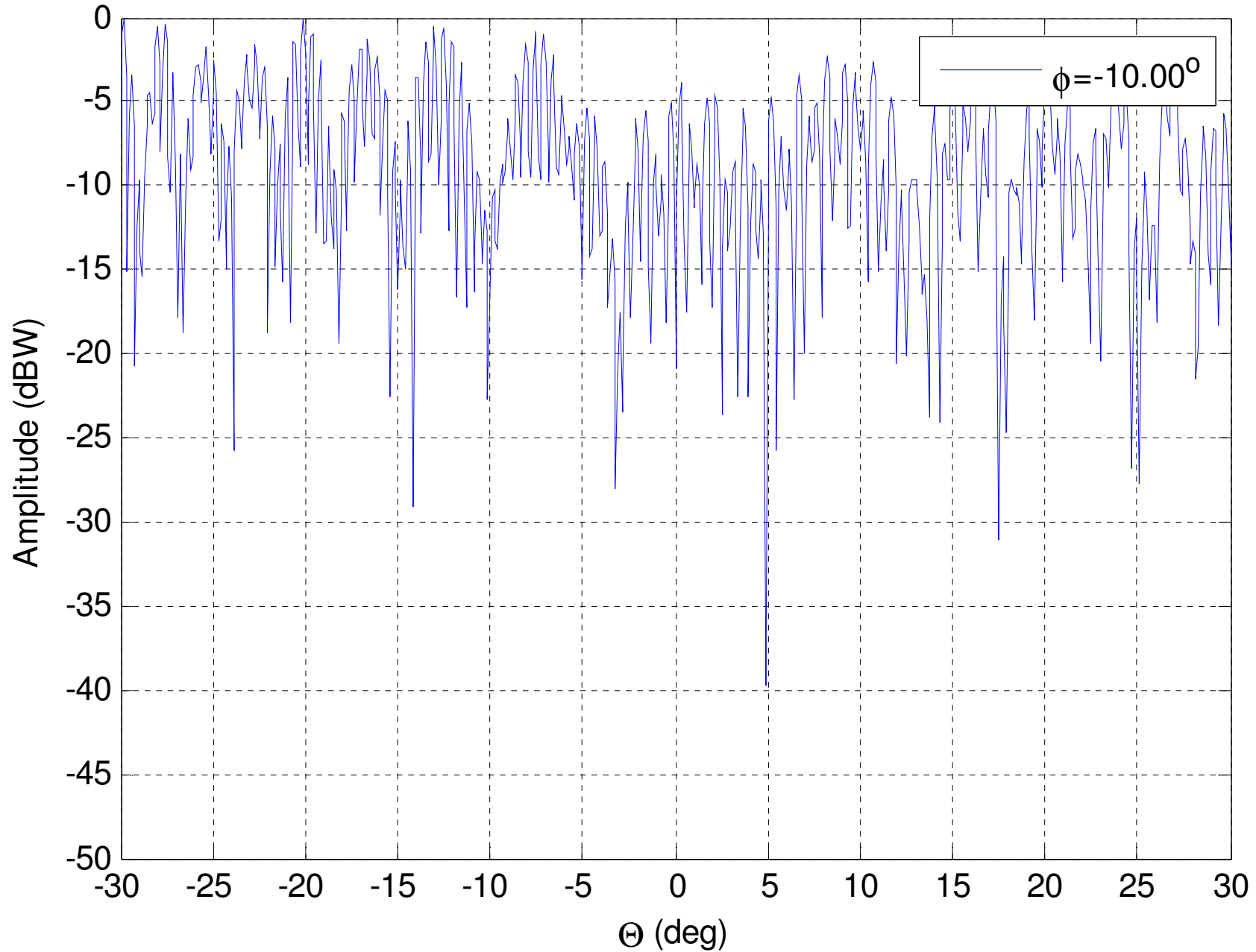
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -4.86 dBW, Date: 14-Dec-2011



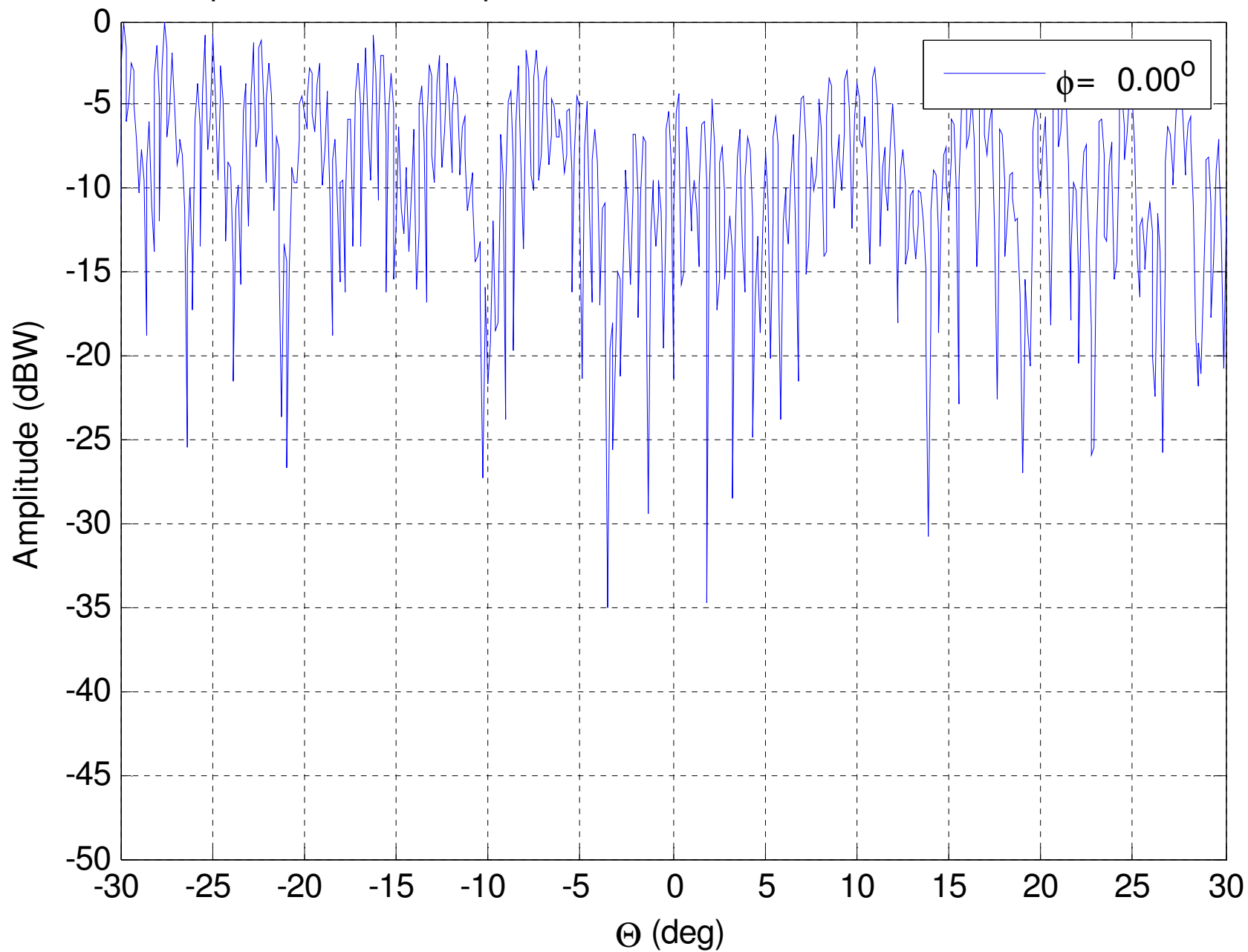
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -5.70 dBW, Date: 14-Dec-2011



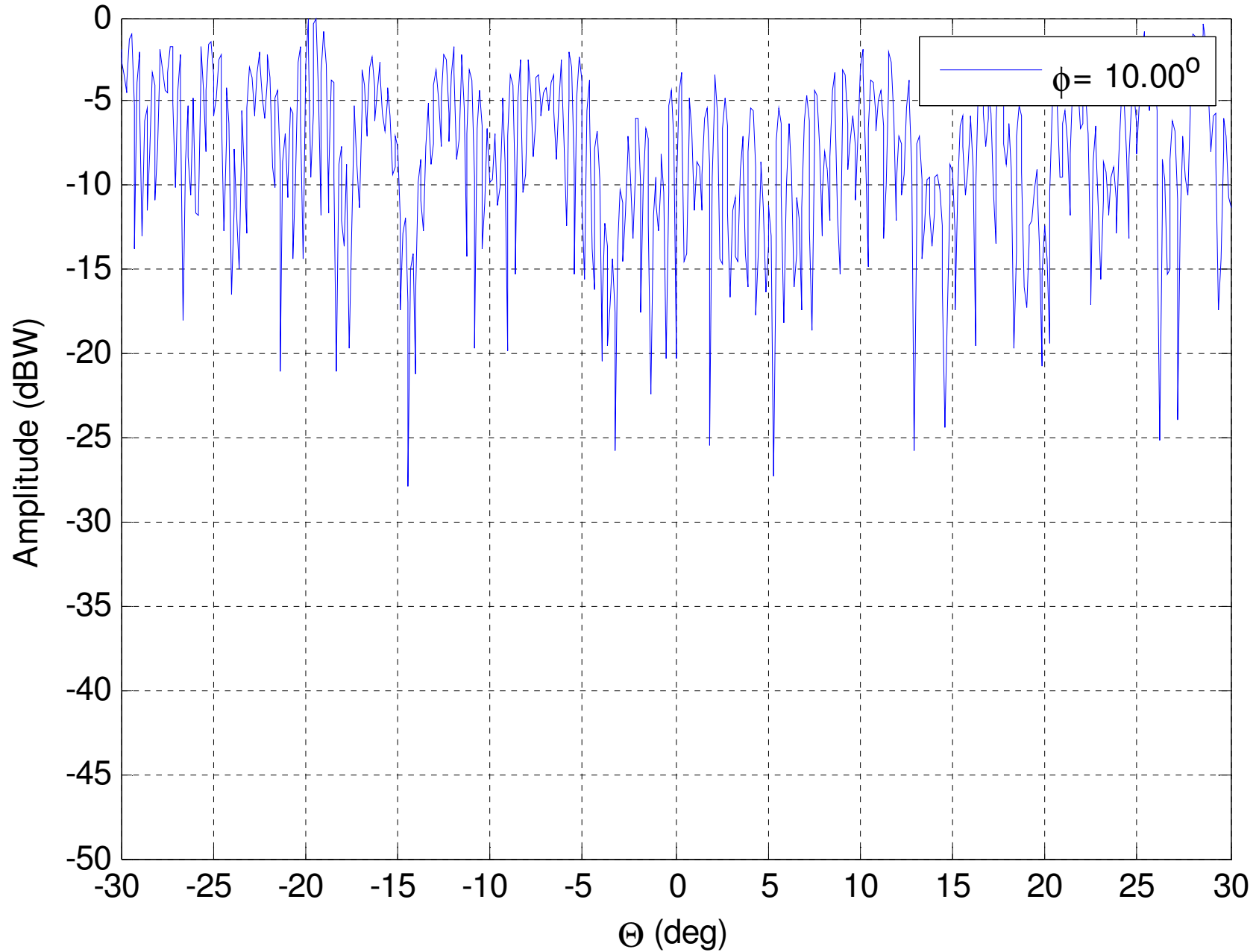
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -5.27 dBW, Date: 14-Dec-2011



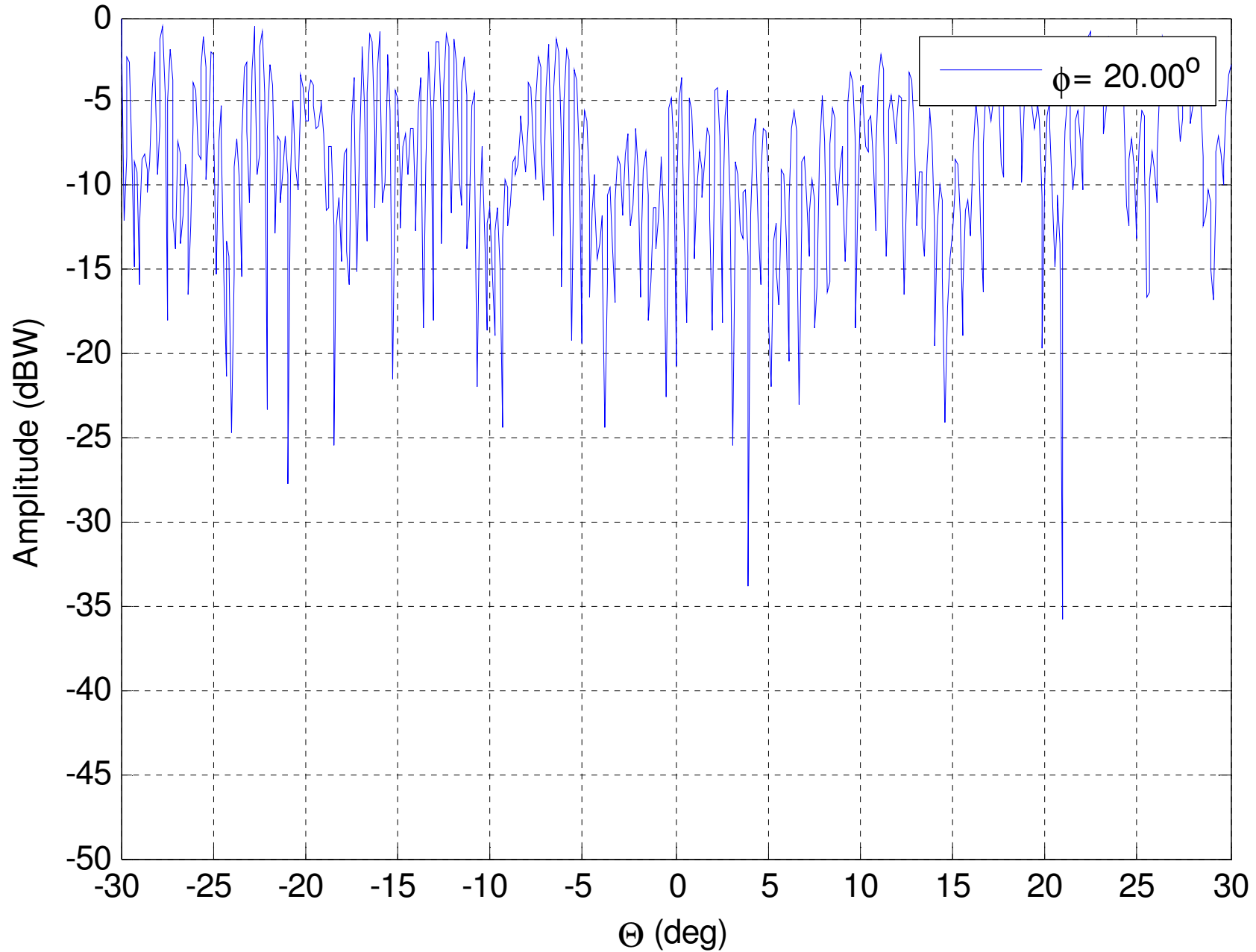
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -6.30 dBW, Date: 14-Dec-2011



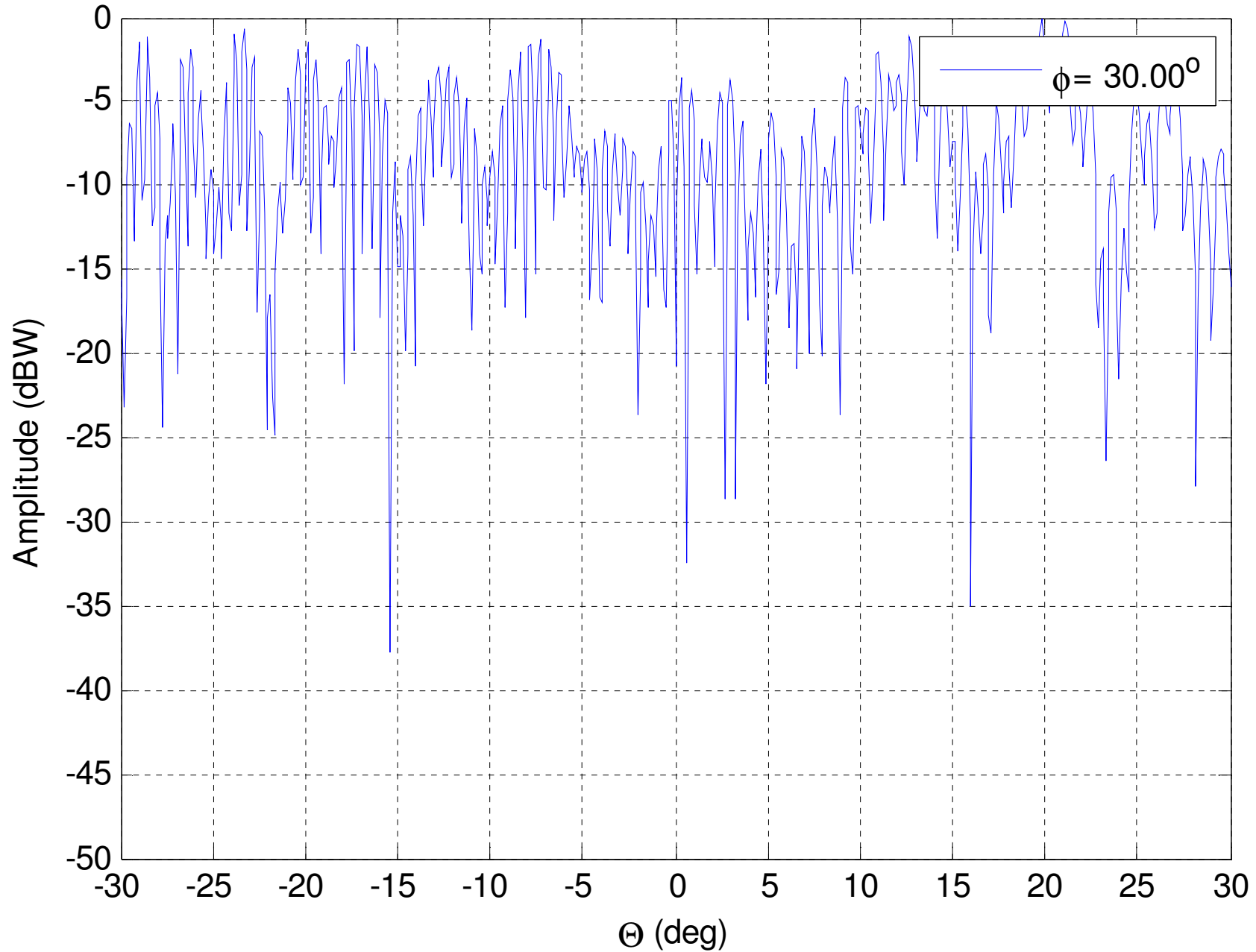
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -5.93 dBW, Date: 14-Dec-2011



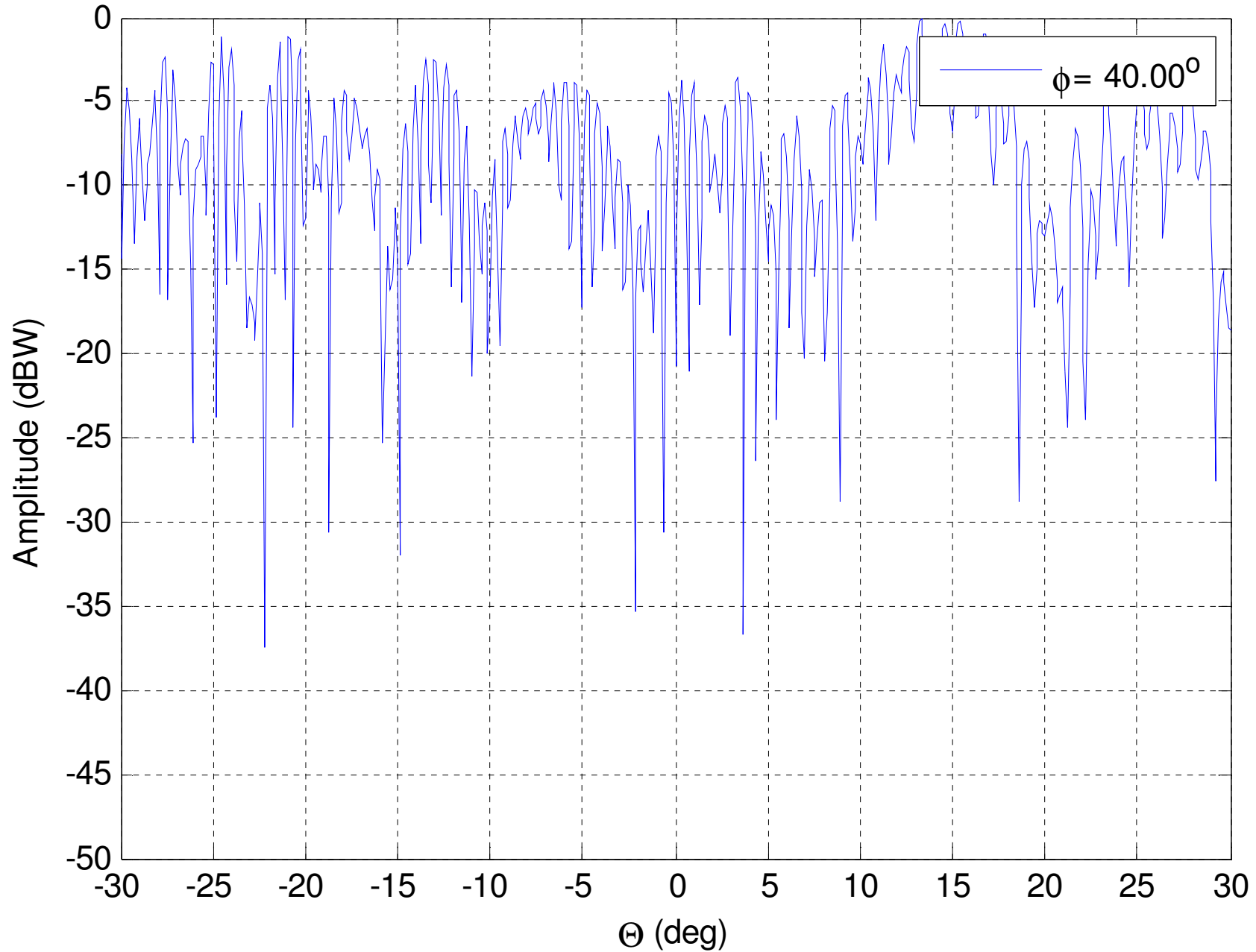
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -5.90 dBW, Date: 14-Dec-2011



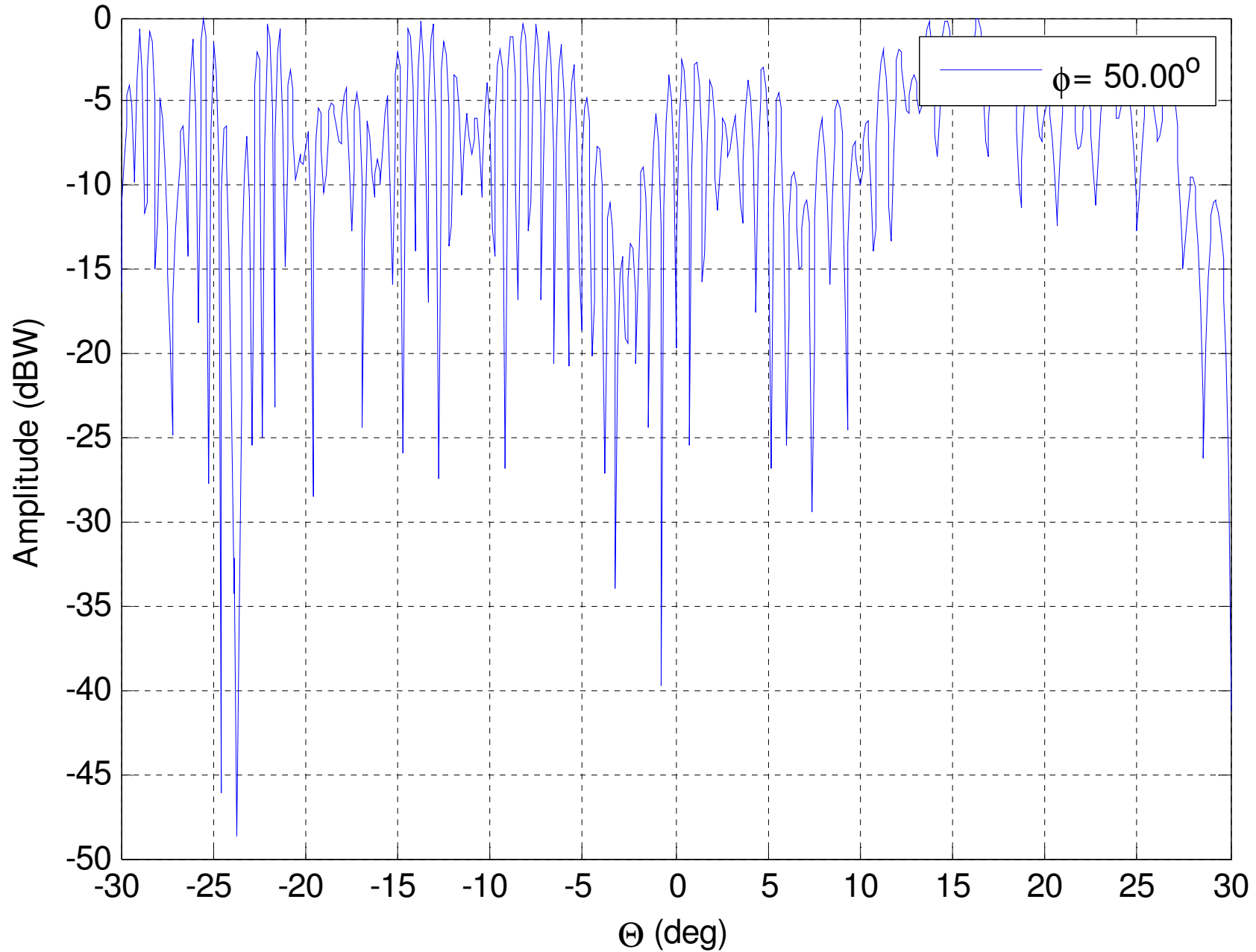
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -5.99 dBW, Date: 14-Dec-2011



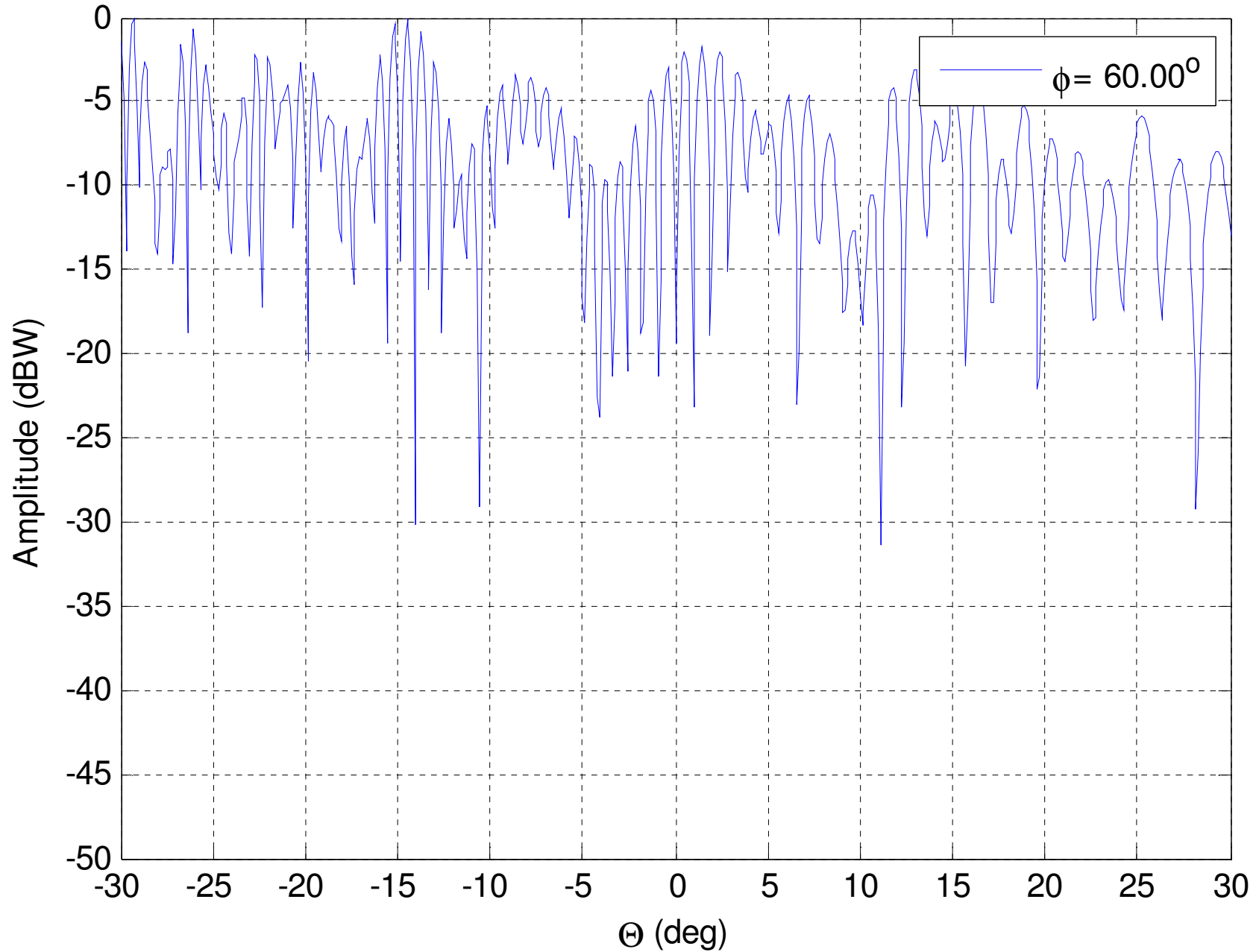
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -6.93 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

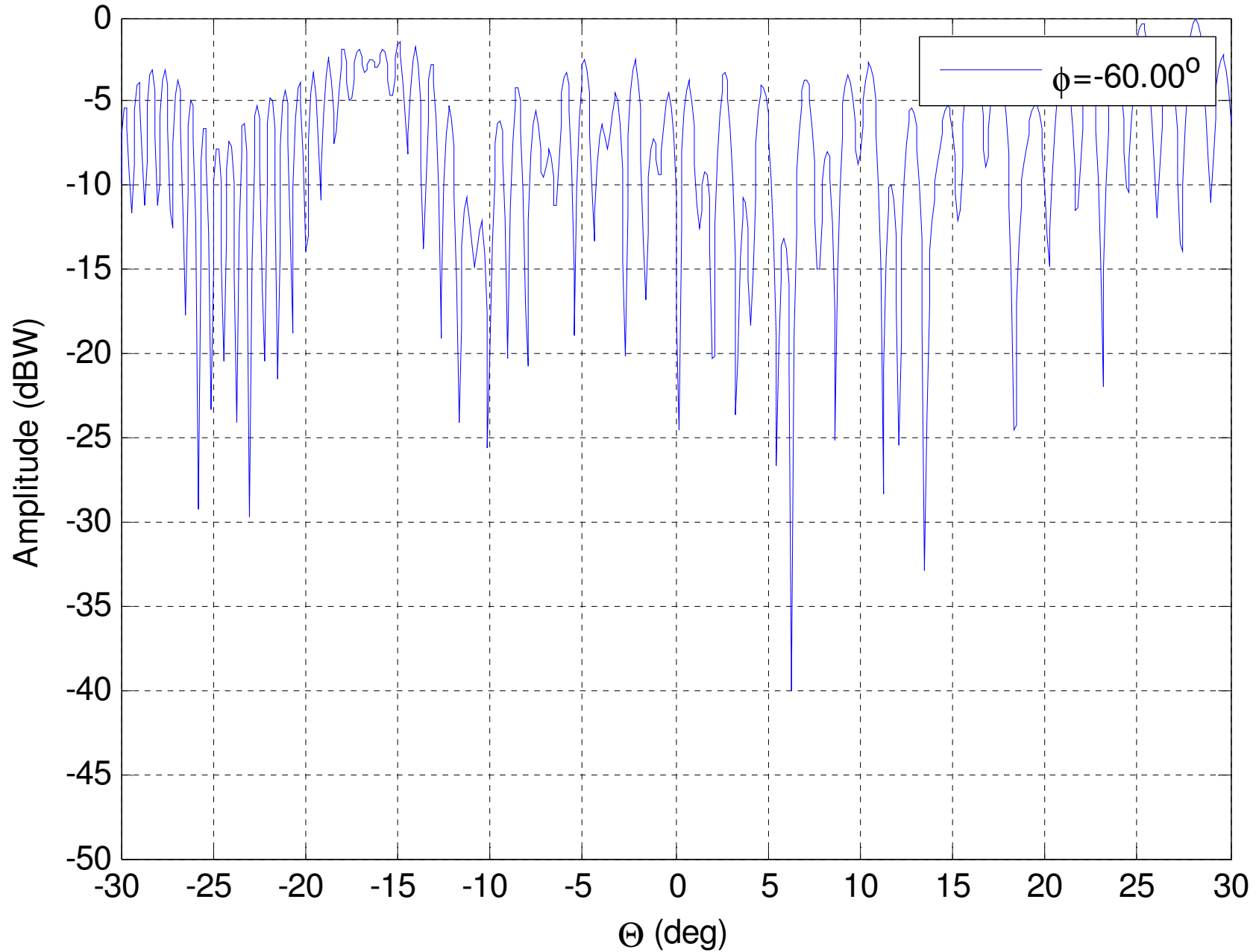
Input file: tx-17.5-lhcp-60.cut, Peak: -7.32 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

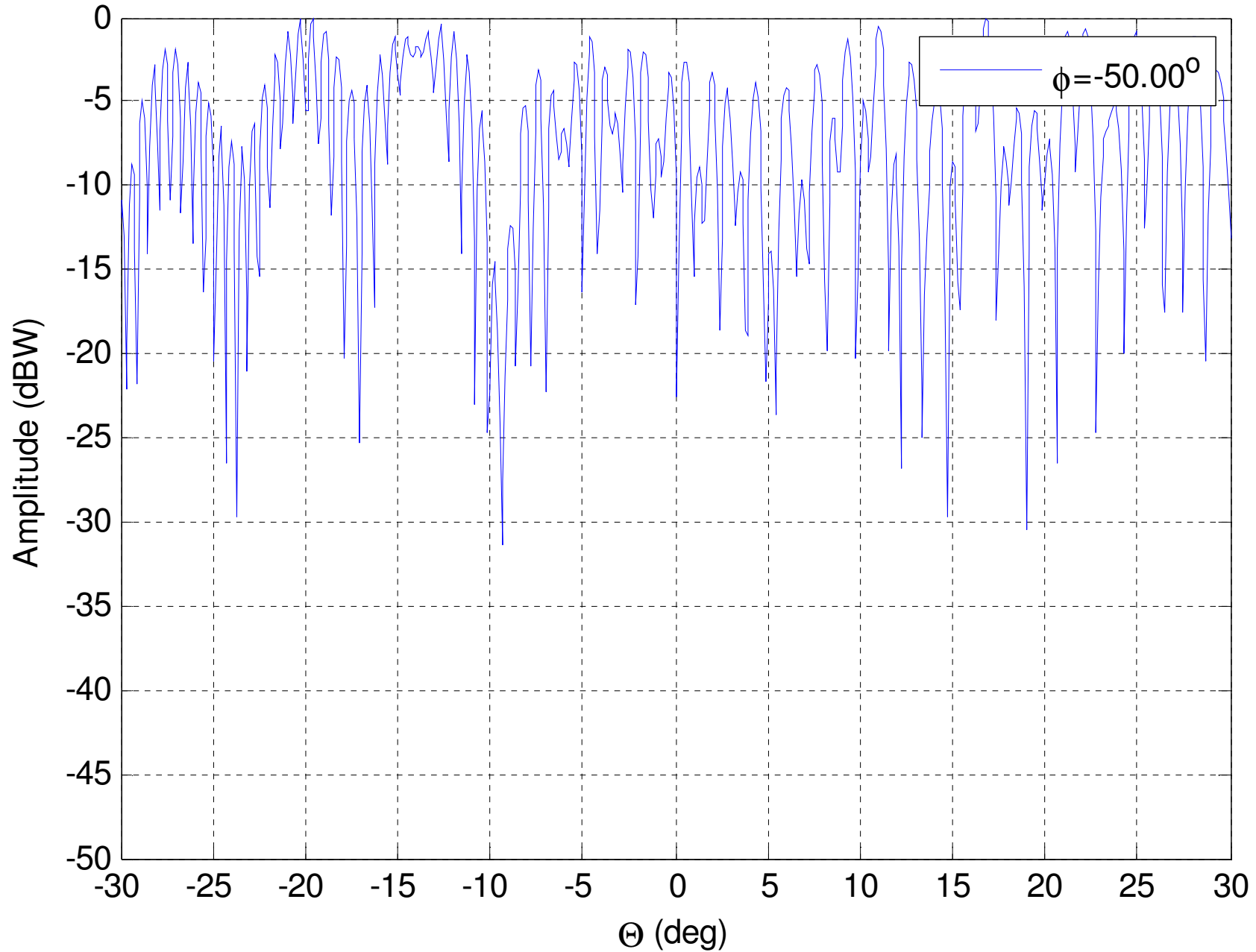
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.83 dBW, Date: 14-Dec-2011



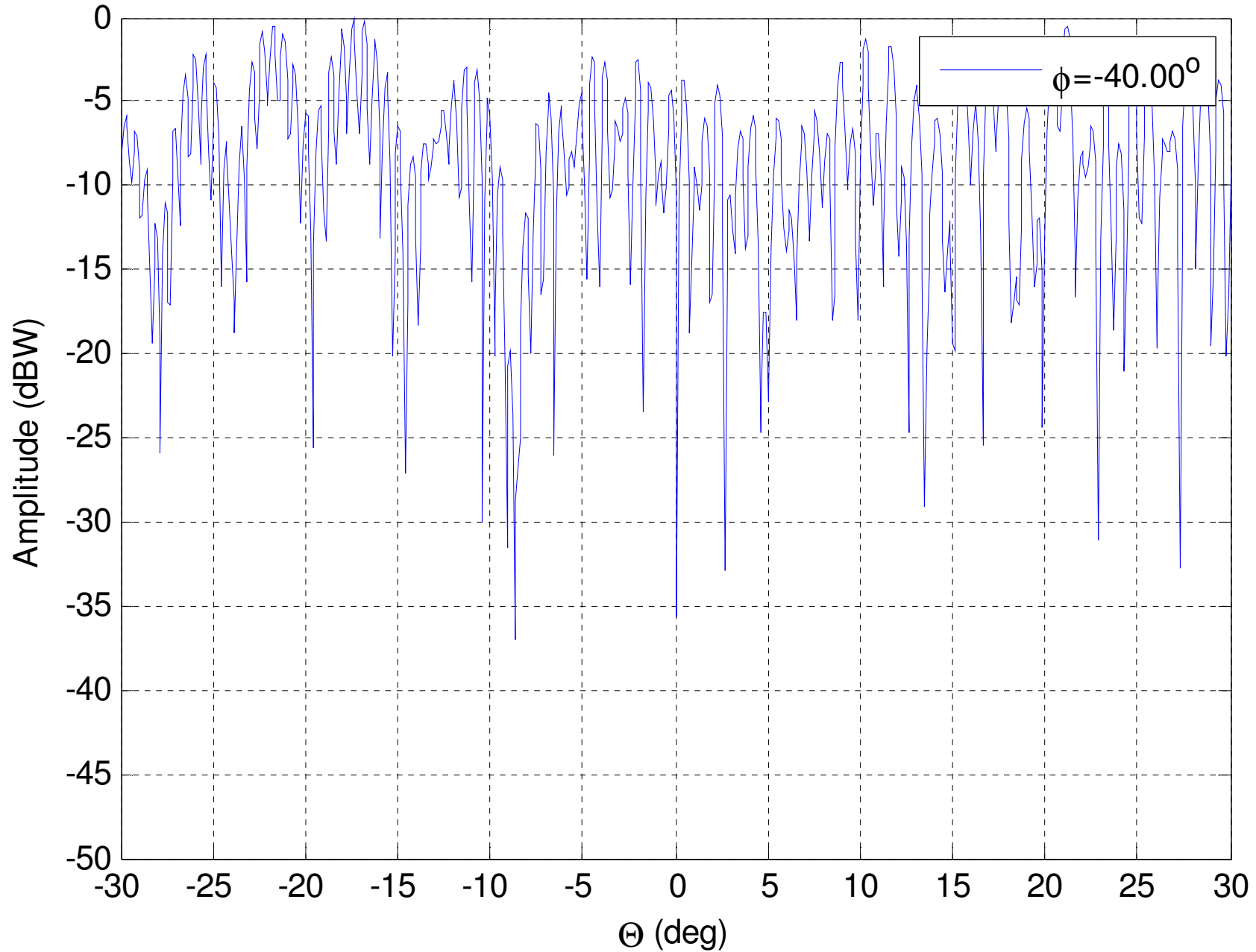
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.82 dBW, Date: 14-Dec-2011



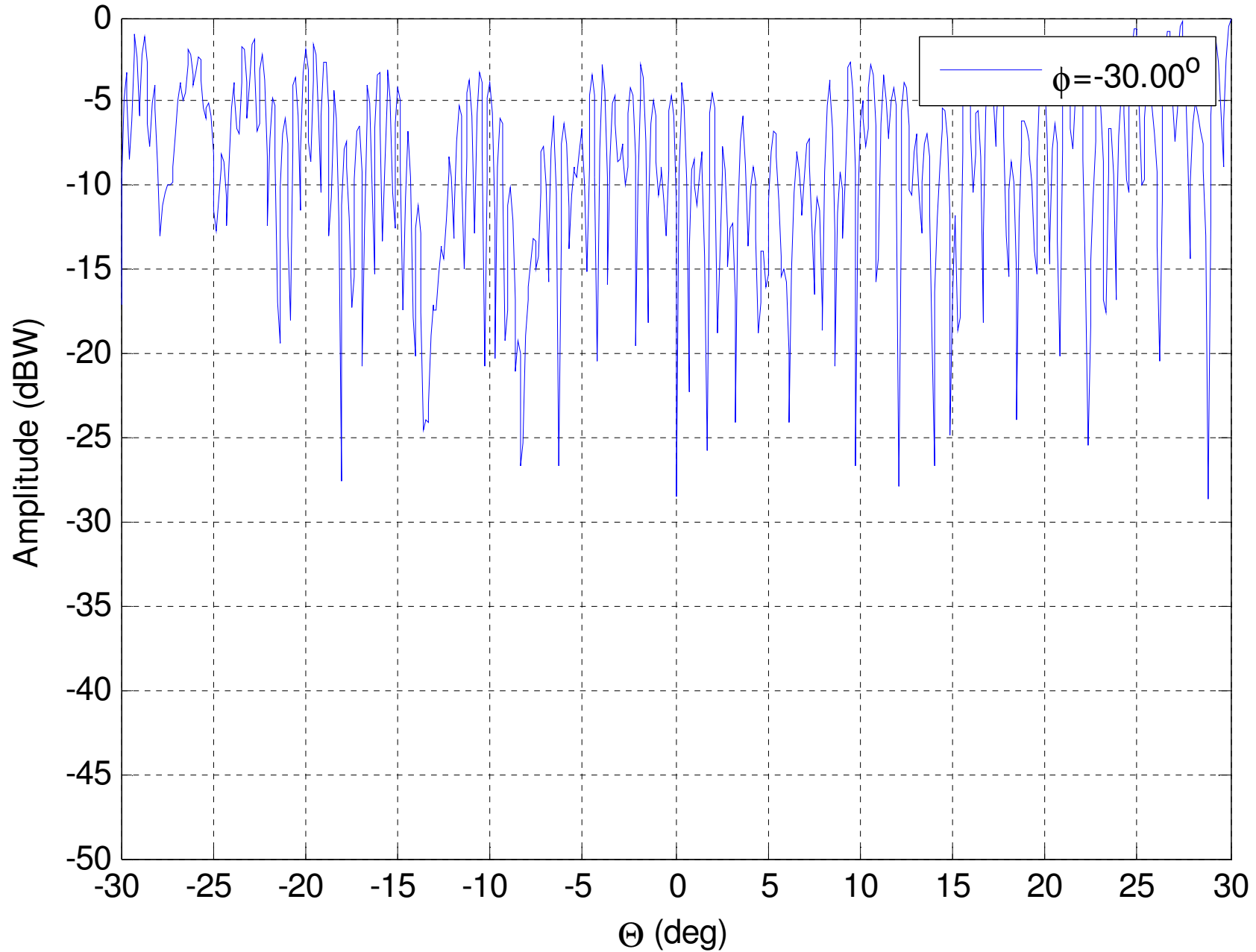
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -5.69 dBW, Date: 14-Dec-2011



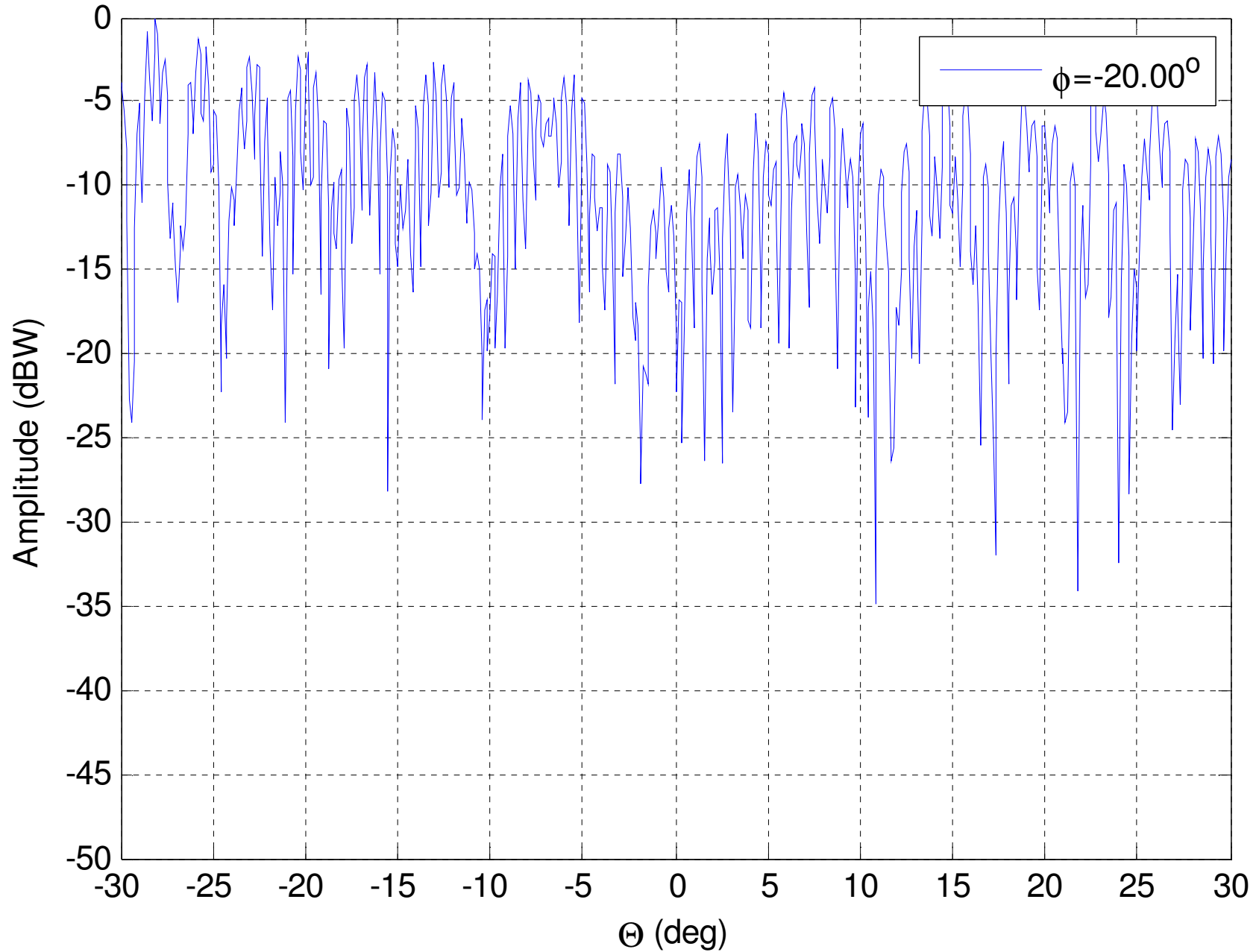
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -5.19 dBW, Date: 14-Dec-2011



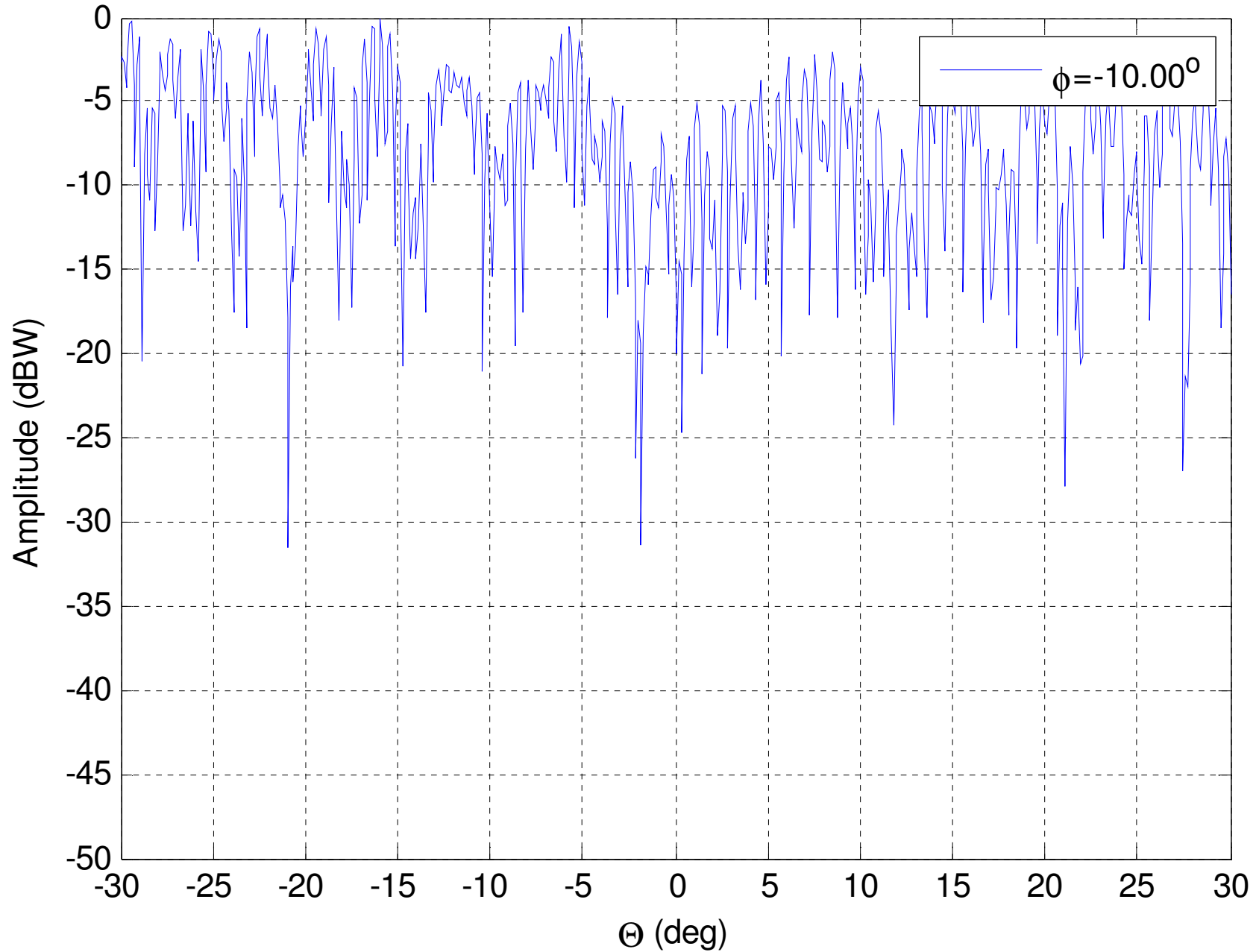
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -4.83 dBW, Date: 14-Dec-2011



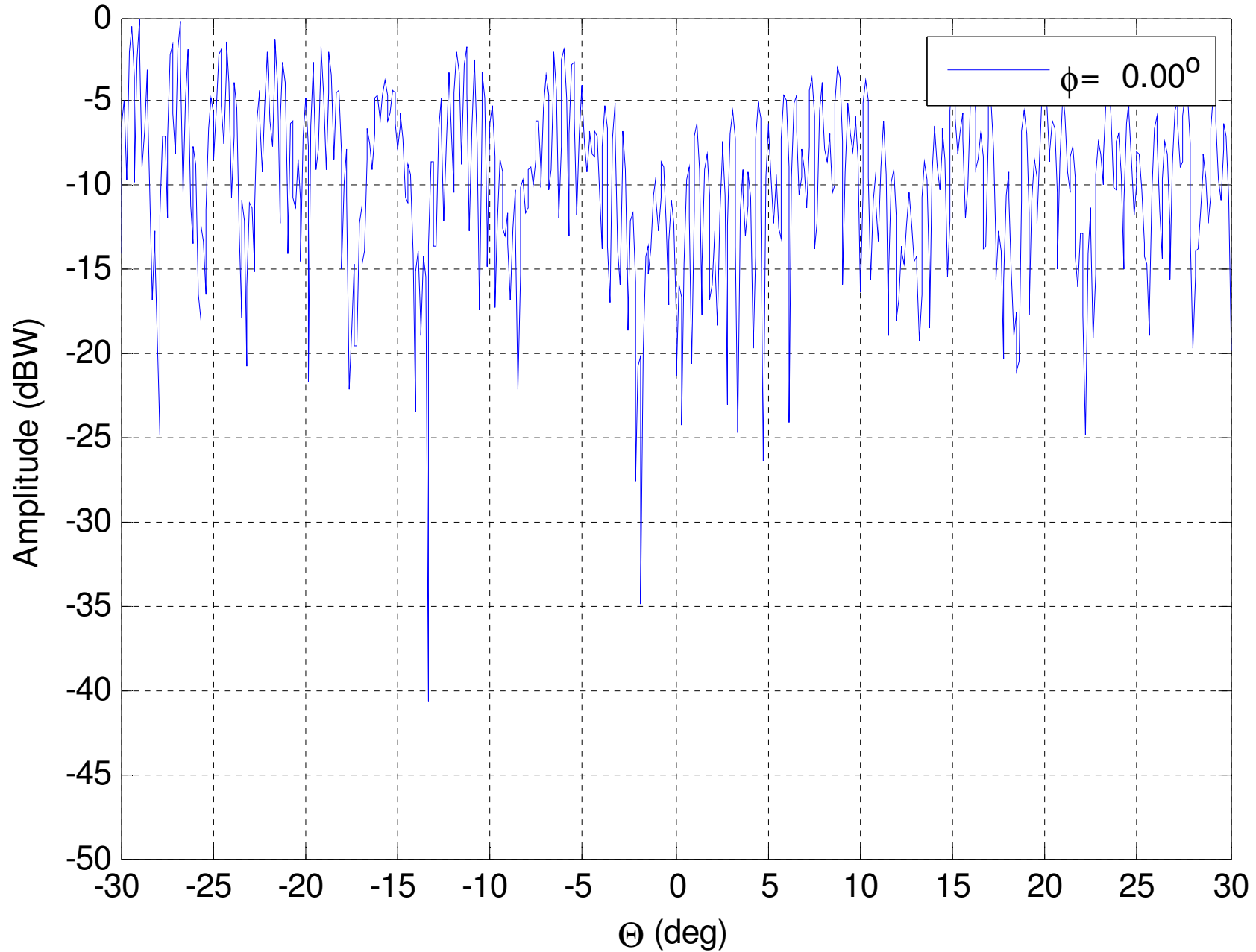
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -6.97 dBW, Date: 14-Dec-2011



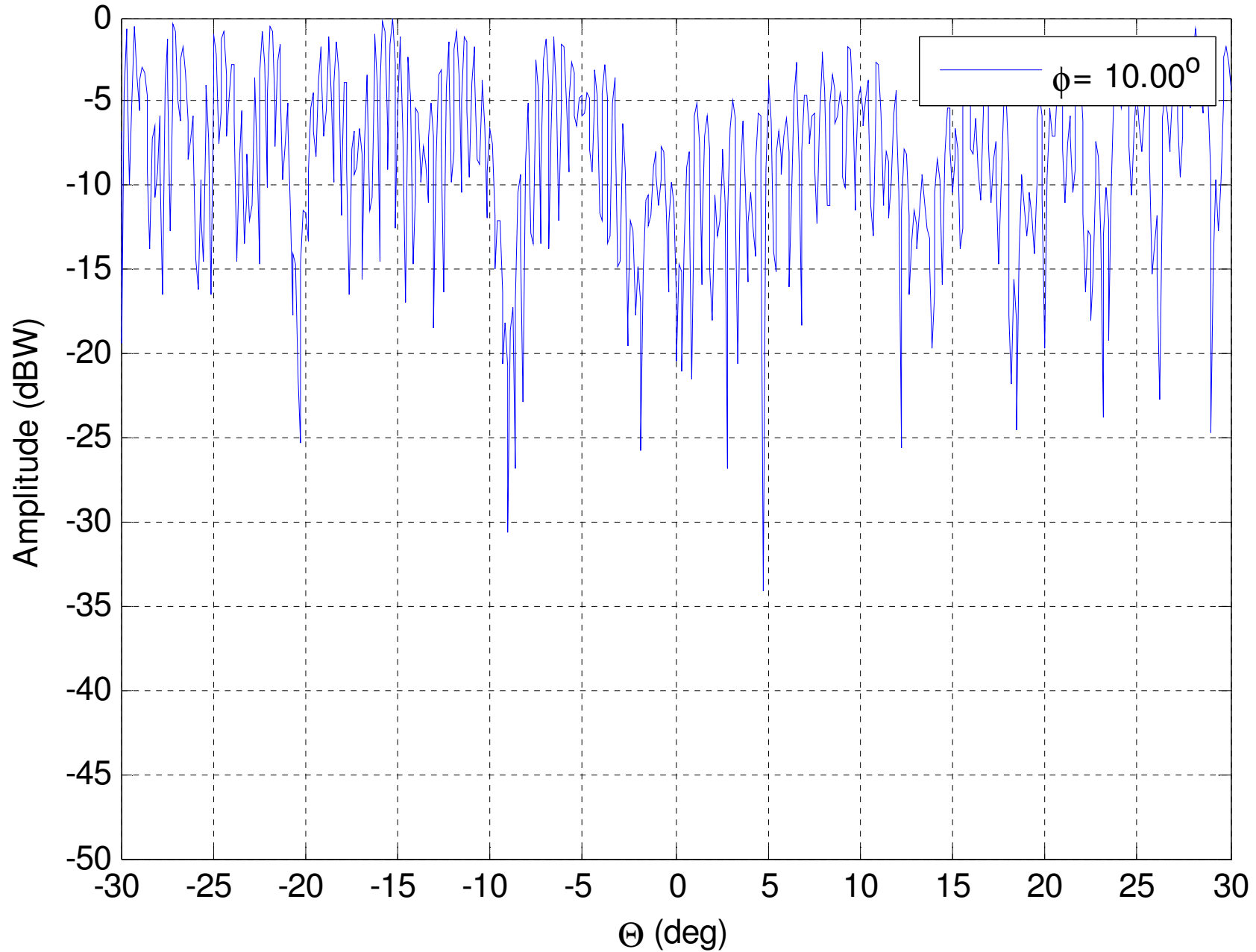
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -5.60 dBW, Date: 14-Dec-2011



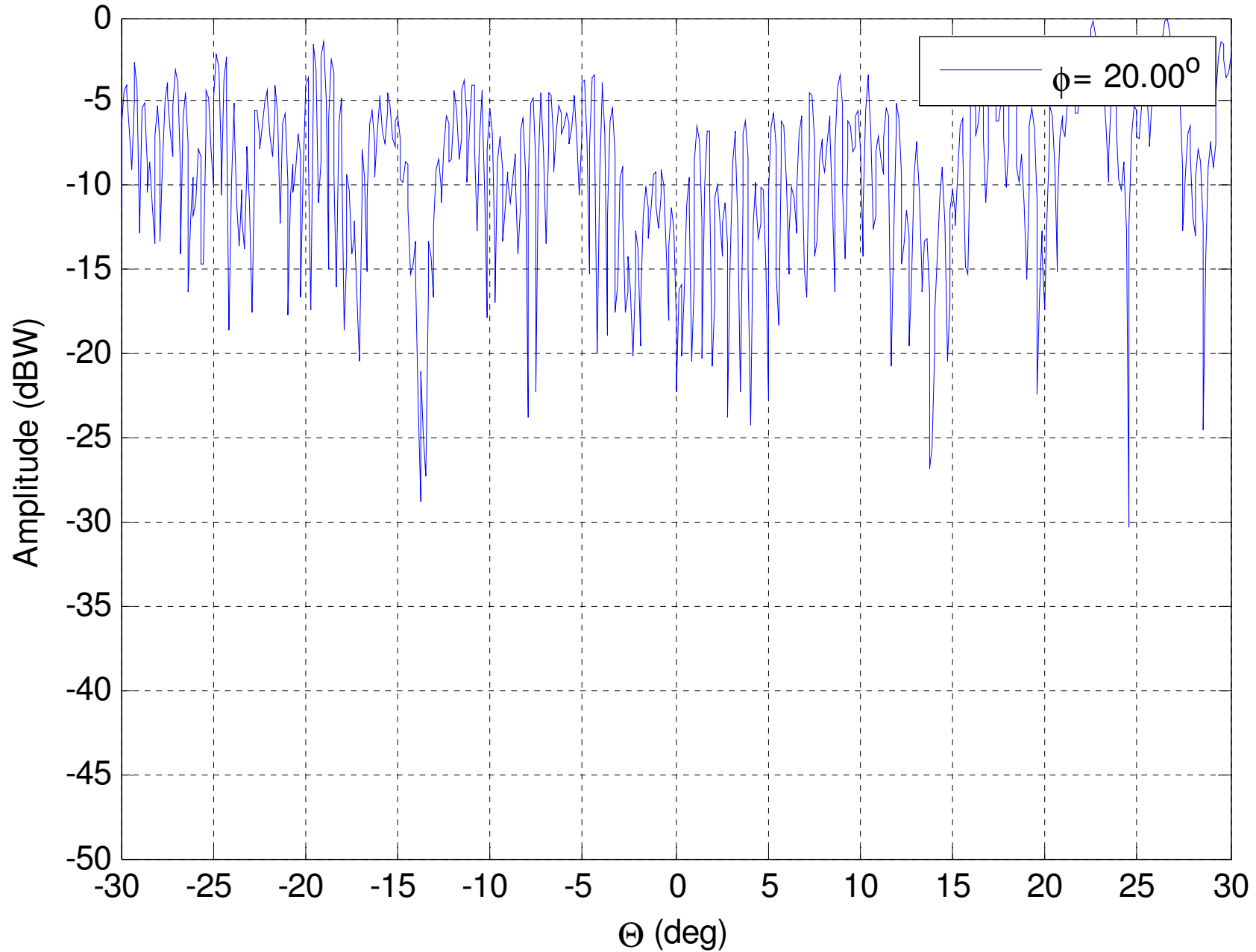
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -6.85 dBW, Date: 14-Dec-2011



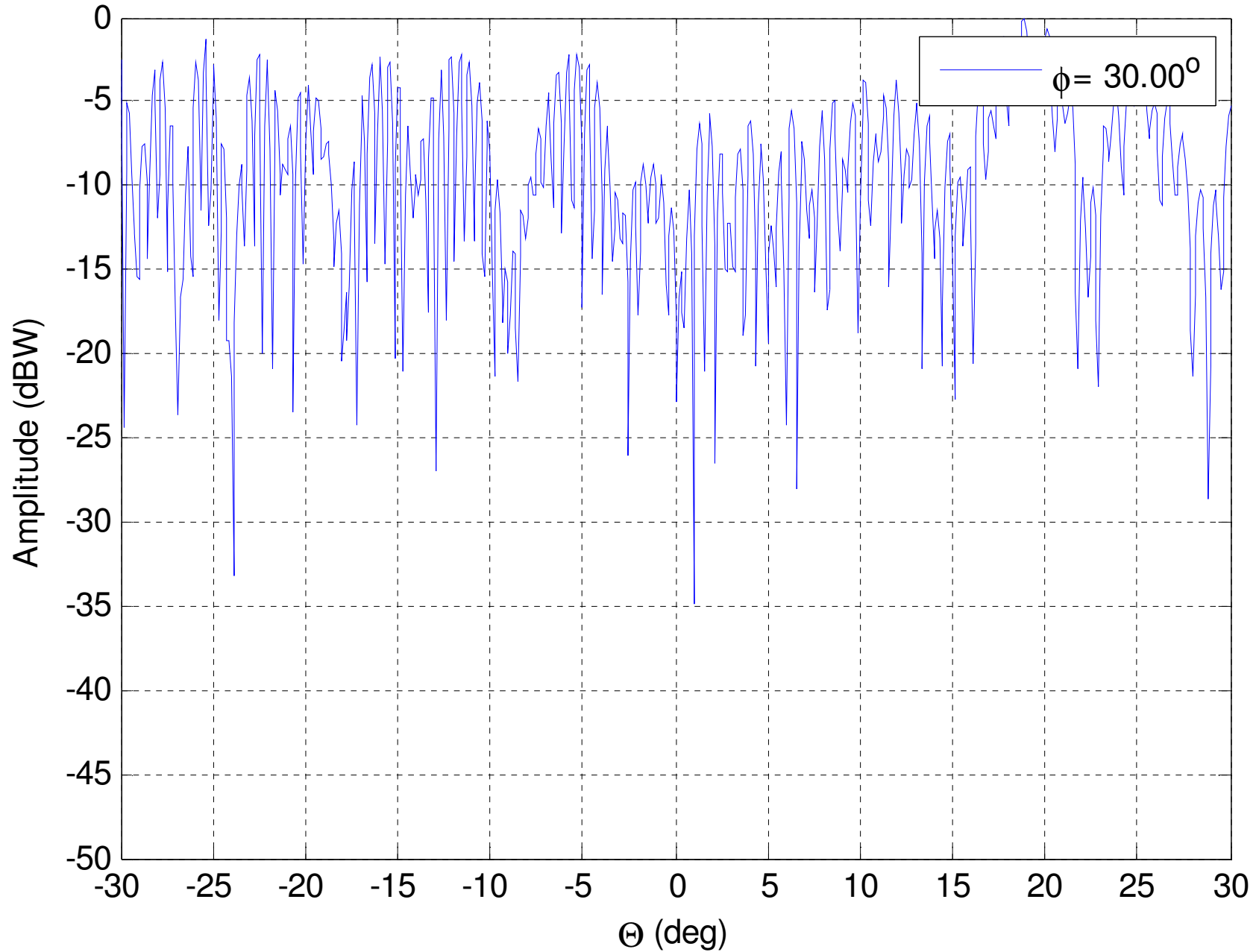
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -5.54 dBW, Date: 14-Dec-2011



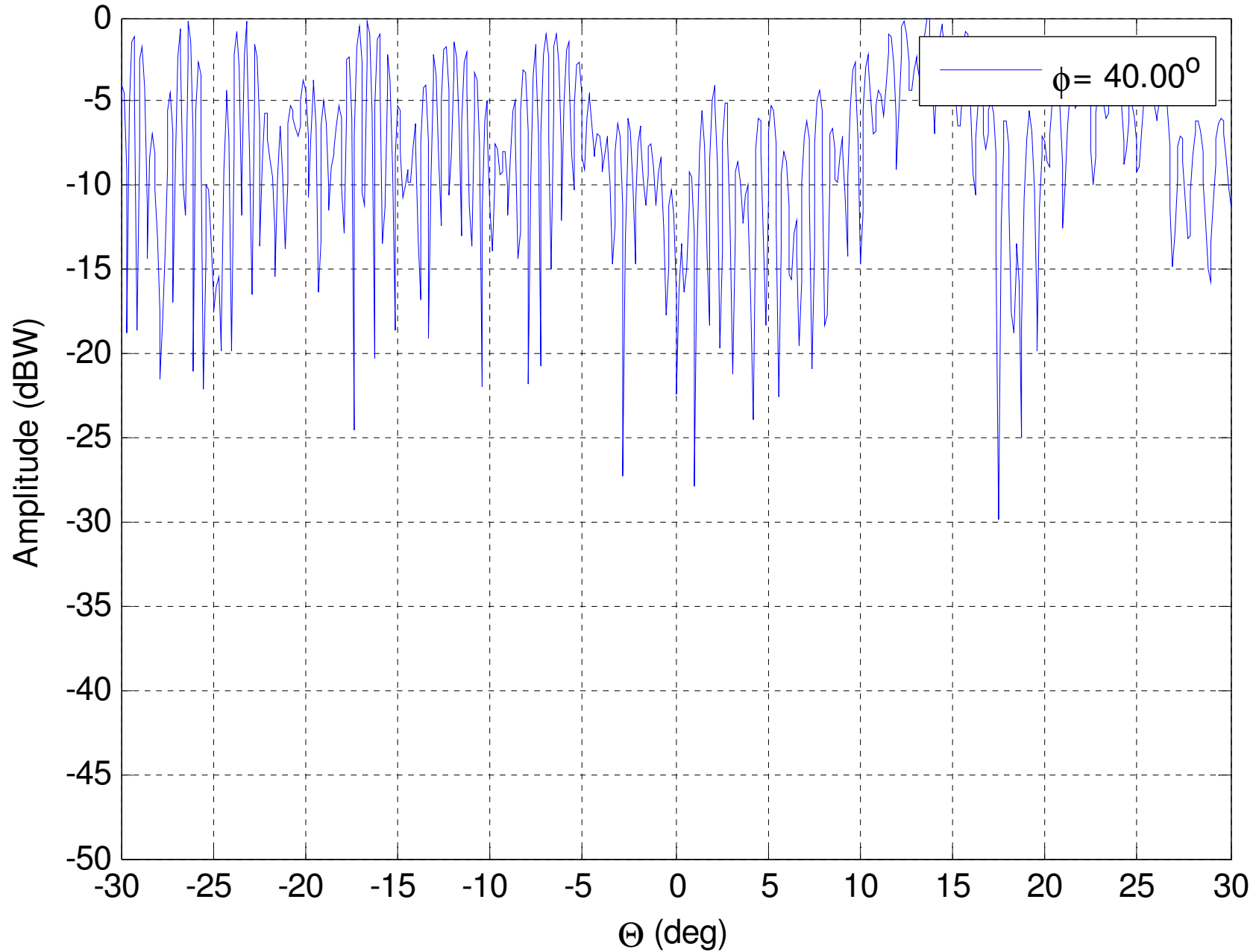
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -5.71 dBW, Date: 14-Dec-2011



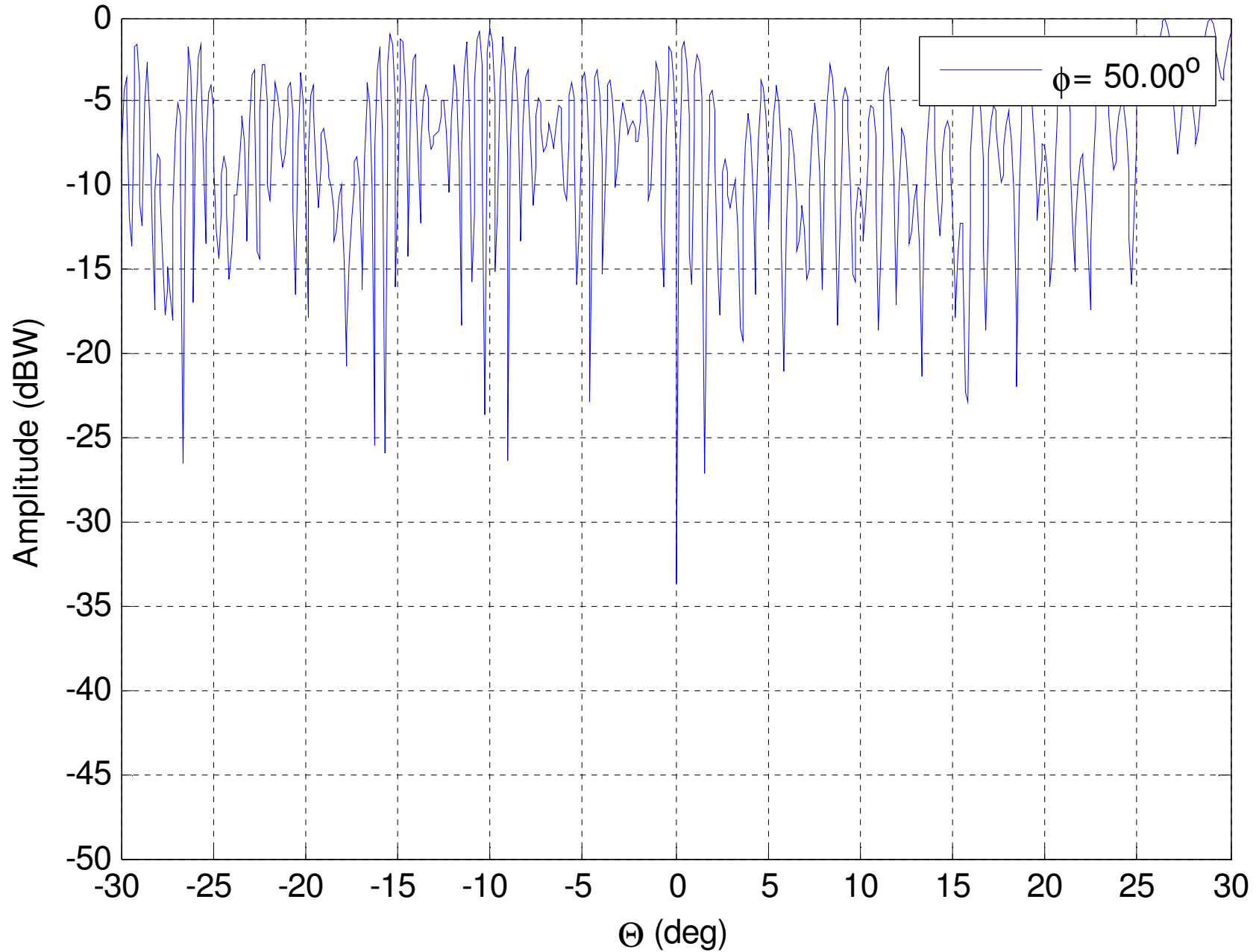
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -7.15 dBW, Date: 14-Dec-2011



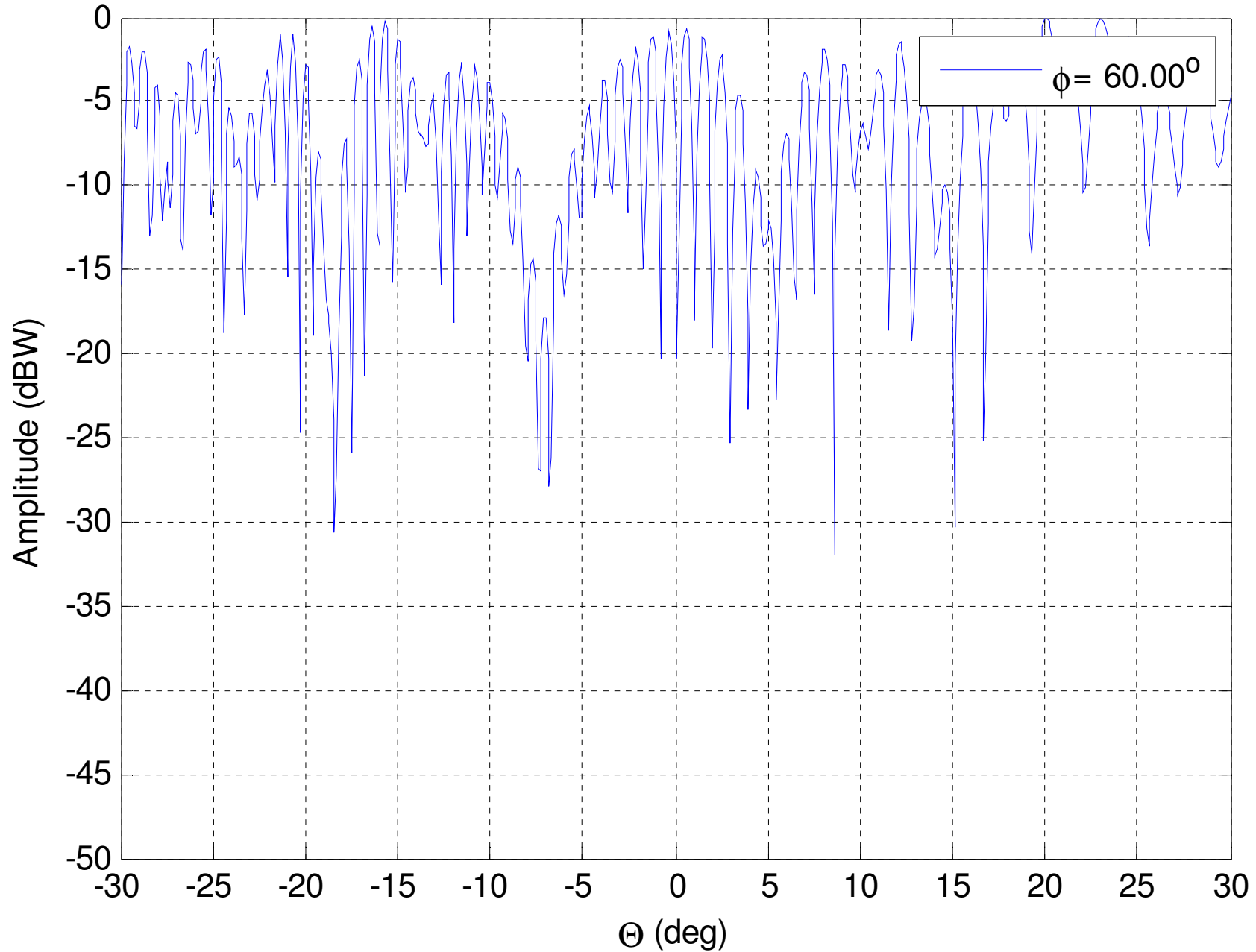
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -7.50 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

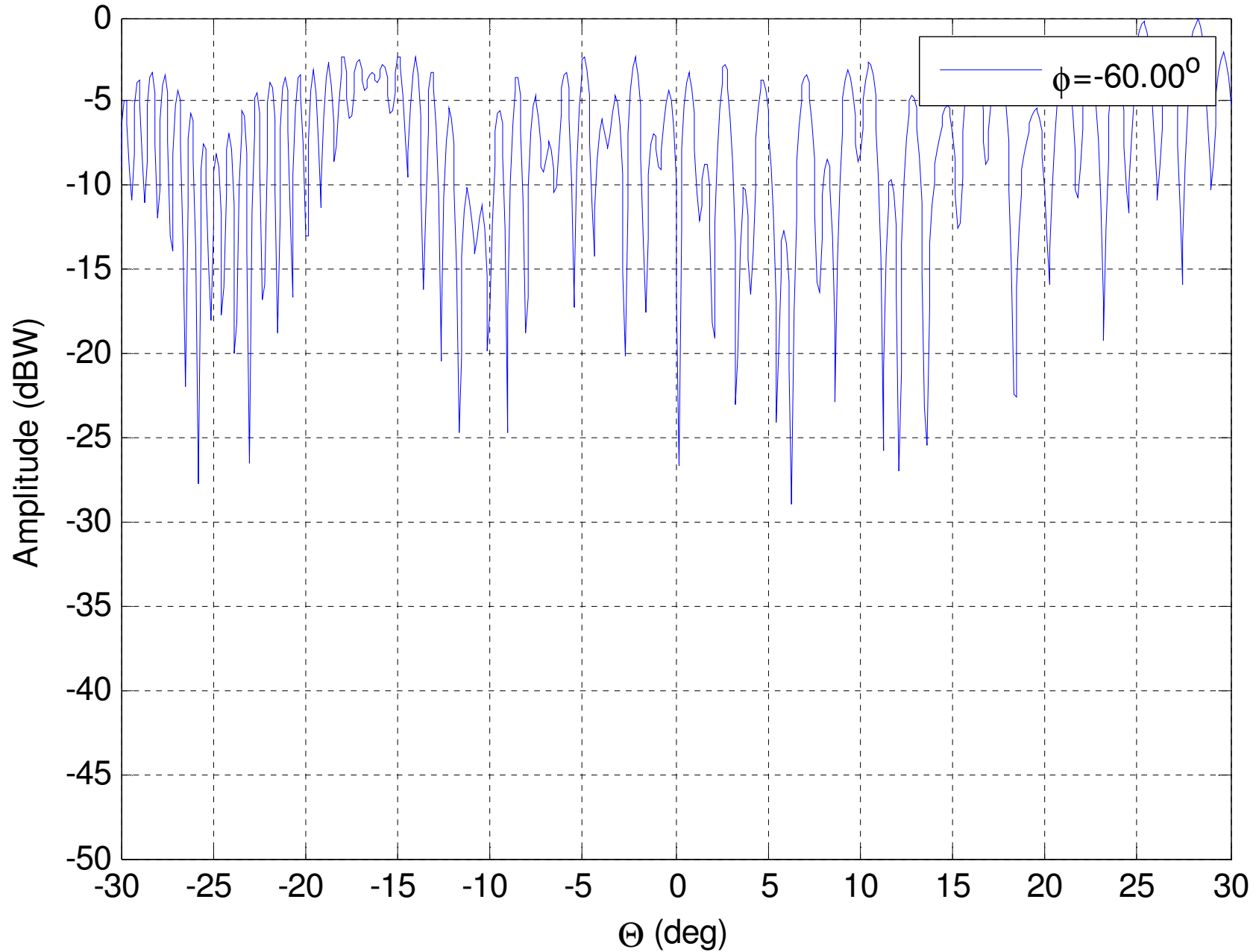
Input file: tx-17.7-rhcp-60.cut, Peak: -8.30 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

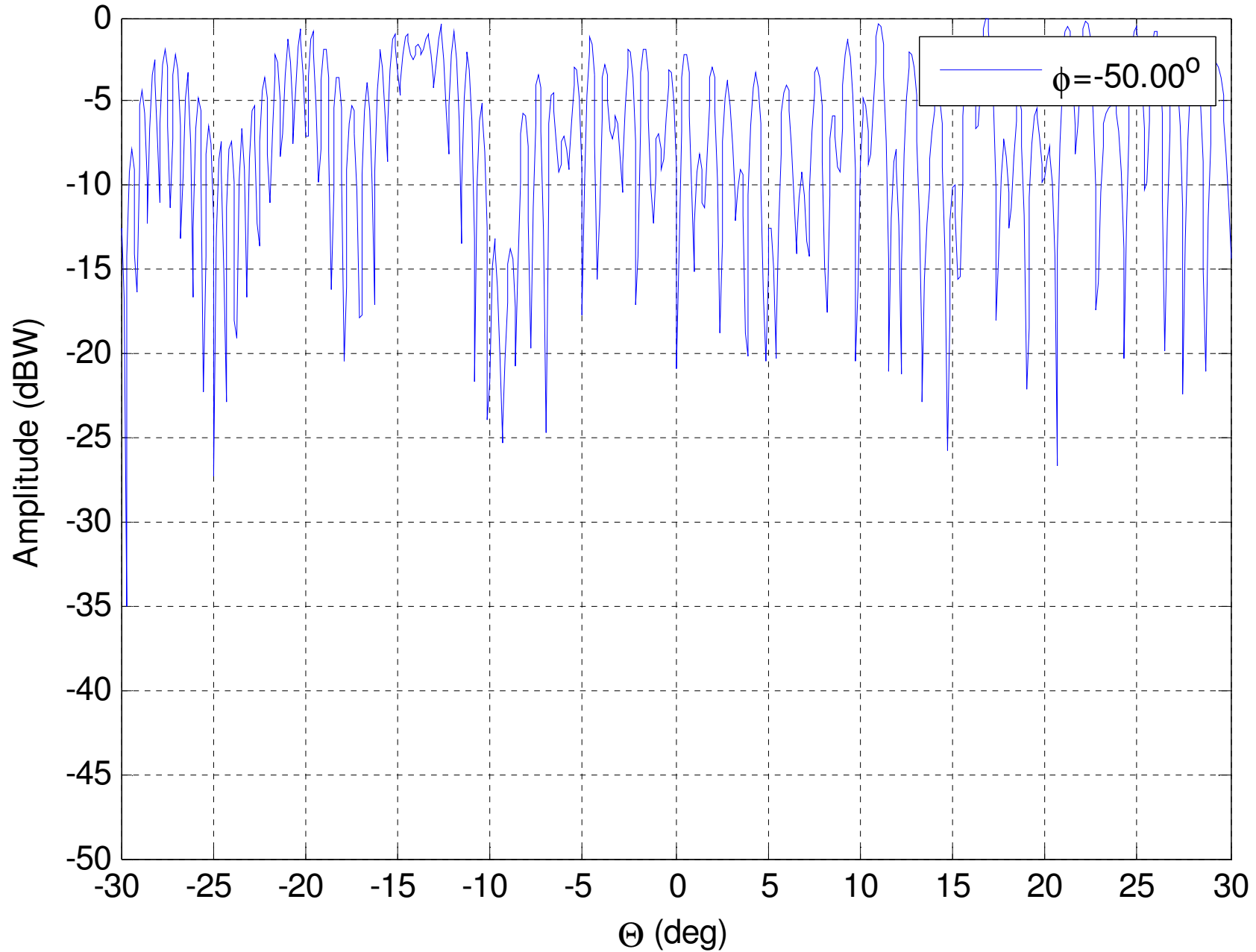
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.96 dBW, Date: 14-Dec-2011



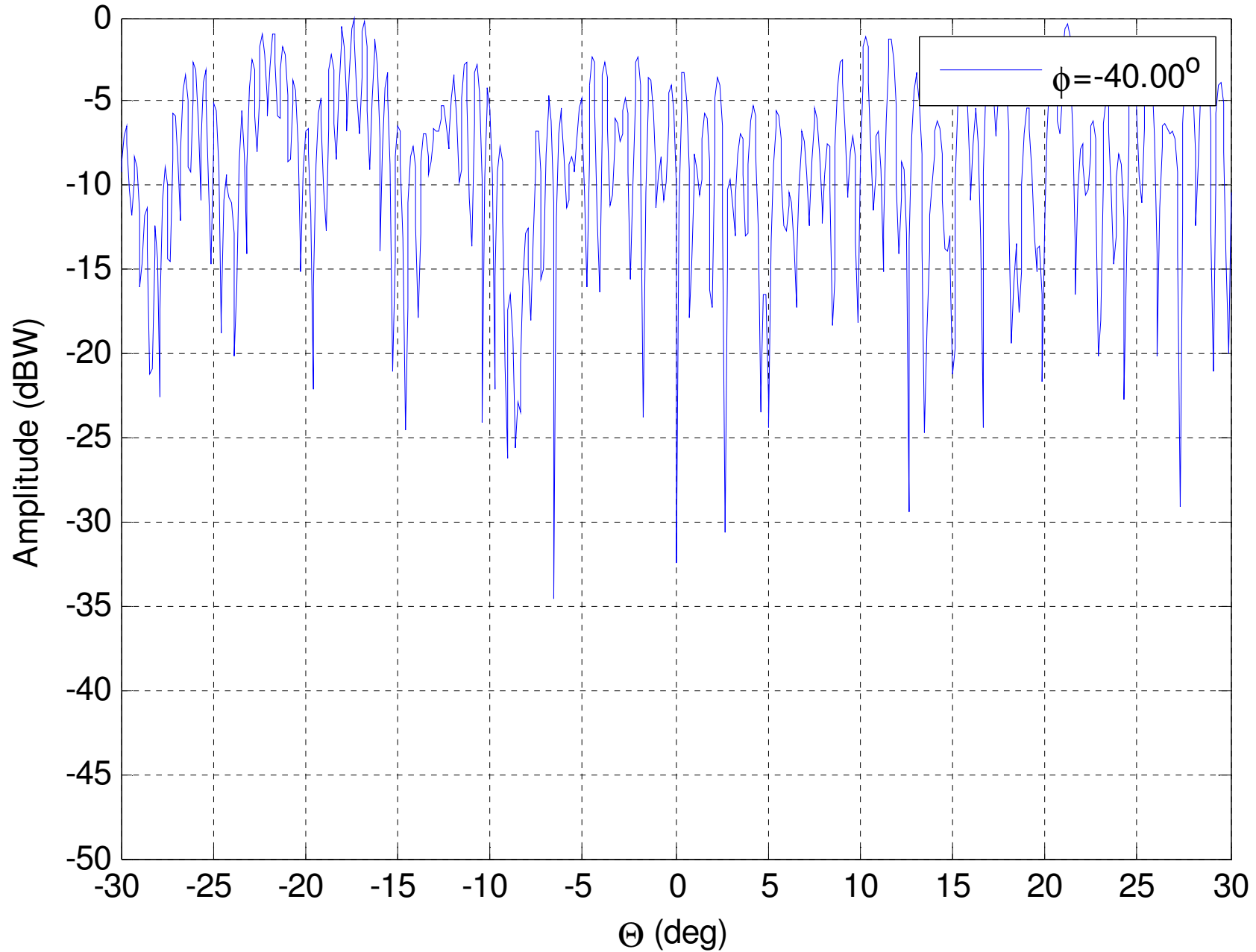
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -6.87 dBW, Date: 14-Dec-2011



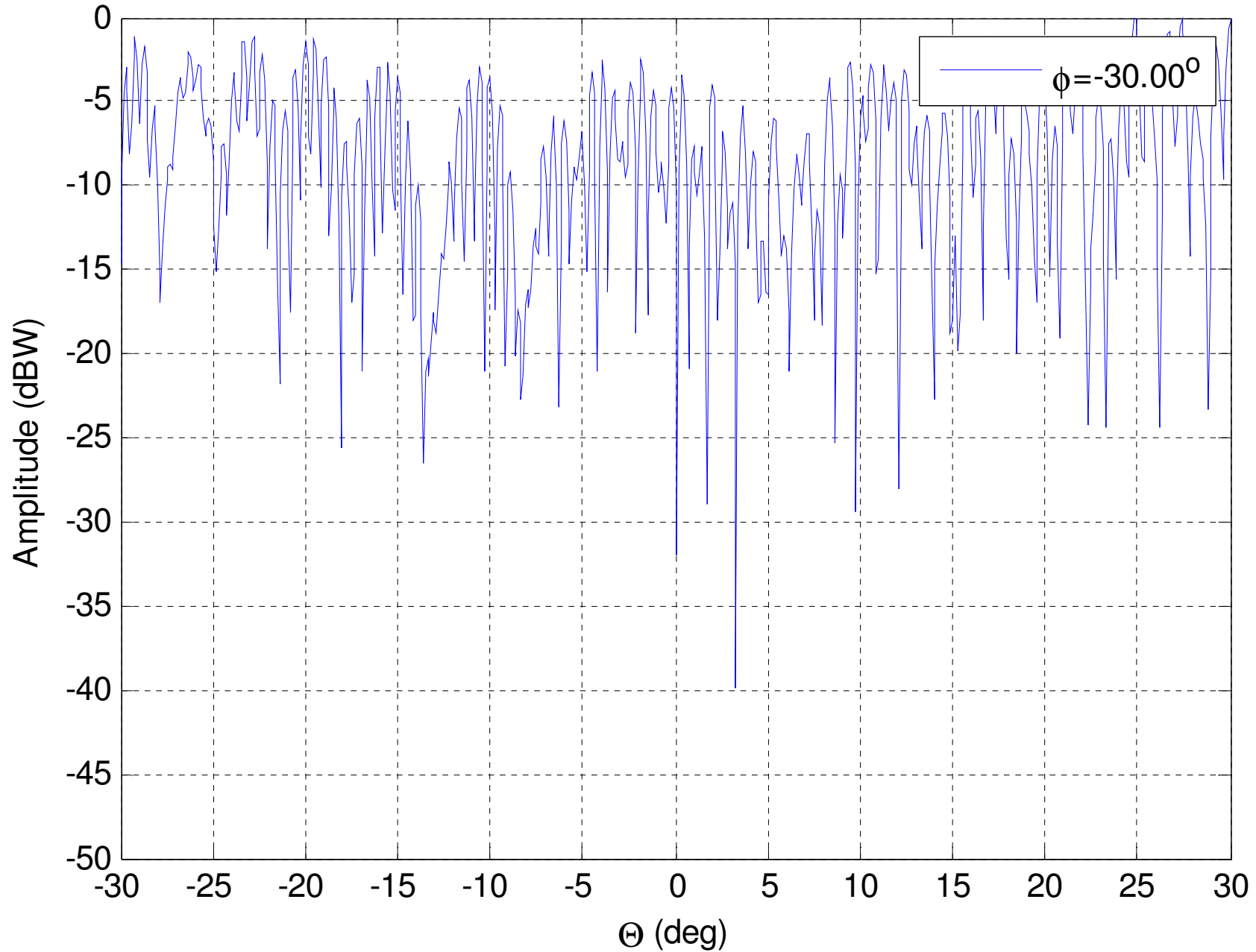
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -5.78 dBW, Date: 14-Dec-2011



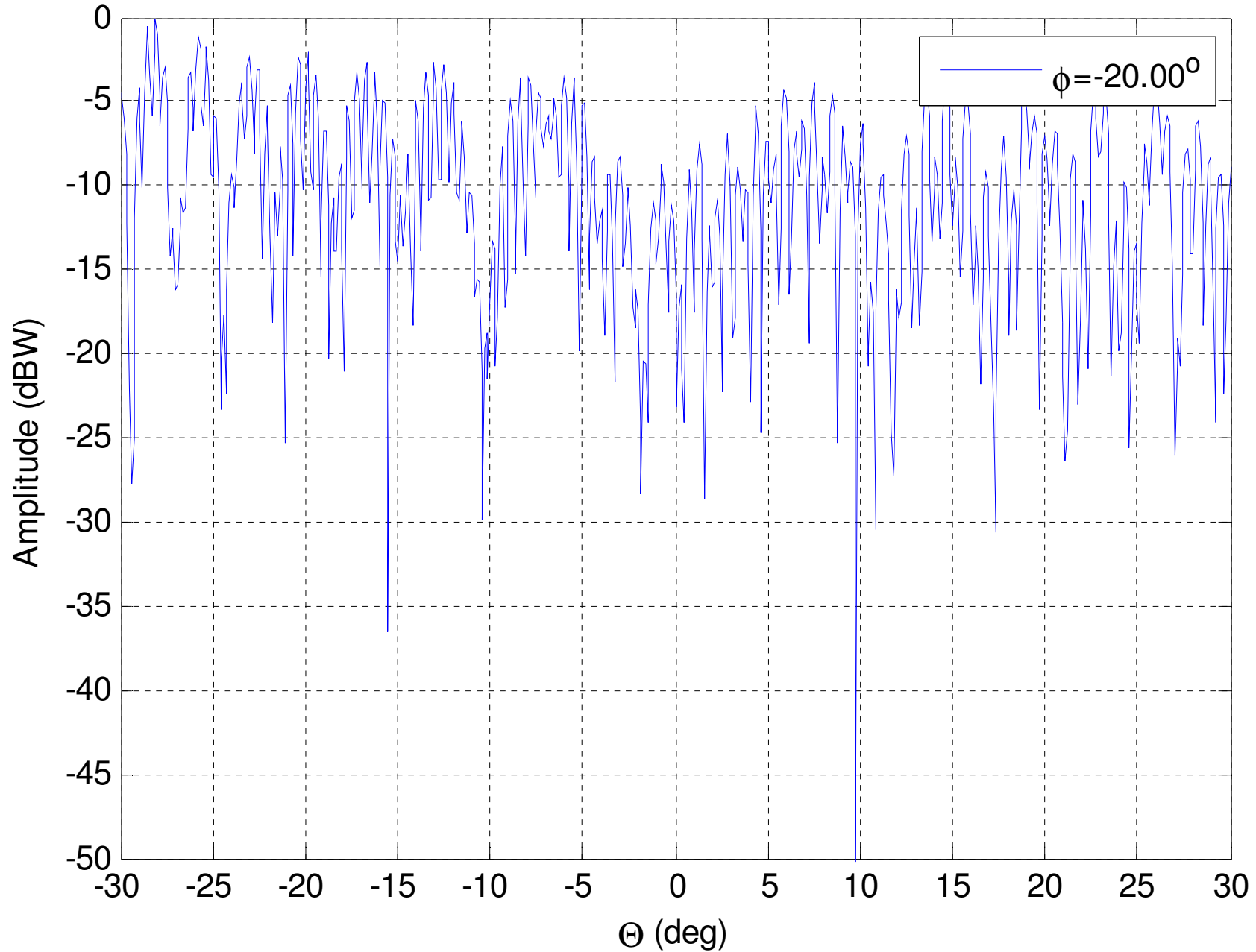
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -5.38 dBW, Date: 14-Dec-2011



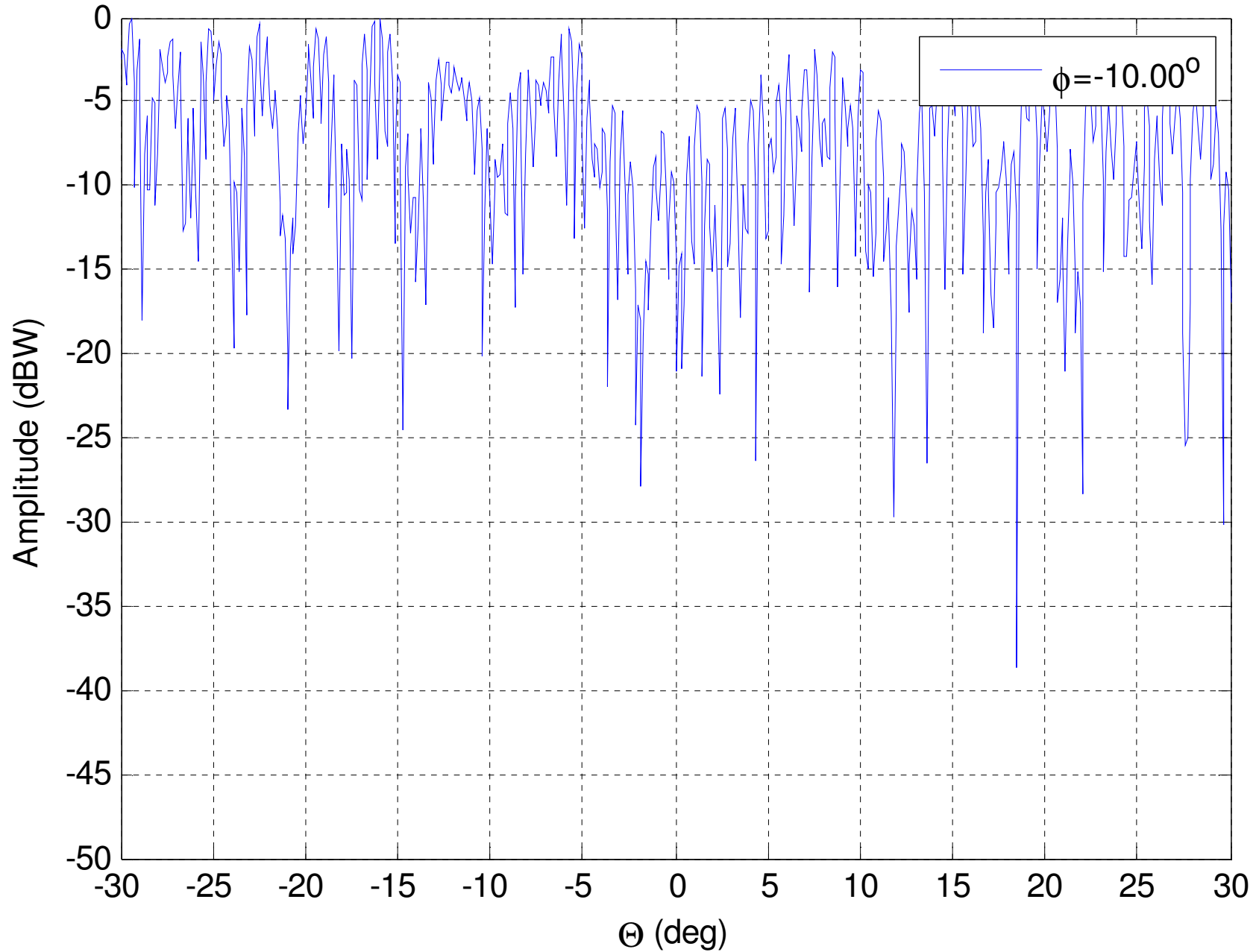
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -4.69 dBW, Date: 14-Dec-2011



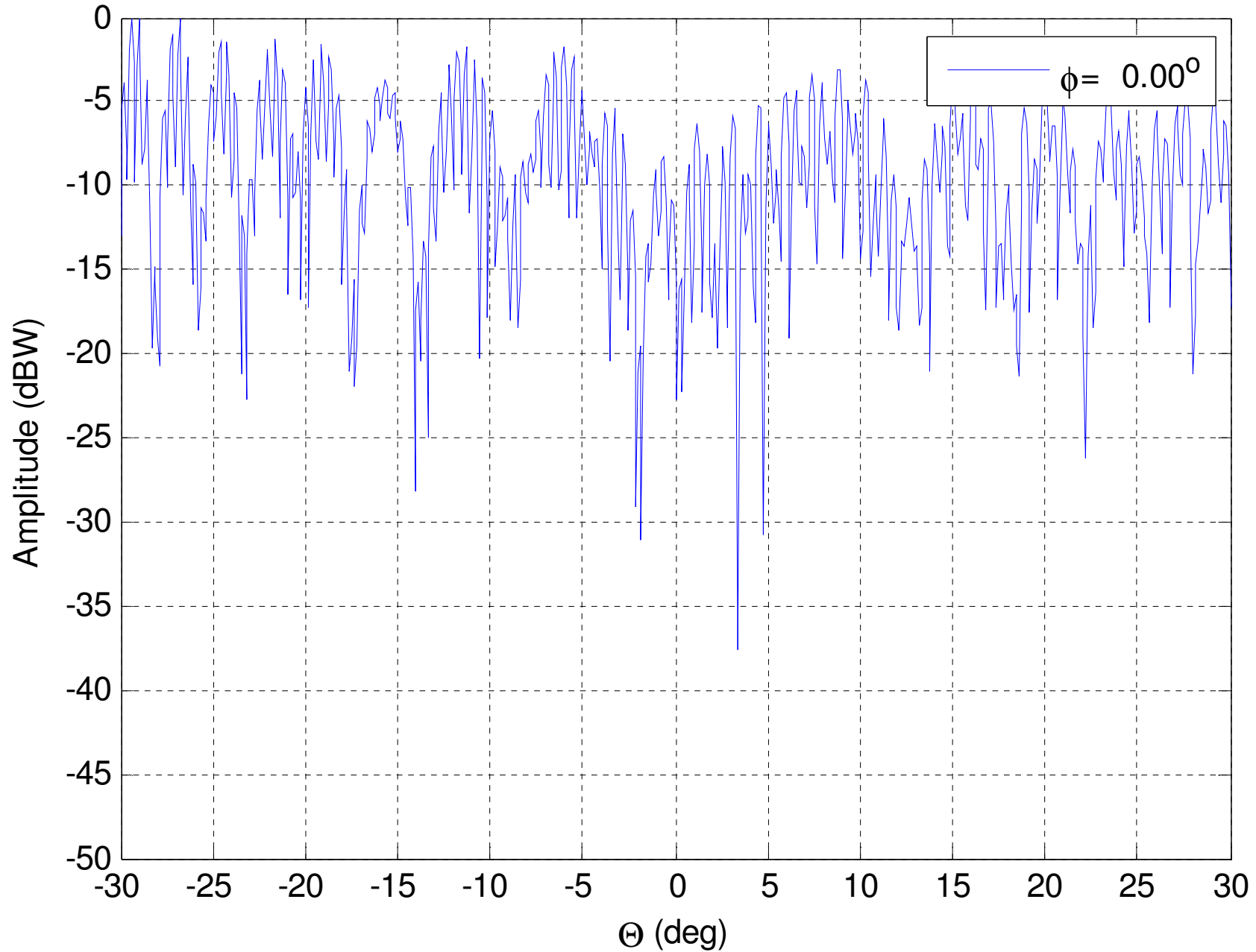
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -6.89 dBW, Date: 14-Dec-2011



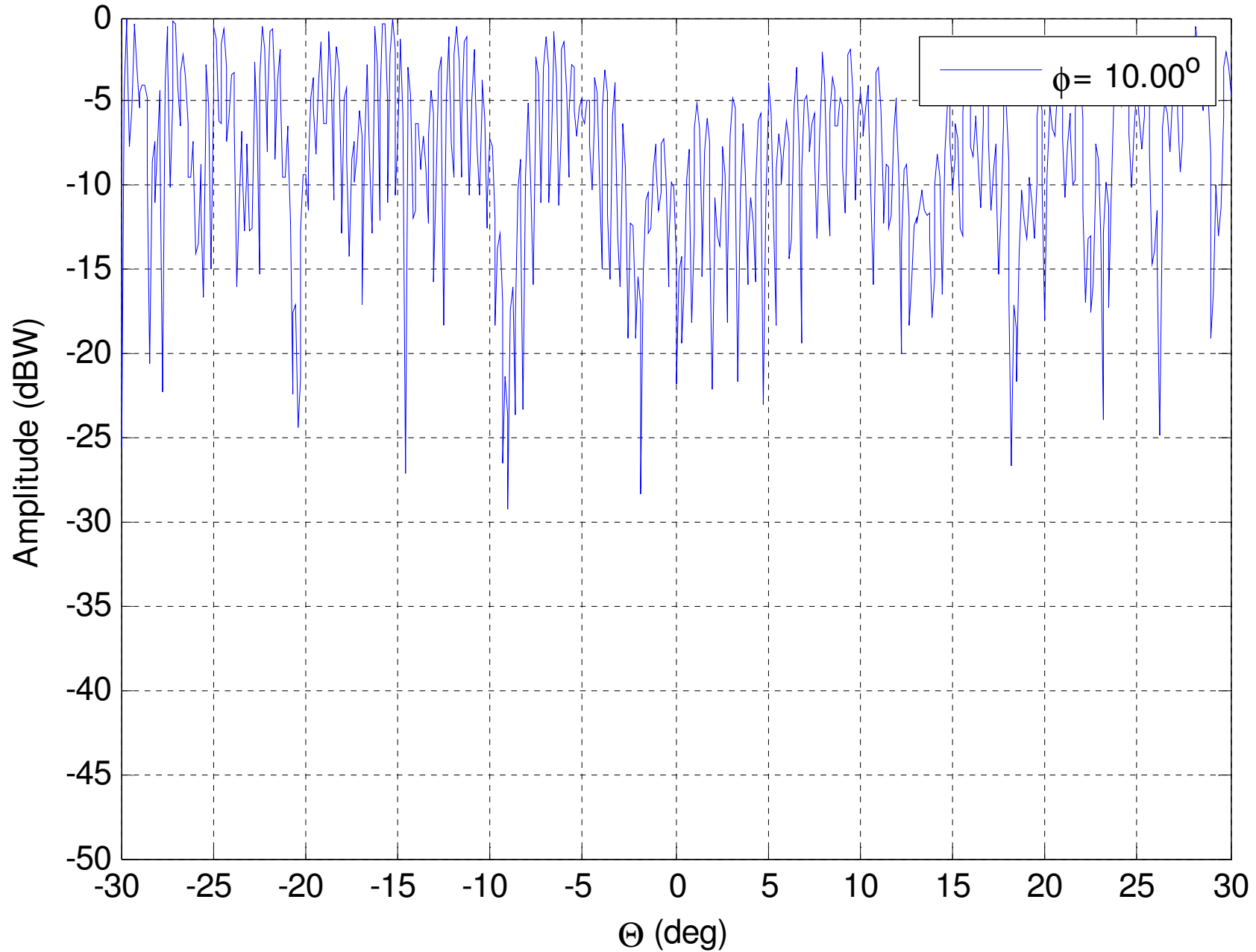
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -5.54 dBW, Date: 14-Dec-2011



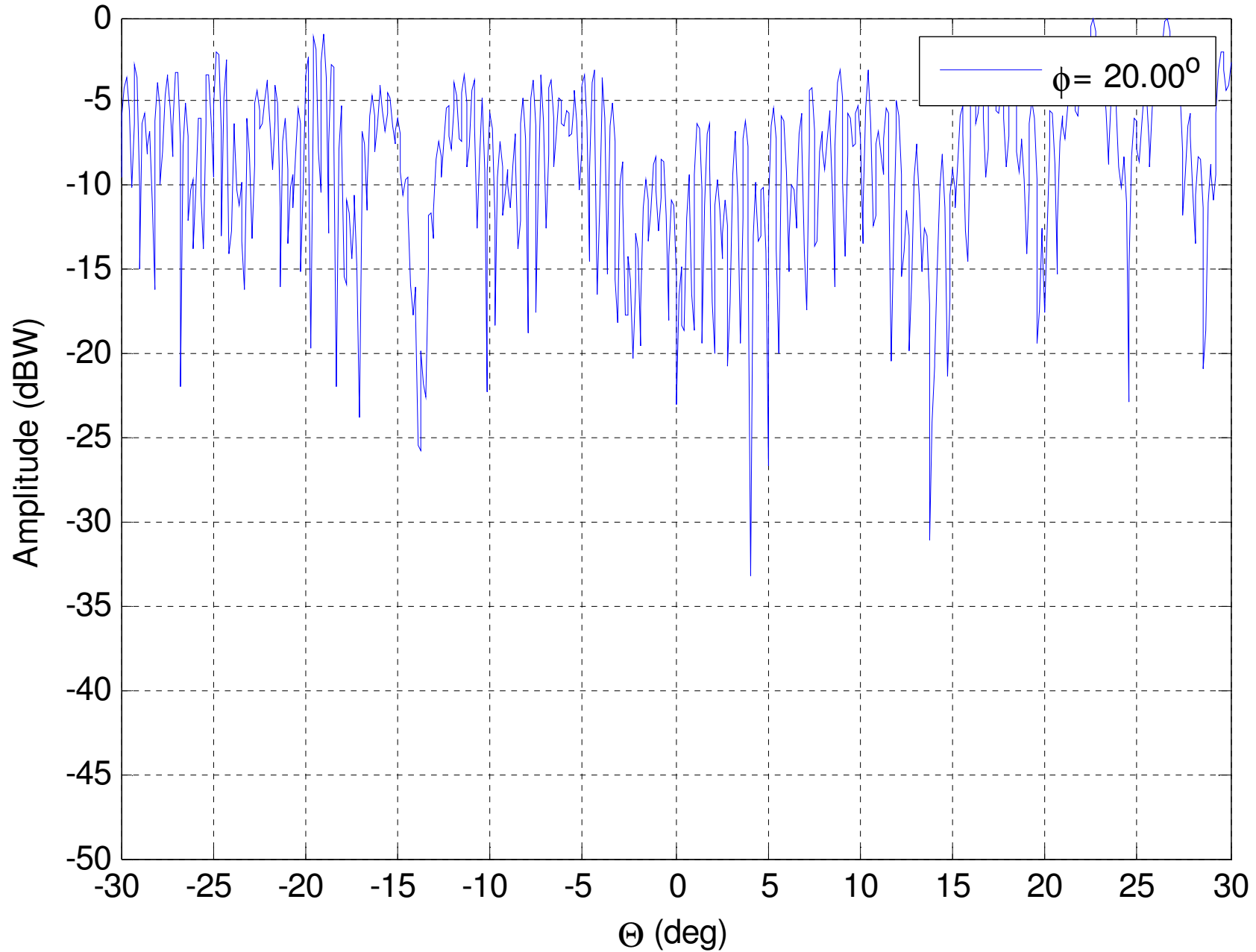
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -6.76 dBW, Date: 14-Dec-2011



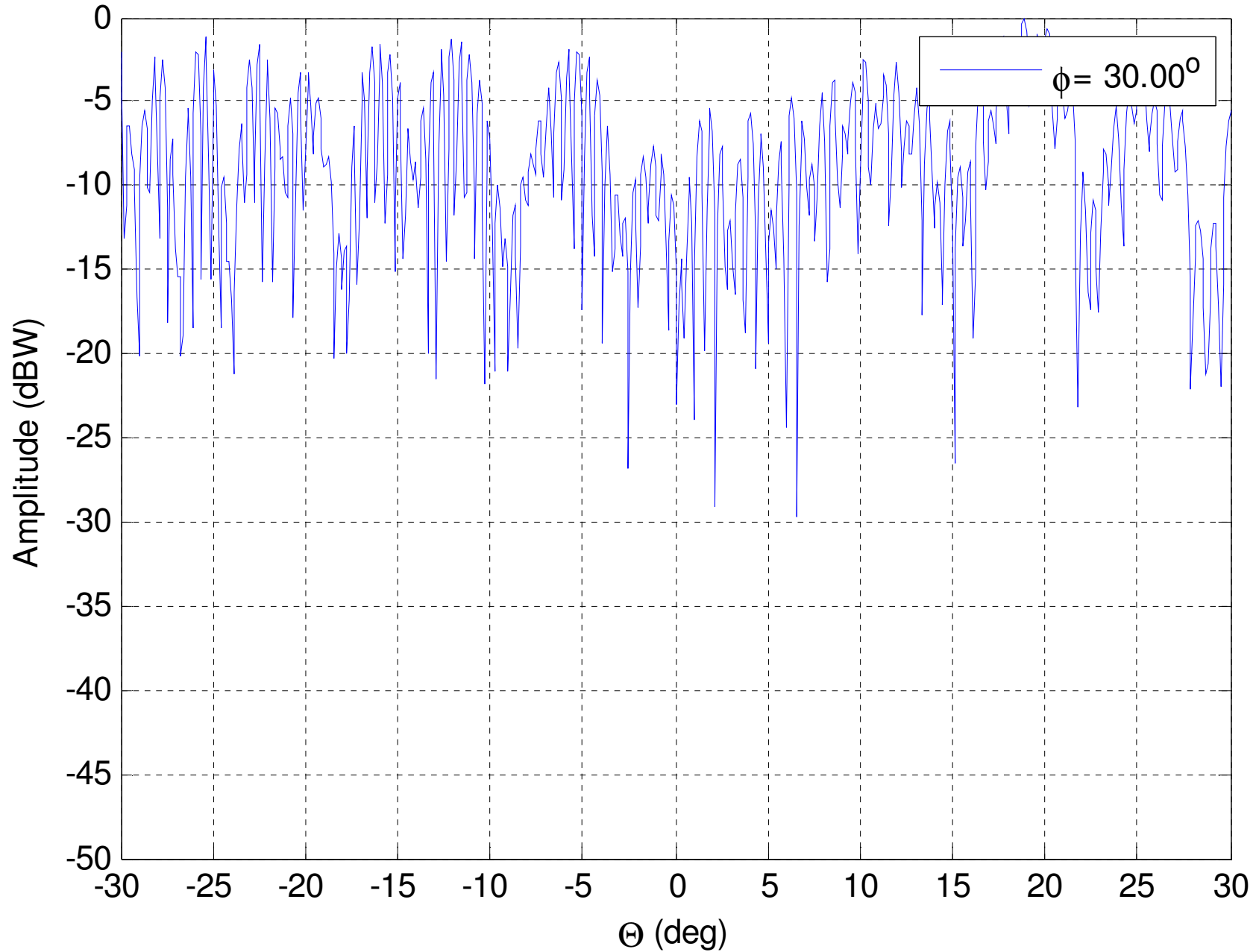
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -5.85 dBW, Date: 14-Dec-2011



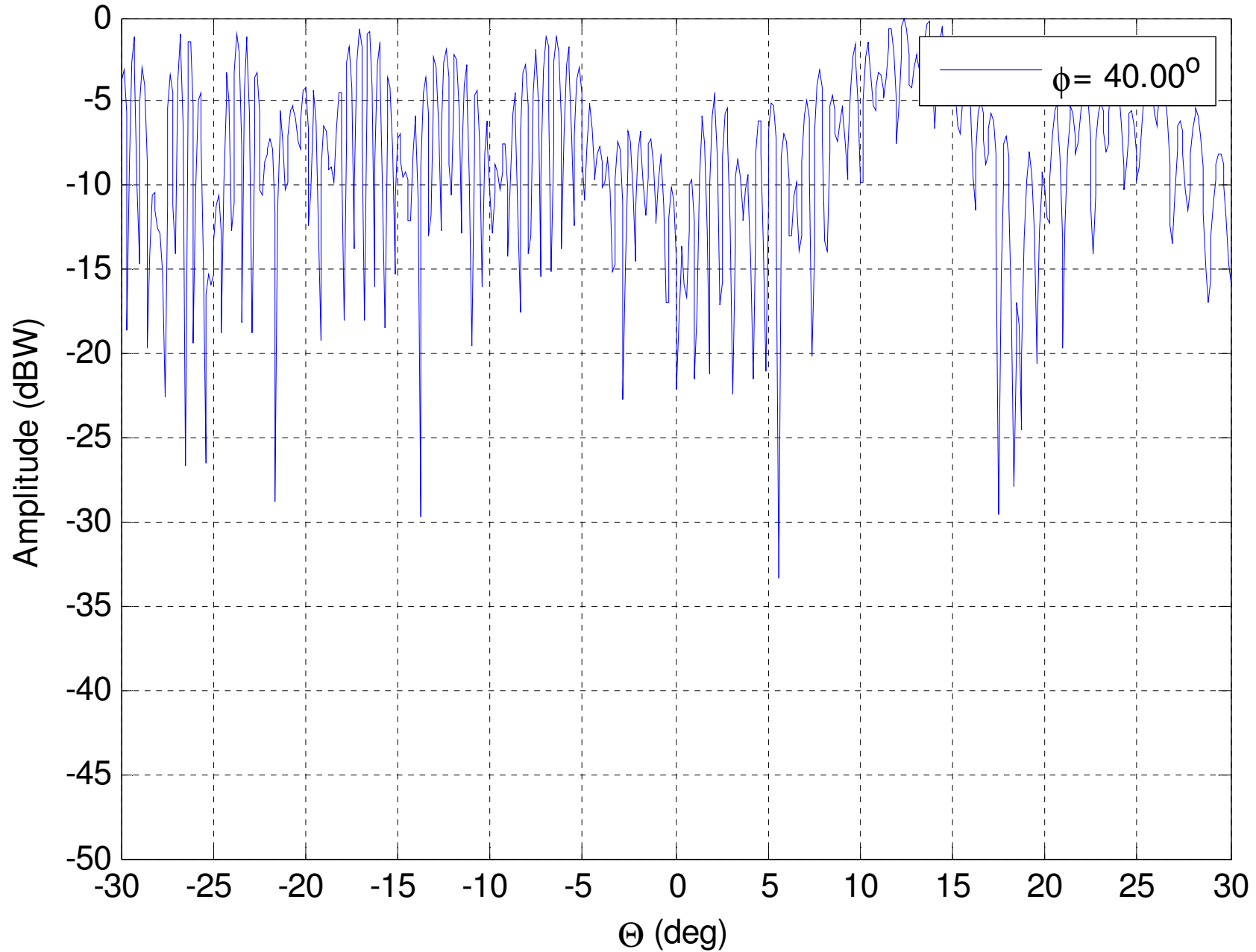
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.11 dBW, Date: 14-Dec-2011



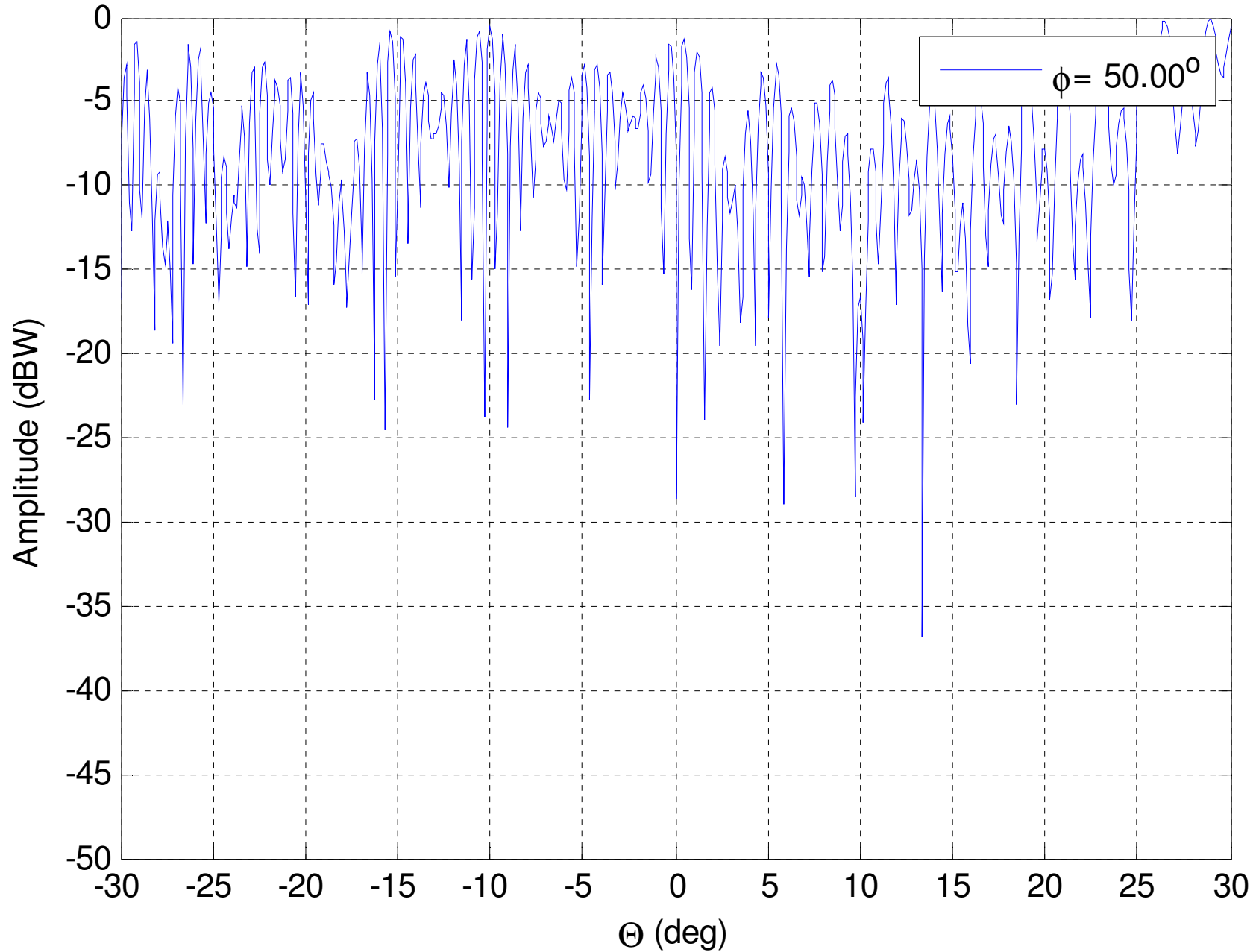
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.74 dBW, Date: 14-Dec-2011



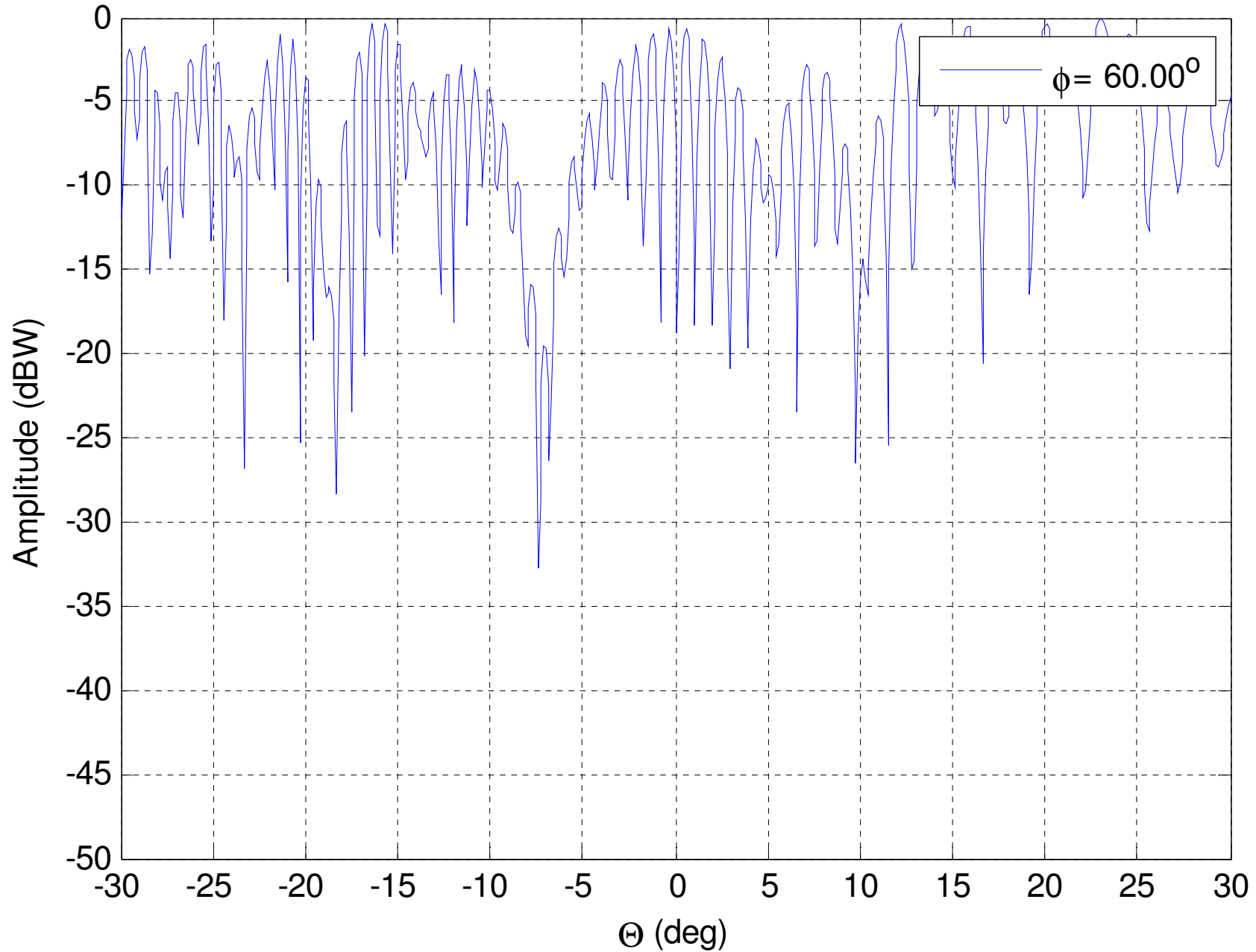
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.57 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -8.19 dBW, Date: 14-Dec-2011



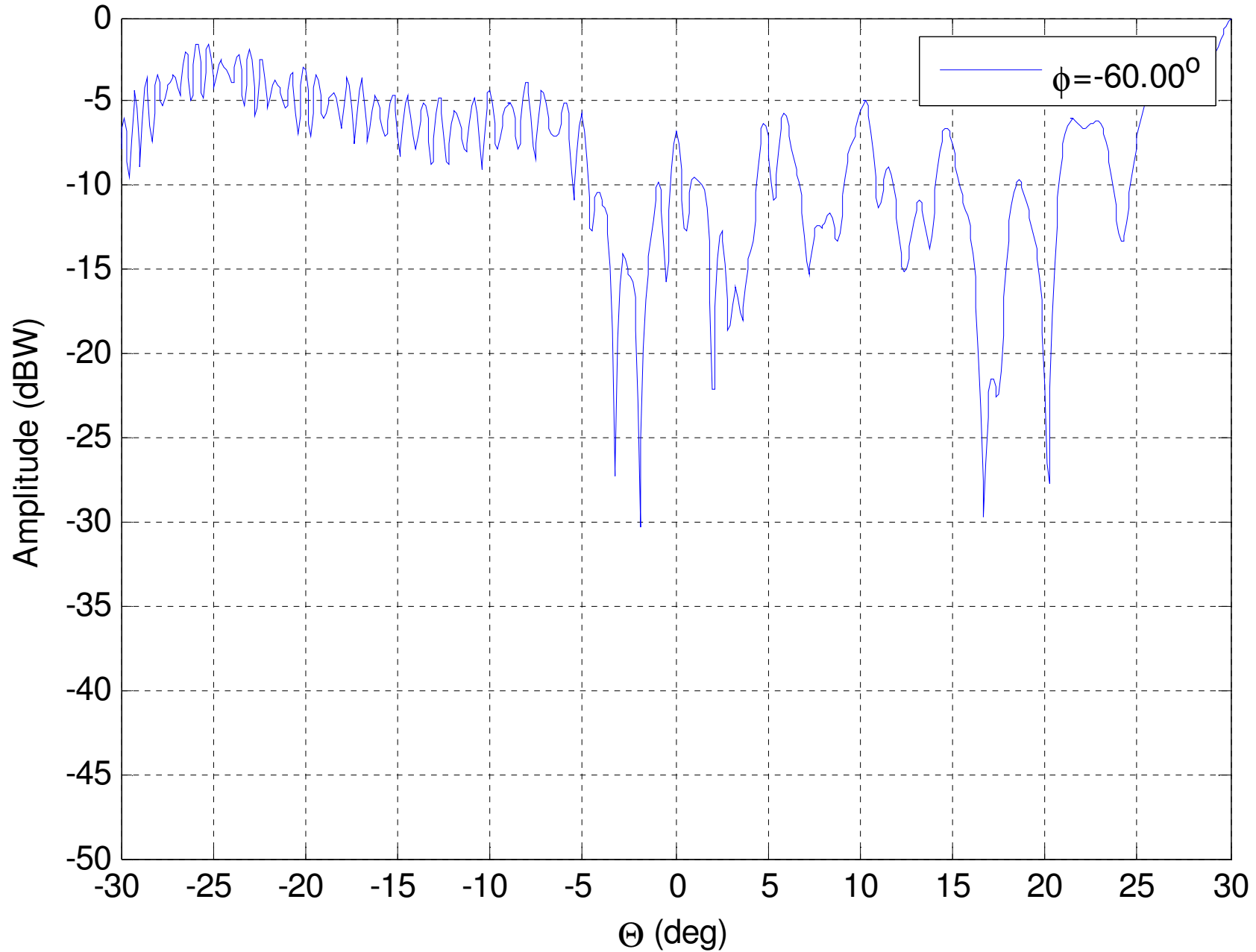
Spot Beam14, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

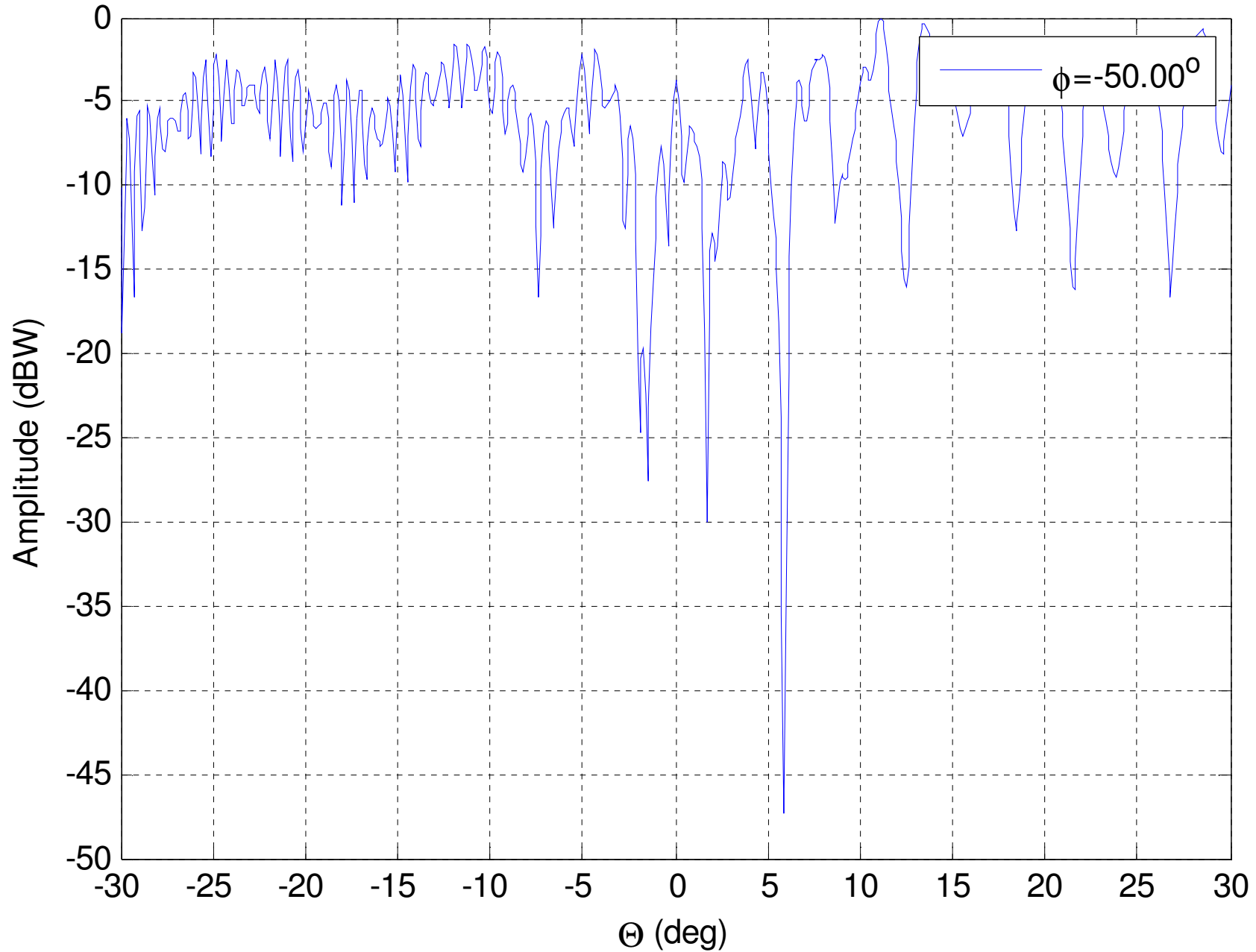
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.80 dBW, Date: 14-Dec-2011



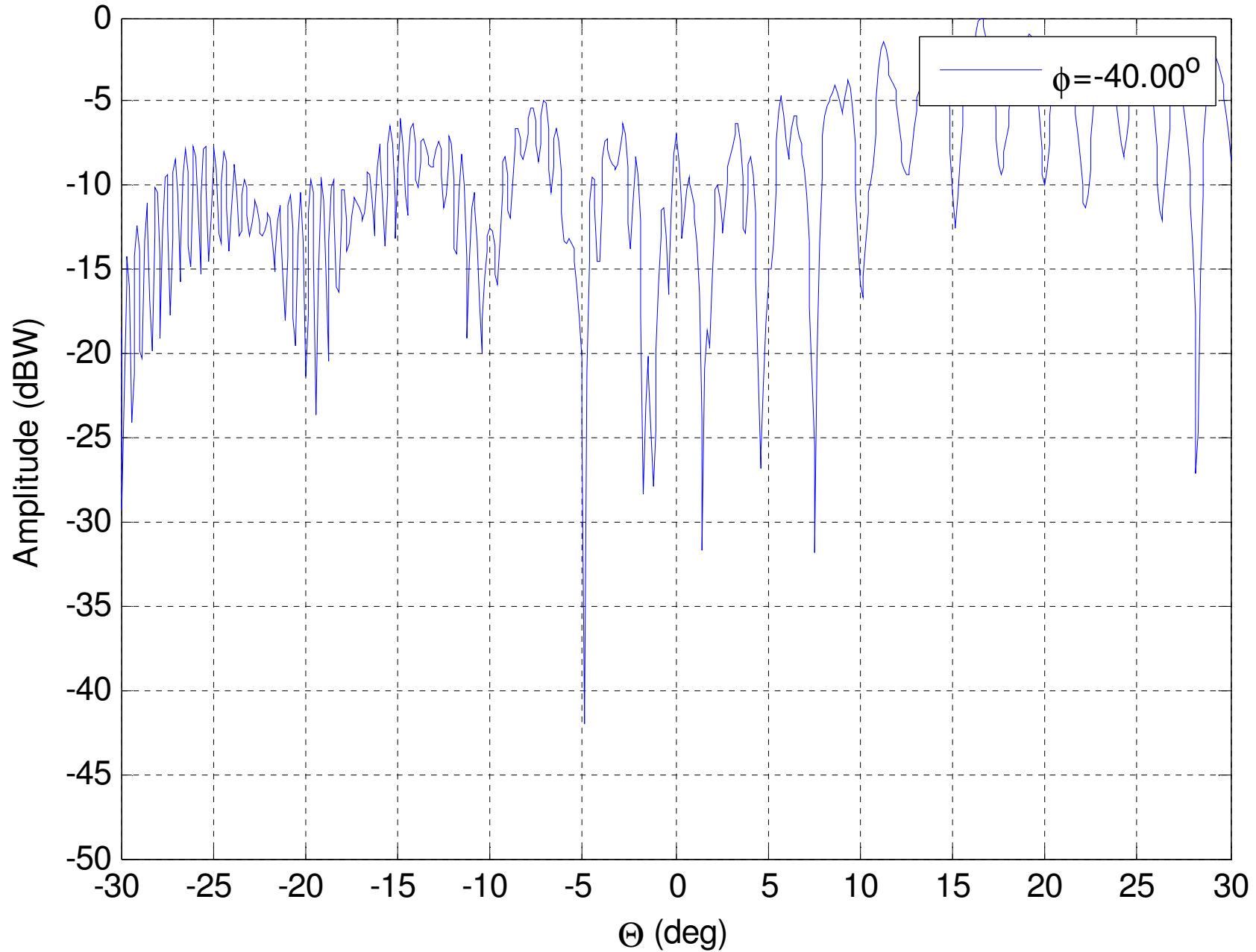
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -8.79 dBW, Date: 14-Dec-2011



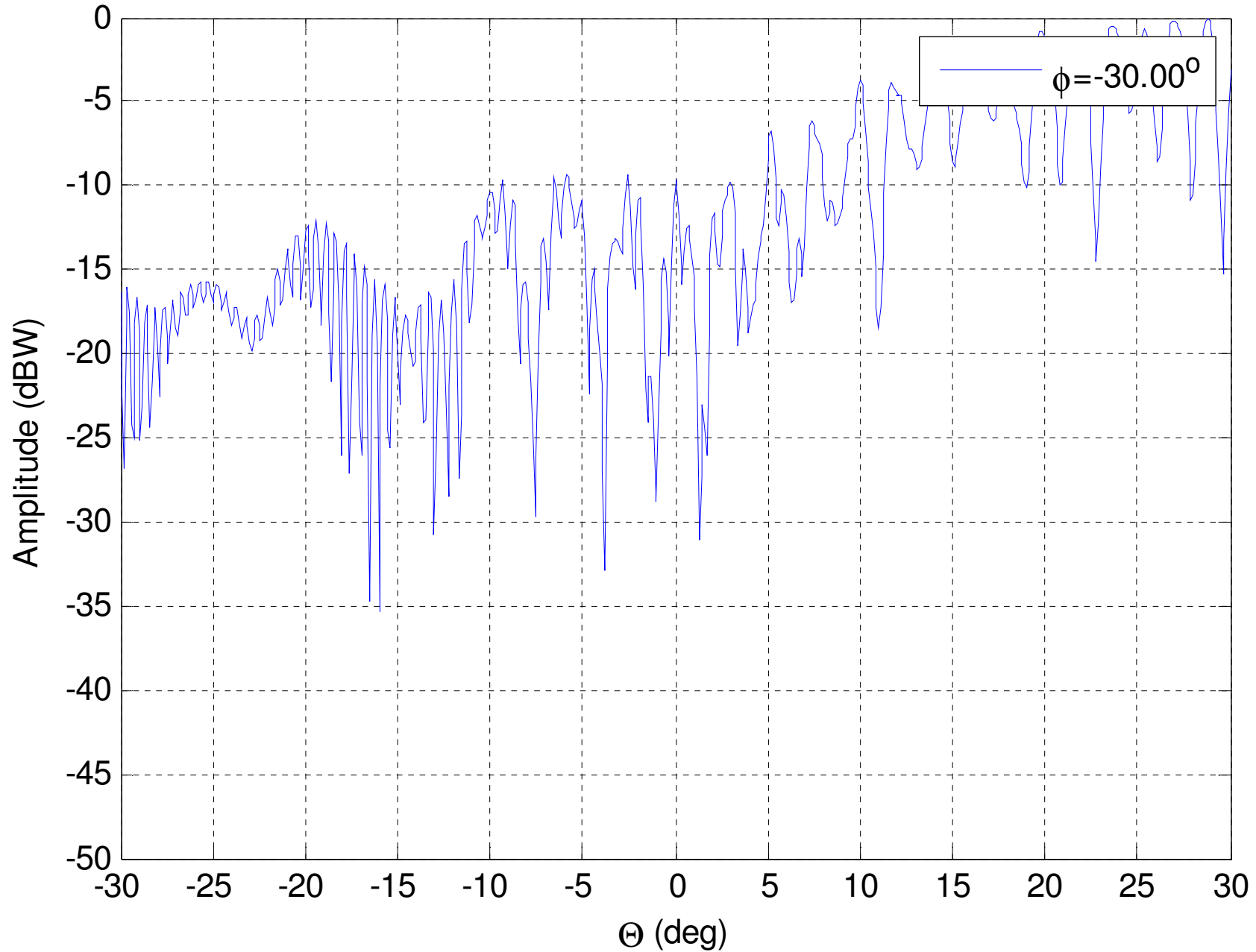
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -5.65 dBW, Date: 14-Dec-2011



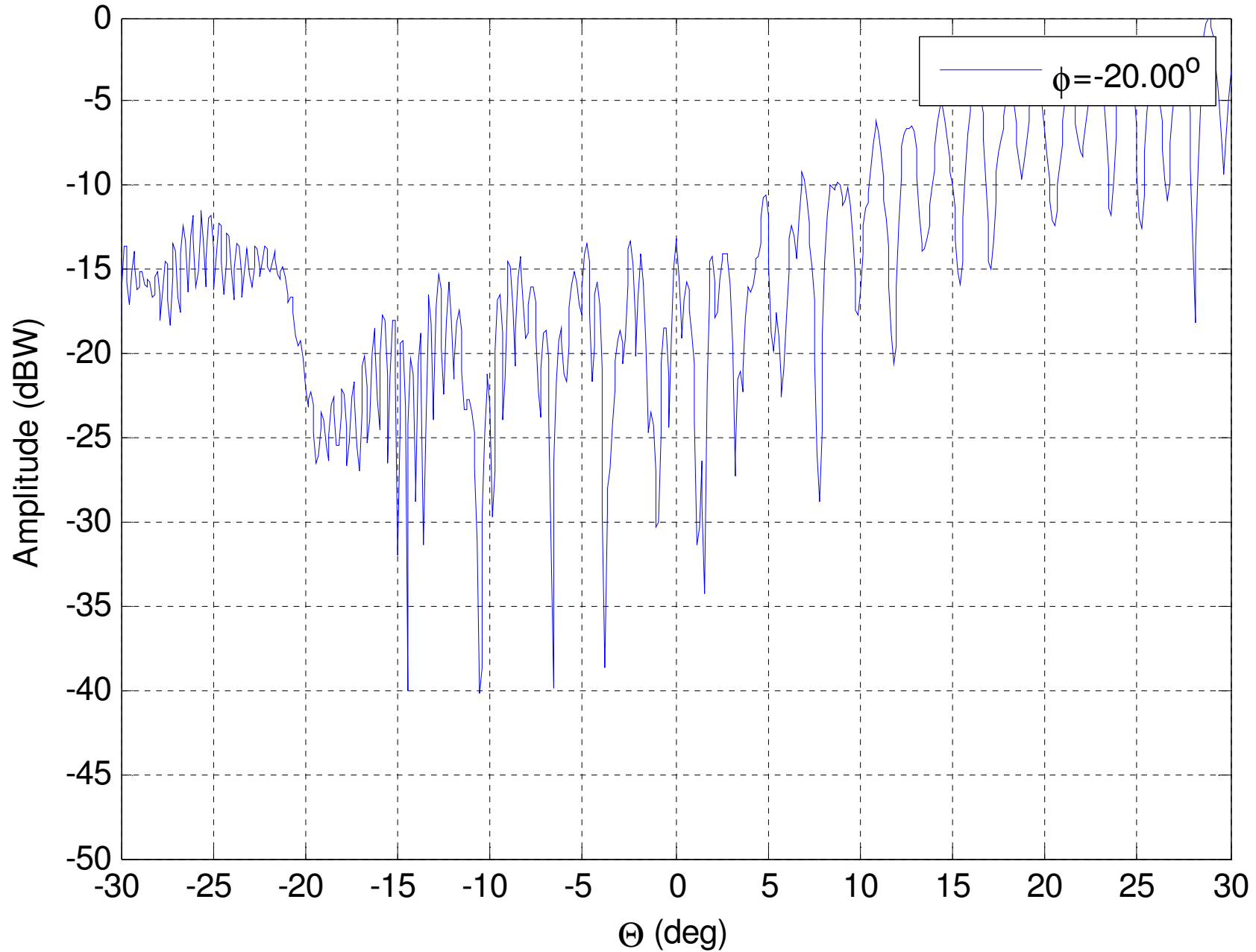
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -2.85 dBW, Date: 14-Dec-2011



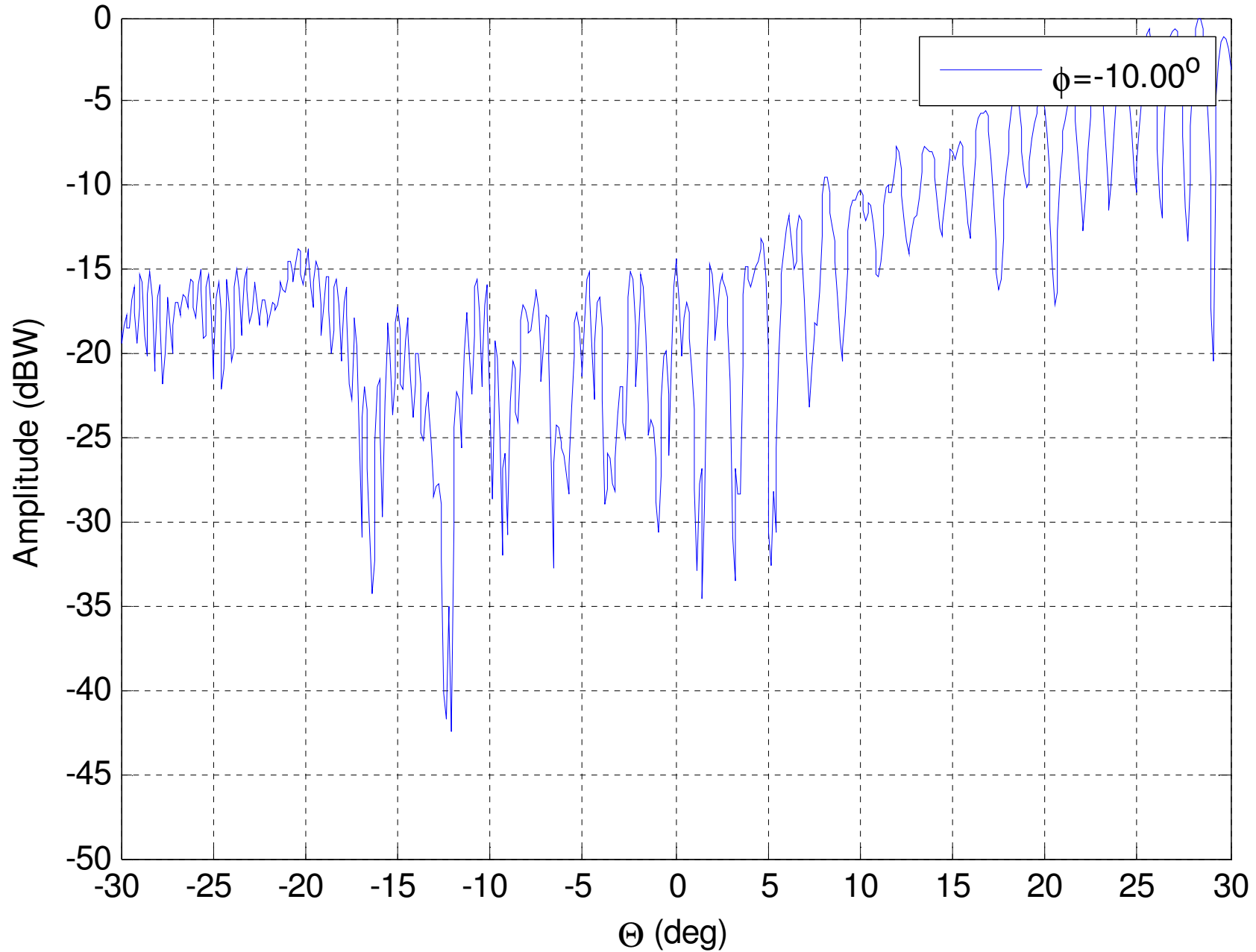
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 0.57 dBW, Date: 14-Dec-2011



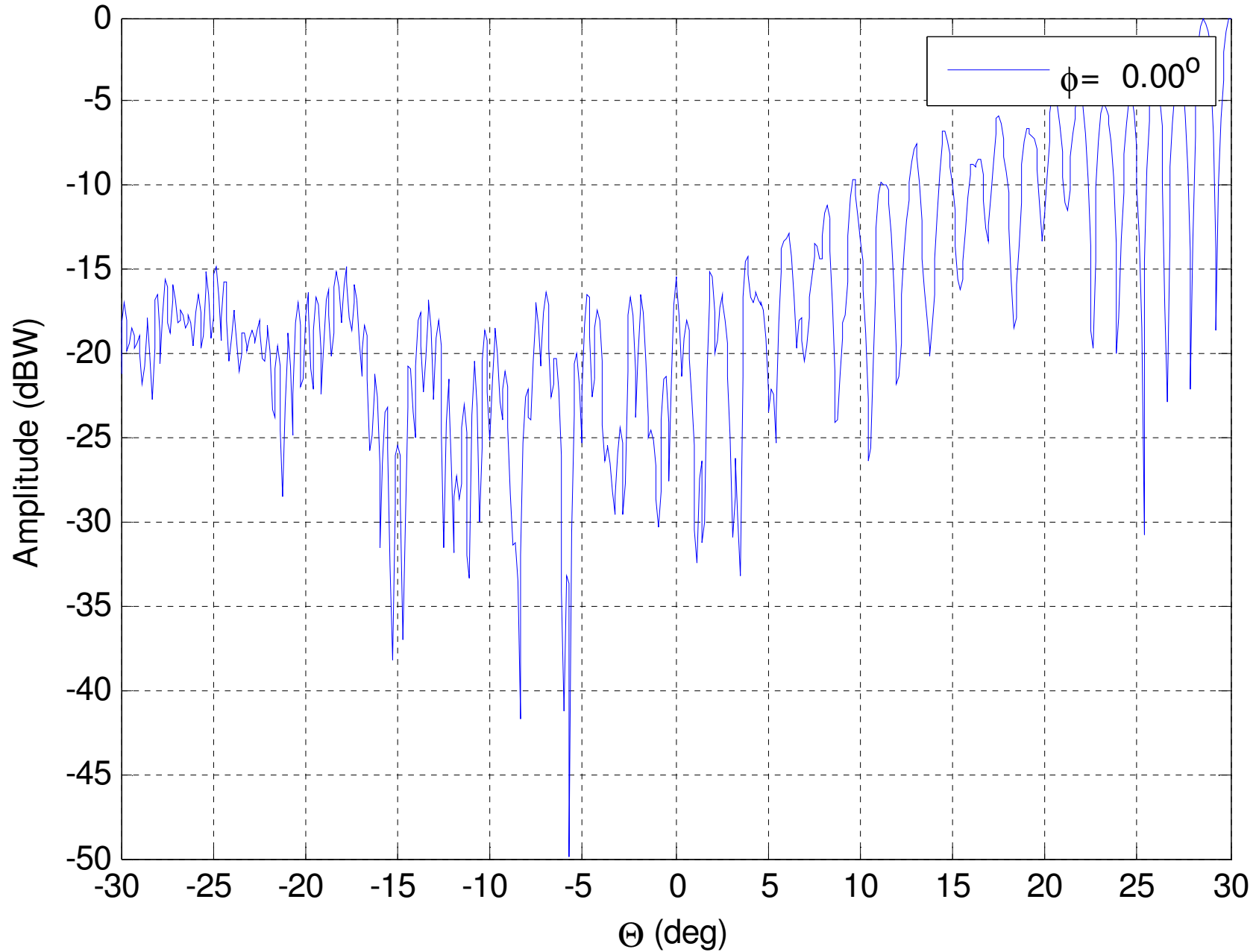
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 1.76 dBW, Date: 14-Dec-2011



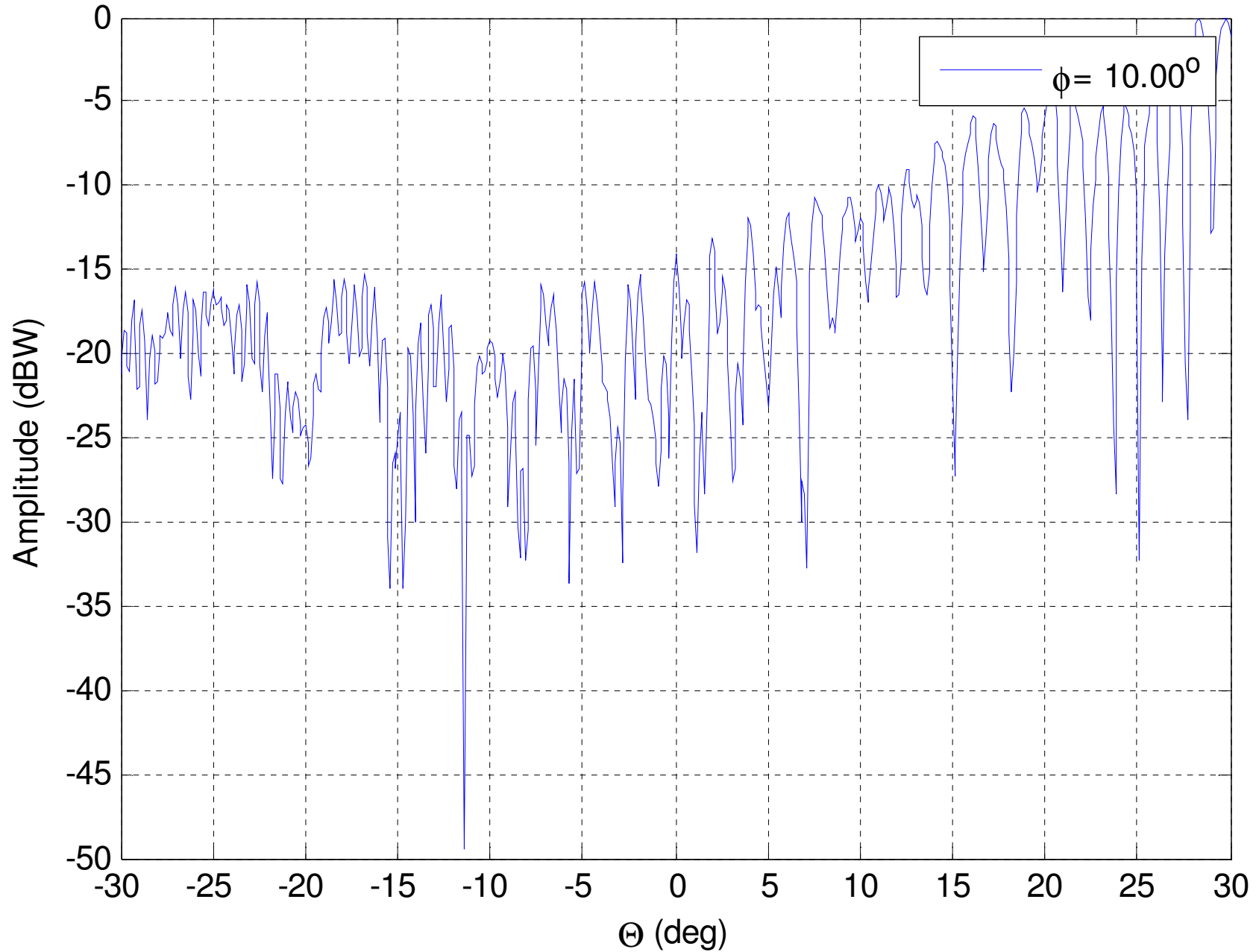
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 2.85 dBW, Date: 14-Dec-2011



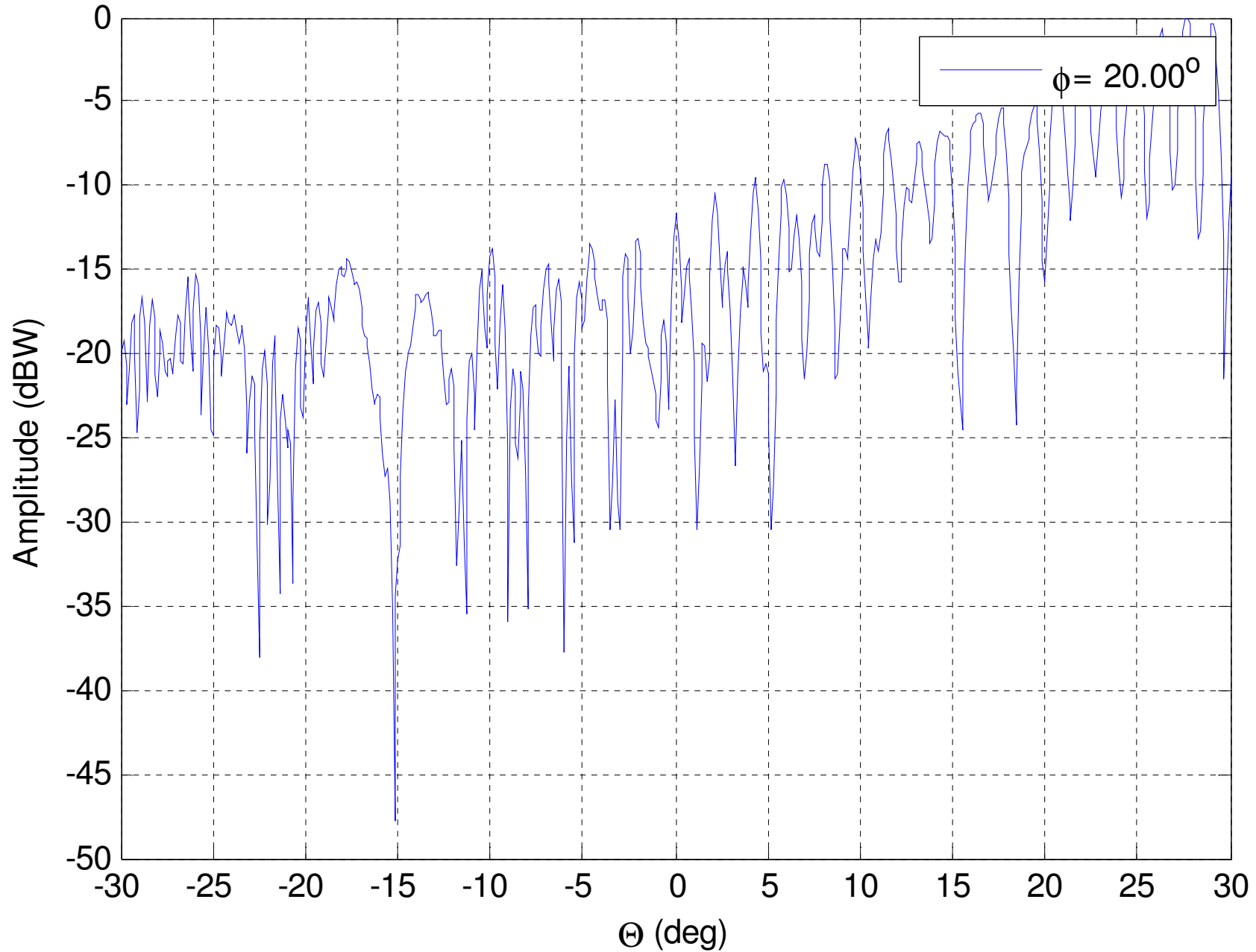
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 1.49 dBW, Date: 14-Dec-2011



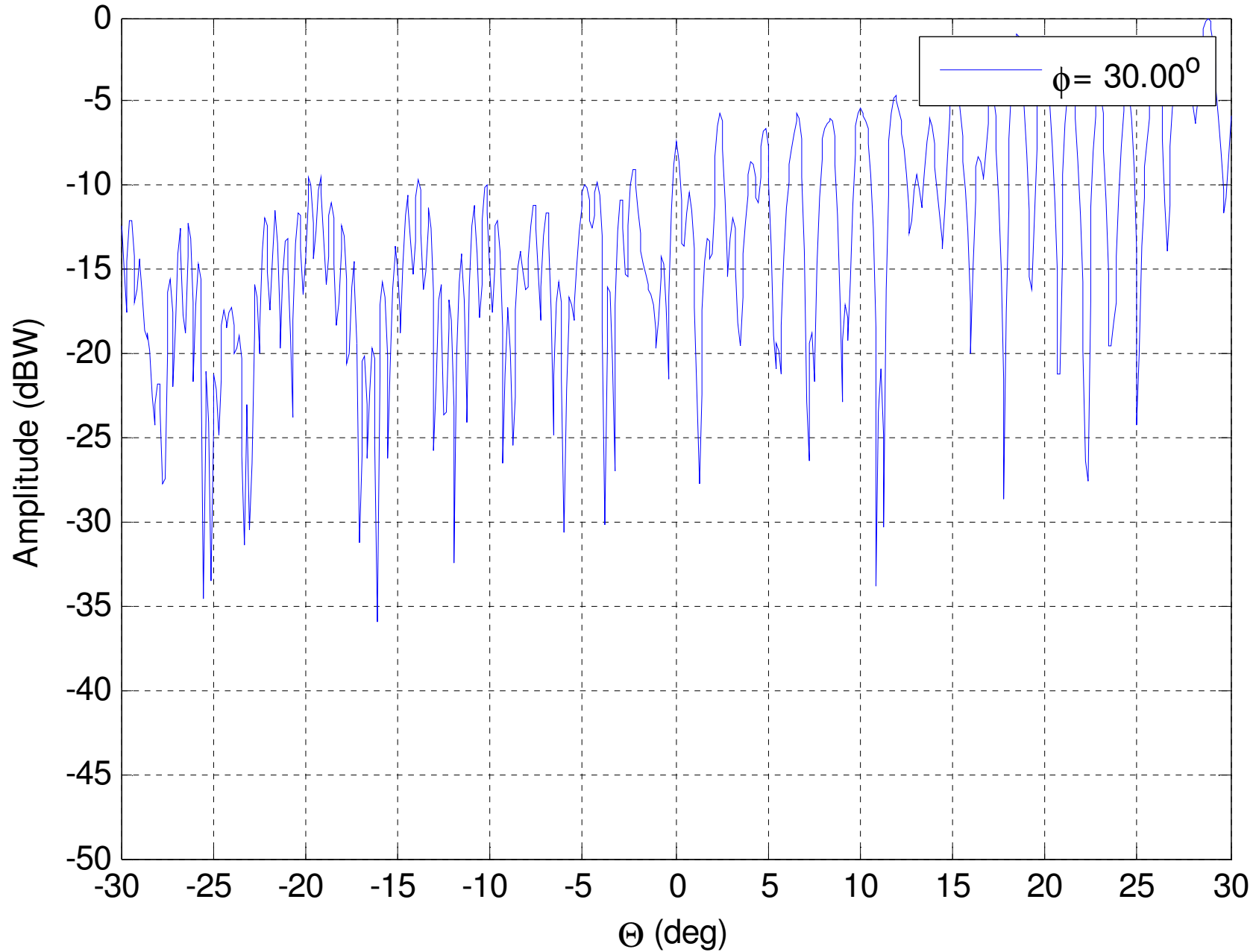
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -0.94 dBW, Date: 14-Dec-2011



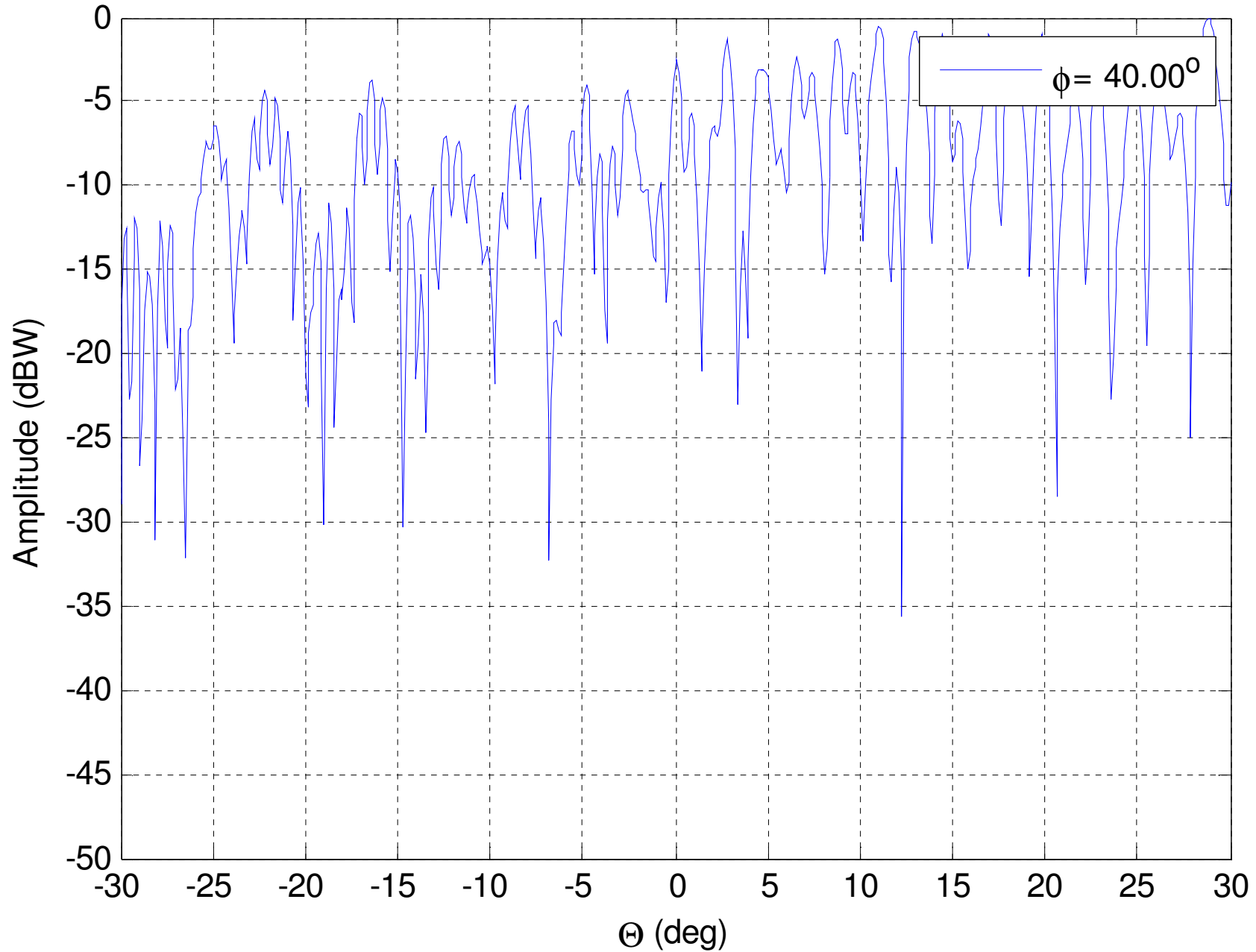
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -5.17 dBW, Date: 14-Dec-2011



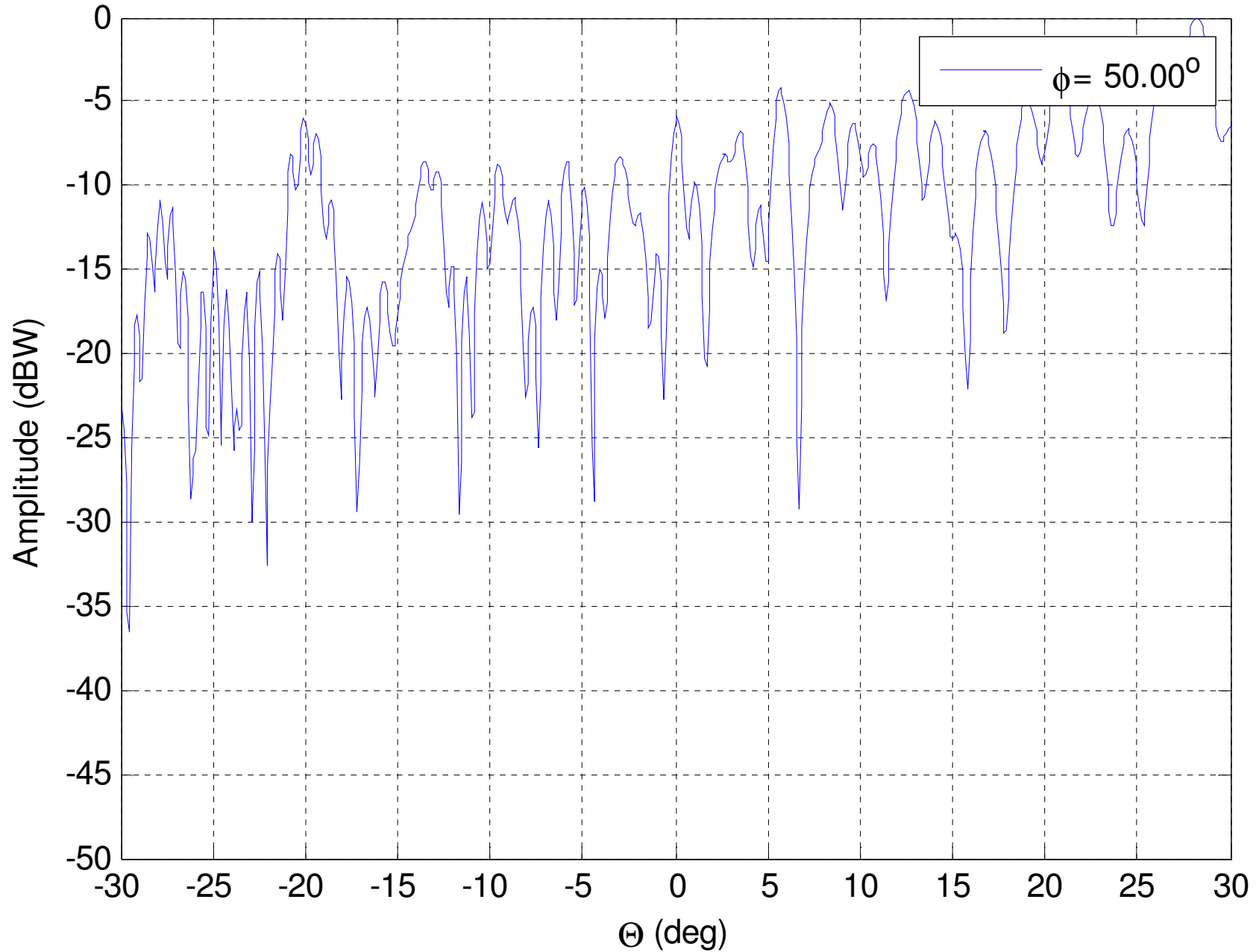
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -9.94 dBW, Date: 14-Dec-2011



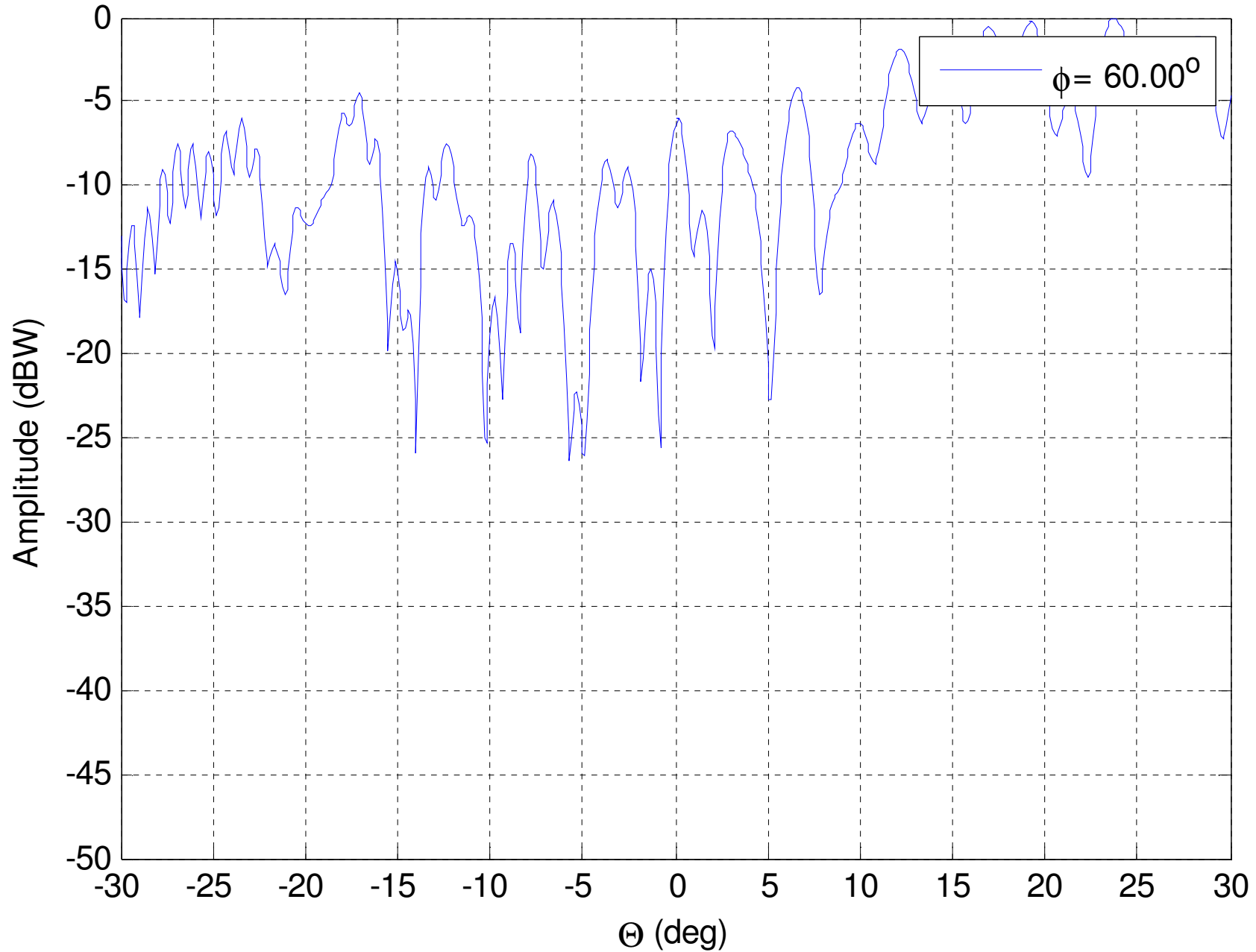
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -6.46 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

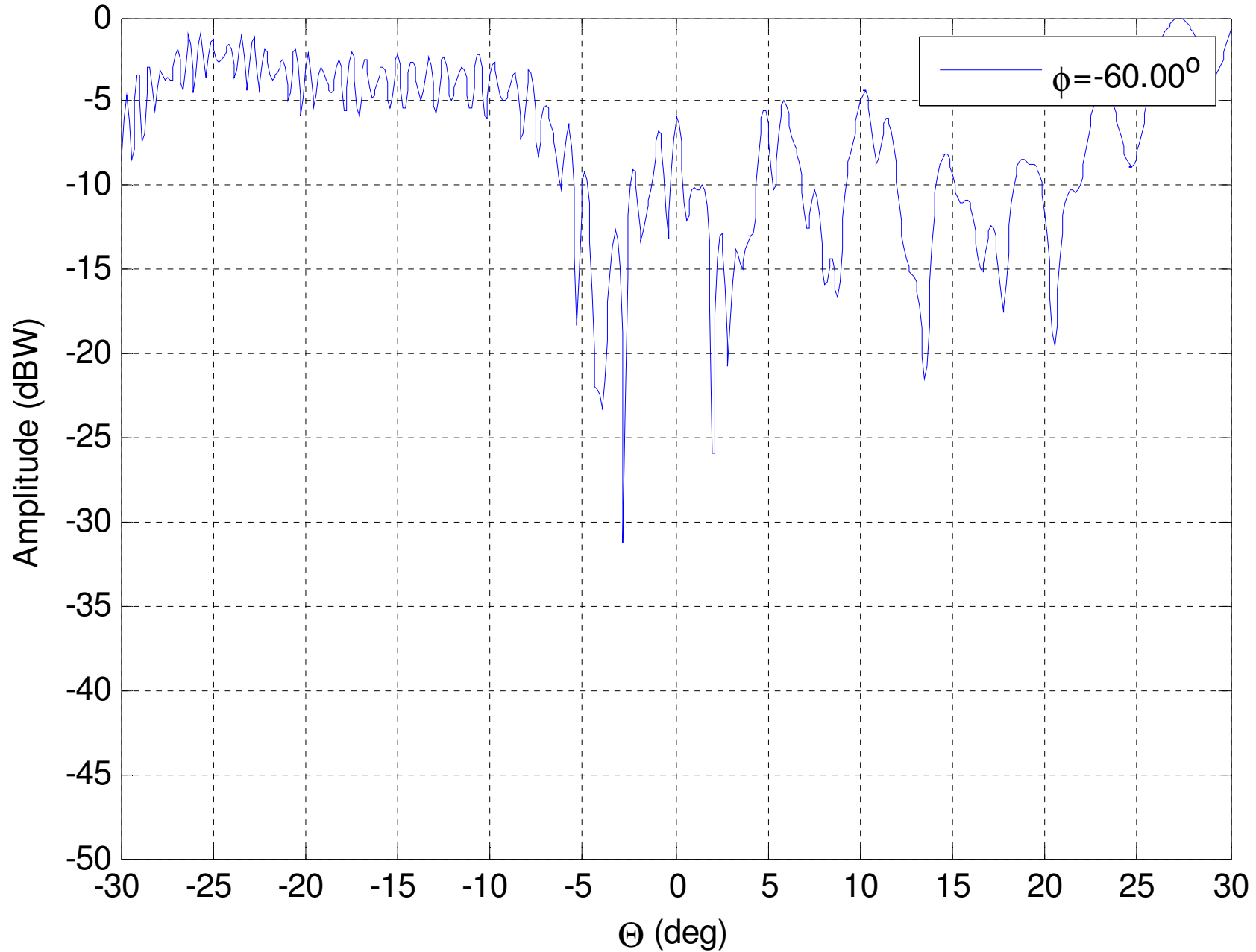
Input file: tx-17.3-rhcp-60.cut, Peak: -6.36 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

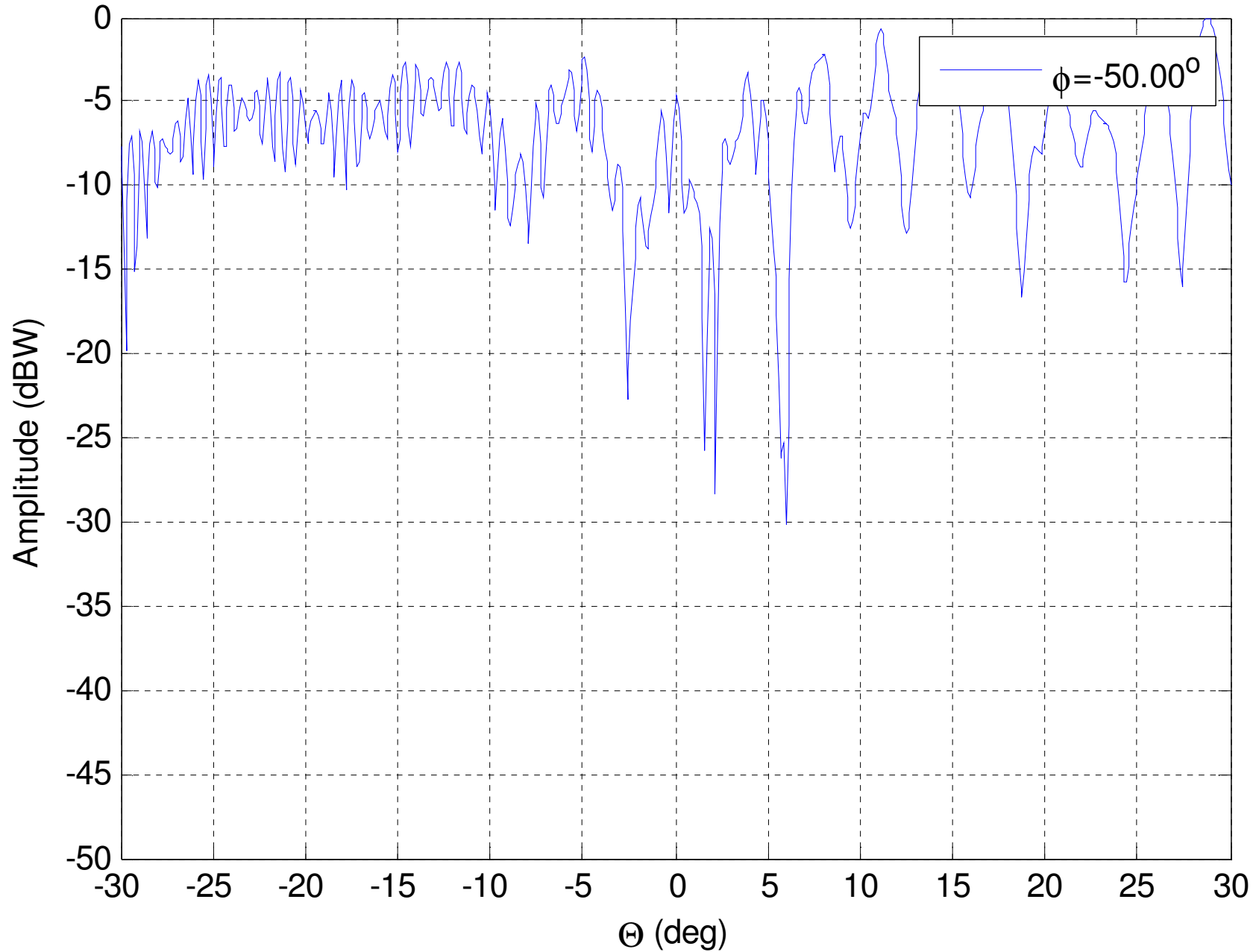
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -6.47 dBW, Date: 14-Dec-2011



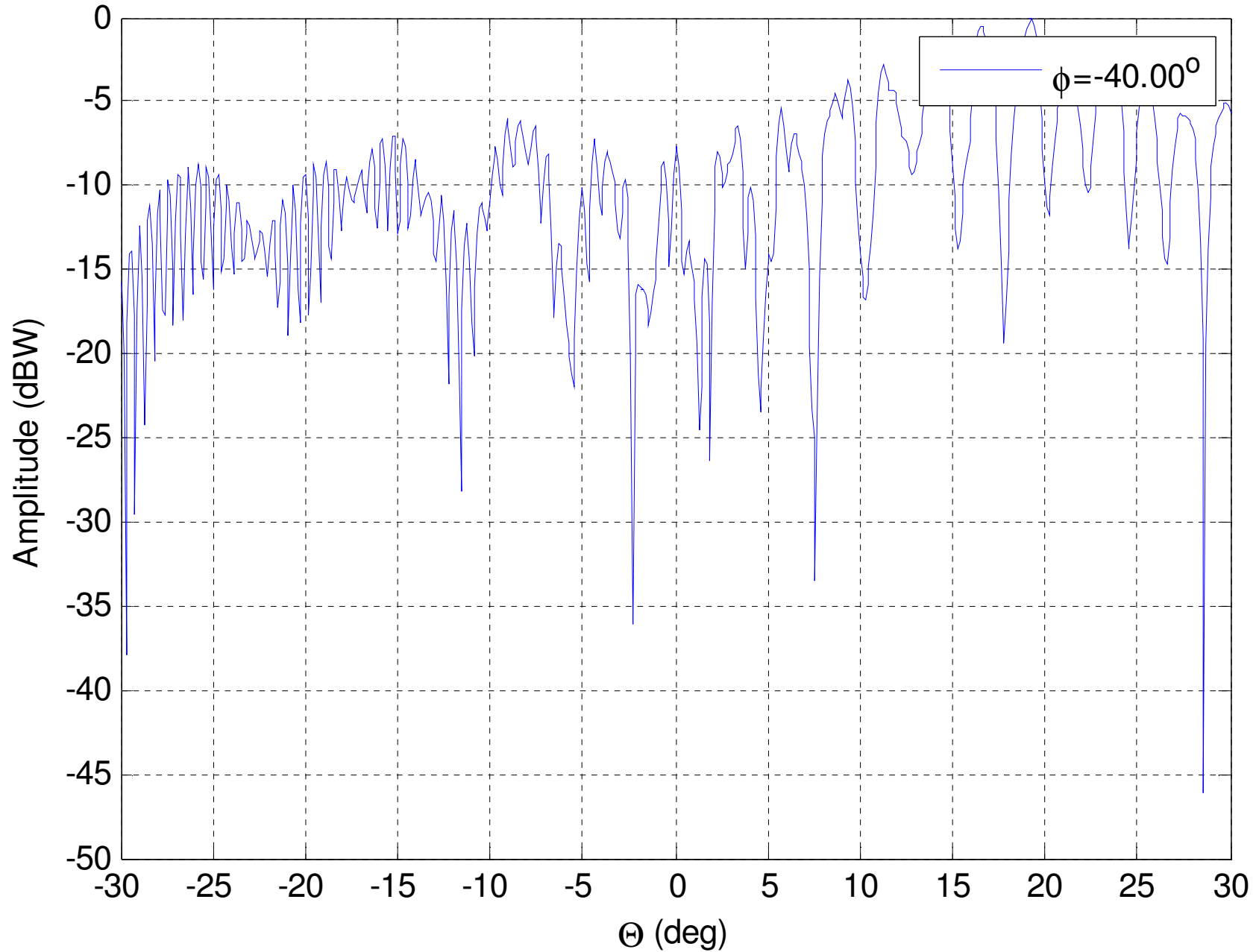
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -7.72 dBW, Date: 14-Dec-2011



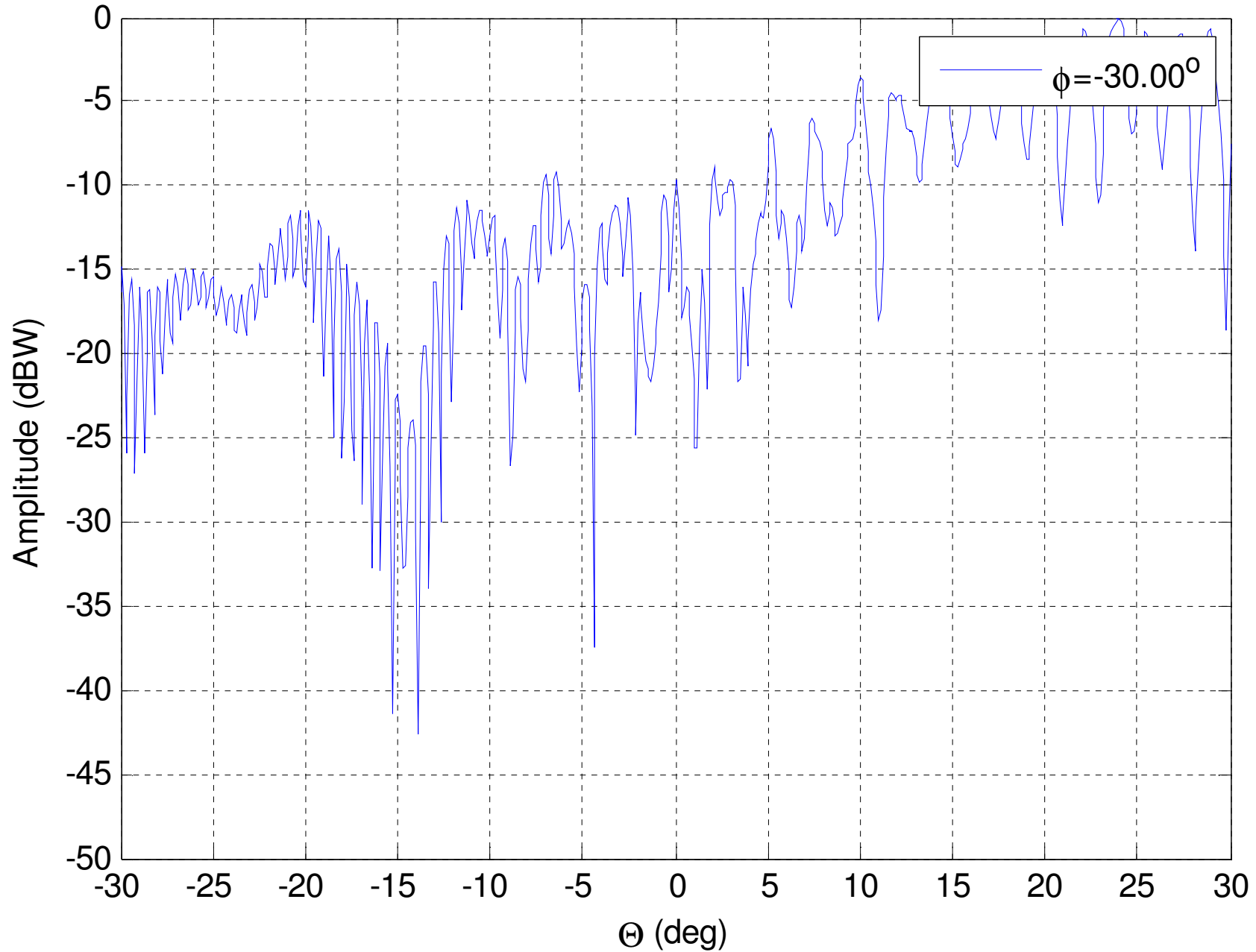
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -4.80 dBW, Date: 14-Dec-2011



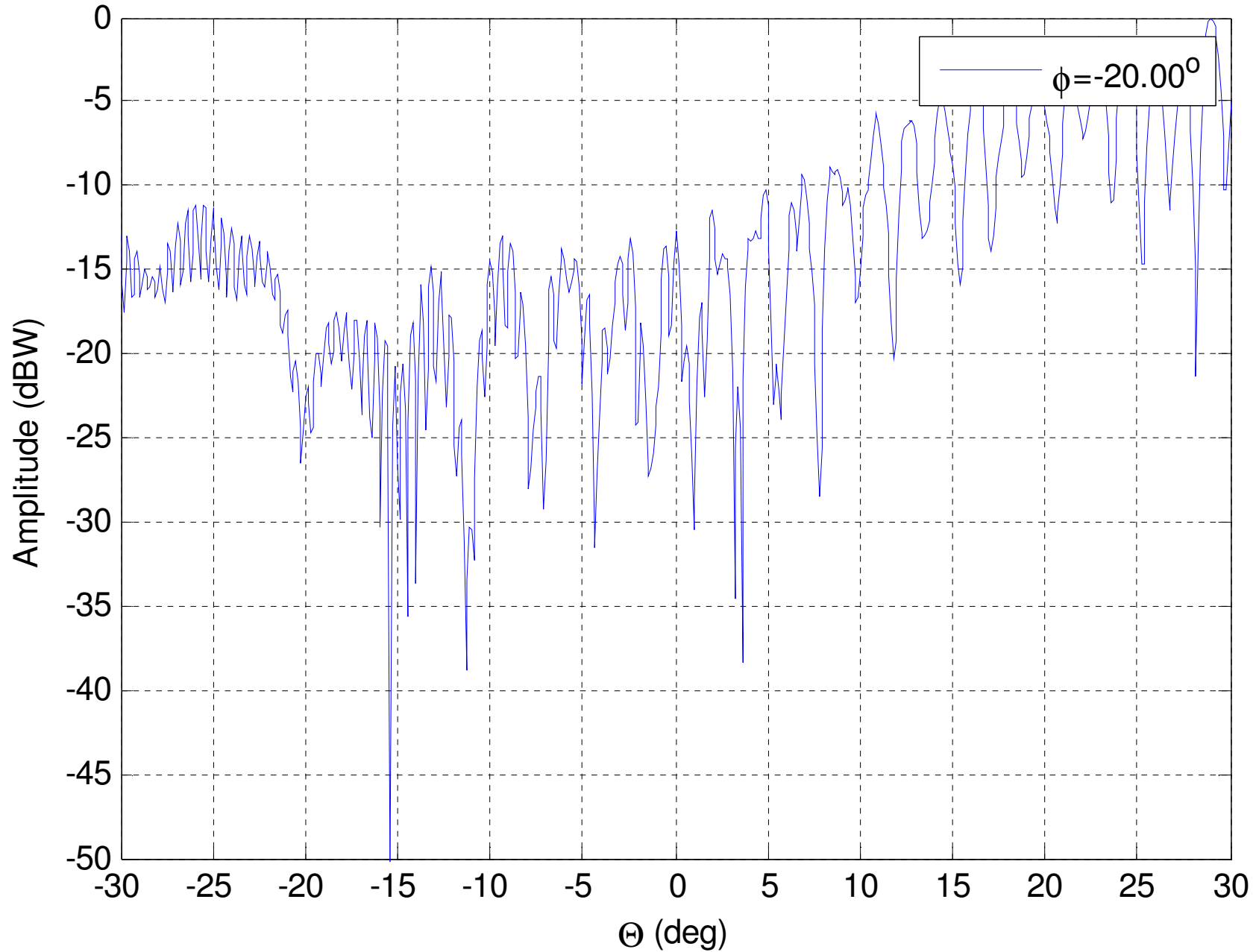
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -2.86 dBW, Date: 14-Dec-2011



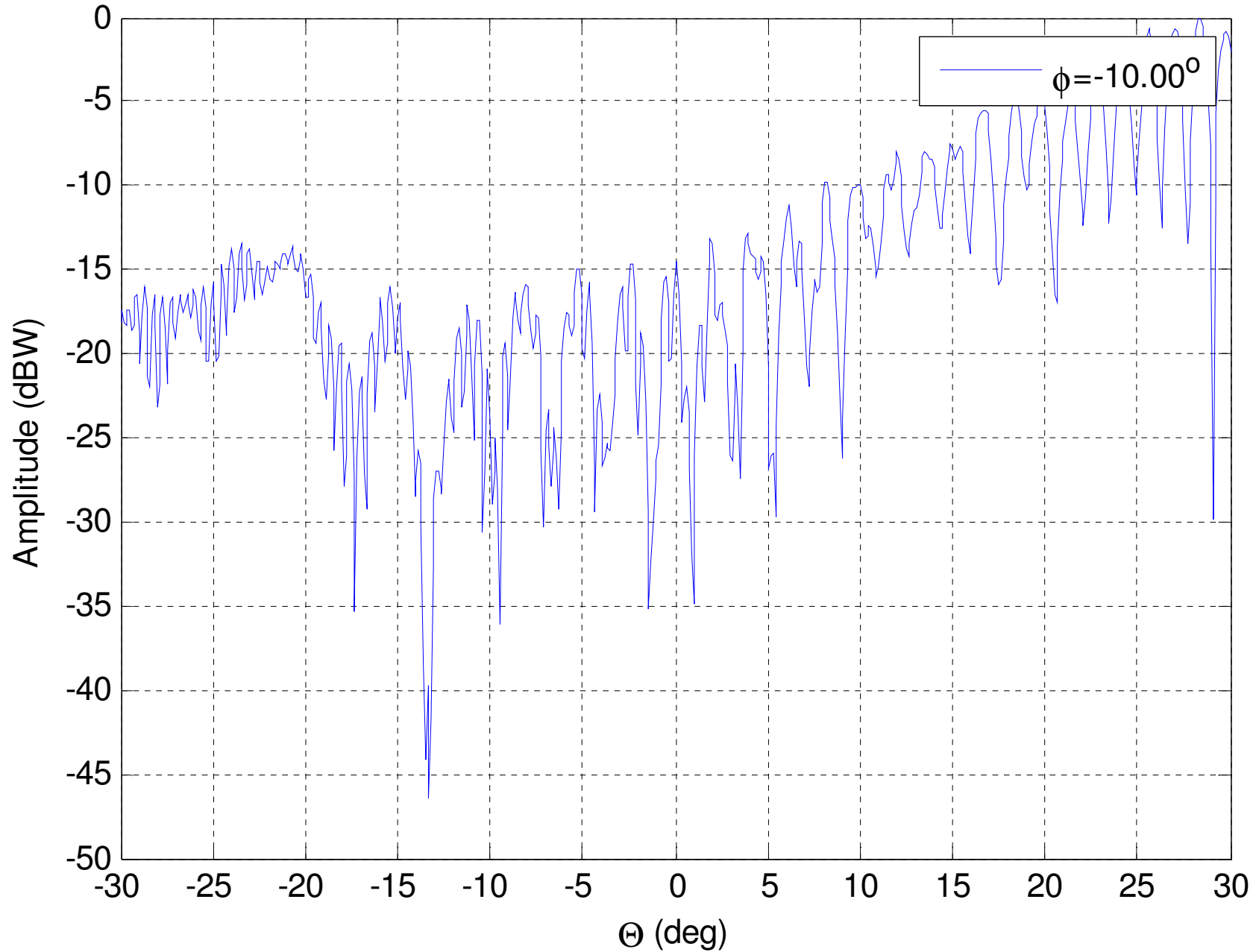
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 0.12 dBW, Date: 14-Dec-2011



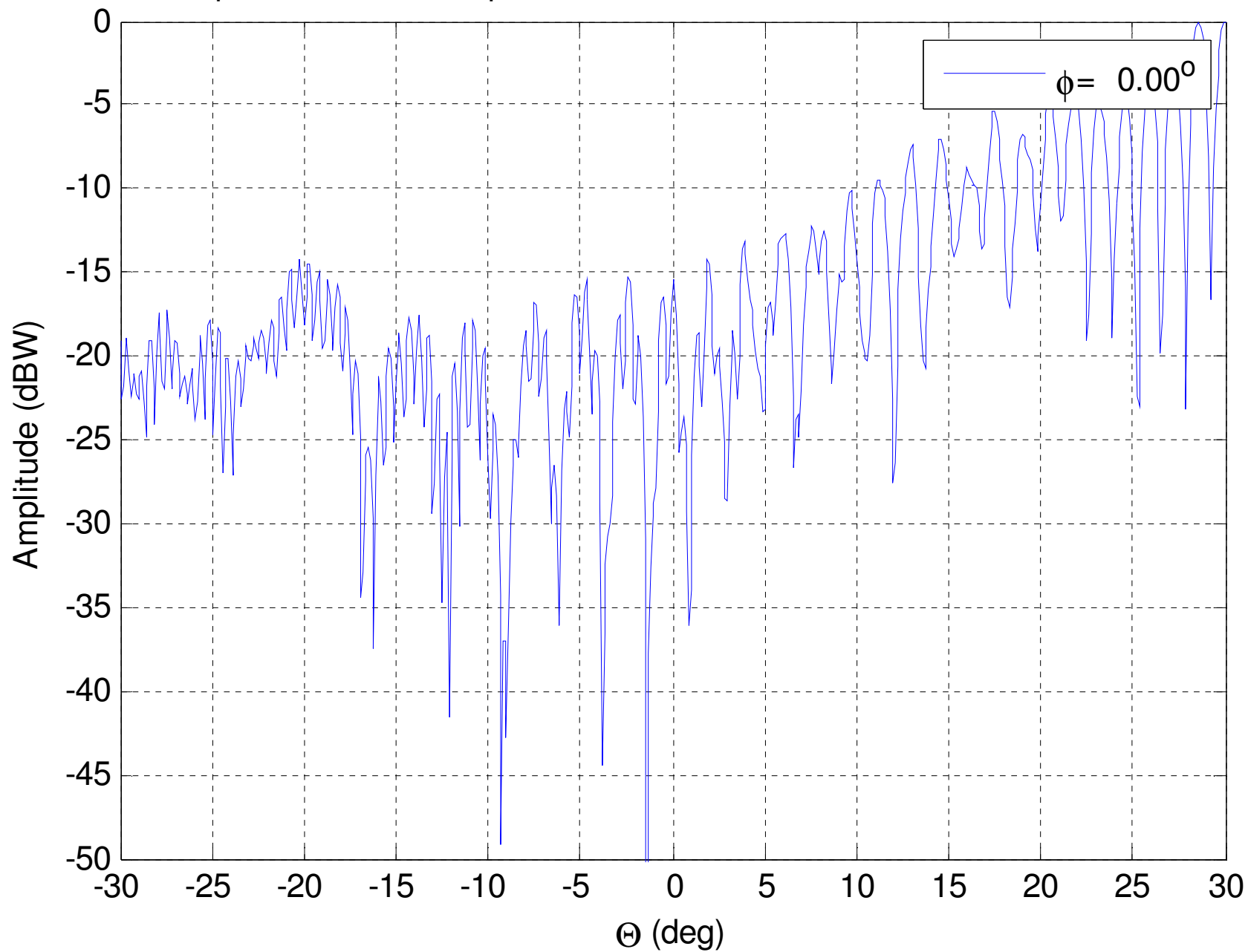
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 1.89 dBW, Date: 14-Dec-2011



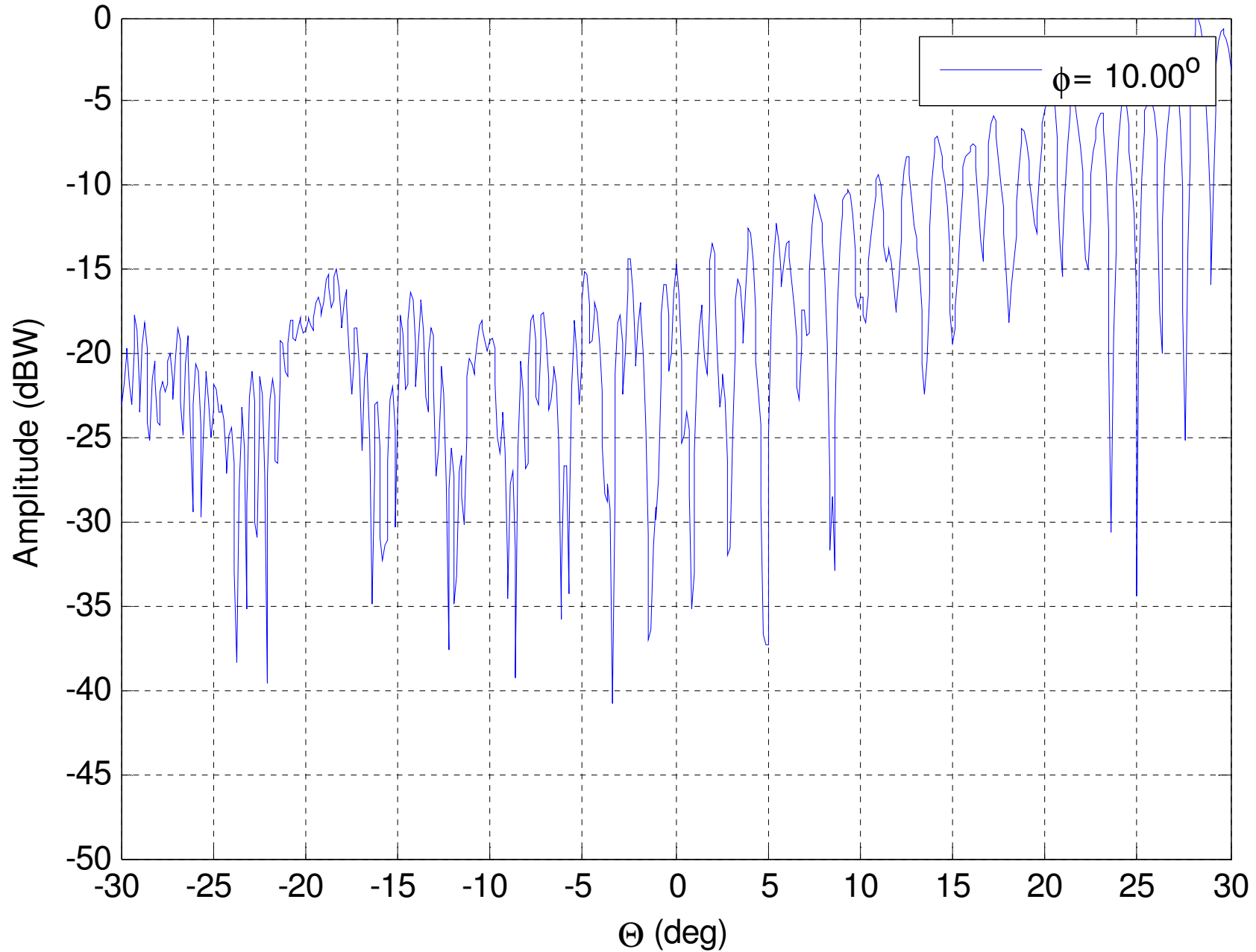
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 2.93 dBW, Date: 14-Dec-2011



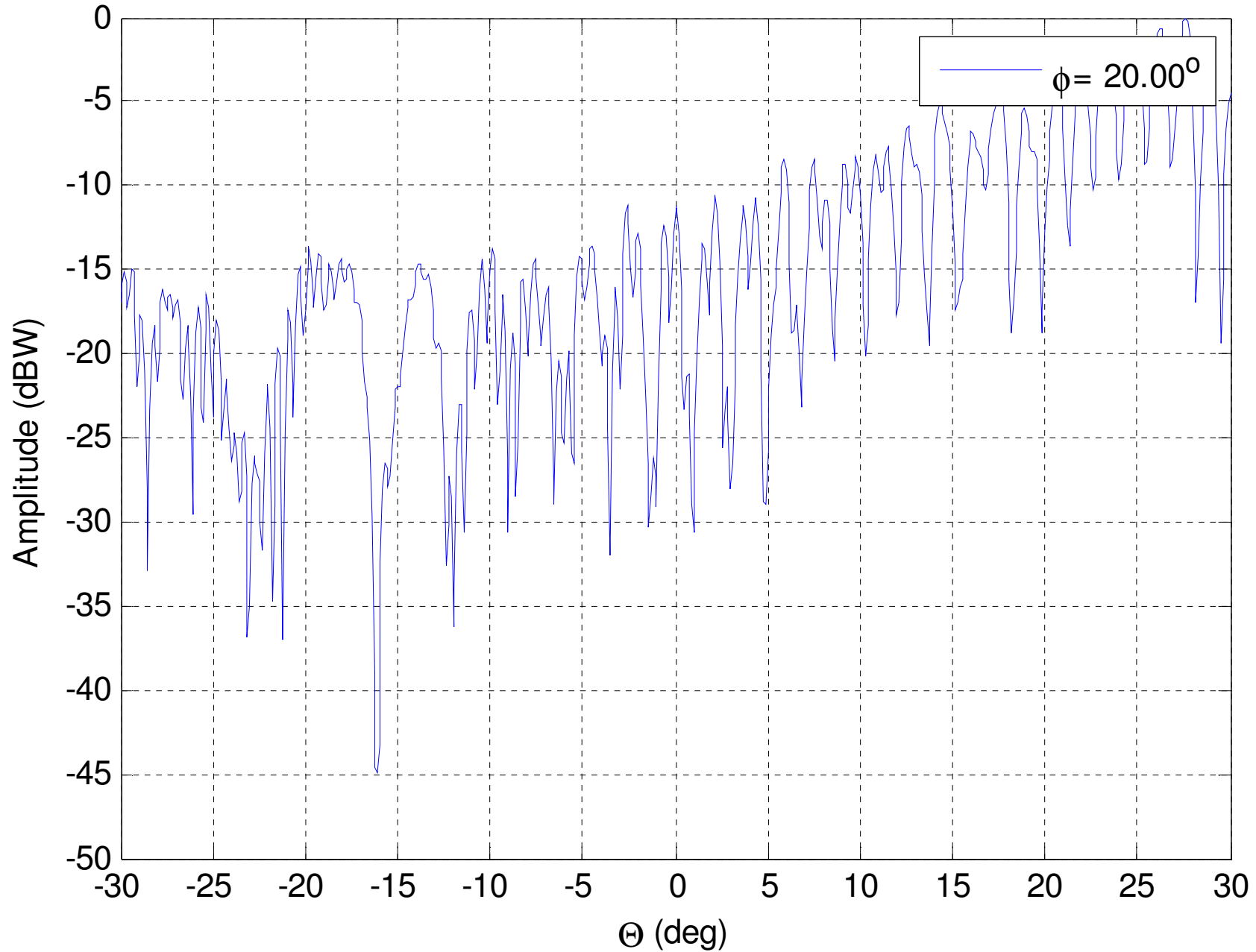
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 2.05 dBW, Date: 14-Dec-2011



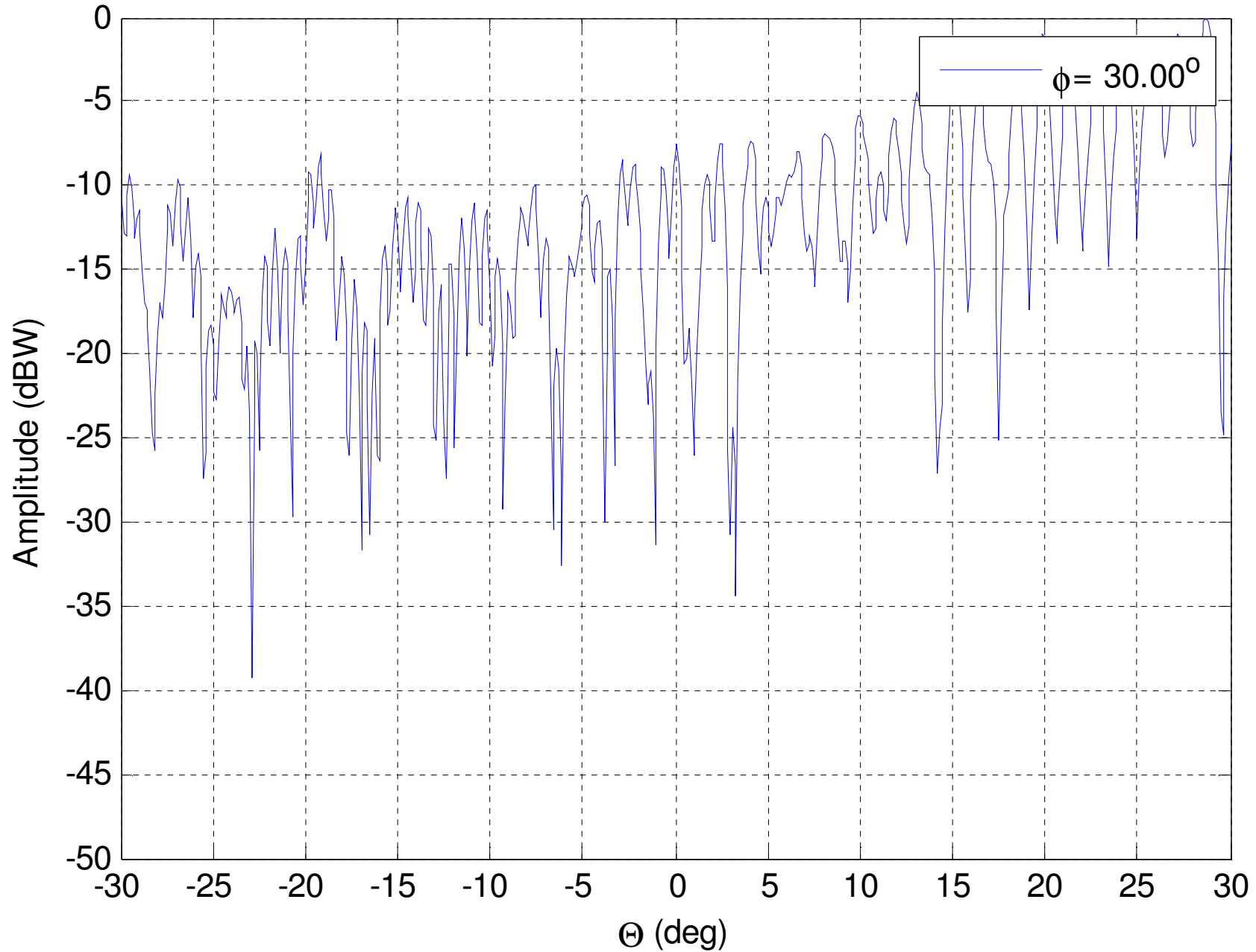
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -1.29 dBW, Date: 14-Dec-2011



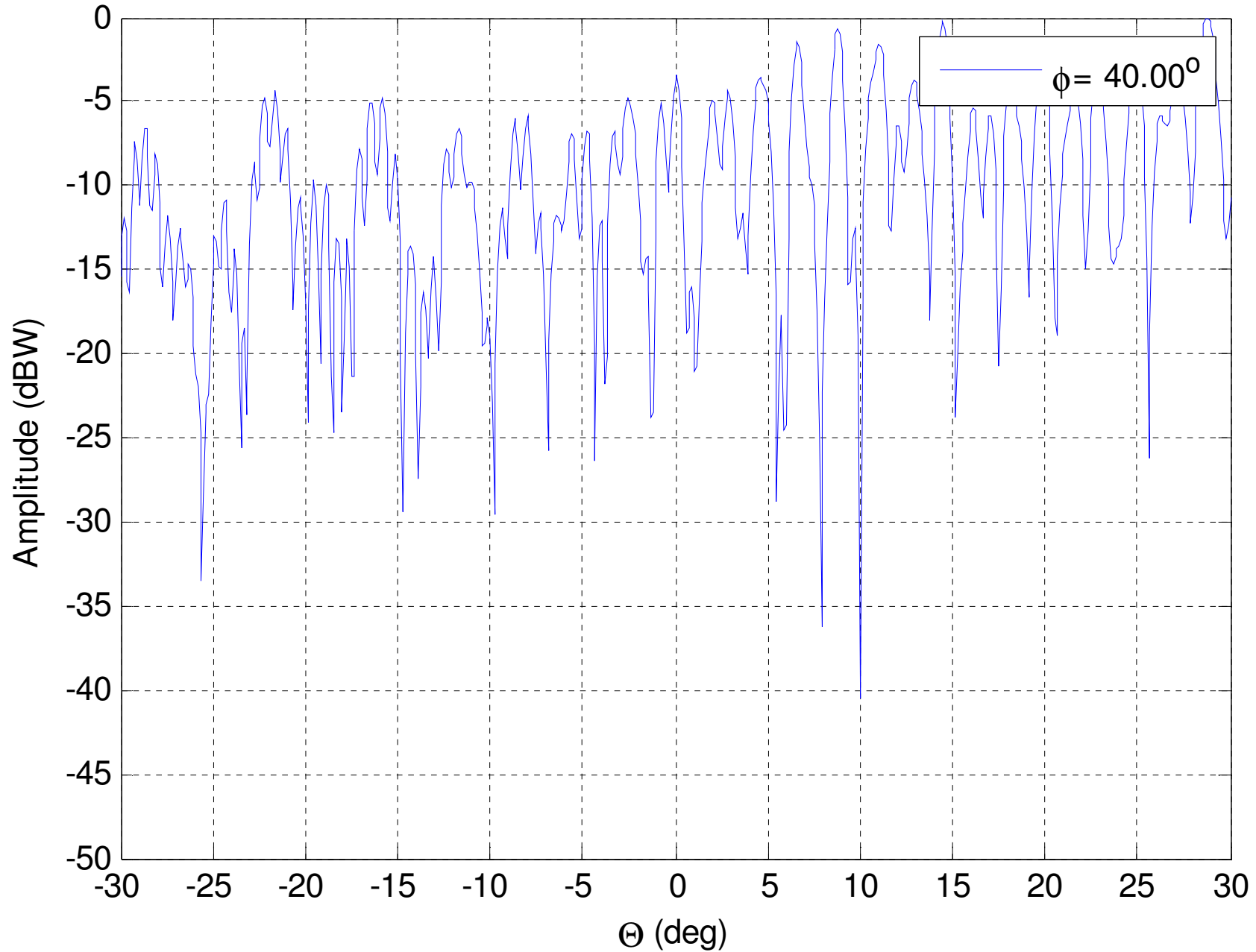
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -4.96 dBW, Date: 14-Dec-2011



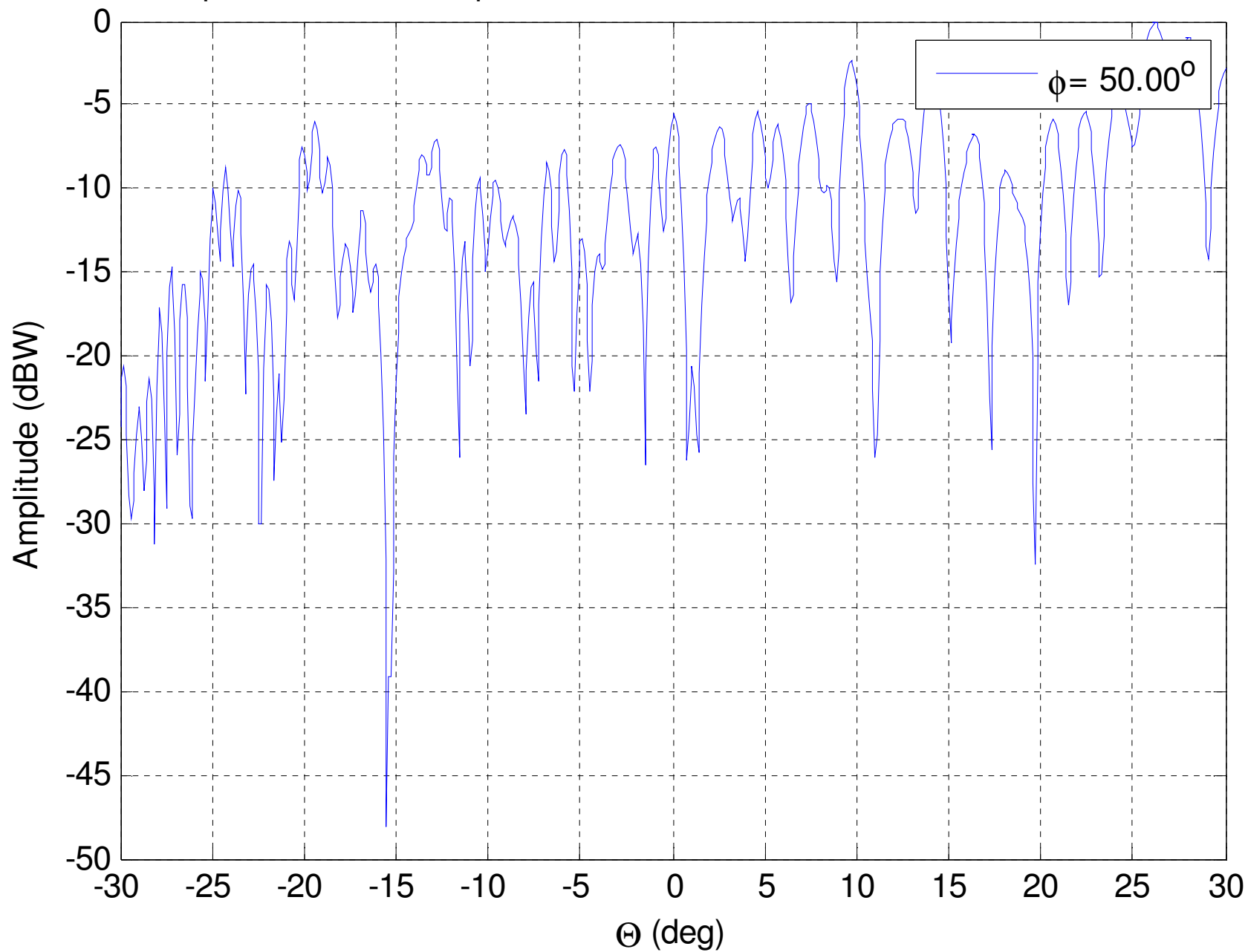
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -8.98 dBW, Date: 14-Dec-2011



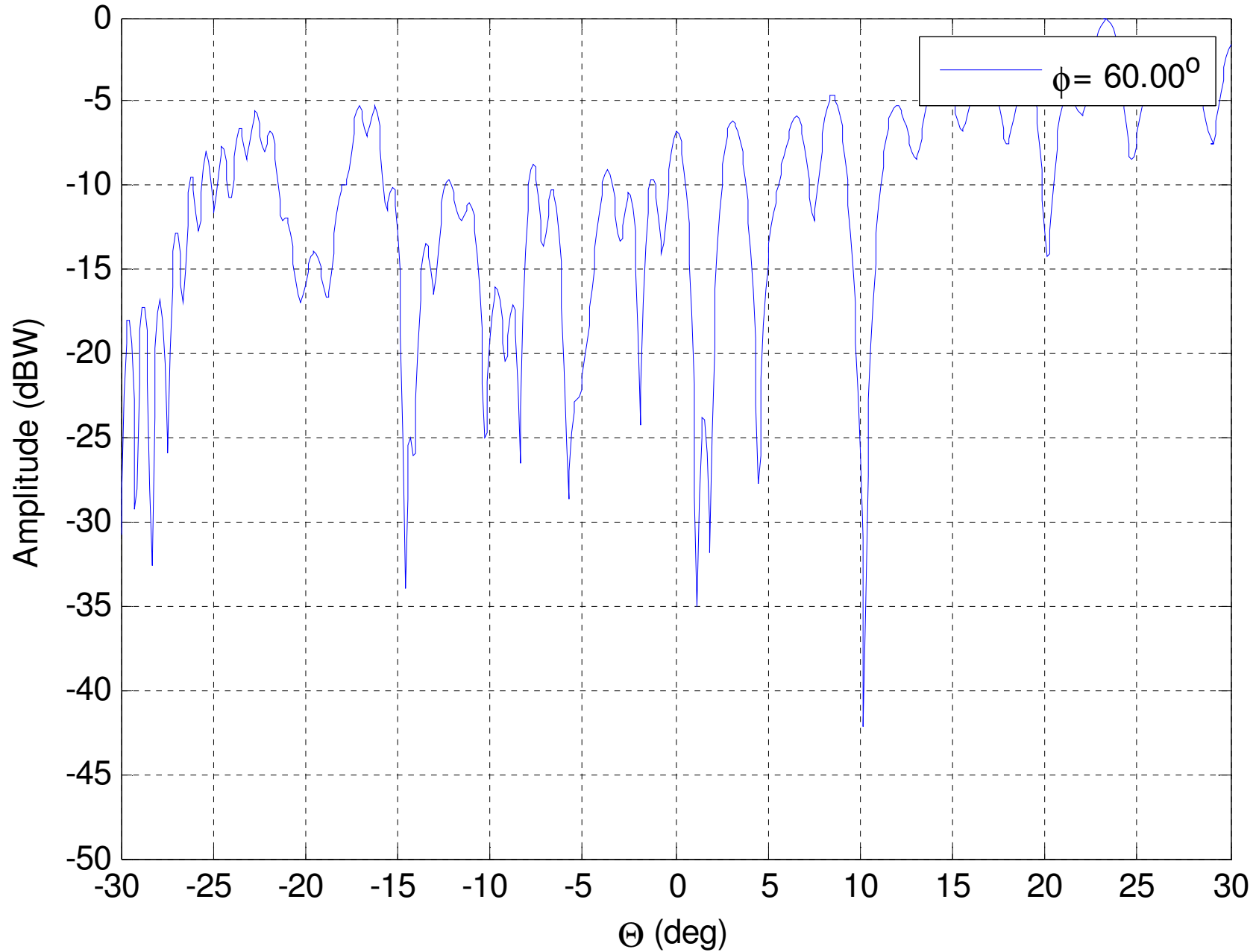
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -6.94 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

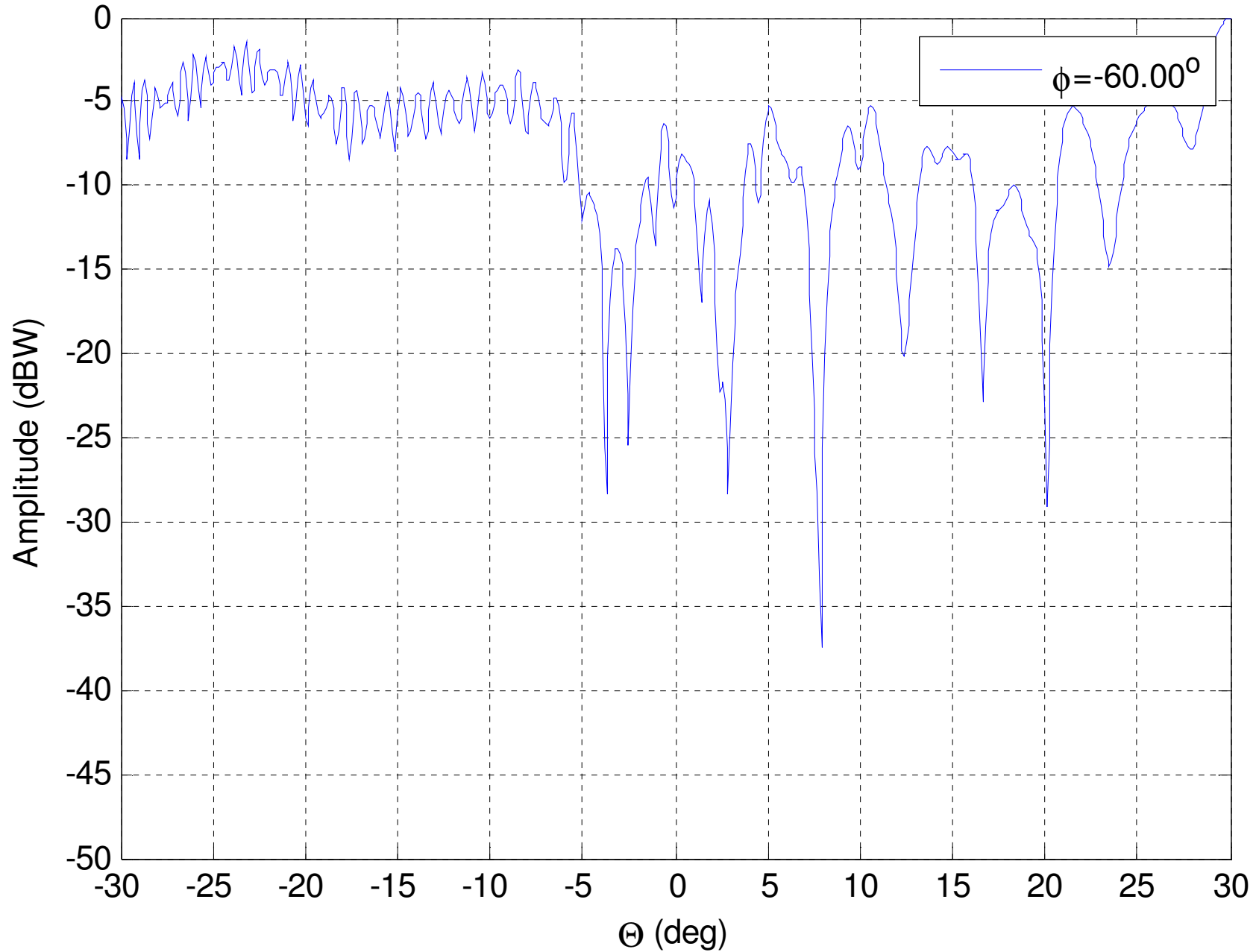
Input file: tx-17.3-lhcp-60.cut, Peak: -5.74 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

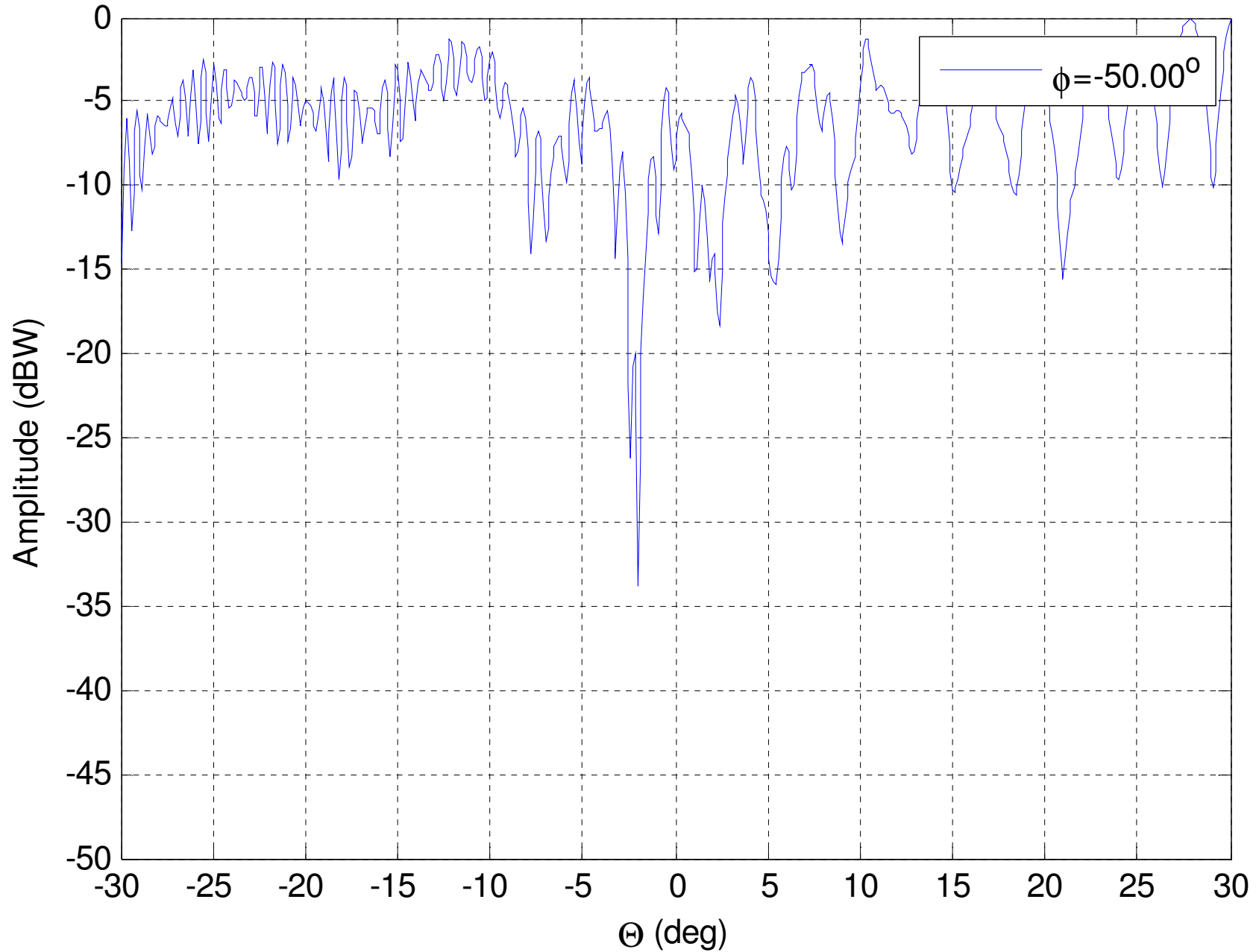
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -5.58 dBW, Date: 14-Dec-2011



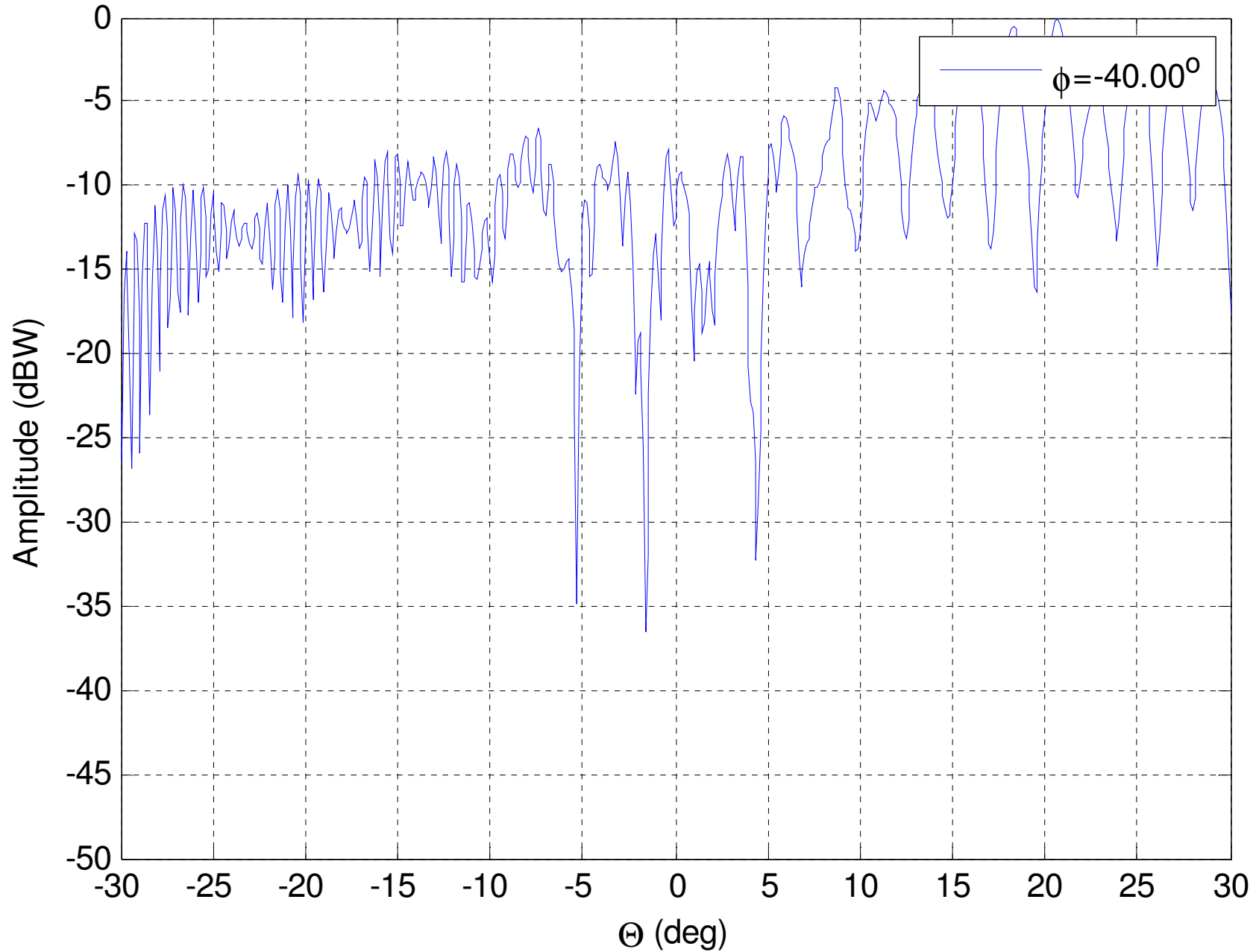
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -7.85 dBW, Date: 14-Dec-2011



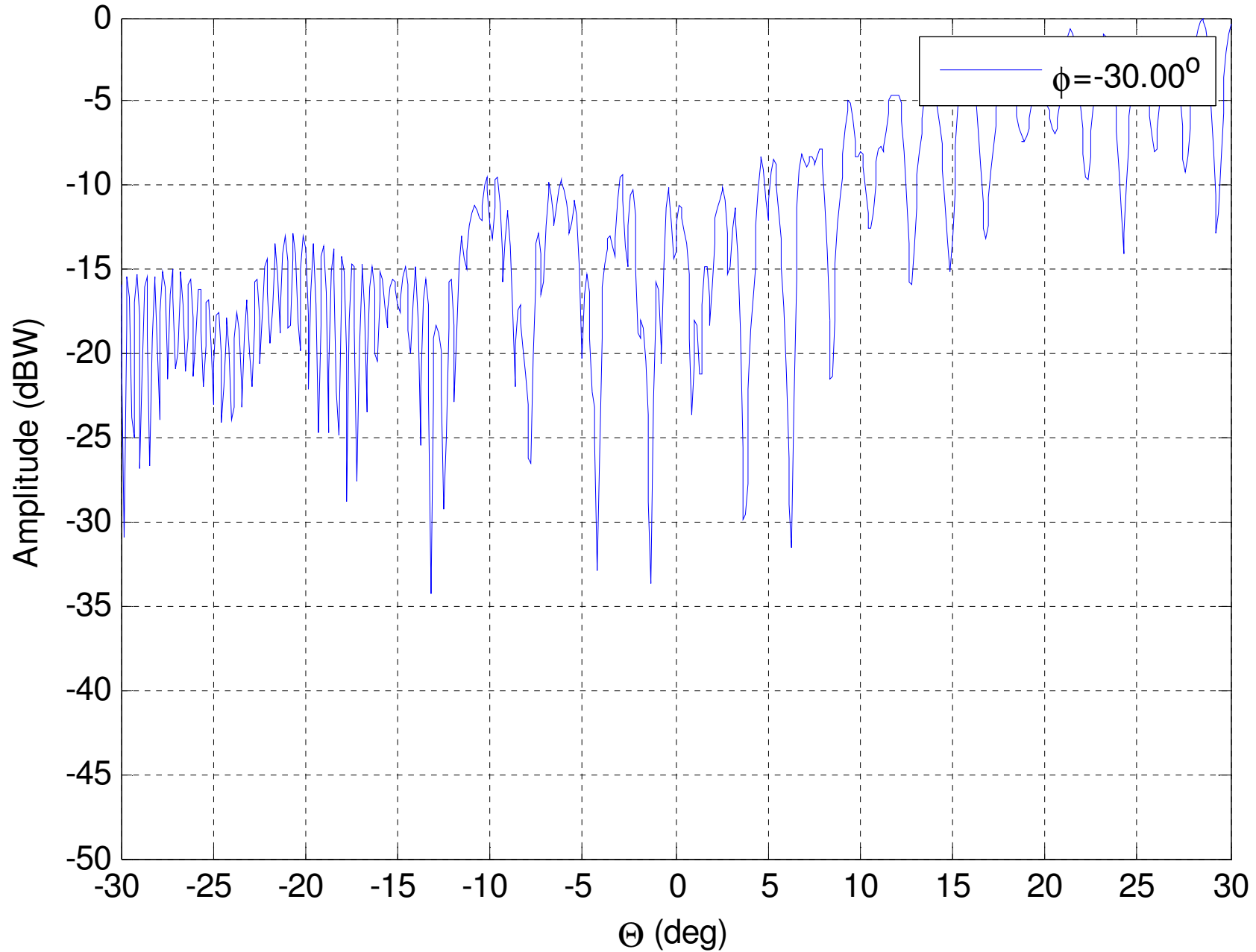
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.38 dBW, Date: 14-Dec-2011



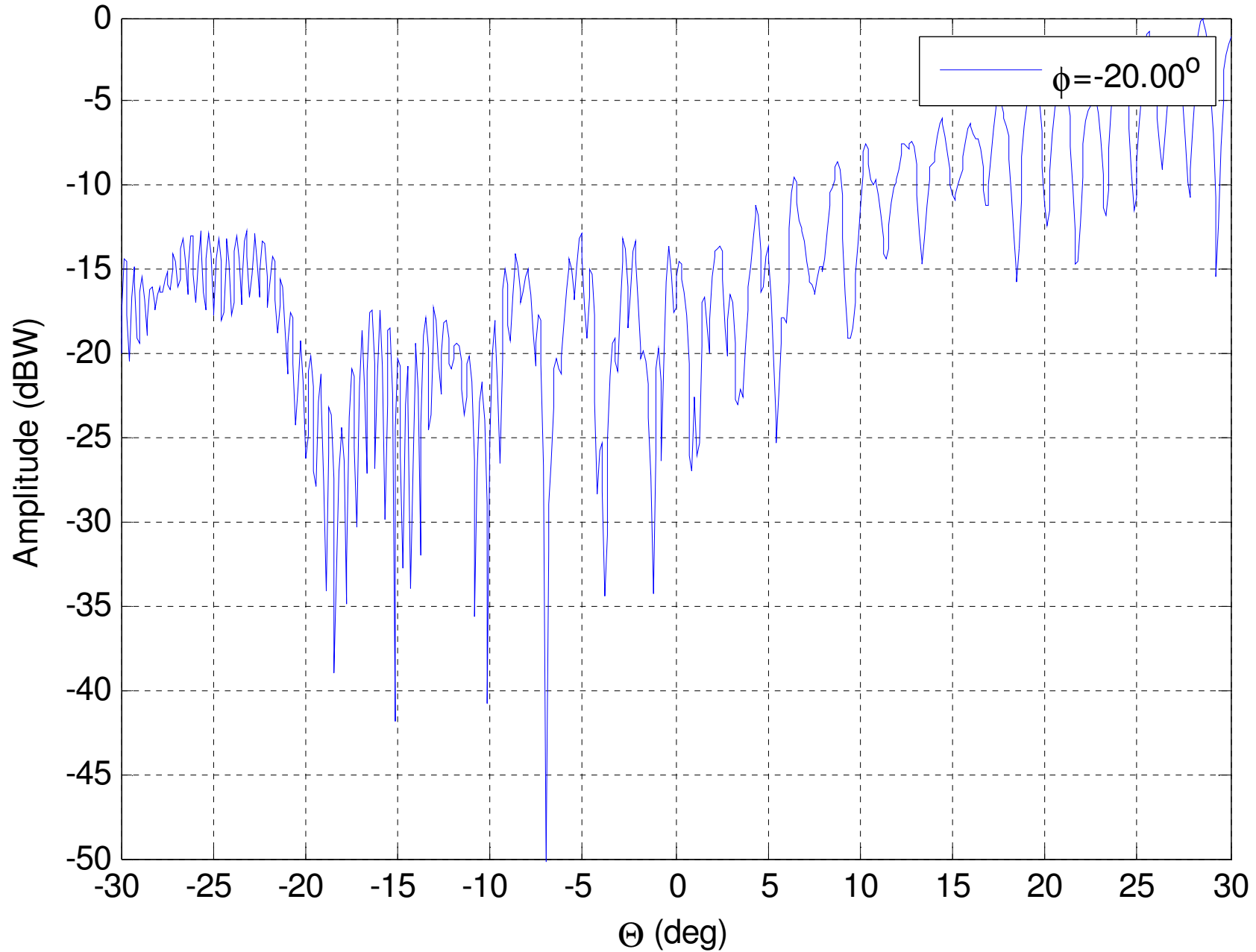
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -2.38 dBW, Date: 14-Dec-2011



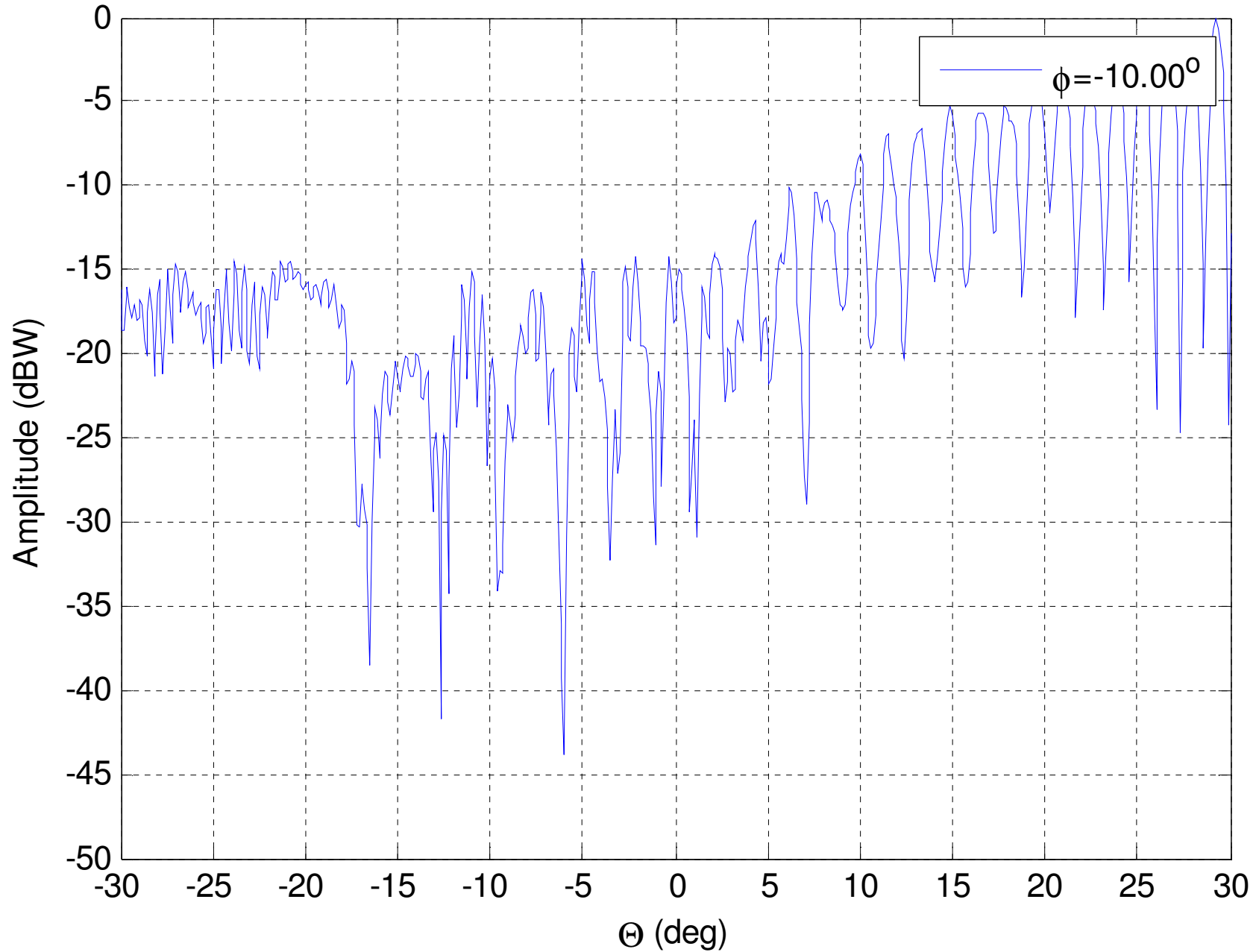
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 0.92 dBW, Date: 14-Dec-2011



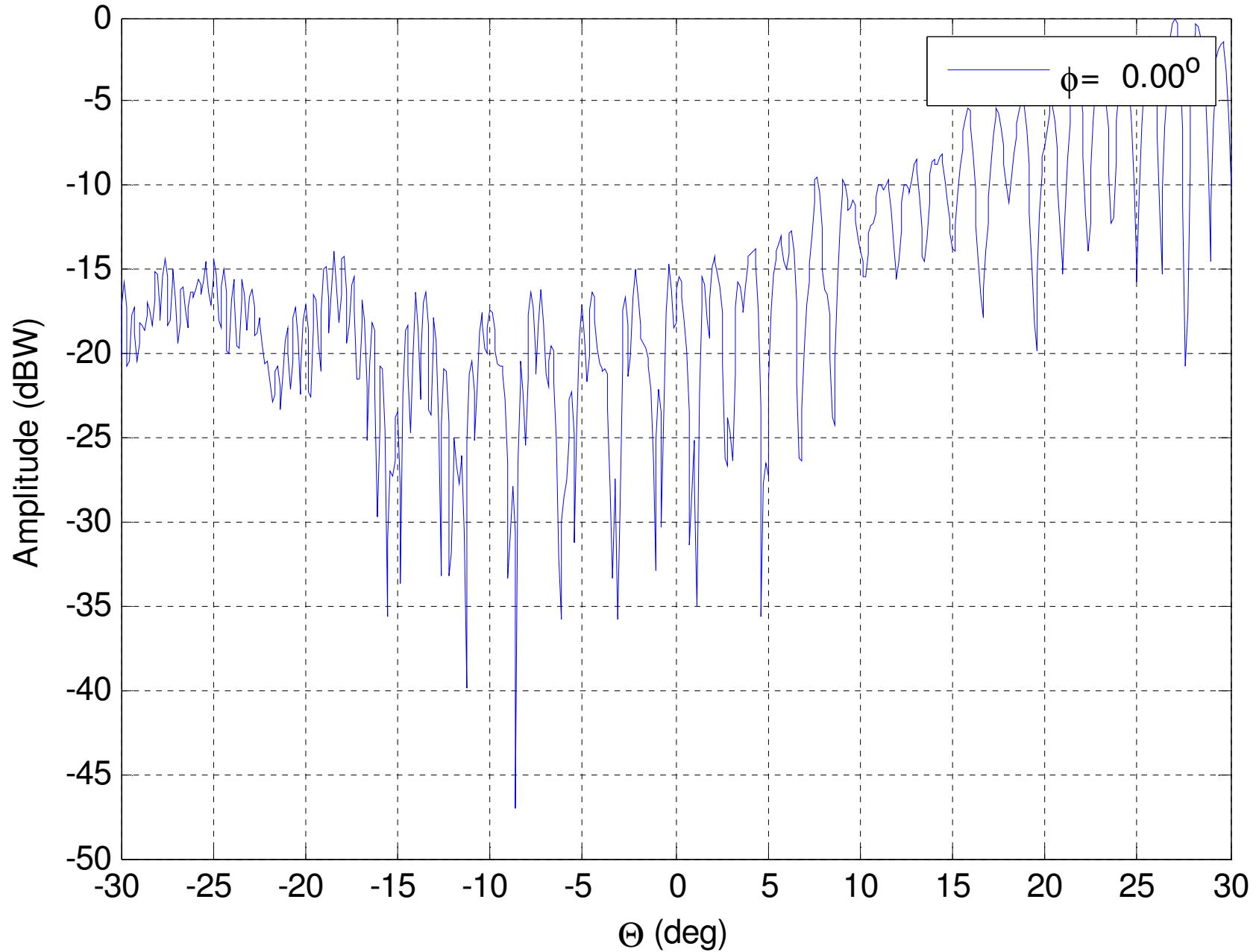
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 1.46 dBW, Date: 14-Dec-2011



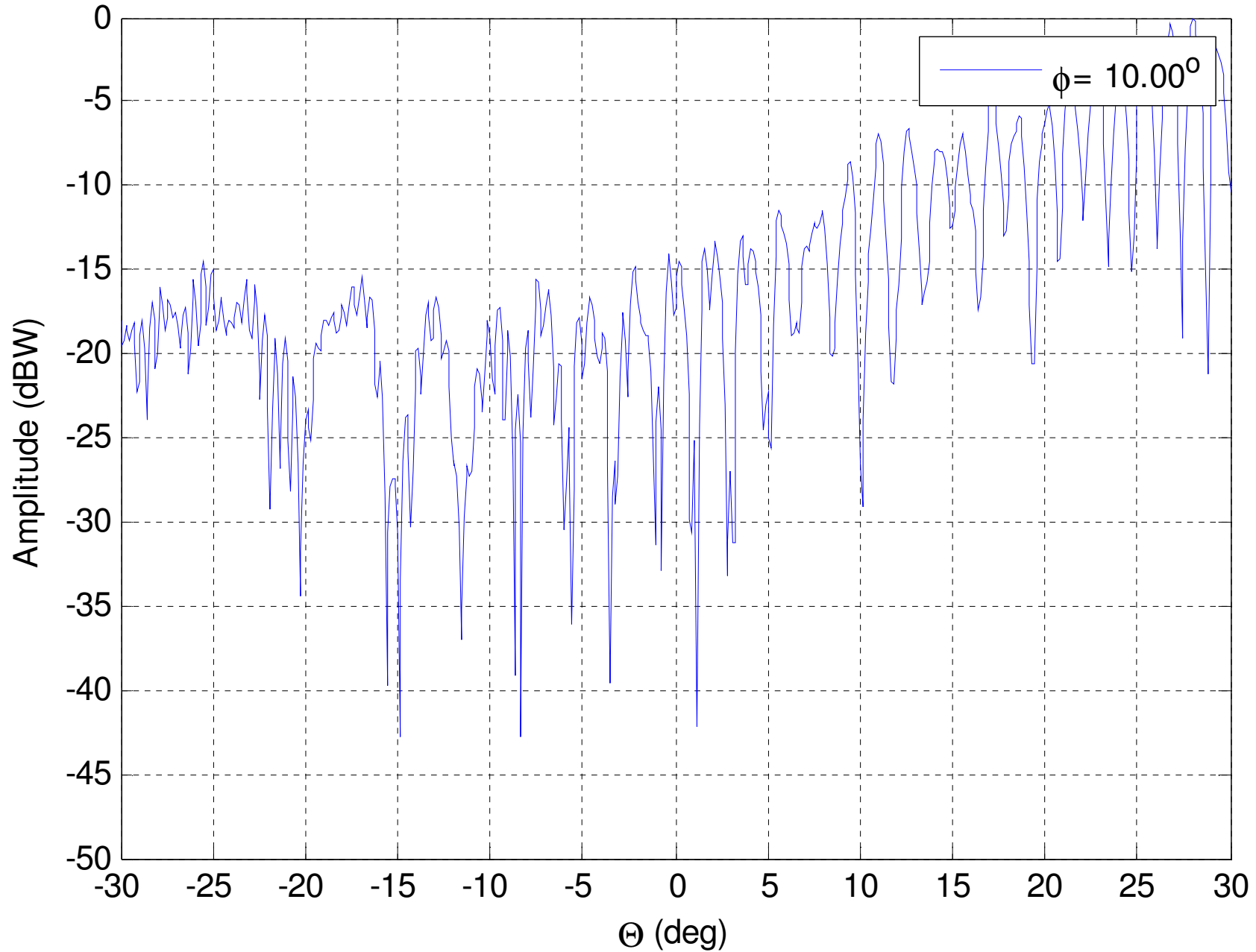
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 1.82 dBW, Date: 14-Dec-2011



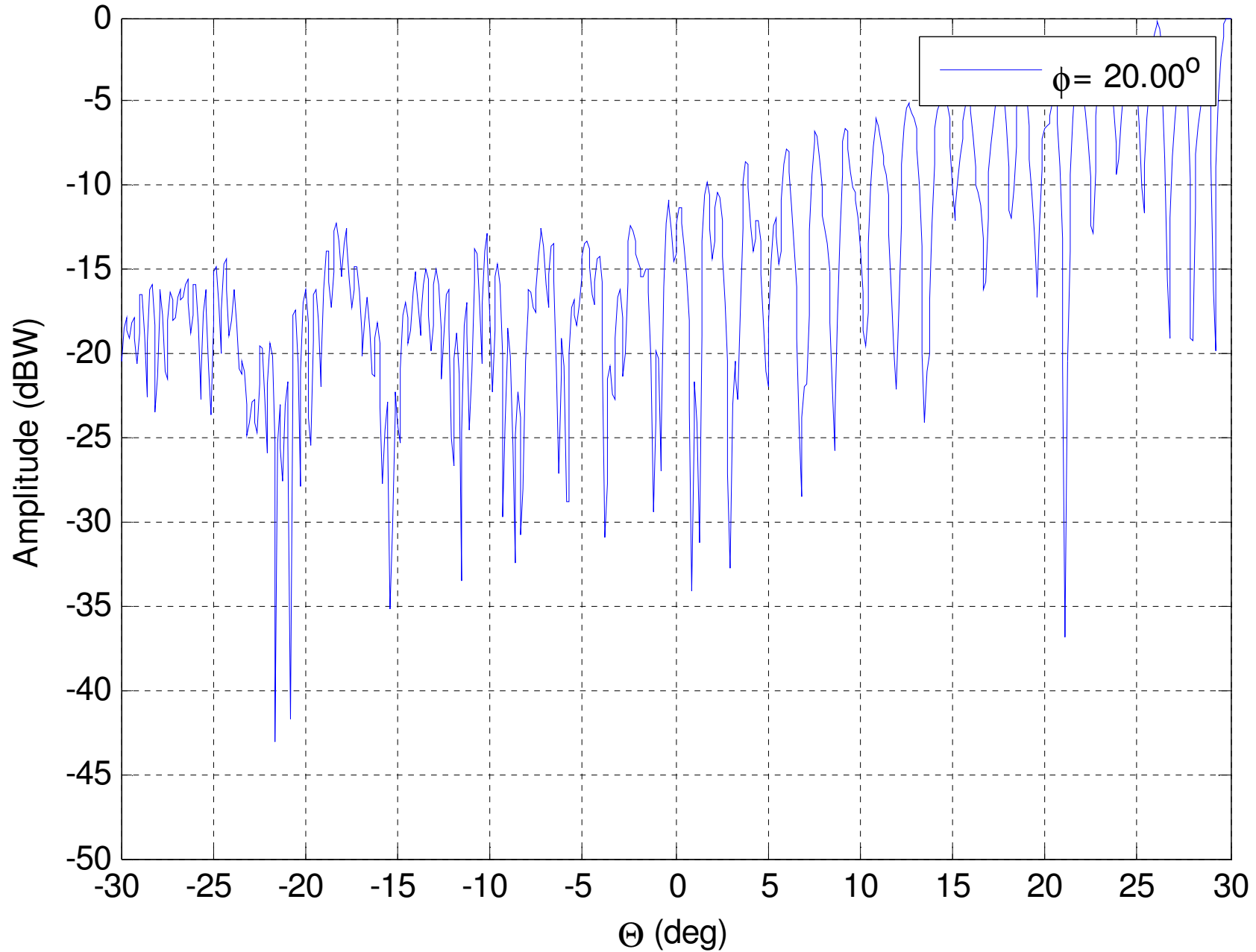
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 1.00 dBW, Date: 14-Dec-2011



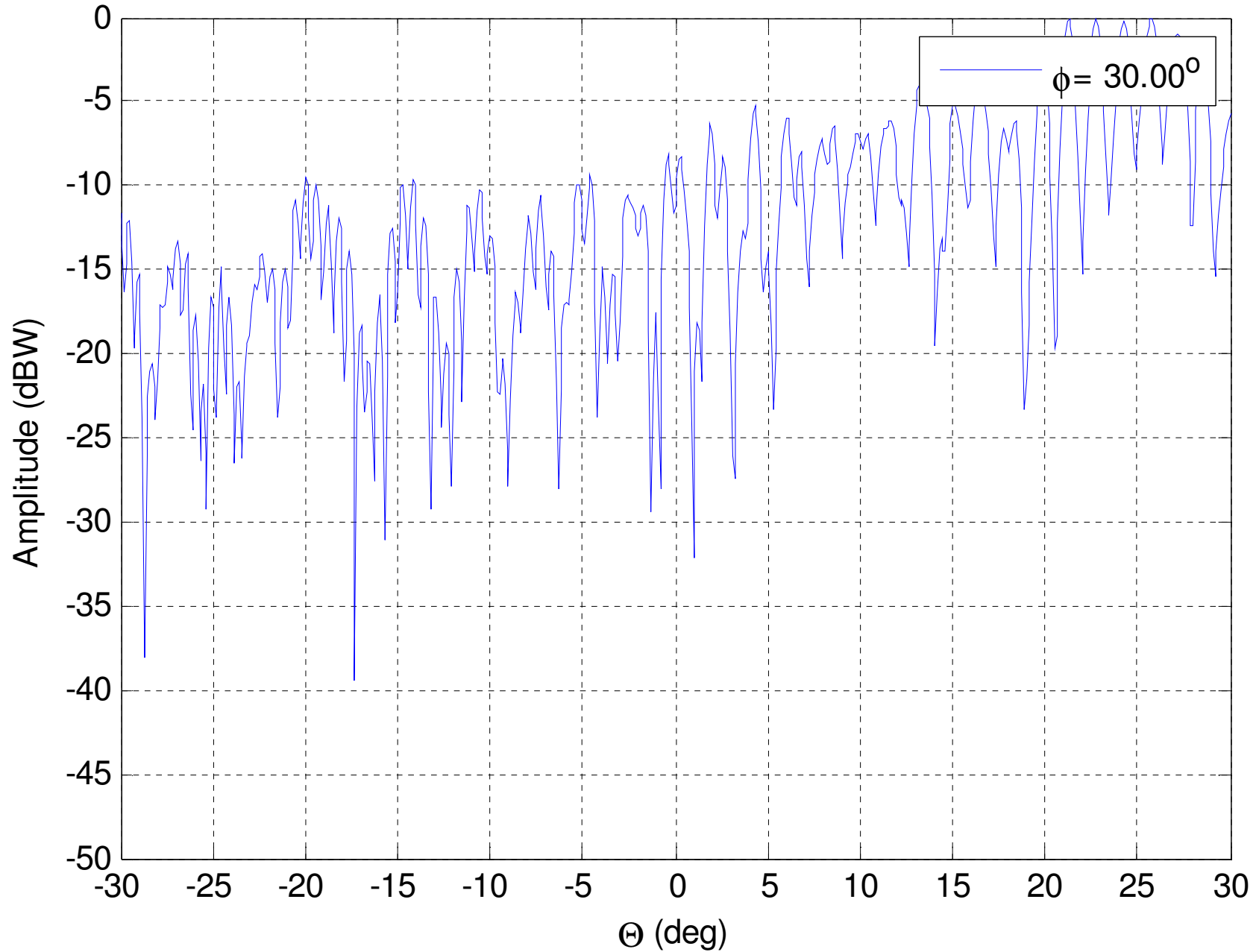
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -2.30 dBW, Date: 14-Dec-2011



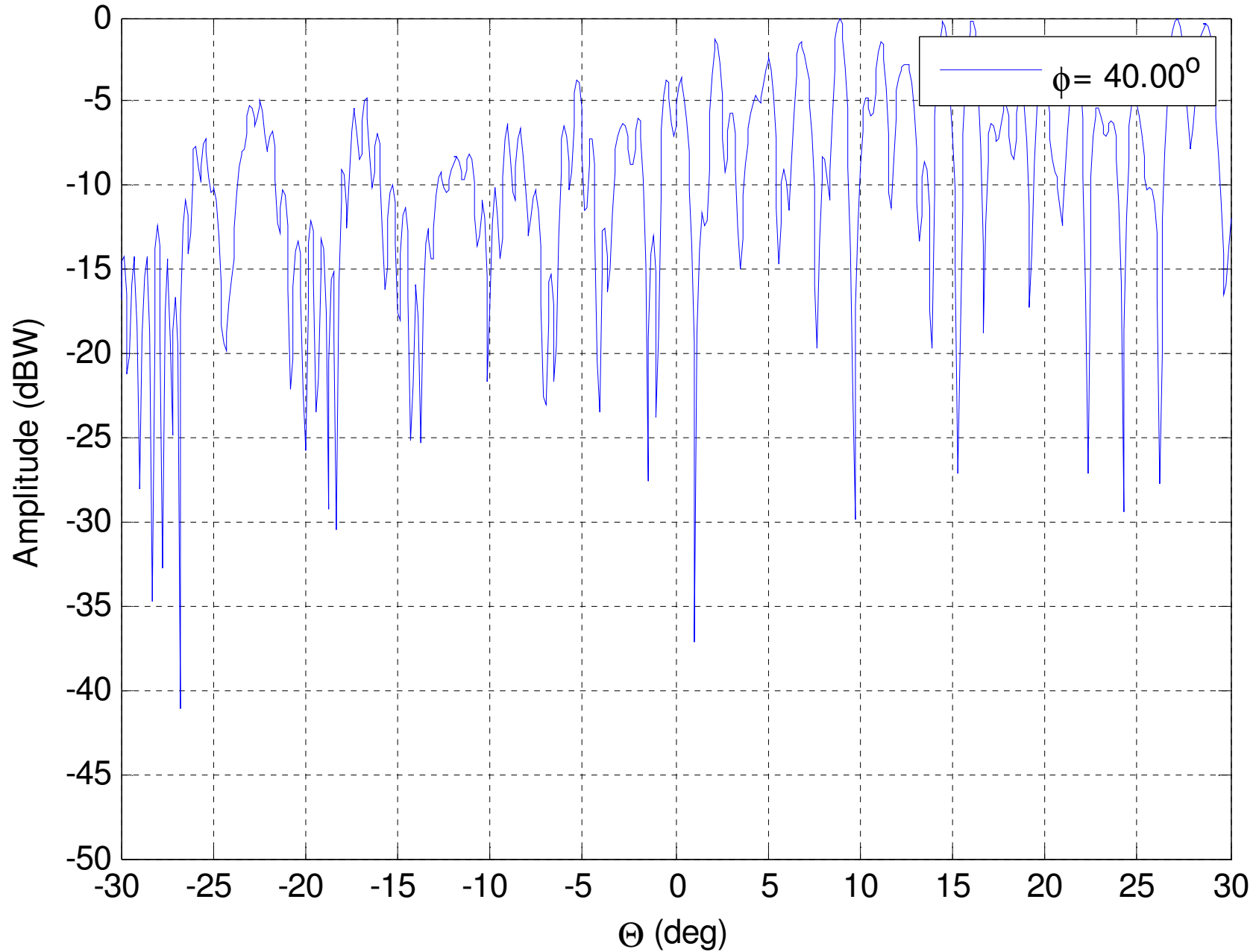
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -5.22 dBW, Date: 14-Dec-2011



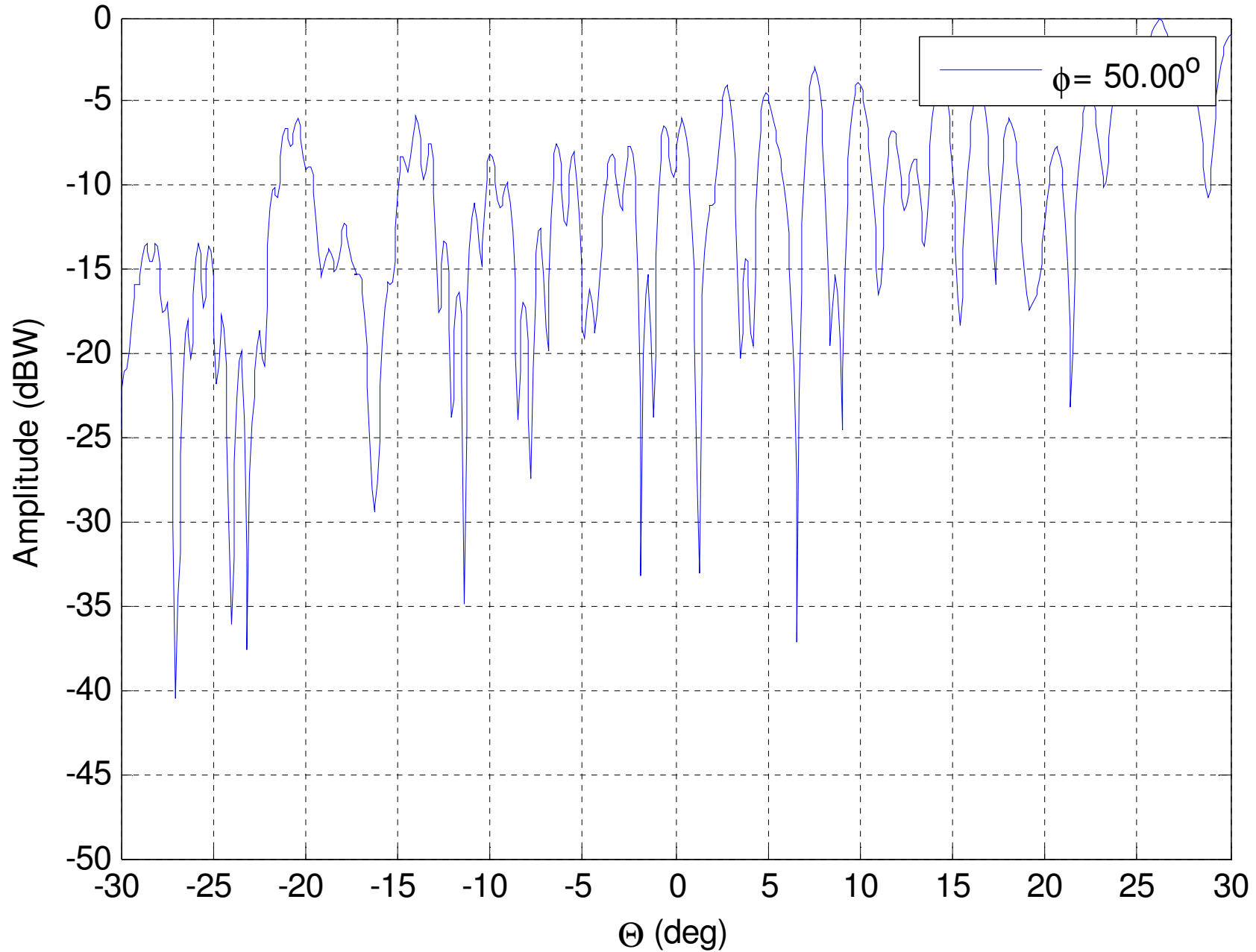
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -9.88 dBW, Date: 14-Dec-2011



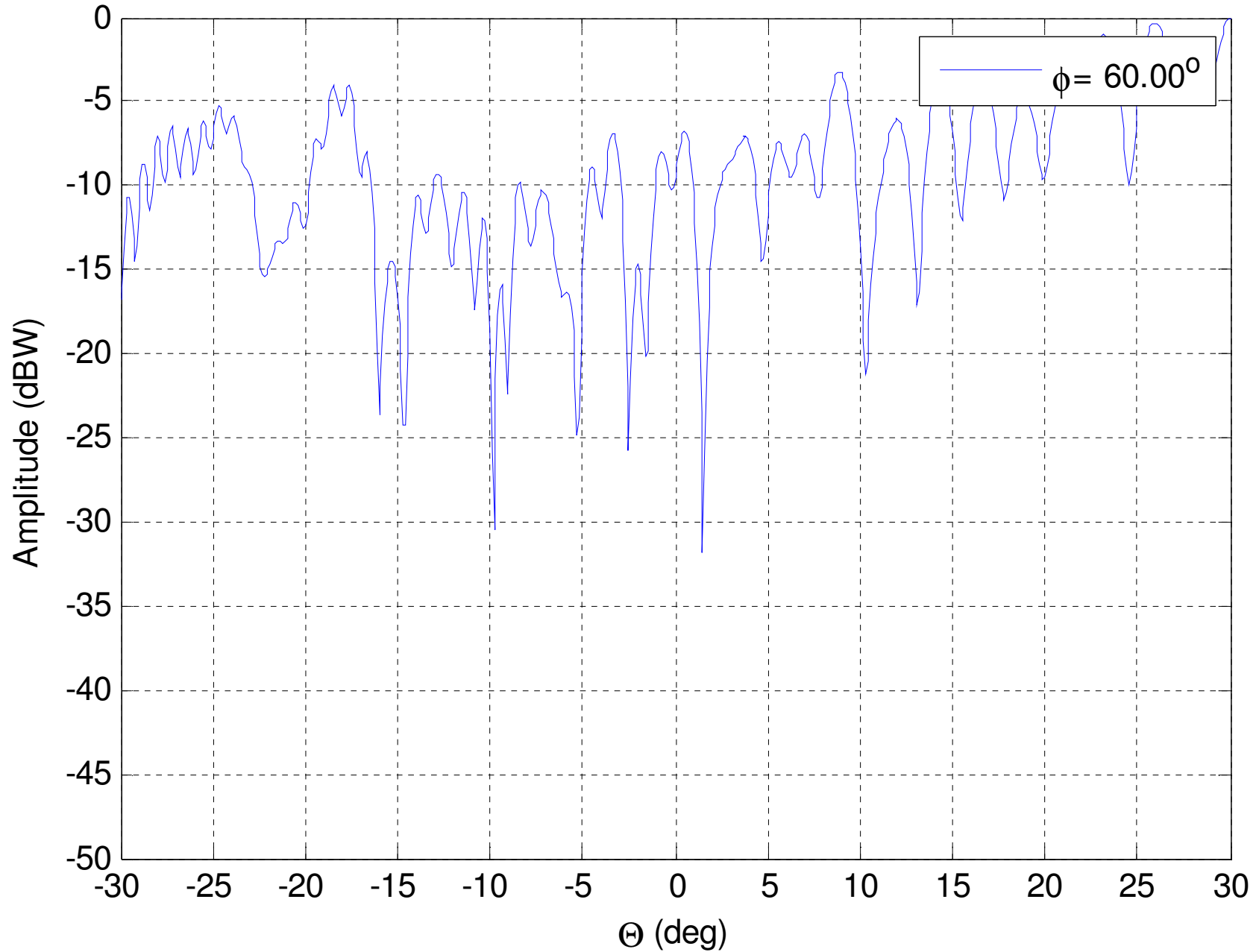
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -7.51 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

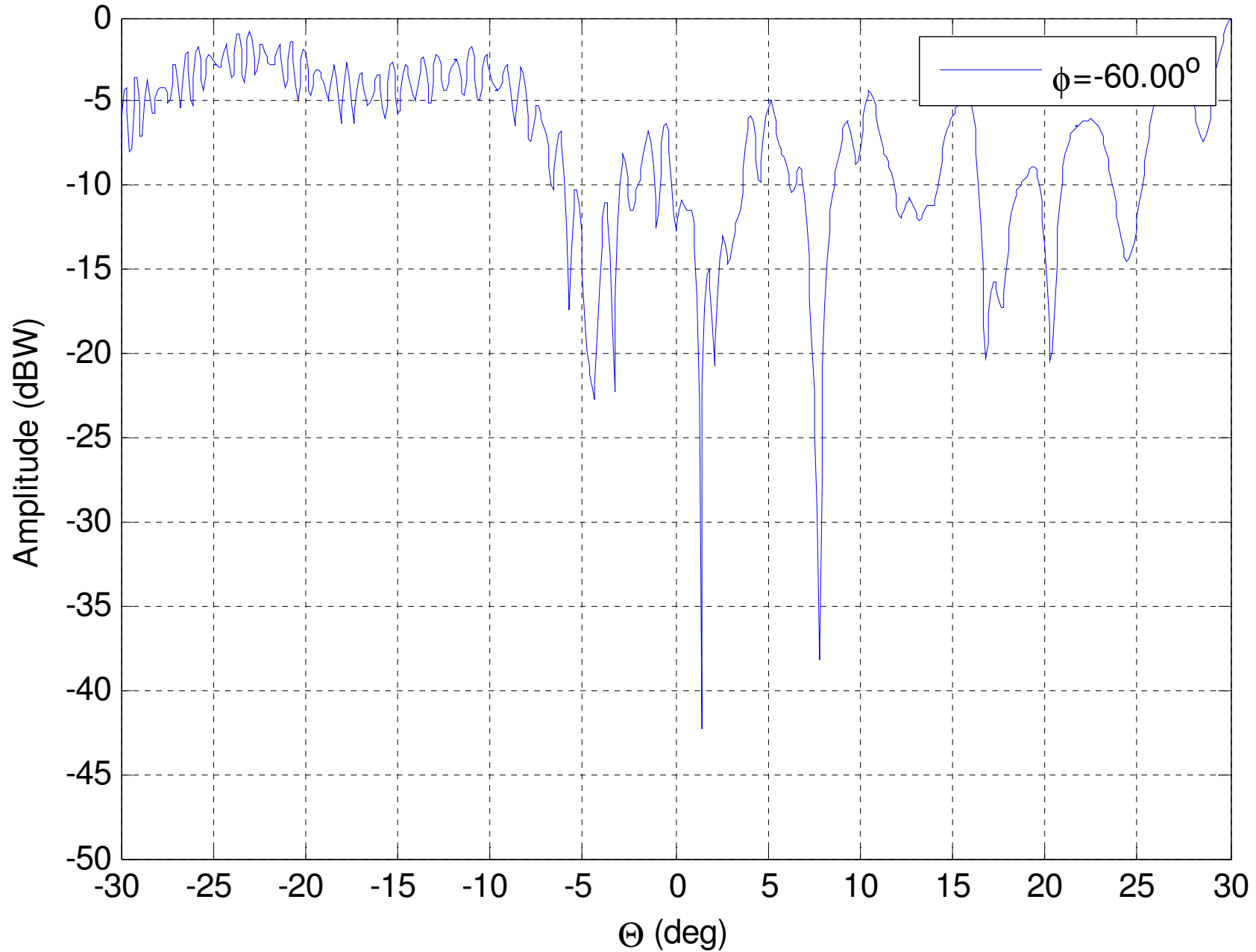
Input file: tx-17.5-rhcp-60.cut, Peak: -6.85 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

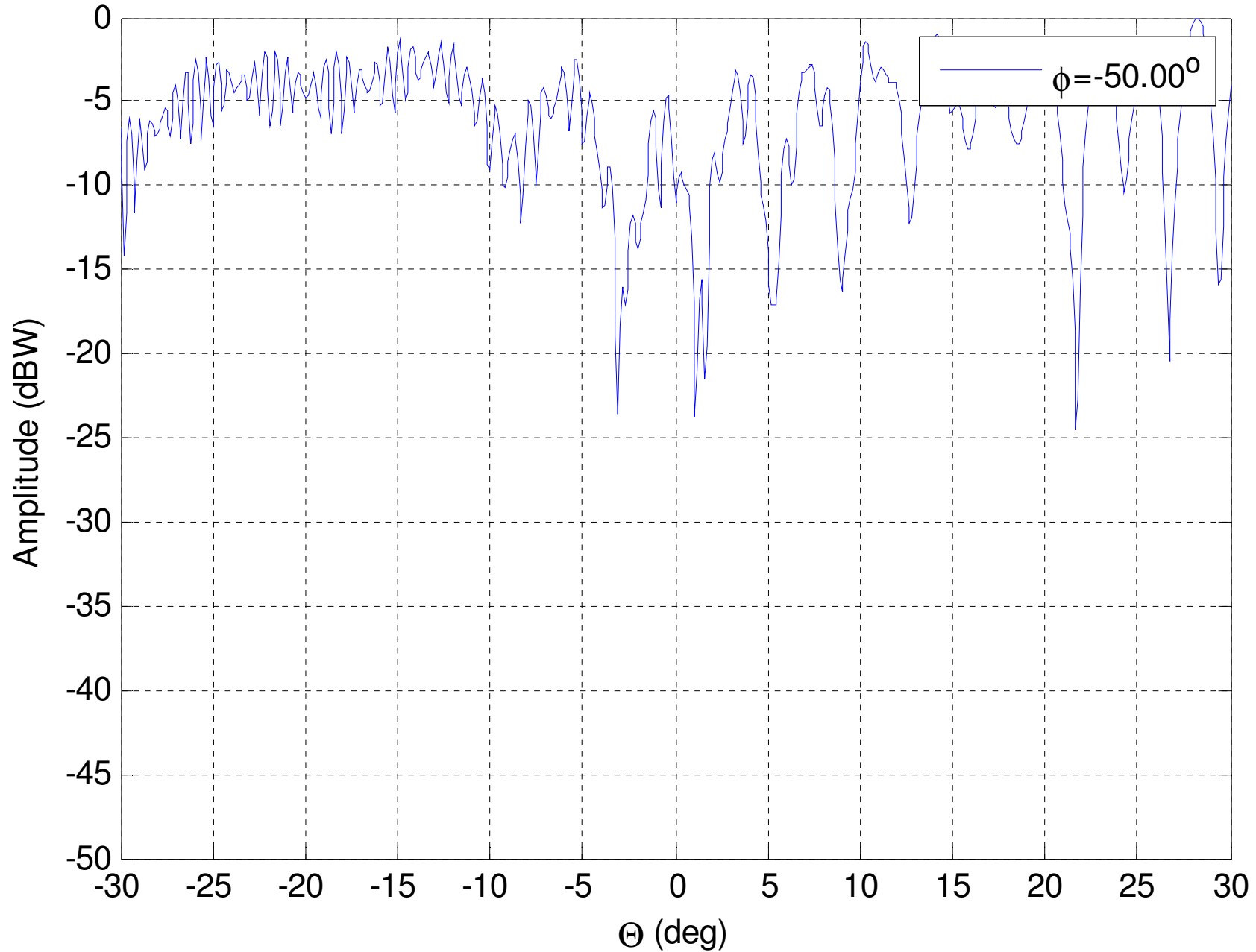
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -6.09 dBW, Date: 14-Dec-2011



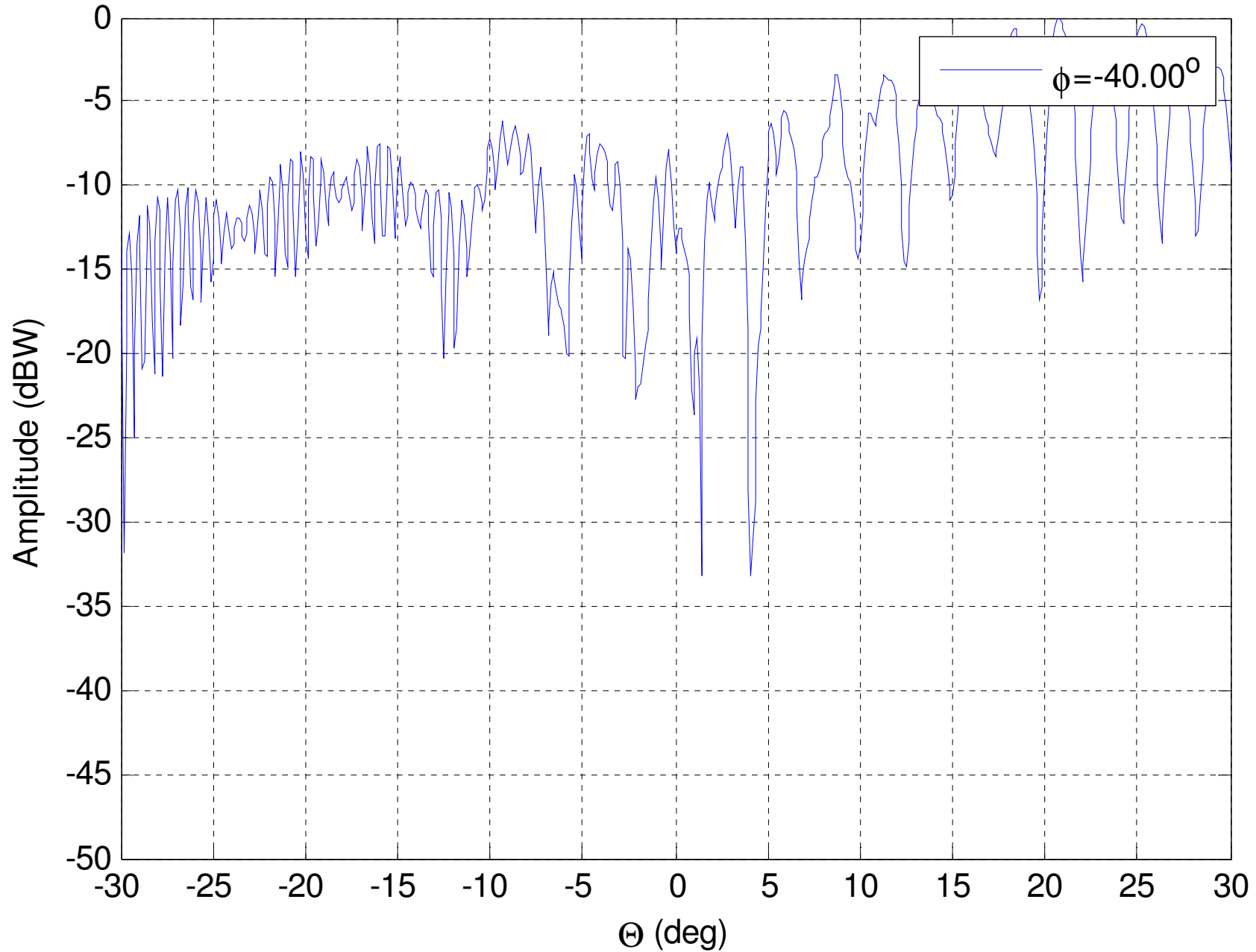
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.89 dBW, Date: 14-Dec-2011



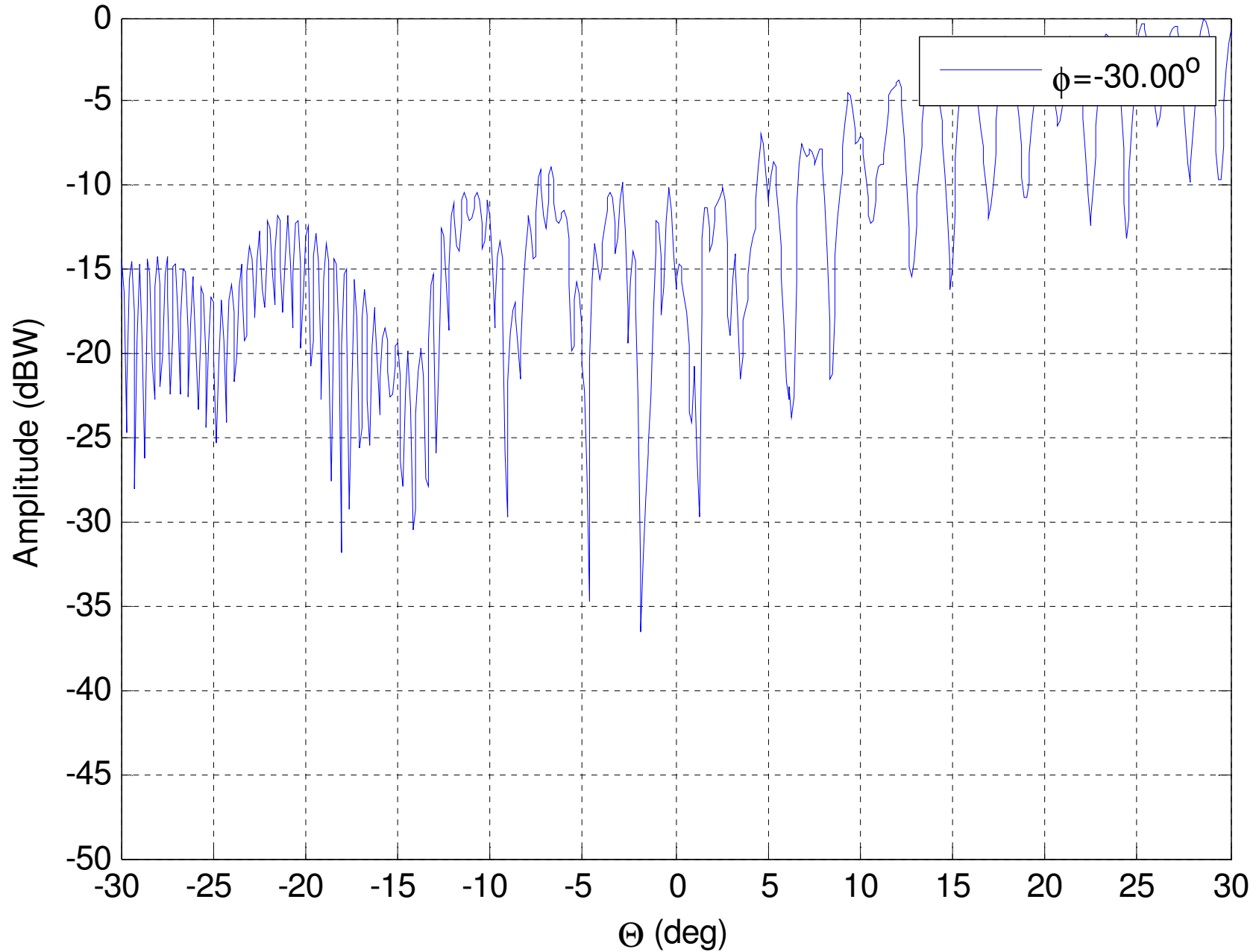
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



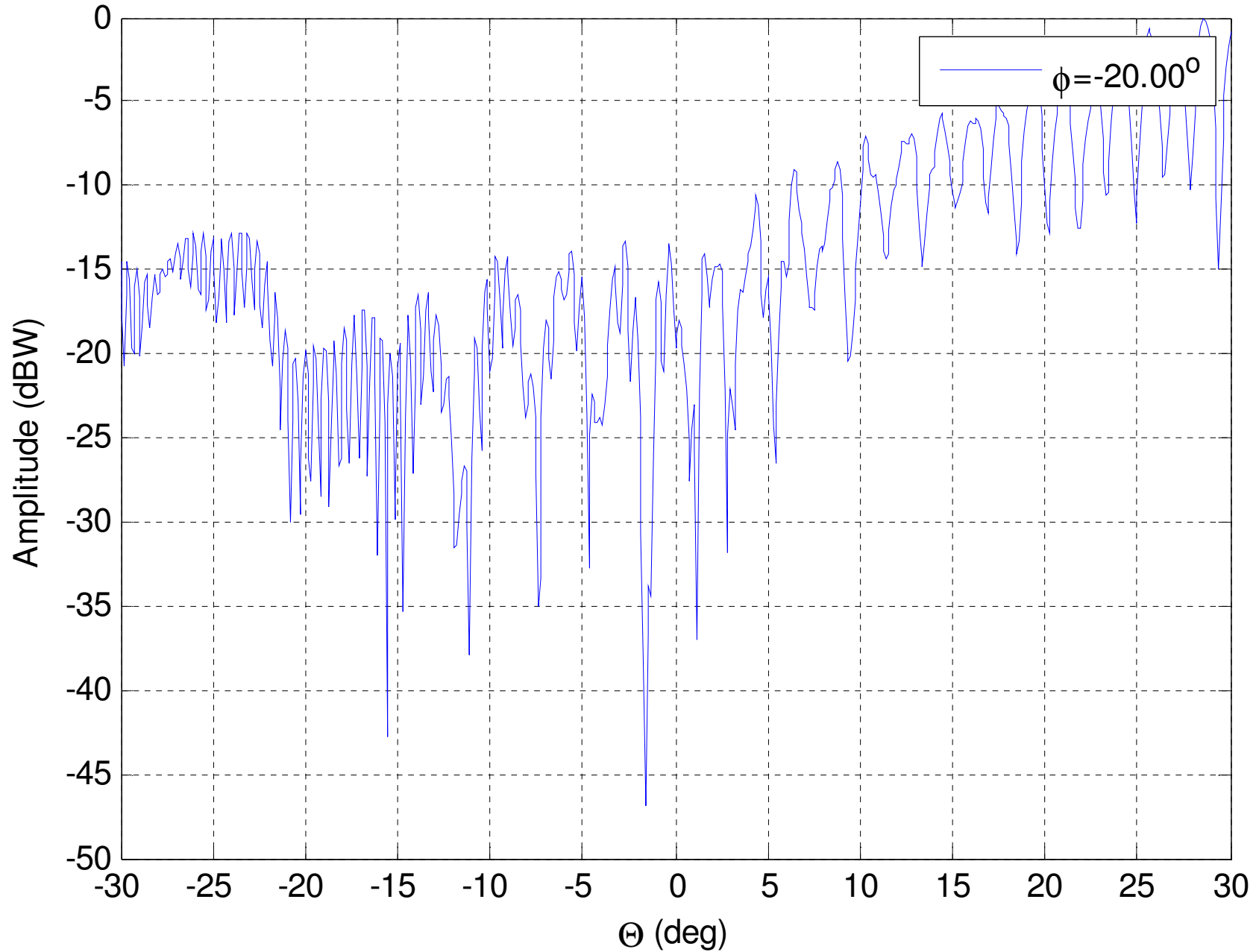
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -2.60 dBW, Date: 14-Dec-2011



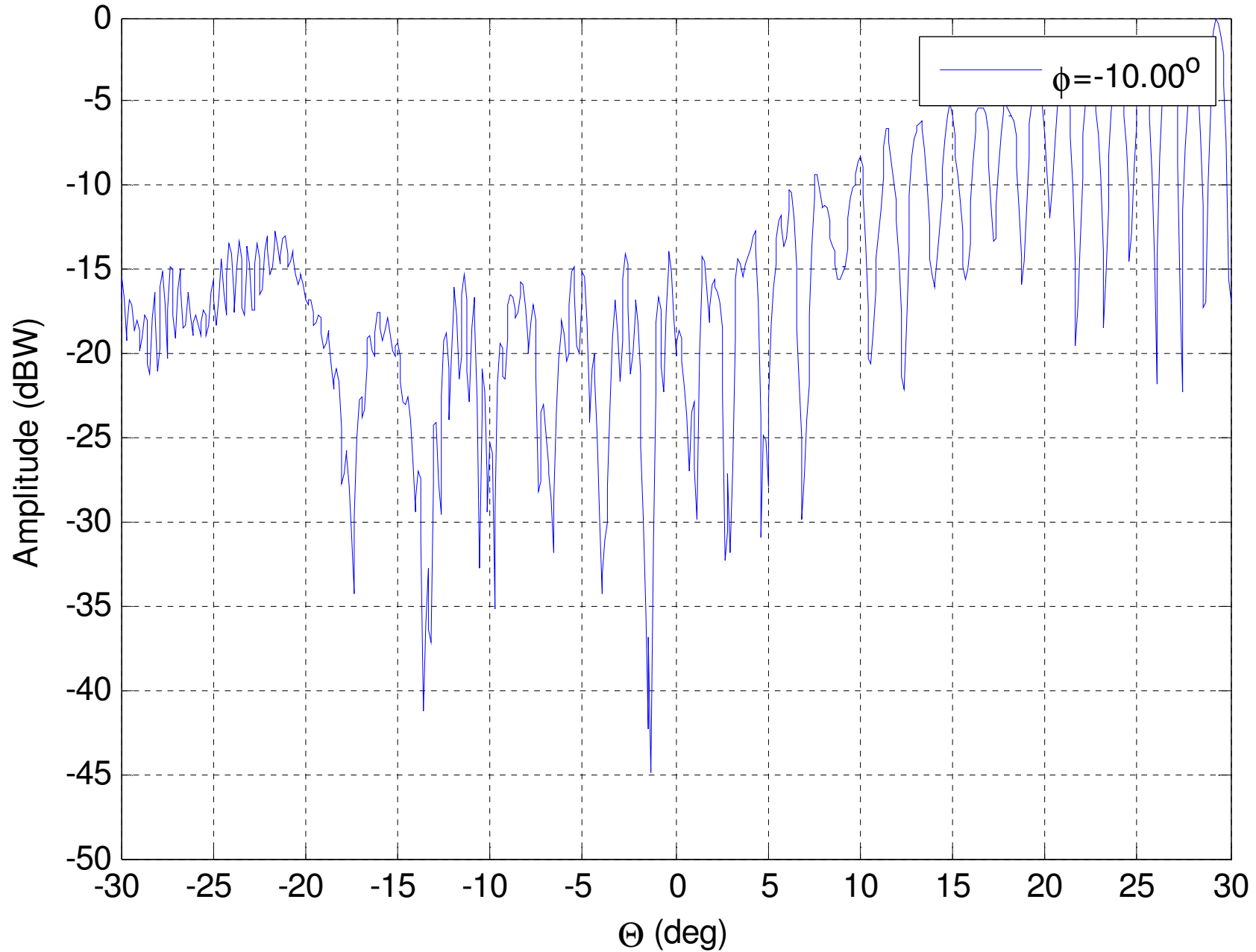
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 0.80 dBW, Date: 14-Dec-2011



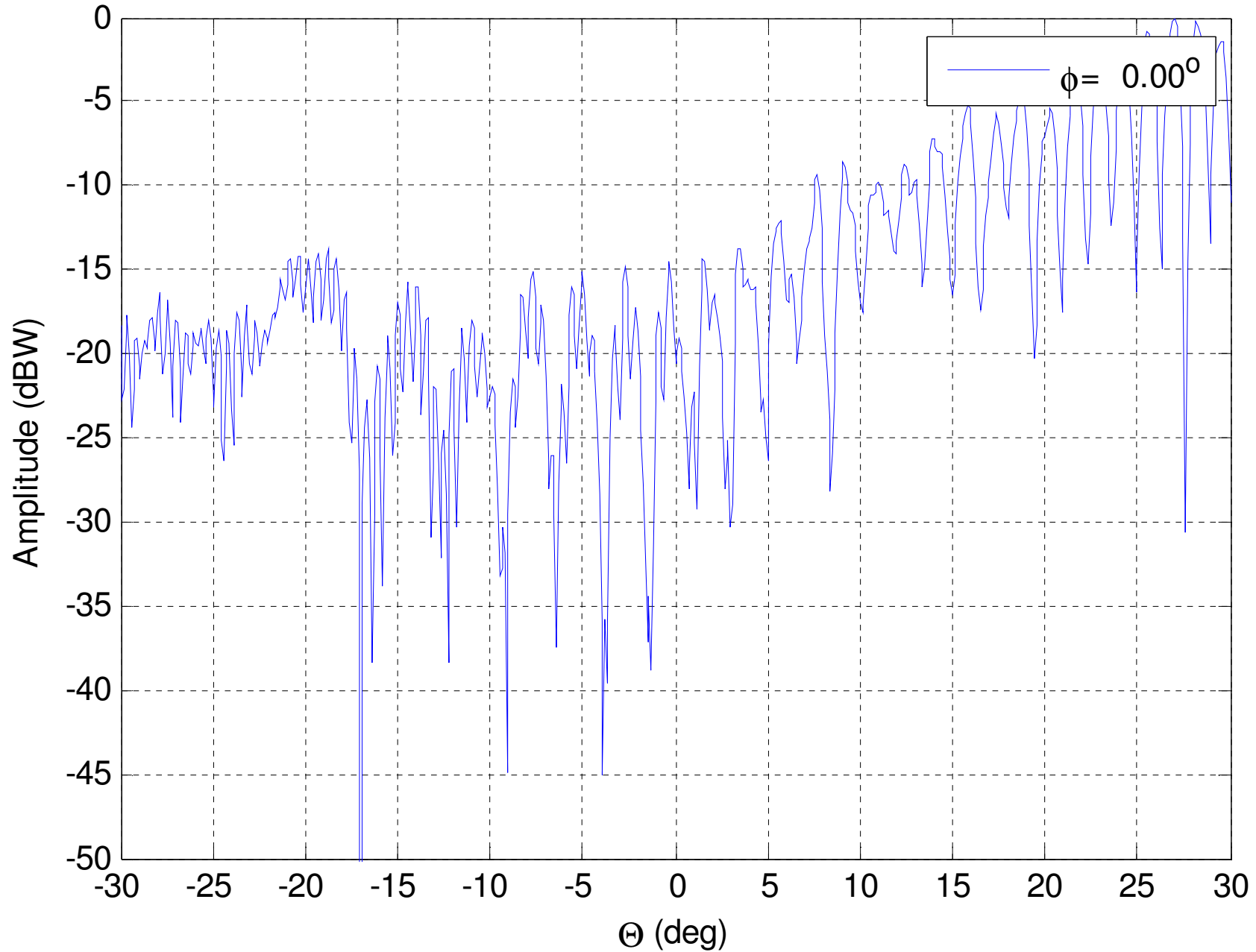
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 1.31 dBW, Date: 14-Dec-2011



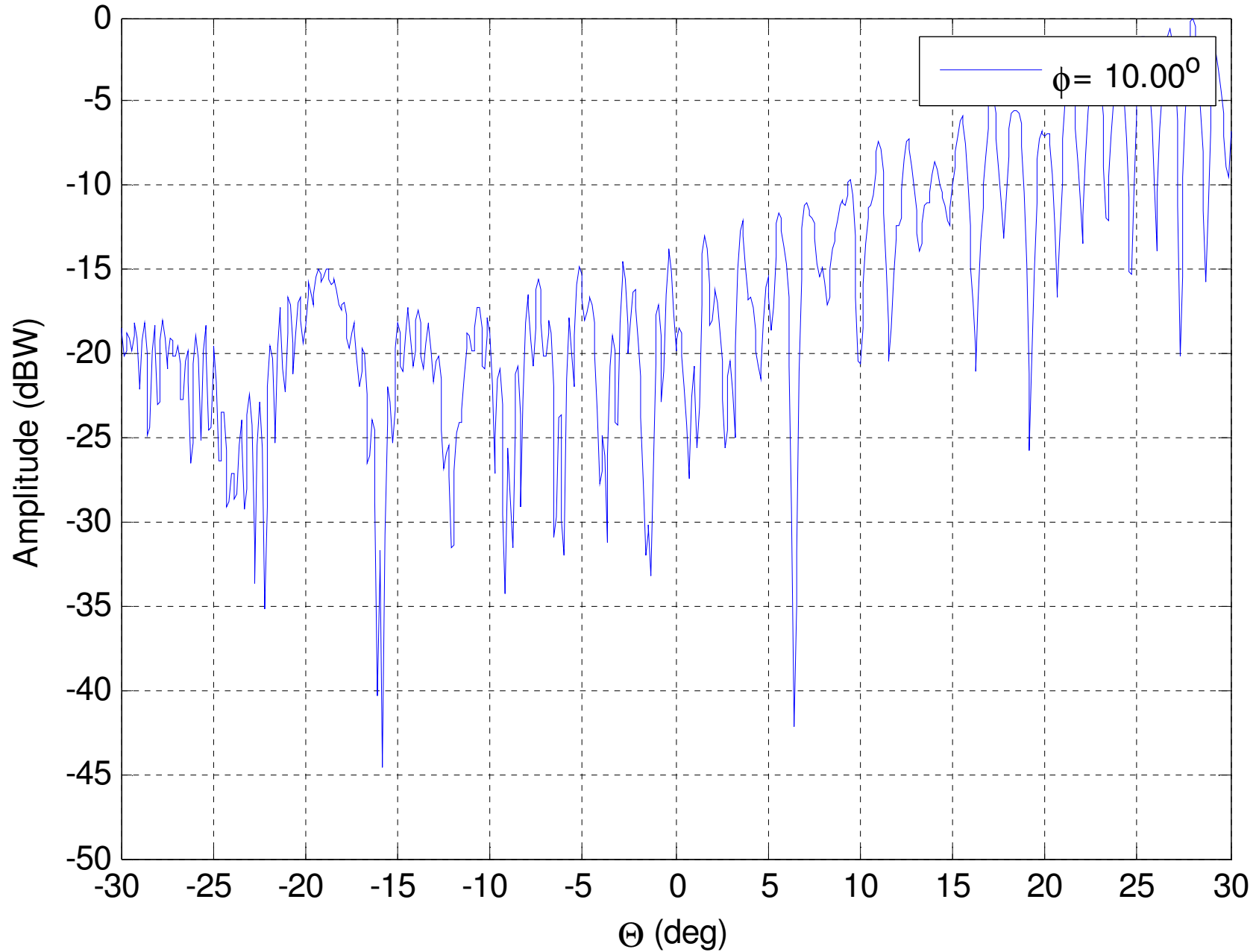
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 1.77 dBW, Date: 14-Dec-2011



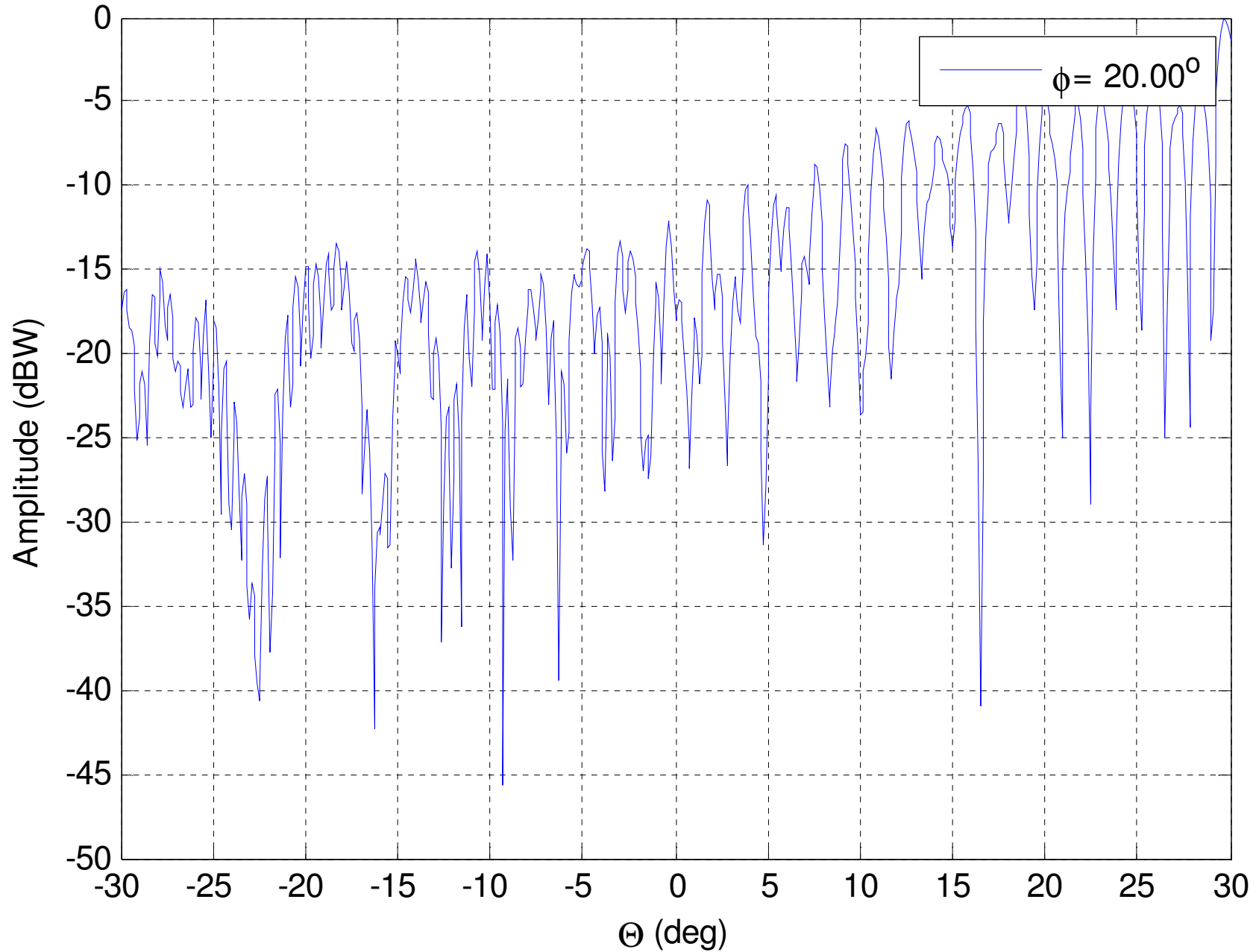
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 1.01 dBW, Date: 14-Dec-2011



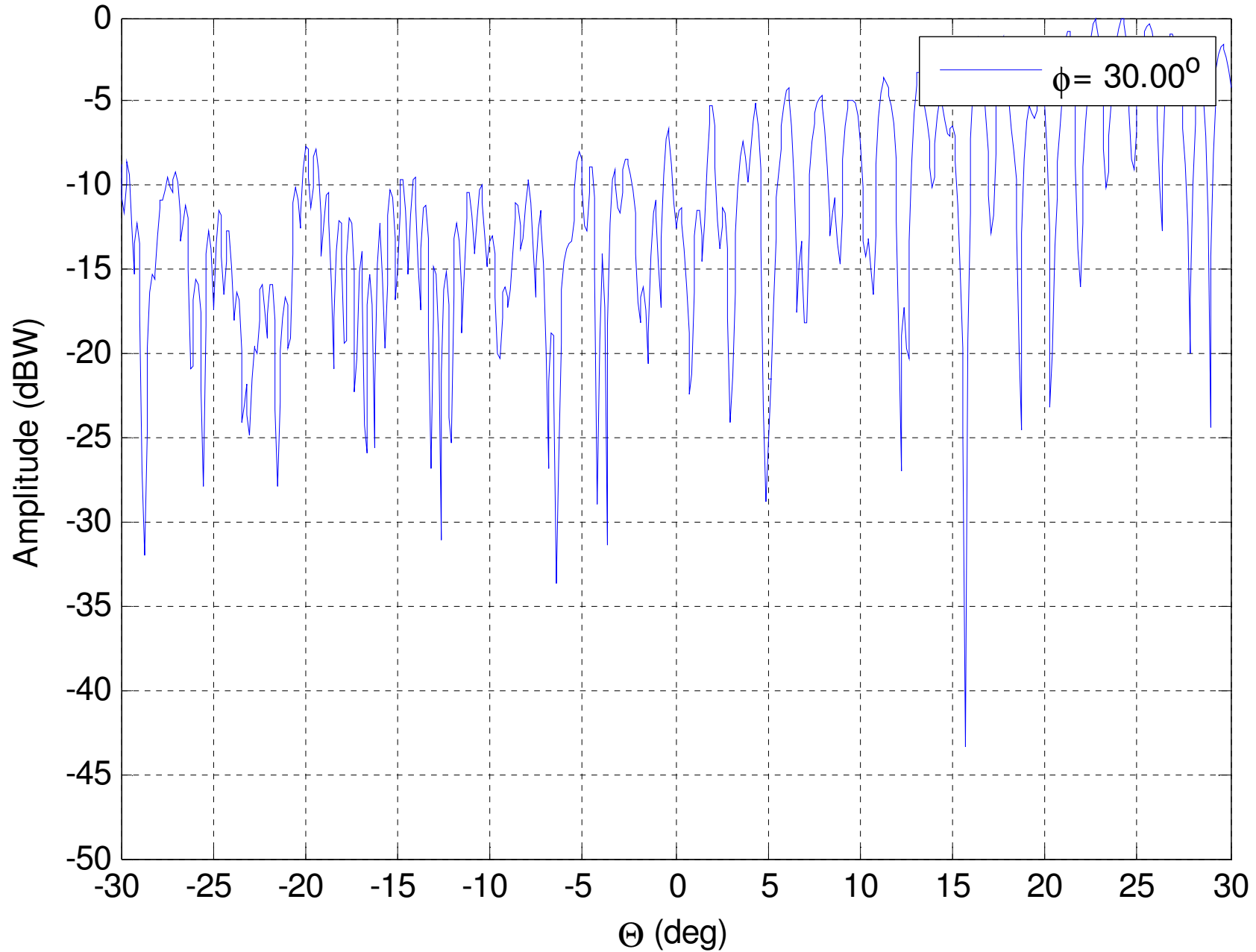
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -0.81 dBW, Date: 14-Dec-2011



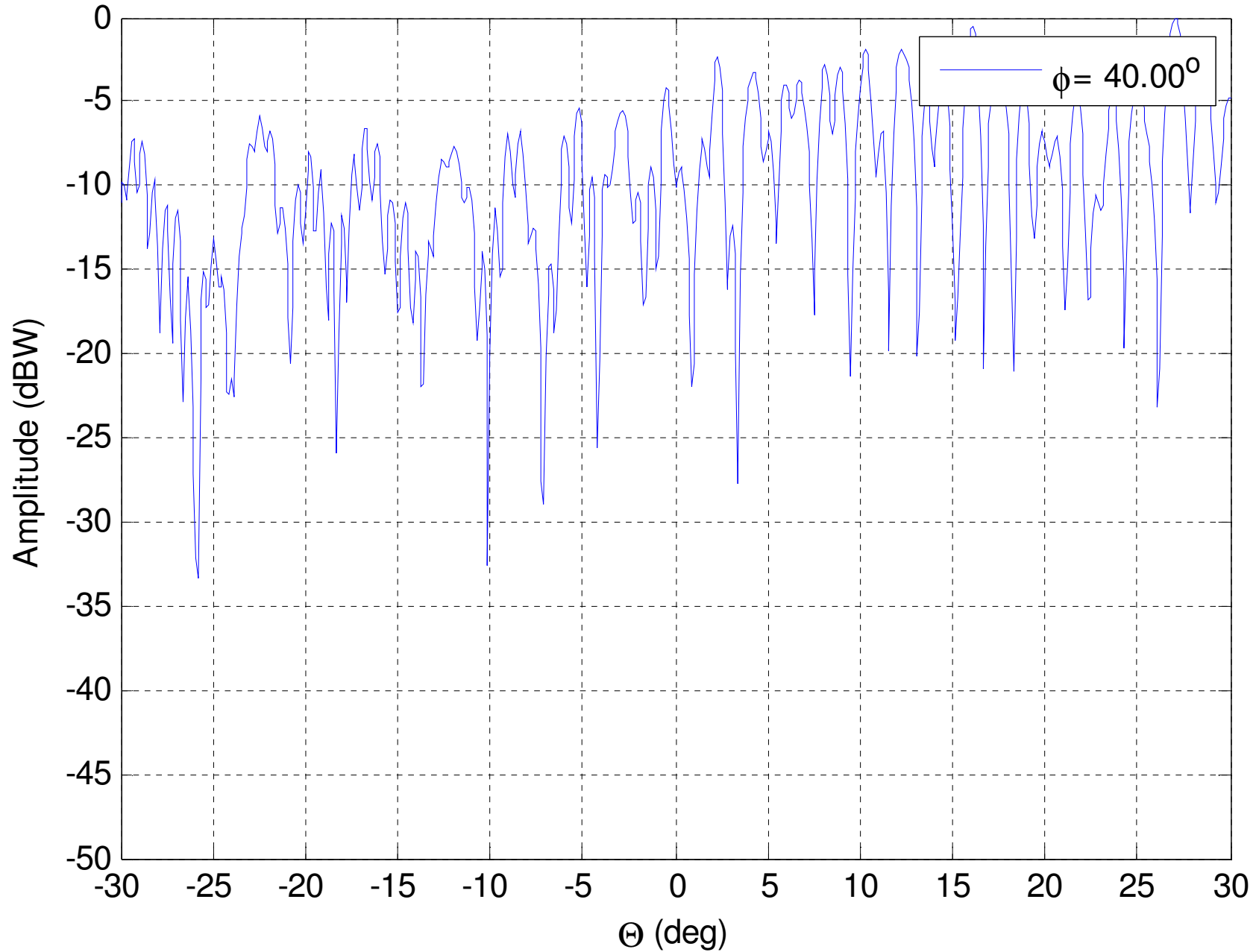
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -6.23 dBW, Date: 14-Dec-2011



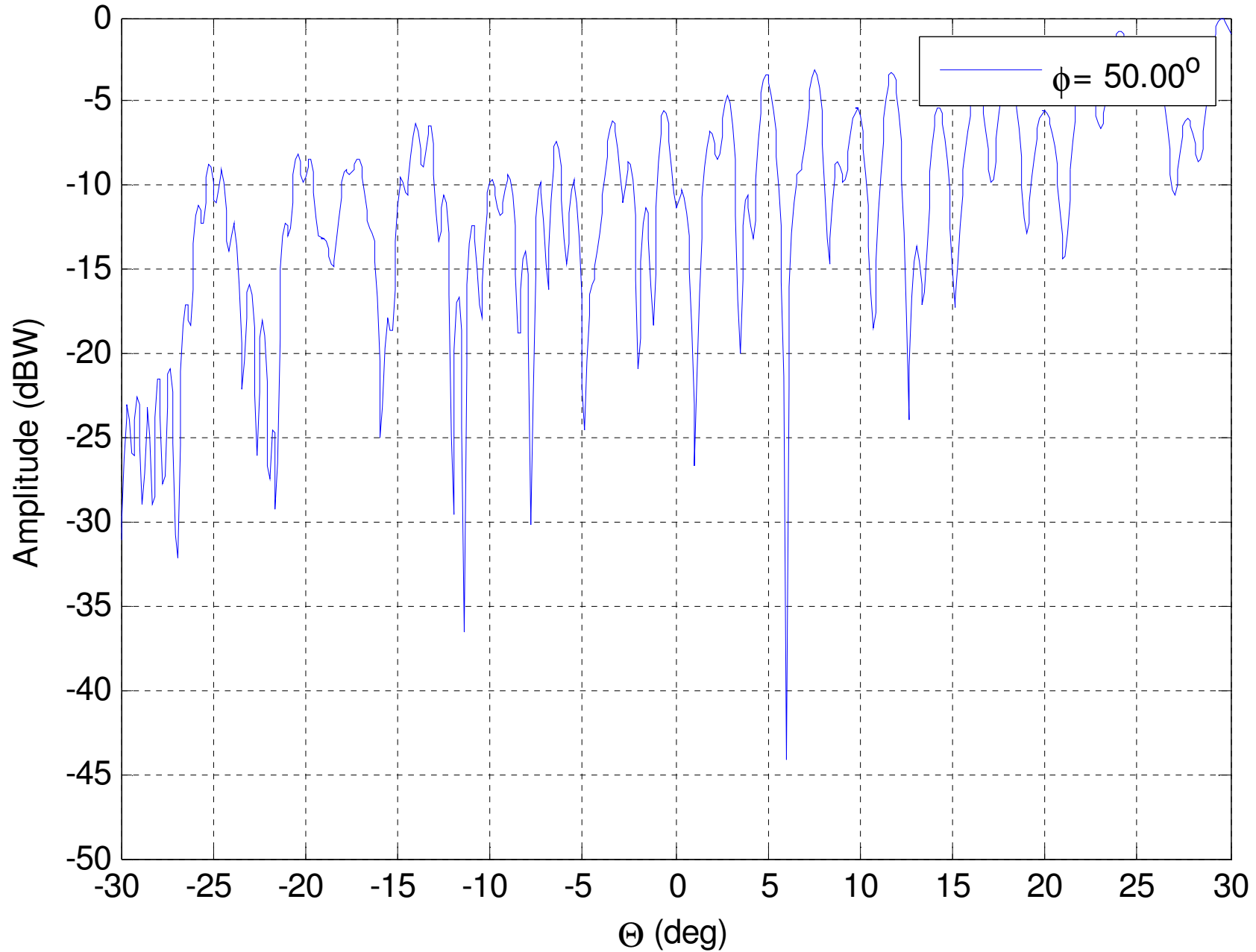
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -8.79 dBW, Date: 14-Dec-2011



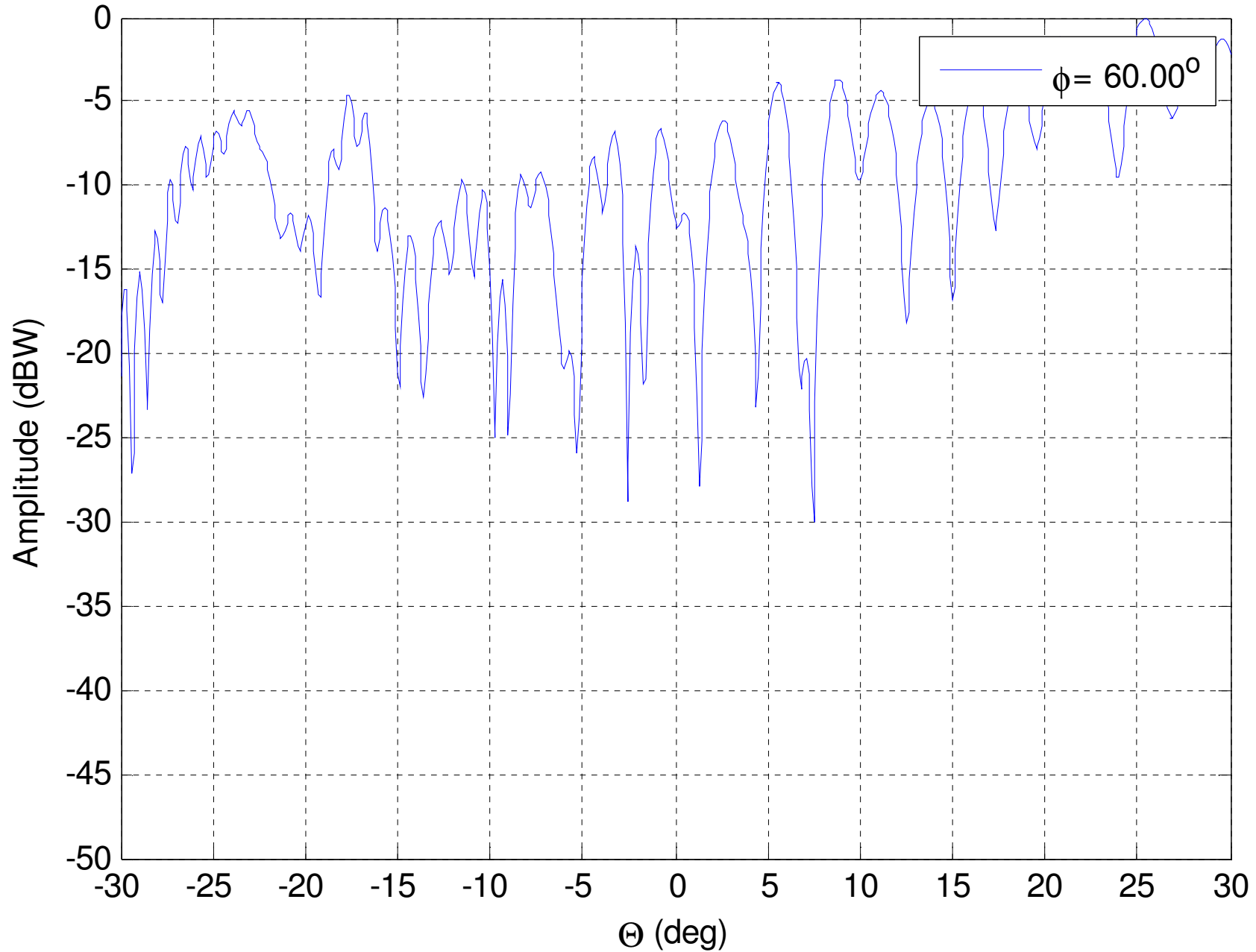
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -7.53 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

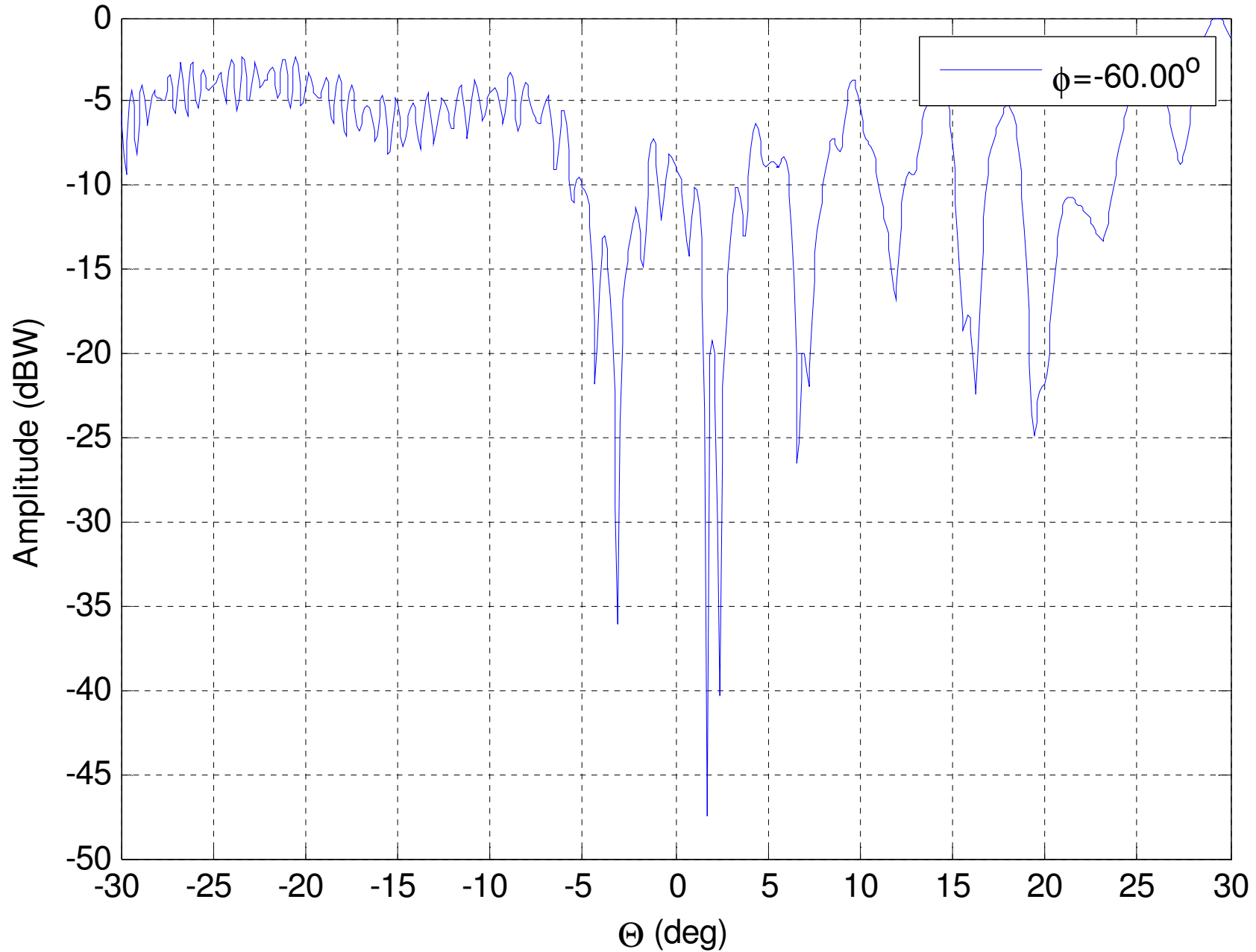
Input file: tx-17.5-lhcp-60.cut, Peak: -6.57 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

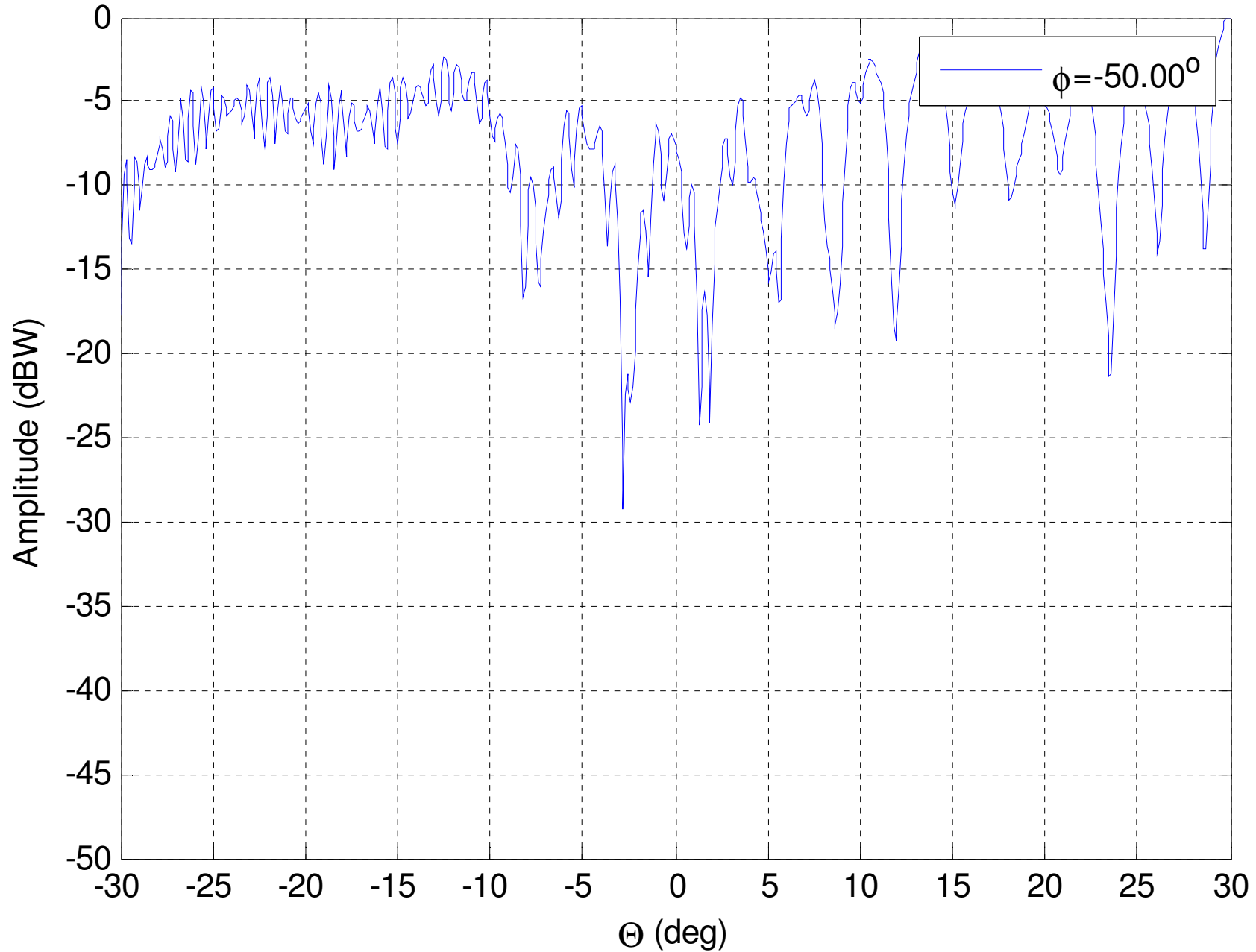
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.16 dBW, Date: 14-Dec-2011



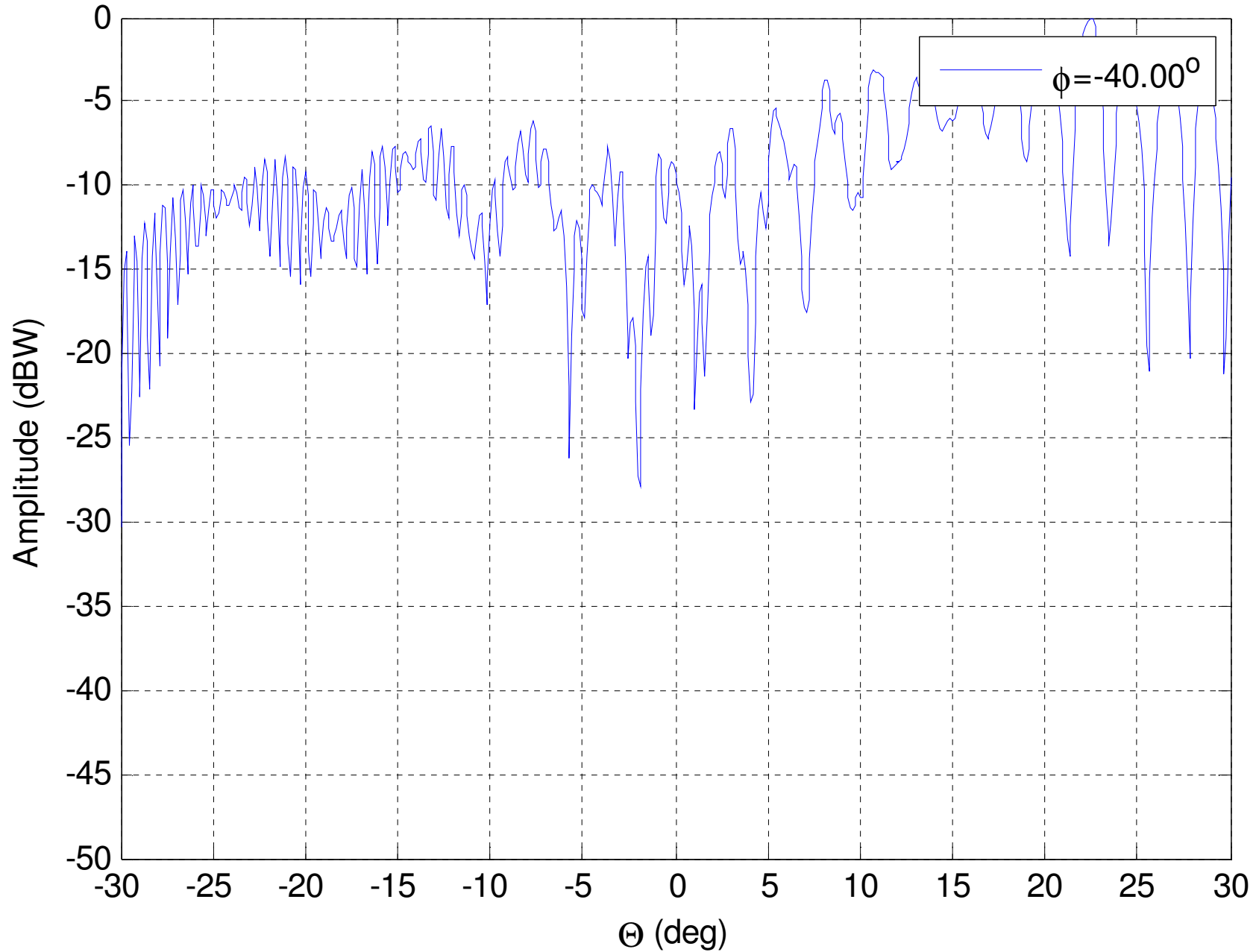
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.34 dBW, Date: 14-Dec-2011



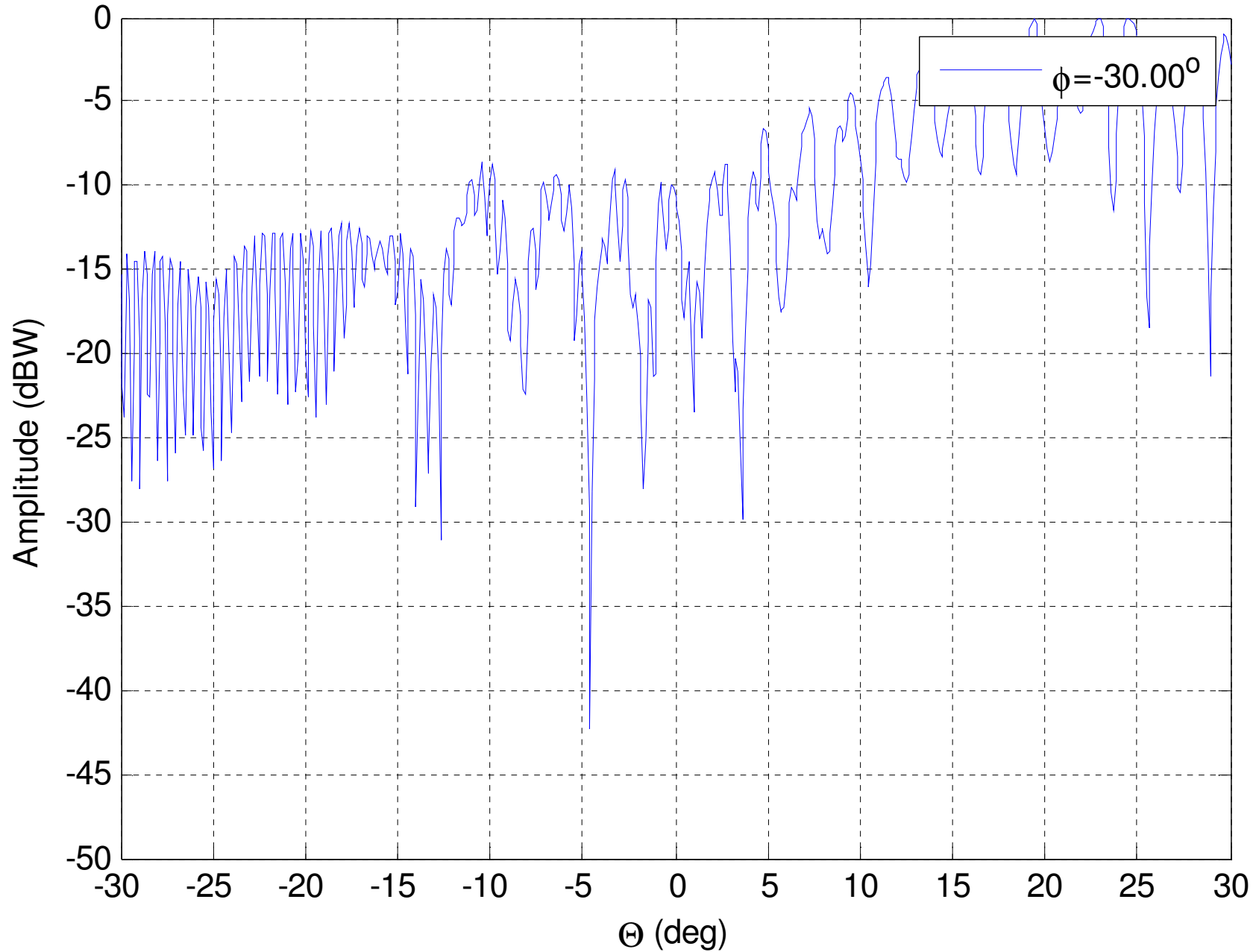
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.75 dBW, Date: 14-Dec-2011



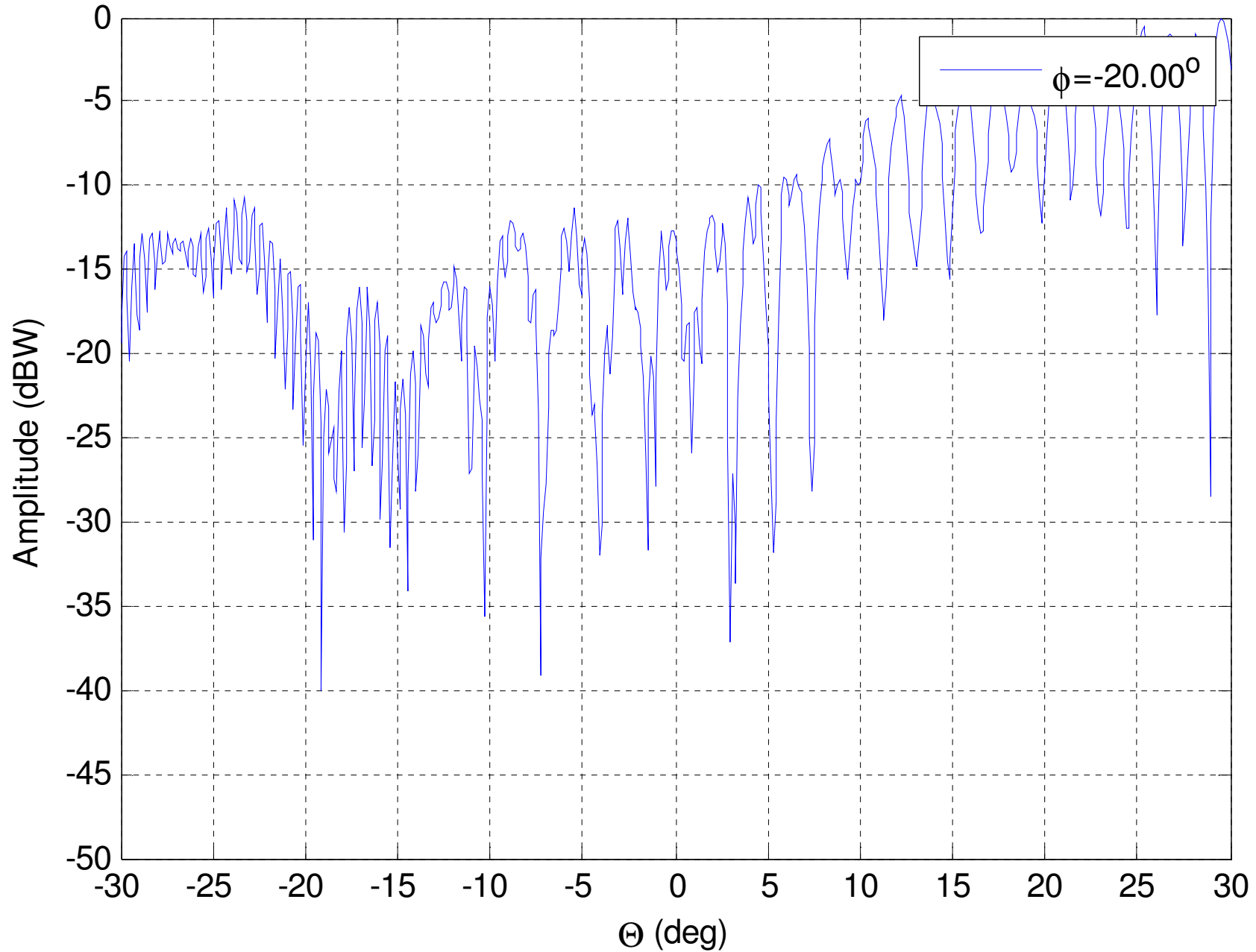
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -3.32 dBW, Date: 14-Dec-2011



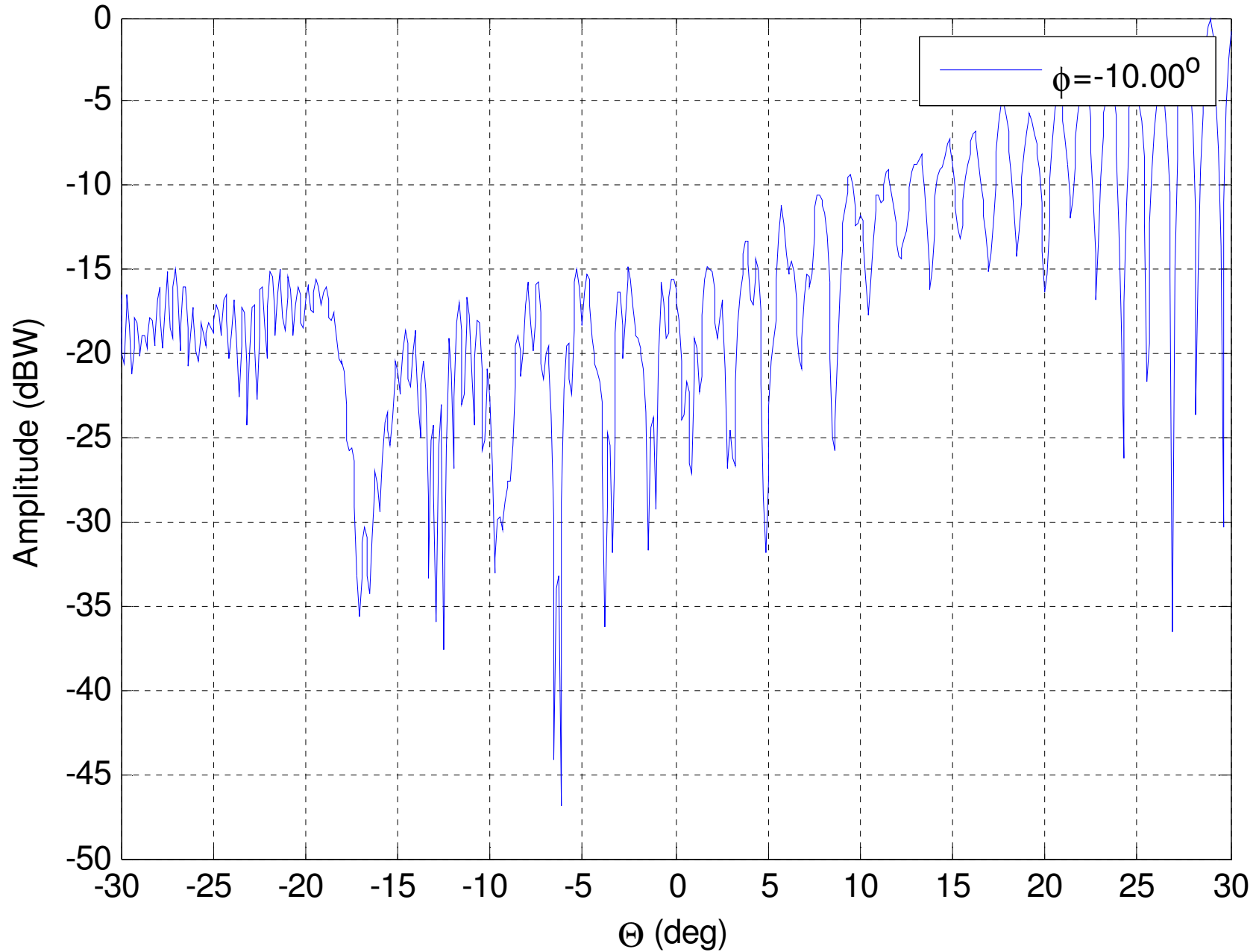
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -0.75 dBW, Date: 14-Dec-2011



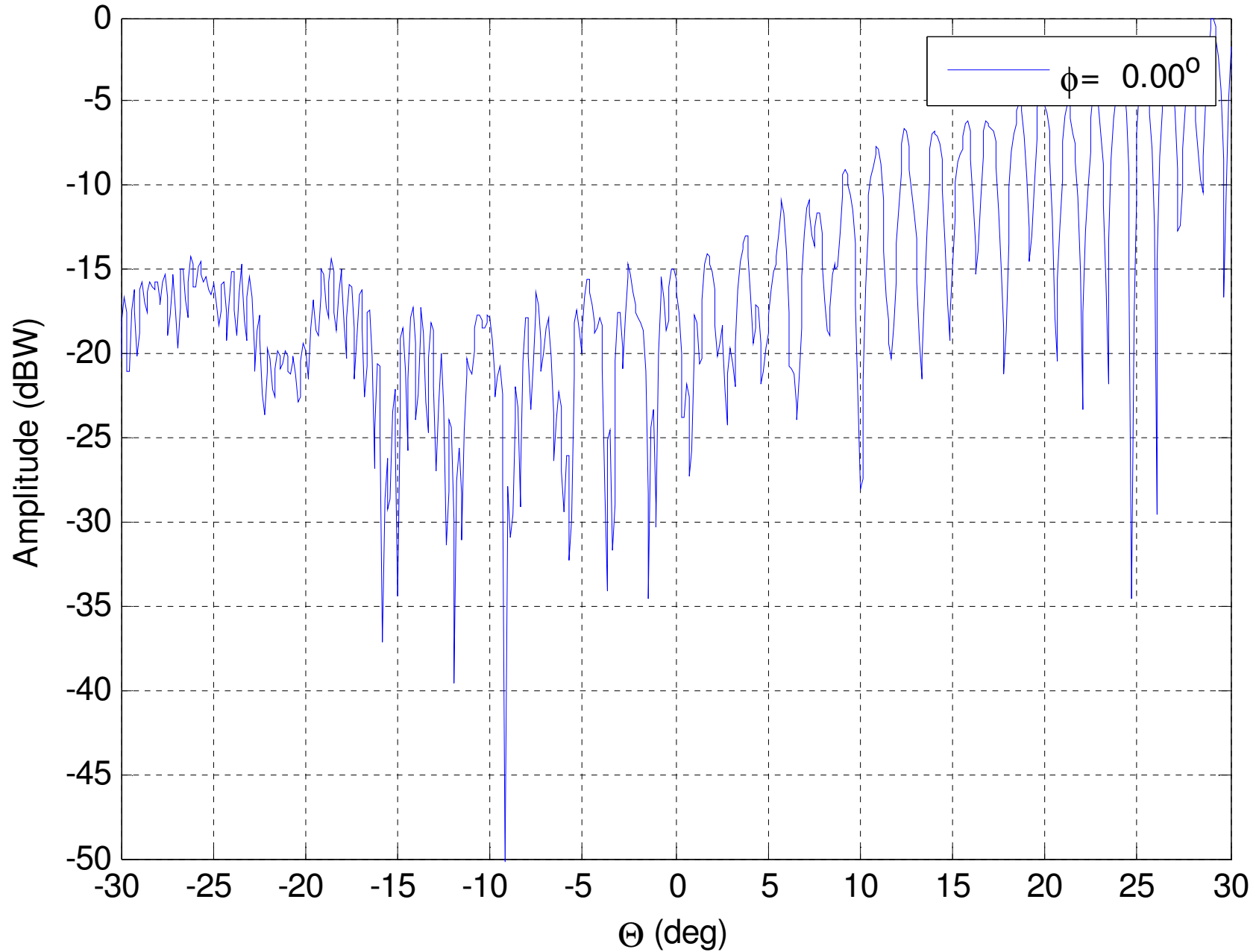
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 2.16 dBW, Date: 14-Dec-2011



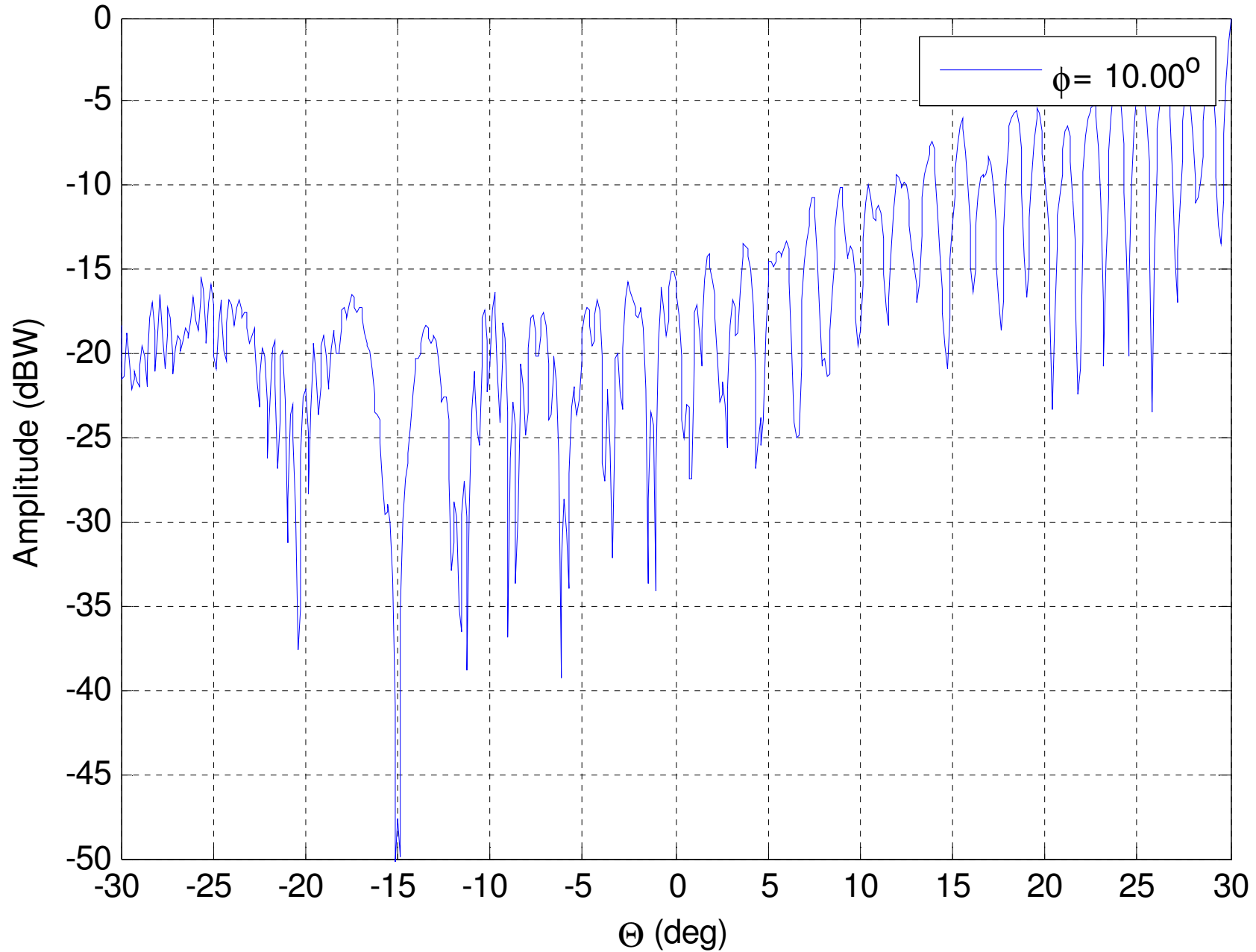
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 1.57 dBW, Date: 14-Dec-2011



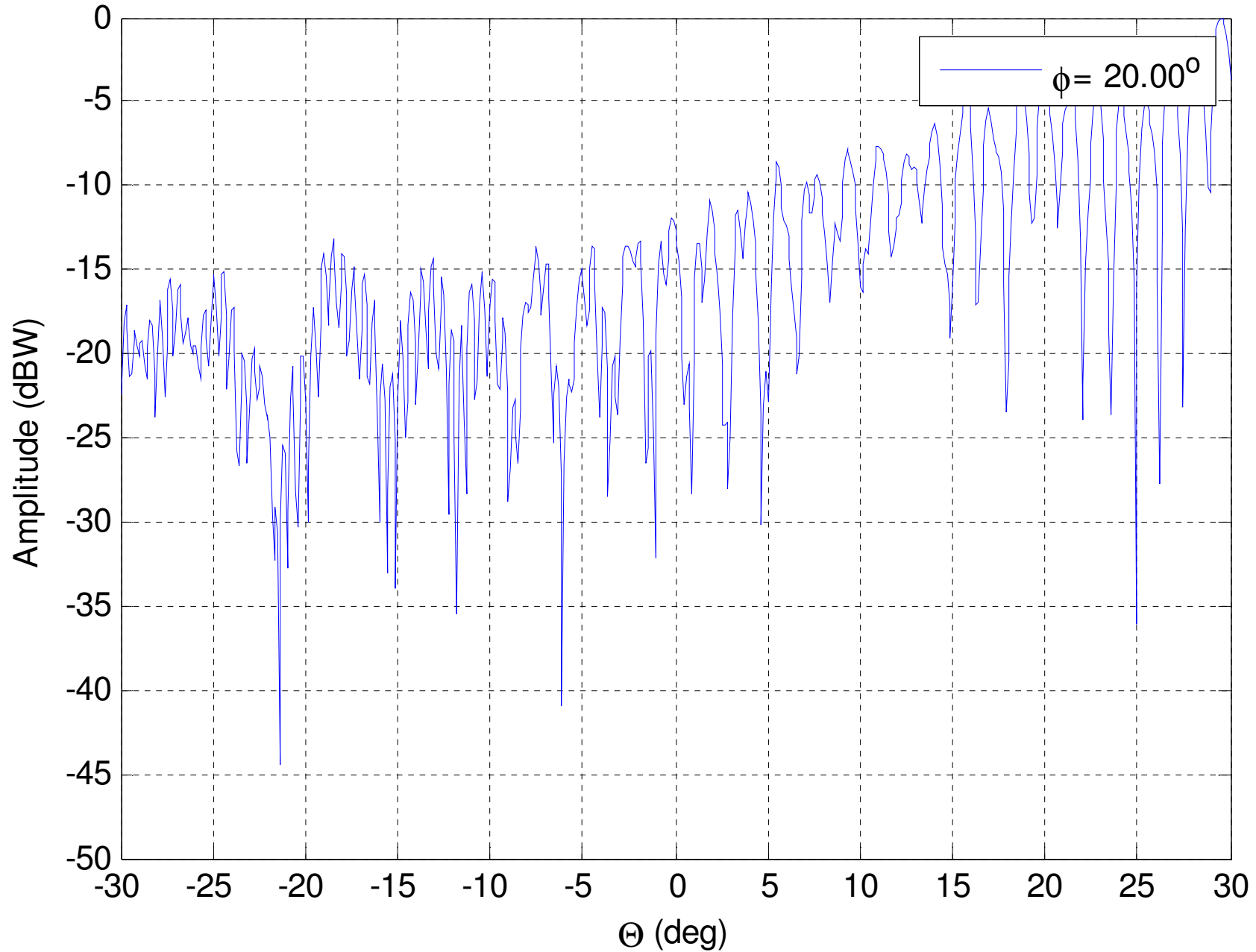
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 1.74 dBW, Date: 14-Dec-2011



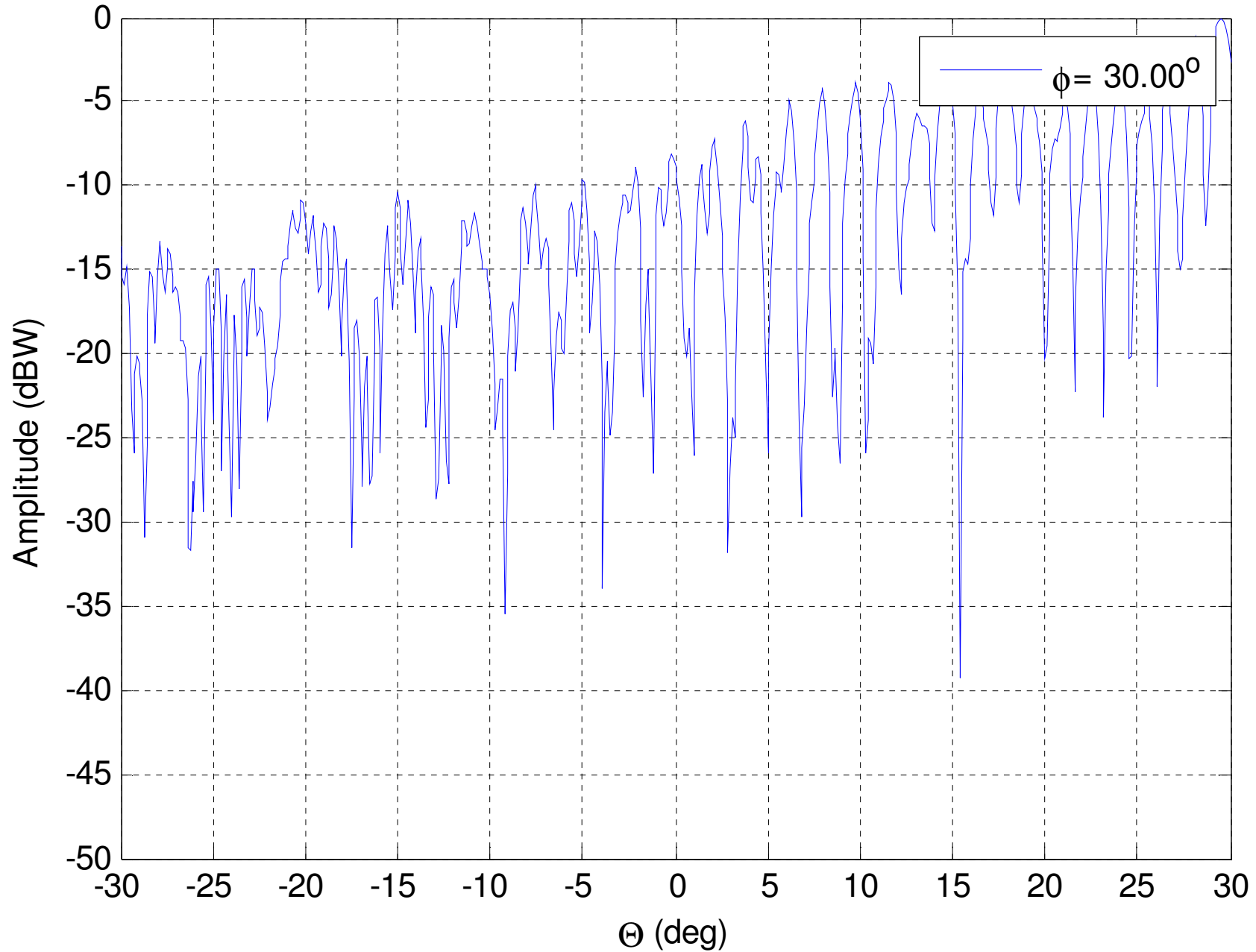
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -1.42 dBW, Date: 14-Dec-2011



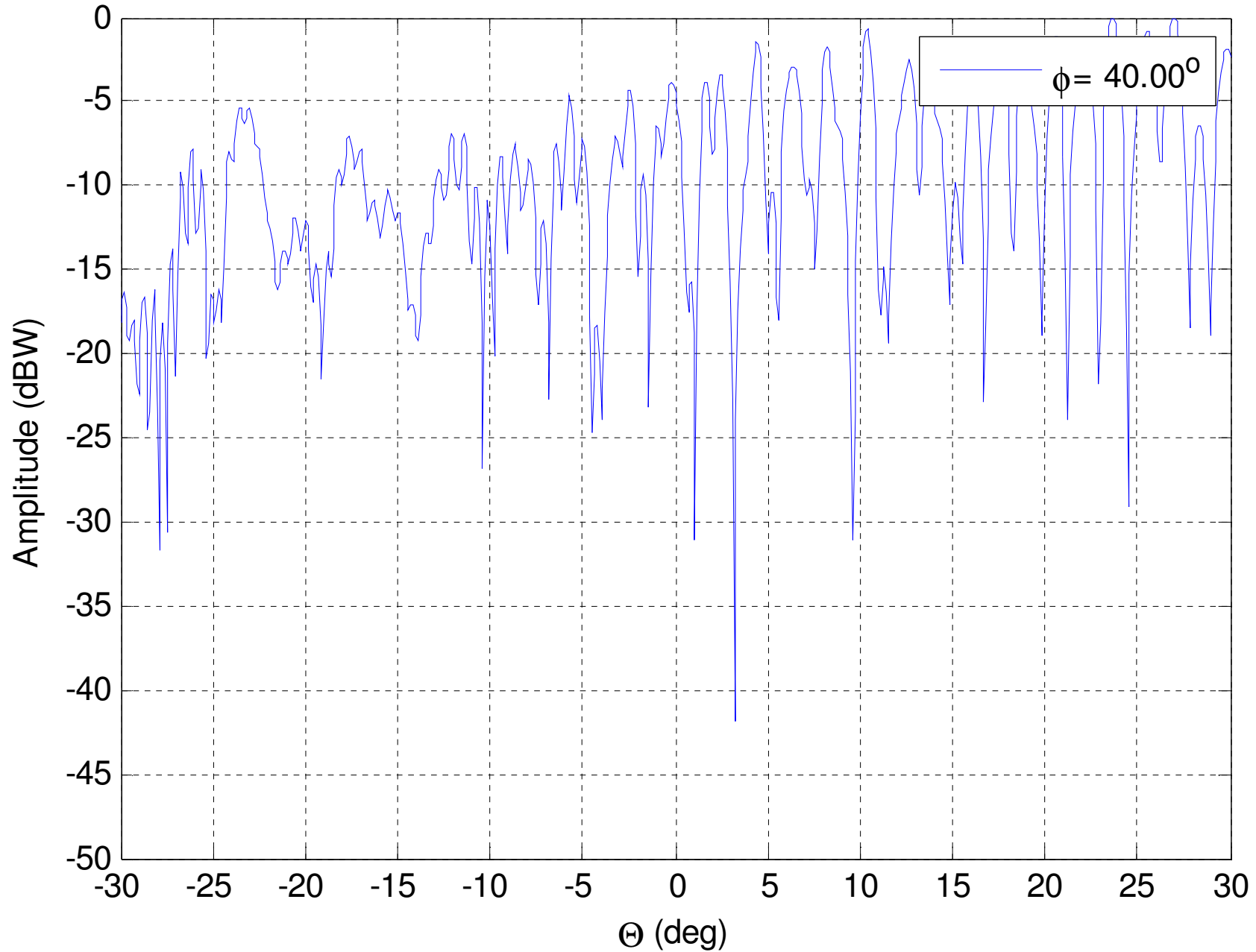
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -5.13 dBW, Date: 14-Dec-2011



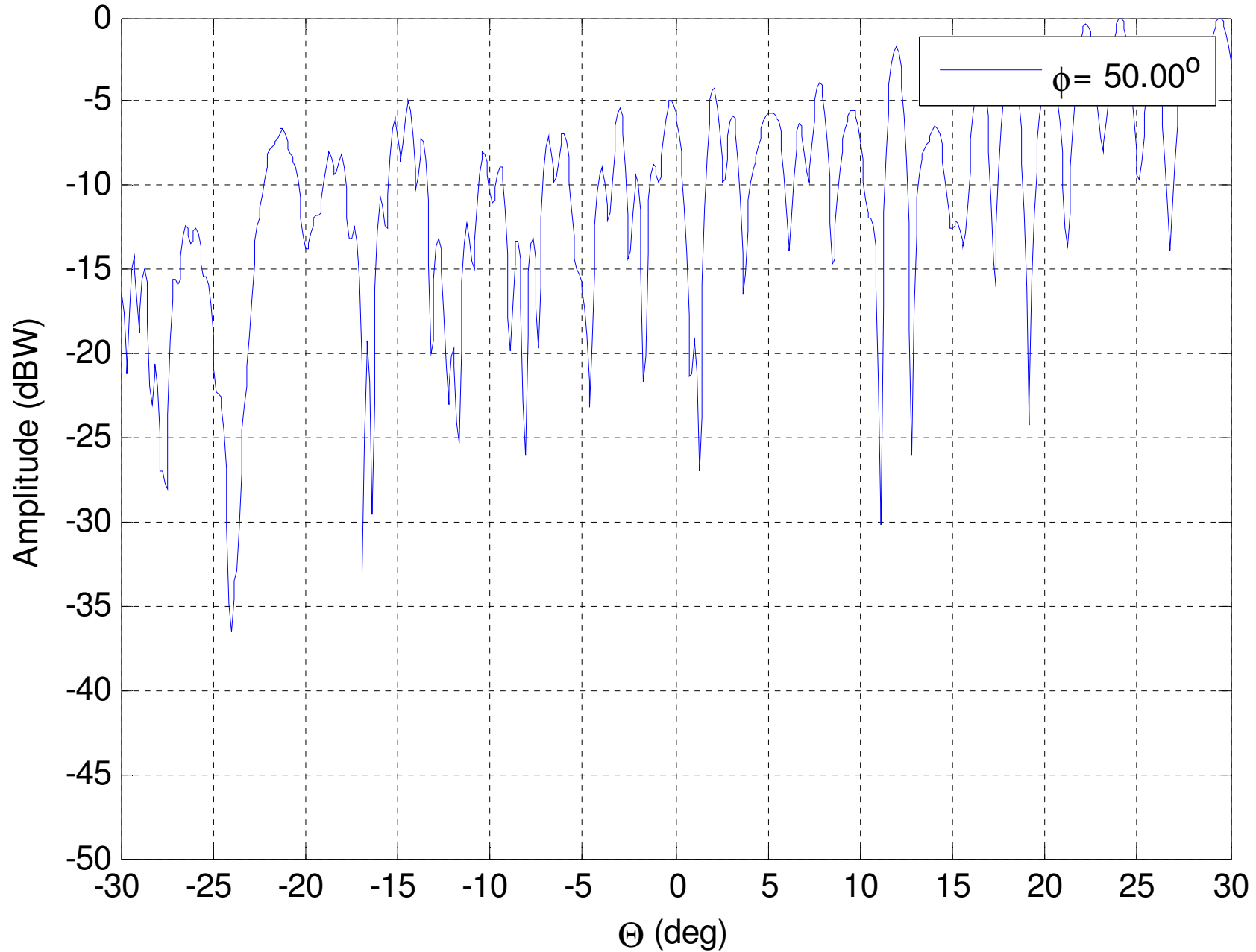
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -9.50 dBW, Date: 14-Dec-2011



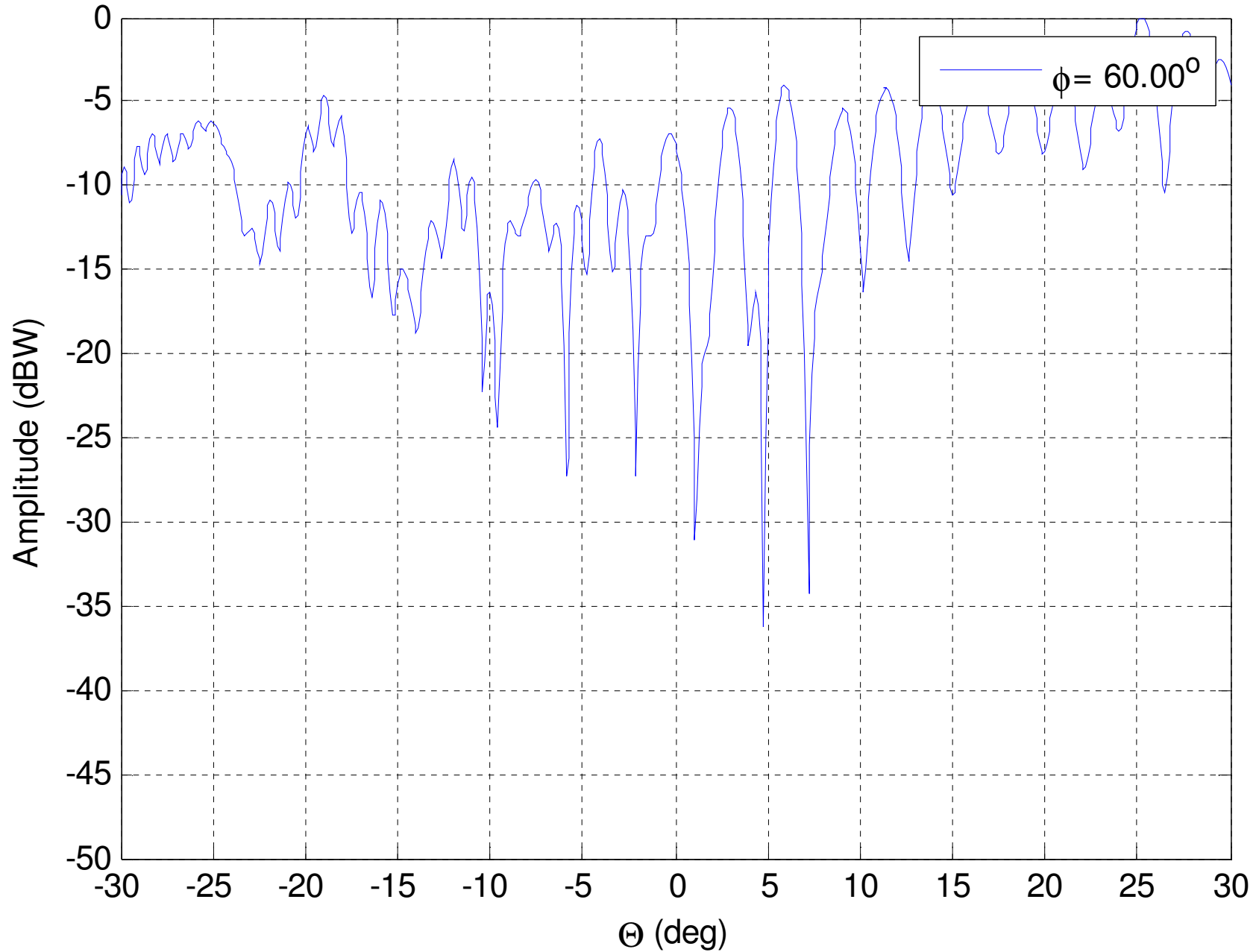
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -8.41 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

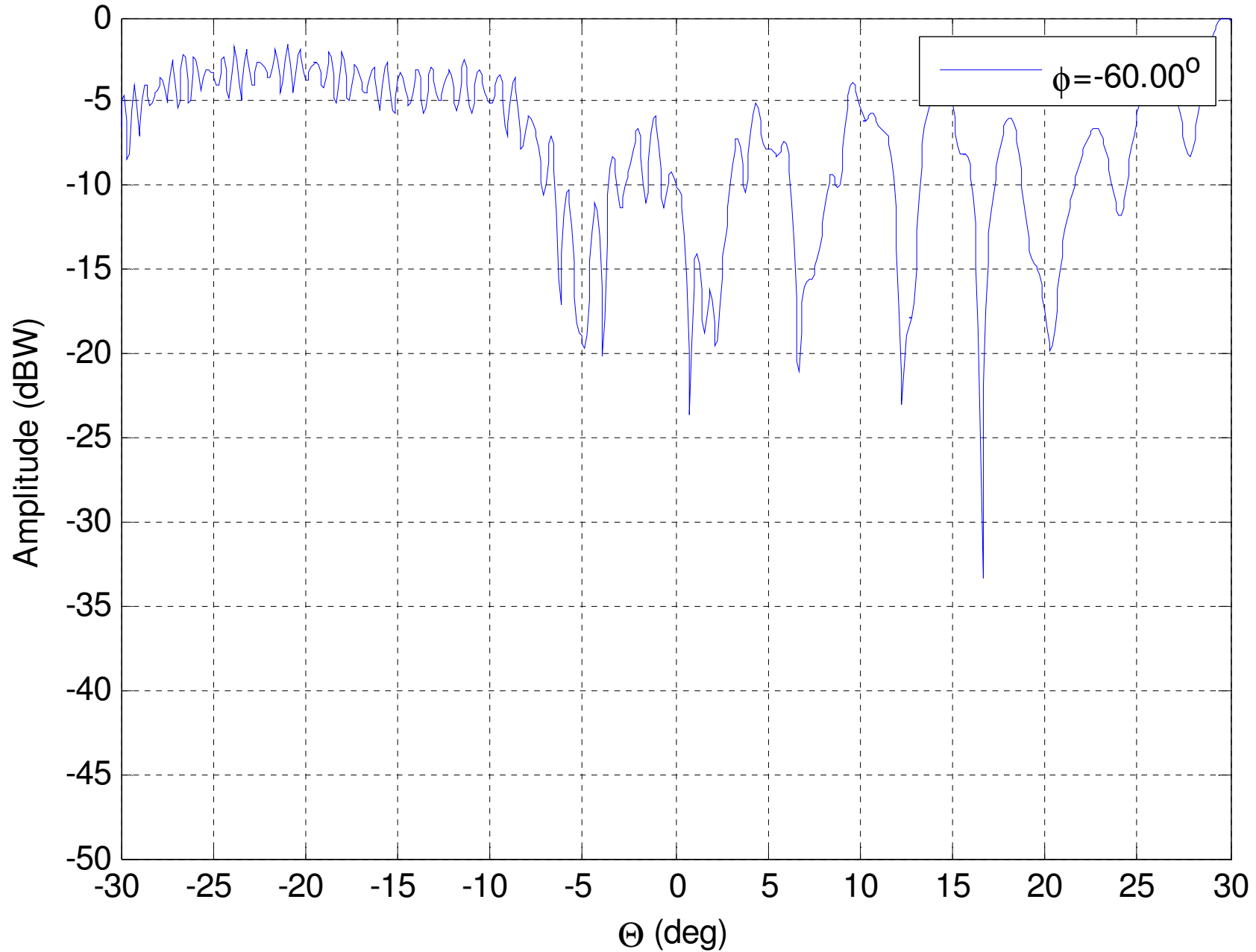
Input file: tx-17.7-rhcp-60.cut, Peak: -6.52 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

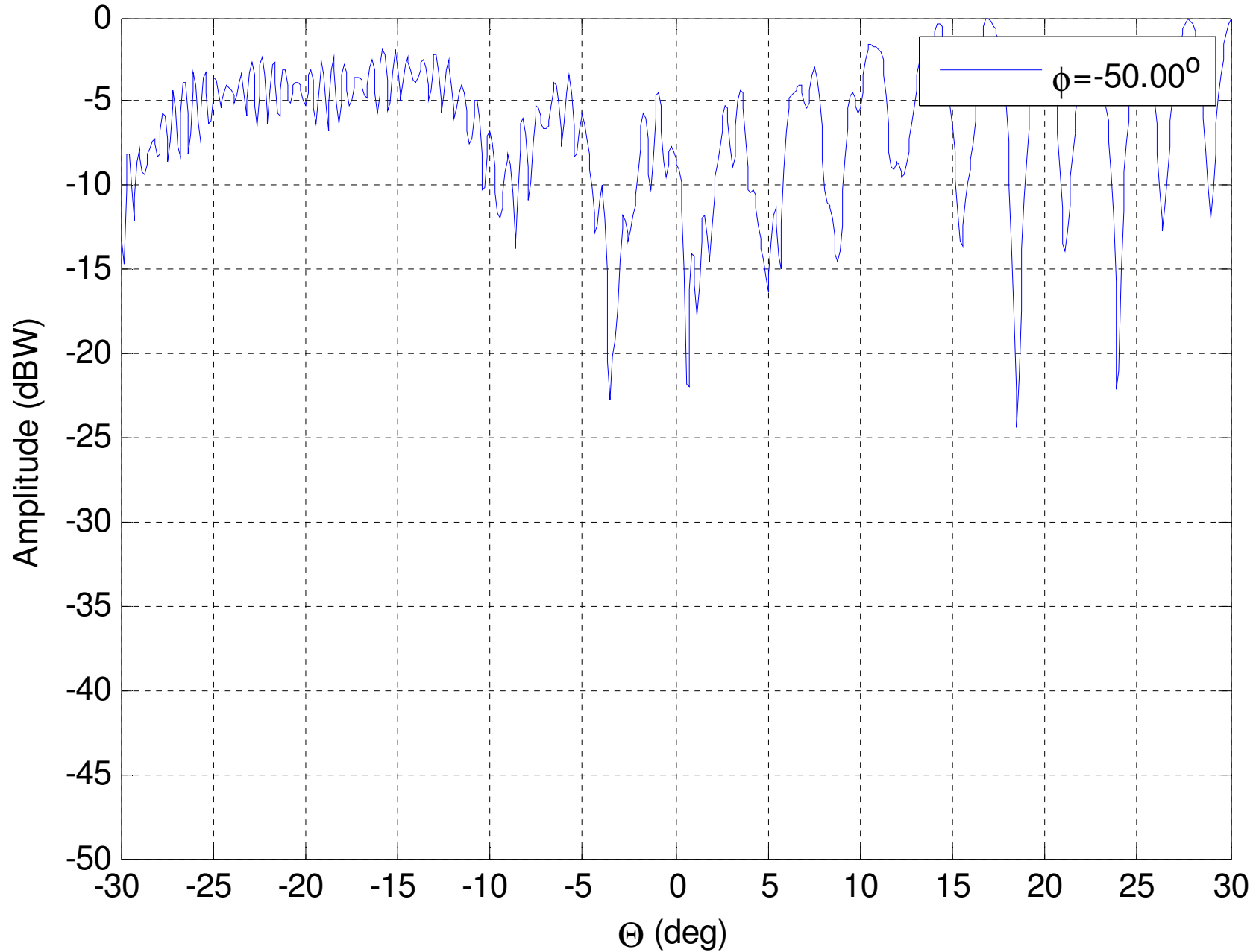
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.68 dBW, Date: 14-Dec-2011



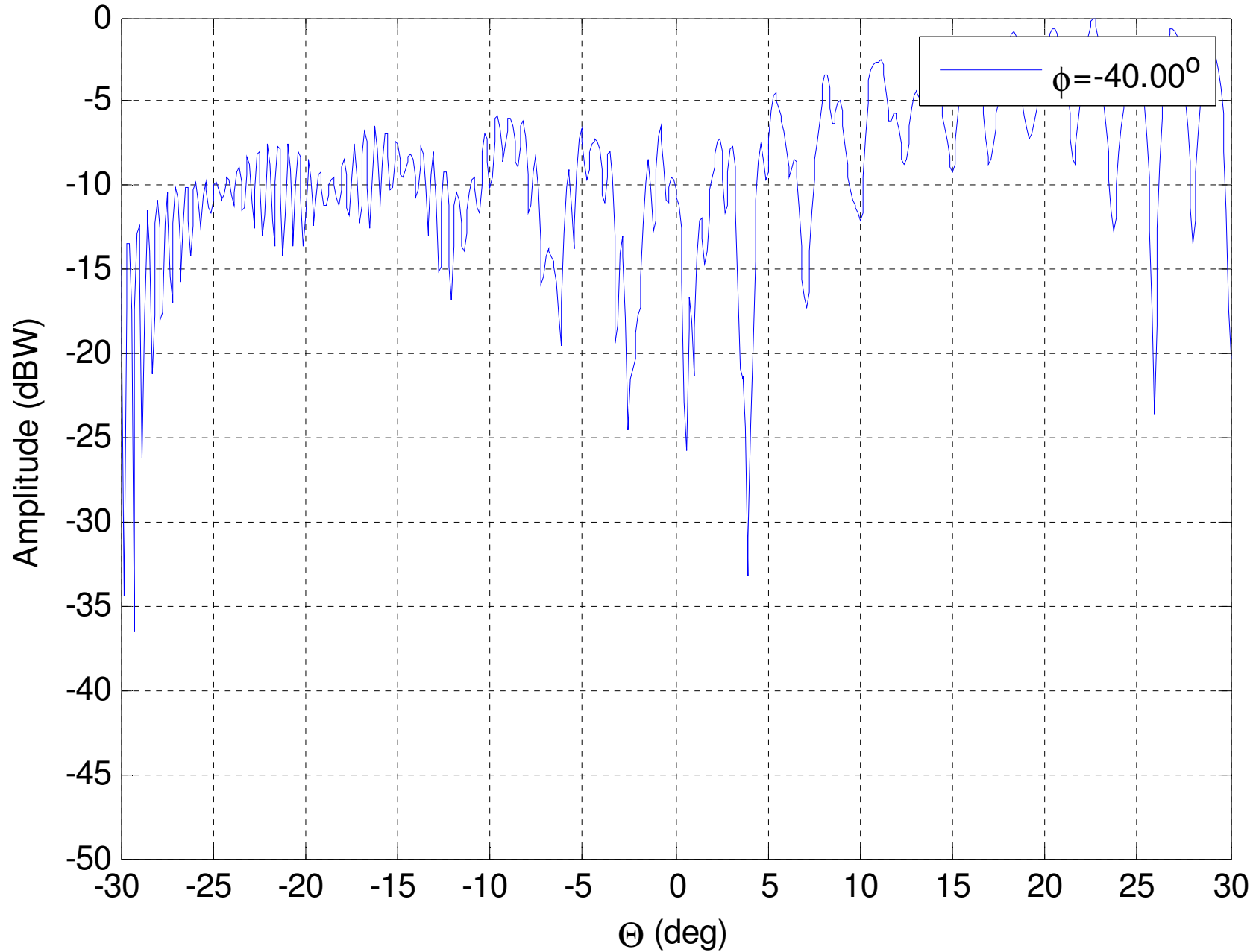
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.20 dBW, Date: 14-Dec-2011



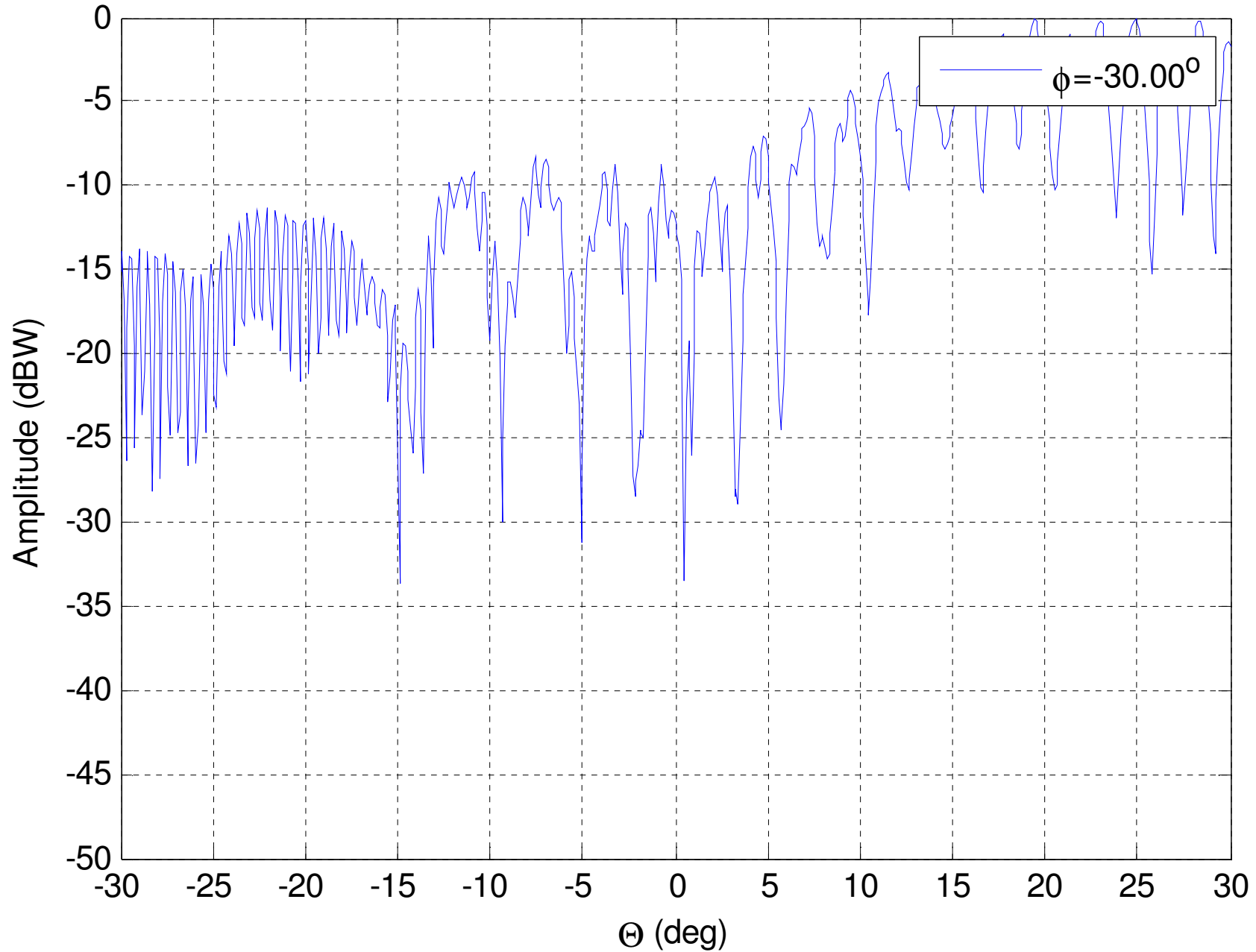
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -5.32 dBW, Date: 14-Dec-2011



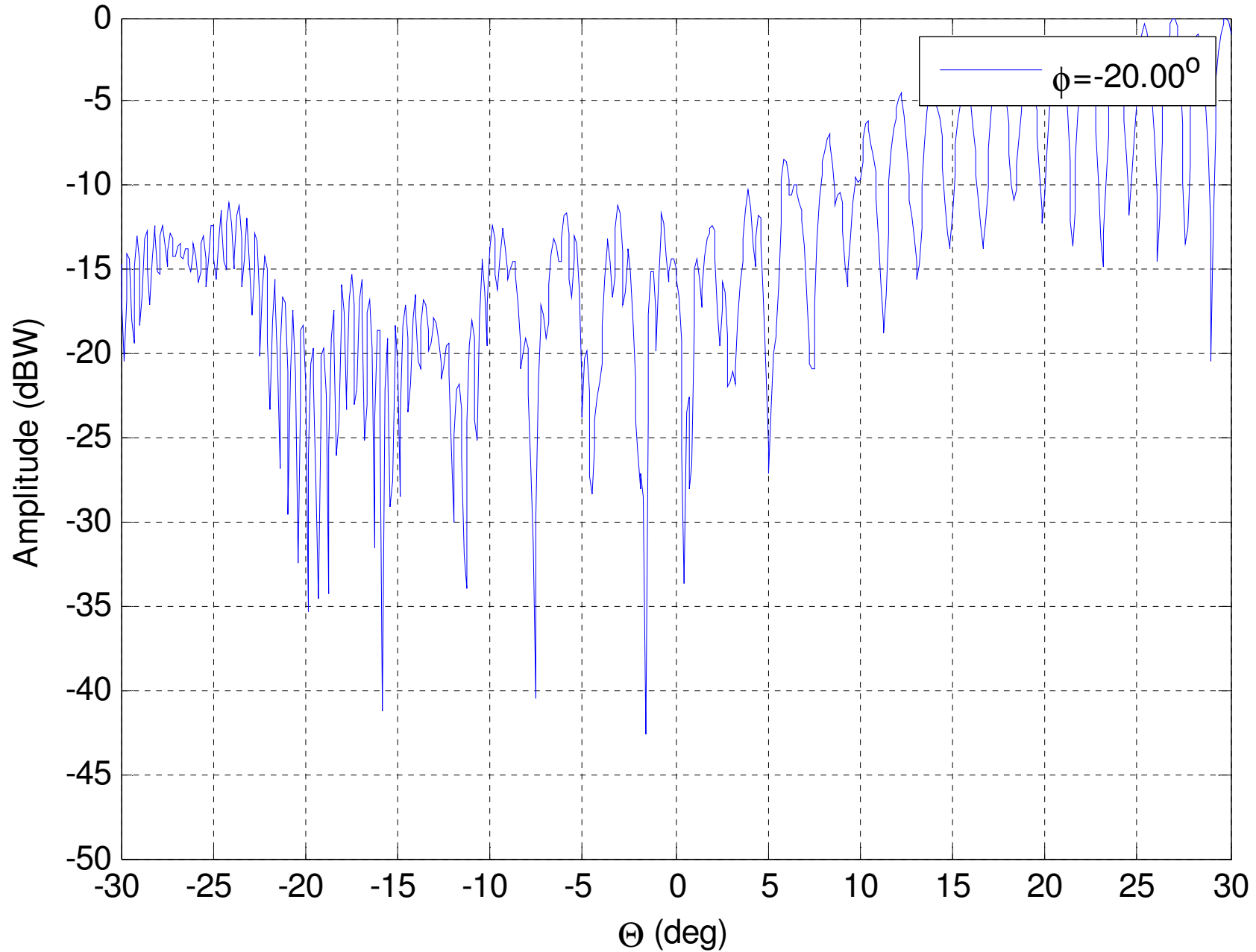
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -3.34 dBW, Date: 14-Dec-2011



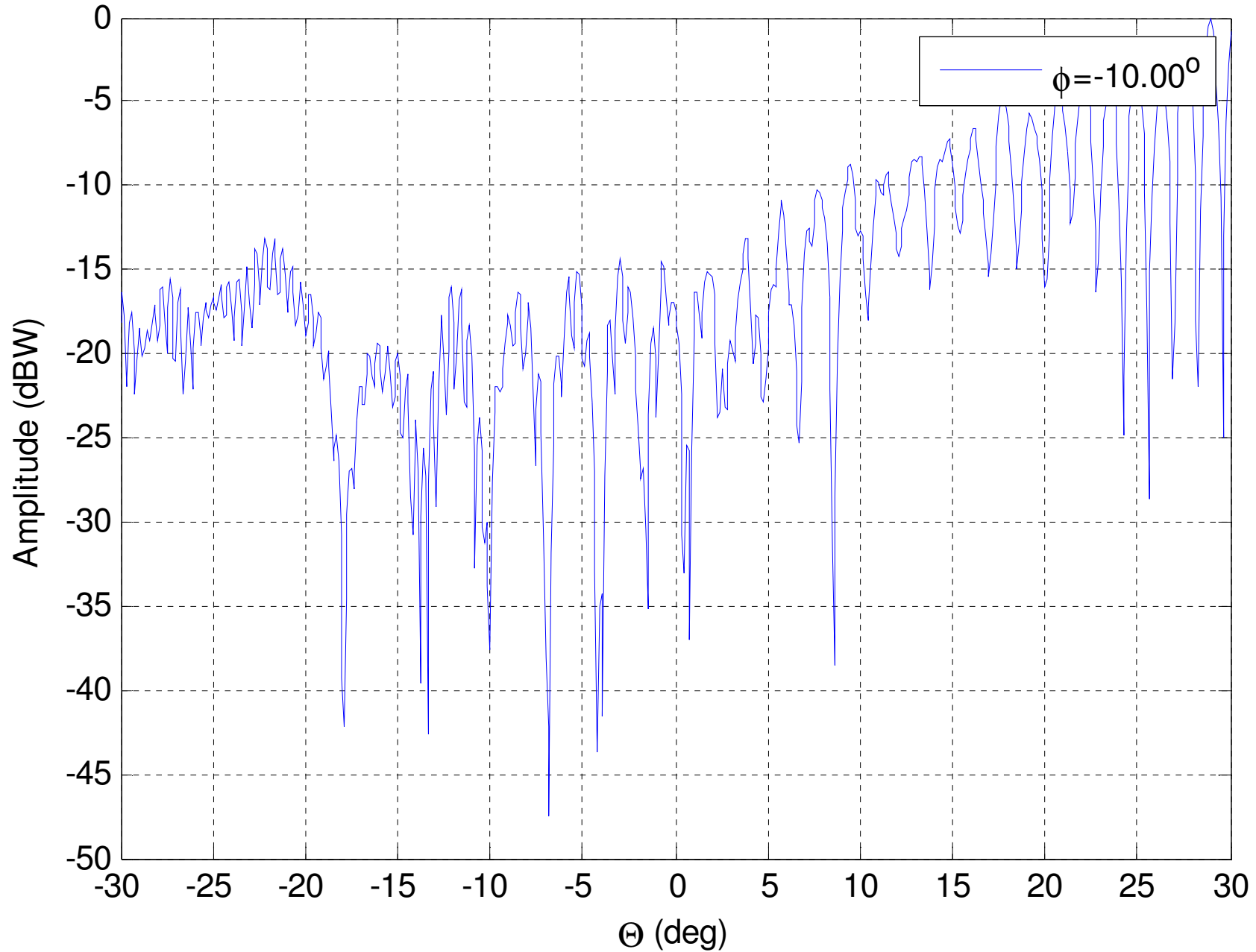
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -0.60 dBW, Date: 14-Dec-2011



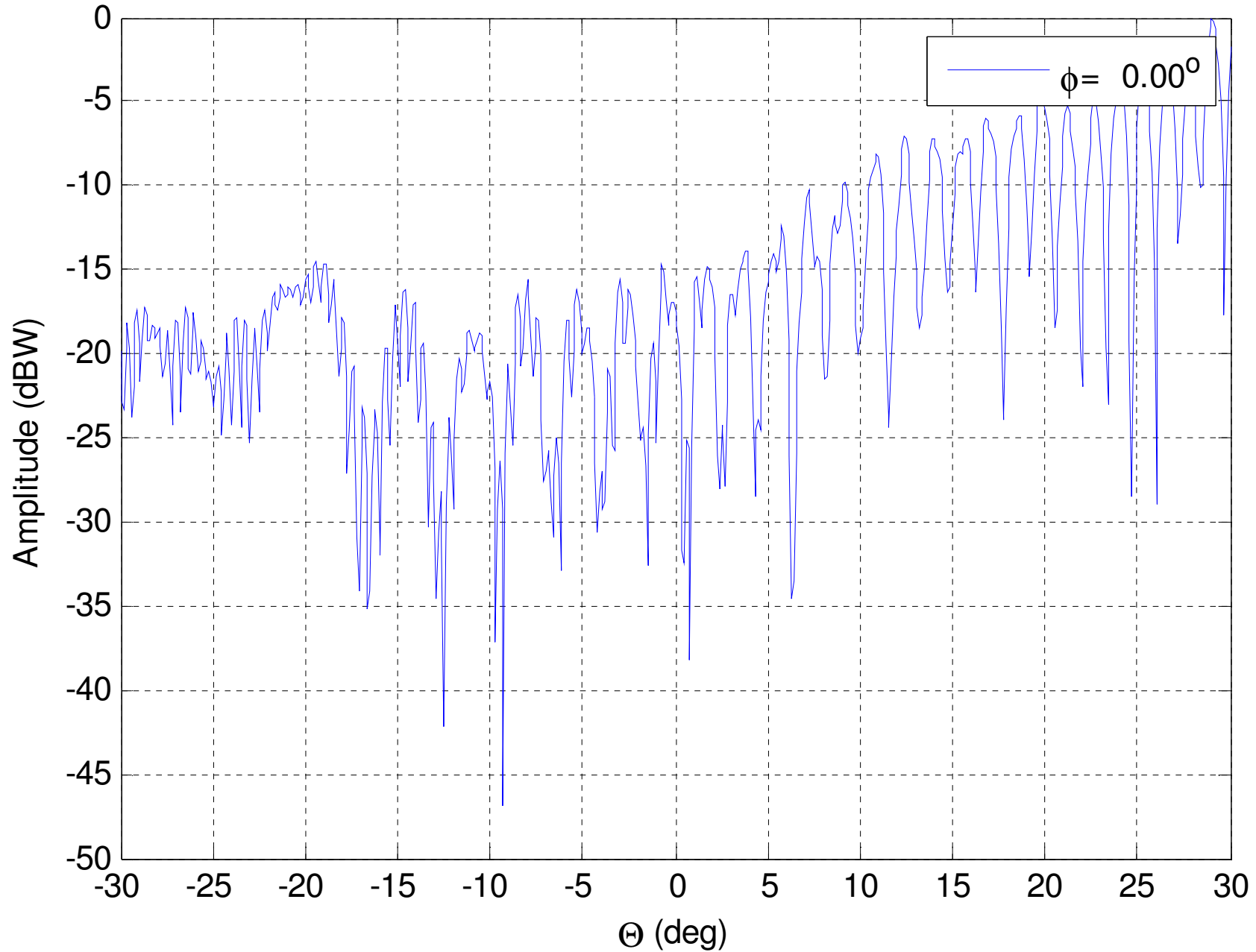
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 1.99 dBW, Date: 14-Dec-2011



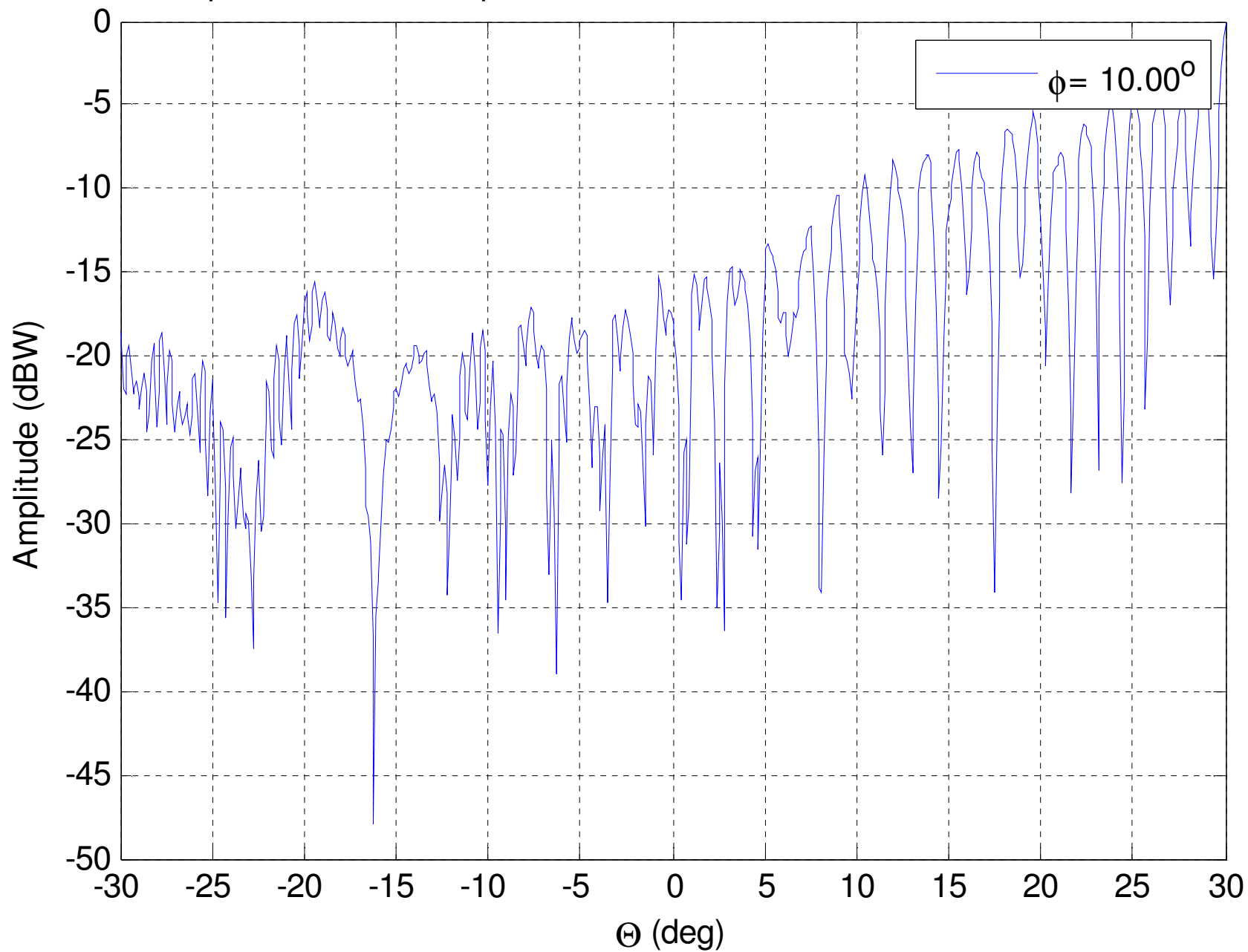
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 1.99 dBW, Date: 14-Dec-2011



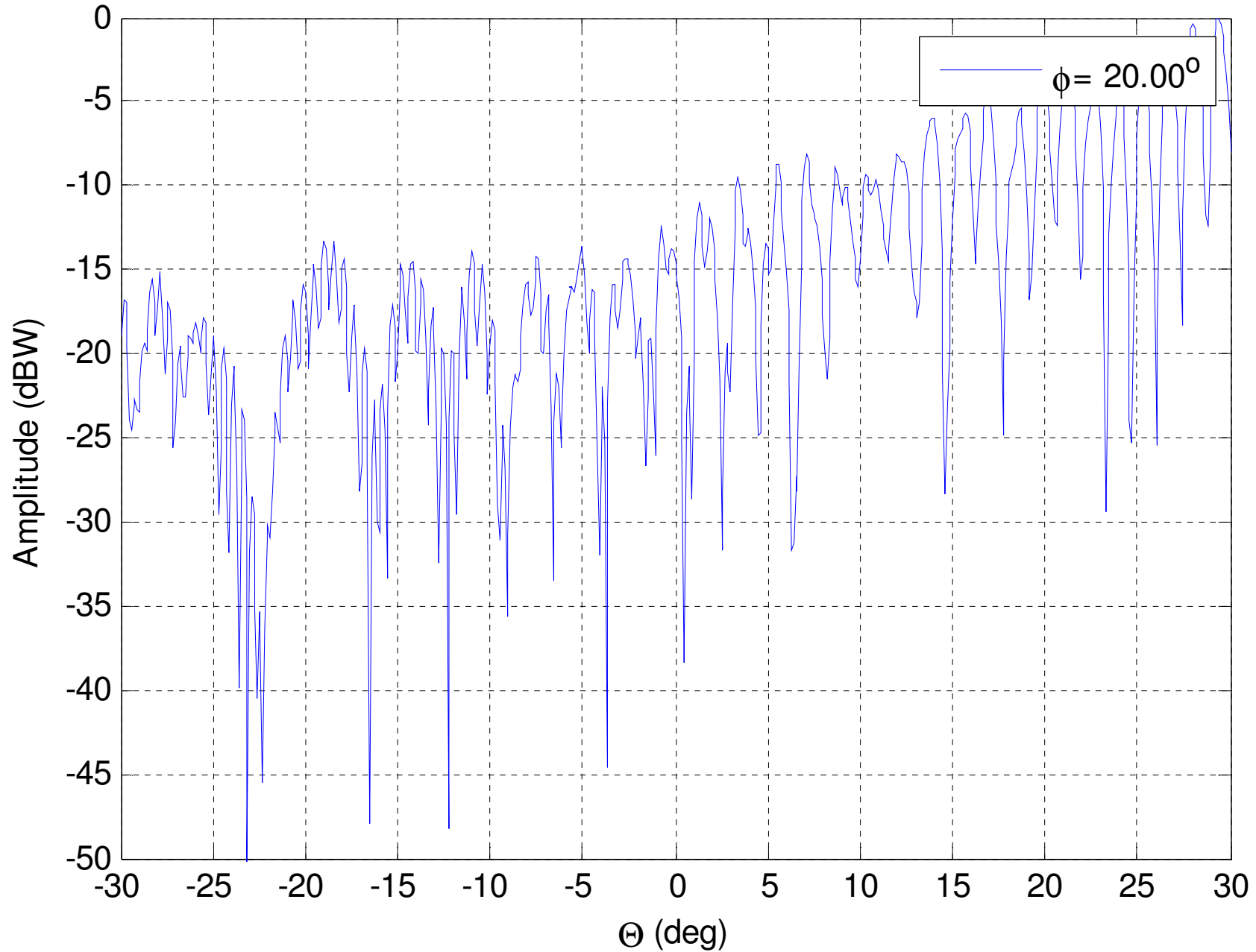
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 2.42 dBW, Date: 14-Dec-2011



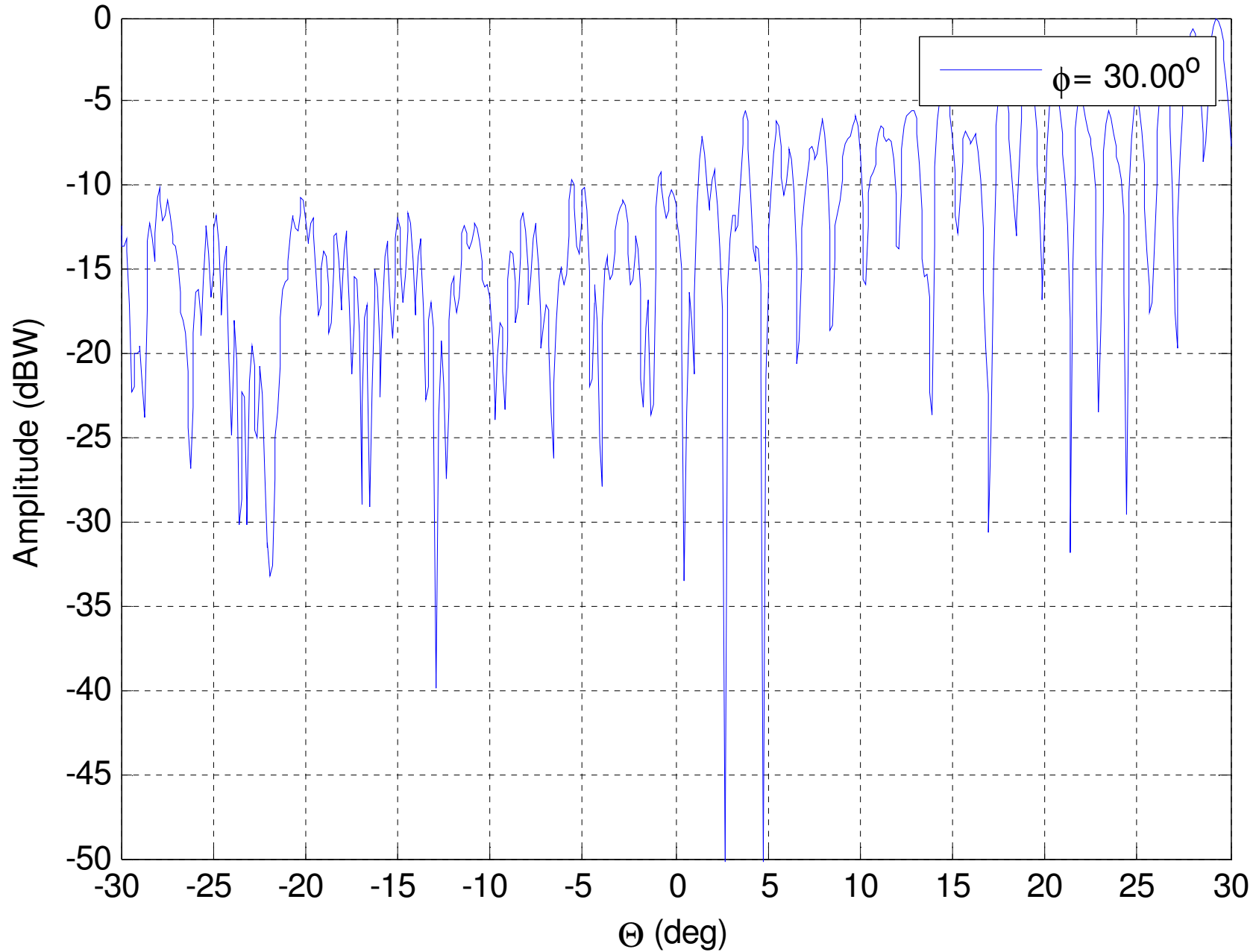
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -0.99 dBW, Date: 14-Dec-2011



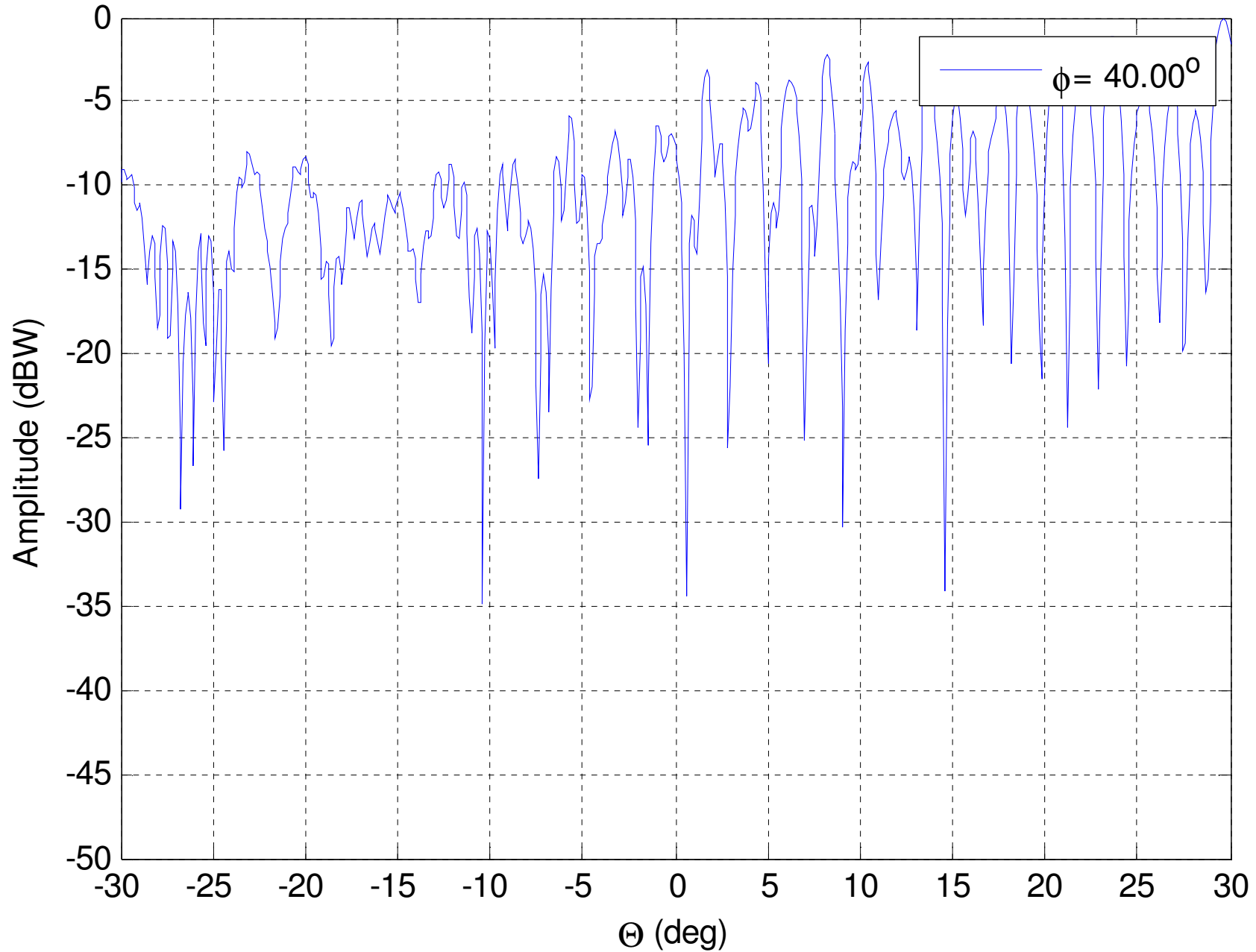
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -4.46 dBW, Date: 14-Dec-2011



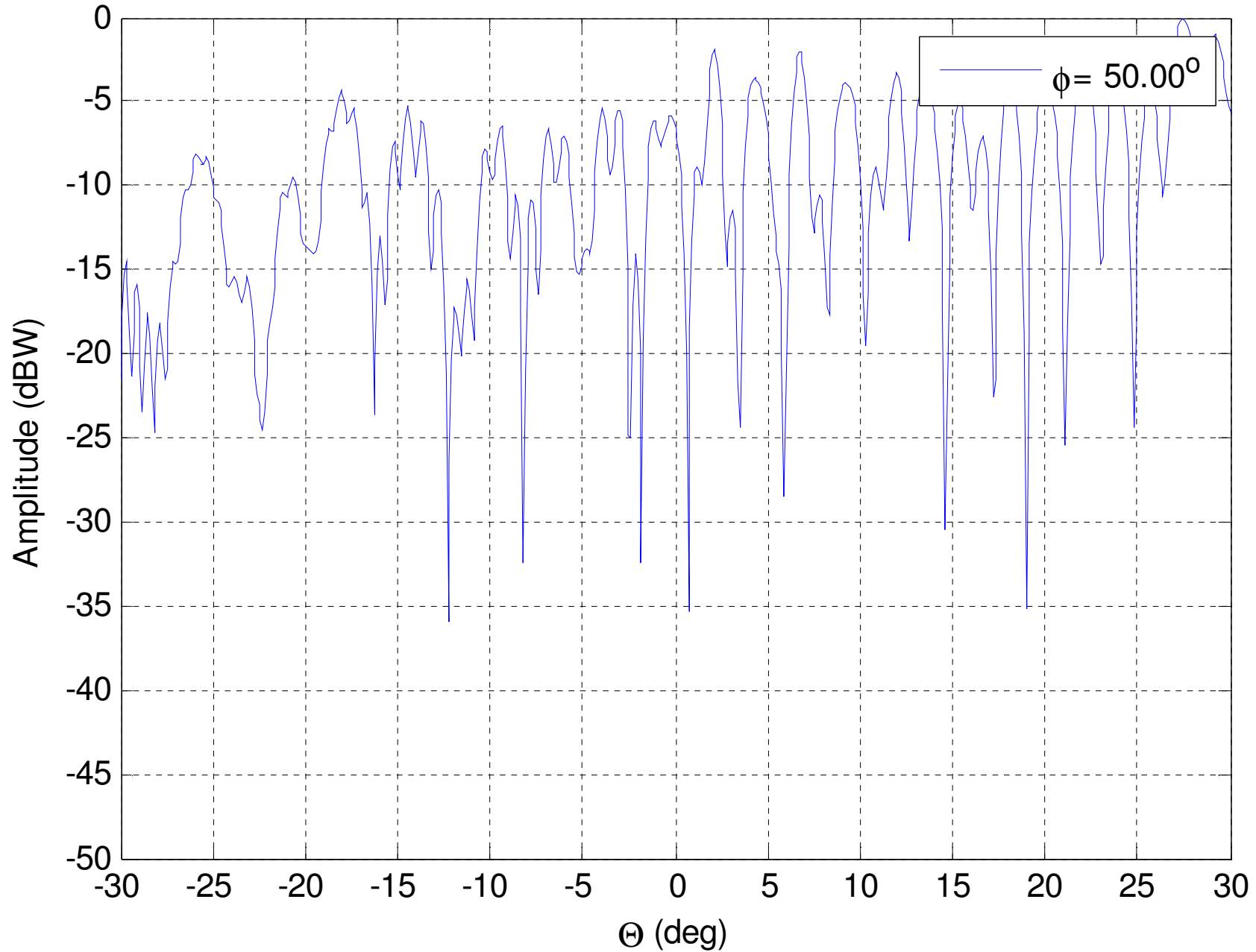
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -7.86 dBW, Date: 14-Dec-2011



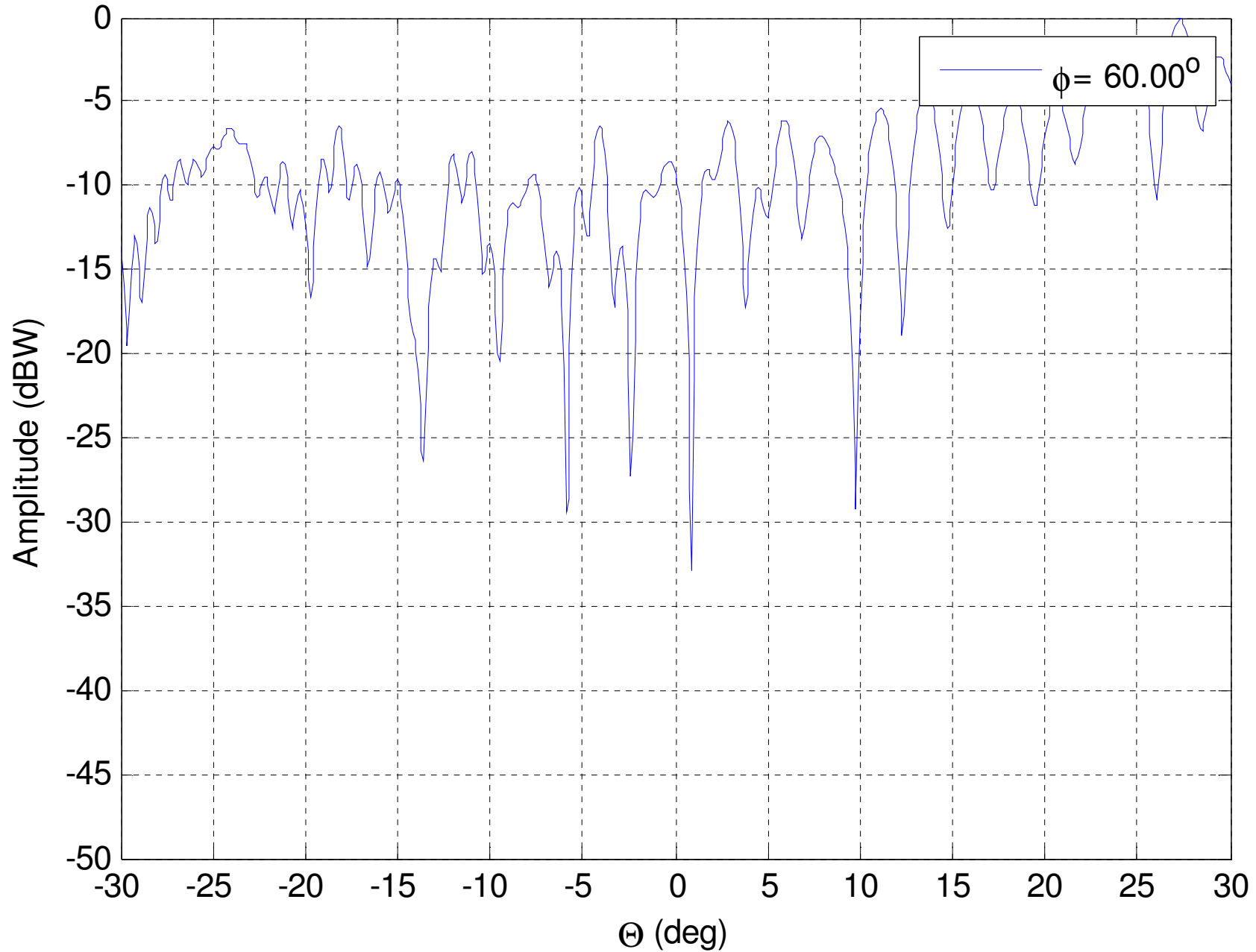
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -8.94 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -6.32 dBW, Date: 14-Dec-2011



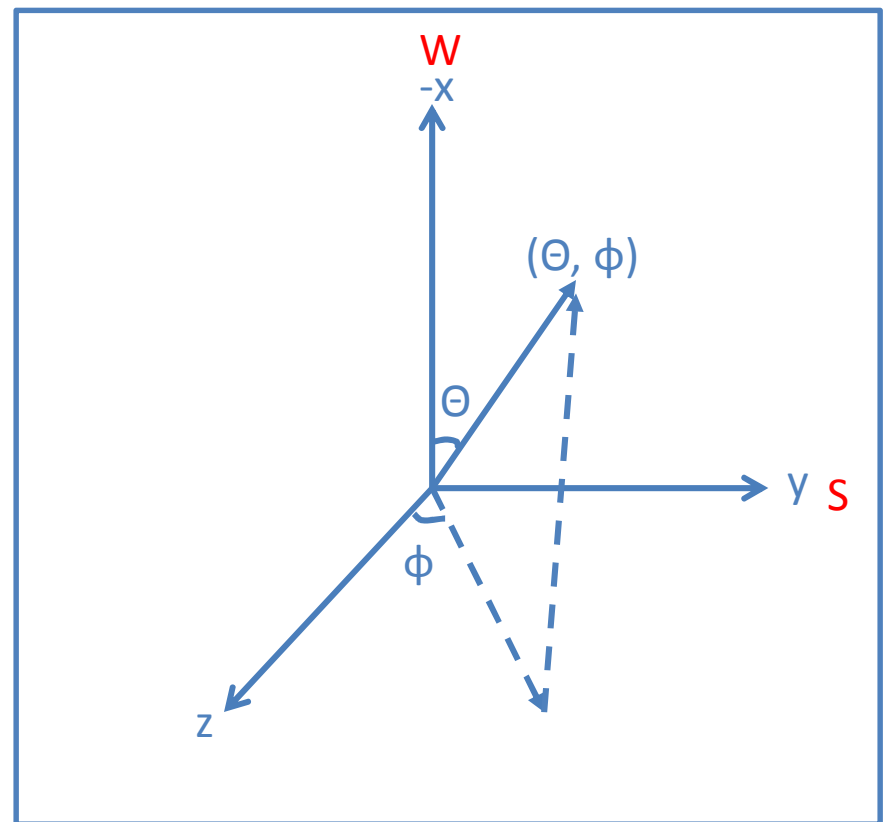
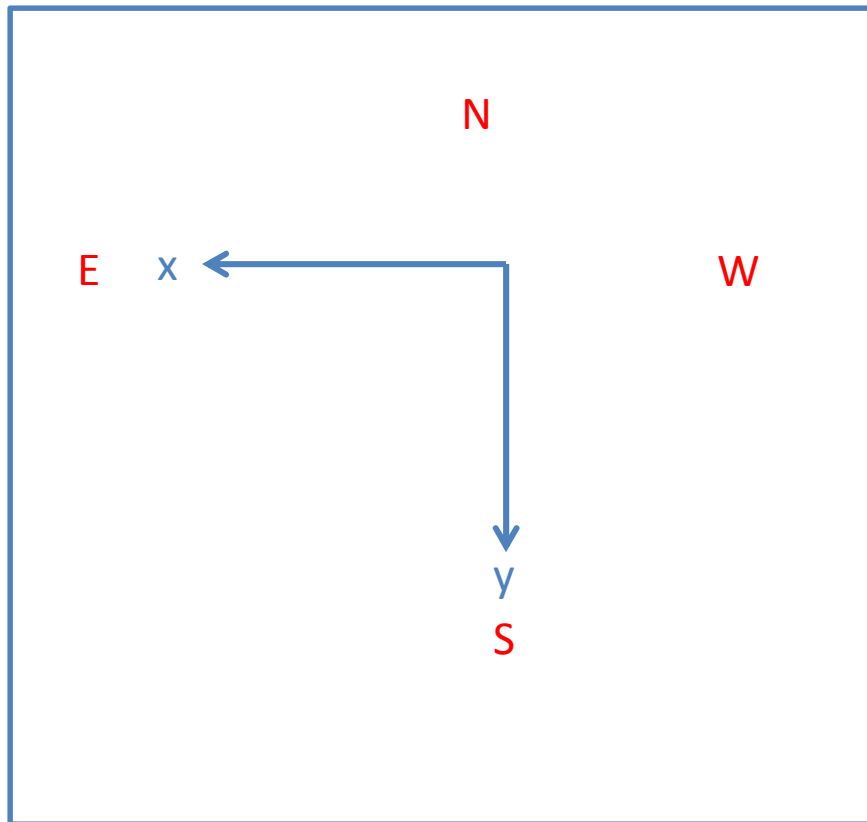
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 15

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



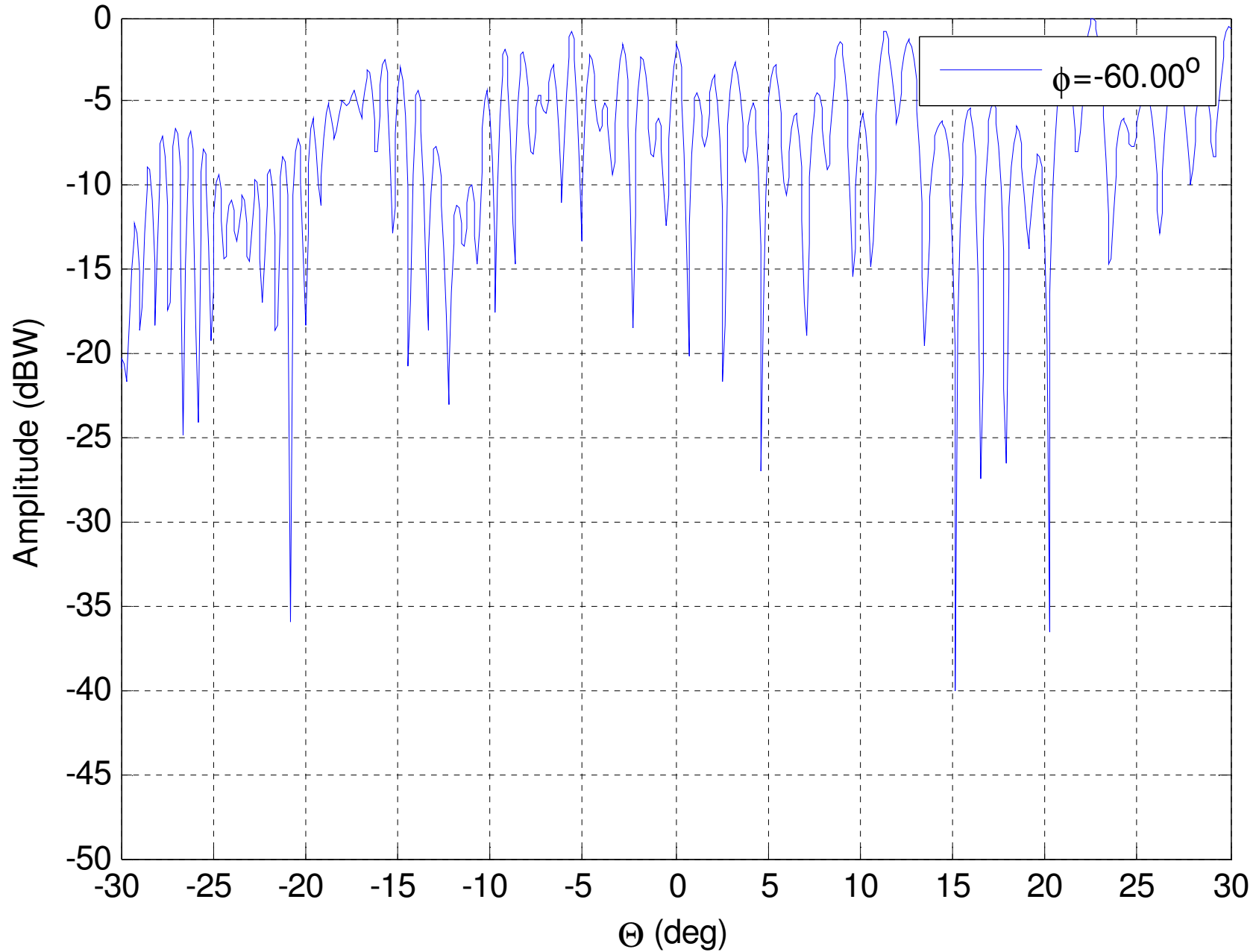
Spot Beam15, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

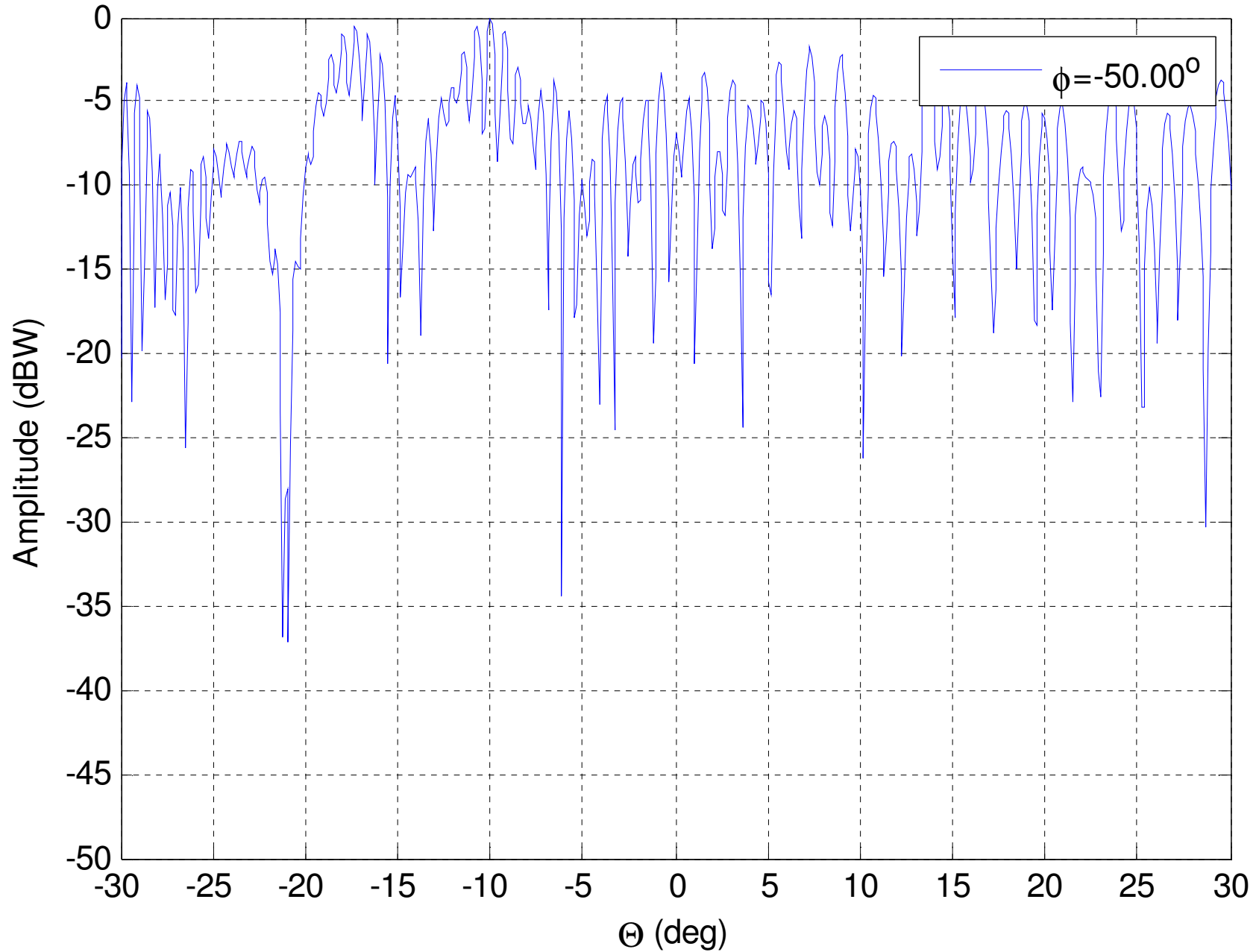
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -3.86 dBW, Date: 14-Dec-2011



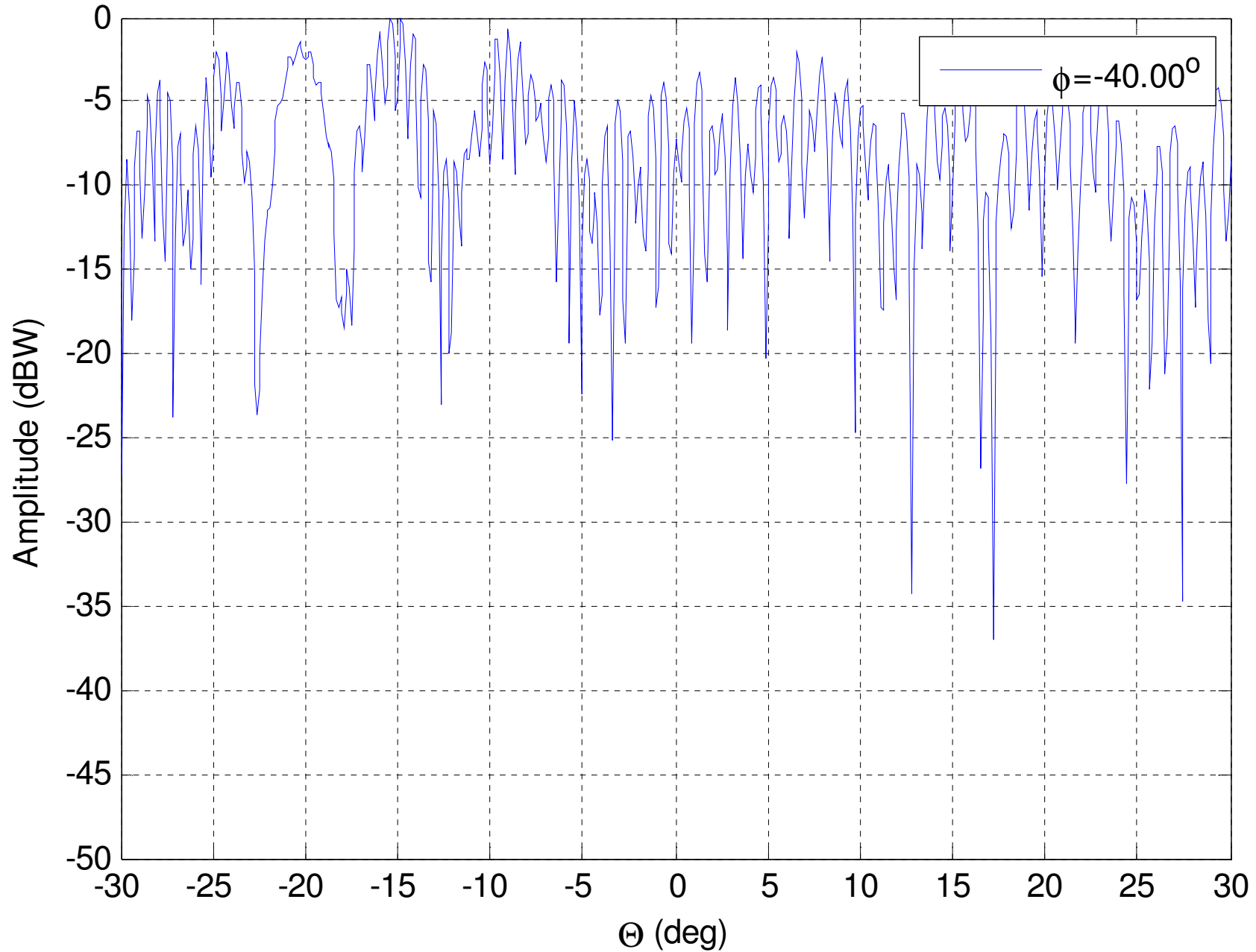
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -3.66 dBW, Date: 14-Dec-2011



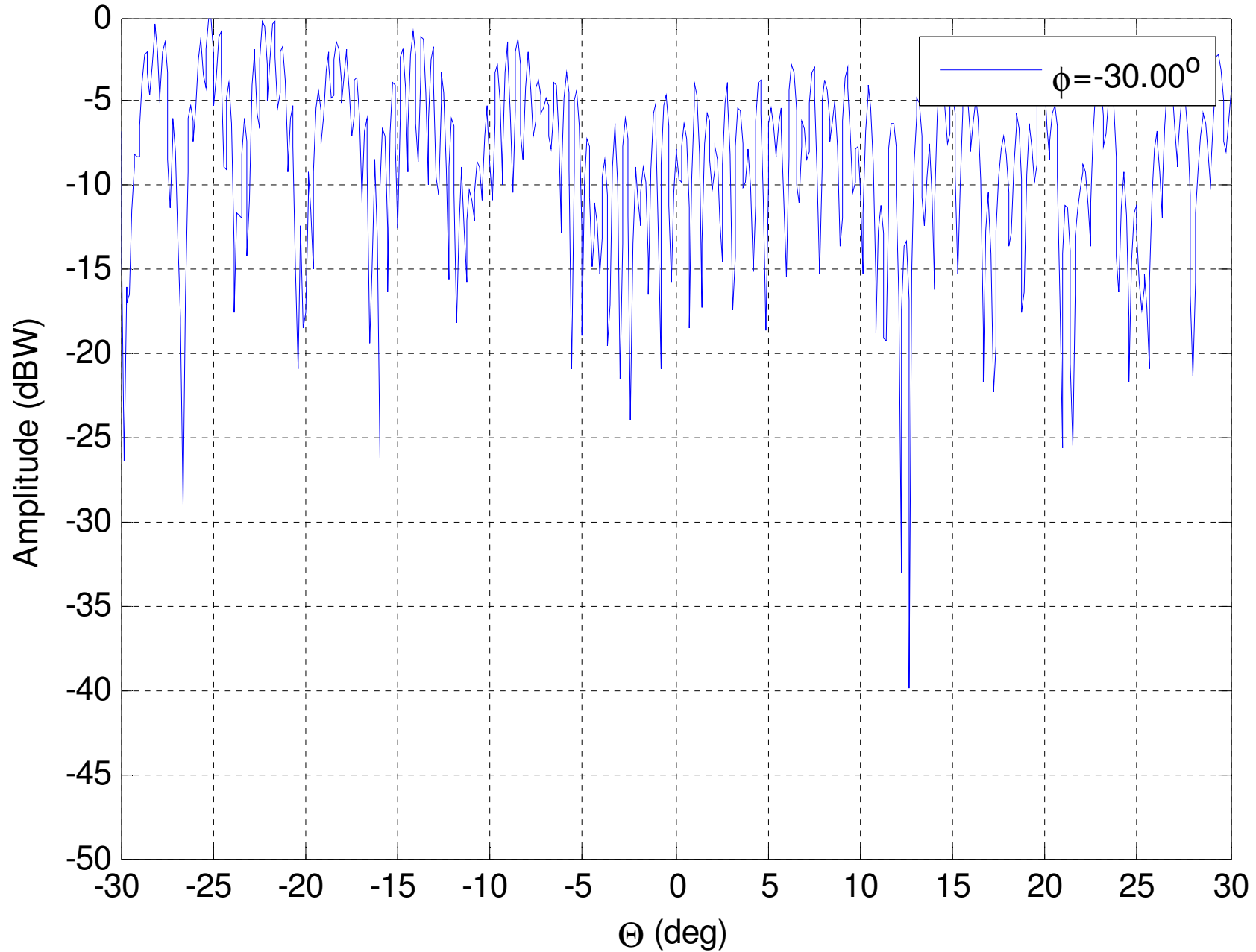
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -3.30 dBW, Date: 14-Dec-2011



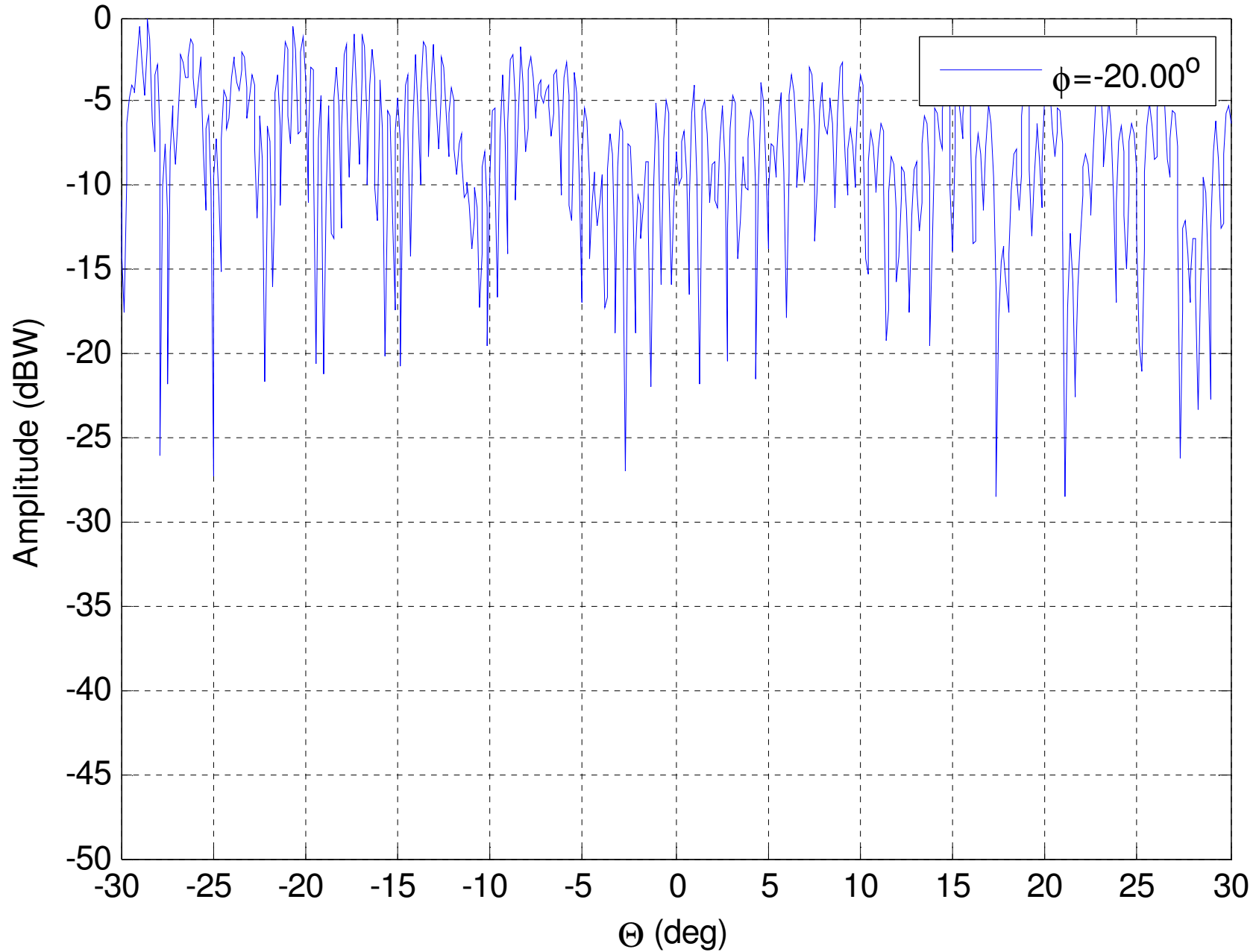
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -2.70 dBW, Date: 14-Dec-2011



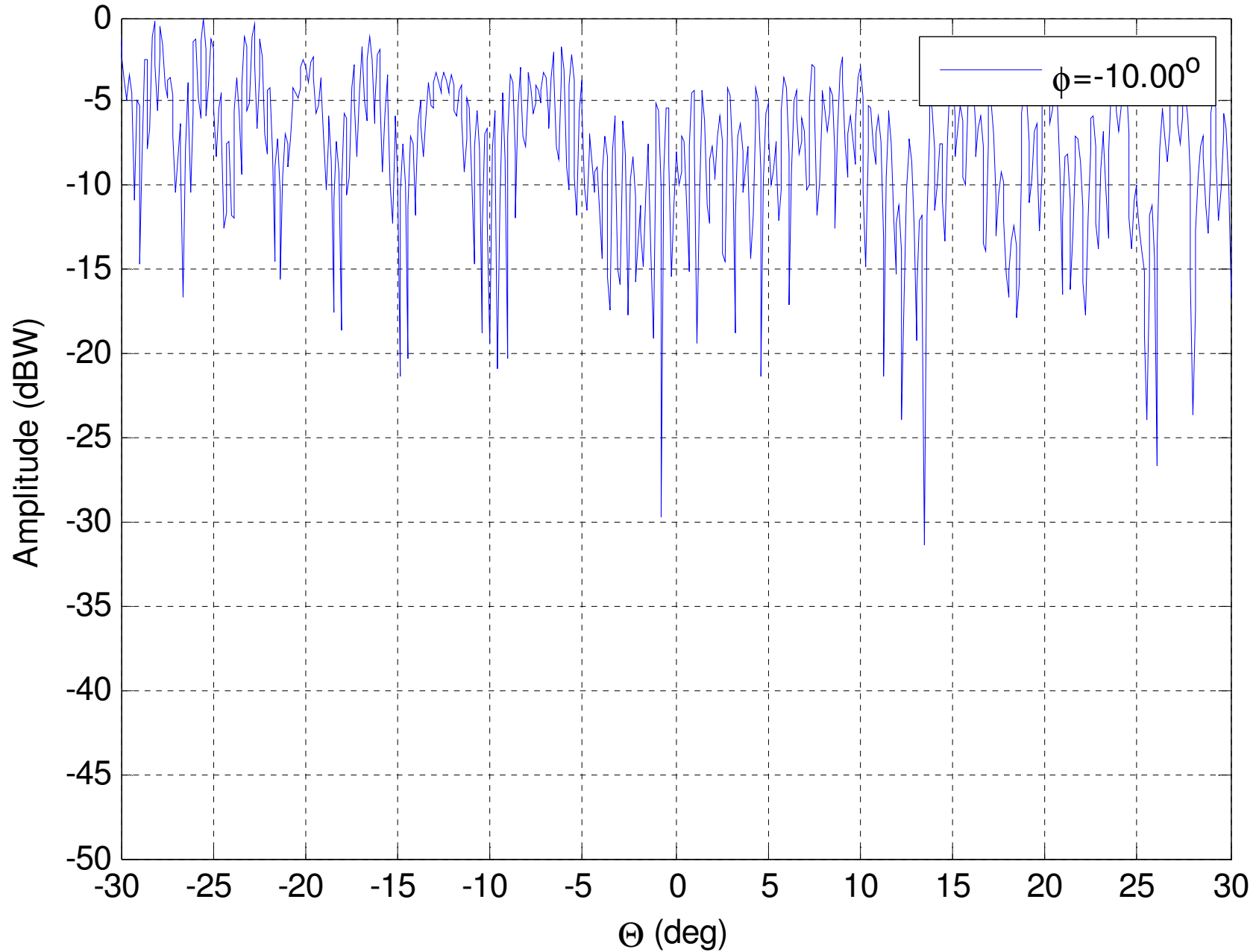
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -2.53 dBW, Date: 14-Dec-2011



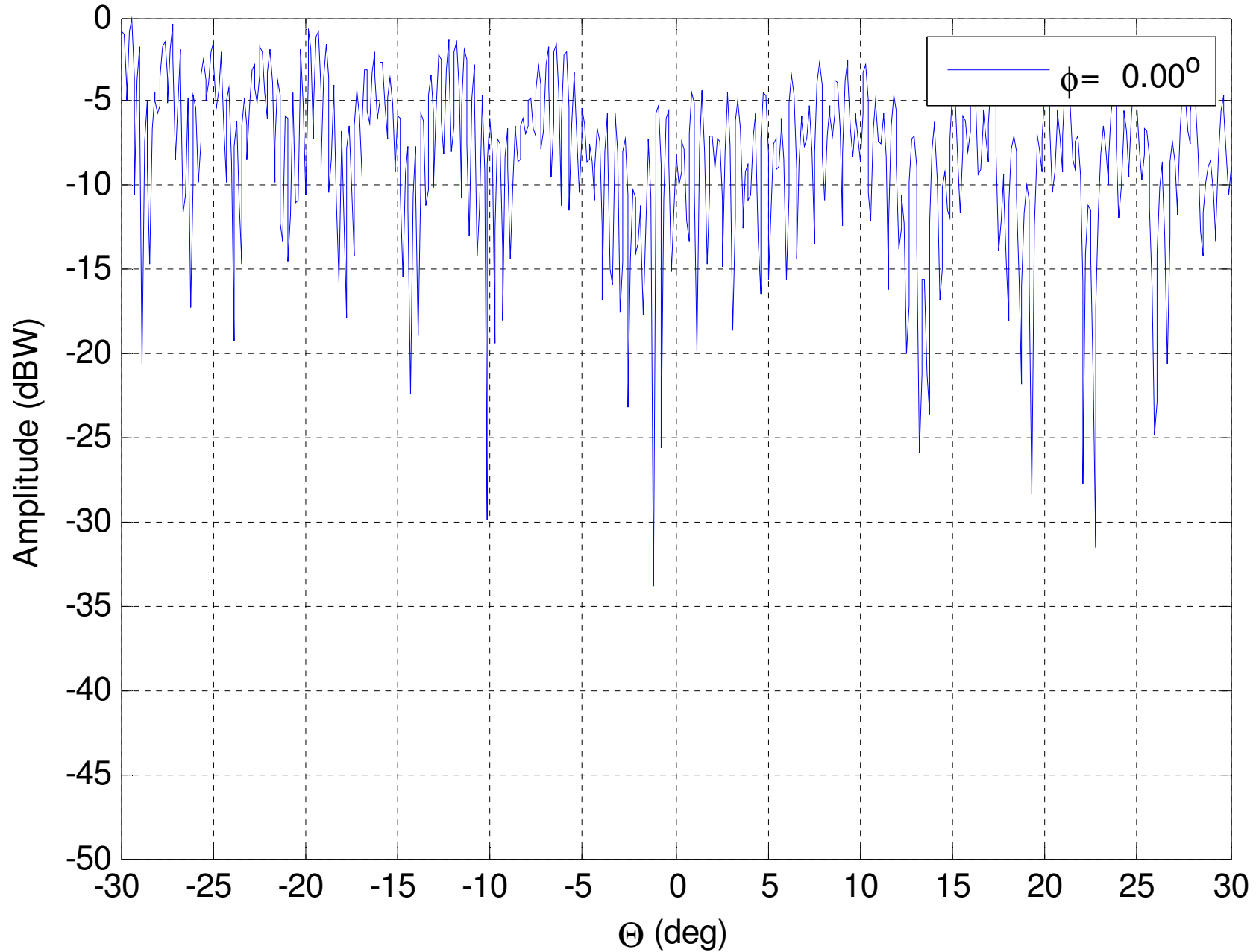
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -2.60 dBW, Date: 14-Dec-2011



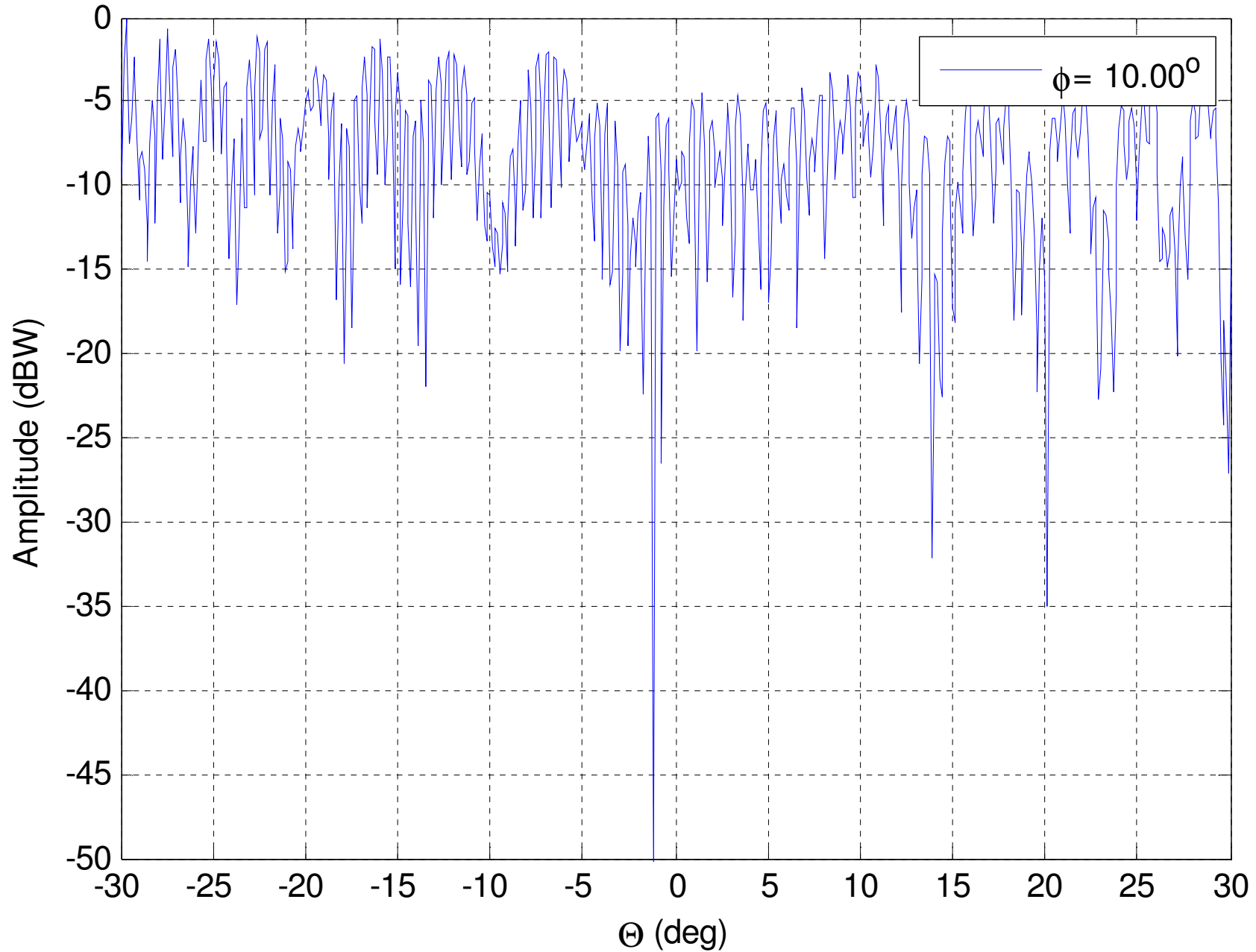
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -2.41 dBW, Date: 14-Dec-2011



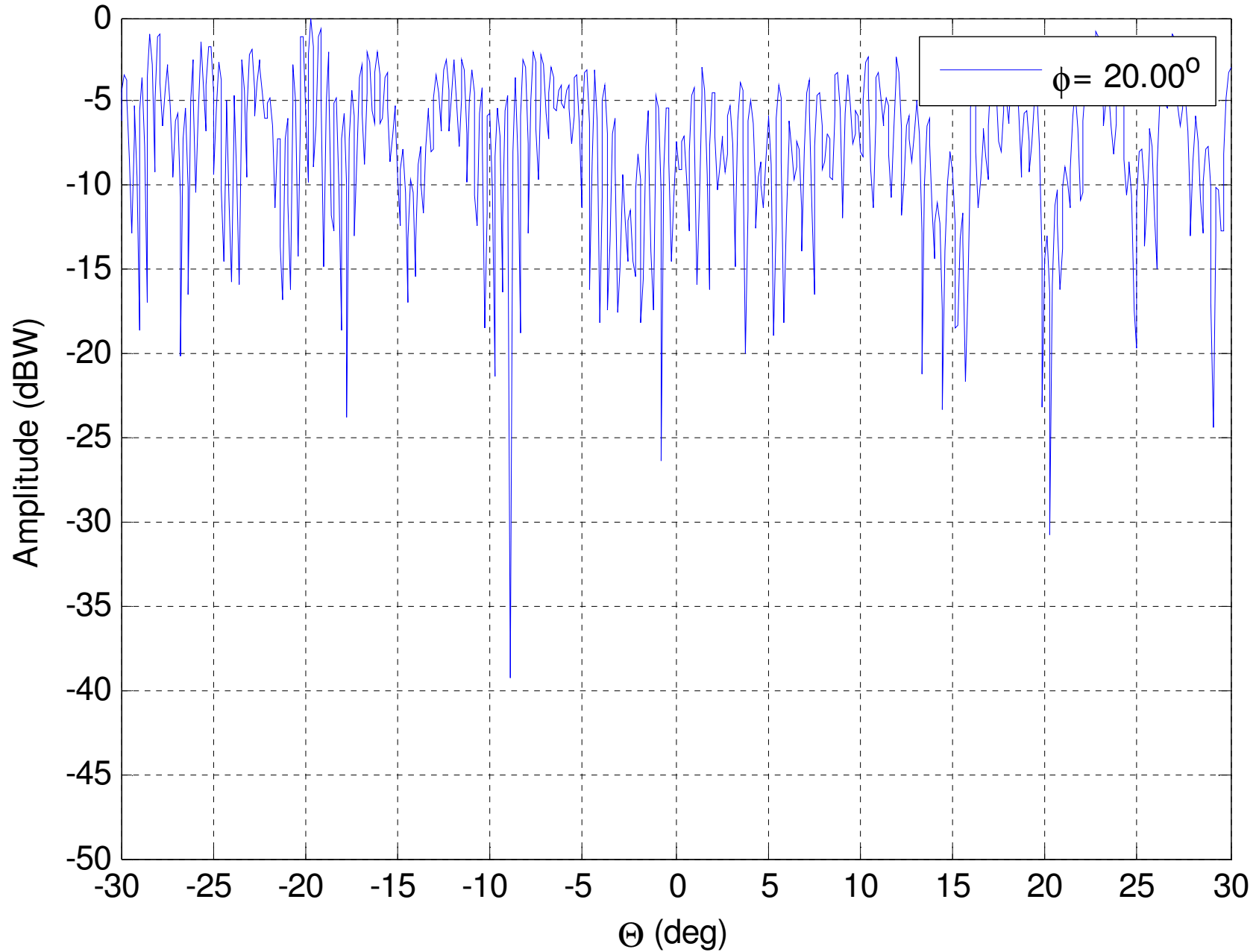
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -2.08 dBW, Date: 14-Dec-2011



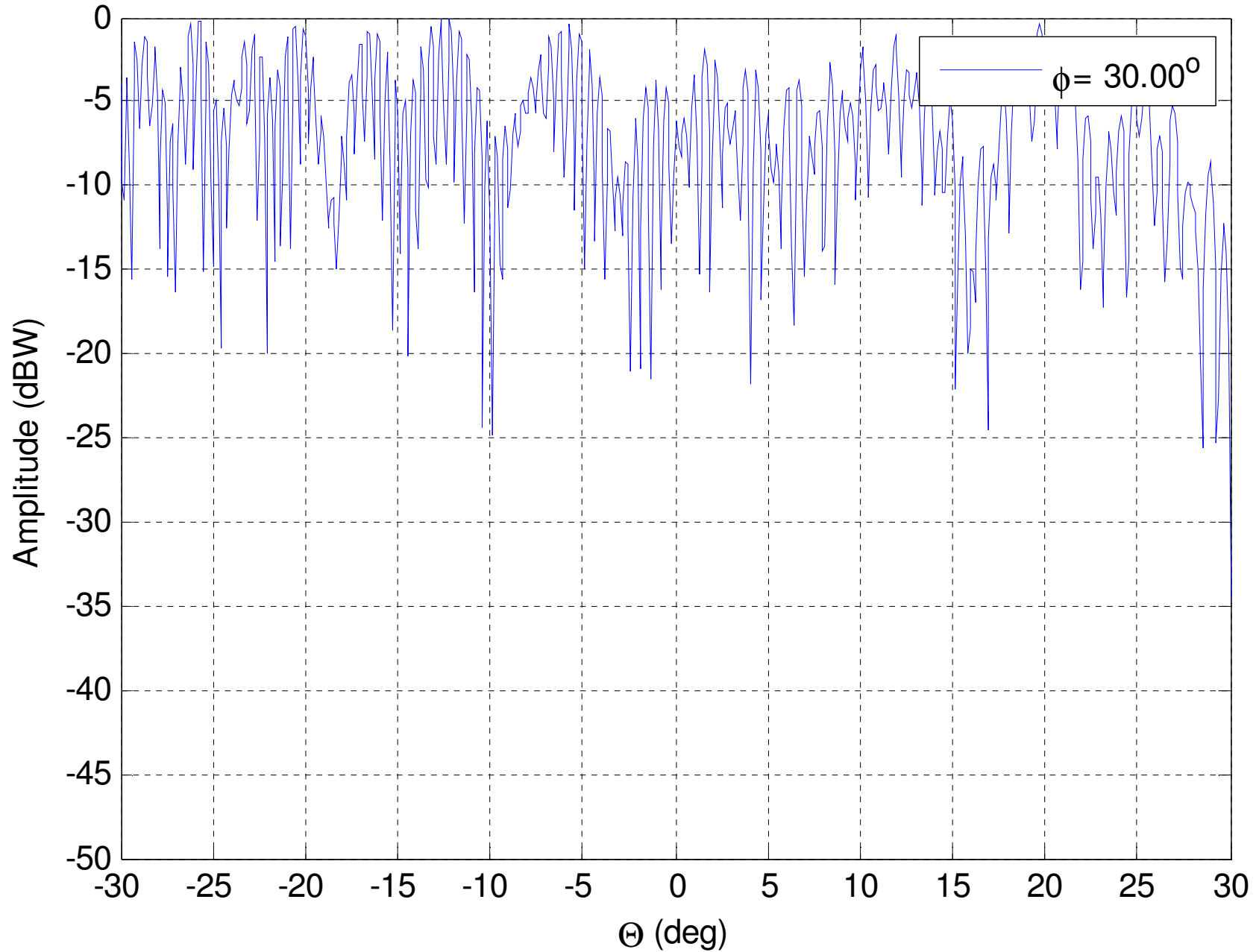
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -3.04 dBW, Date: 14-Dec-2011



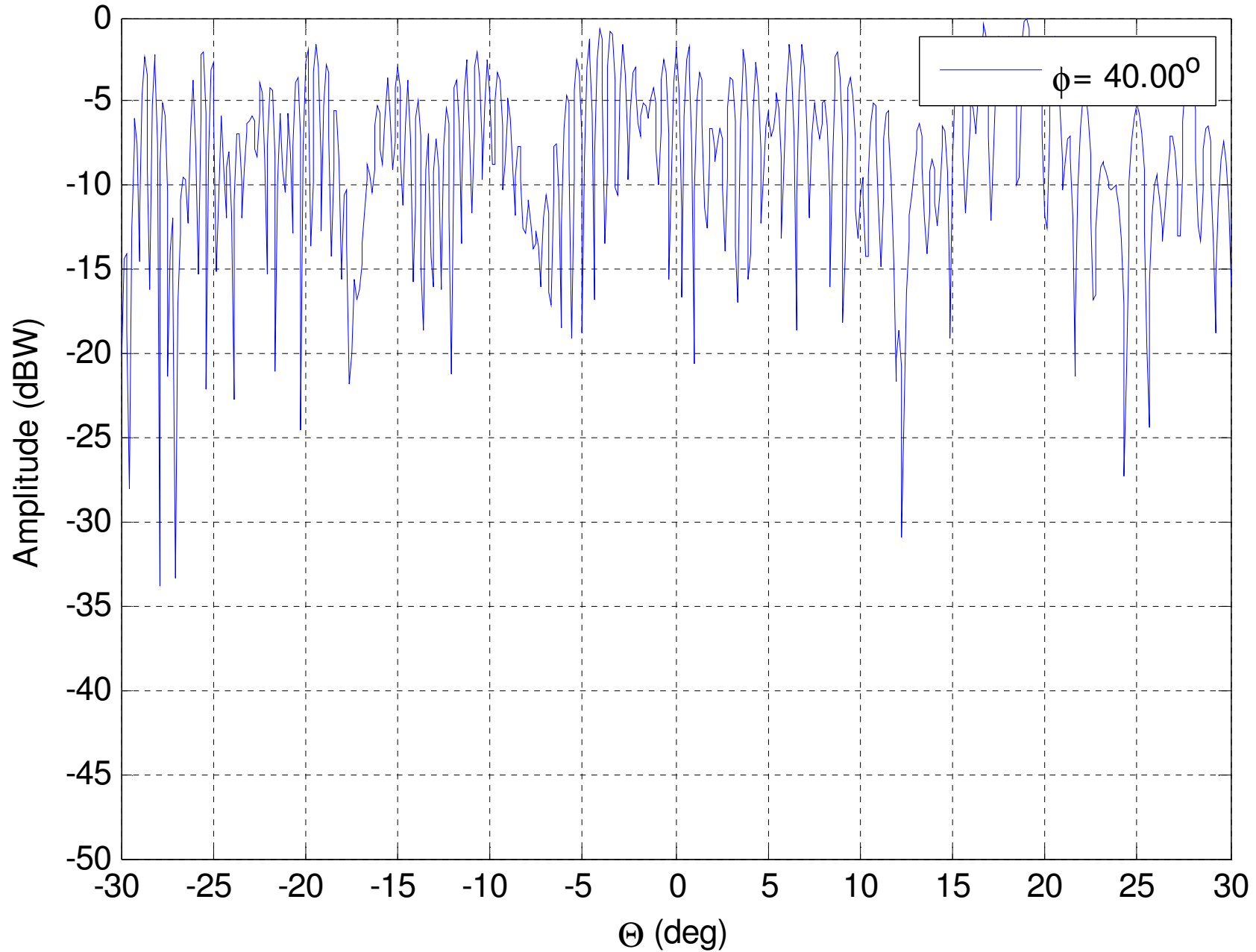
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -4.10 dBW, Date: 14-Dec-2011



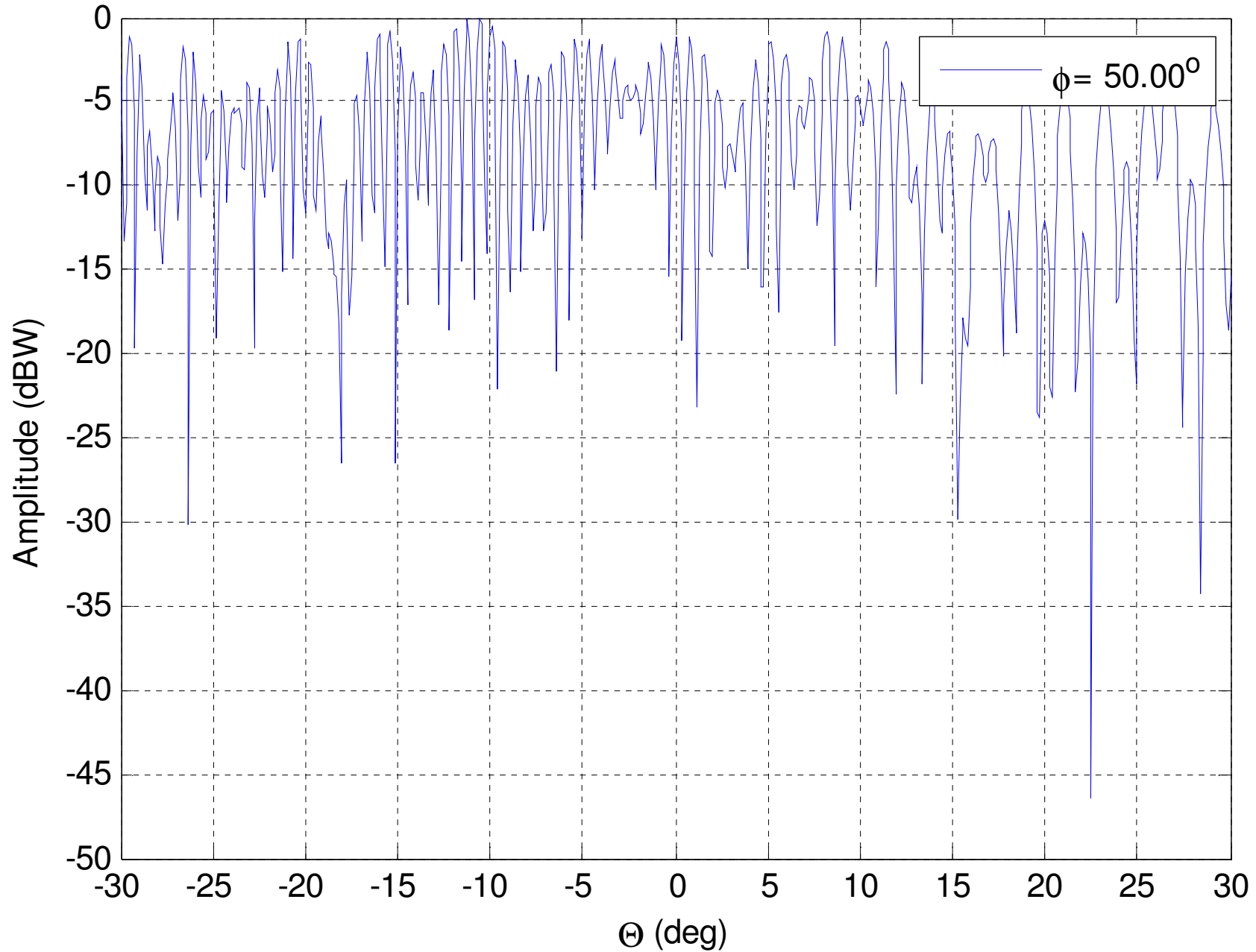
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -4.01 dBW, Date: 14-Dec-2011



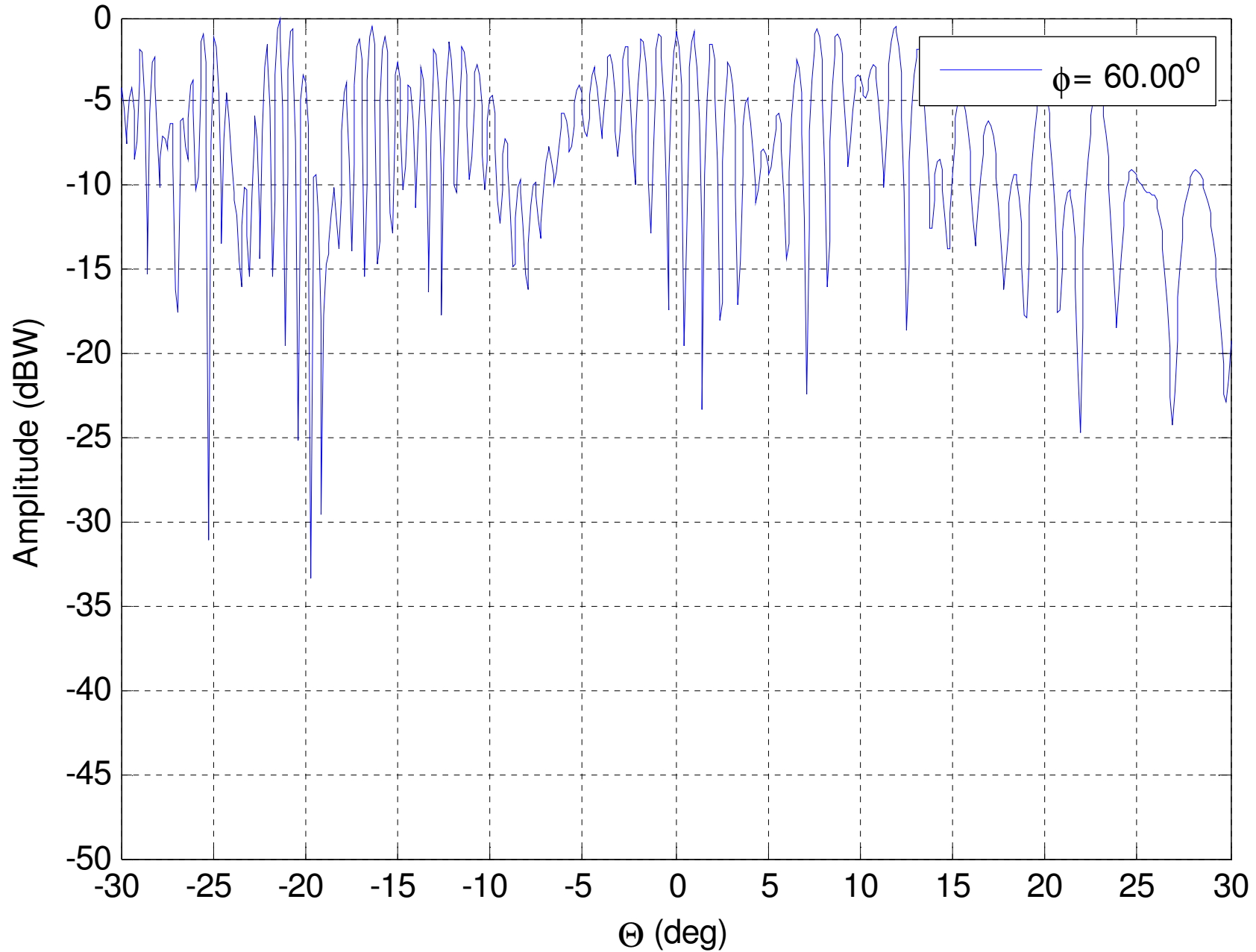
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -4.62 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

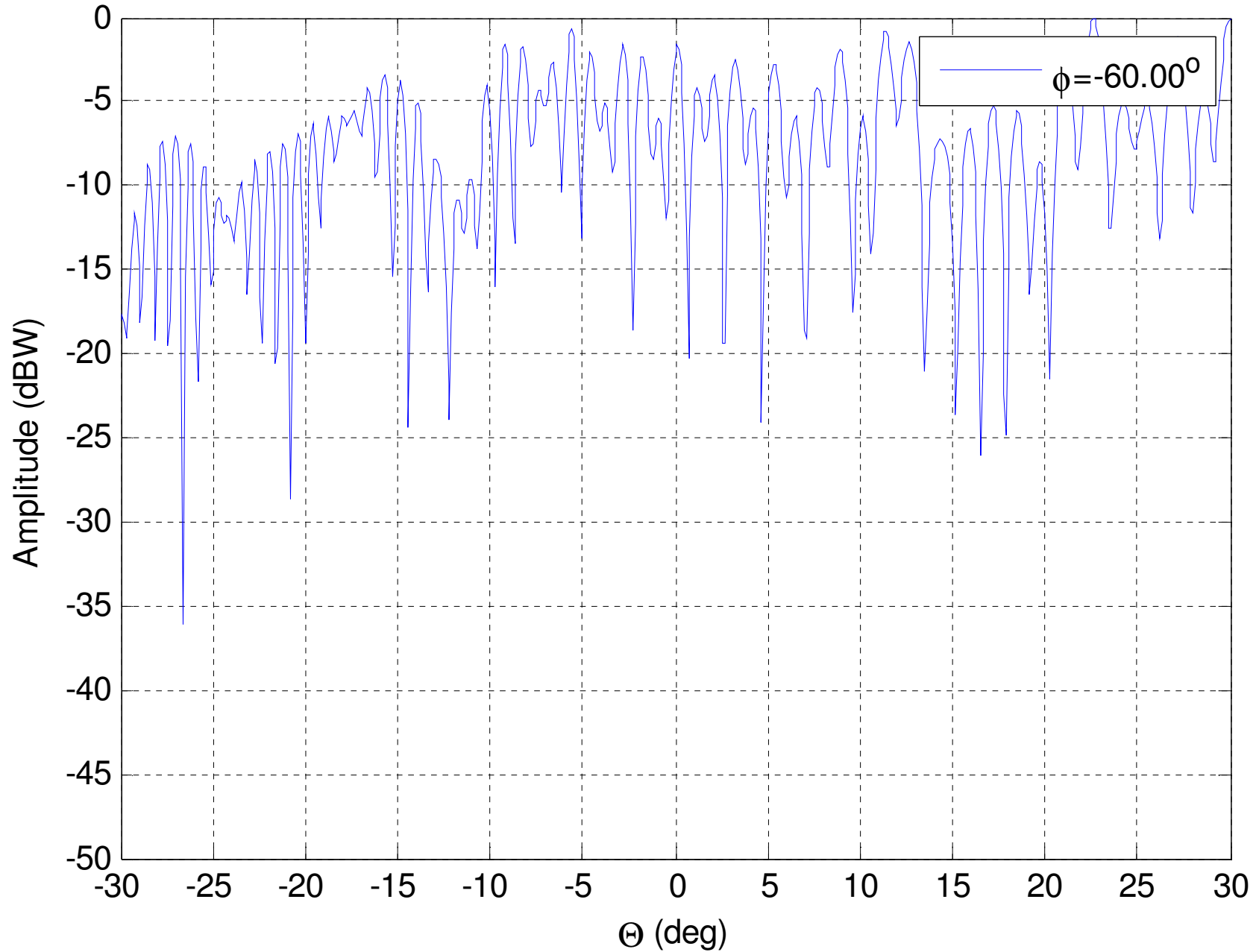
Input file: tx-17.3-rhcp-60.cut, Peak: -4.83 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

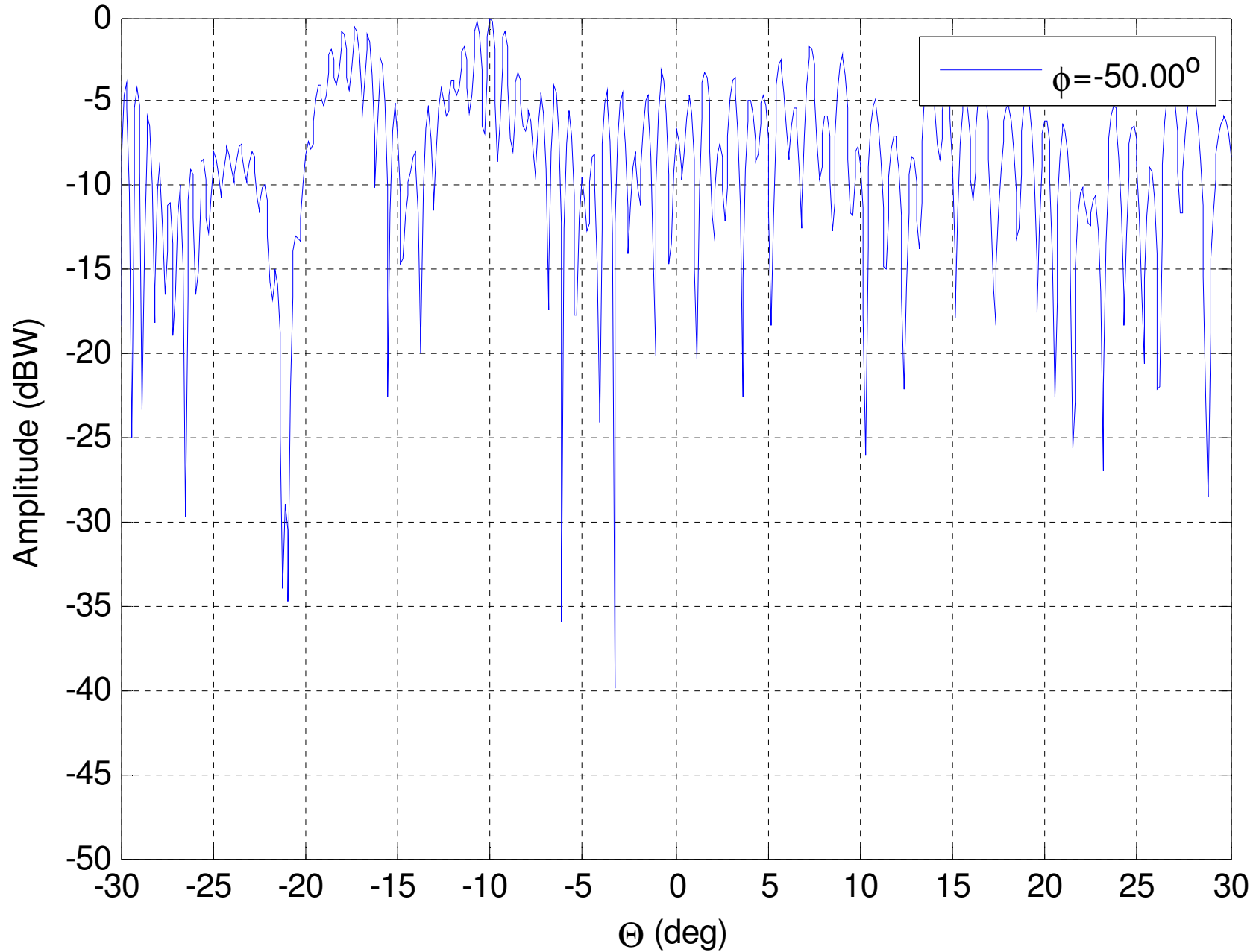
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -3.79 dBW, Date: 14-Dec-2011



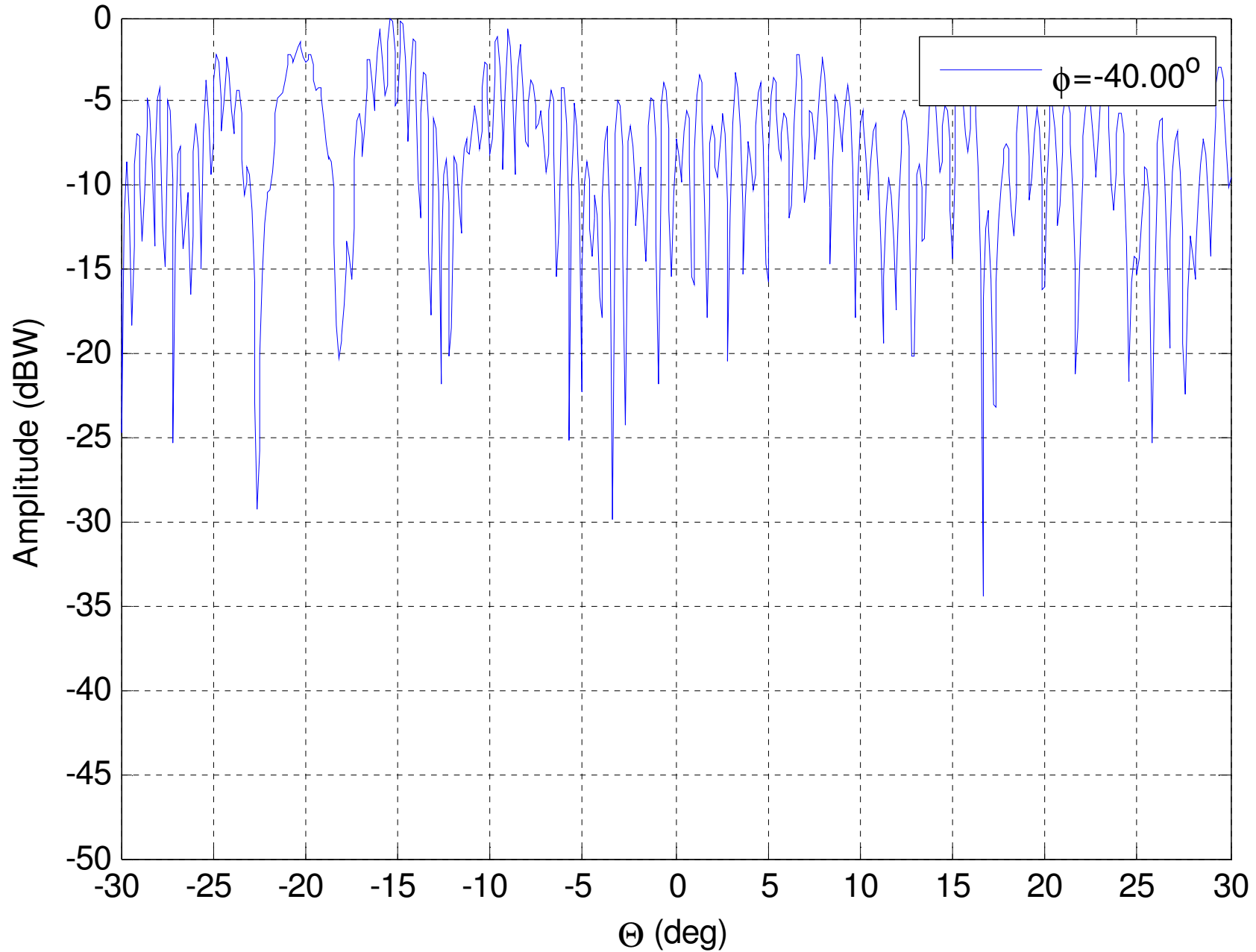
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -3.70 dBW, Date: 14-Dec-2011



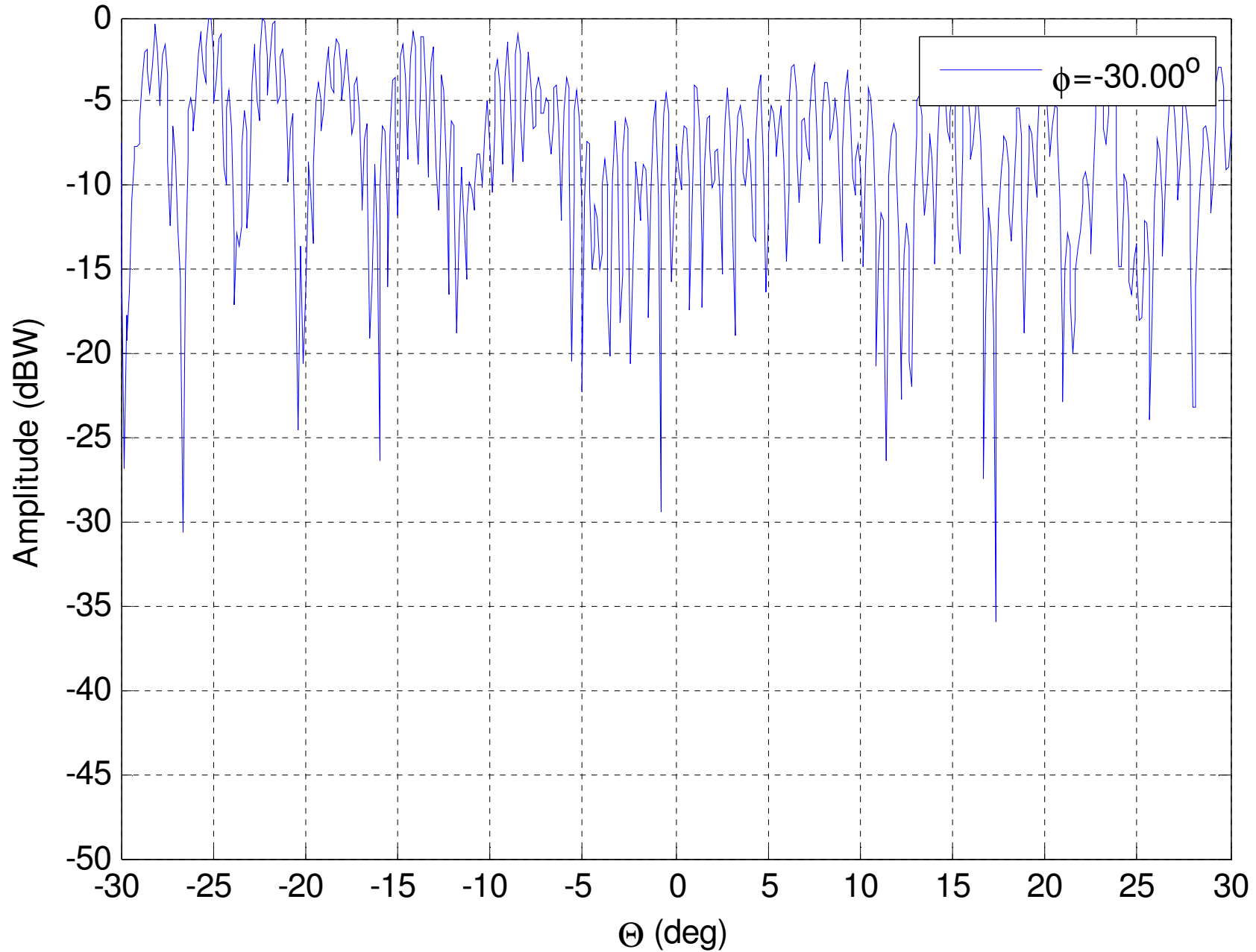
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.16 dBW, Date: 14-Dec-2011



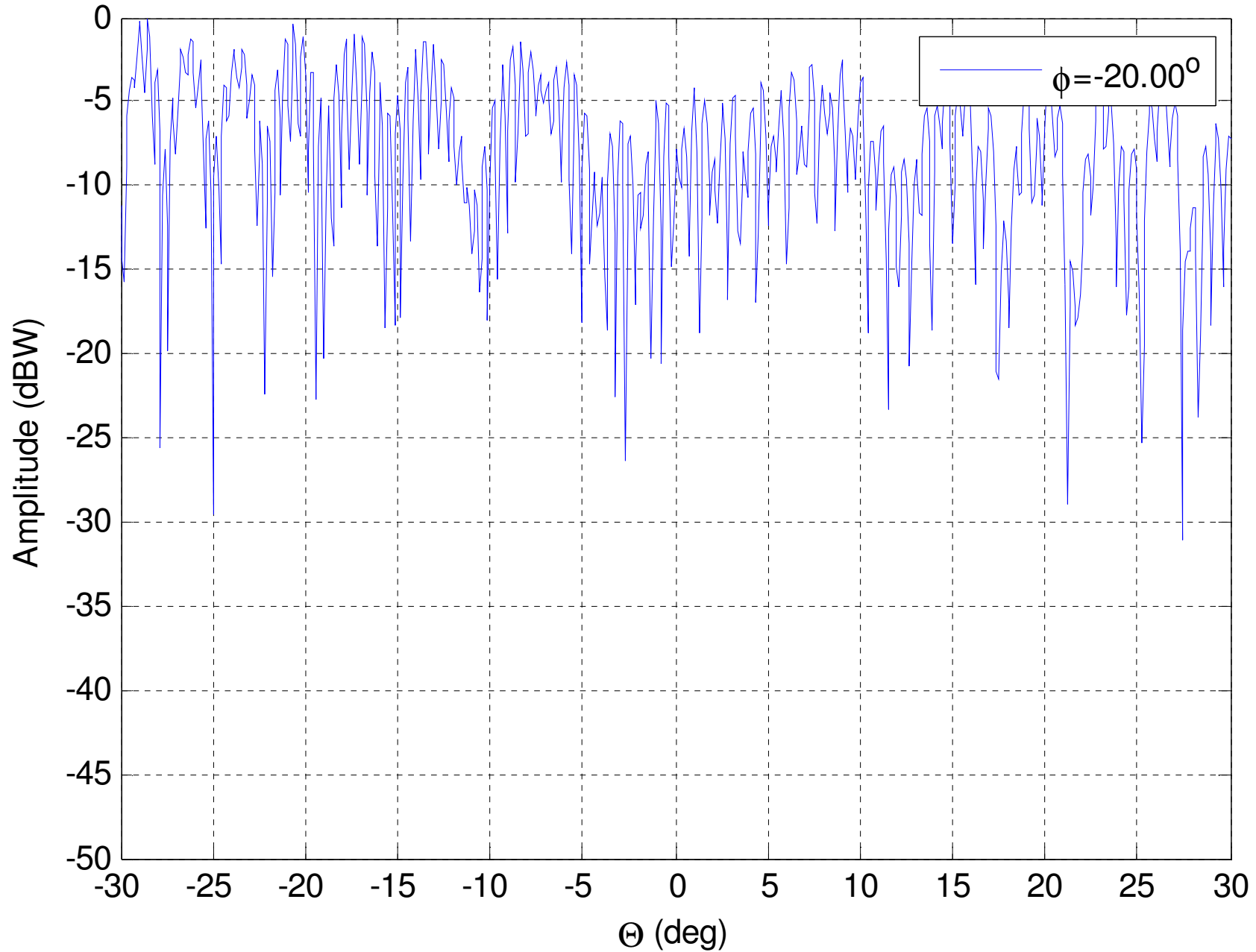
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -2.67 dBW, Date: 14-Dec-2011



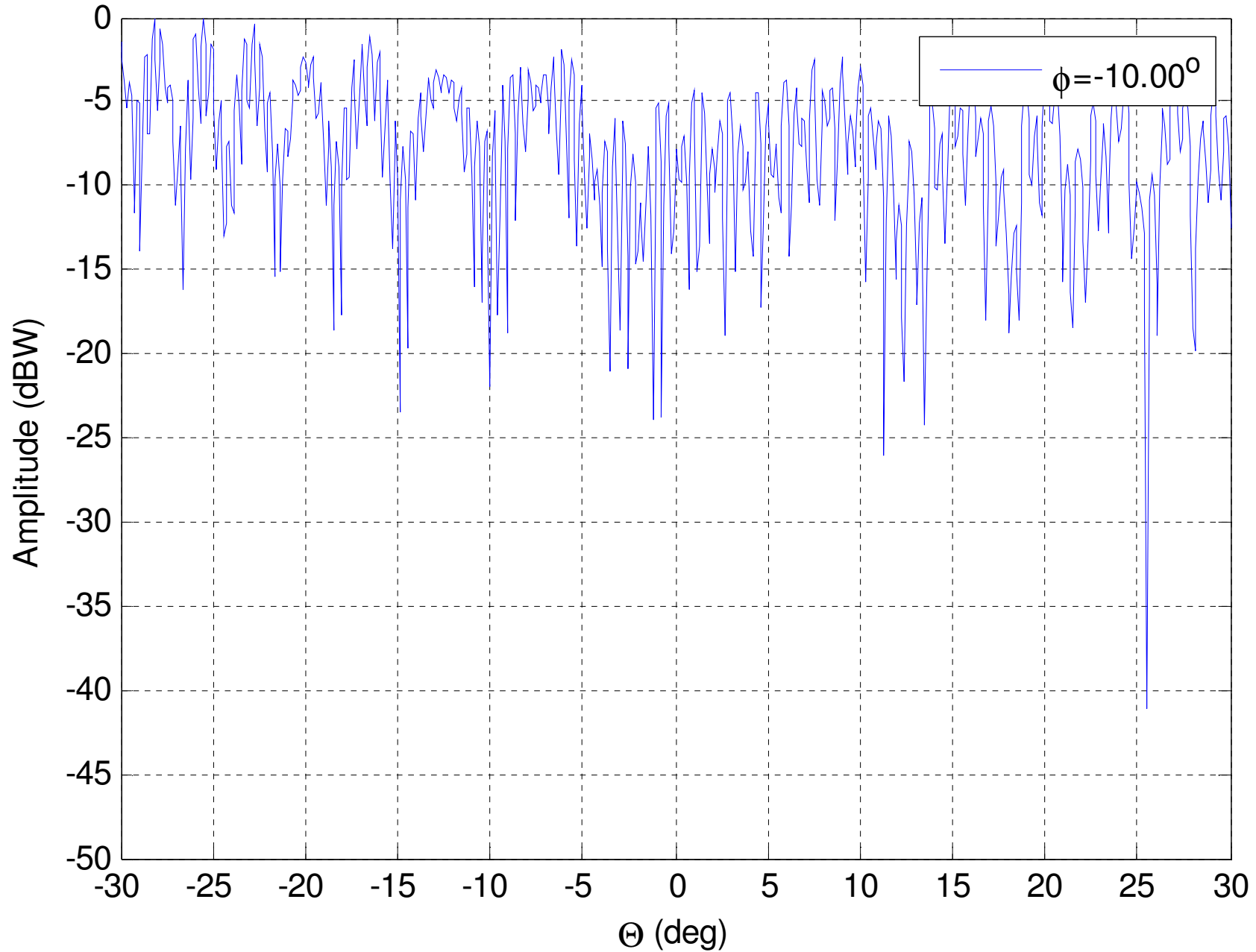
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.51 dBW, Date: 14-Dec-2011



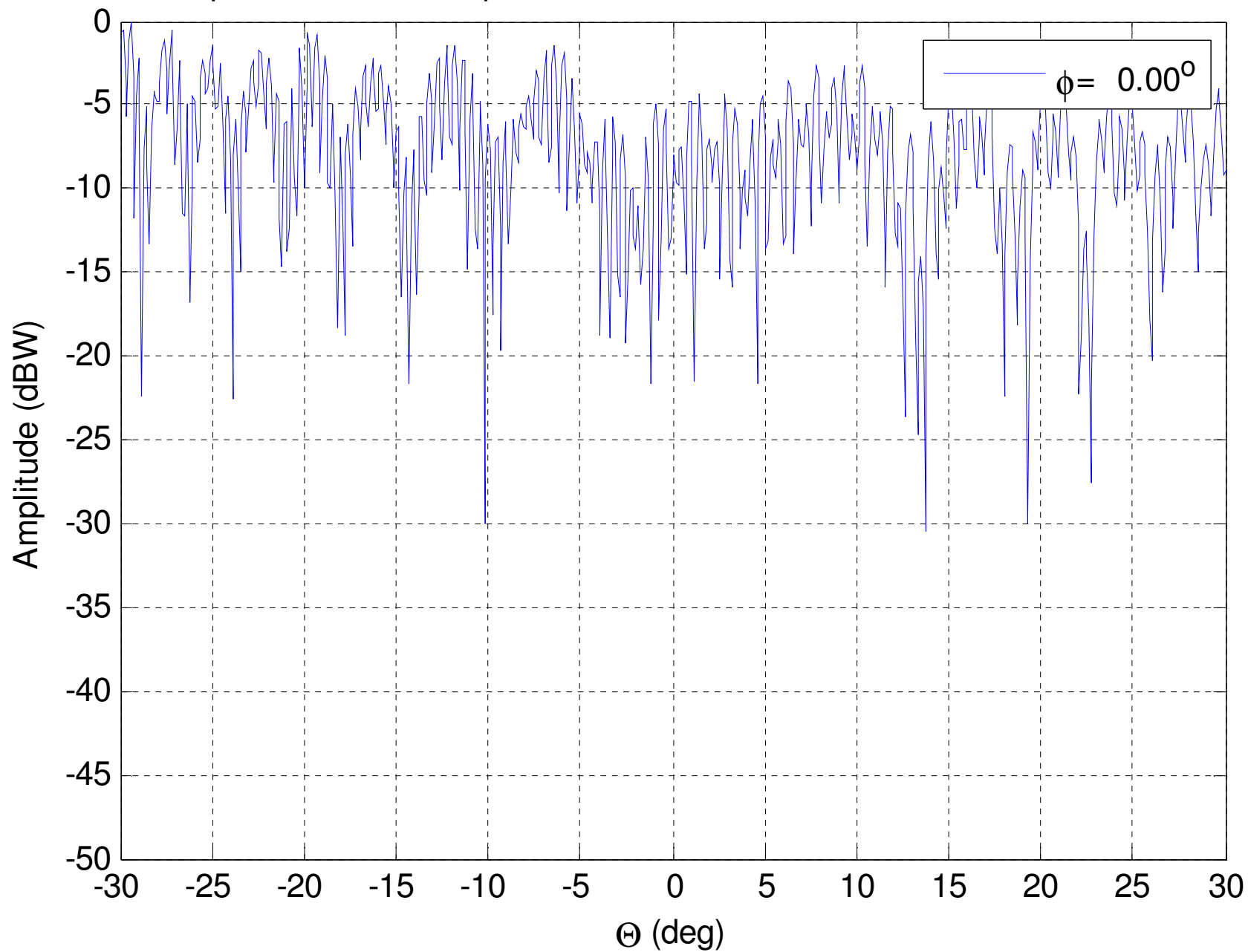
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -2.44 dBW, Date: 14-Dec-2011



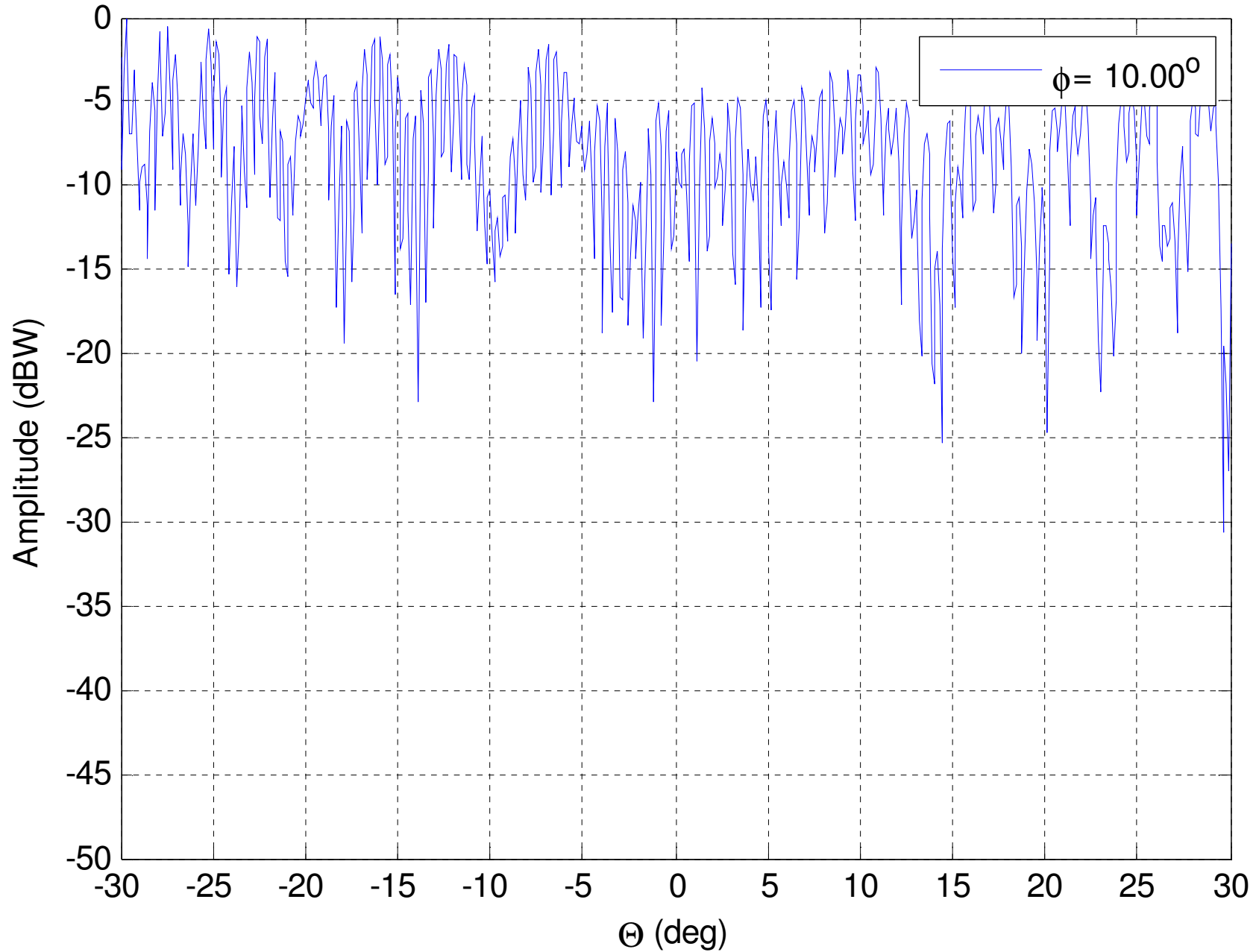
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -2.34 dBW, Date: 14-Dec-2011



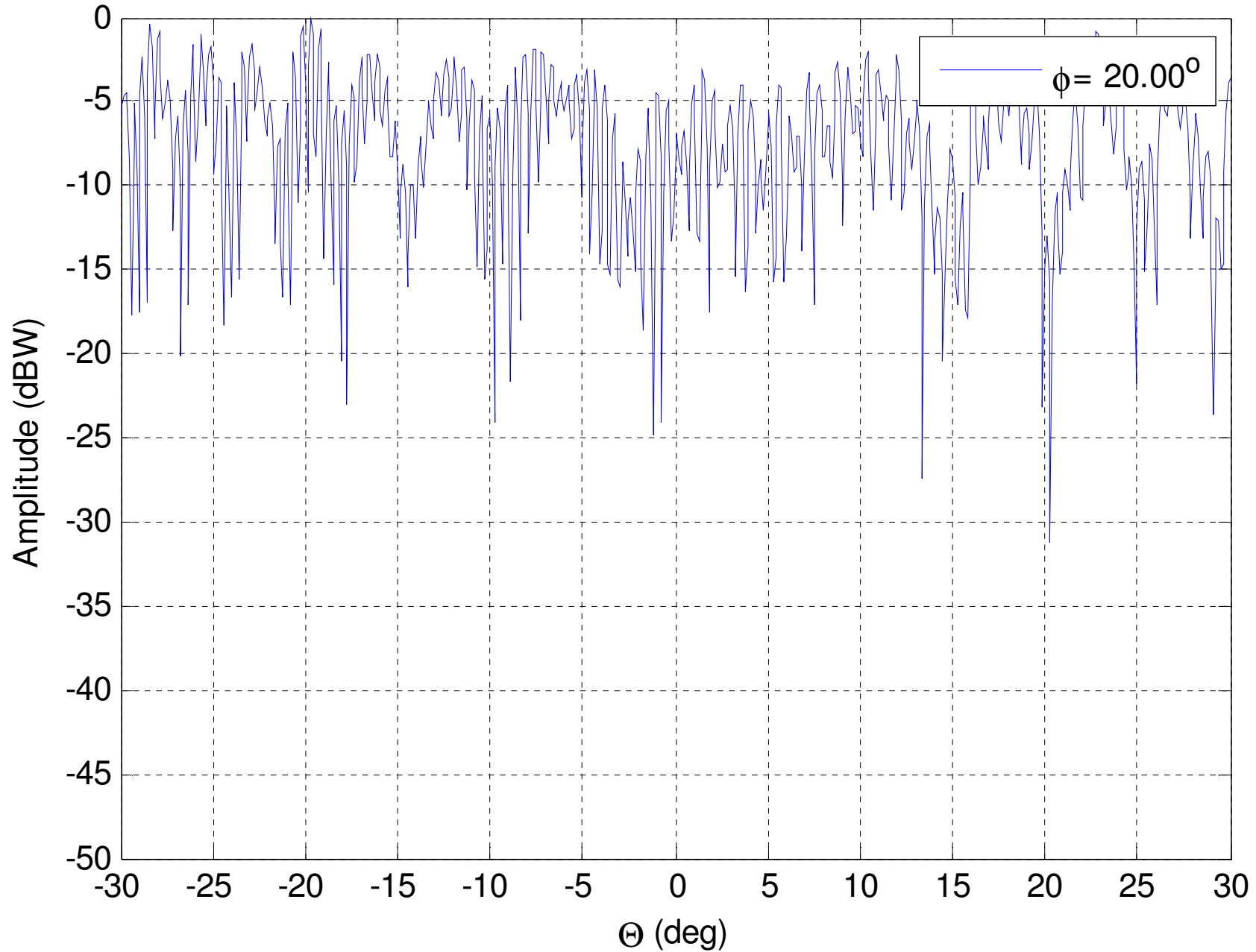
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -2.17 dBW, Date: 14-Dec-2011



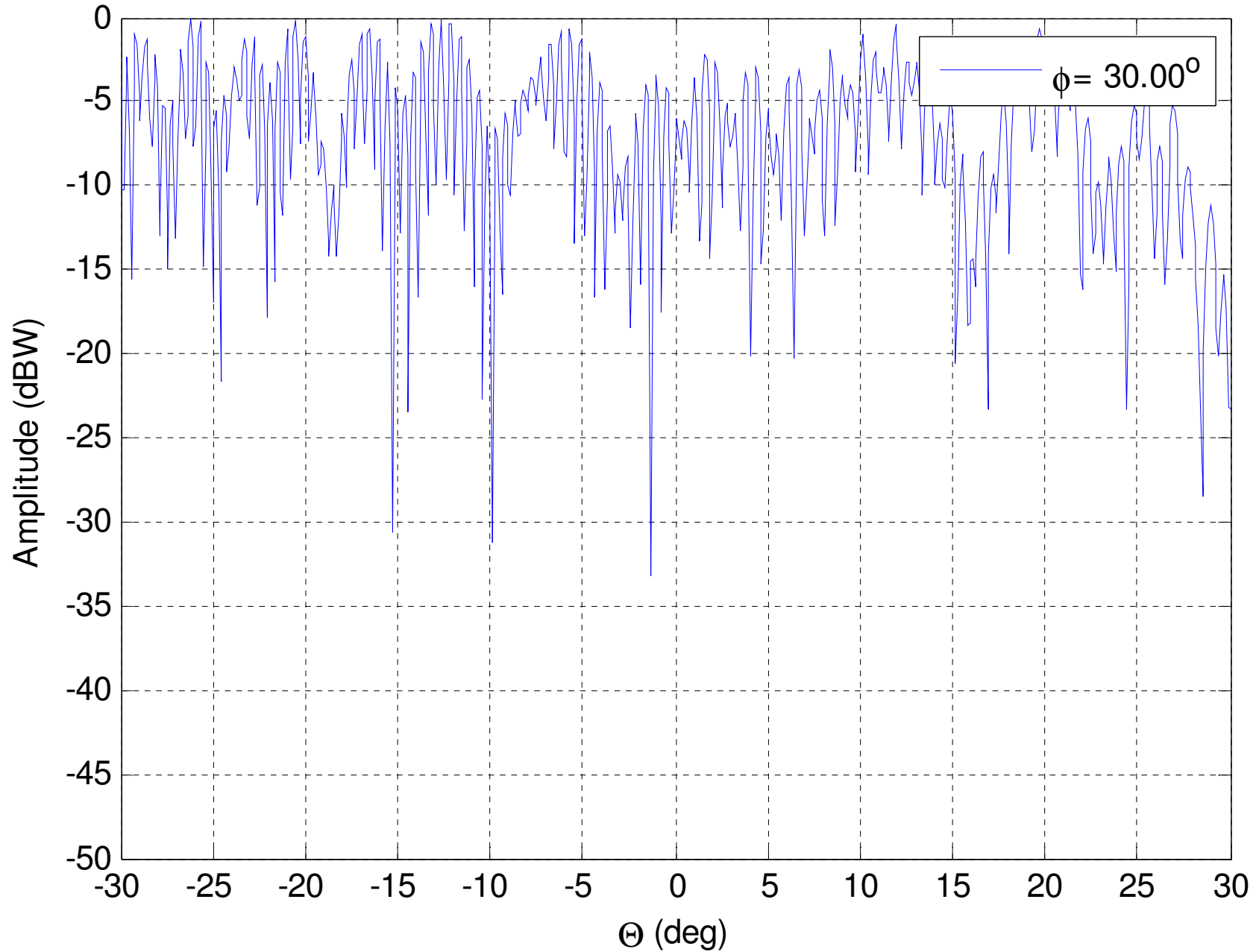
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -3.13 dBW, Date: 14-Dec-2011



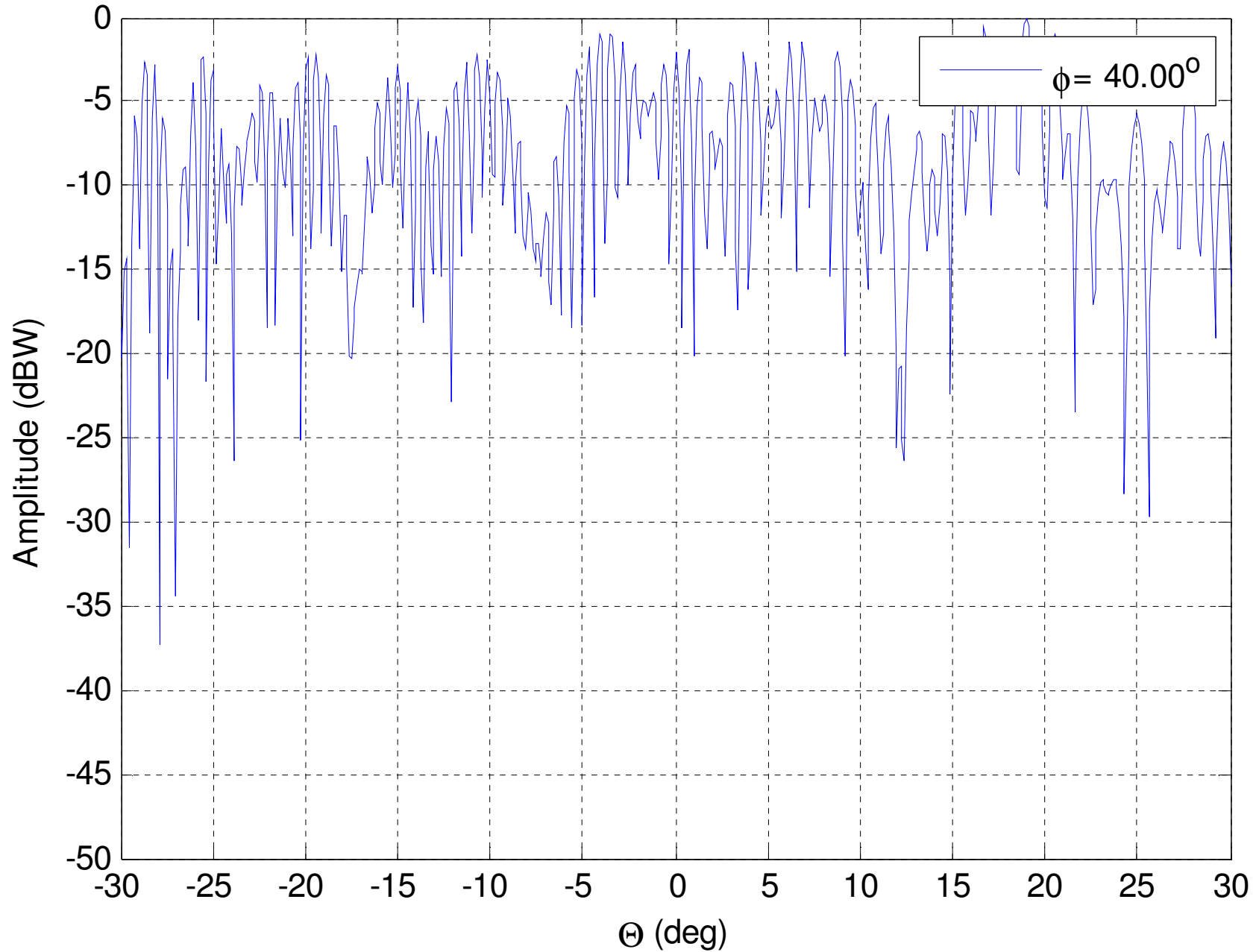
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -4.07 dBW, Date: 14-Dec-2011



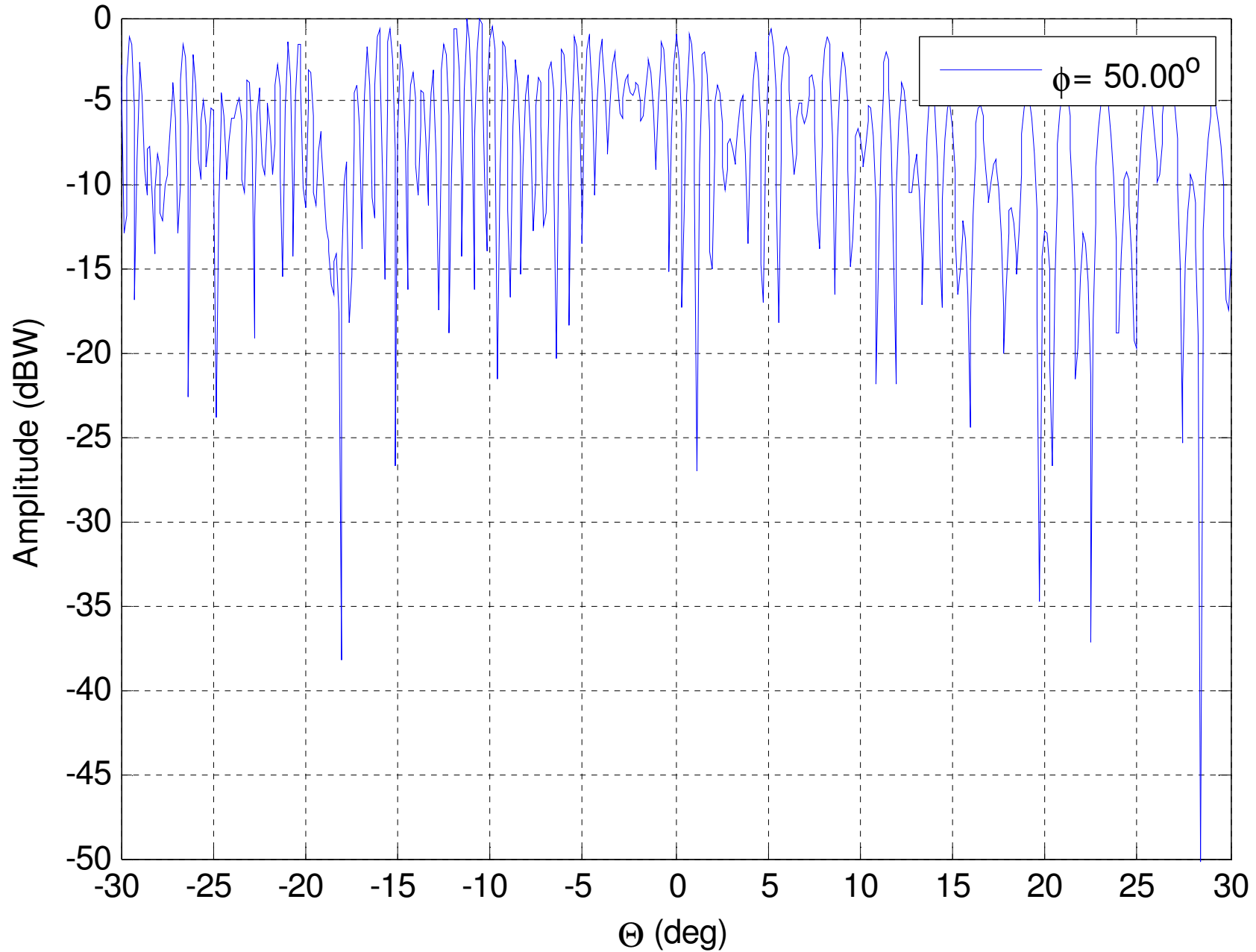
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -3.71 dBW, Date: 14-Dec-2011



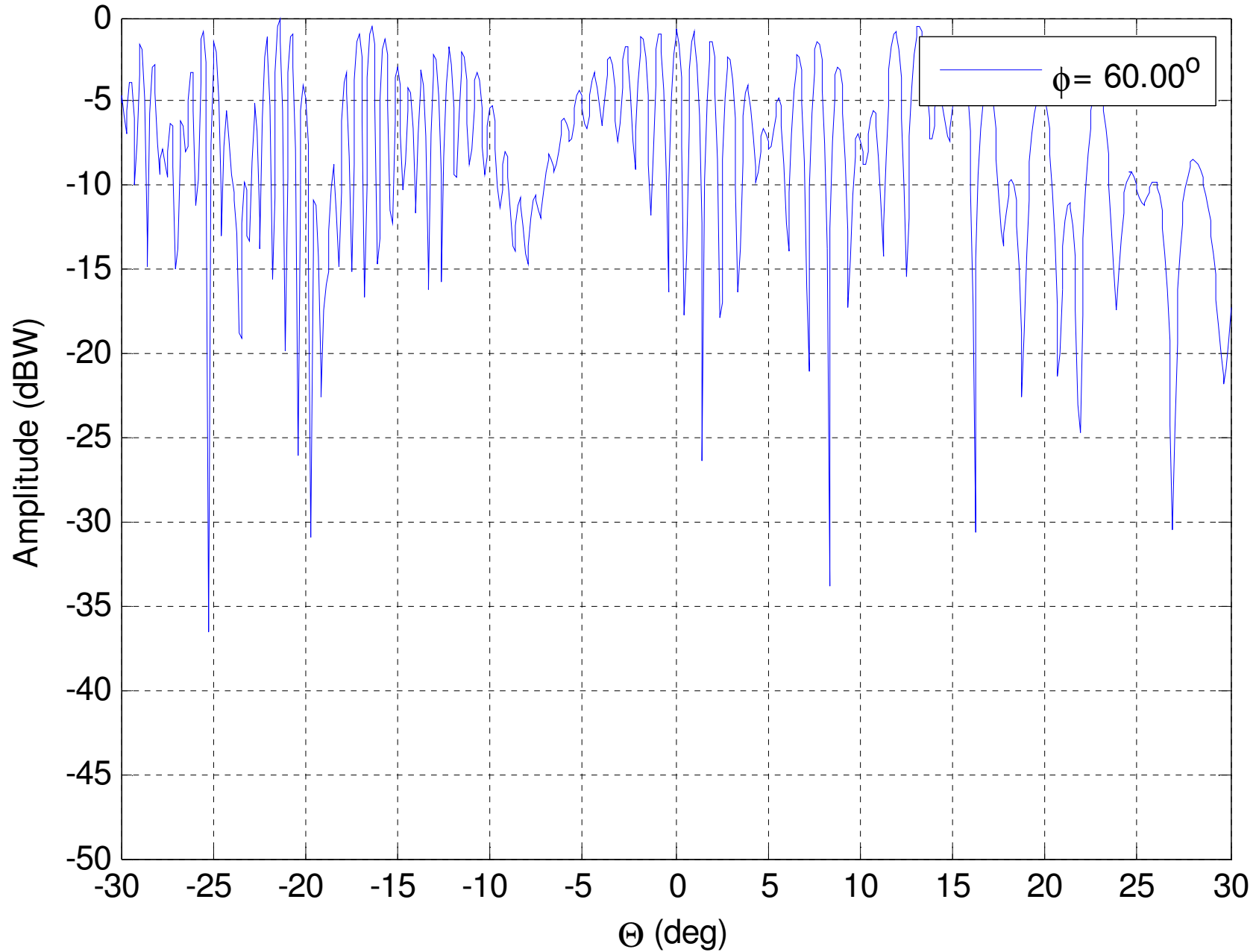
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

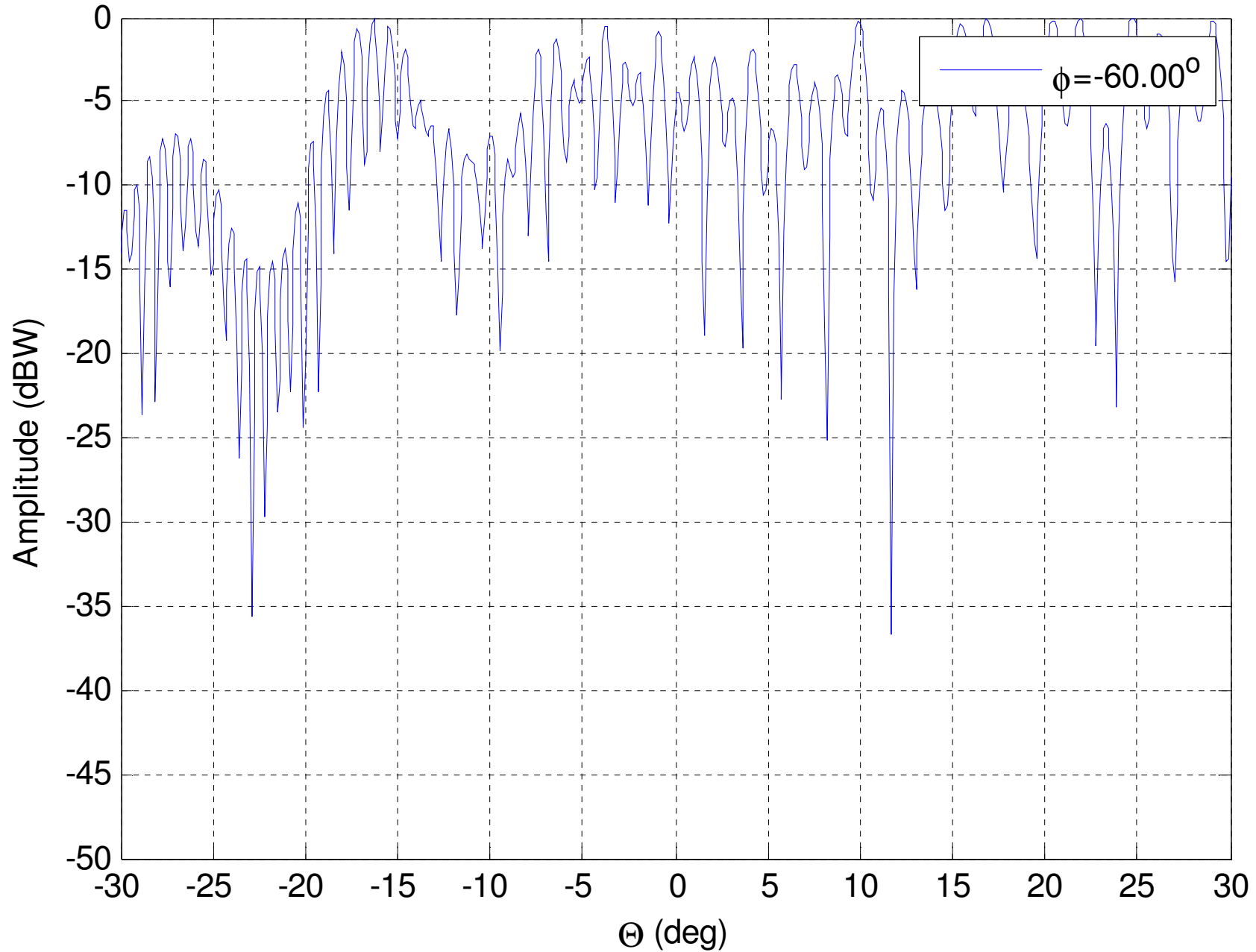
Input file: tx-17.3-lhcp-60.cut, Peak: -4.85 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

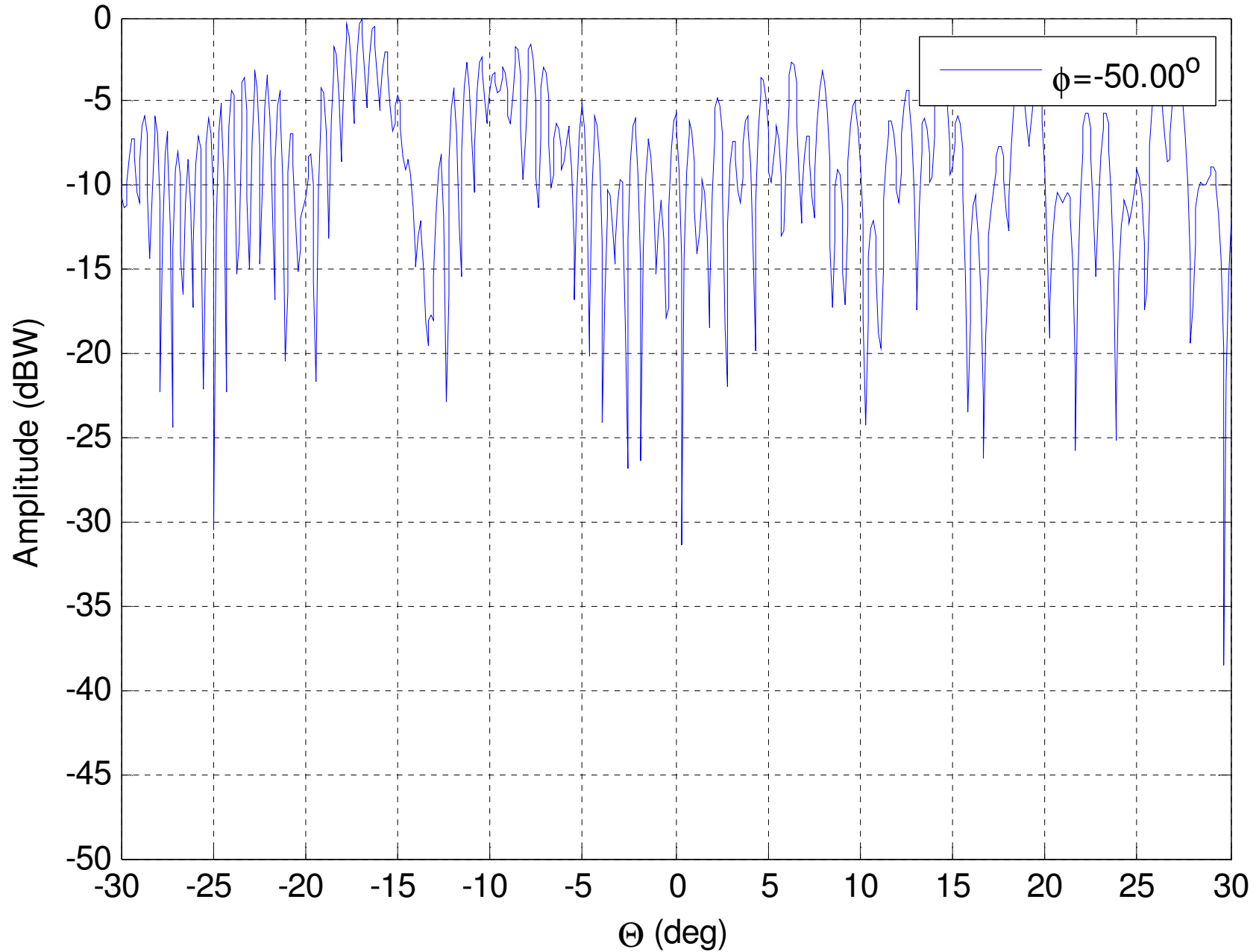
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -4.34 dBW, Date: 14-Dec-2011



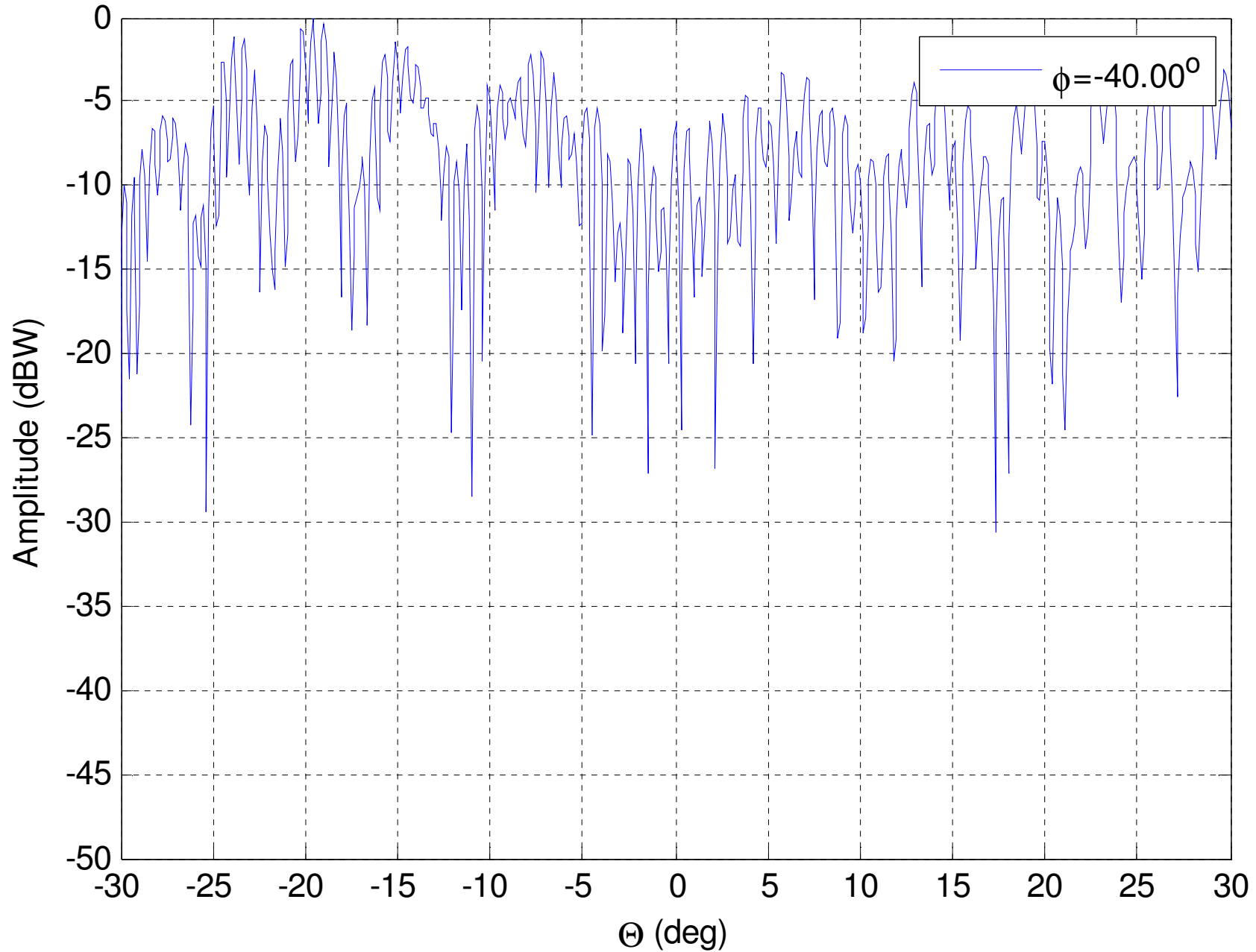
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -3.48 dBW, Date: 14-Dec-2011



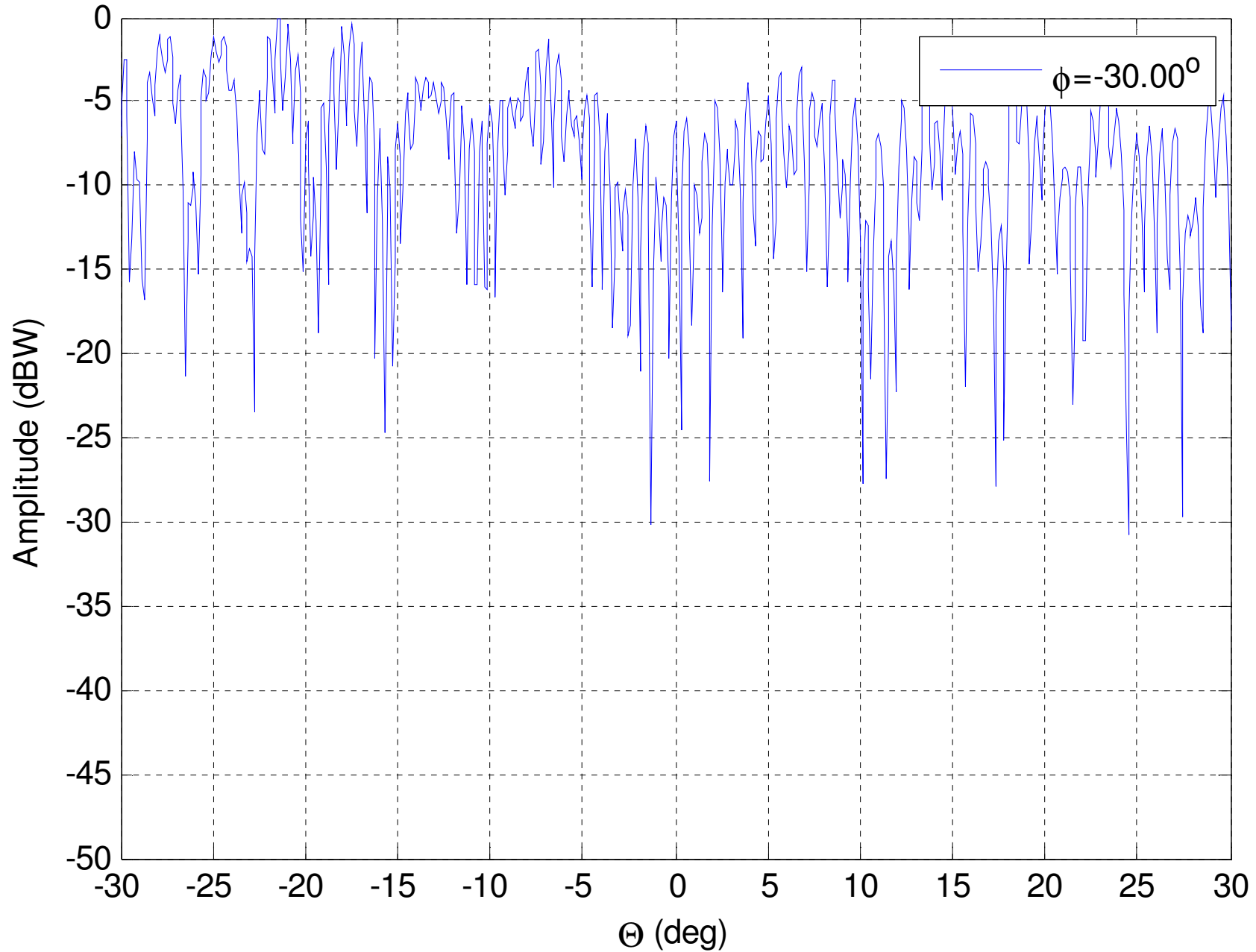
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -2.82 dBW, Date: 14-Dec-2011



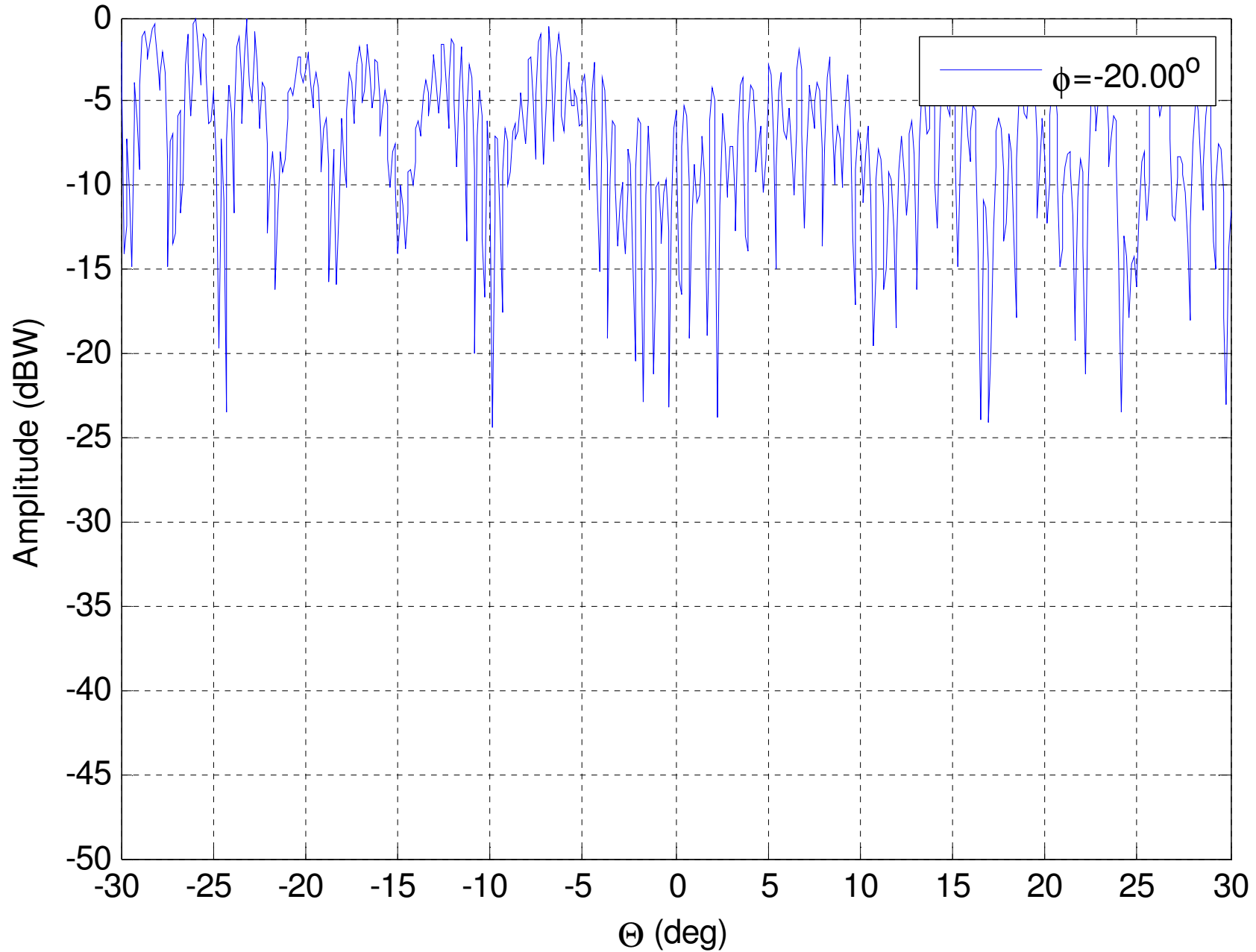
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -3.01 dBW, Date: 14-Dec-2011



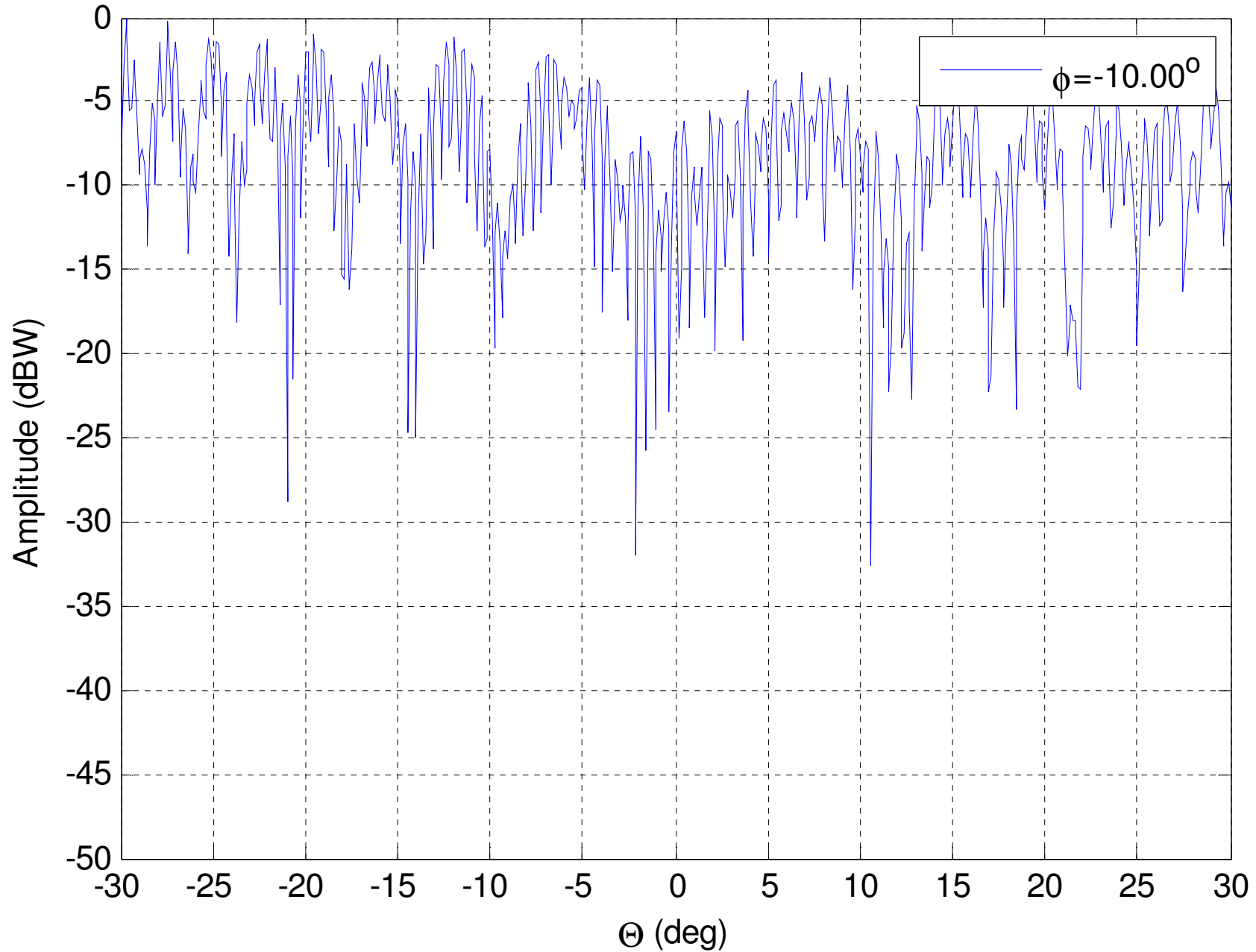
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -3.69 dBW, Date: 14-Dec-2011



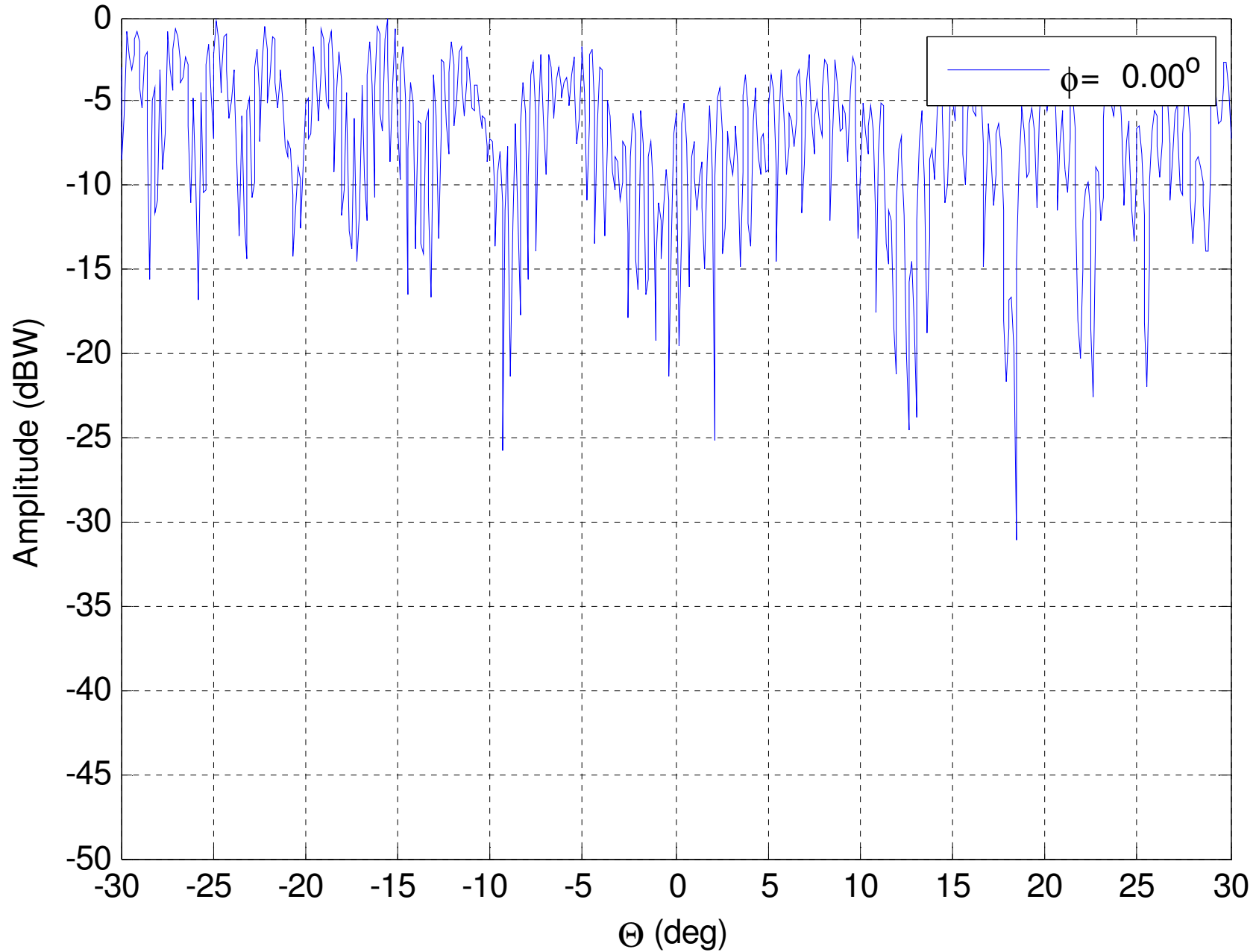
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.47 dBW, Date: 14-Dec-2011



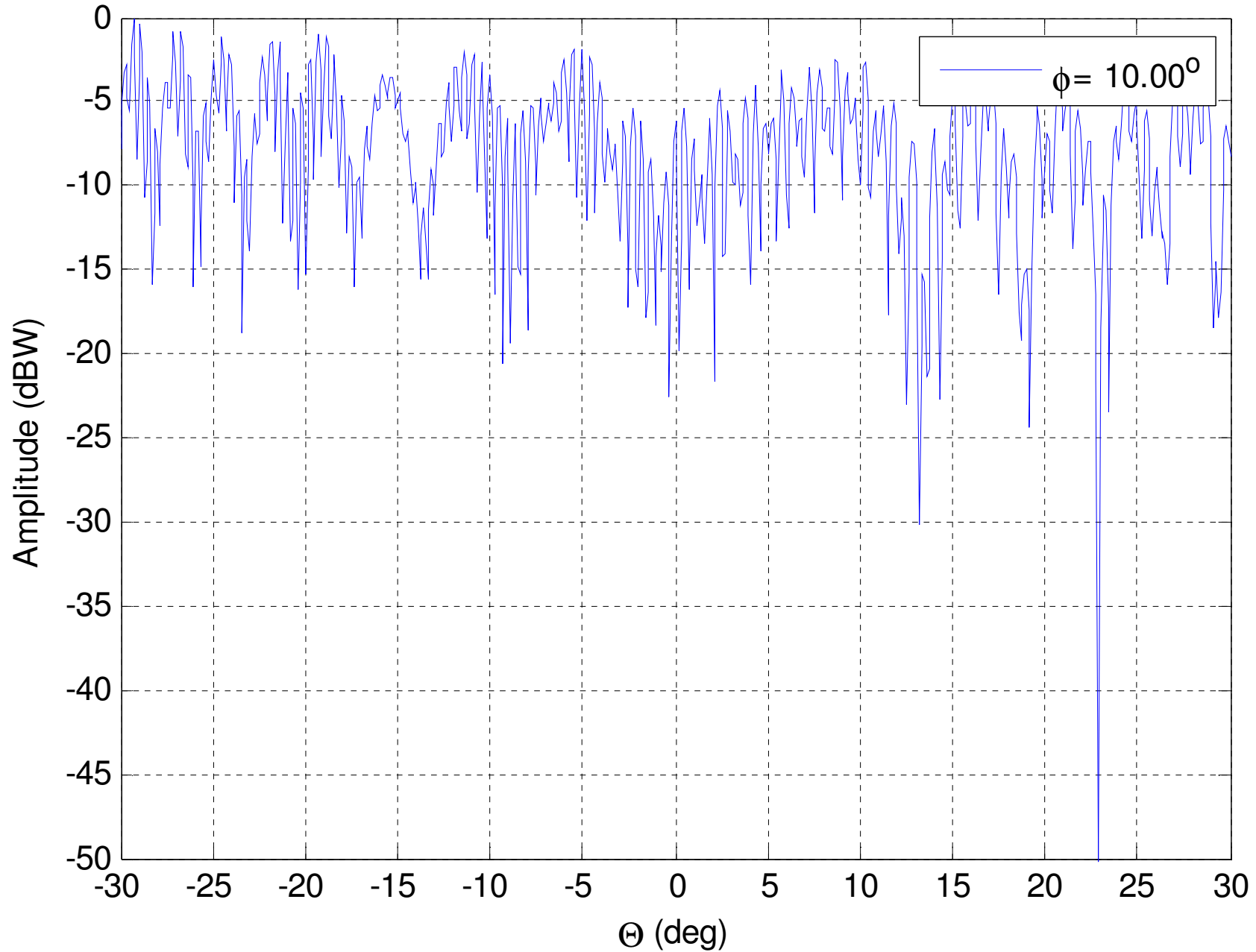
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -3.51 dBW, Date: 14-Dec-2011



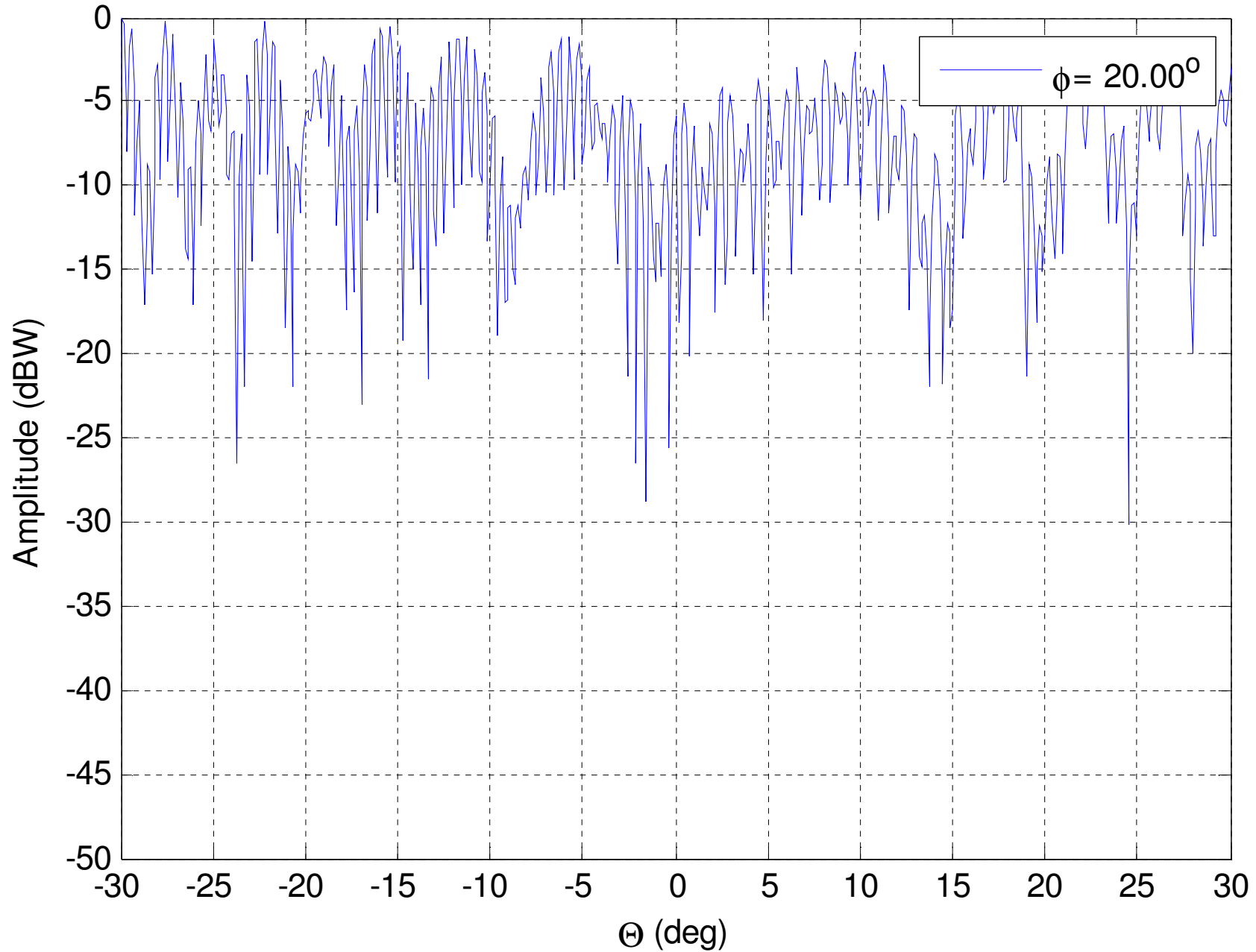
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.06 dBW, Date: 14-Dec-2011



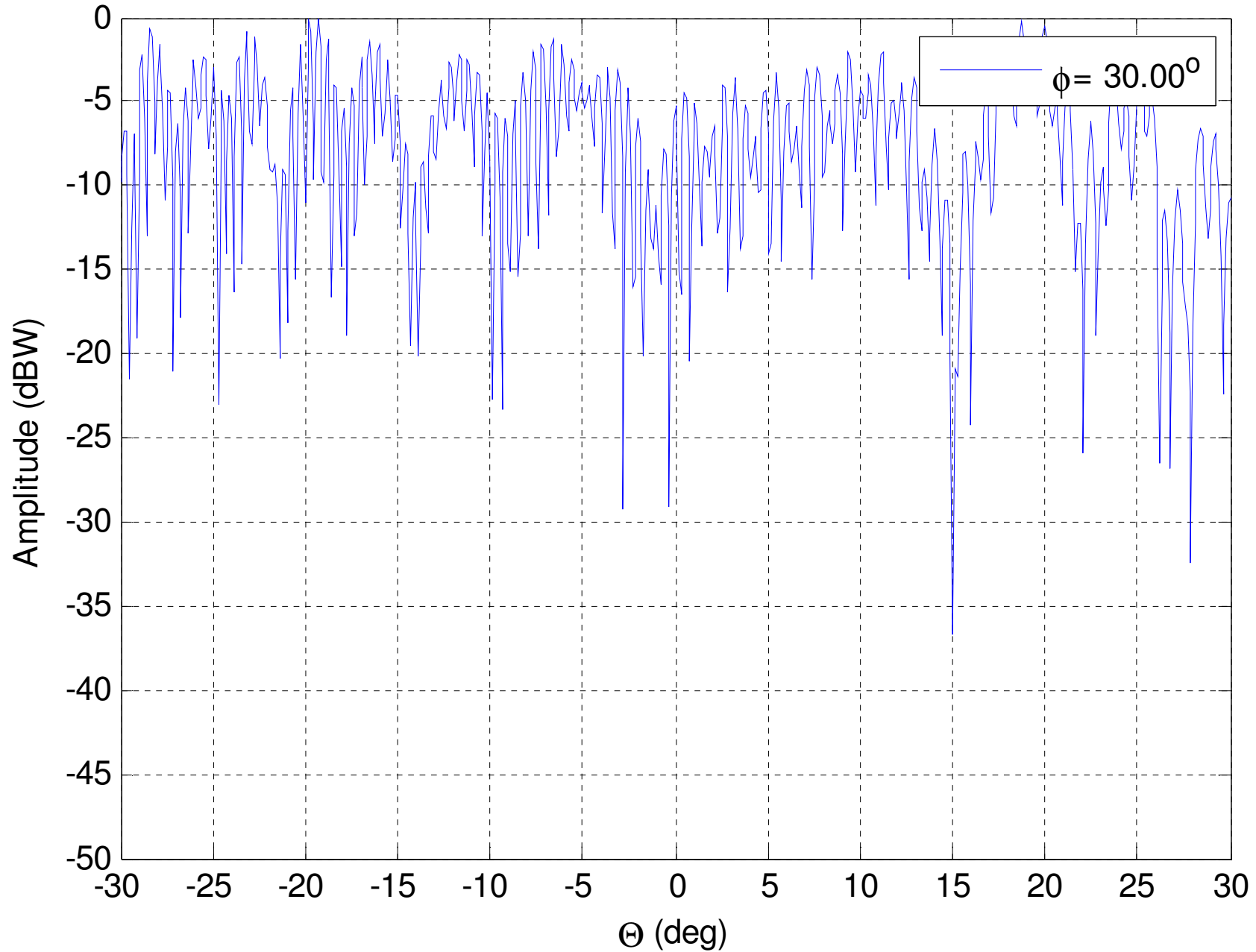
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -3.30 dBW, Date: 14-Dec-2011



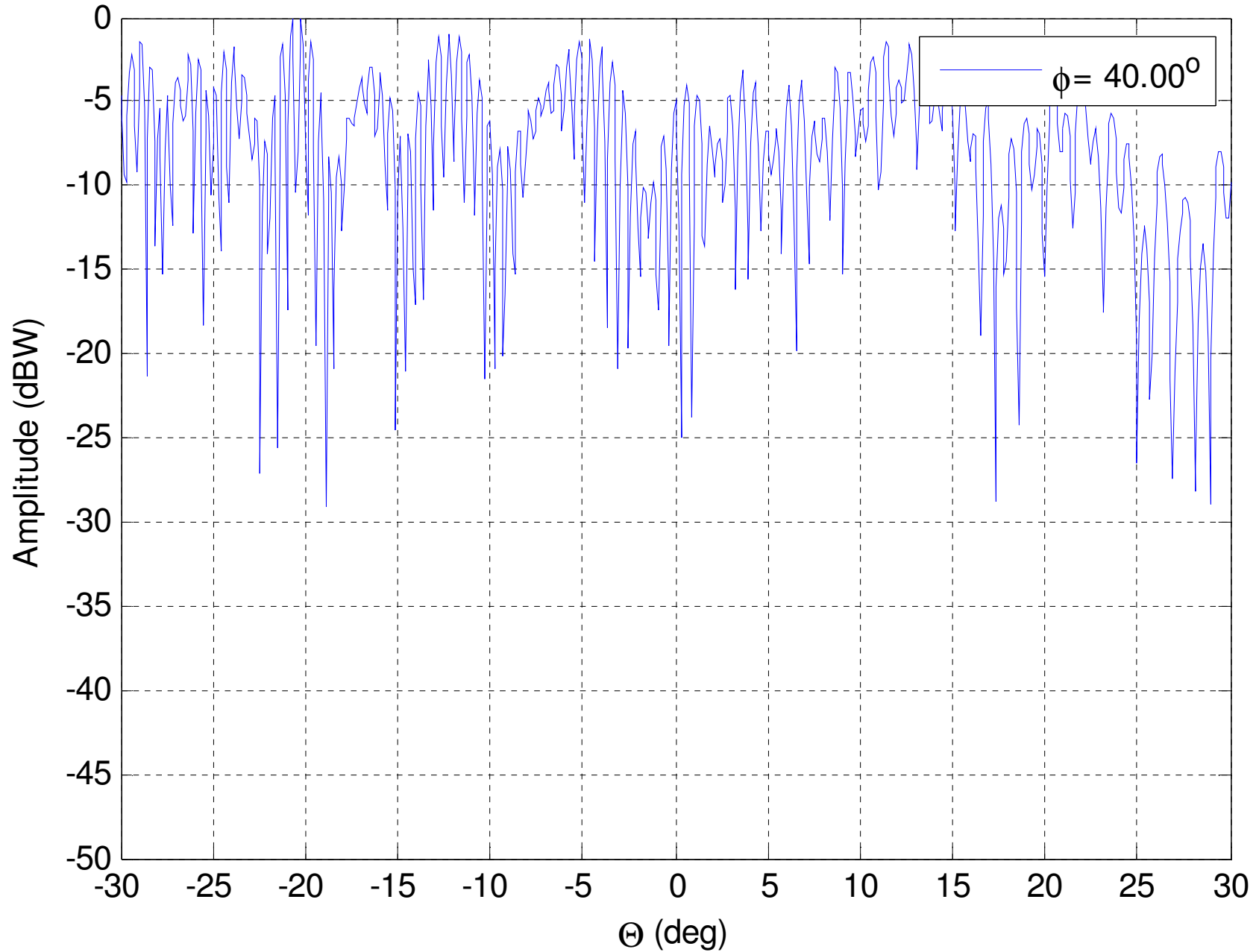
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -4.02 dBW, Date: 14-Dec-2011



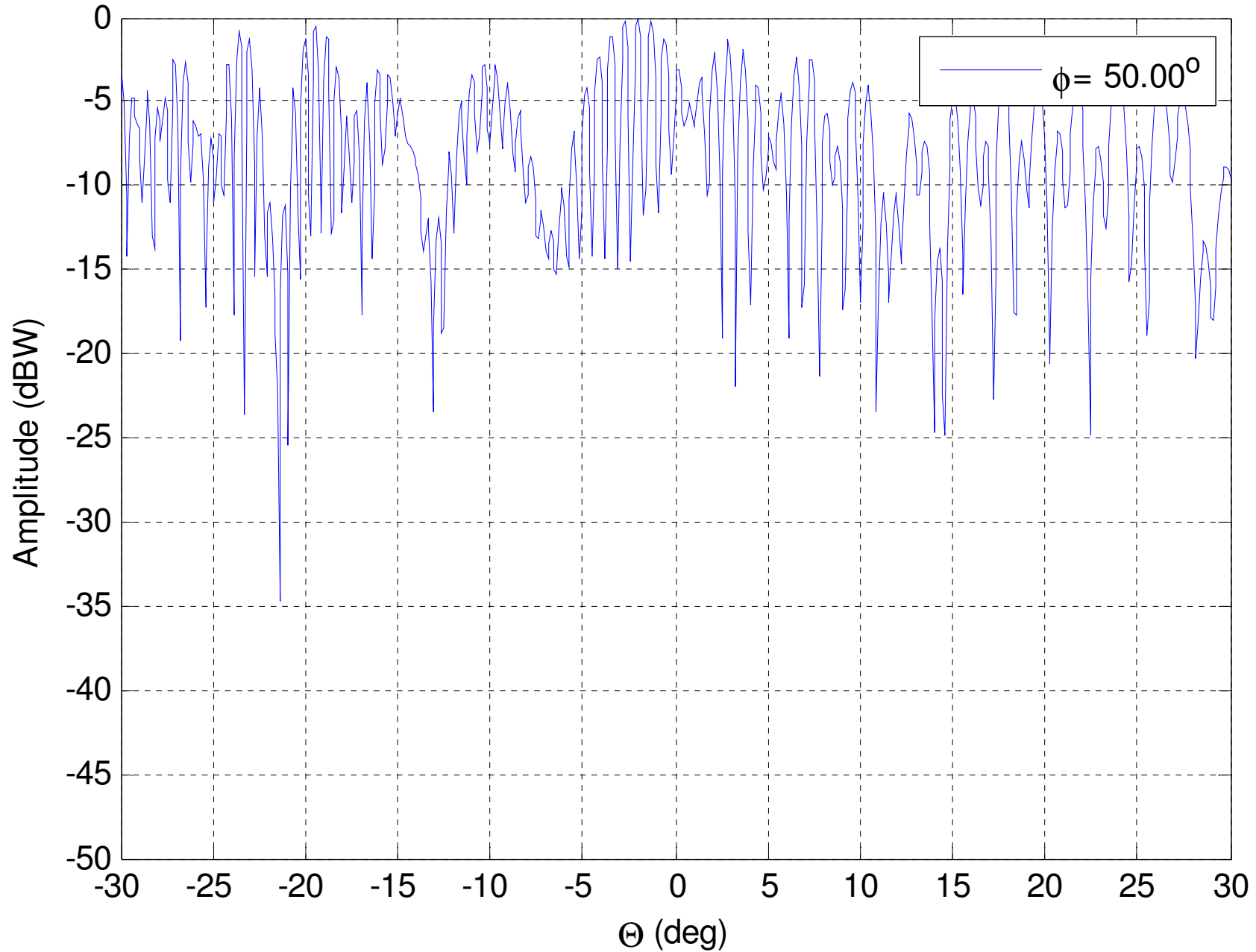
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -4.19 dBW, Date: 14-Dec-2011



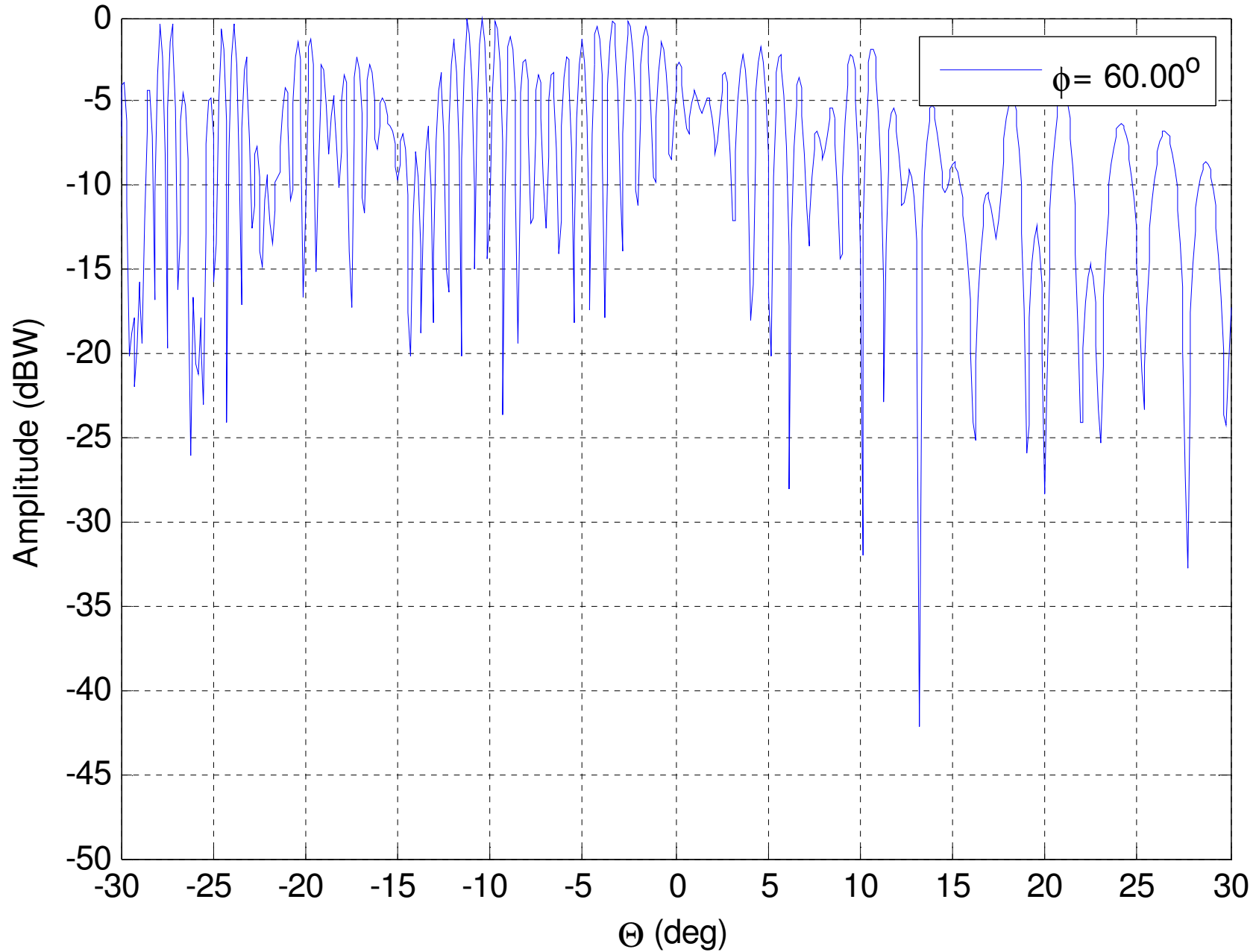
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.04 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

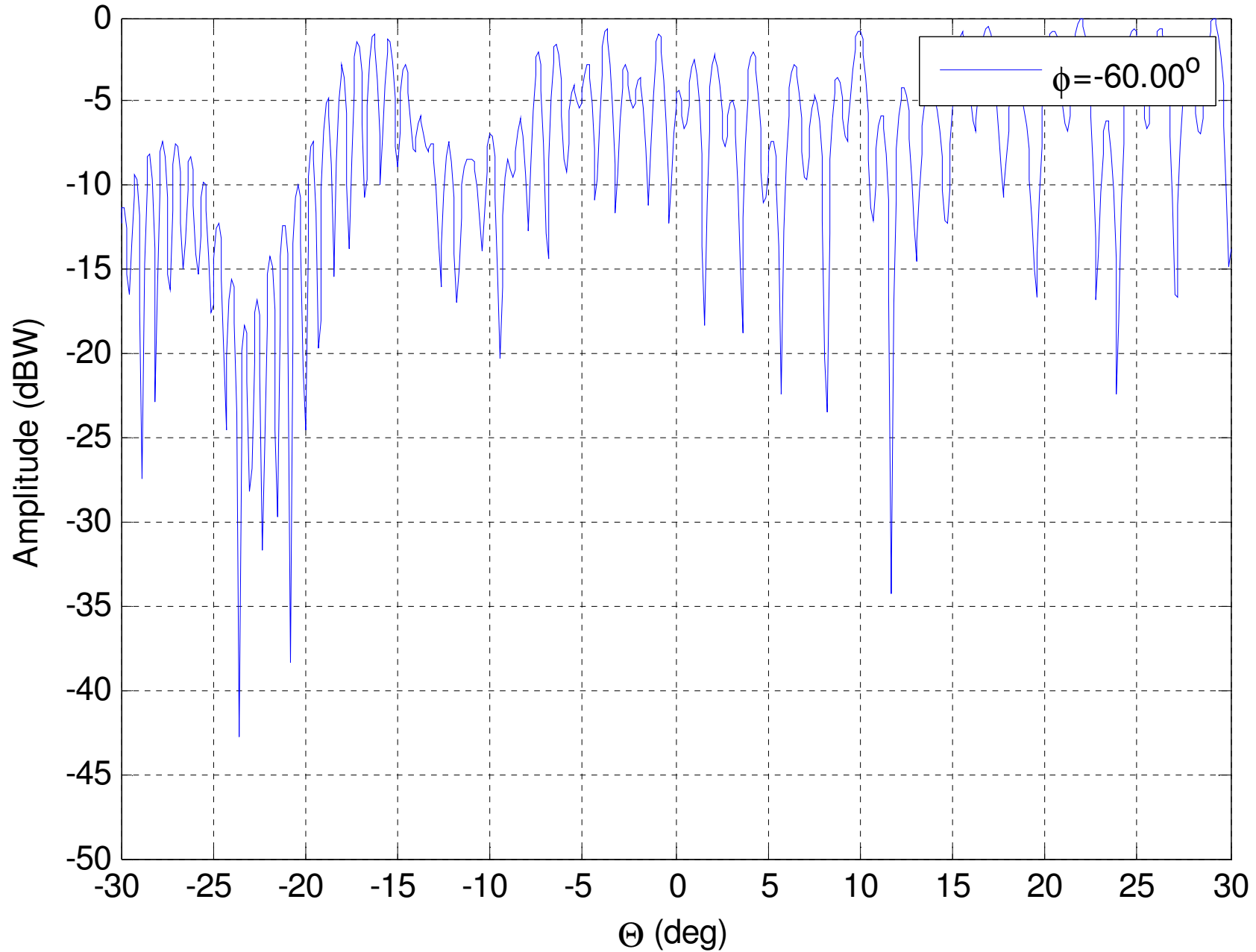
Input file: tx-17.5-rhcp-60.cut, Peak: -5.27 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

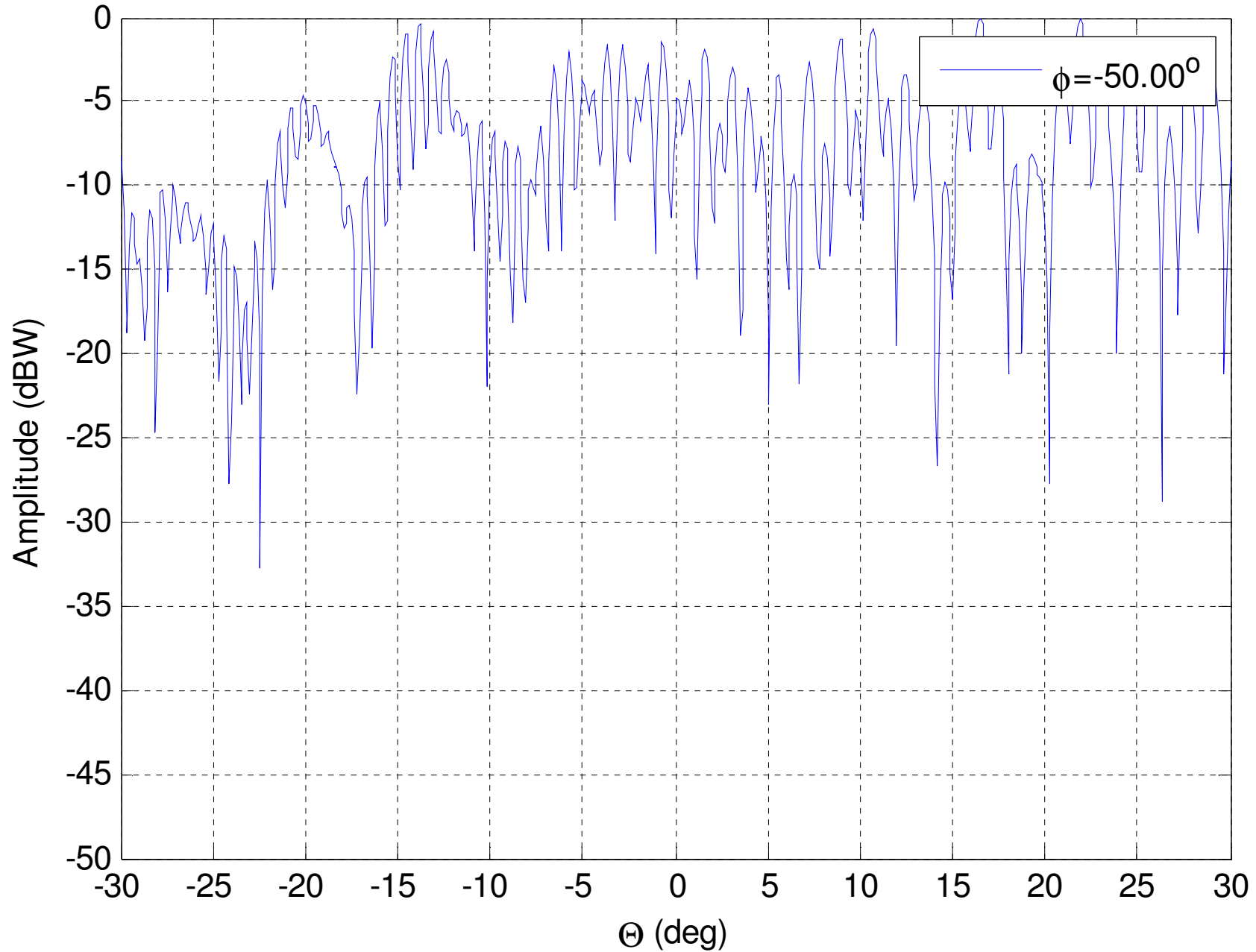
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -4.05 dBW, Date: 14-Dec-2011



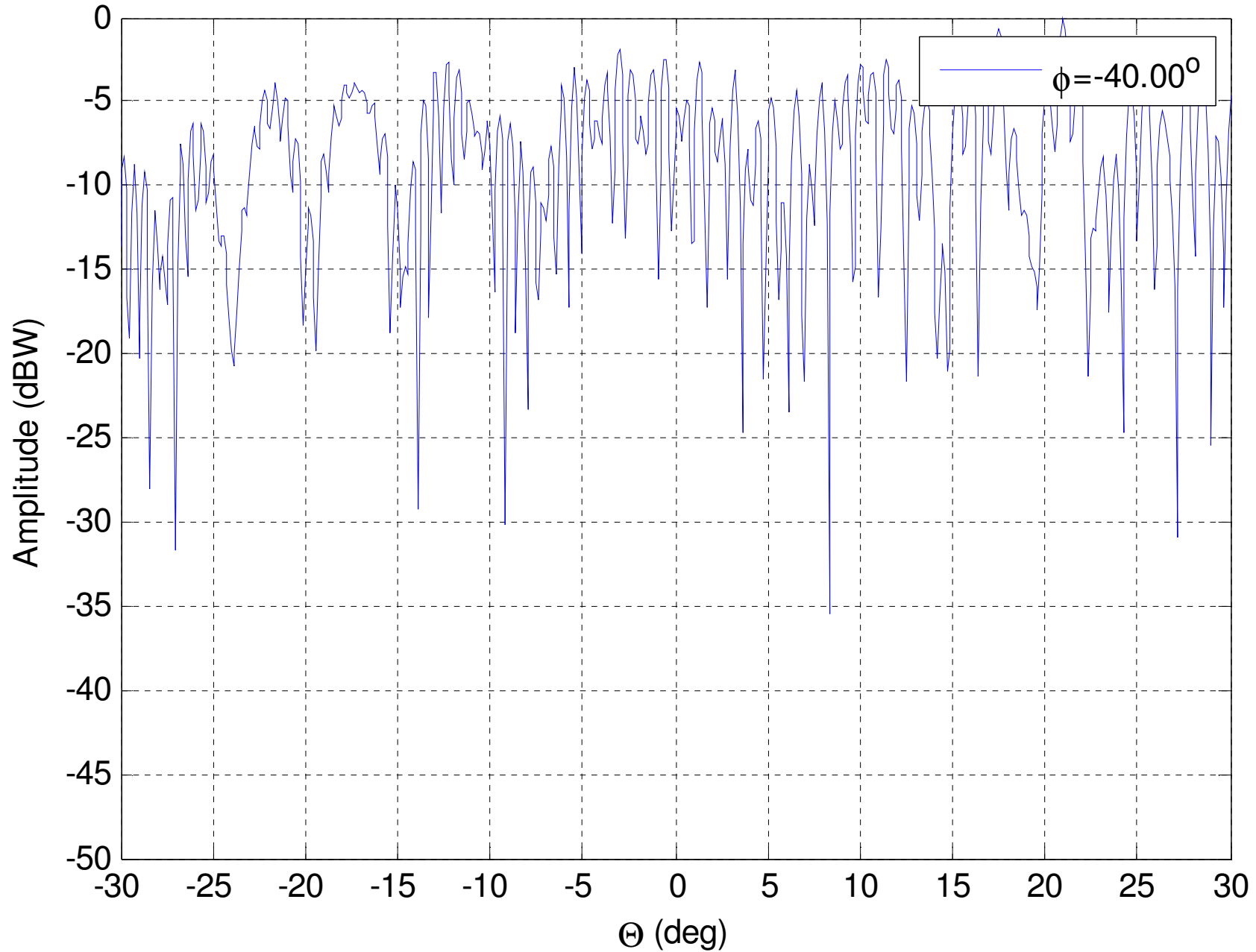
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -3.56 dBW, Date: 14-Dec-2011



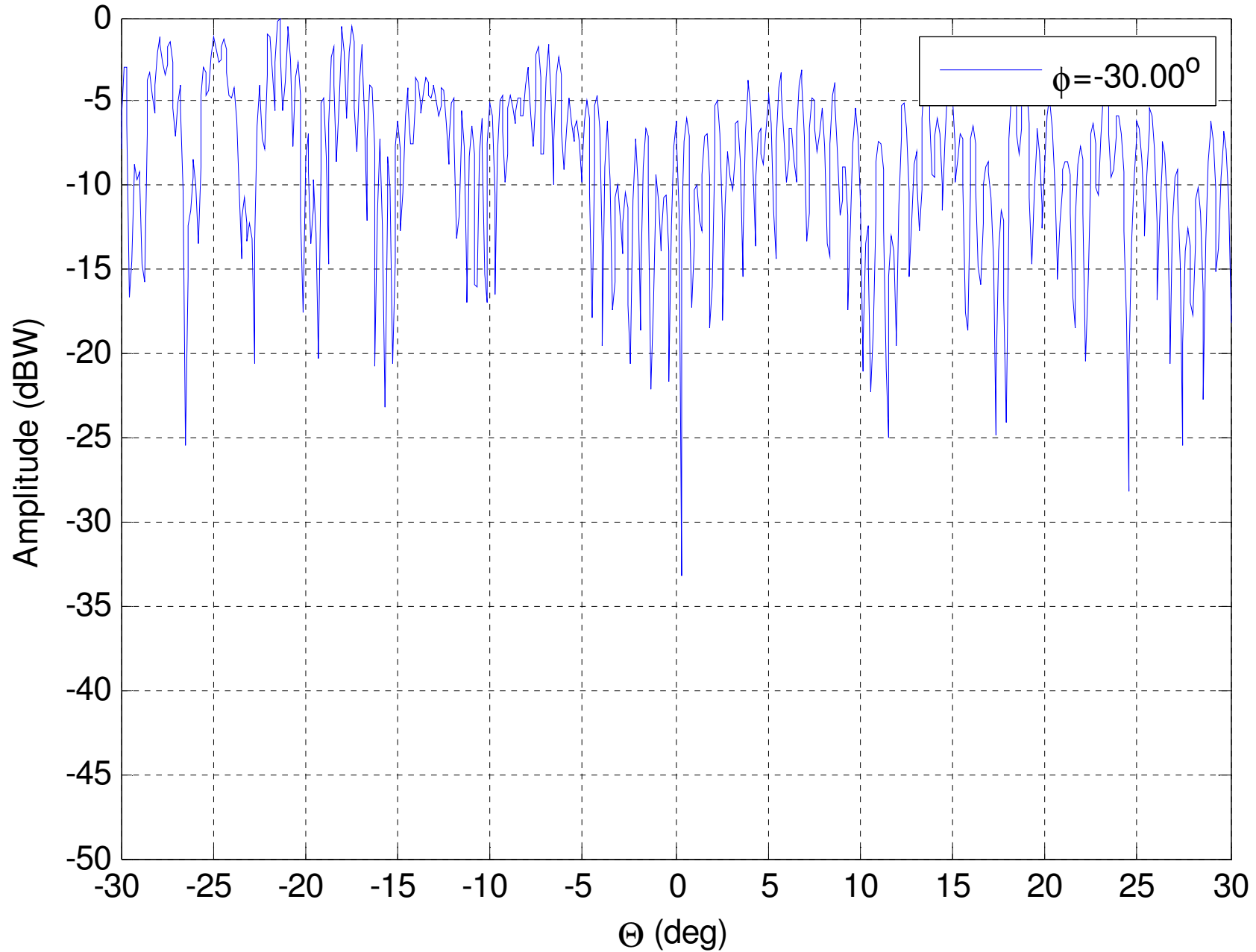
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.78 dBW, Date: 14-Dec-2011



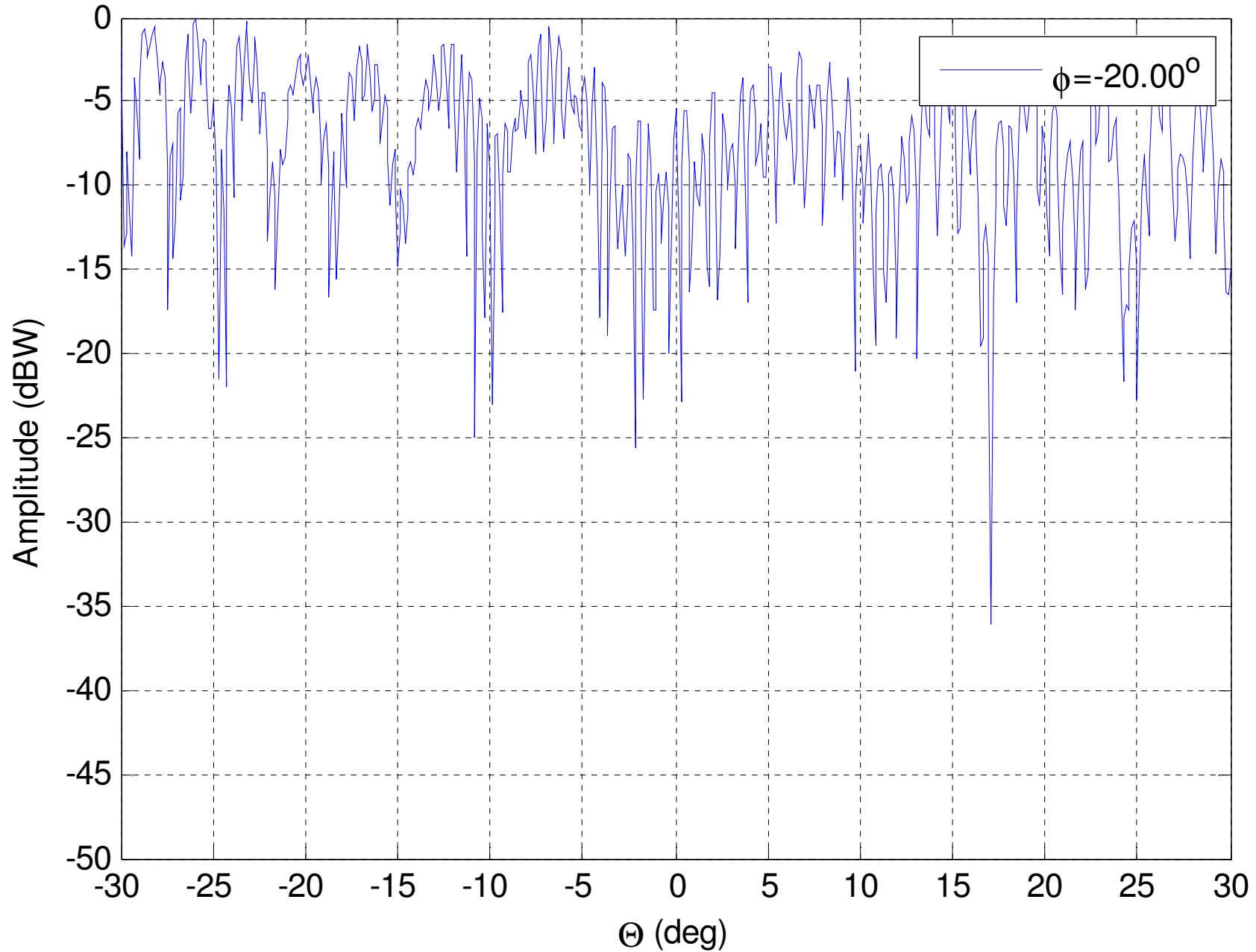
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -2.76 dBW, Date: 14-Dec-2011



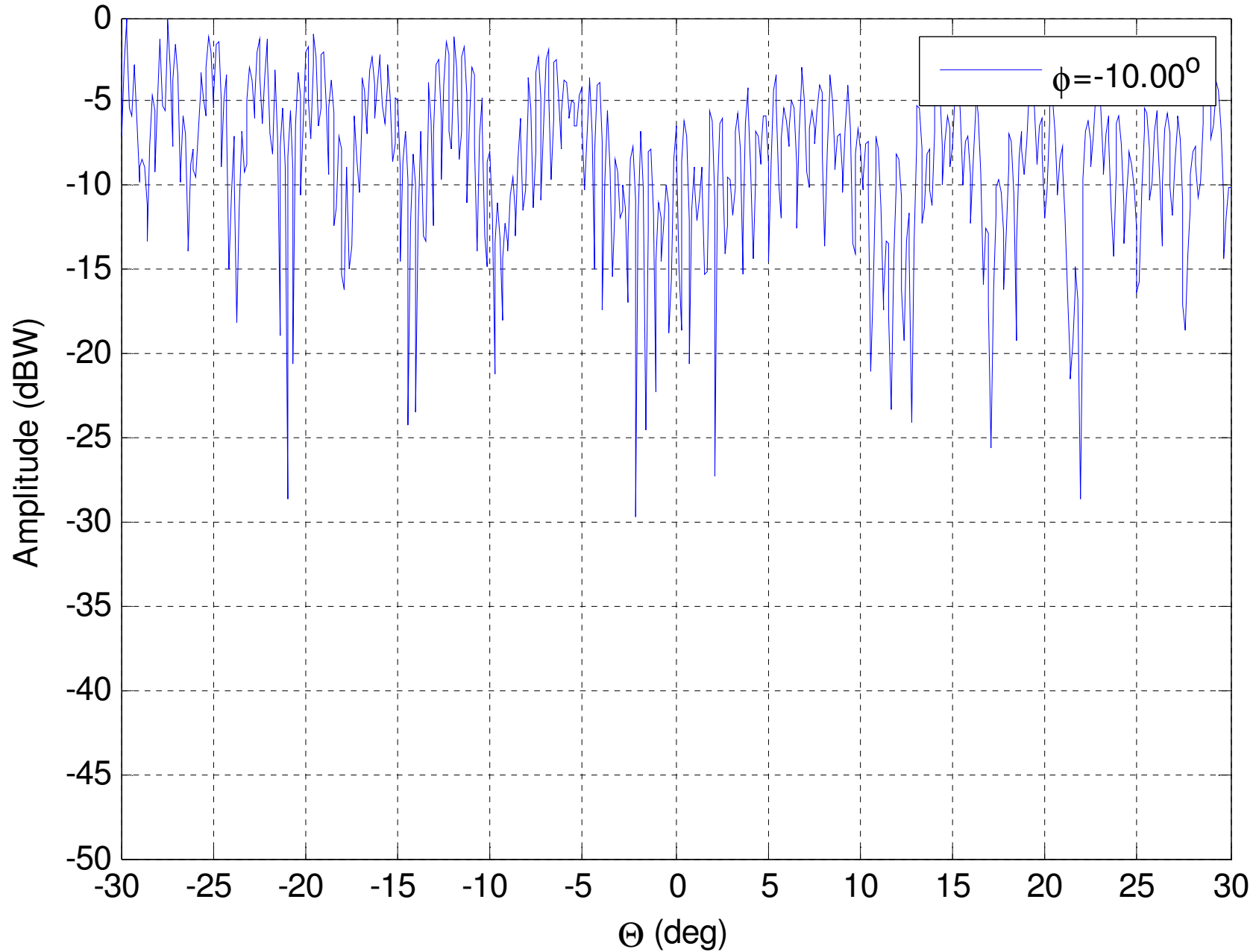
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -3.43 dBW, Date: 14-Dec-2011



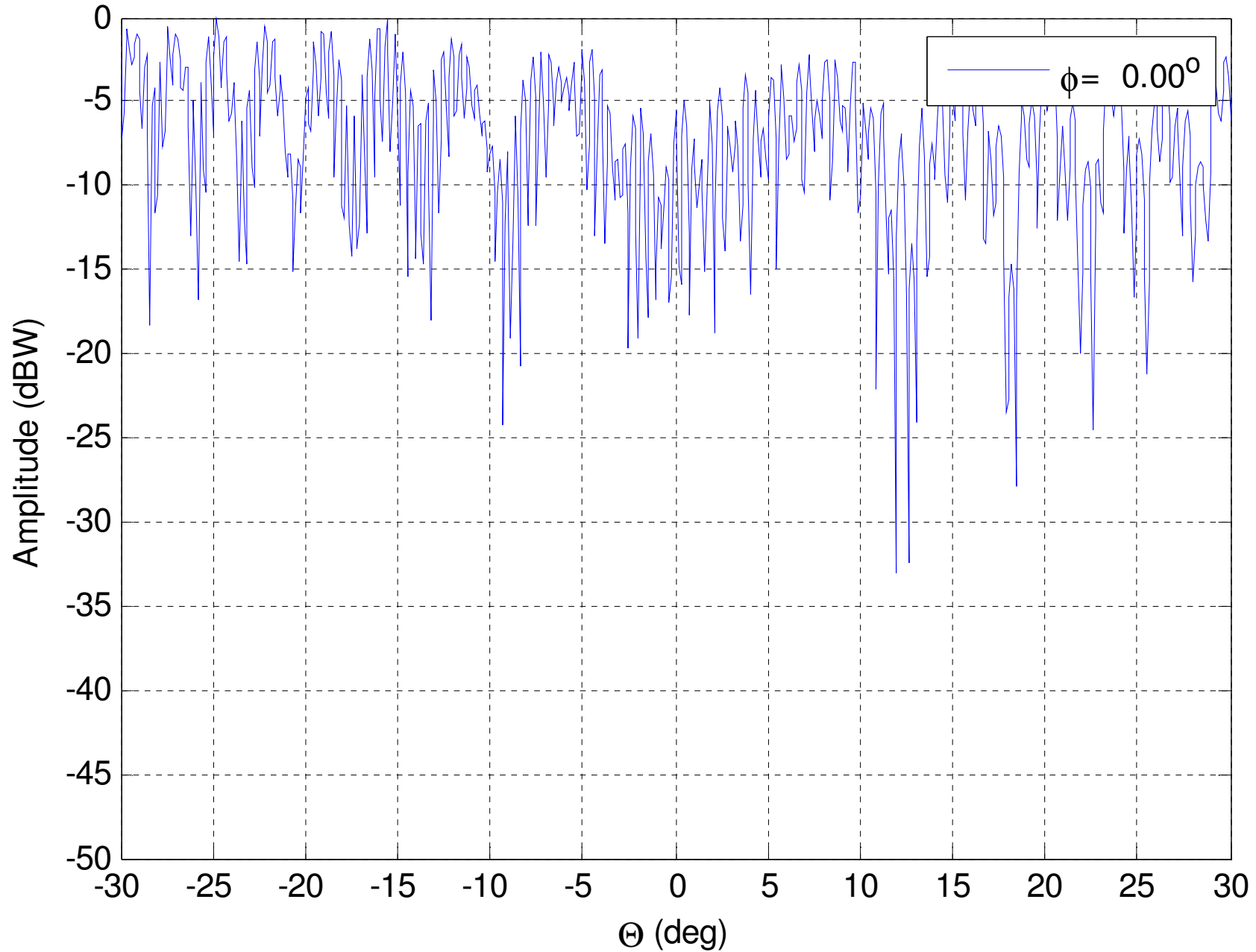
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -2.43 dBW, Date: 14-Dec-2011



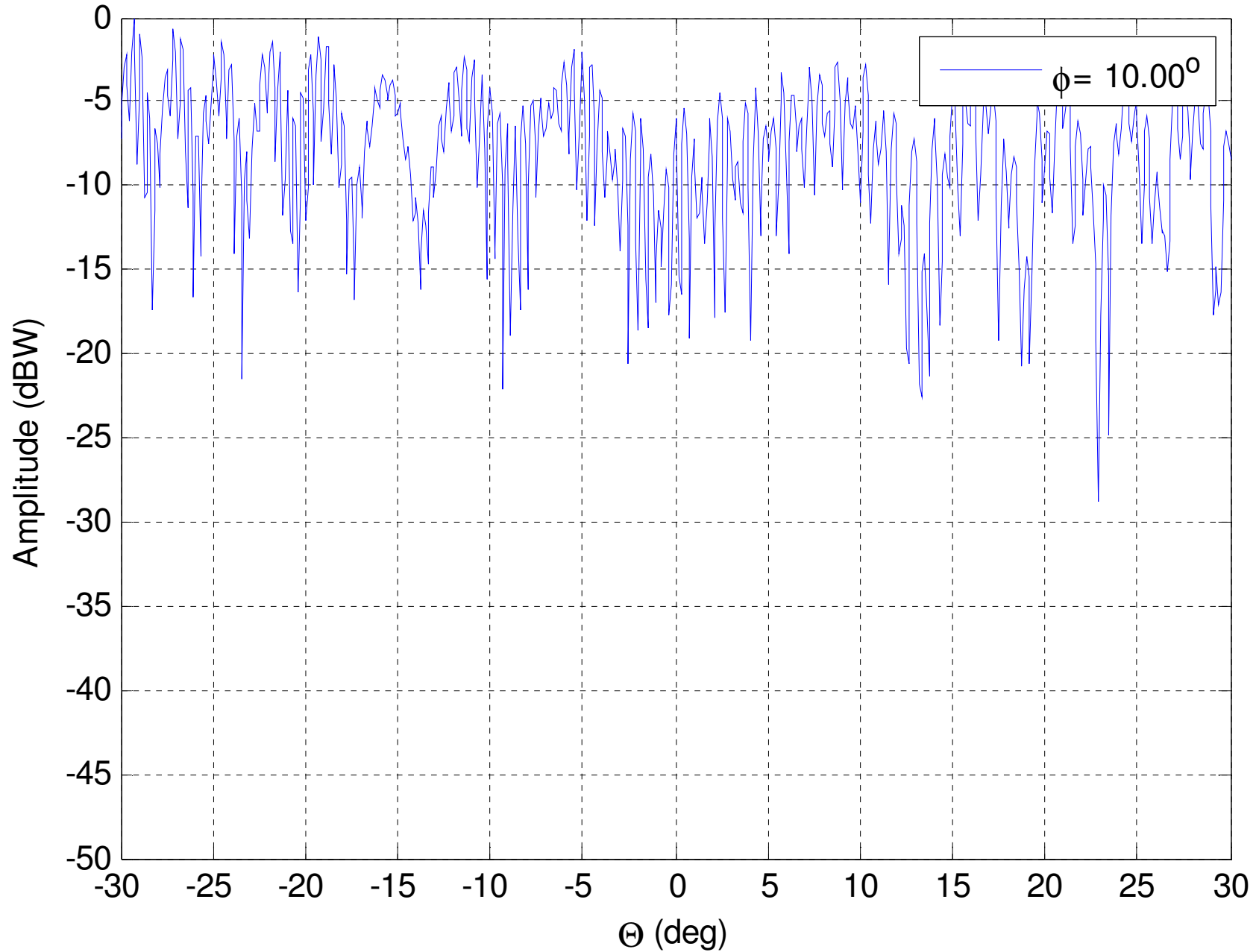
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -3.40 dBW, Date: 14-Dec-2011



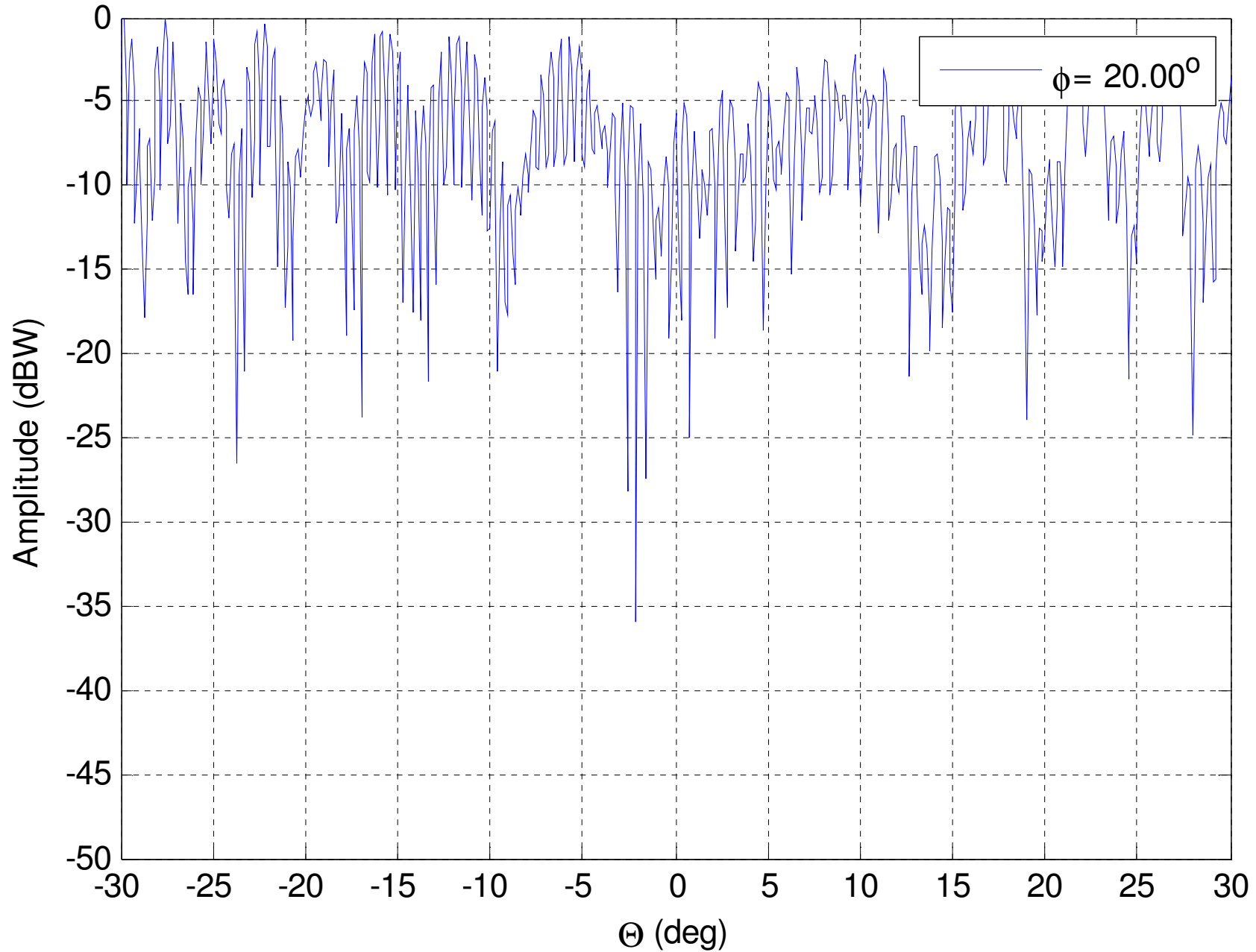
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -2.83 dBW, Date: 14-Dec-2011



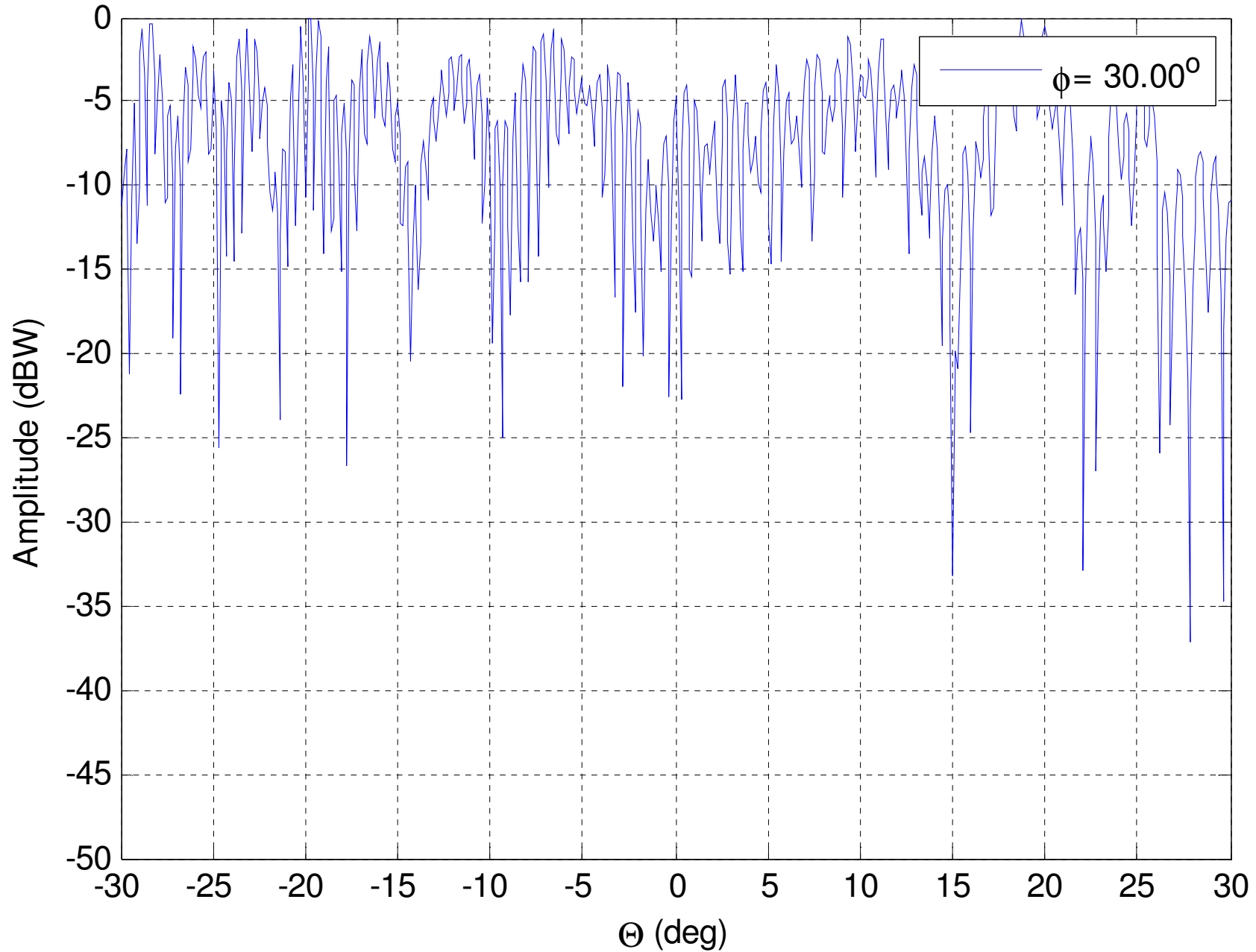
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -3.21 dBW, Date: 14-Dec-2011



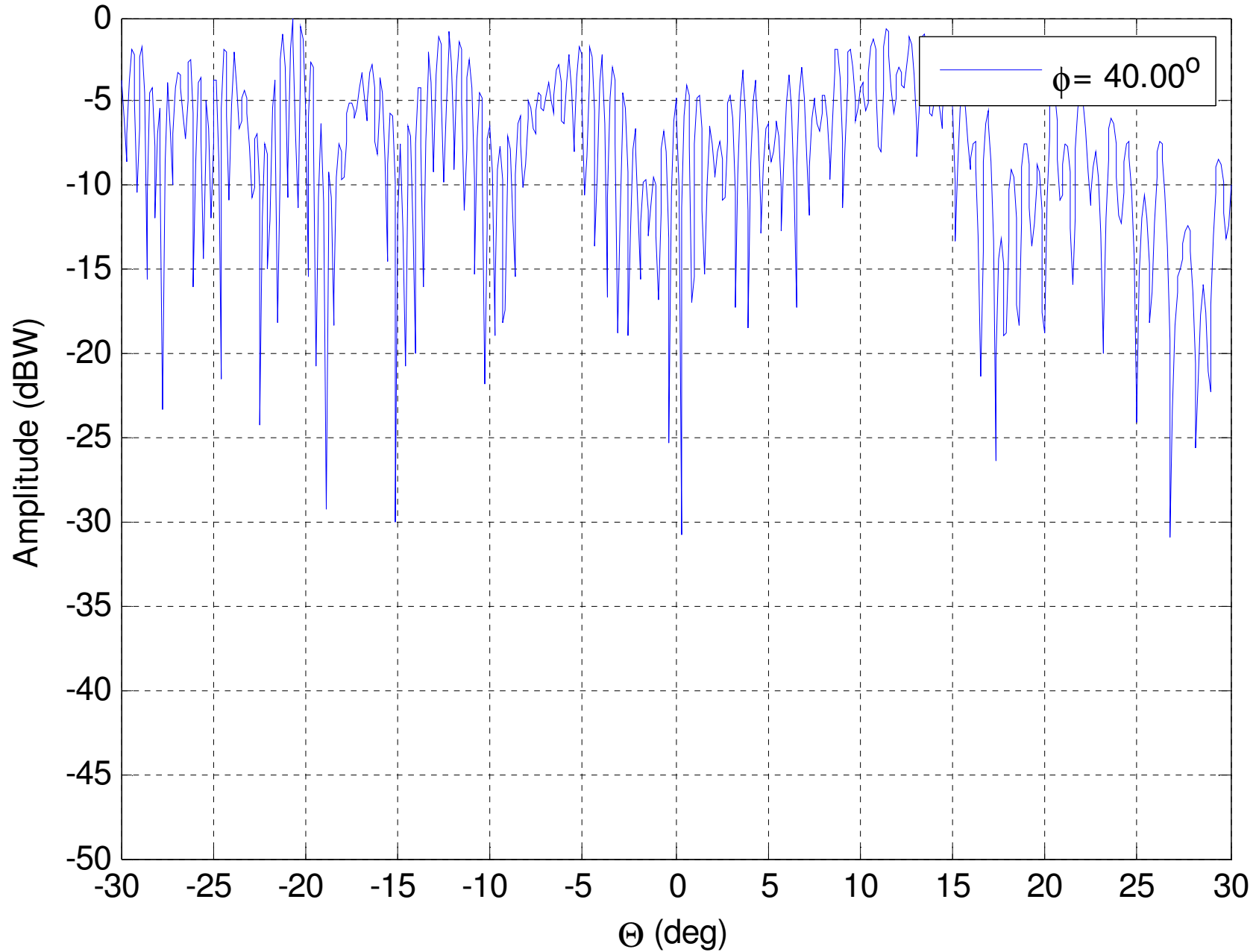
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -4.29 dBW, Date: 14-Dec-2011



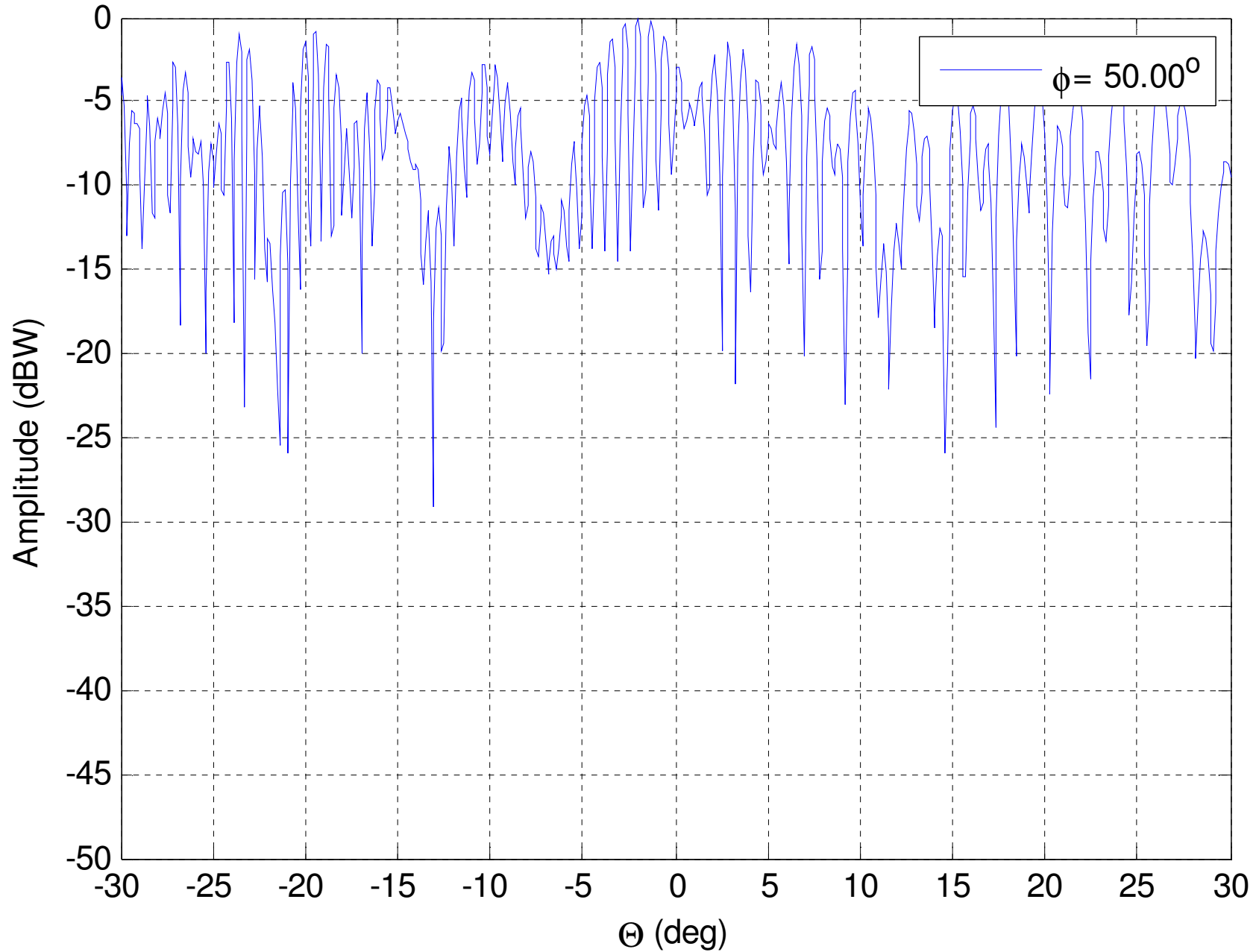
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -4.09 dBW, Date: 14-Dec-2011



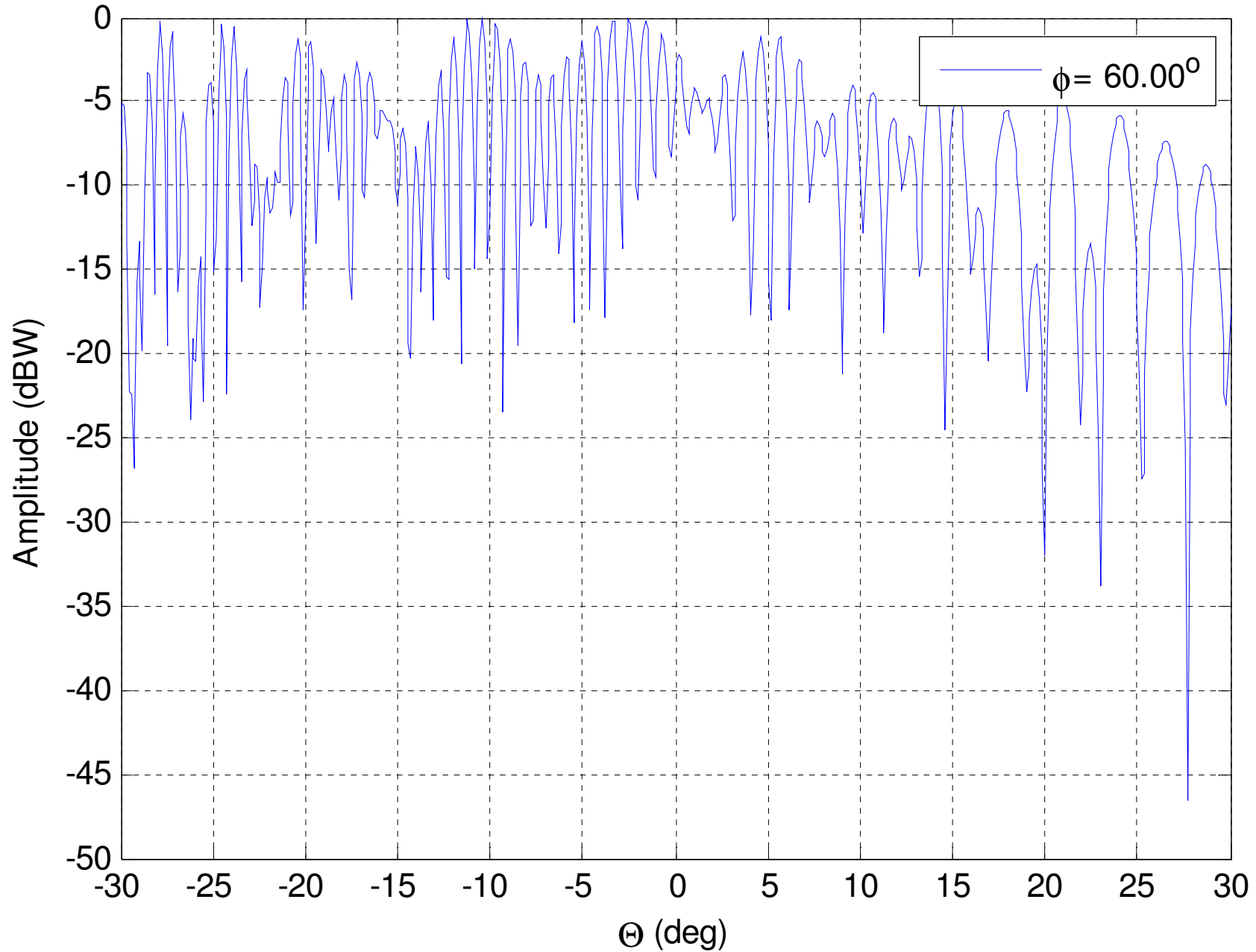
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -4.83 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

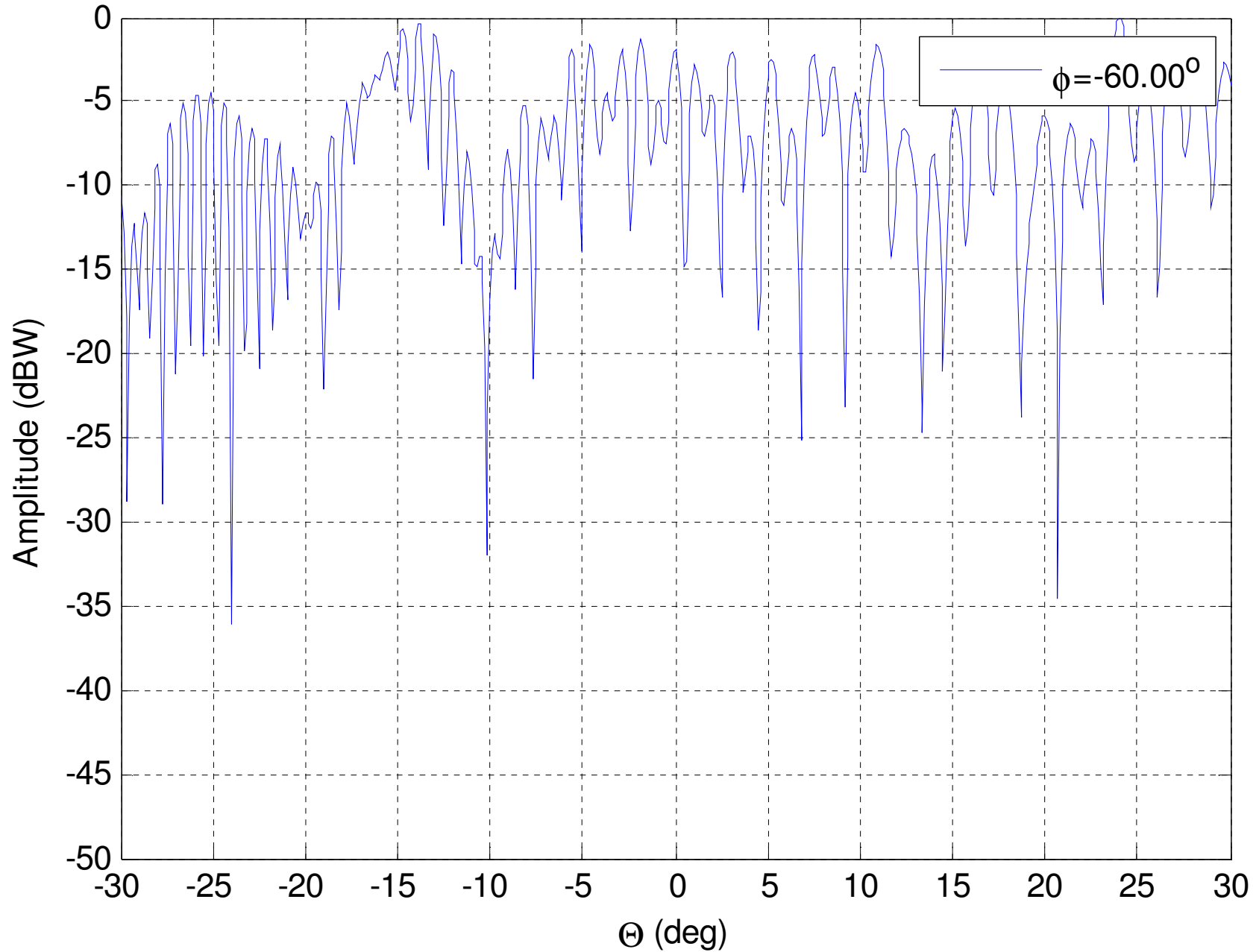
Input file: tx-17.5-lhcp-60.cut, Peak: -5.27 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

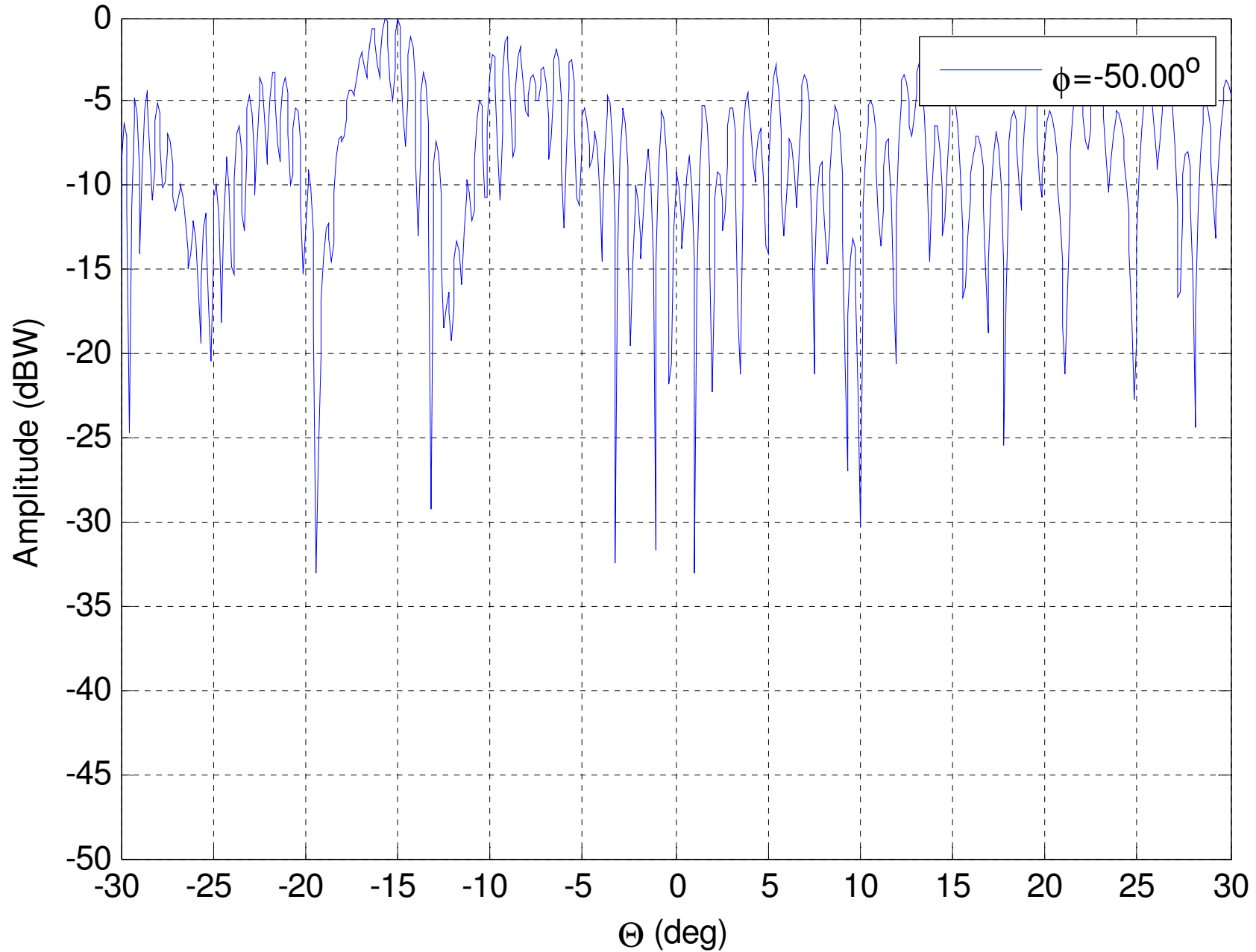
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -4.37 dBW, Date: 14-Dec-2011



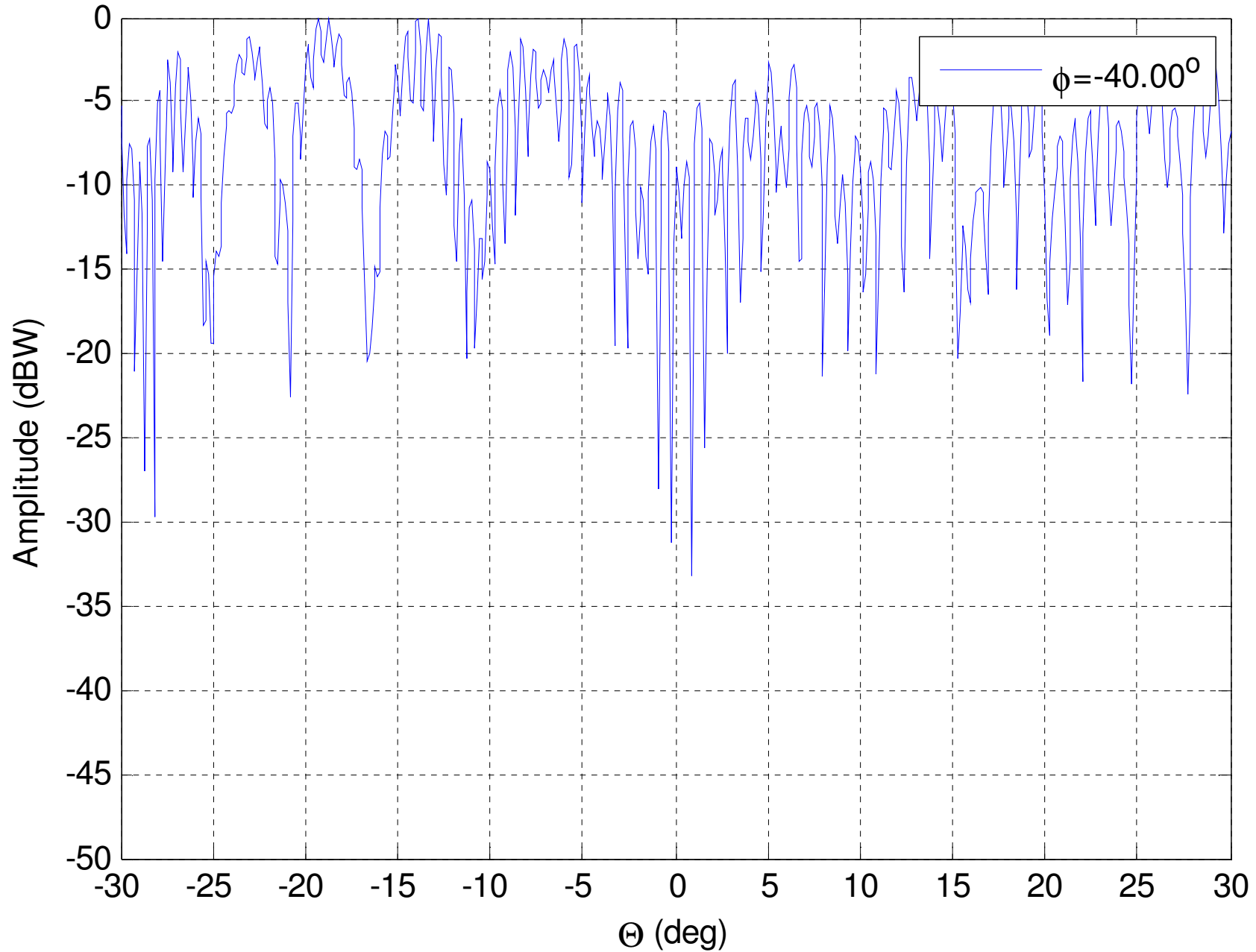
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -4.18 dBW, Date: 14-Dec-2011



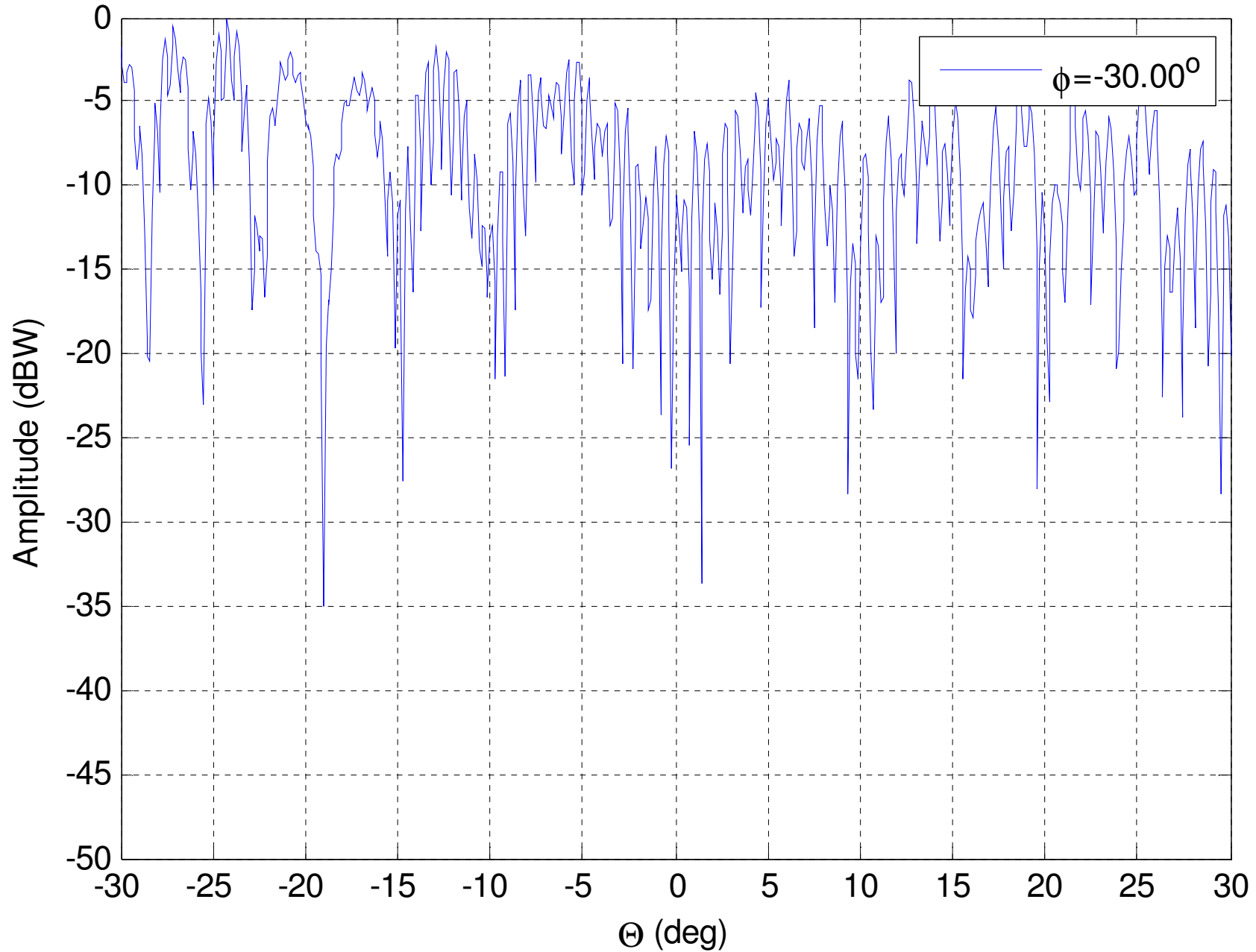
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.36 dBW, Date: 14-Dec-2011



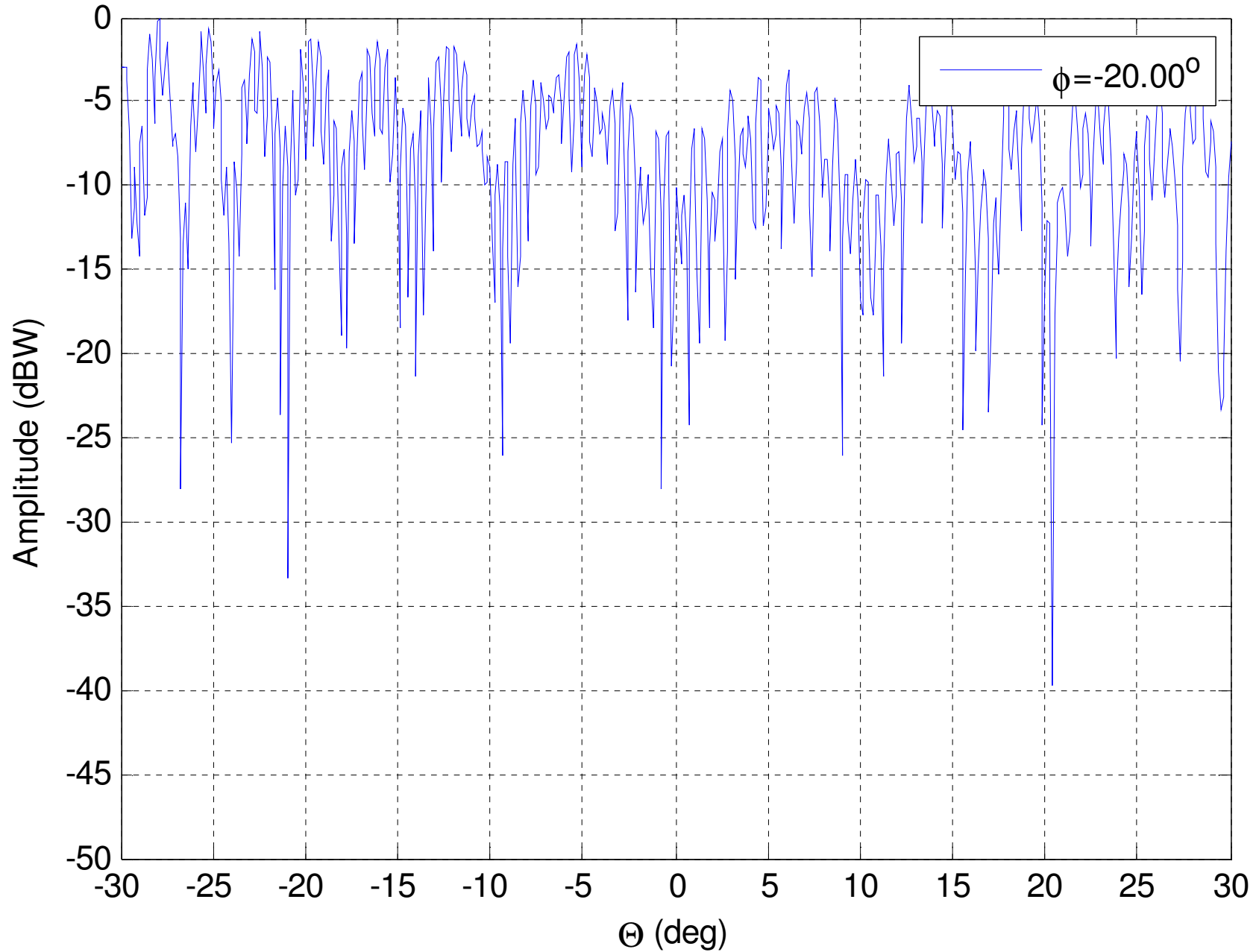
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -2.80 dBW, Date: 14-Dec-2011



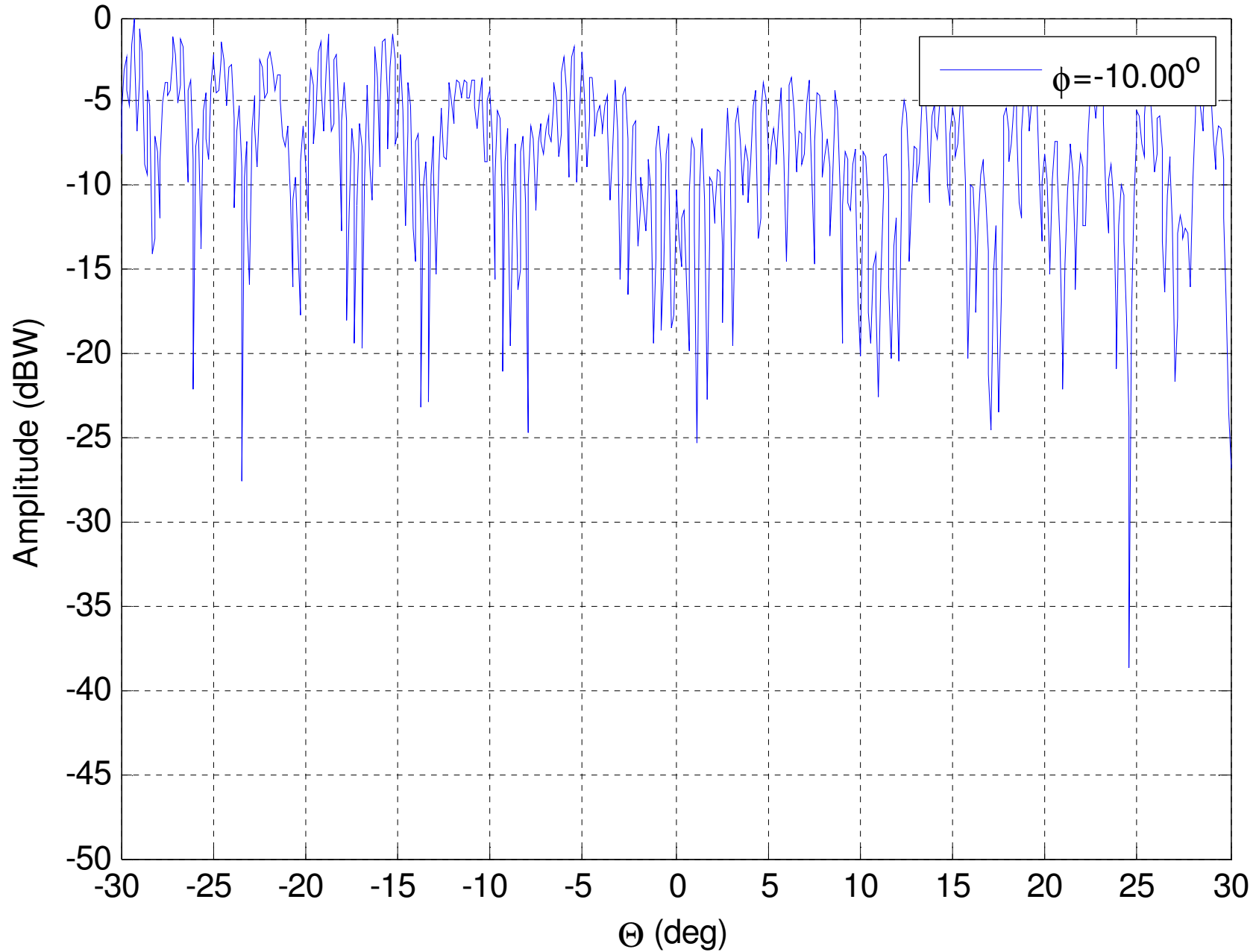
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -3.30 dBW, Date: 14-Dec-2011



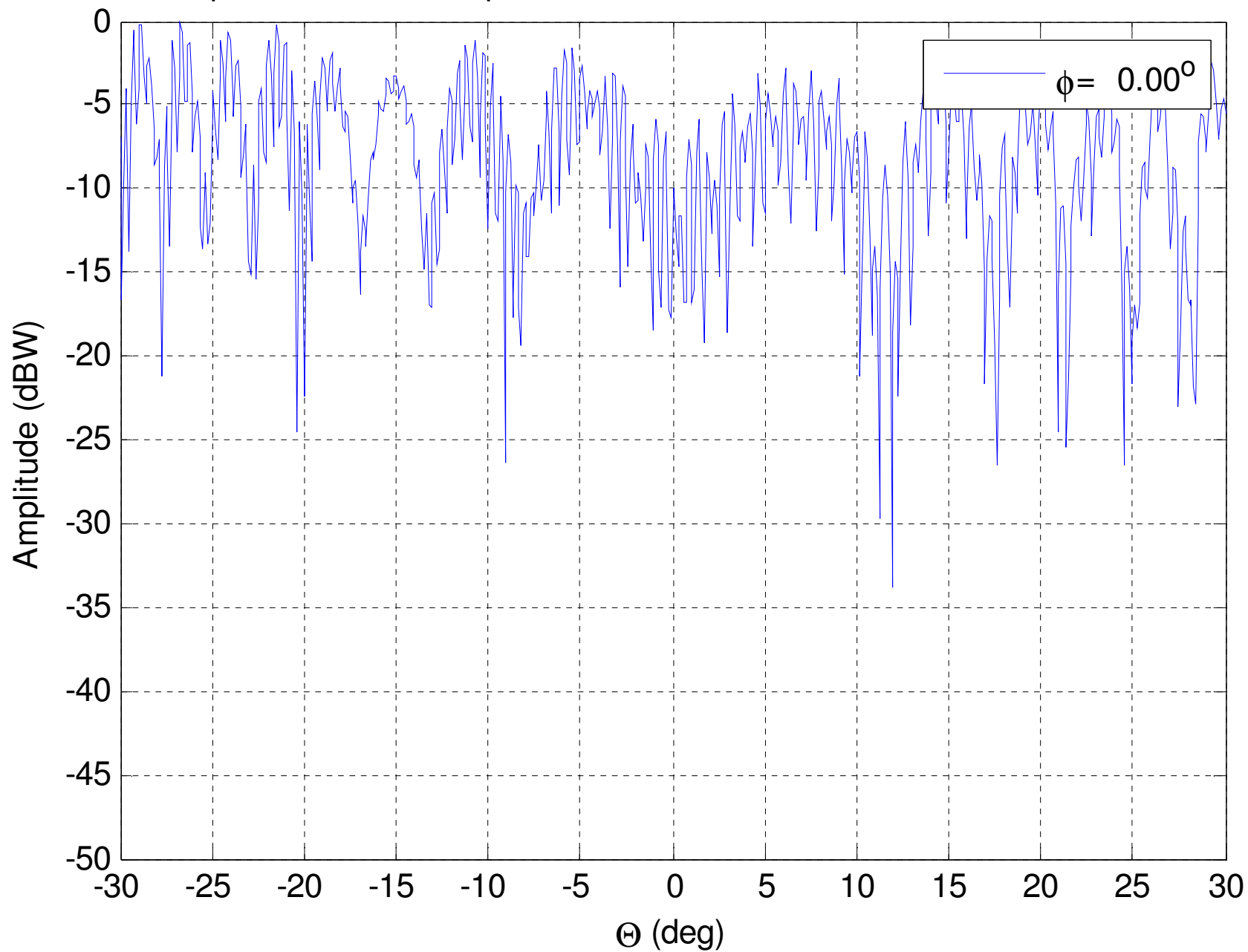
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -3.09 dBW, Date: 14-Dec-2011



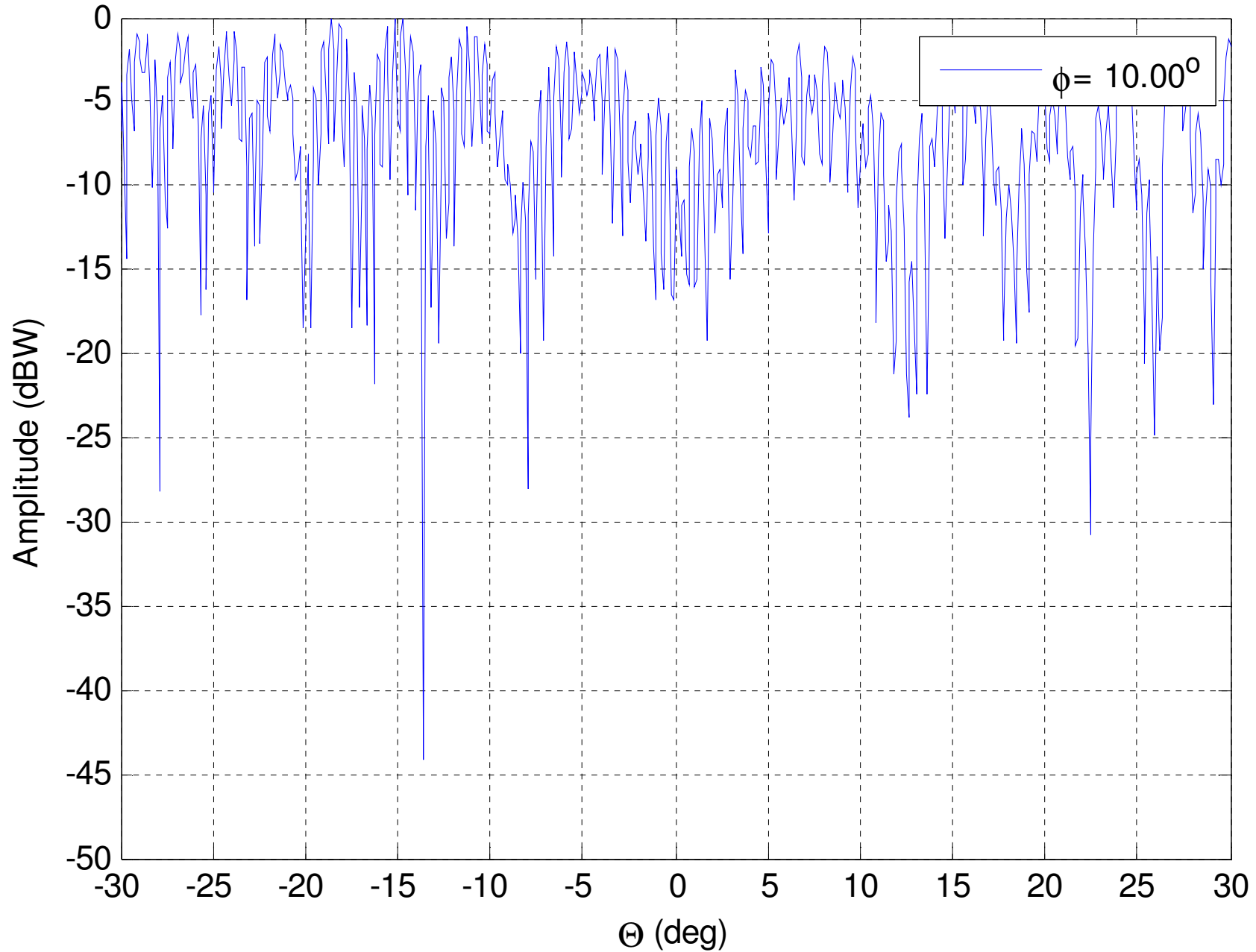
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -3.42 dBW, Date: 14-Dec-2011



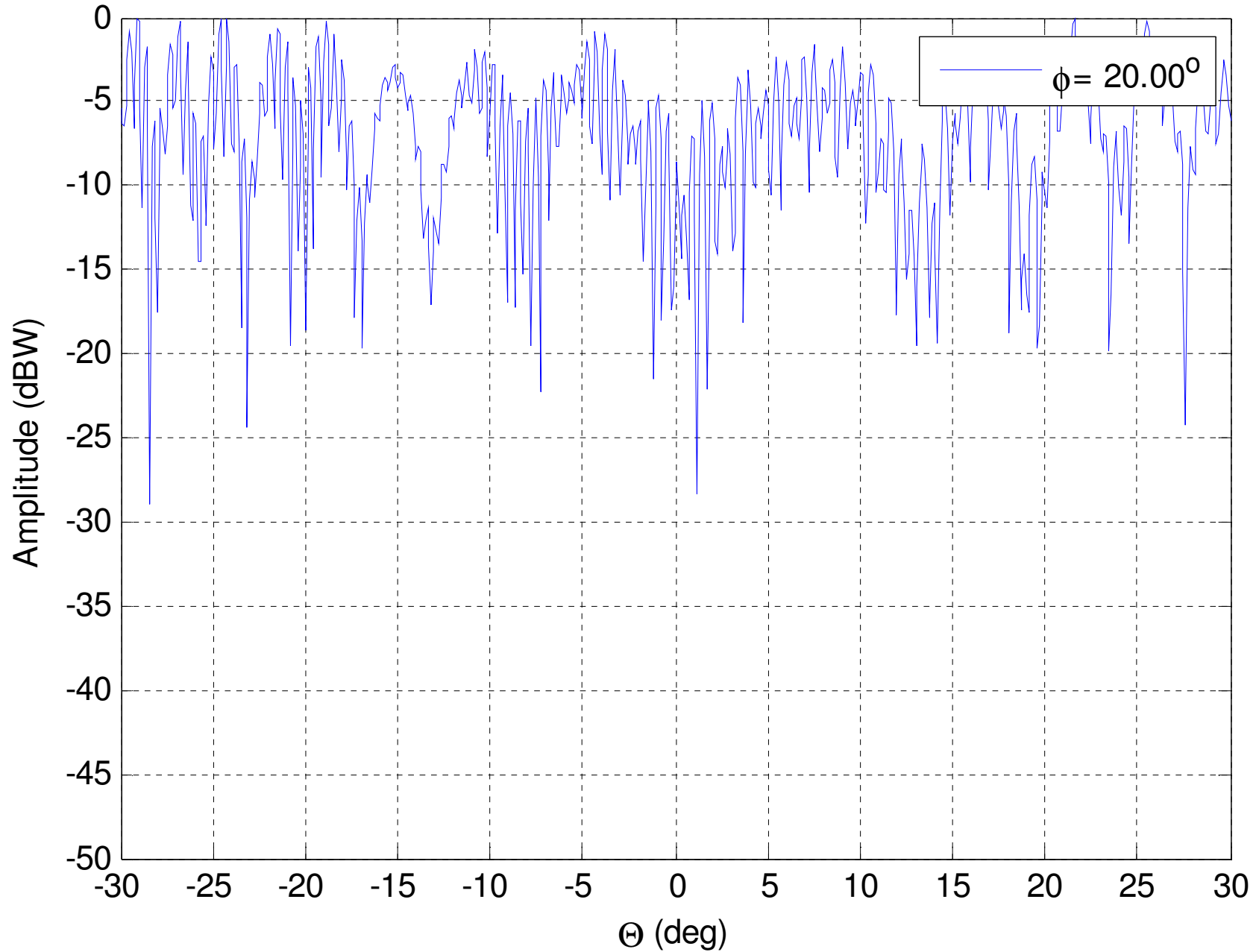
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -4.28 dBW, Date: 14-Dec-2011



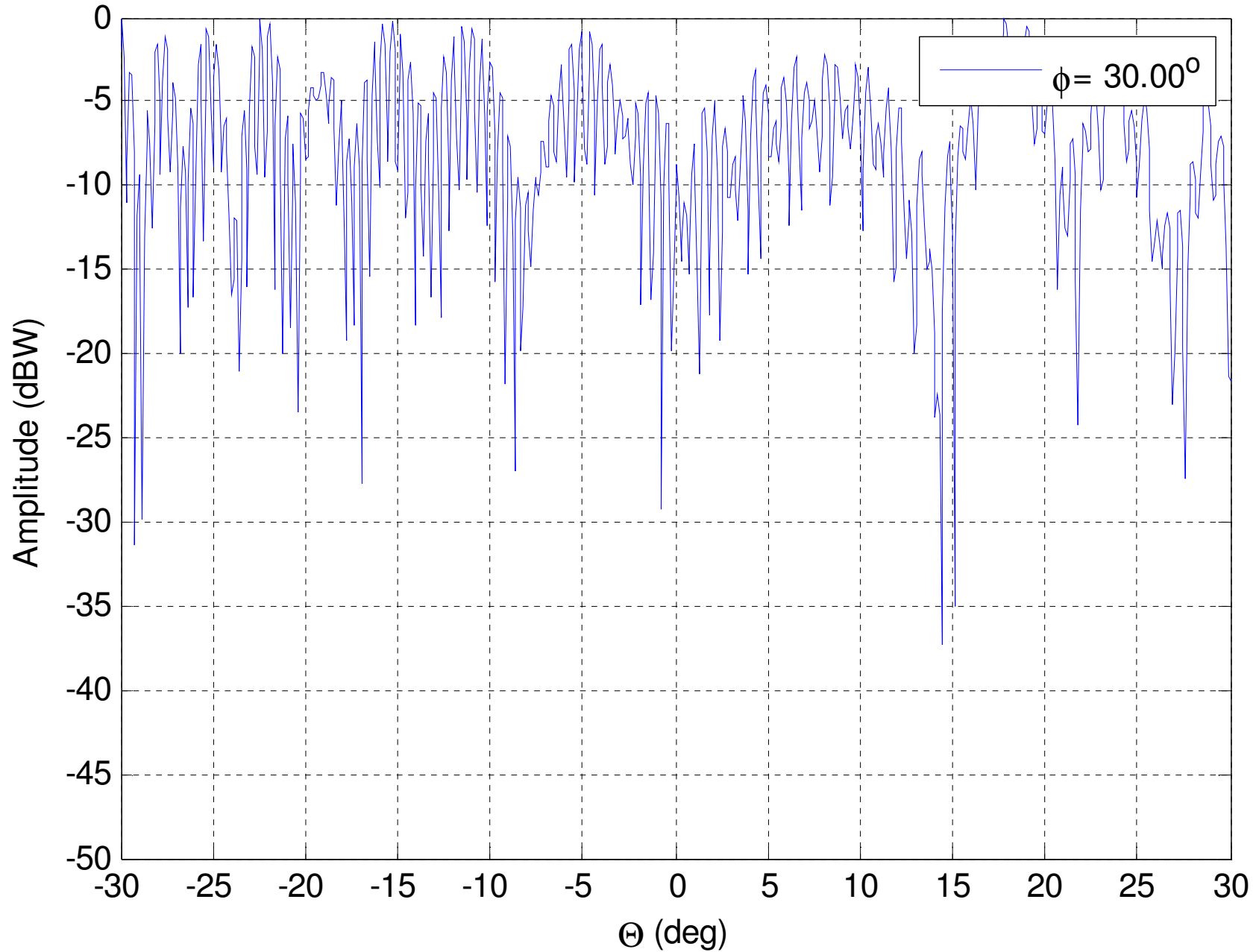
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -4.50 dBW, Date: 14-Dec-2011



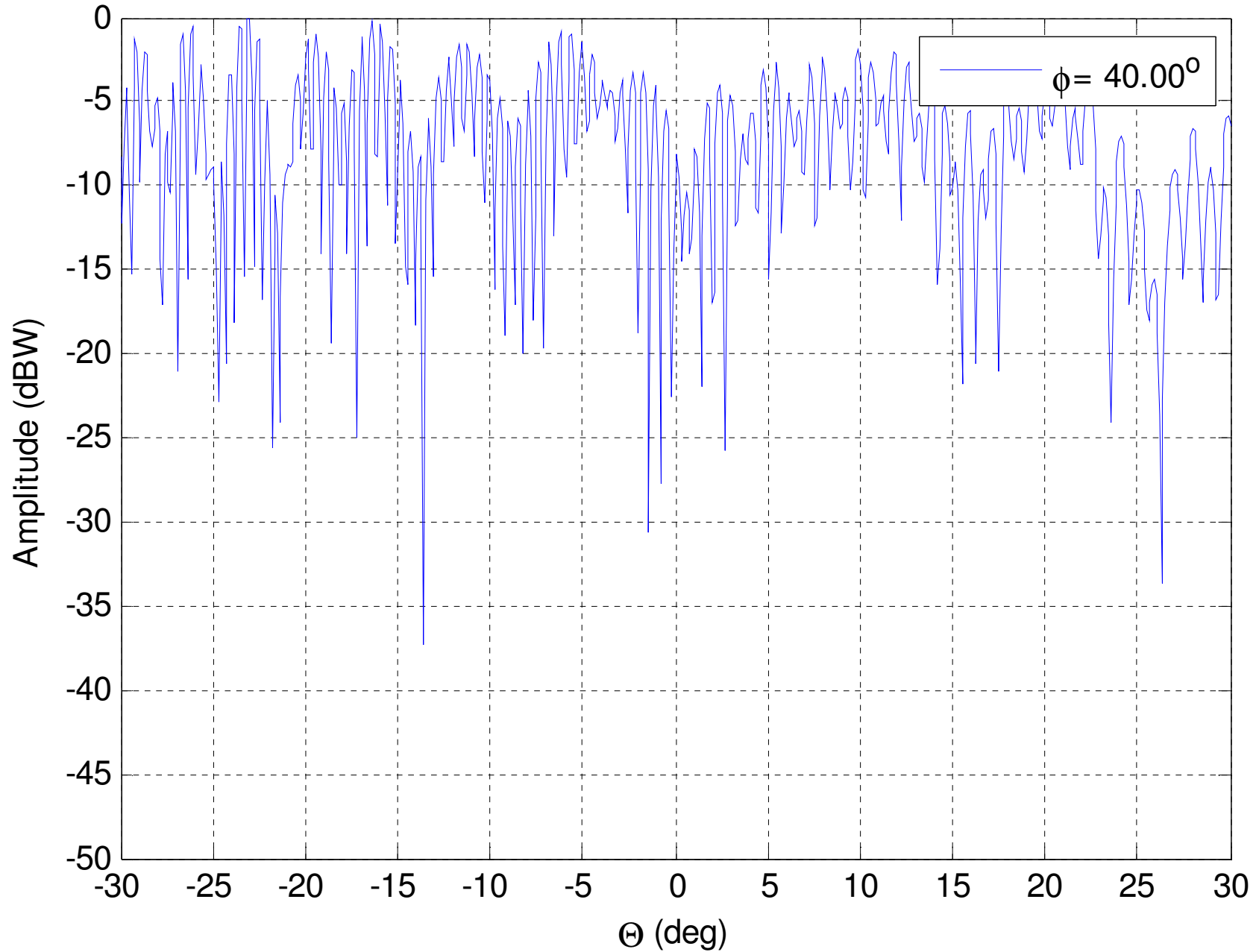
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -4.29 dBW, Date: 14-Dec-2011



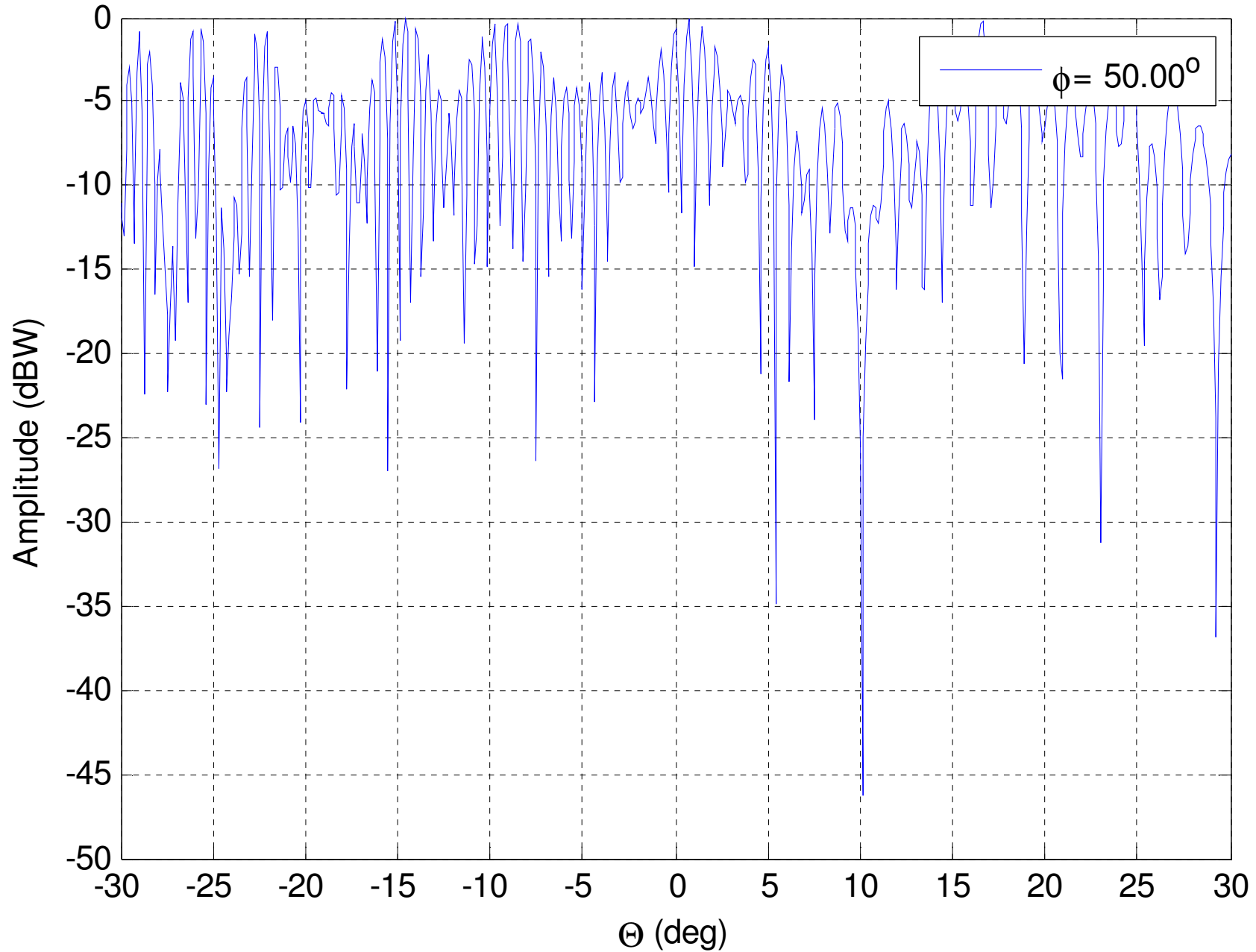
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -4.87 dBW, Date: 14-Dec-2011



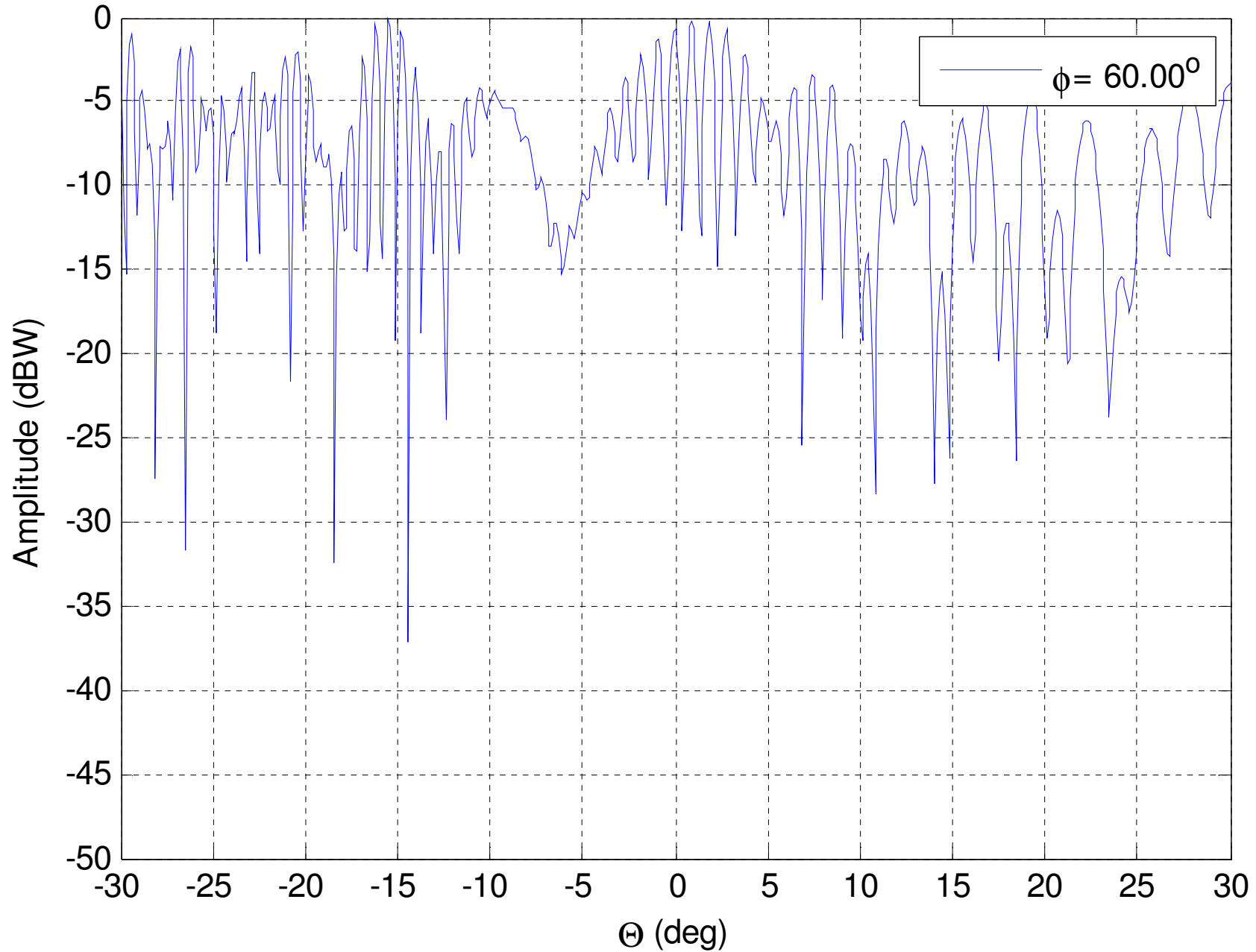
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.58 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

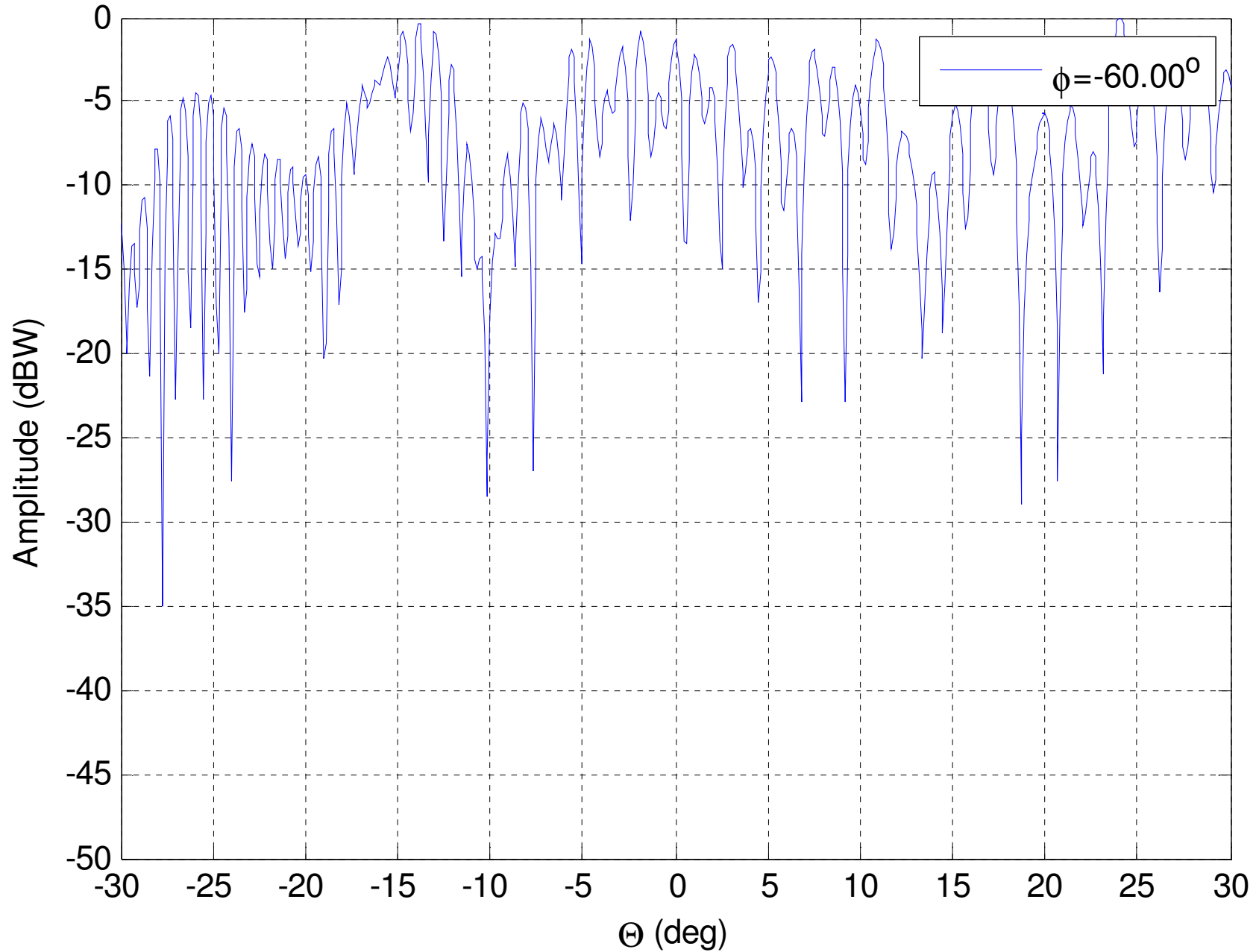
Input file: tx-17.7-rhcp-60.cut, Peak: -5.59 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

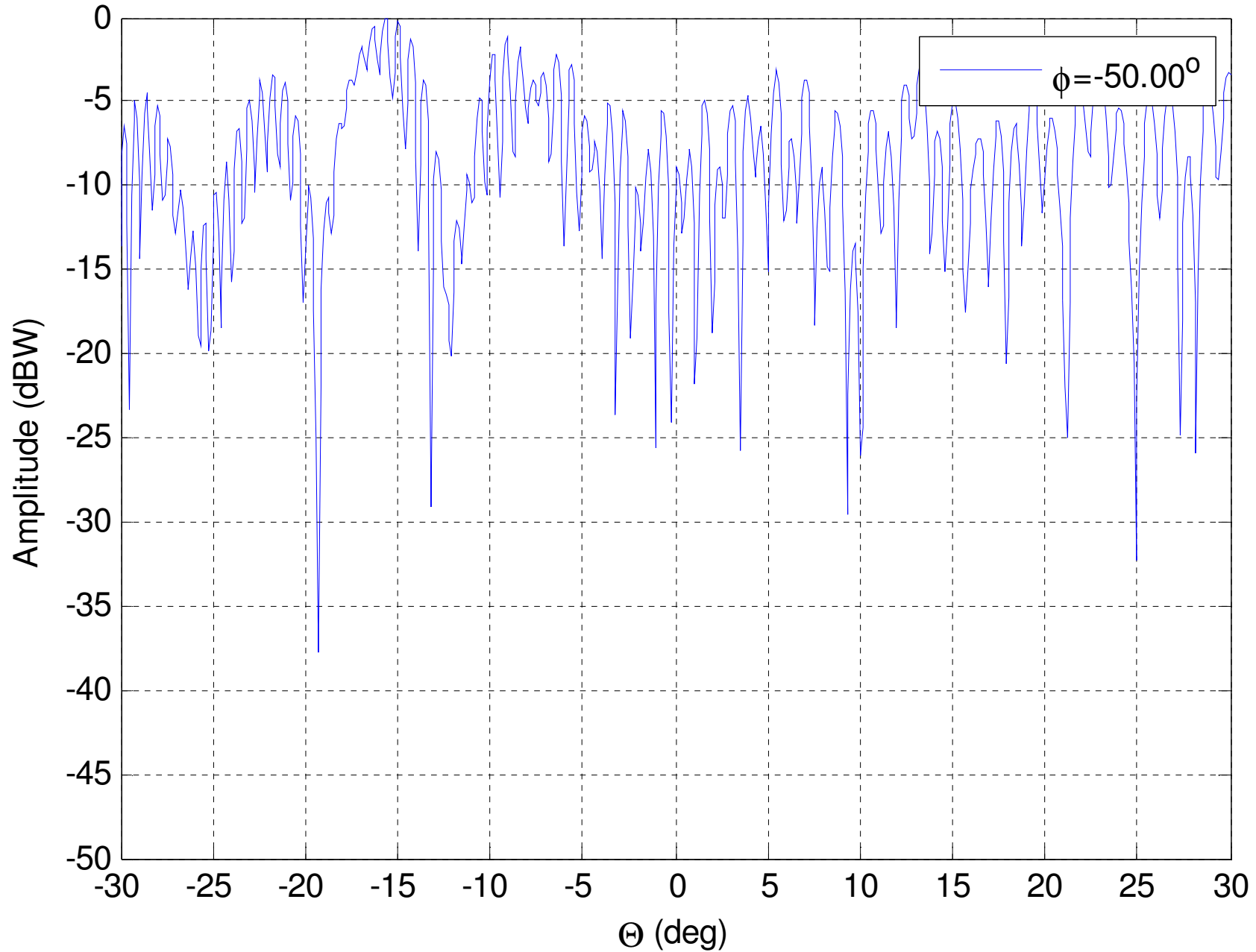
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -4.66 dBW, Date: 14-Dec-2011



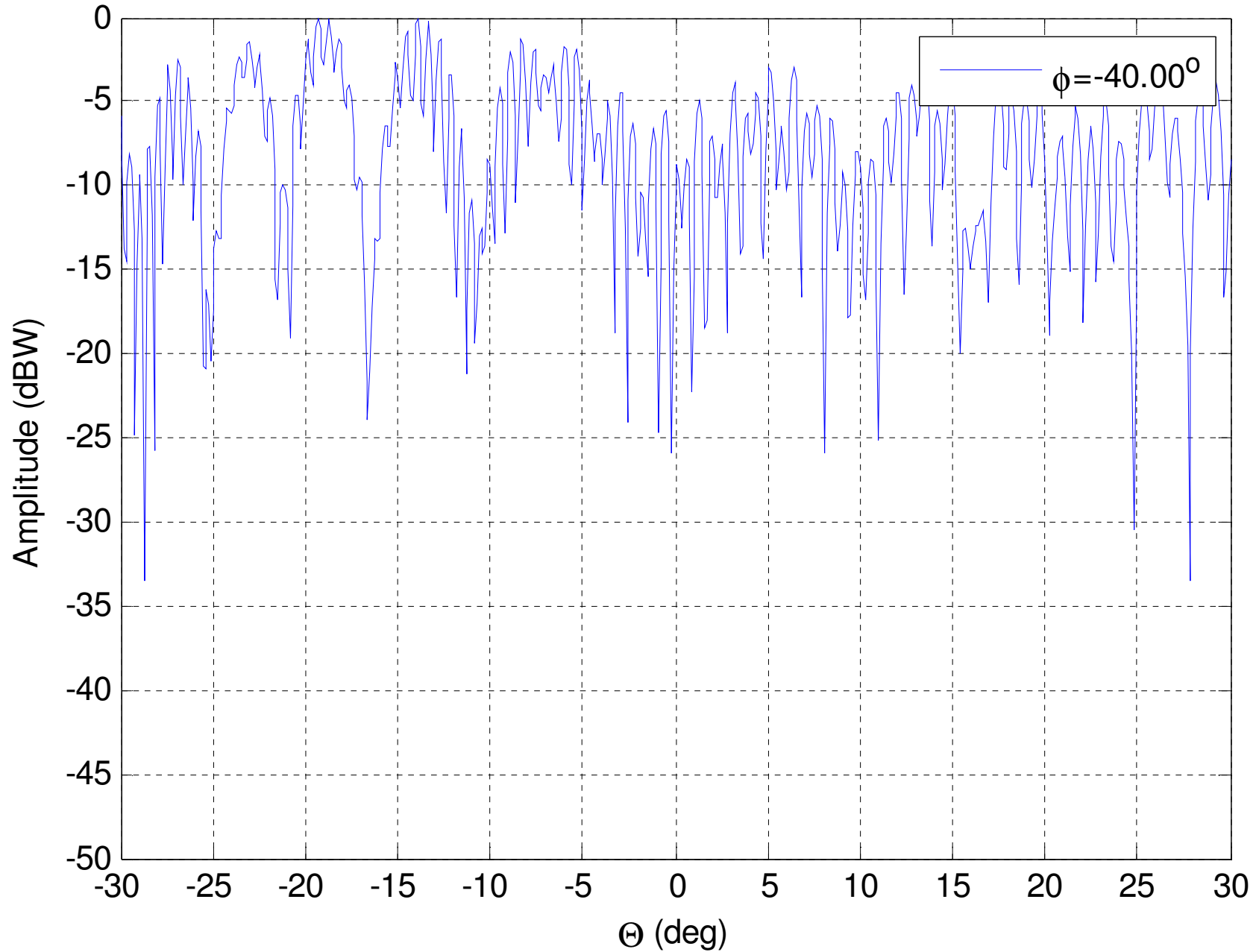
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -4.01 dBW, Date: 14-Dec-2011



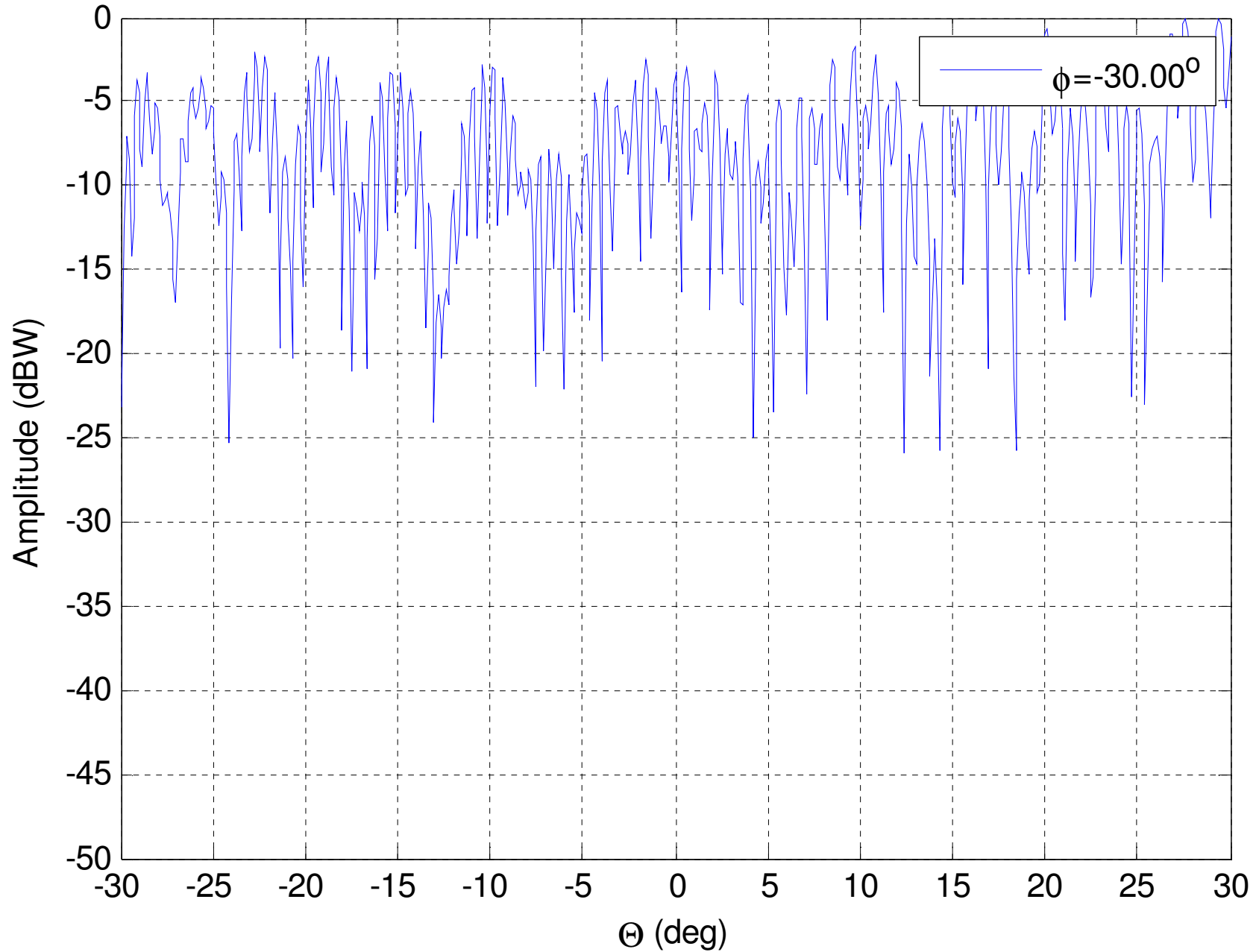
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -4.03 dBW, Date: 14-Dec-2011



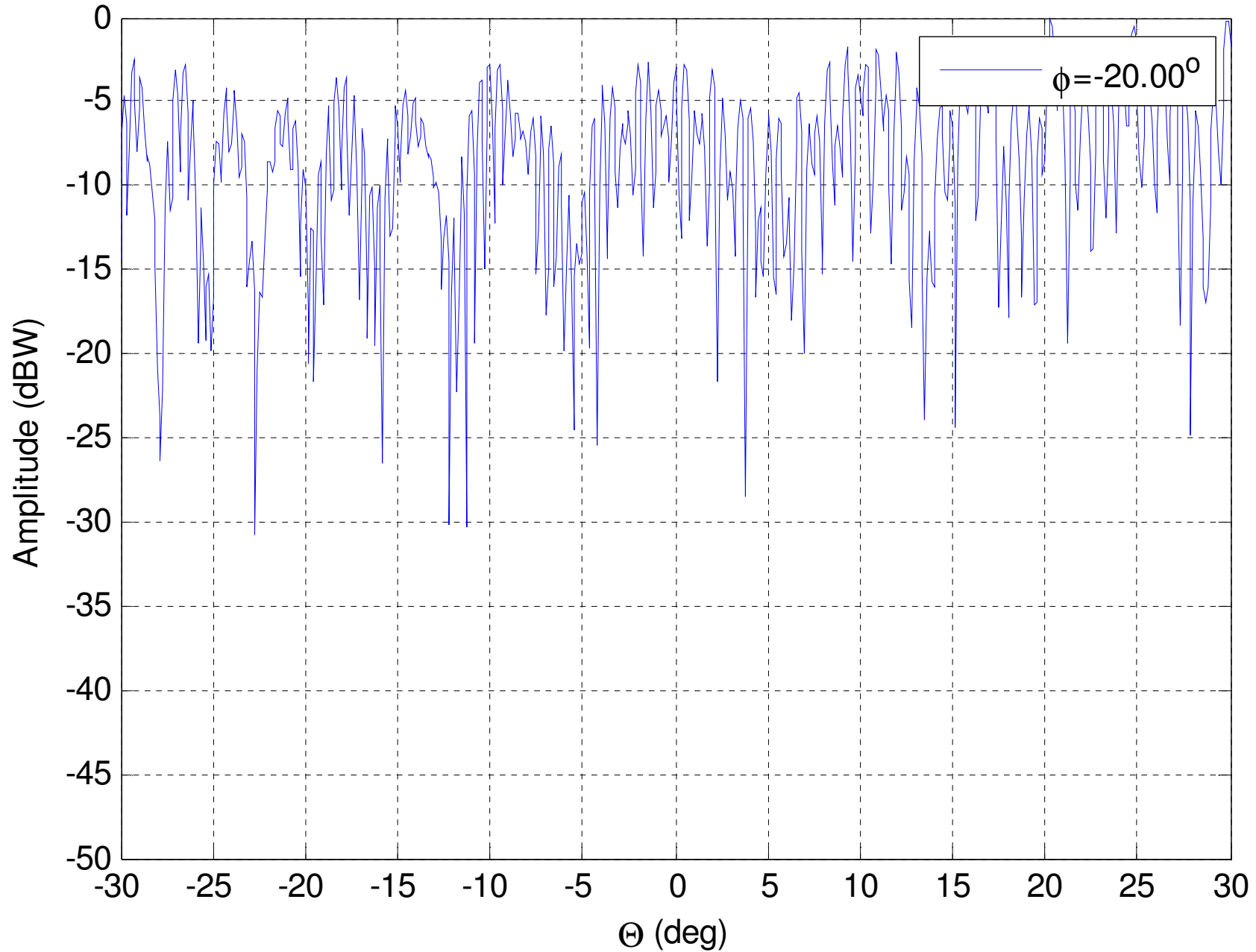
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -2.78 dBW, Date: 14-Dec-2011



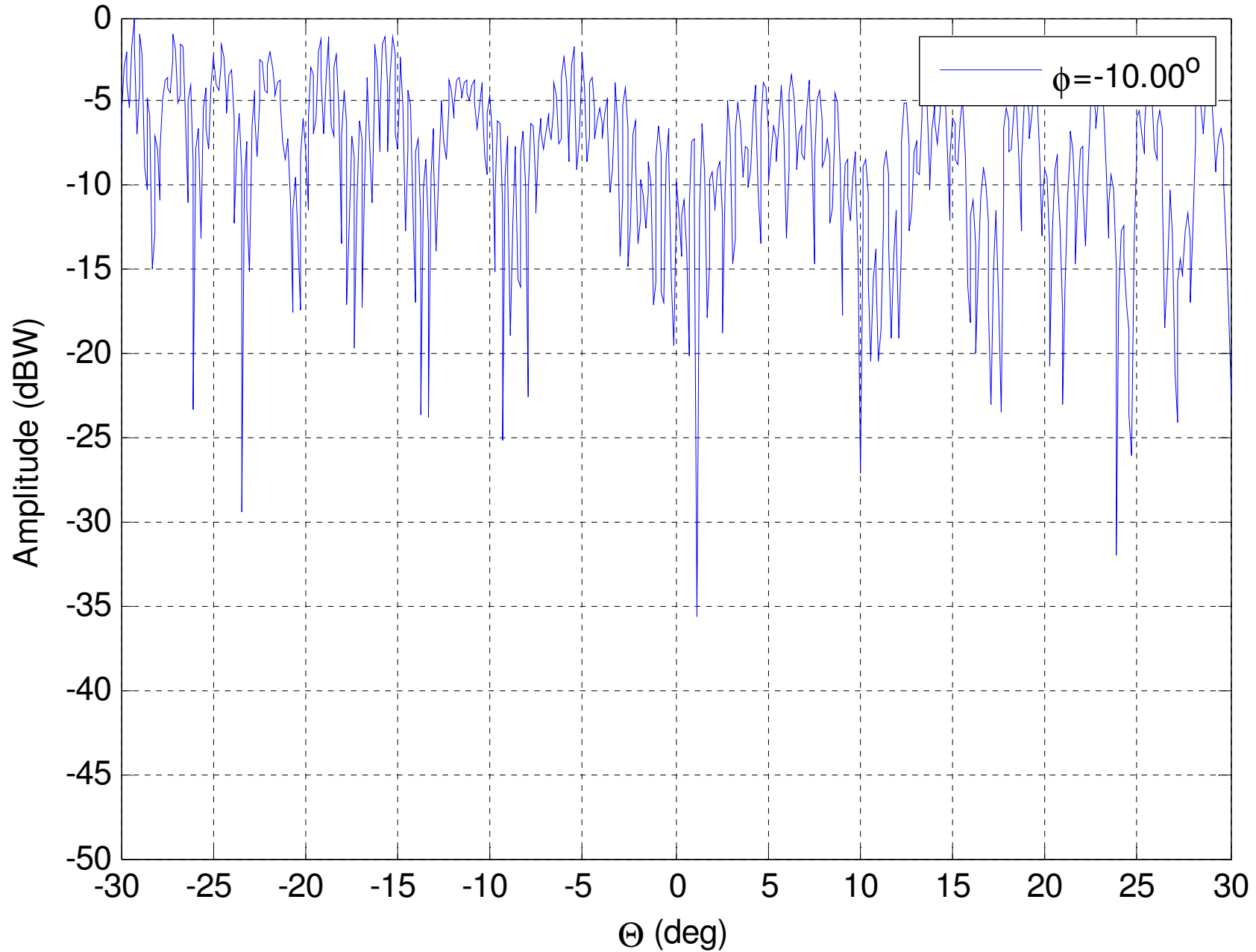
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -3.09 dBW, Date: 14-Dec-2011



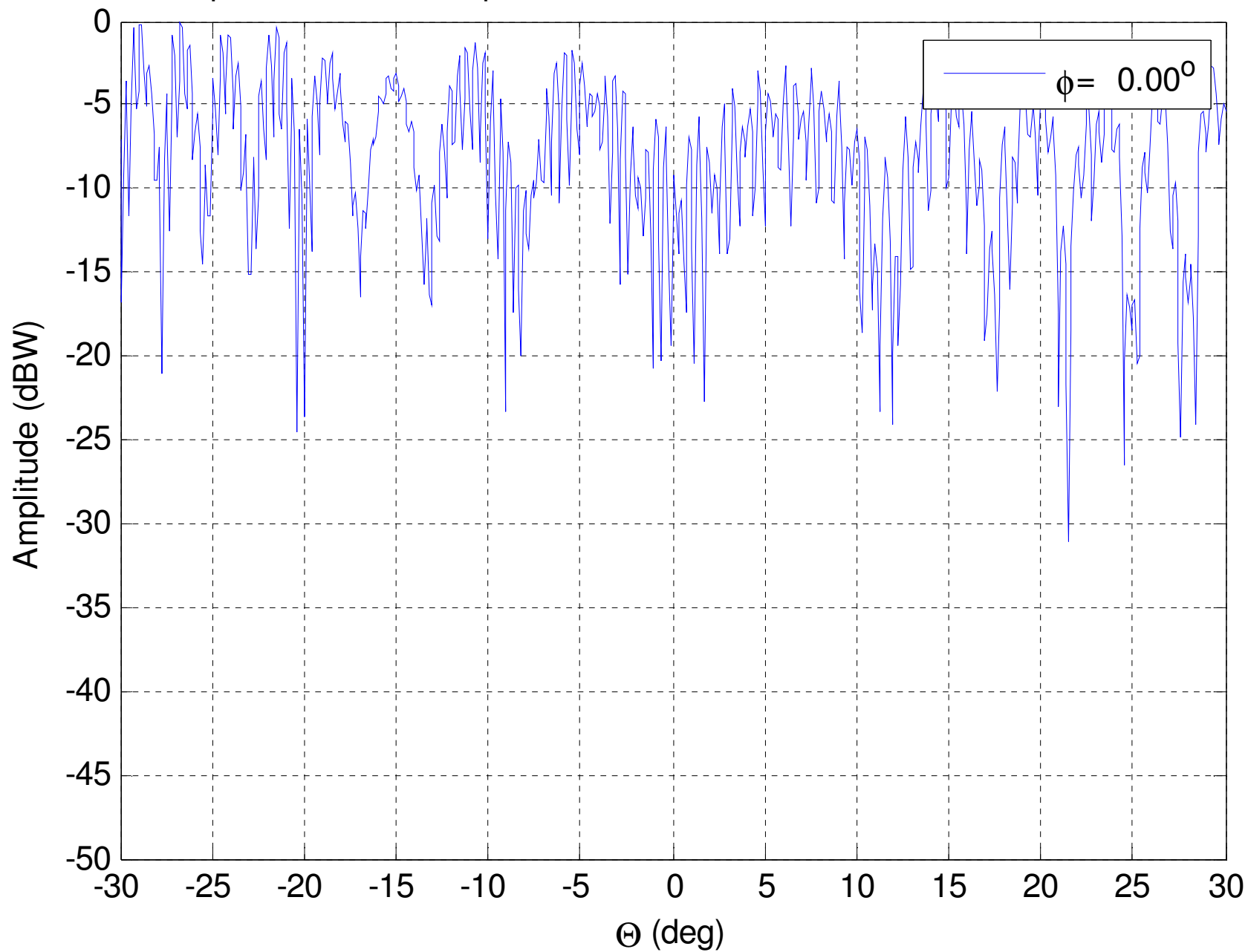
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -2.94 dBW, Date: 14-Dec-2011



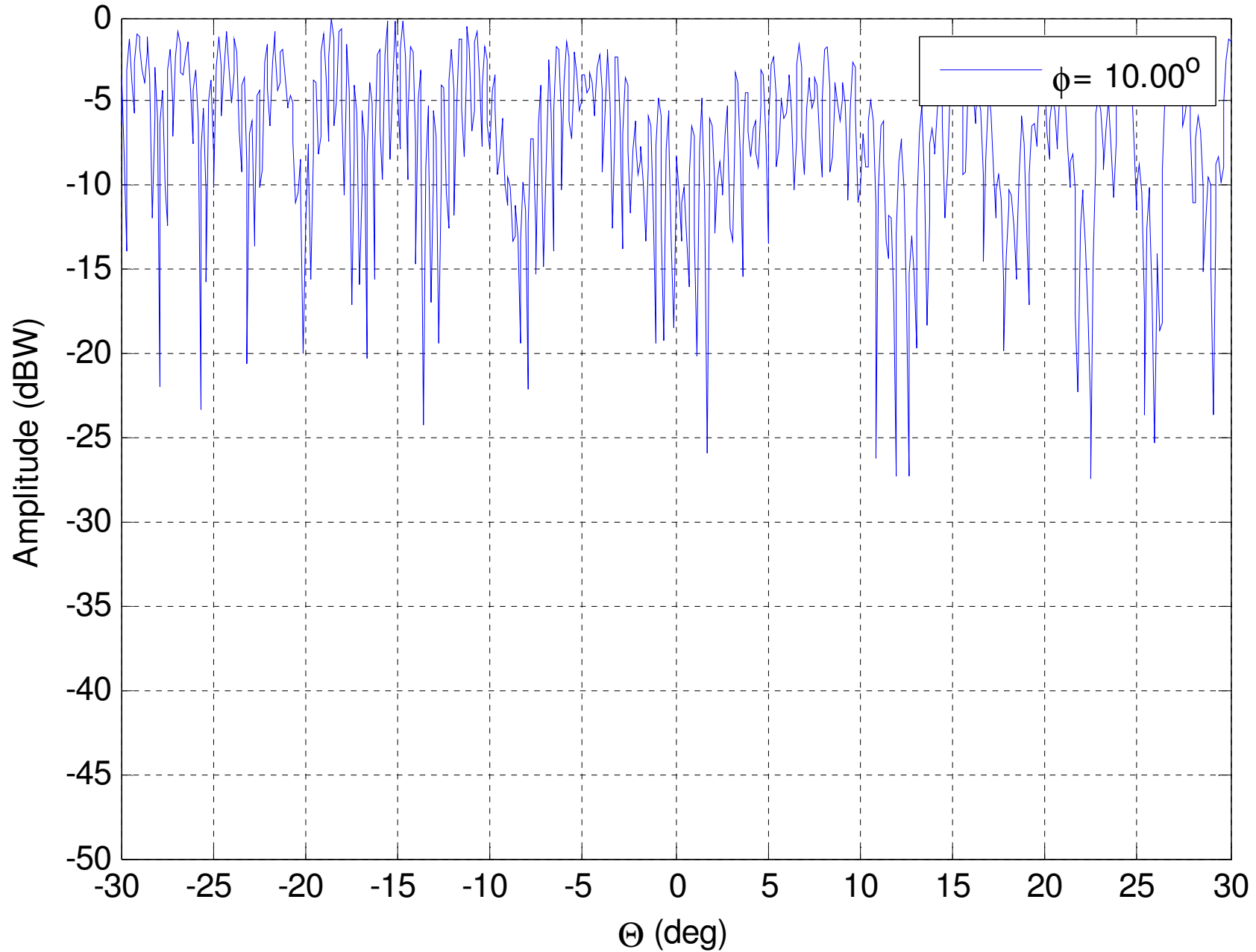
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -3.37 dBW, Date: 14-Dec-2011



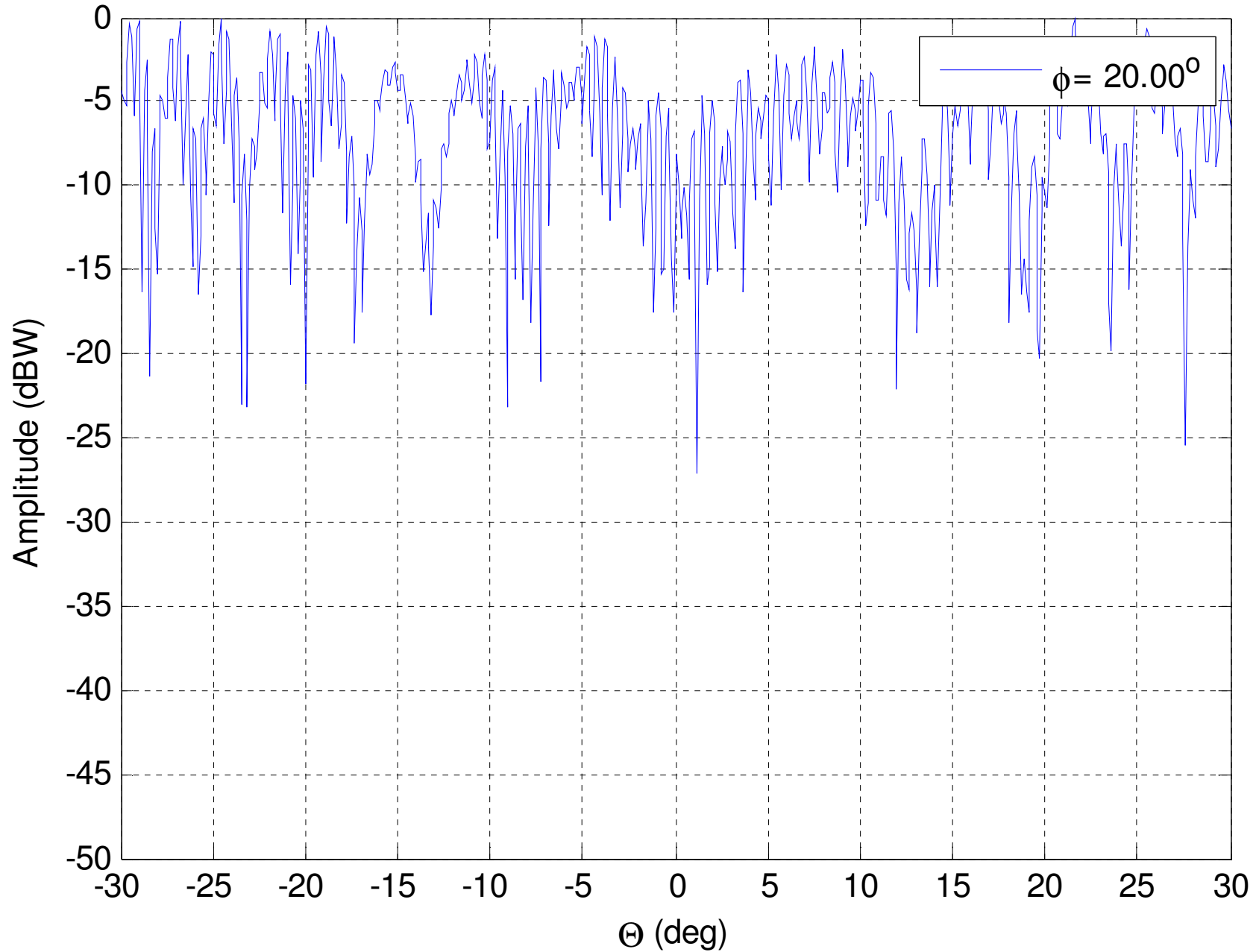
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -4.26 dBW, Date: 14-Dec-2011



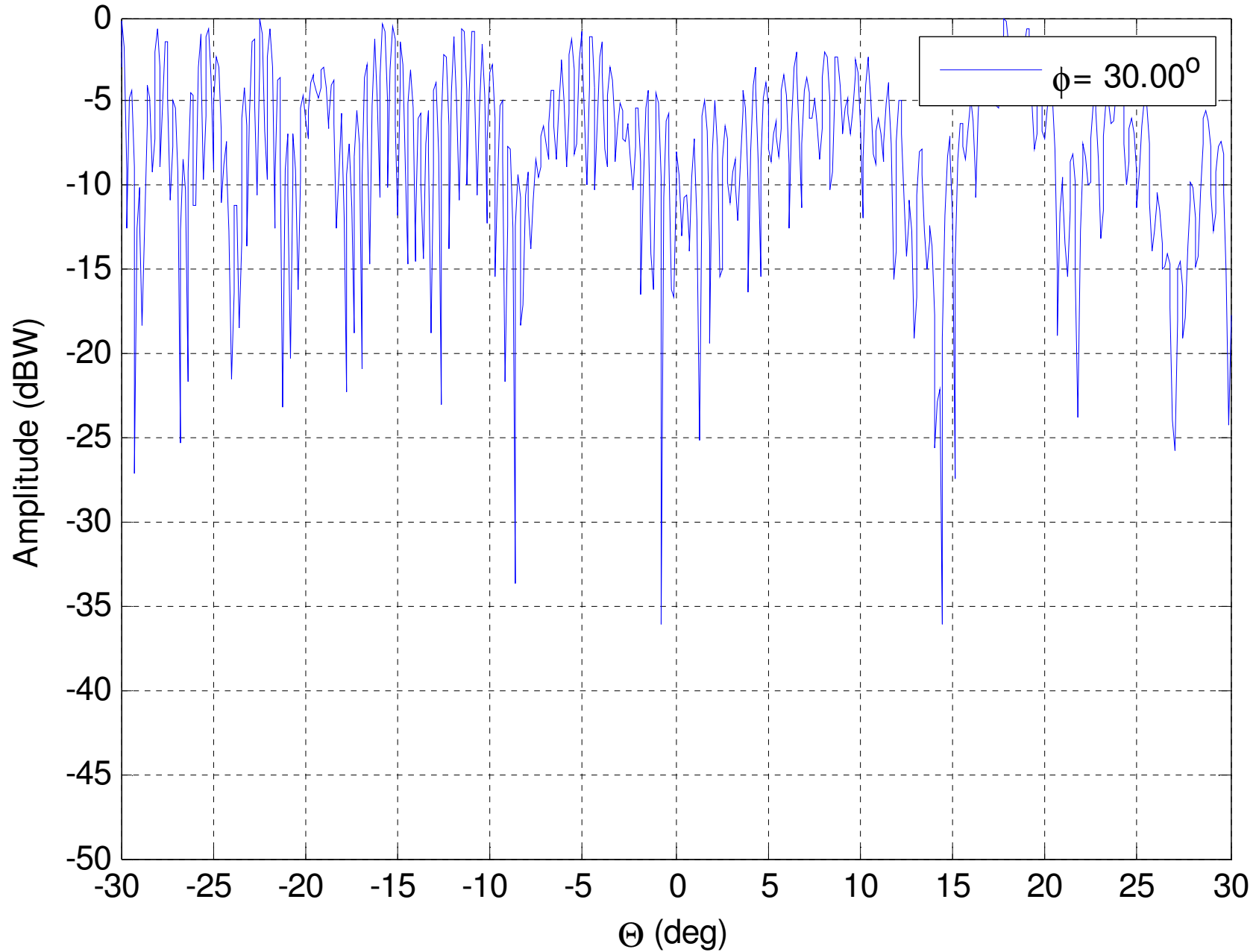
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -4.44 dBW, Date: 14-Dec-2011



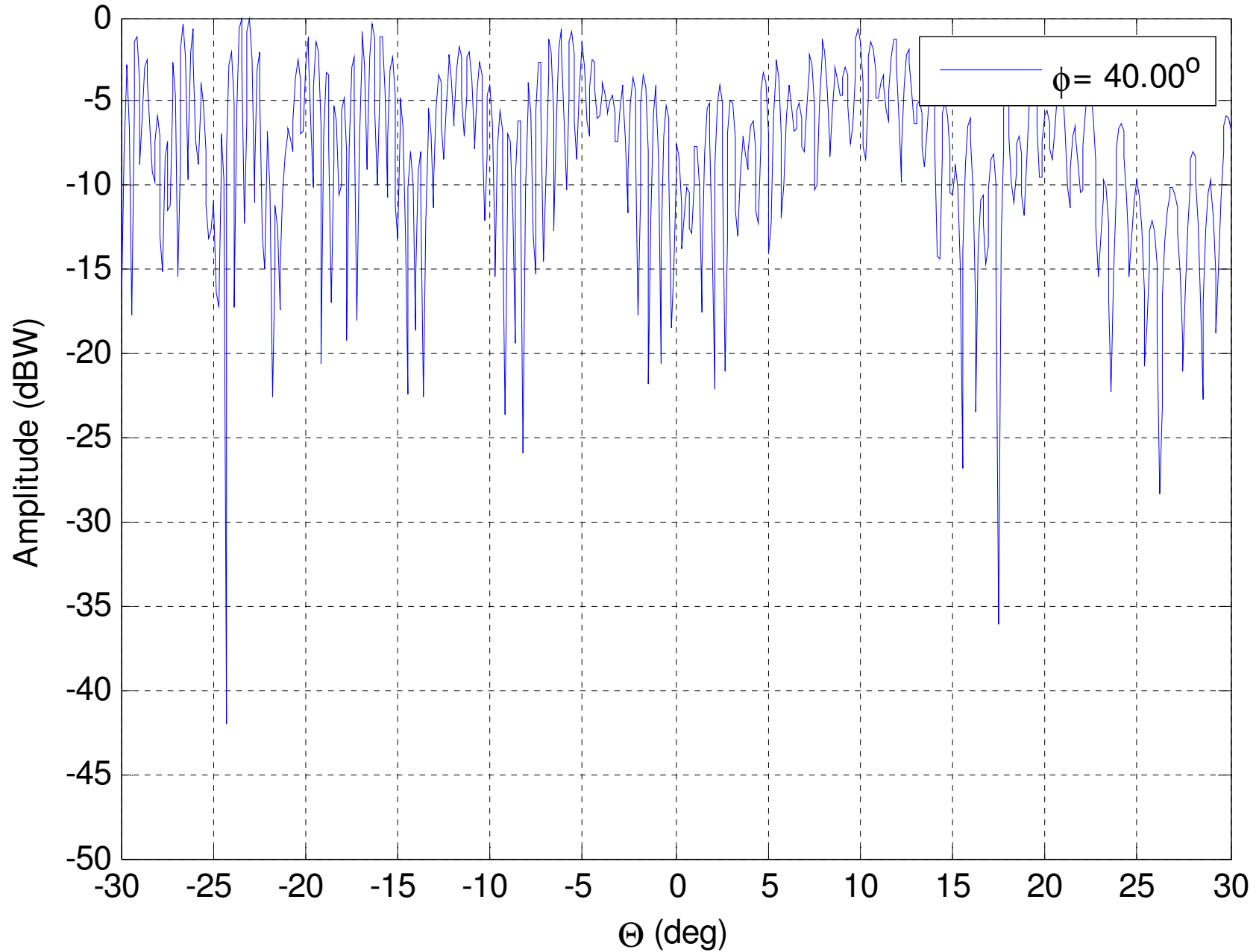
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -4.41 dBW, Date: 14-Dec-2011



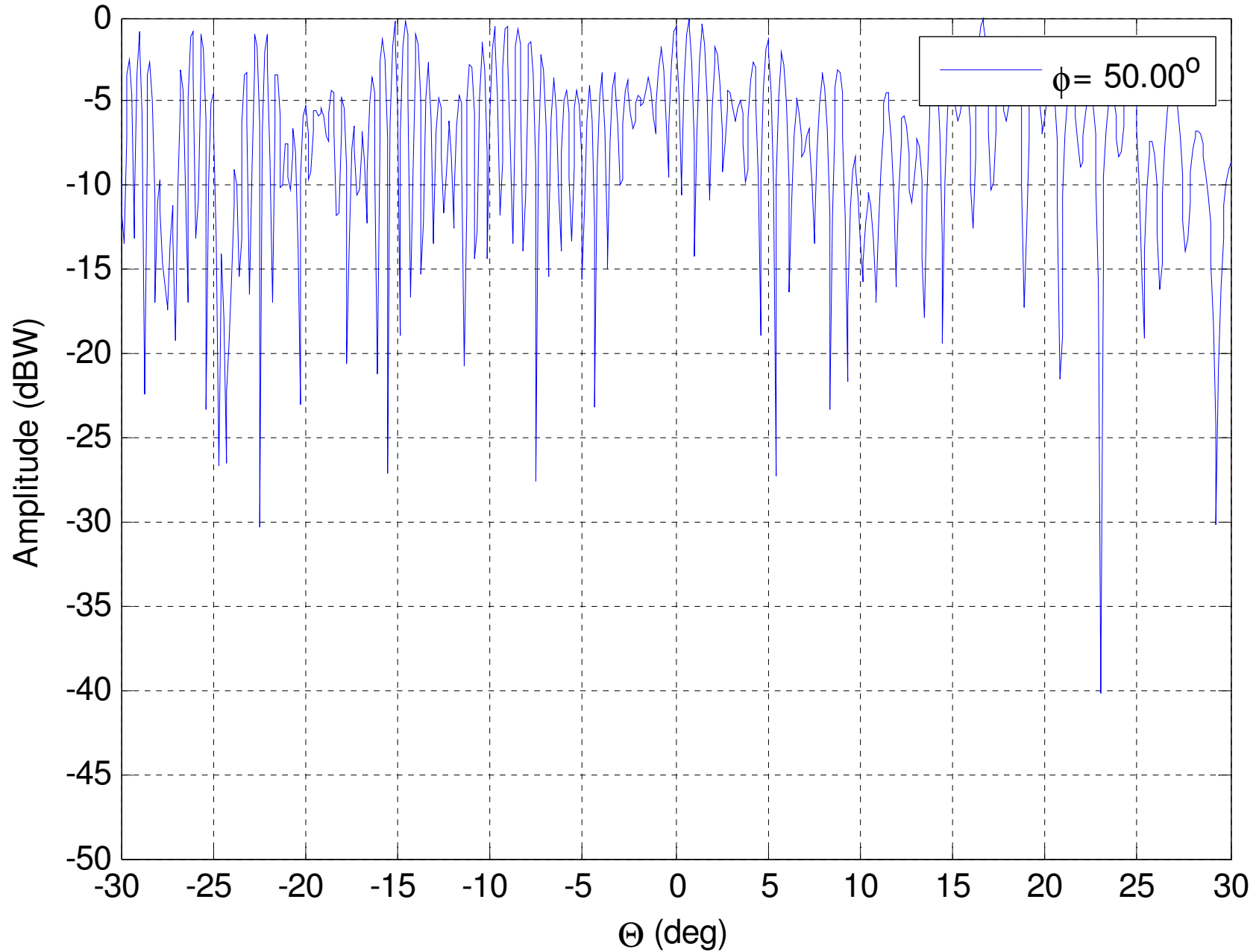
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -4.83 dBW, Date: 14-Dec-2011



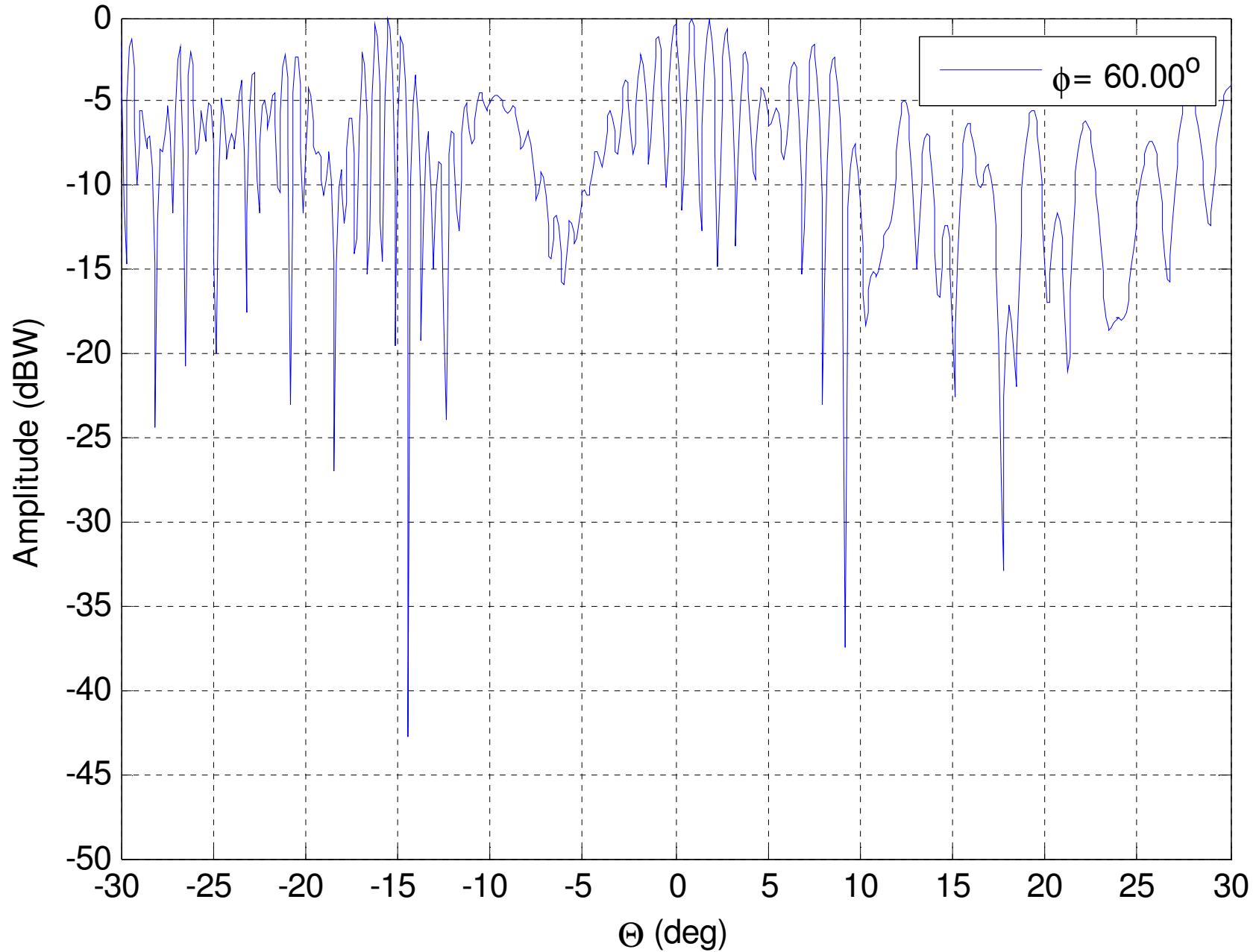
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -5.52 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -5.61 dBW, Date: 14-Dec-2011



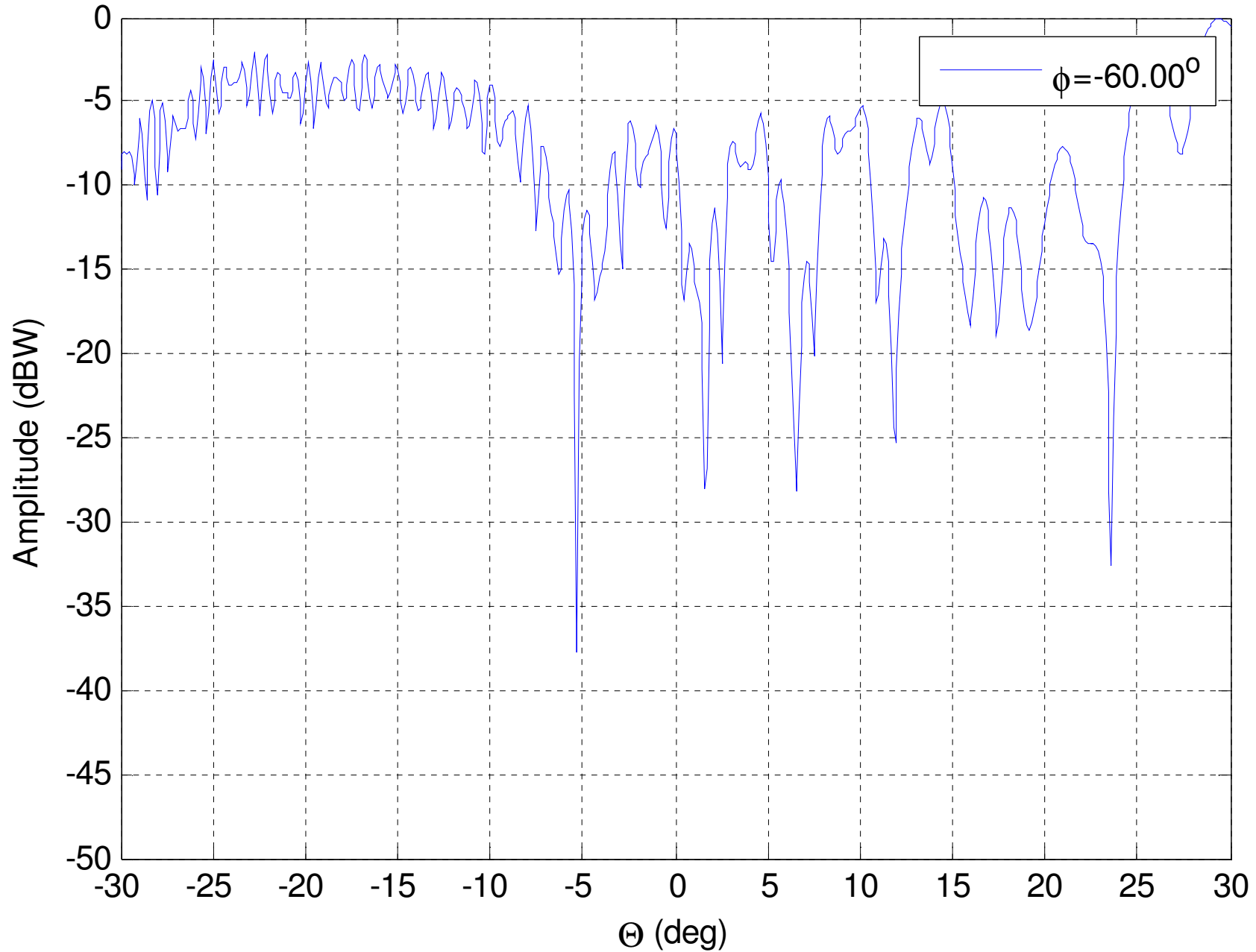
Spot Beam15, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

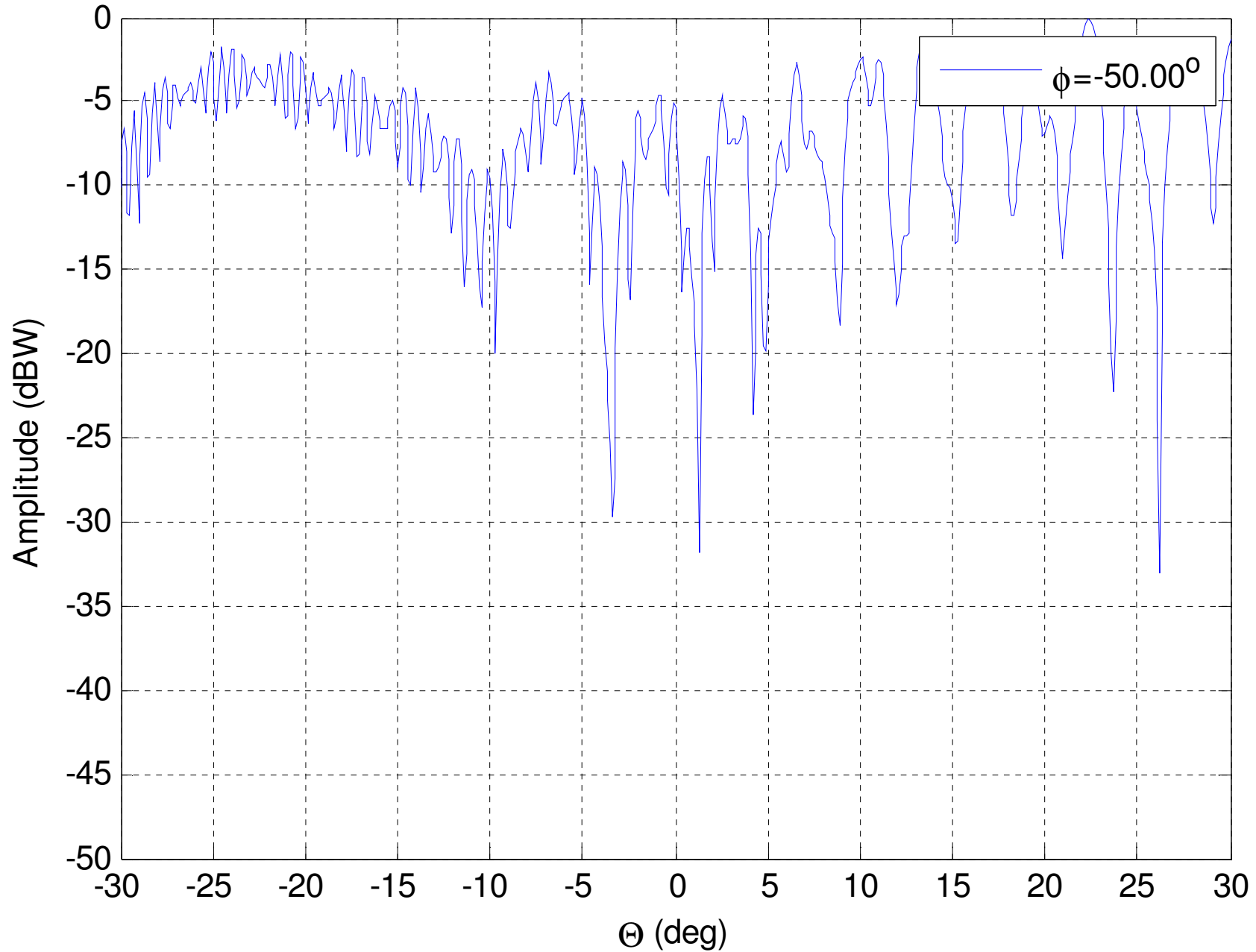
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -4.93 dBW, Date: 14-Dec-2011



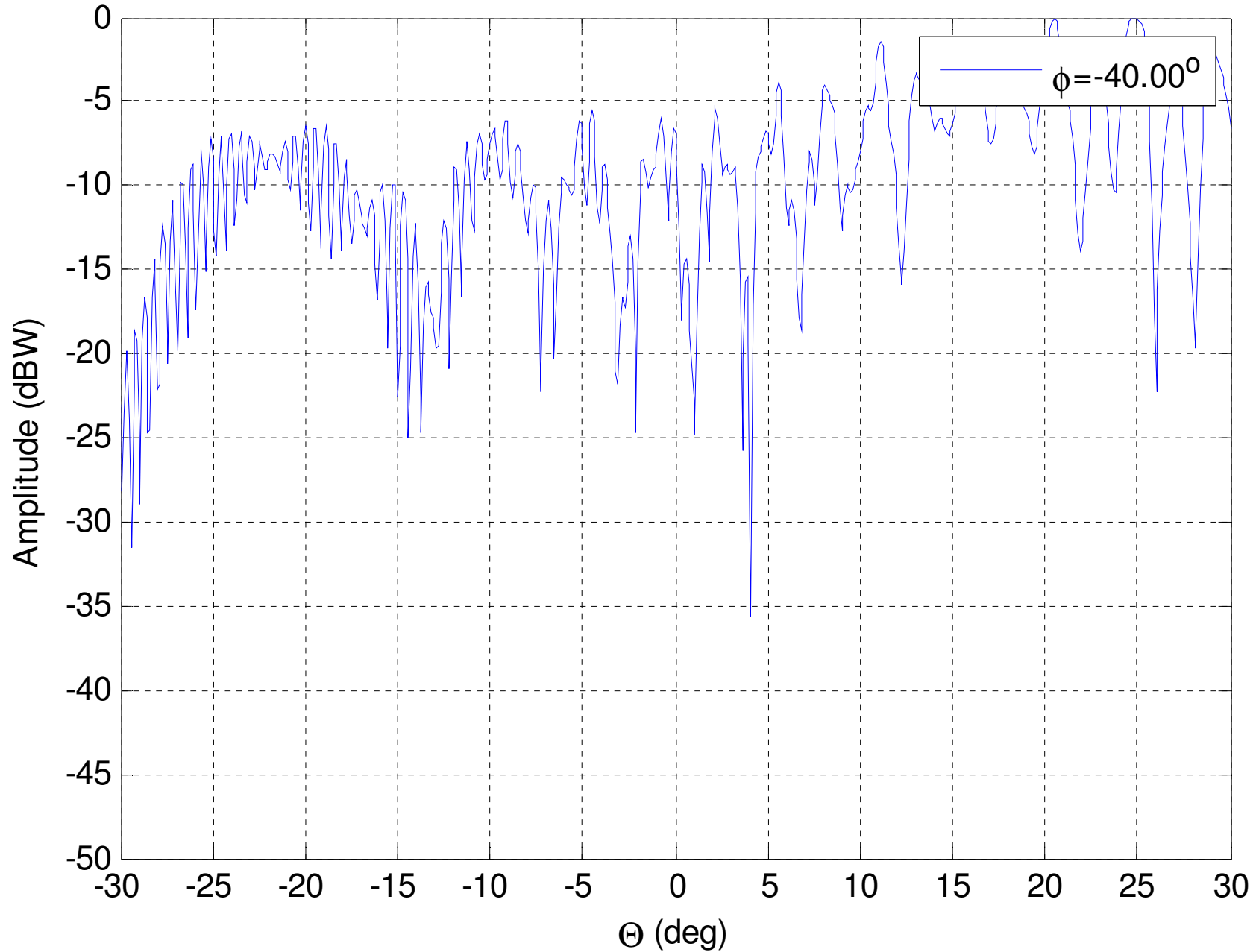
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.48 dBW, Date: 14-Dec-2011



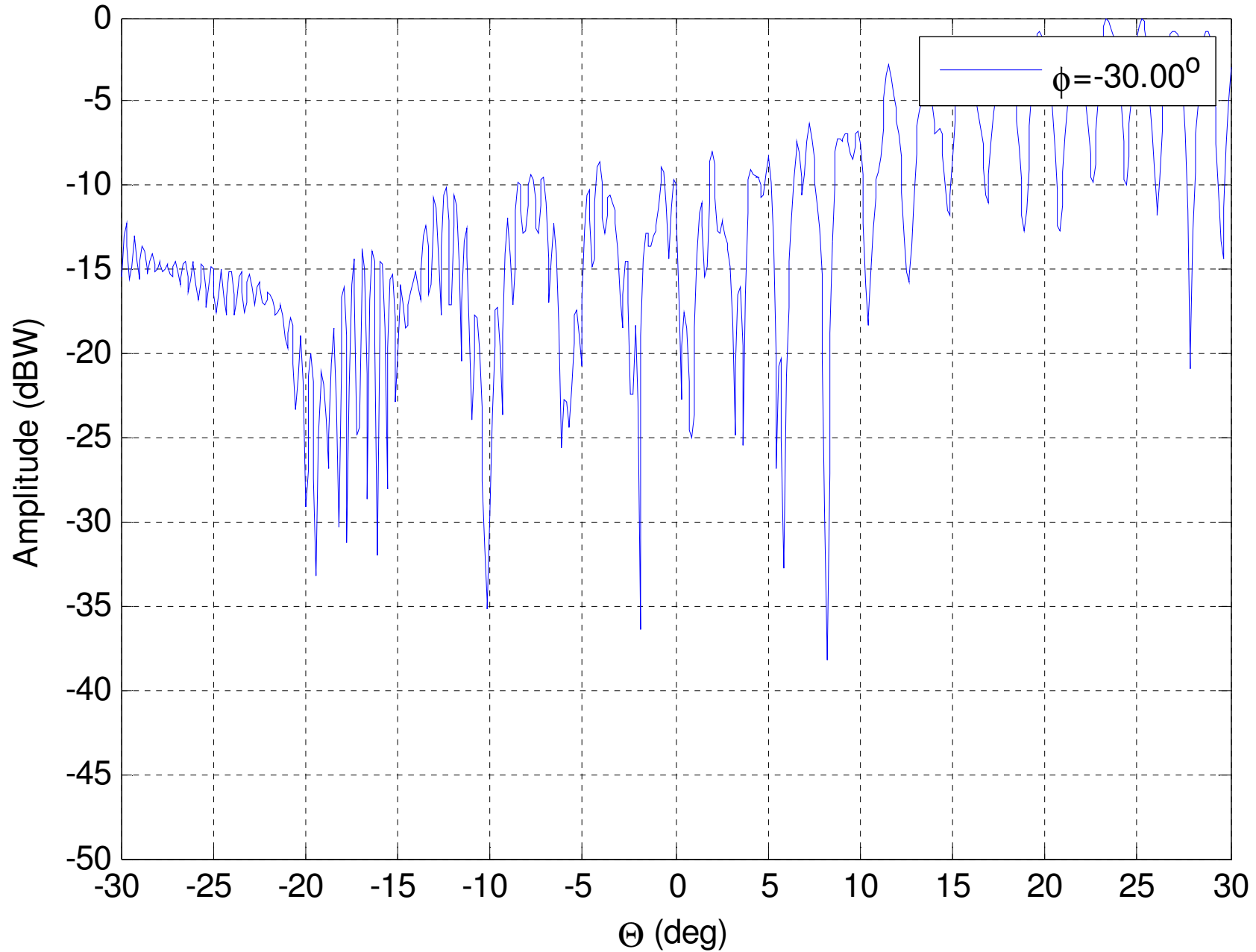
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.95 dBW, Date: 14-Dec-2011



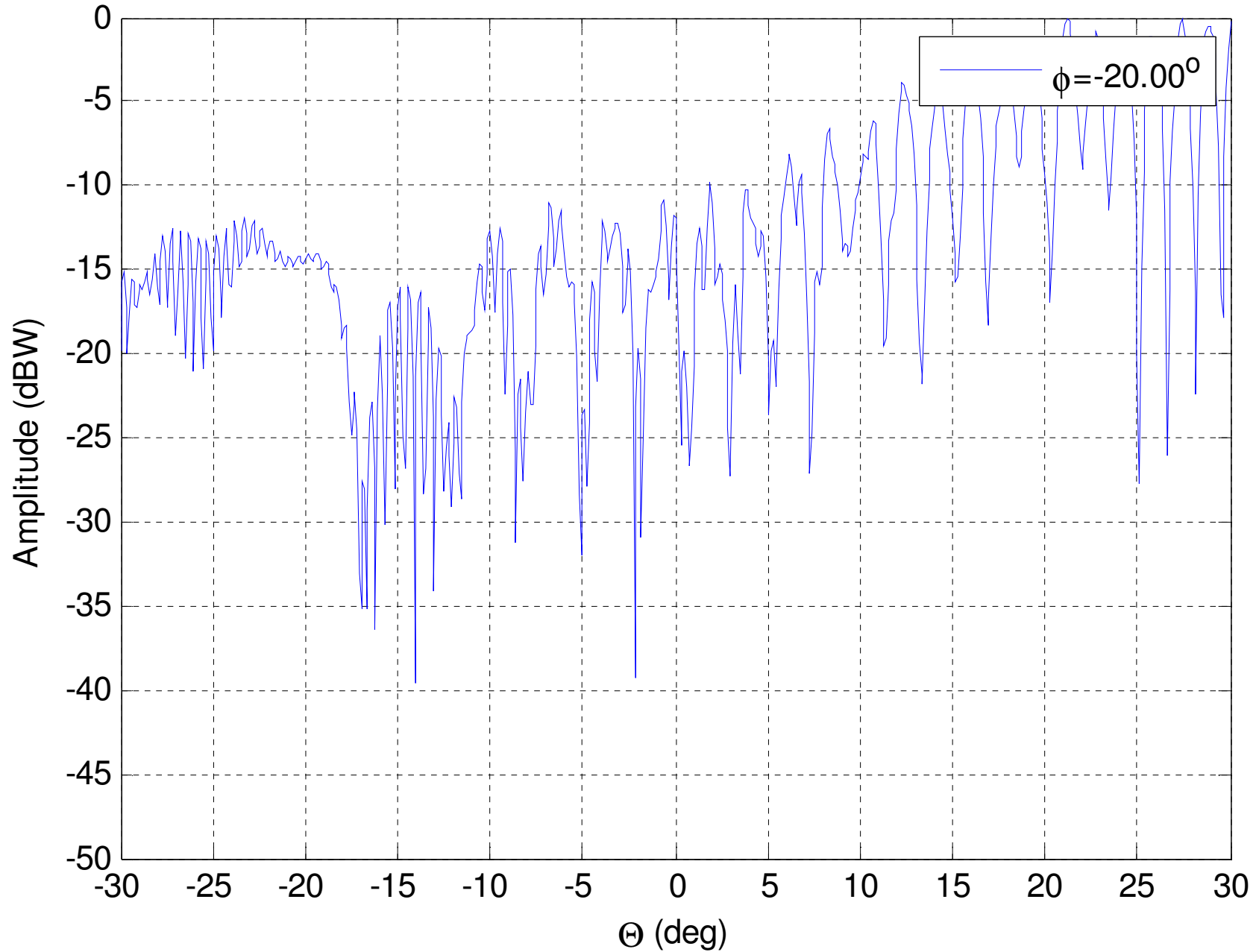
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -1.92 dBW, Date: 14-Dec-2011



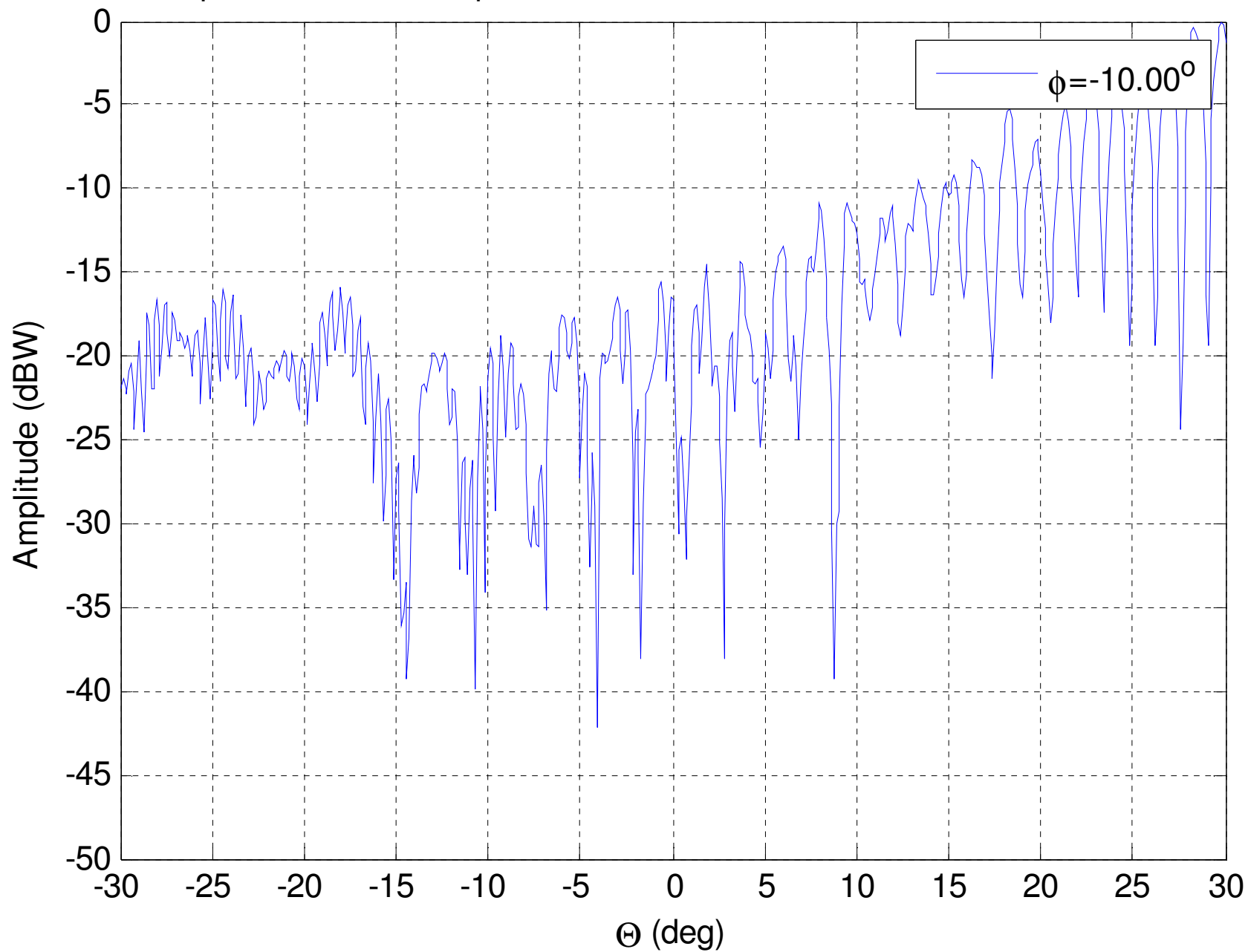
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 0.11 dBW, Date: 14-Dec-2011



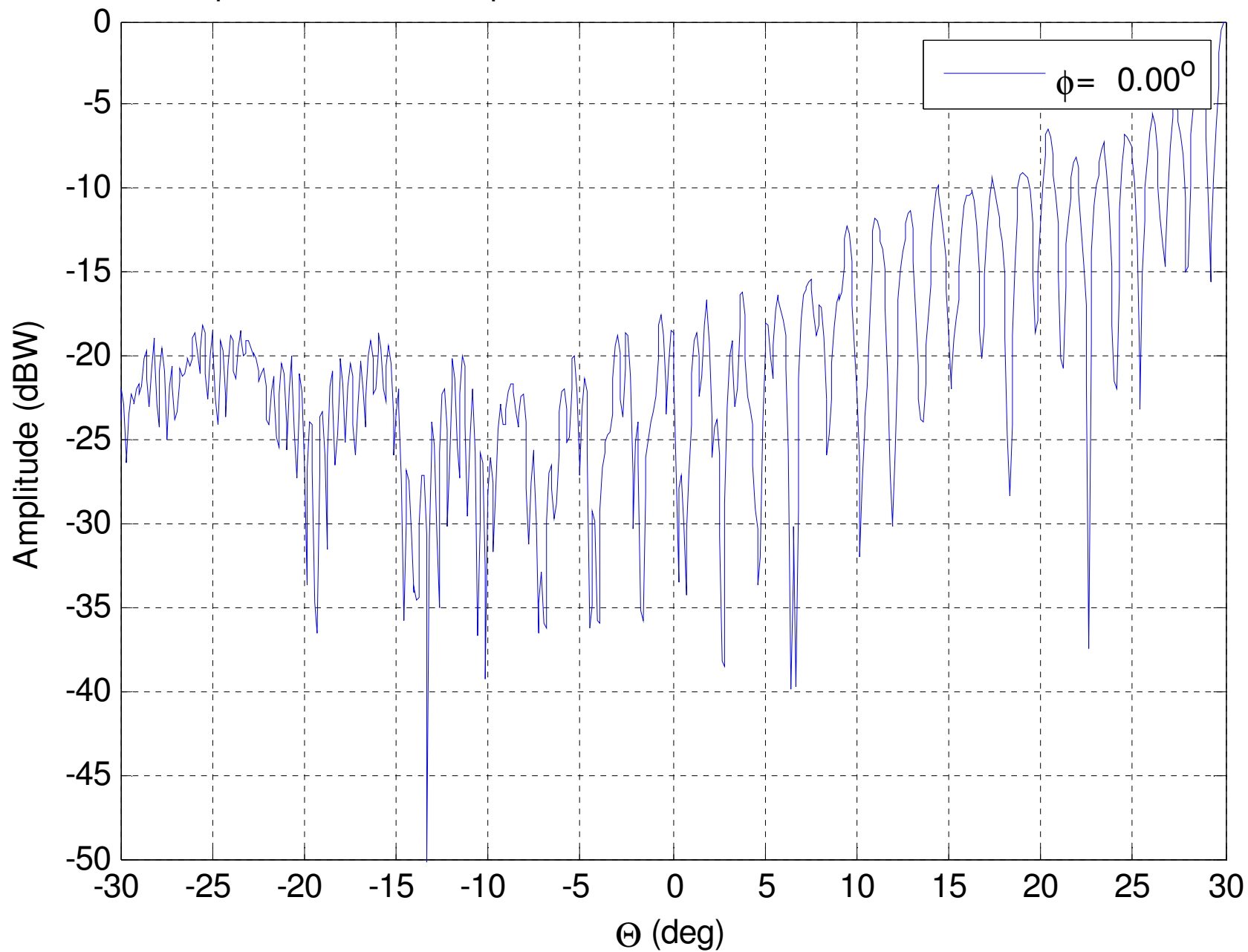
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 4.80 dBW, Date: 14-Dec-2011



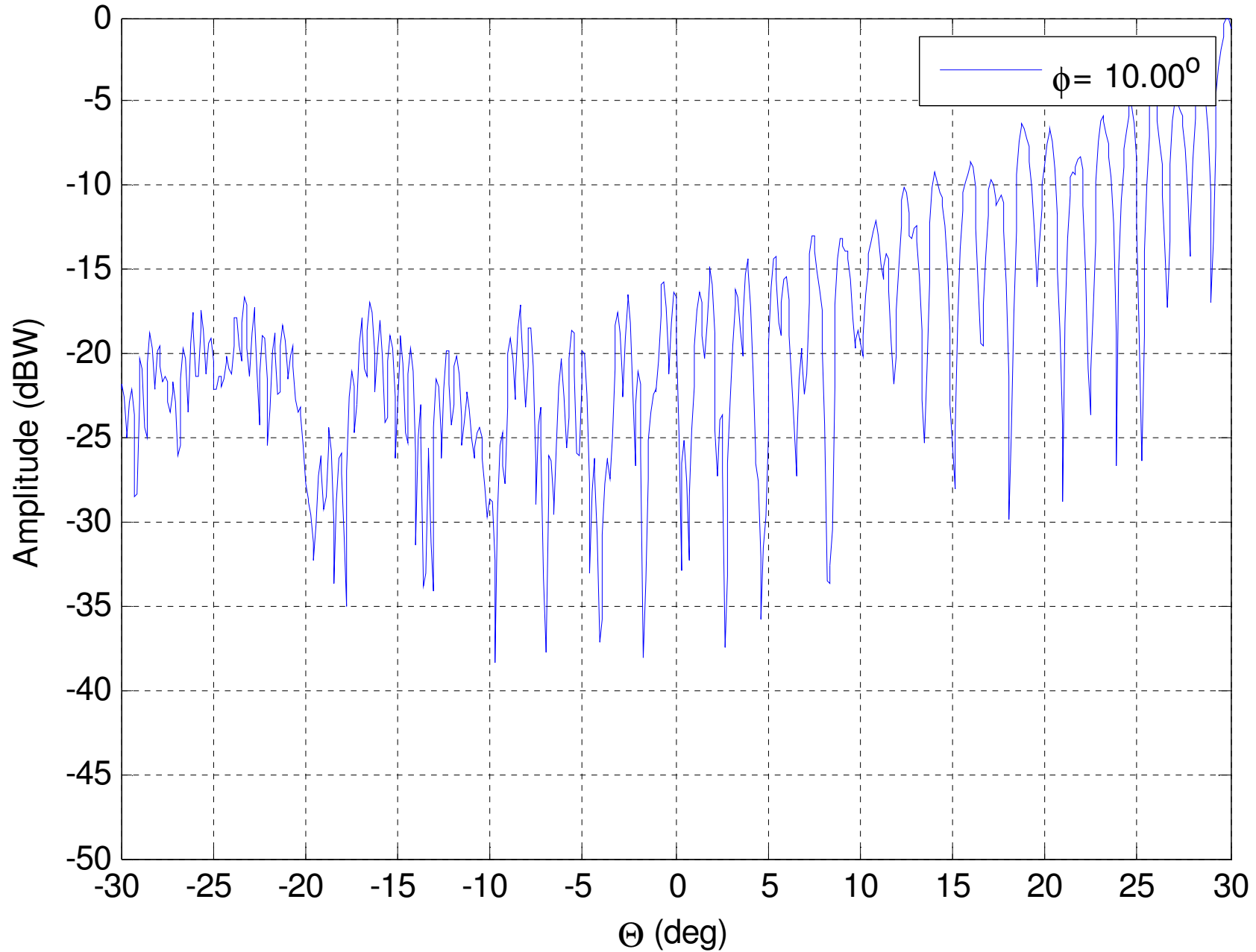
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 6.82 dBW, Date: 14-Dec-2011



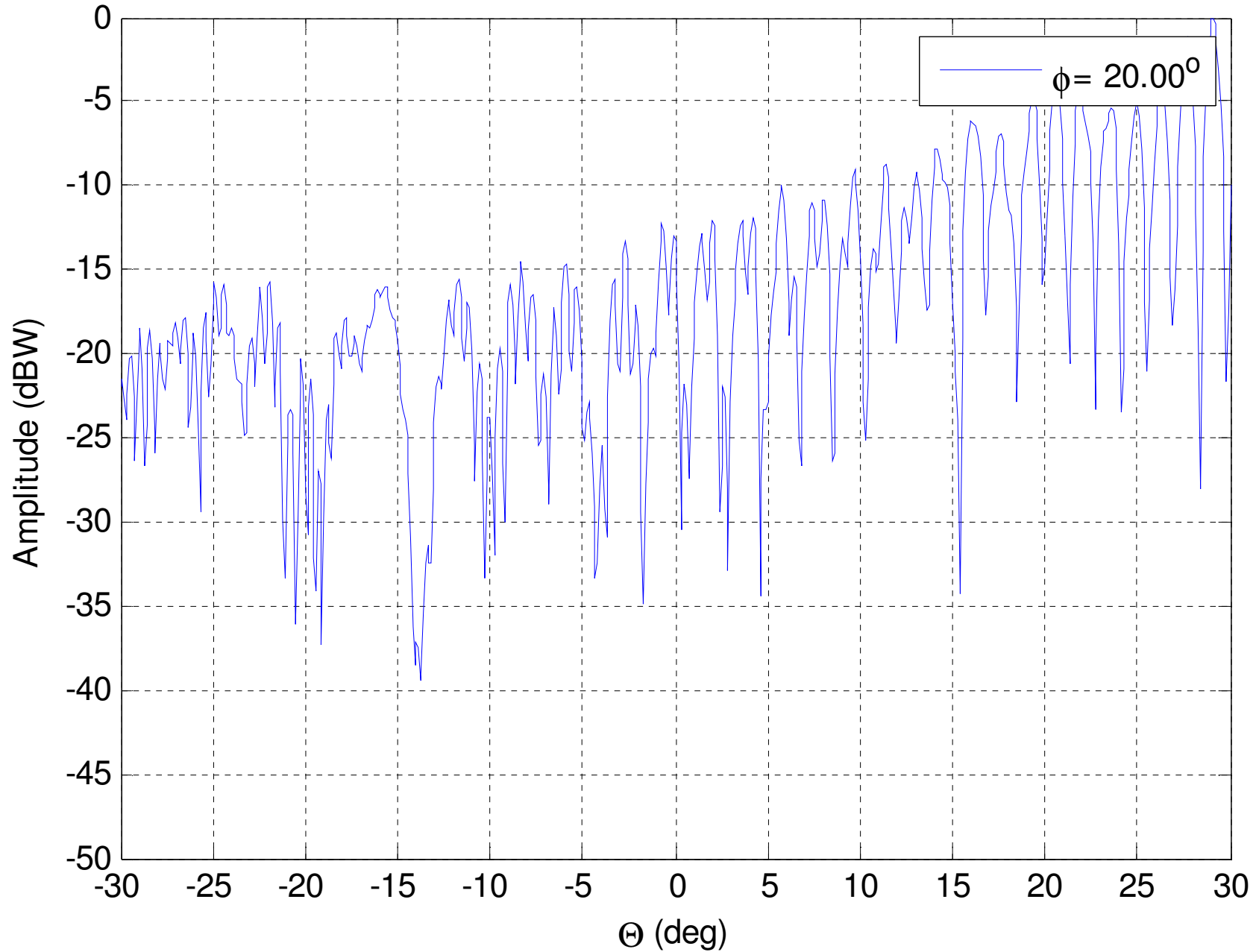
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 4.82 dBW, Date: 14-Dec-2011



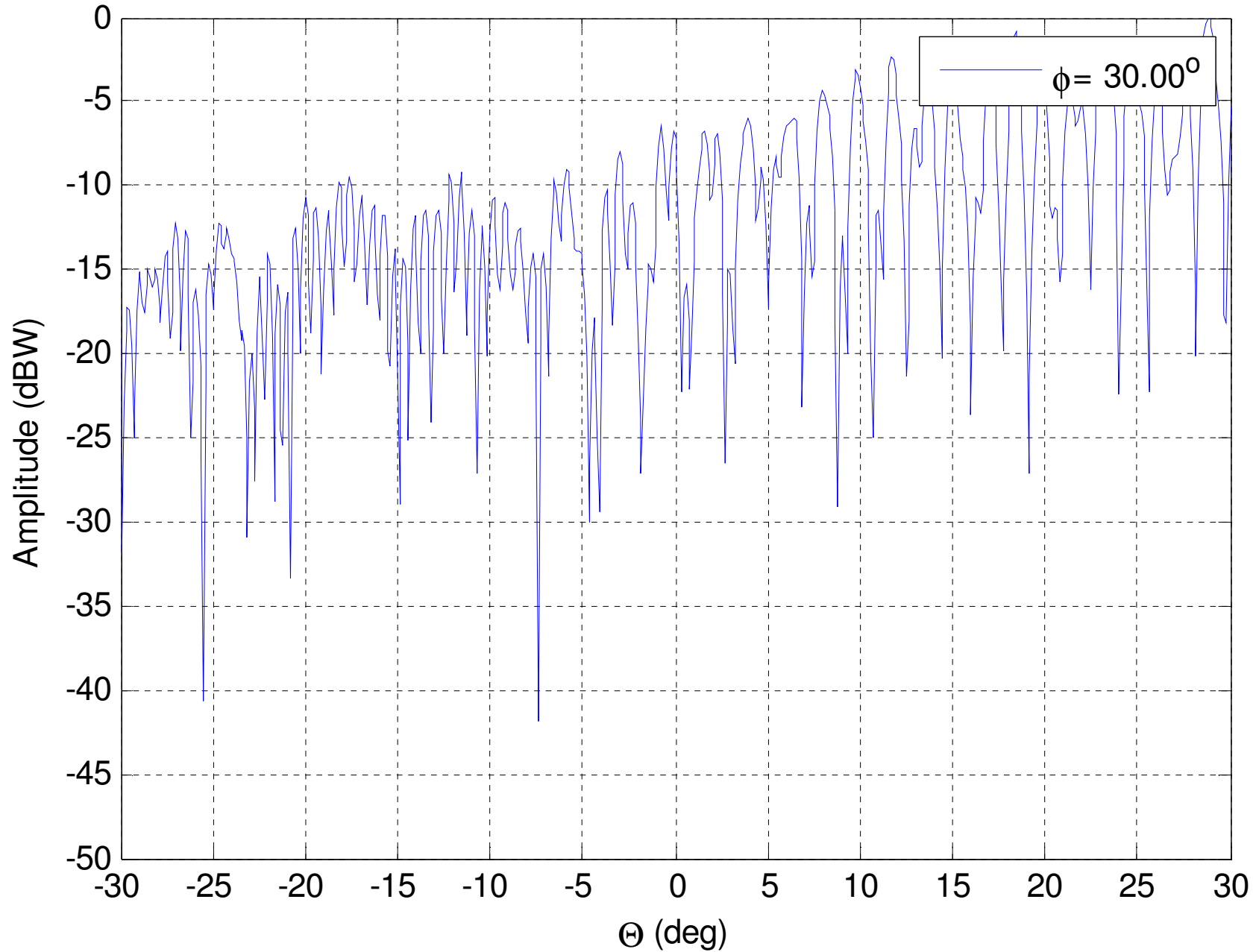
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 1.45 dBW, Date: 14-Dec-2011



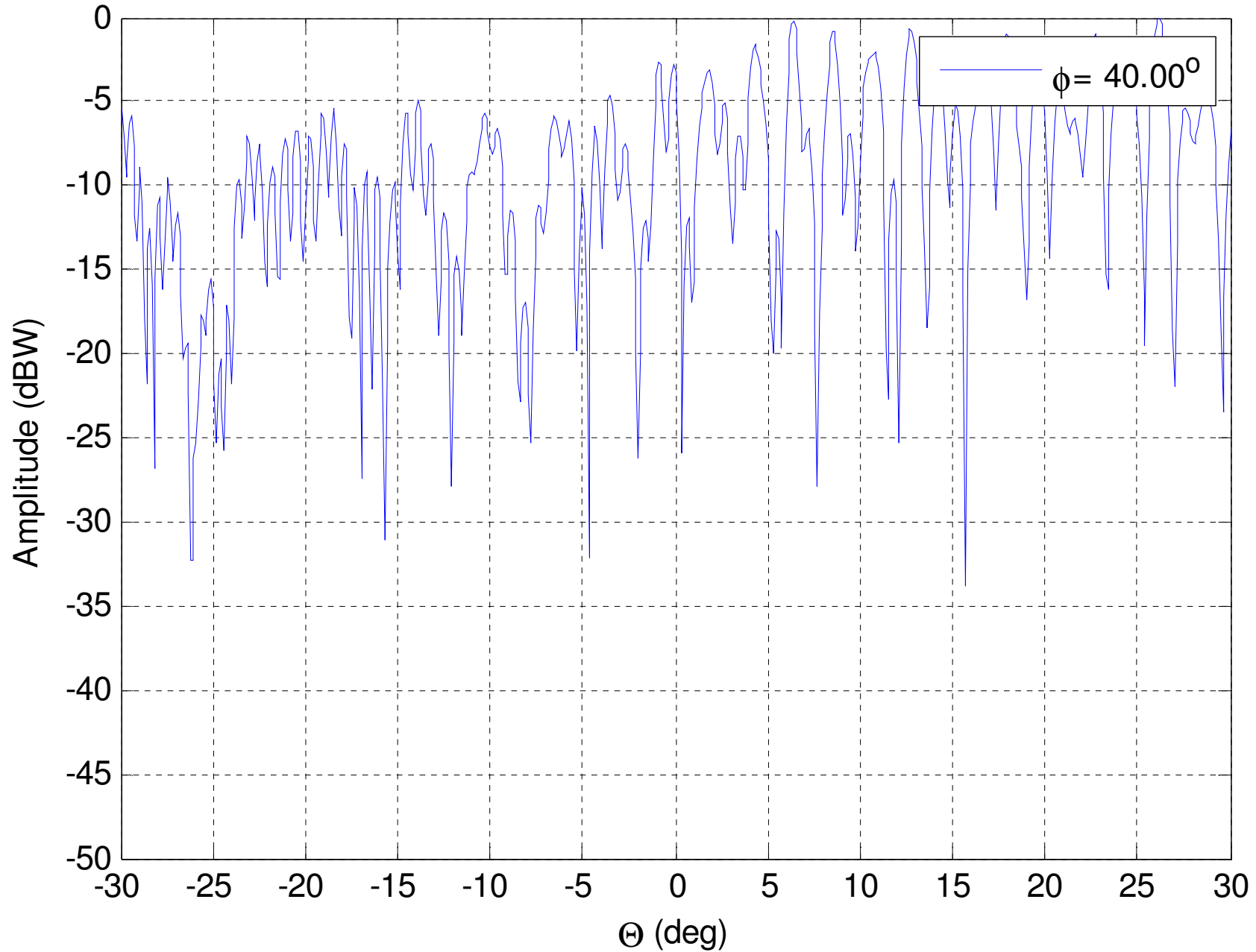
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -4.66 dBW, Date: 14-Dec-2011



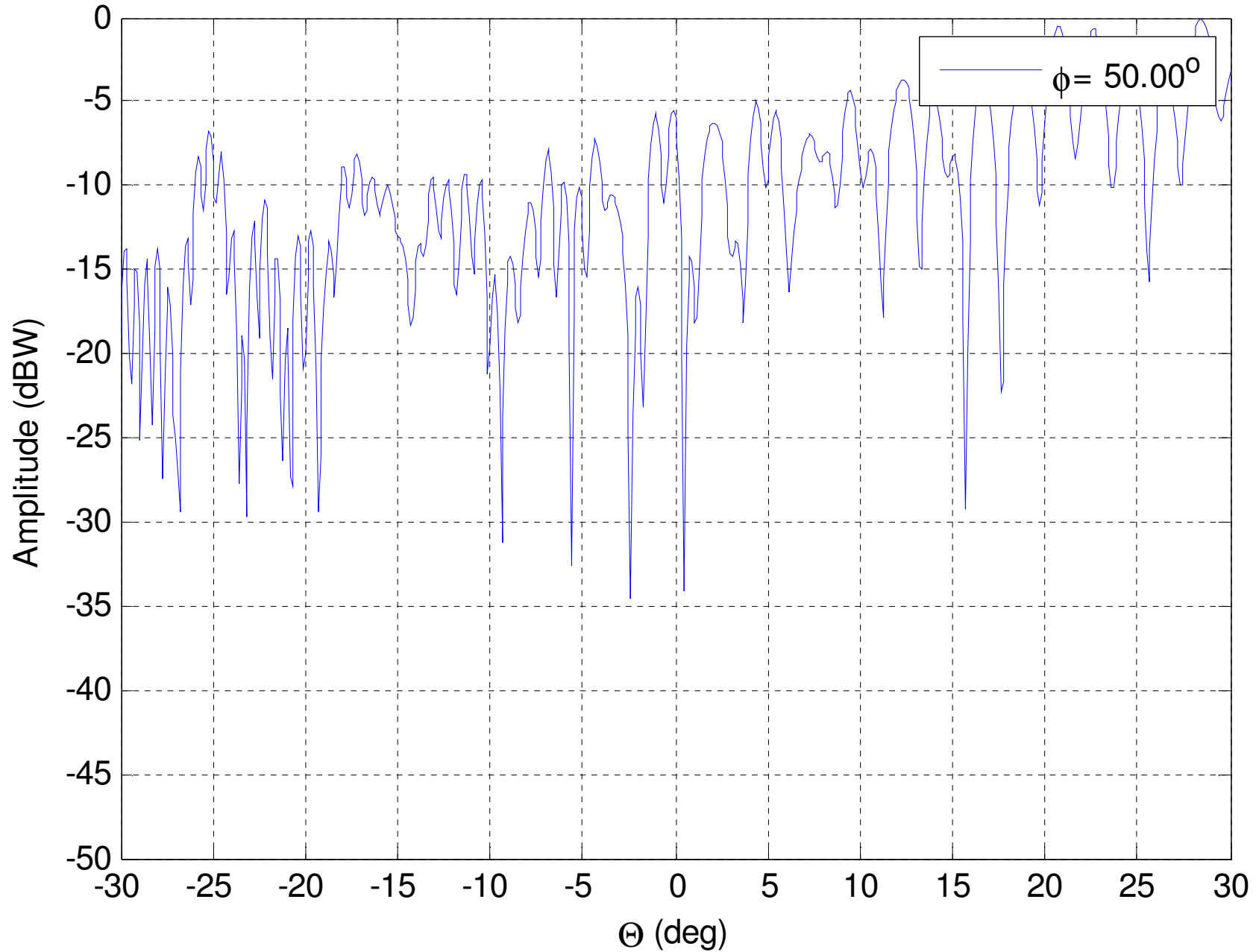
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -8.57 dBW, Date: 14-Dec-2011



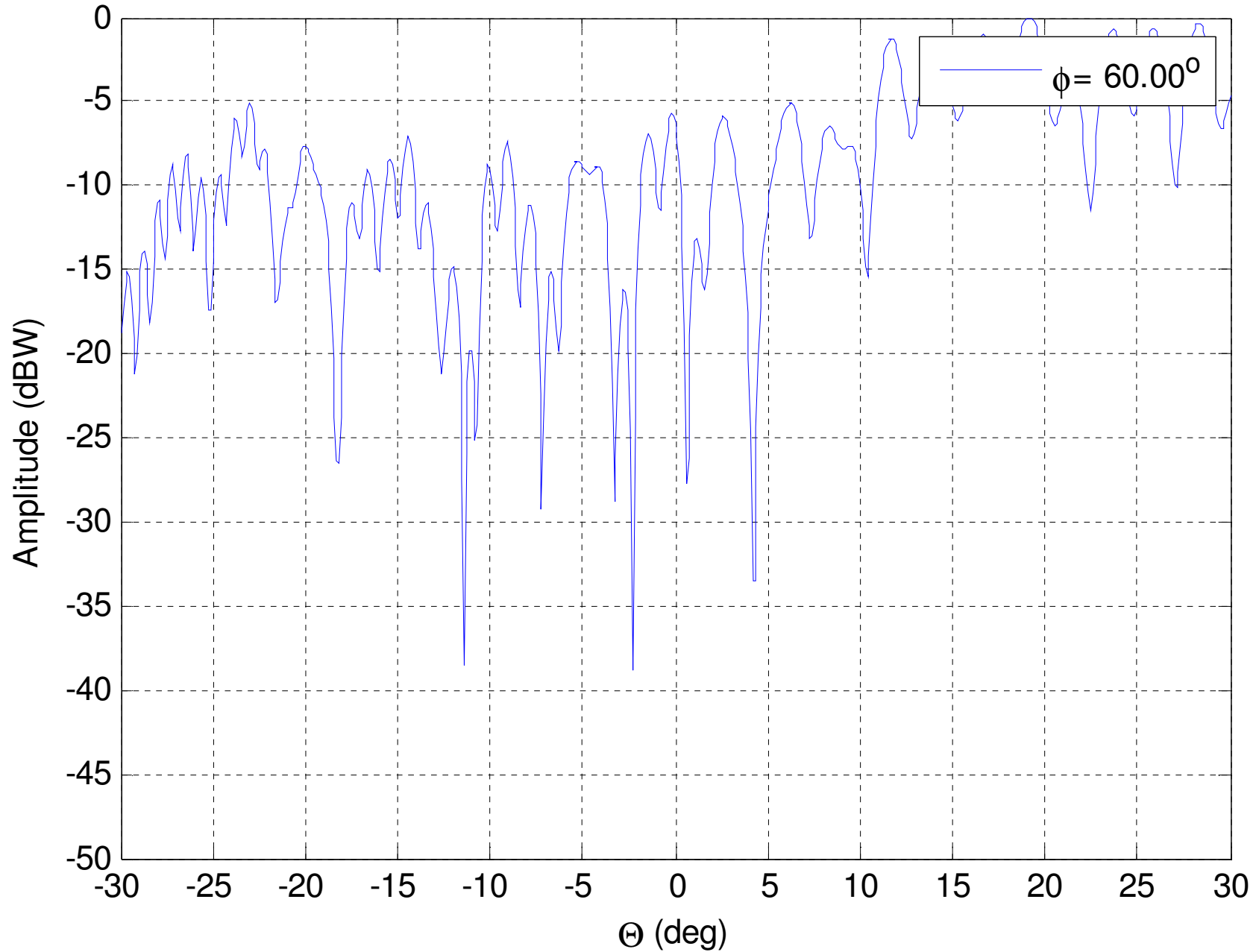
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -5.82 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

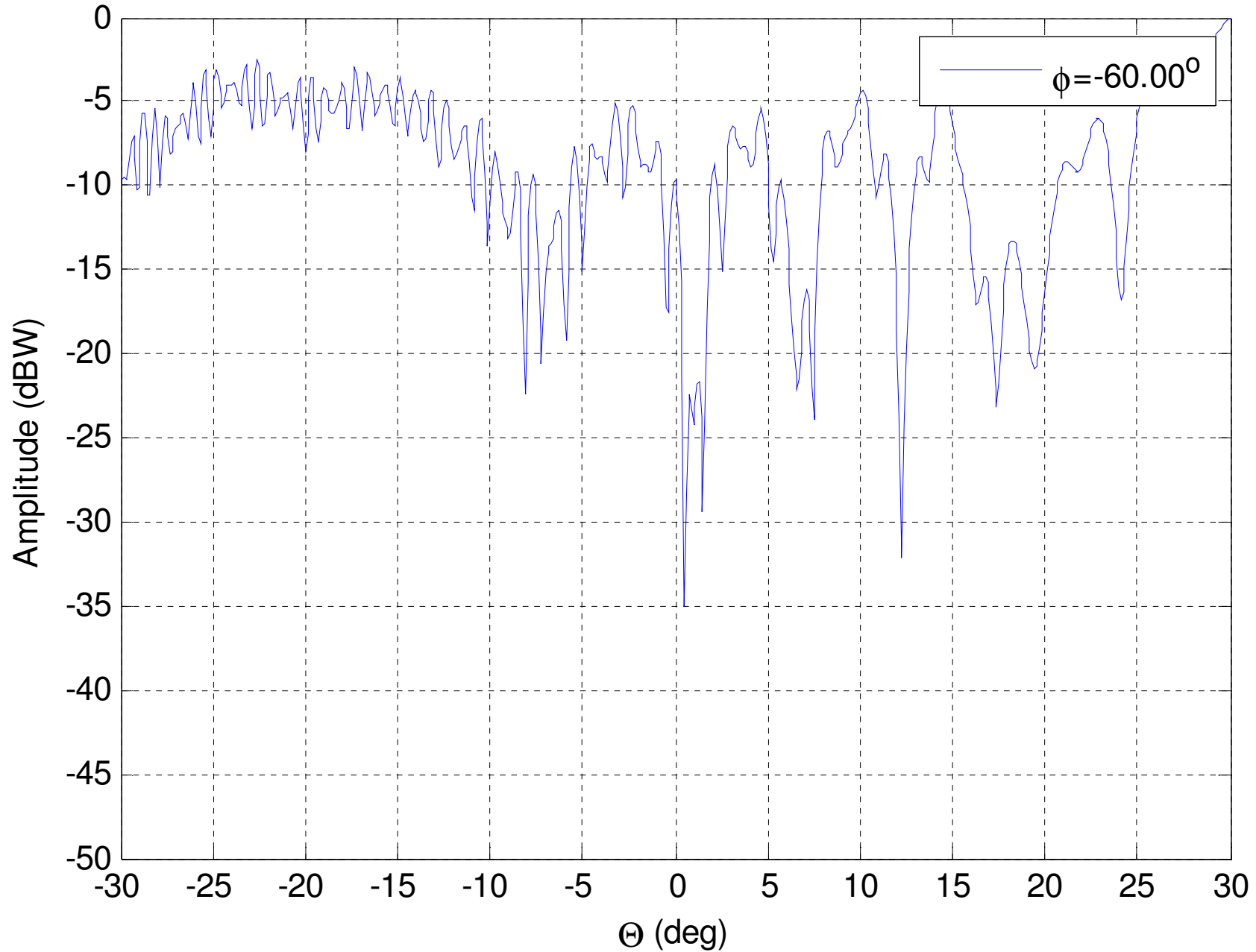
Input file: tx-17.3-rhcp-60.cut, Peak: -5.48 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

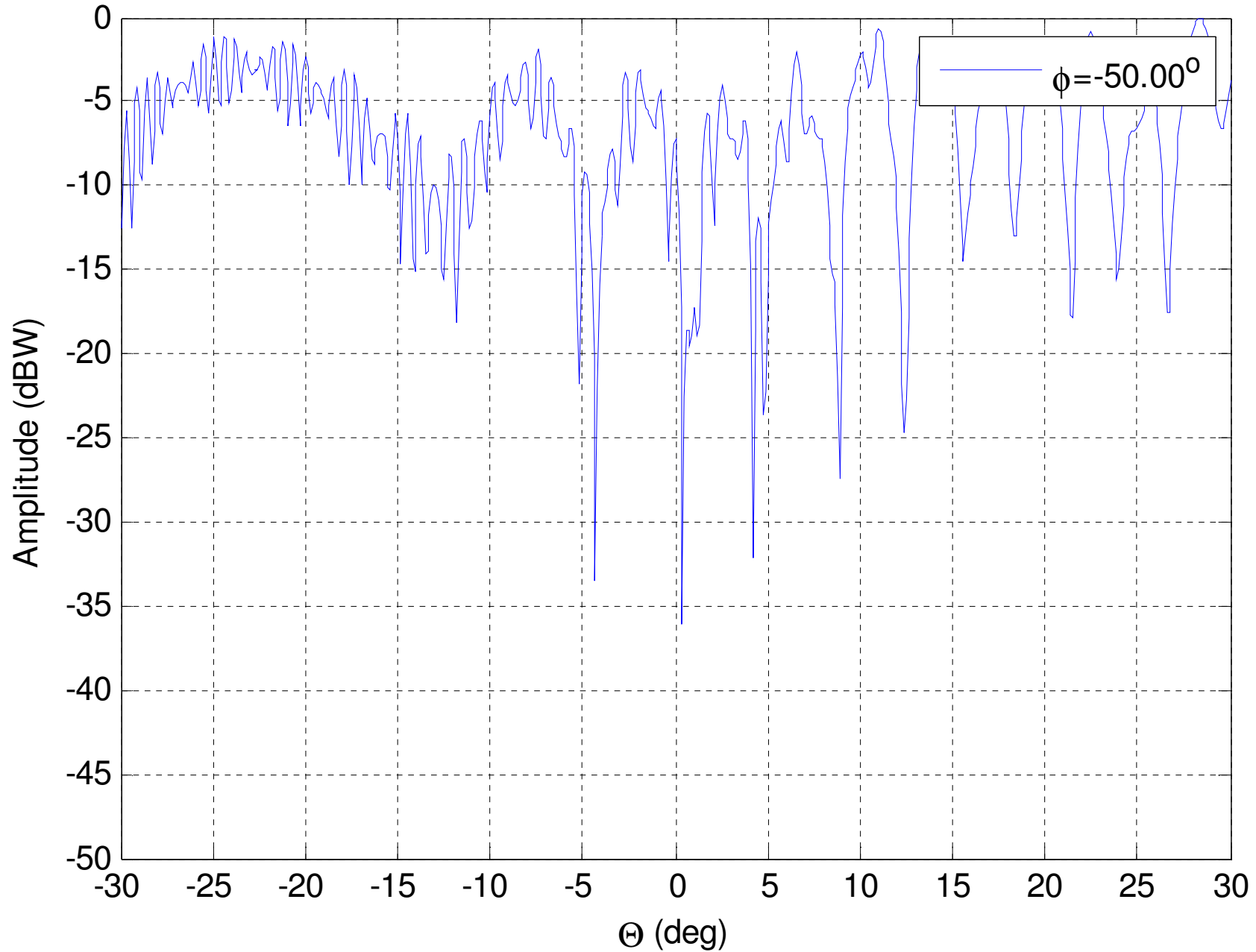
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -4.80 dBW, Date: 14-Dec-2011



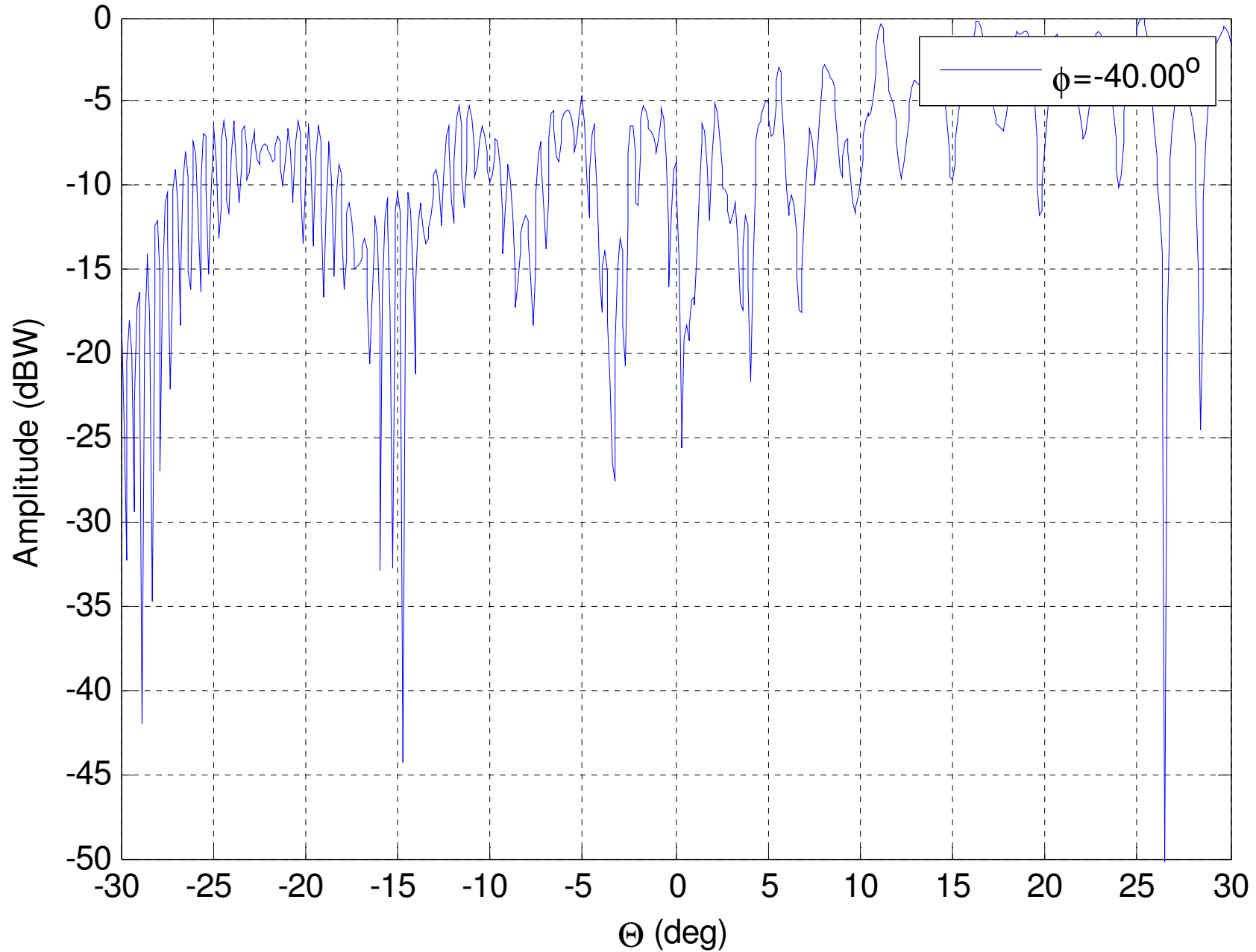
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



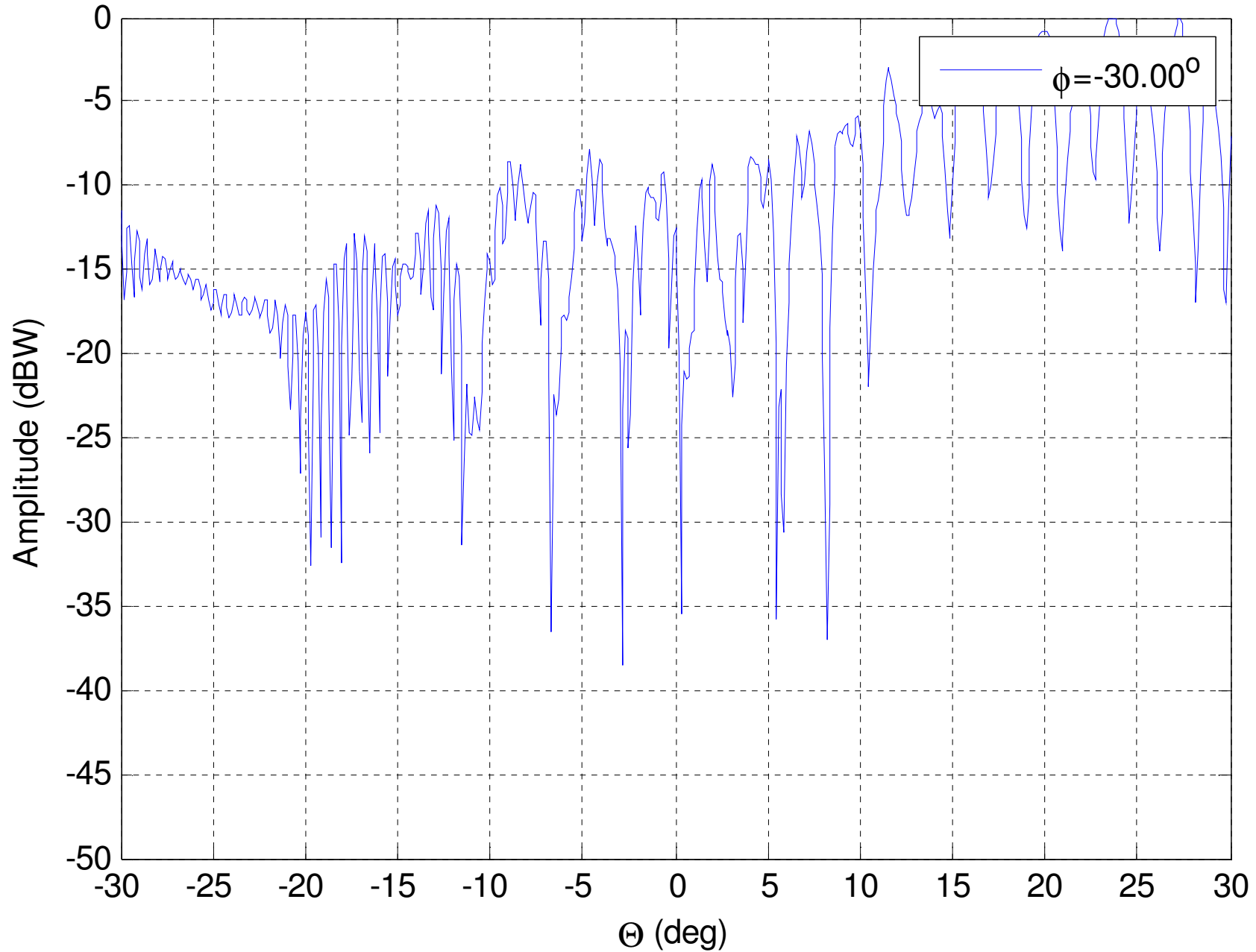
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -5.88 dBW, Date: 14-Dec-2011



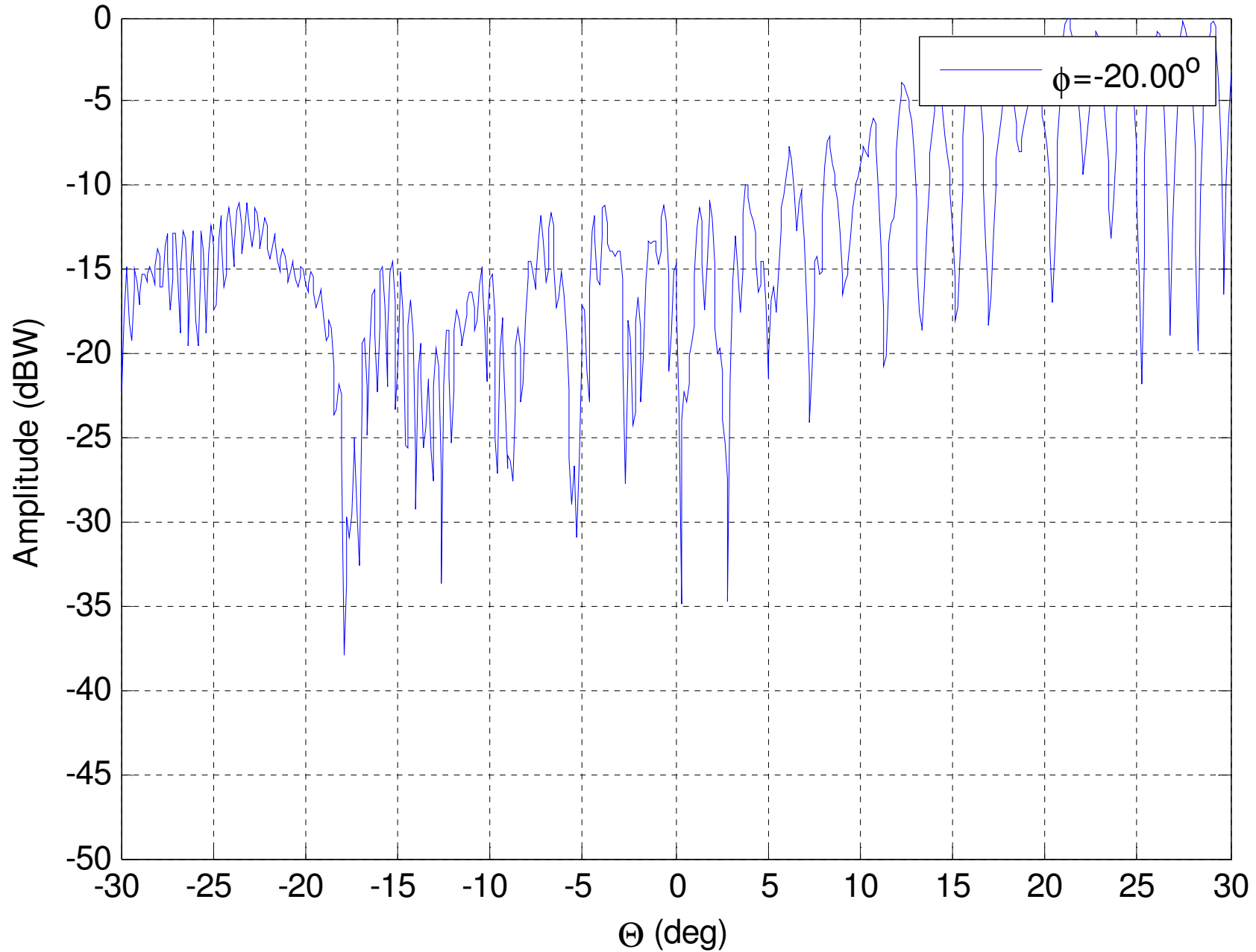
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -2.02 dBW, Date: 14-Dec-2011



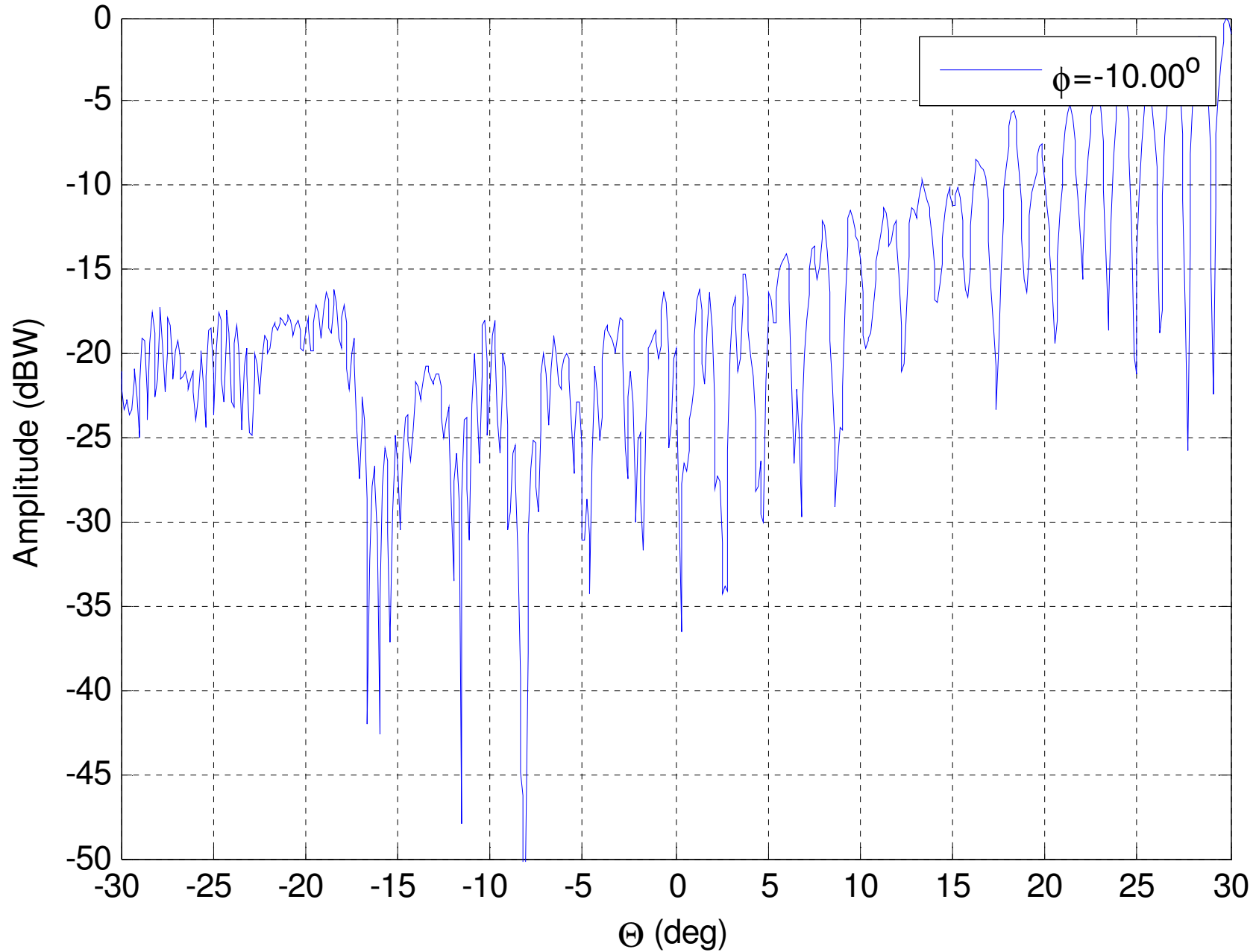
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 0.13 dBW, Date: 14-Dec-2011



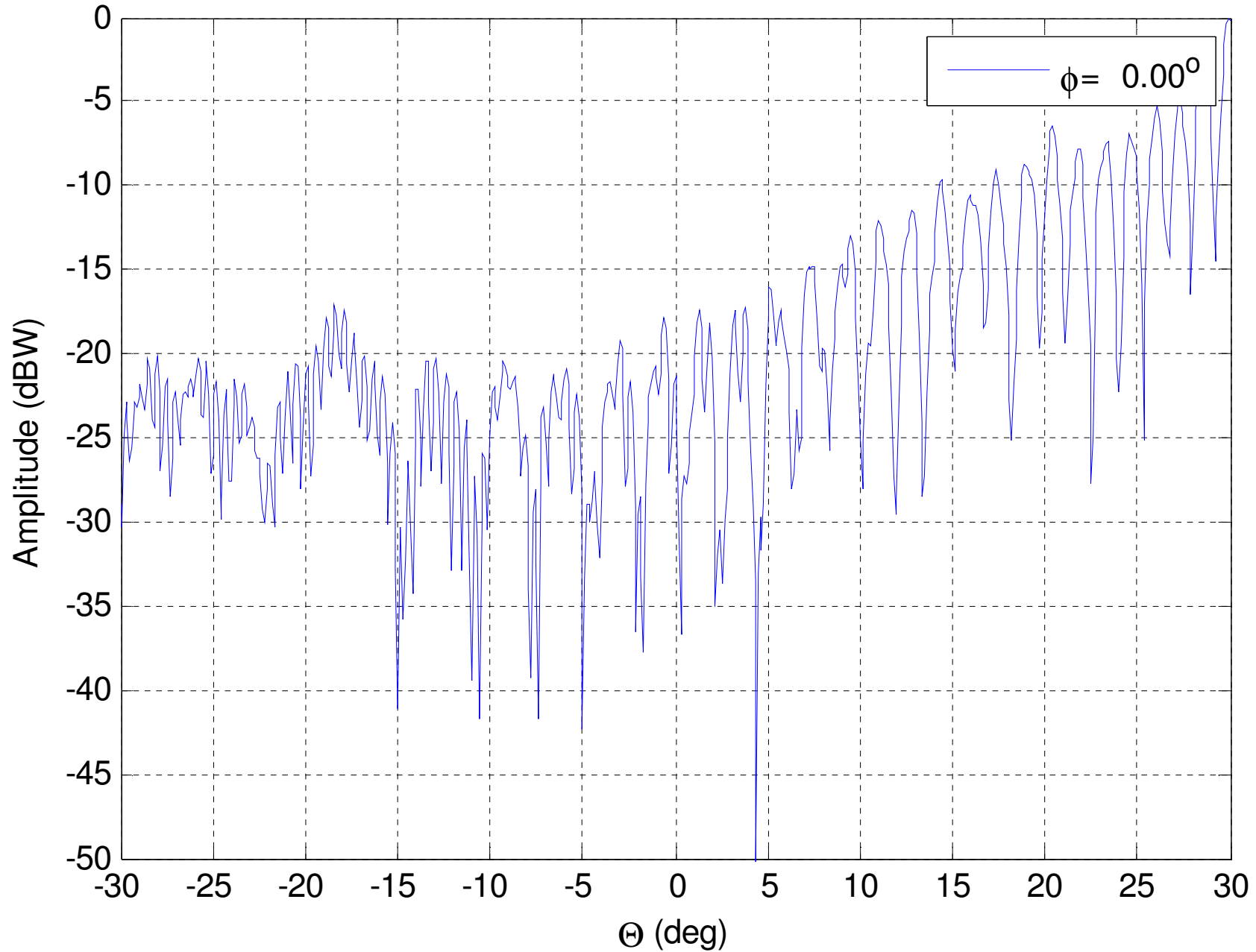
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 5.24 dBW, Date: 14-Dec-2011



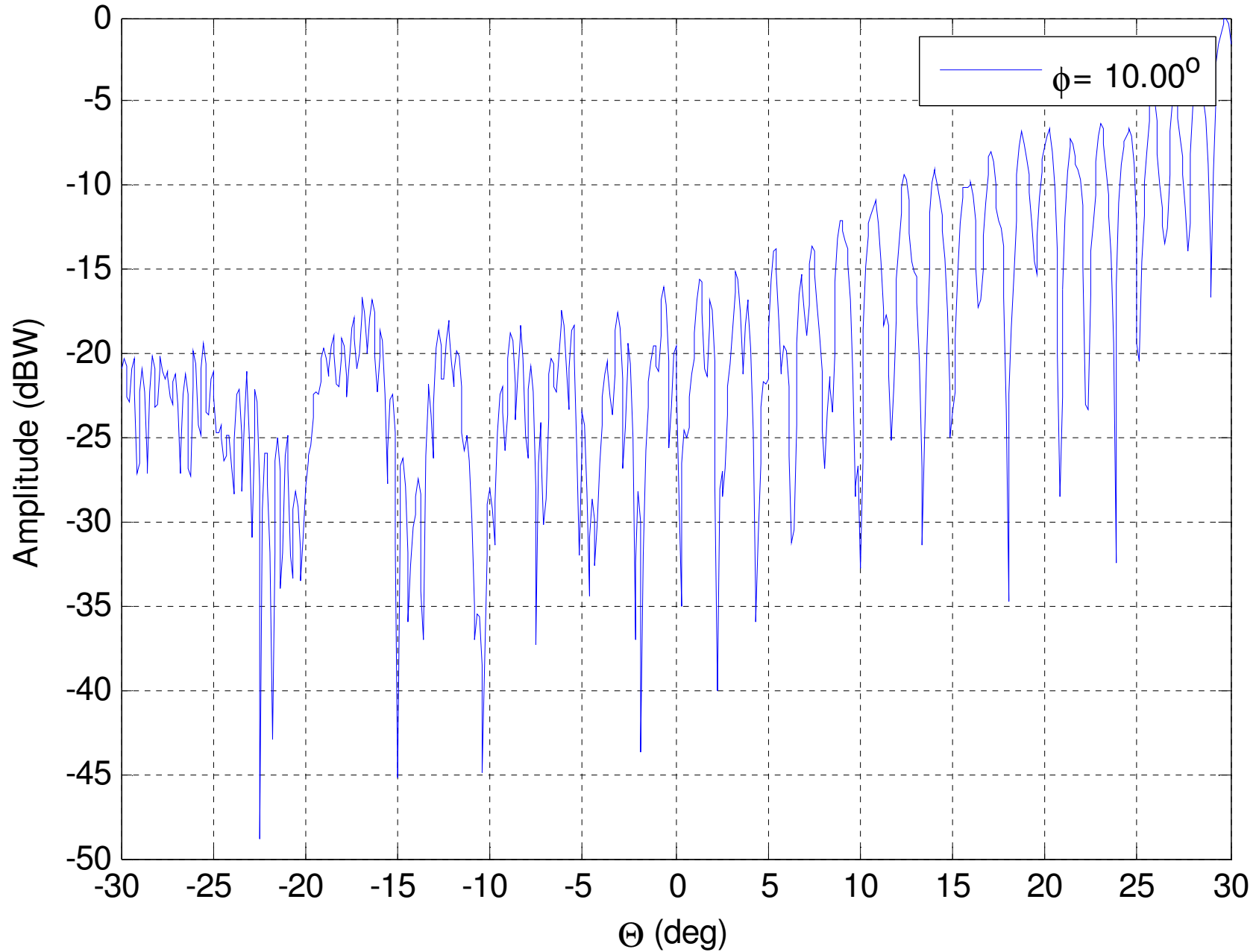
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 6.82 dBW, Date: 14-Dec-2011



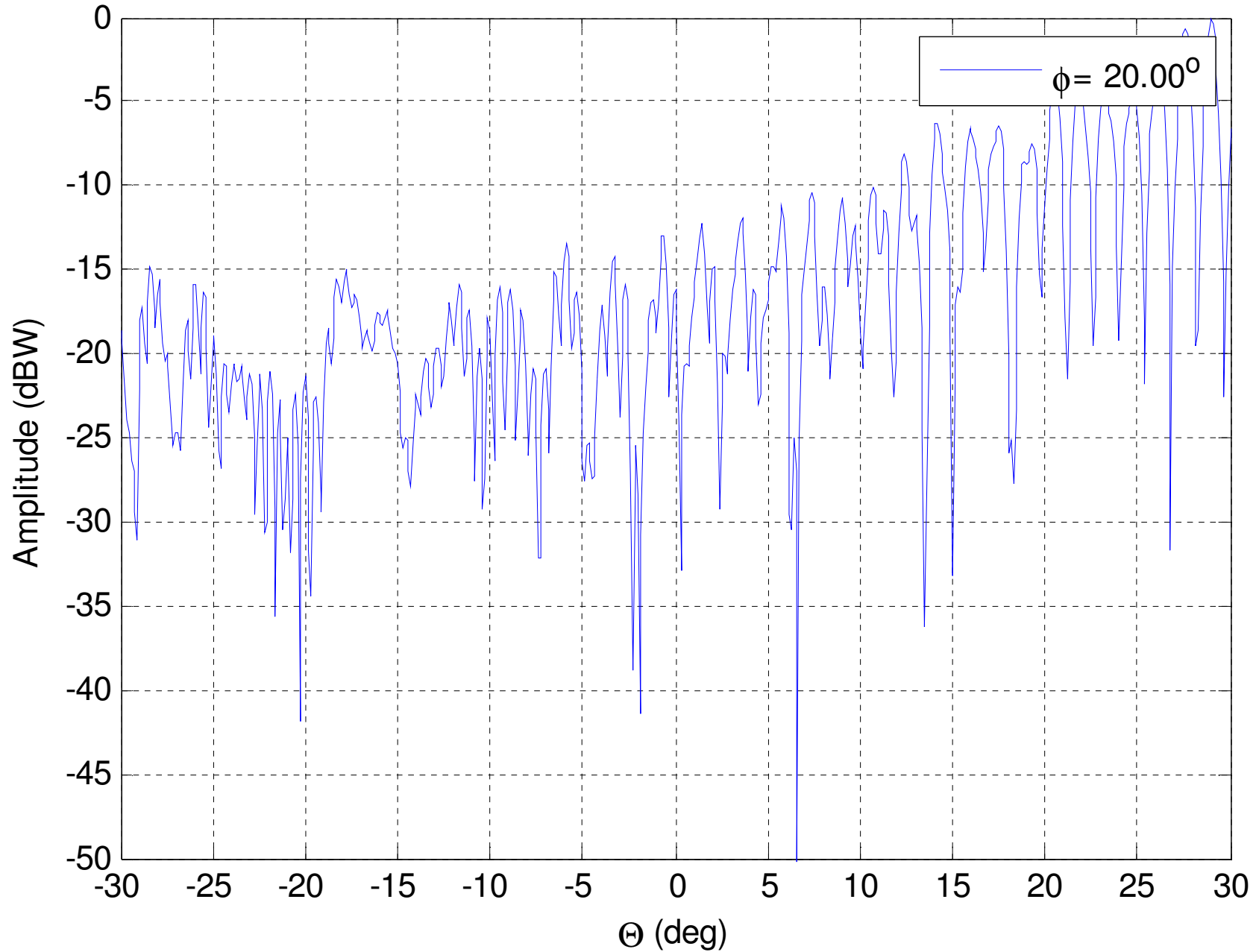
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 4.99 dBW, Date: 14-Dec-2011



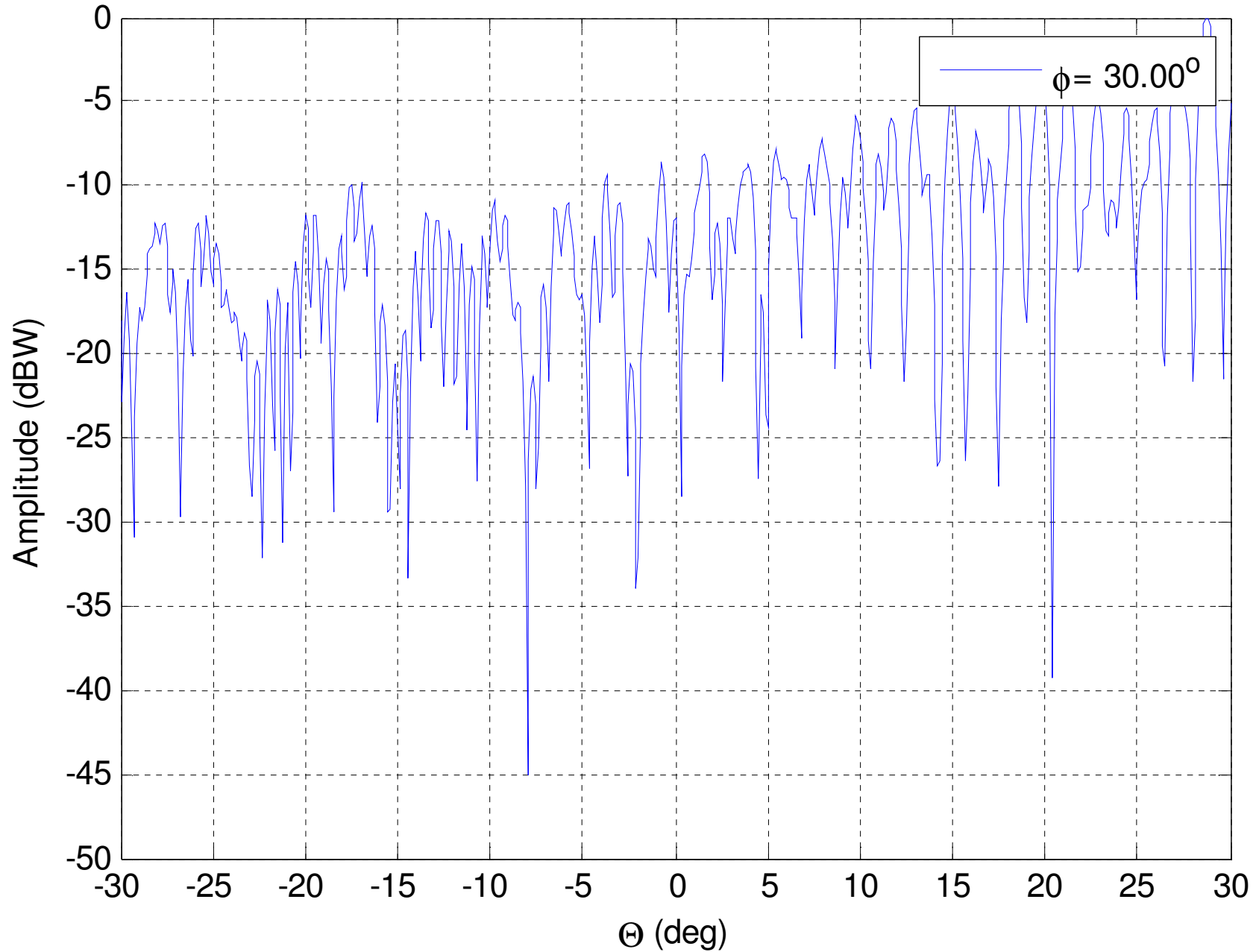
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 1.71 dBW, Date: 14-Dec-2011



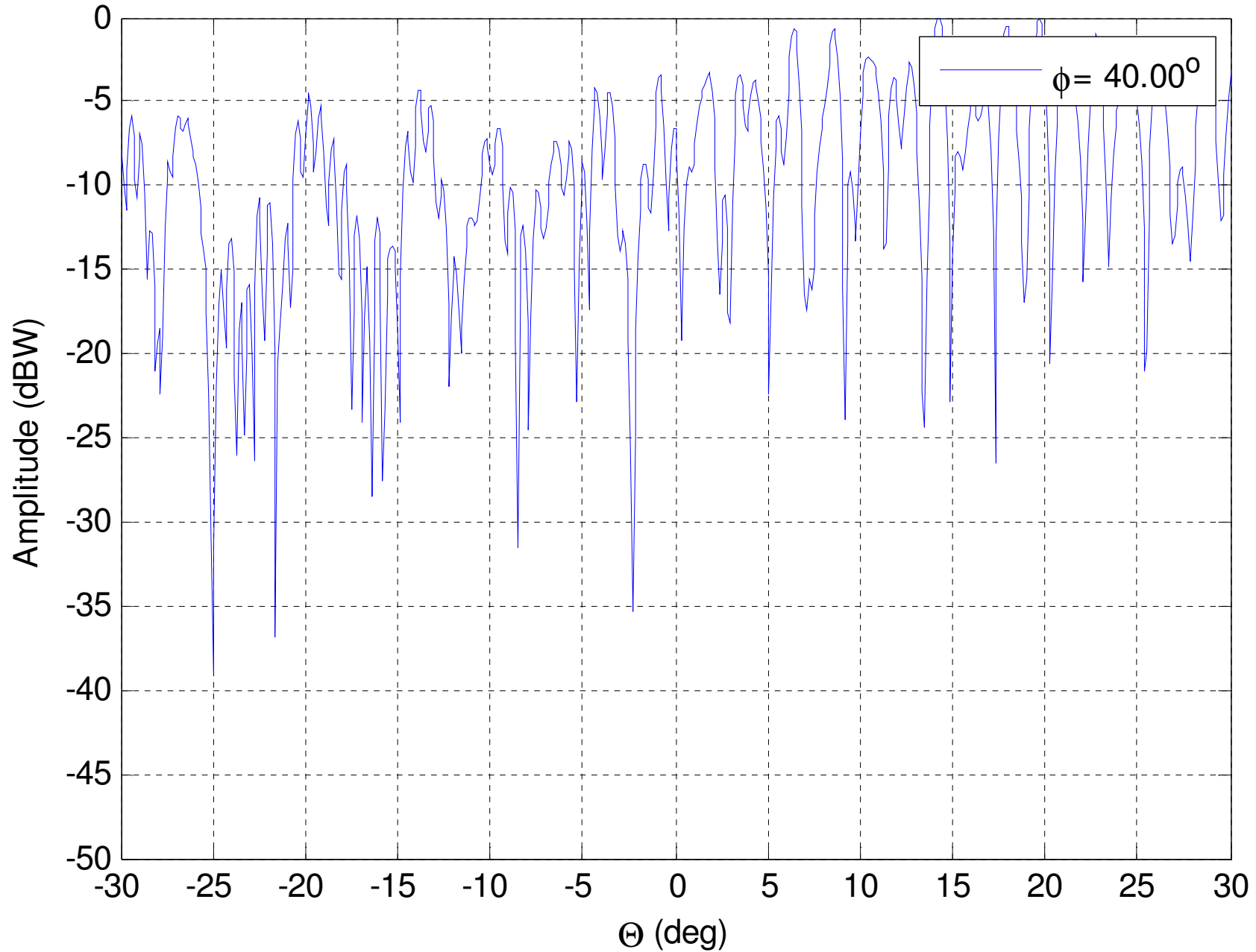
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -2.58 dBW, Date: 14-Dec-2011



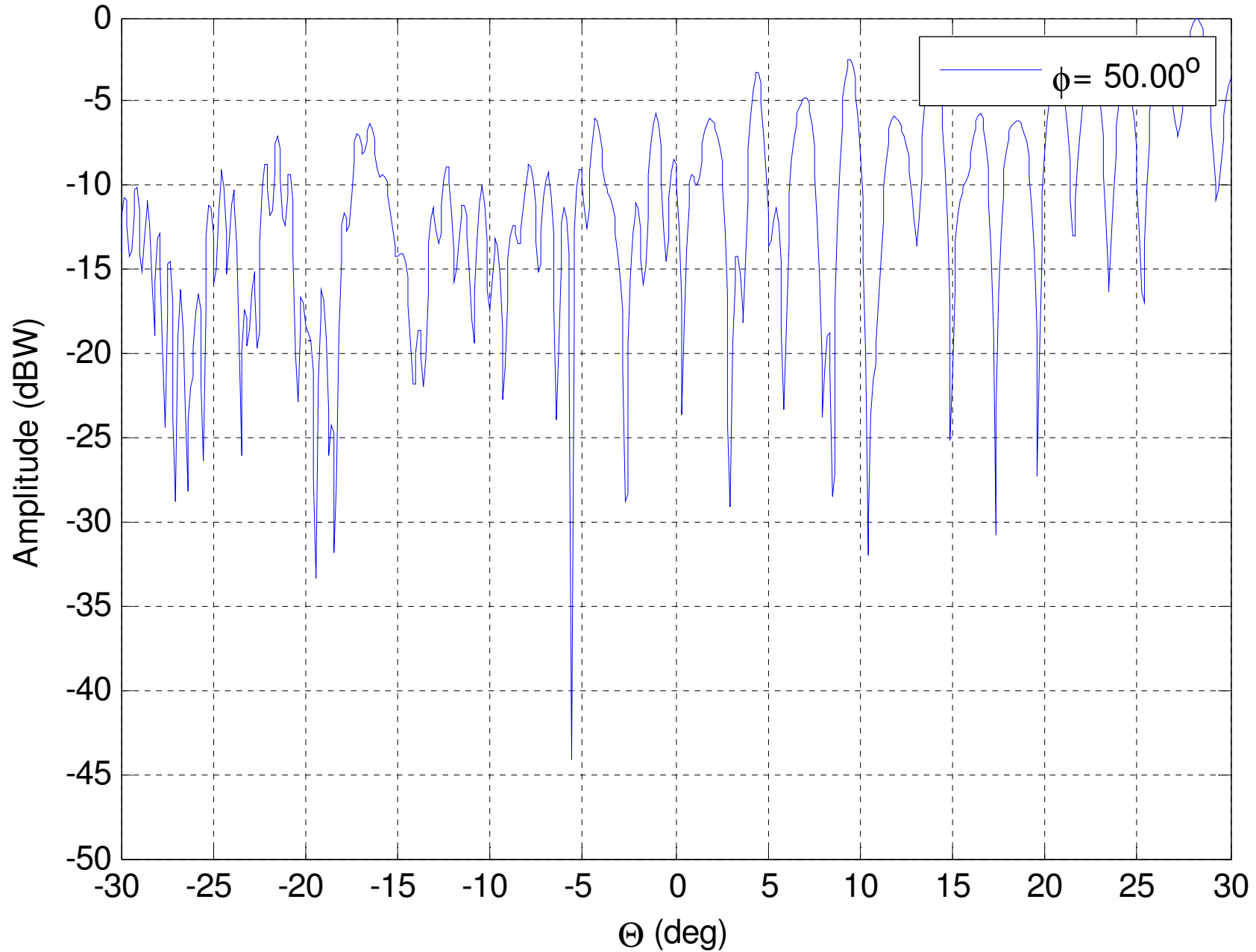
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -7.86 dBW, Date: 14-Dec-2011



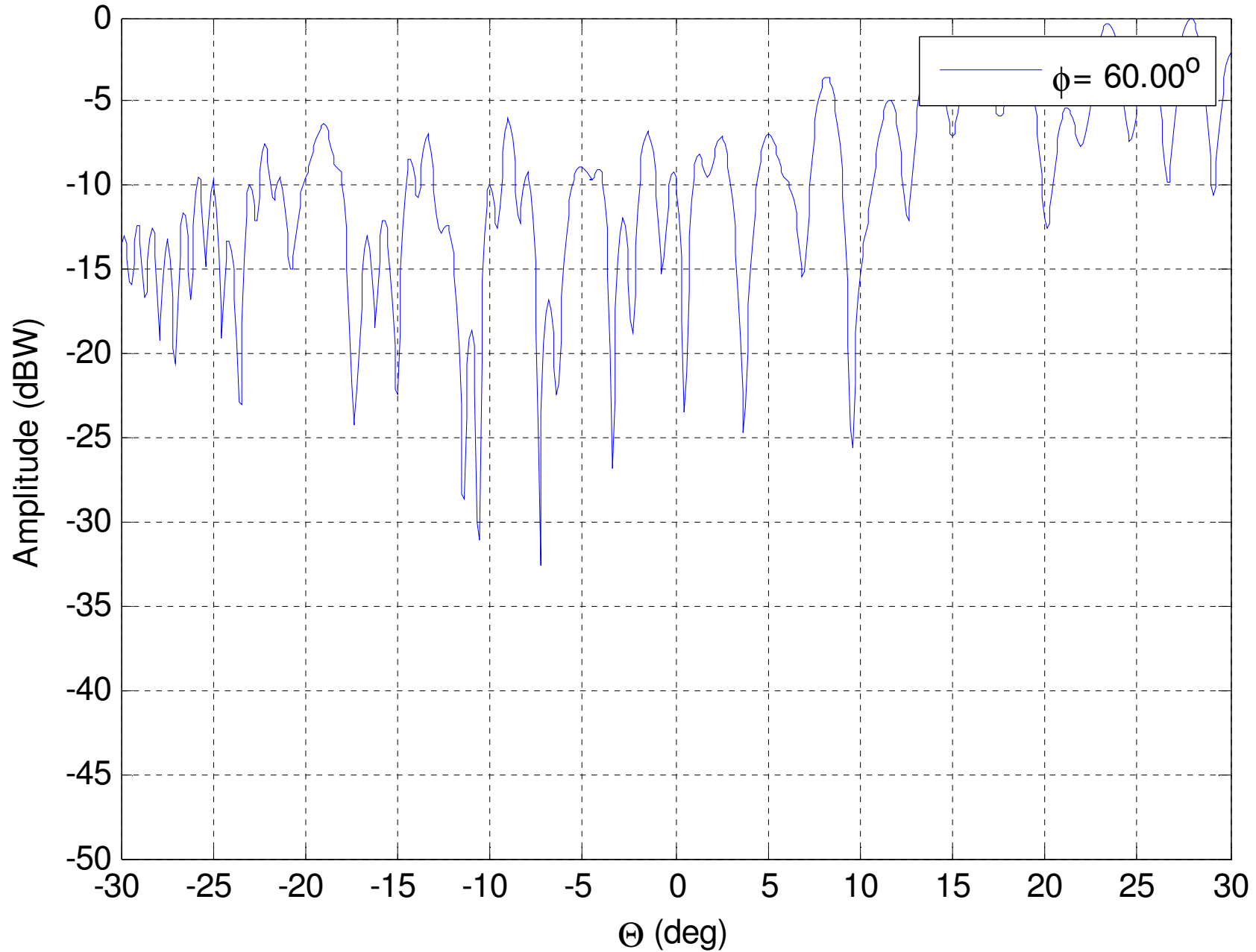
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -5.82 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

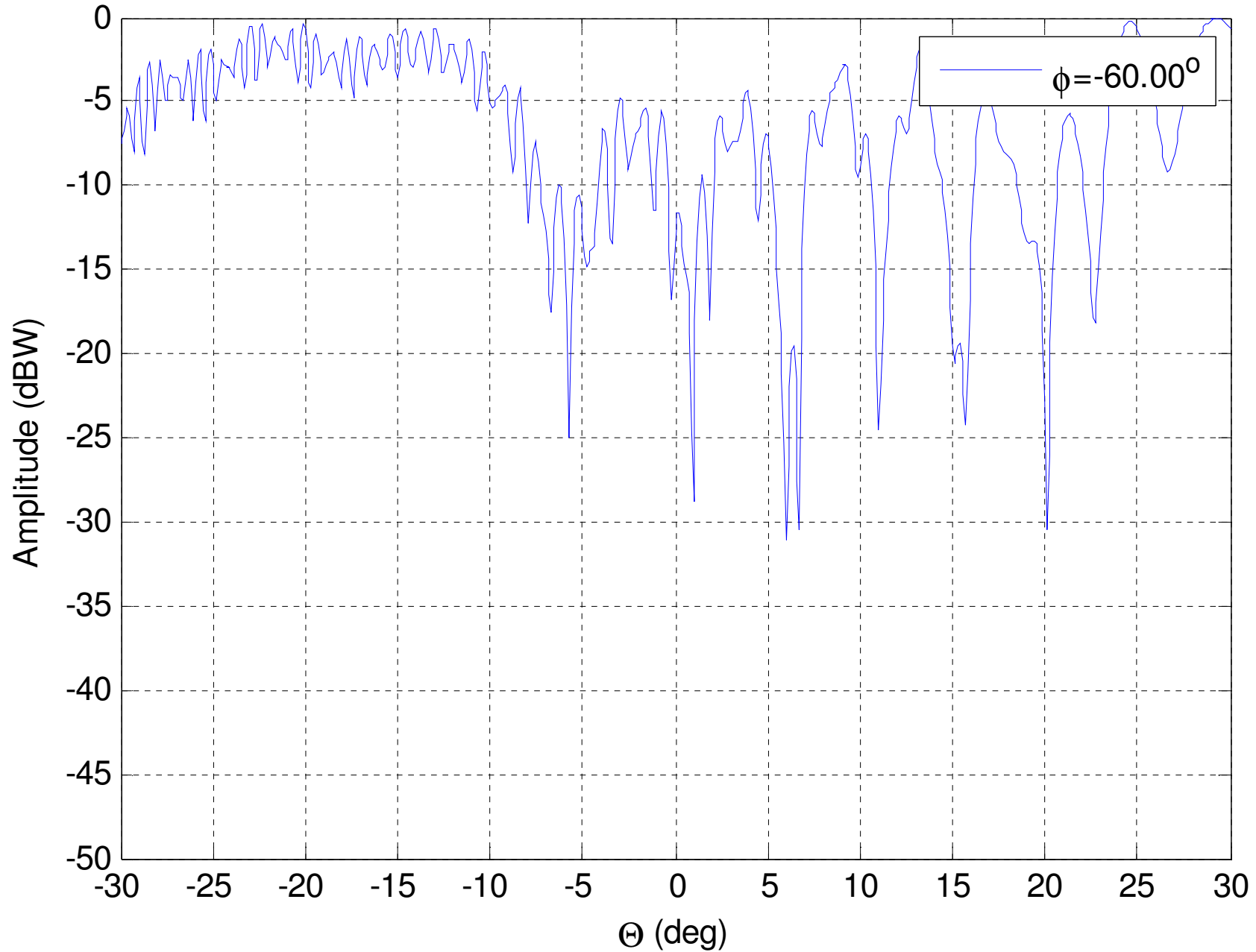
Input file: tx-17.3-lhcp-60.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

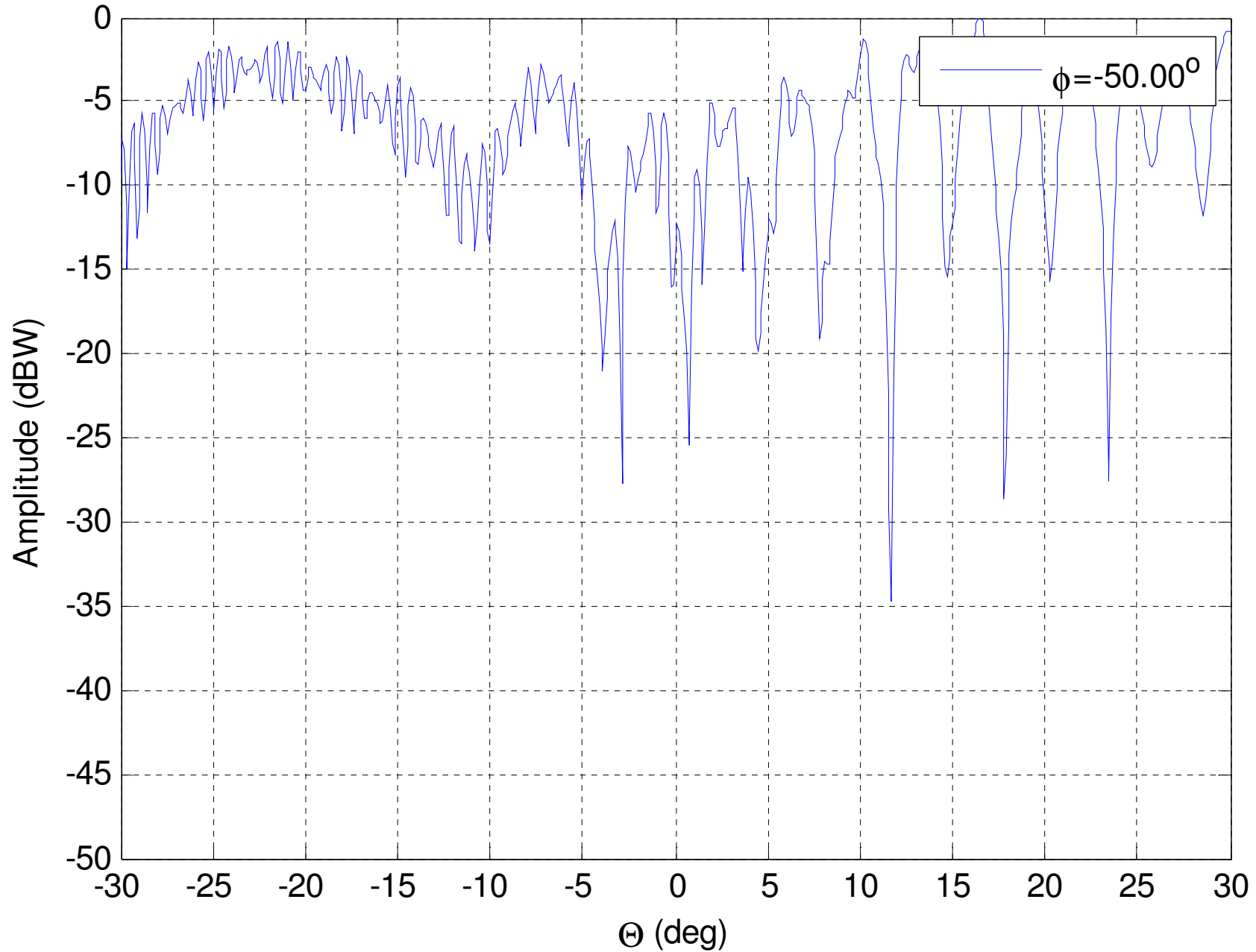
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -6.81 dBW, Date: 14-Dec-2011



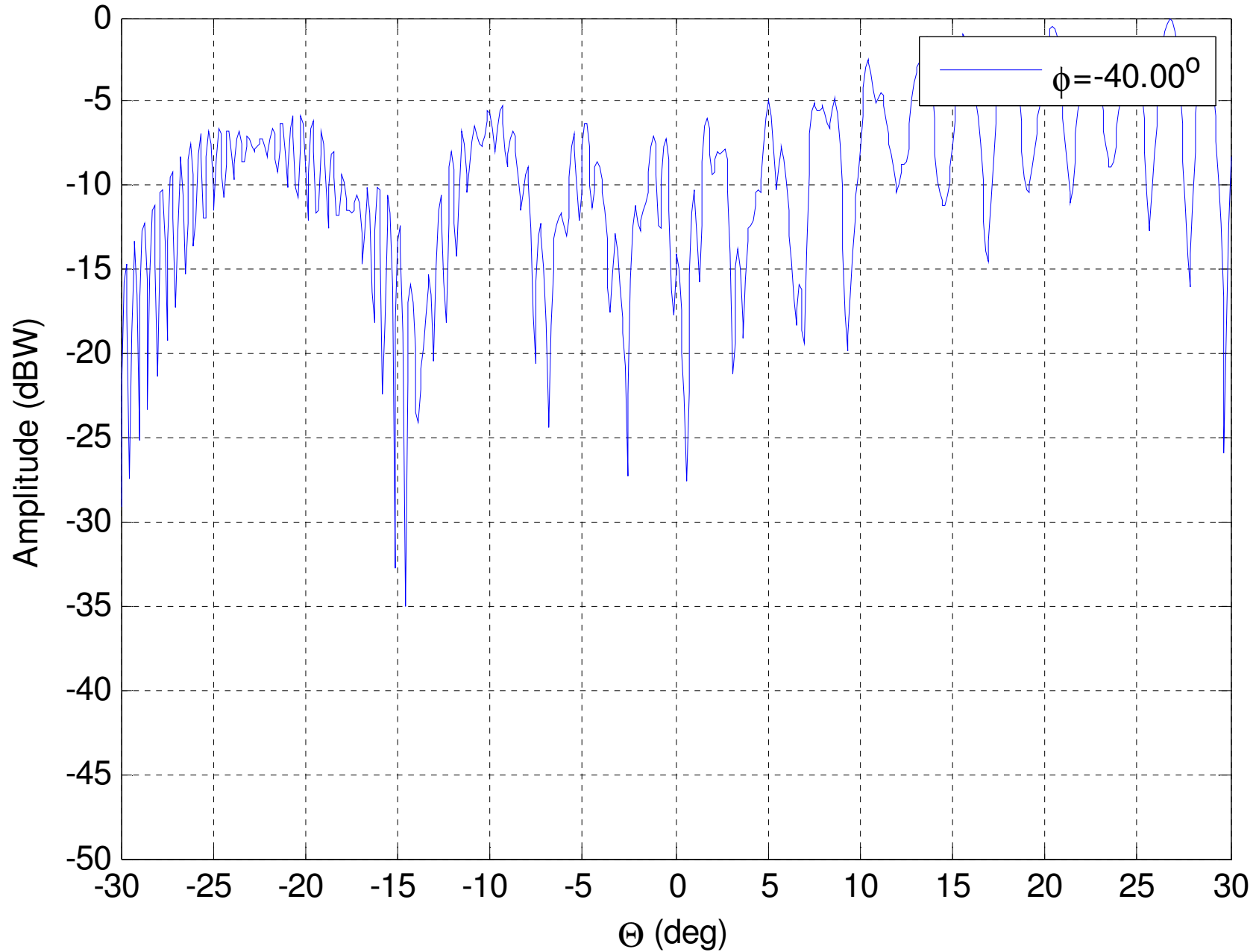
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.20 dBW, Date: 14-Dec-2011



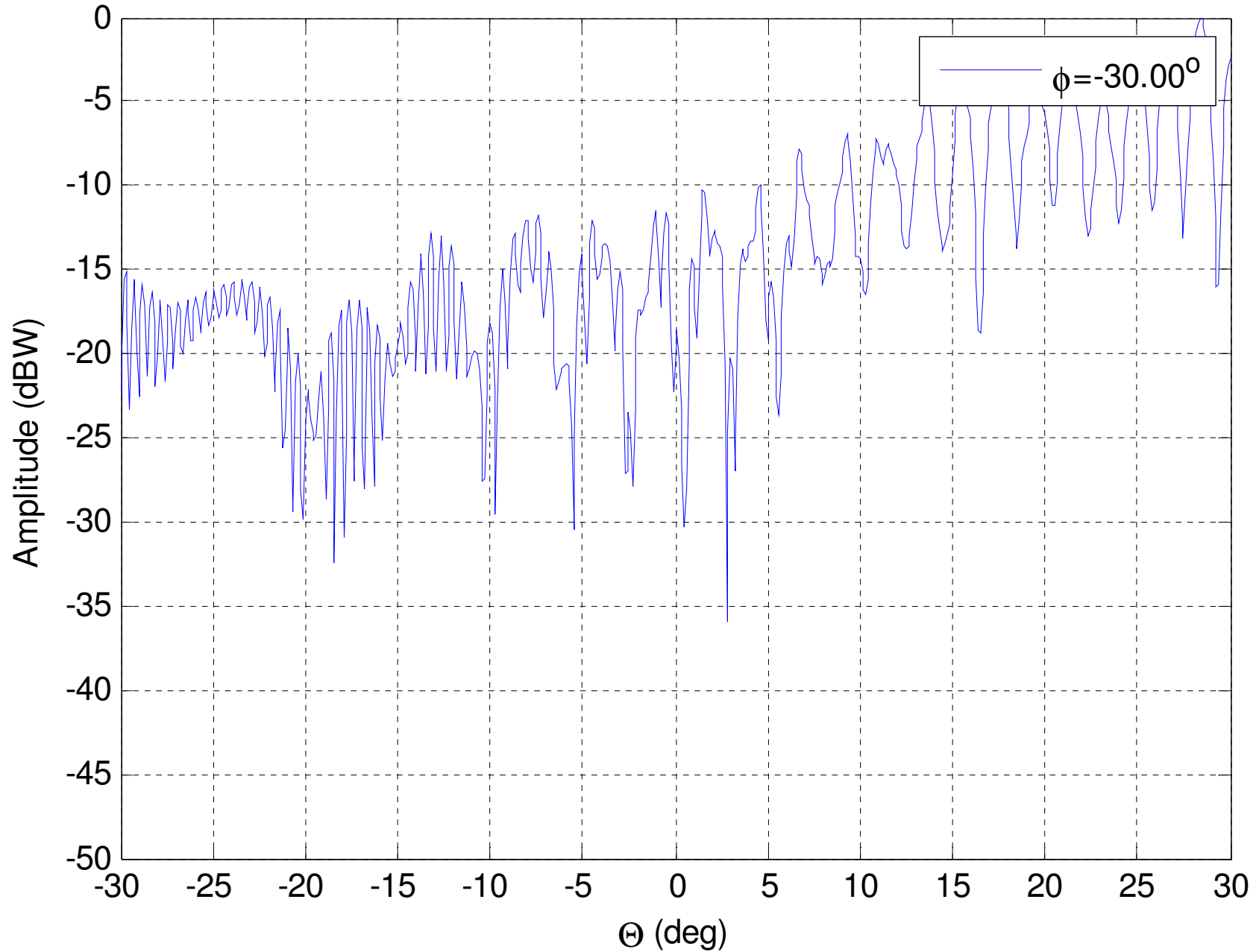
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.52 dBW, Date: 14-Dec-2011



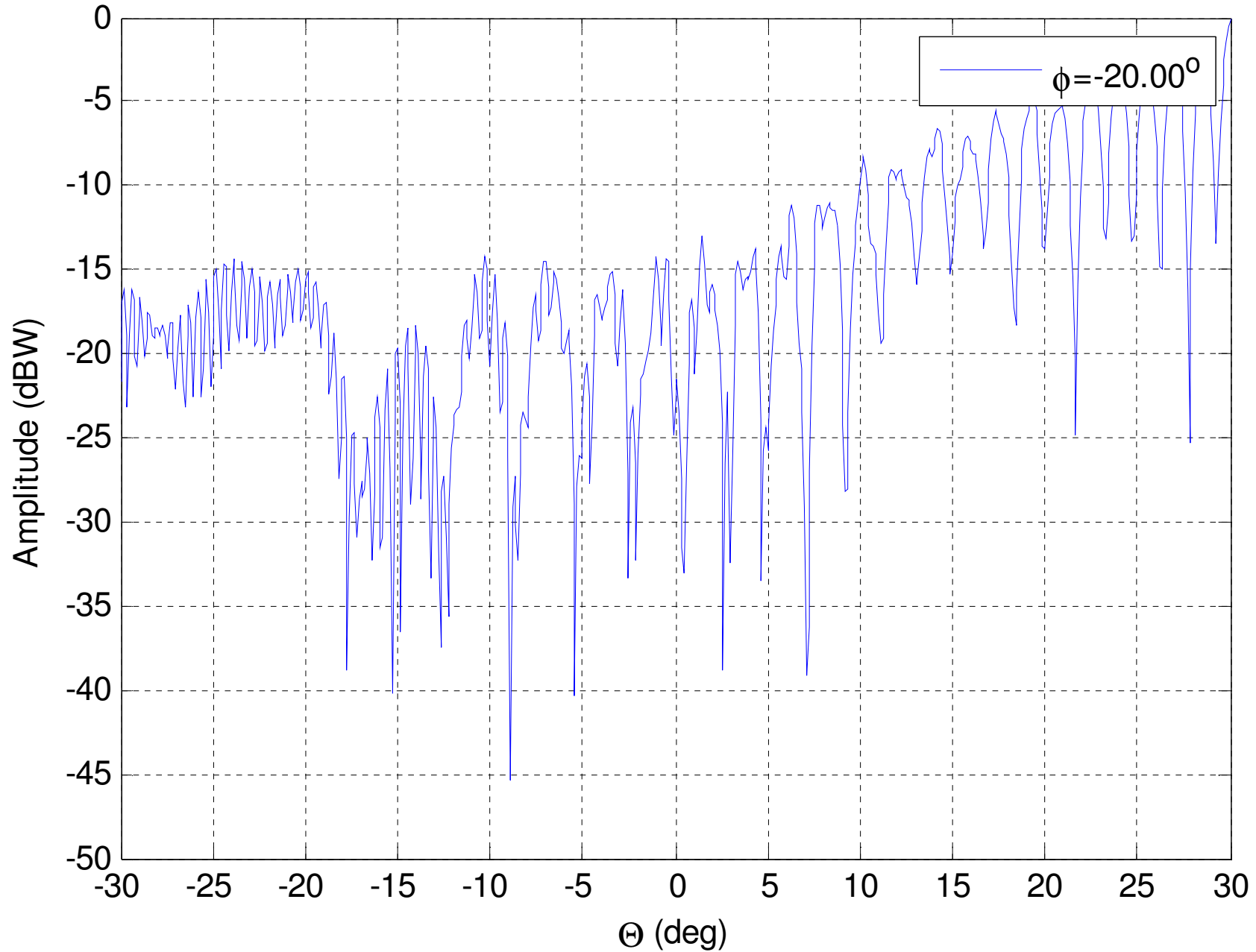
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 0.01 dBW, Date: 14-Dec-2011



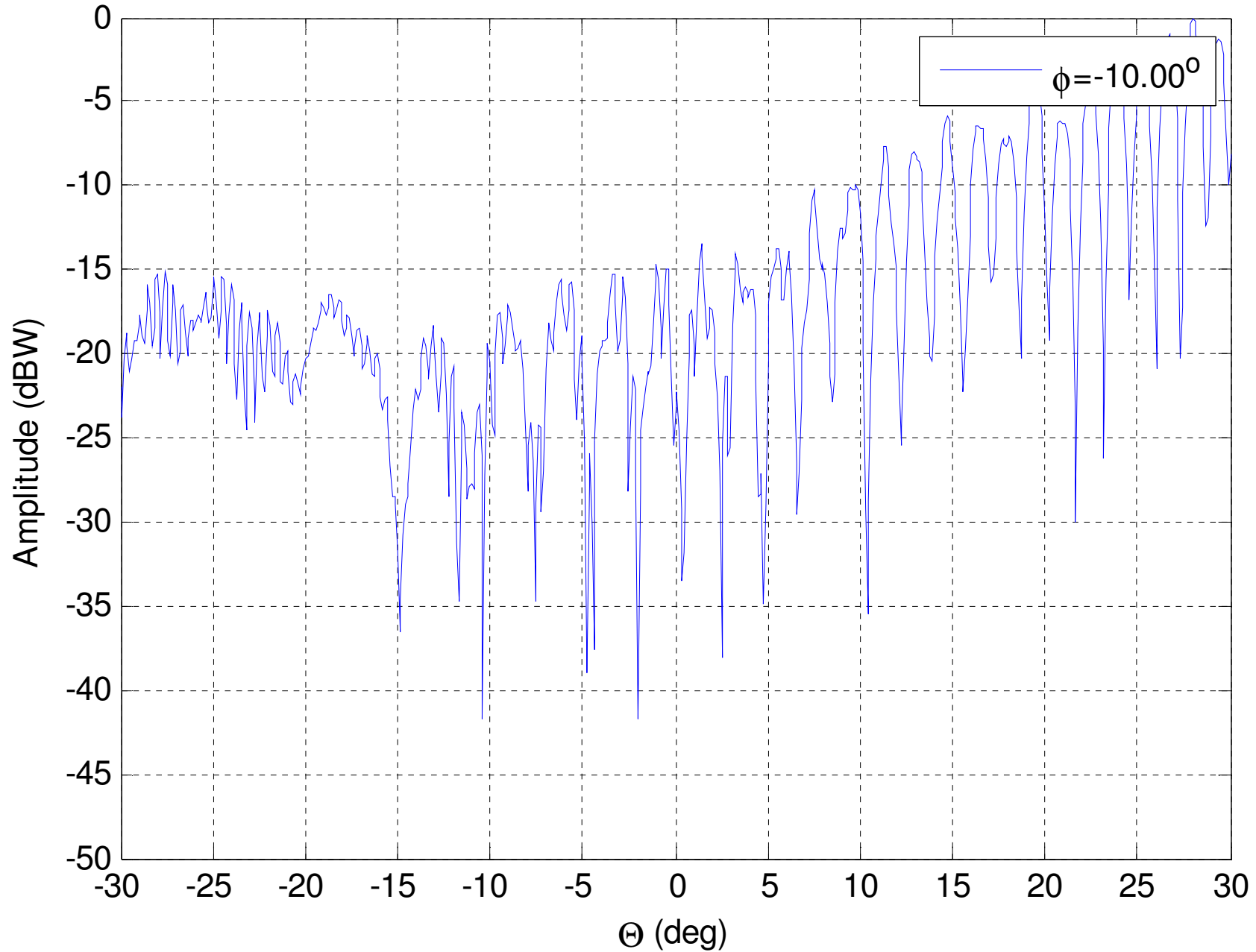
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 2.79 dBW, Date: 14-Dec-2011



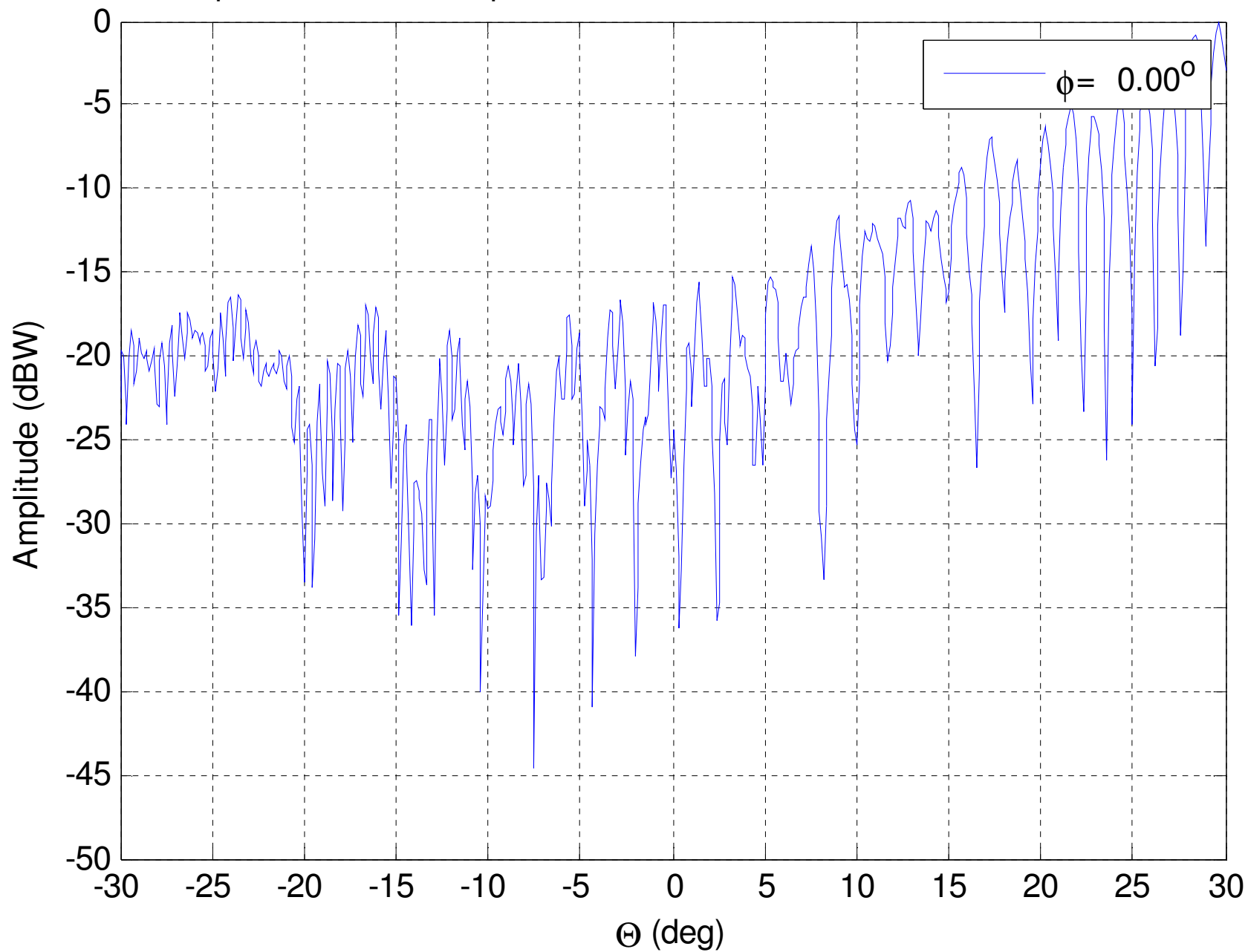
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 3.46 dBW, Date: 14-Dec-2011



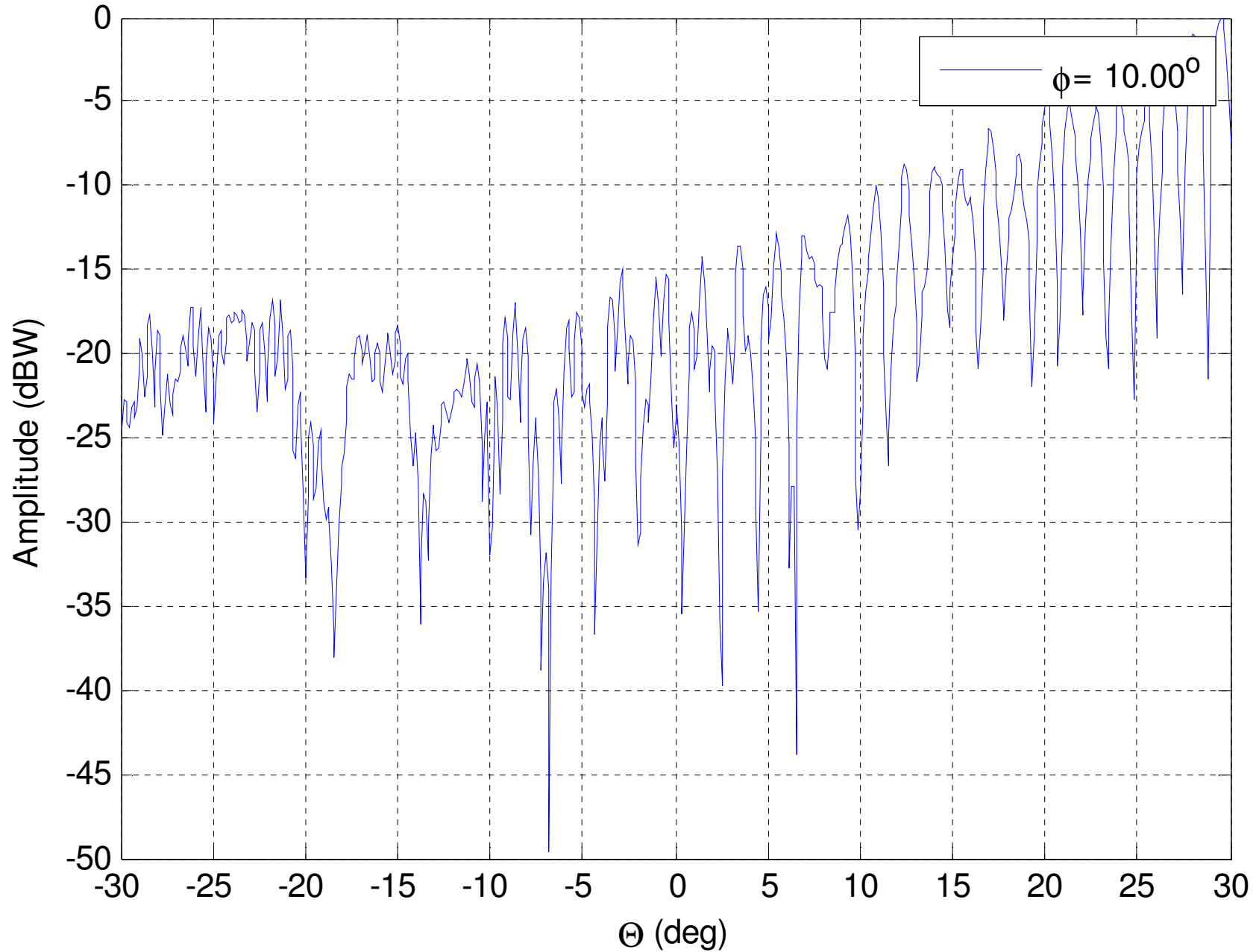
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 5.53 dBW, Date: 14-Dec-2011



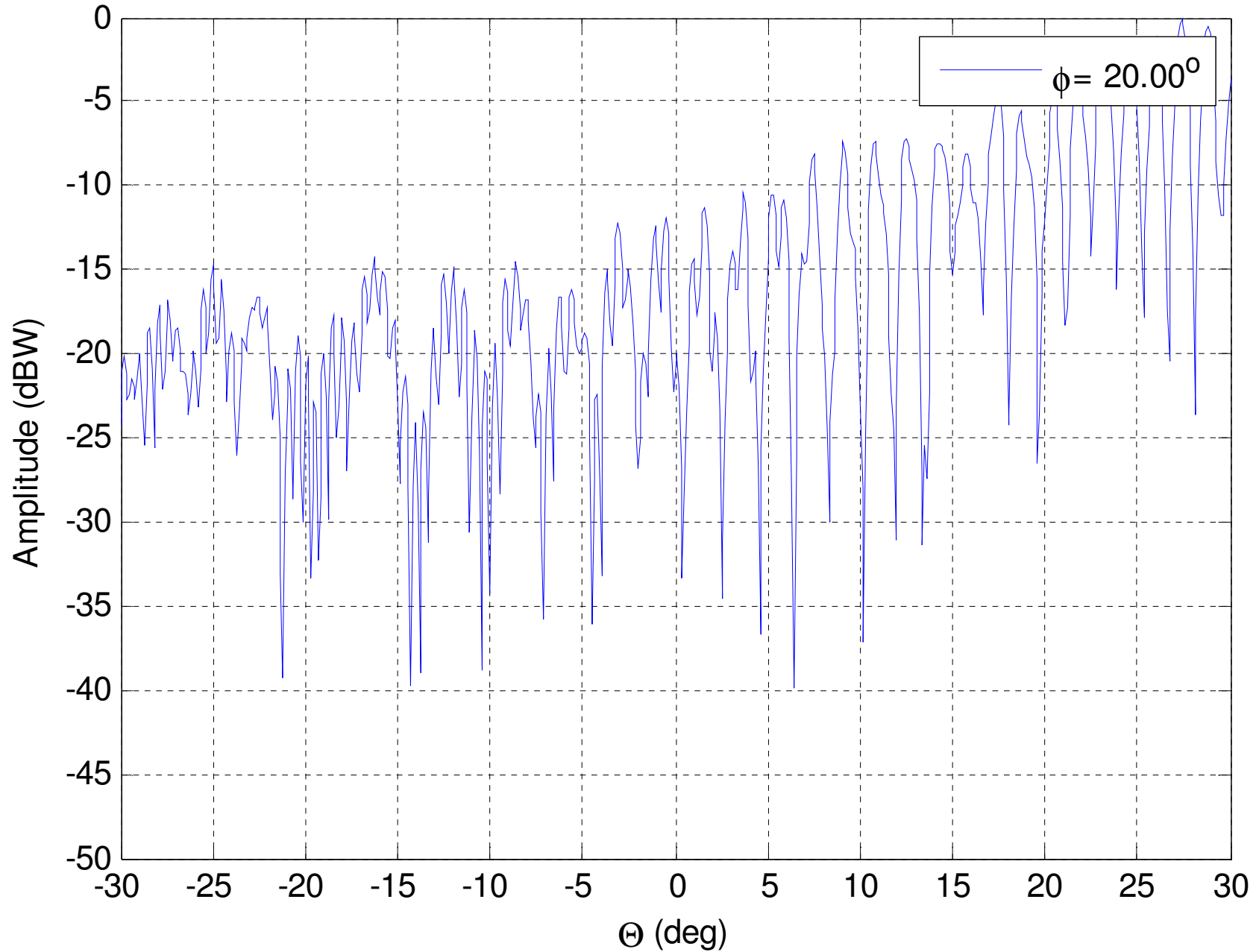
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 4.09 dBW, Date: 14-Dec-2011



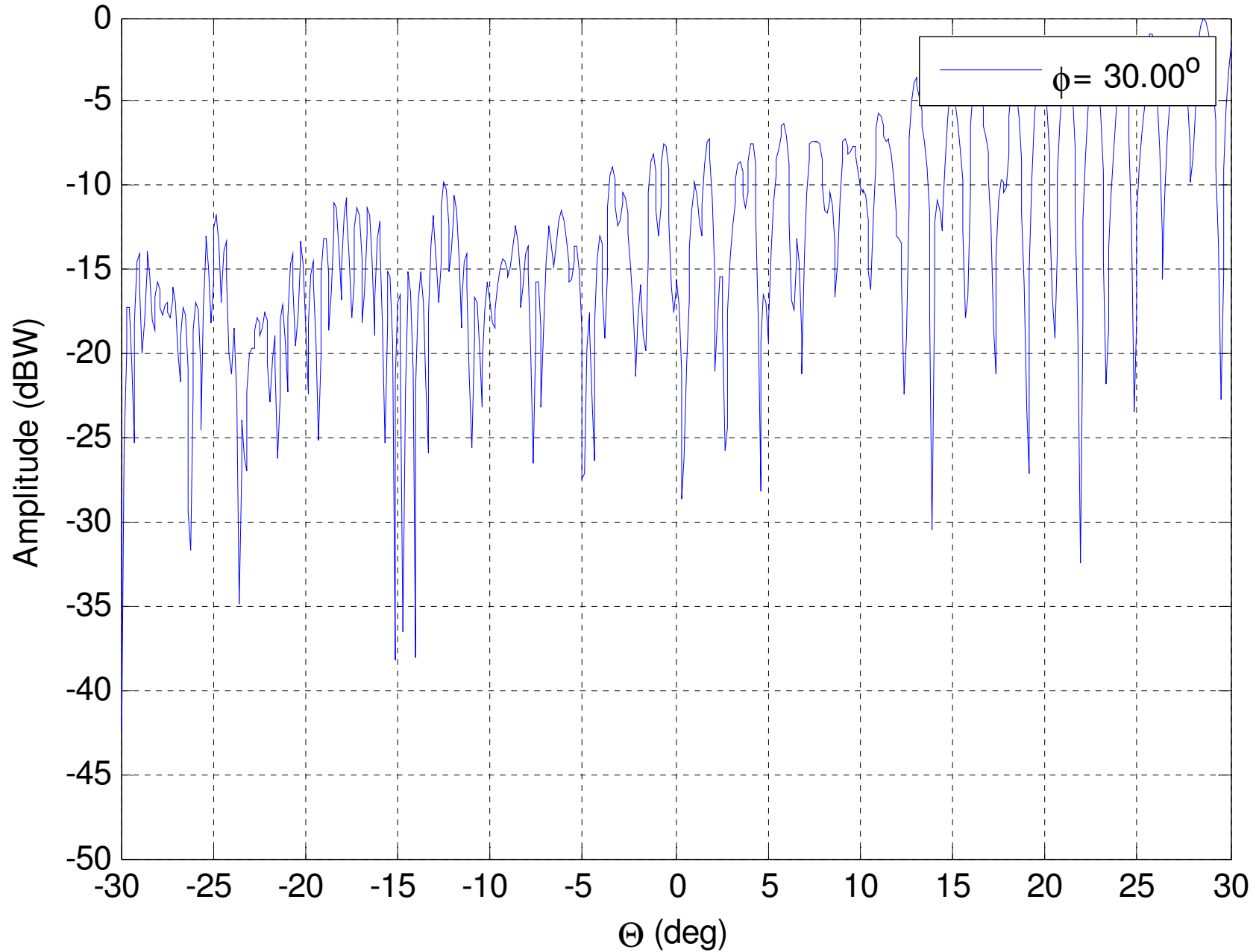
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 0.98 dBW, Date: 14-Dec-2011



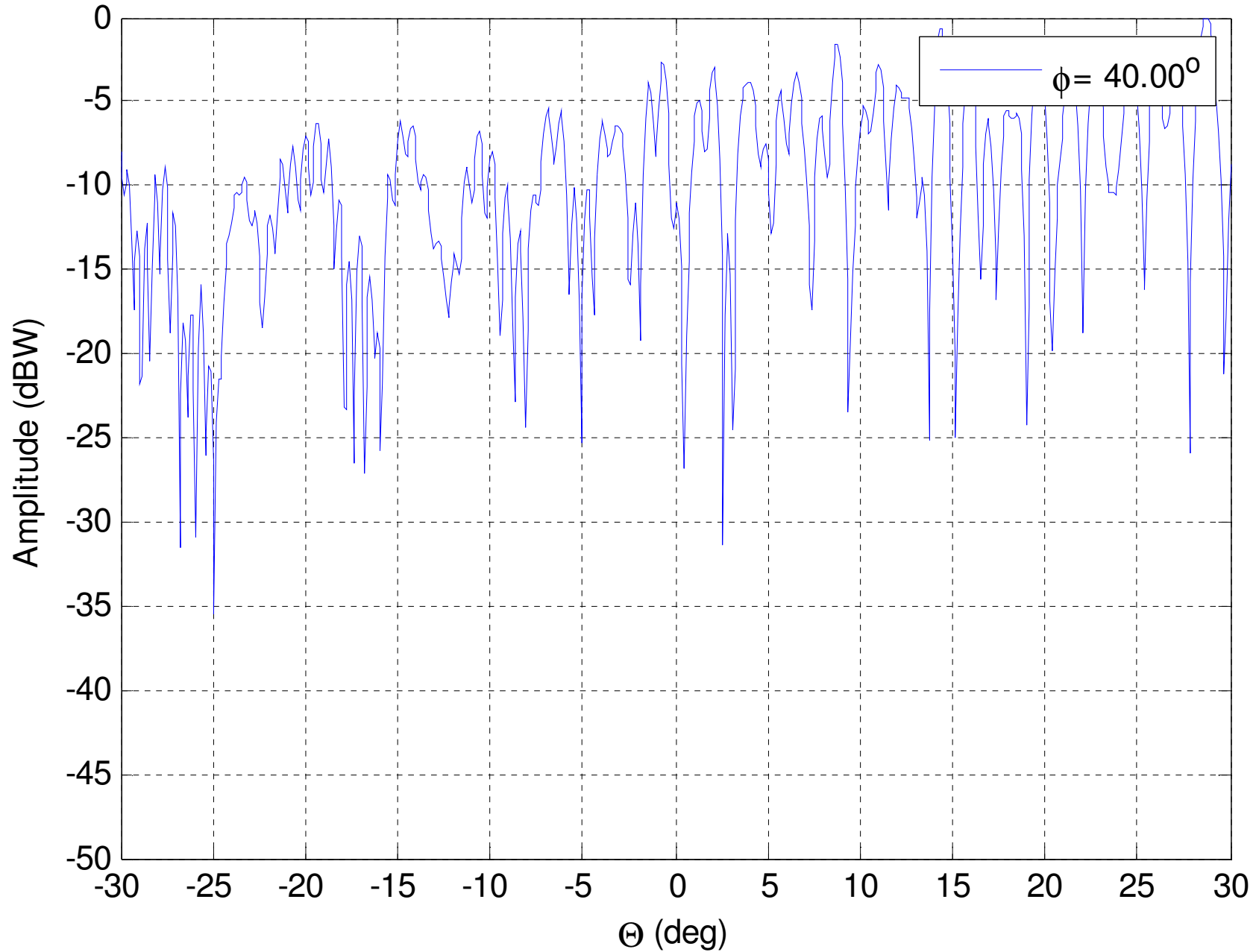
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -3.46 dBW, Date: 14-Dec-2011



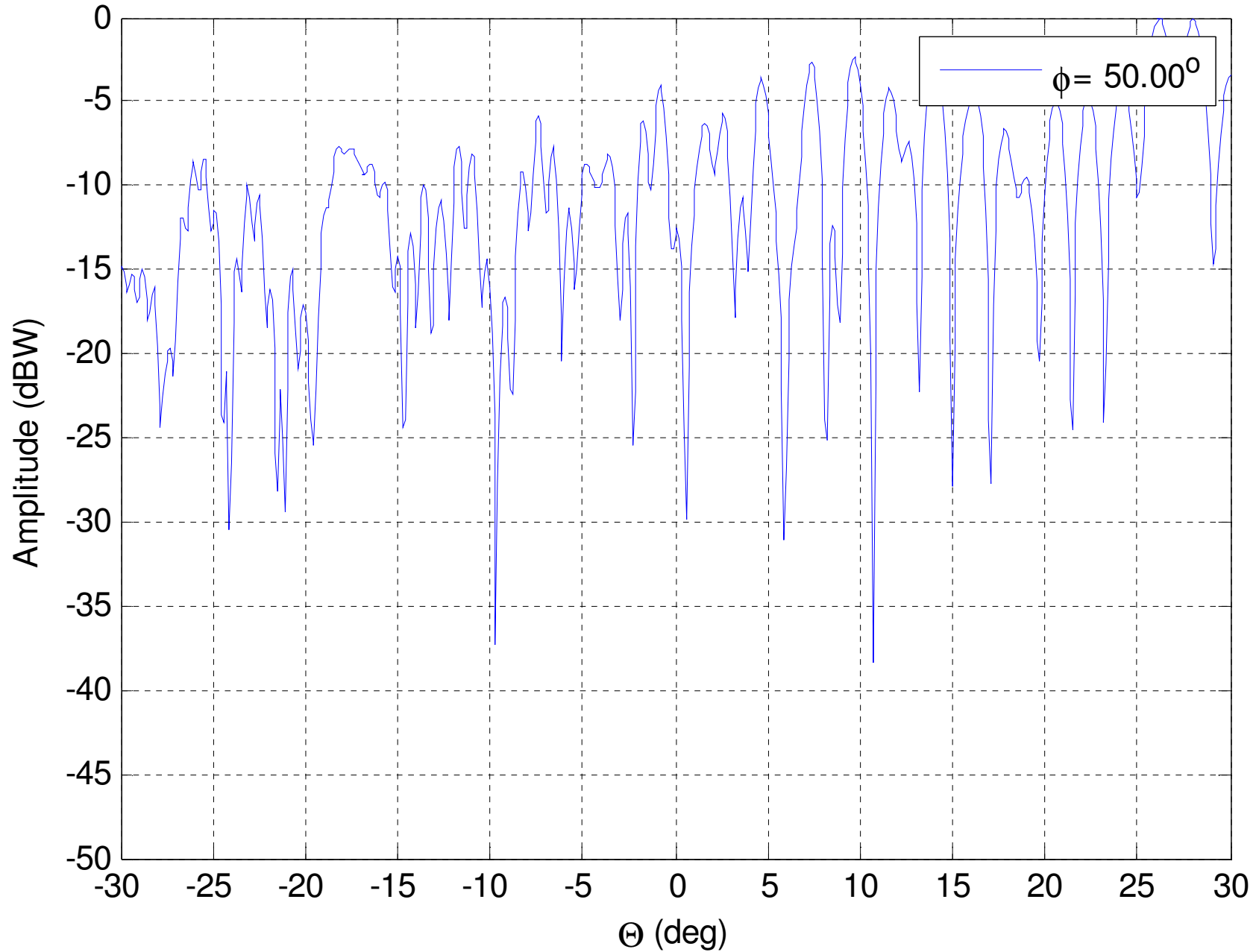
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -8.12 dBW, Date: 14-Dec-2011



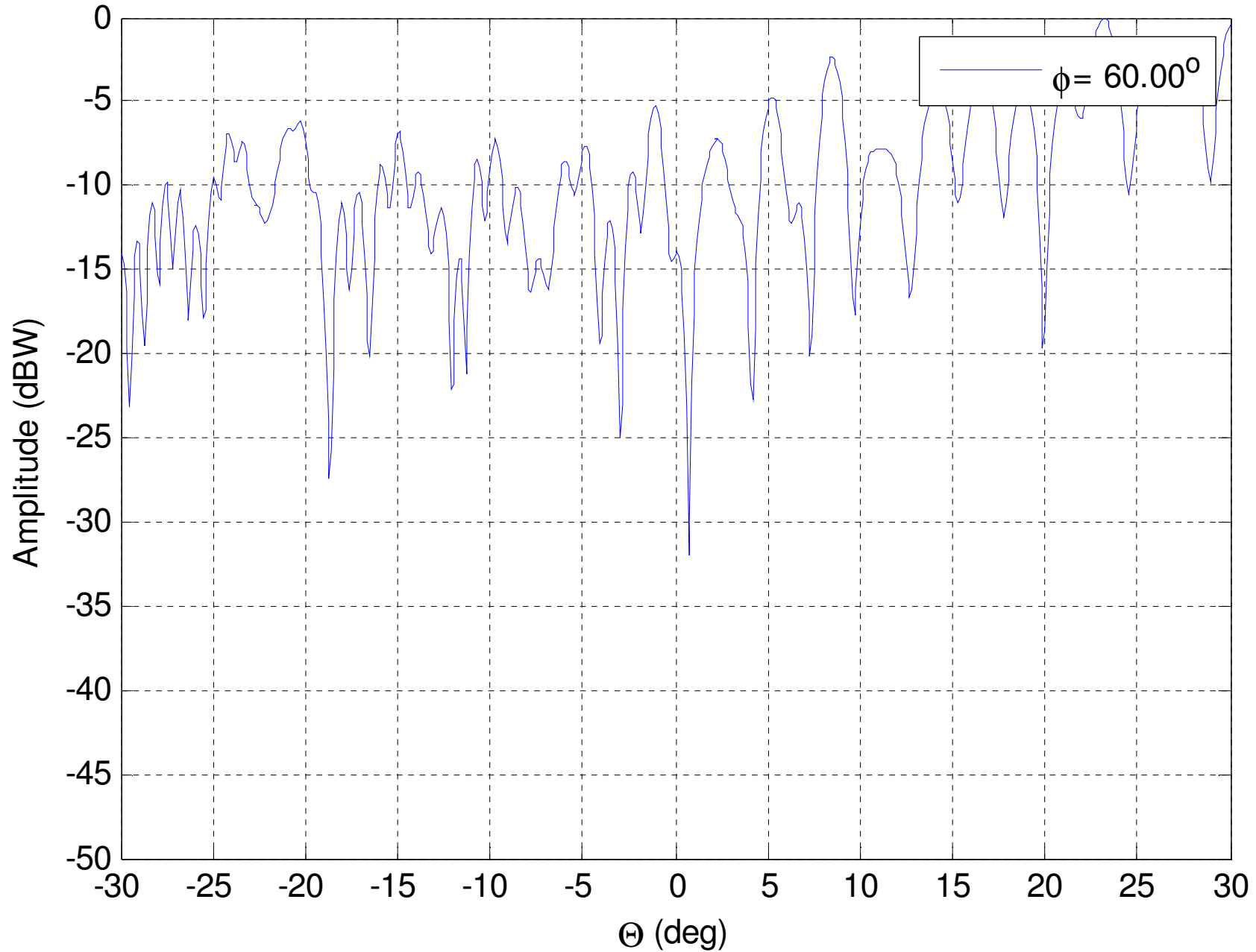
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -6.60 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

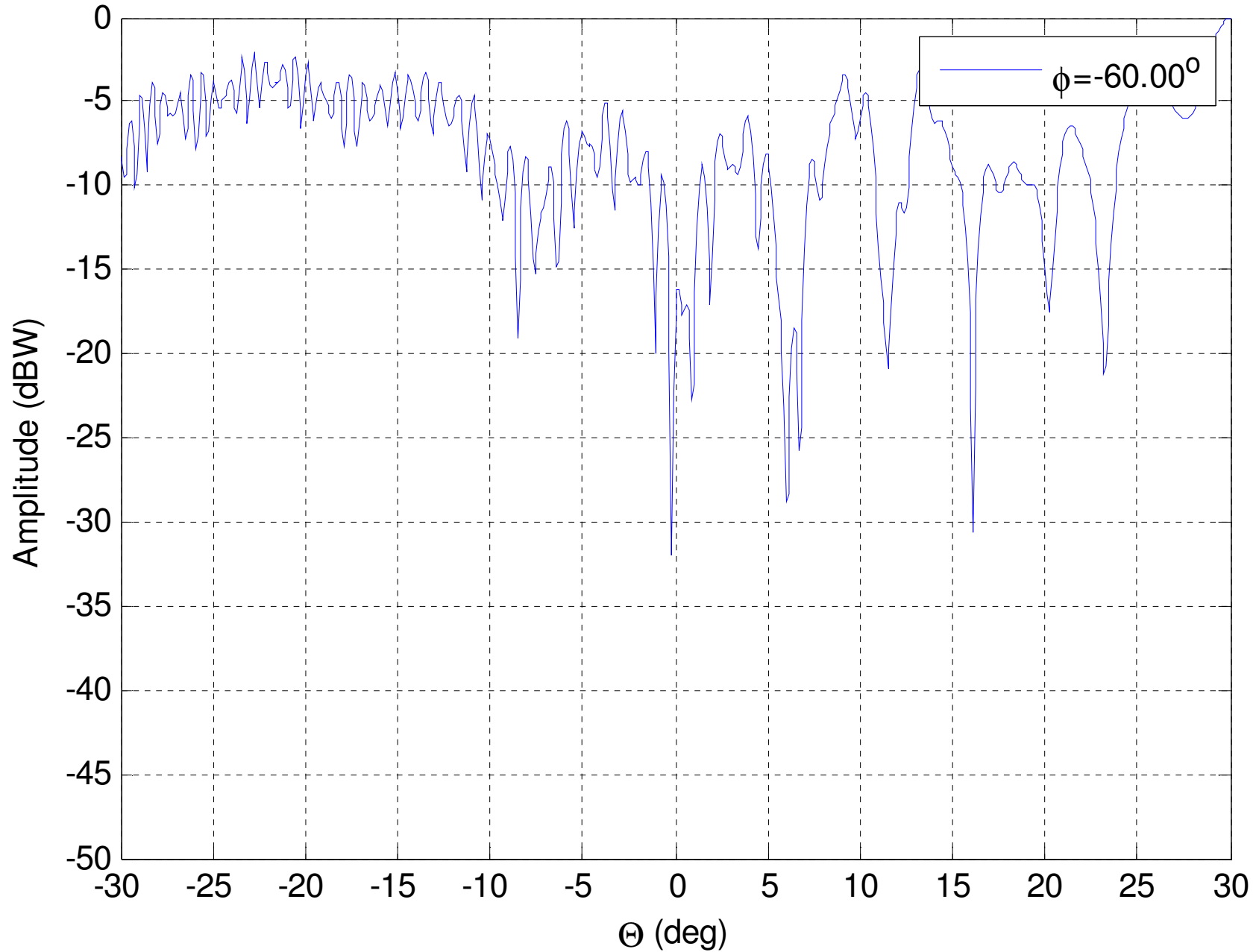
Input file: tx-17.5-rhcp-60.cut, Peak: -5.45 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

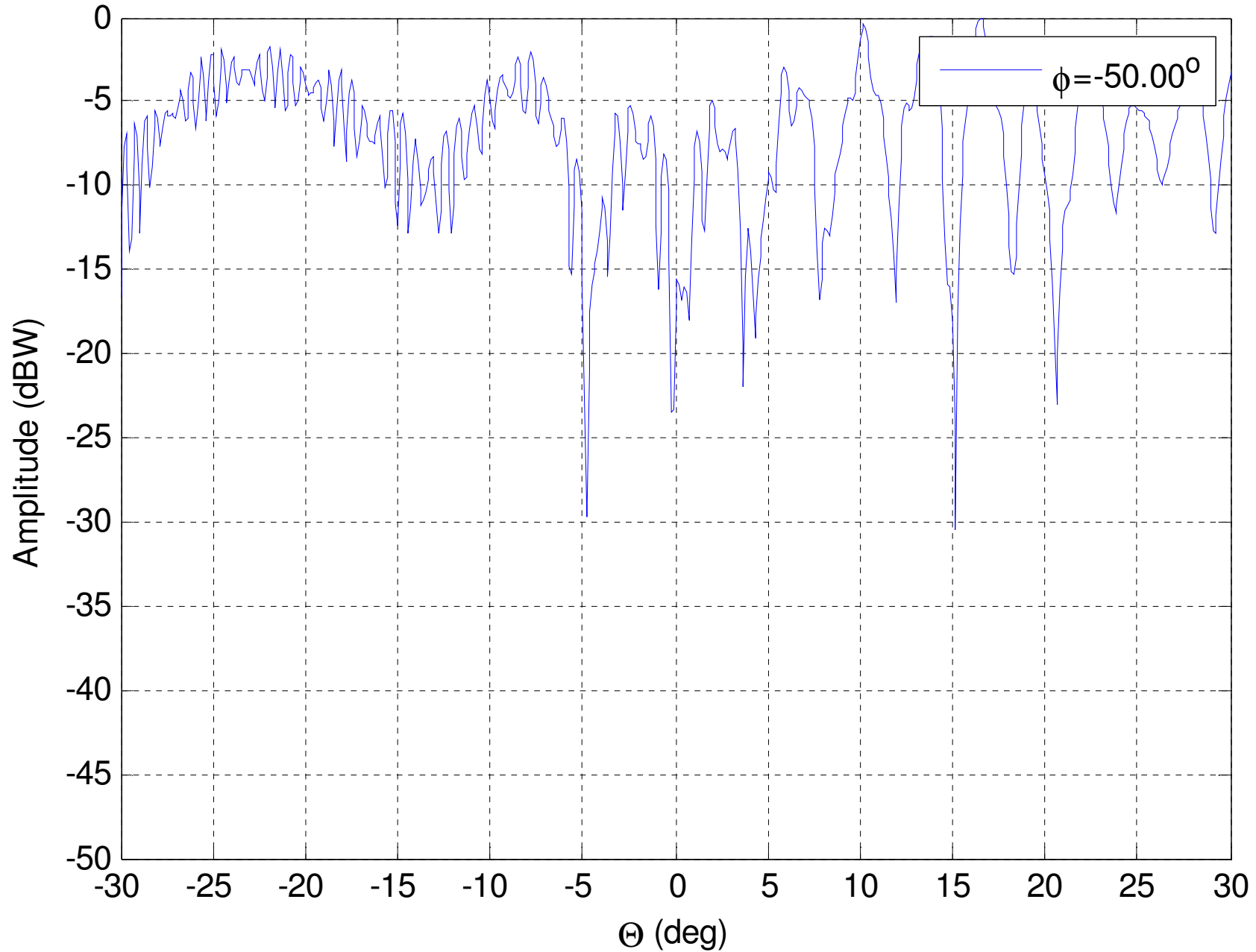
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -5.53 dBW, Date: 14-Dec-2011



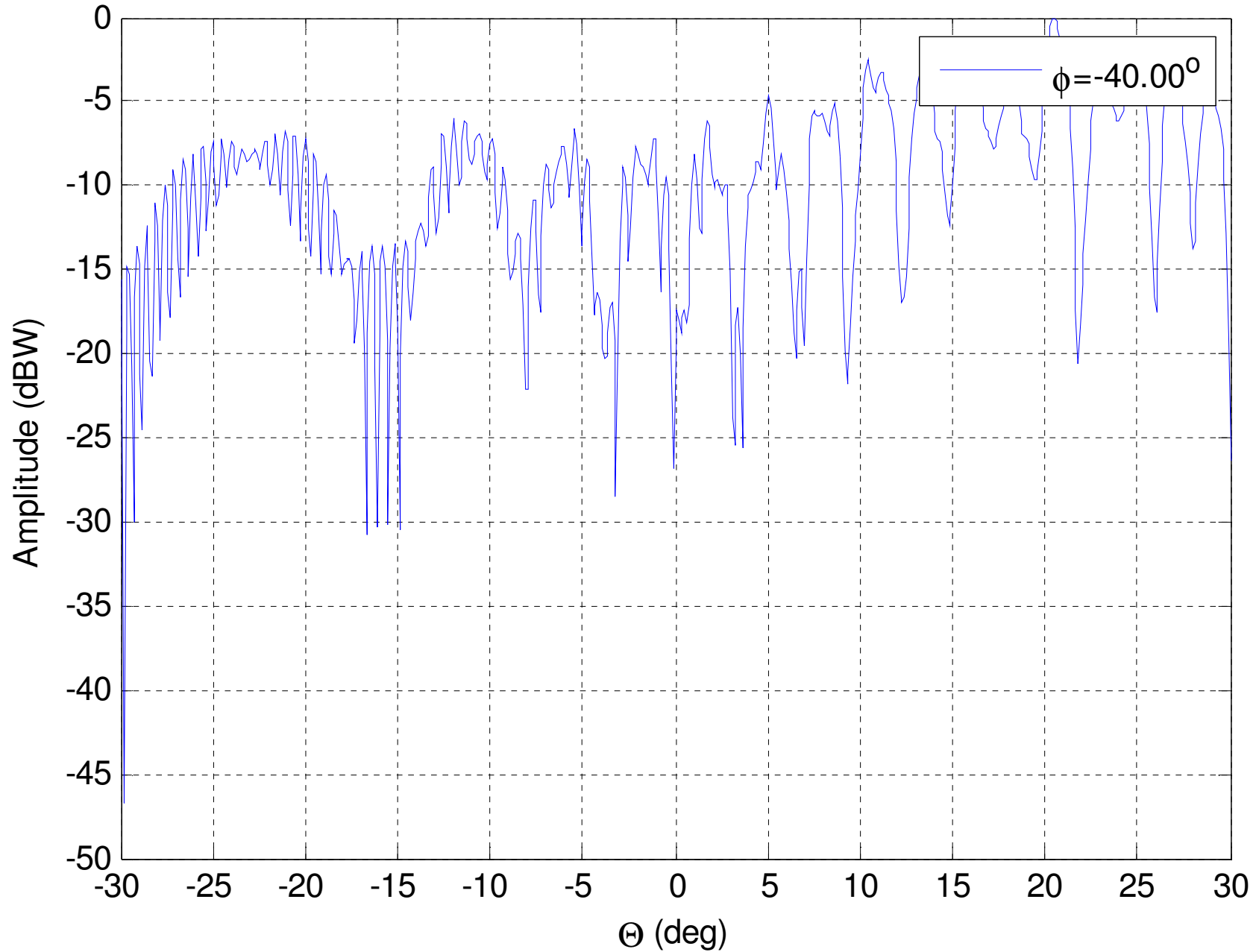
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -6.11 dBW, Date: 14-Dec-2011



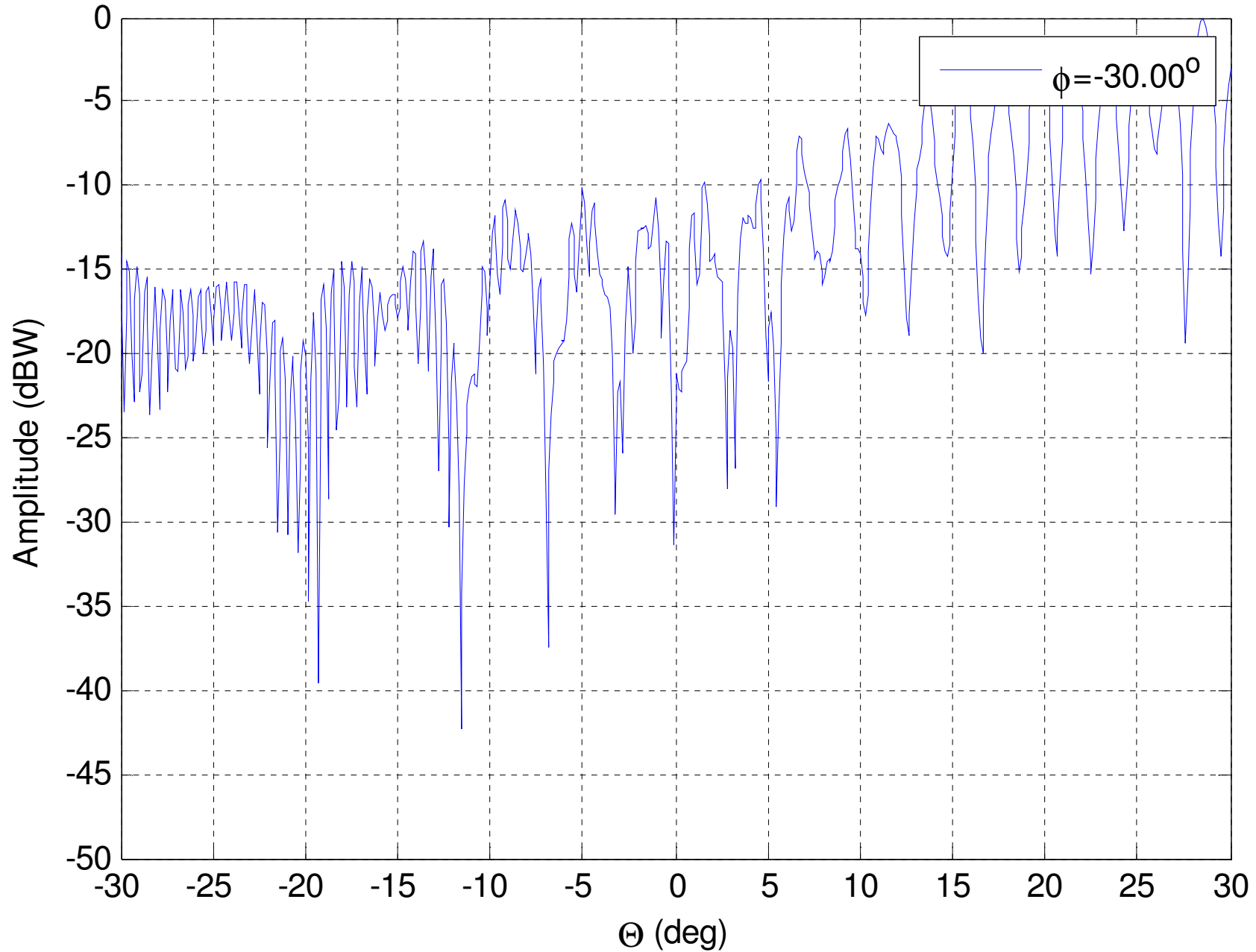
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -4.15 dBW, Date: 14-Dec-2011



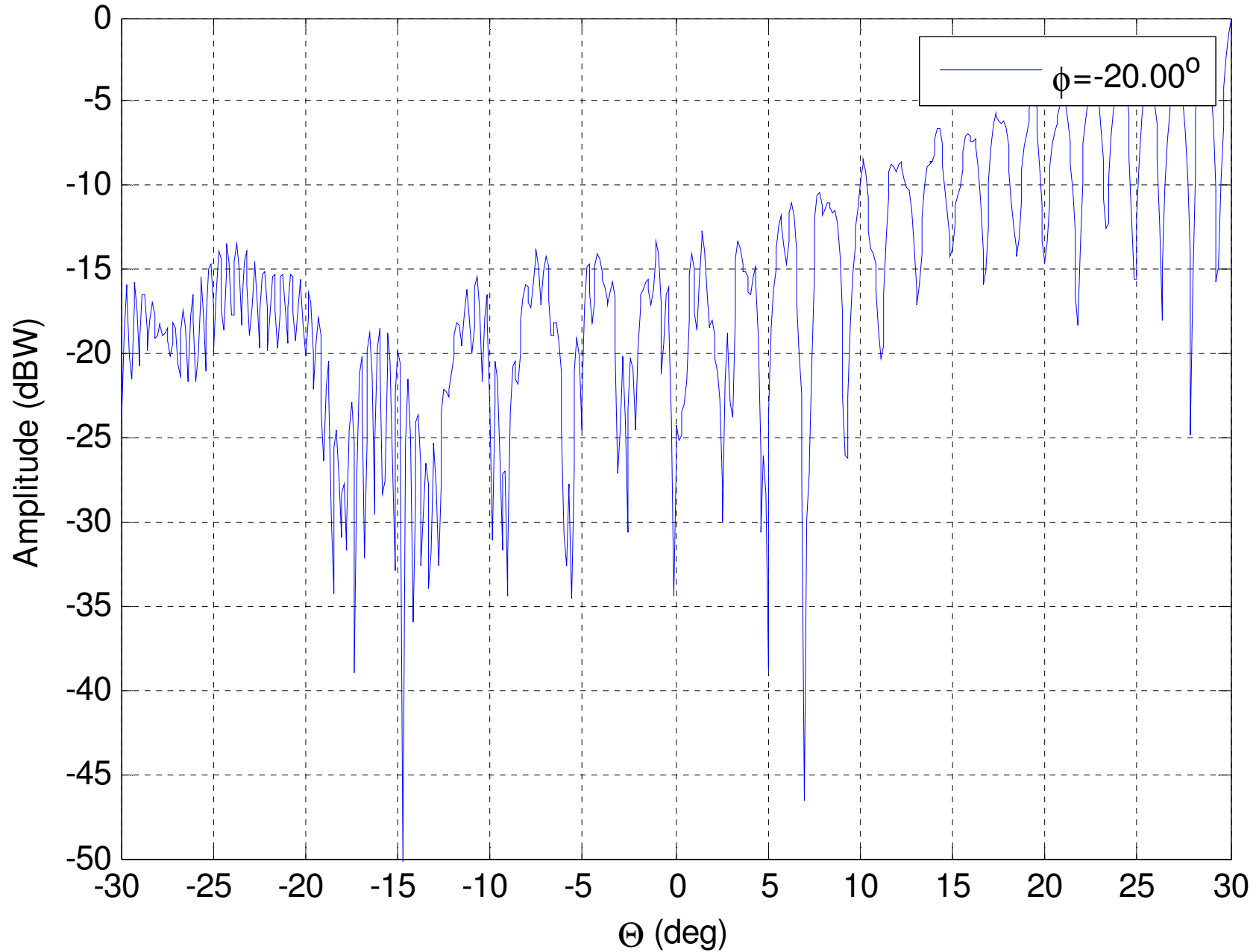
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.27 dBW, Date: 14-Dec-2011



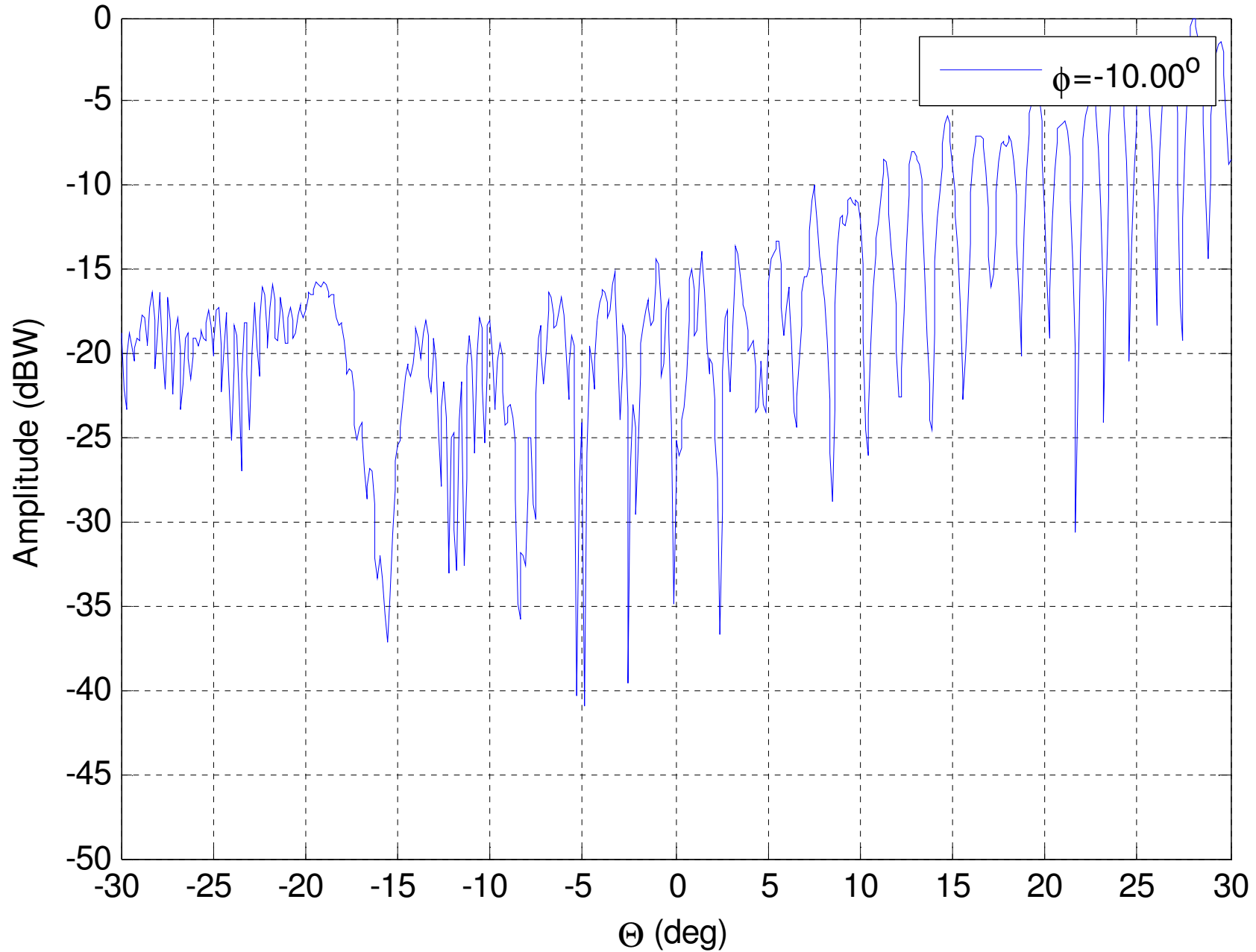
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 2.76 dBW, Date: 14-Dec-2011



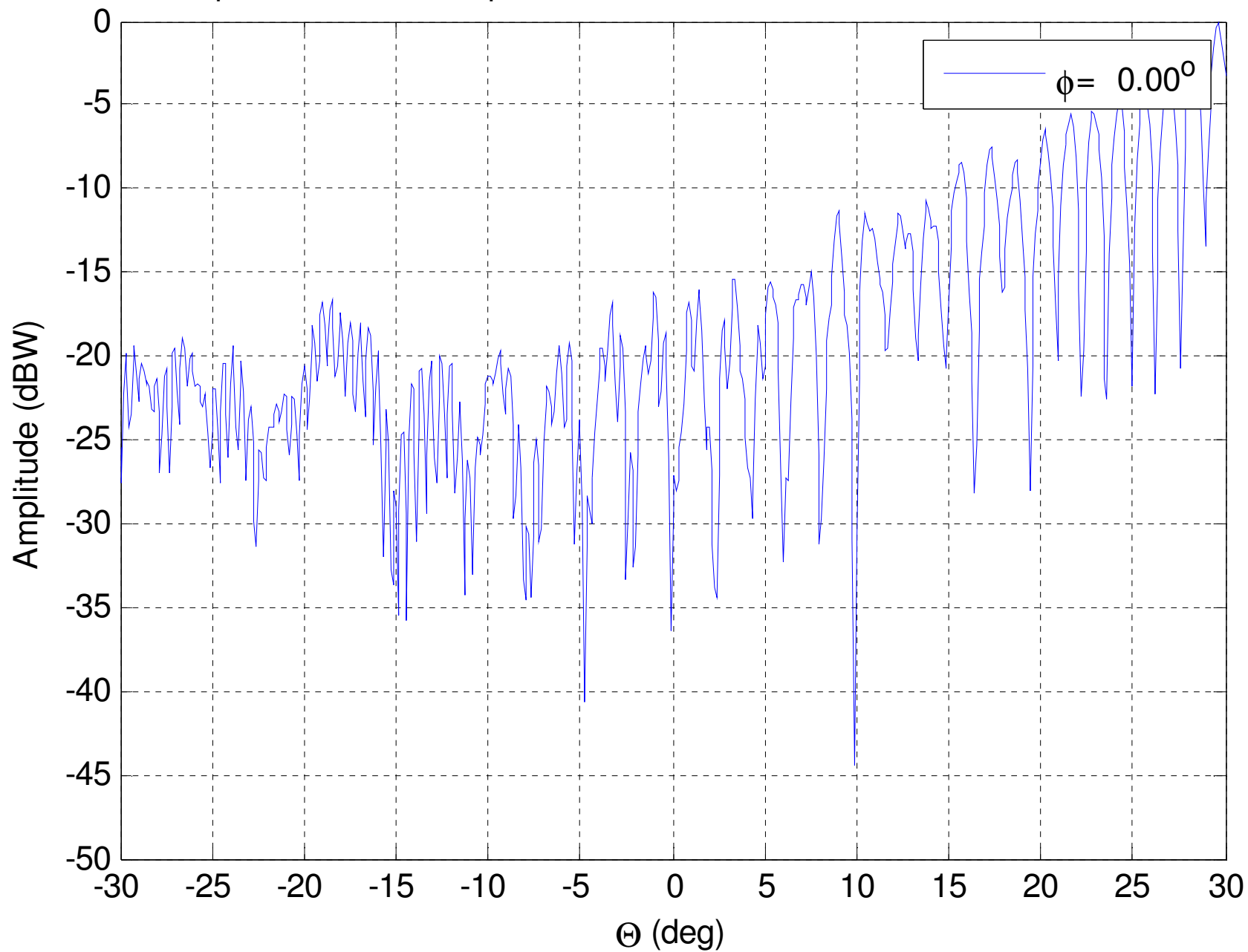
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 3.79 dBW, Date: 14-Dec-2011



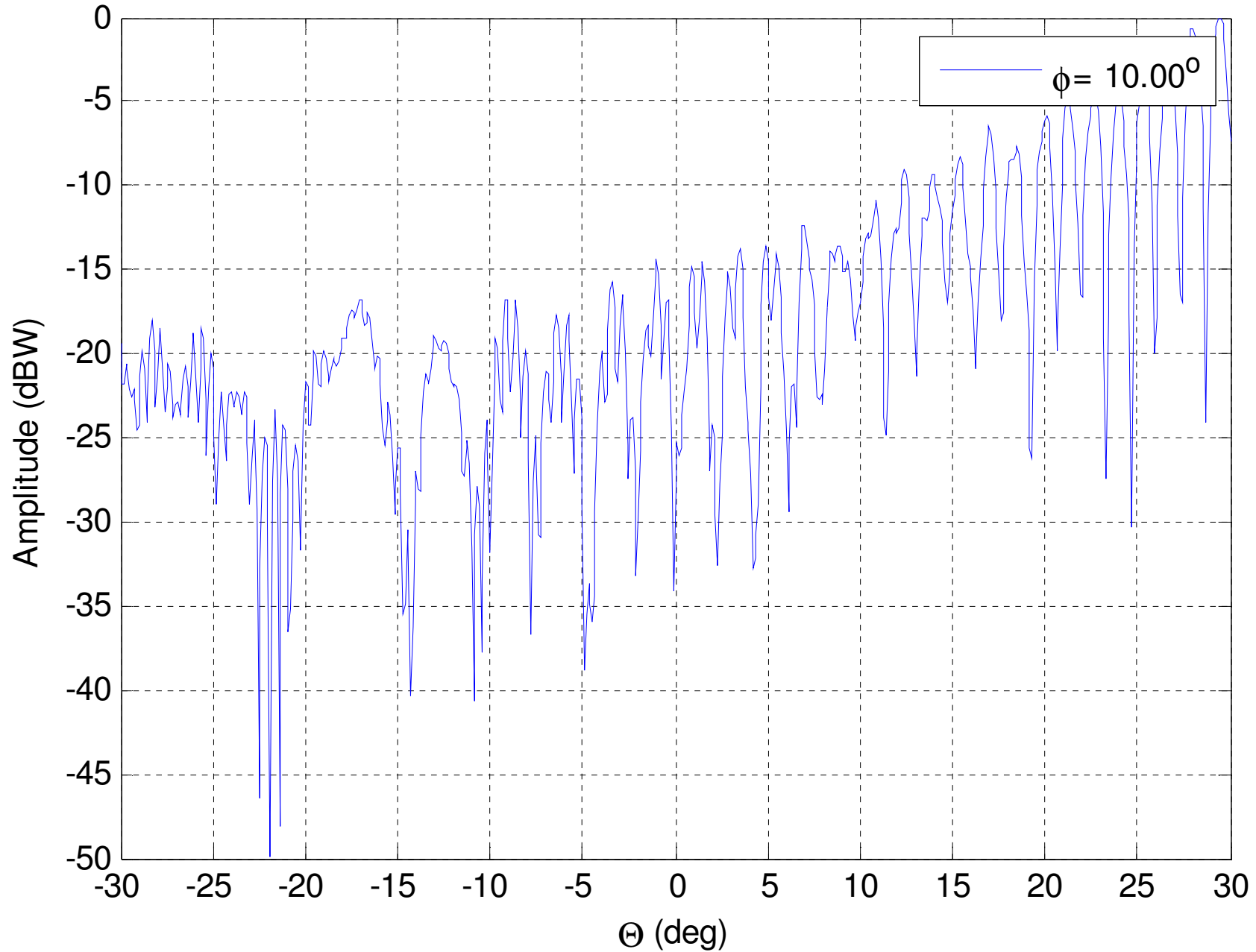
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 5.79 dBW, Date: 14-Dec-2011



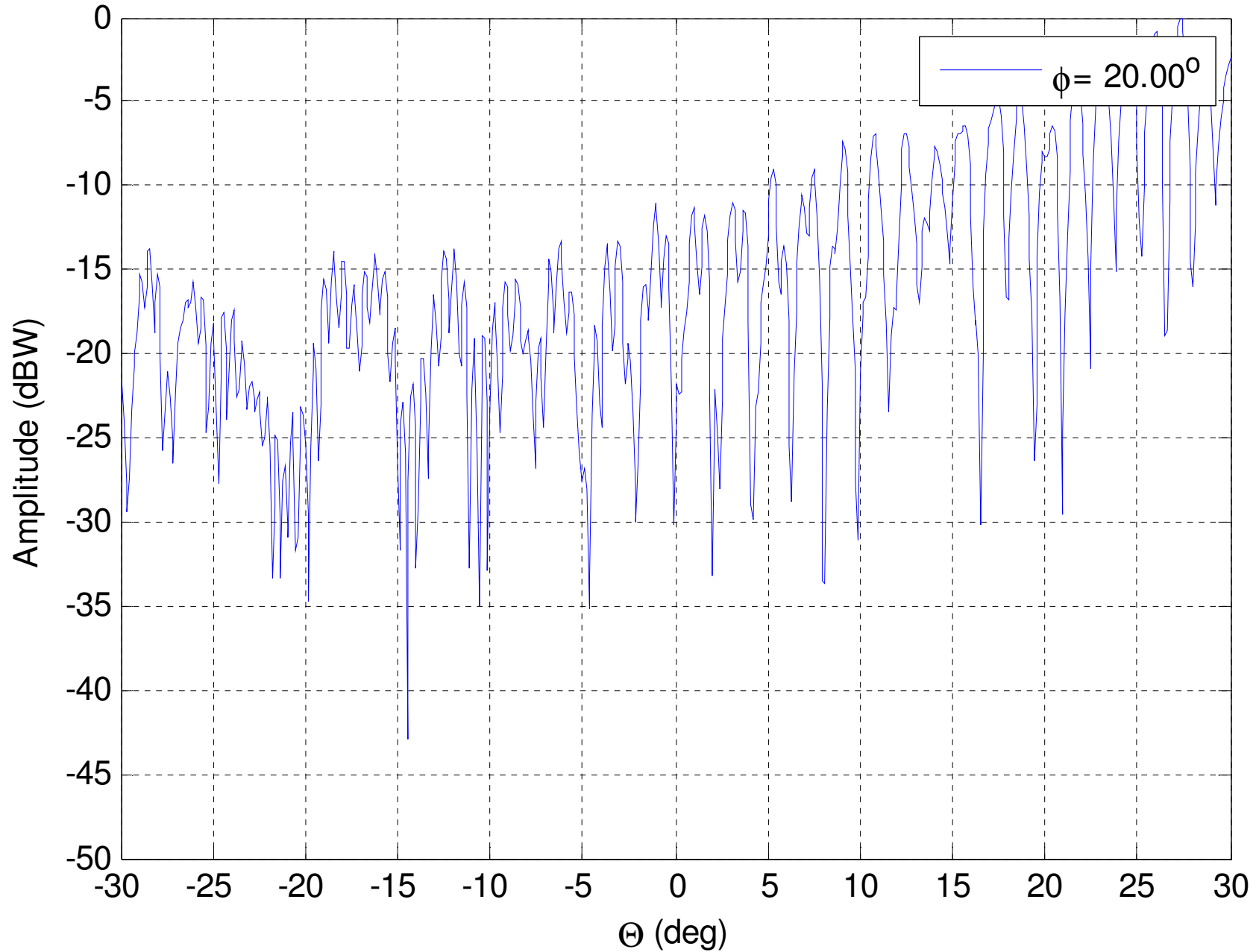
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 4.04 dBW, Date: 14-Dec-2011



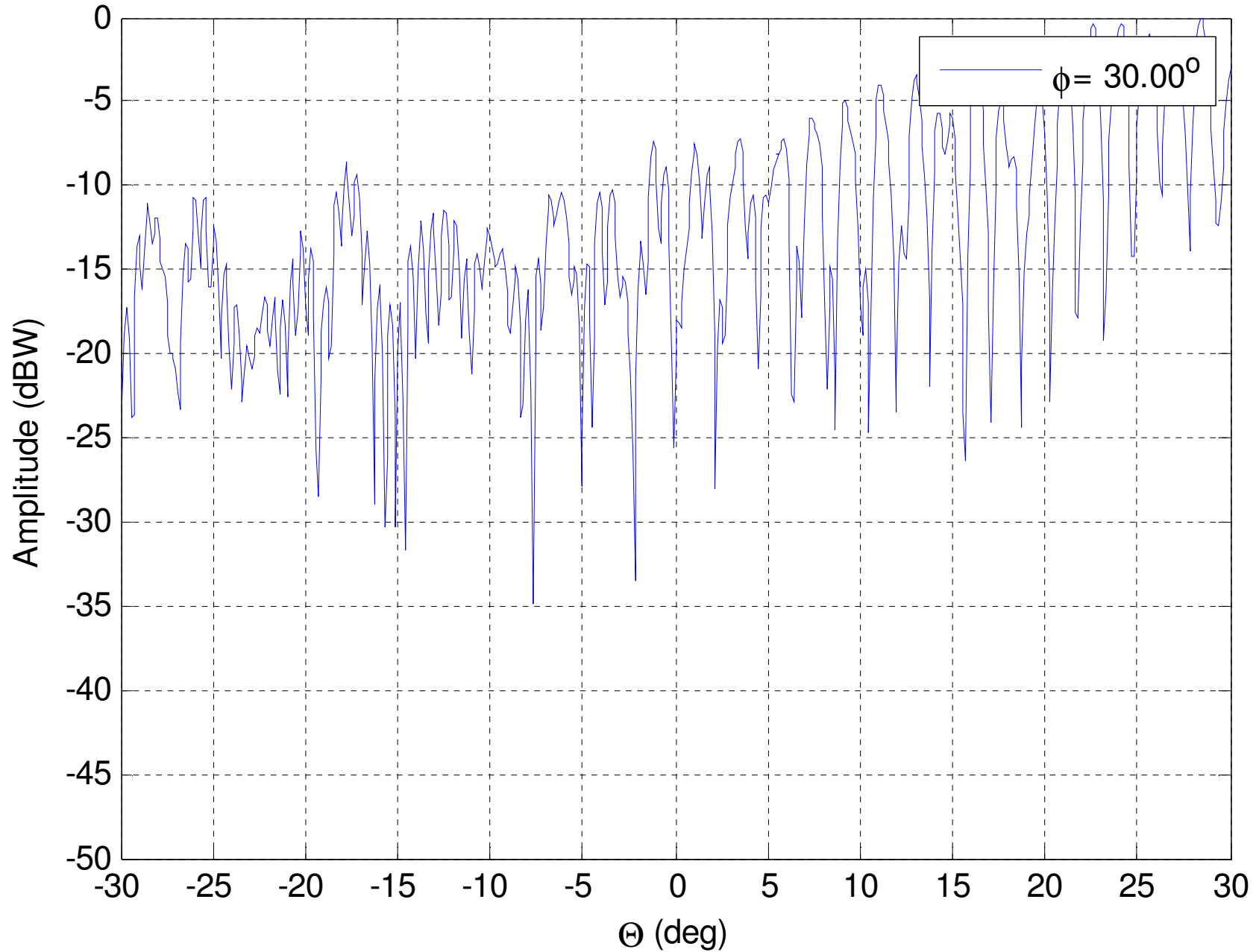
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 0.59 dBW, Date: 14-Dec-2011



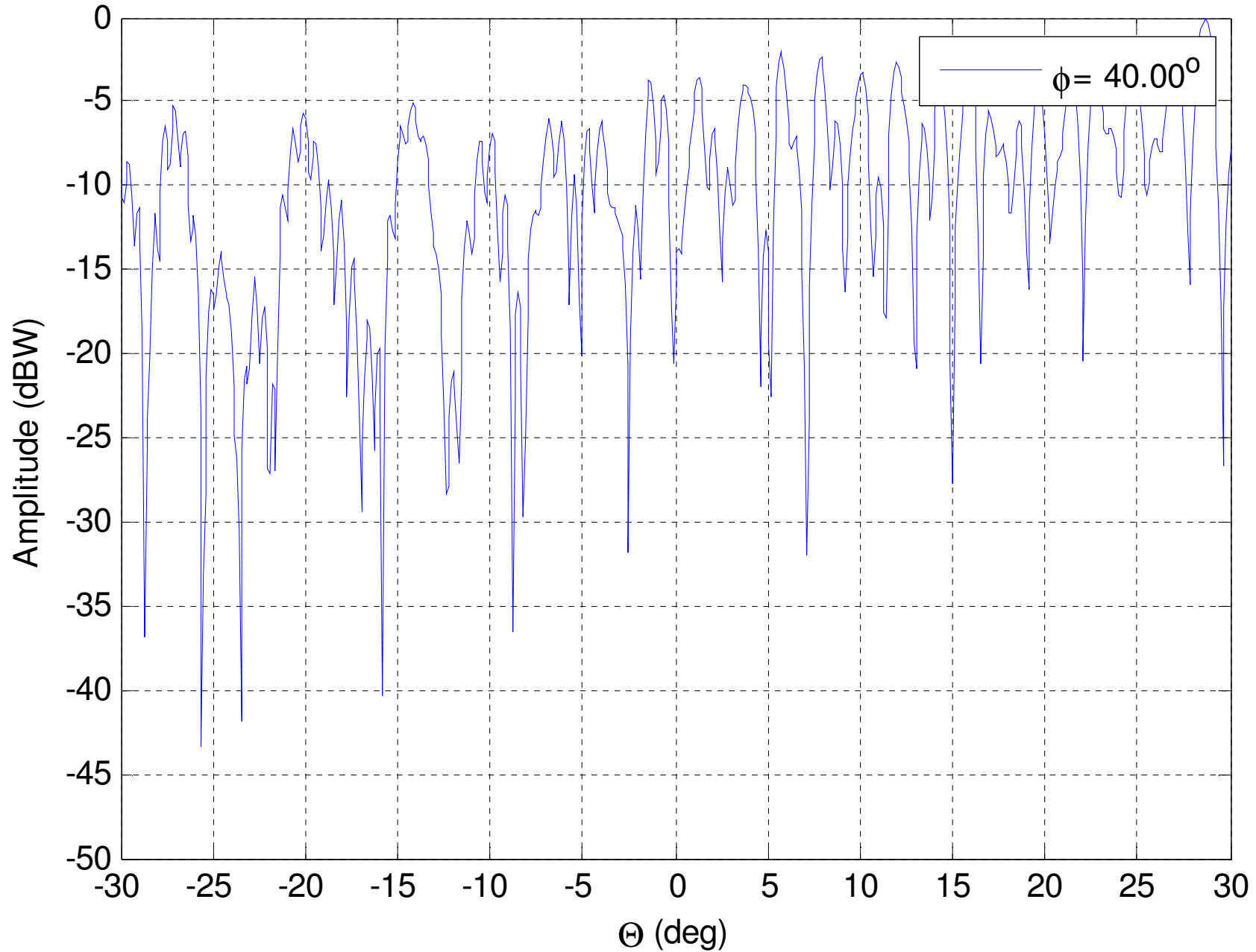
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -3.26 dBW, Date: 14-Dec-2011



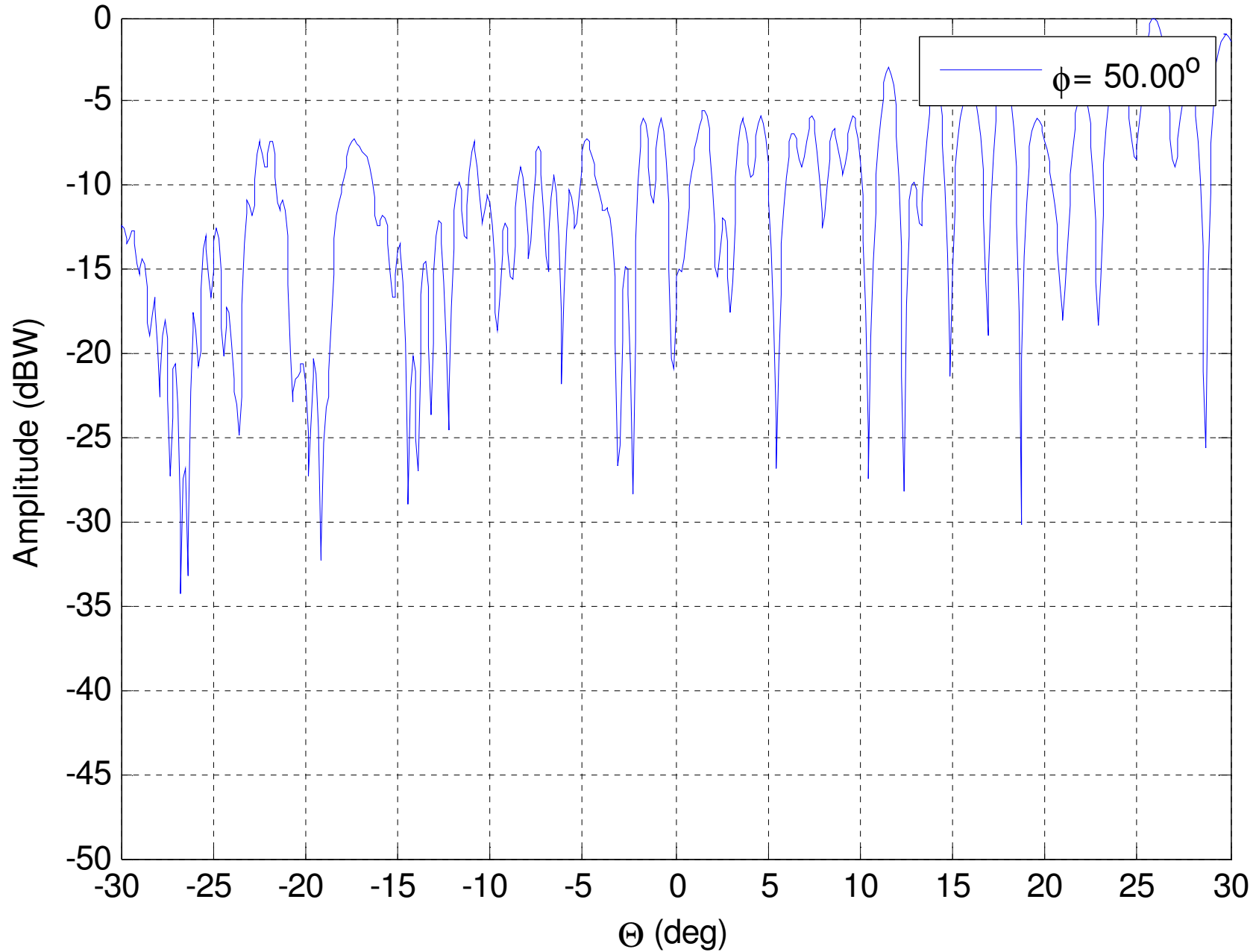
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.36 dBW, Date: 14-Dec-2011



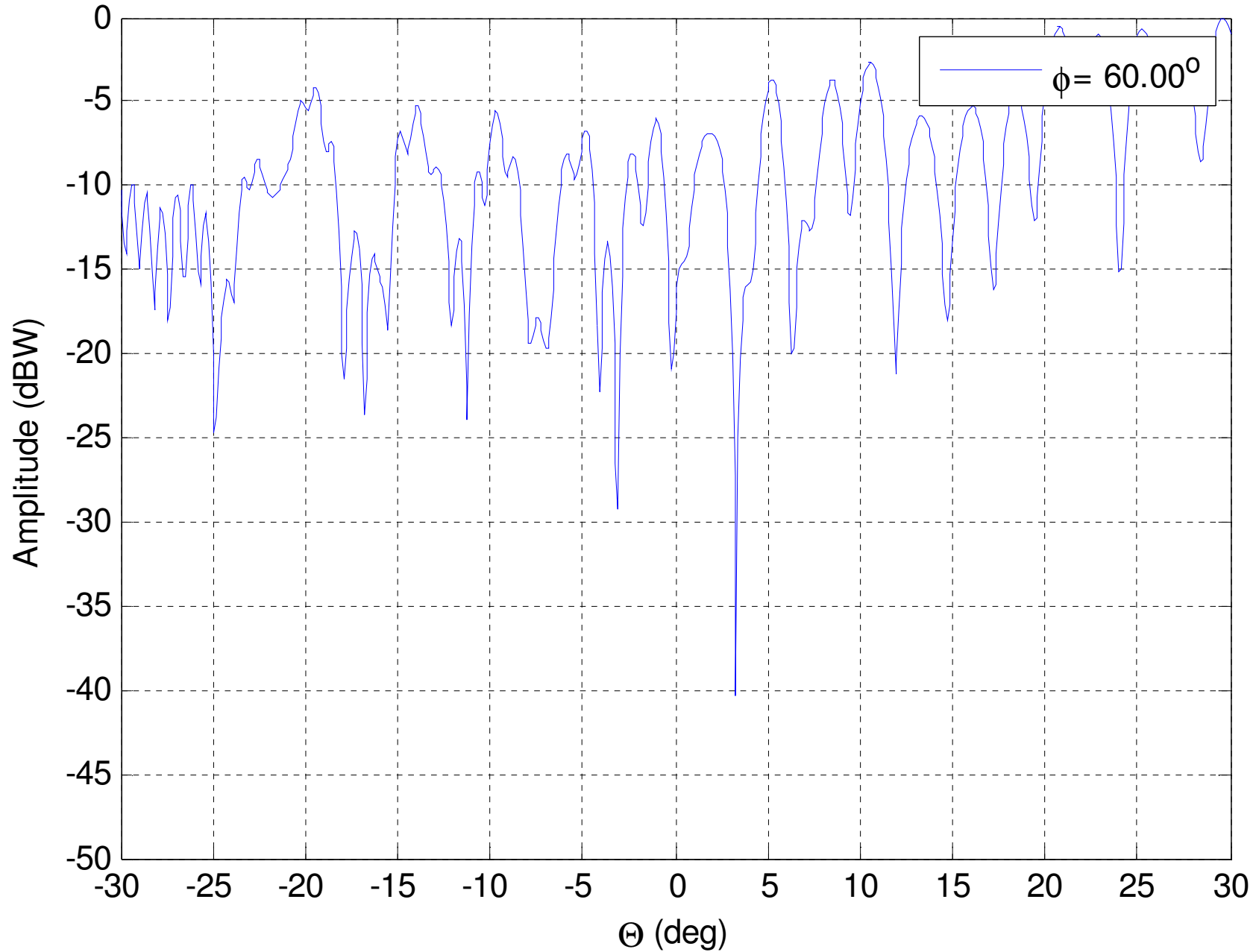
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.91 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

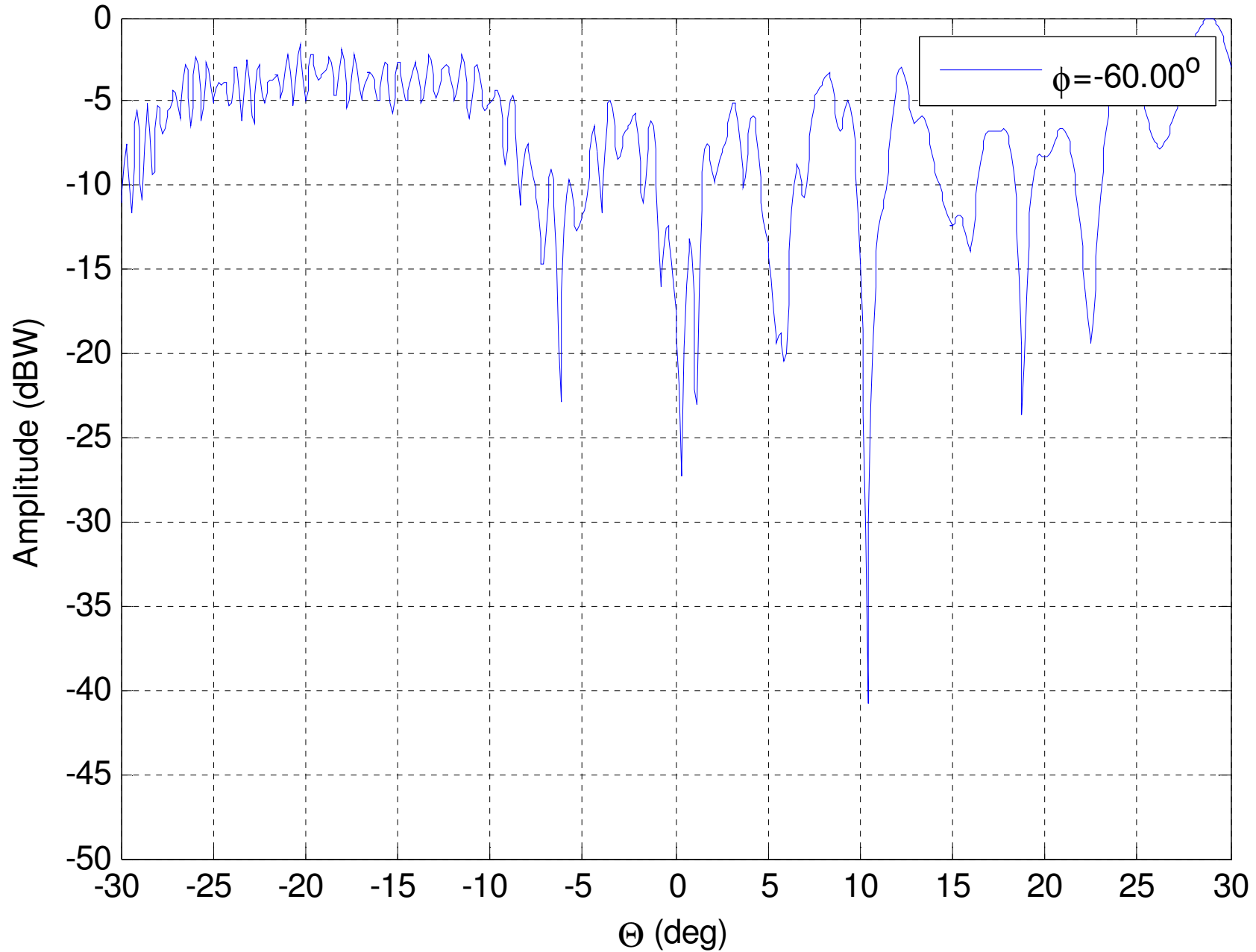
Input file: tx-17.5-lhcp-60.cut, Peak: -5.69 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

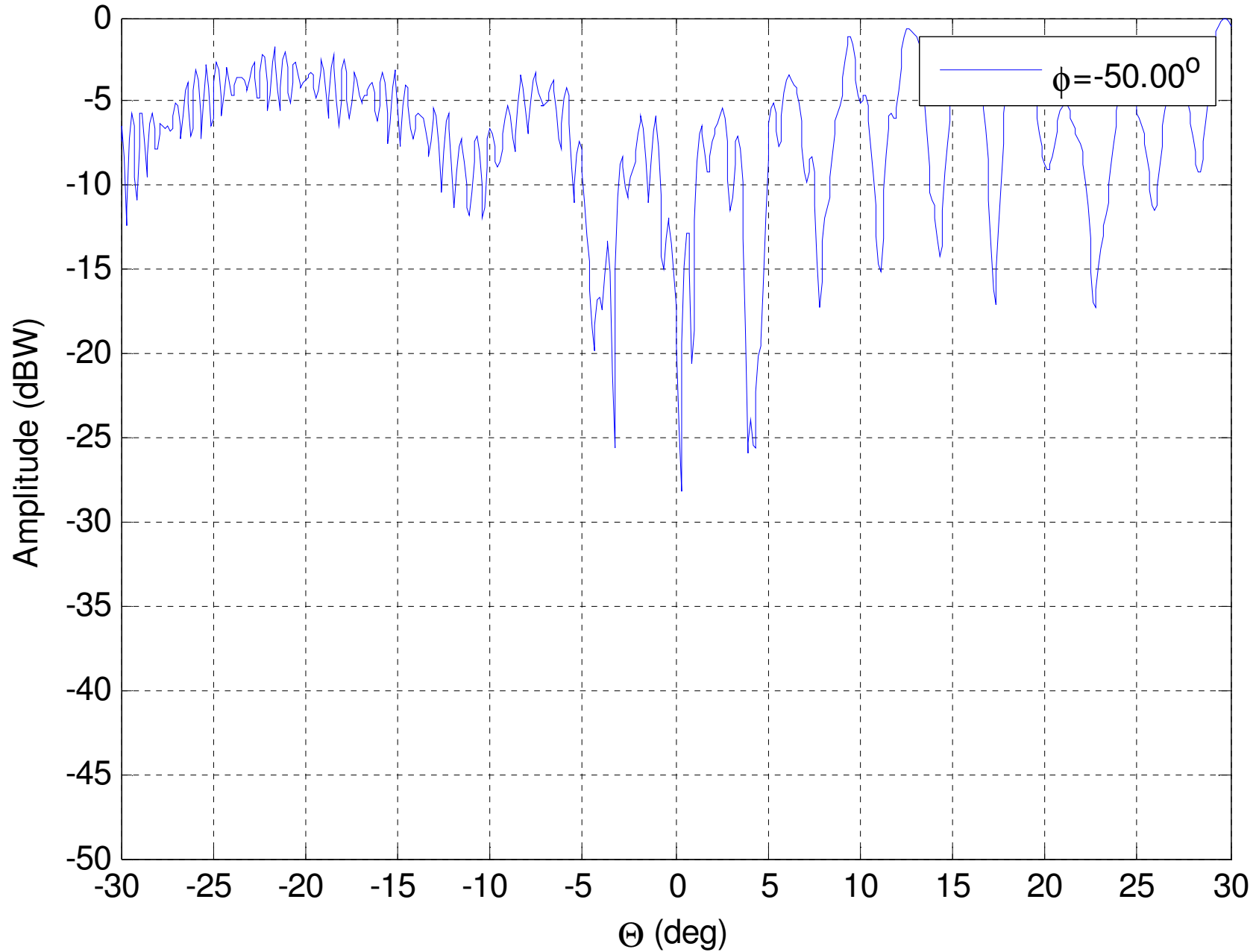
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.68 dBW, Date: 14-Dec-2011



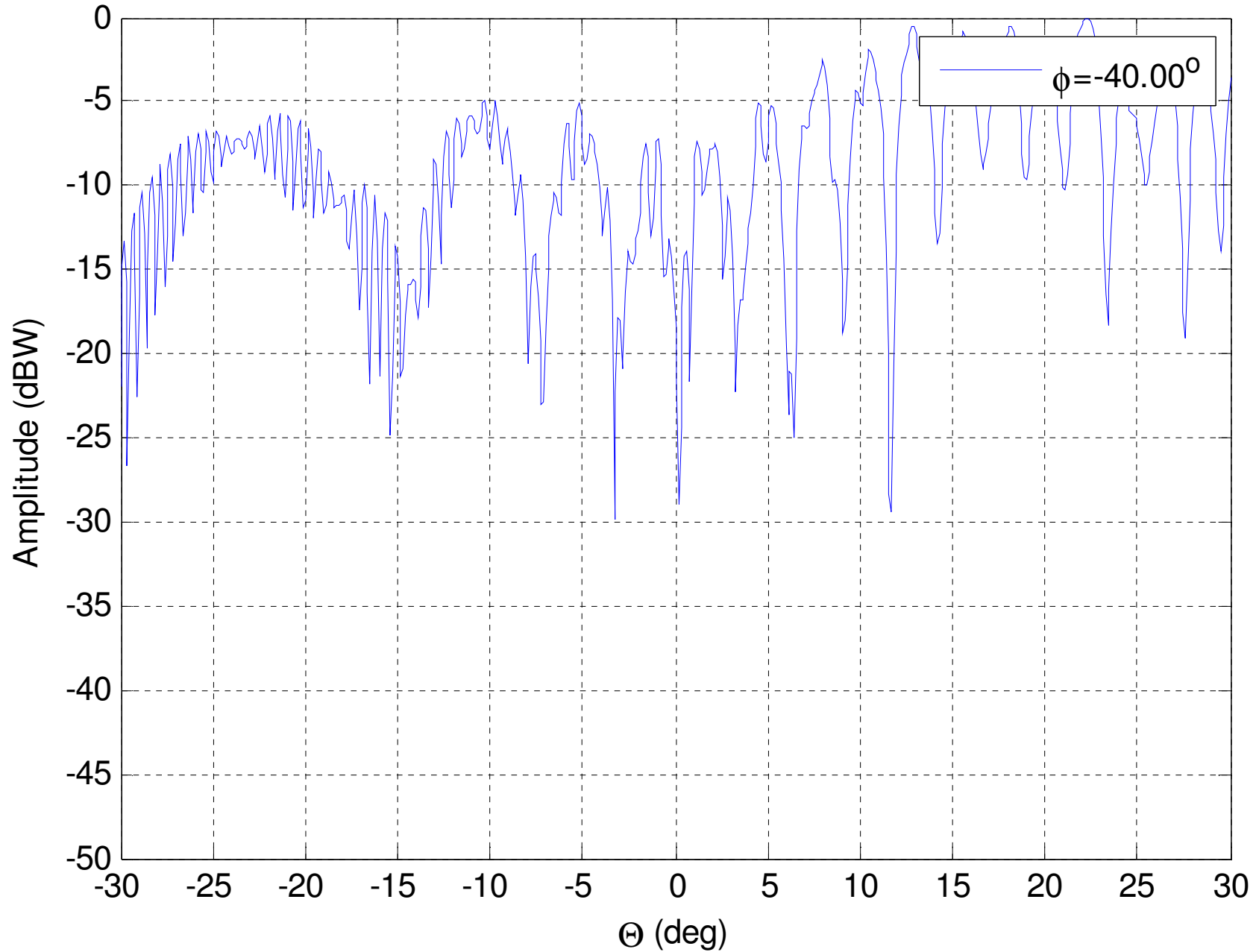
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -5.96 dBW, Date: 14-Dec-2011



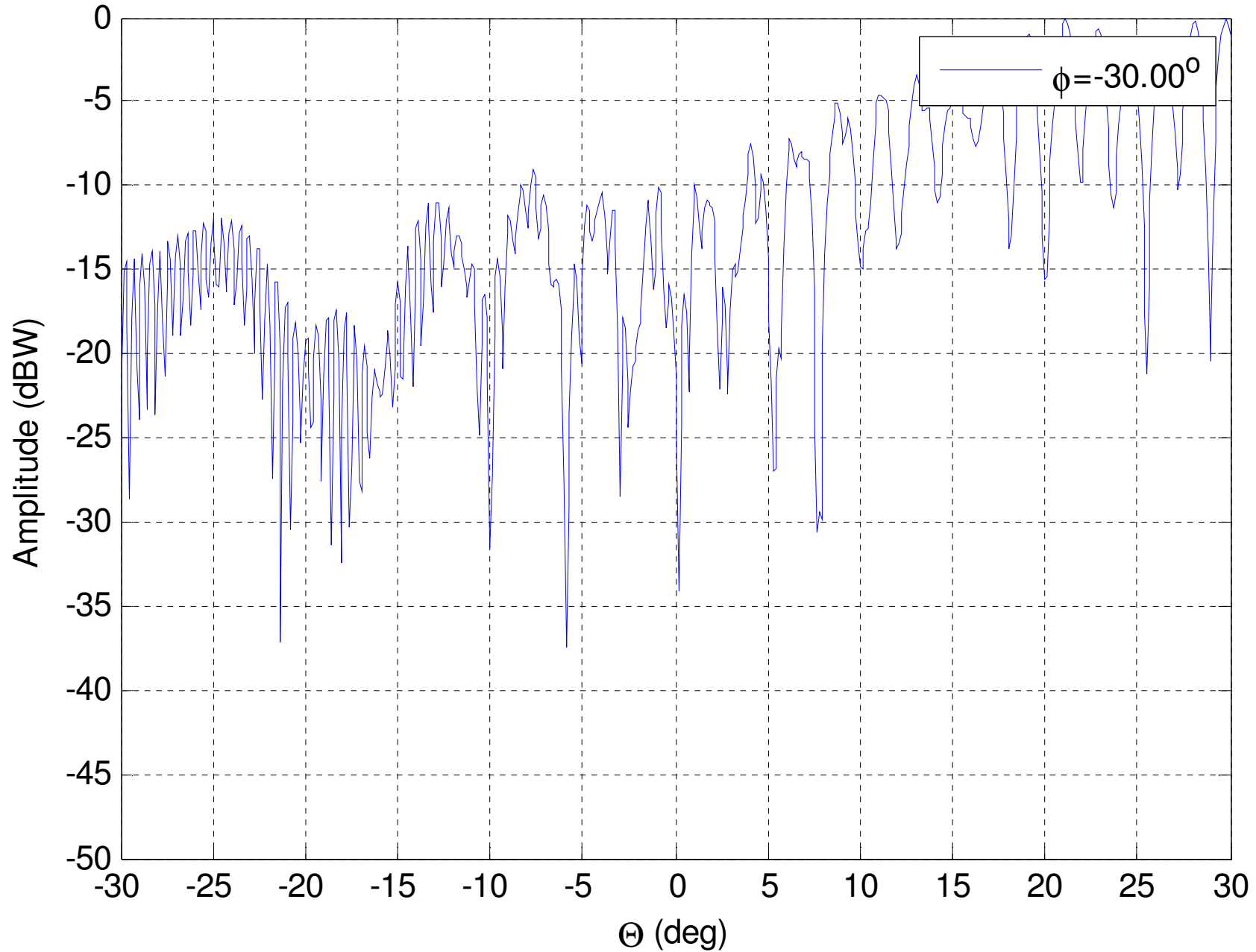
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.67 dBW, Date: 14-Dec-2011



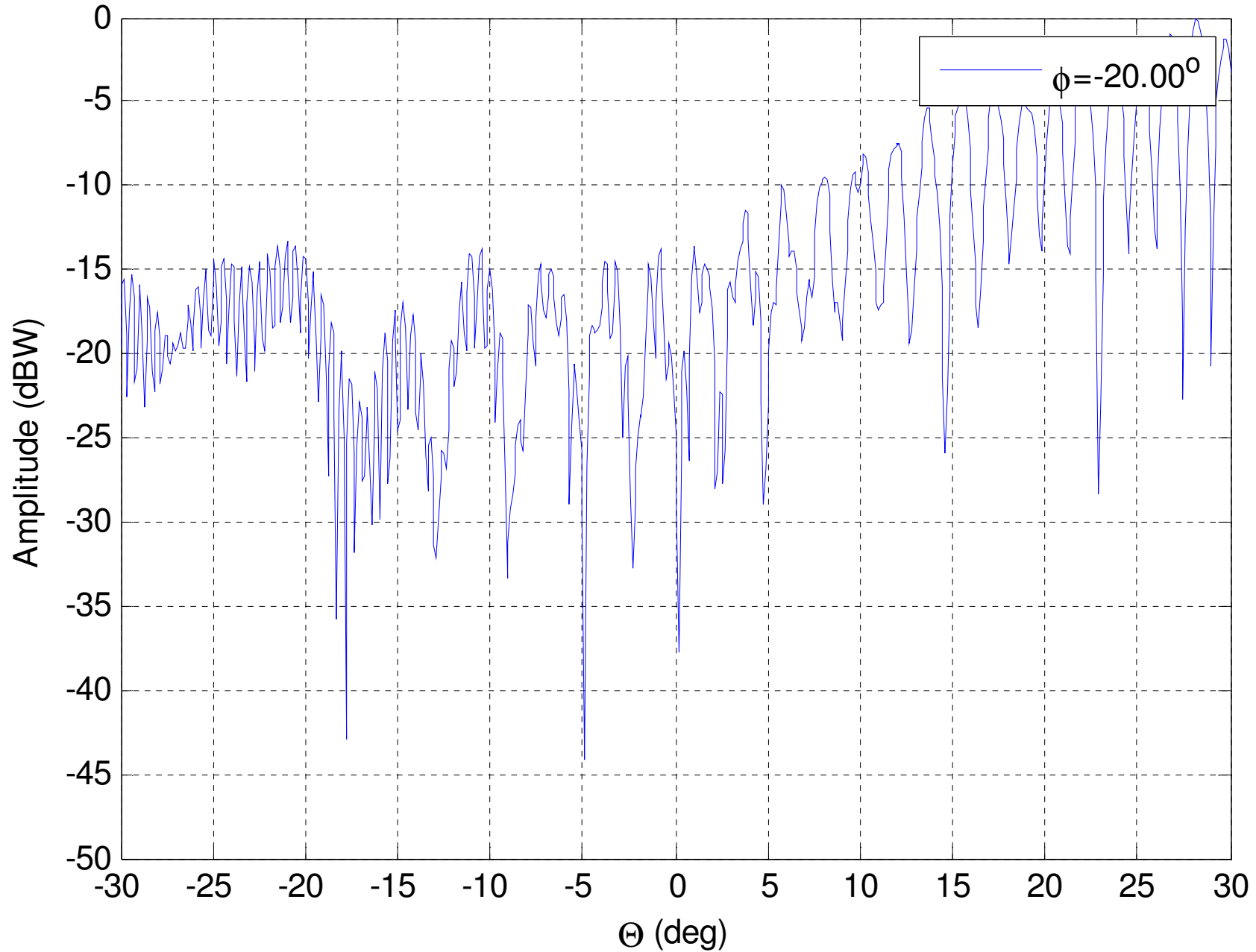
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -1.79 dBW, Date: 14-Dec-2011



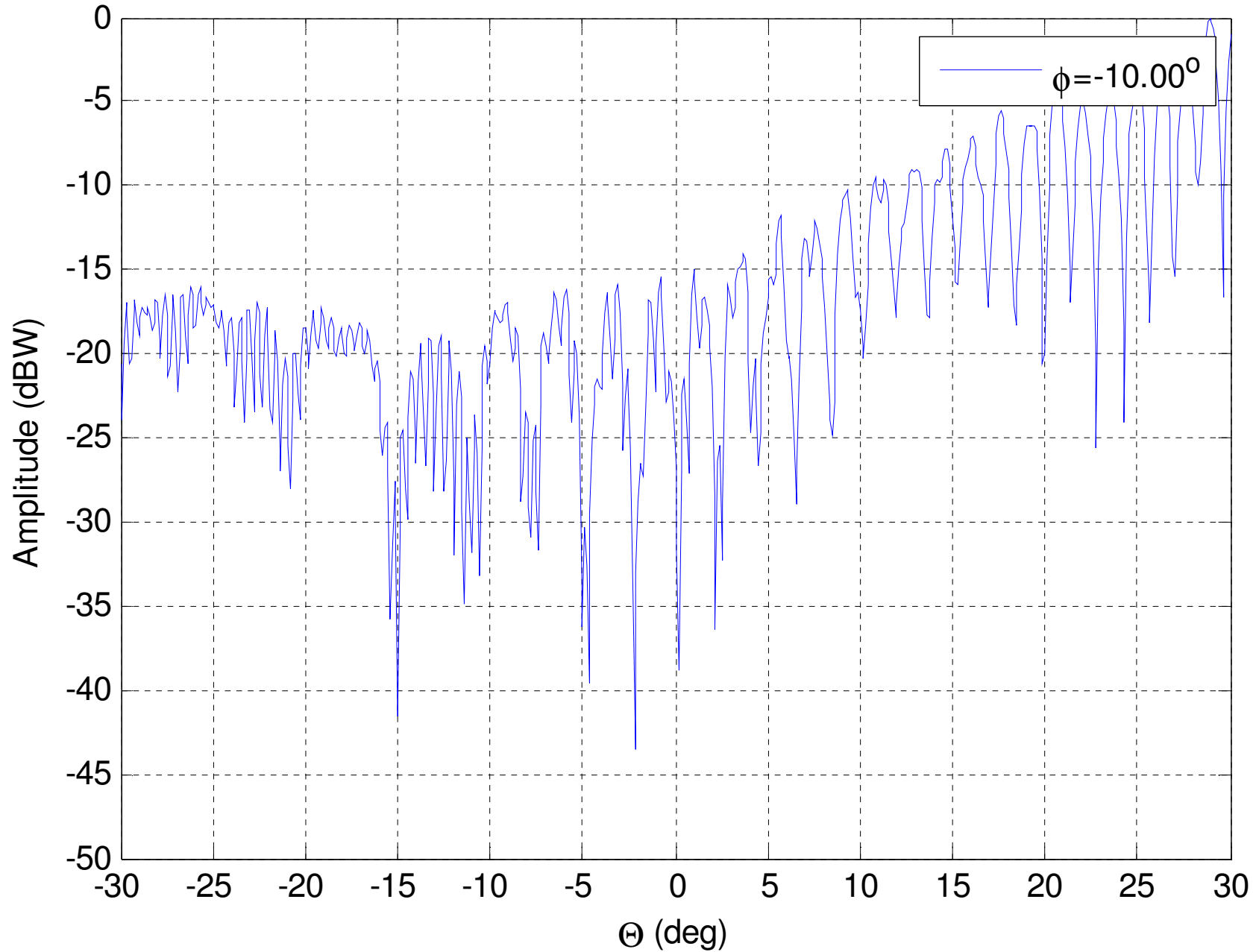
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 1.84 dBW, Date: 14-Dec-2011



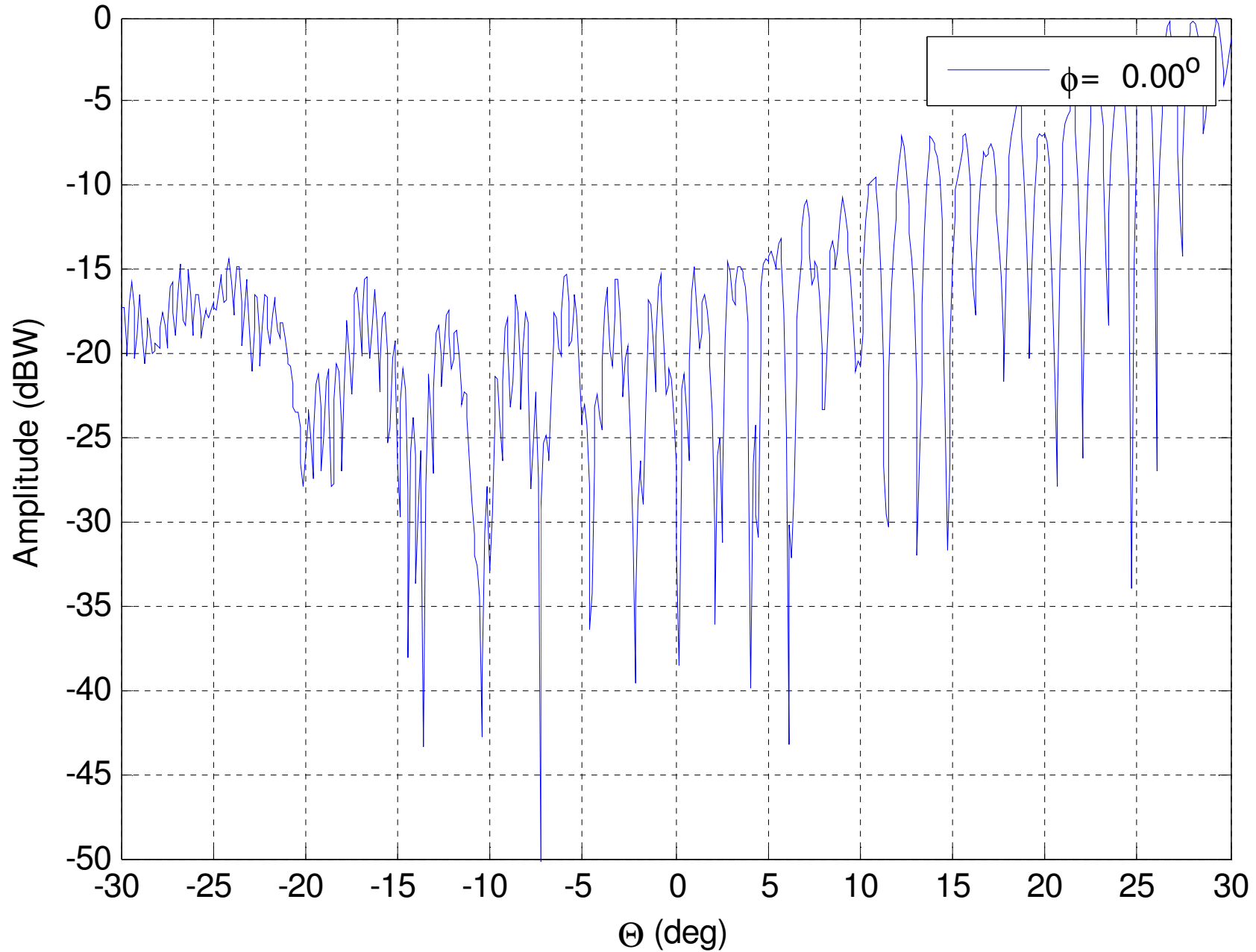
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 3.61 dBW, Date: 14-Dec-2011



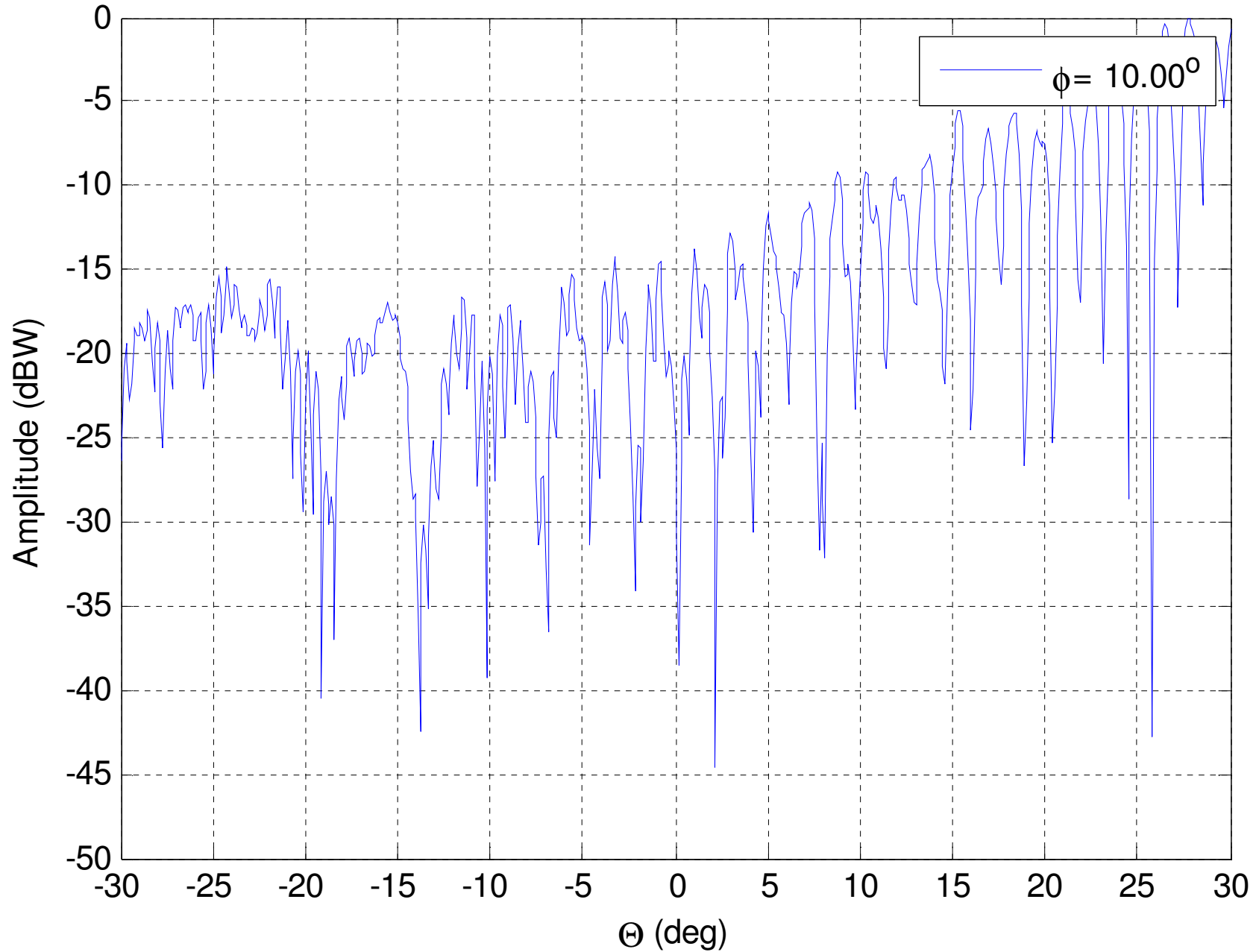
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 3.46 dBW, Date: 14-Dec-2011



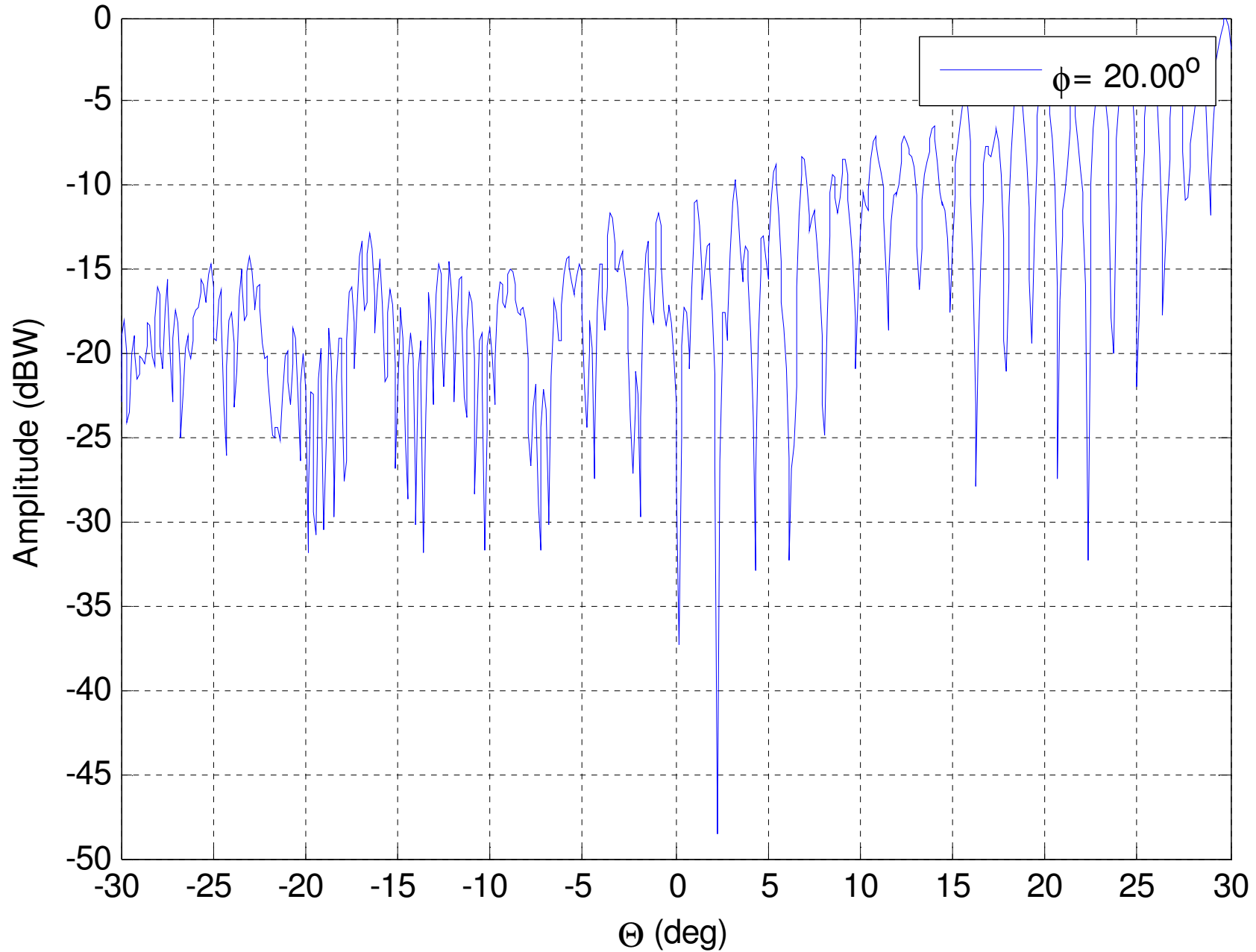
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 2.59 dBW, Date: 14-Dec-2011



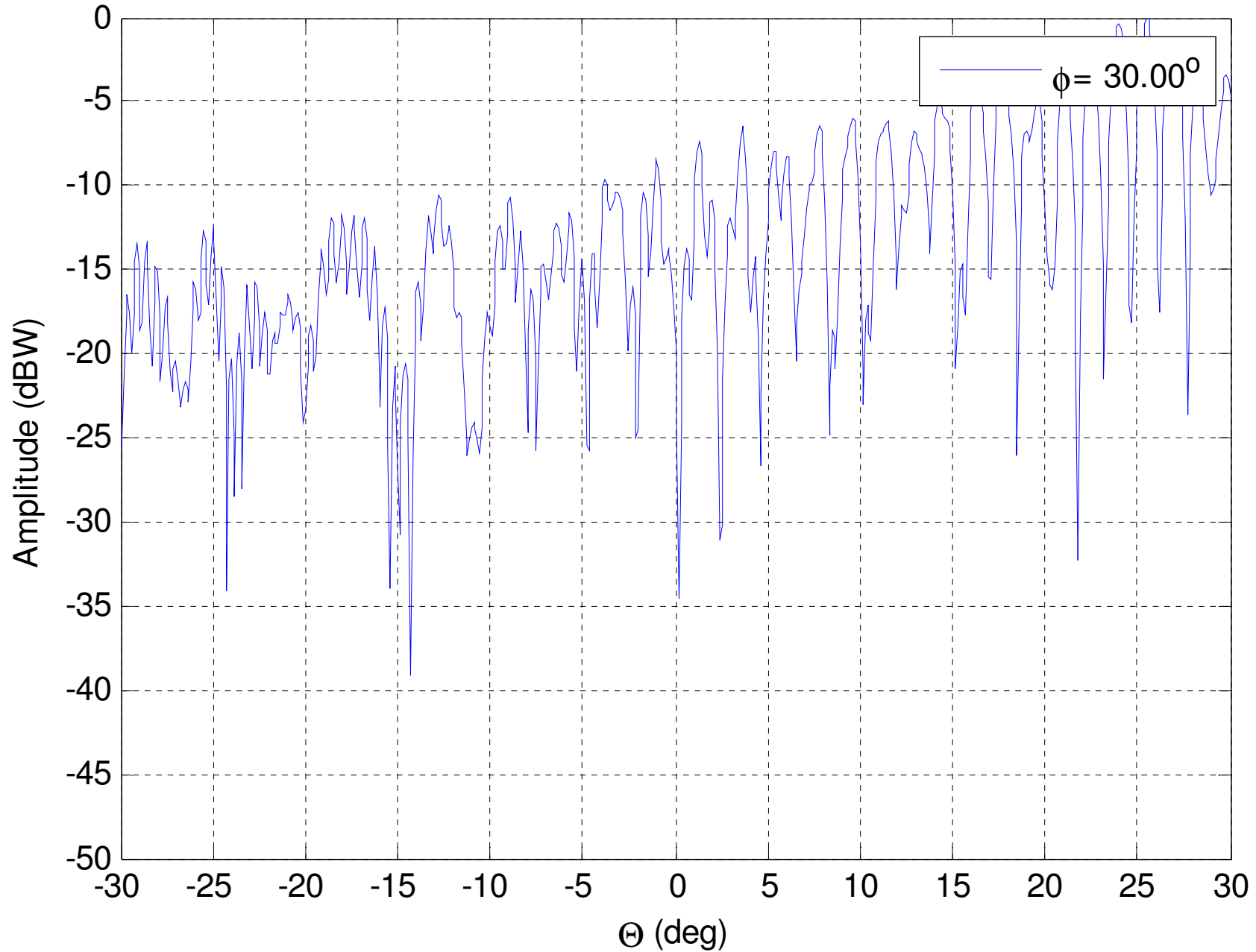
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -0.15 dBW, Date: 14-Dec-2011



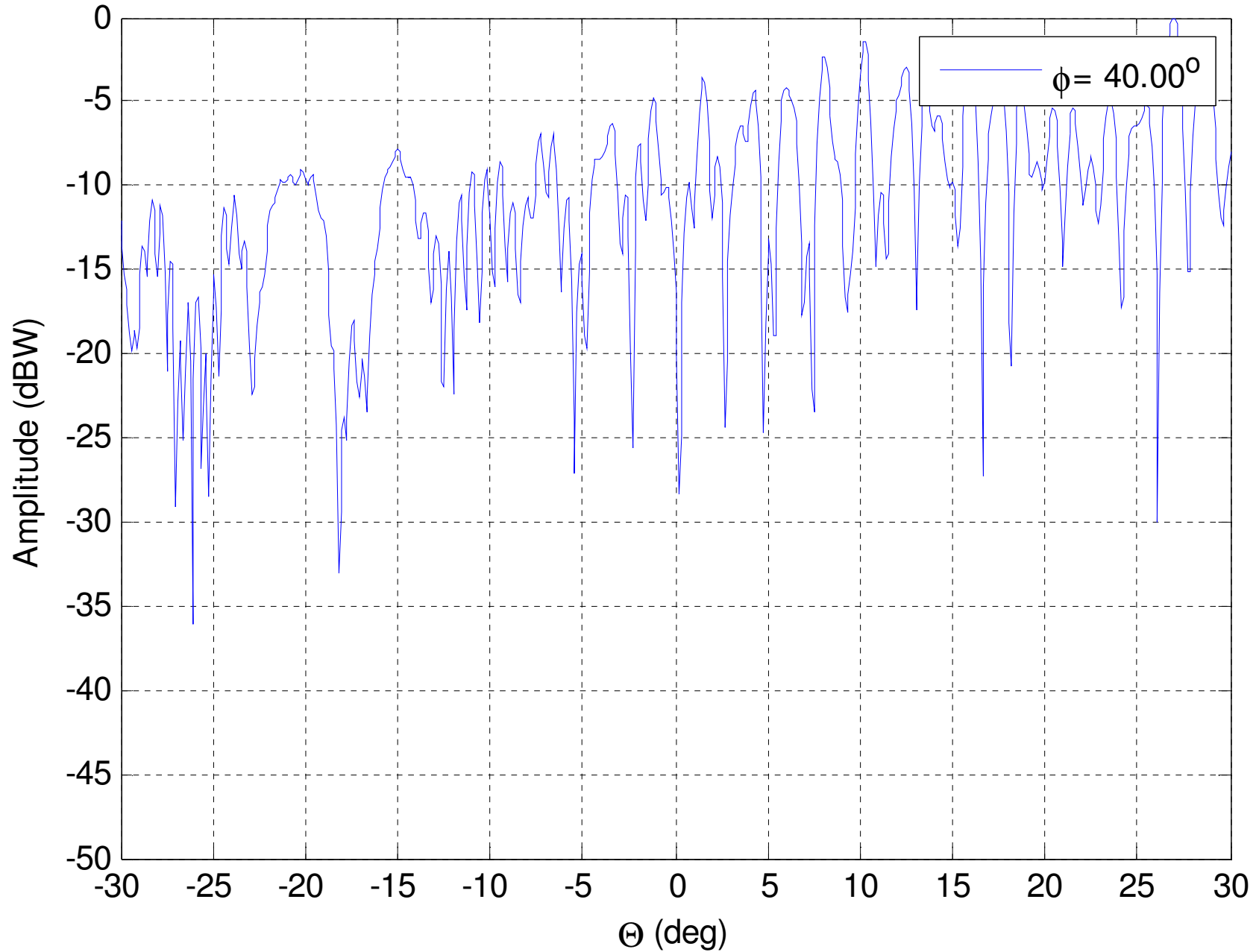
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -3.30 dBW, Date: 14-Dec-2011



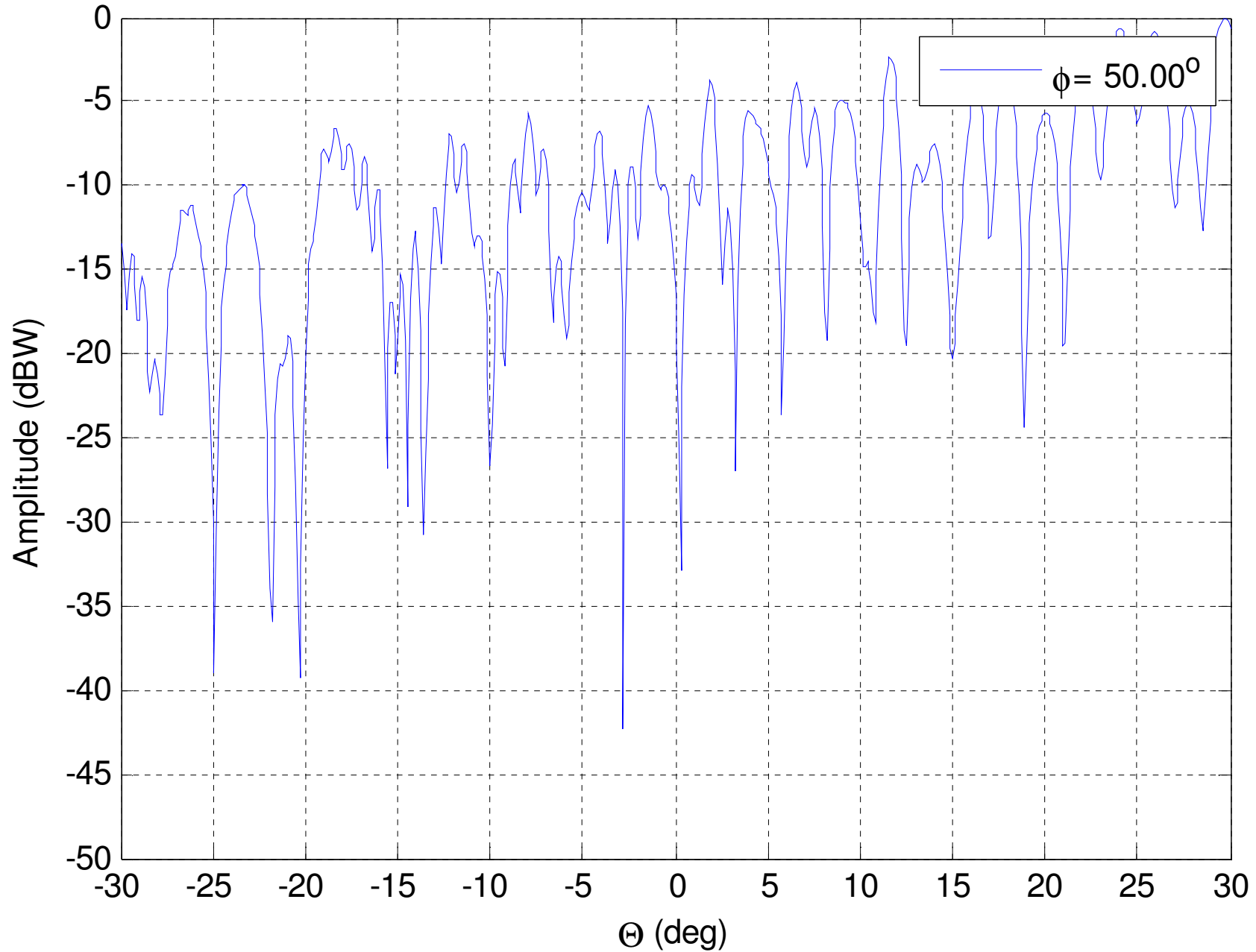
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.87 dBW, Date: 14-Dec-2011



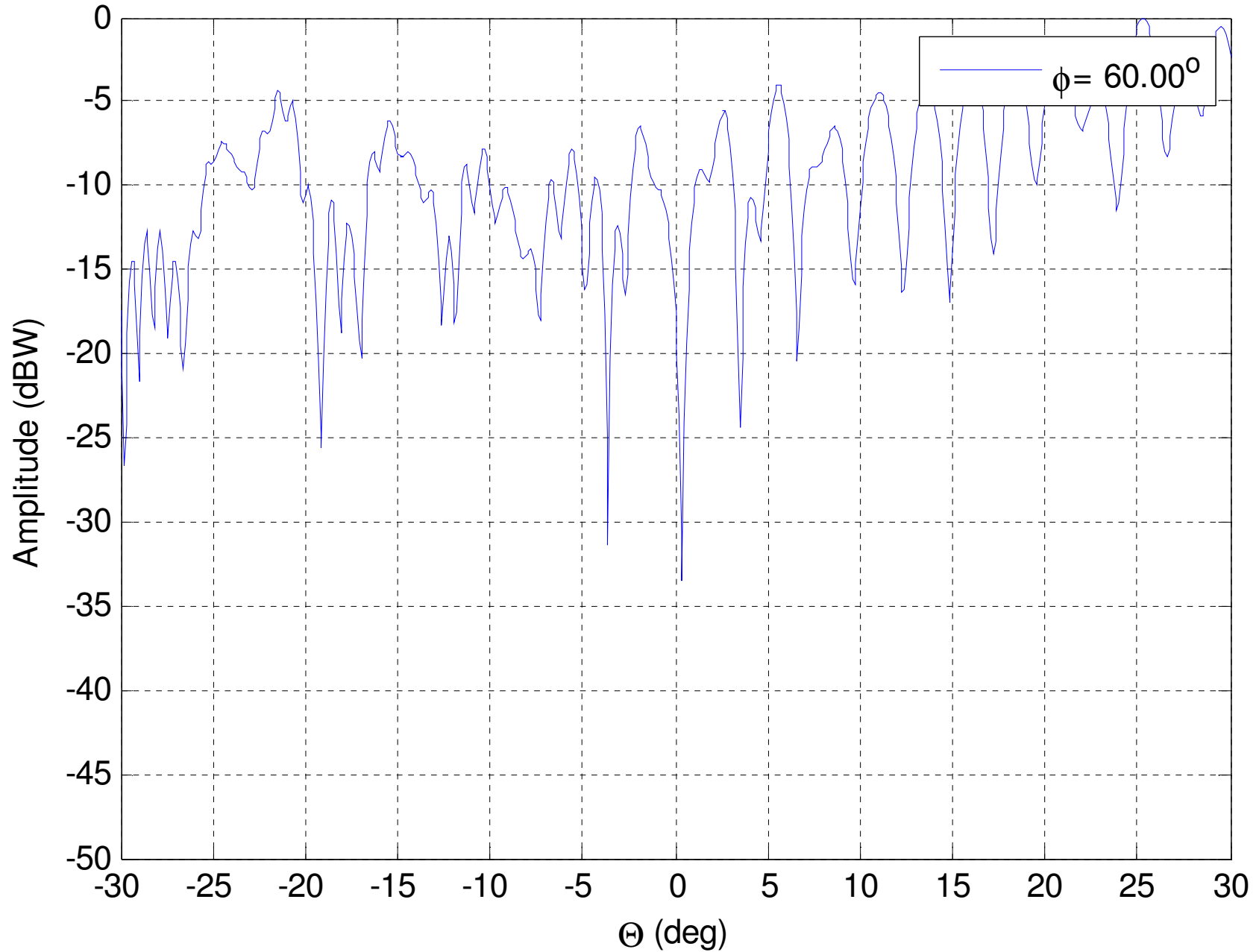
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -6.58 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

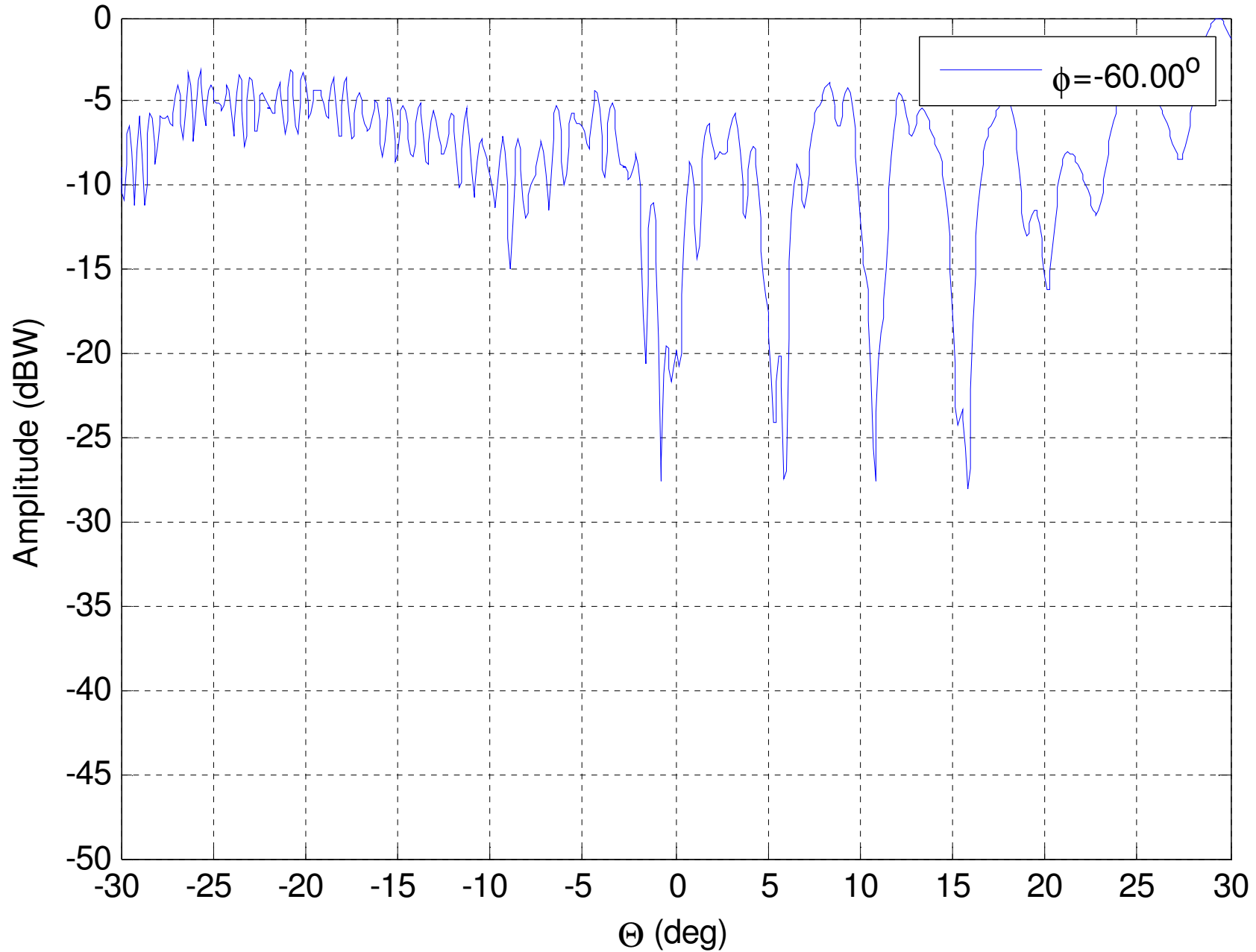
Input file: tx-17.7-rhcp-60.cut, Peak: -5.67 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

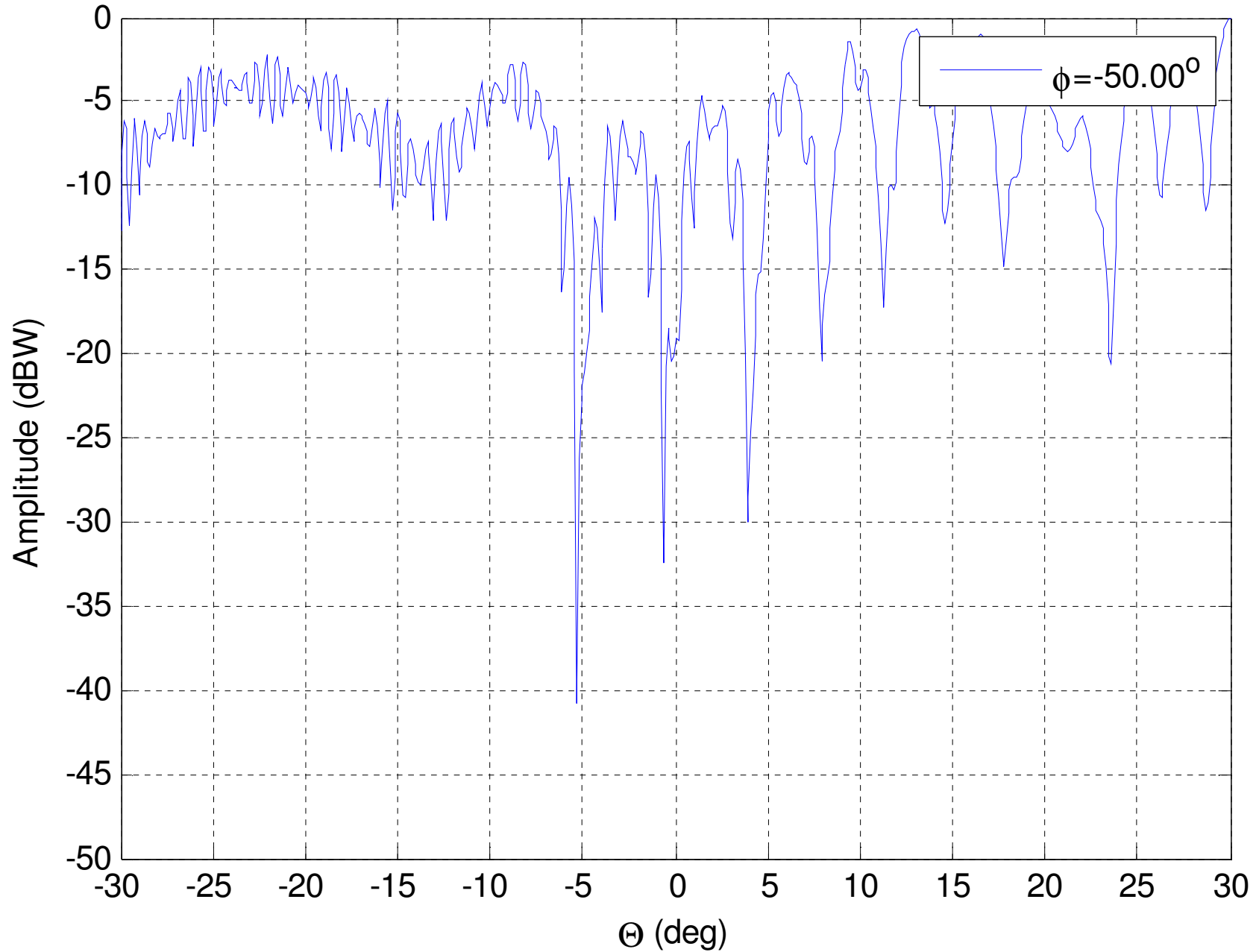
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.12 dBW, Date: 14-Dec-2011



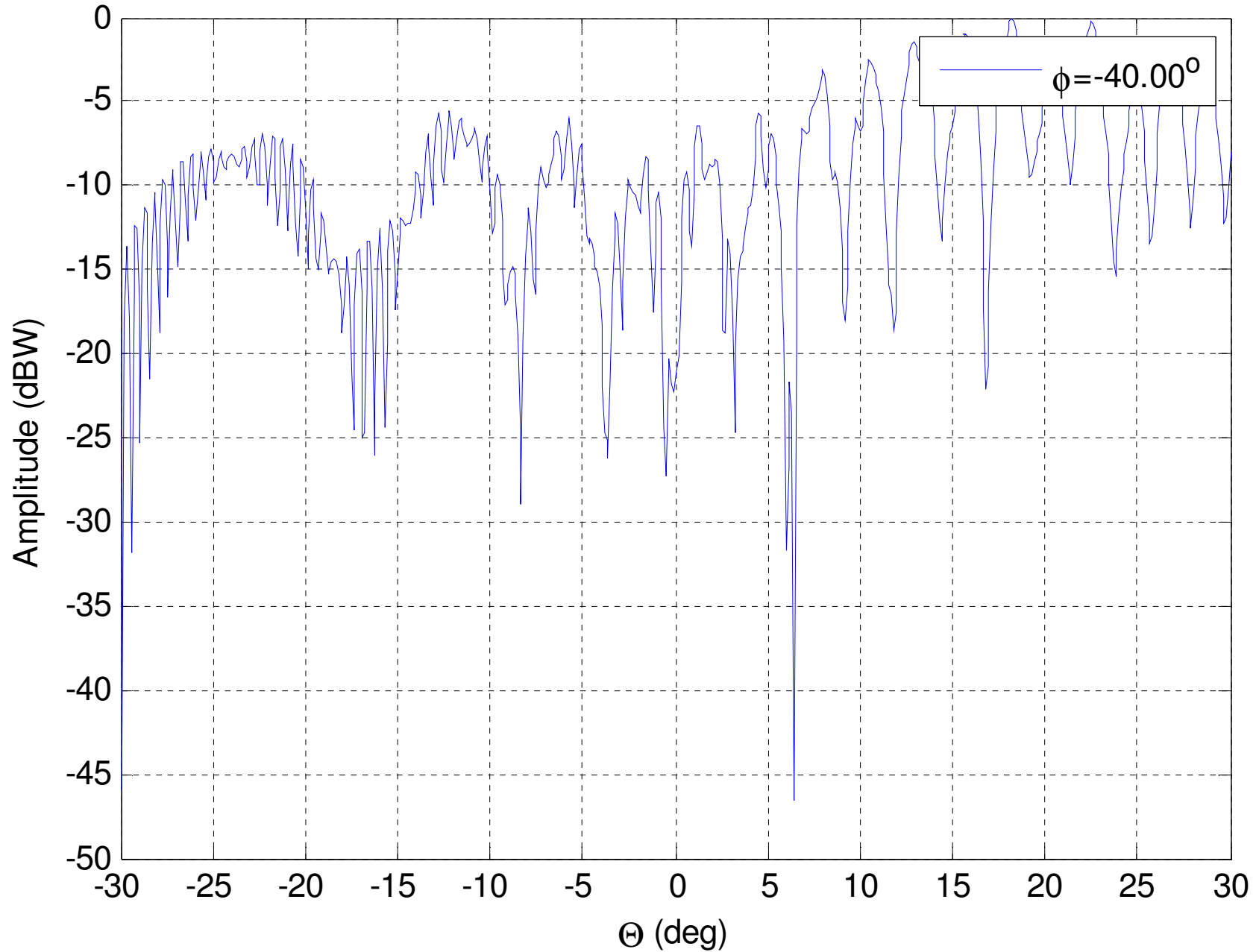
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -5.94 dBW, Date: 14-Dec-2011



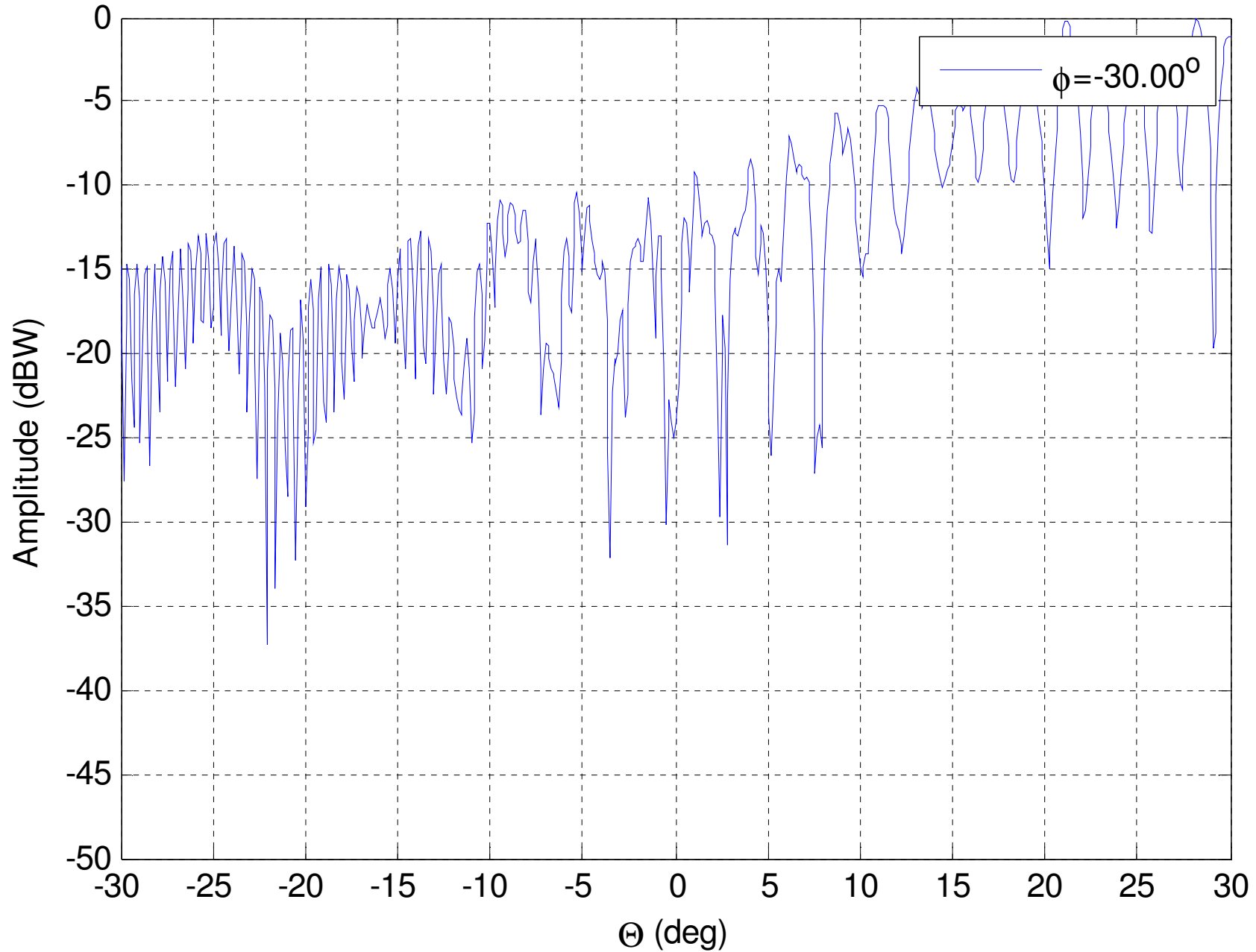
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -3.94 dBW, Date: 14-Dec-2011



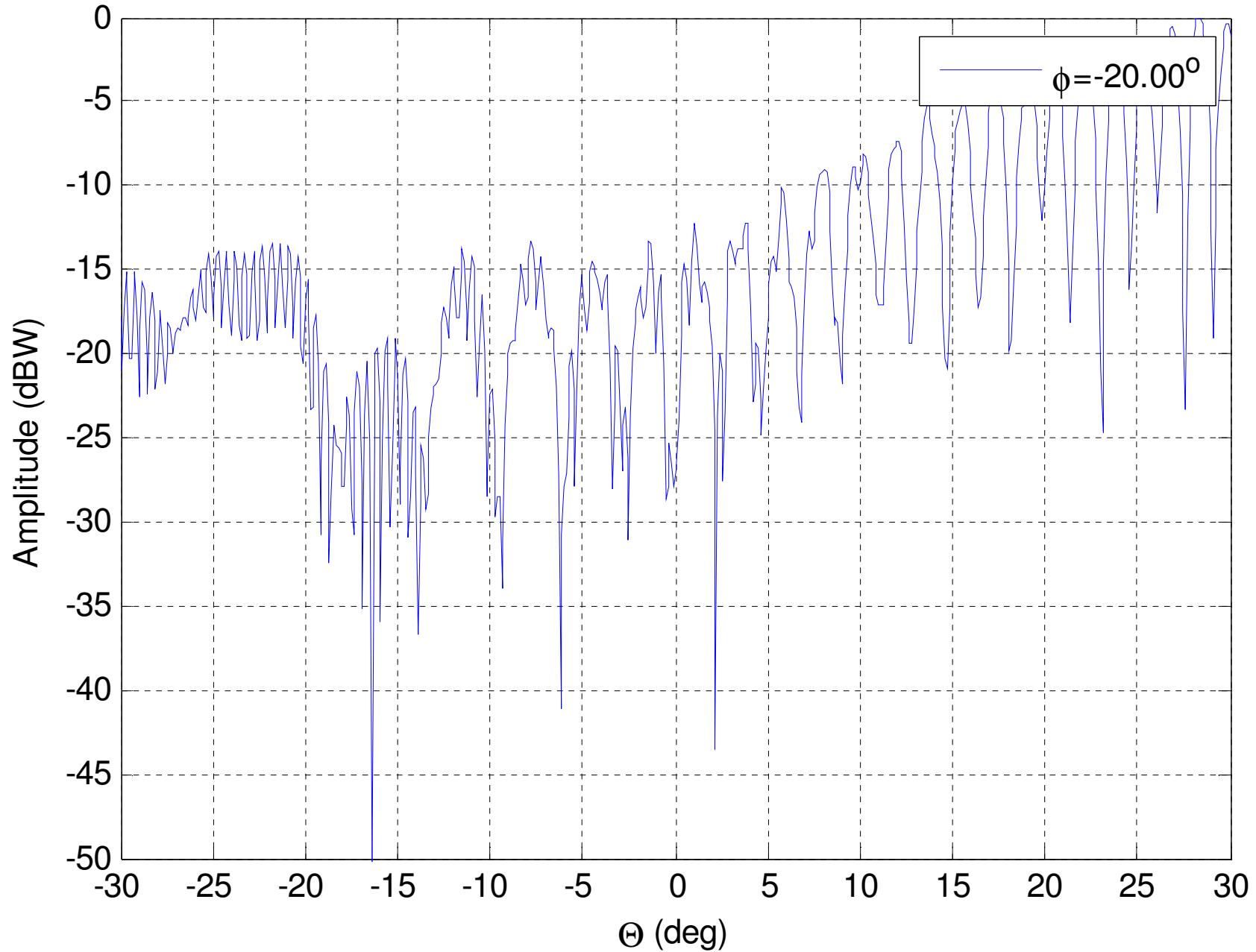
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -1.07 dBW, Date: 14-Dec-2011



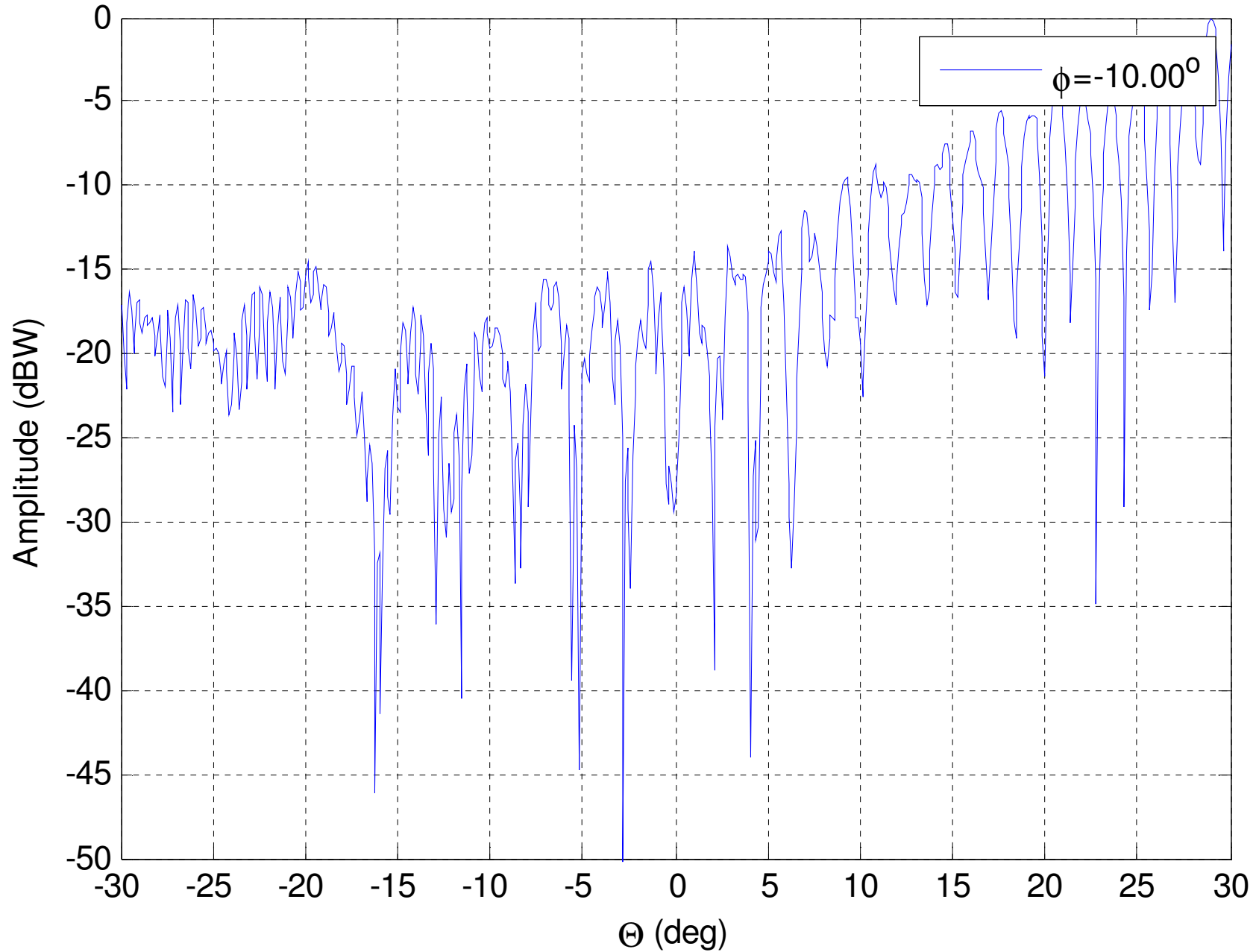
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 1.85 dBW, Date: 14-Dec-2011



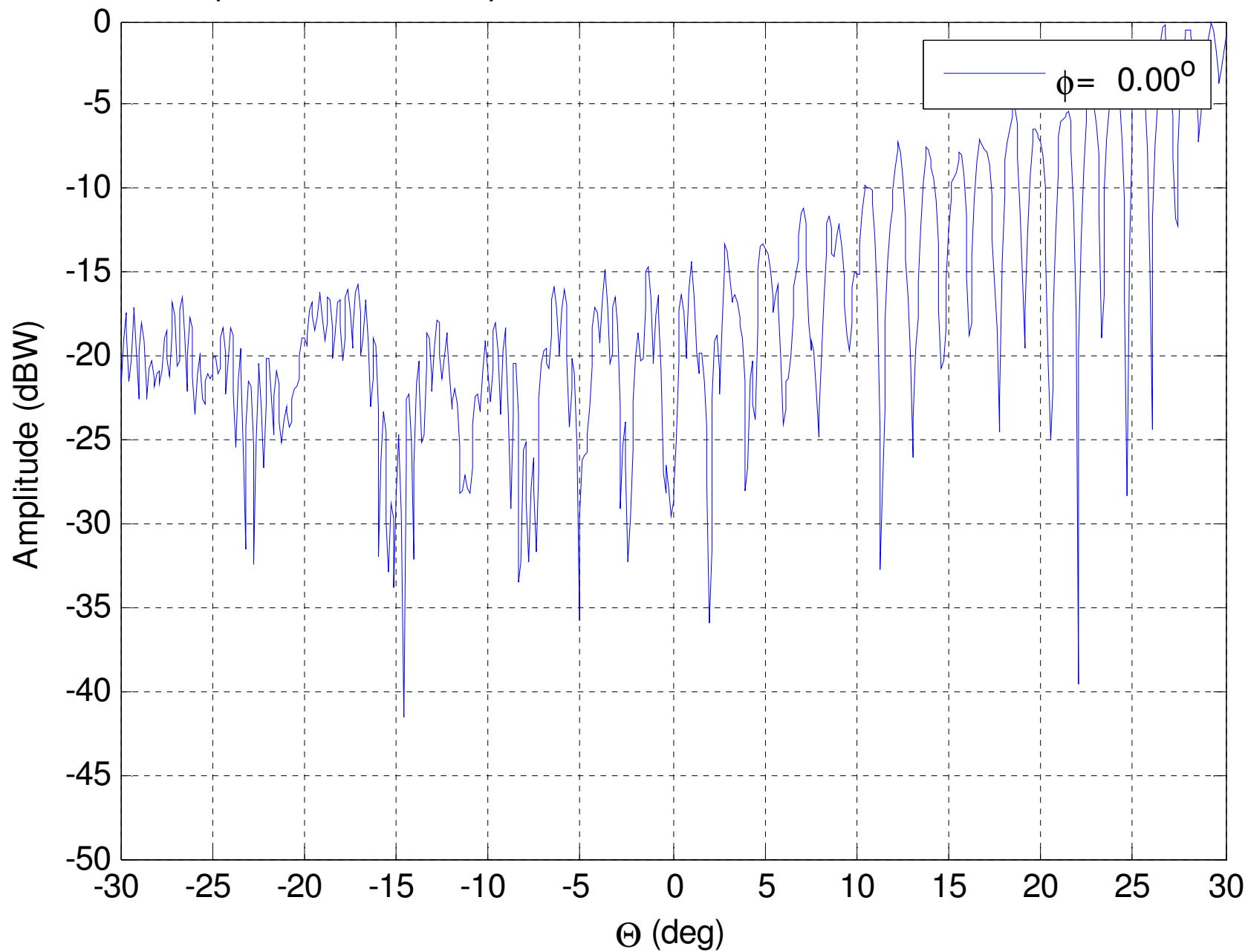
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 3.41 dBW, Date: 14-Dec-2011



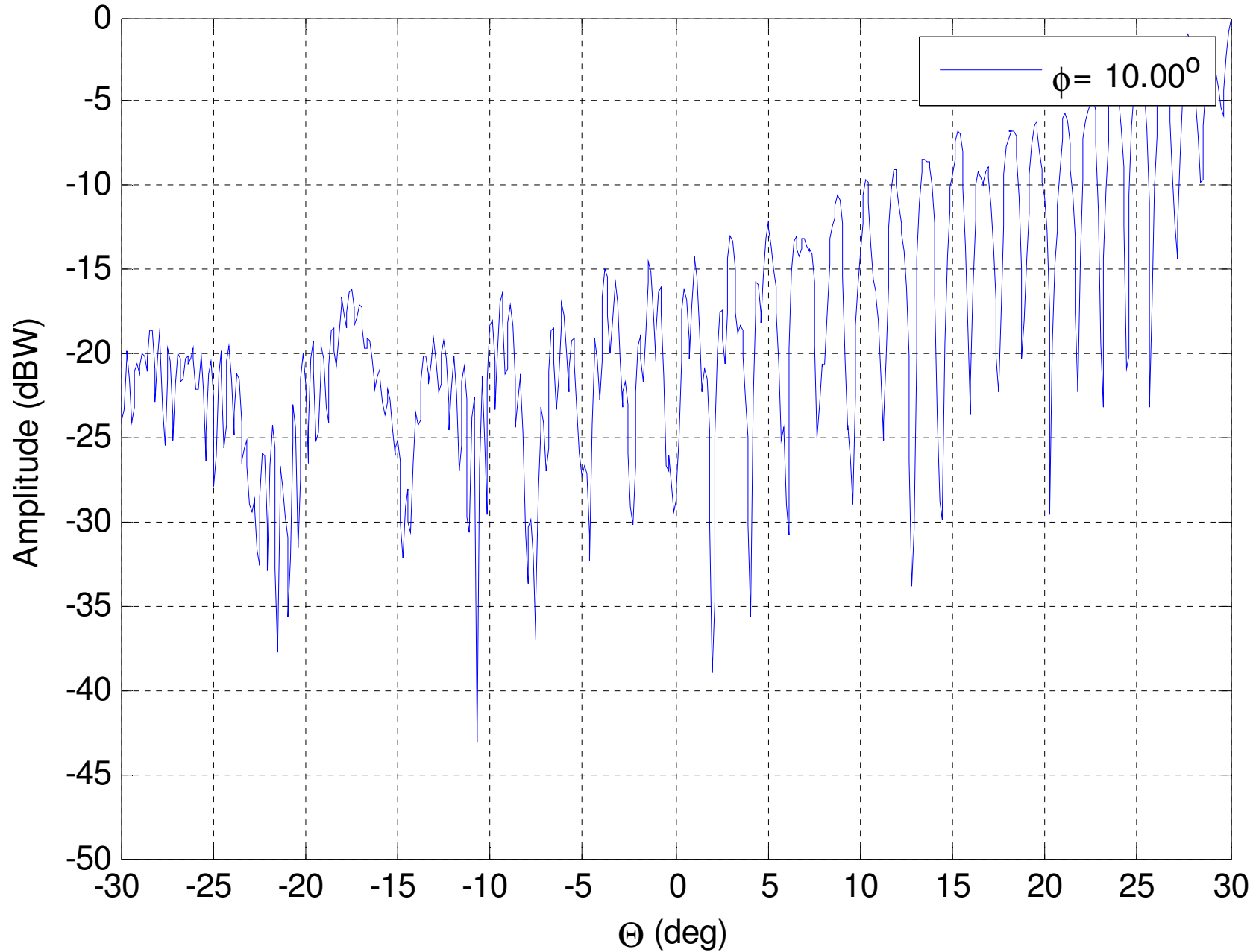
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 3.70 dBW, Date: 14-Dec-2011



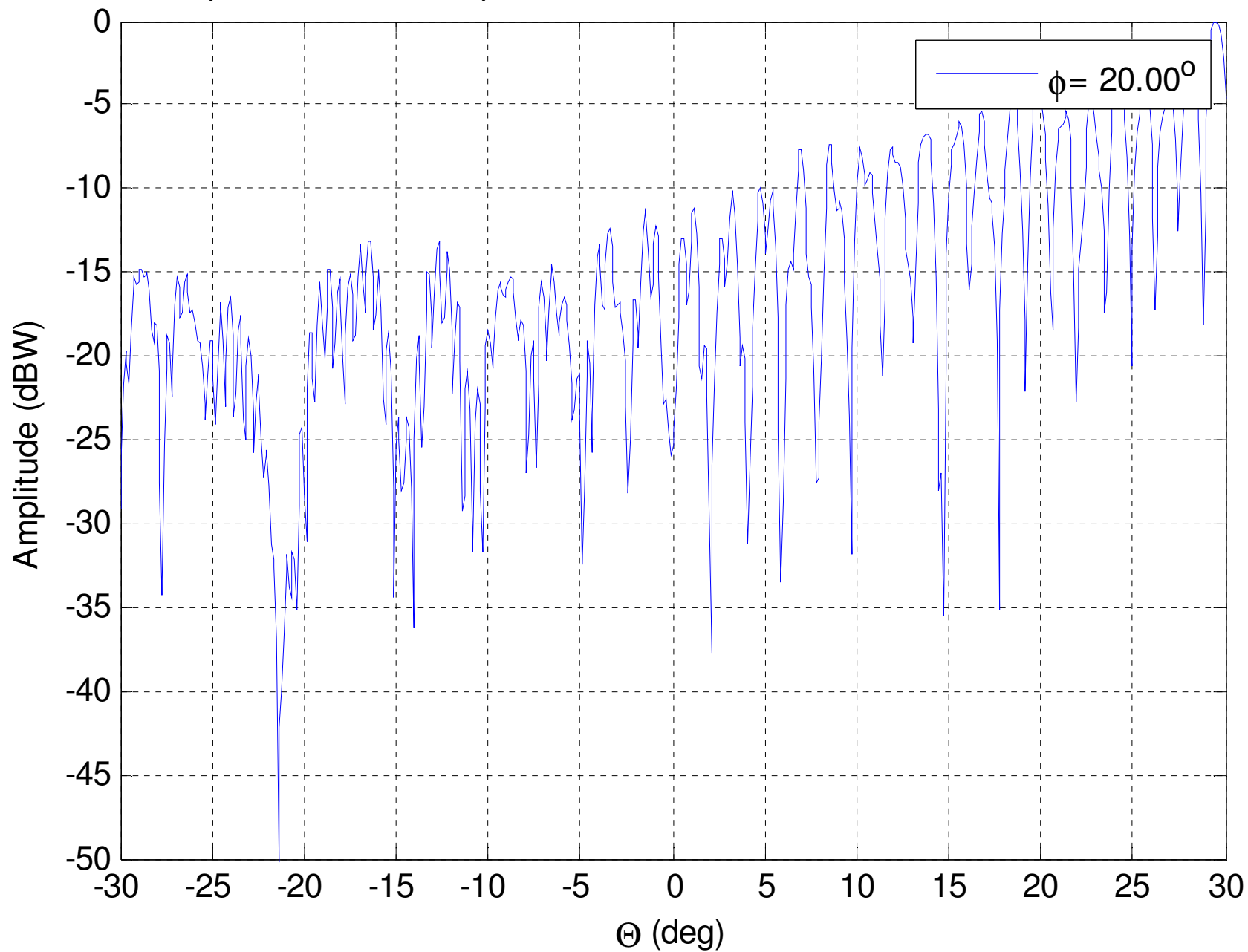
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 3.61 dBW, Date: 14-Dec-2011



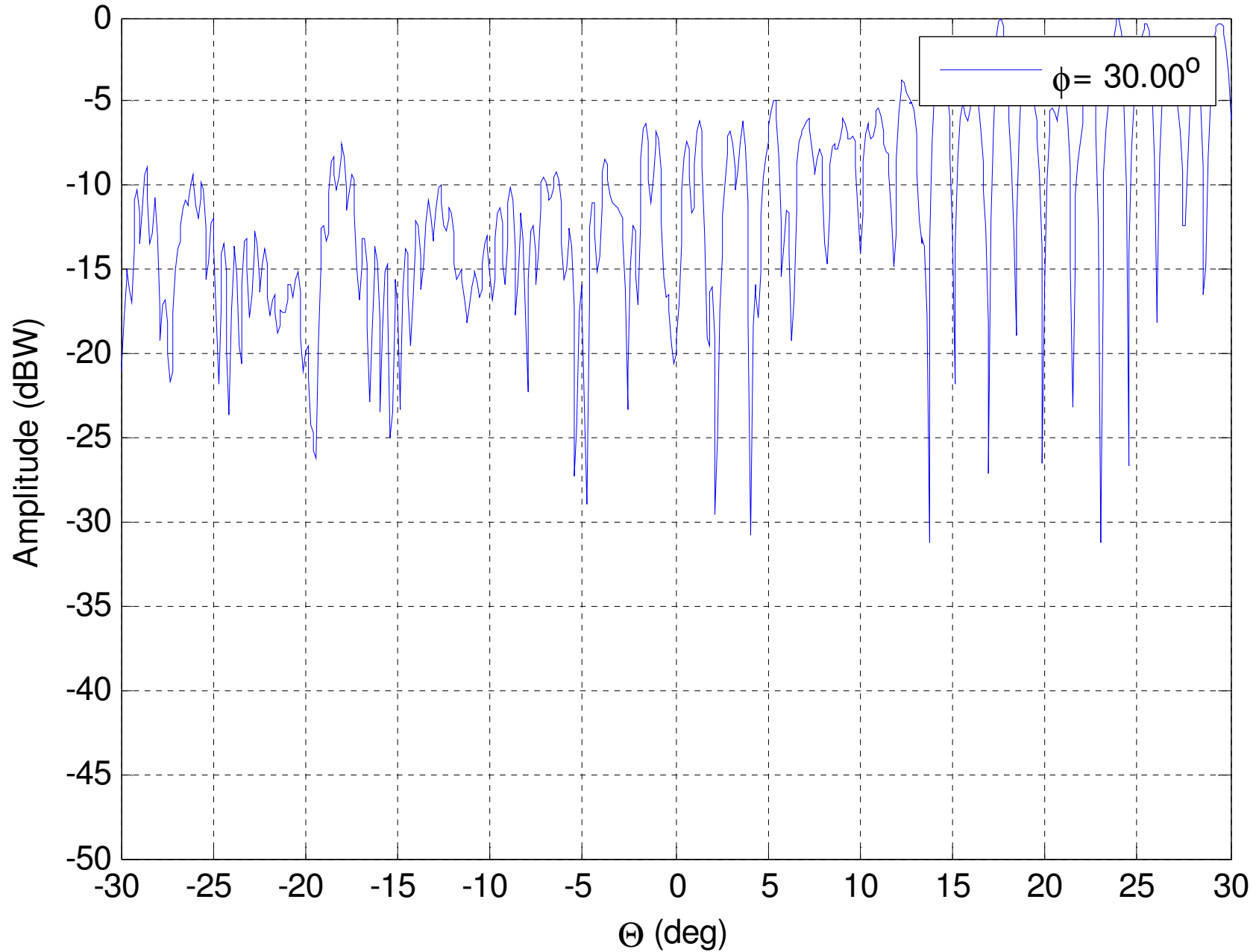
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 0.28 dBW, Date: 14-Dec-2011



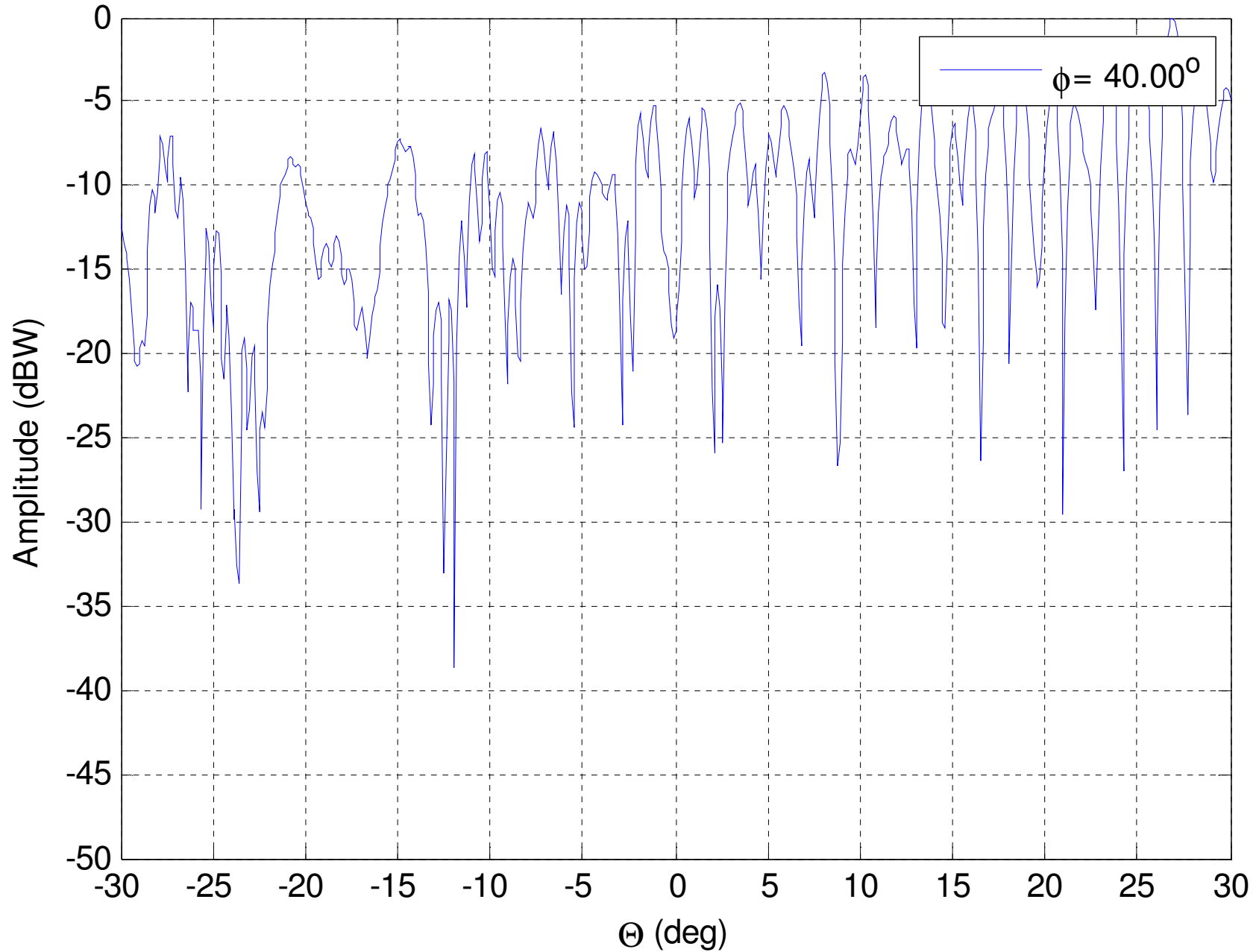
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -4.97 dBW, Date: 14-Dec-2011



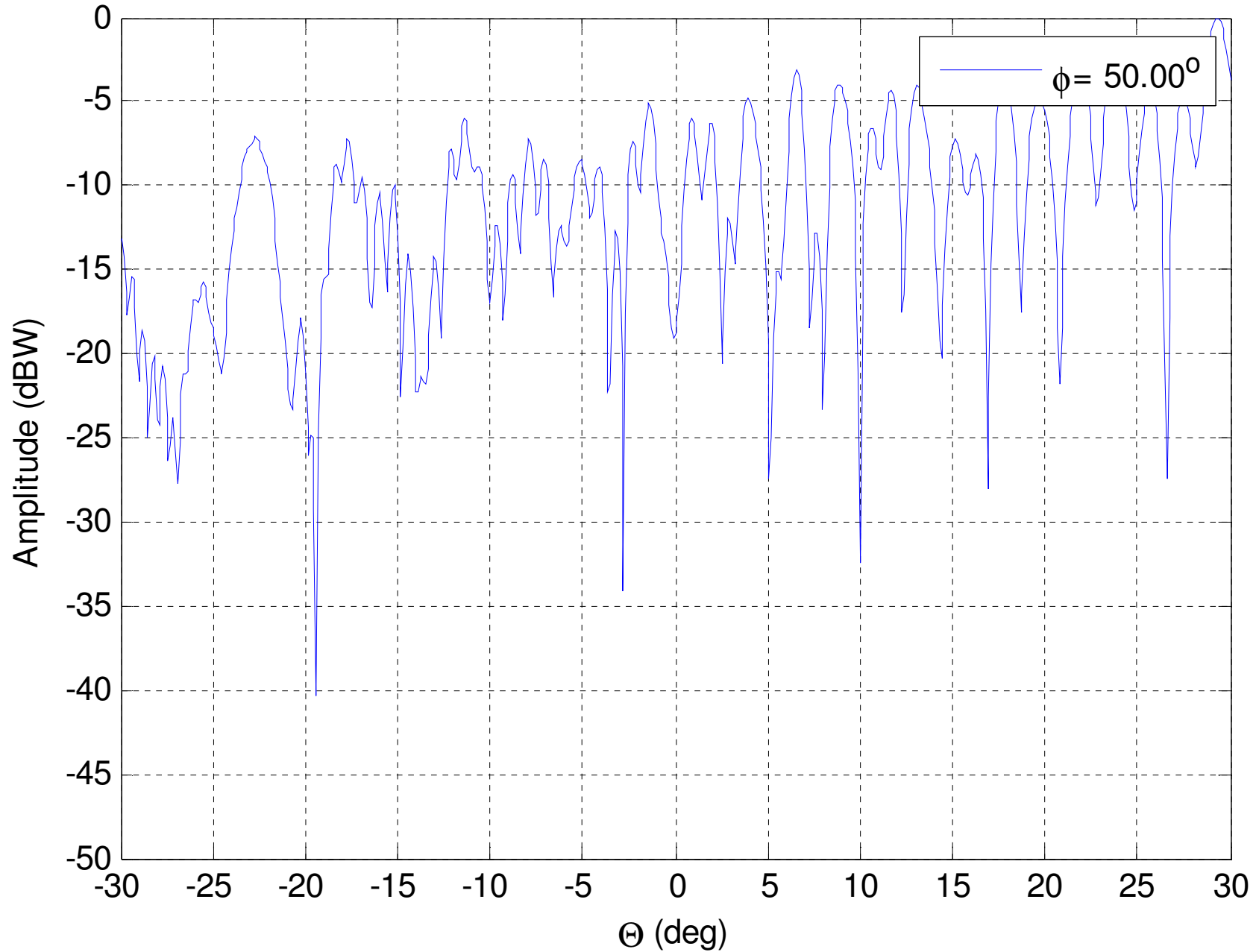
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.31 dBW, Date: 14-Dec-2011



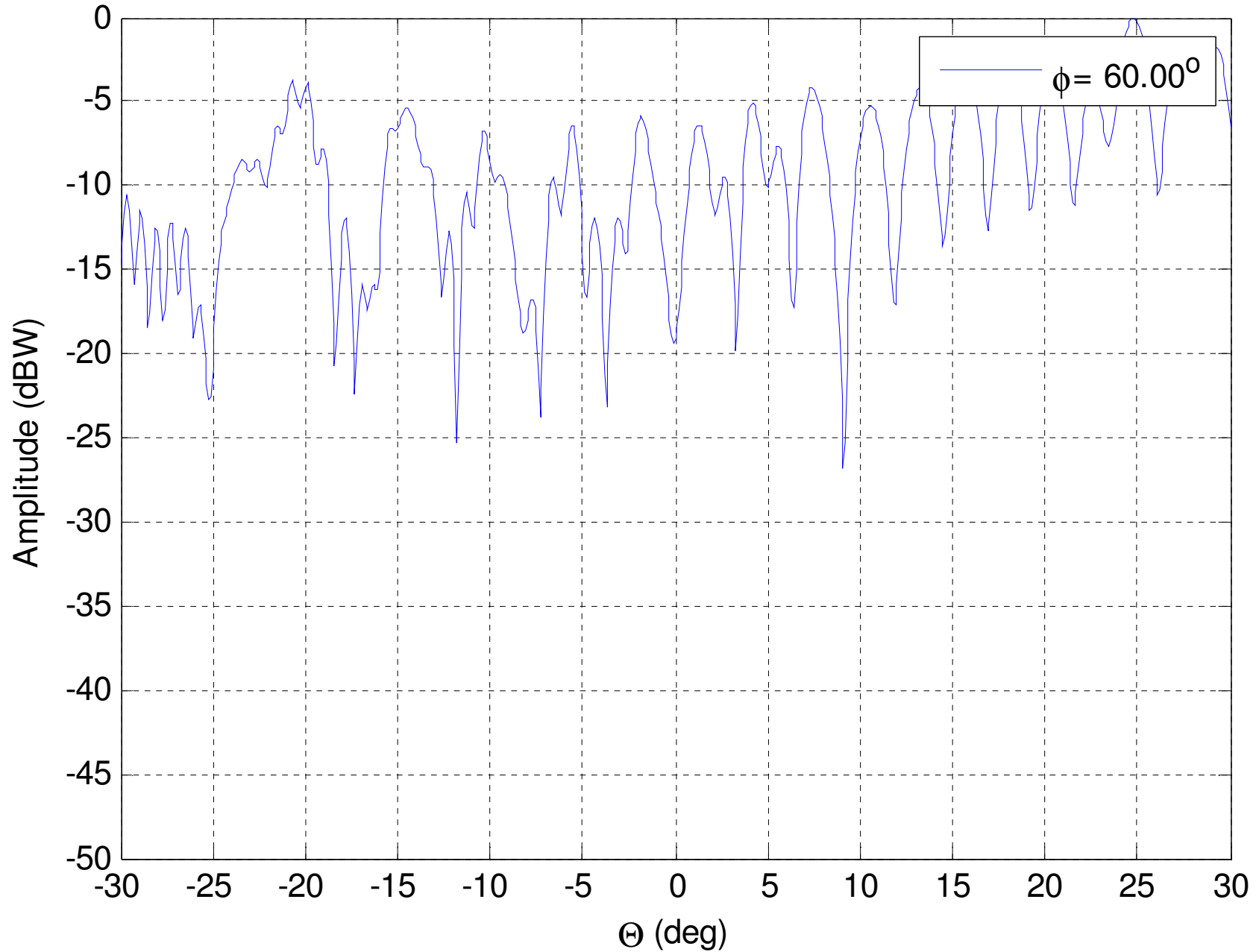
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -6.22 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -5.81 dBW, Date: 14-Dec-2011



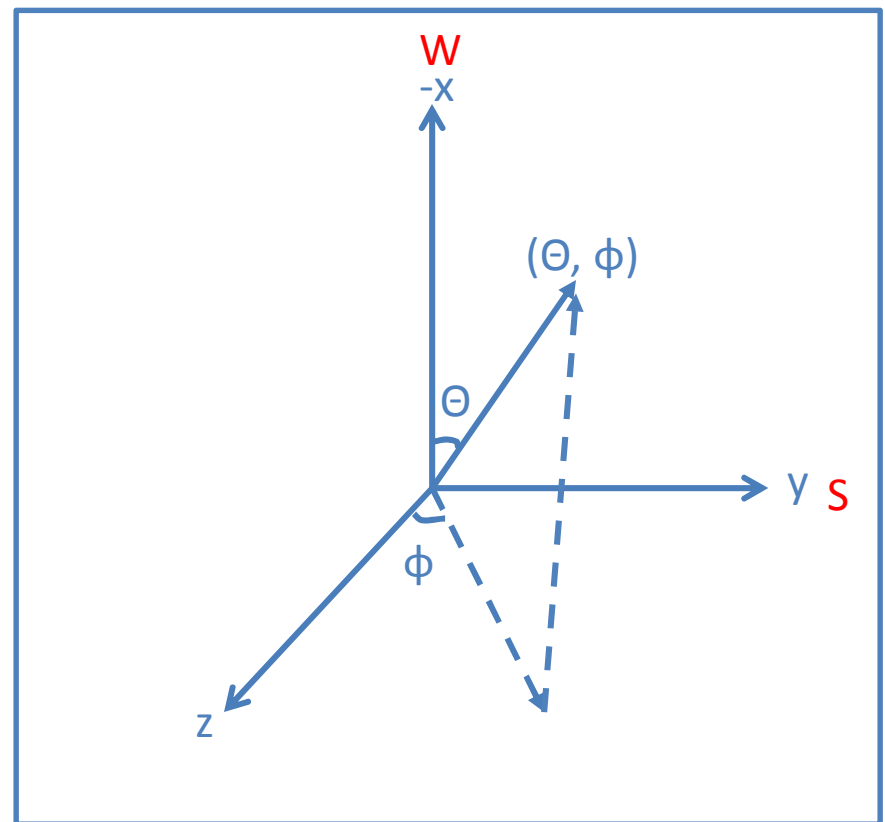
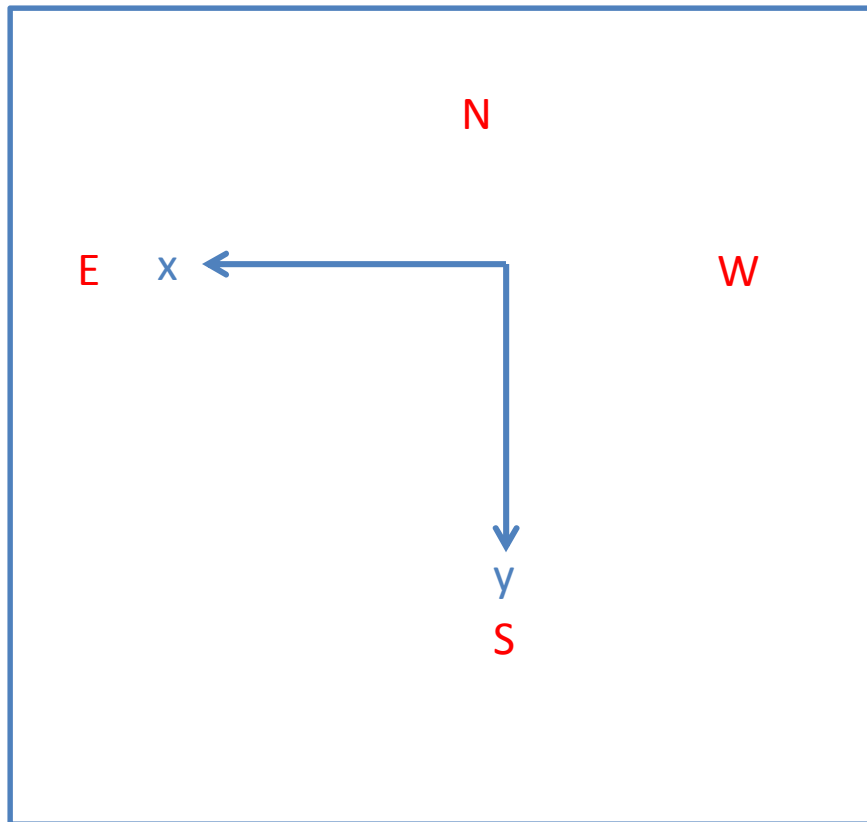
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 16

Maximum Allowable EIRP to meet the -117dBW/m²/100 kHz

Maximum EIRP Allowed	
Spec Max flux density, dBW/m ² /100kHz	-117
Desired channel band width, MHz	25.8
Symbol rate band width modification factor	1
Effective channel bandwidth, MHz	25.8
Effective bandwidth, dB-100kHz	24.1
Flux density allowed per channel, dBW/m ²	-92.9
R, radial distance to GEO, km	42164.0
Angle of separation between satellites, deg	0.1
range between satellites, km	73.59
Spreading factor, dB/m ²	-108.3
Atmospheric loss, dB	0
Max satellite EIRP allowed, dBW	15.4

Coordinate System



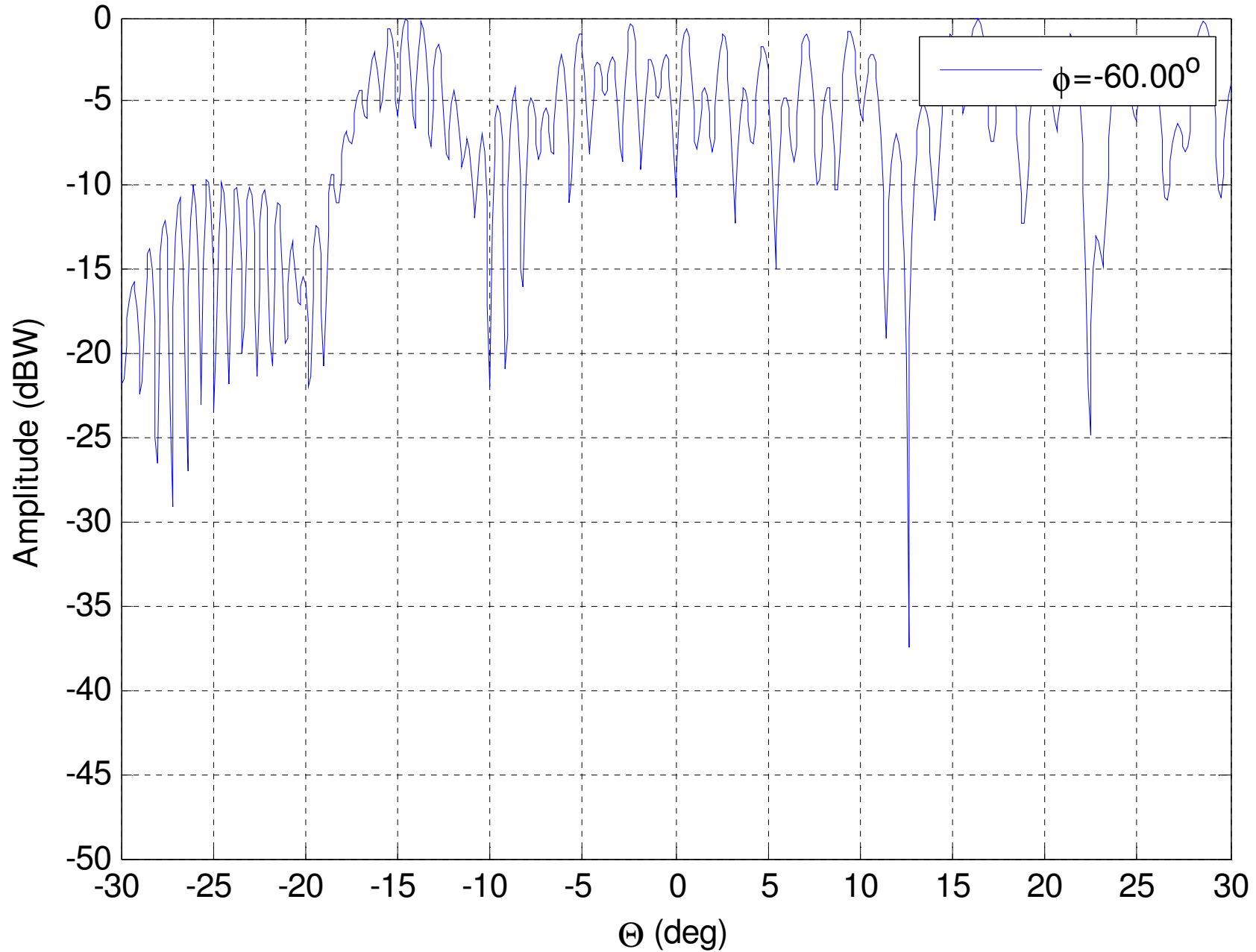
Spot Beam16, -X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: -X -axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

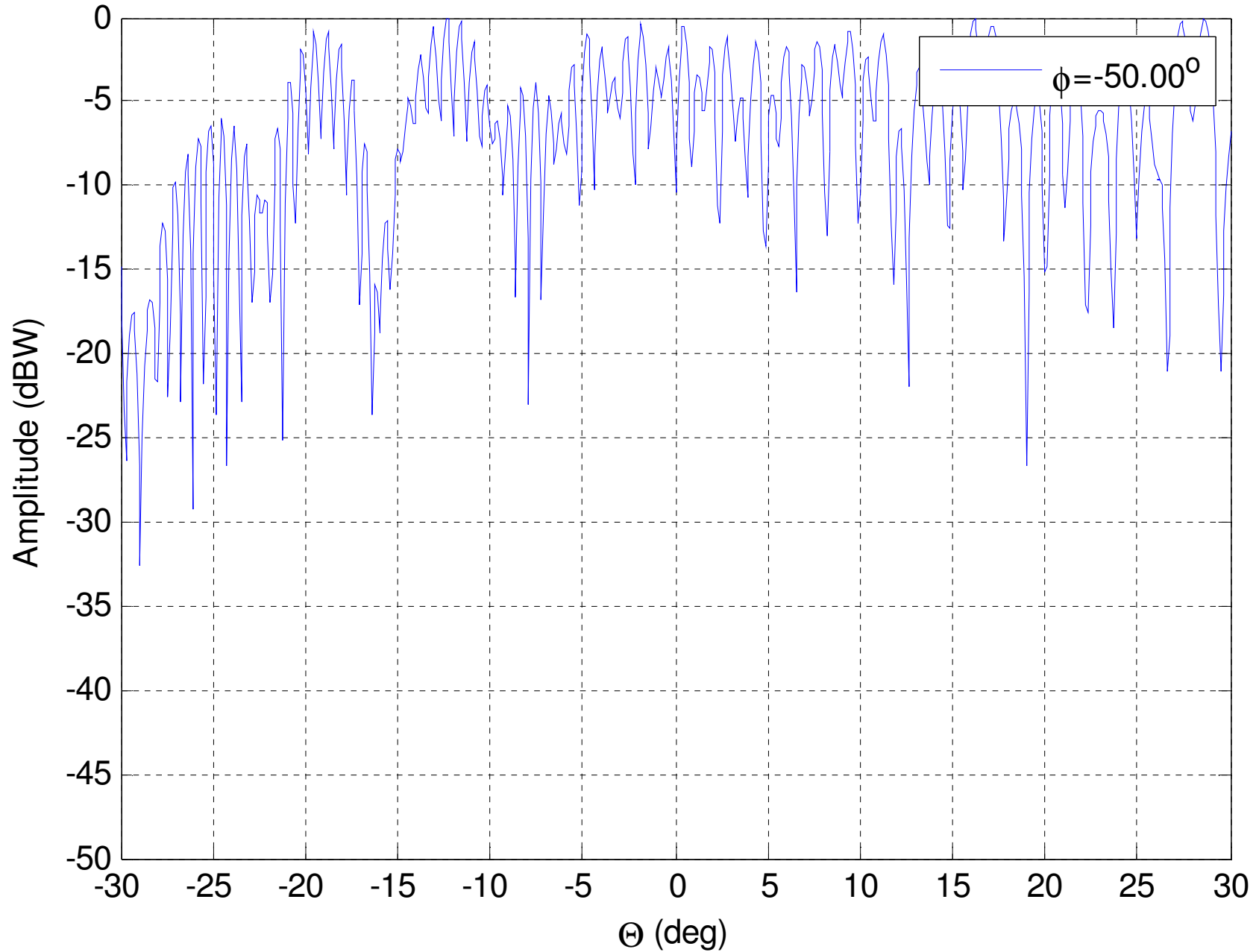
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -0.09 dBW, Date: 14-Dec-2011



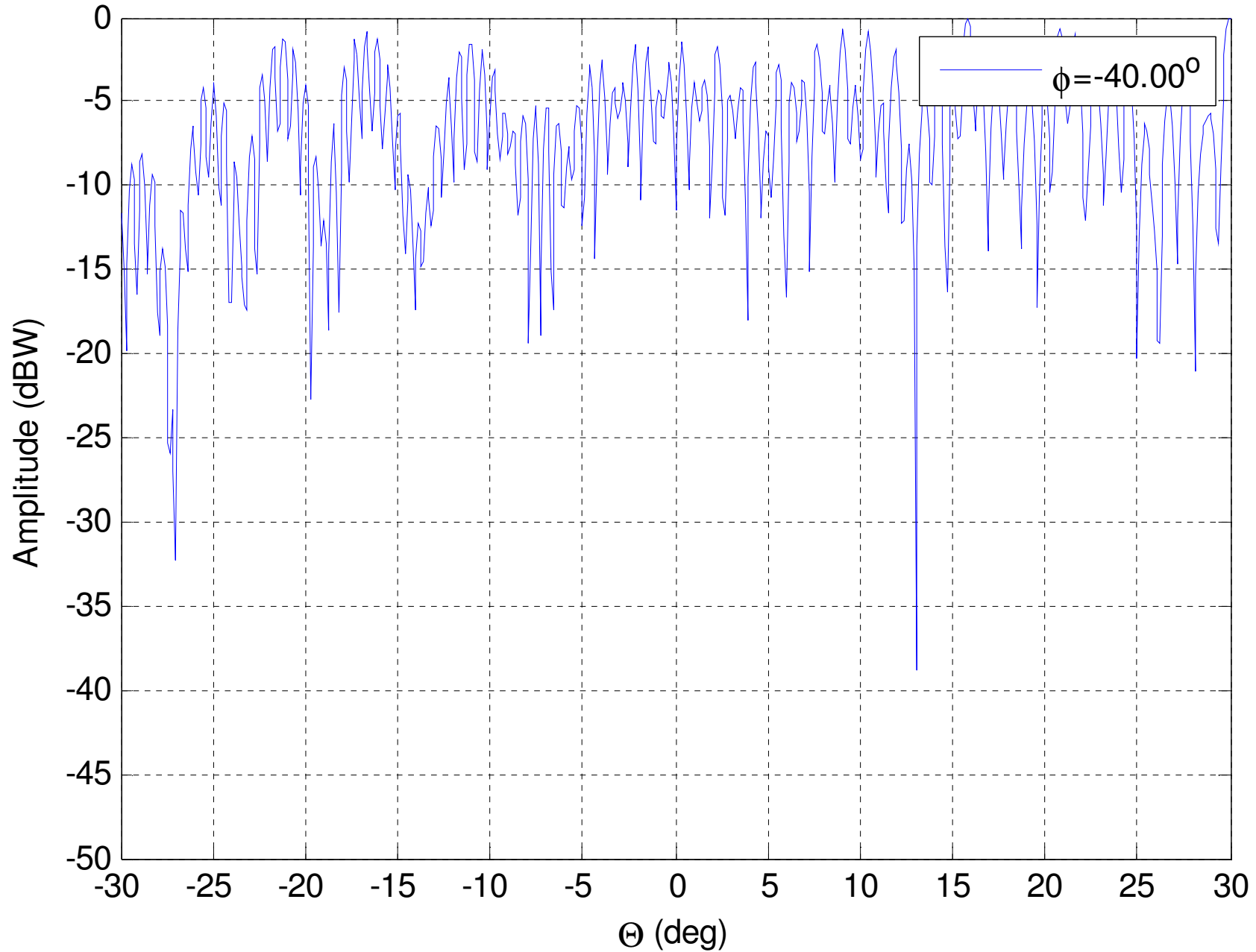
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -0.29 dBW, Date: 14-Dec-2011



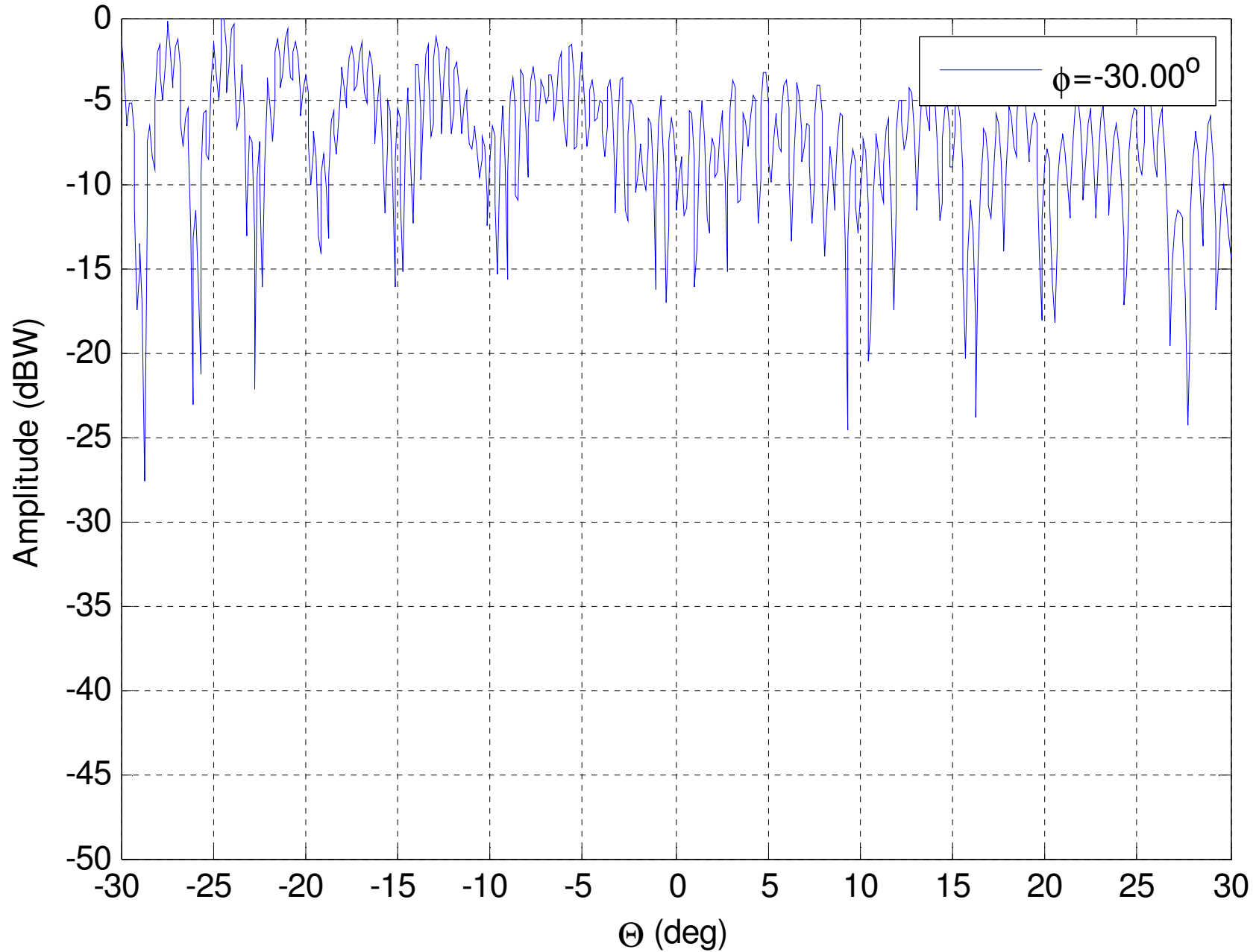
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: 0.70 dBW, Date: 14-Dec-2011



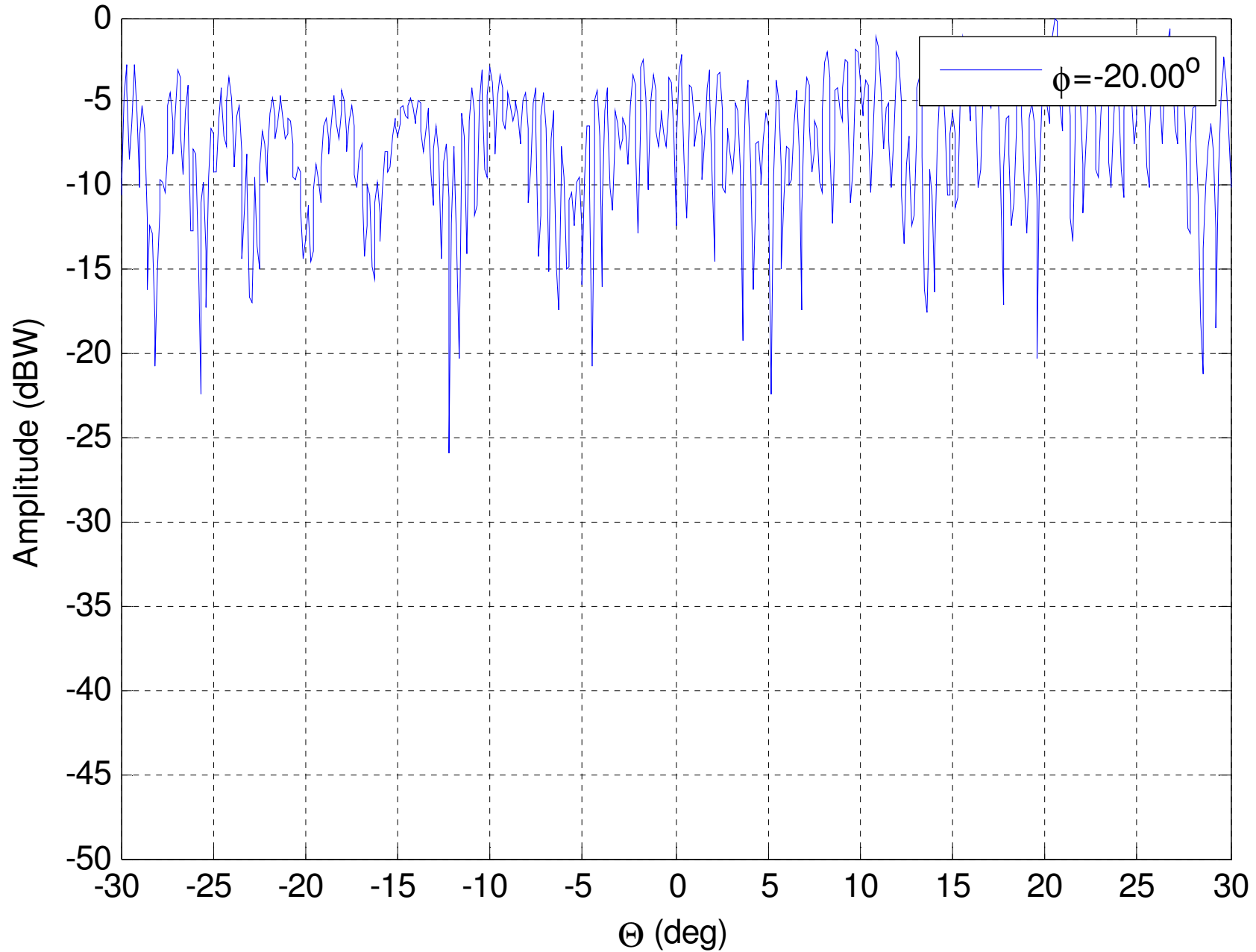
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 1.53 dBW, Date: 14-Dec-2011



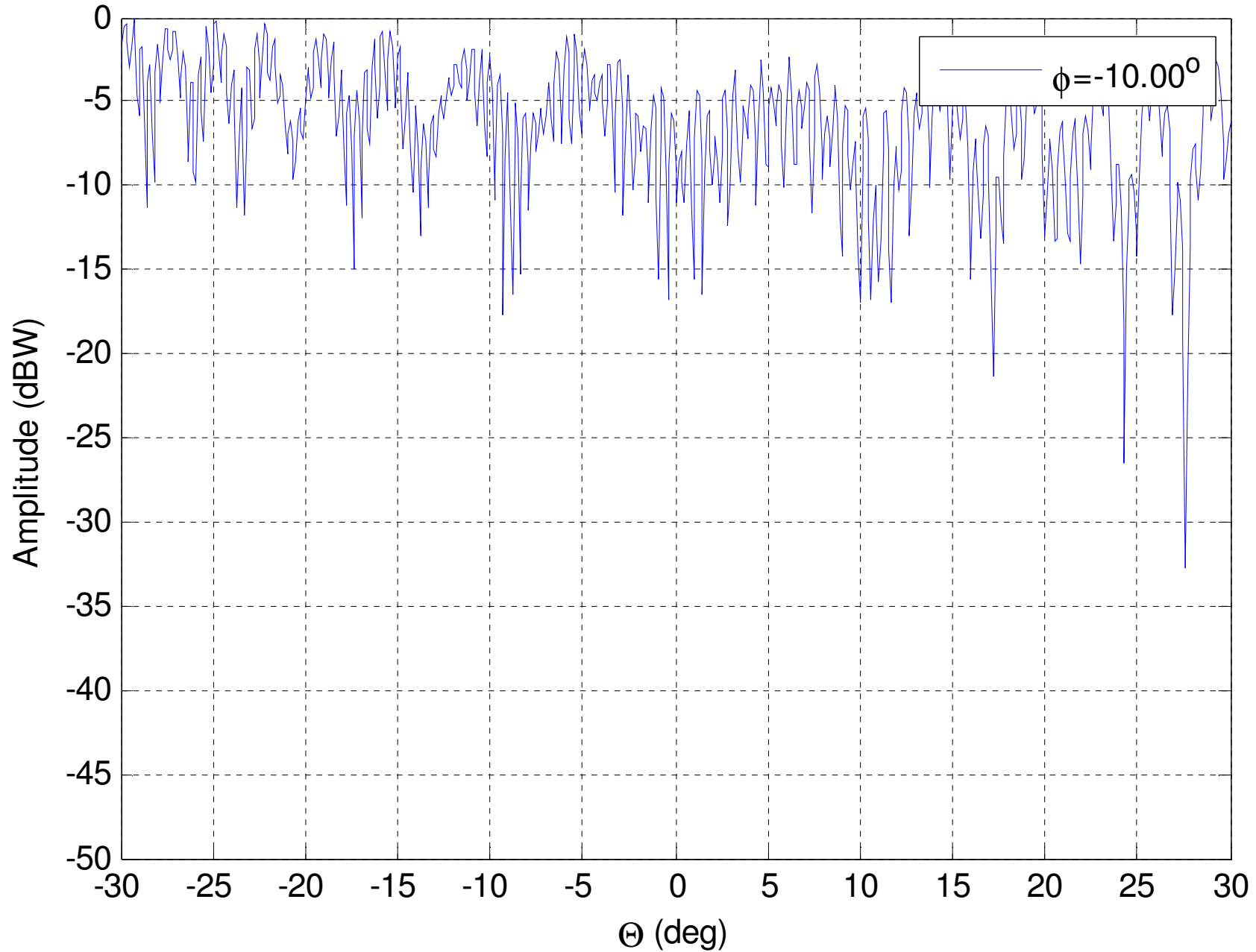
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 1.61 dBW, Date: 14-Dec-2011



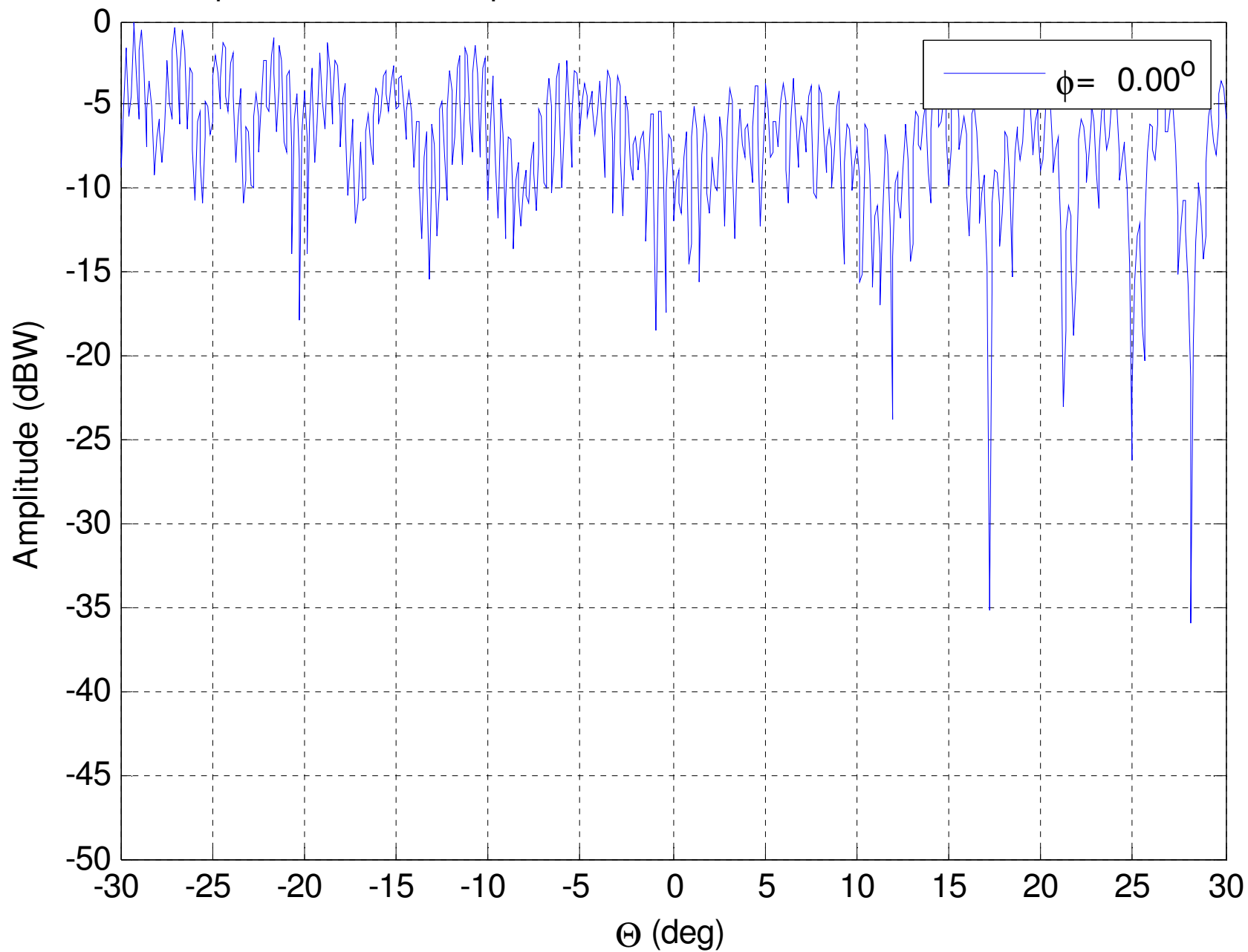
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 1.07 dBW, Date: 14-Dec-2011



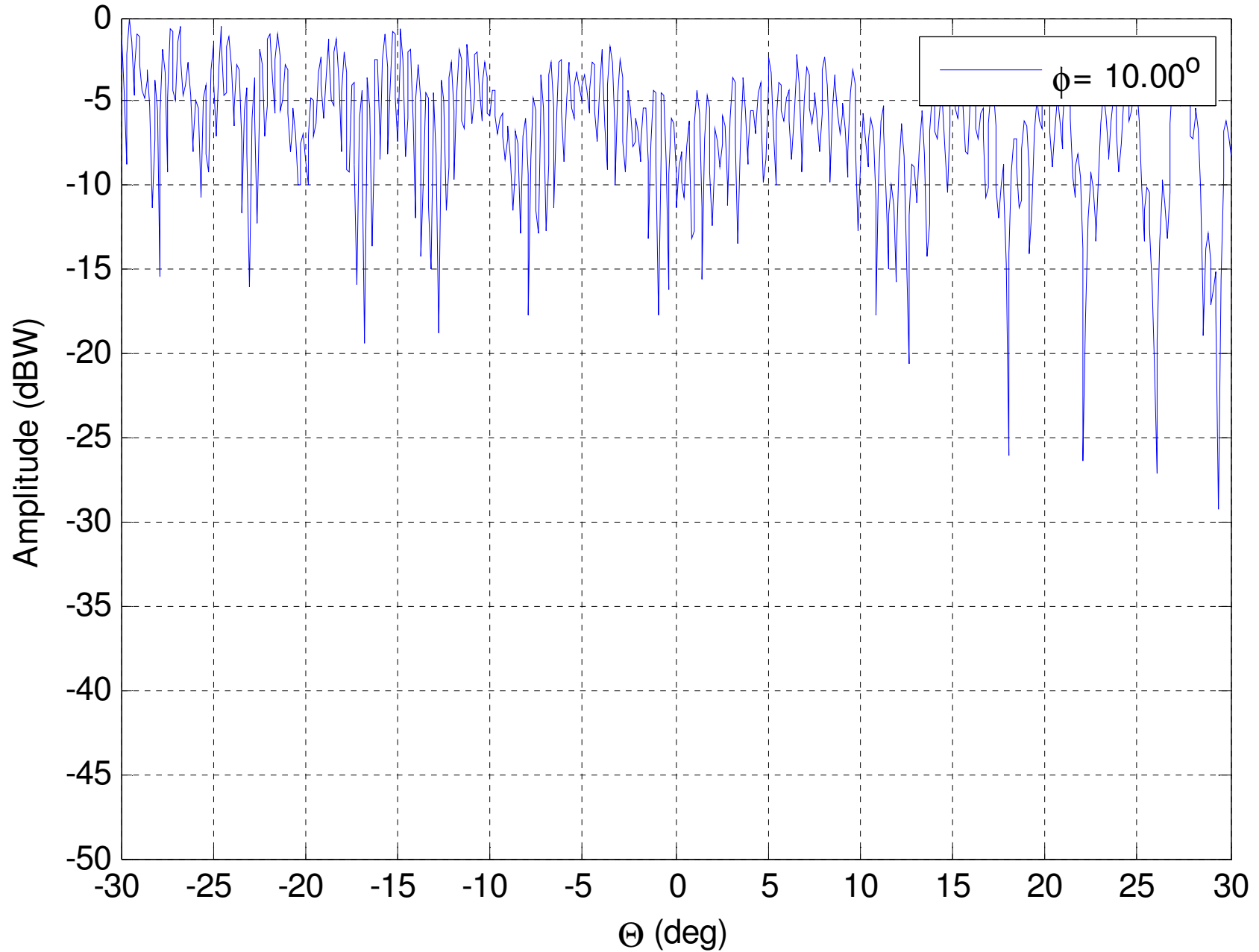
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 1.96 dBW, Date: 14-Dec-2011



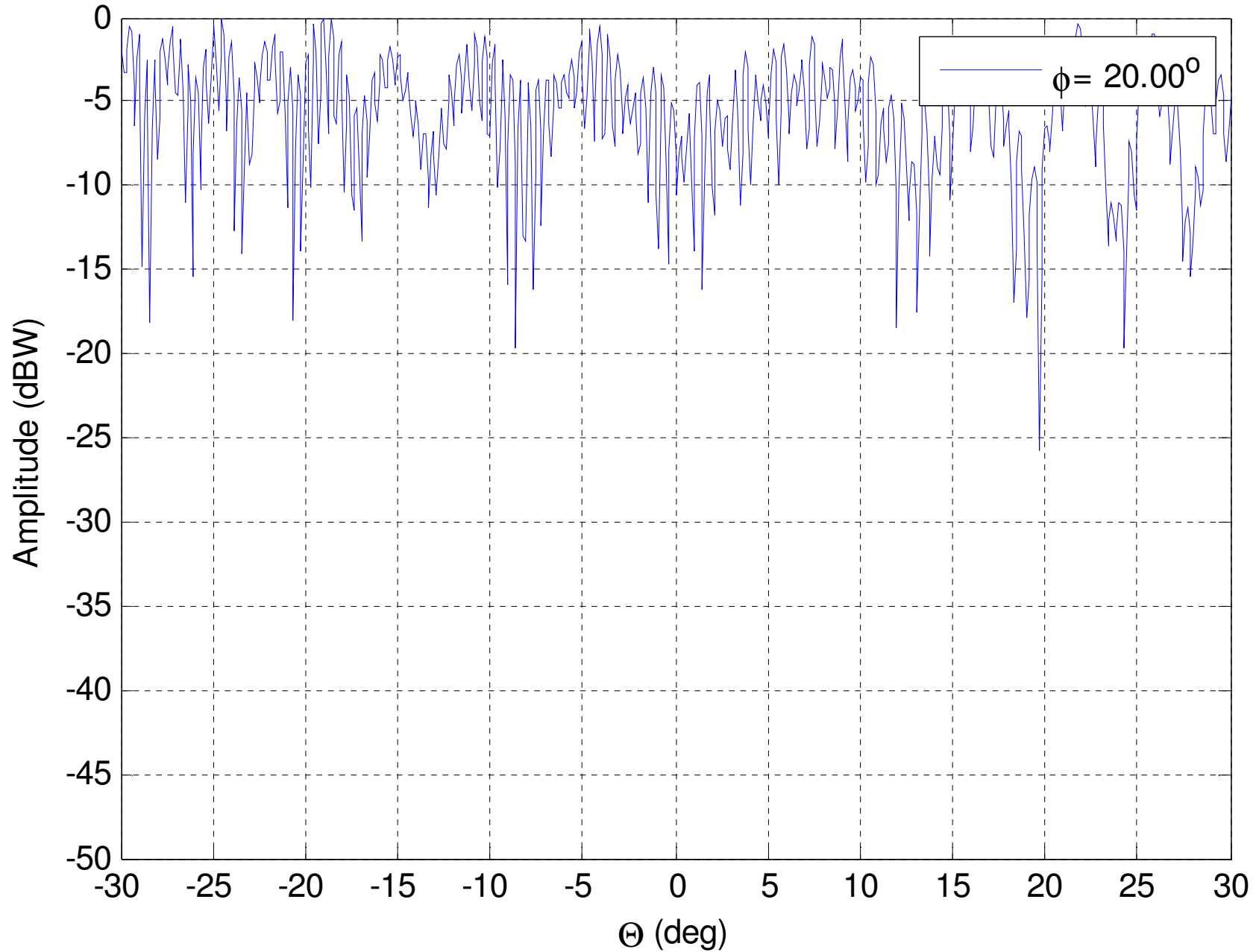
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 1.18 dBW, Date: 14-Dec-2011



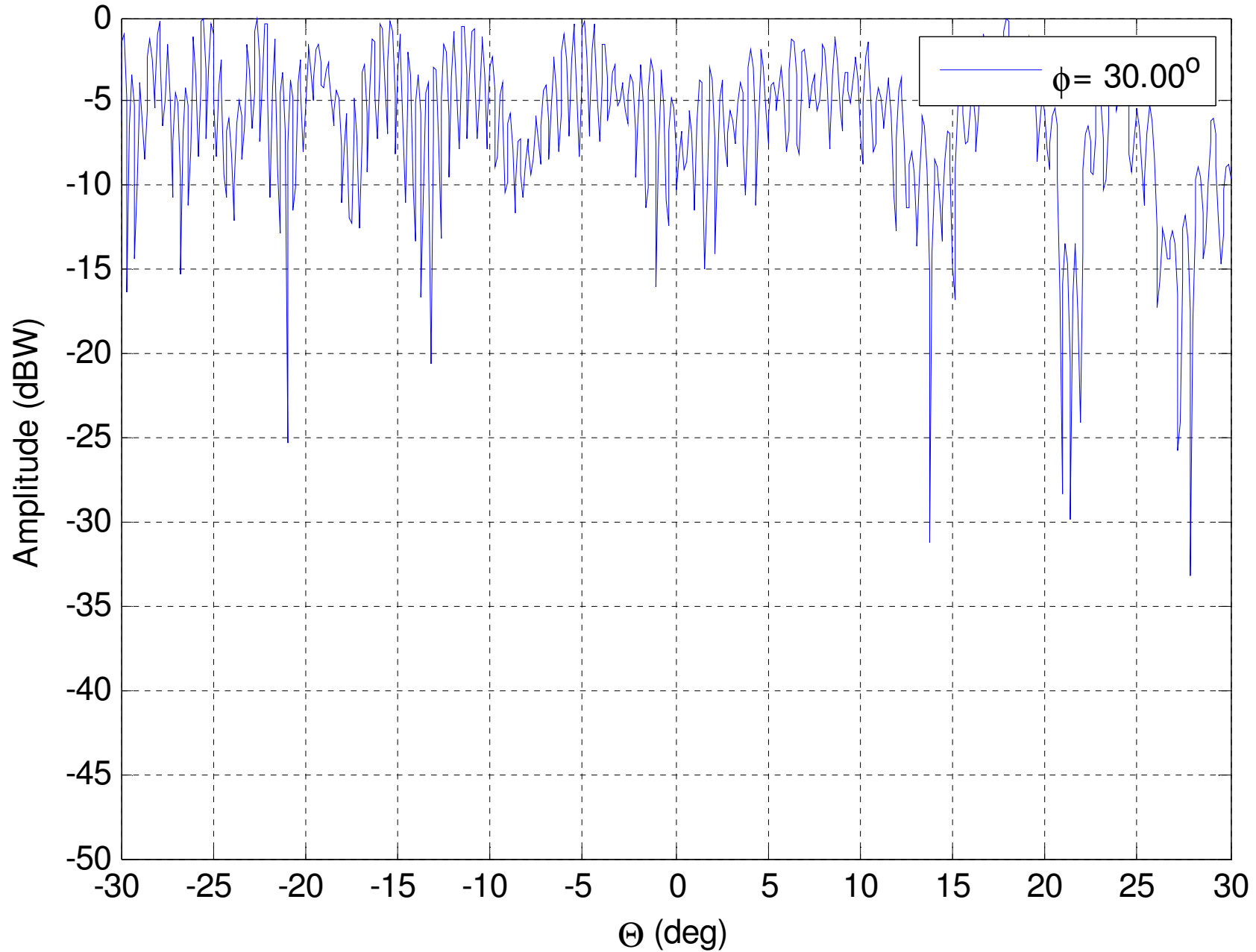
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 0.26 dBW, Date: 14-Dec-2011



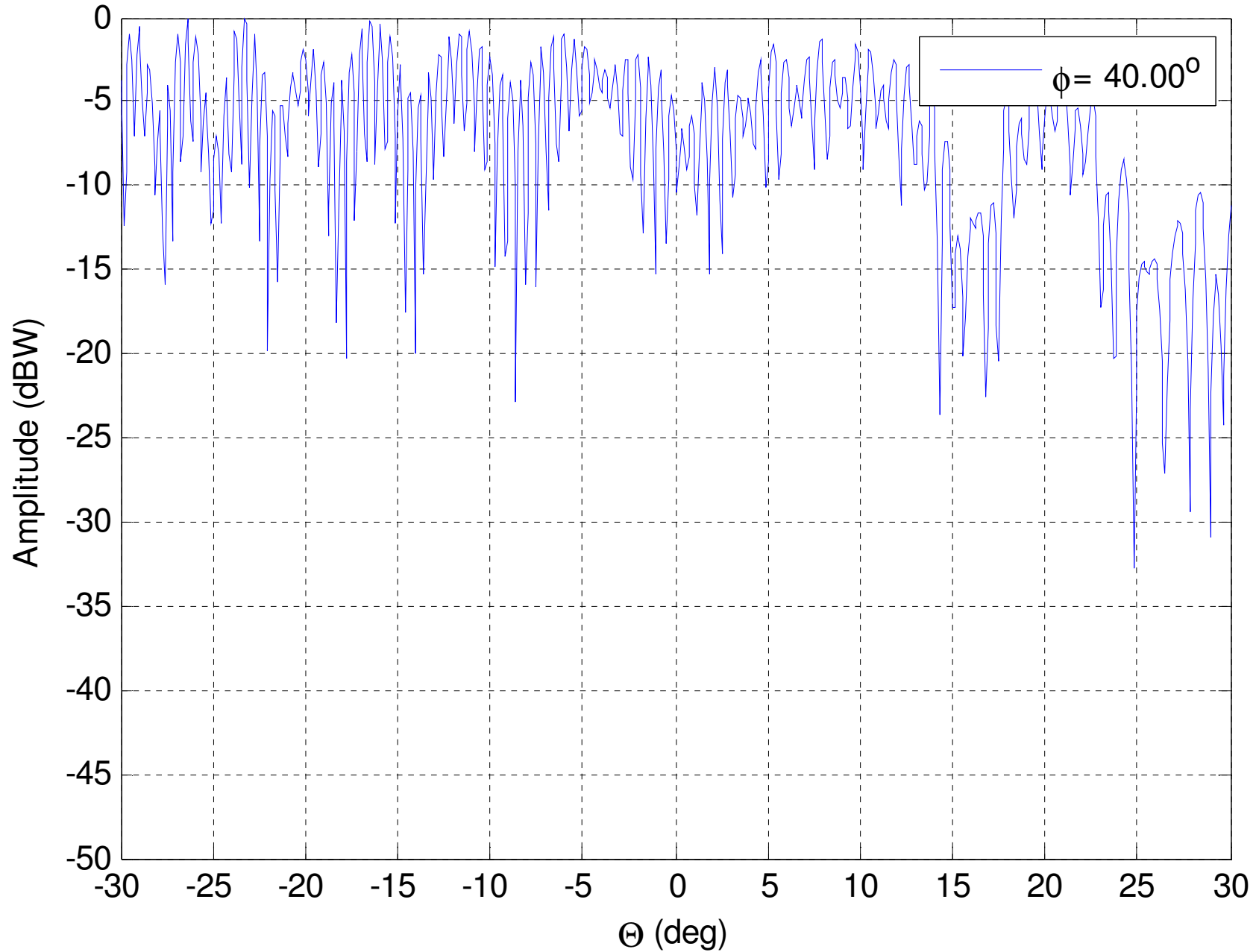
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -0.05 dBW, Date: 14-Dec-2011



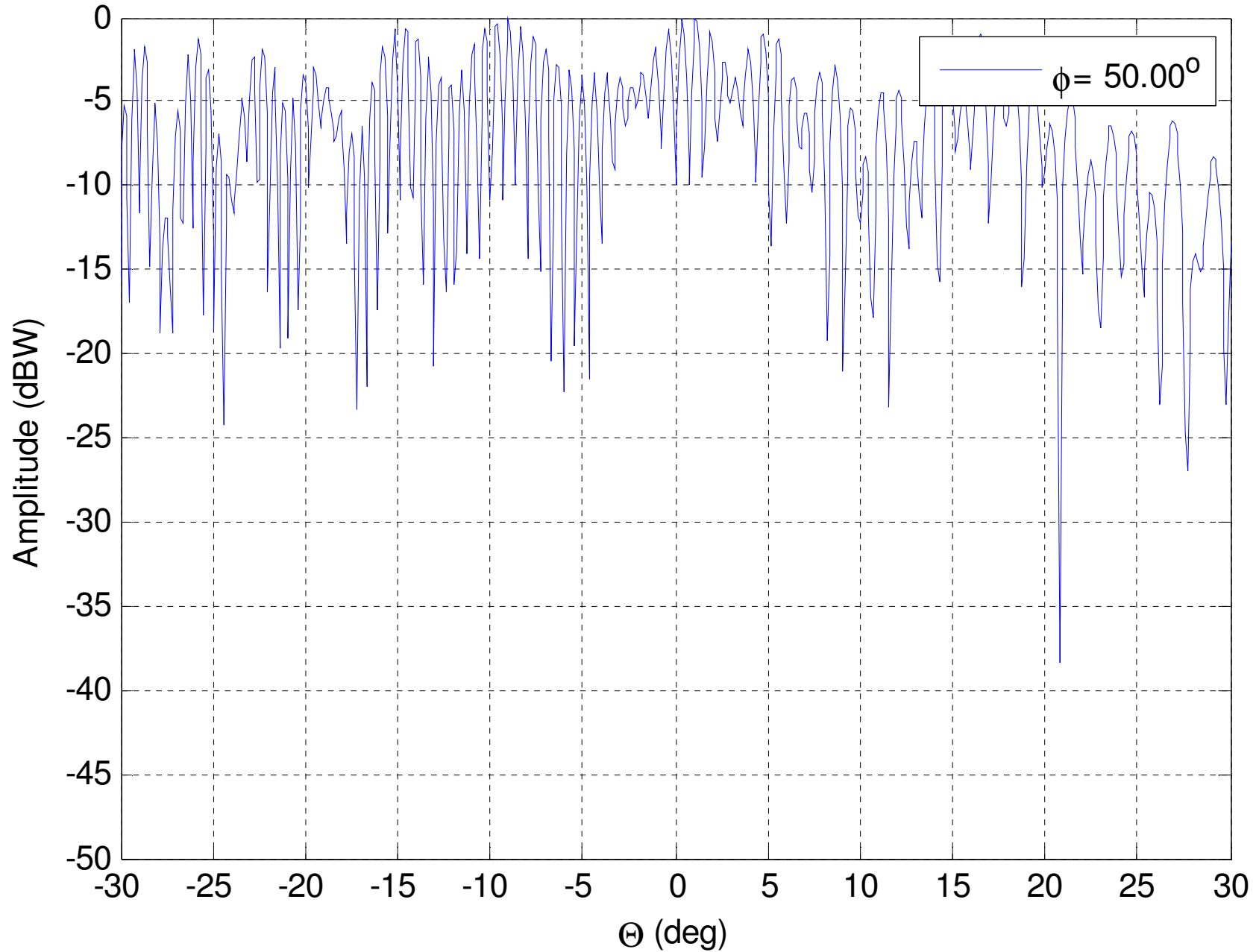
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -0.07 dBW, Date: 14-Dec-2011



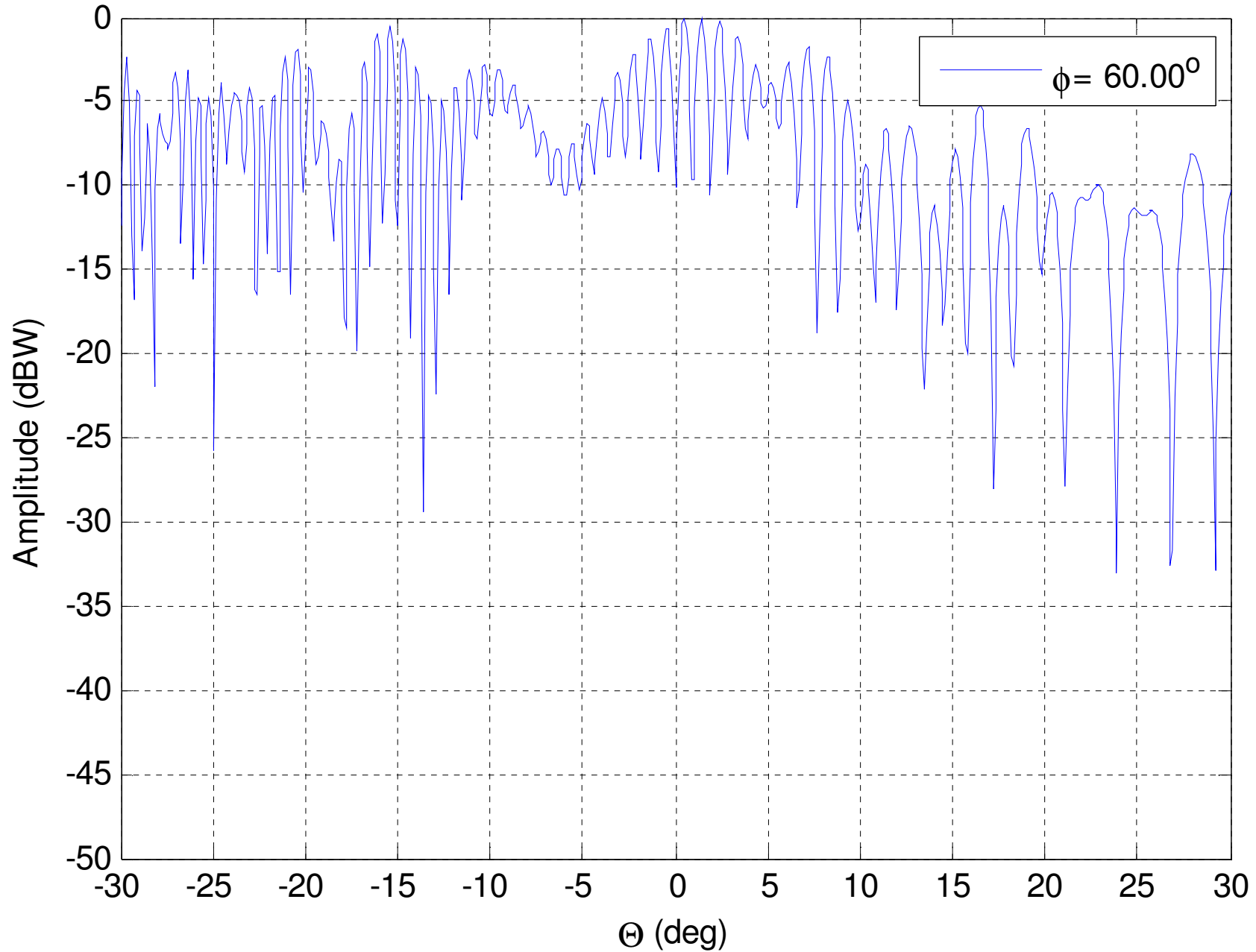
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -0.71 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

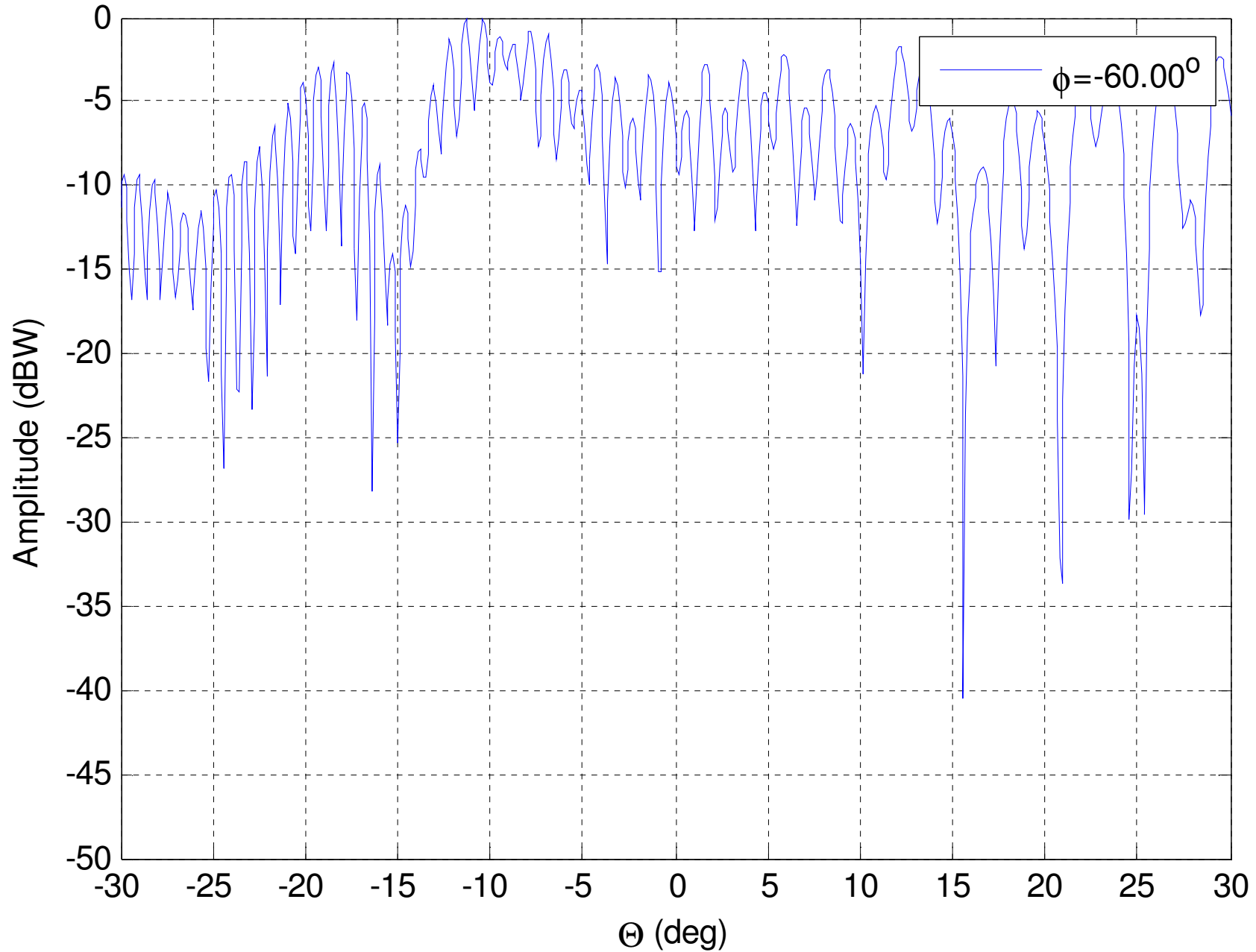
Input file: tx-17.3-rhcp-60.cut, Peak: -0.66 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

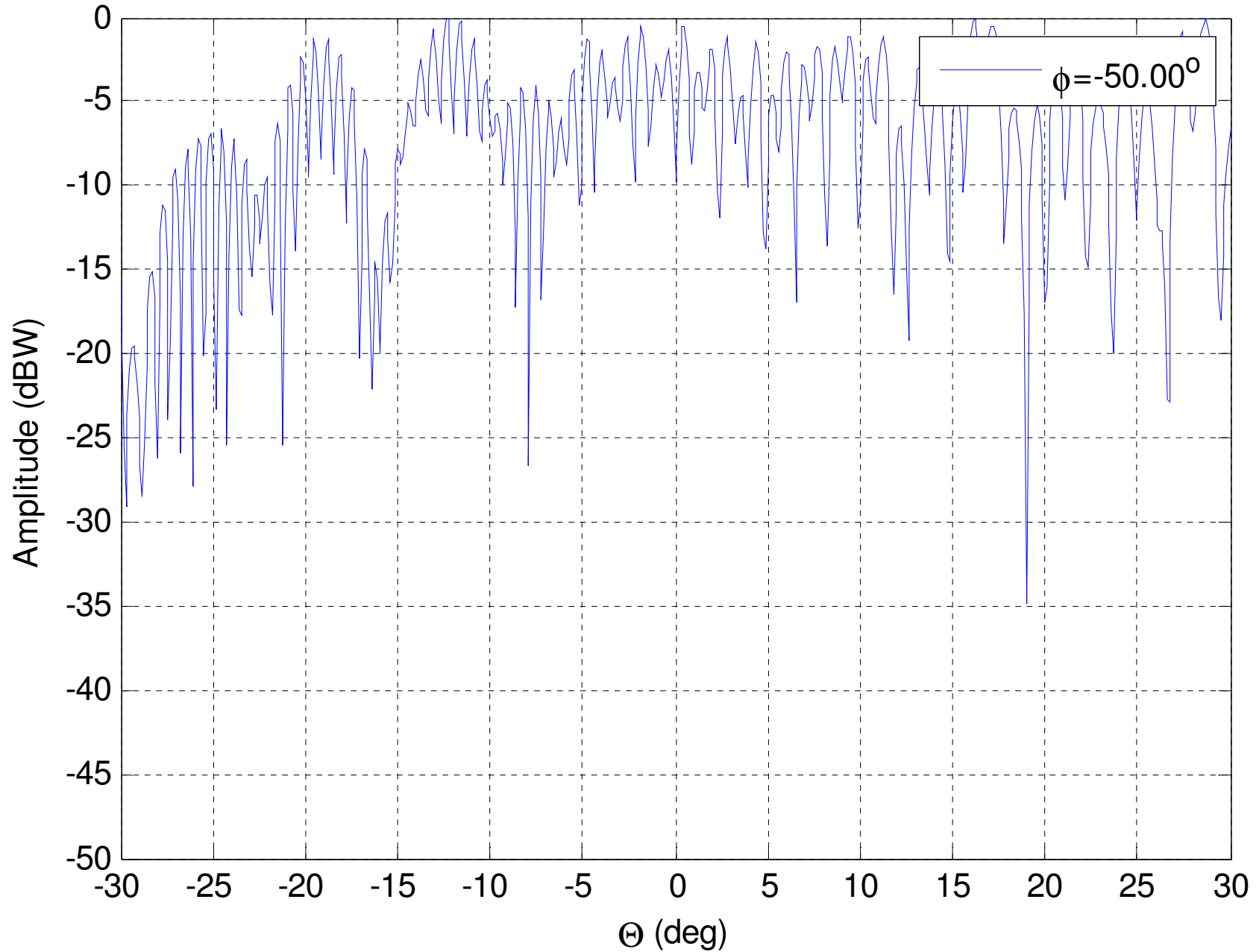
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -0.06 dBW, Date: 14-Dec-2011



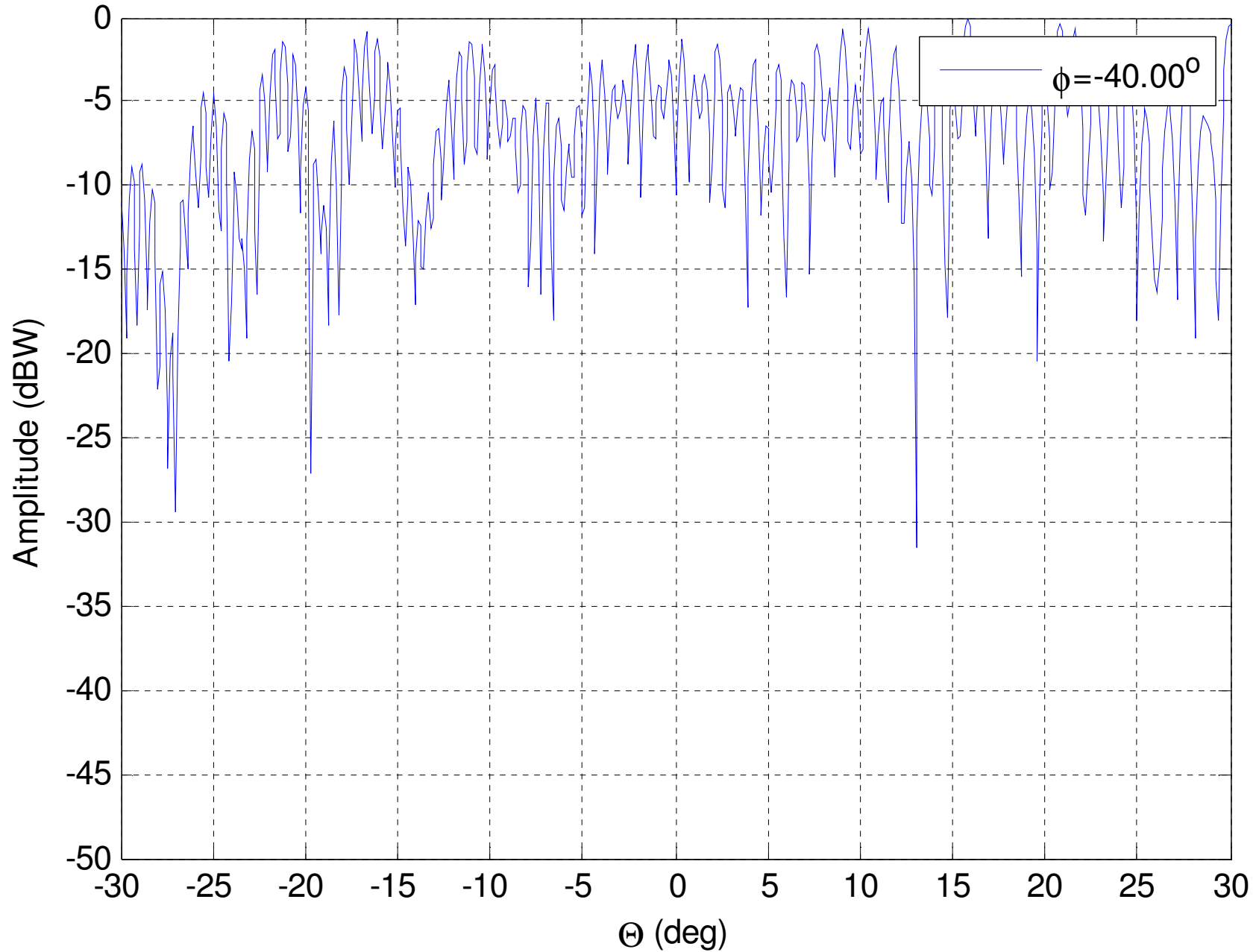
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -0.11 dBW, Date: 14-Dec-2011



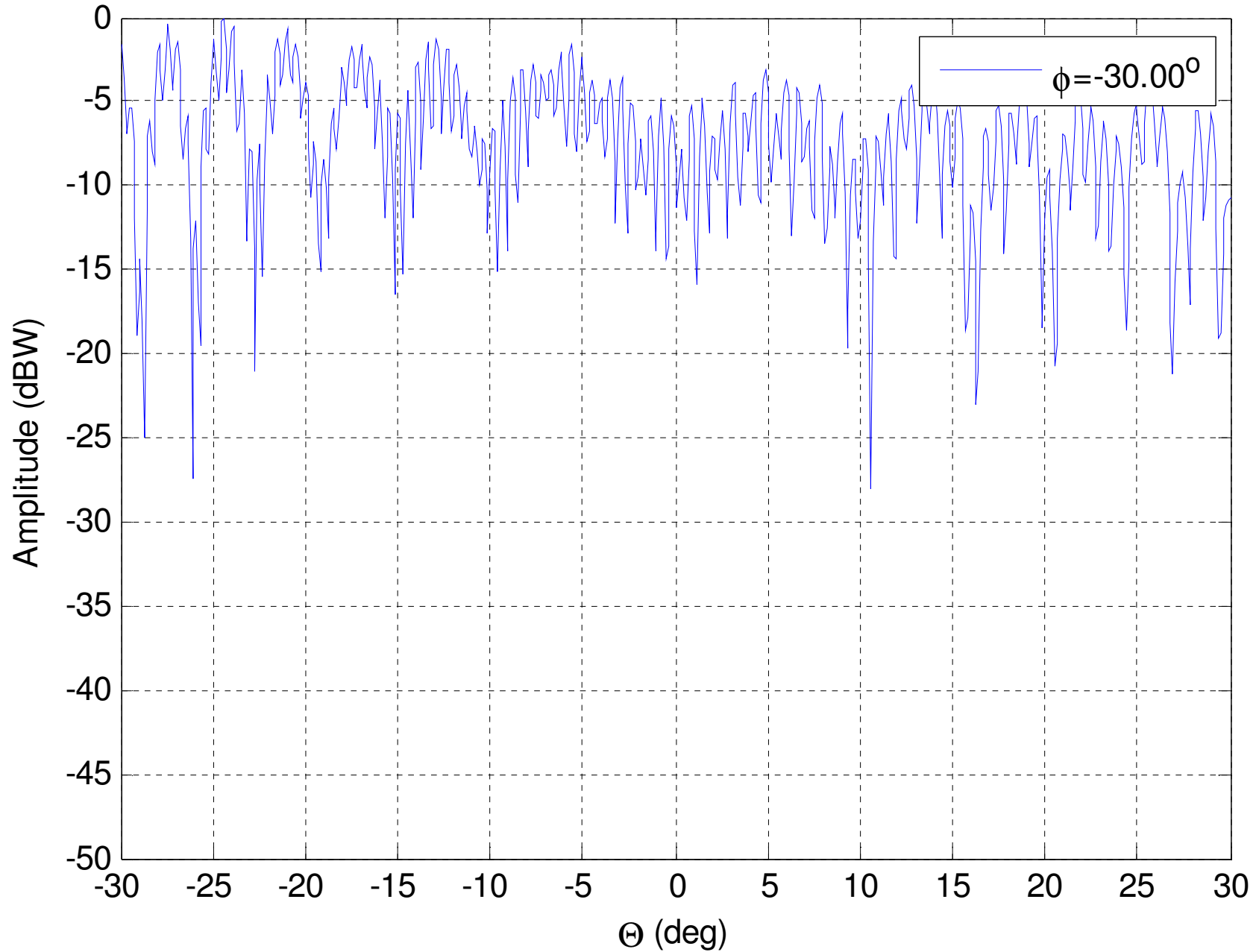
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: 0.69 dBW, Date: 14-Dec-2011



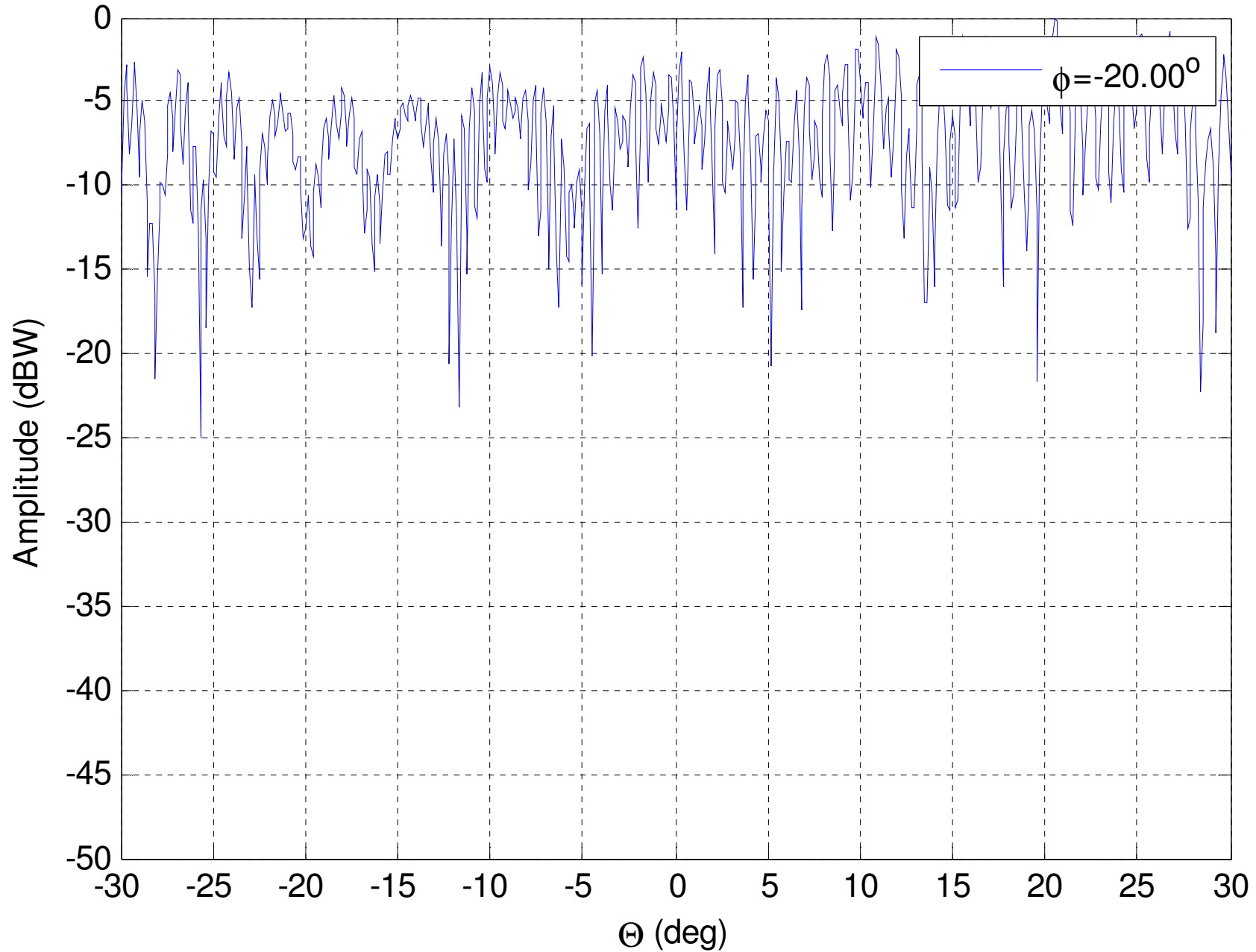
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 1.66 dBW, Date: 14-Dec-2011



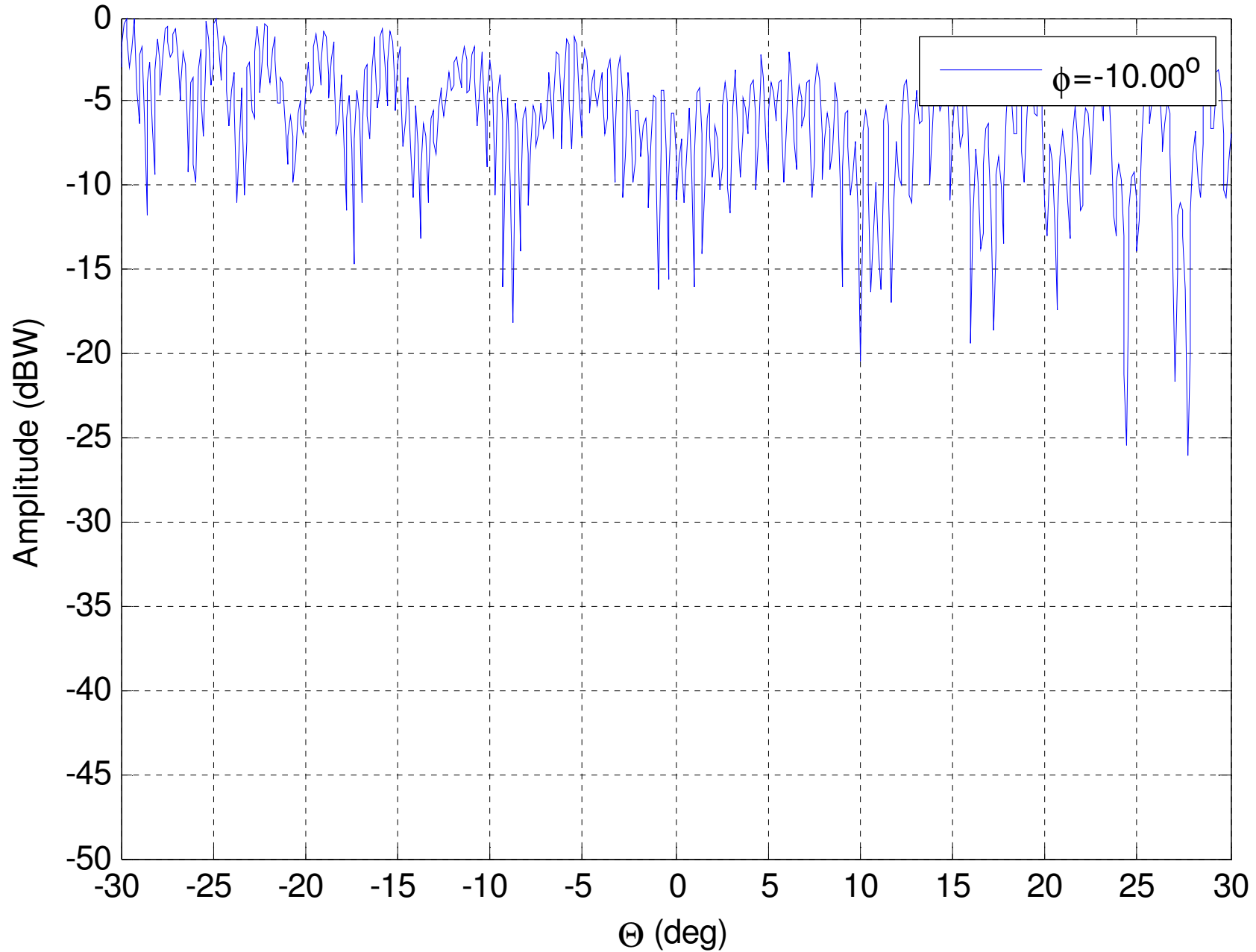
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 1.61 dBW, Date: 14-Dec-2011



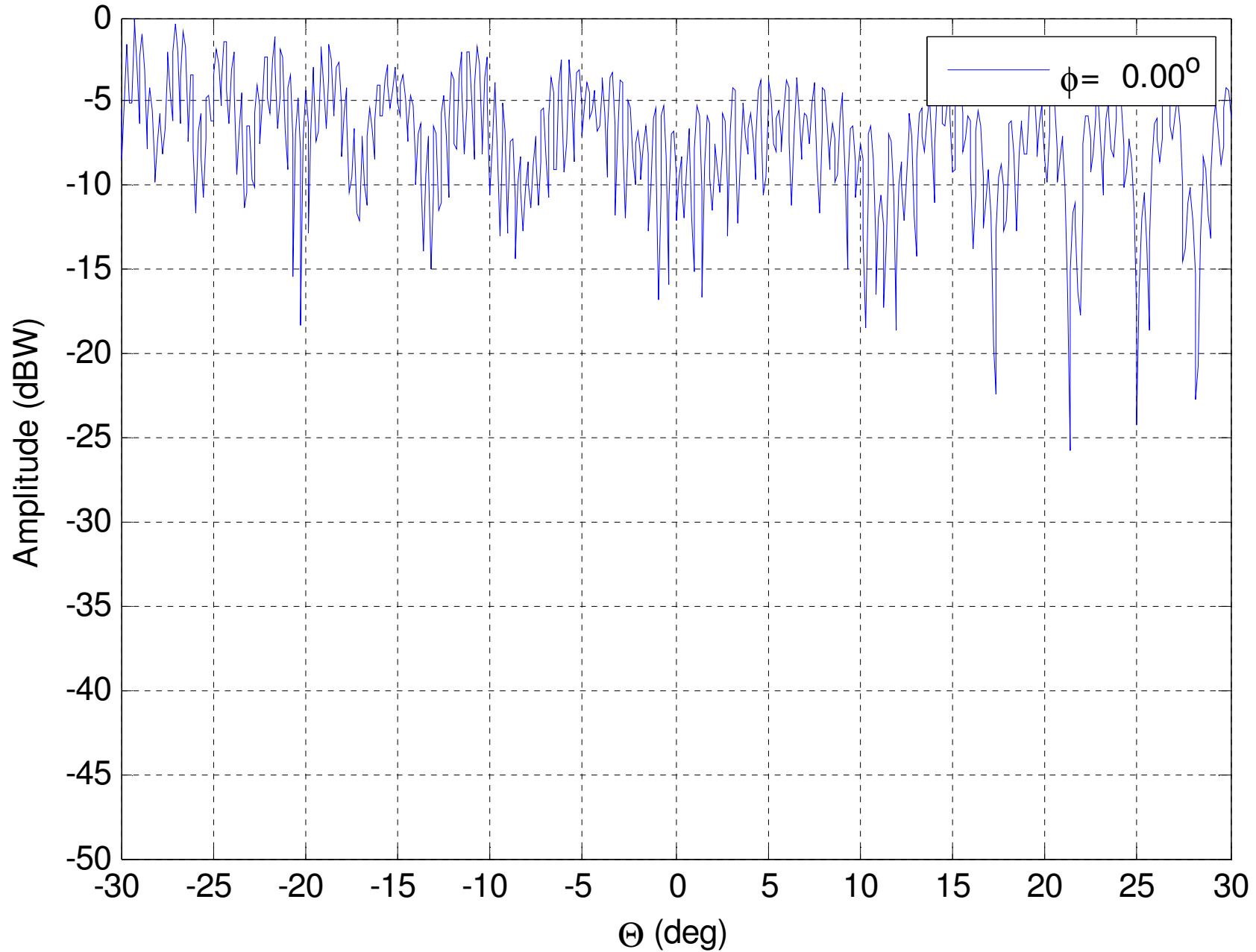
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 1.04 dBW, Date: 14-Dec-2011



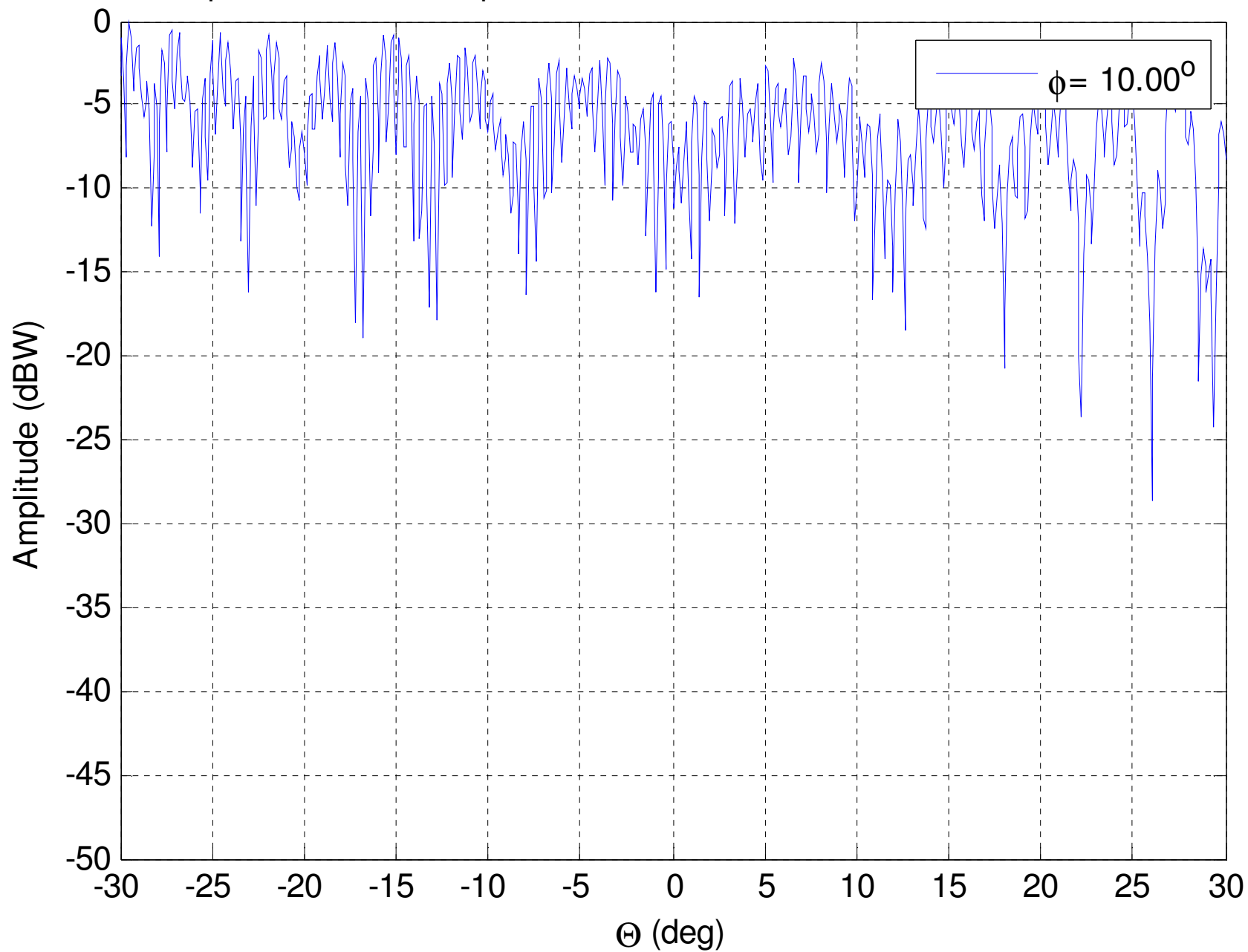
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 2.16 dBW, Date: 14-Dec-2011



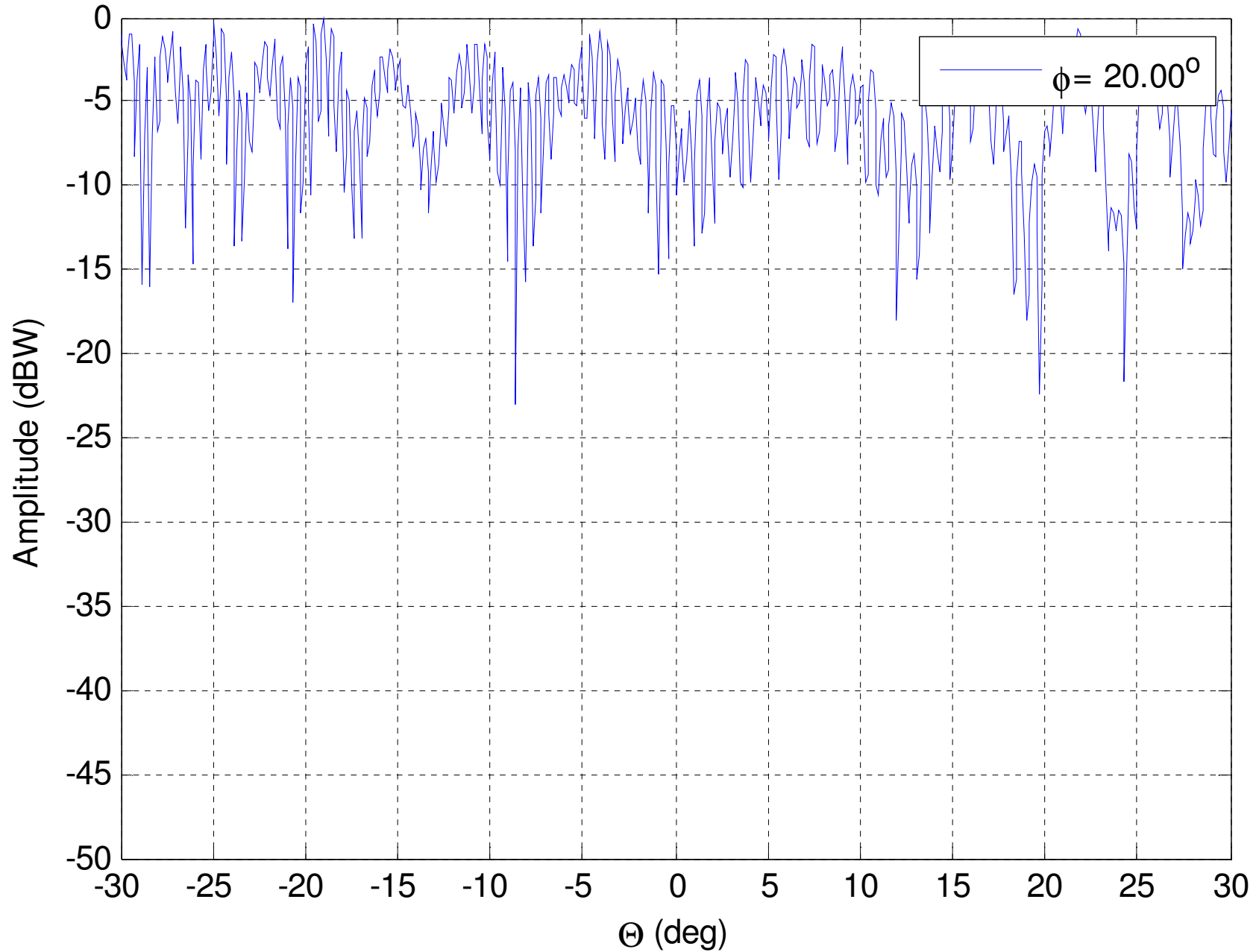
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 1.32 dBW, Date: 14-Dec-2011



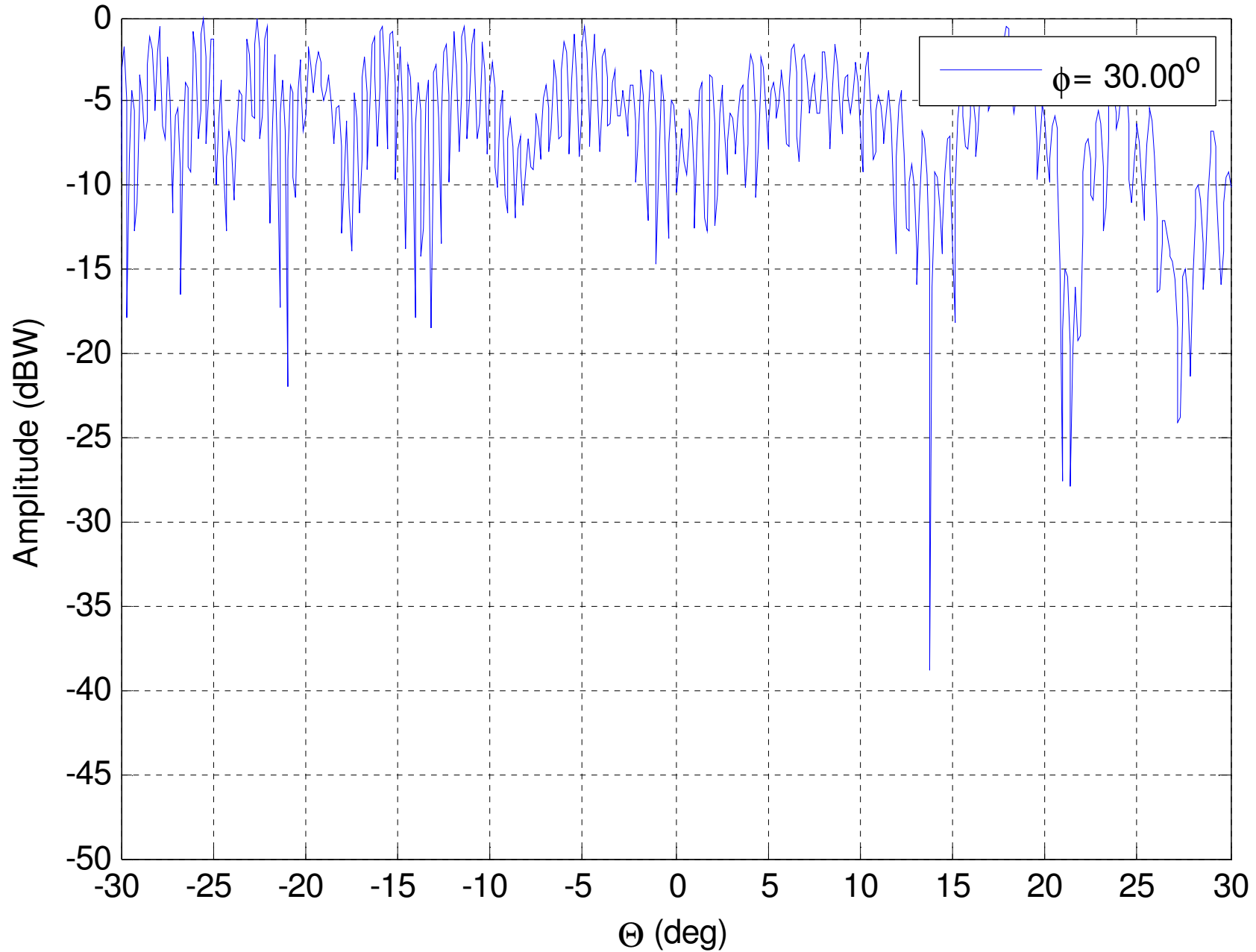
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 0.53 dBW, Date: 14-Dec-2011



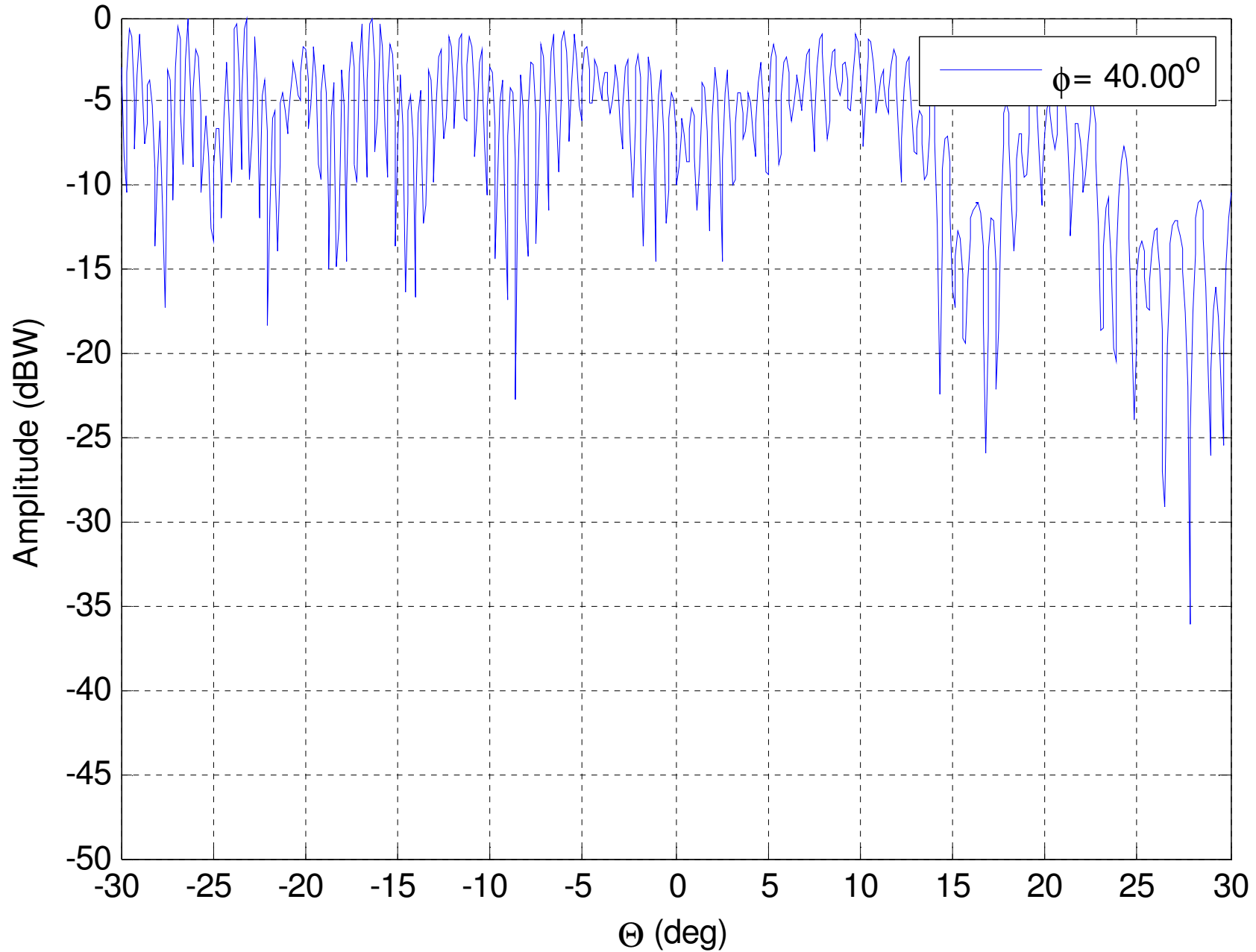
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: 0.34 dBW, Date: 14-Dec-2011



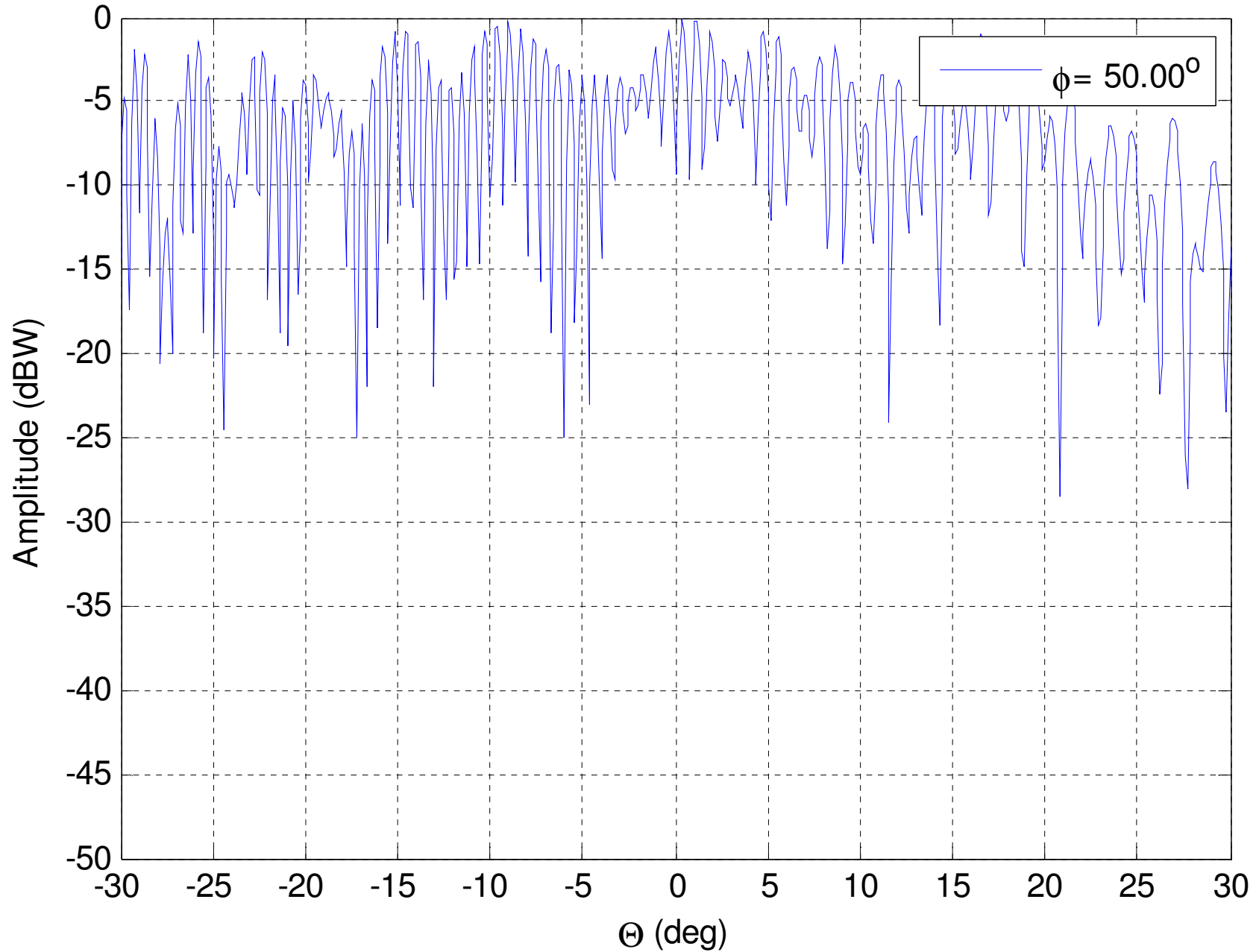
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -0.05 dBW, Date: 14-Dec-2011



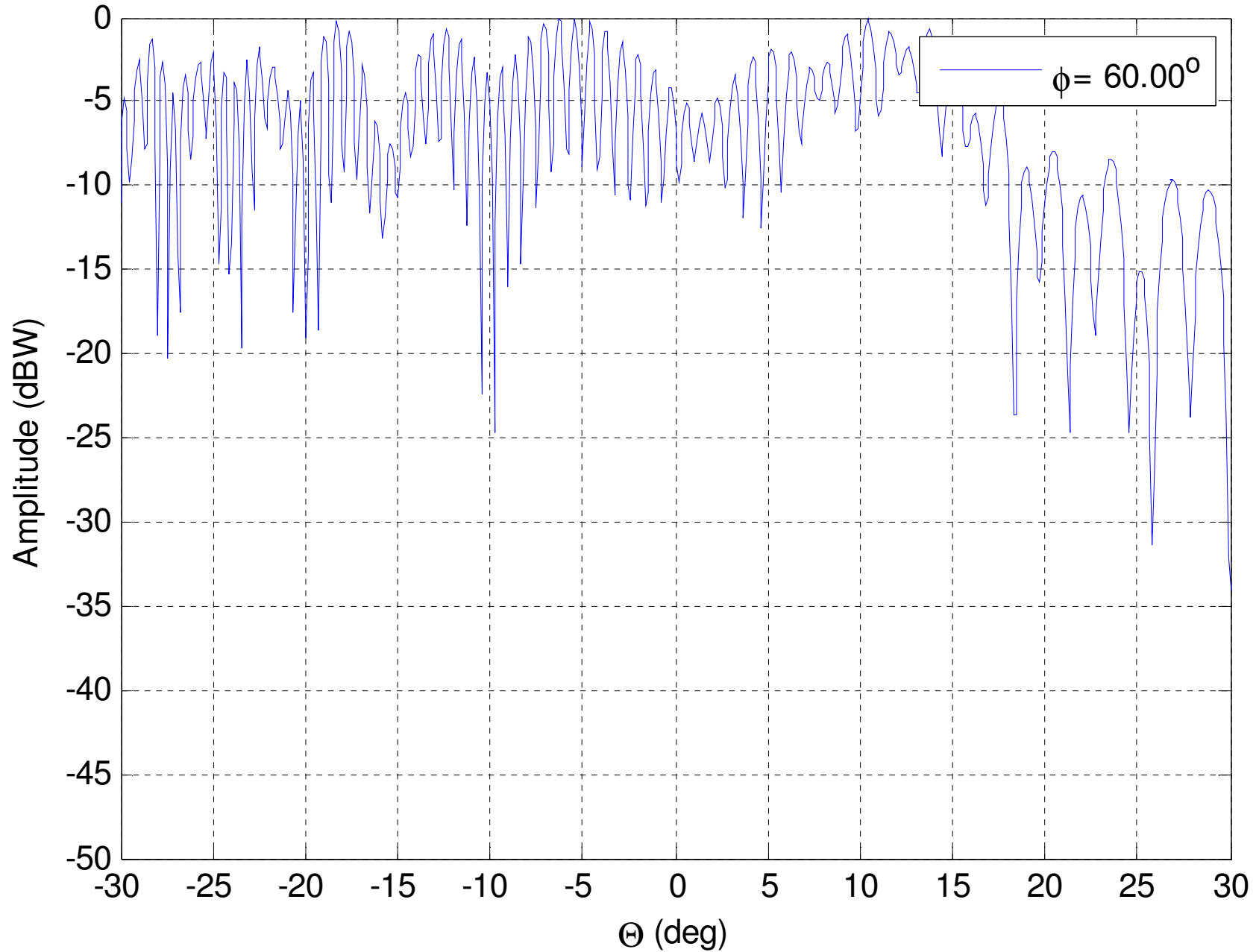
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -0.55 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

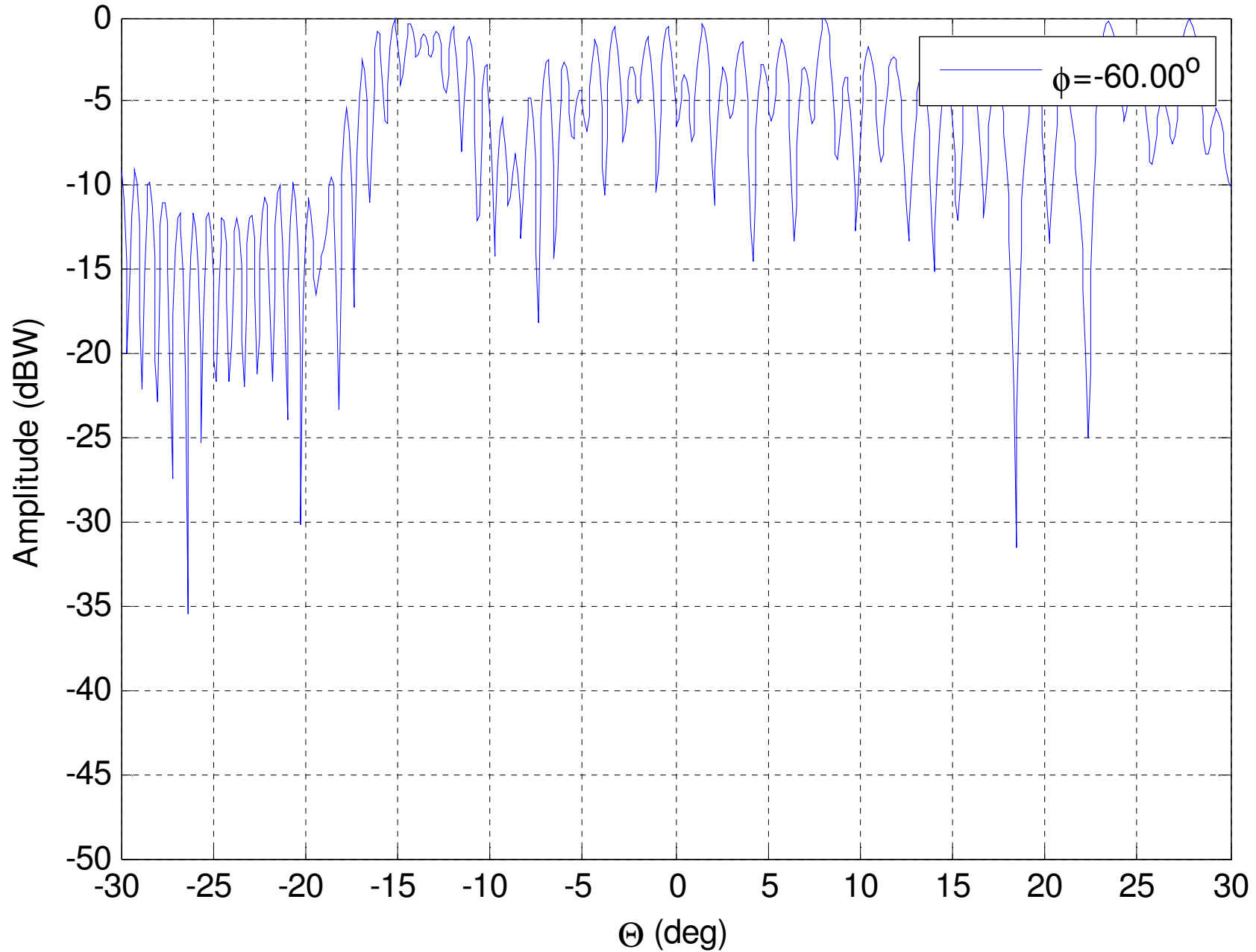
Input file: tx-17.3-lhcp-60.cut, Peak: -0.58 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

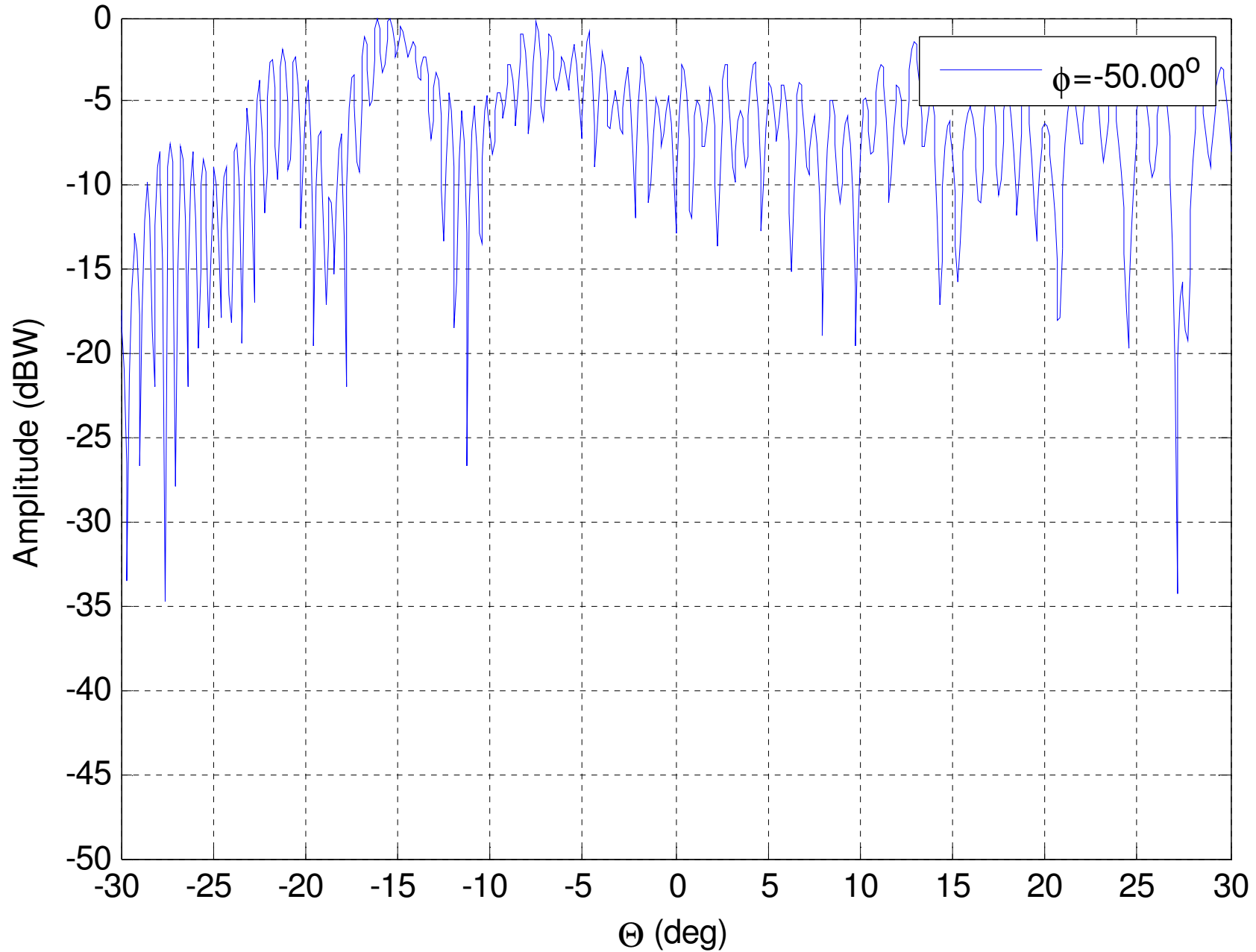
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -1.13 dBW, Date: 14-Dec-2011



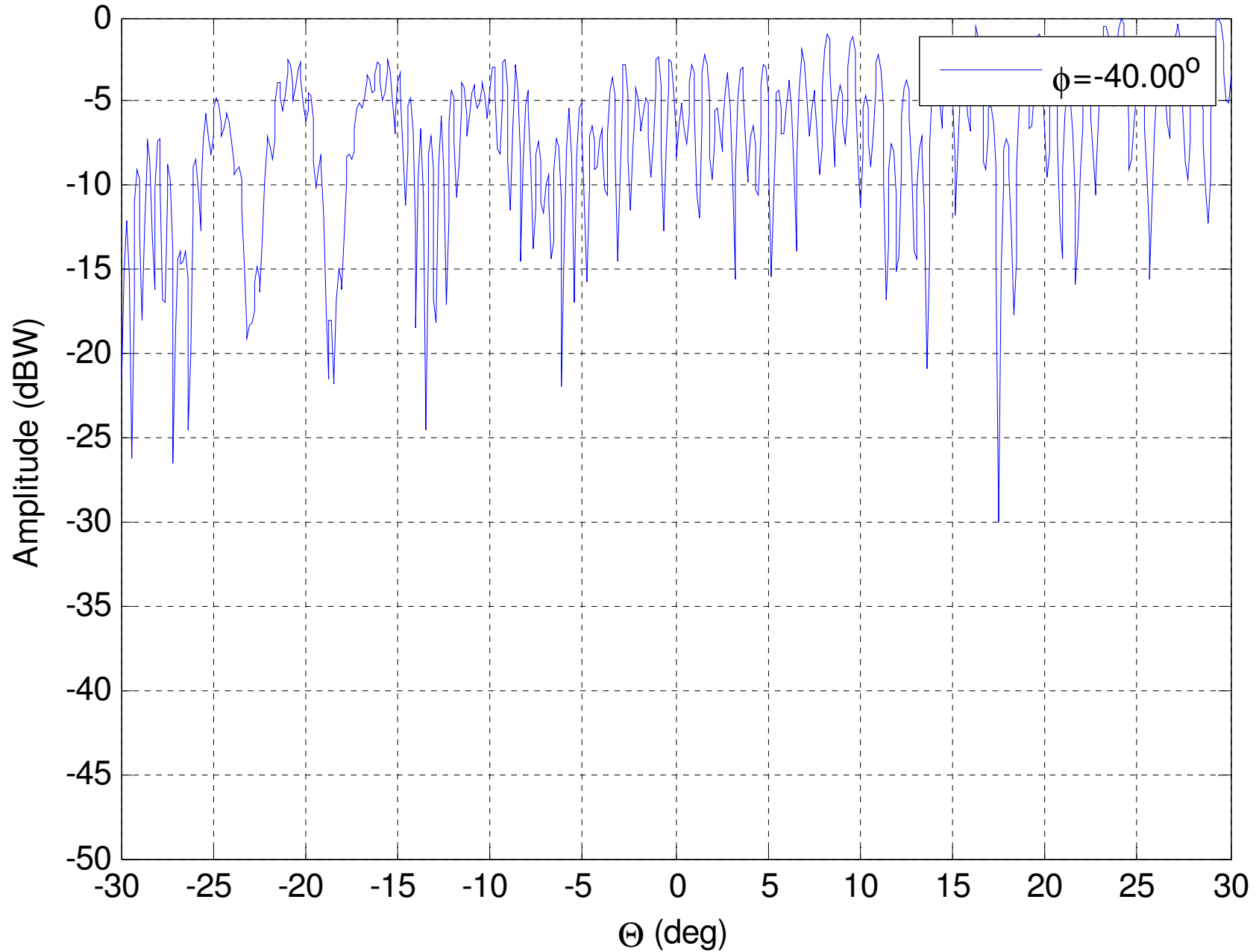
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -0.23 dBW, Date: 14-Dec-2011



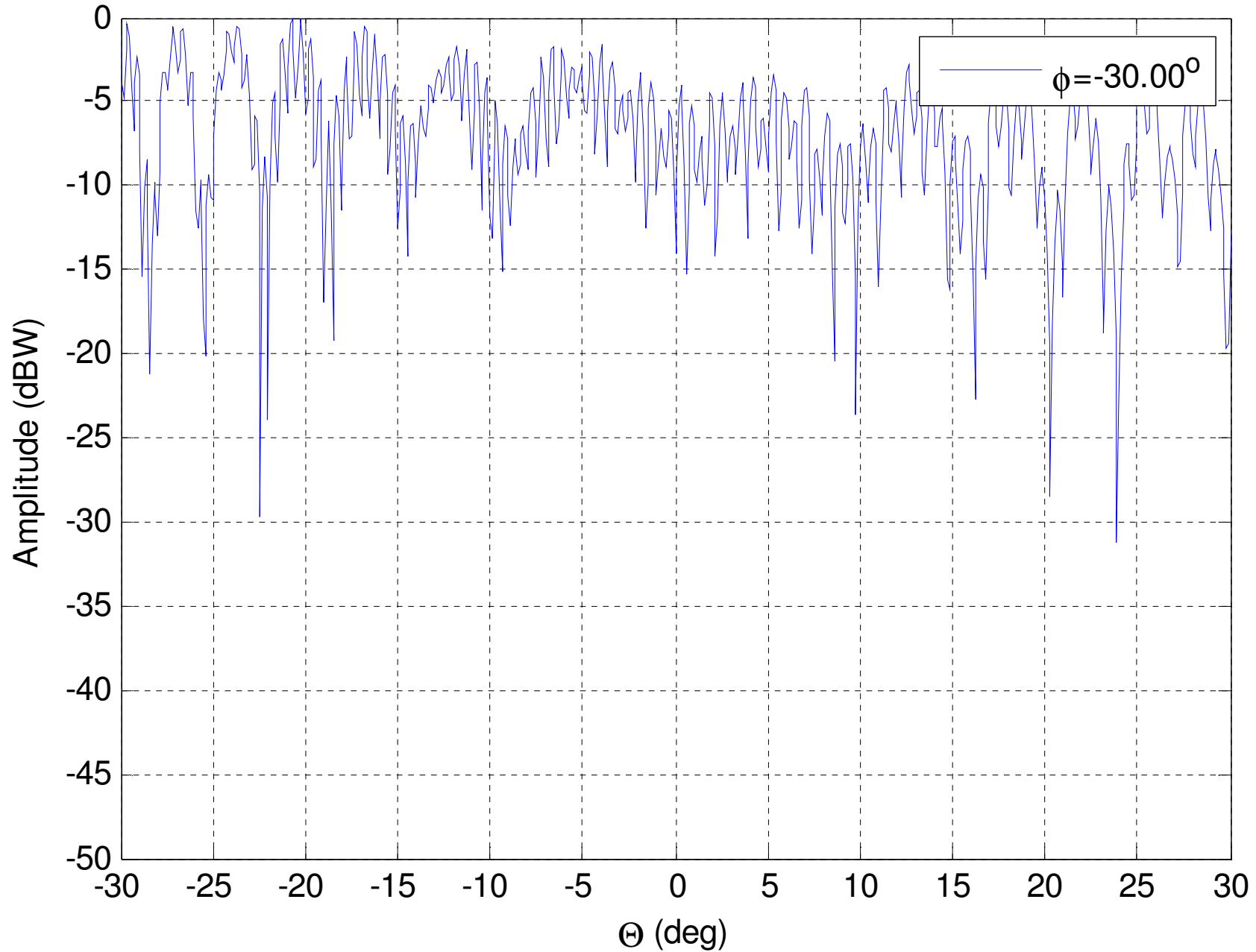
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: 0.54 dBW, Date: 14-Dec-2011



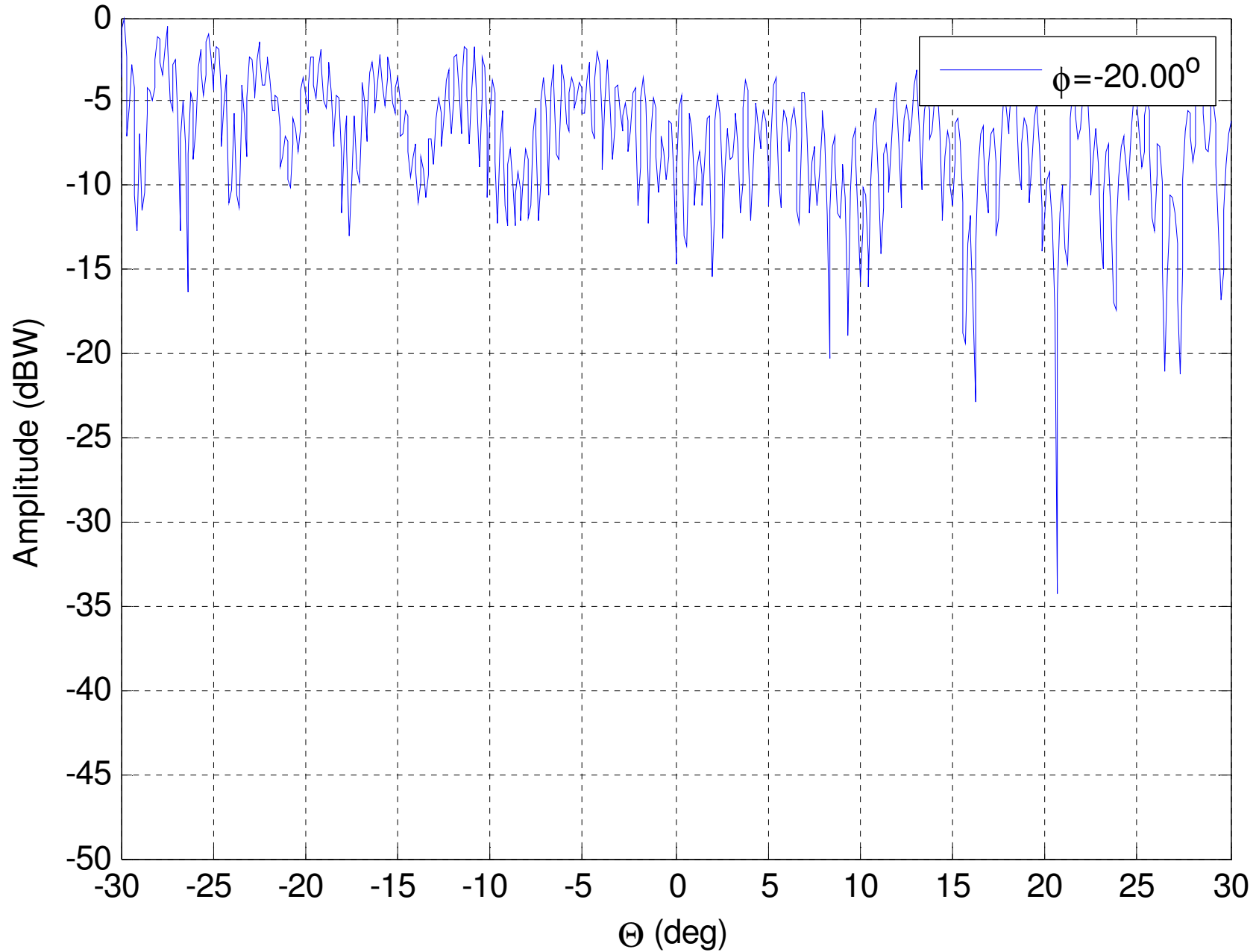
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 0.95 dBW, Date: 14-Dec-2011



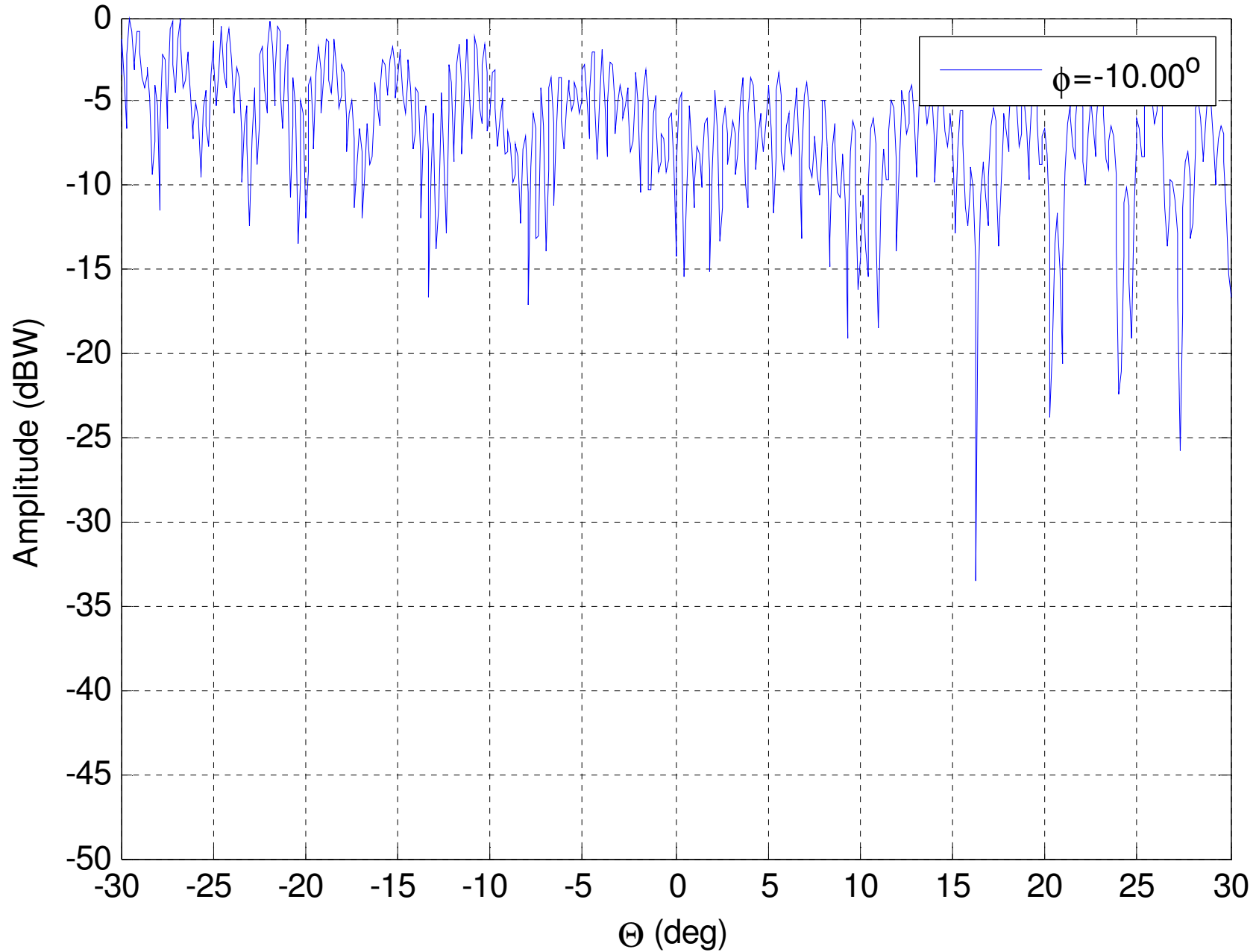
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 1.52 dBW, Date: 14-Dec-2011



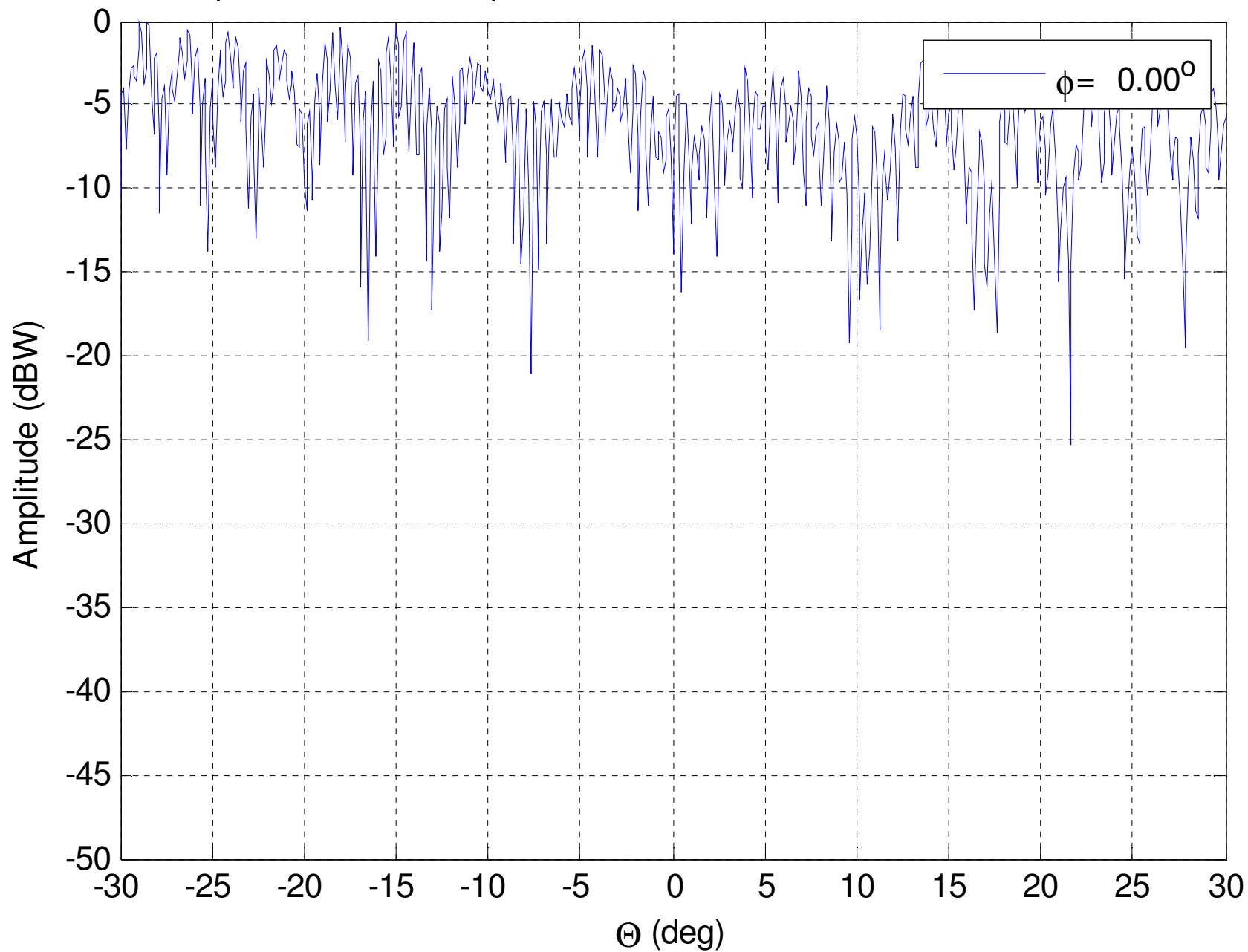
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 1.16 dBW, Date: 14-Dec-2011



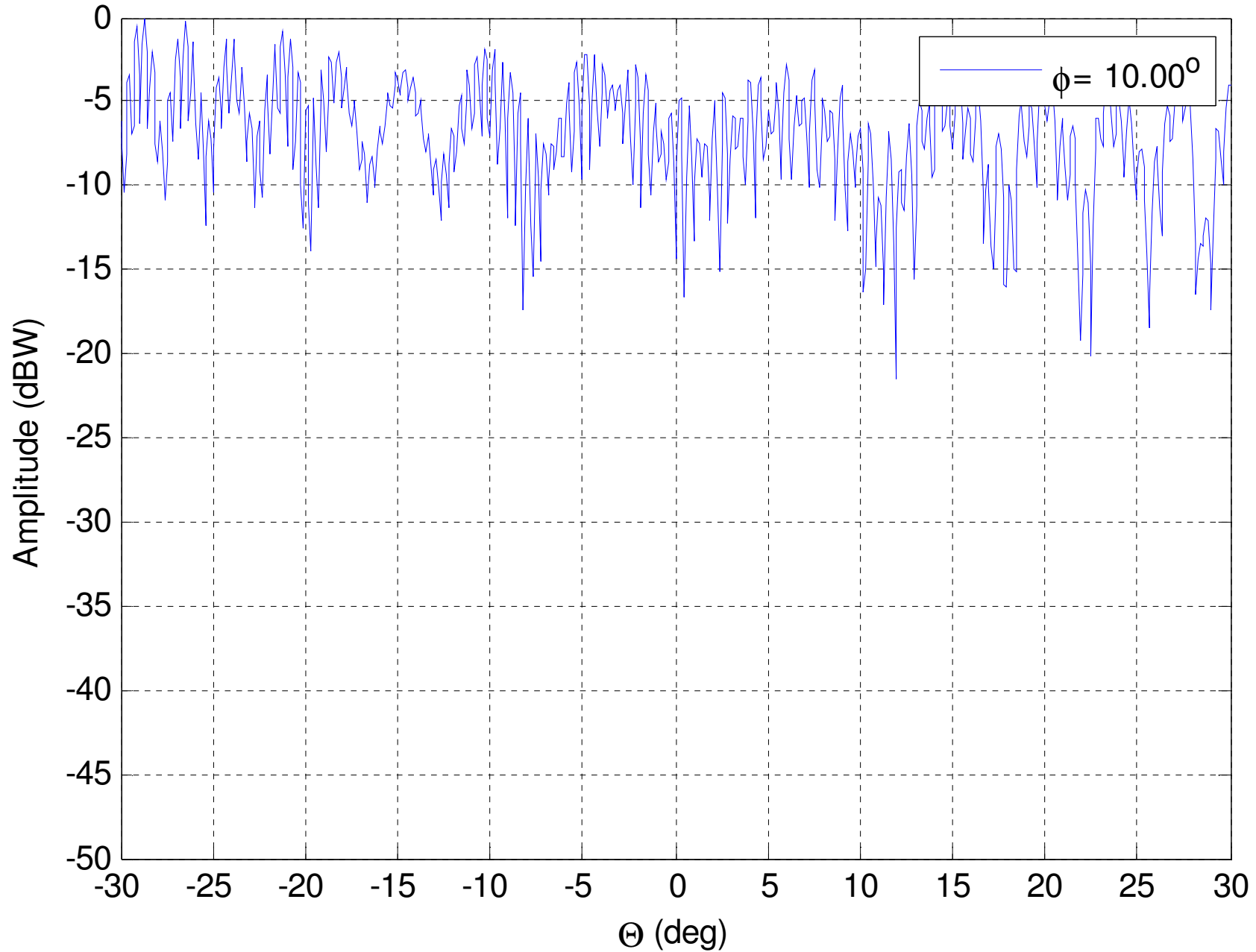
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 0.84 dBW, Date: 14-Dec-2011



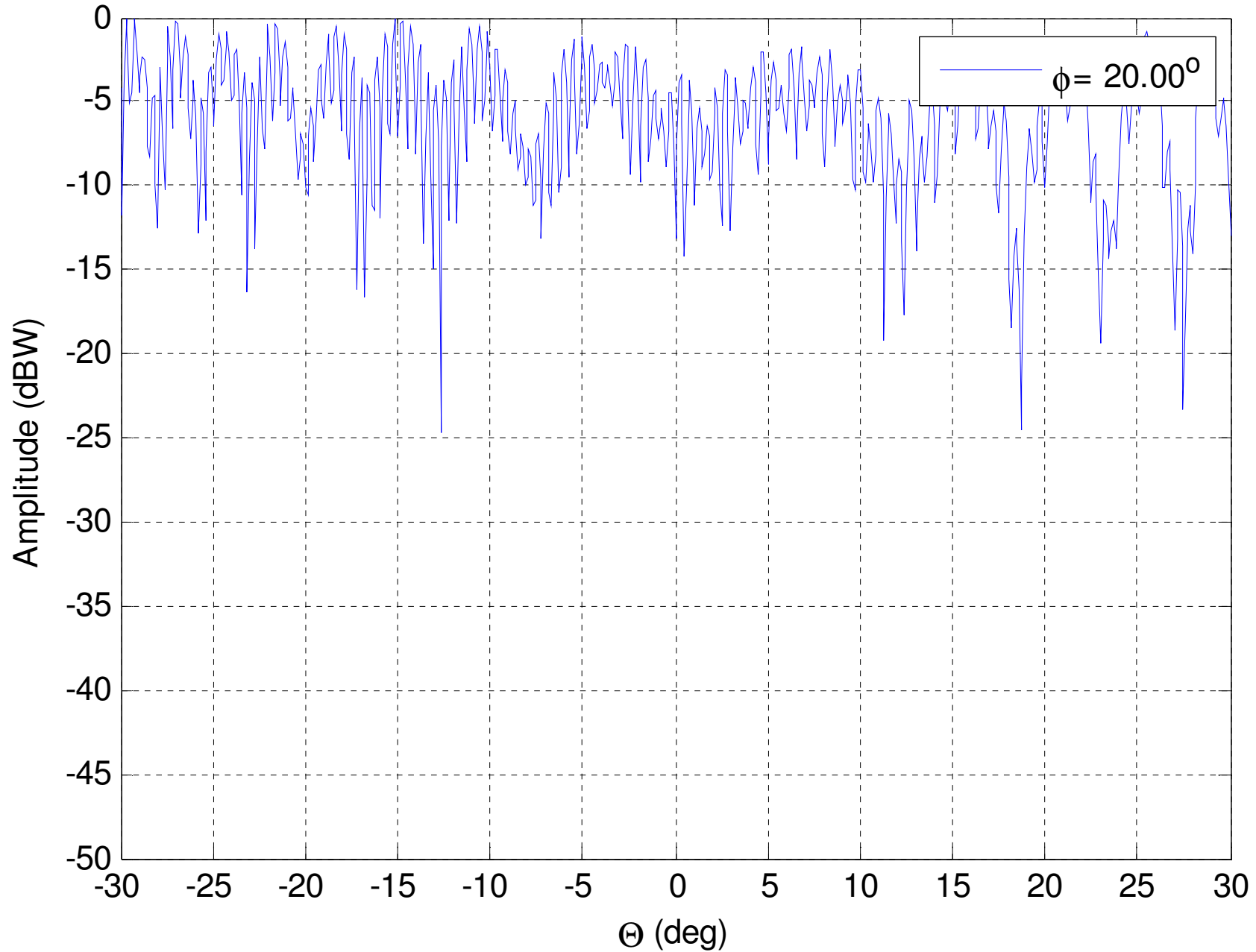
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 1.28 dBW, Date: 14-Dec-2011



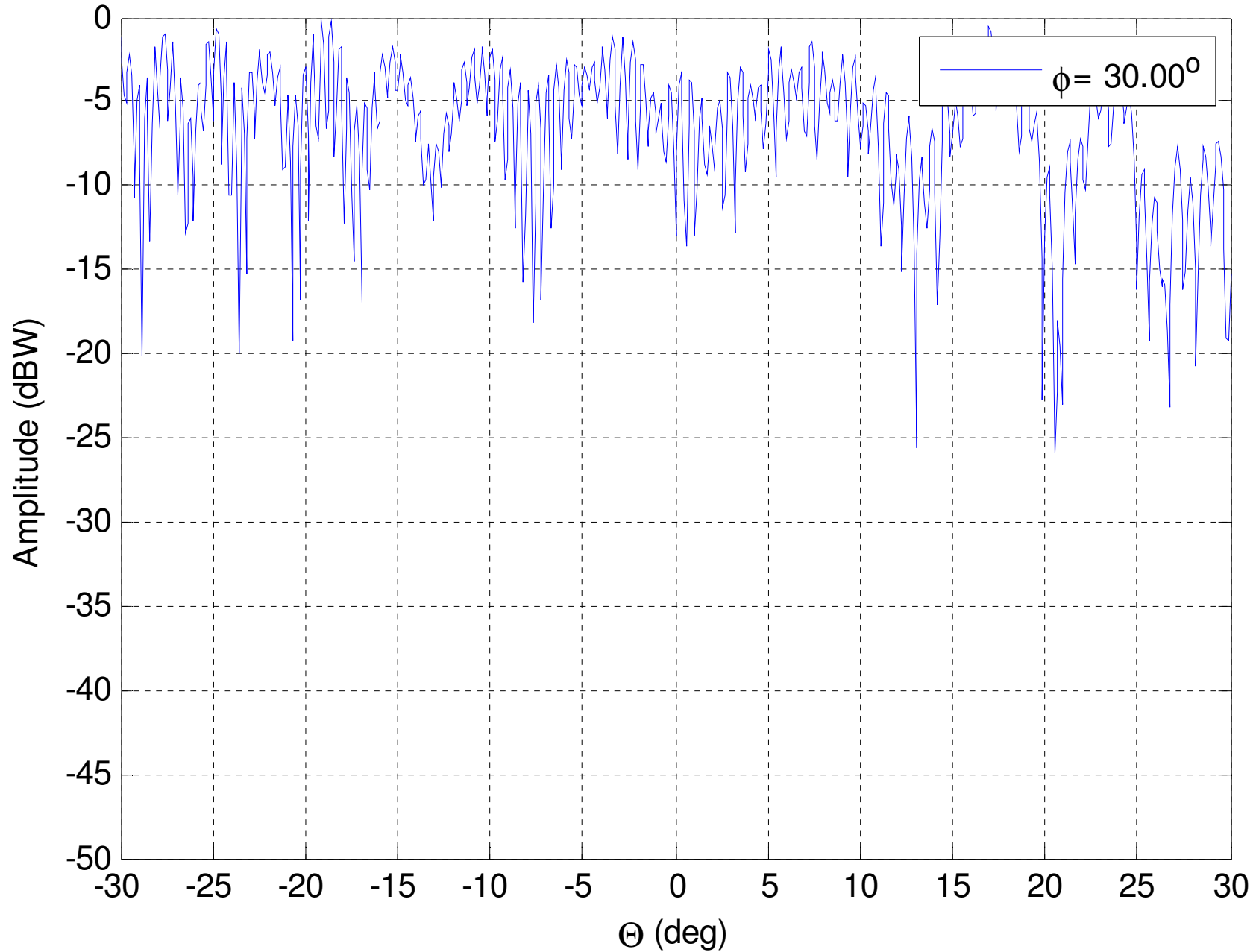
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 0.04 dBW, Date: 14-Dec-2011



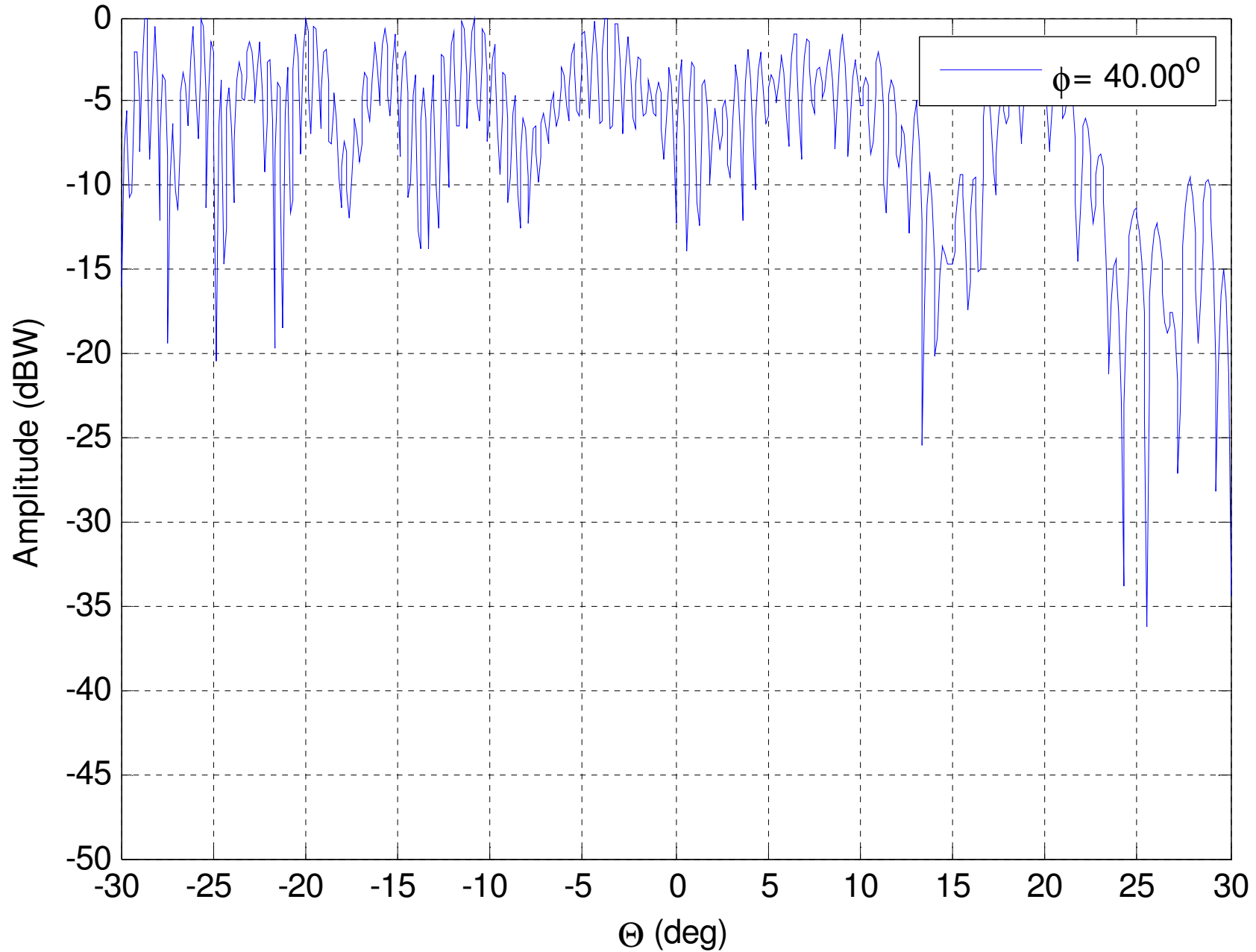
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.07 dBW, Date: 14-Dec-2011



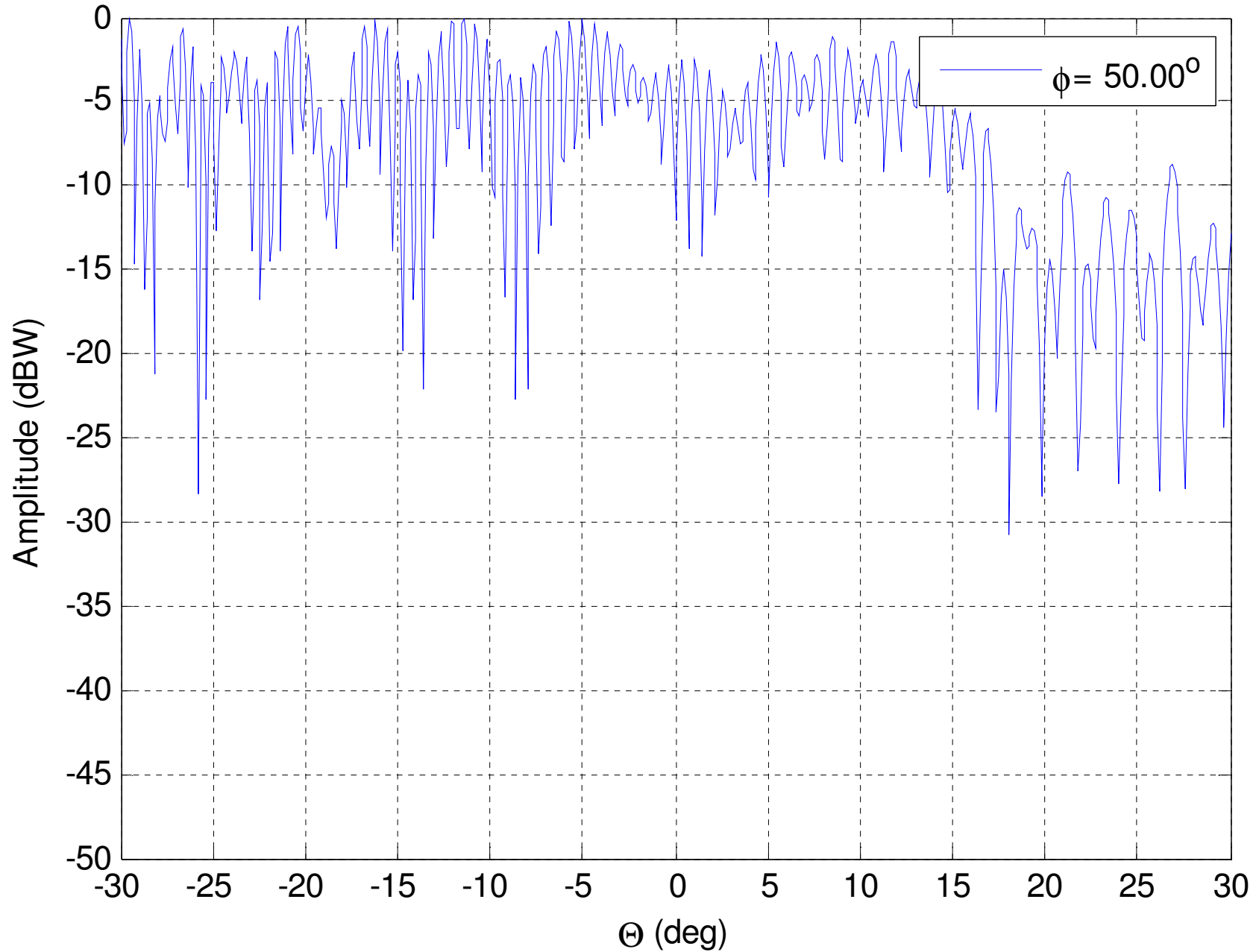
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -0.89 dBW, Date: 14-Dec-2011



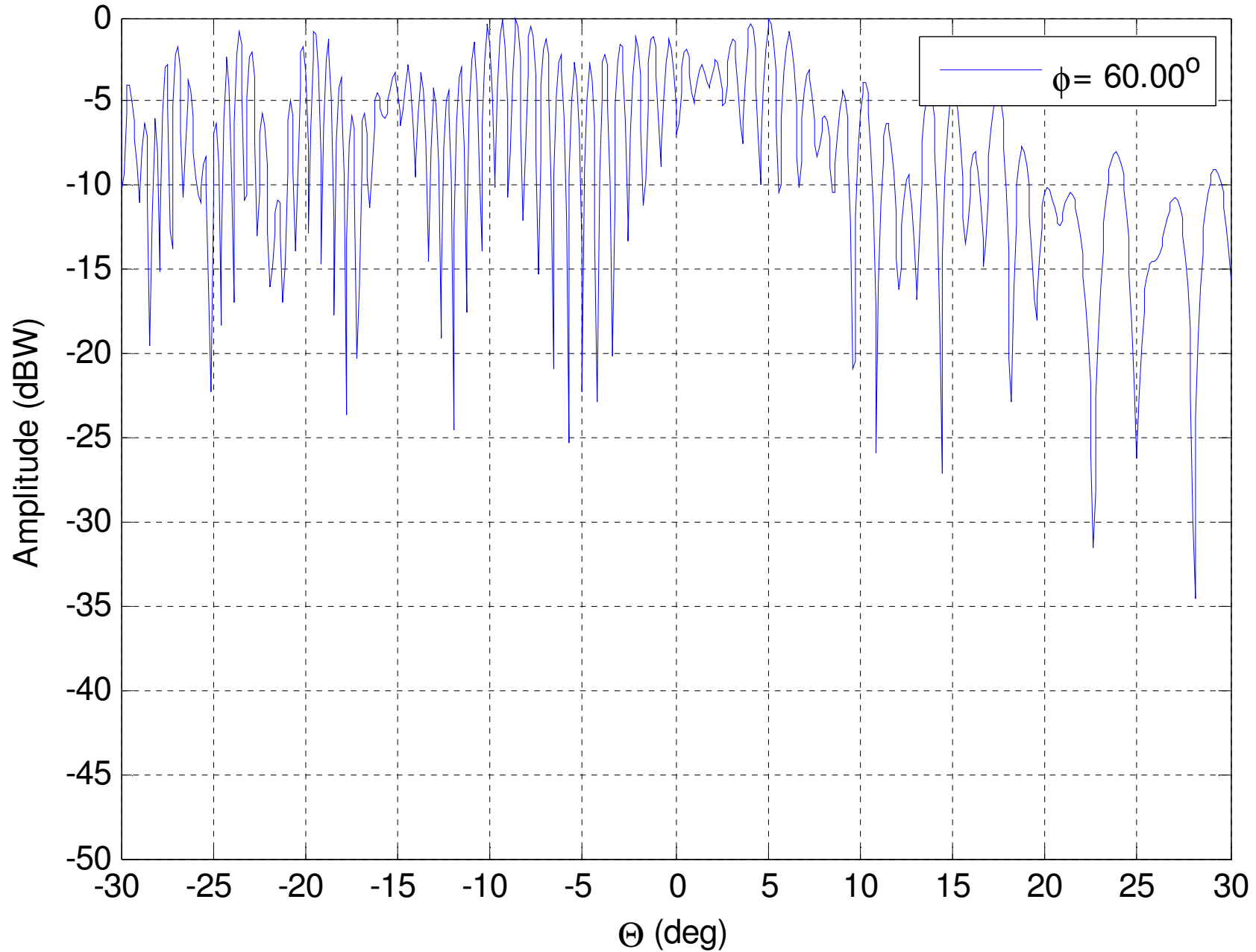
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -1.00 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

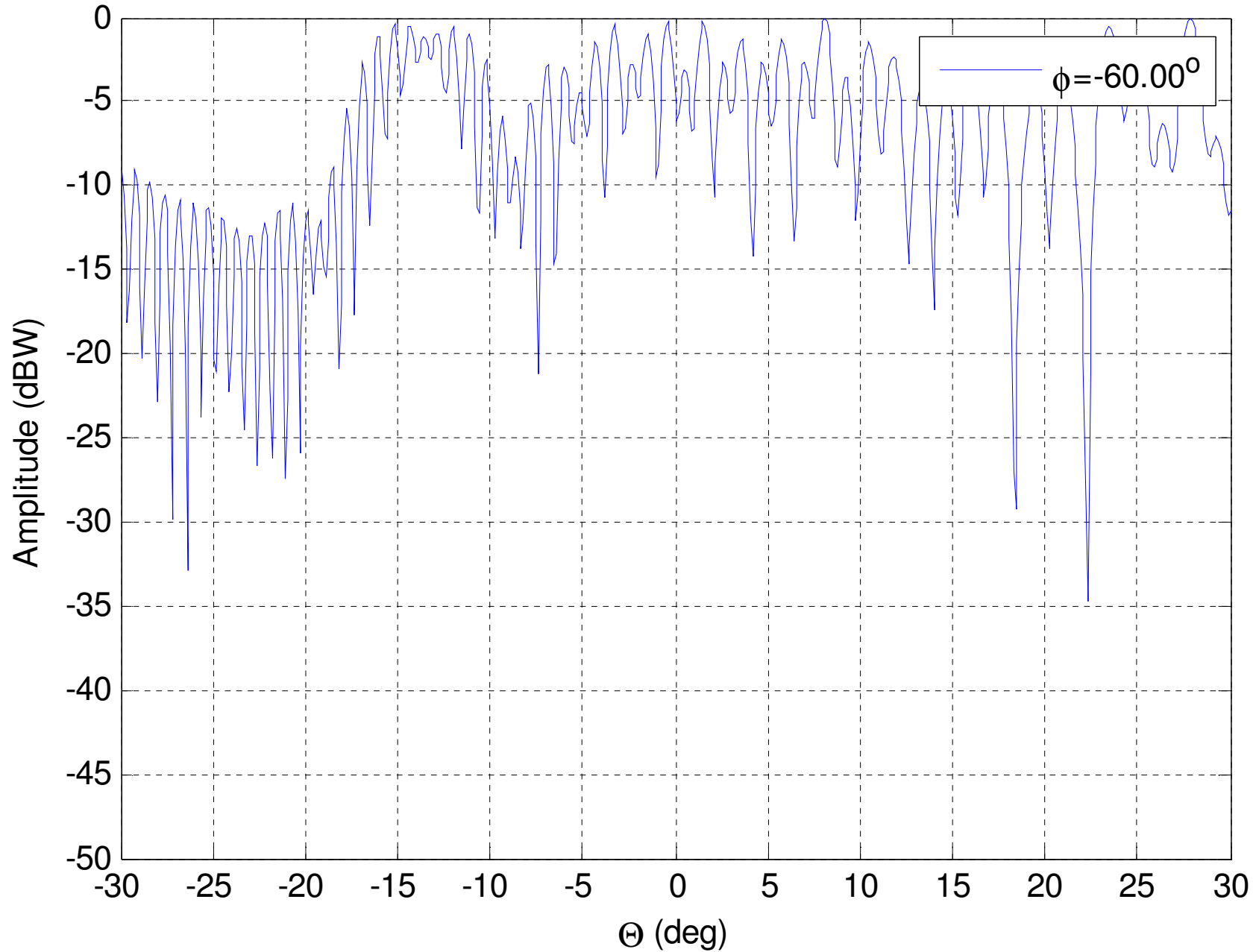
Input file: tx-17.5-rhcp-60.cut, Peak: -1.29 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

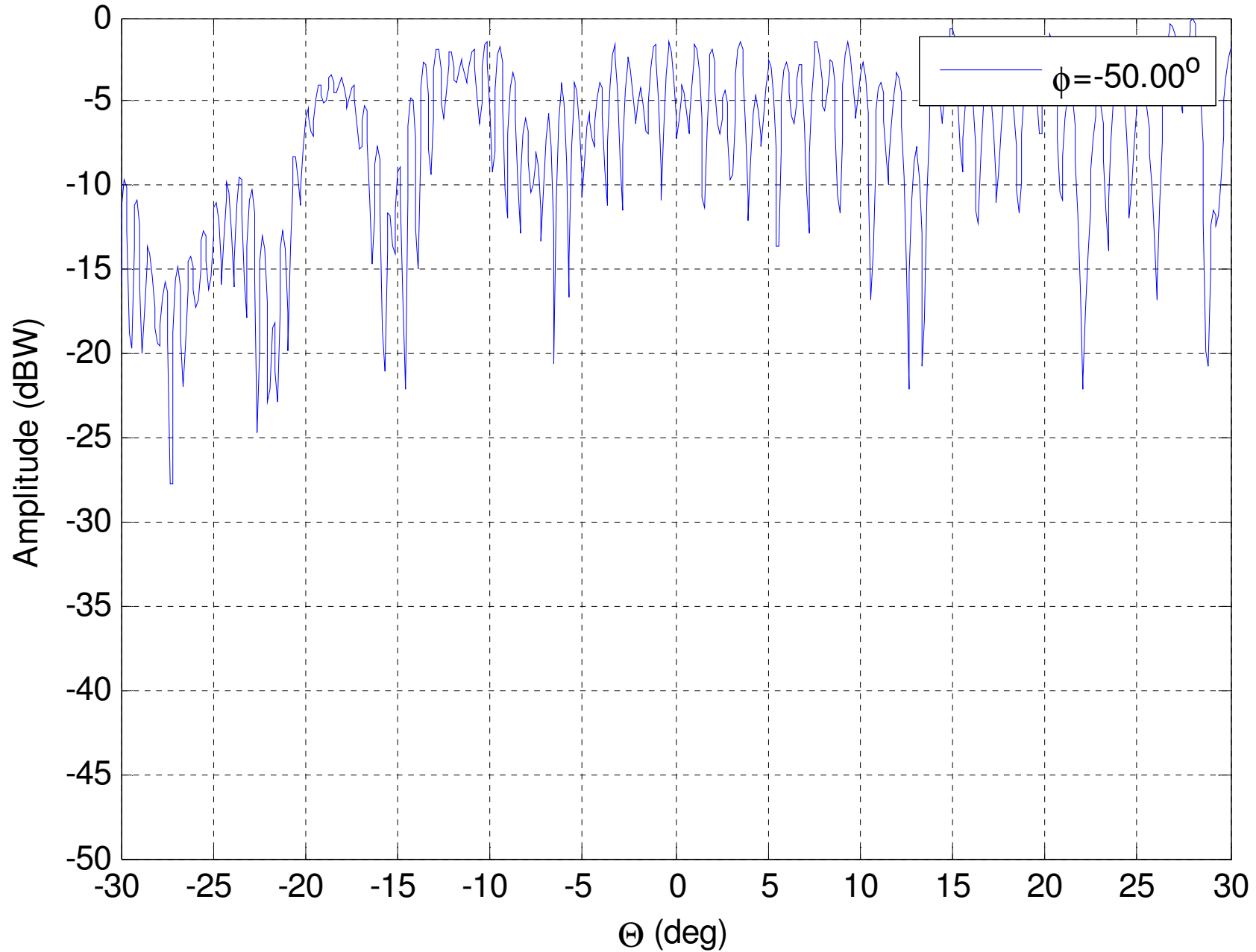
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -1.19 dBW, Date: 14-Dec-2011



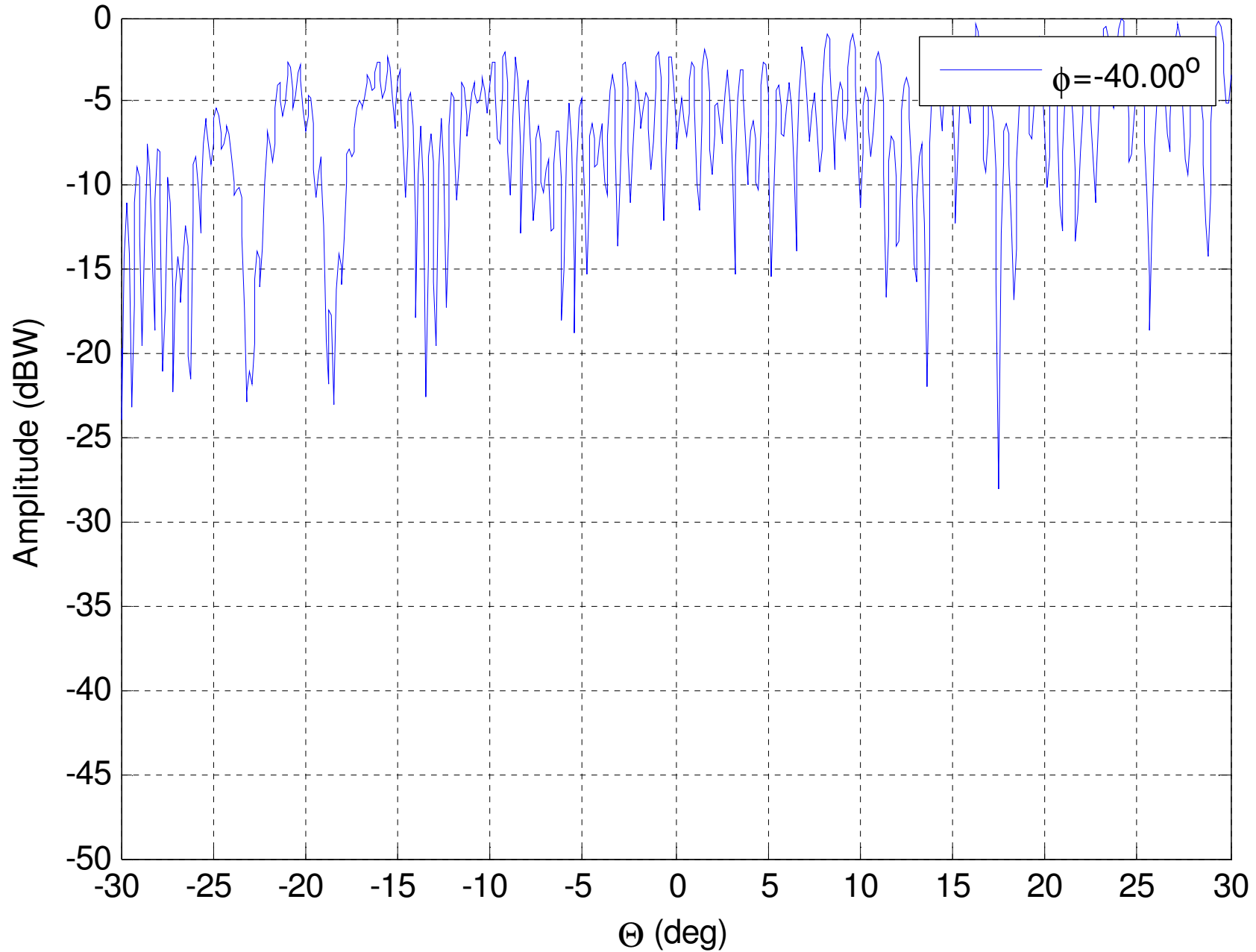
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -0.19 dBW, Date: 14-Dec-2011



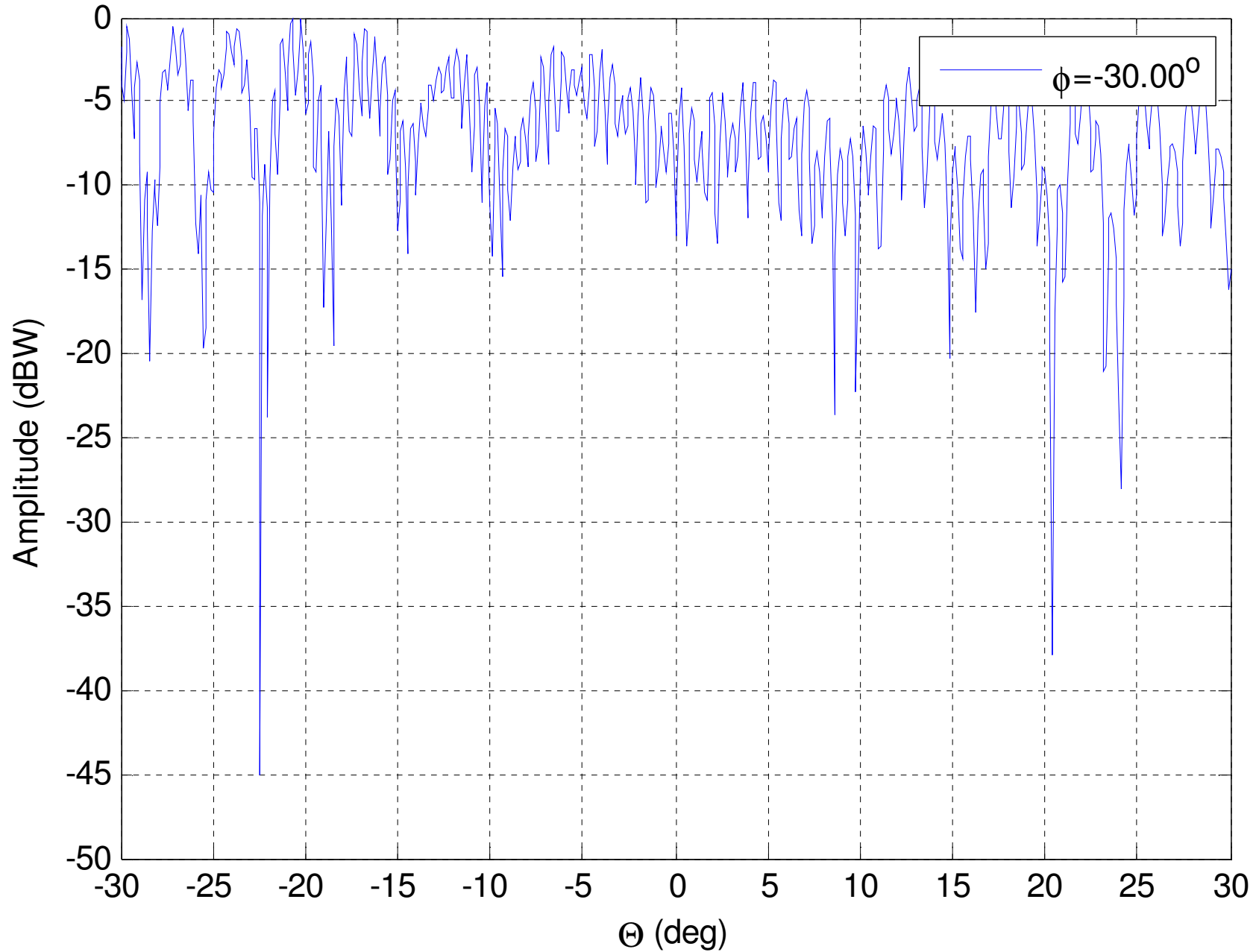
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: 0.46 dBW, Date: 14-Dec-2011



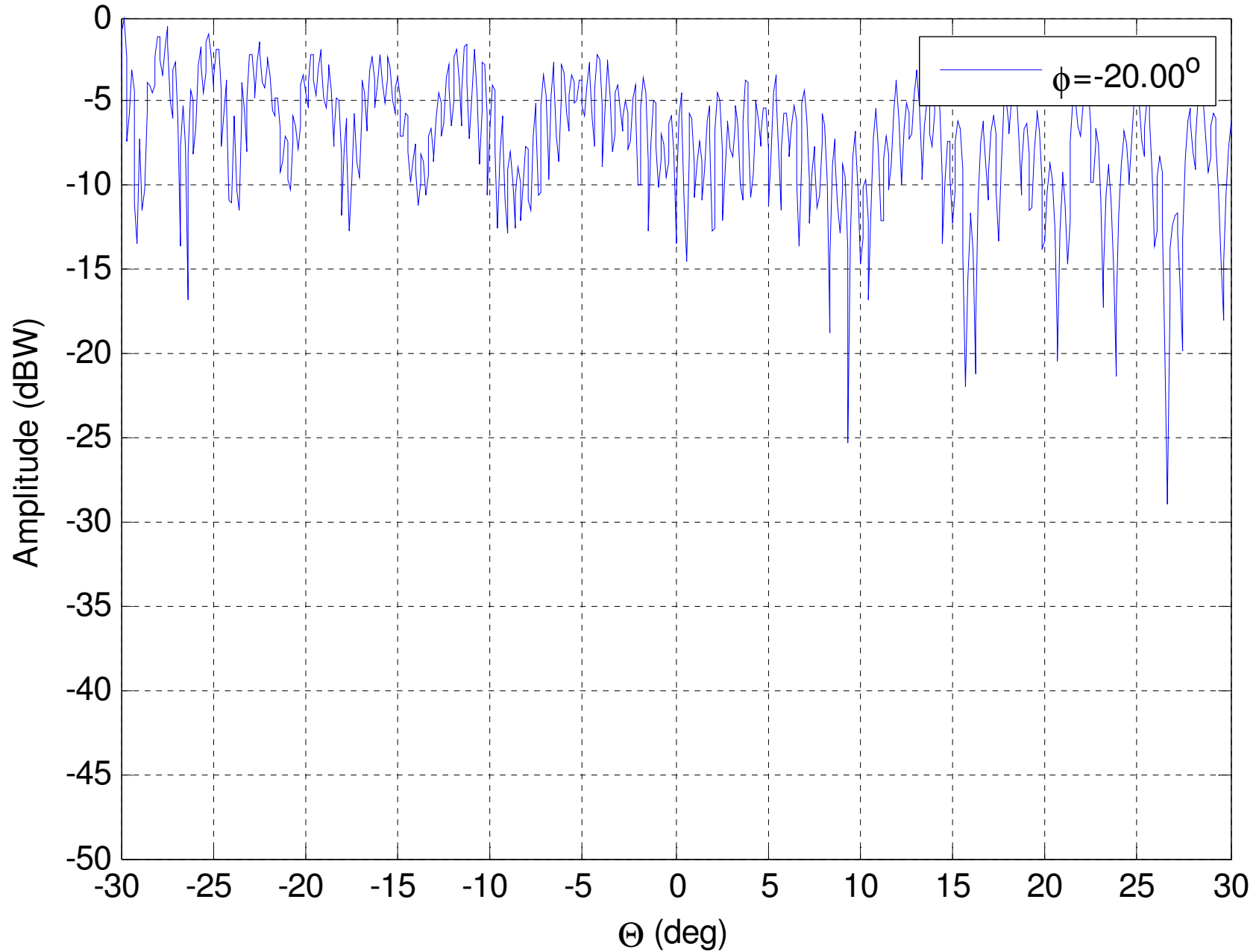
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 1.12 dBW, Date: 14-Dec-2011



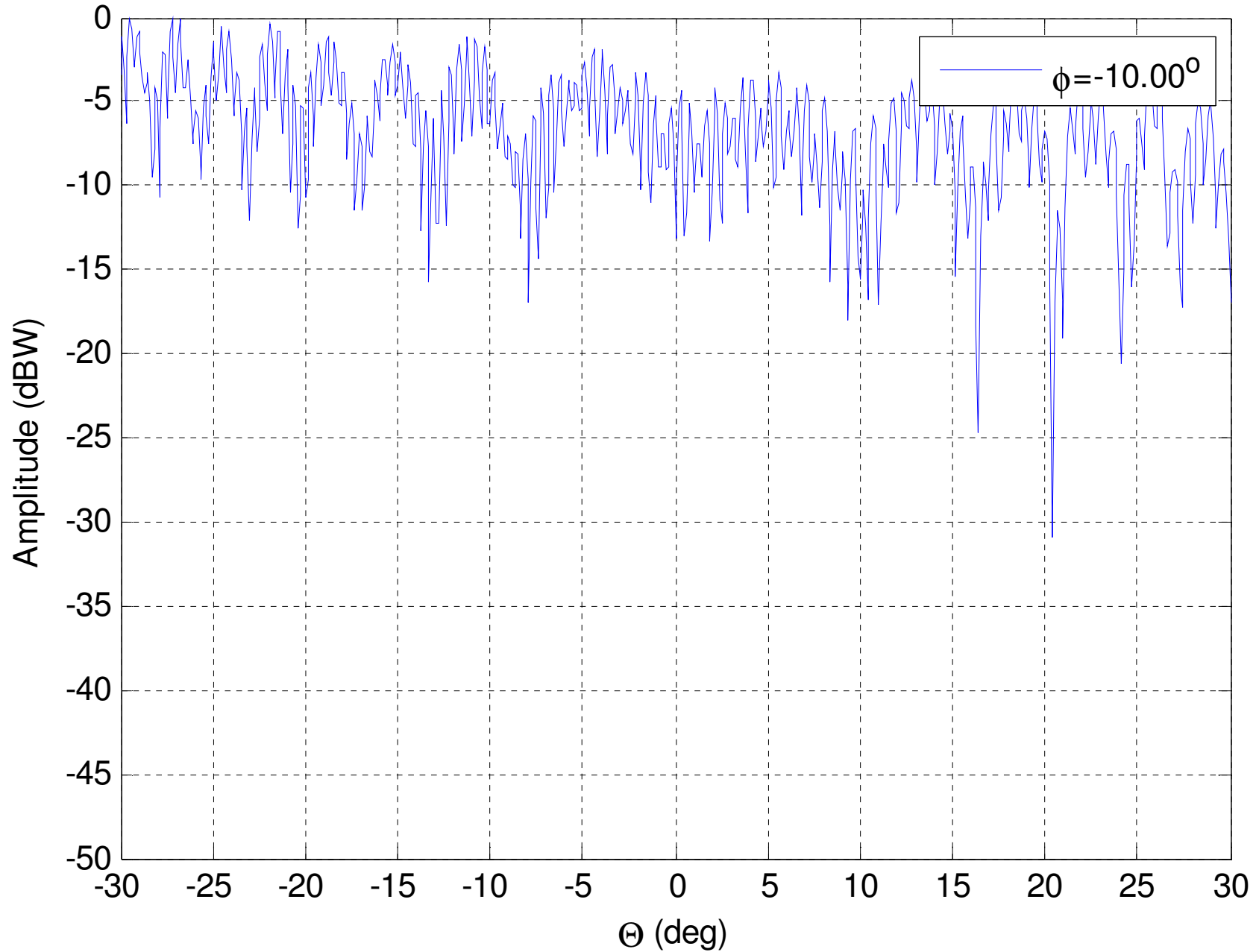
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 1.52 dBW, Date: 14-Dec-2011



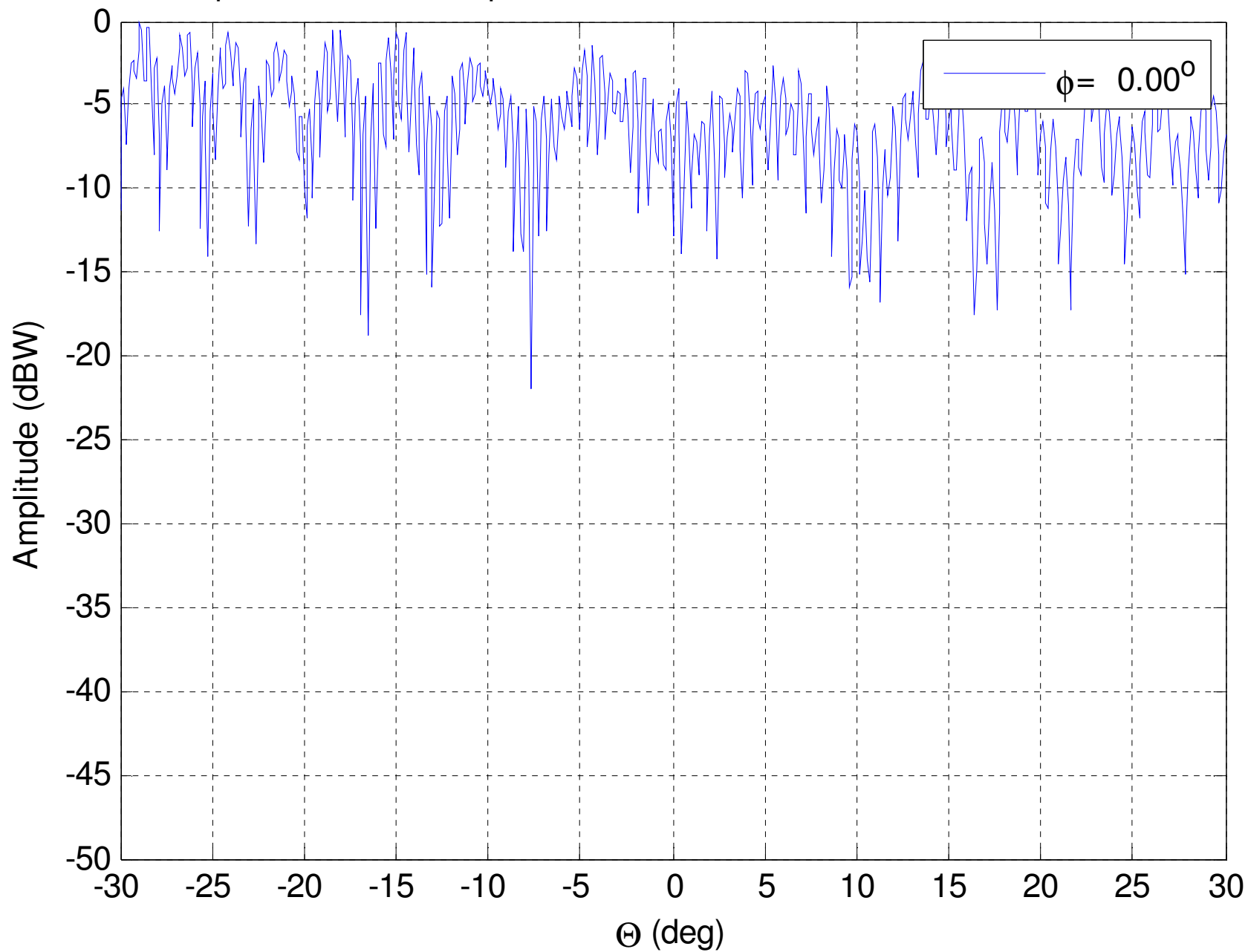
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 1.28 dBW, Date: 14-Dec-2011



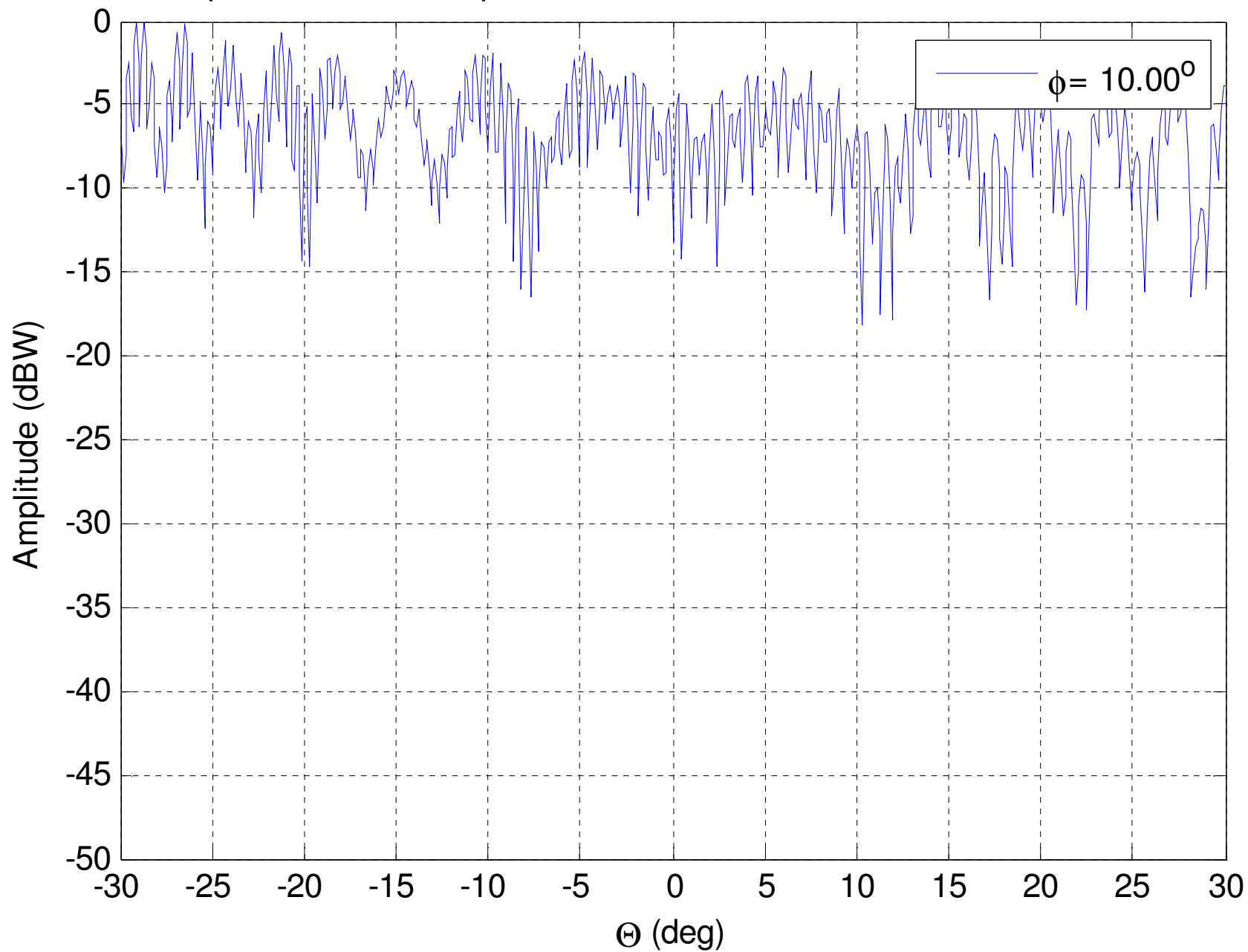
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 0.94 dBW, Date: 14-Dec-2011



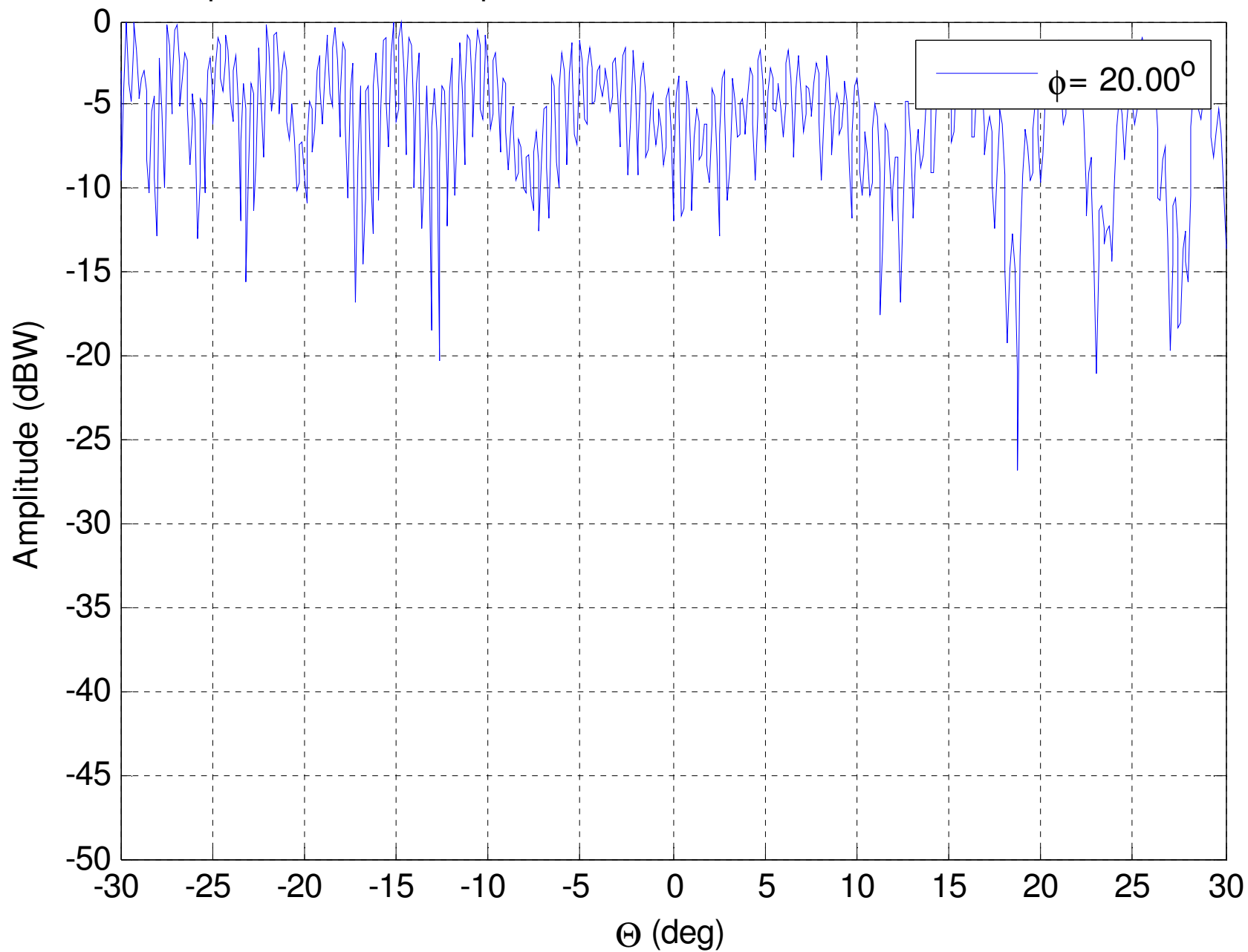
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 1.23 dBW, Date: 14-Dec-2011



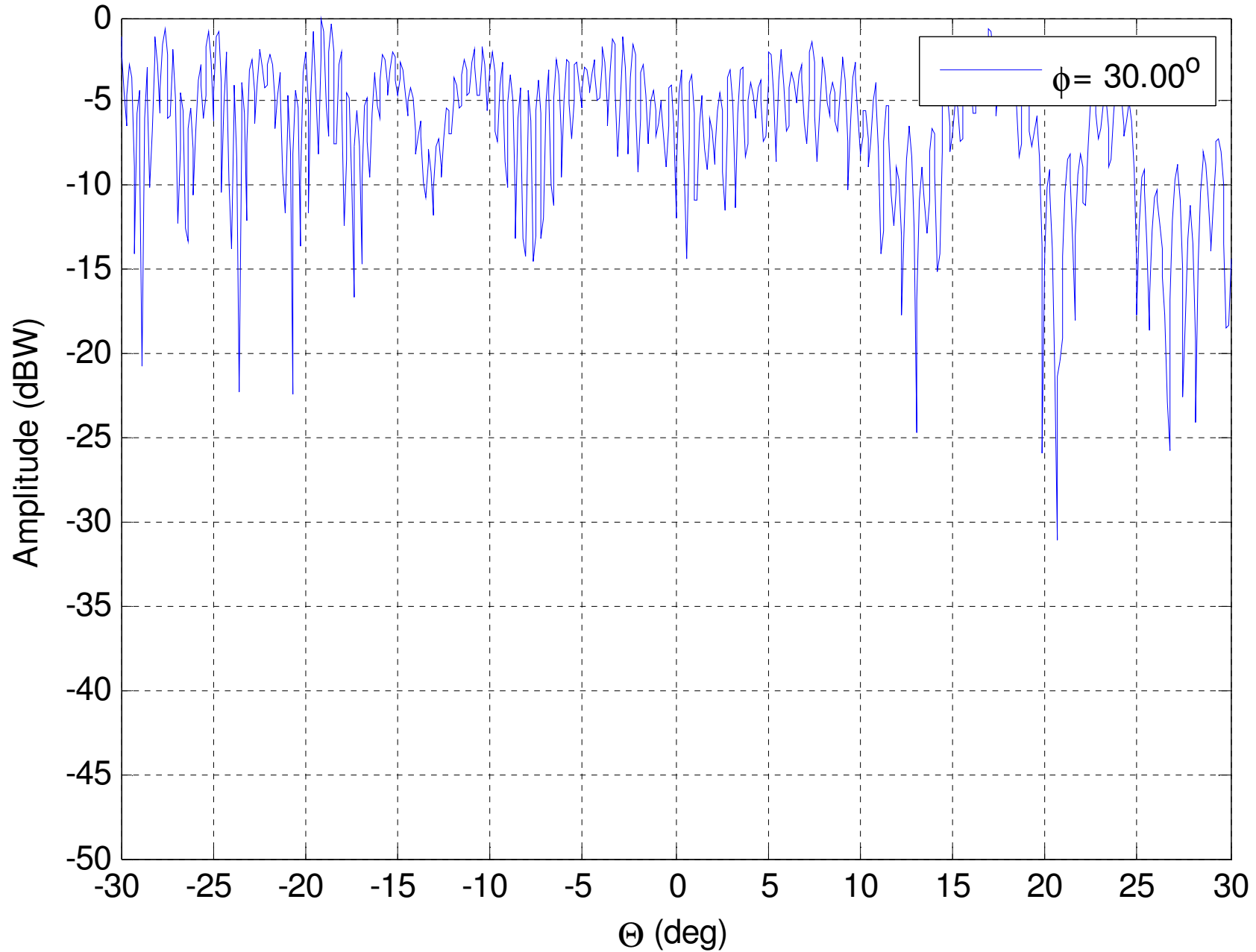
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 0.09 dBW, Date: 14-Dec-2011



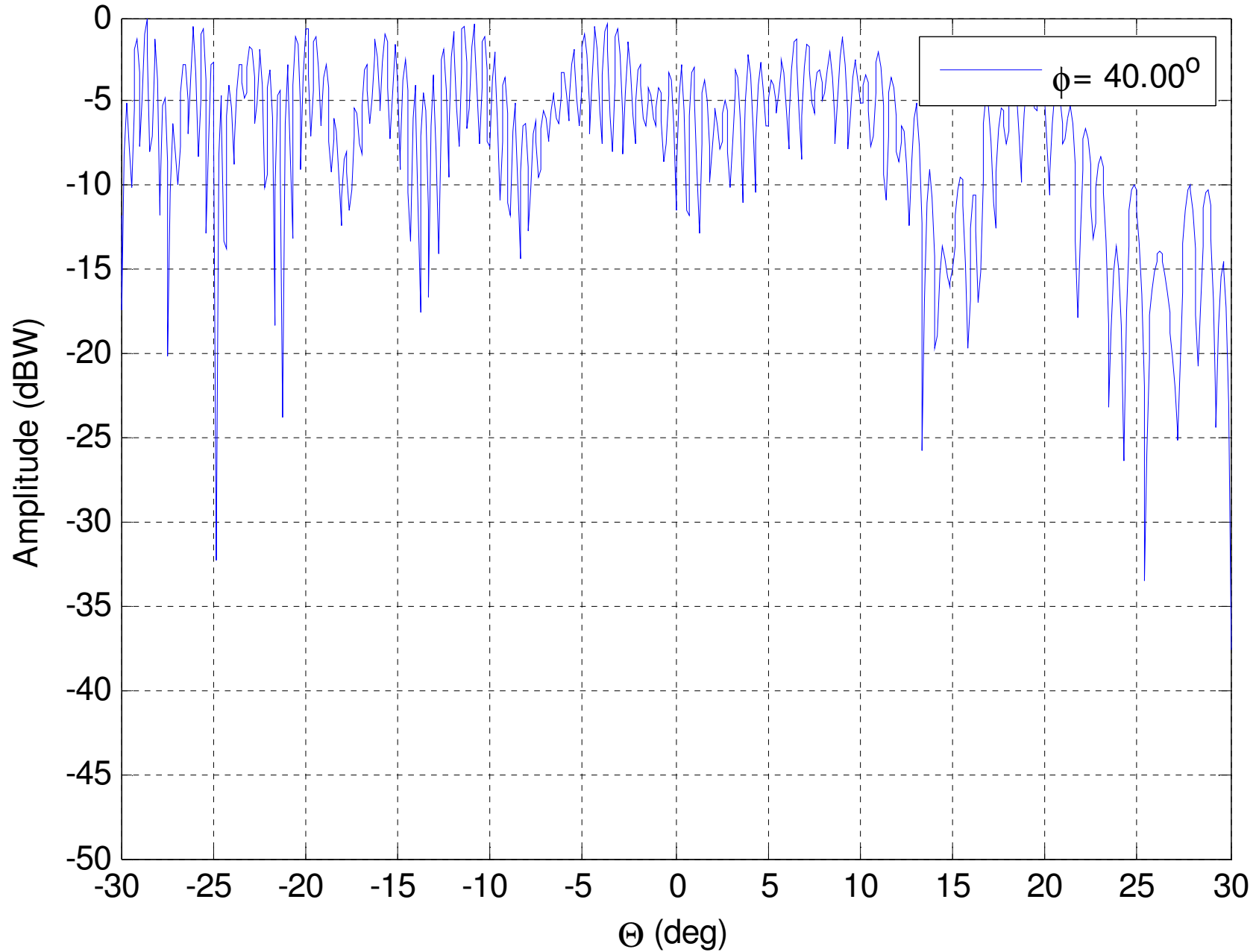
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.04 dBW, Date: 14-Dec-2011



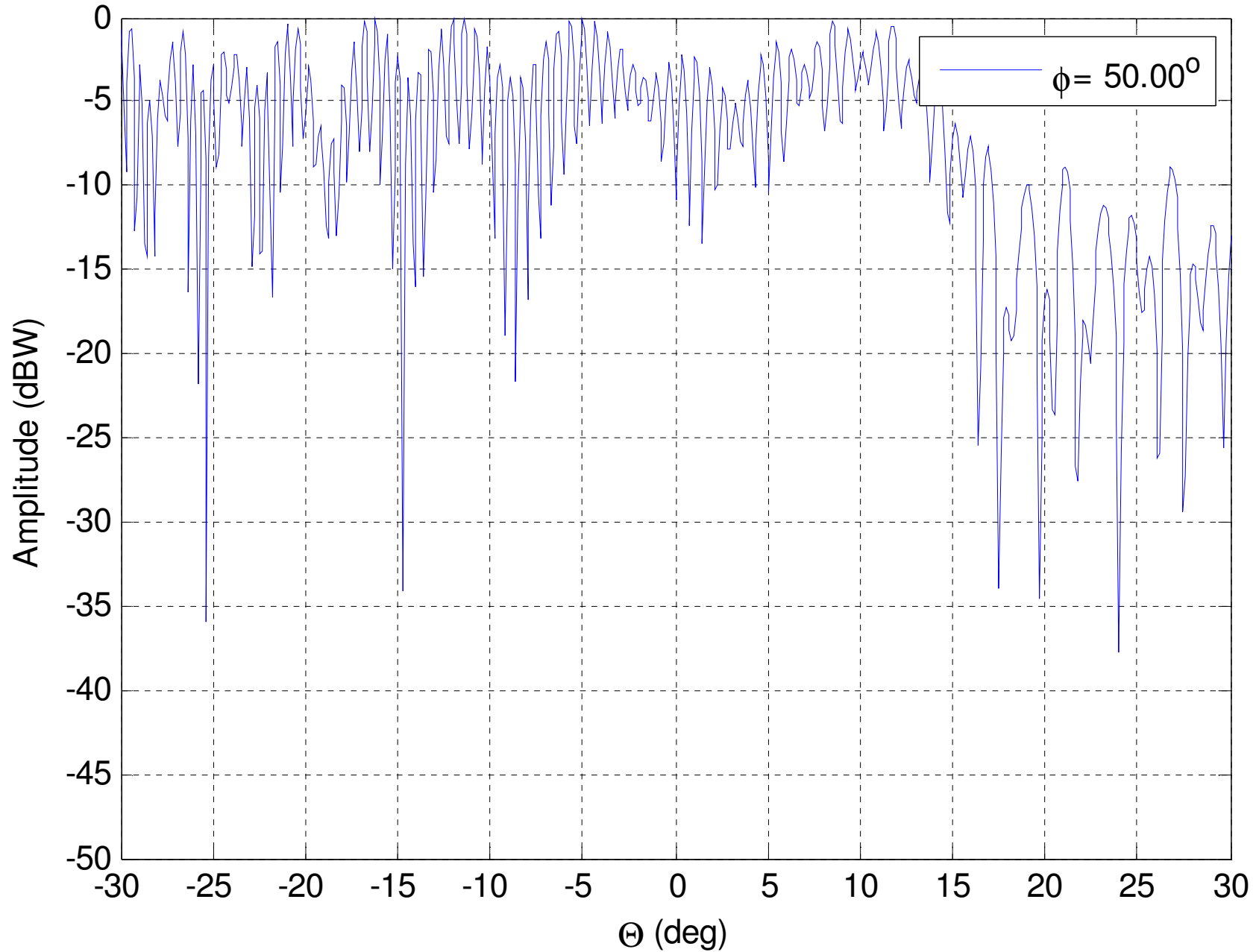
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -0.50 dBW, Date: 14-Dec-2011



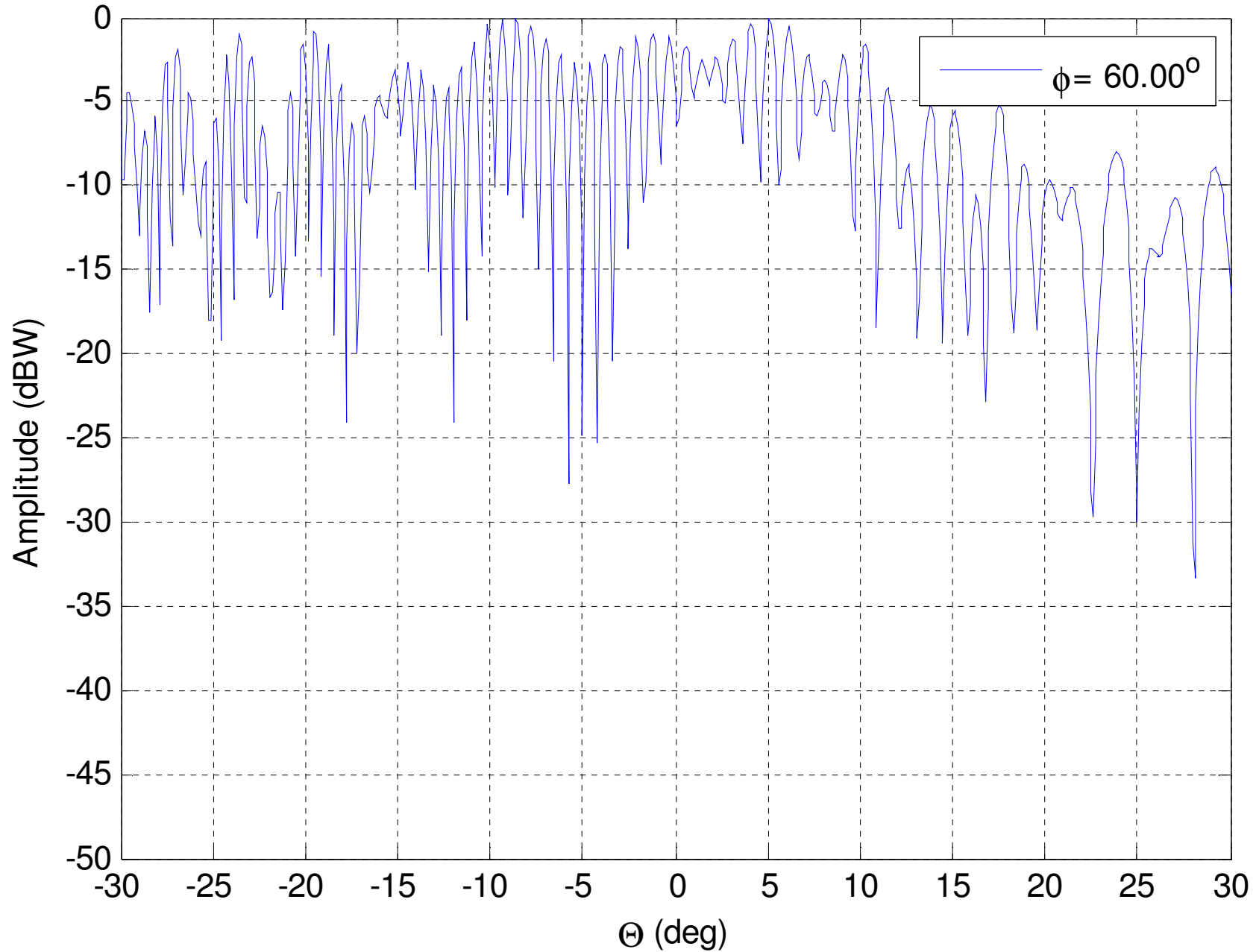
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -1.00 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

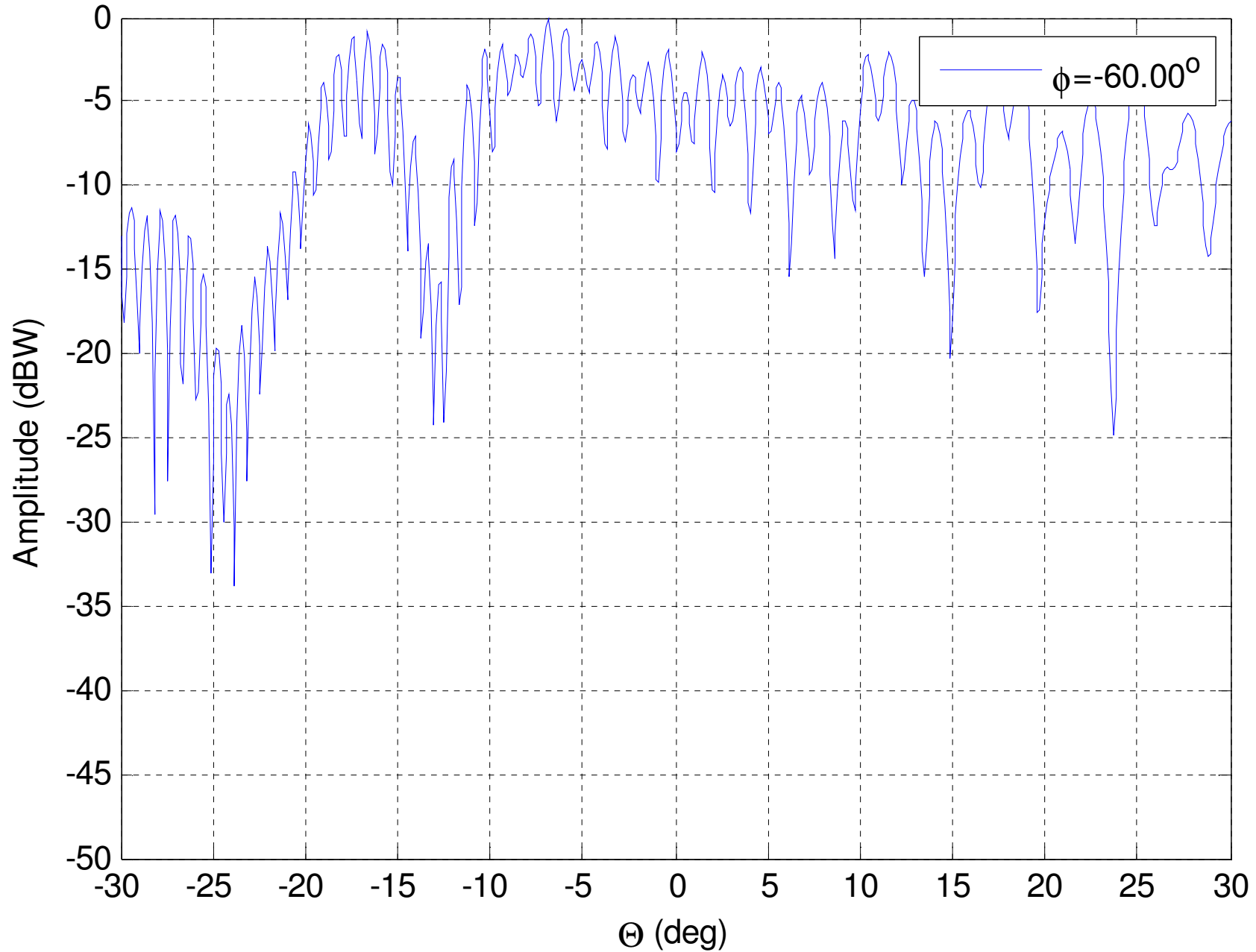
Input file: tx-17.5-lhcp-60.cut, Peak: -1.27 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

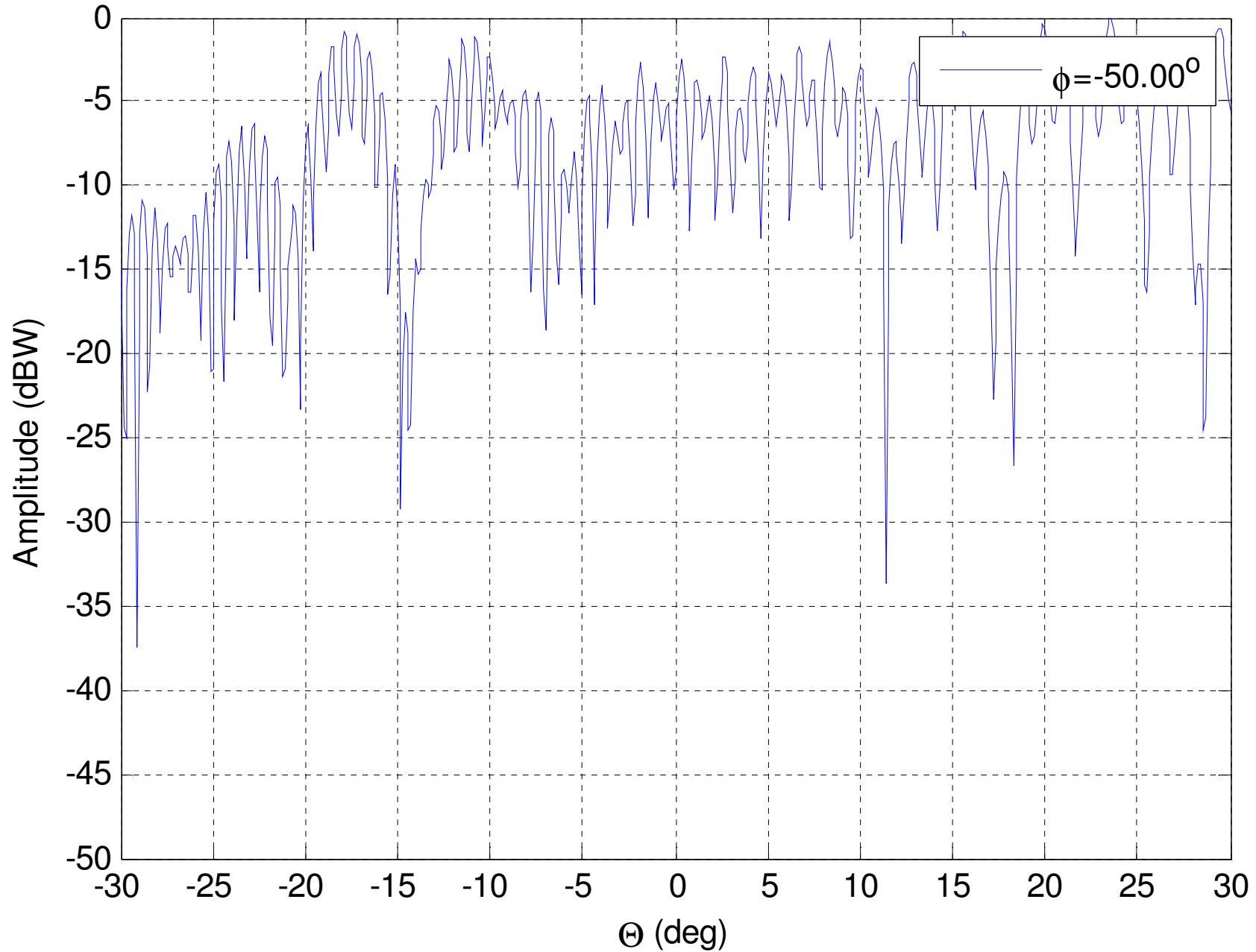
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -0.92 dBW, Date: 14-Dec-2011



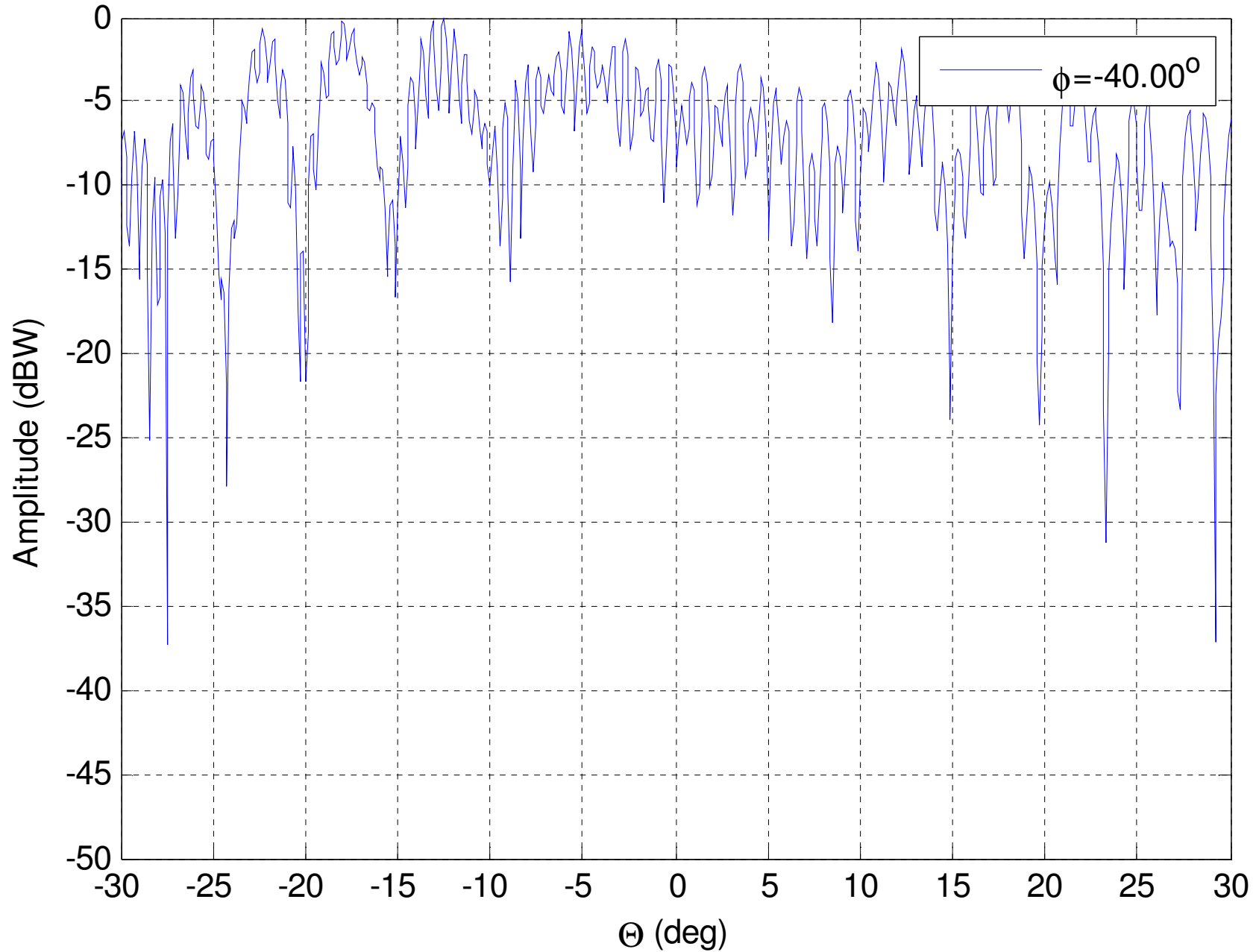
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -0.16 dBW, Date: 14-Dec-2011



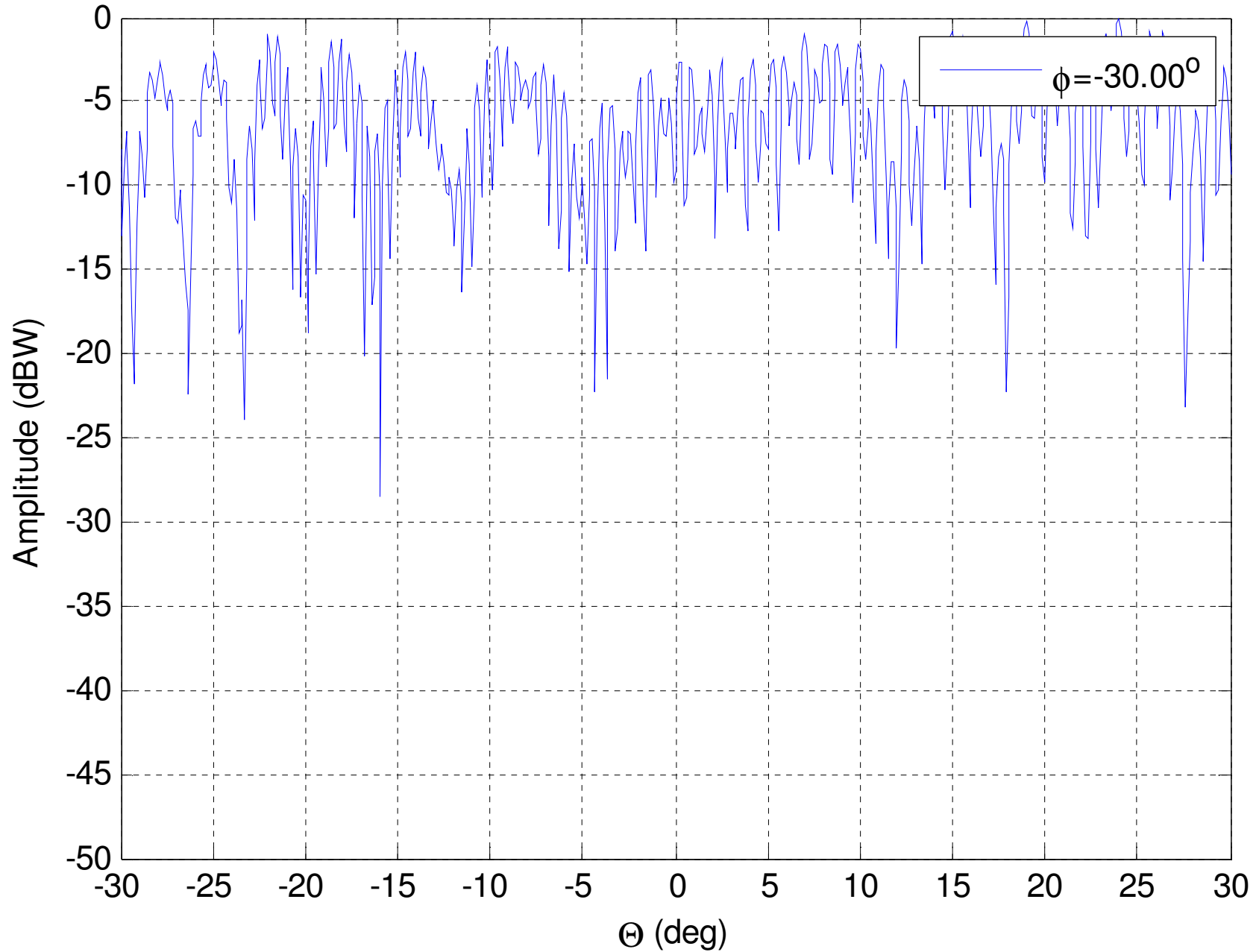
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -0.19 dBW, Date: 14-Dec-2011



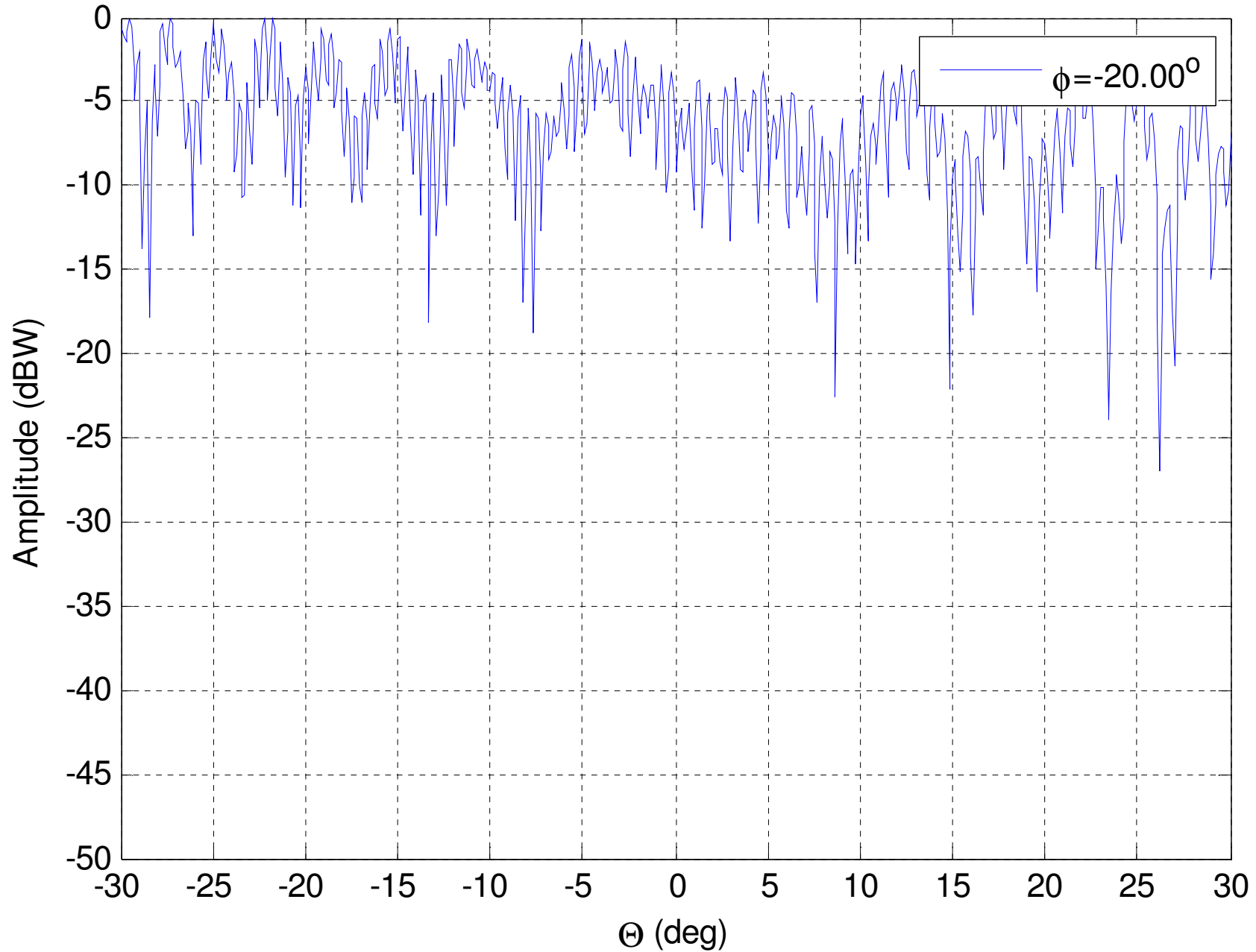
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -0.10 dBW, Date: 14-Dec-2011



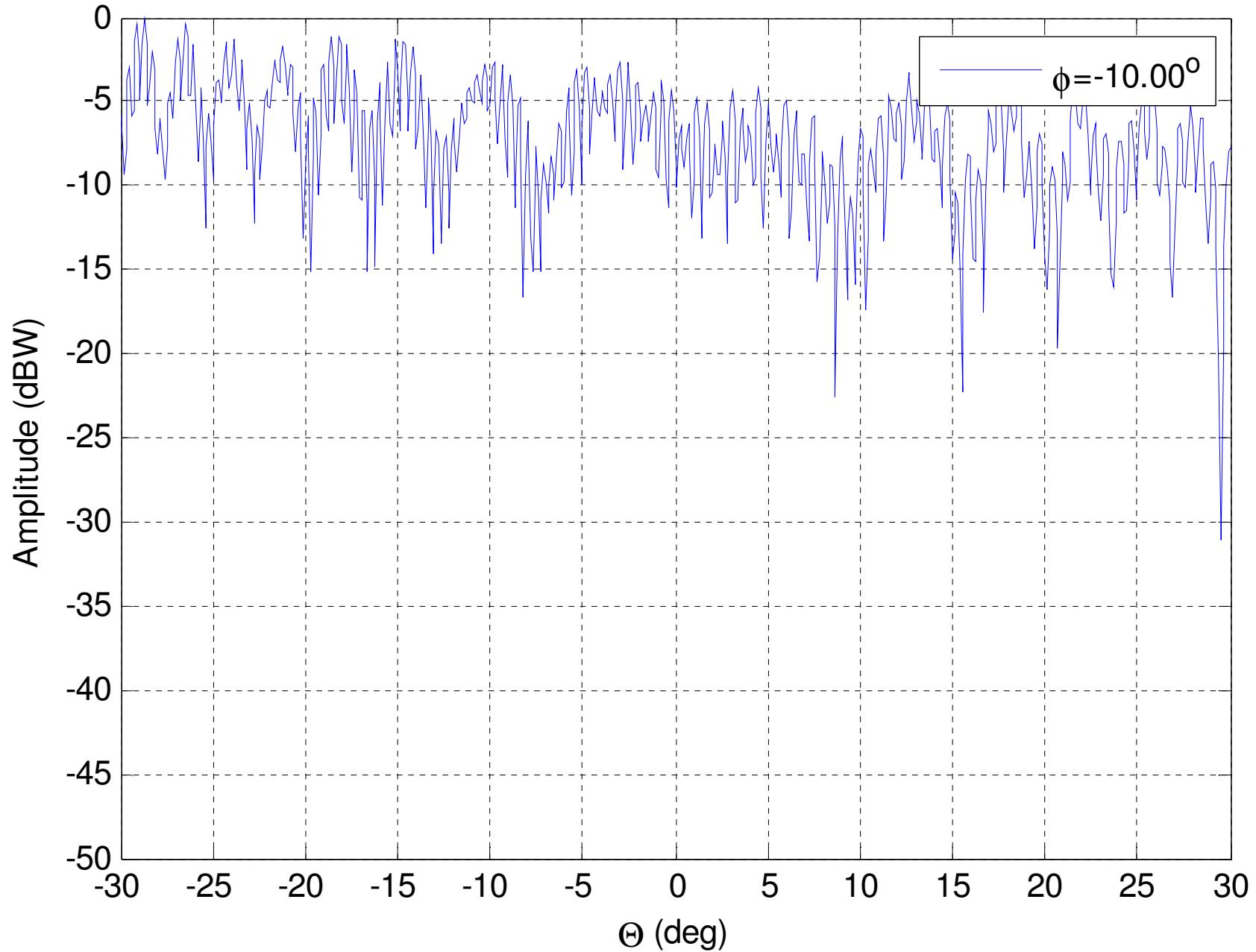
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 0.29 dBW, Date: 14-Dec-2011



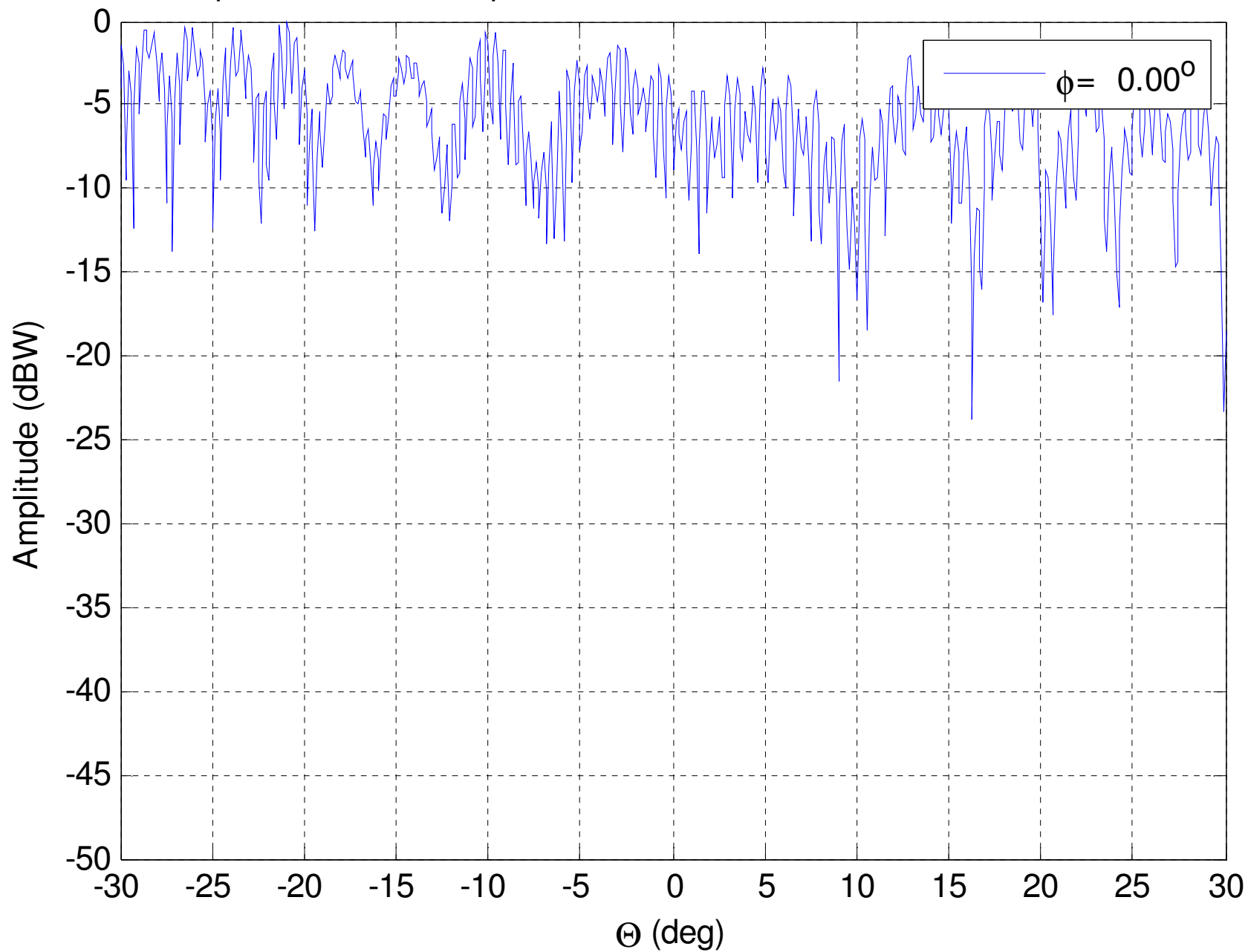
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 1.36 dBW, Date: 14-Dec-2011



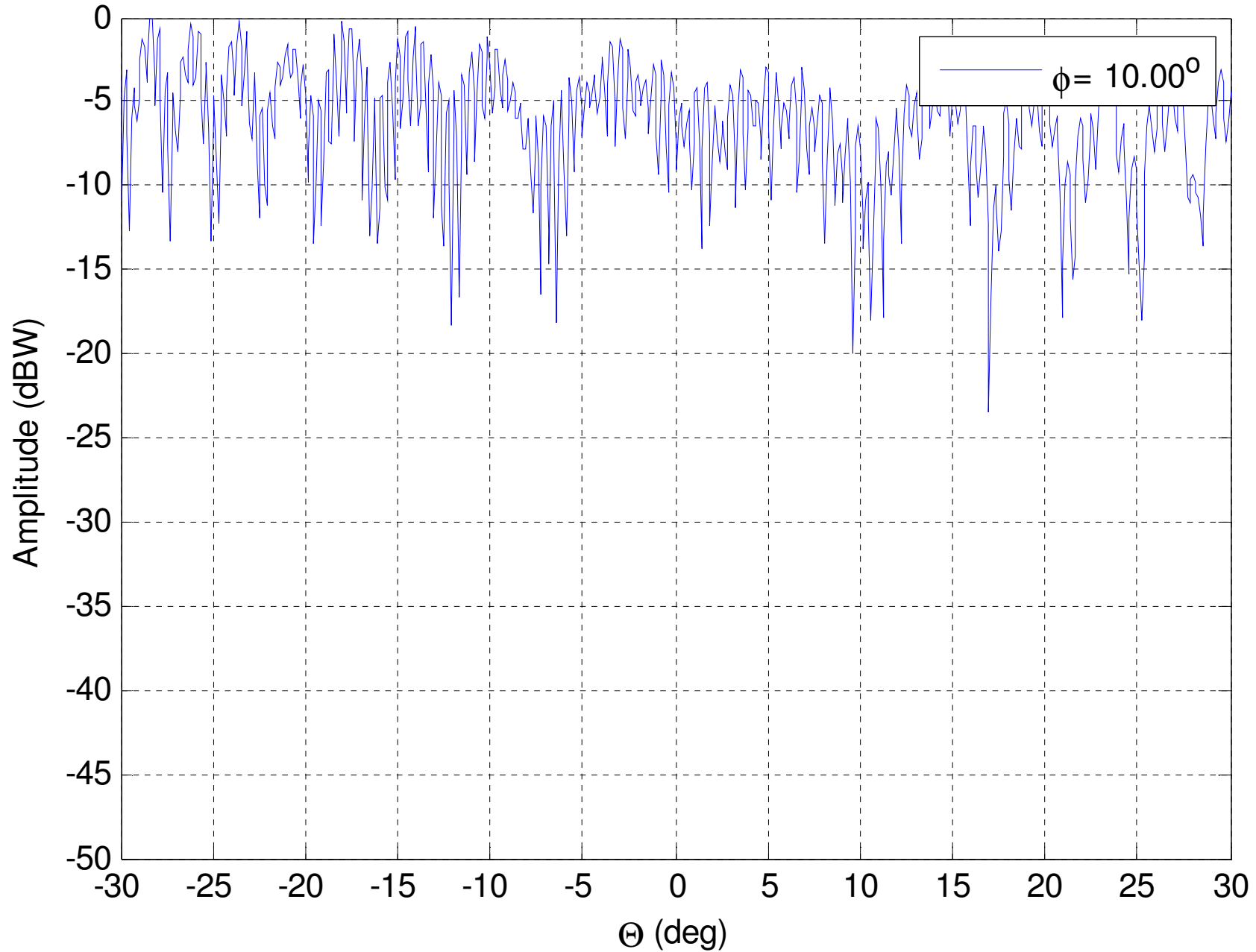
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 0.21 dBW, Date: 14-Dec-2011



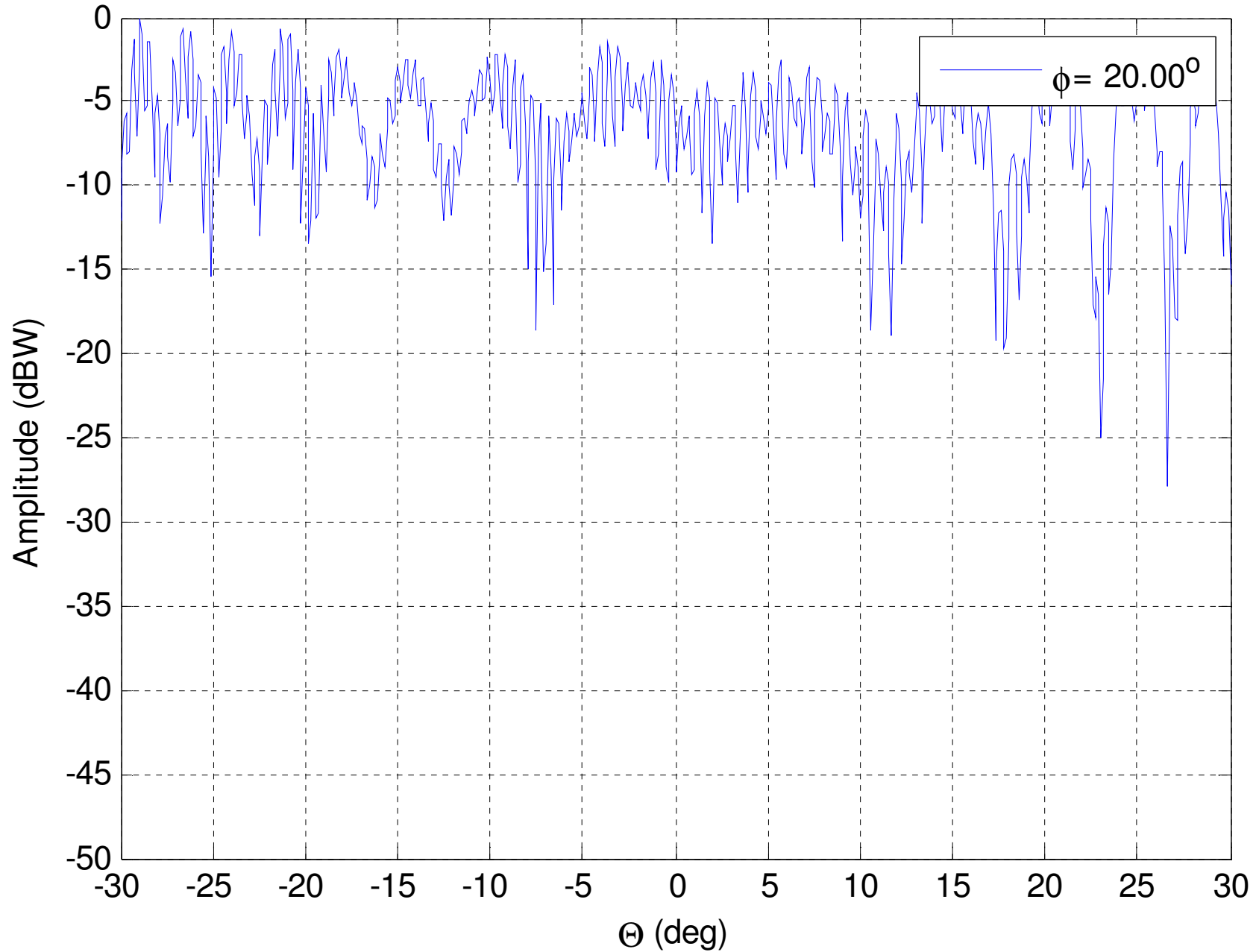
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 0.16 dBW, Date: 14-Dec-2011



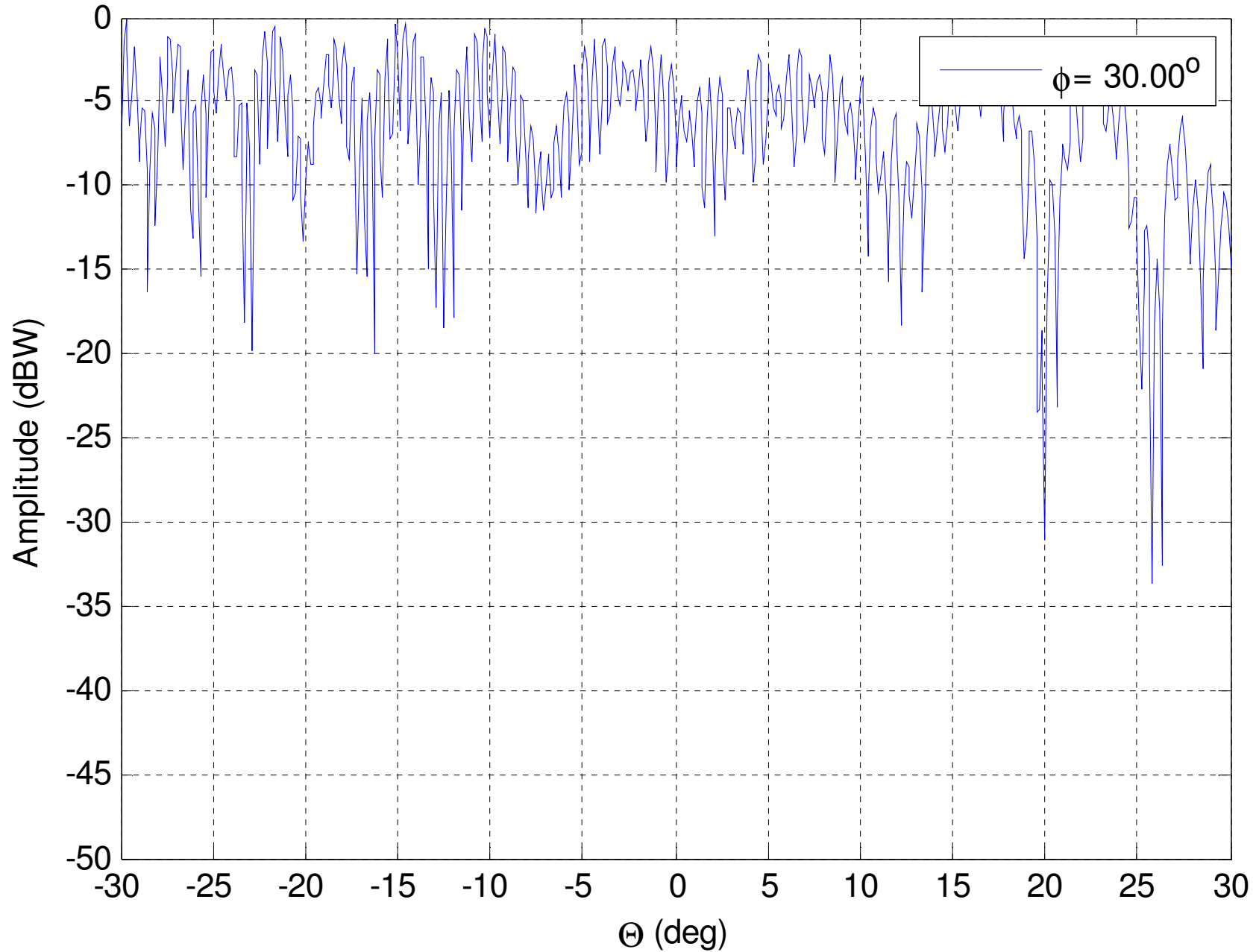
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 0.30 dBW, Date: 14-Dec-2011



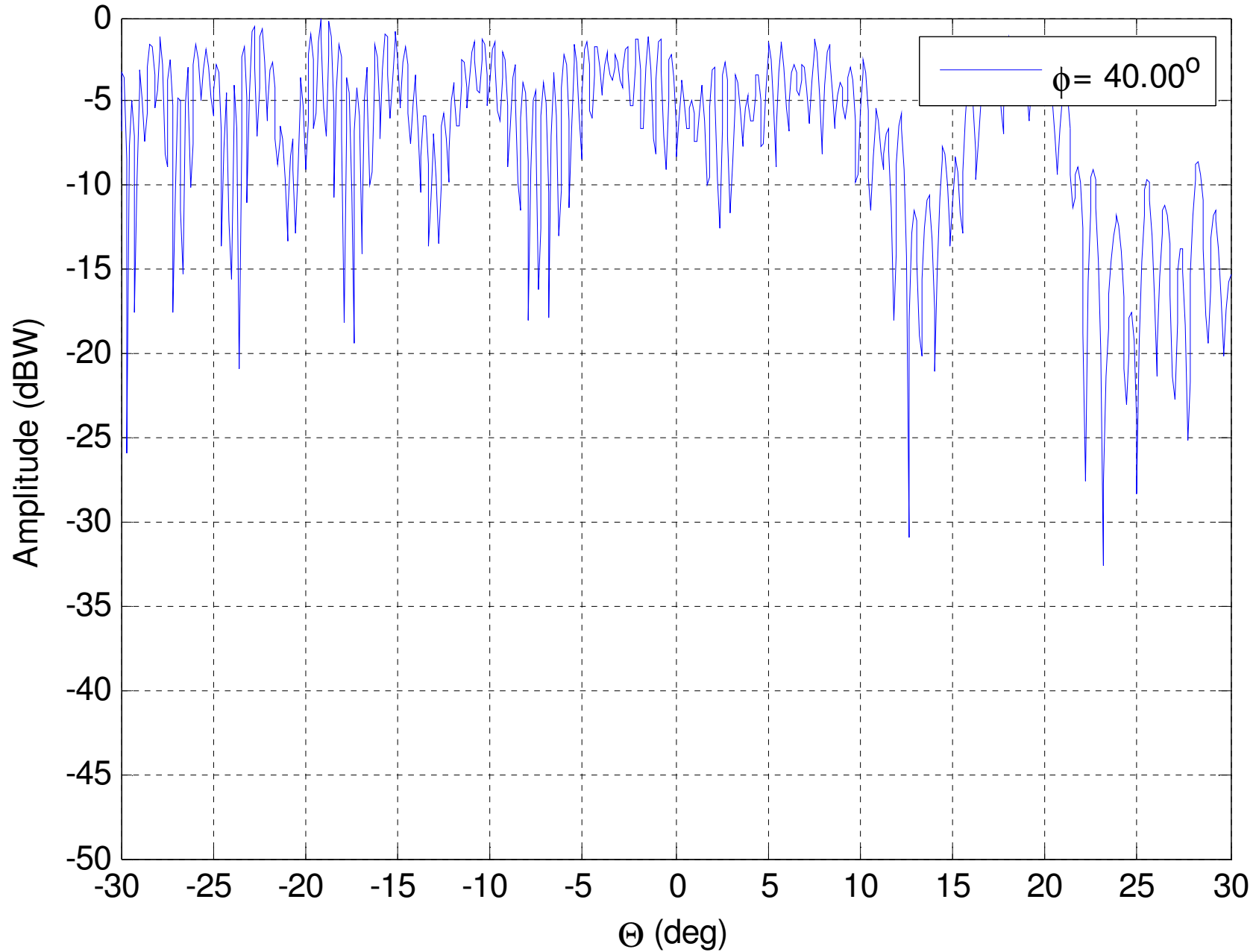
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.31 dBW, Date: 14-Dec-2011



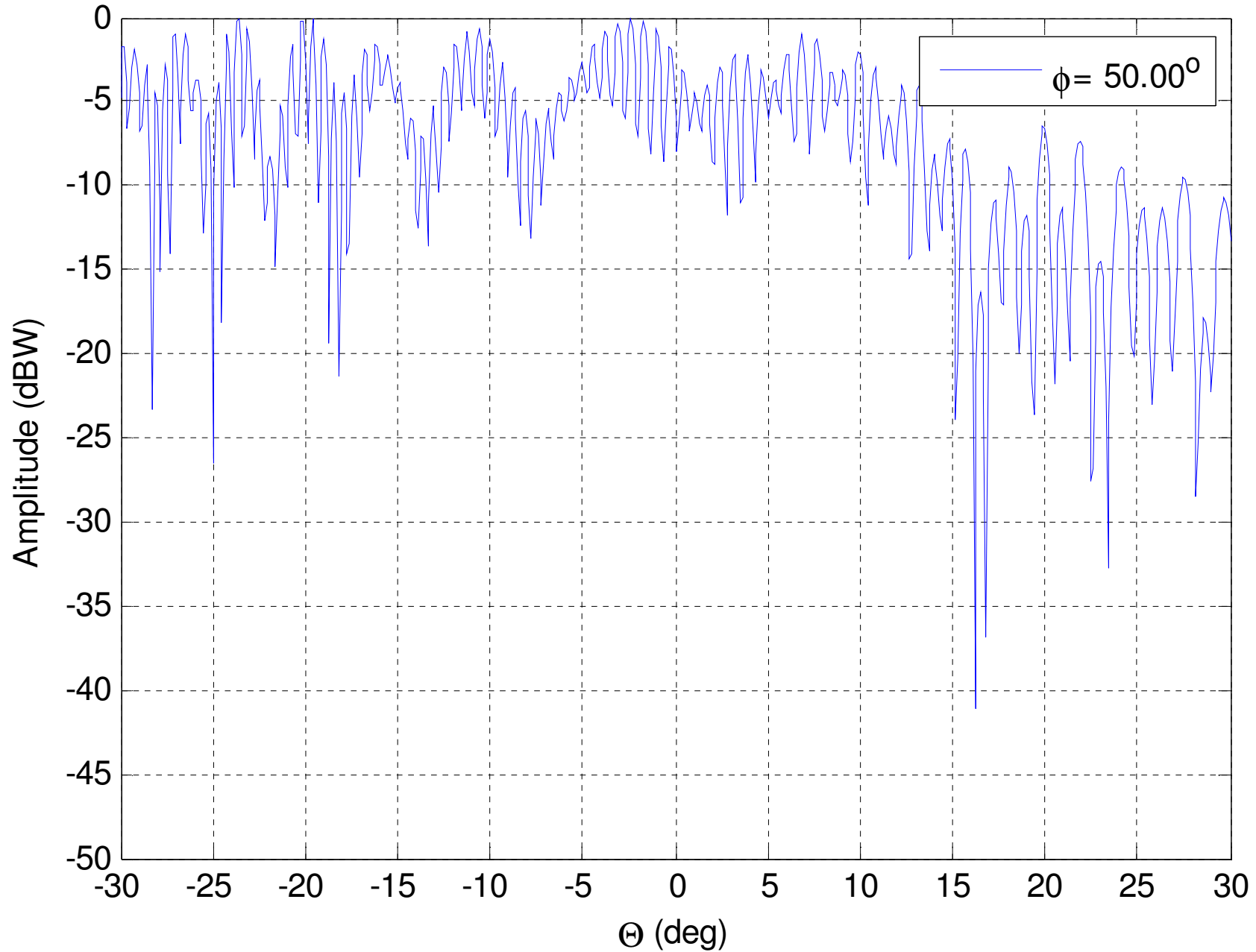
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -1.06 dBW, Date: 14-Dec-2011



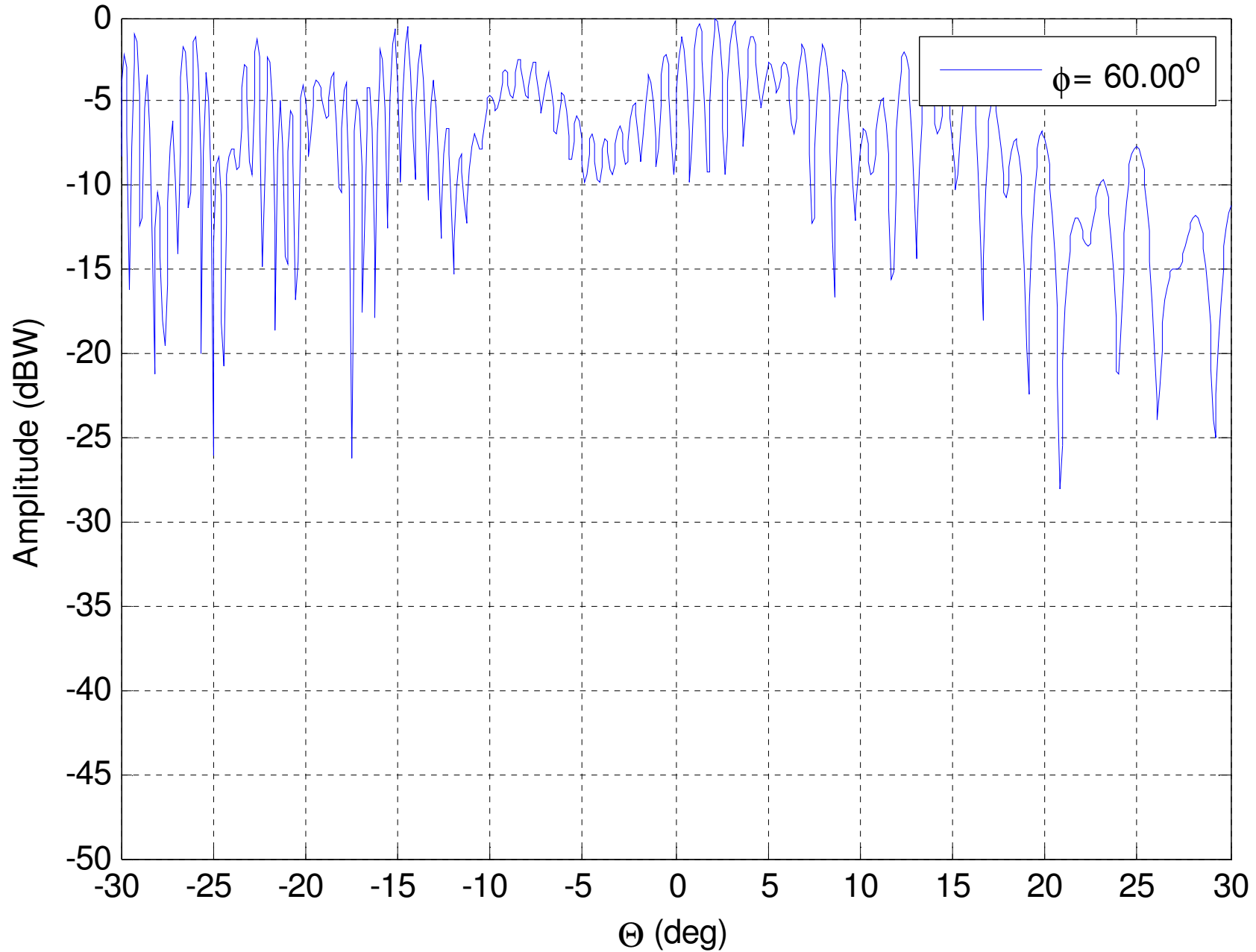
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -1.55 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

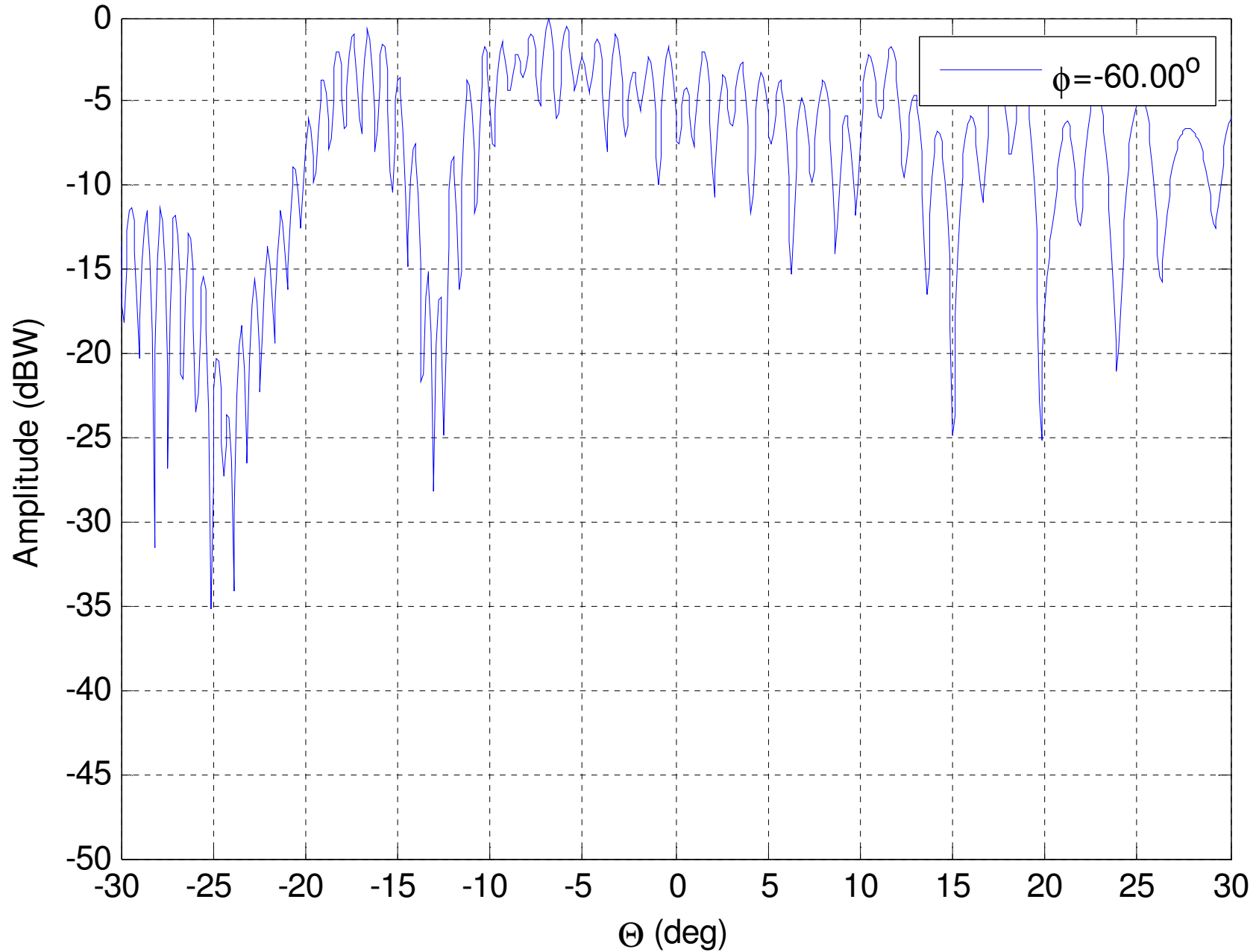
Input file: tx-17.7-rhcp-60.cut, Peak: -1.81 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

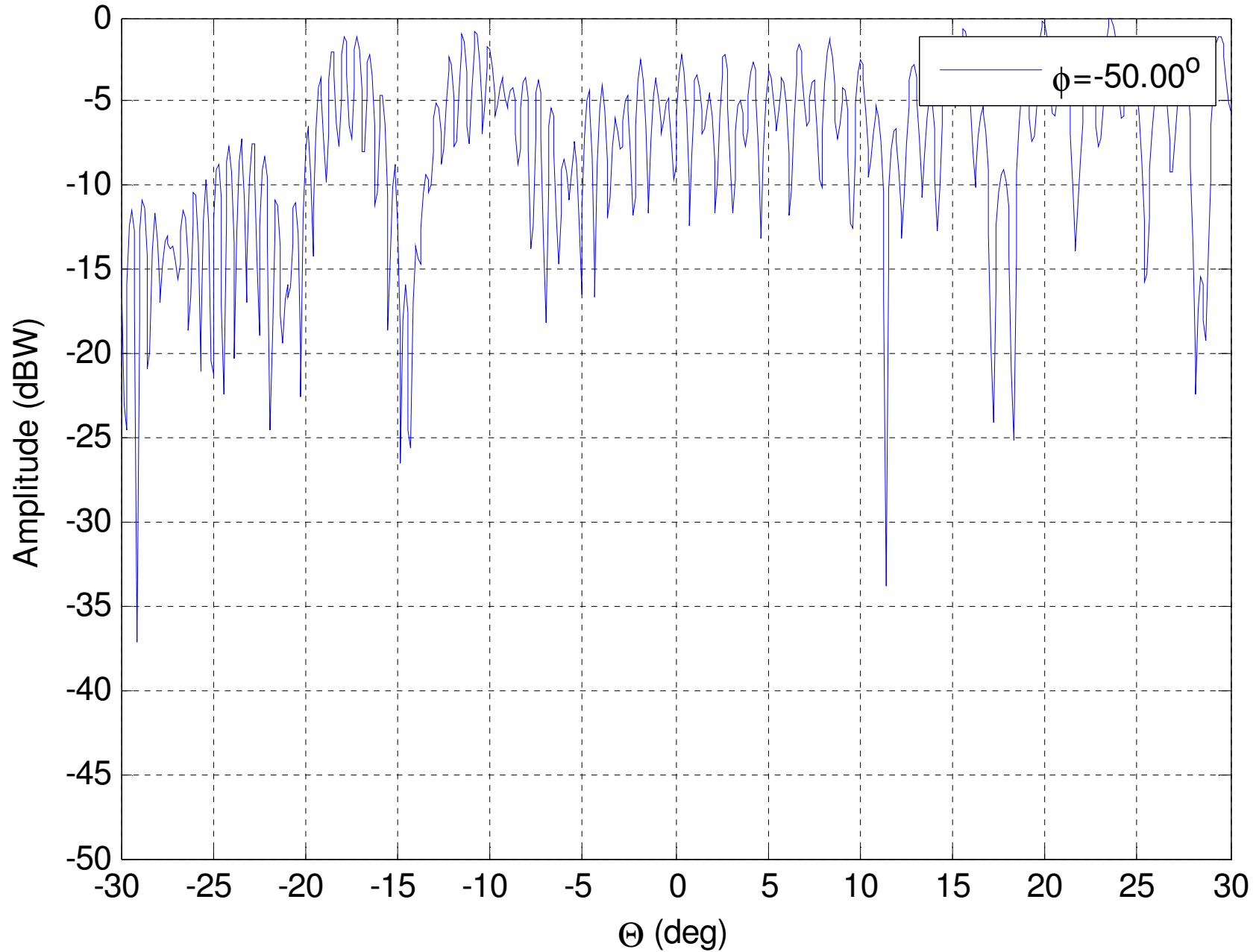
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -1.02 dBW, Date: 14-Dec-2011



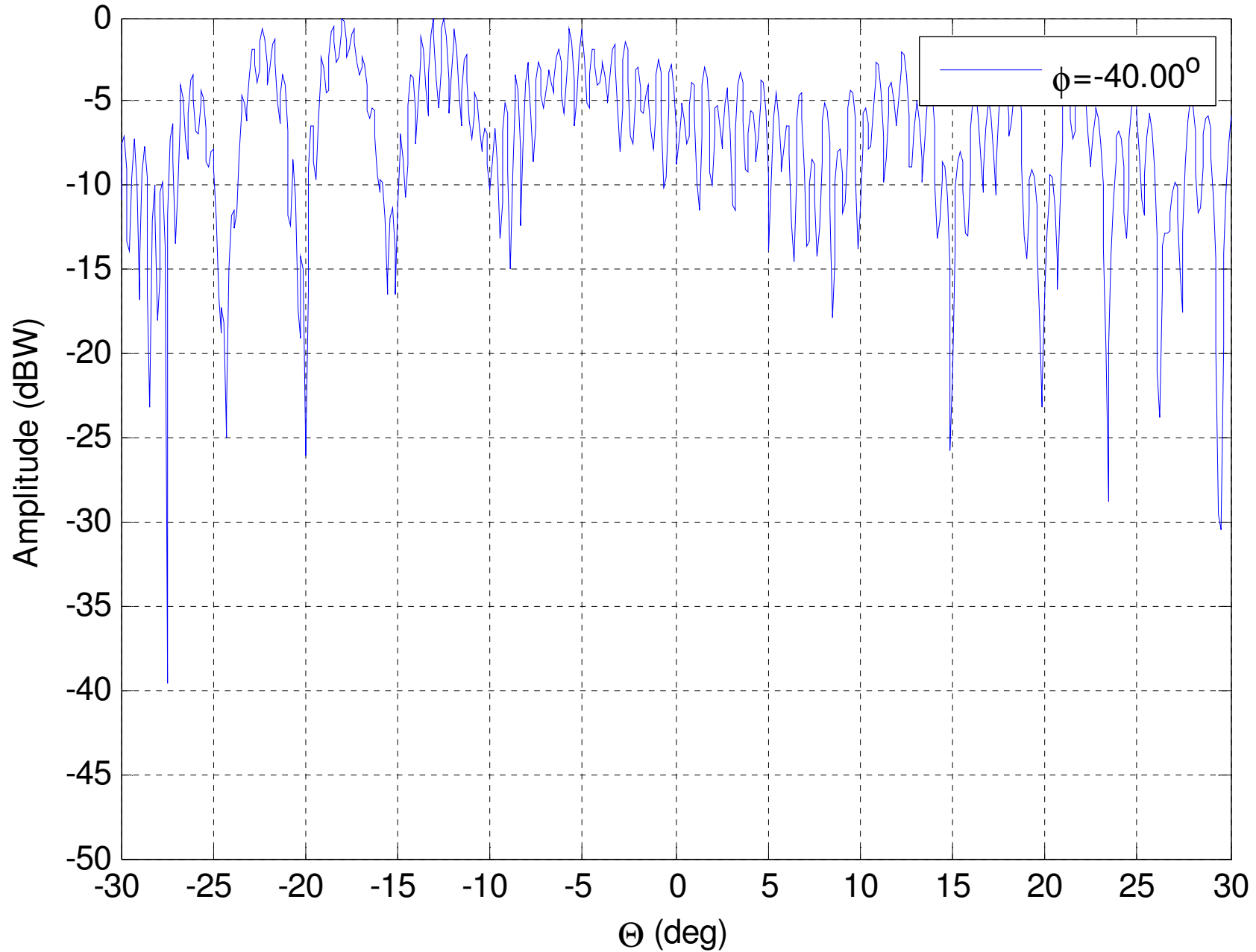
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -0.28 dBW, Date: 14-Dec-2011



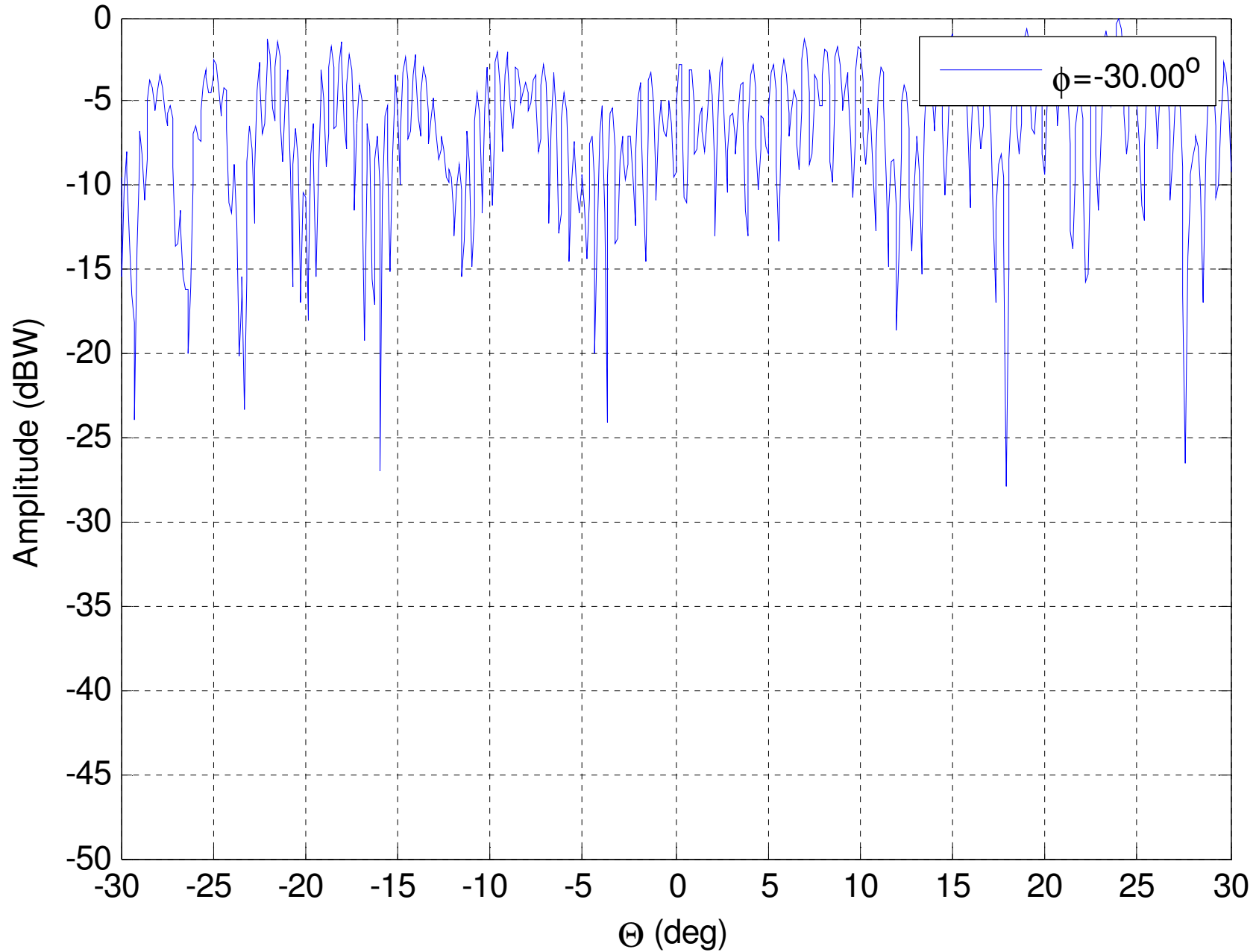
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -0.08 dBW, Date: 14-Dec-2011



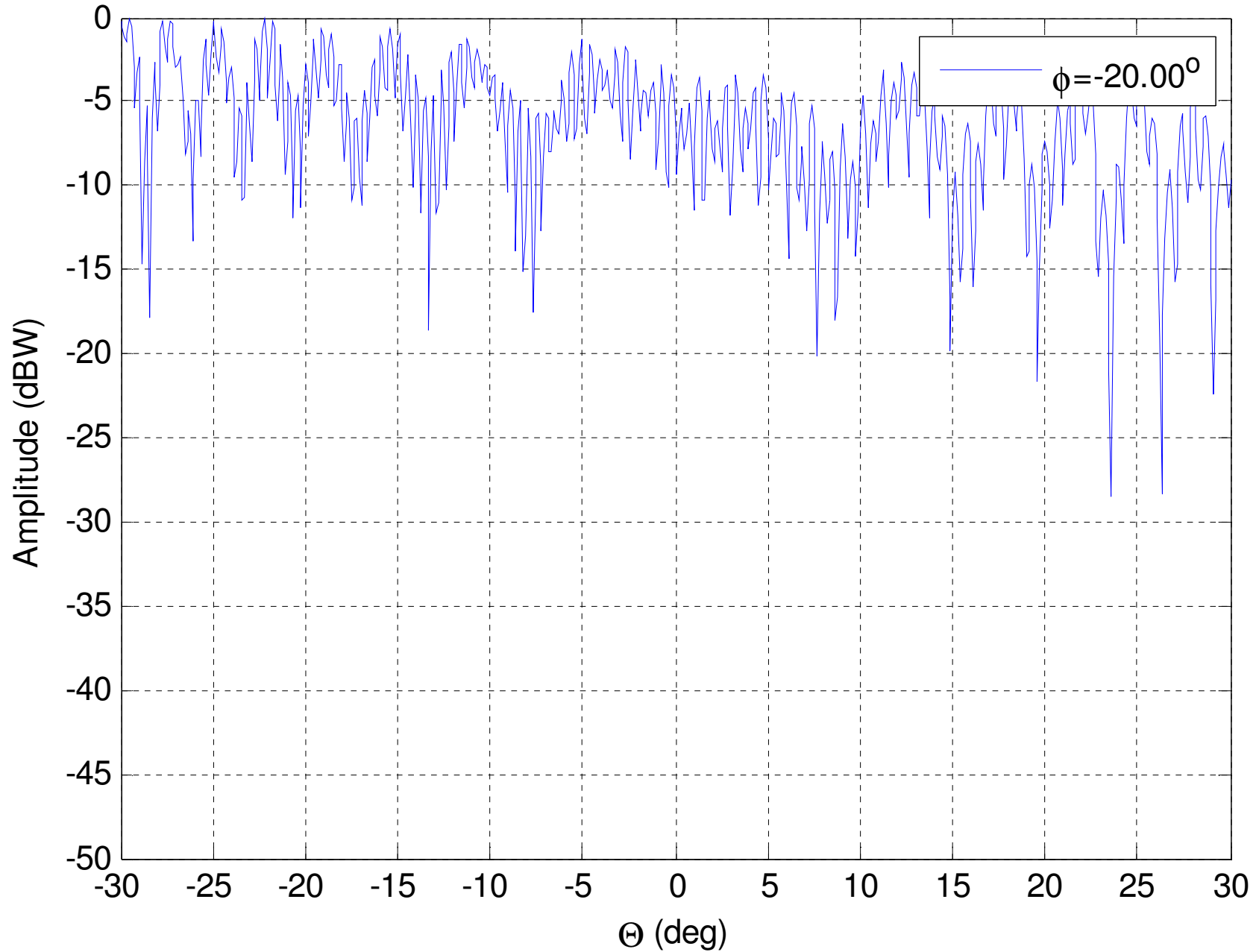
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: 0.17 dBW, Date: 14-Dec-2011



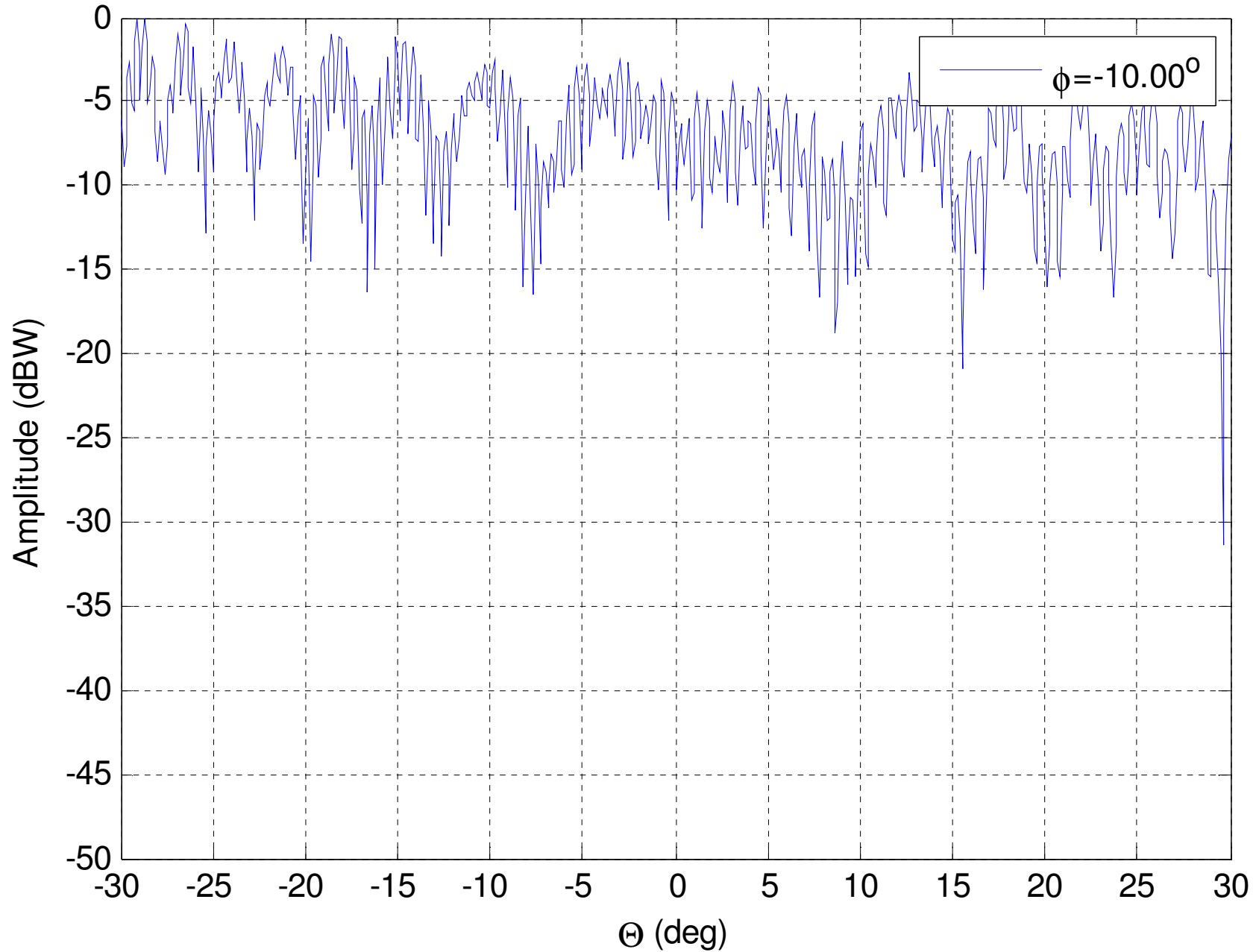
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 0.40 dBW, Date: 14-Dec-2011



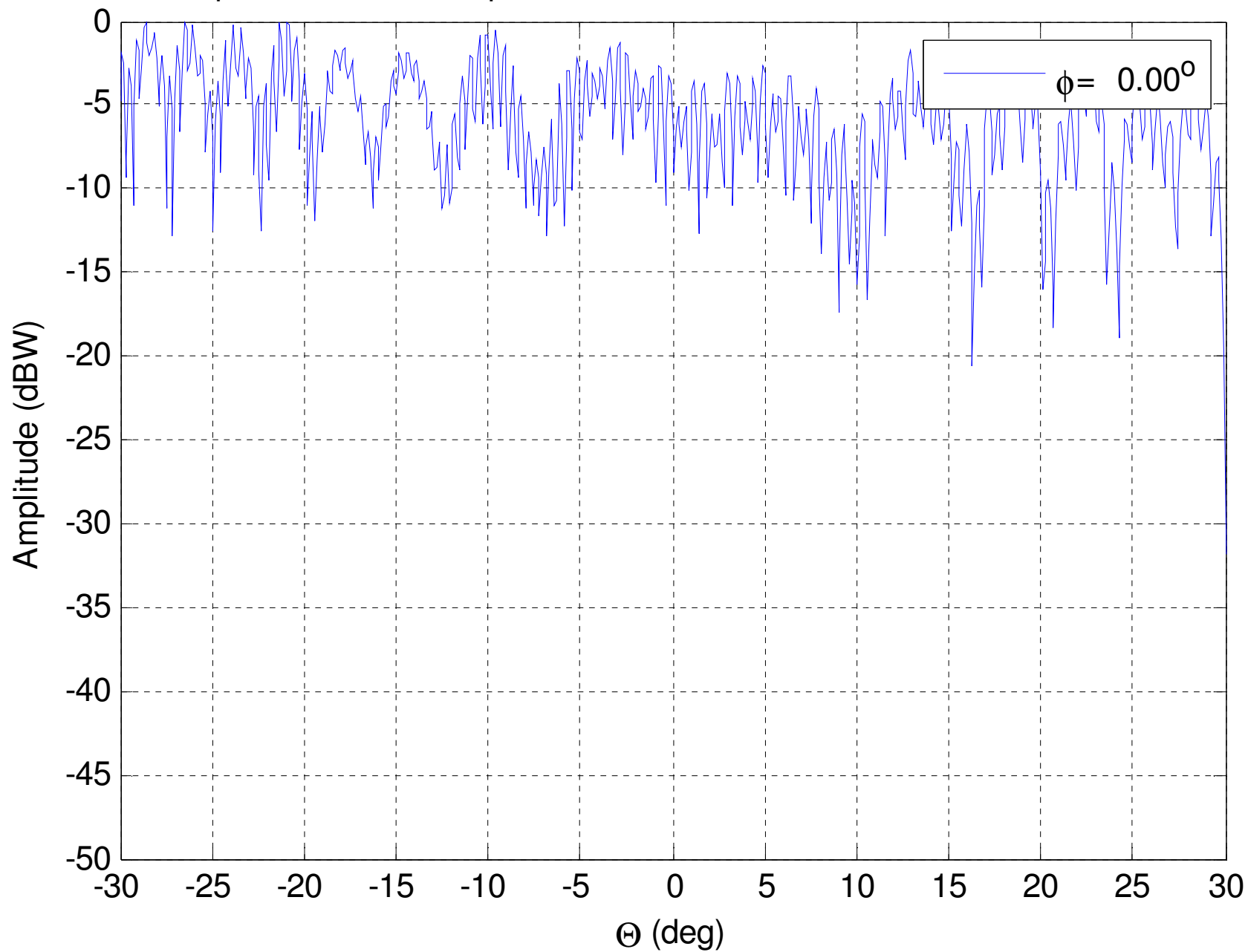
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 1.35 dBW, Date: 14-Dec-2011



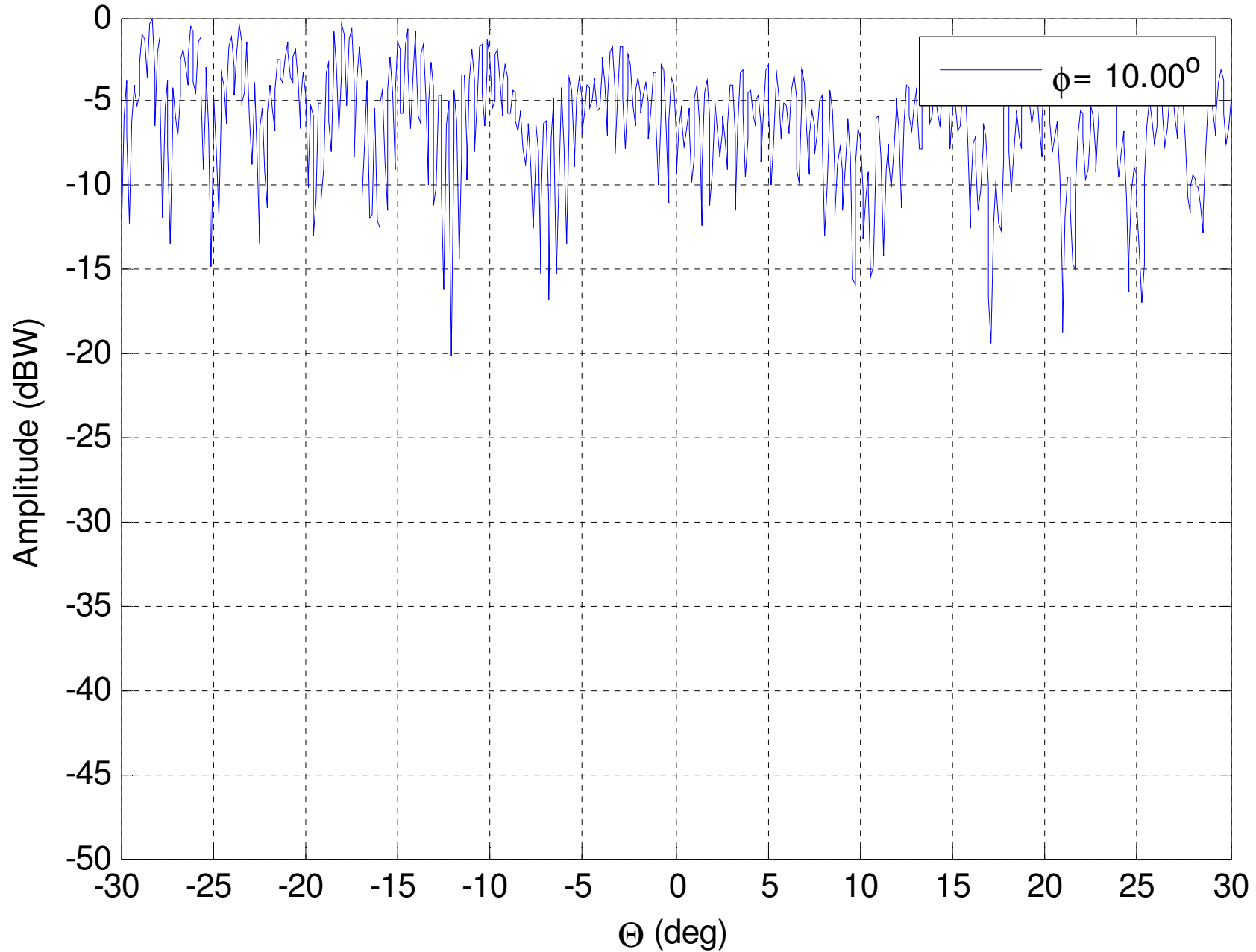
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 0.12 dBW, Date: 14-Dec-2011



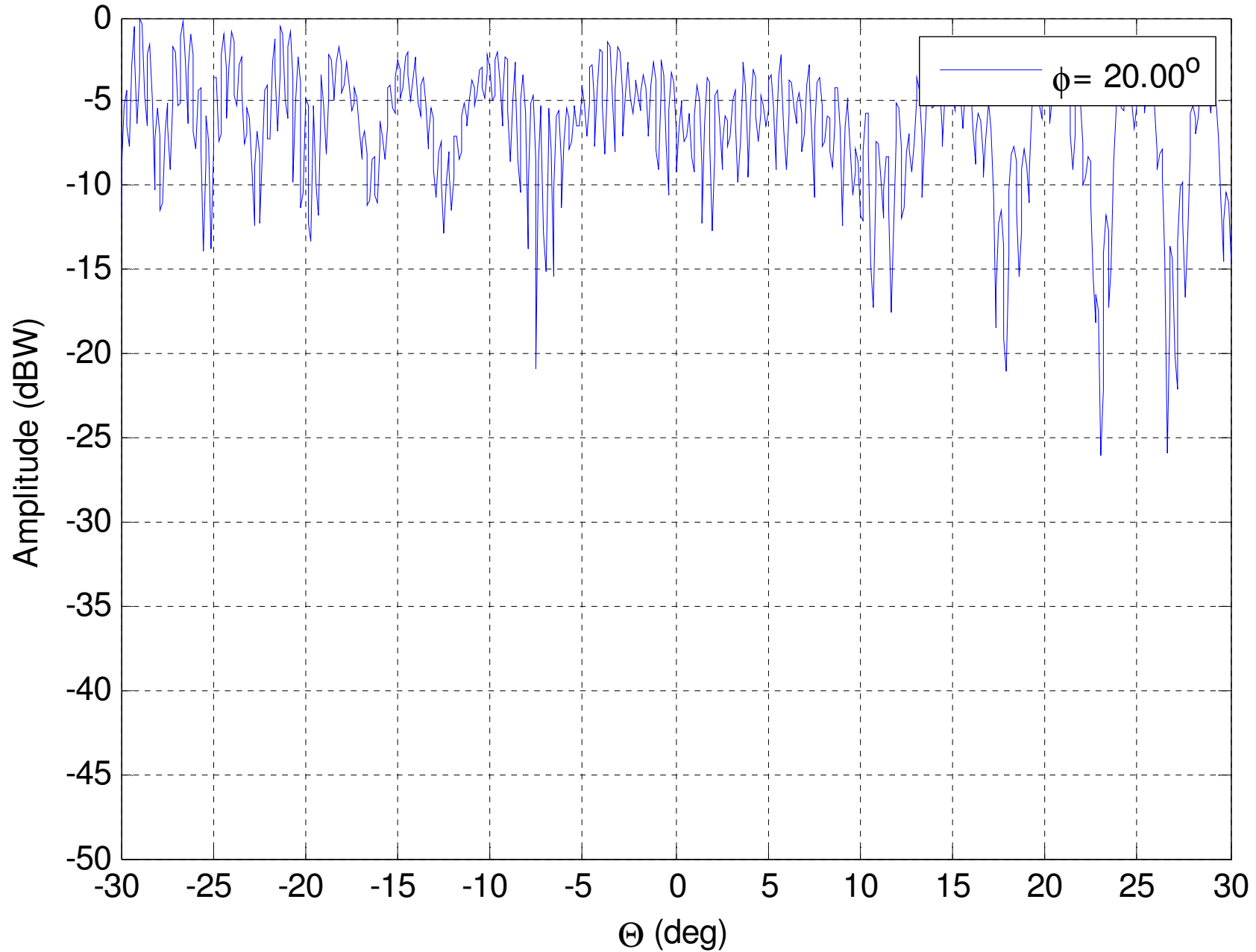
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 0.32 dBW, Date: 14-Dec-2011



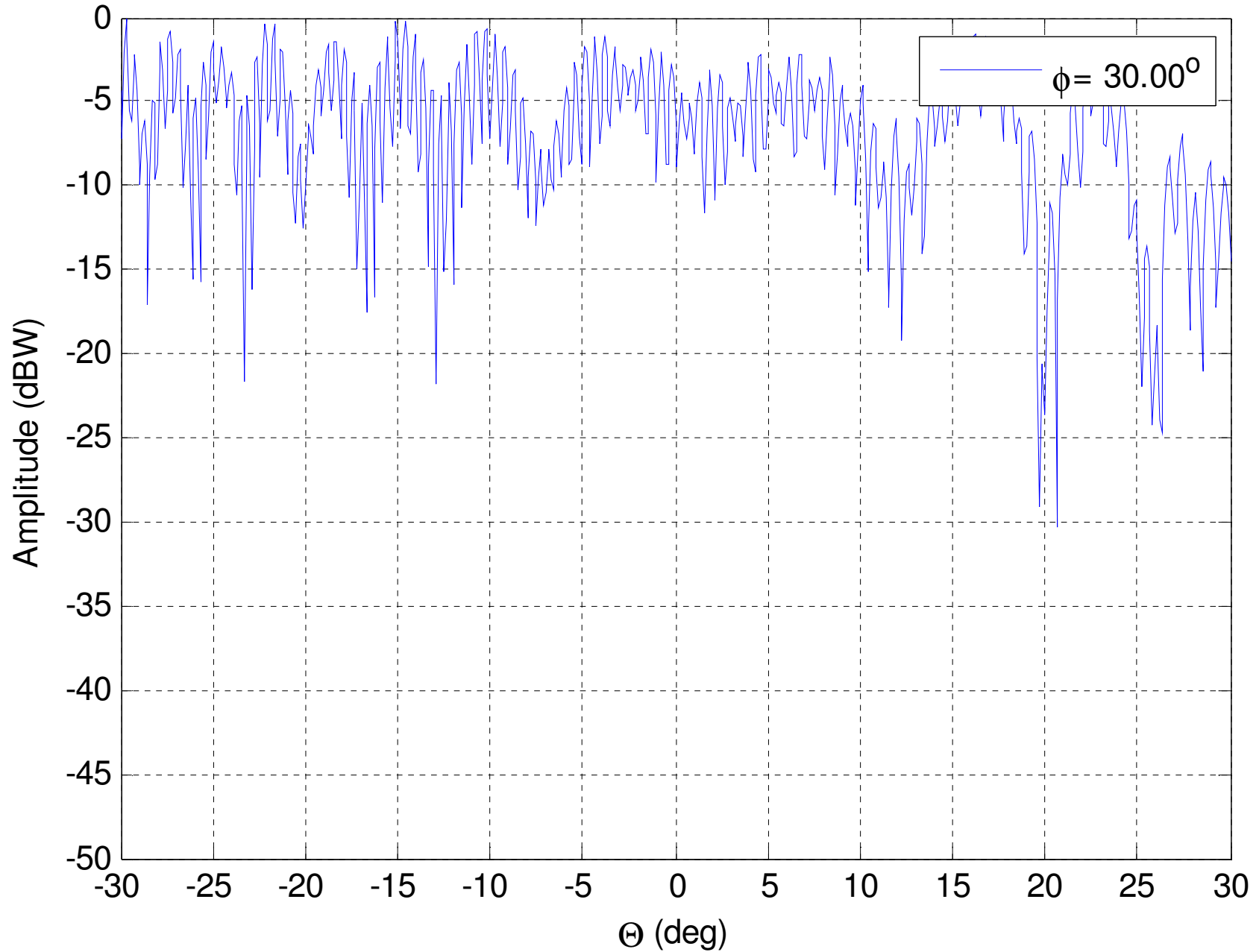
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 0.19 dBW, Date: 14-Dec-2011



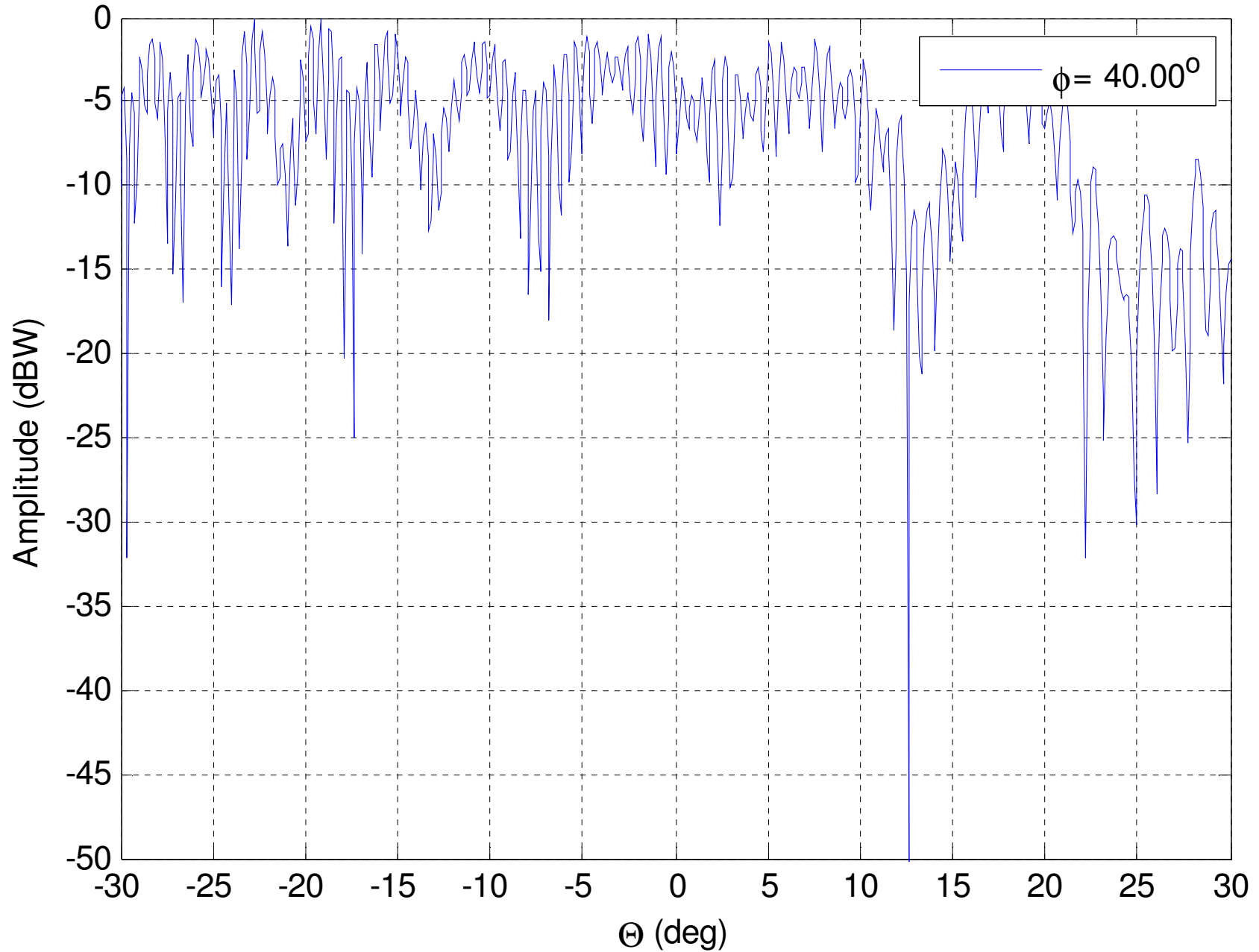
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.34 dBW, Date: 14-Dec-2011



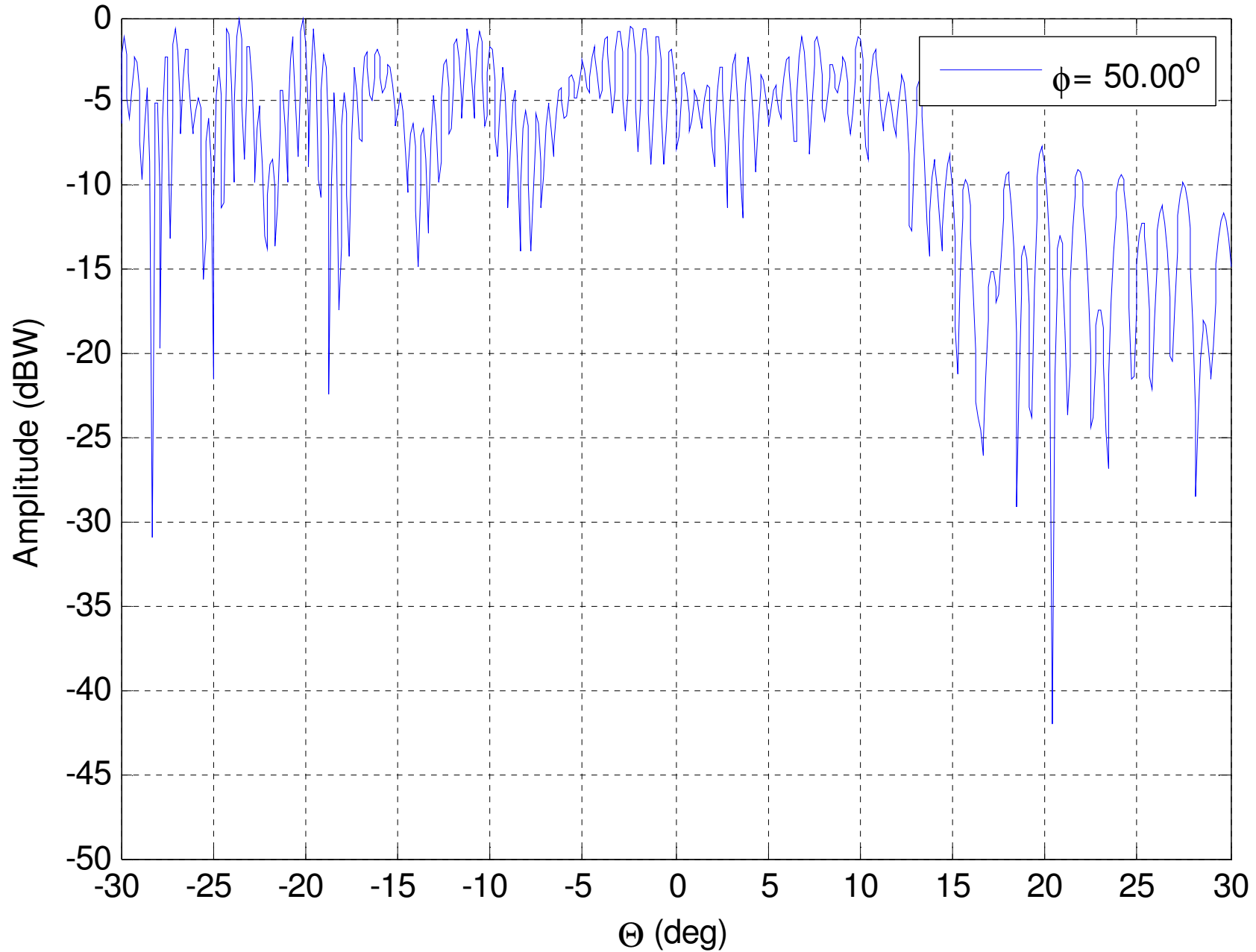
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -1.09 dBW, Date: 14-Dec-2011



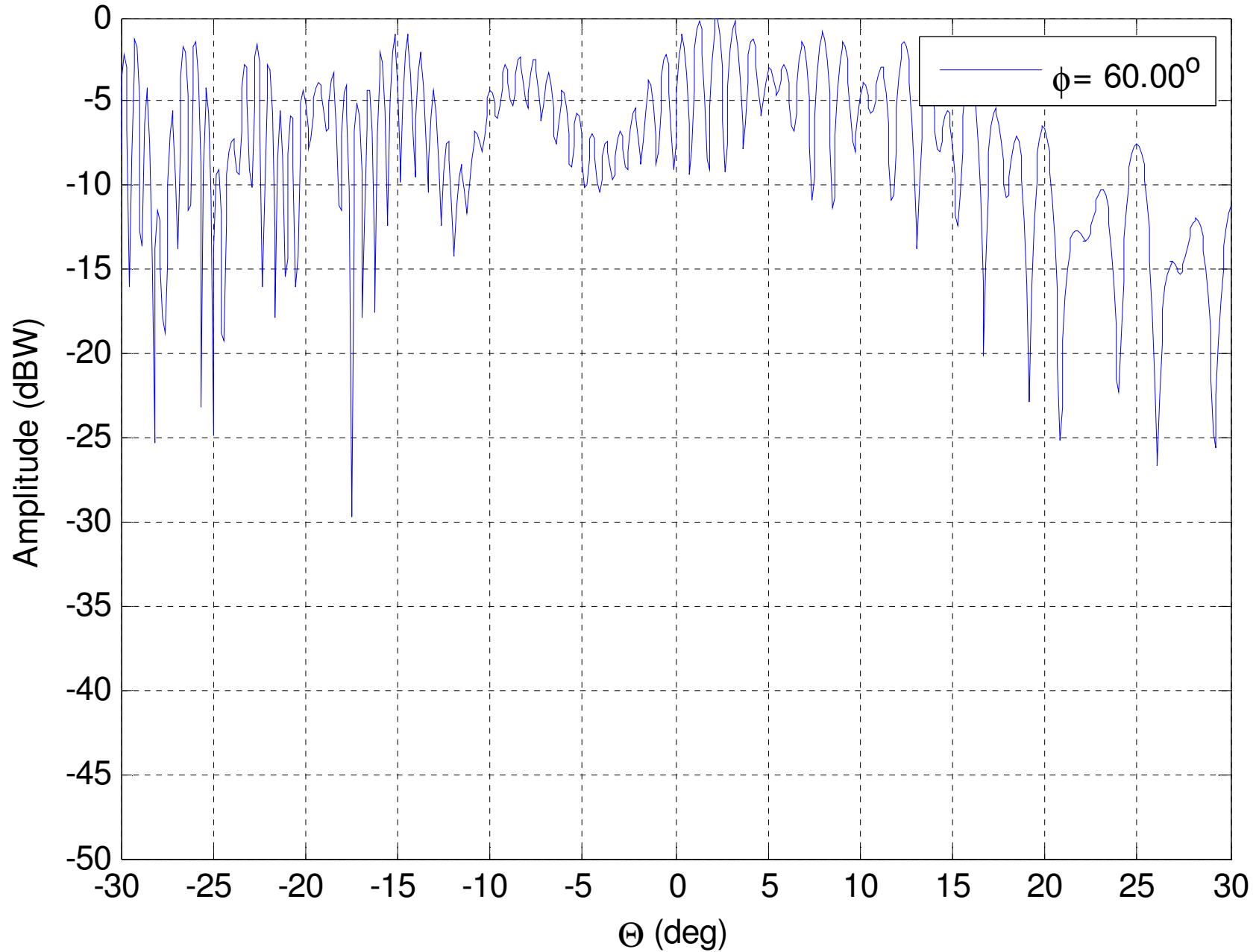
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -1.34 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -1.65 dBW, Date: 14-Dec-2011



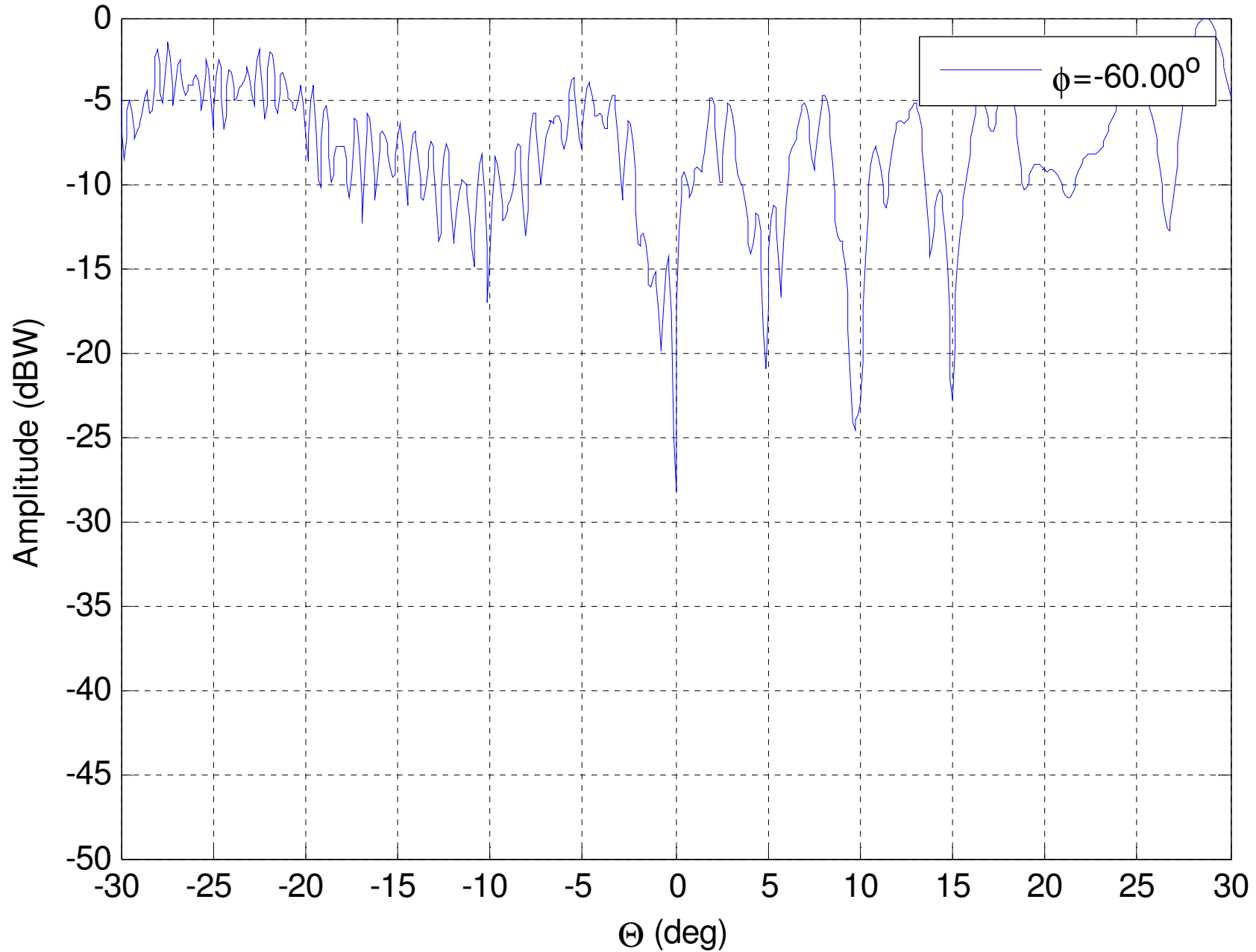
Spot Beam16, +X Axis Plots

- Both polarizations; RHCP, LHCP
- $-30 < \Theta < 30$ ($\Theta=0$: = +X-axis)
- $-60 < \phi < 60$
- Freq = 17.305, 17.5, and 17.695 GHz
- The Zero reference line is the maximum EIRP listed in the title of each plot sheet. All levels are below the required 15.4 dBW maximum
- The Zero reference for the maximum antenna gain is the maximum EIRP listed minus the power input to the antenna specified in Table I of the attached narrative.

RHCP at 17.3 GHz

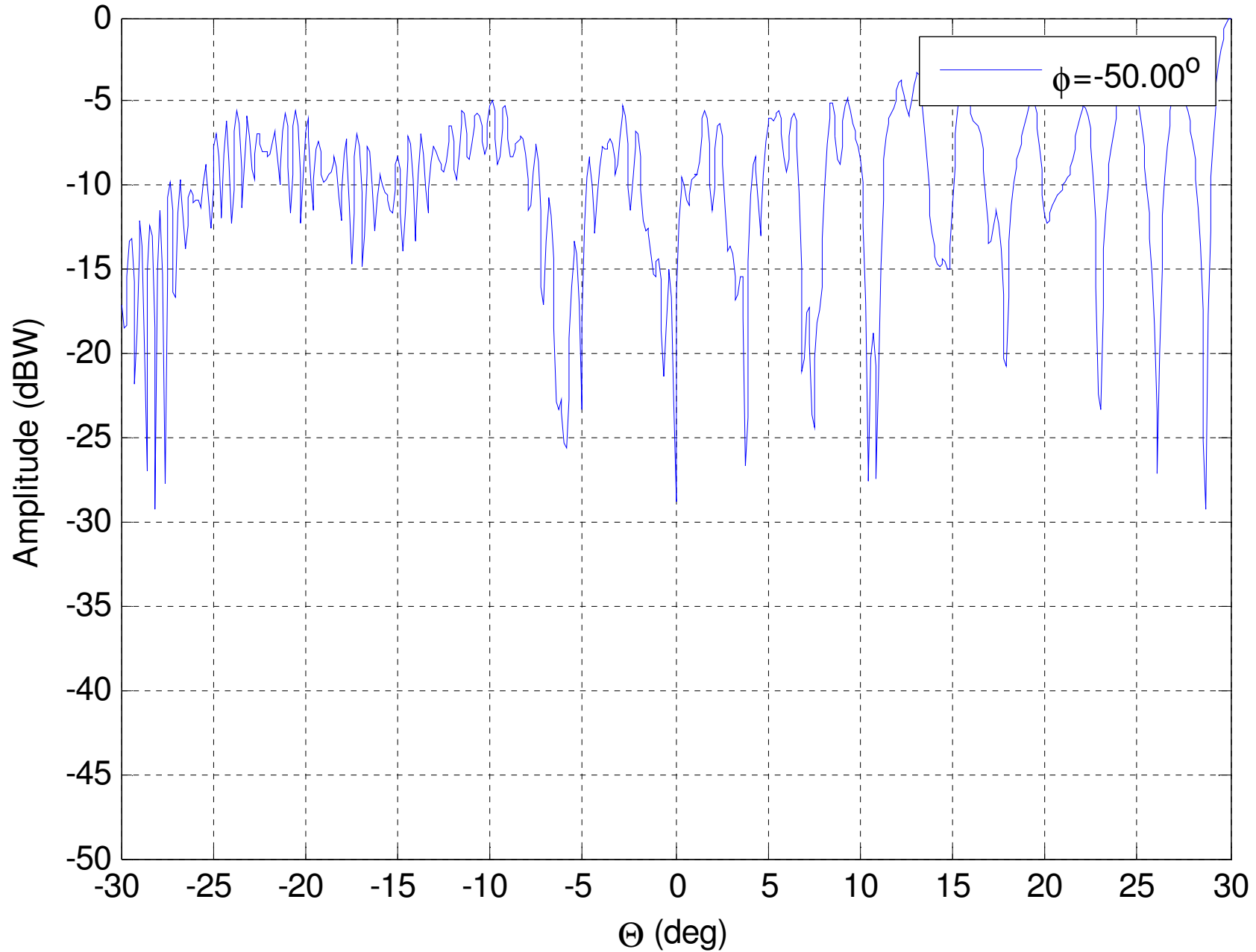
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.09 dBW, Date: 14-Dec-2011



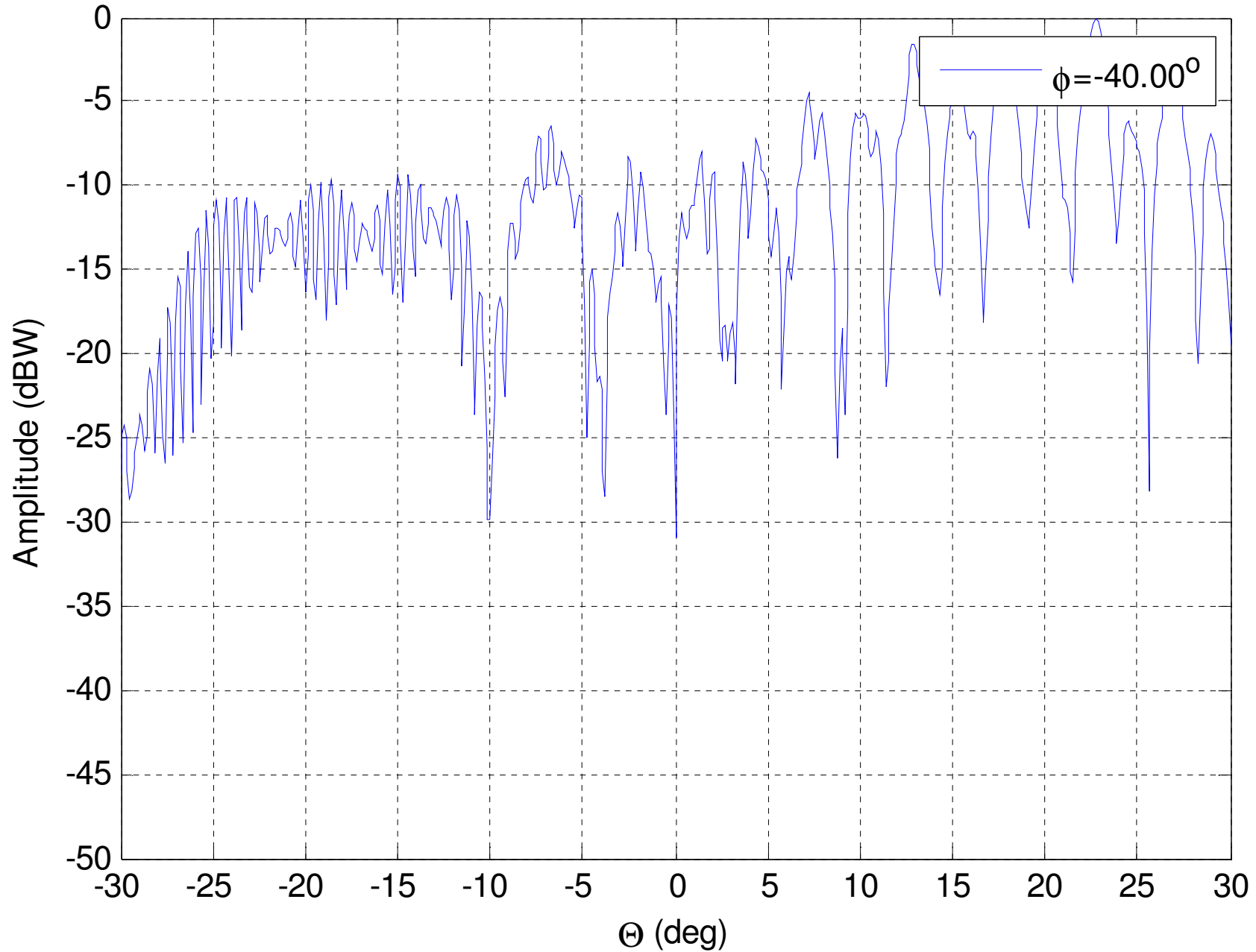
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -4.50 dBW, Date: 14-Dec-2011



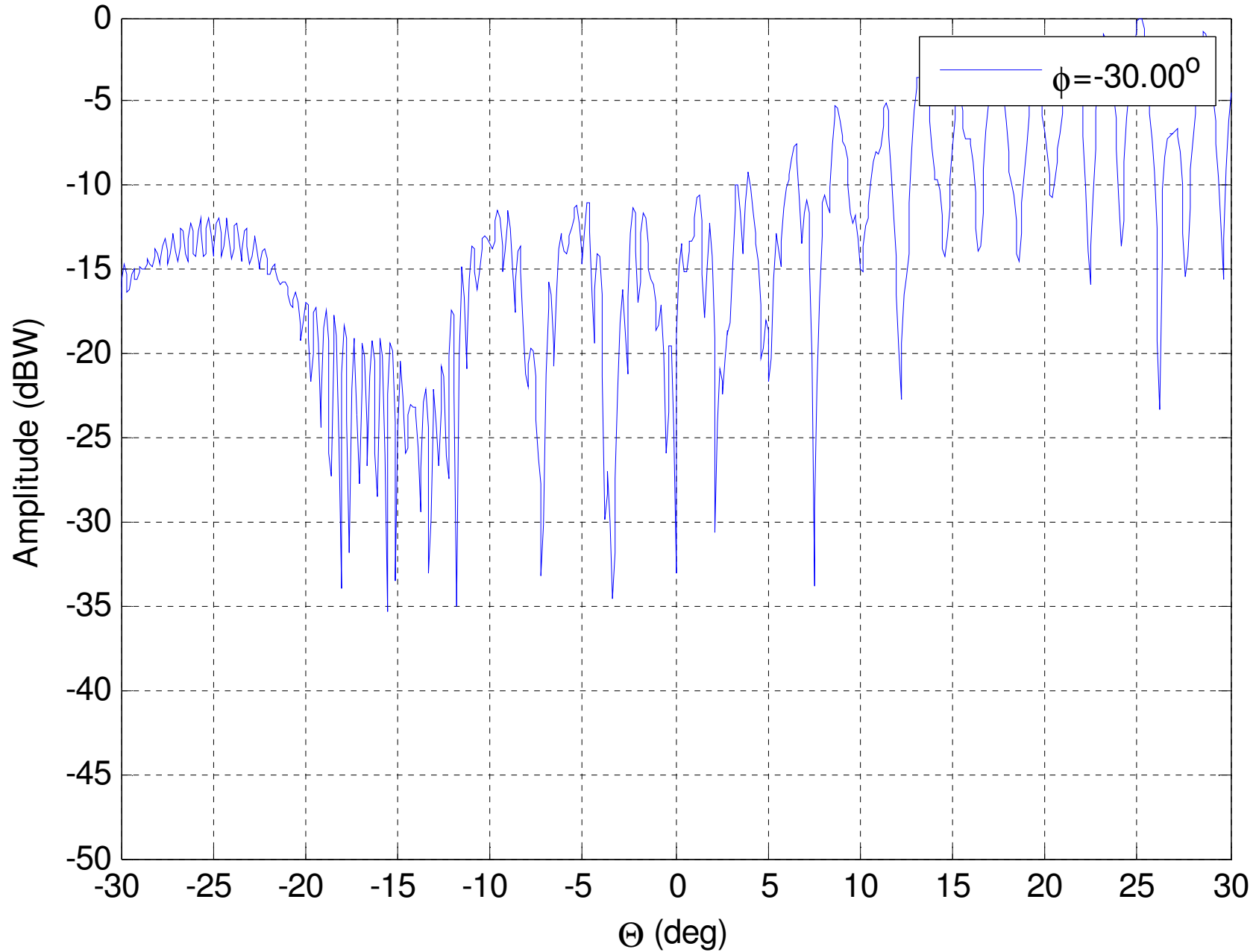
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -2.48 dBW, Date: 14-Dec-2011



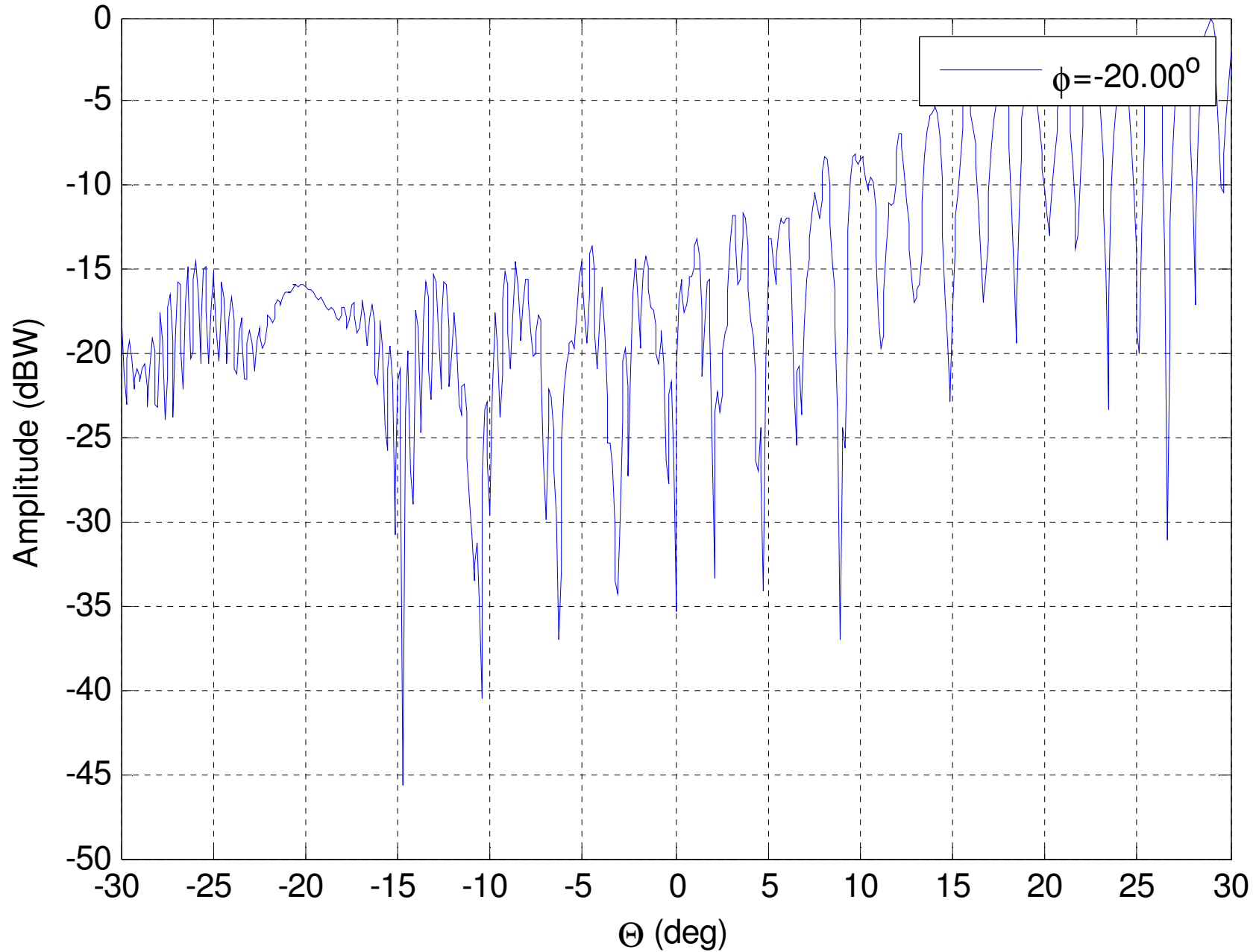
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -0.35 dBW, Date: 14-Dec-2011



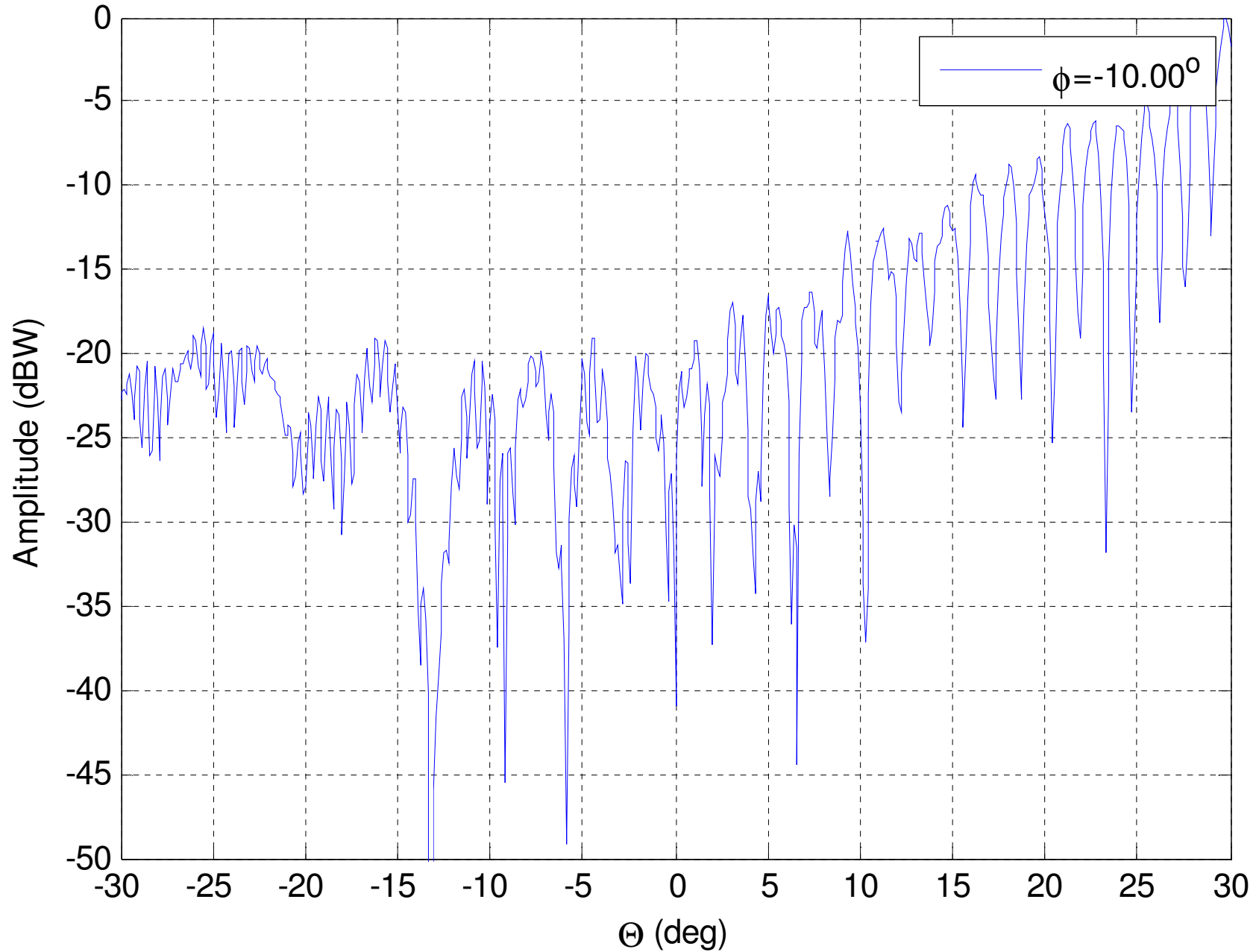
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 2.00 dBW, Date: 14-Dec-2011



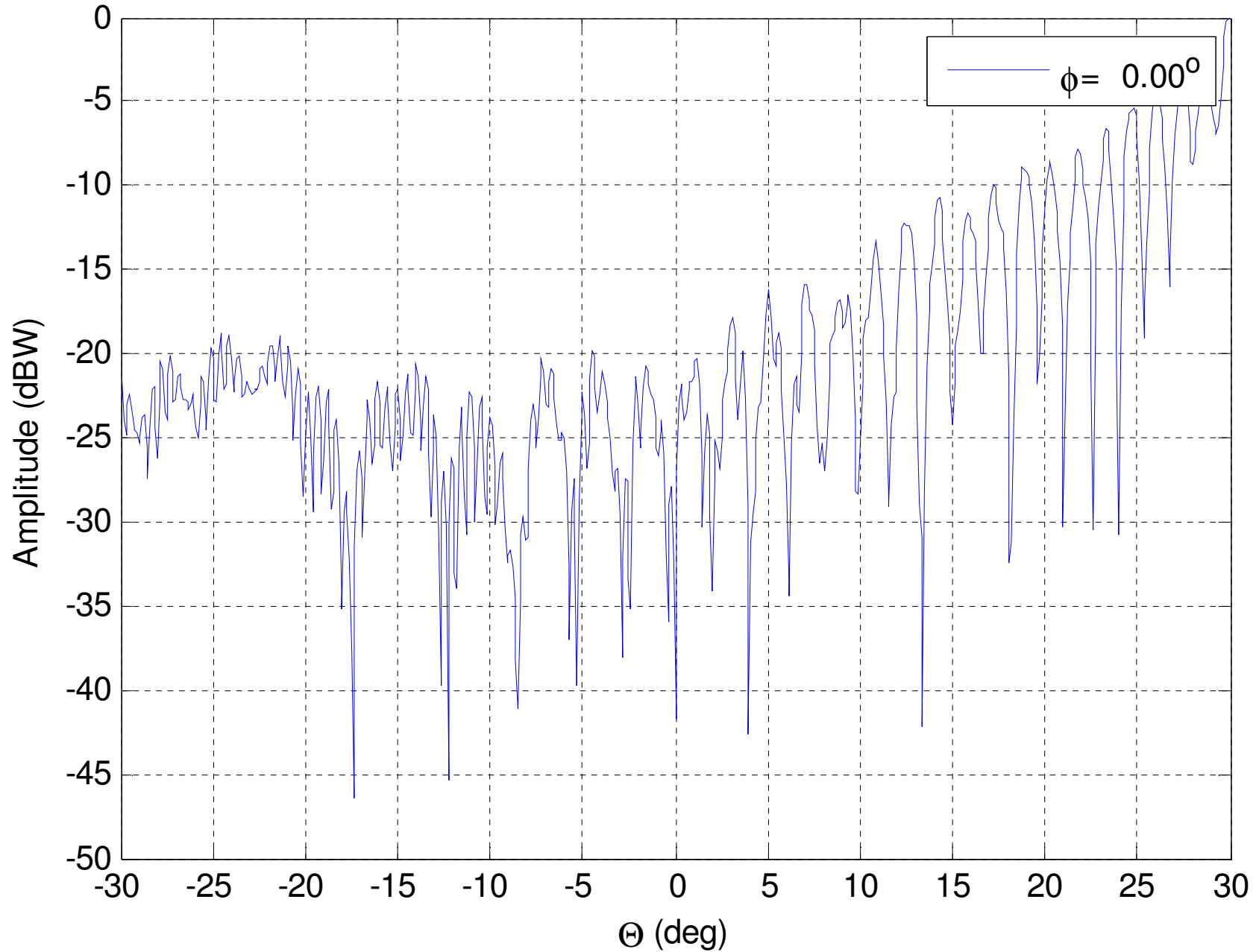
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 7.54 dBW, Date: 14-Dec-2011



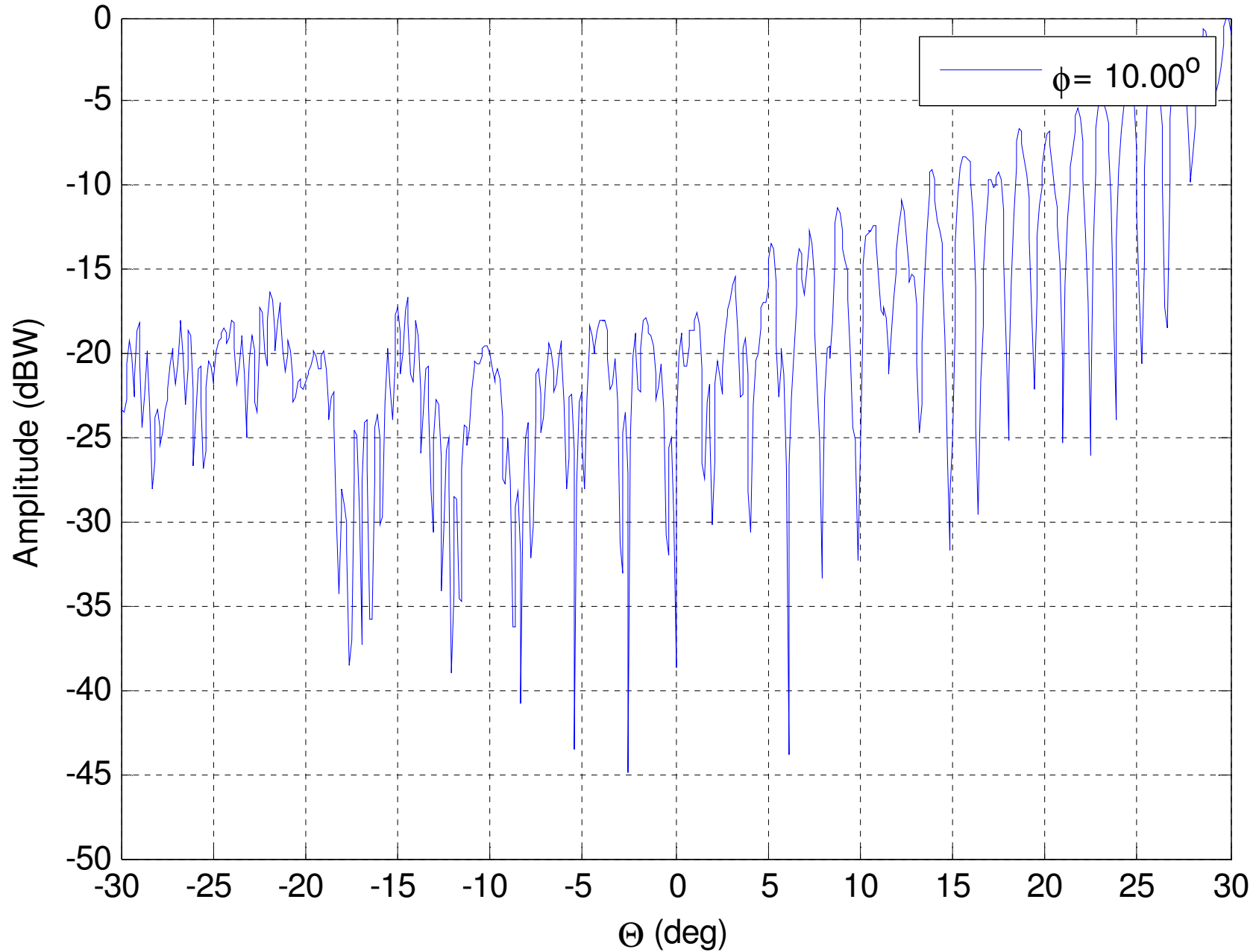
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 8.34 dBW, Date: 14-Dec-2011



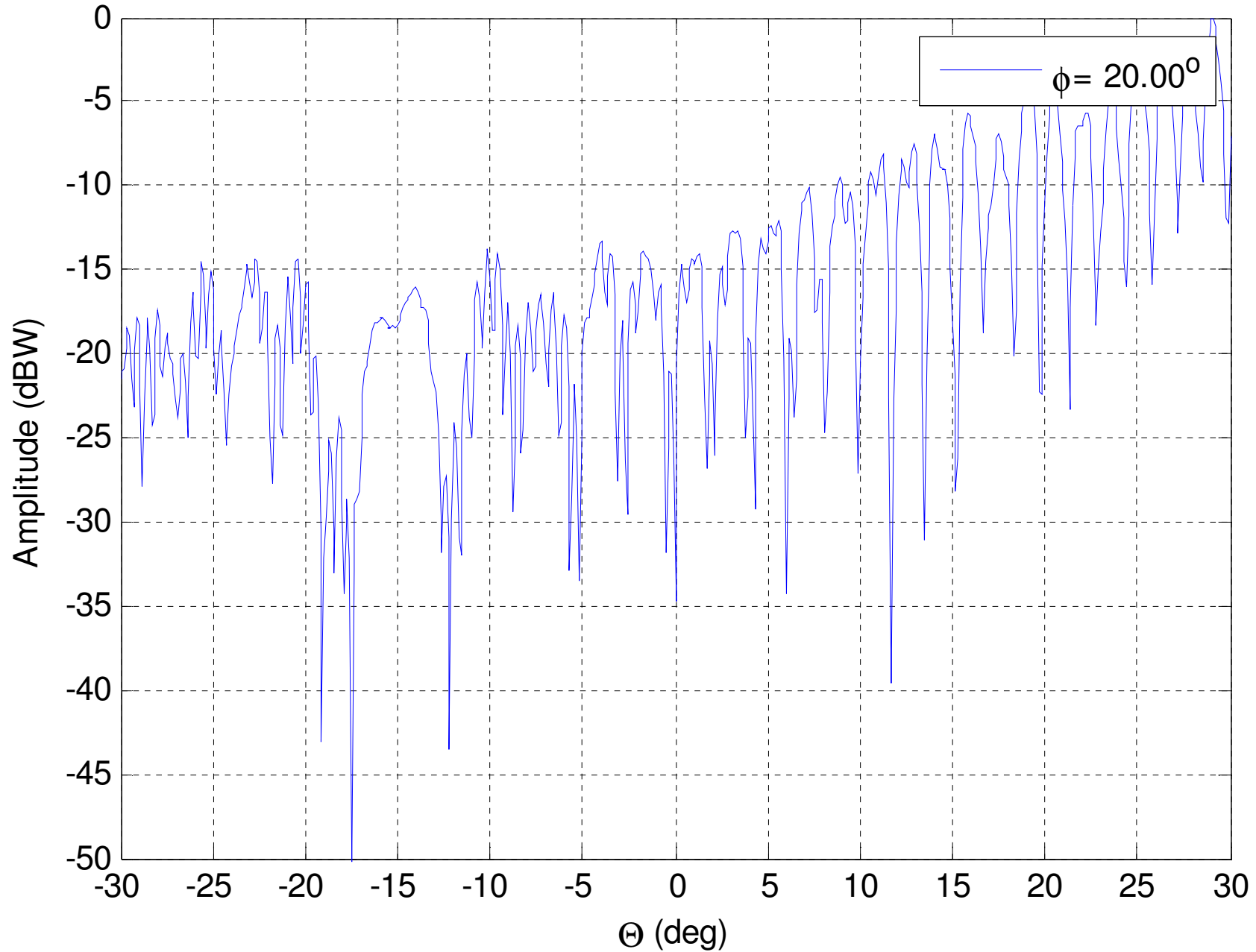
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 5.37 dBW, Date: 14-Dec-2011



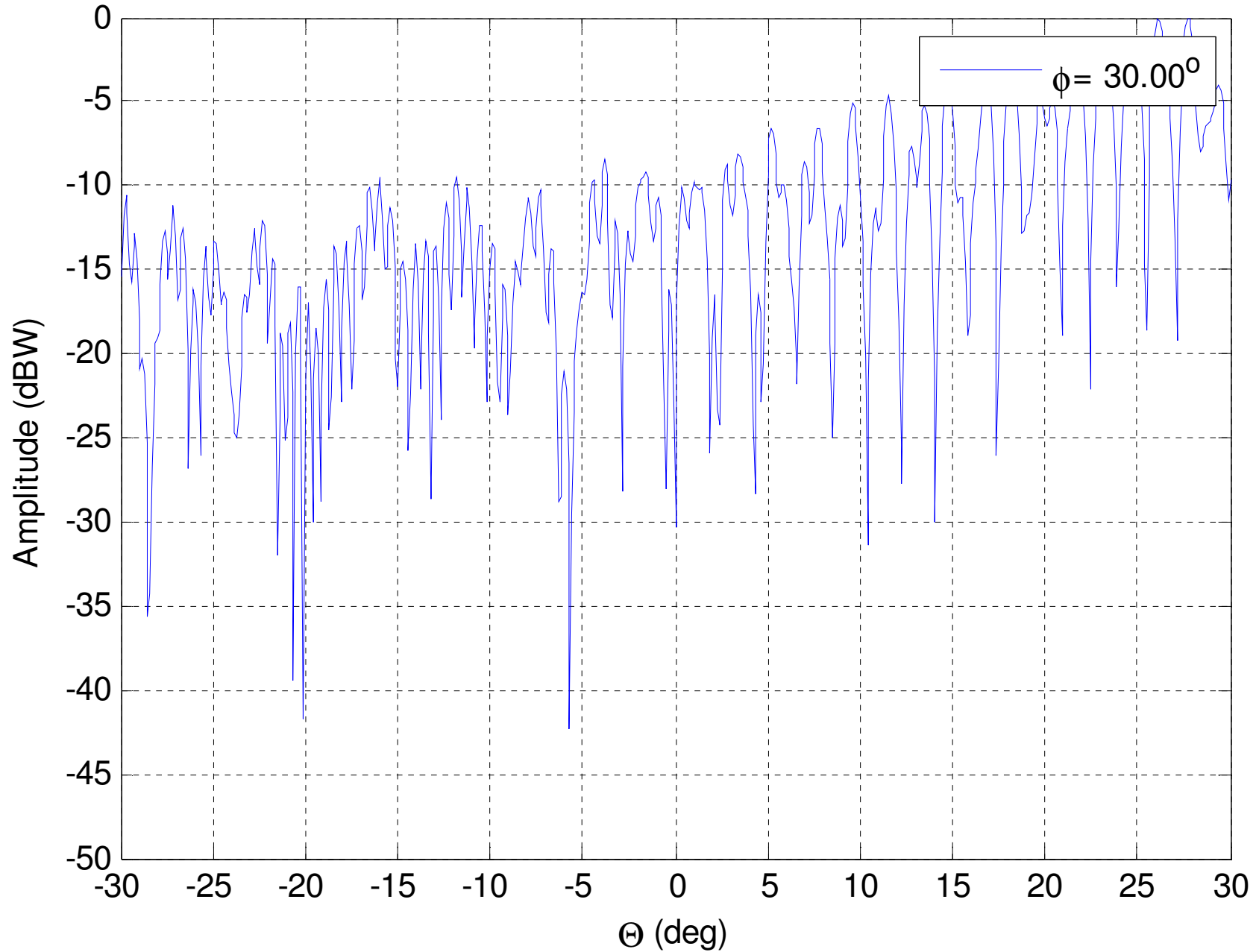
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 1.37 dBW, Date: 14-Dec-2011



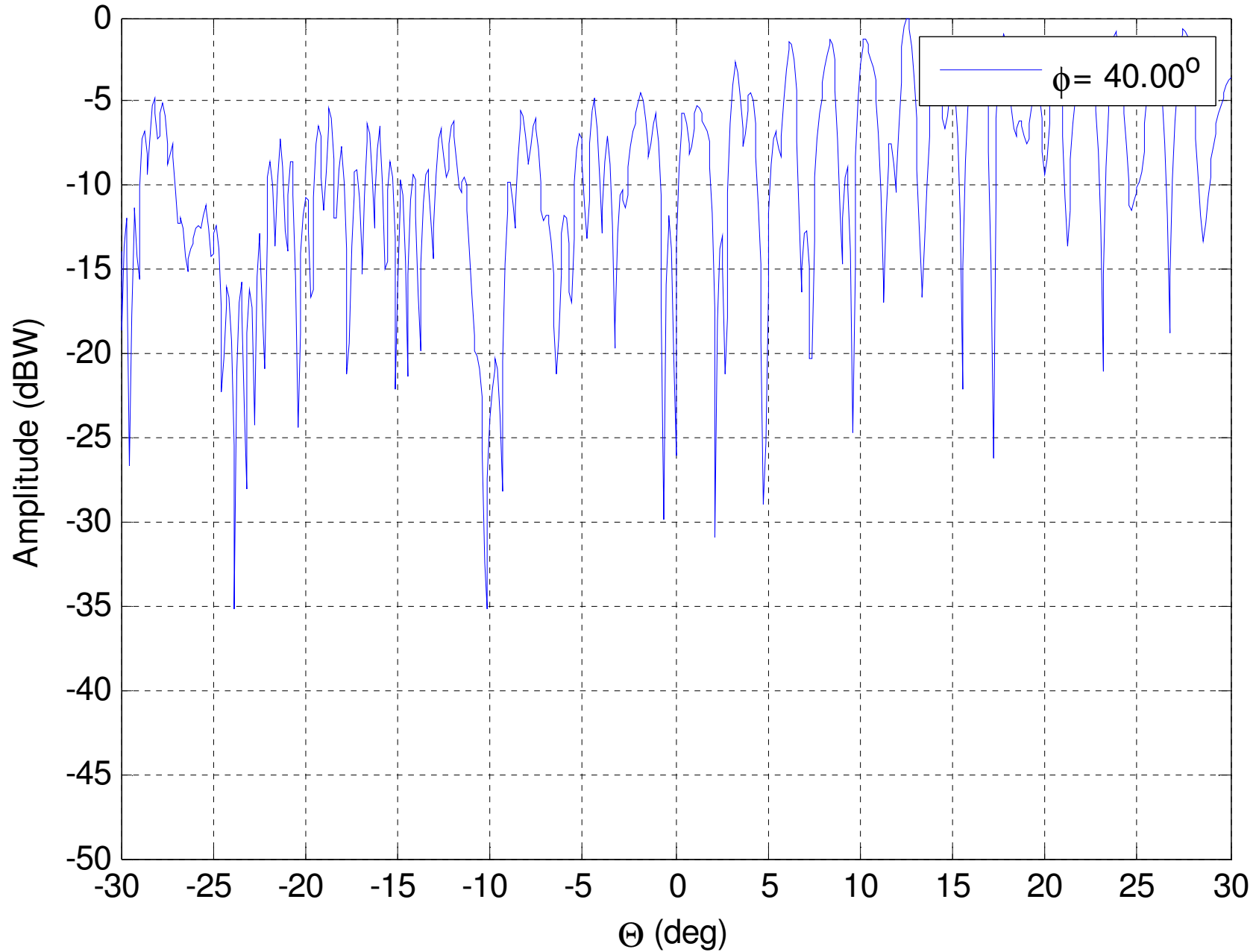
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -3.04 dBW, Date: 14-Dec-2011



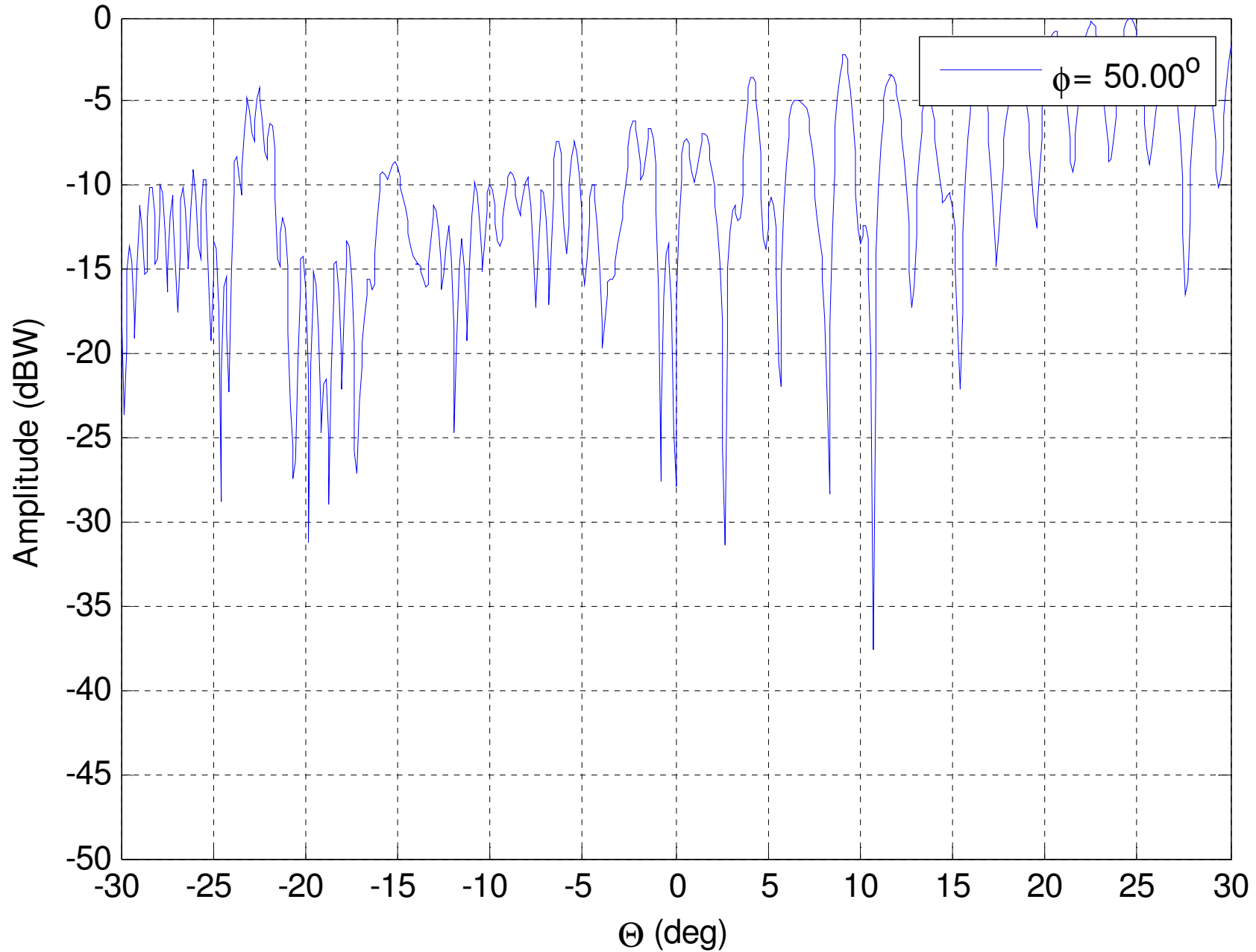
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.32 dBW, Date: 14-Dec-2011



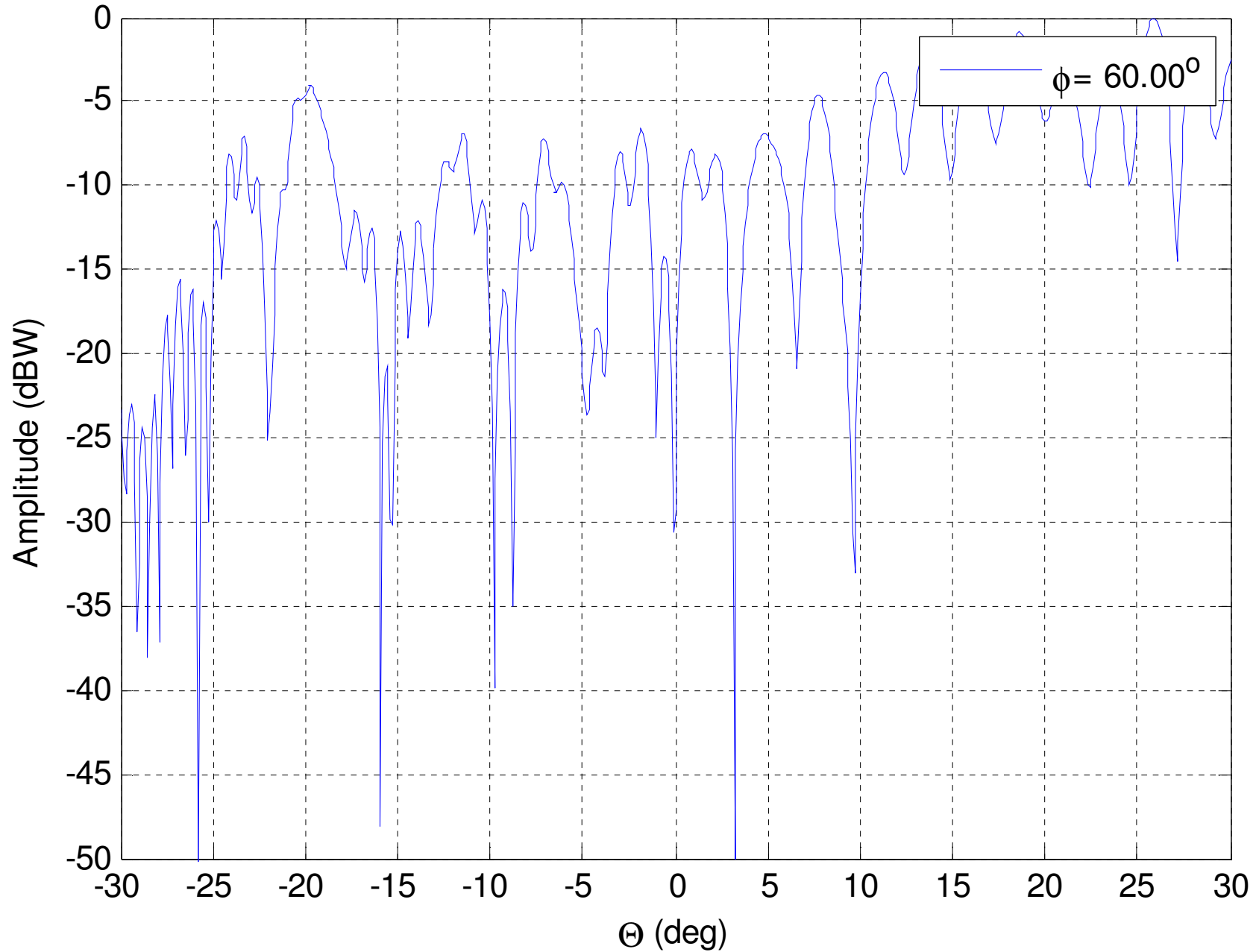
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -5.42 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

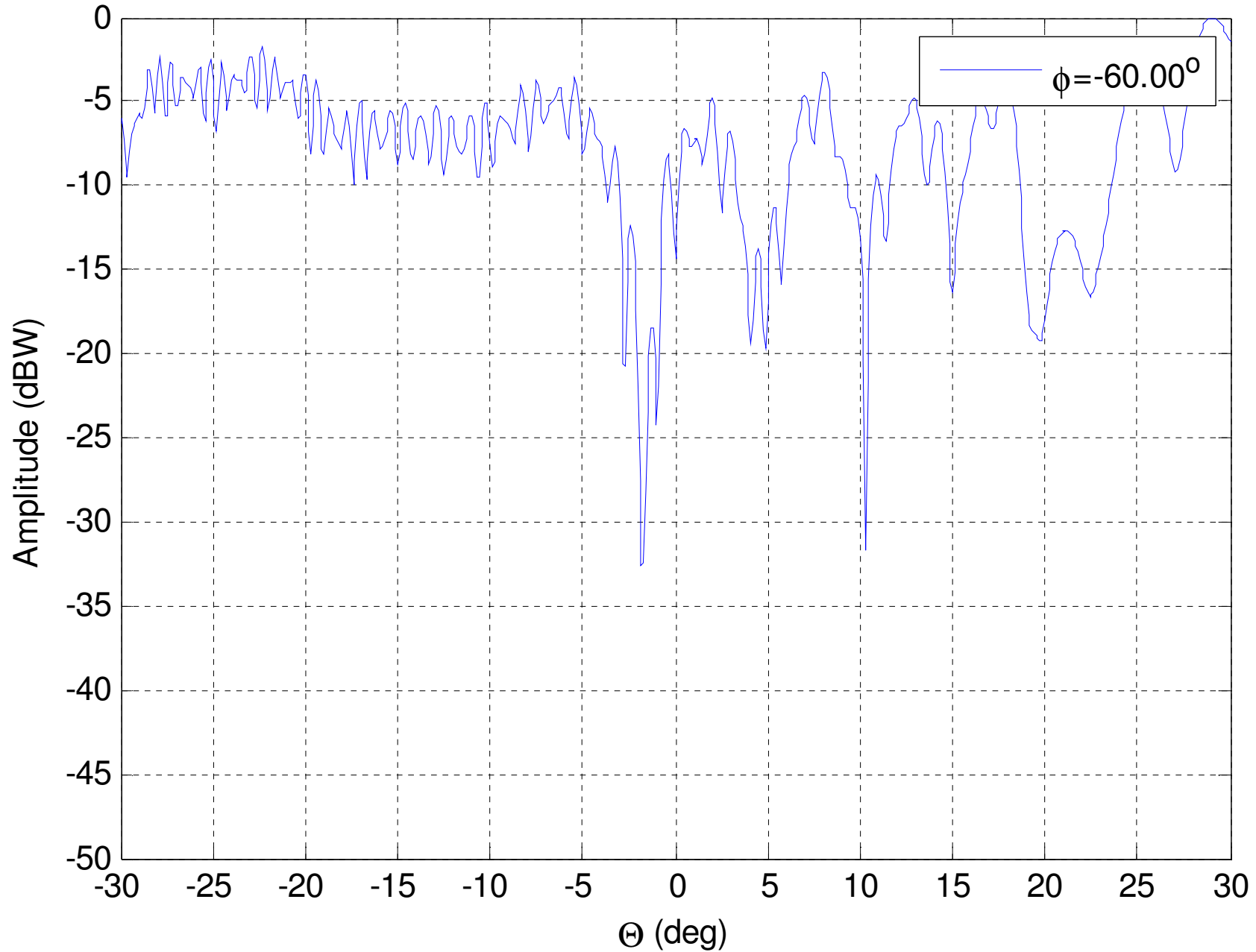
Input file: tx-17.3-rhcp-60.cut, Peak: -4.12 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

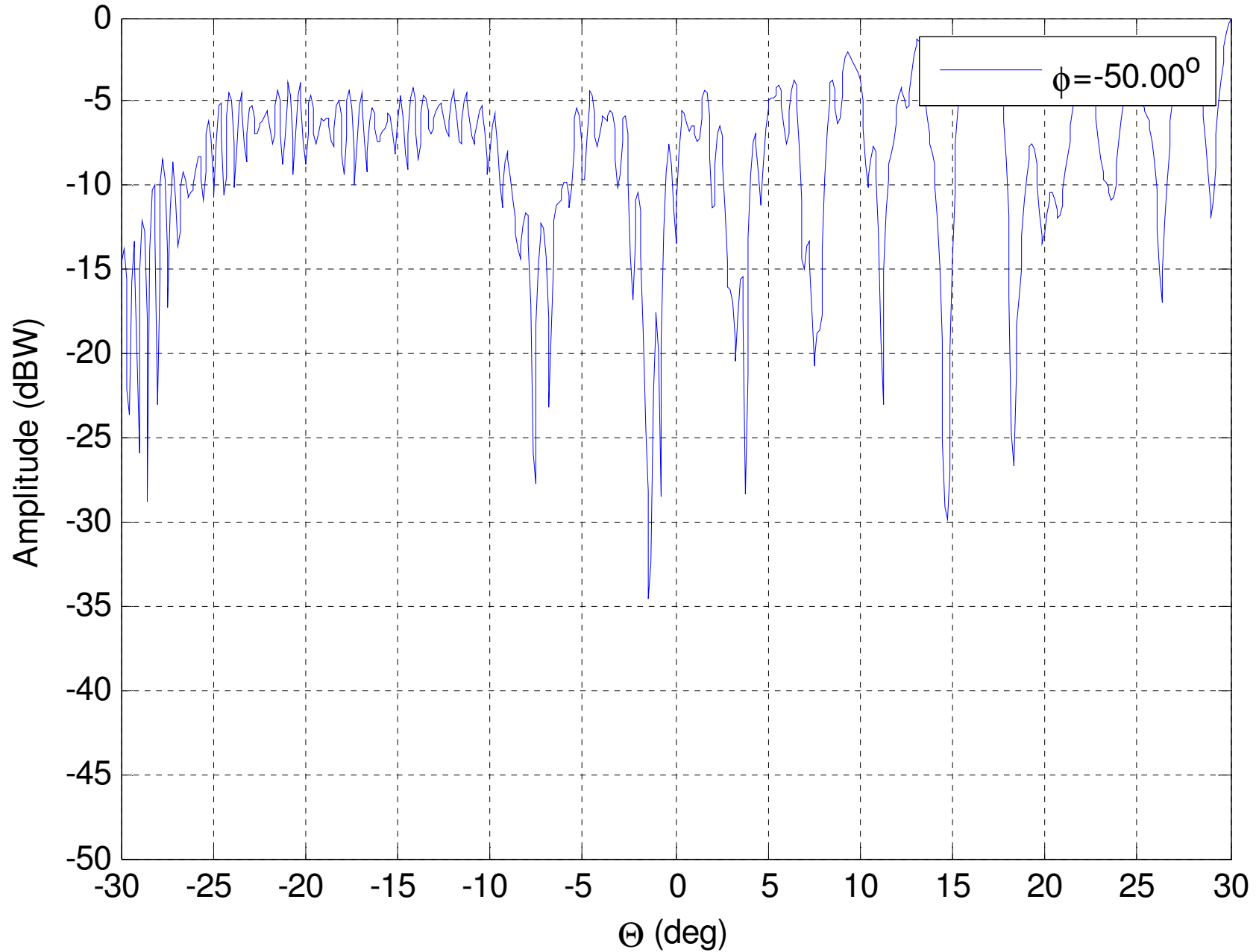
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



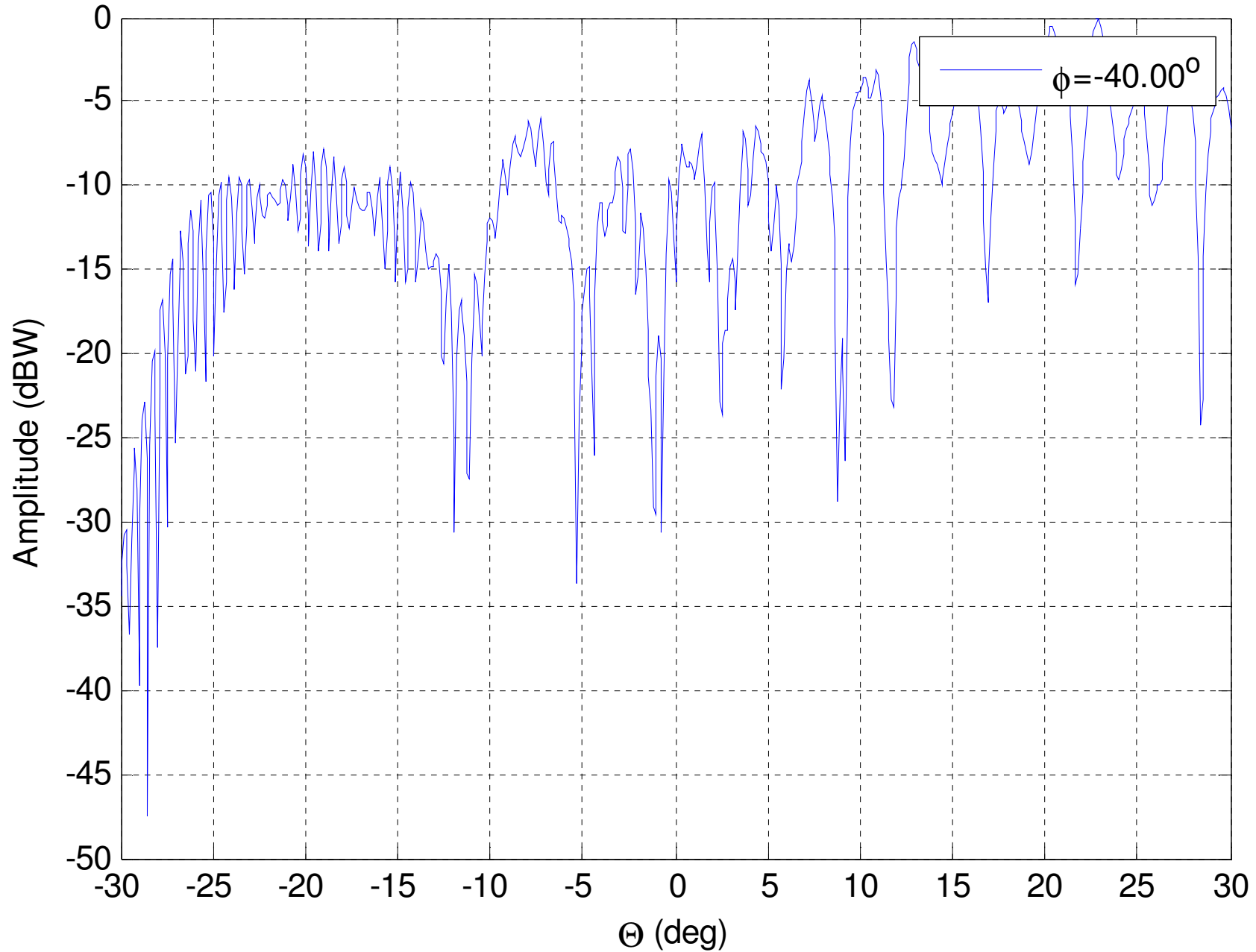
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -5.58 dBW, Date: 14-Dec-2011



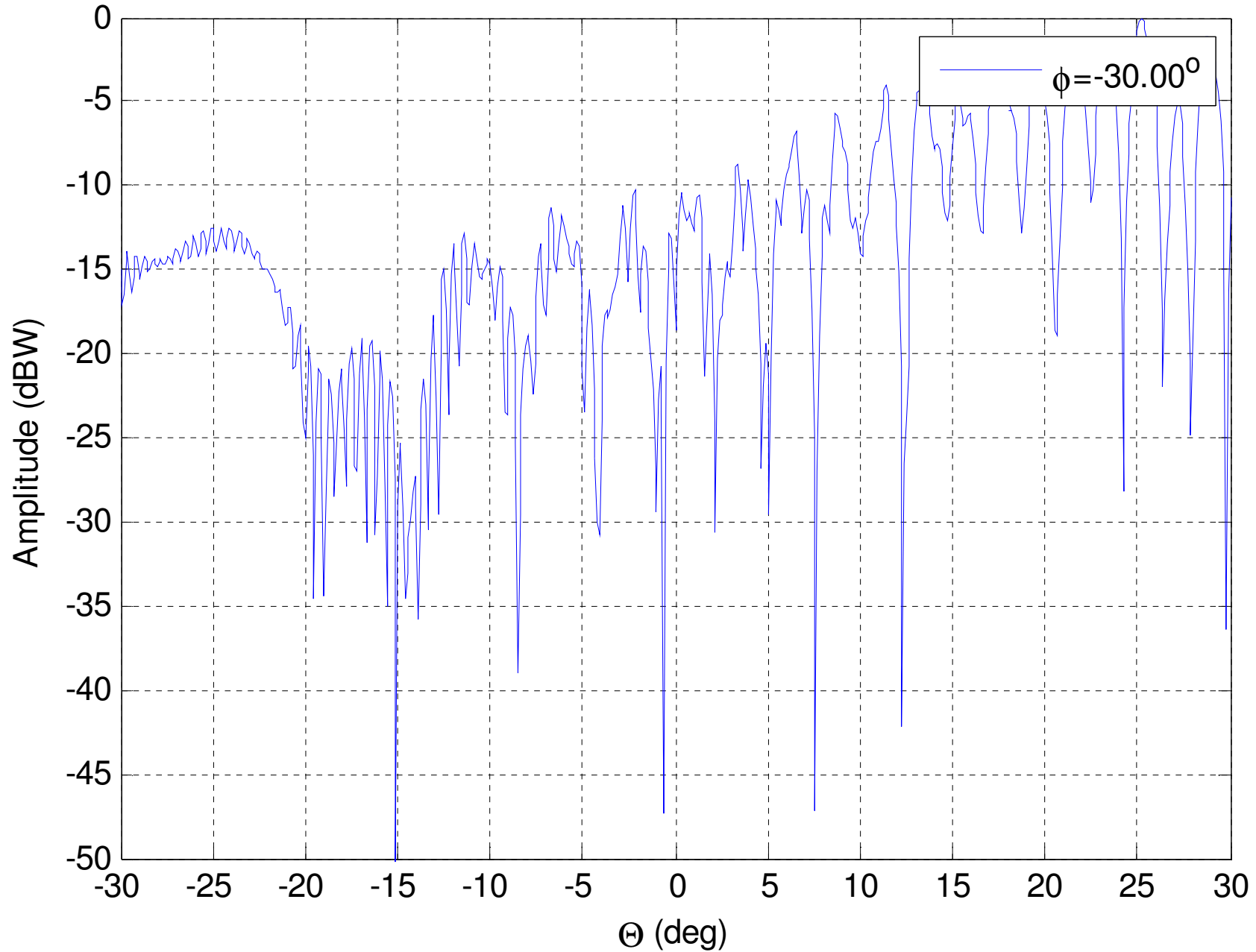
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.45 dBW, Date: 14-Dec-2011



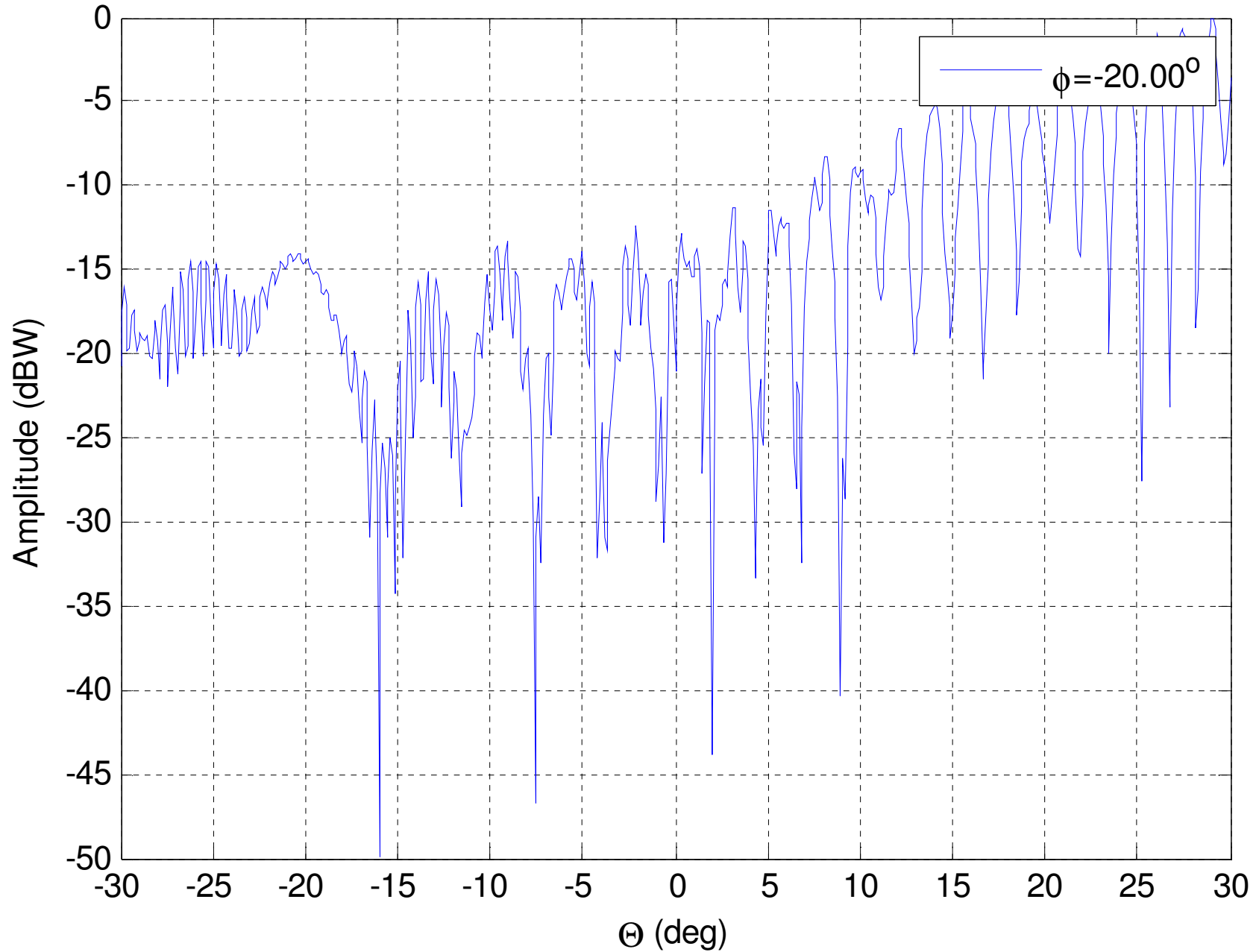
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -0.56 dBW, Date: 14-Dec-2011



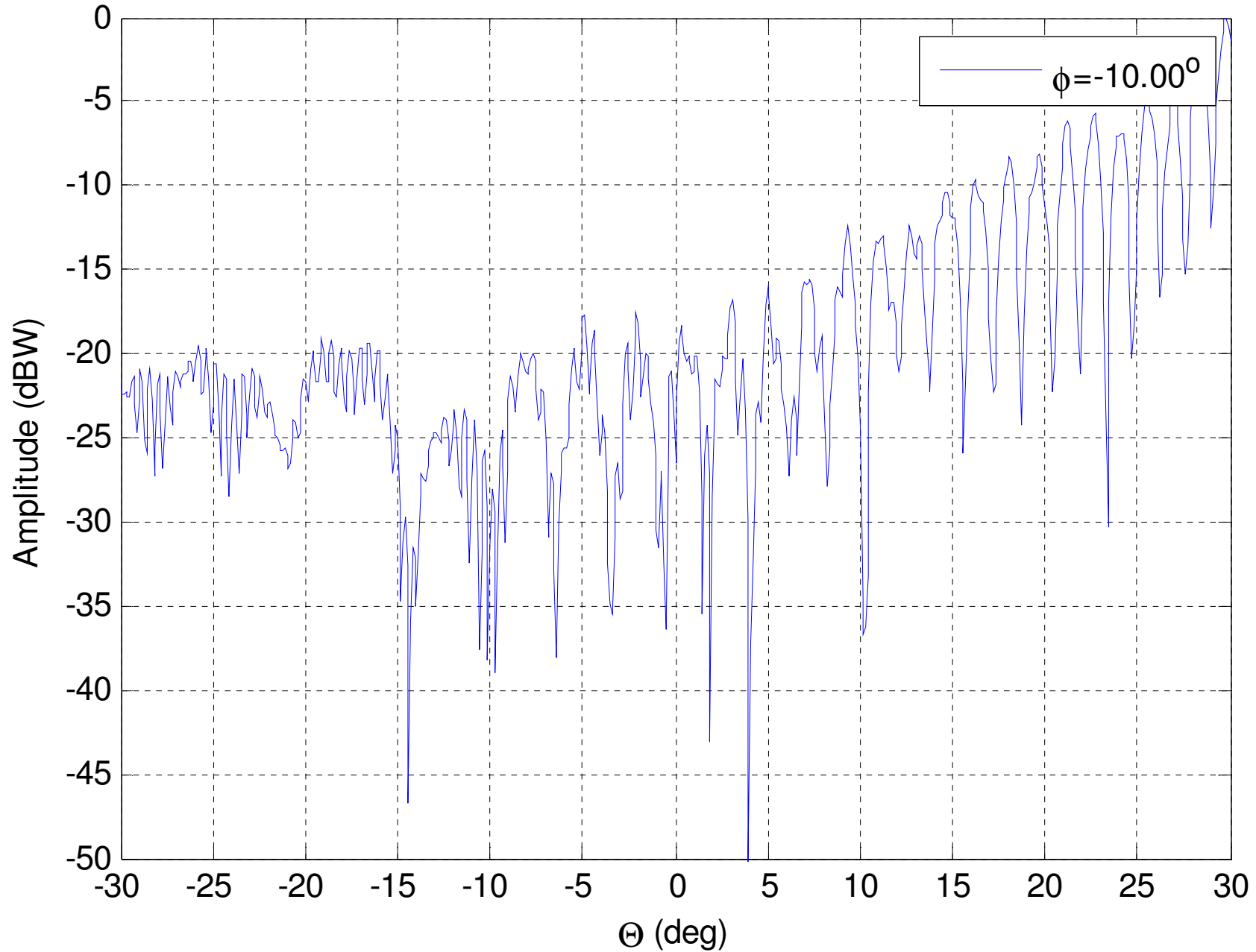
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 2.01 dBW, Date: 14-Dec-2011



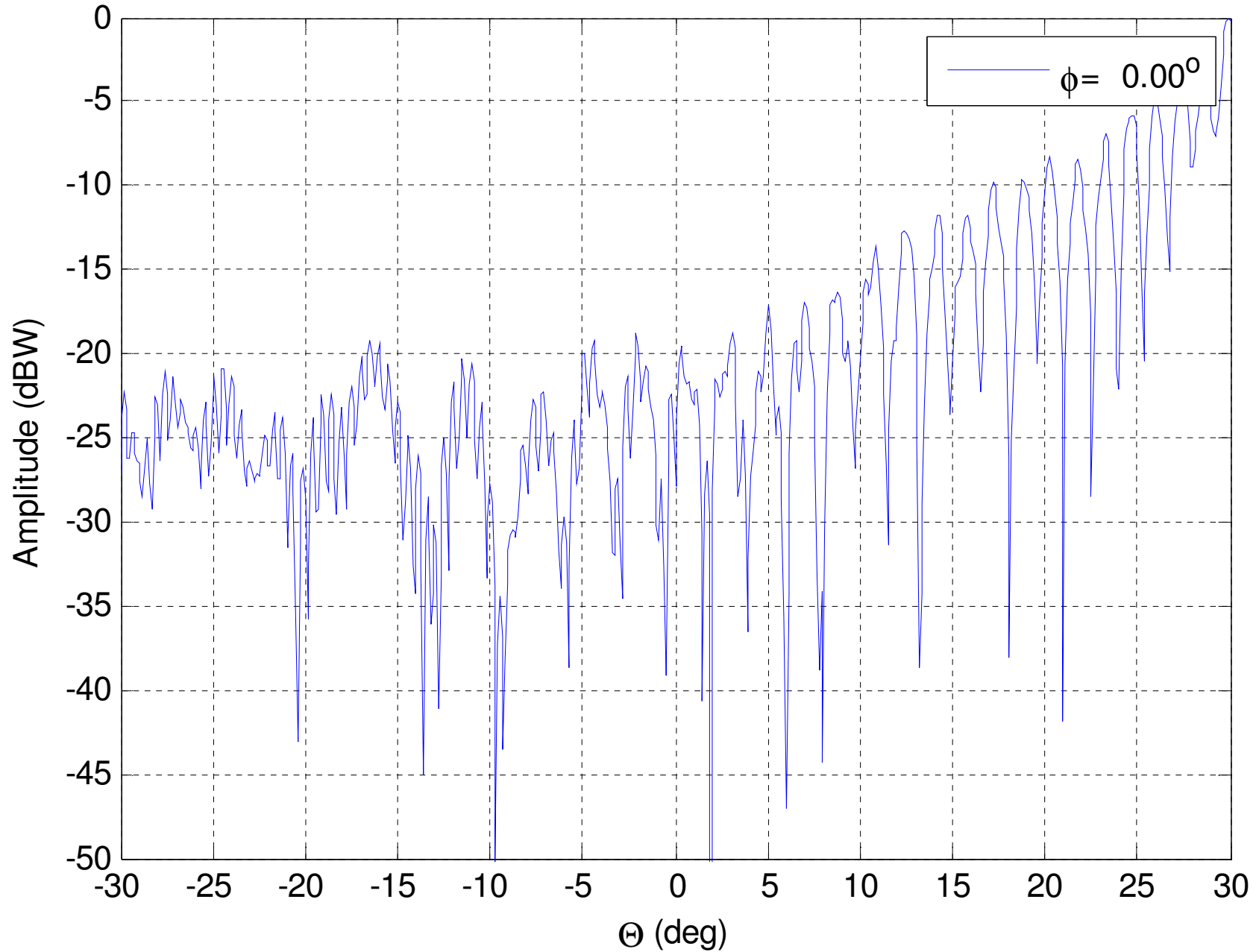
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 7.45 dBW, Date: 14-Dec-2011



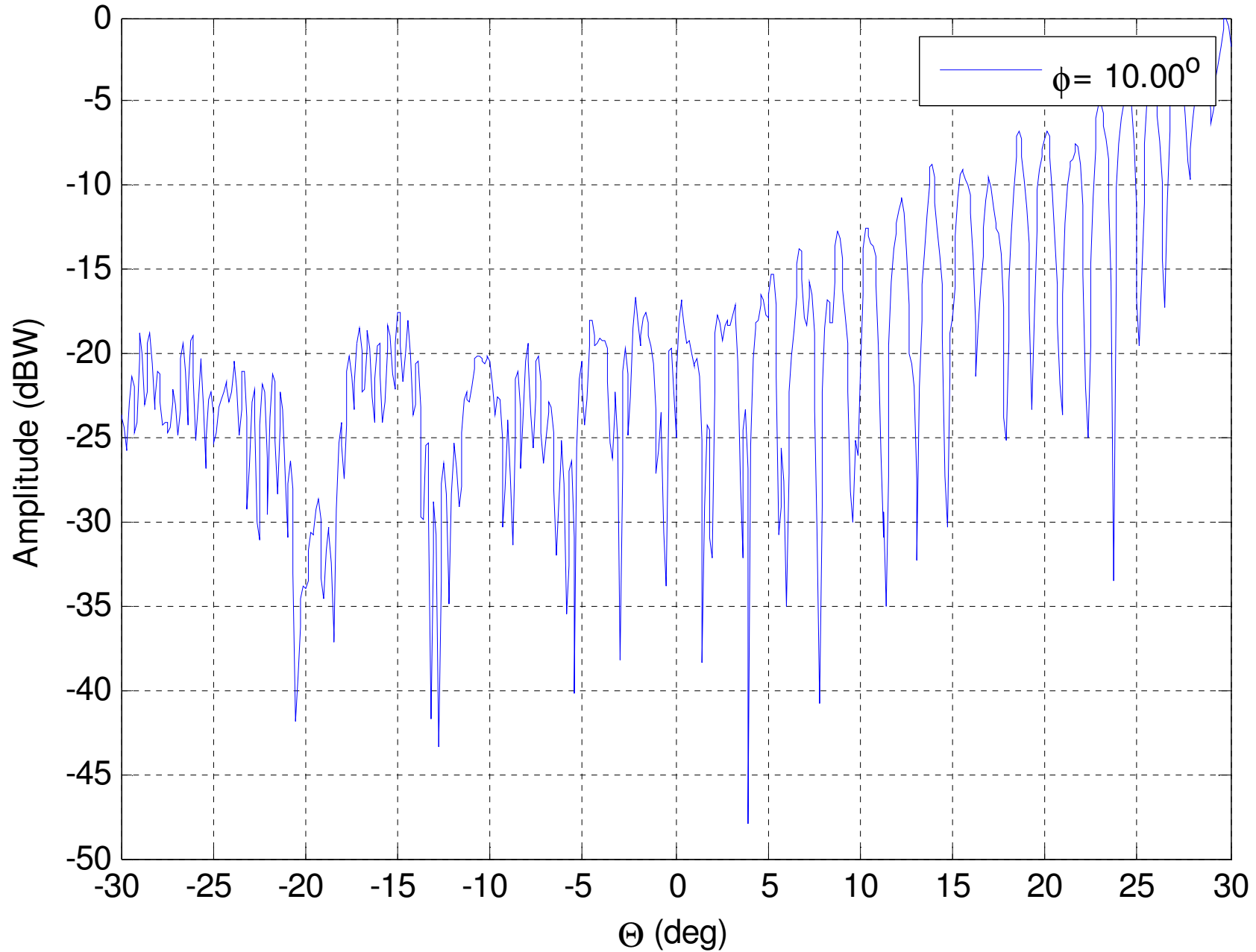
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 8.73 dBW, Date: 14-Dec-2011



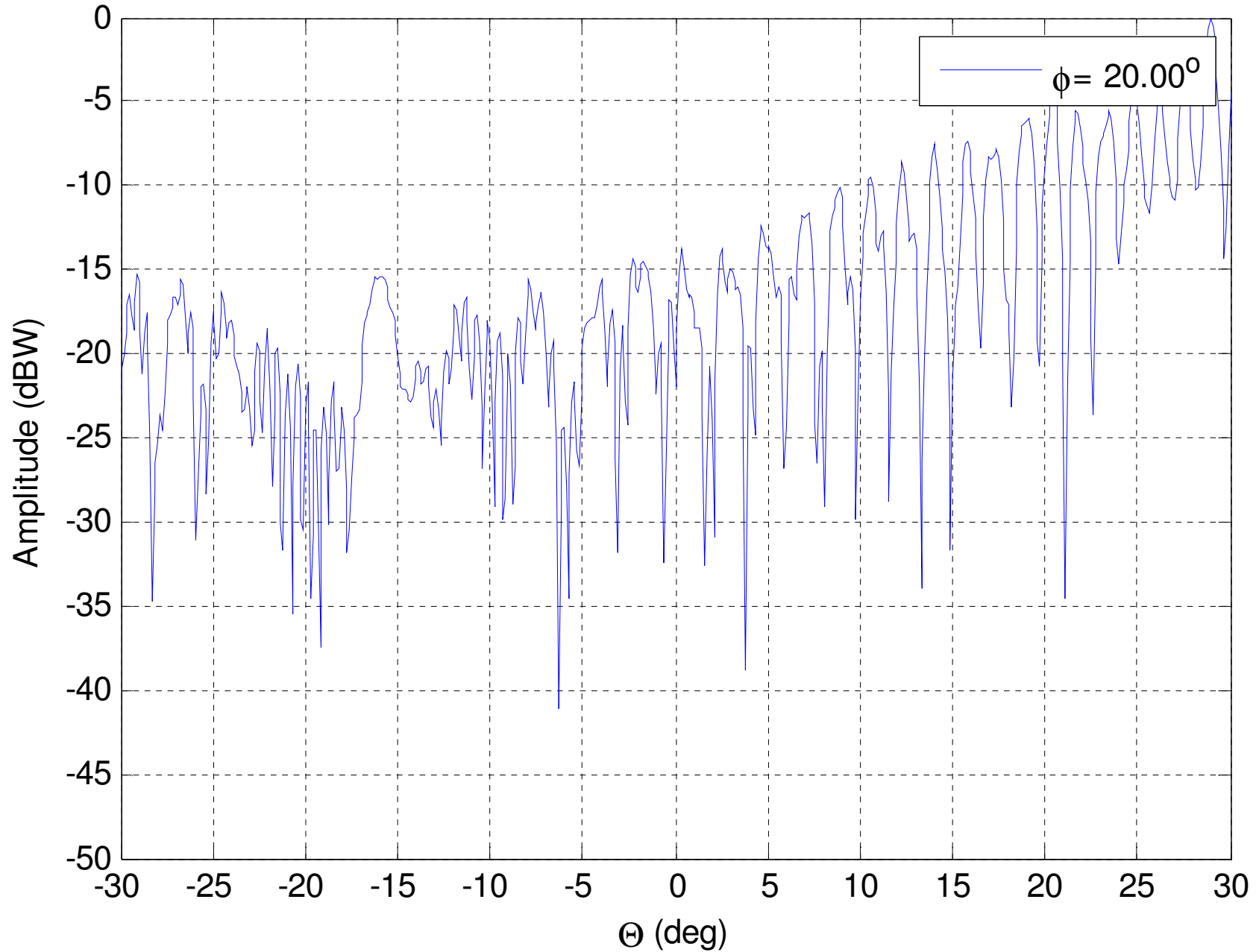
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 5.96 dBW, Date: 14-Dec-2011



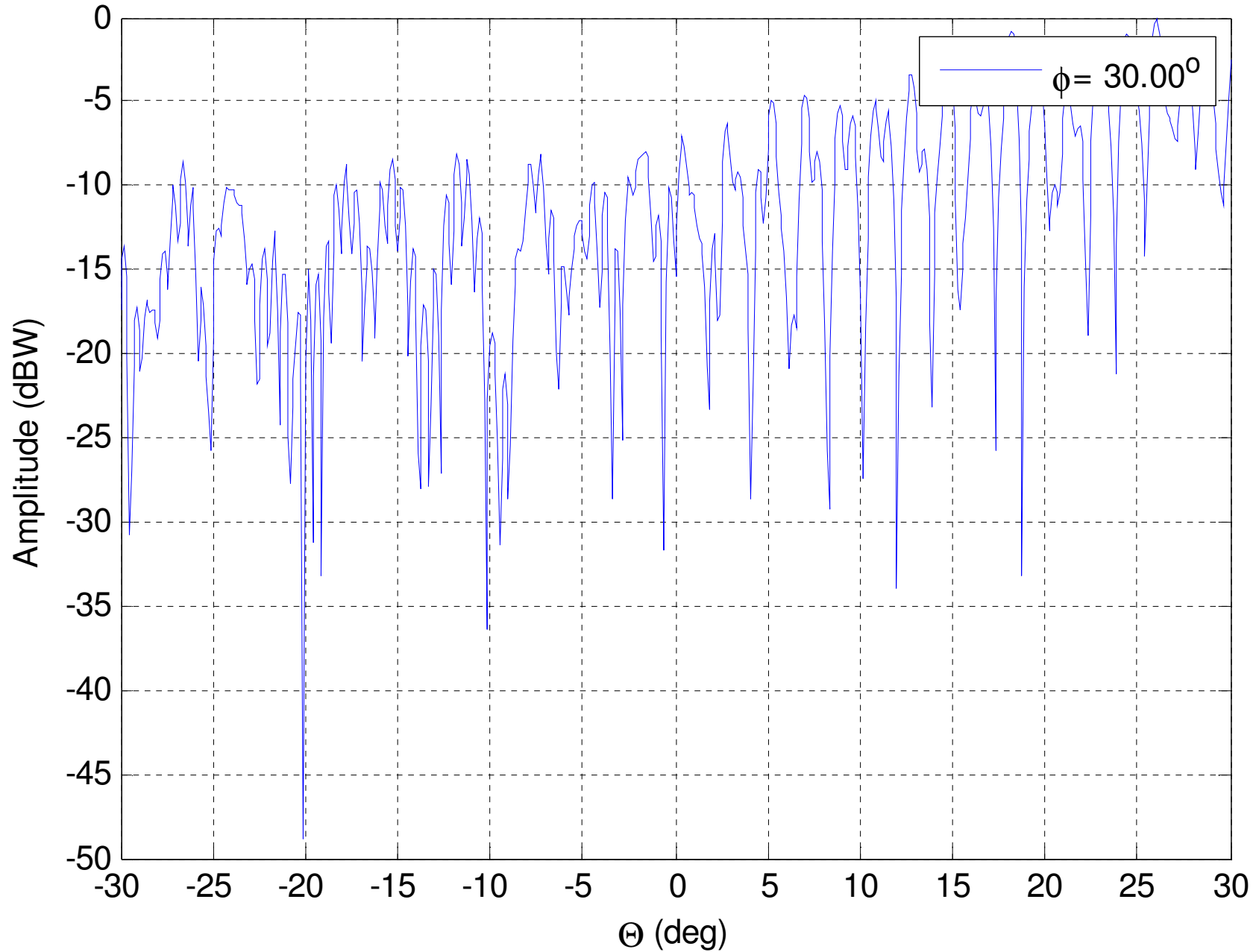
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 2.91 dBW, Date: 14-Dec-2011



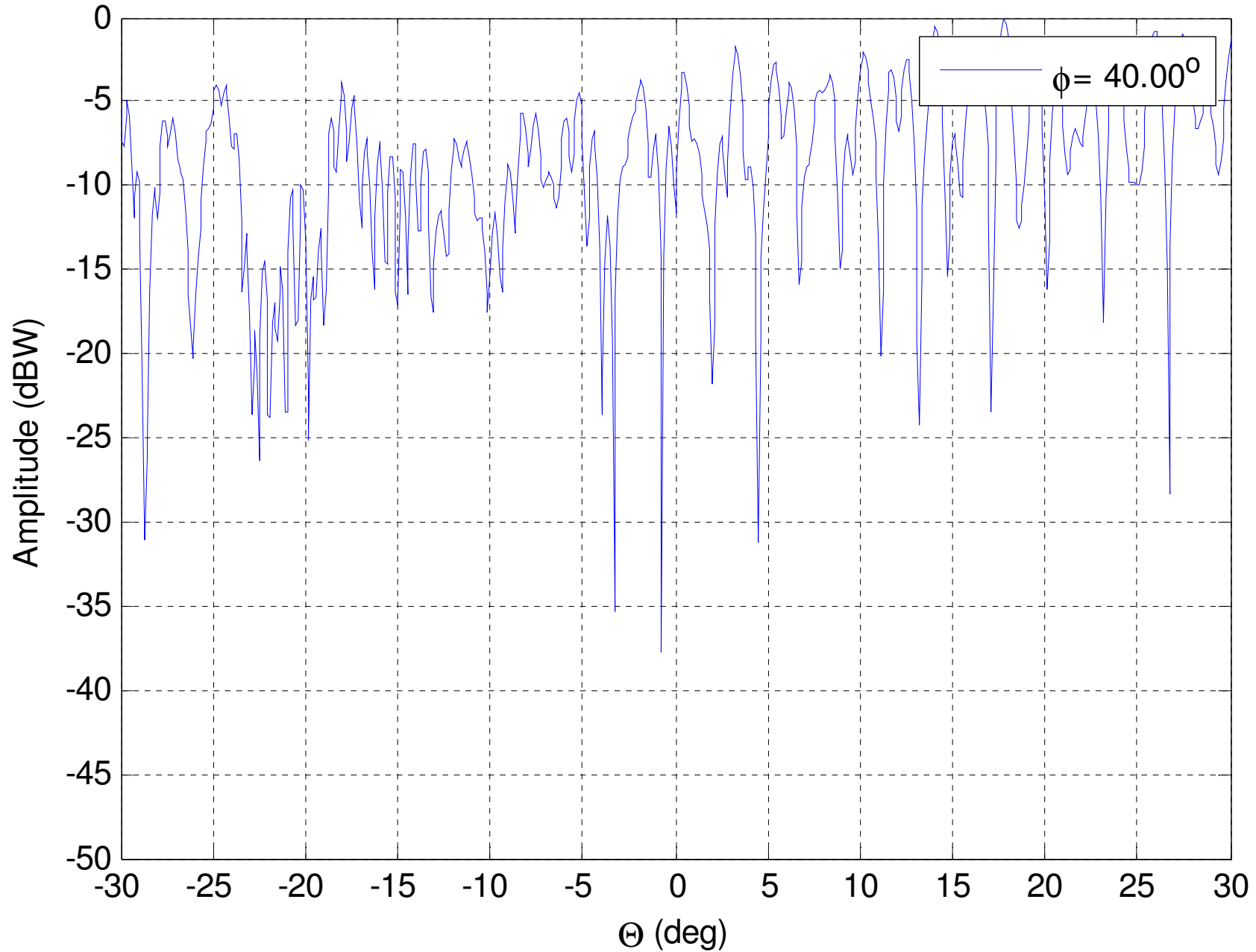
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -3.64 dBW, Date: 14-Dec-2011



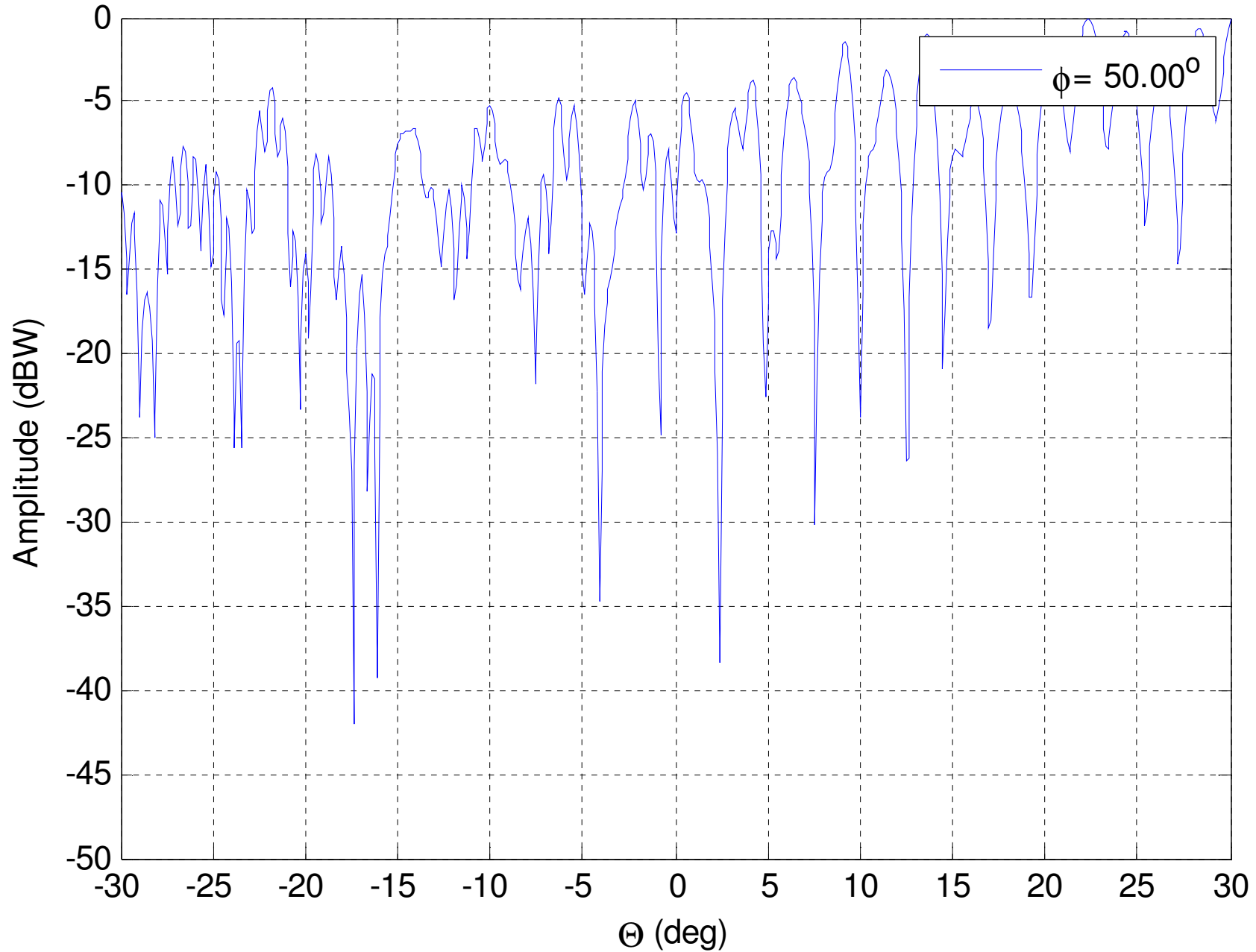
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -7.44 dBW, Date: 14-Dec-2011



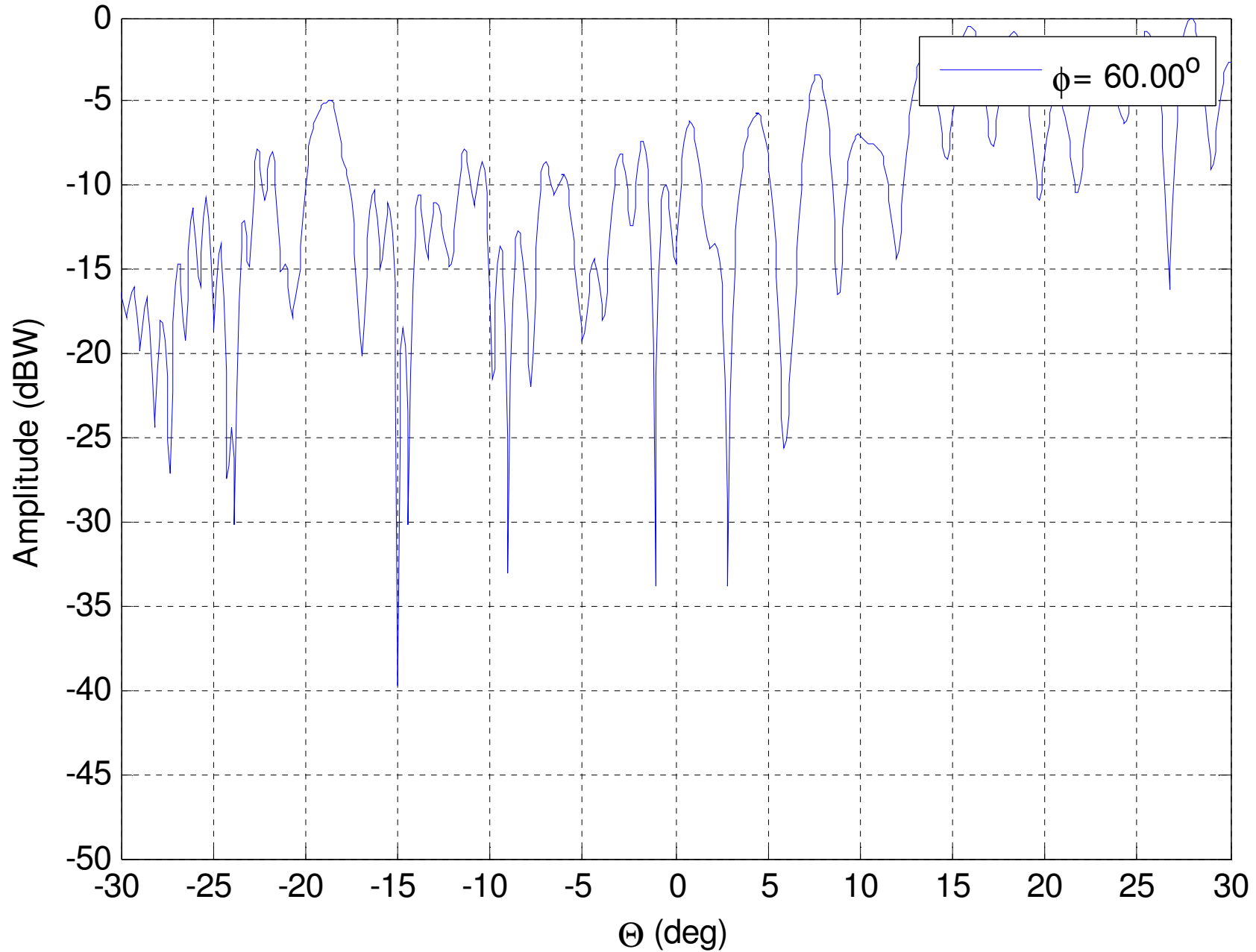
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -6.20 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

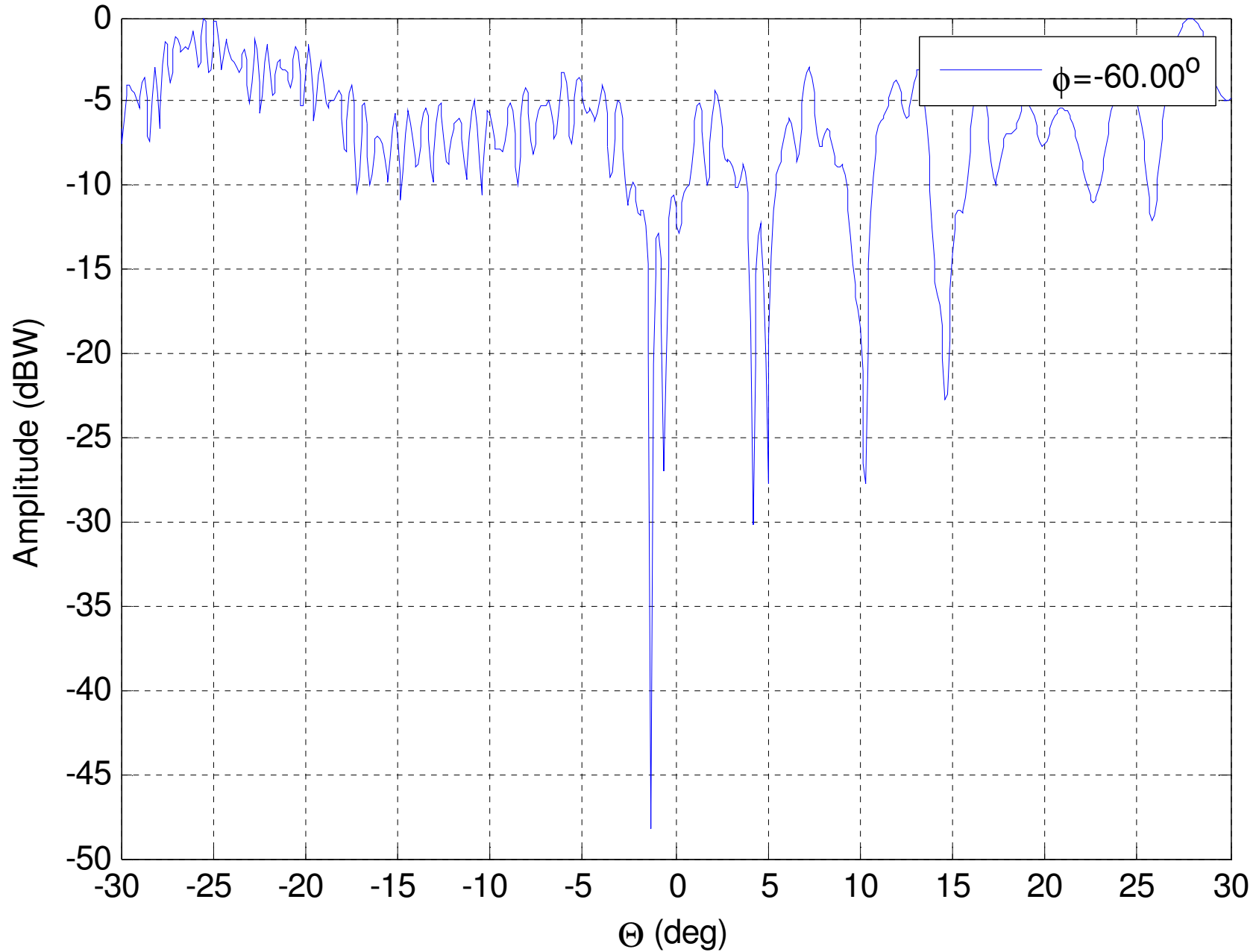
Input file: tx-17.3-lhcp-60.cut, Peak: -4.49 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

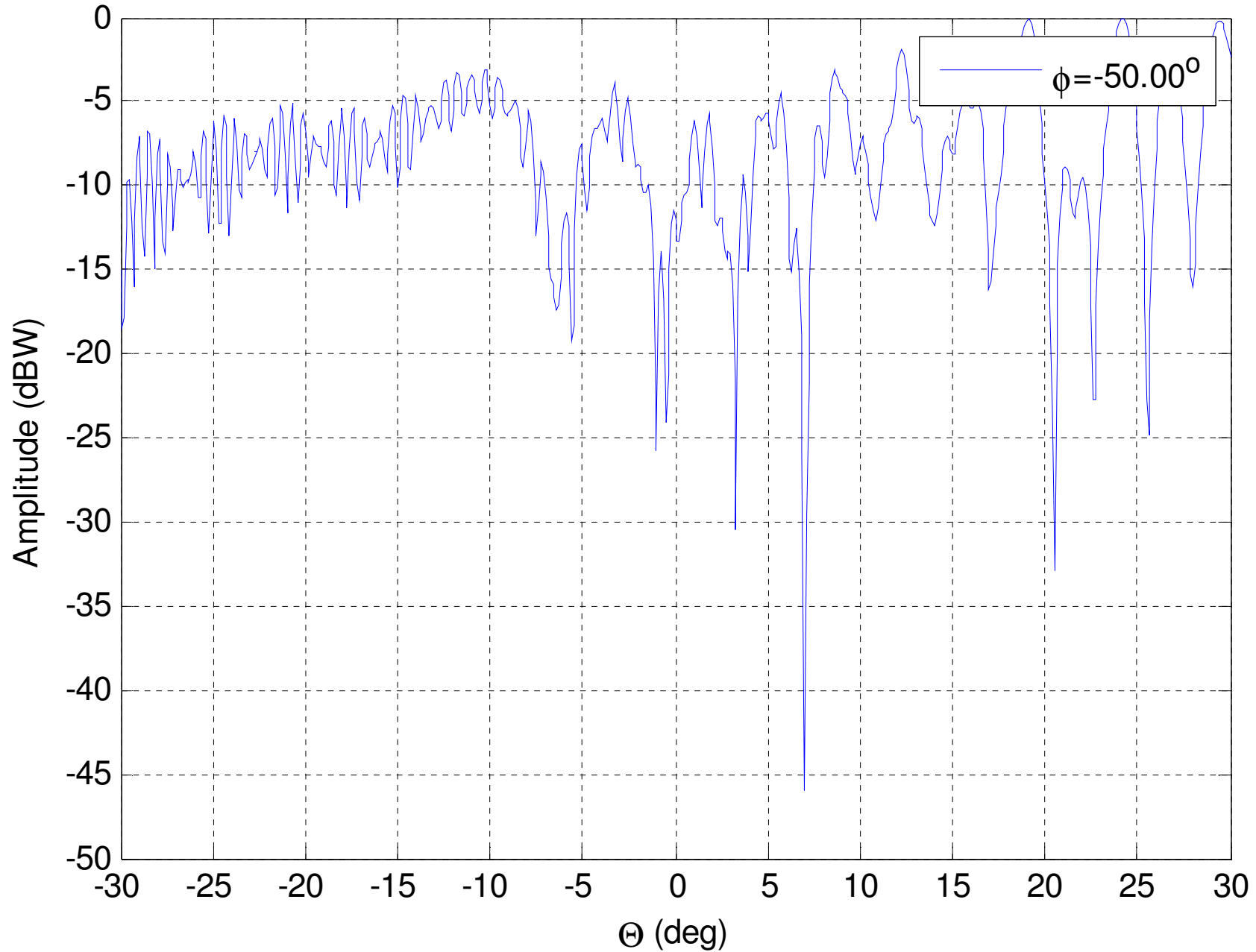
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -6.25 dBW, Date: 14-Dec-2011



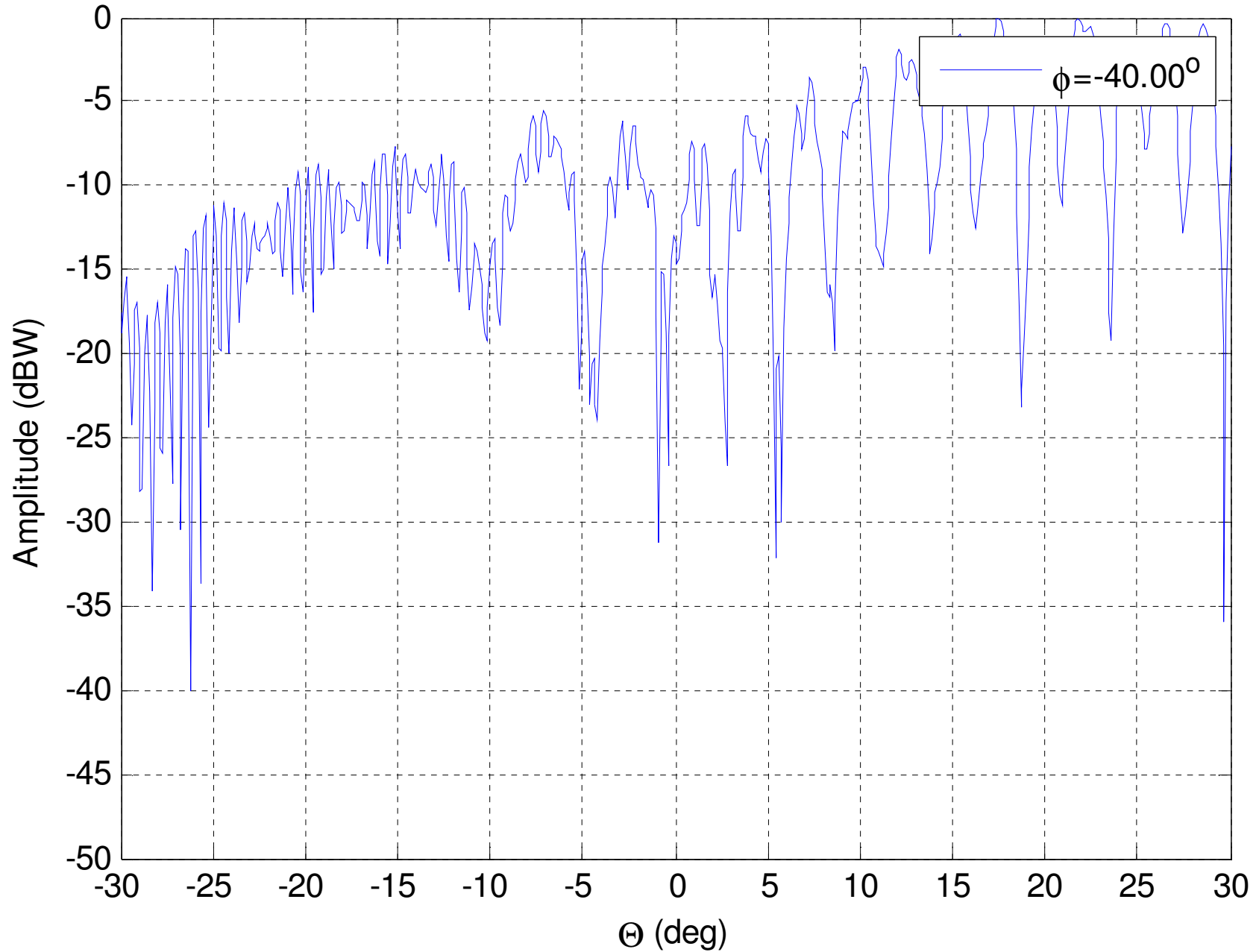
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -5.43 dBW, Date: 14-Dec-2011



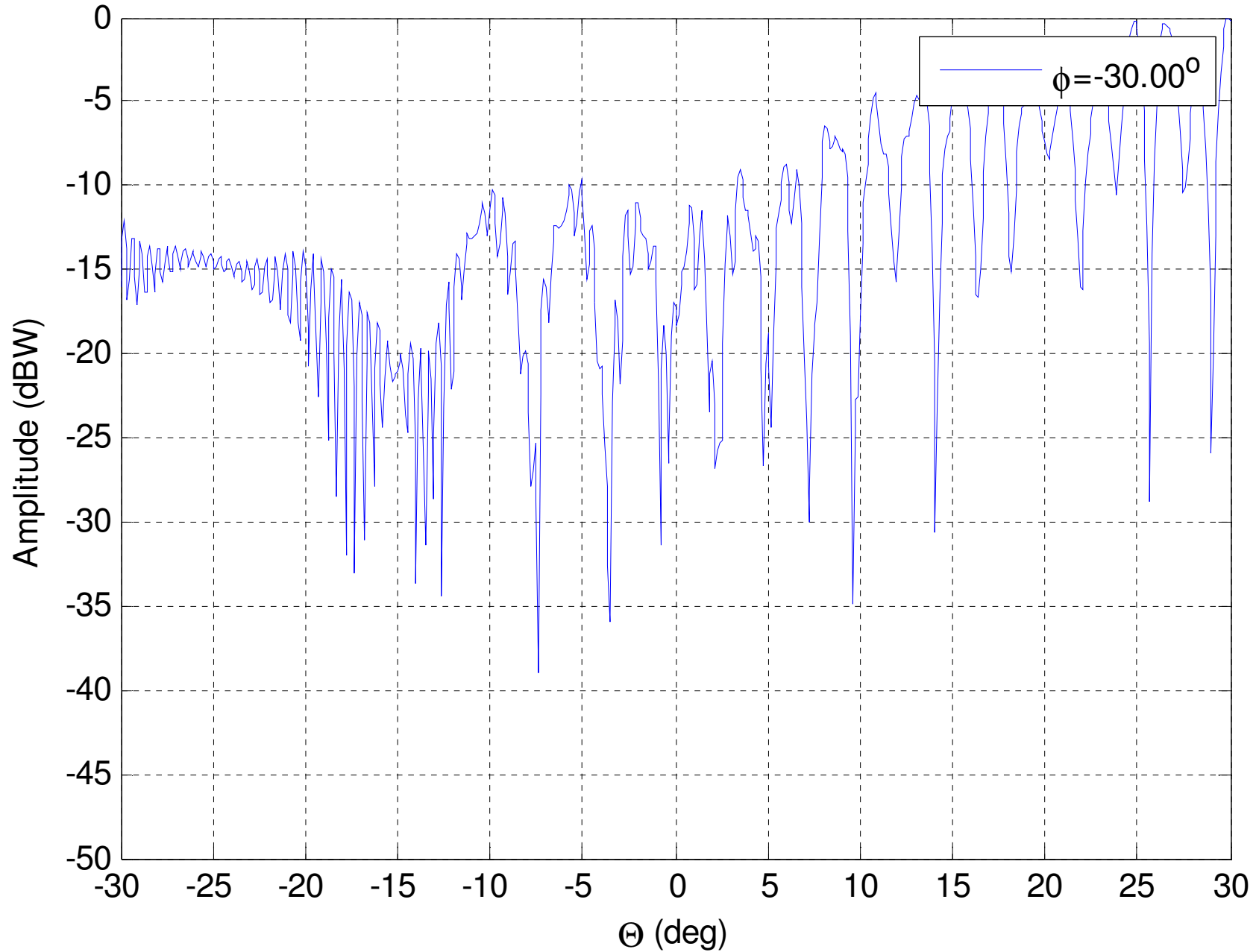
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.07 dBW, Date: 14-Dec-2011



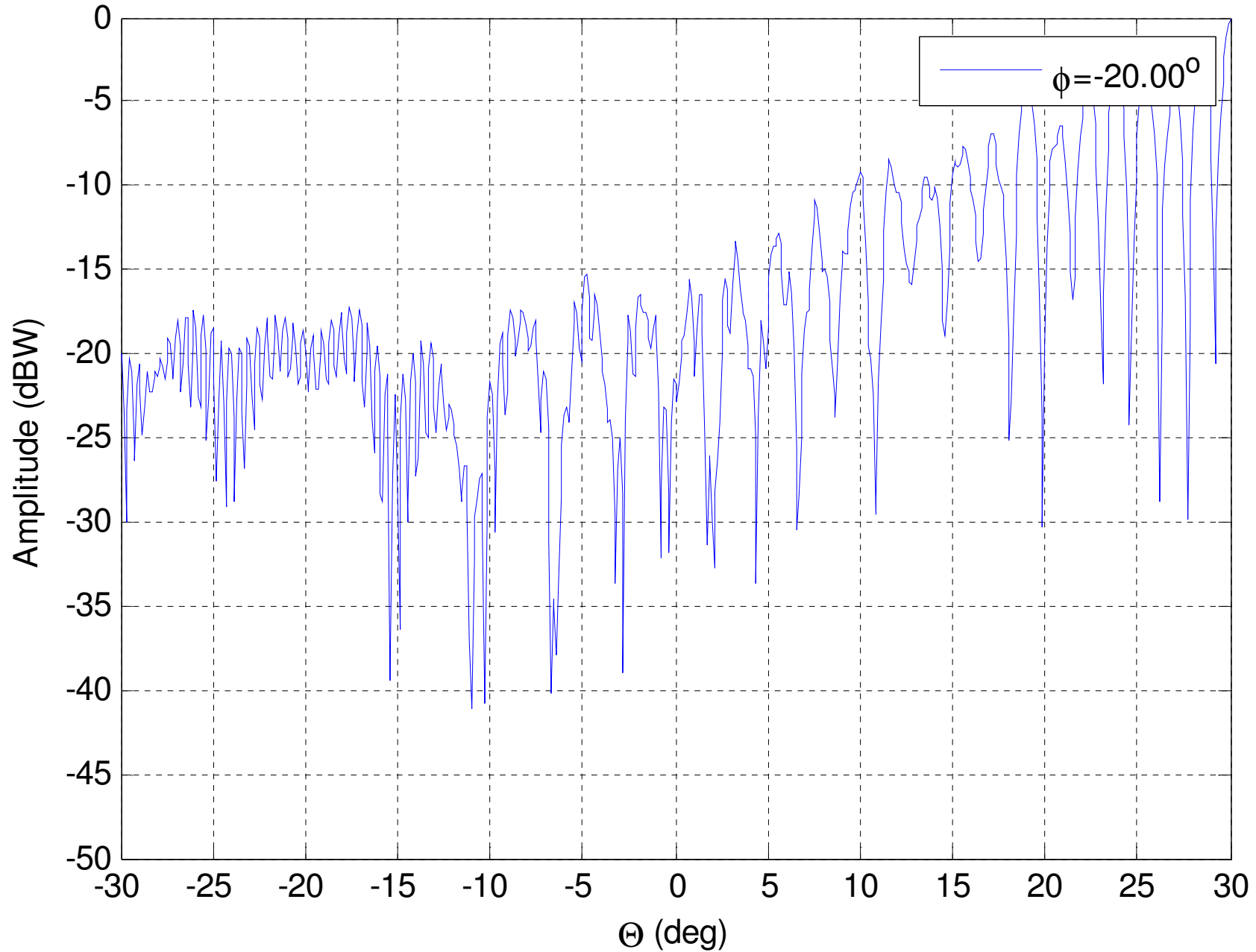
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -0.36 dBW, Date: 14-Dec-2011



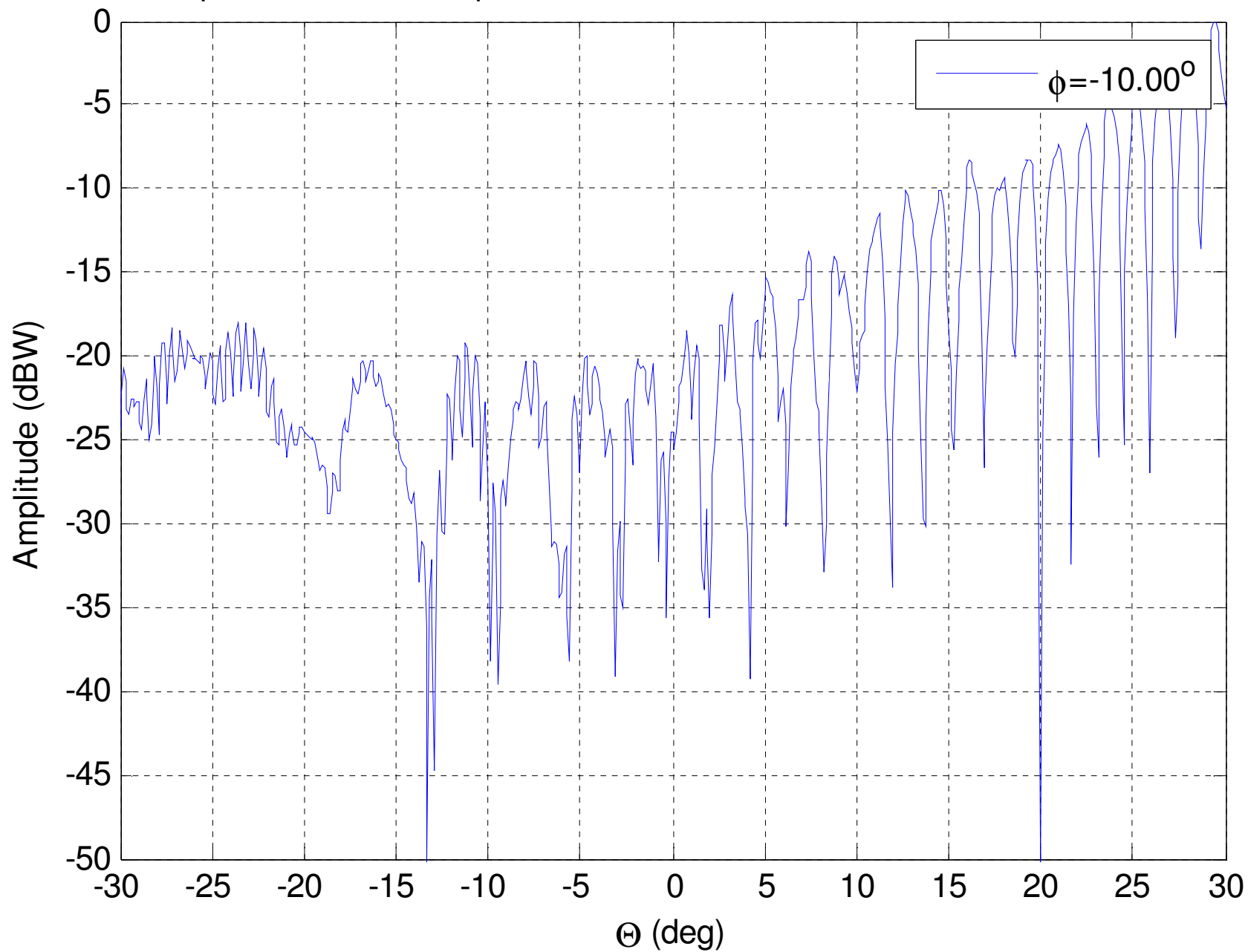
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 4.17 dBW, Date: 14-Dec-2011



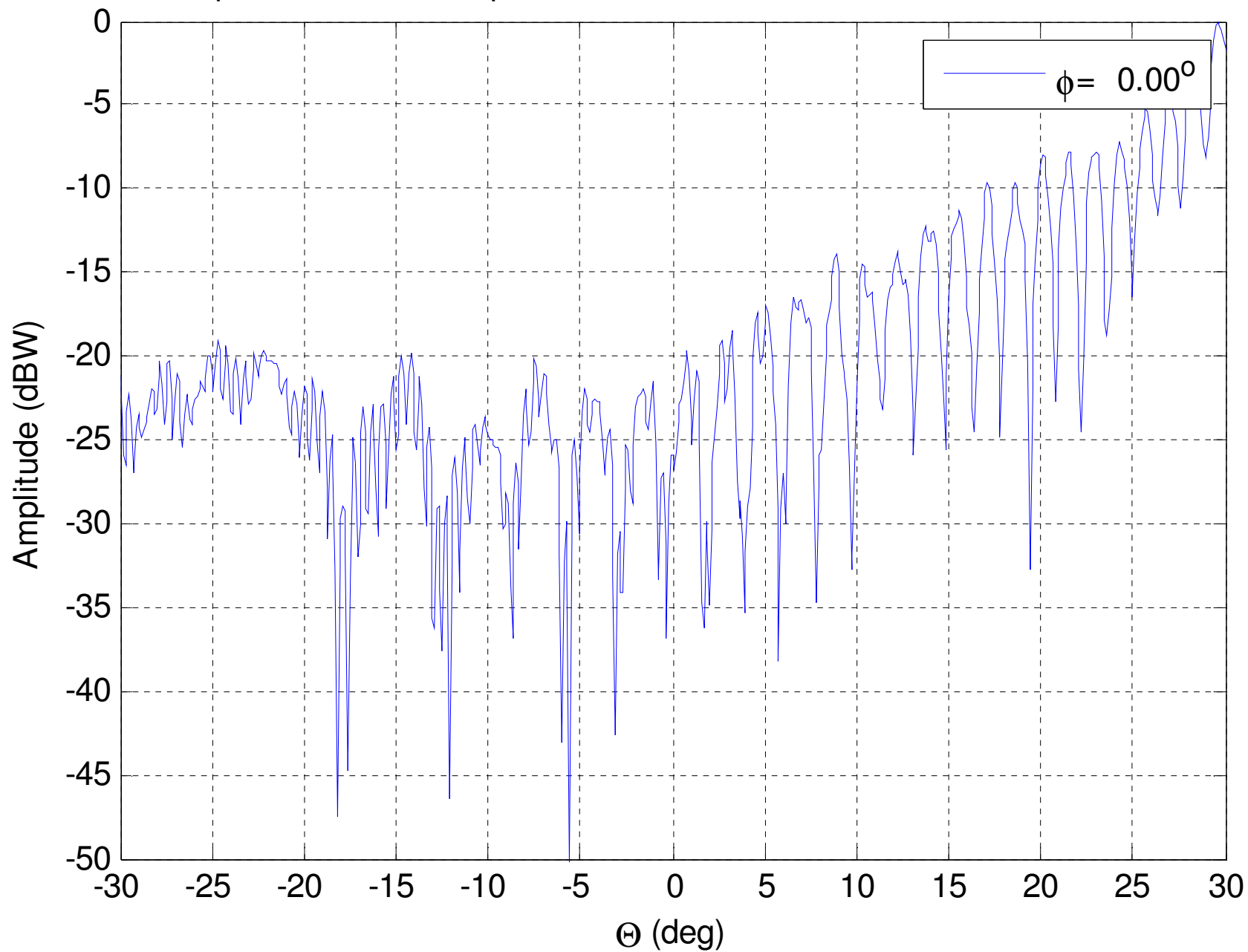
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 7.01 dBW, Date: 14-Dec-2011



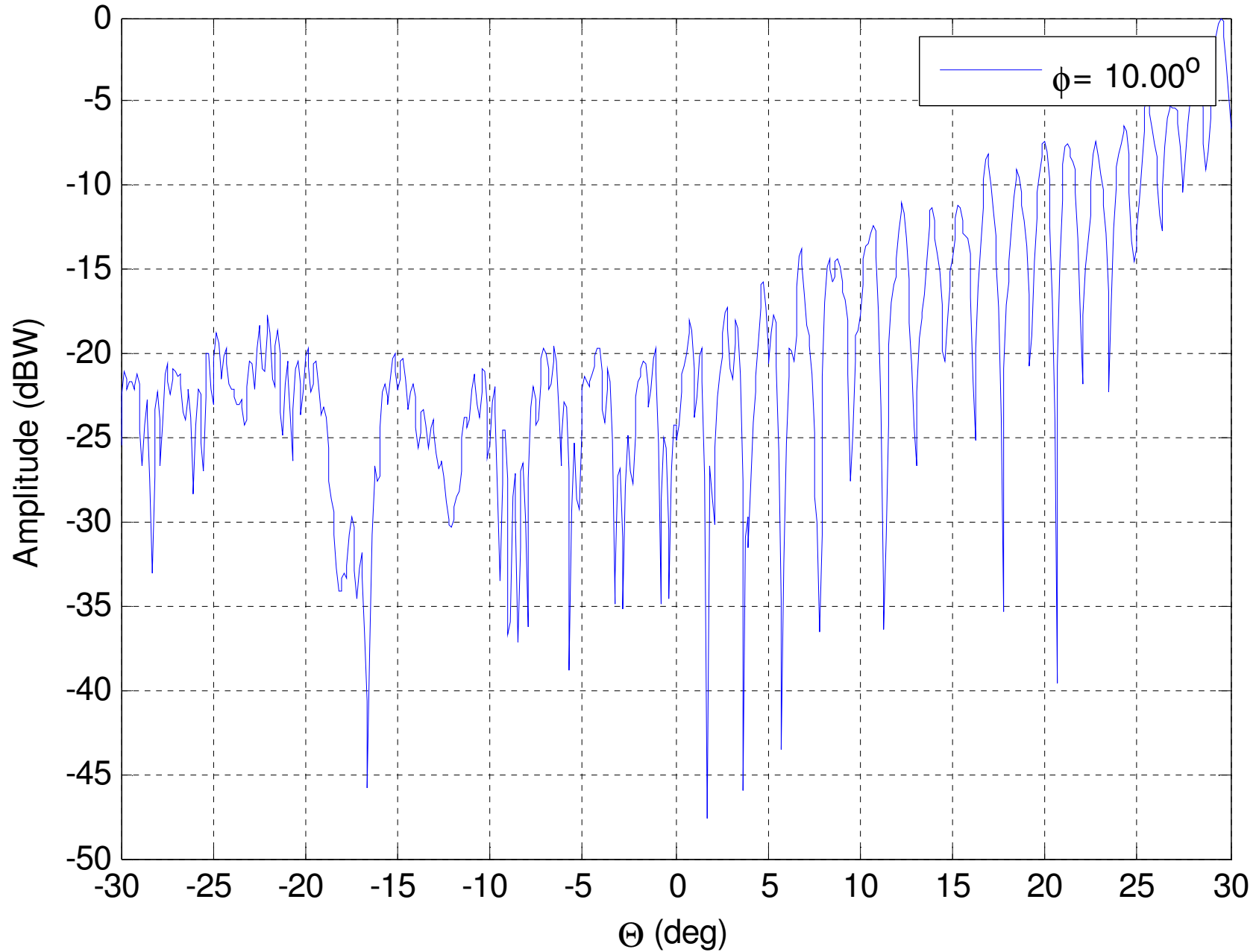
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 8.30 dBW, Date: 14-Dec-2011



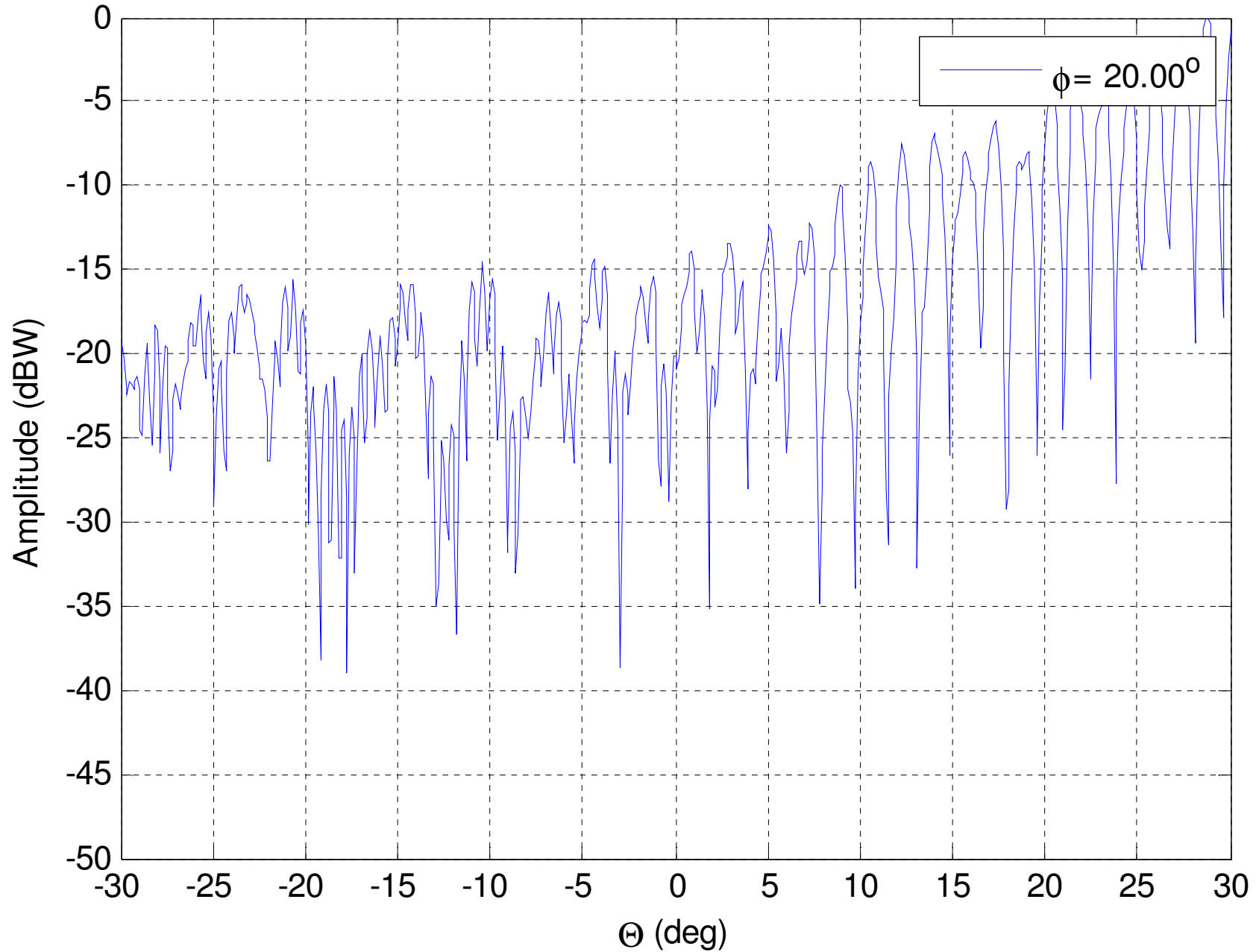
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 6.69 dBW, Date: 14-Dec-2011



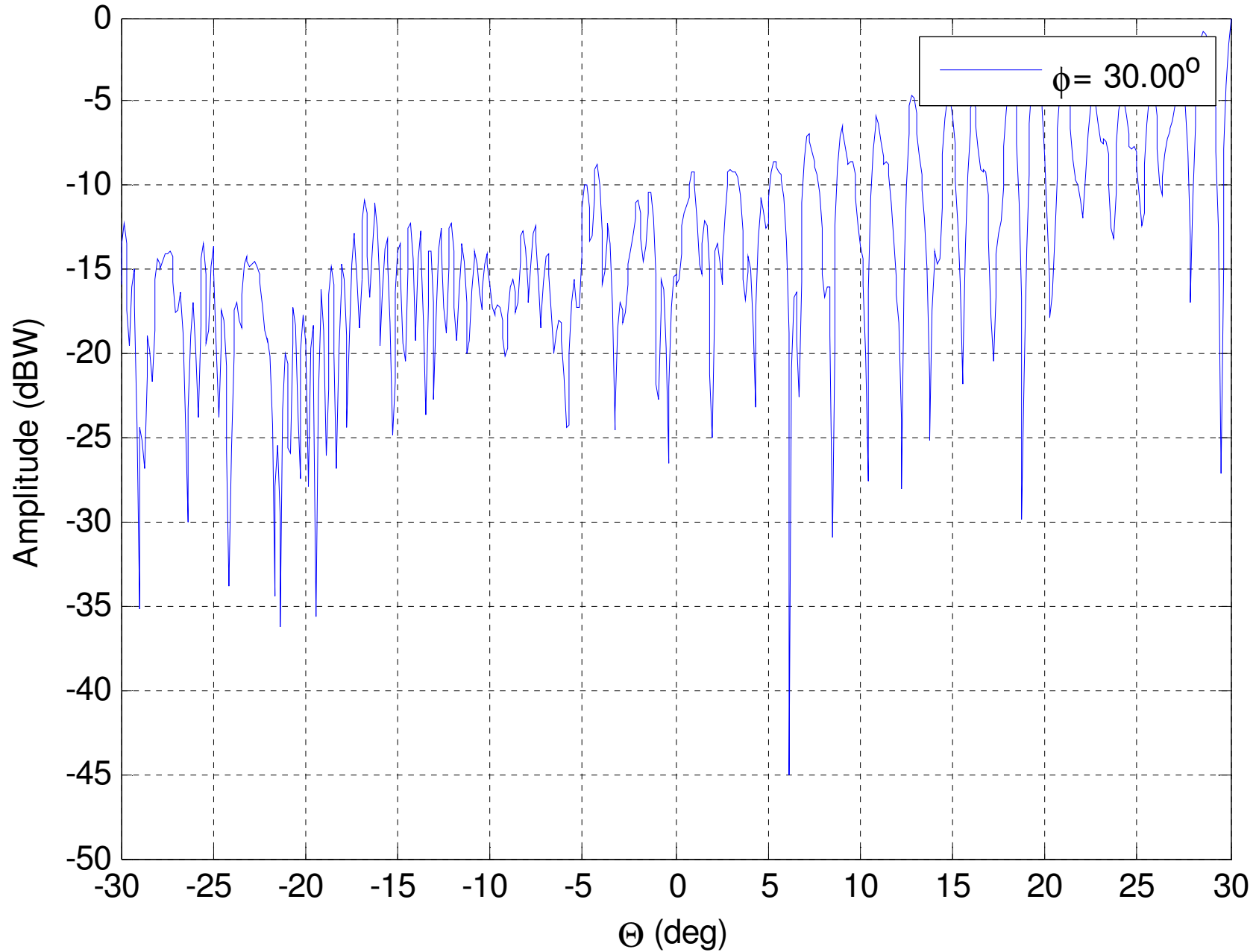
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 2.57 dBW, Date: 14-Dec-2011



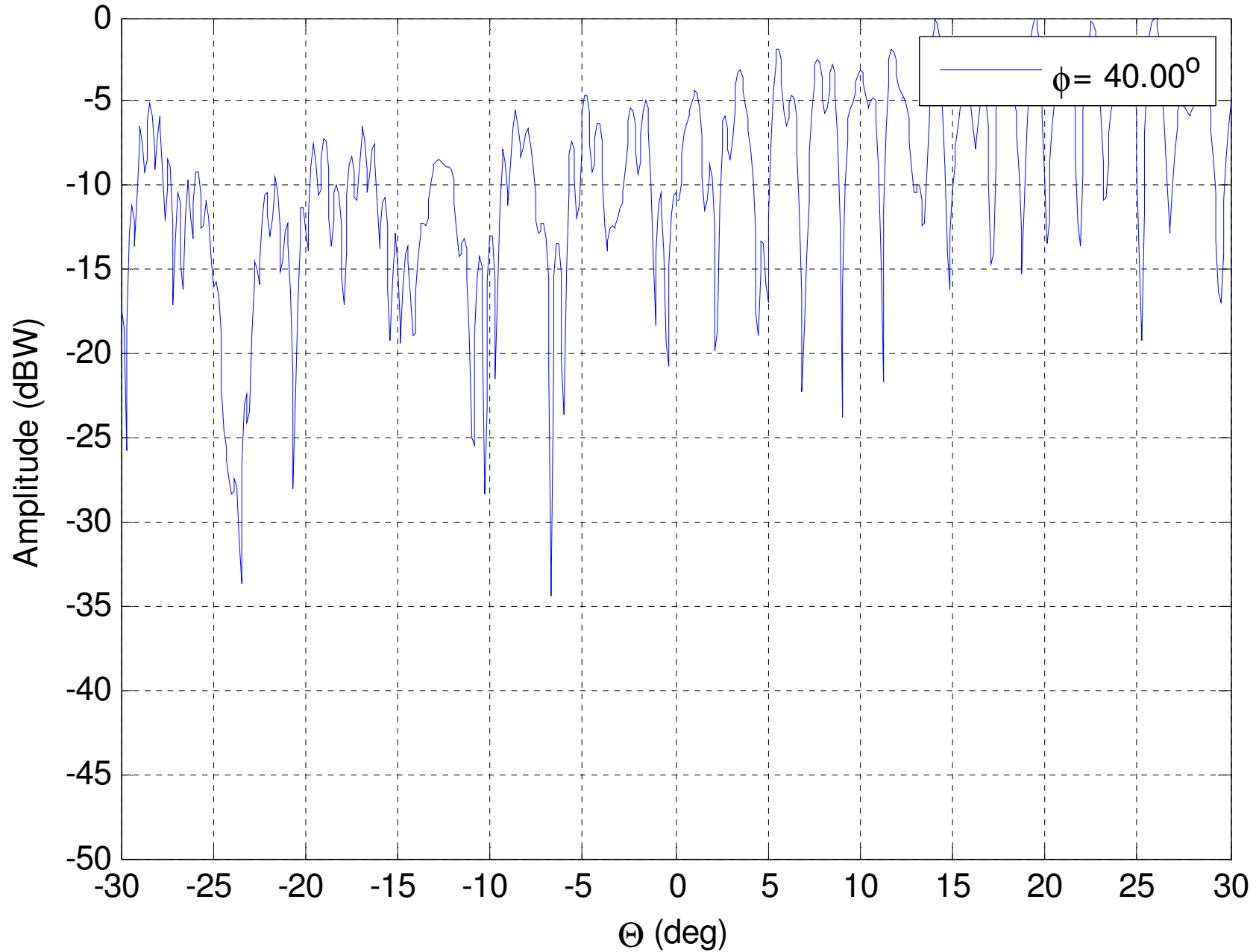
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -2.26 dBW, Date: 14-Dec-2011



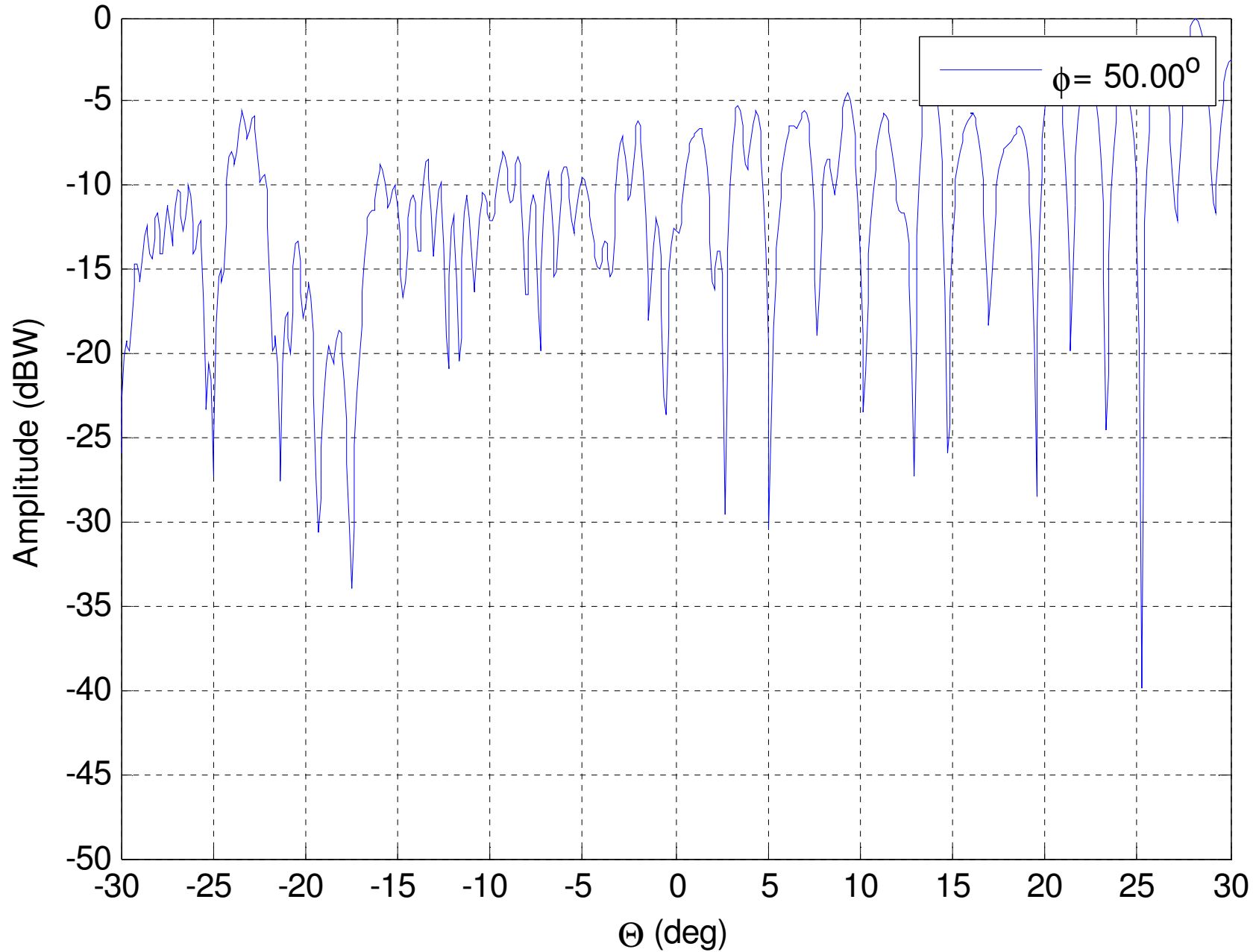
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.12 dBW, Date: 14-Dec-2011



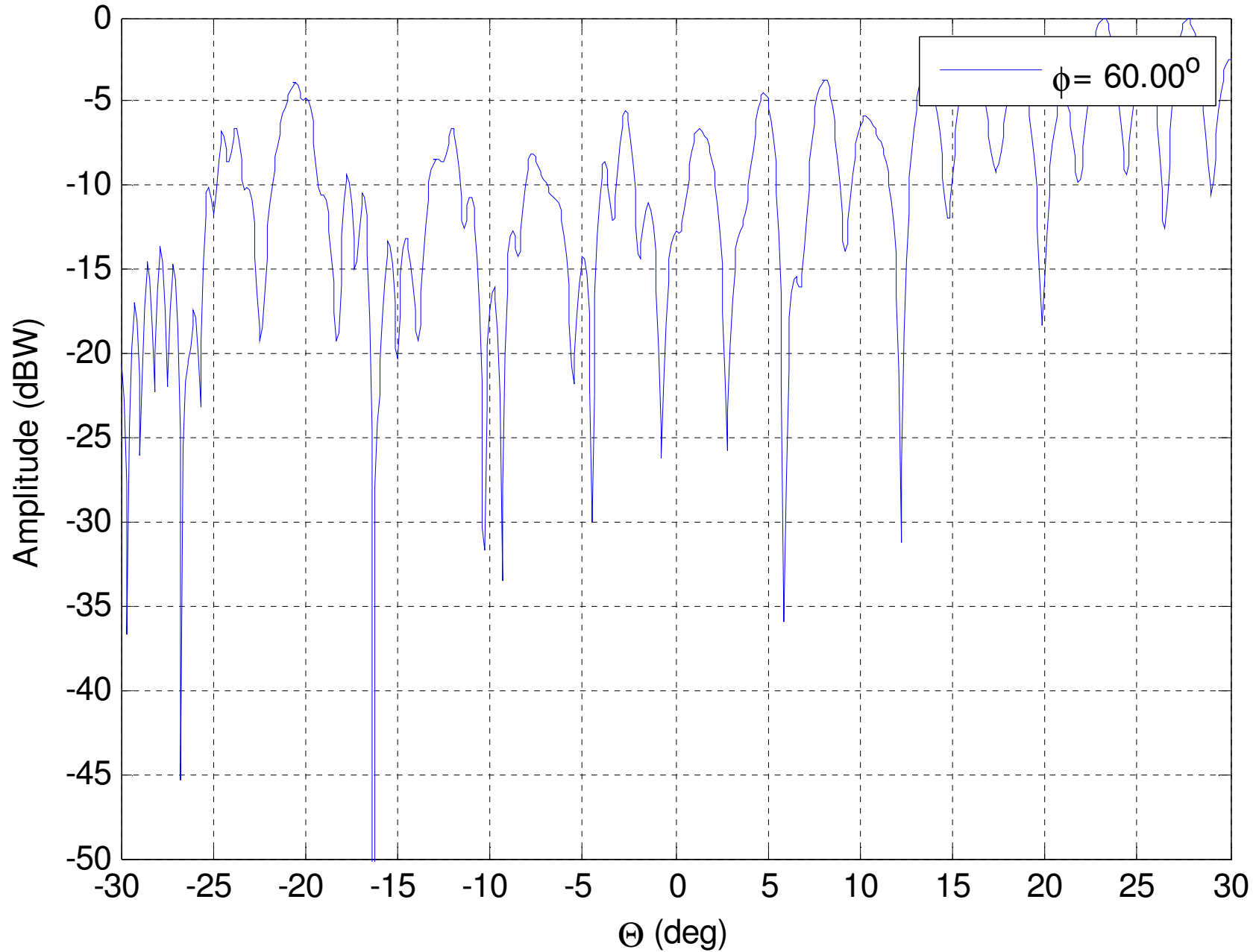
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.11 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

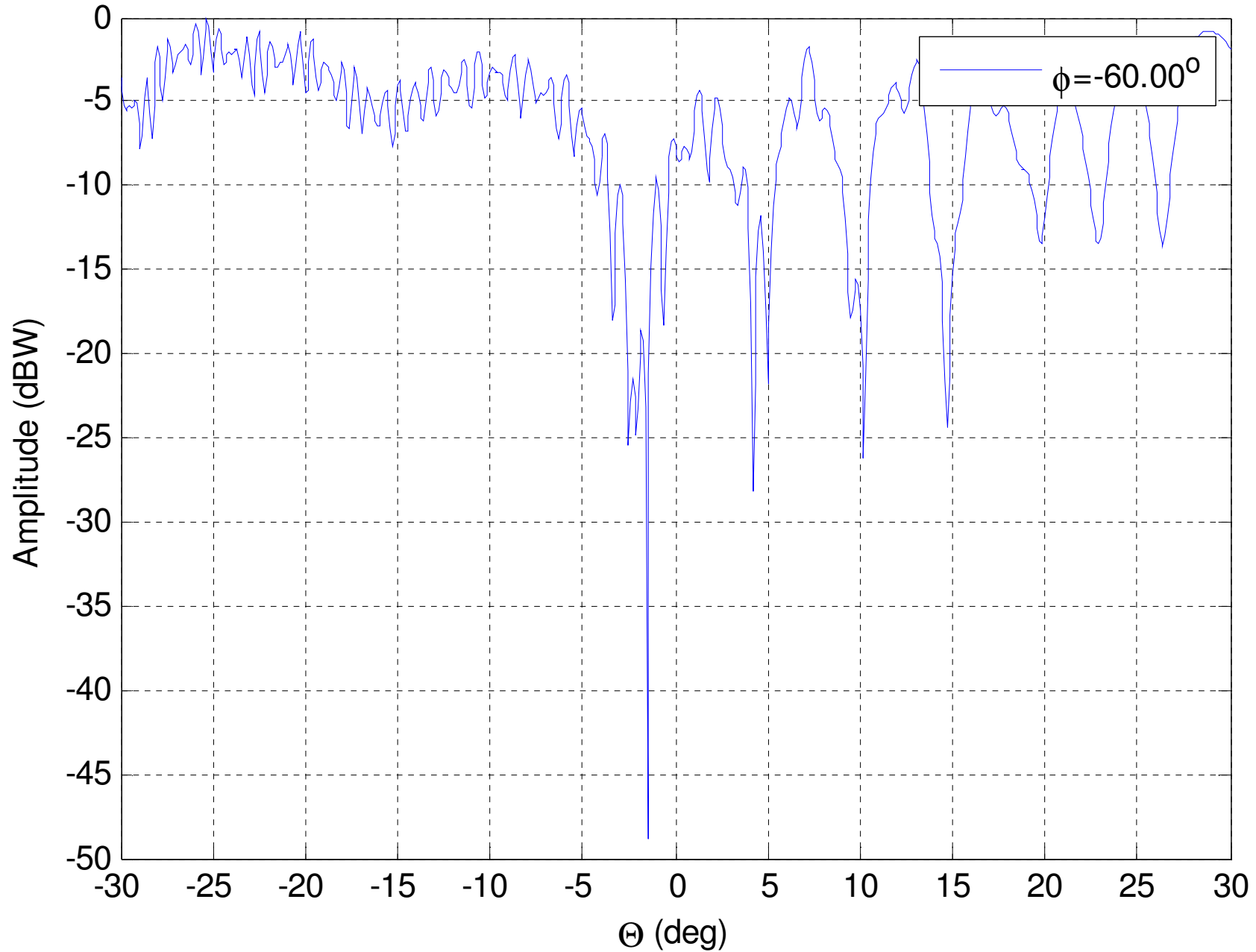
Input file: tx-17.5-rhcp-60.cut, Peak: -4.84 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

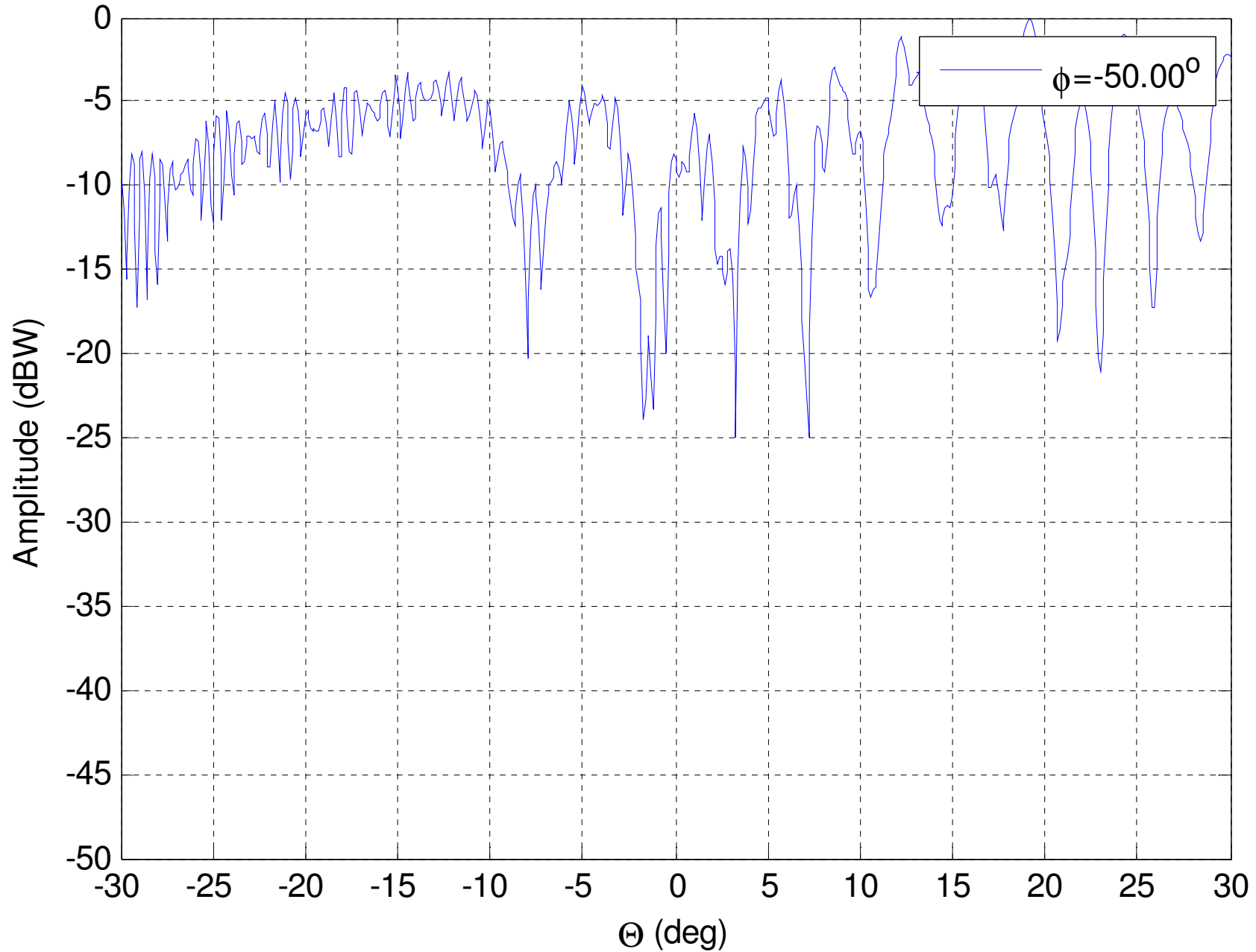
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -6.09 dBW, Date: 14-Dec-2011



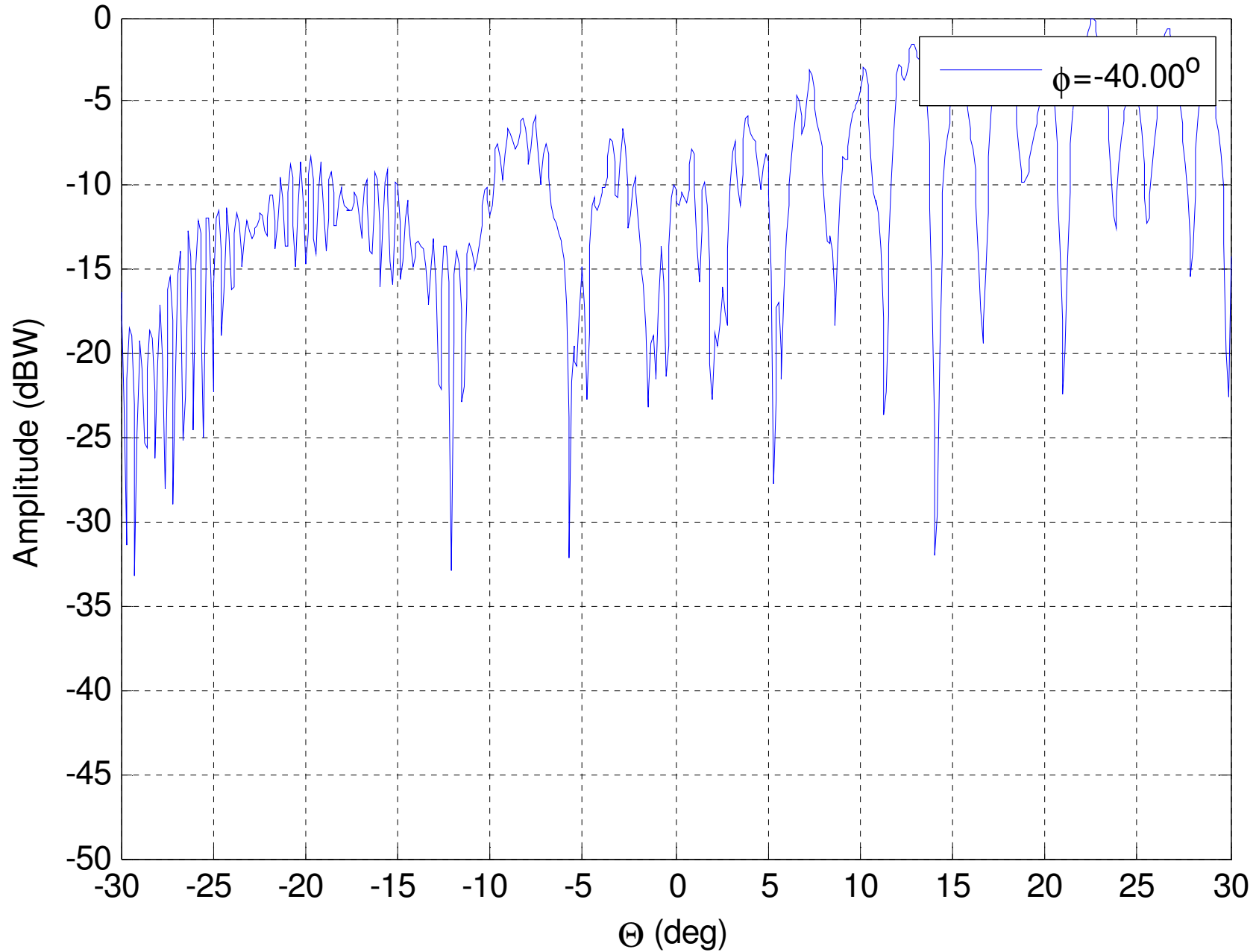
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -5.25 dBW, Date: 14-Dec-2011



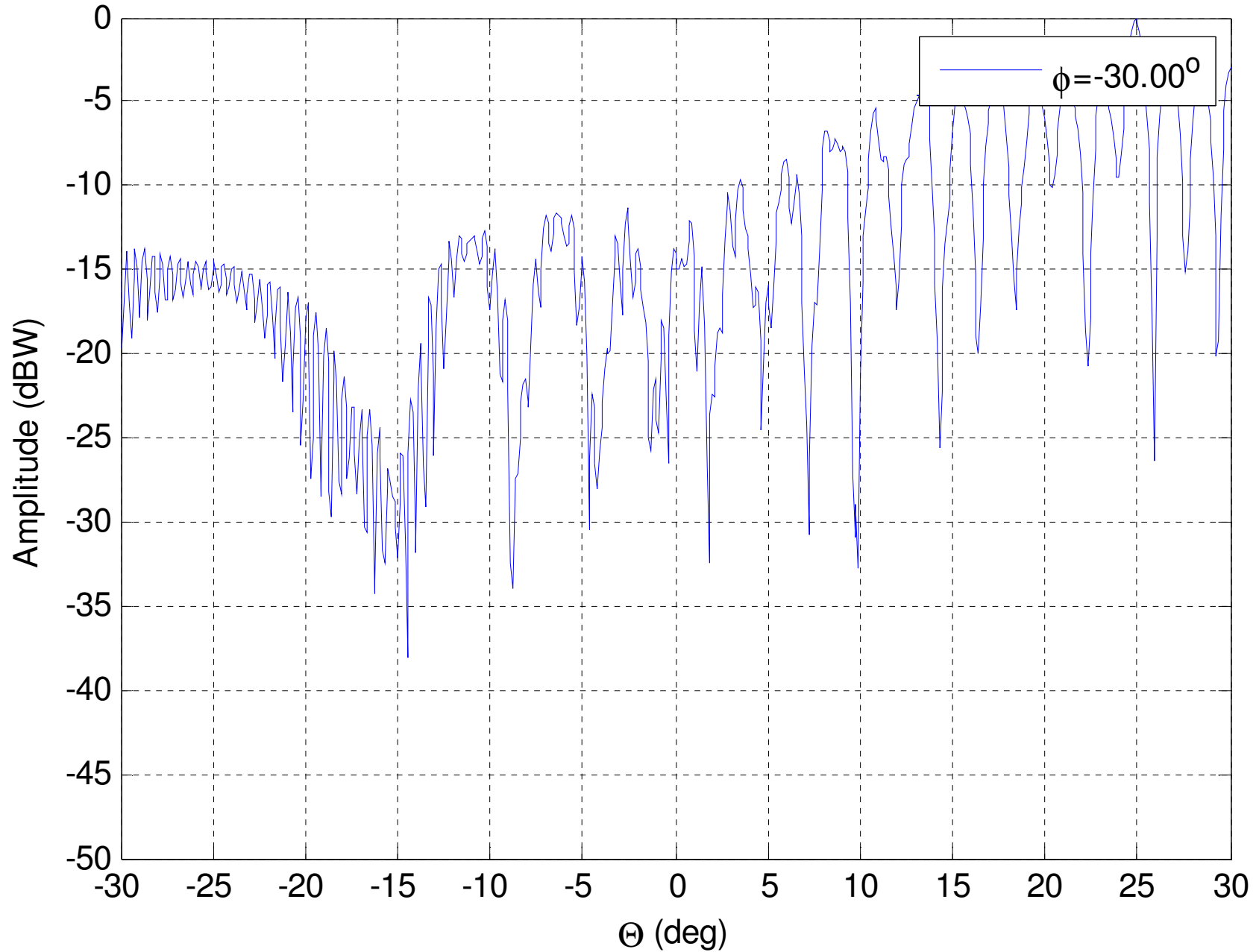
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -3.52 dBW, Date: 14-Dec-2011



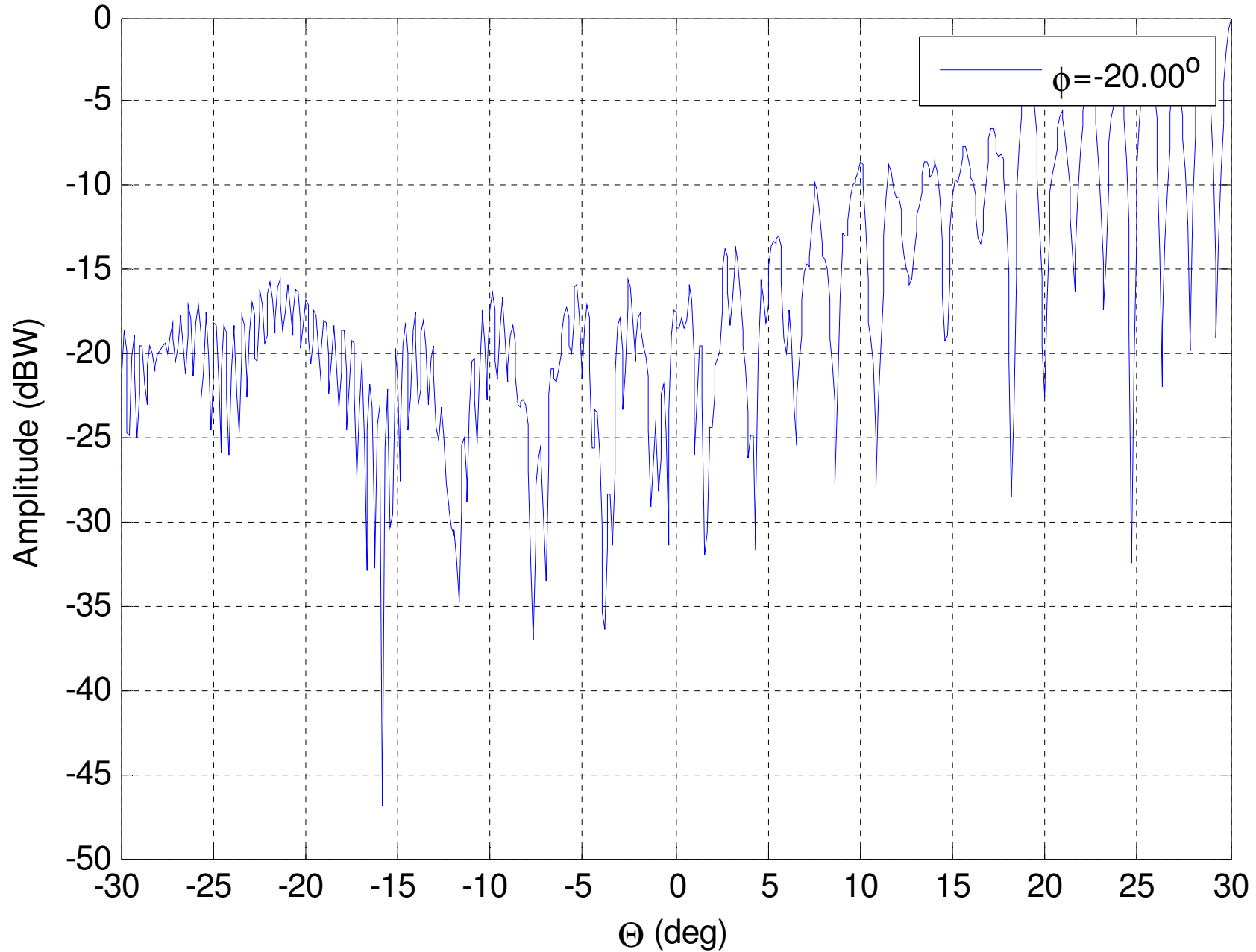
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 0.34 dBW, Date: 14-Dec-2011



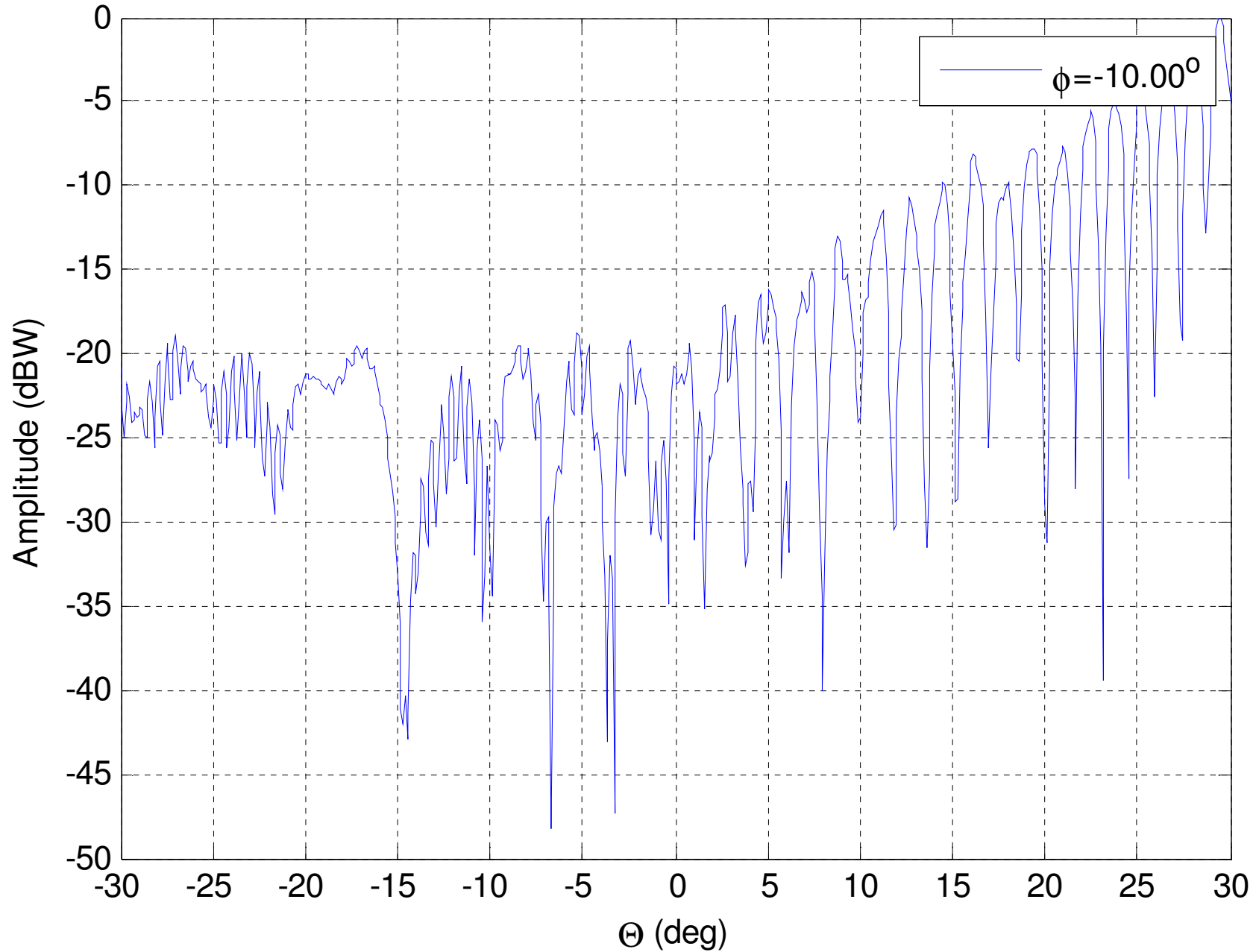
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 3.85 dBW, Date: 14-Dec-2011



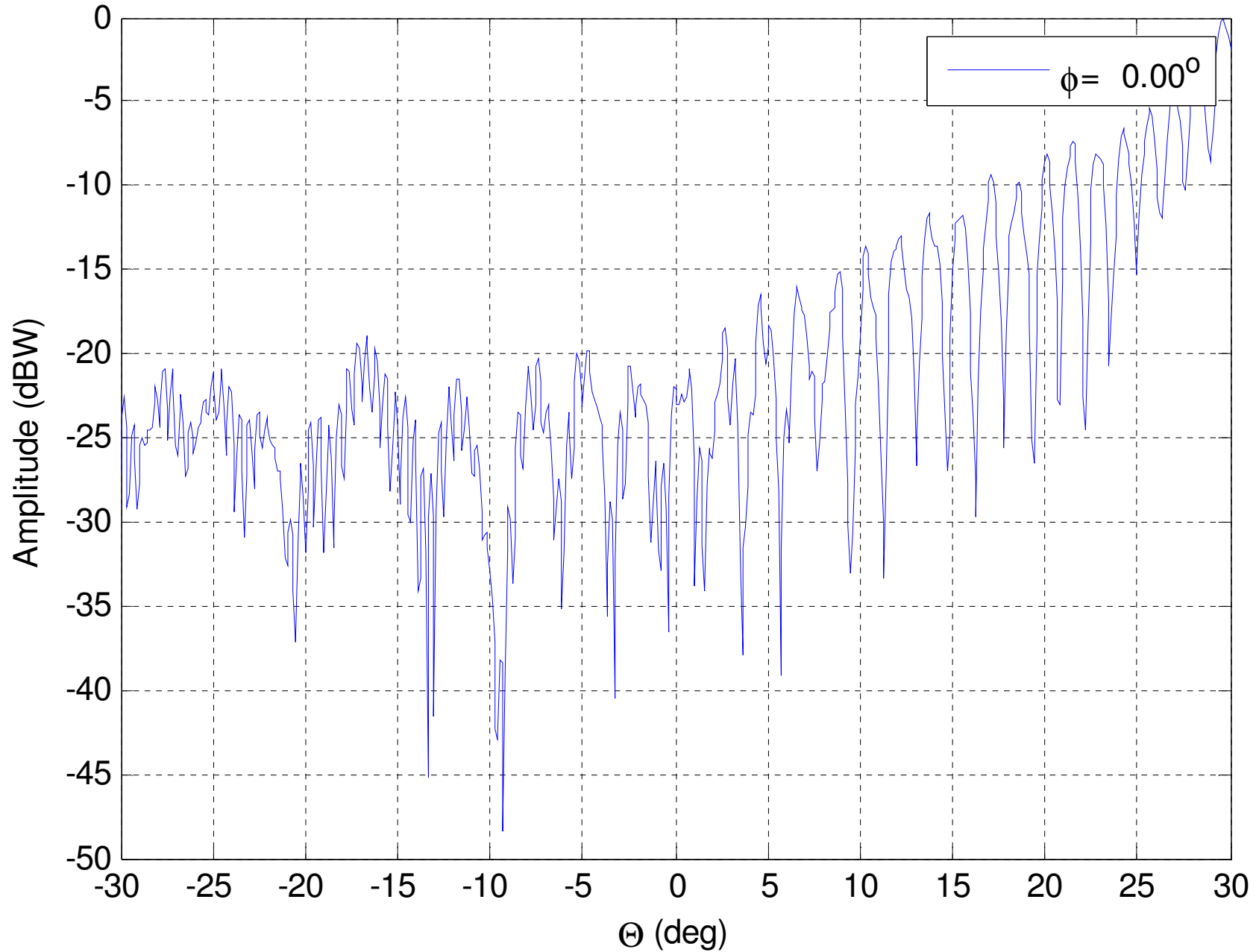
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 7.14 dBW, Date: 14-Dec-2011



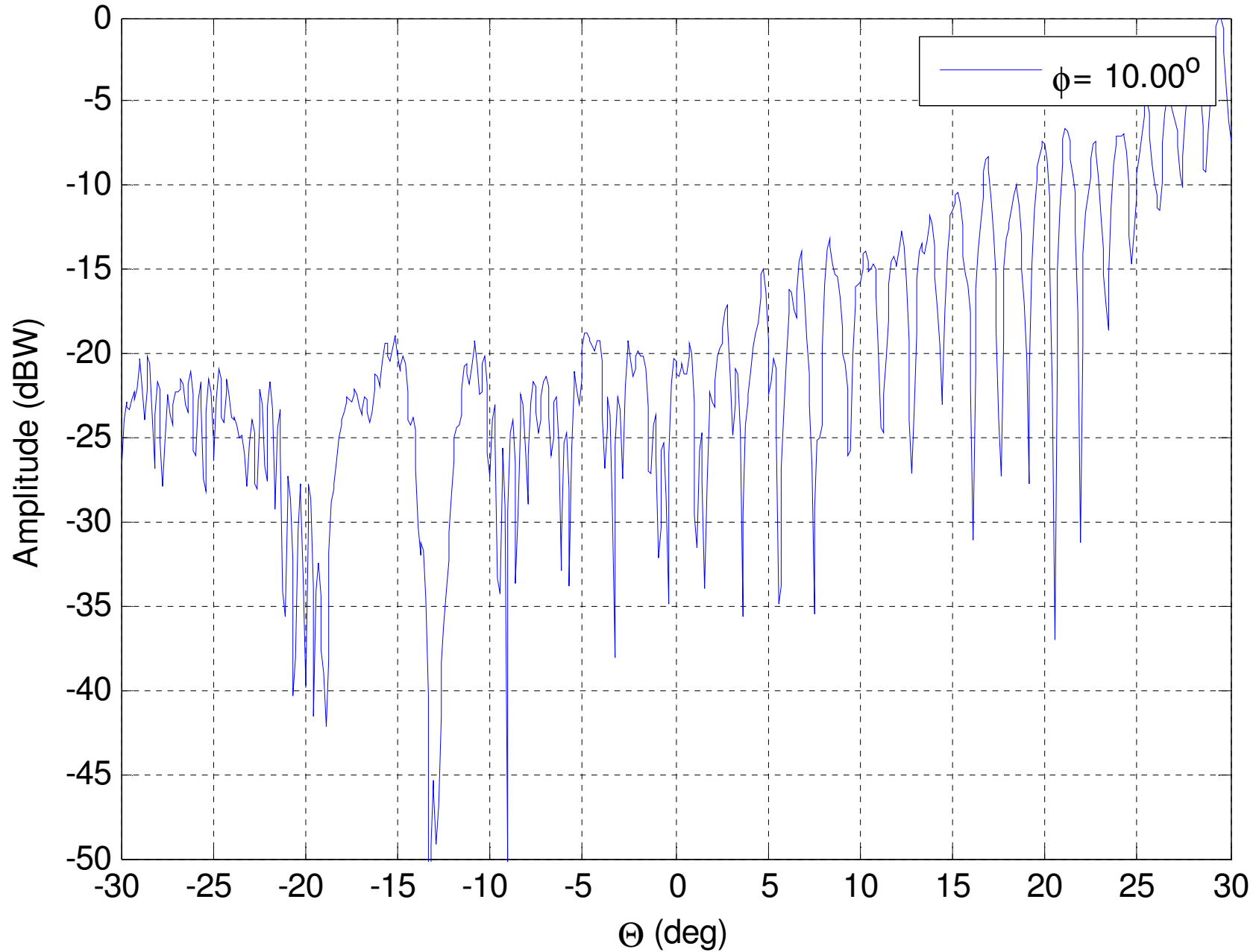
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 8.36 dBW, Date: 14-Dec-2011



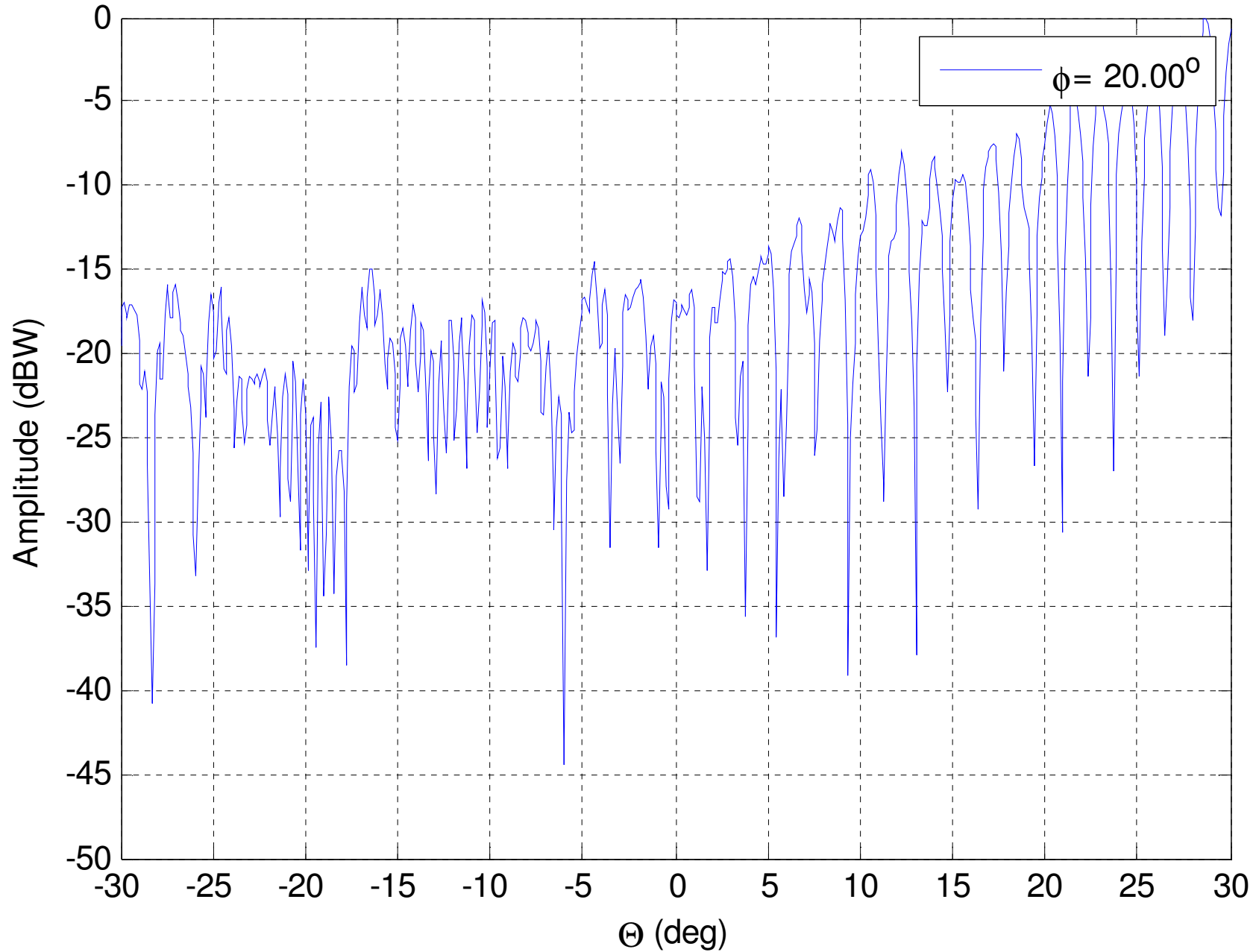
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 6.70 dBW, Date: 14-Dec-2011



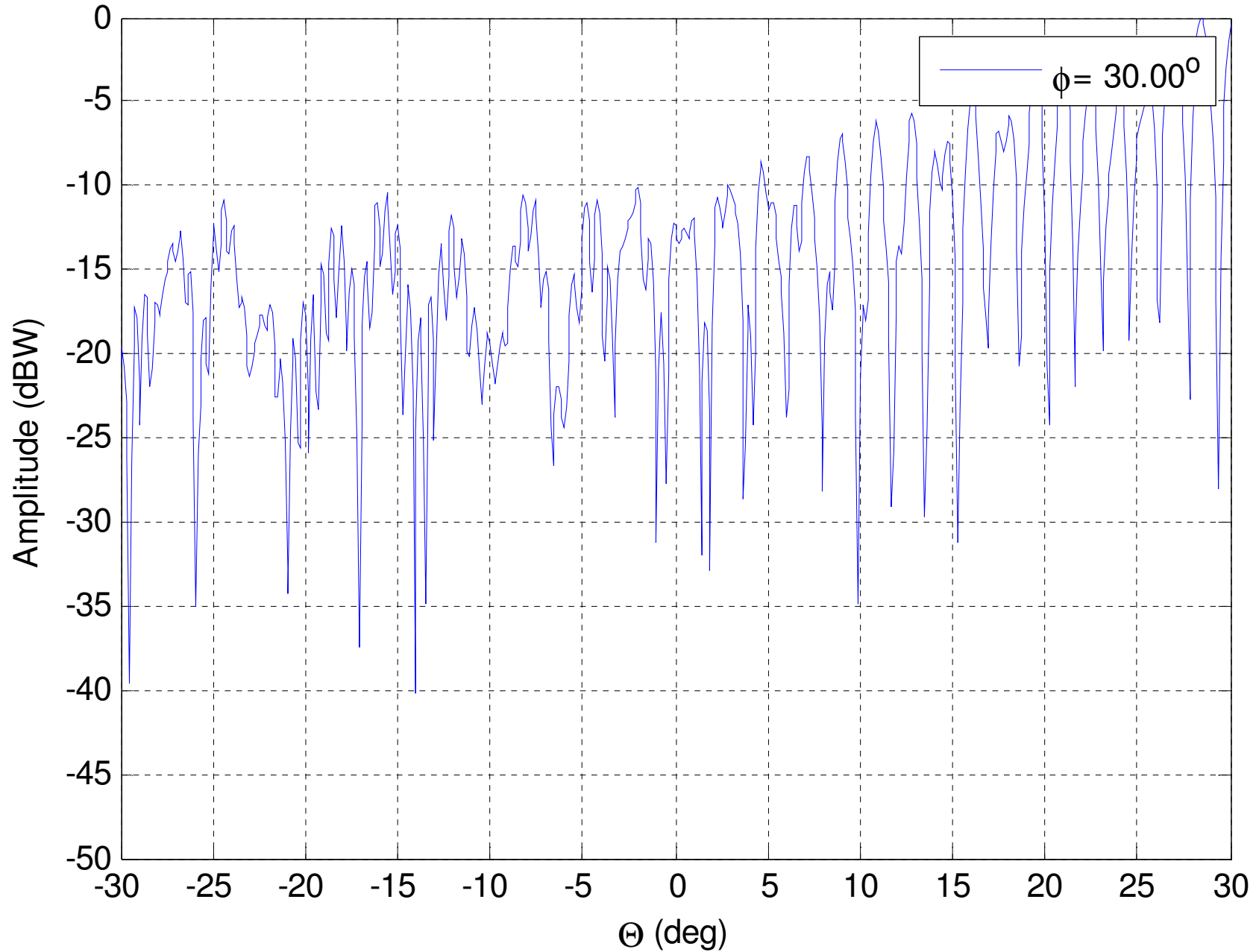
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 3.16 dBW, Date: 14-Dec-2011



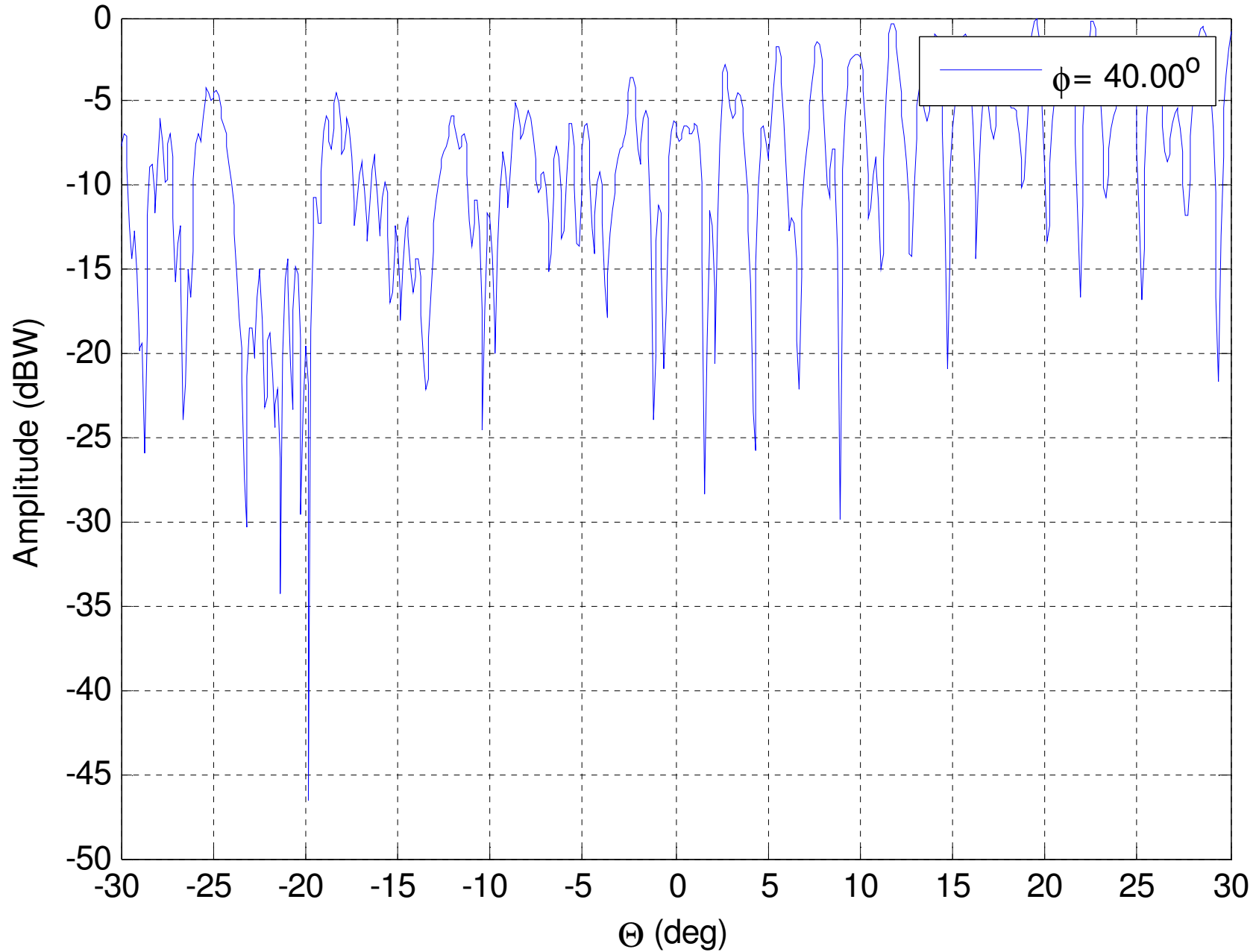
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -1.33 dBW, Date: 14-Dec-2011



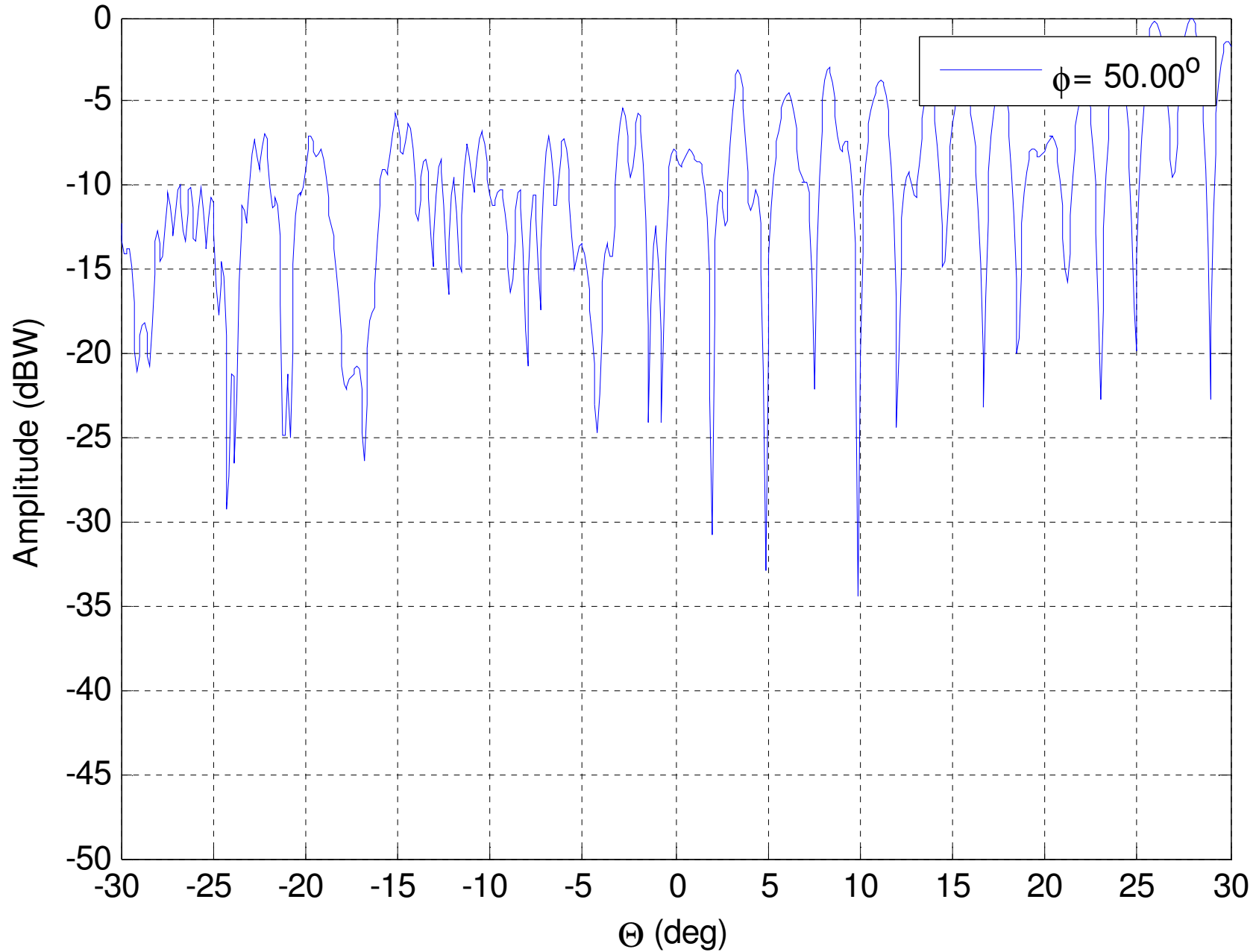
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.39 dBW, Date: 14-Dec-2011



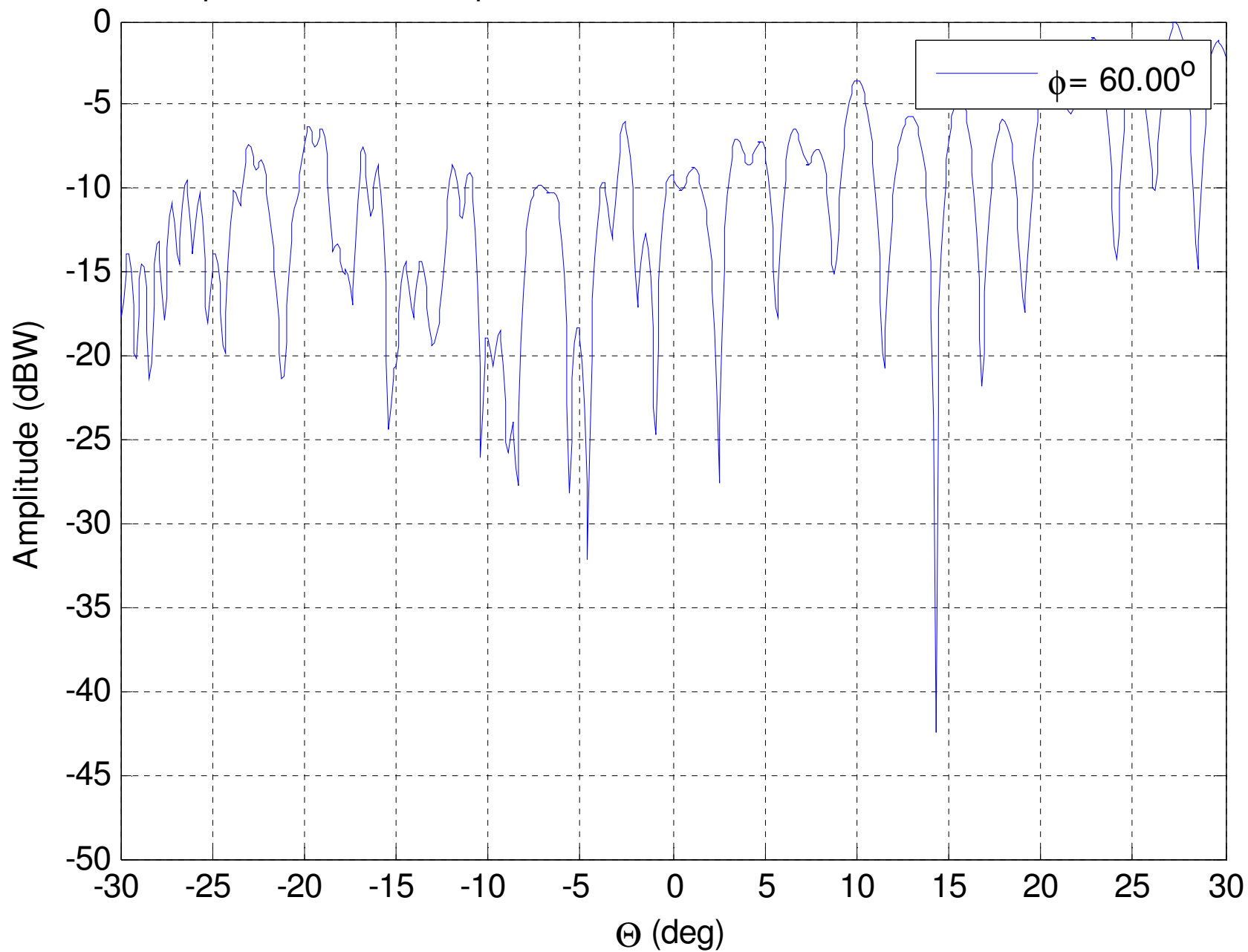
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.80 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

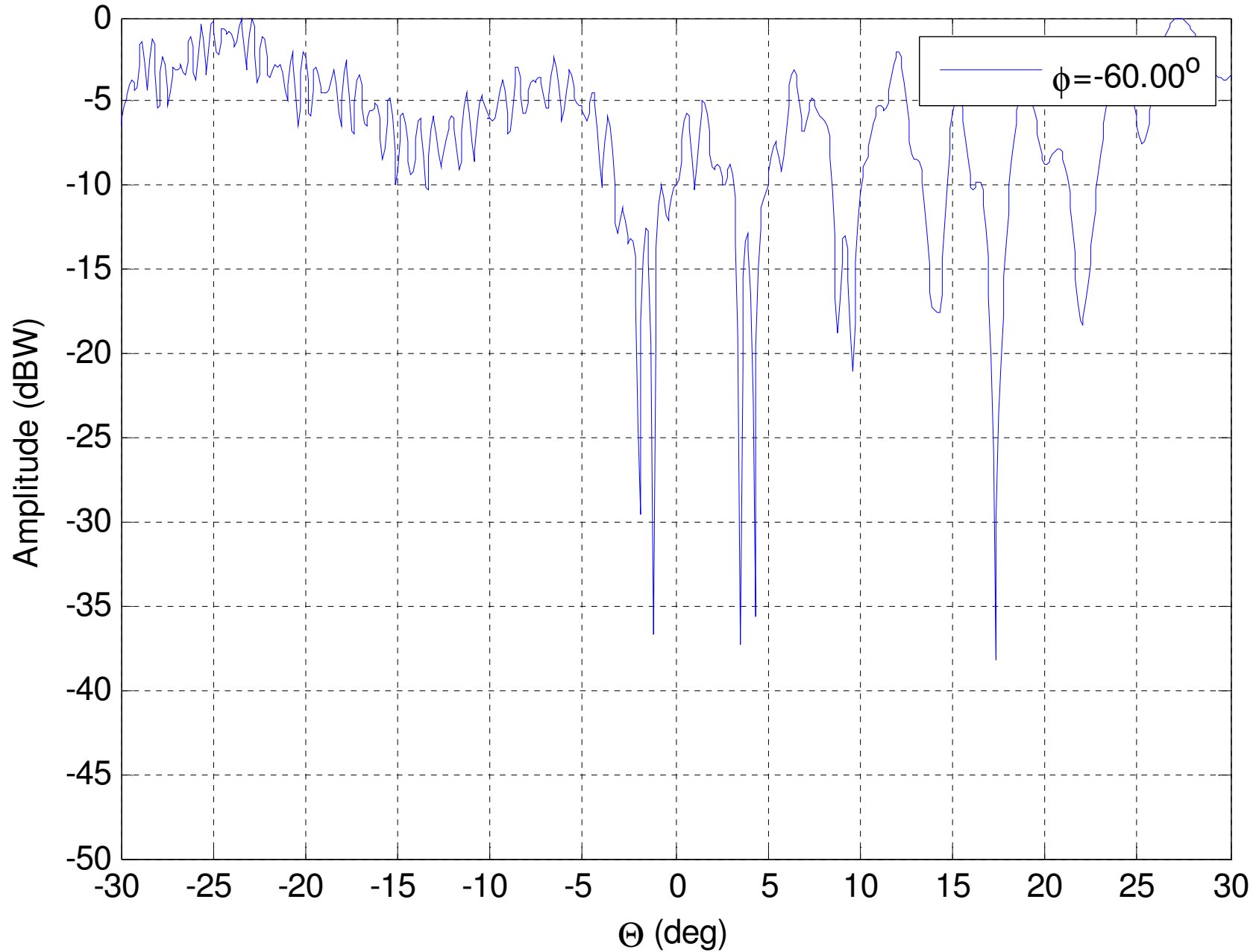
Input file: tx-17.5-lhcp-60.cut, Peak: -4.50 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

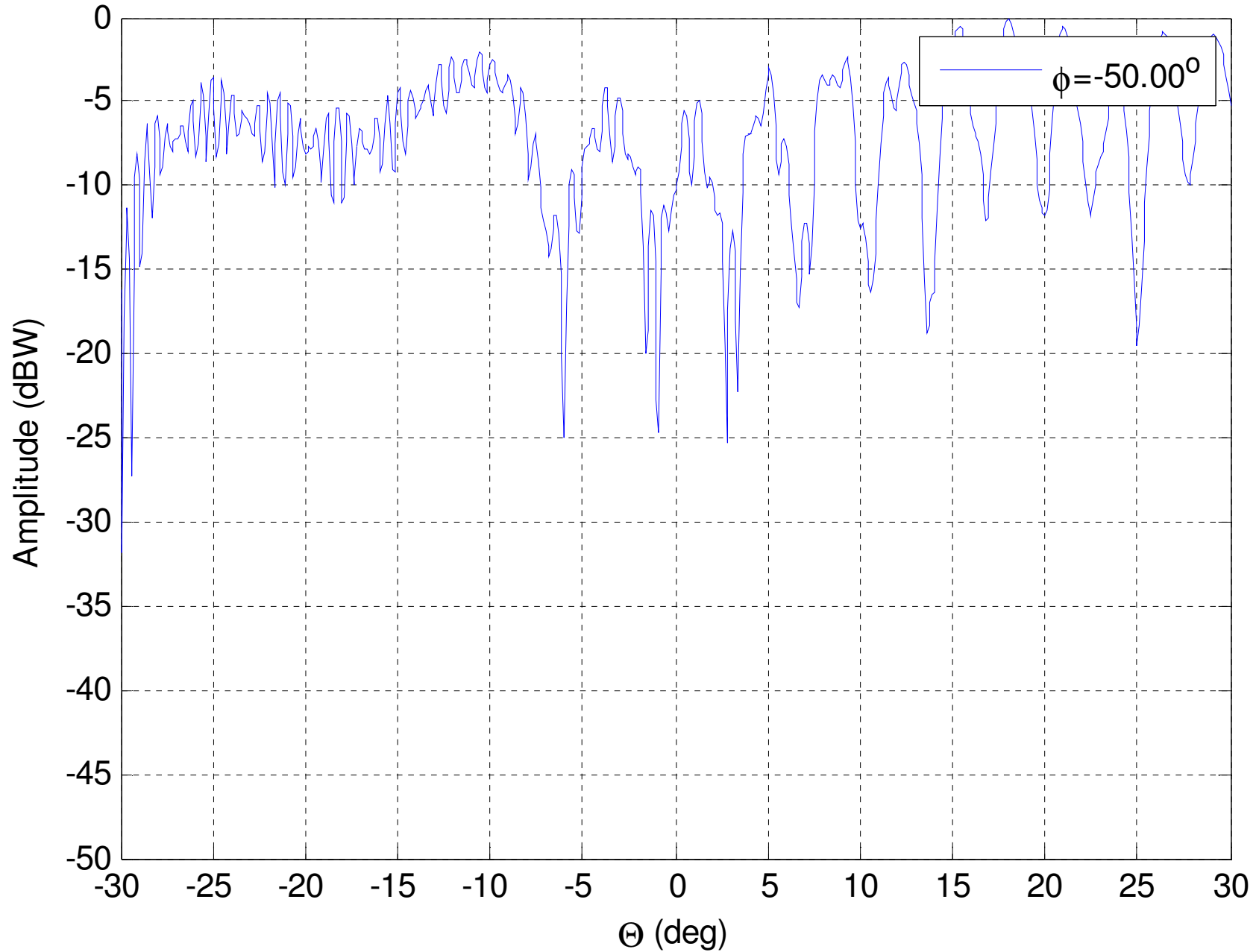
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.27 dBW, Date: 14-Dec-2011



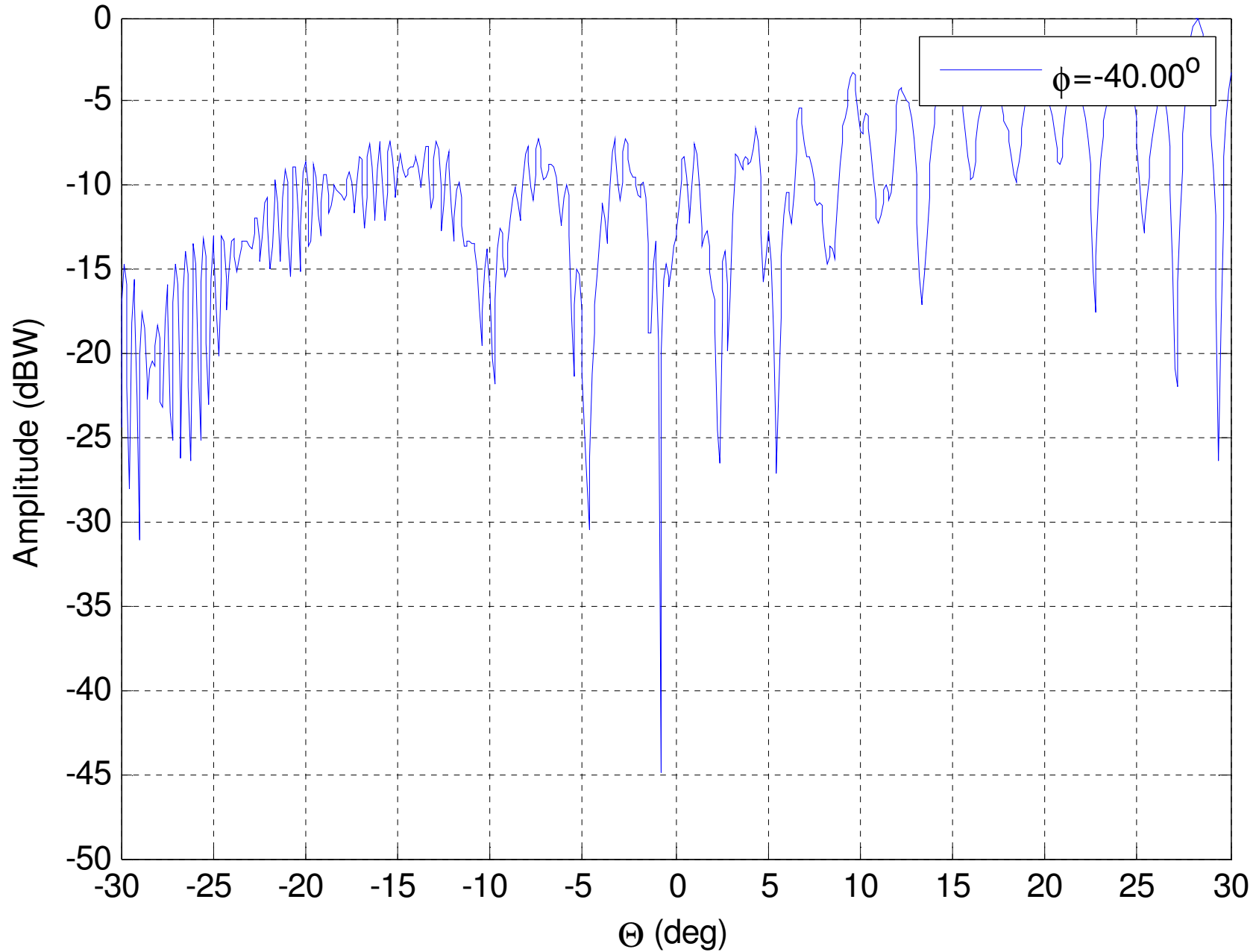
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.06 dBW, Date: 14-Dec-2011



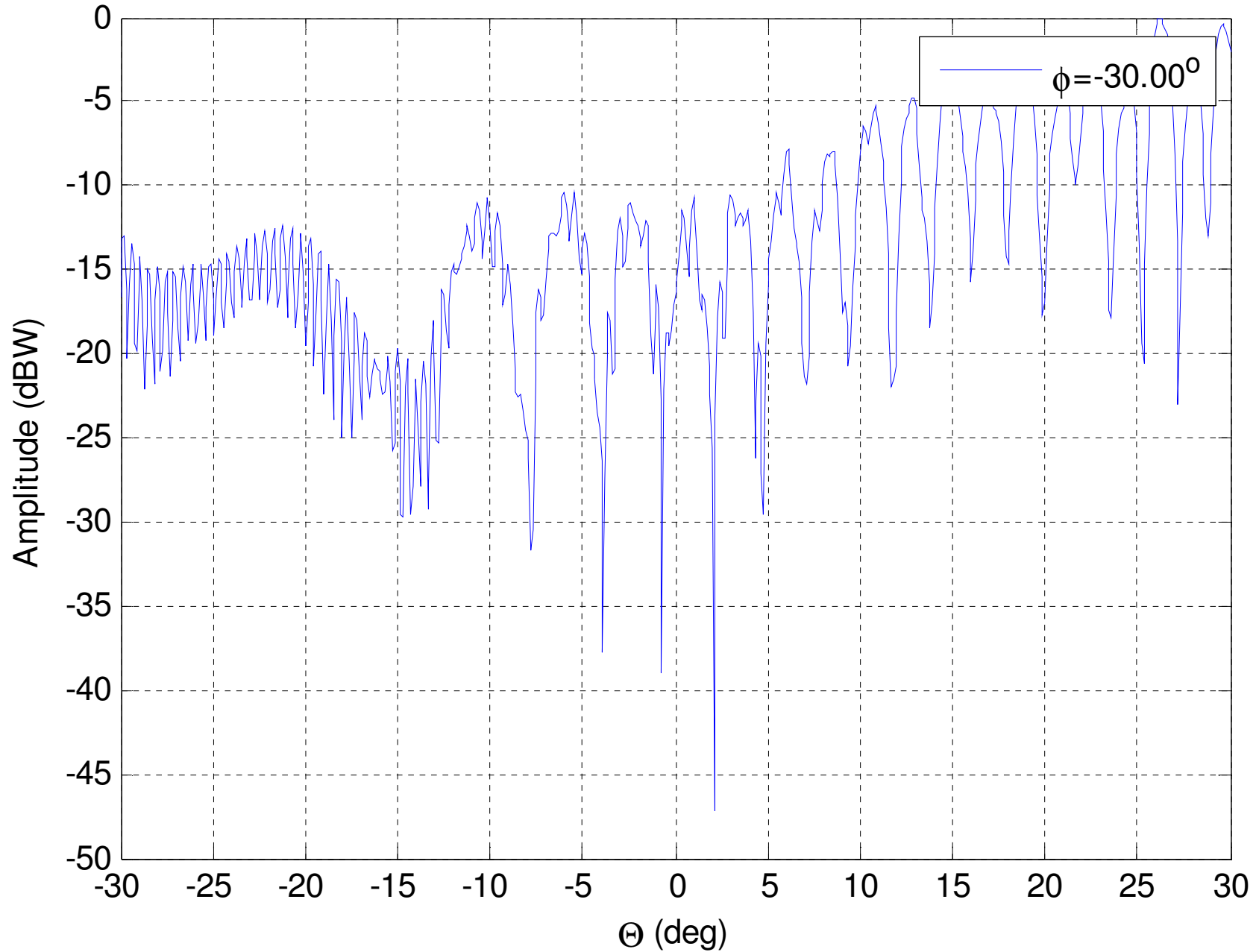
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -3.25 dBW, Date: 14-Dec-2011



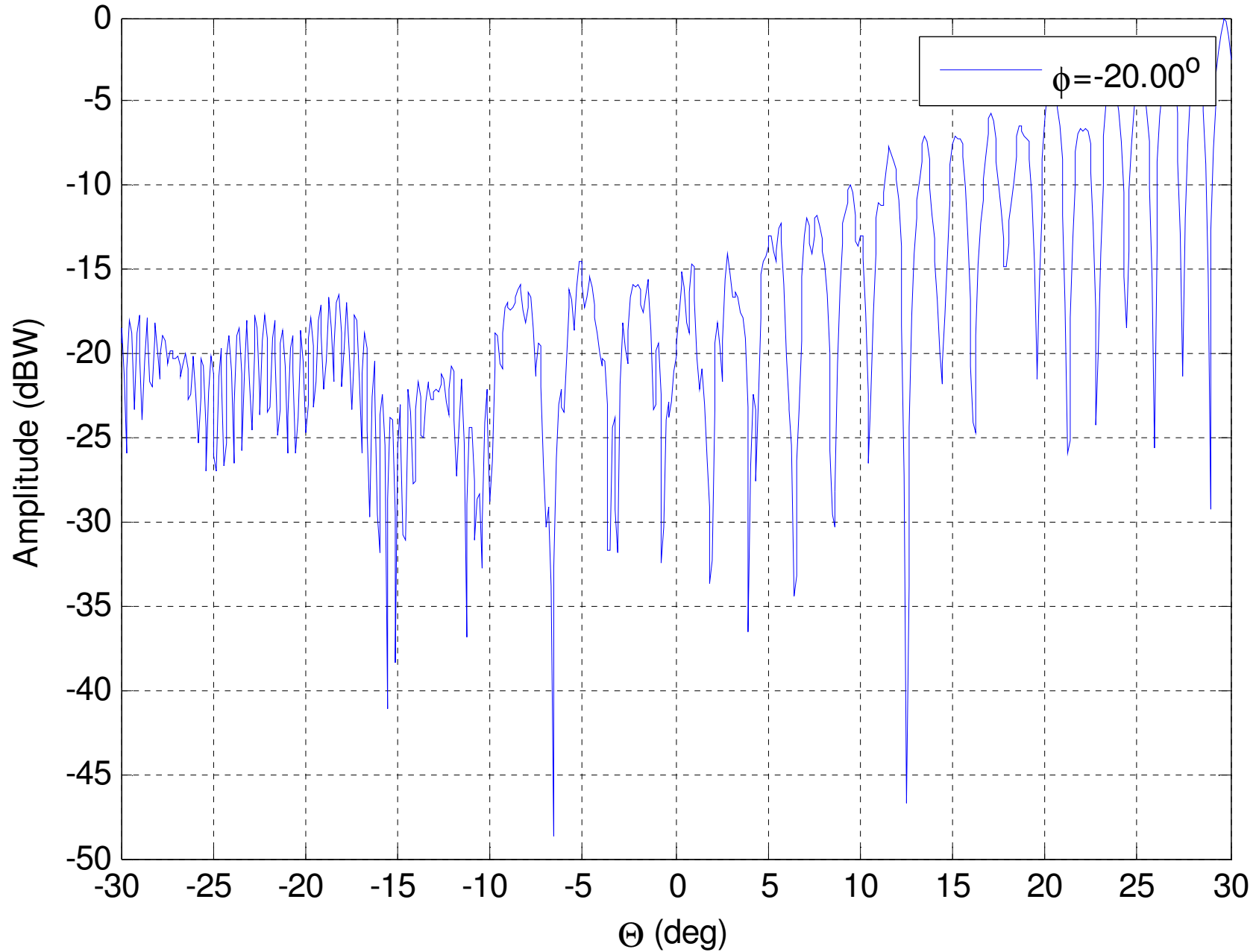
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 0.01 dBW, Date: 14-Dec-2011



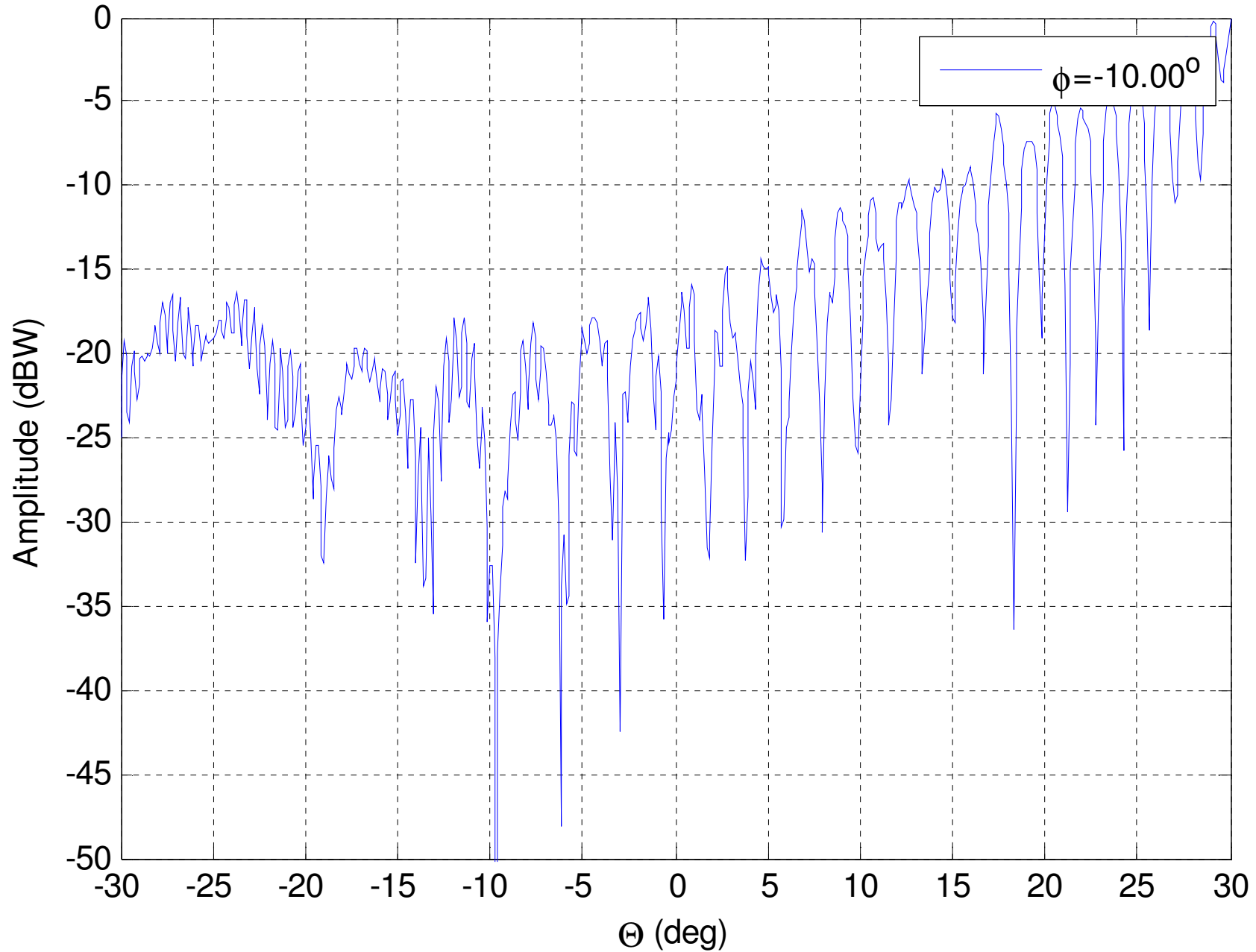
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 3.89 dBW, Date: 14-Dec-2011



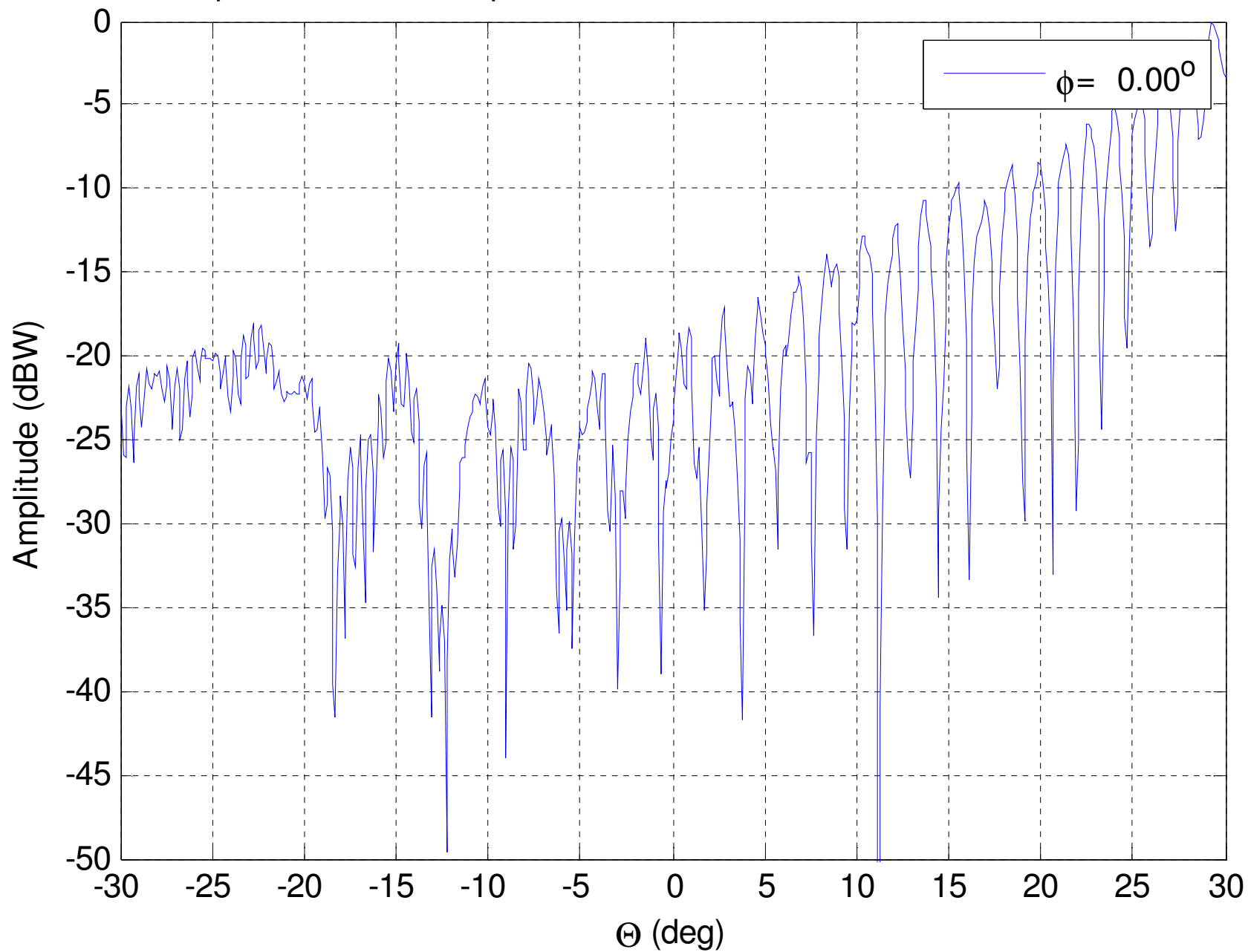
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 5.19 dBW, Date: 14-Dec-2011



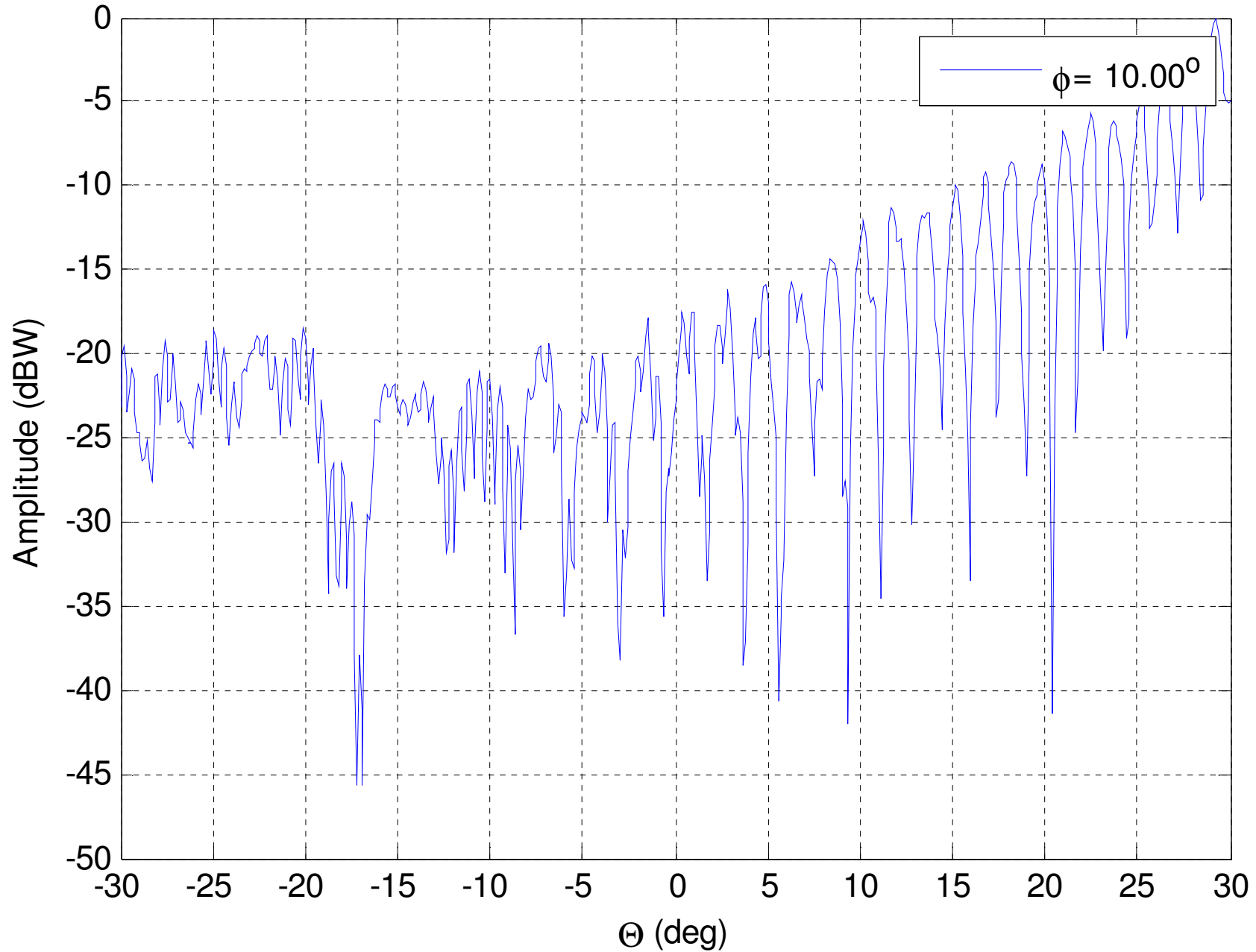
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 7.49 dBW, Date: 14-Dec-2011



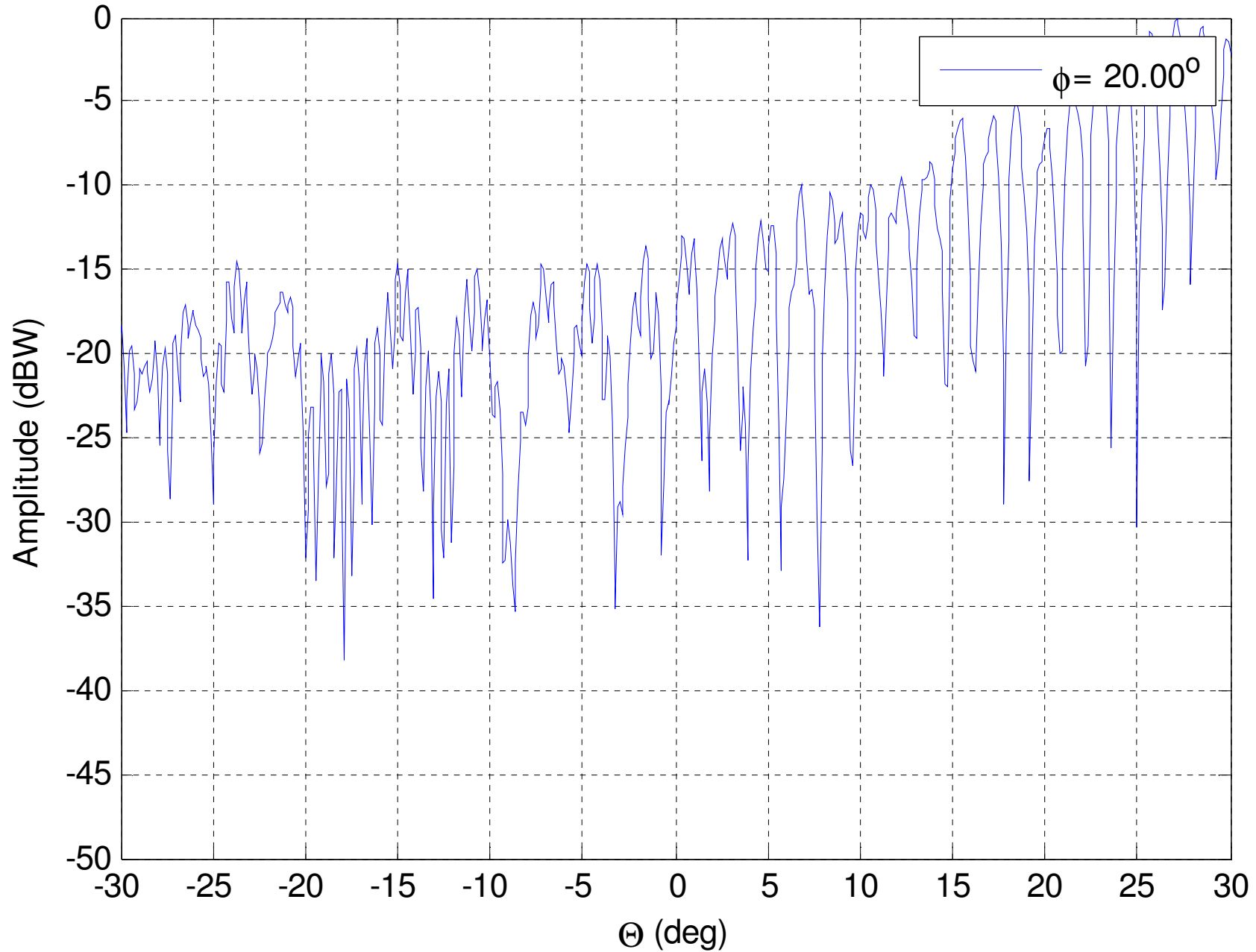
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 6.47 dBW, Date: 14-Dec-2011



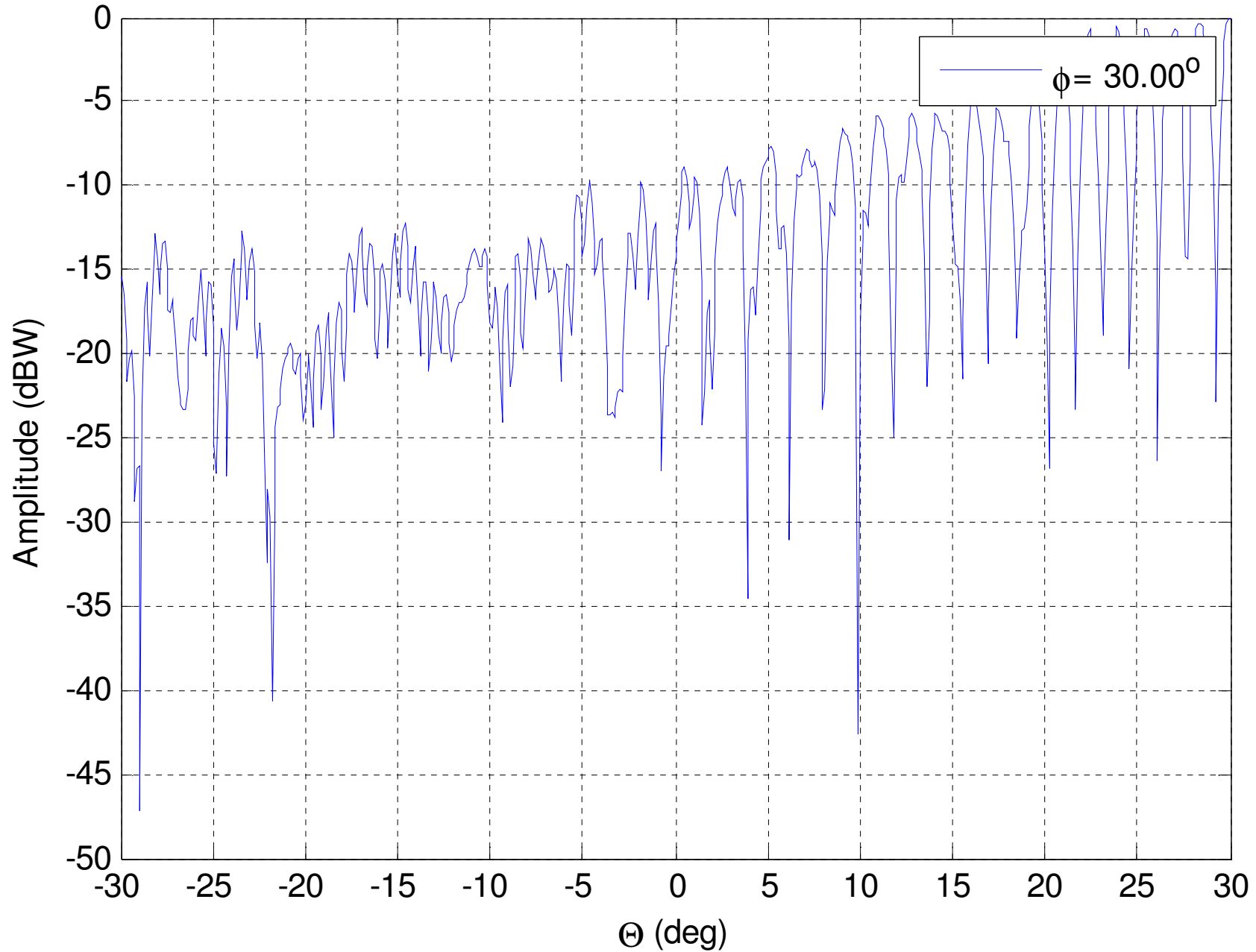
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 1.99 dBW, Date: 14-Dec-2011



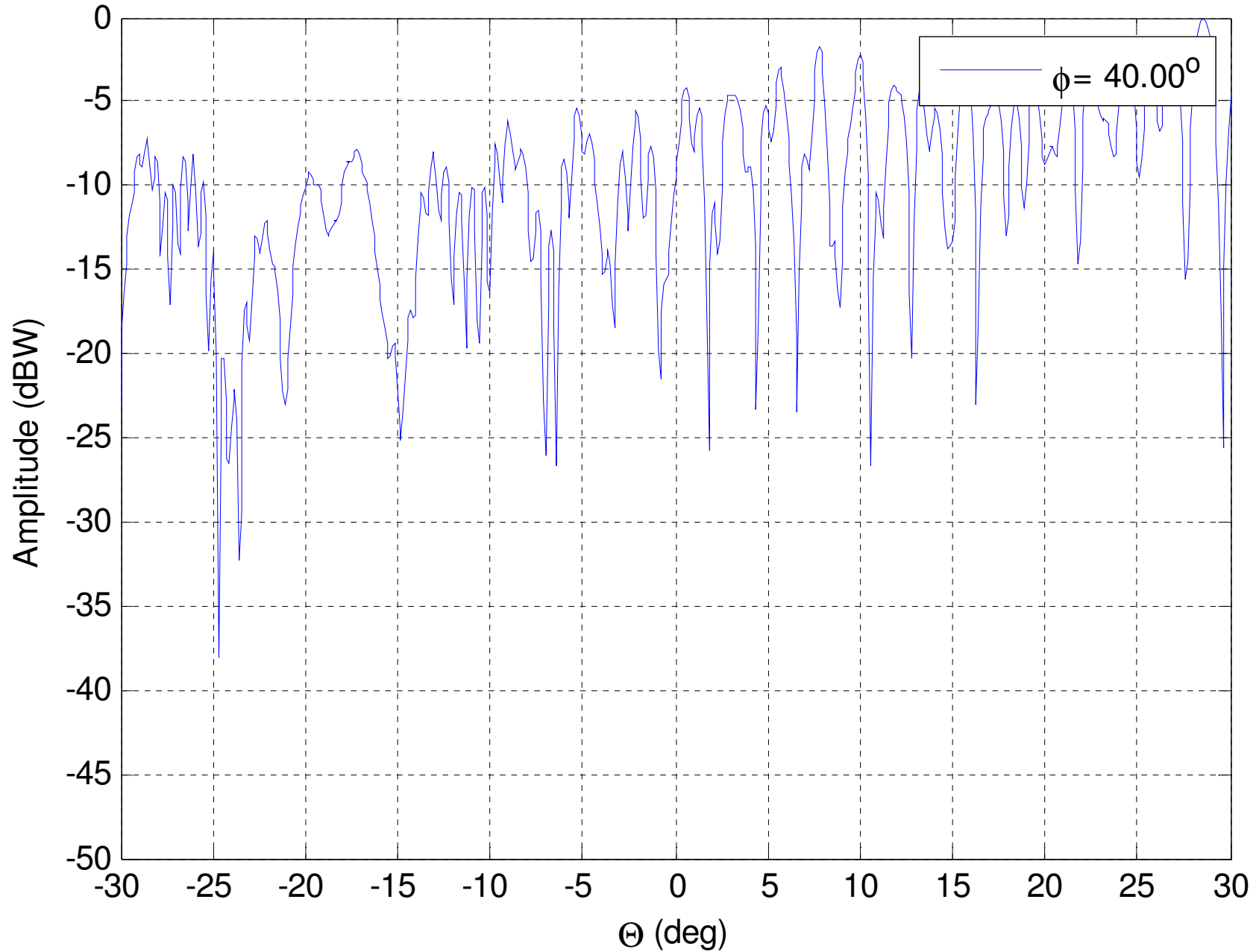
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -2.07 dBW, Date: 14-Dec-2011



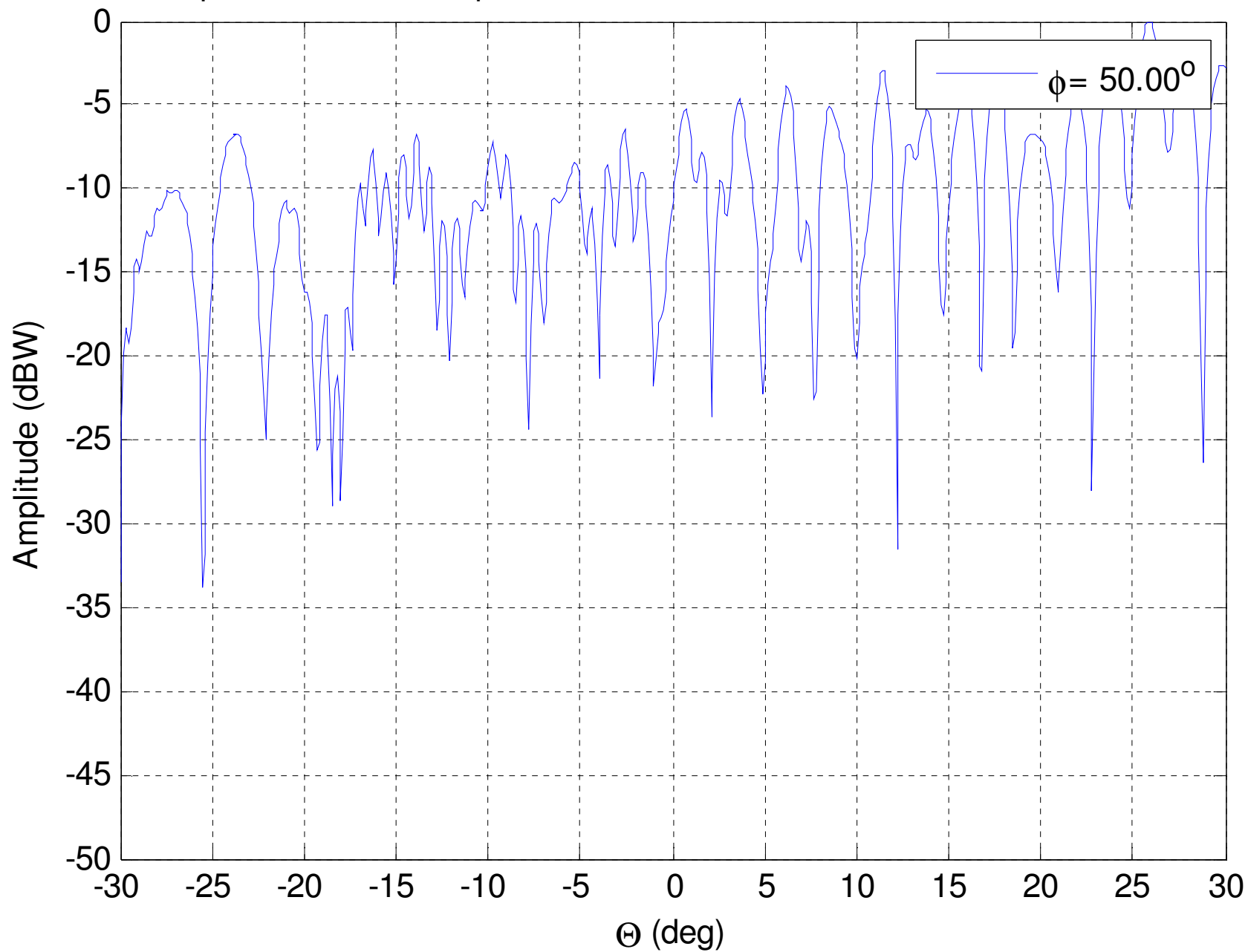
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



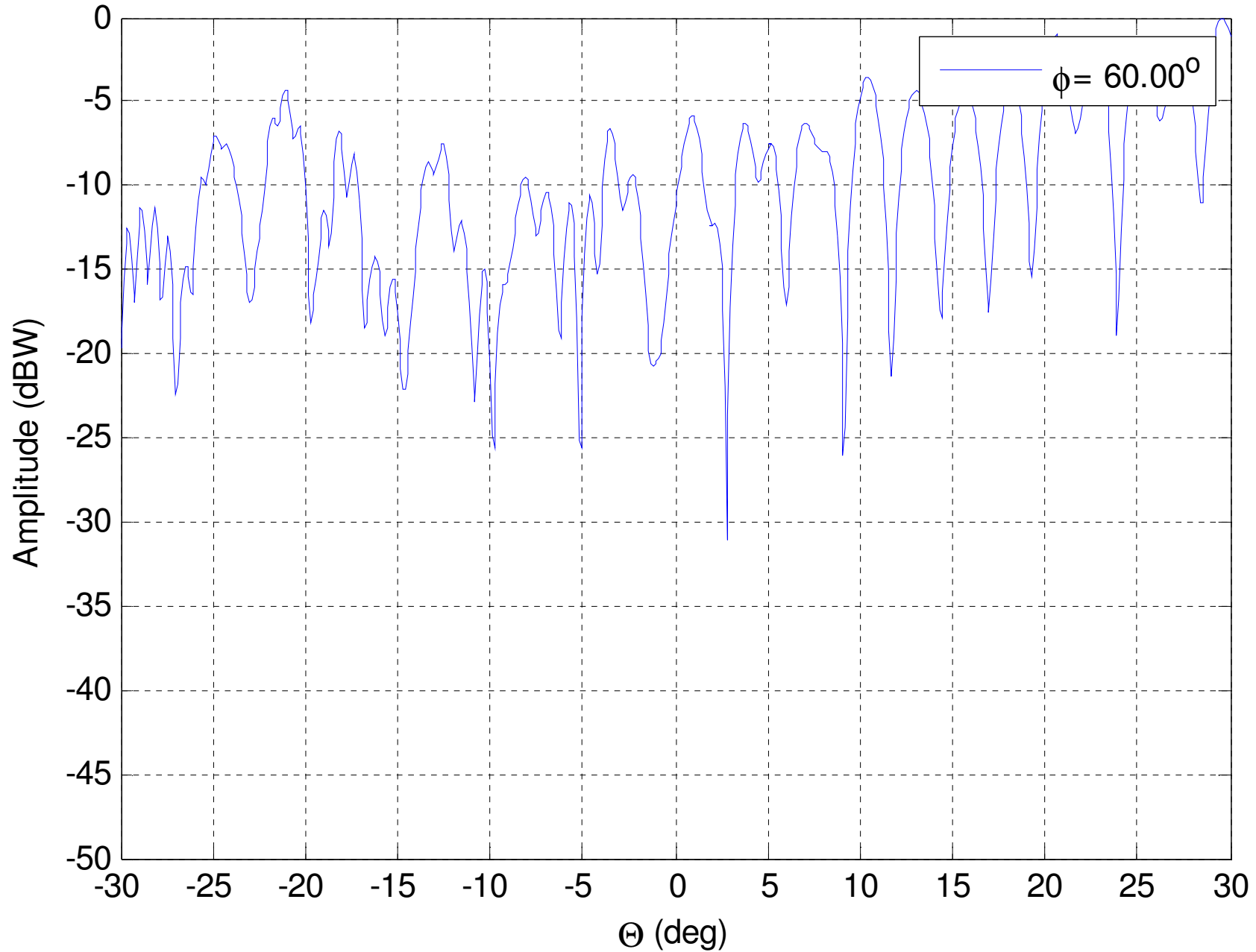
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.58 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

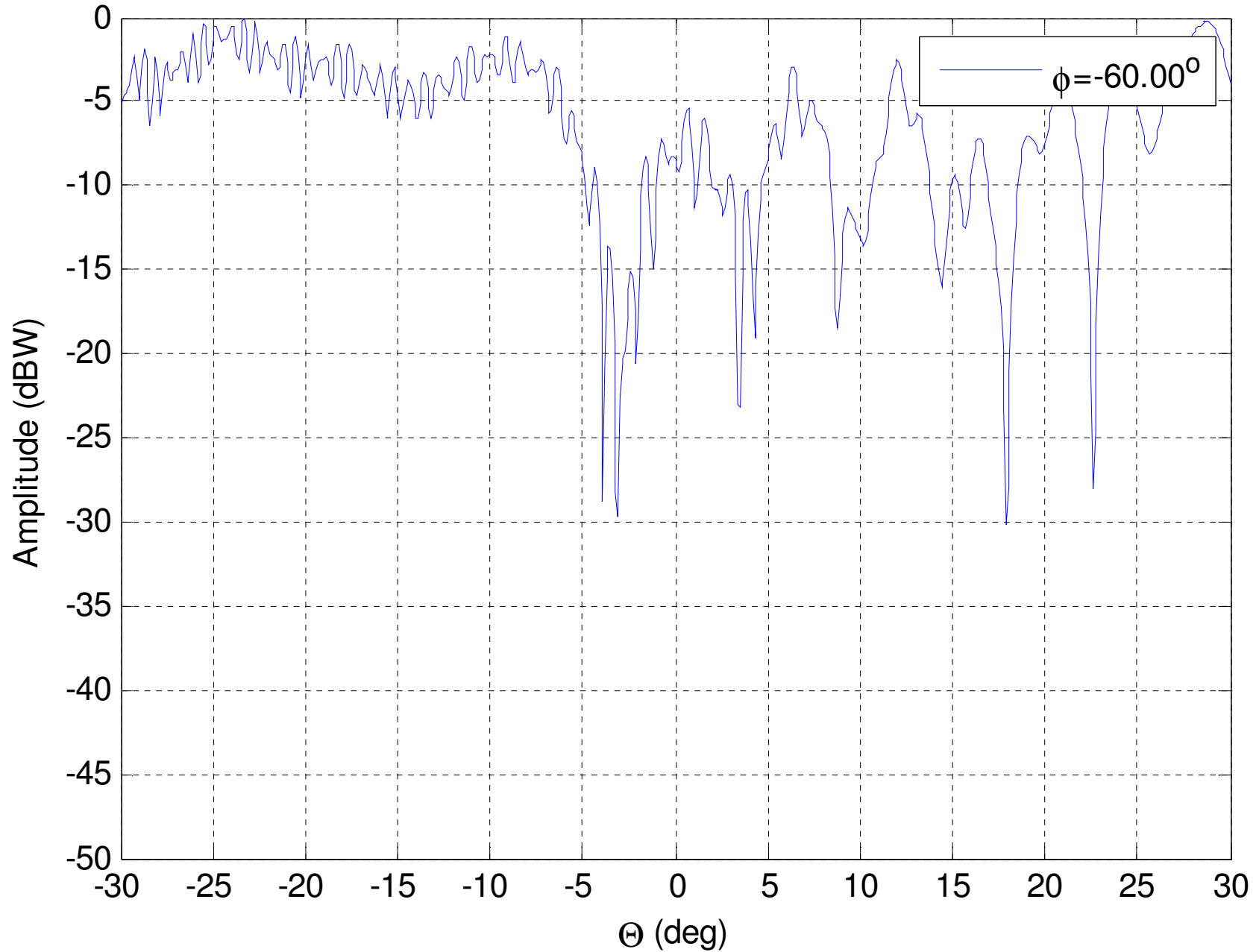
Input file: tx-17.7-rhcp-60.cut, Peak: -5.03 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

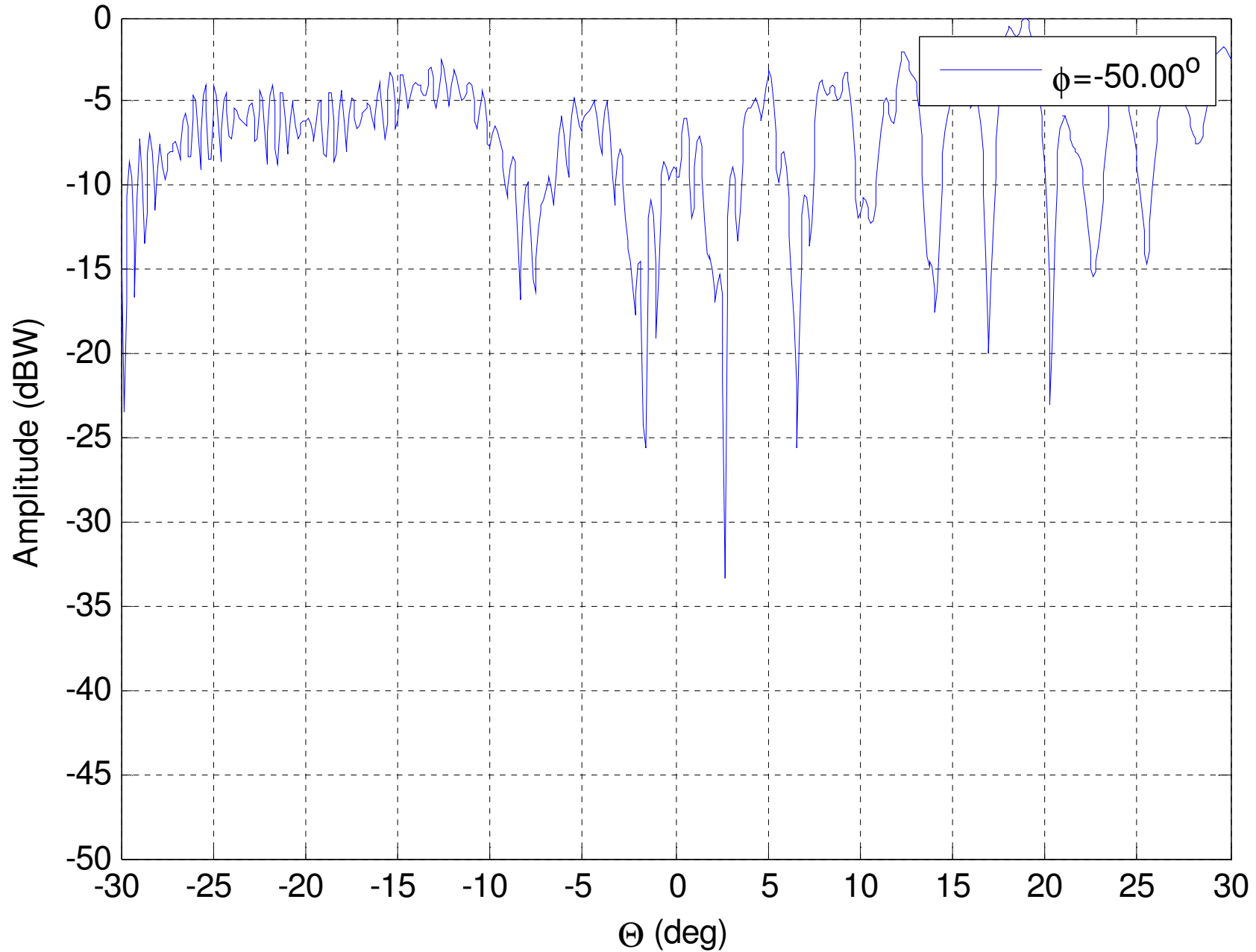
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -6.12 dBW, Date: 14-Dec-2011



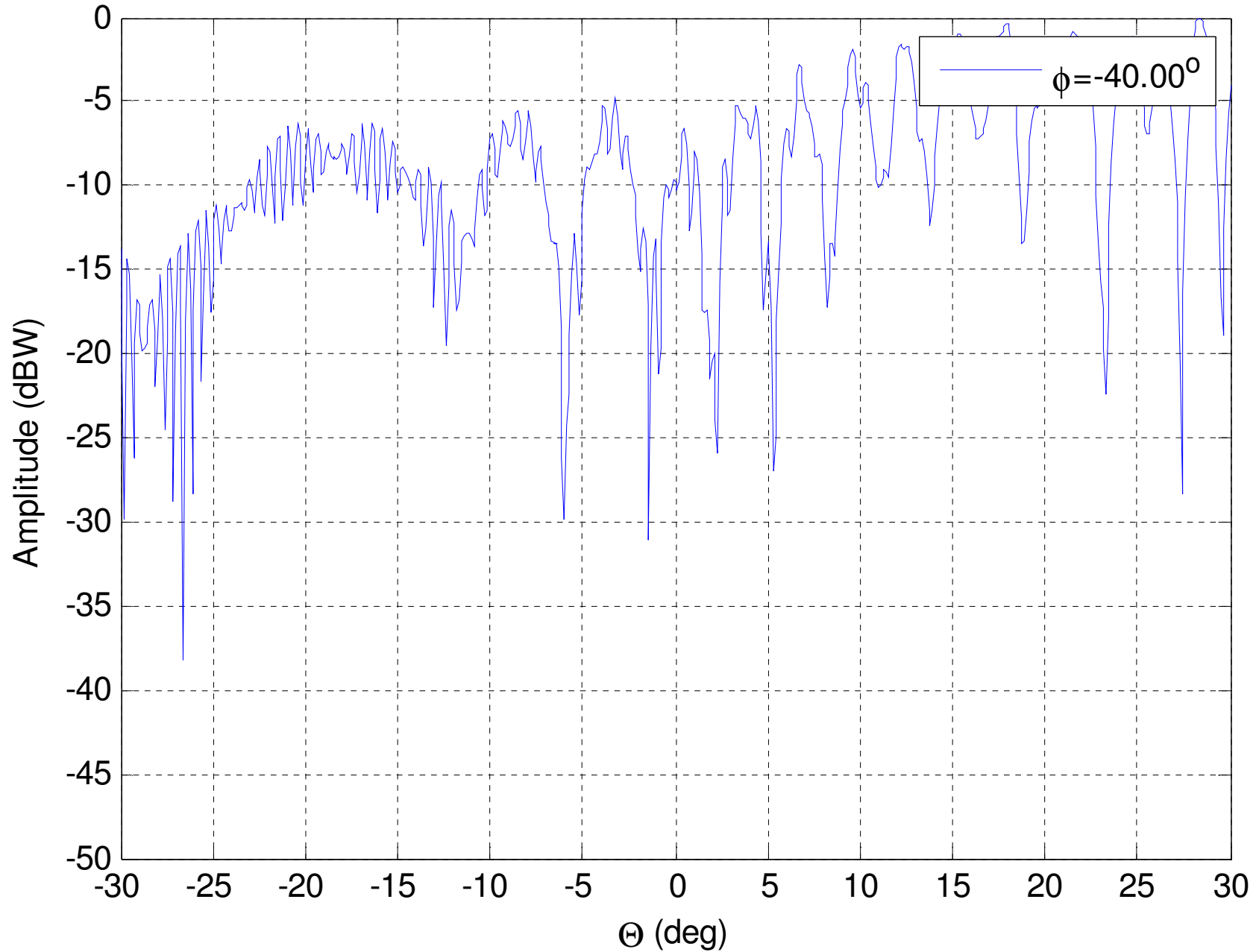
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -5.54 dBW, Date: 14-Dec-2011



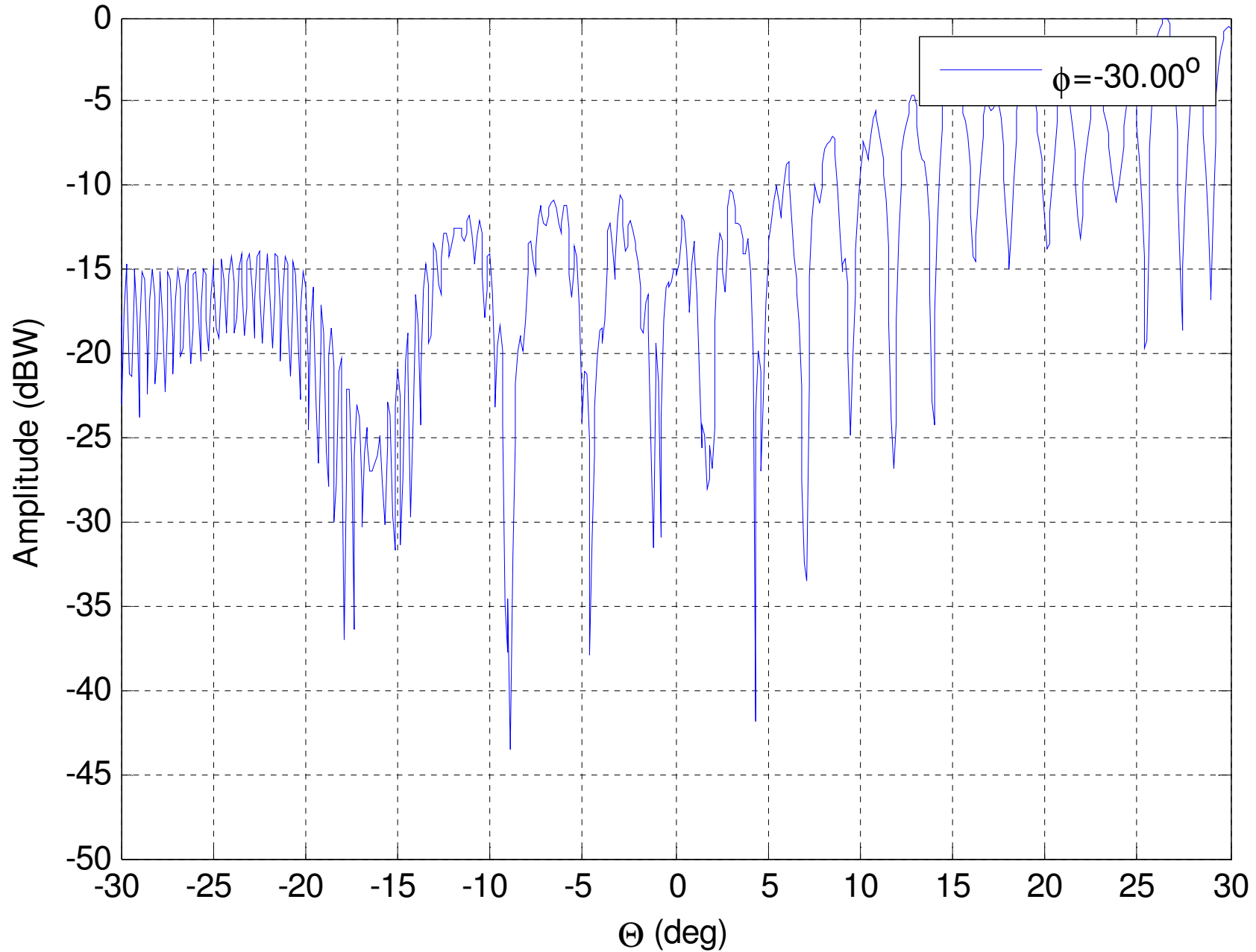
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -4.82 dBW, Date: 14-Dec-2011



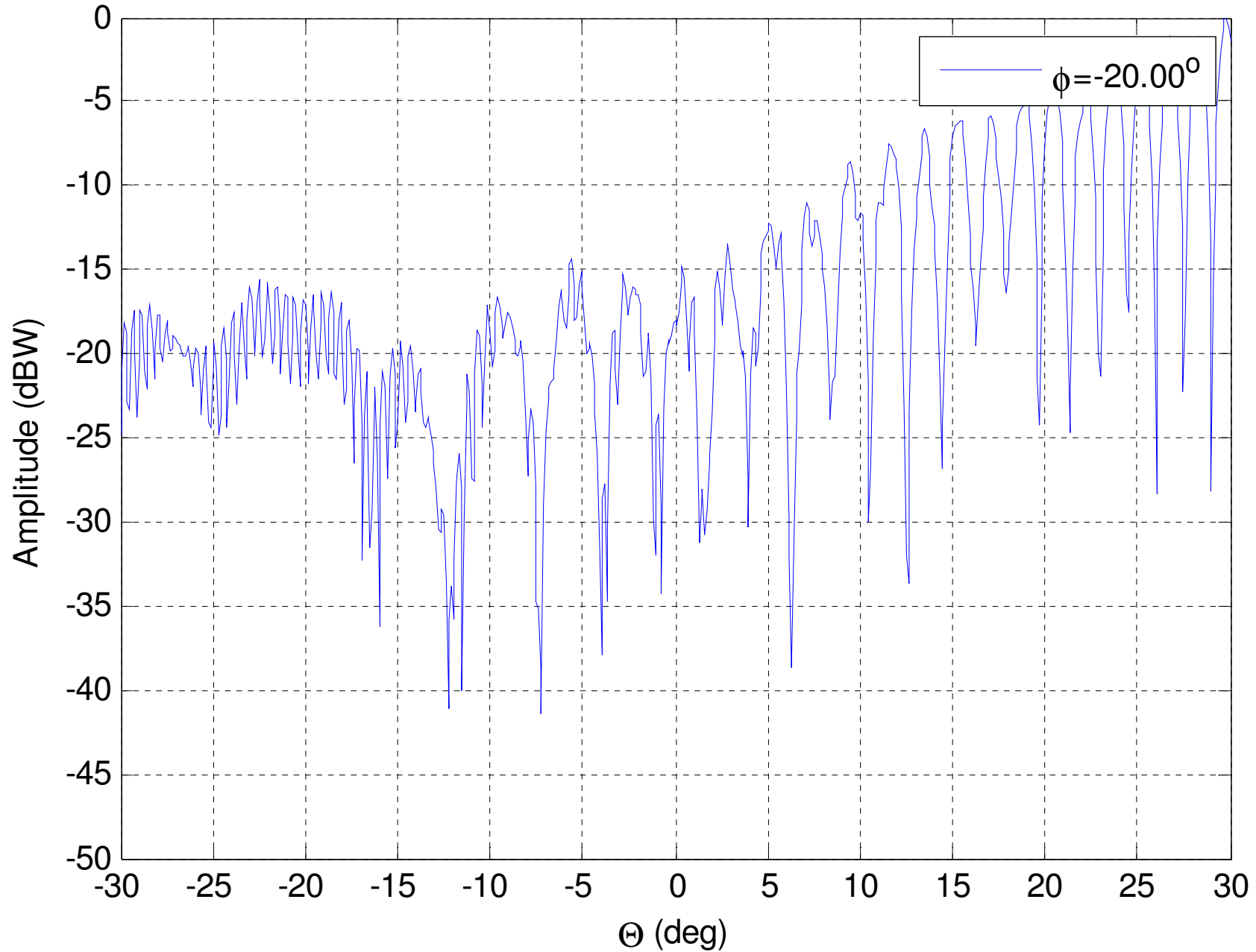
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: 0.38 dBW, Date: 14-Dec-2011



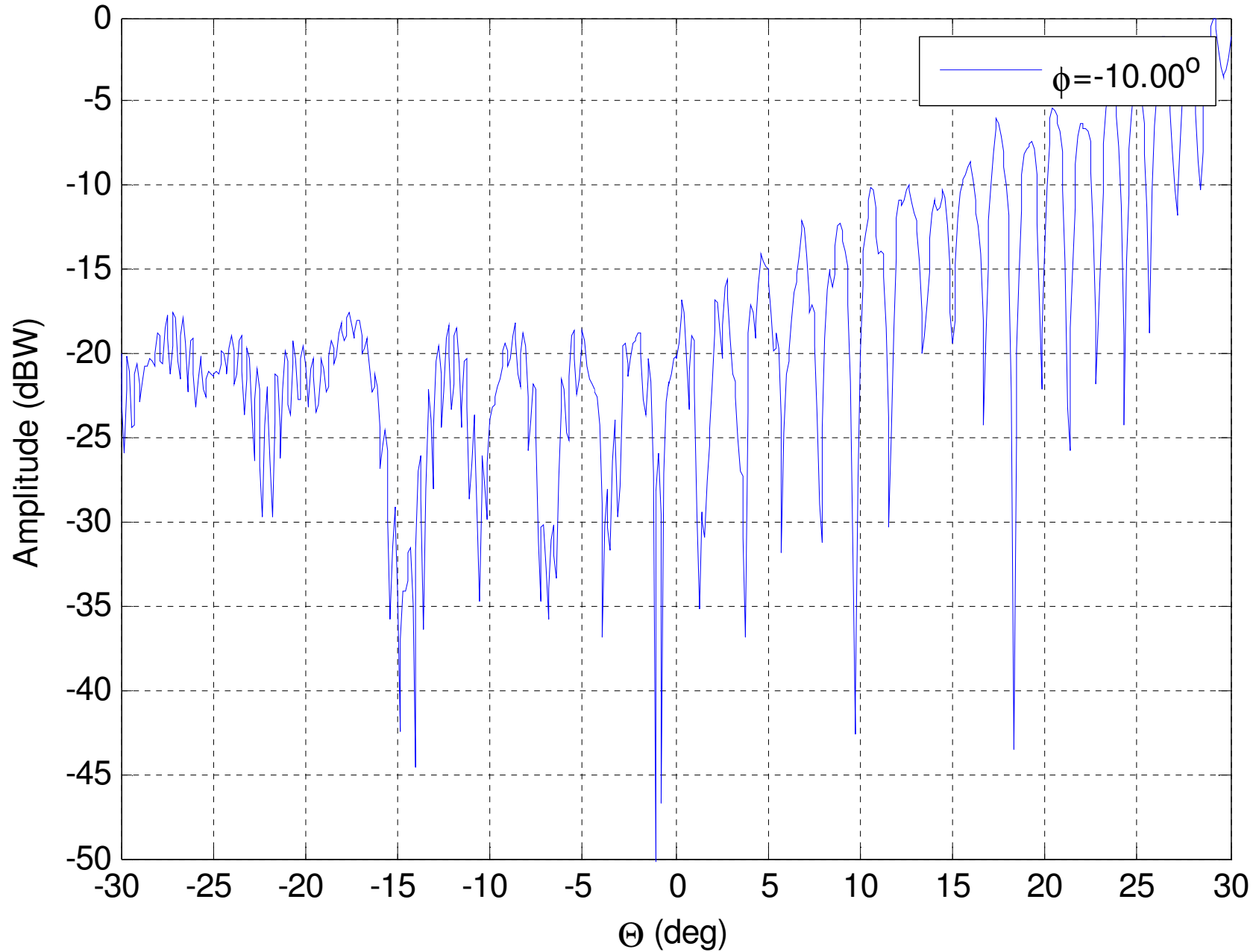
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 3.48 dBW, Date: 14-Dec-2011



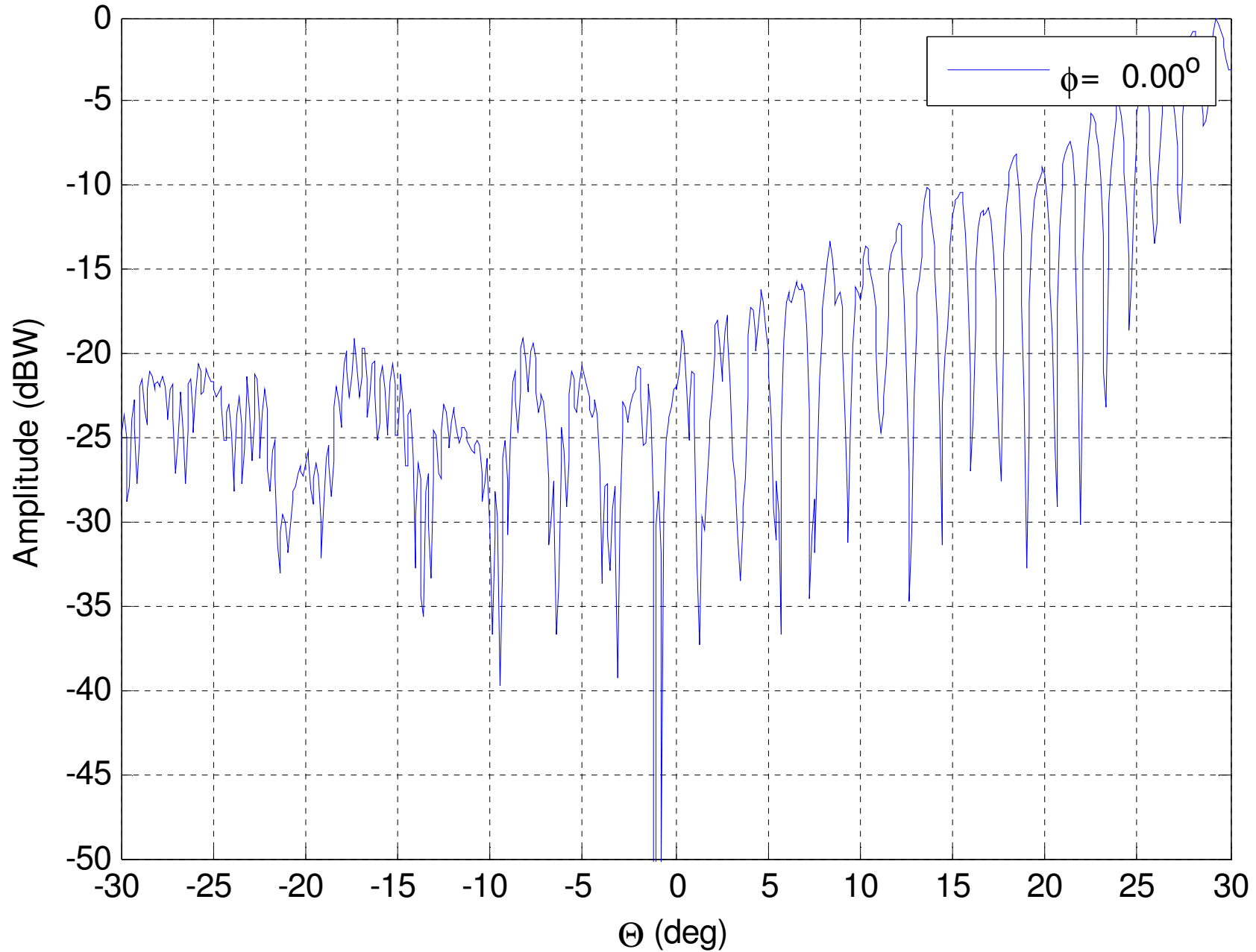
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 5.53 dBW, Date: 14-Dec-2011



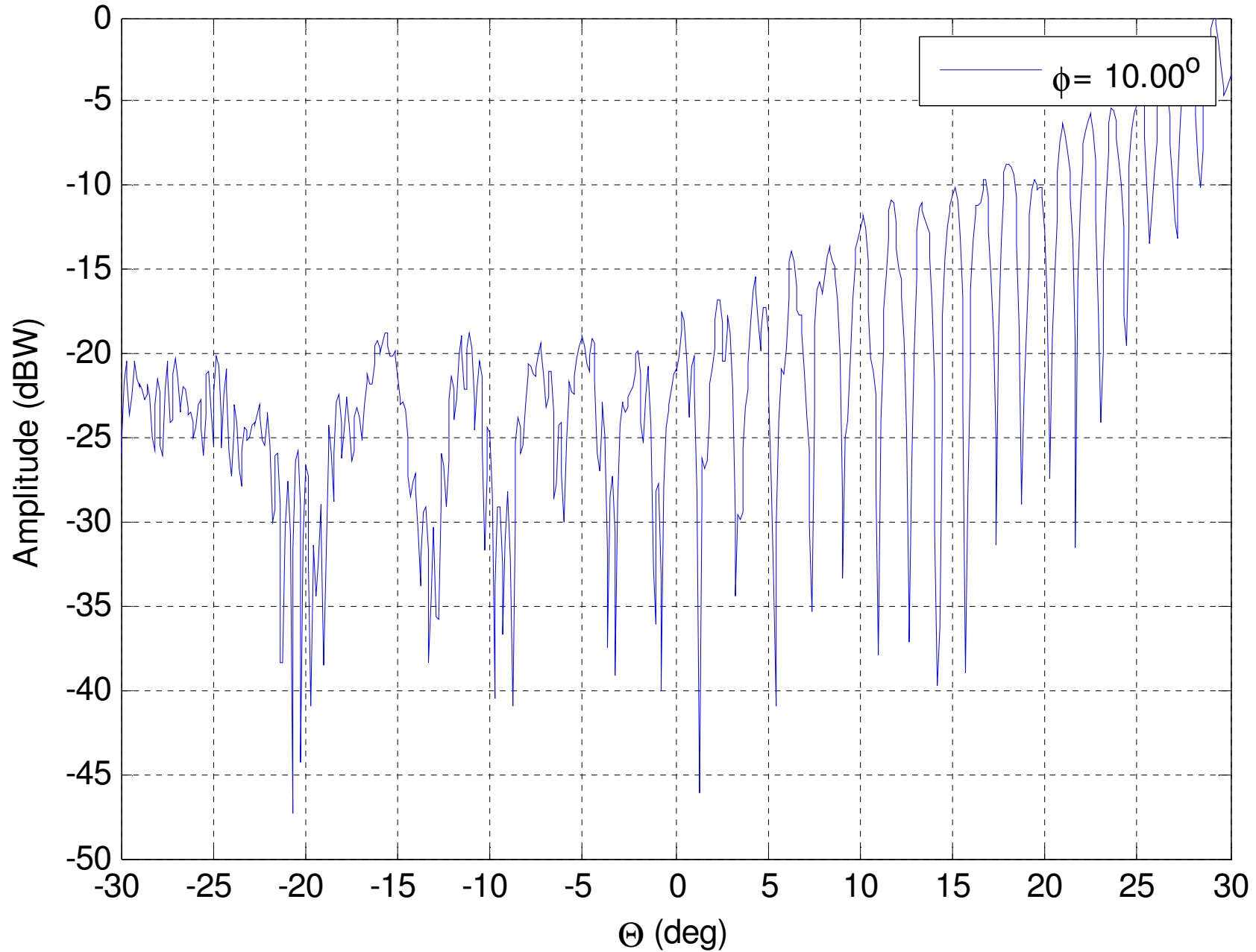
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 7.37 dBW, Date: 14-Dec-2011



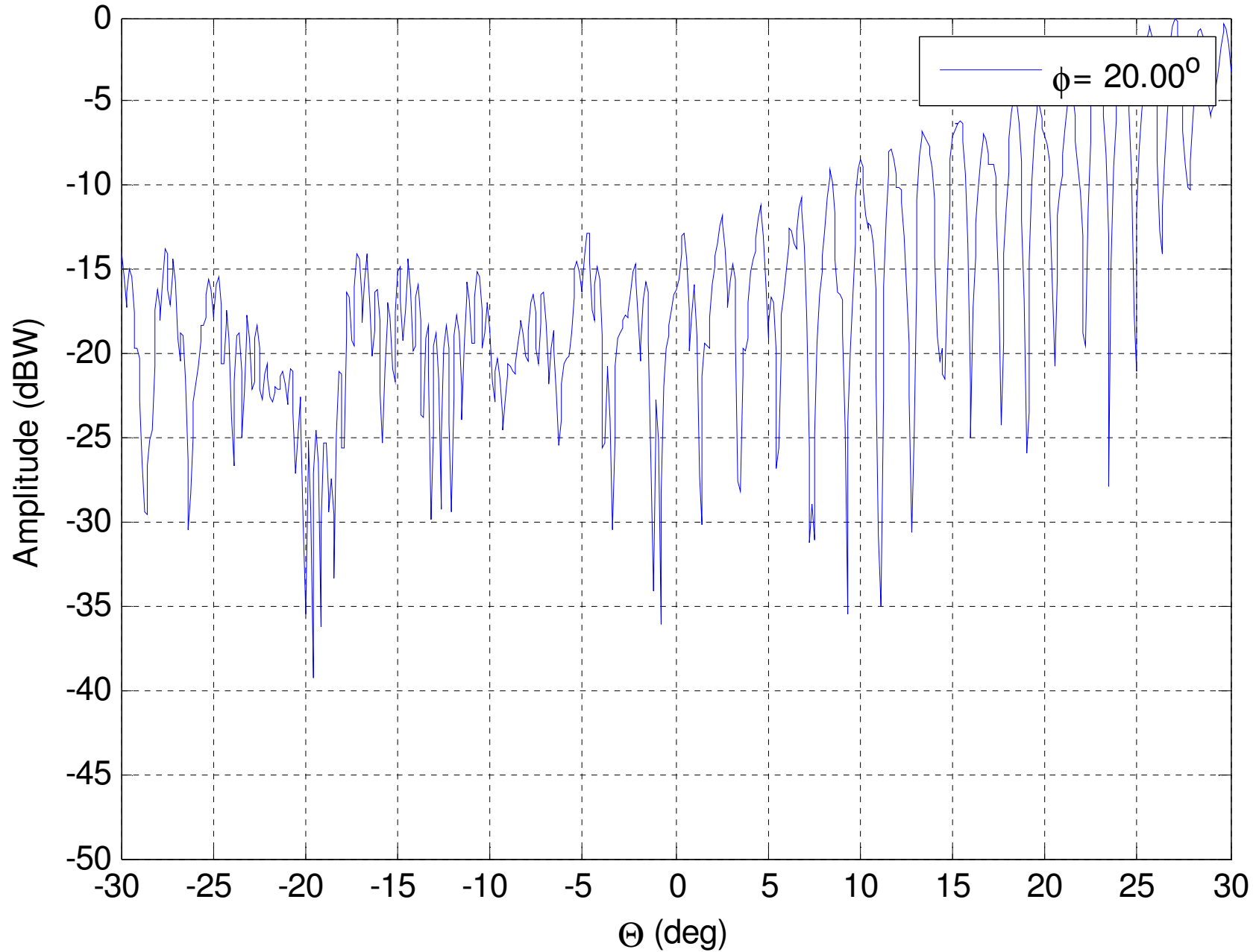
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 6.38 dBW, Date: 14-Dec-2011



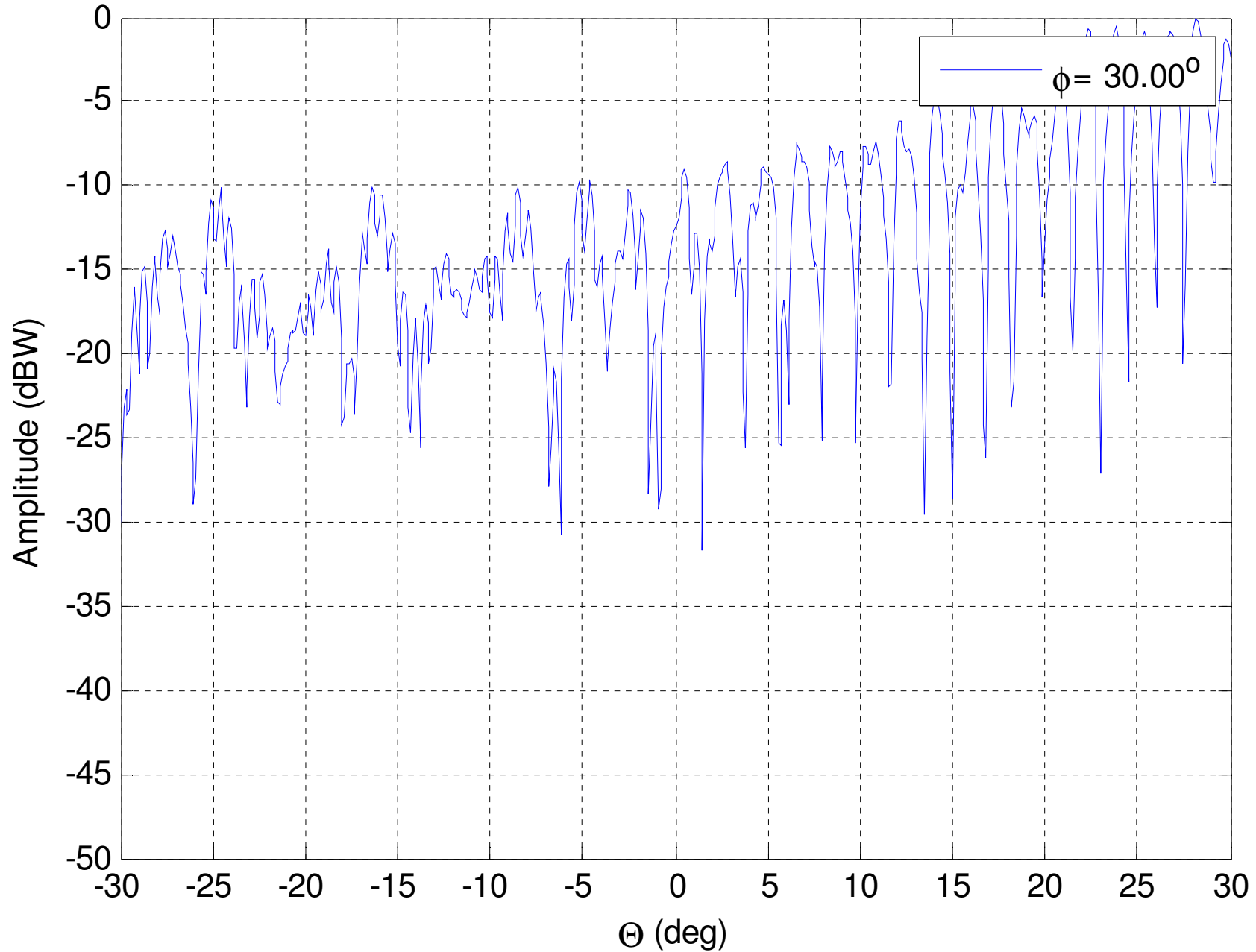
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 1.62 dBW, Date: 14-Dec-2011



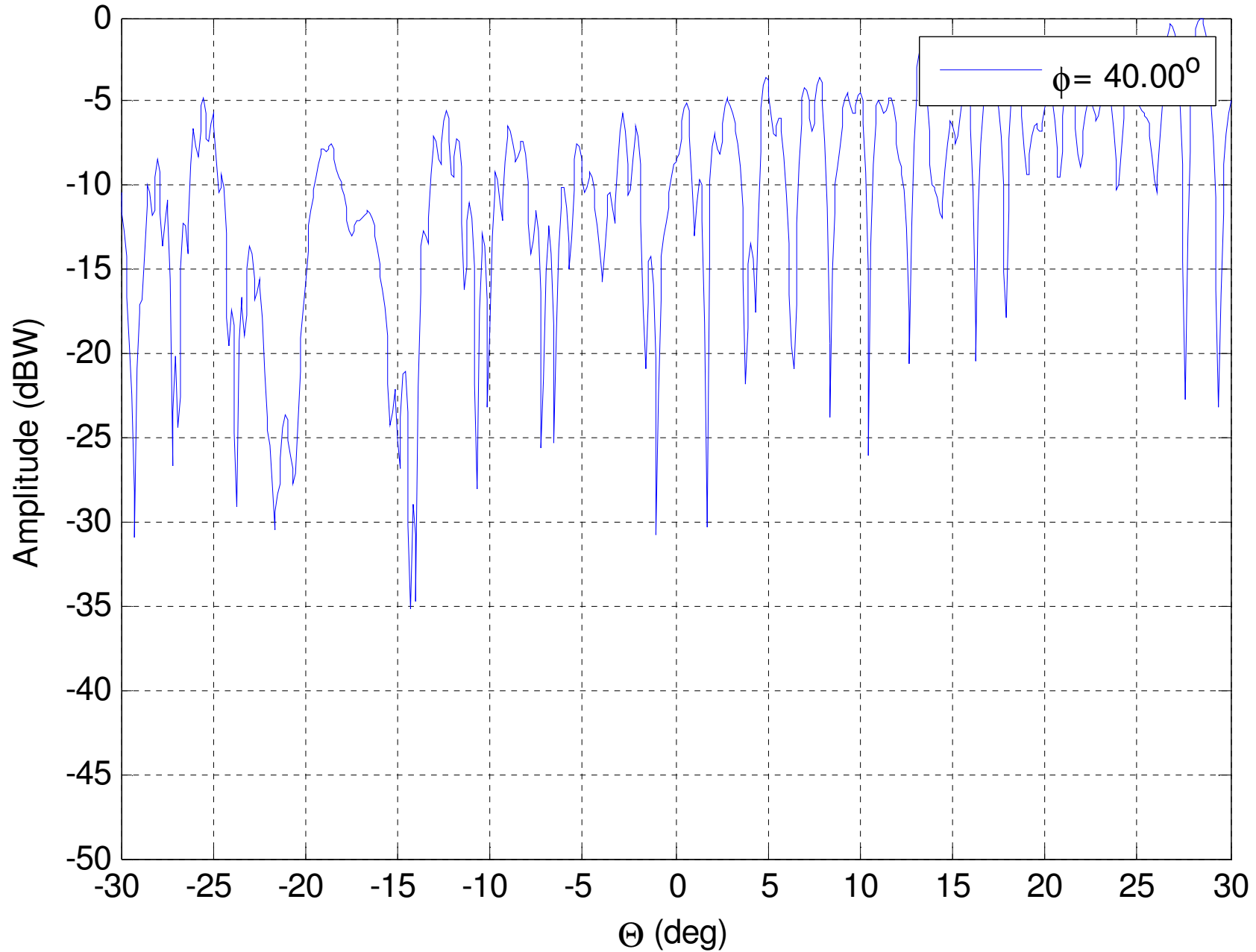
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -2.13 dBW, Date: 14-Dec-2011



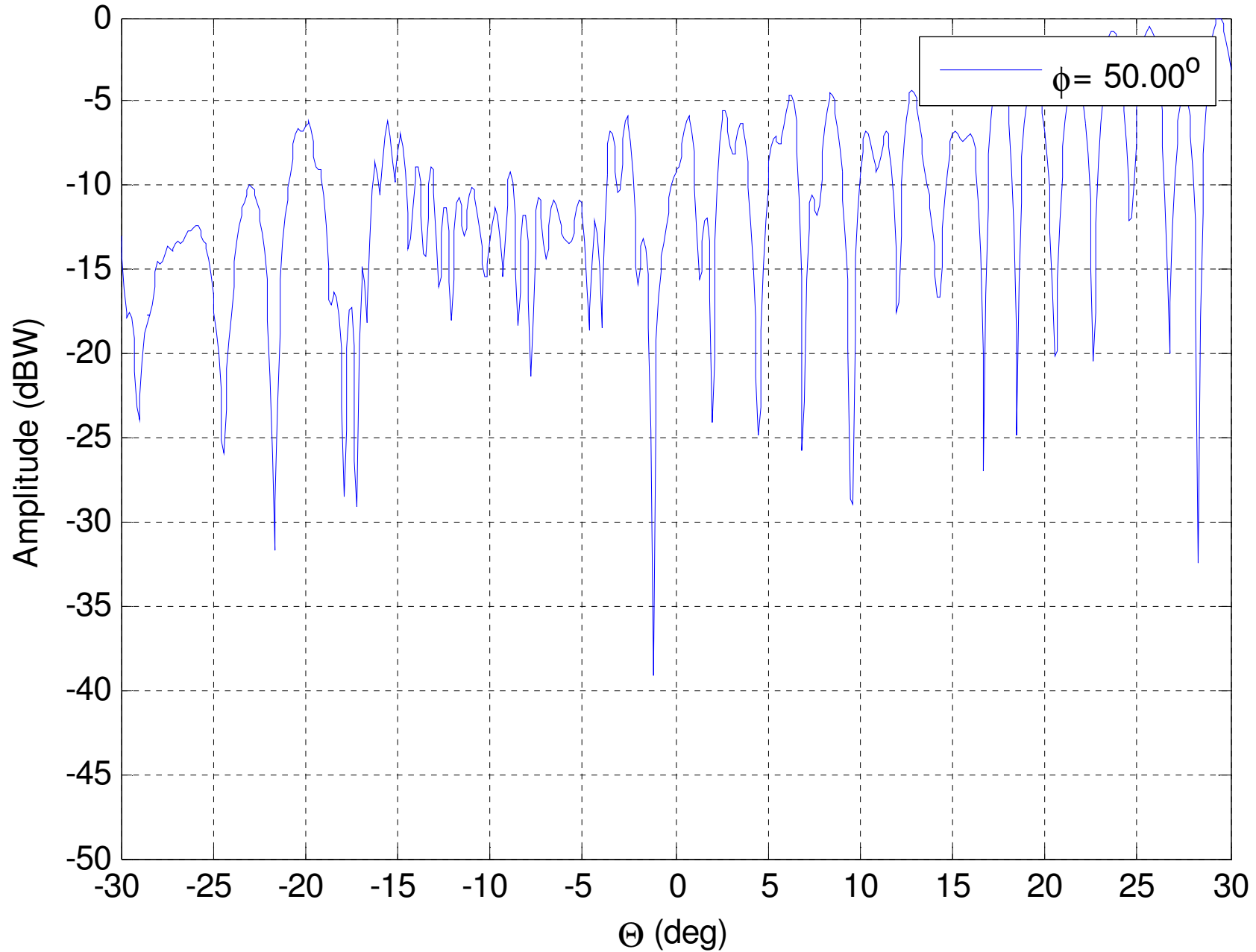
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.05 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -5.34 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -4.82 dBW, Date: 14-Dec-2011

