

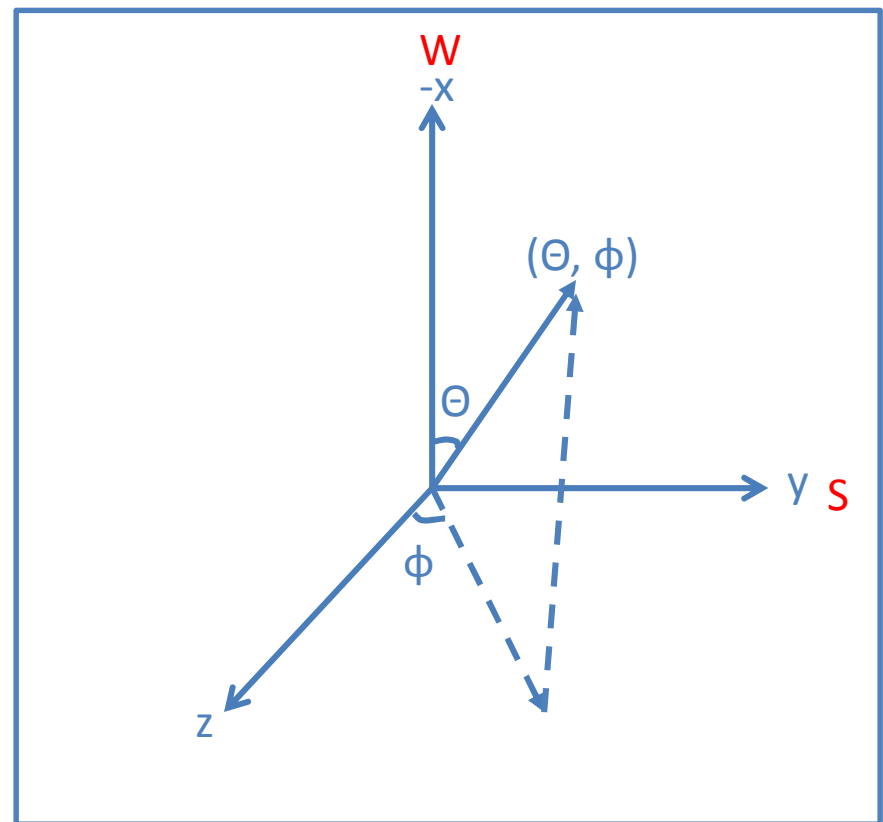
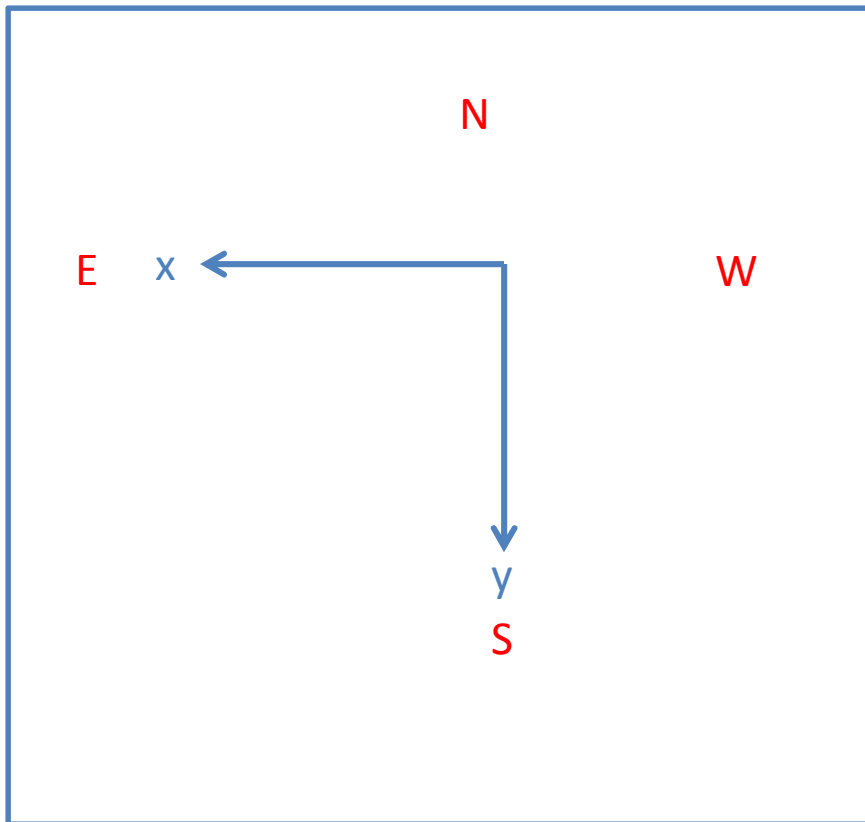
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 17

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



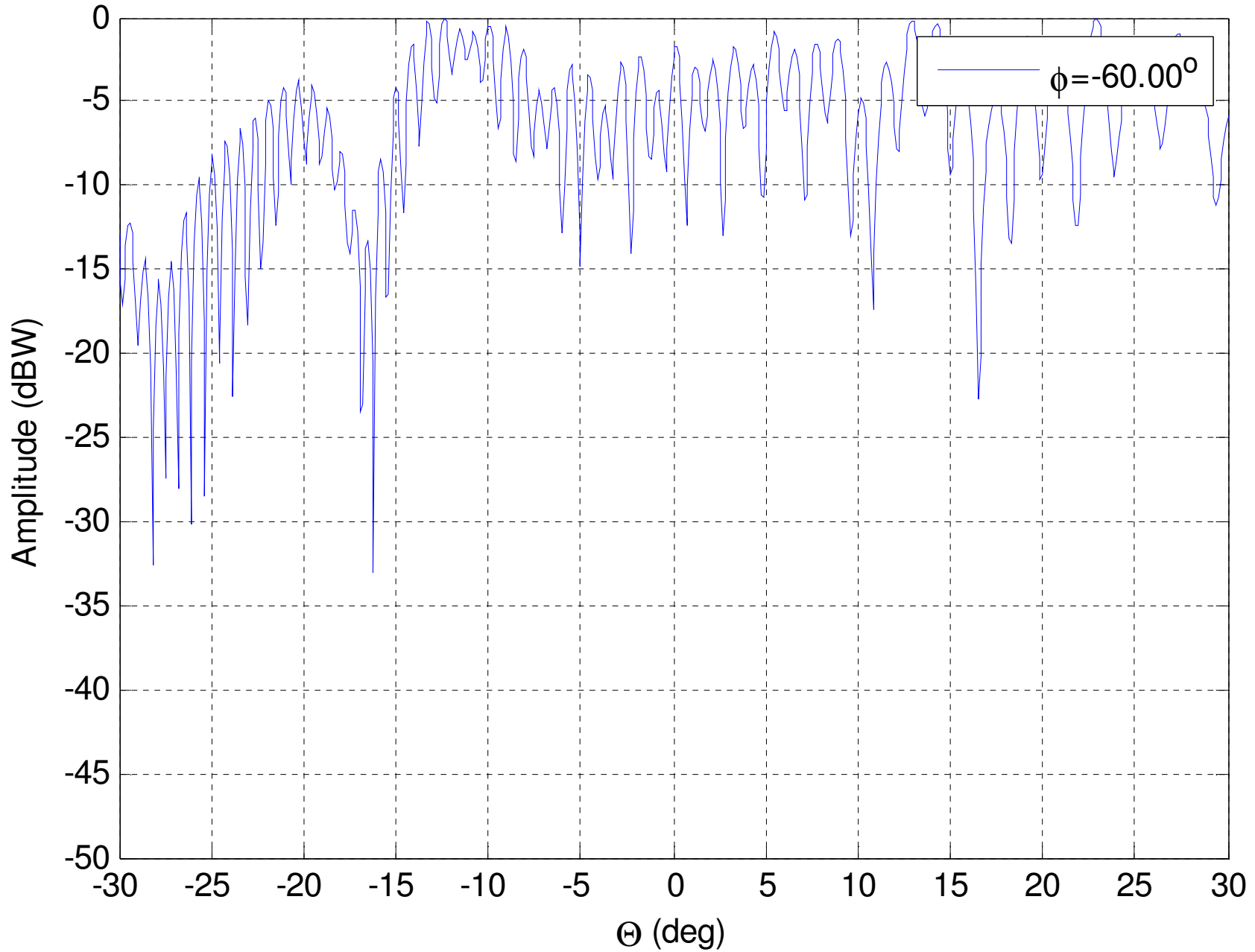
Spot Beam17, -X Axis Plots

- 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

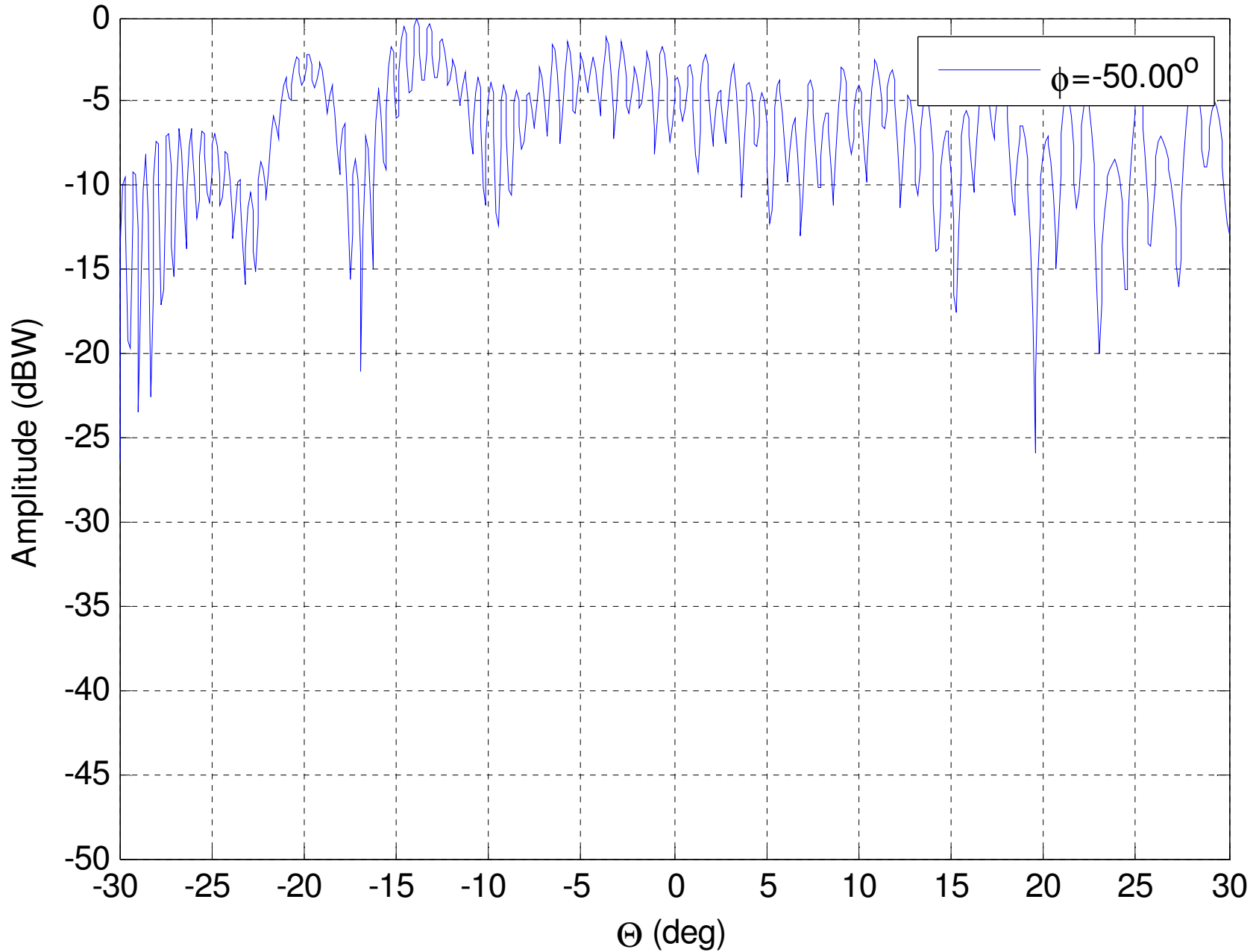
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -1.19 dBW, Date: 14-Dec-2011



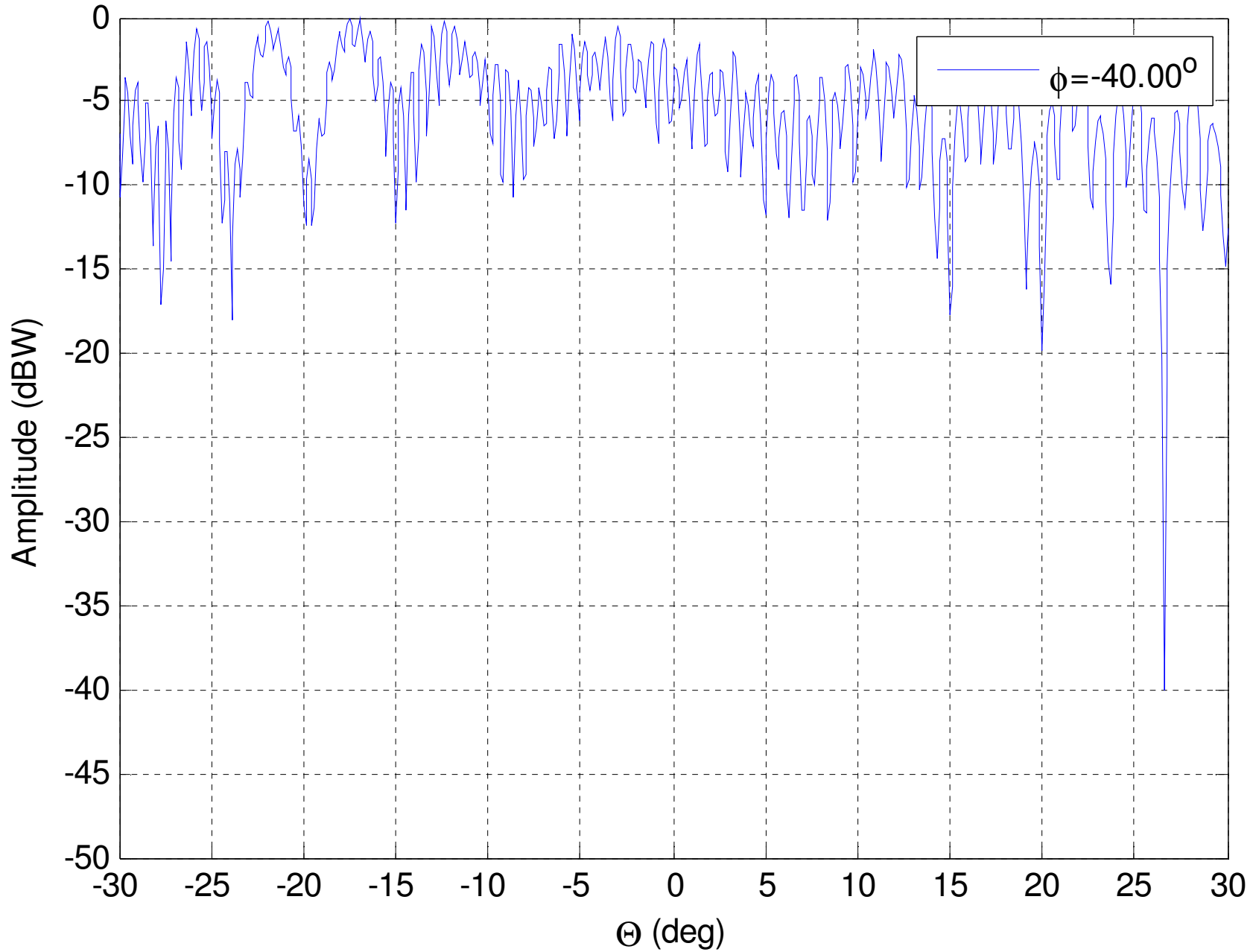
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: 0.38 dBW, Date: 14-Dec-2011



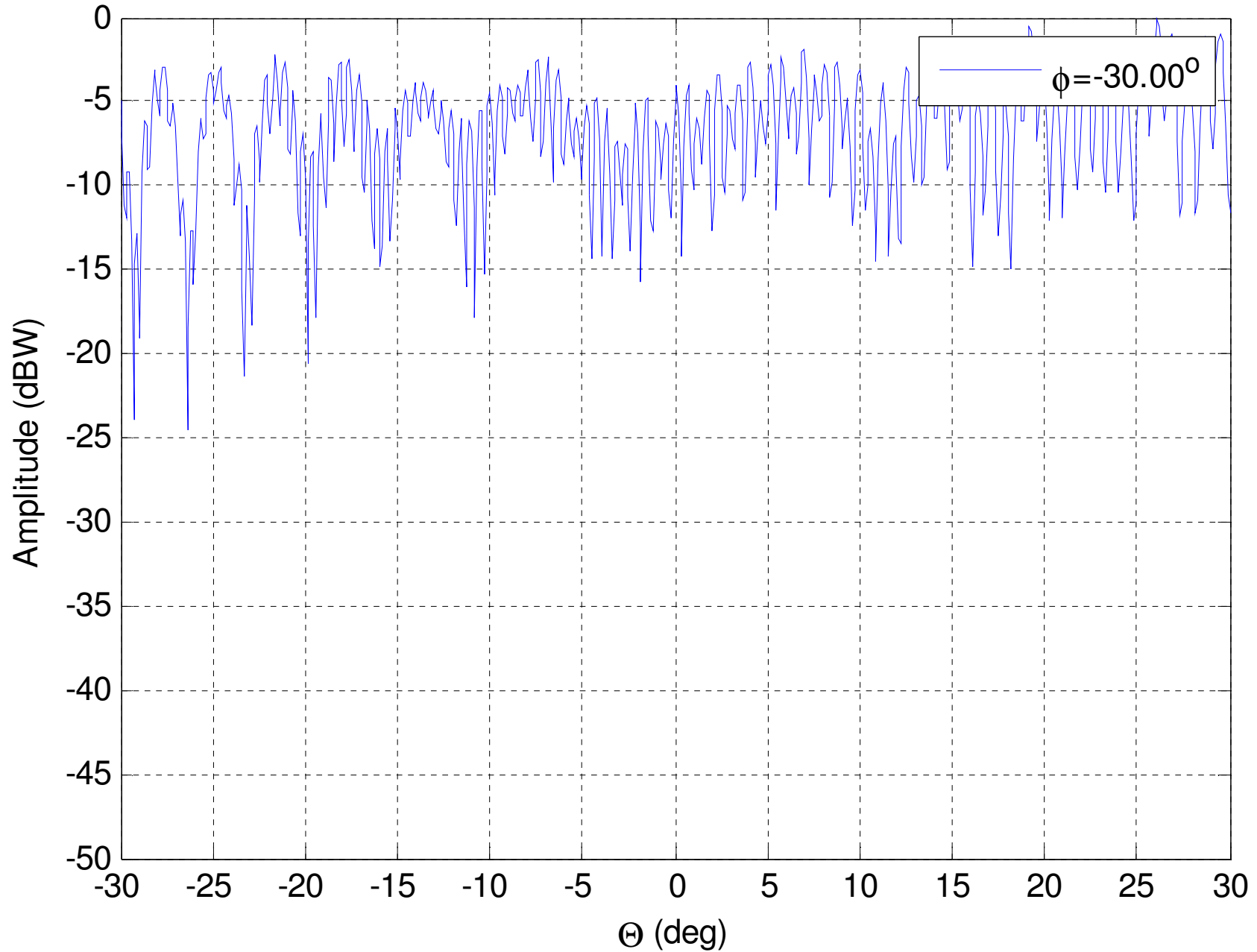
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -0.18 dBW, Date: 14-Dec-2011



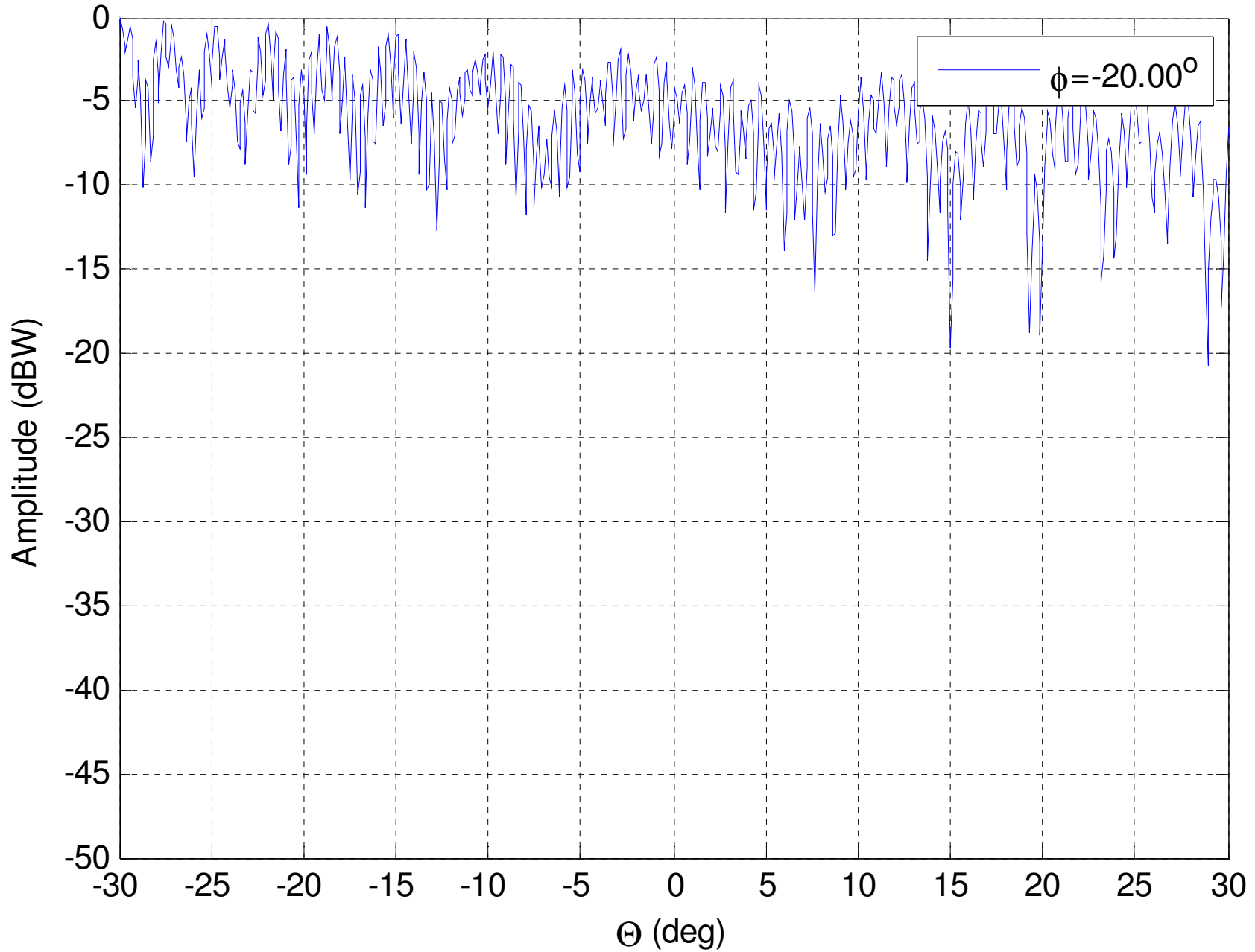
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 1.10 dBW, Date: 14-Dec-2011



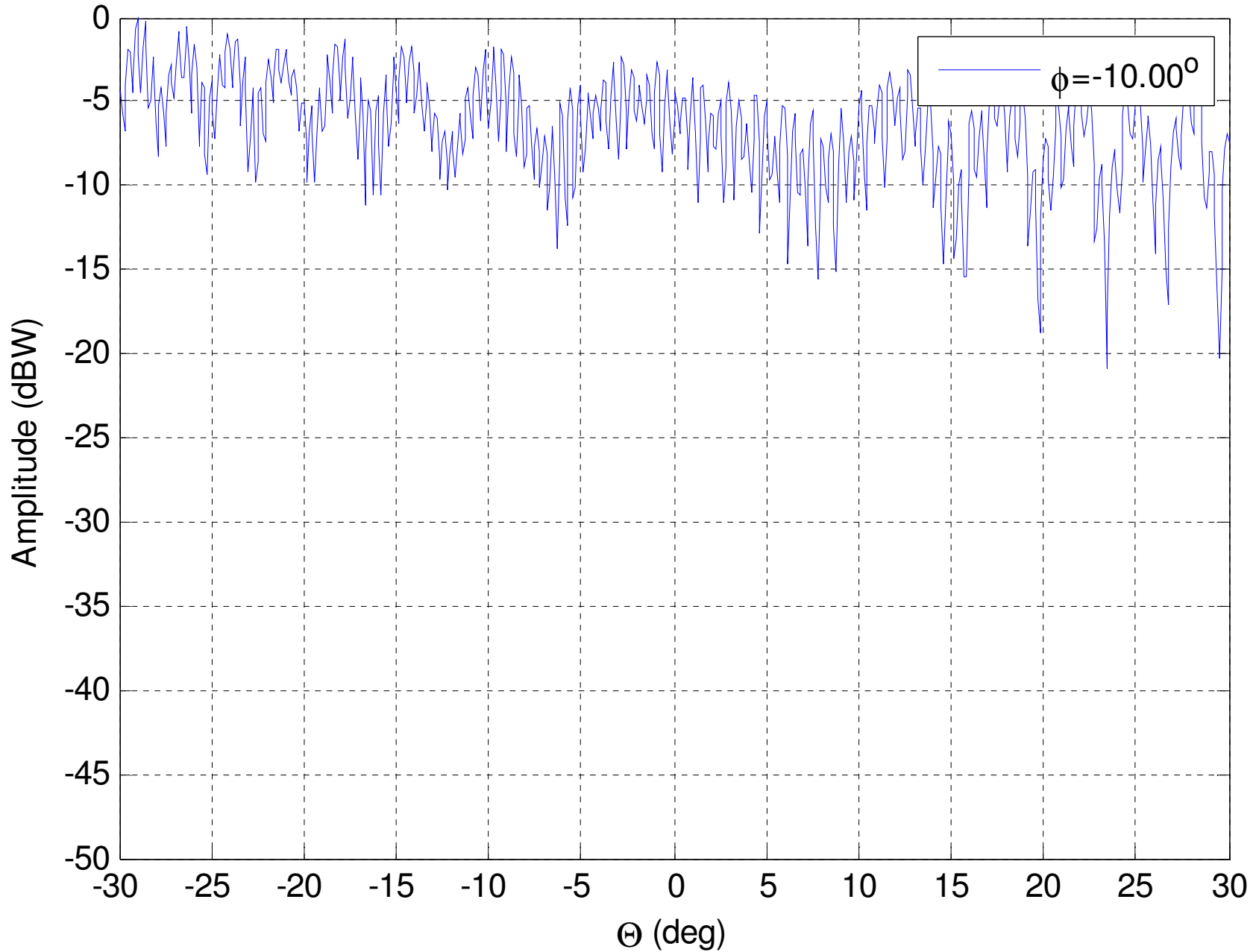
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 1.09 dBW, Date: 14-Dec-2011



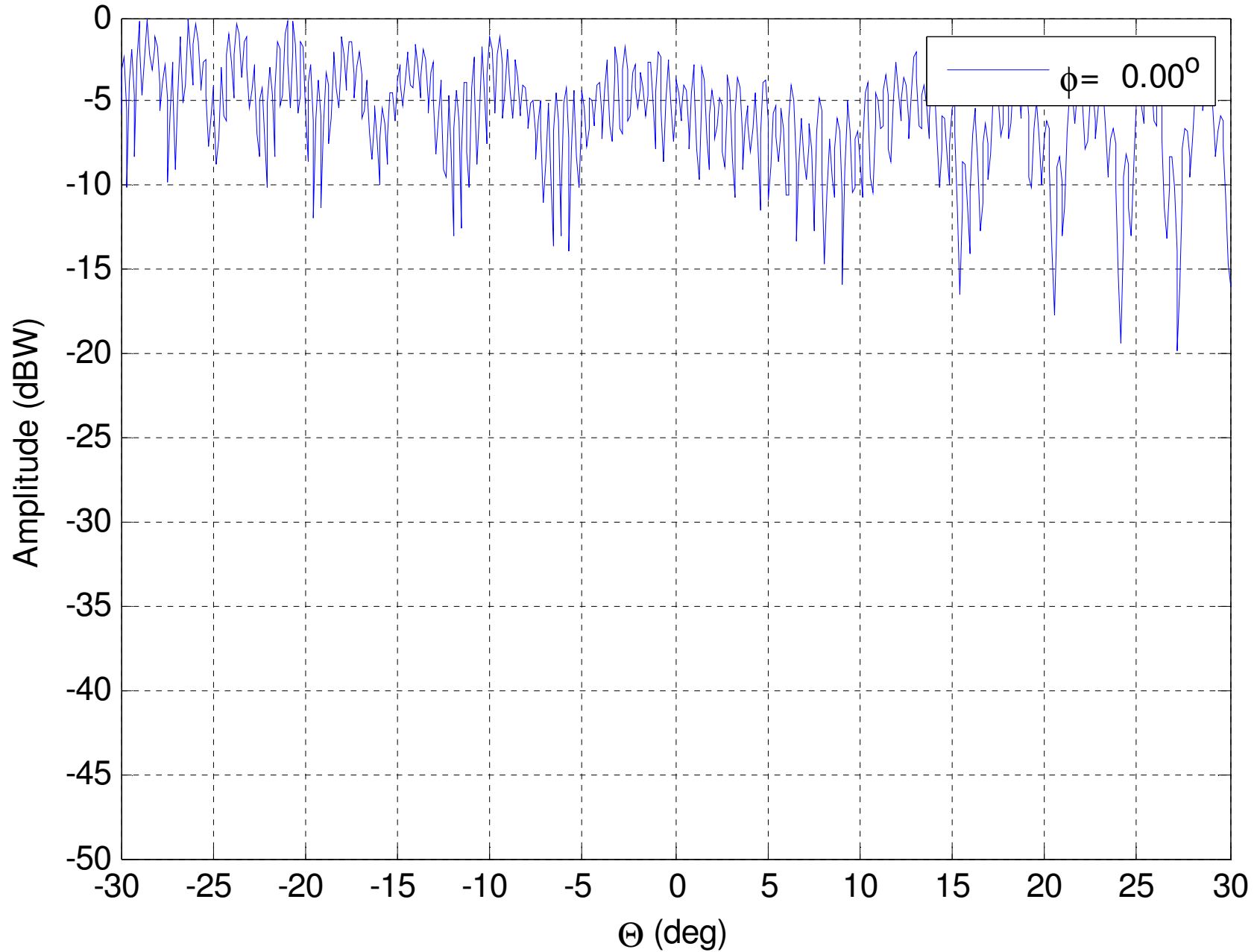
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 1.47 dBW, Date: 14-Dec-2011



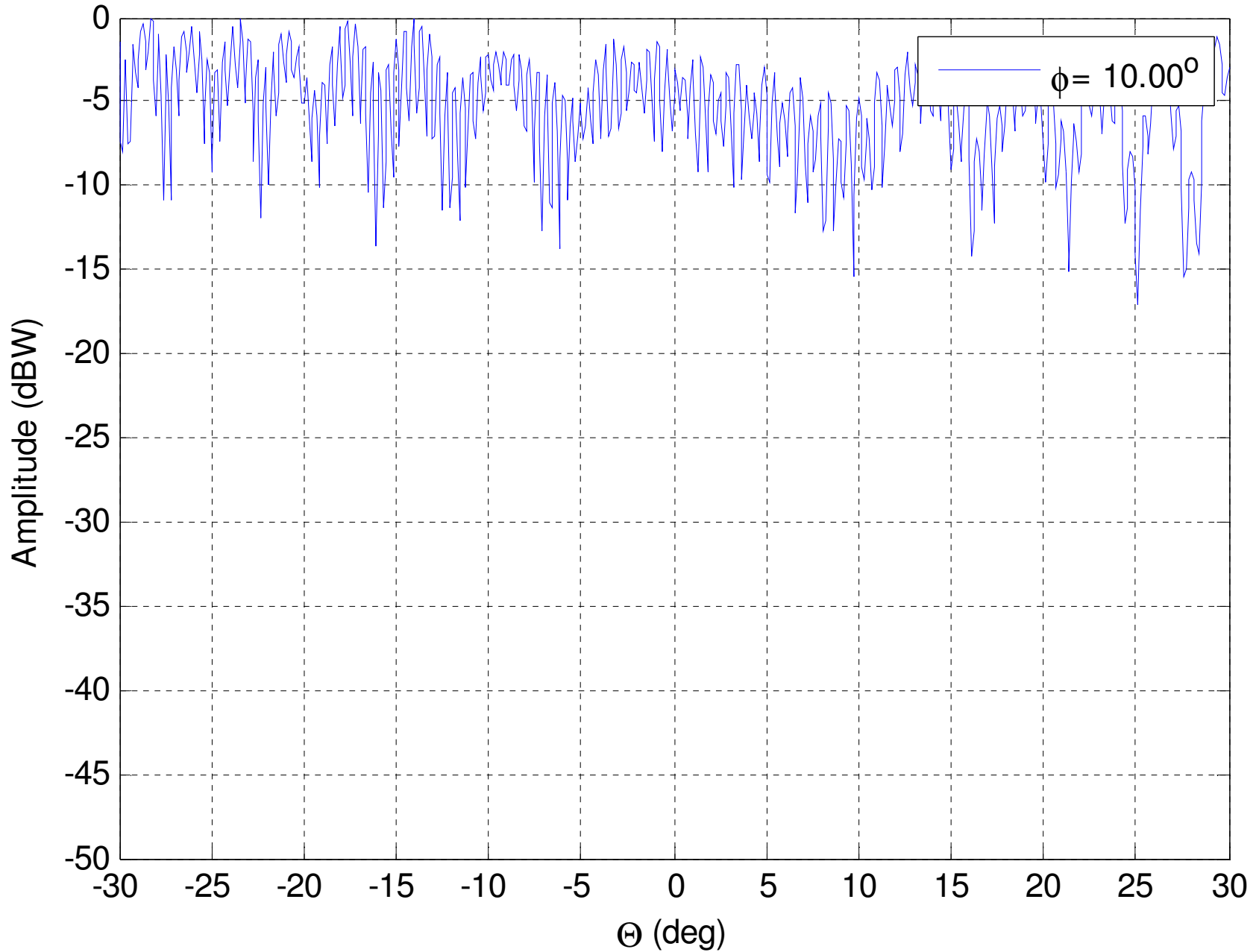
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 0.74 dBW, Date: 14-Dec-2011



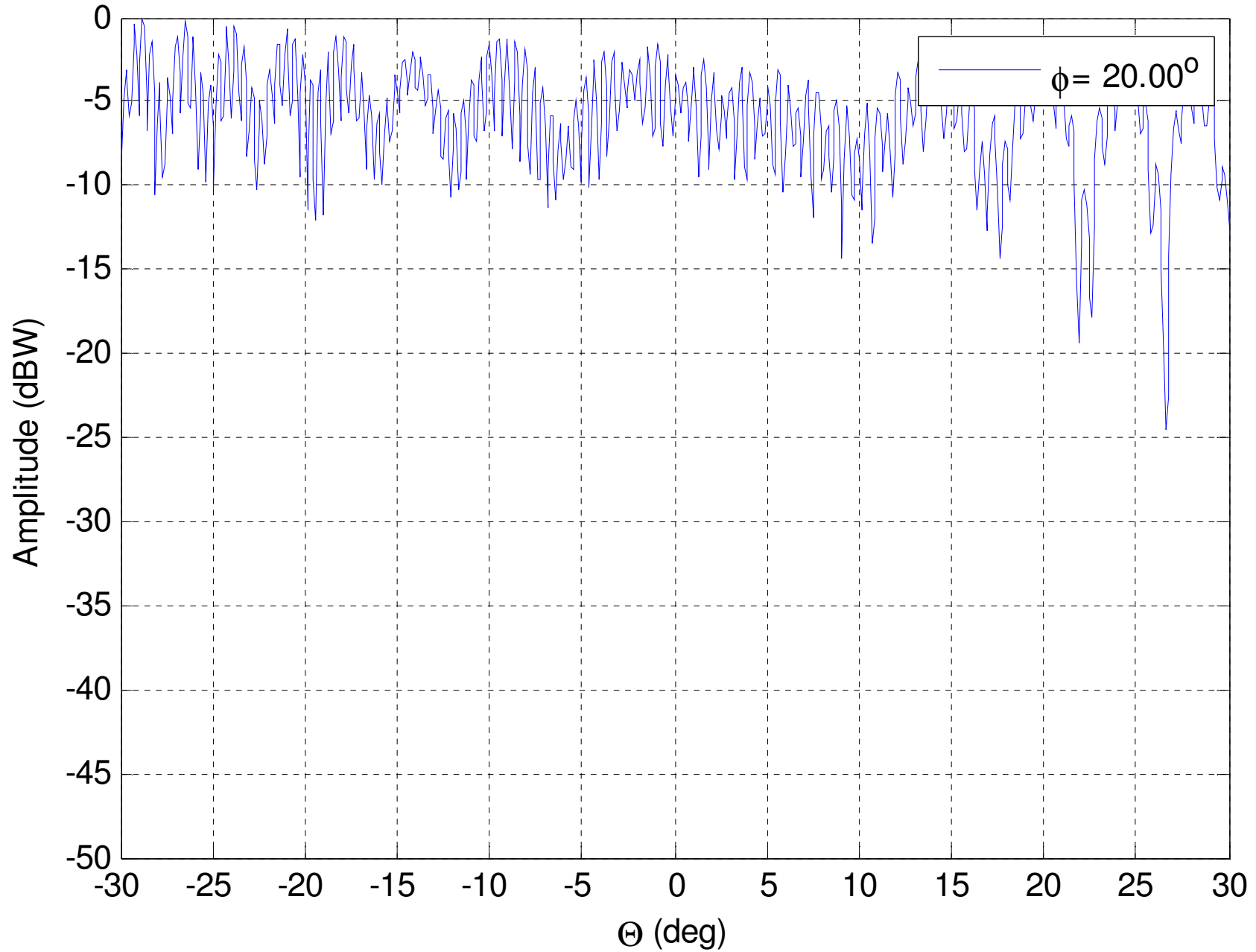
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 0.17 dBW, Date: 14-Dec-2011



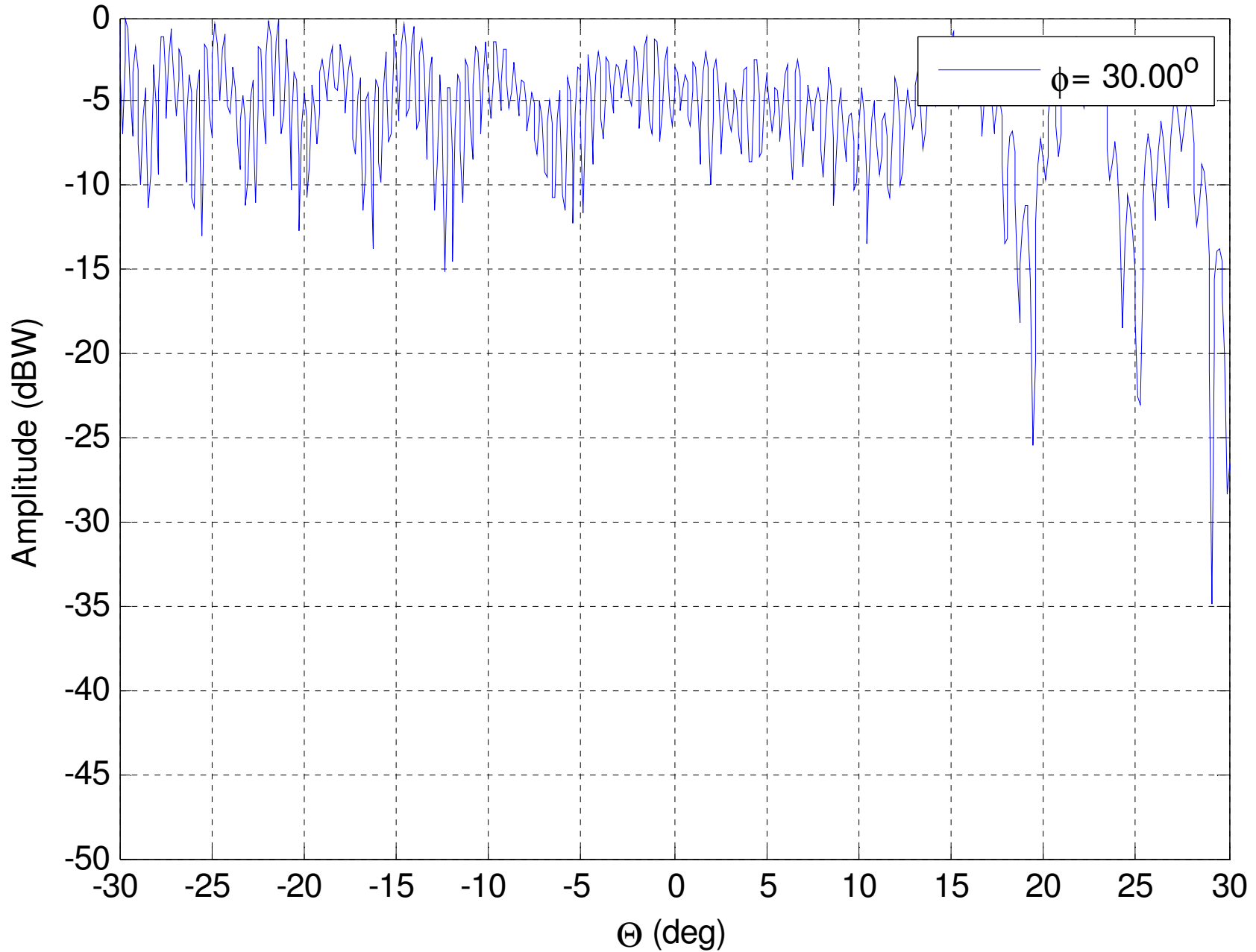
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 0.46 dBW, Date: 14-Dec-2011



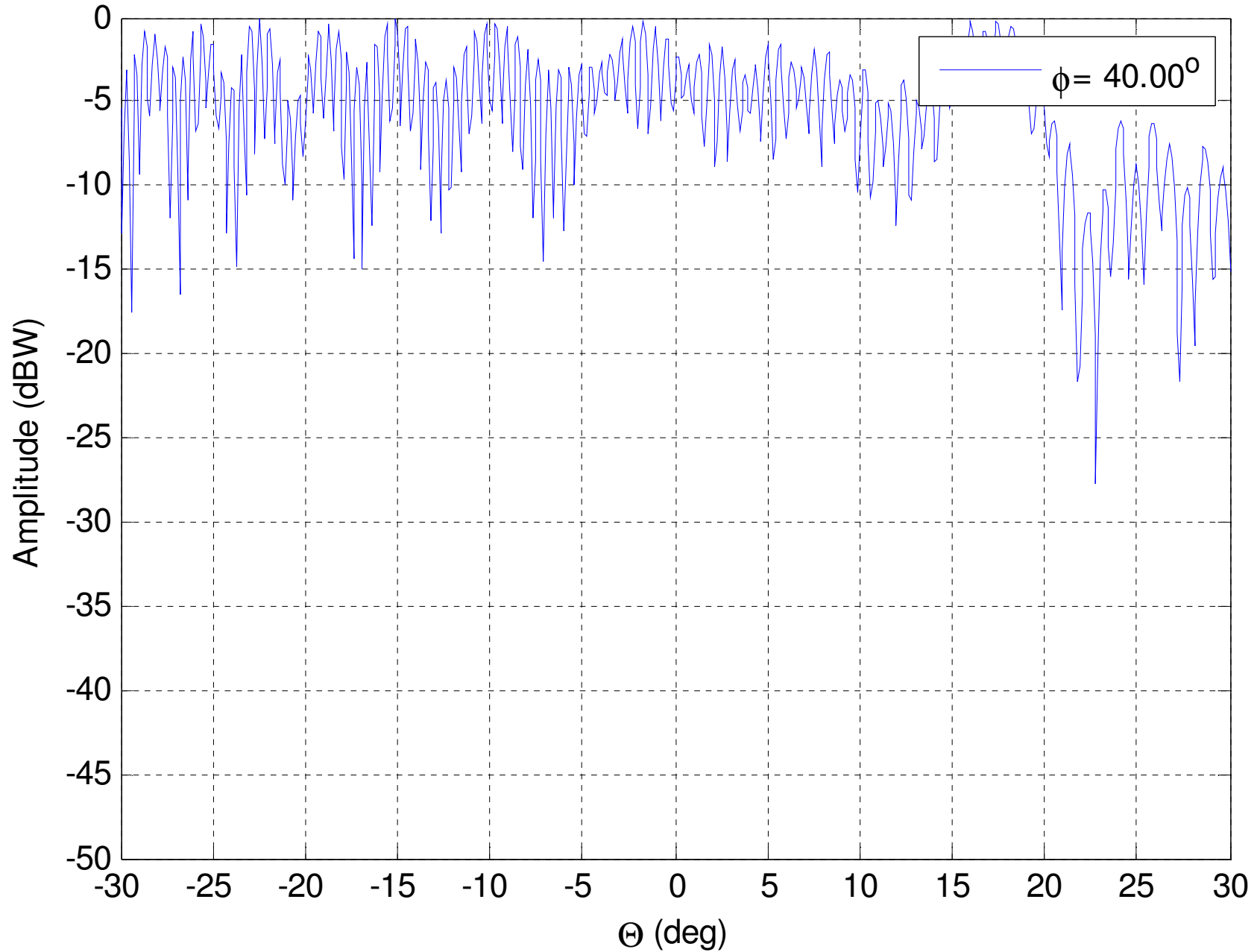
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -0.05 dBW, Date: 14-Dec-2011



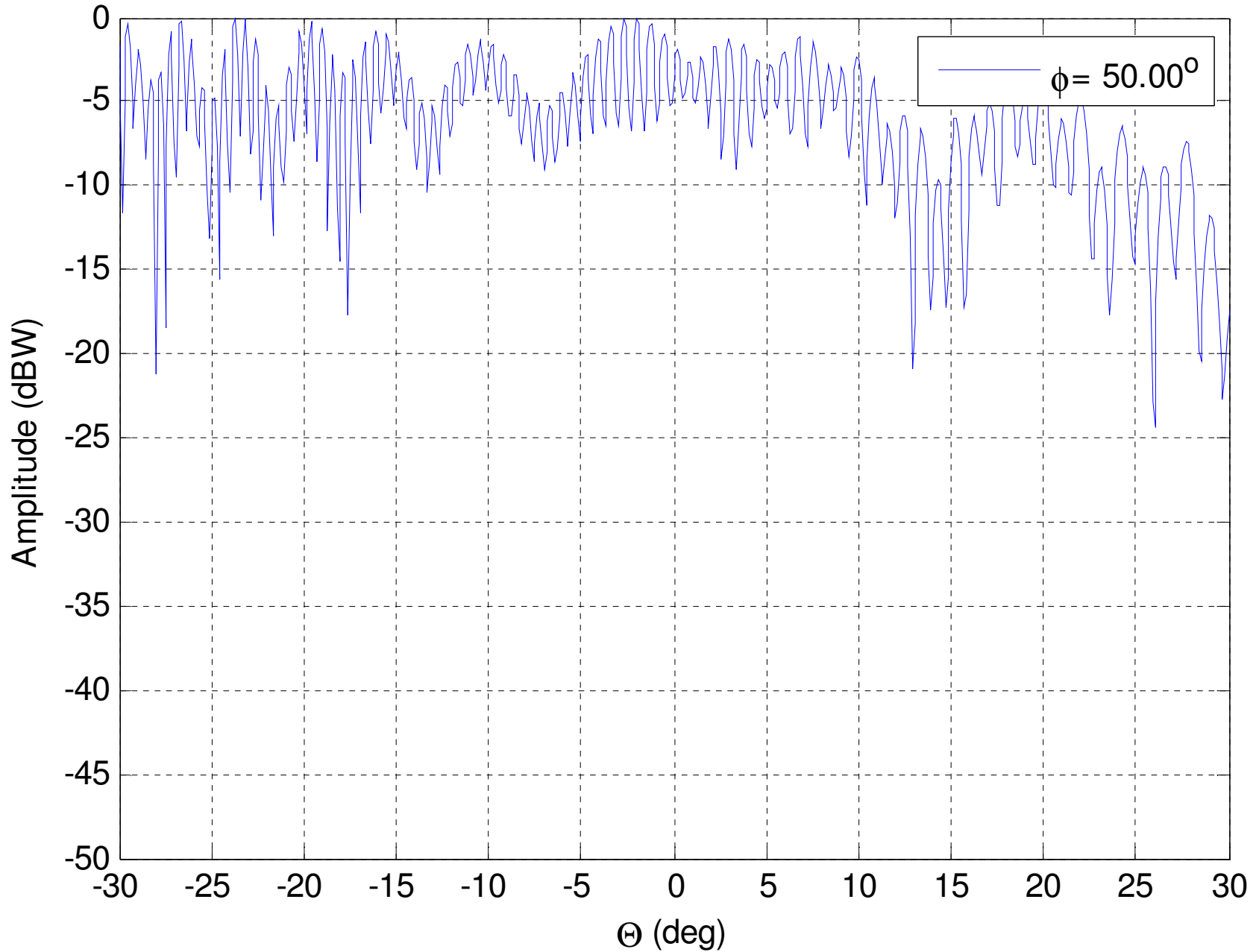
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -0.75 dBW, Date: 14-Dec-2011



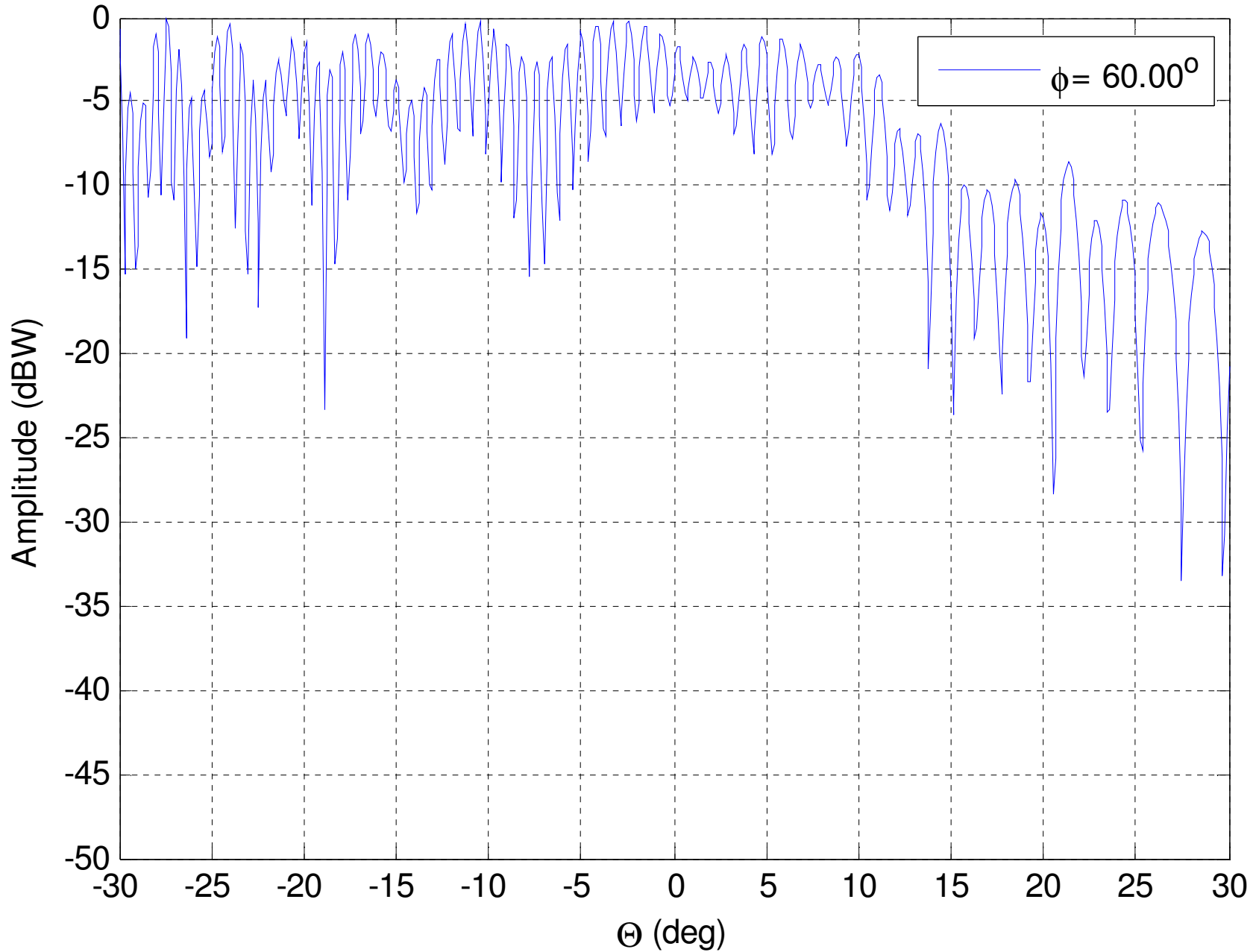
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -0.99 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

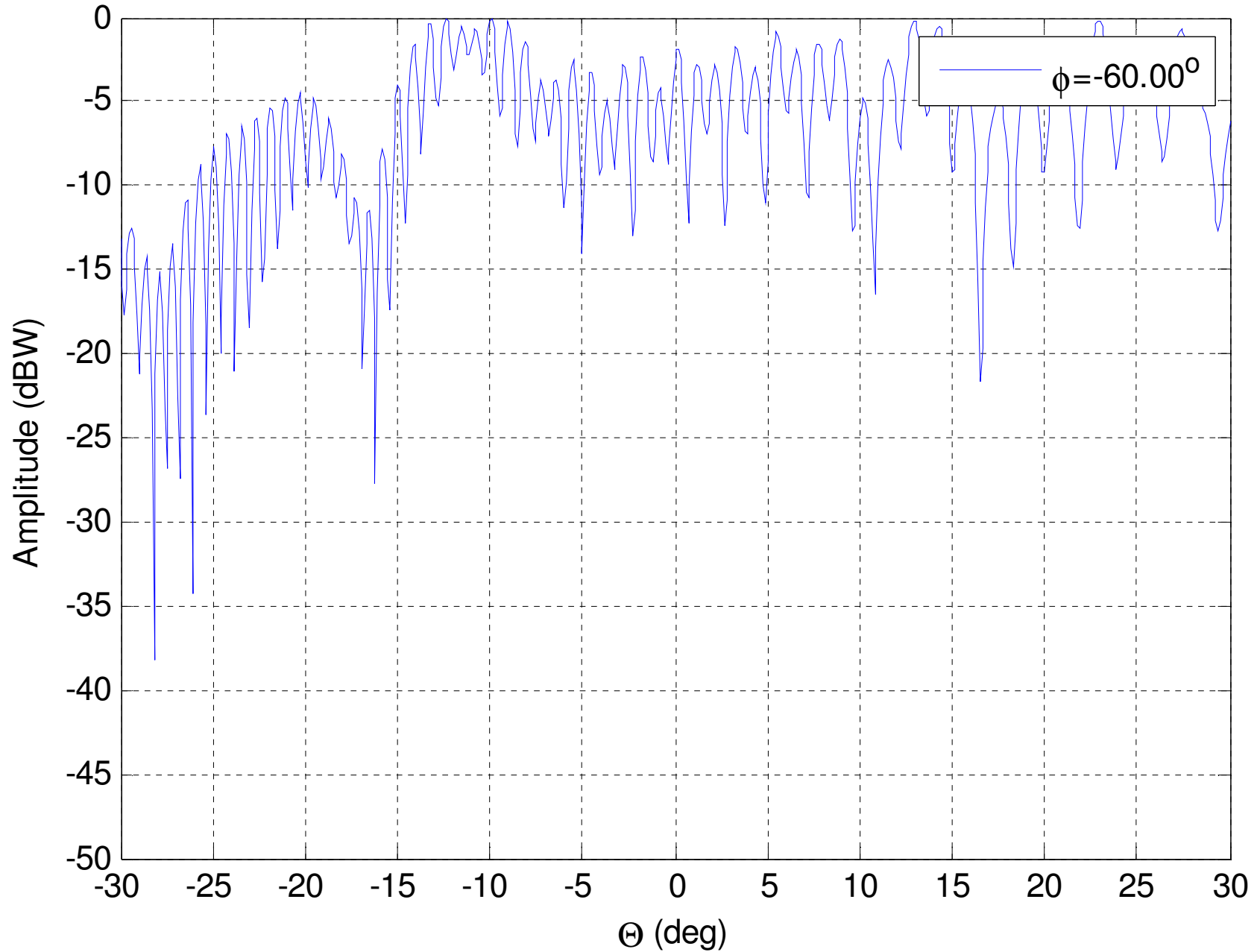
Input file: tx-17.3-rhcp-60.cut, Peak: -1.11 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

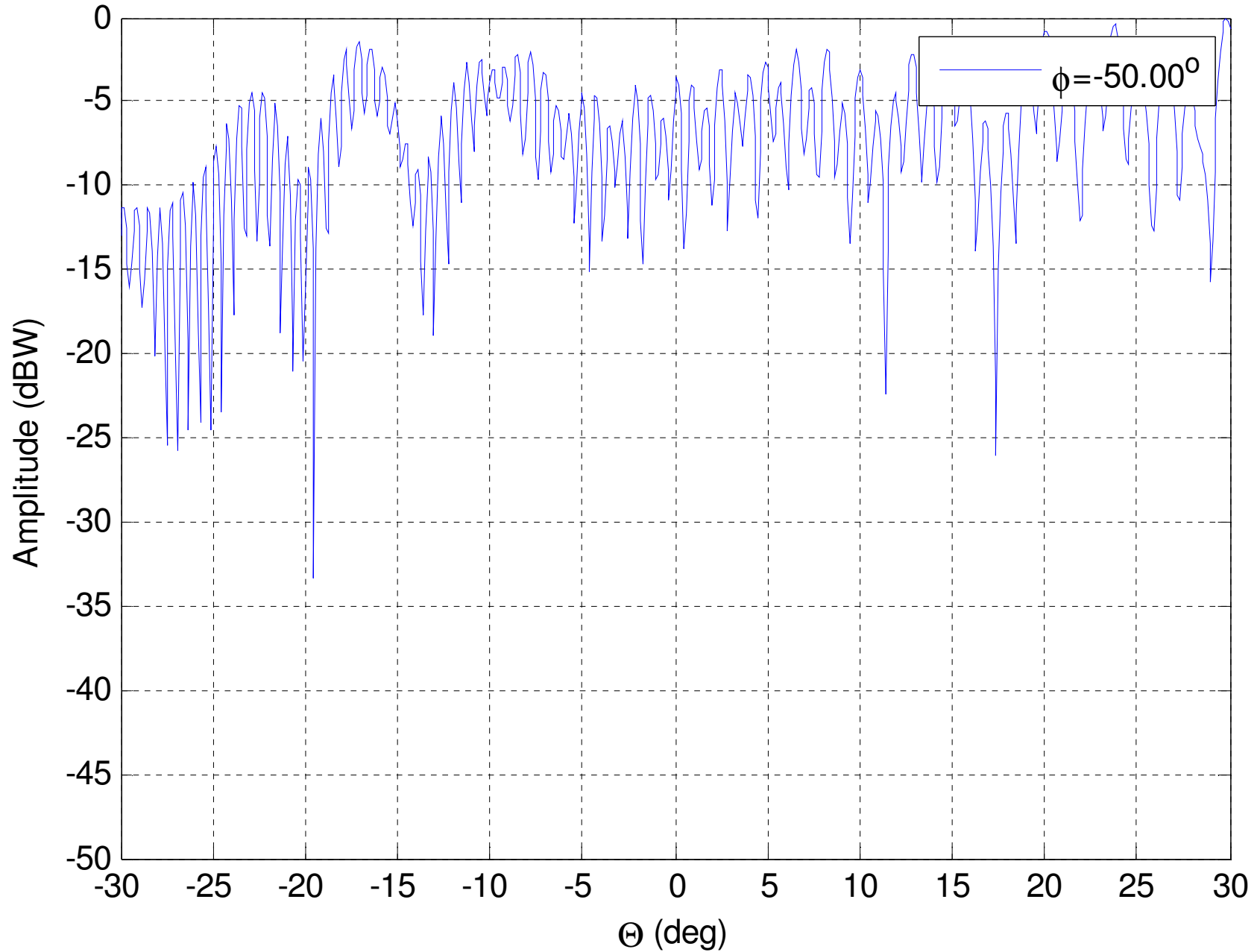
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -1.20 dBW, Date: 14-Dec-2011



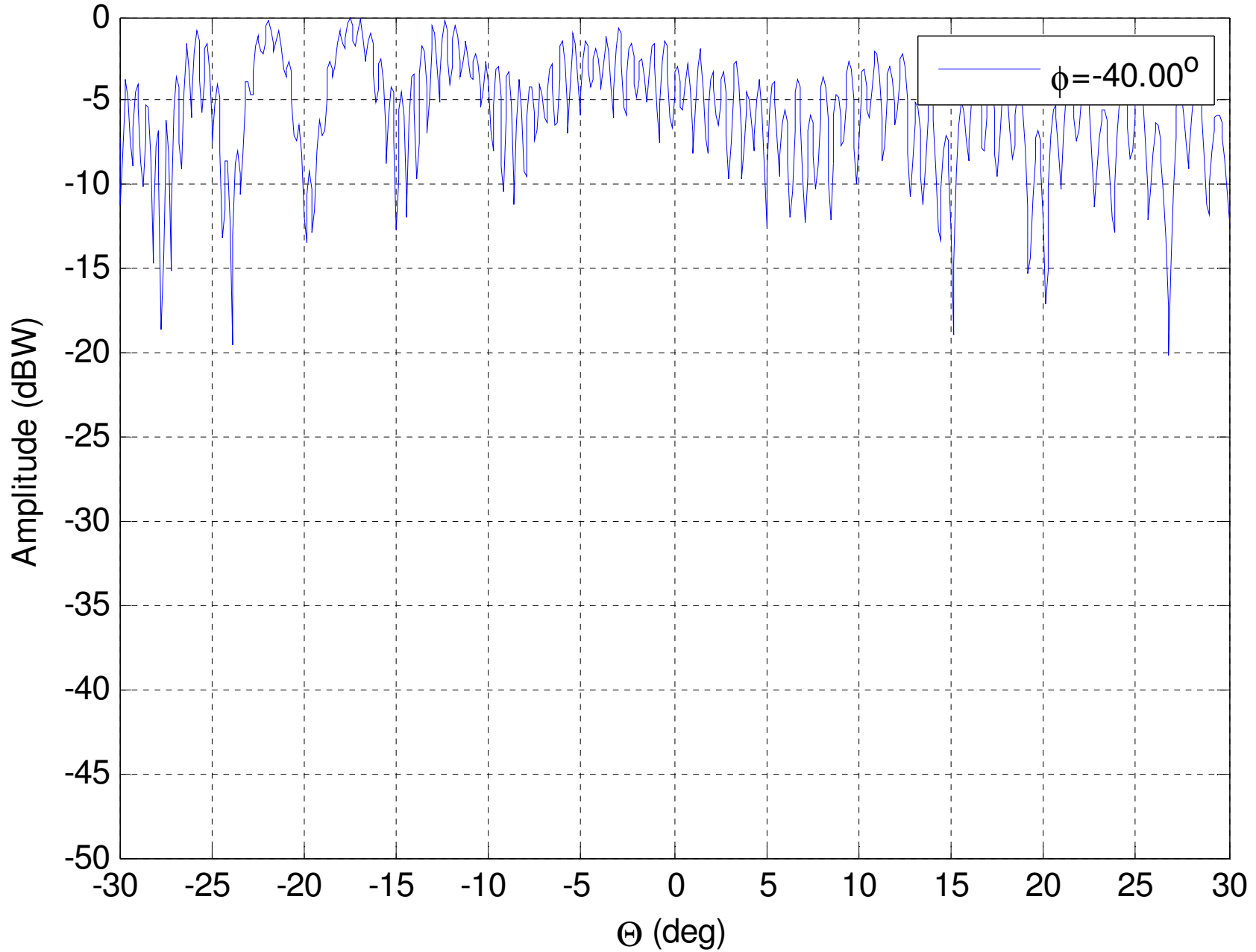
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: 0.52 dBW, Date: 14-Dec-2011



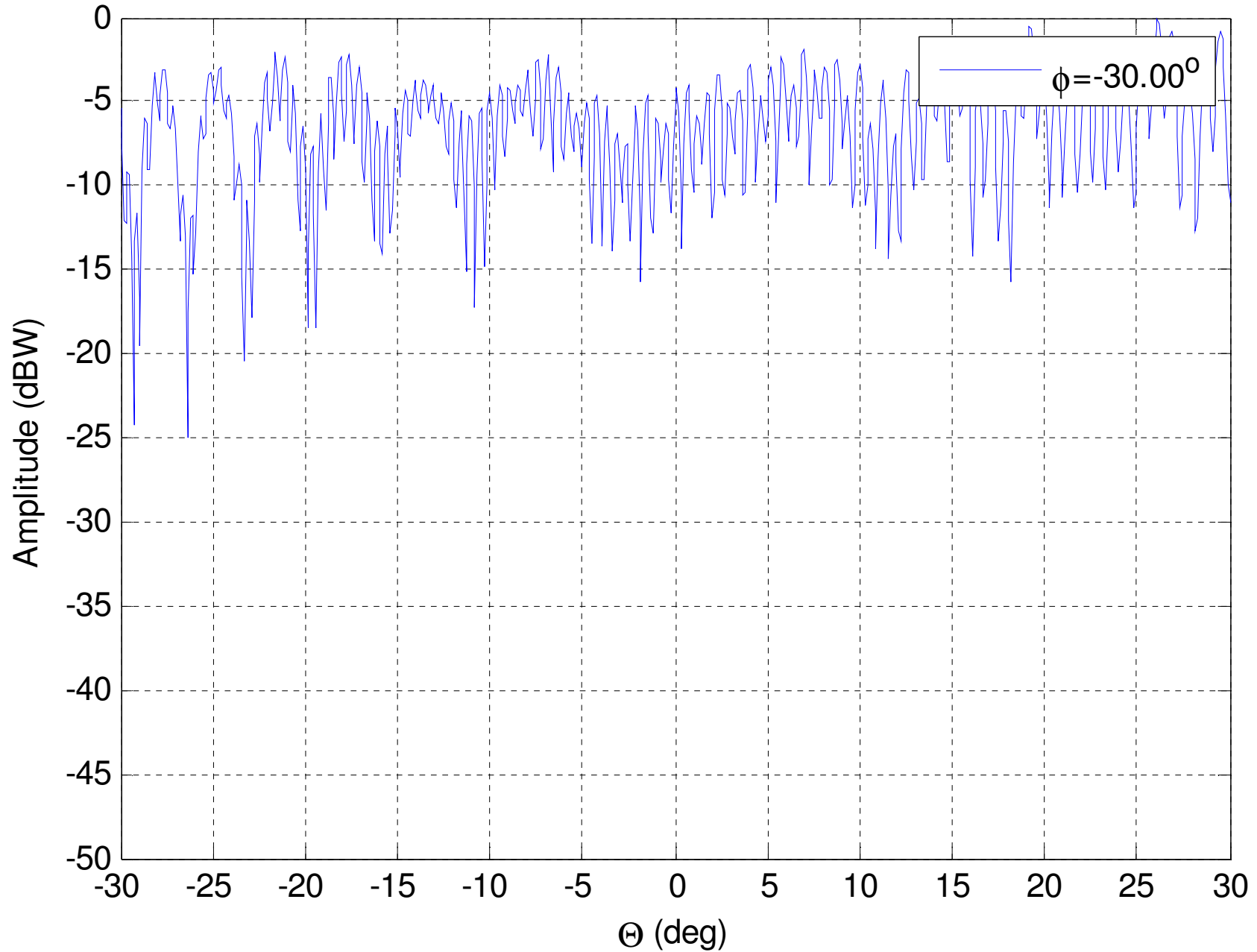
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -0.07 dBW, Date: 14-Dec-2011



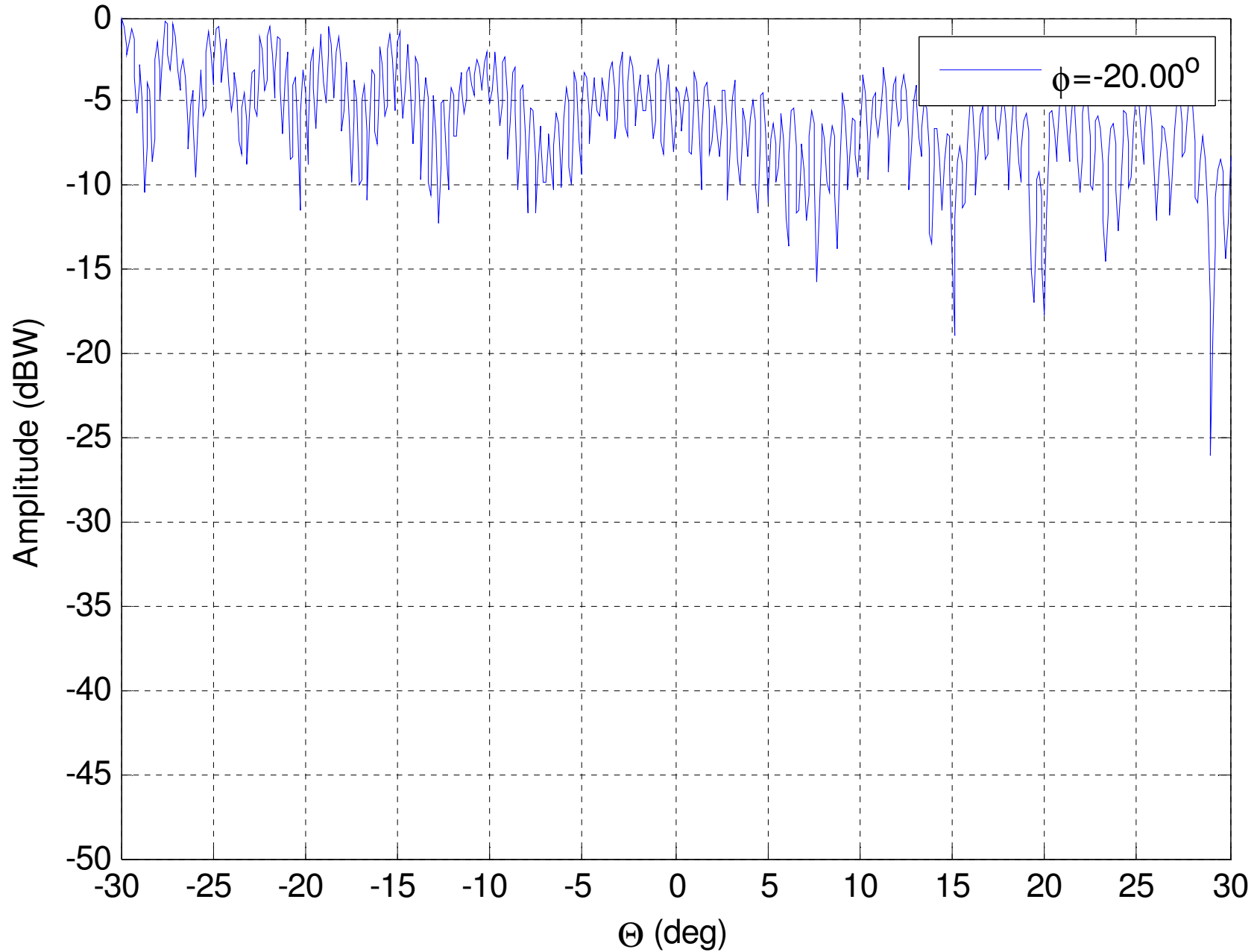
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 1.00 dBW, Date: 14-Dec-2011



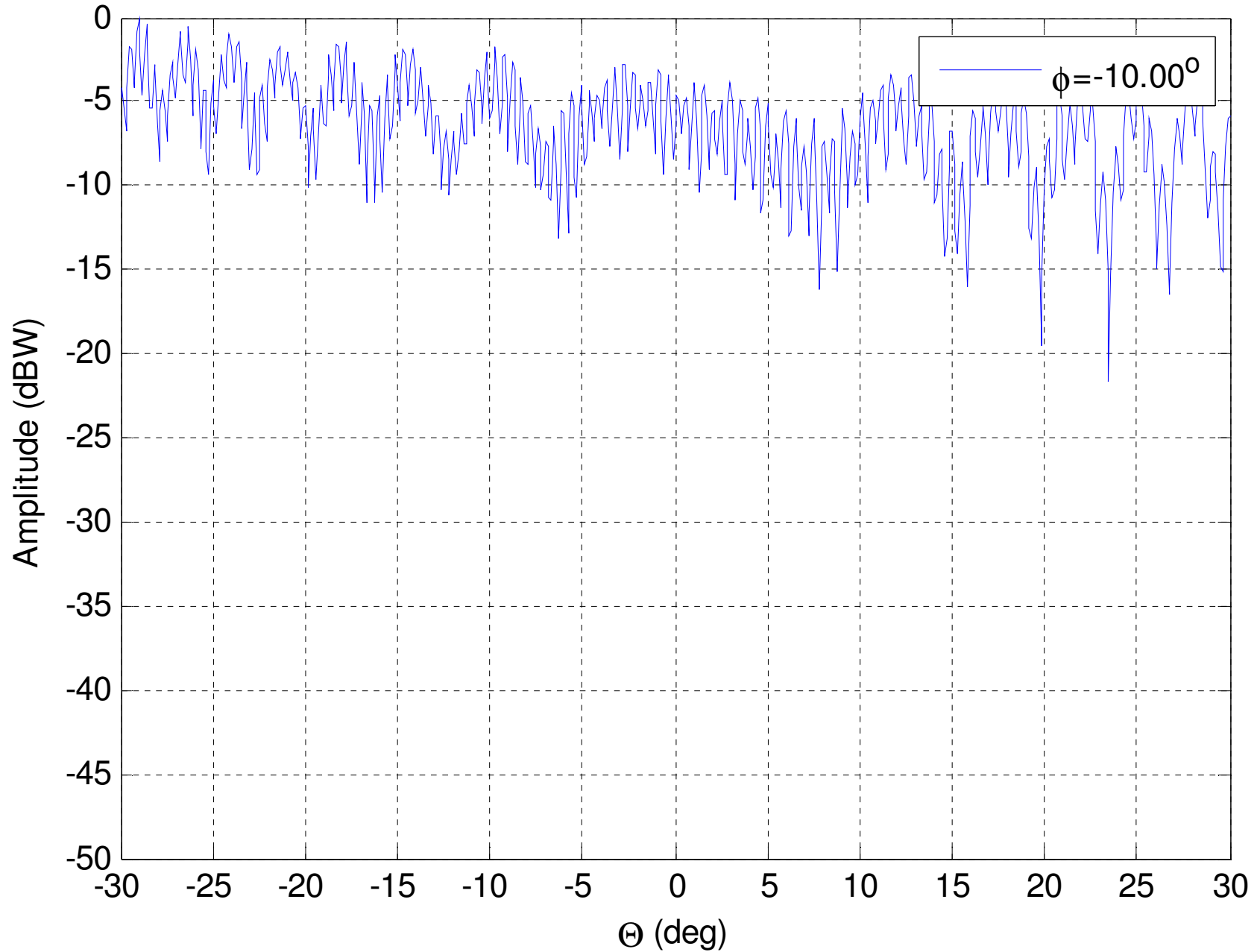
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 1.16 dBW, Date: 14-Dec-2011



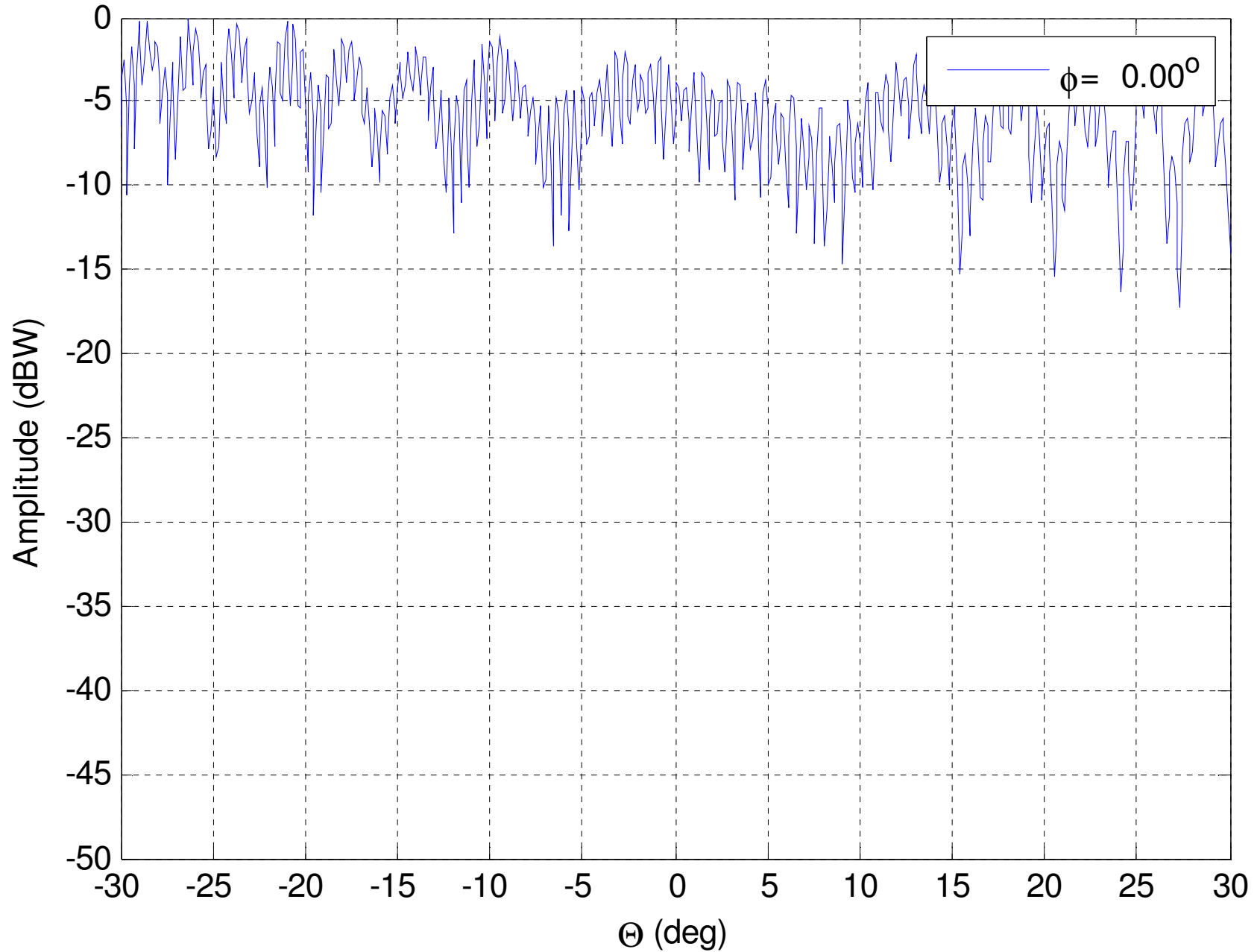
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 1.58 dBW, Date: 14-Dec-2011



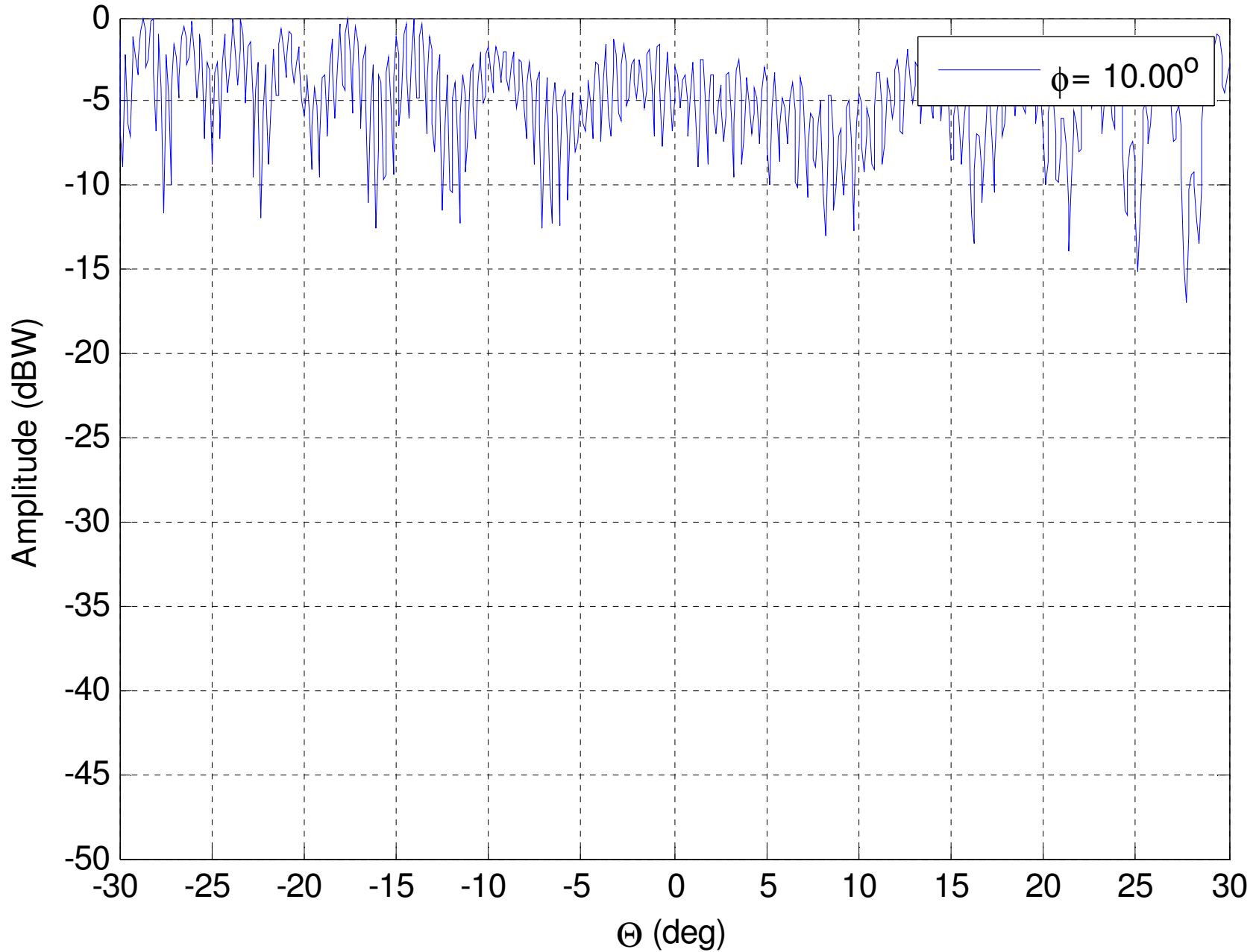
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 0.83 dBW, Date: 14-Dec-2011



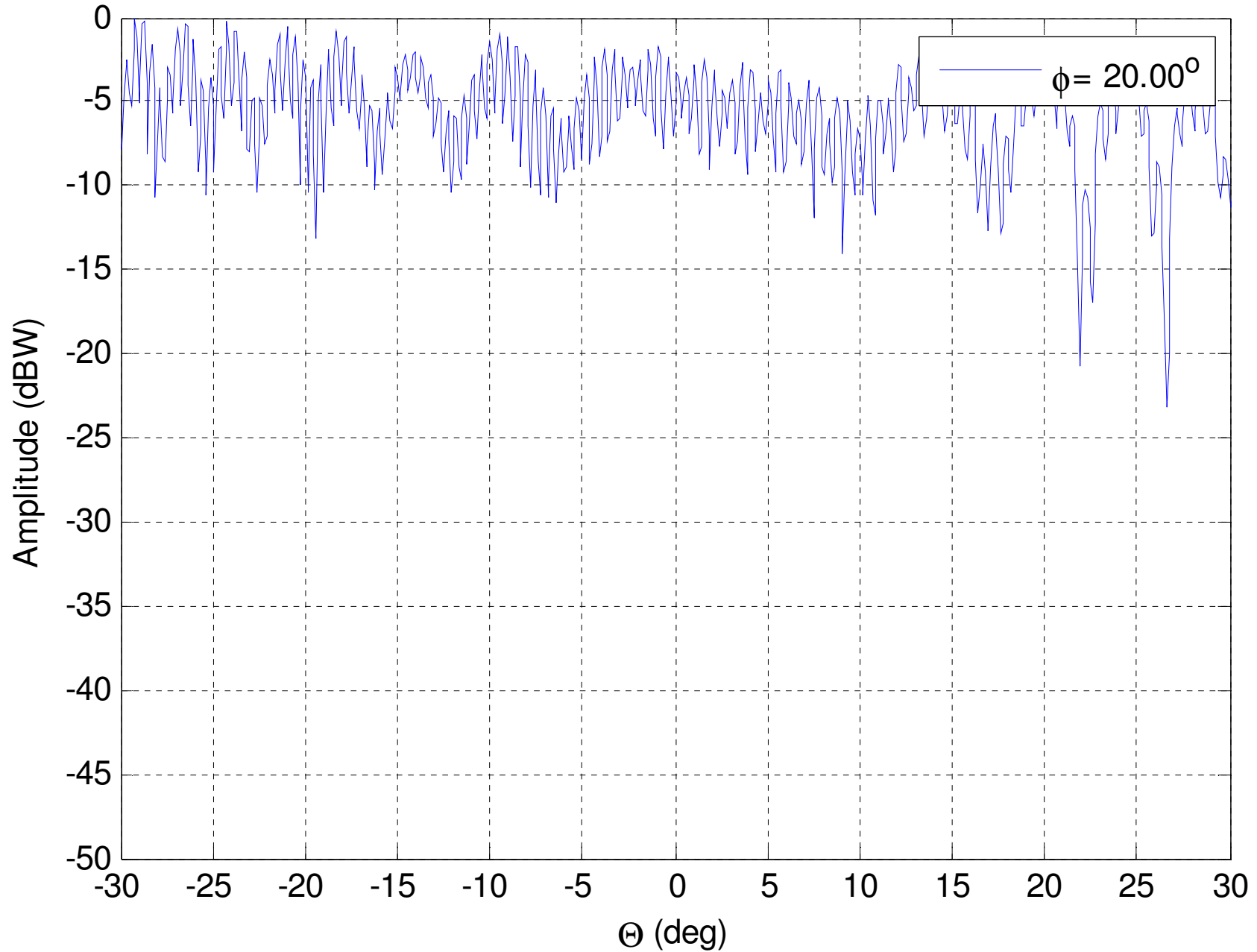
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 0.05 dBW, Date: 14-Dec-2011



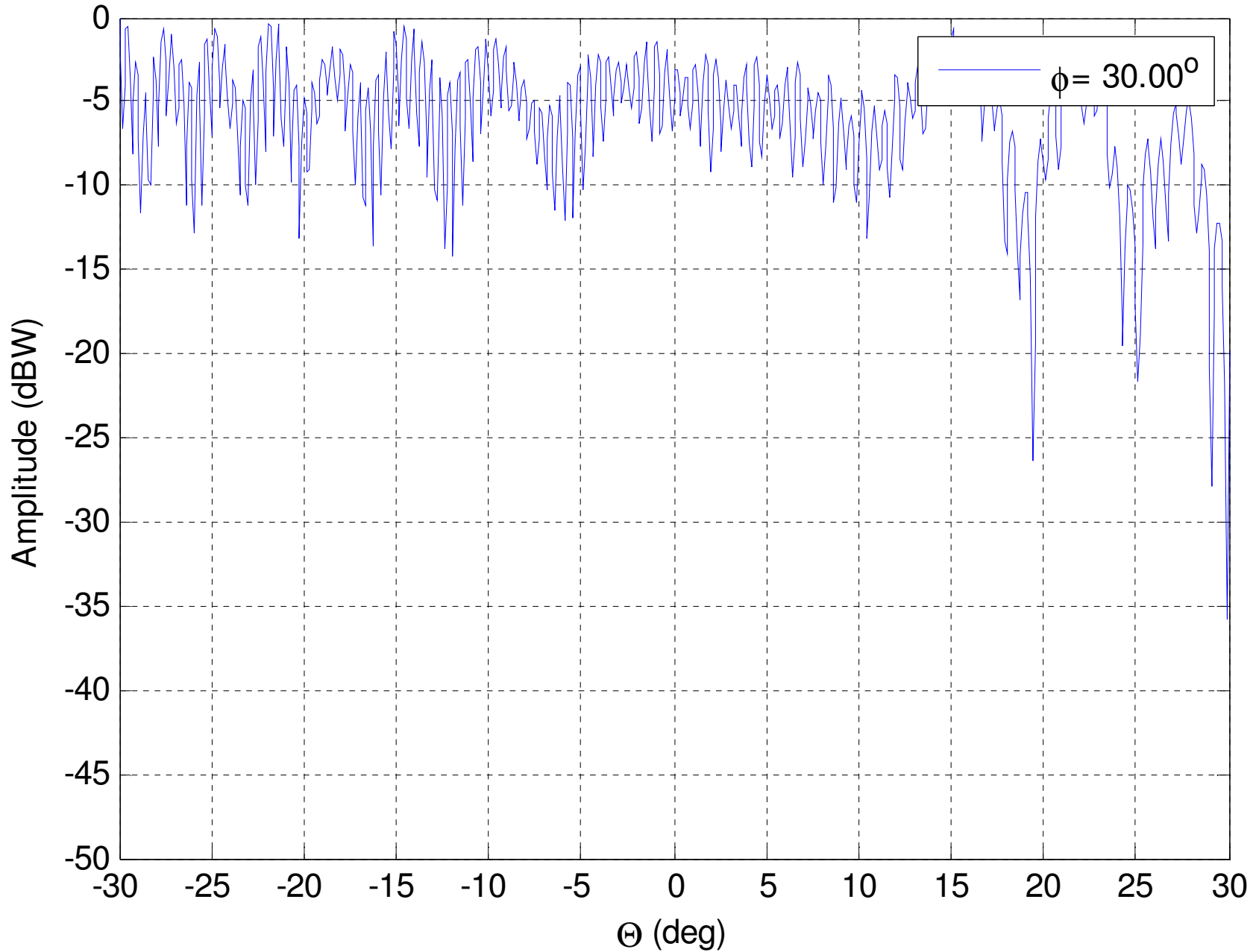
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 0.35 dBW, Date: 14-Dec-2011



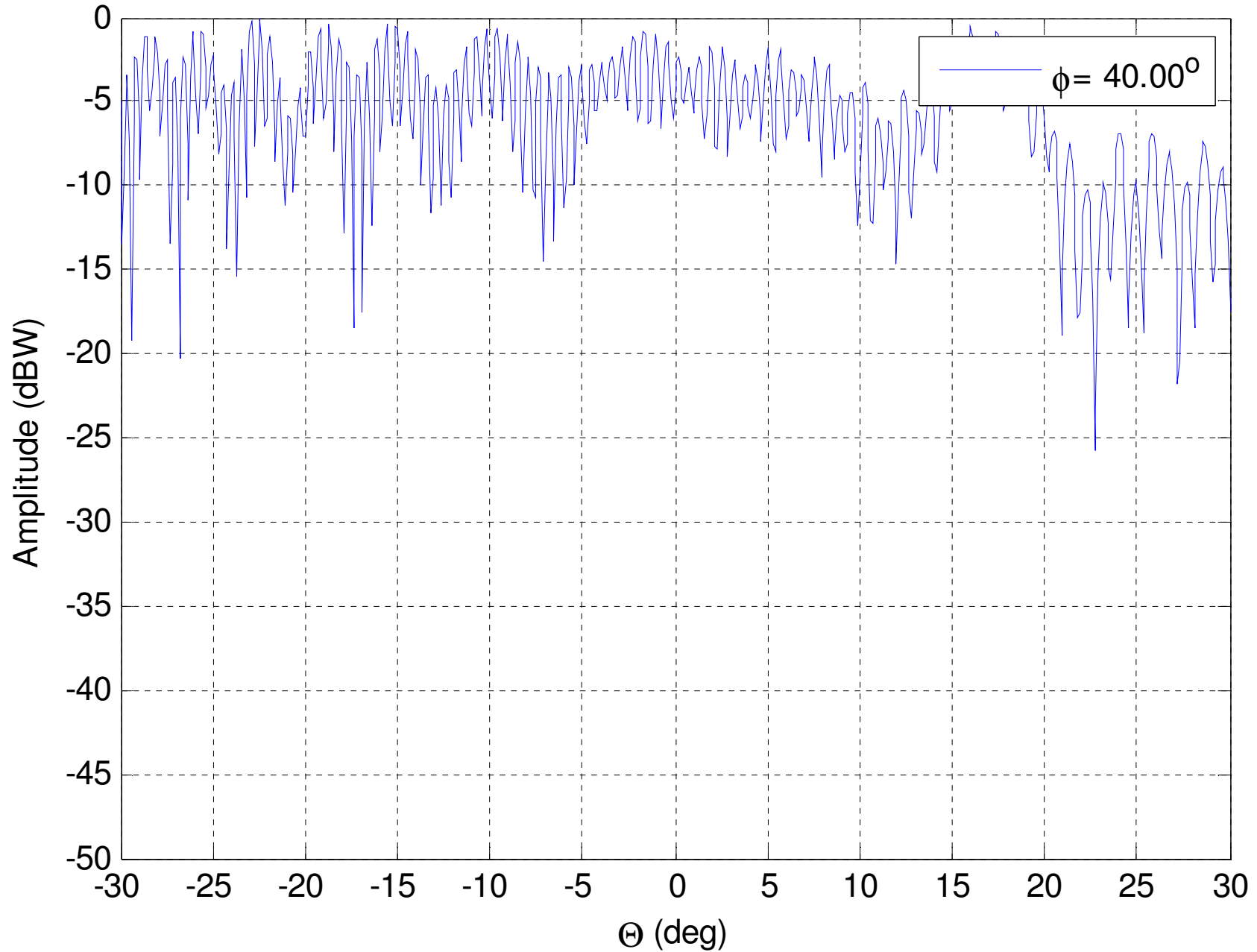
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: 0.05 dBW, Date: 14-Dec-2011



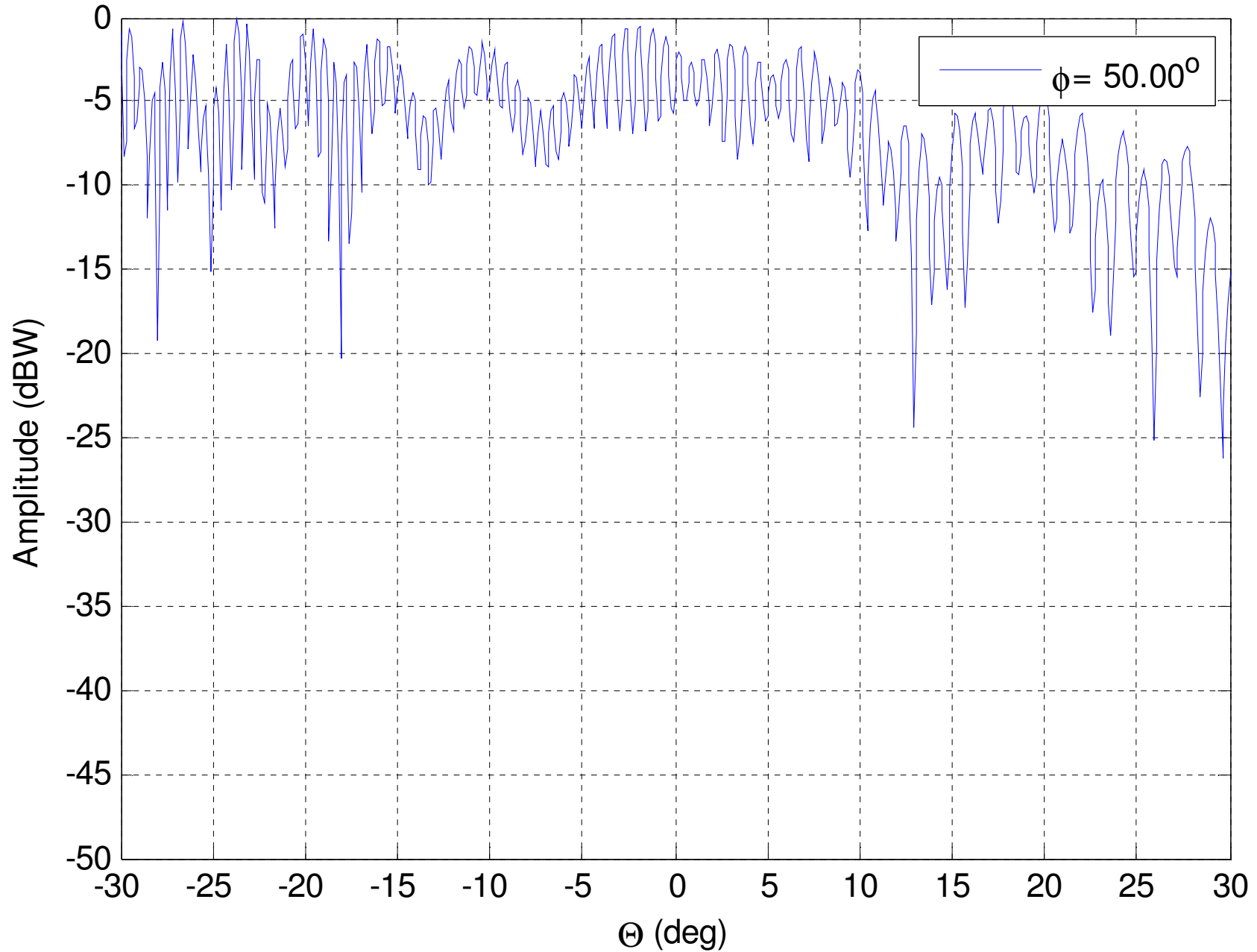
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -0.55 dBW, Date: 14-Dec-2011



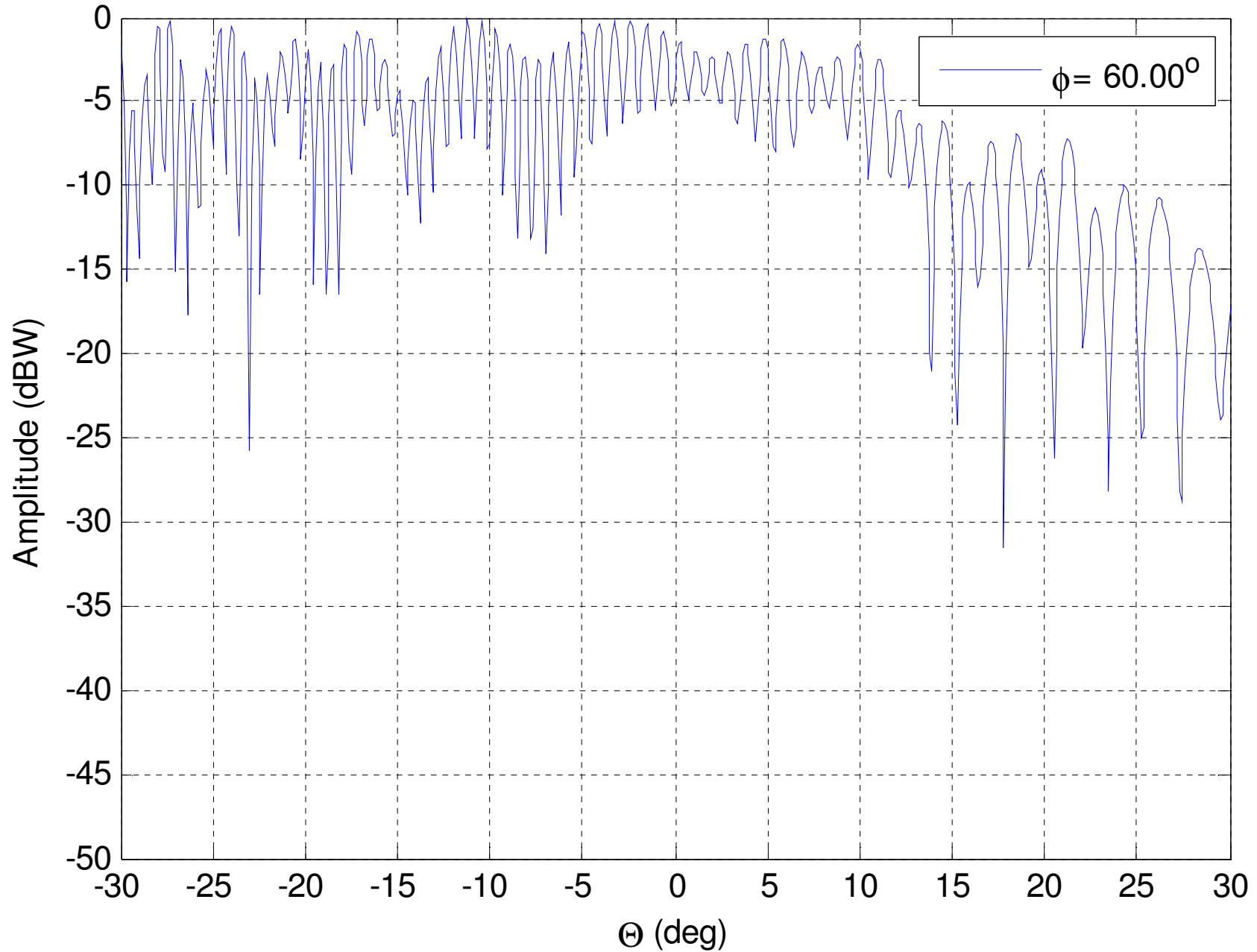
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -0.75 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

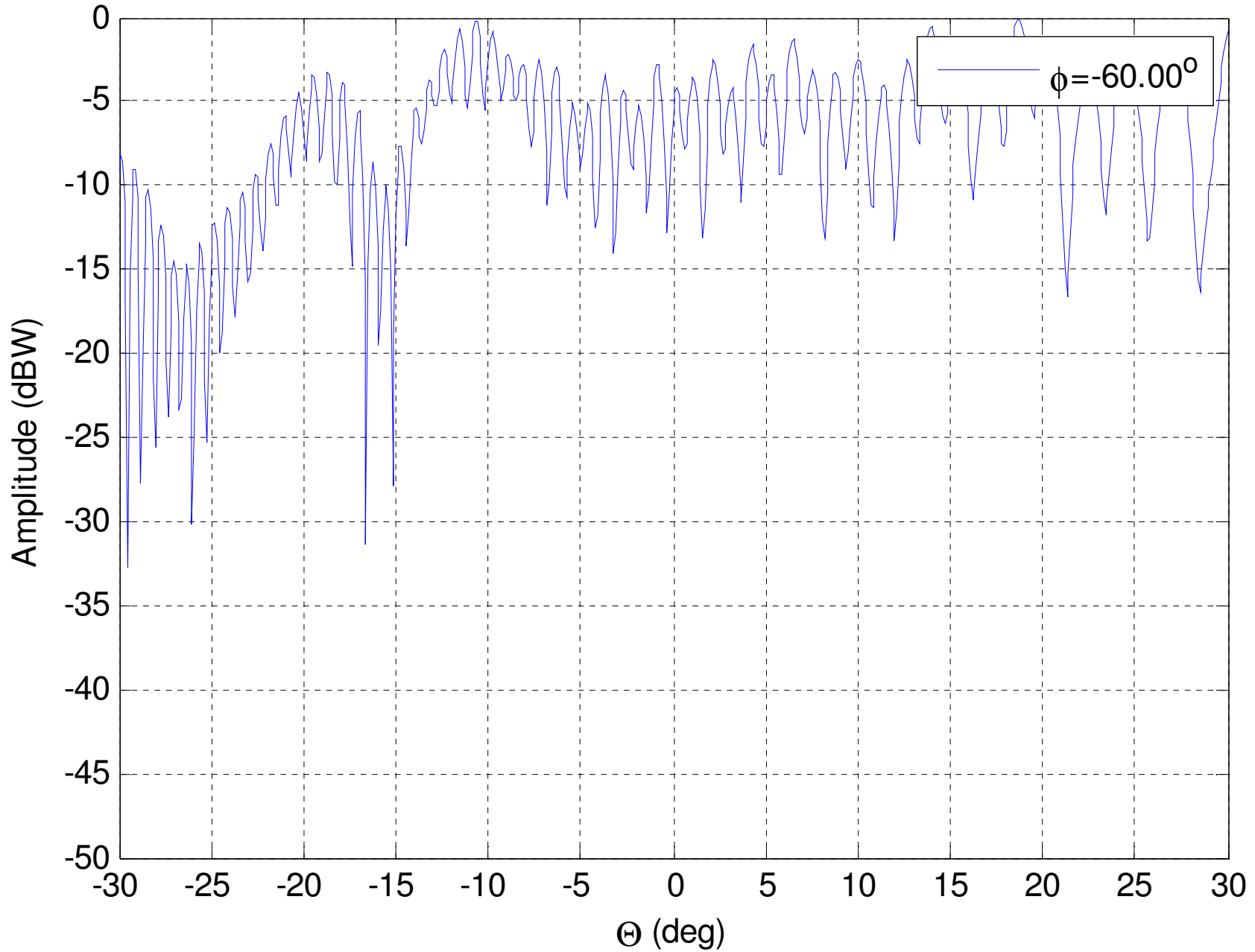
Input file: tx-17.3-lhcp-60.cut, Peak: -1.23 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

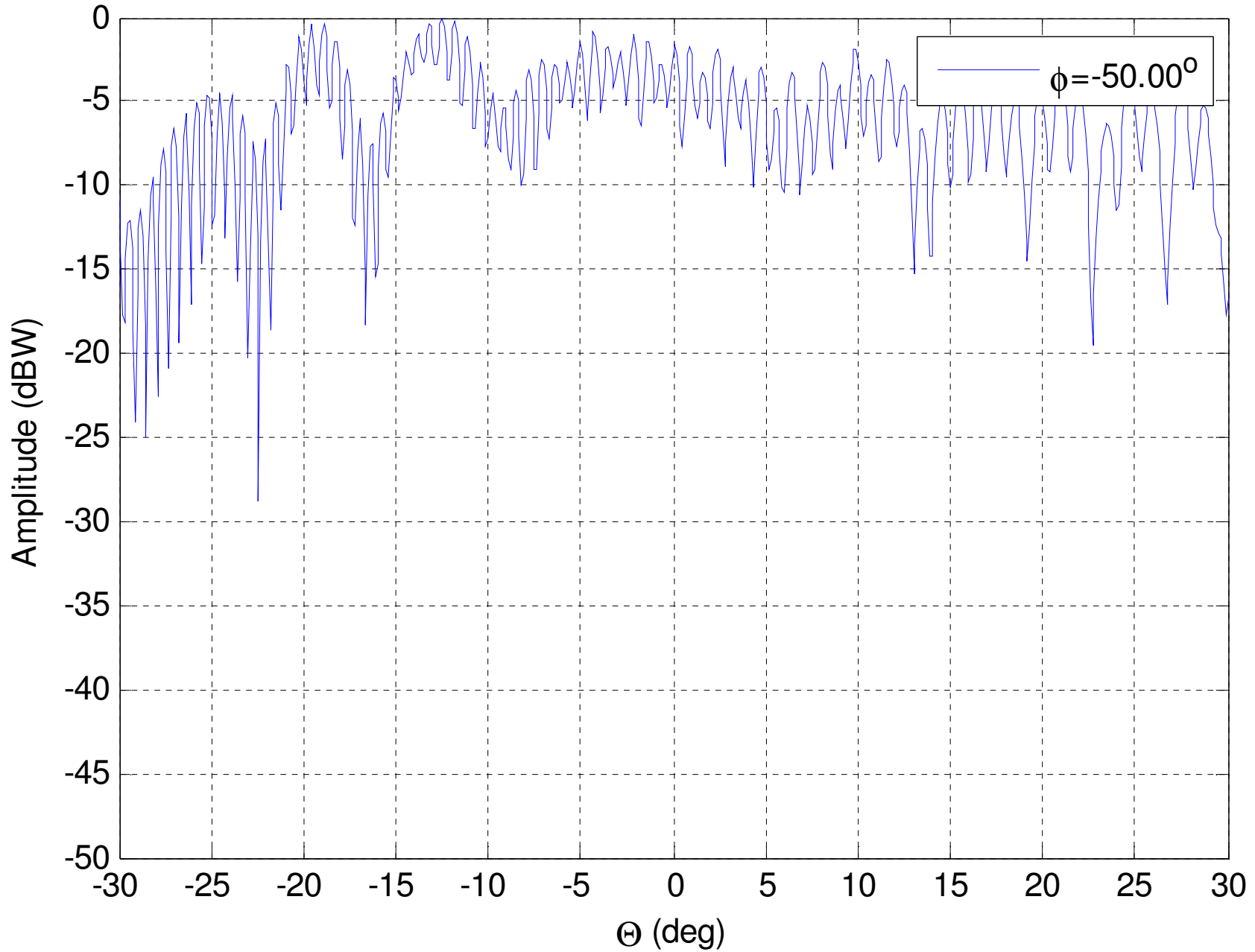
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -0.84 dBW, Date: 14-Dec-2011



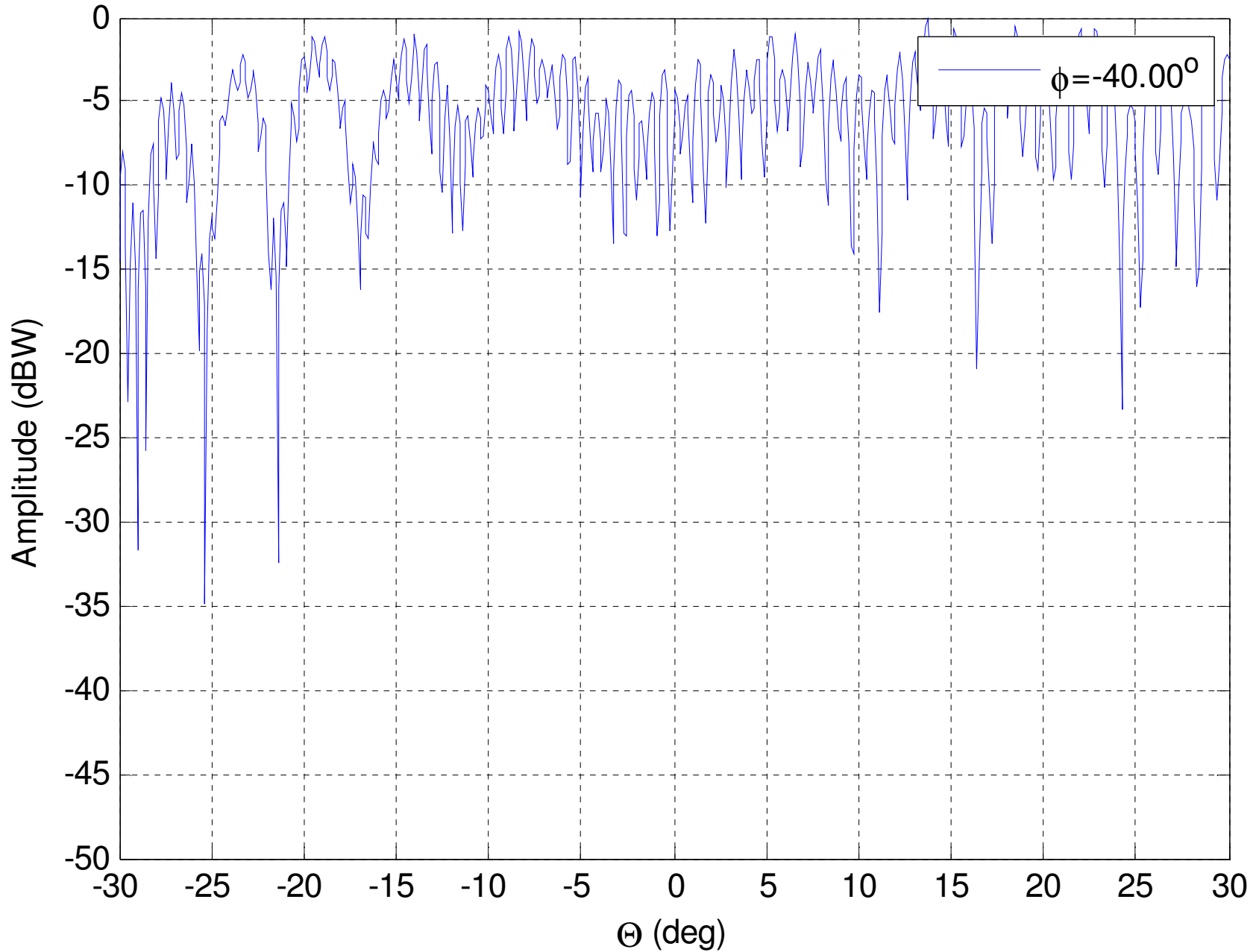
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -0.24 dBW, Date: 14-Dec-2011



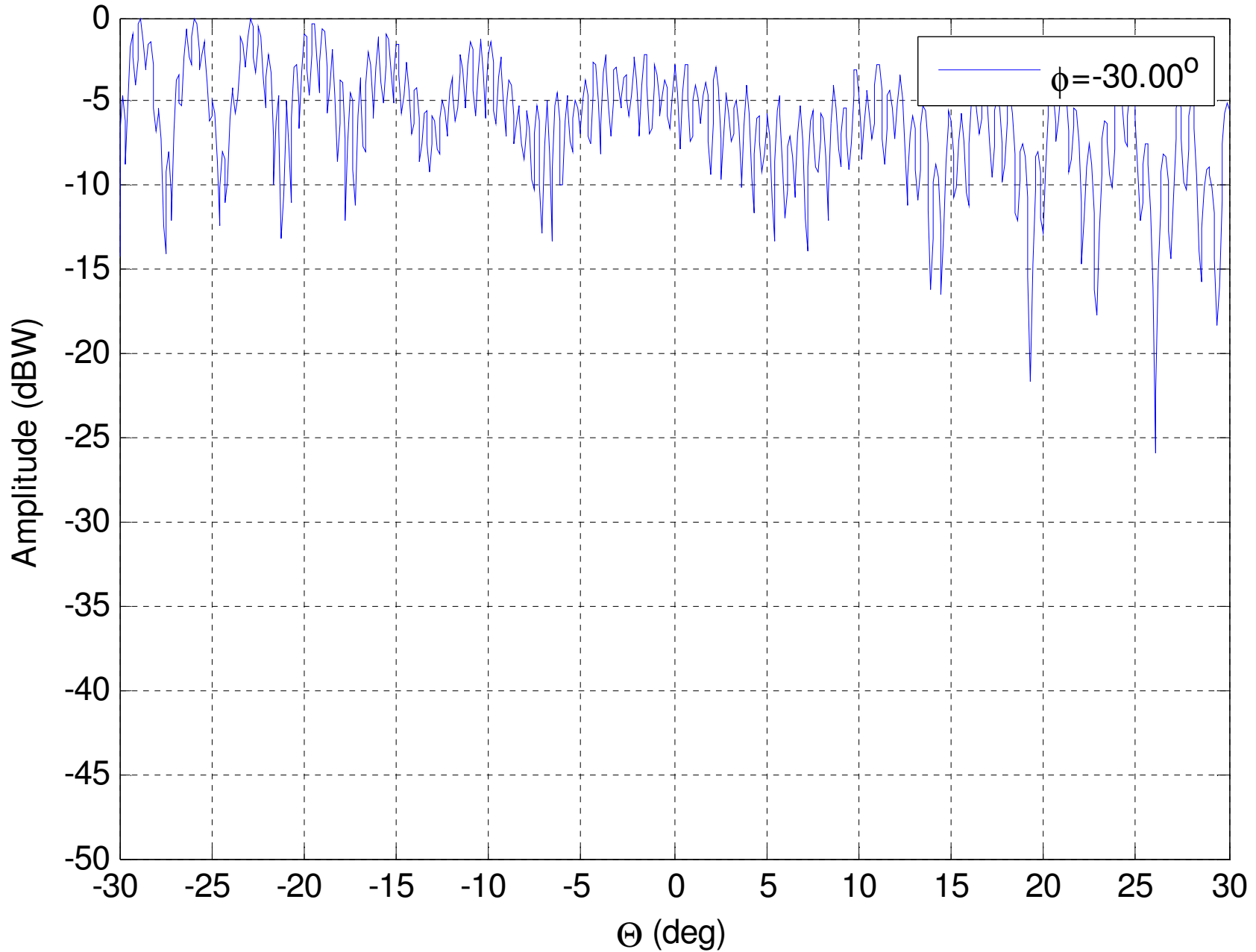
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -0.52 dBW, Date: 14-Dec-2011



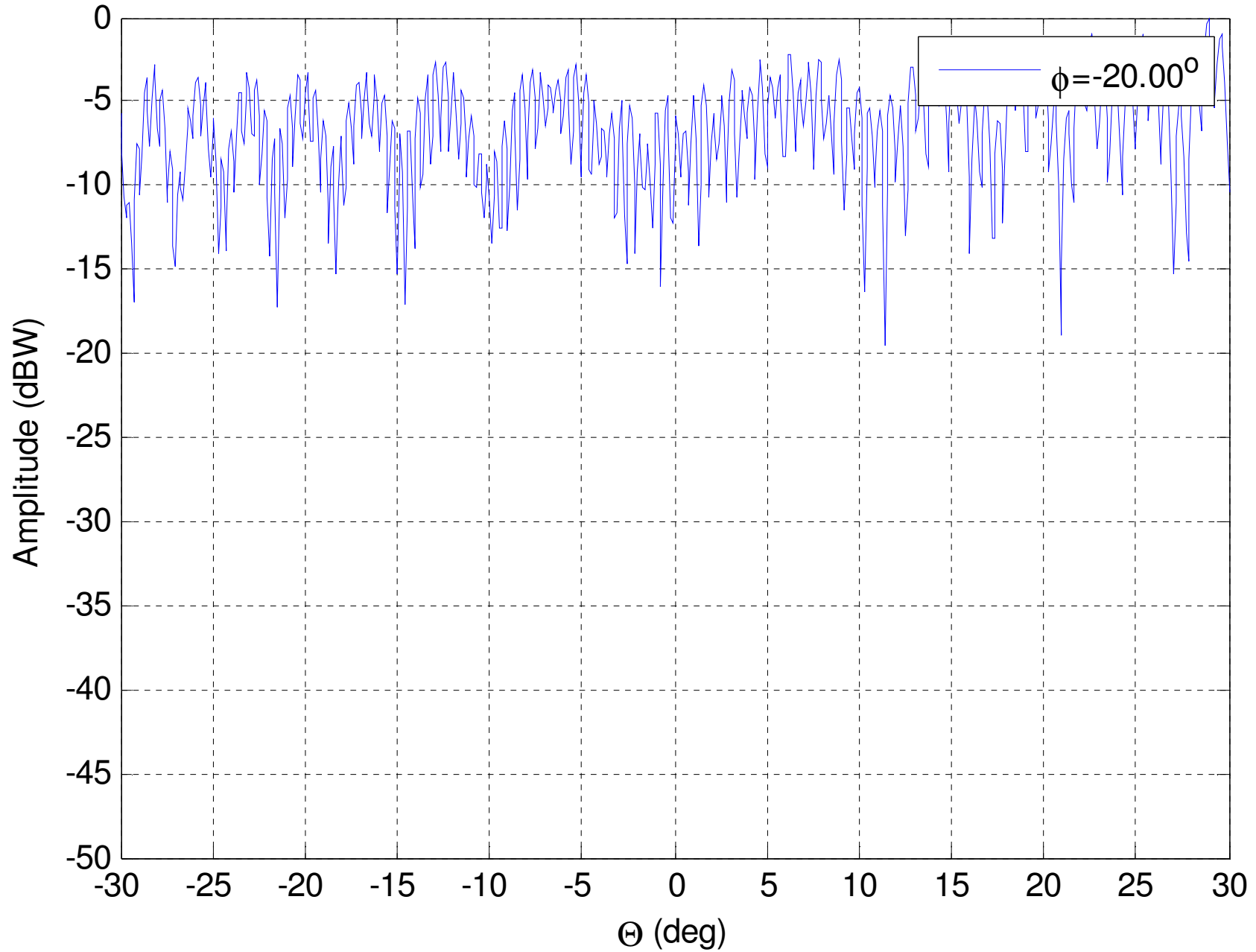
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 0.80 dBW, Date: 14-Dec-2011



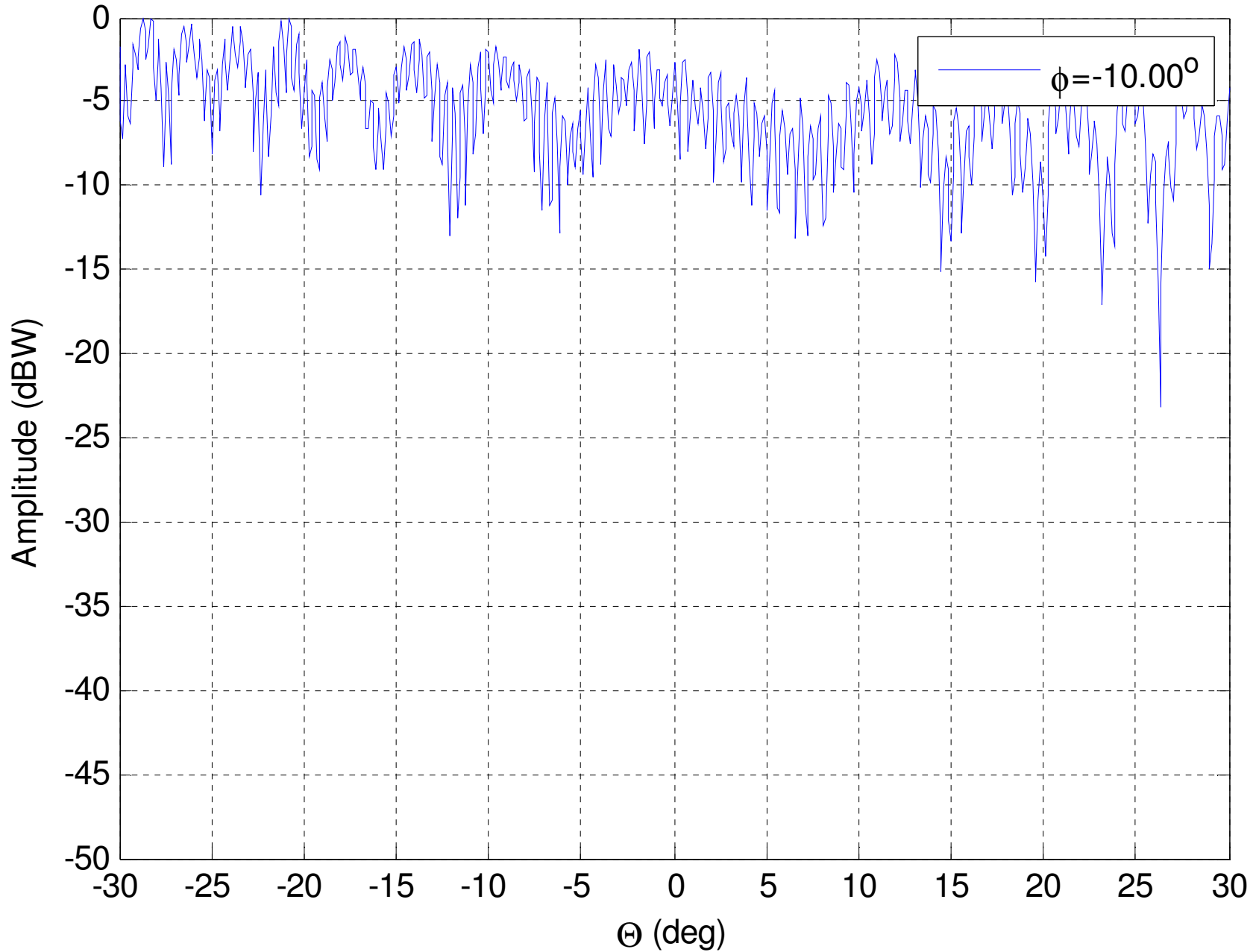
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 1.03 dBW, Date: 14-Dec-2011



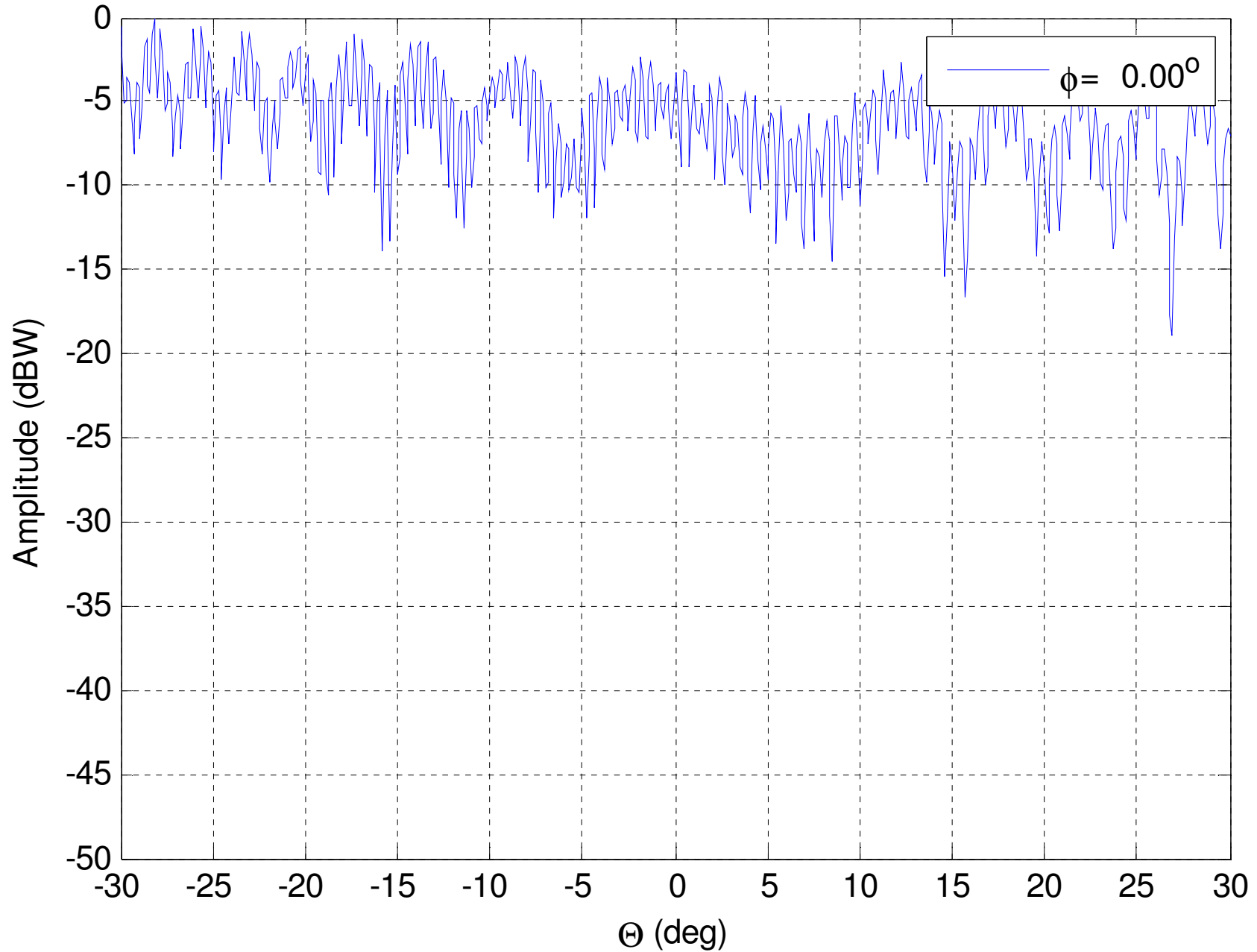
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 0.55 dBW, Date: 14-Dec-2011



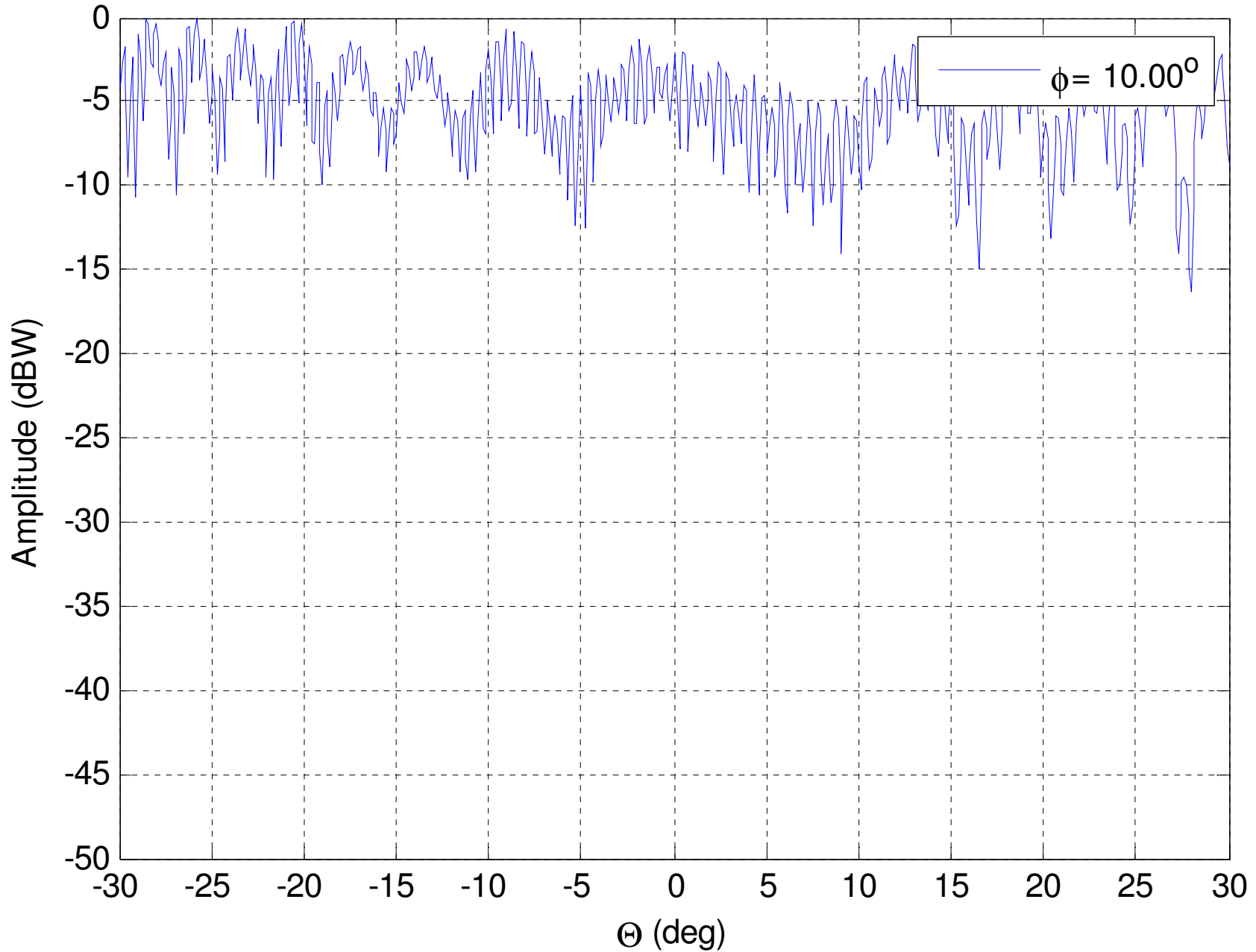
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 1.17 dBW, Date: 14-Dec-2011



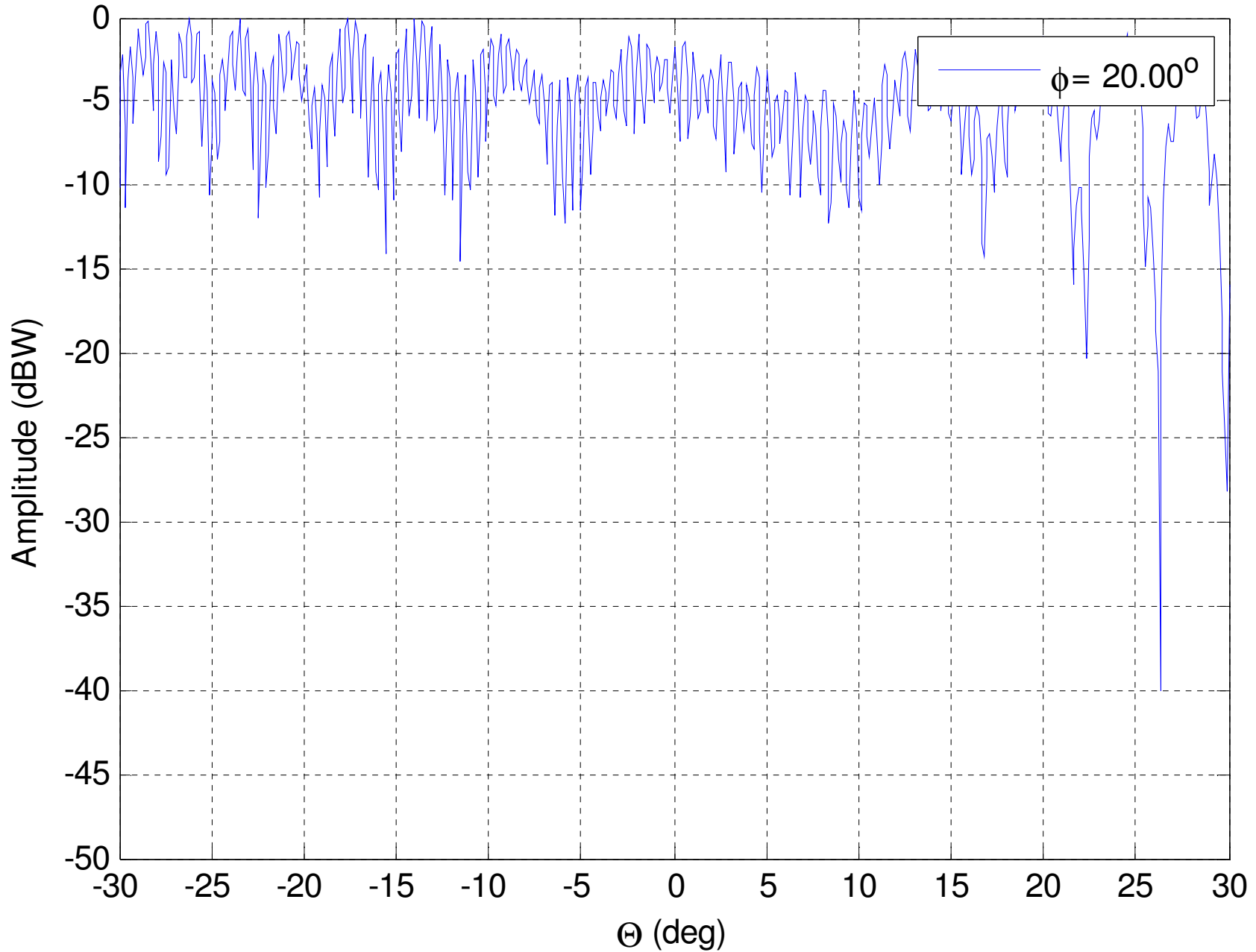
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 0.12 dBW, Date: 14-Dec-2011



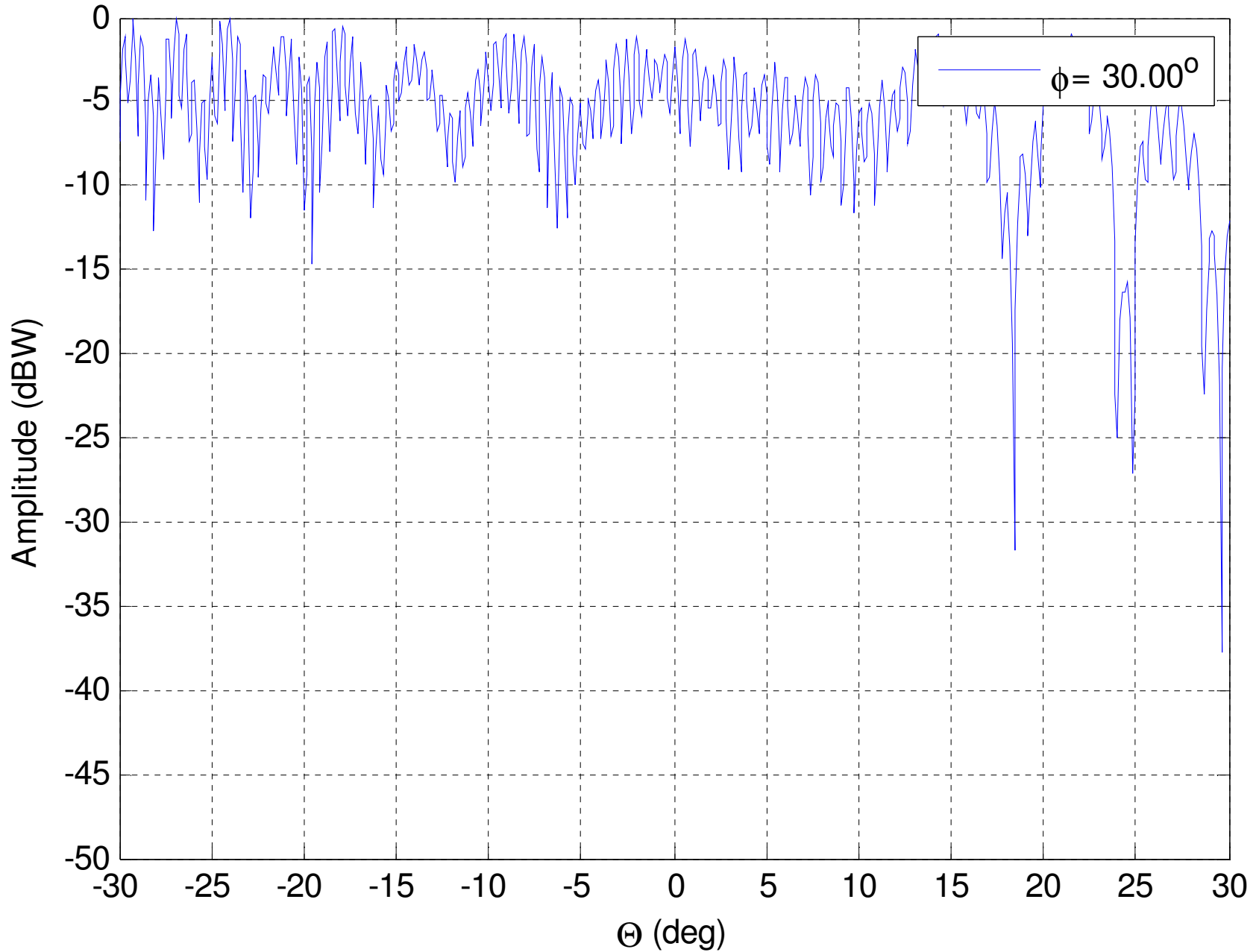
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -0.39 dBW, Date: 14-Dec-2011



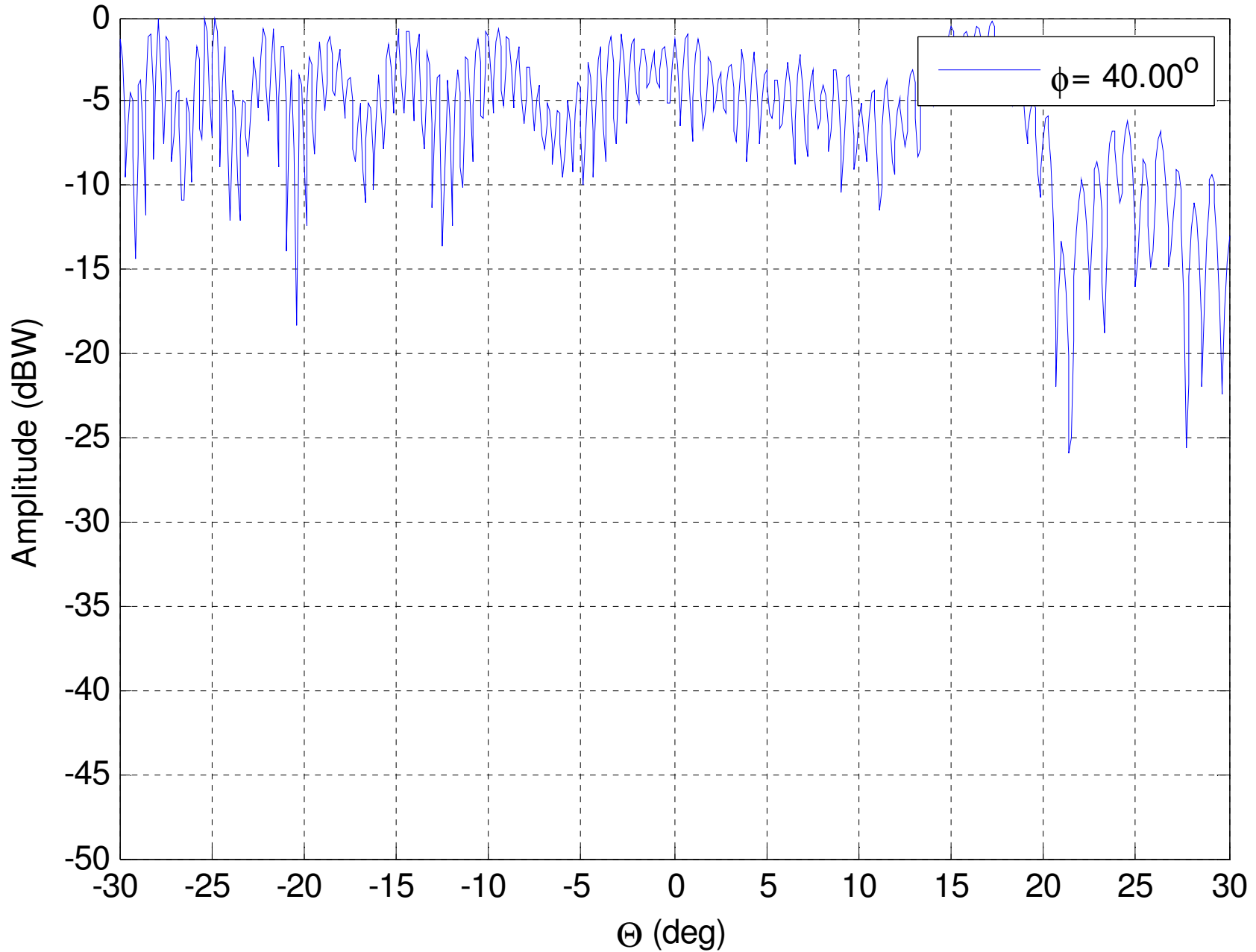
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.41 dBW, Date: 14-Dec-2011



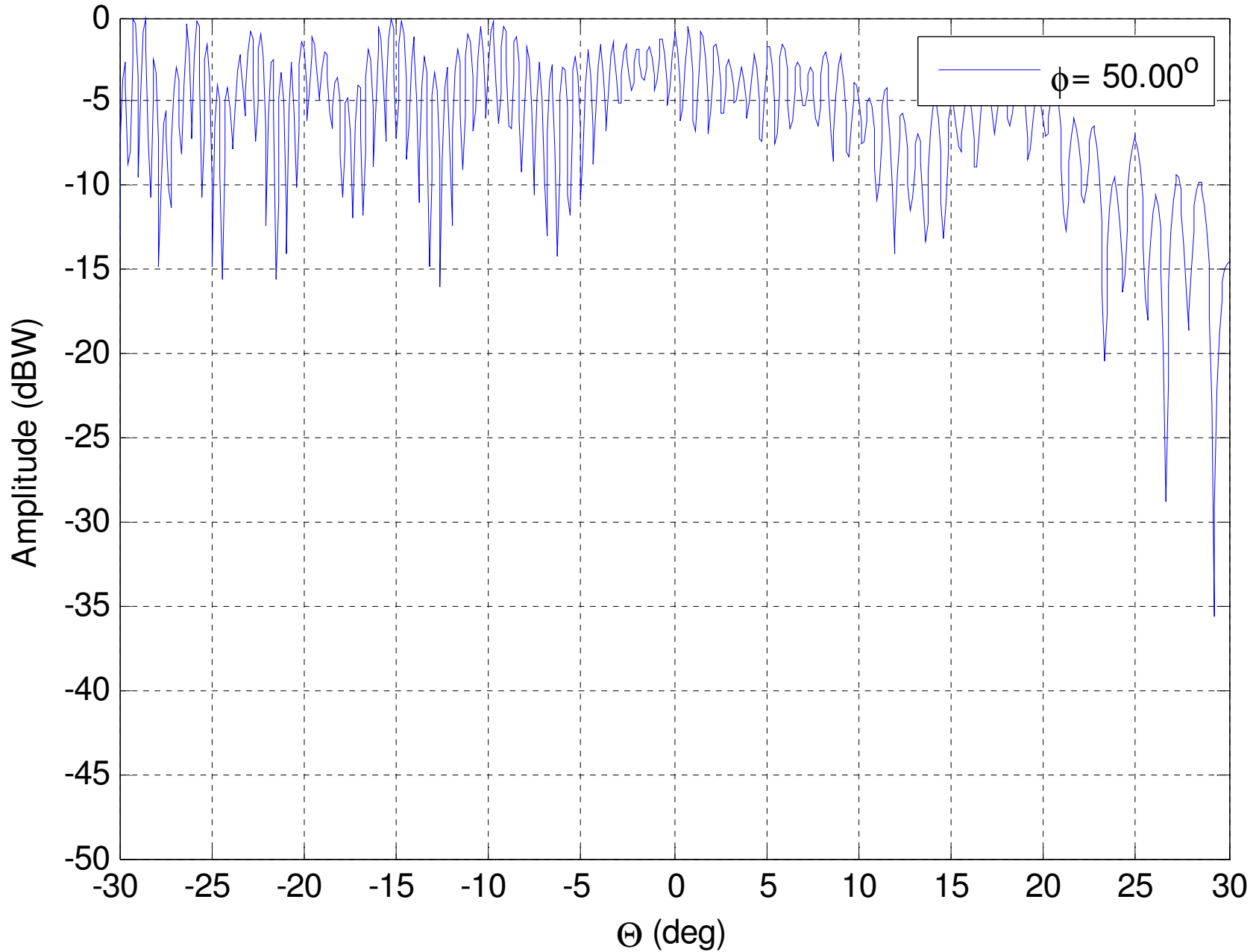
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -0.79 dBW, Date: 14-Dec-2011



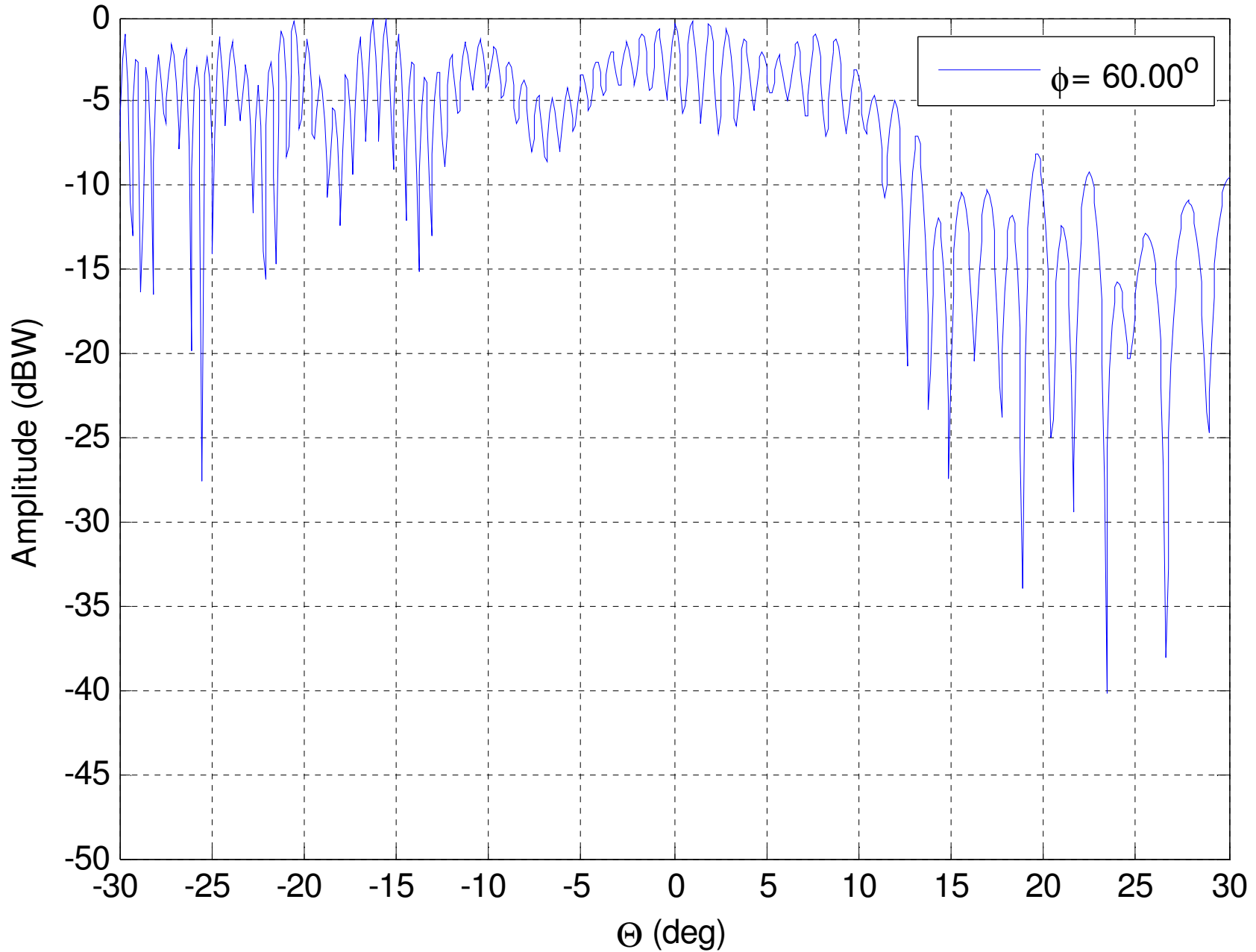
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -1.13 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

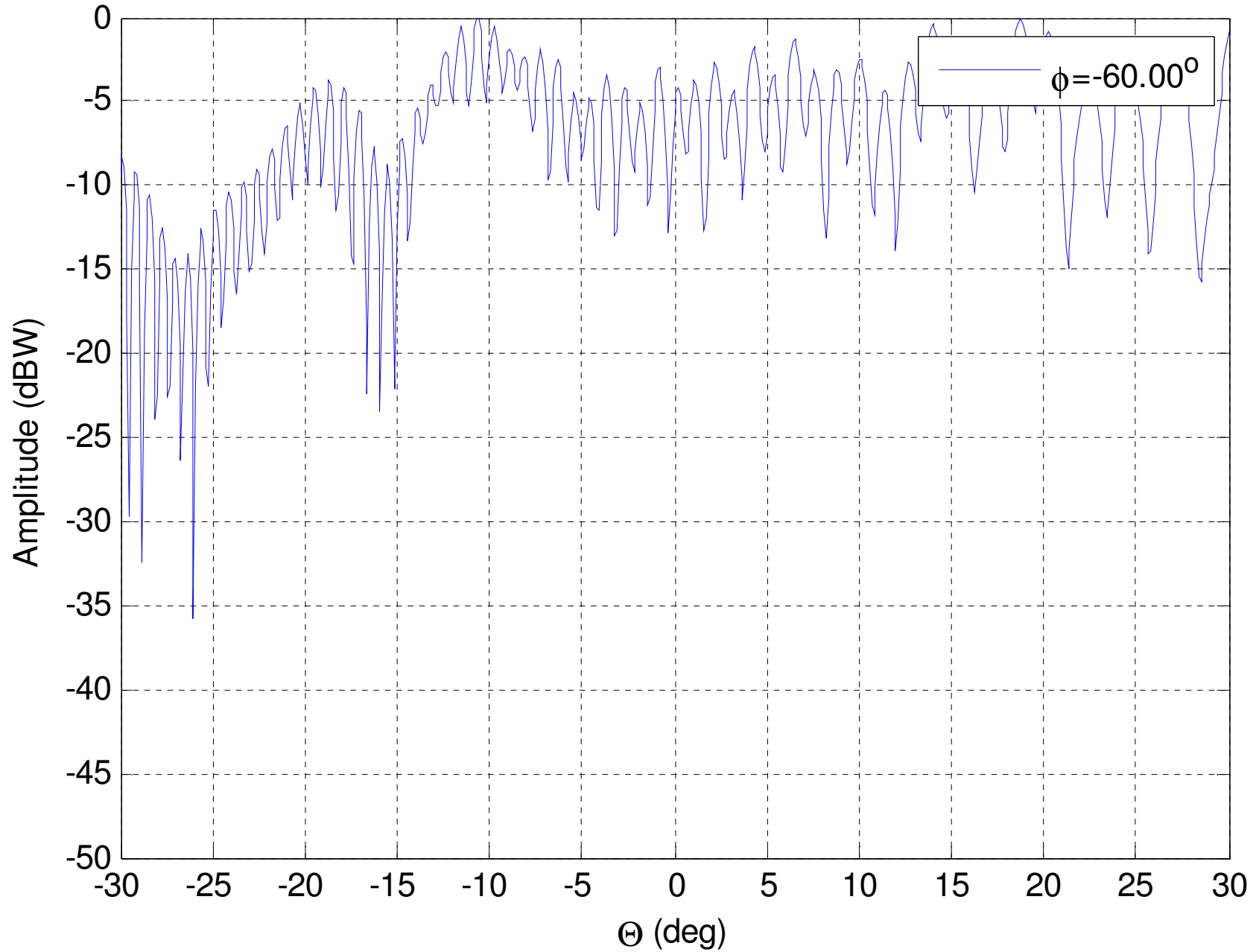
Input file: tx-17.5-rhcp-60.cut, Peak: -1.55 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

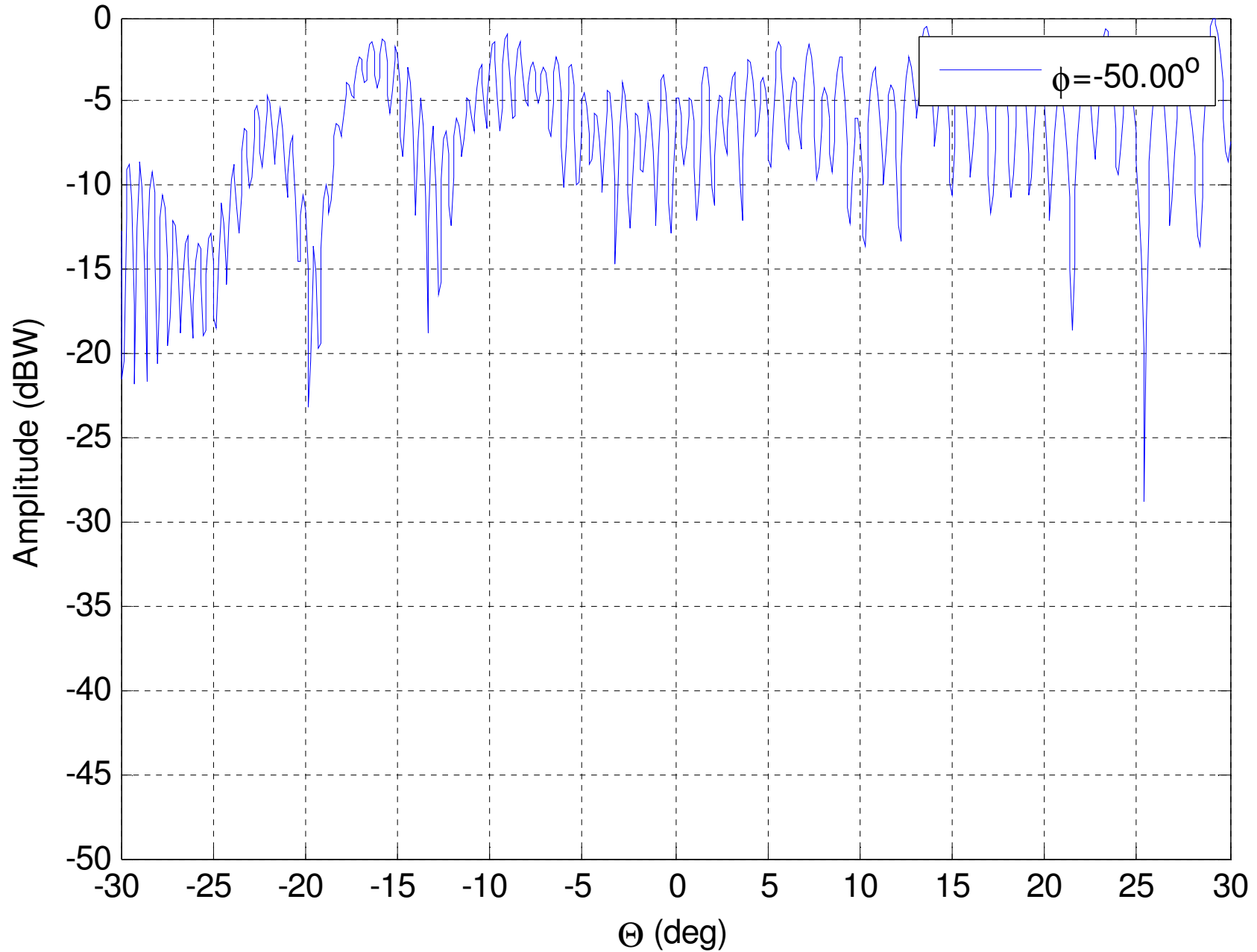
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -0.81 dBW, Date: 14-Dec-2011



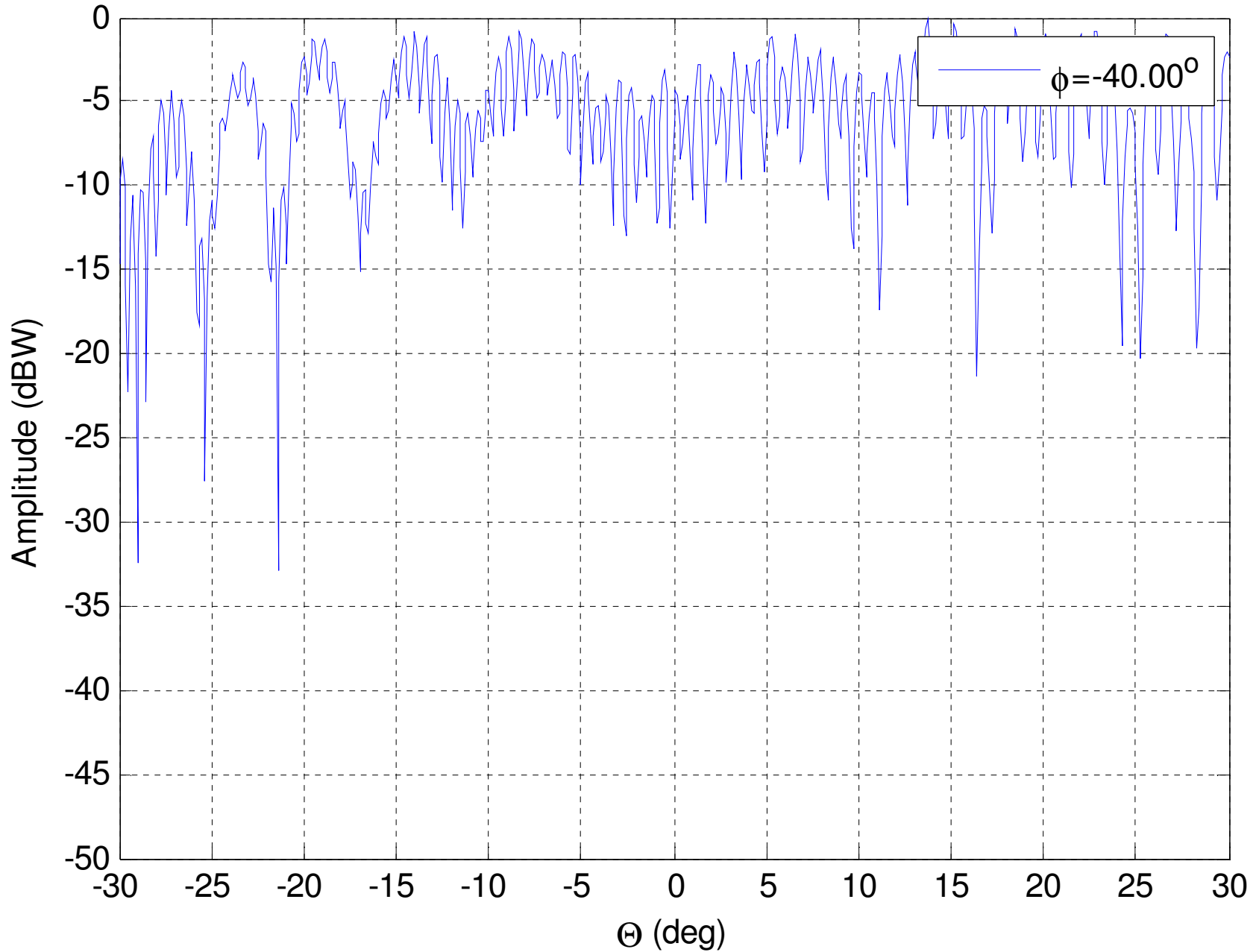
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -0.31 dBW, Date: 14-Dec-2011



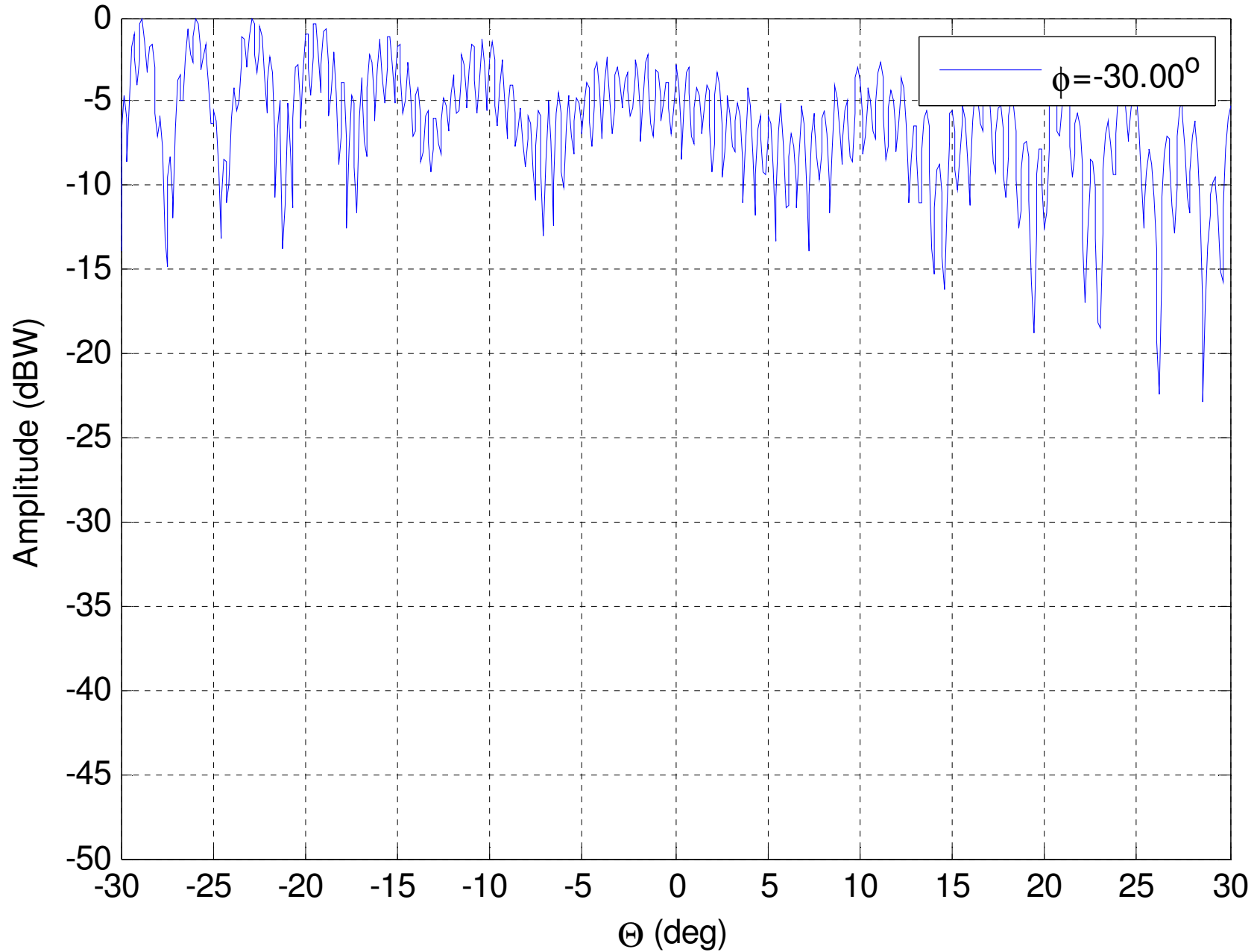
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -0.58 dBW, Date: 14-Dec-2011



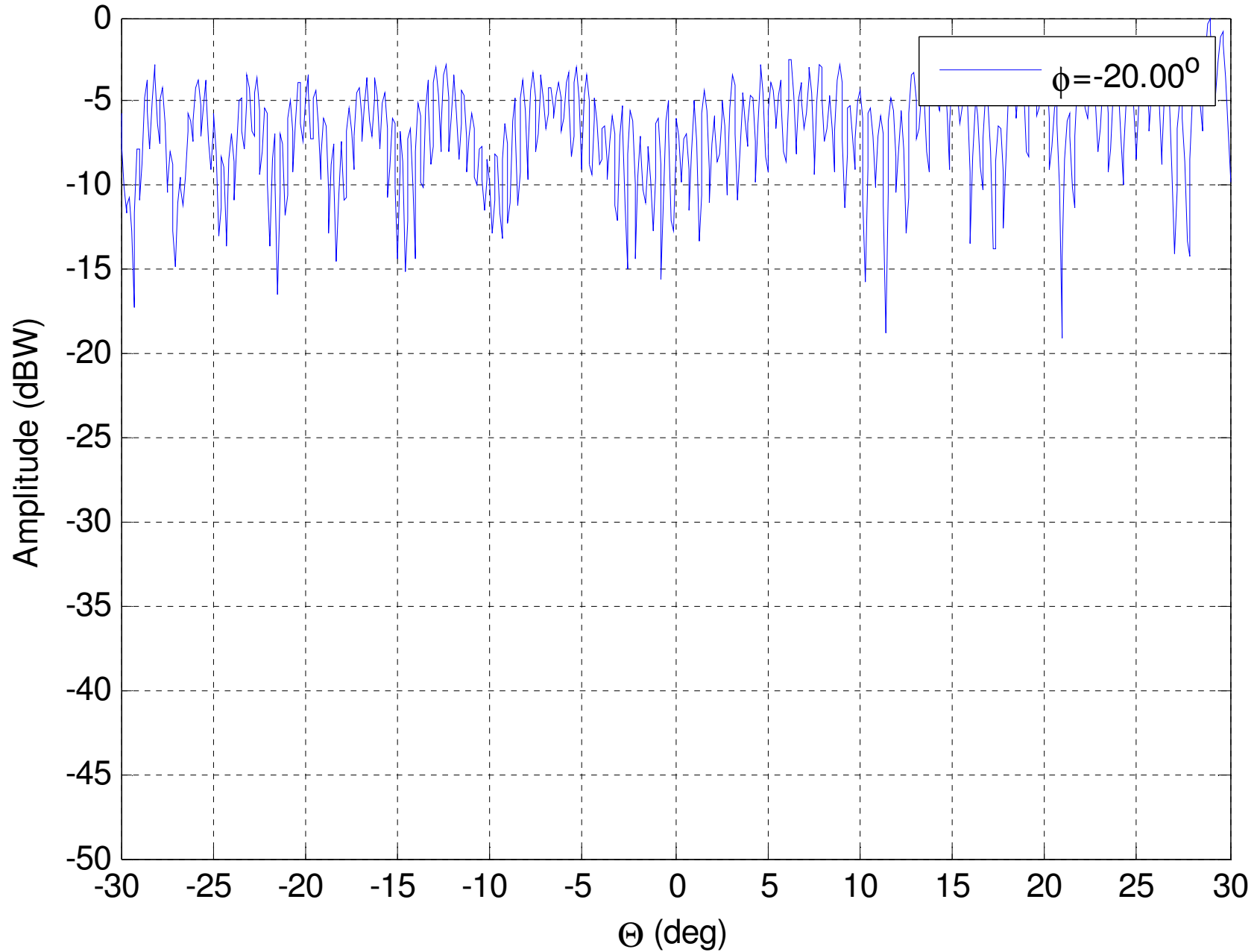
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 0.89 dBW, Date: 14-Dec-2011



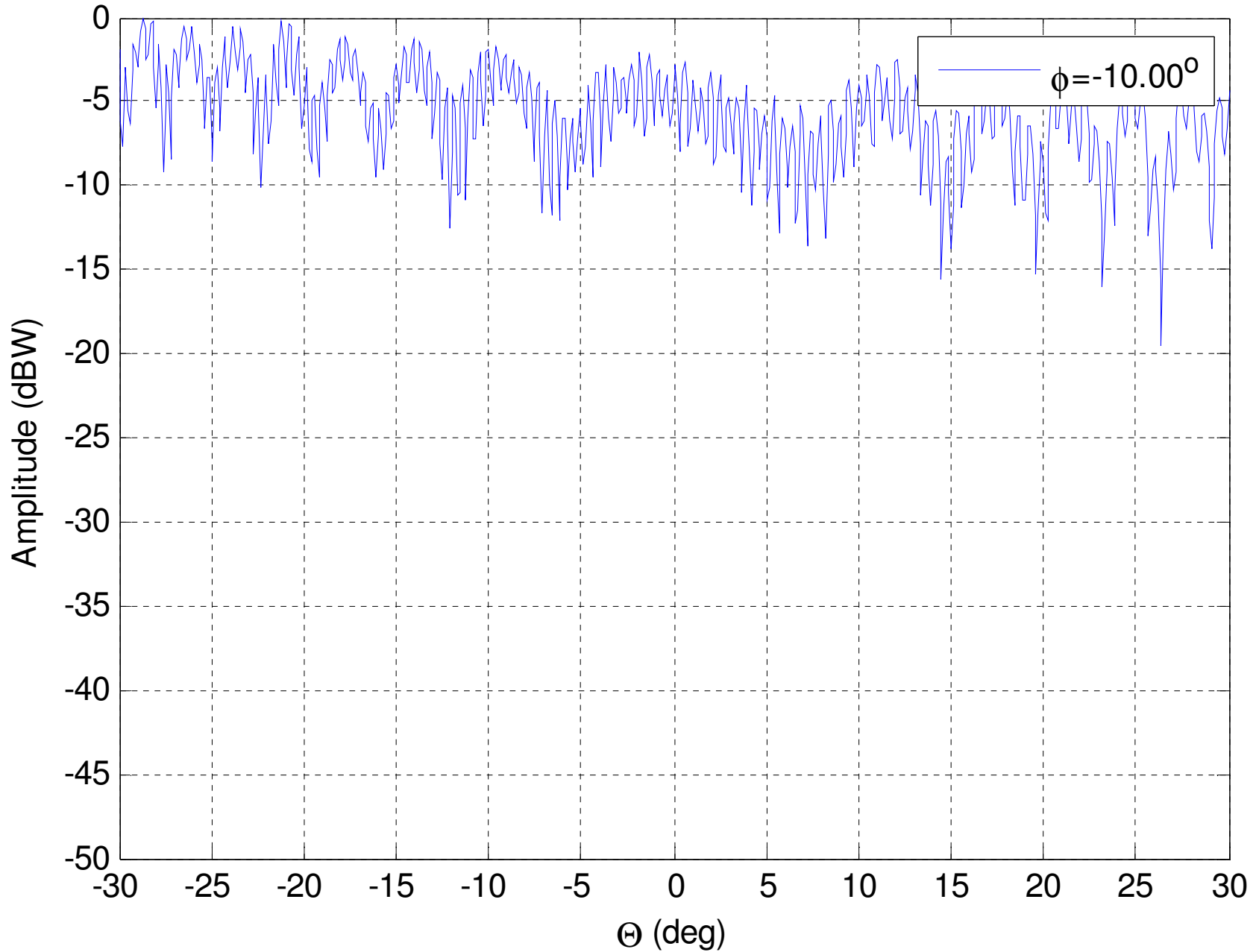
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 1.24 dBW, Date: 14-Dec-2011



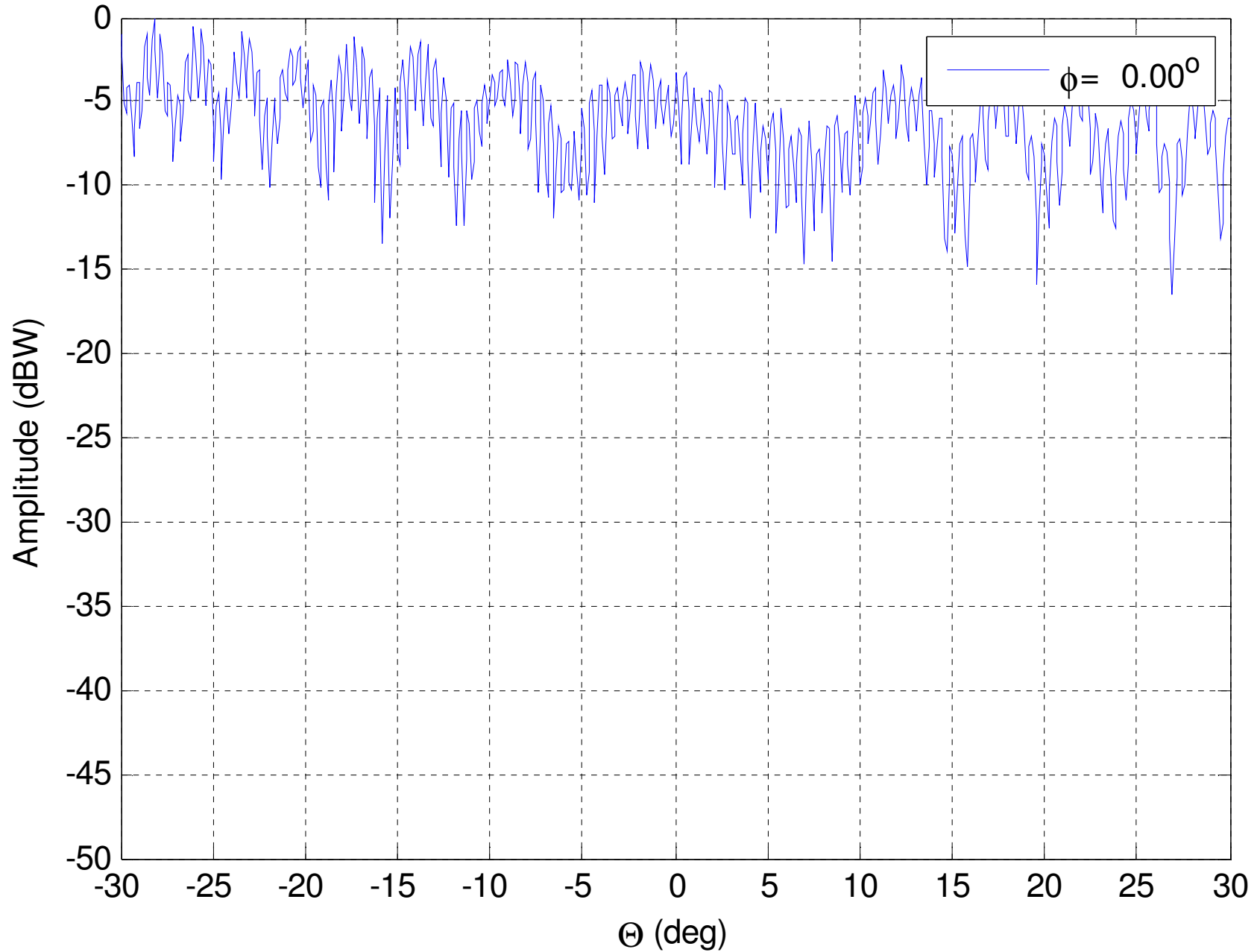
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 0.68 dBW, Date: 14-Dec-2011



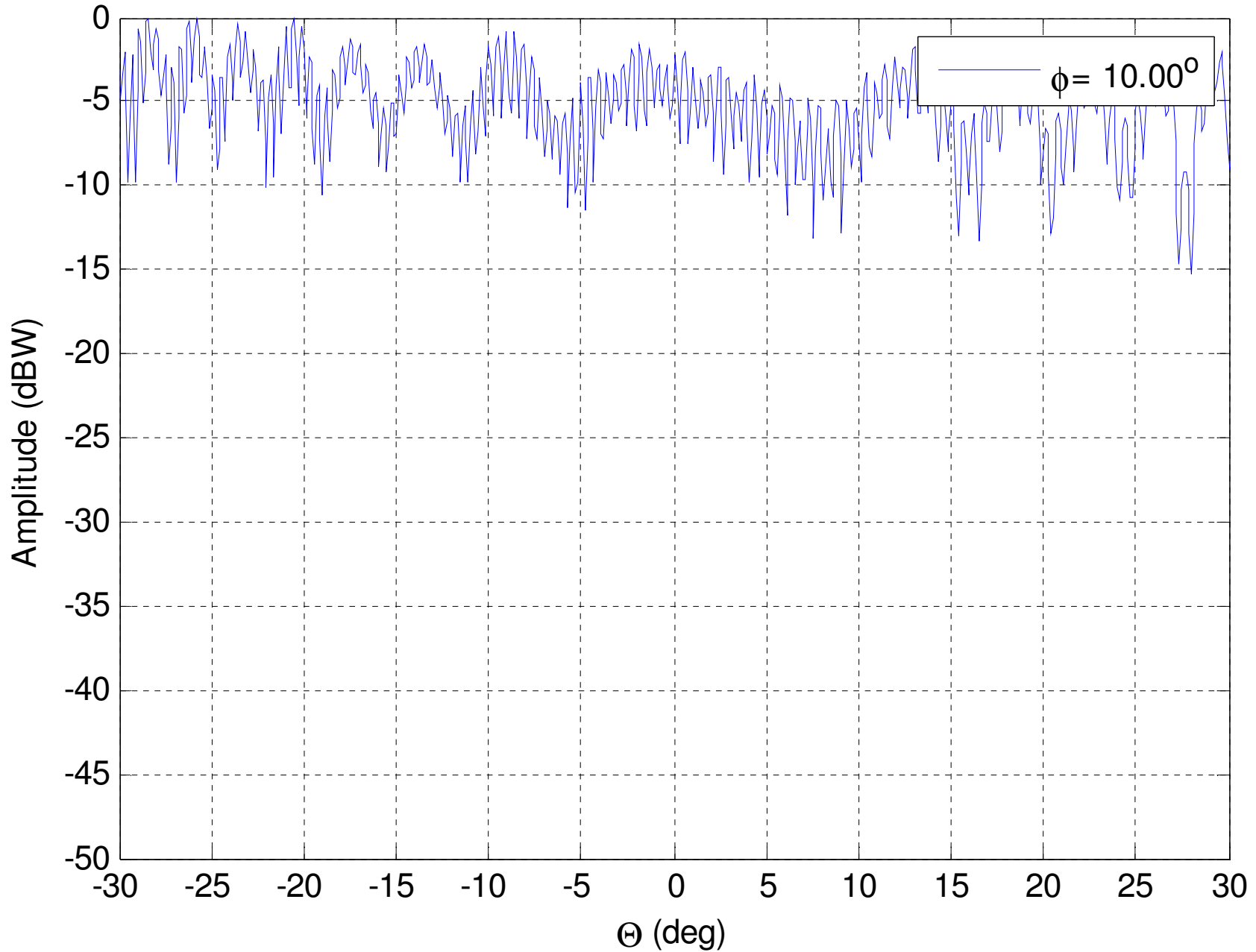
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 1.24 dBW, Date: 14-Dec-2011



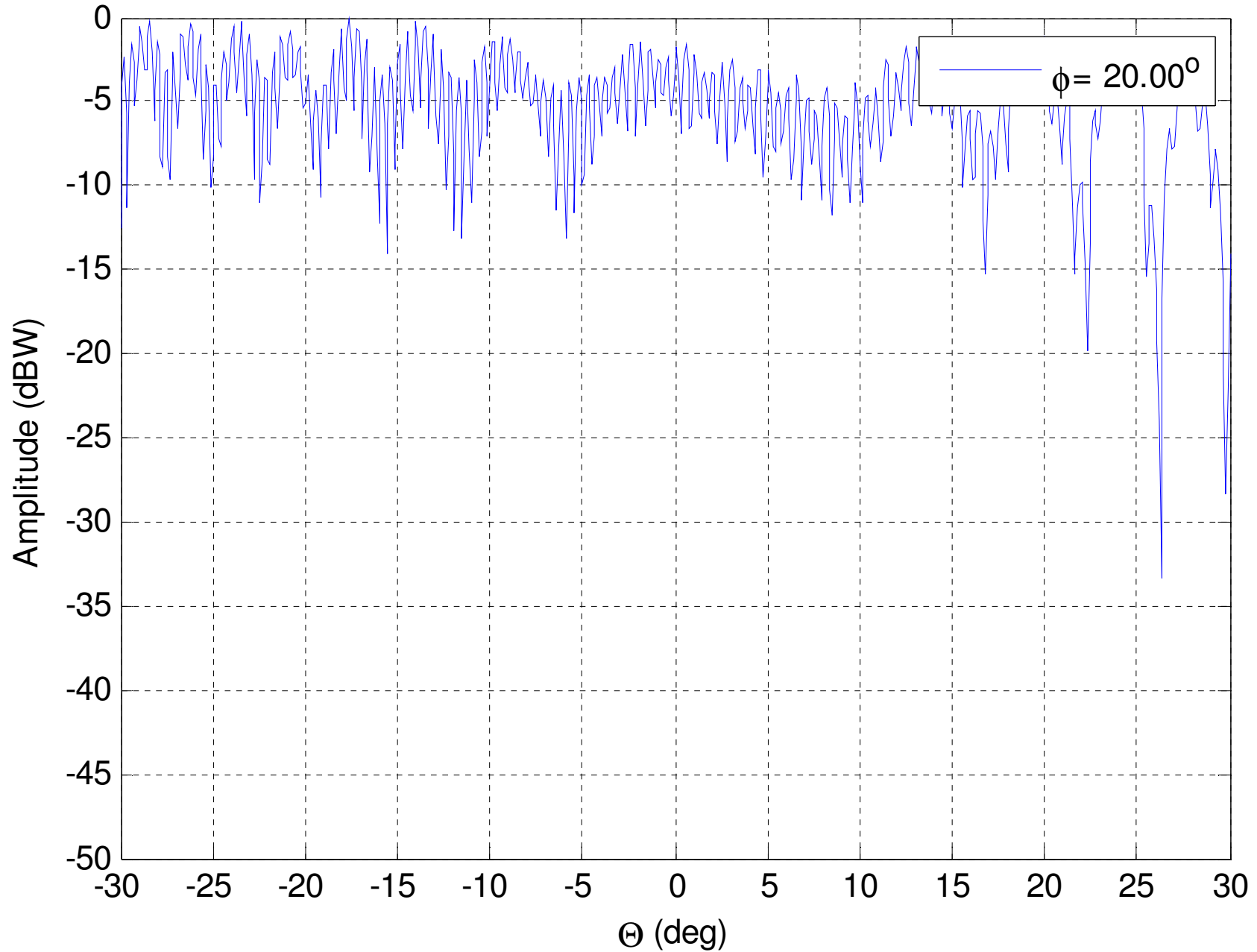
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 0.12 dBW, Date: 14-Dec-2011



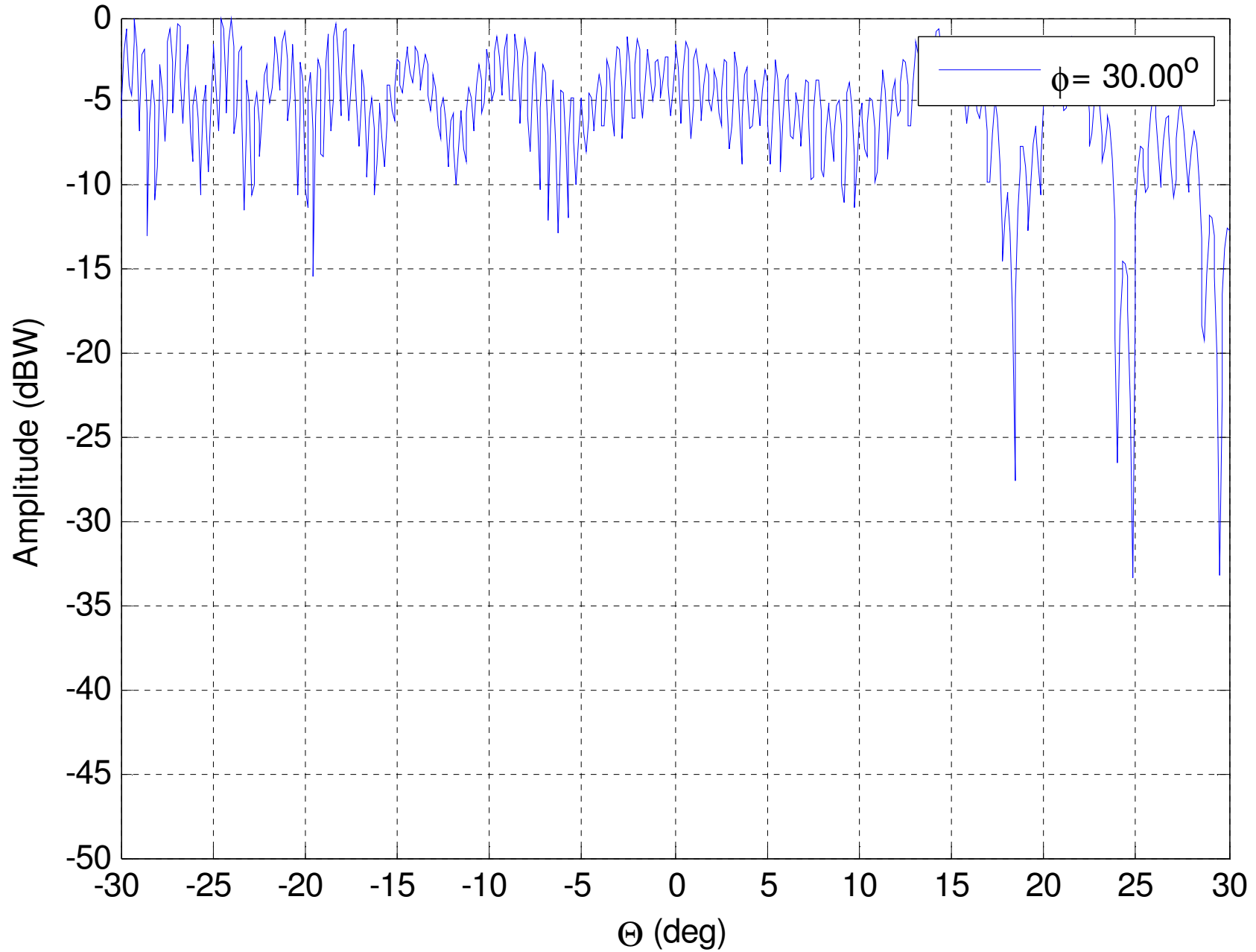
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -0.26 dBW, Date: 14-Dec-2011



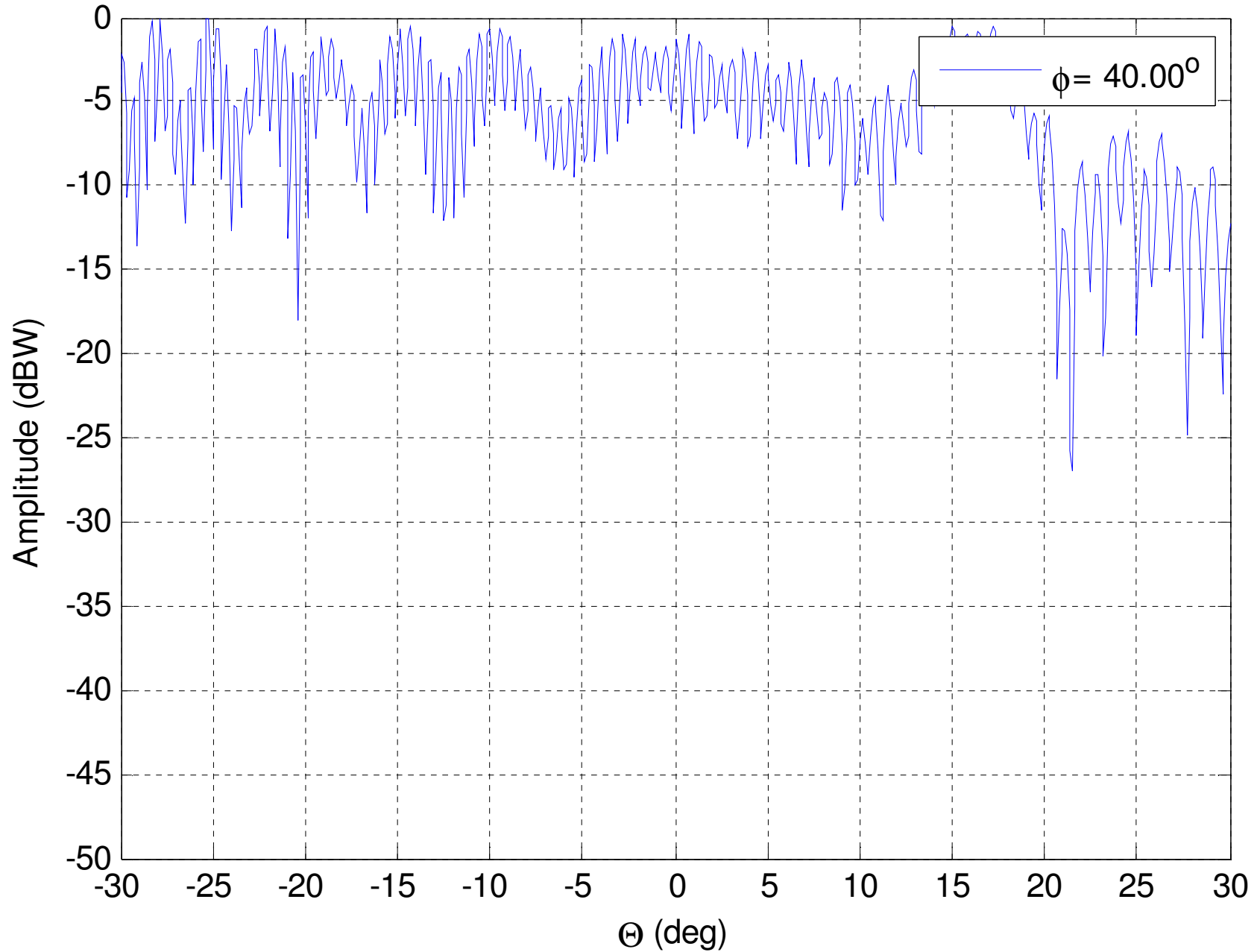
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.43 dBW, Date: 14-Dec-2011



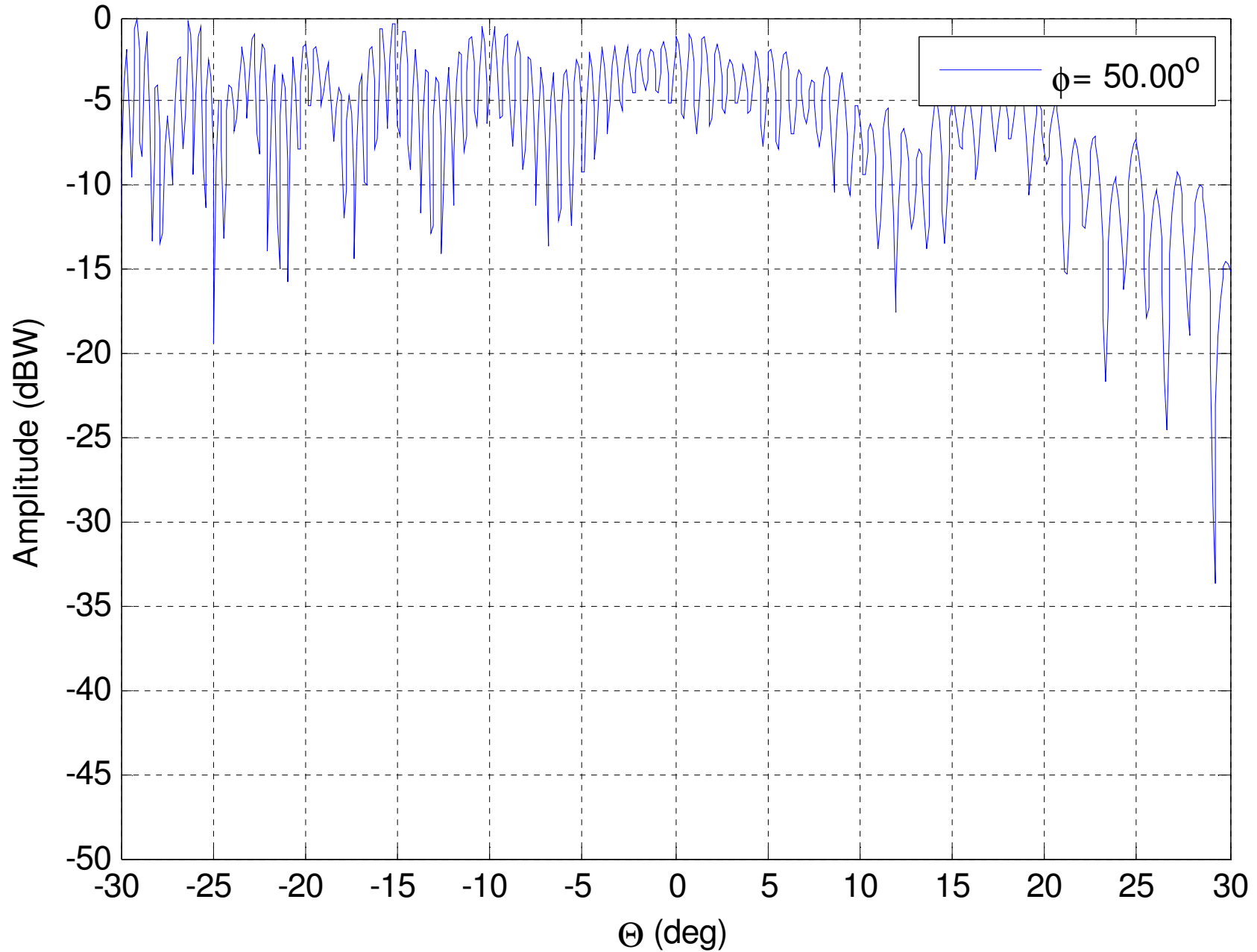
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -0.78 dBW, Date: 14-Dec-2011



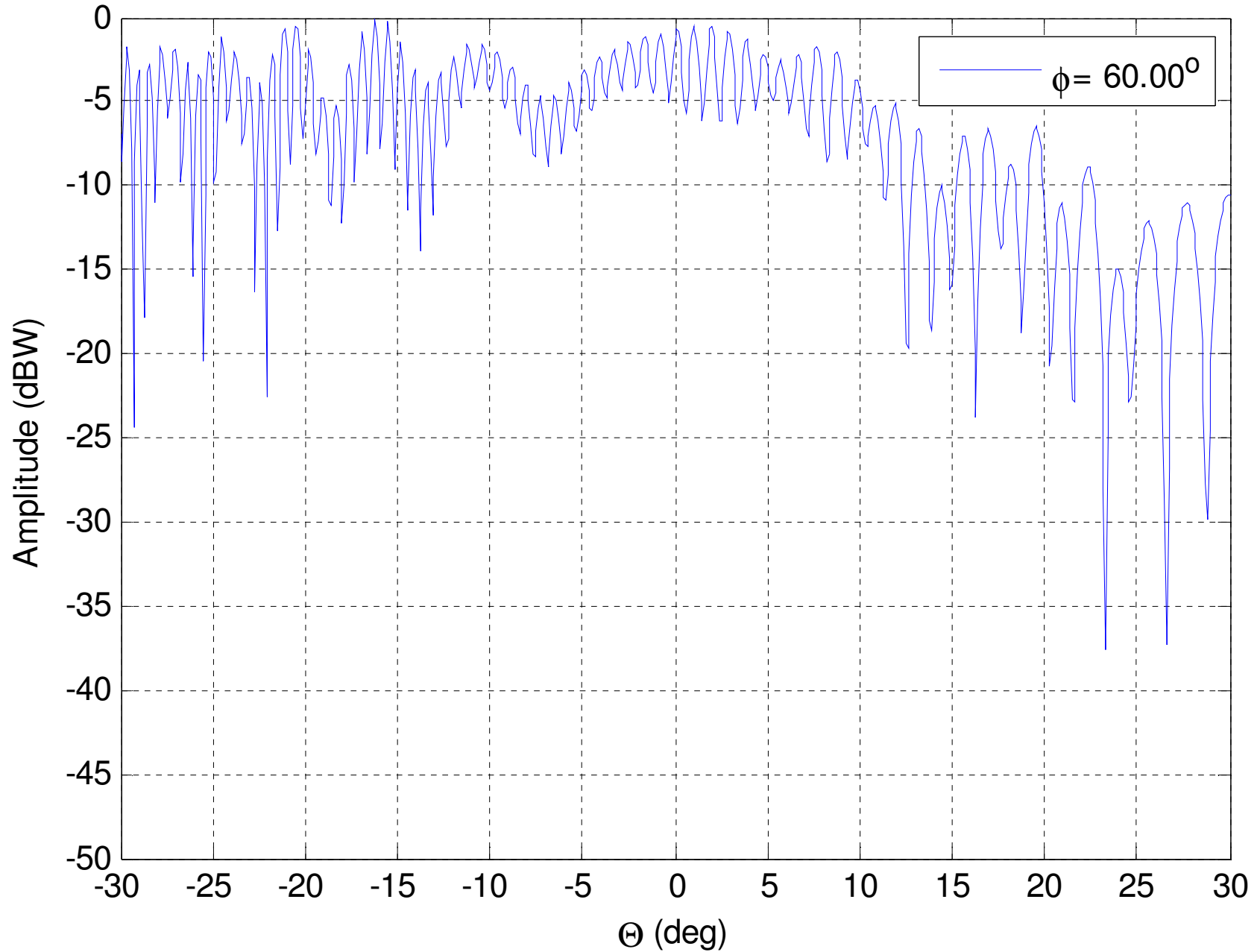
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -0.94 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

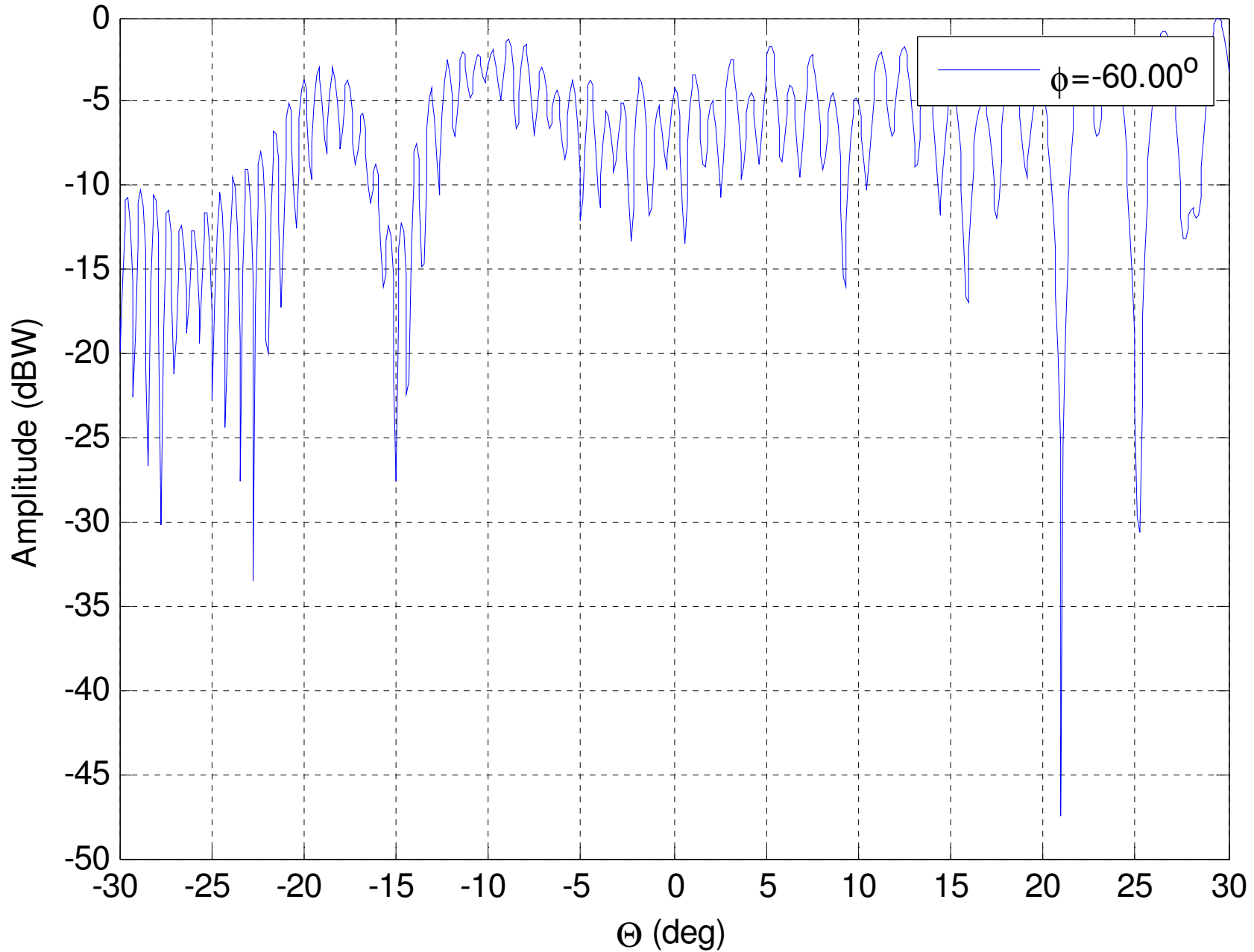
Input file: tx-17.5-lhcp-60.cut, Peak: -1.42 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

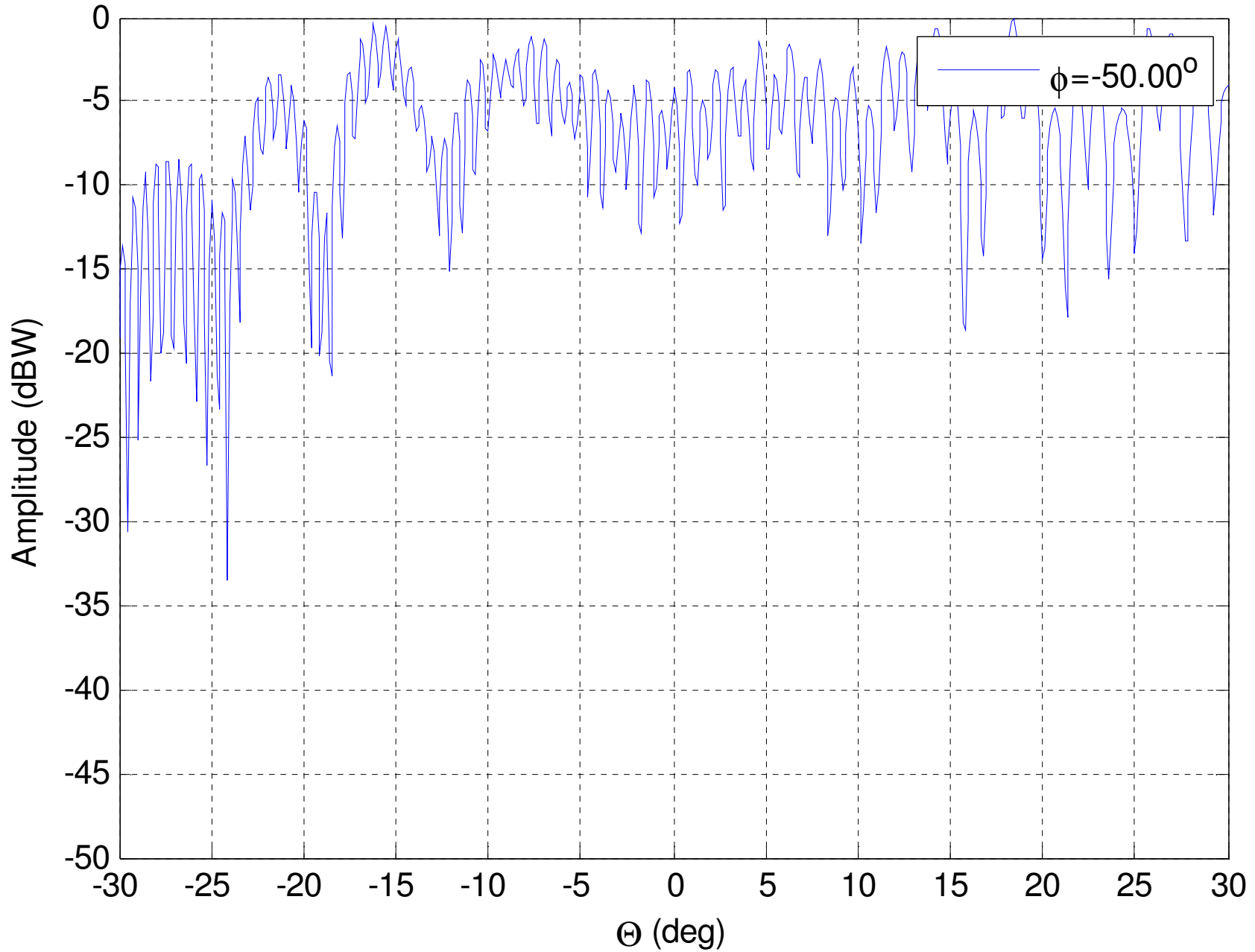
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -0.64 dBW, Date: 14-Dec-2011



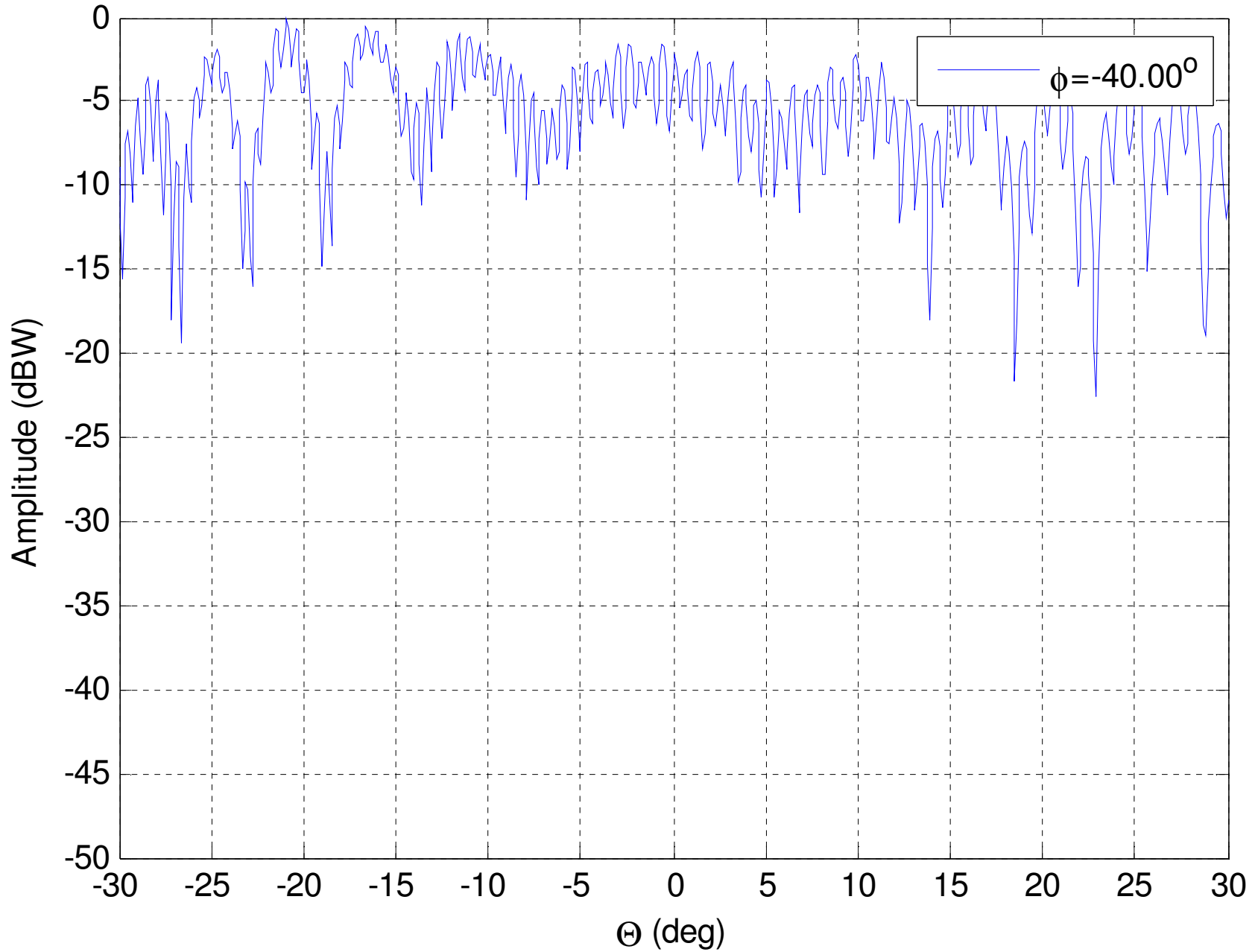
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -0.71 dBW, Date: 14-Dec-2011



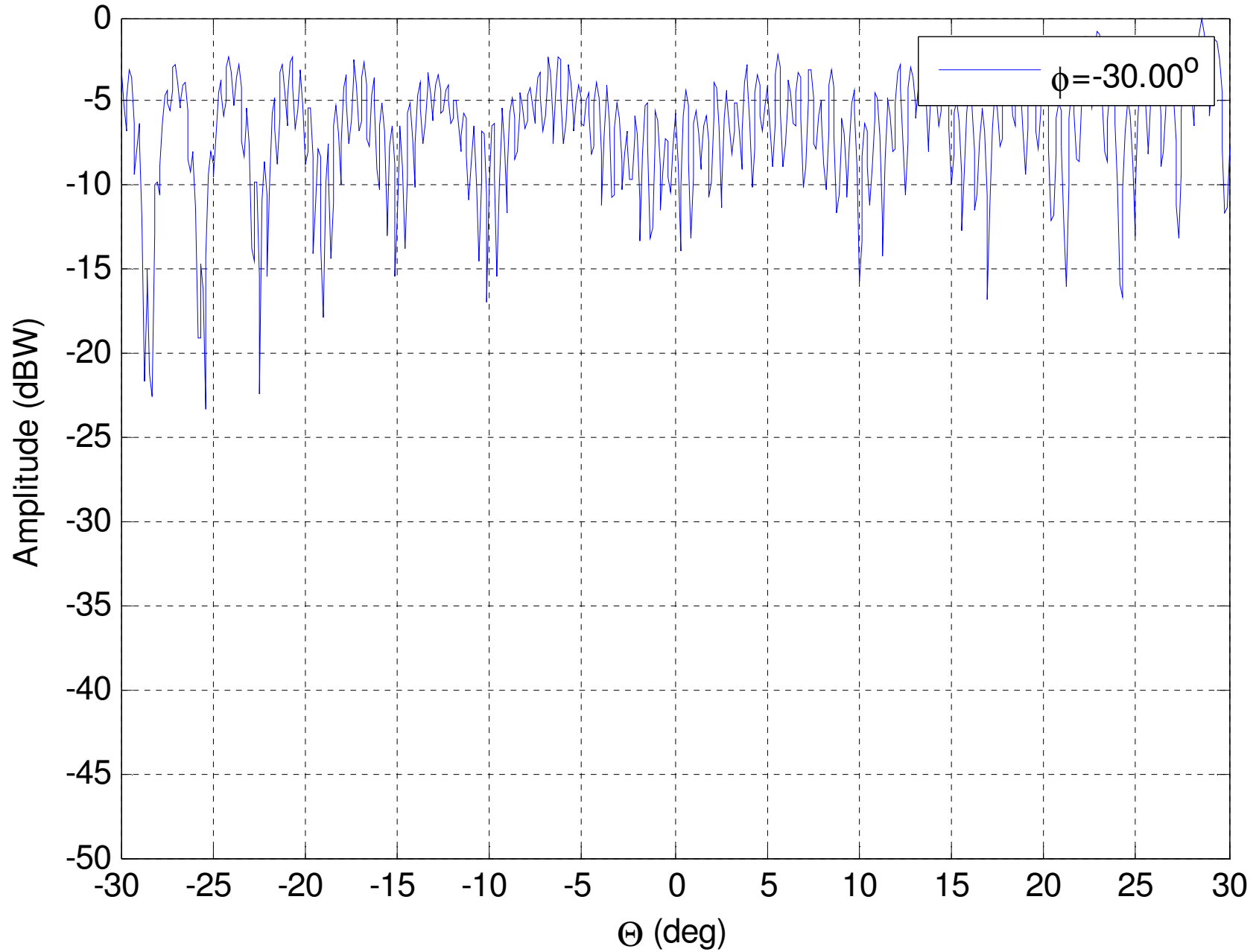
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -0.11 dBW, Date: 14-Dec-2011



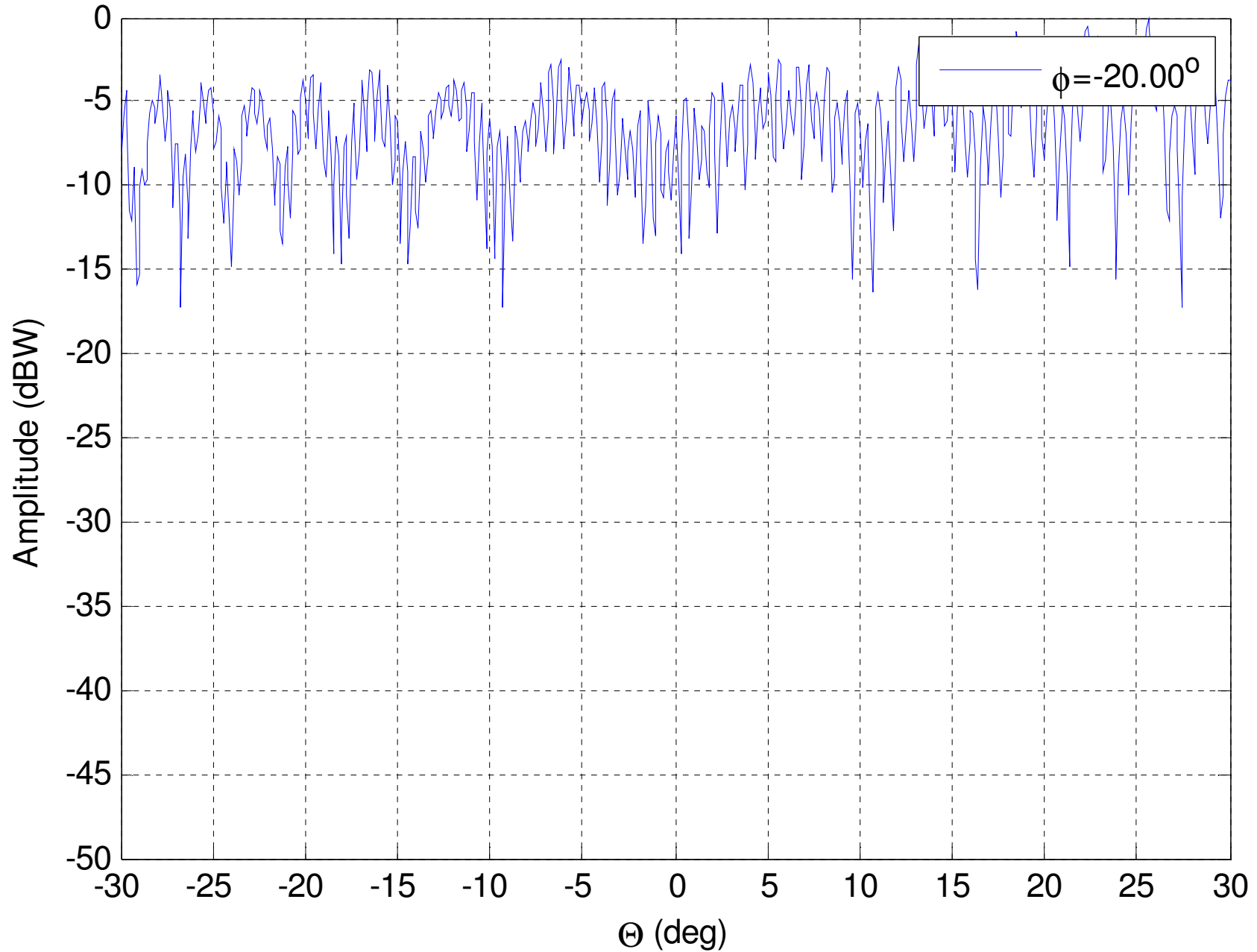
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 0.70 dBW, Date: 14-Dec-2011



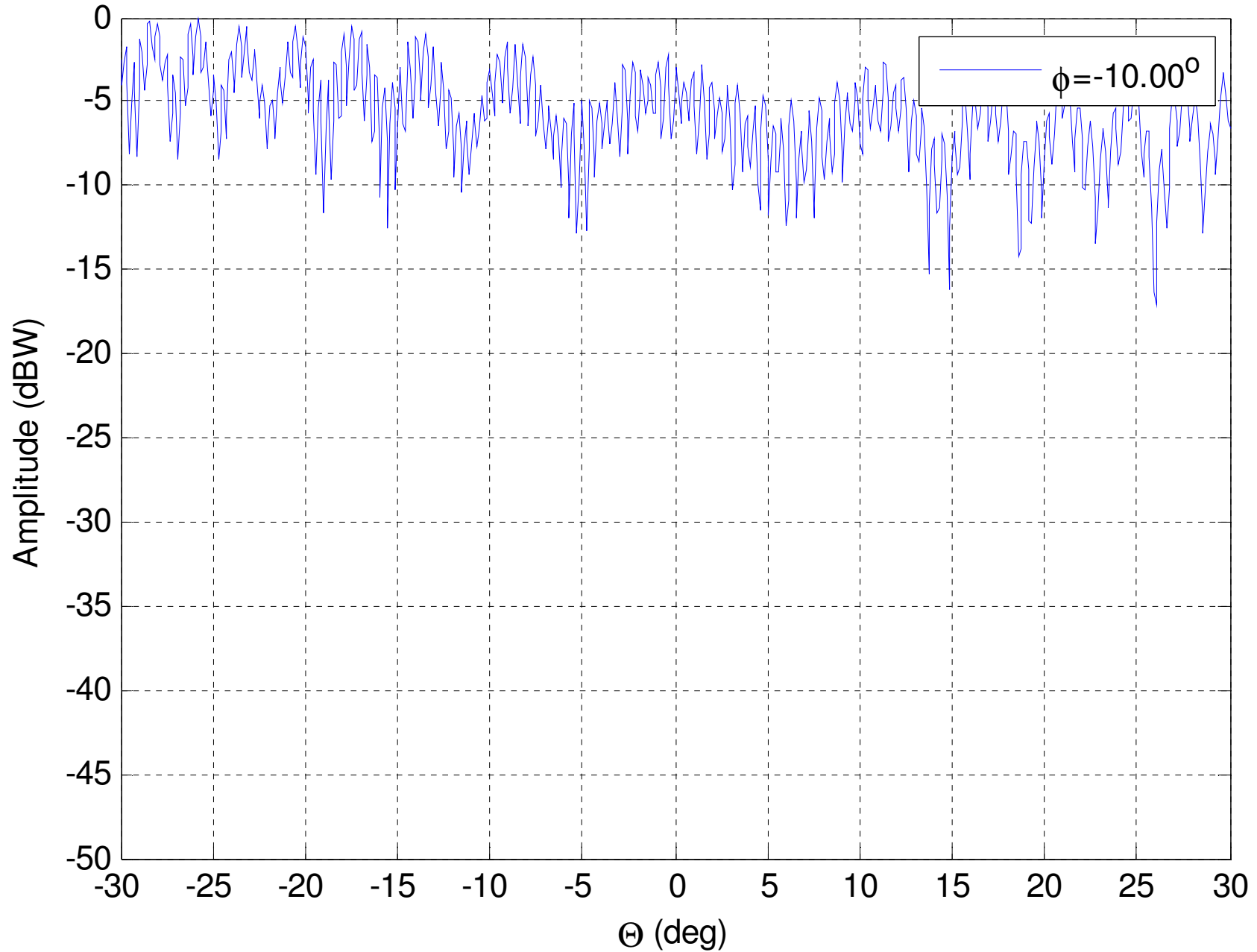
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 0.89 dBW, Date: 14-Dec-2011



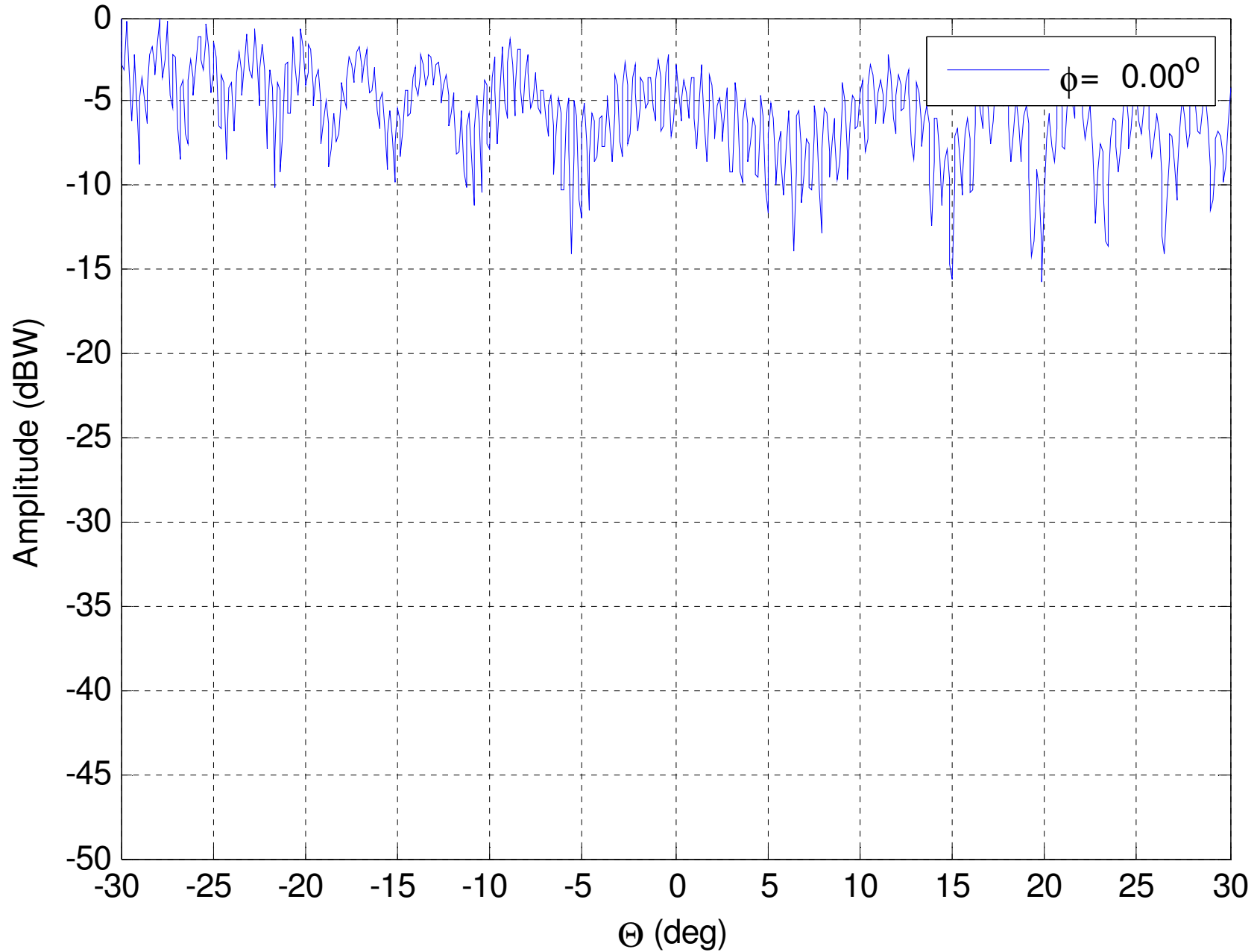
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 0.59 dBW, Date: 14-Dec-2011



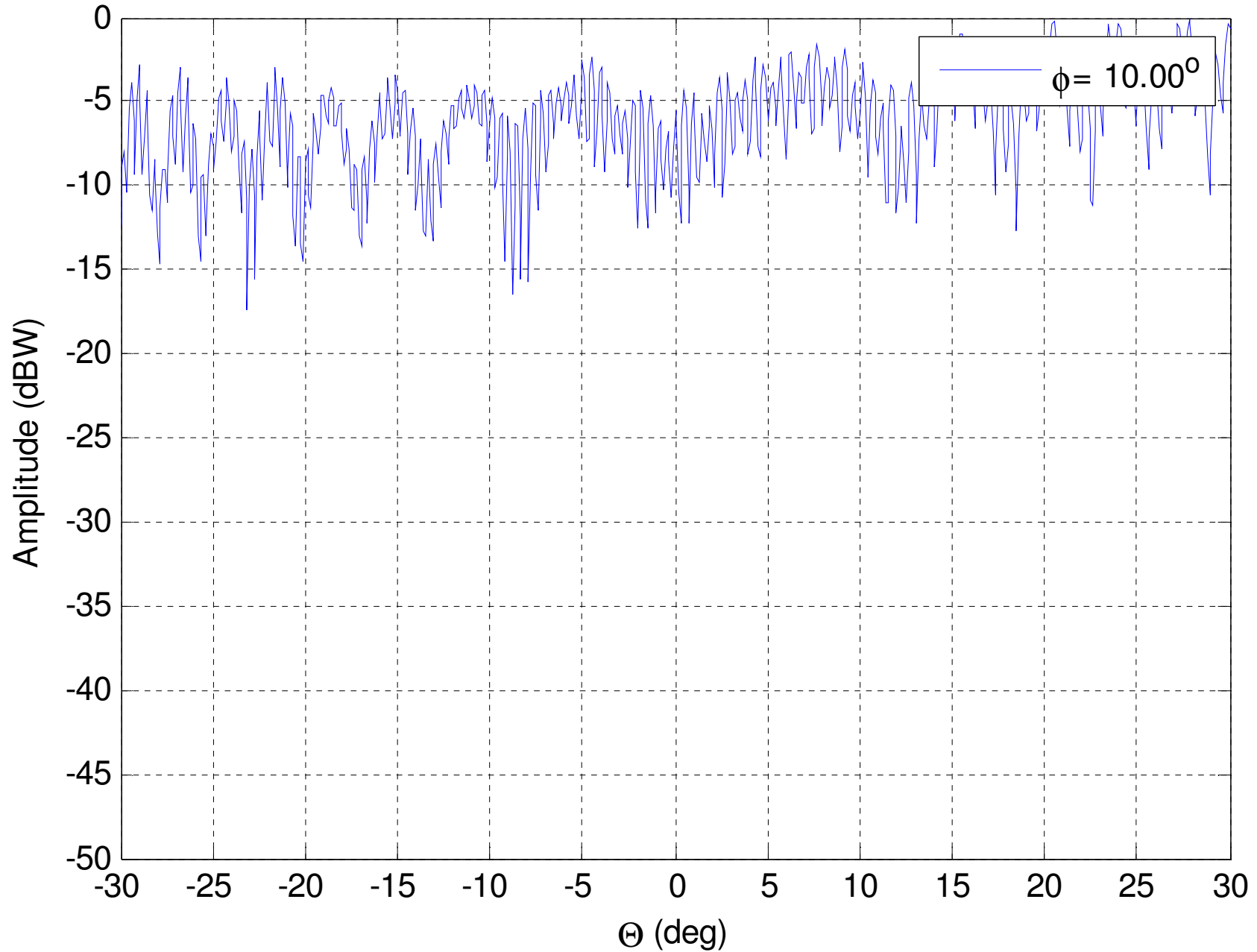
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 0.52 dBW, Date: 14-Dec-2011



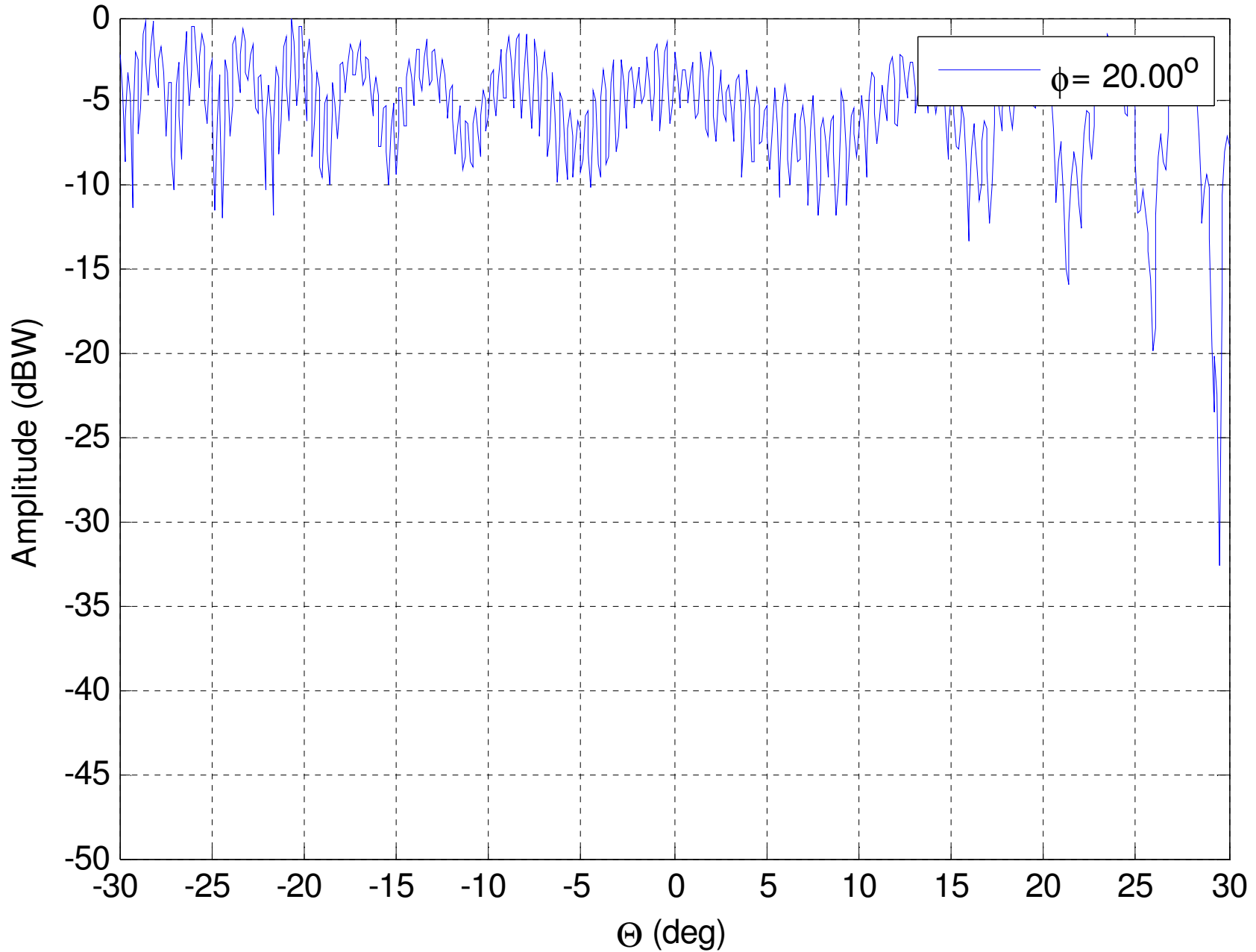
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 0.50 dBW, Date: 14-Dec-2011



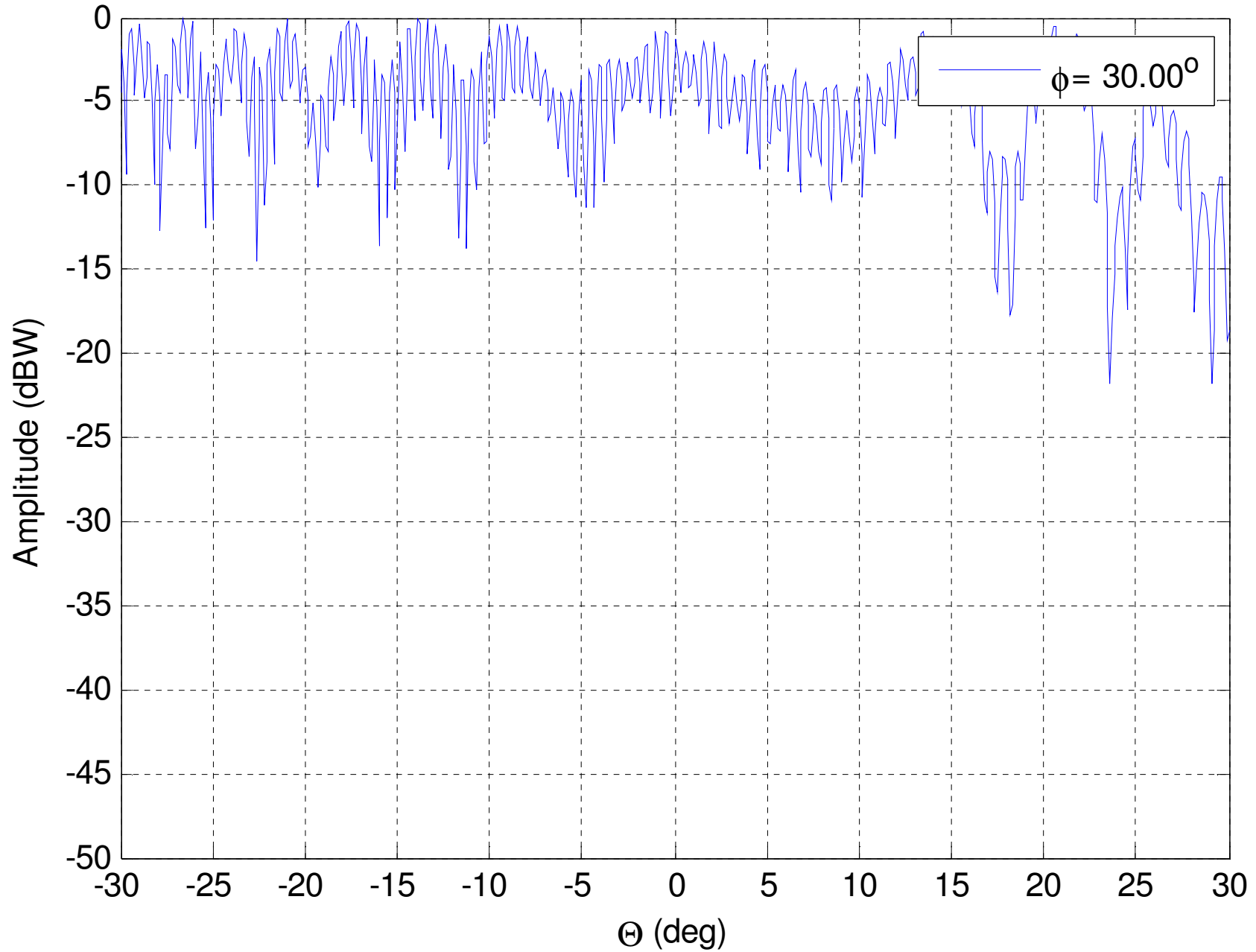
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -0.31 dBW, Date: 14-Dec-2011



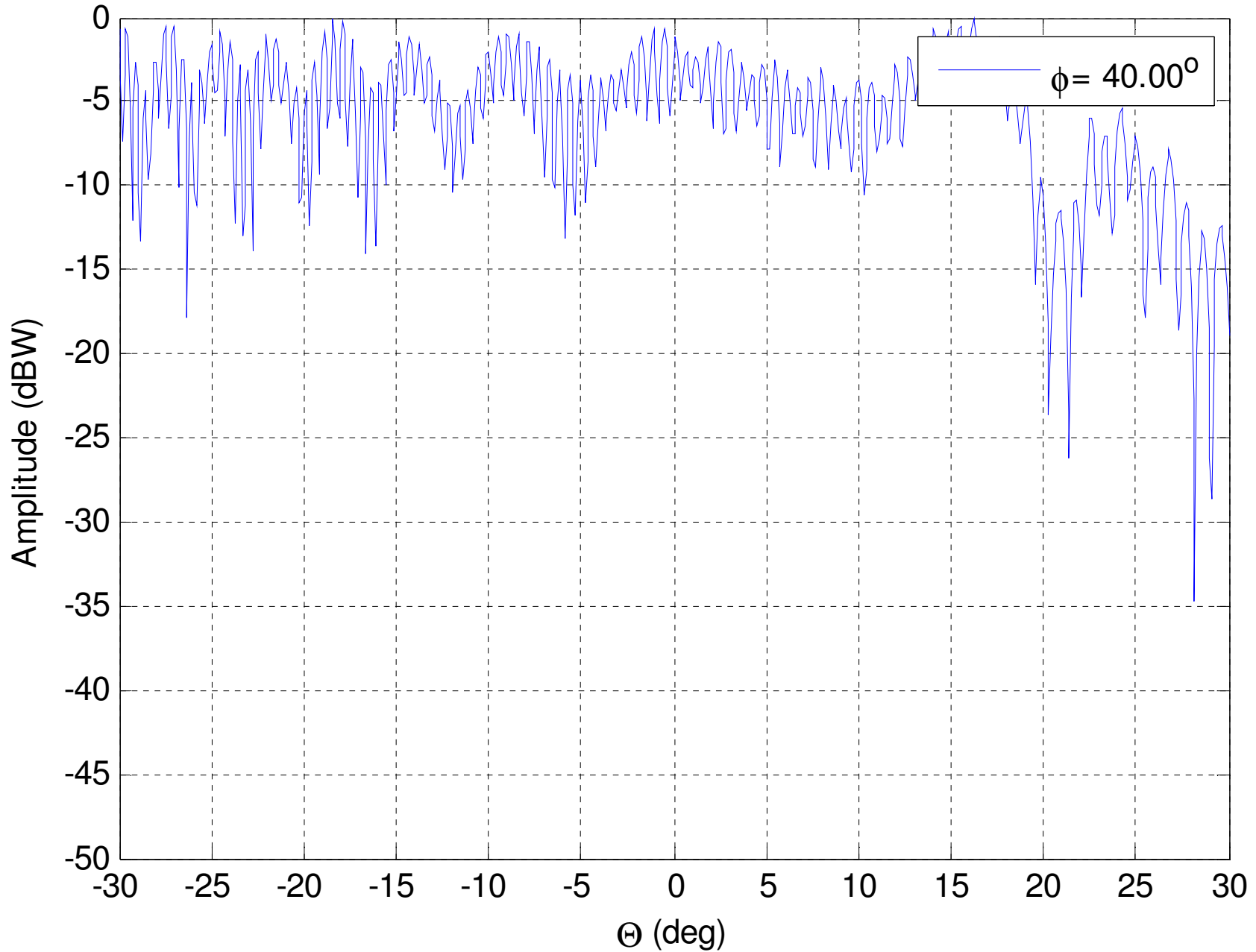
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -1.00 dBW, Date: 14-Dec-2011



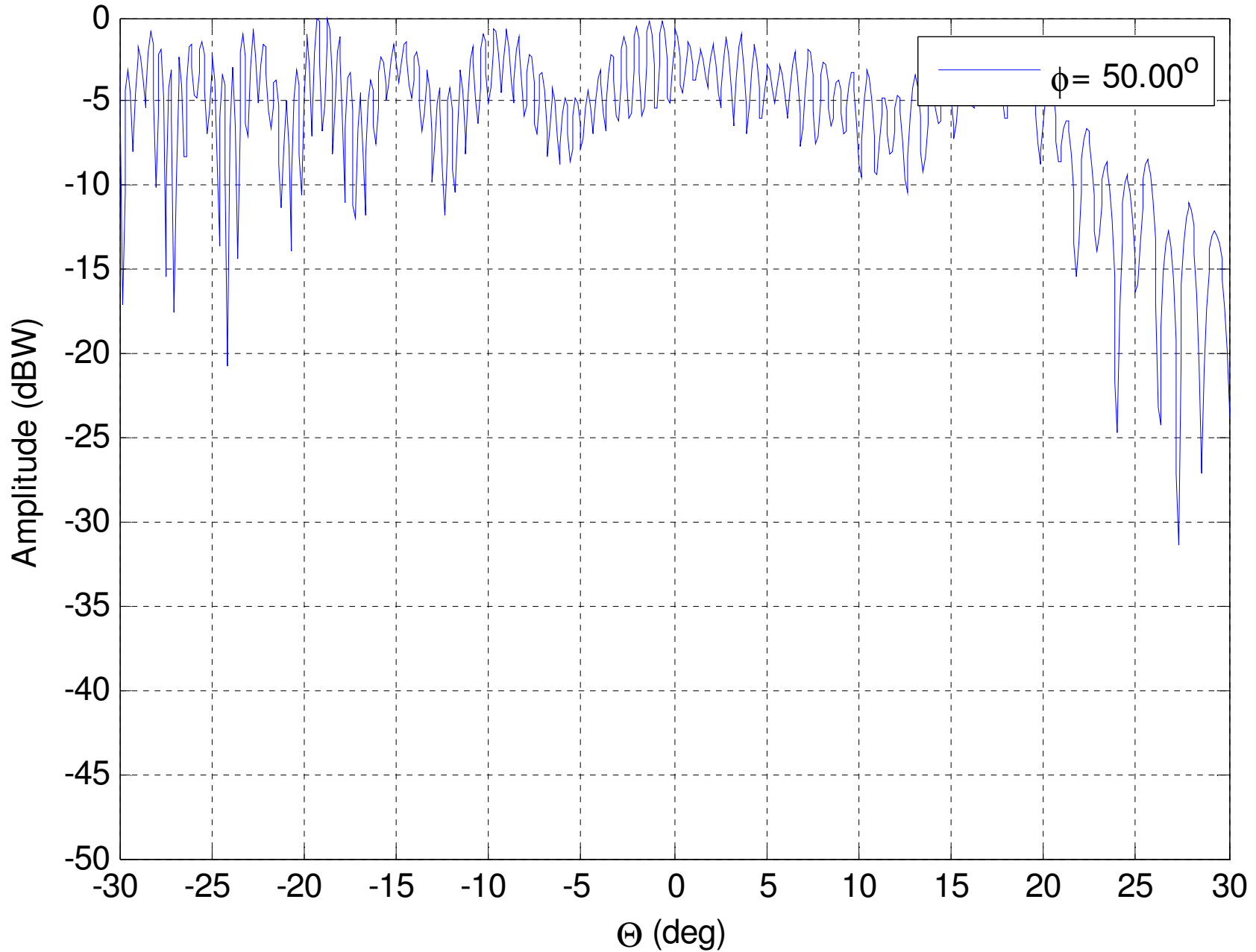
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -1.02 dBW, Date: 14-Dec-2011



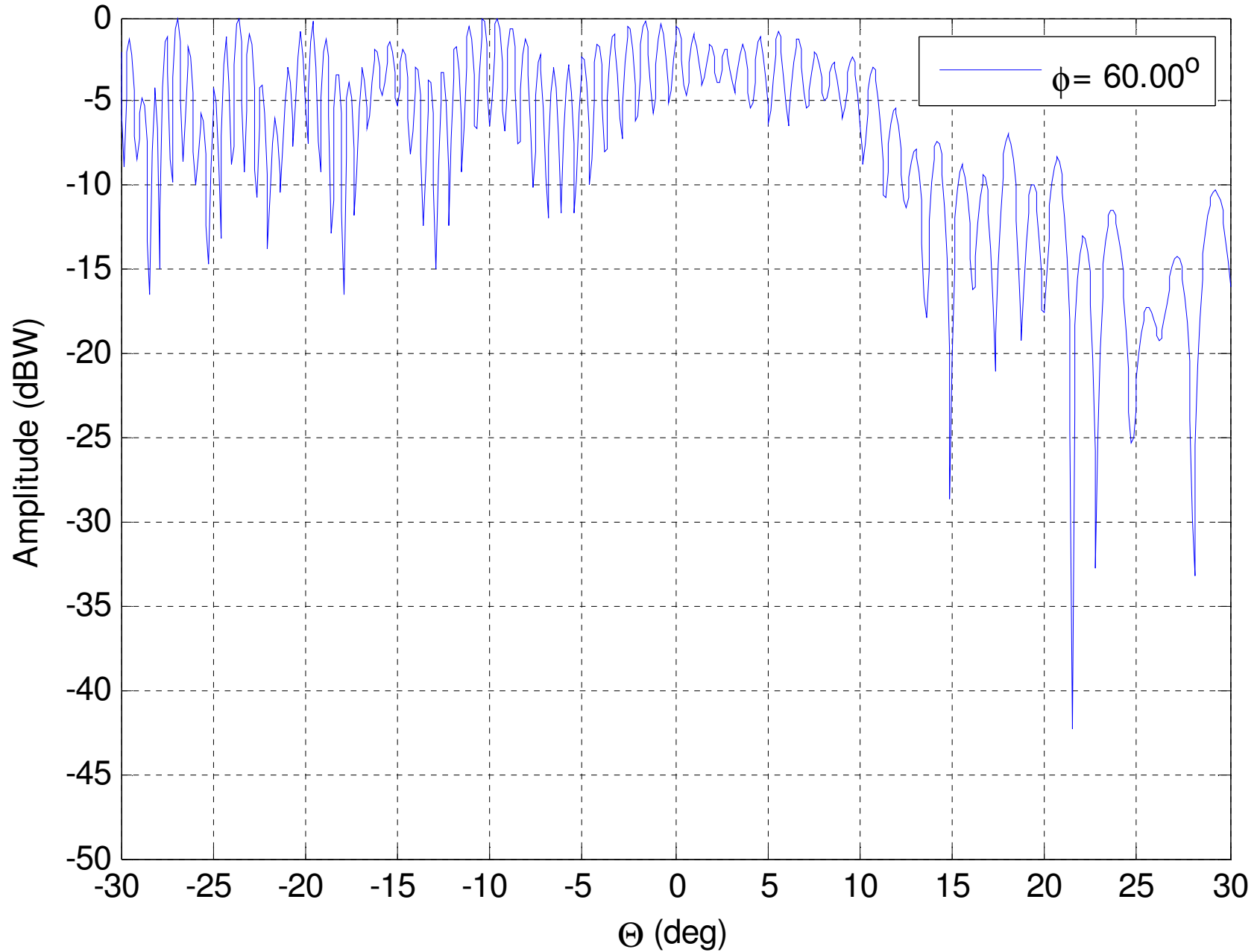
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -1.50 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

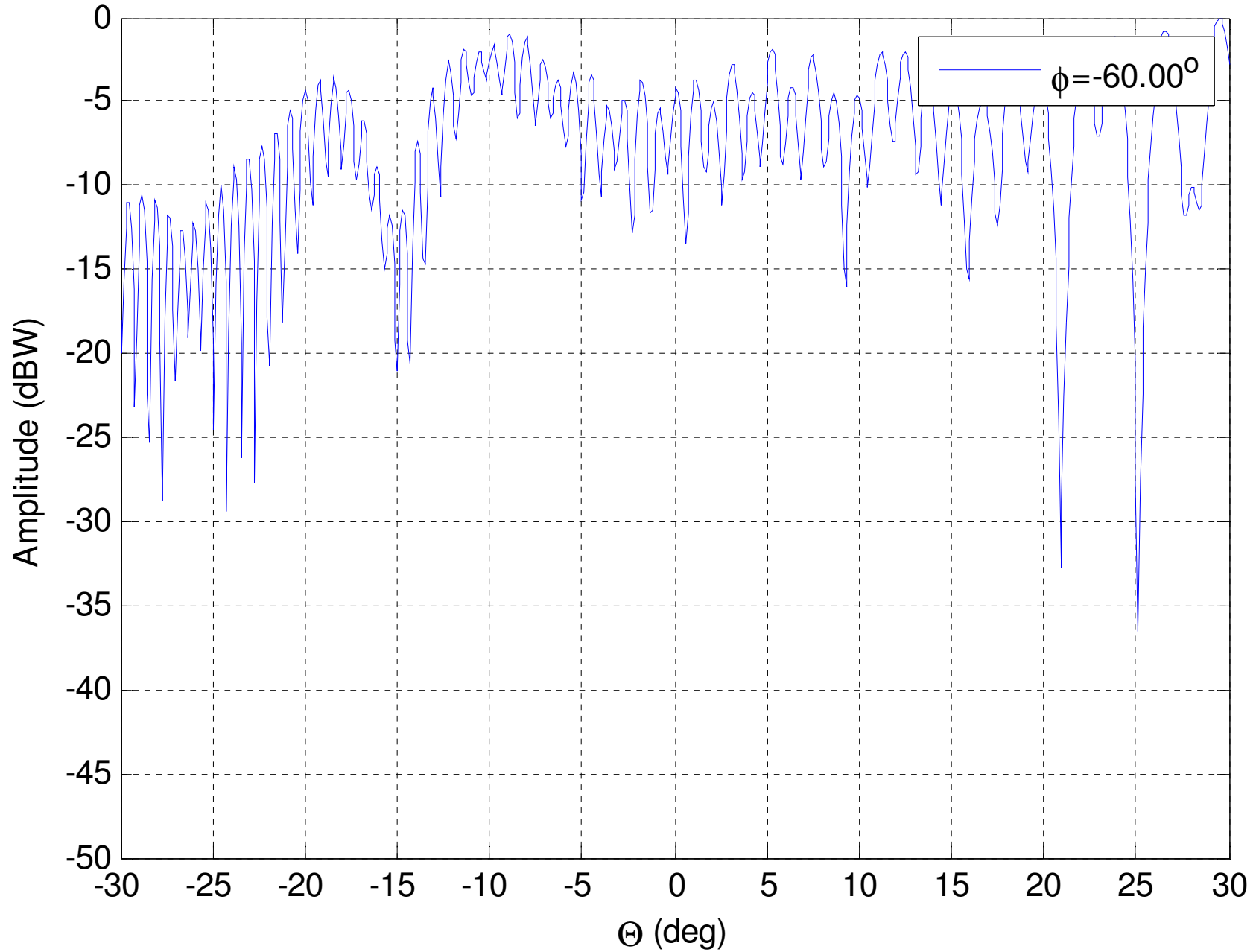
Input file: tx-17.7-rhcp-60.cut, Peak: -1.64 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

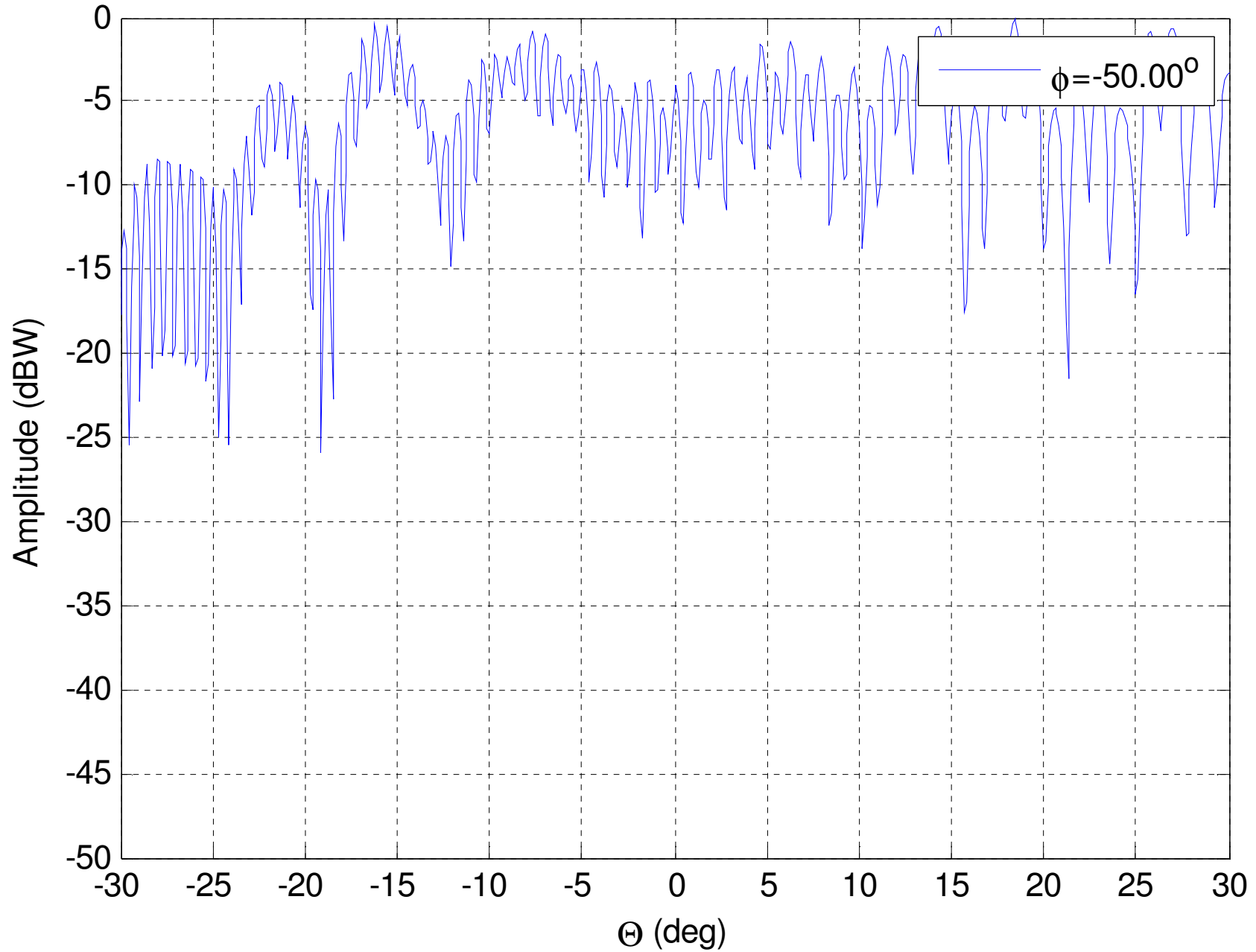
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -0.59 dBW, Date: 14-Dec-2011



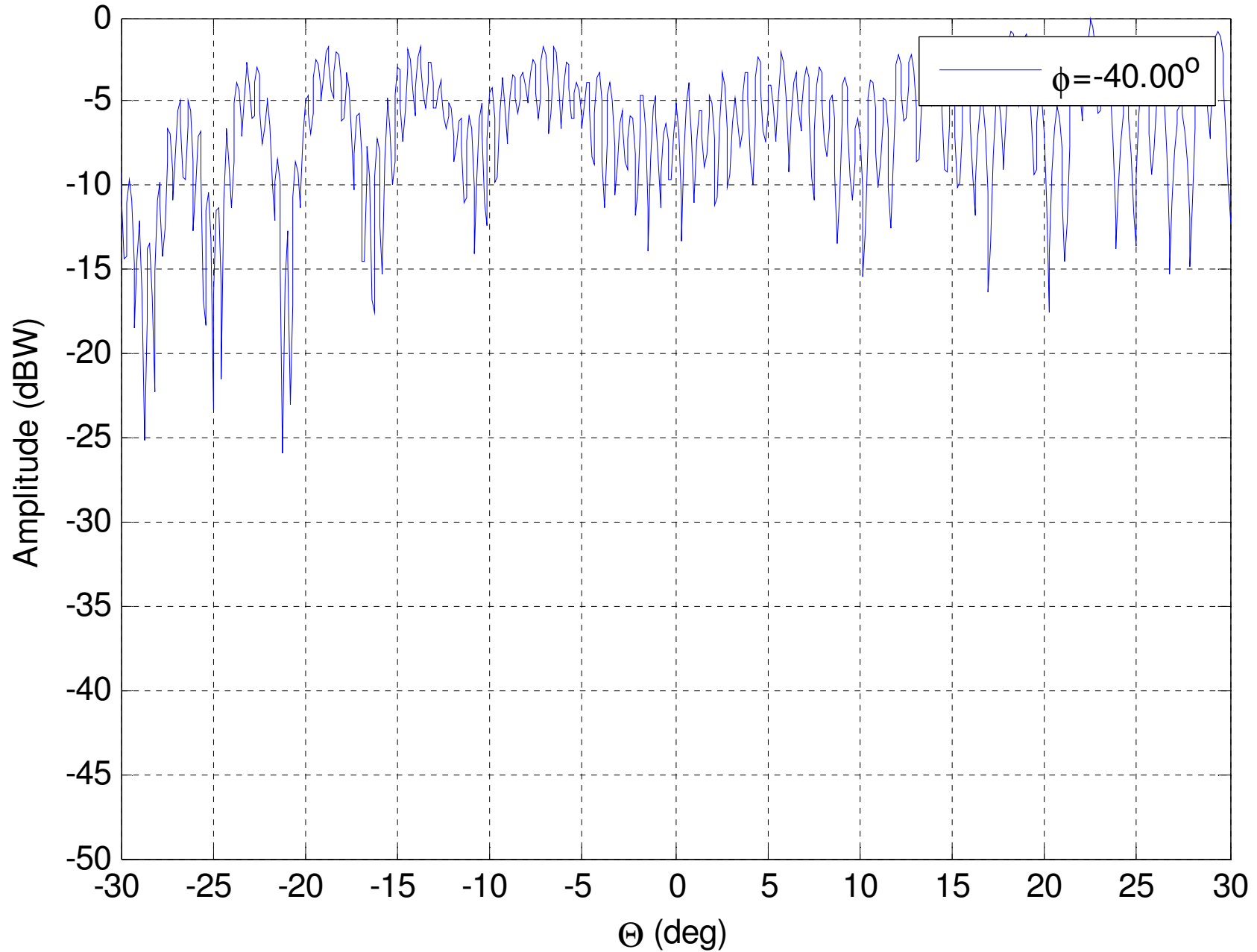
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -0.82 dBW, Date: 14-Dec-2011



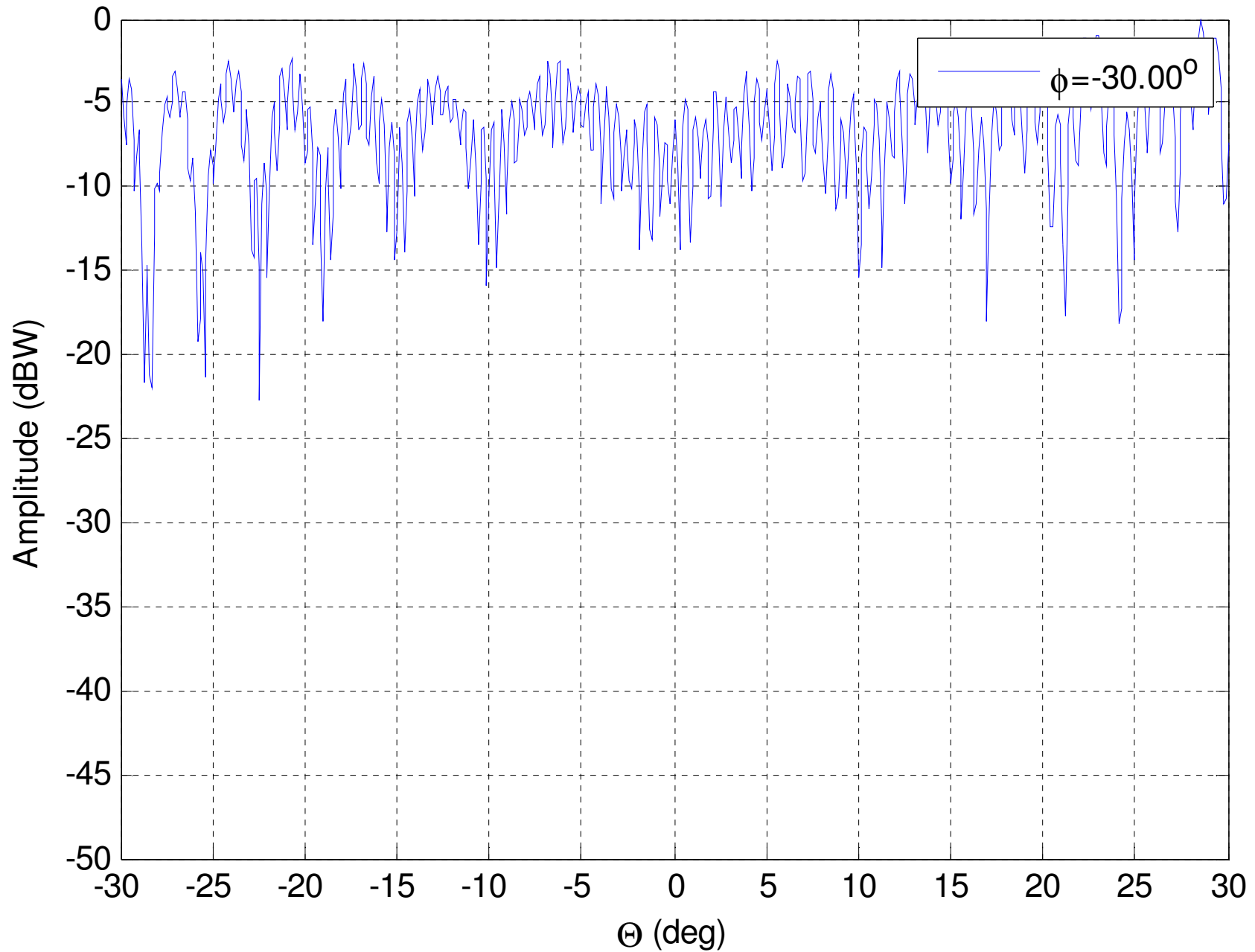
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: 0.04 dBW, Date: 14-Dec-2011



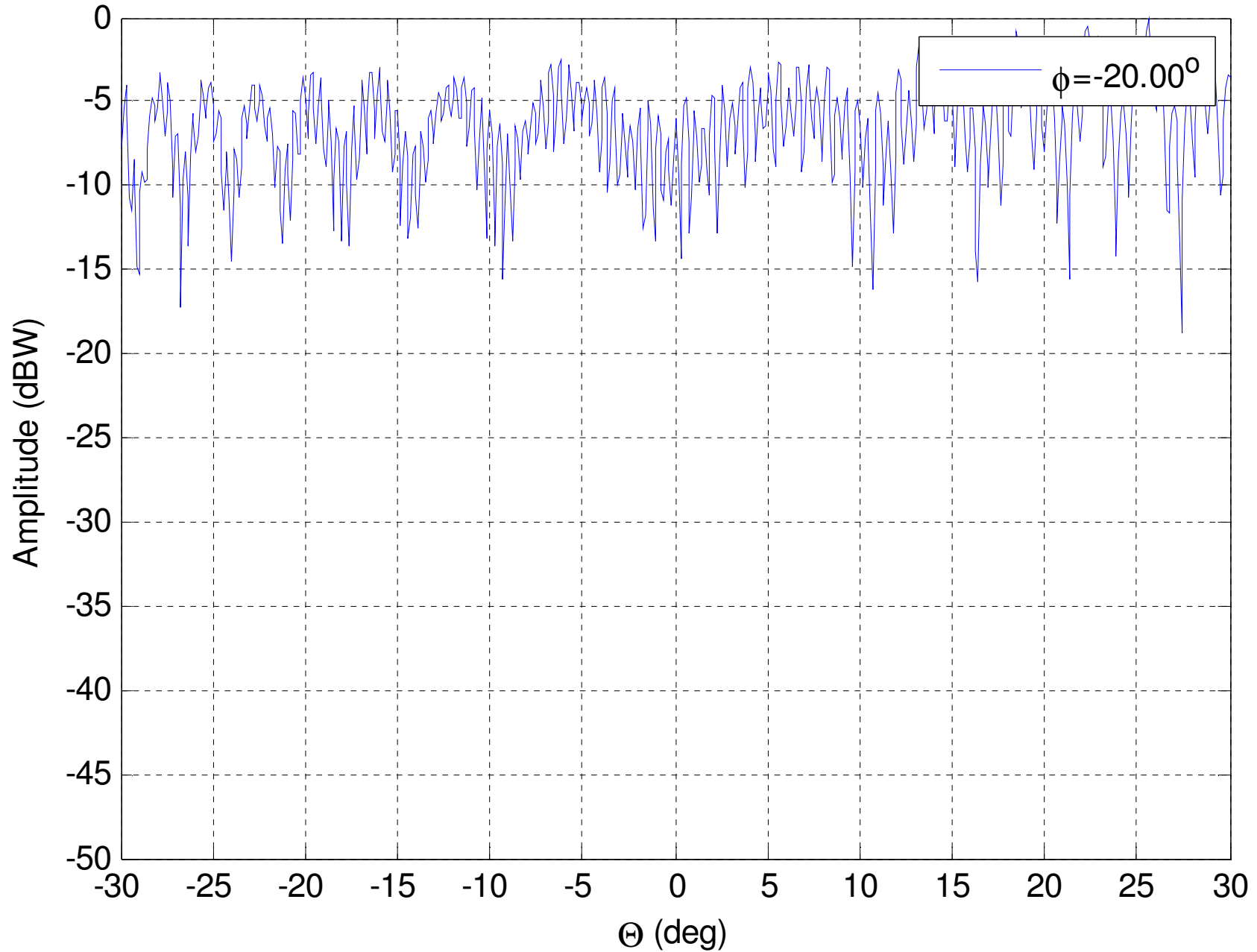
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: 0.85 dBW, Date: 14-Dec-2011



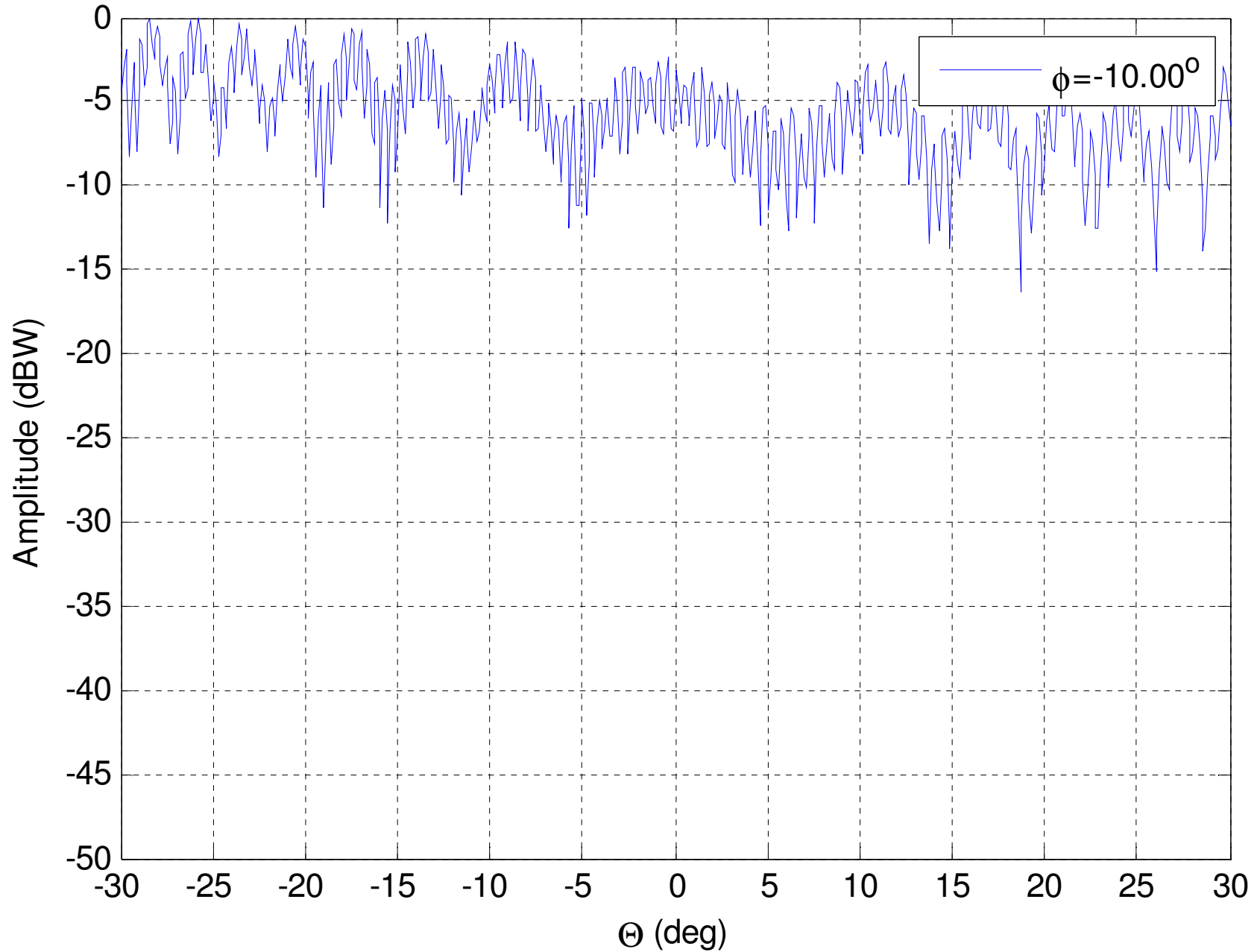
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 0.85 dBW, Date: 14-Dec-2011



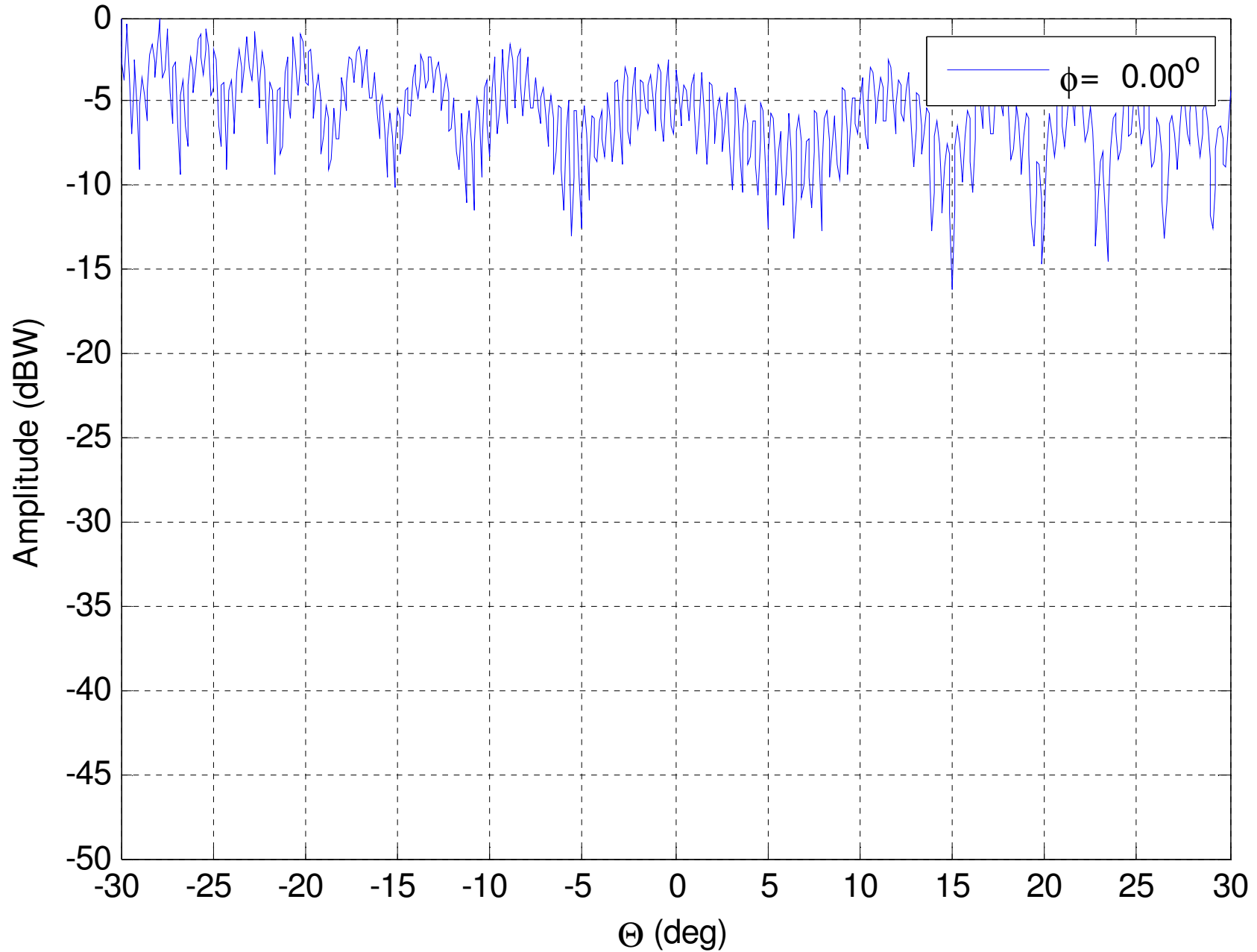
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 0.64 dBW, Date: 14-Dec-2011



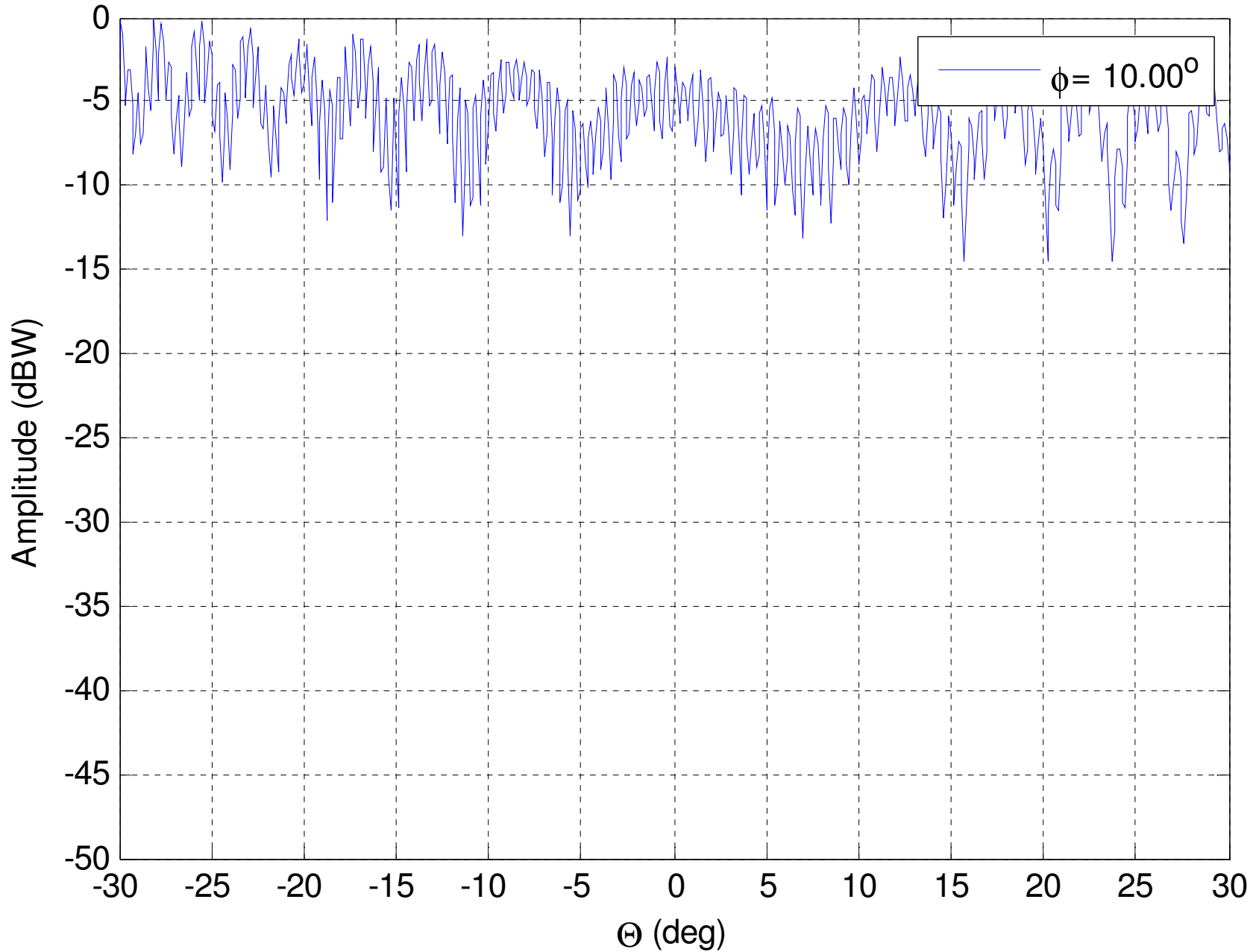
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 0.68 dBW, Date: 14-Dec-2011



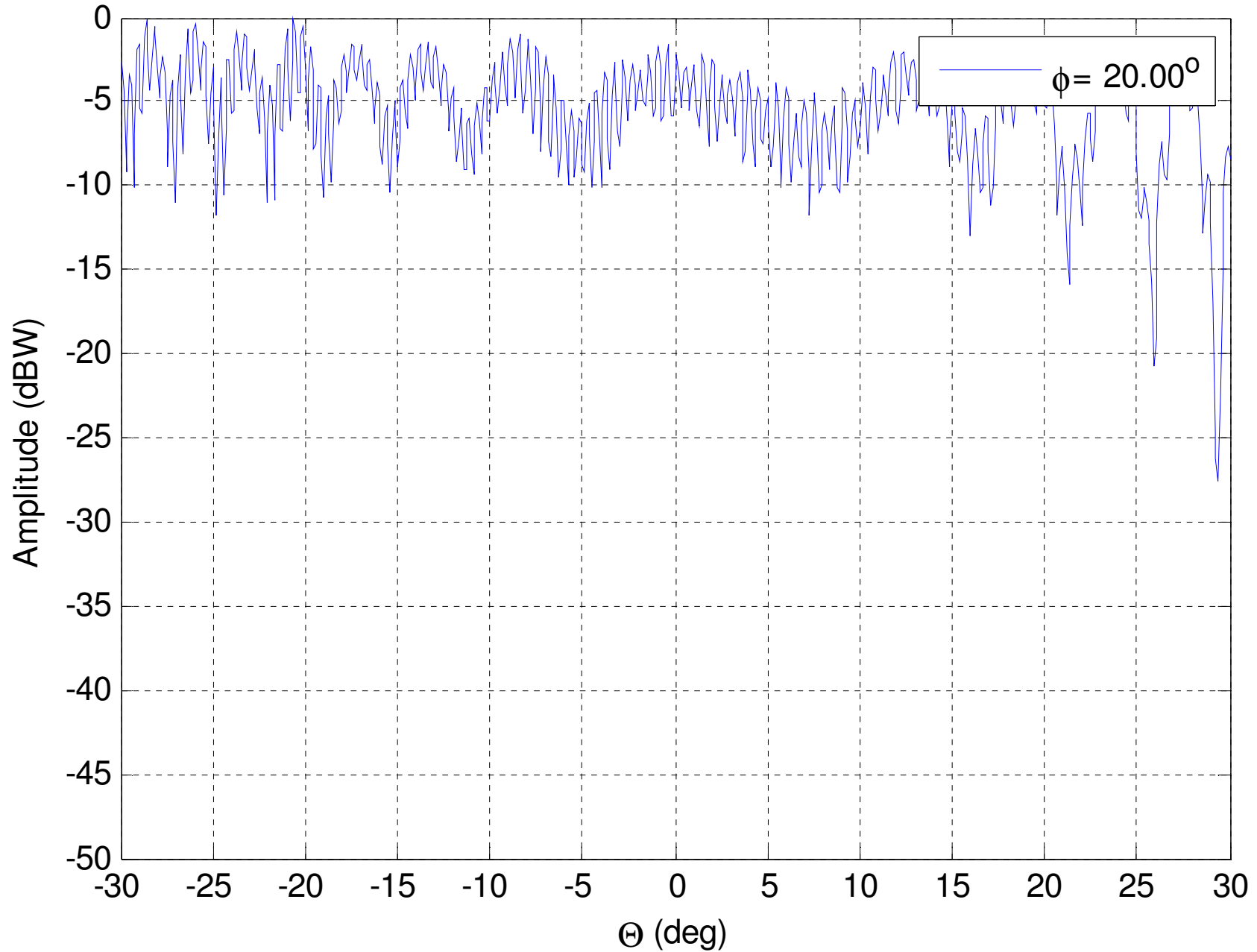
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 0.59 dBW, Date: 14-Dec-2011



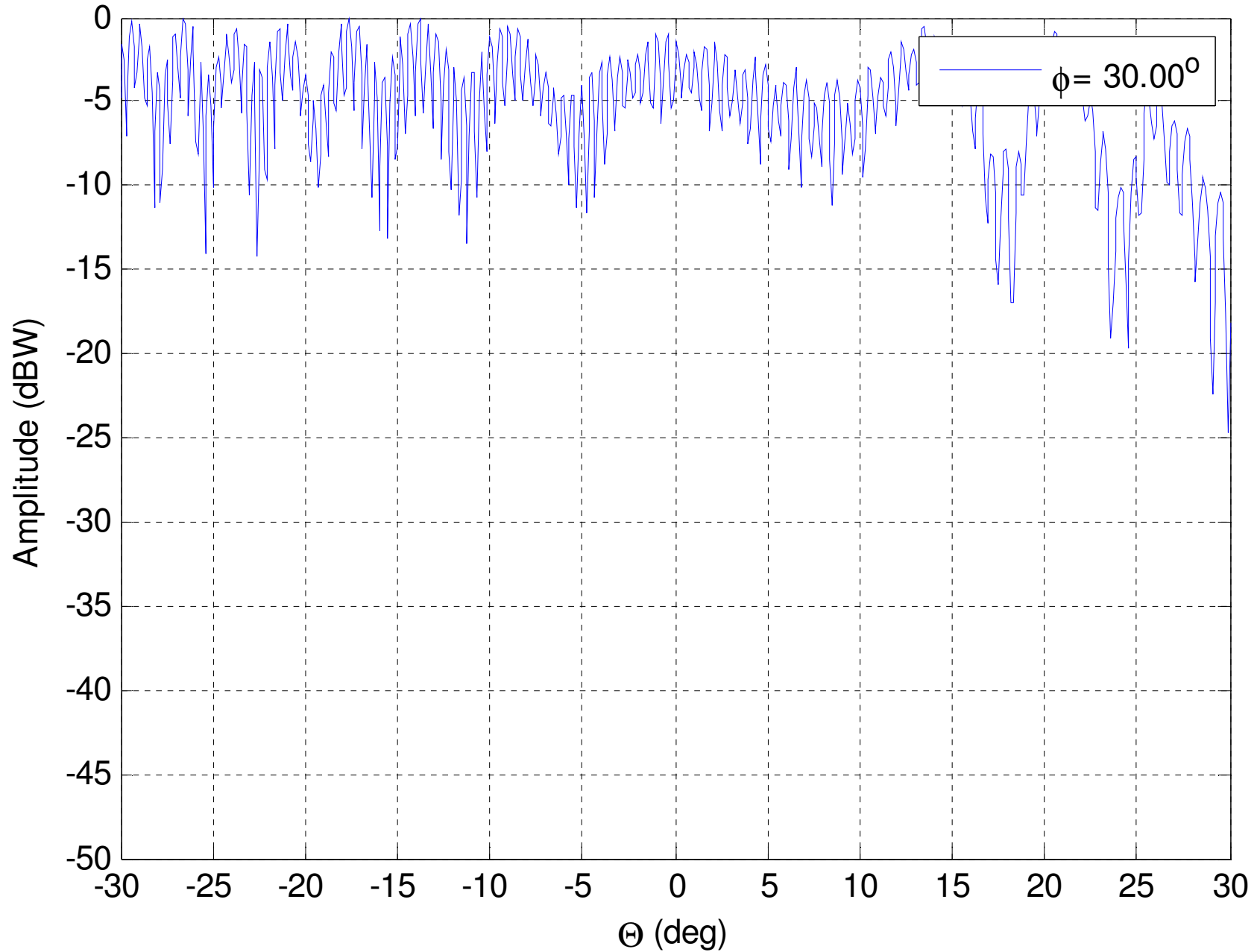
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -0.24 dBW, Date: 14-Dec-2011



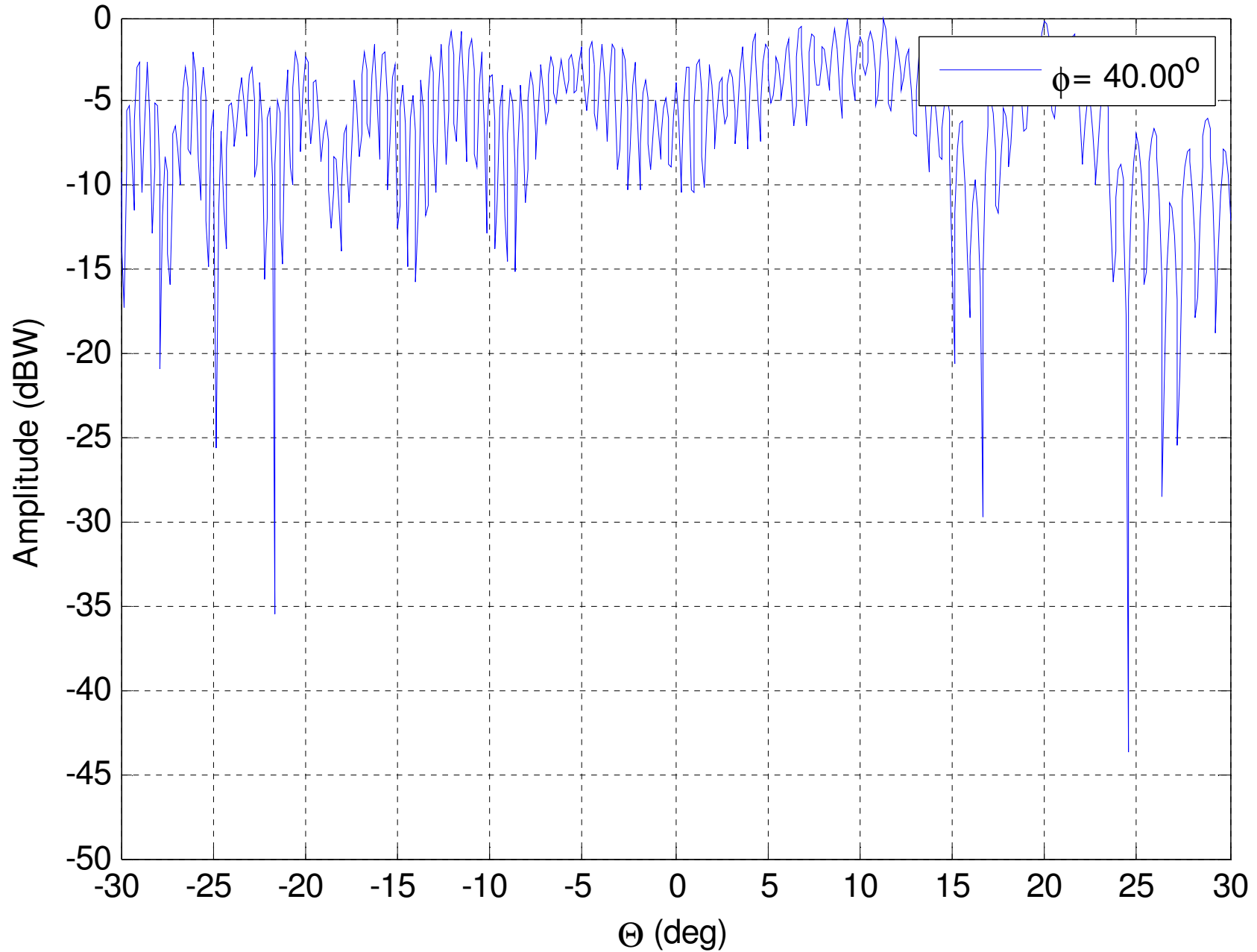
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.94 dBW, Date: 14-Dec-2011



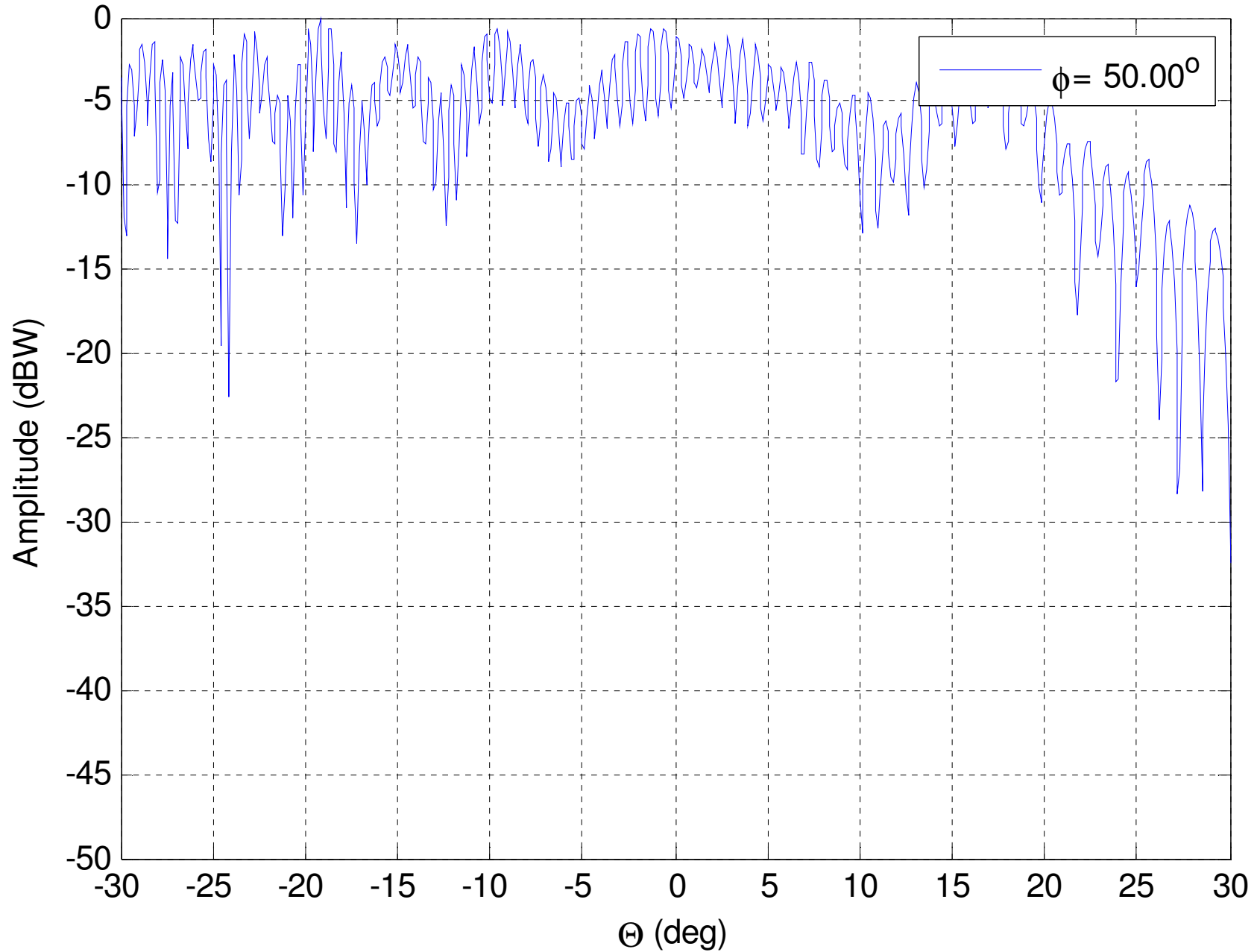
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -1.28 dBW, Date: 14-Dec-2011



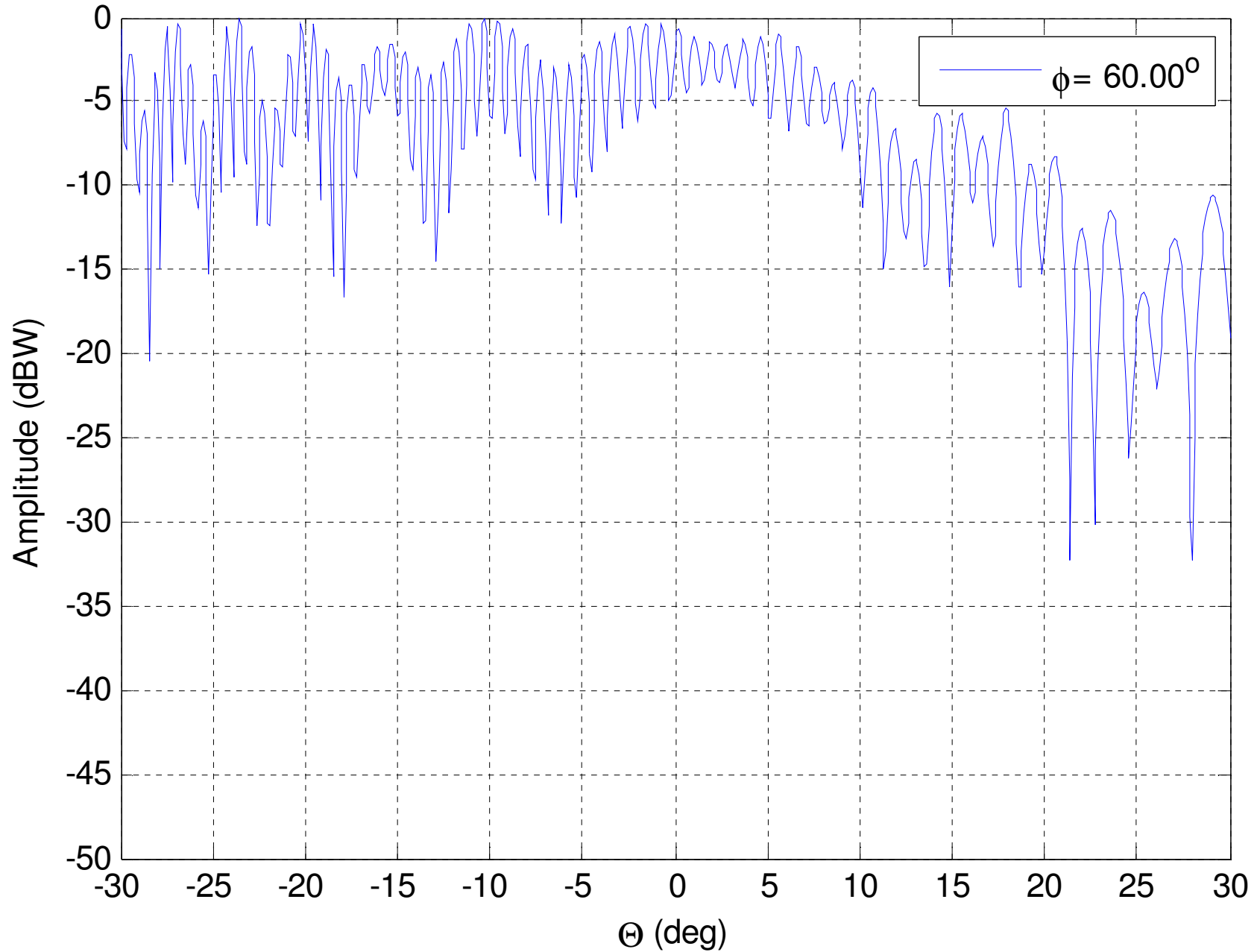
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -1.29 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -1.64 dBW, Date: 14-Dec-2011



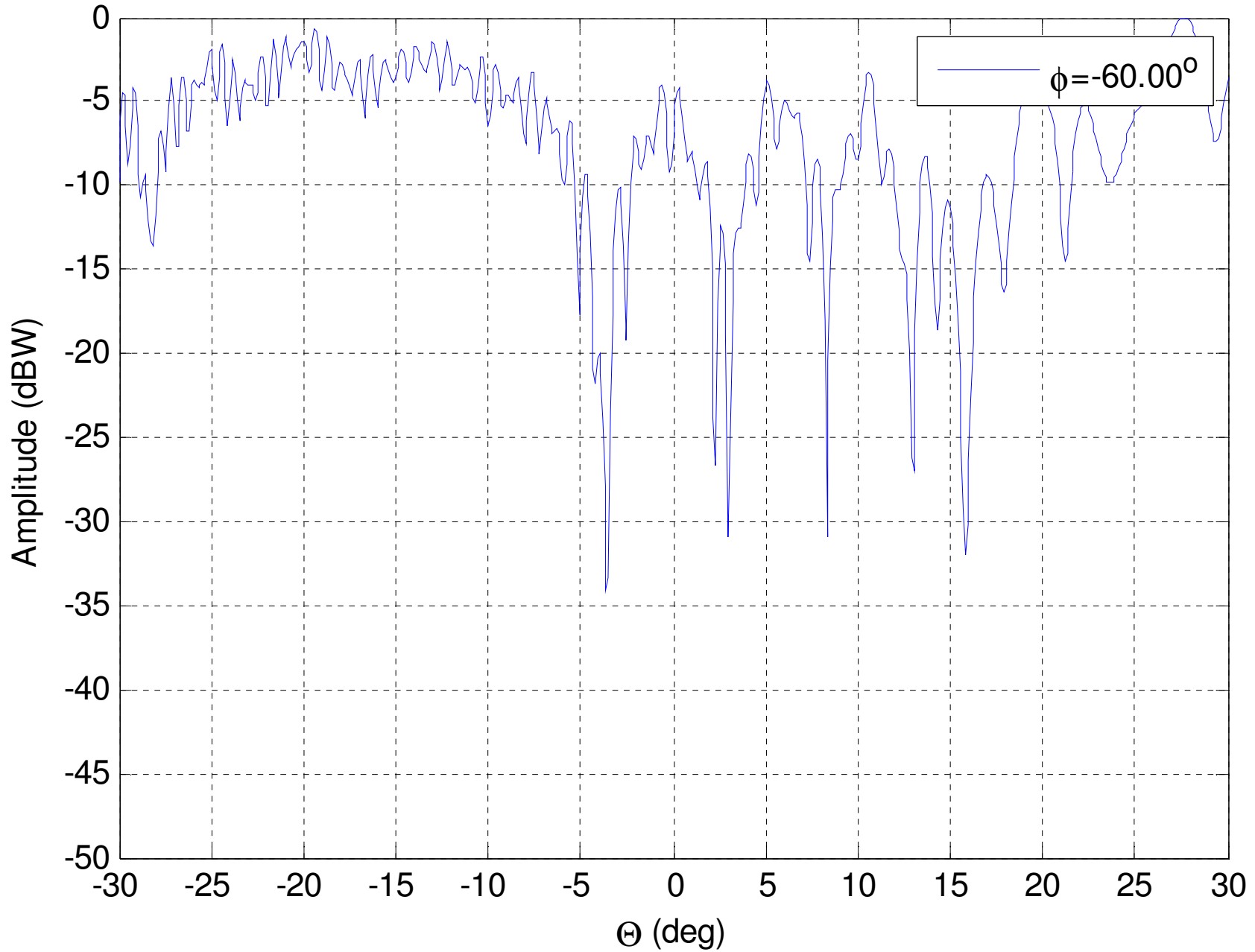
Spot Beam17, +X Axis Plots

- 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

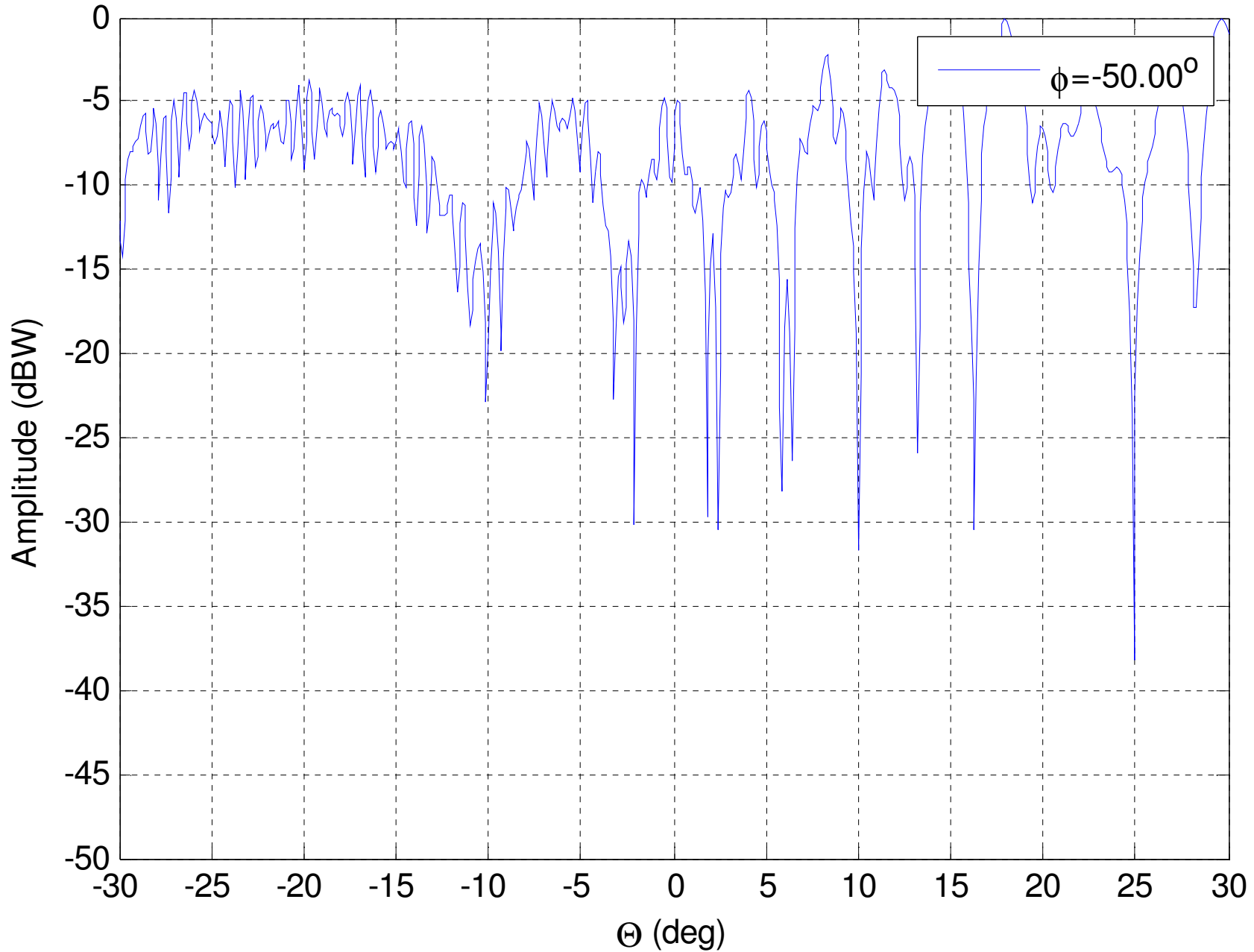
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -6.04 dBW, Date: 14-Dec-2011



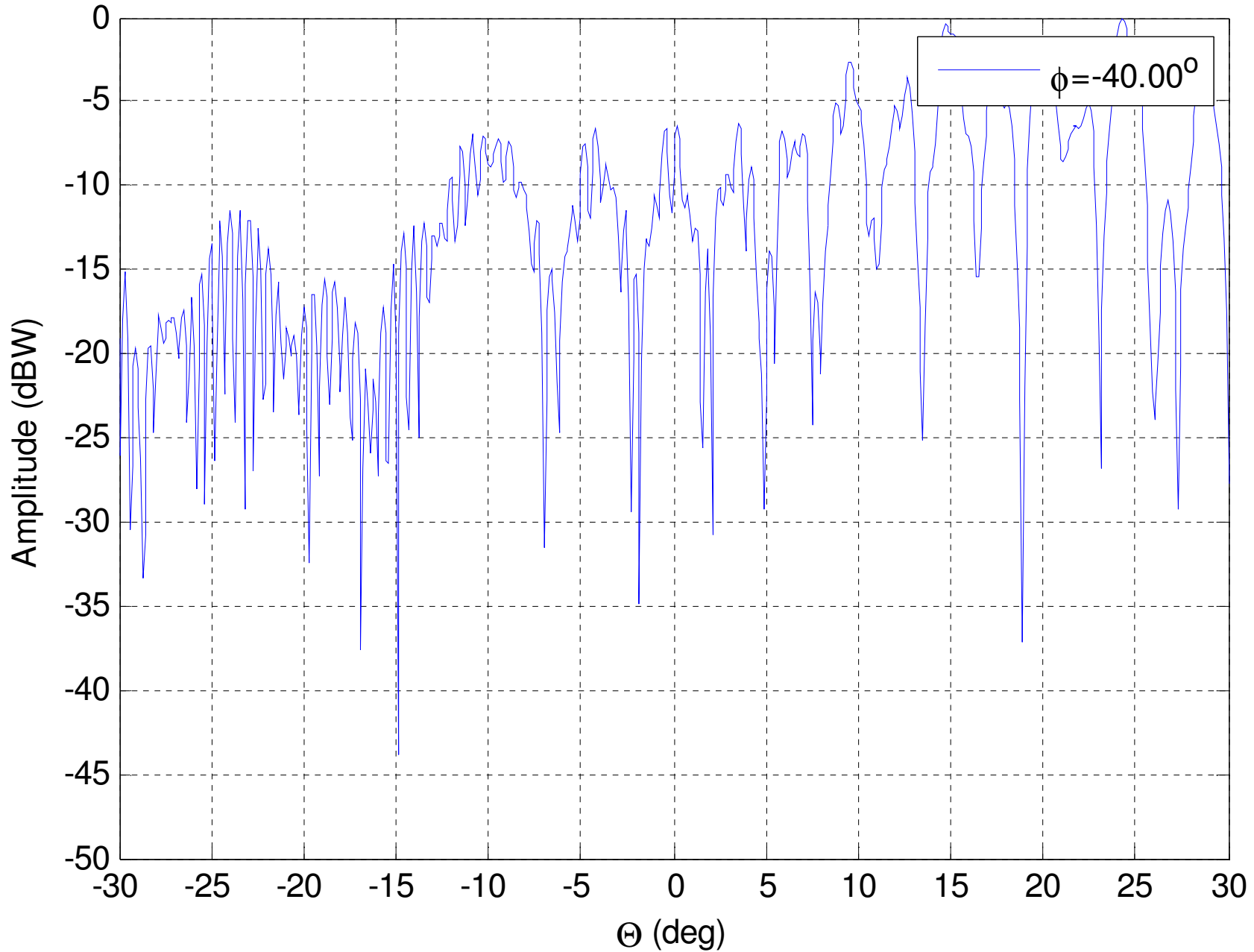
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -5.34 dBW, Date: 14-Dec-2011



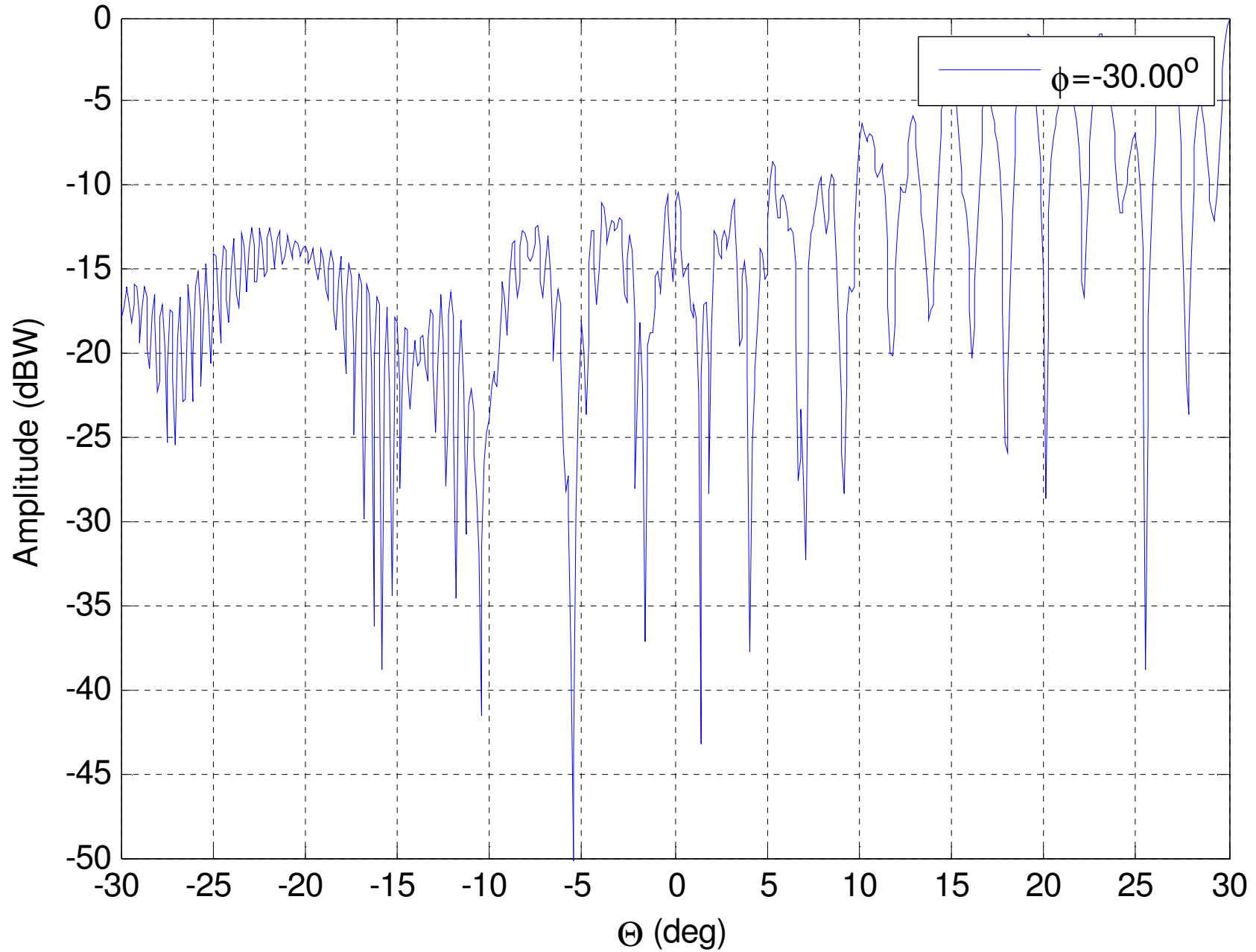
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -3.73 dBW, Date: 14-Dec-2011



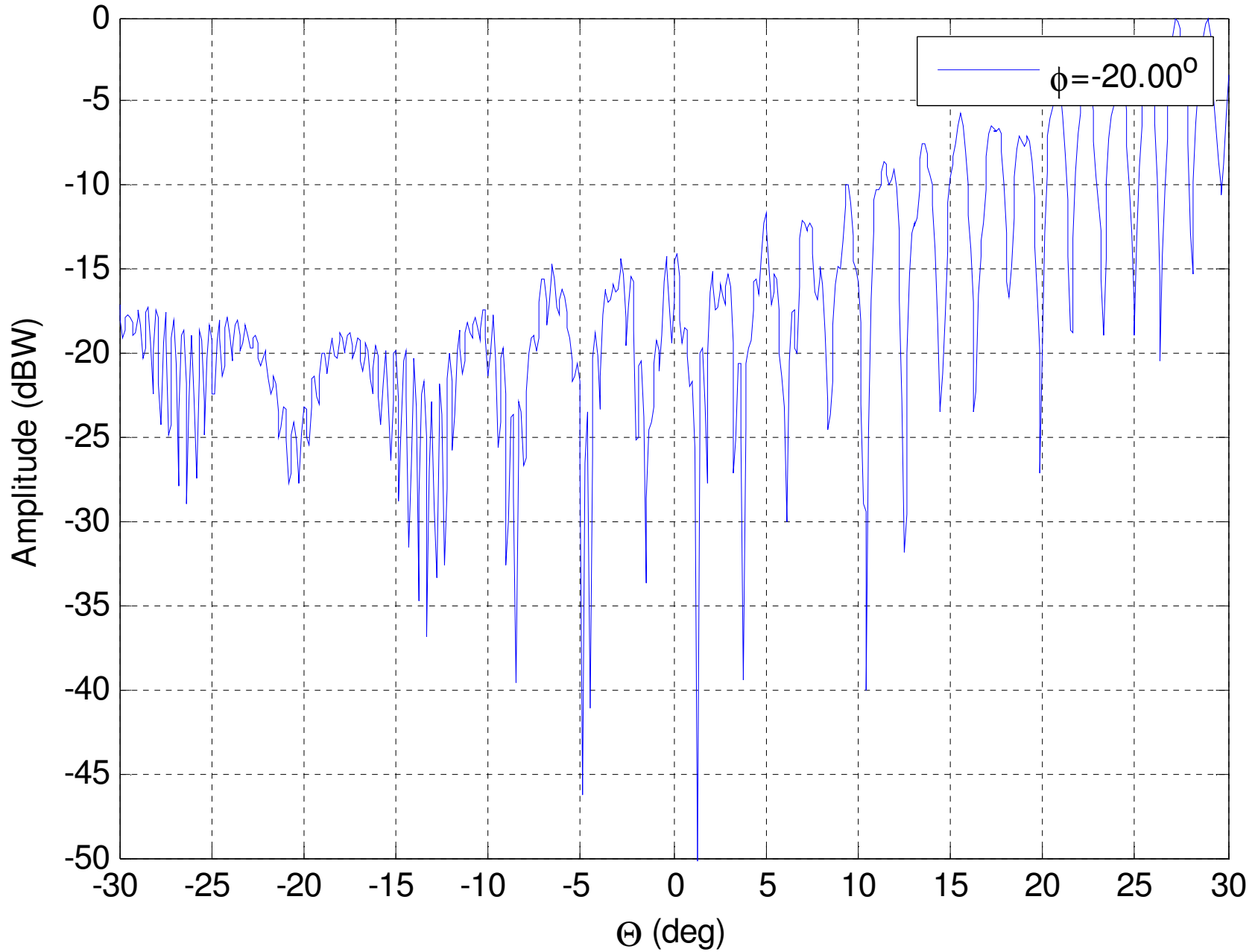
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 0.24 dBW, Date: 14-Dec-2011



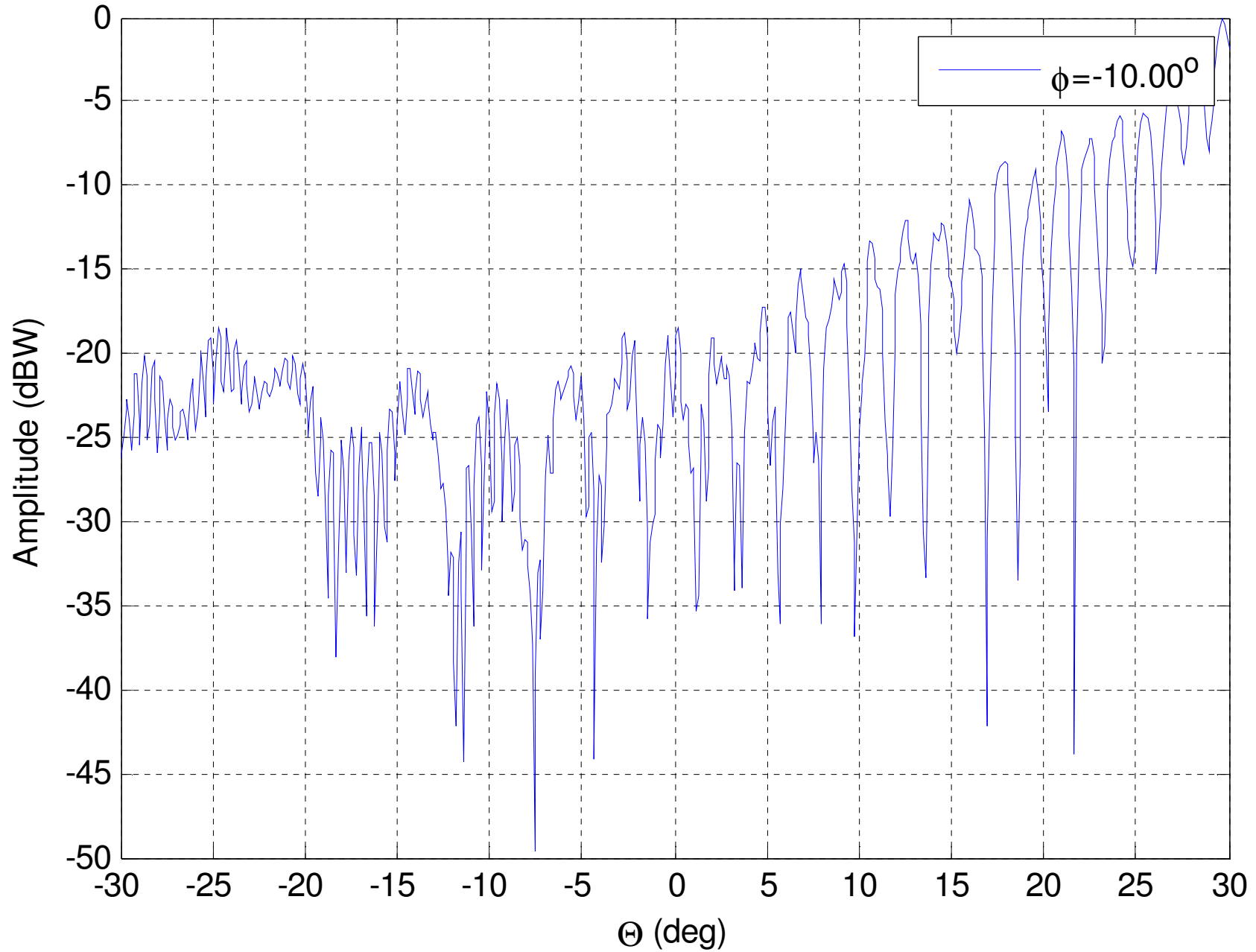
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 3.83 dBW, Date: 14-Dec-2011



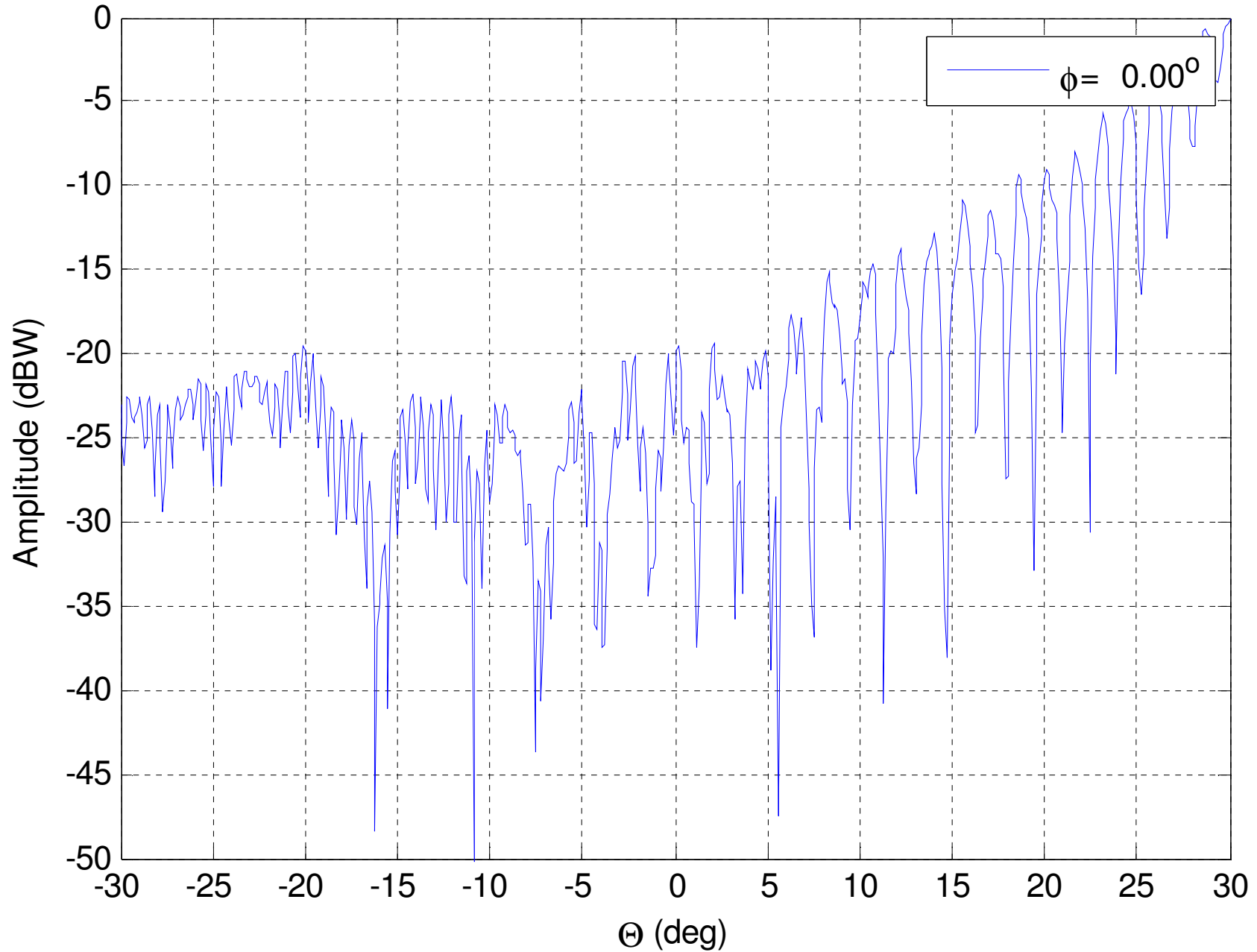
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 8.26 dBW, Date: 14-Dec-2011



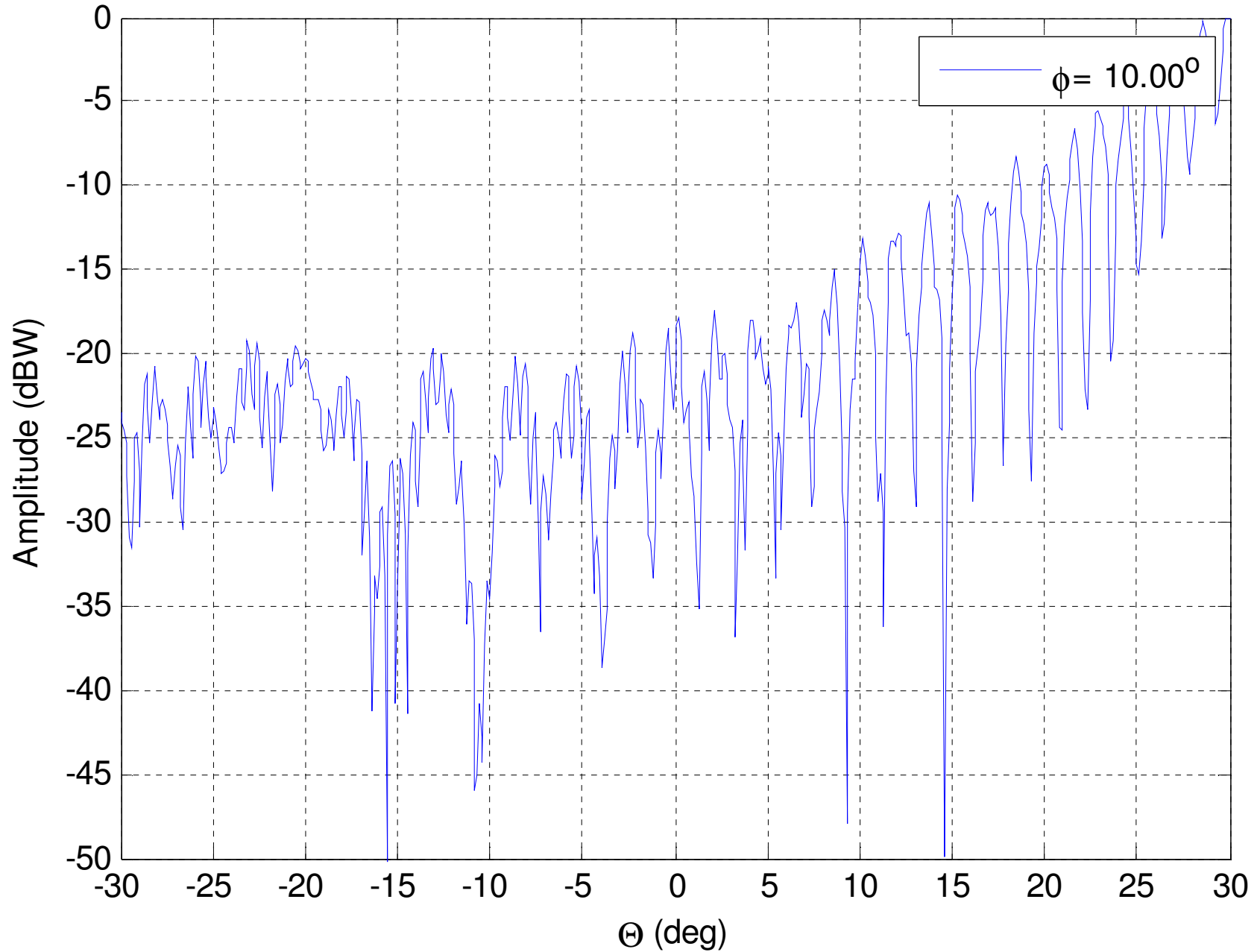
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 9.32 dBW, Date: 14-Dec-2011



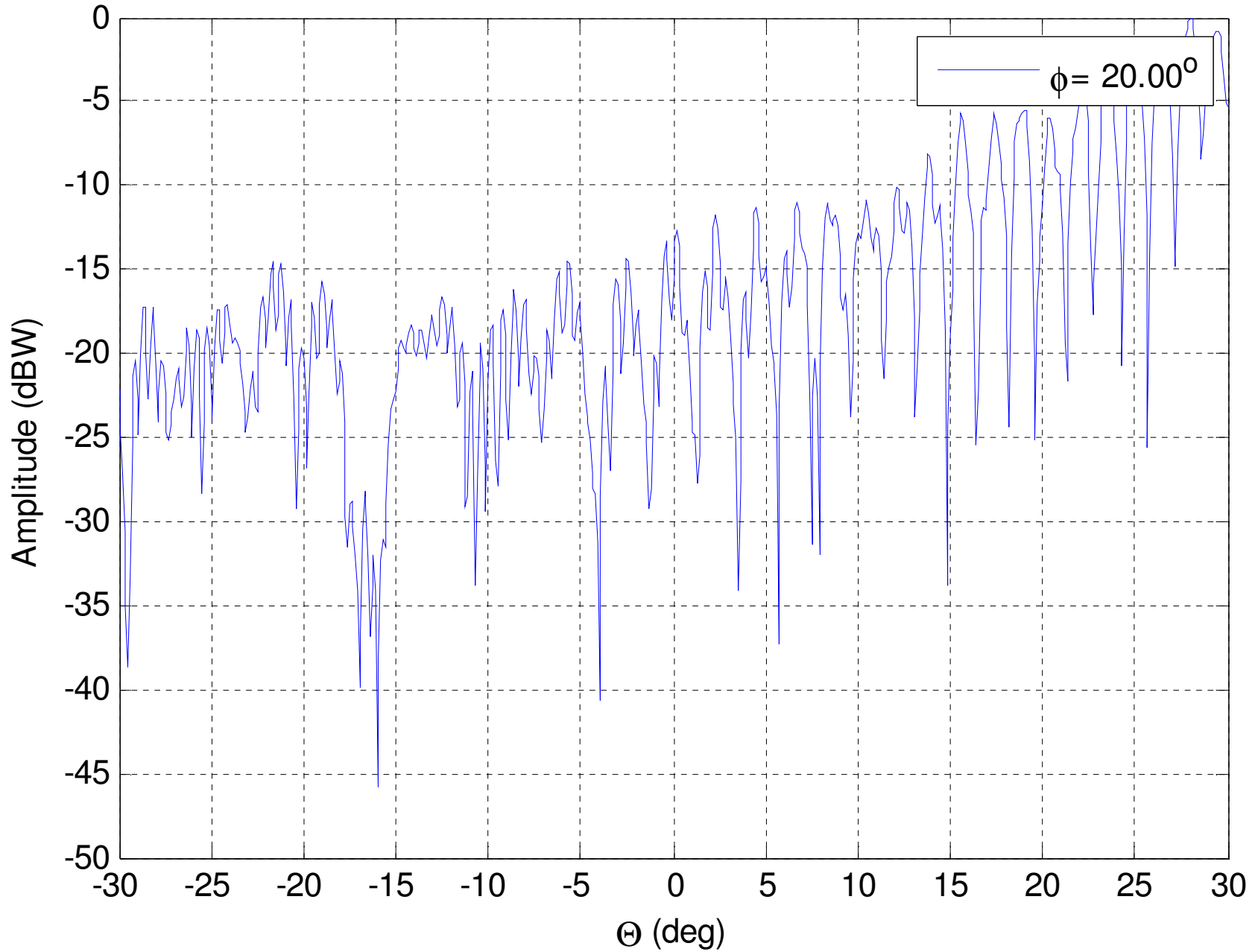
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 7.72 dBW, Date: 14-Dec-2011



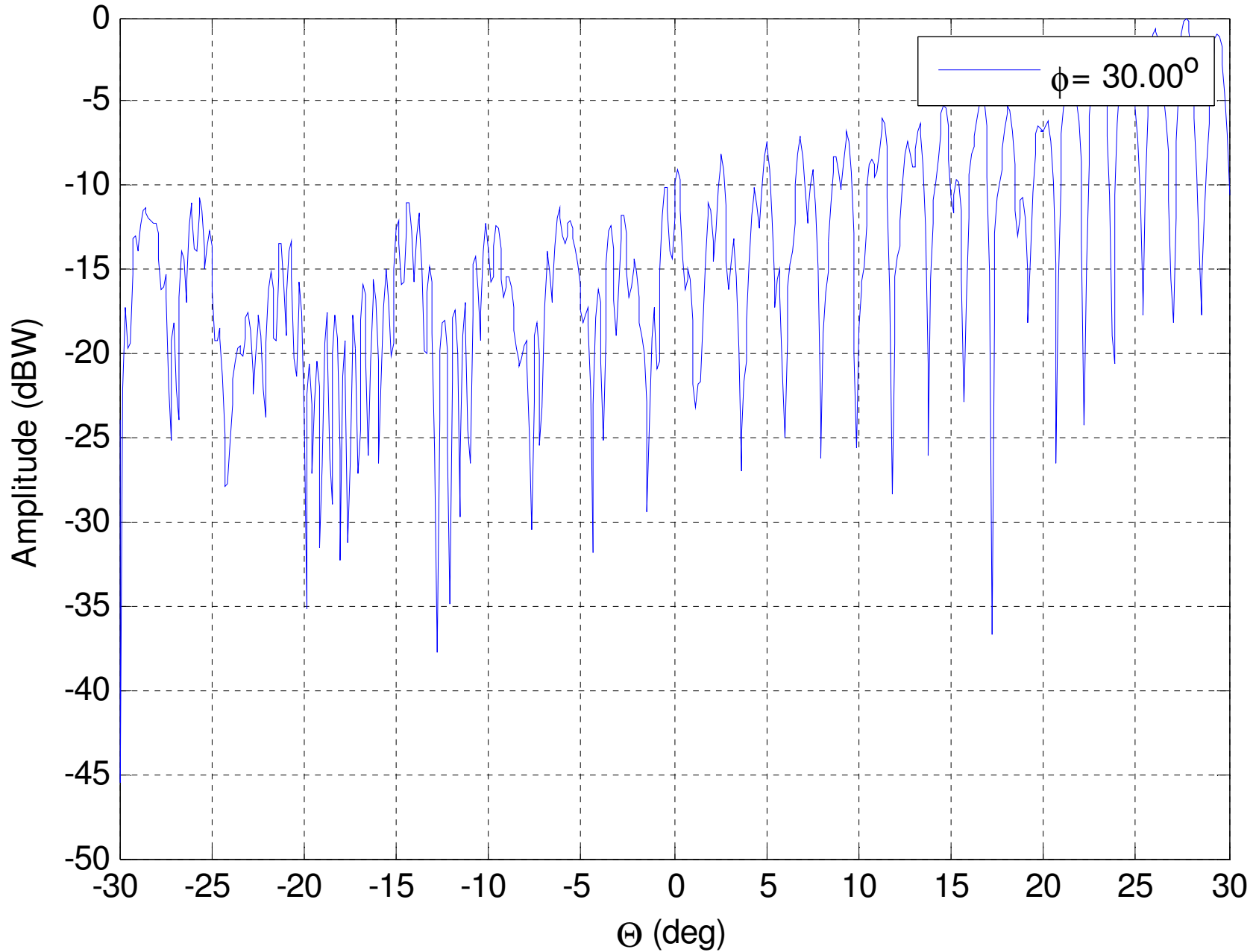
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 2.53 dBW, Date: 14-Dec-2011



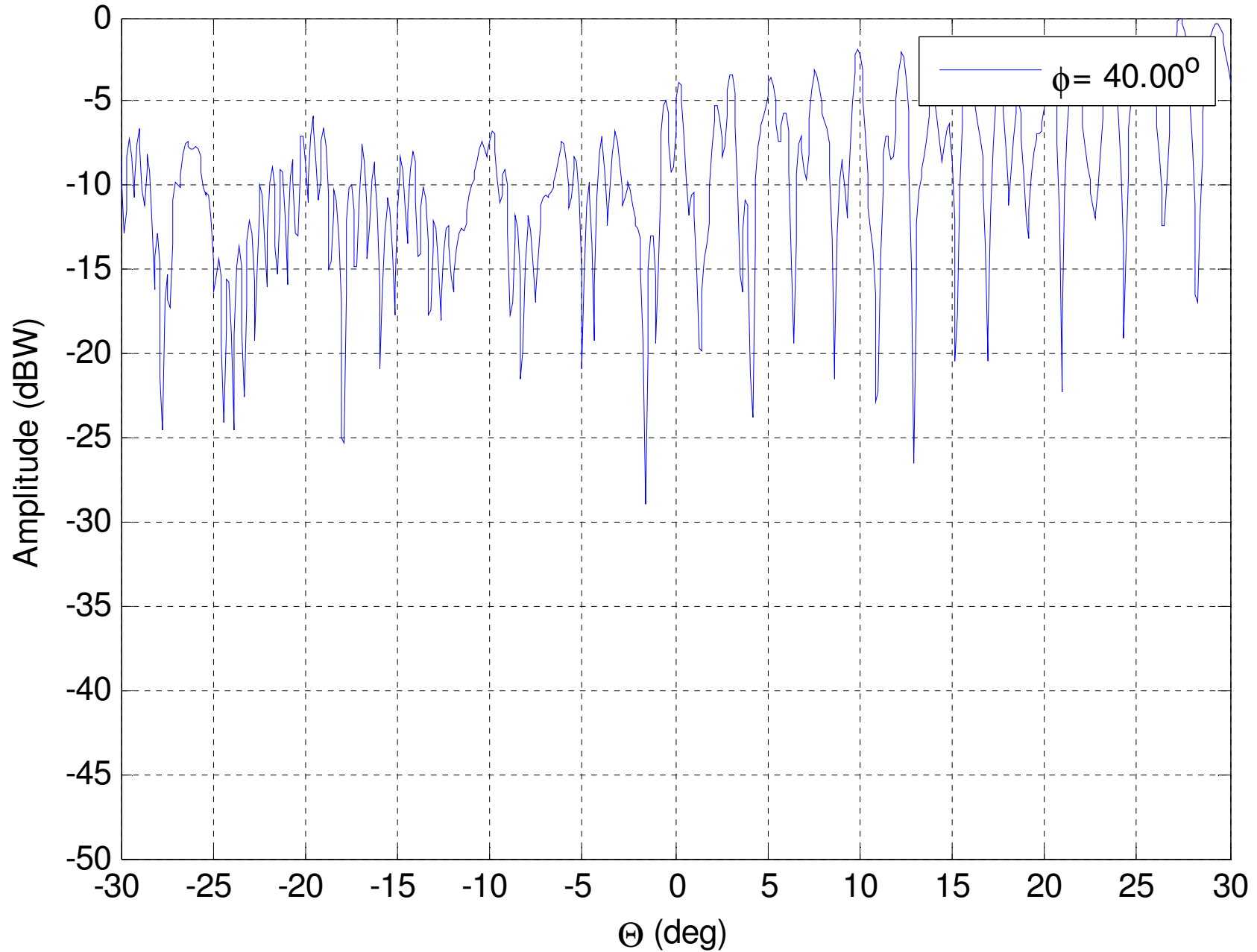
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -1.02 dBW, Date: 14-Dec-2011



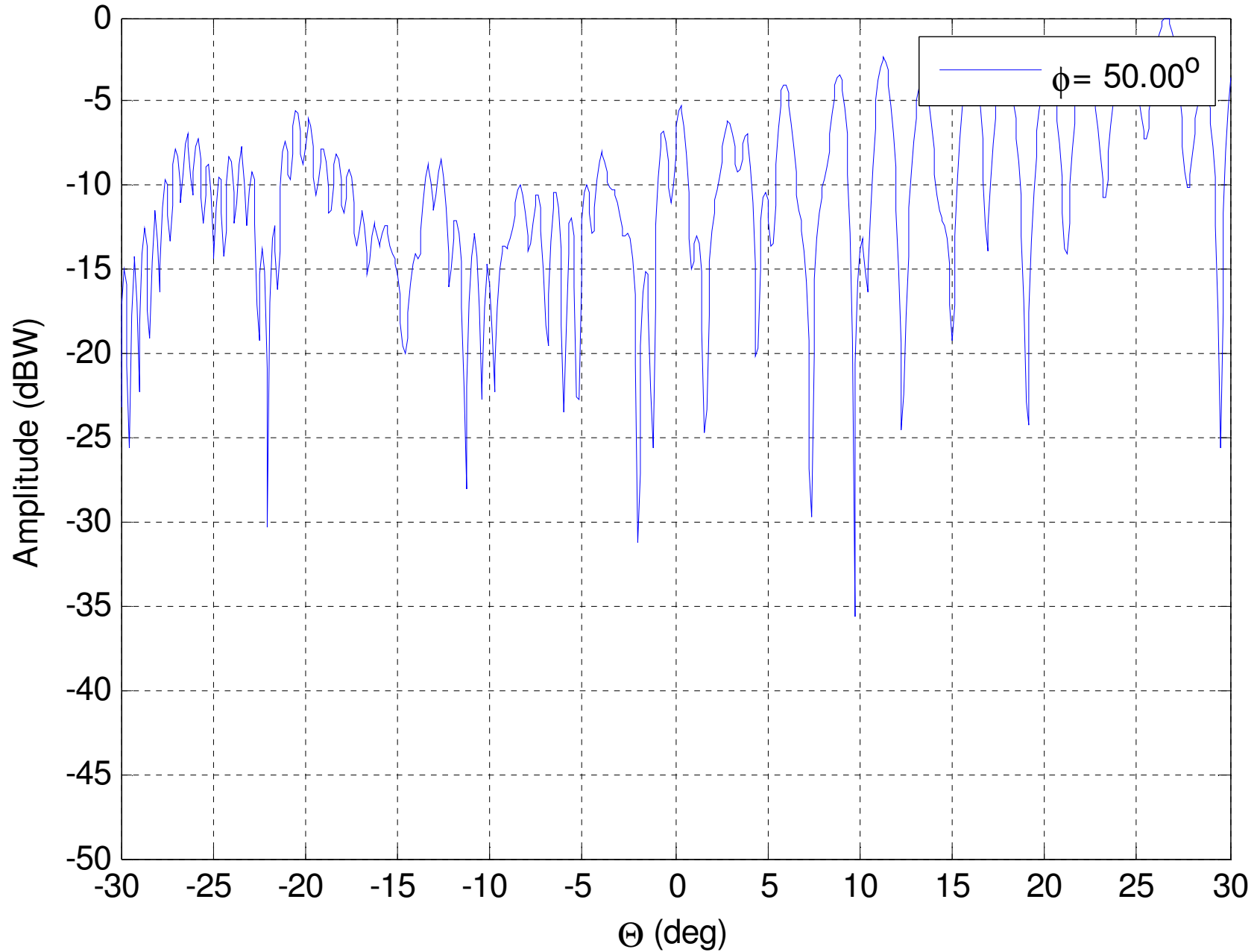
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -6.27 dBW, Date: 14-Dec-2011



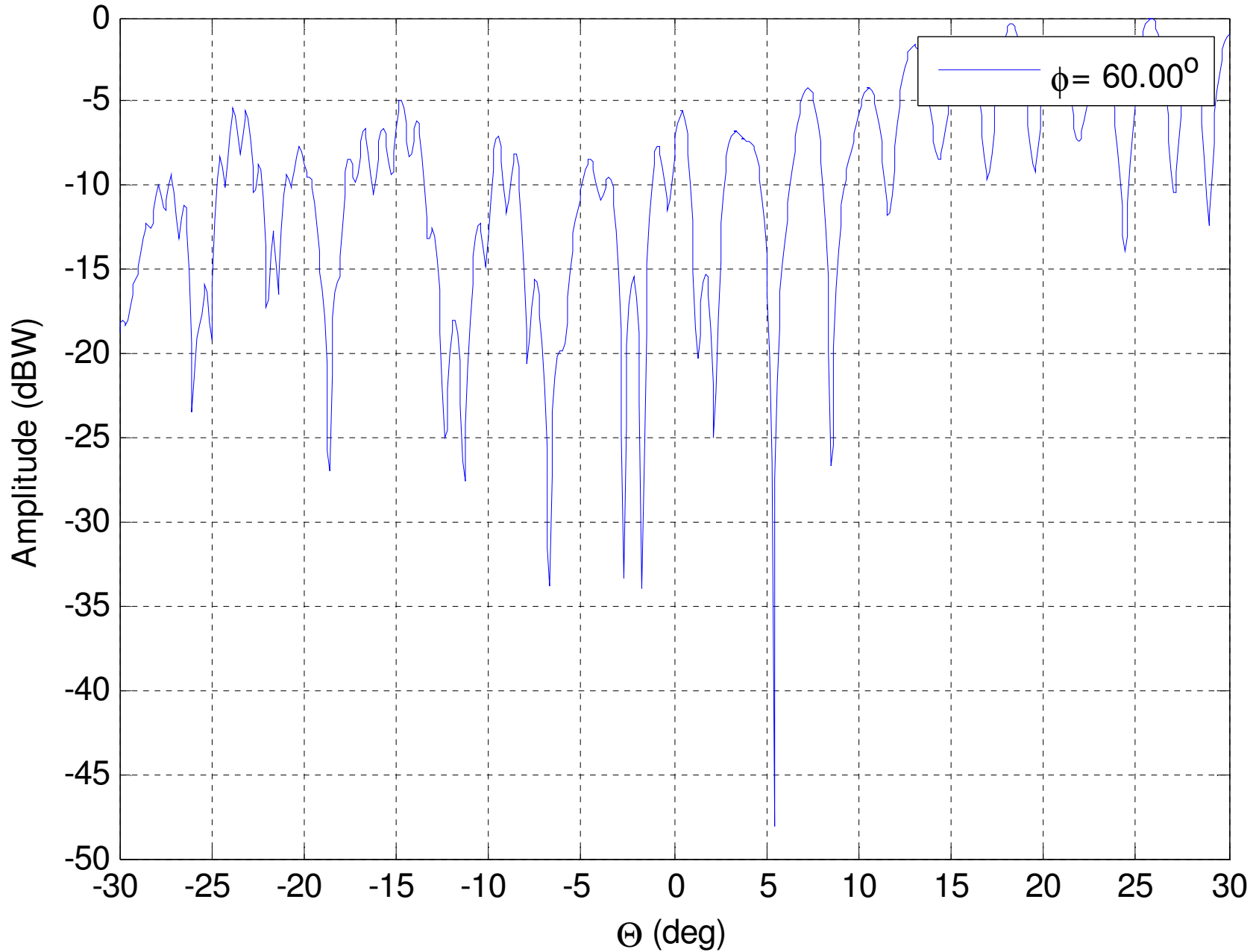
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -4.87 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

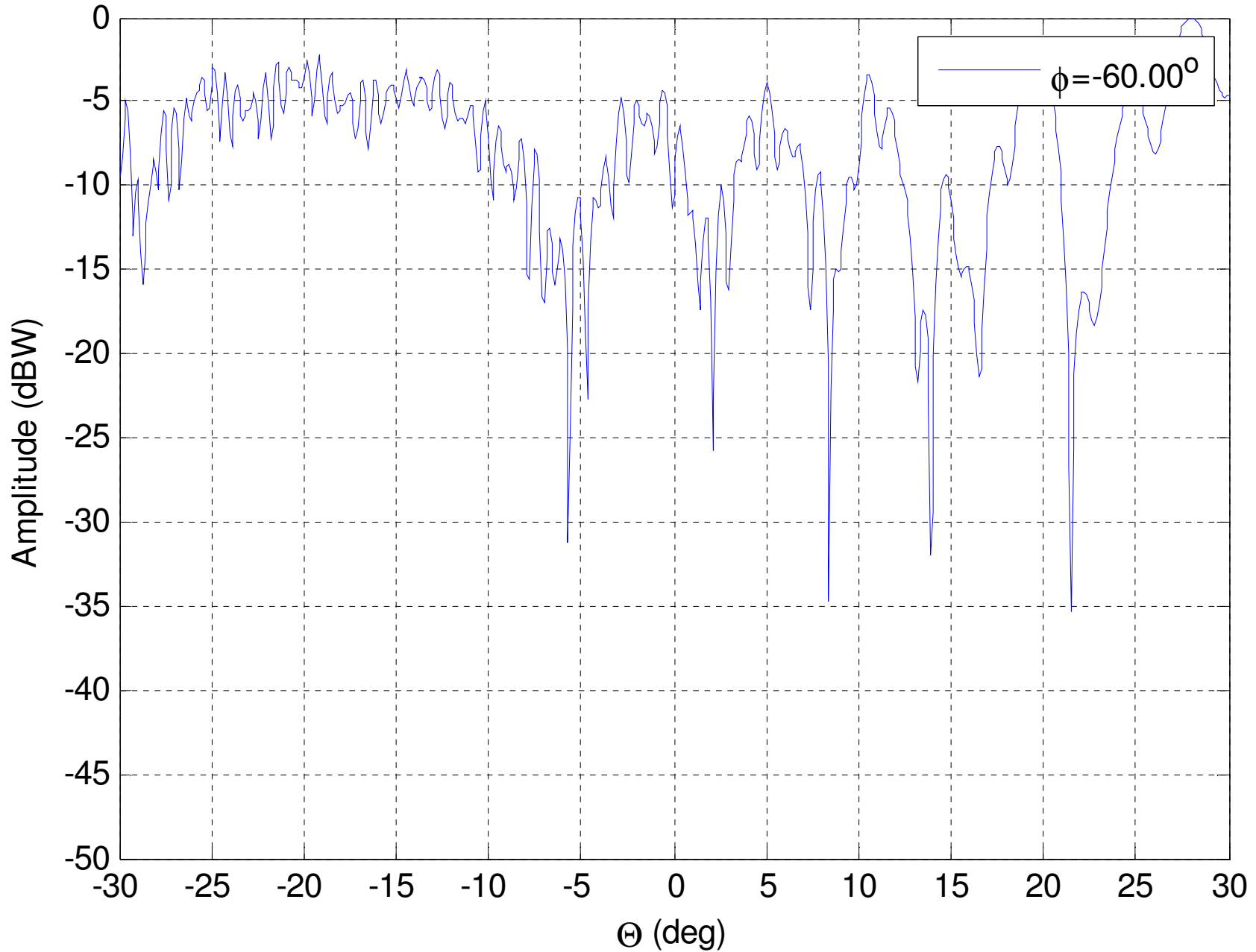
Input file: tx-17.3-rhcp-60.cut, Peak: -4.64 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

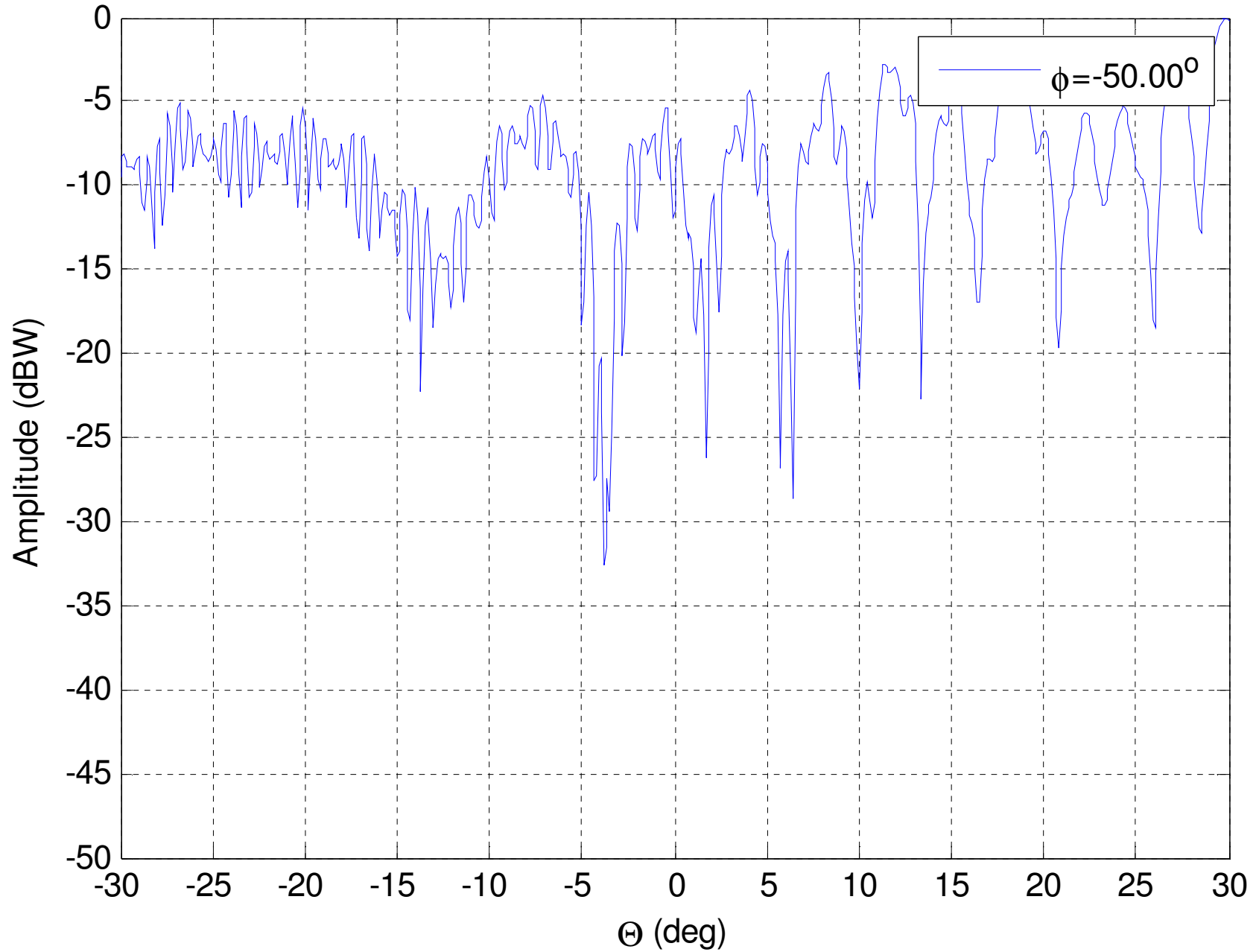
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -5.35 dBW, Date: 14-Dec-2011



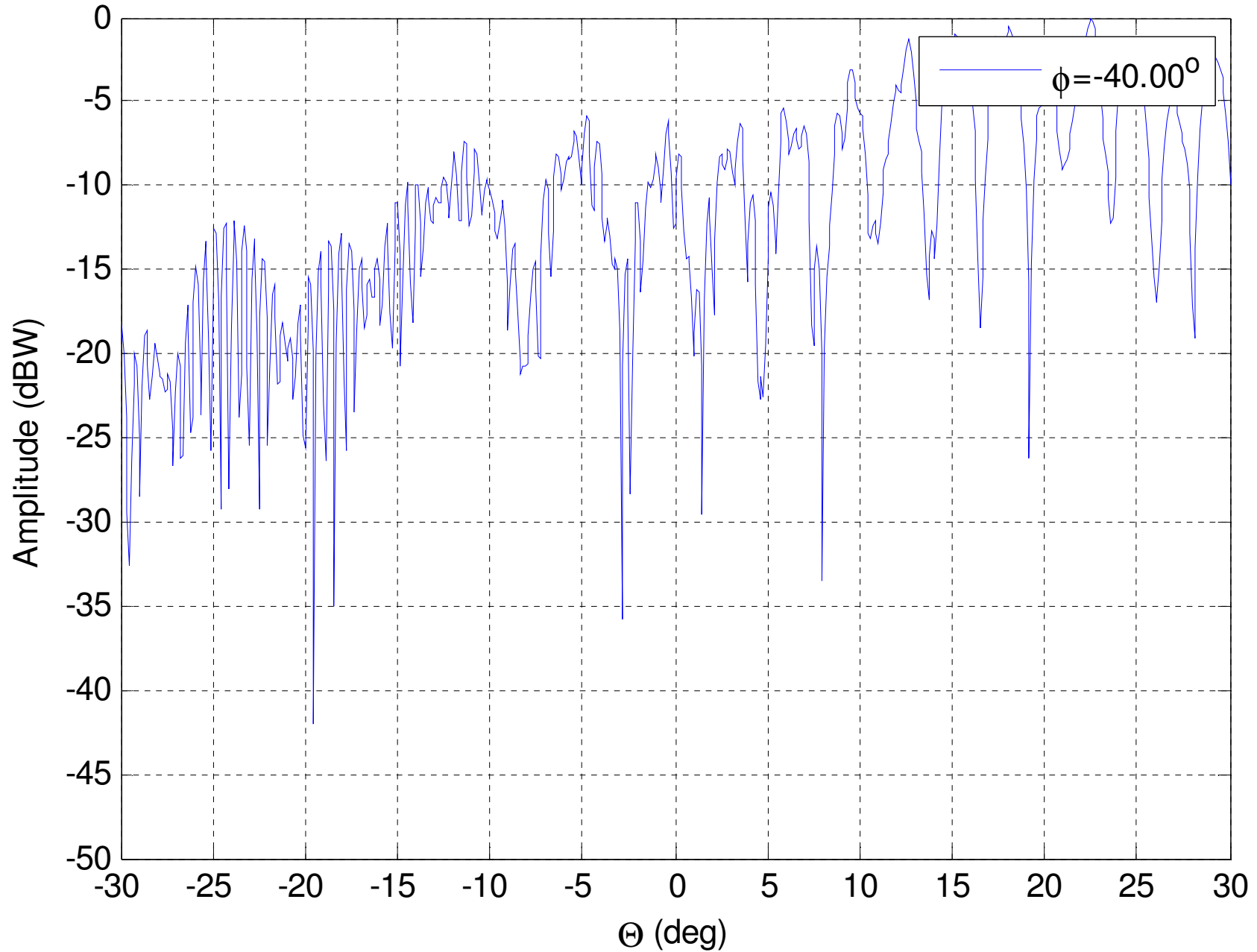
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.50 dBW, Date: 14-Dec-2011



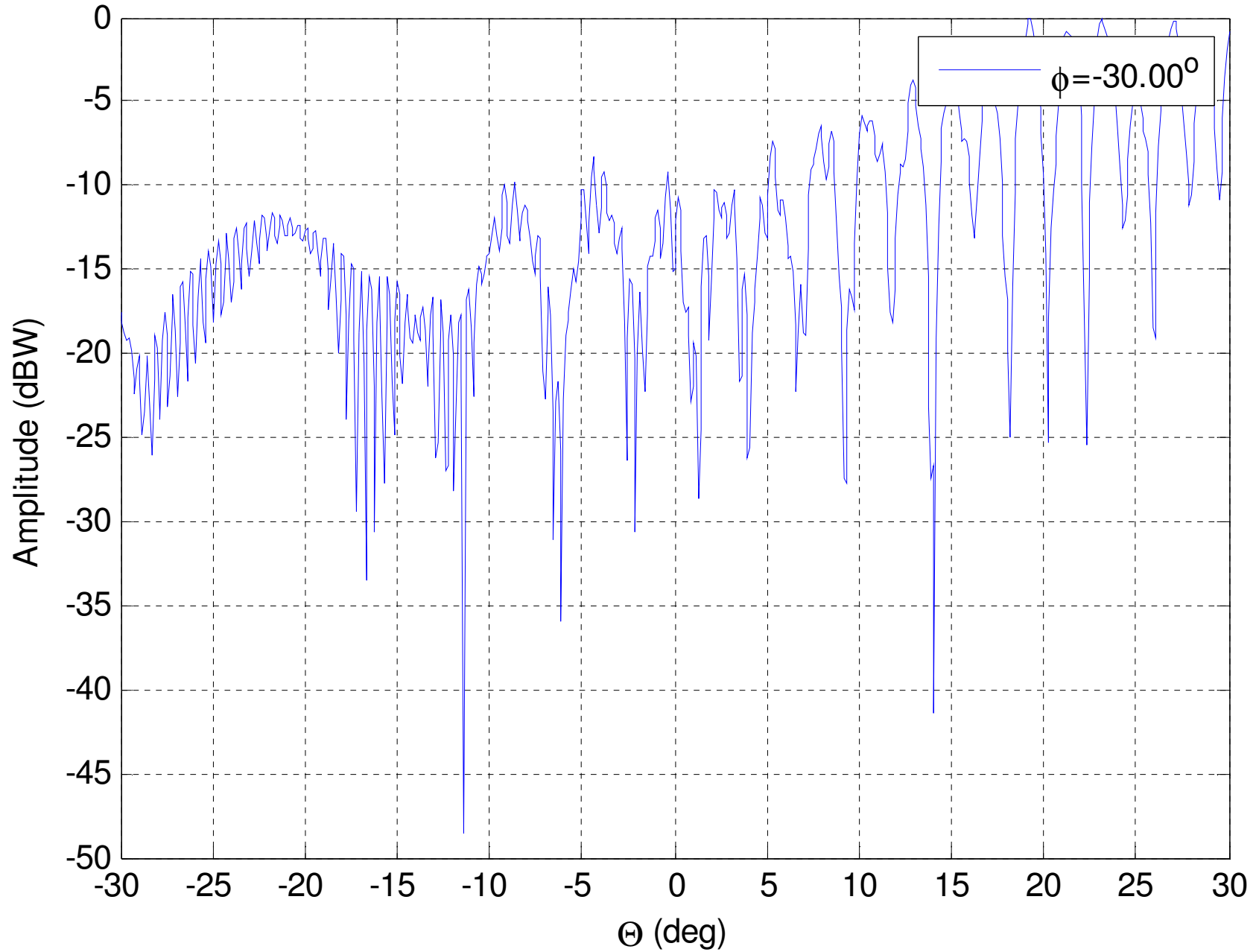
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.67 dBW, Date: 14-Dec-2011



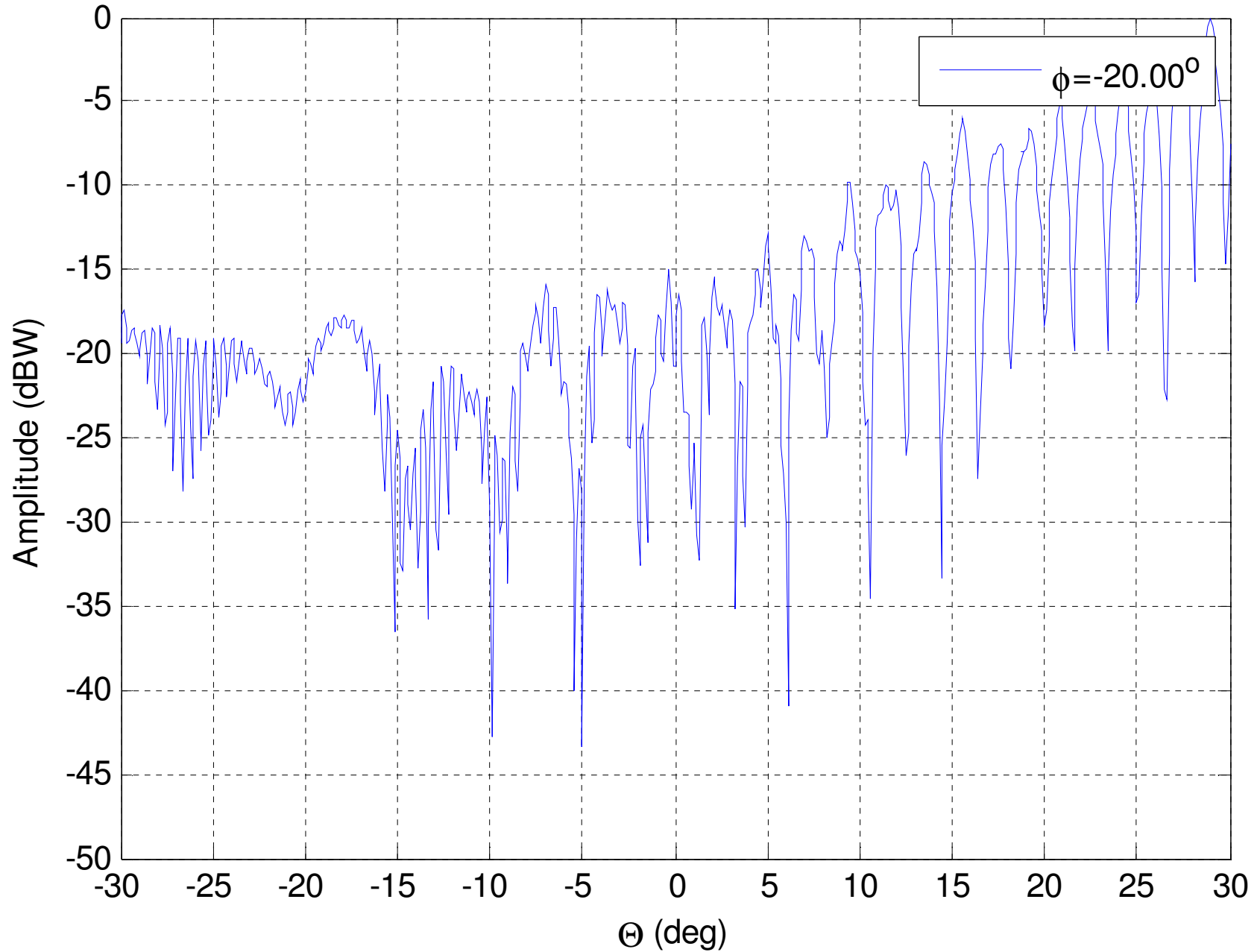
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -0.90 dBW, Date: 14-Dec-2011



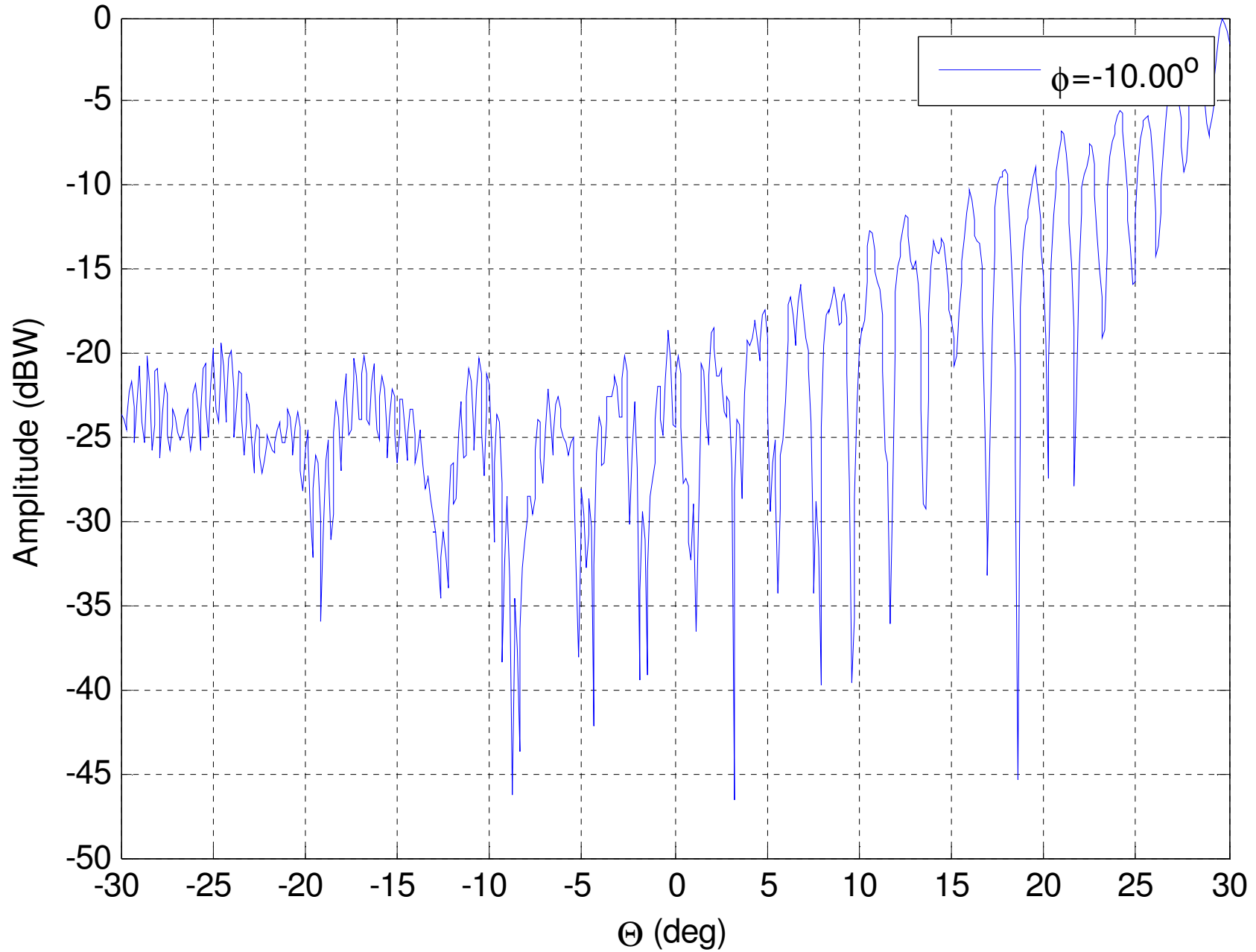
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 4.84 dBW, Date: 14-Dec-2011



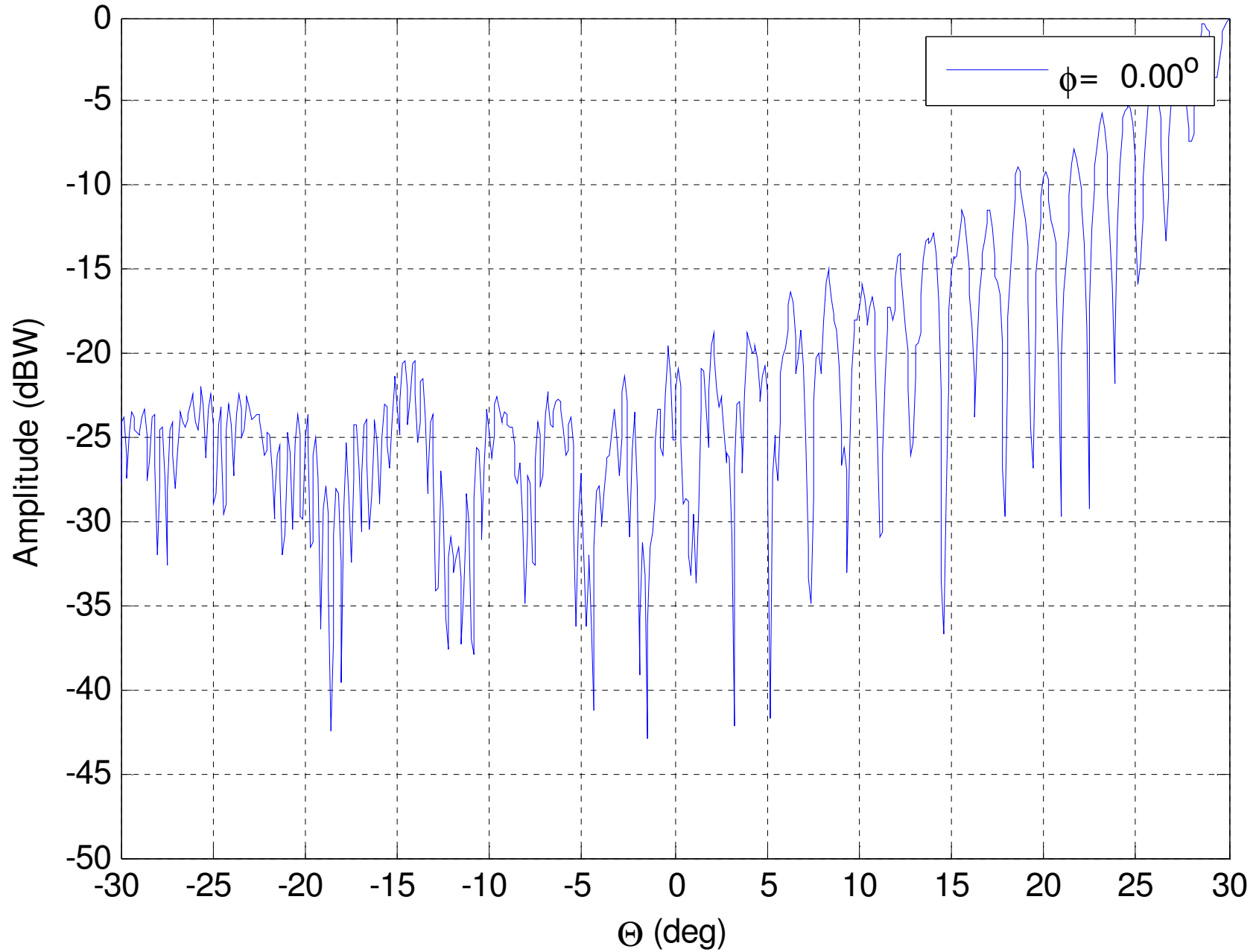
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 8.46 dBW, Date: 14-Dec-2011



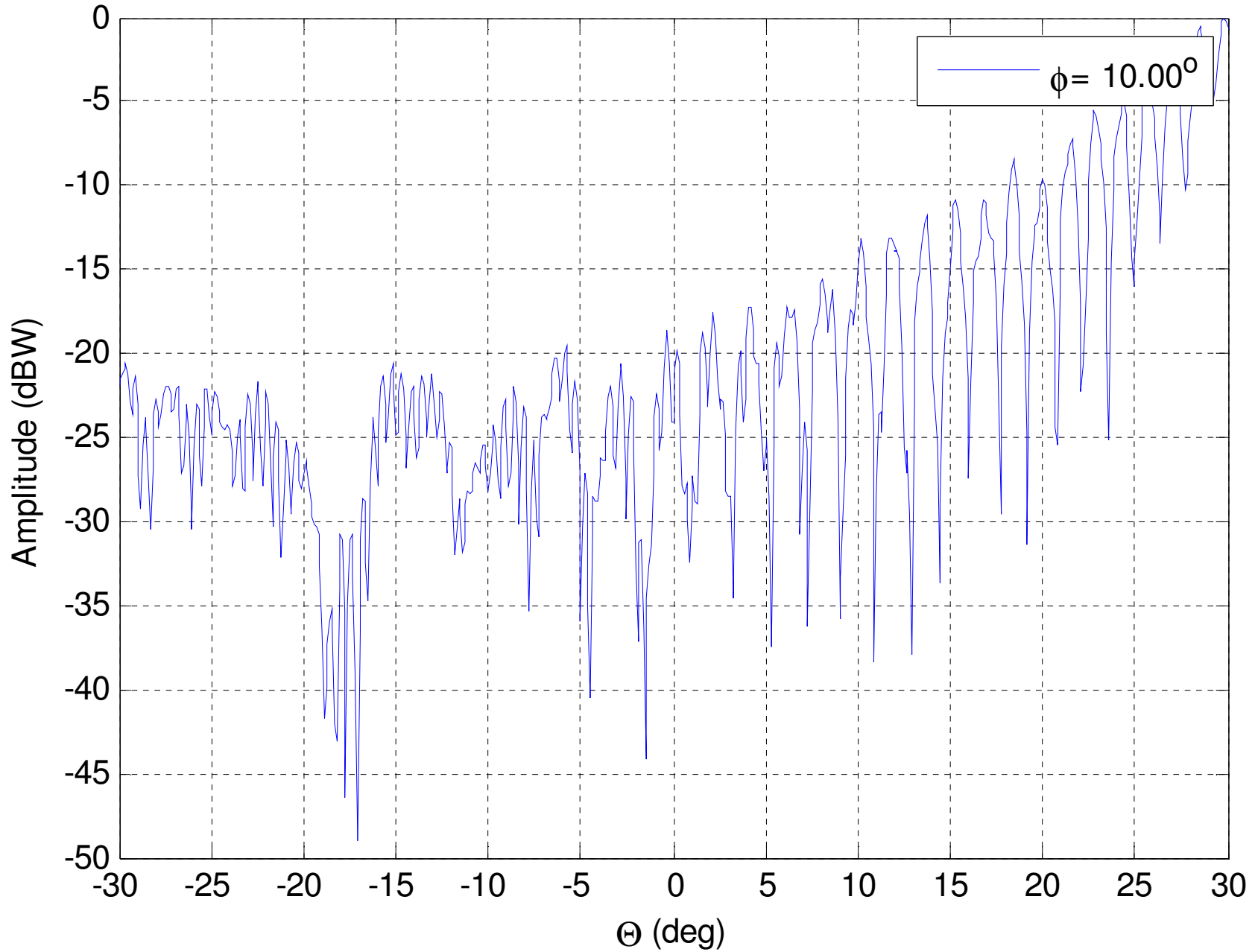
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 9.31 dBW, Date: 14-Dec-2011



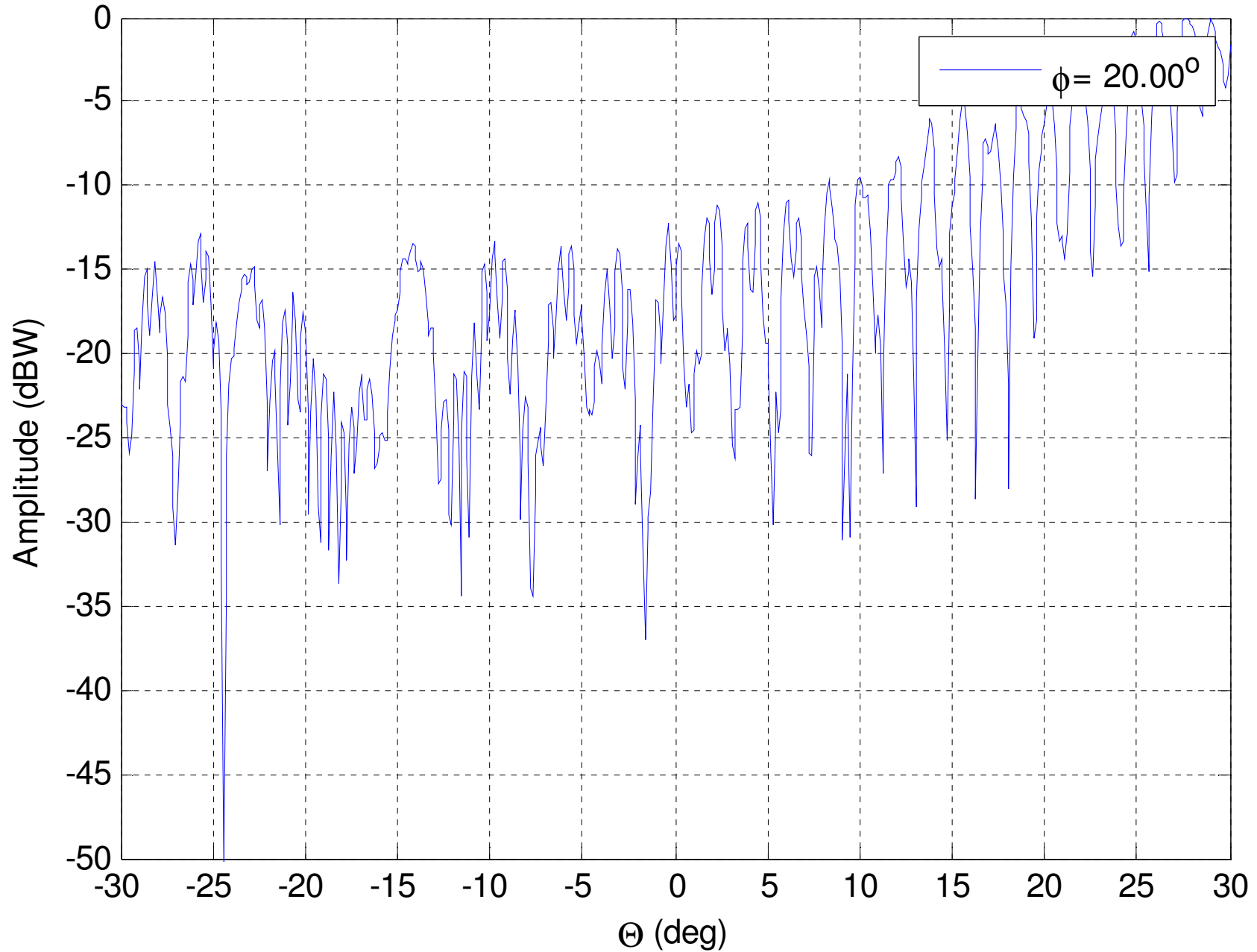
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 8.17 dBW, Date: 14-Dec-2011



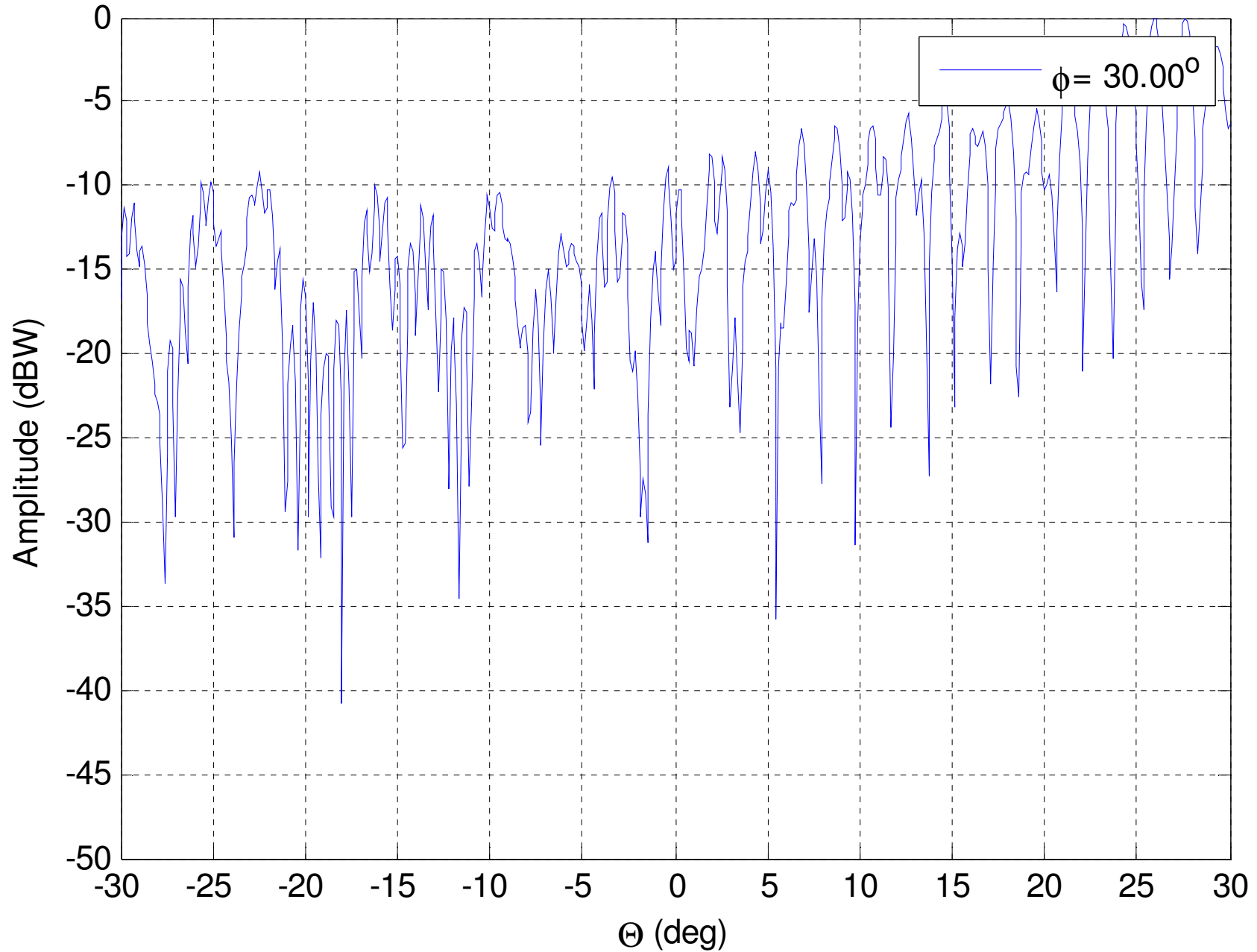
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 1.78 dBW, Date: 14-Dec-2011



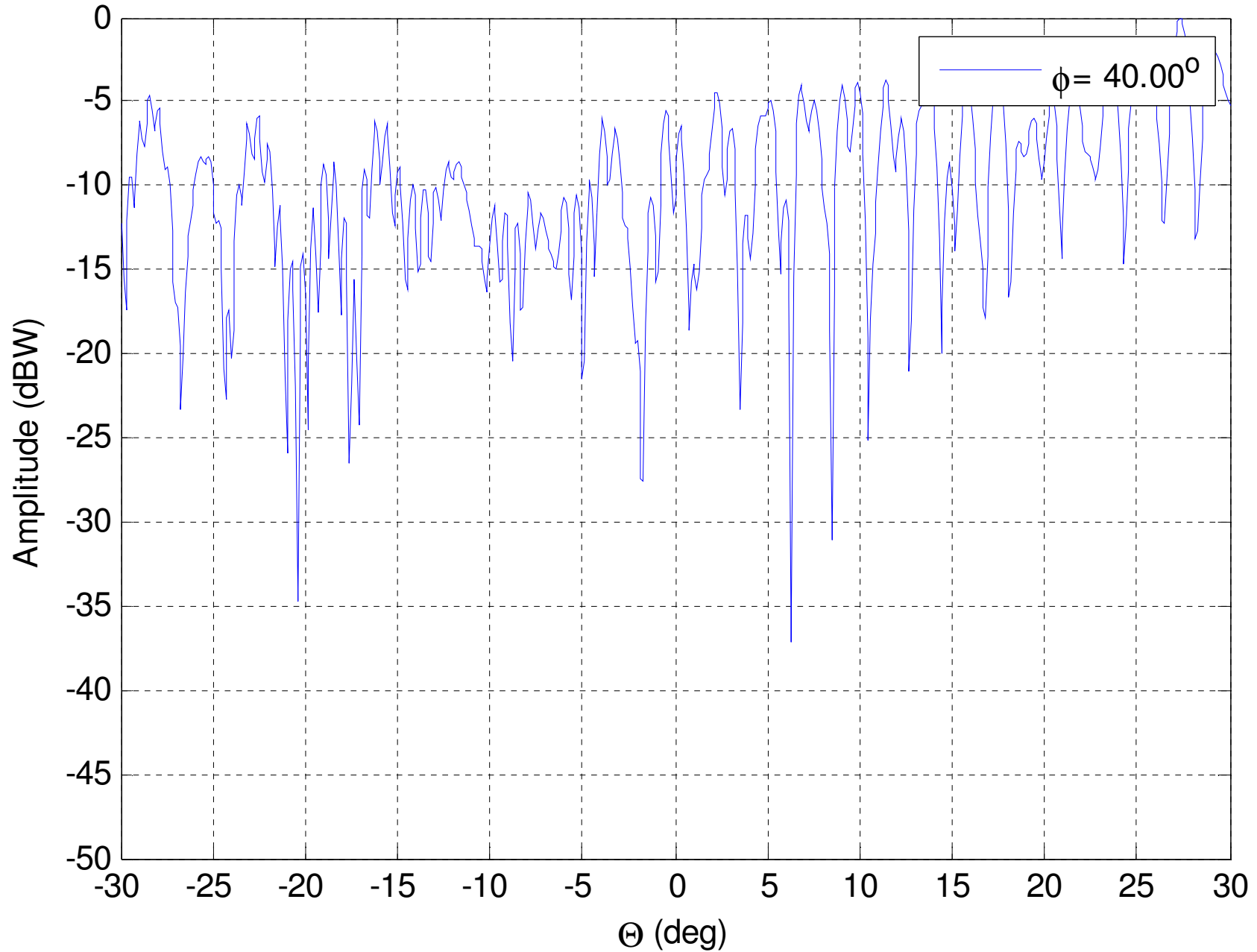
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -1.57 dBW, Date: 14-Dec-2011



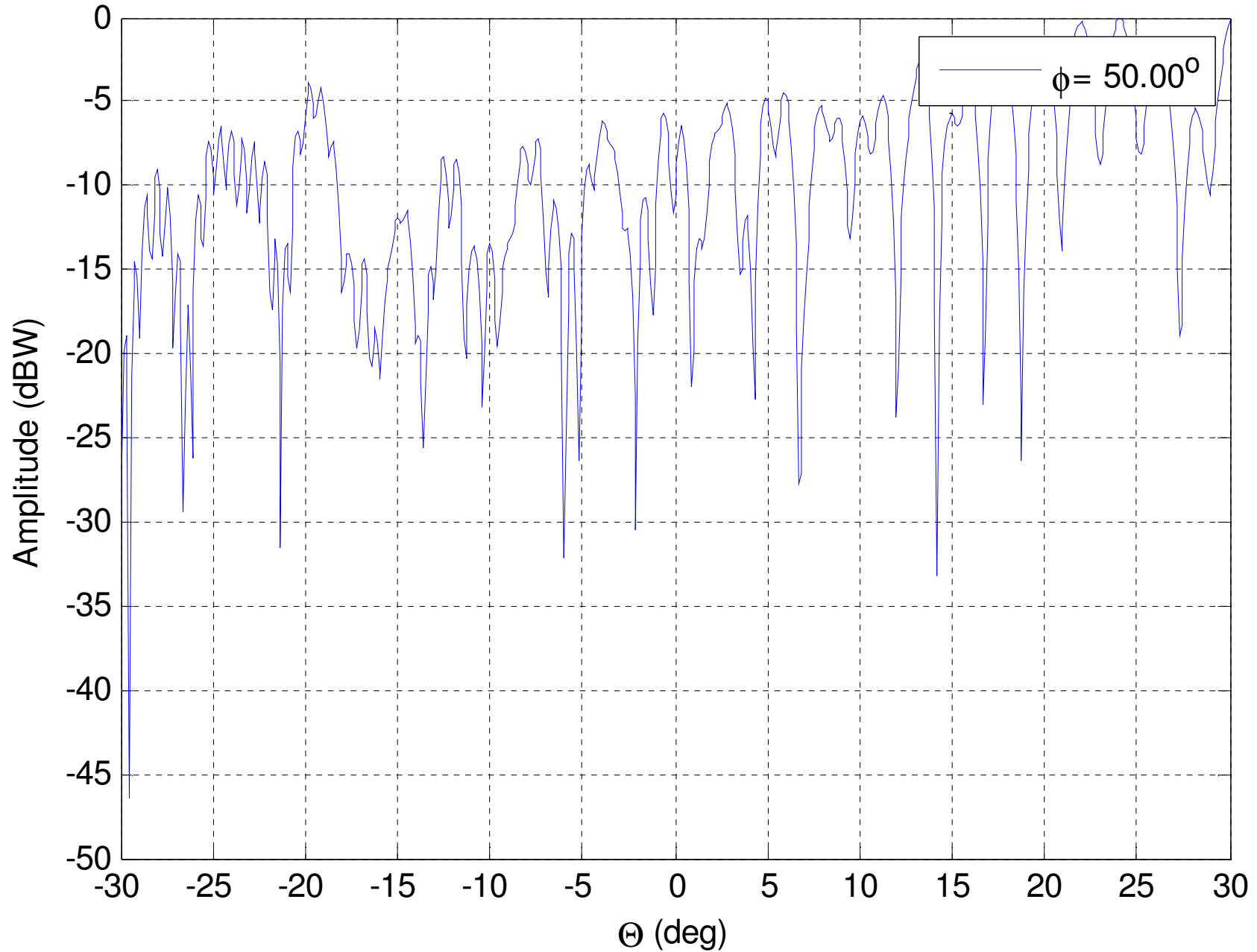
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -5.12 dBW, Date: 14-Dec-2011



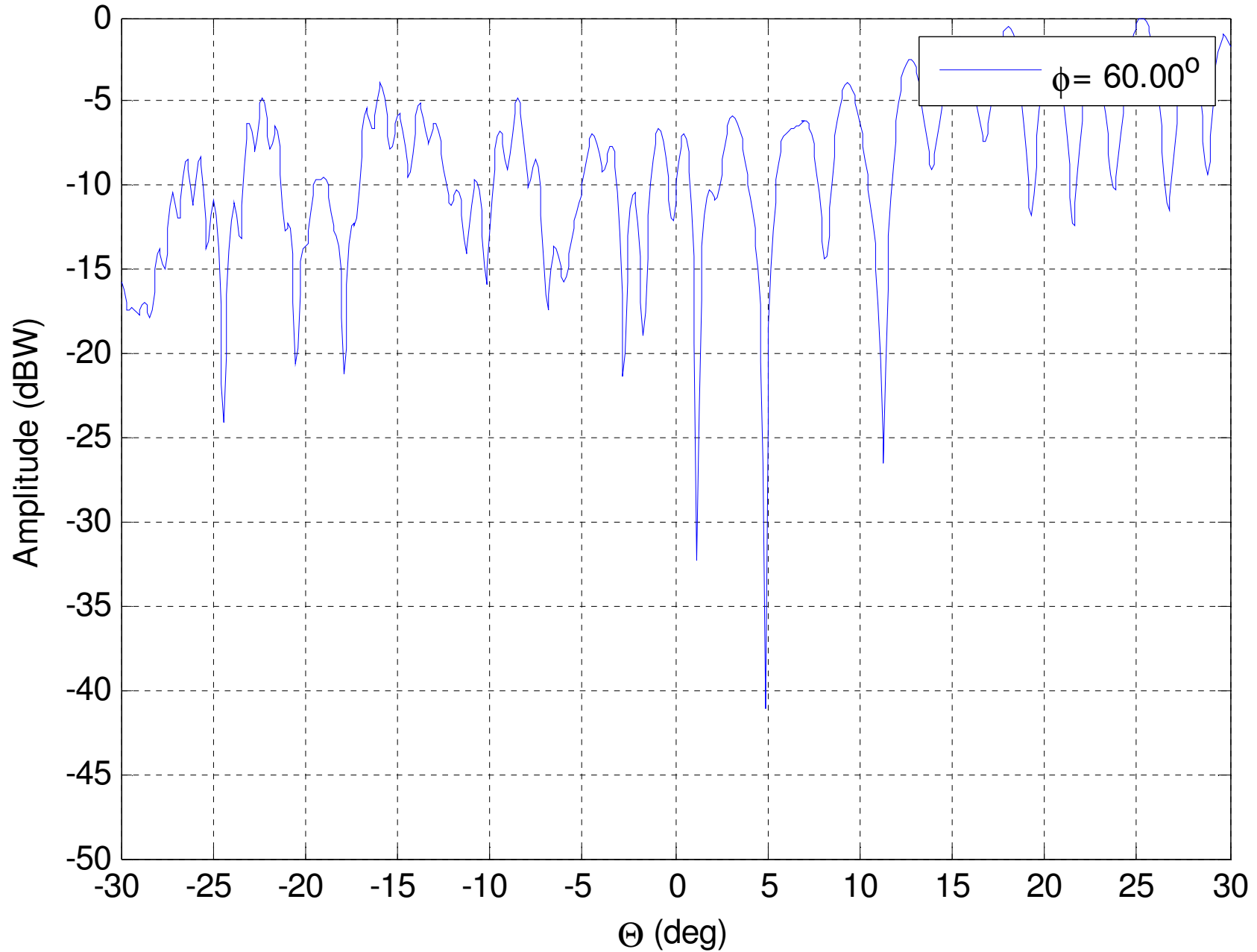
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -5.27 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

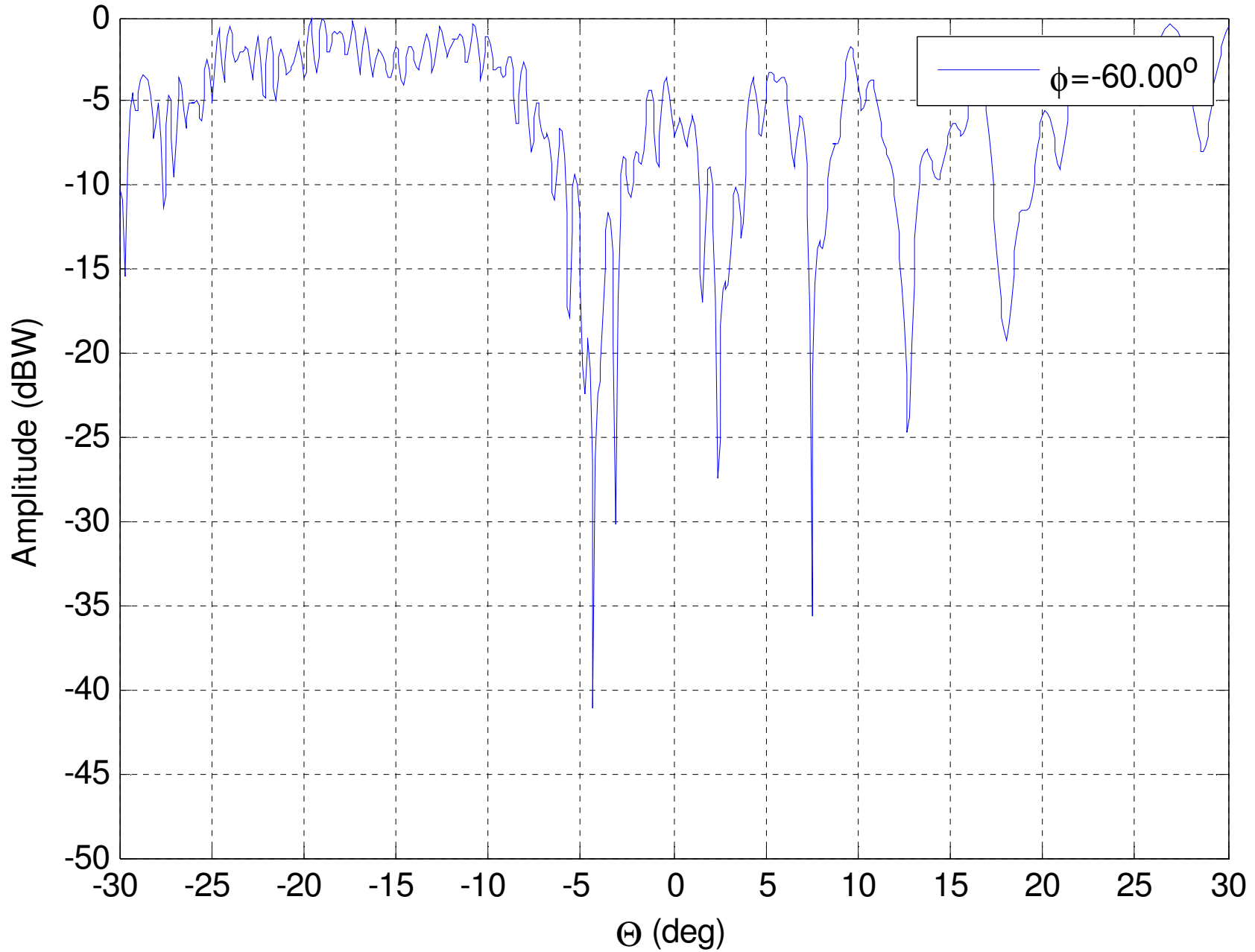
Input file: tx-17.3-lhcp-60.cut, Peak: -4.81 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

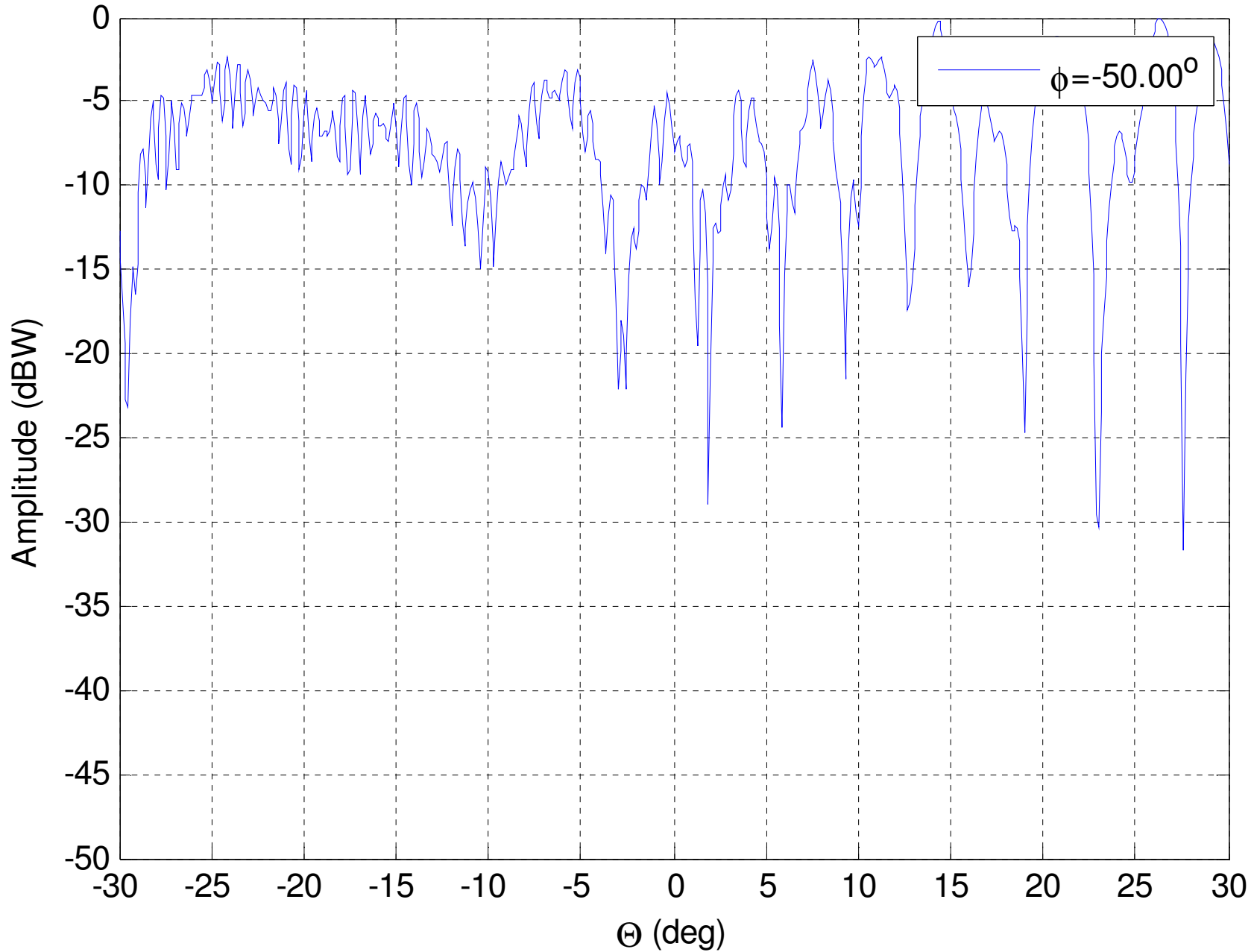
Normalized pattern cuts - farfield

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



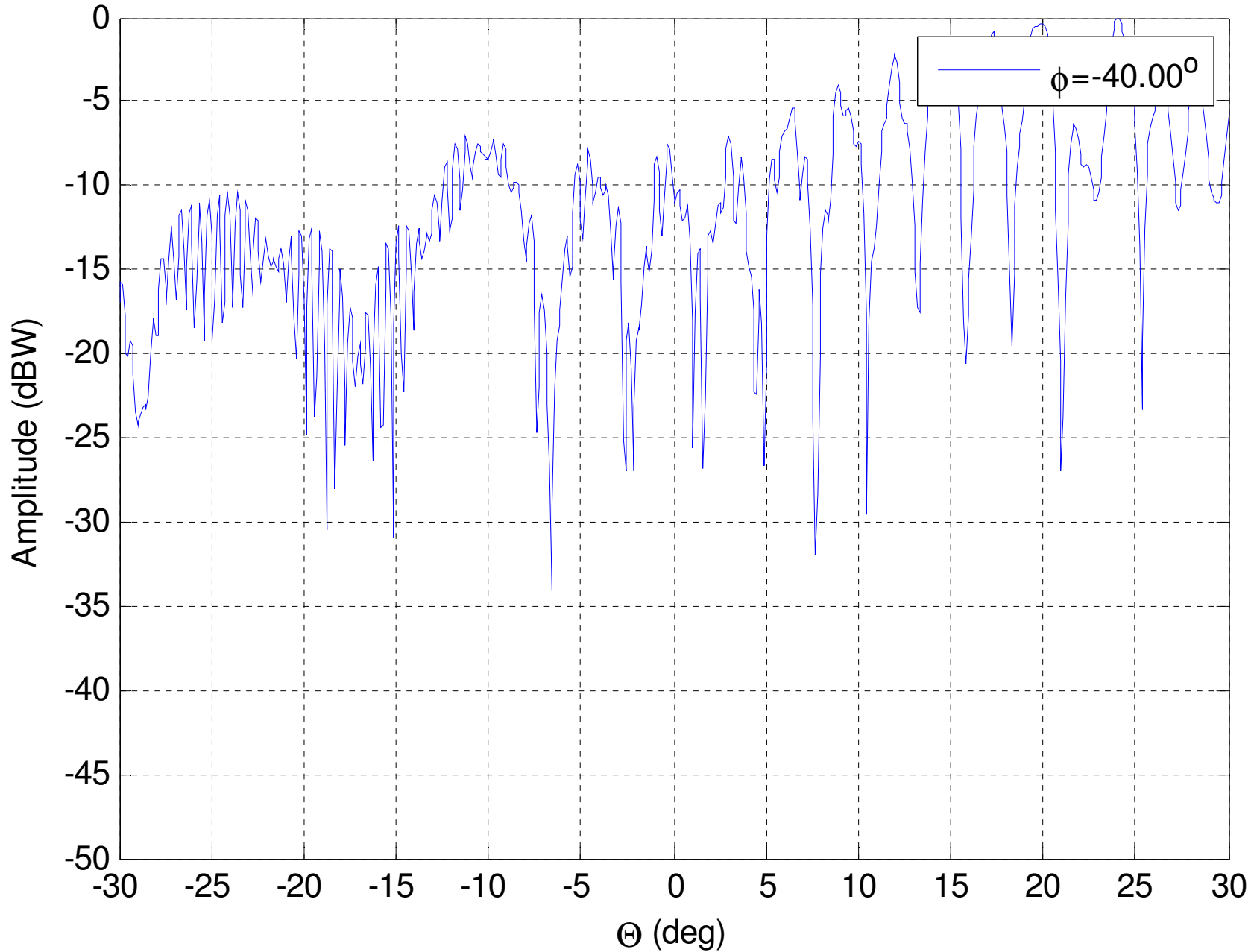
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.01 dBW, Date: 14-Dec-2011



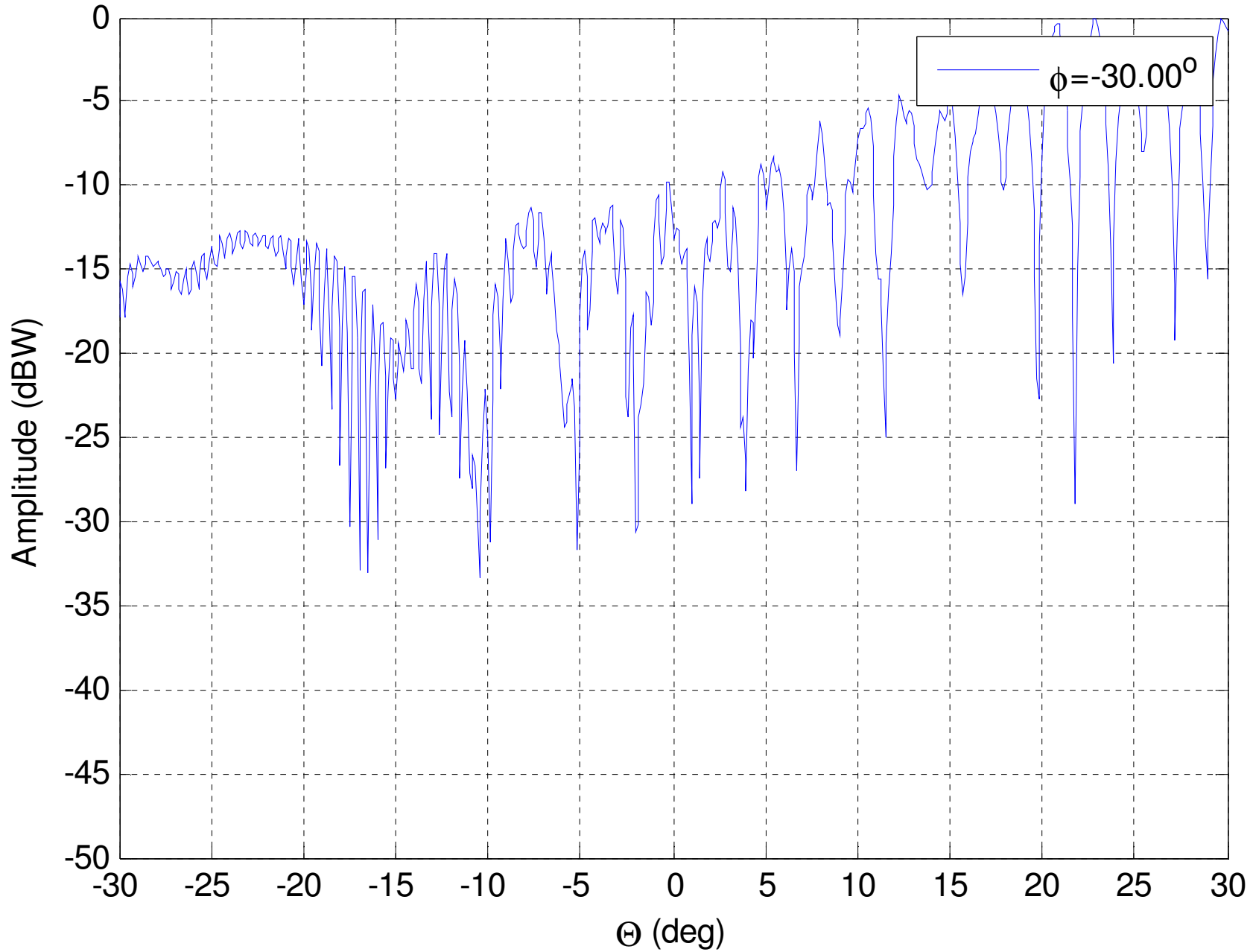
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -3.02 dBW, Date: 14-Dec-2011



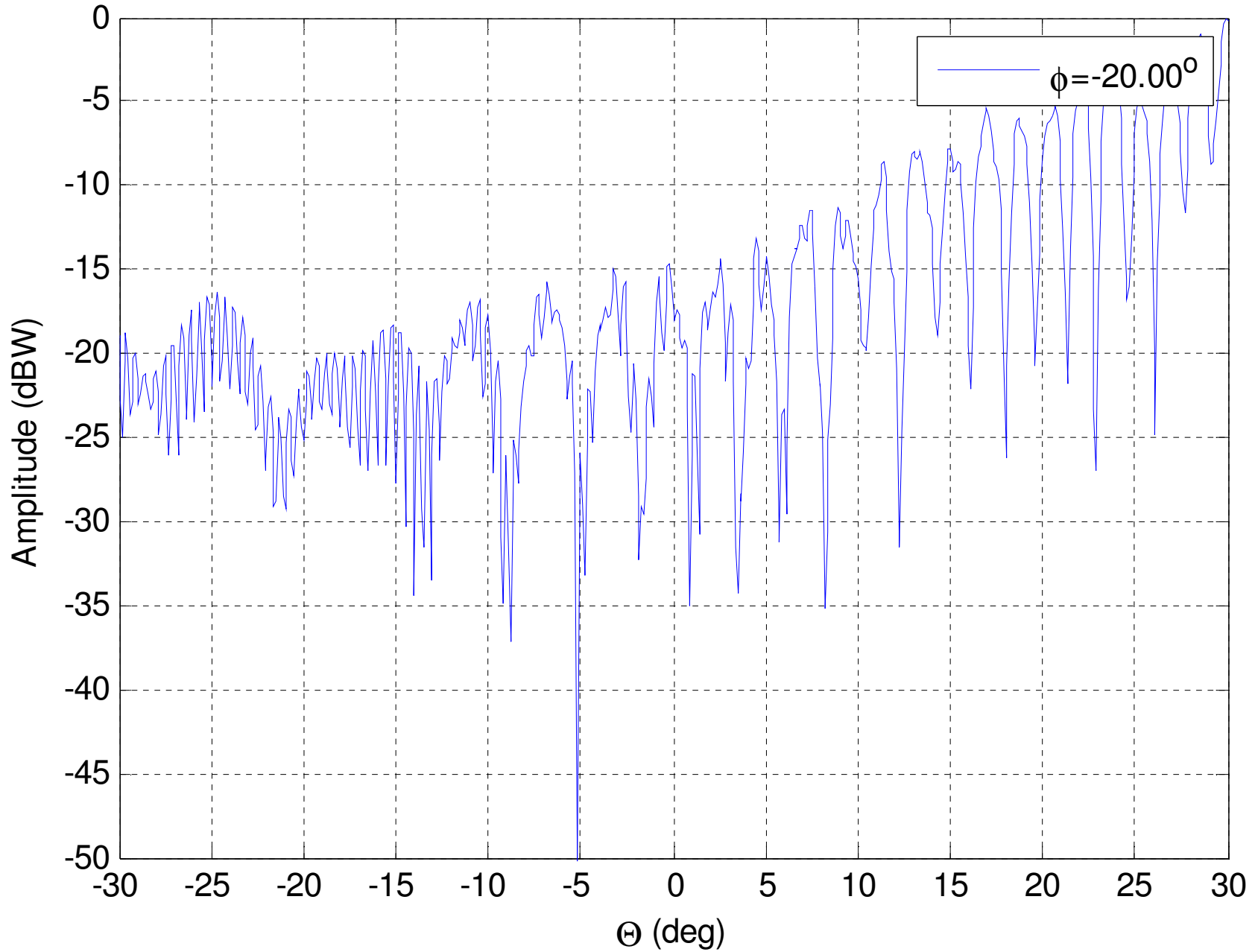
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -0.87 dBW, Date: 14-Dec-2011



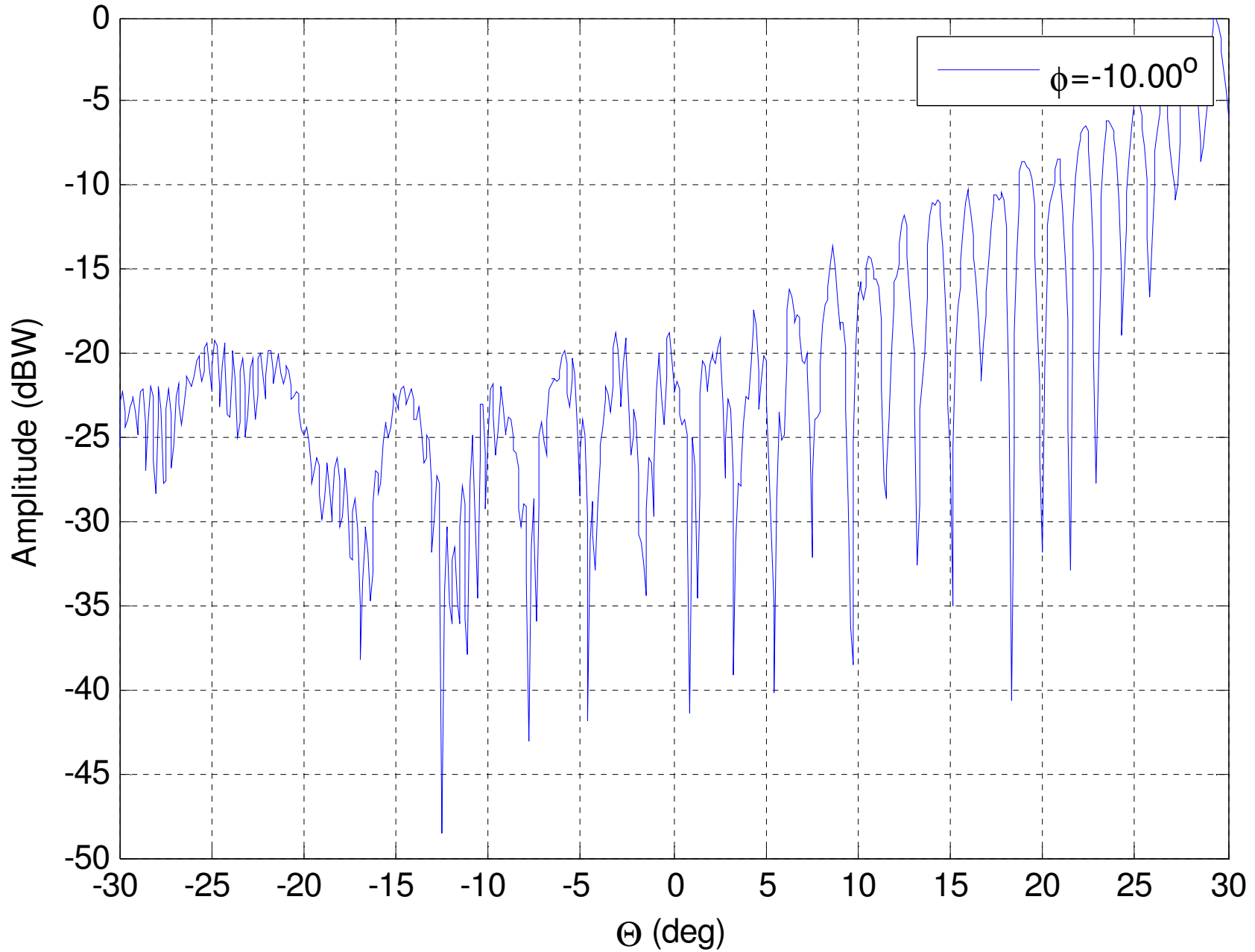
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 3.98 dBW, Date: 14-Dec-2011



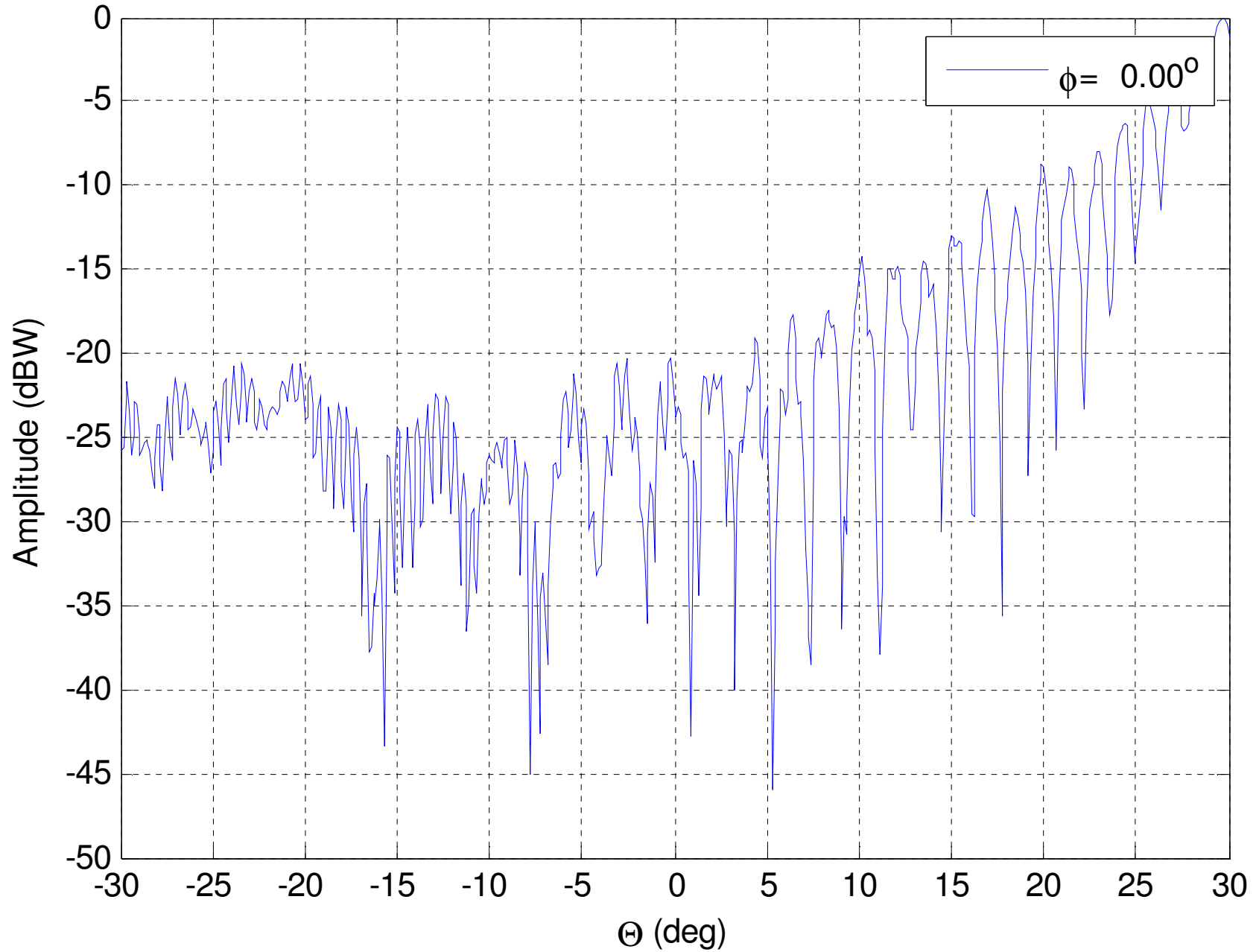
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 8.23 dBW, Date: 14-Dec-2011



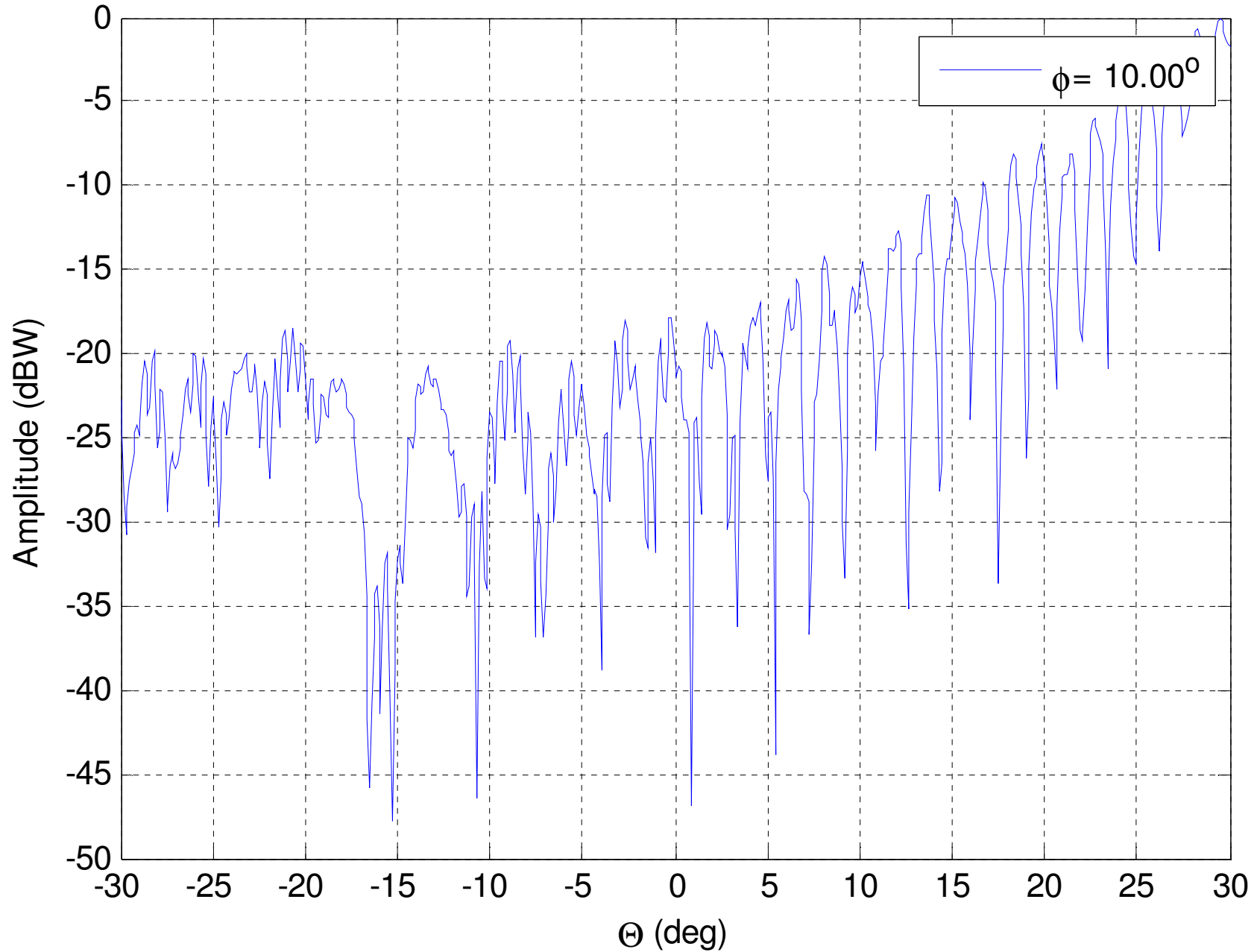
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 9.68 dBW, Date: 14-Dec-2011



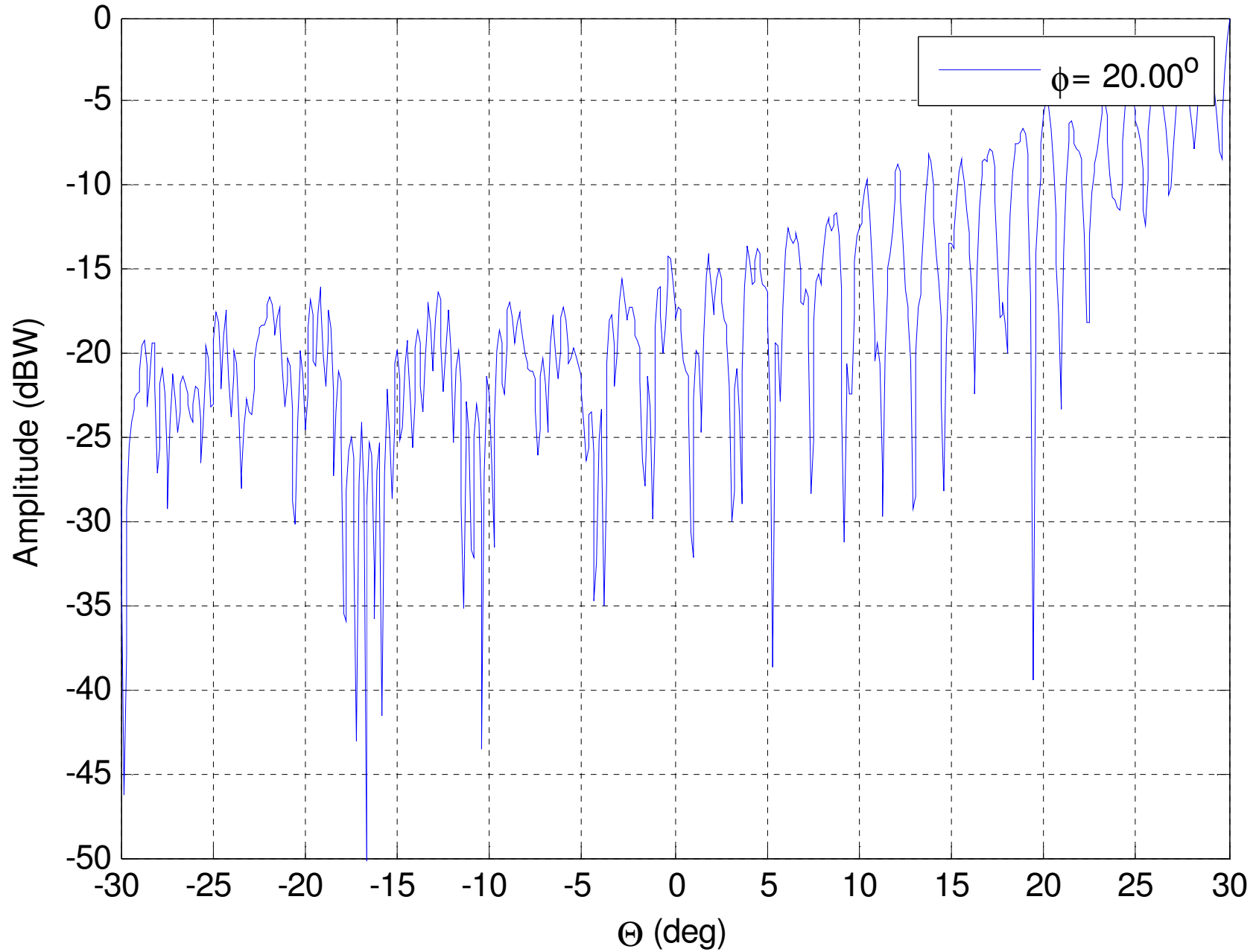
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 7.11 dBW, Date: 14-Dec-2011



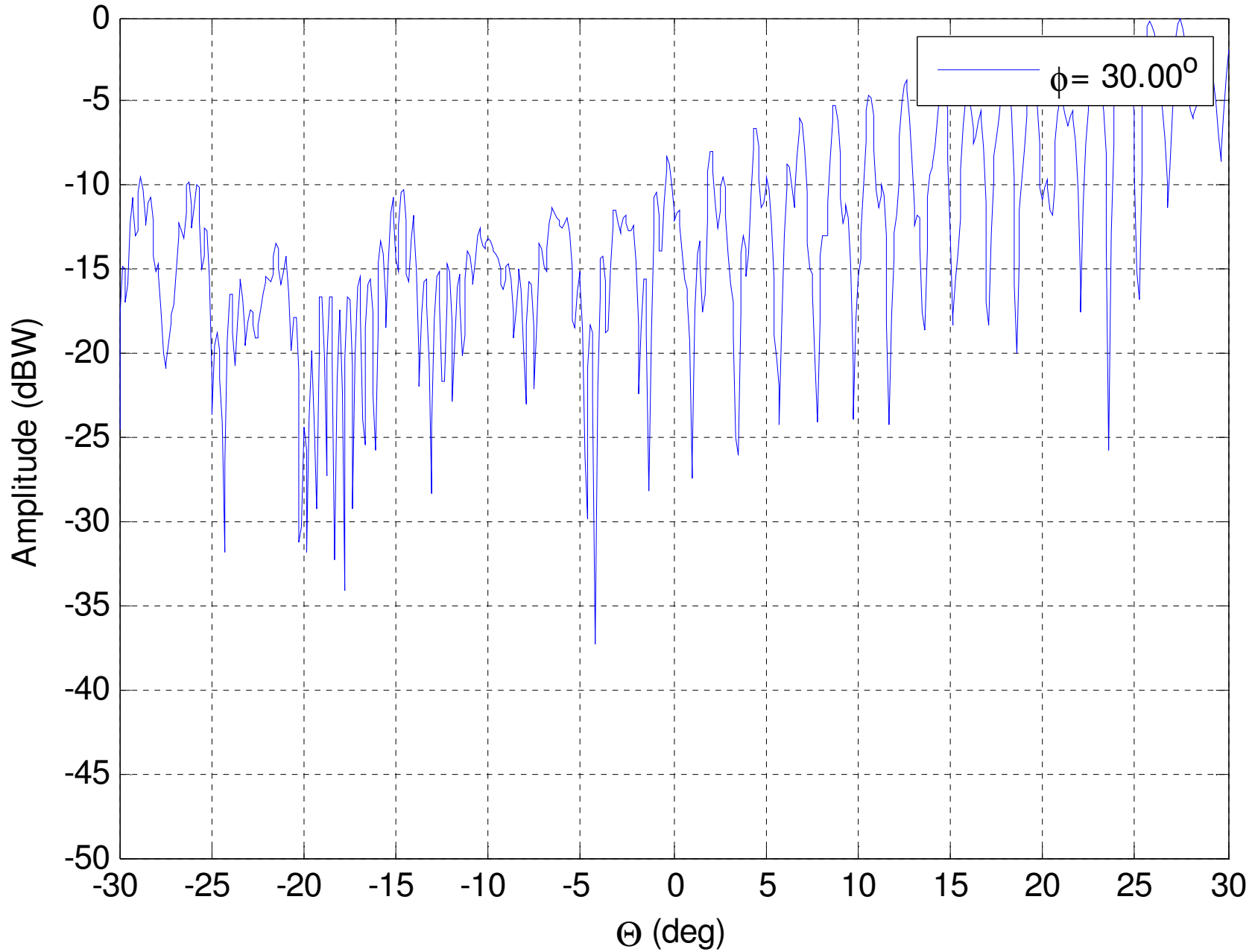
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 3.52 dBW, Date: 14-Dec-2011



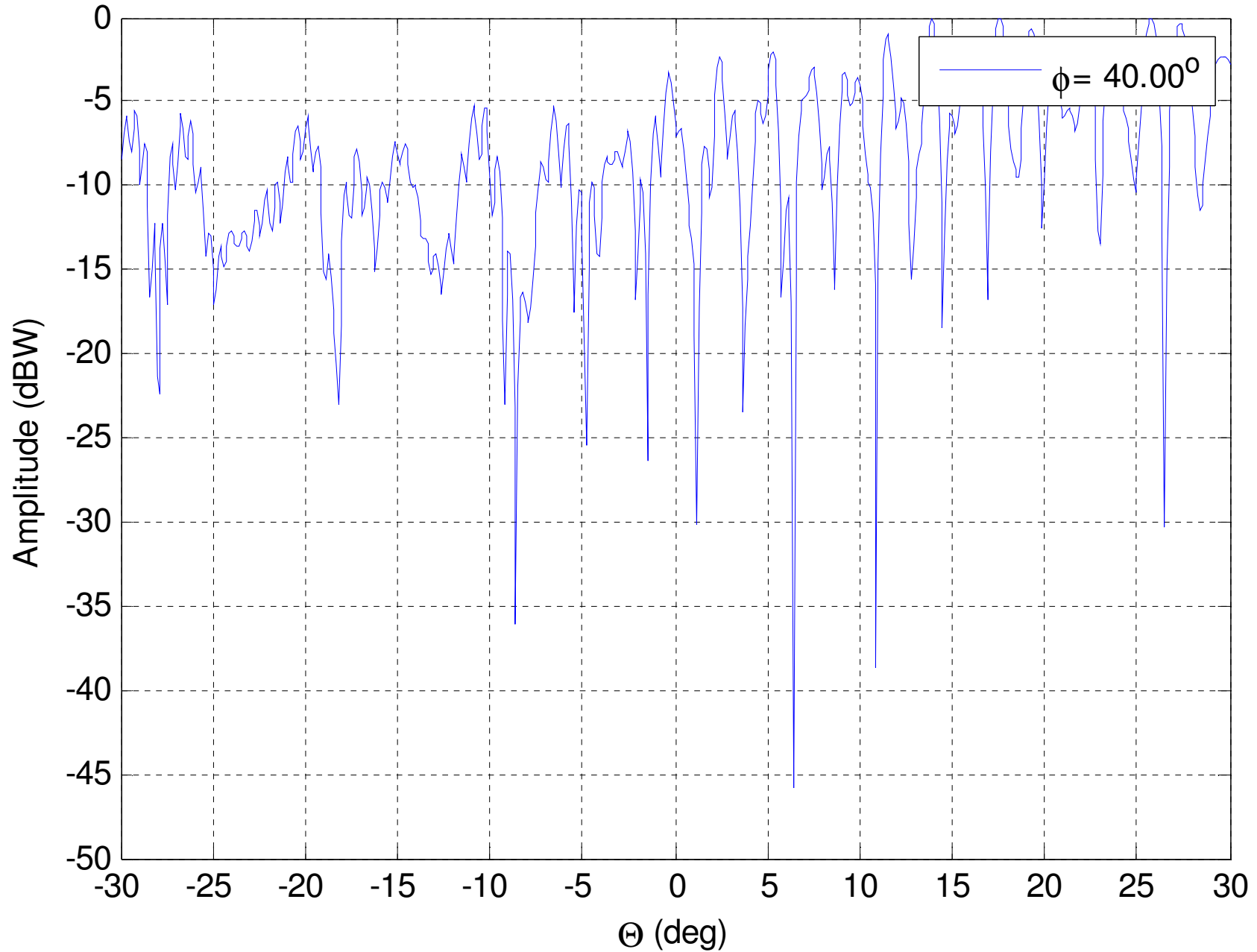
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -2.33 dBW, Date: 14-Dec-2011



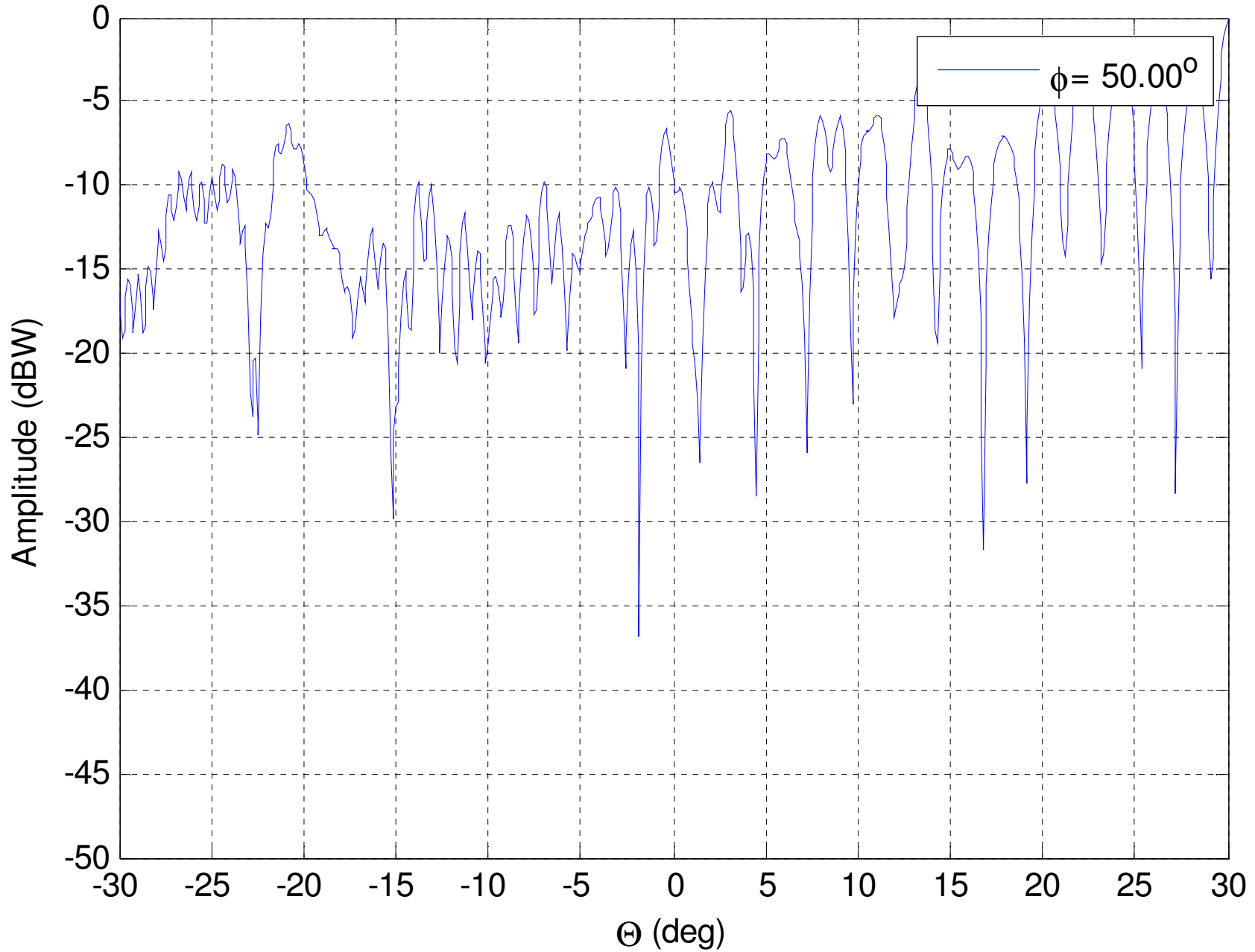
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.43 dBW, Date: 14-Dec-2011



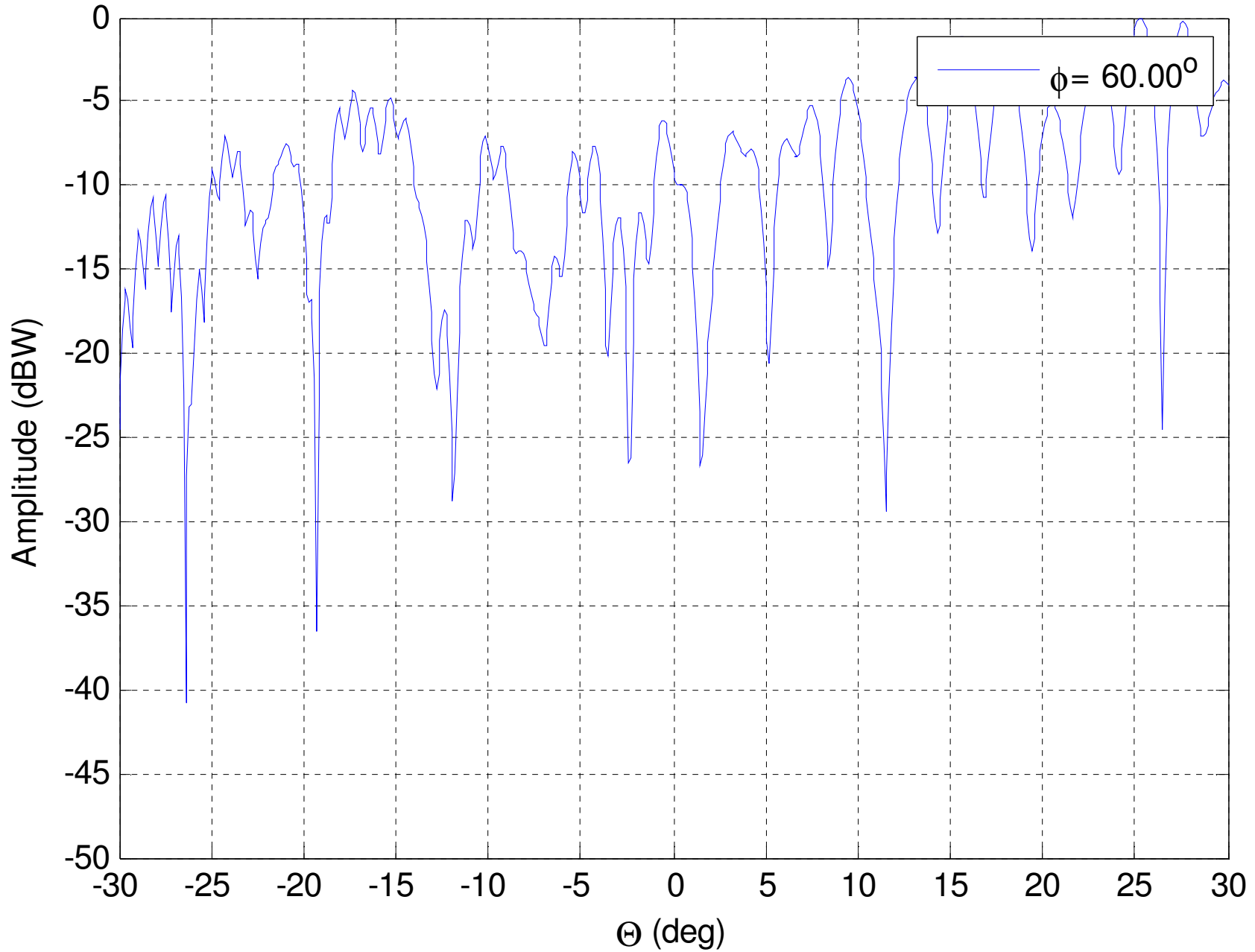
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -4.09 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

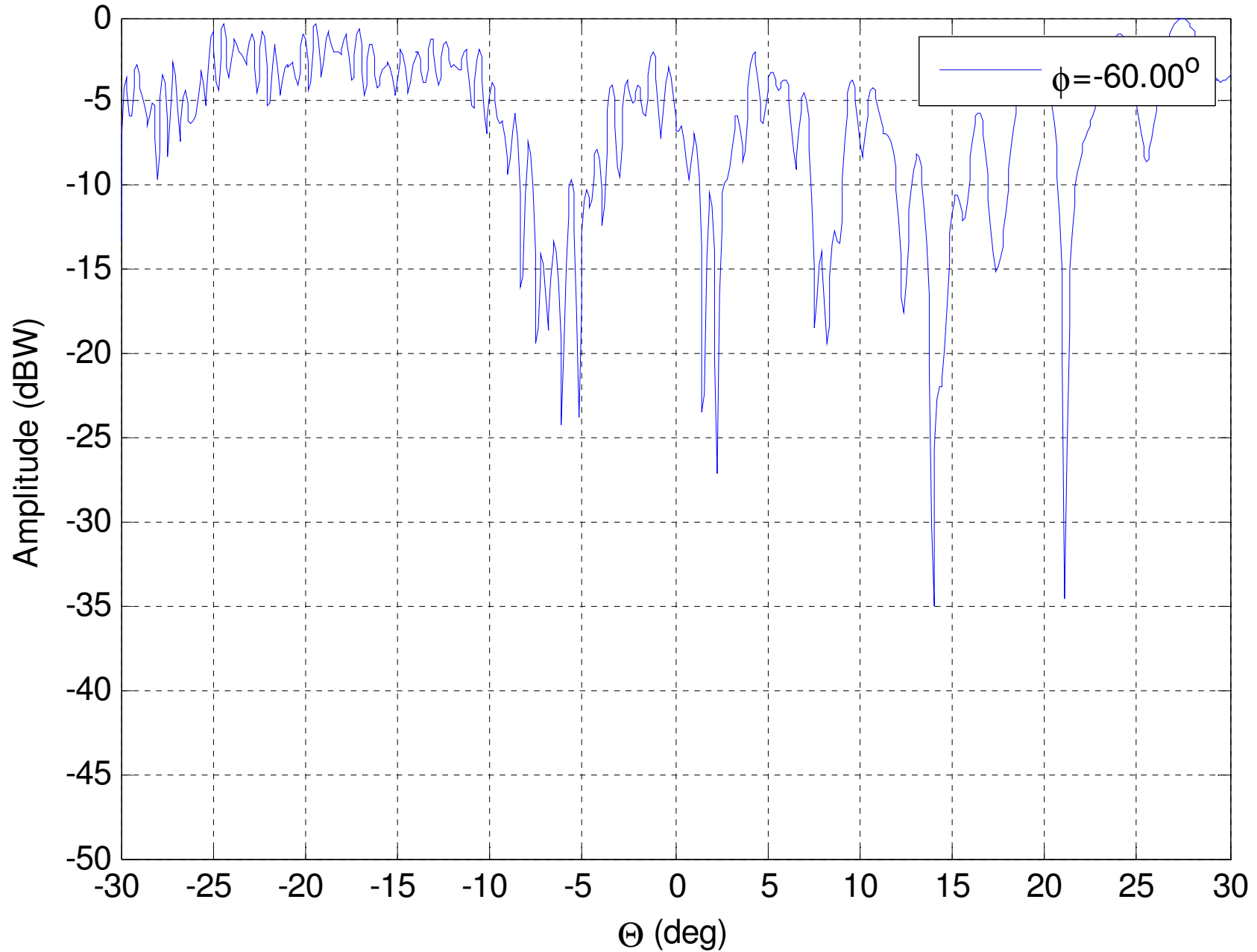
Input file: tx-17.5-rhcp-60.cut, Peak: -4.78 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

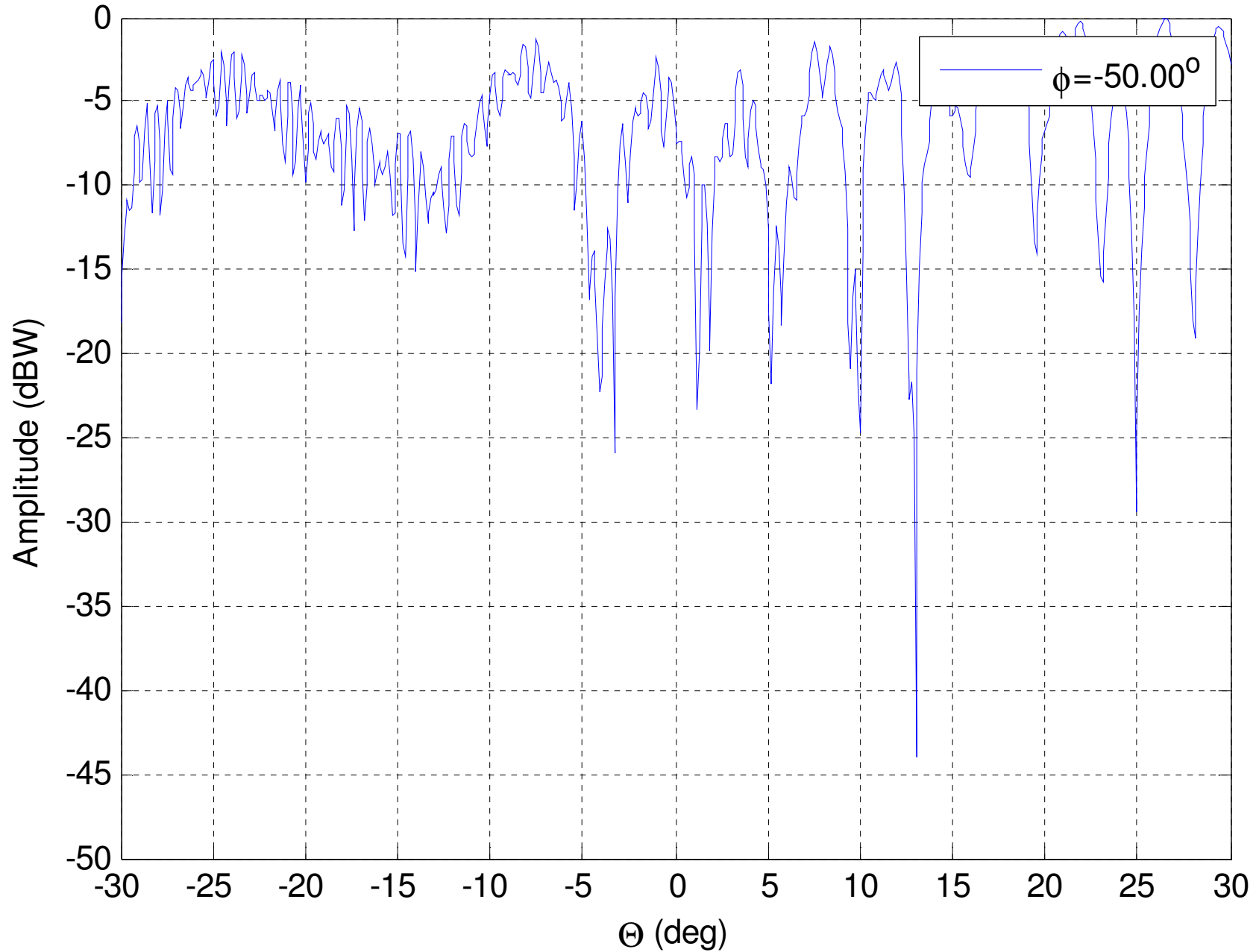
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -7.65 dBW, Date: 14-Dec-2011



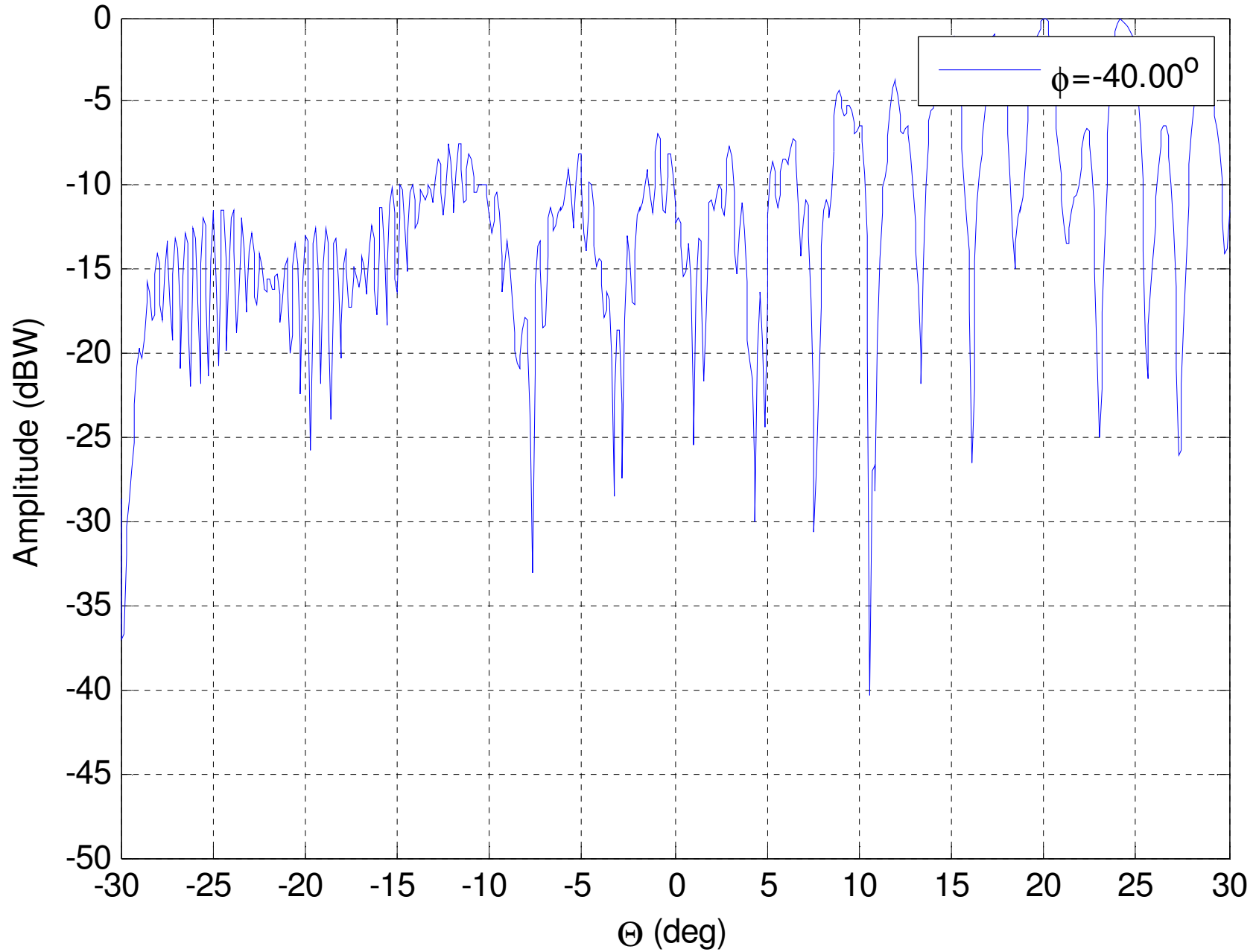
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -6.97 dBW, Date: 14-Dec-2011



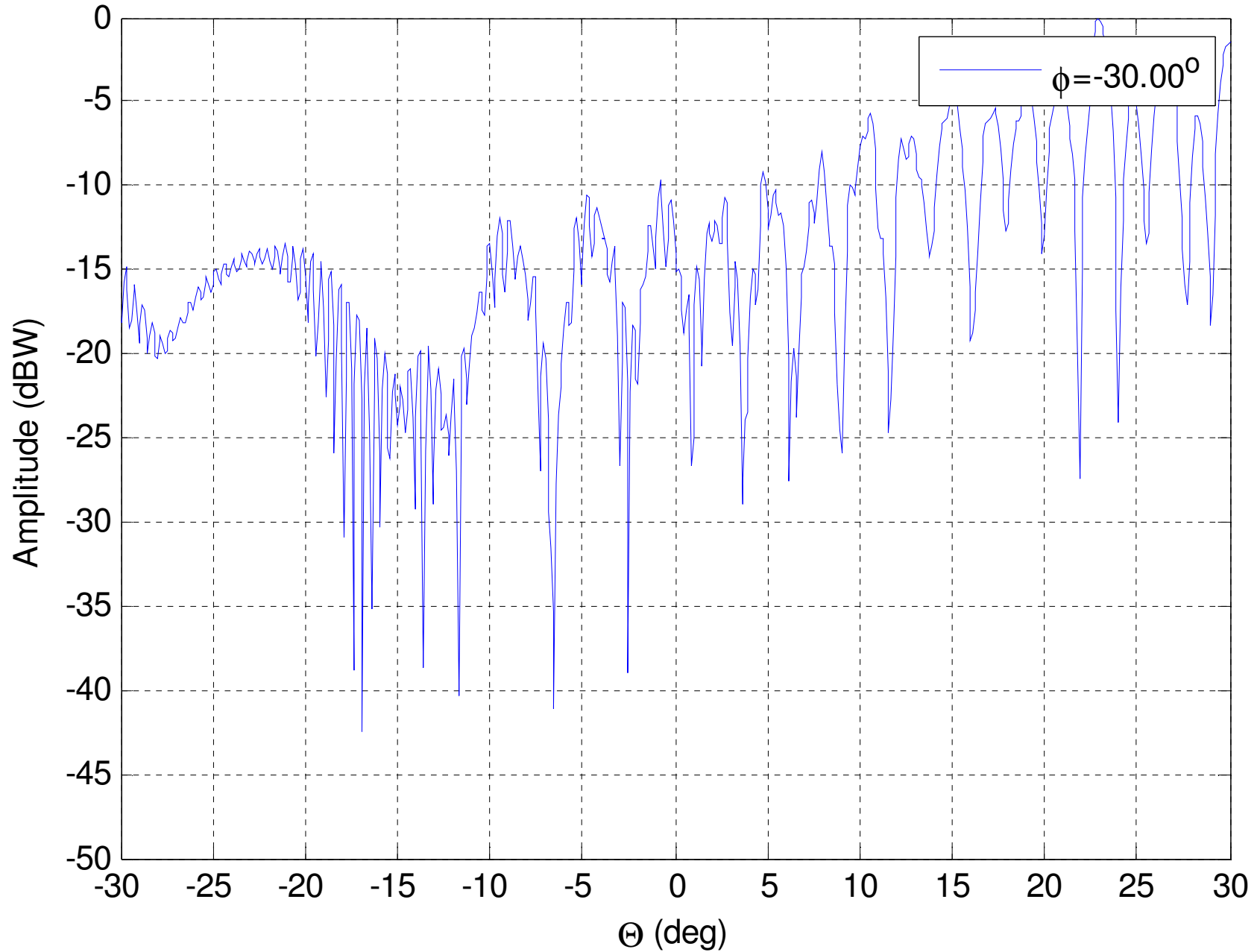
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.46 dBW, Date: 14-Dec-2011



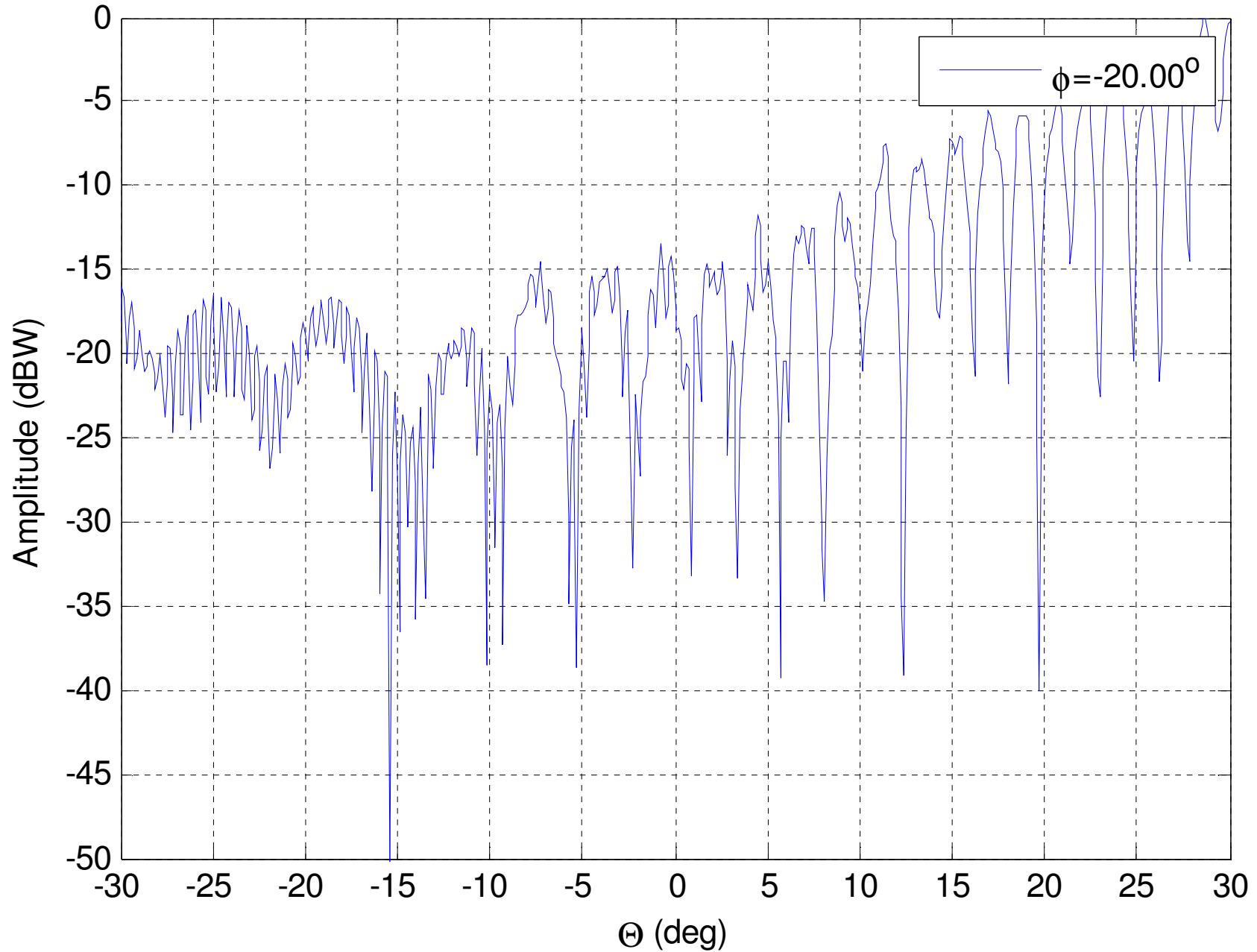
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 0.37 dBW, Date: 14-Dec-2011



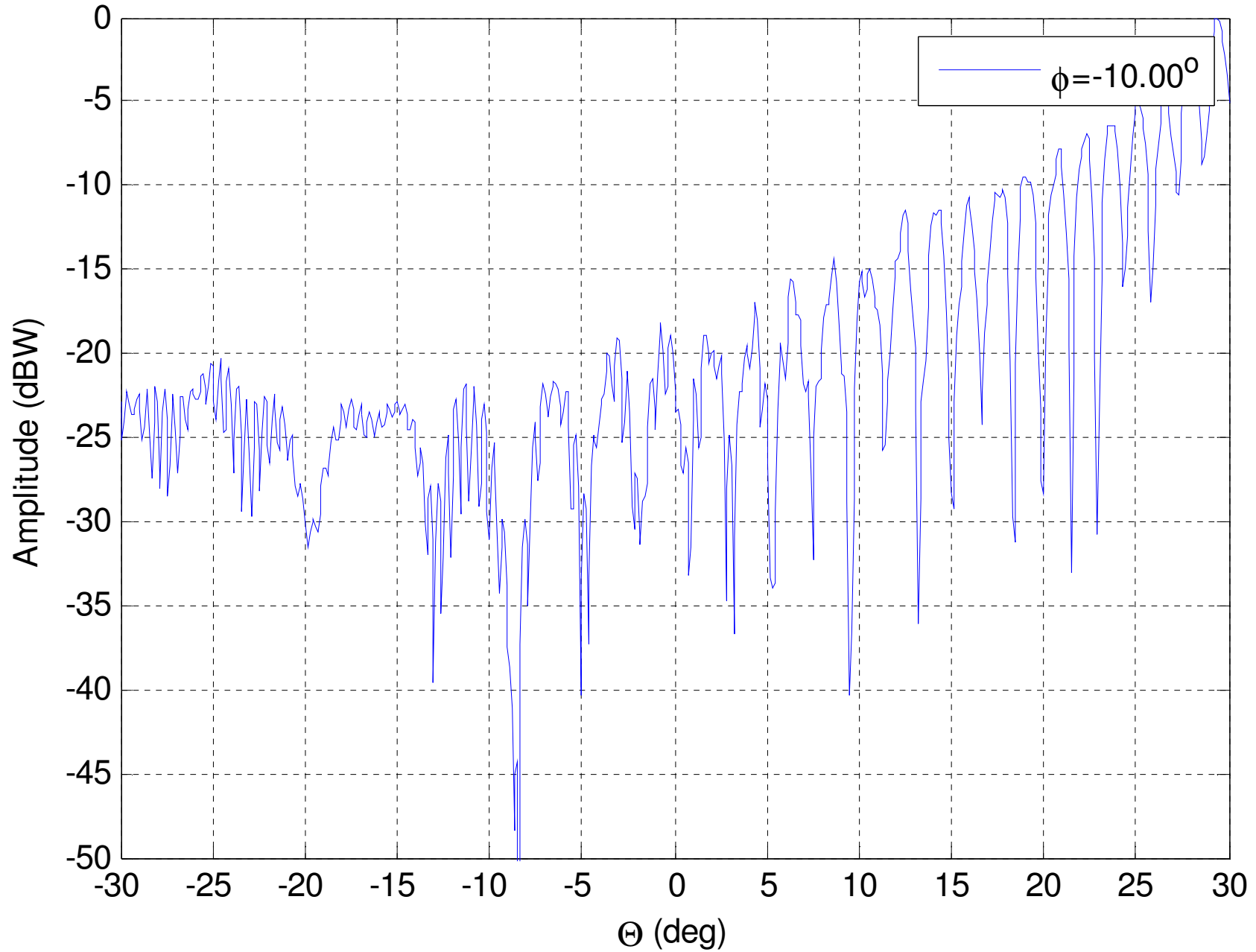
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 3.77 dBW, Date: 14-Dec-2011



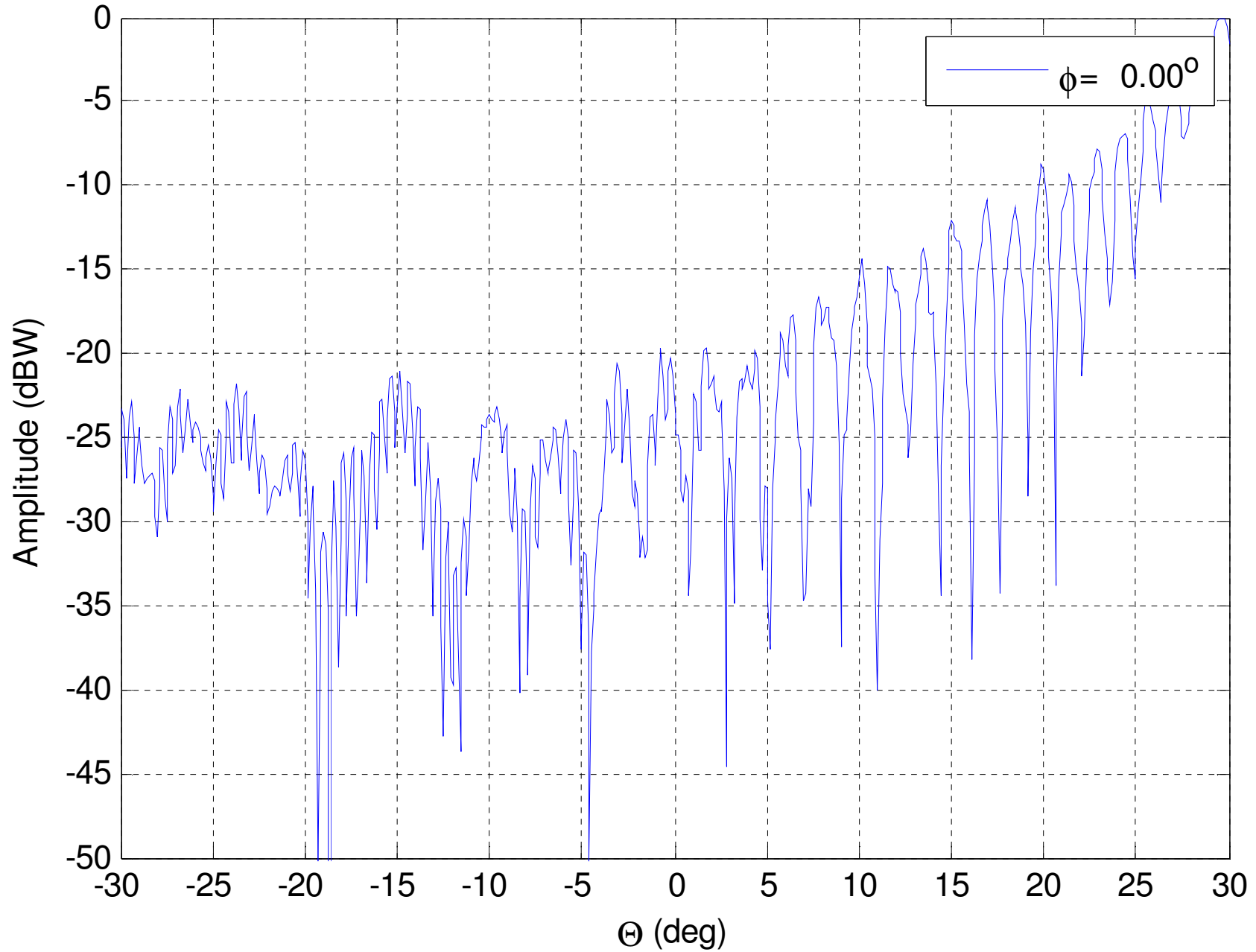
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 8.54 dBW, Date: 14-Dec-2011



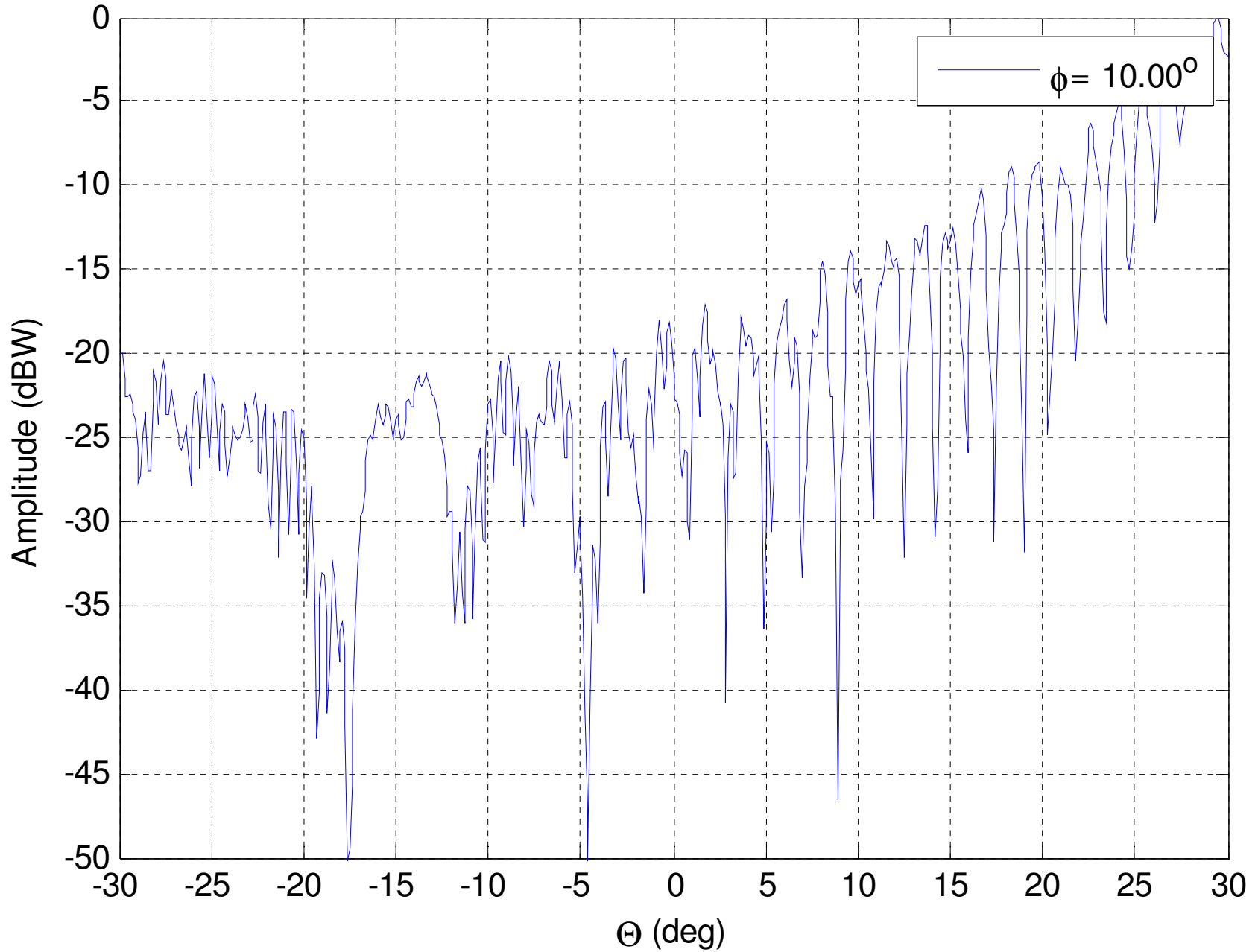
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 9.88 dBW, Date: 14-Dec-2011



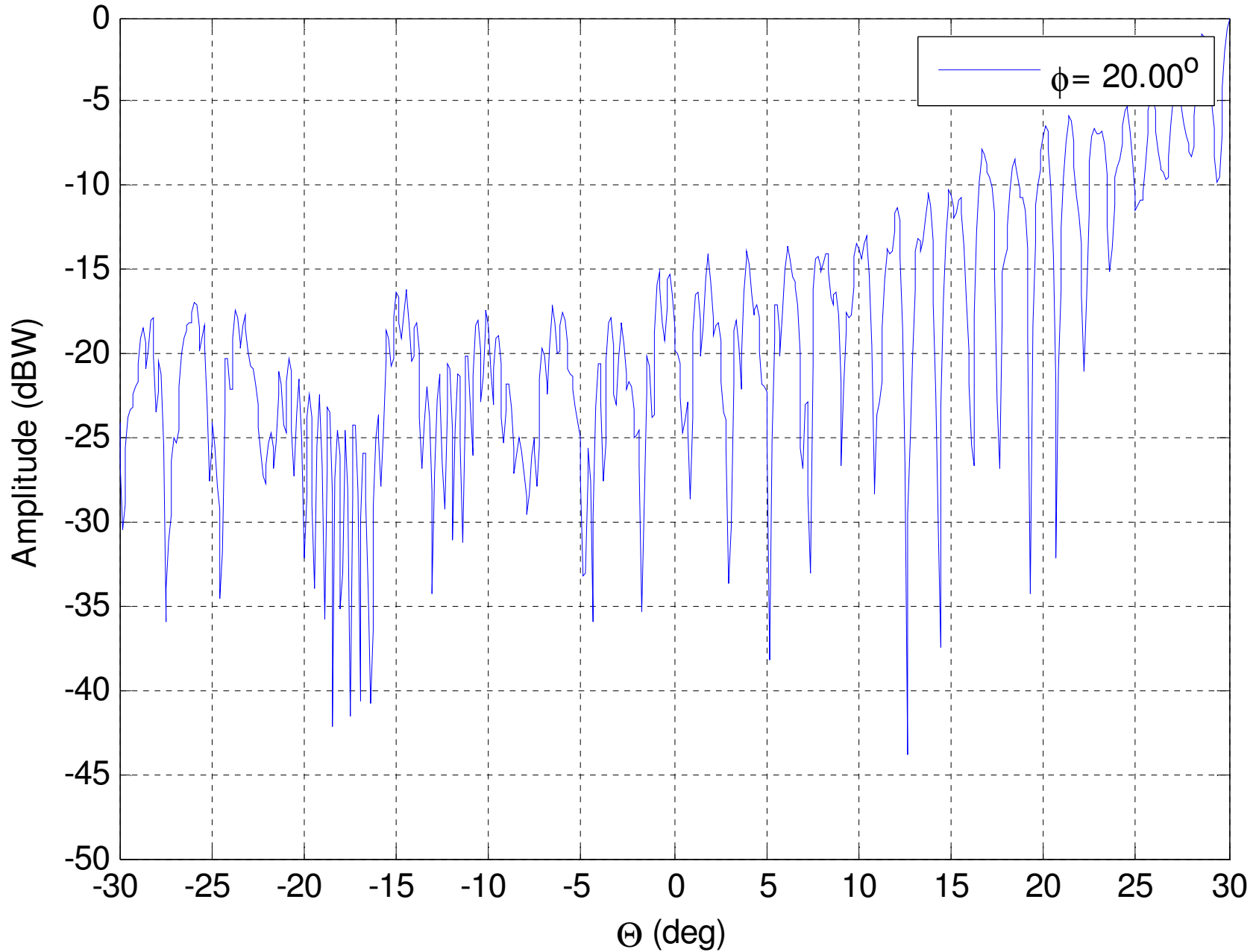
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 7.75 dBW, Date: 14-Dec-2011



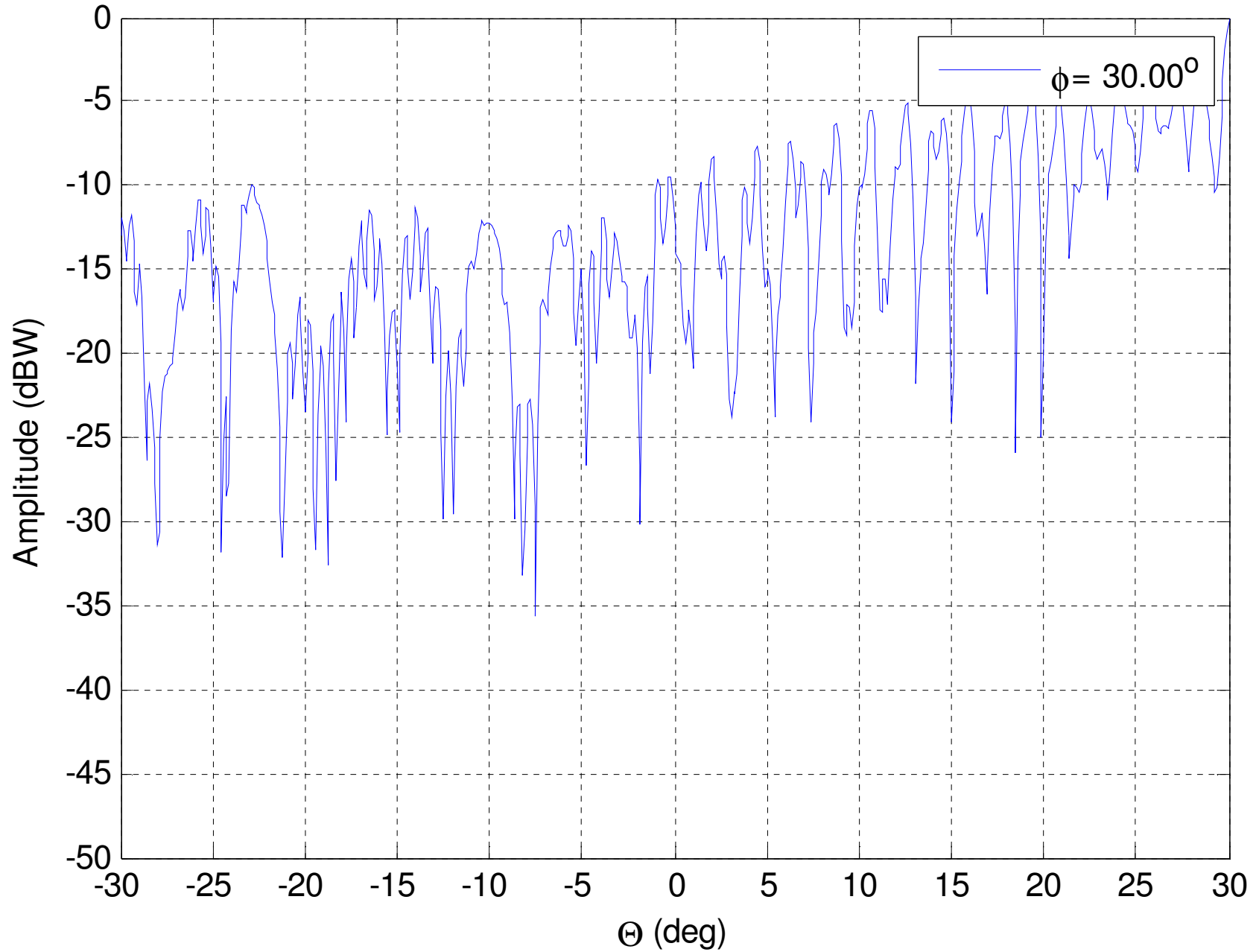
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 4.79 dBW, Date: 14-Dec-2011



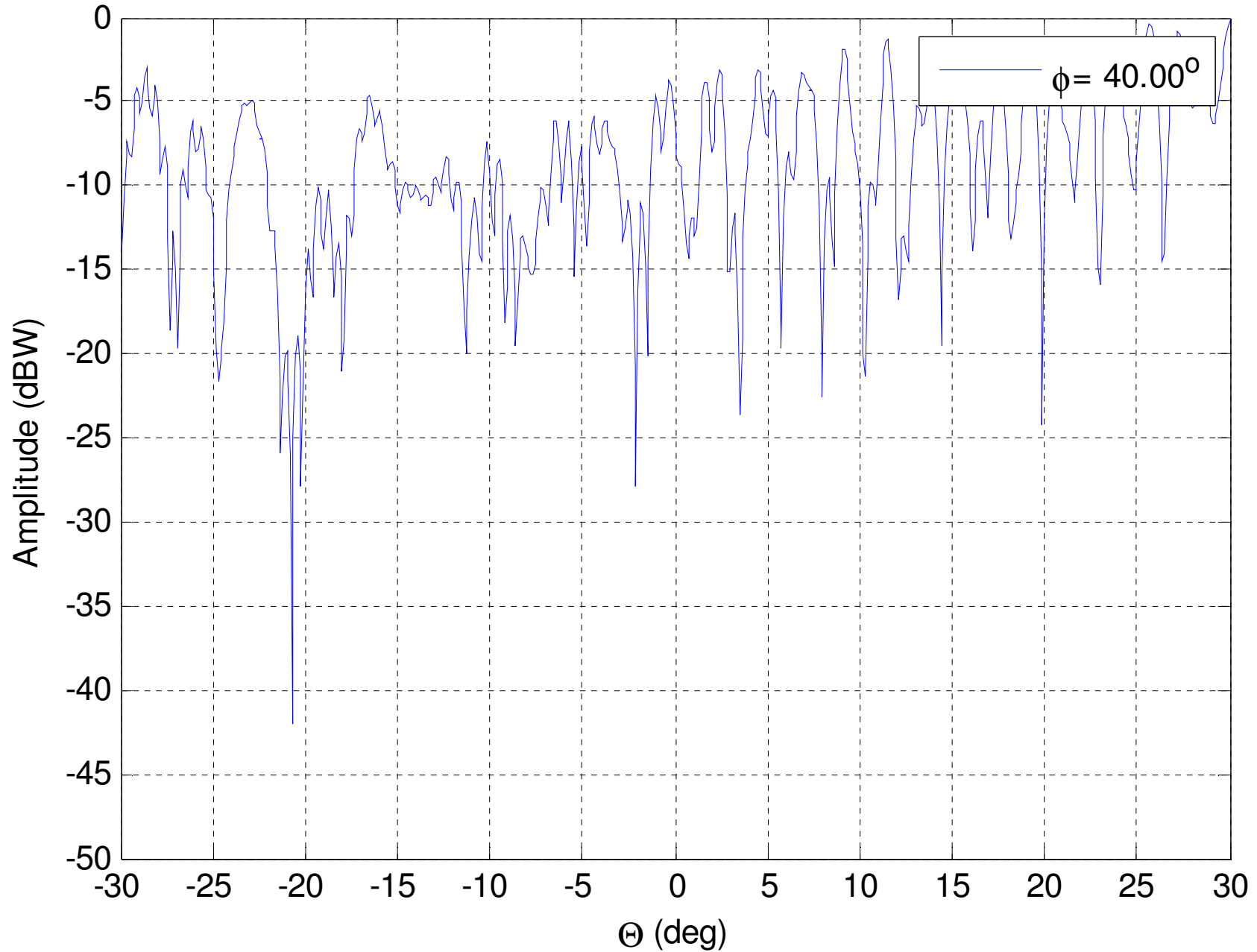
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -1.11 dBW, Date: 14-Dec-2011



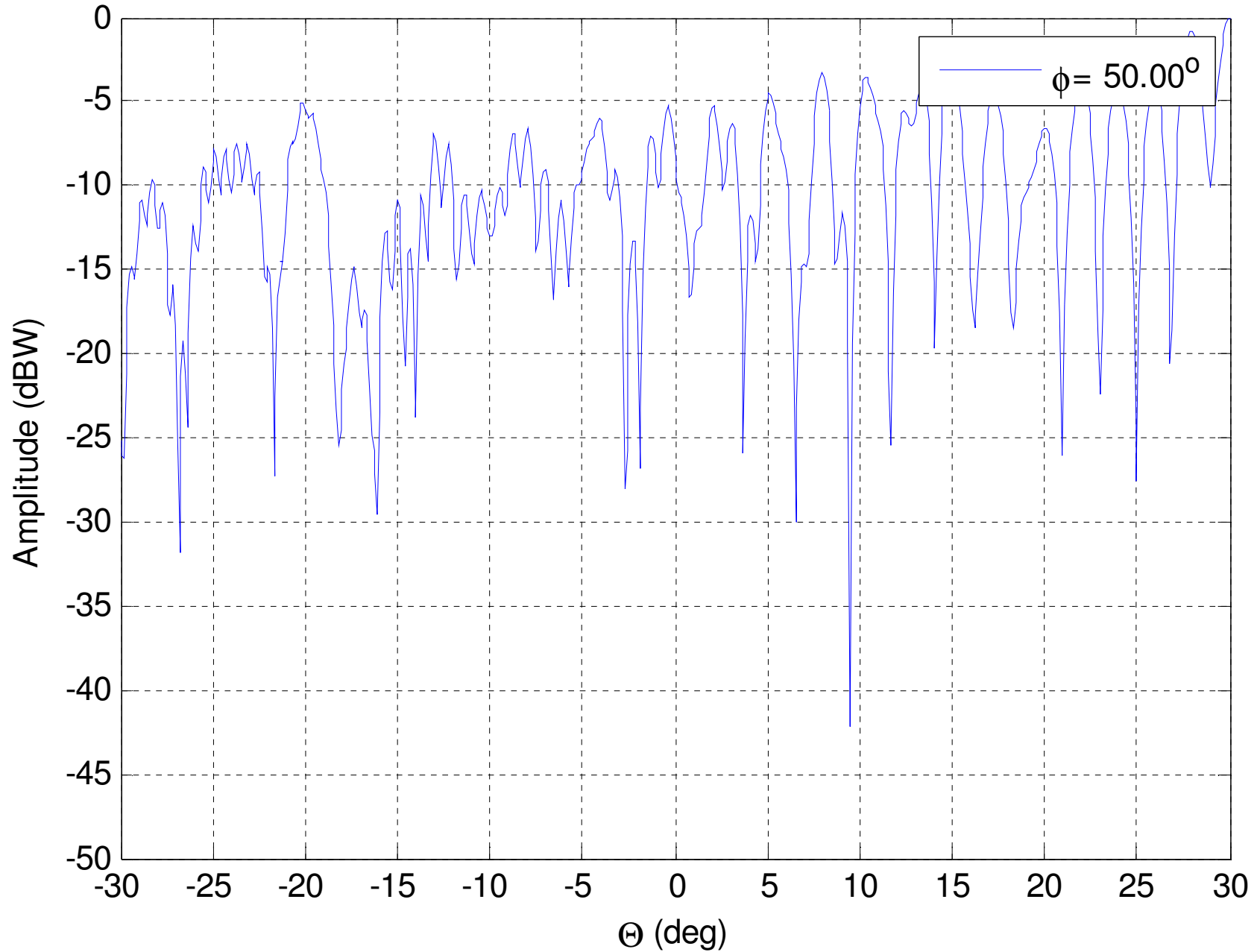
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -6.81 dBW, Date: 14-Dec-2011



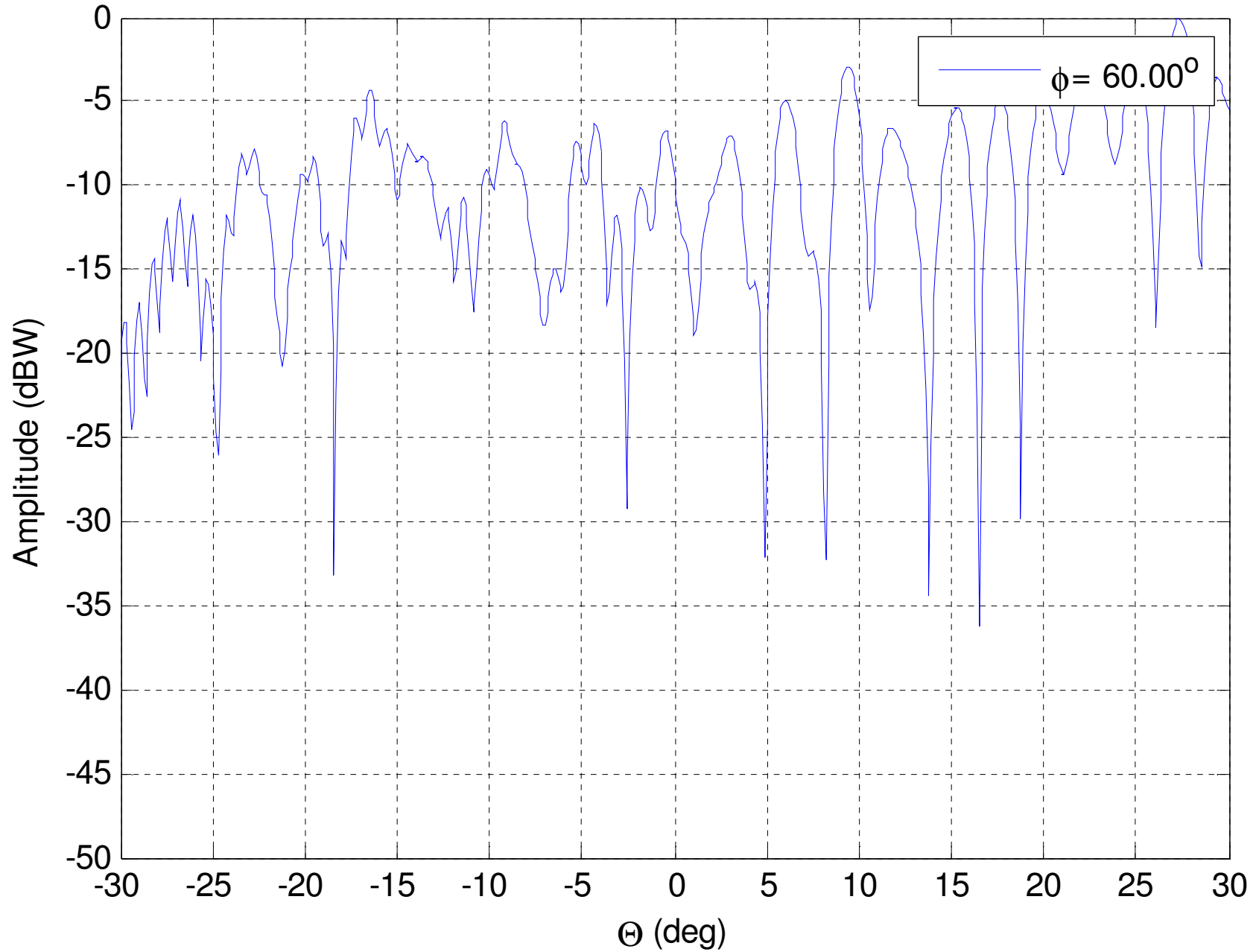
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.29 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

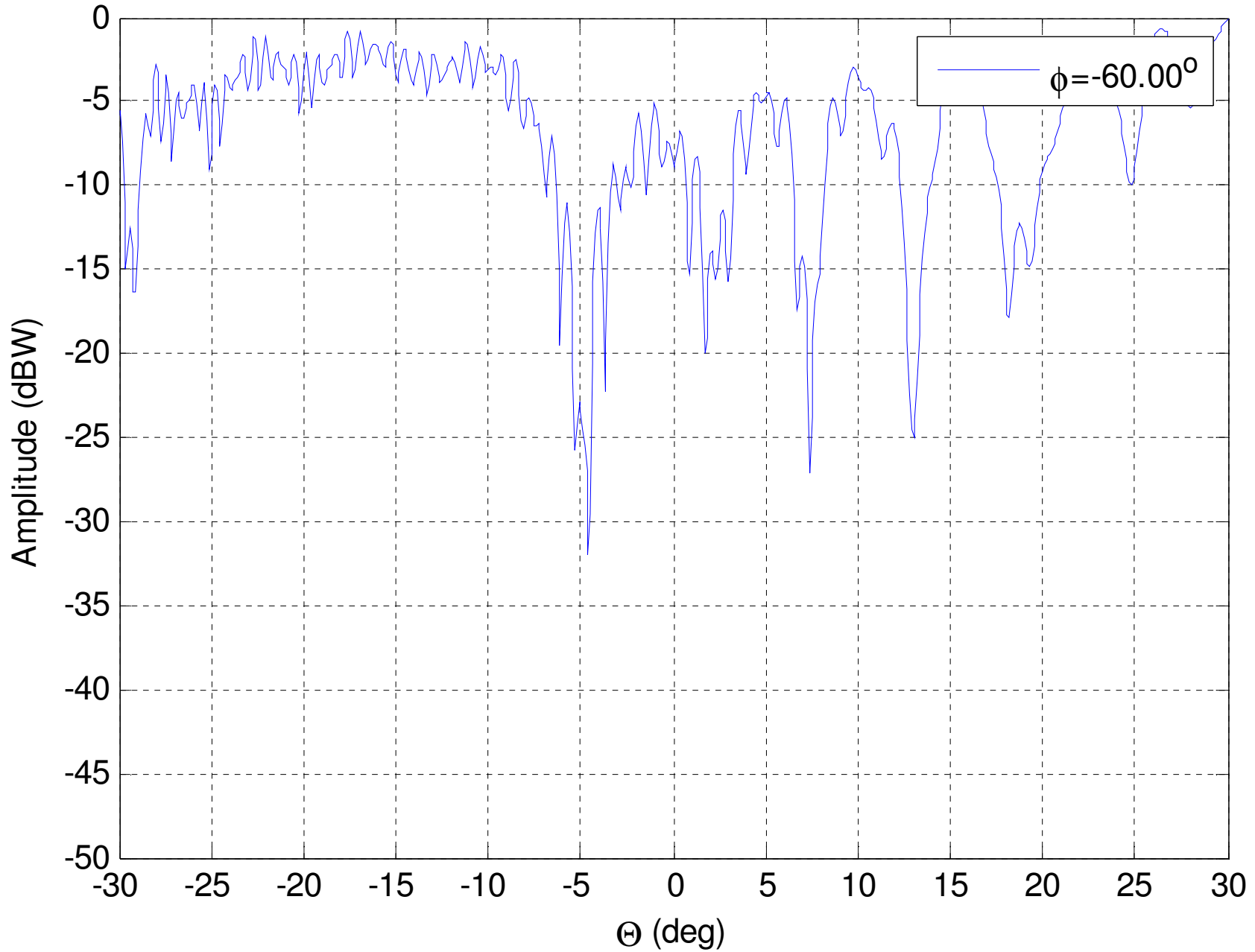
Input file: tx-17.5-lhcp-60.cut, Peak: -3.98 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

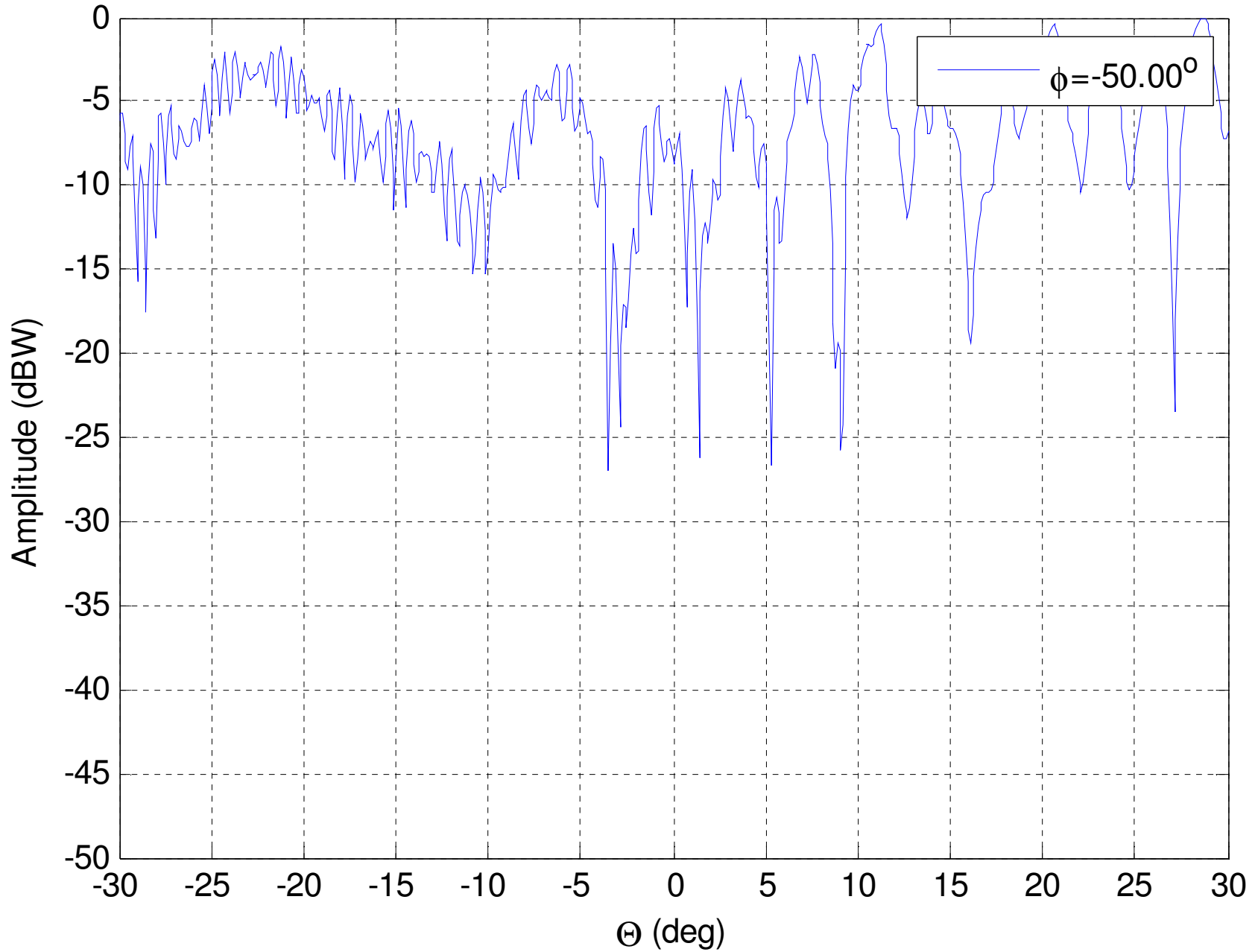
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.32 dBW, Date: 14-Dec-2011



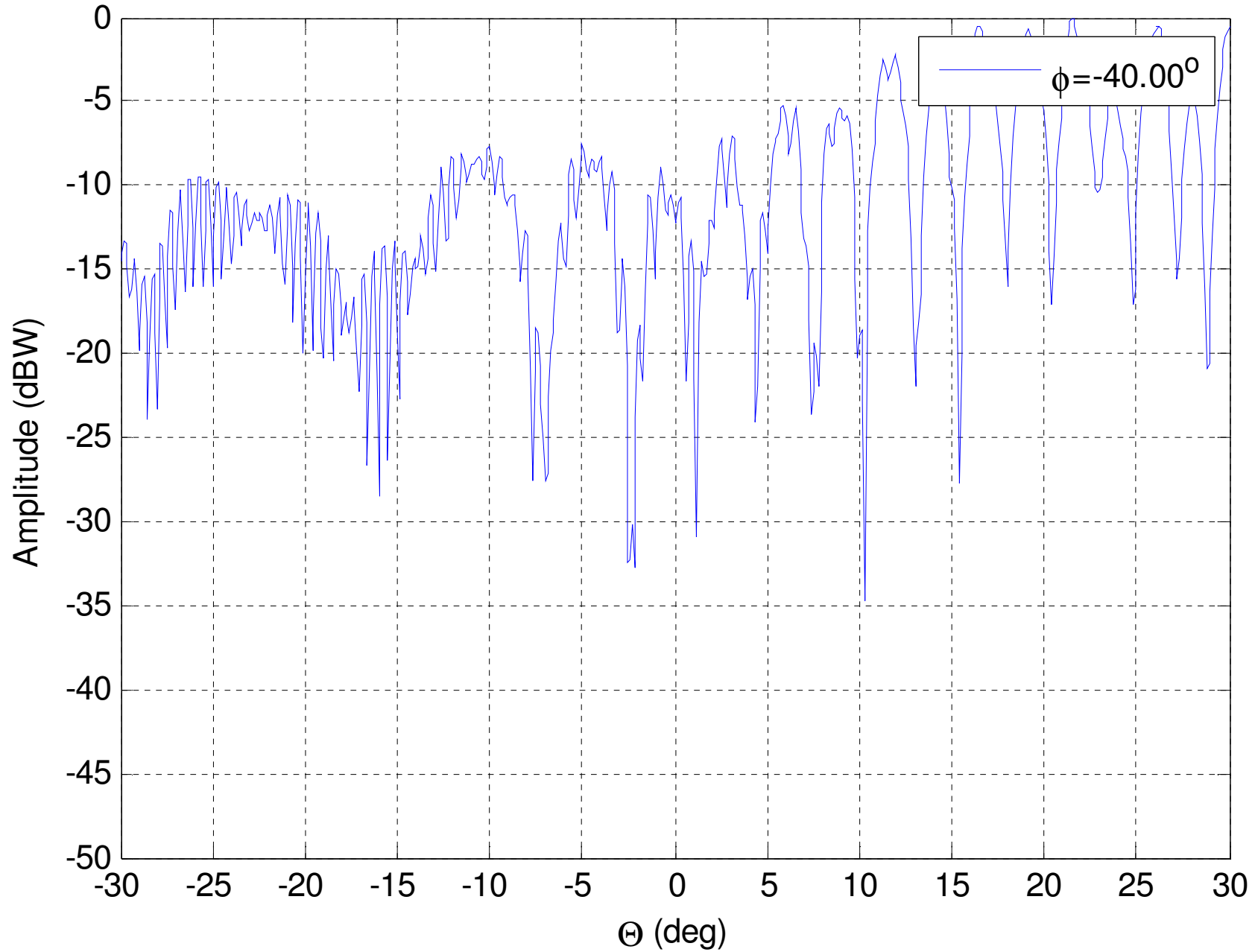
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.44 dBW, Date: 14-Dec-2011



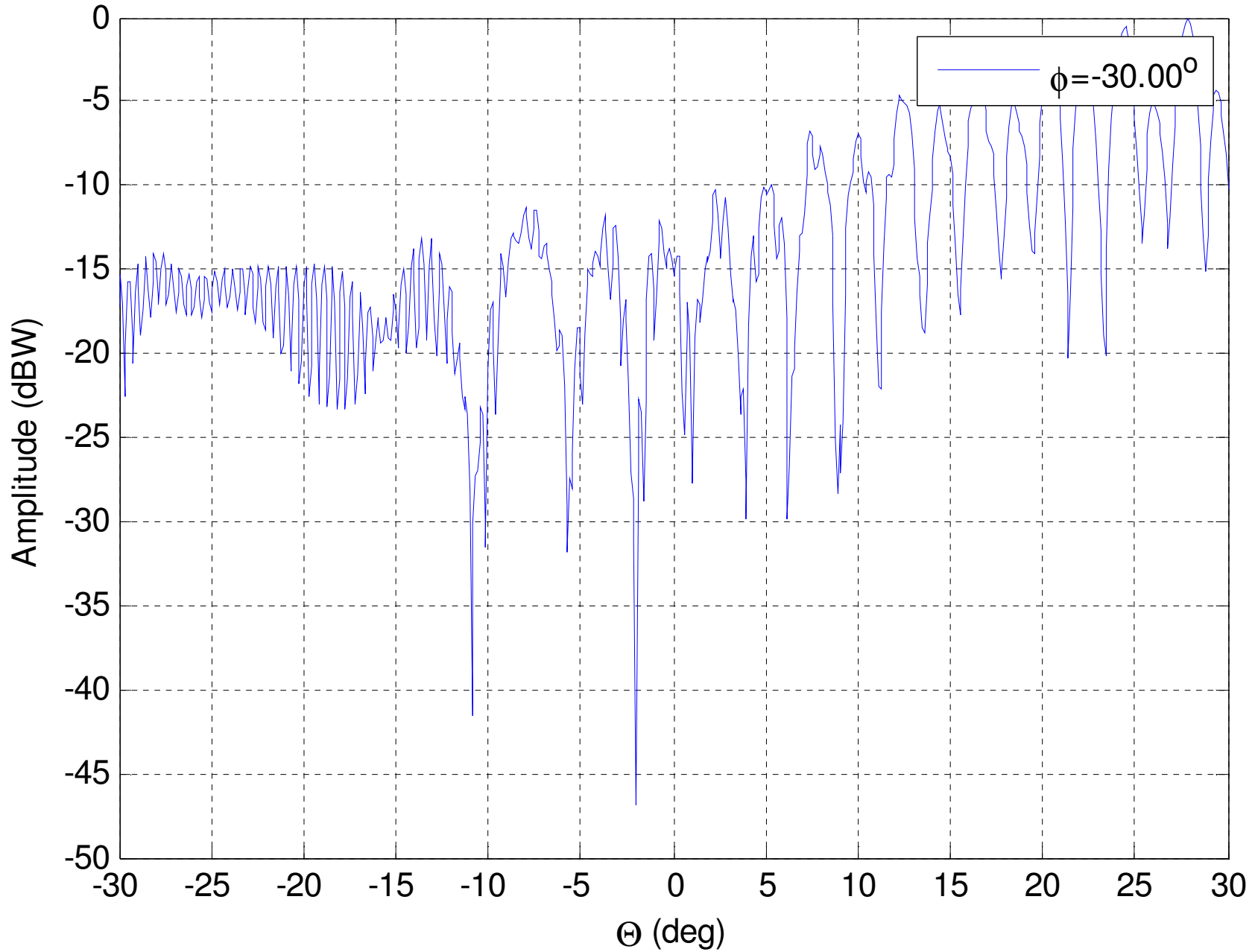
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -2.95 dBW, Date: 14-Dec-2011



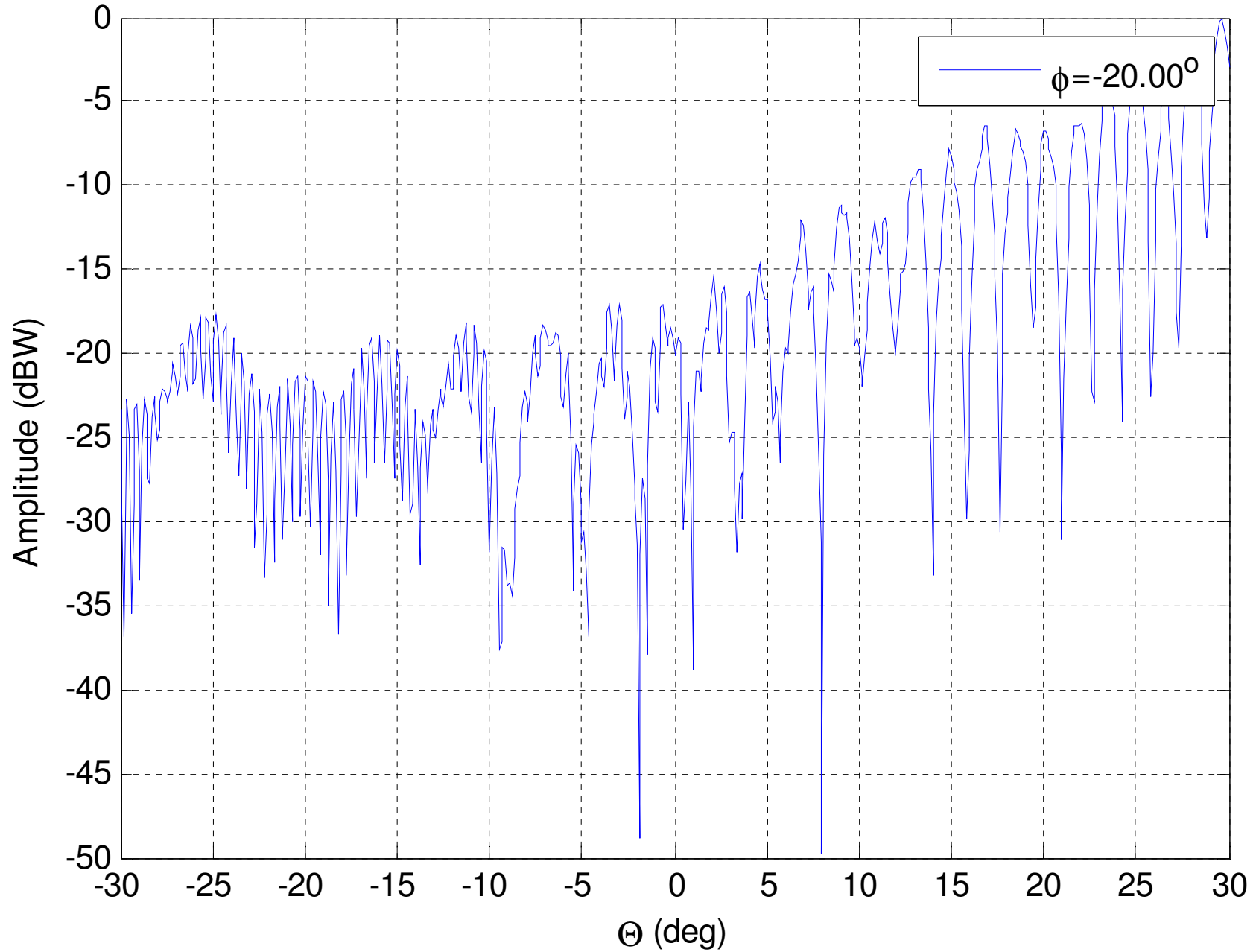
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 0.21 dBW, Date: 14-Dec-2011



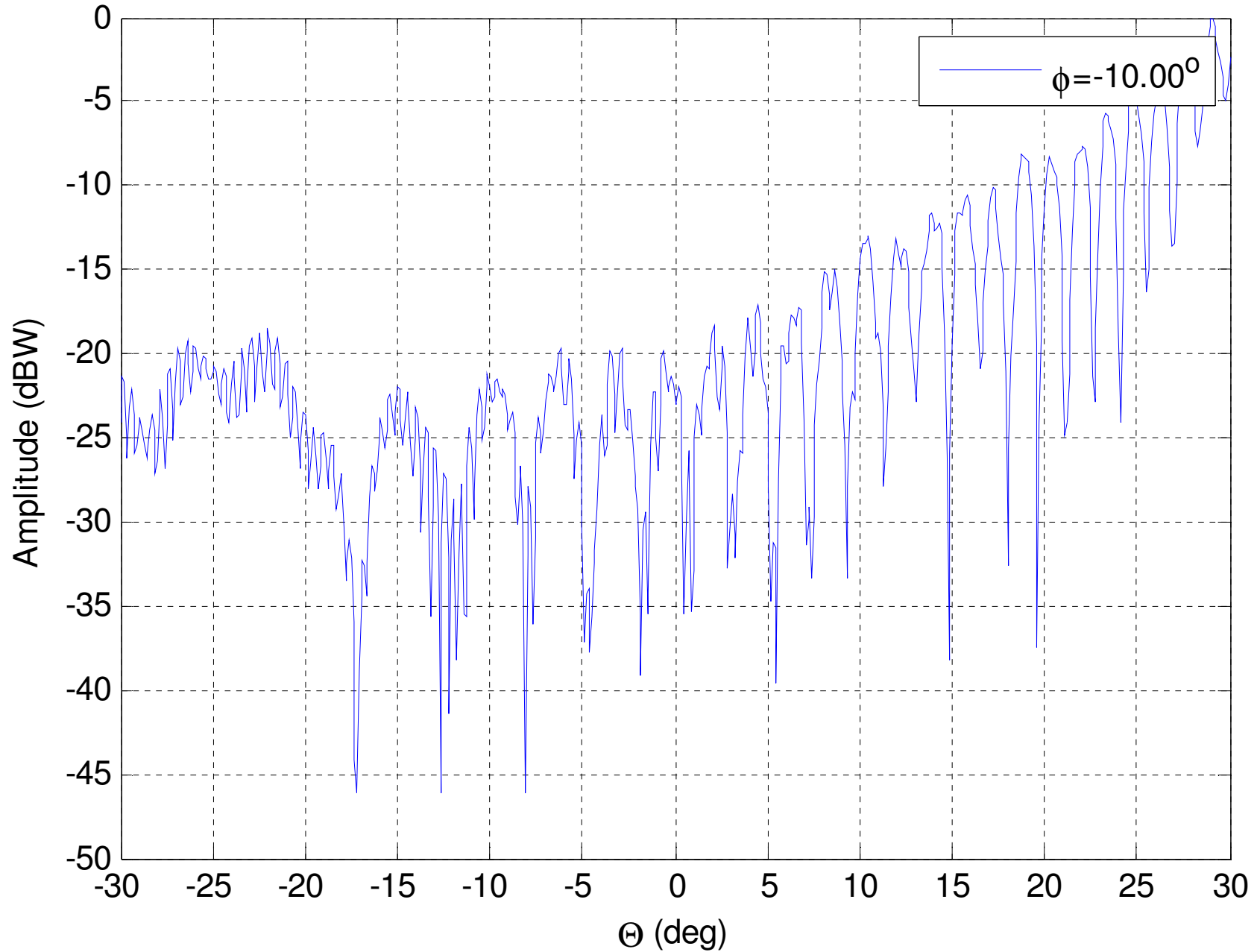
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 5.03 dBW, Date: 14-Dec-2011



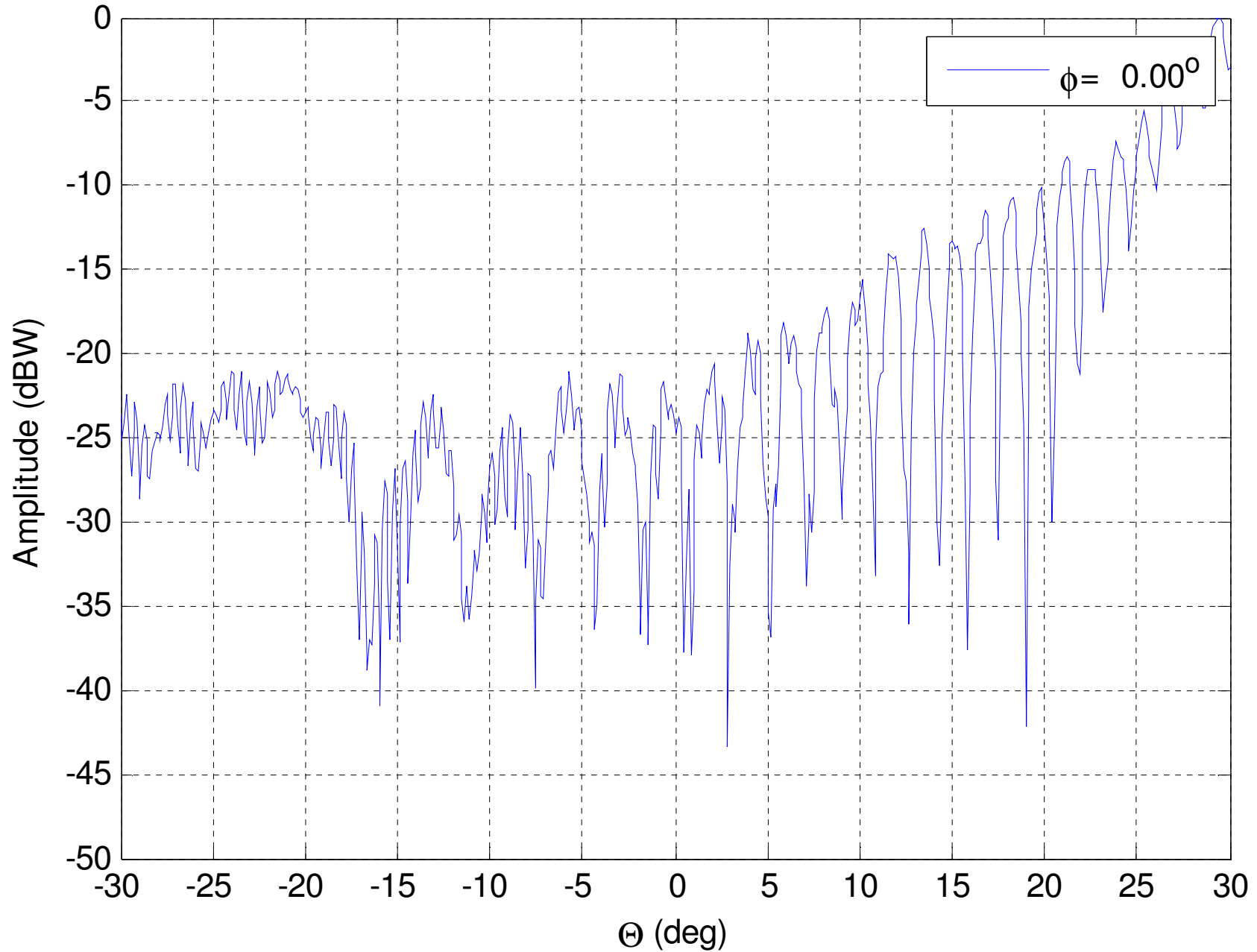
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 7.85 dBW, Date: 14-Dec-2011



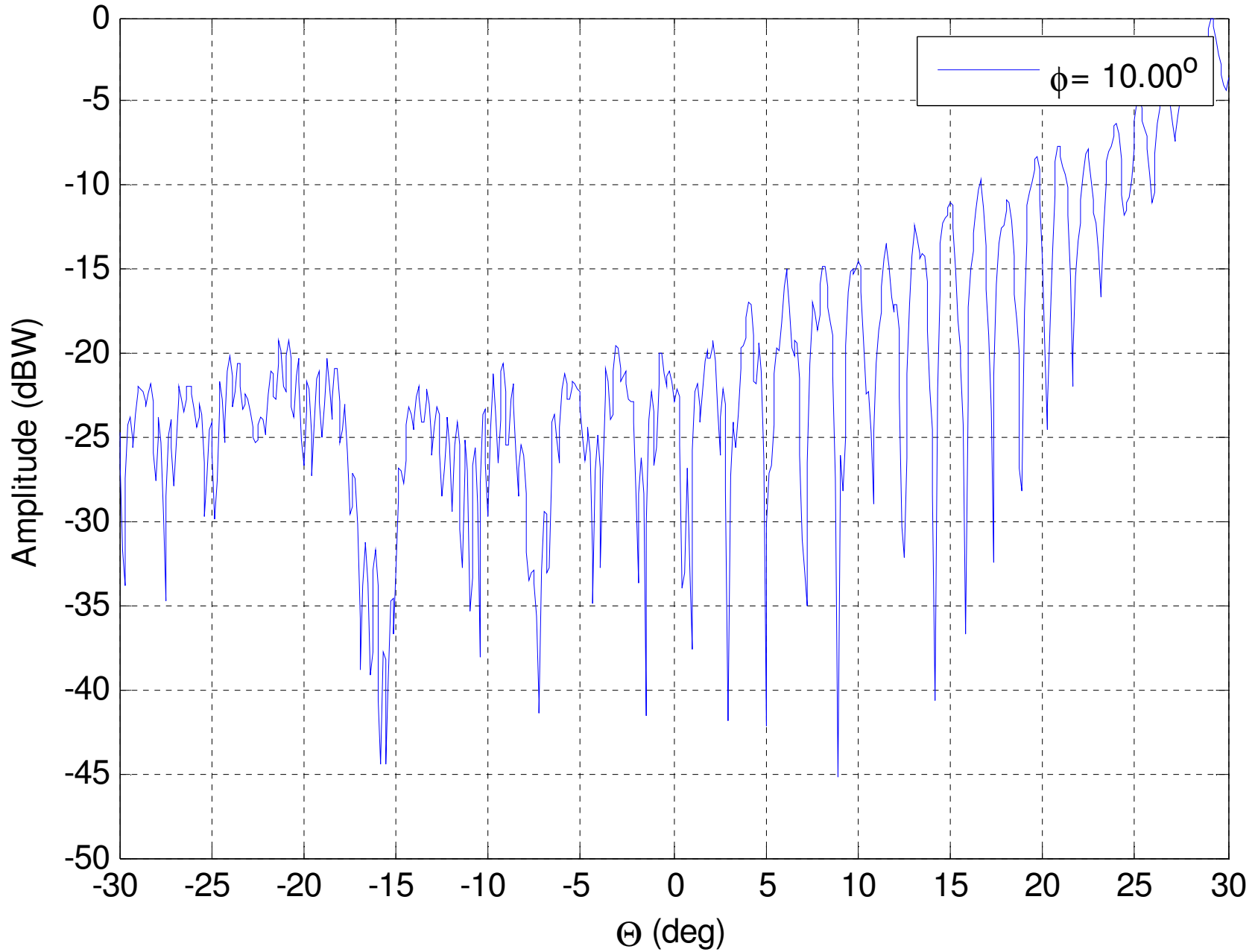
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 9.60 dBW, Date: 14-Dec-2011



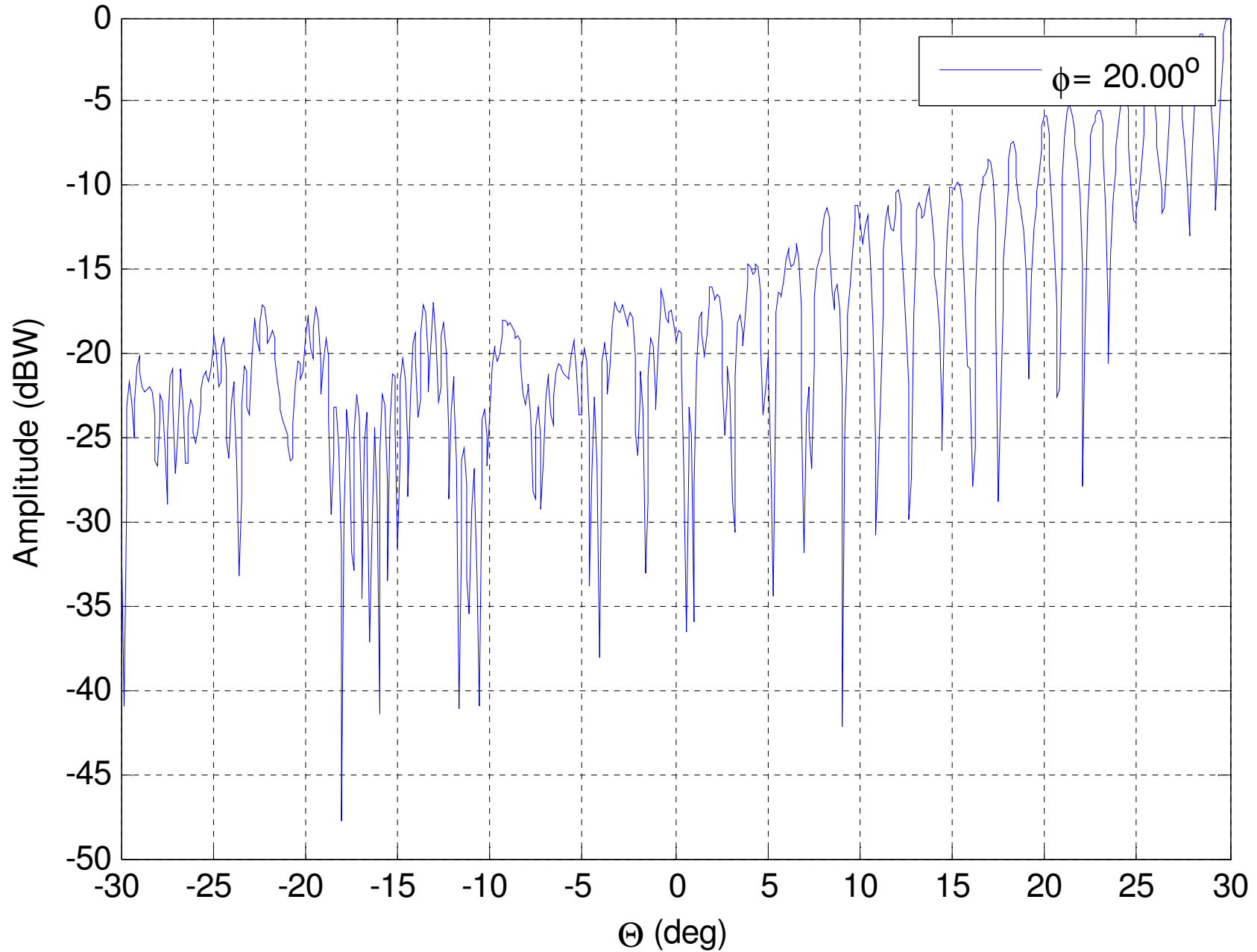
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 7.68 dBW, Date: 14-Dec-2011



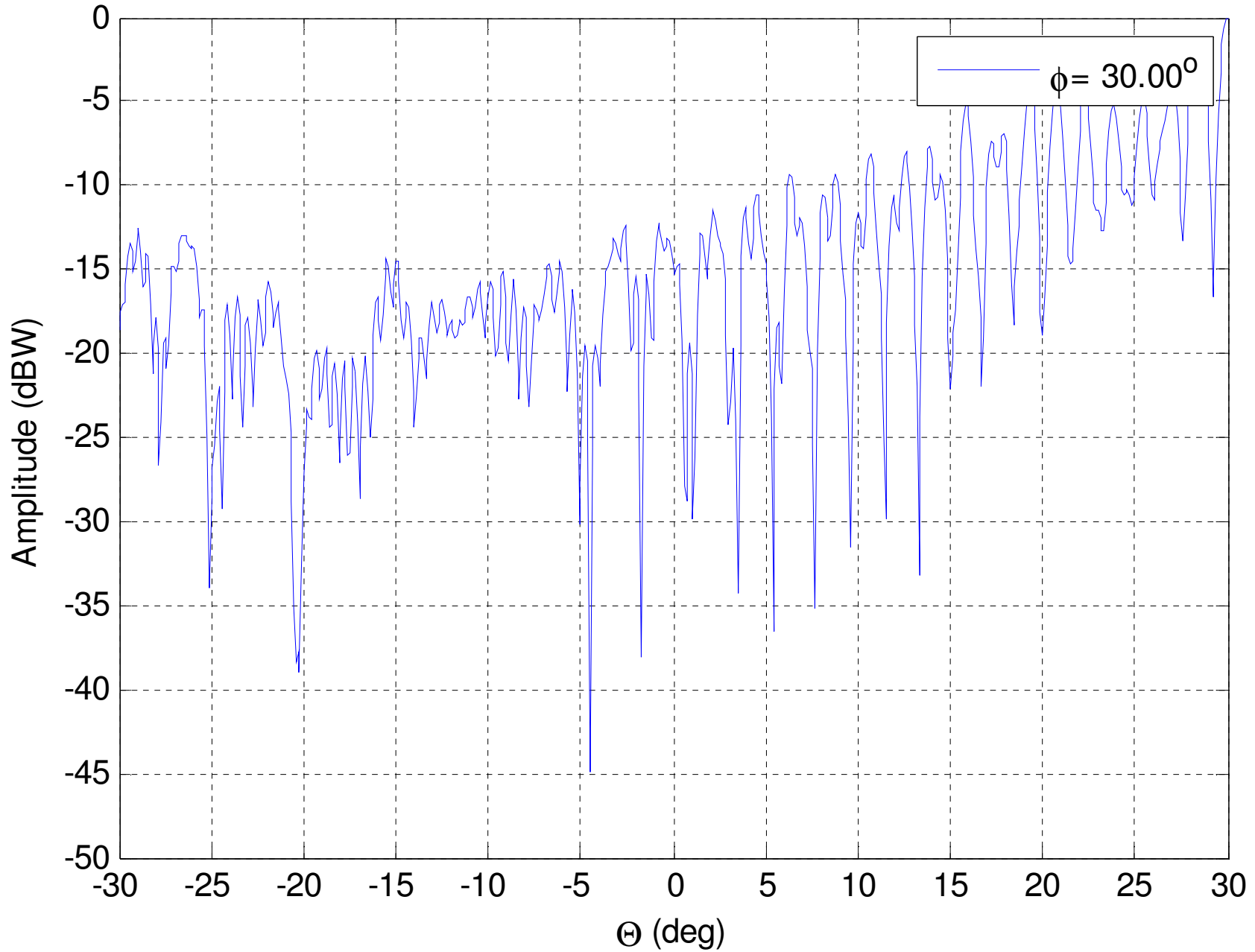
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 4.05 dBW, Date: 14-Dec-2011



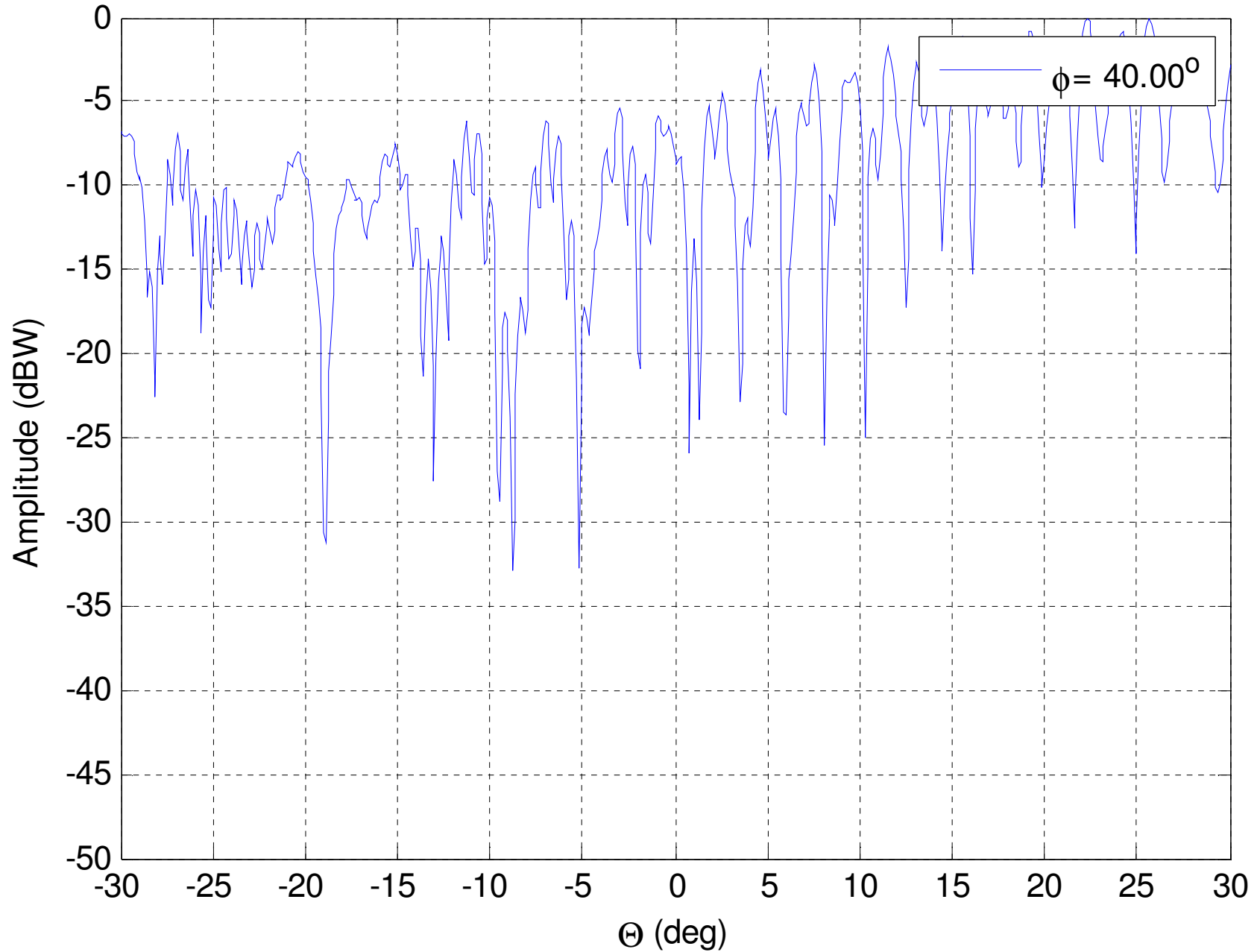
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.05 dBW, Date: 14-Dec-2011



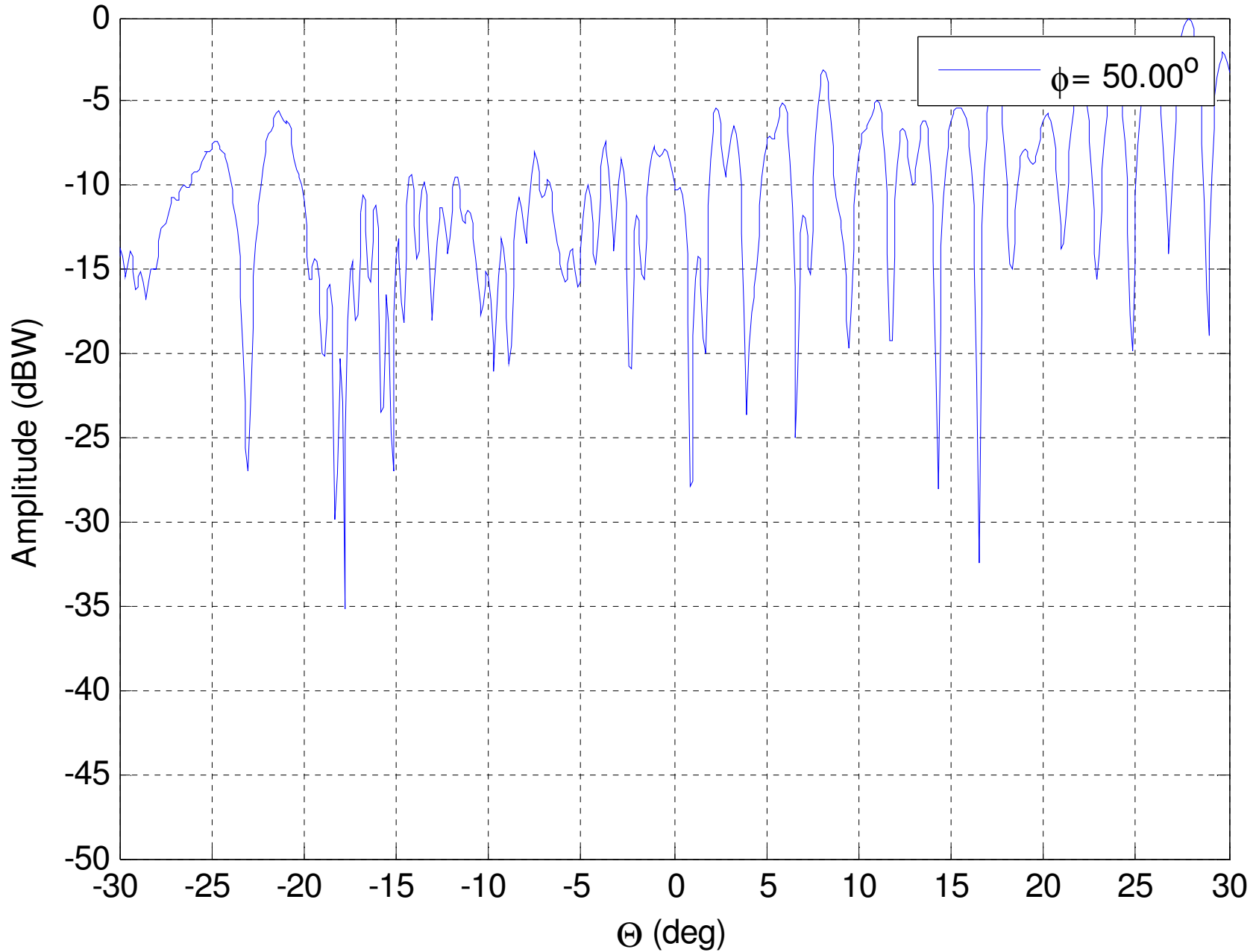
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.65 dBW, Date: 14-Dec-2011



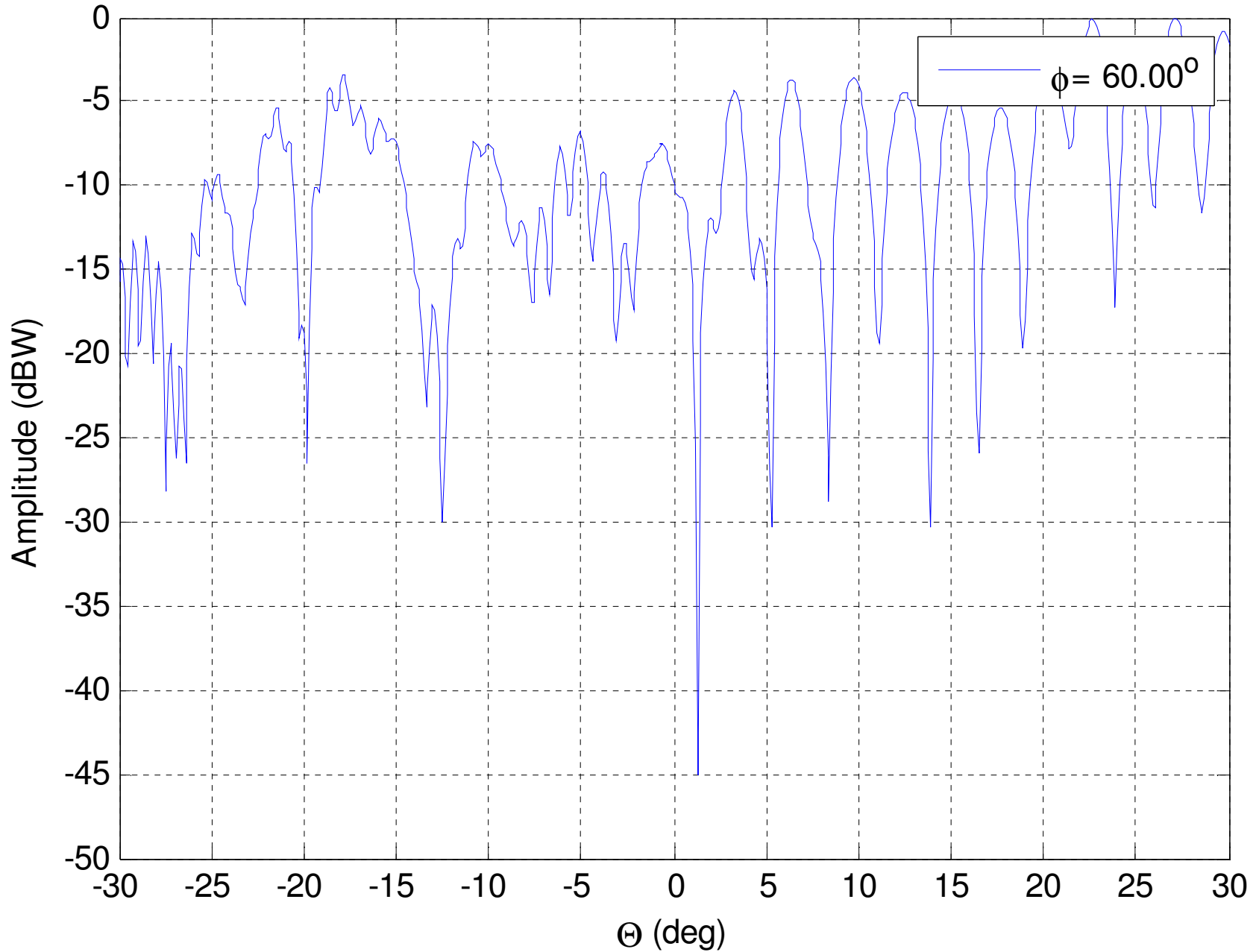
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.22 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

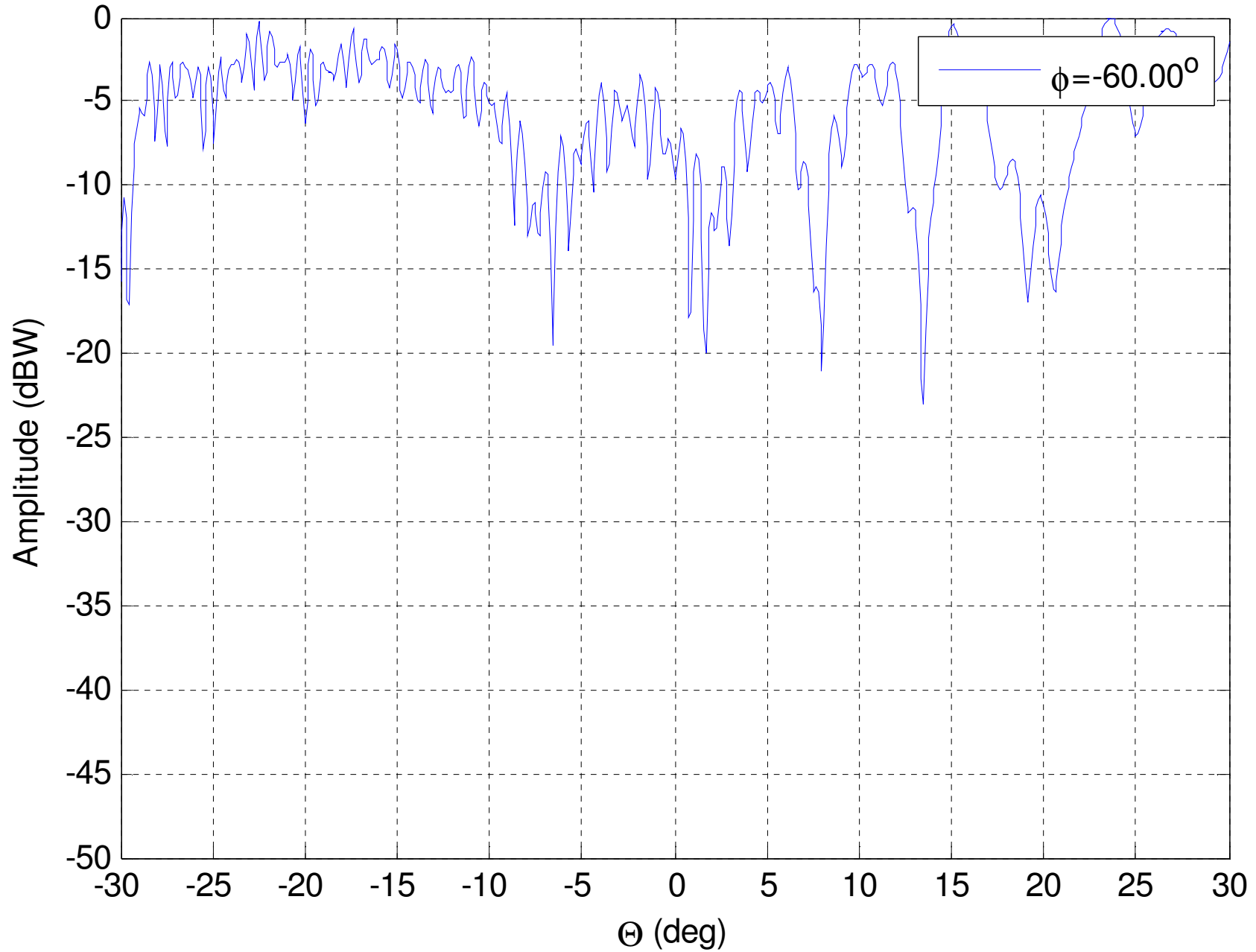
Input file: tx-17.7-rhcp-60.cut, Peak: -5.14 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

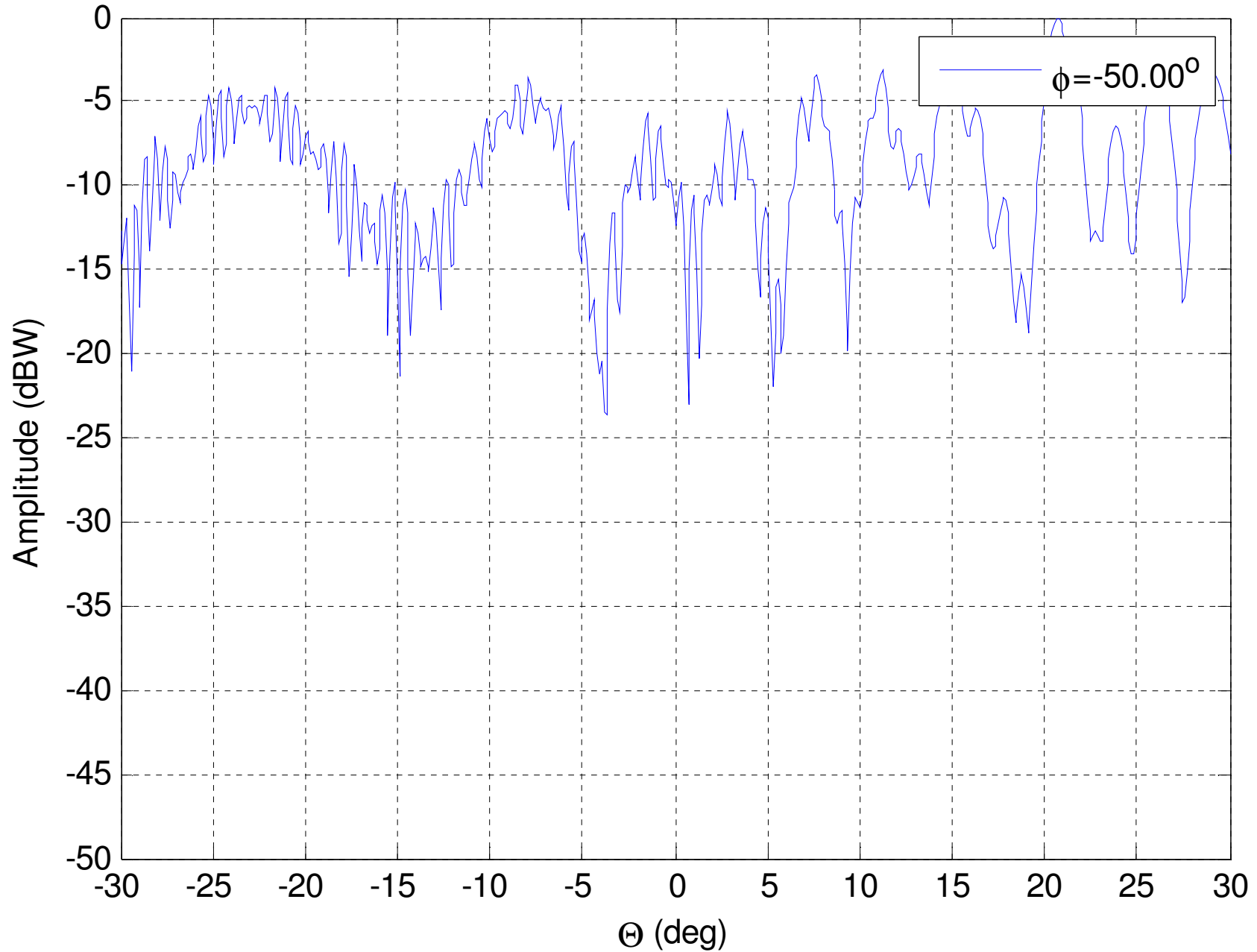
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.59 dBW, Date: 14-Dec-2011



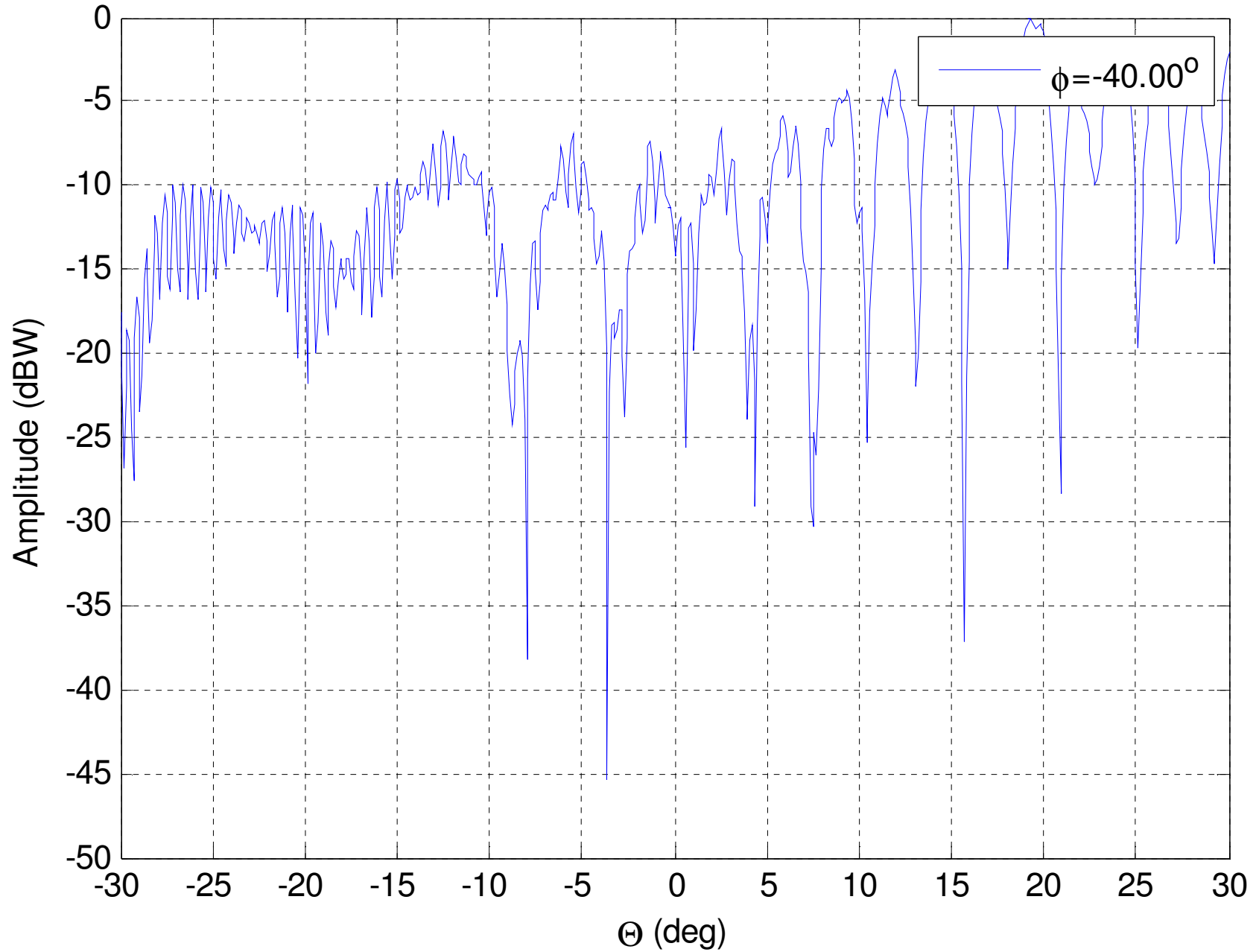
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -4.91 dBW, Date: 14-Dec-2011



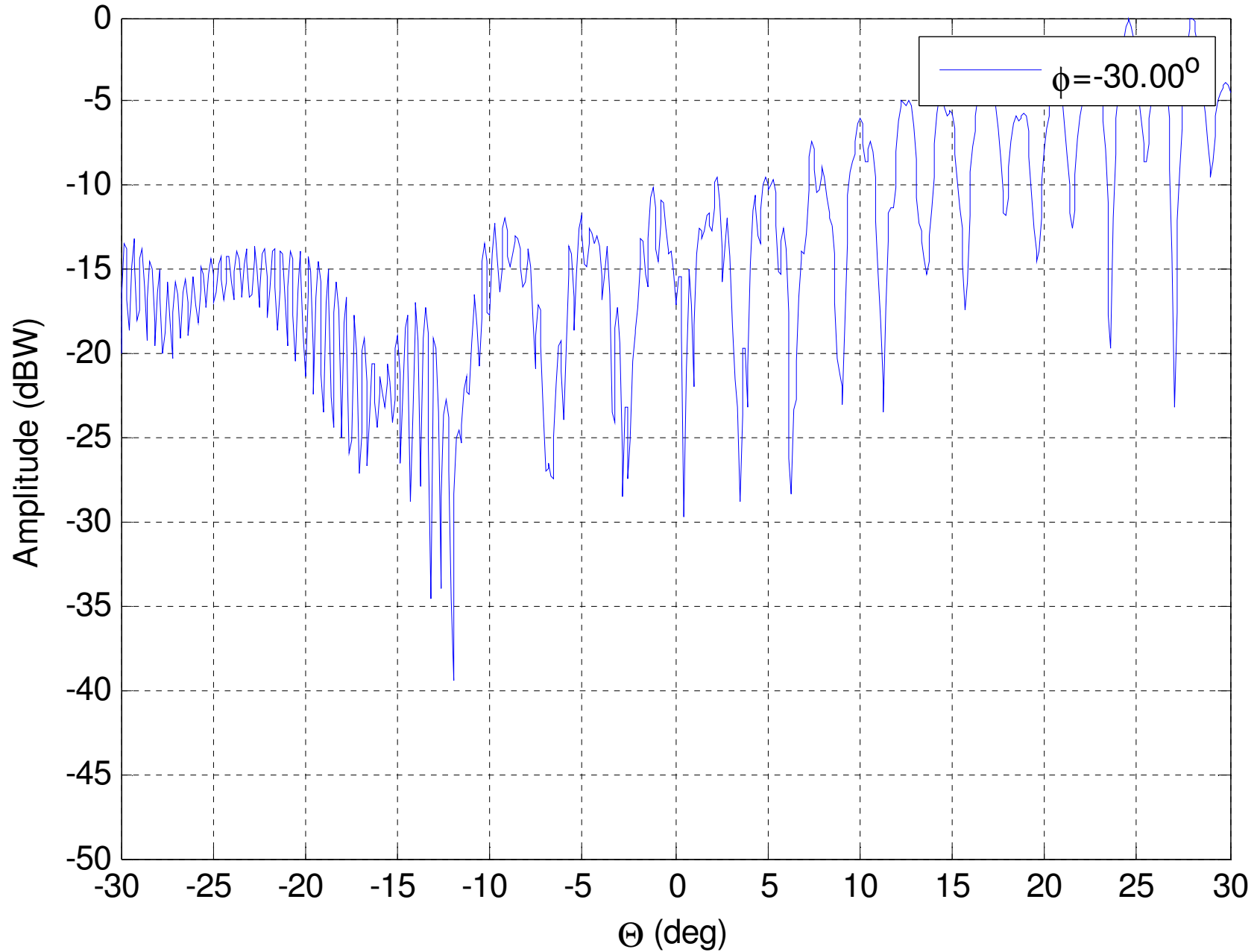
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -3.06 dBW, Date: 14-Dec-2011



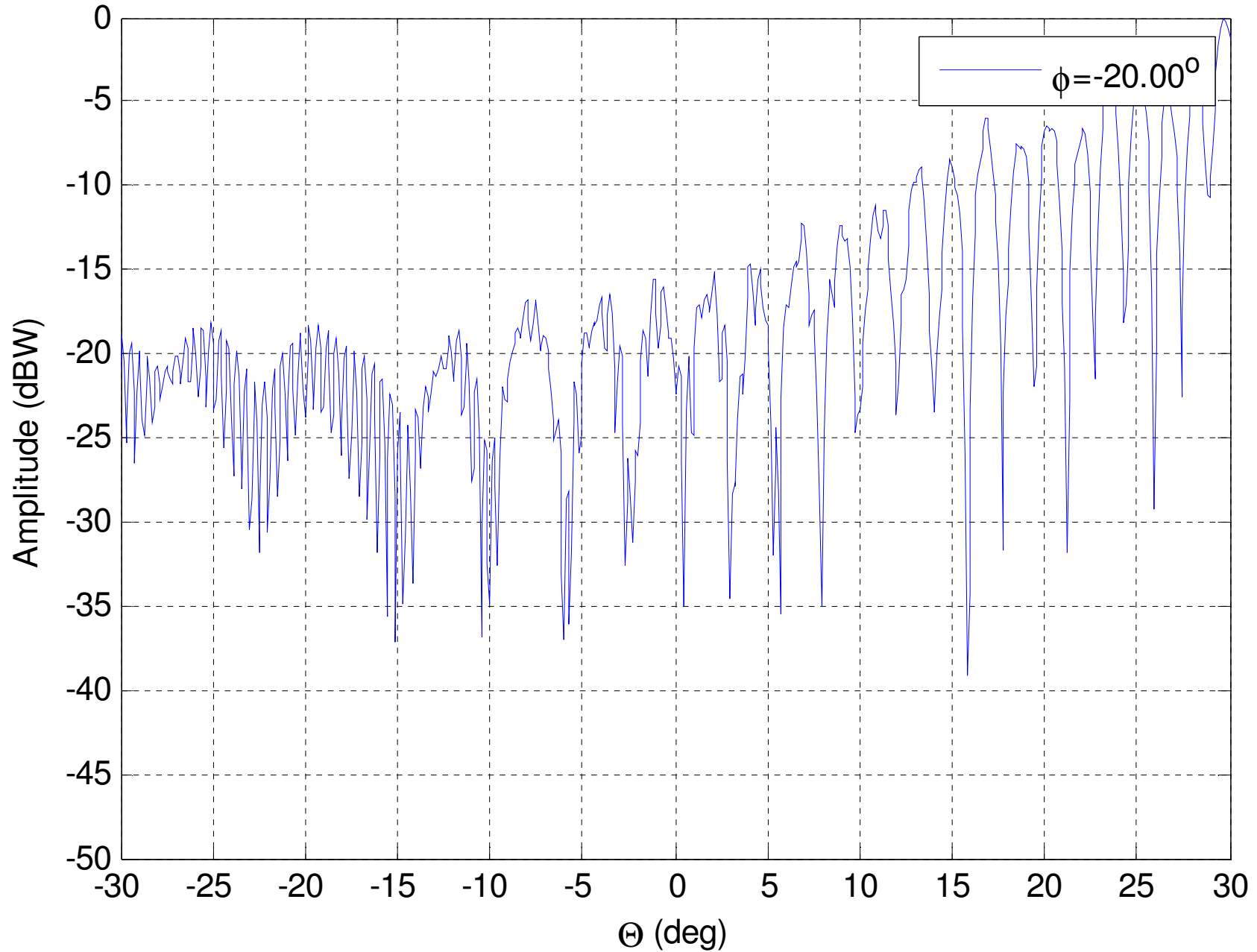
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -0.10 dBW, Date: 14-Dec-2011



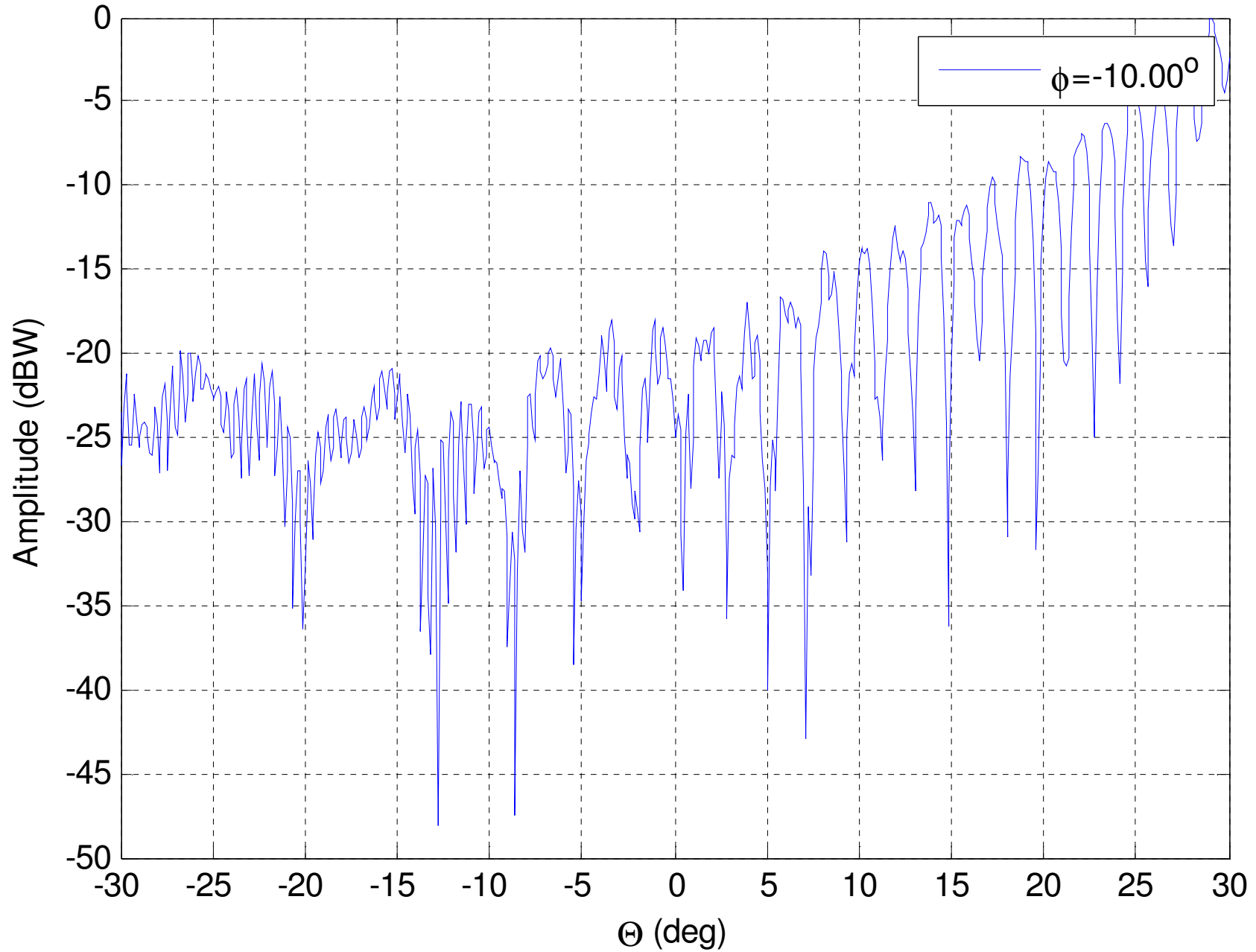
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 5.21 dBW, Date: 14-Dec-2011



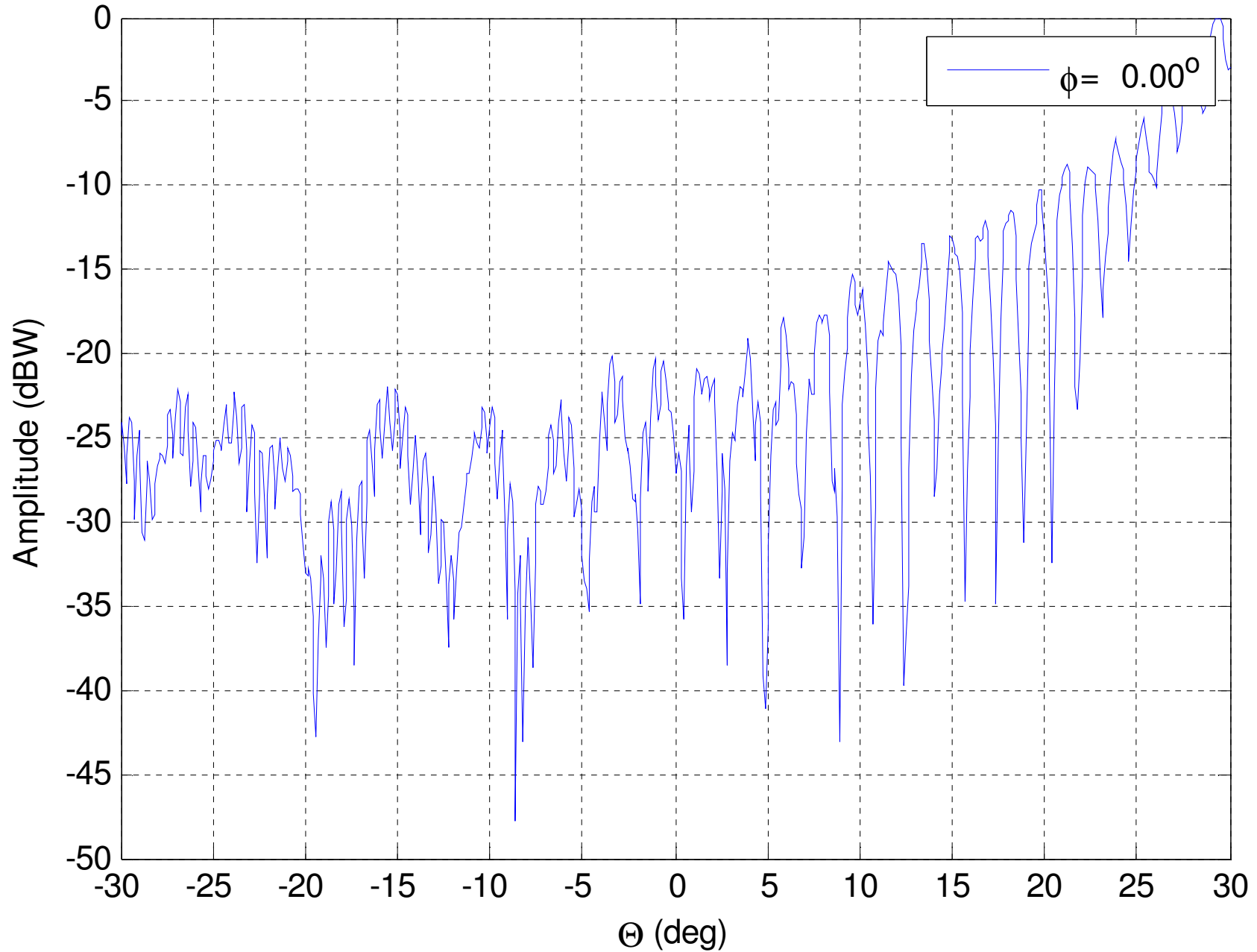
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 7.83 dBW, Date: 14-Dec-2011



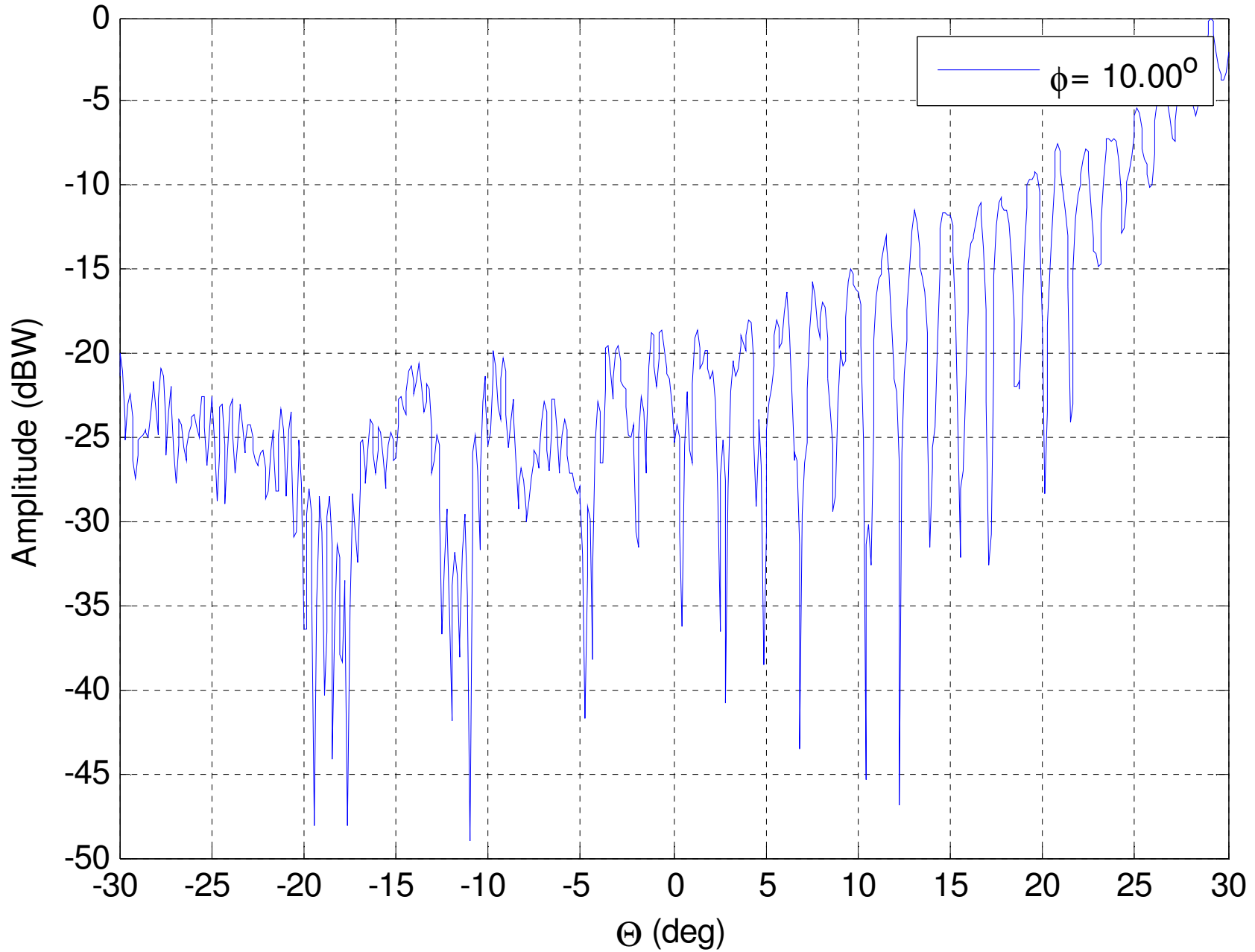
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 9.91 dBW, Date: 14-Dec-2011



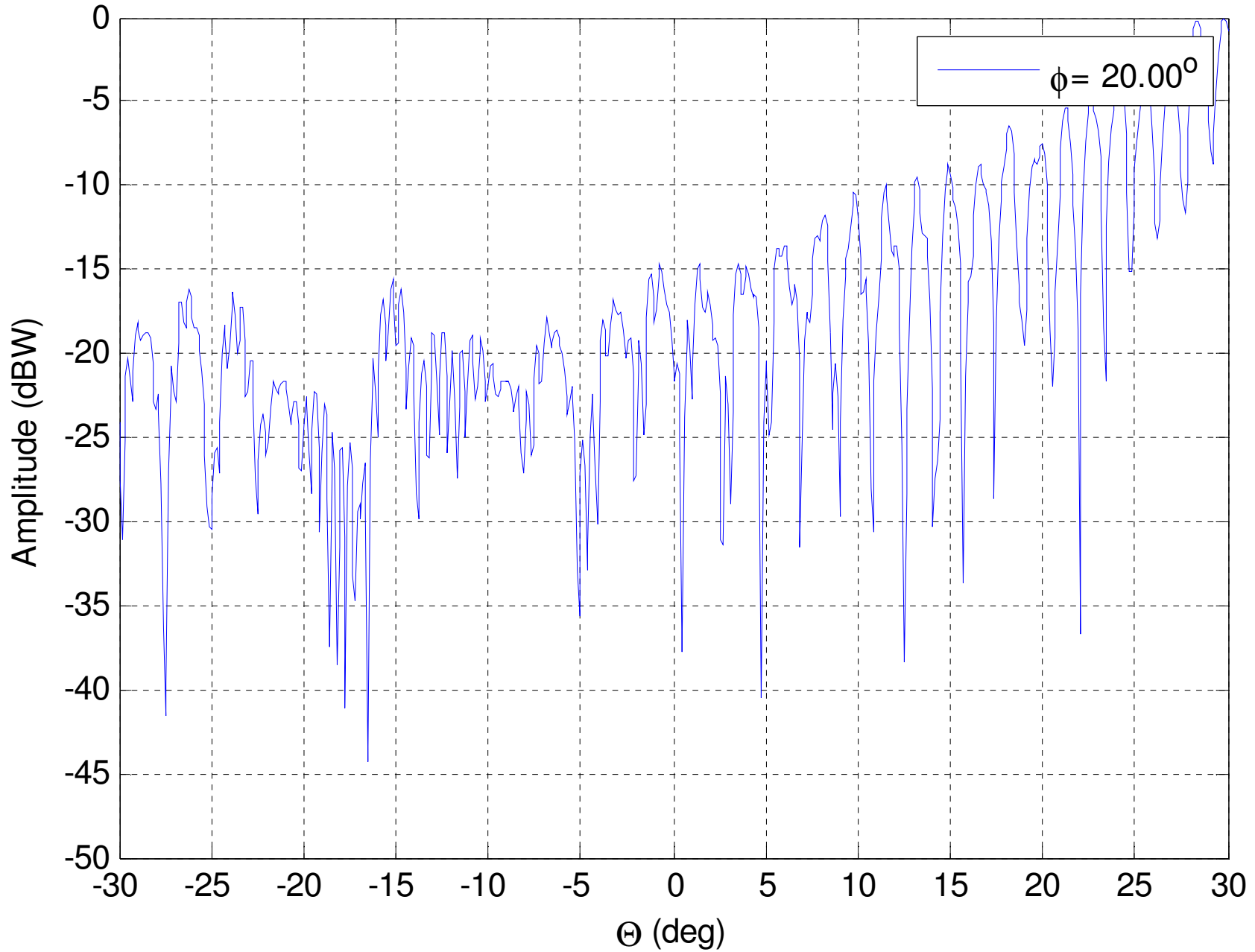
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 7.98 dBW, Date: 14-Dec-2011



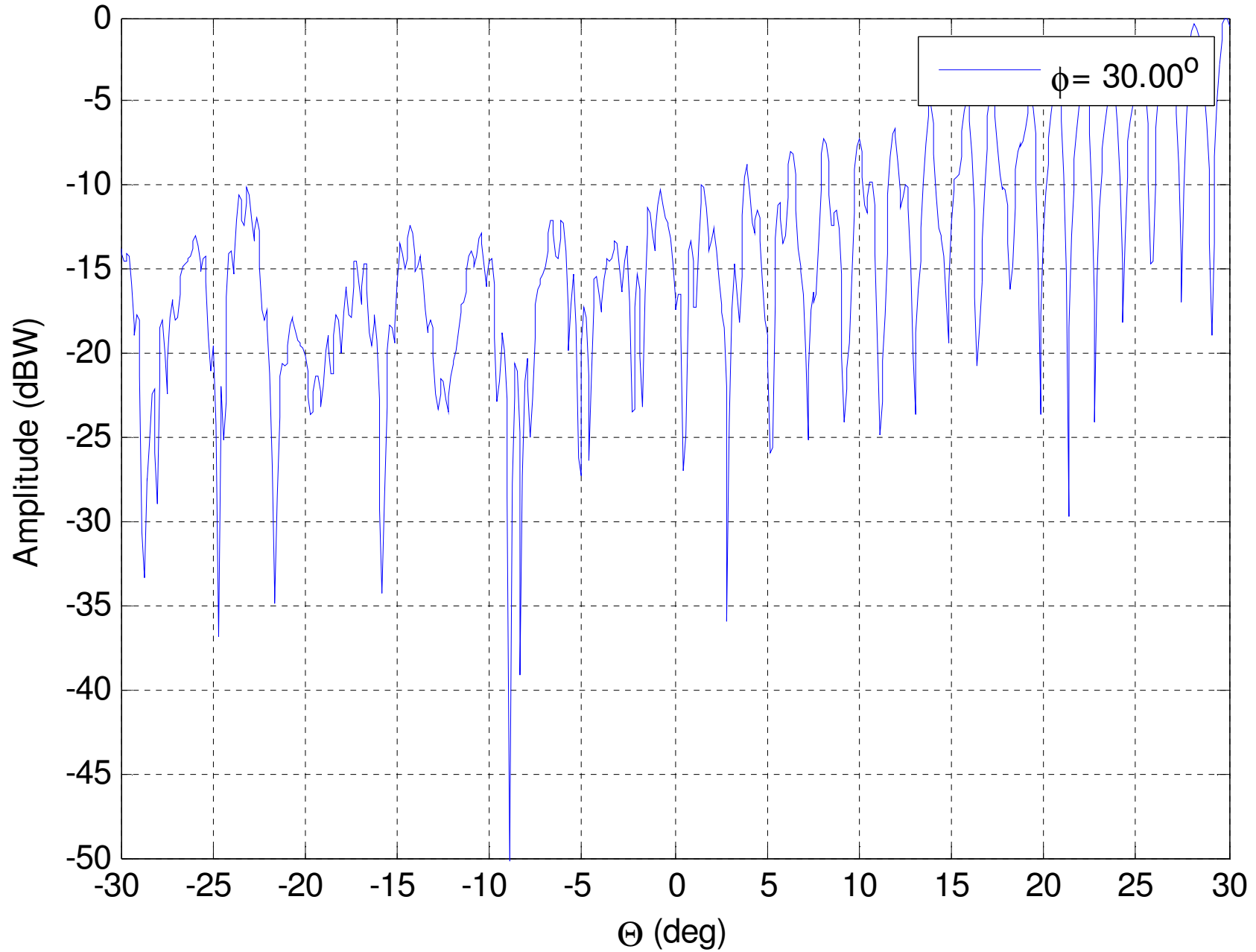
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 4.13 dBW, Date: 14-Dec-2011



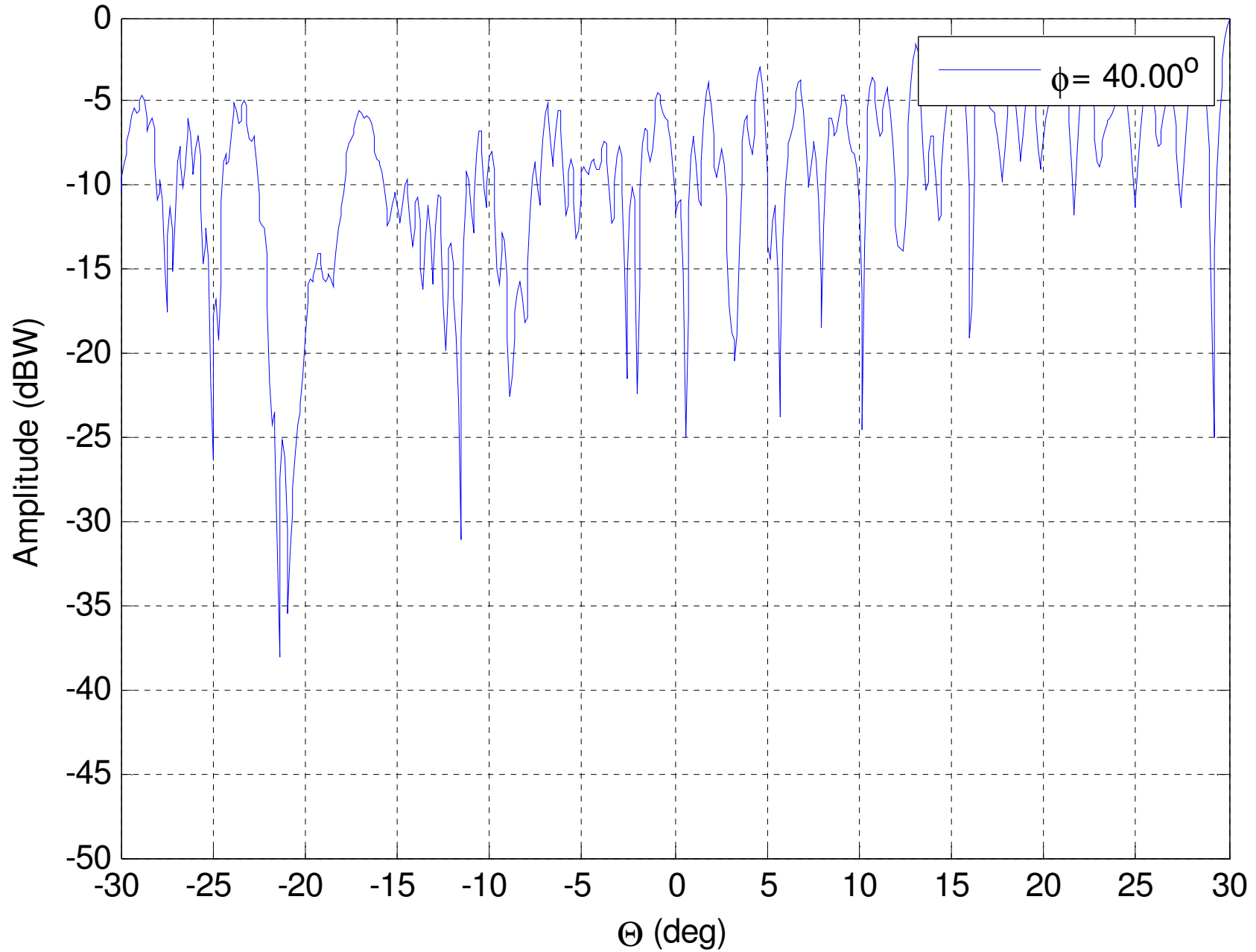
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.45 dBW, Date: 14-Dec-2011



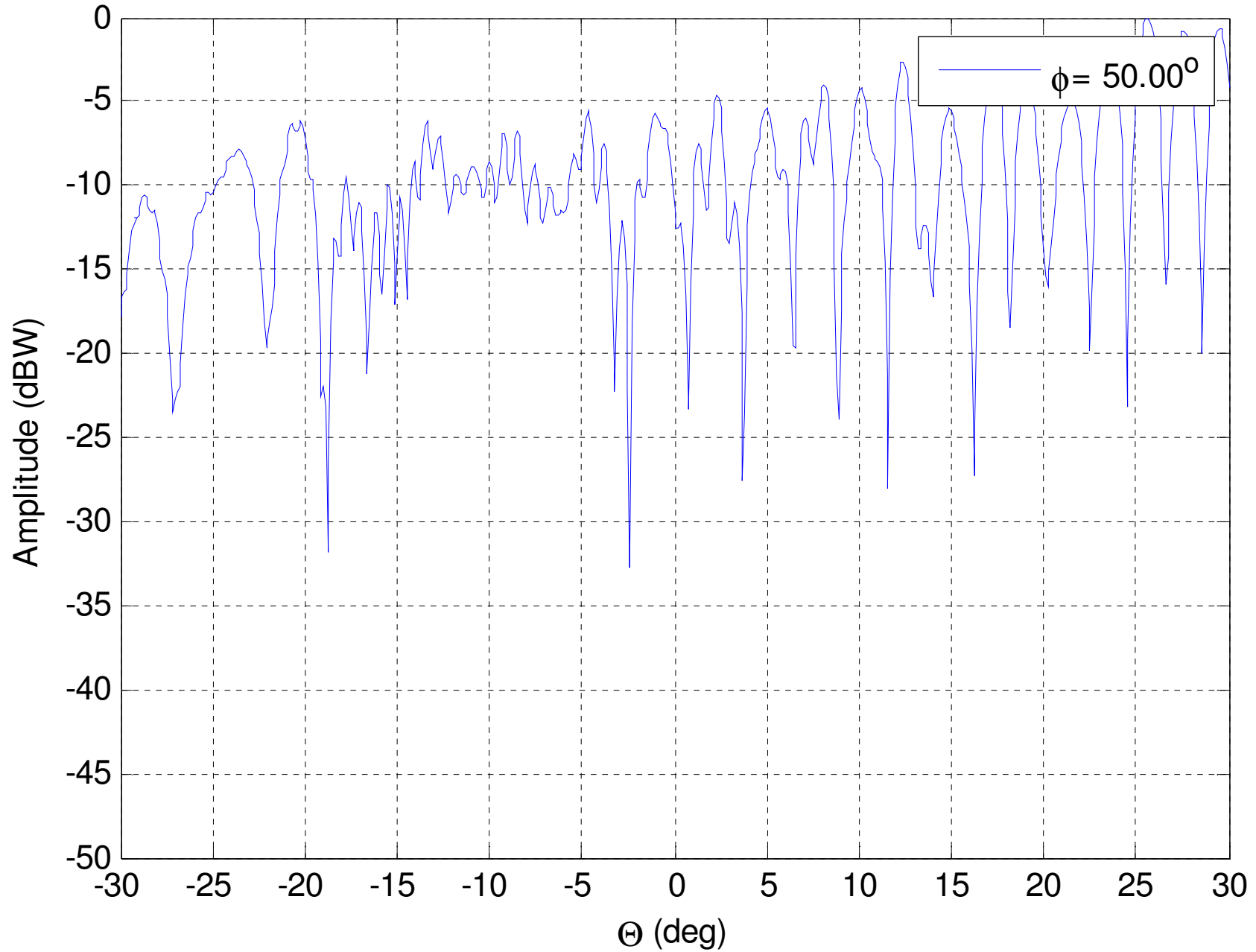
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.37 dBW, Date: 14-Dec-2011



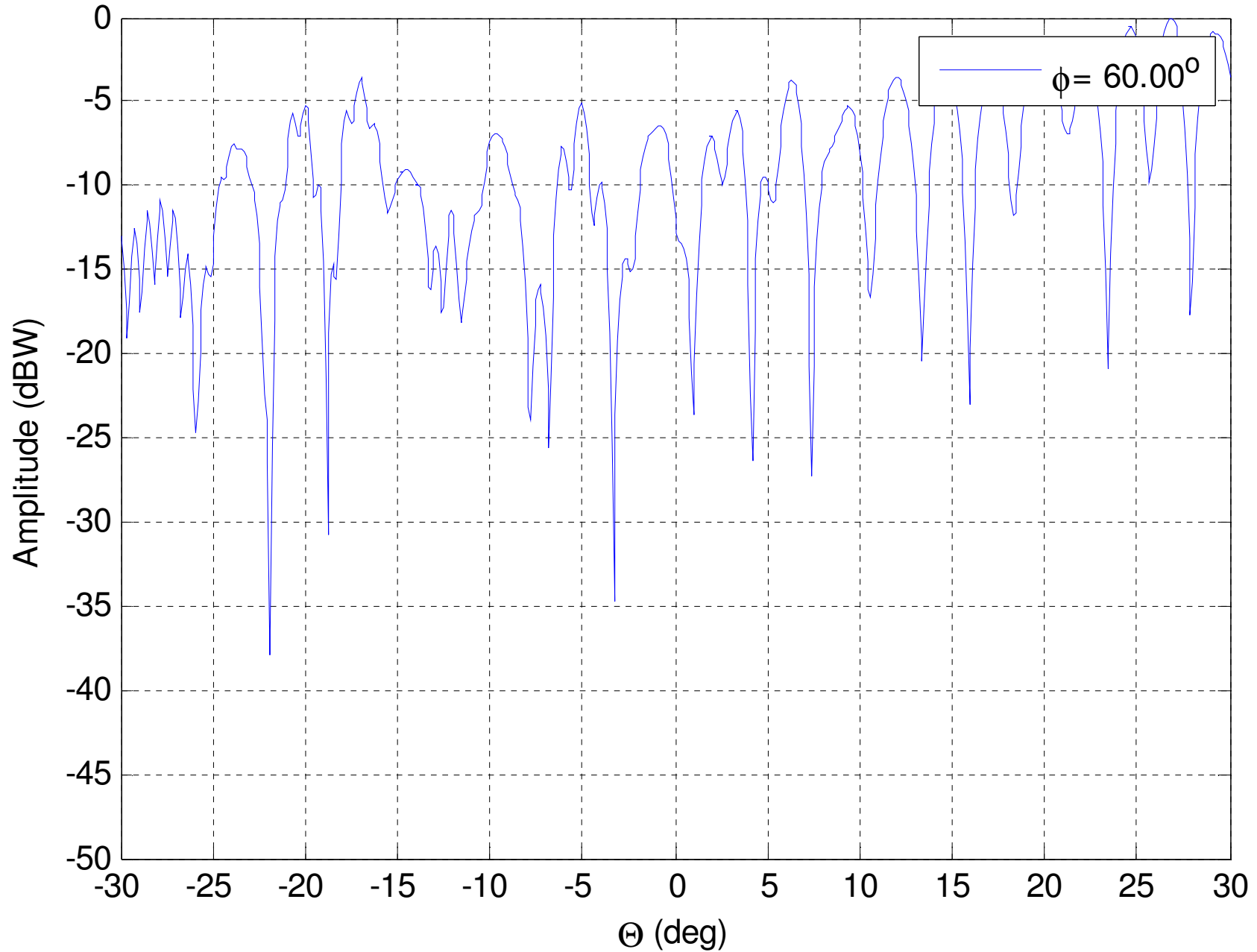
Normalized pattern cuts - farfield

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: -5.28 dBW, Date: 14-Dec-2011



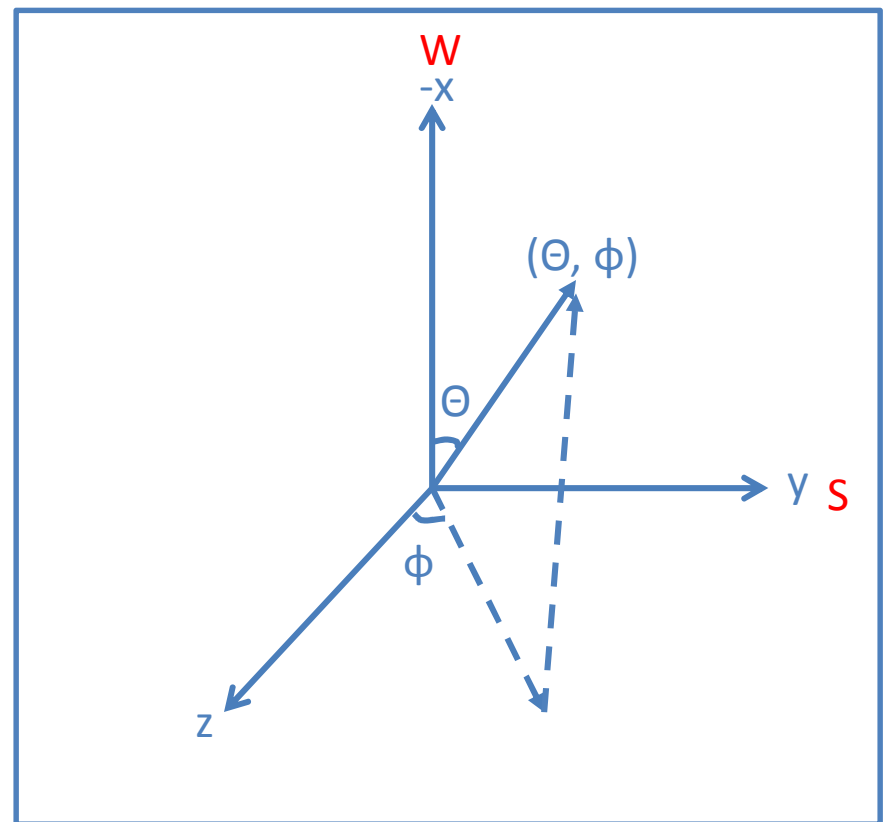
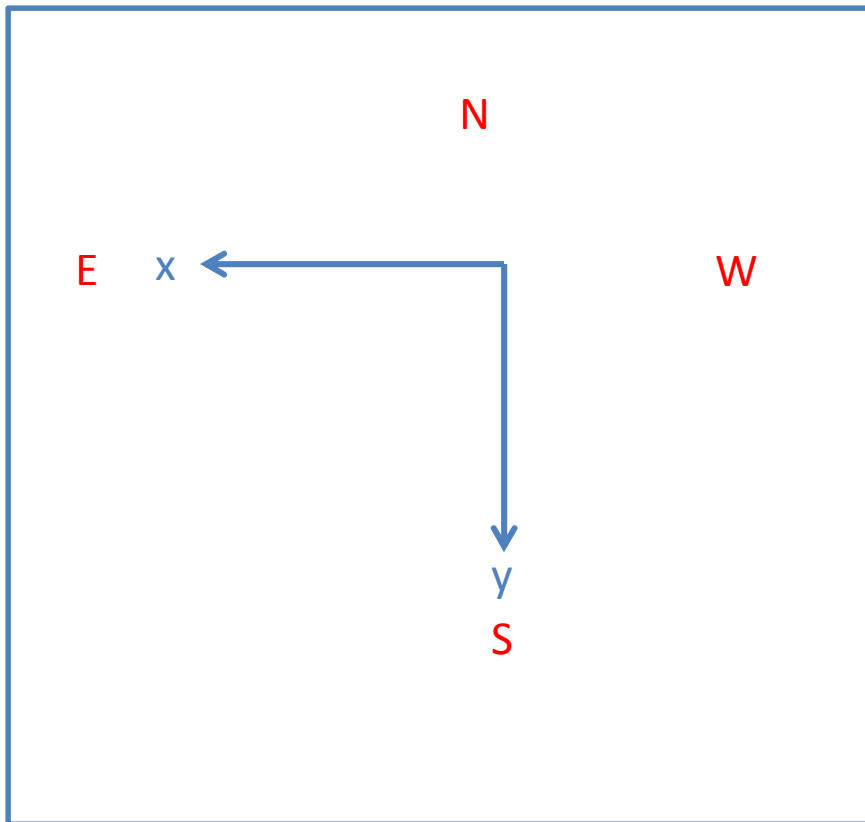
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 18

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



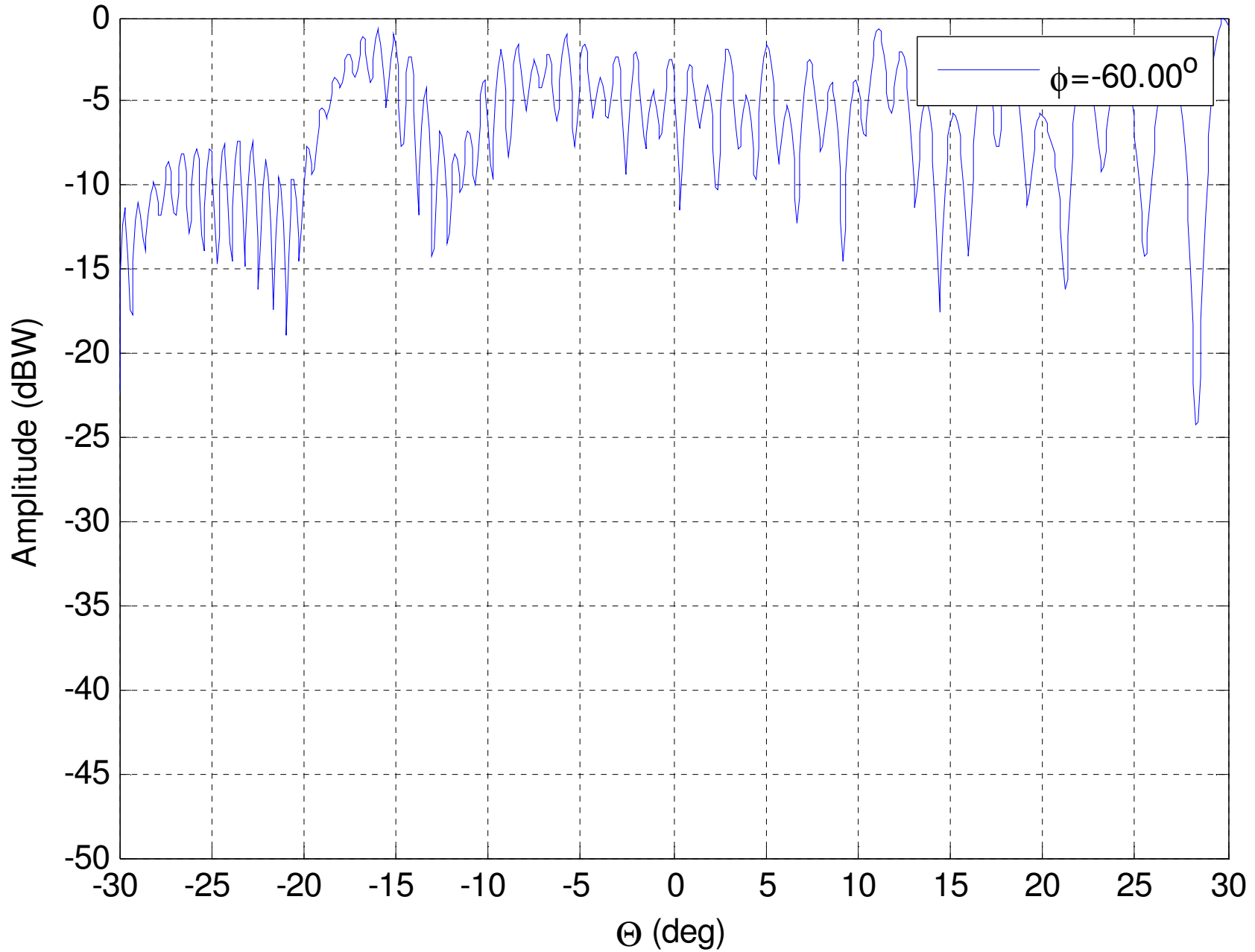
Spot Beam18, -X Axis Plots

- 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

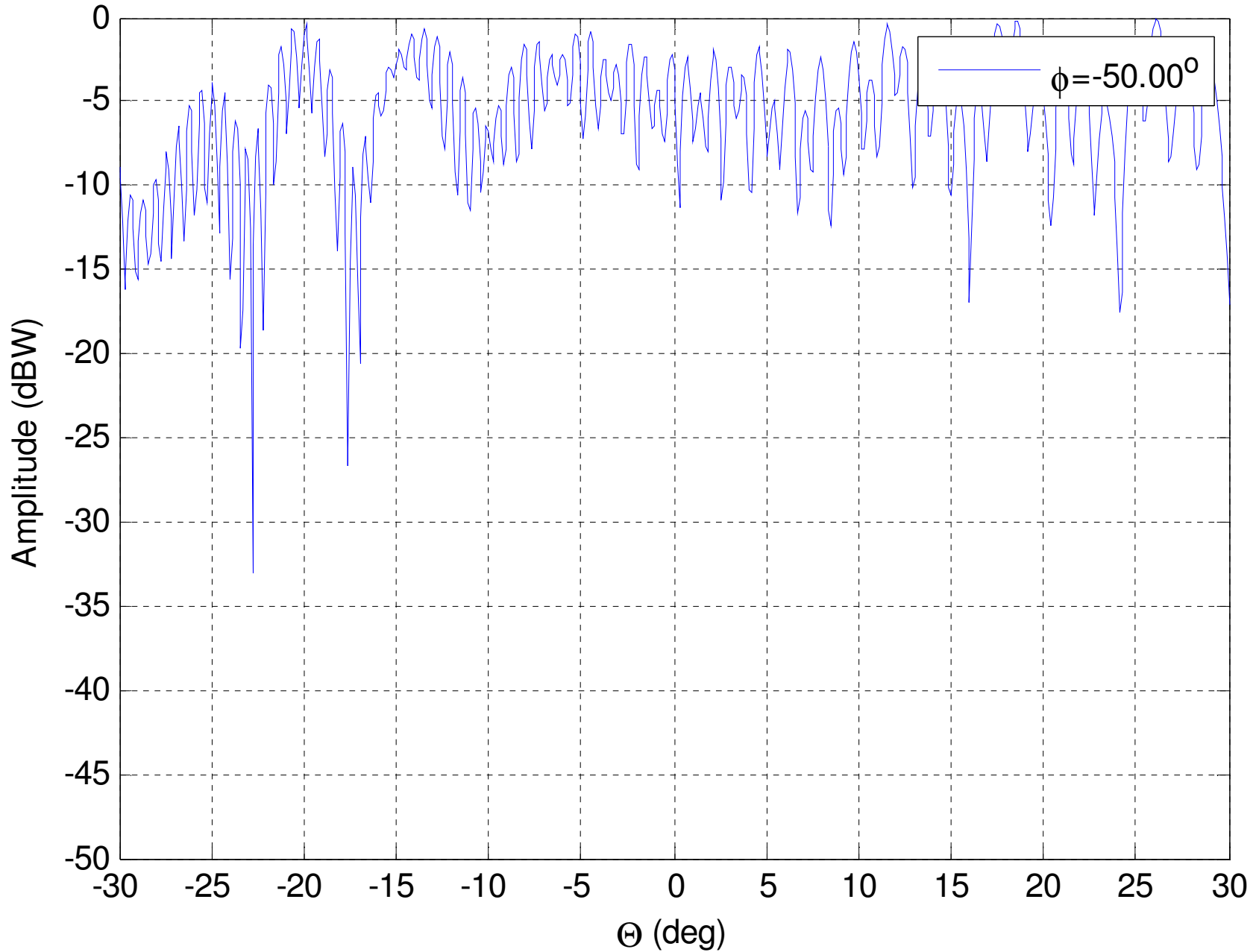
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: 1.39 dBW, Date: 14-Dec-2011



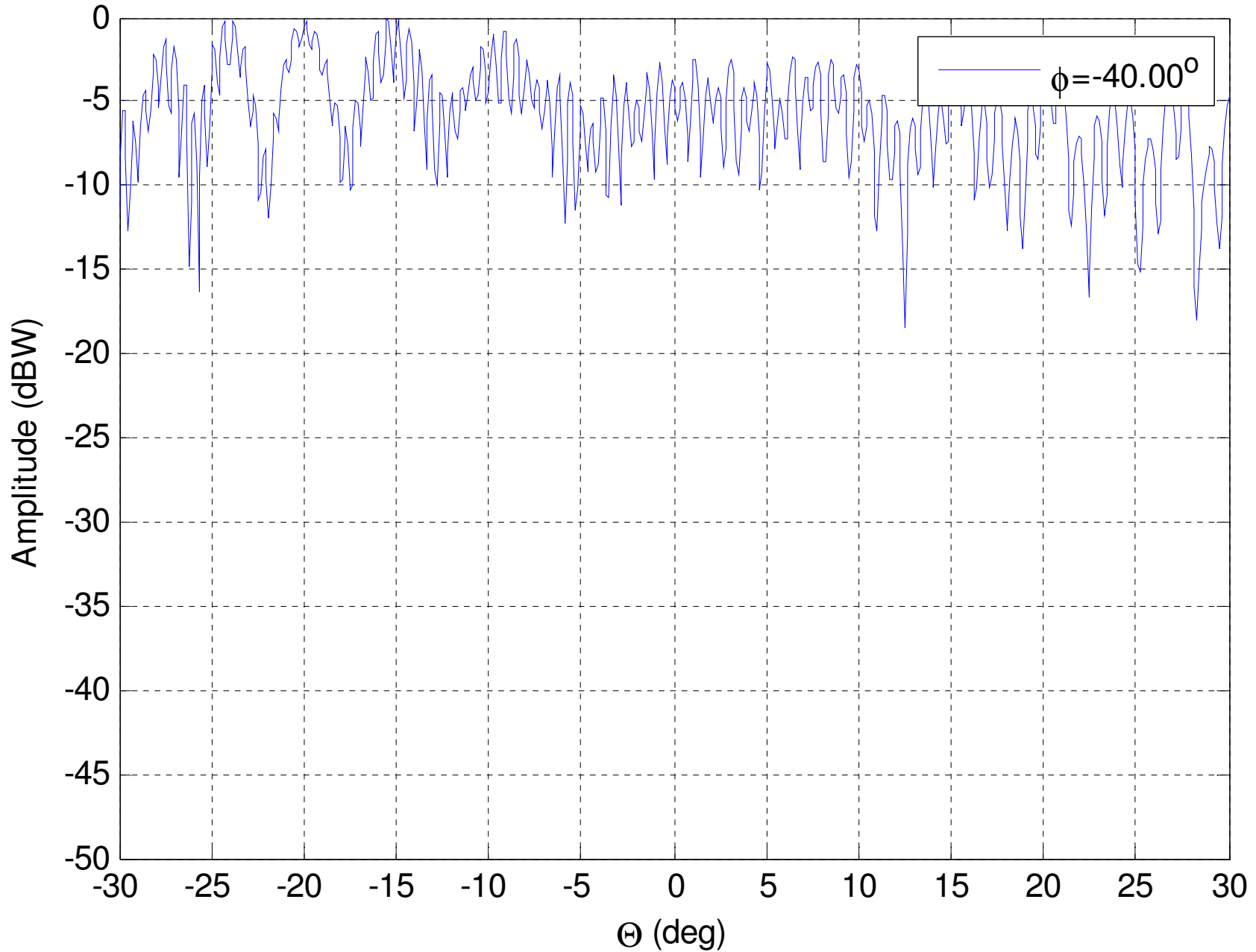
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: 1.19 dBW, Date: 14-Dec-2011



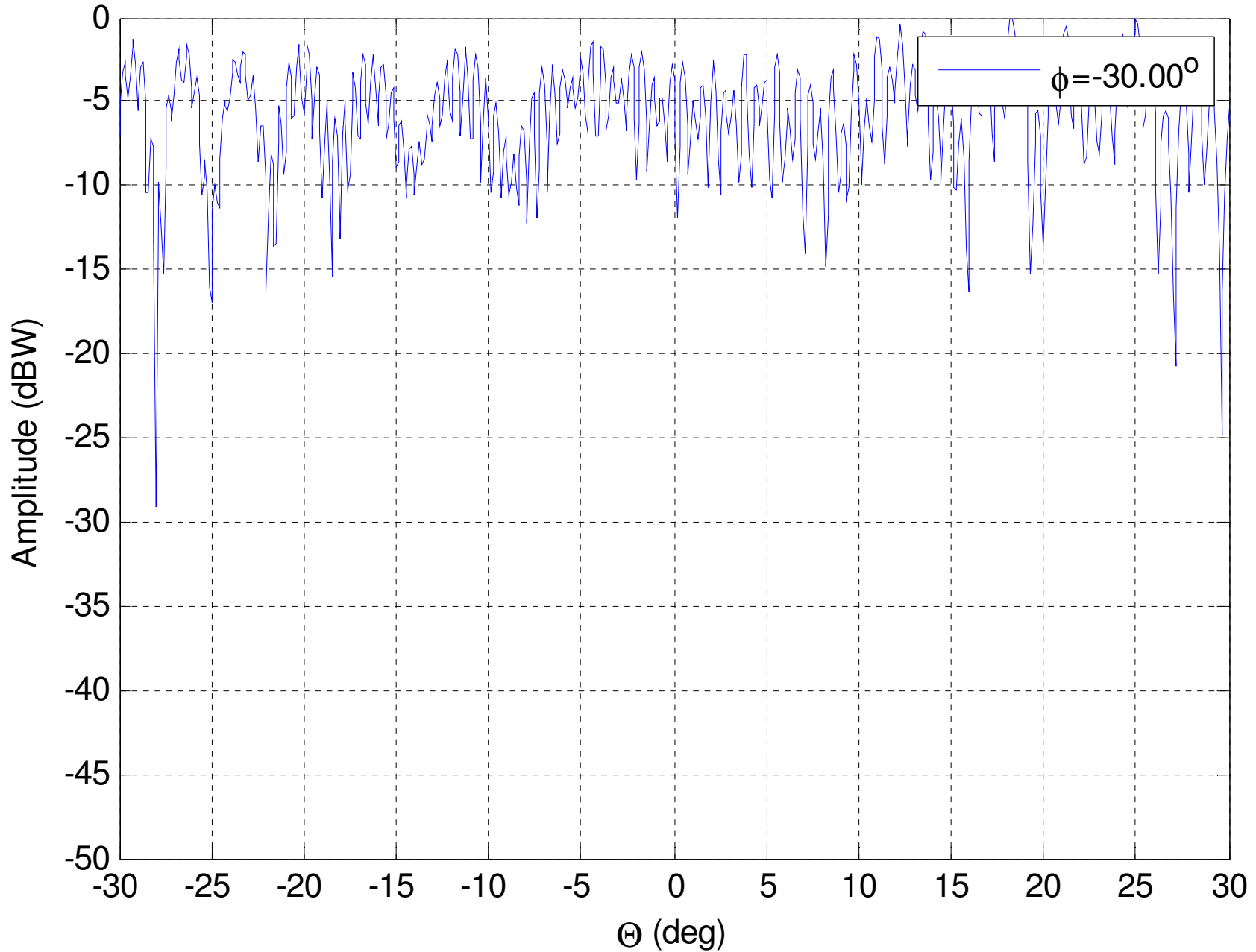
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: 1.82 dBW, Date: 14-Dec-2011



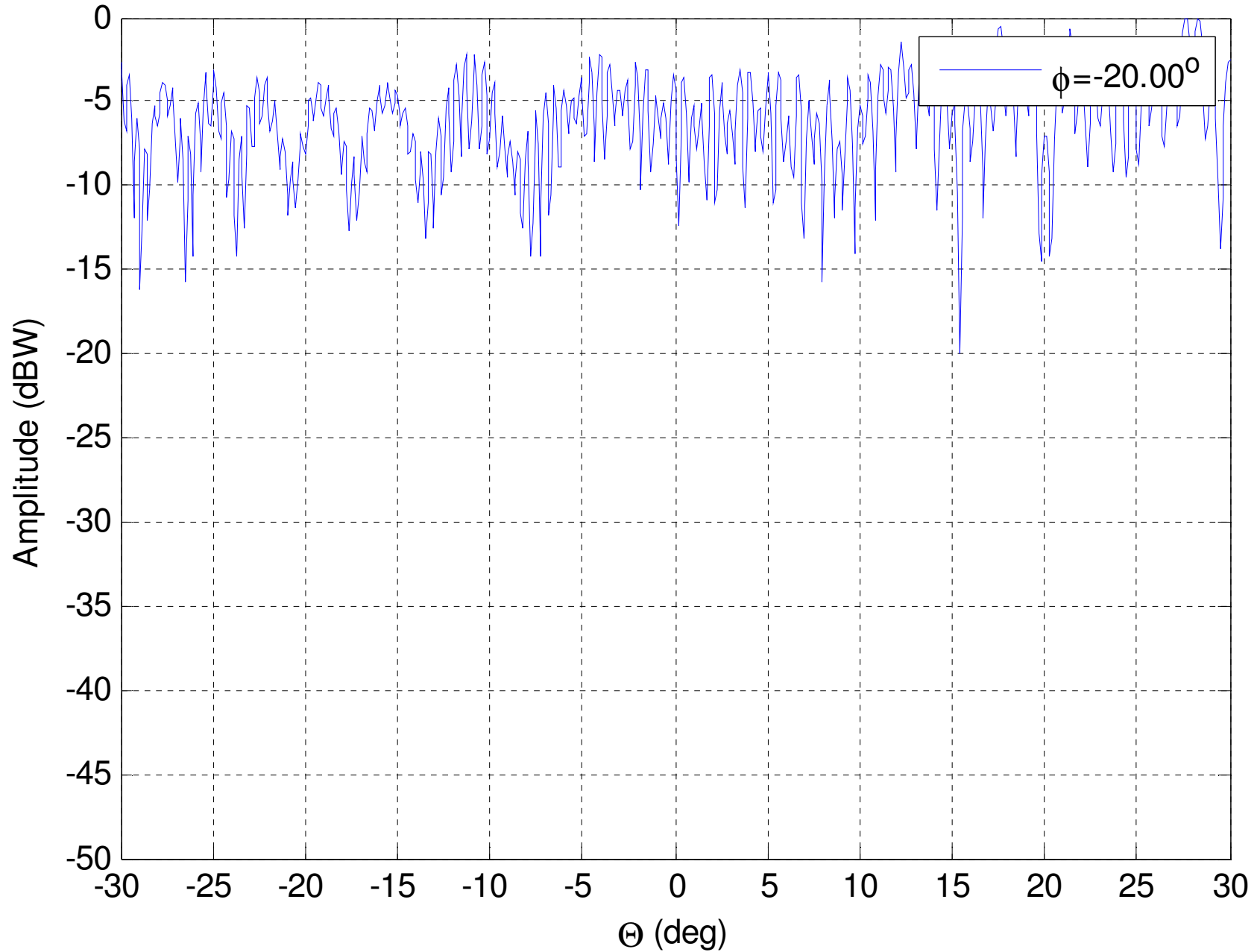
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 1.82 dBW, Date: 14-Dec-2011



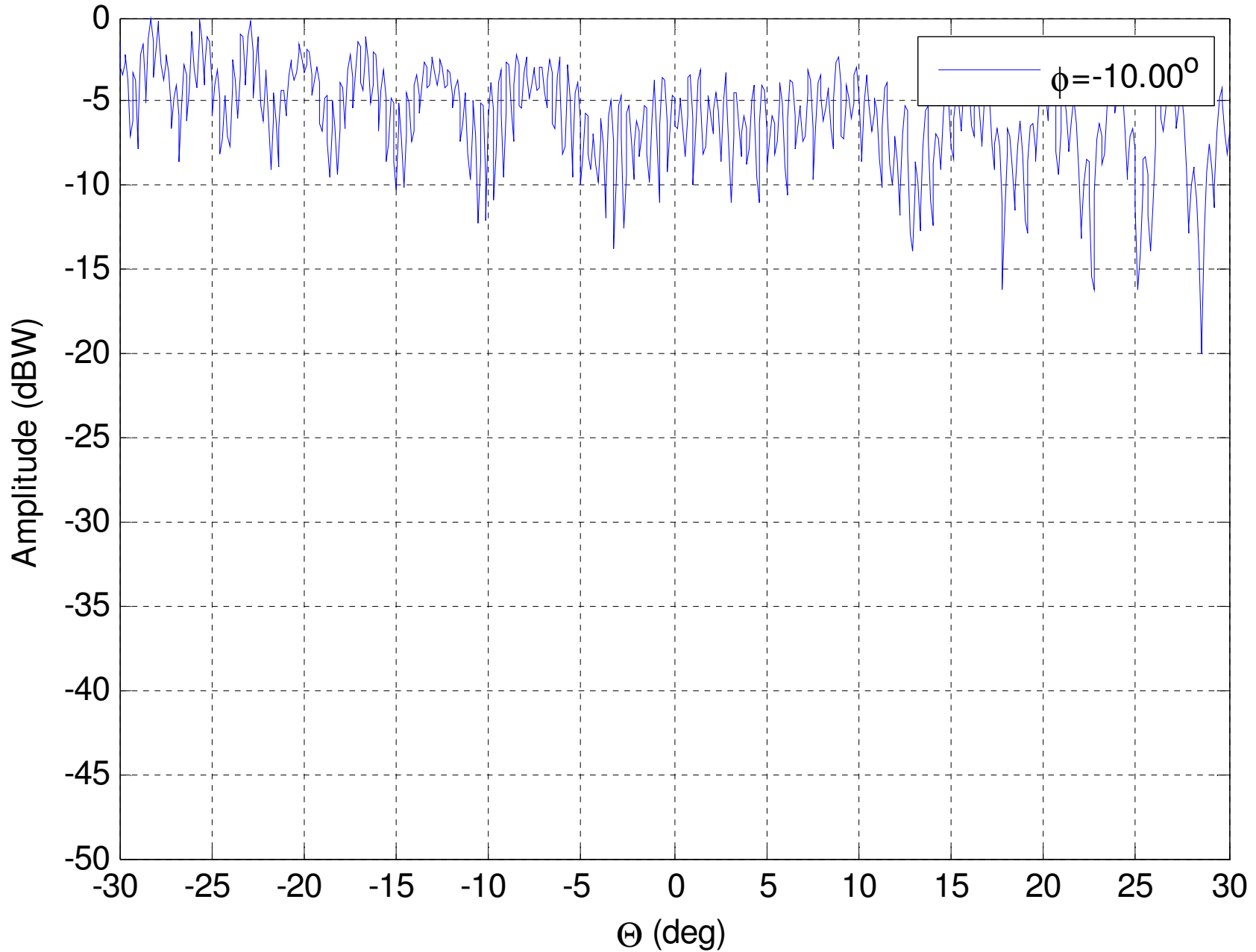
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 2.48 dBW, Date: 14-Dec-2011



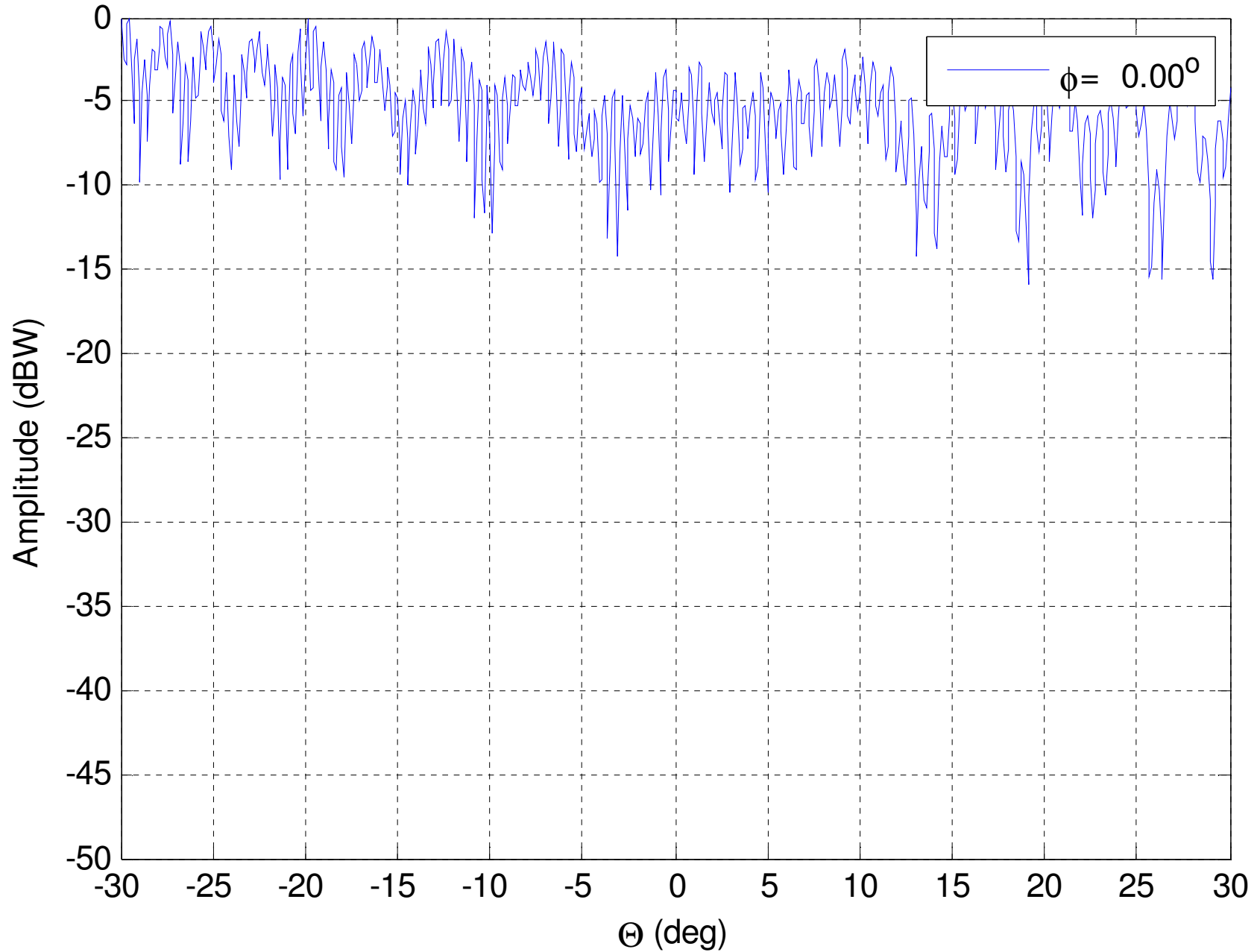
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 2.48 dBW, Date: 14-Dec-2011



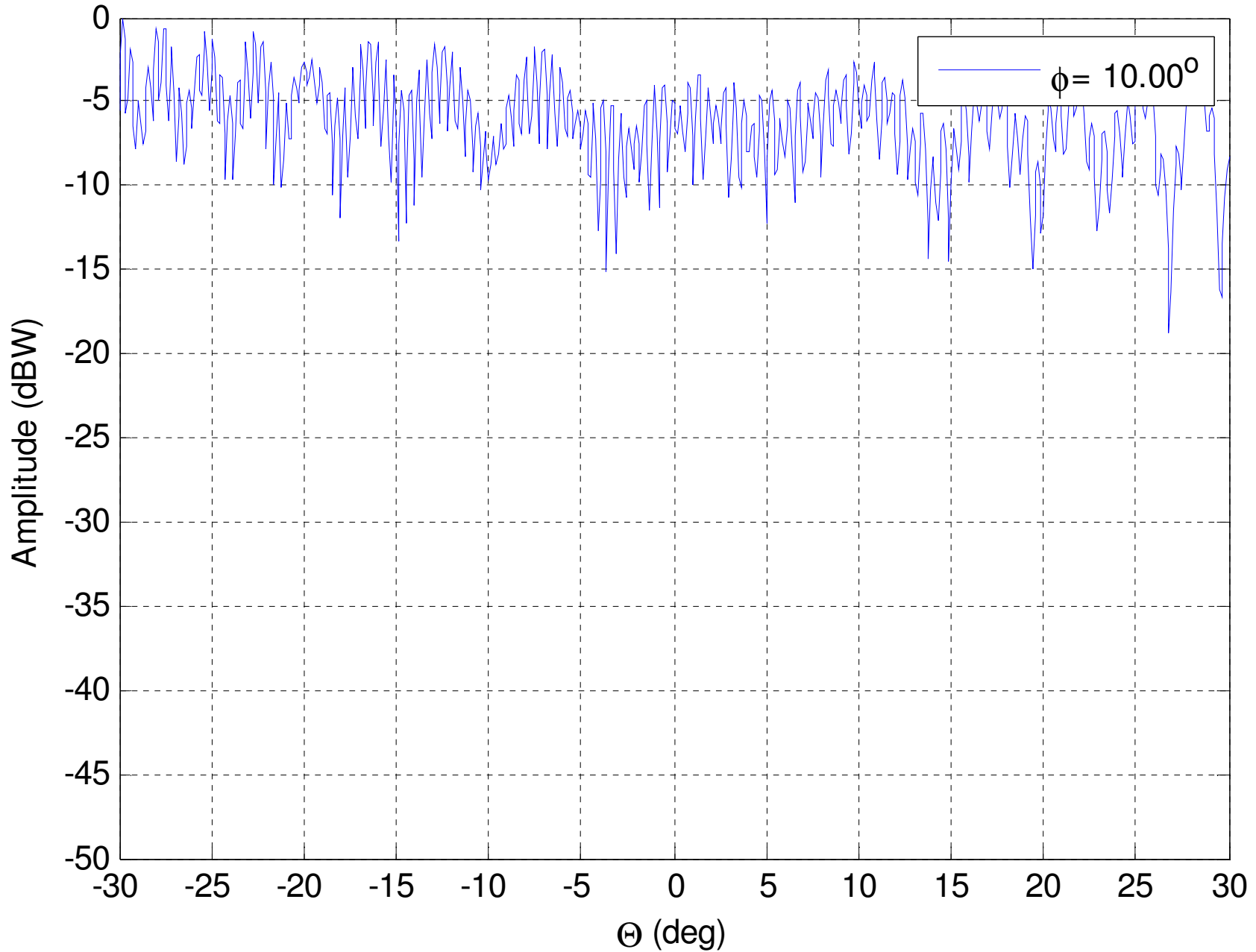
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 2.04 dBW, Date: 14-Dec-2011



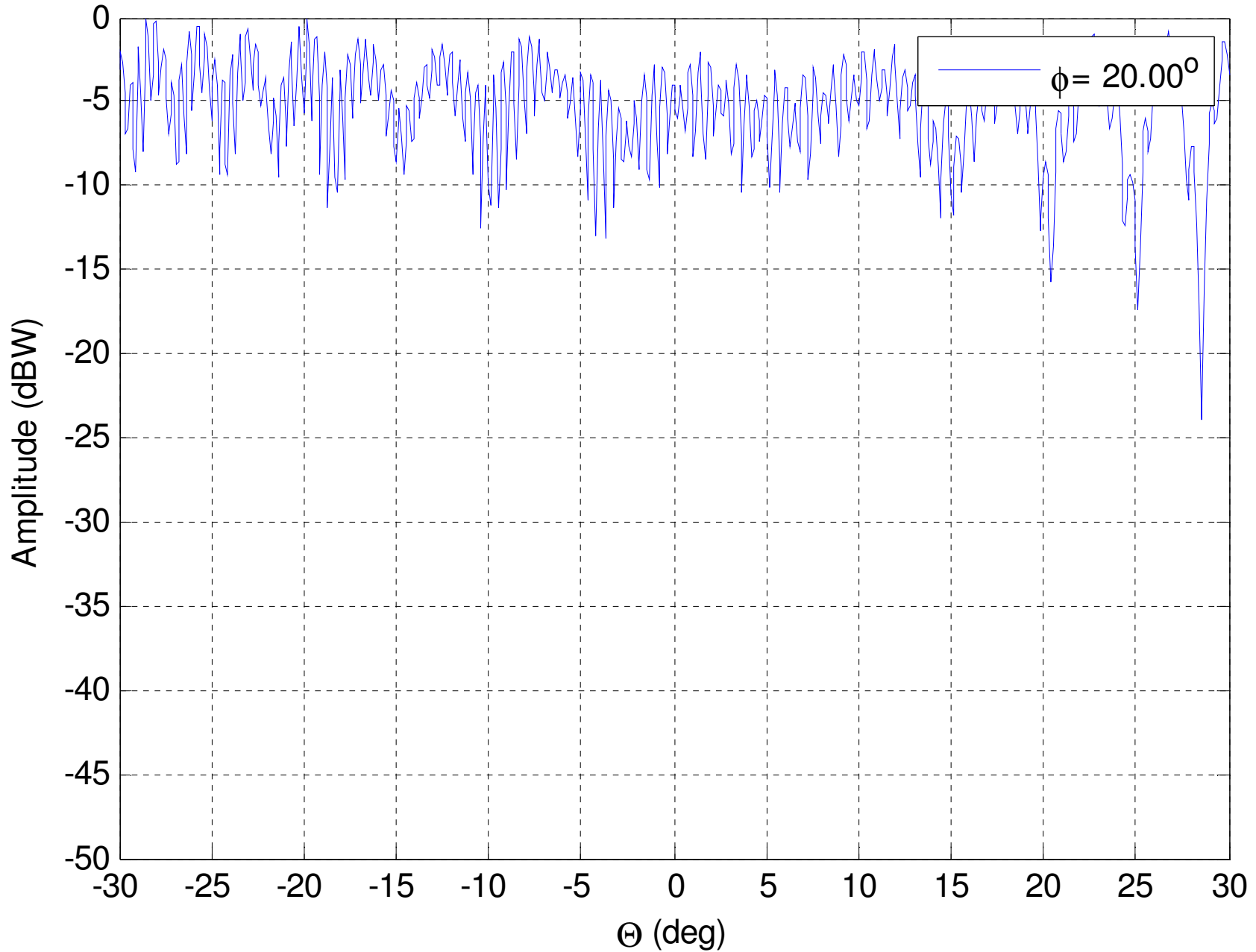
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 2.76 dBW, Date: 14-Dec-2011



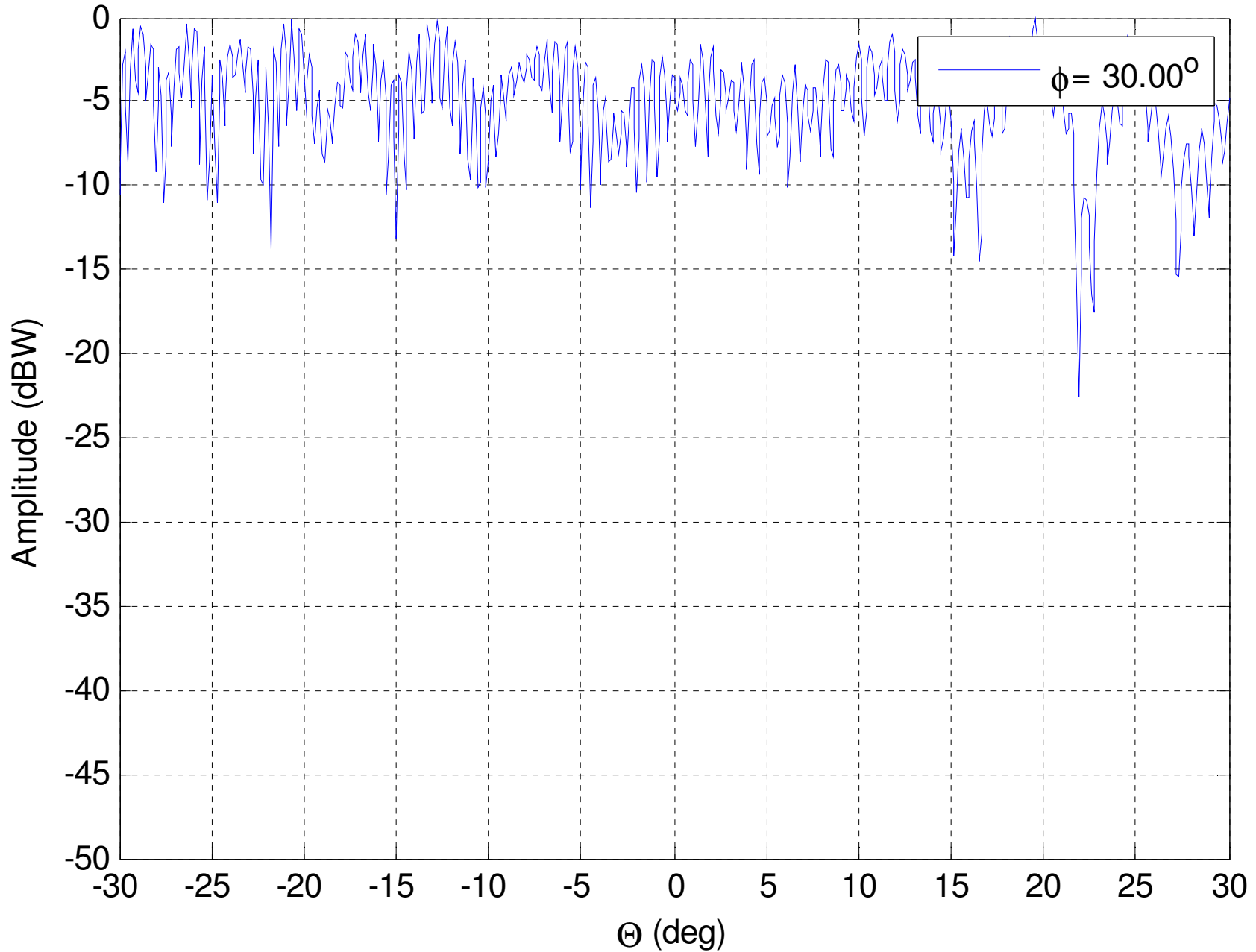
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 1.73 dBW, Date: 14-Dec-2011



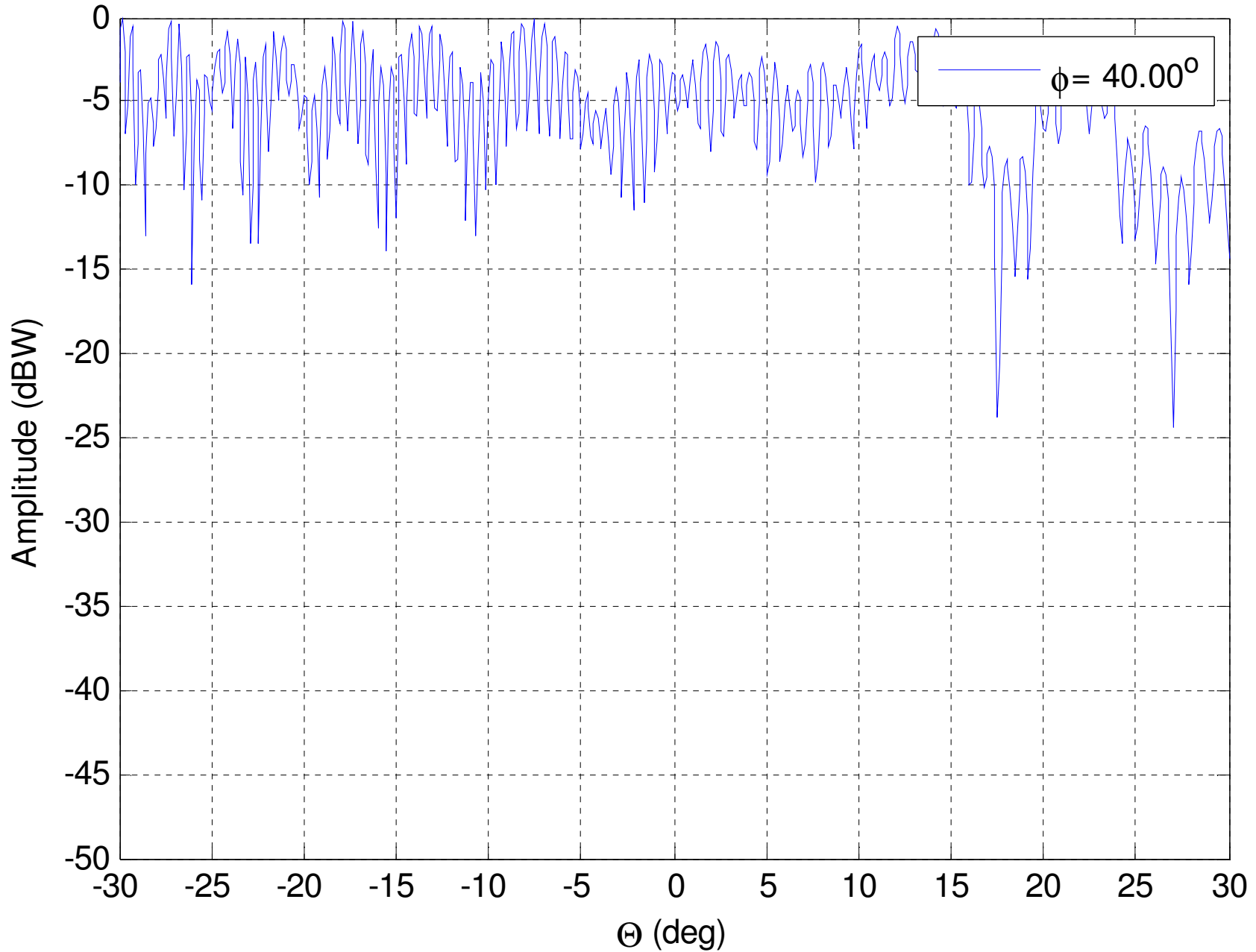
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: 1.19 dBW, Date: 14-Dec-2011



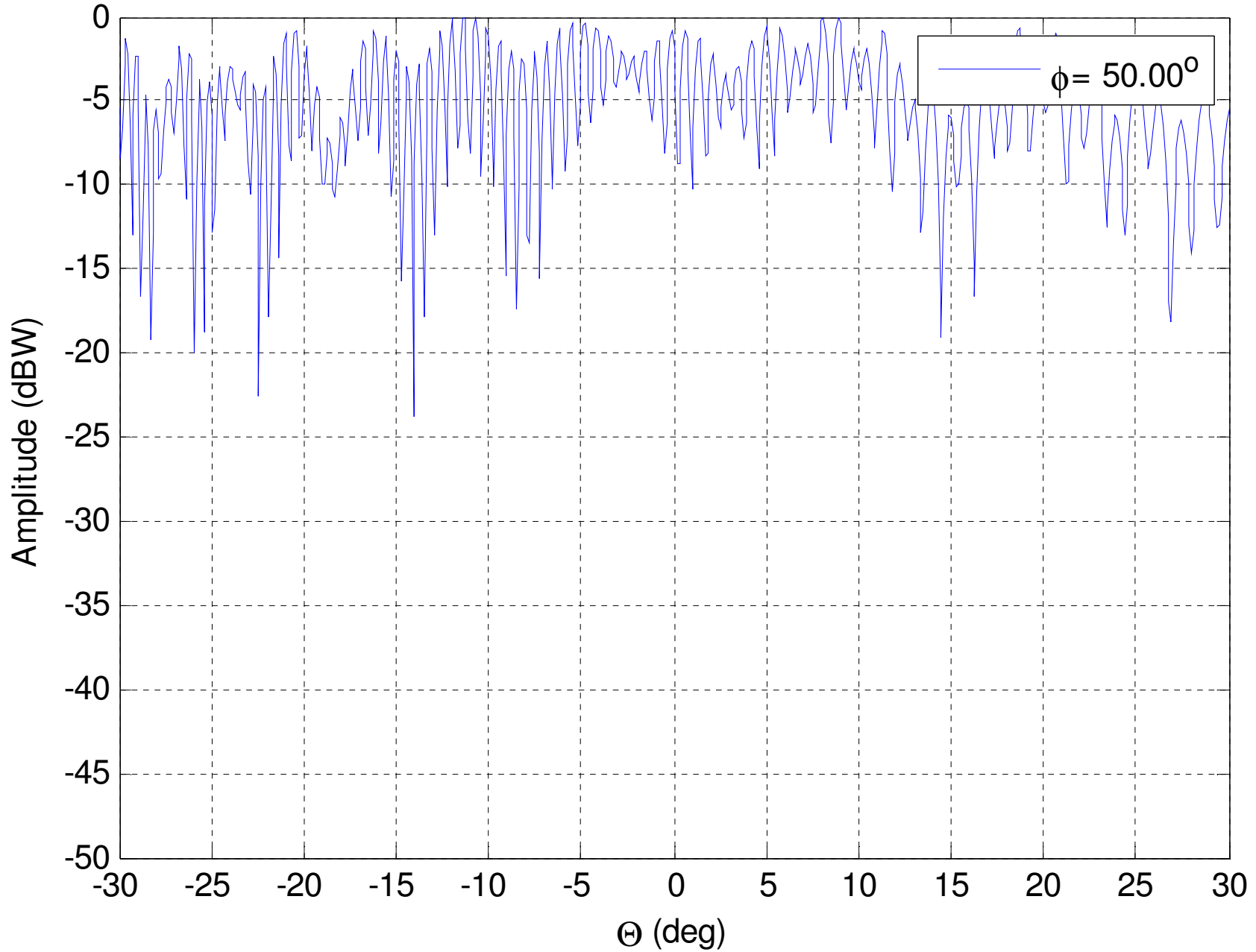
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: 1.04 dBW, Date: 14-Dec-2011



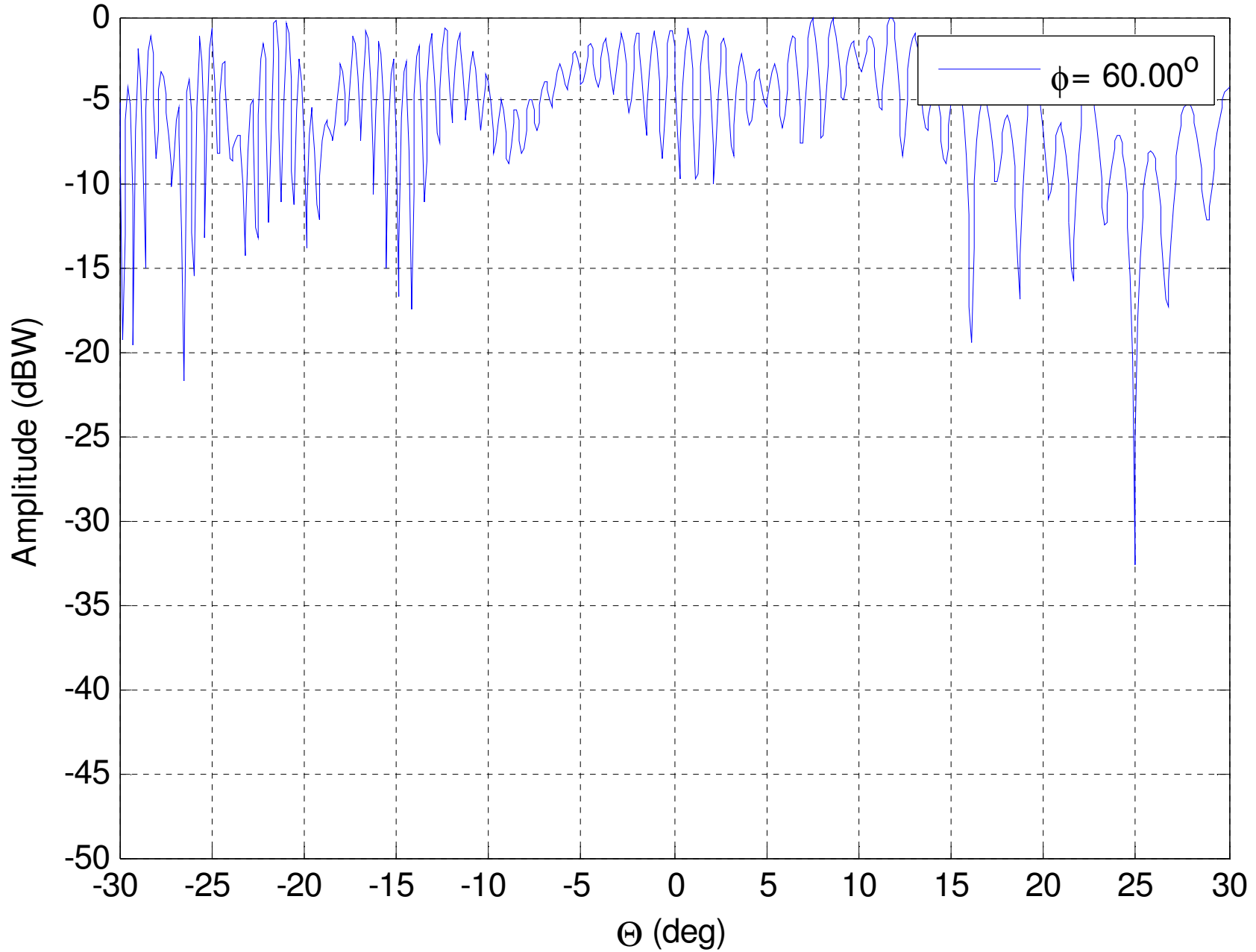
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: 0.04 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

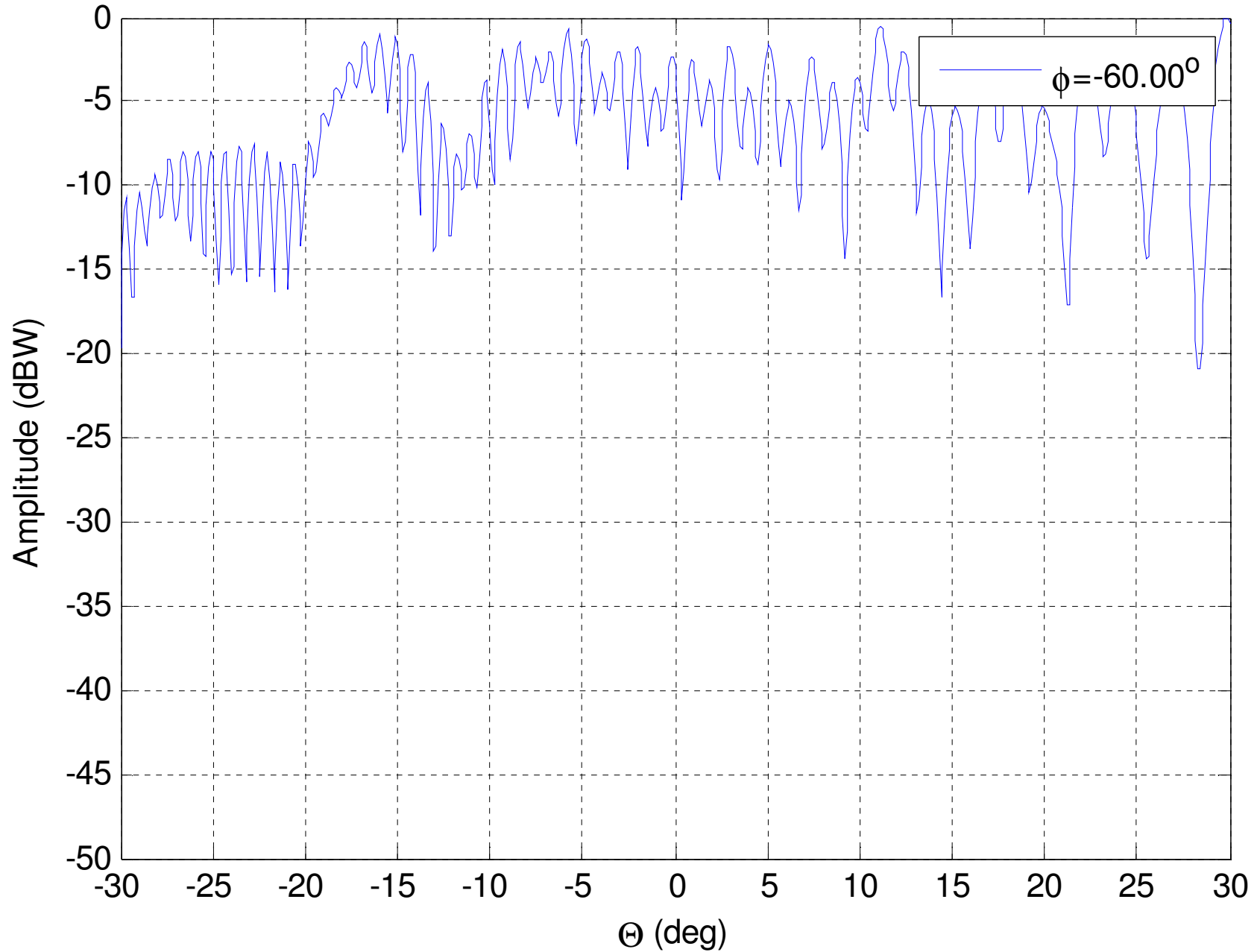
Input file: tx-17.3-rhcp-60.cut, Peak: -0.10 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

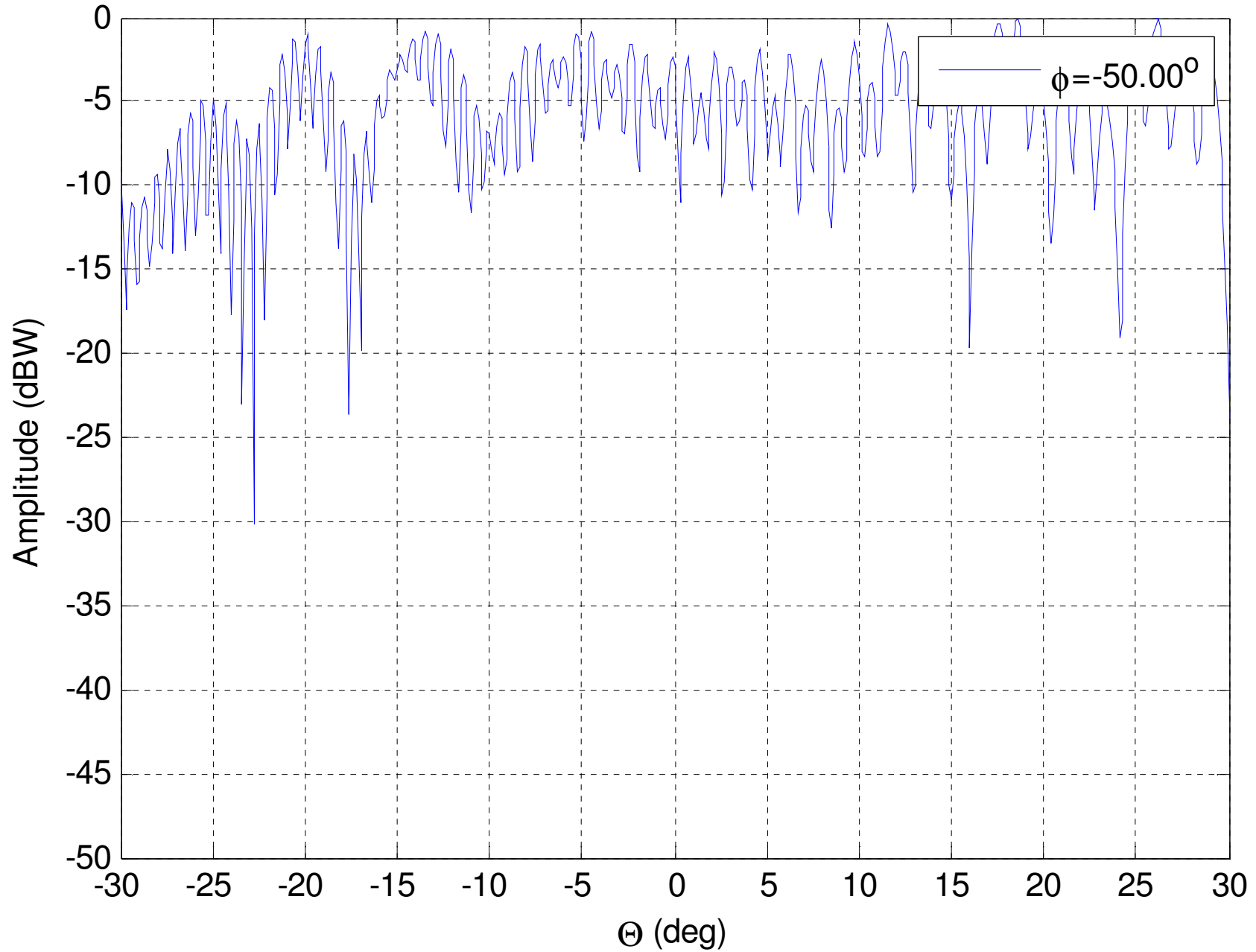
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: 1.25 dBW, Date: 14-Dec-2011



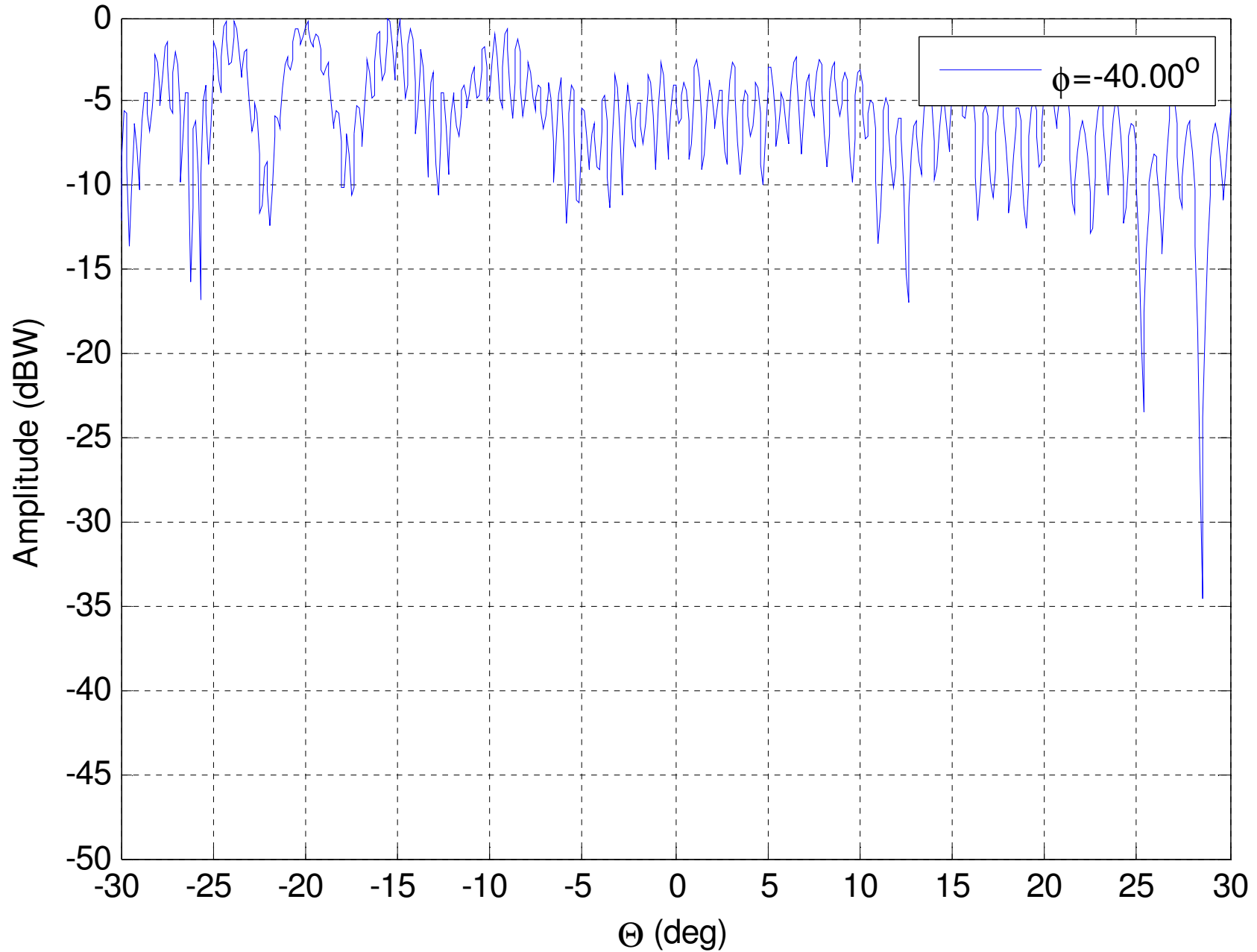
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: 1.30 dBW, Date: 14-Dec-2011



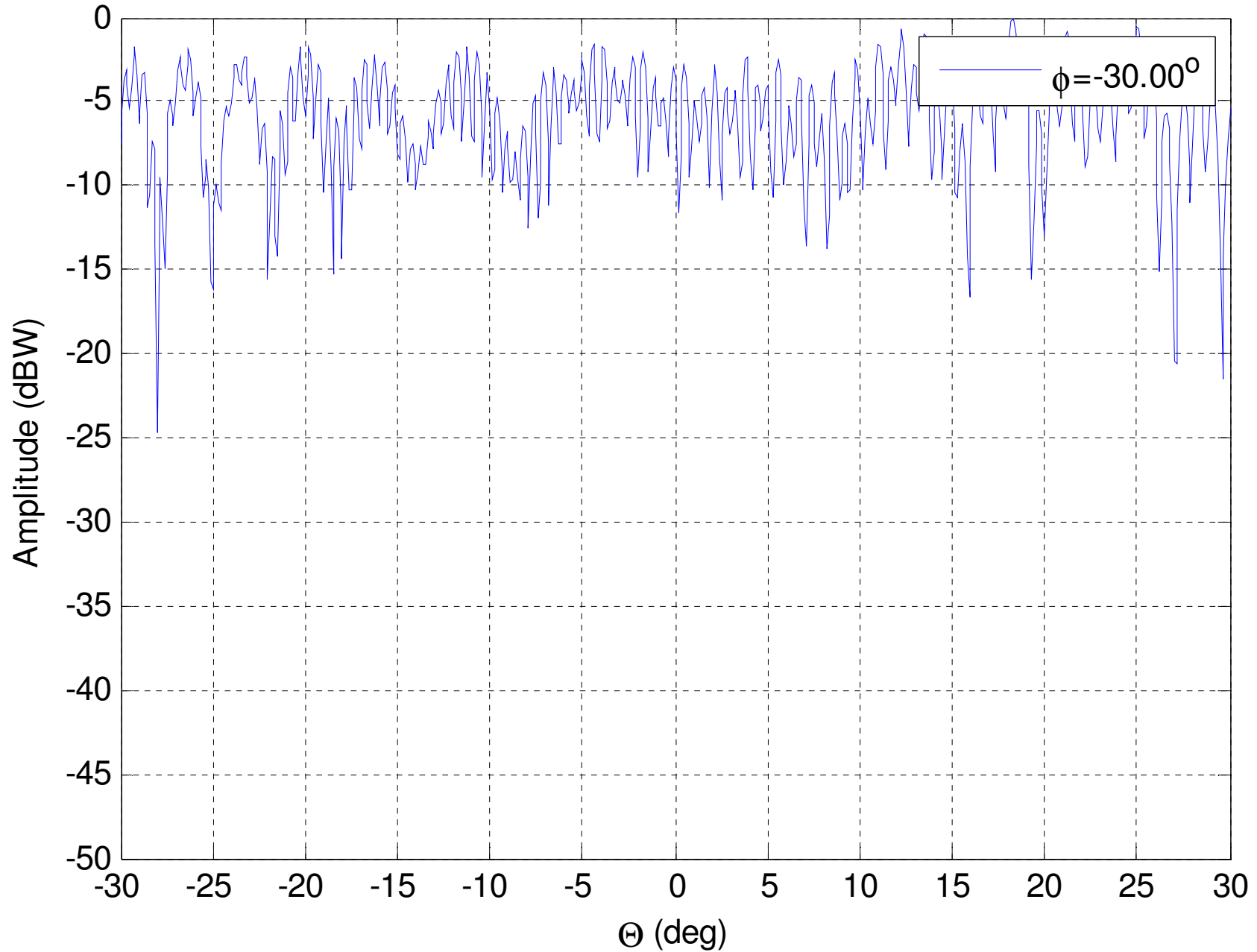
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: 1.89 dBW, Date: 14-Dec-2011



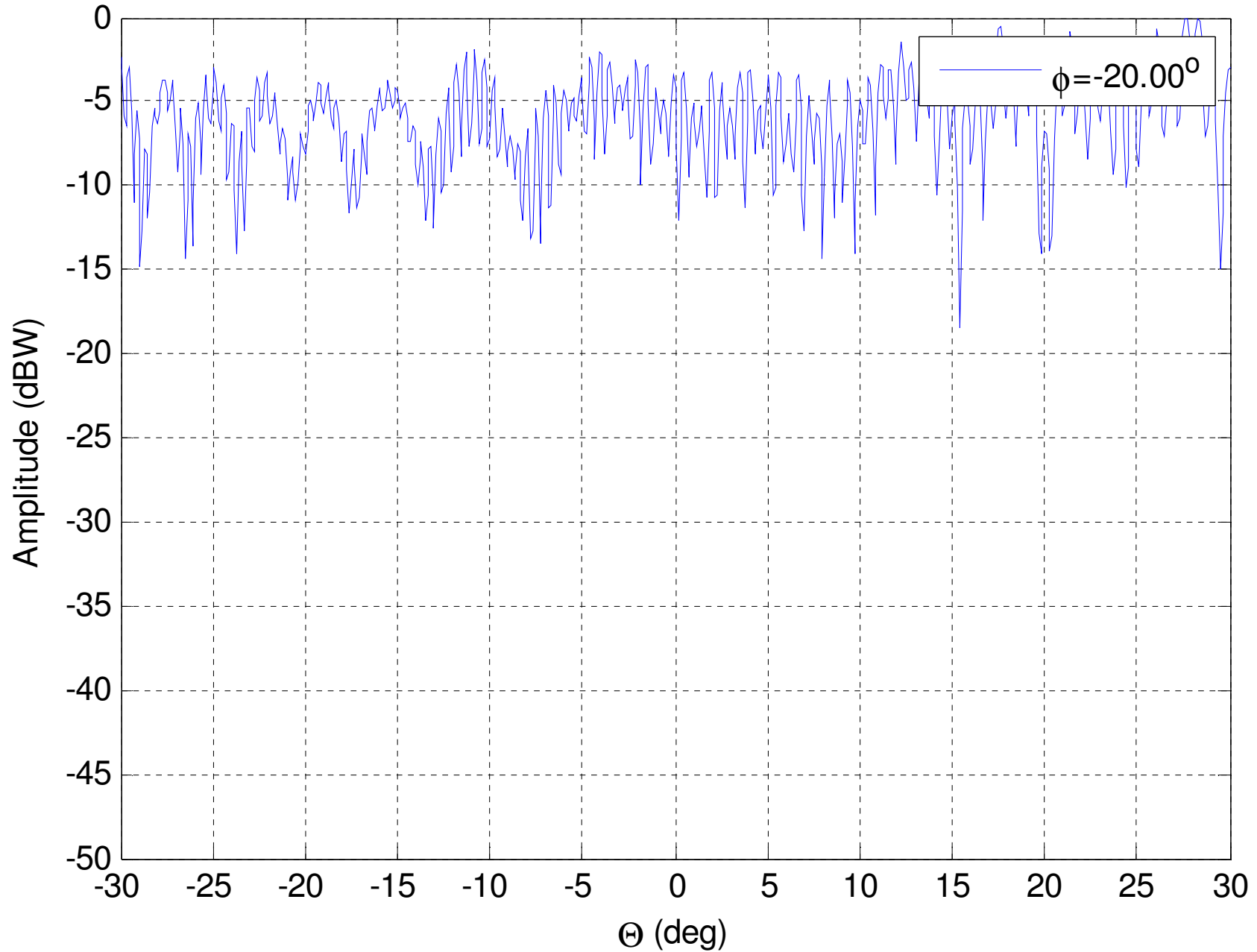
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 2.02 dBW, Date: 14-Dec-2011



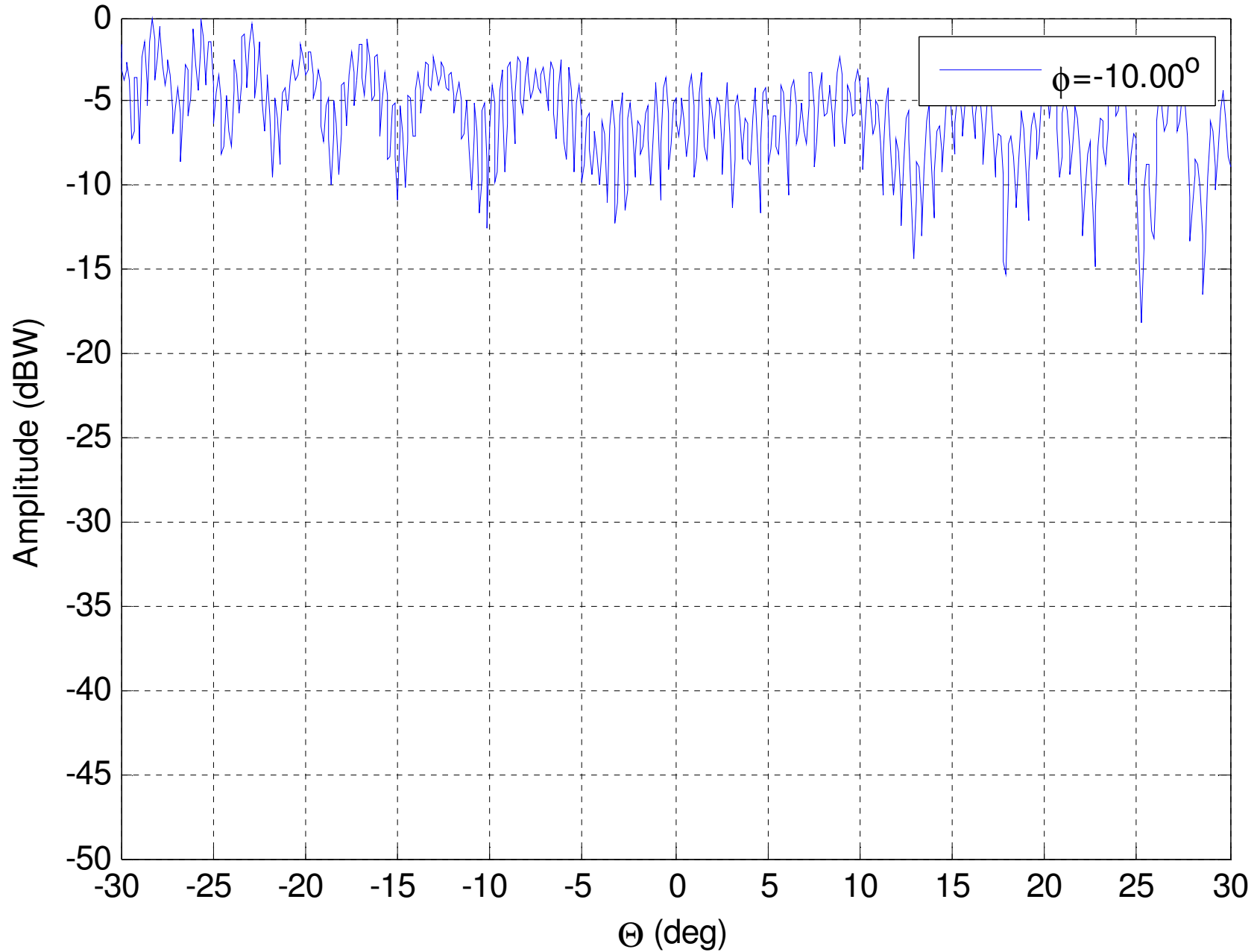
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 2.43 dBW, Date: 14-Dec-2011



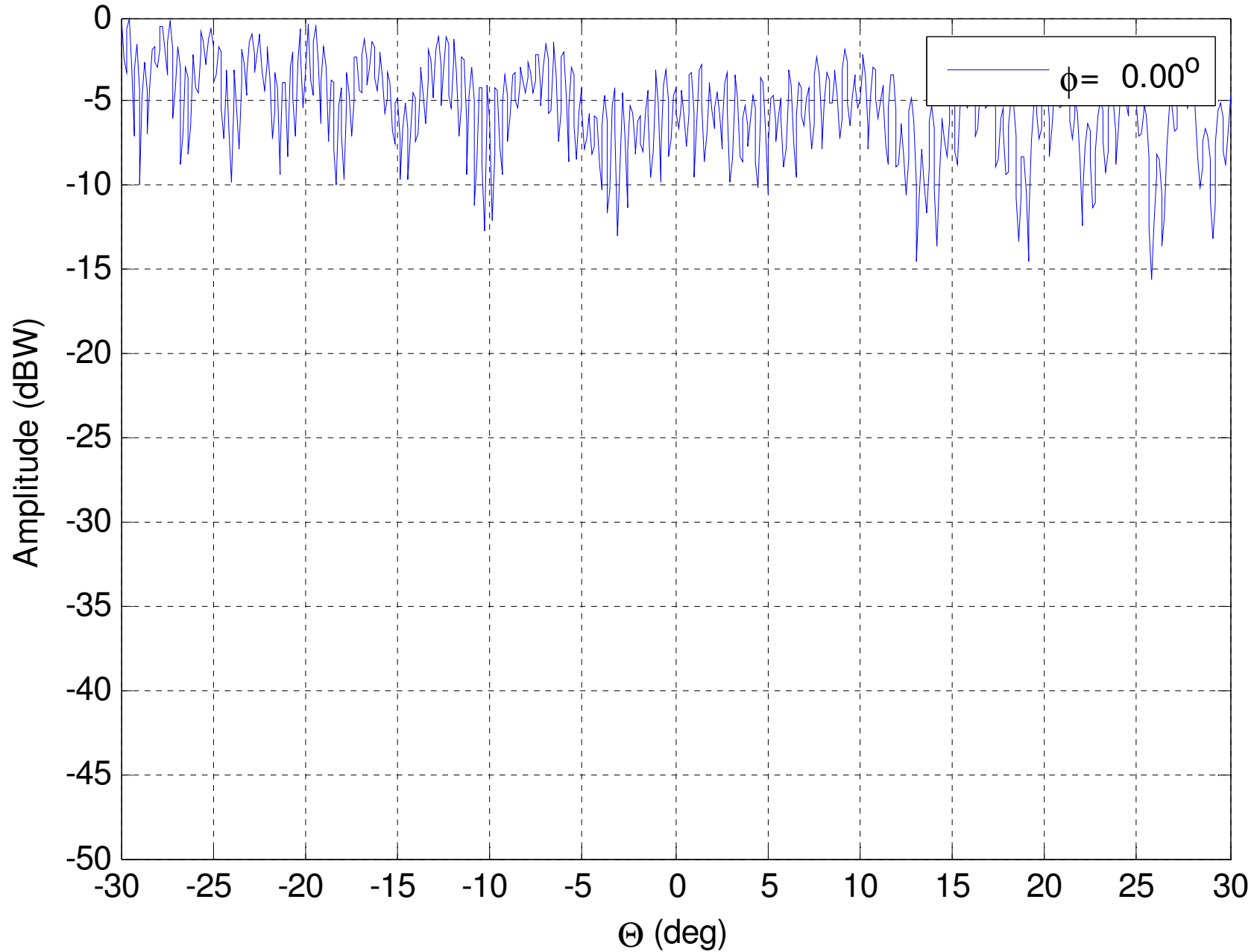
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 2.62 dBW, Date: 14-Dec-2011



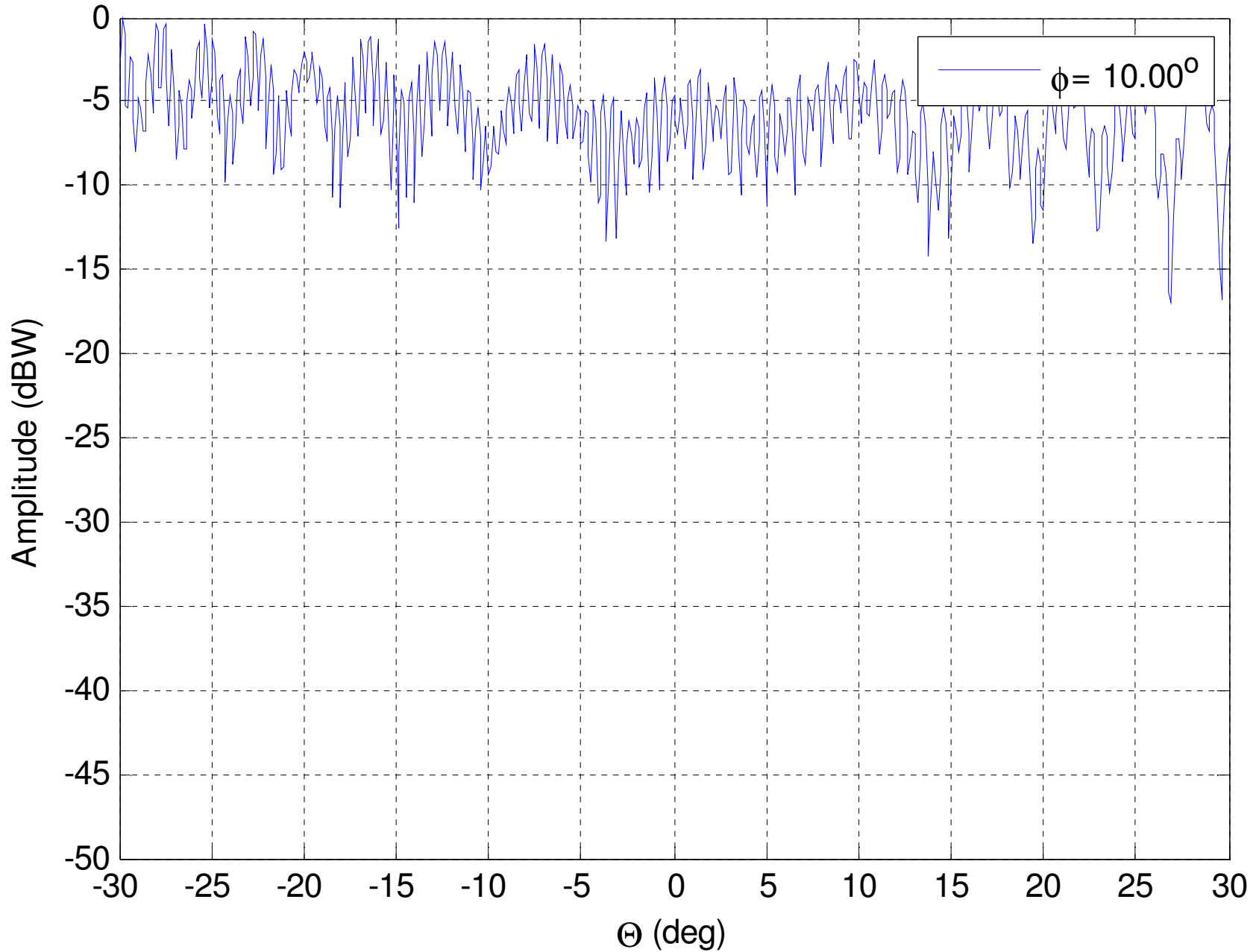
Normalized pattern cuts - farfield

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



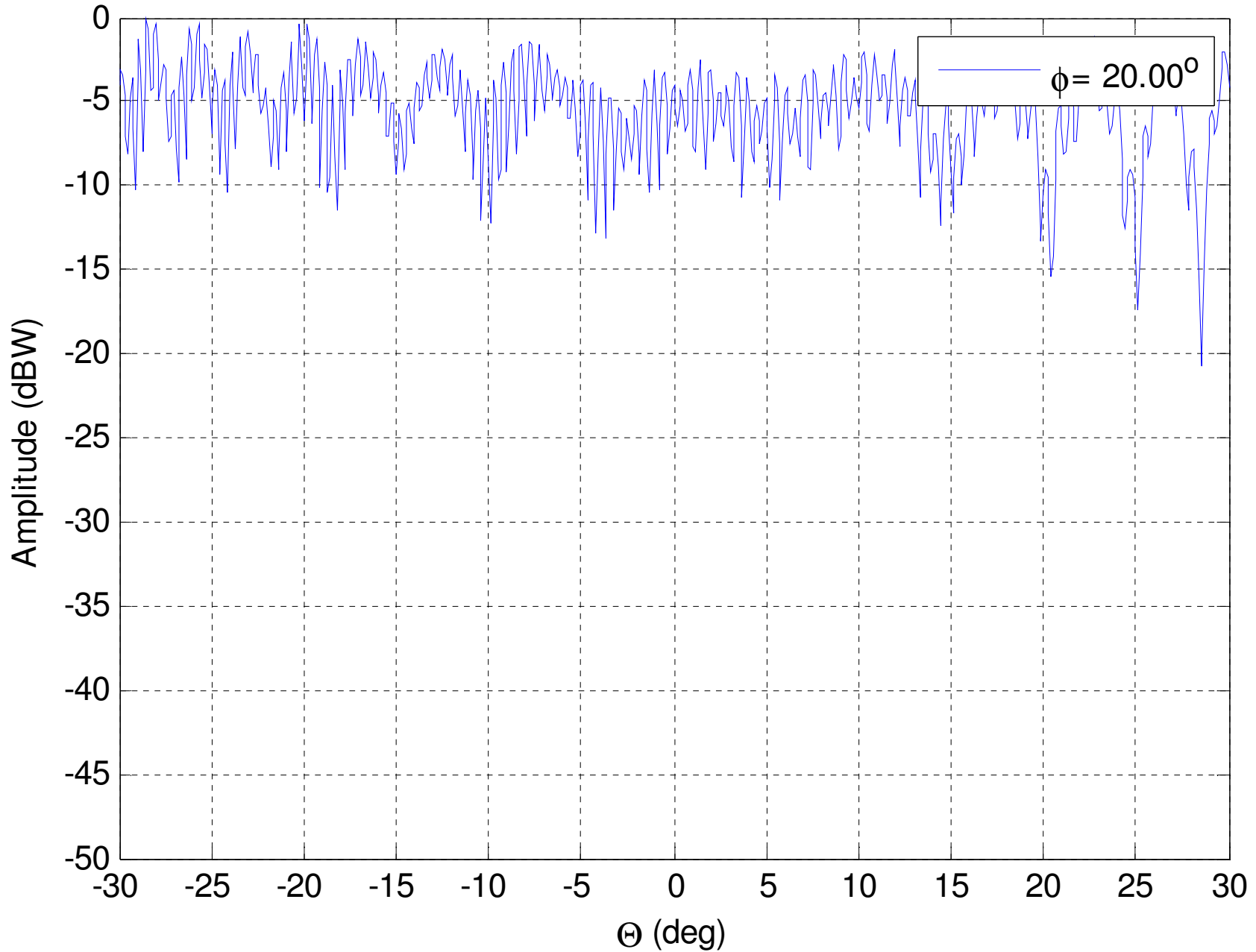
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 2.51 dBW, Date: 14-Dec-2011



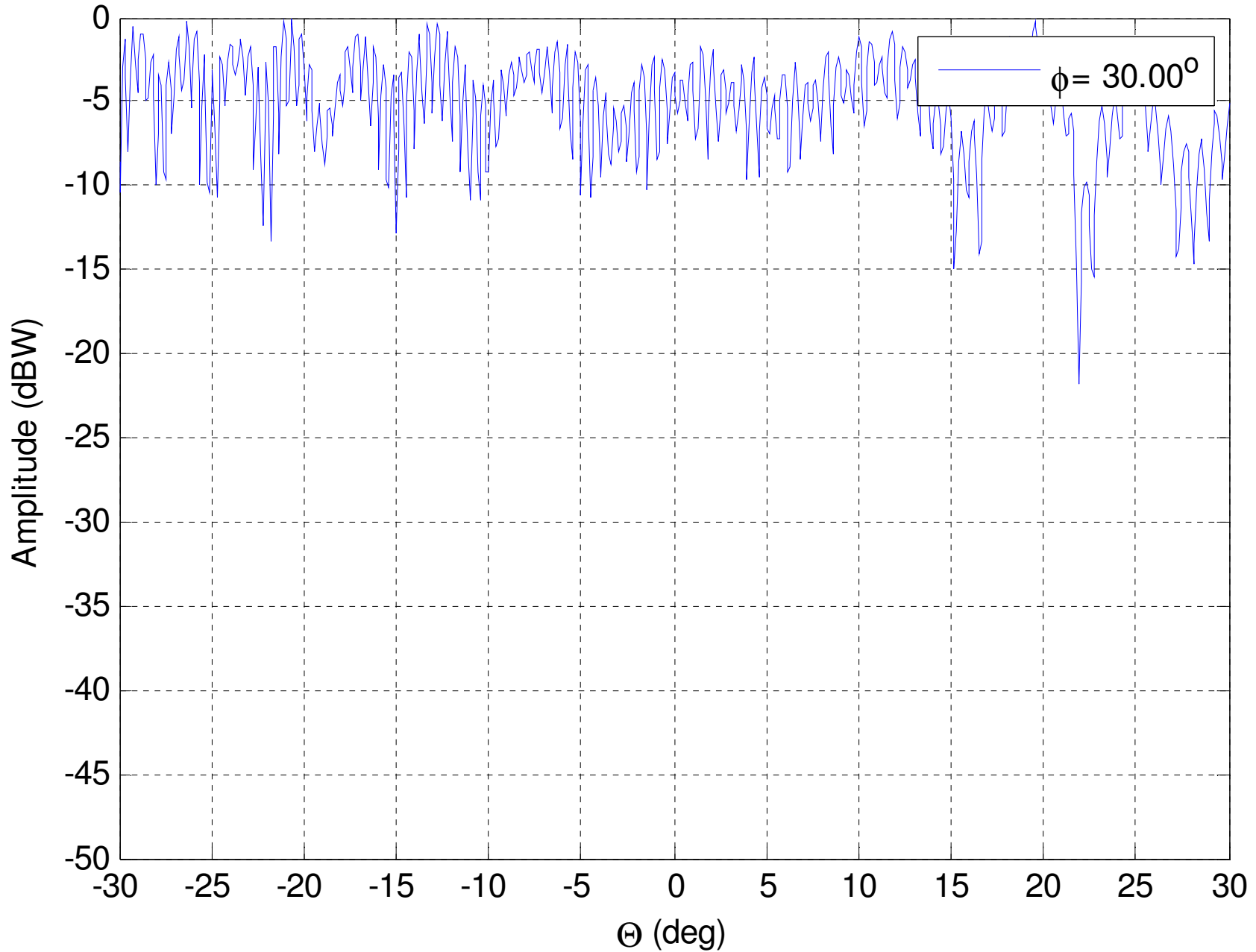
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 1.93 dBW, Date: 14-Dec-2011



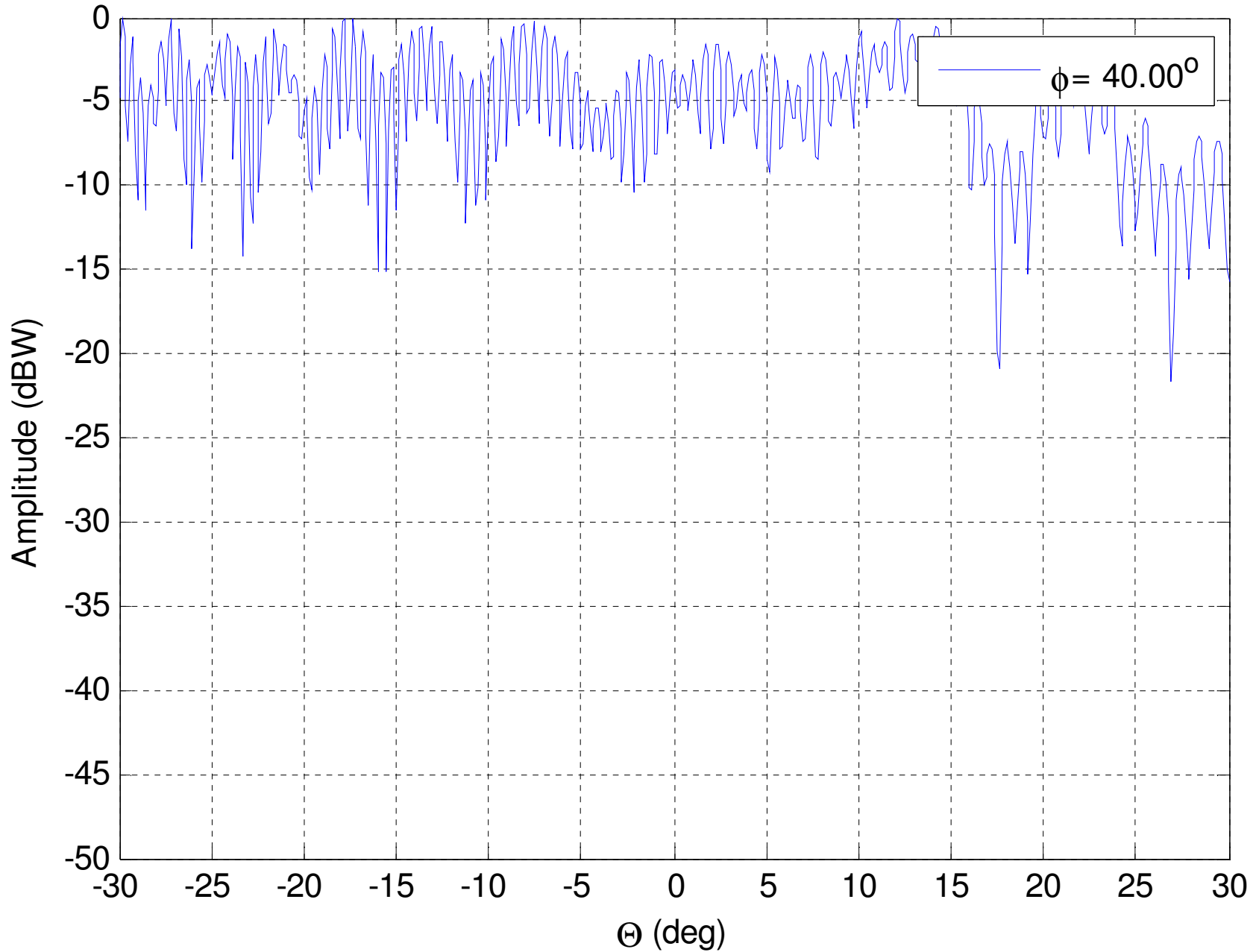
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: 1.23 dBW, Date: 14-Dec-2011



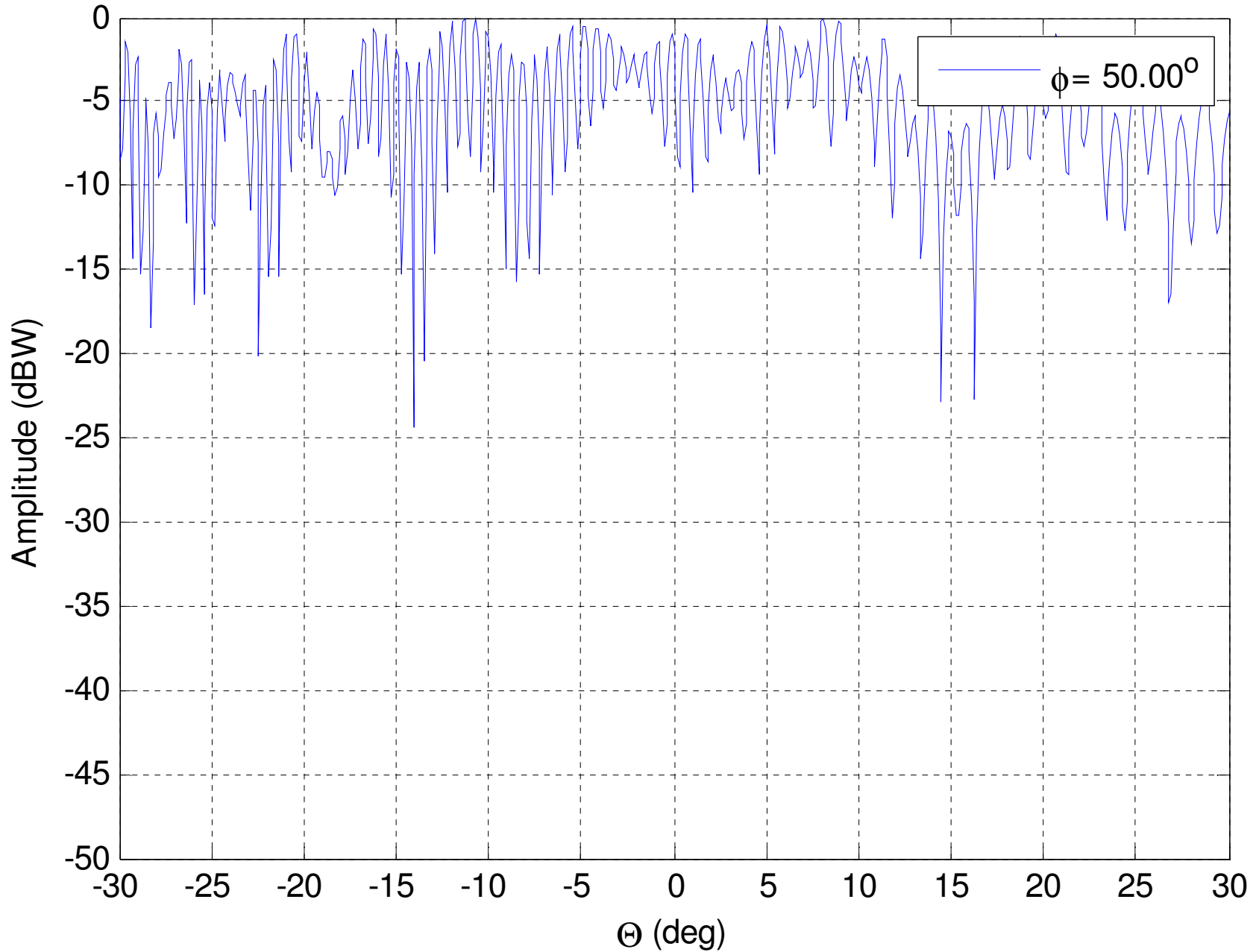
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: 0.99 dBW, Date: 14-Dec-2011



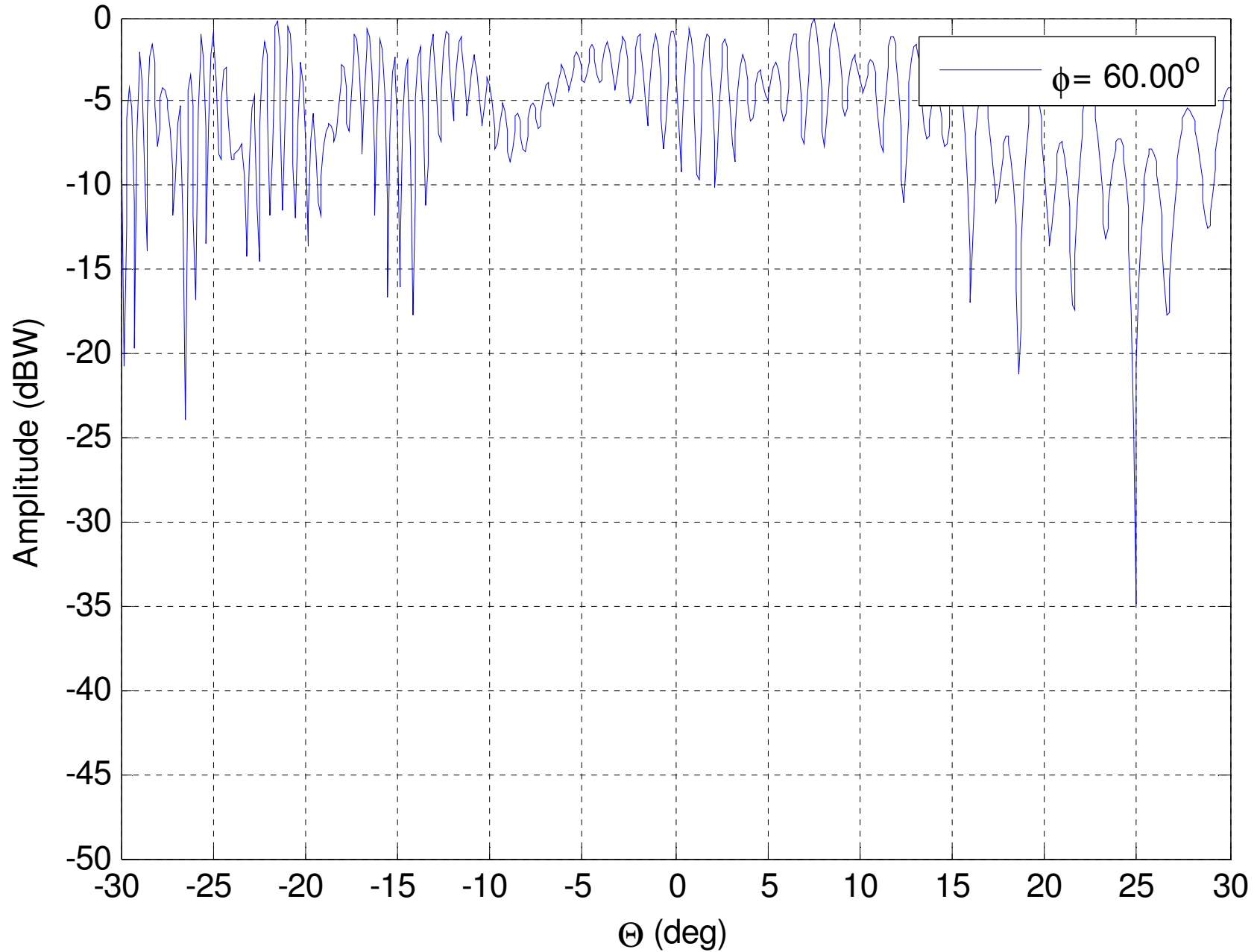
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: 0.17 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

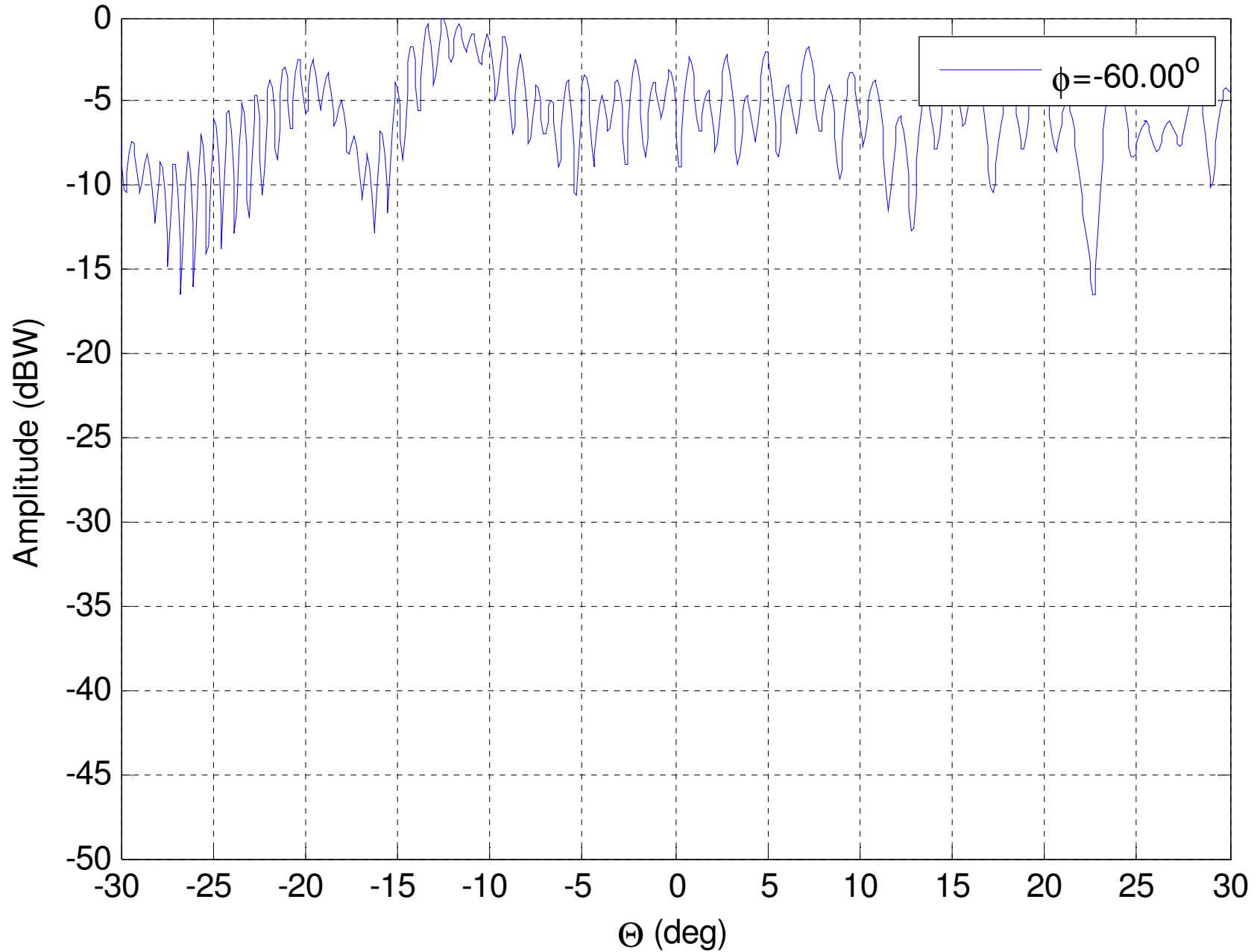
Input file: tx-17.3-lhcp-60.cut, Peak: -0.04 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

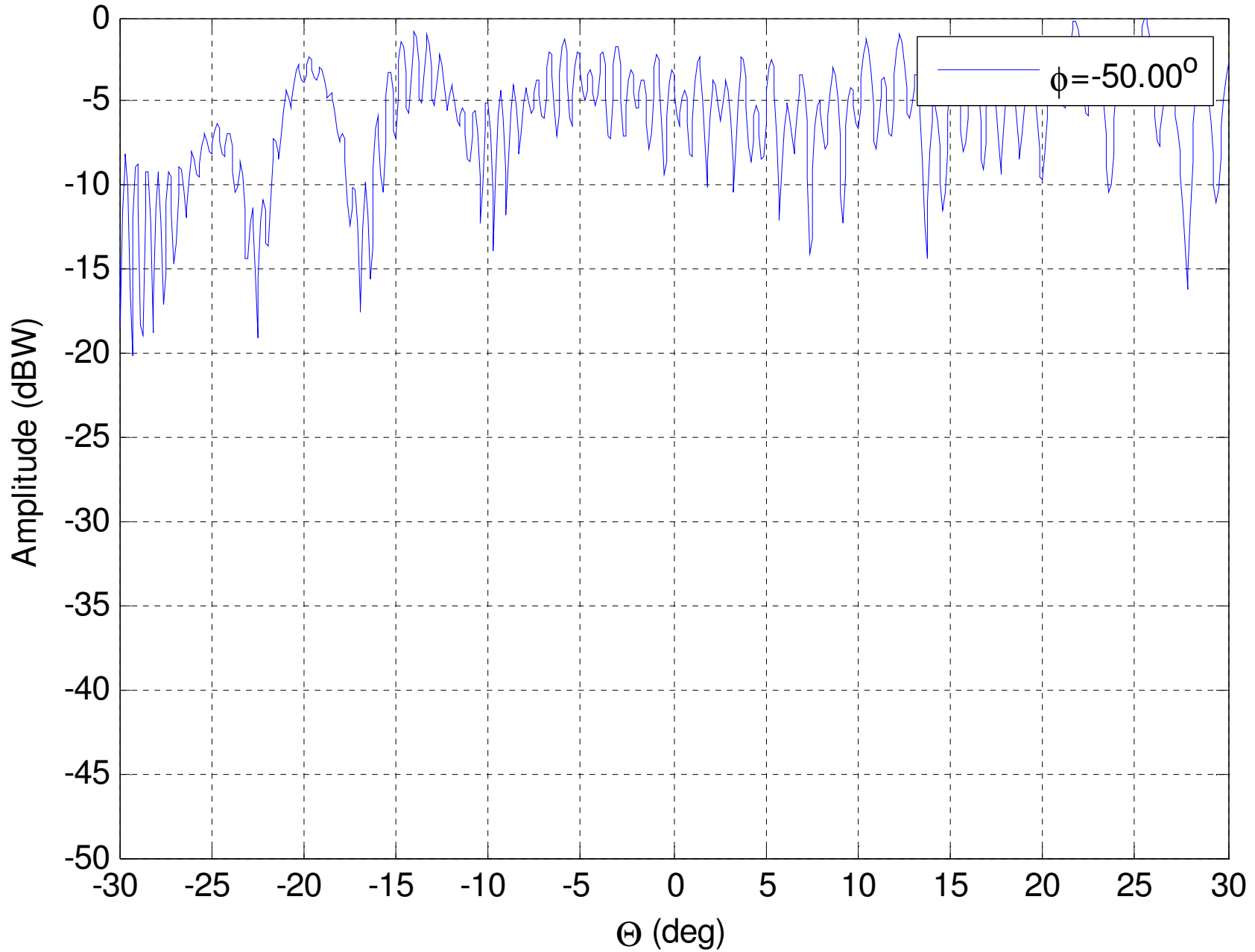
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: 1.27 dBW, Date: 14-Dec-2011



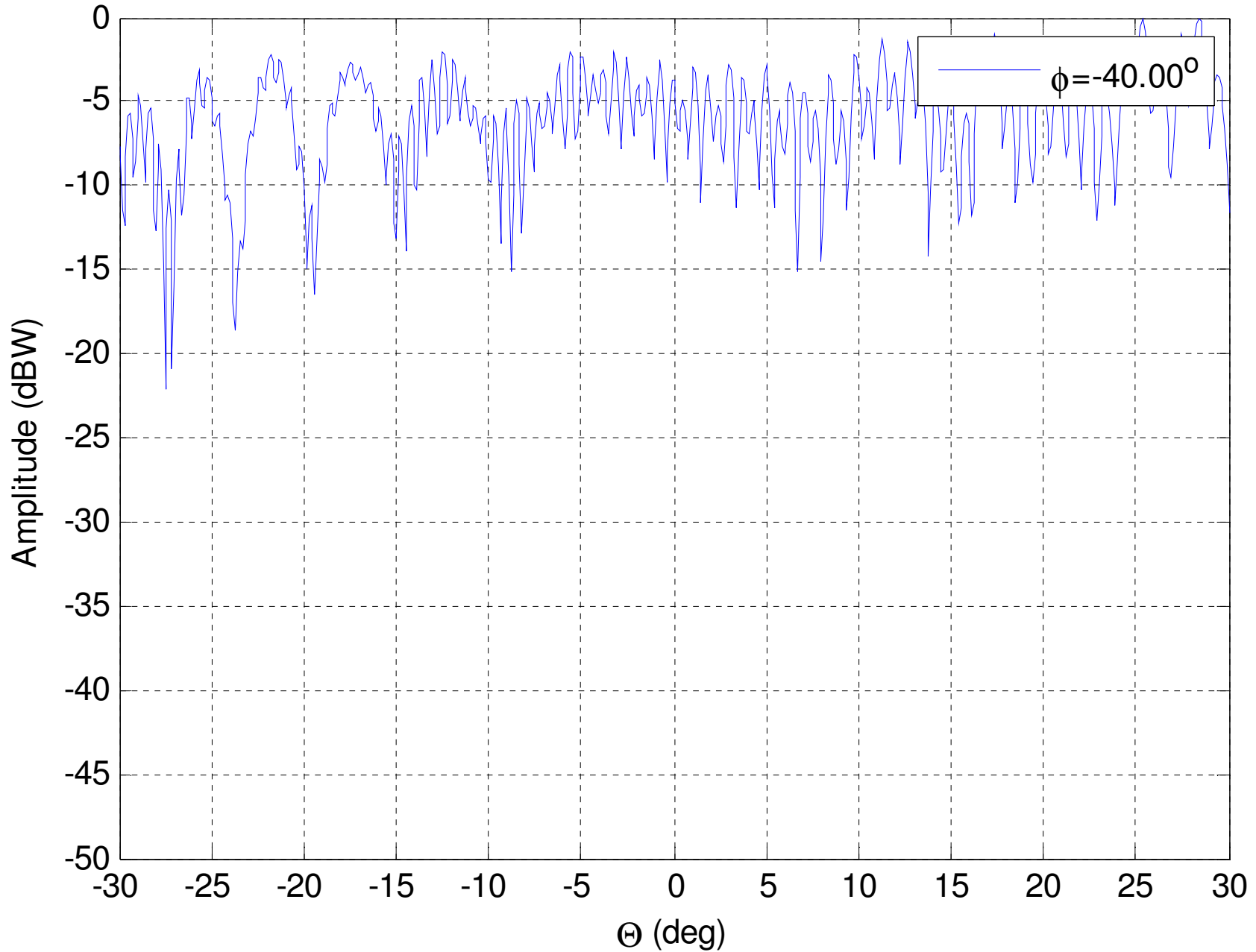
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: 1.78 dBW, Date: 14-Dec-2011



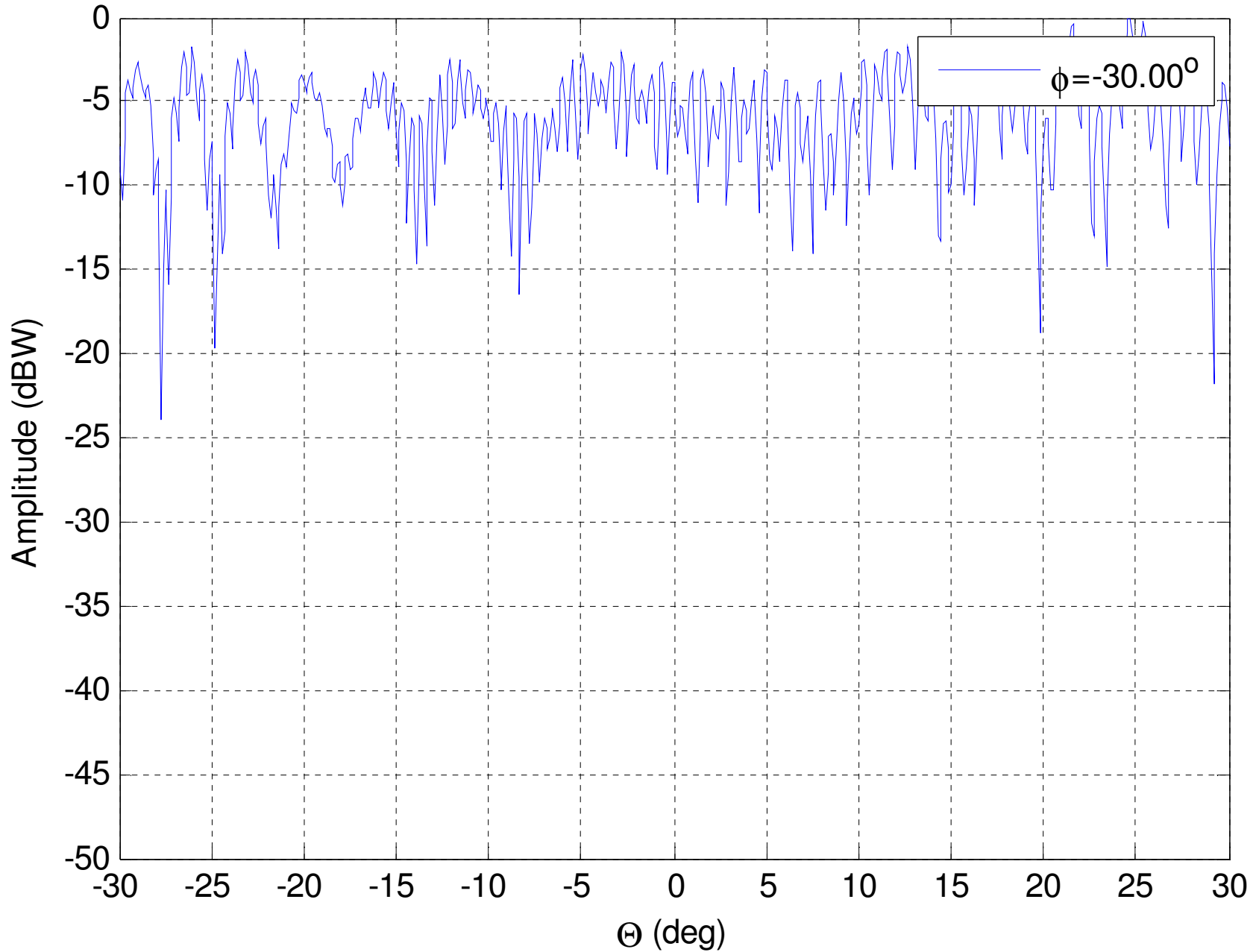
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: 2.18 dBW, Date: 14-Dec-2011



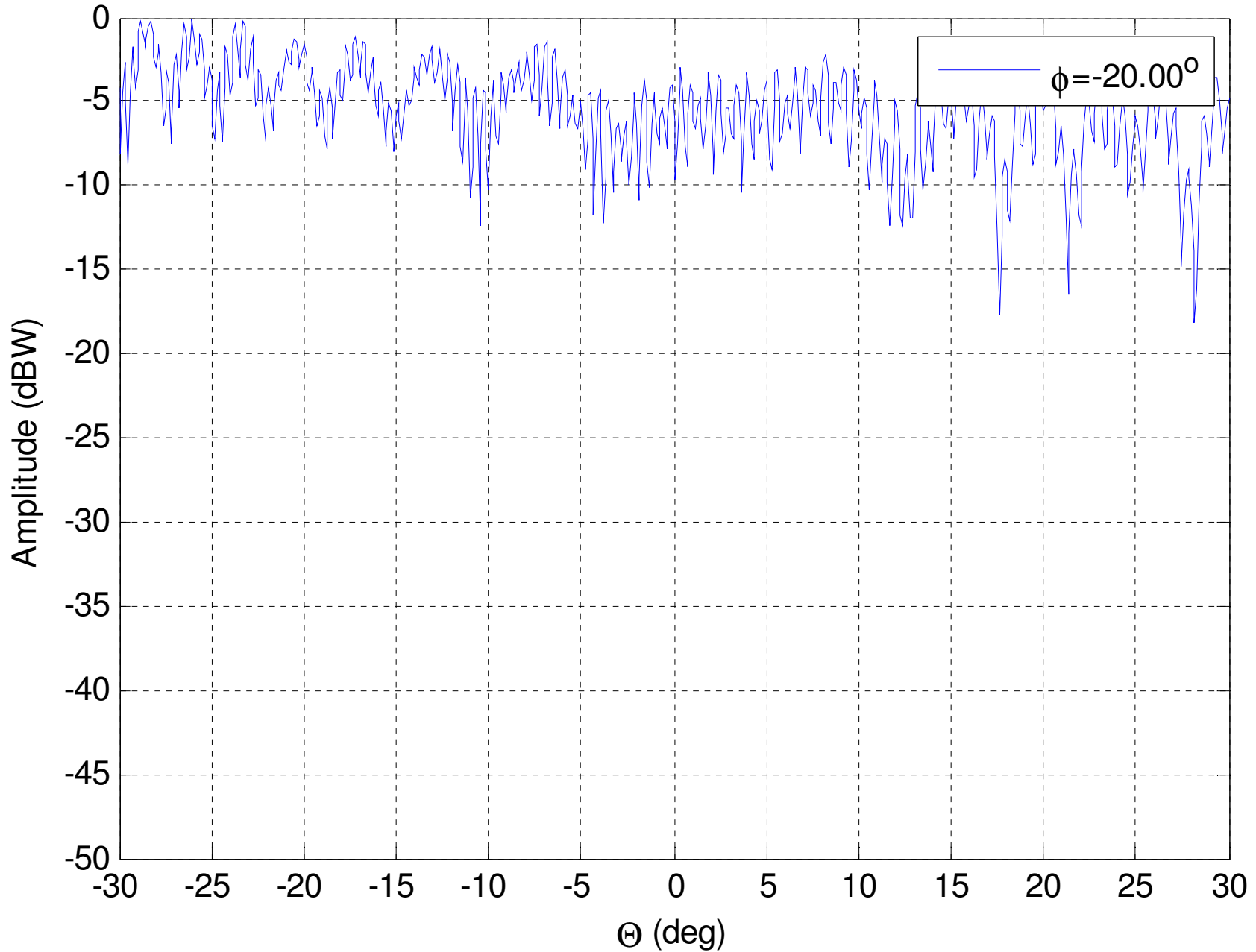
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 2.28 dBW, Date: 14-Dec-2011



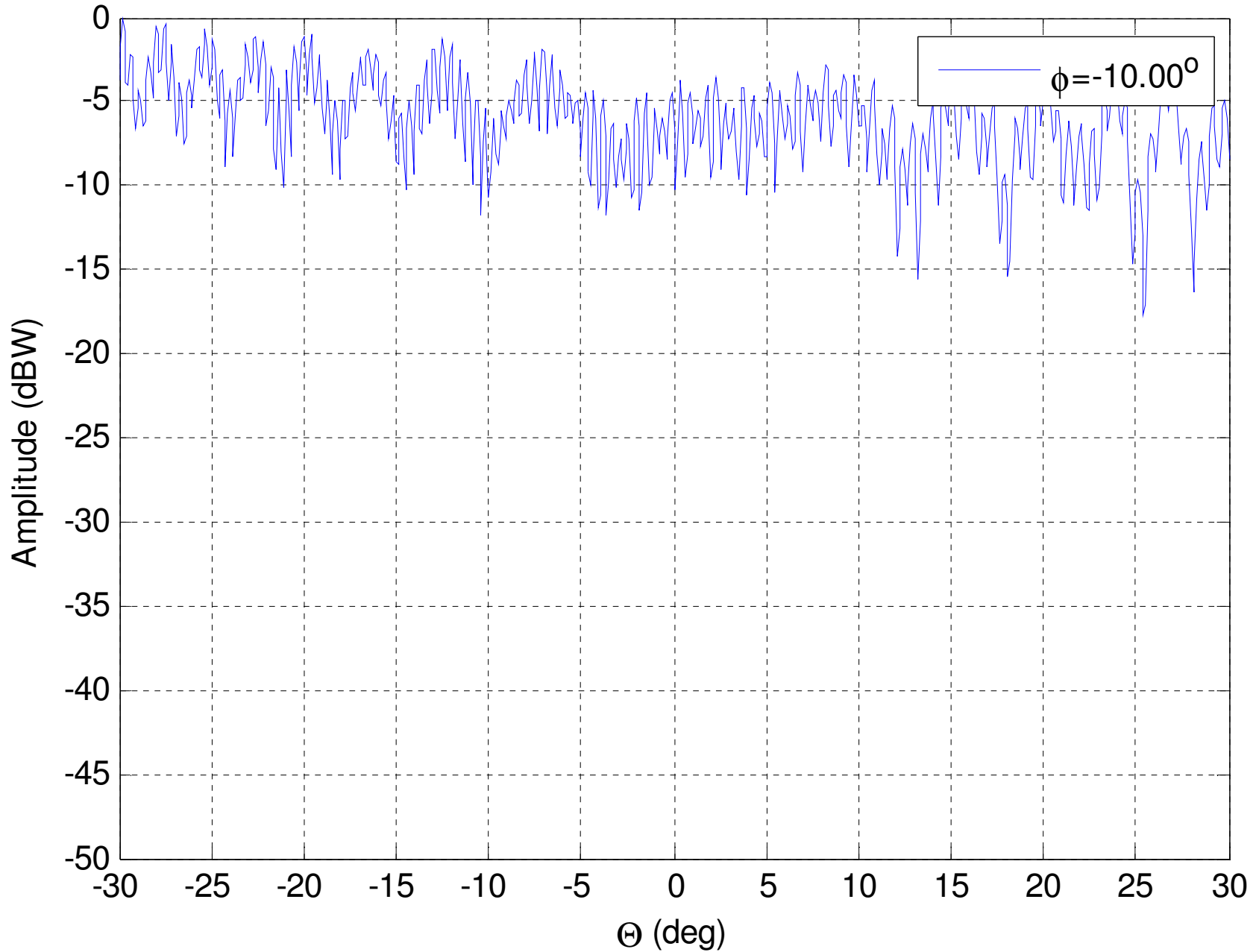
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 2.19 dBW, Date: 14-Dec-2011



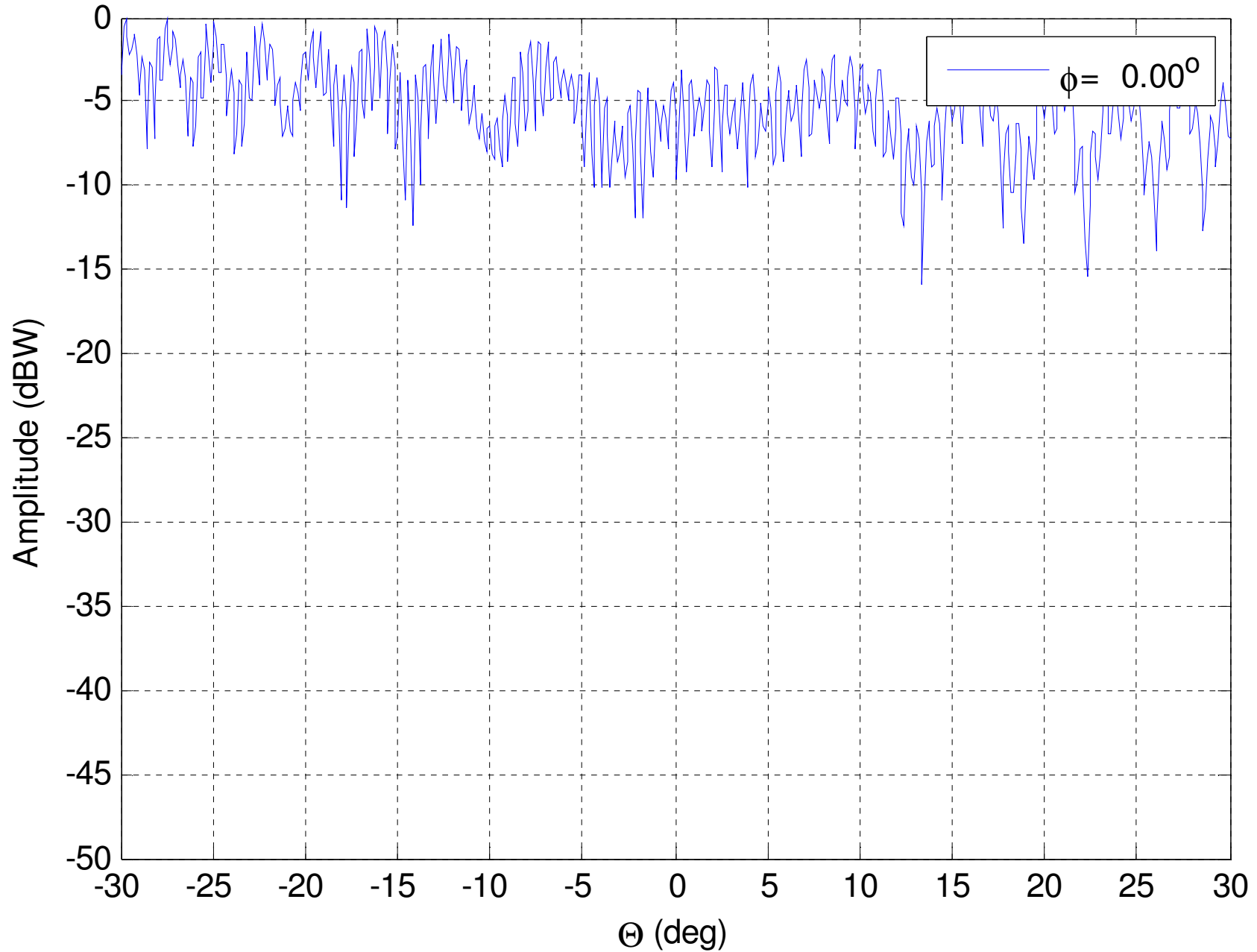
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 2.79 dBW, Date: 14-Dec-2011



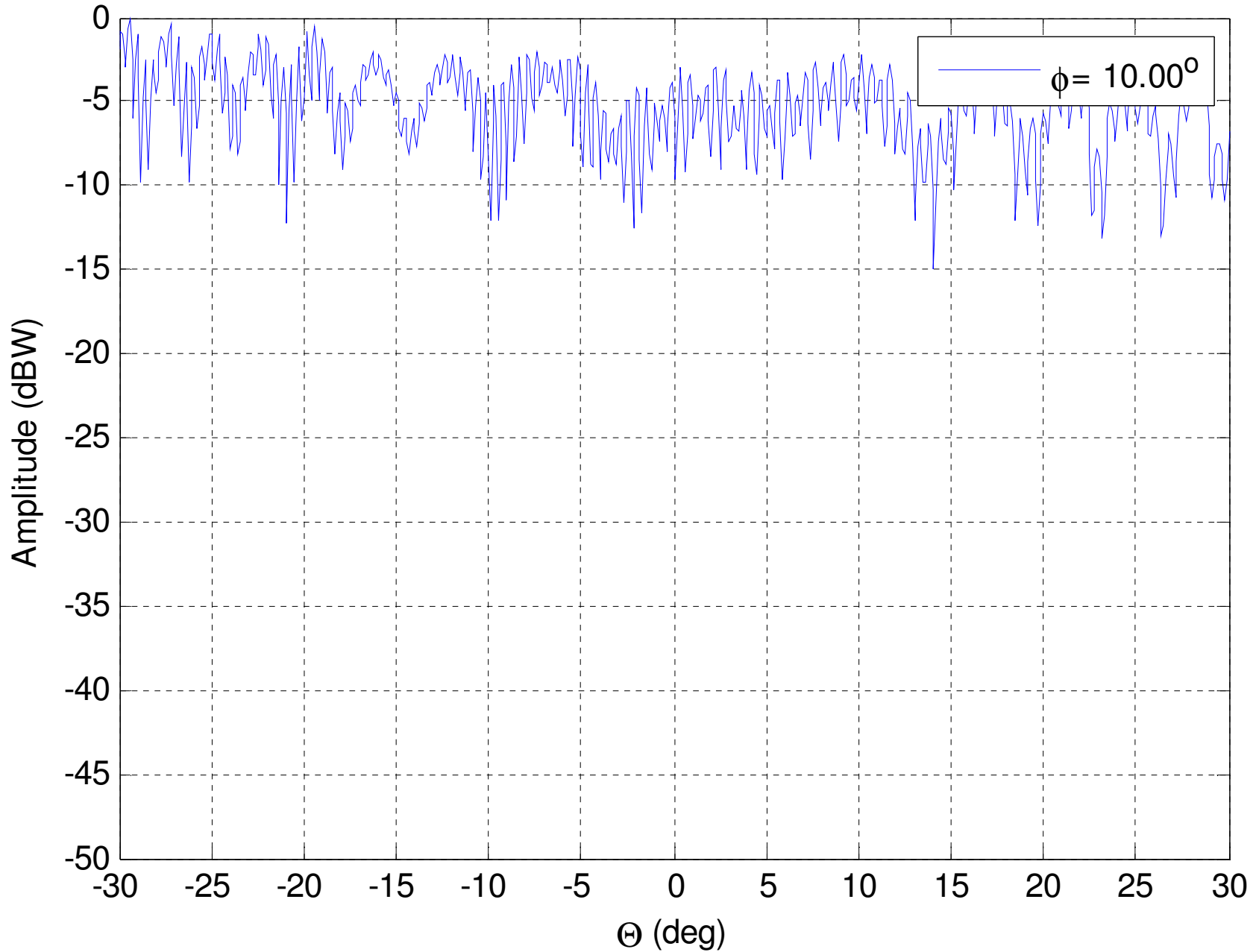
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 2.12 dBW, Date: 14-Dec-2011



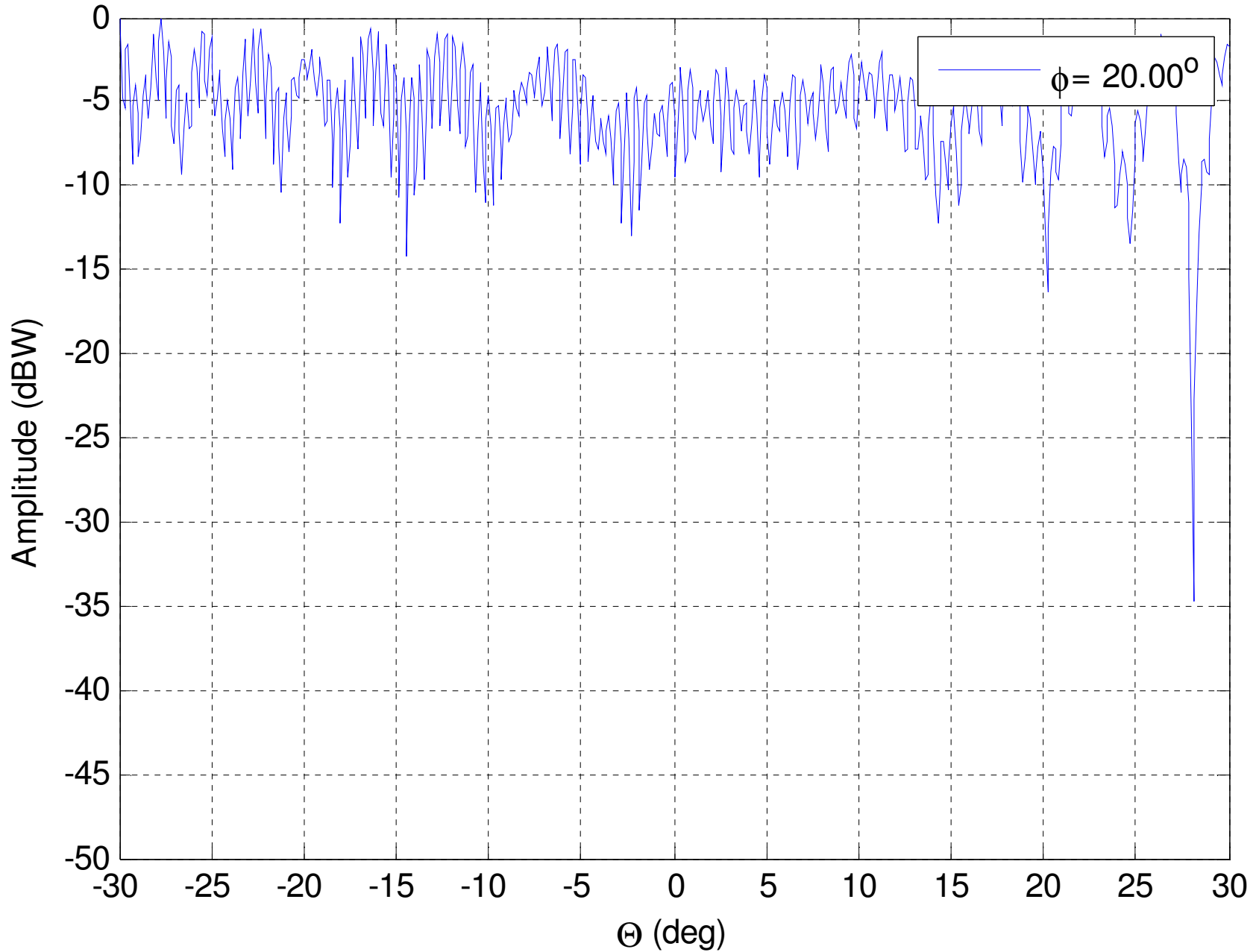
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 2.08 dBW, Date: 14-Dec-2011



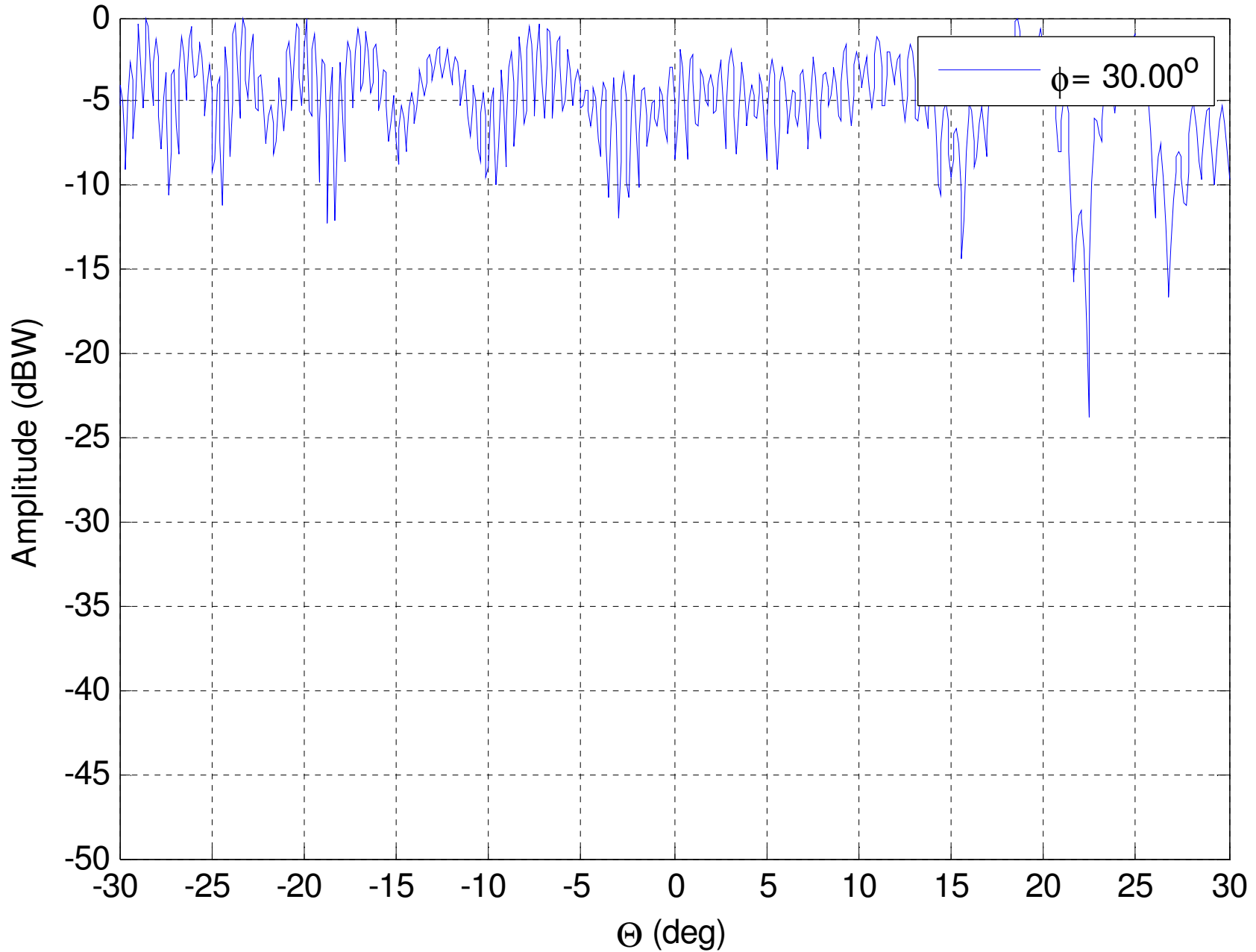
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 2.12 dBW, Date: 14-Dec-2011



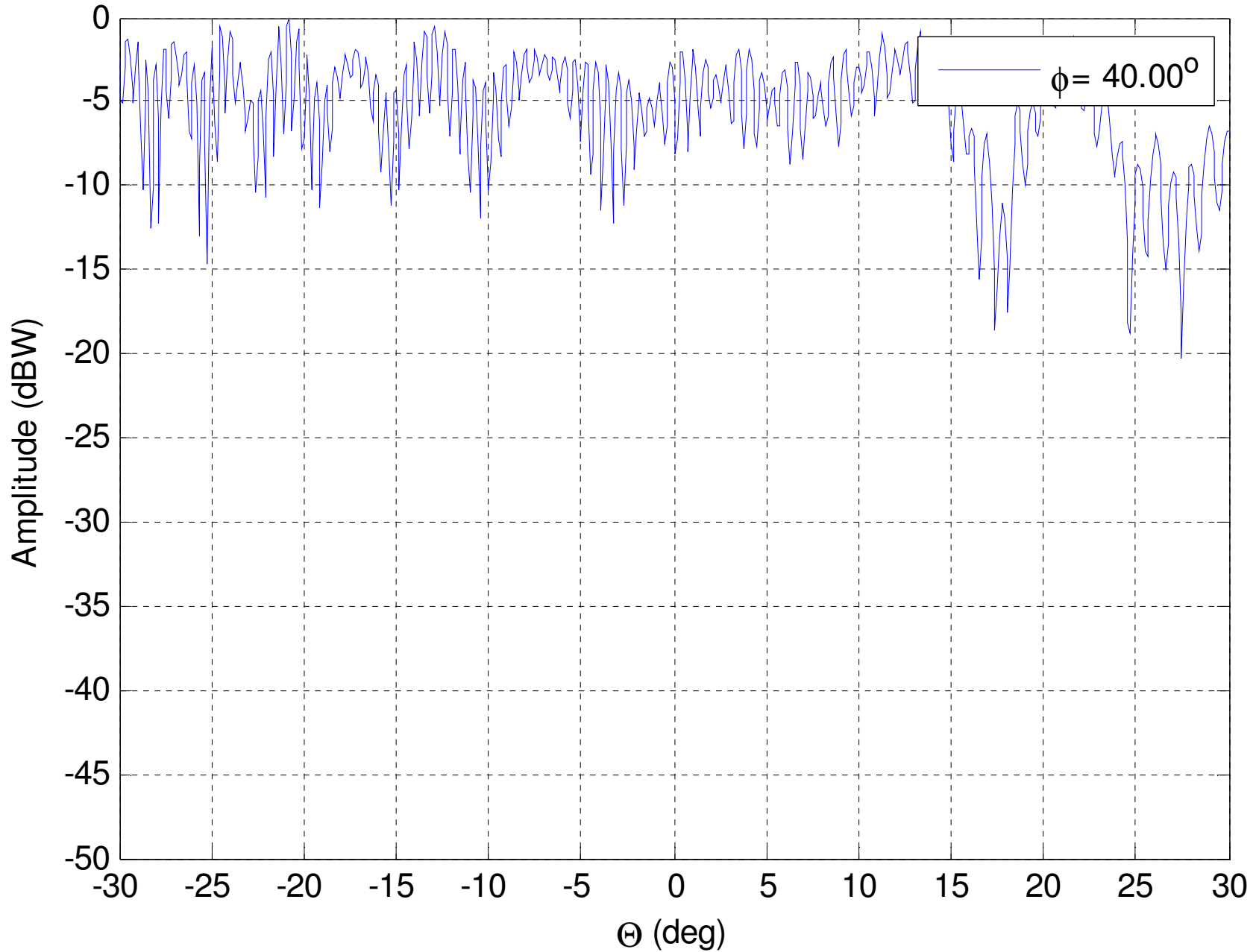
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: 1.18 dBW, Date: 14-Dec-2011



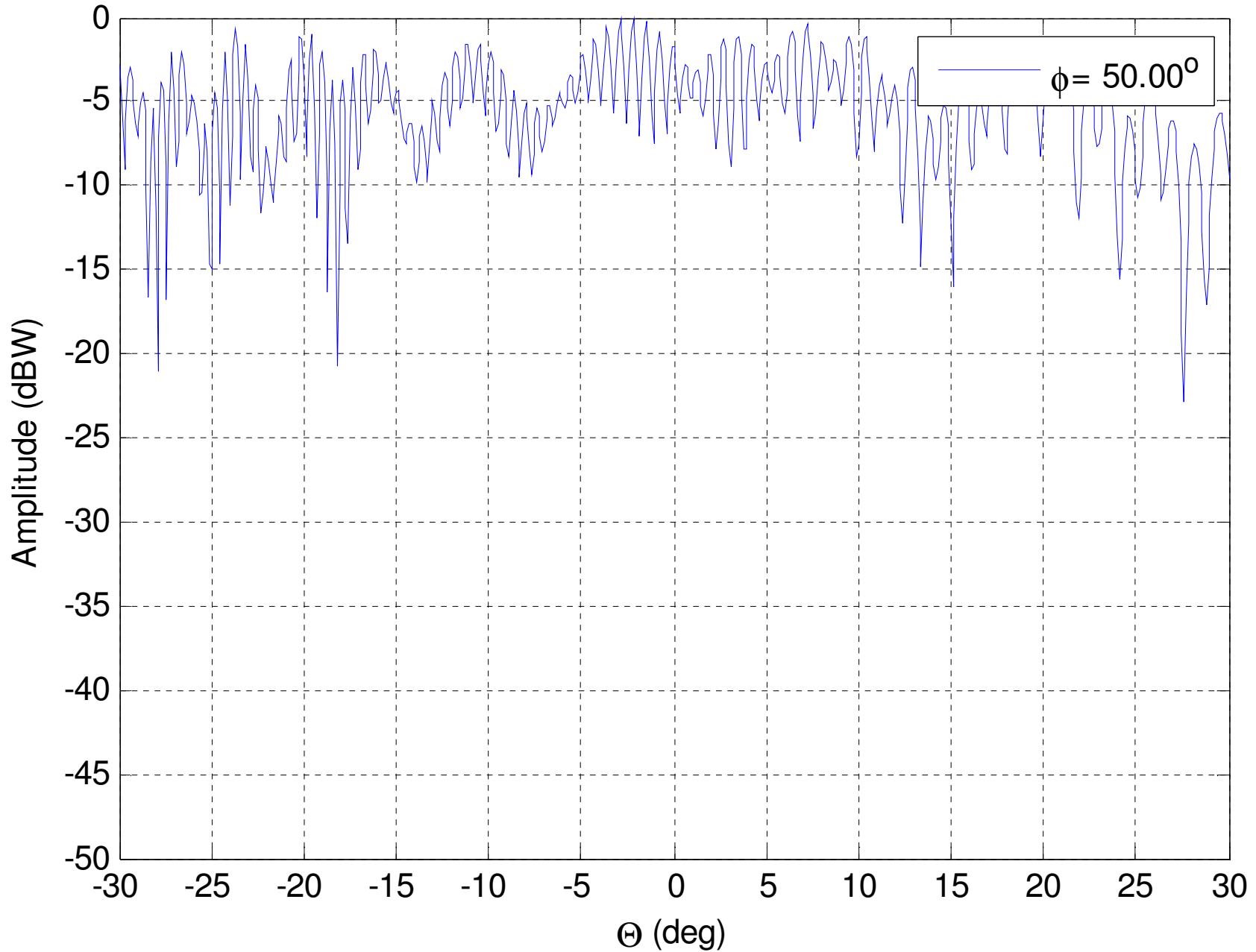
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: 1.05 dBW, Date: 14-Dec-2011



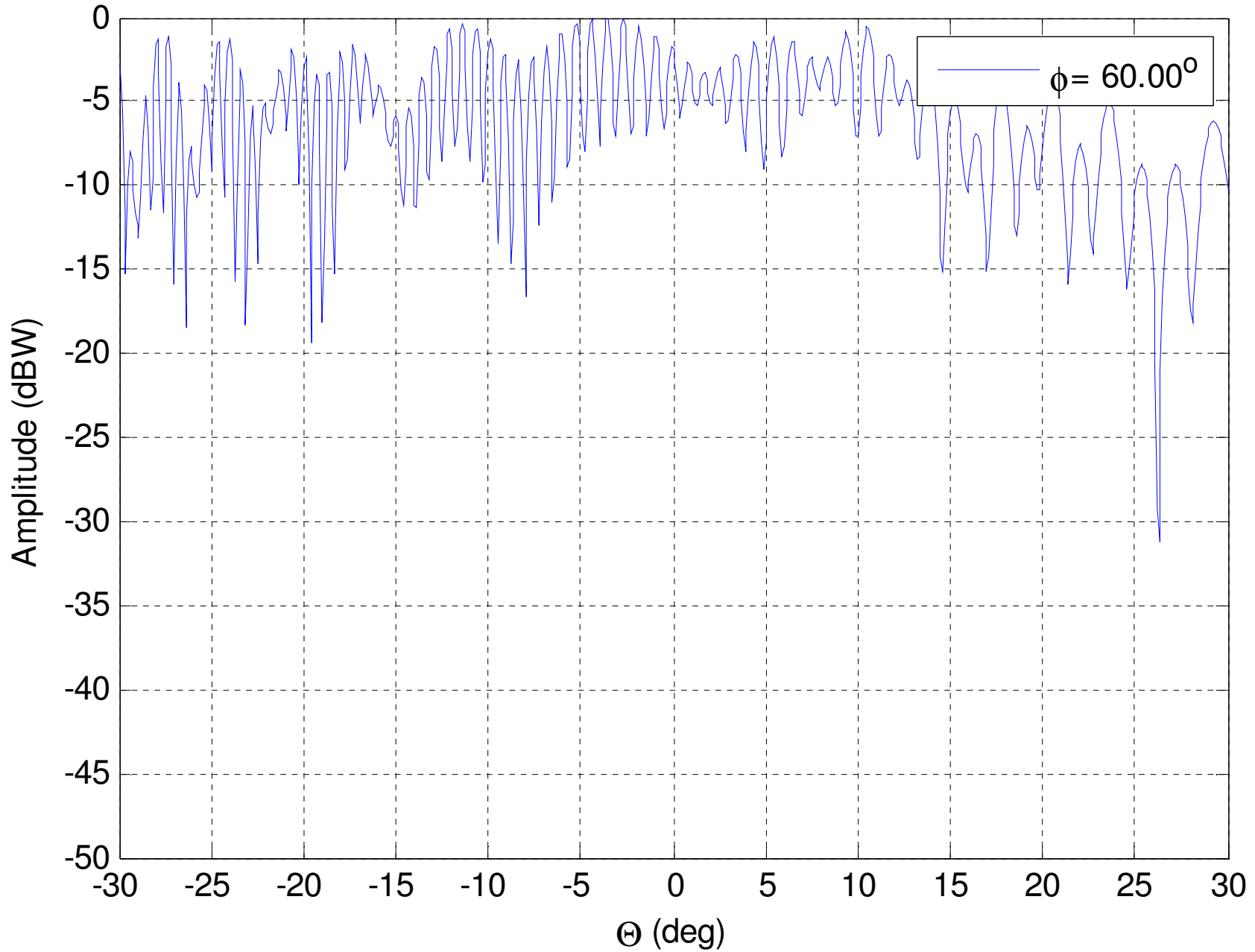
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: 0.19 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

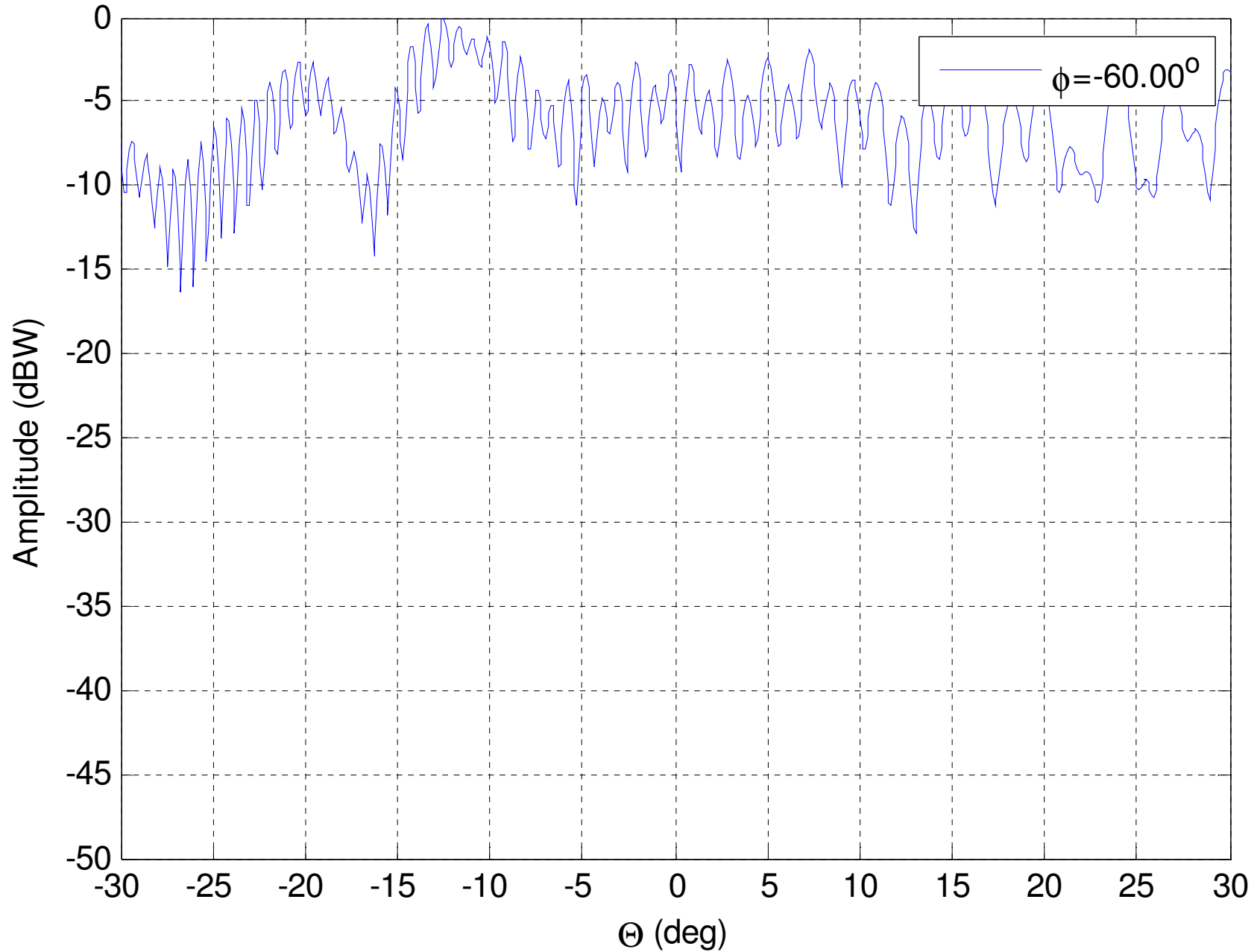
Input file: tx-17.5-rhcp-60.cut, Peak: 0.26 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

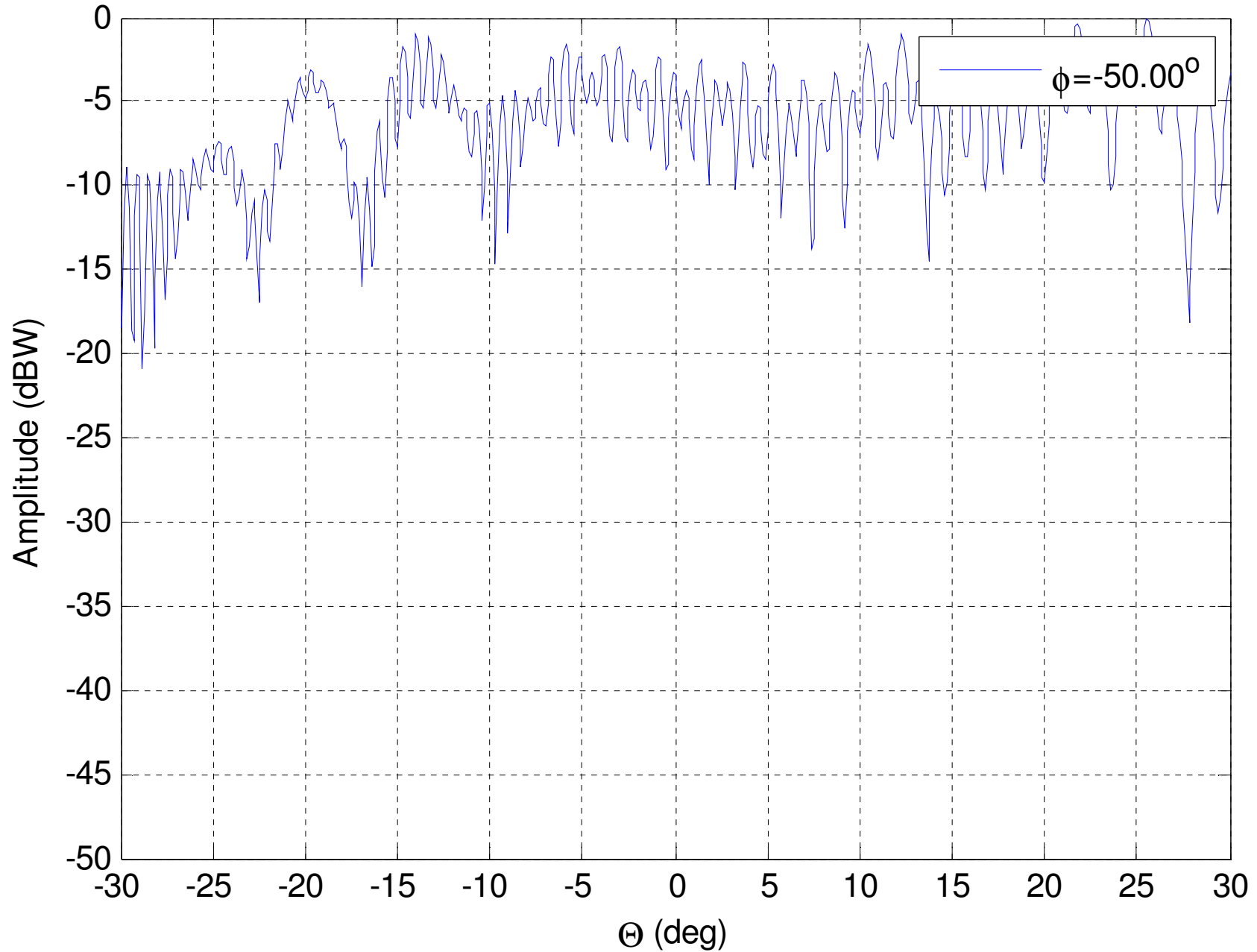
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: 1.48 dBW, Date: 14-Dec-2011



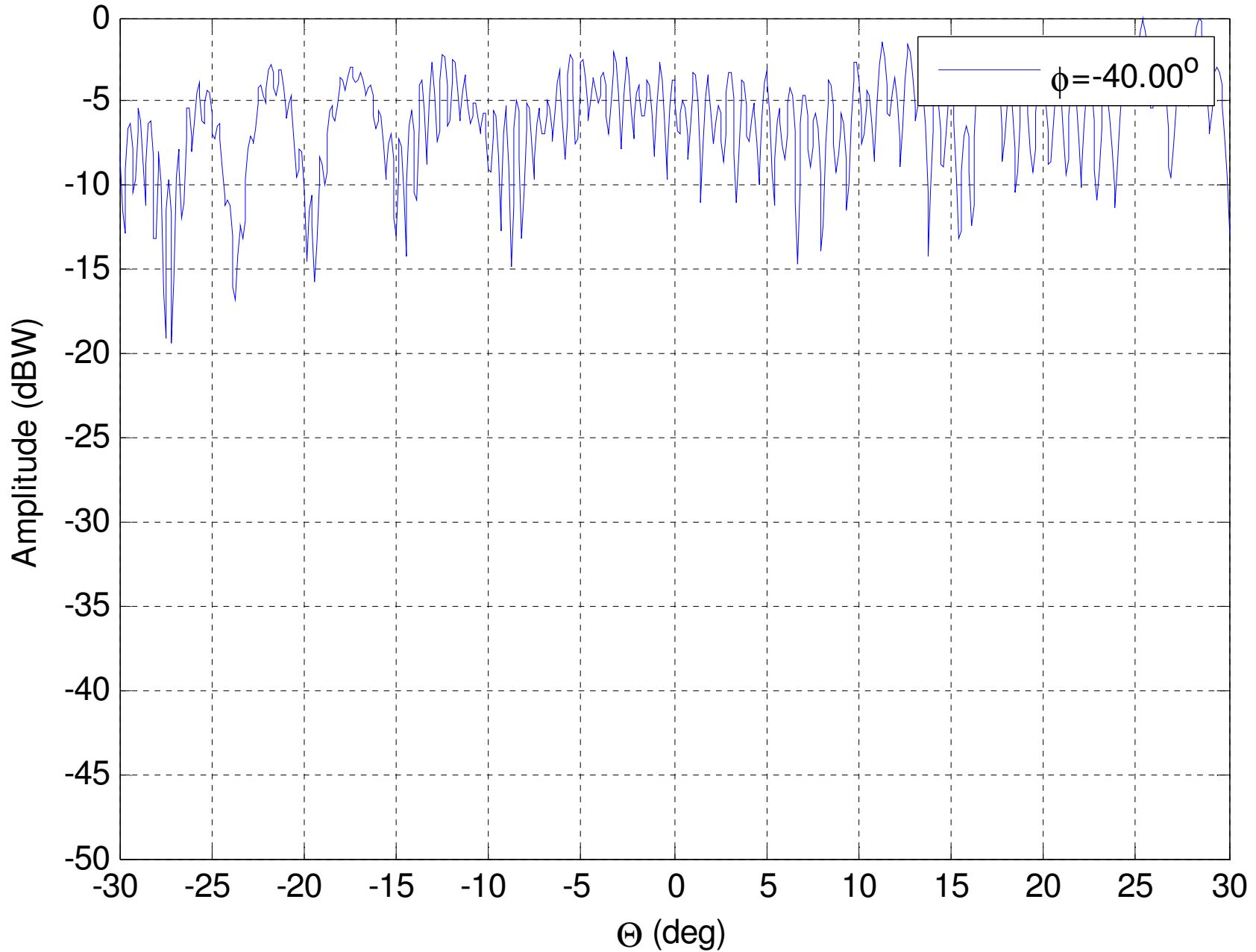
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: 2.02 dBW, Date: 14-Dec-2011



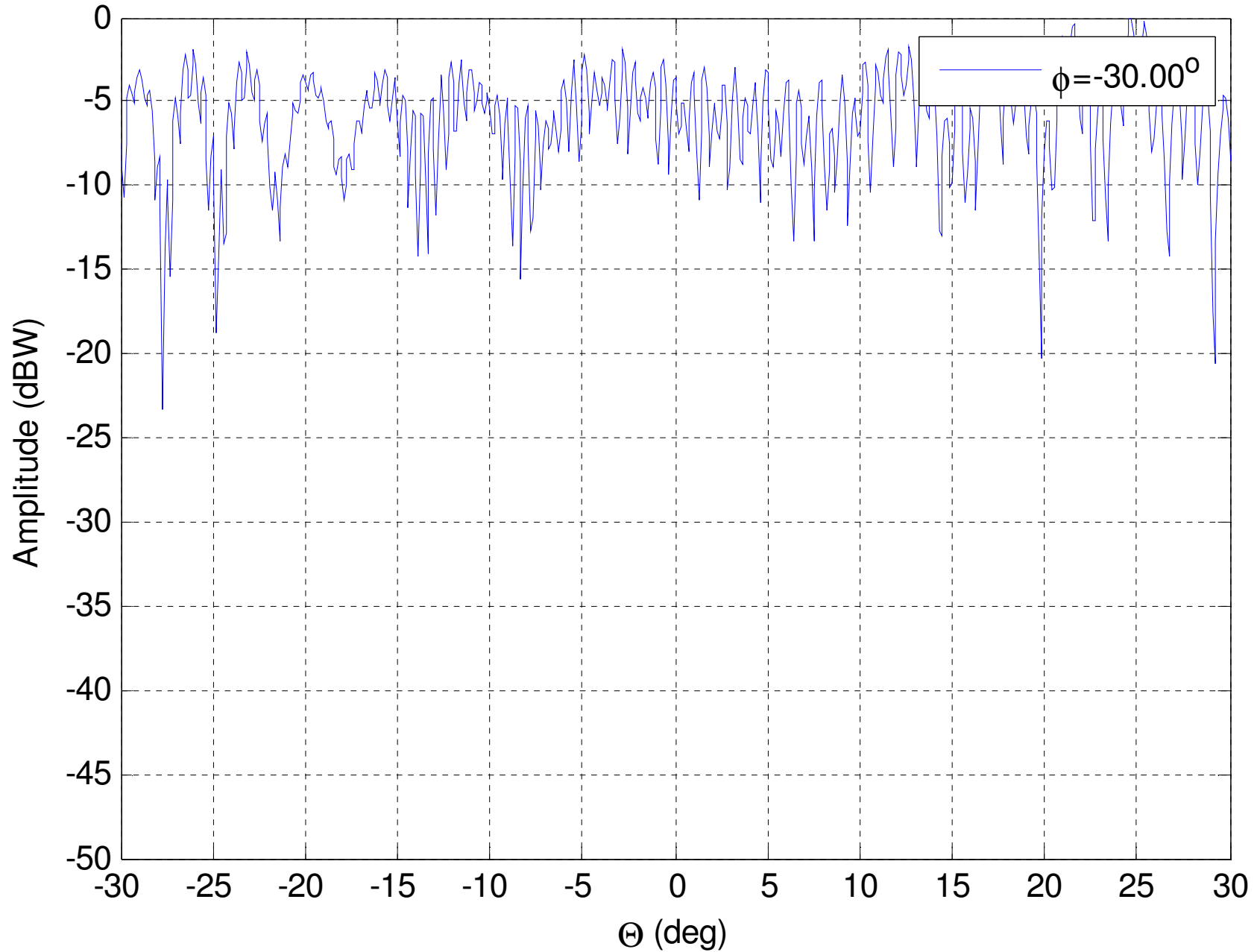
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: 2.43 dBW, Date: 14-Dec-2011



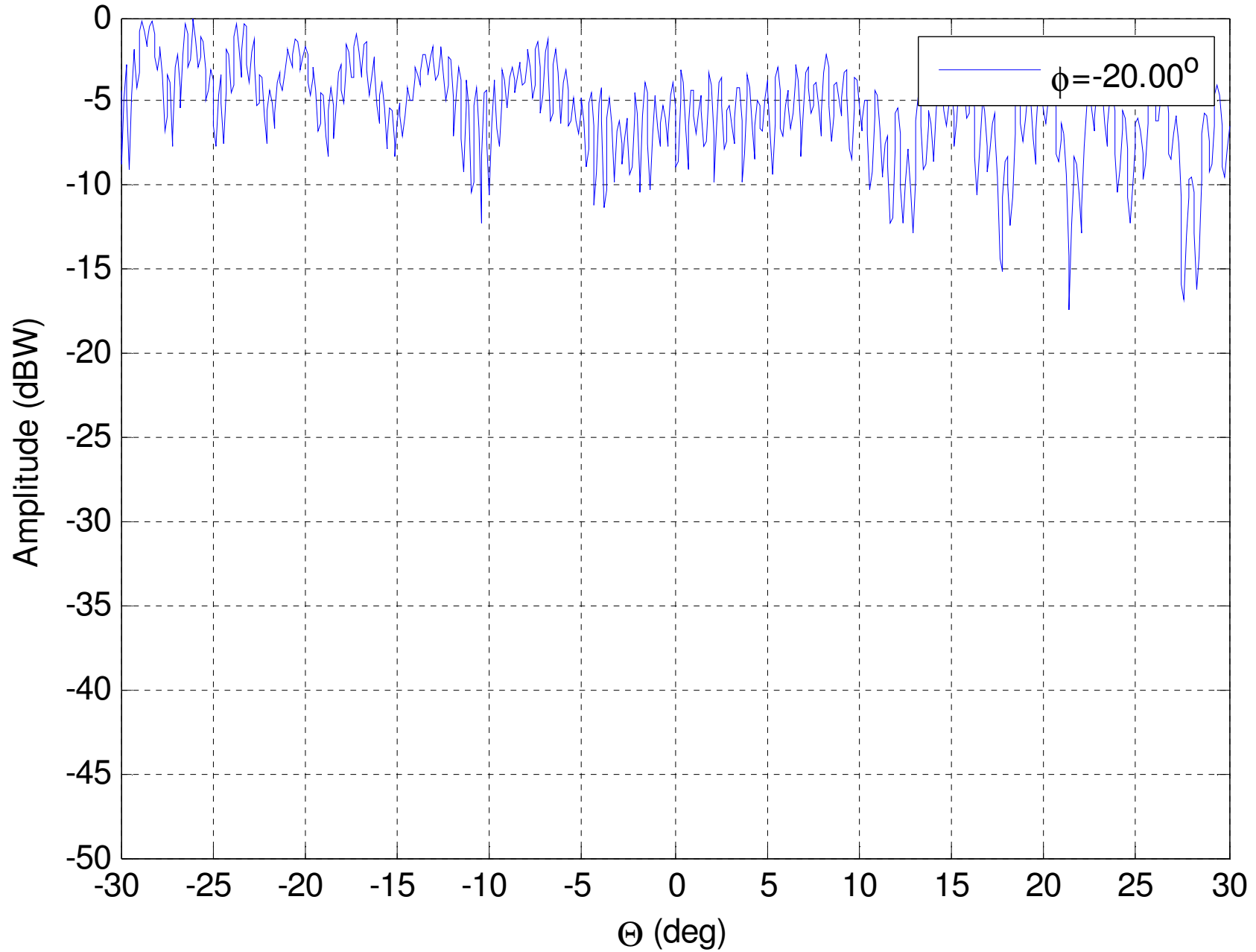
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 2.30 dBW, Date: 14-Dec-2011



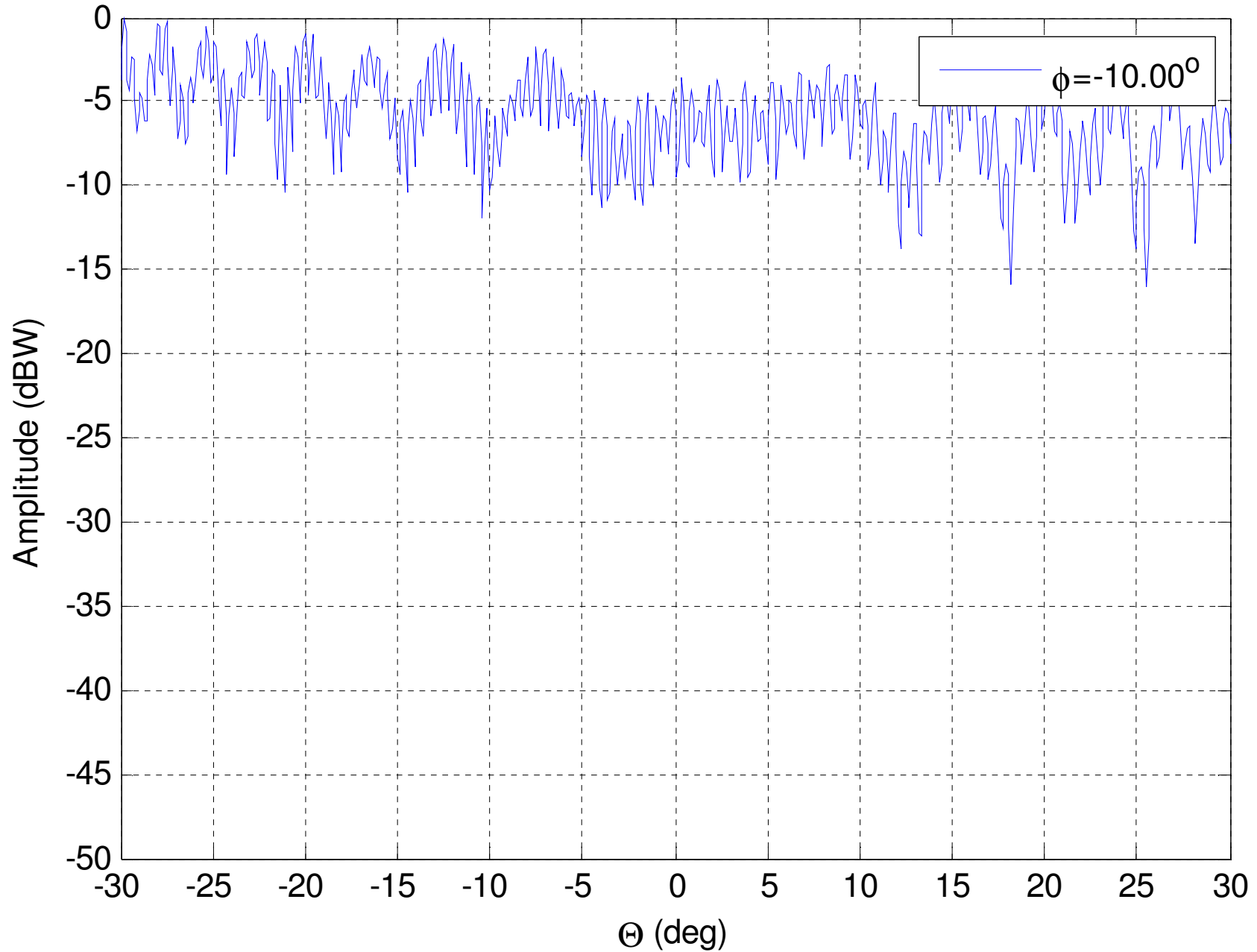
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 2.27 dBW, Date: 14-Dec-2011



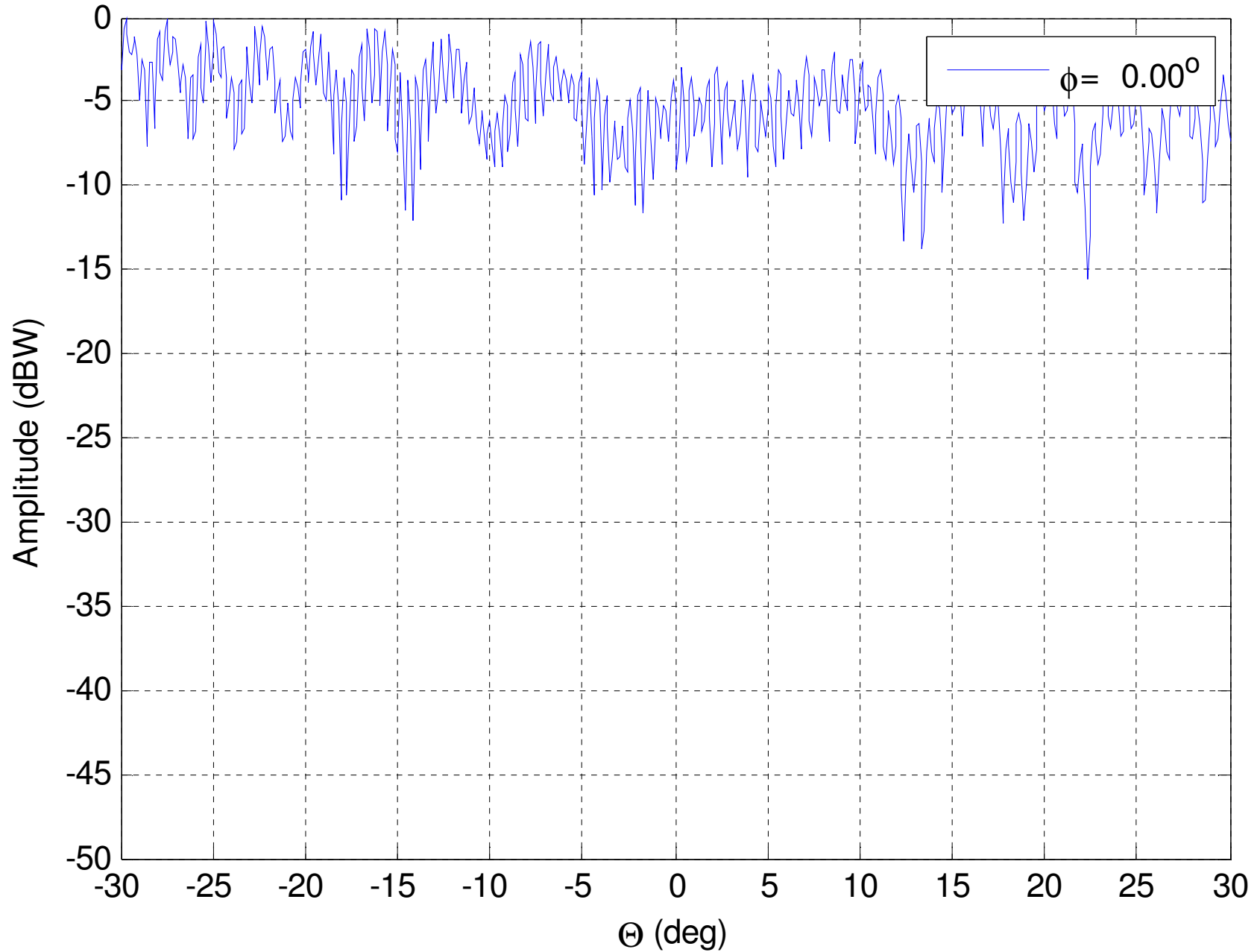
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 2.77 dBW, Date: 14-Dec-2011



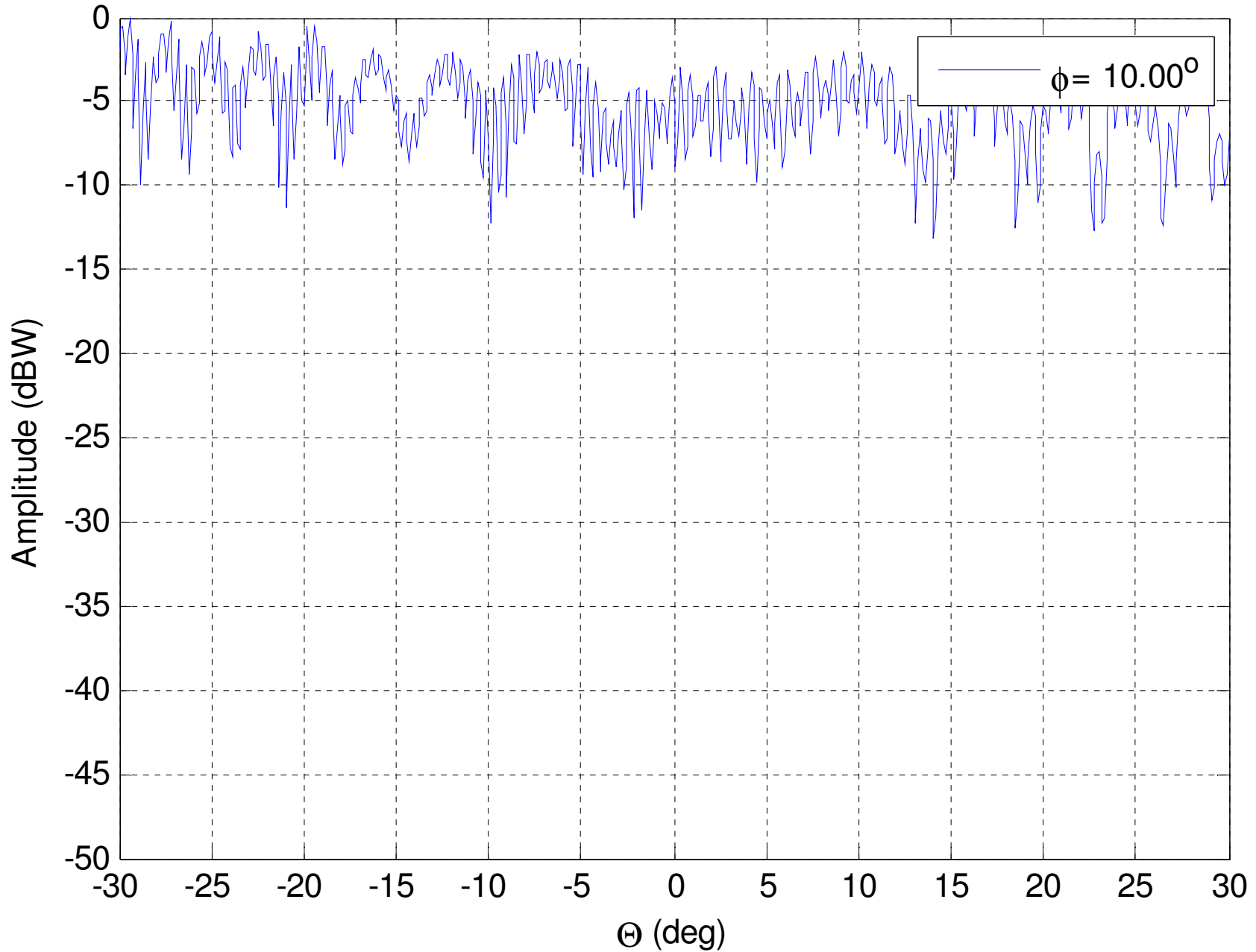
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 2.15 dBW, Date: 14-Dec-2011



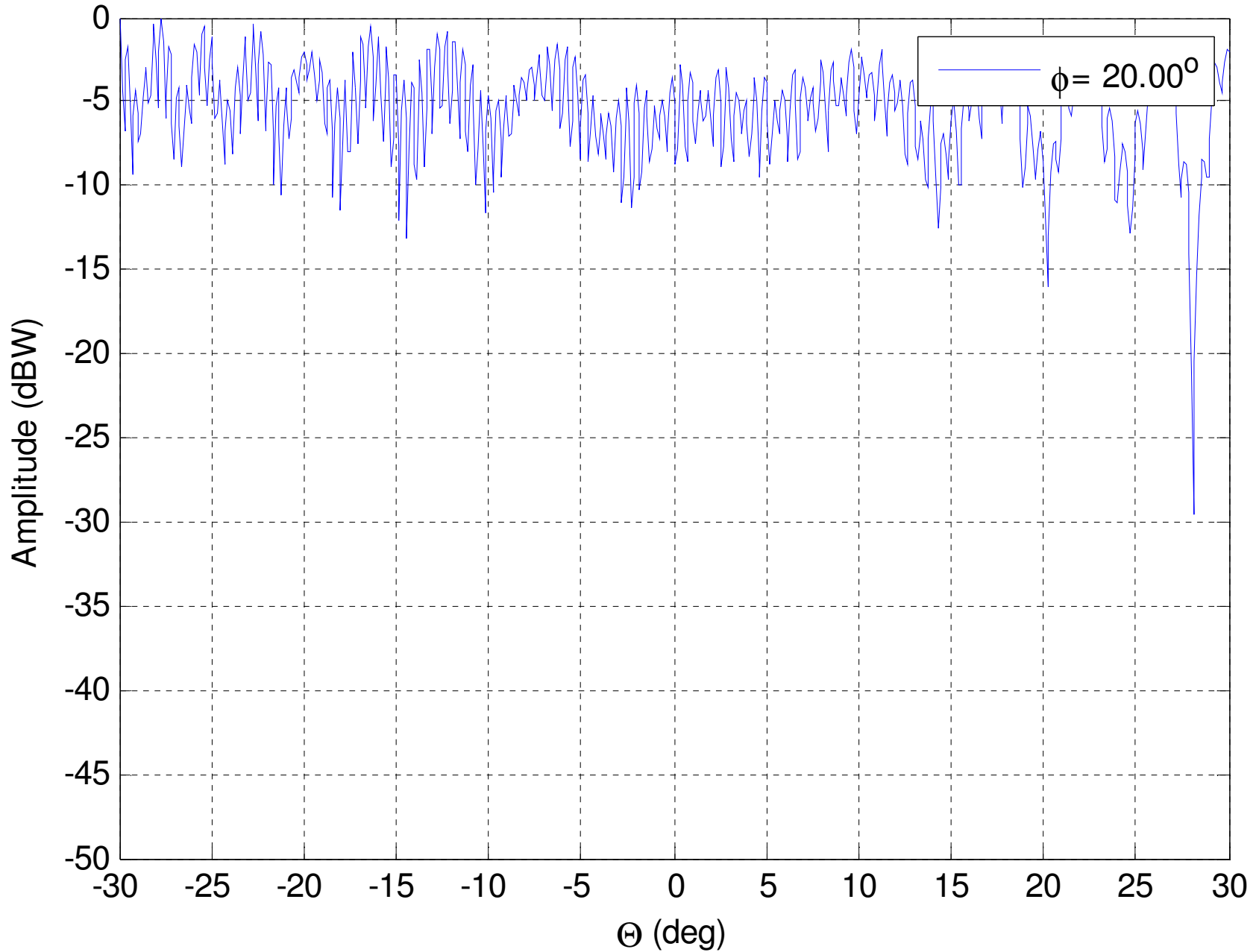
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 2.07 dBW, Date: 14-Dec-2011



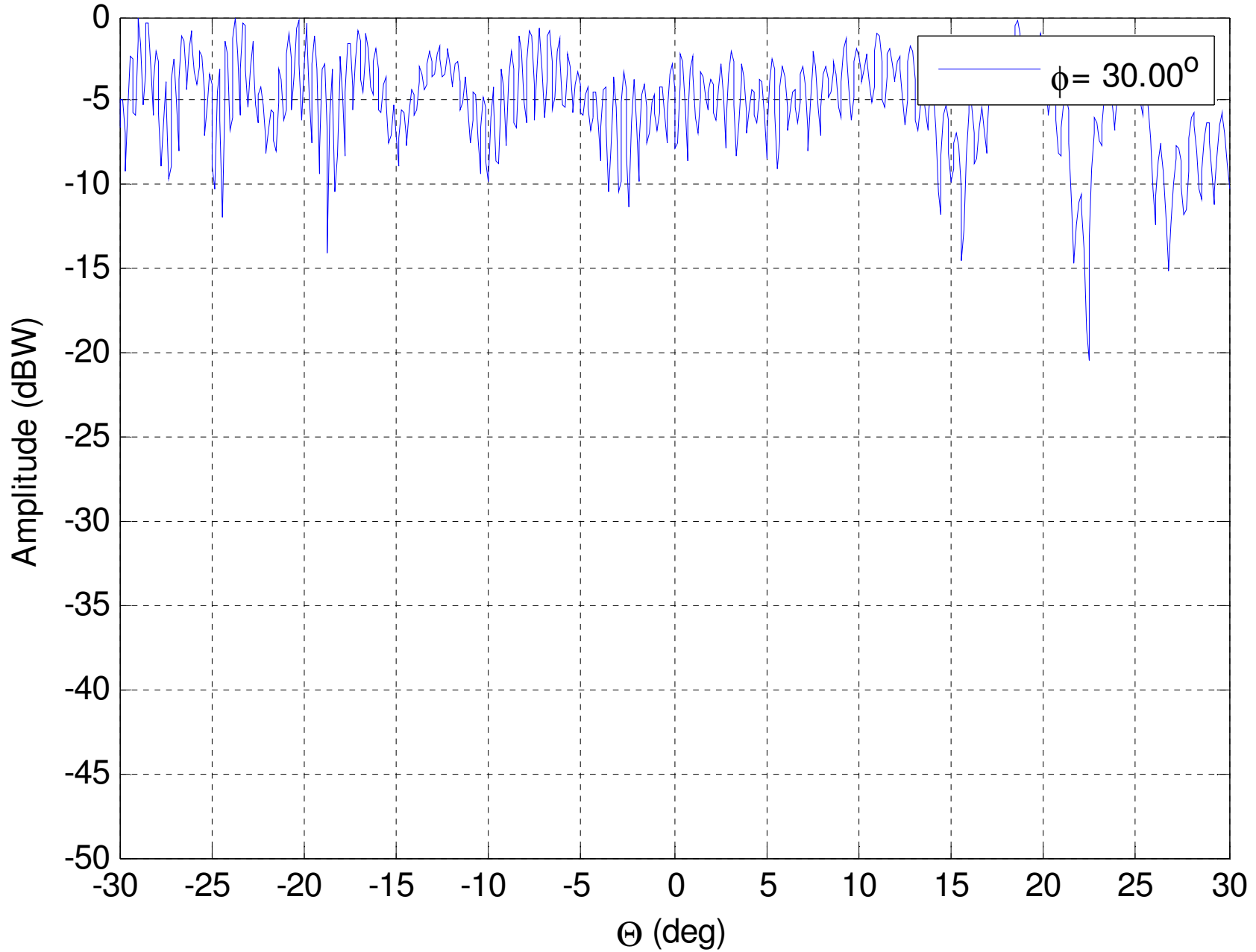
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 2.06 dBW, Date: 14-Dec-2011



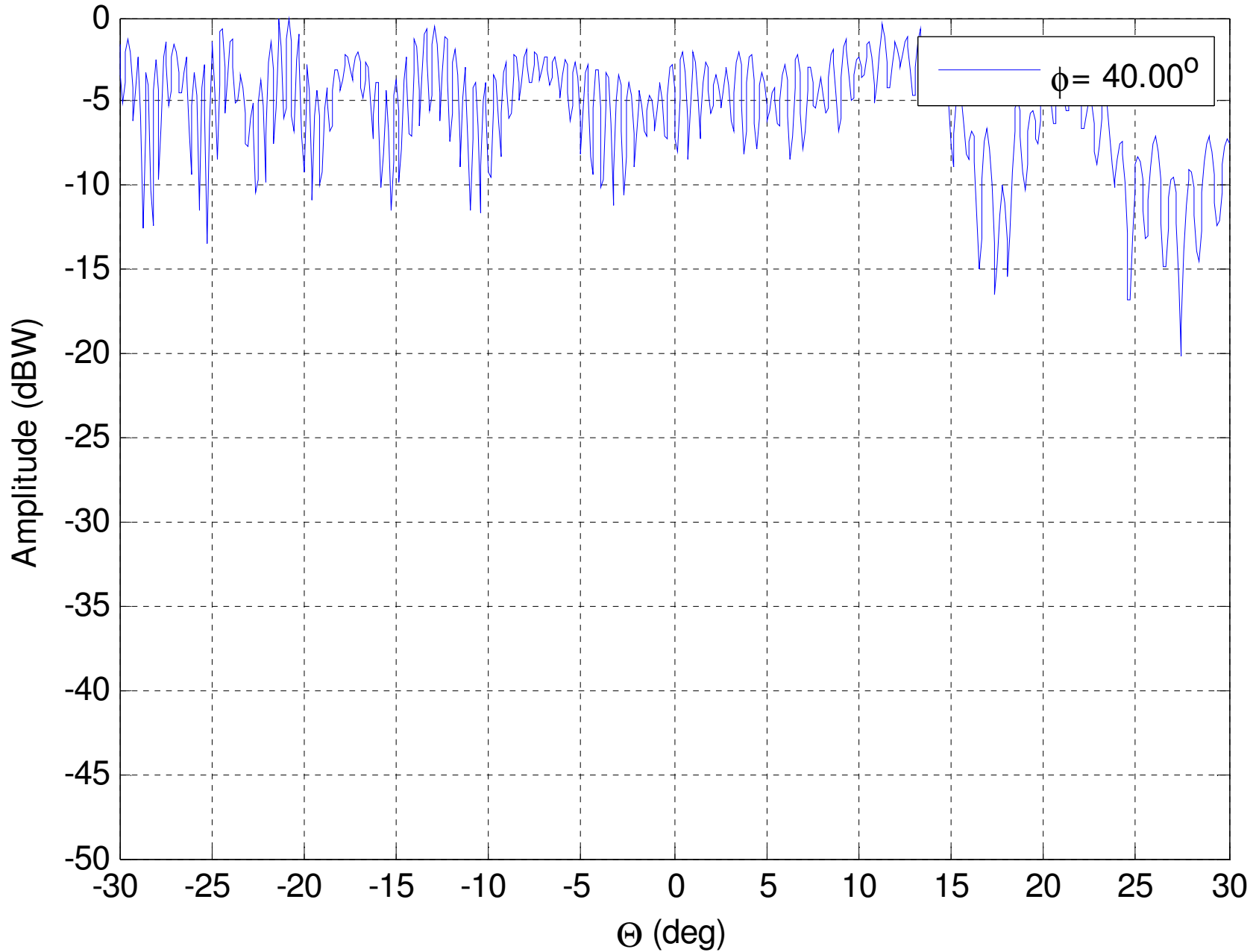
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: 1.31 dBW, Date: 14-Dec-2011



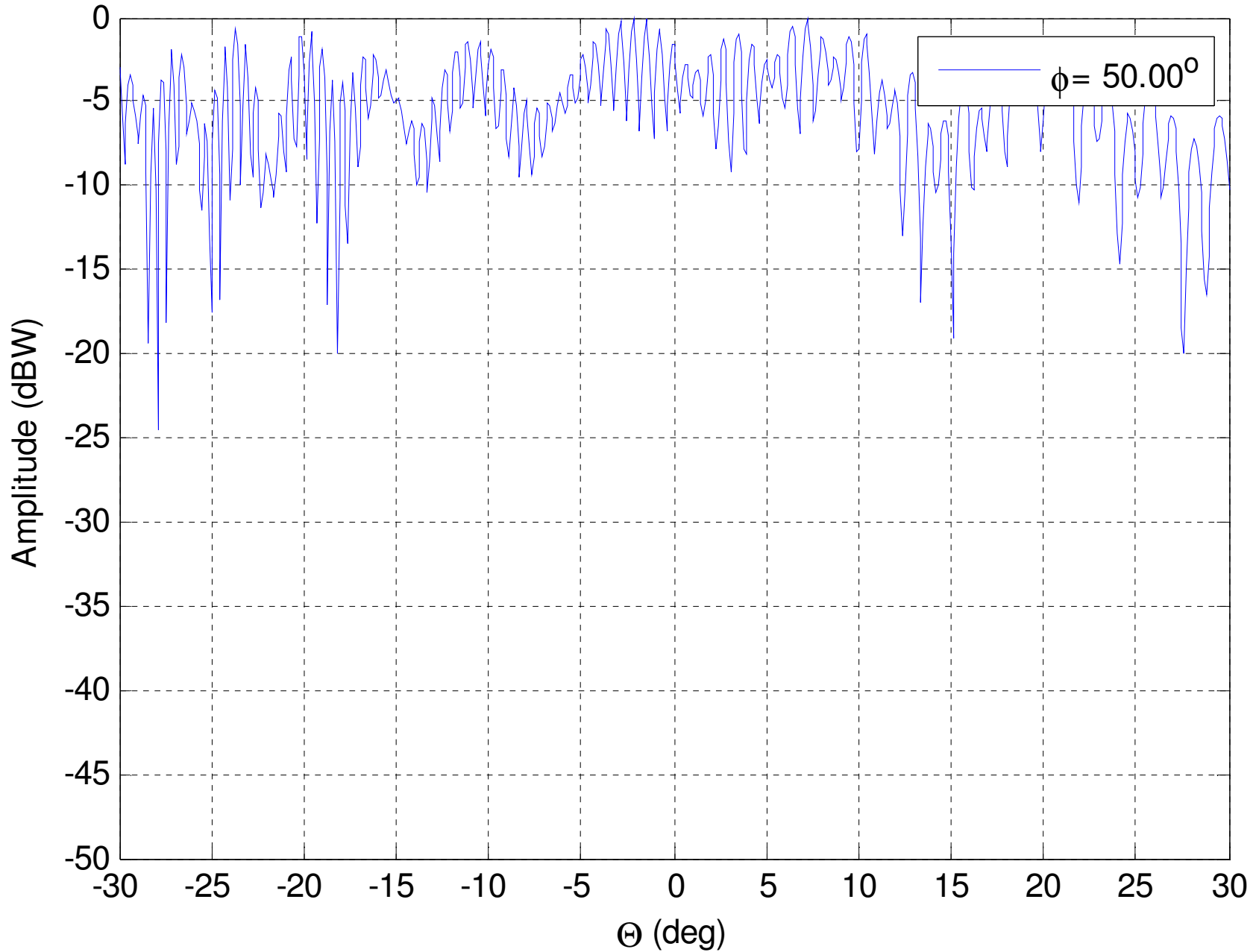
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: 1.17 dBW, Date: 14-Dec-2011



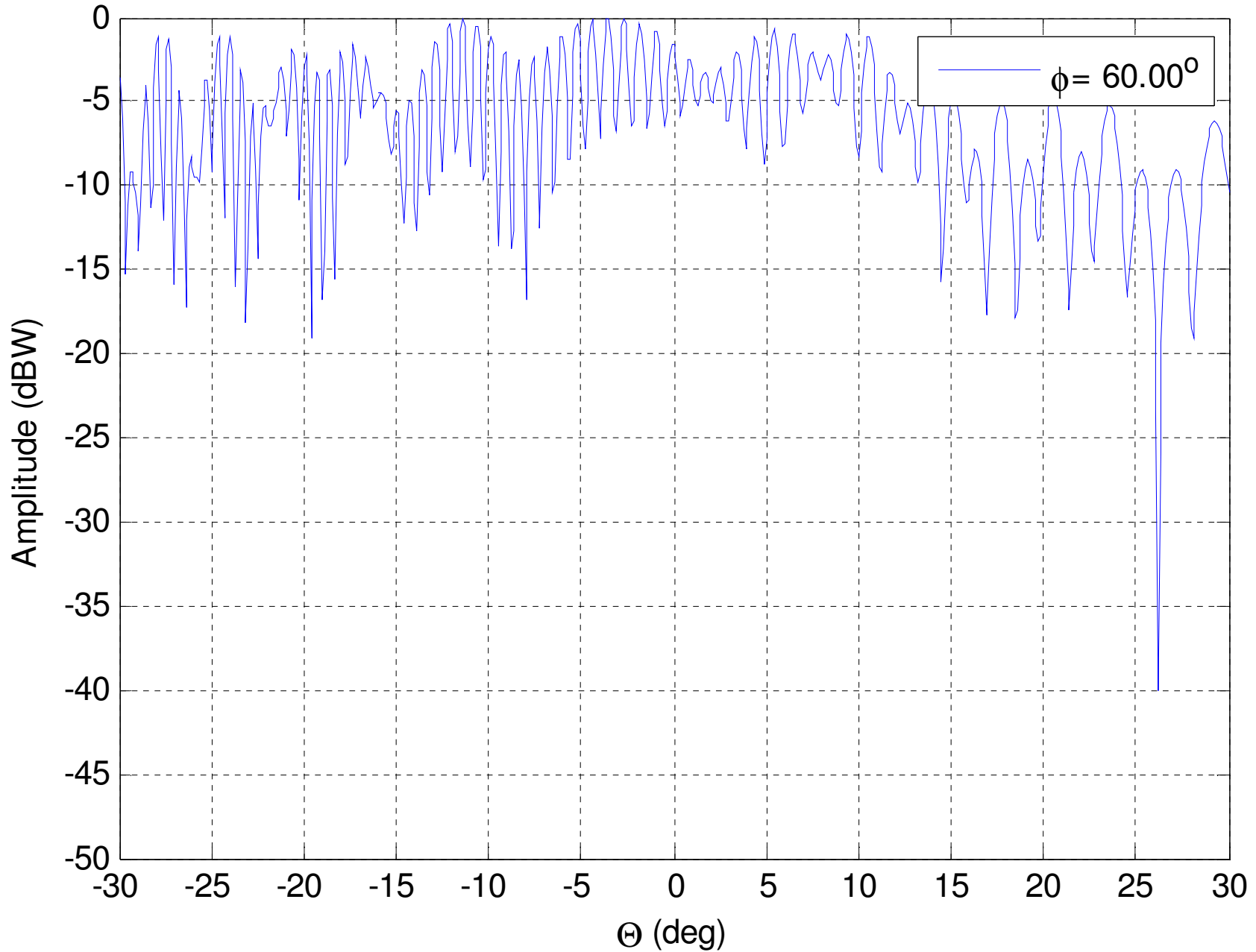
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: 0.24 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

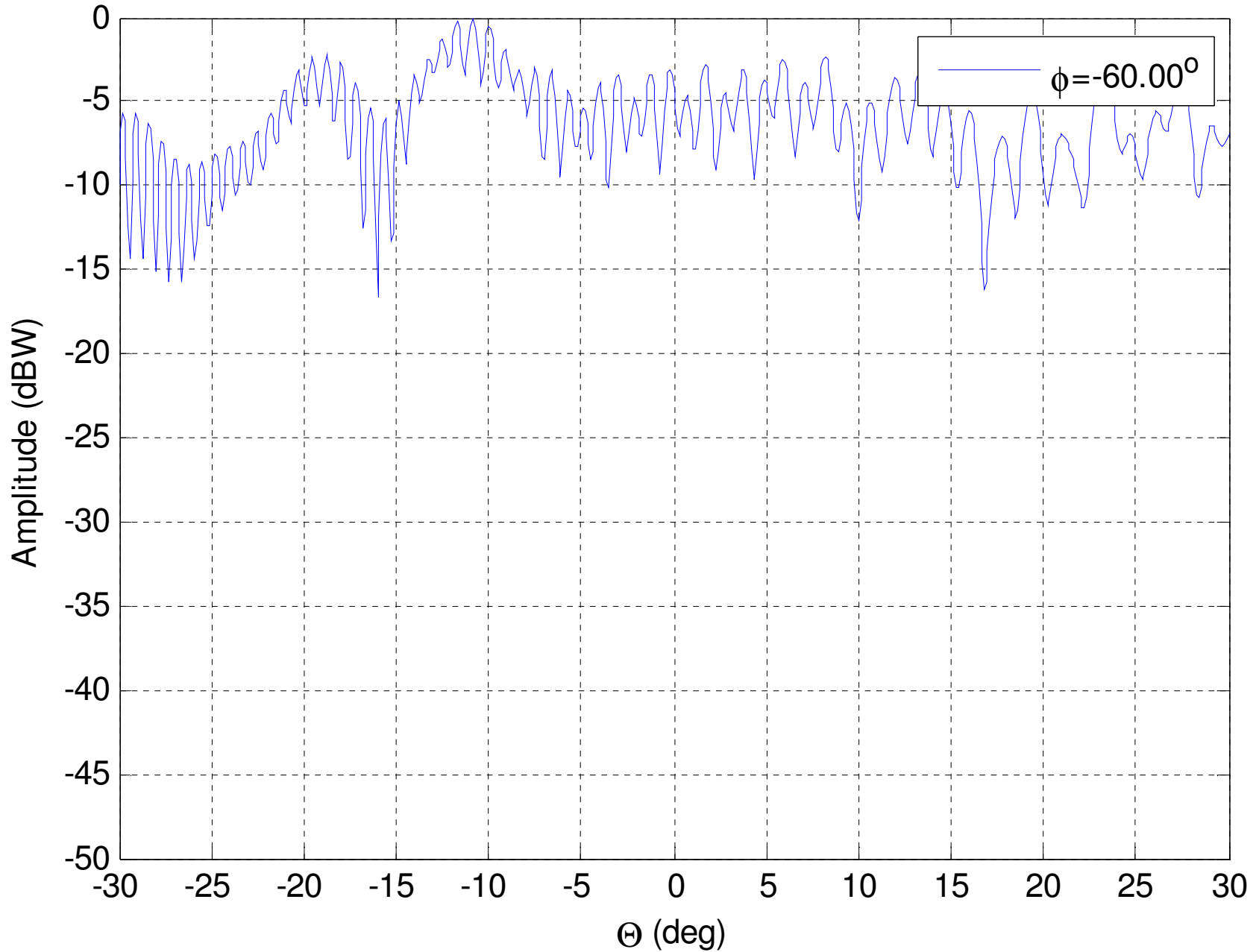
Input file: tx-17.5-lhcp-60.cut, Peak: 0.23 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

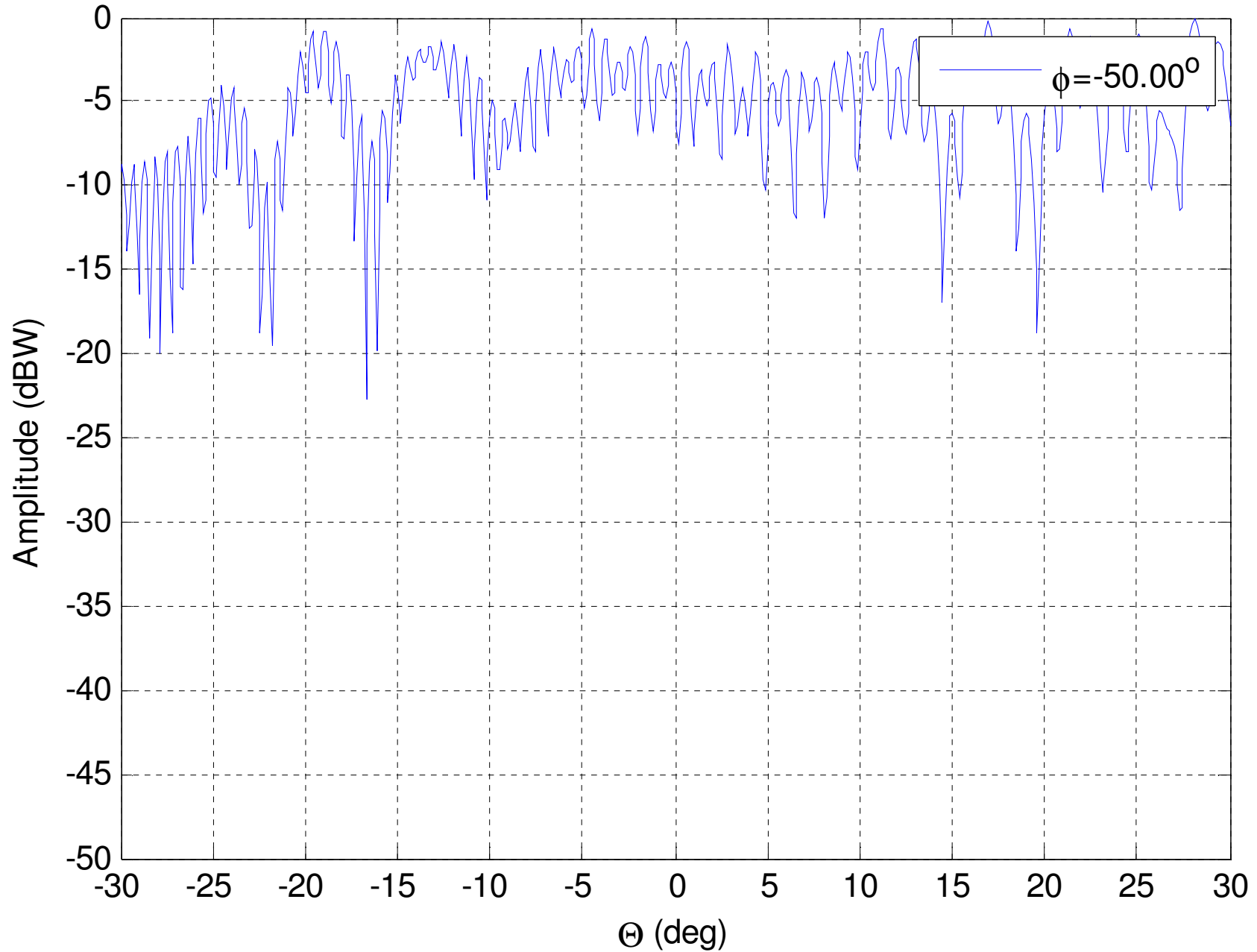
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: 1.43 dBW, Date: 14-Dec-2011



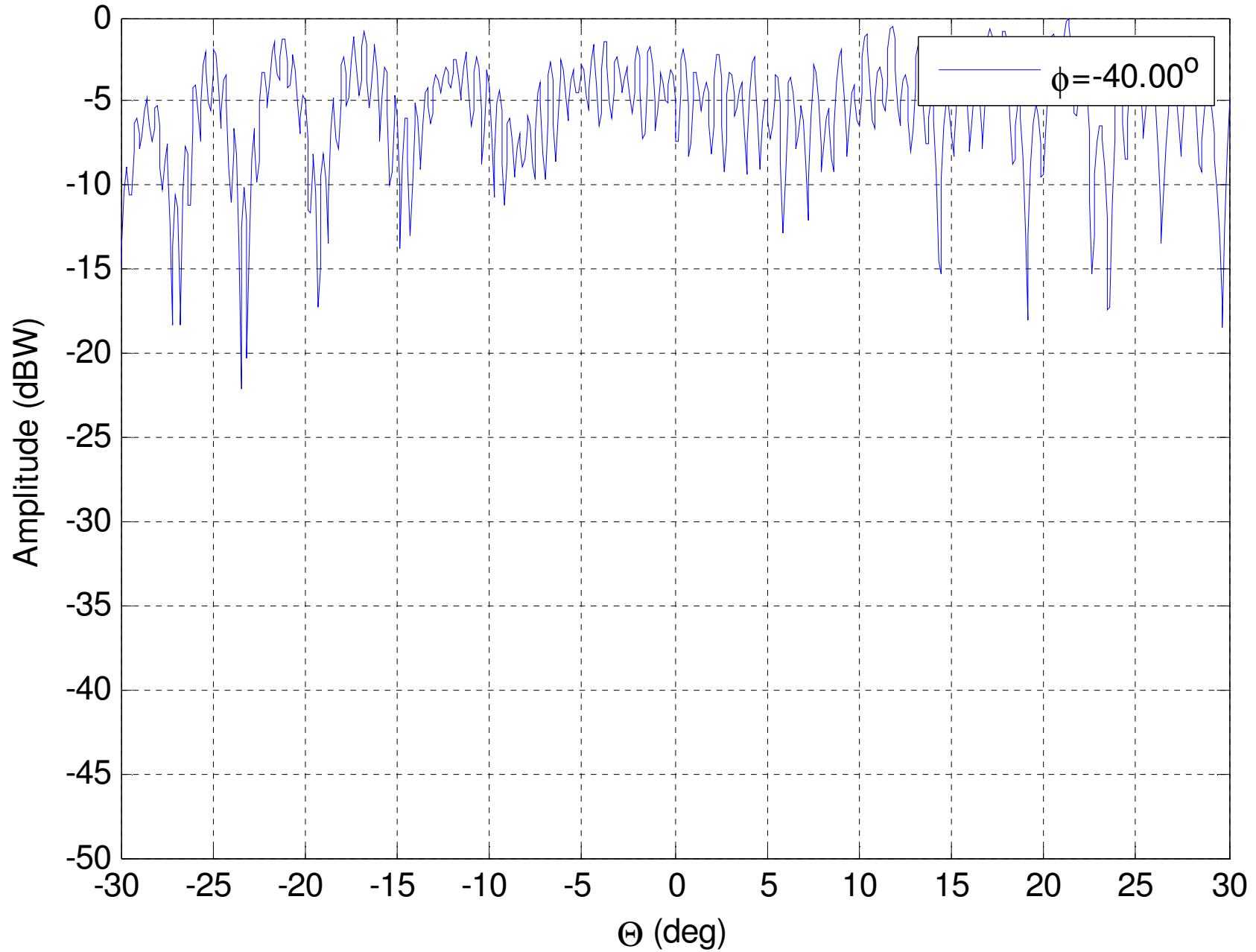
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: 1.12 dBW, Date: 14-Dec-2011



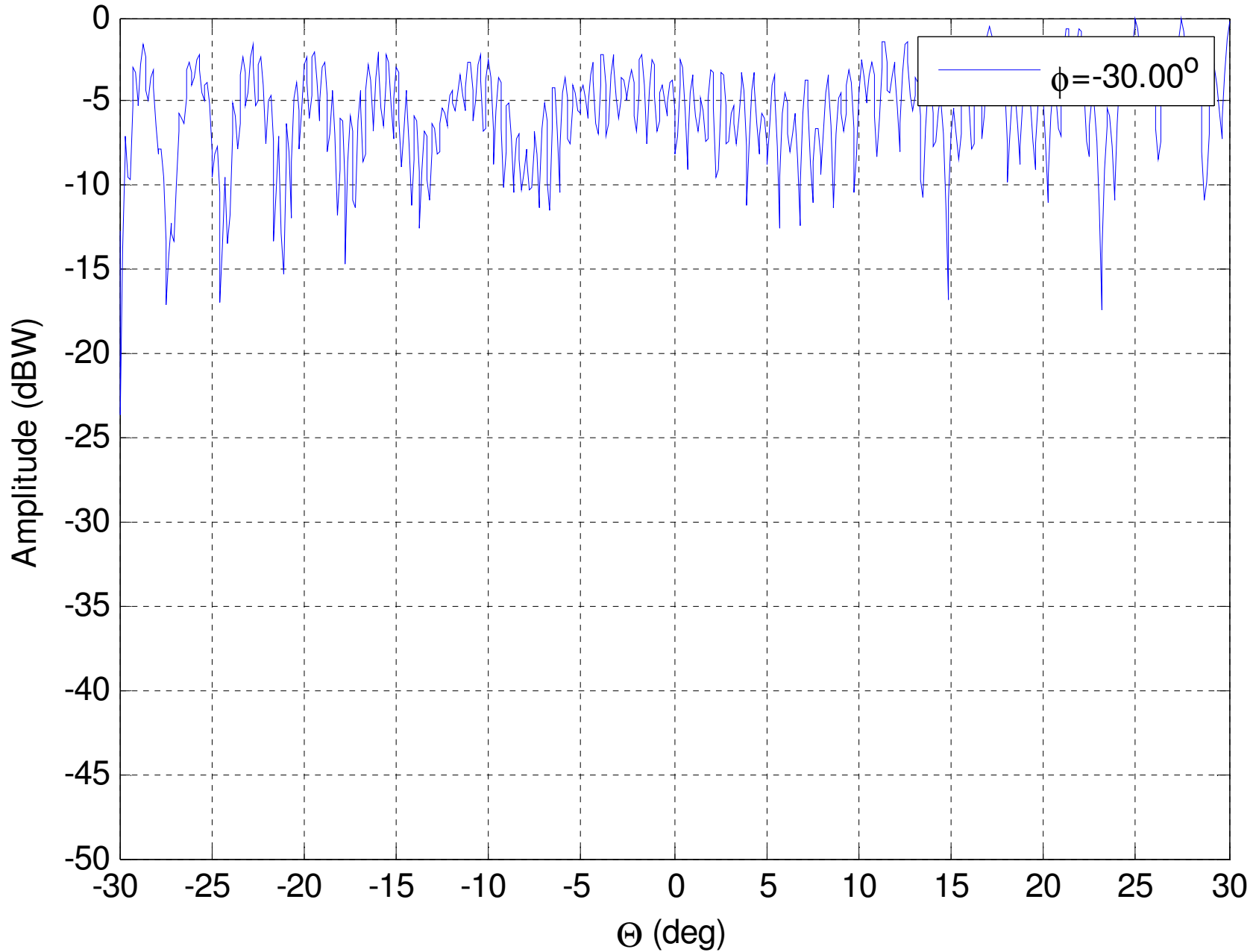
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: 1.57 dBW, Date: 14-Dec-2011



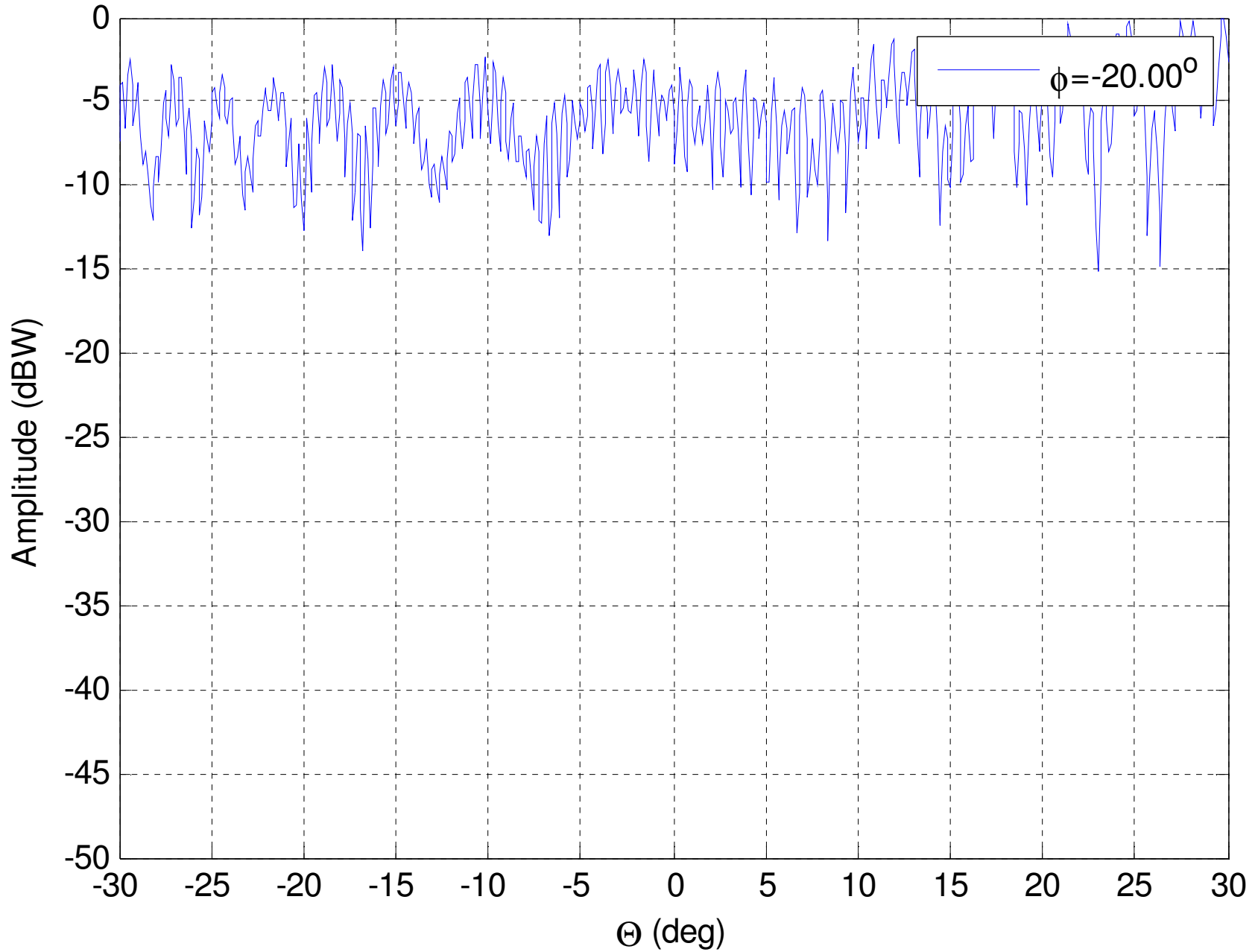
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 2.14 dBW, Date: 14-Dec-2011



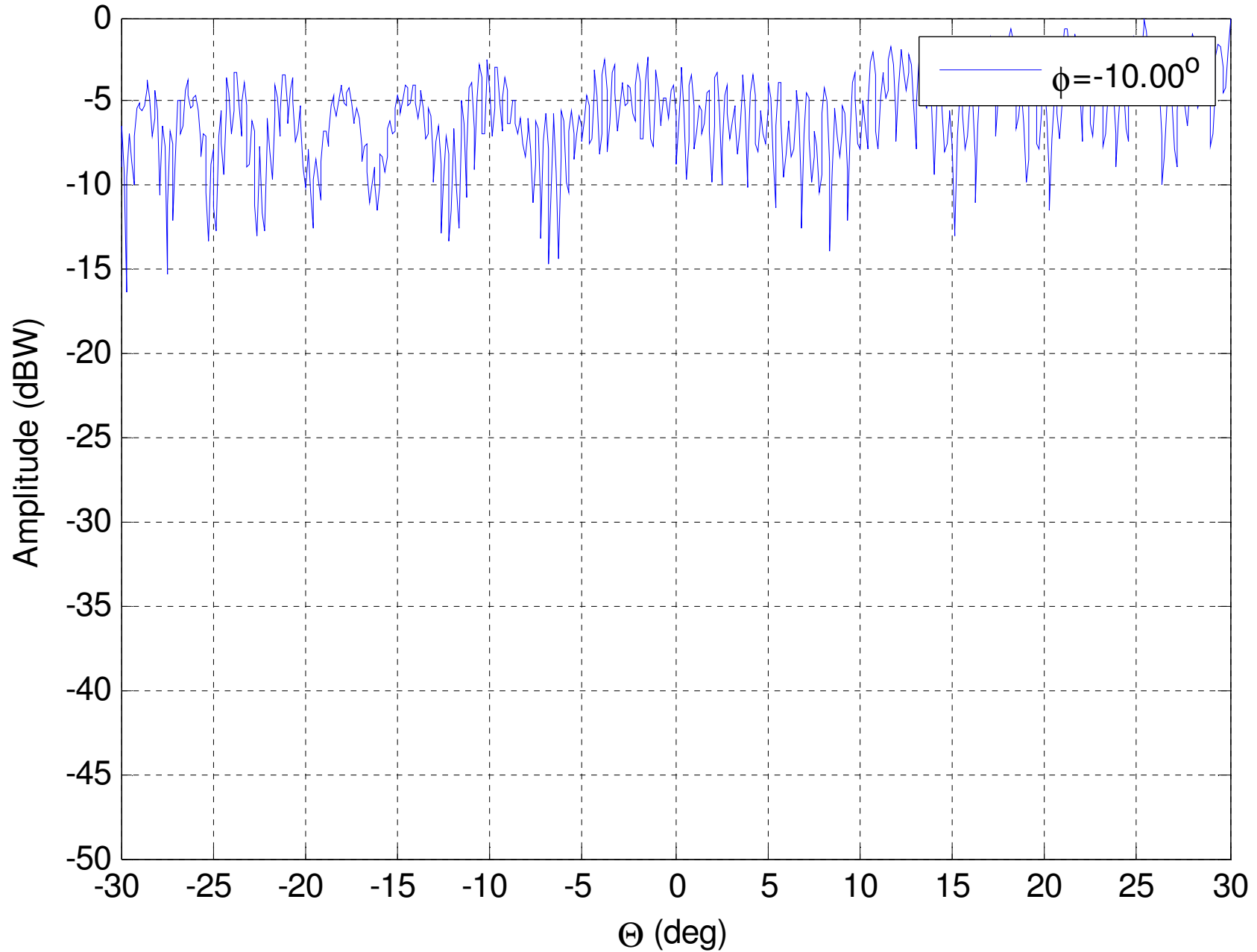
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 2.55 dBW, Date: 14-Dec-2011



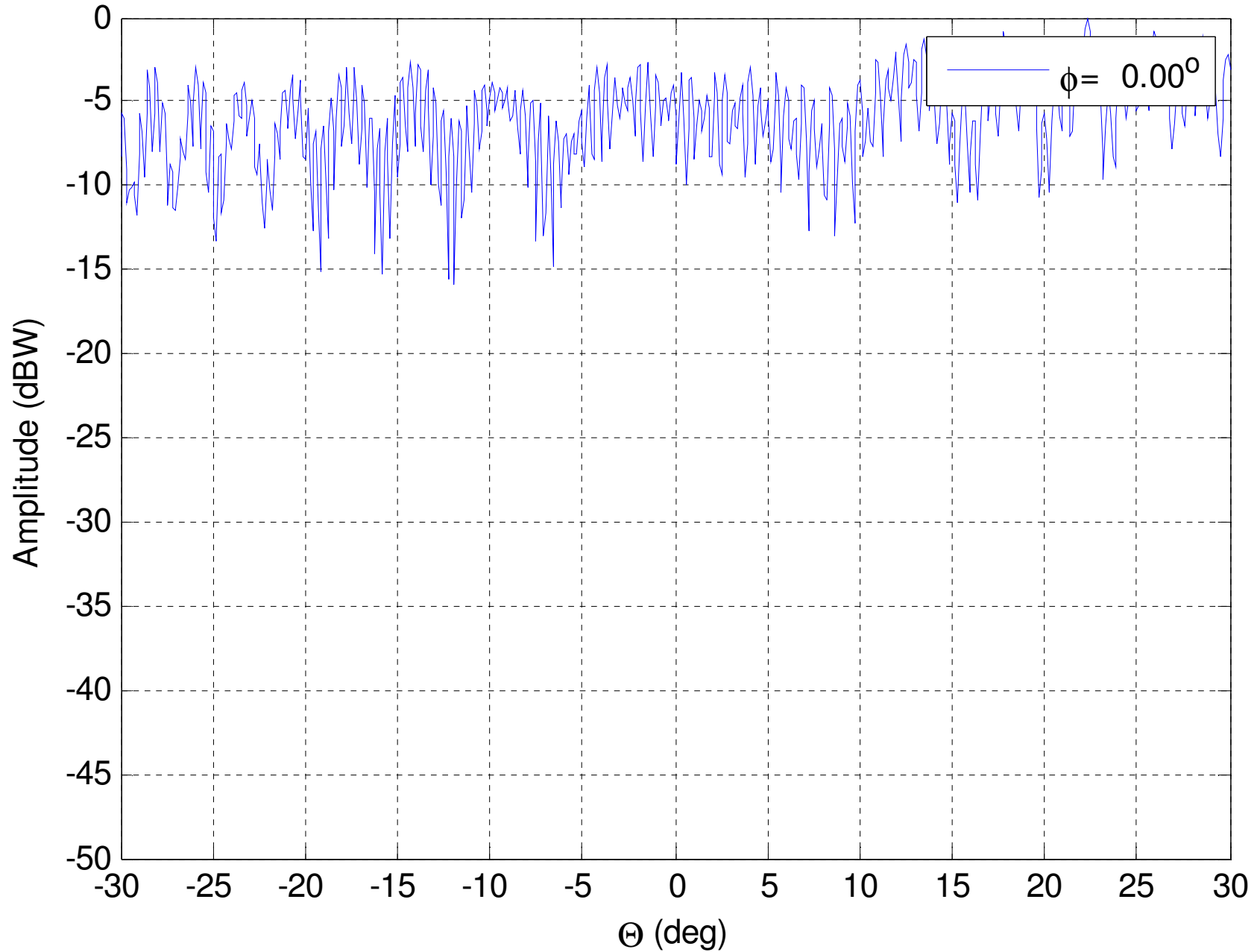
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 2.48 dBW, Date: 14-Dec-2011



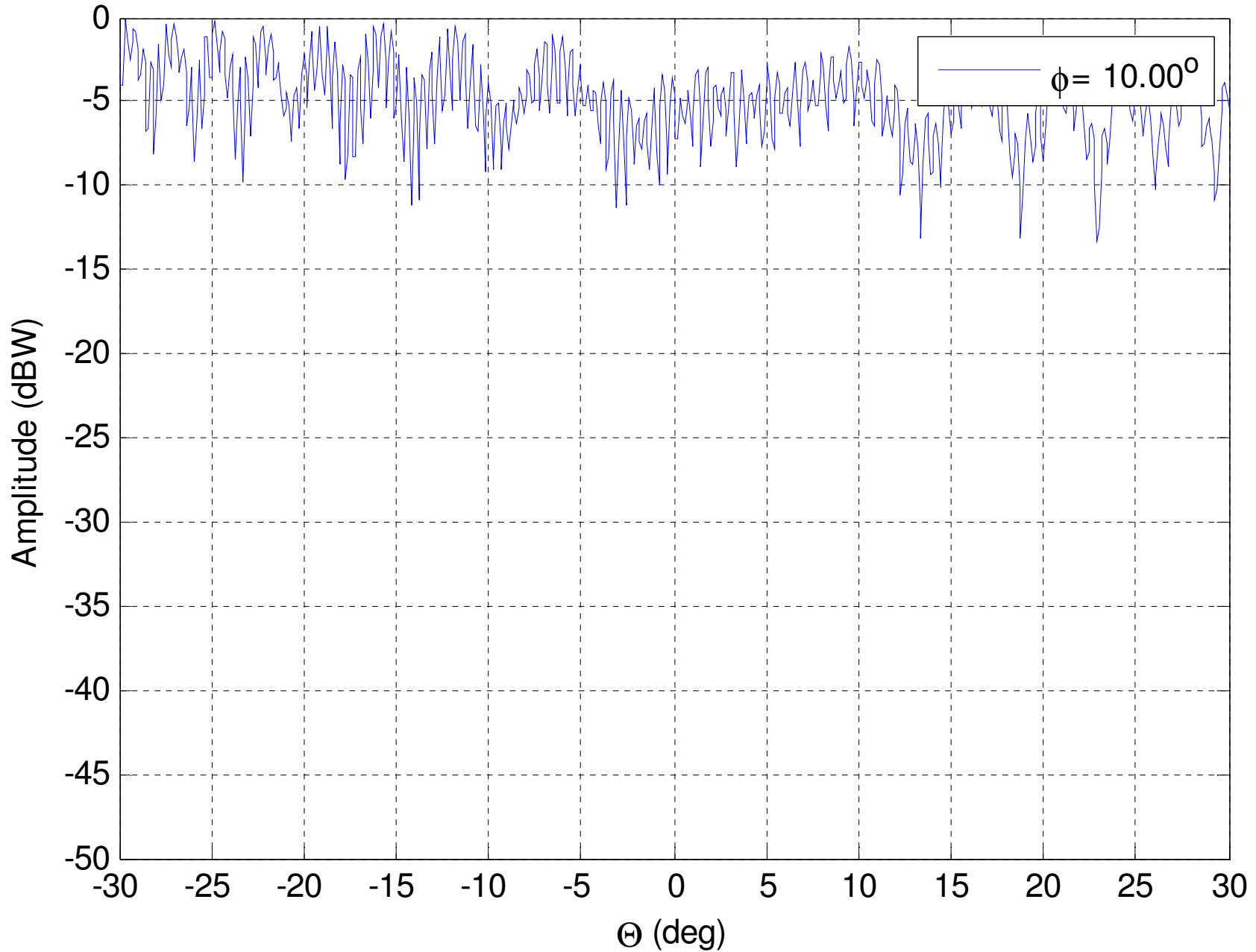
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 2.51 dBW, Date: 14-Dec-2011



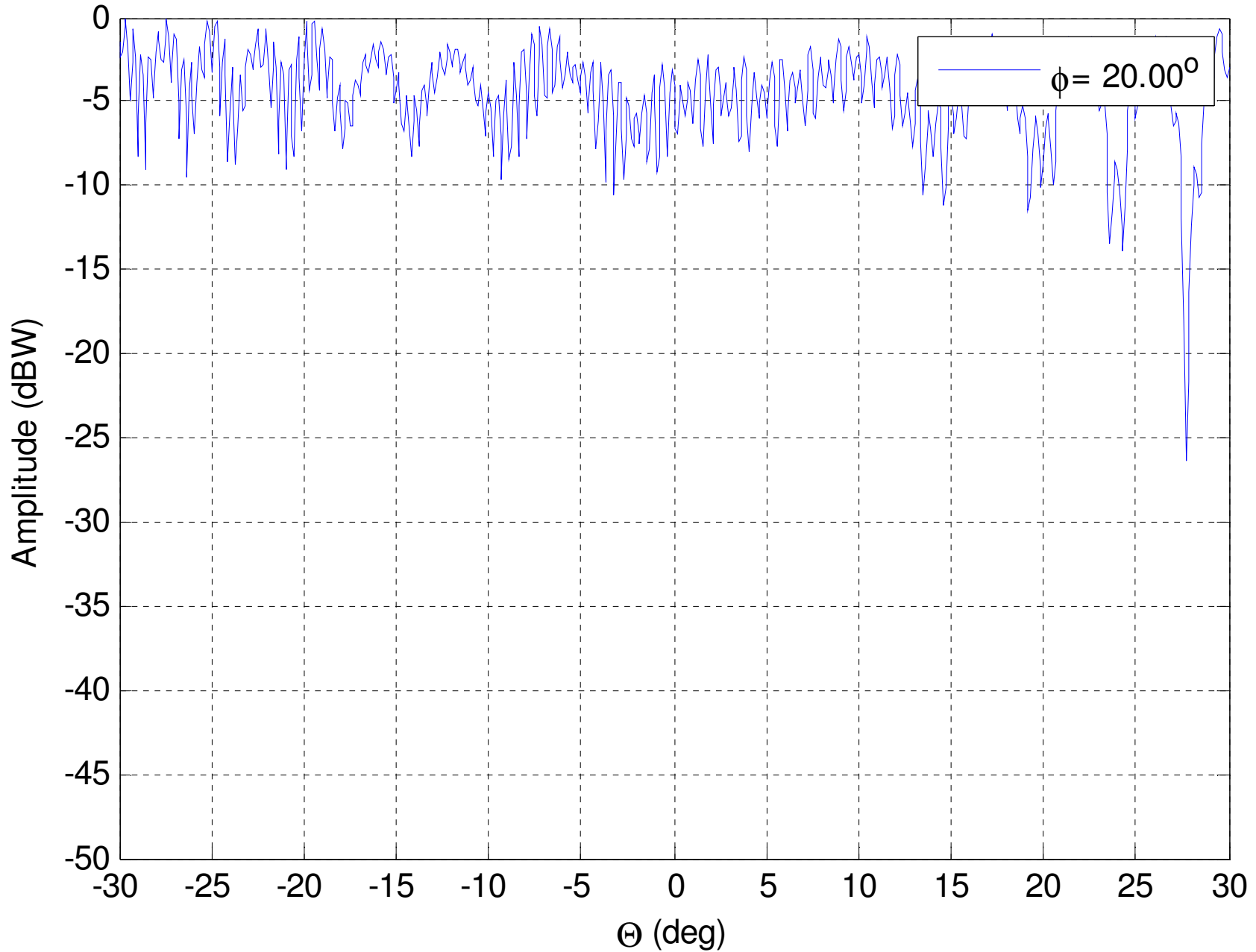
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 1.79 dBW, Date: 14-Dec-2011



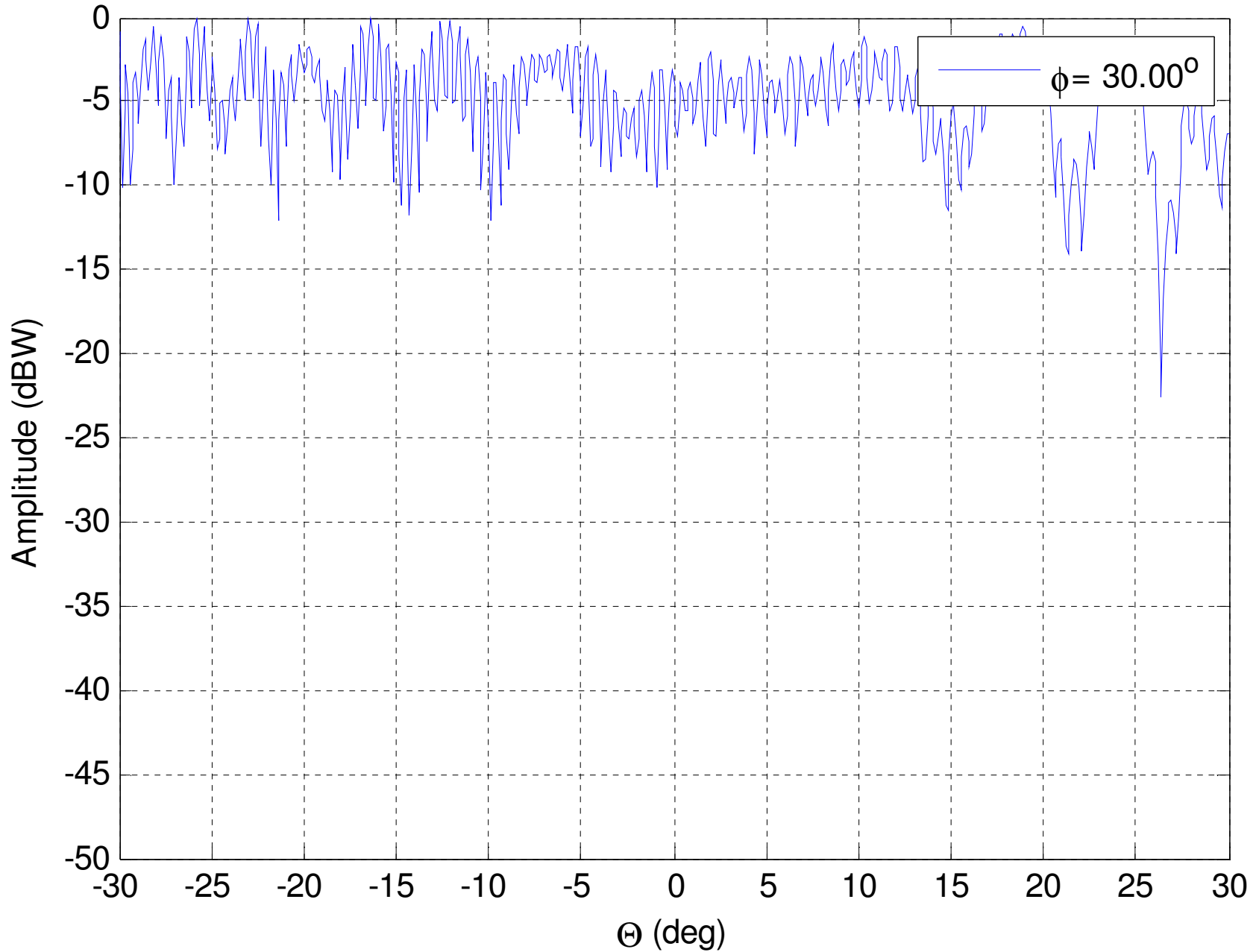
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 1.23 dBW, Date: 14-Dec-2011



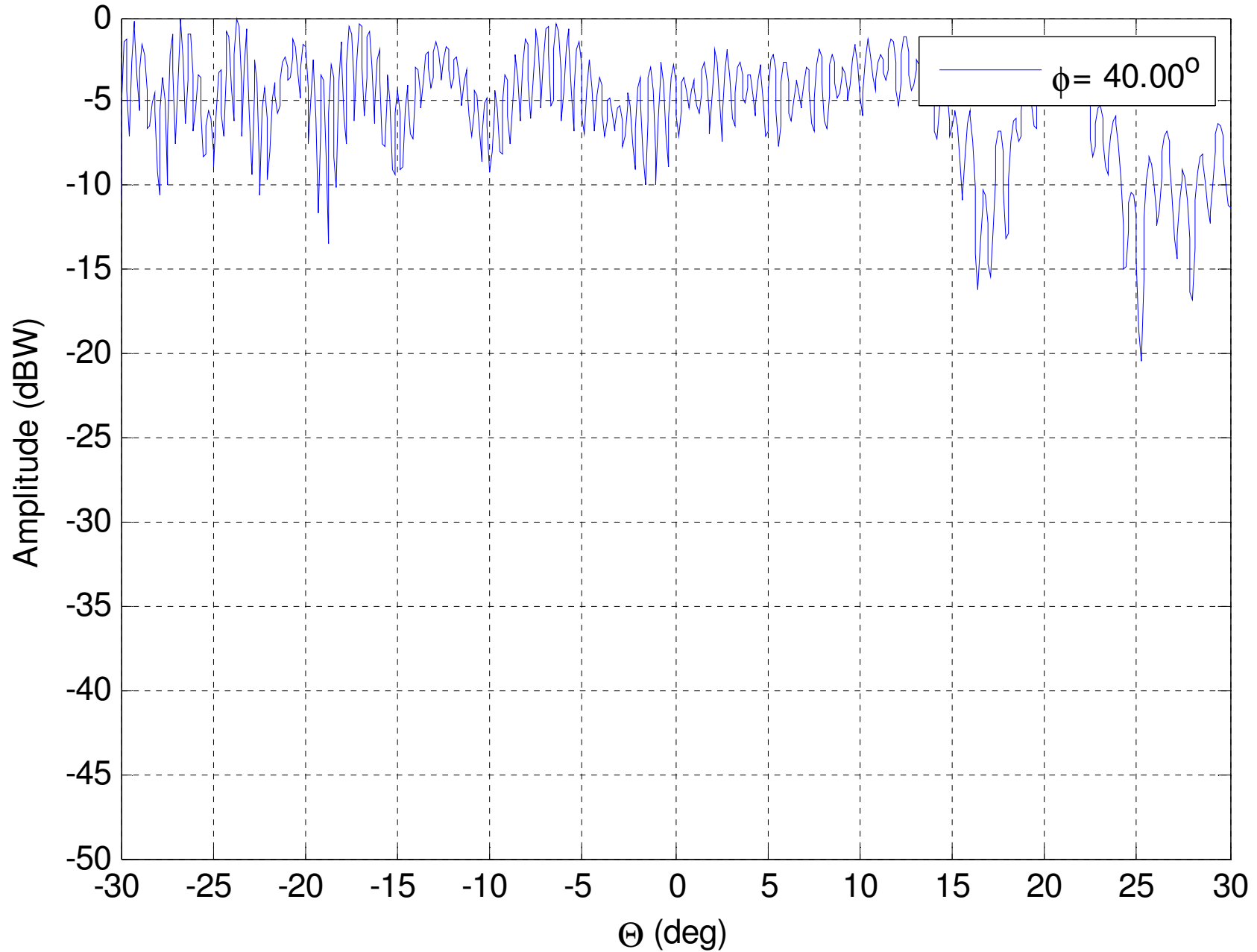
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: 1.21 dBW, Date: 14-Dec-2011



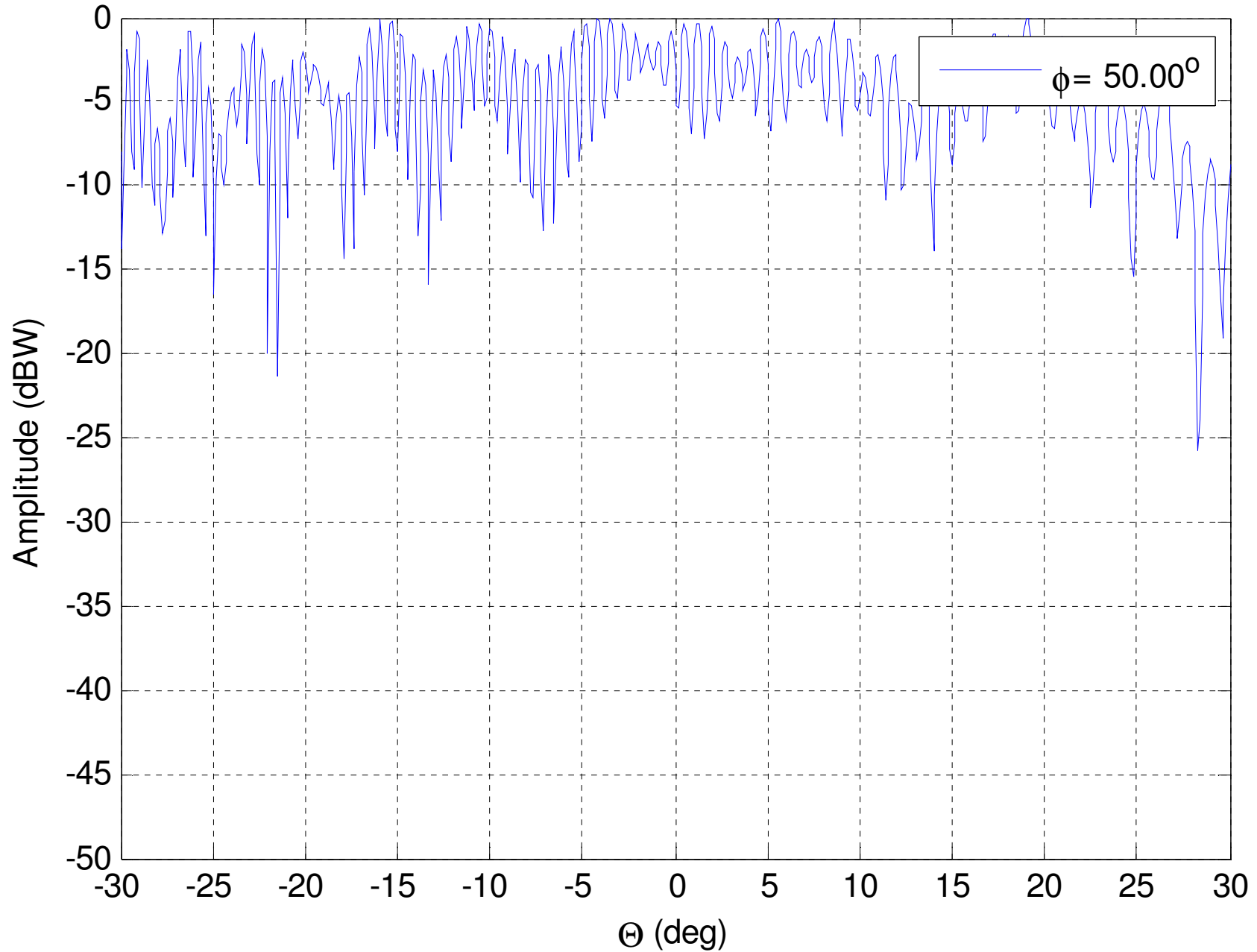
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: 0.97 dBW, Date: 14-Dec-2011



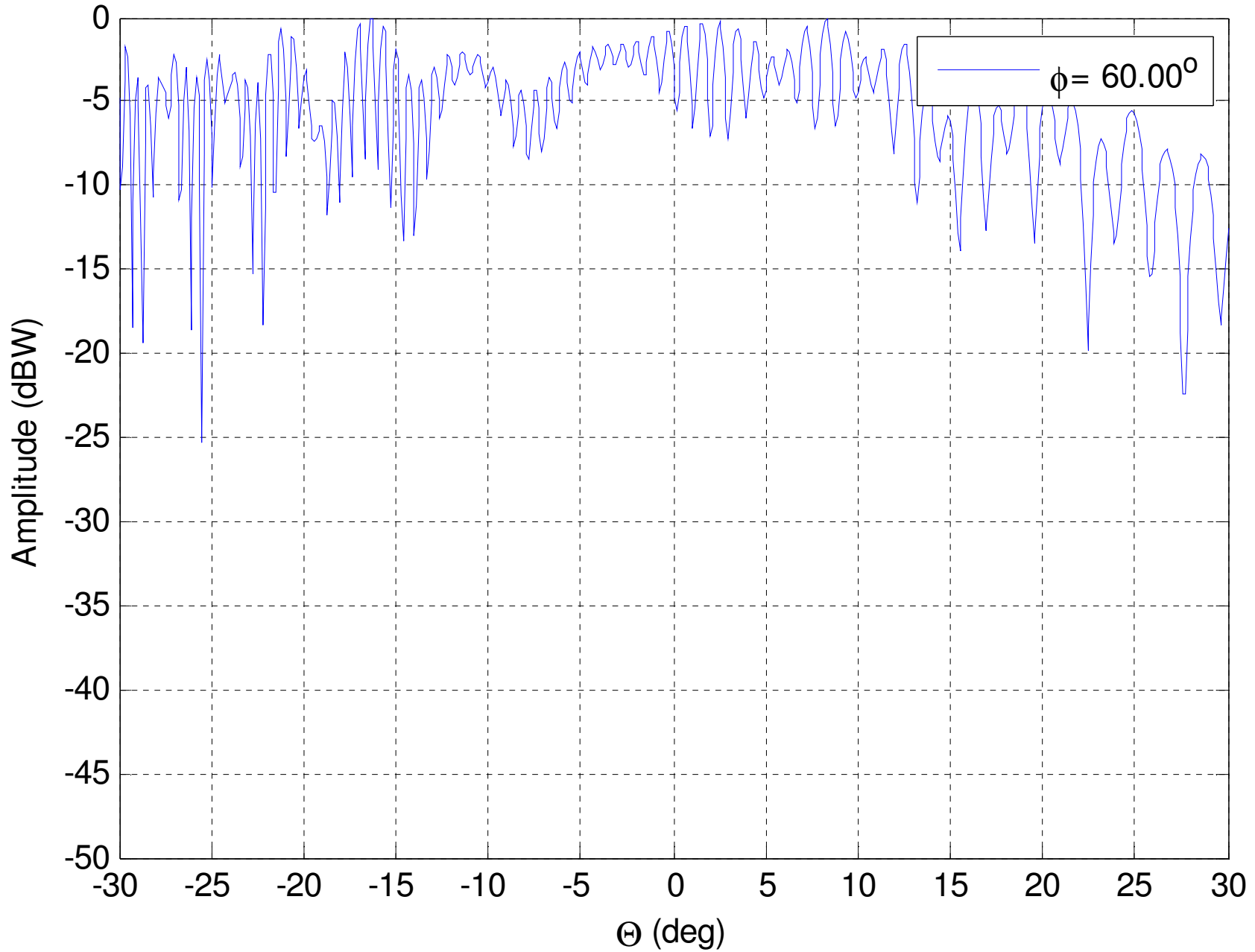
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -0.30 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

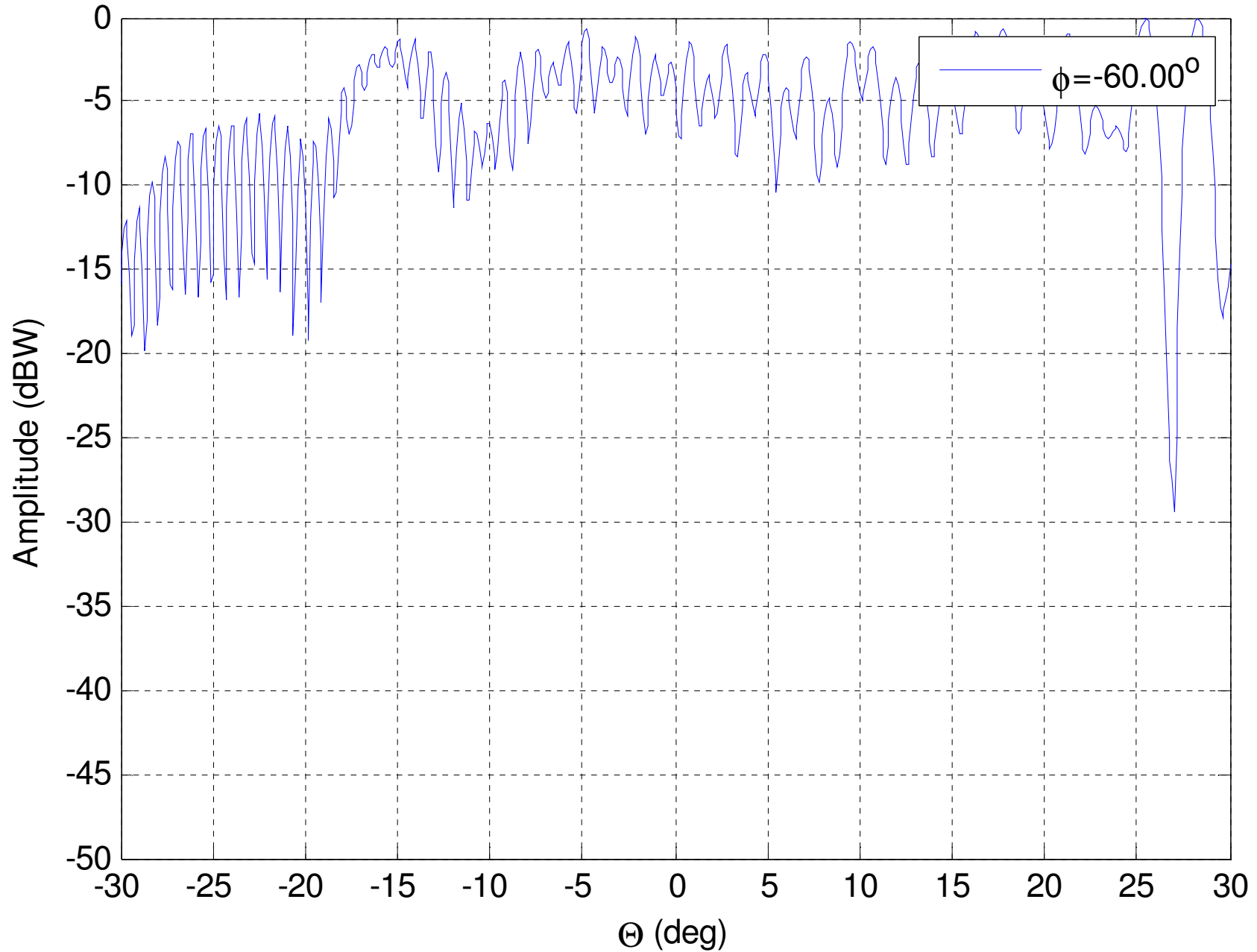
Input file: tx-17.7-rhcp-60.cut, Peak: -0.37 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

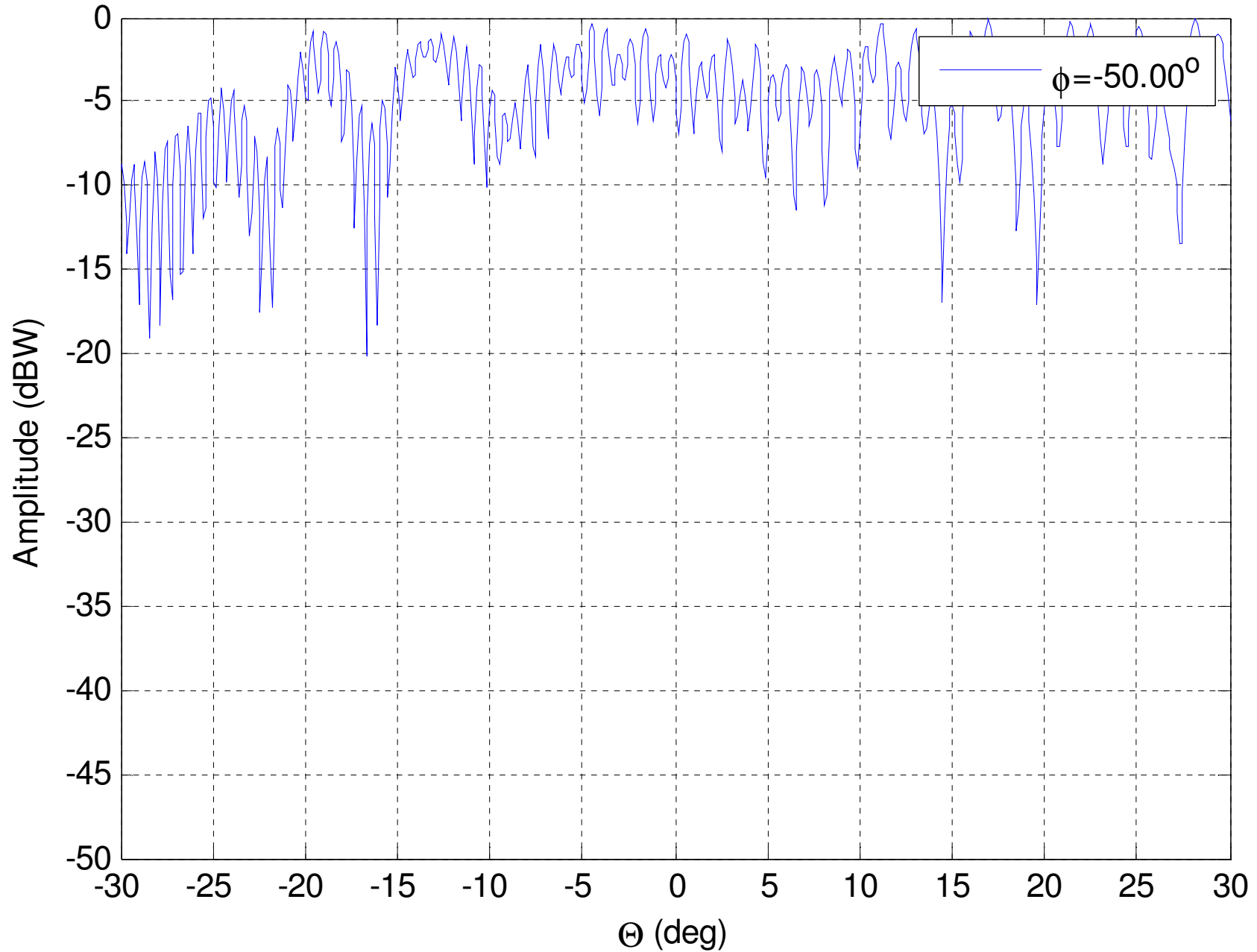
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: 1.21 dBW, Date: 14-Dec-2011



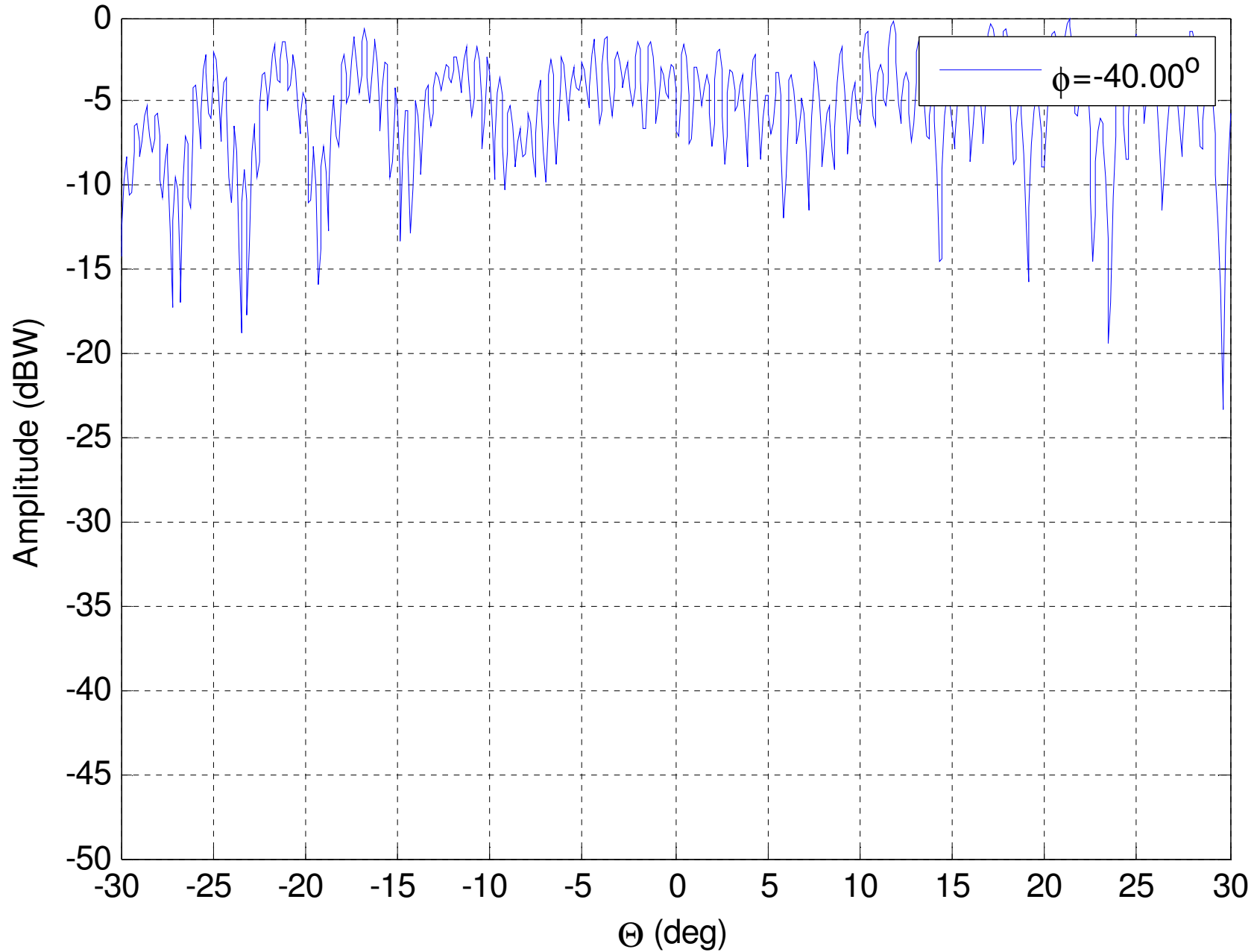
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: 0.77 dBW, Date: 14-Dec-2011



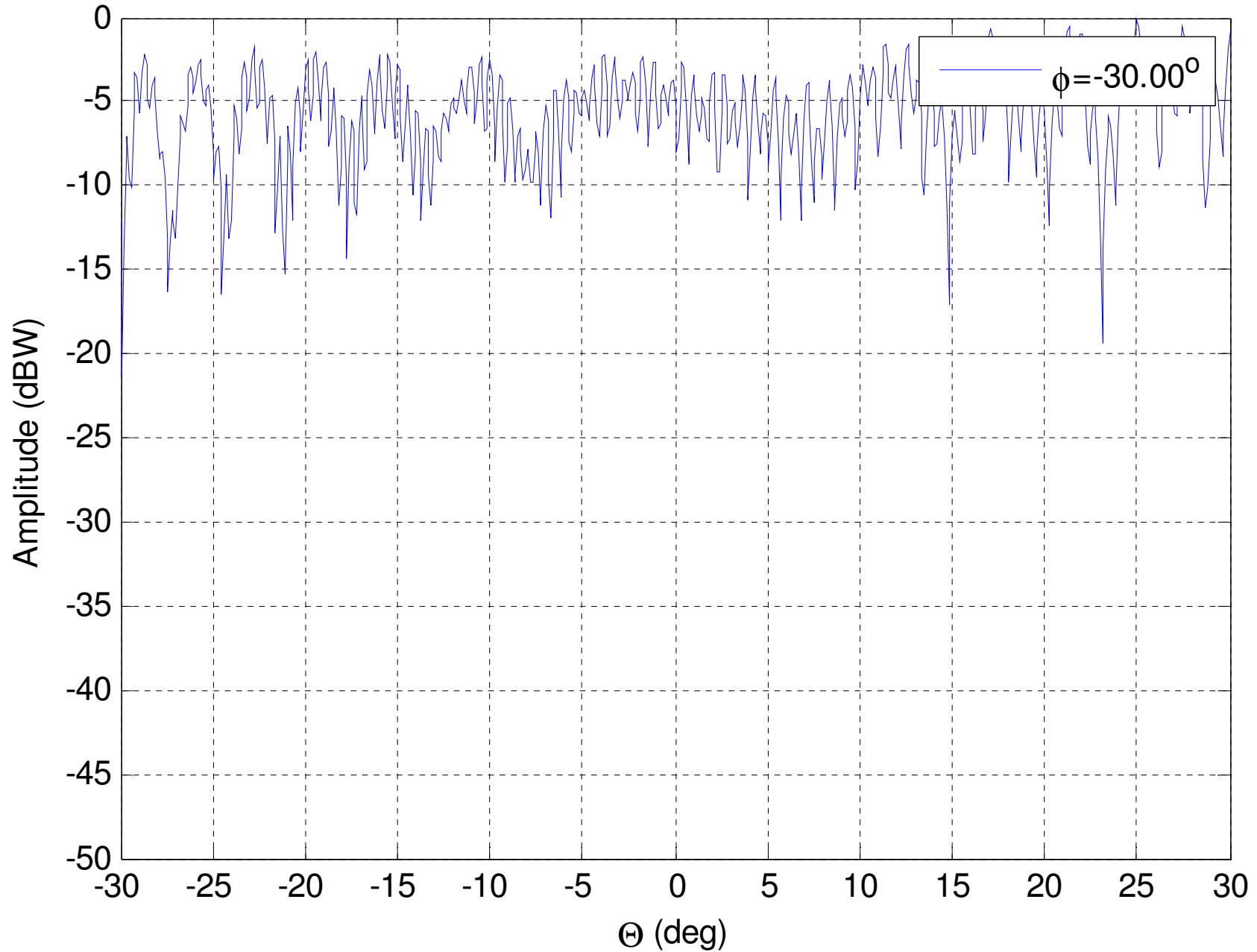
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: 1.39 dBW, Date: 14-Dec-2011



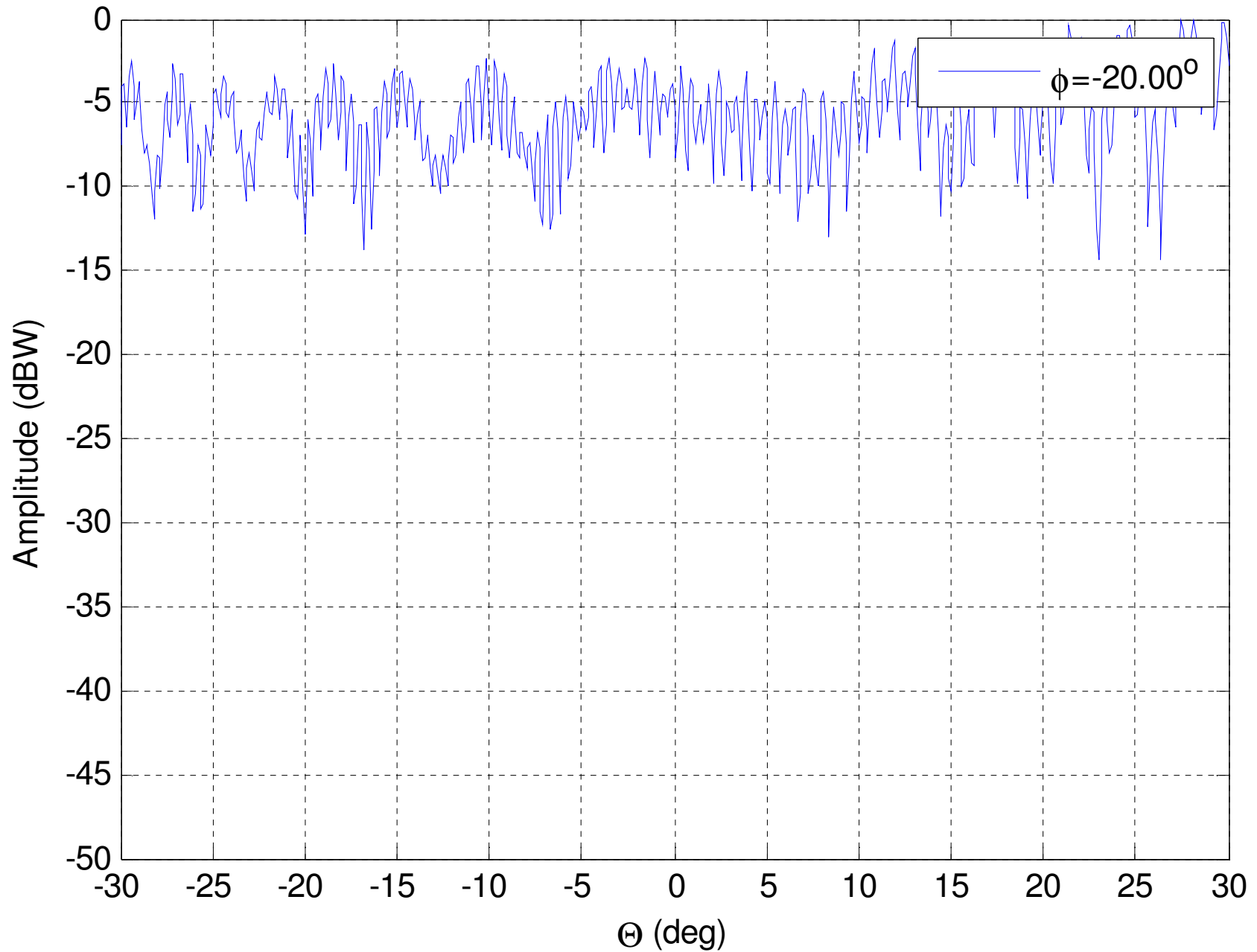
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: 2.33 dBW, Date: 14-Dec-2011



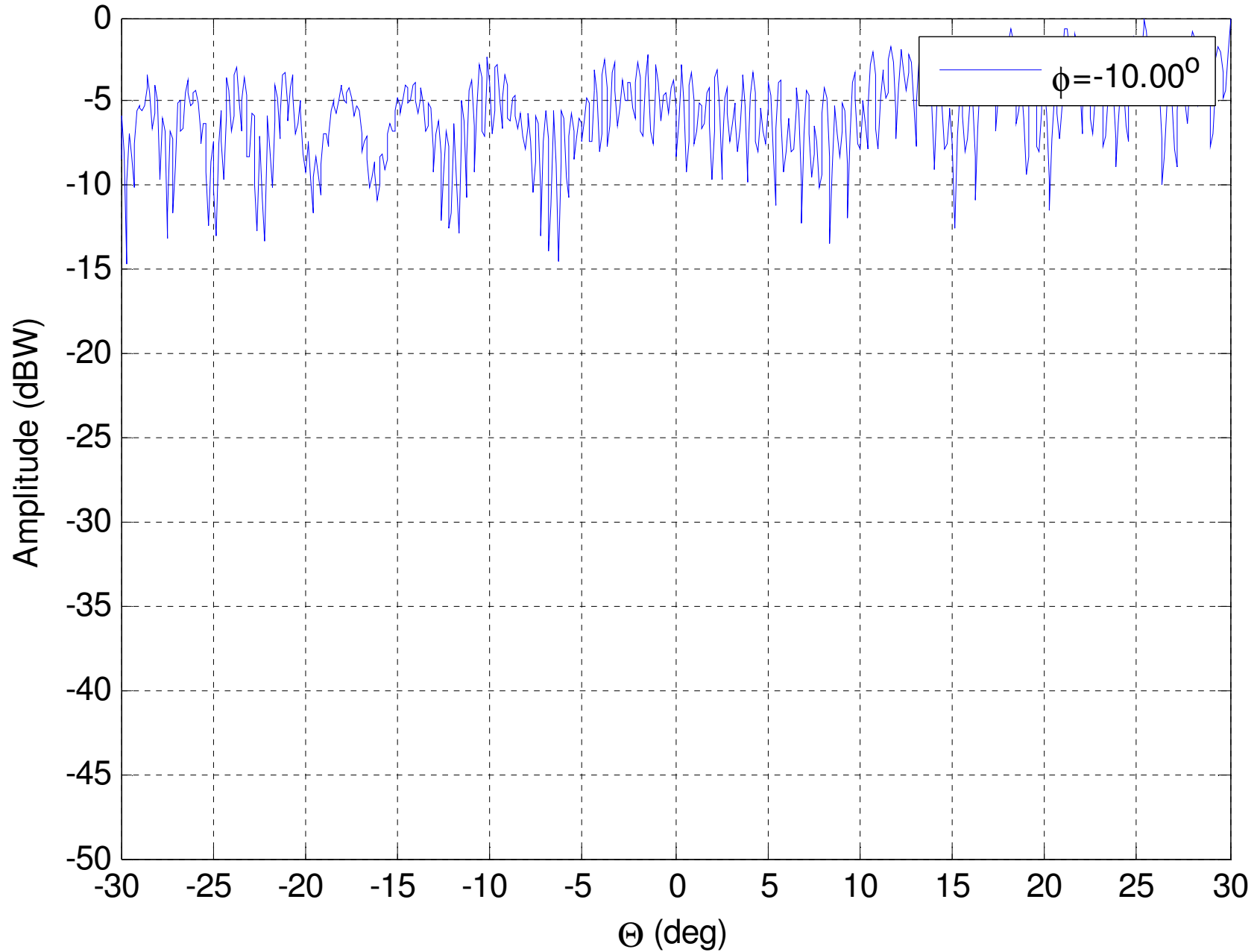
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 2.54 dBW, Date: 14-Dec-2011



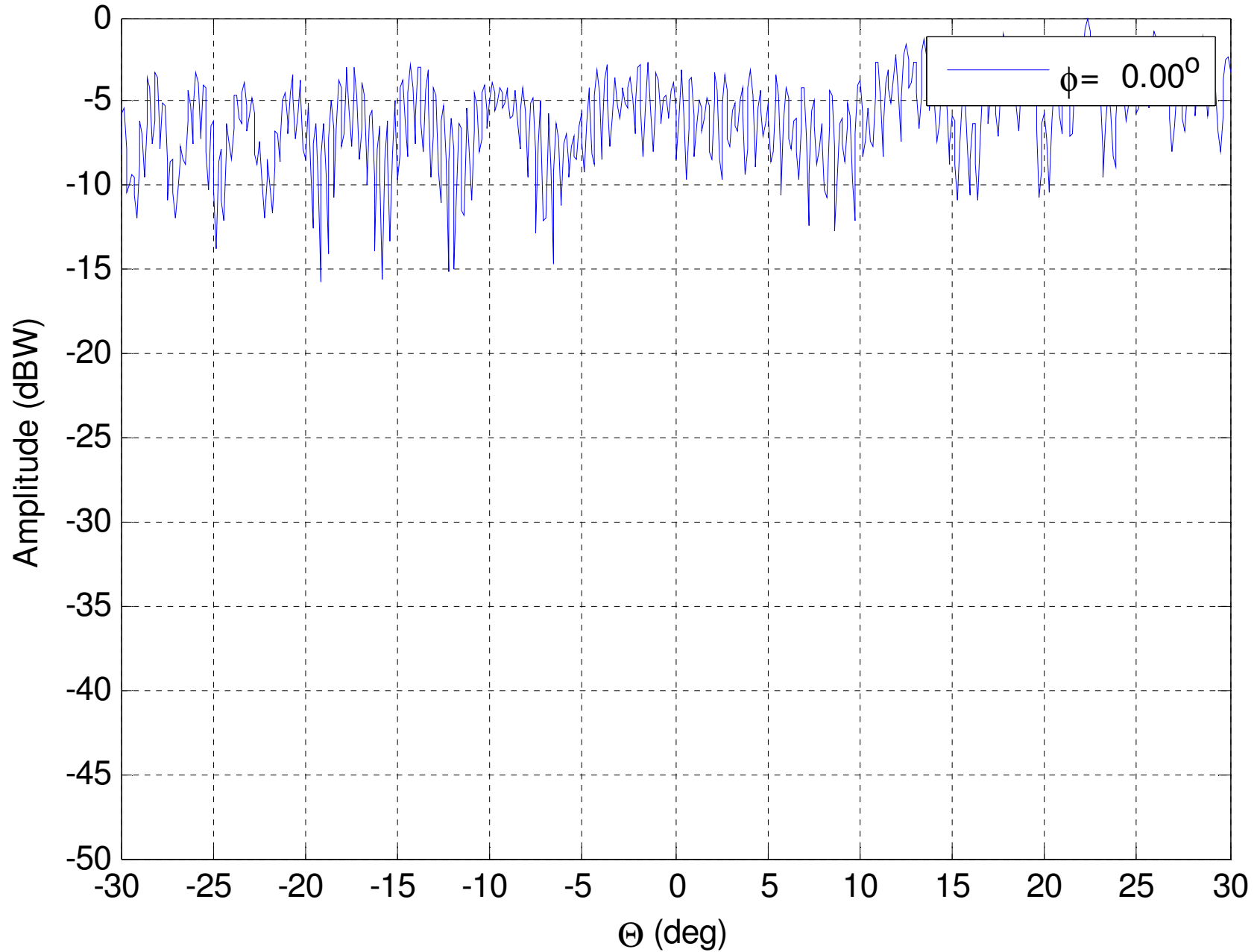
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 2.45 dBW, Date: 14-Dec-2011



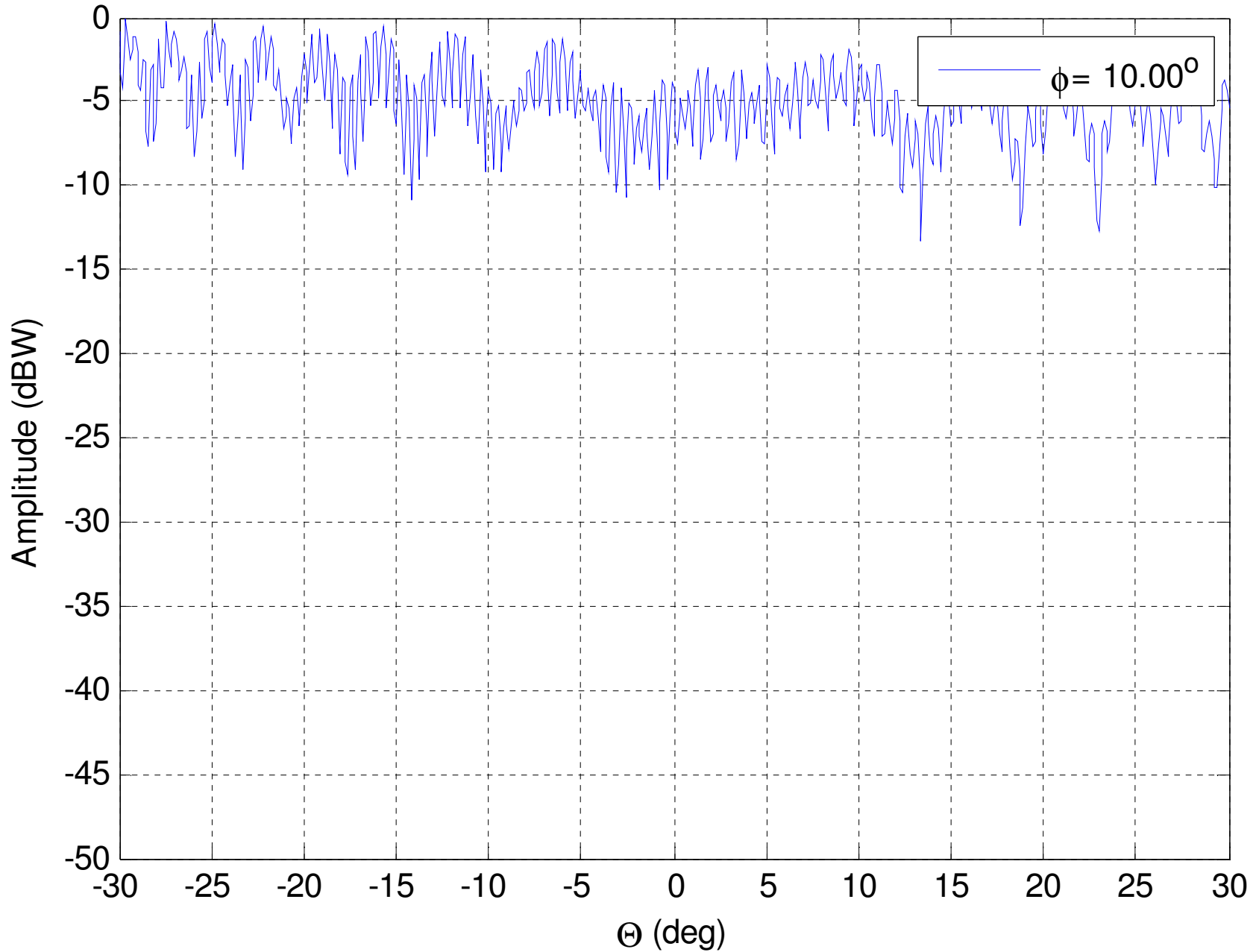
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 2.60 dBW, Date: 14-Dec-2011



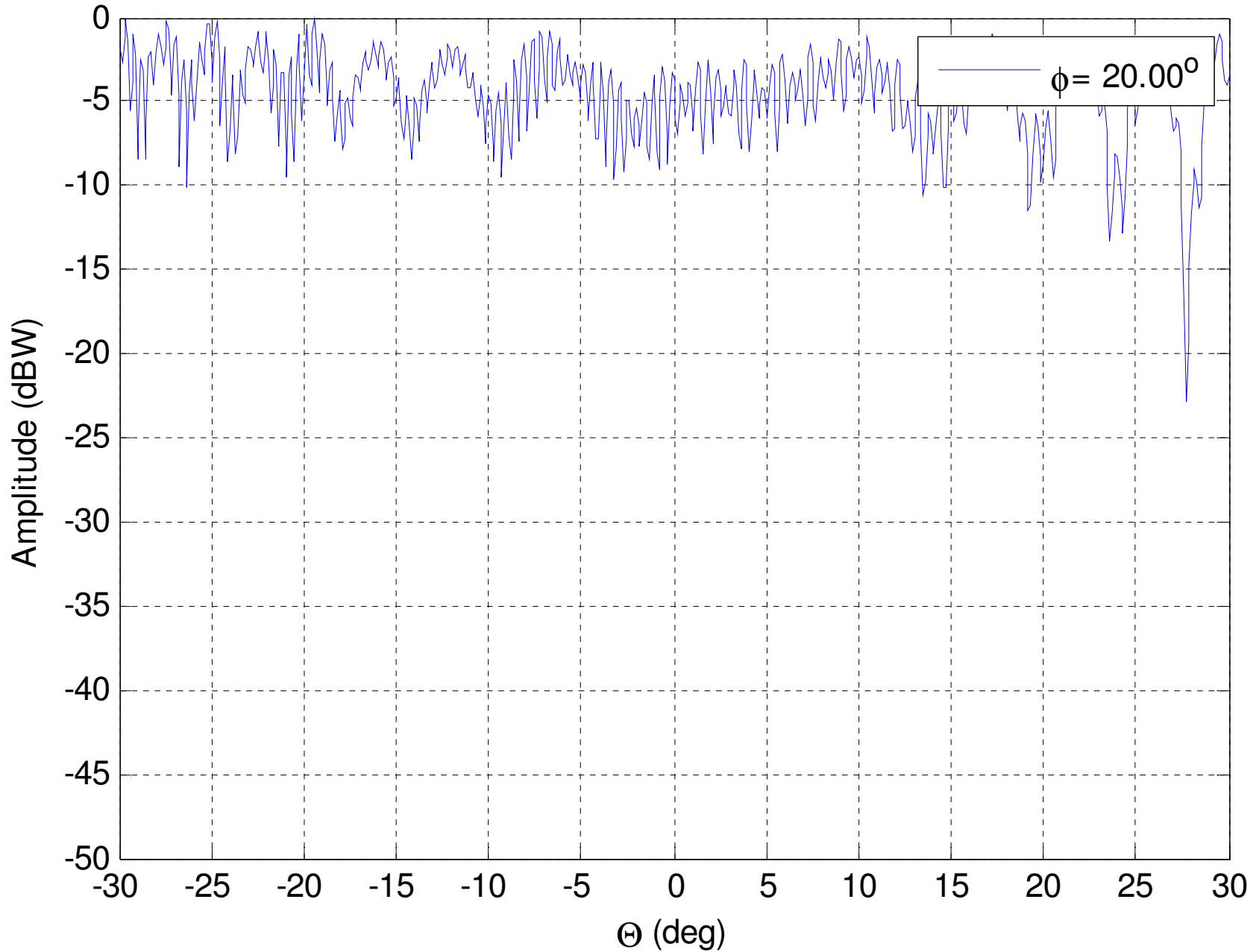
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 1.94 dBW, Date: 14-Dec-2011



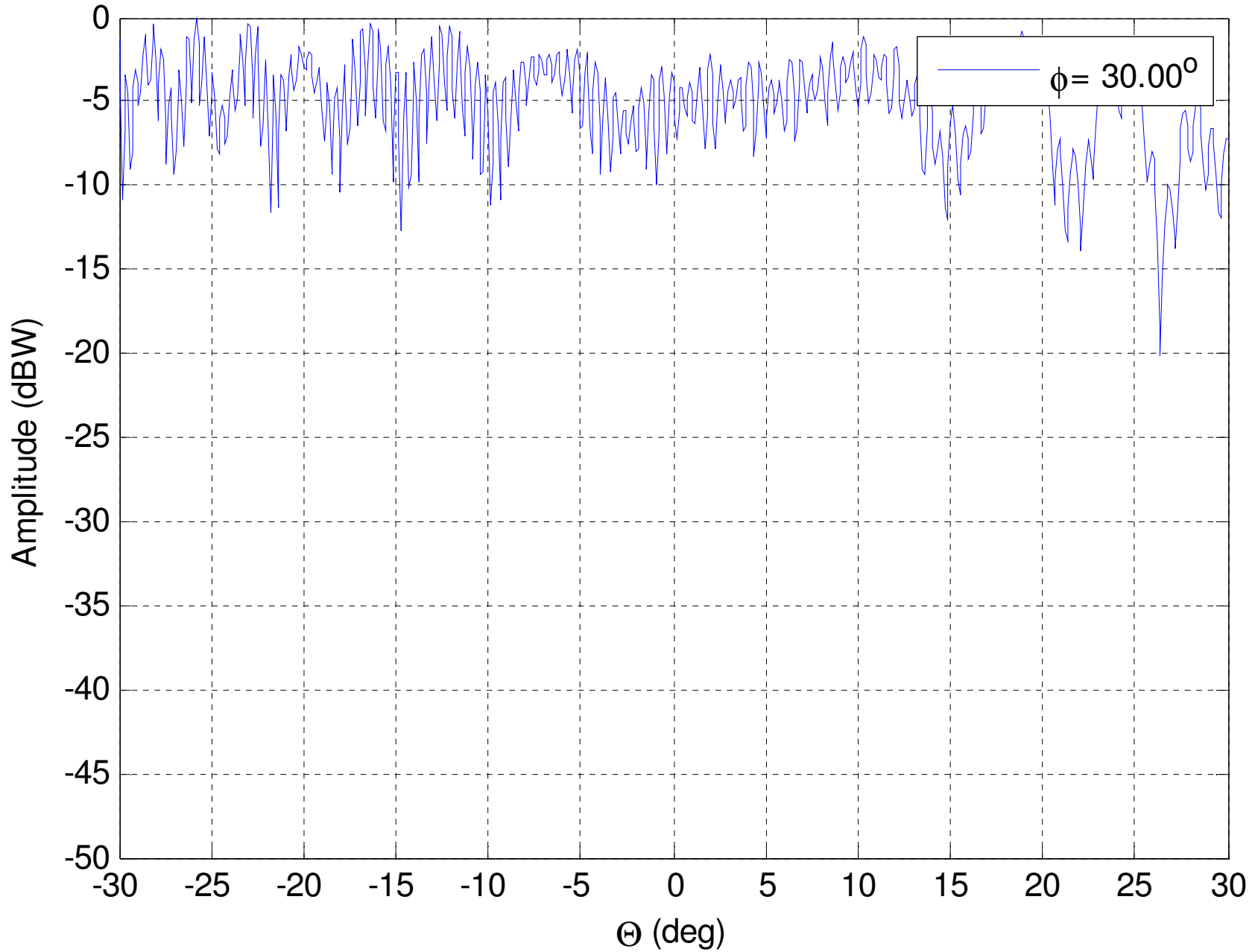
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 1.28 dBW, Date: 14-Dec-2011



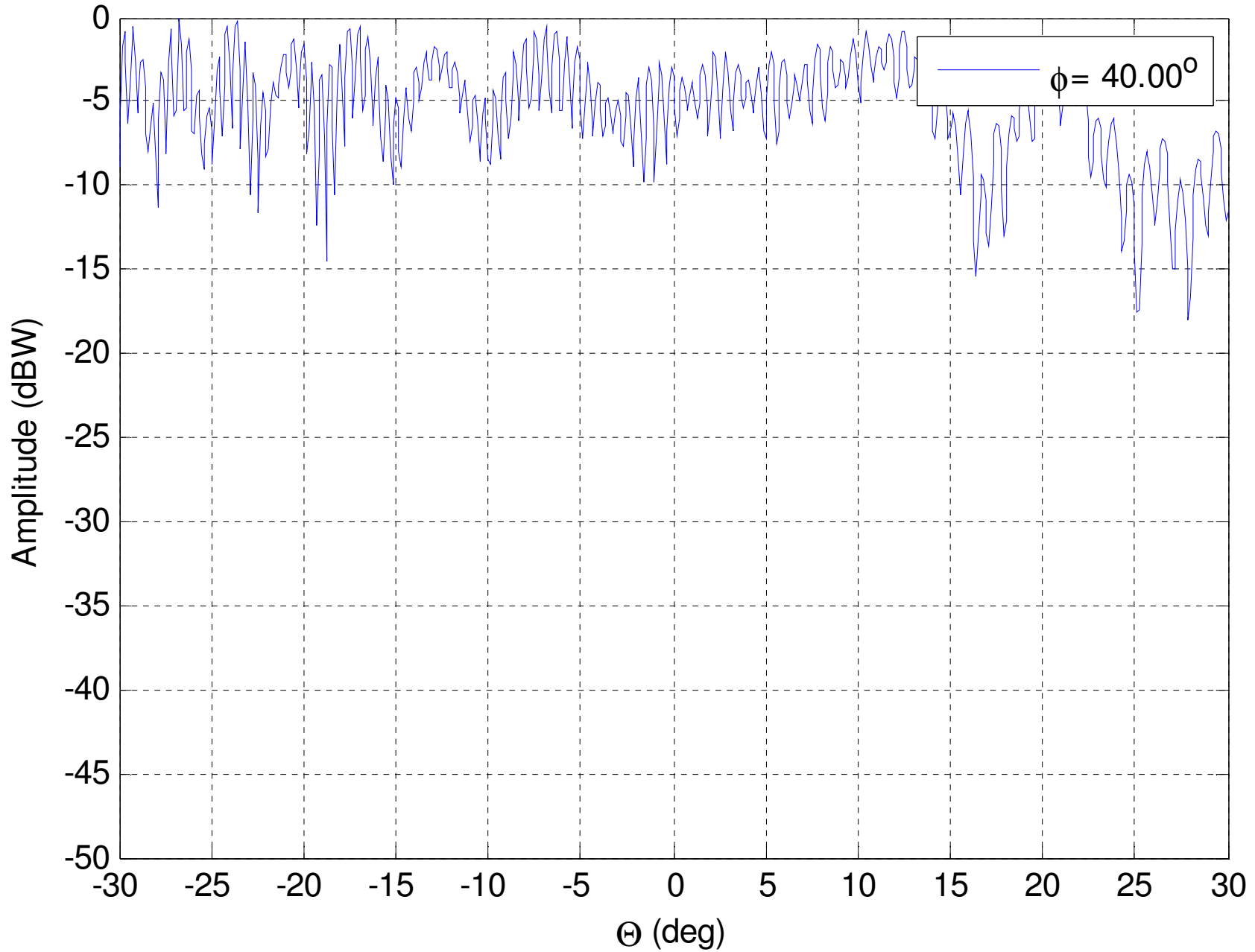
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: 1.38 dBW, Date: 14-Dec-2011



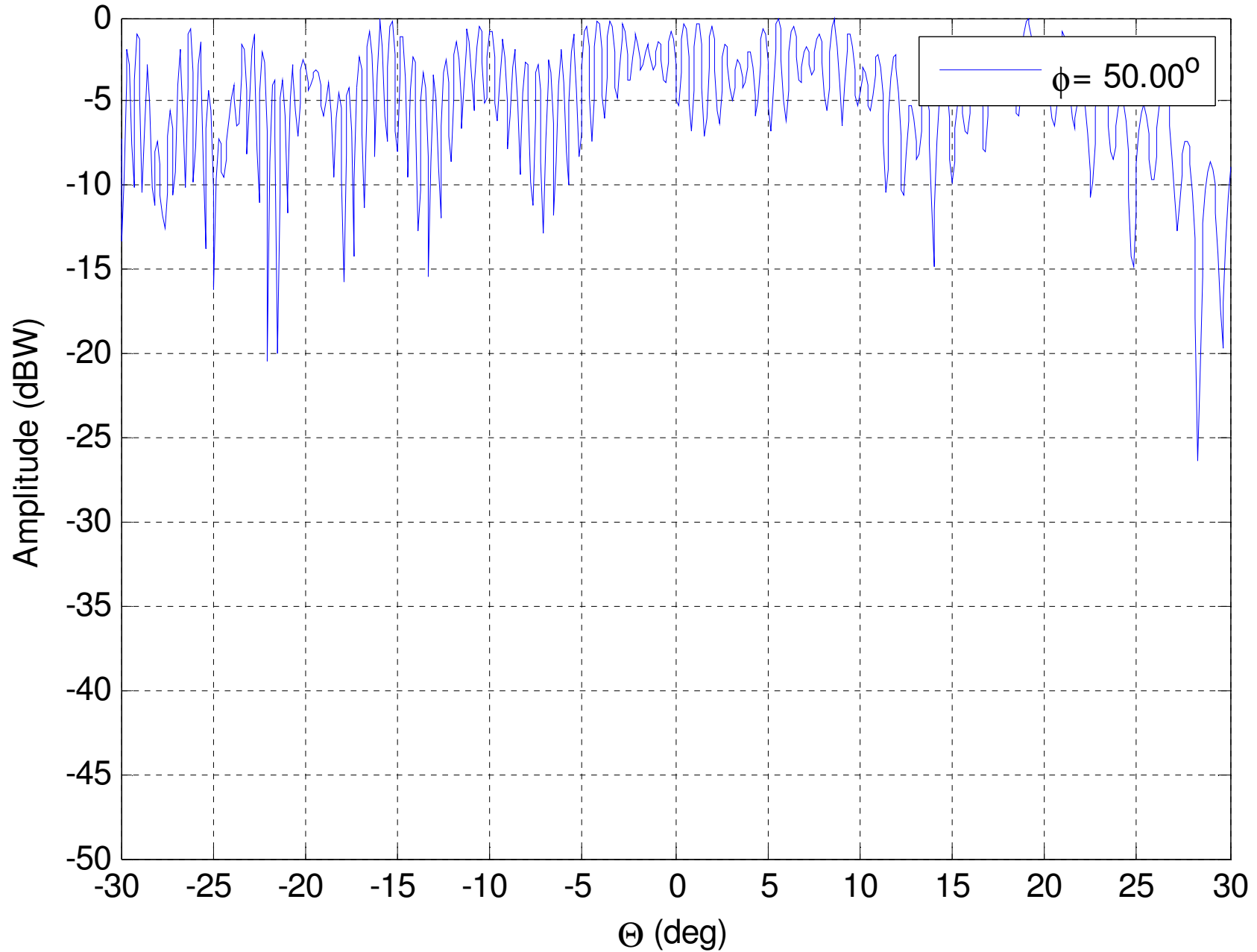
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: 1.08 dBW, Date: 14-Dec-2011



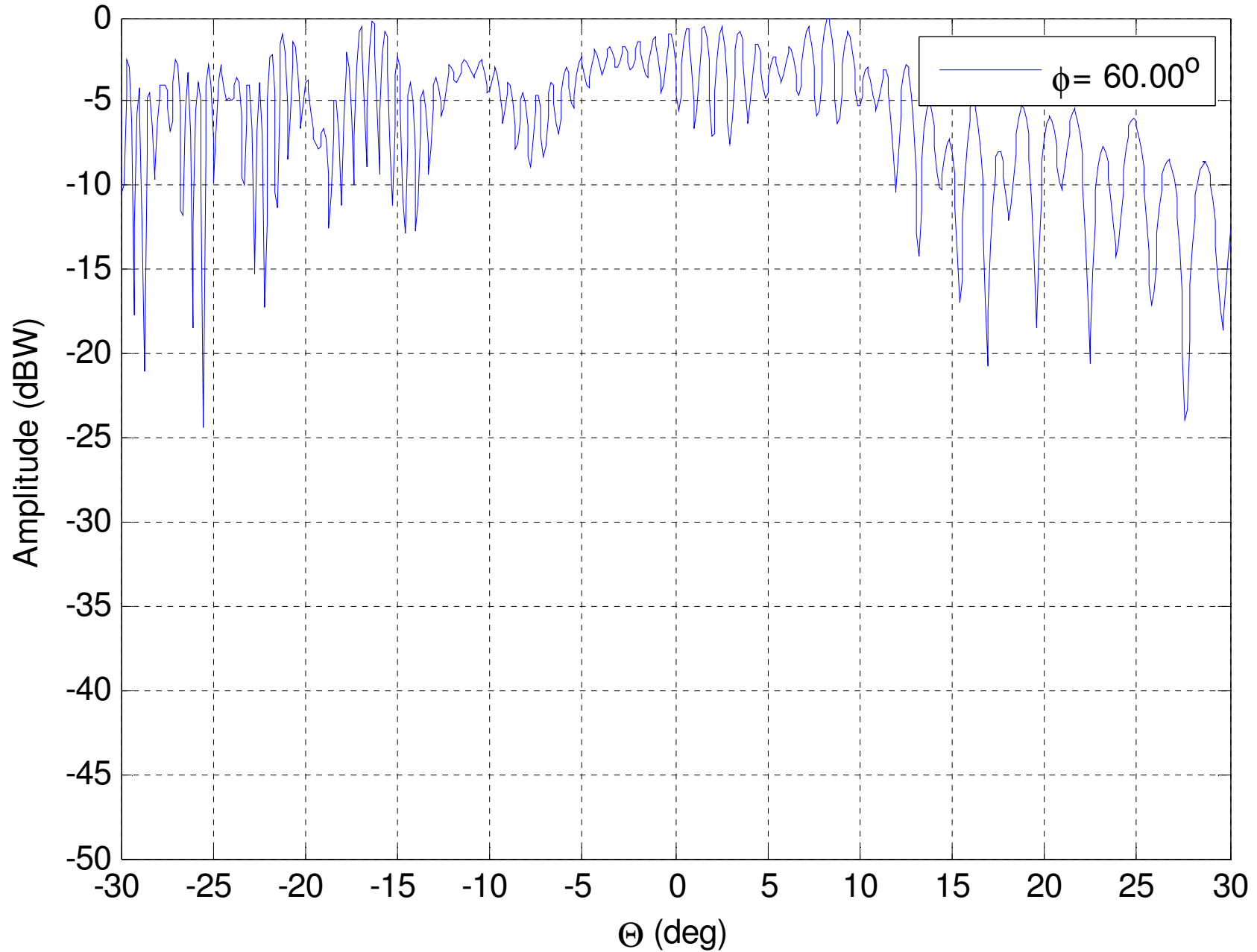
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -0.18 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -0.10 dBW, Date: 14-Dec-2011



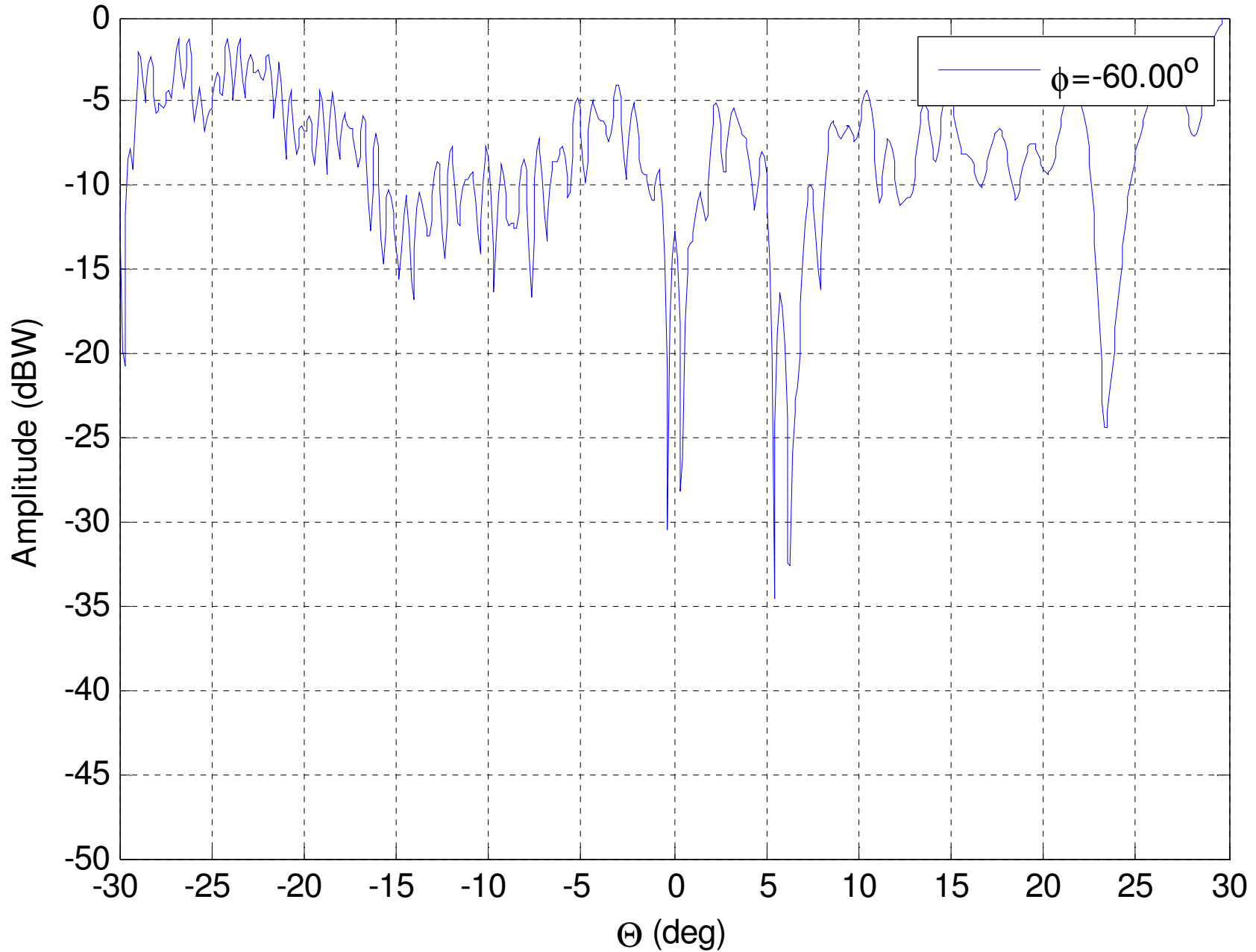
Spot Beam18, +X Axis Plots

- 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

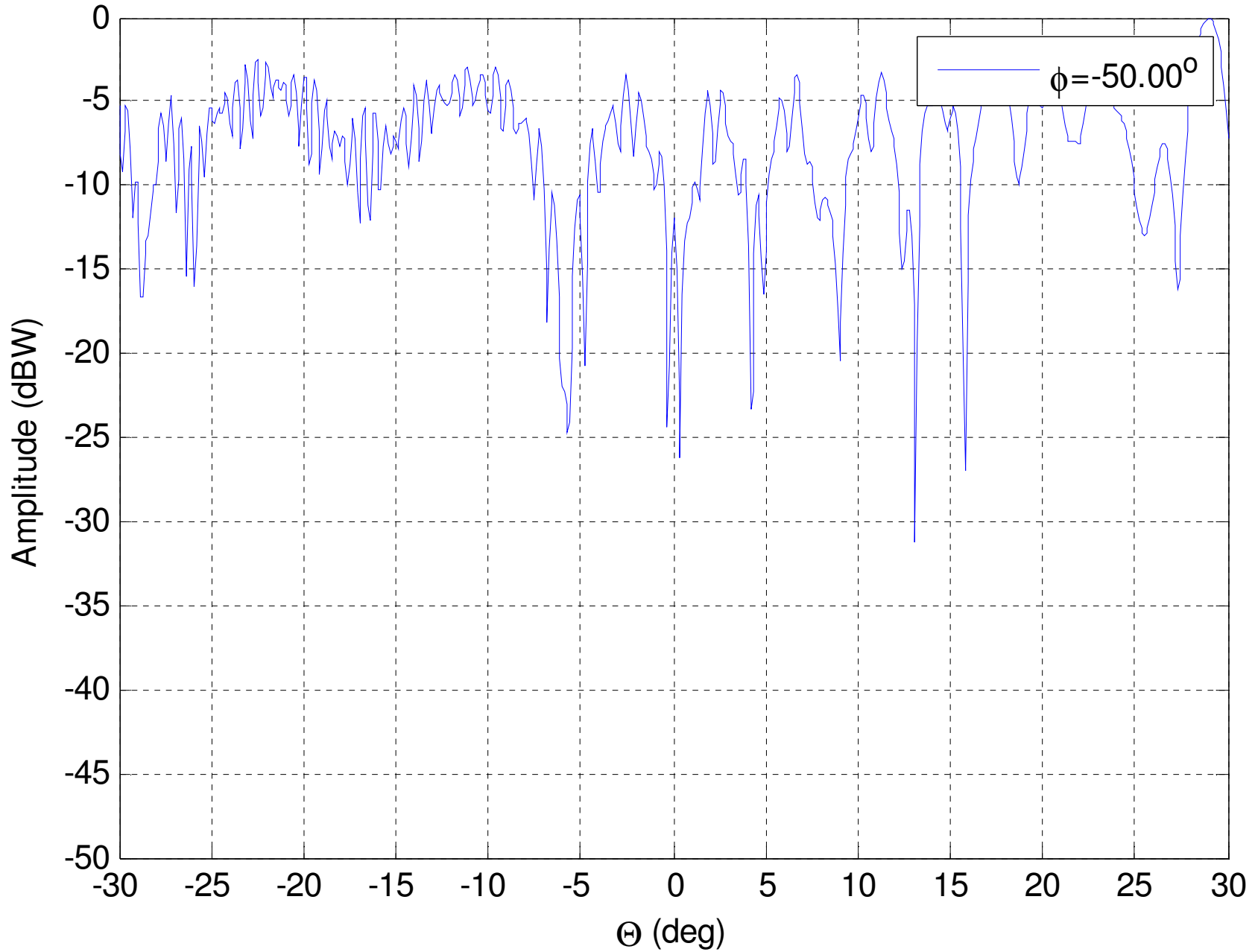
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -4.57 dBW, Date: 14-Dec-2011



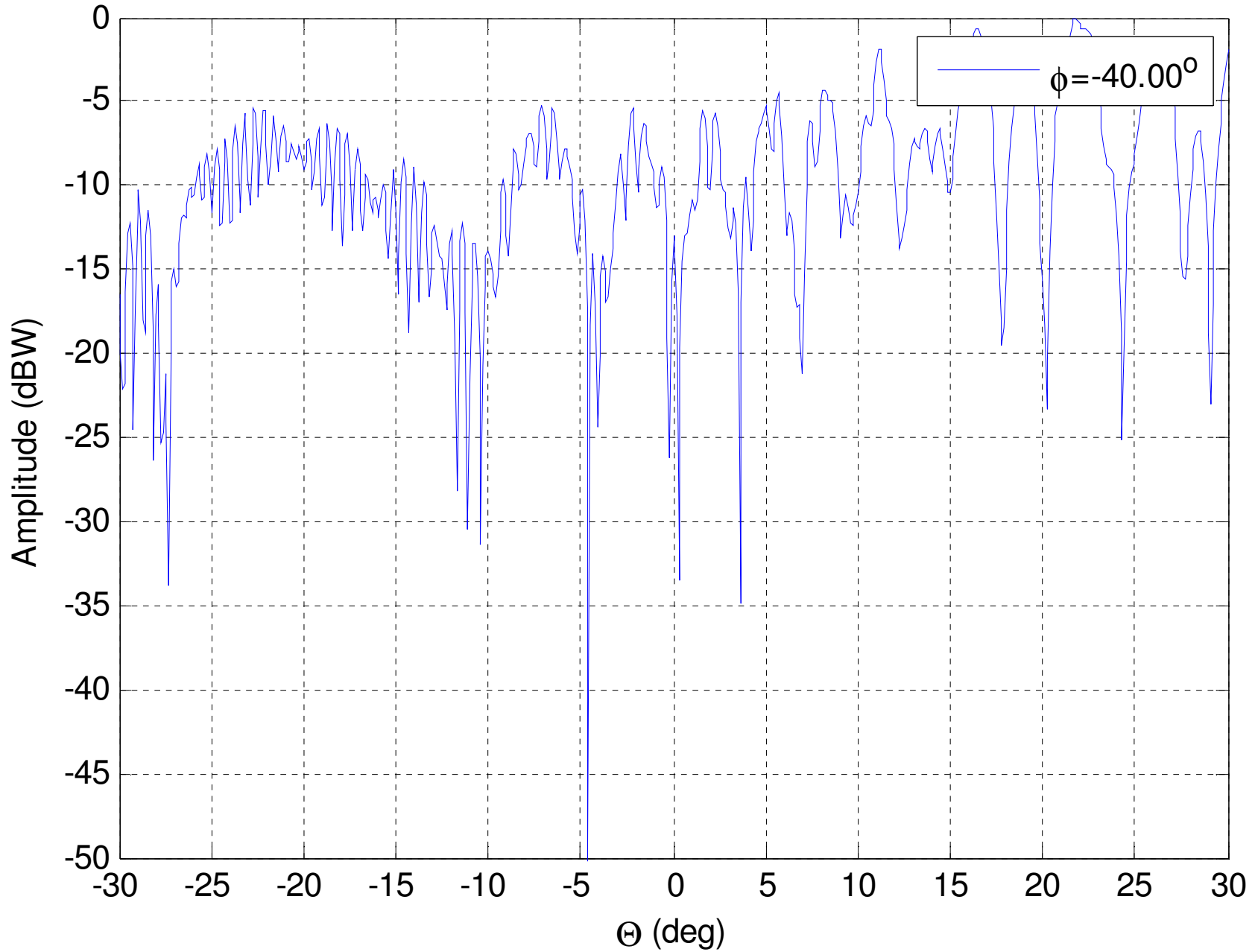
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -5.28 dBW, Date: 14-Dec-2011



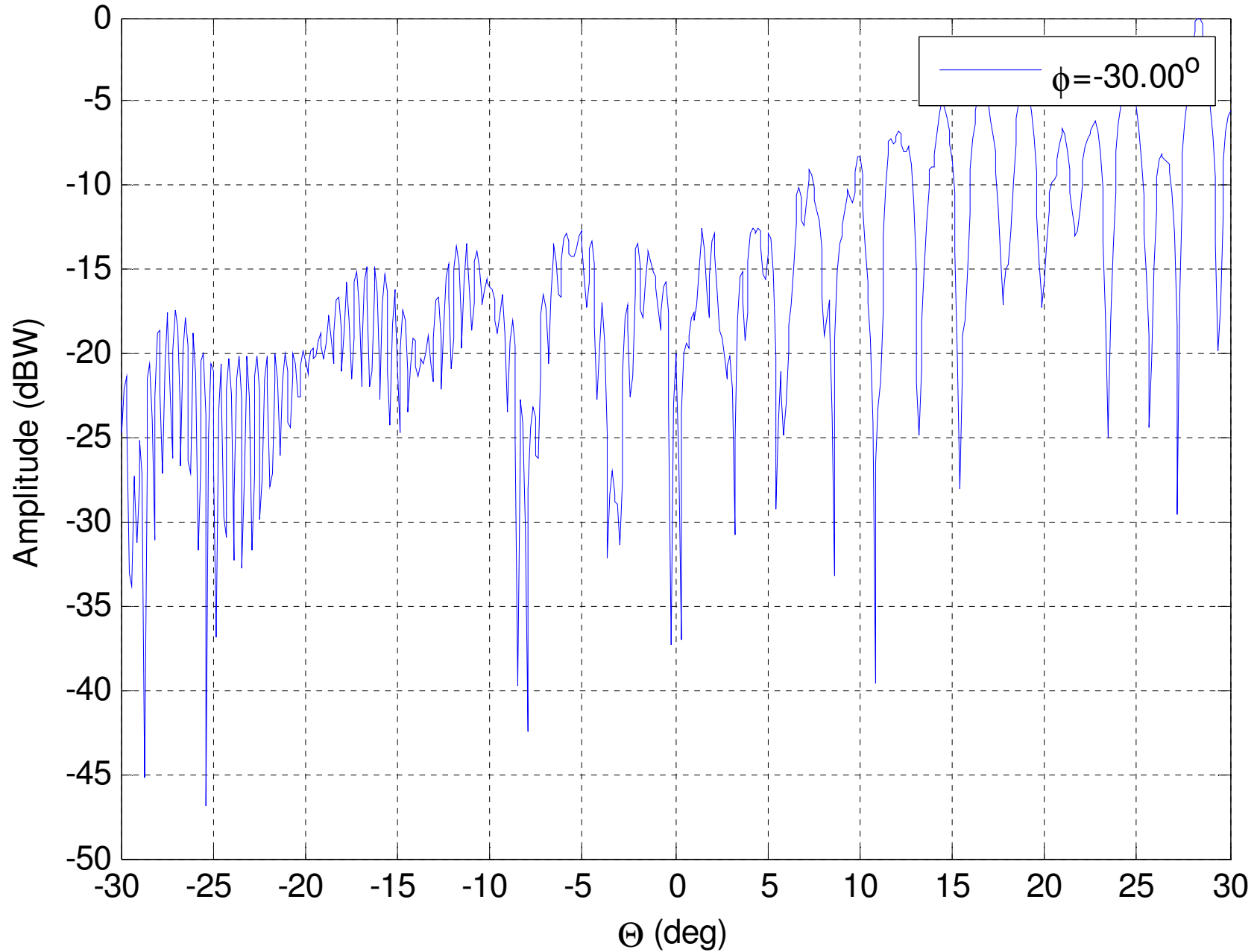
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.19 dBW, Date: 14-Dec-2011



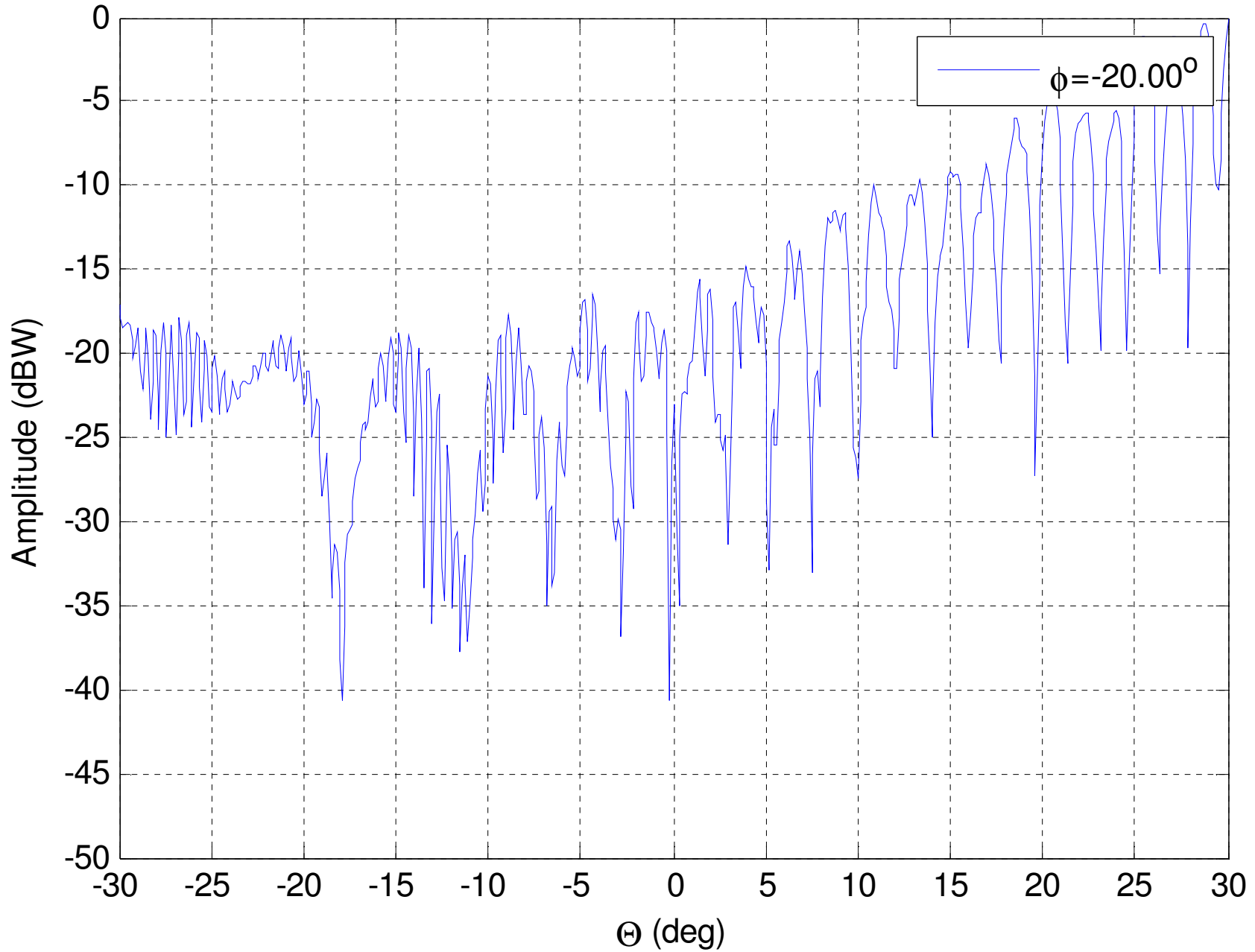
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 2.69 dBW, Date: 14-Dec-2011



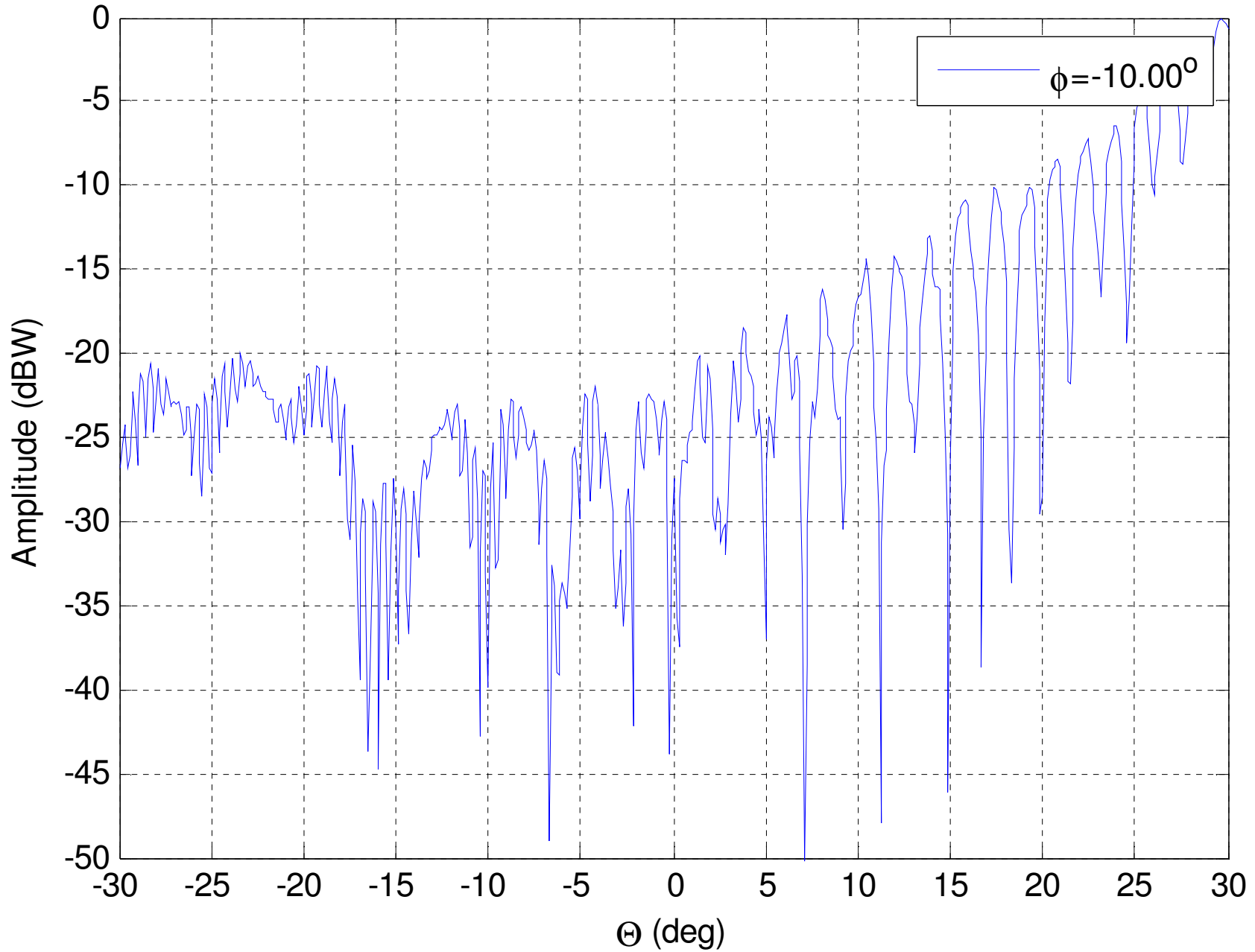
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 5.76 dBW, Date: 14-Dec-2011



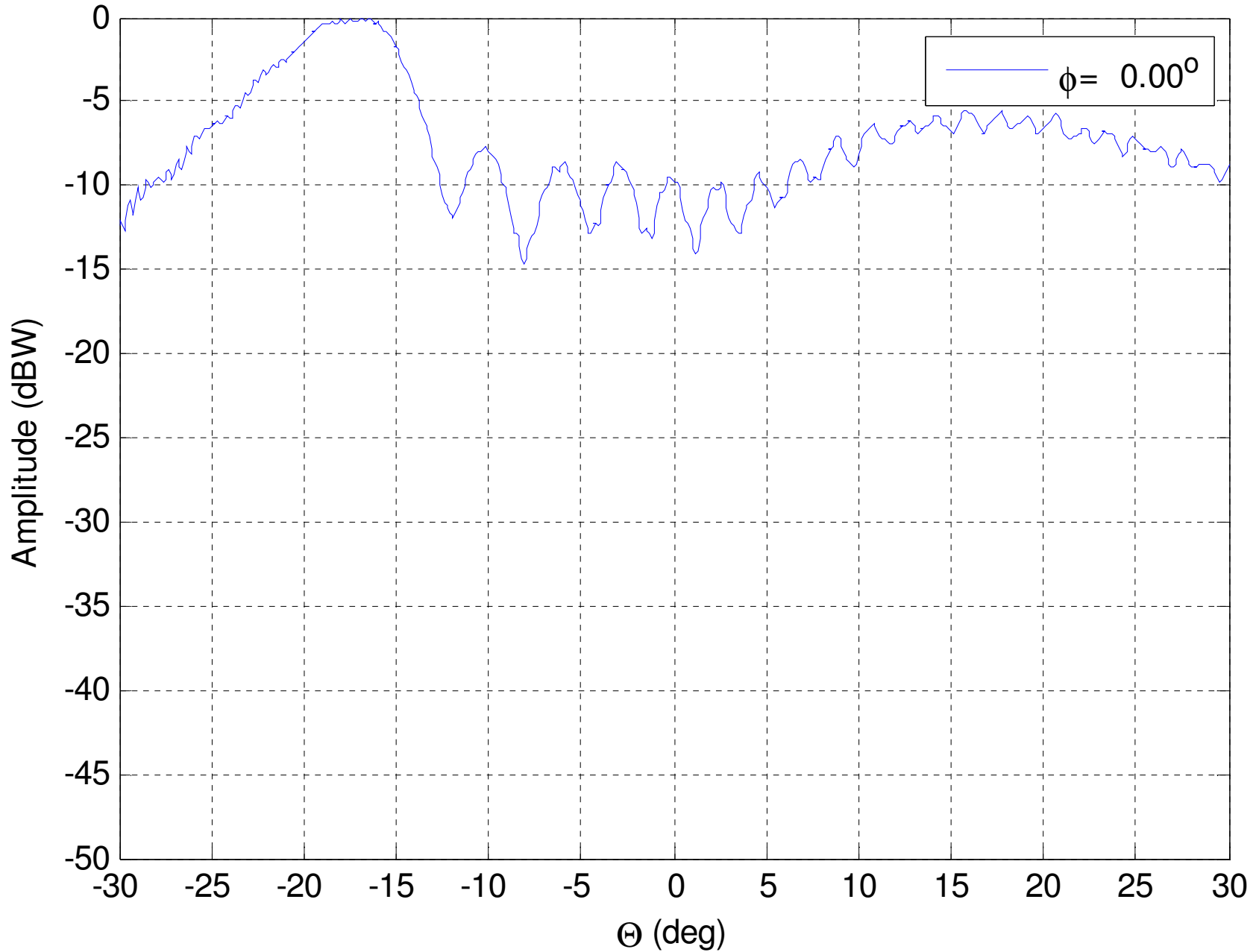
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 10.15 dBW, Date: 14-Dec-2011



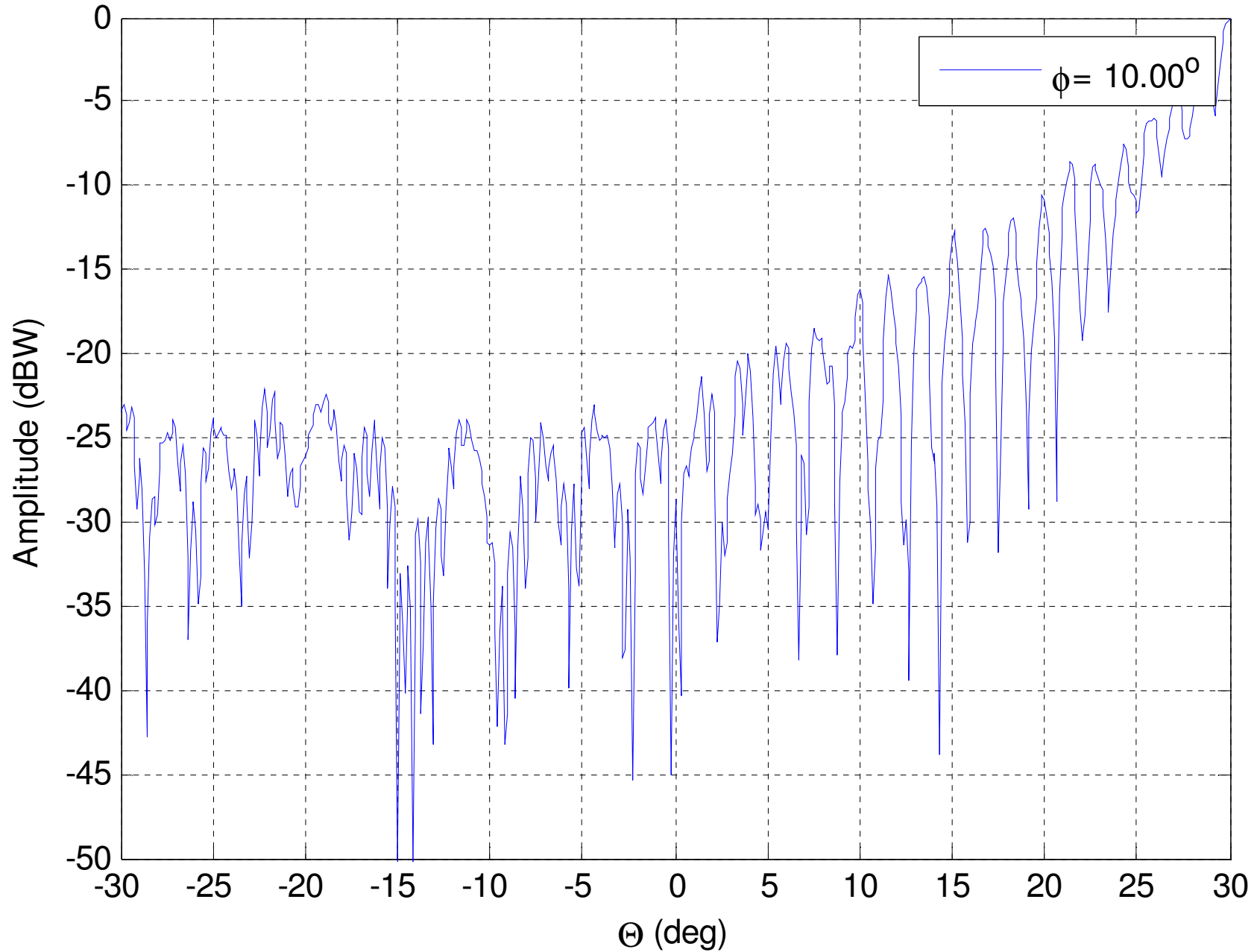
Normalized pattern cuts - farfield

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



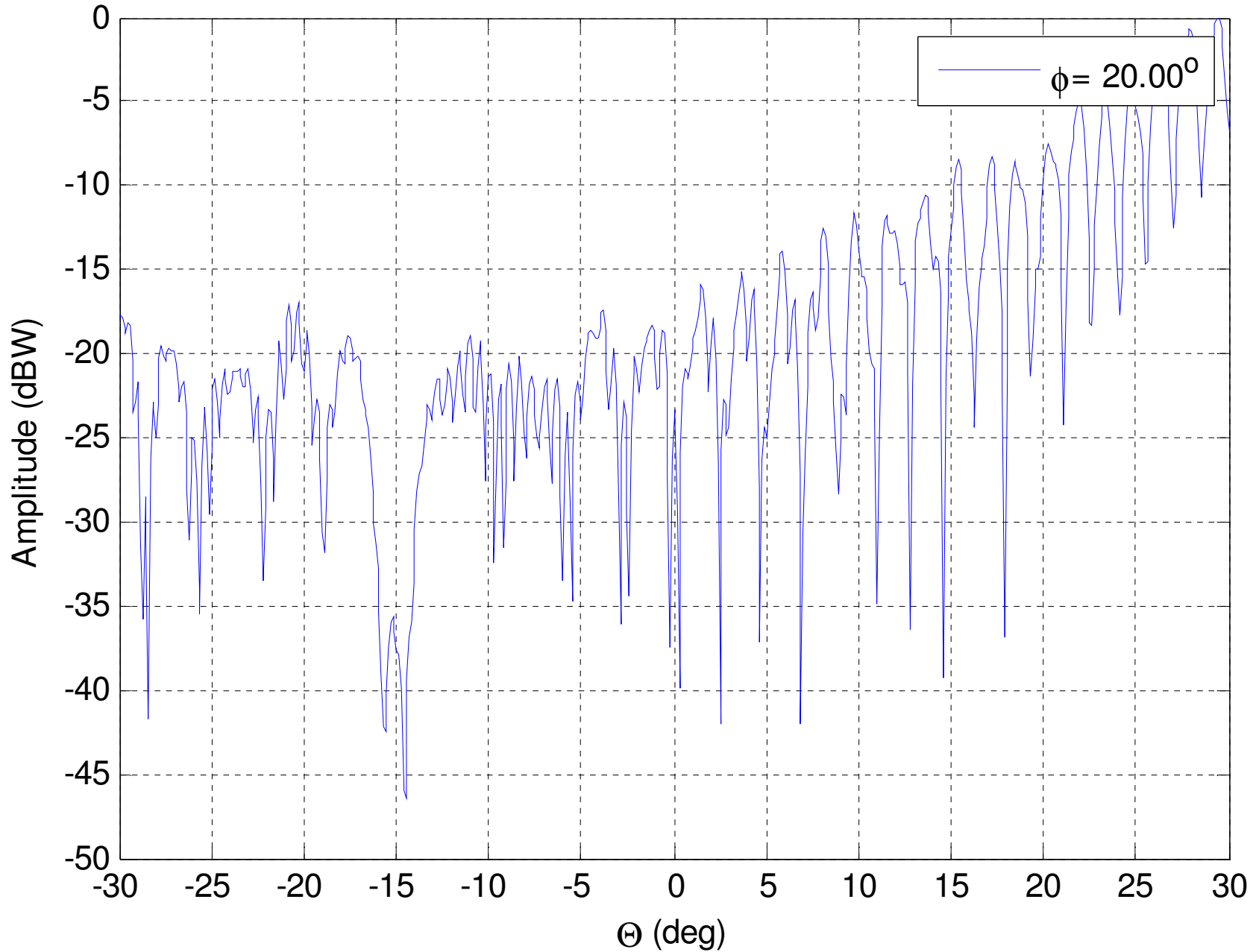
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 11.39 dBW, Date: 14-Dec-2011



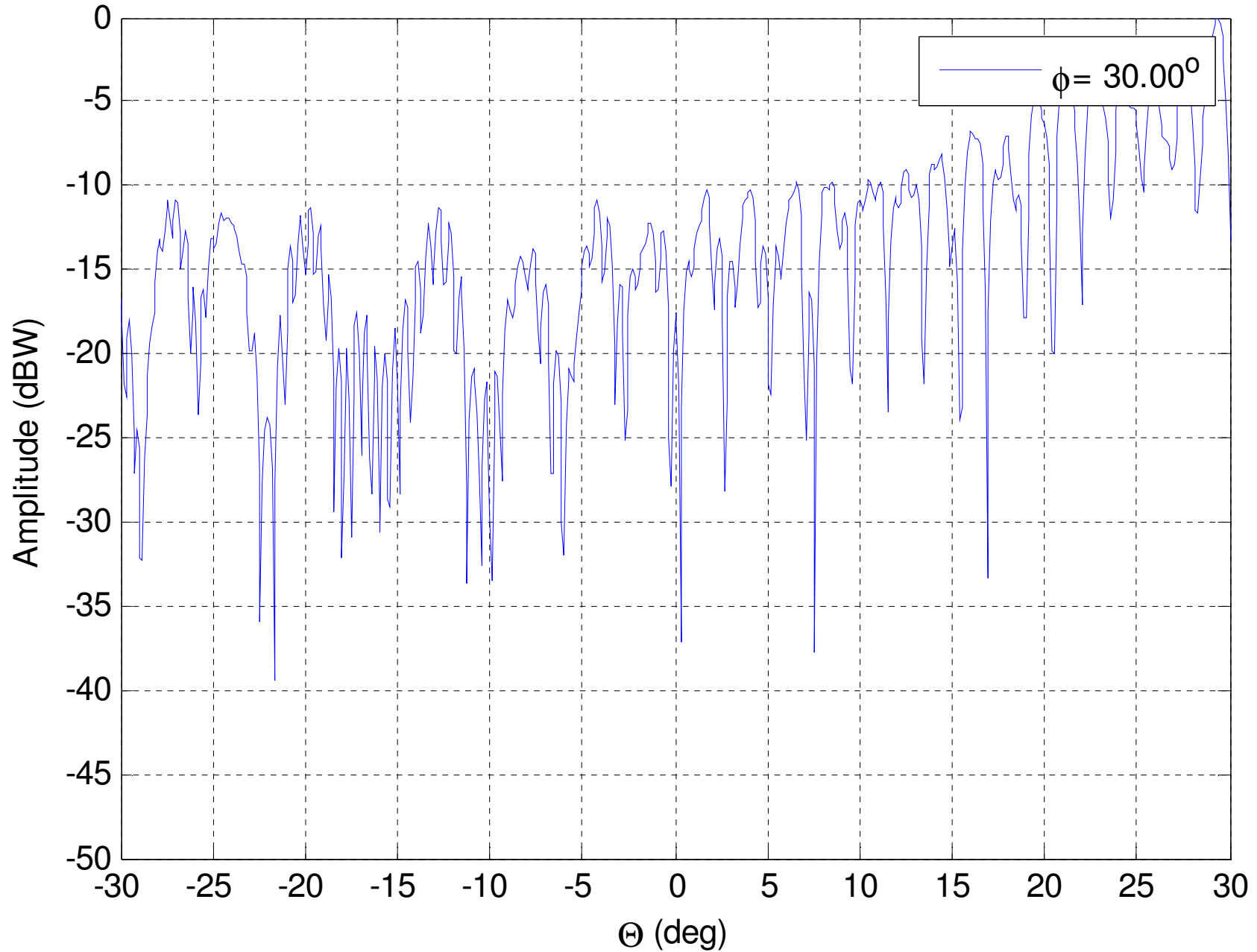
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 6.04 dBW, Date: 14-Dec-2011



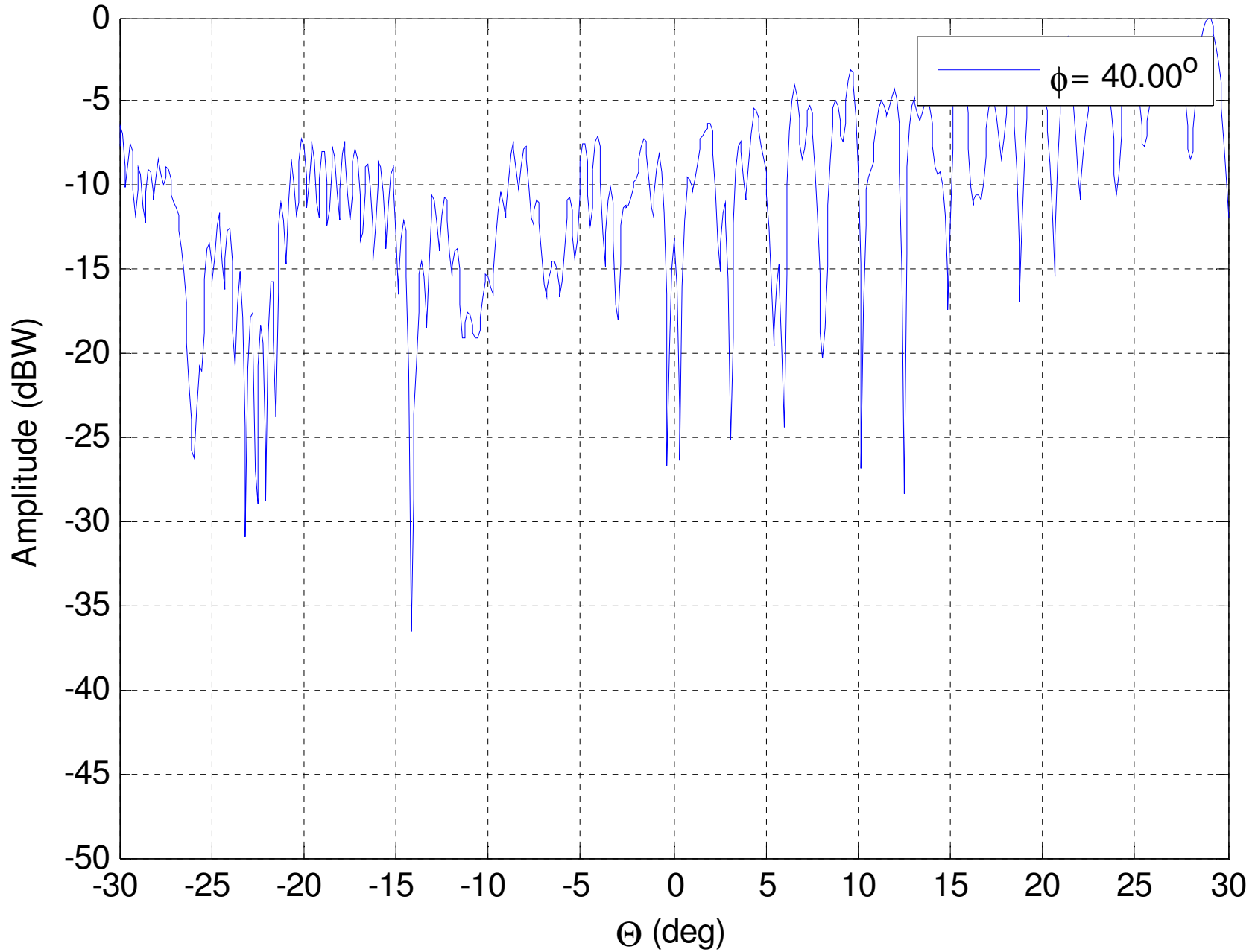
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: 0.34 dBW, Date: 14-Dec-2011



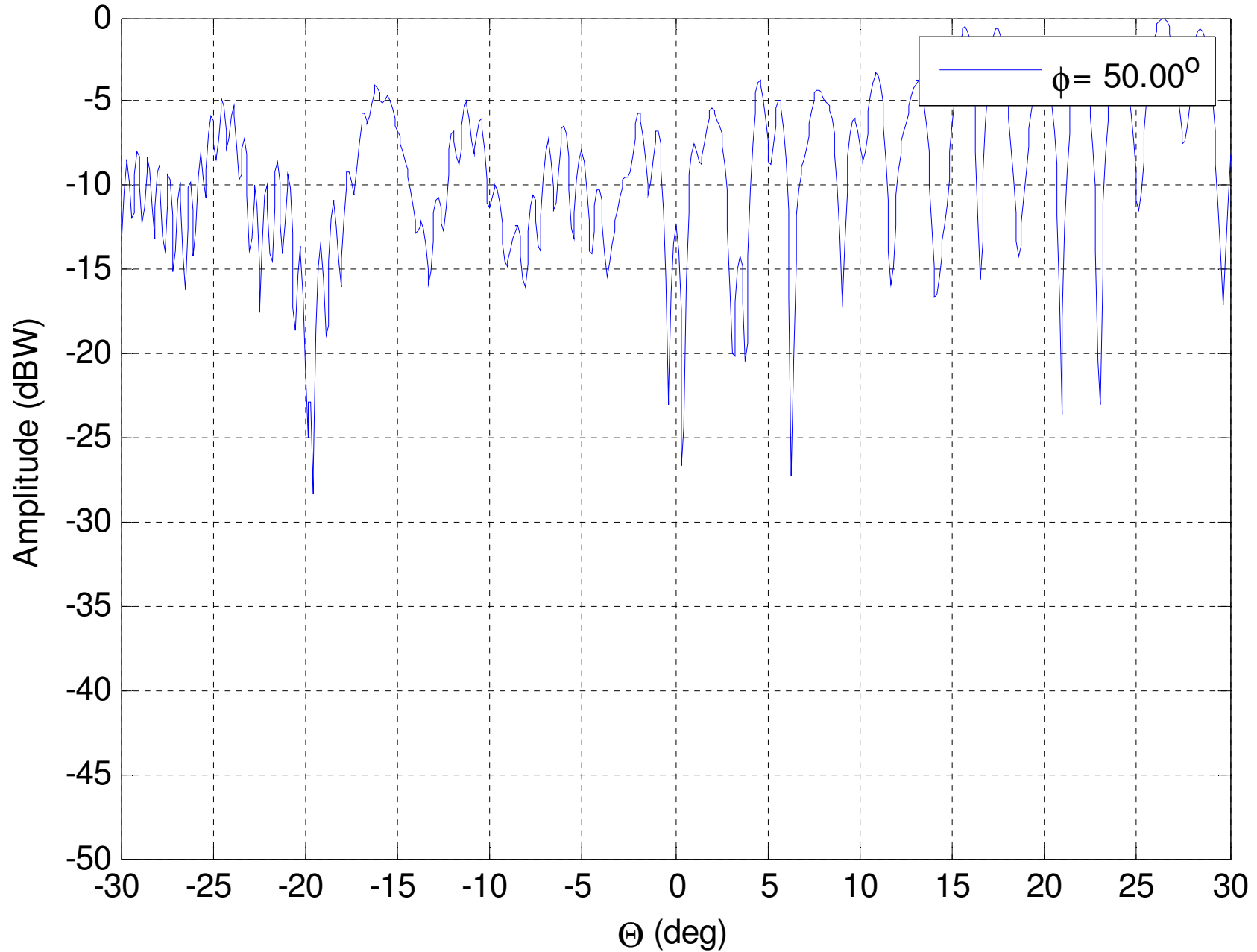
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -4.05 dBW, Date: 14-Dec-2011



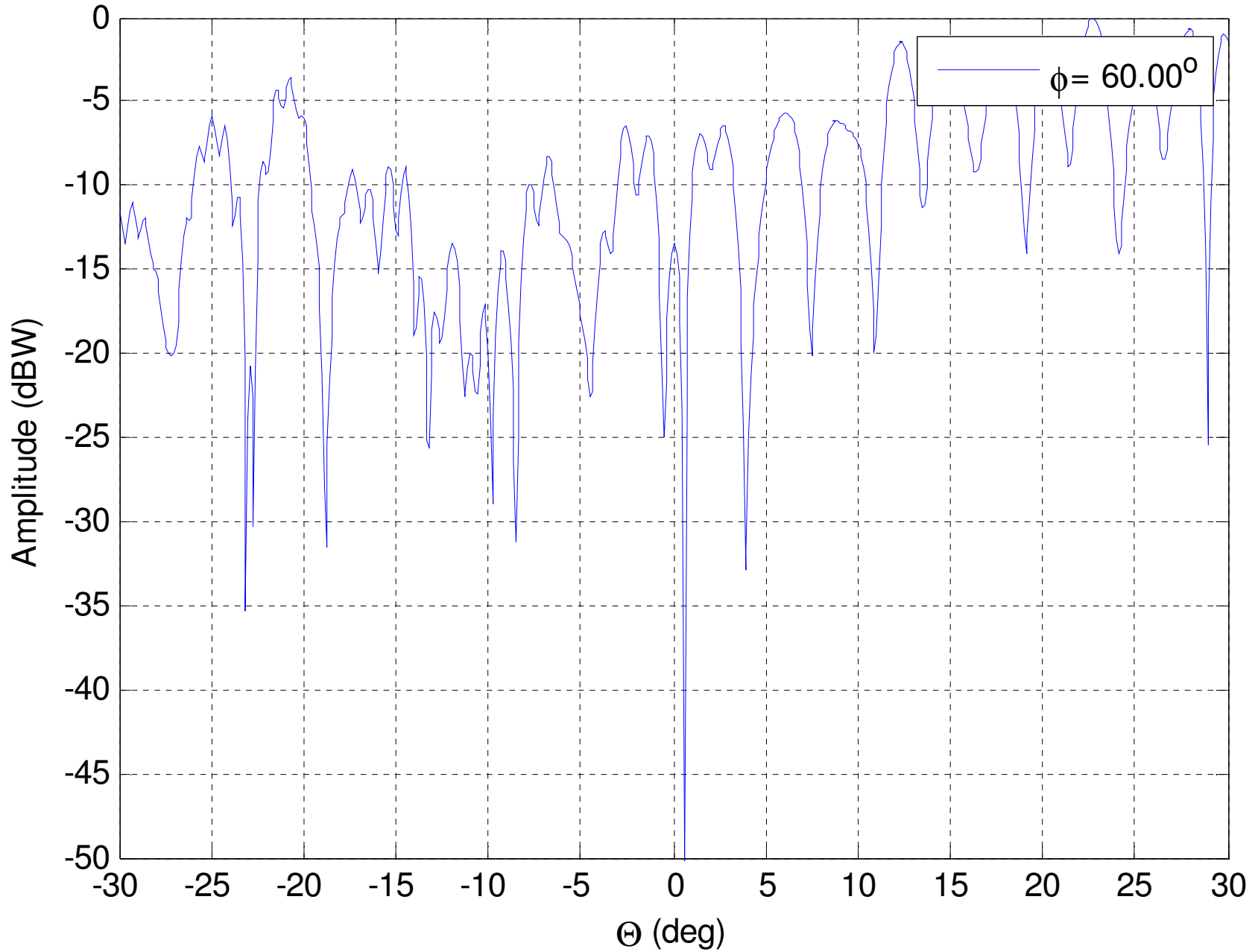
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -4.89 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

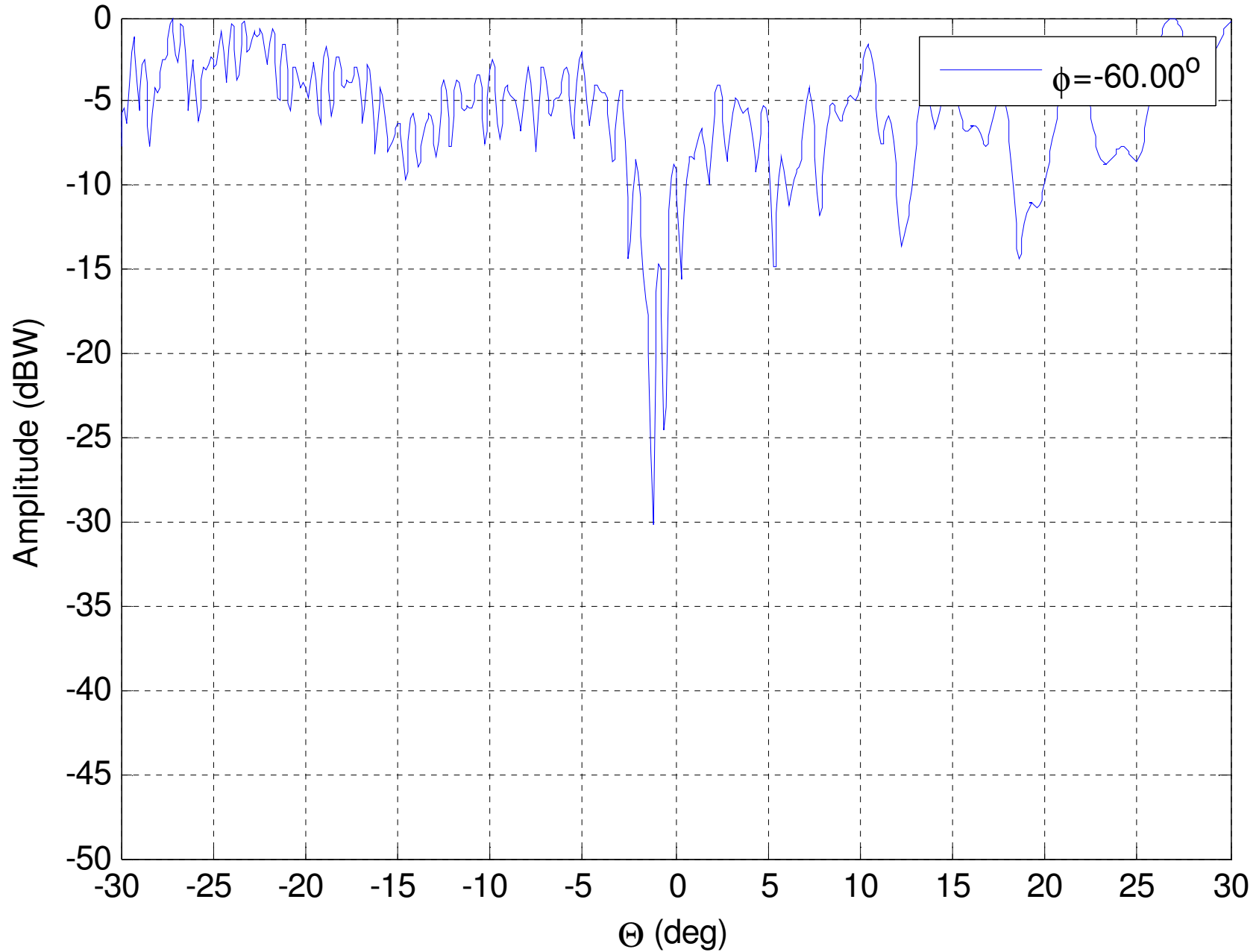
Input file: tx-17.3-rhcp-60.cut, Peak: -3.80 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

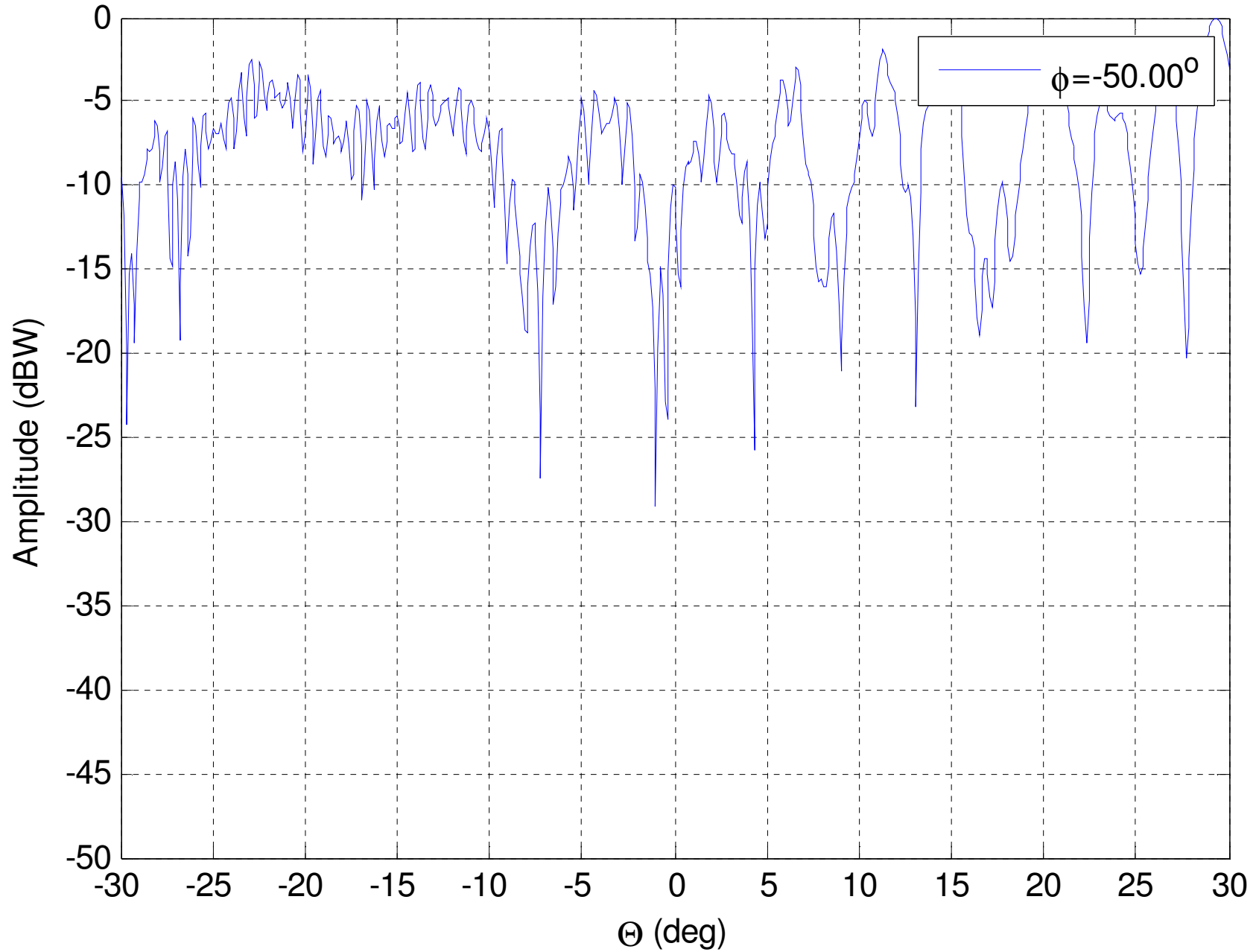
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -5.78 dBW, Date: 14-Dec-2011



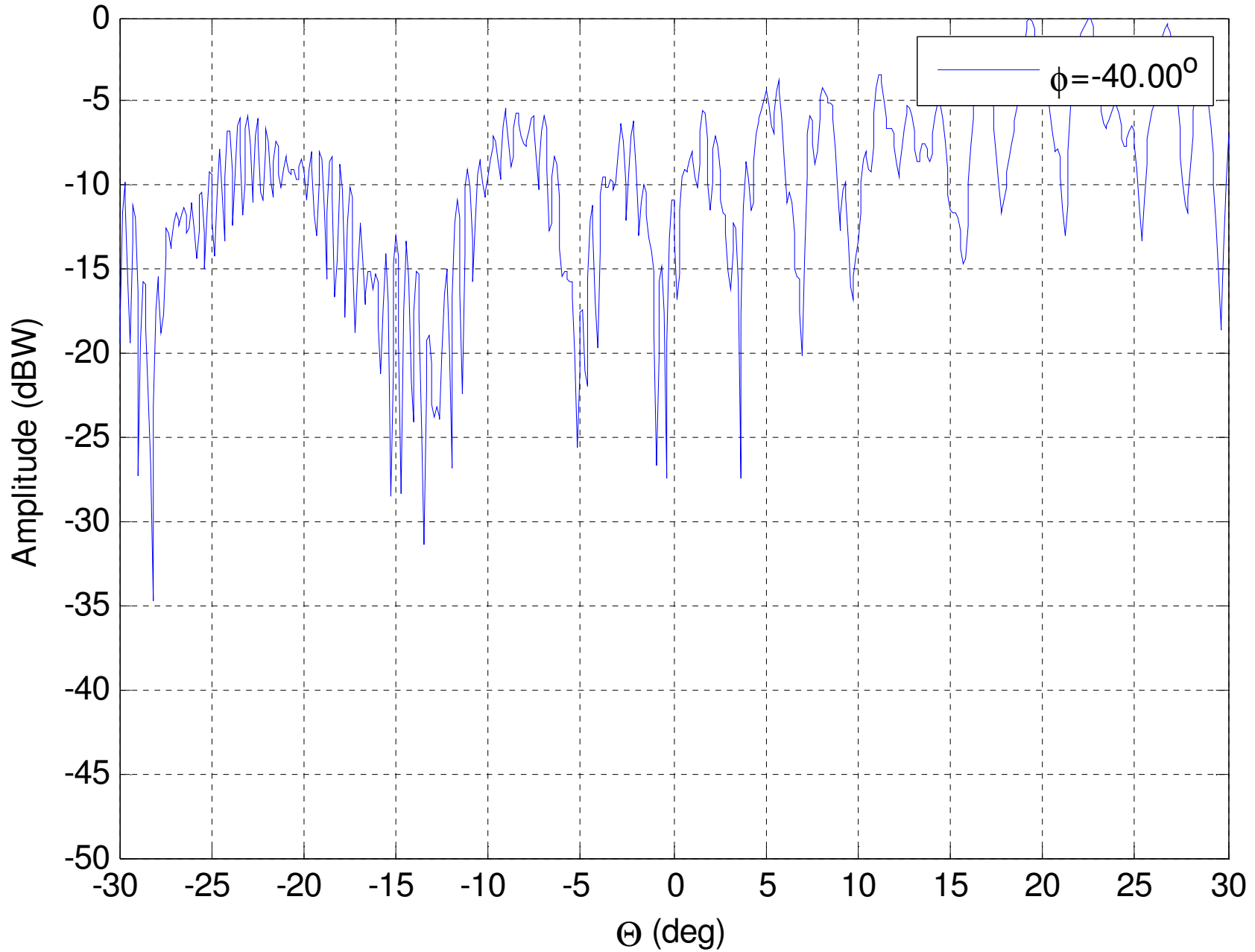
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.73 dBW, Date: 14-Dec-2011



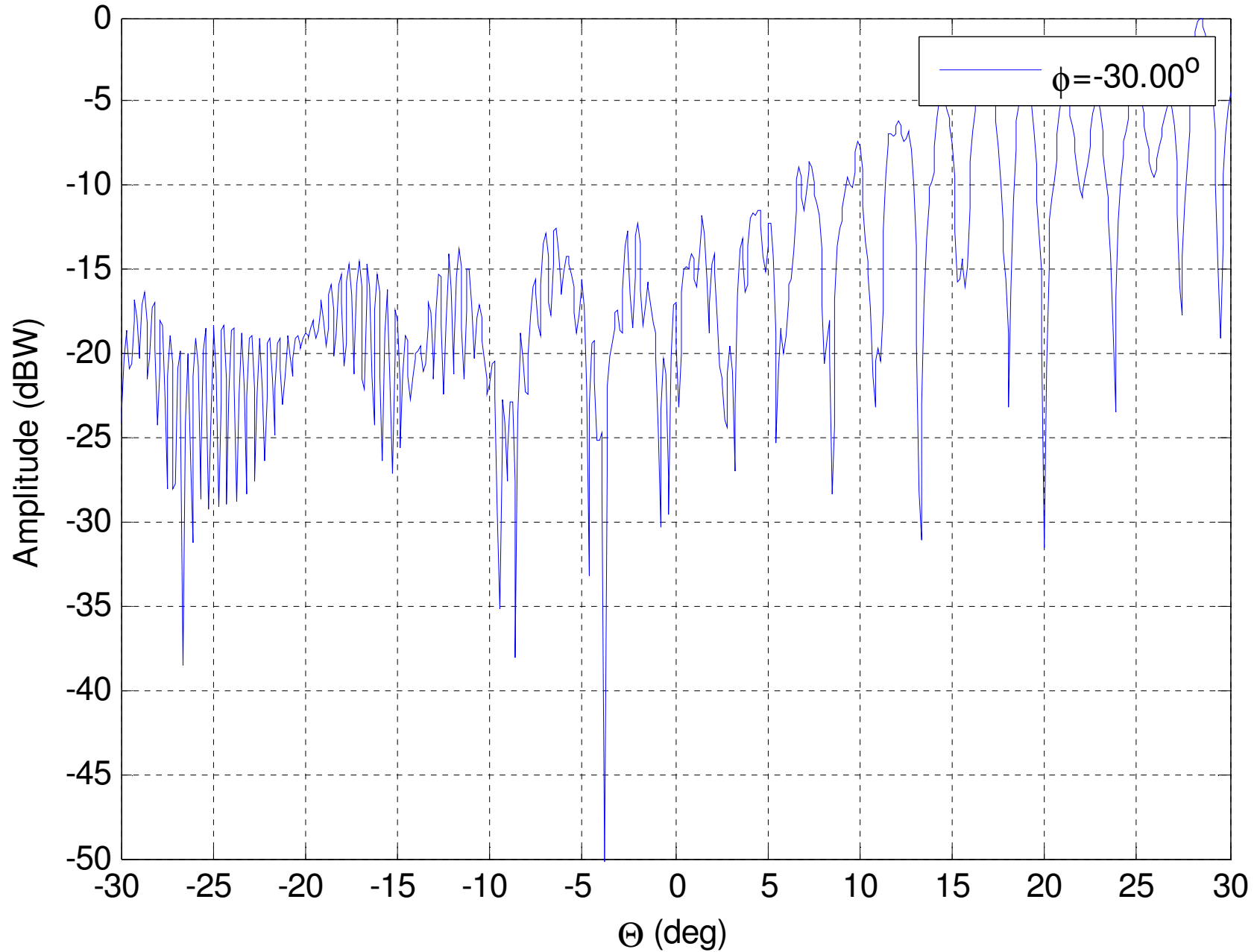
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.93 dBW, Date: 14-Dec-2011



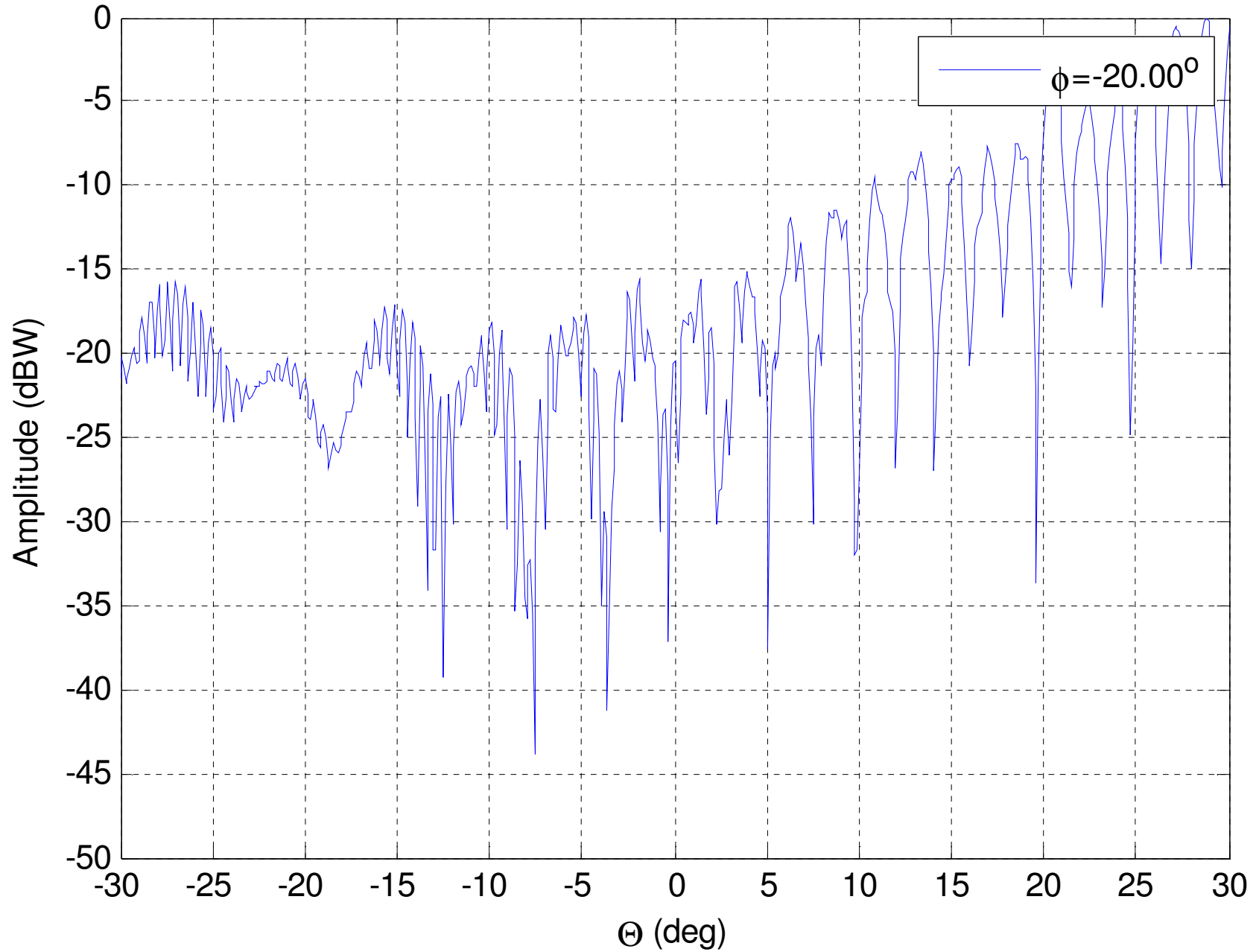
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 2.15 dBW, Date: 14-Dec-2011



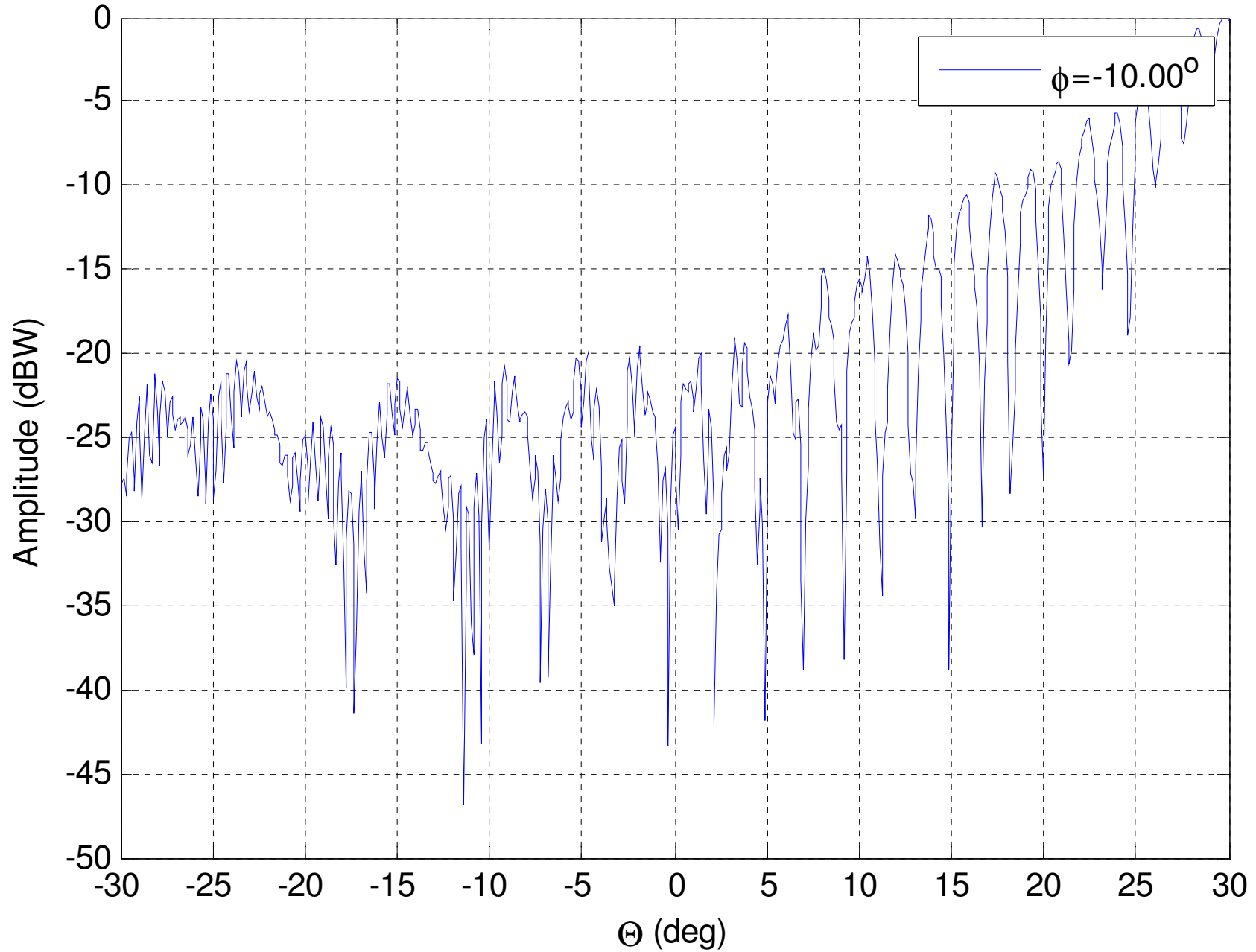
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 5.52 dBW, Date: 14-Dec-2011



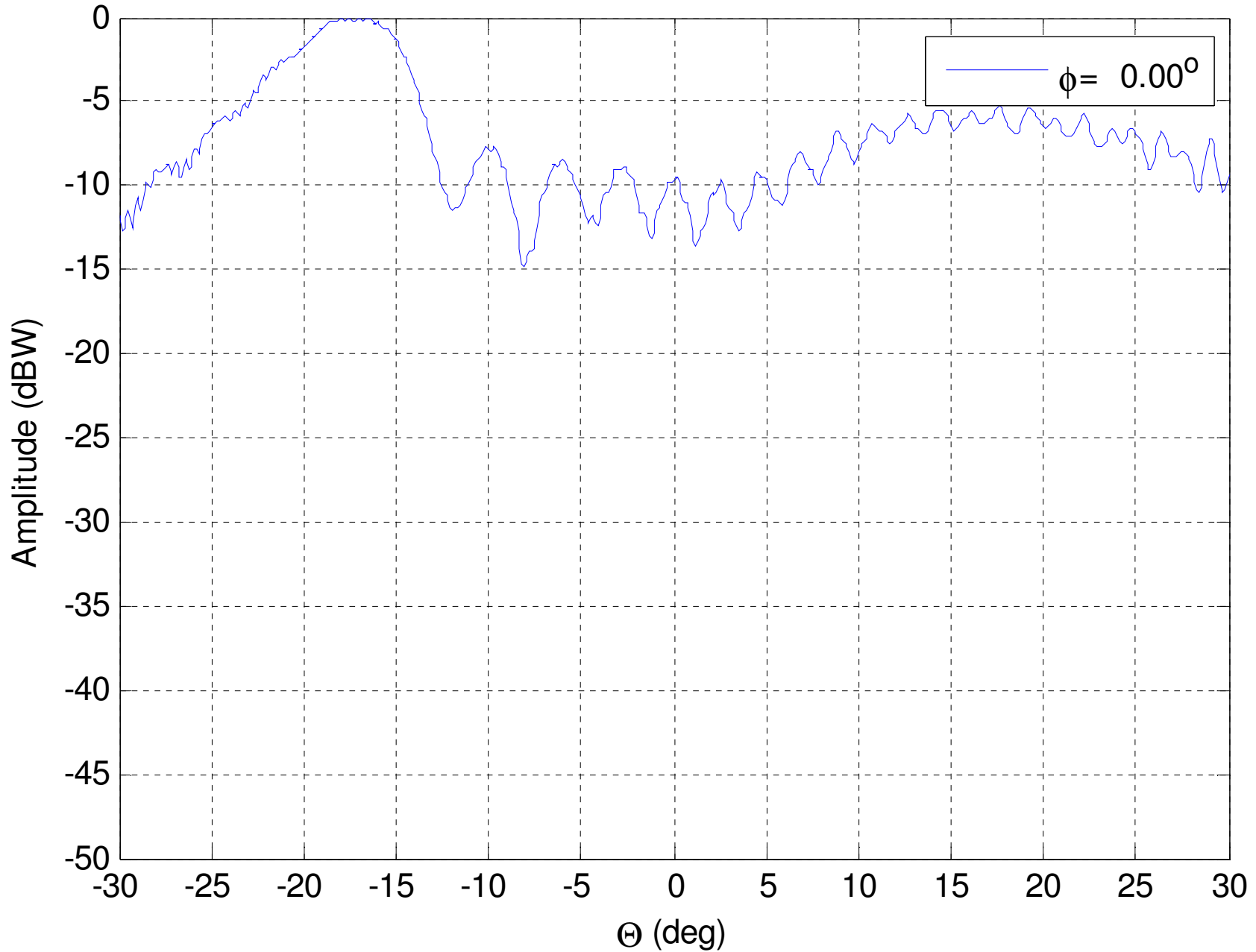
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 9.59 dBW, Date: 14-Dec-2011



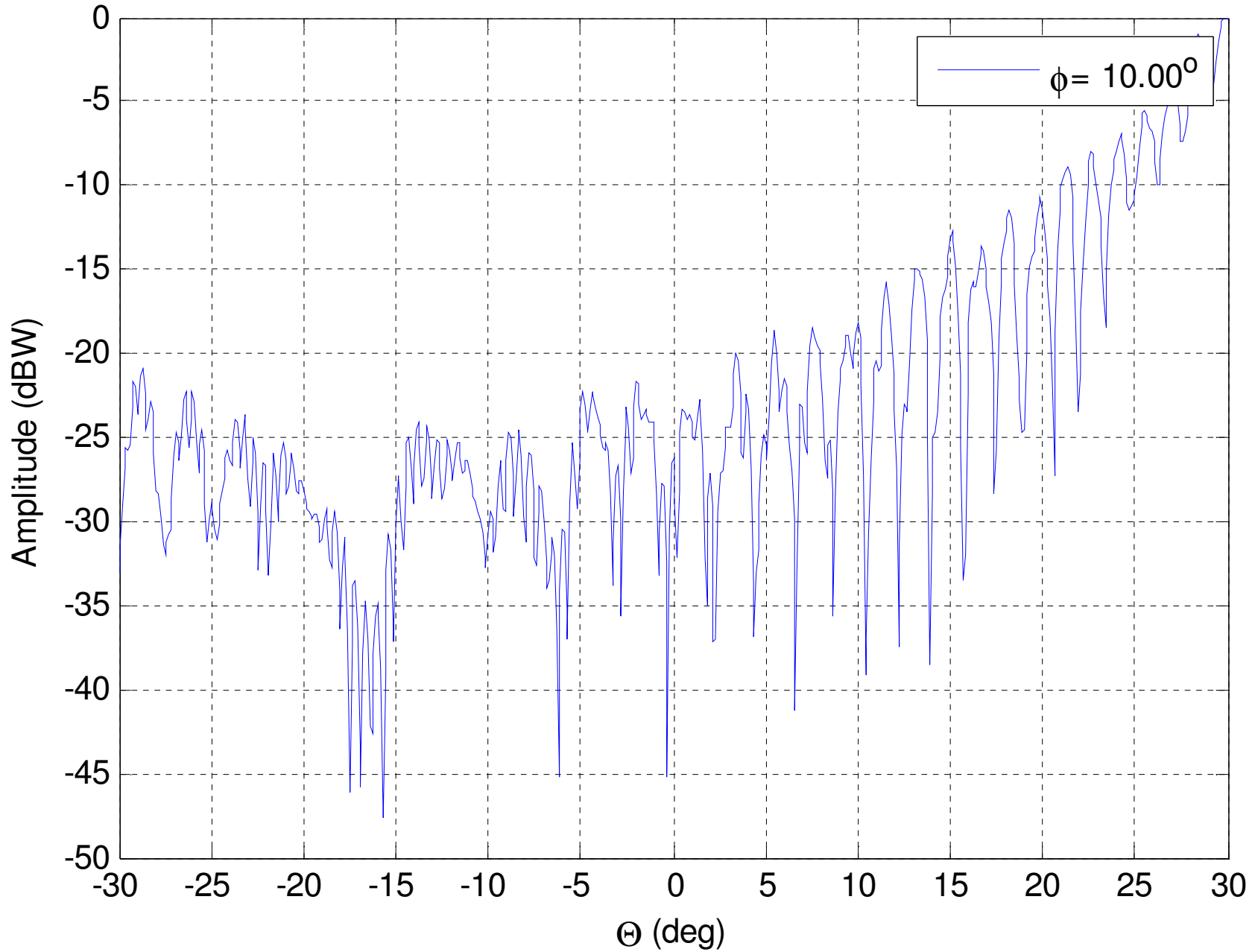
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 11.22 dBW, Date: 14-Dec-2011



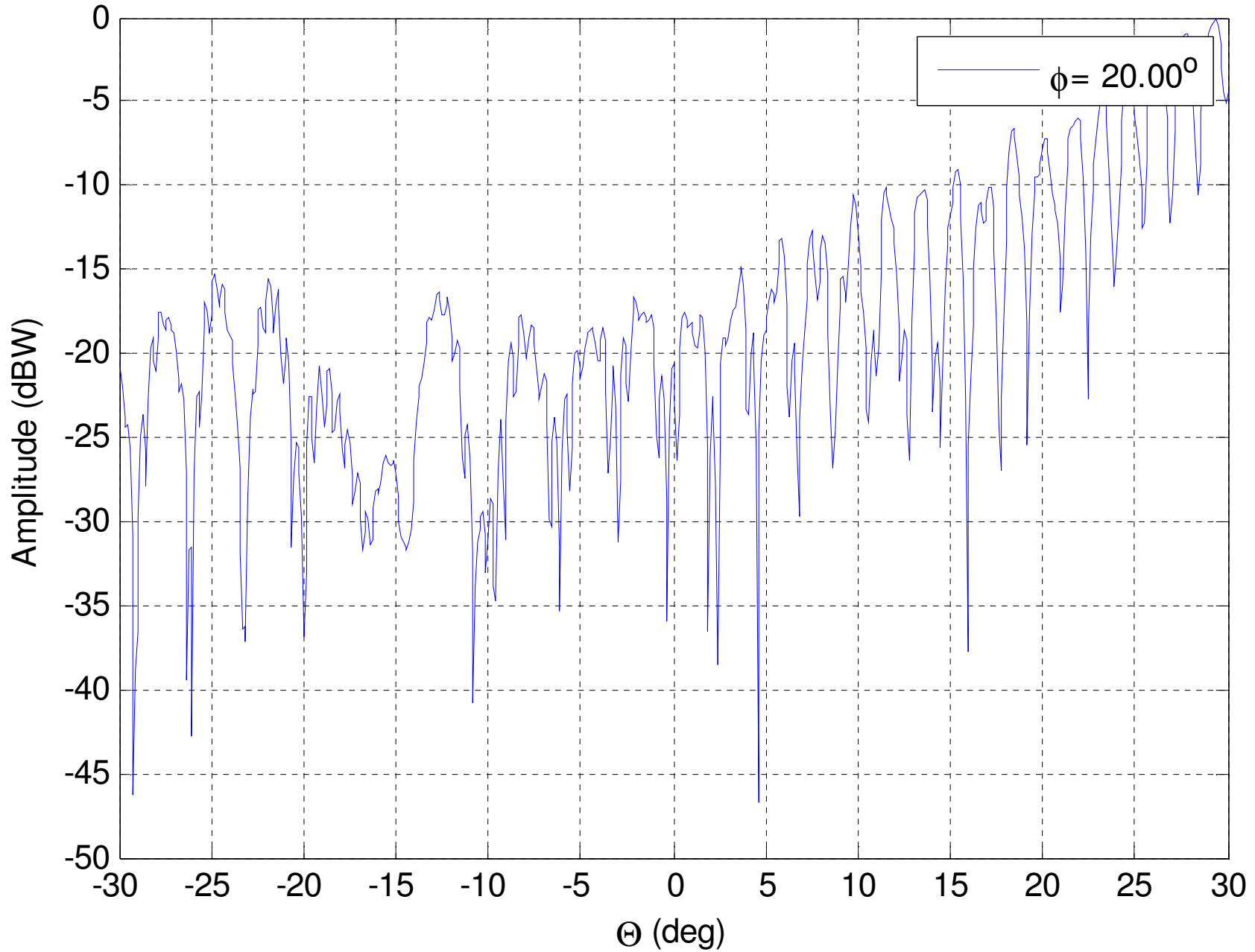
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 11.37 dBW, Date: 14-Dec-2011



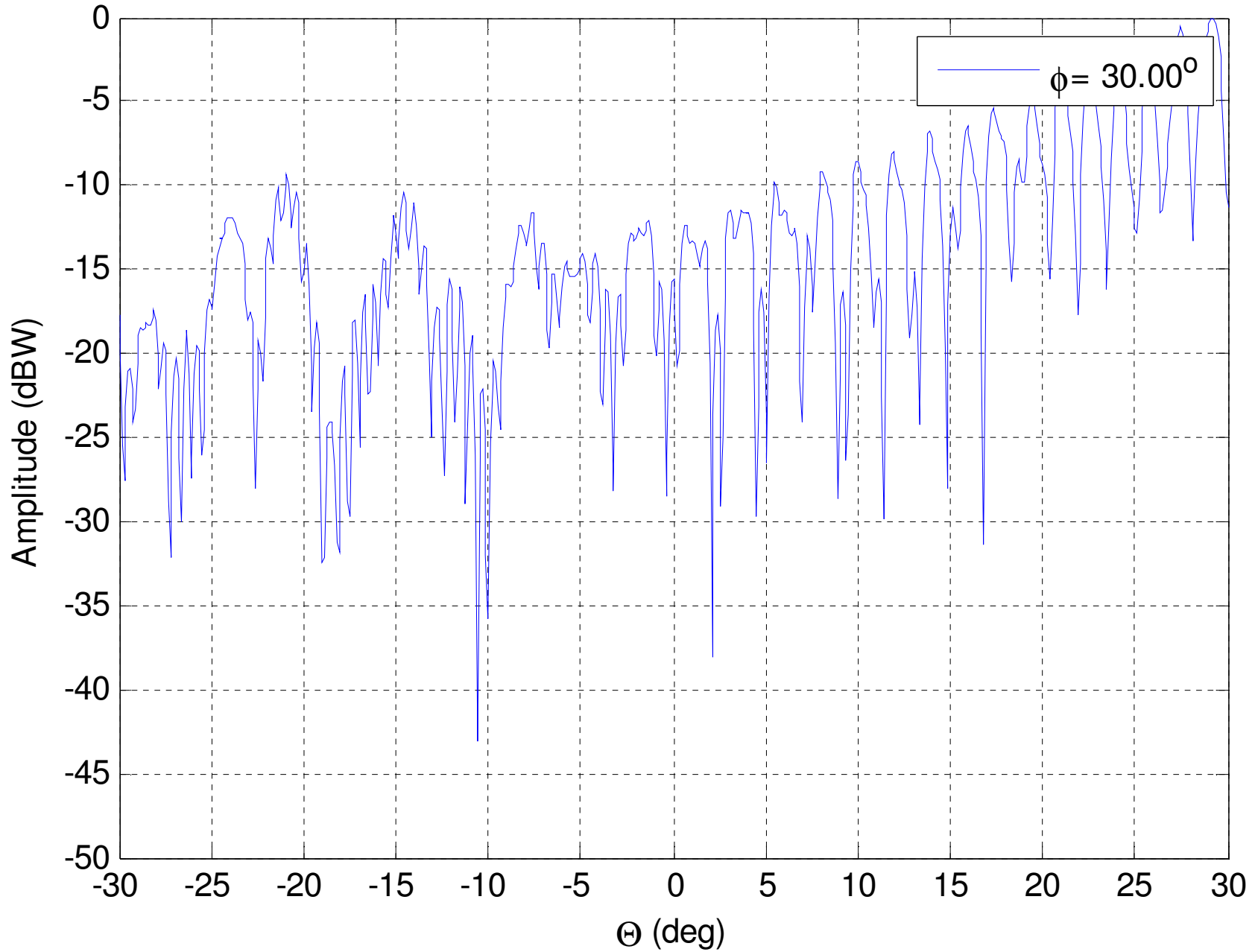
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 5.80 dBW, Date: 14-Dec-2011



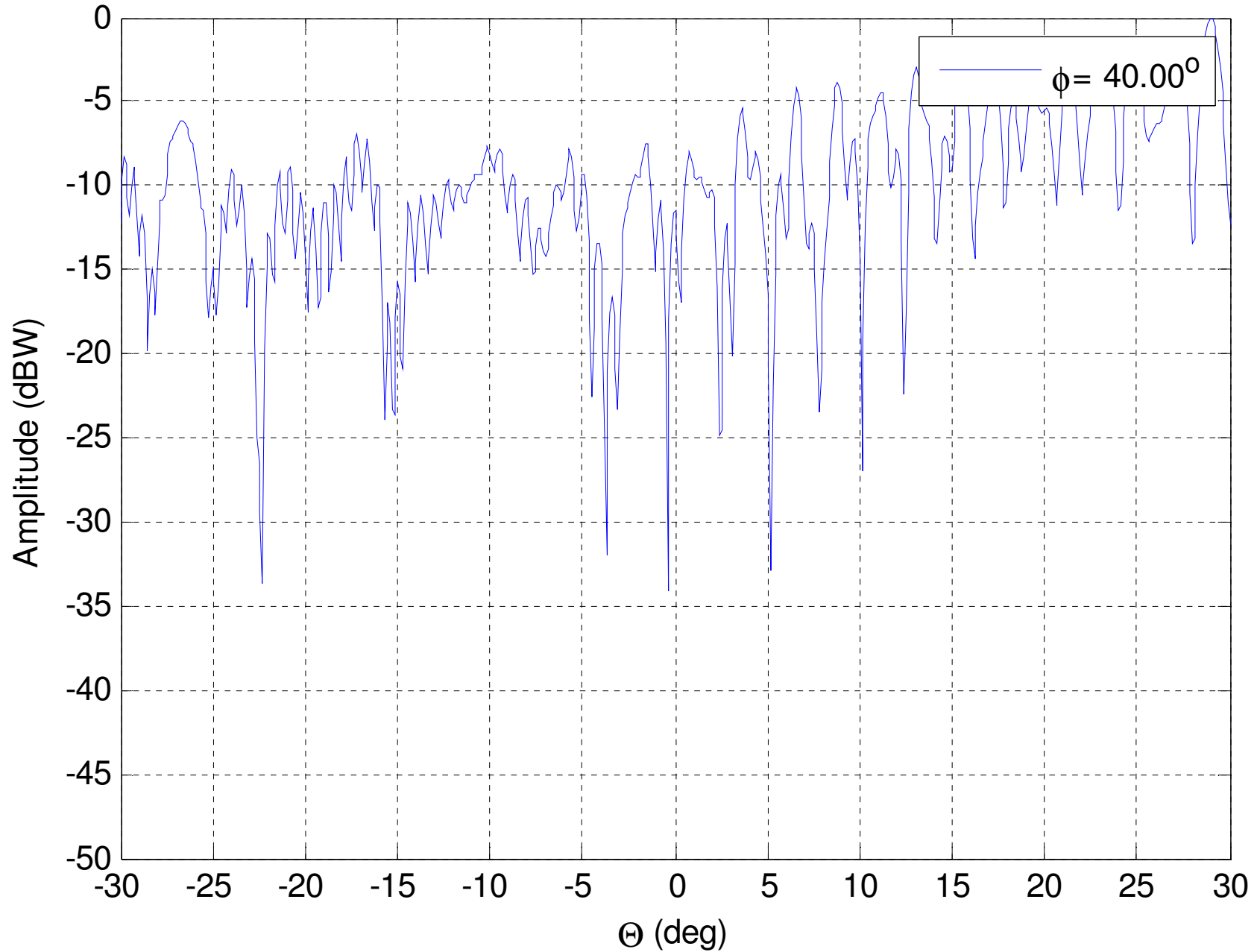
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: 0.74 dBW, Date: 14-Dec-2011



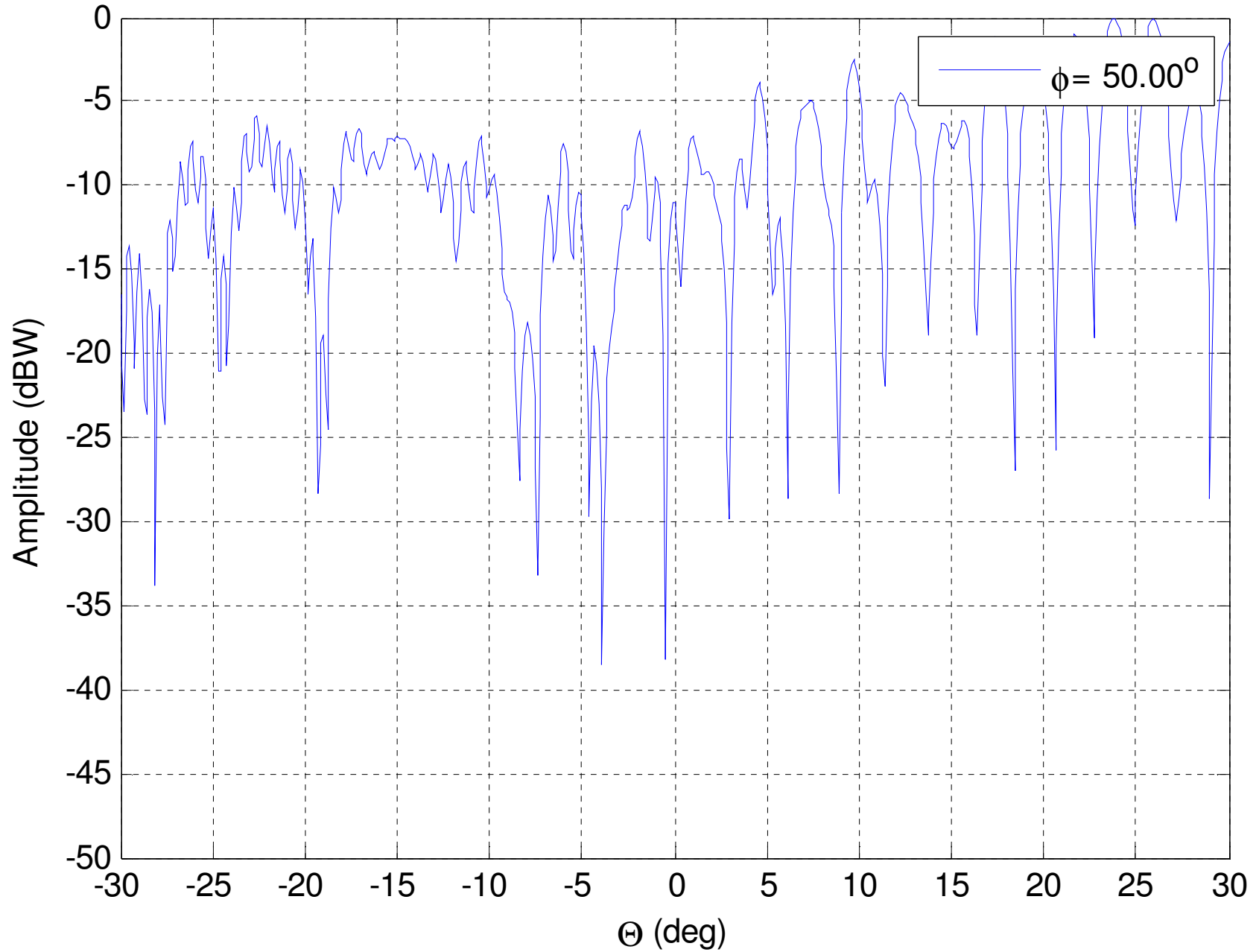
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -3.34 dBW, Date: 14-Dec-2011



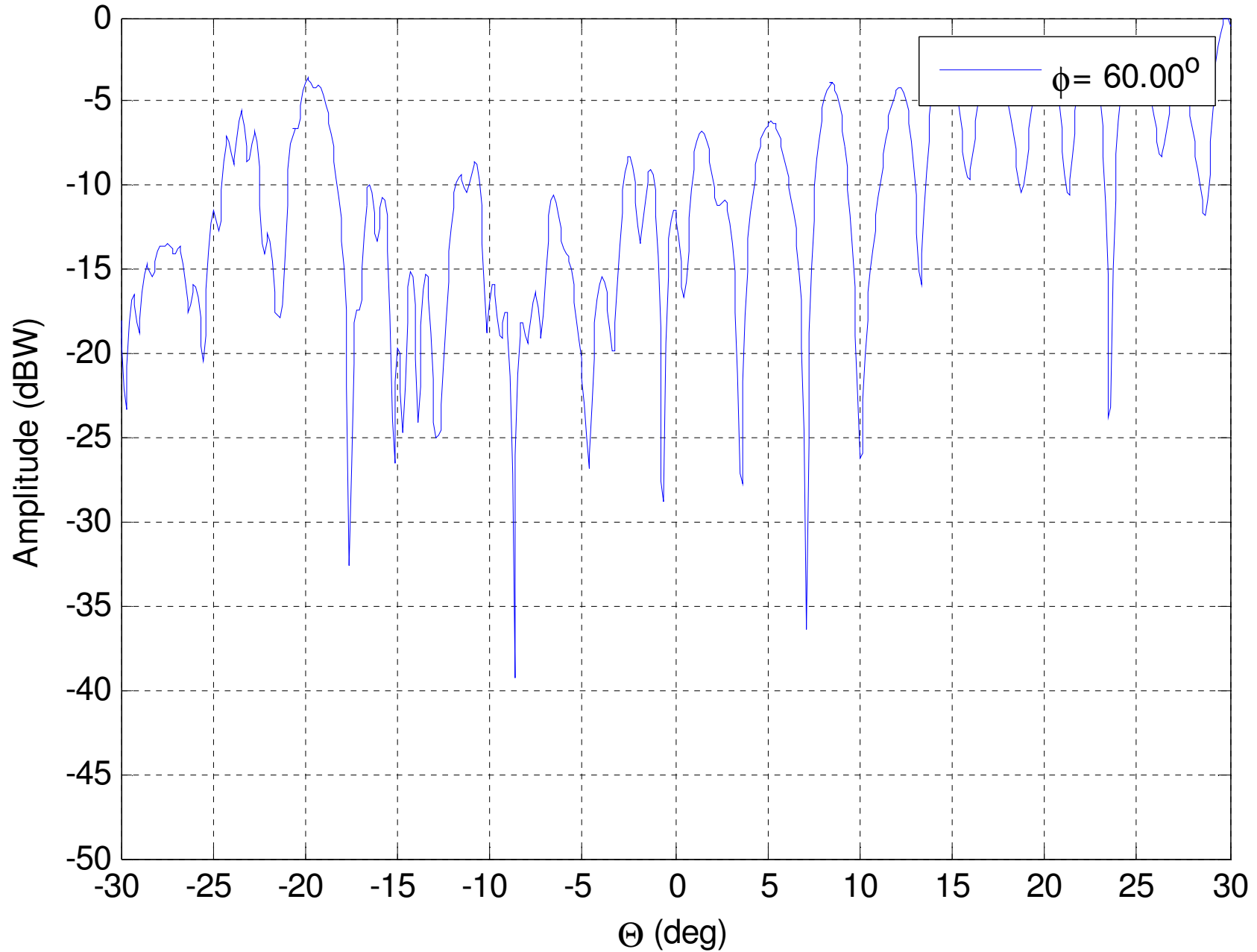
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -3.84 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

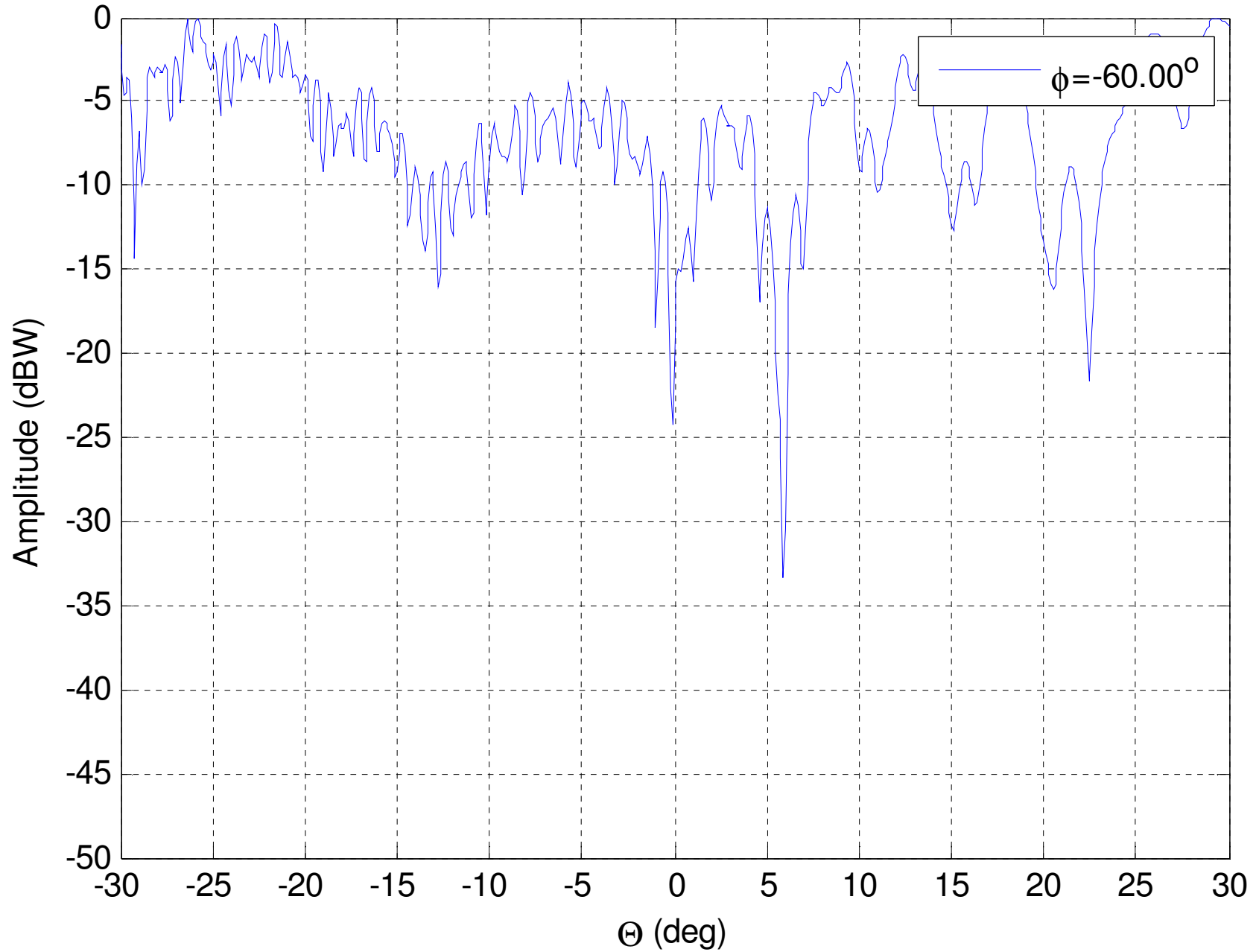
Input file: tx-17.3-lhcp-60.cut, Peak: -3.33 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

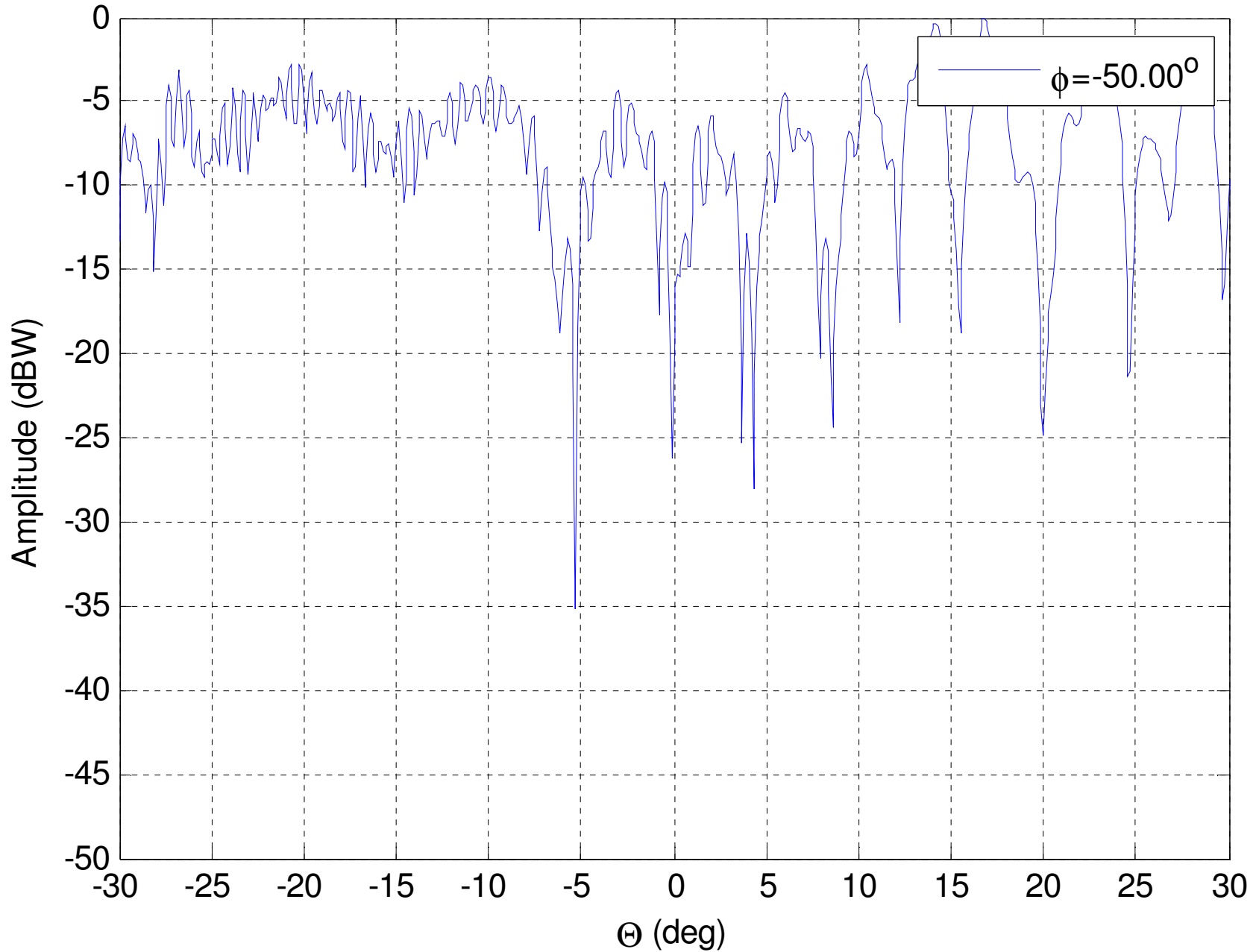
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -5.46 dBW, Date: 14-Dec-2011



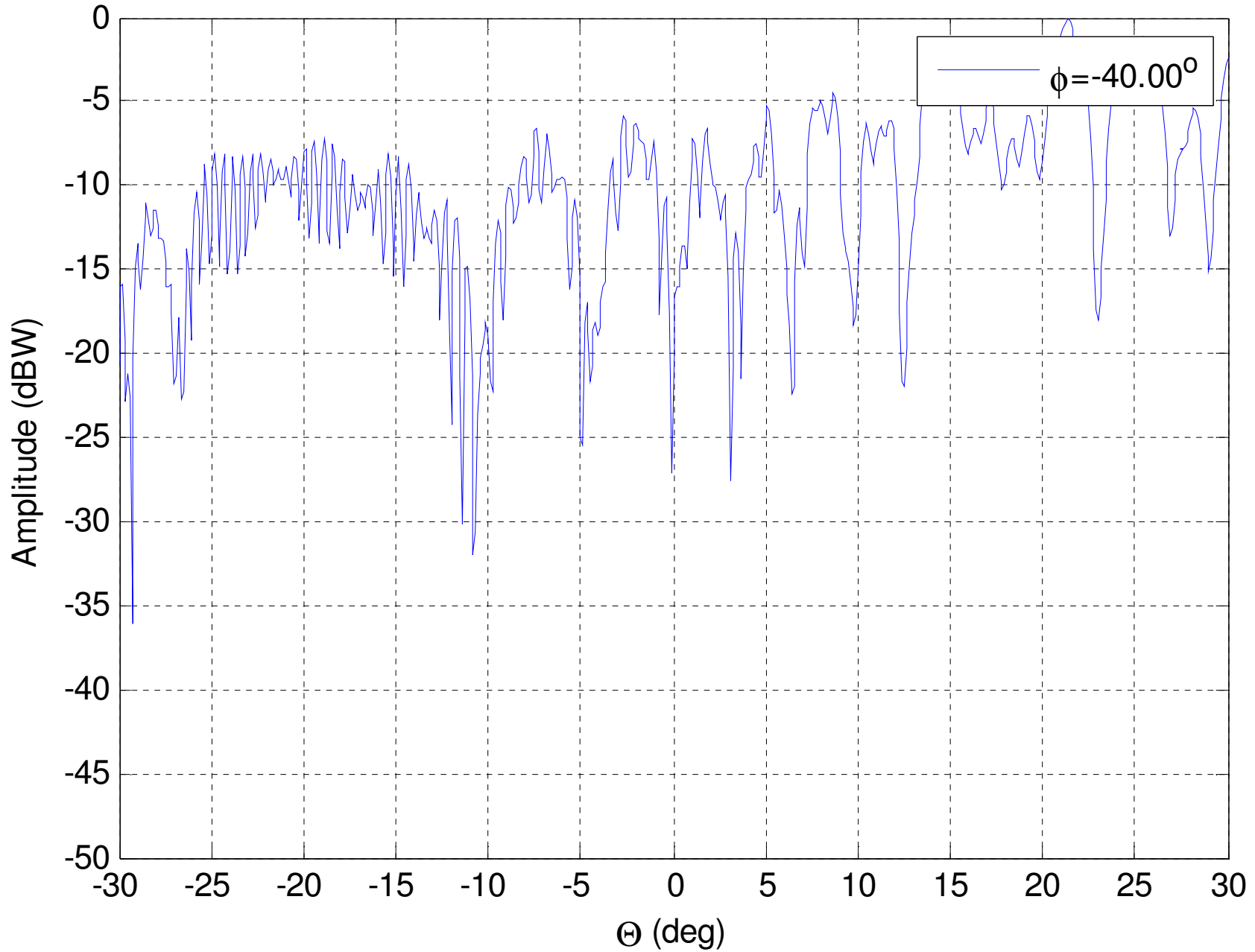
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



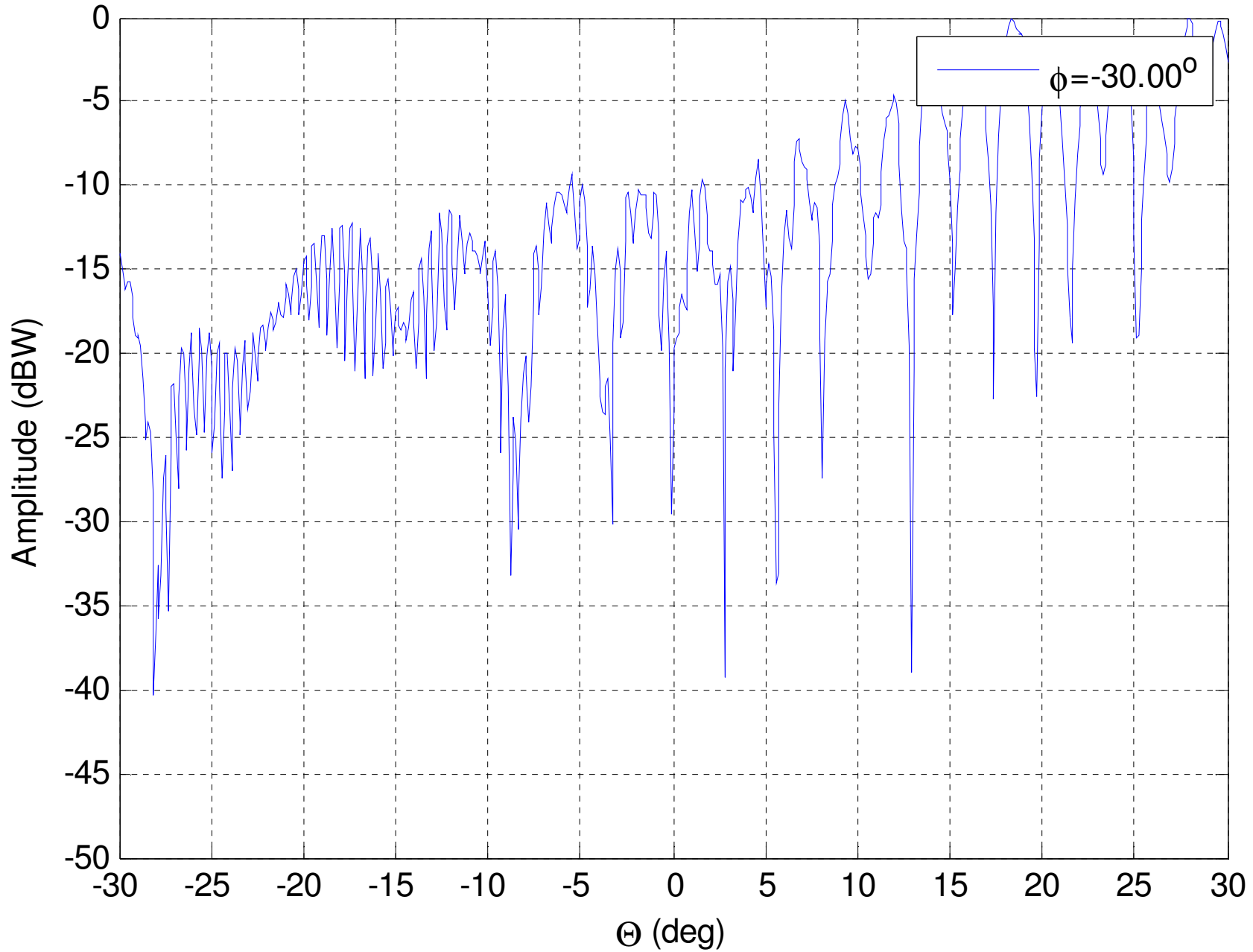
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -3.73 dBW, Date: 14-Dec-2011



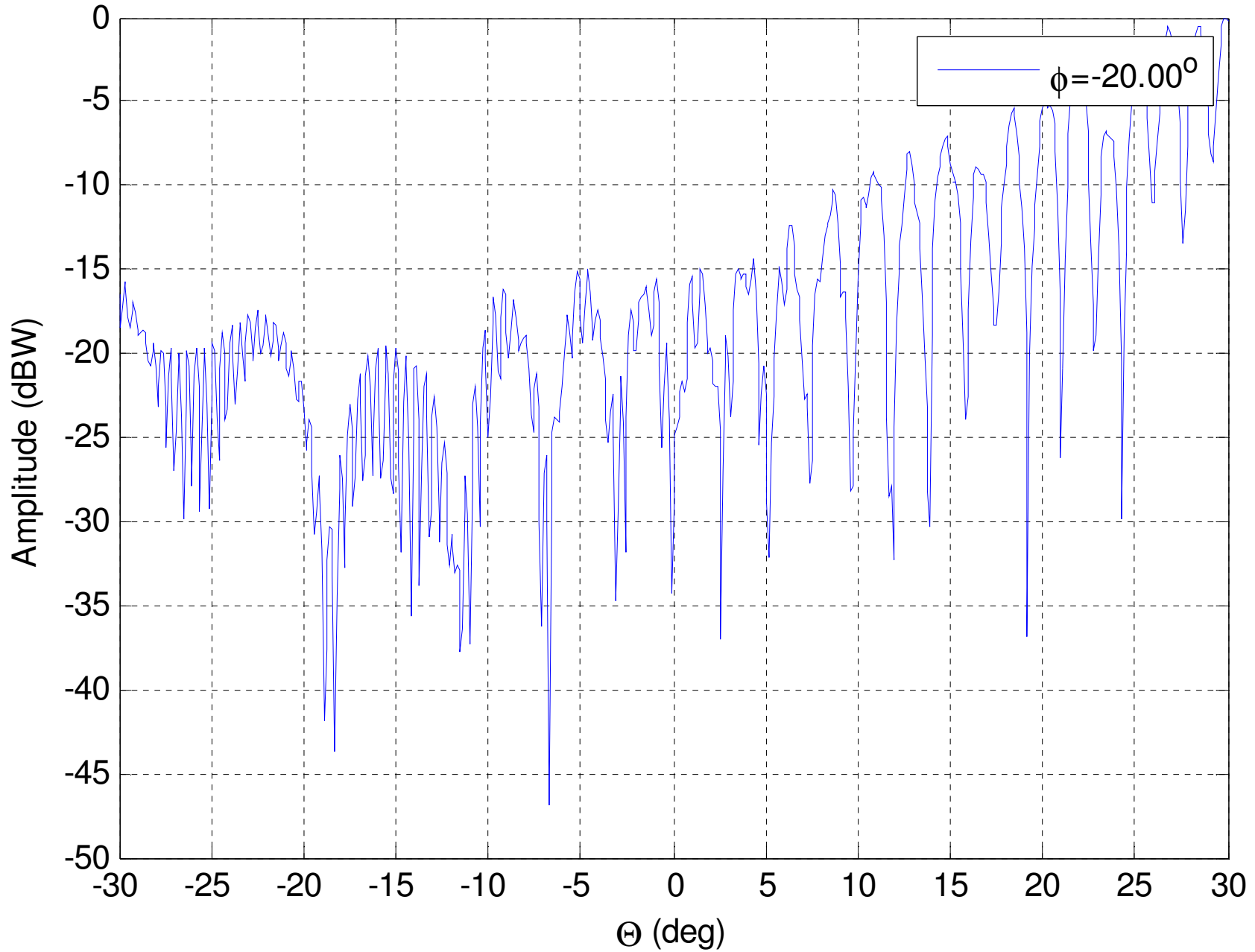
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -0.41 dBW, Date: 14-Dec-2011



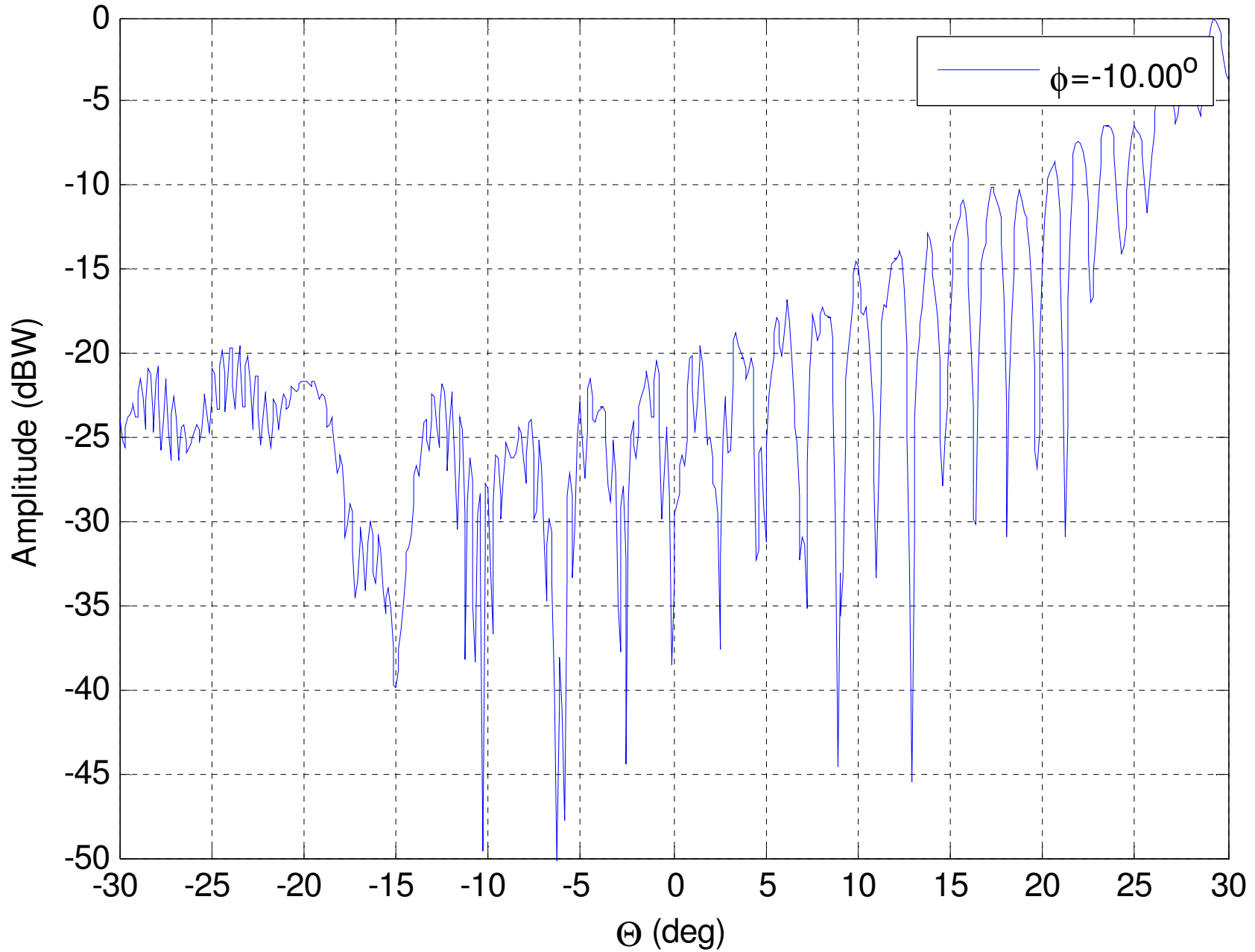
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 5.06 dBW, Date: 14-Dec-2011



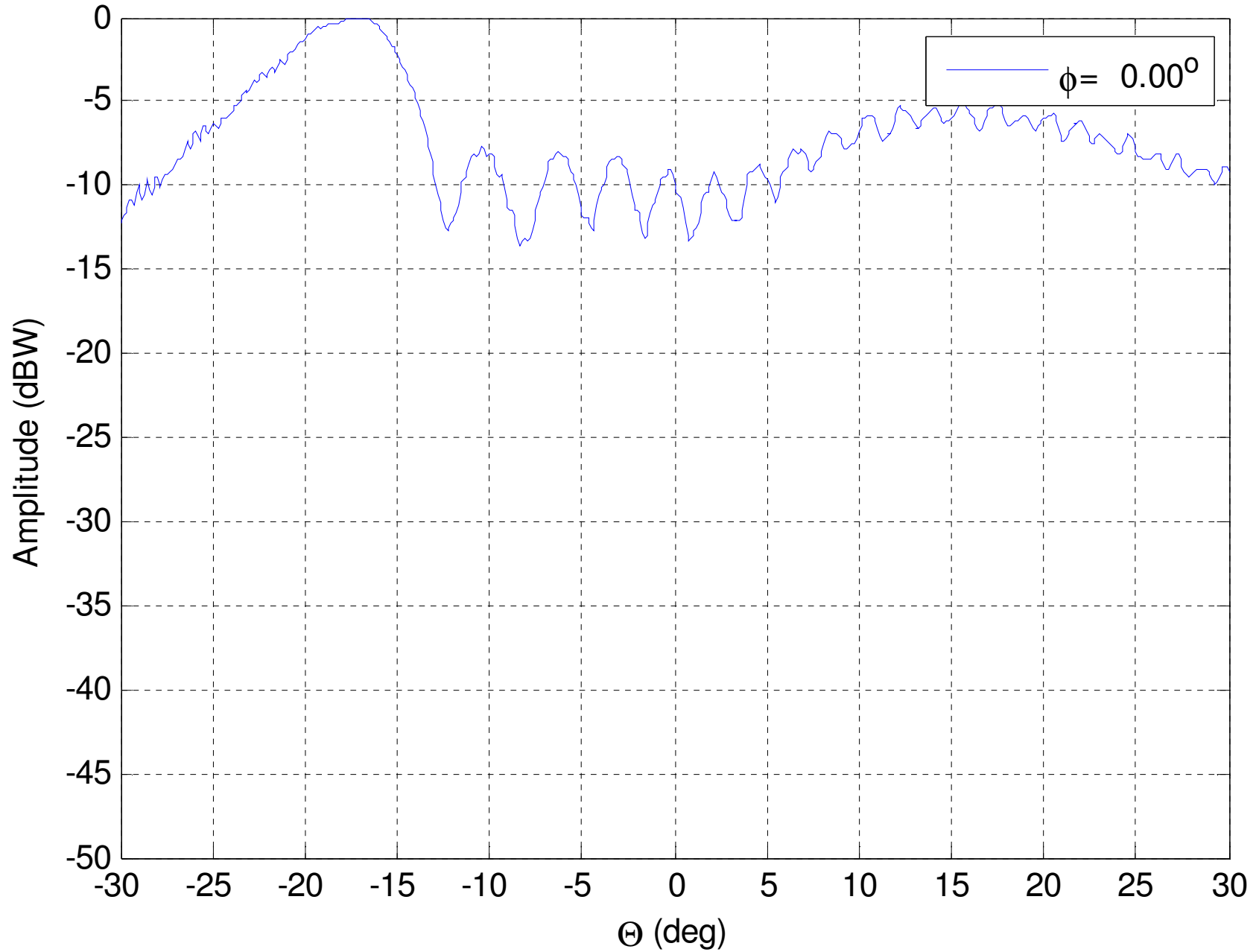
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 9.87 dBW, Date: 14-Dec-2011



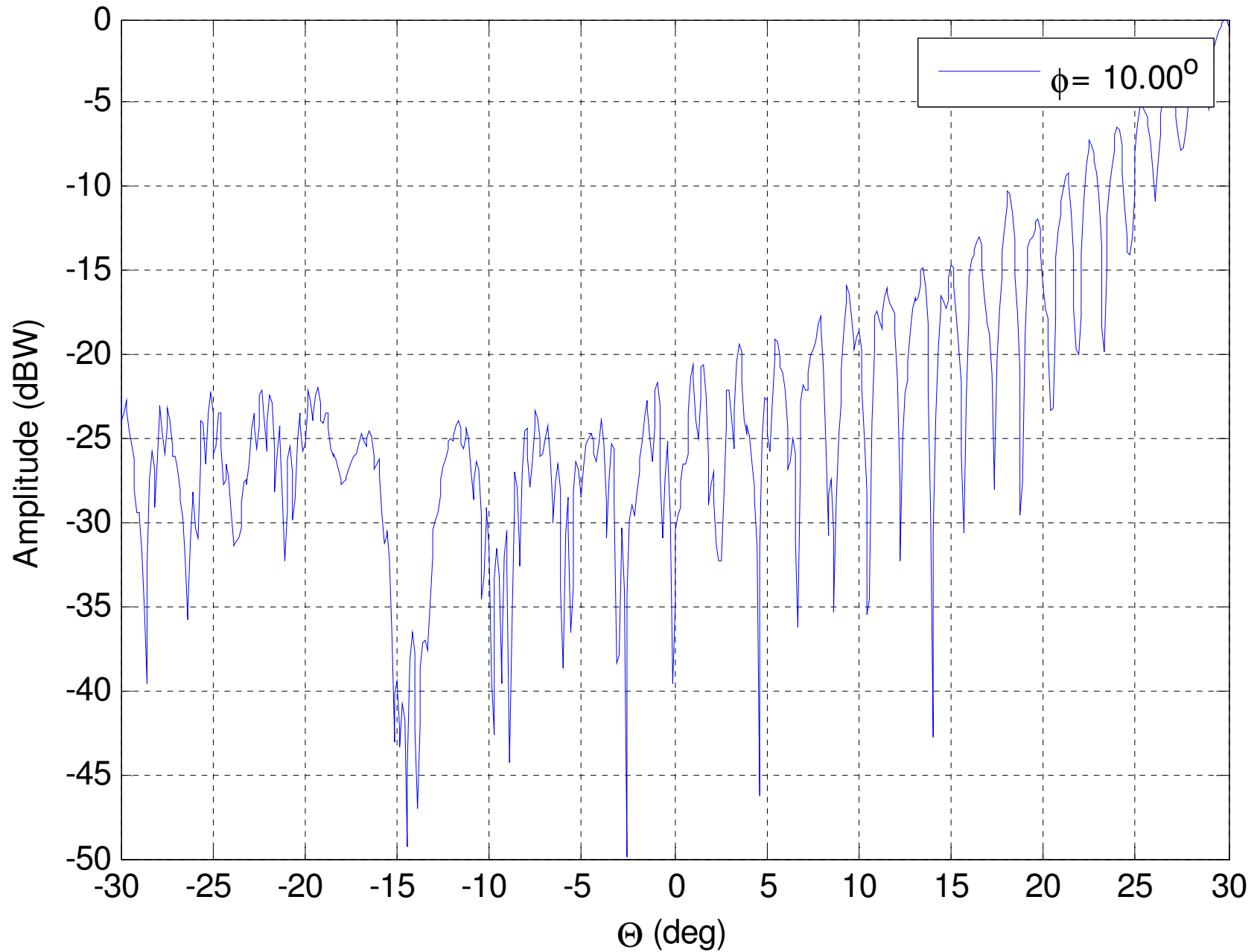
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 11.13 dBW, Date: 14-Dec-2011



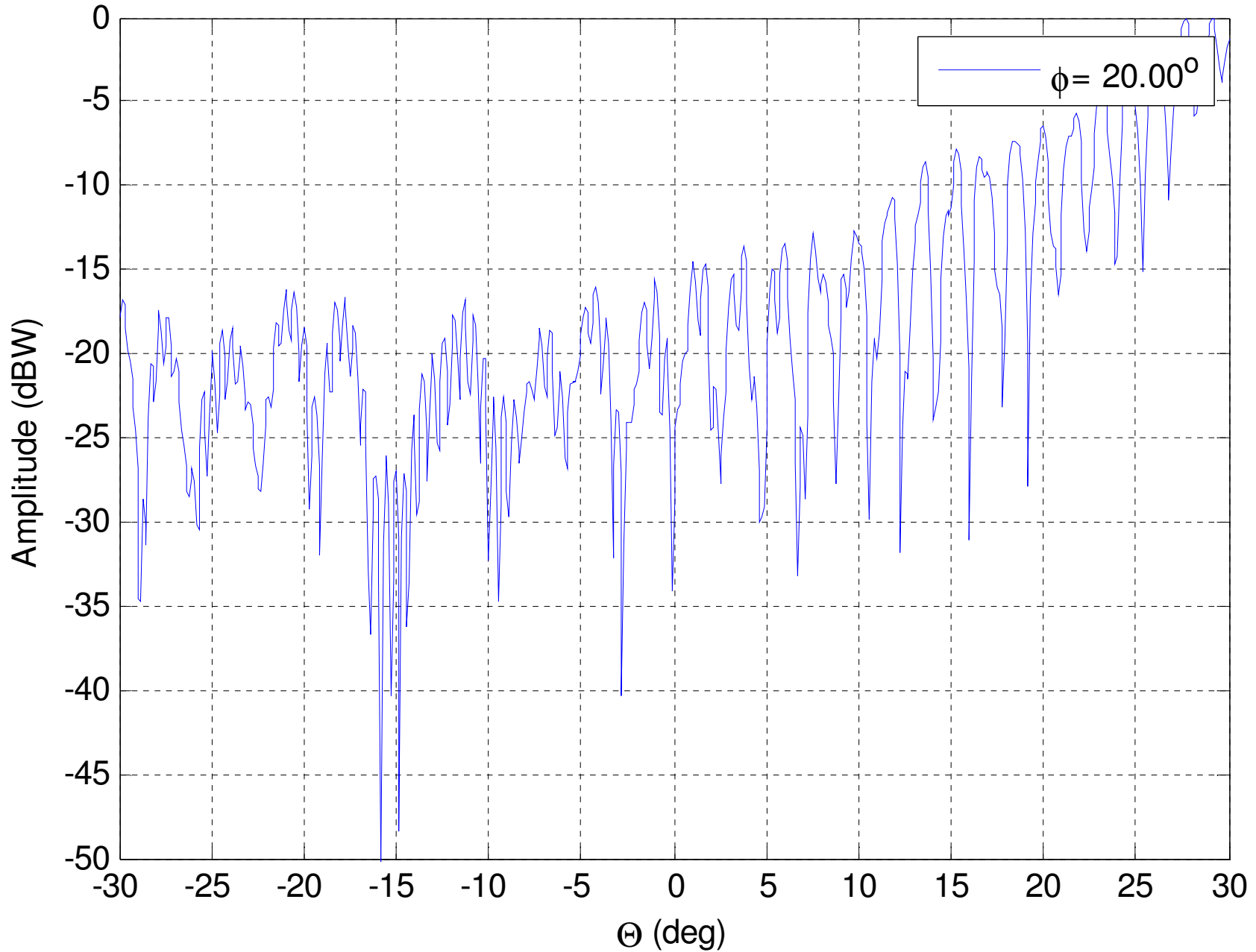
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 10.92 dBW, Date: 14-Dec-2011



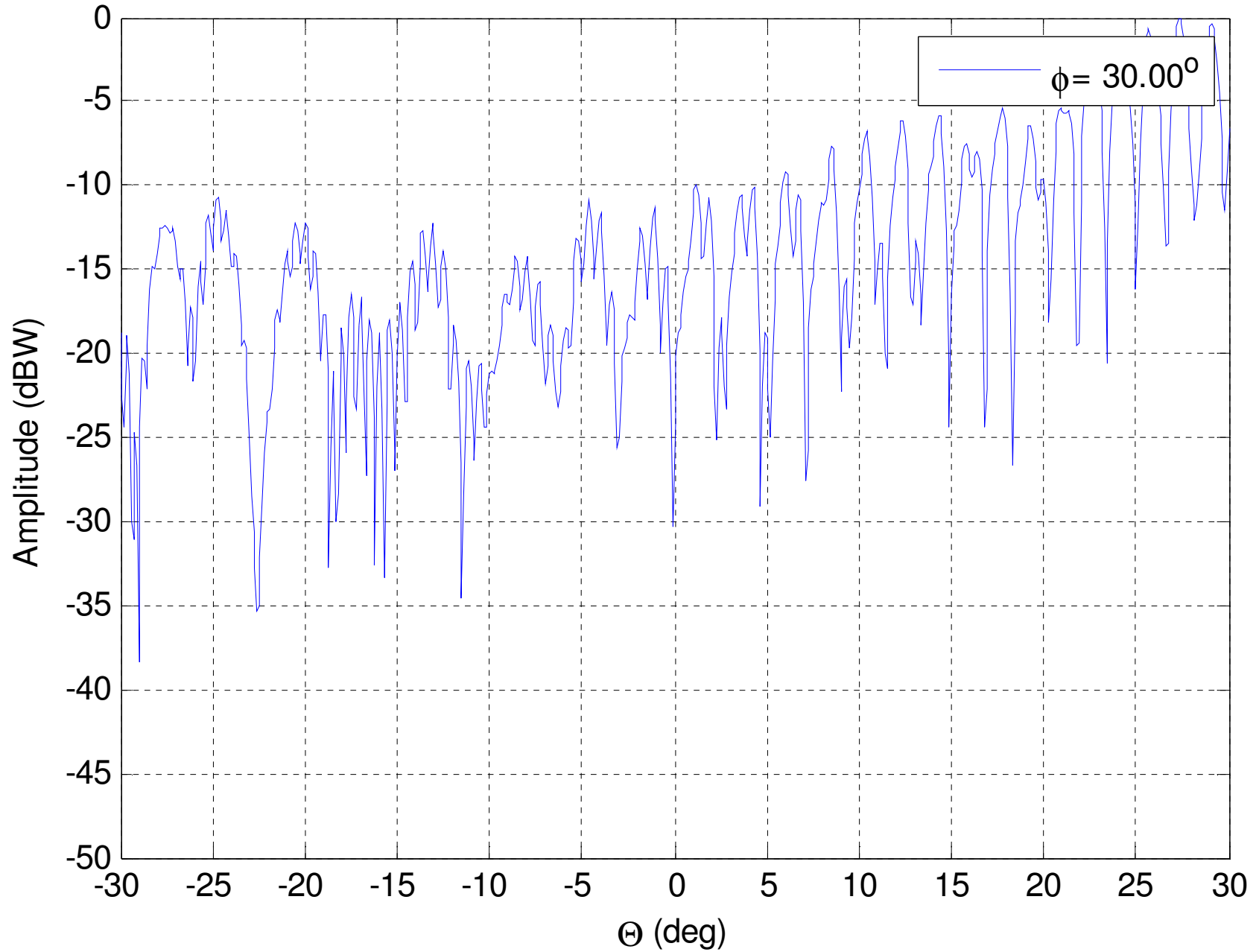
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 4.89 dBW, Date: 14-Dec-2011



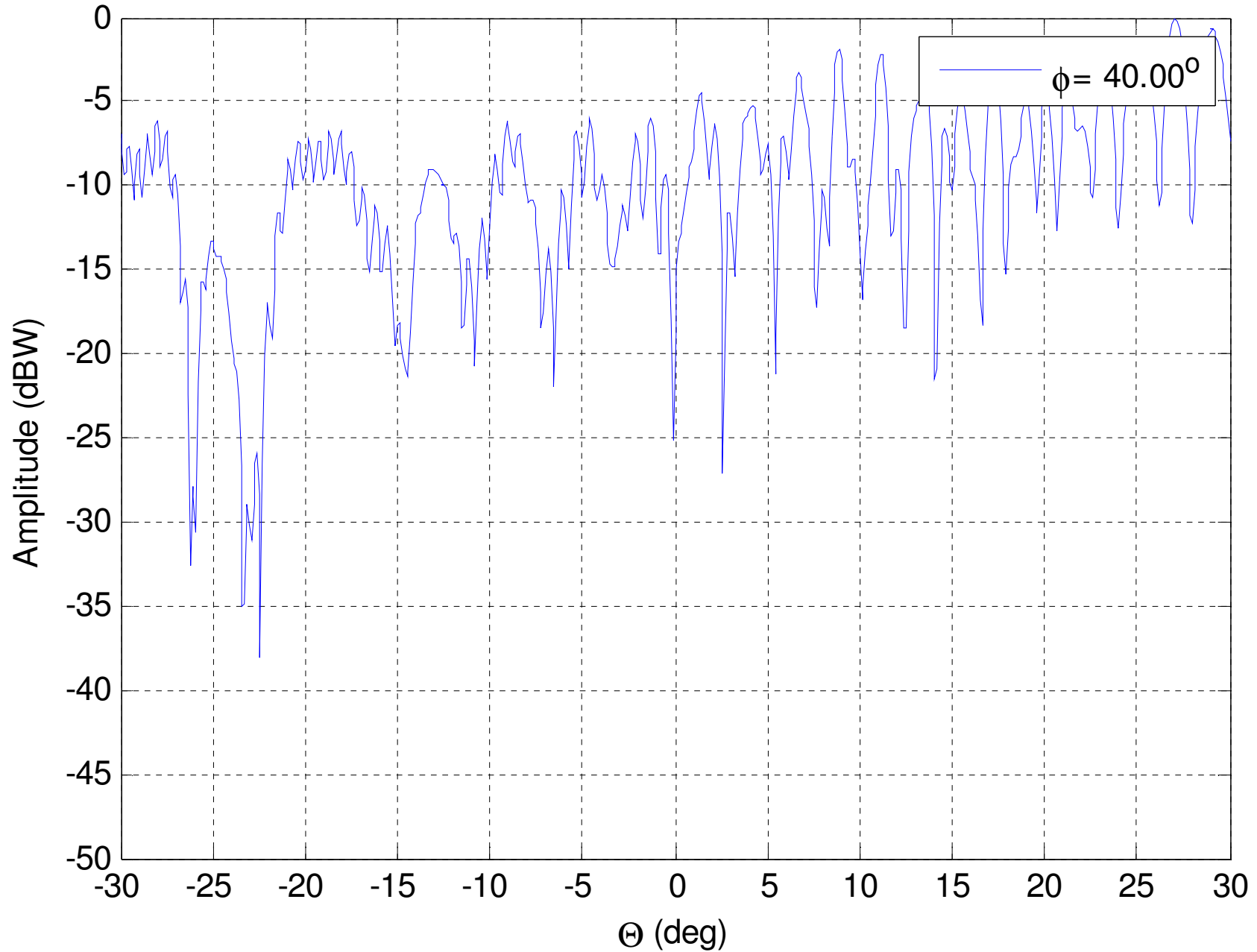
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: 0.48 dBW, Date: 14-Dec-2011



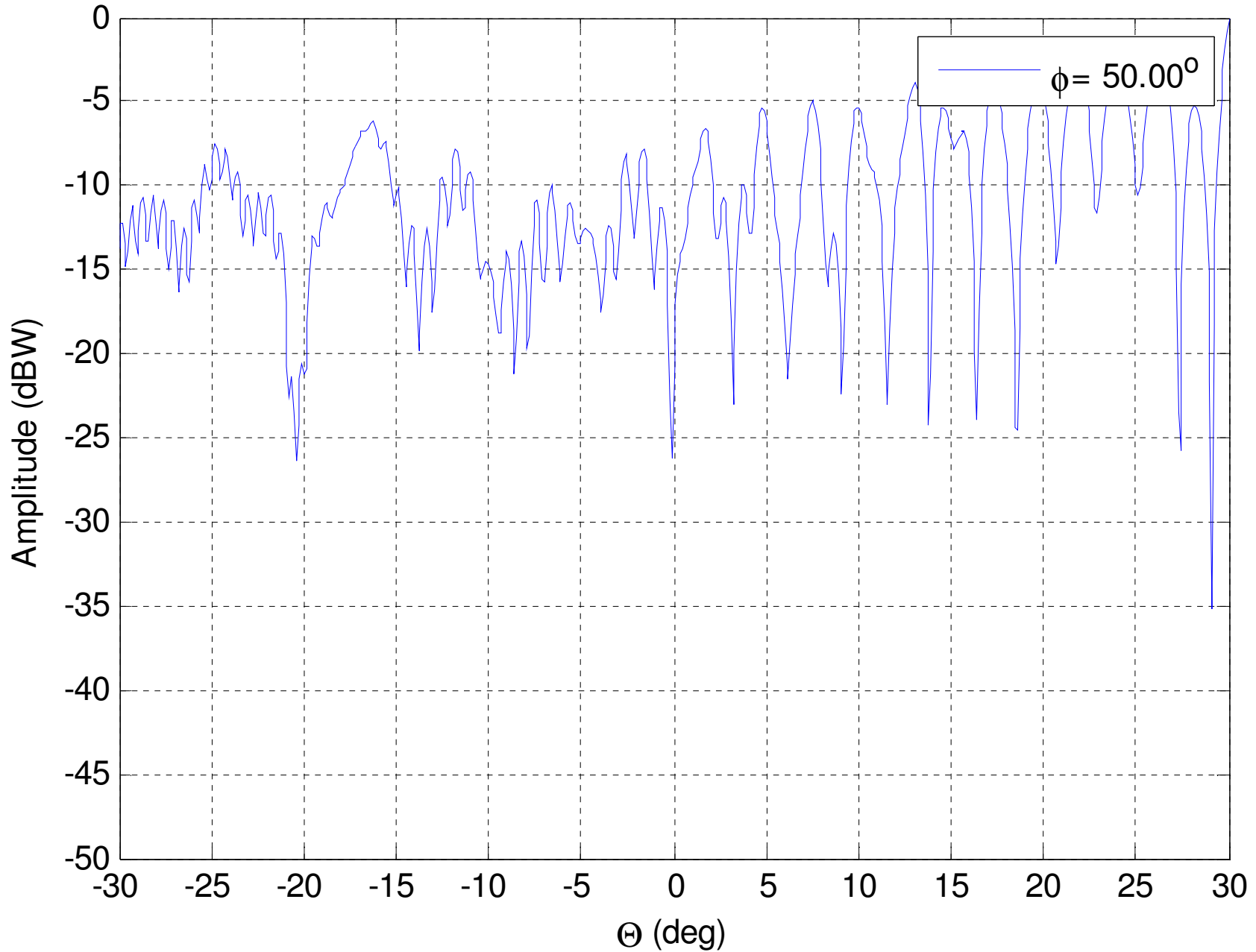
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -4.94 dBW, Date: 14-Dec-2011



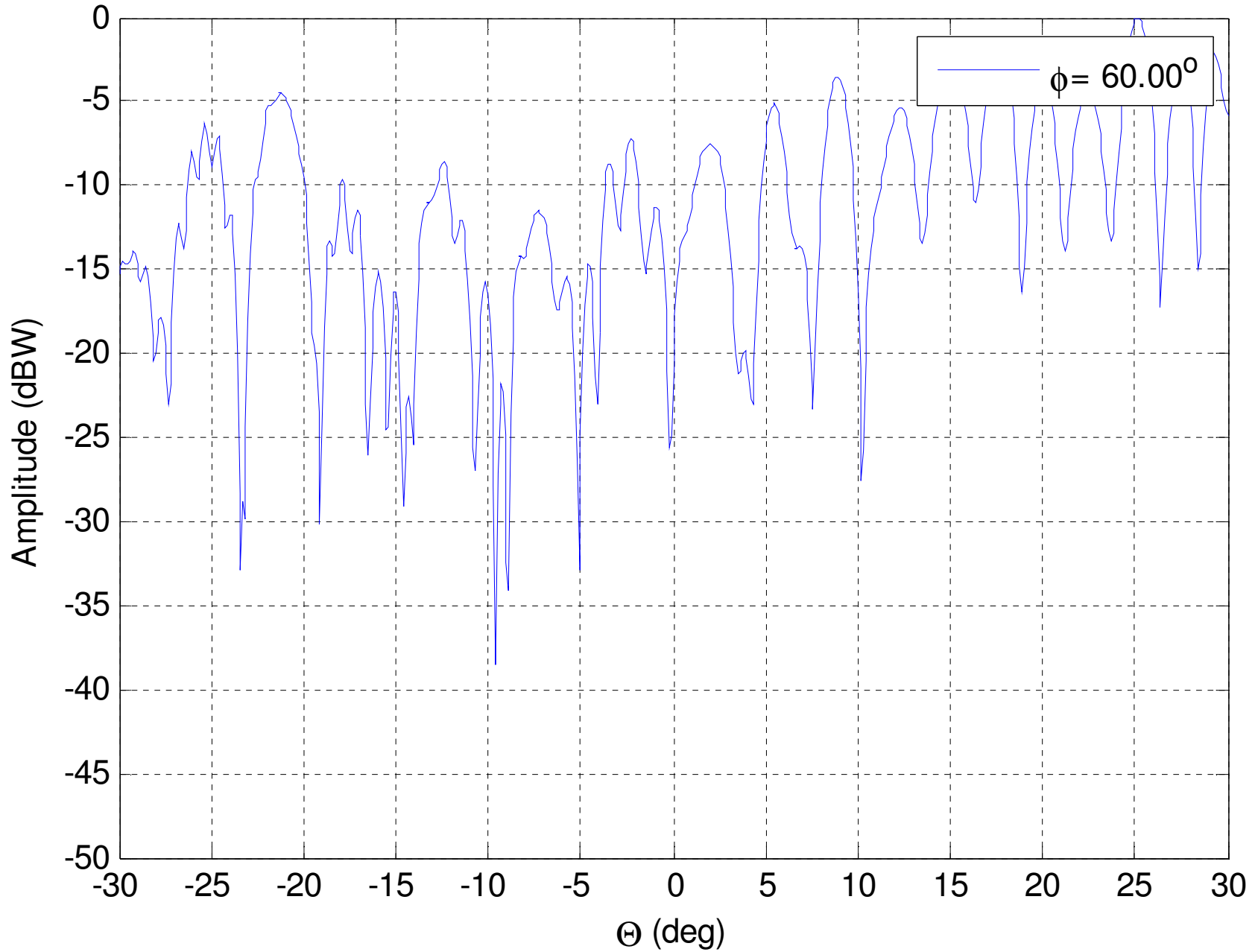
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -3.09 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

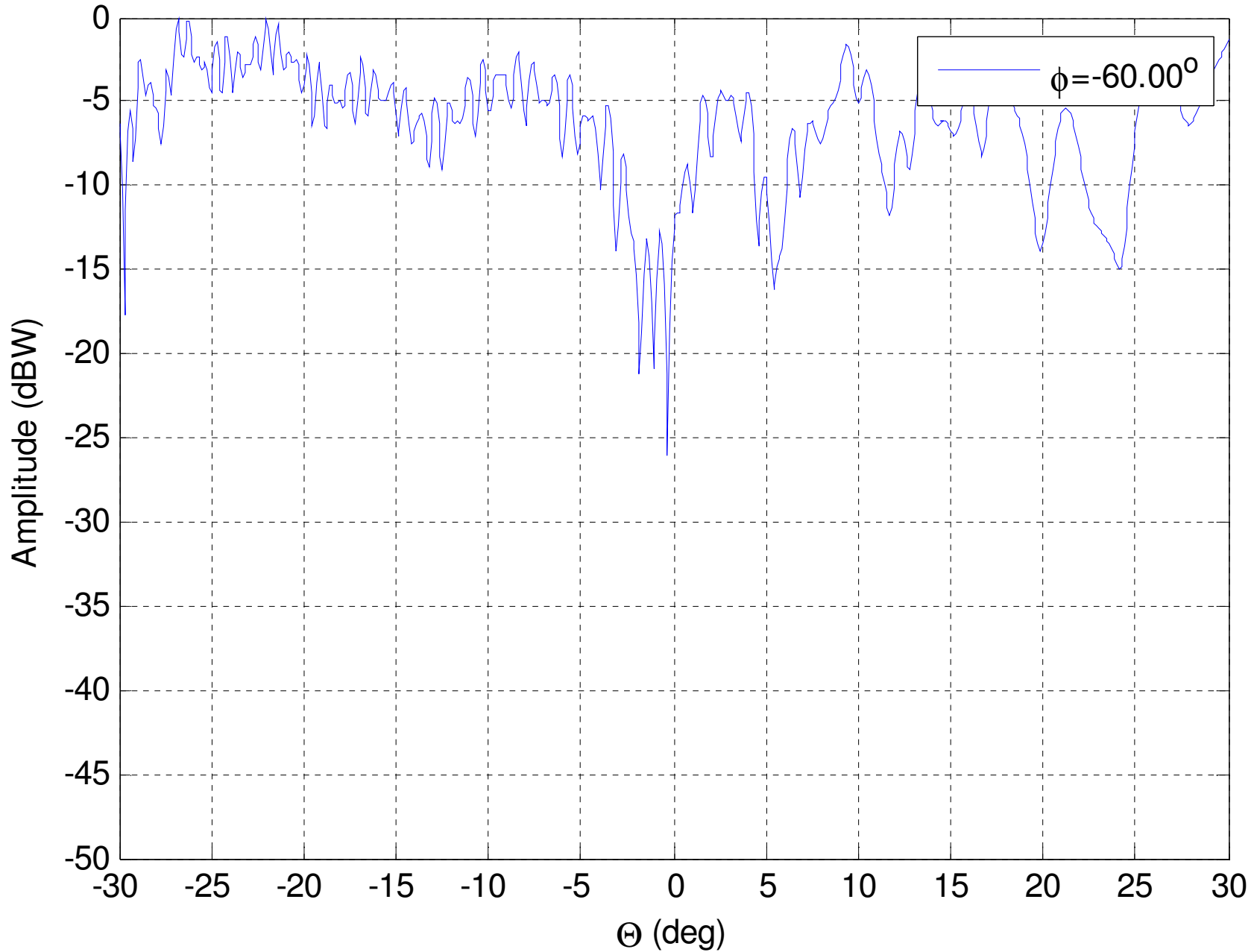
Input file: tx-17.5-rhcp-60.cut, Peak: -3.15 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

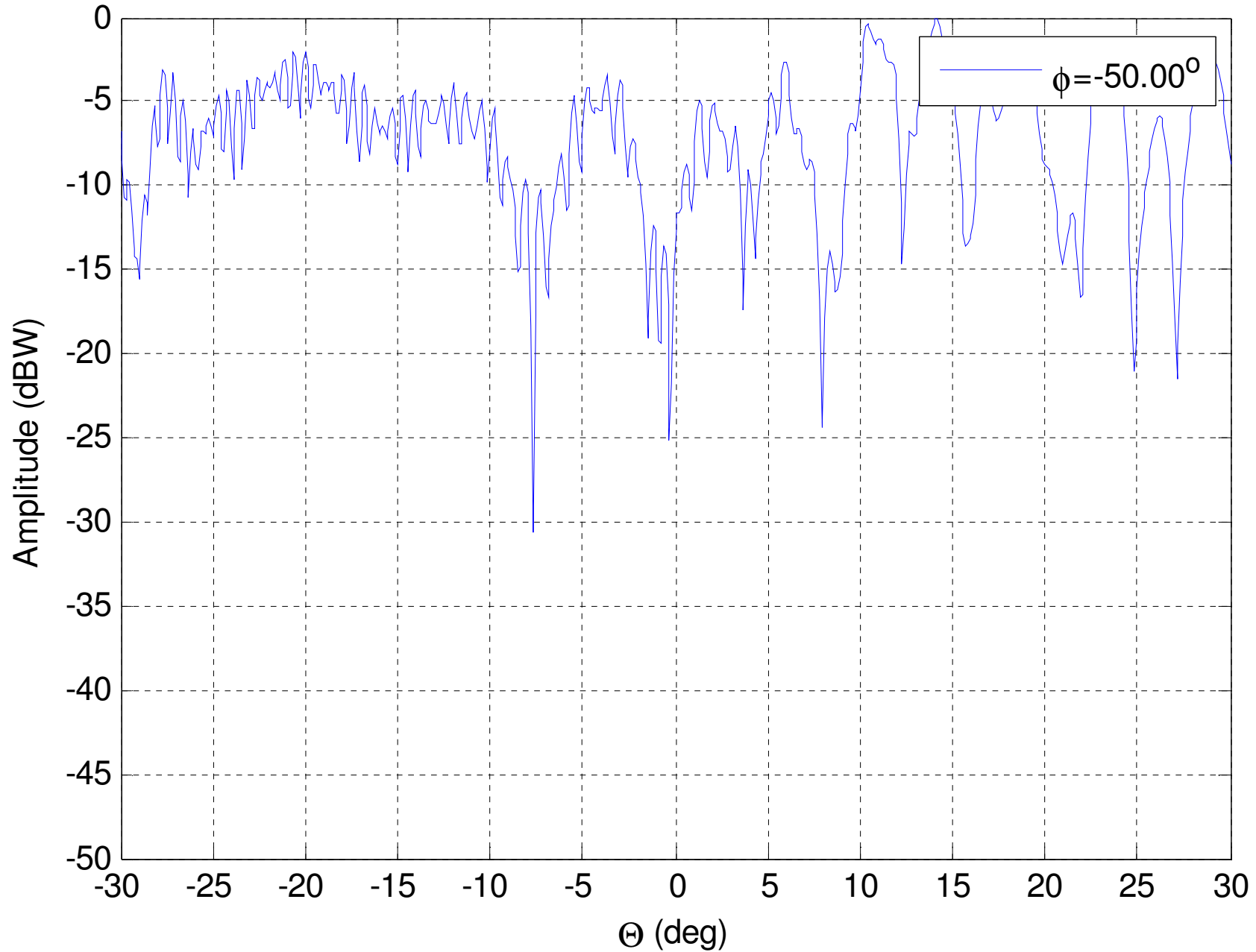
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -5.31 dBW, Date: 14-Dec-2011



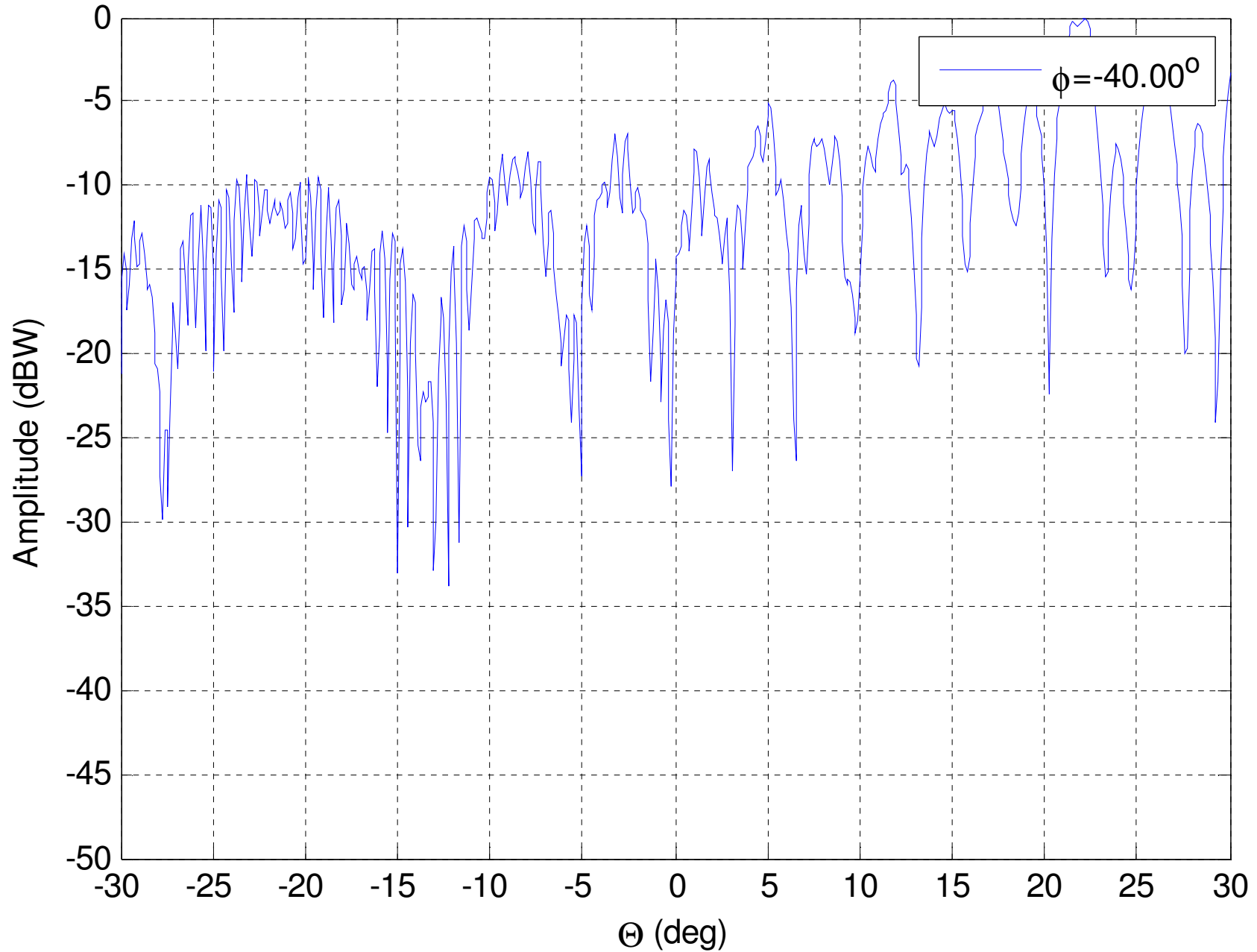
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -5.21 dBW, Date: 14-Dec-2011



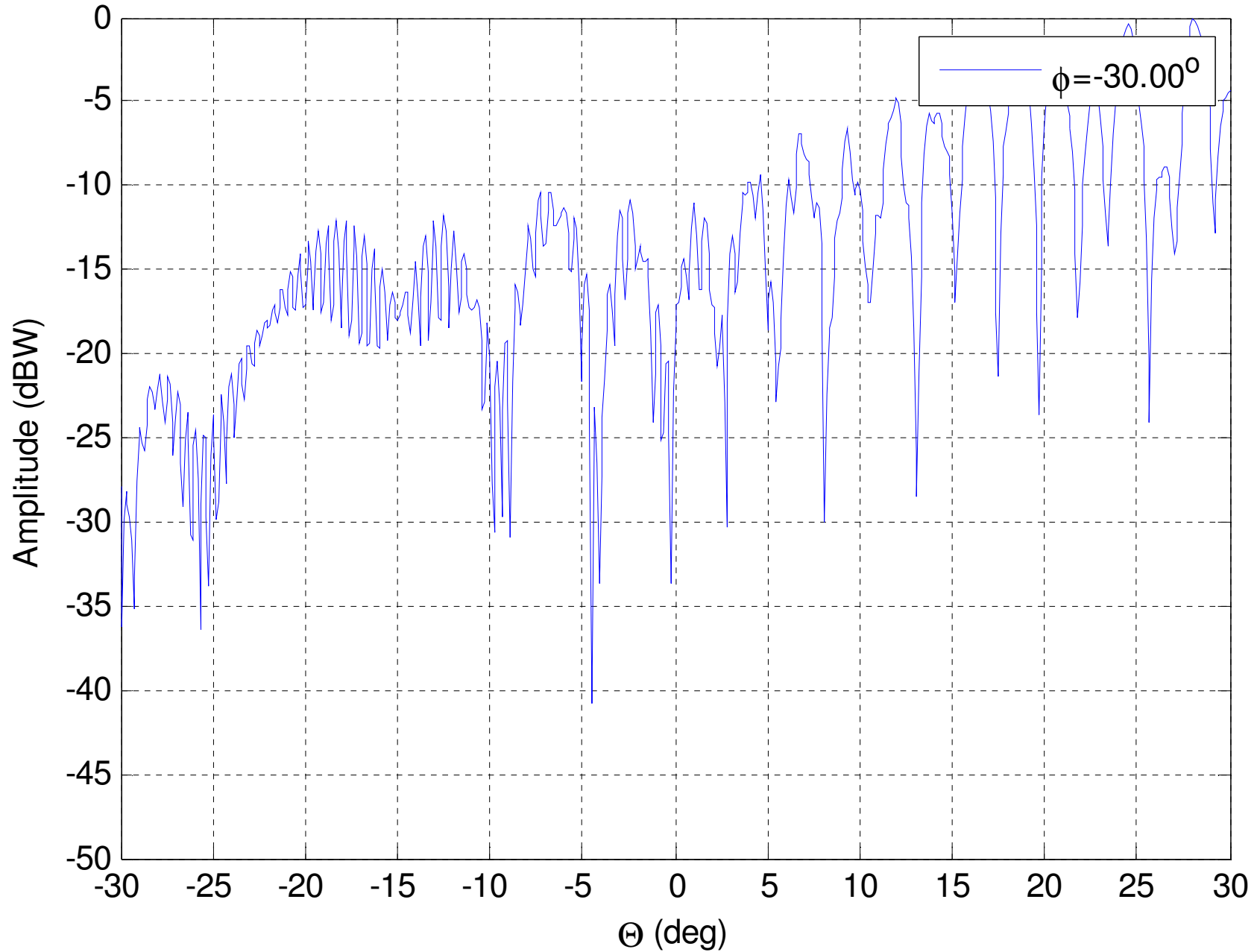
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.46 dBW, Date: 14-Dec-2011



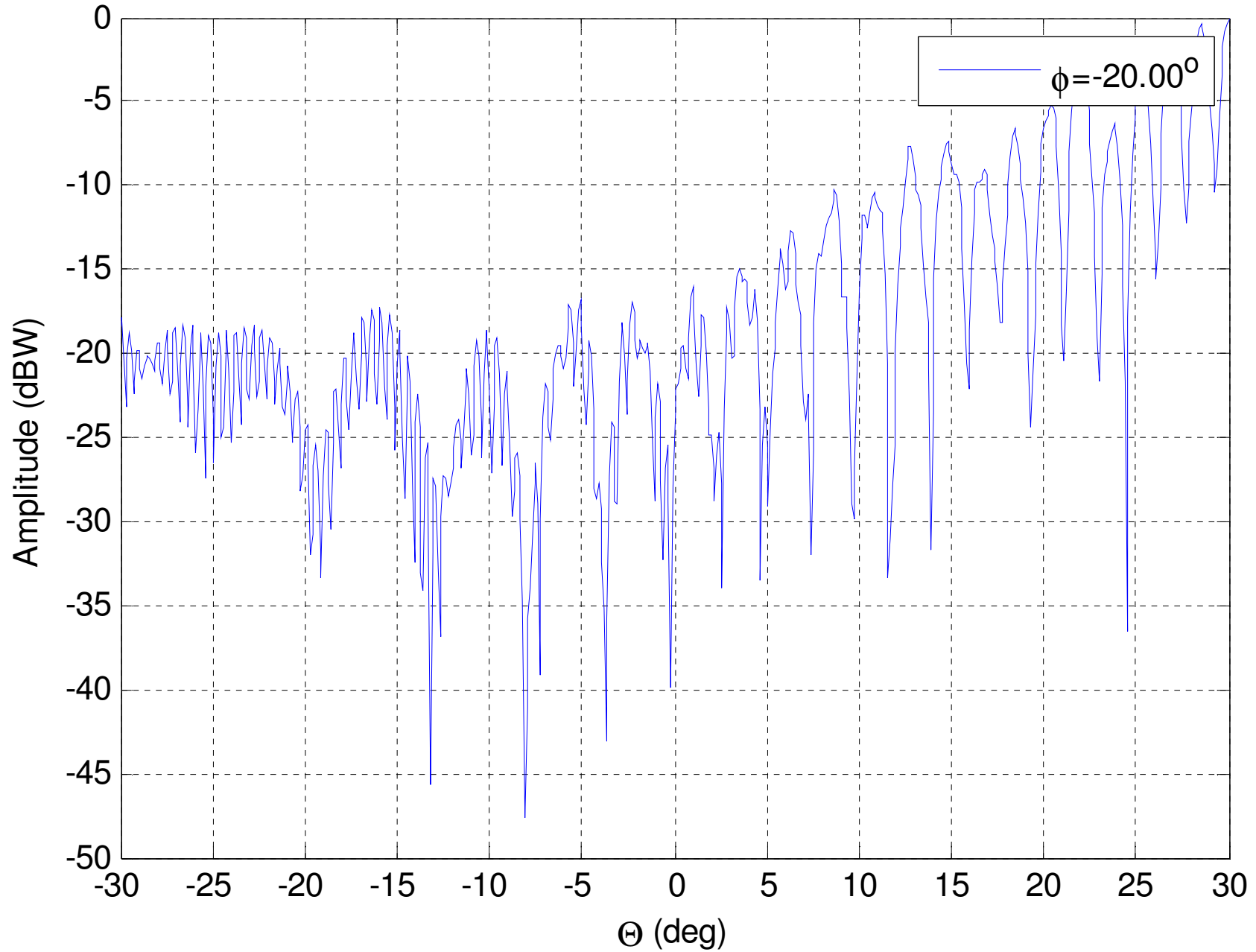
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 0.47 dBW, Date: 14-Dec-2011



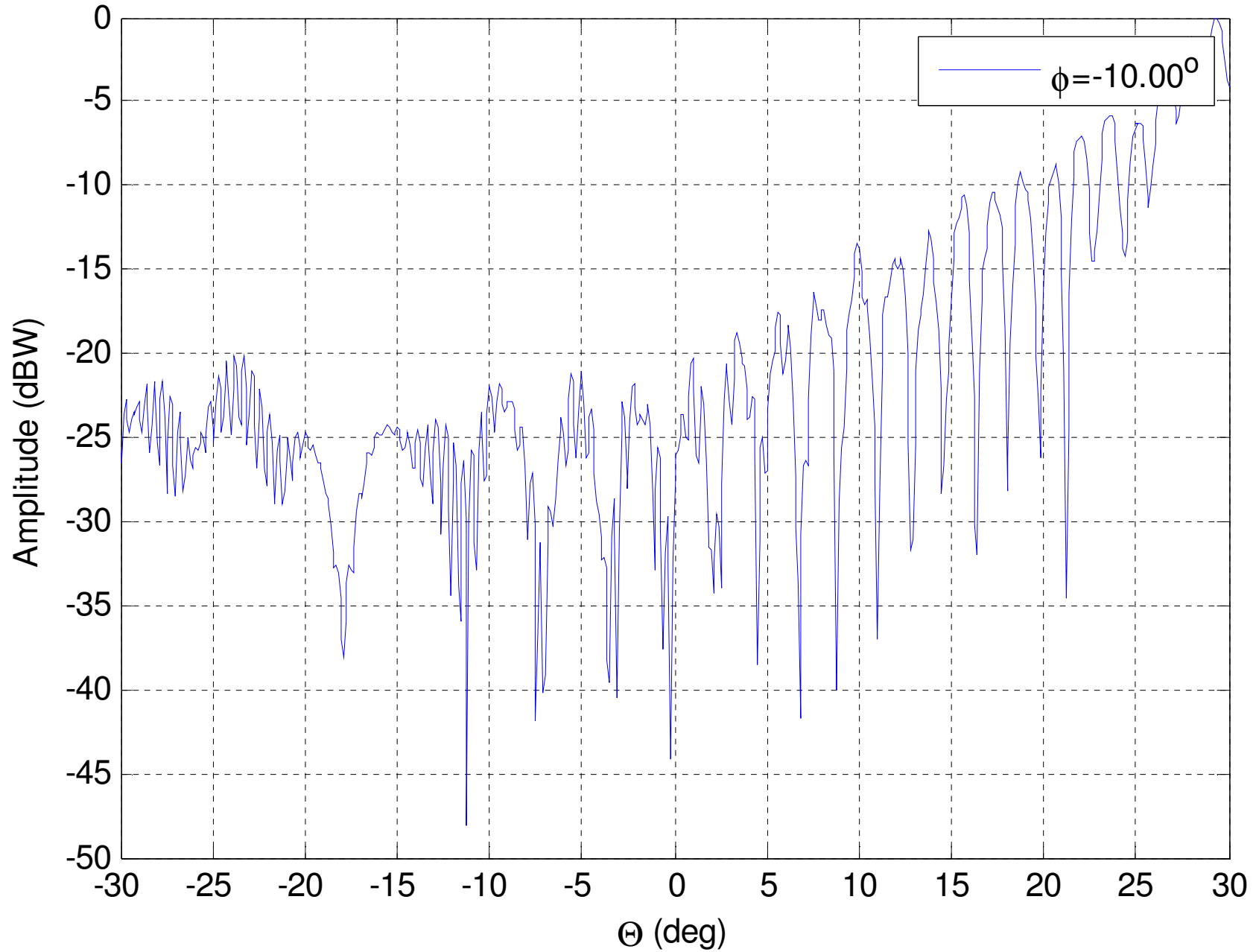
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 5.59 dBW, Date: 14-Dec-2011



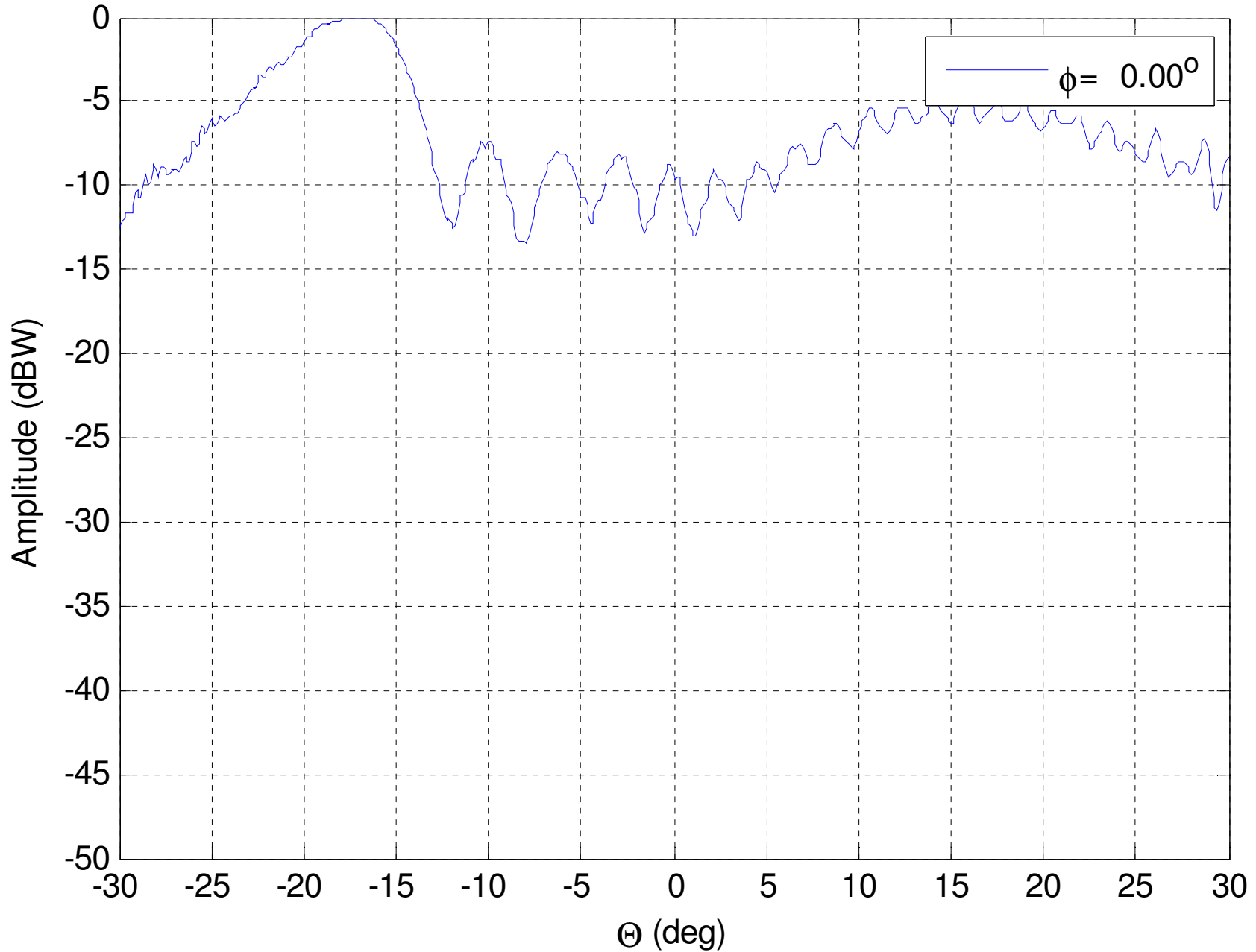
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 9.67 dBW, Date: 14-Dec-2011



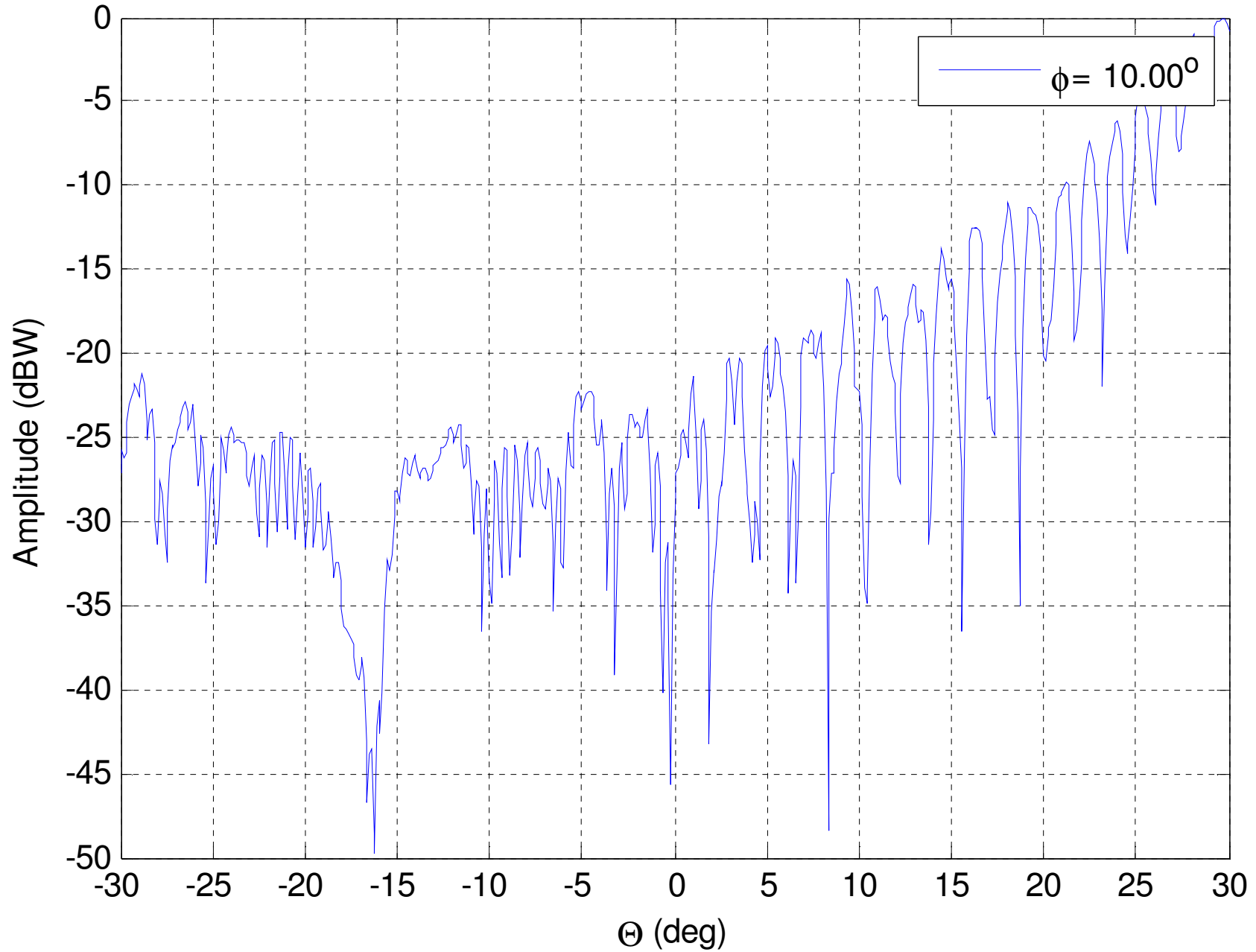
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 10.88 dBW, Date: 14-Dec-2011



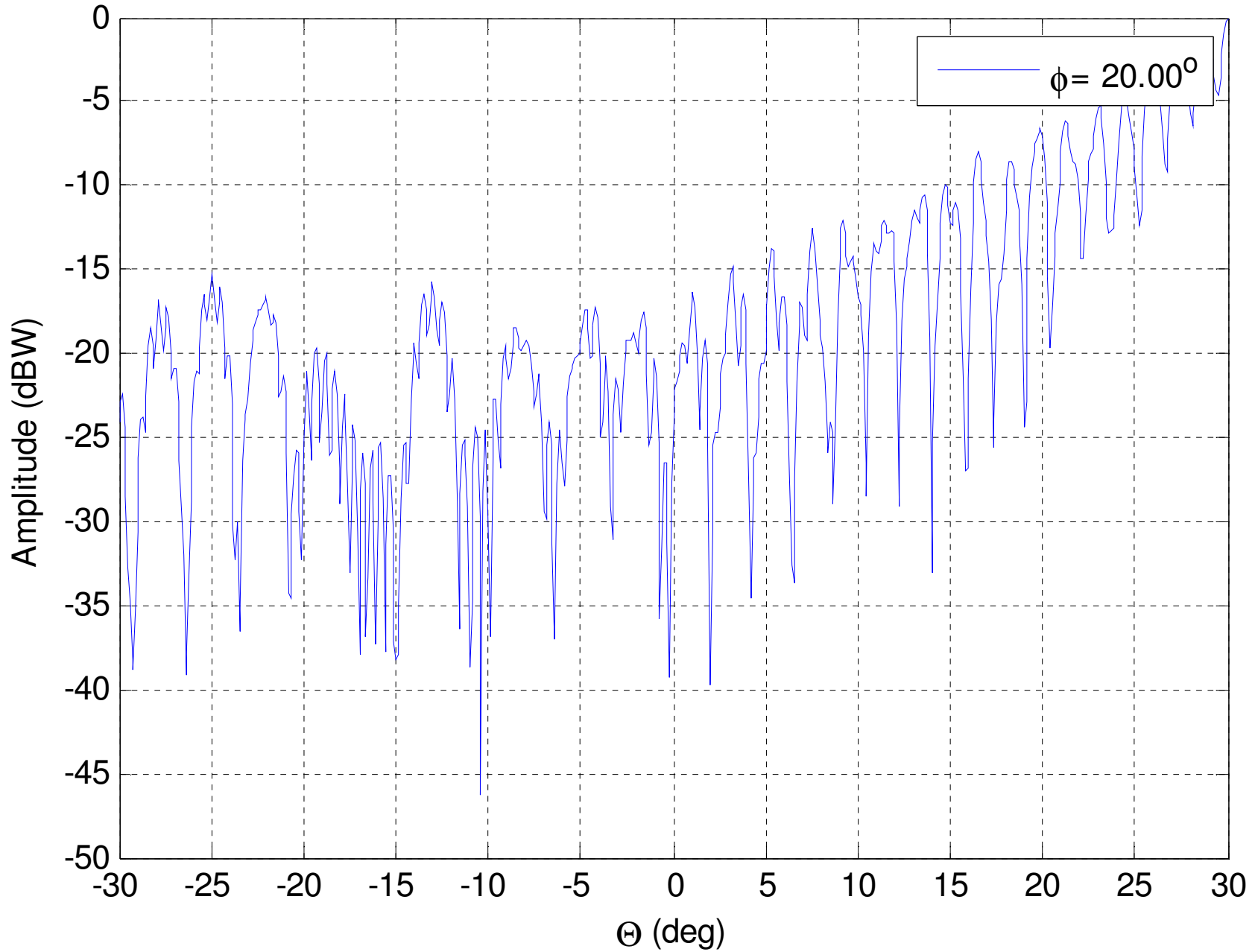
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 10.82 dBW, Date: 14-Dec-2011



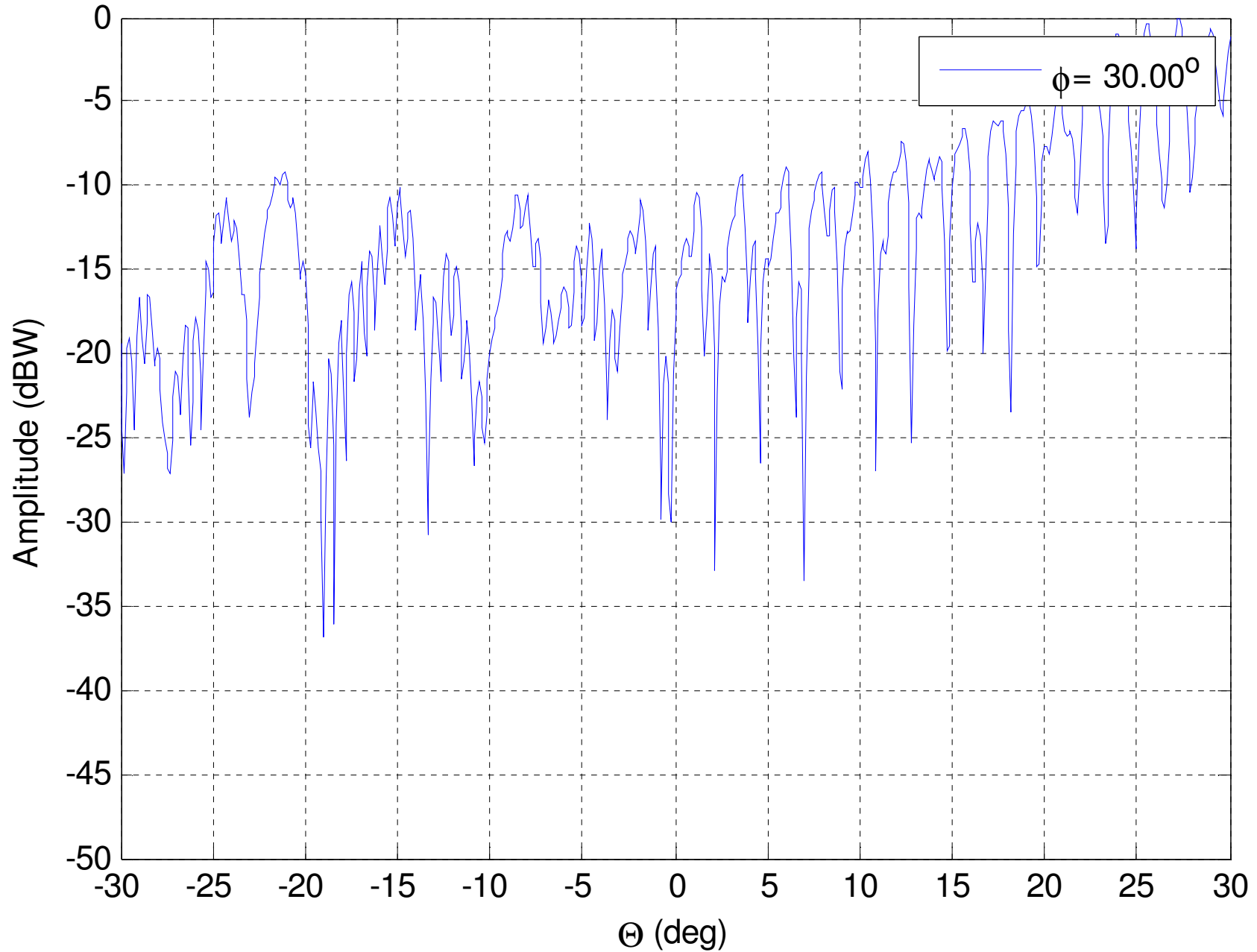
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 5.76 dBW, Date: 14-Dec-2011



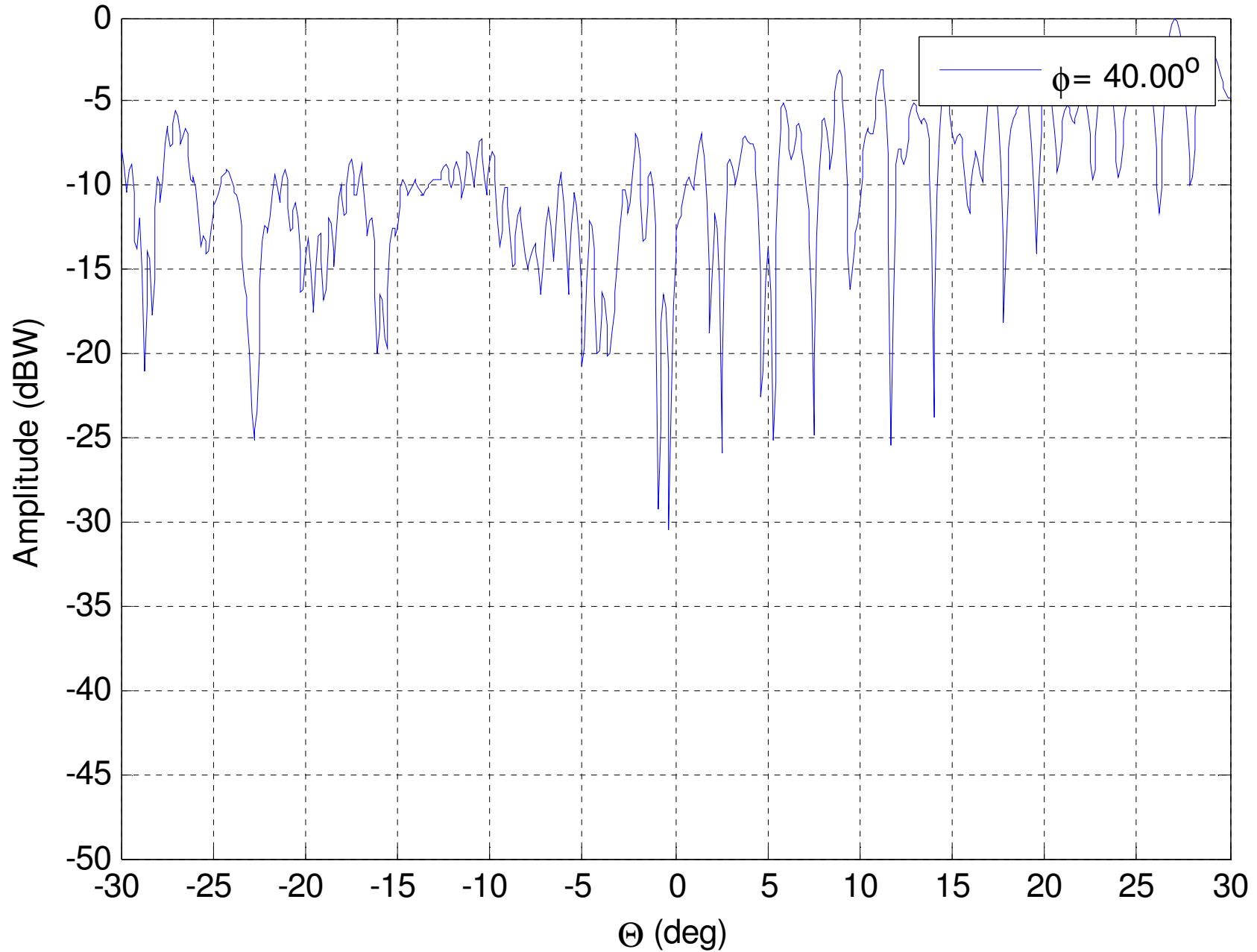
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.20 dBW, Date: 14-Dec-2011



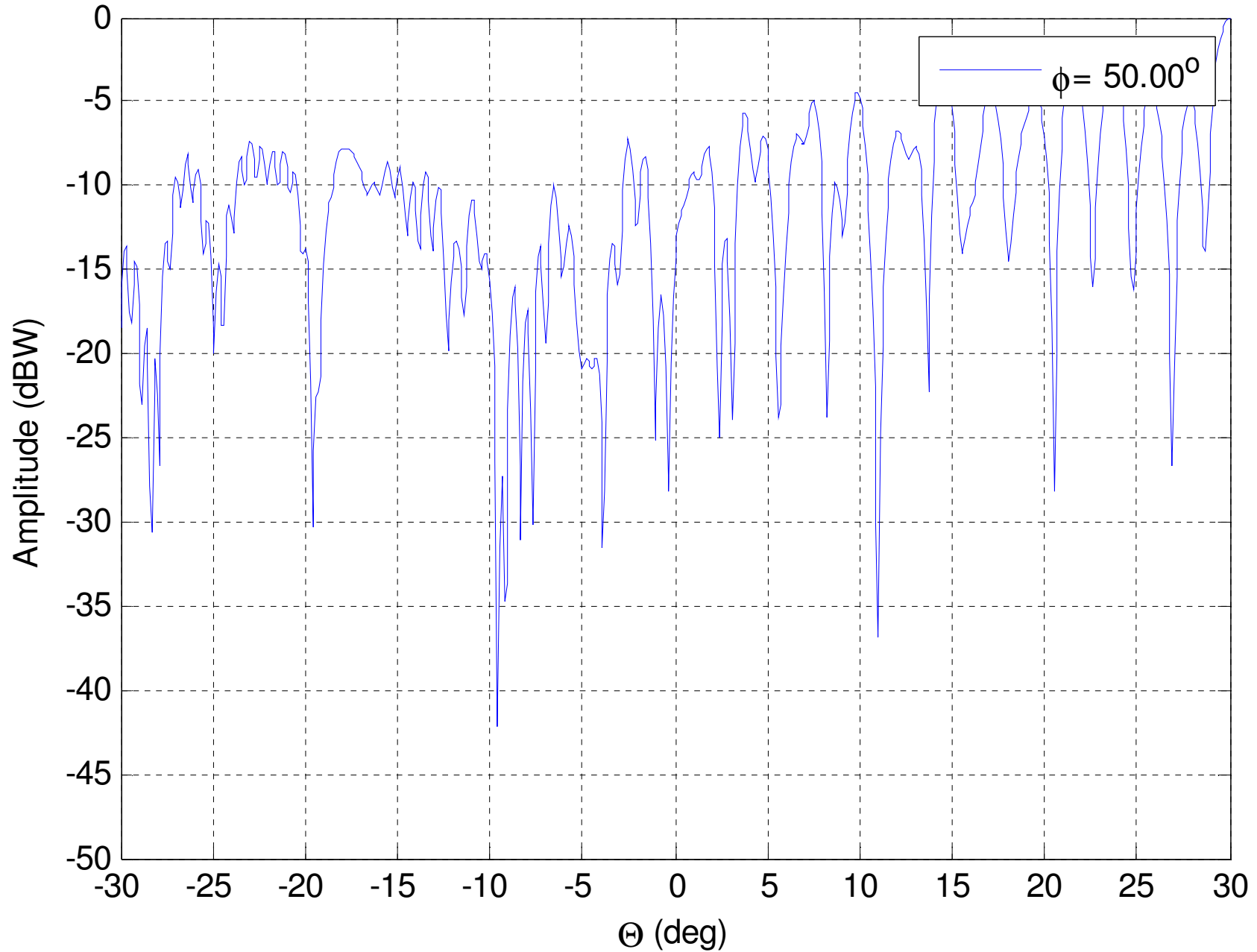
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -3.72 dBW, Date: 14-Dec-2011



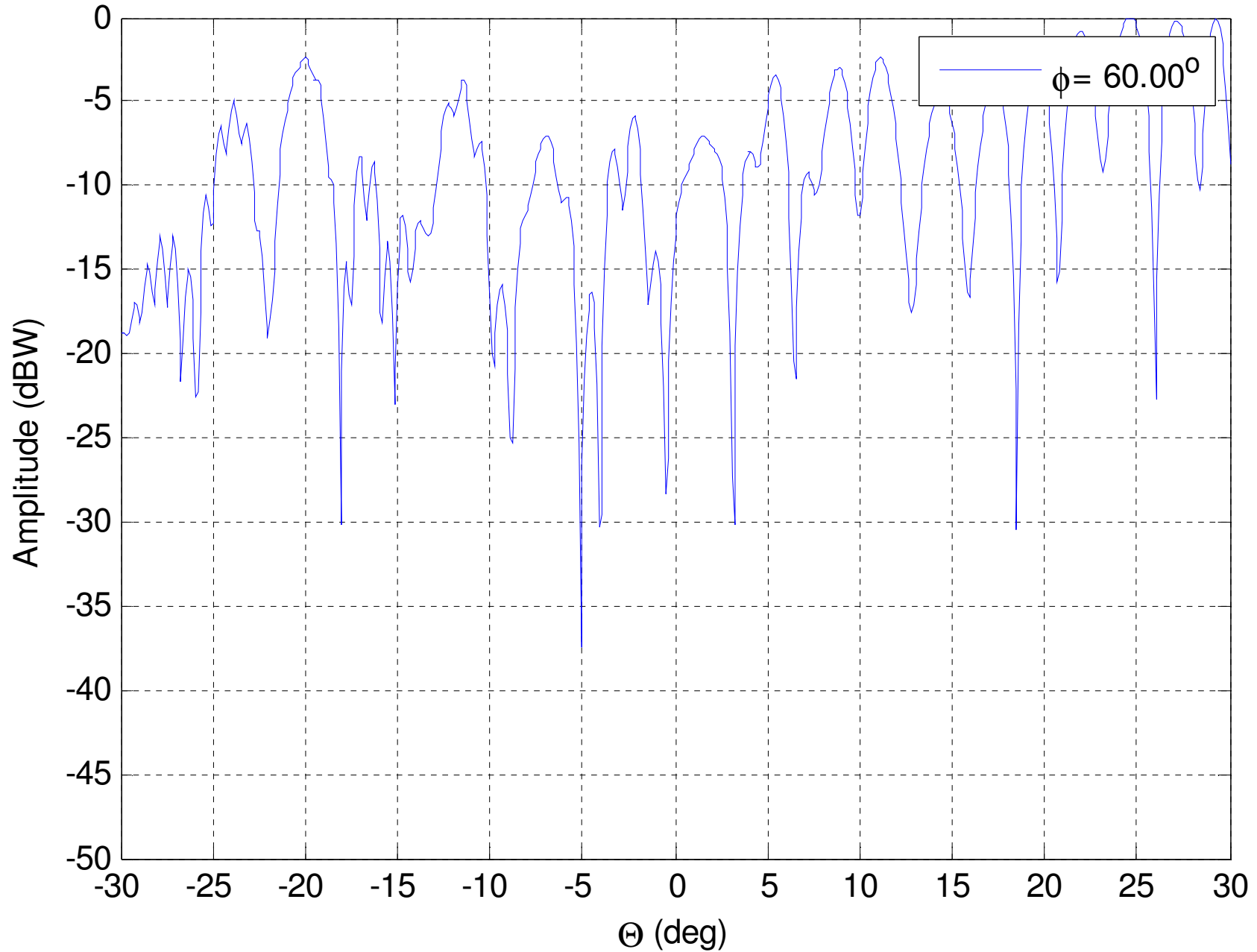
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -3.48 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

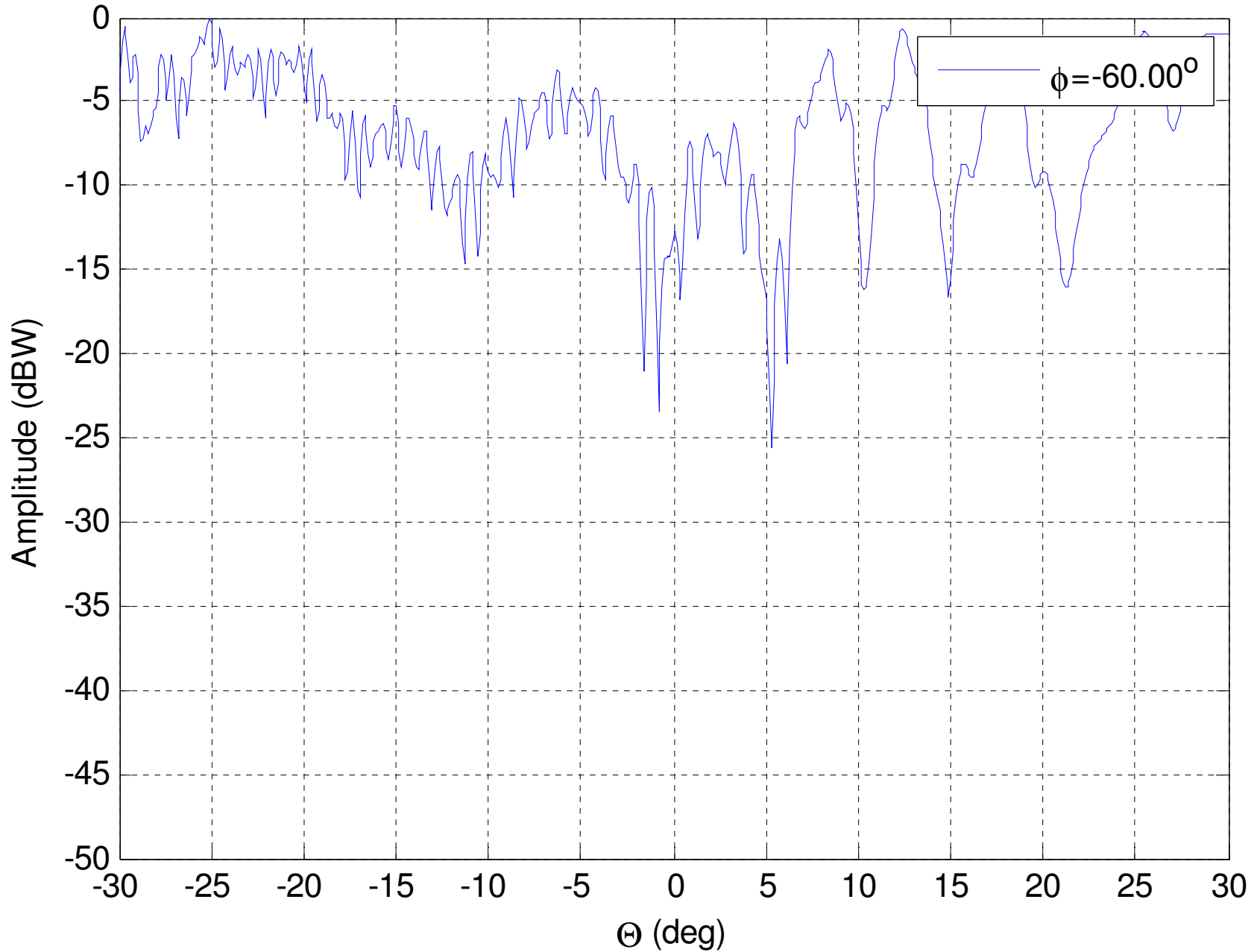
Input file: tx-17.5-lhcp-60.cut, Peak: -4.88 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

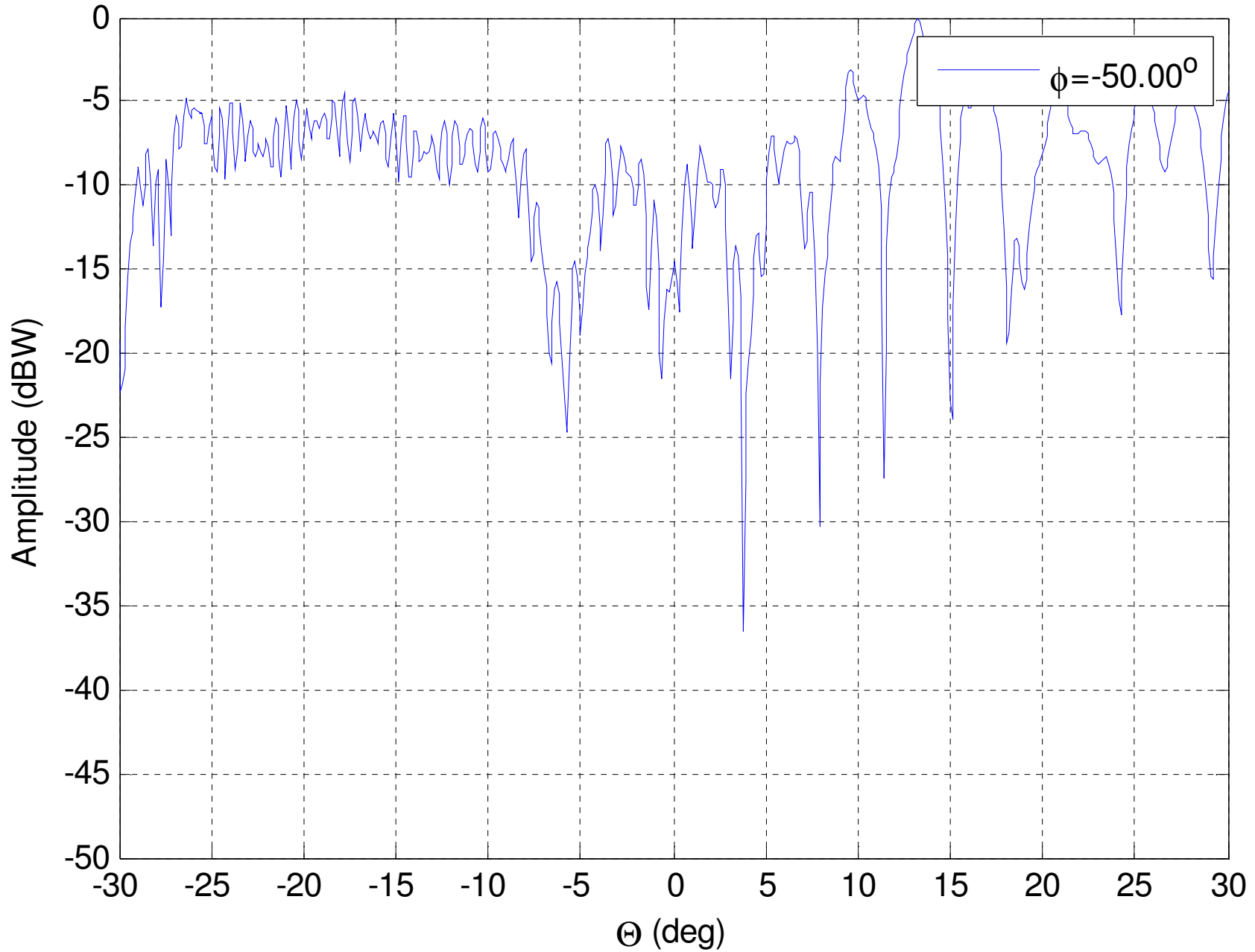
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.03 dBW, Date: 14-Dec-2011



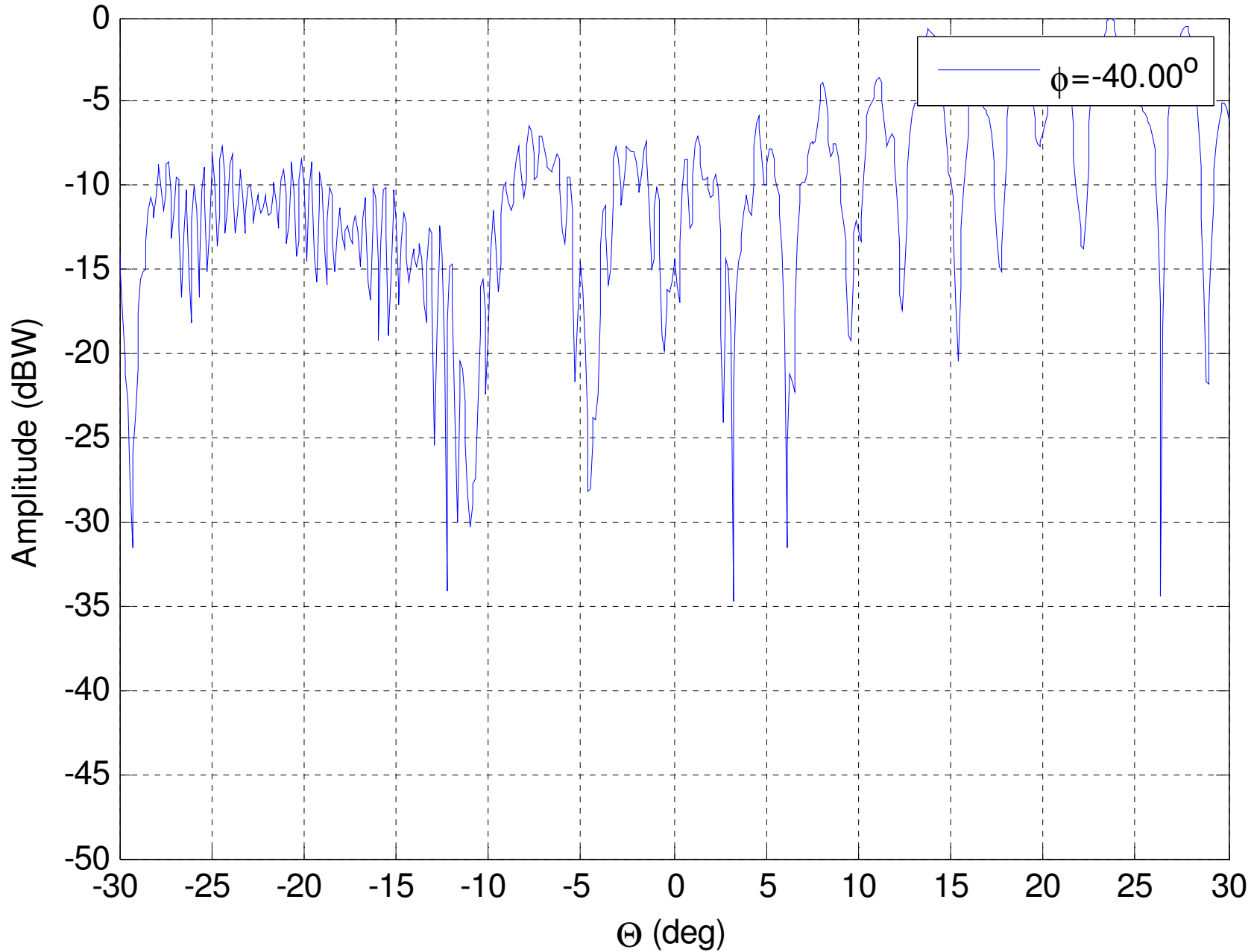
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -3.22 dBW, Date: 14-Dec-2011



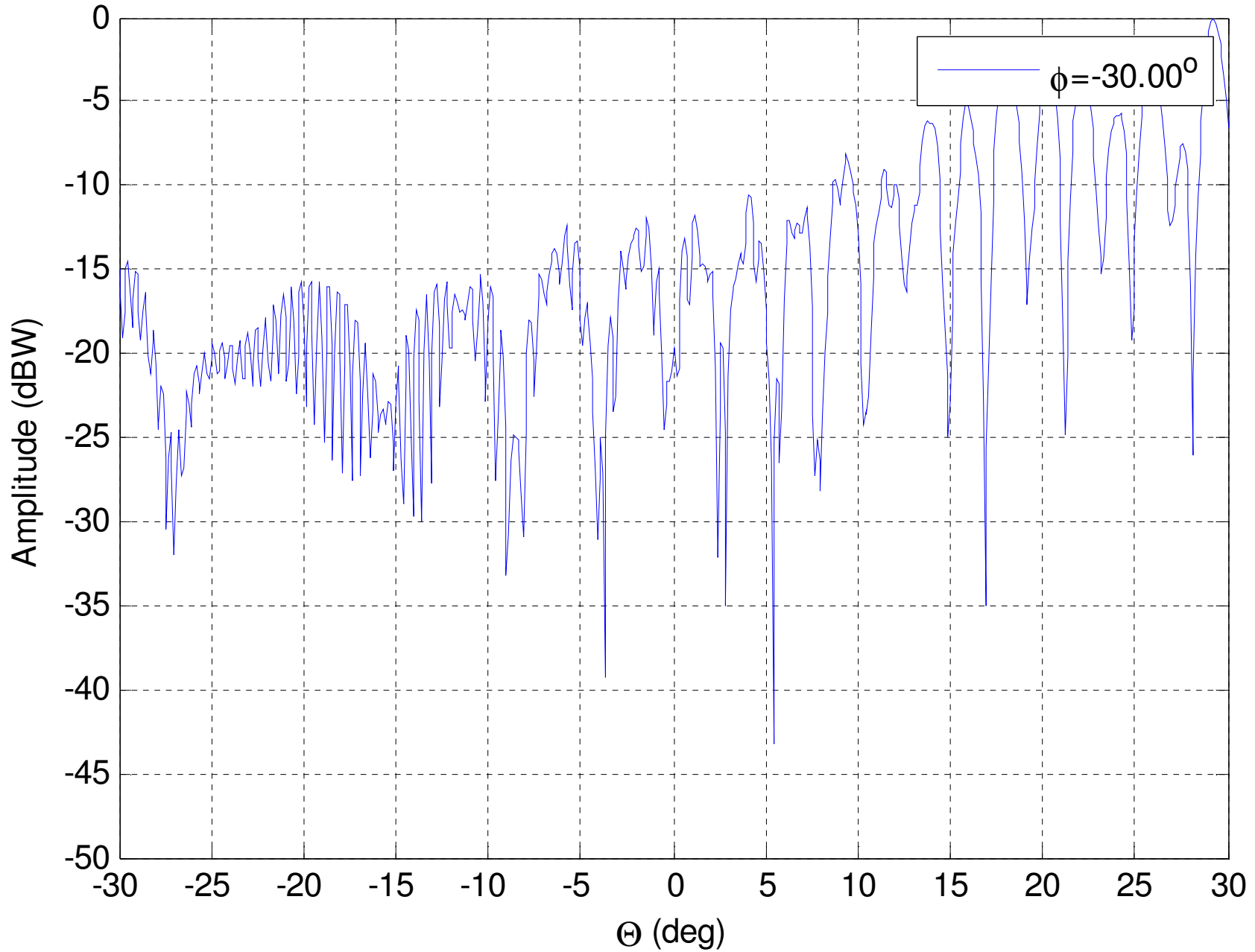
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -3.29 dBW, Date: 14-Dec-2011



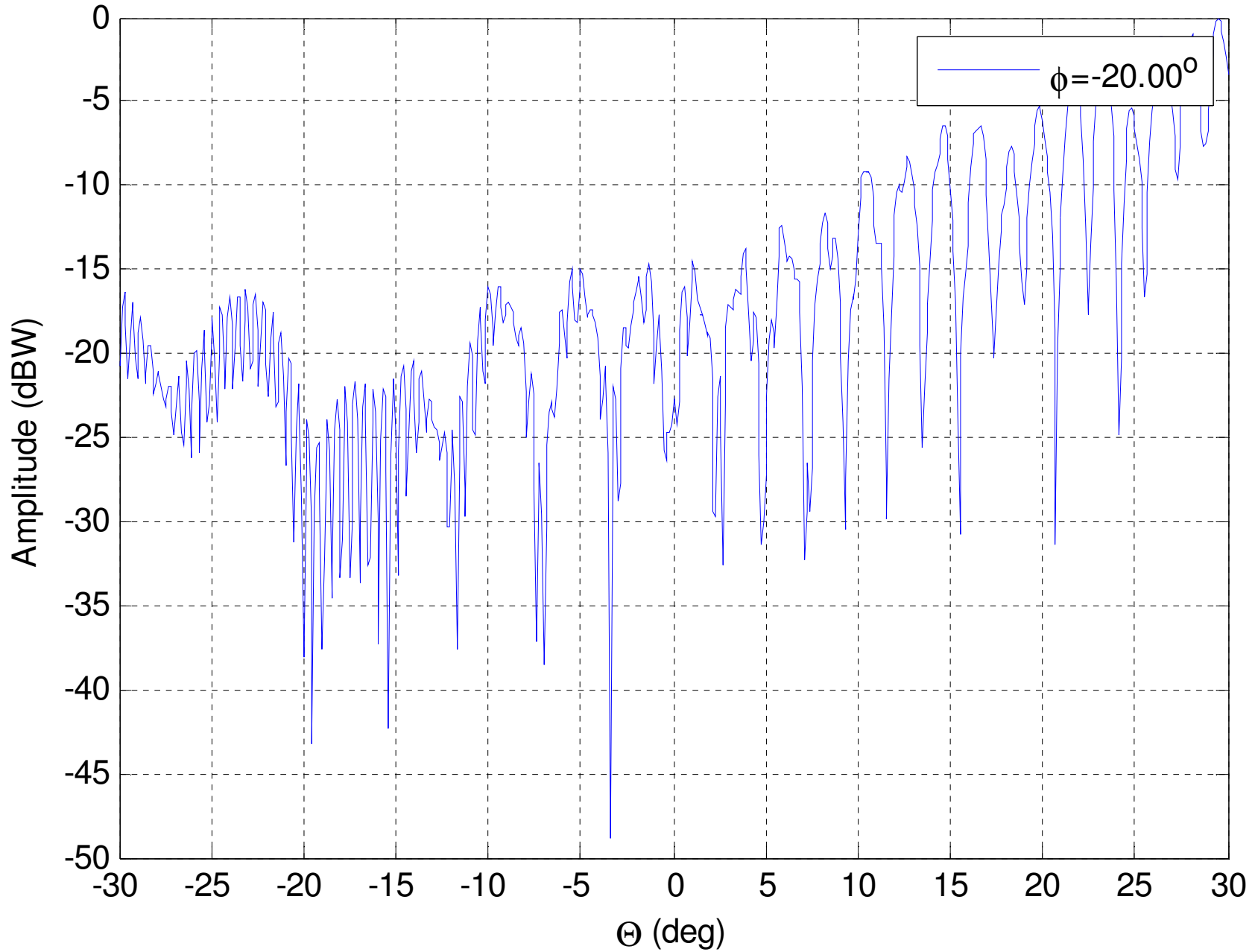
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 1.90 dBW, Date: 14-Dec-2011



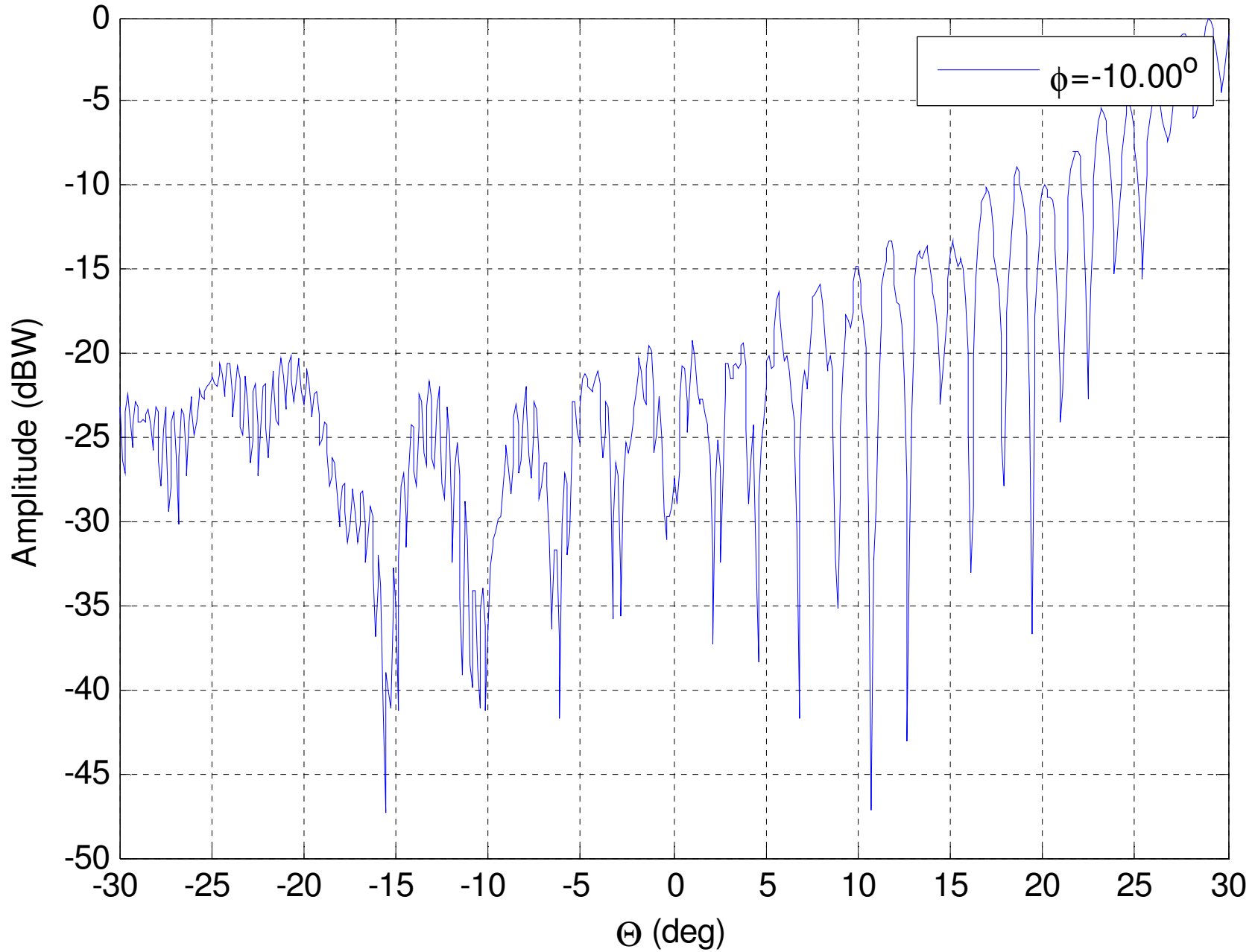
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 4.88 dBW, Date: 14-Dec-2011



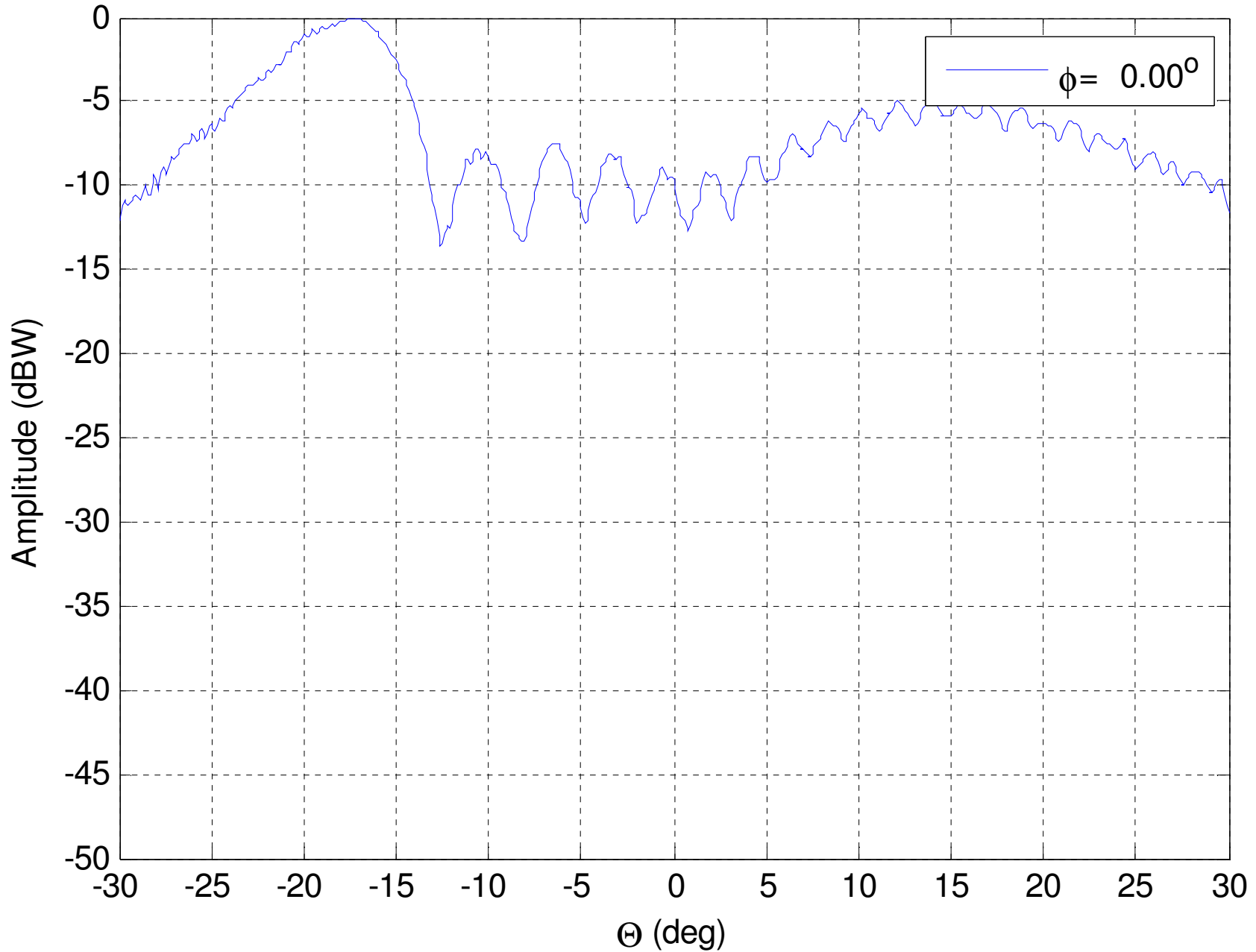
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 9.73 dBW, Date: 14-Dec-2011



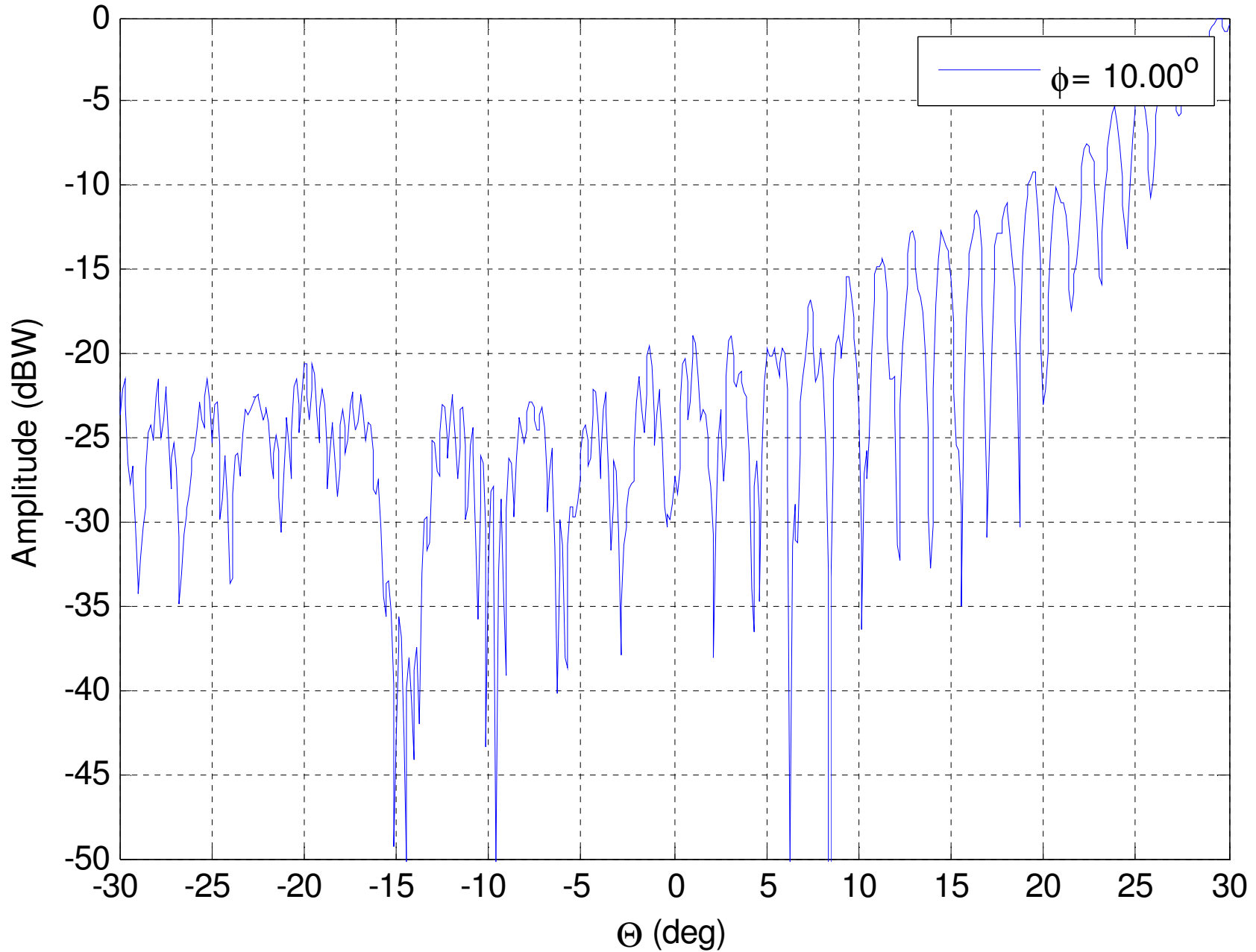
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 10.95 dBW, Date: 14-Dec-2011



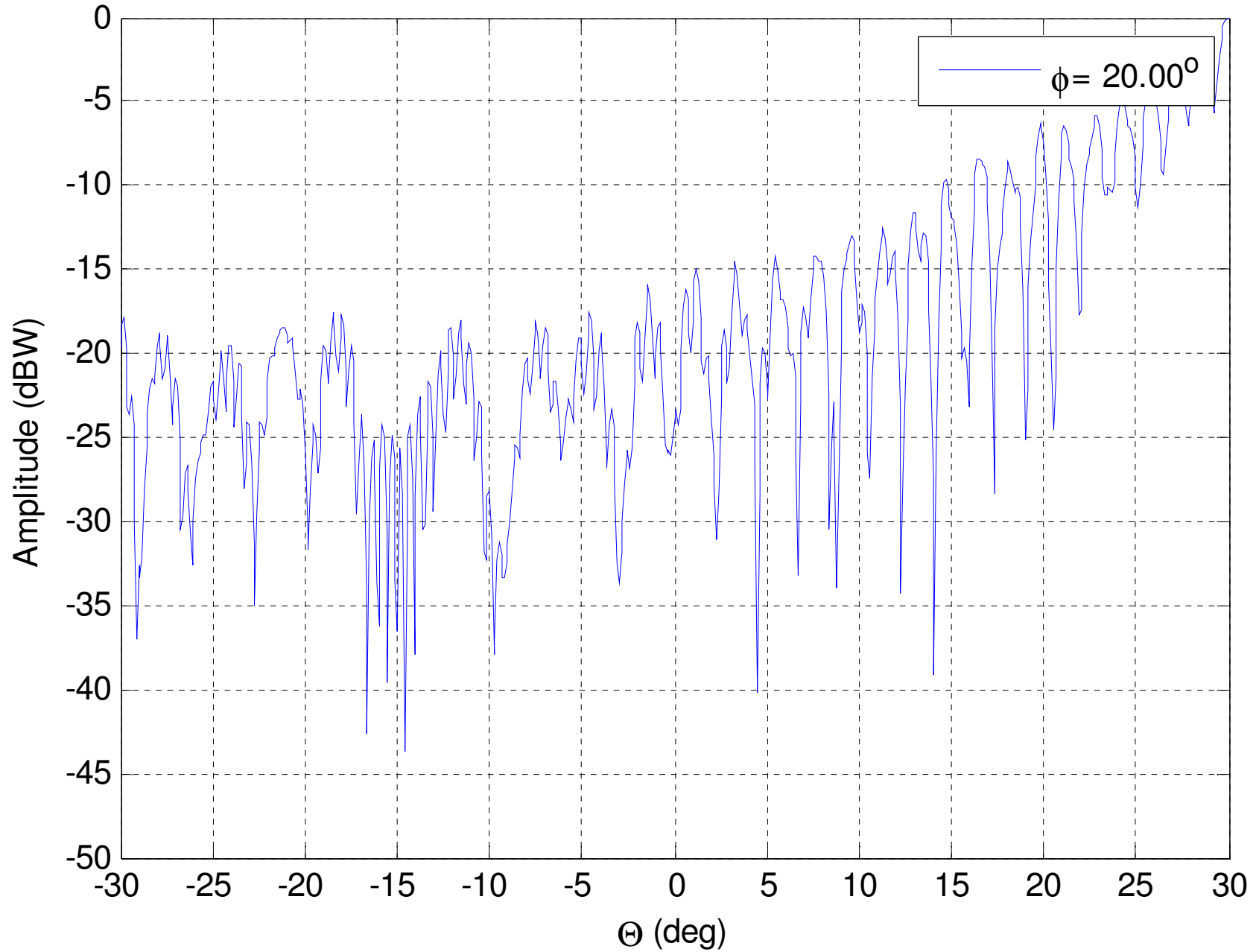
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 9.64 dBW, Date: 14-Dec-2011



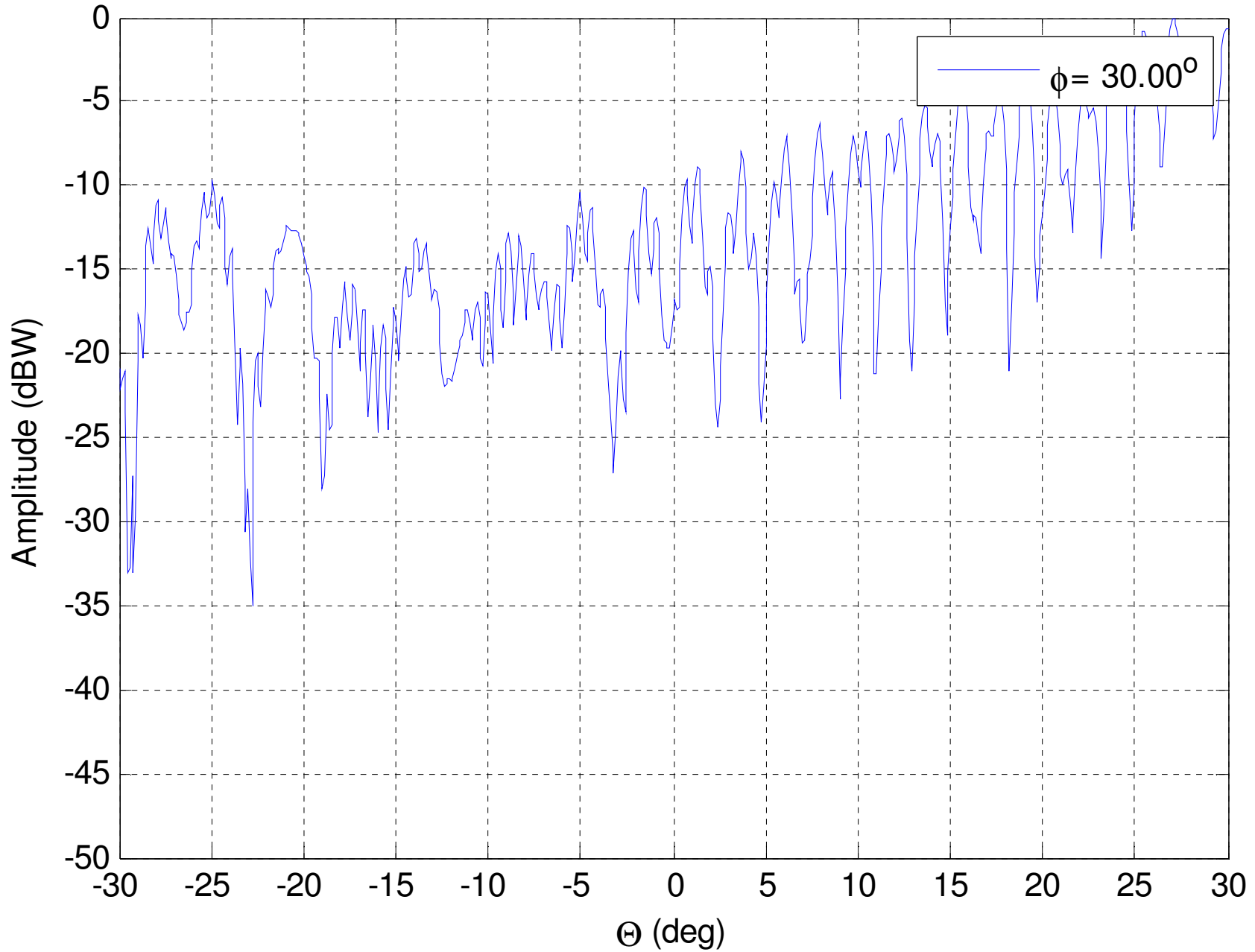
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 5.75 dBW, Date: 14-Dec-2011



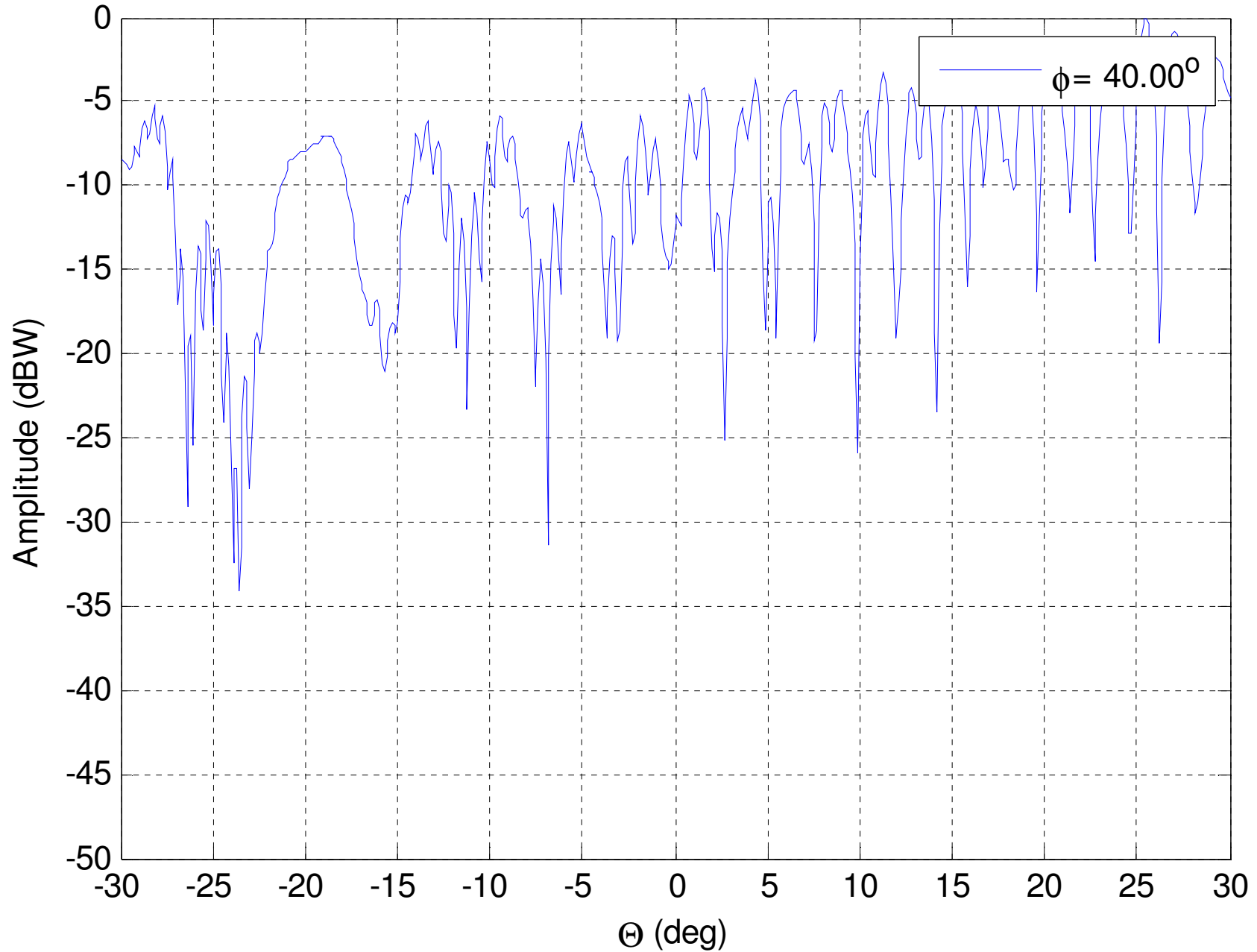
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.59 dBW, Date: 14-Dec-2011



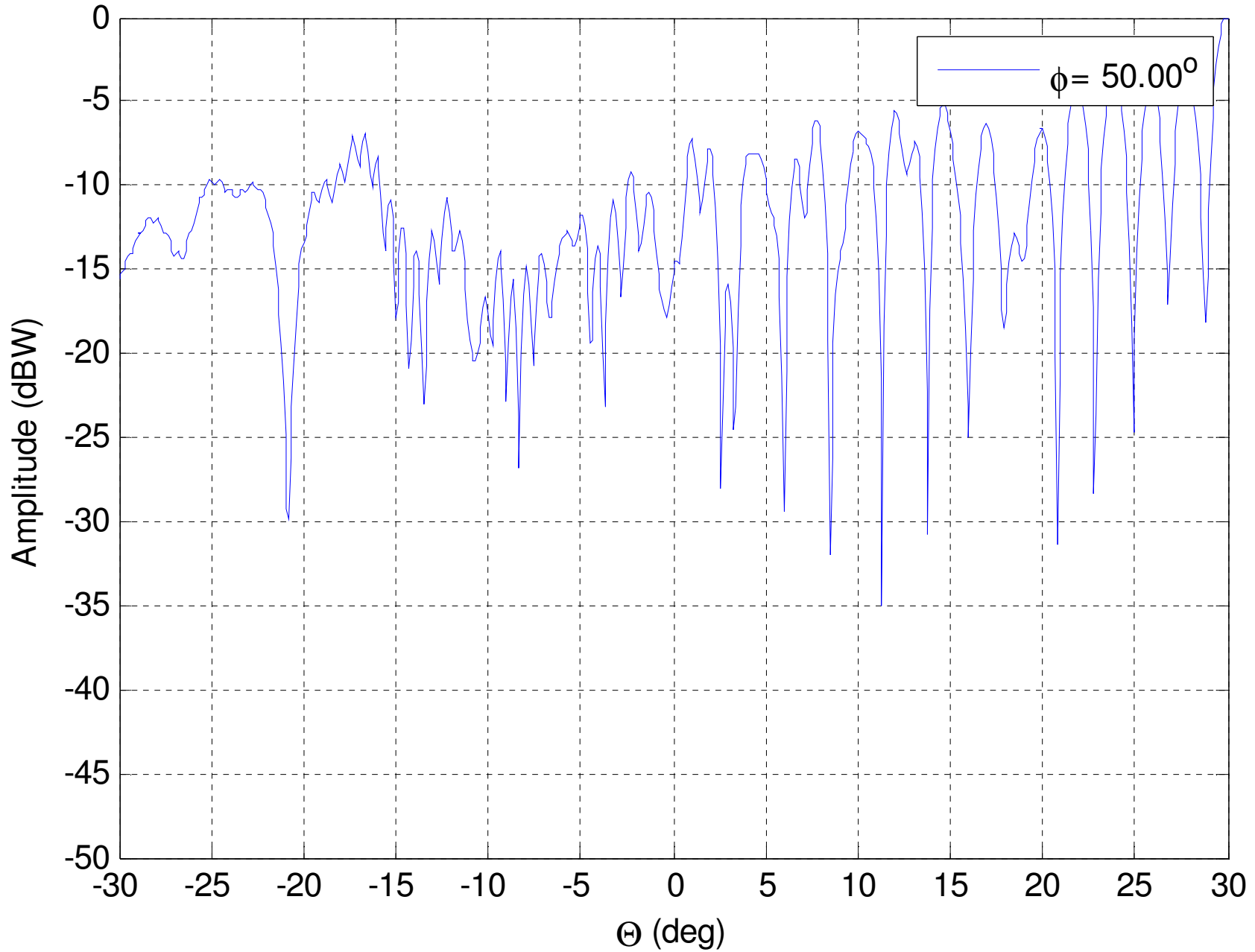
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -5.55 dBW, Date: 14-Dec-2011



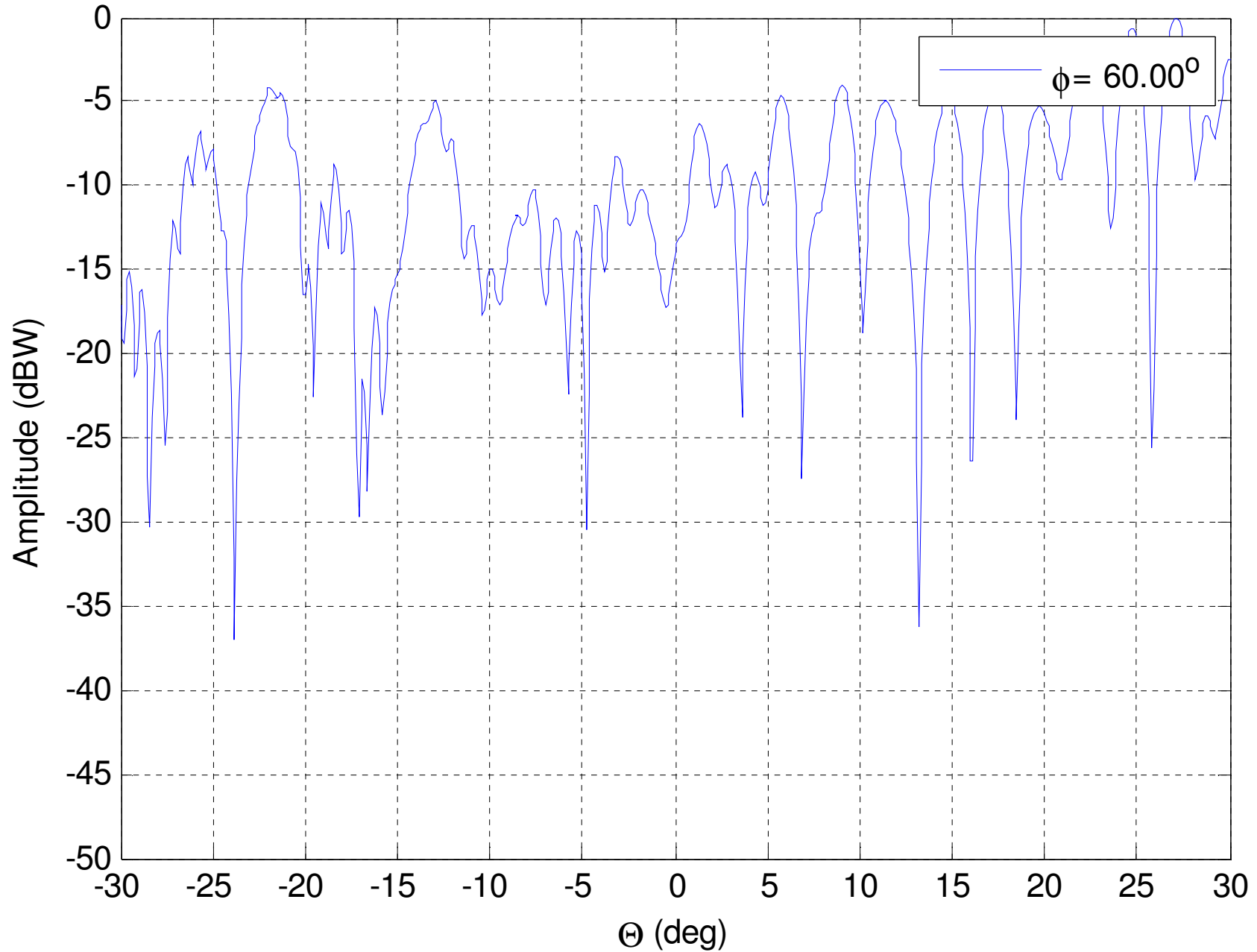
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -2.78 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

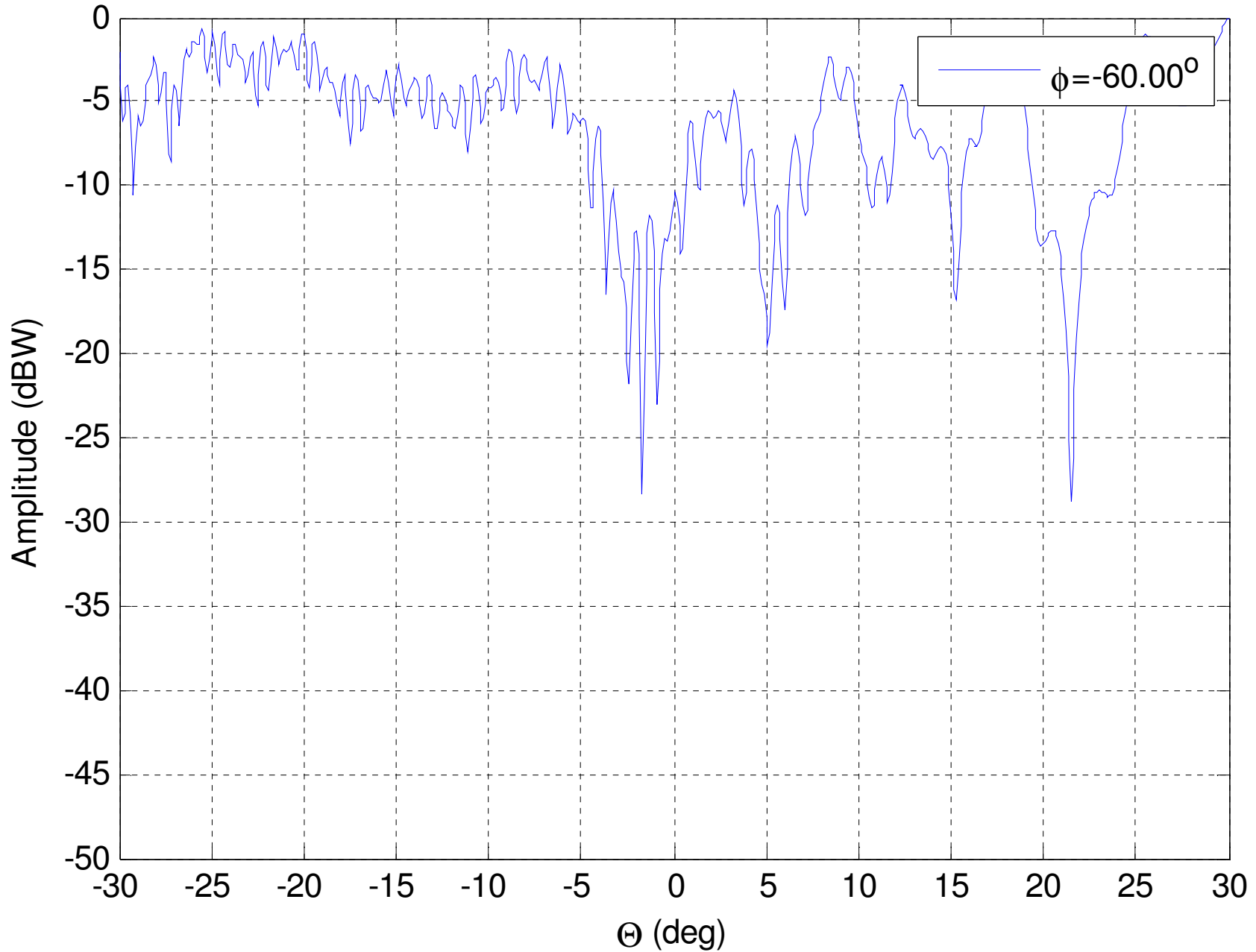
Input file: tx-17.7-rhcp-60.cut, Peak: -3.92 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

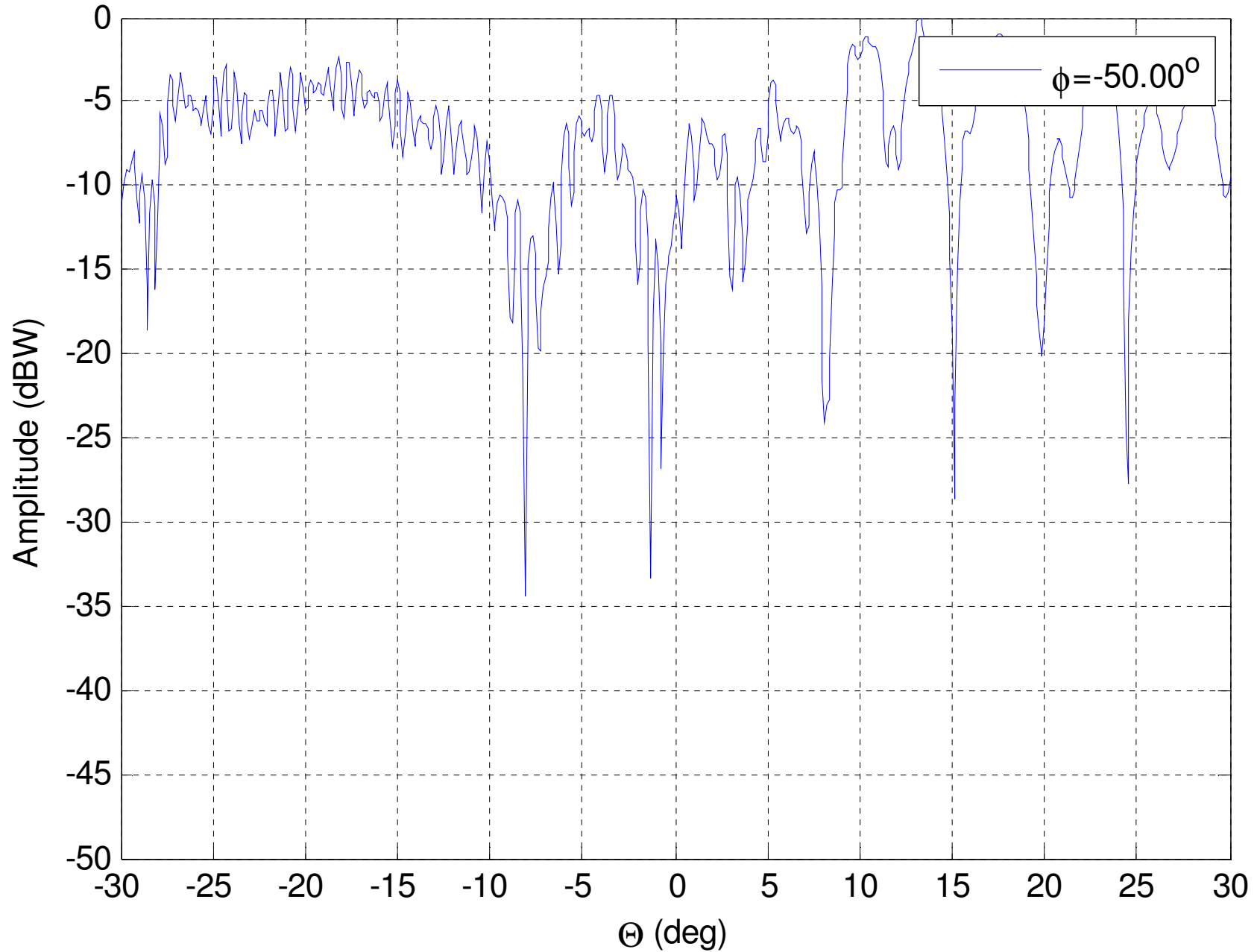
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.15 dBW, Date: 14-Dec-2011



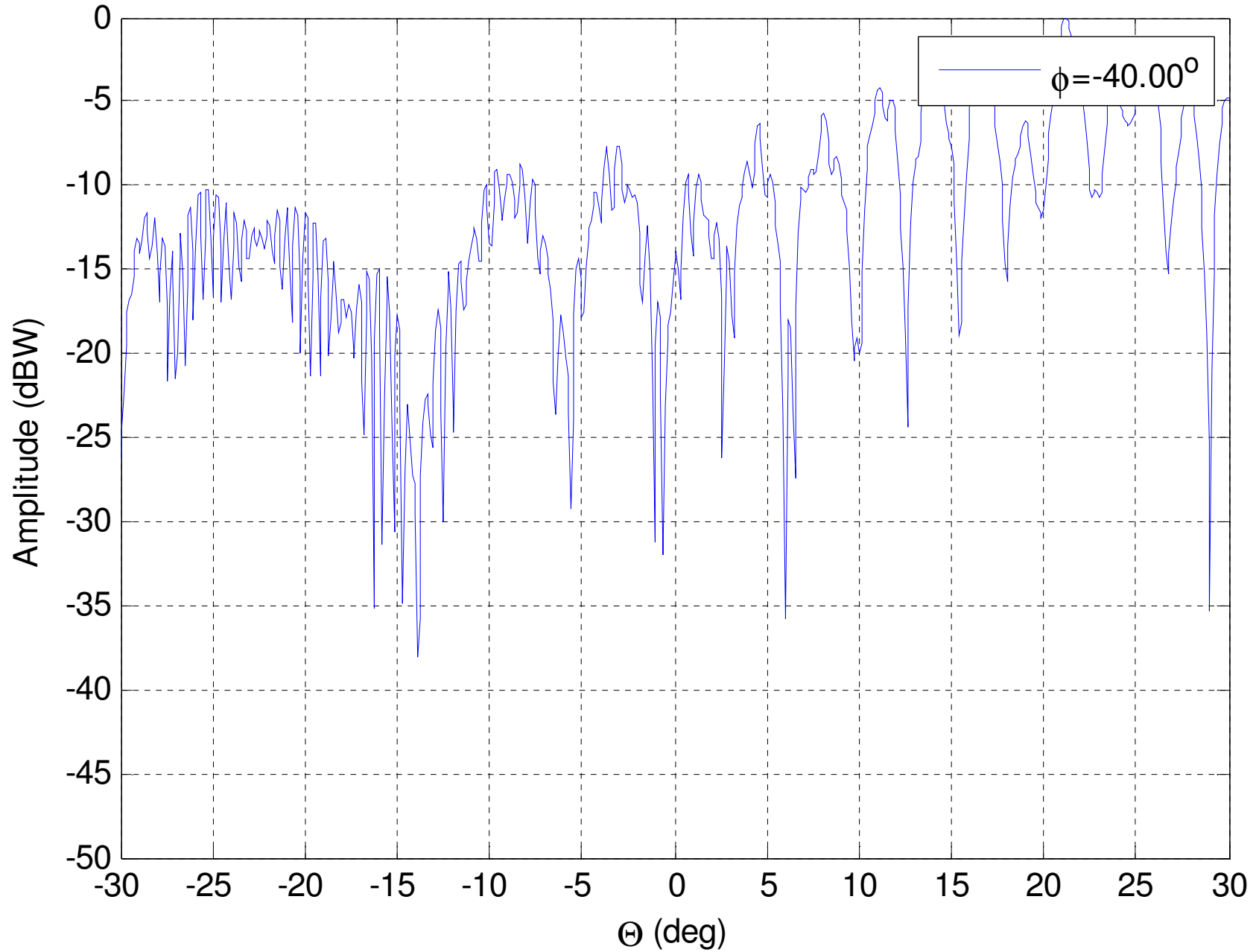
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -4.89 dBW, Date: 14-Dec-2011



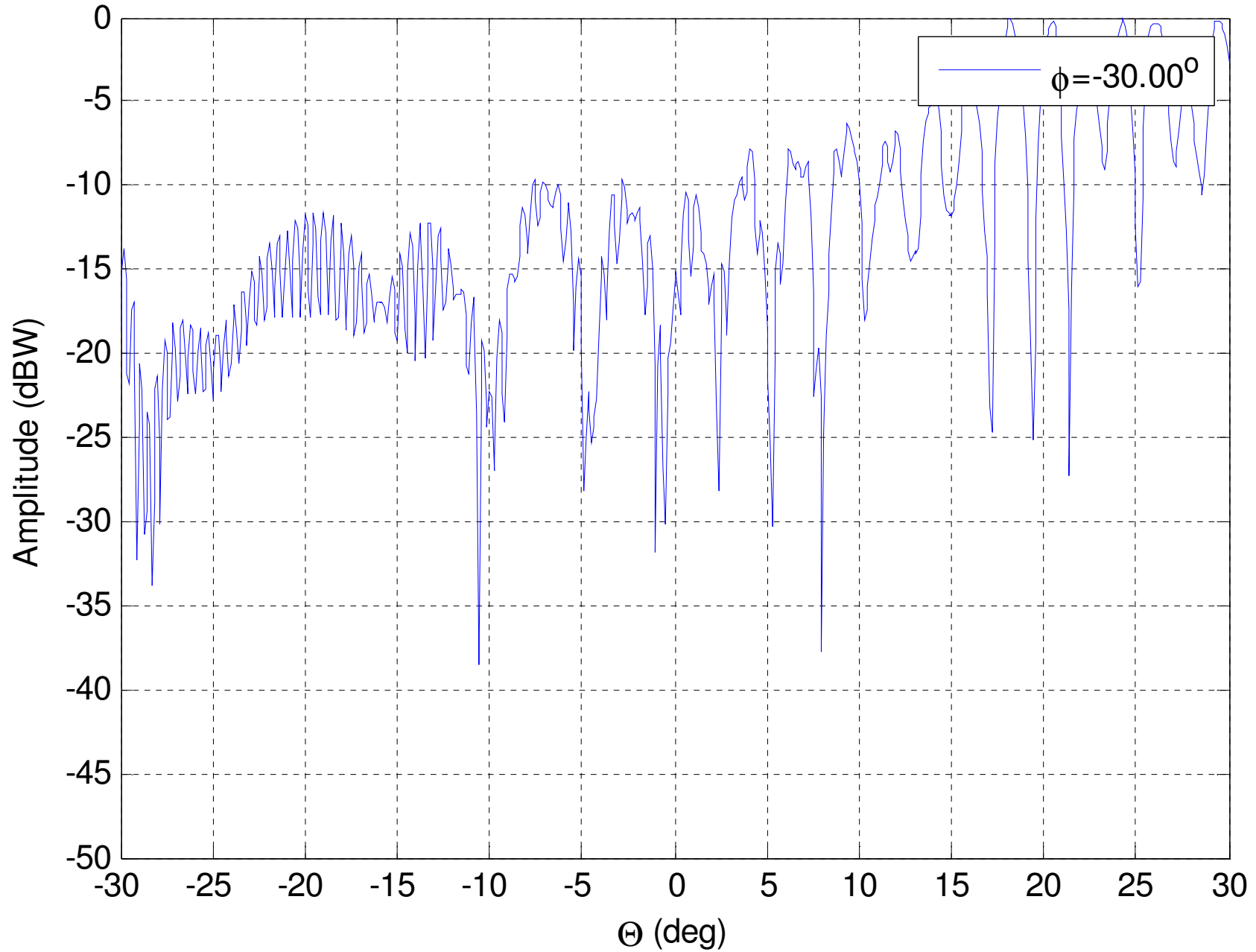
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -1.62 dBW, Date: 14-Dec-2011



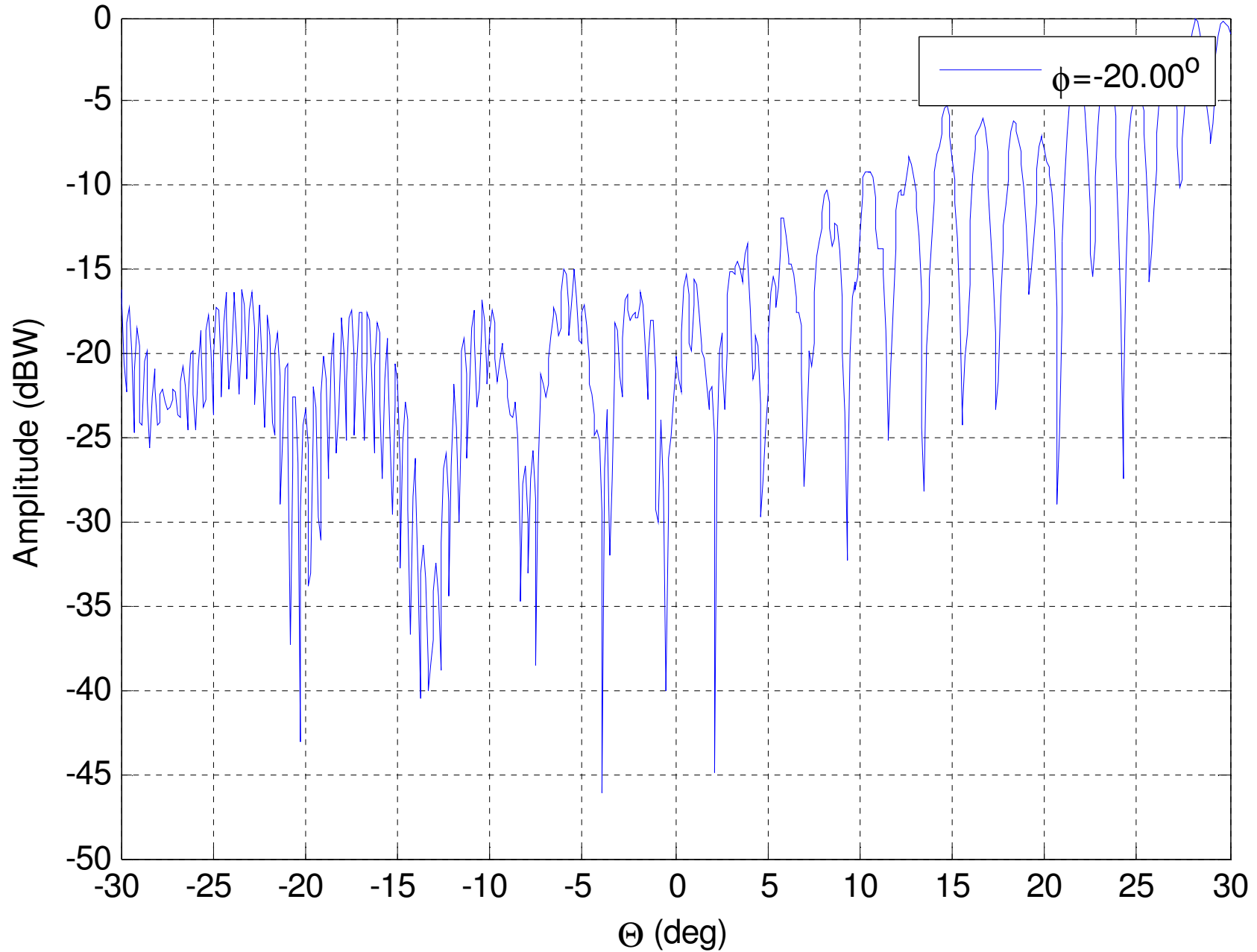
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -0.38 dBW, Date: 14-Dec-2011



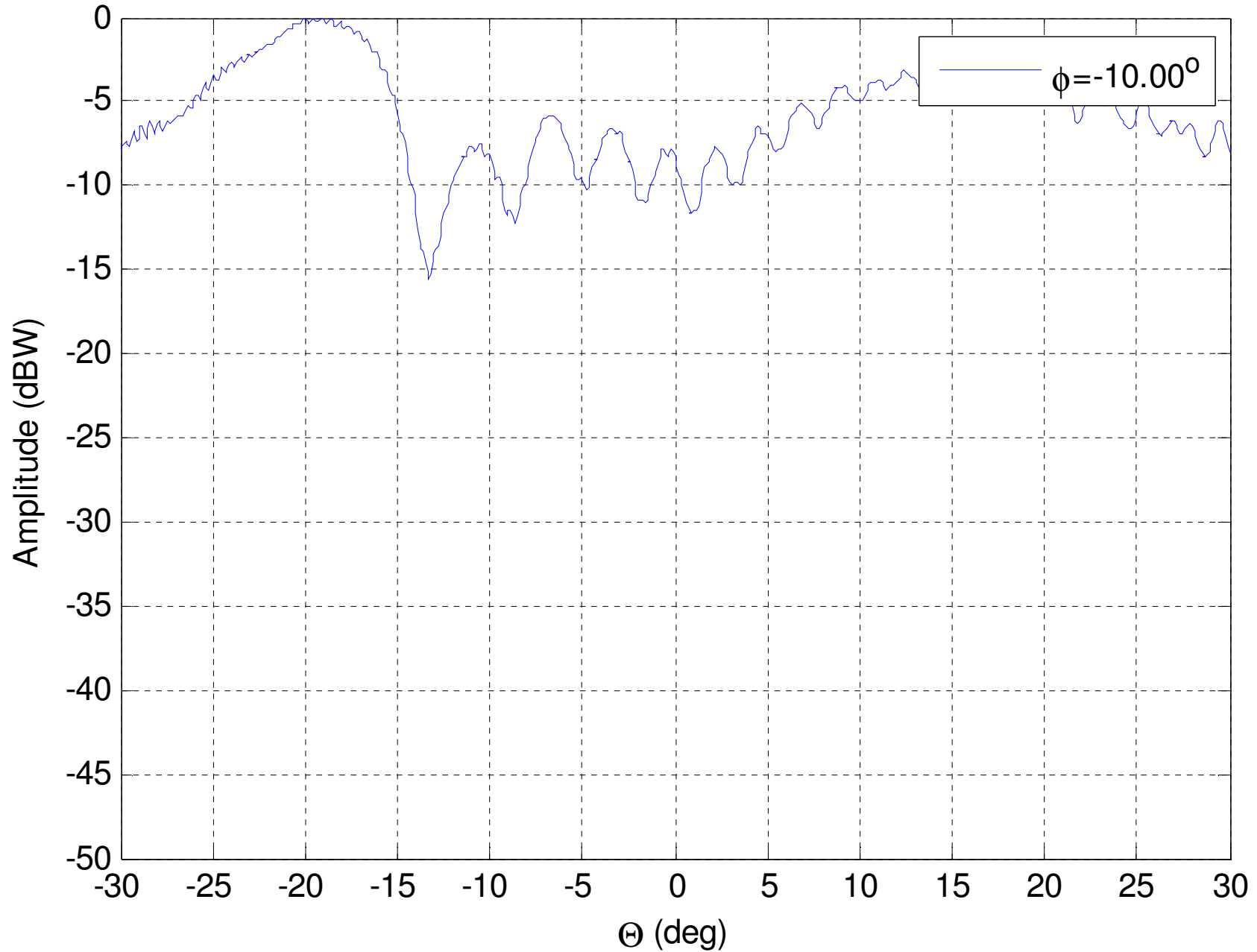
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 4.67 dBW, Date: 14-Dec-2011



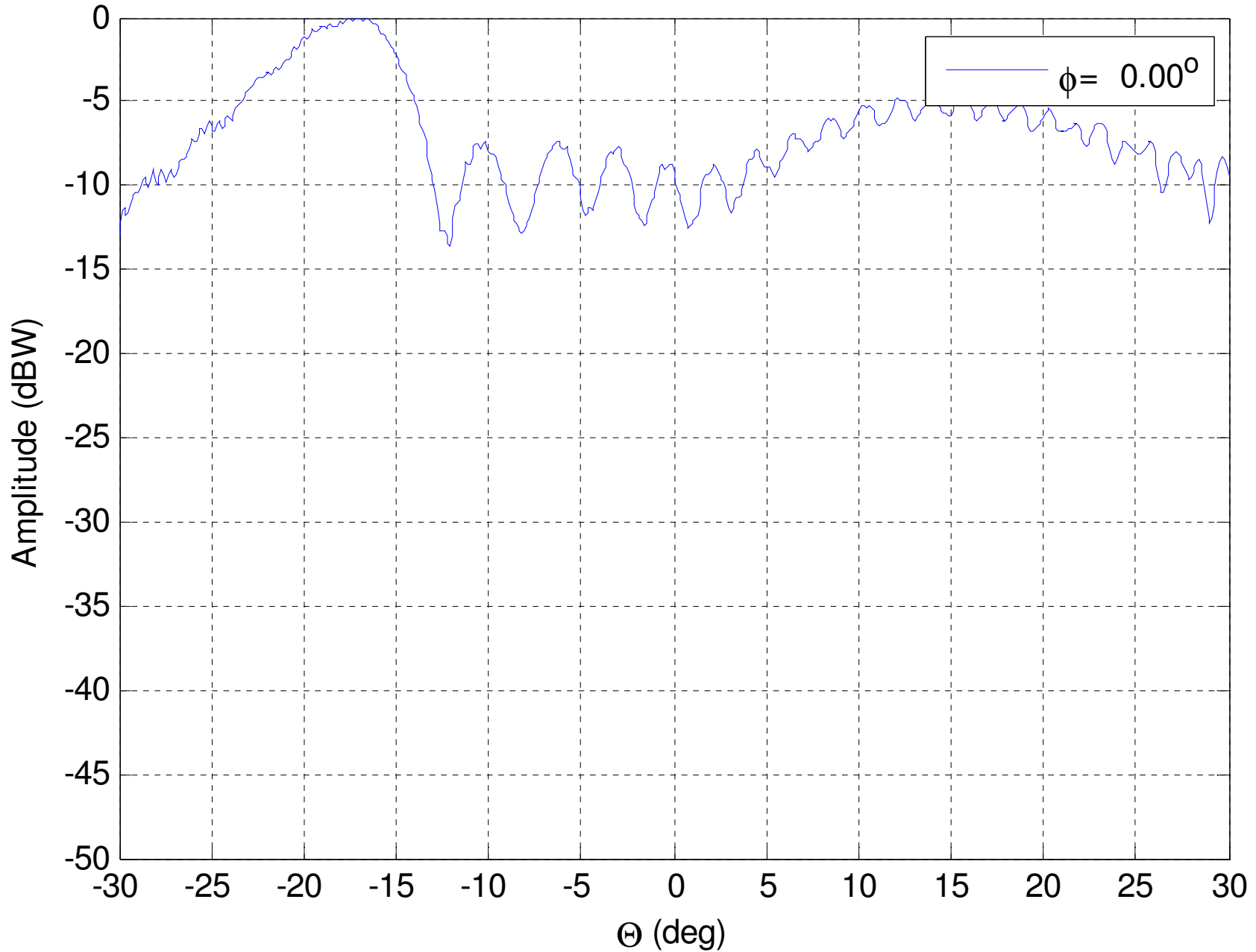
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 9.87 dBW, Date: 14-Dec-2011



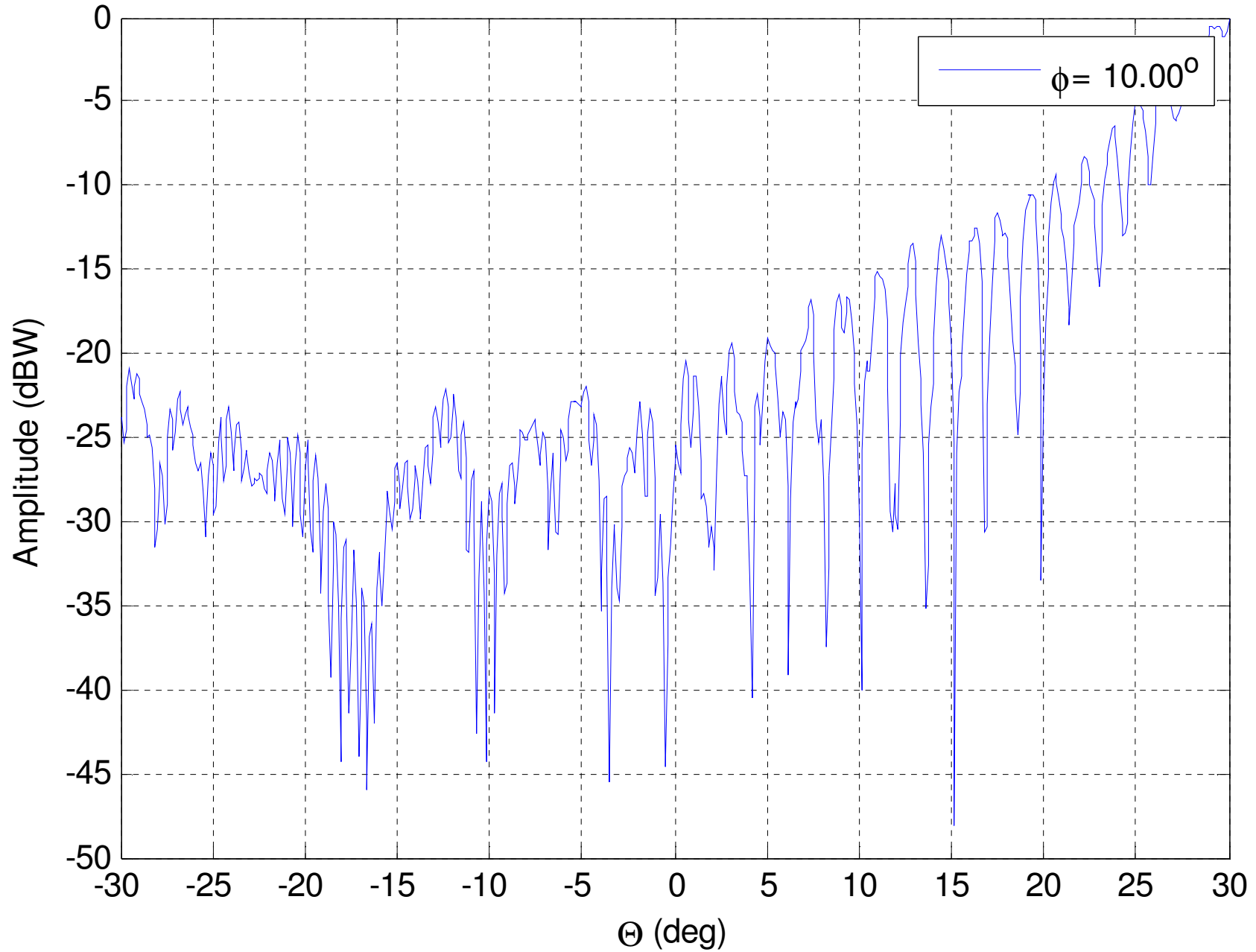
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 10.73 dBW, Date: 14-Dec-2011



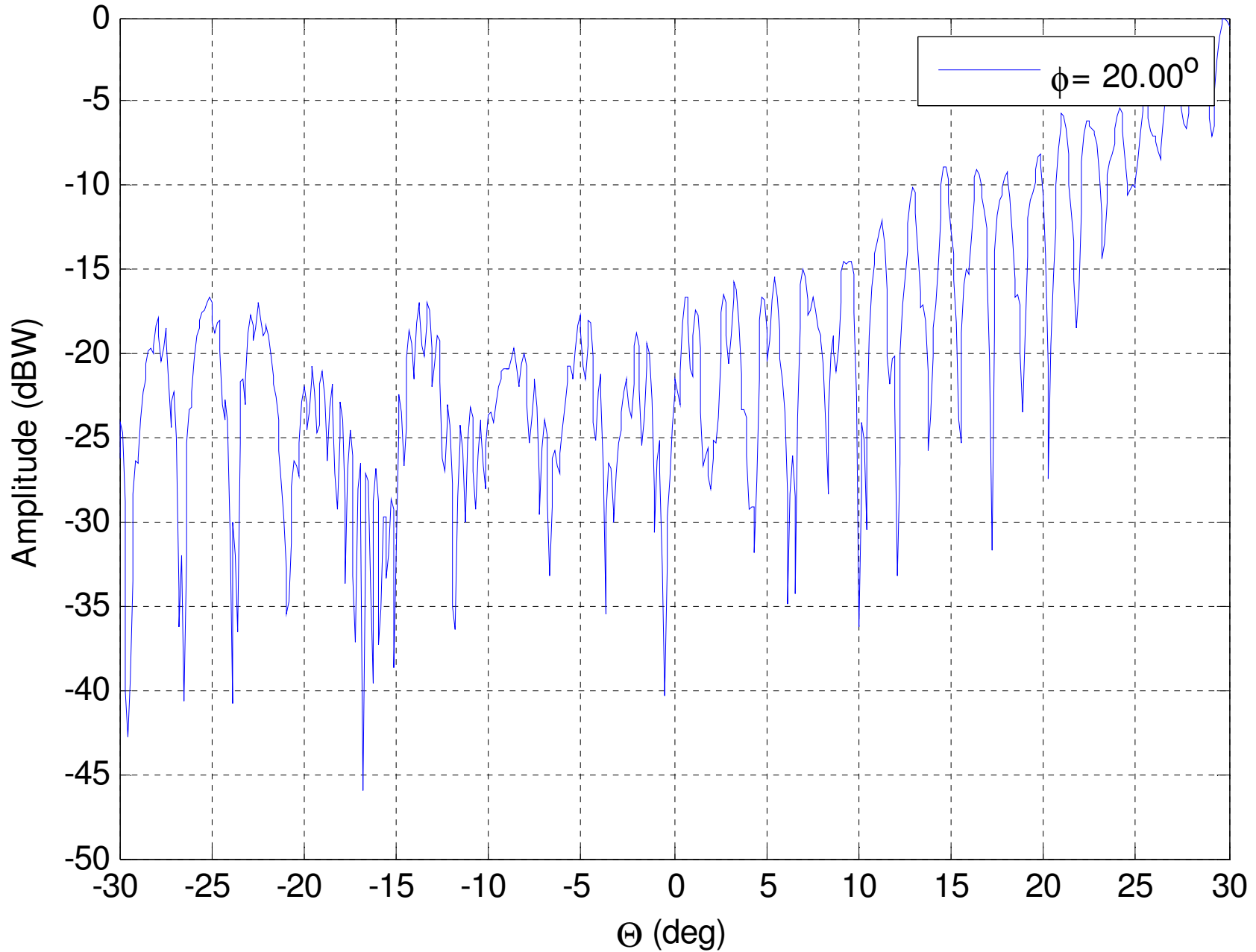
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 10.29 dBW, Date: 14-Dec-2011



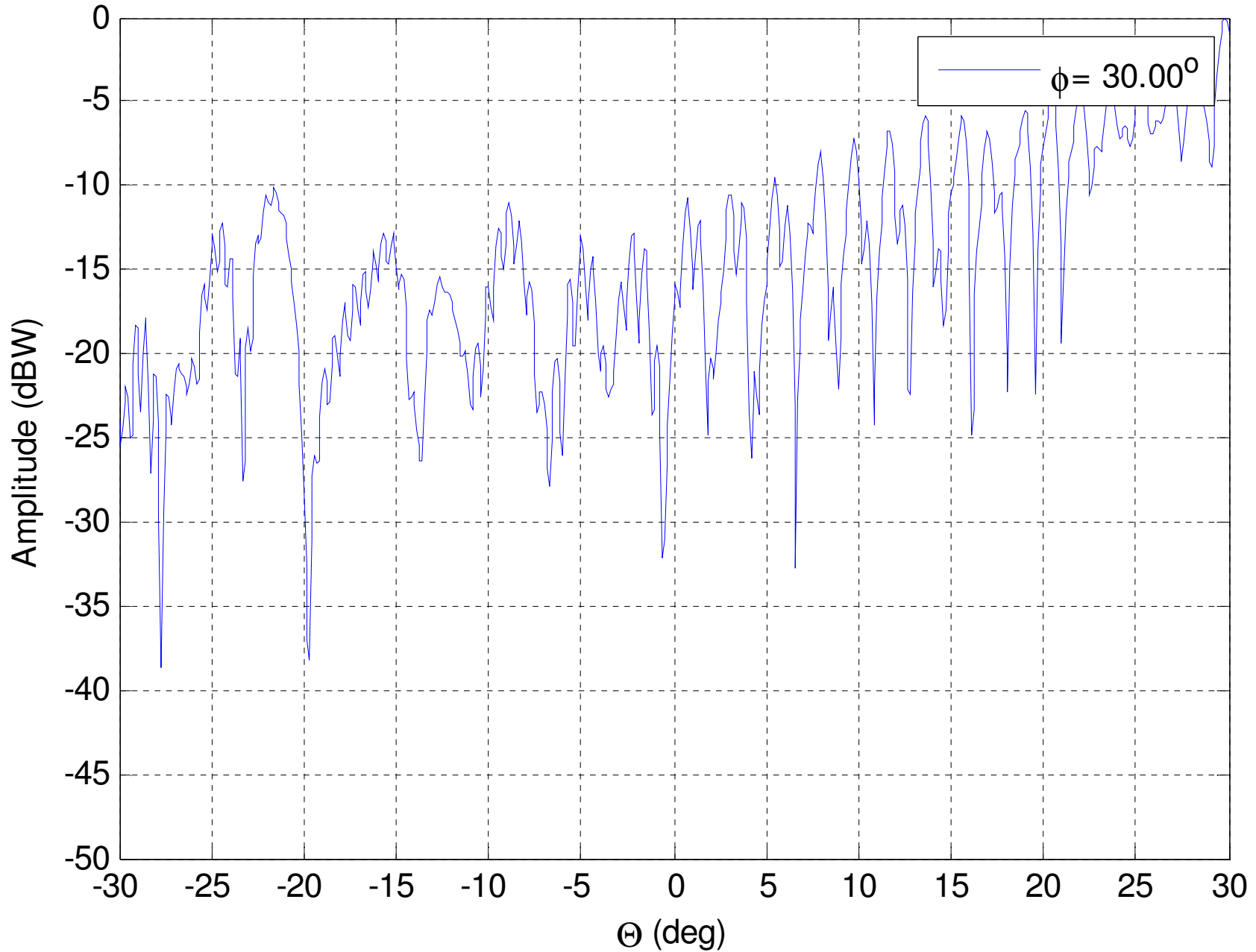
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 6.37 dBW, Date: 14-Dec-2011



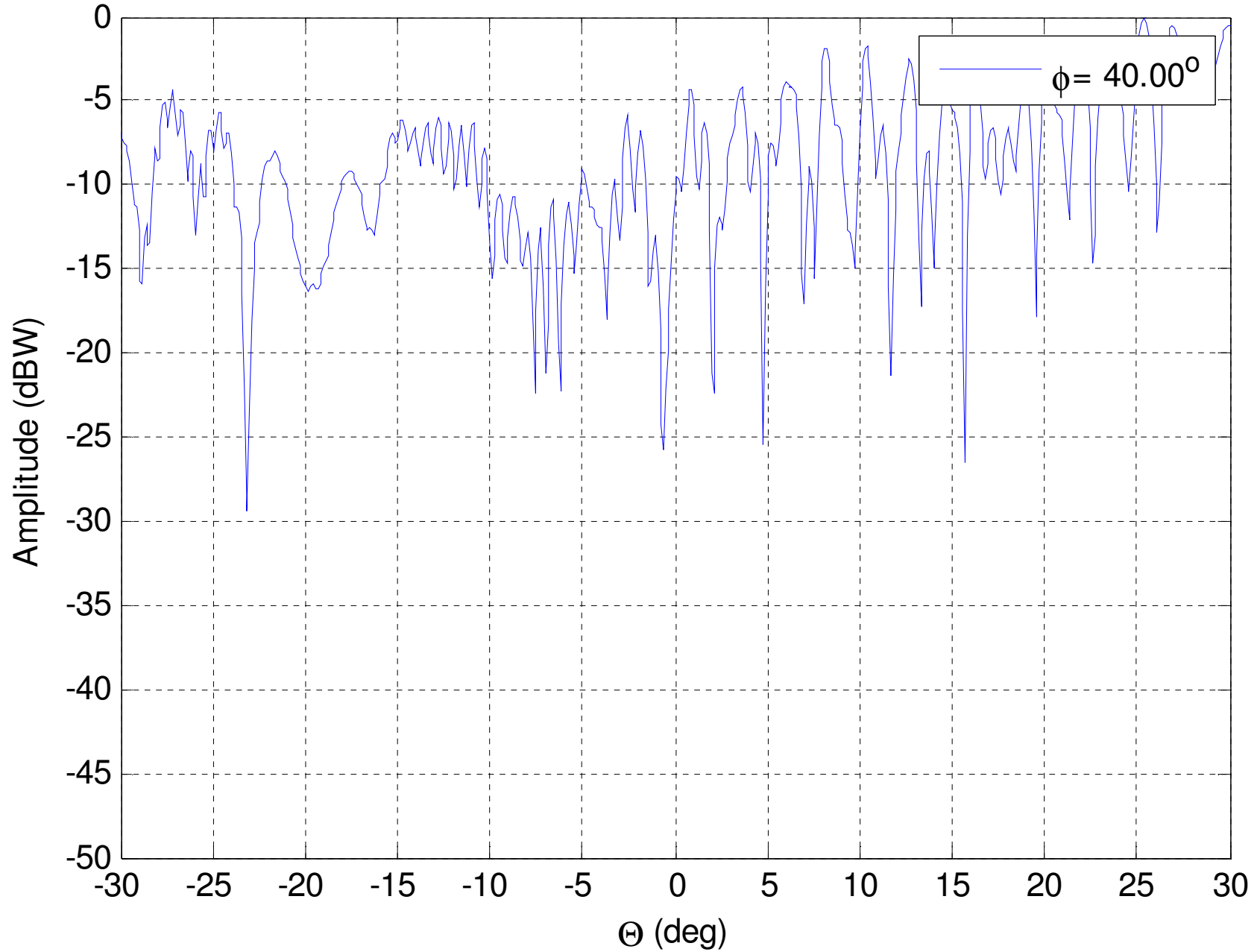
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: 0.82 dBW, Date: 14-Dec-2011



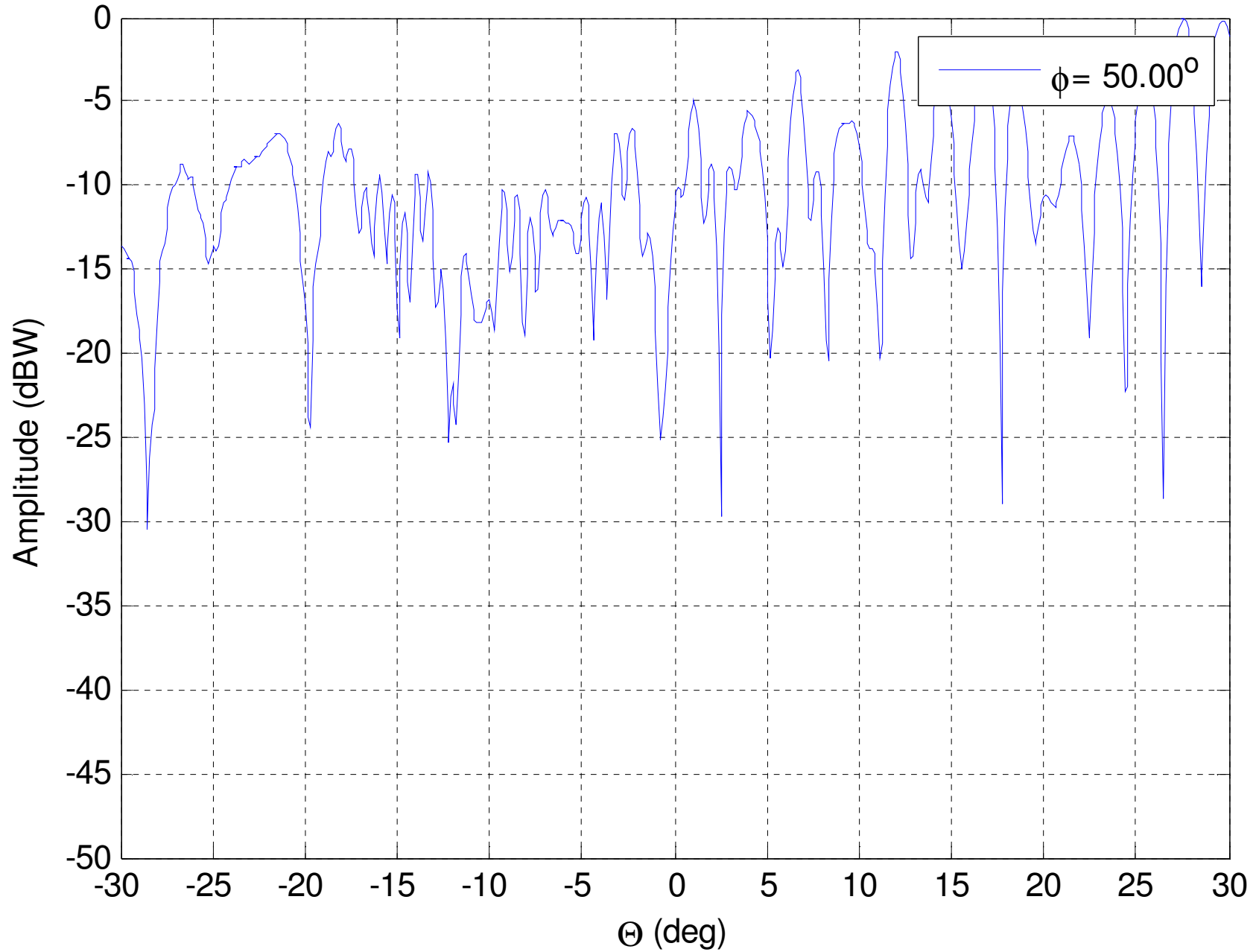
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -5.50 dBW, Date: 14-Dec-2011



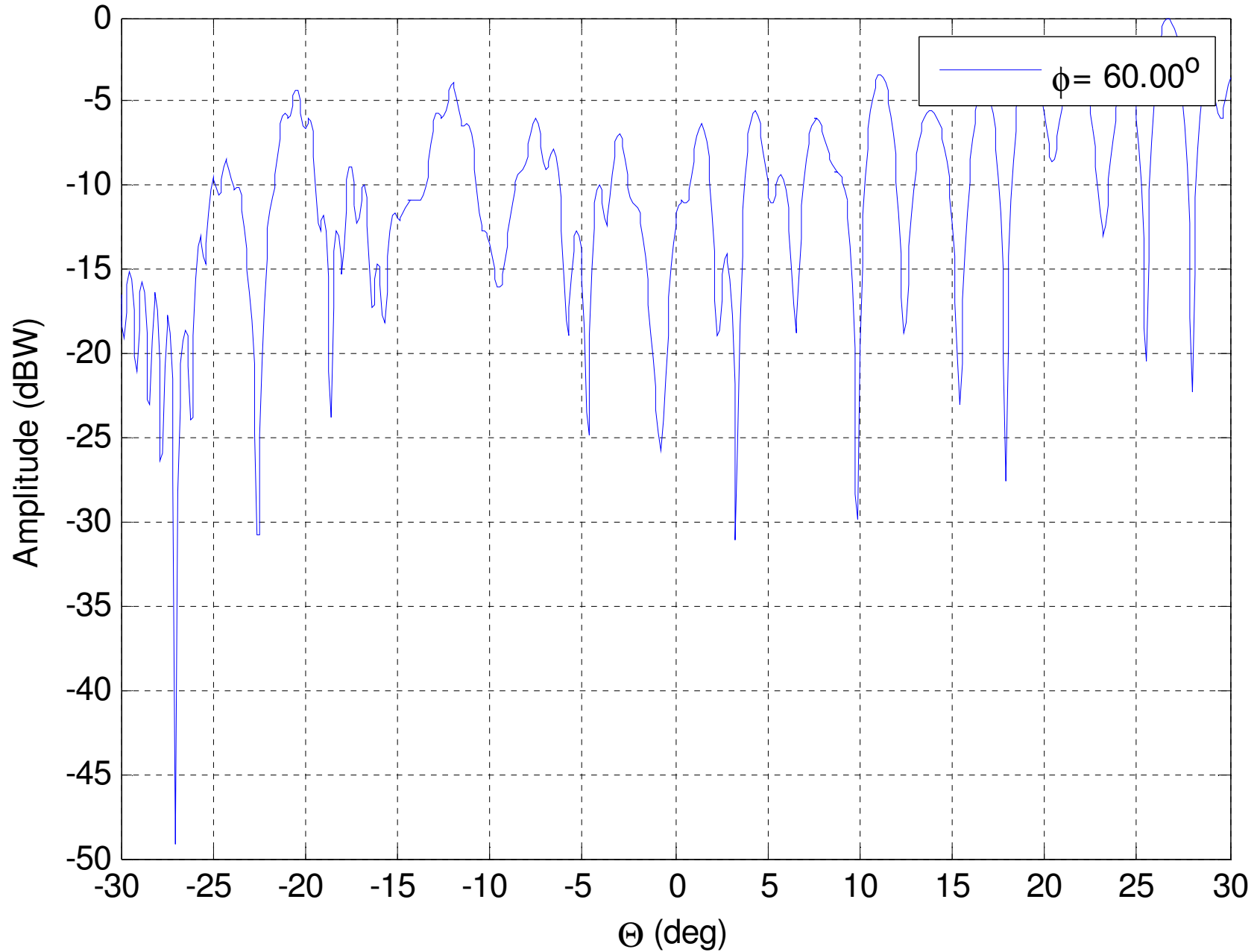
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -4.66 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -3.47 dBW, Date: 14-Dec-2011



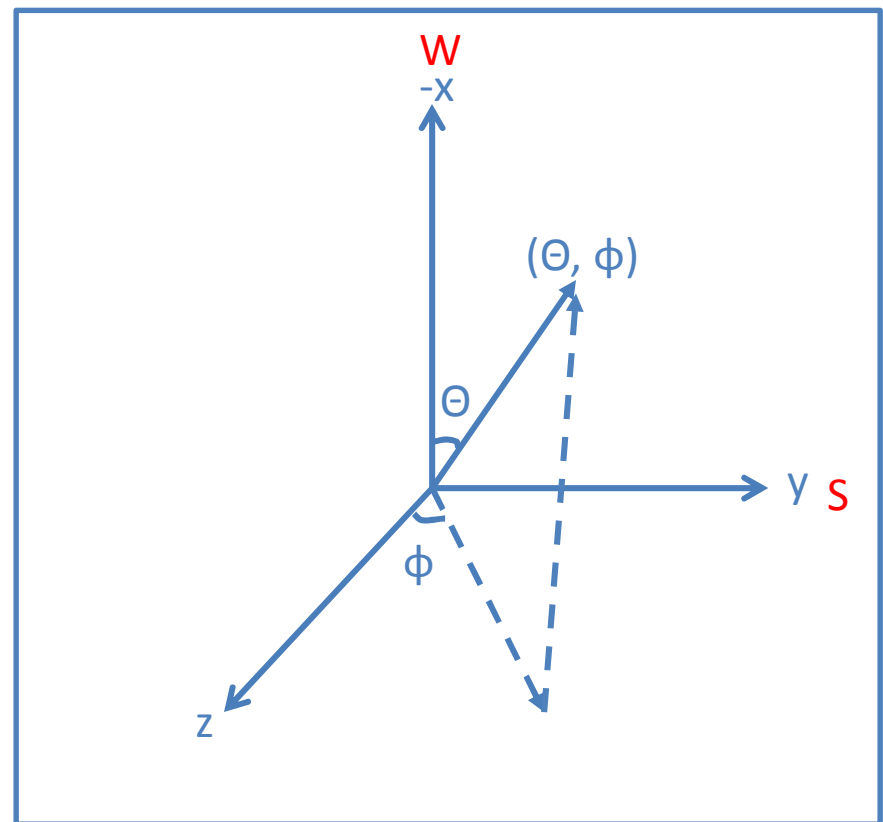
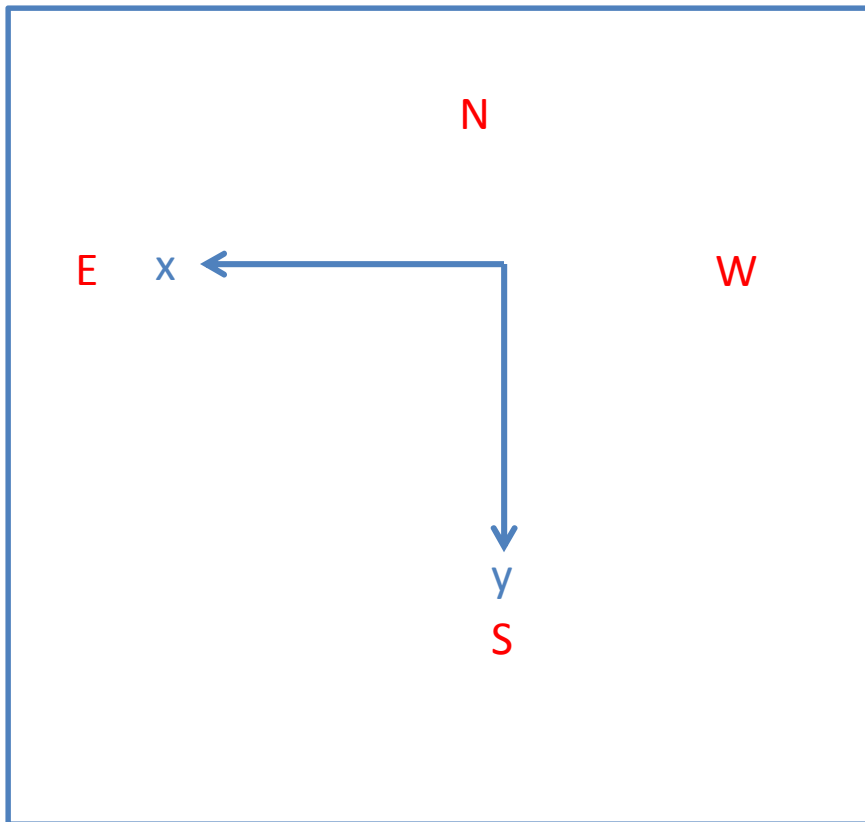
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 19

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



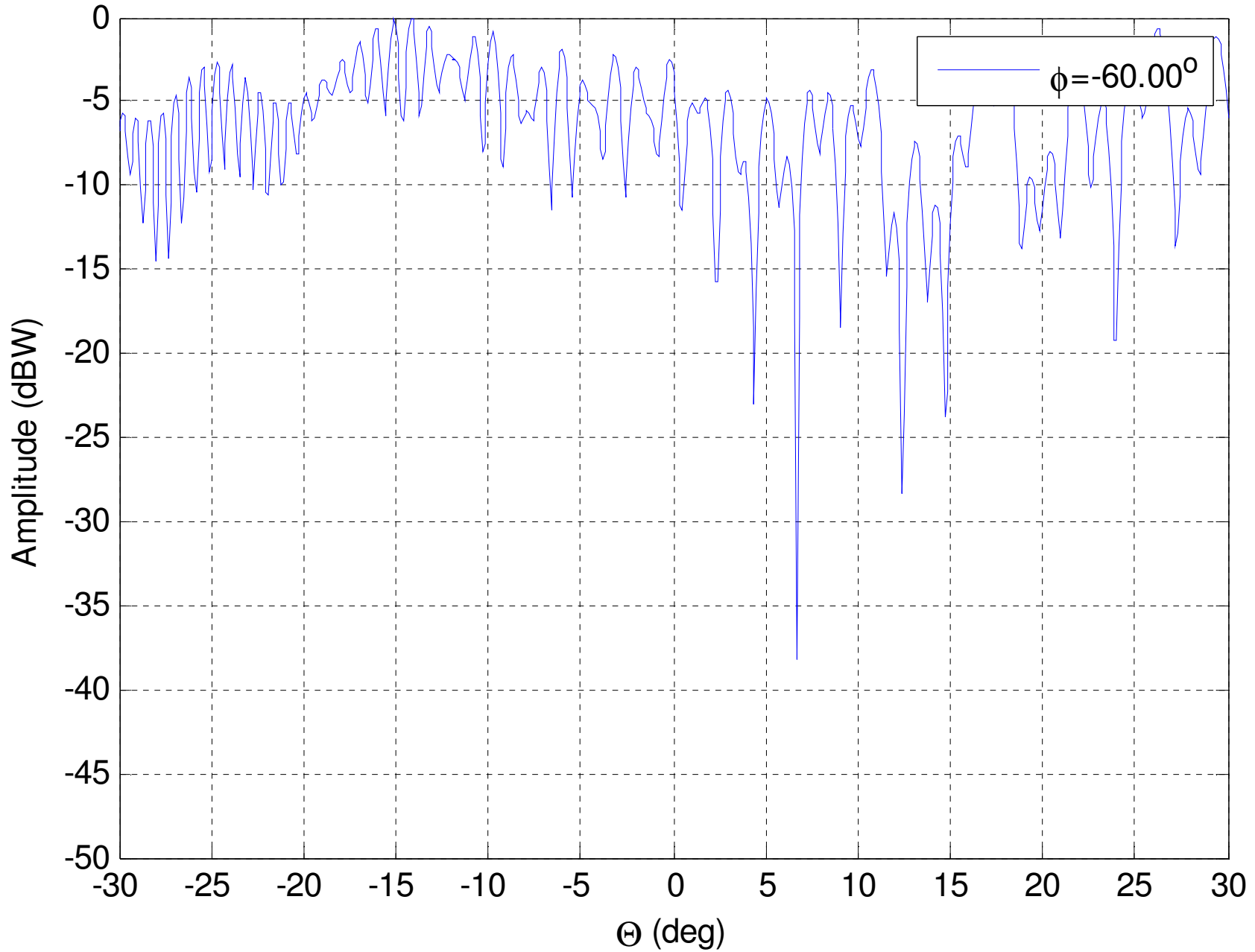
Spot Beam19, -X Axis Plots

- 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

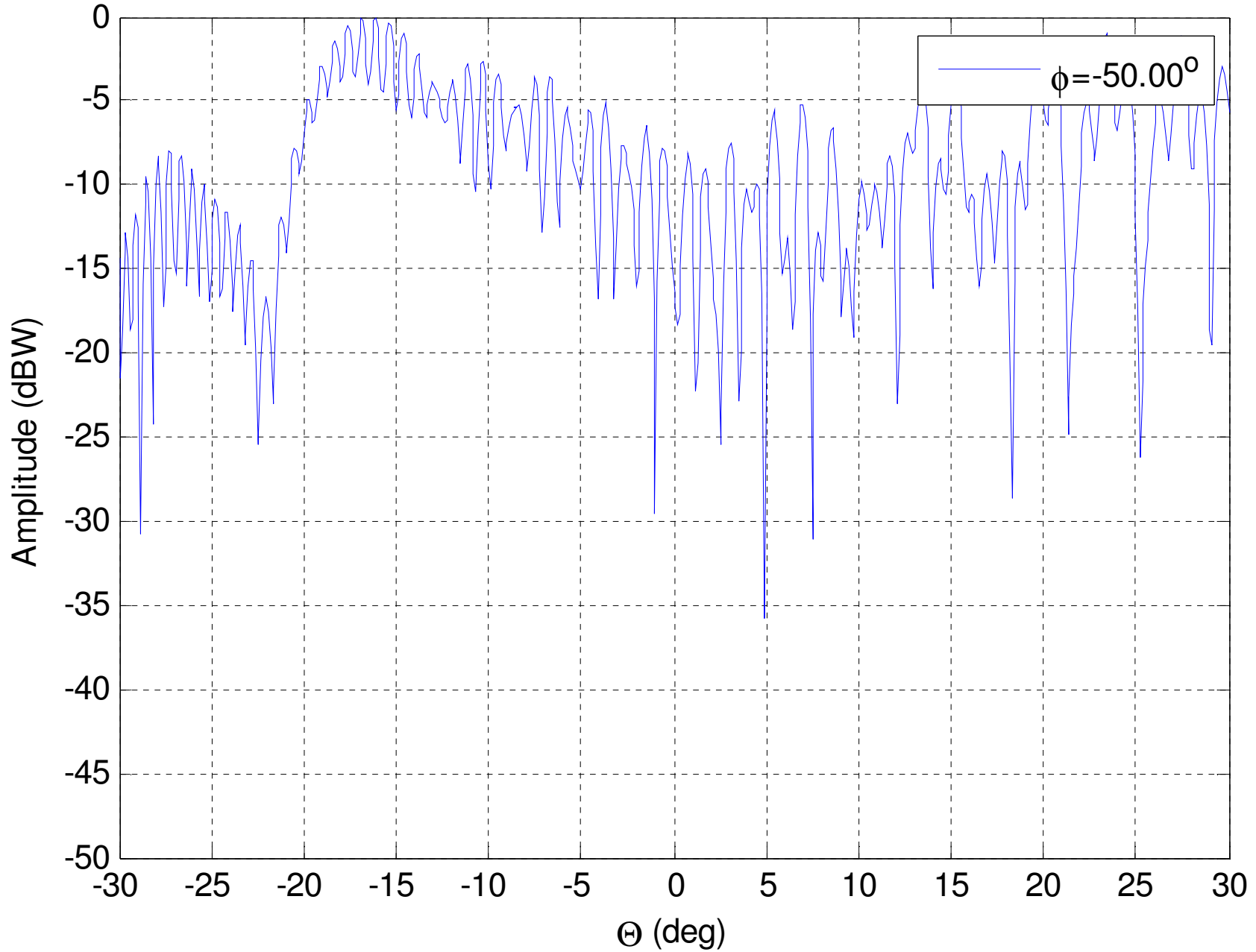
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -7.93 dBW, Date: 14-Dec-2011



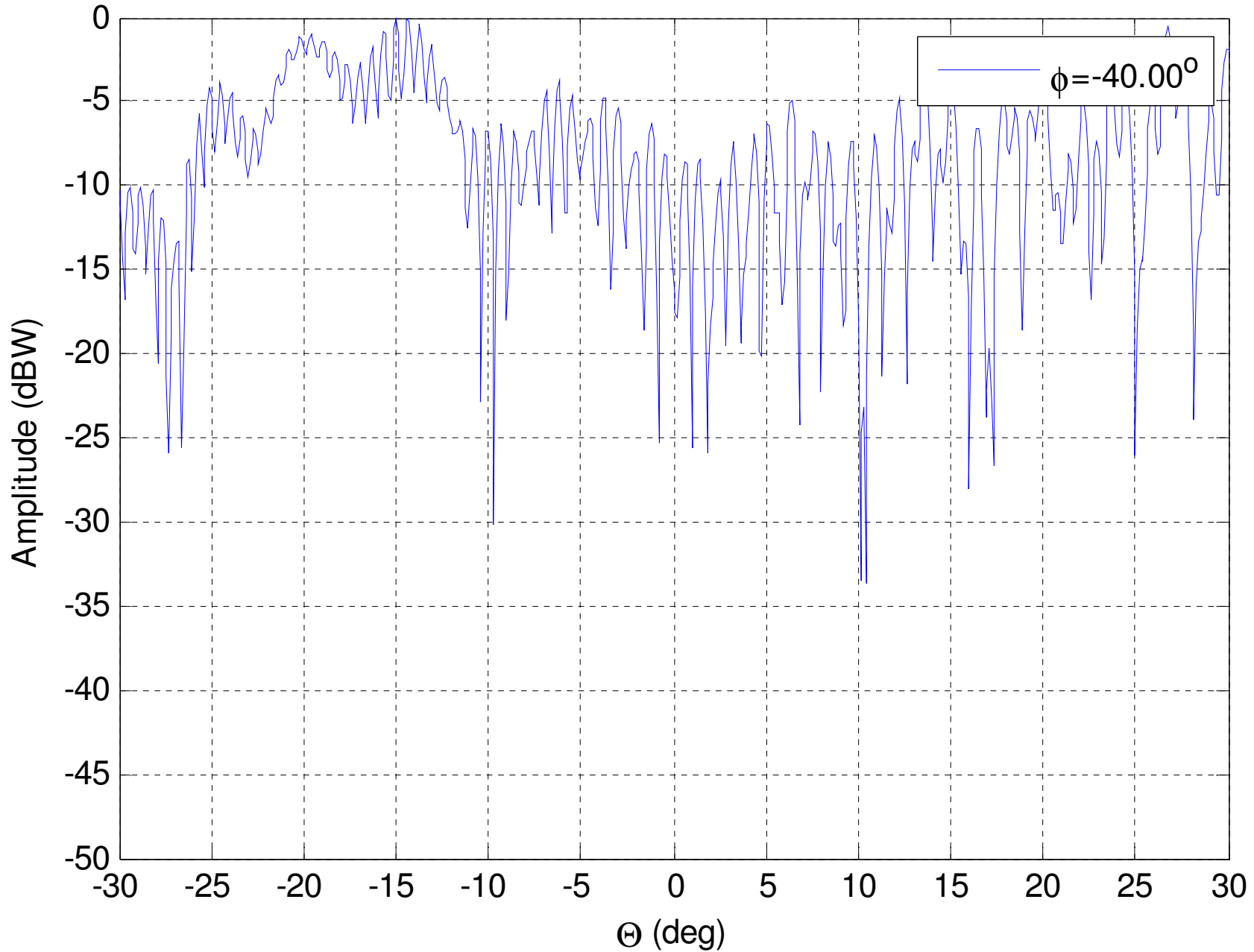
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -5.02 dBW, Date: 14-Dec-2011



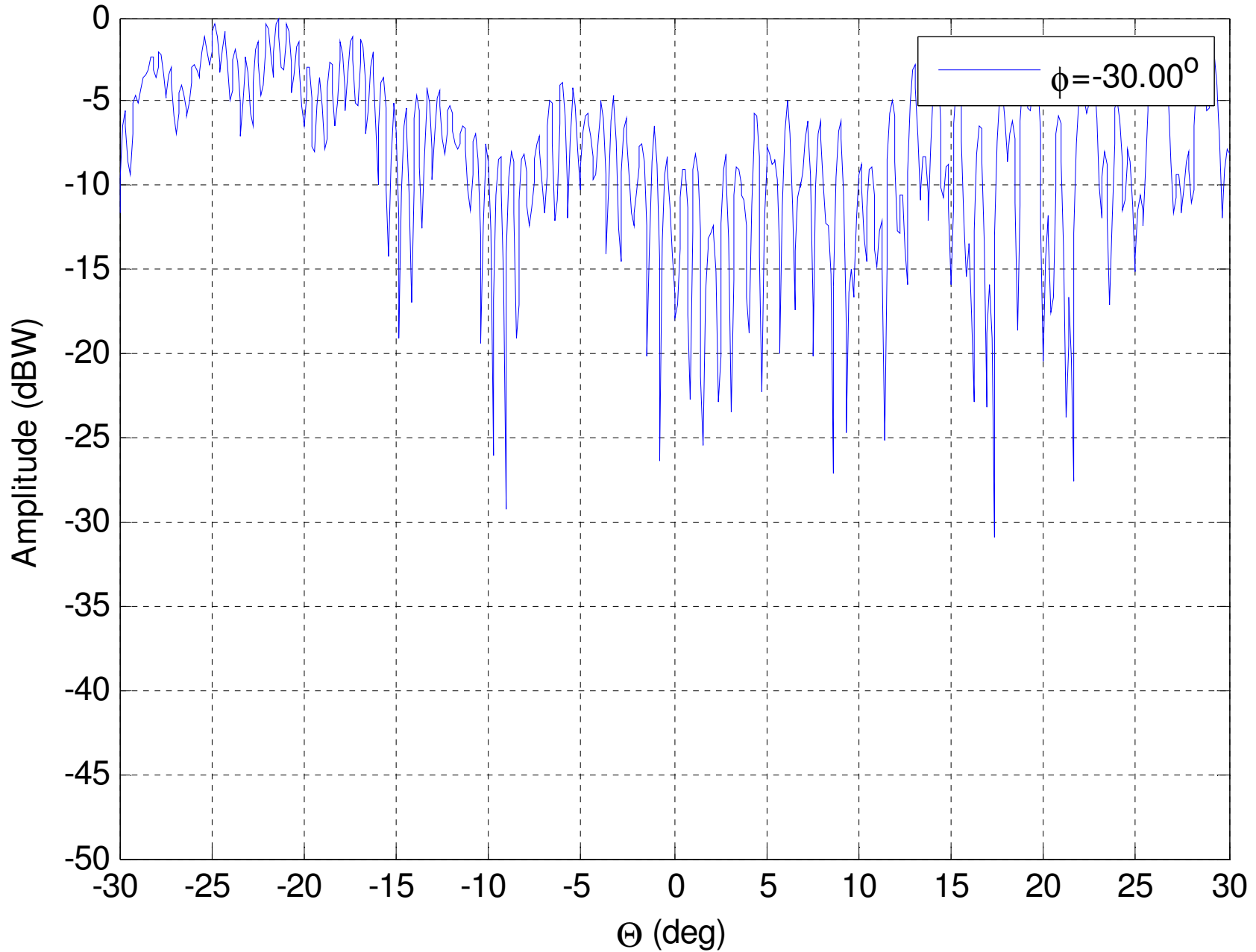
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.98 dBW, Date: 14-Dec-2011



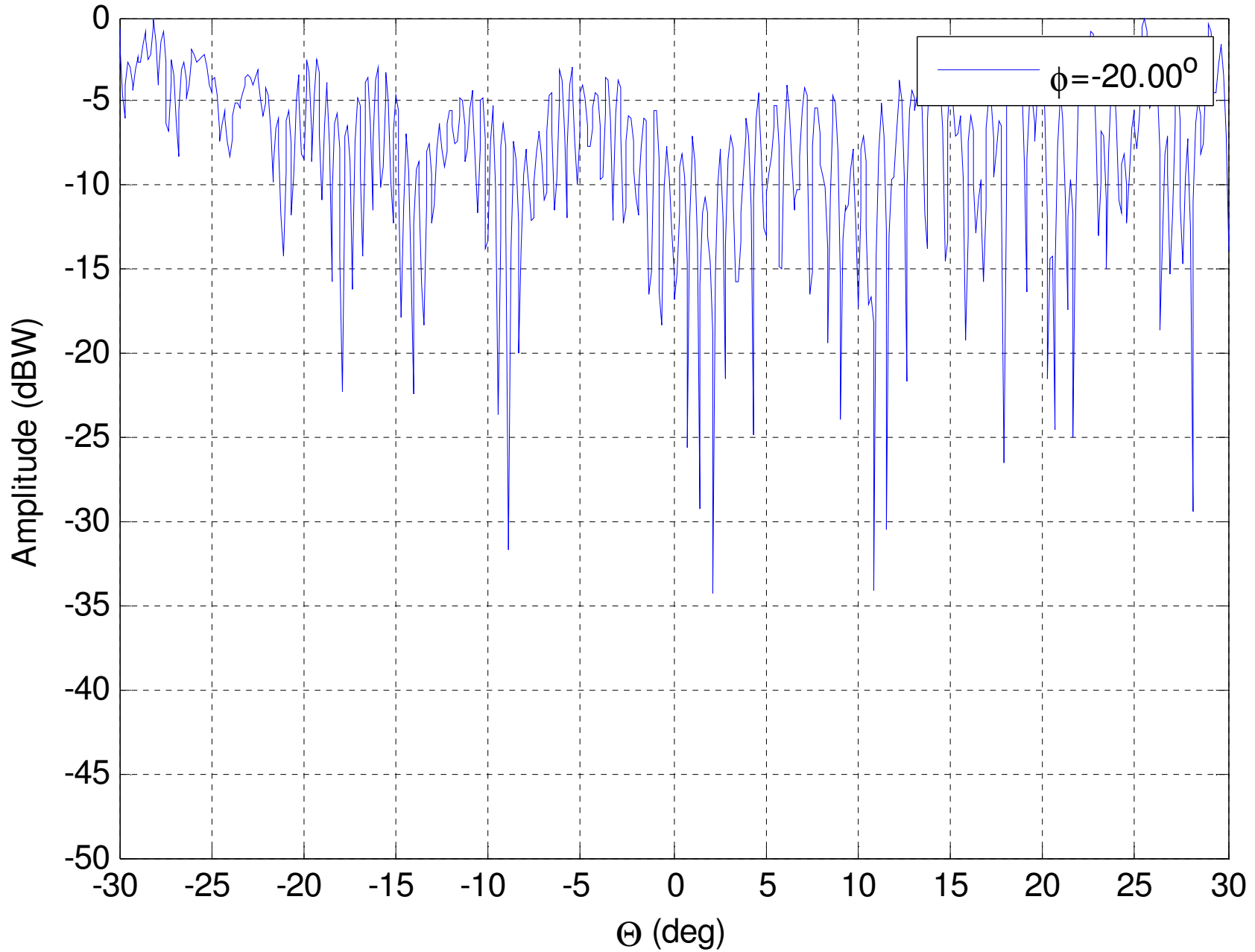
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -4.86 dBW, Date: 14-Dec-2011



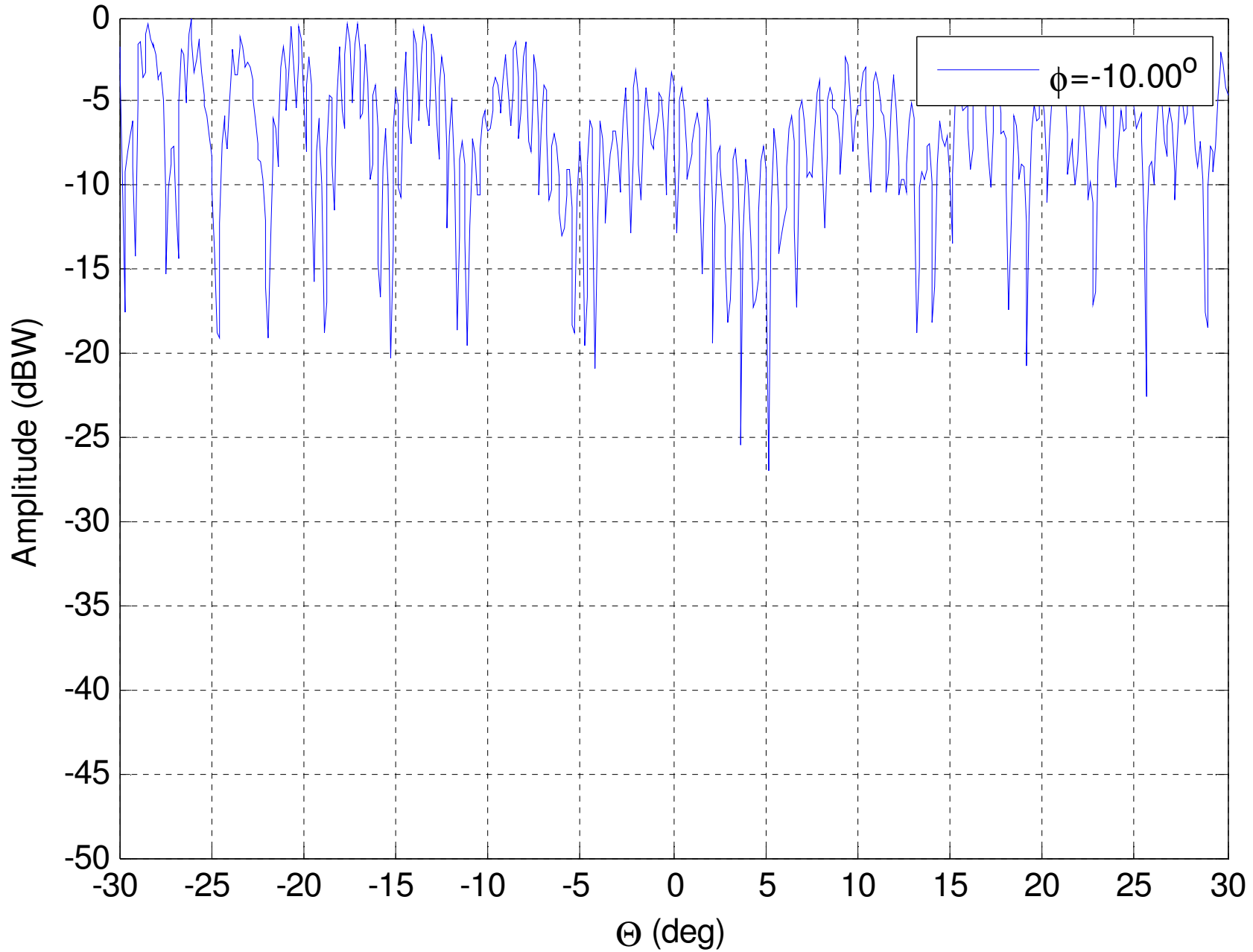
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -5.87 dBW, Date: 14-Dec-2011



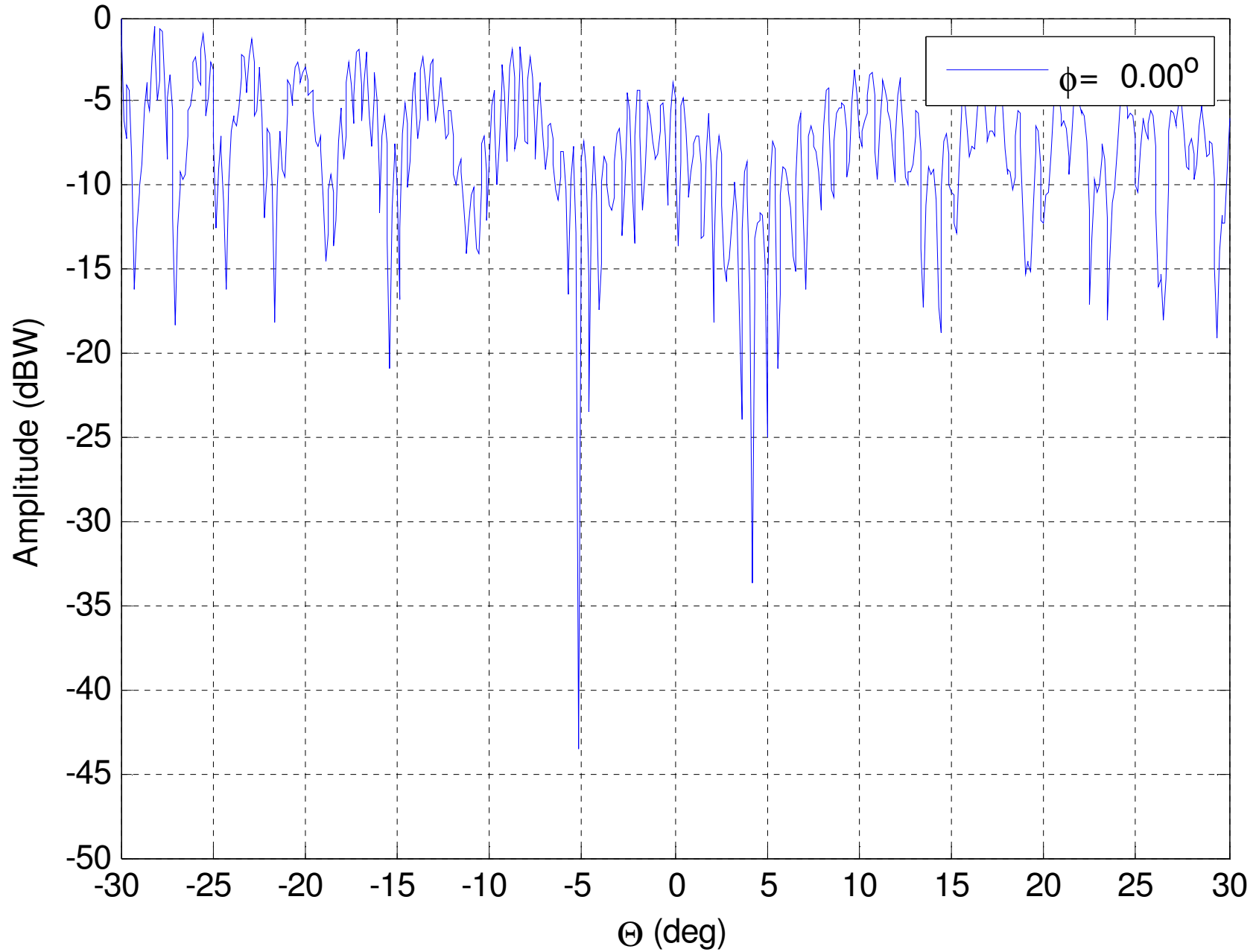
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -7.14 dBW, Date: 14-Dec-2011



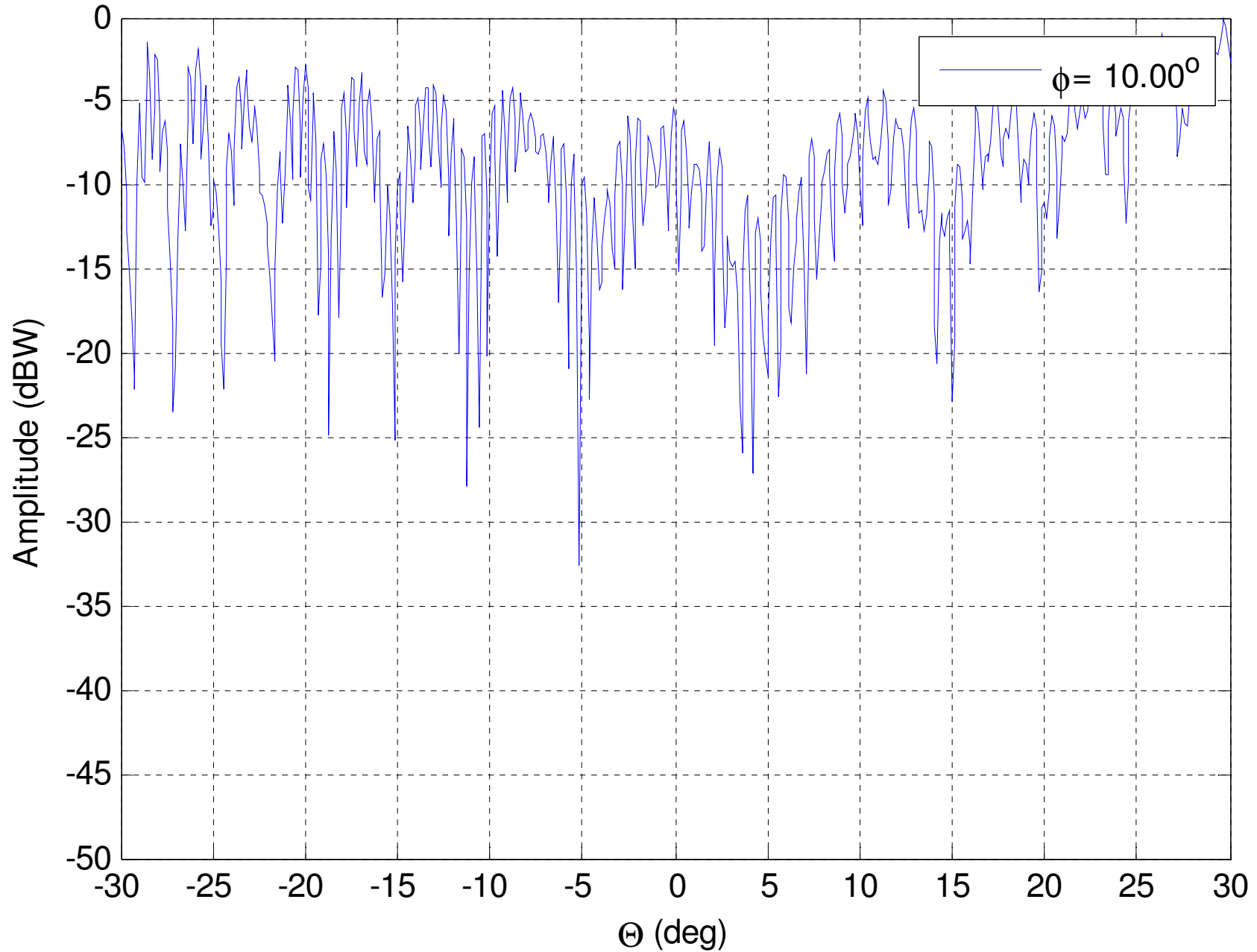
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -6.42 dBW, Date: 14-Dec-2011



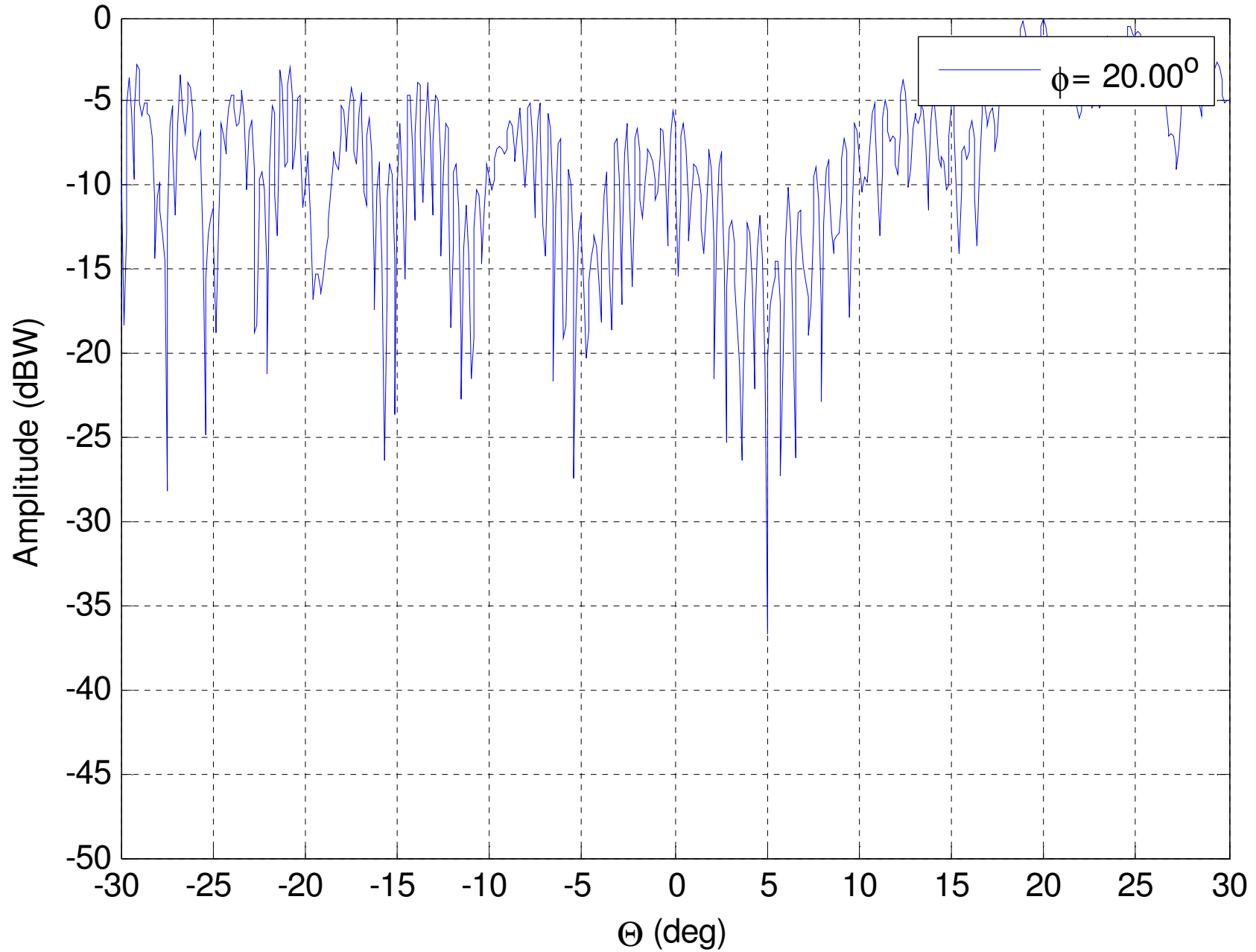
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -4.97 dBW, Date: 14-Dec-2011



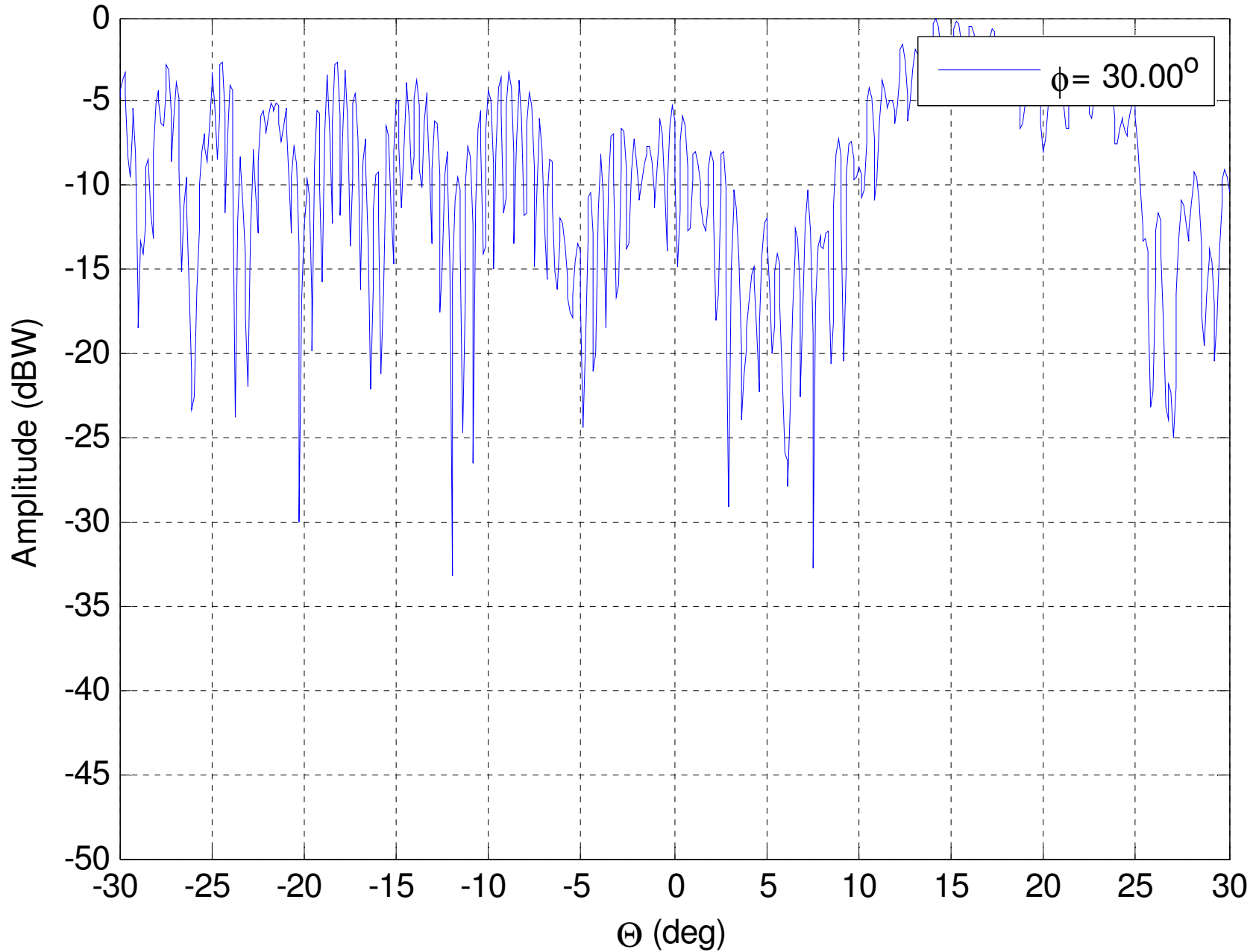
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



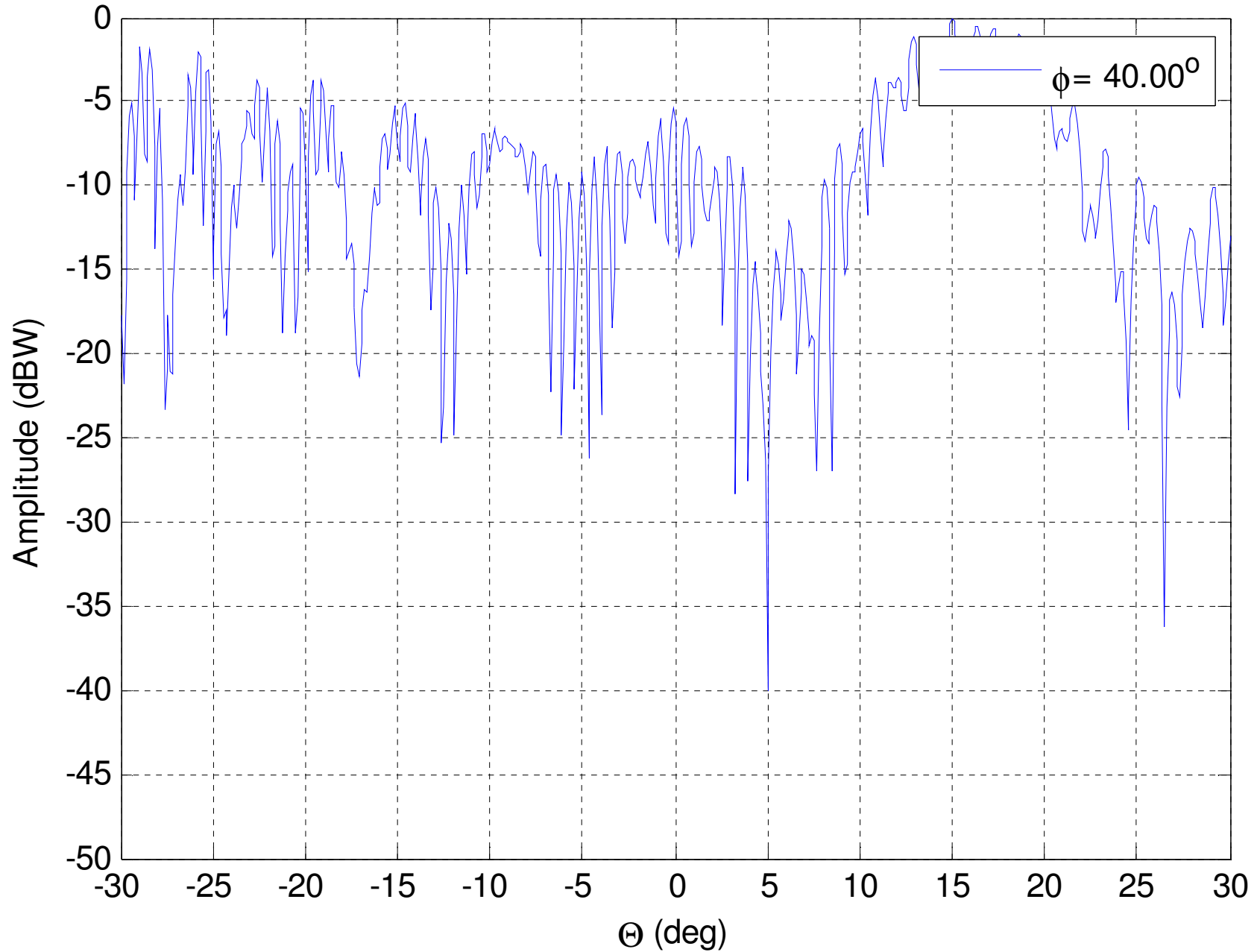
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



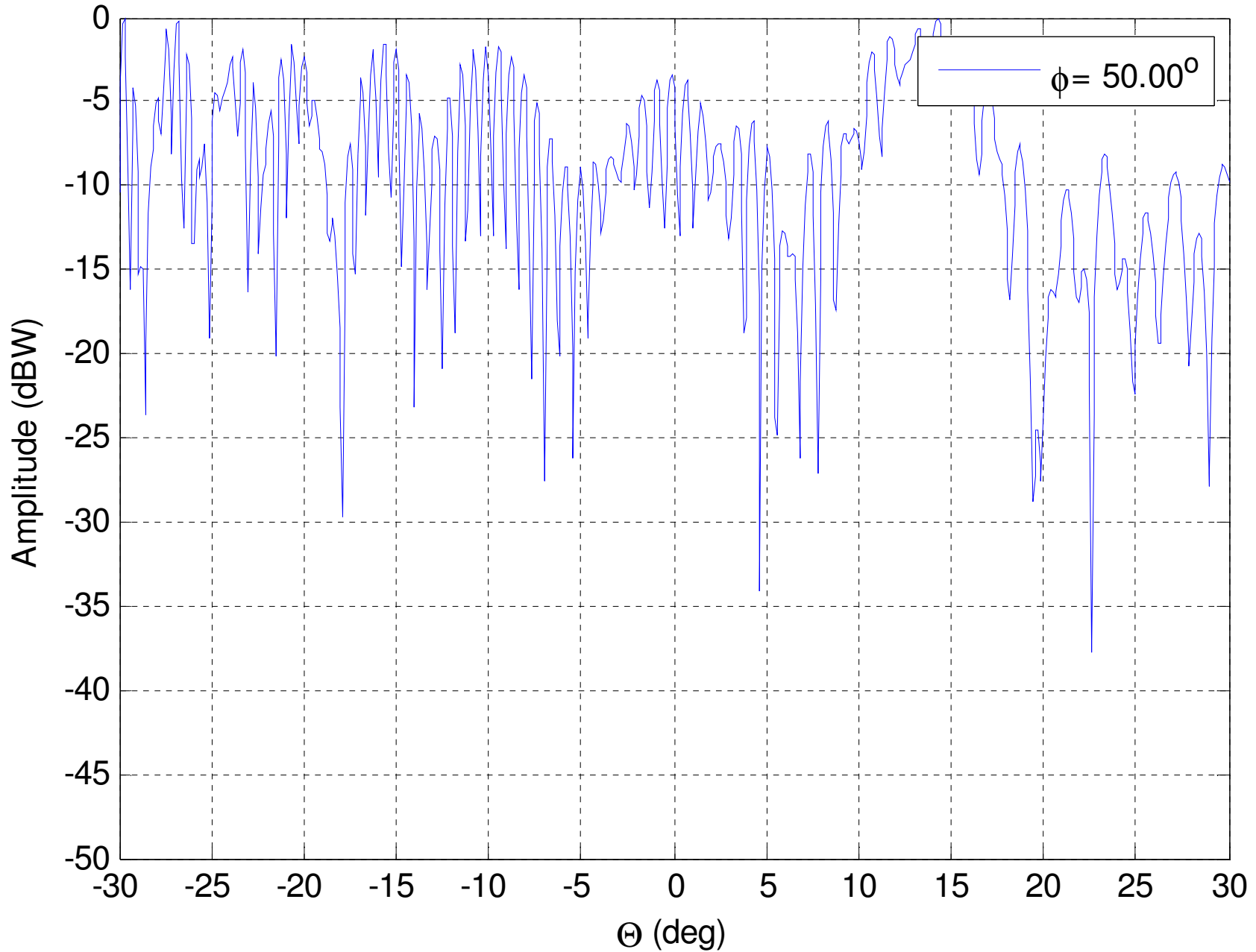
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -4.84 dBW, Date: 14-Dec-2011



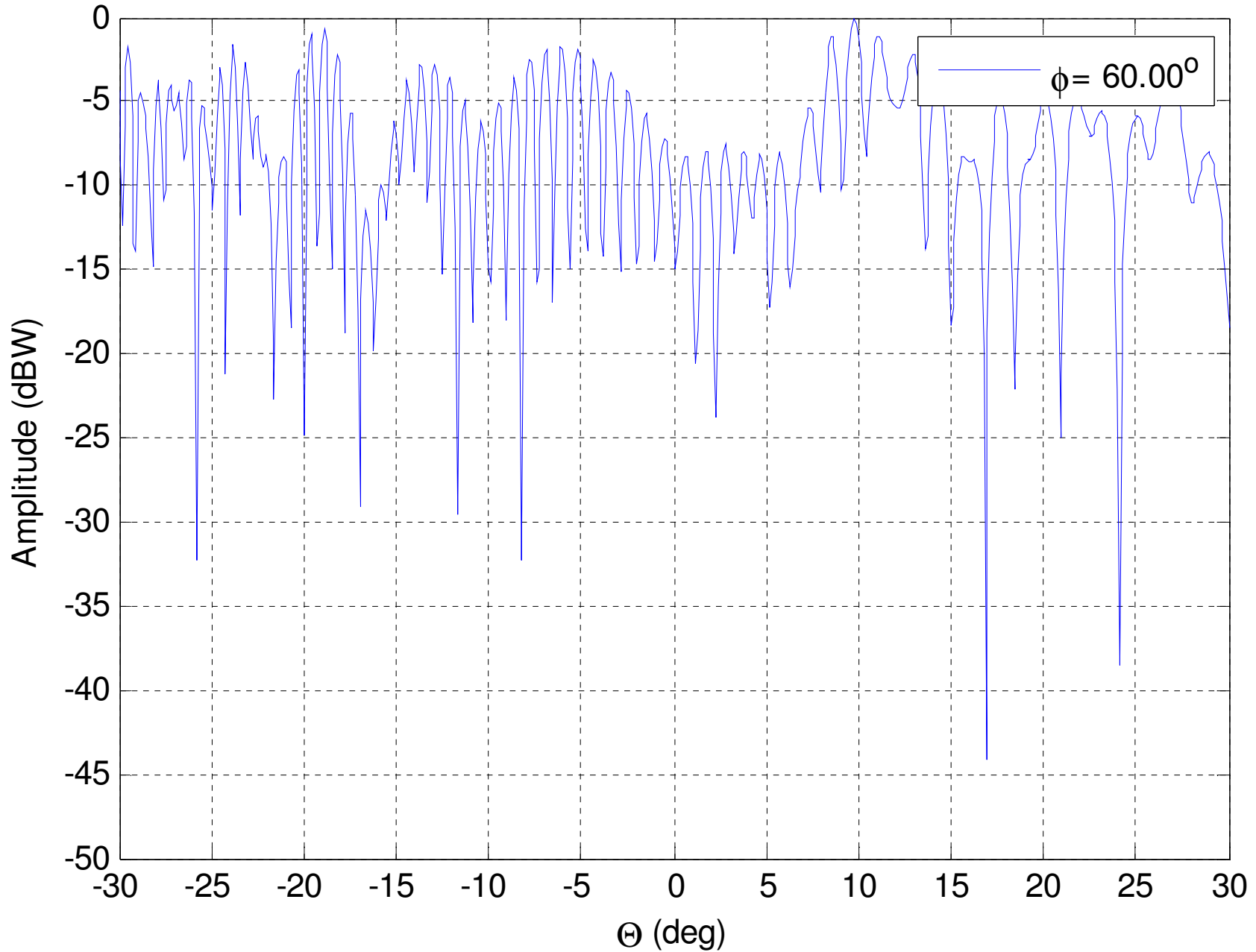
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -6.96 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

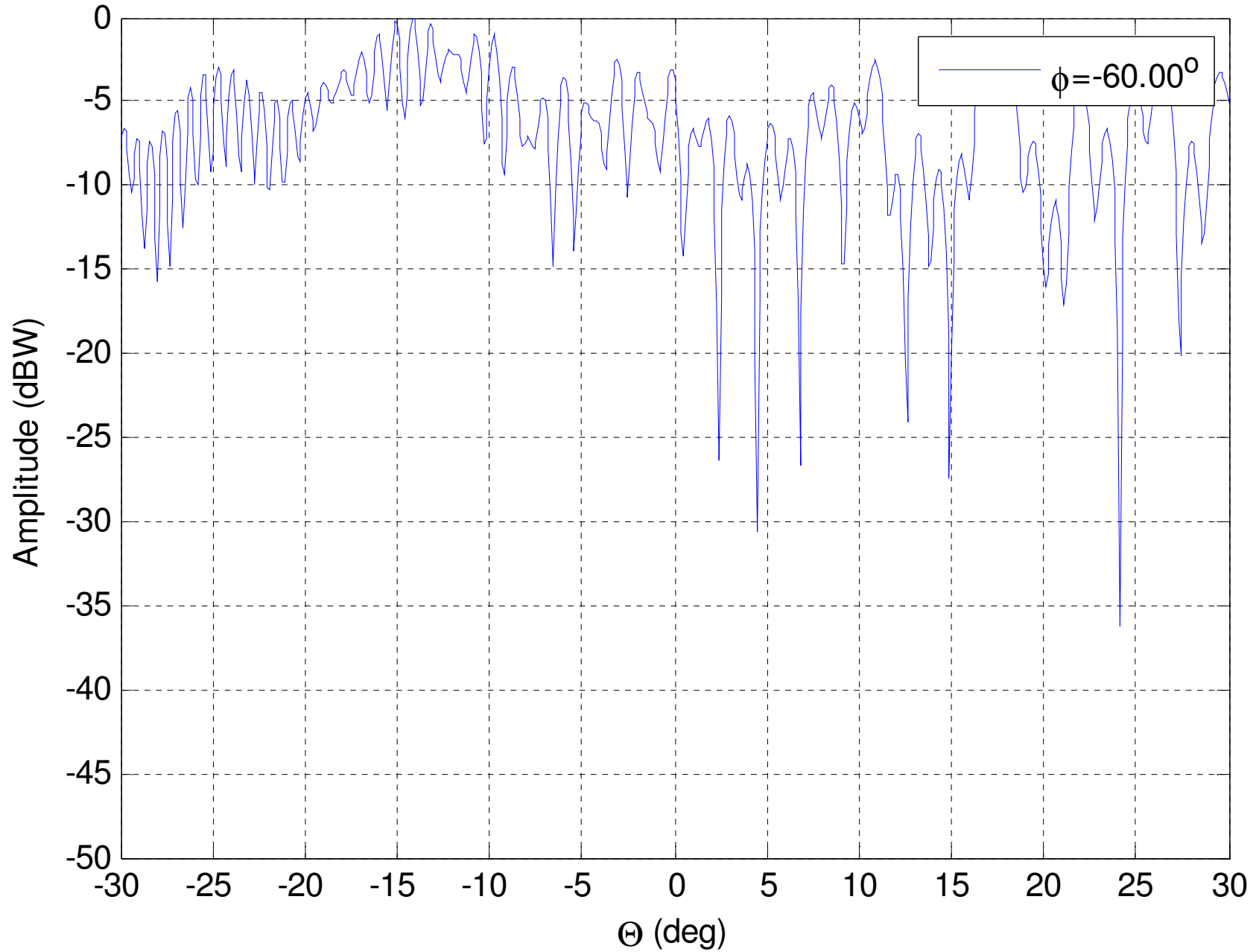
Input file: tx-17.3-rhcp-60.cut, Peak: -7.62 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

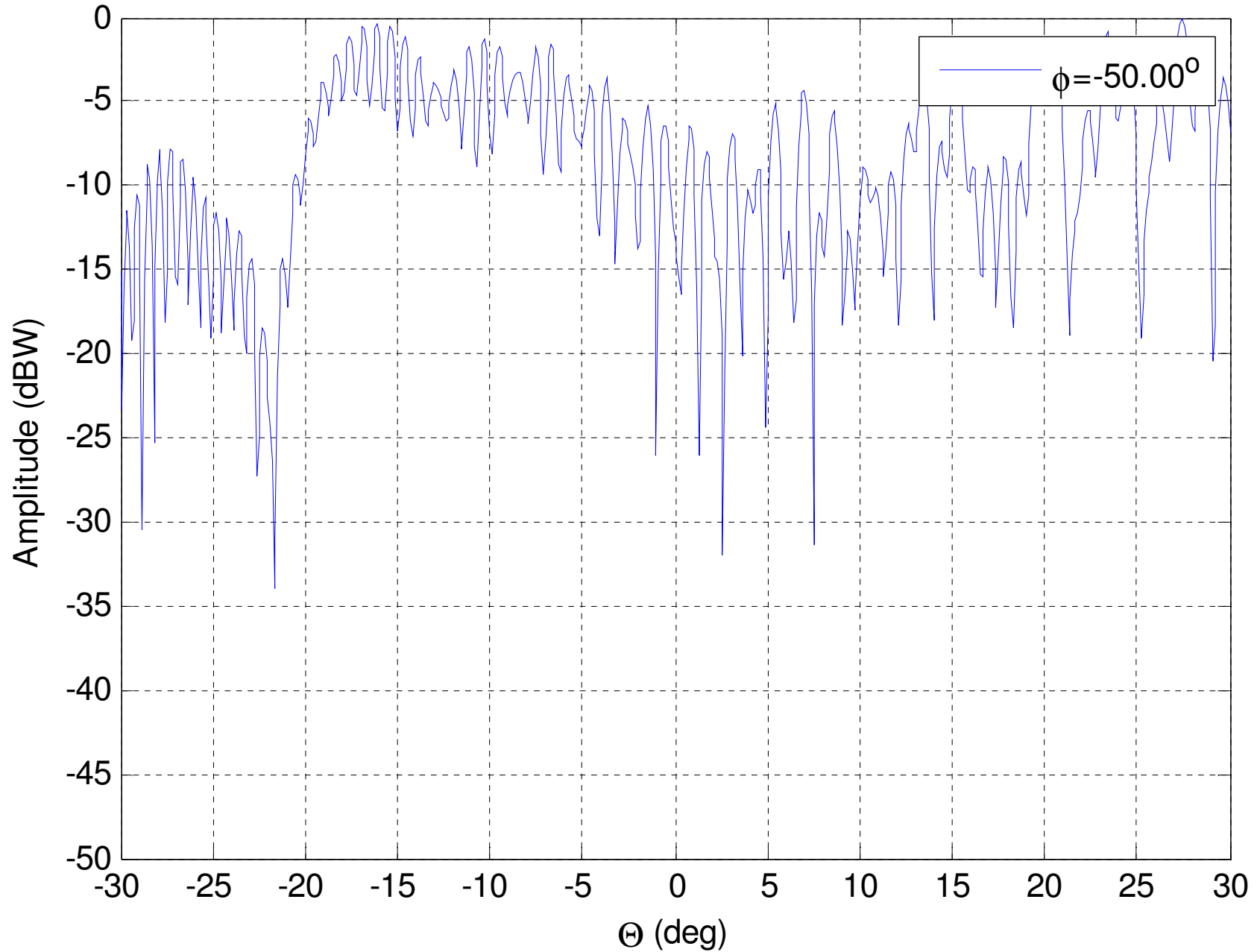
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -7.37 dBW, Date: 14-Dec-2011



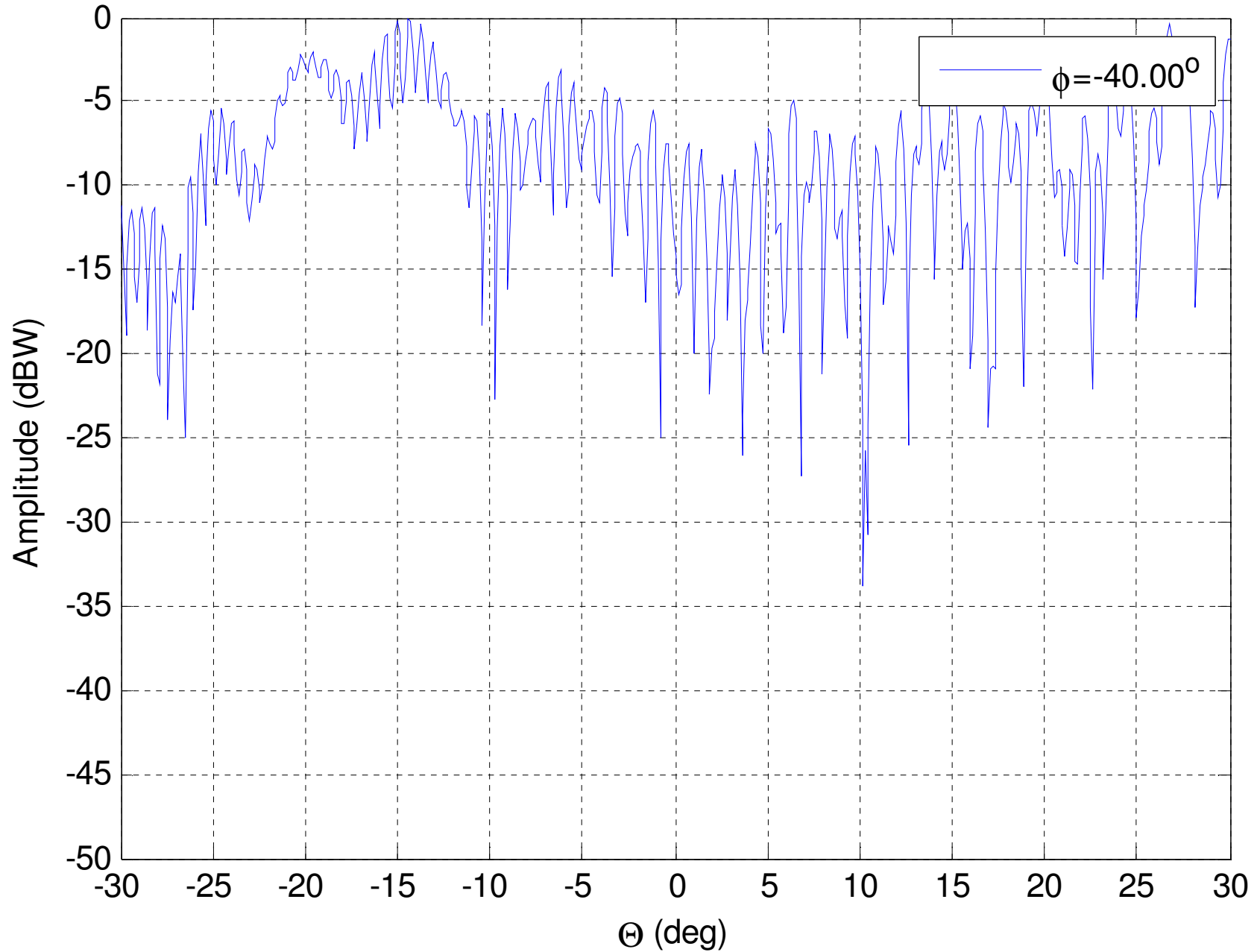
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -5.83 dBW, Date: 14-Dec-2011



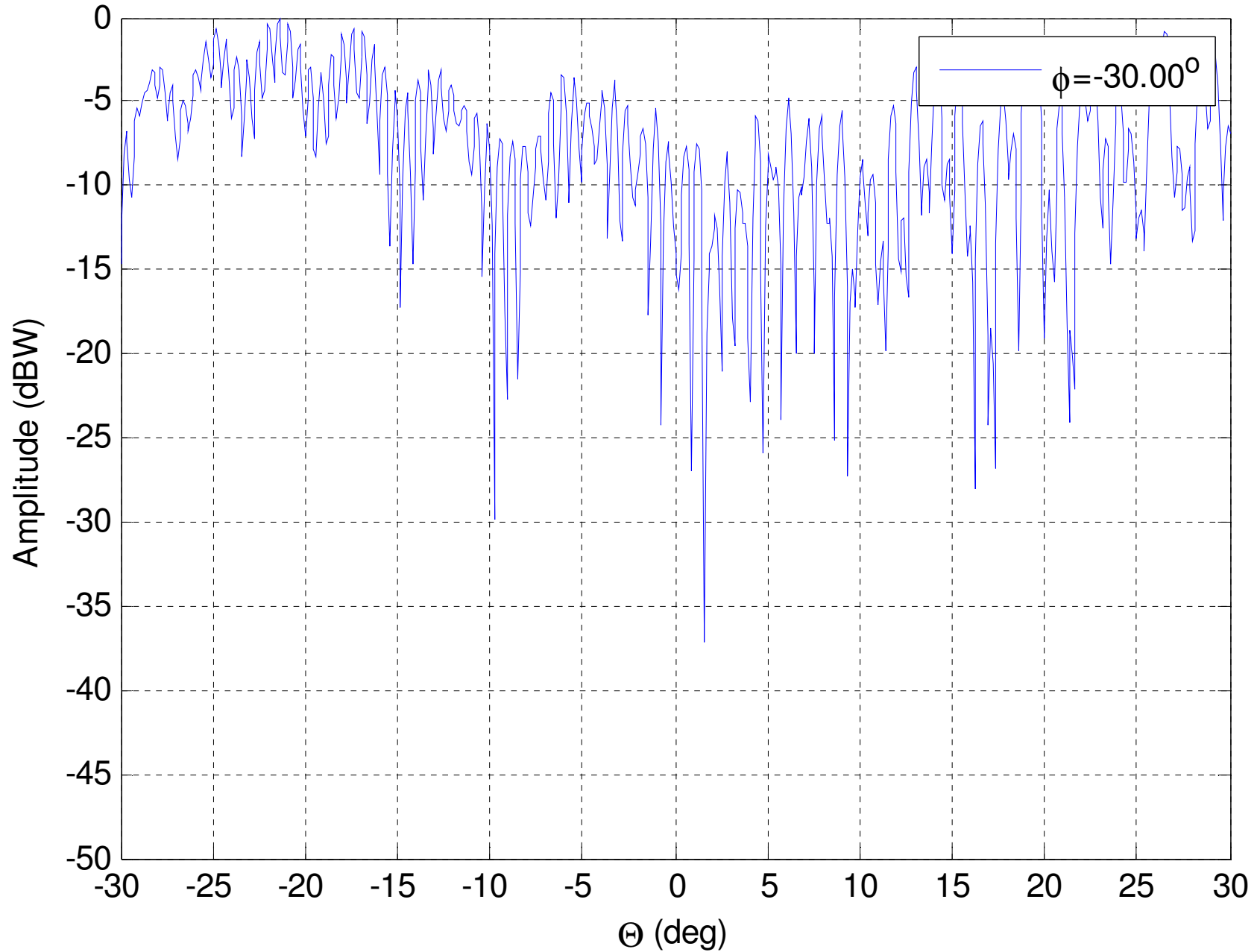
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -5.07 dBW, Date: 14-Dec-2011



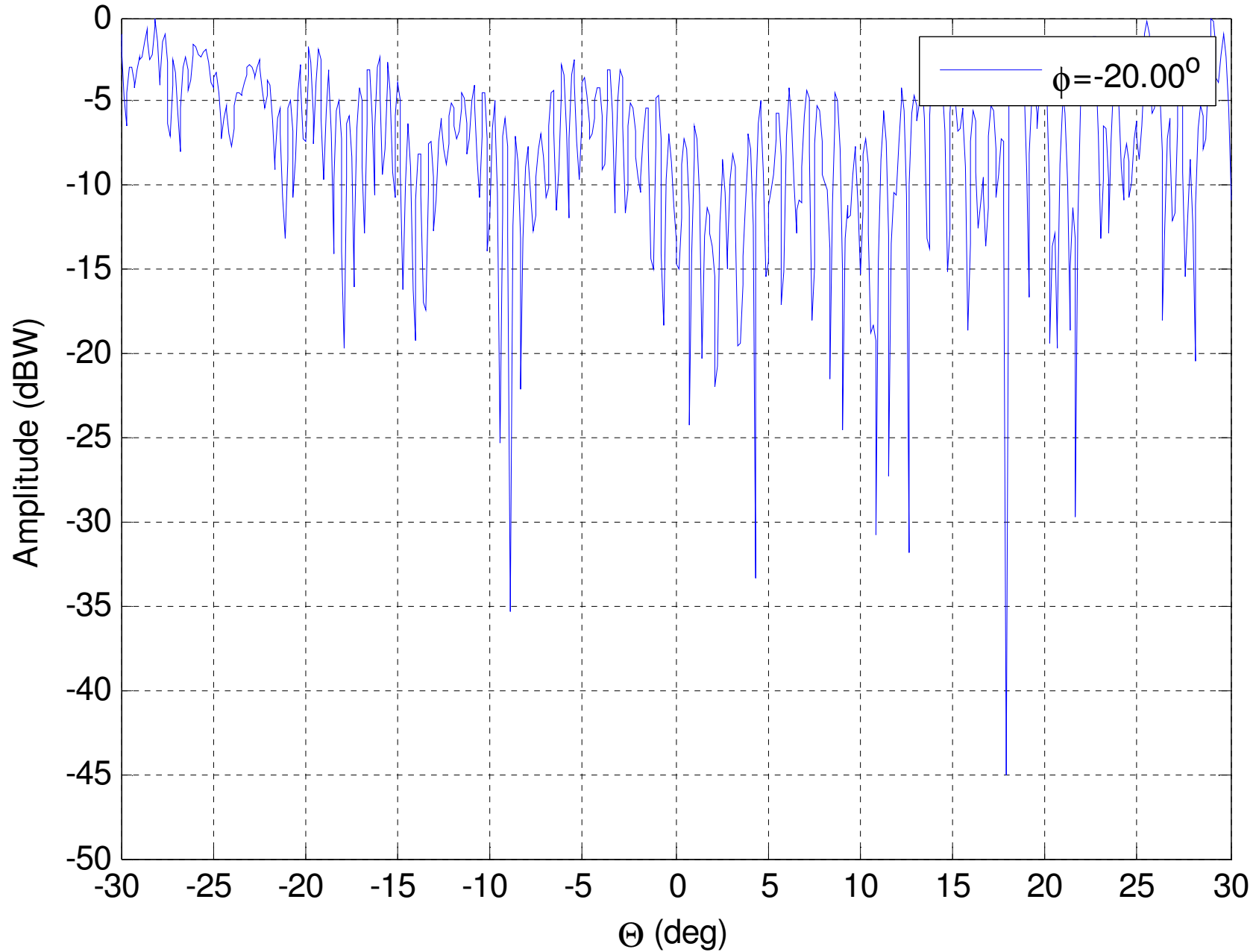
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -5.24 dBW, Date: 14-Dec-2011



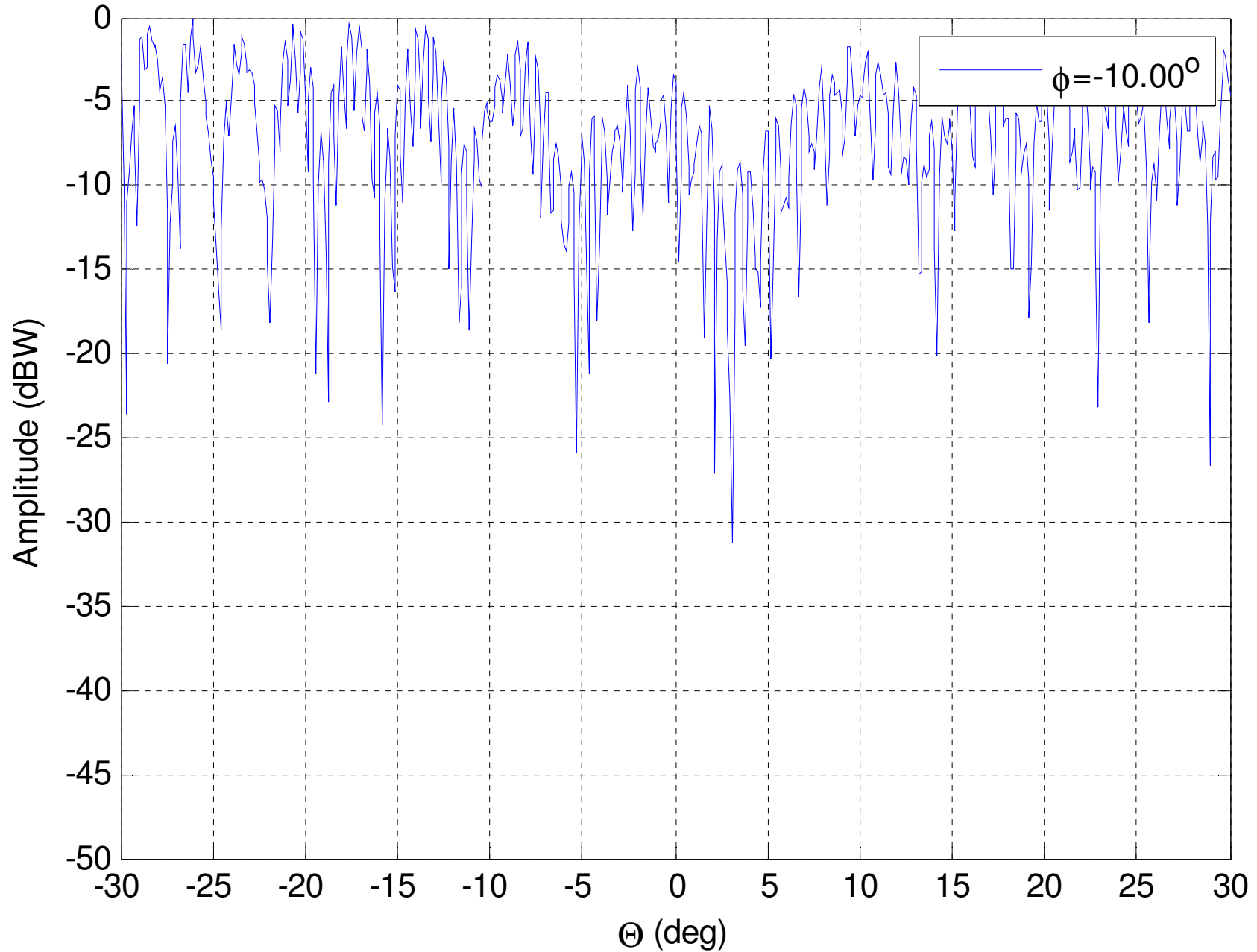
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.02 dBW, Date: 14-Dec-2011



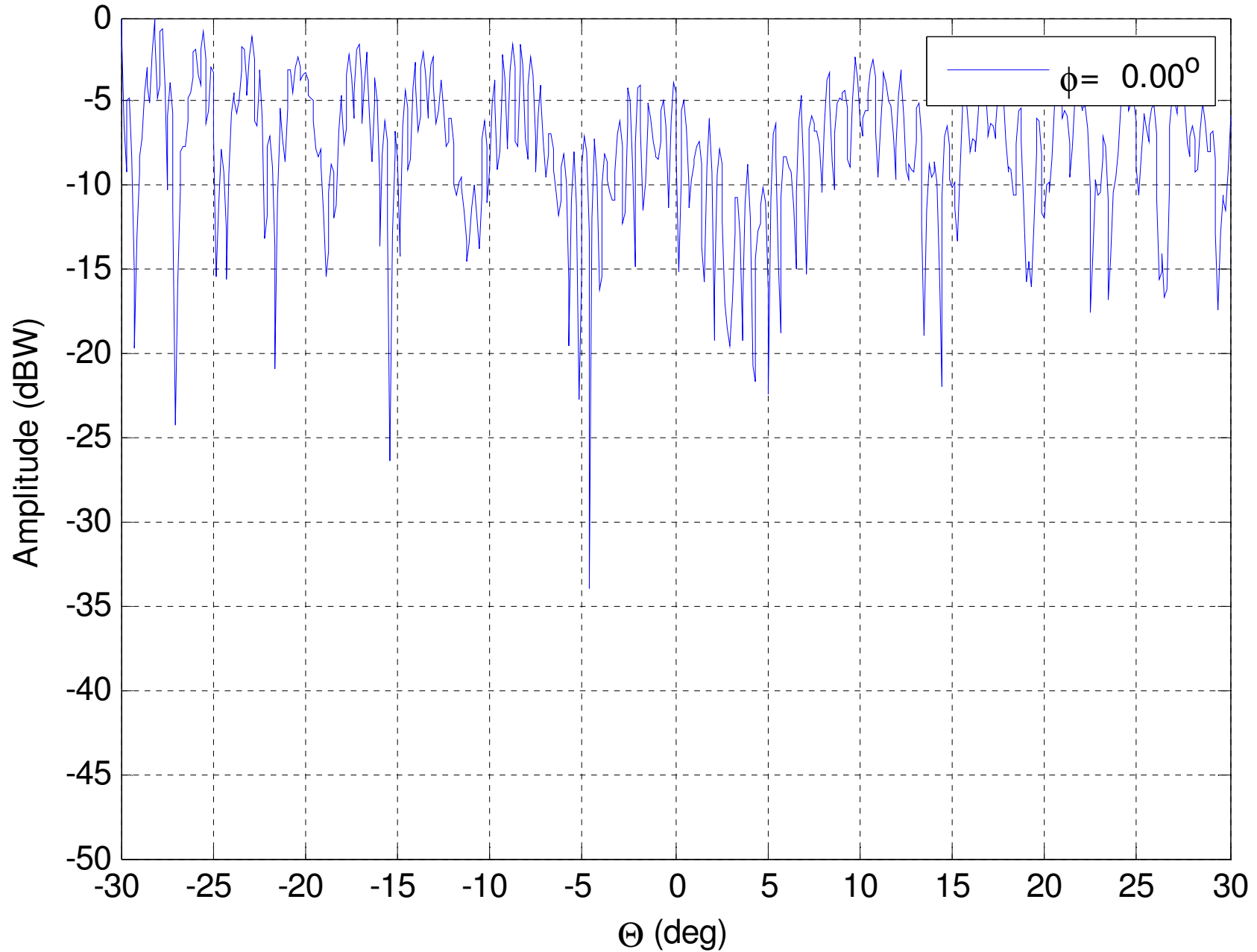
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -7.18 dBW, Date: 14-Dec-2011



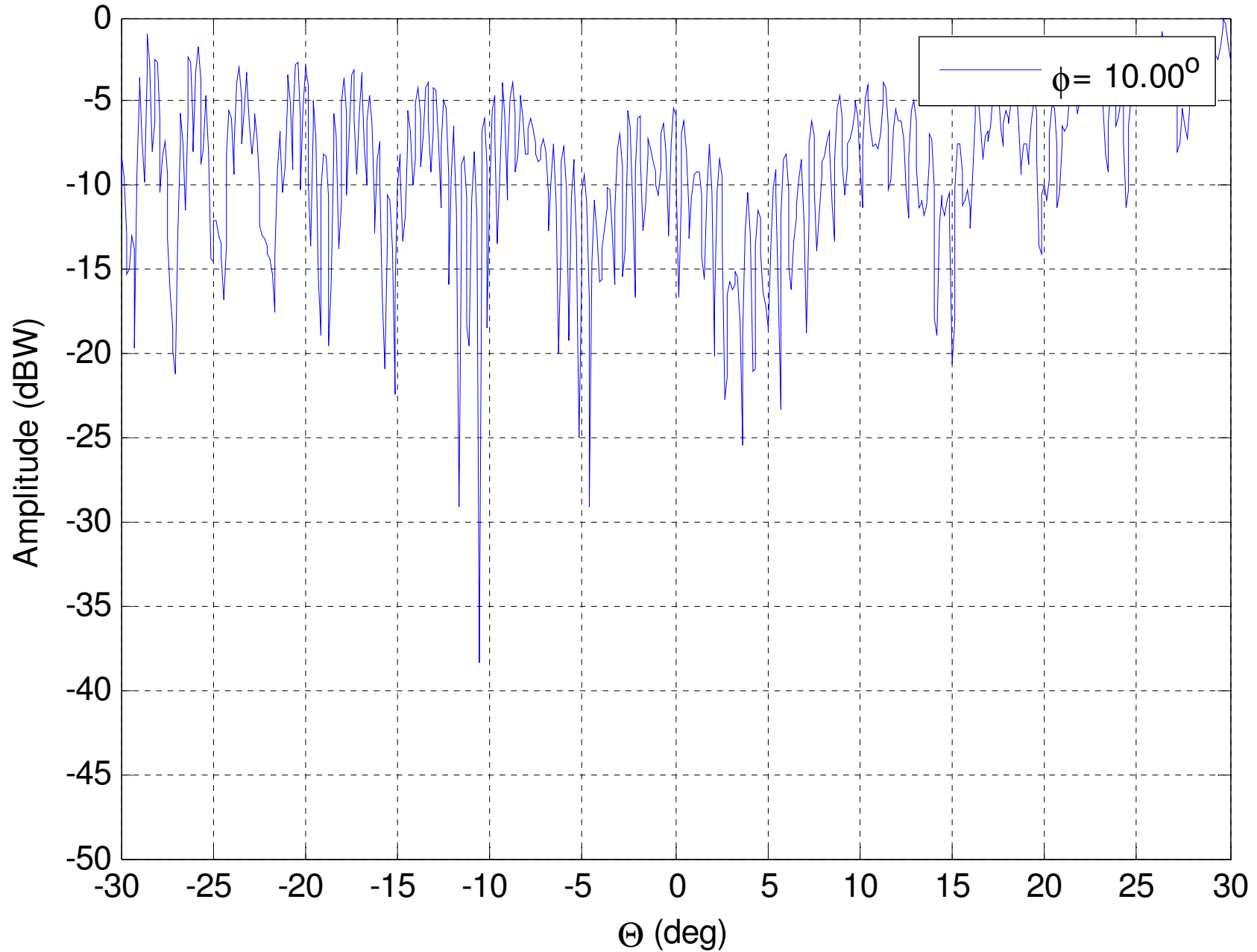
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -6.67 dBW, Date: 14-Dec-2011



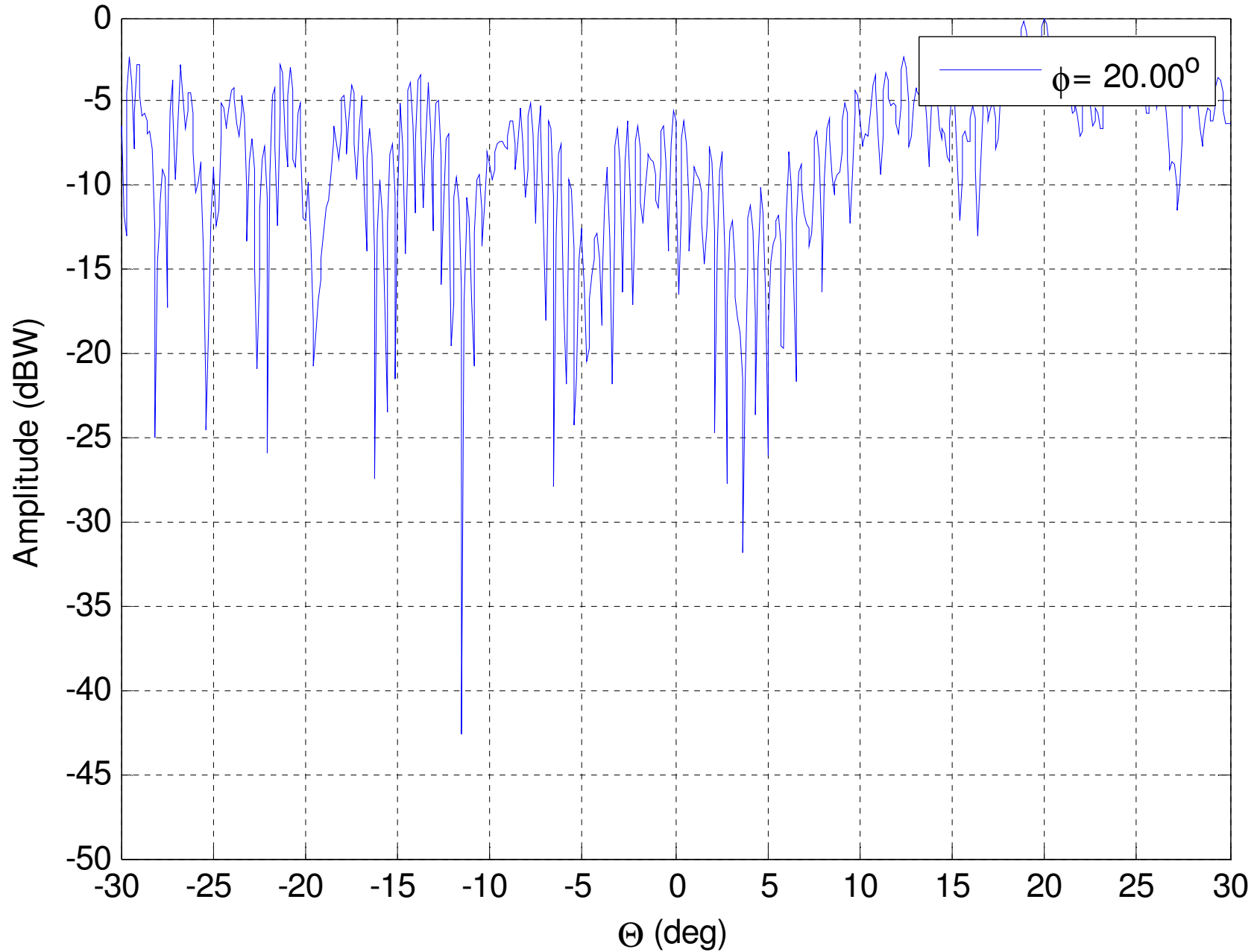
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.22 dBW, Date: 14-Dec-2011



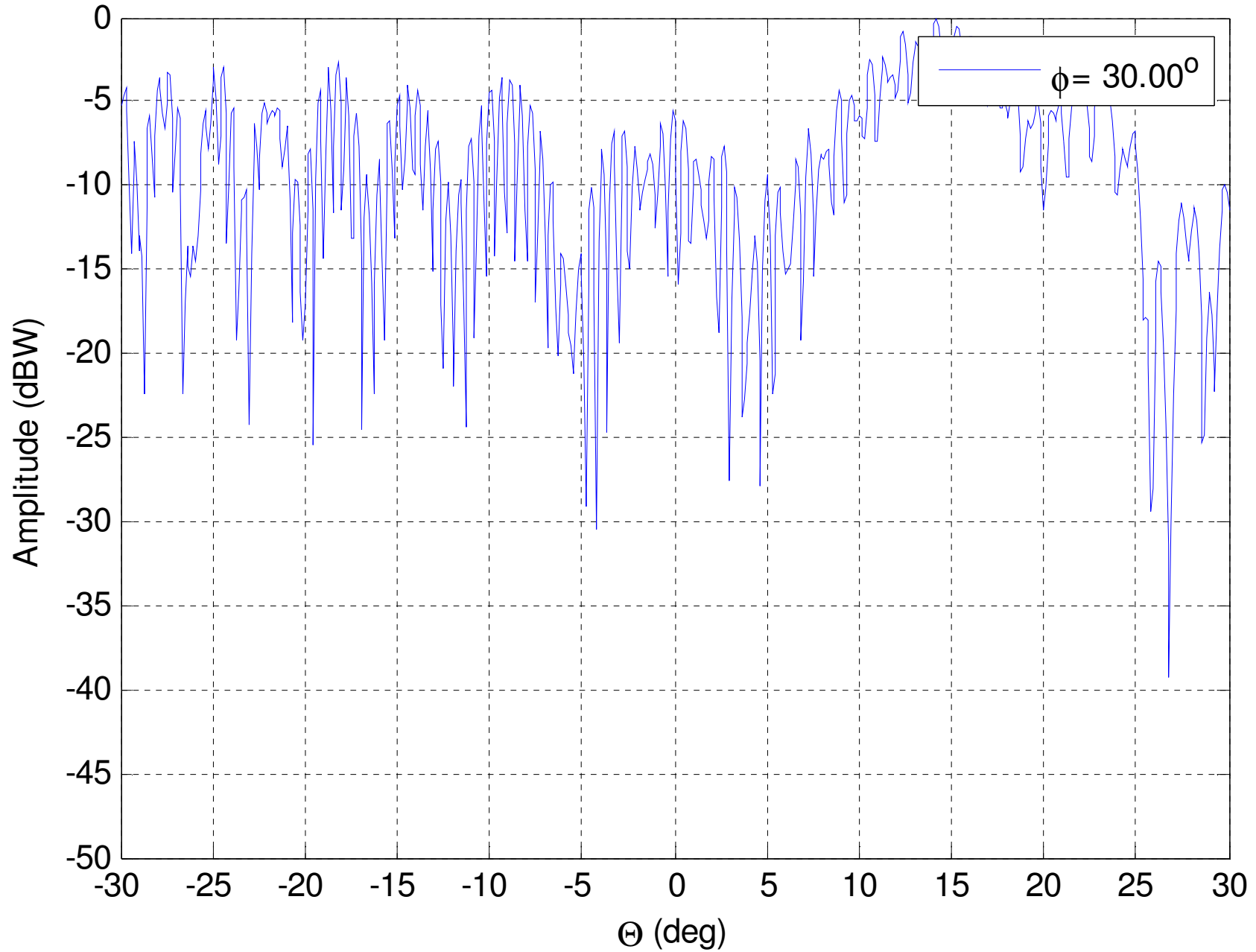
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



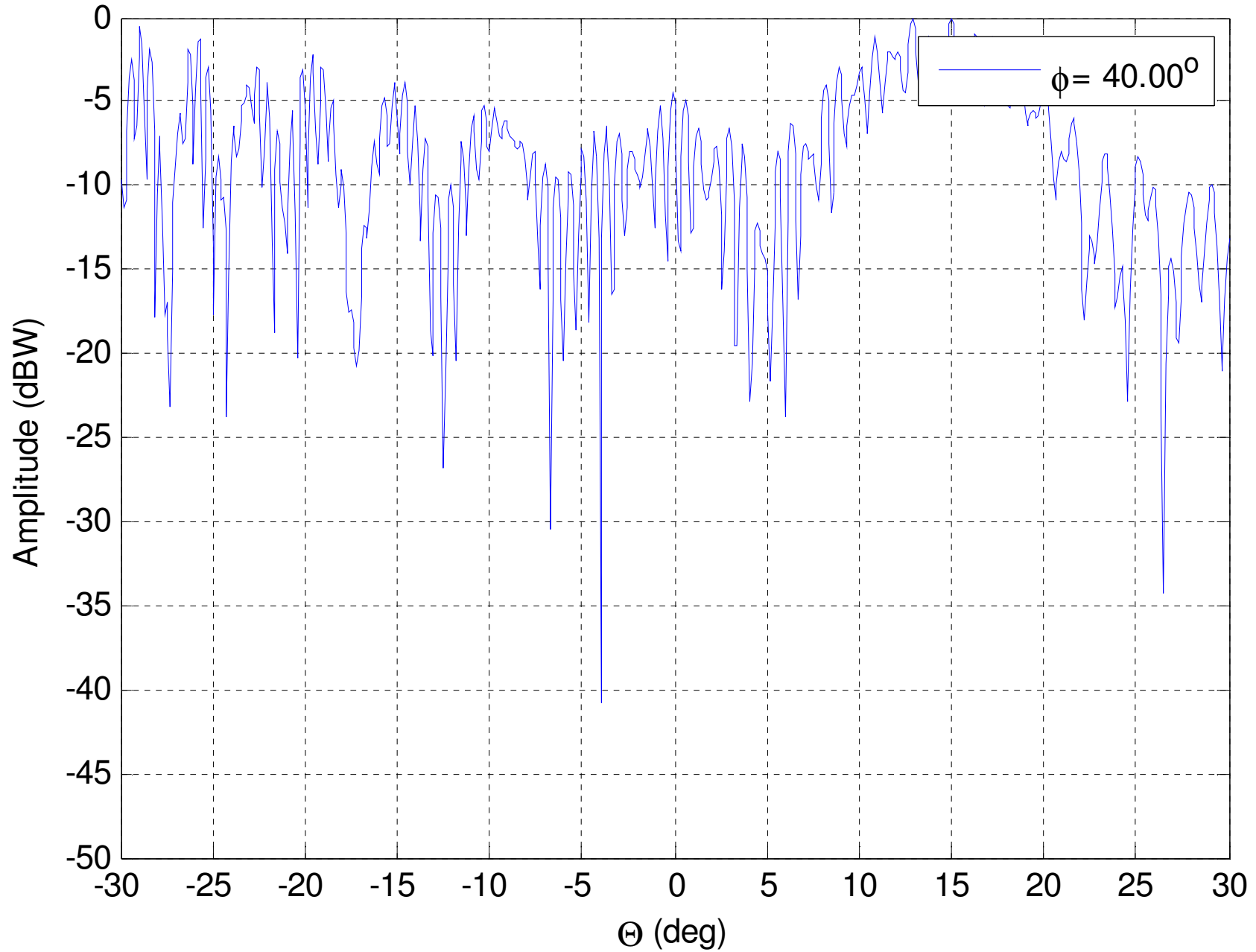
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -4.93 dBW, Date: 14-Dec-2011



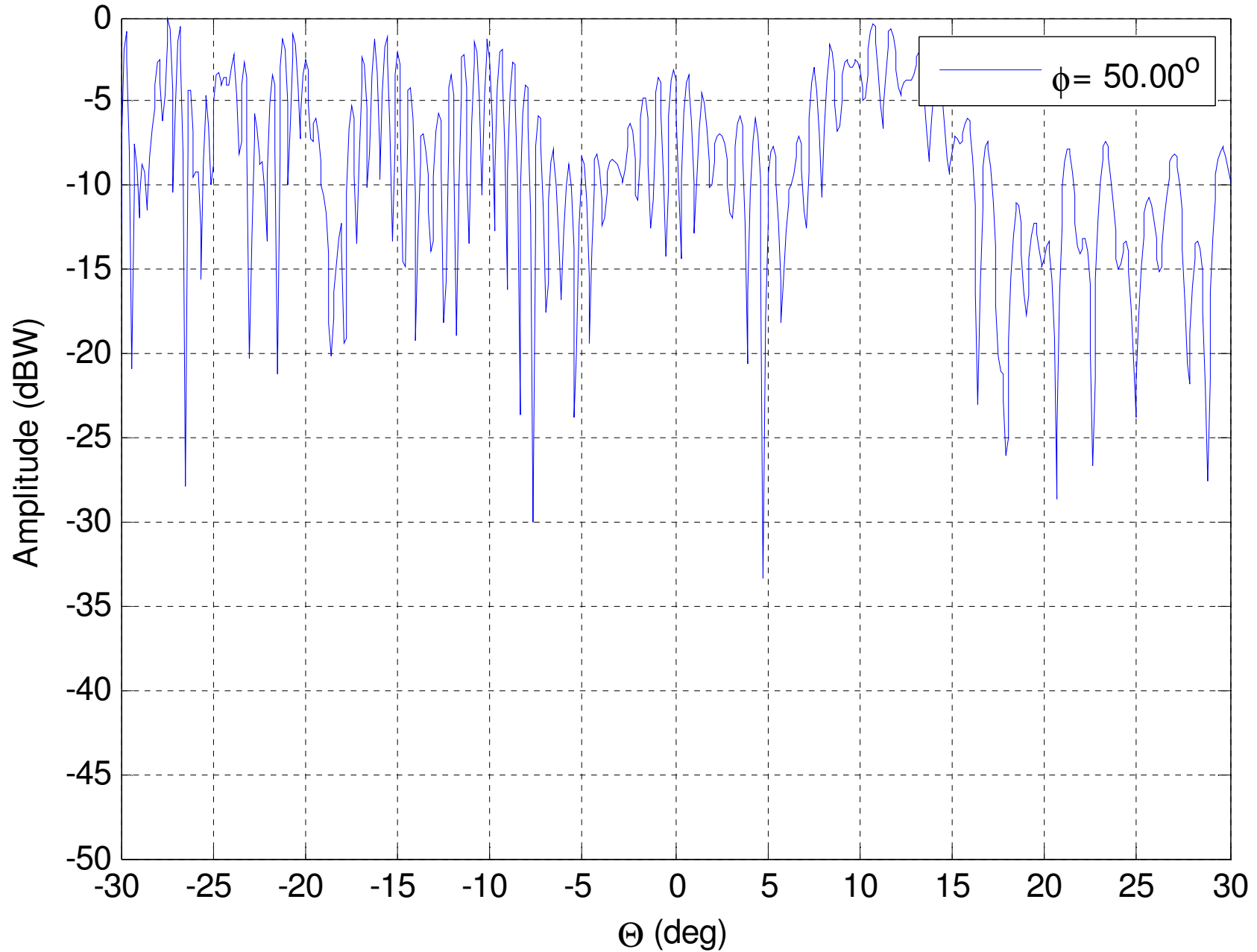
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -6.03 dBW, Date: 14-Dec-2011



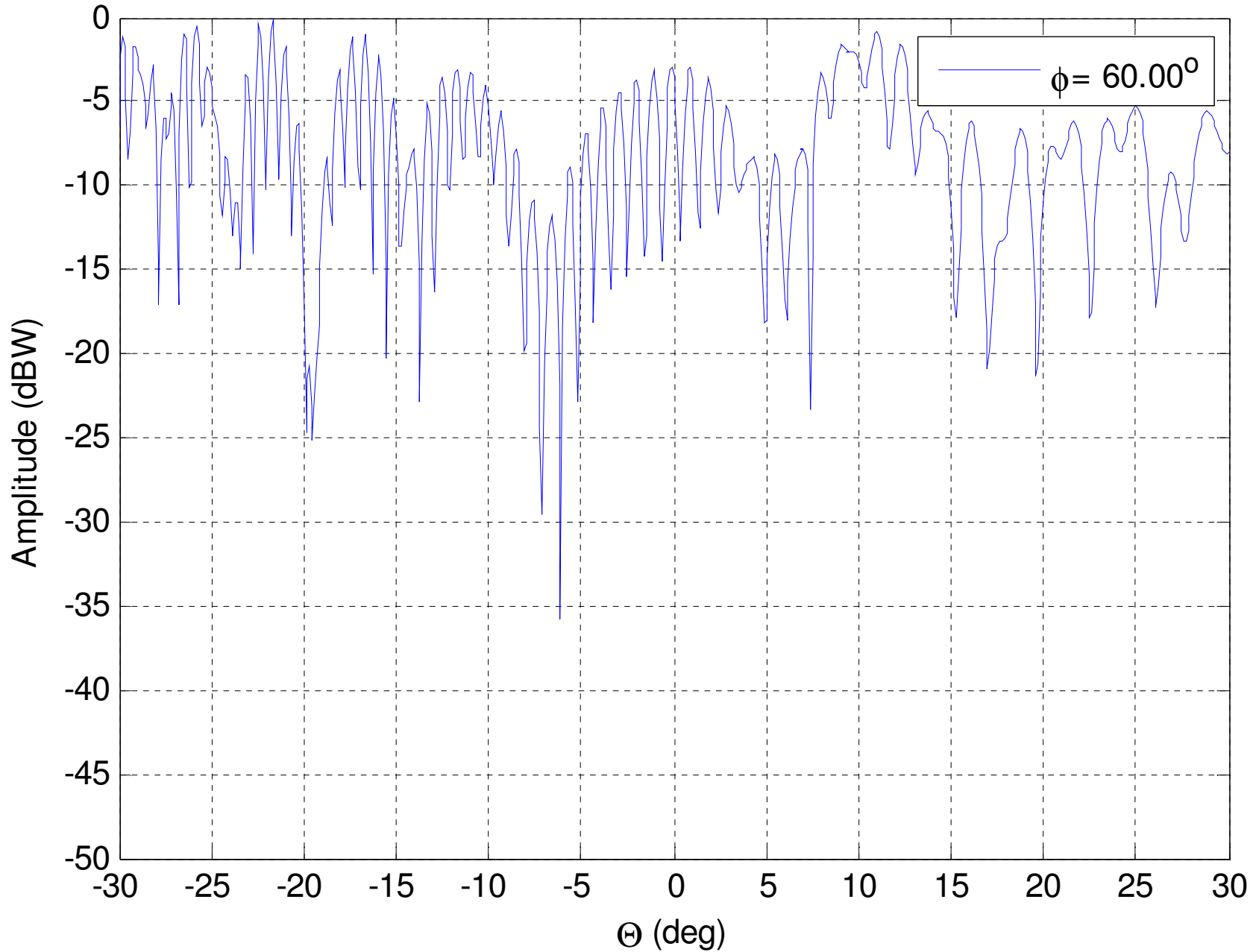
Normalized pattern cuts - farfield

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



Normalized pattern cuts - farfield

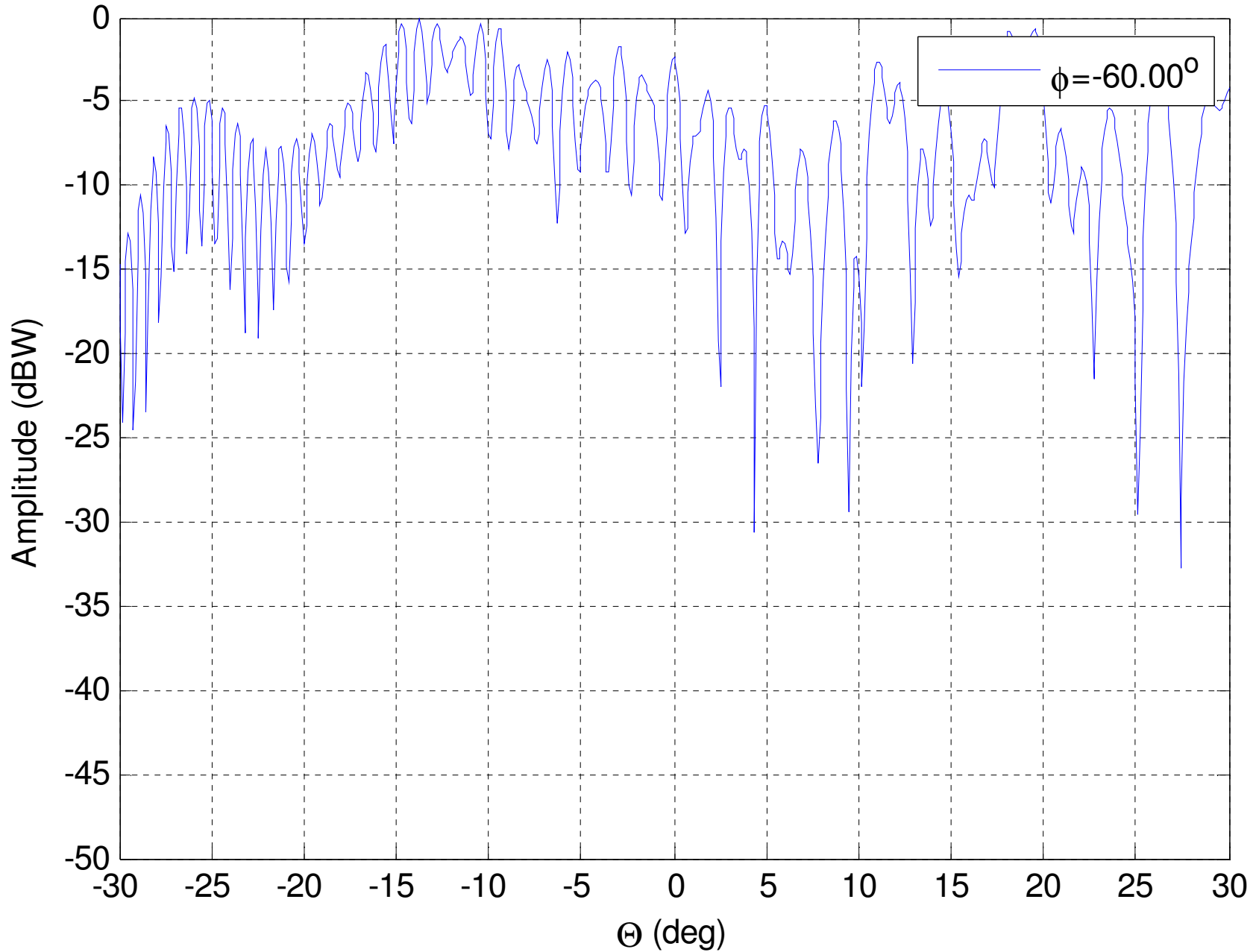
Input file: tx-17.3-lhcp-60.cut, Peak: -7.60 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

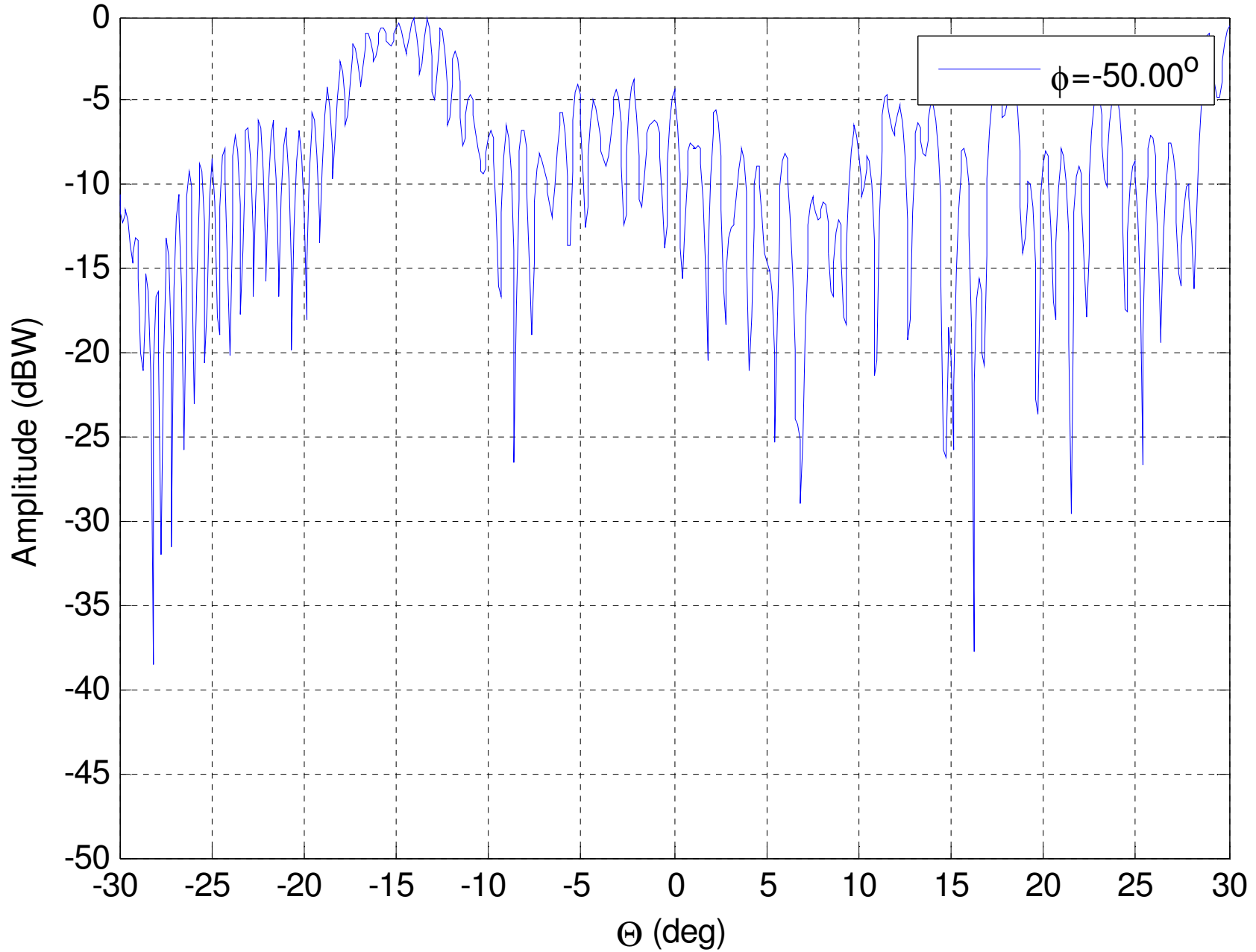
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -7.42 dBW, Date: 14-Dec-2011



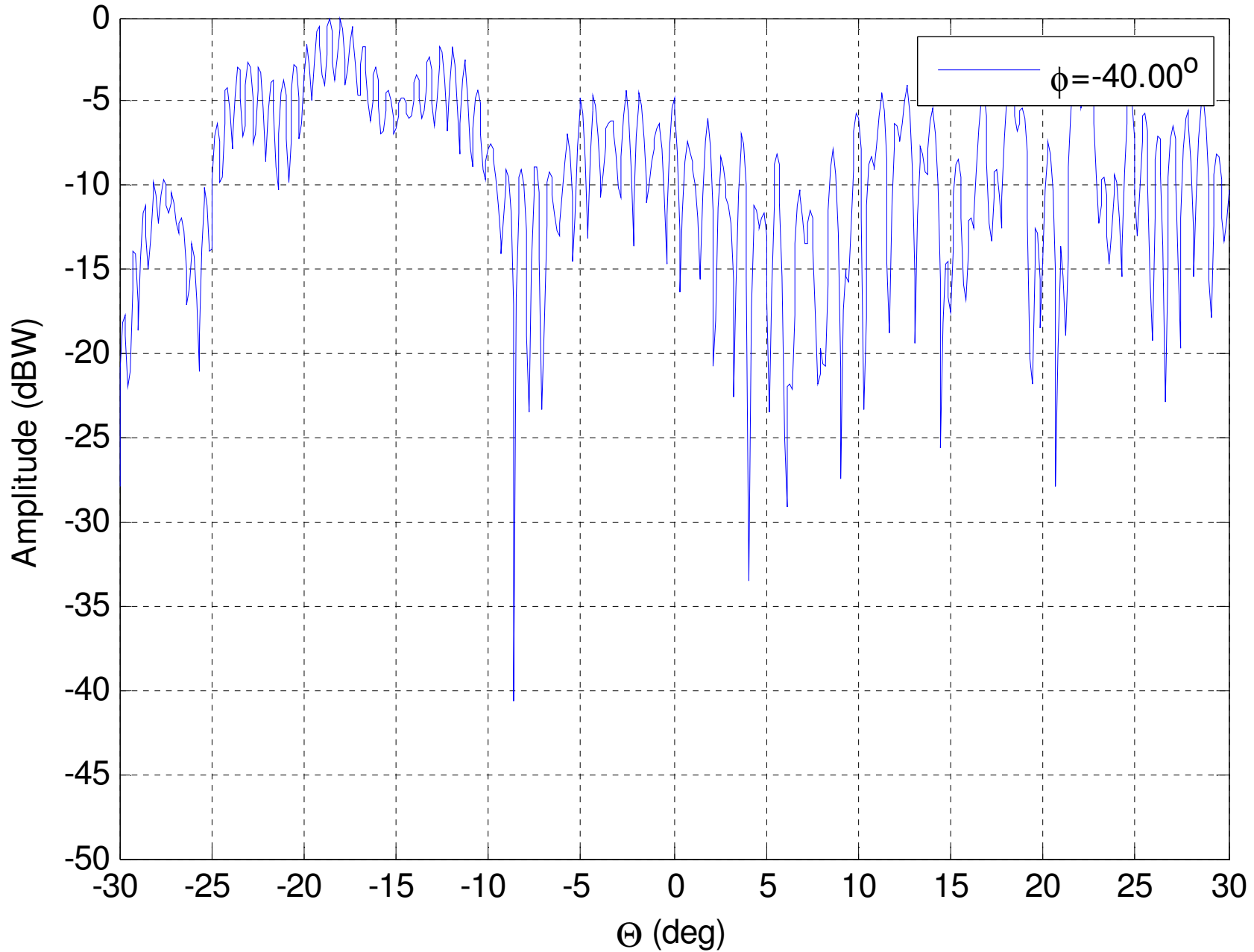
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -5.38 dBW, Date: 14-Dec-2011



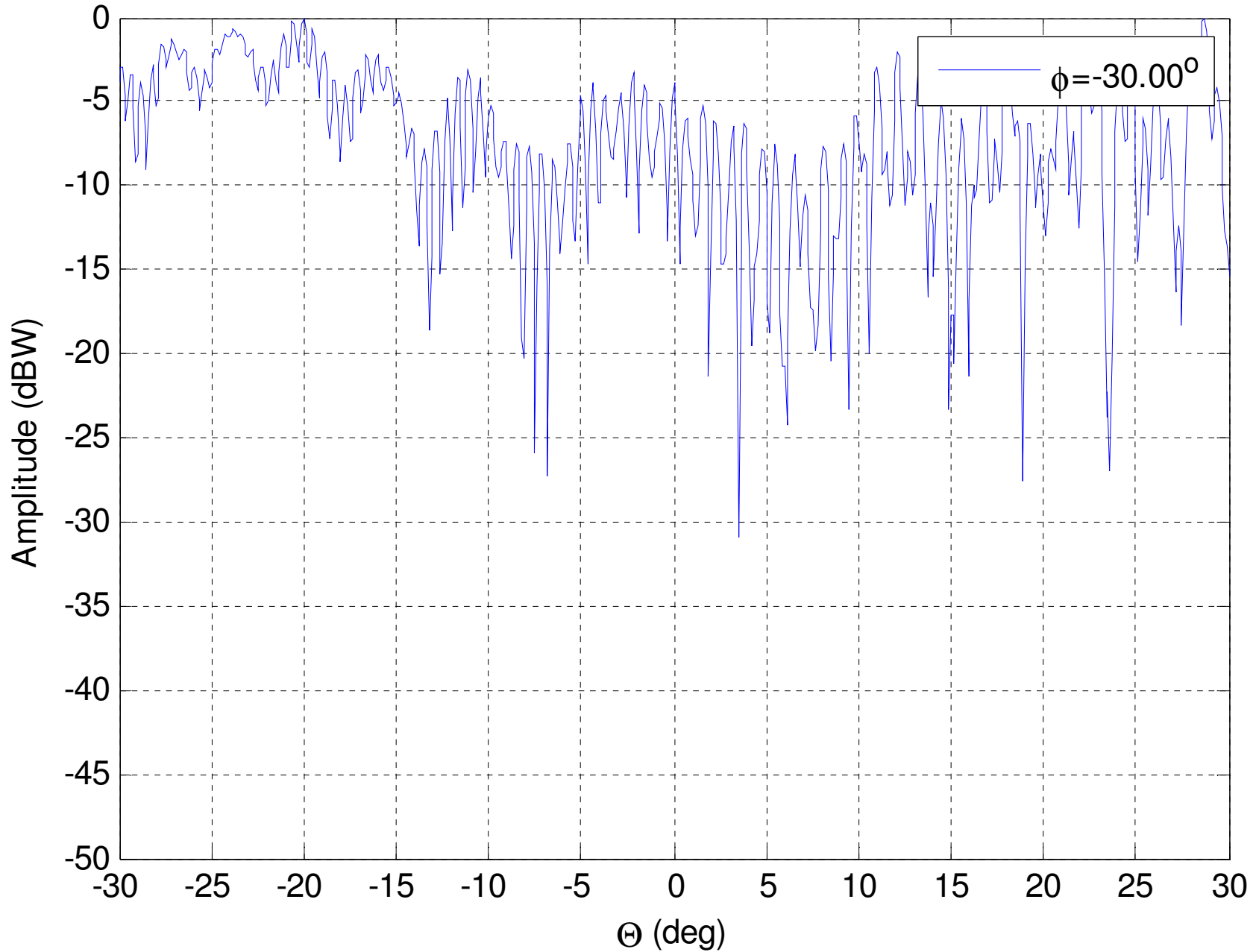
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.99 dBW, Date: 14-Dec-2011



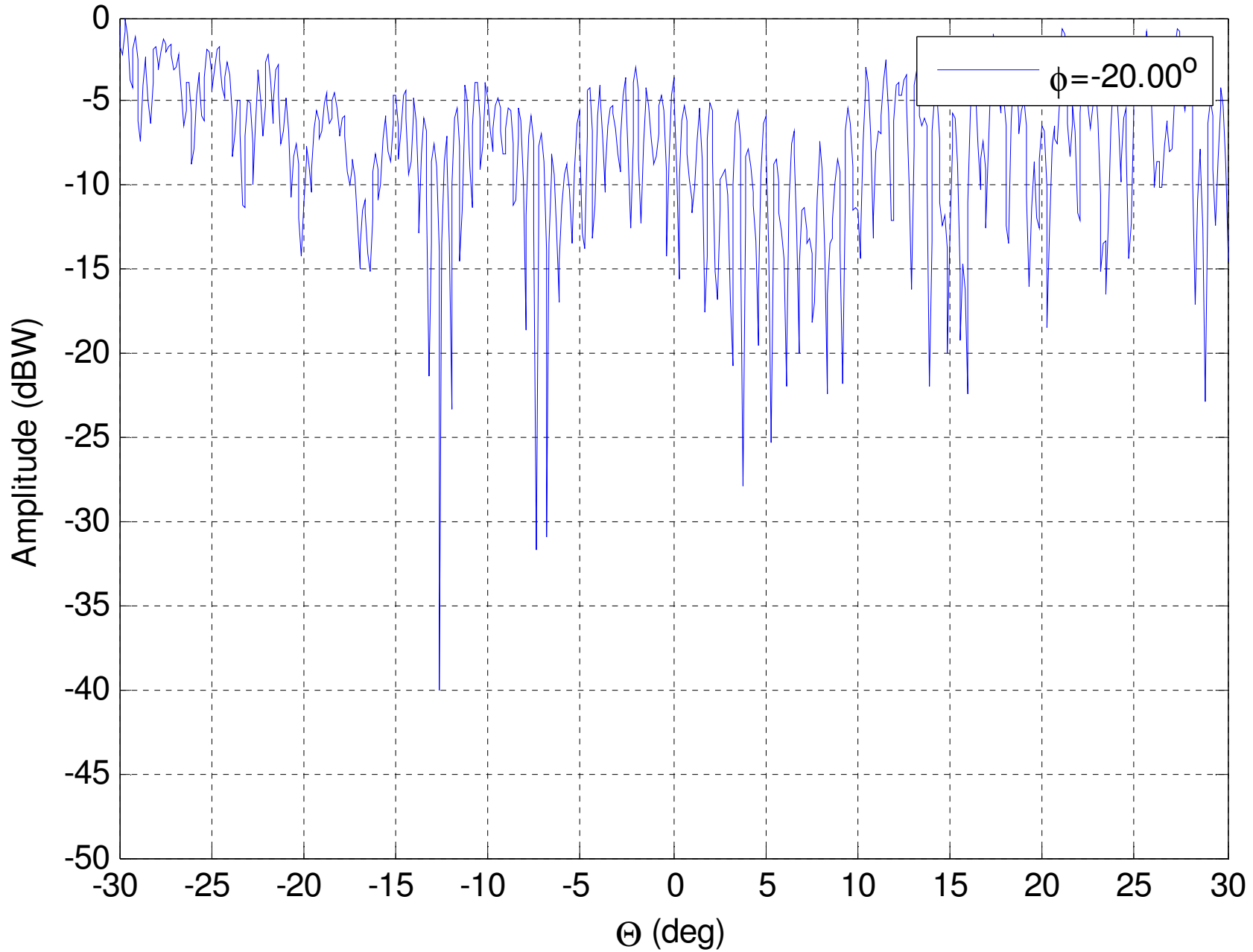
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -5.91 dBW, Date: 14-Dec-2011



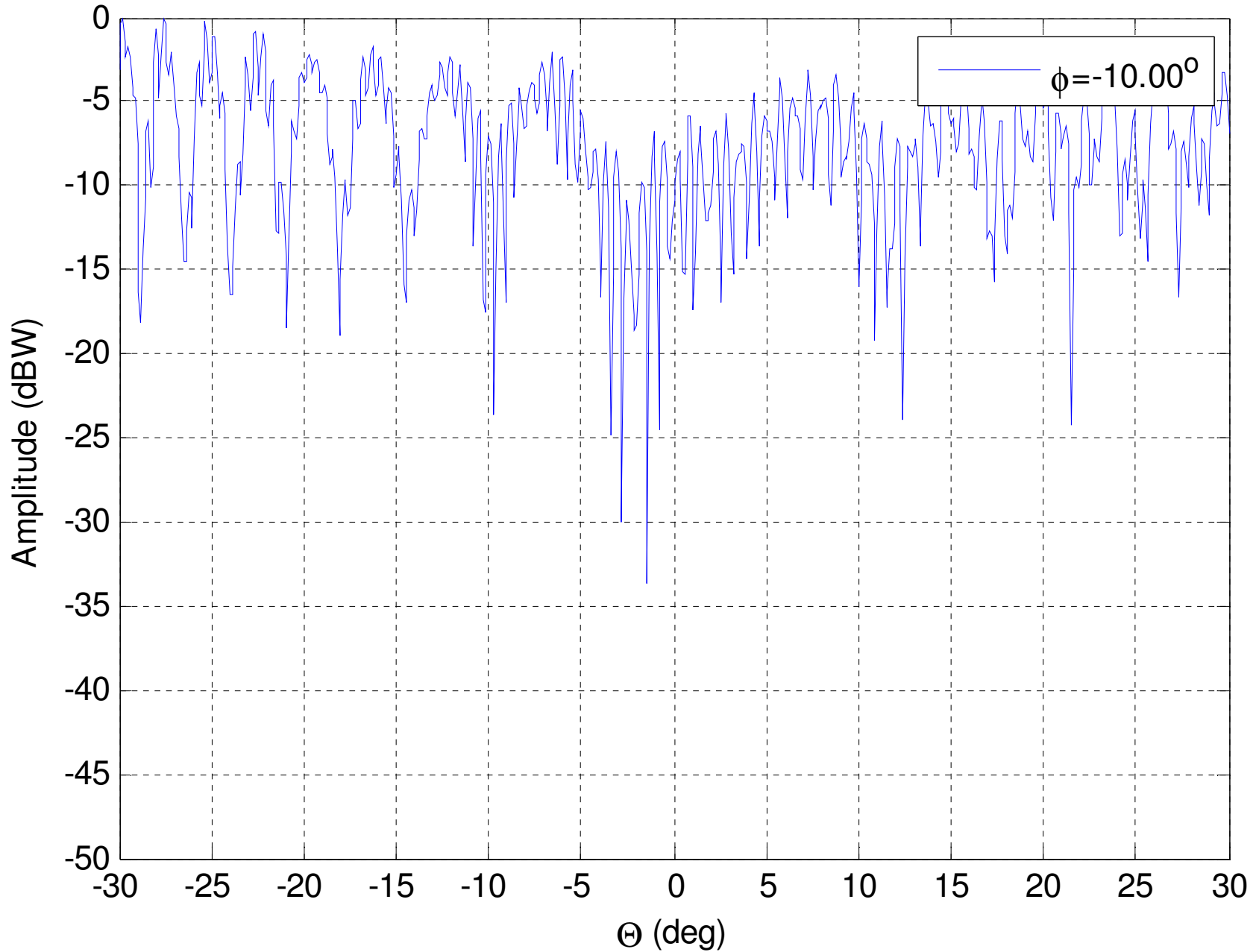
Normalized pattern cuts - farfield

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



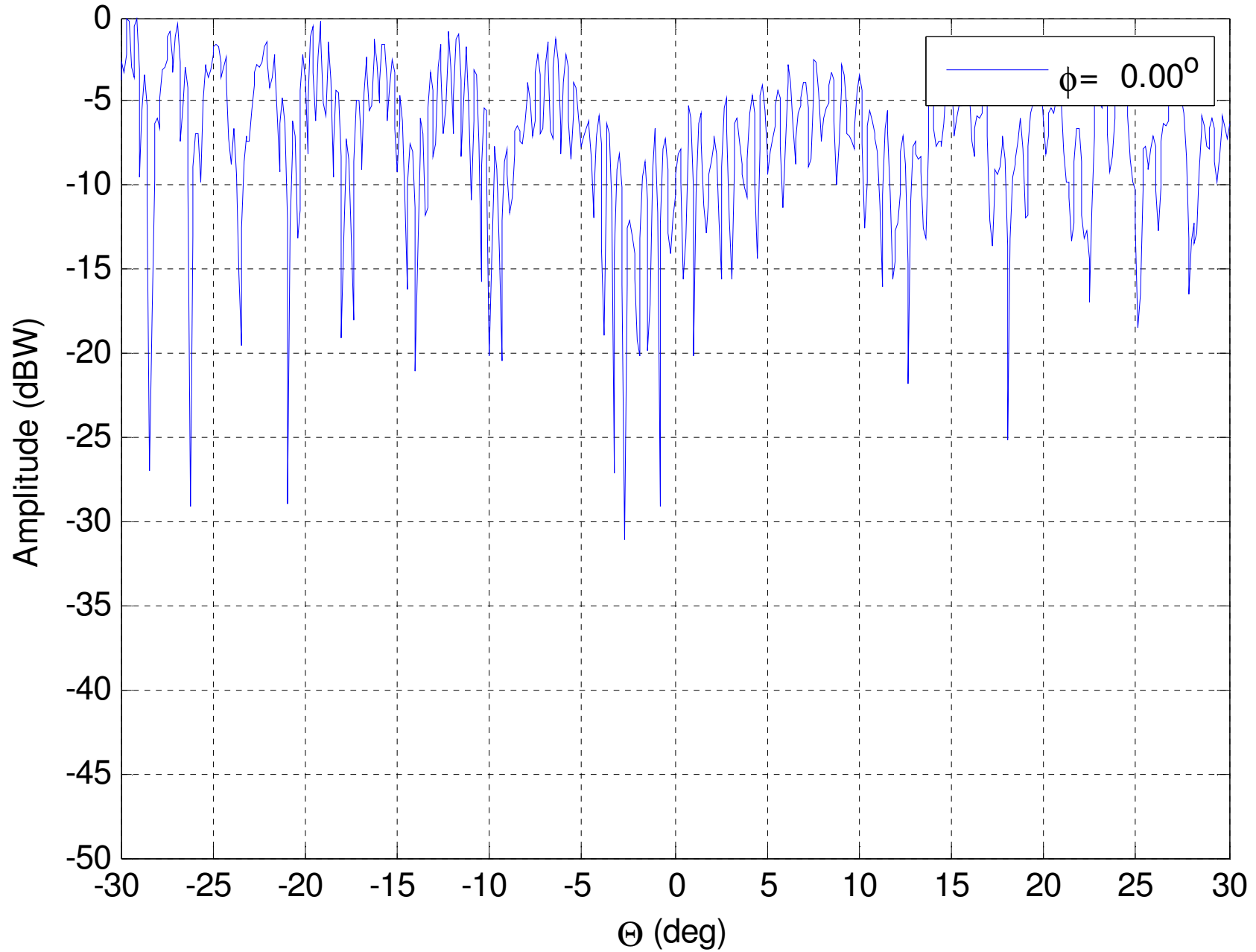
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -7.08 dBW, Date: 14-Dec-2011



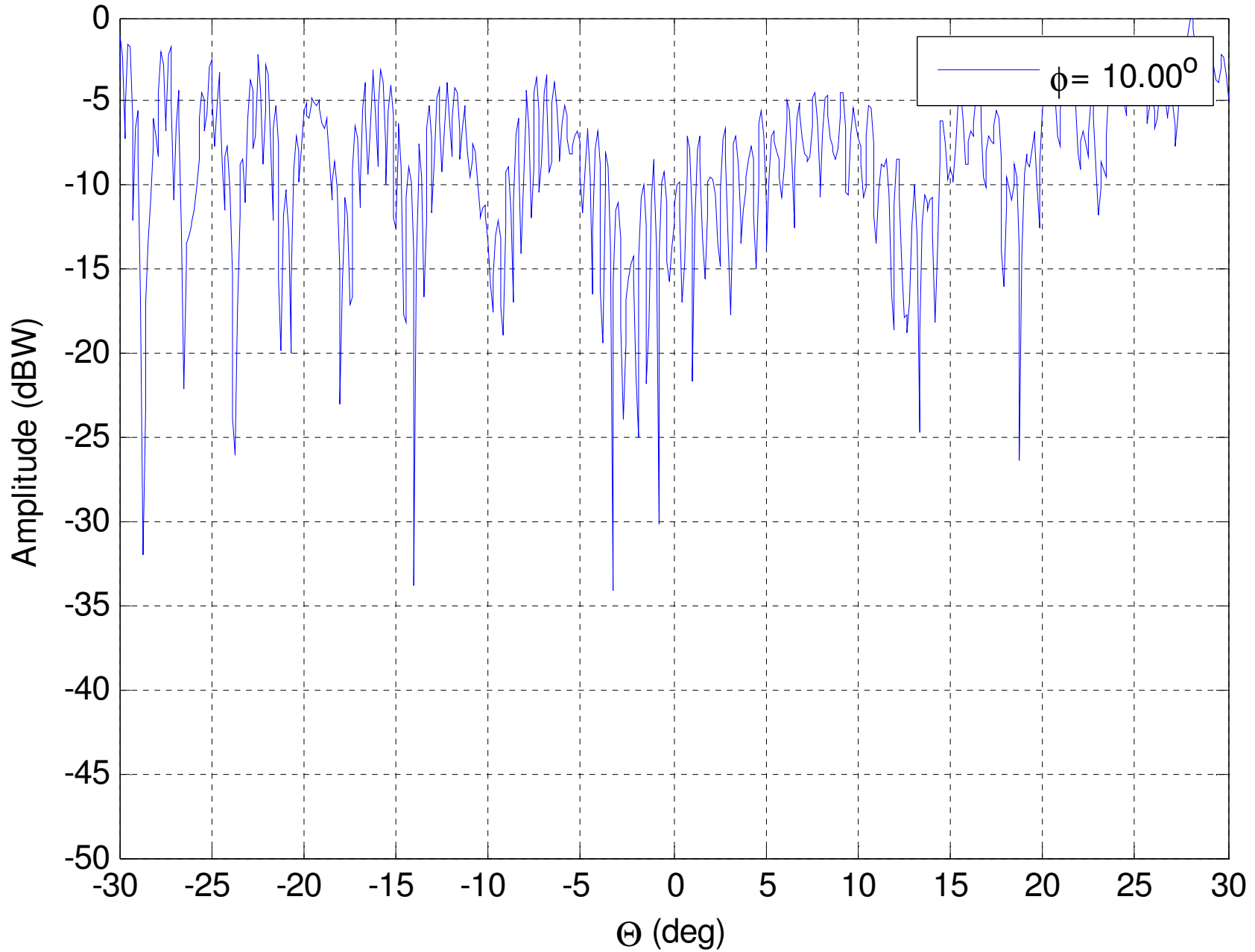
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -7.42 dBW, Date: 14-Dec-2011



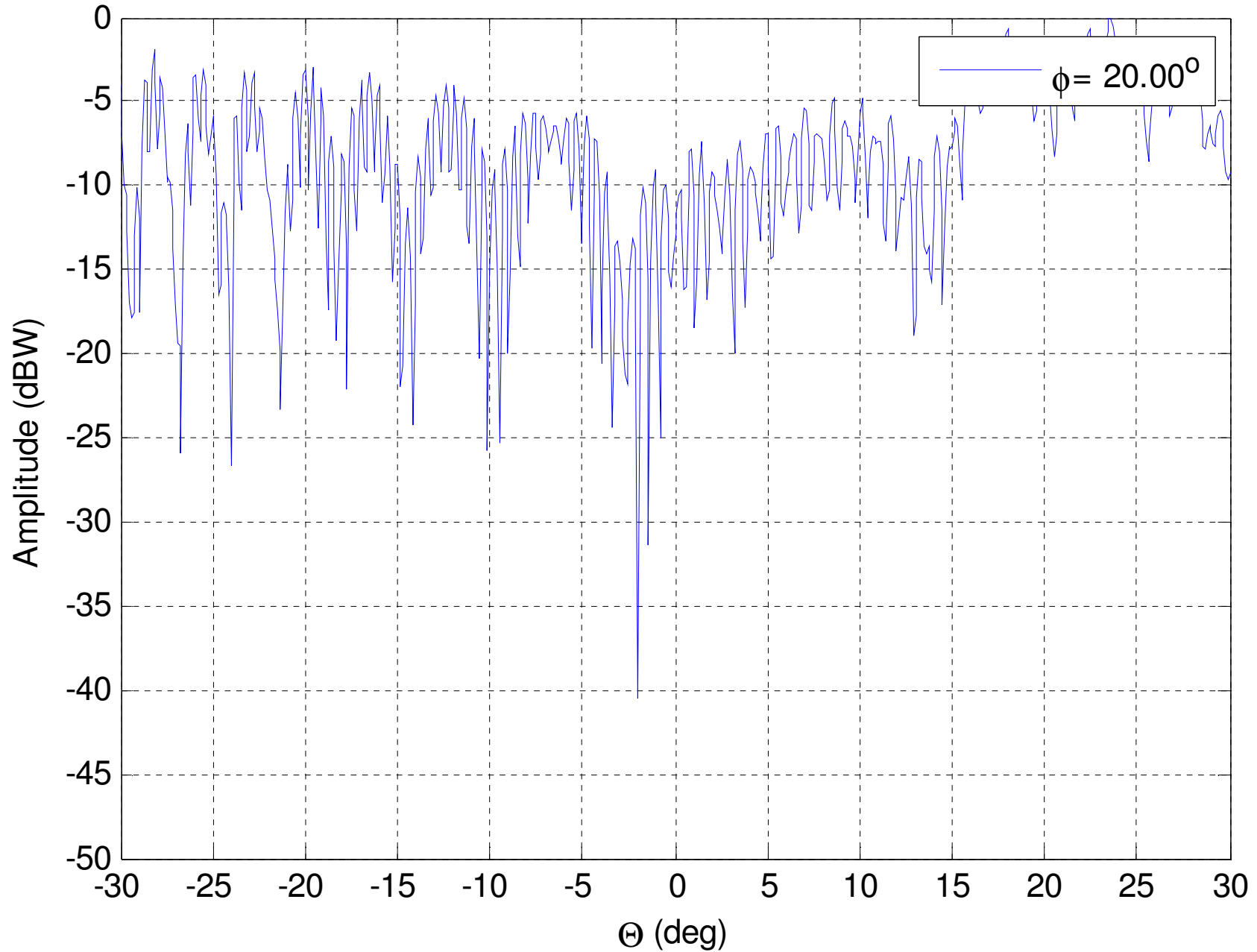
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -5.63 dBW, Date: 14-Dec-2011



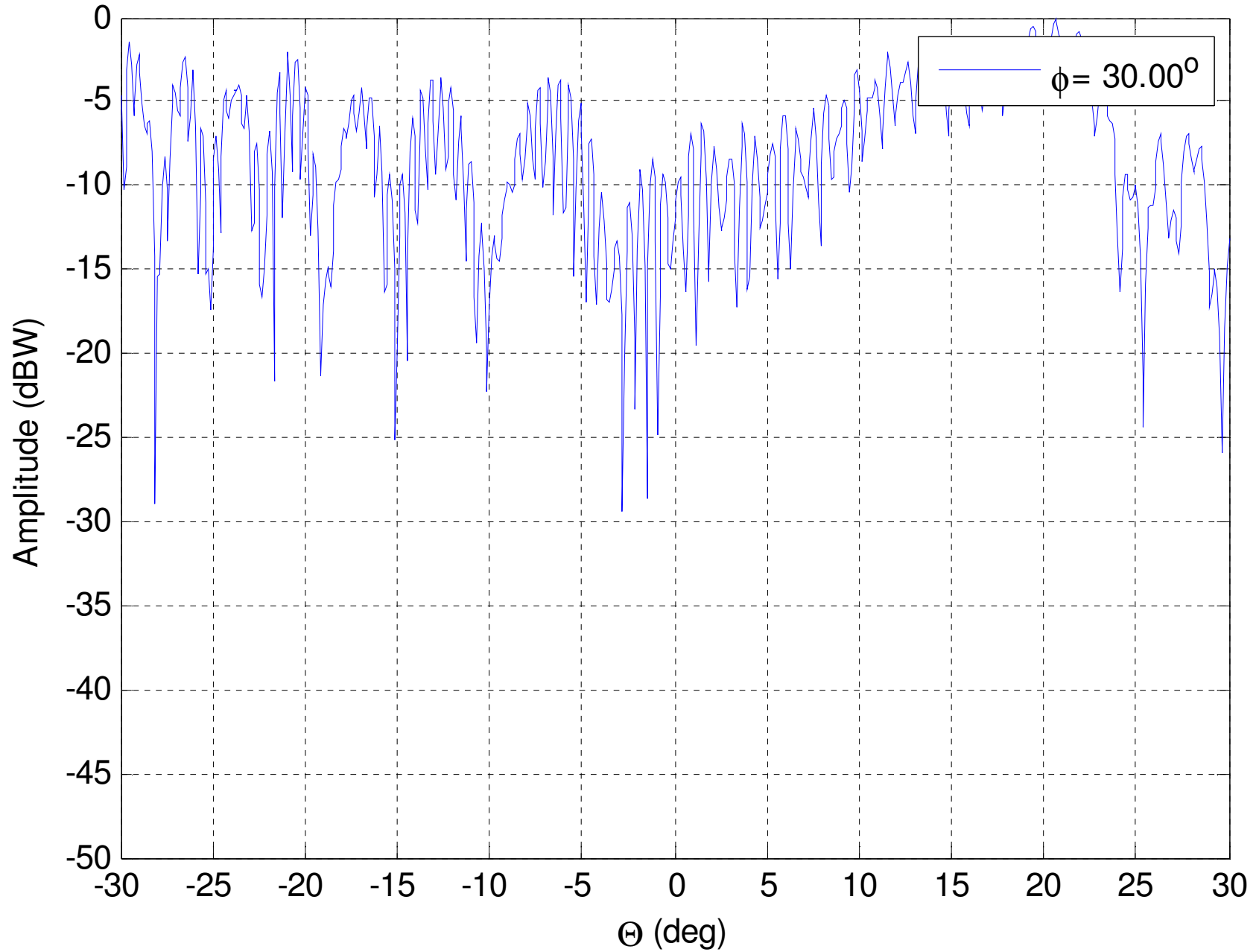
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -5.15 dBW, Date: 14-Dec-2011



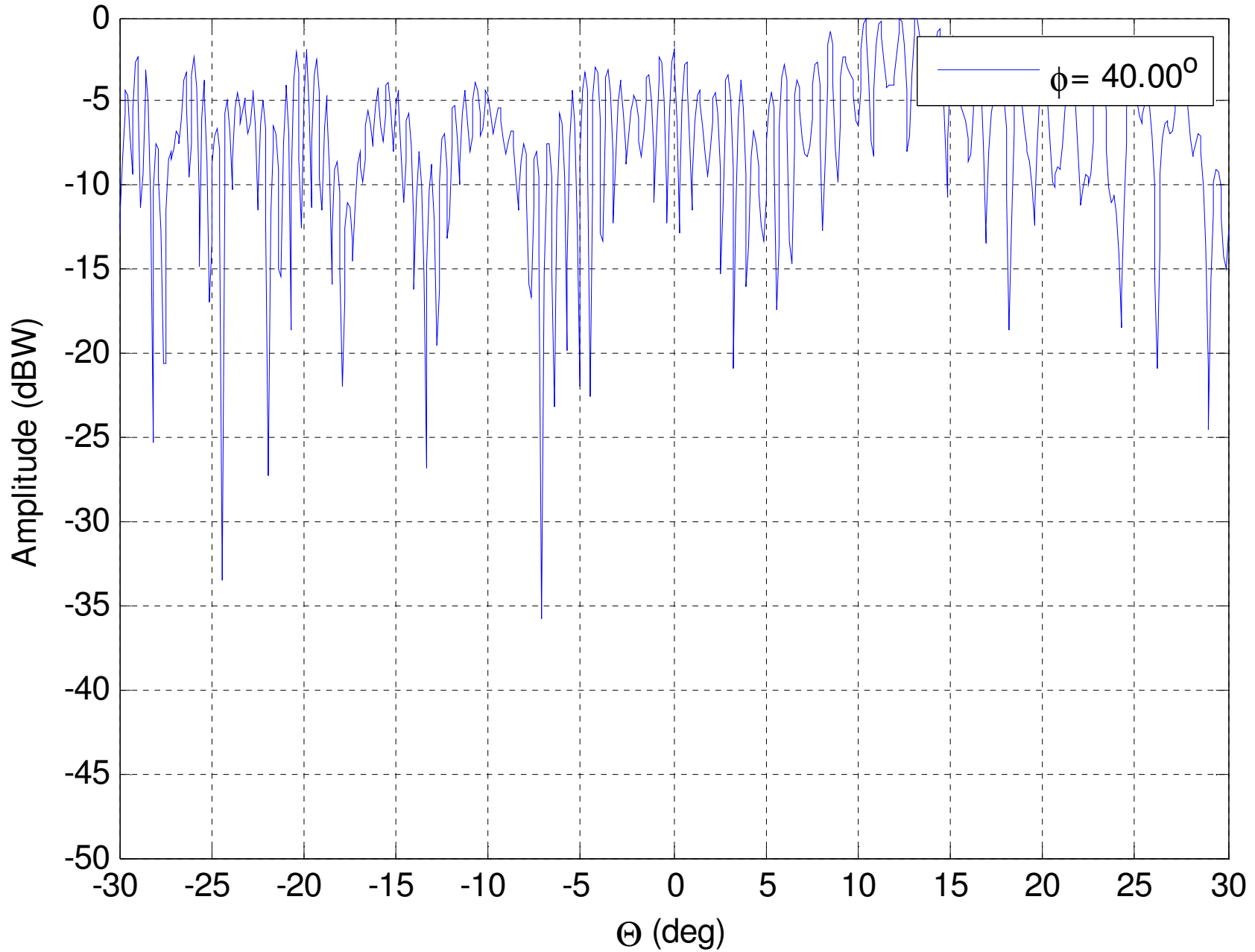
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -5.96 dBW, Date: 14-Dec-2011



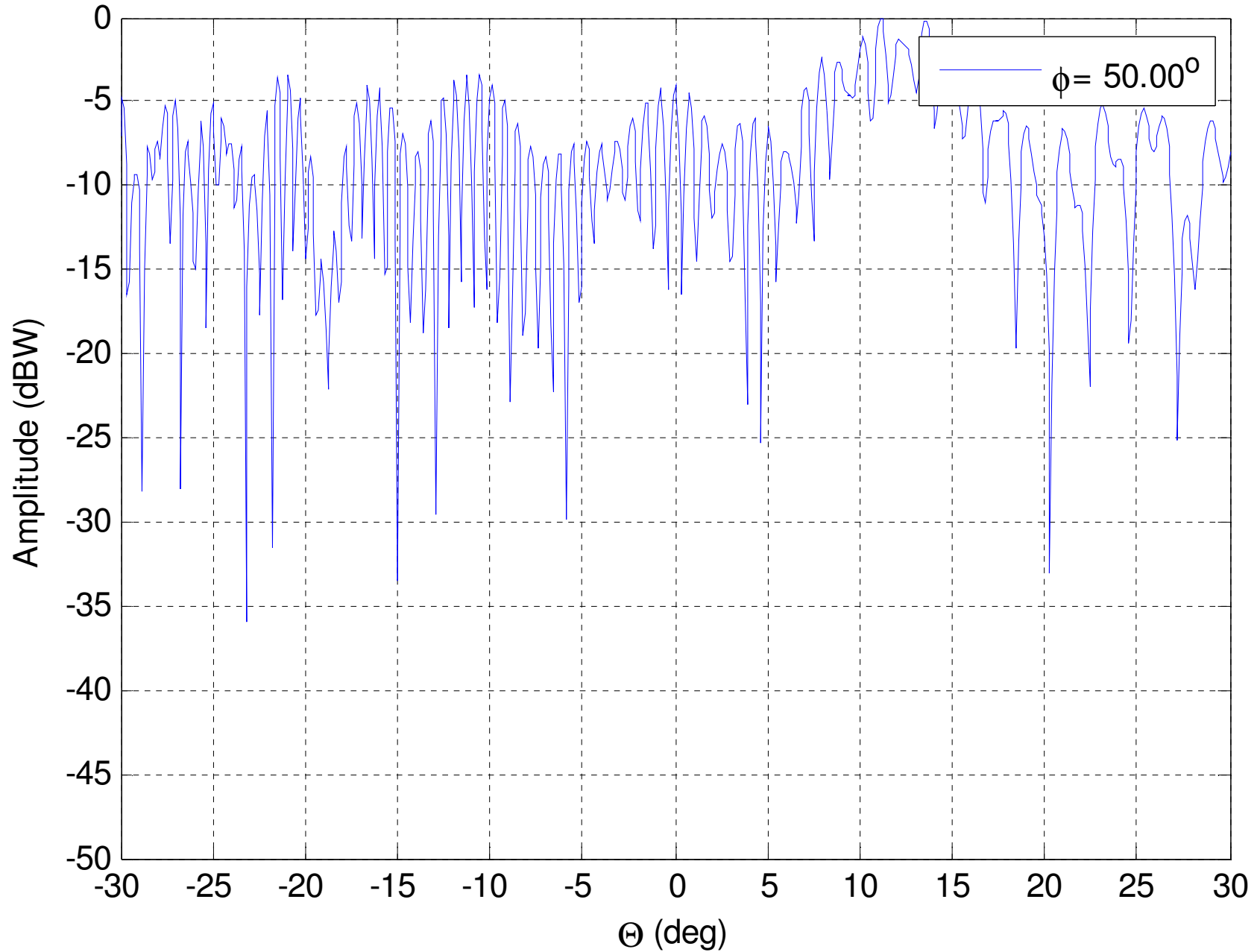
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.92 dBW, Date: 14-Dec-2011



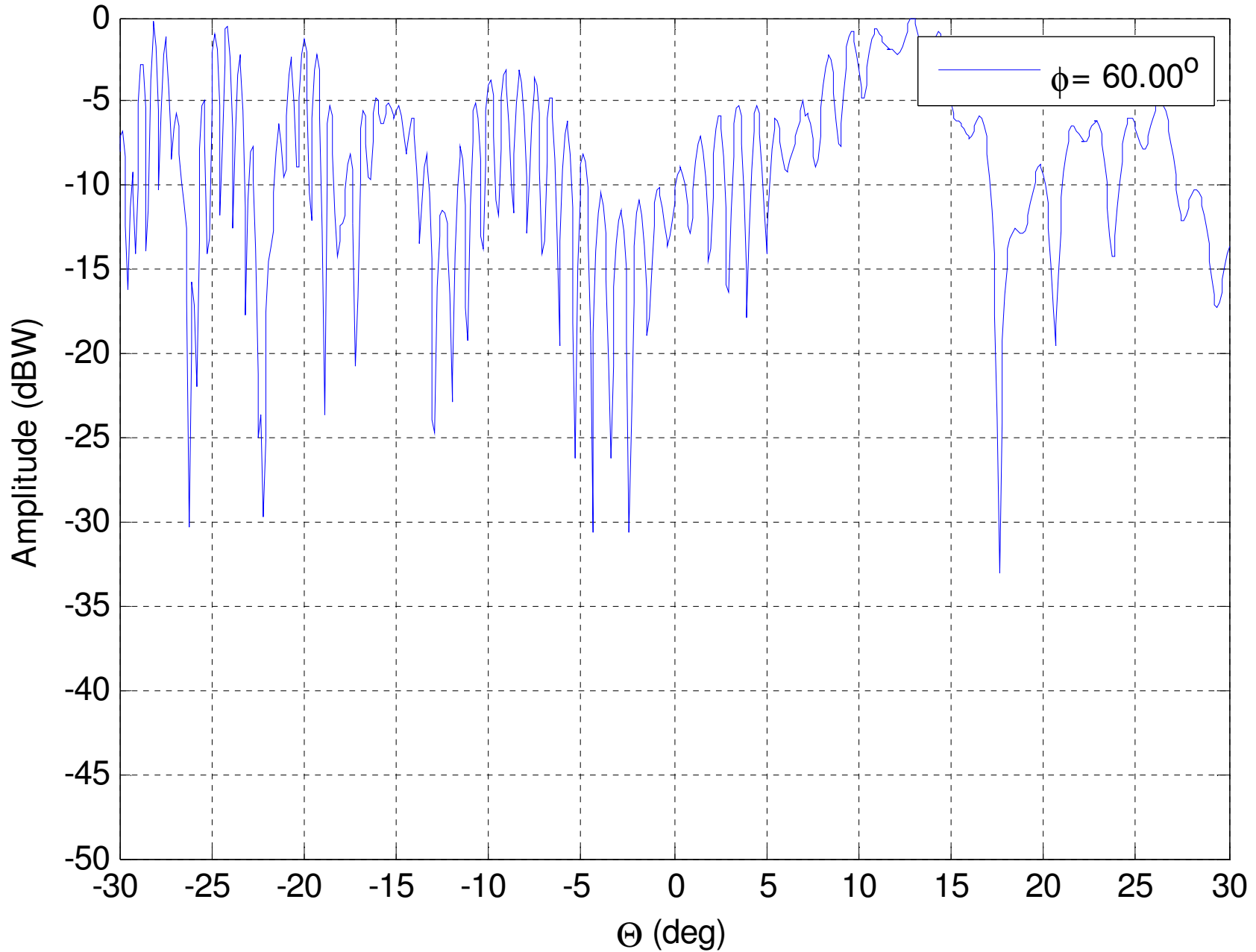
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.79 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

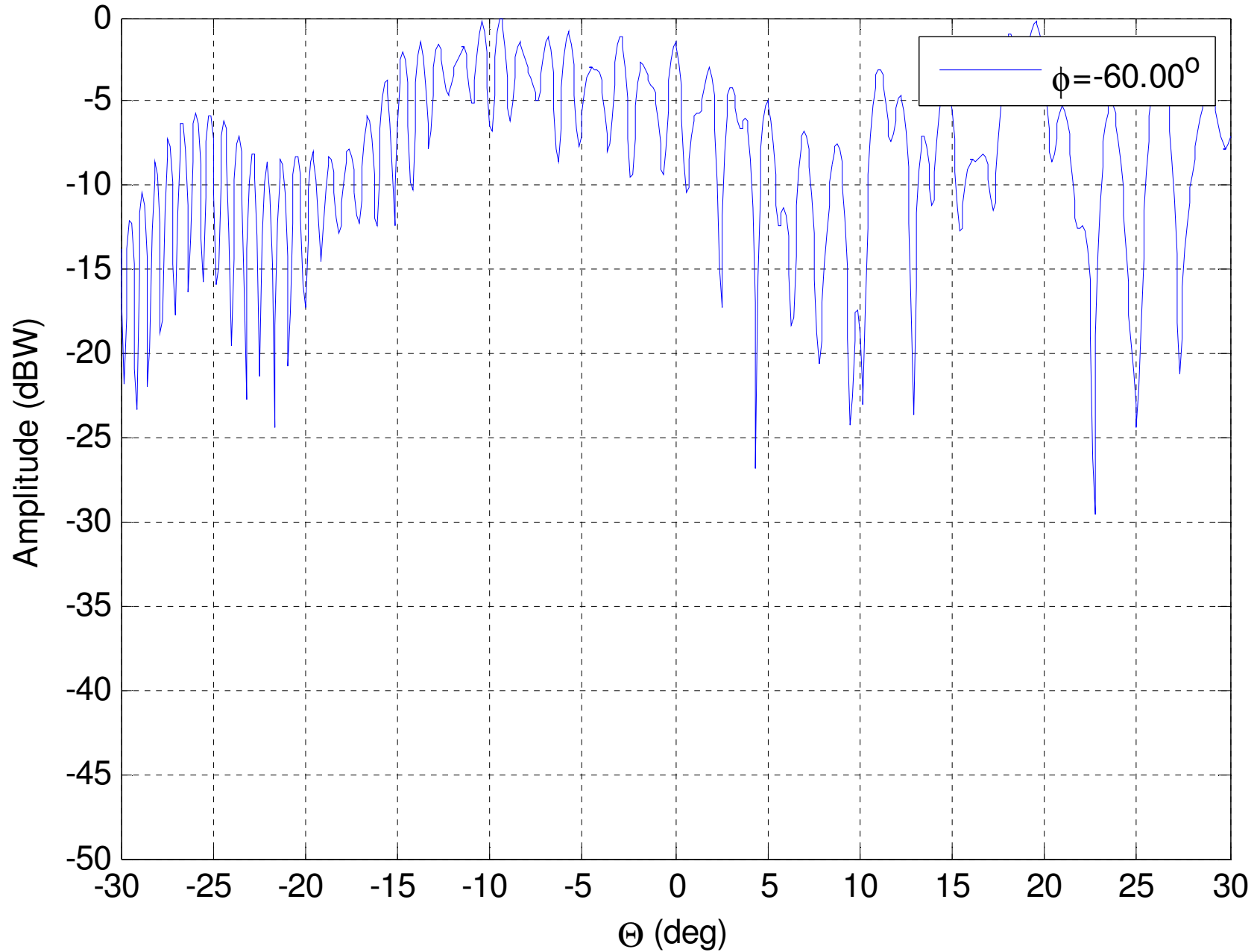
Input file: tx-17.5-rhcp-60.cut, Peak: -6.95 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

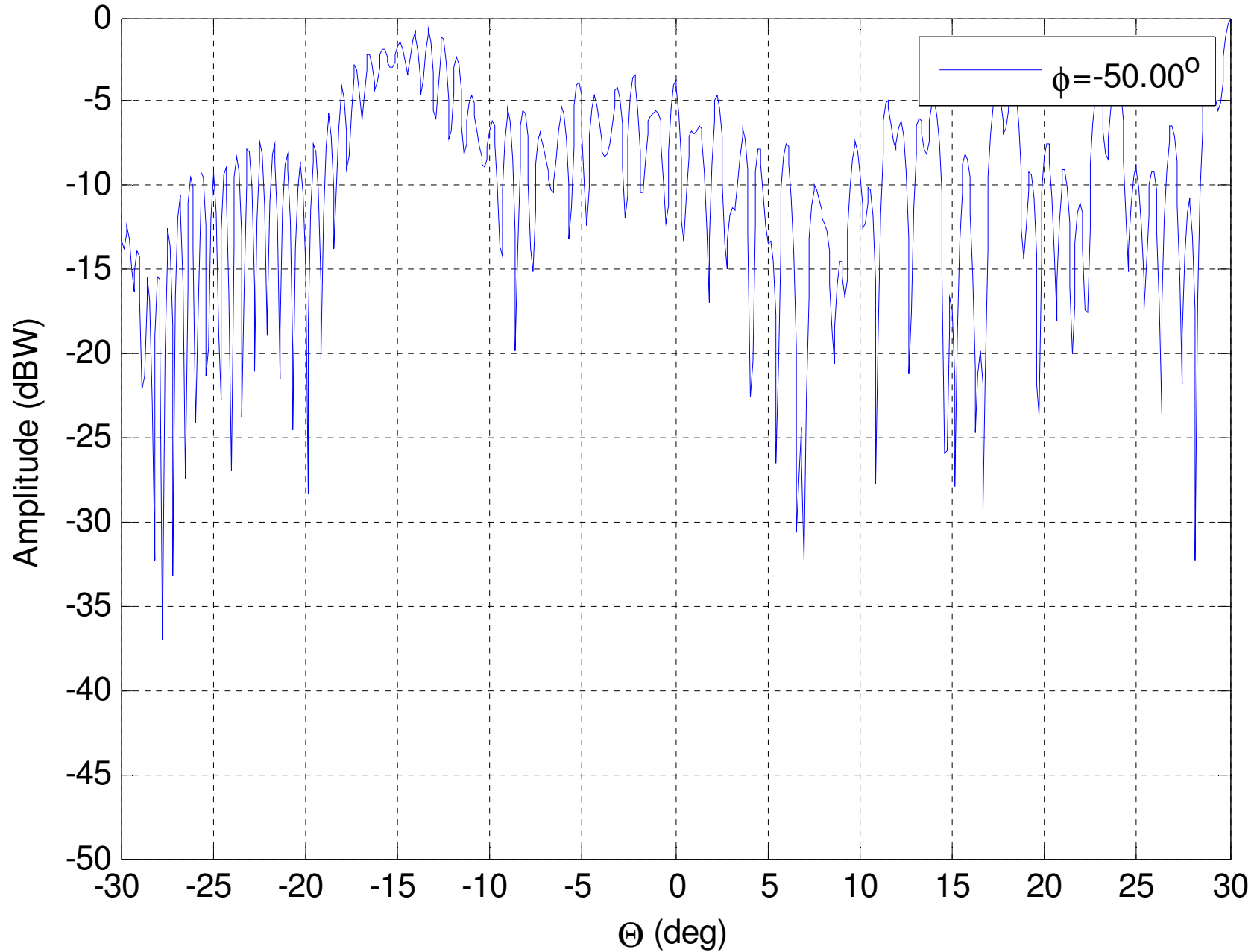
Normalized pattern cuts - farfield

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



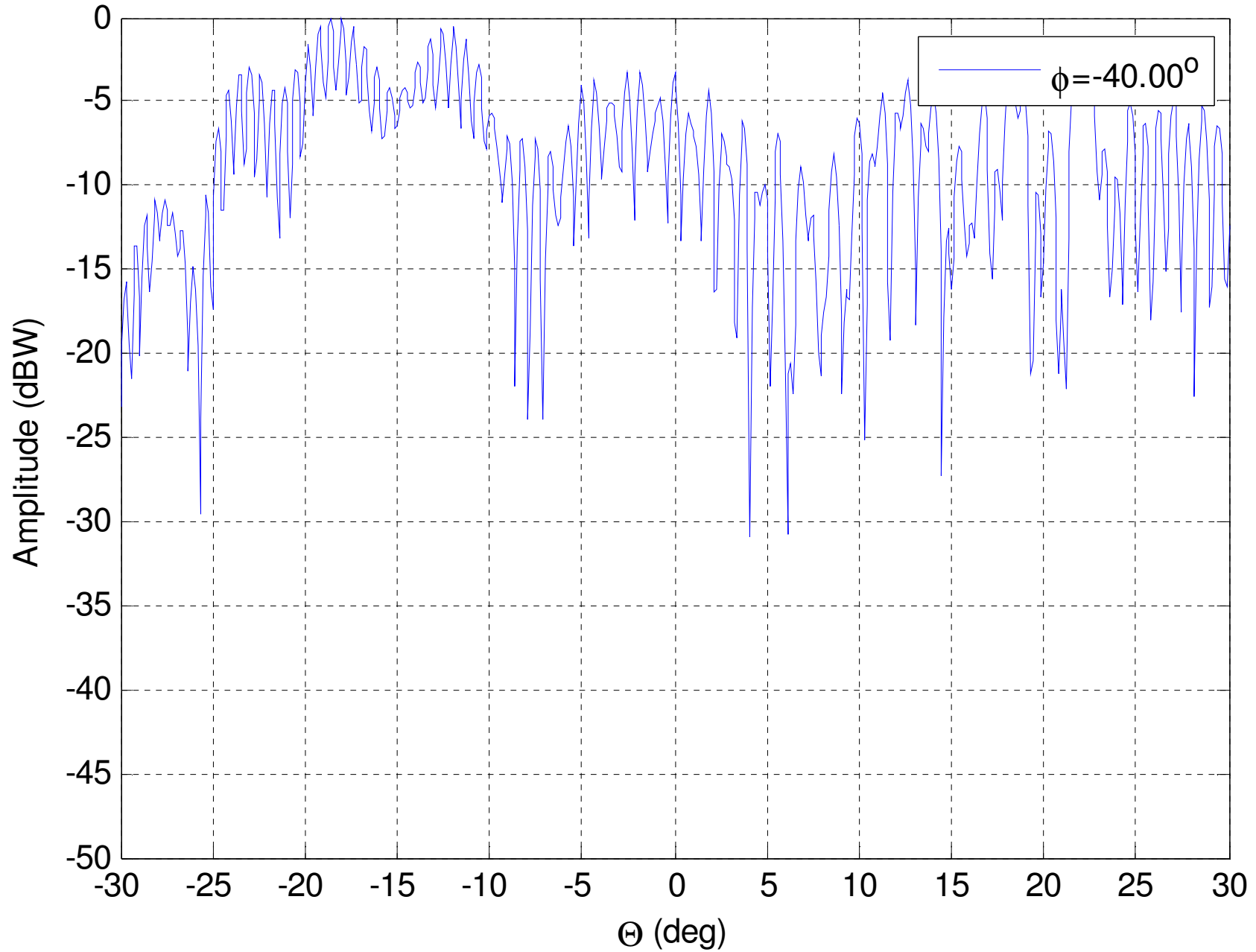
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -5.30 dBW, Date: 14-Dec-2011



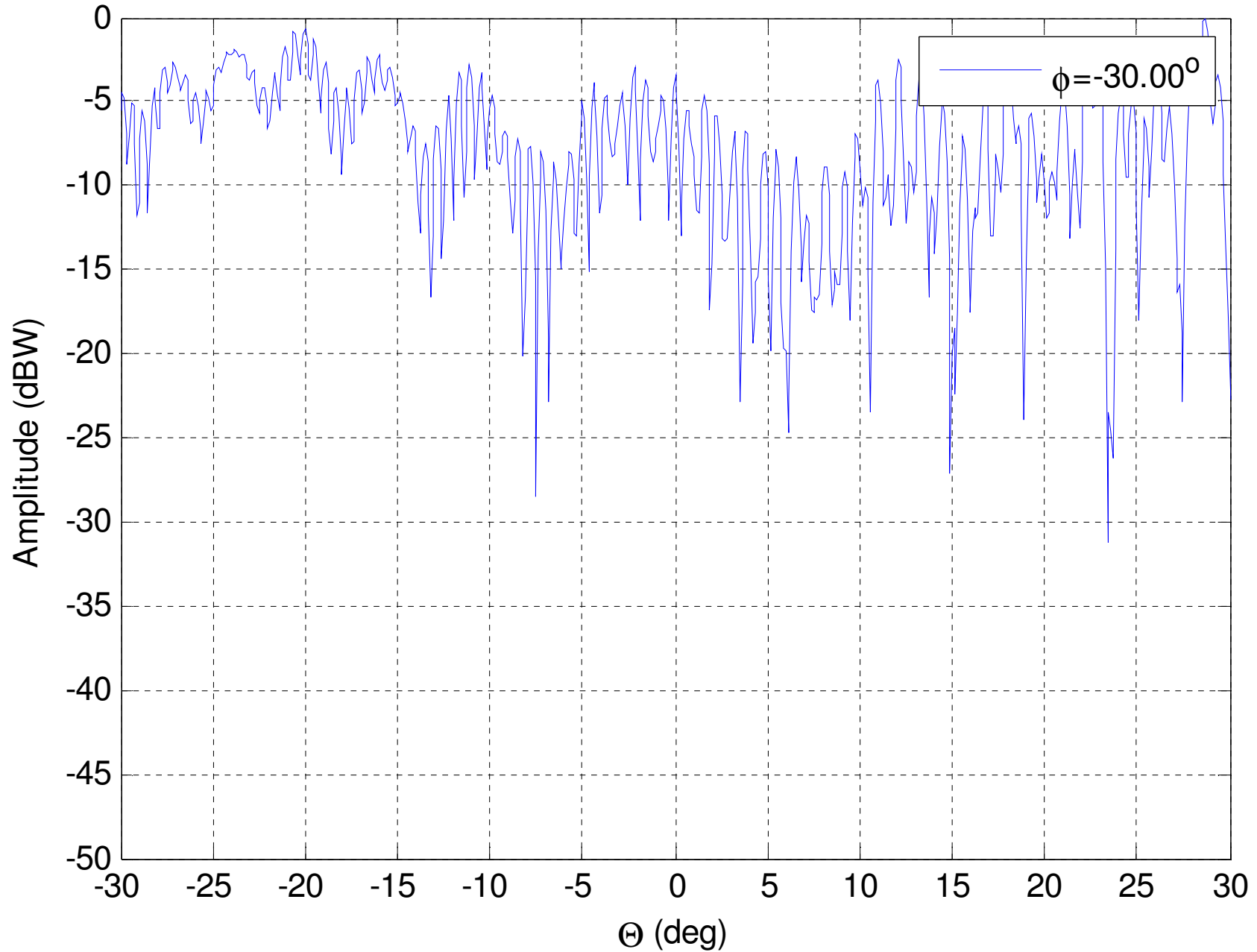
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -5.74 dBW, Date: 14-Dec-2011



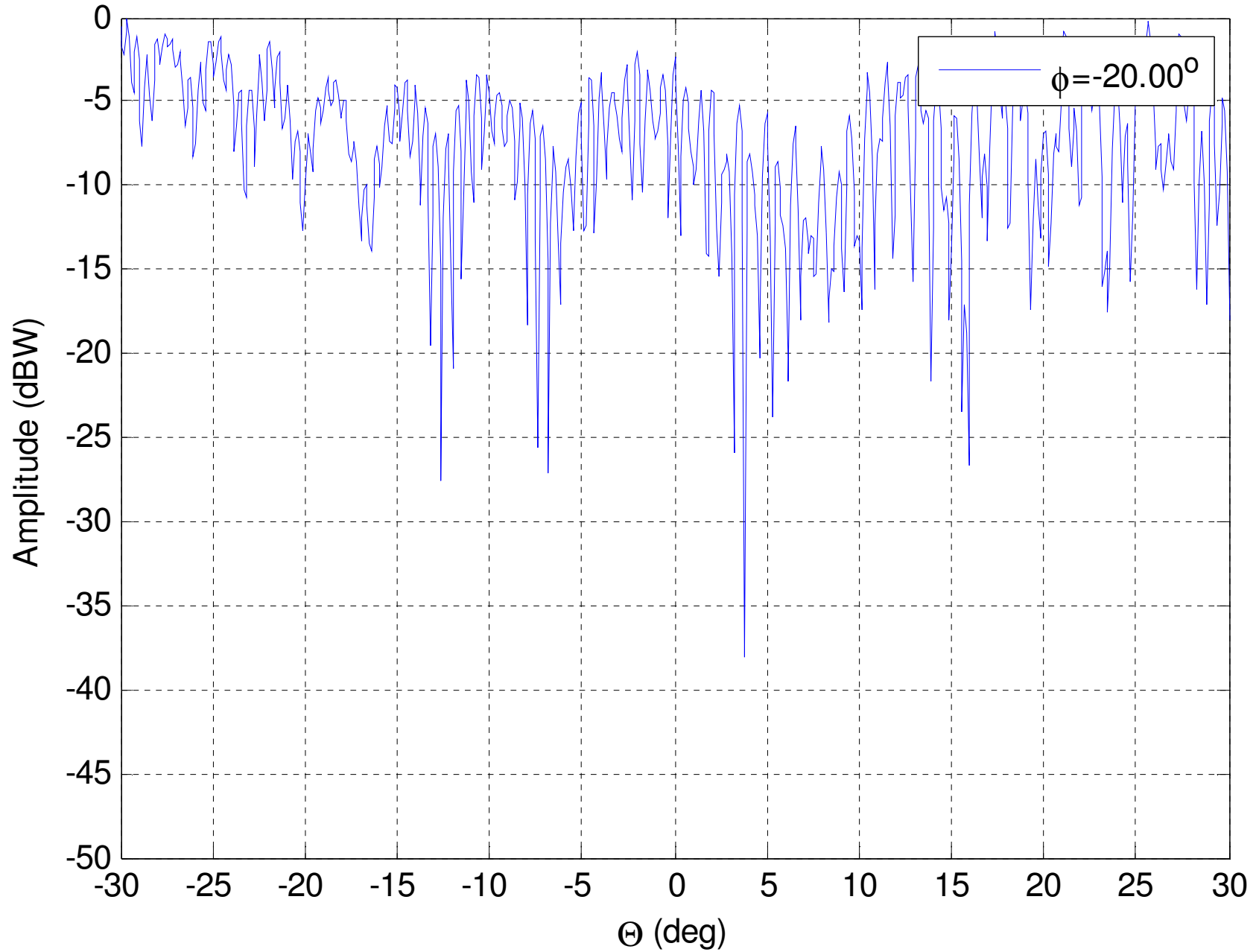
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -5.59 dBW, Date: 14-Dec-2011



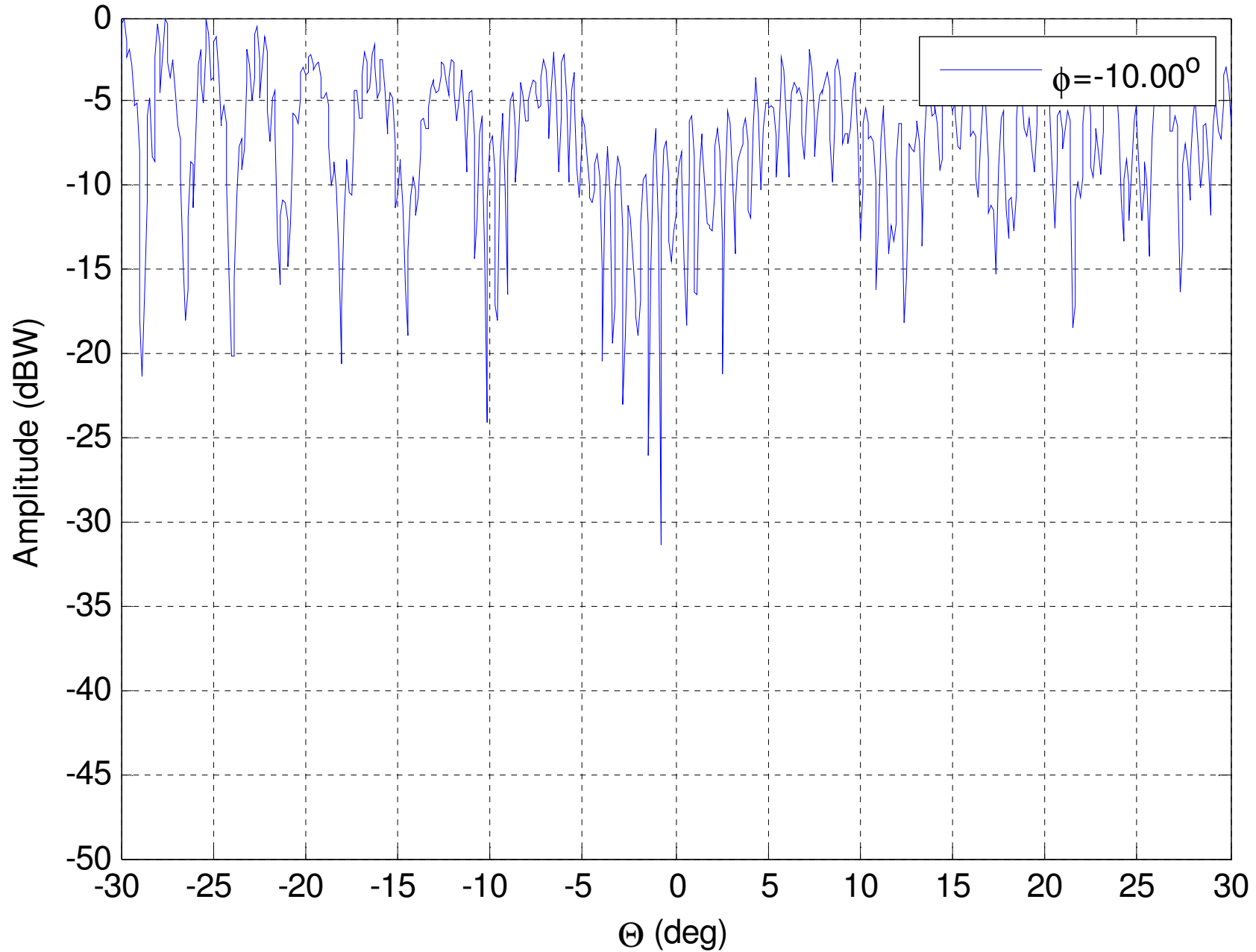
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -6.56 dBW, Date: 14-Dec-2011



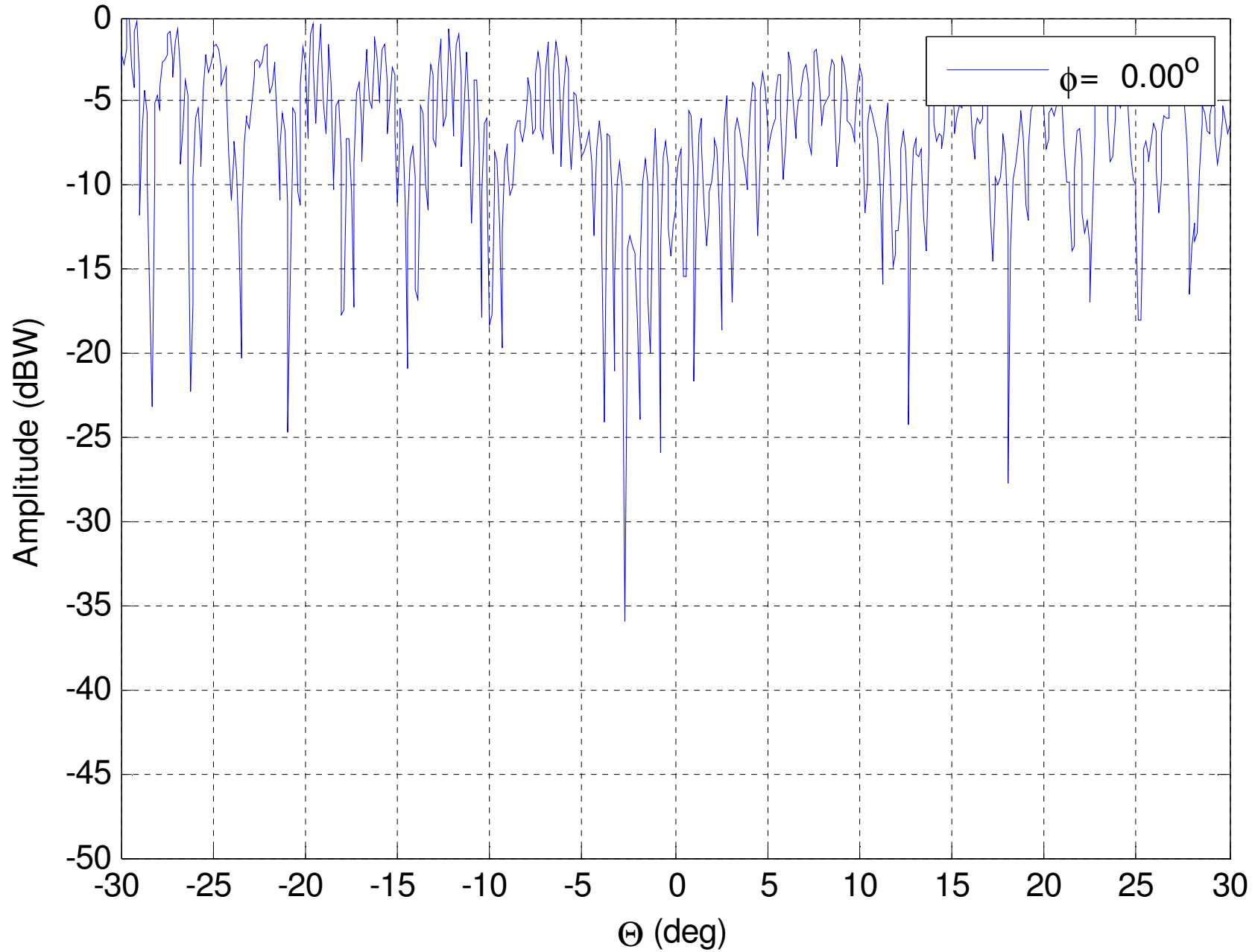
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



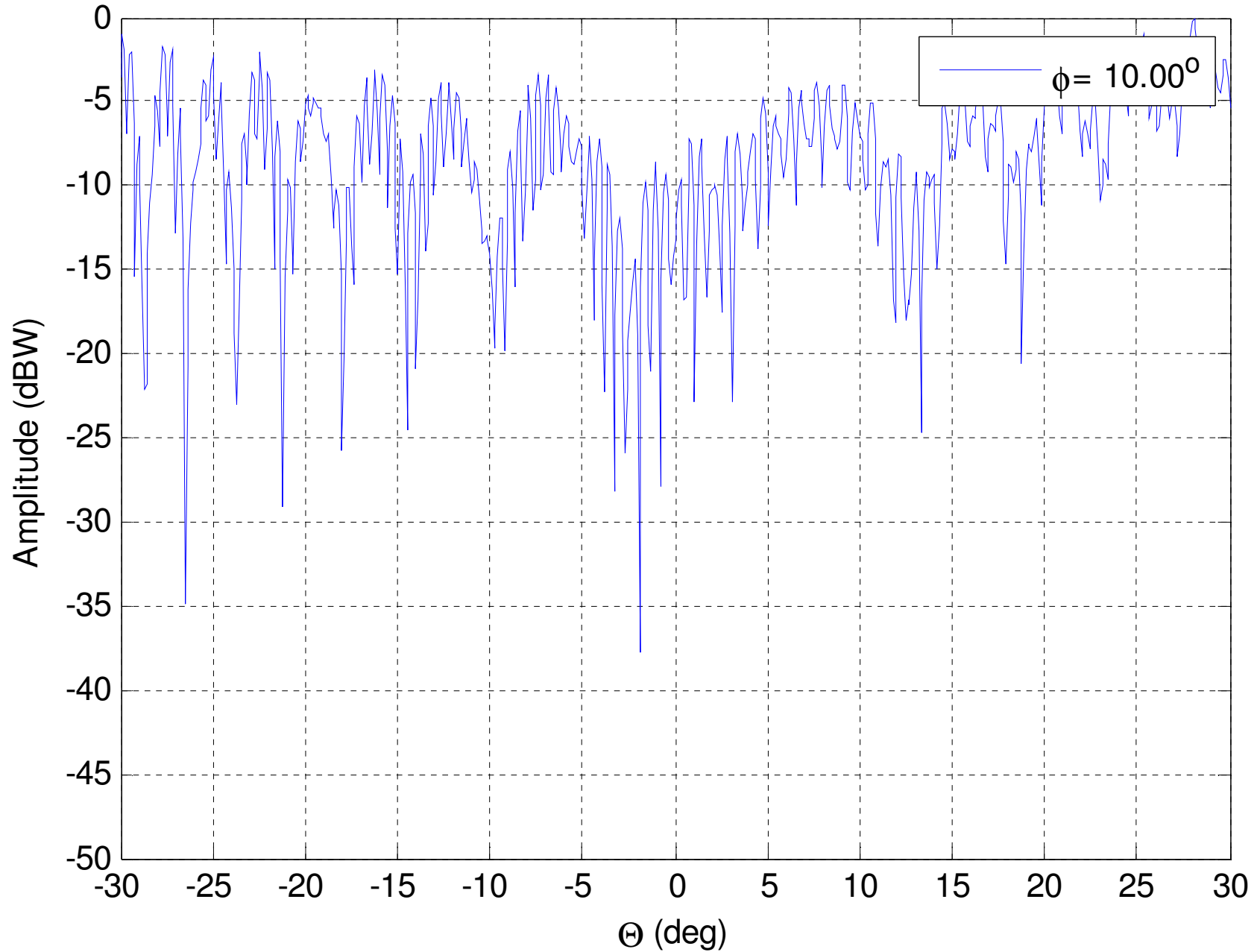
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -7.51 dBW, Date: 14-Dec-2011



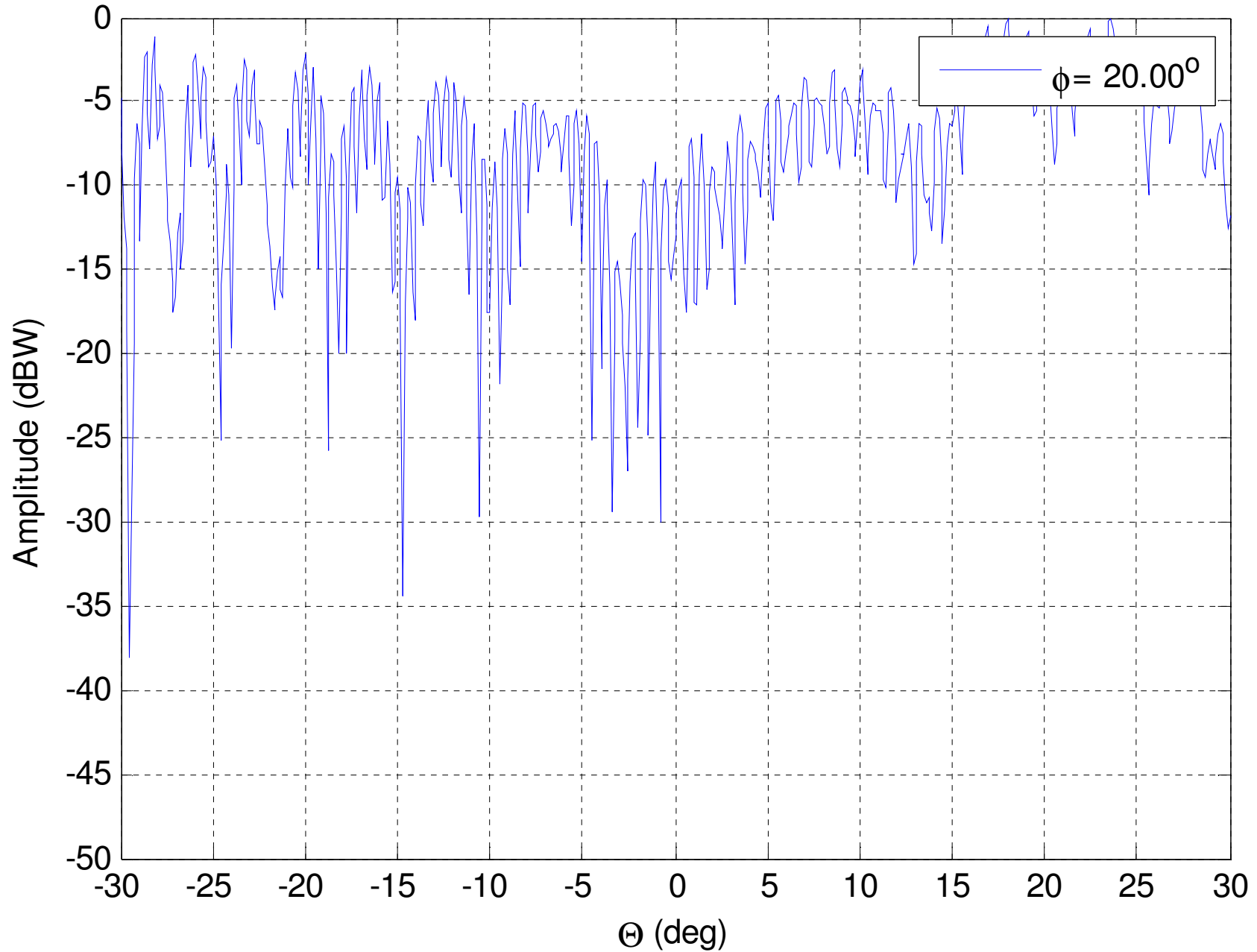
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -5.74 dBW, Date: 14-Dec-2011



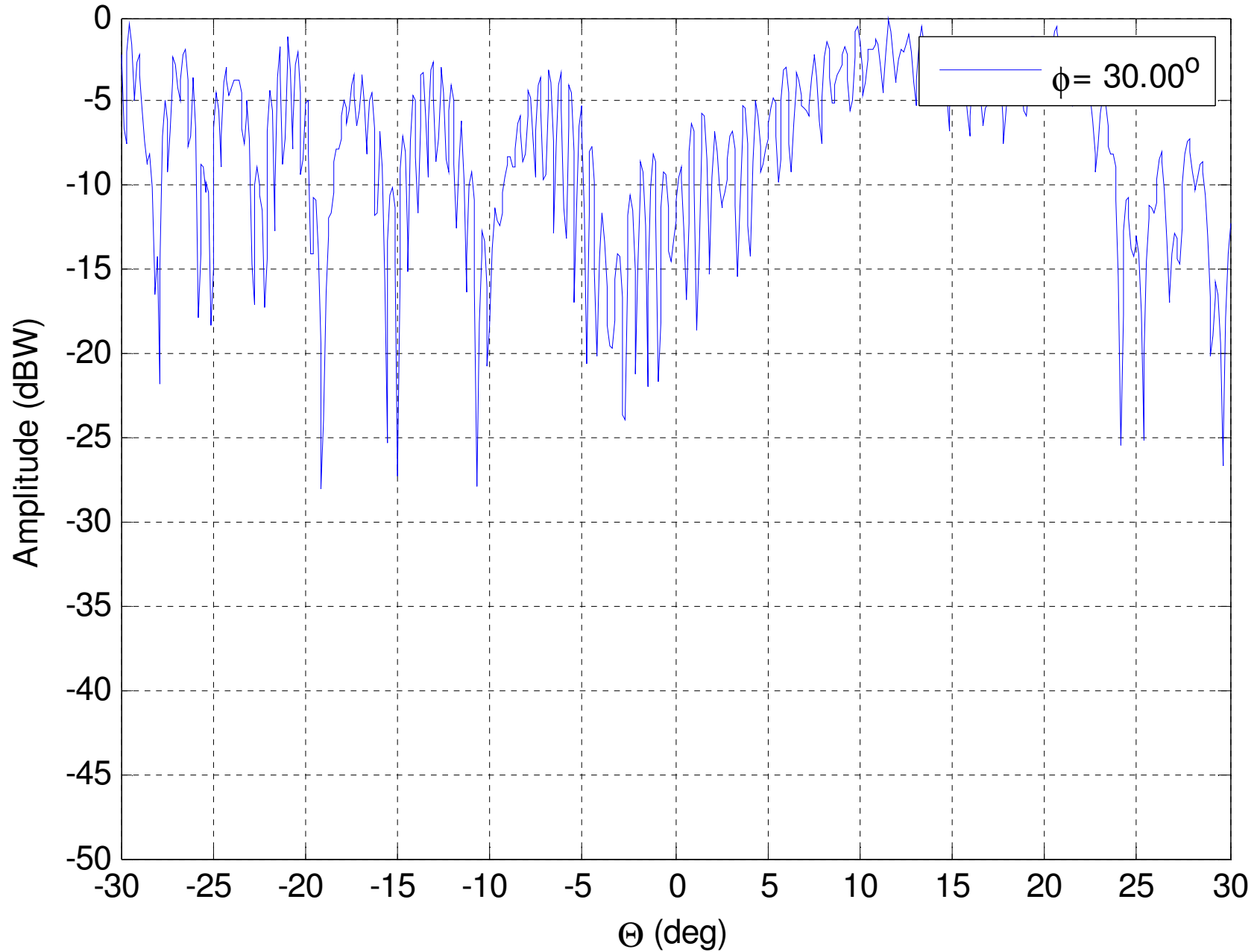
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -5.81 dBW, Date: 14-Dec-2011



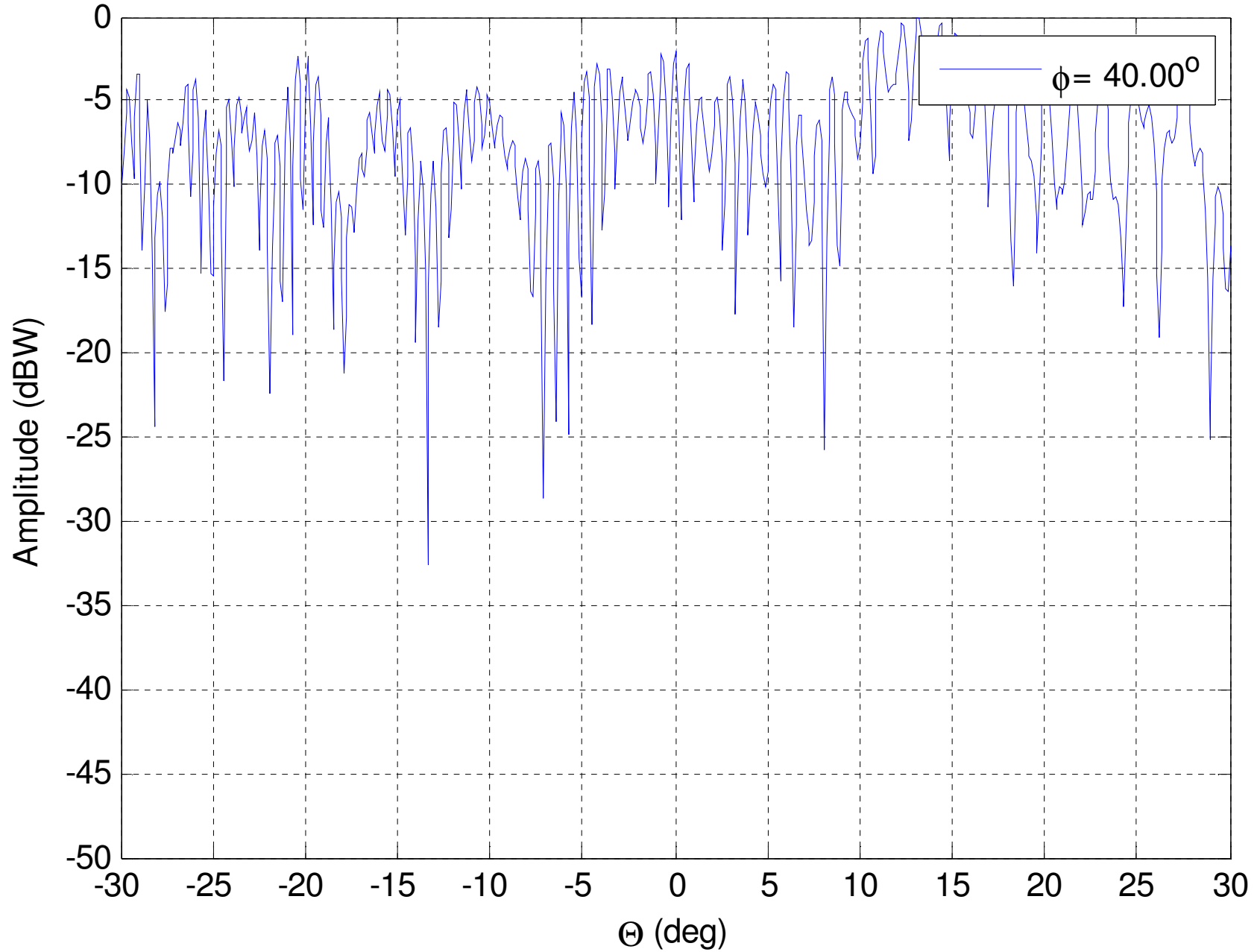
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -6.71 dBW, Date: 14-Dec-2011



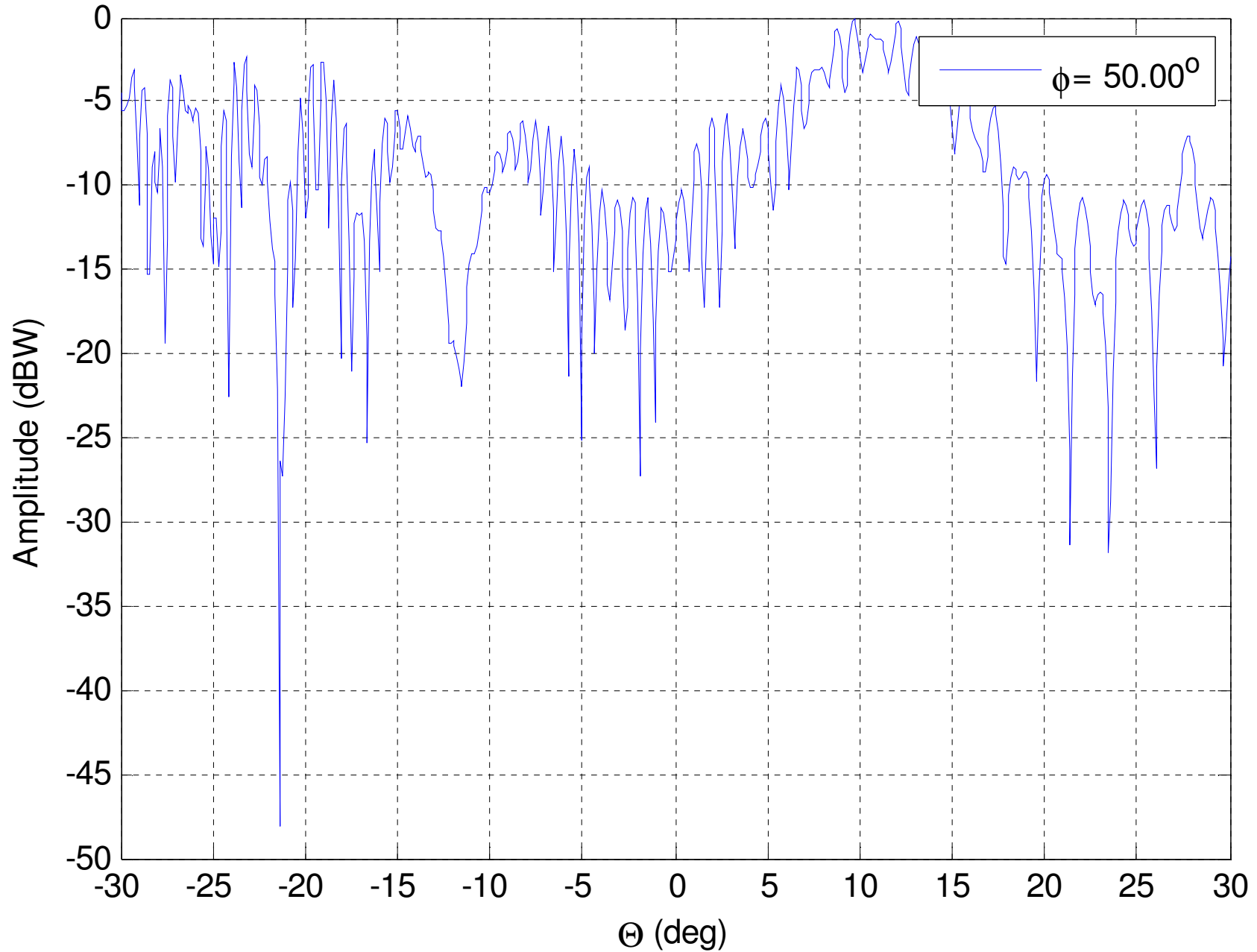
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -6.96 dBW, Date: 14-Dec-2011



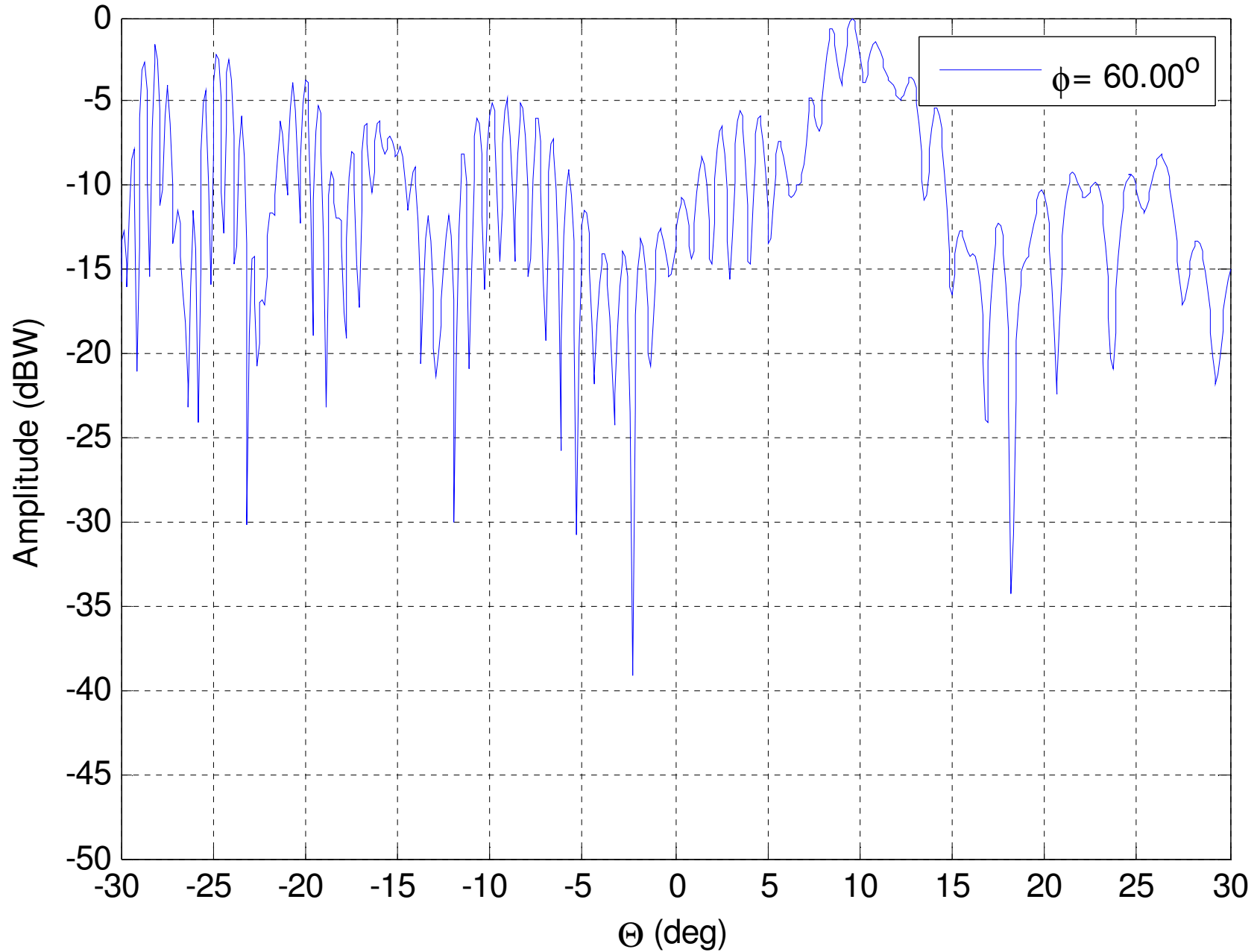
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.68 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

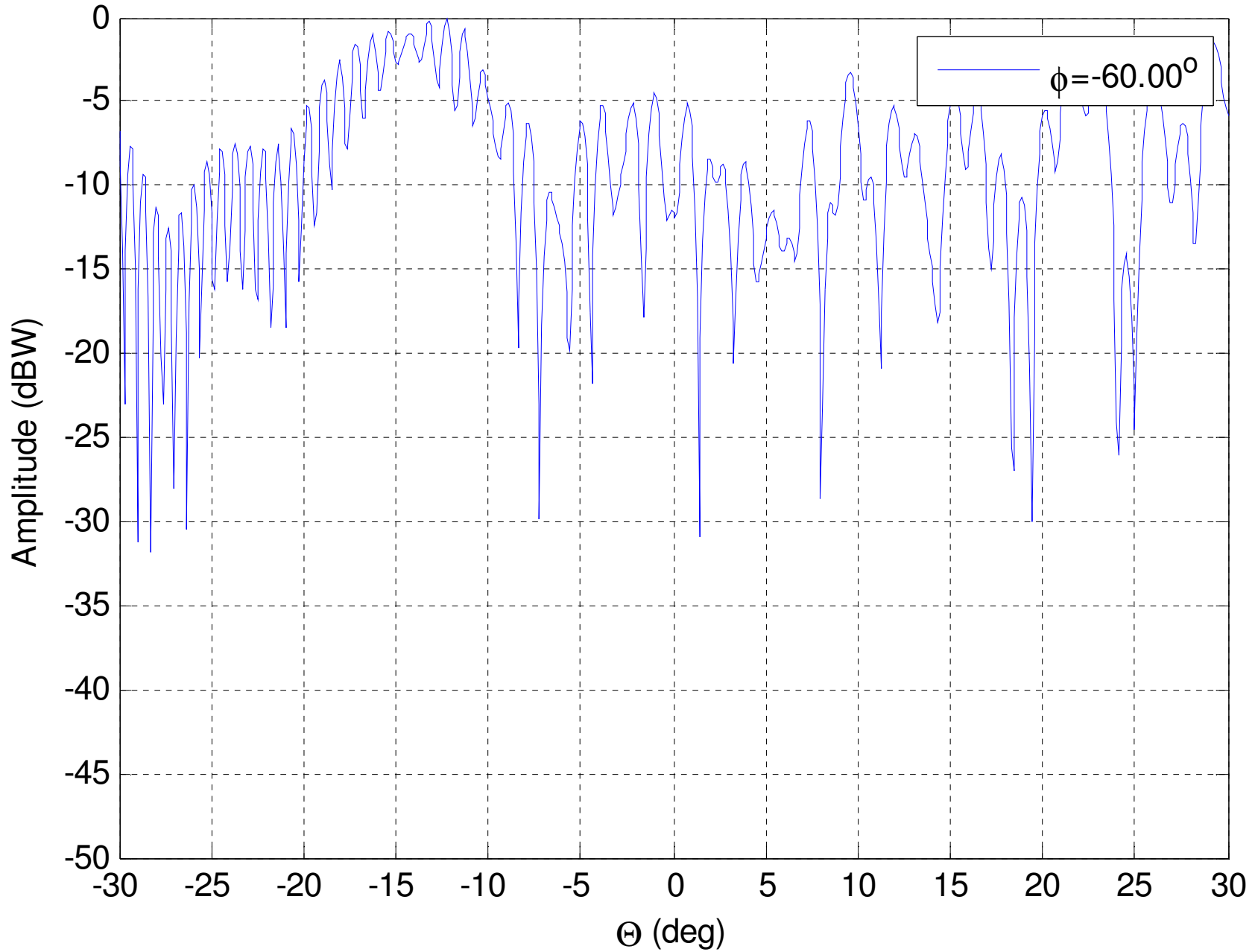
Input file: tx-17.5-lhcp-60.cut, Peak: -5.29 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

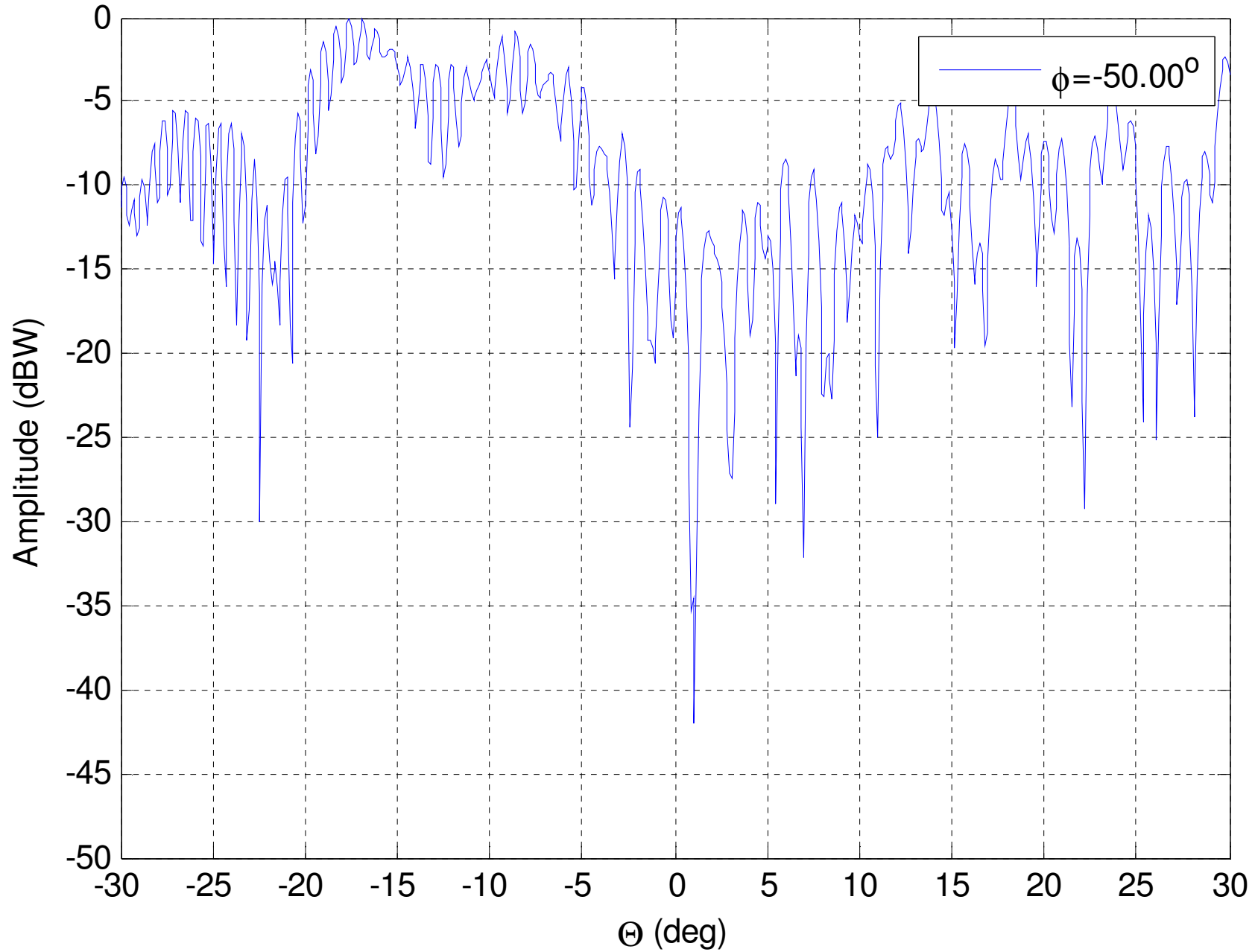
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.76 dBW, Date: 14-Dec-2011



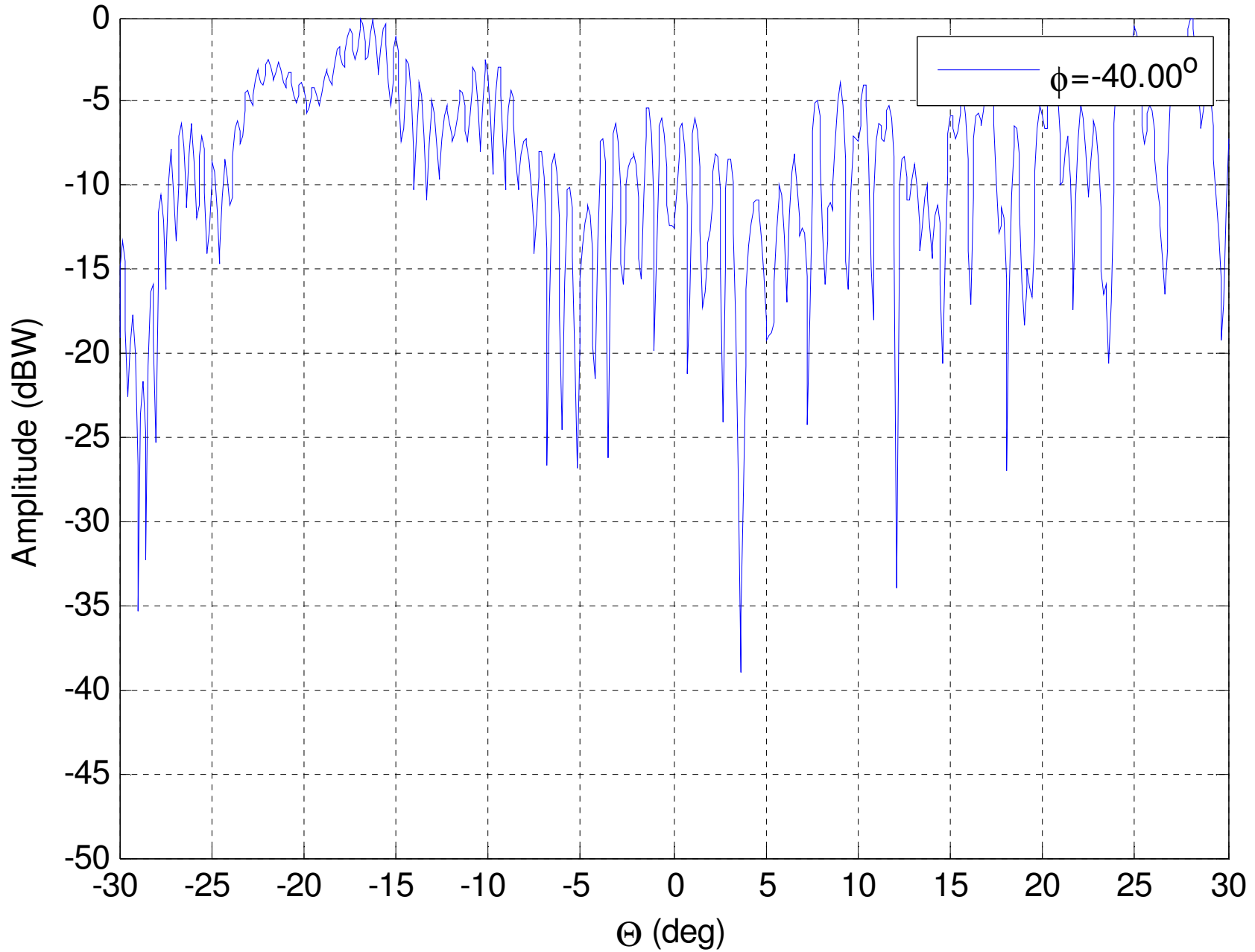
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.71 dBW, Date: 14-Dec-2011



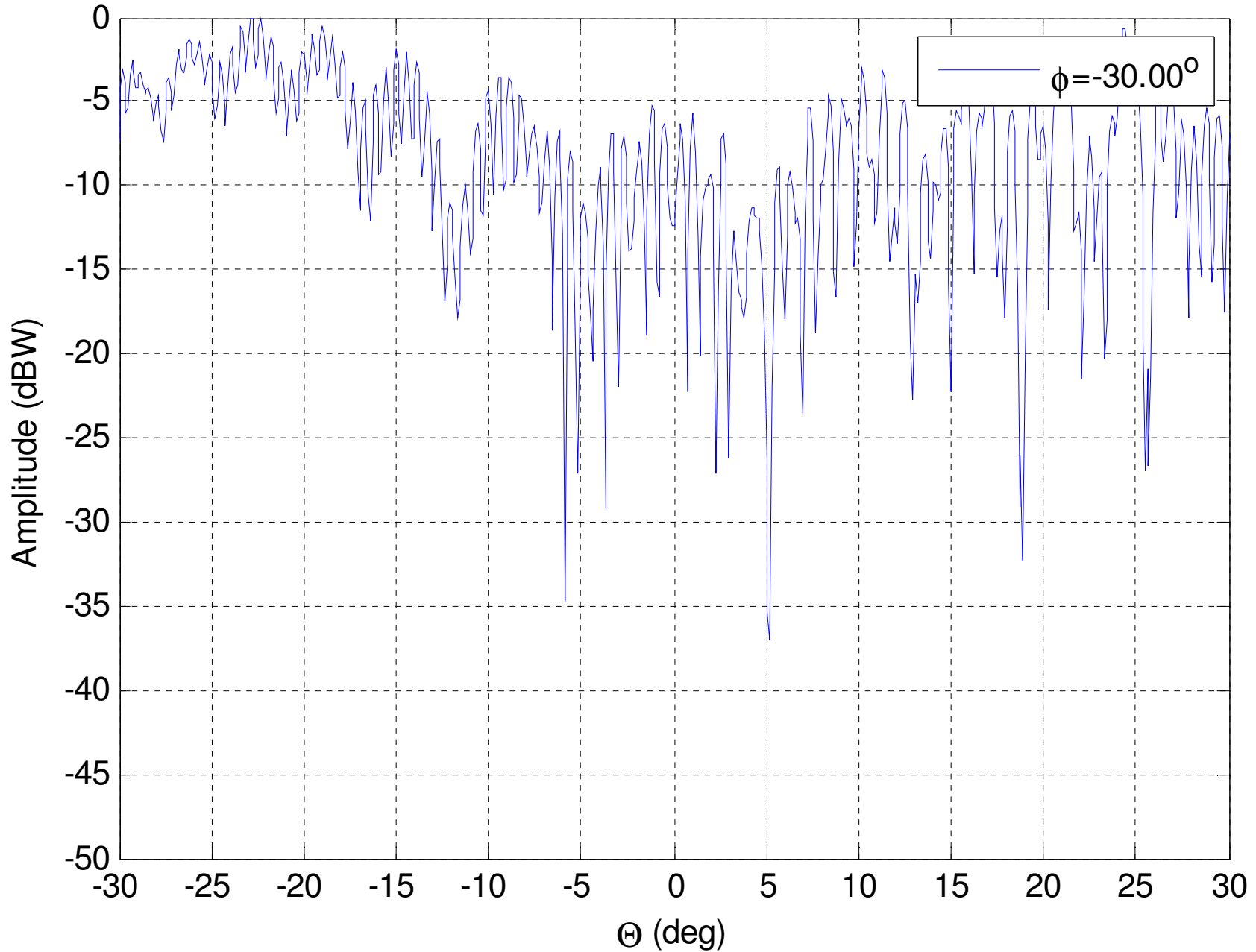
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -5.95 dBW, Date: 14-Dec-2011



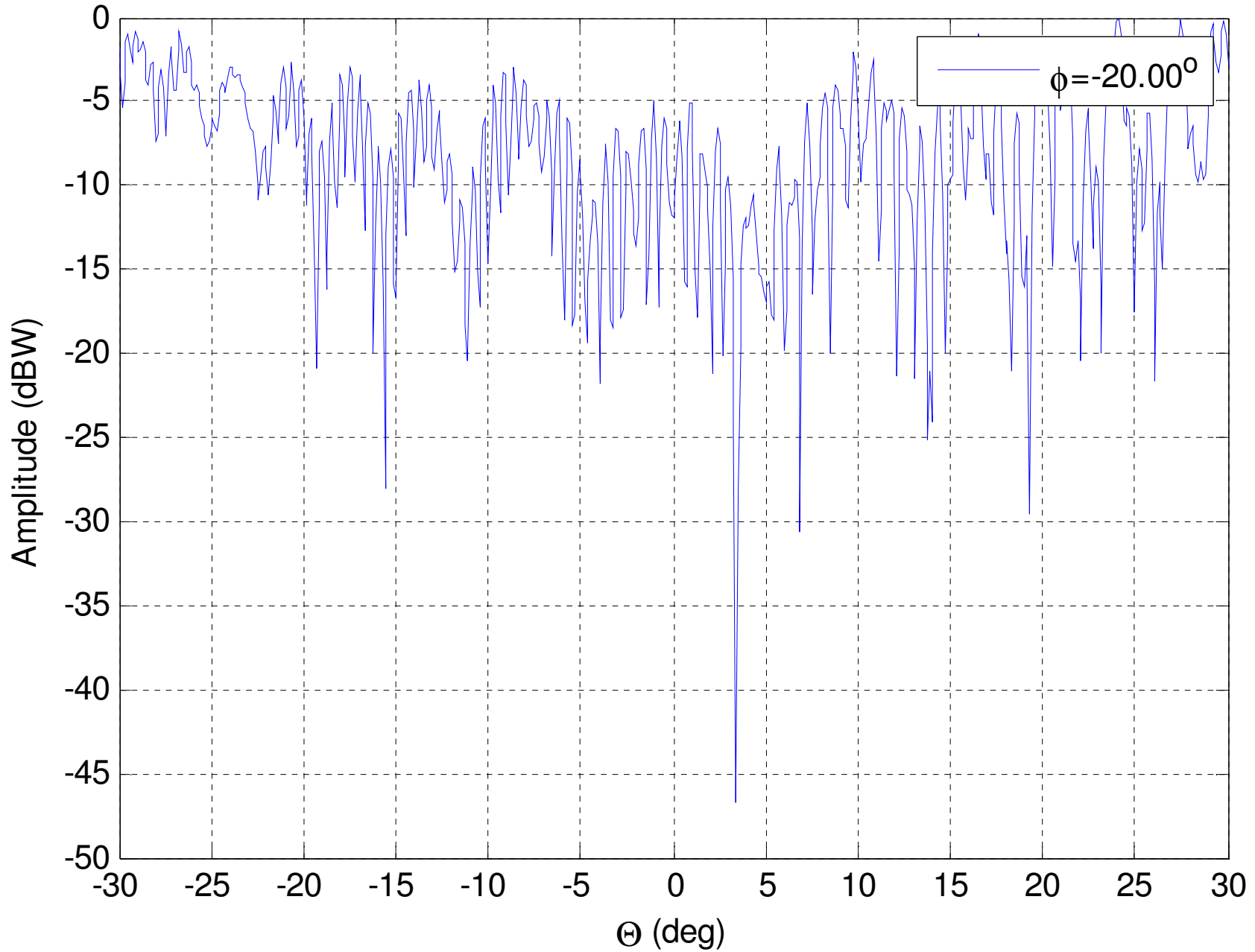
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -6.06 dBW, Date: 14-Dec-2011



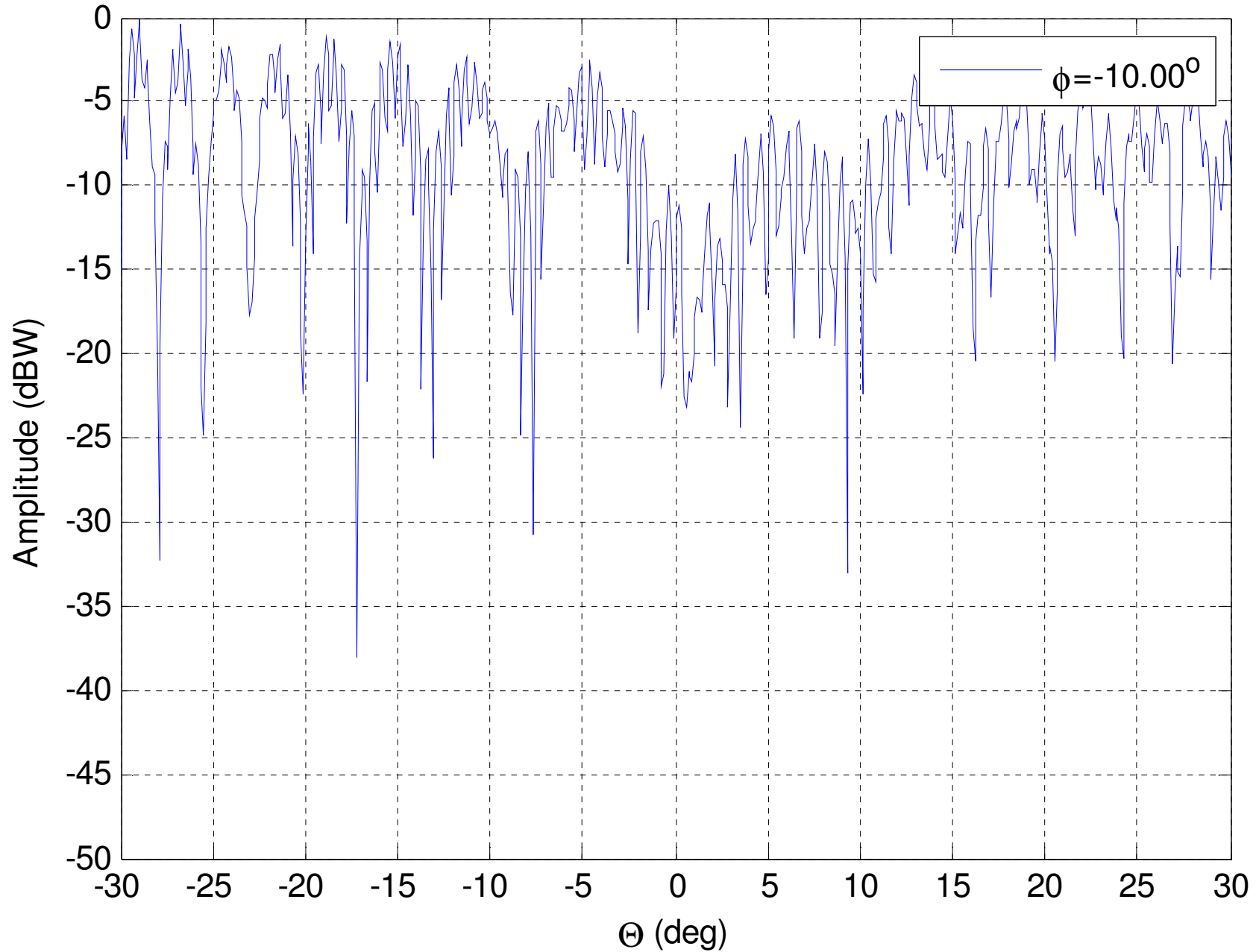
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -6.53 dBW, Date: 14-Dec-2011



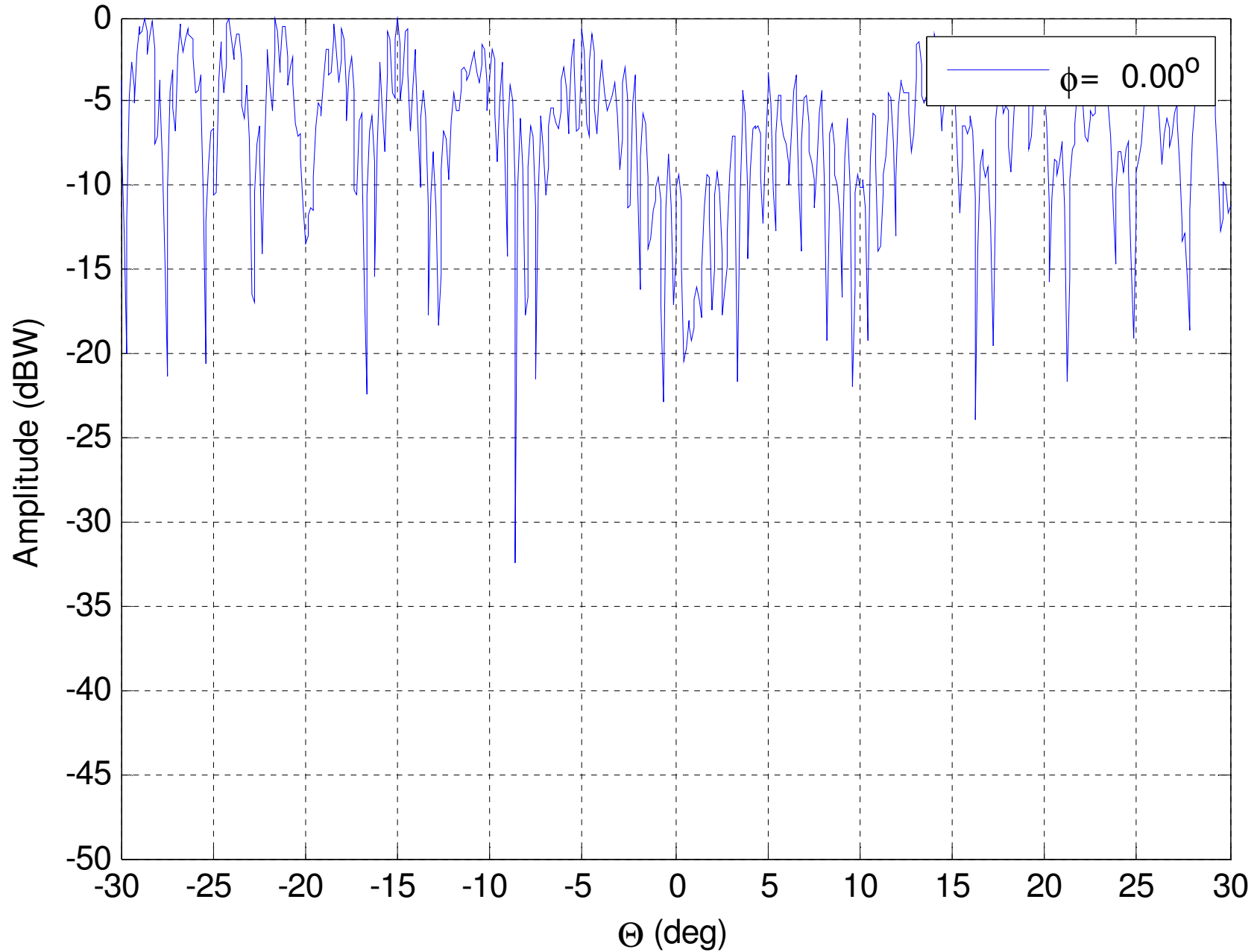
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -6.69 dBW, Date: 14-Dec-2011



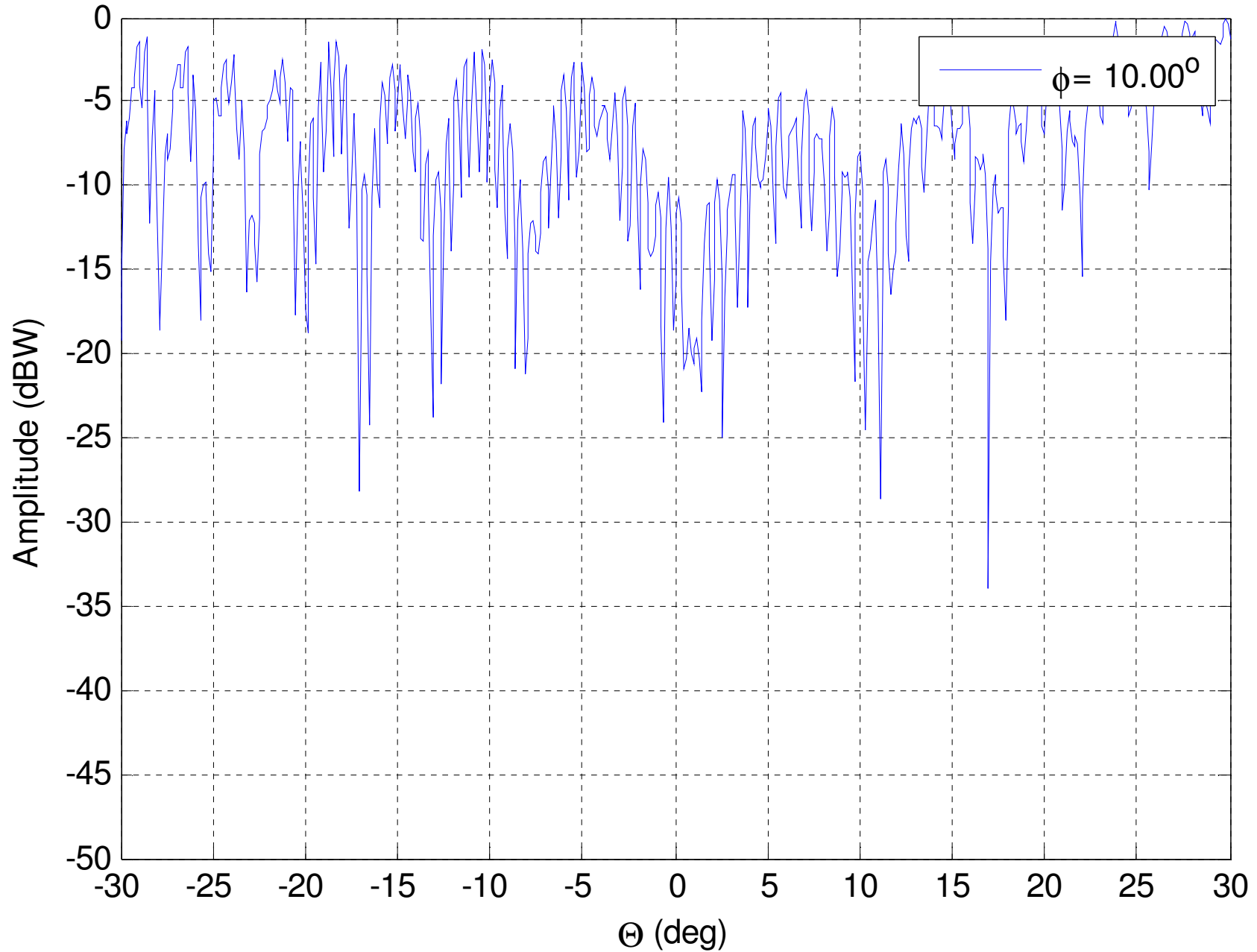
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -8.49 dBW, Date: 14-Dec-2011



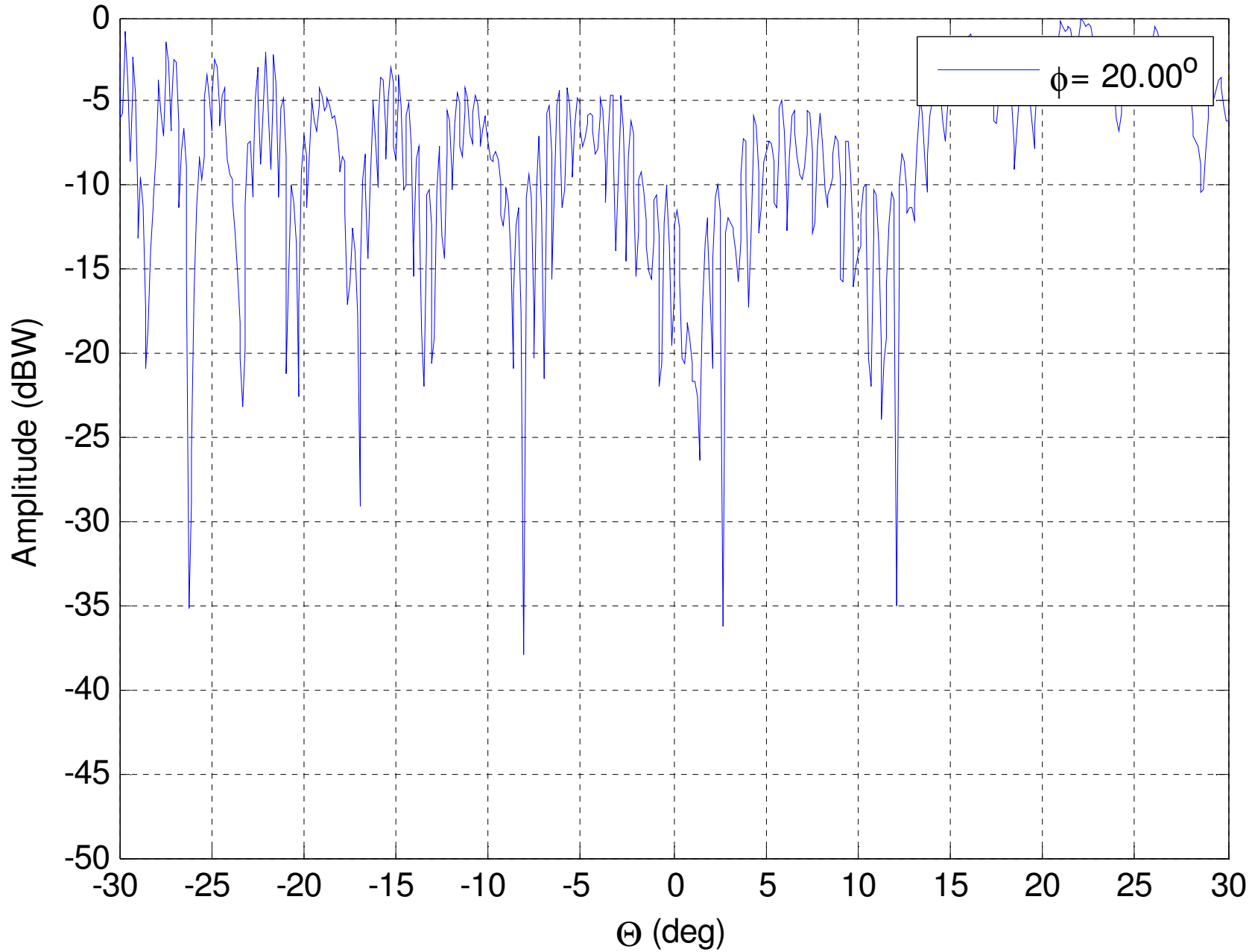
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -6.97 dBW, Date: 14-Dec-2011



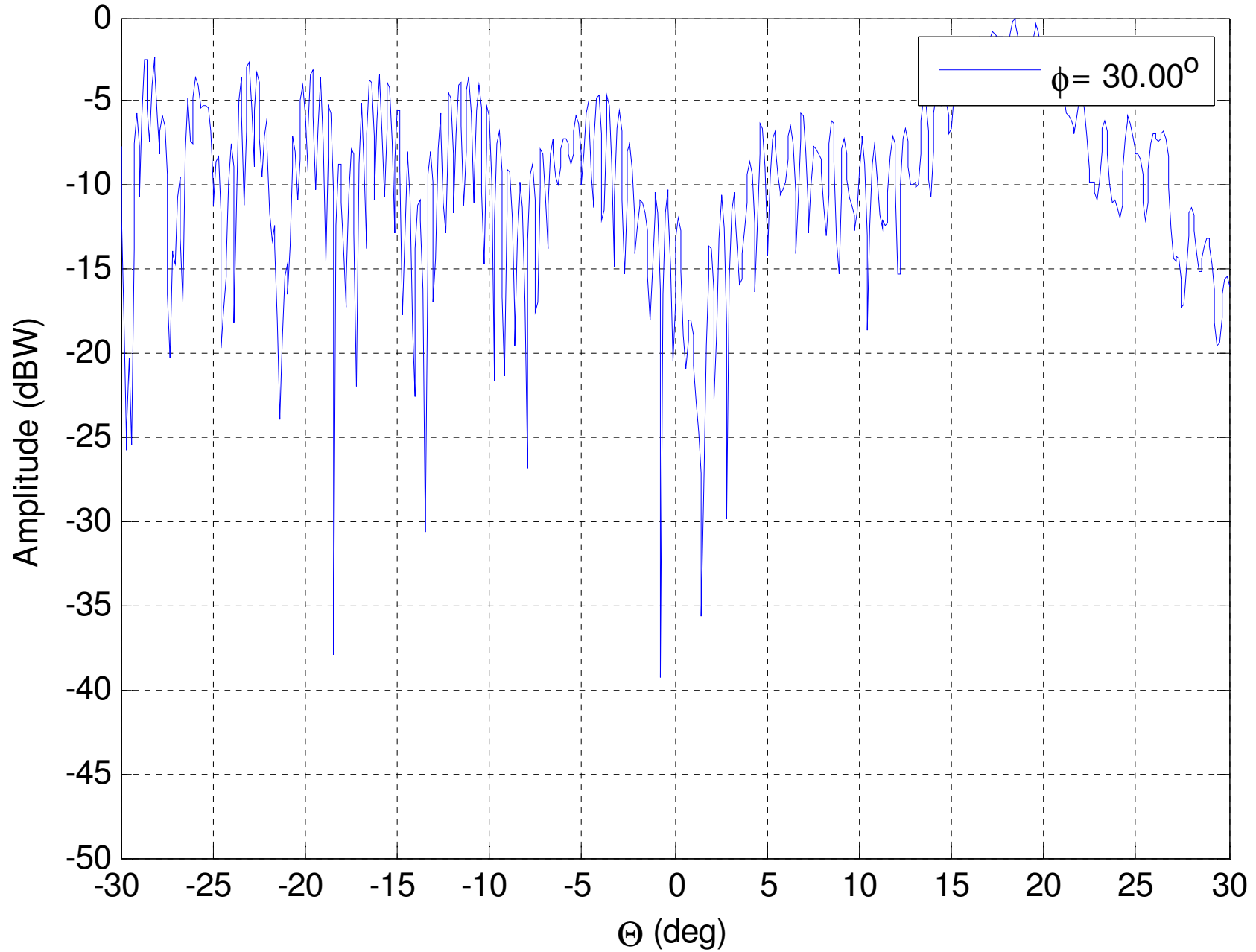
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -6.27 dBW, Date: 14-Dec-2011



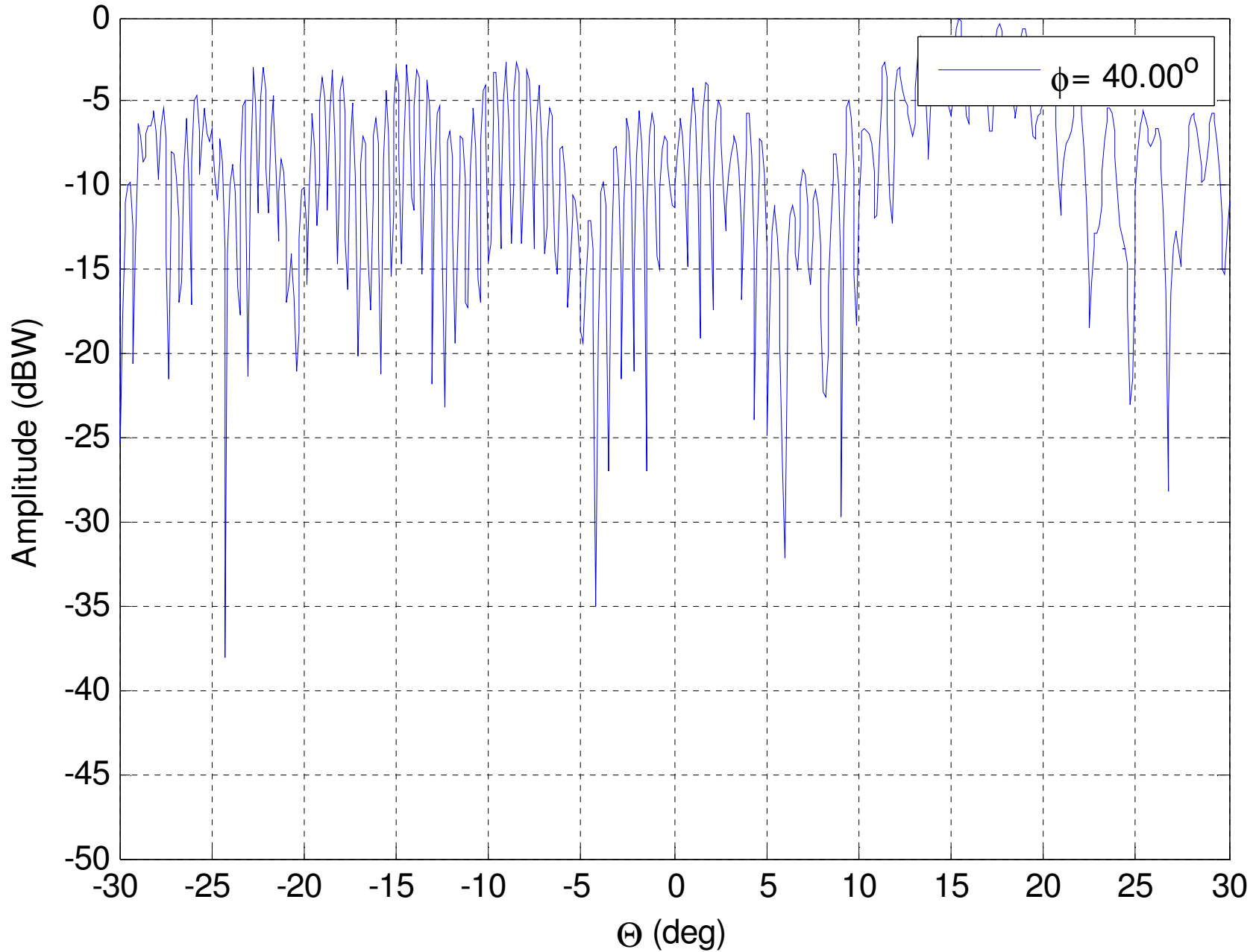
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -5.67 dBW, Date: 14-Dec-2011



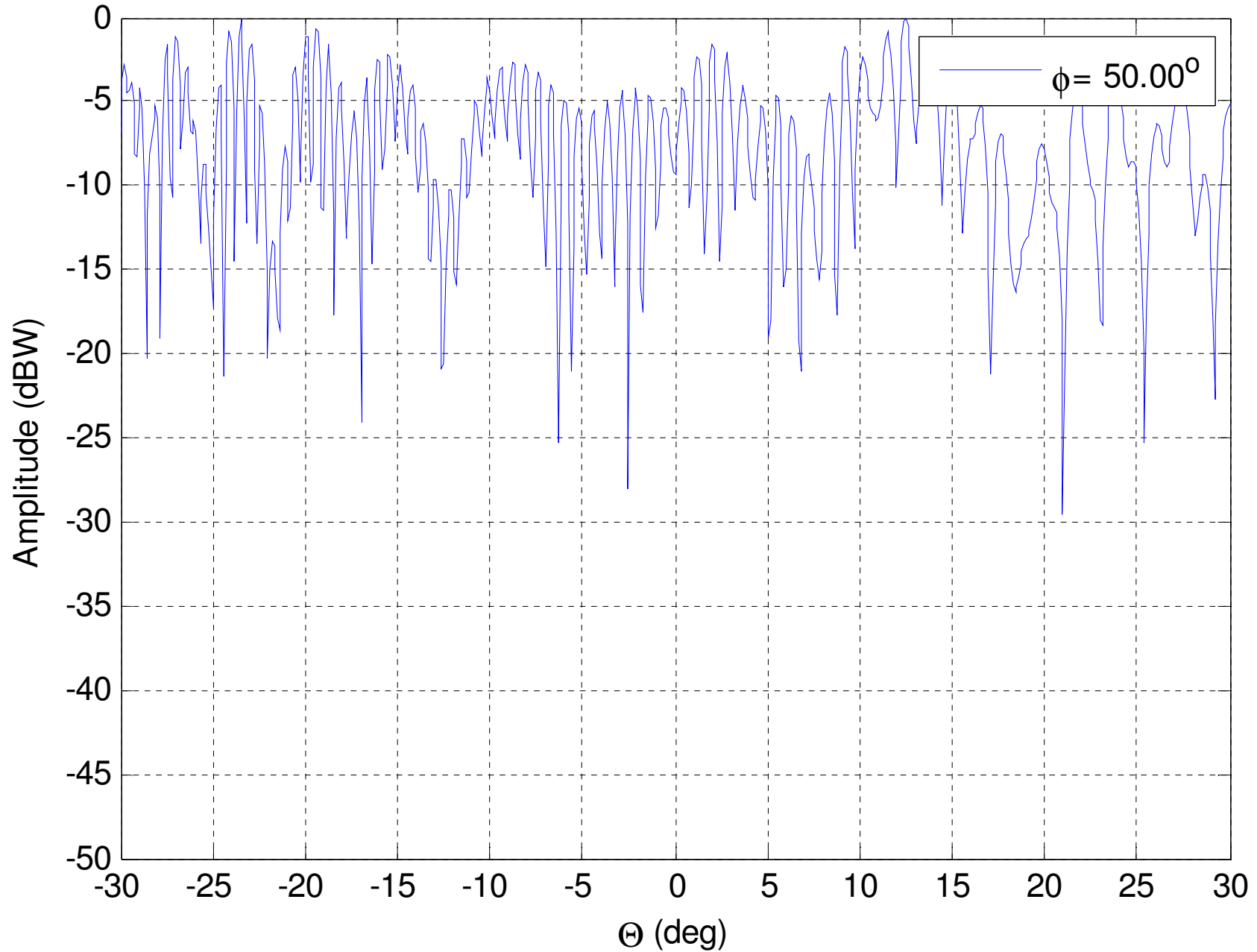
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -7.09 dBW, Date: 14-Dec-2011



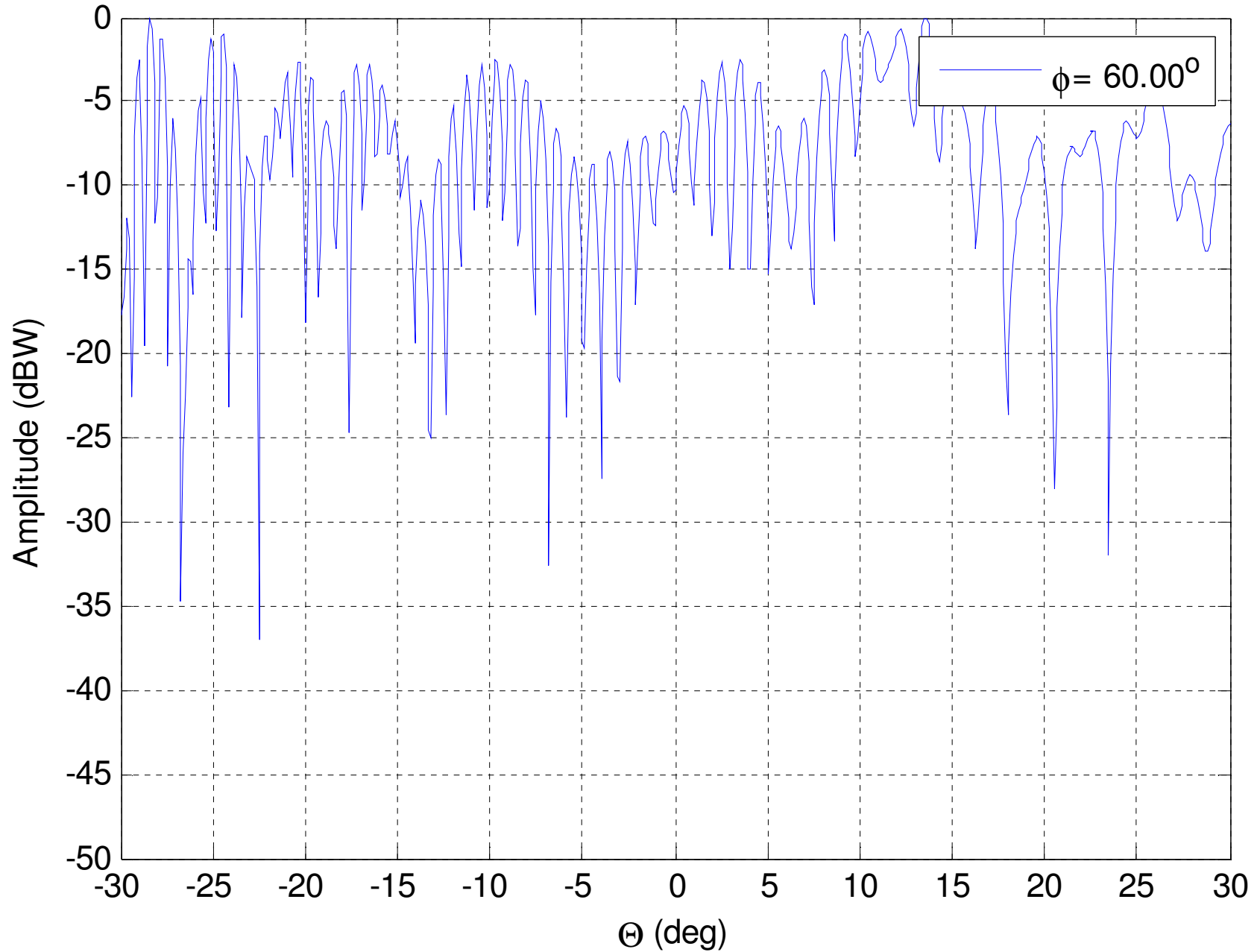
Normalized pattern cuts - farfield

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



Normalized pattern cuts - farfield

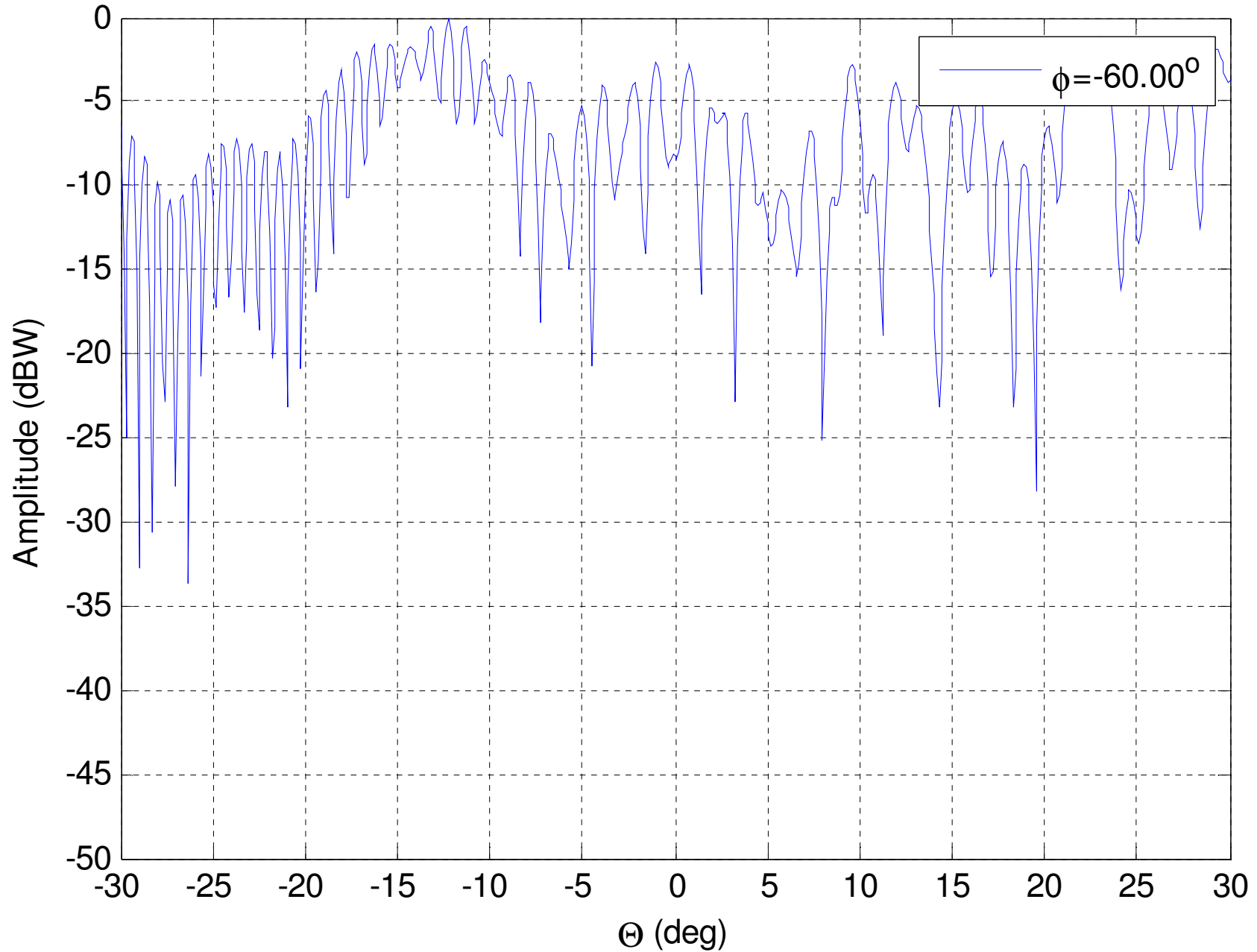
Input file: tx-17.7-rhcp-60.cut, Peak: -8.15 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

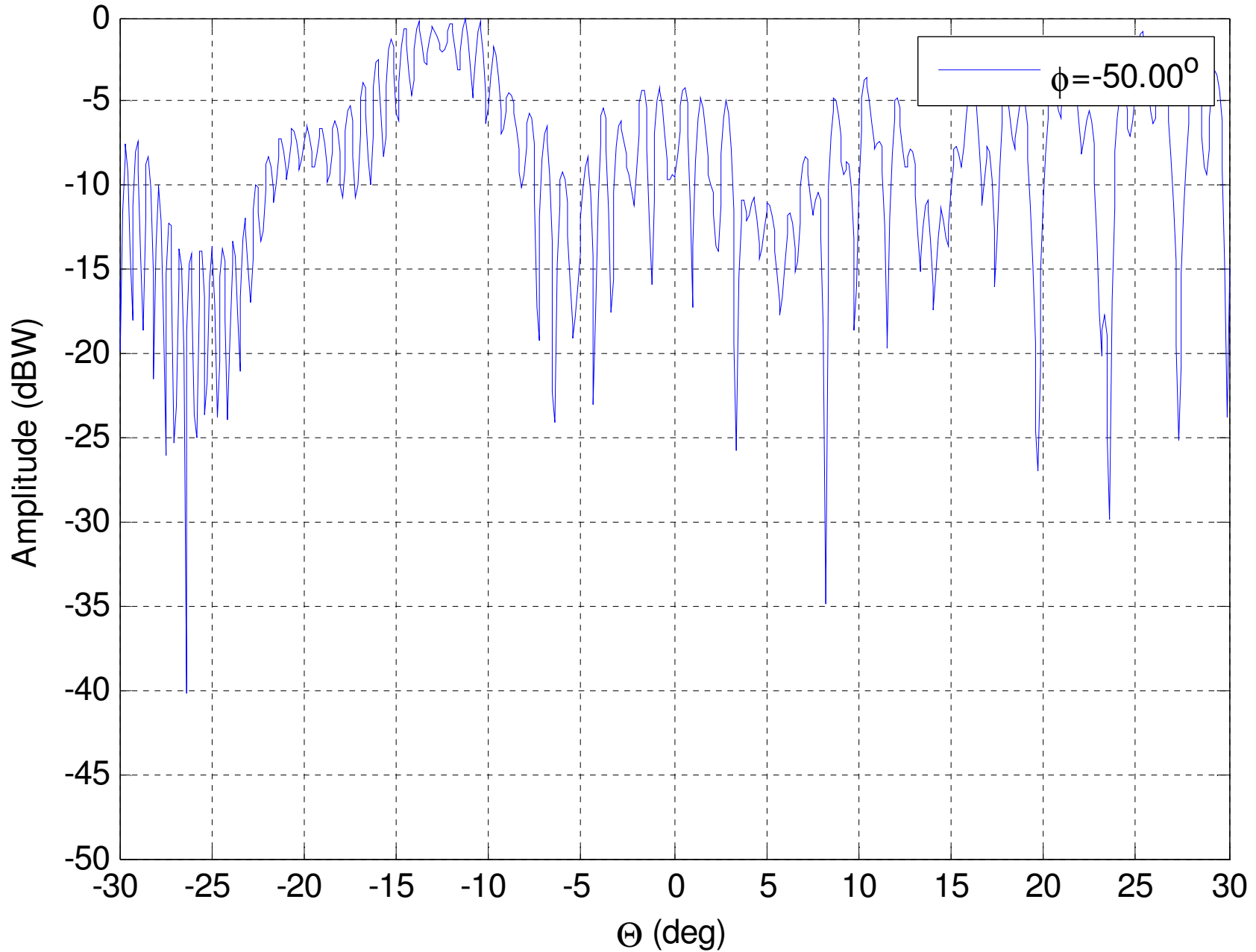
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.67 dBW, Date: 14-Dec-2011



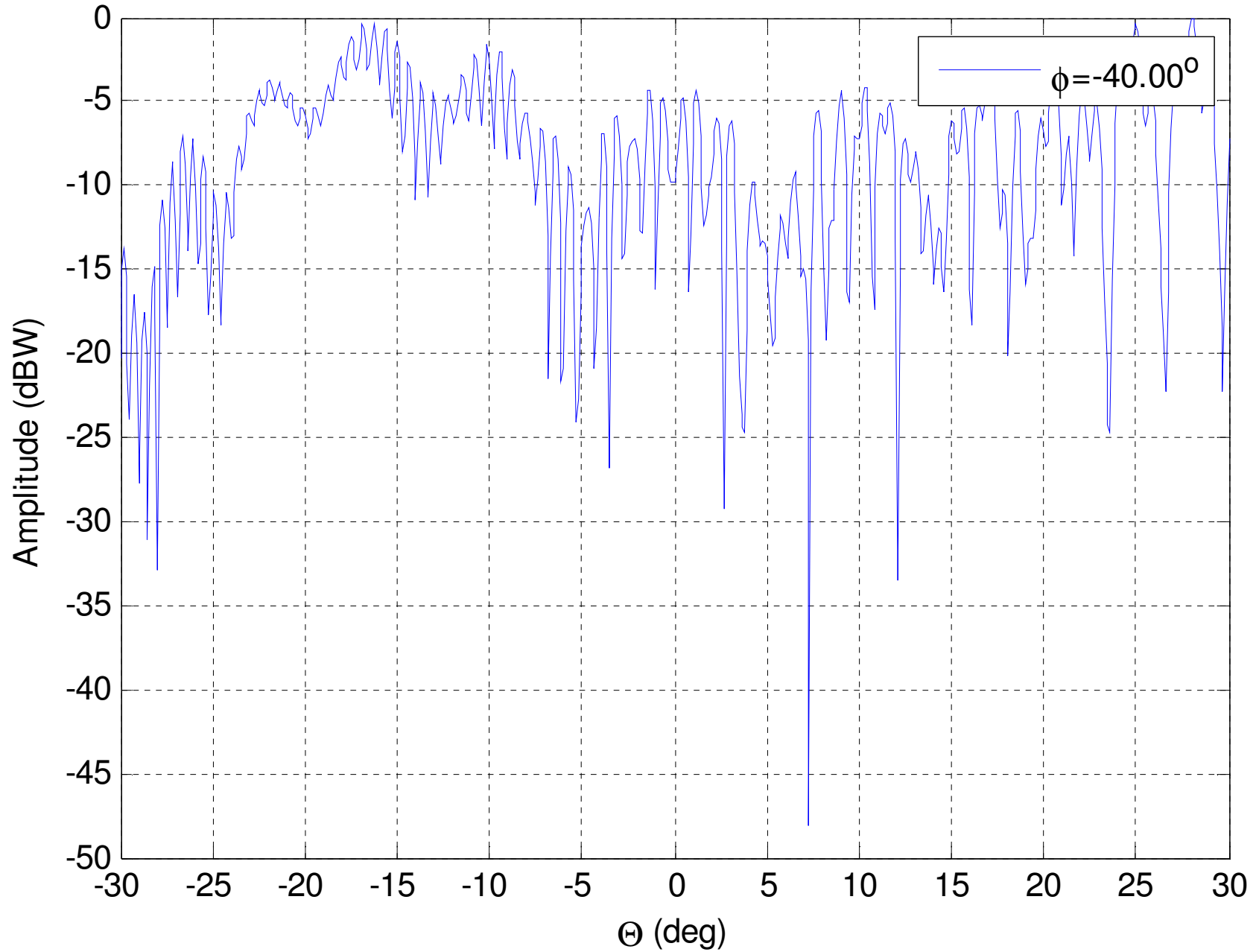
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -6.52 dBW, Date: 14-Dec-2011



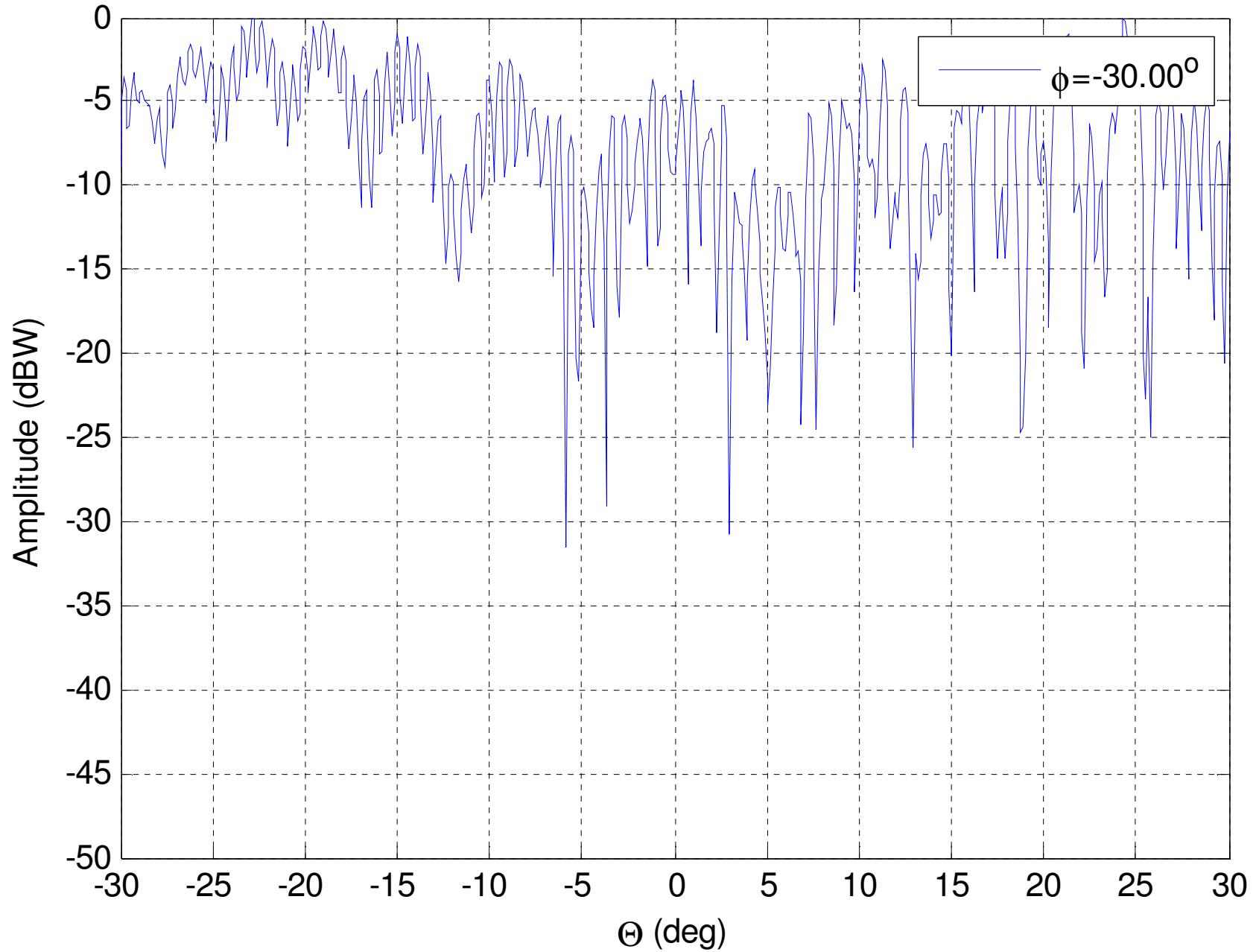
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -6.20 dBW, Date: 14-Dec-2011



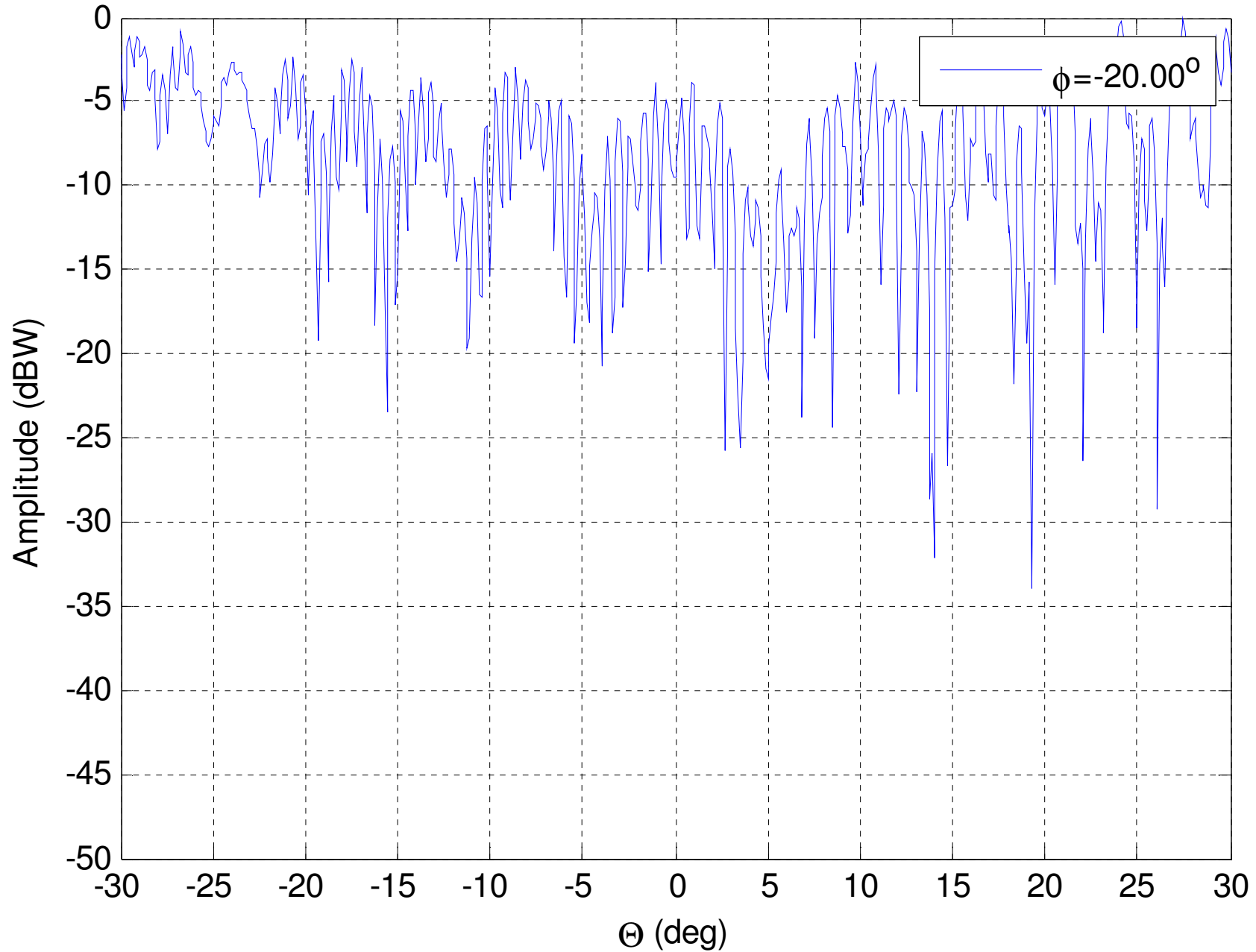
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -6.60 dBW, Date: 14-Dec-2011



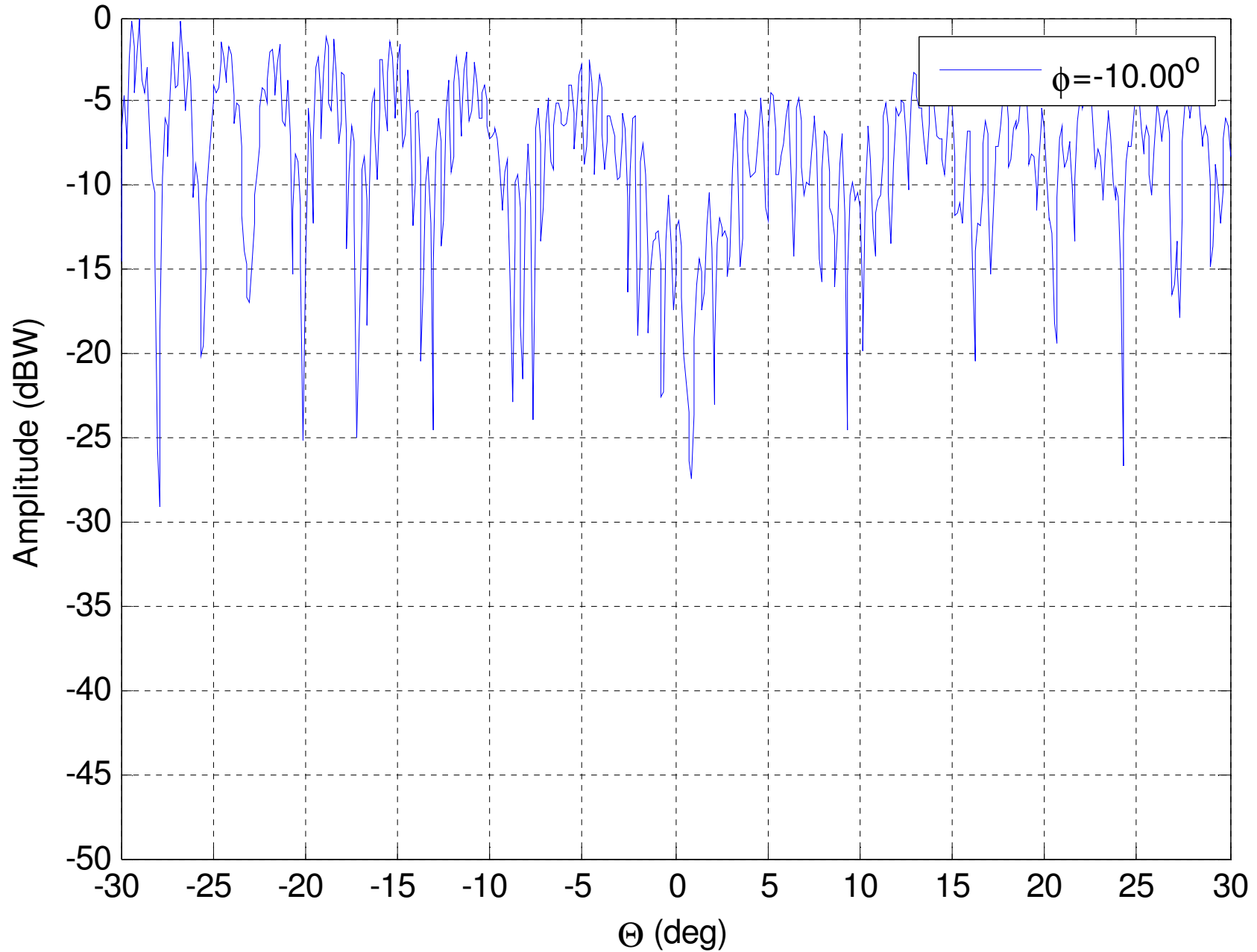
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -6.44 dBW, Date: 14-Dec-2011



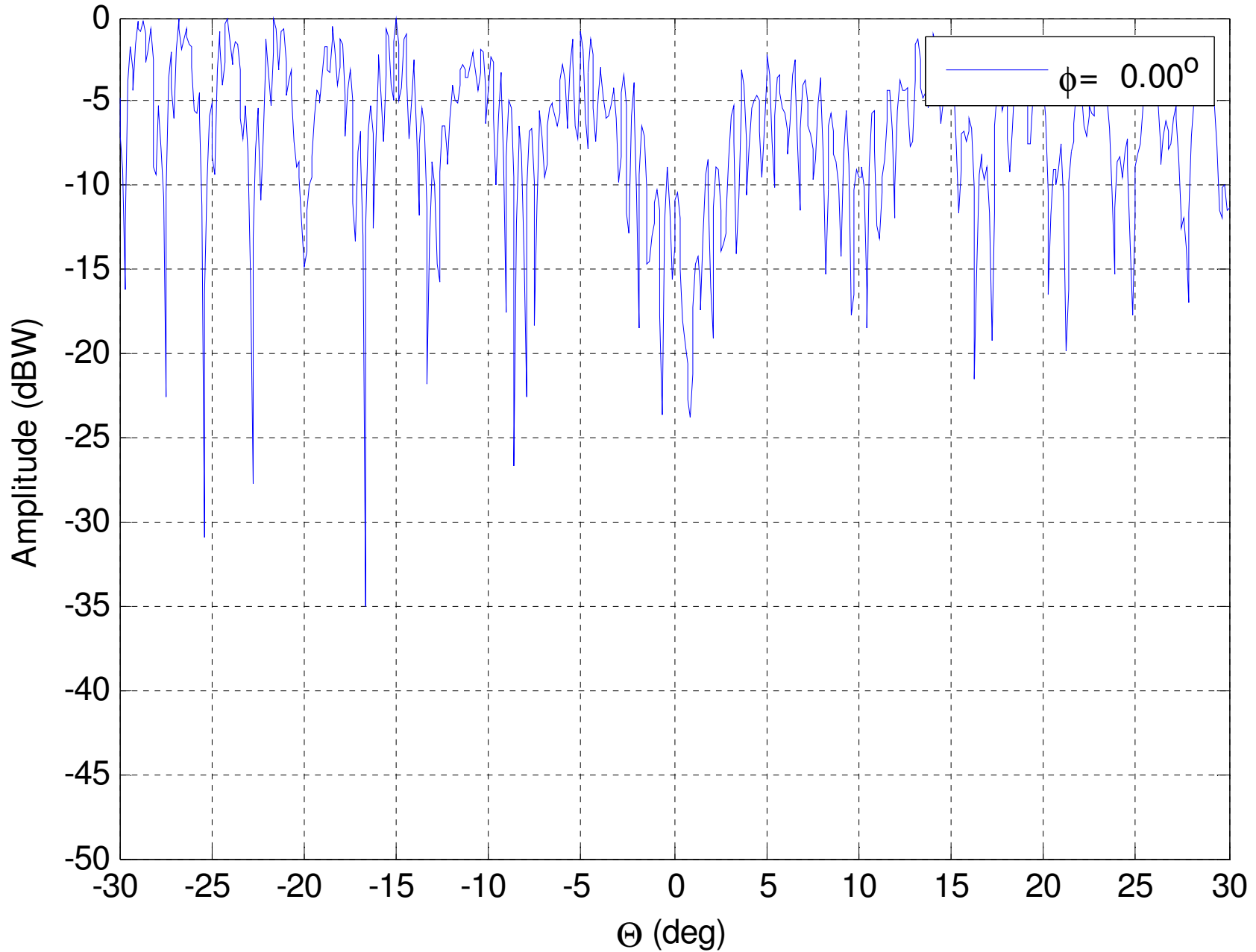
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -6.85 dBW, Date: 14-Dec-2011



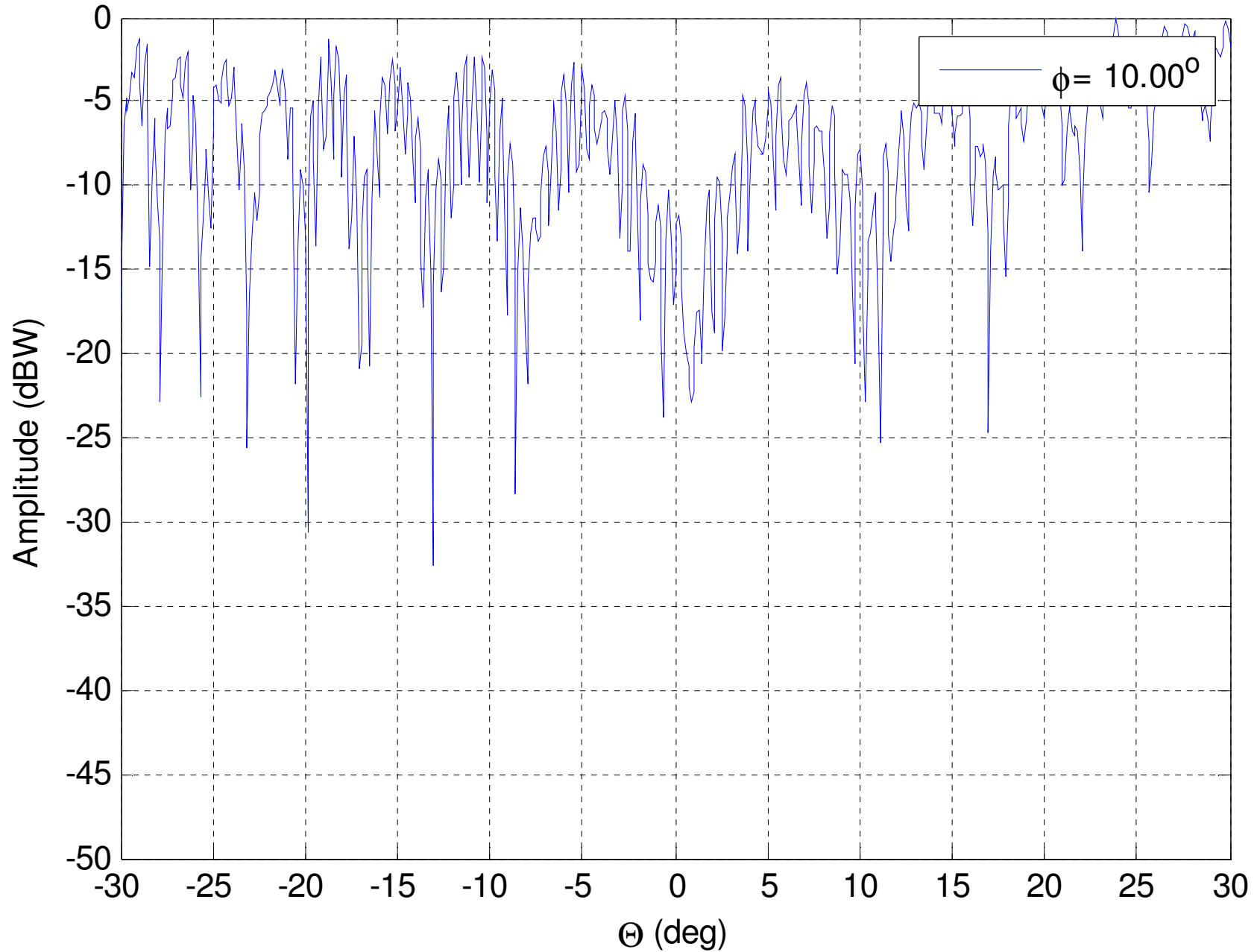
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -8.52 dBW, Date: 14-Dec-2011



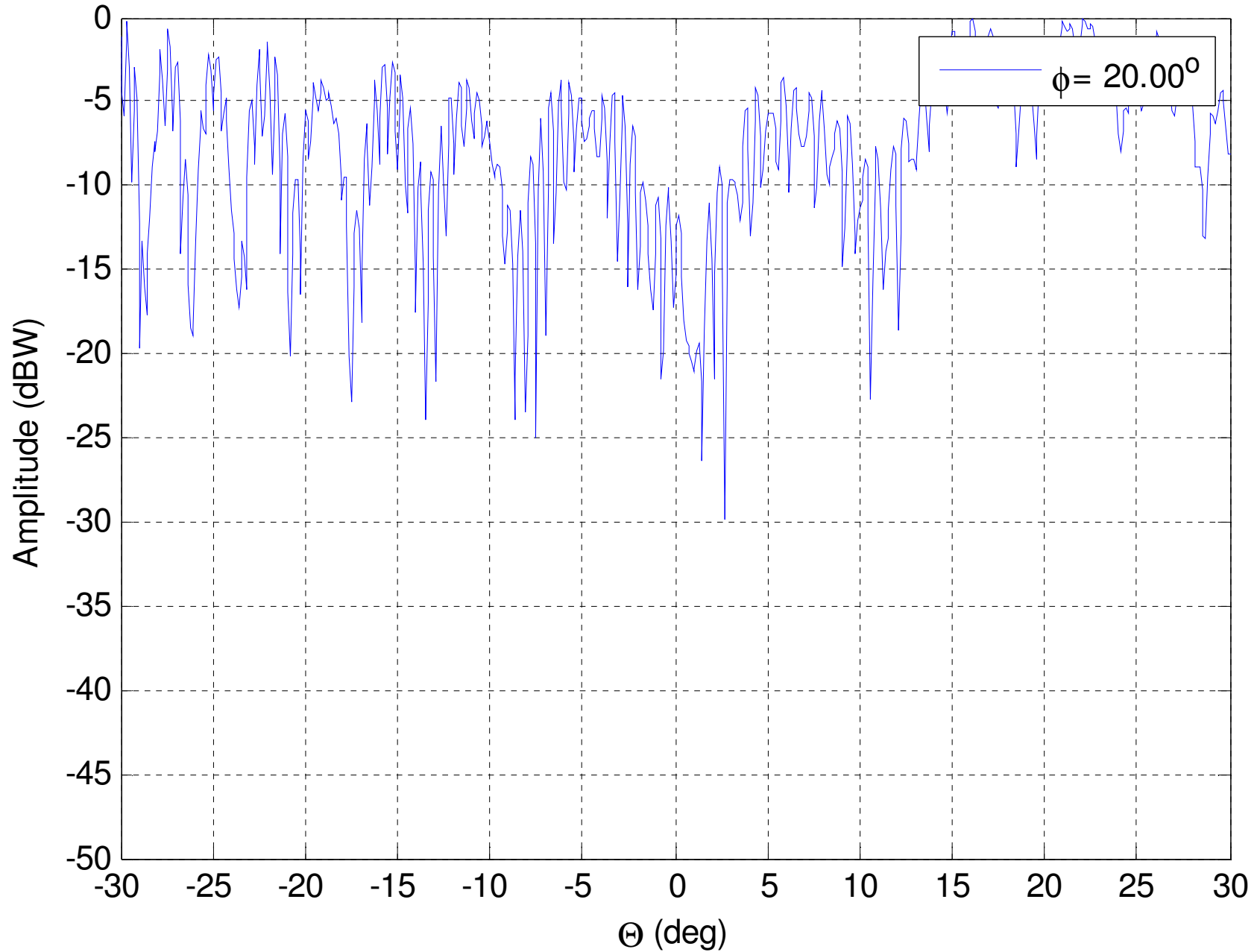
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -7.06 dBW, Date: 14-Dec-2011



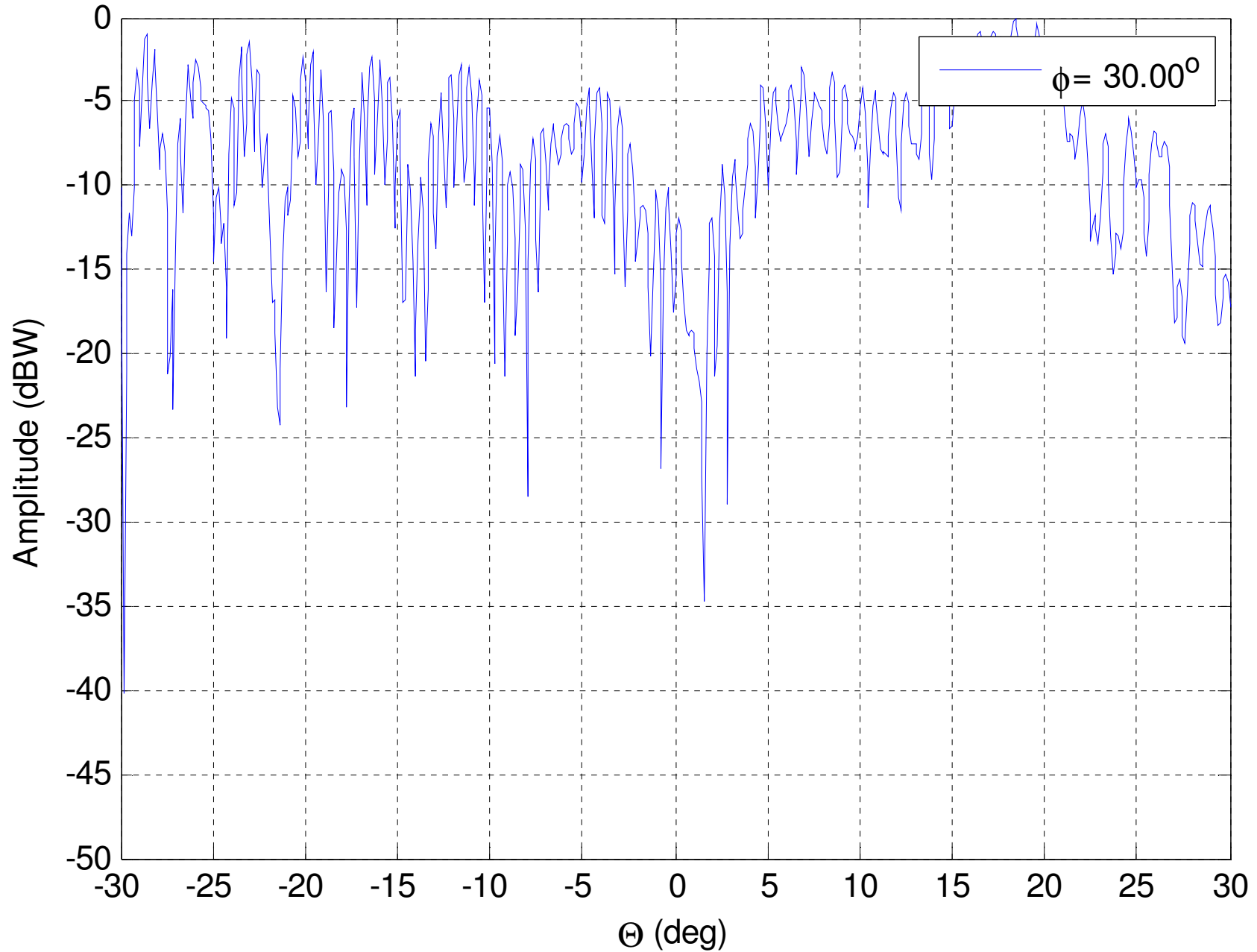
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -6.94 dBW, Date: 14-Dec-2011



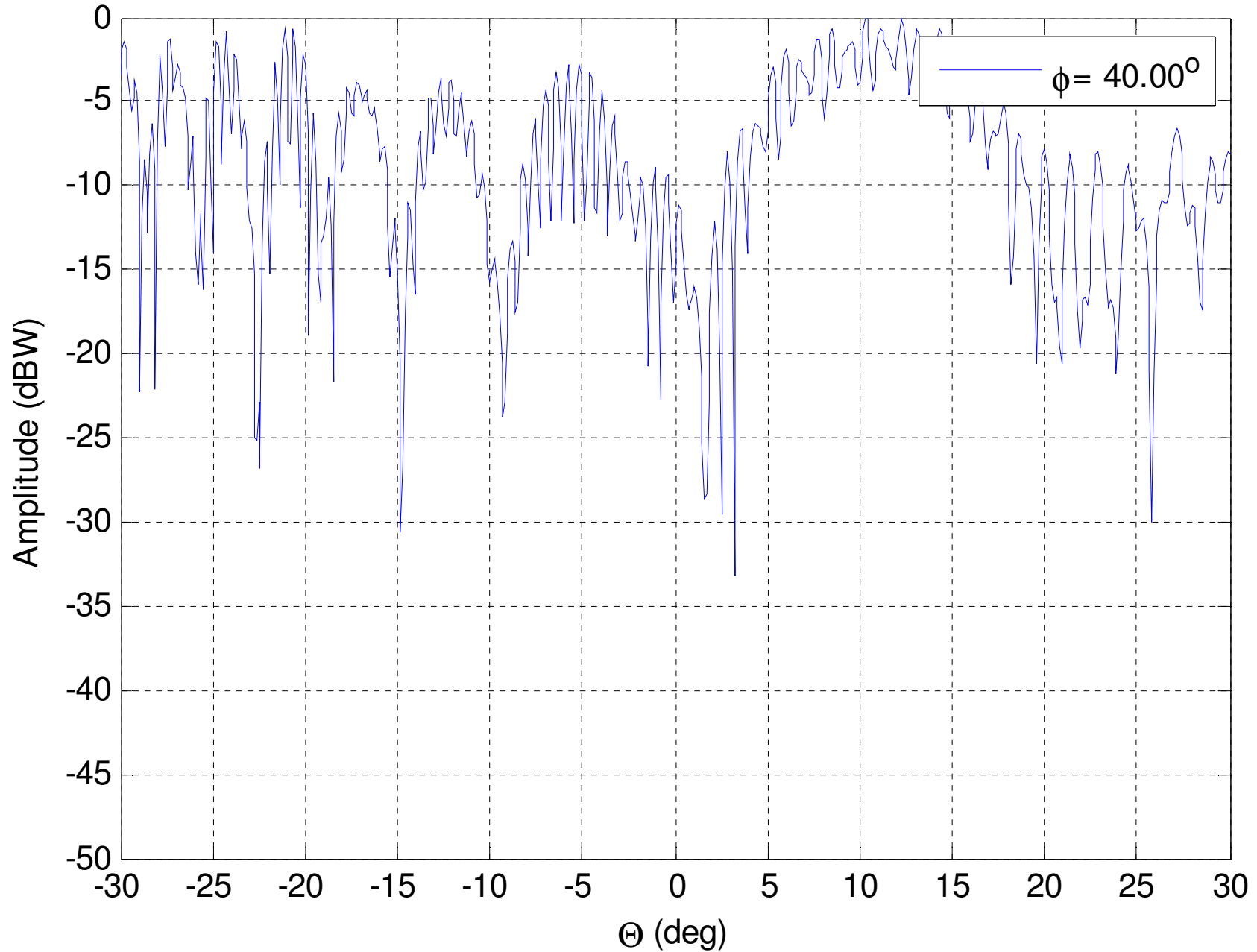
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



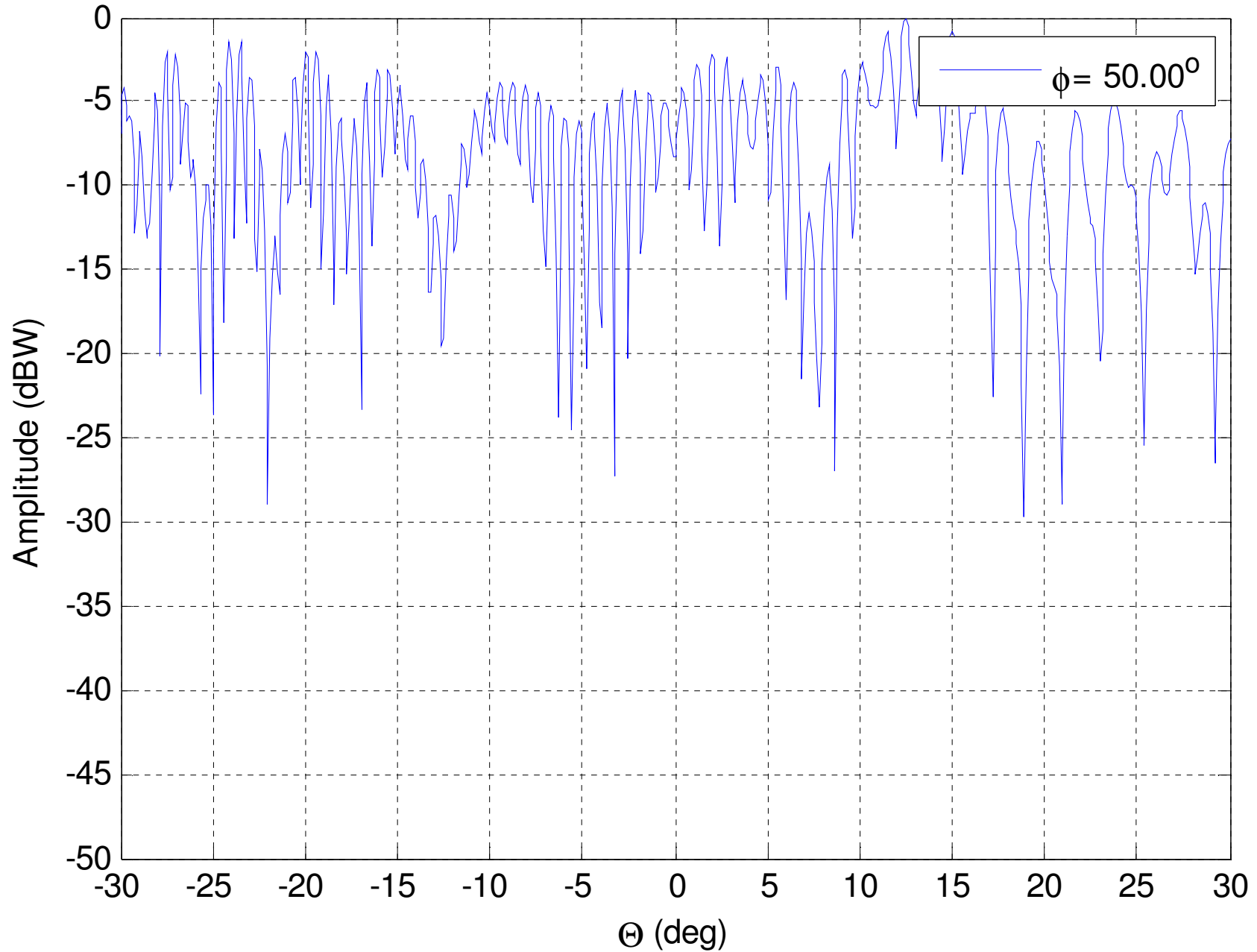
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -7.48 dBW, Date: 14-Dec-2011



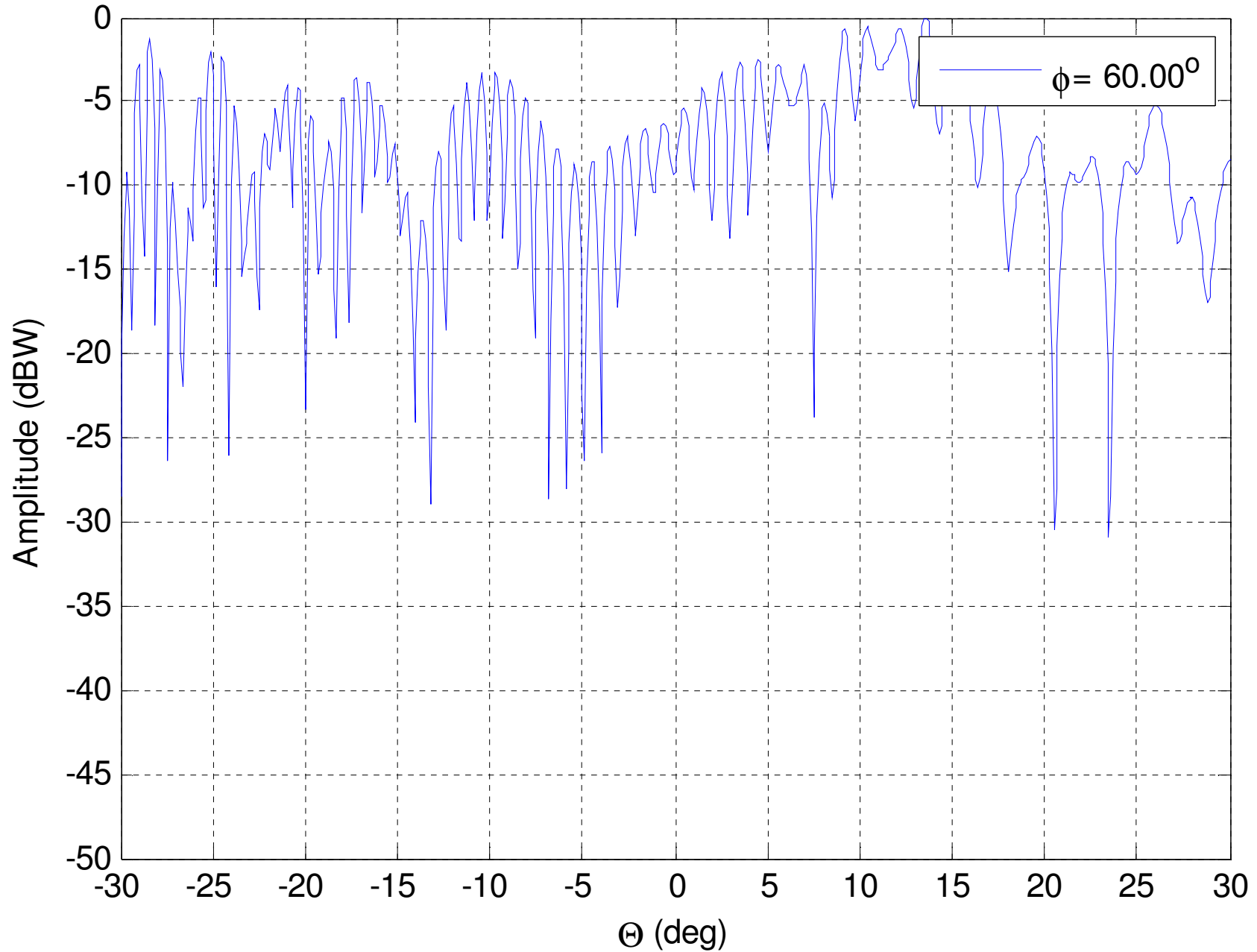
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.74 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -6.74 dBW, Date: 14-Dec-2011



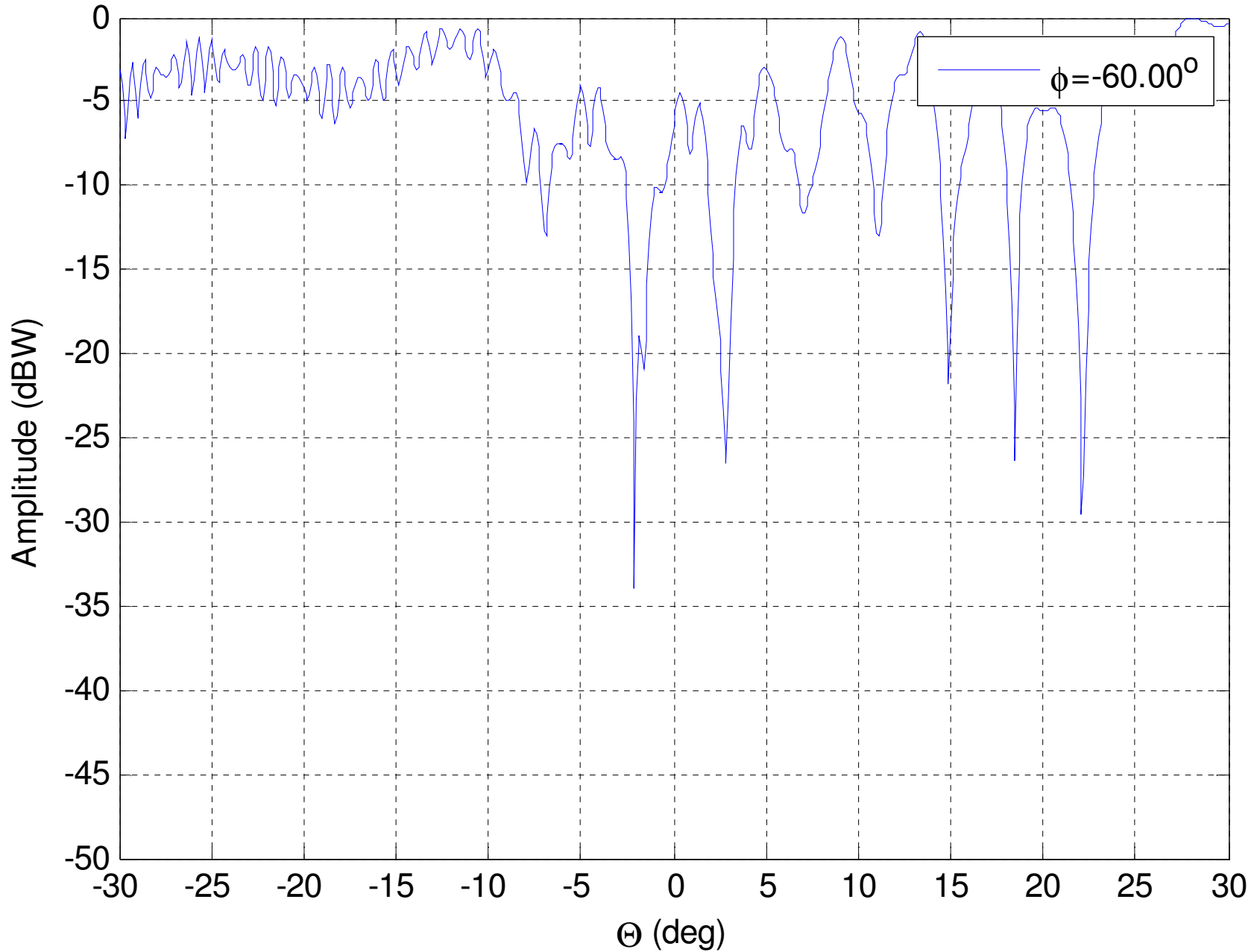
Spot Beam19, +X Axis Plots

- 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

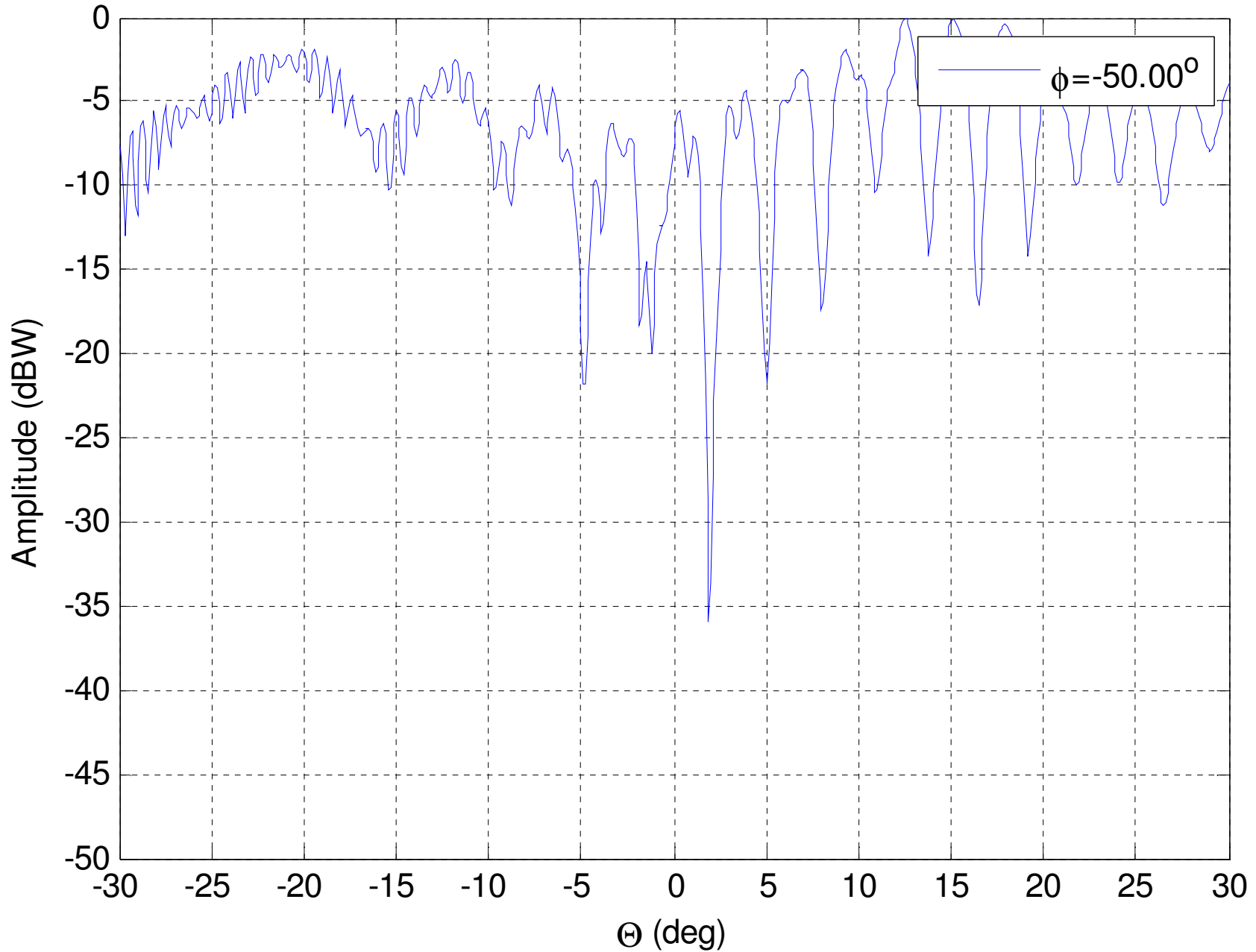
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -8.80 dBW, Date: 14-Dec-2011



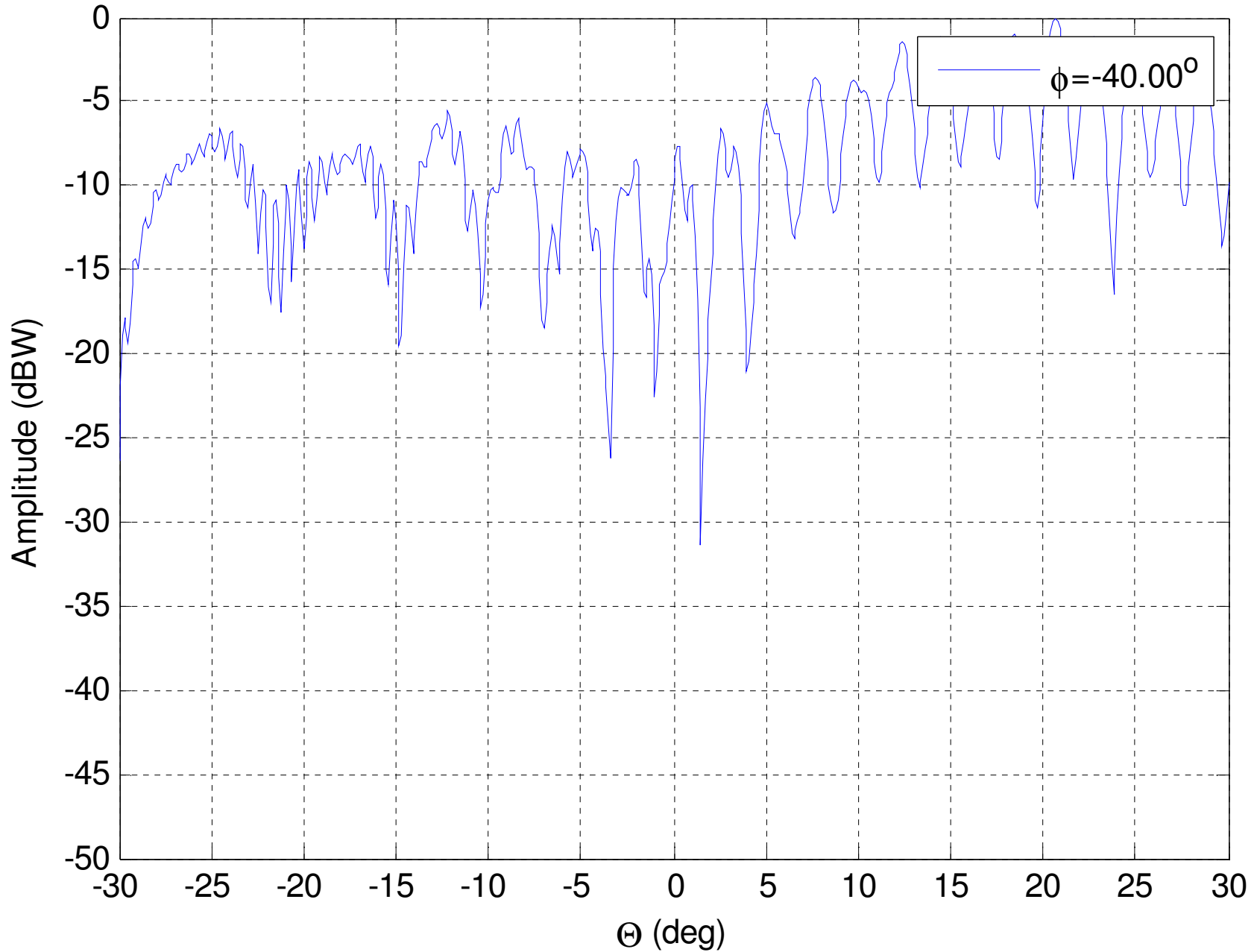
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -7.76 dBW, Date: 14-Dec-2011



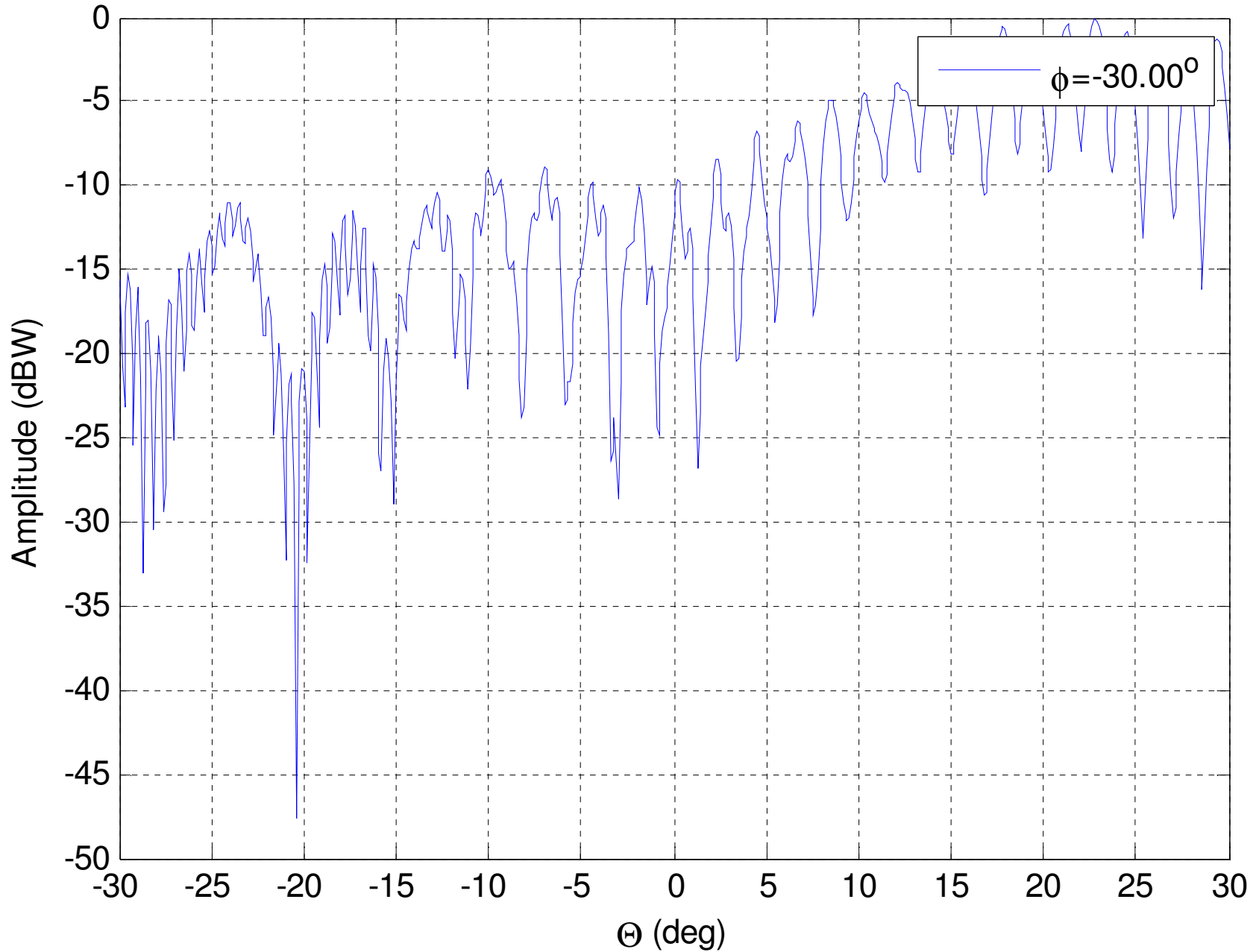
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -5.64 dBW, Date: 14-Dec-2011



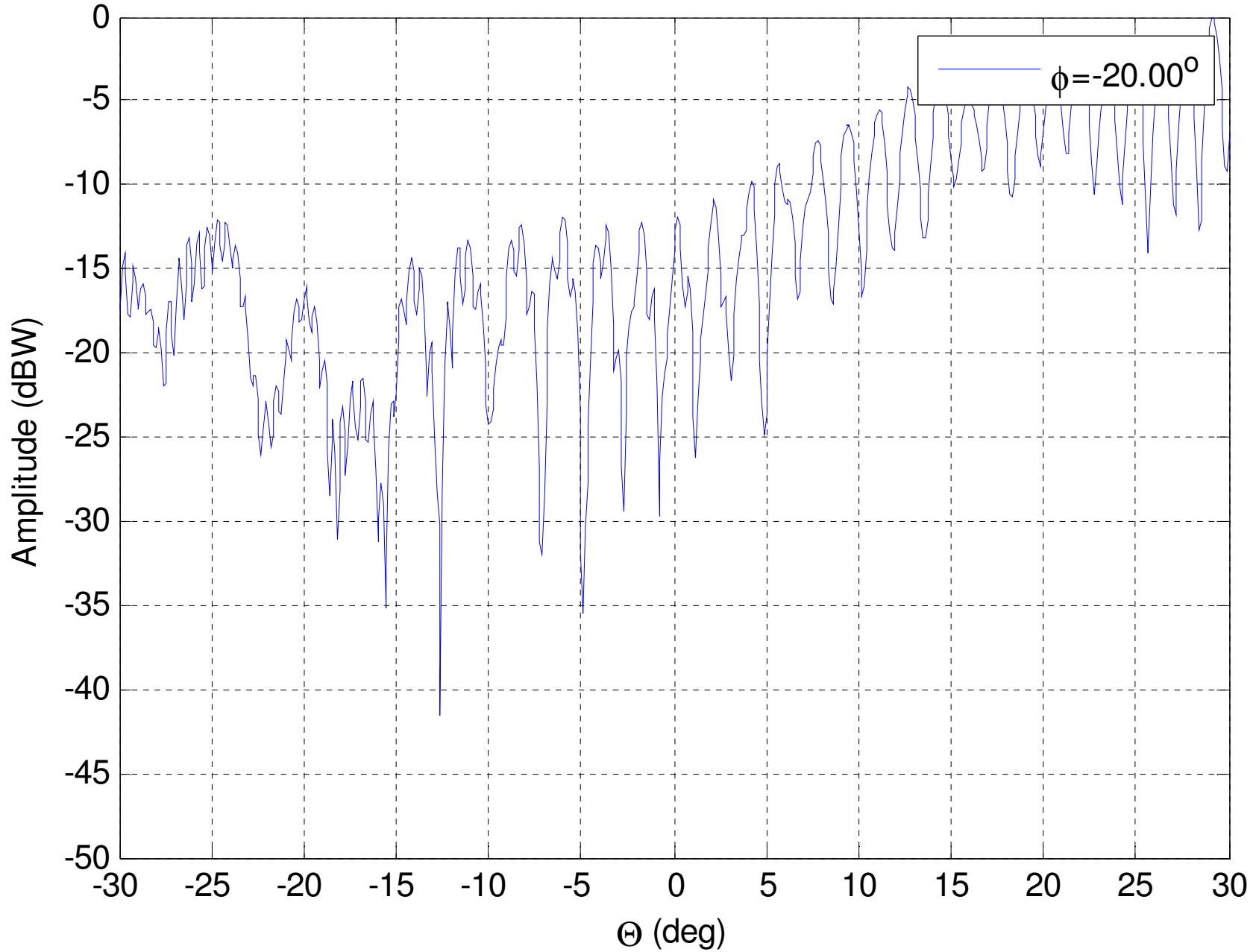
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -3.63 dBW, Date: 14-Dec-2011



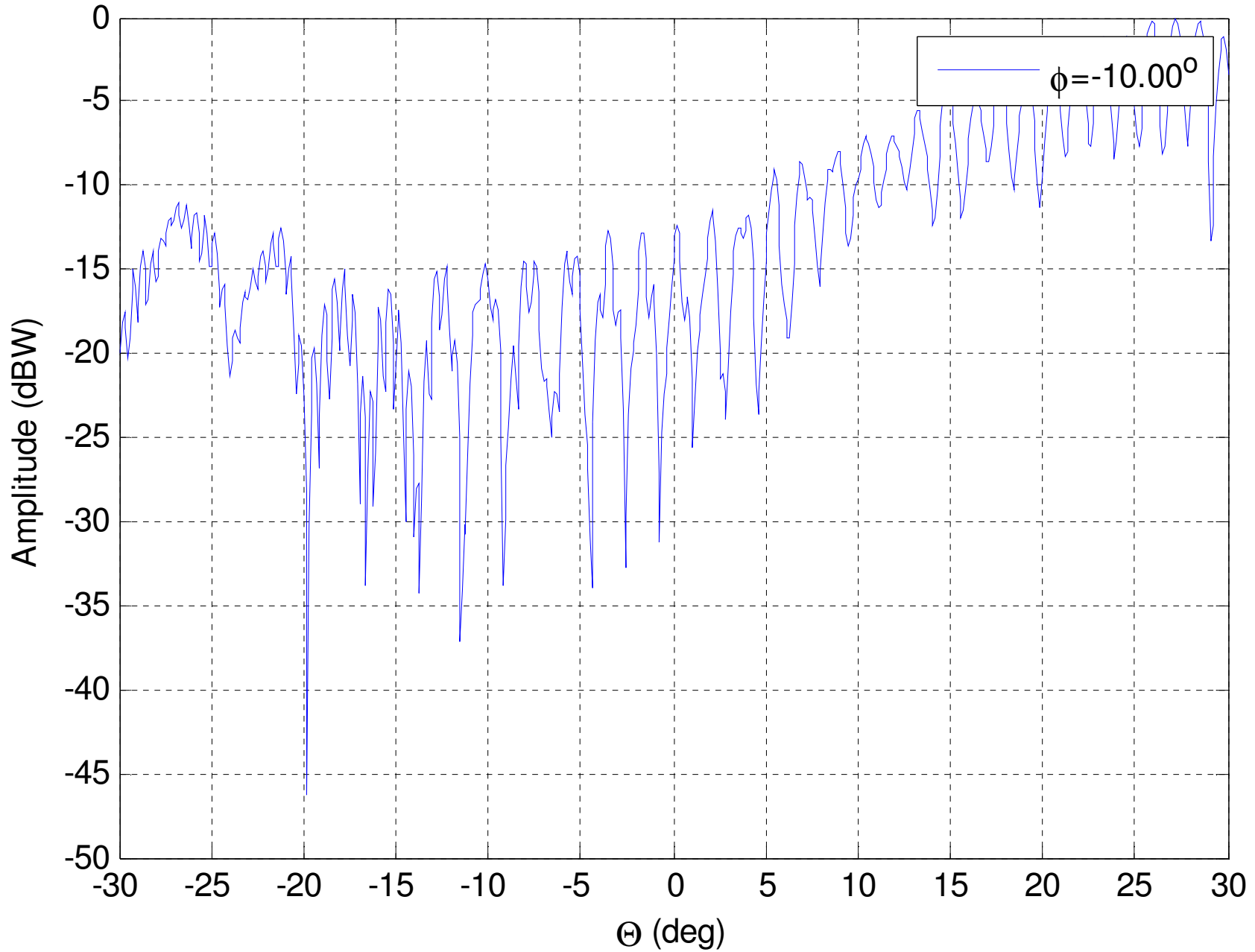
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -1.28 dBW, Date: 14-Dec-2011



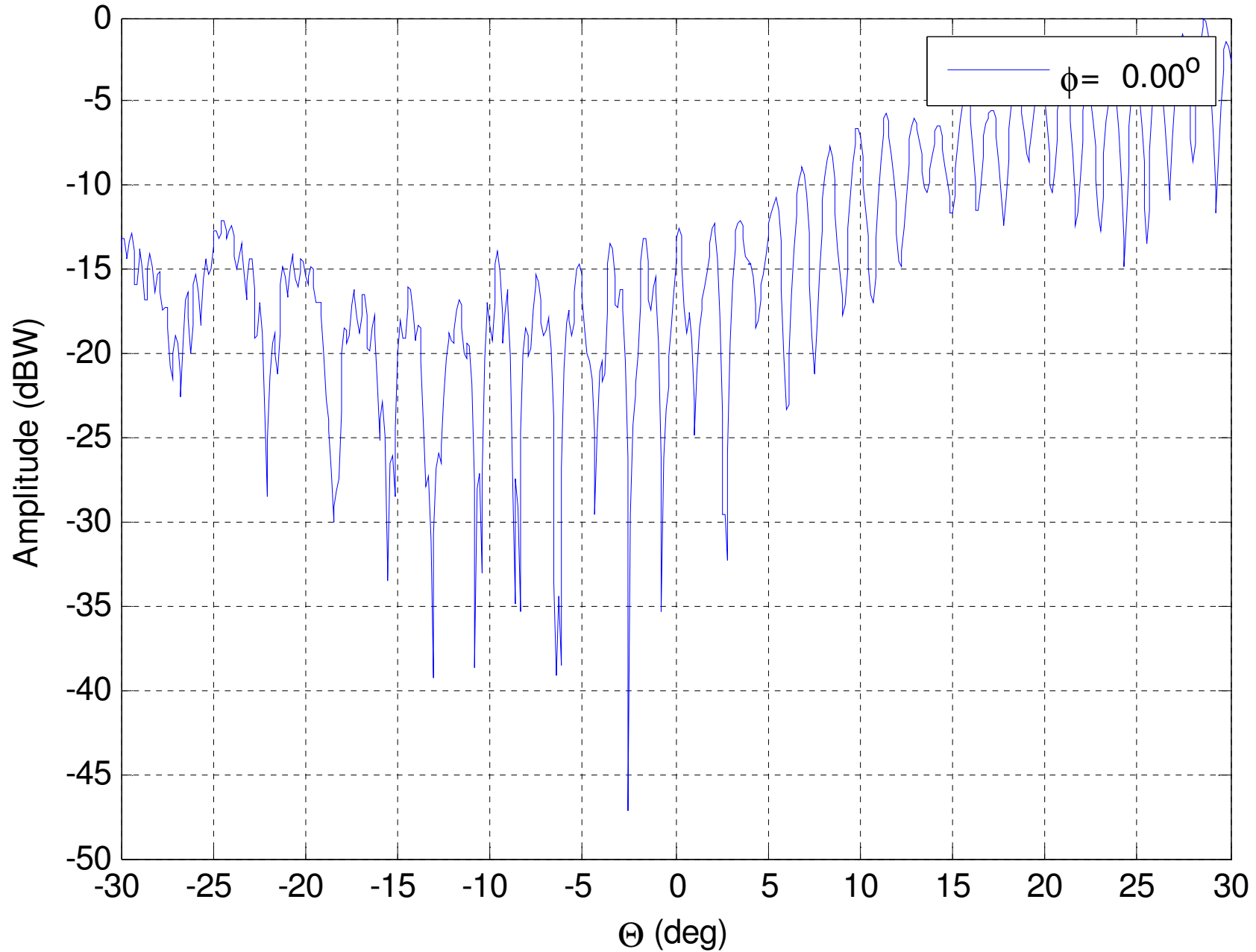
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -0.90 dBW, Date: 14-Dec-2011



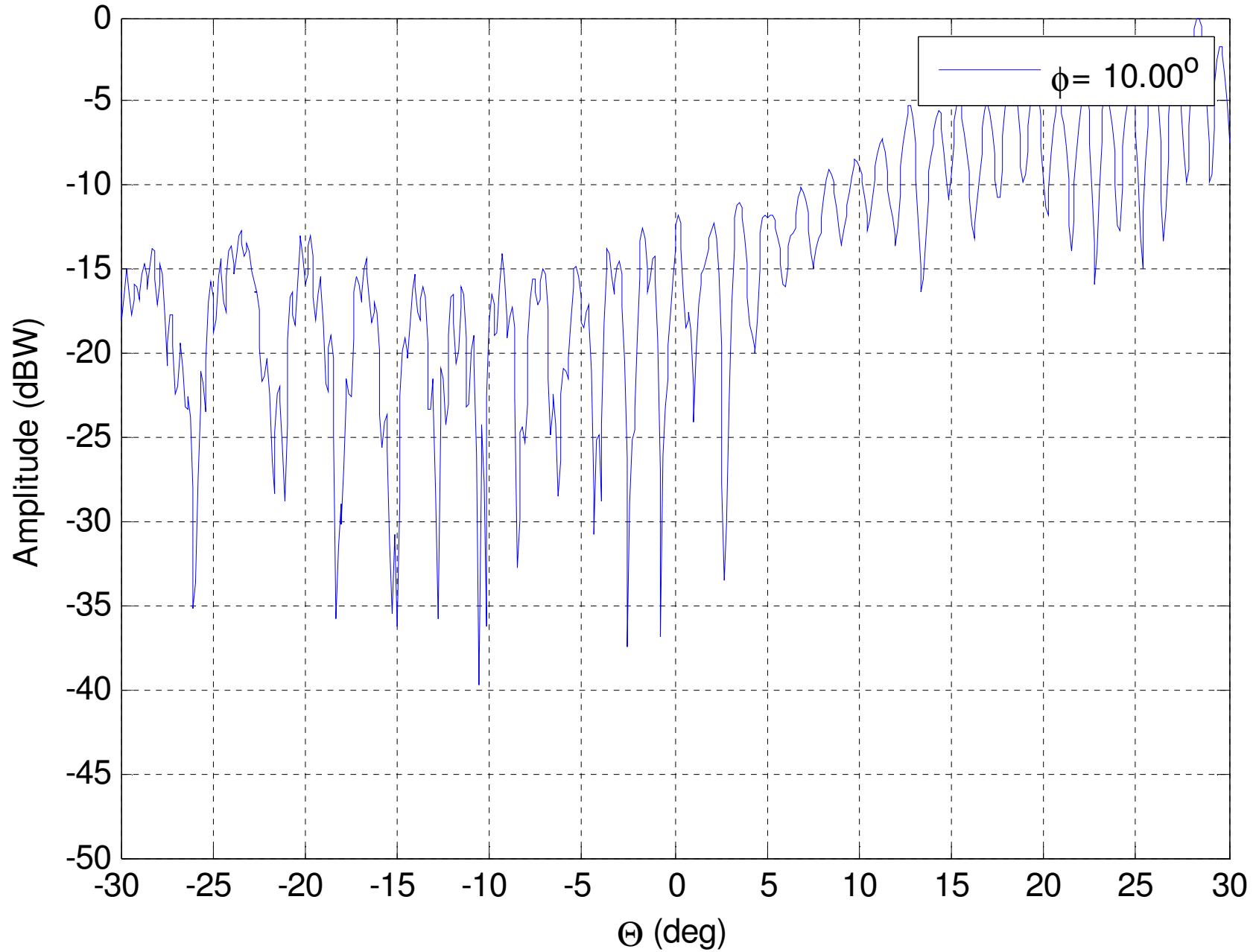
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -0.71 dBW, Date: 14-Dec-2011



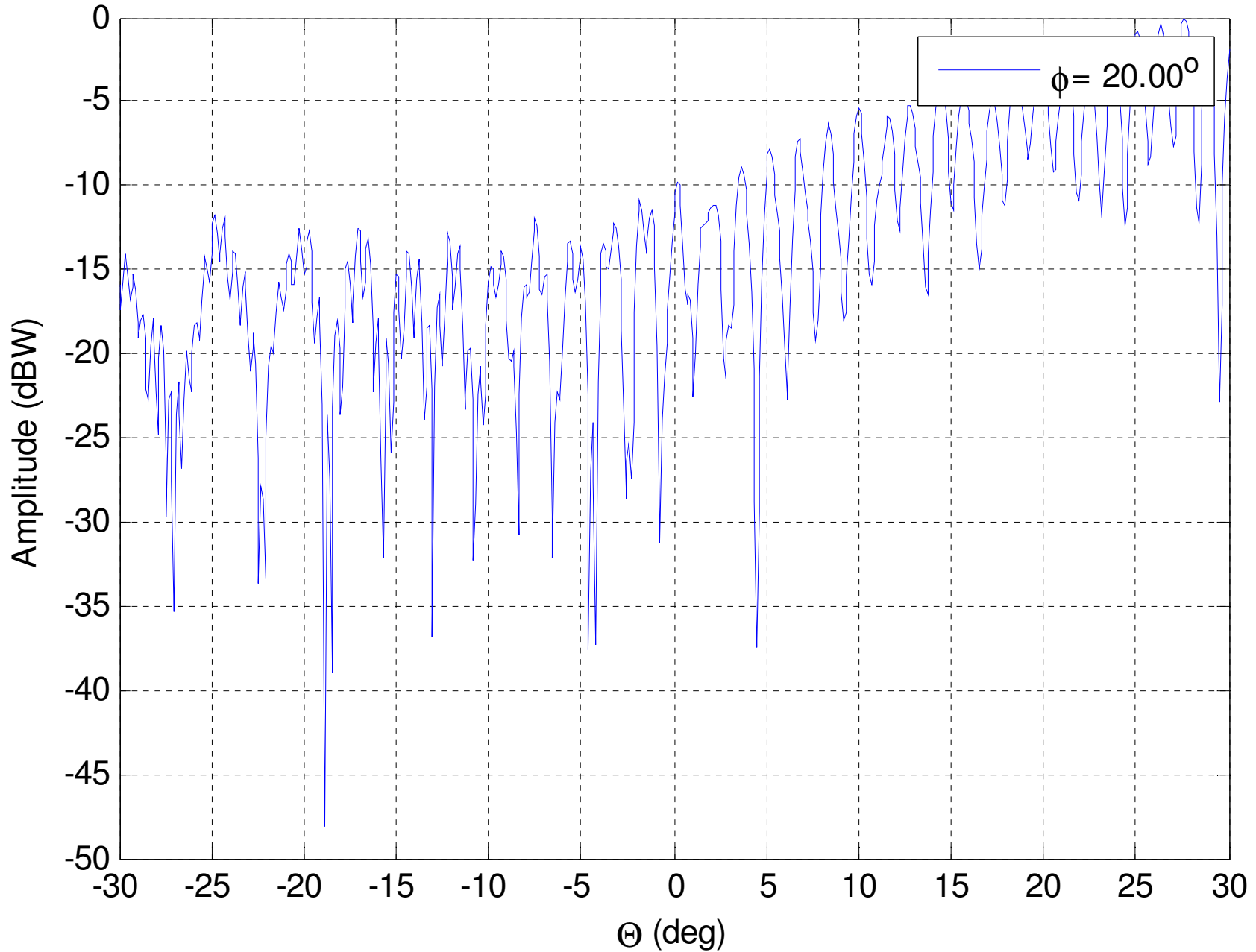
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -1.47 dBW, Date: 14-Dec-2011



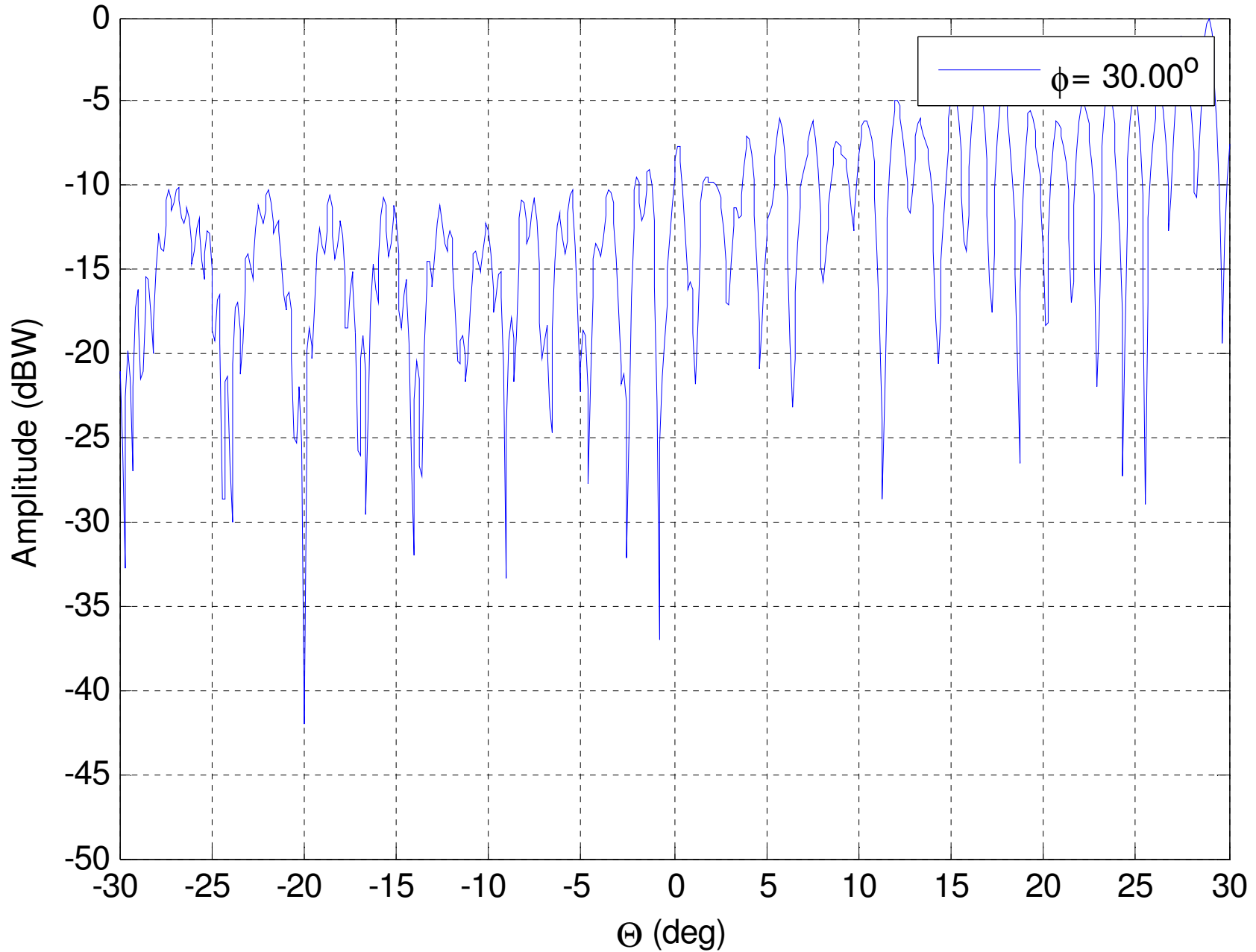
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -3.57 dBW, Date: 14-Dec-2011



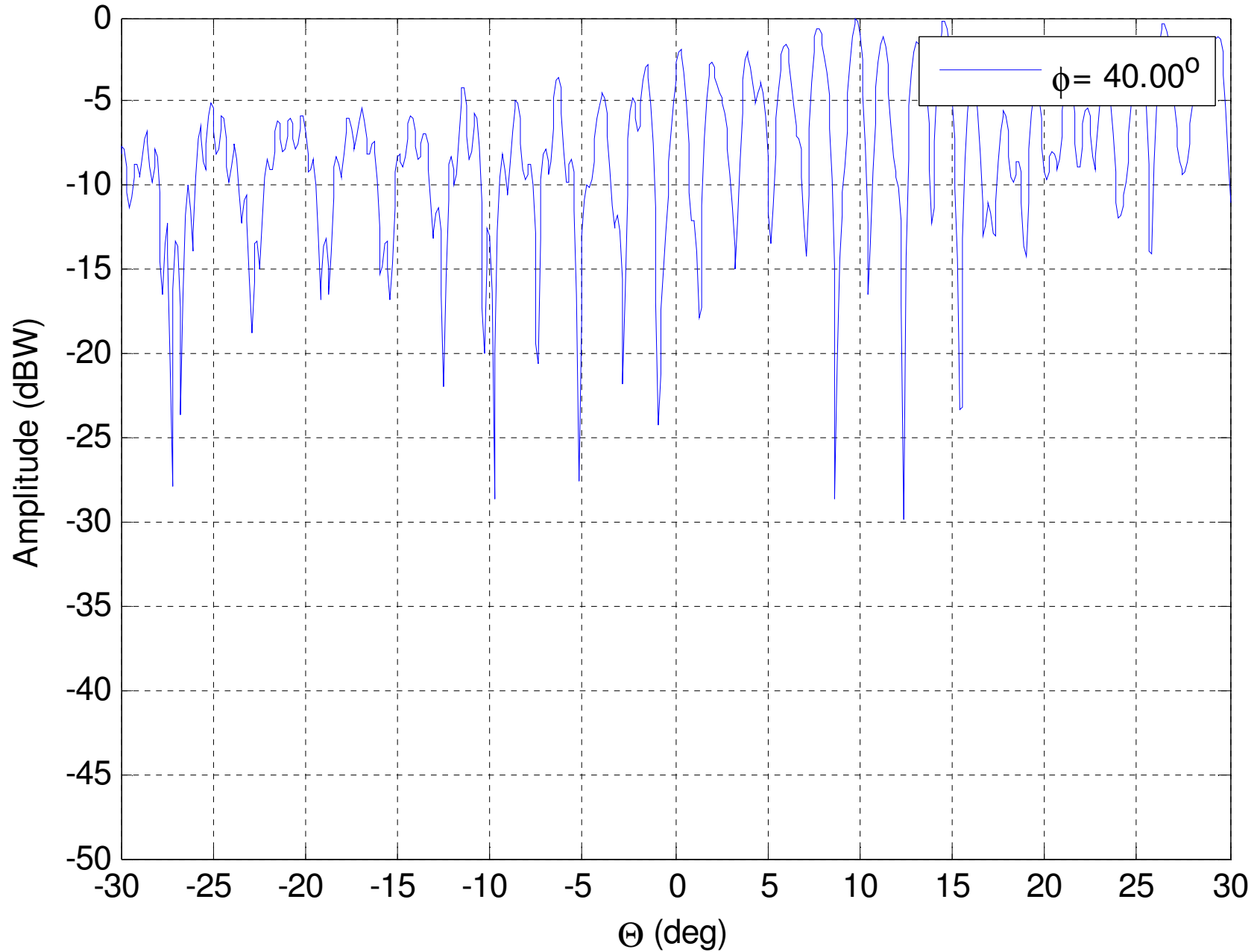
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -5.68 dBW, Date: 14-Dec-2011



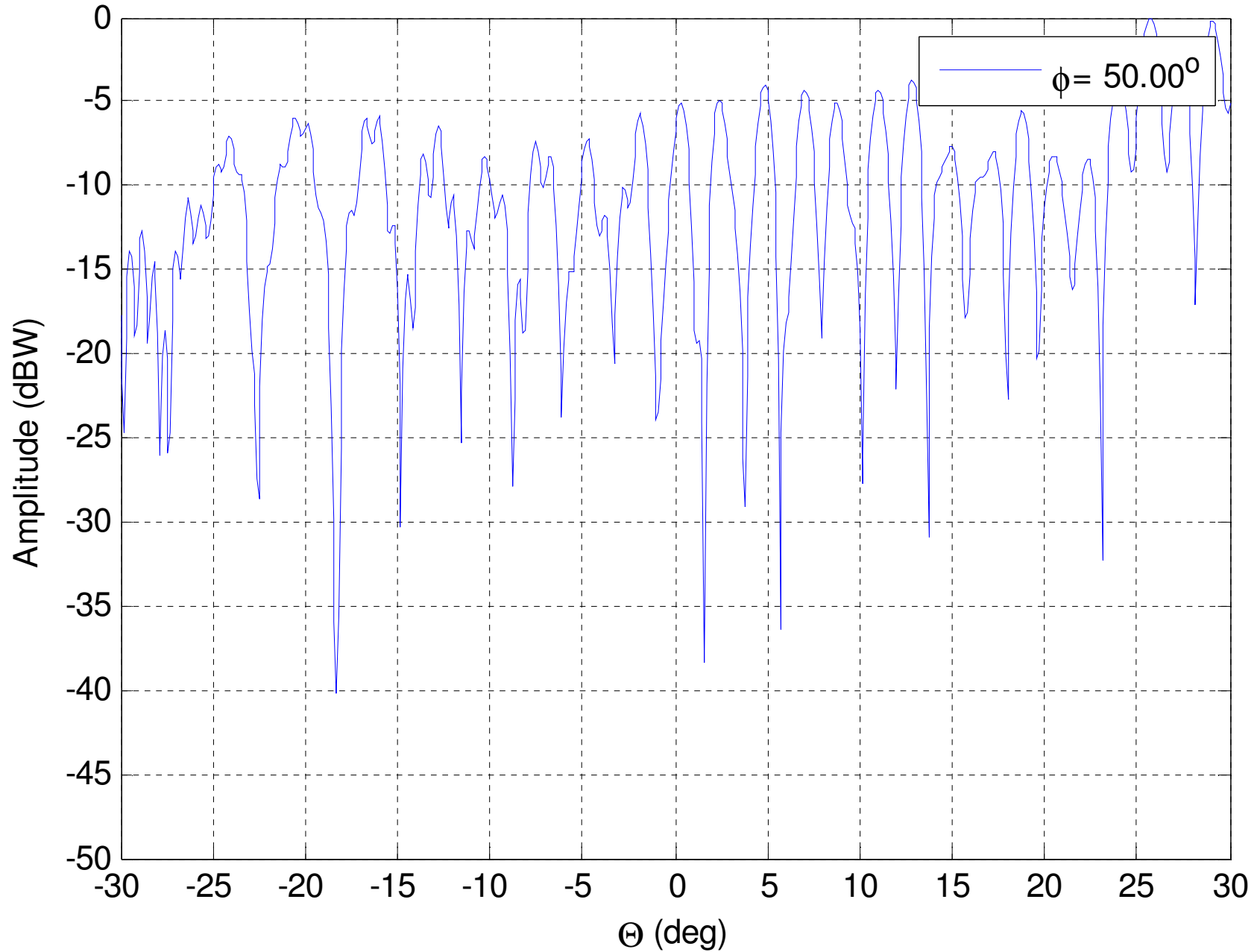
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -11.53 dBW, Date: 14-Dec-2011



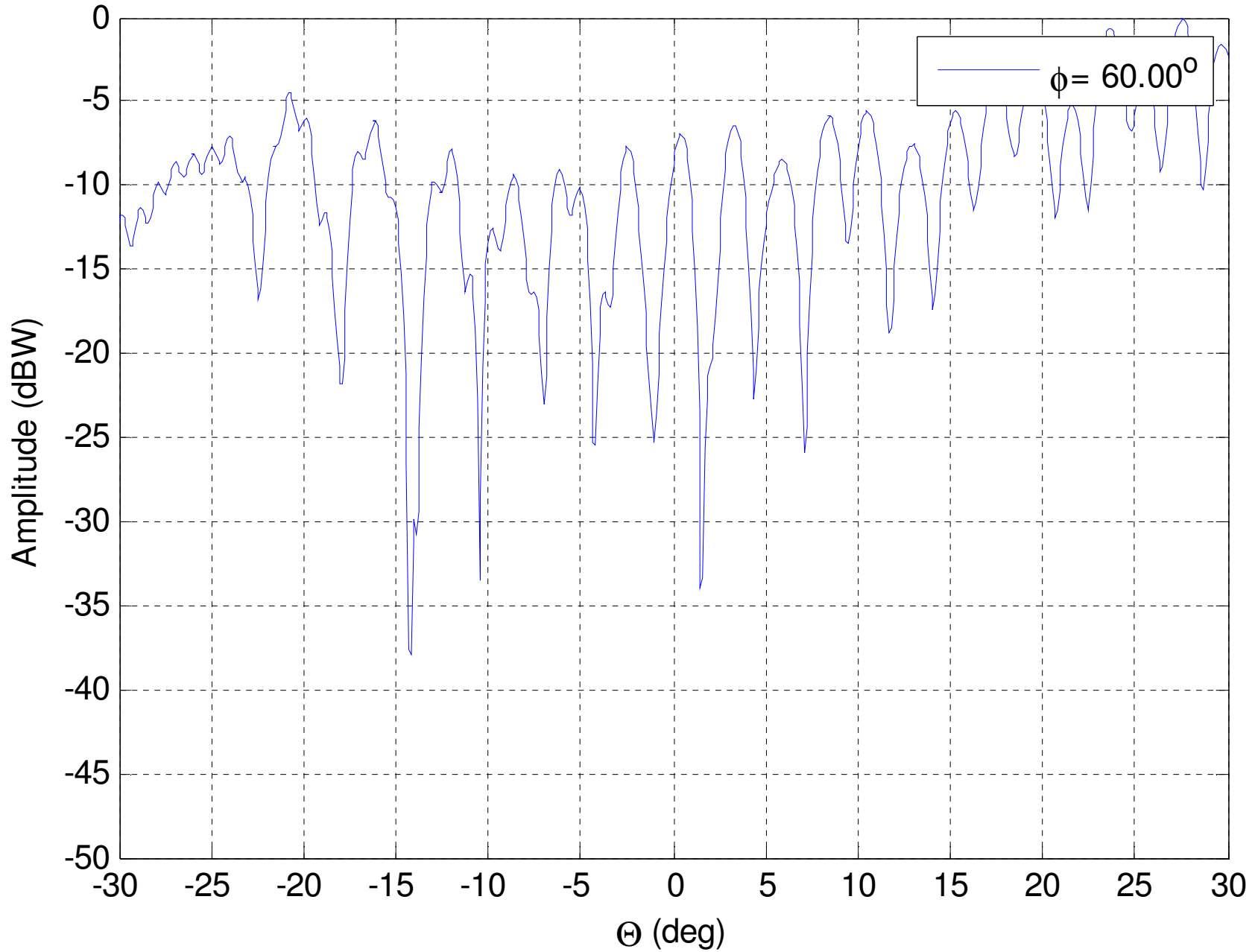
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -8.40 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

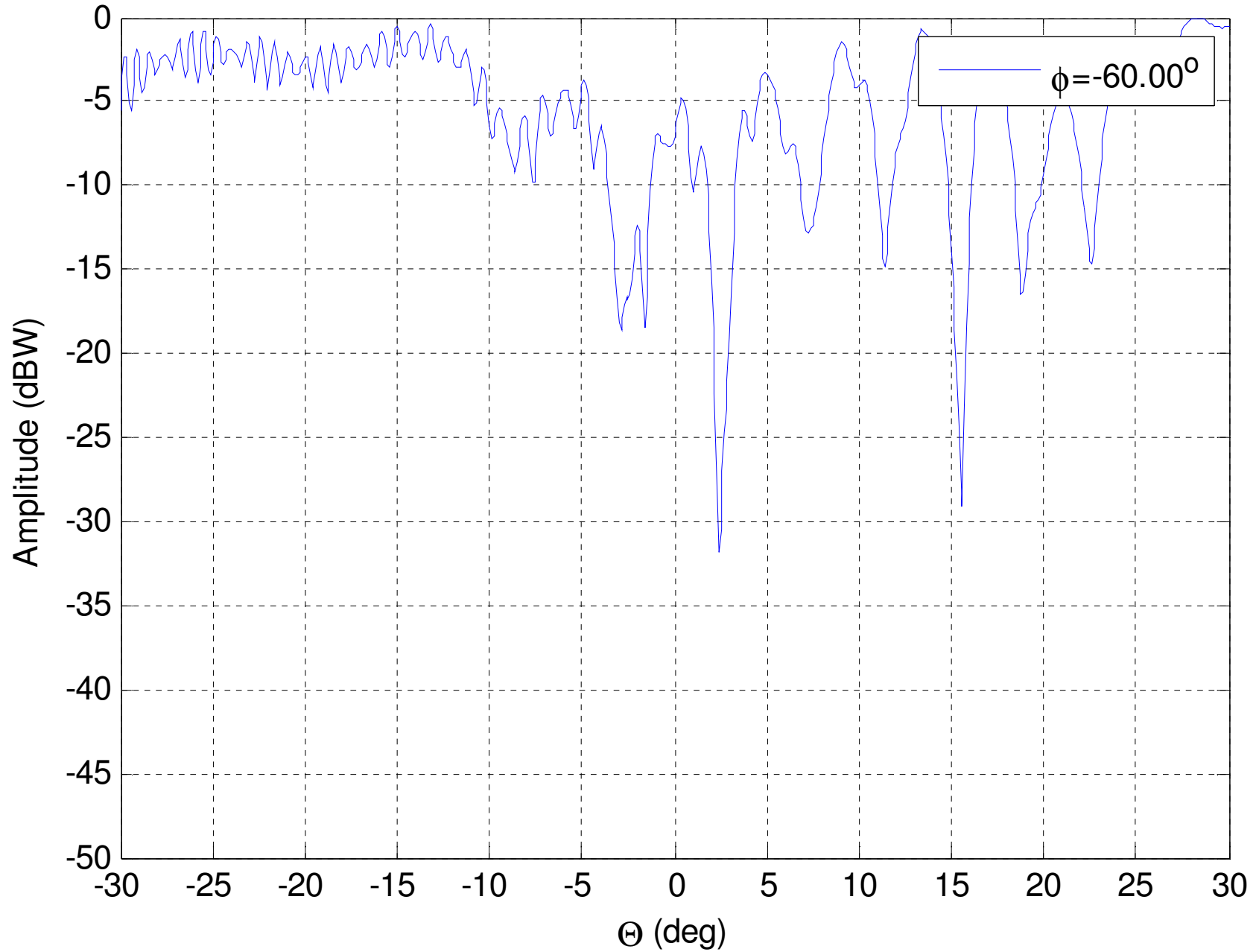
Input file: tx-17.3-rhcp-60.cut, Peak: -6.52 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

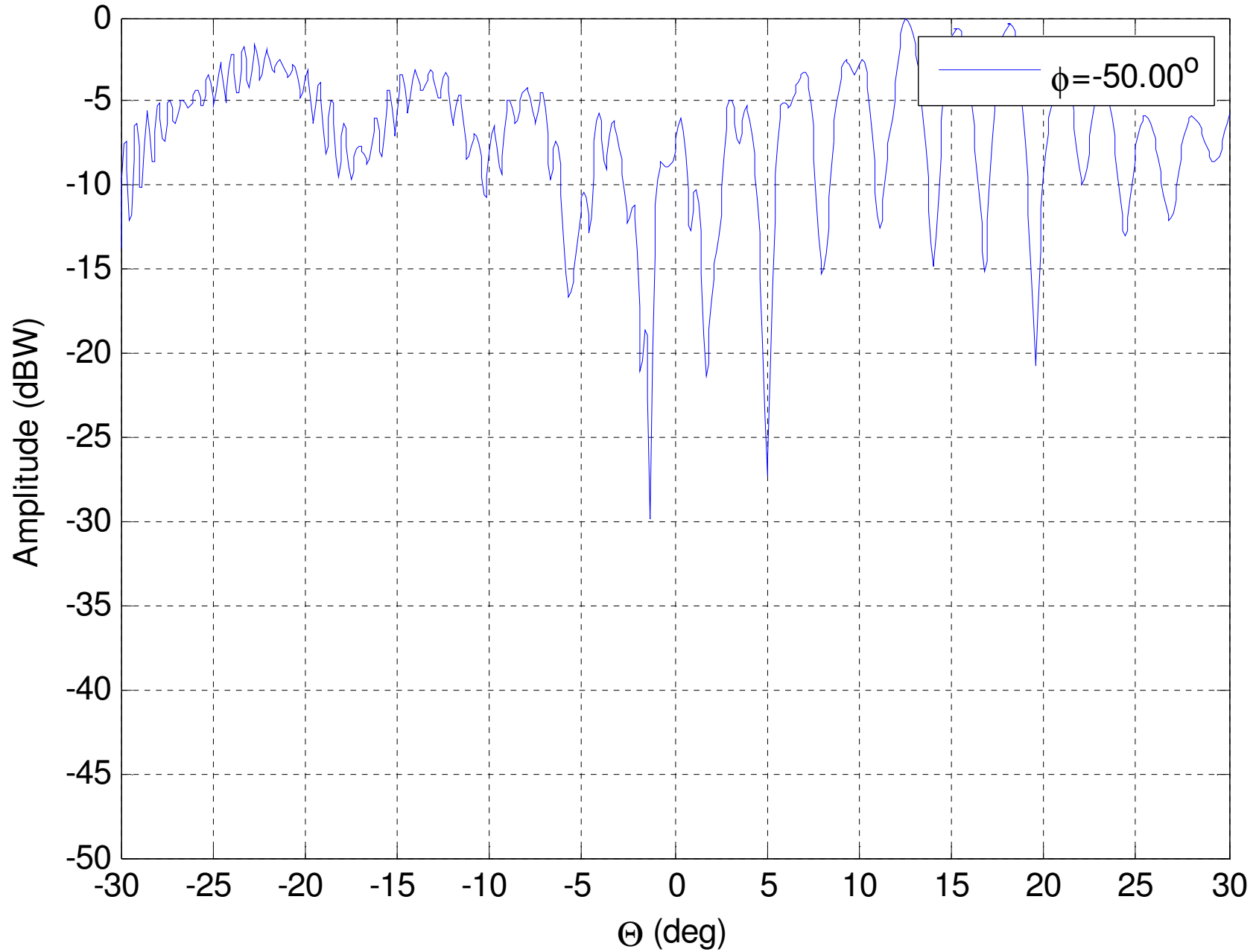
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -8.55 dBW, Date: 14-Dec-2011



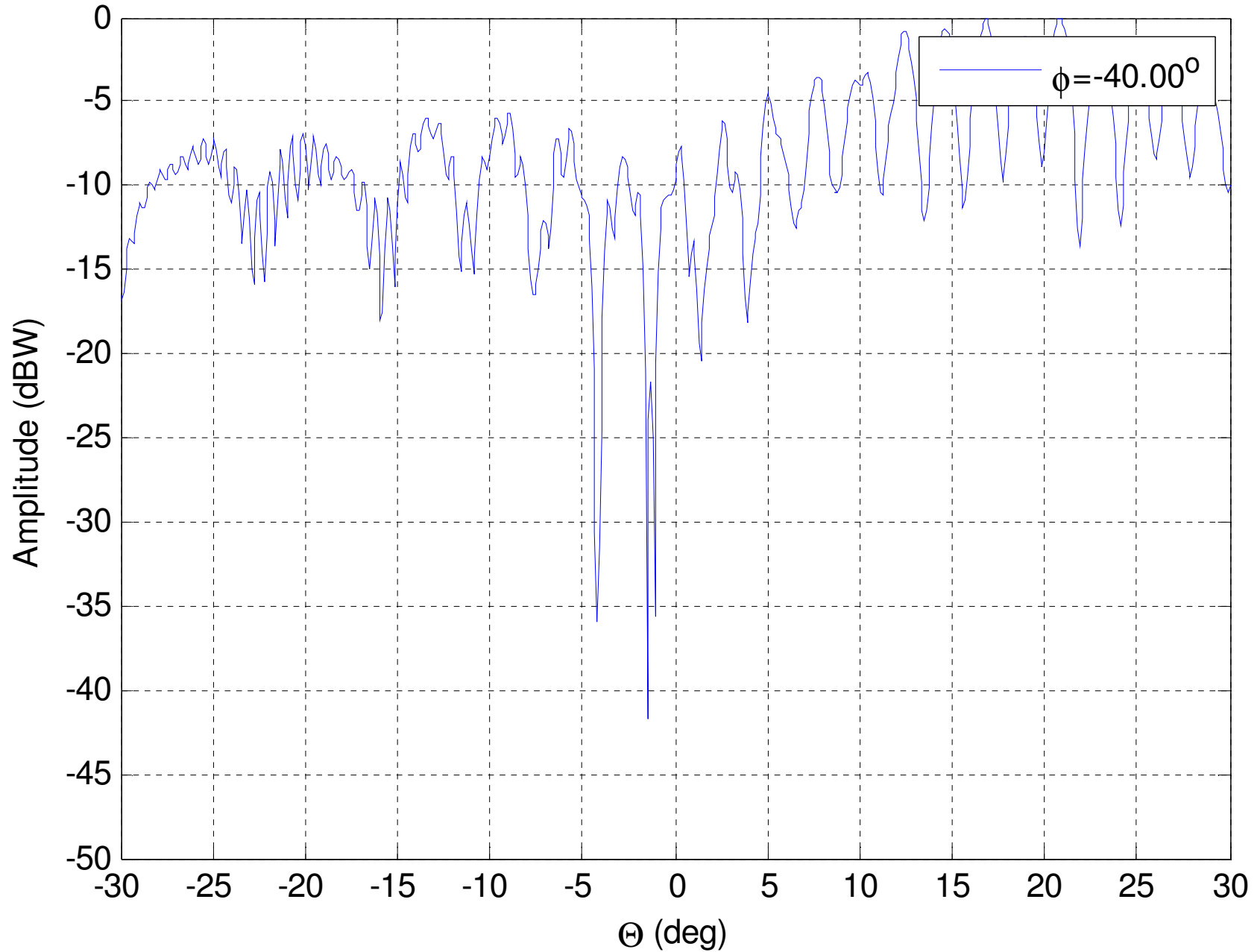
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -7.53 dBW, Date: 14-Dec-2011



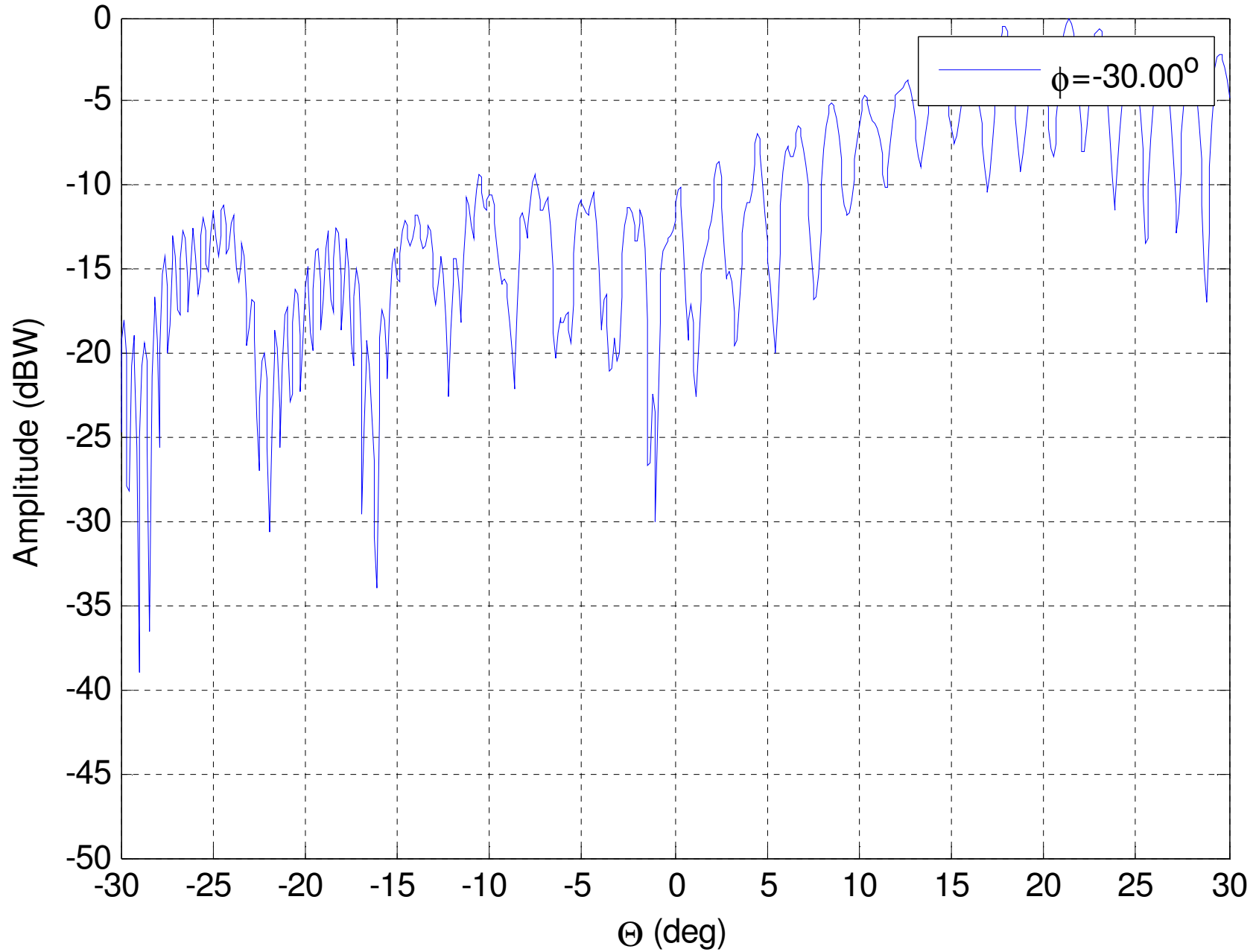
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -5.87 dBW, Date: 14-Dec-2011



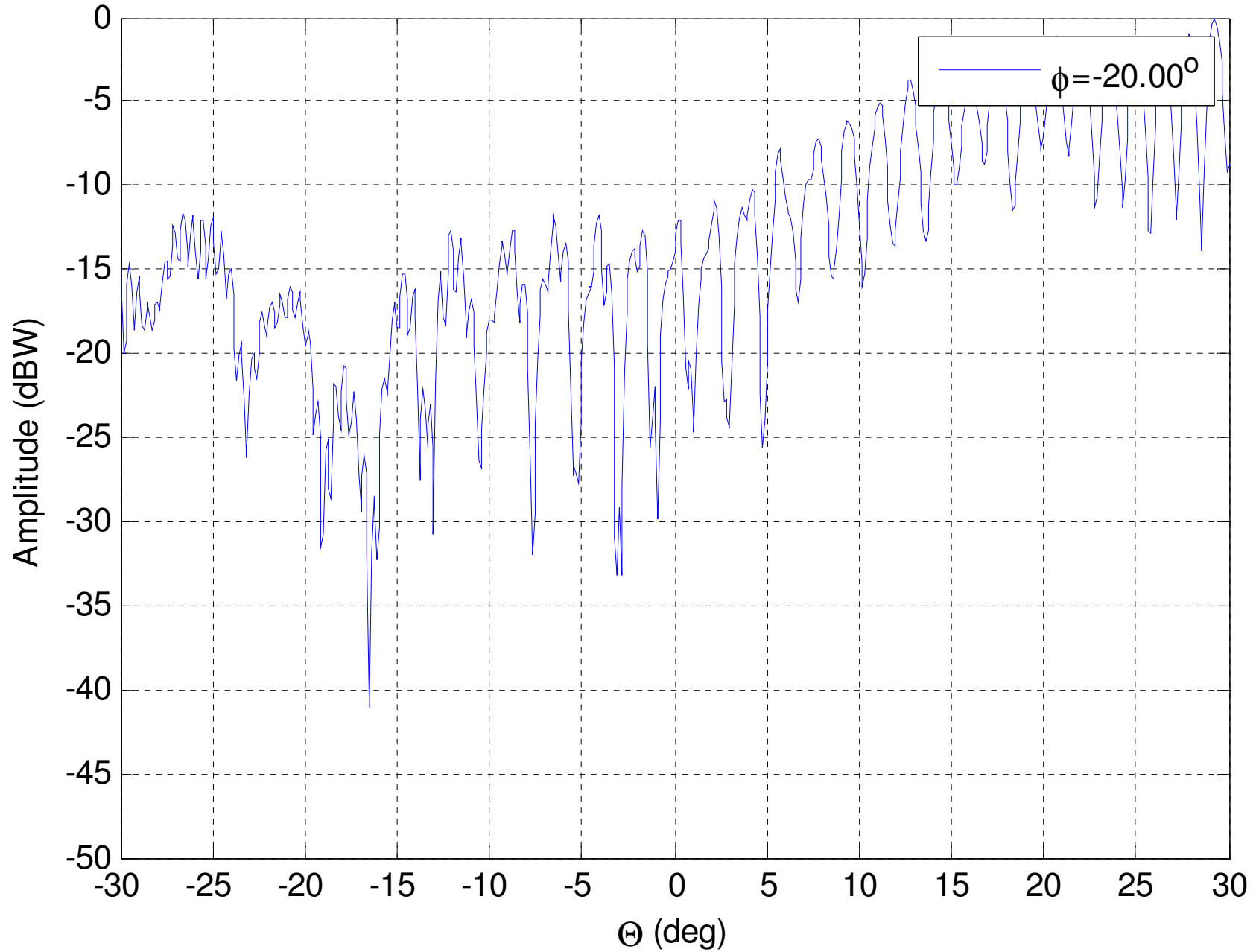
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -3.51 dBW, Date: 14-Dec-2011



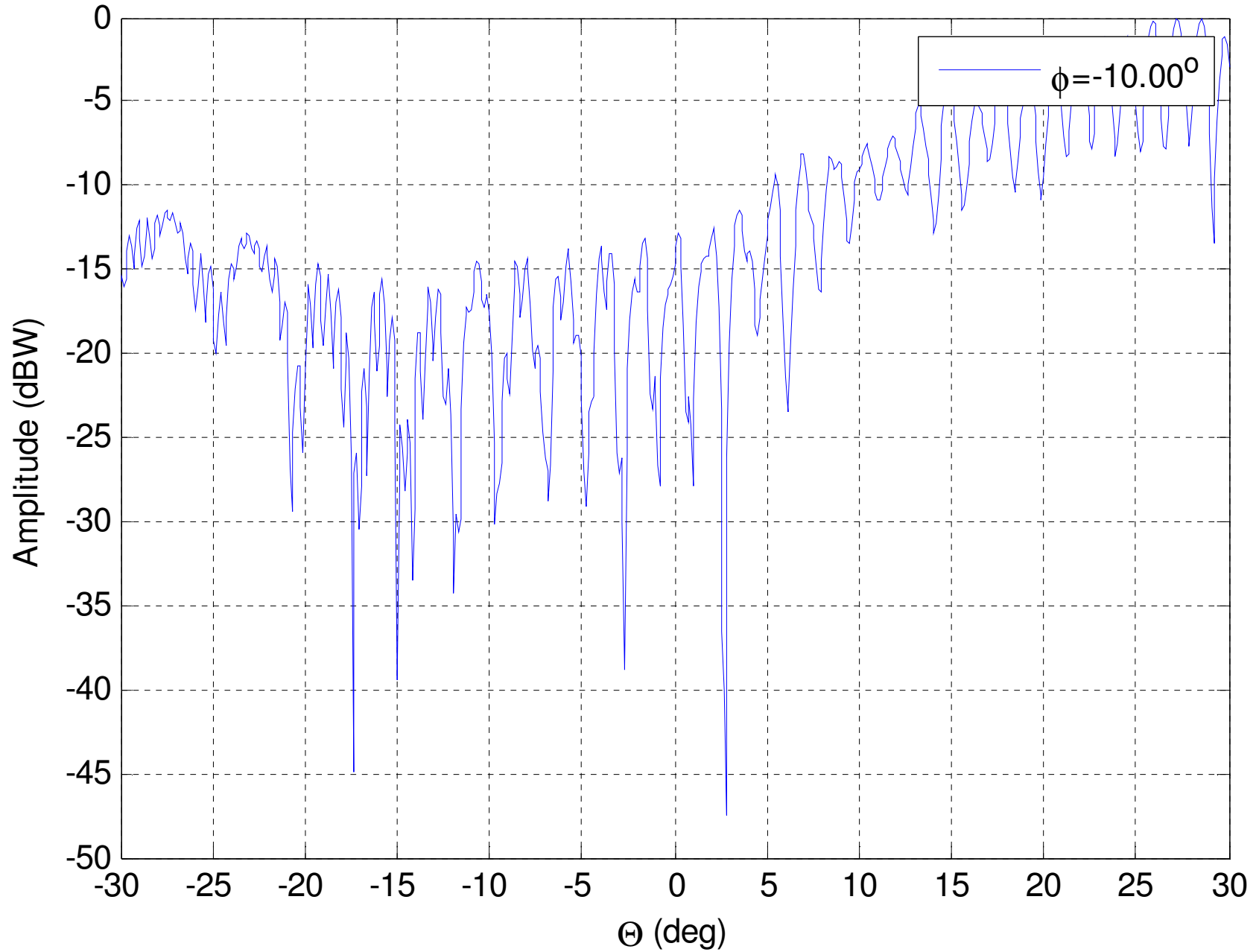
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -1.70 dBW, Date: 14-Dec-2011



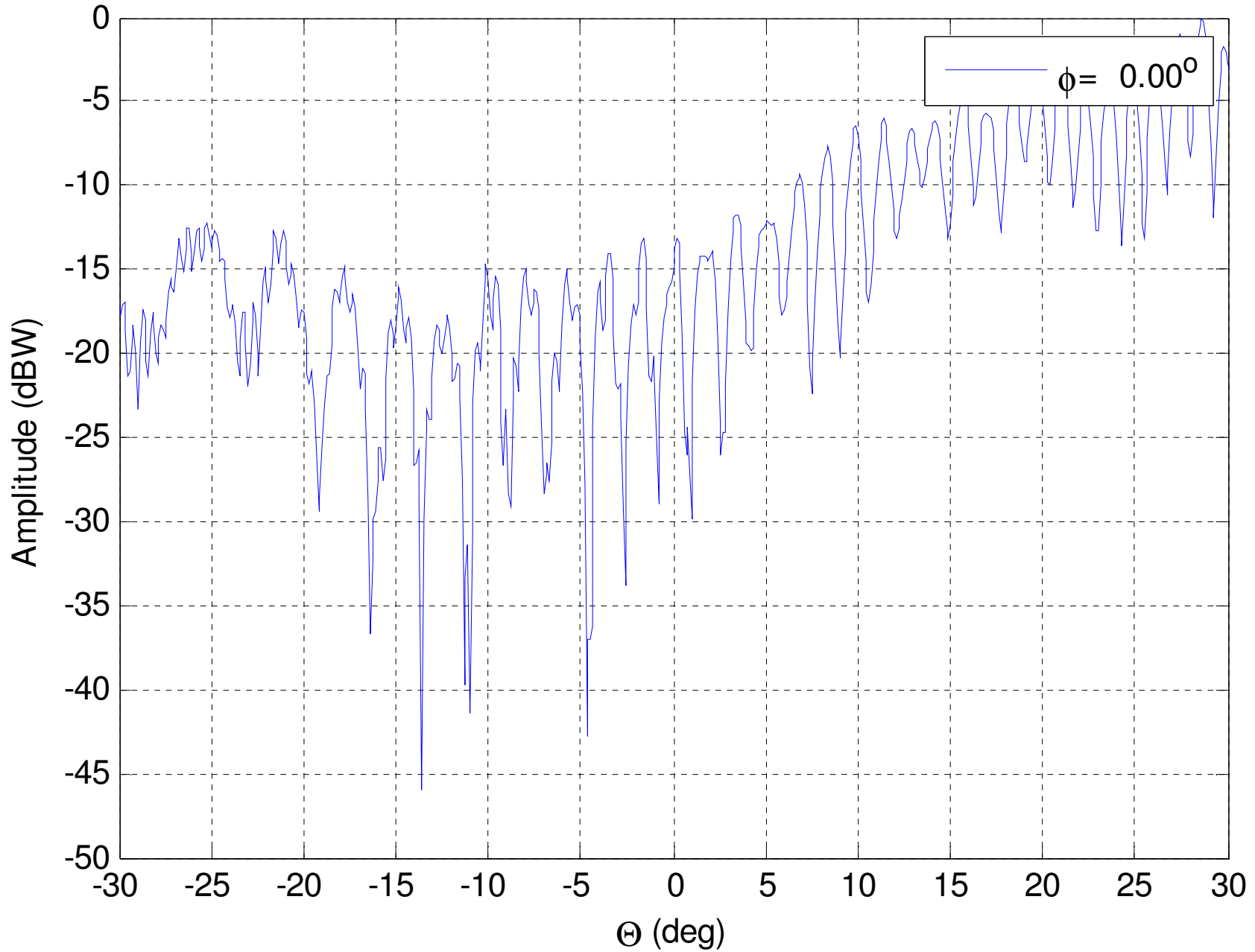
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -0.89 dBW, Date: 14-Dec-2011



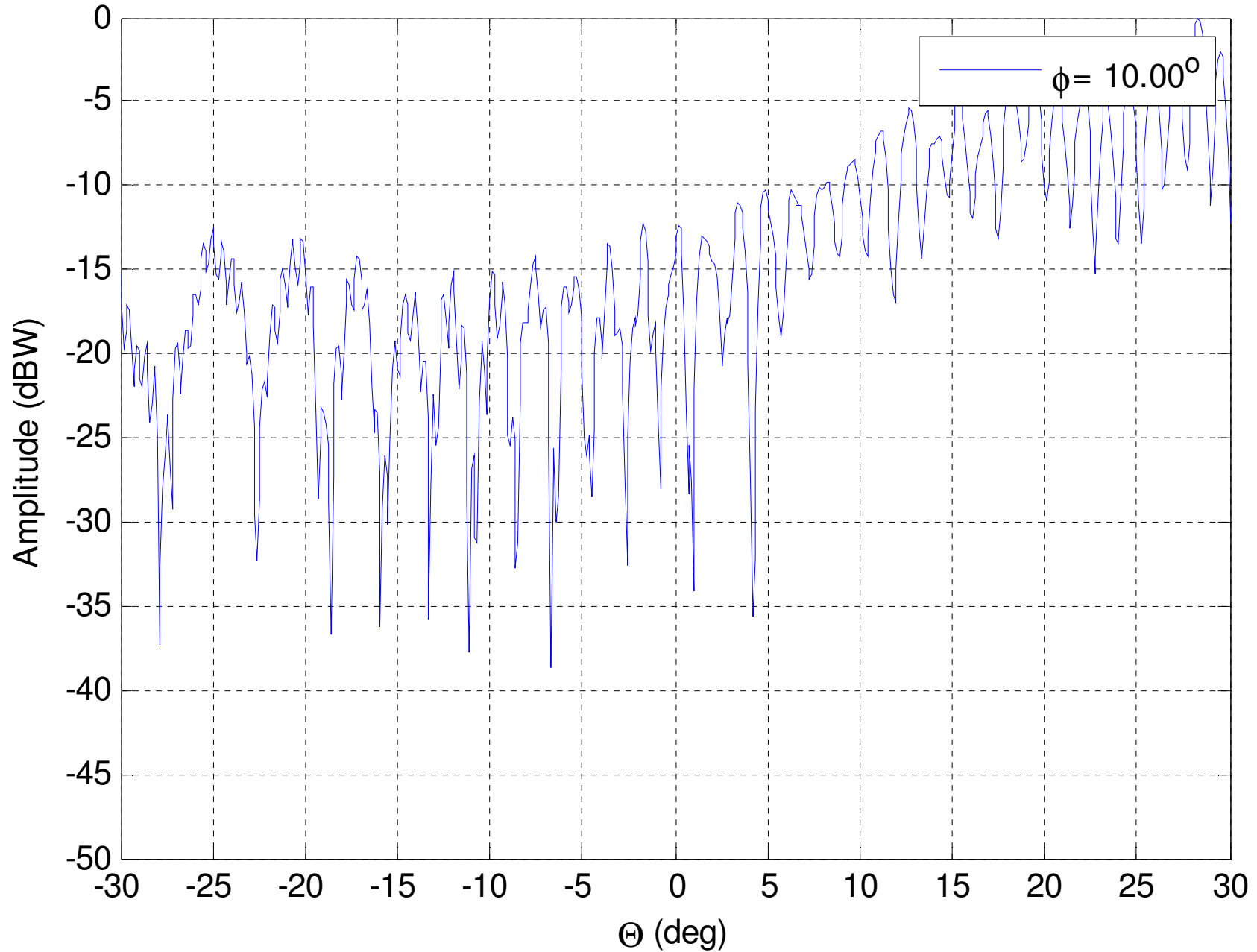
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -0.68 dBW, Date: 14-Dec-2011



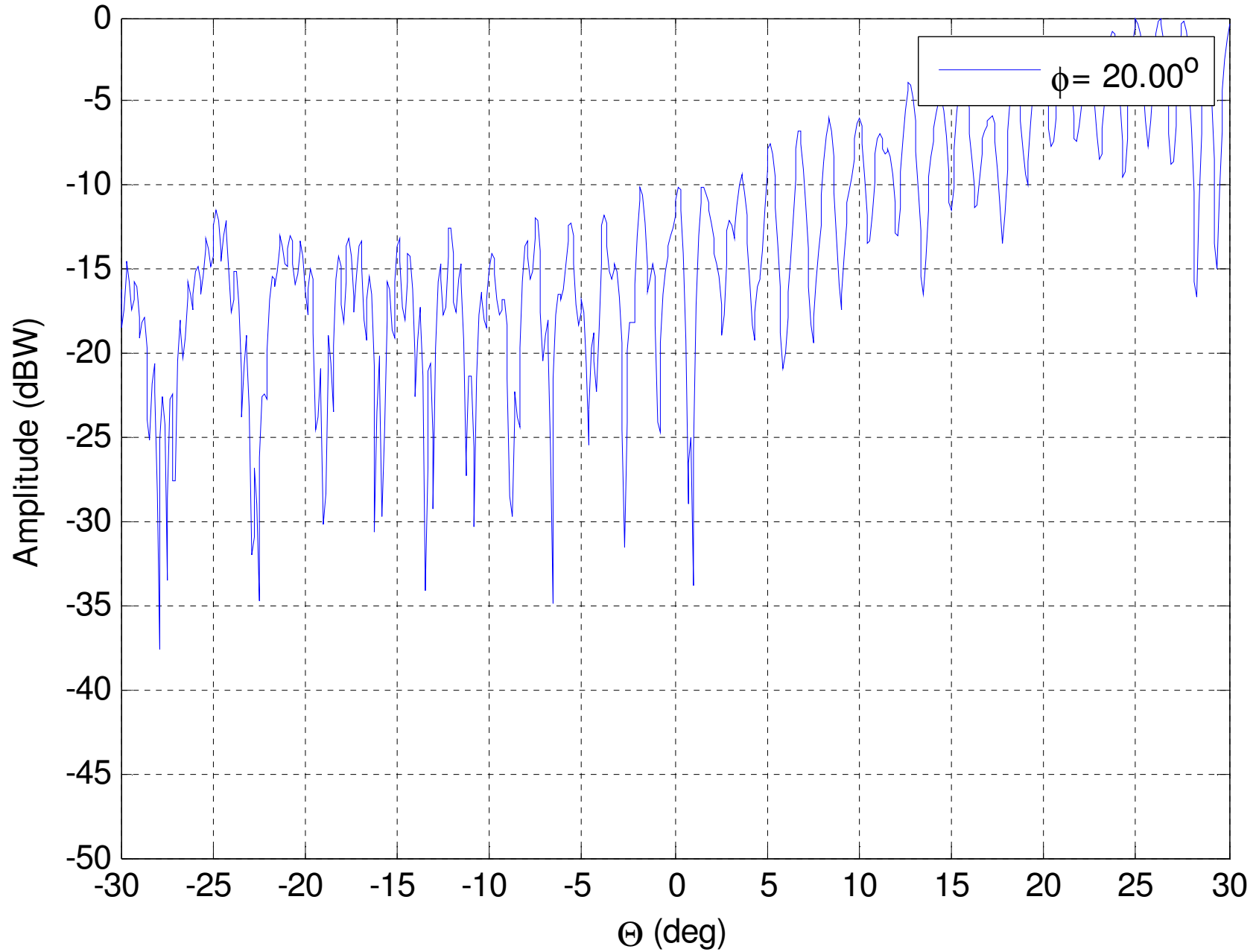
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -1.49 dBW, Date: 14-Dec-2011



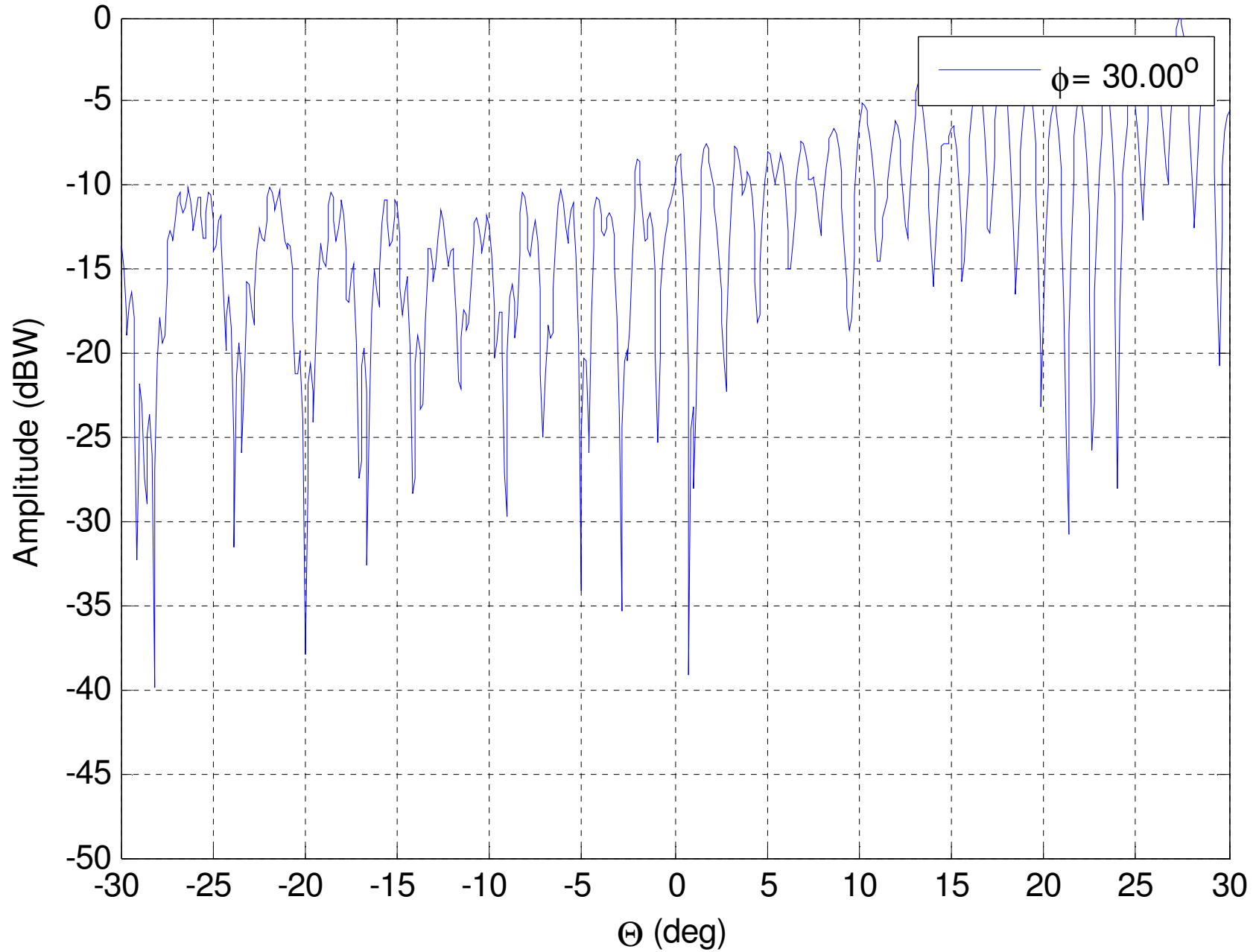
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -3.82 dBW, Date: 14-Dec-2011



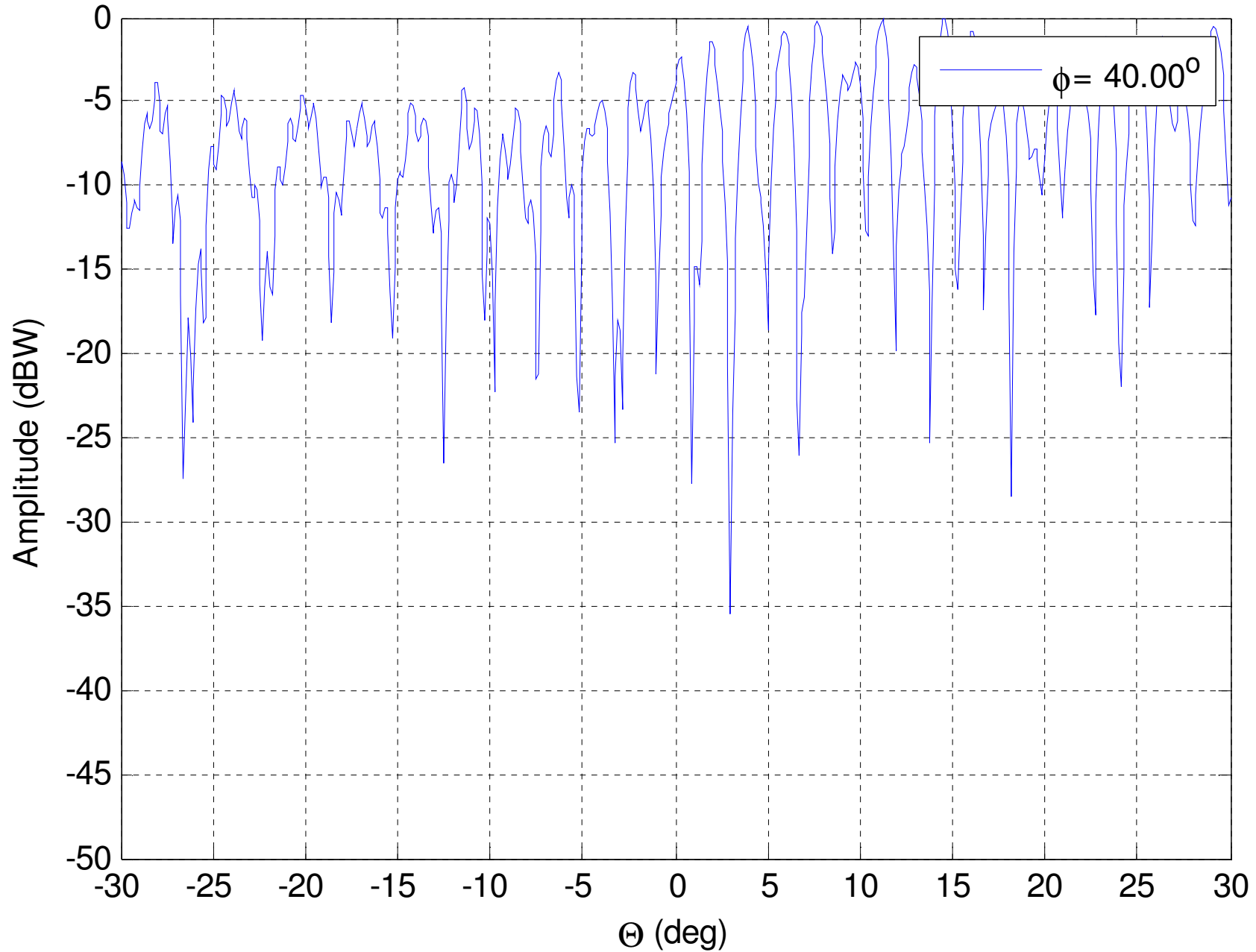
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -5.89 dBW, Date: 14-Dec-2011



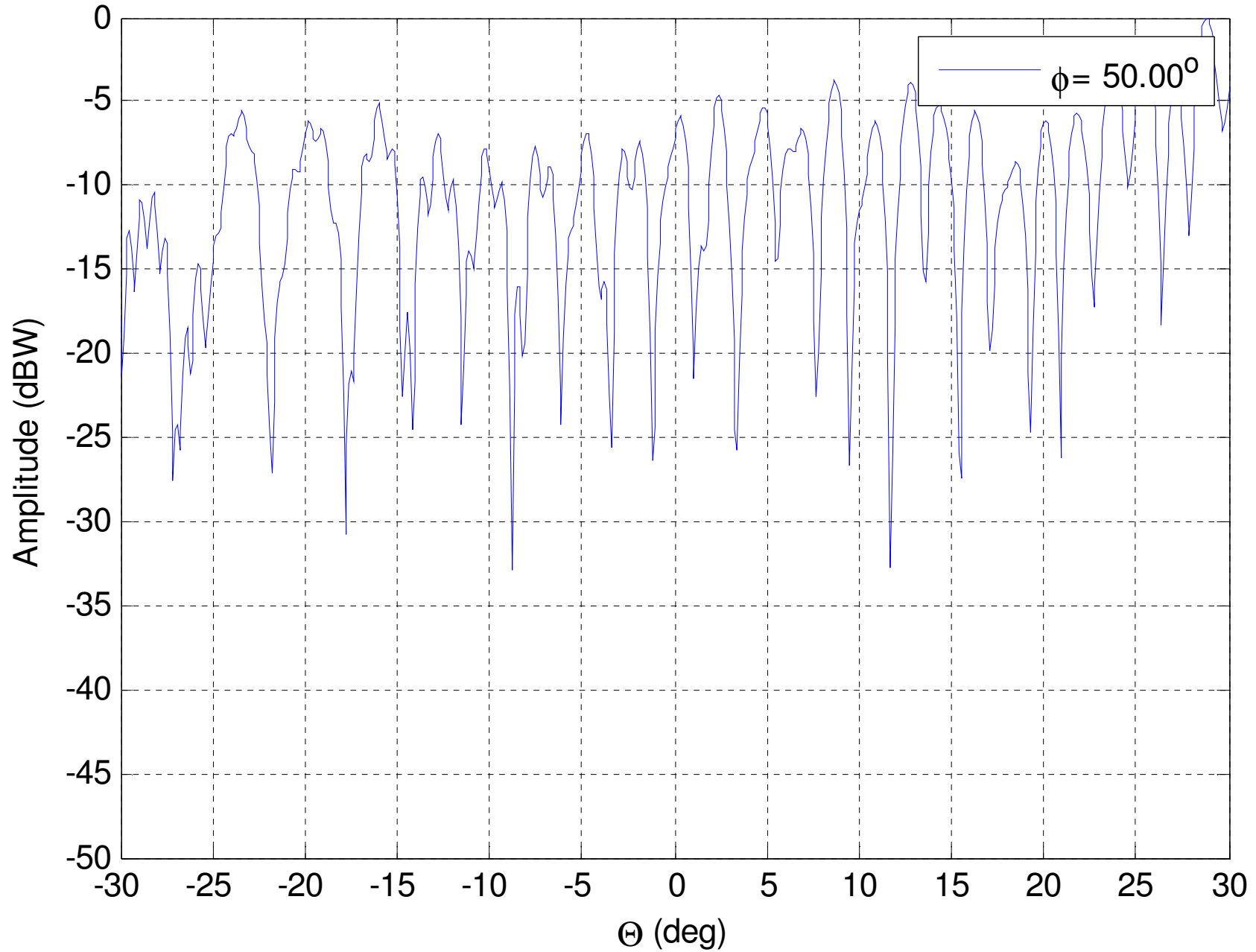
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.72 dBW, Date: 14-Dec-2011



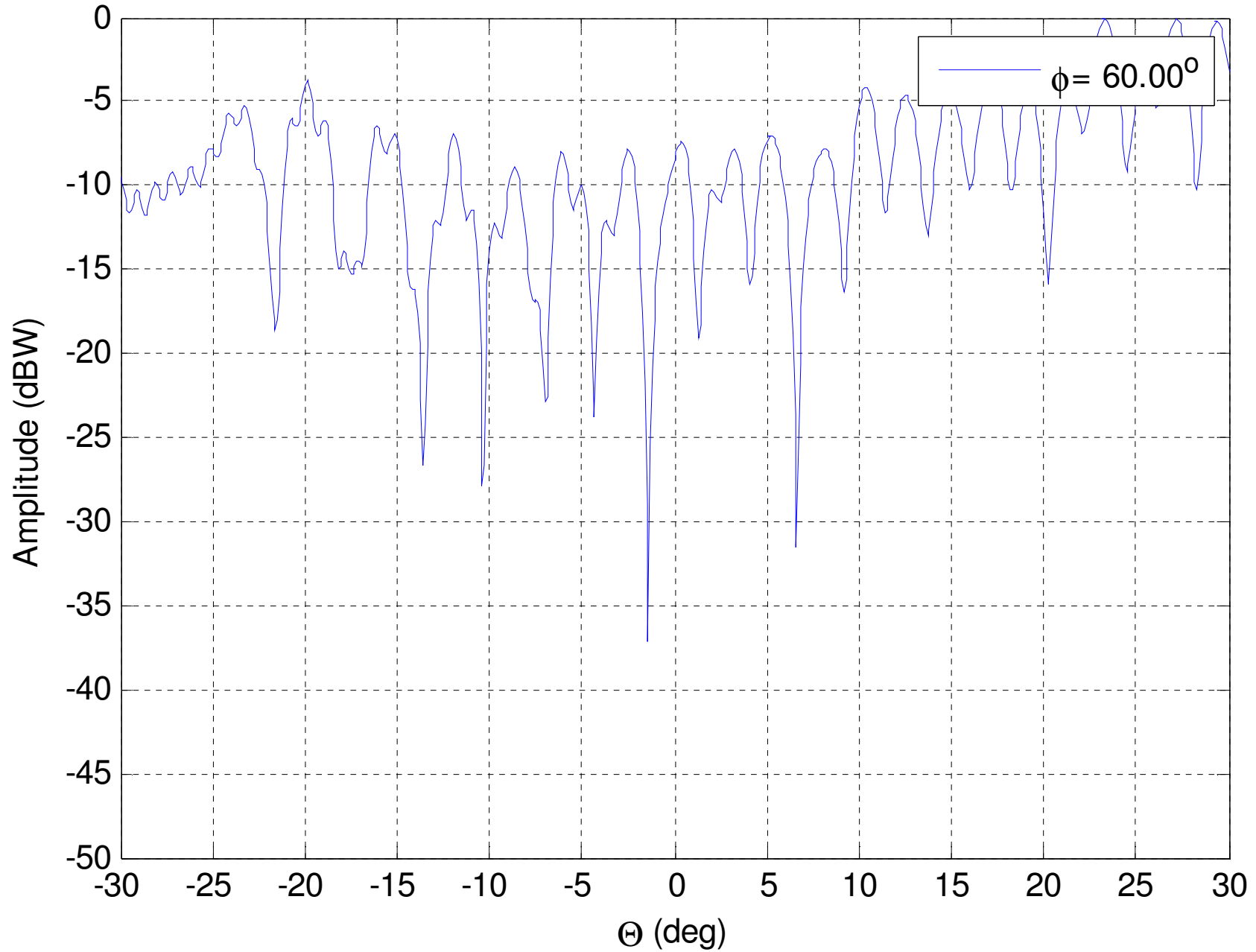
Normalized pattern cuts - farfield

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



Normalized pattern cuts - farfield

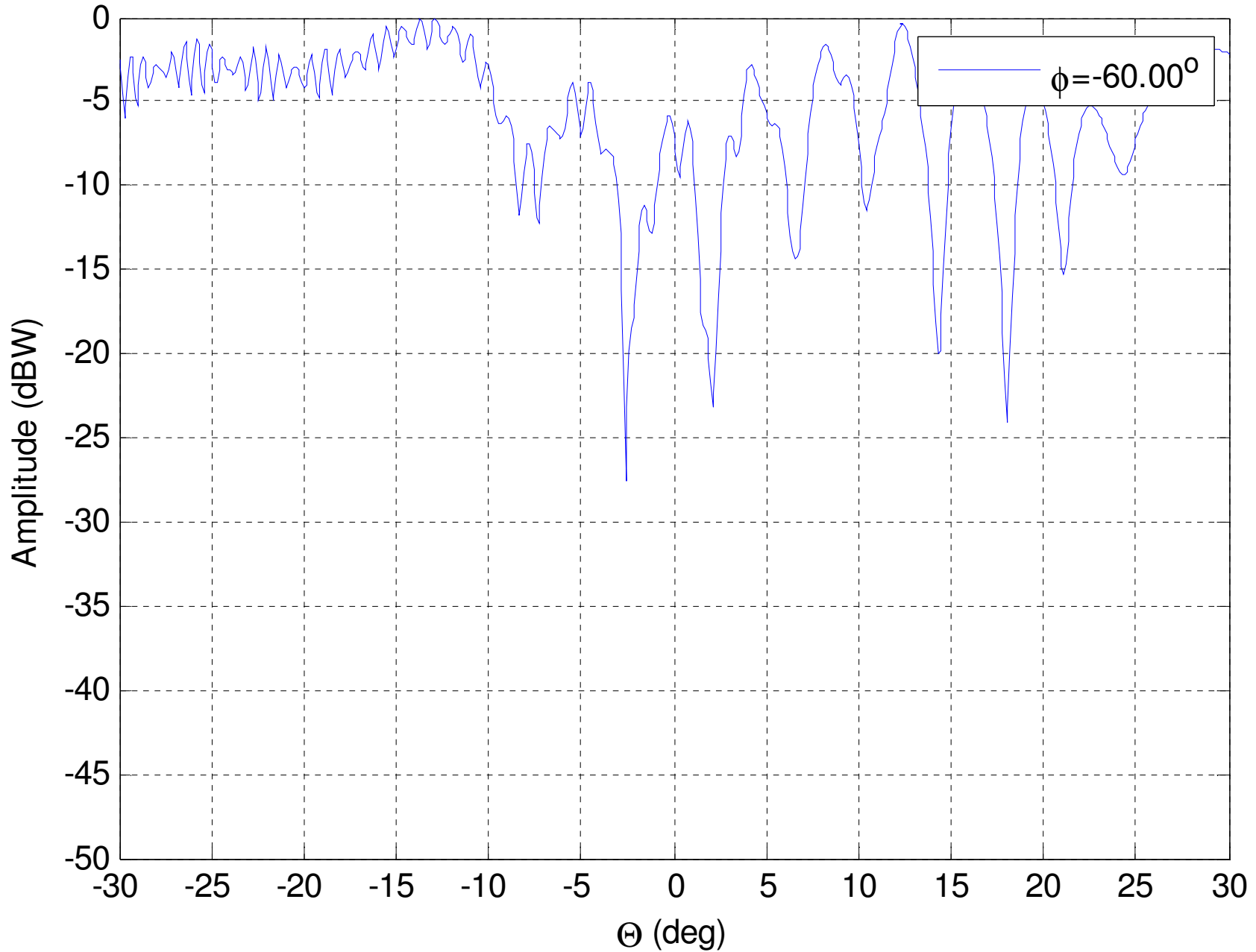
Input file: tx-17.3-lhcp-60.cut, Peak: -7.13 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

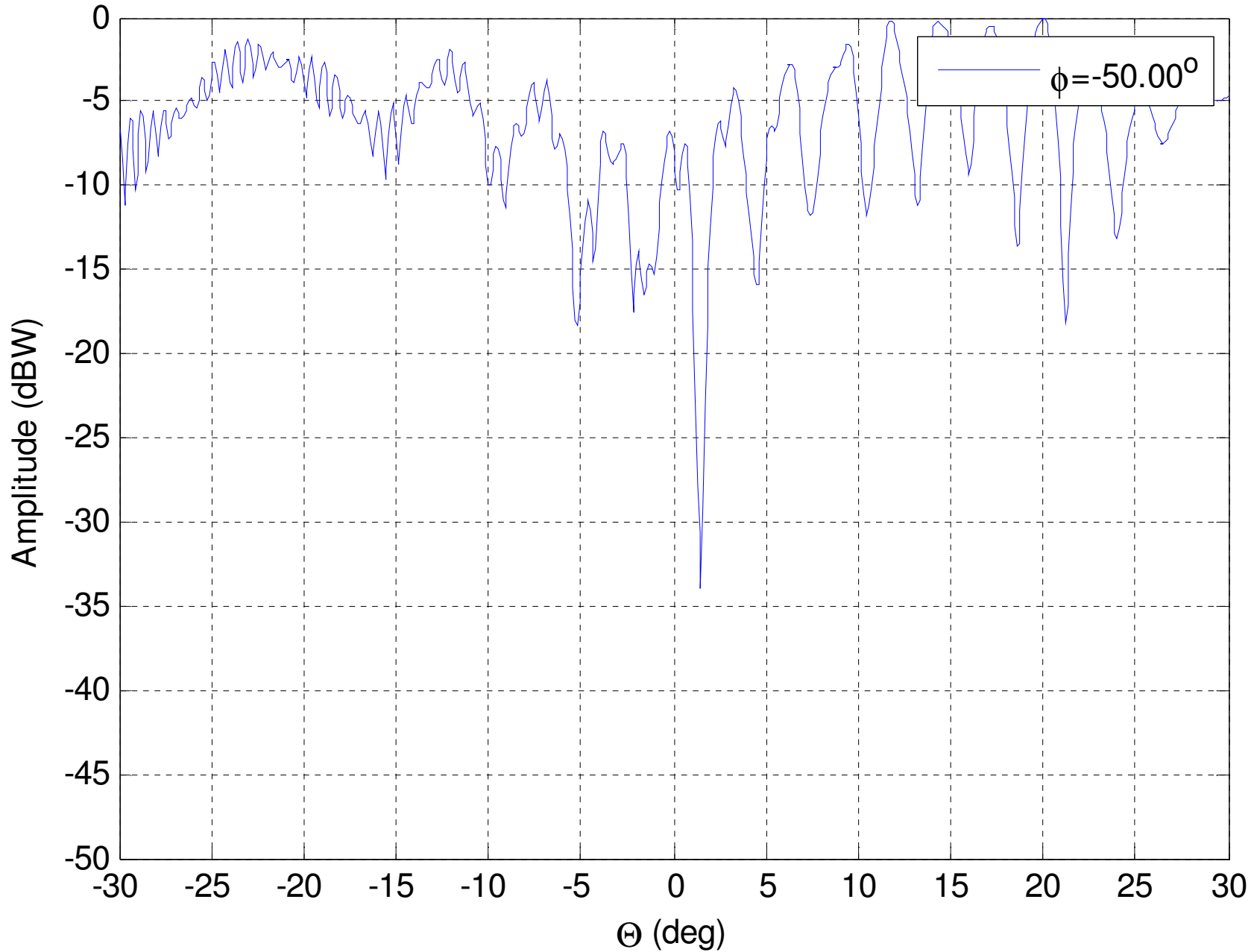
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -8.77 dBW, Date: 14-Dec-2011



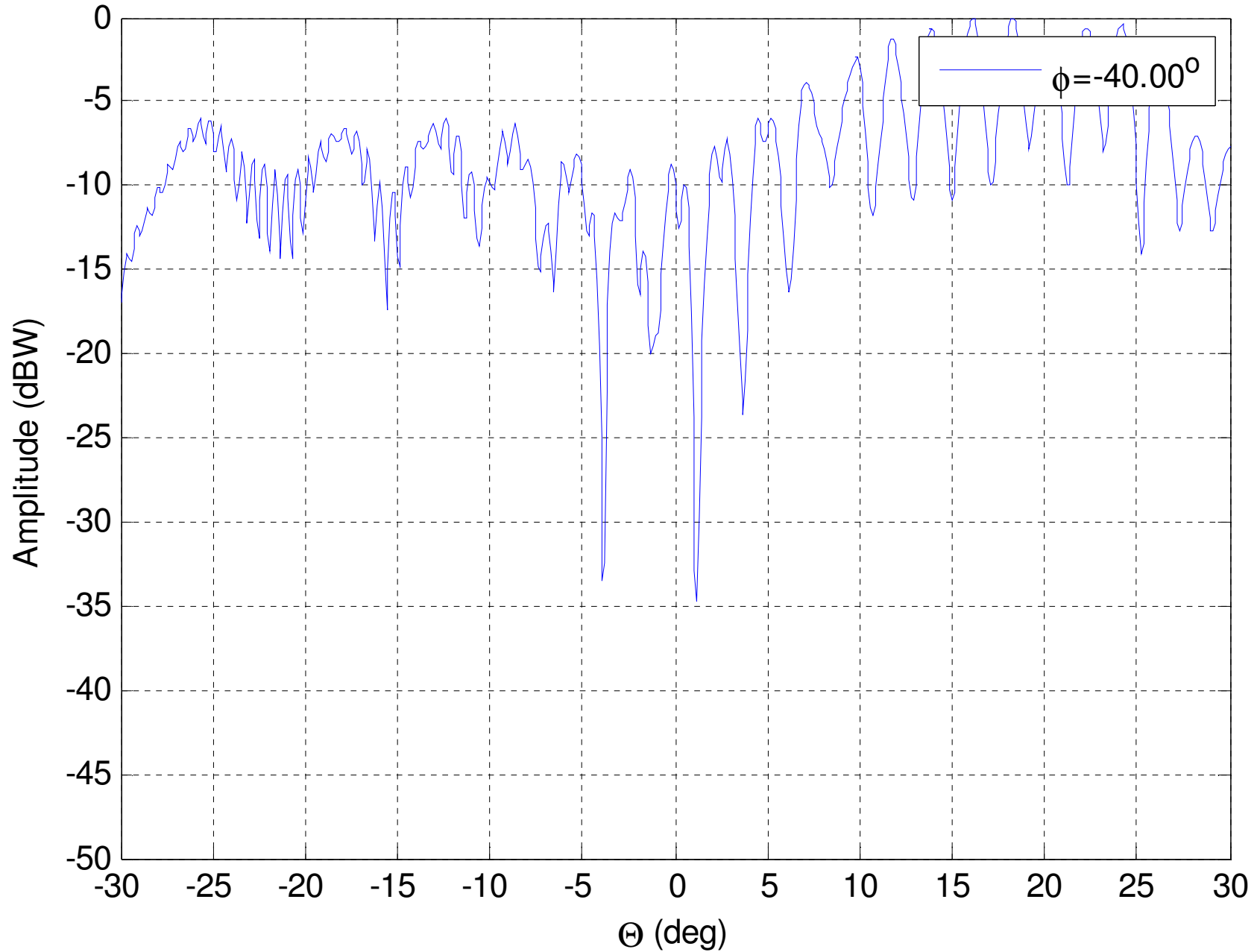
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -7.87 dBW, Date: 14-Dec-2011



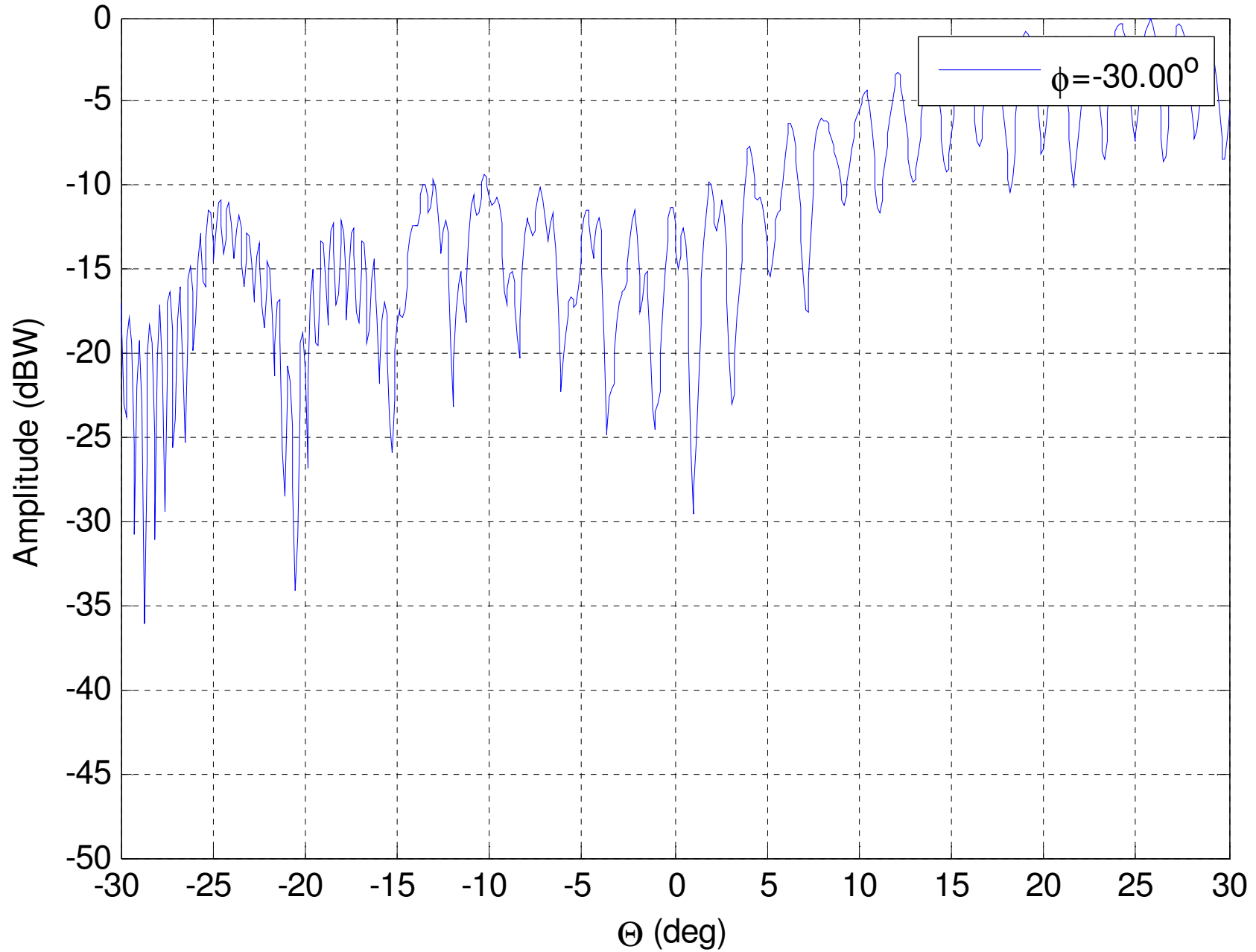
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -5.87 dBW, Date: 14-Dec-2011



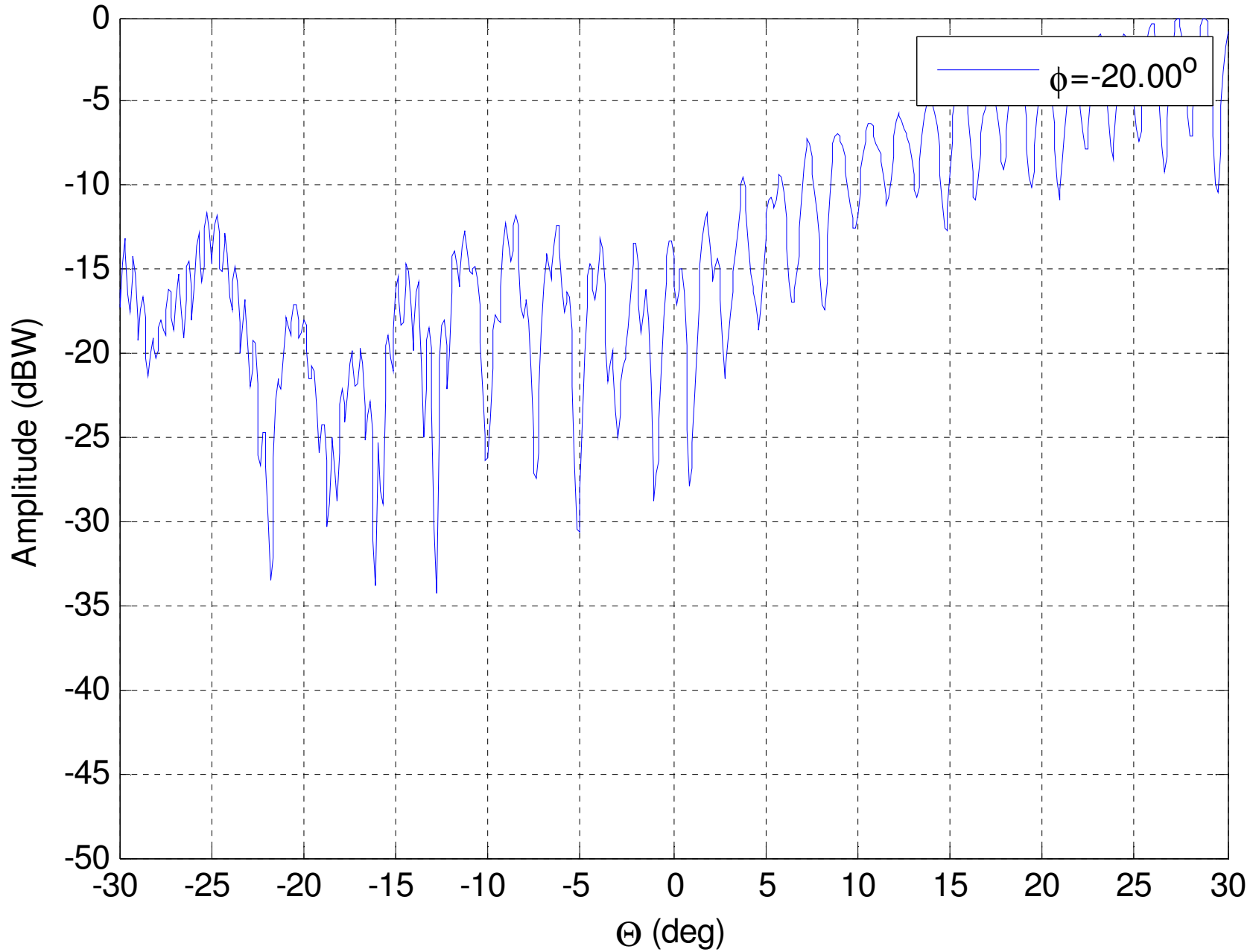
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -3.48 dBW, Date: 14-Dec-2011



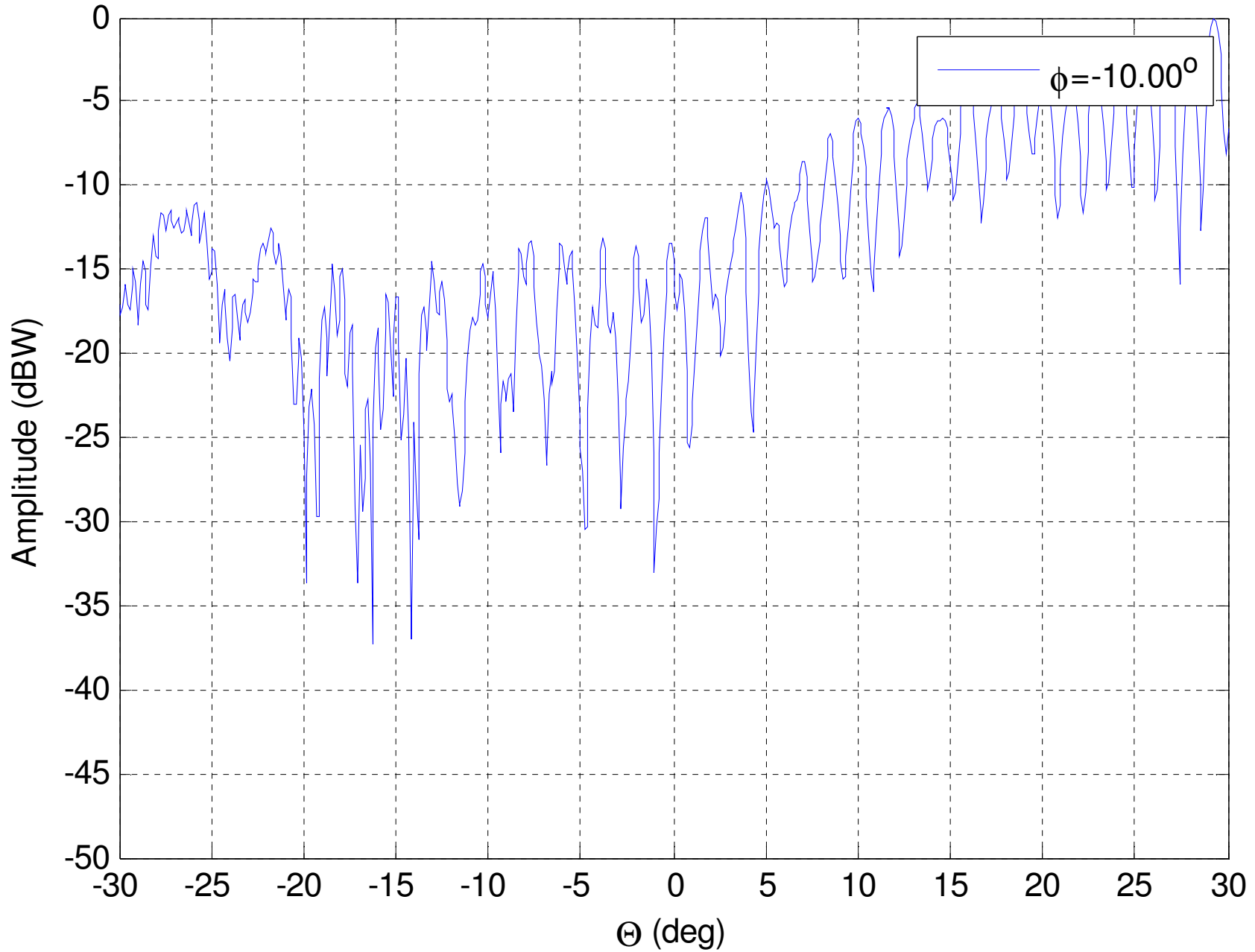
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -1.53 dBW, Date: 14-Dec-2011



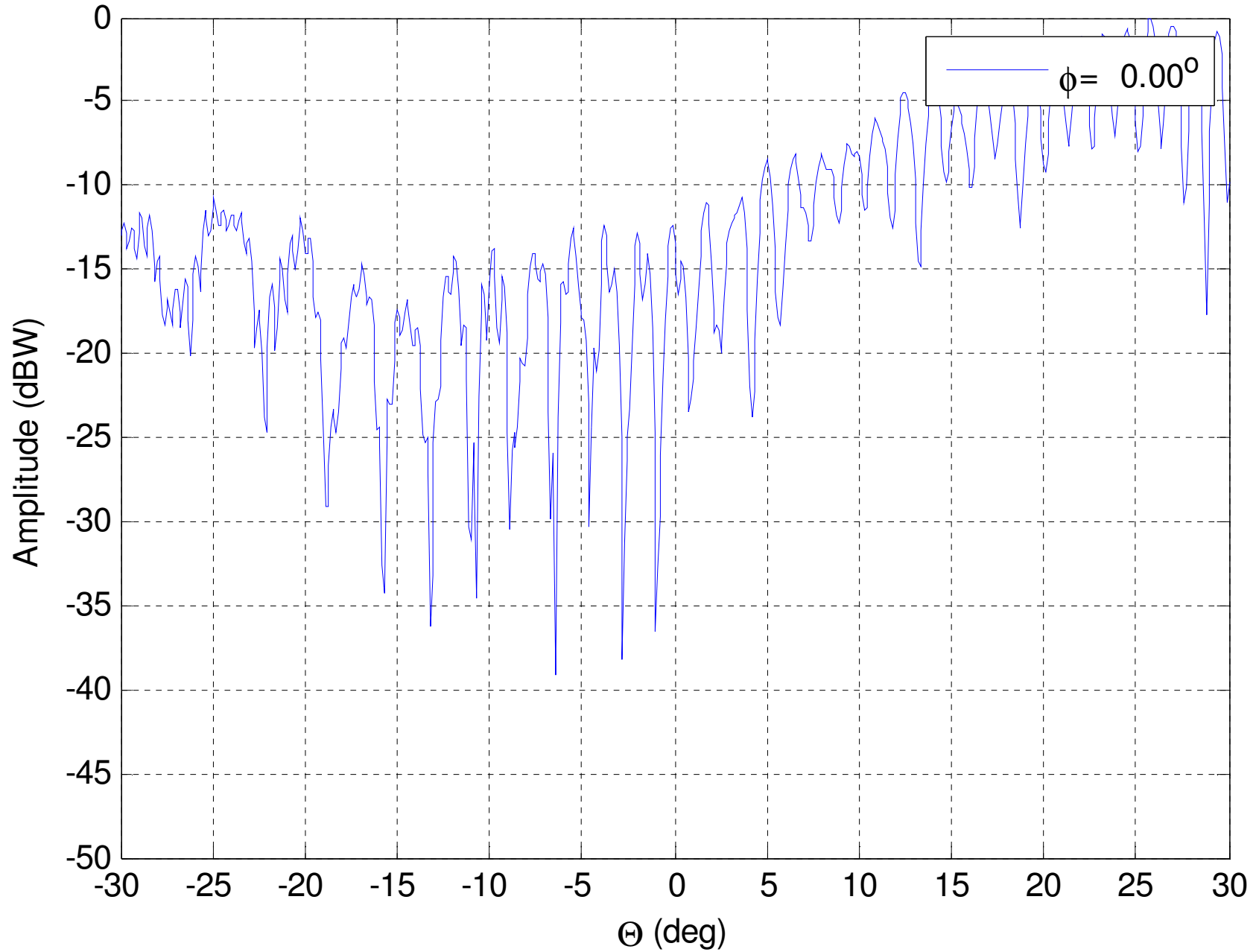
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -1.33 dBW, Date: 14-Dec-2011



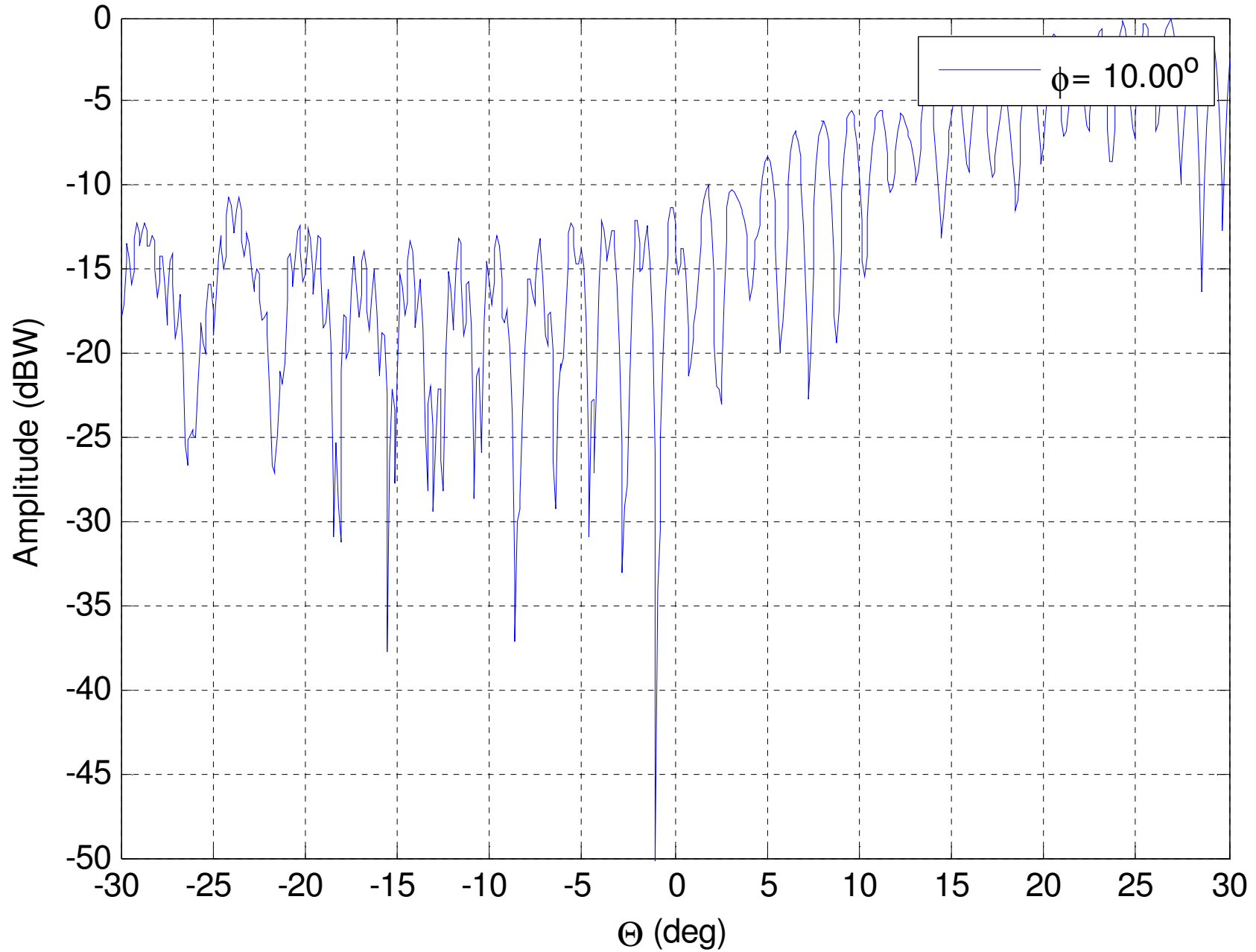
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -2.33 dBW, Date: 14-Dec-2011



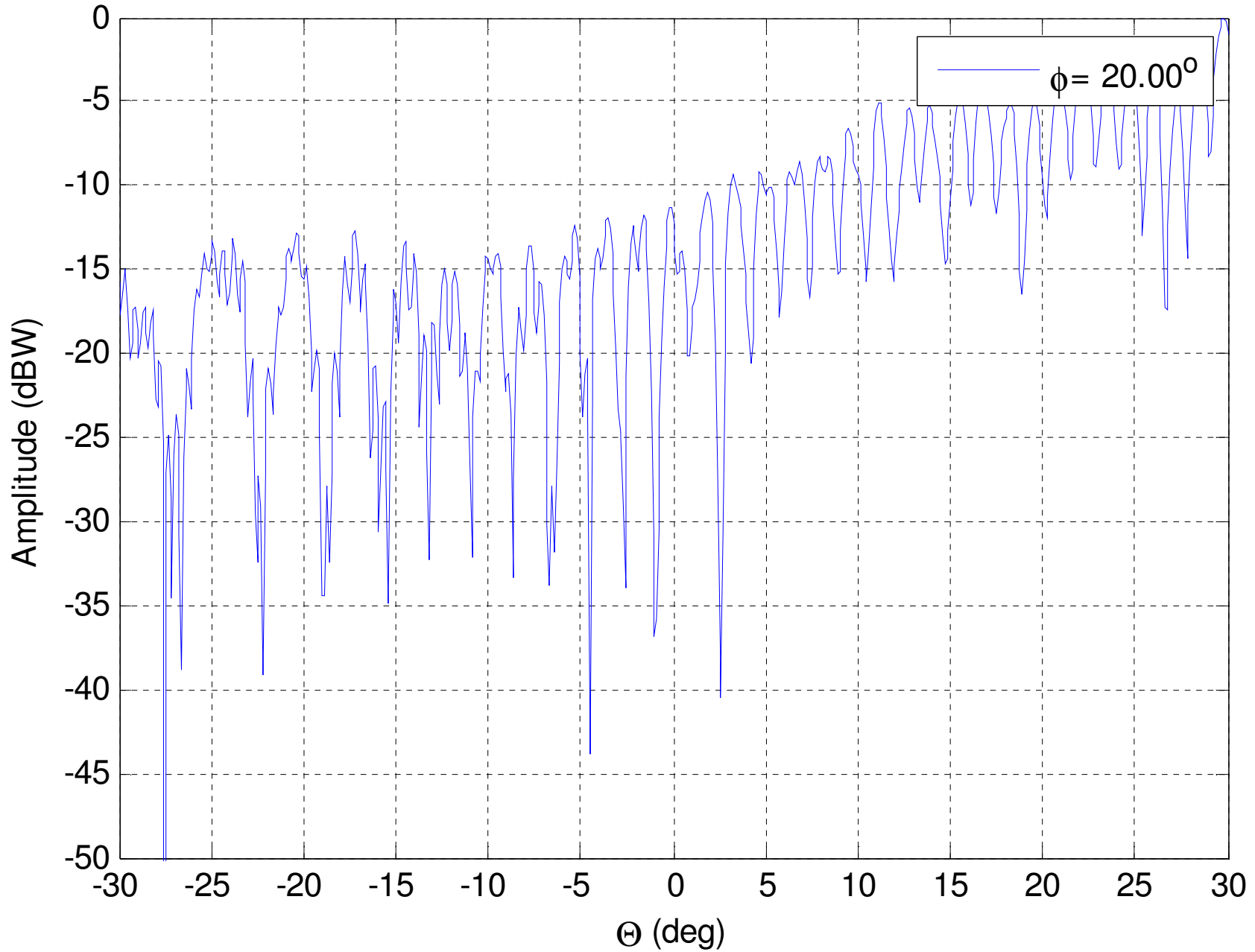
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.50 dBW, Date: 14-Dec-2011



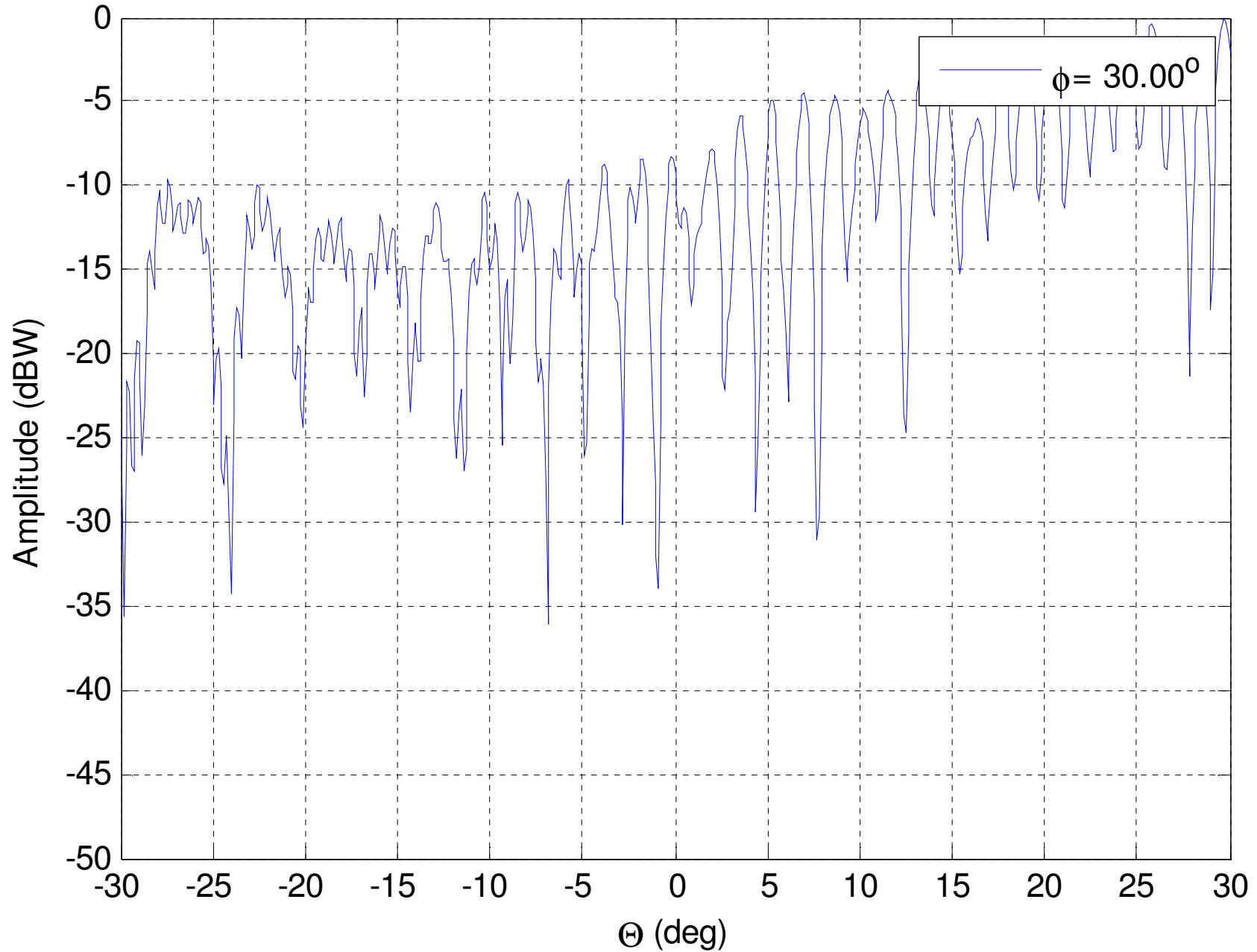
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -3.53 dBW, Date: 14-Dec-2011



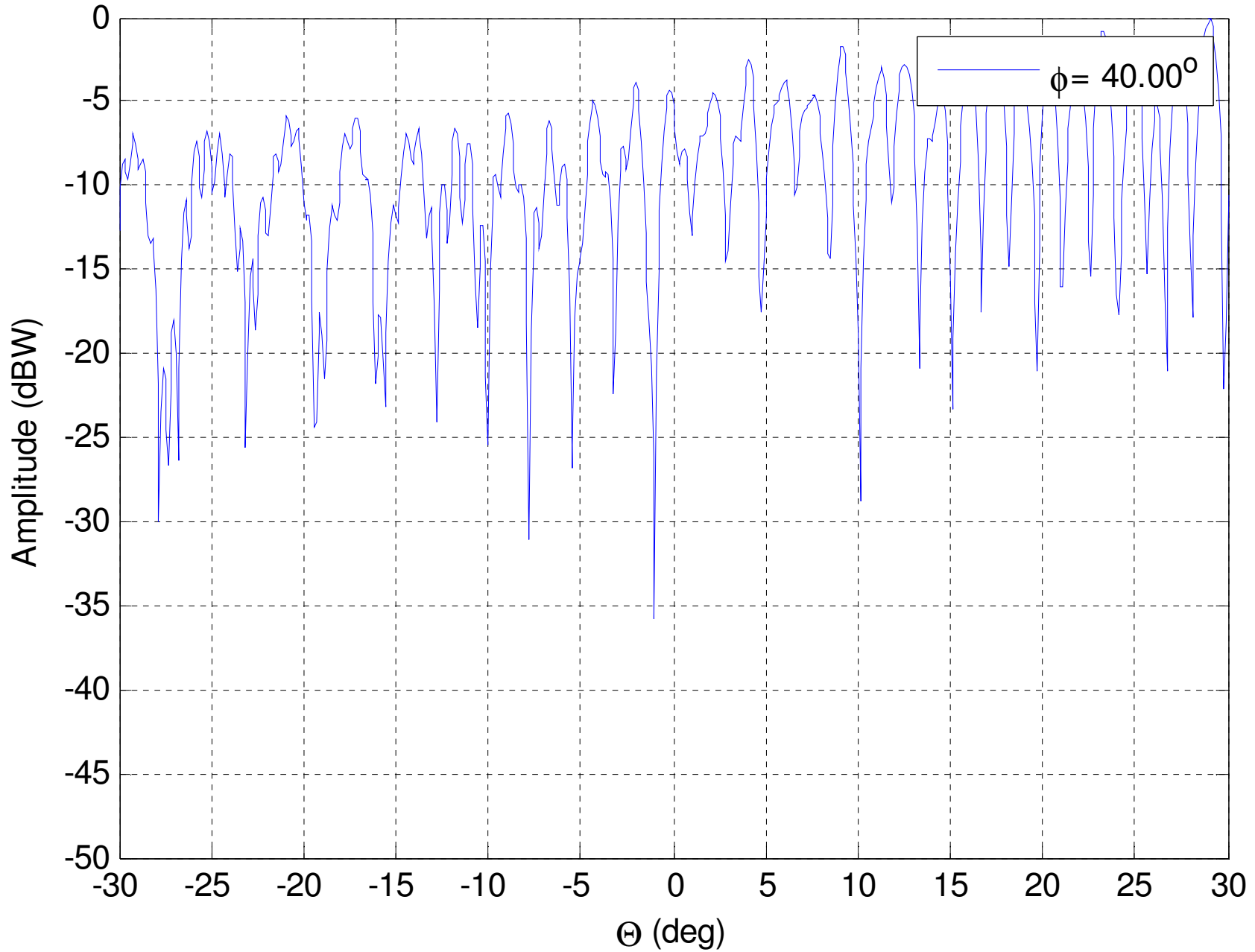
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -6.51 dBW, Date: 14-Dec-2011



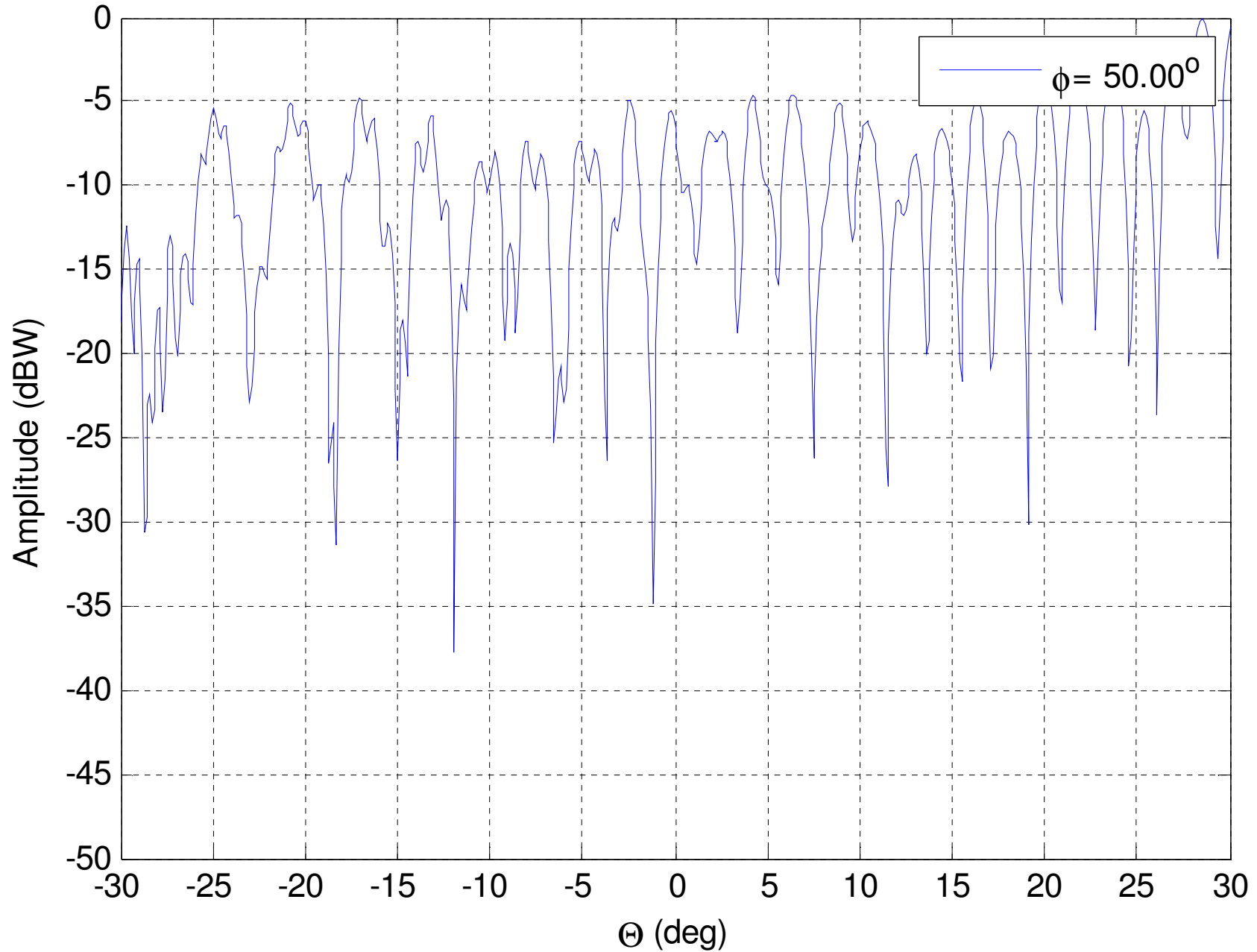
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.47 dBW, Date: 14-Dec-2011



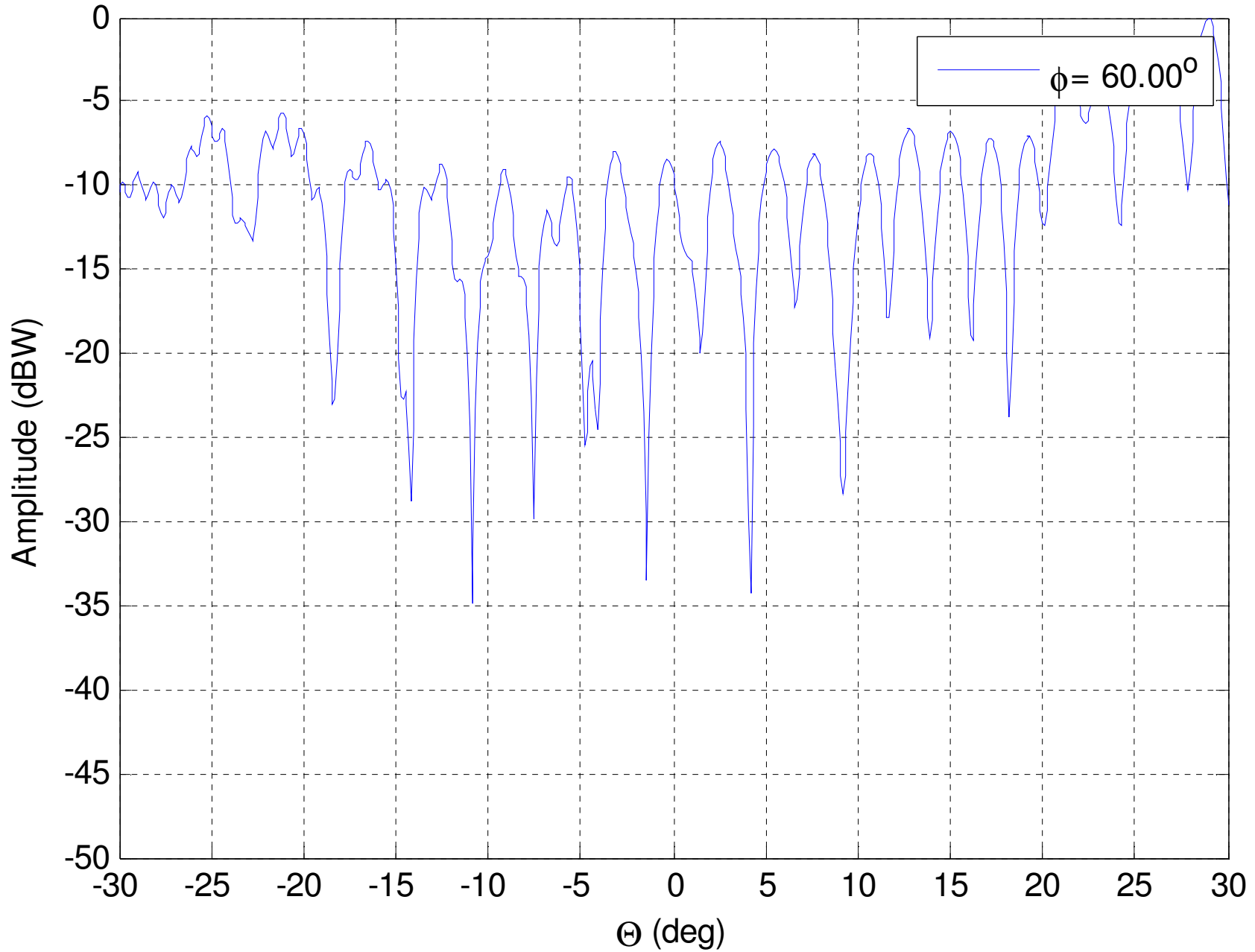
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -9.18 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

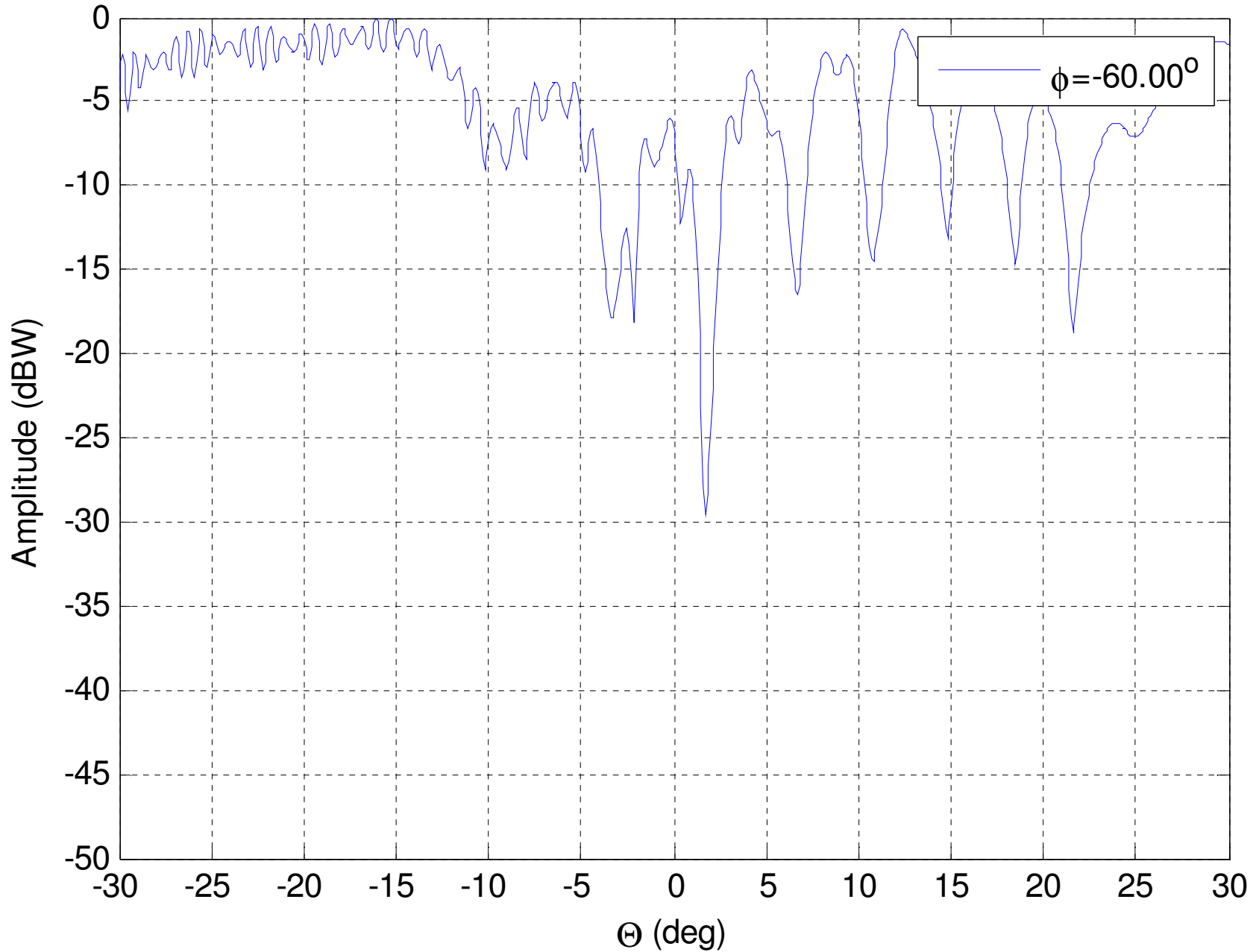
Input file: tx-17.5-rhcp-60.cut, Peak: -6.40 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

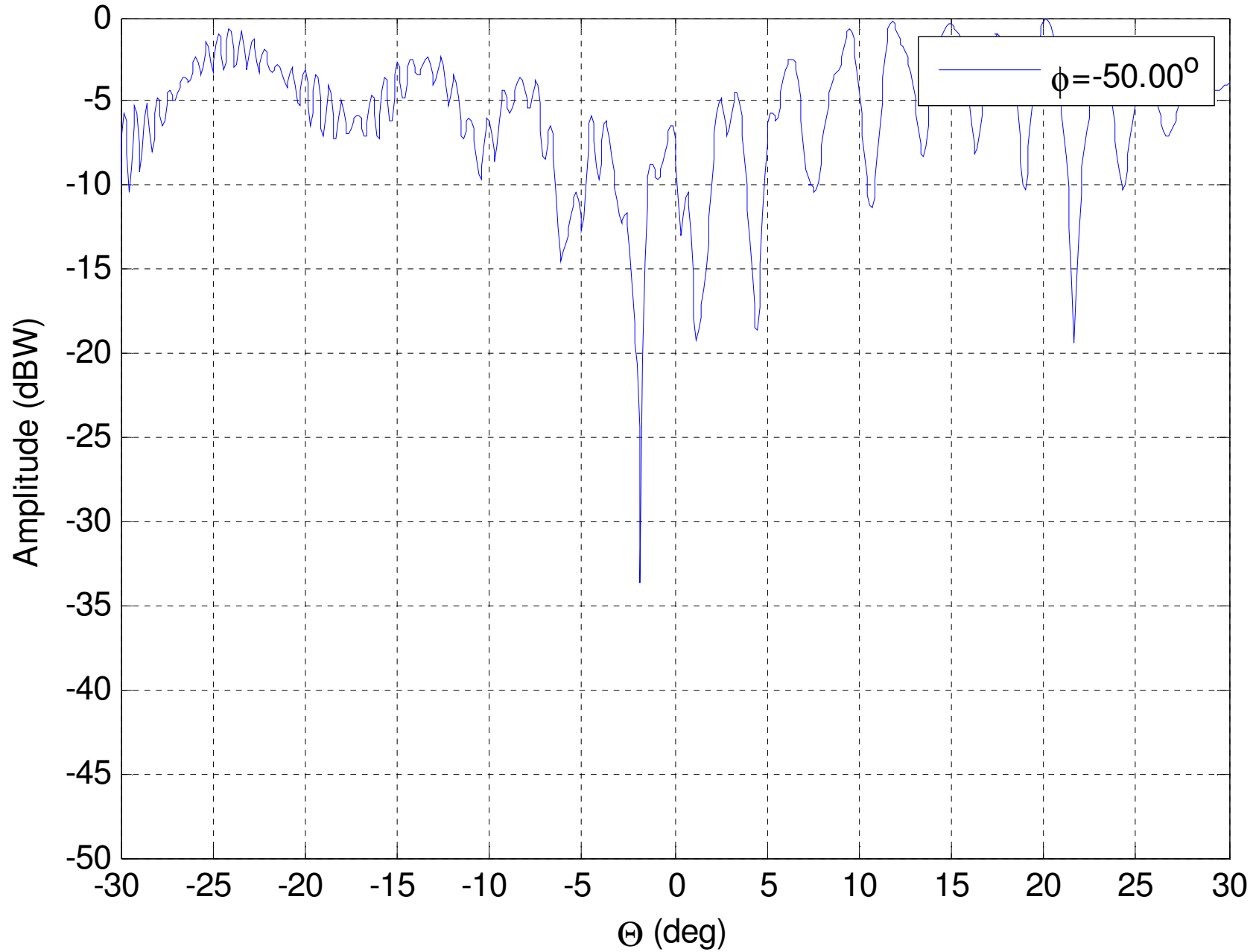
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.59 dBW, Date: 14-Dec-2011



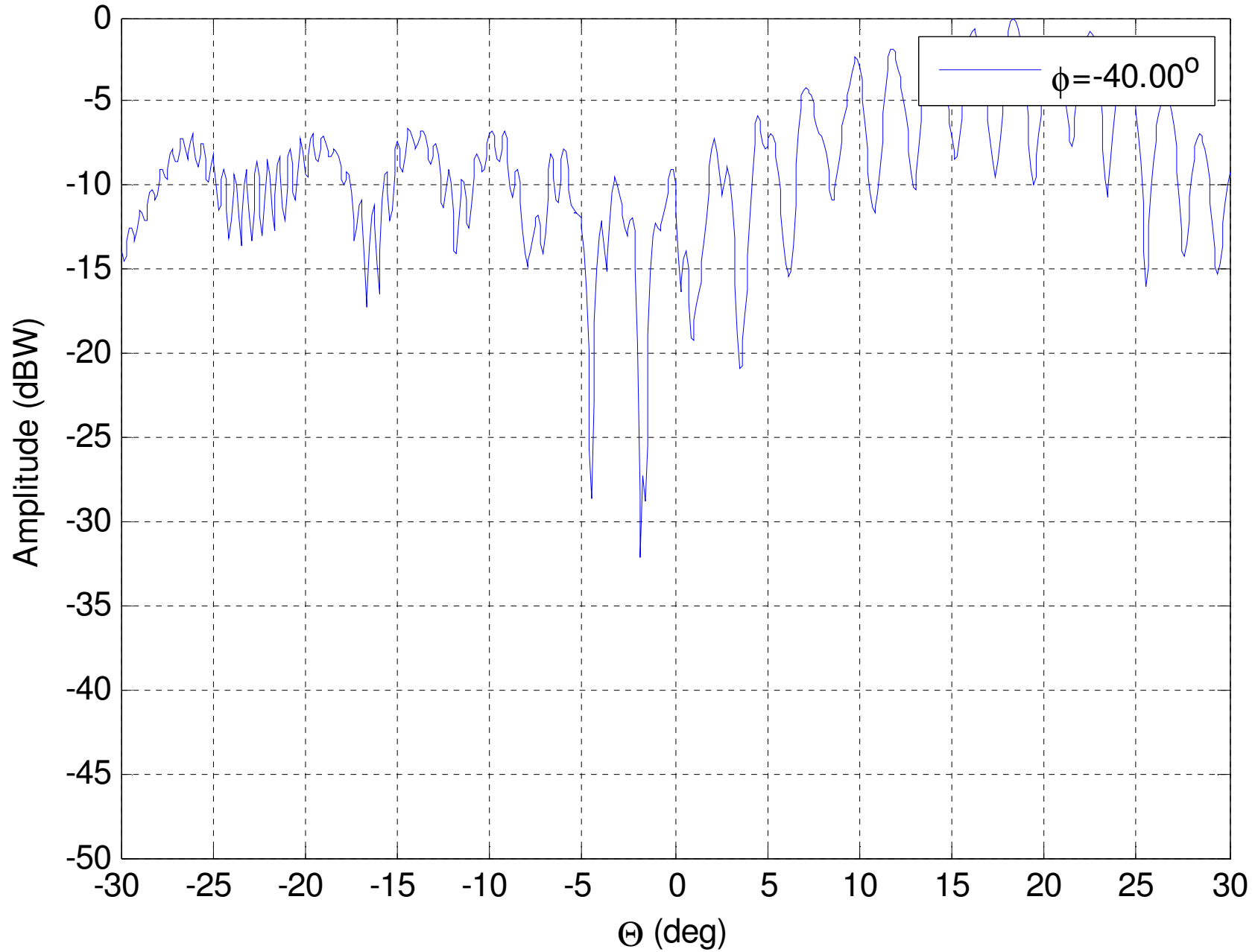
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -8.18 dBW, Date: 14-Dec-2011



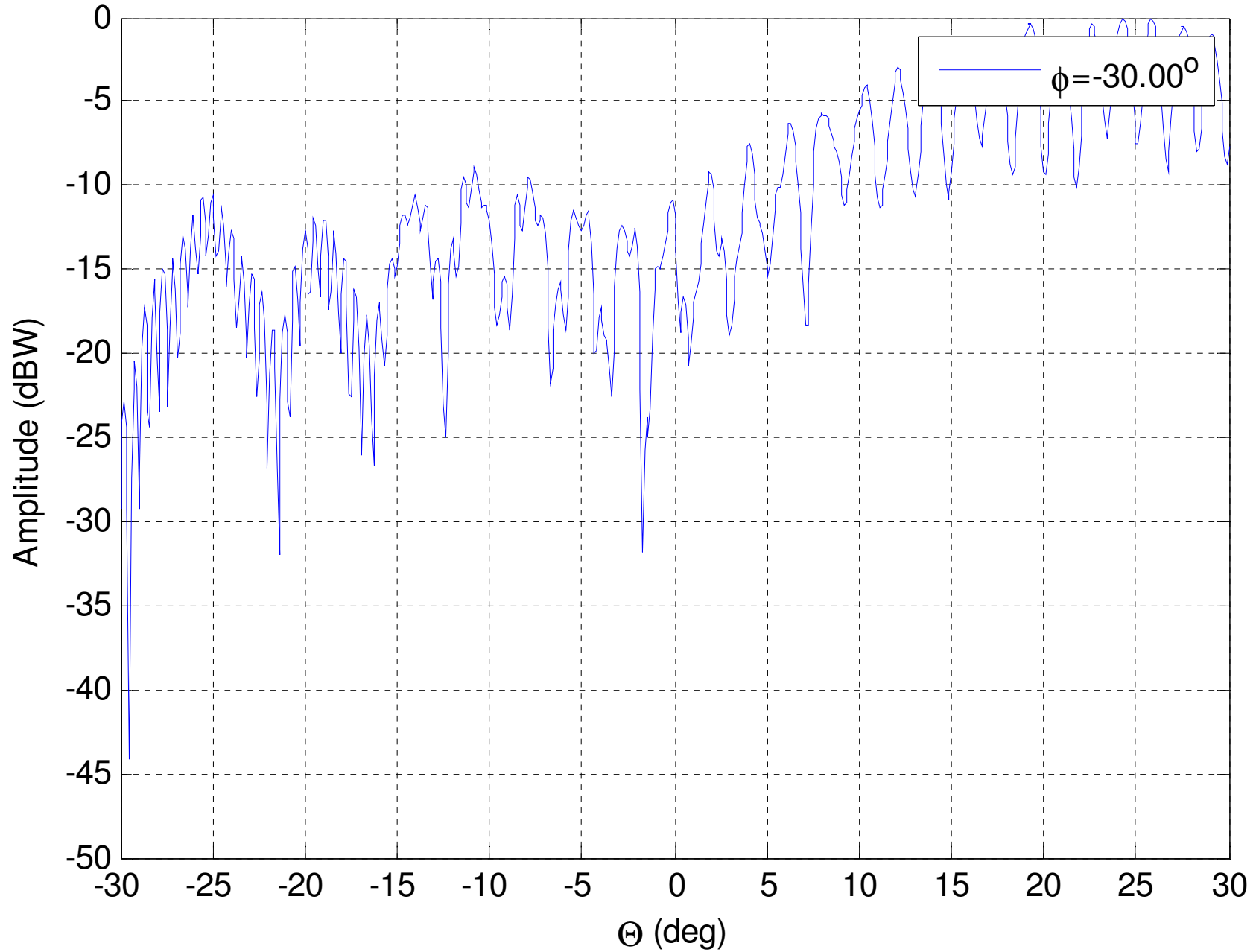
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -5.52 dBW, Date: 14-Dec-2011



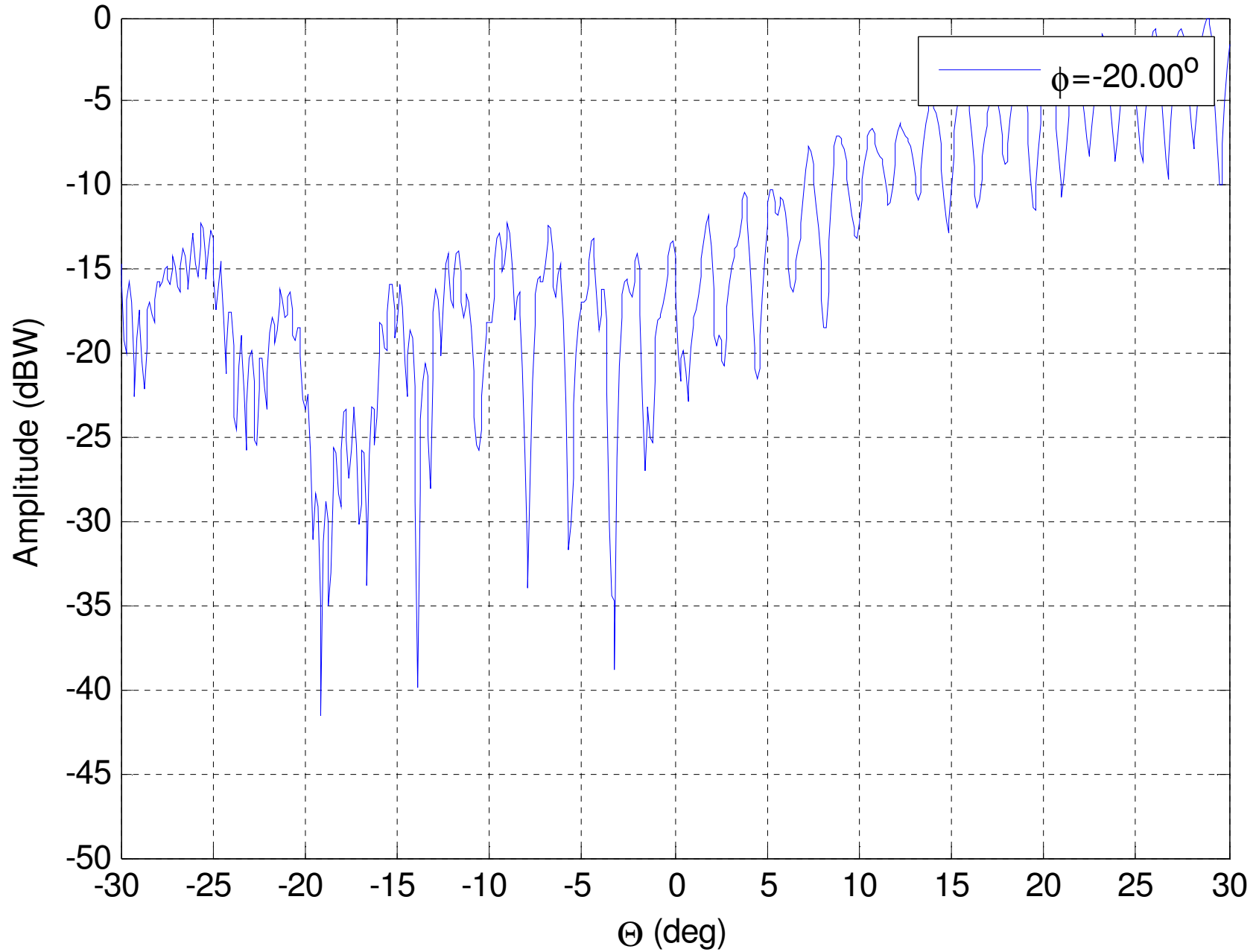
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -3.62 dBW, Date: 14-Dec-2011



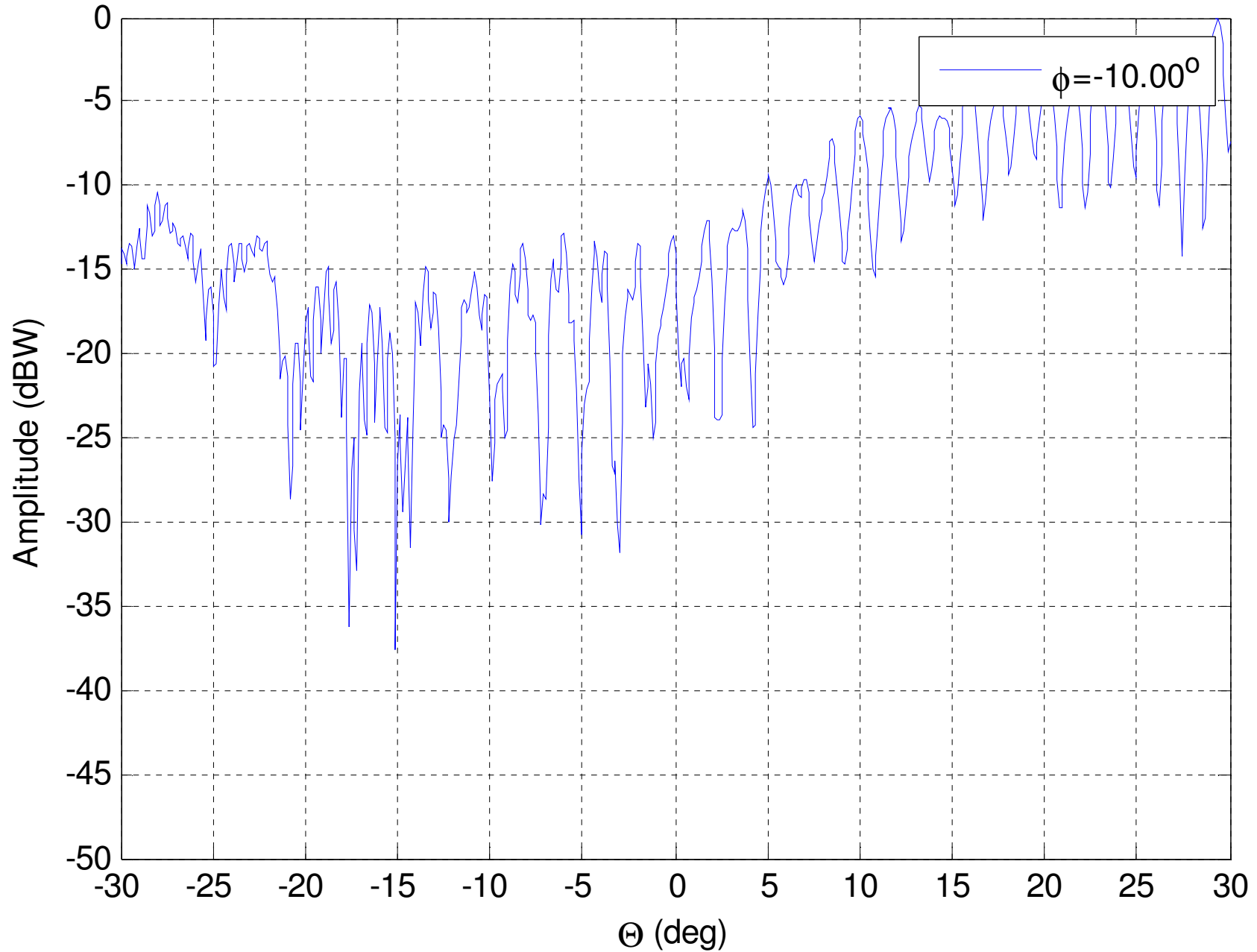
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -1.18 dBW, Date: 14-Dec-2011



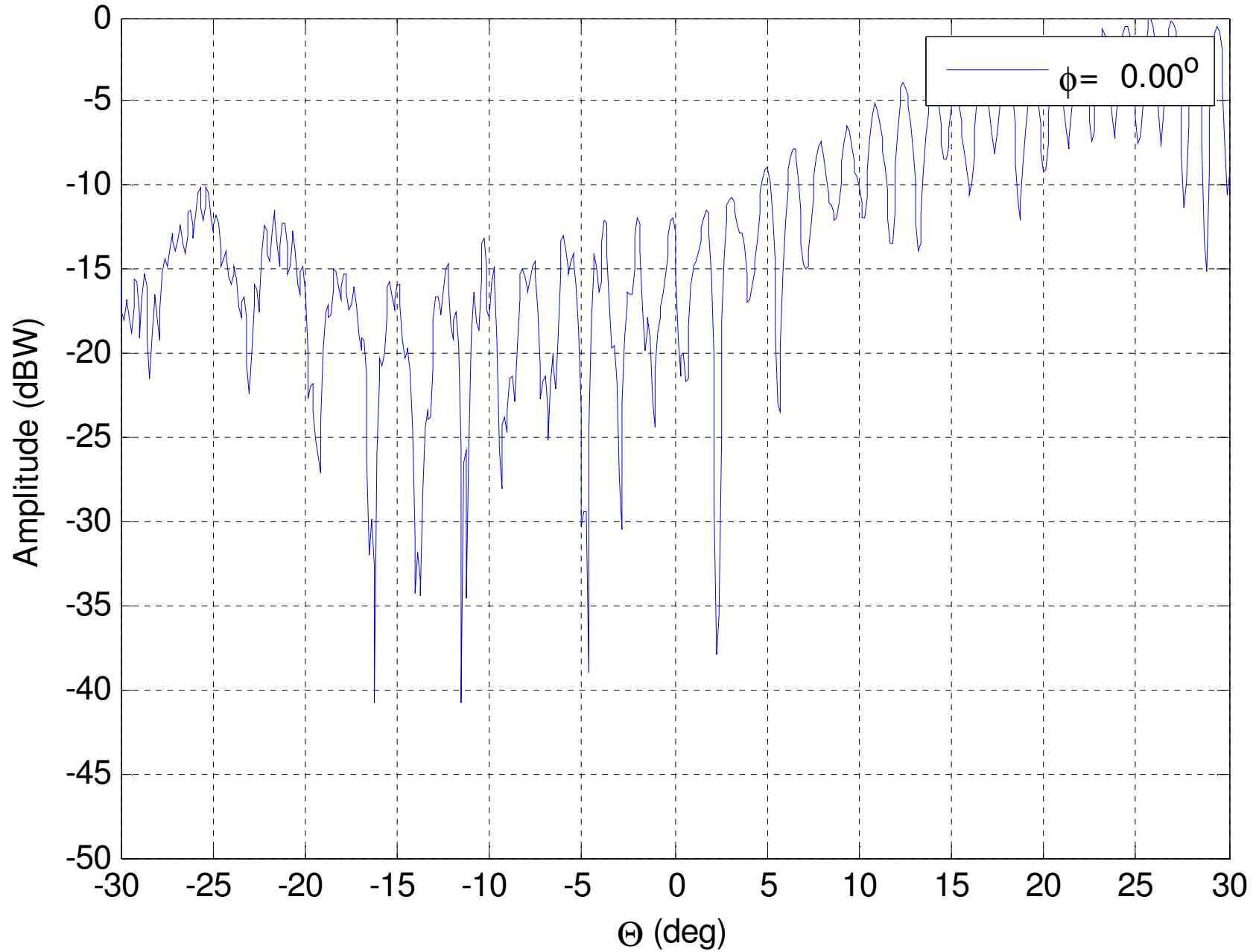
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -1.41 dBW, Date: 14-Dec-2011



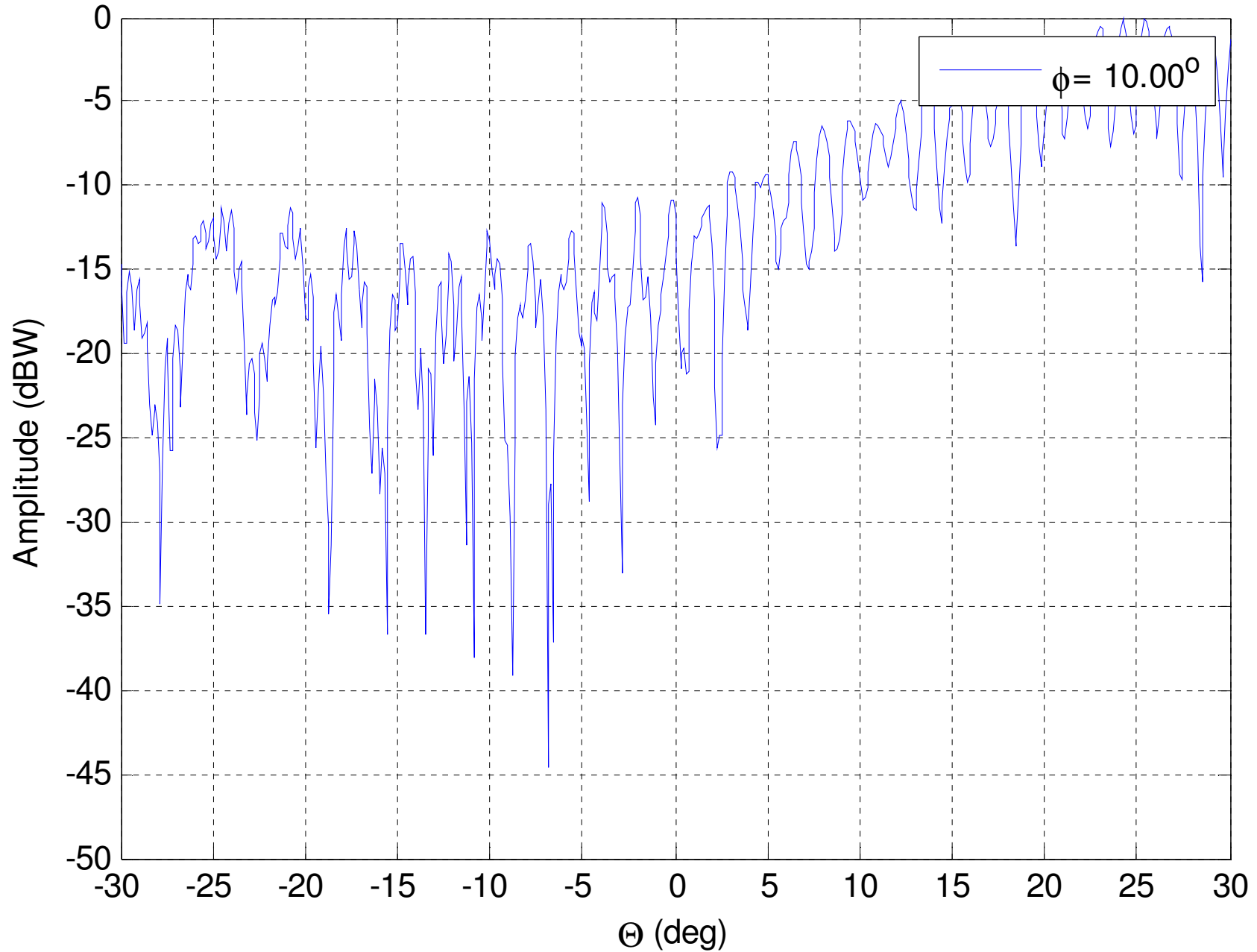
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -2.53 dBW, Date: 14-Dec-2011



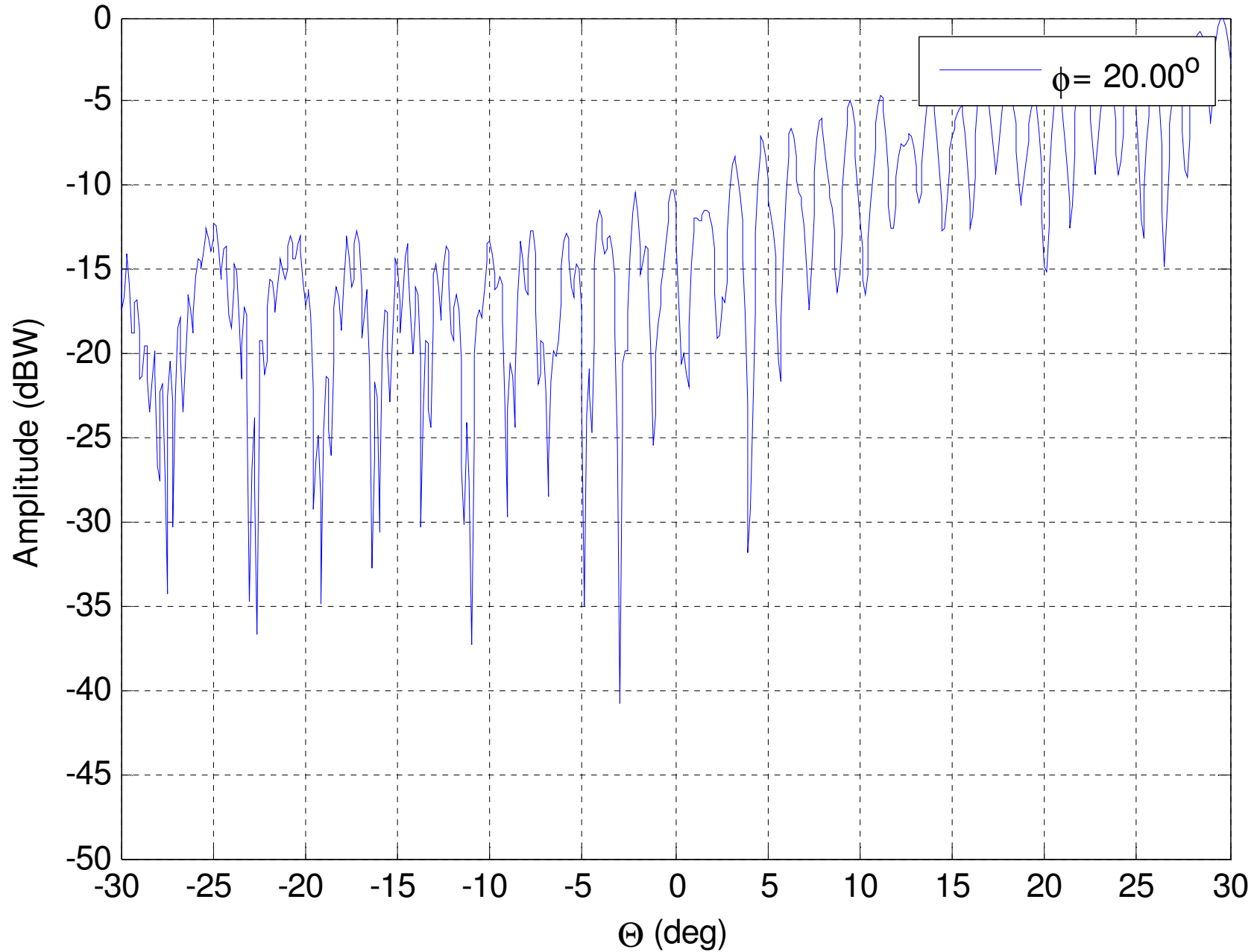
Normalized pattern cuts - farfield

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



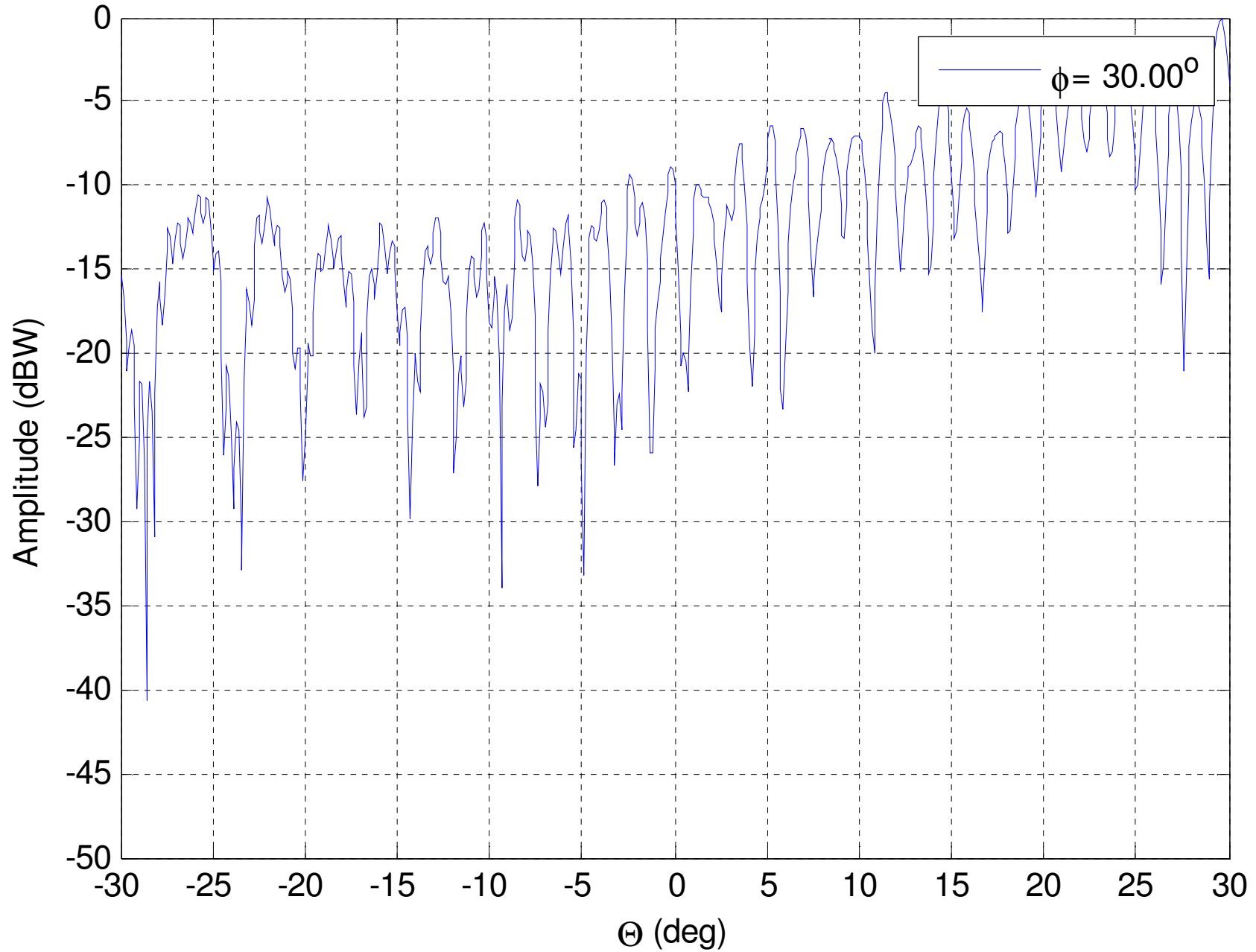
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -4.17 dBW, Date: 14-Dec-2011



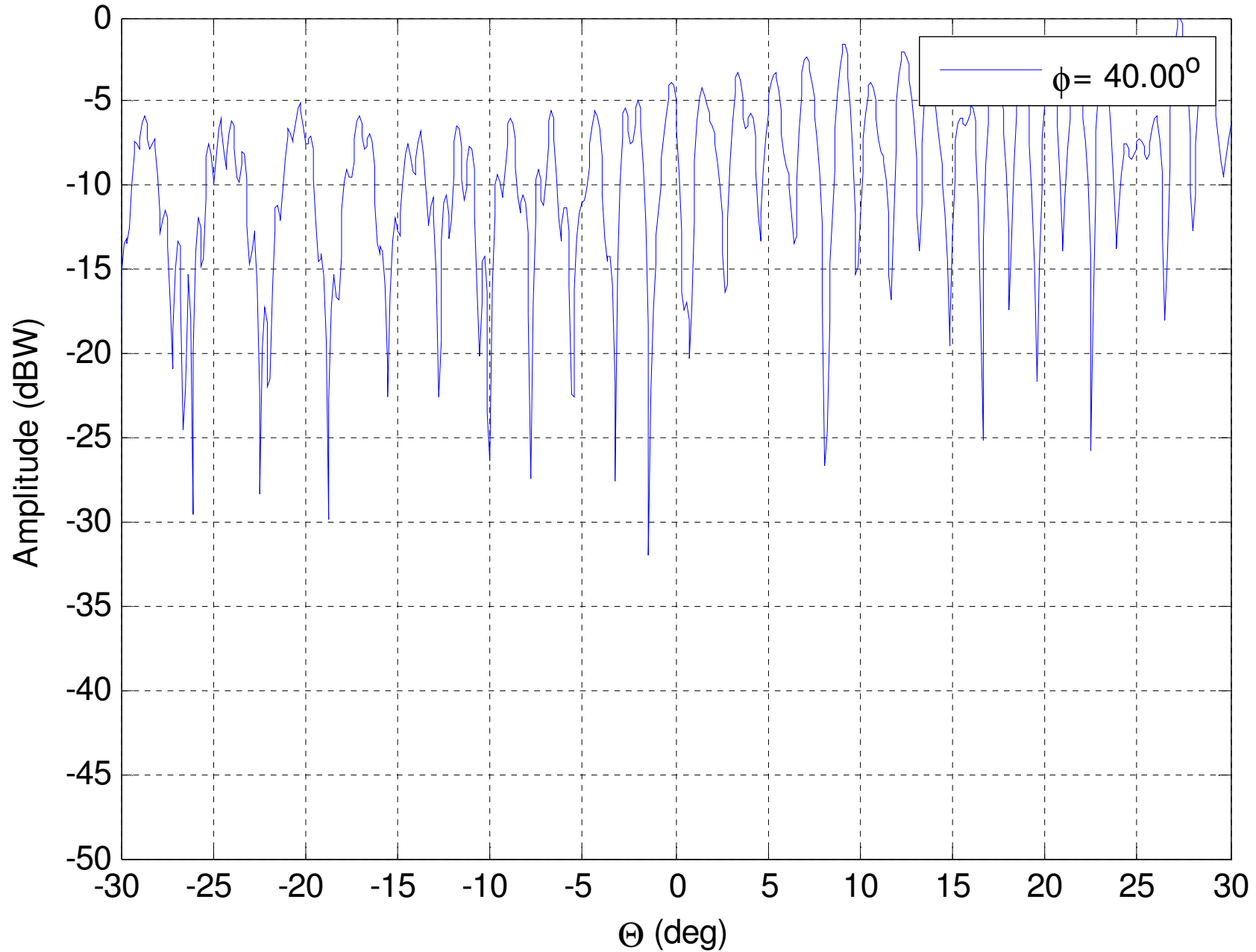
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -5.46 dBW, Date: 14-Dec-2011



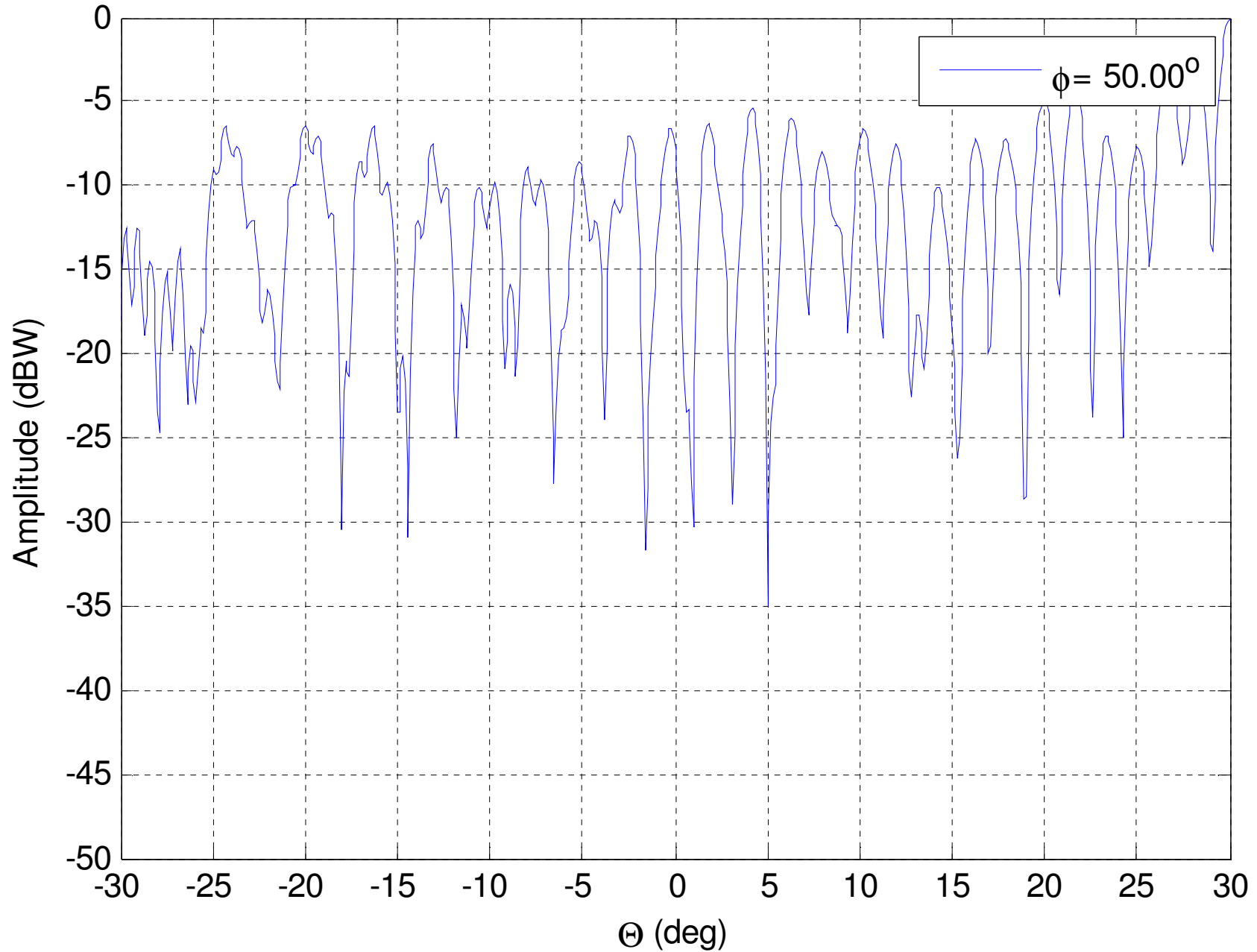
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -10.45 dBW, Date: 14-Dec-2011



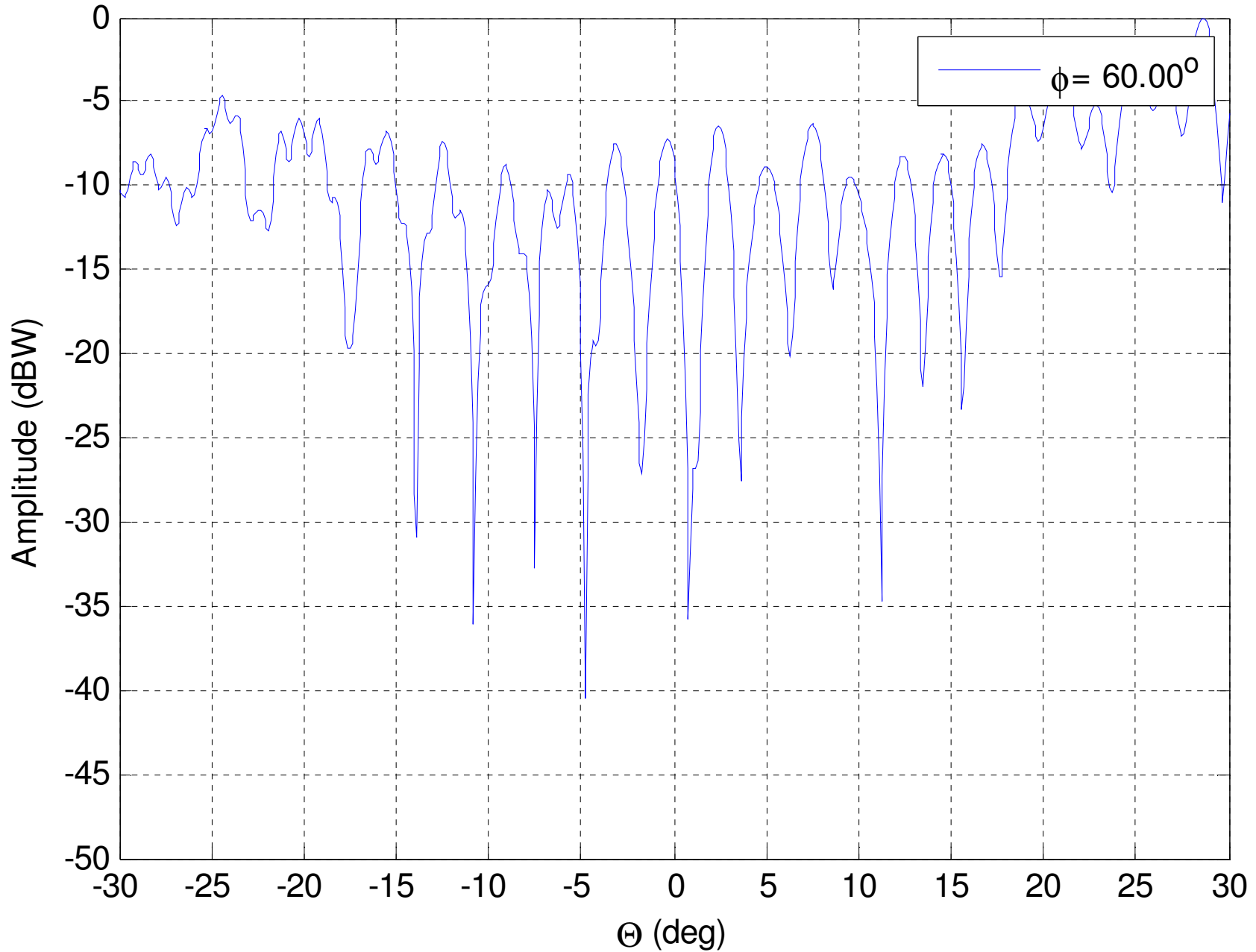
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -7.59 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

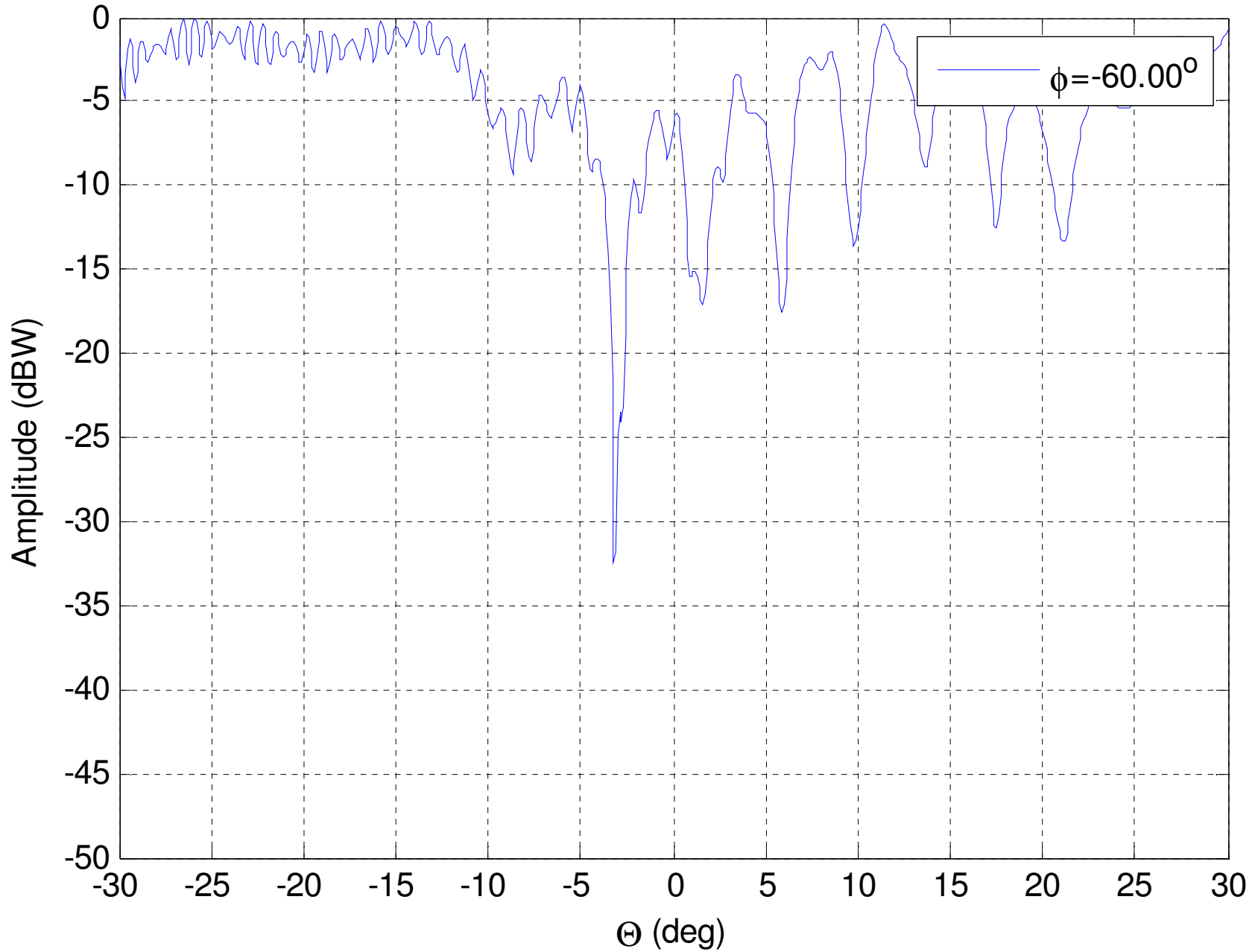
Input file: tx-17.5-lhcp-60.cut, Peak: -6.90 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

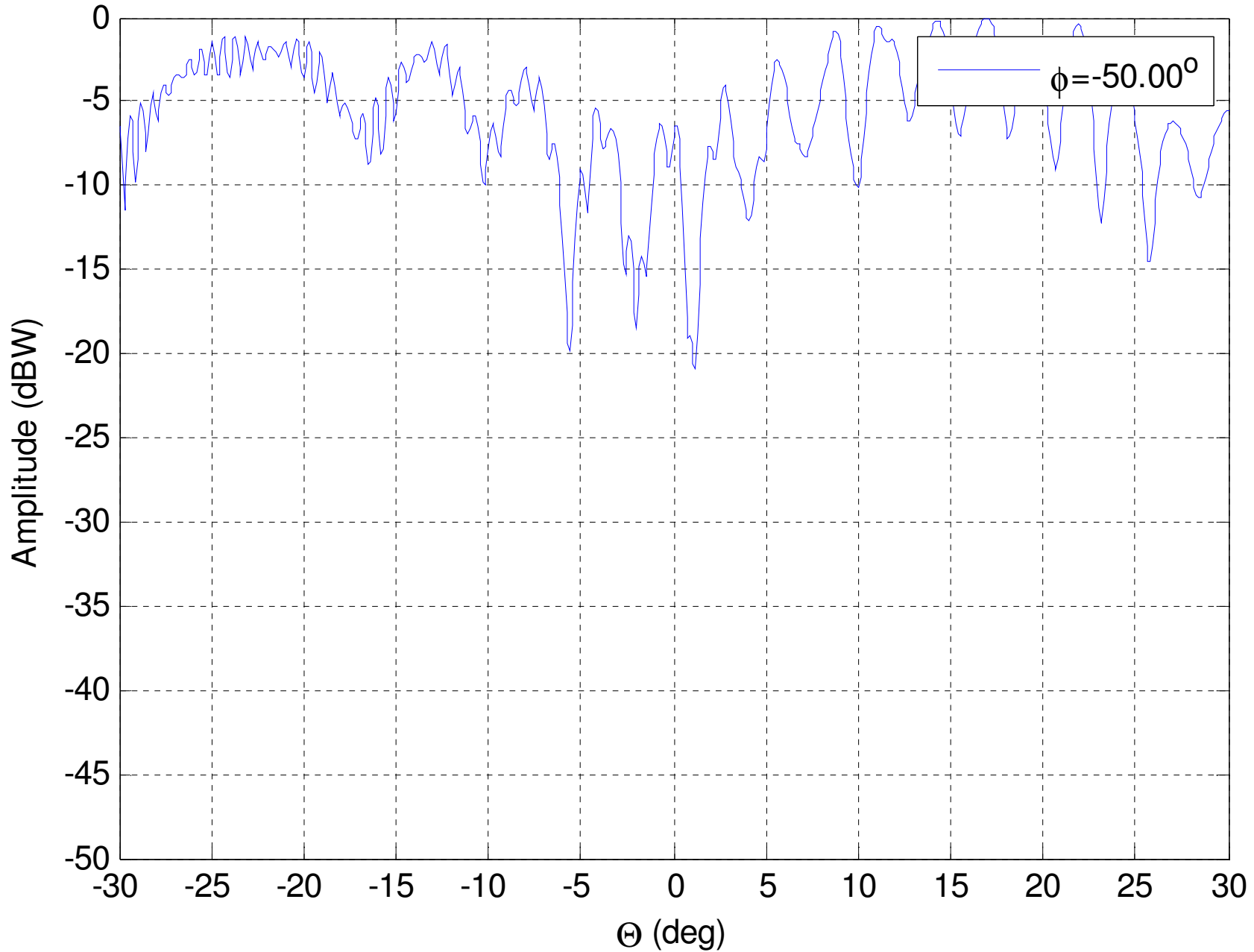
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.07 dBW, Date: 14-Dec-2011



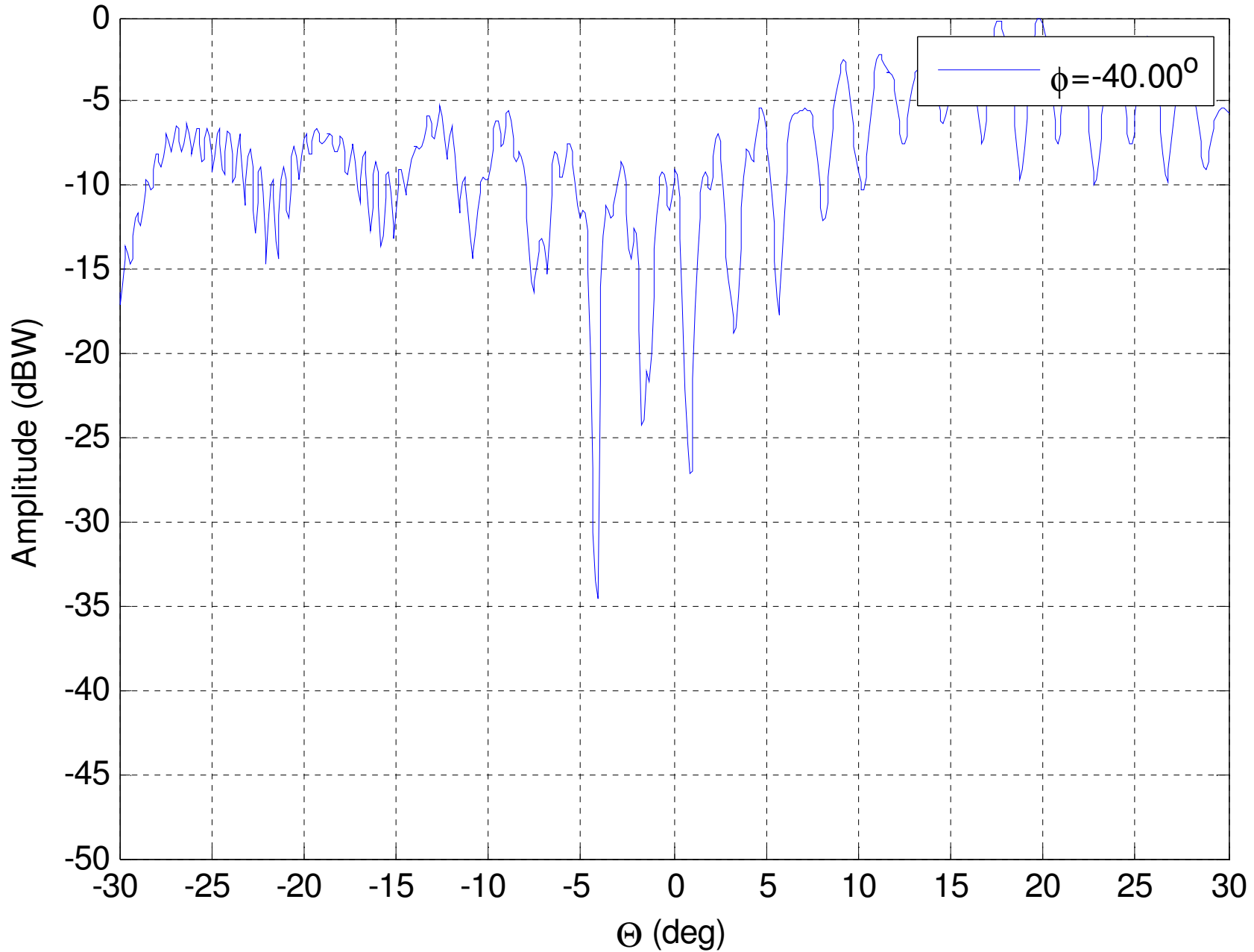
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.42 dBW, Date: 14-Dec-2011



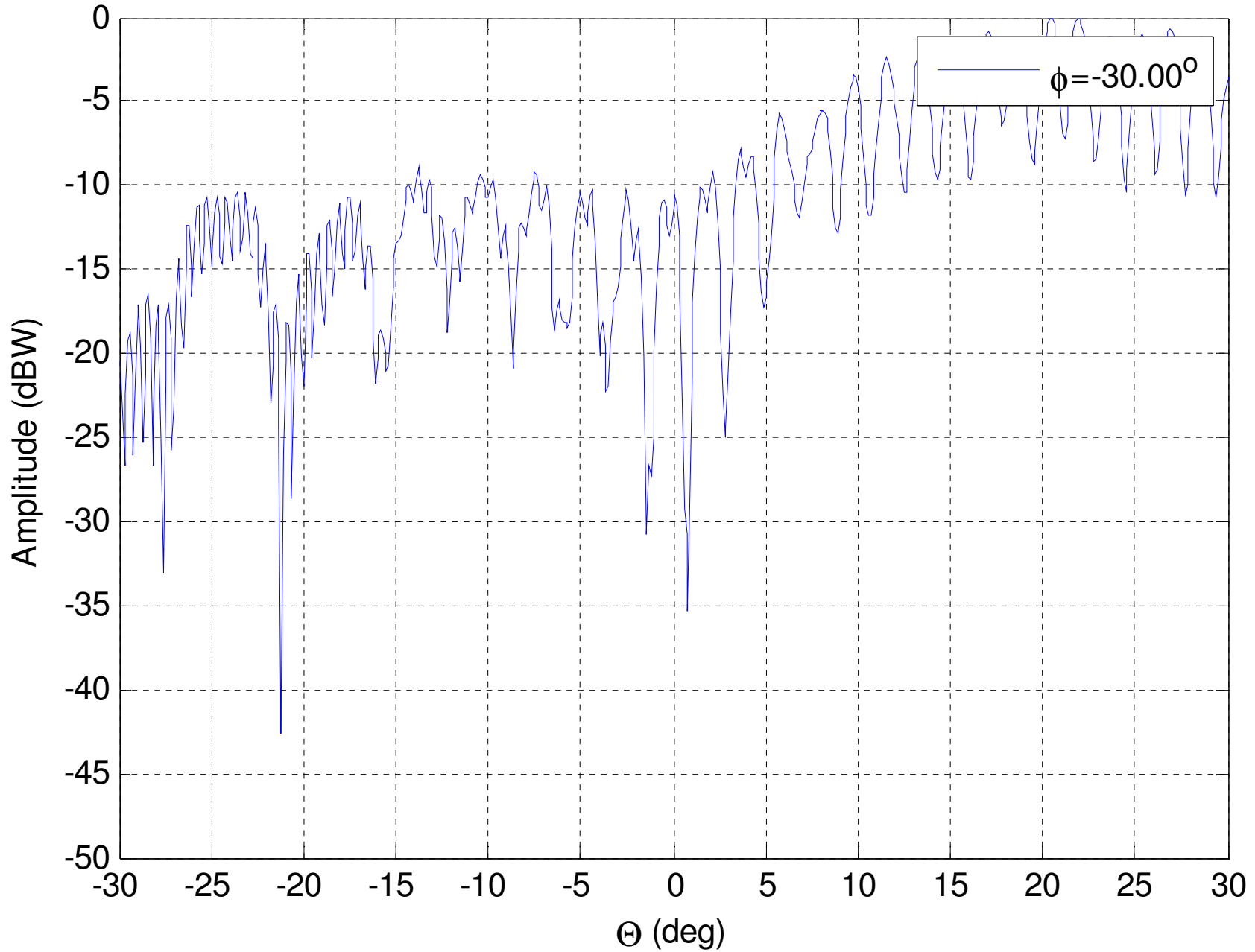
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -5.82 dBW, Date: 14-Dec-2011



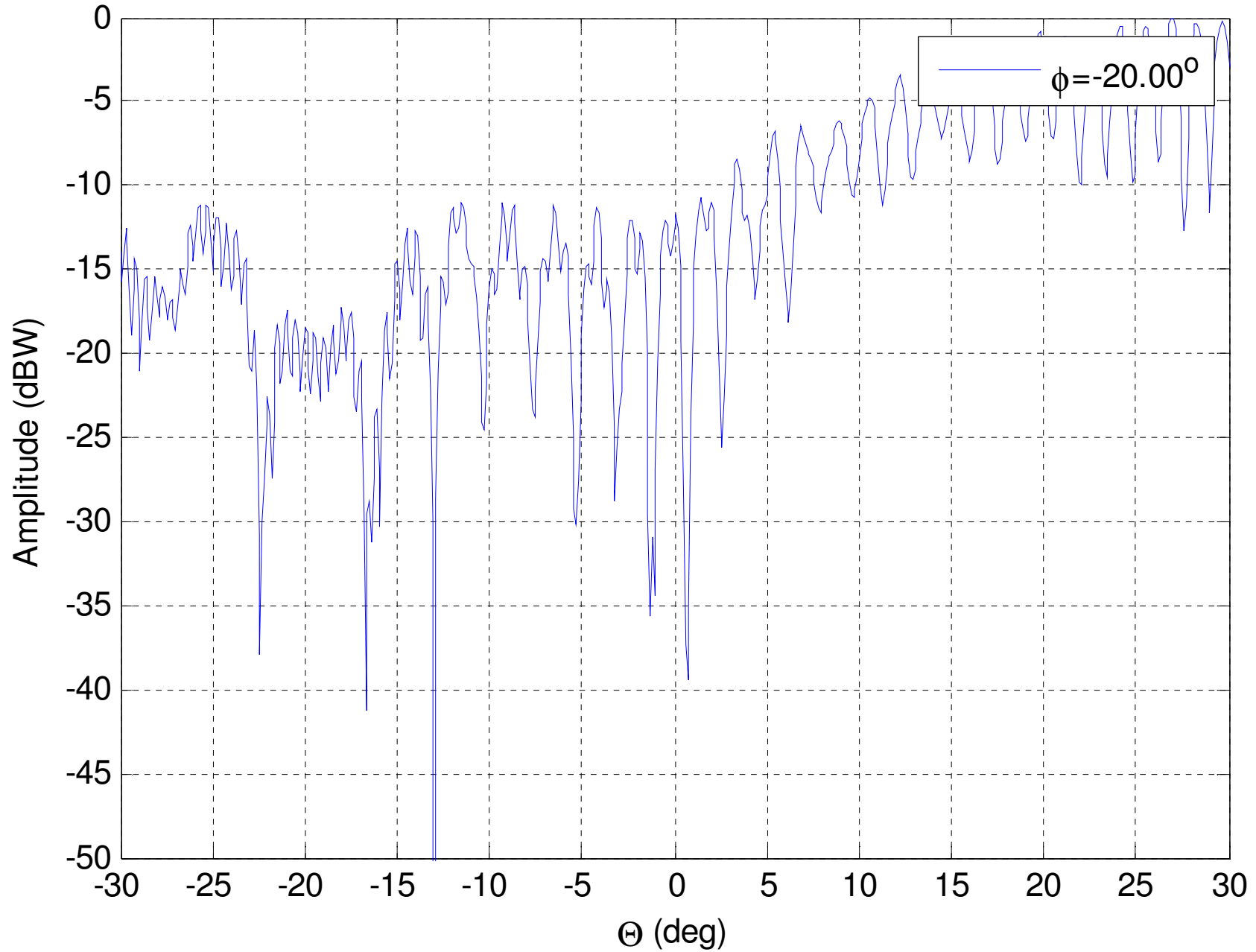
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -4.32 dBW, Date: 14-Dec-2011



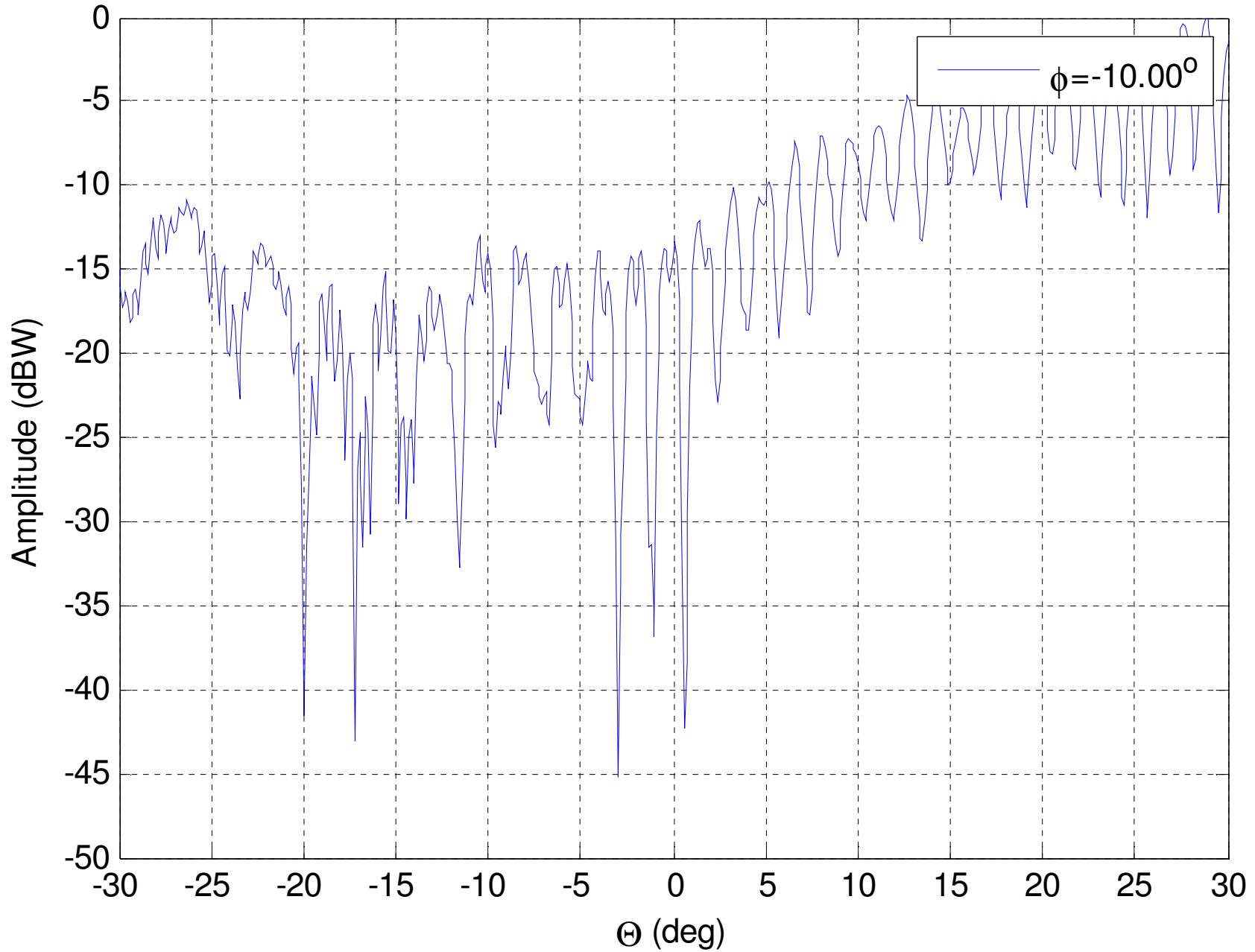
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -3.20 dBW, Date: 14-Dec-2011



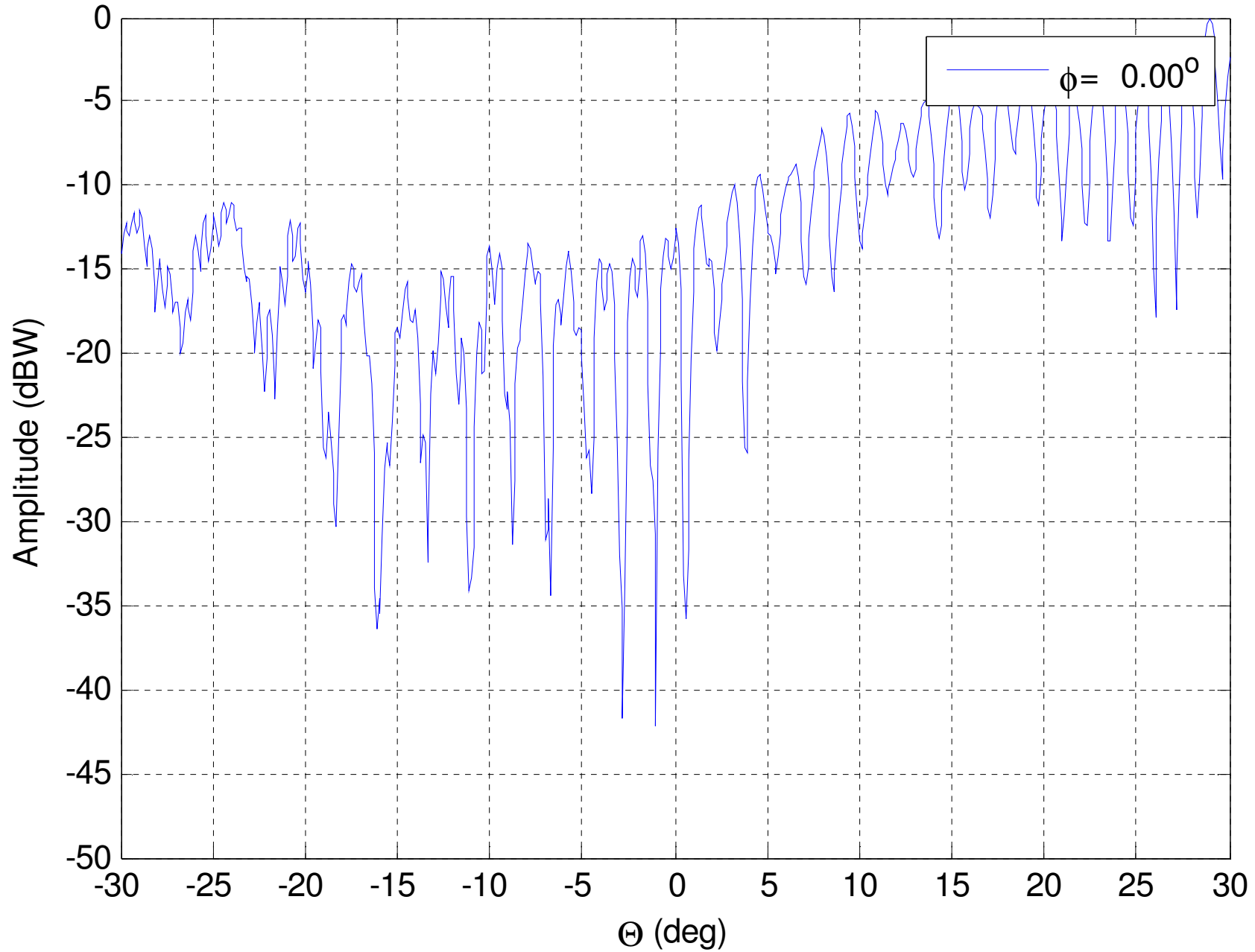
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -1.68 dBW, Date: 14-Dec-2011



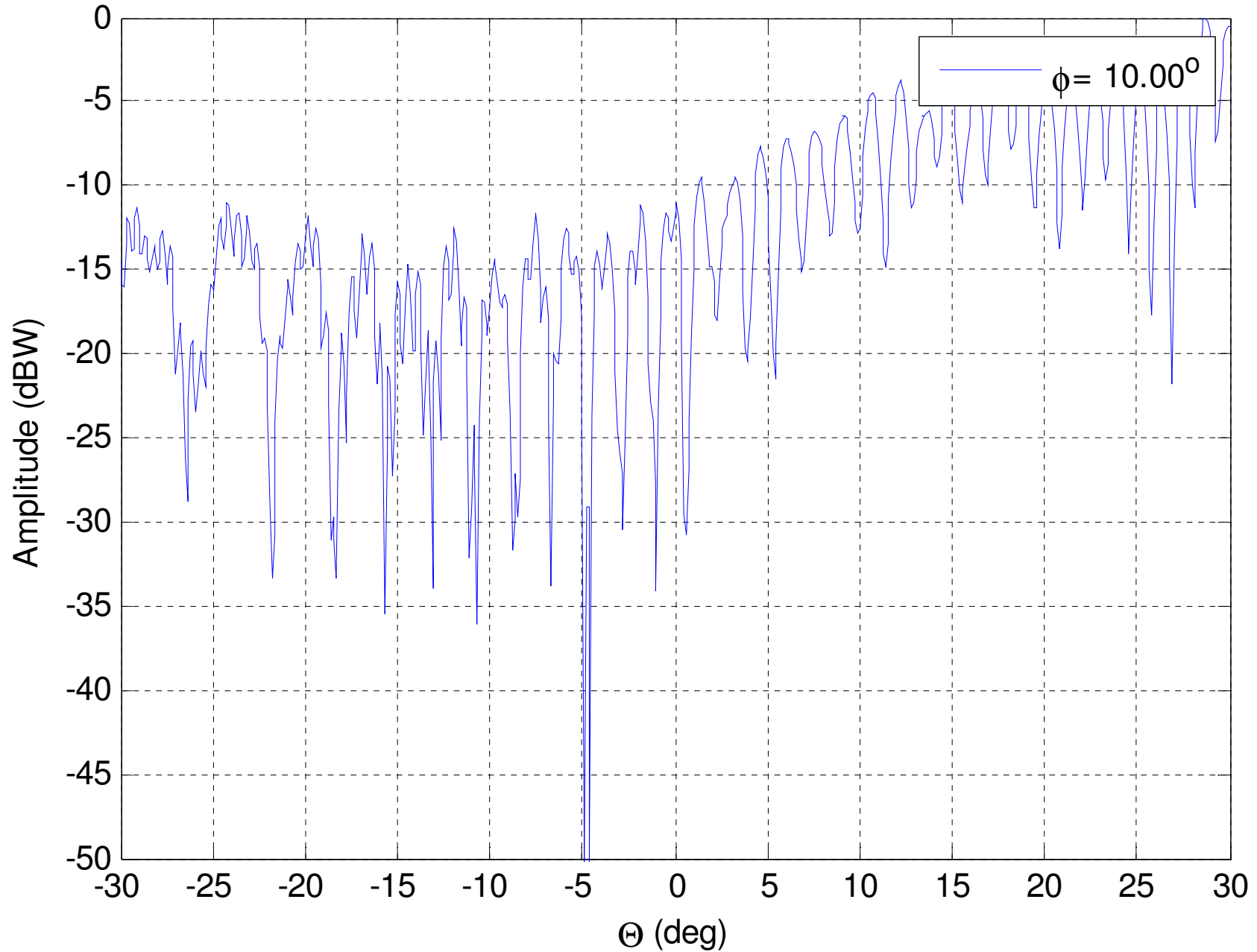
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -2.41 dBW, Date: 14-Dec-2011



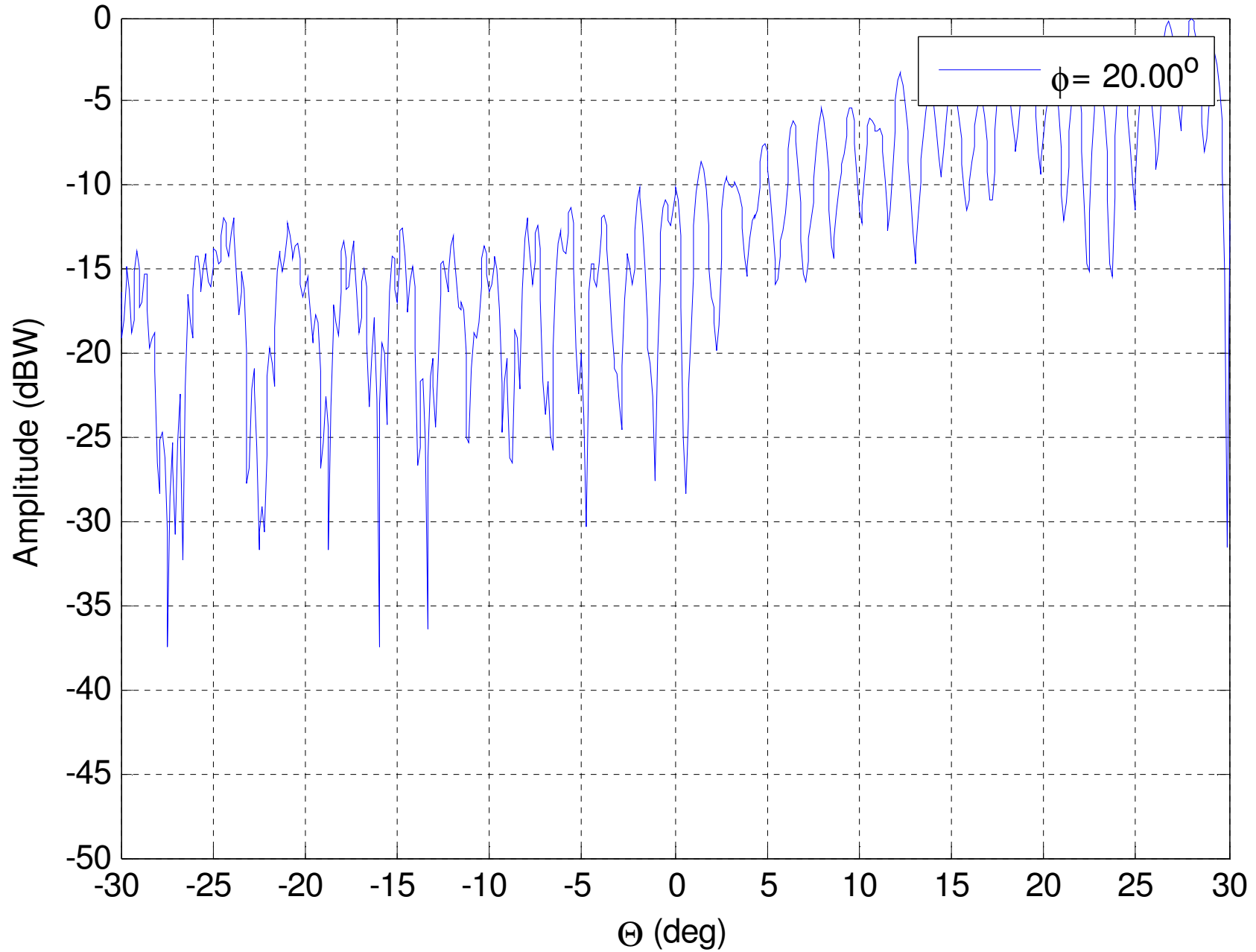
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -4.03 dBW, Date: 14-Dec-2011



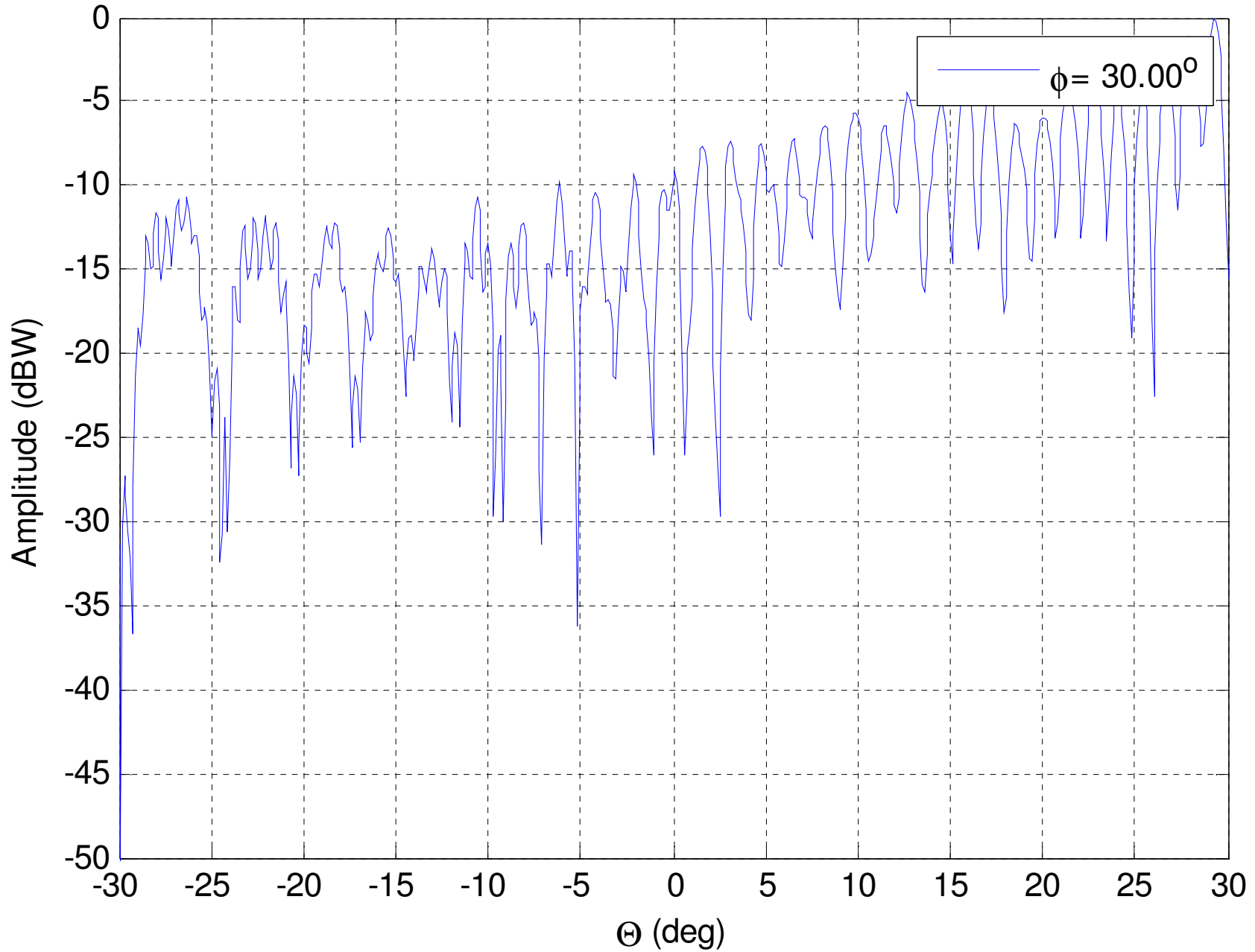
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -4.99 dBW, Date: 14-Dec-2011



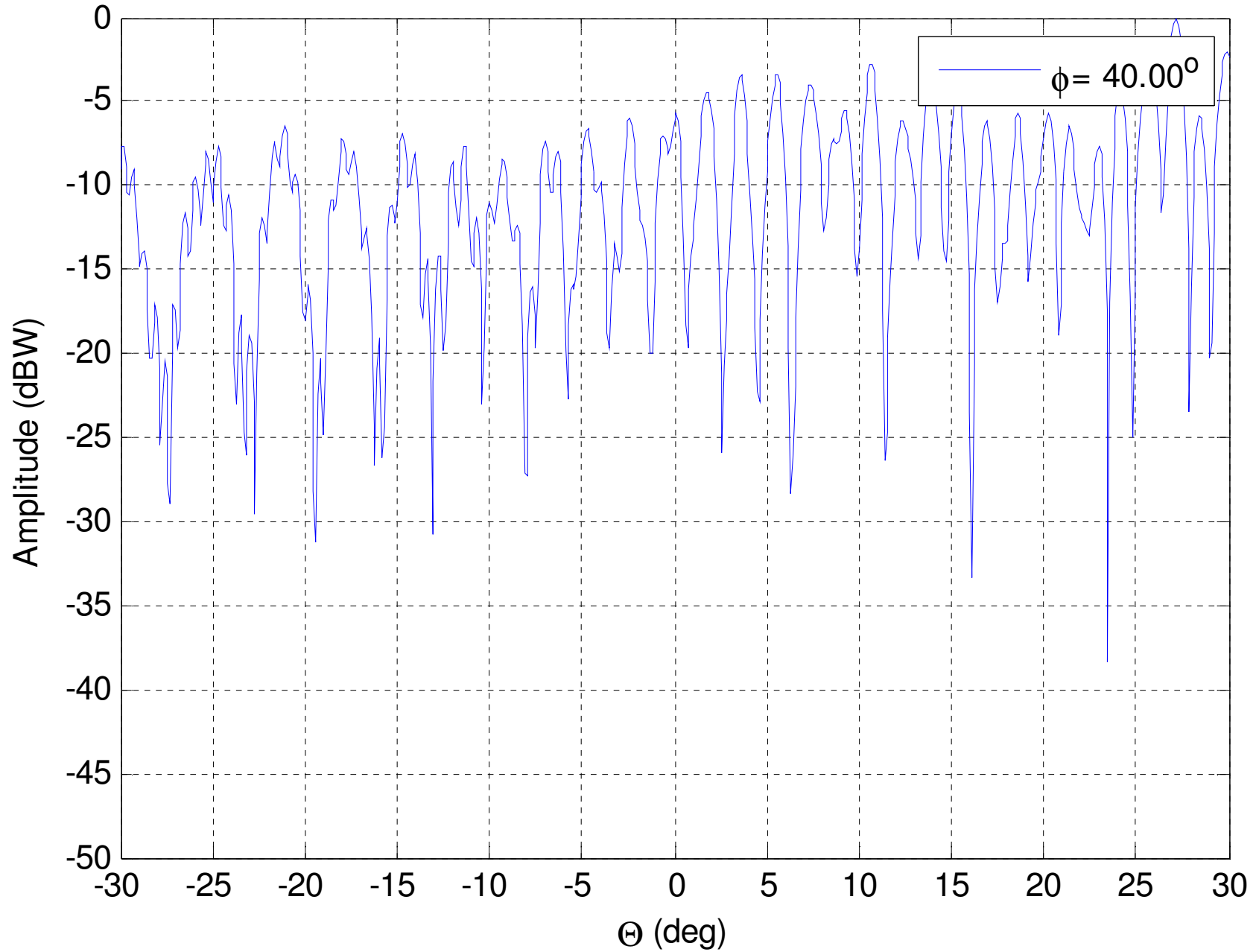
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -5.88 dBW, Date: 14-Dec-2011



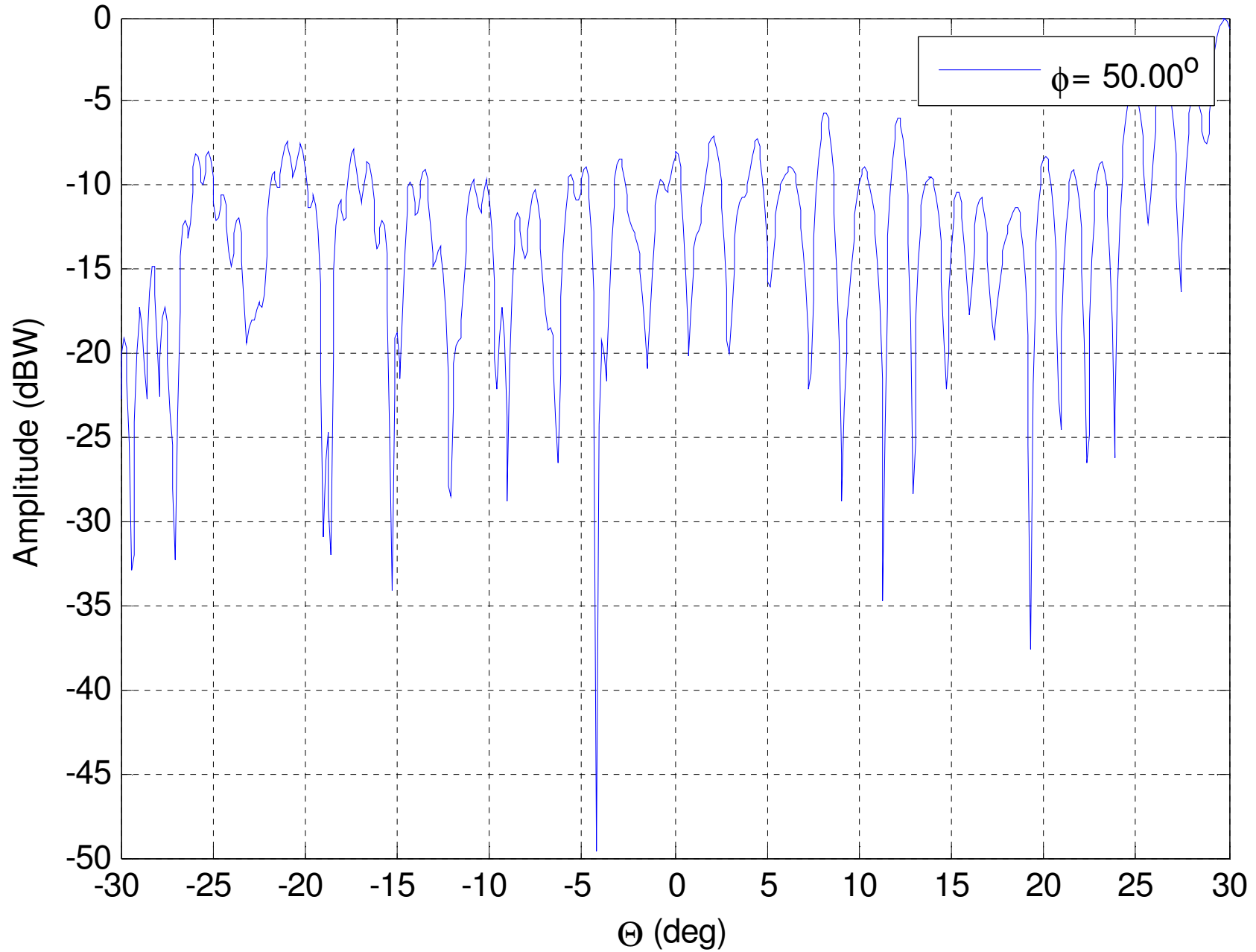
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -9.39 dBW, Date: 14-Dec-2011



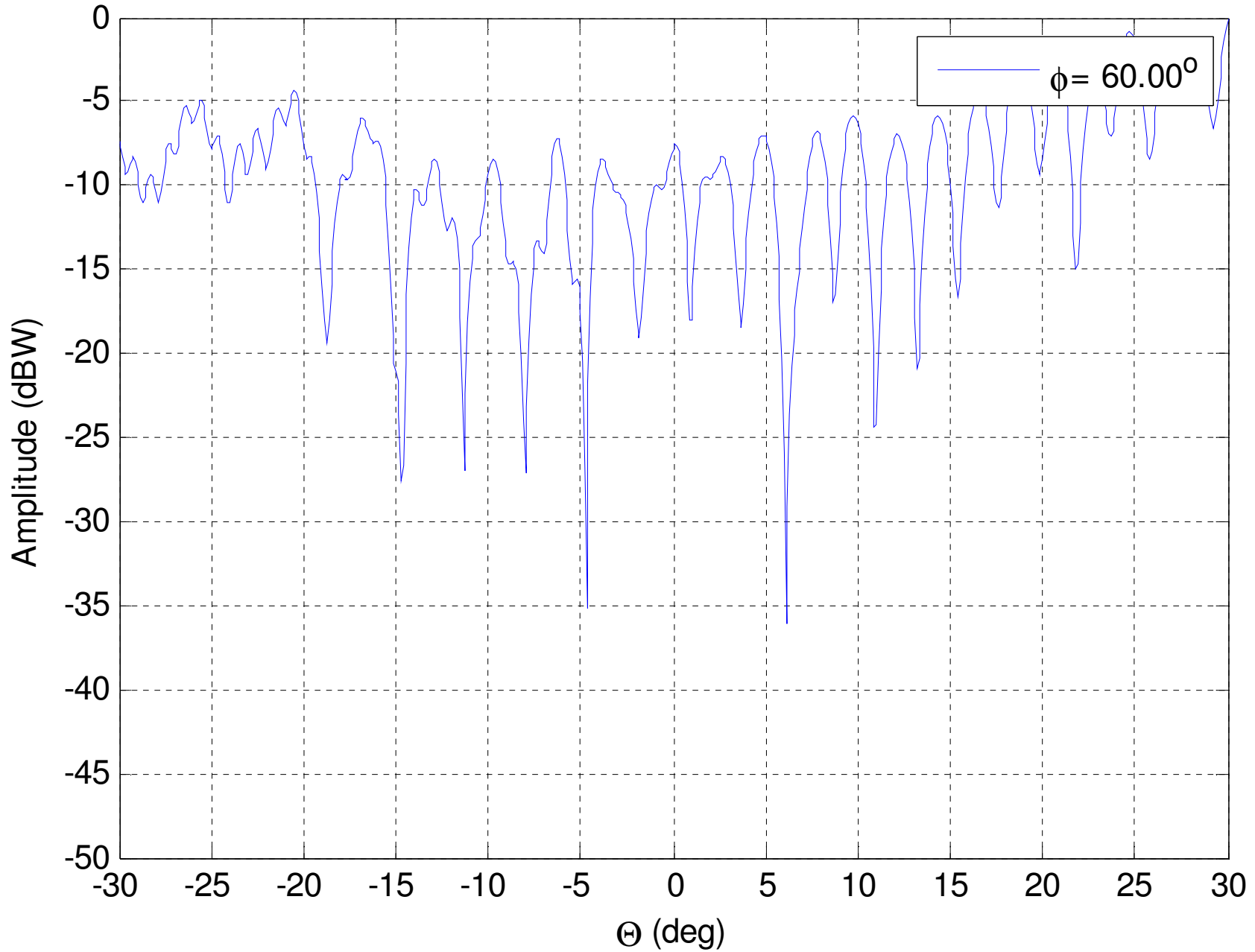
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -7.22 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

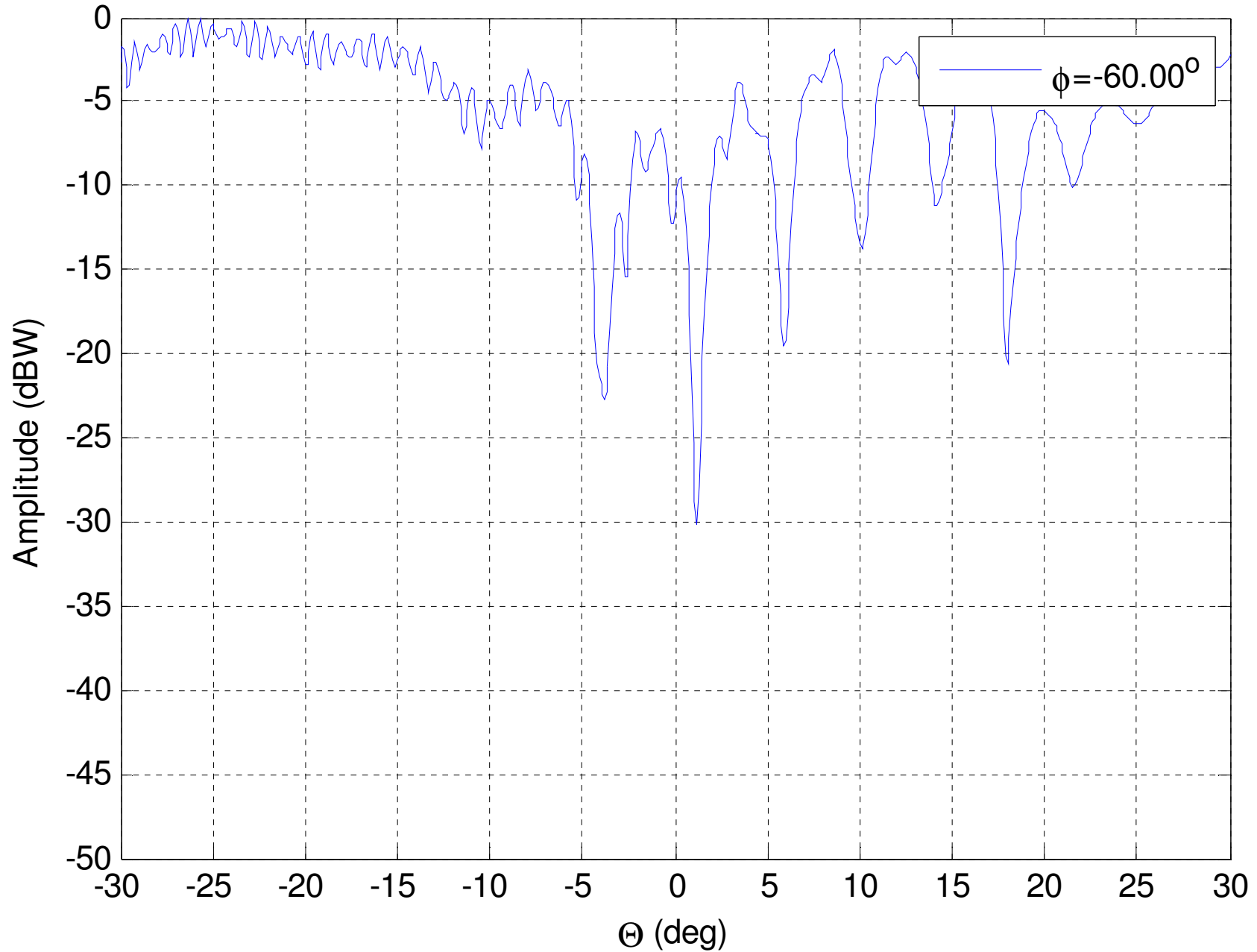
Input file: tx-17.7-rhcp-60.cut, Peak: -7.68 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

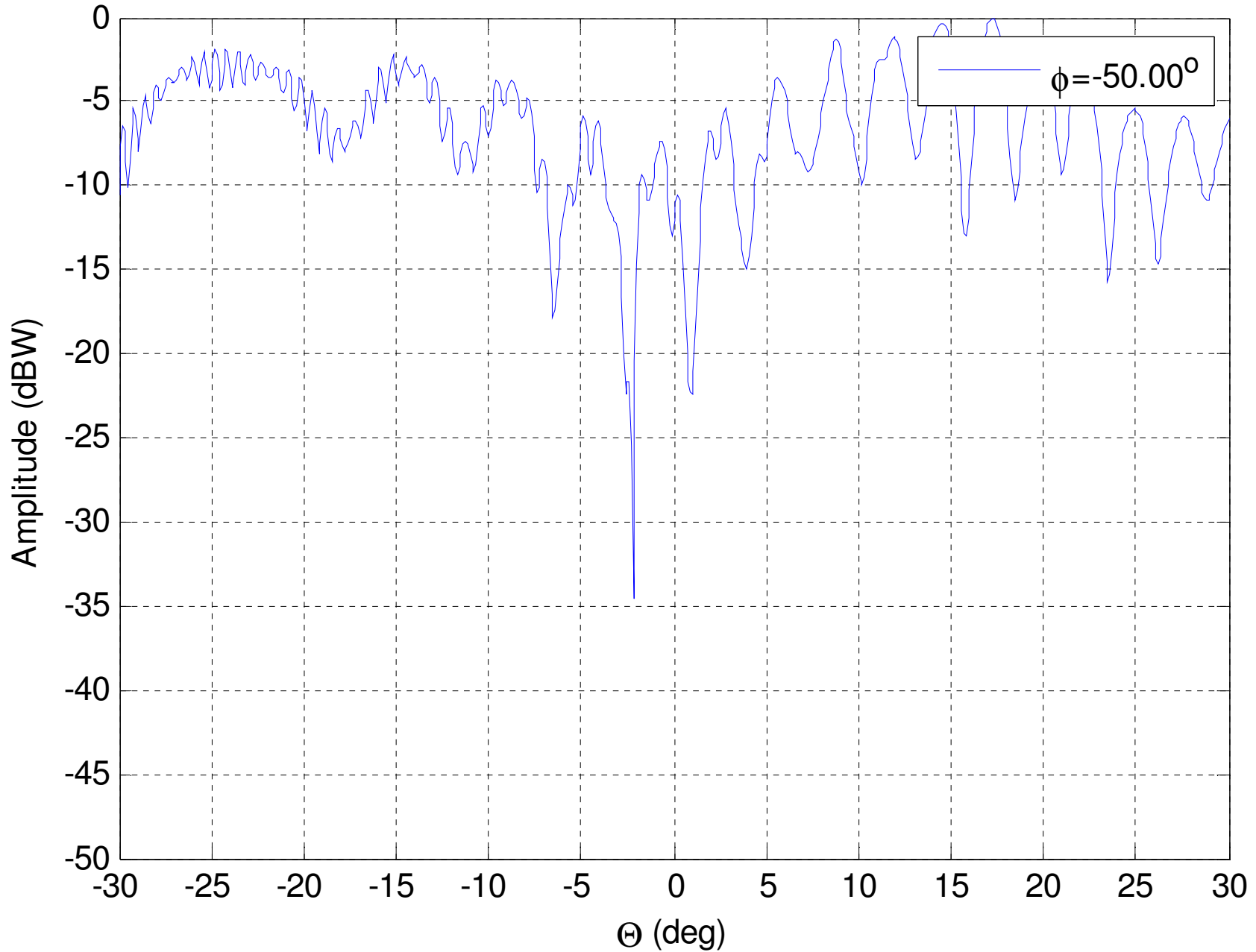
Normalized pattern cuts - farfield

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



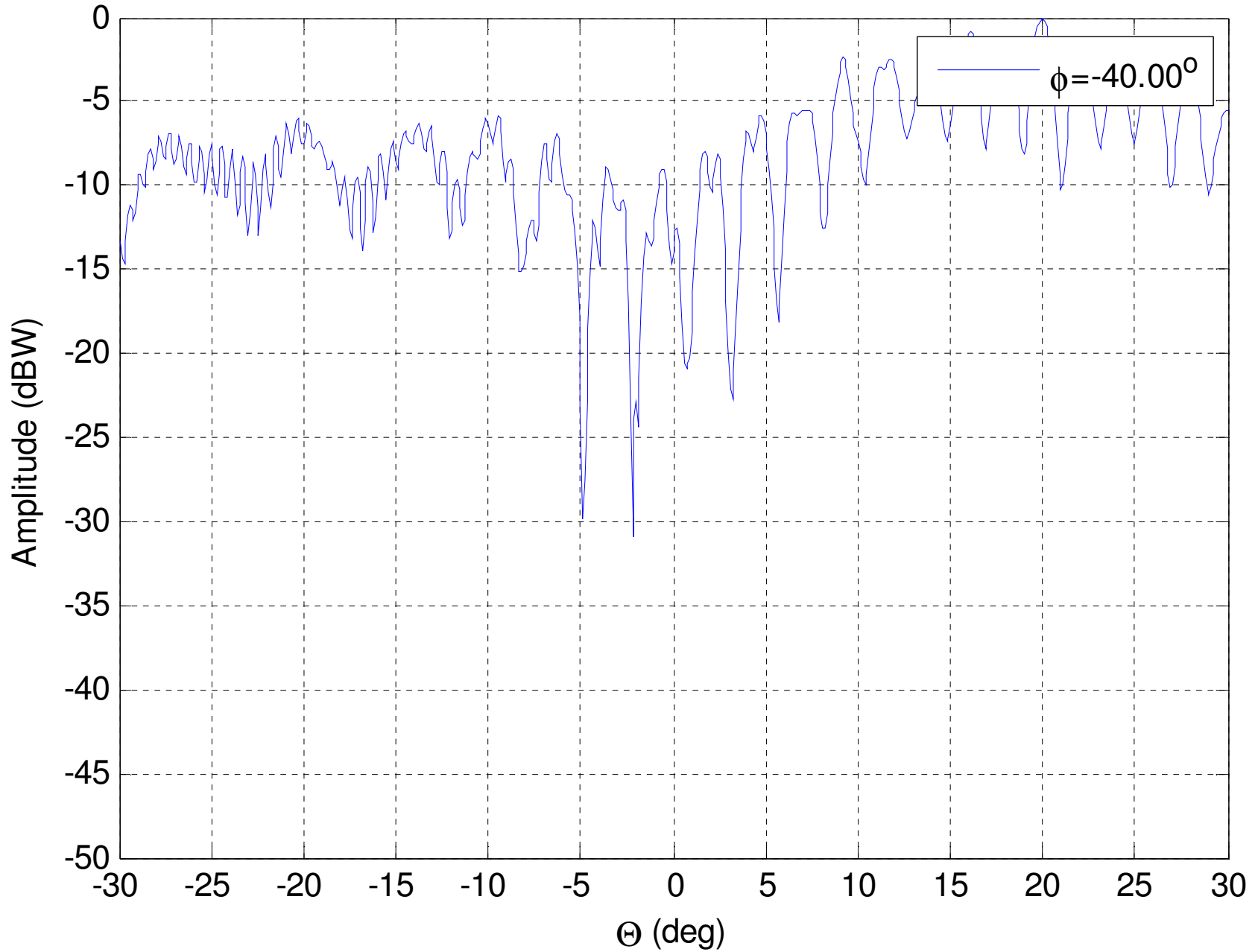
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.55 dBW, Date: 14-Dec-2011



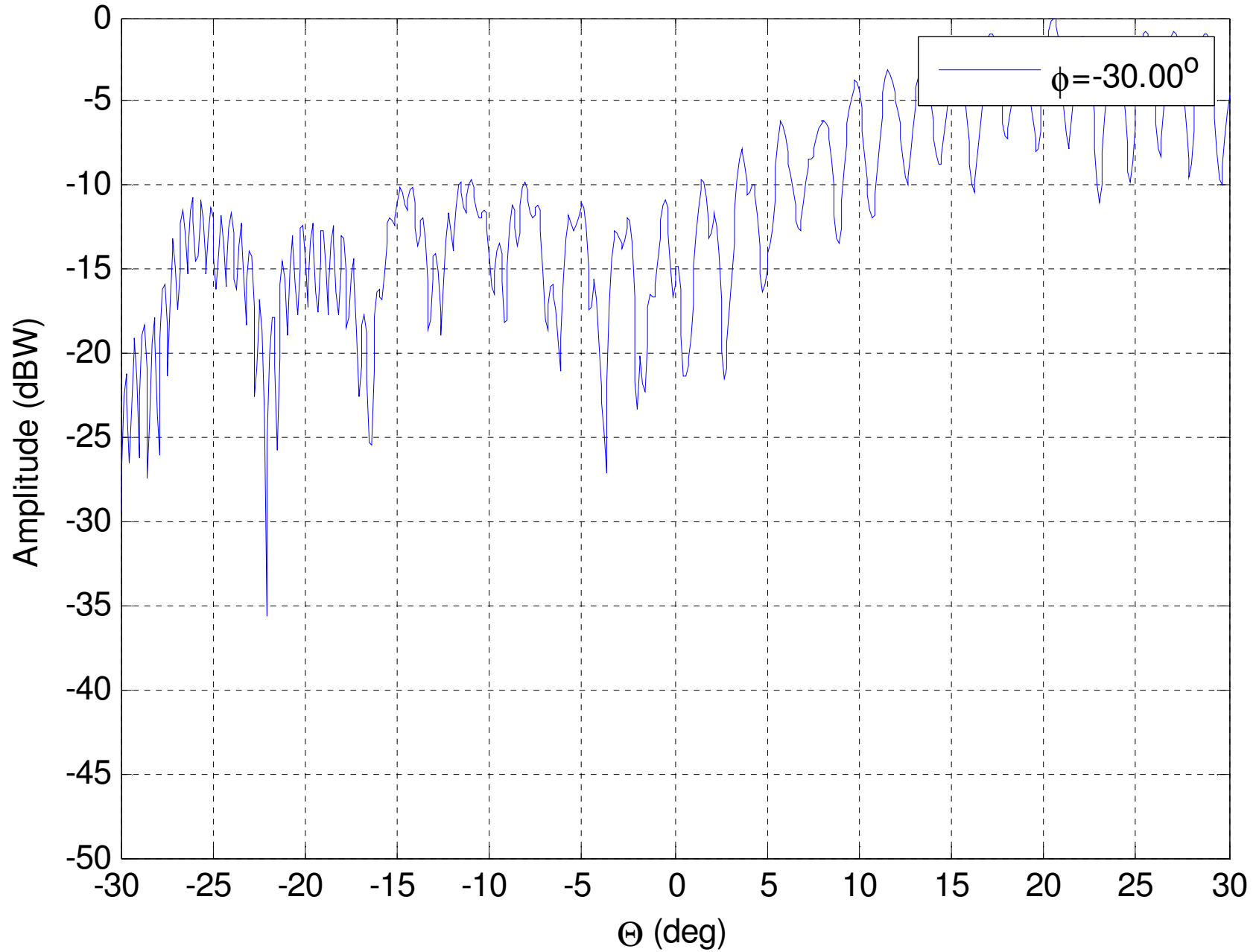
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -5.84 dBW, Date: 14-Dec-2011



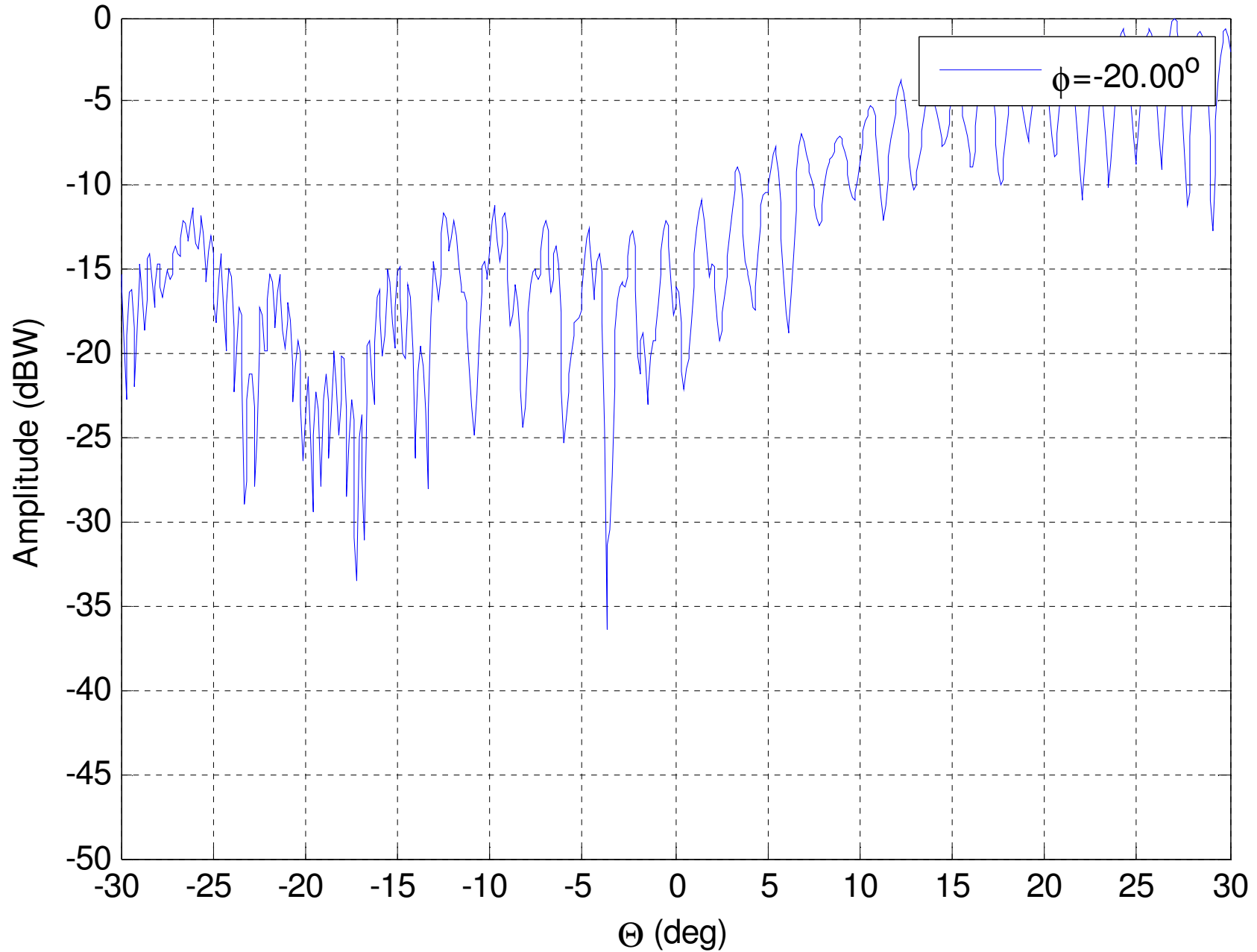
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -3.84 dBW, Date: 14-Dec-2011



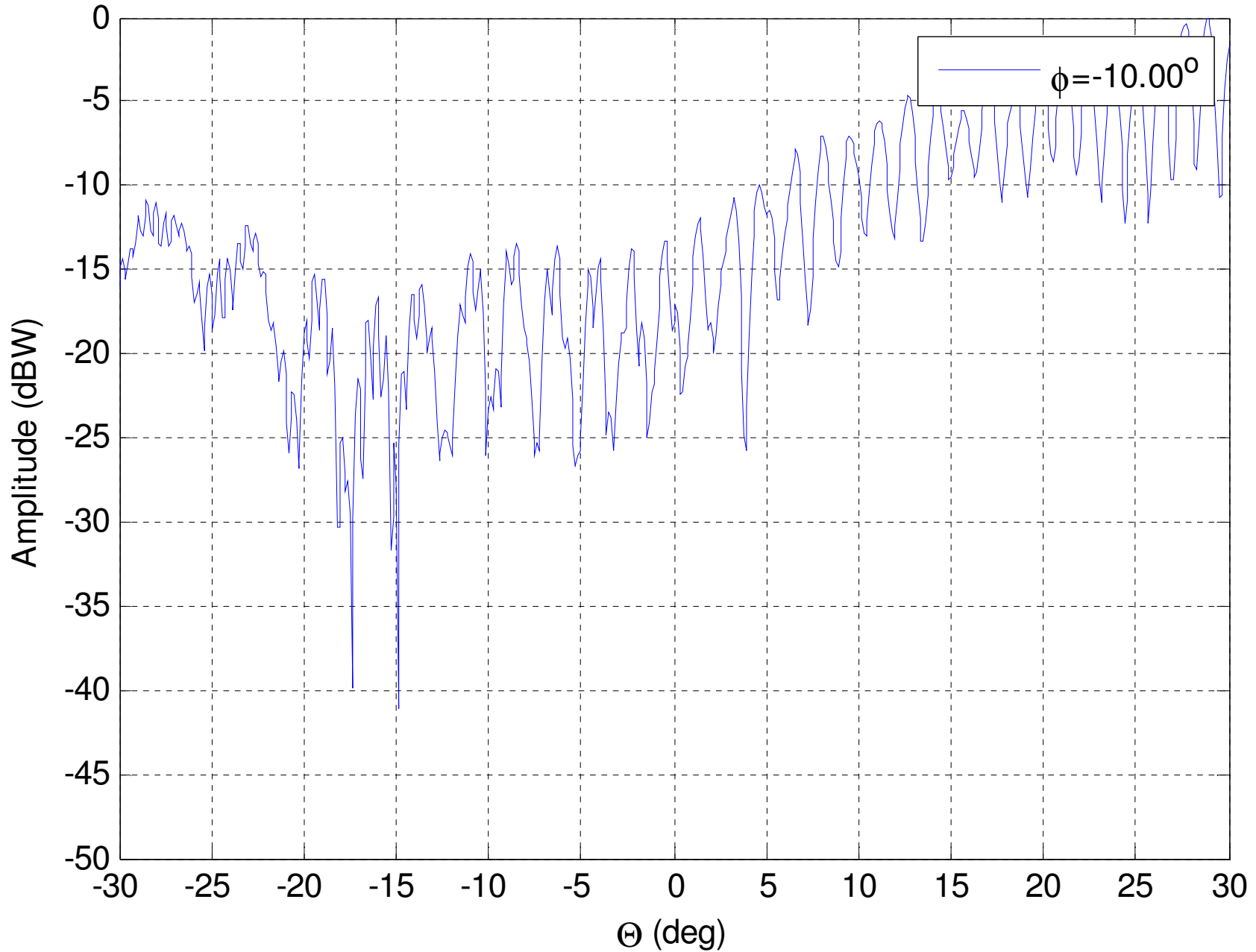
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -2.65 dBW, Date: 14-Dec-2011



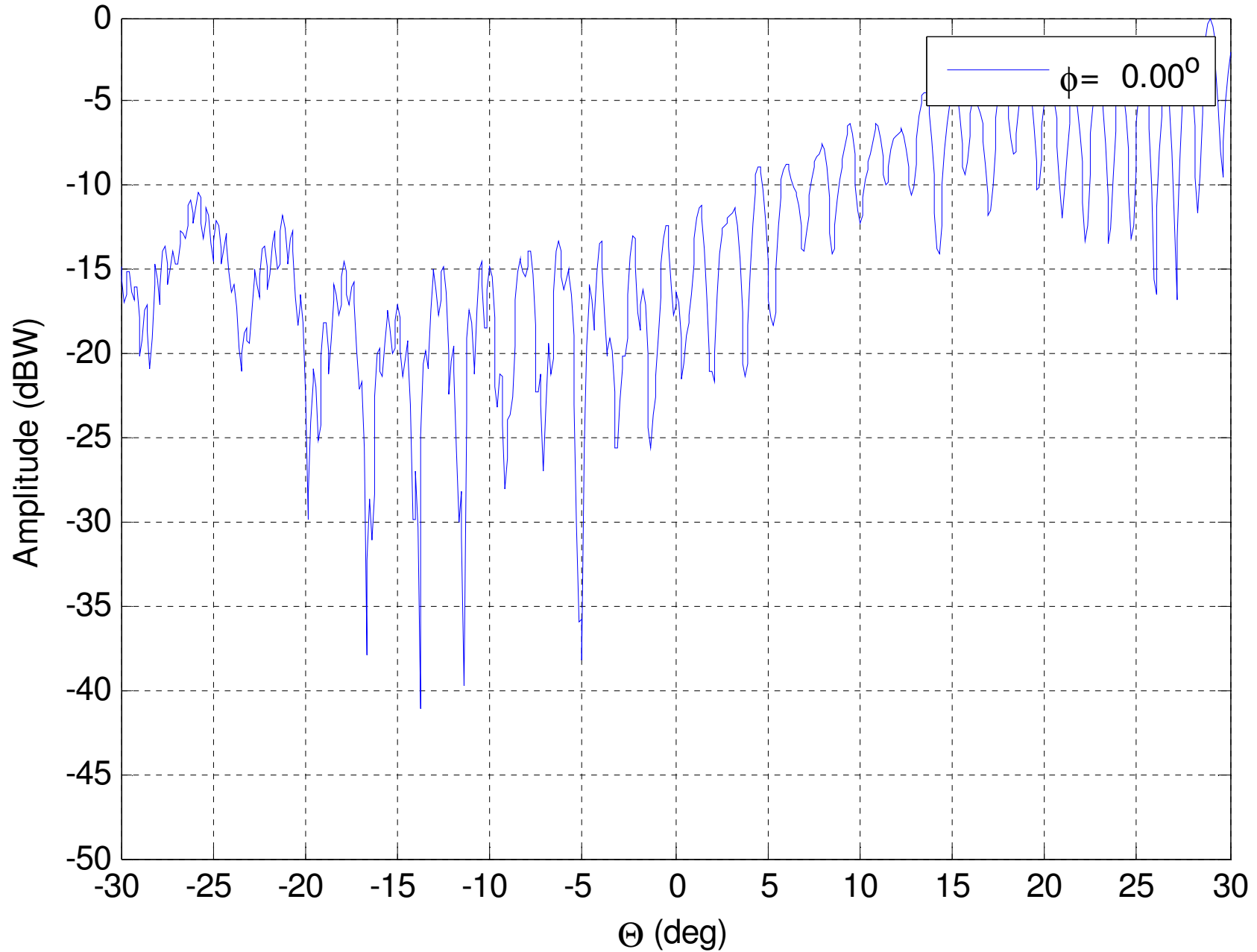
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -1.59 dBW, Date: 14-Dec-2011



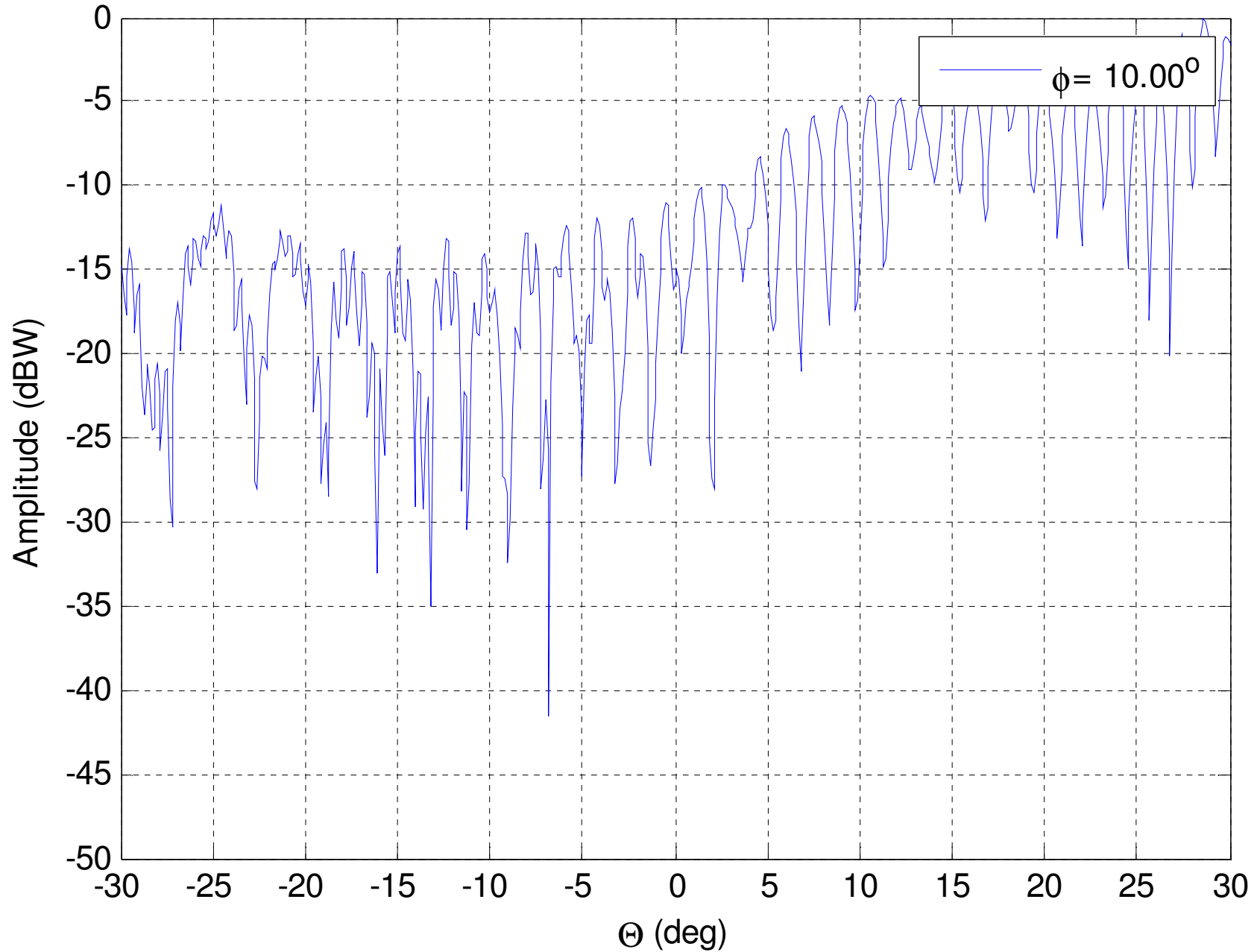
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -2.51 dBW, Date: 14-Dec-2011



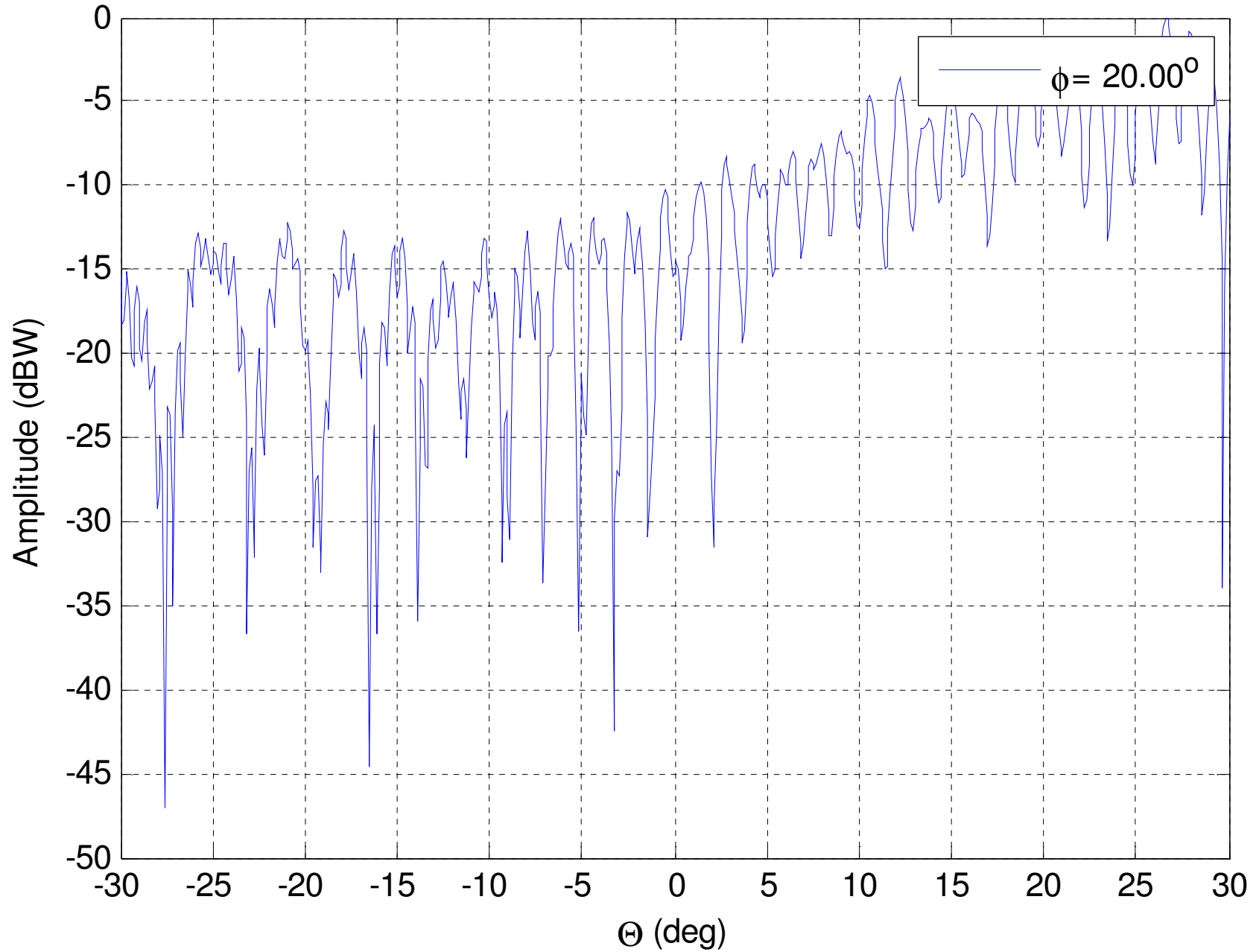
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -3.90 dBW, Date: 14-Dec-2011



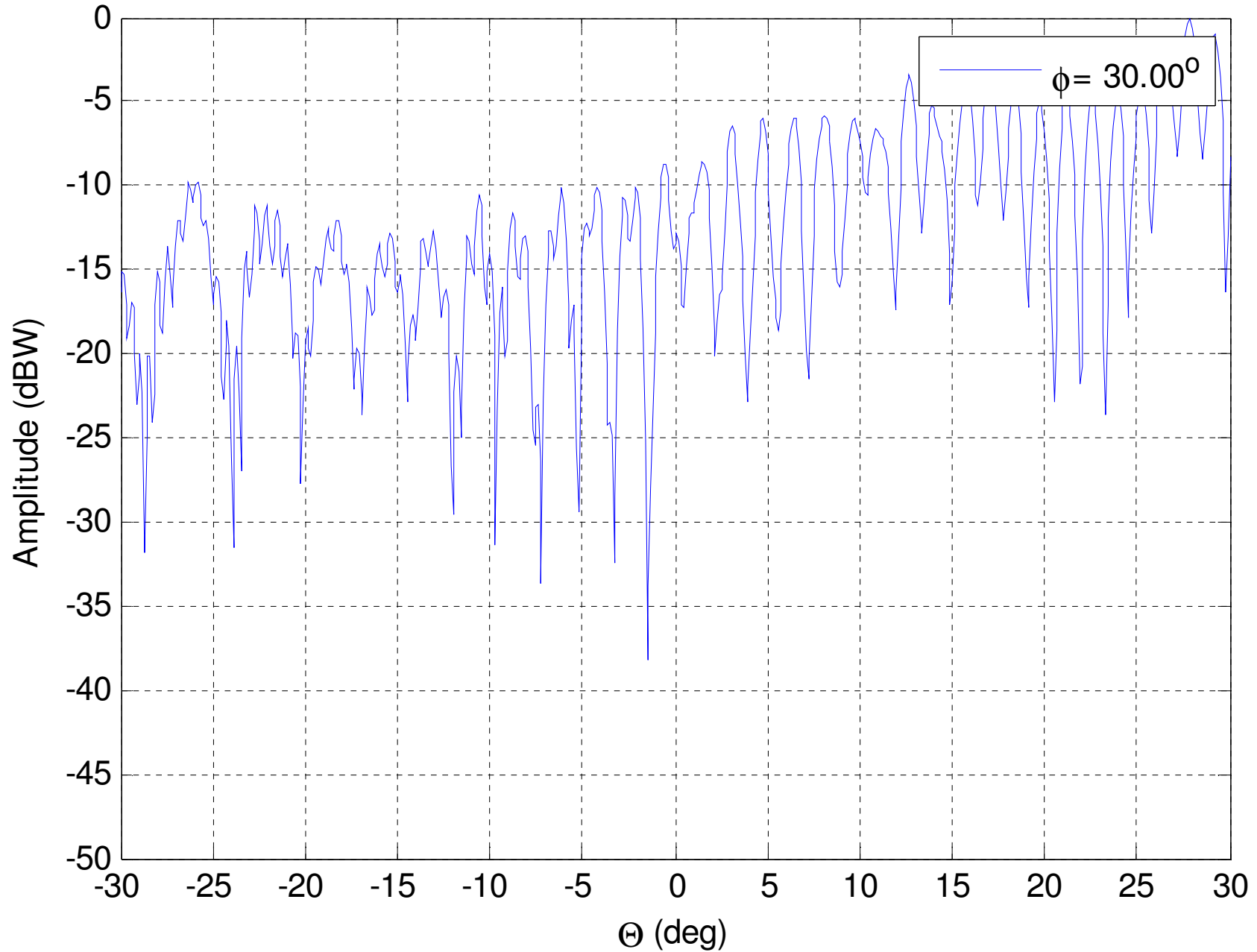
Normalized pattern cuts - farfield

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



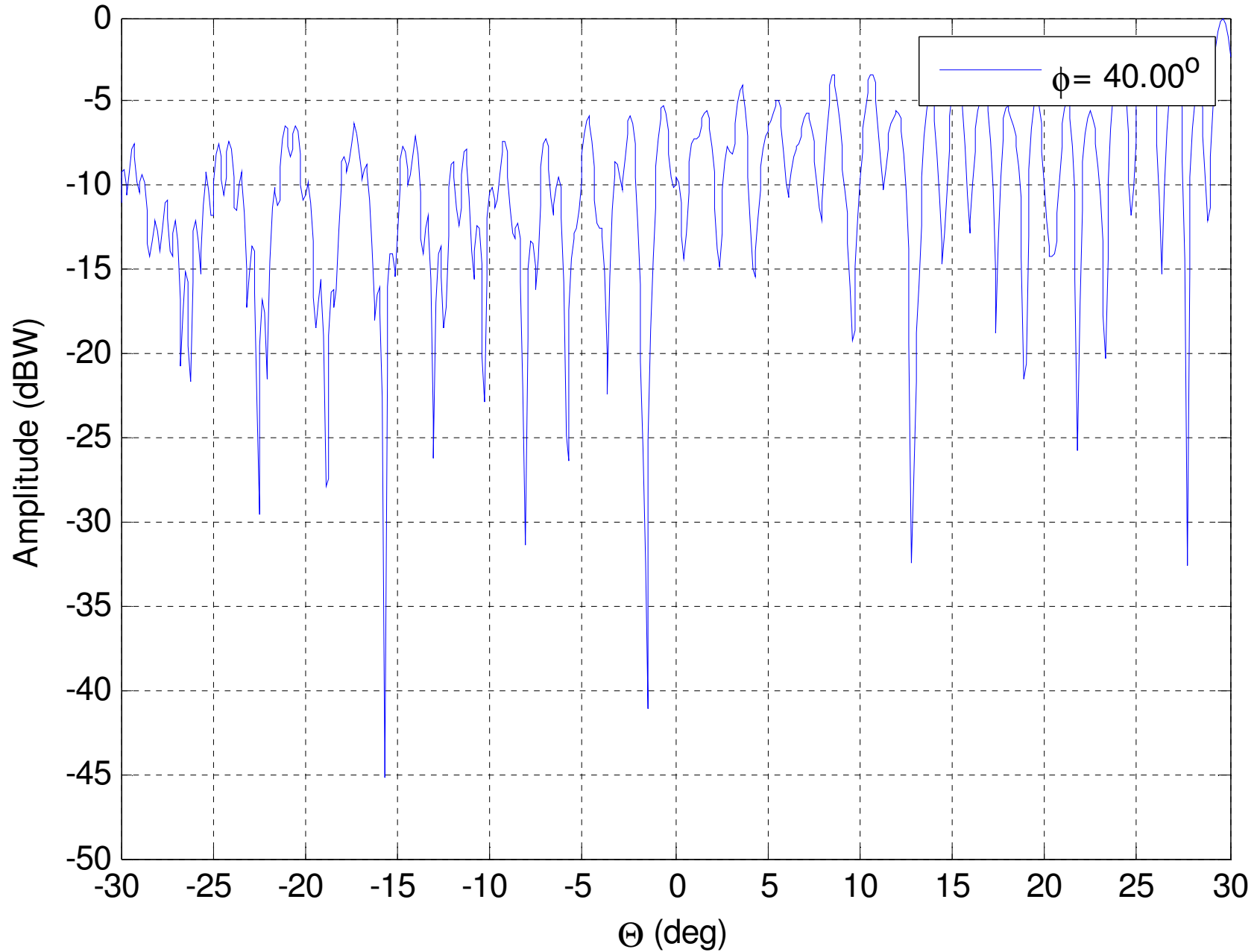
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.27 dBW, Date: 14-Dec-2011



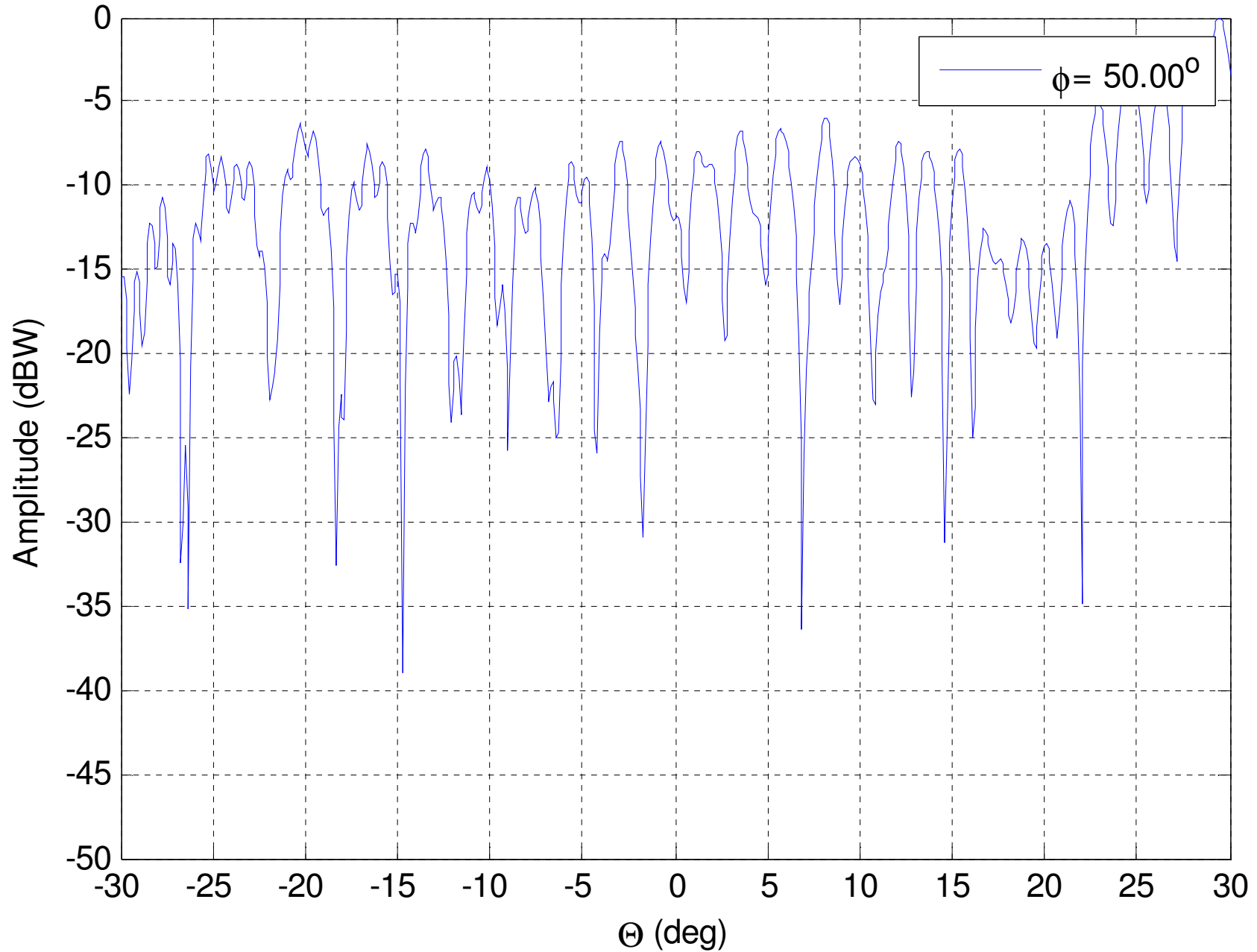
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -9.78 dBW, Date: 14-Dec-2011



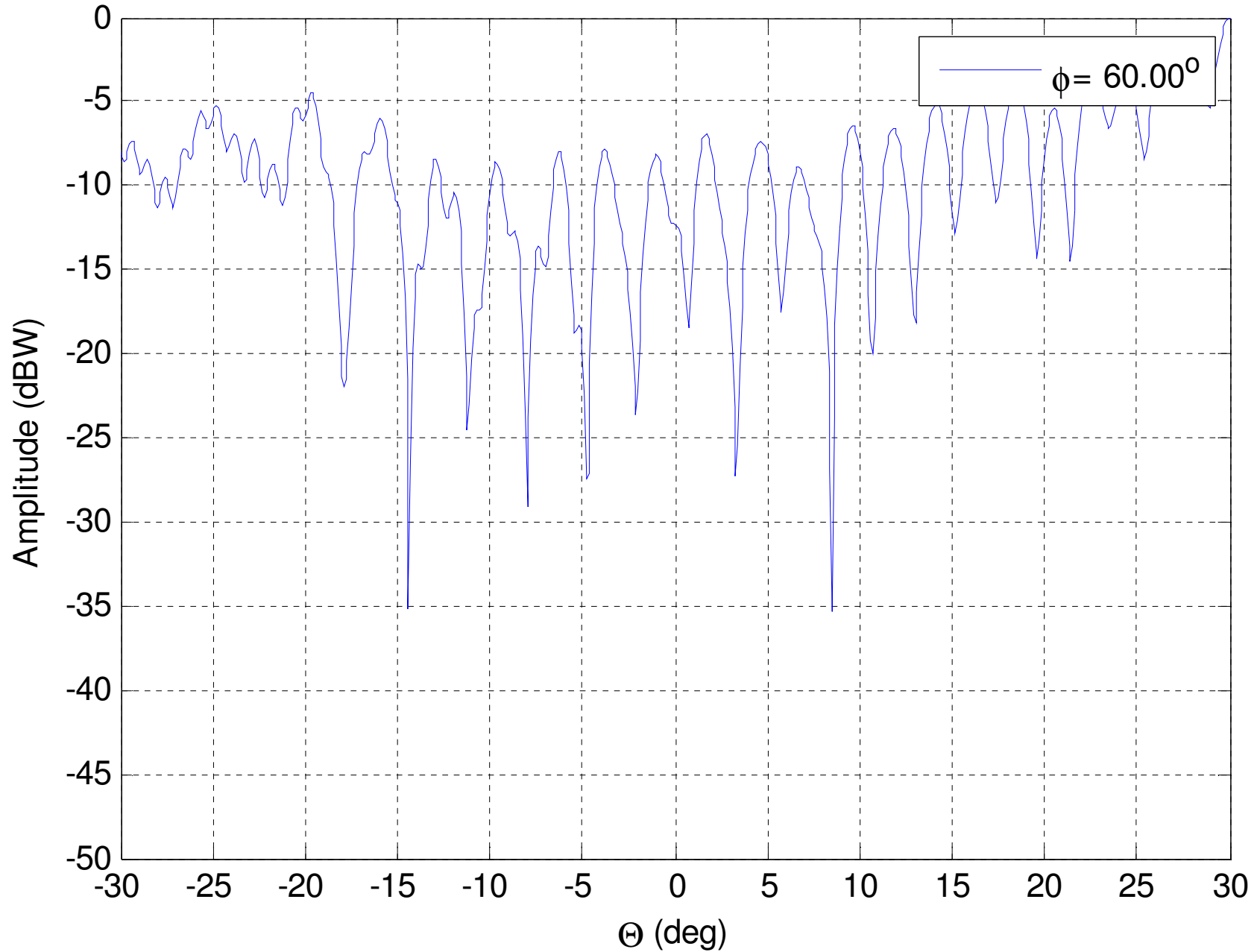
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.76 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -7.38 dBW, Date: 14-Dec-2011



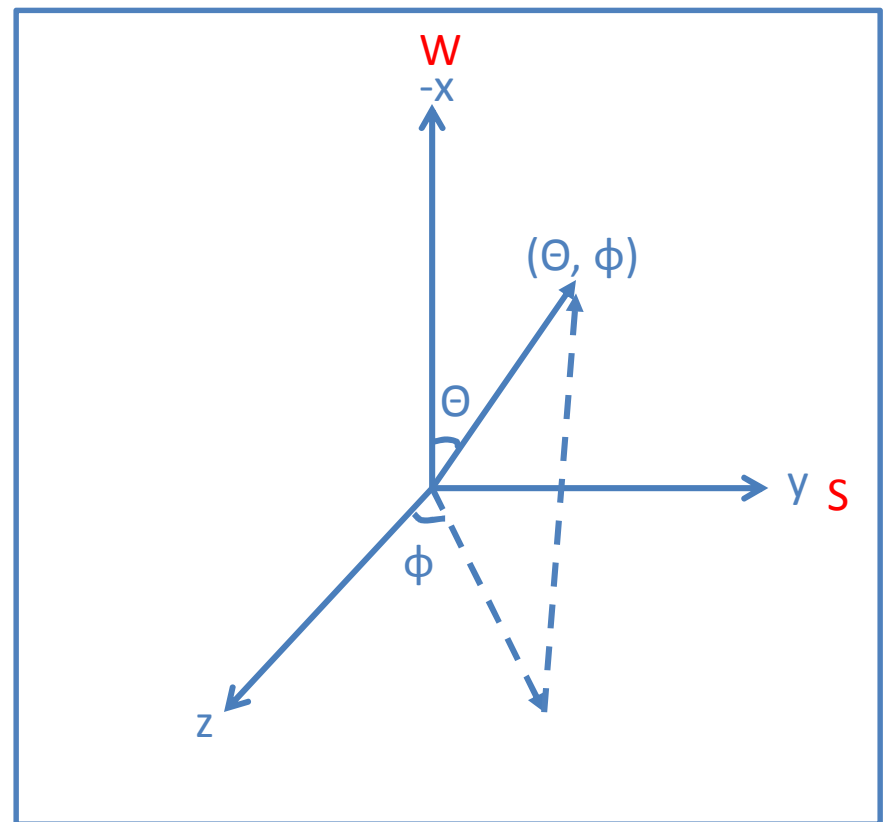
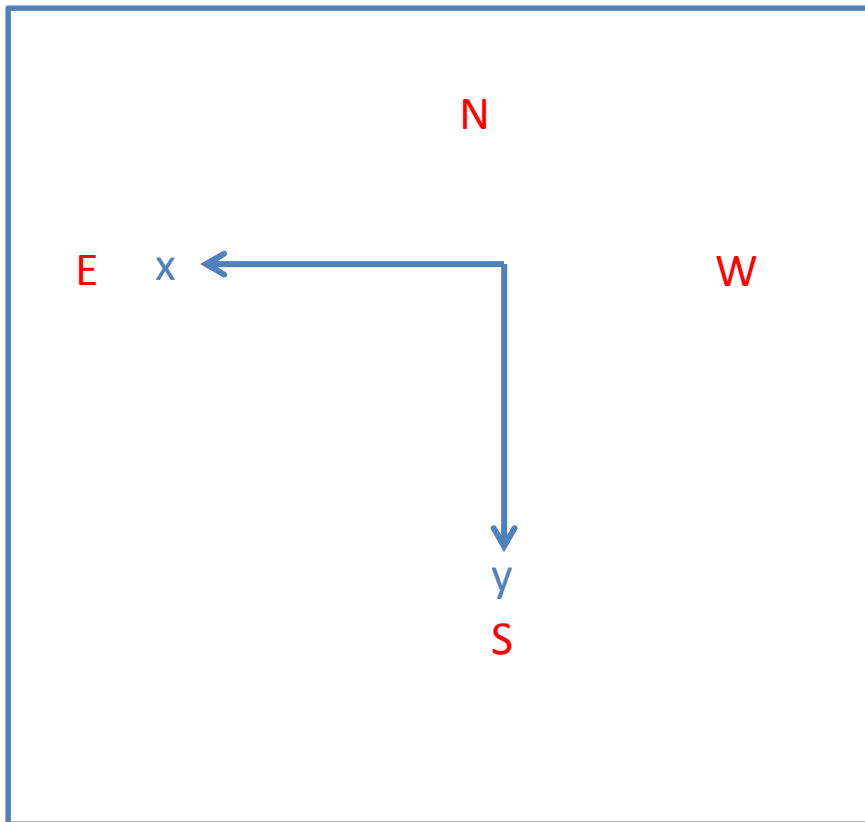
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 20

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



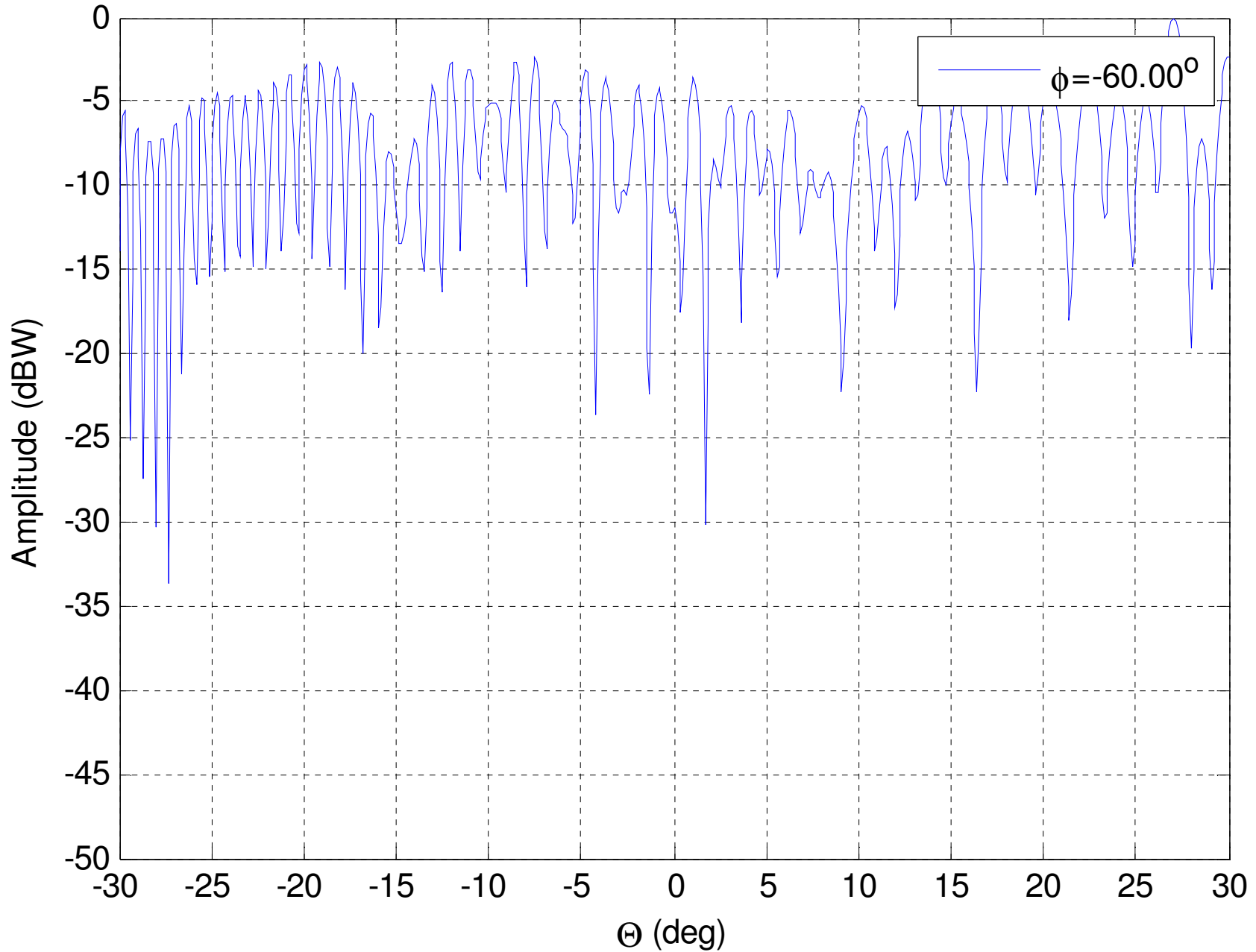
Spot Beam20, -X Axis Plots

- 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

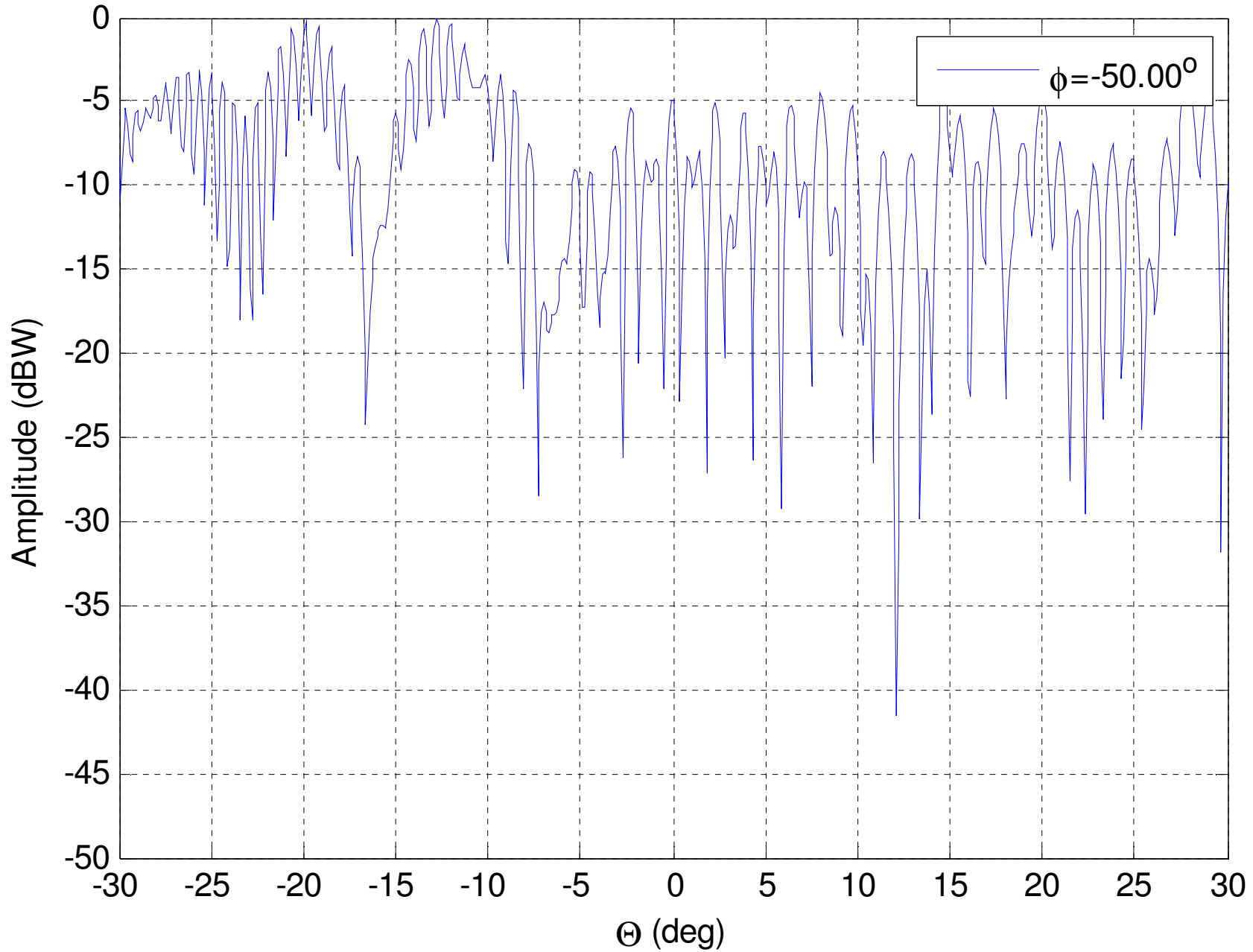
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.56 dBW, Date: 14-Dec-2011



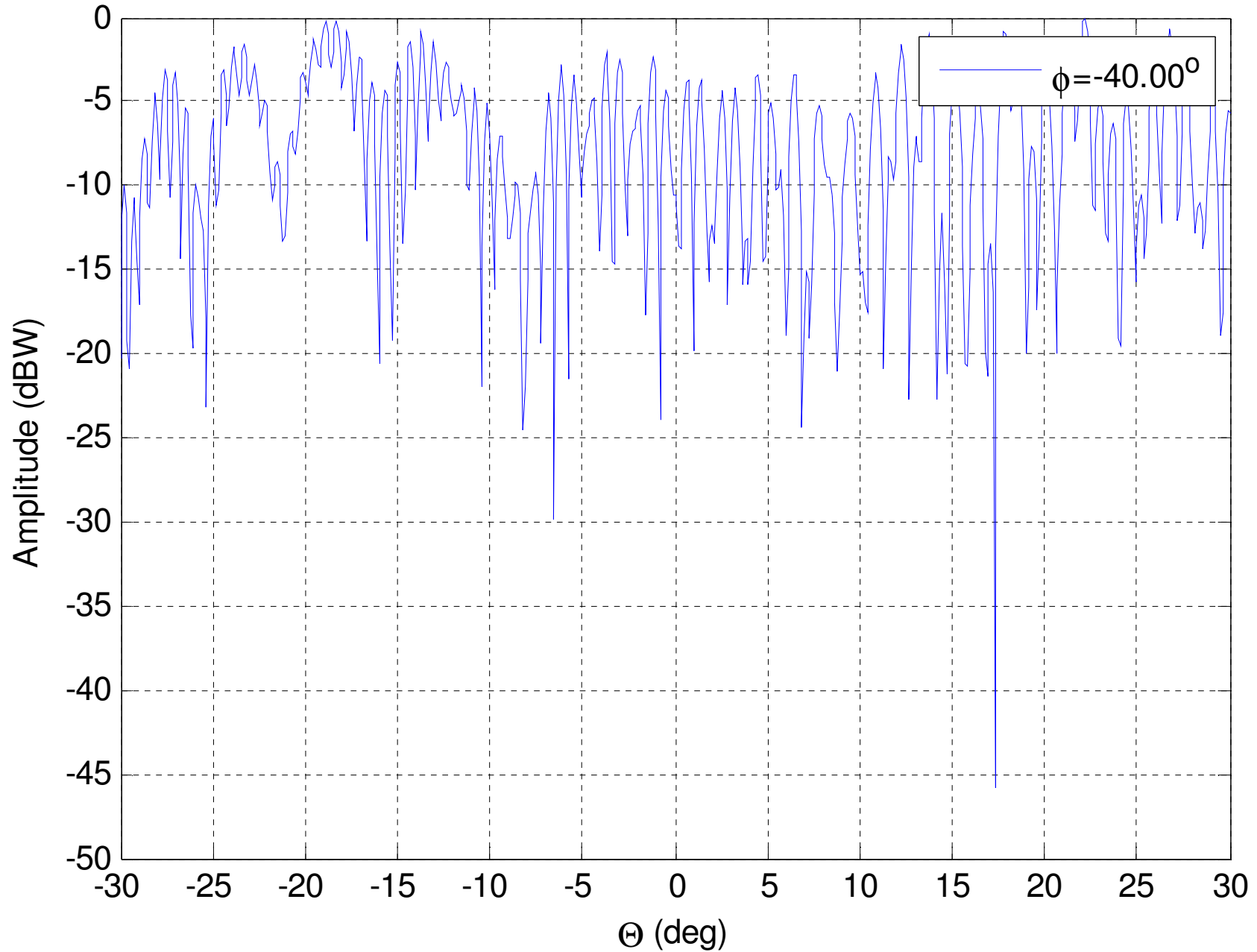
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -9.10 dBW, Date: 14-Dec-2011



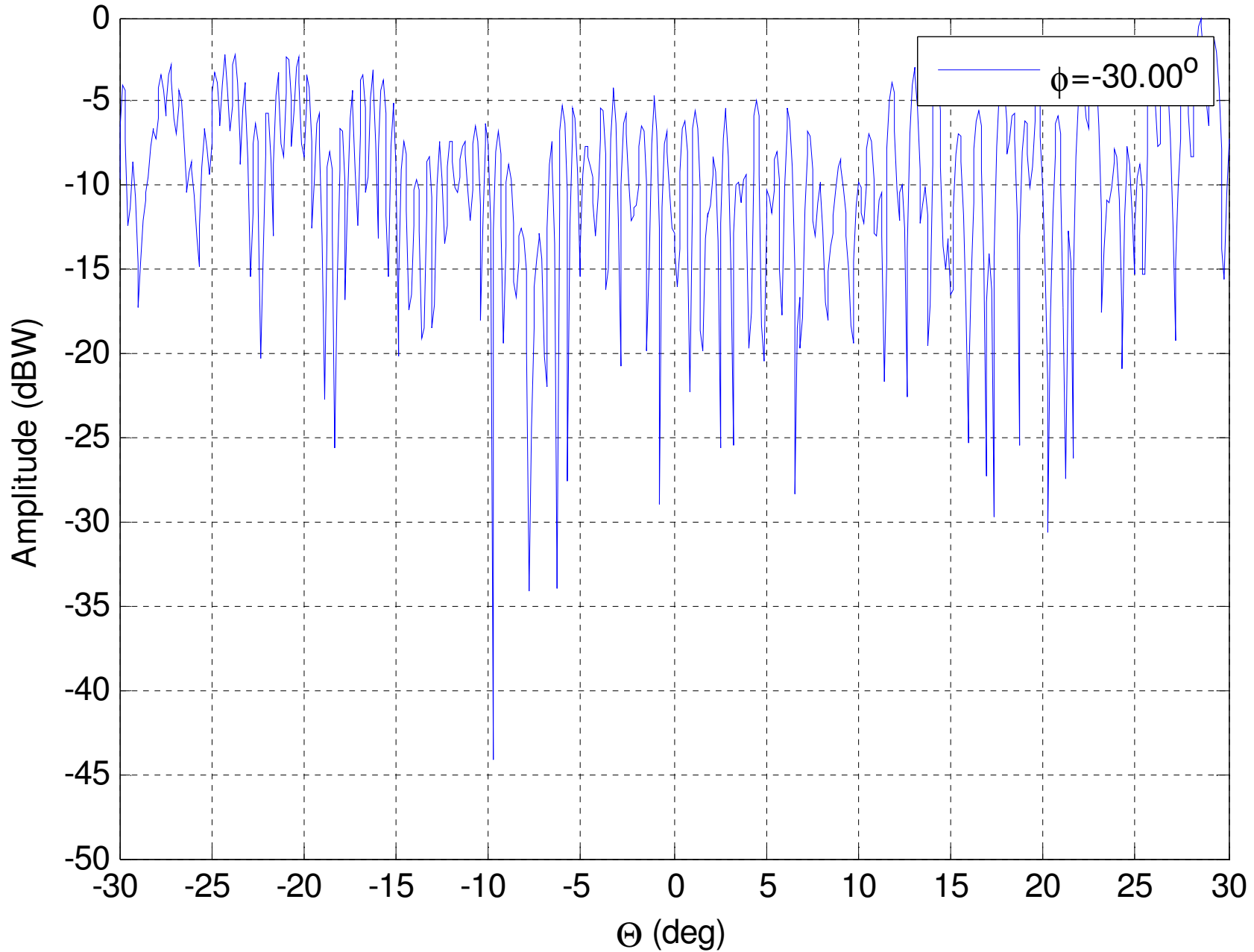
Normalized pattern cuts - farfield

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



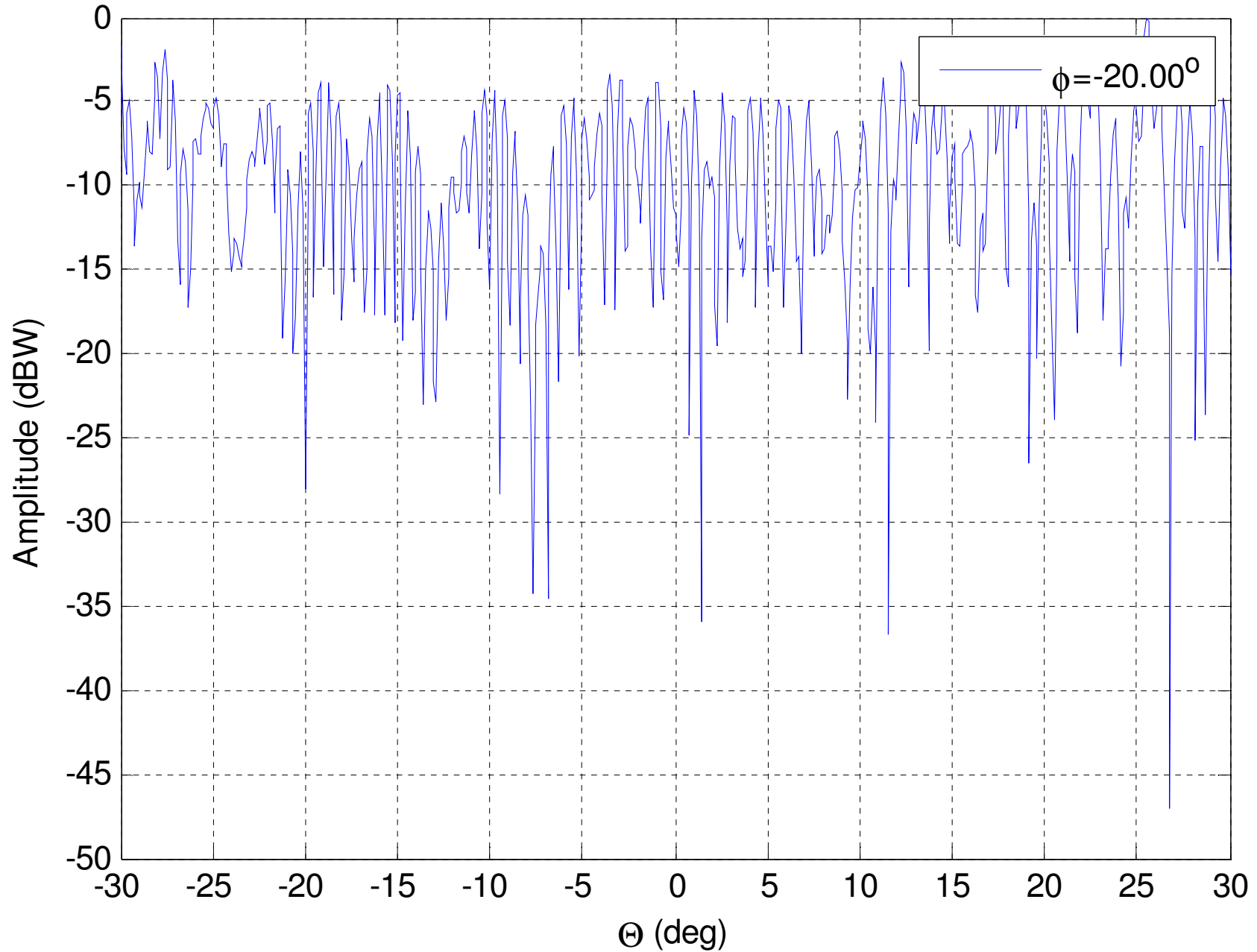
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -8.05 dBW, Date: 14-Dec-2011



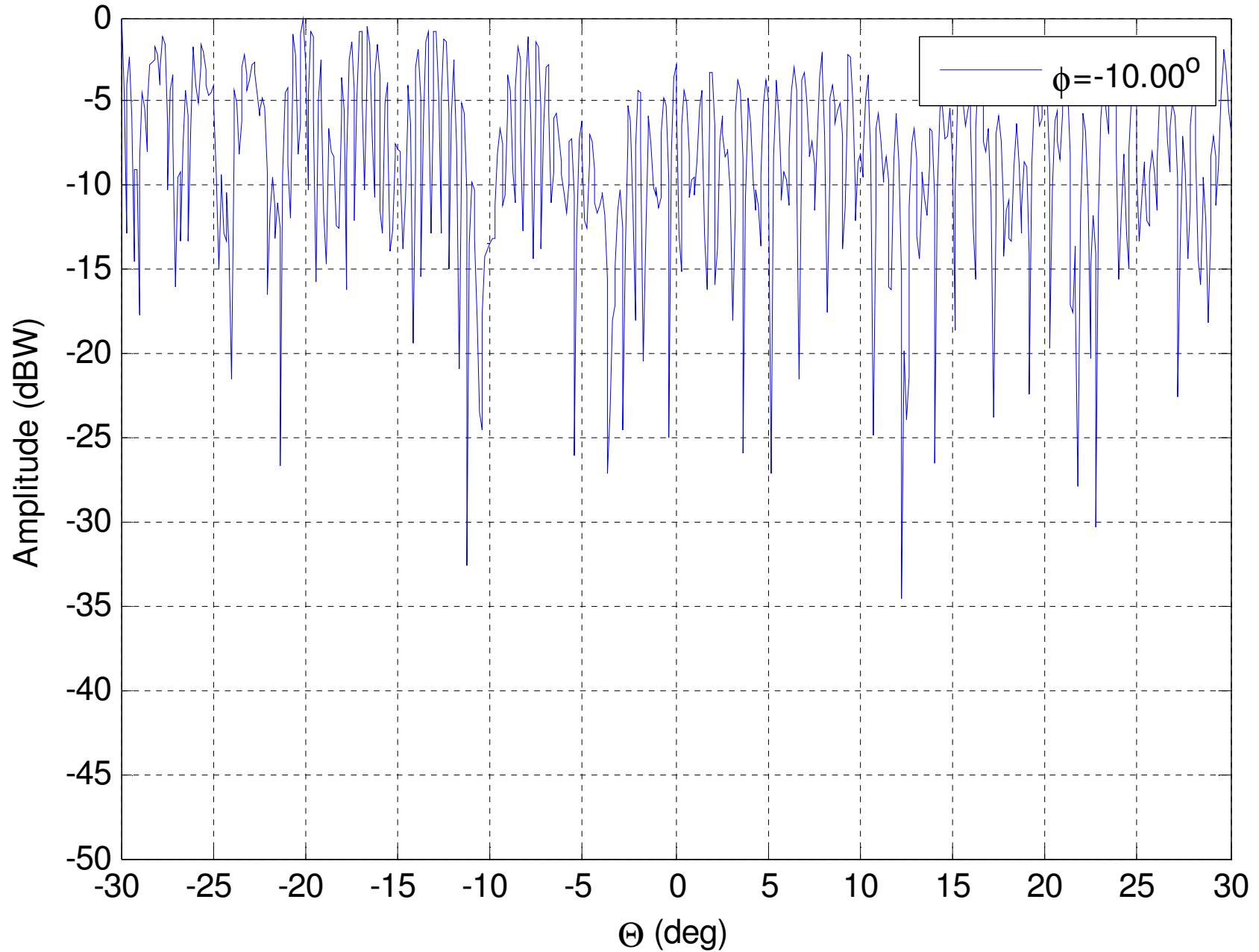
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -9.01 dBW, Date: 14-Dec-2011



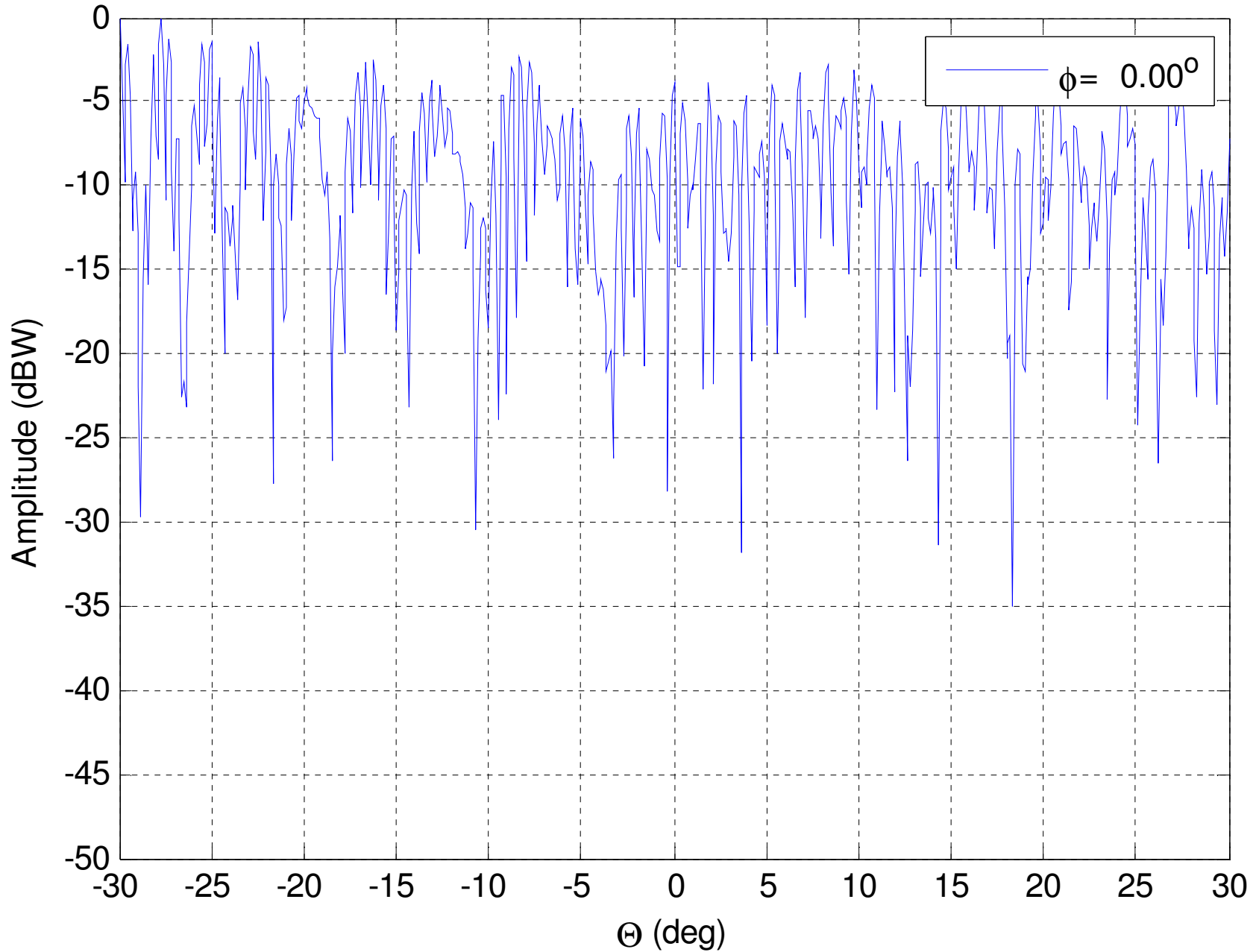
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -11.13 dBW, Date: 14-Dec-2011



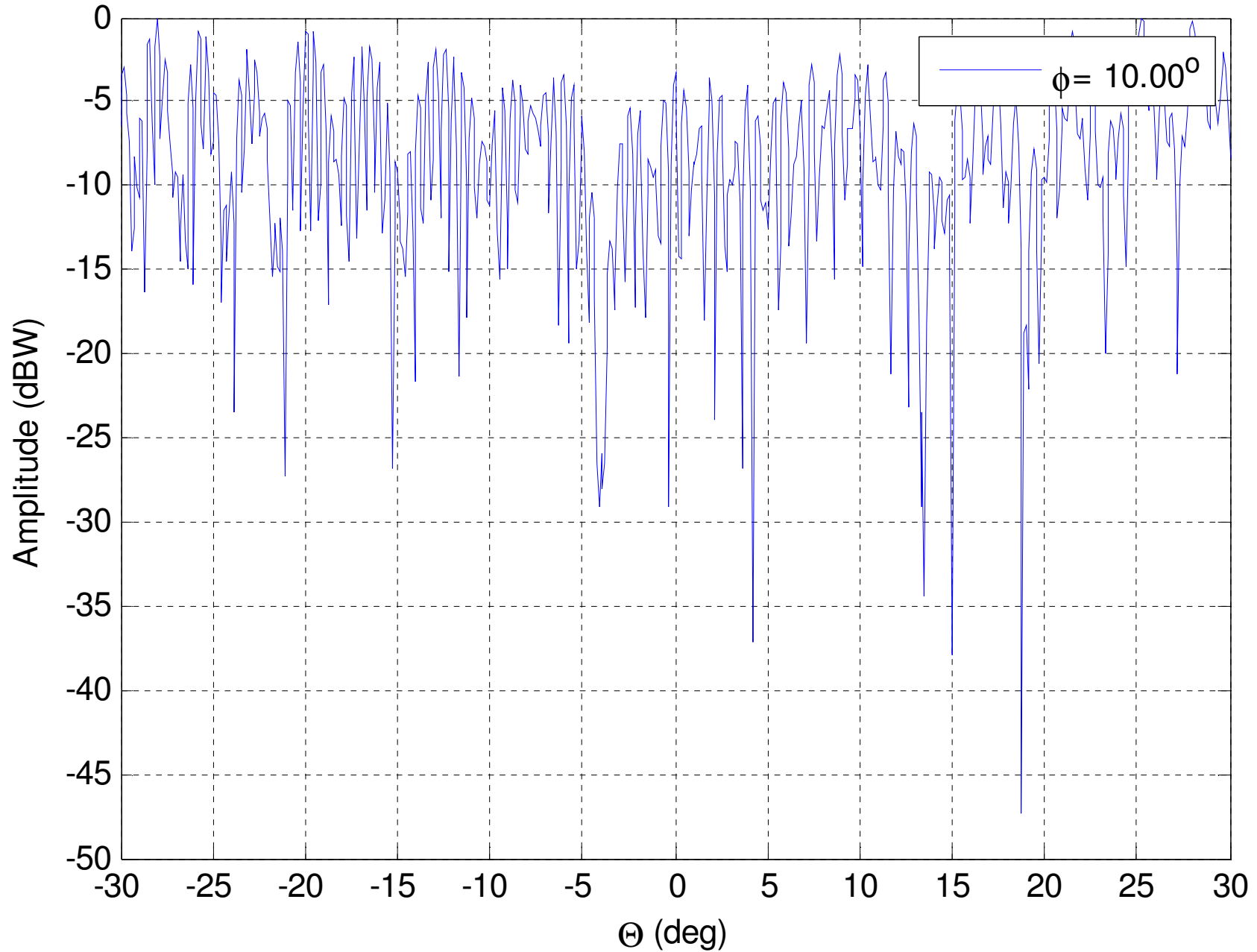
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -10.16 dBW, Date: 14-Dec-2011



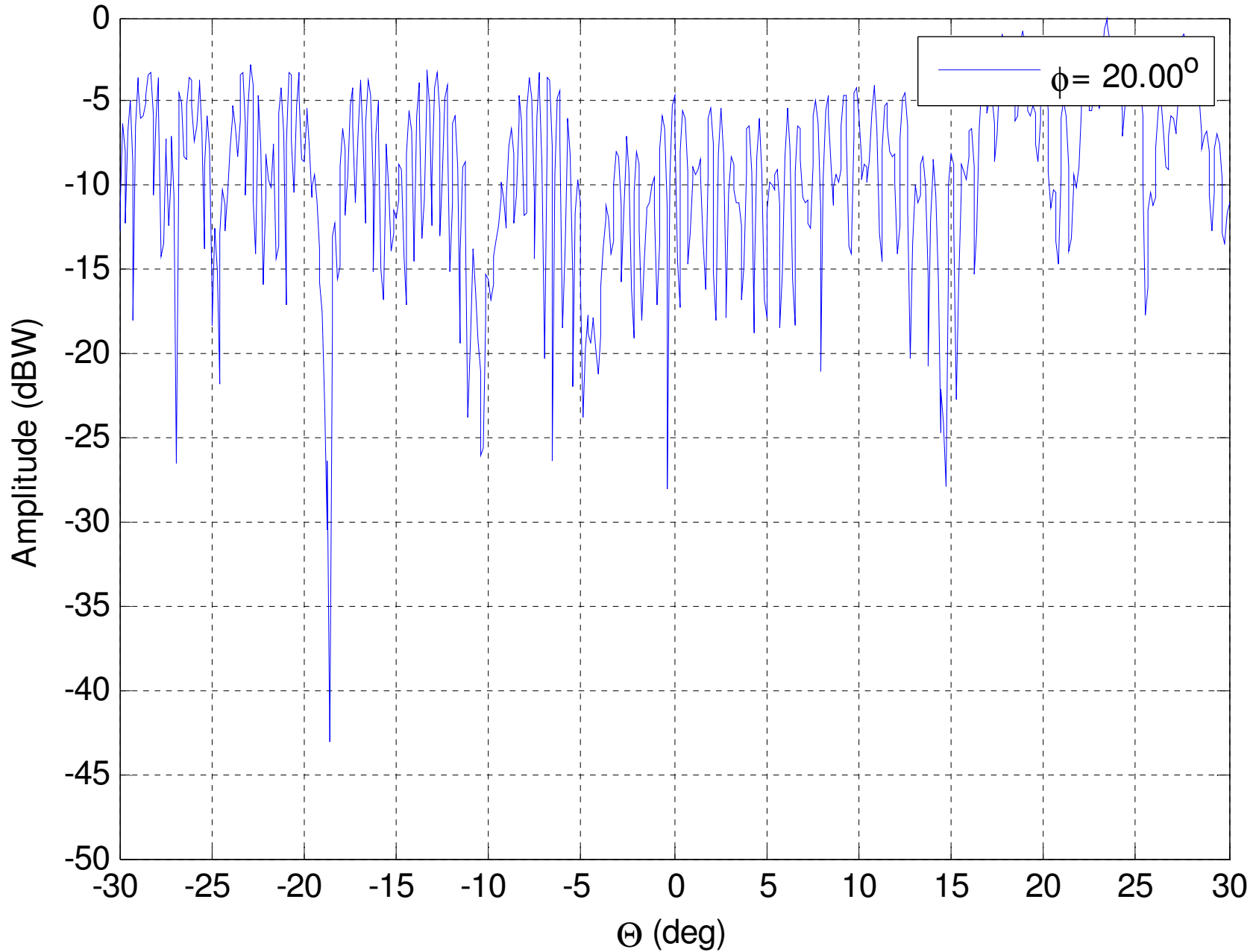
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -10.70 dBW, Date: 14-Dec-2011



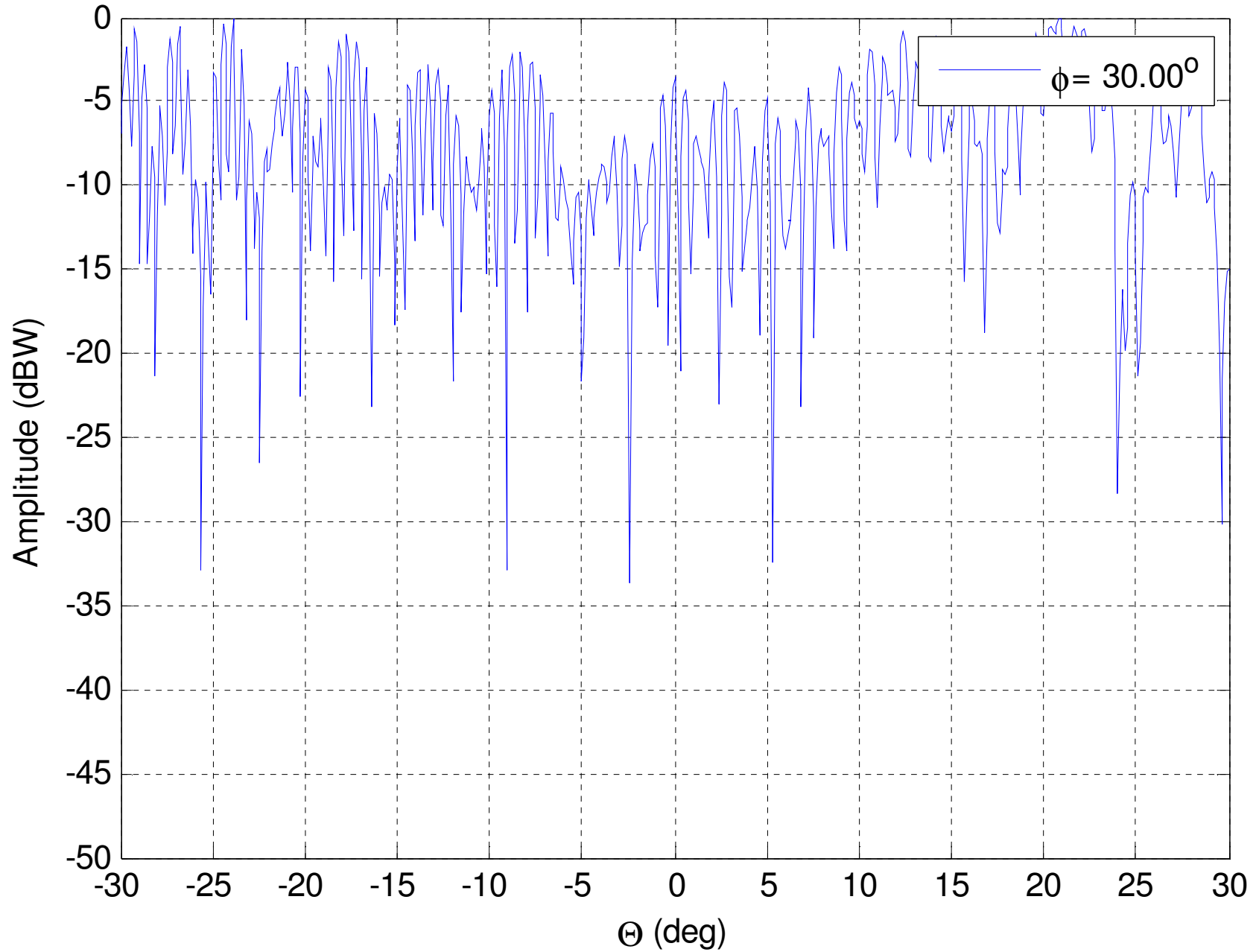
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -9.40 dBW, Date: 14-Dec-2011



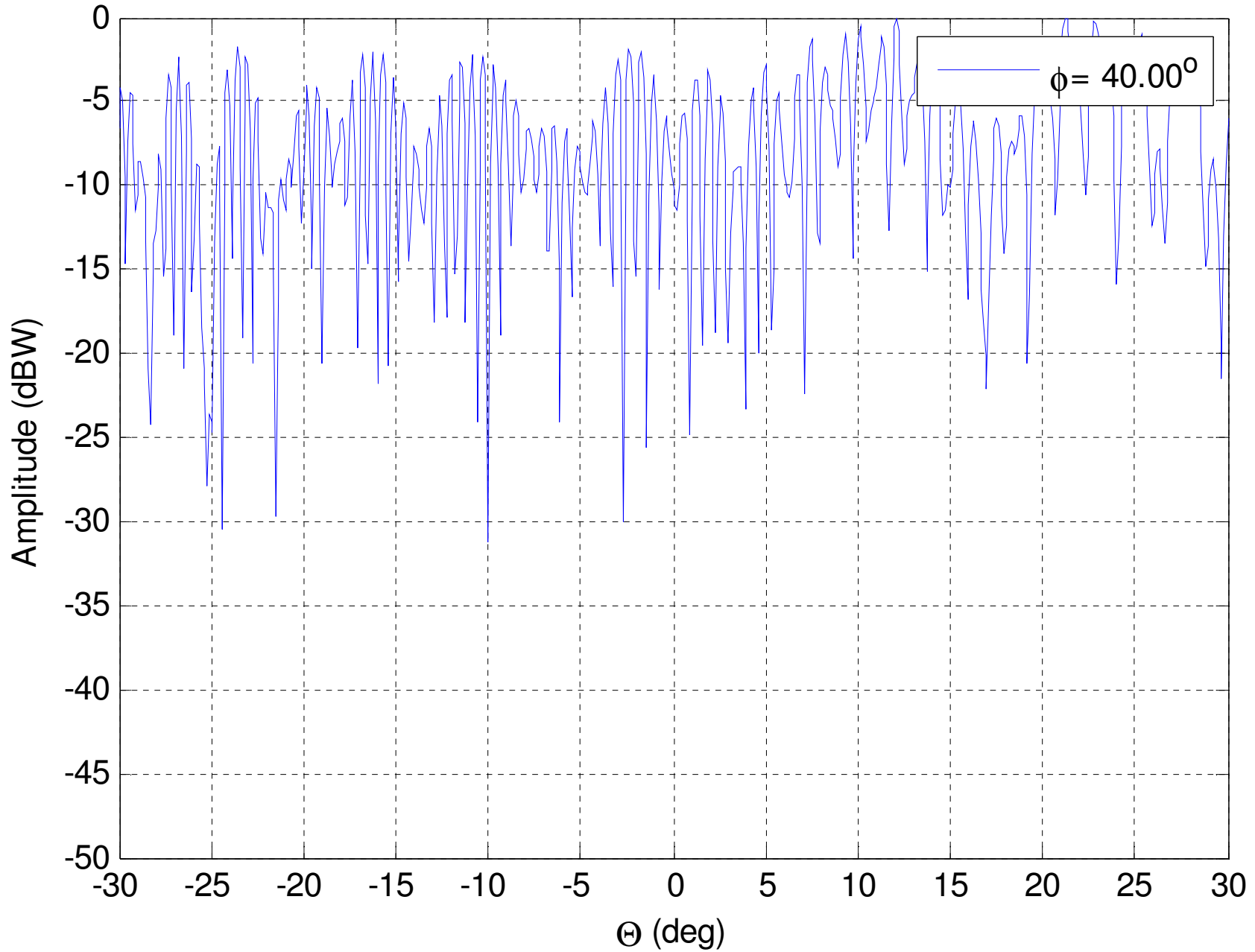
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.40 dBW, Date: 14-Dec-2011



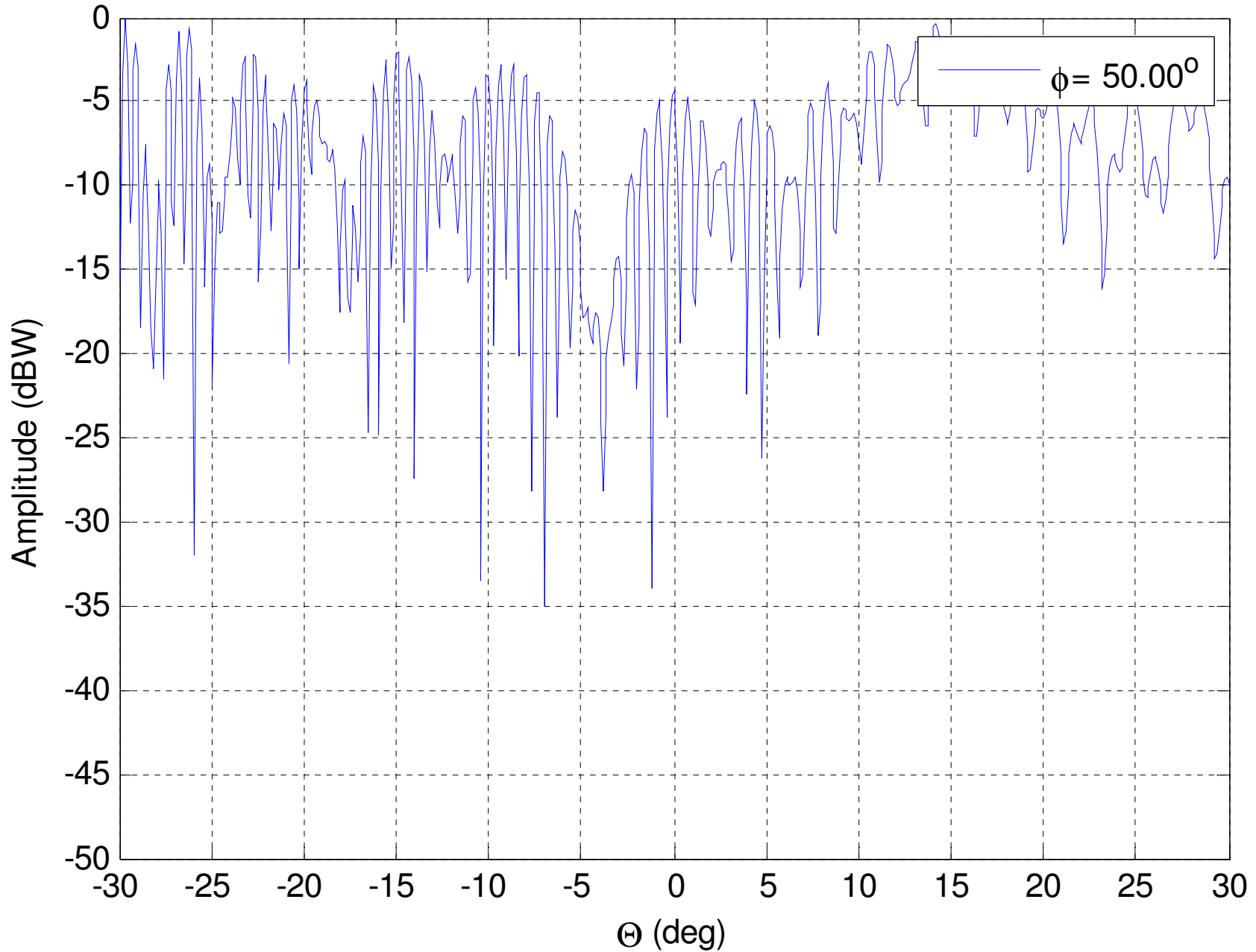
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -10.52 dBW, Date: 14-Dec-2011



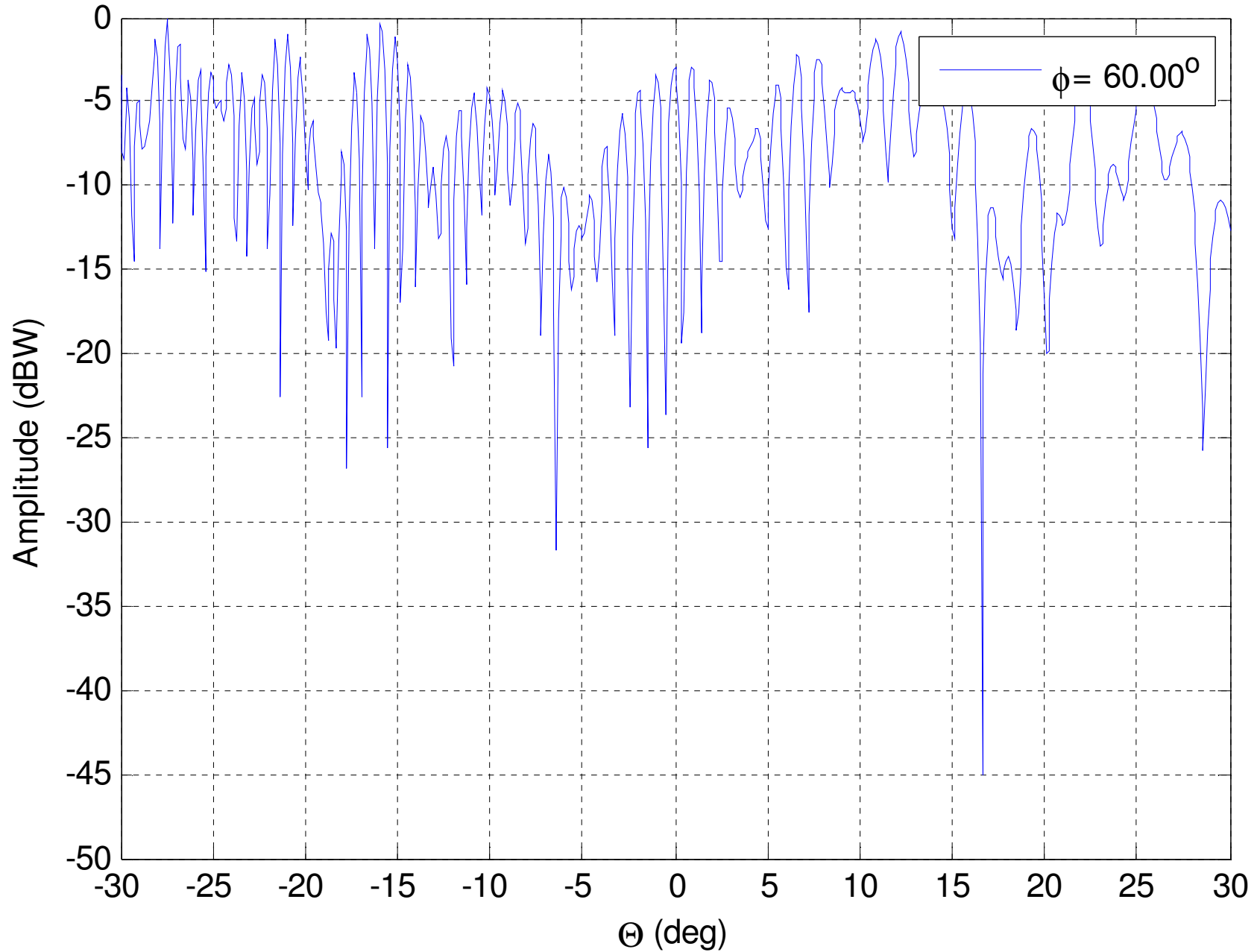
Normalized pattern cuts - farfield

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



Normalized pattern cuts - farfield

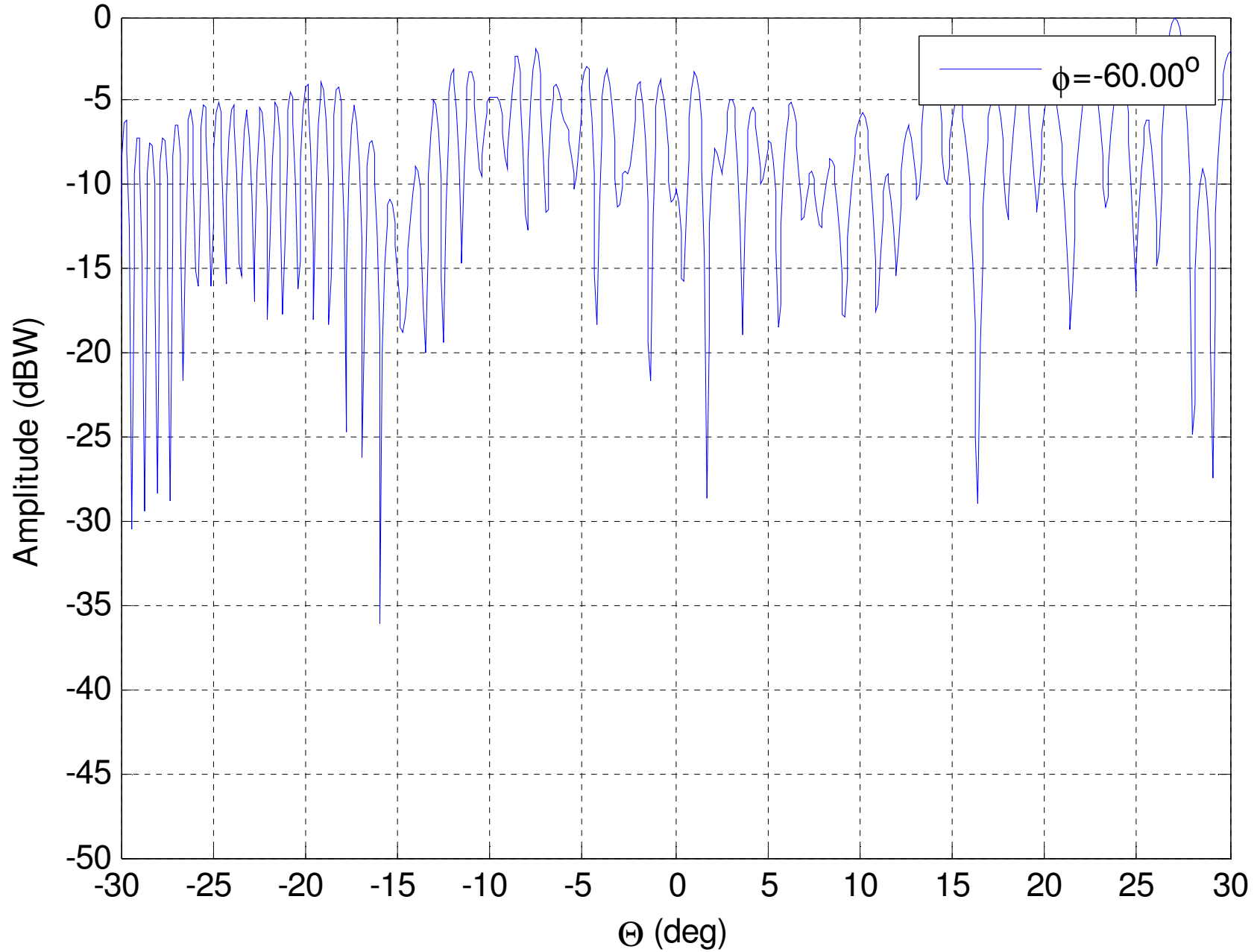
Input file: tx-17.3-rhcp-60.cut, Peak: -10.99 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

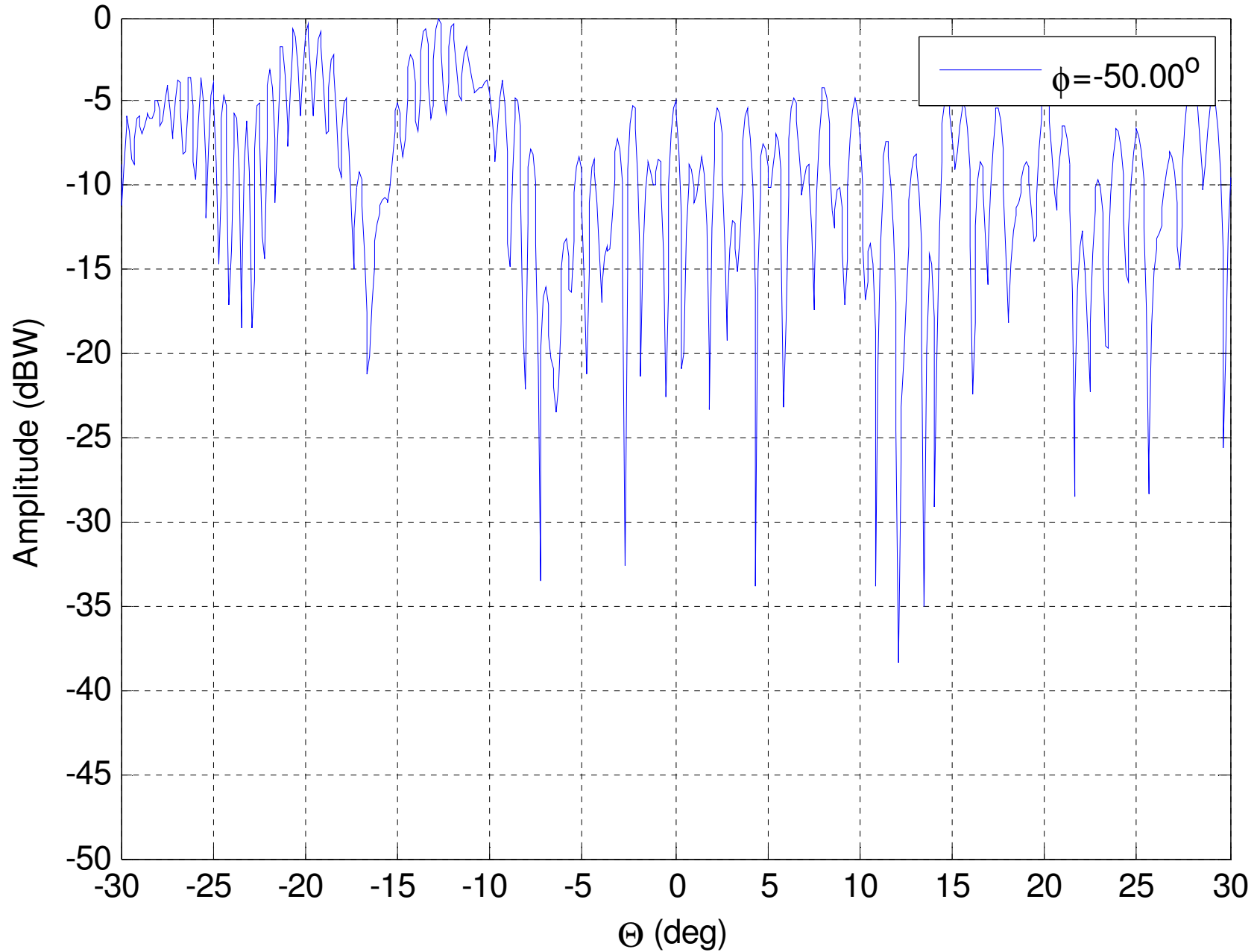
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.31 dBW, Date: 14-Dec-2011



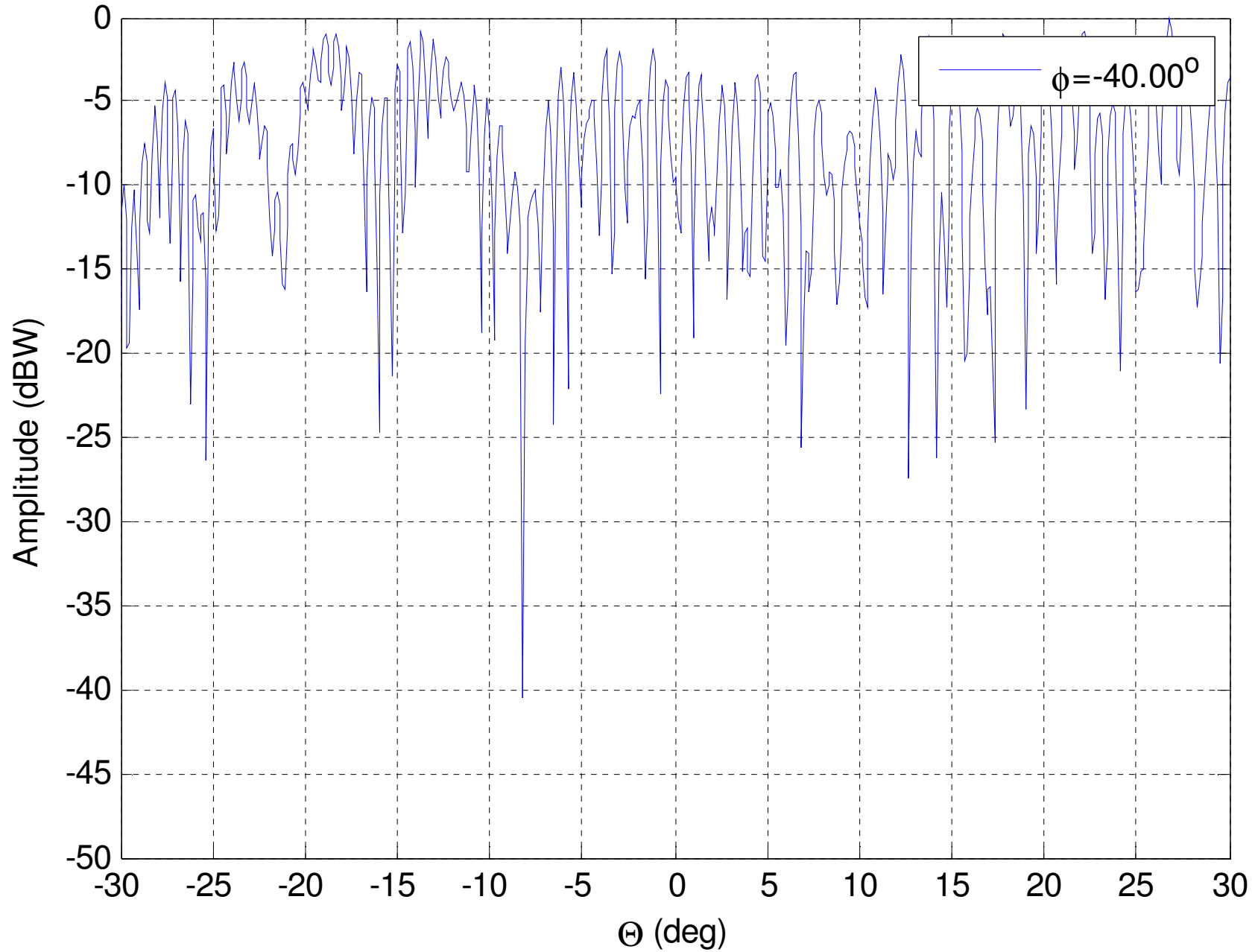
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -8.87 dBW, Date: 14-Dec-2011



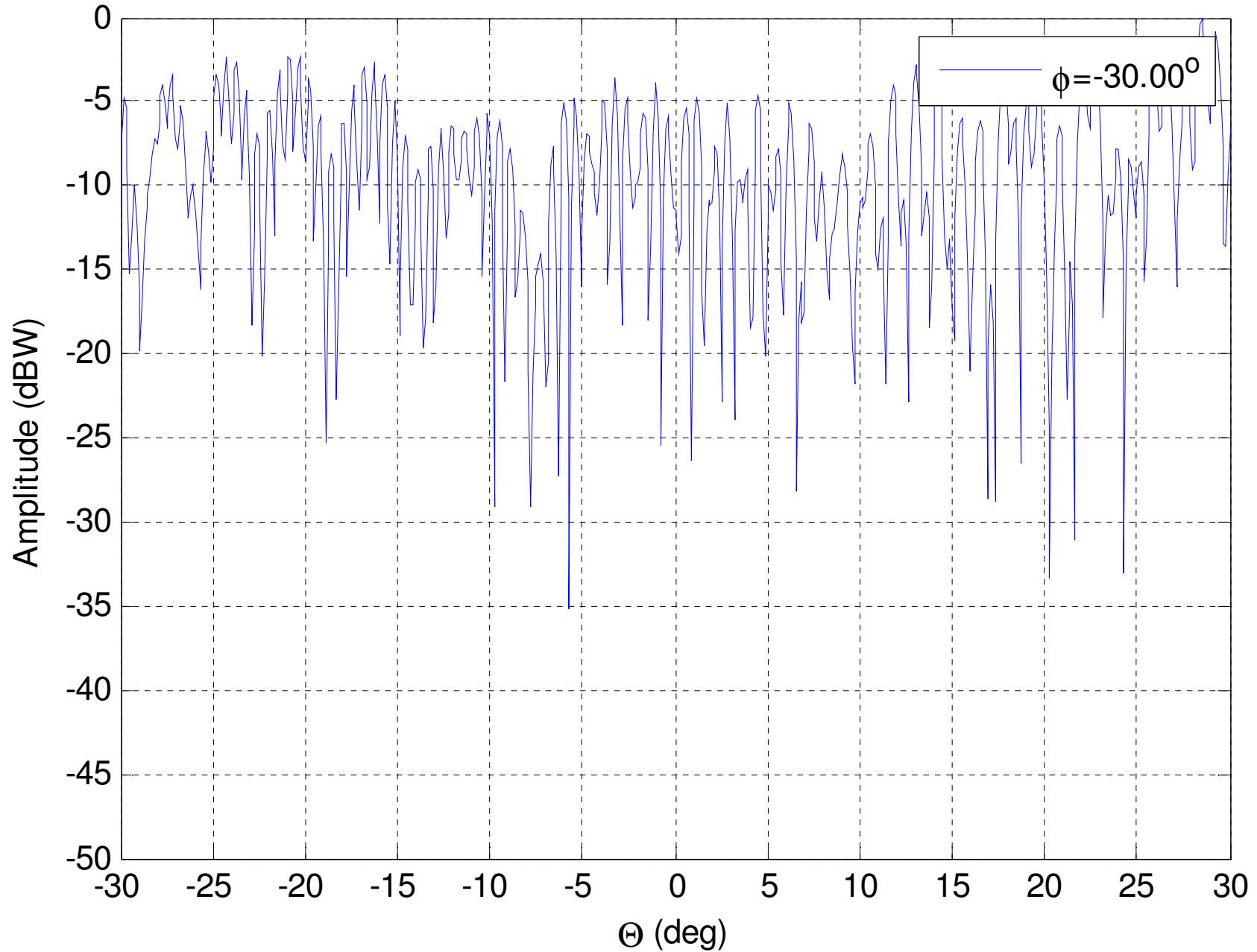
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.14 dBW, Date: 14-Dec-2011



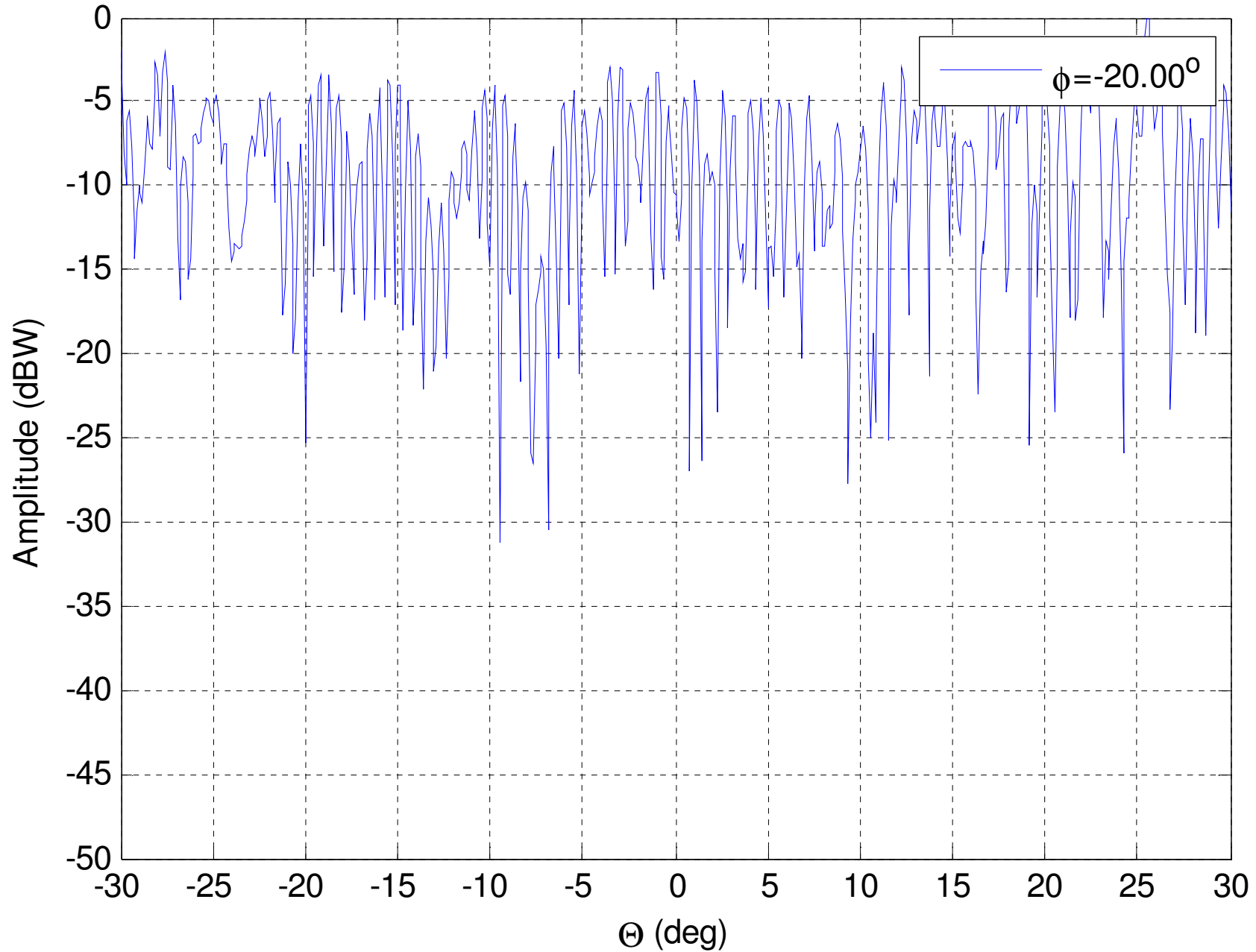
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -8.26 dBW, Date: 14-Dec-2011



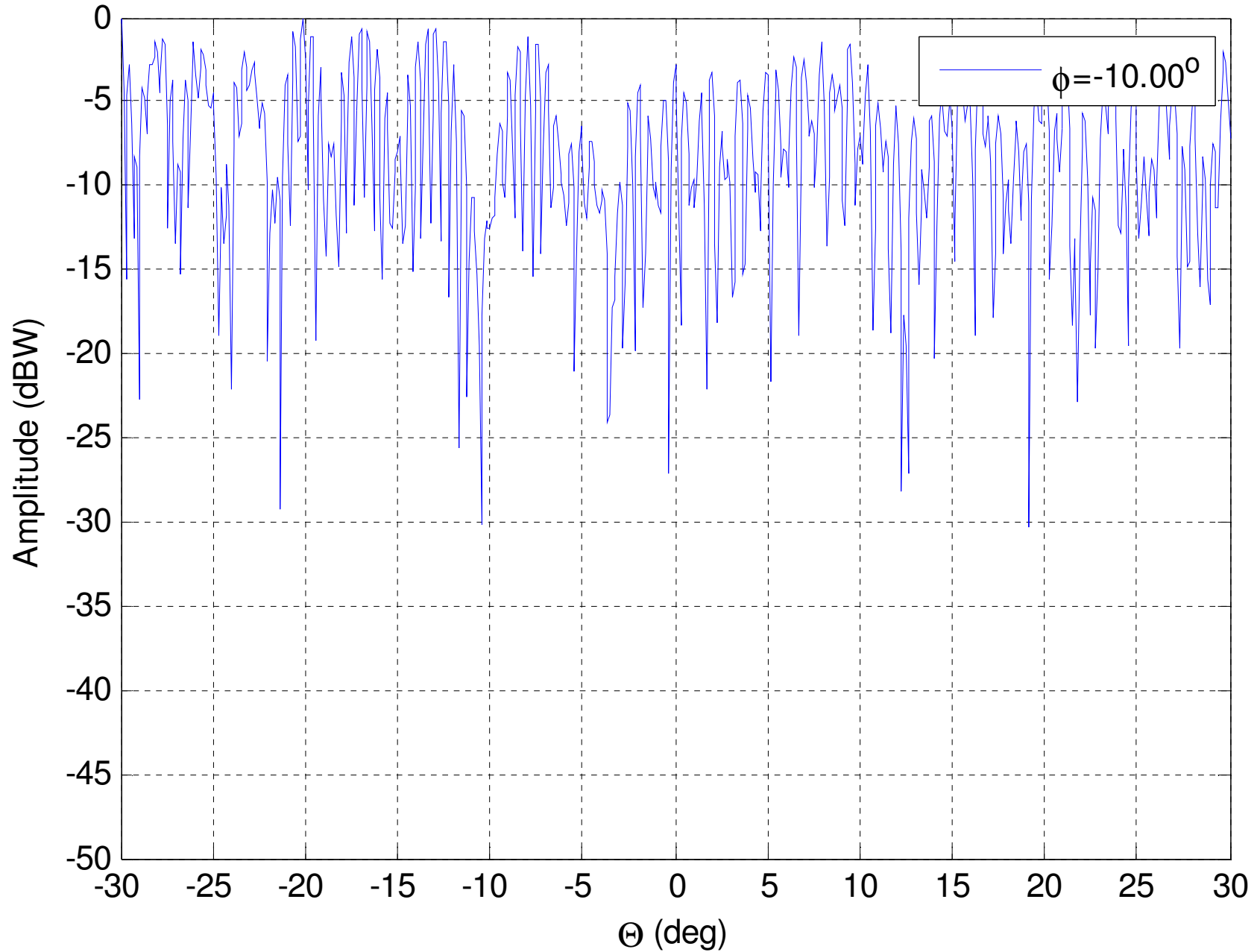
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -9.07 dBW, Date: 14-Dec-2011



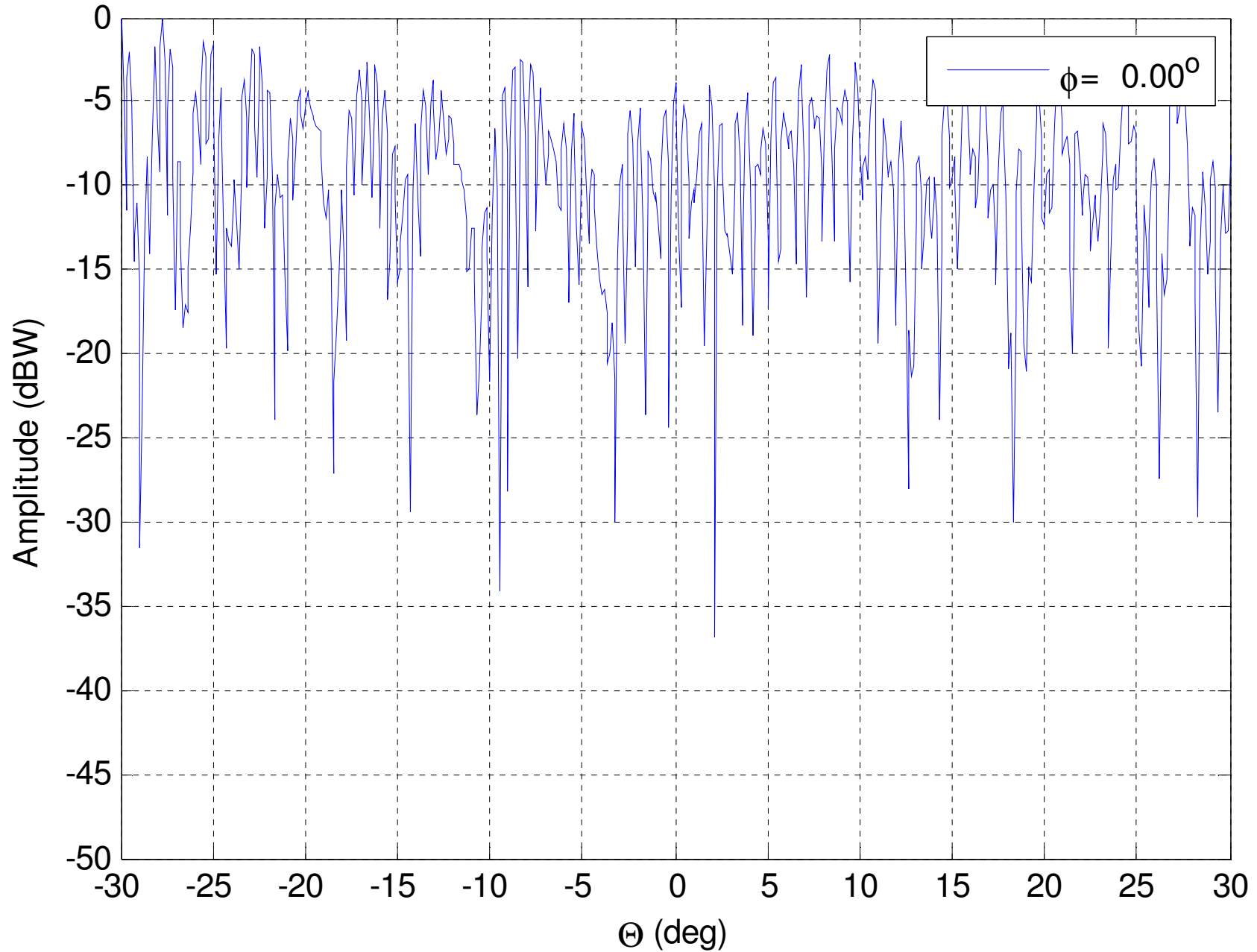
Normalized pattern cuts - farfield

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



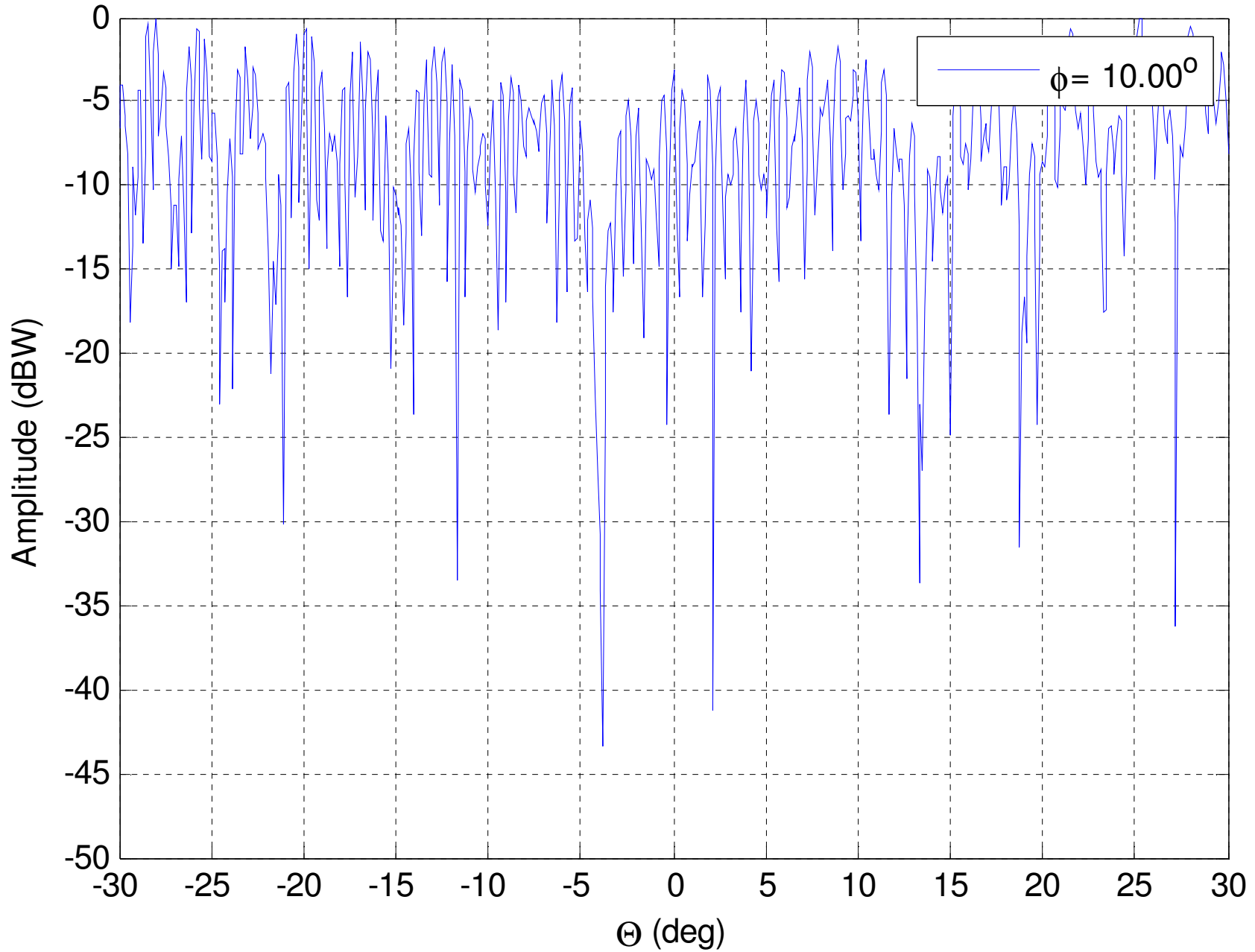
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -10.08 dBW, Date: 14-Dec-2011



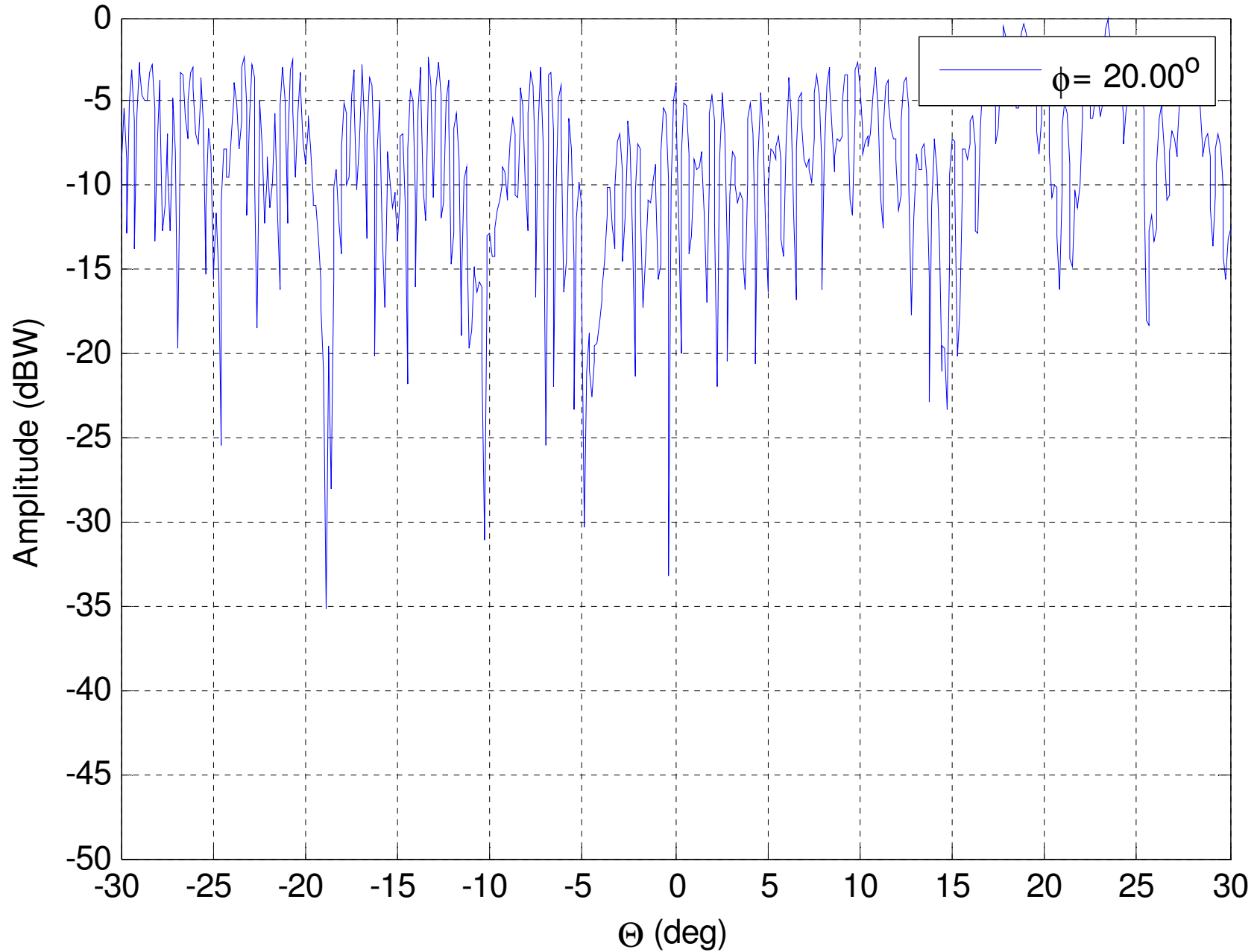
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -10.83 dBW, Date: 14-Dec-2011



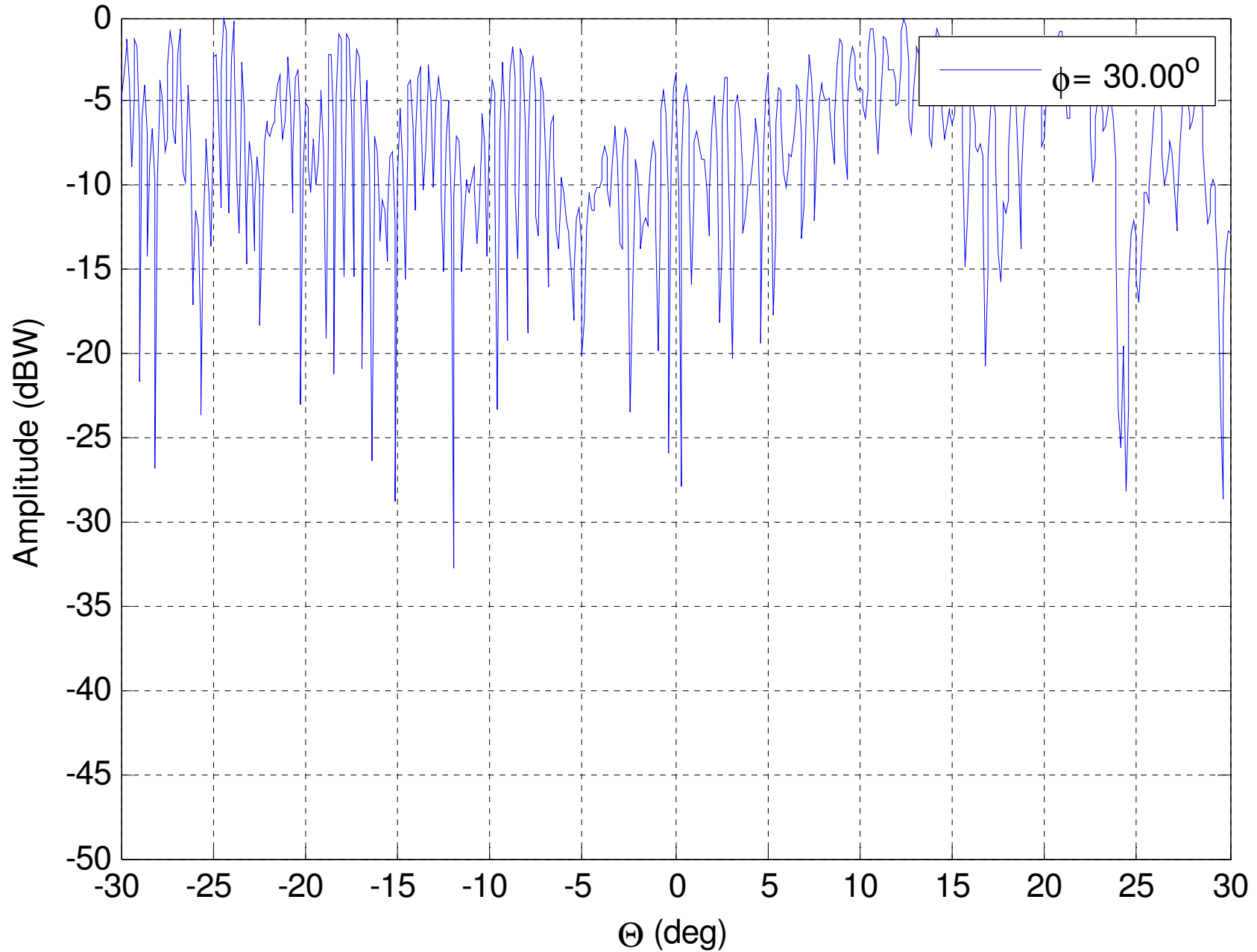
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -9.98 dBW, Date: 14-Dec-2011



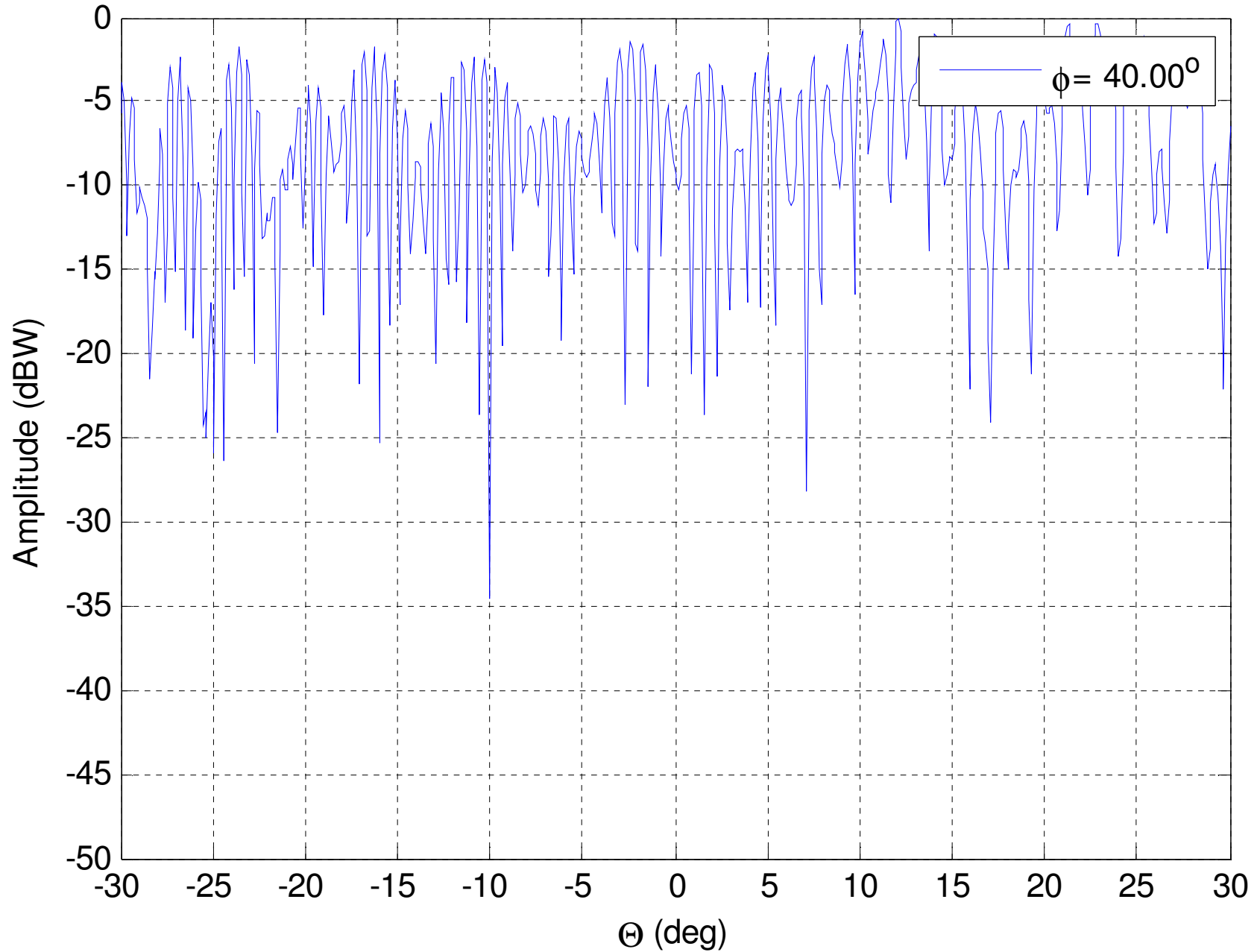
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -10.63 dBW, Date: 14-Dec-2011



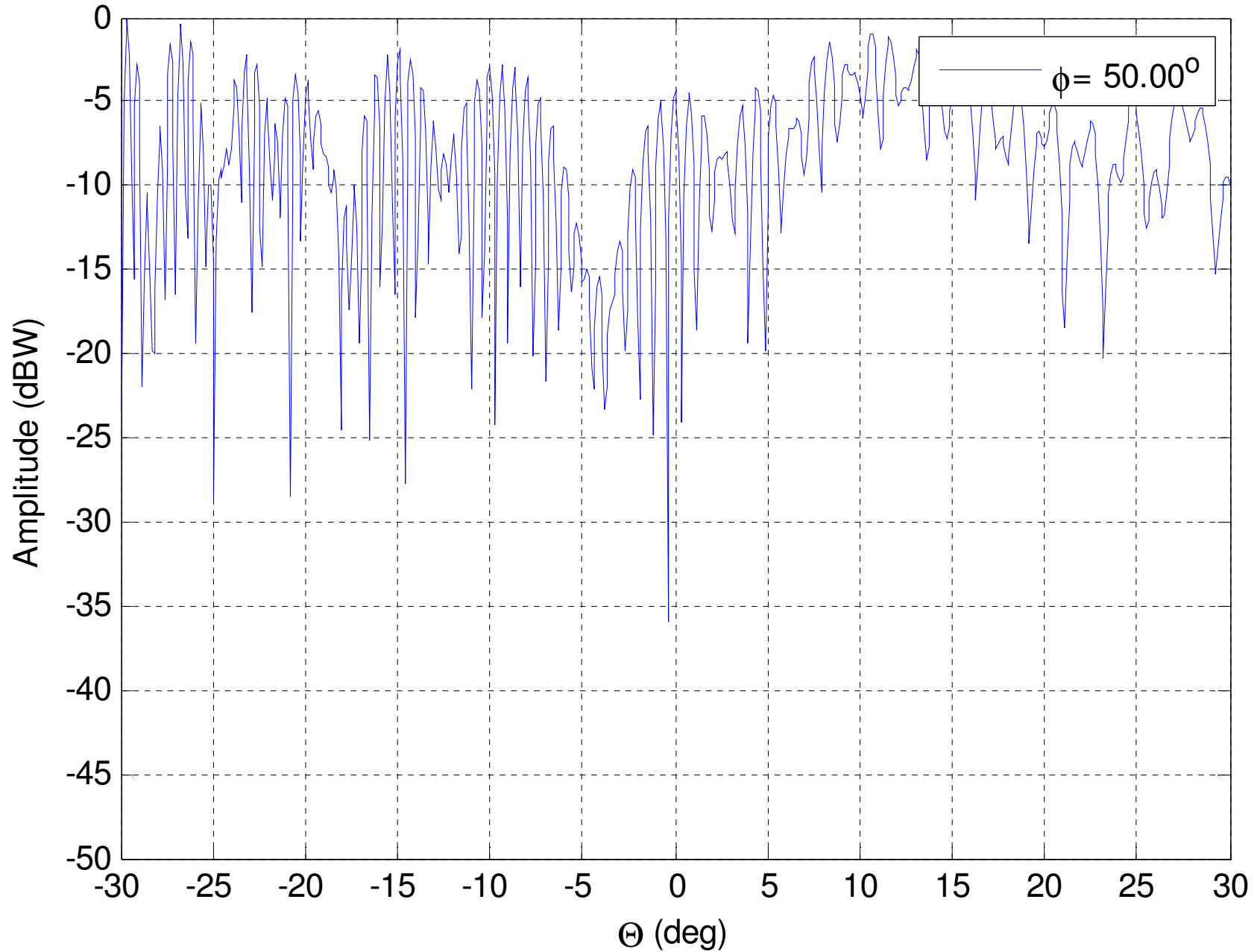
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -10.35 dBW, Date: 14-Dec-2011



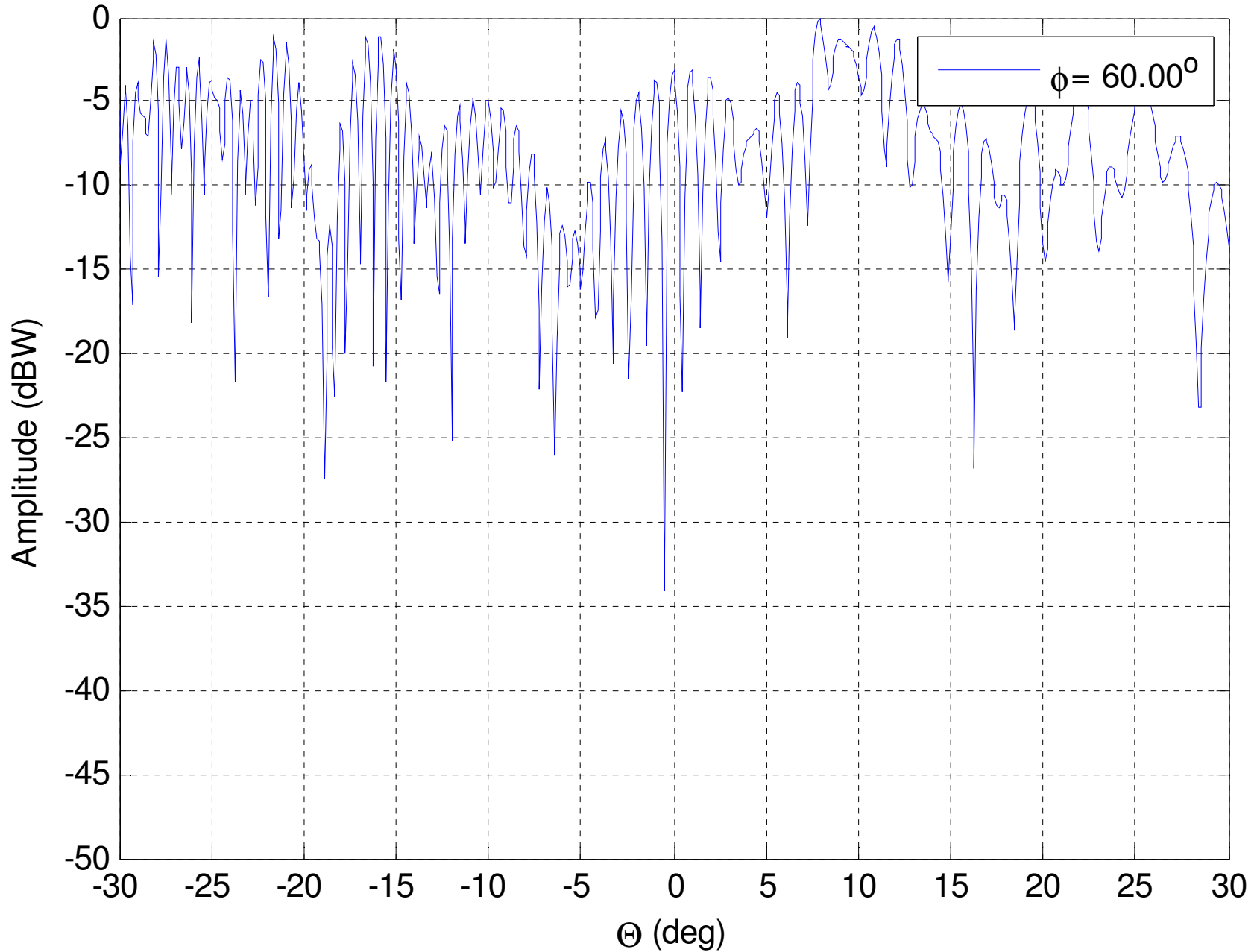
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -9.62 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

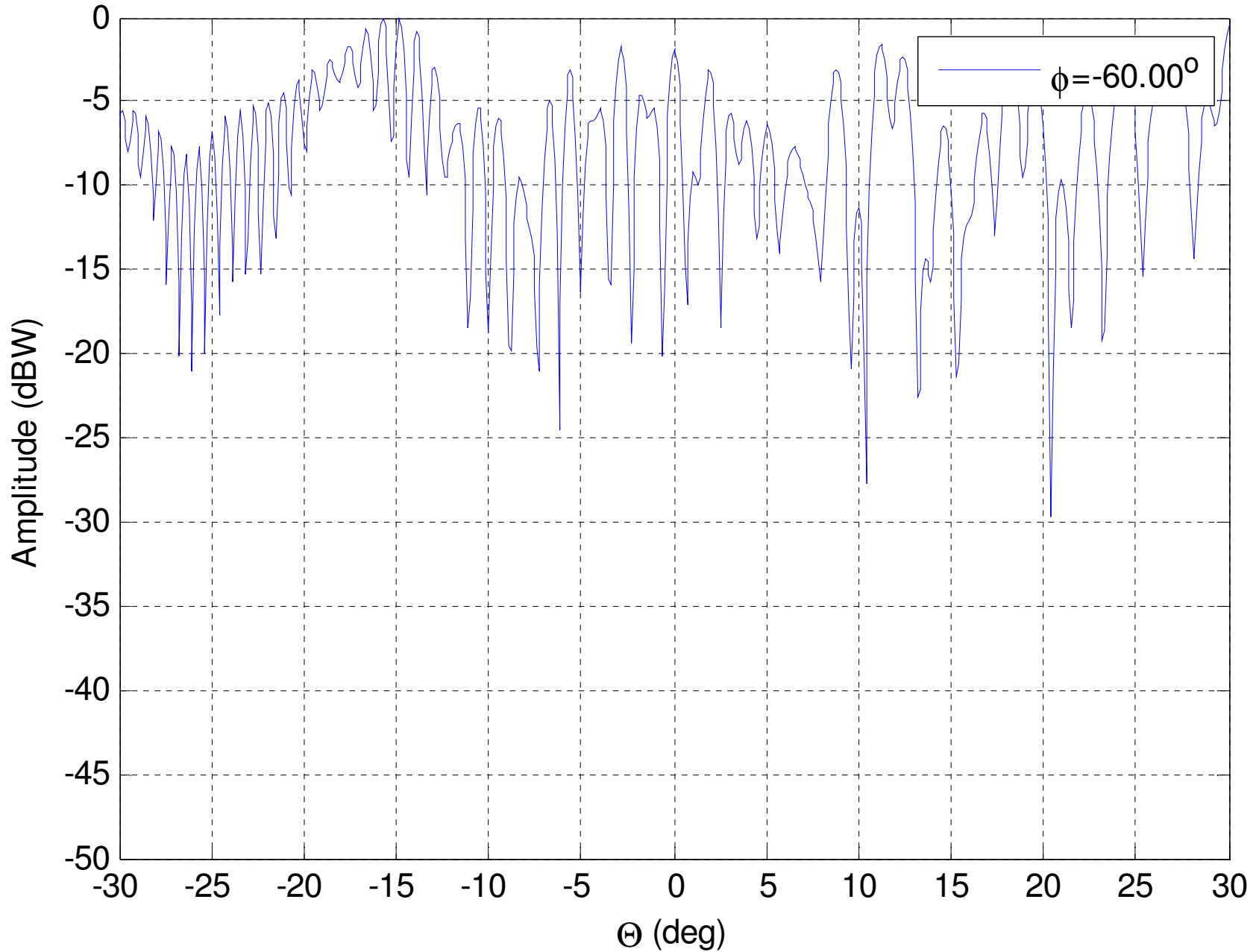
Input file: tx-17.3-lhcp-60.cut, Peak: -10.70 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

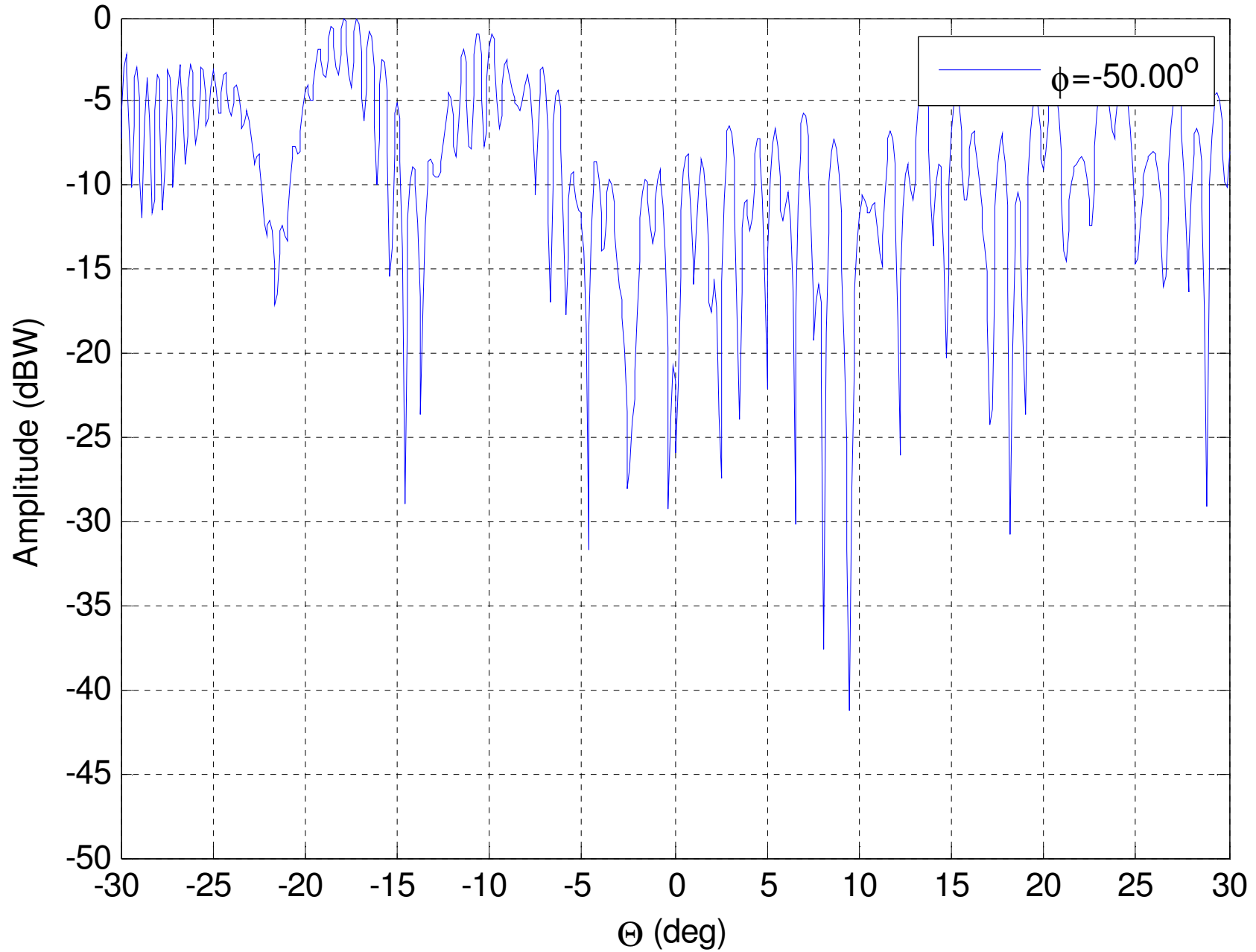
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.20 dBW, Date: 14-Dec-2011



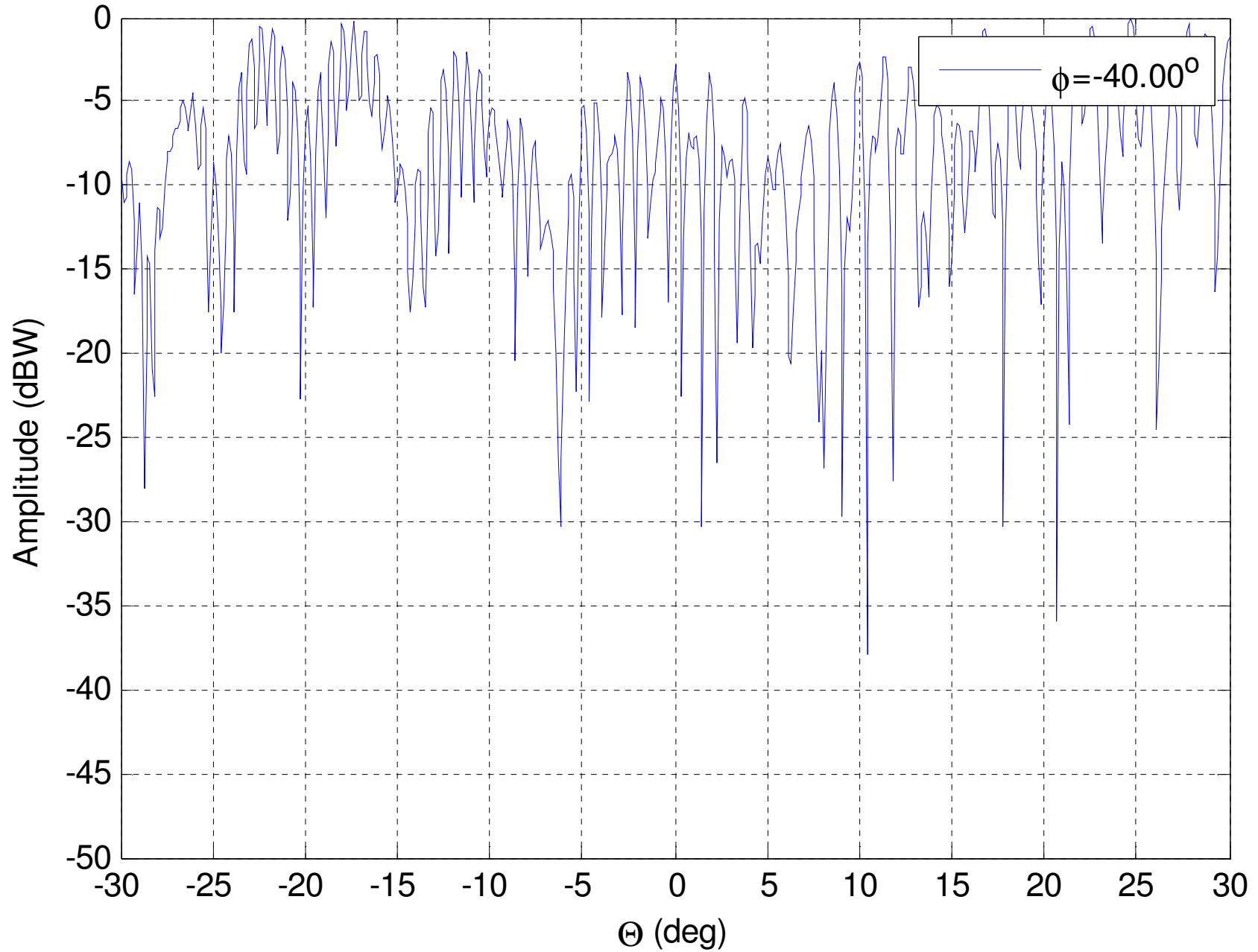
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.26 dBW, Date: 14-Dec-2011



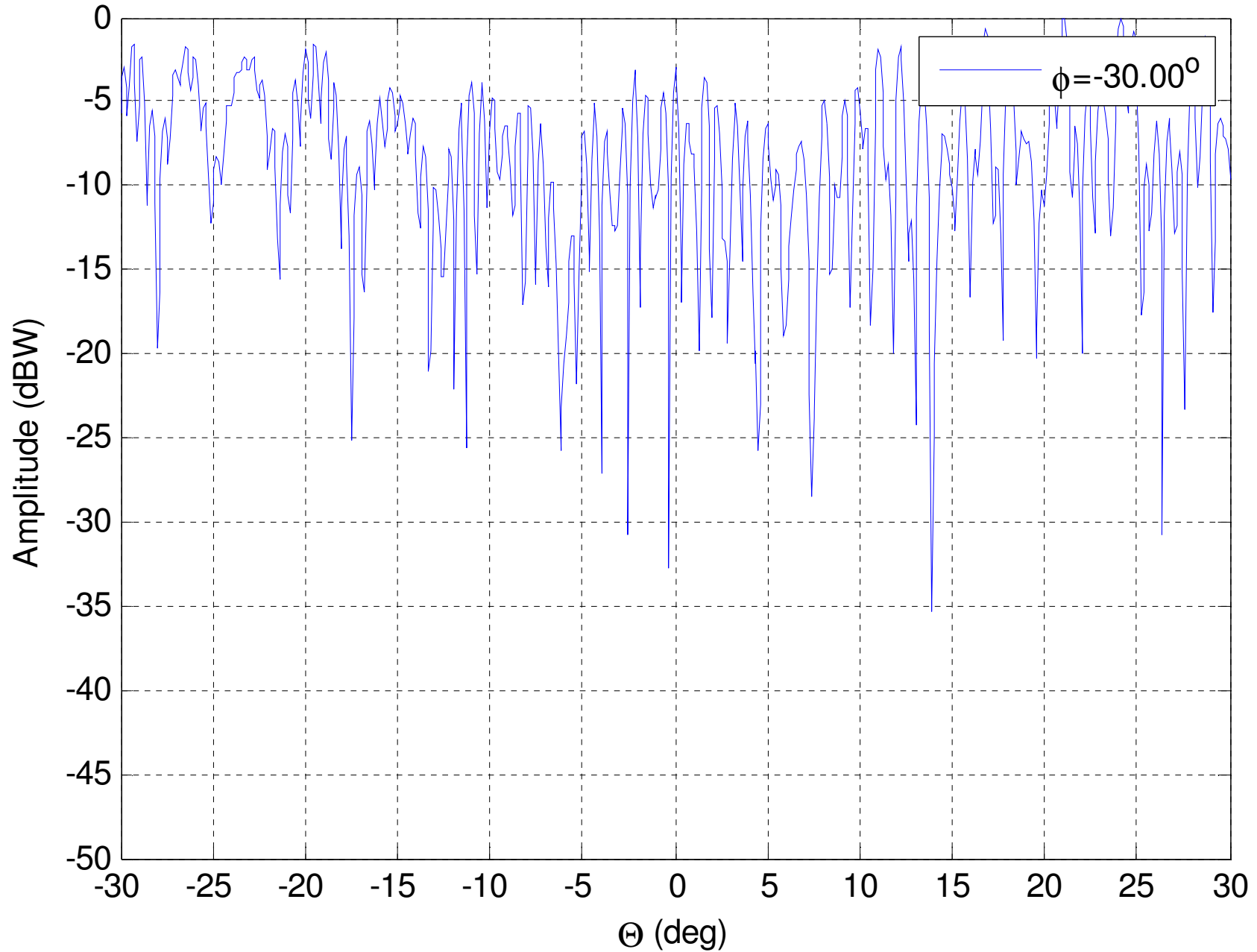
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.22 dBW, Date: 14-Dec-2011



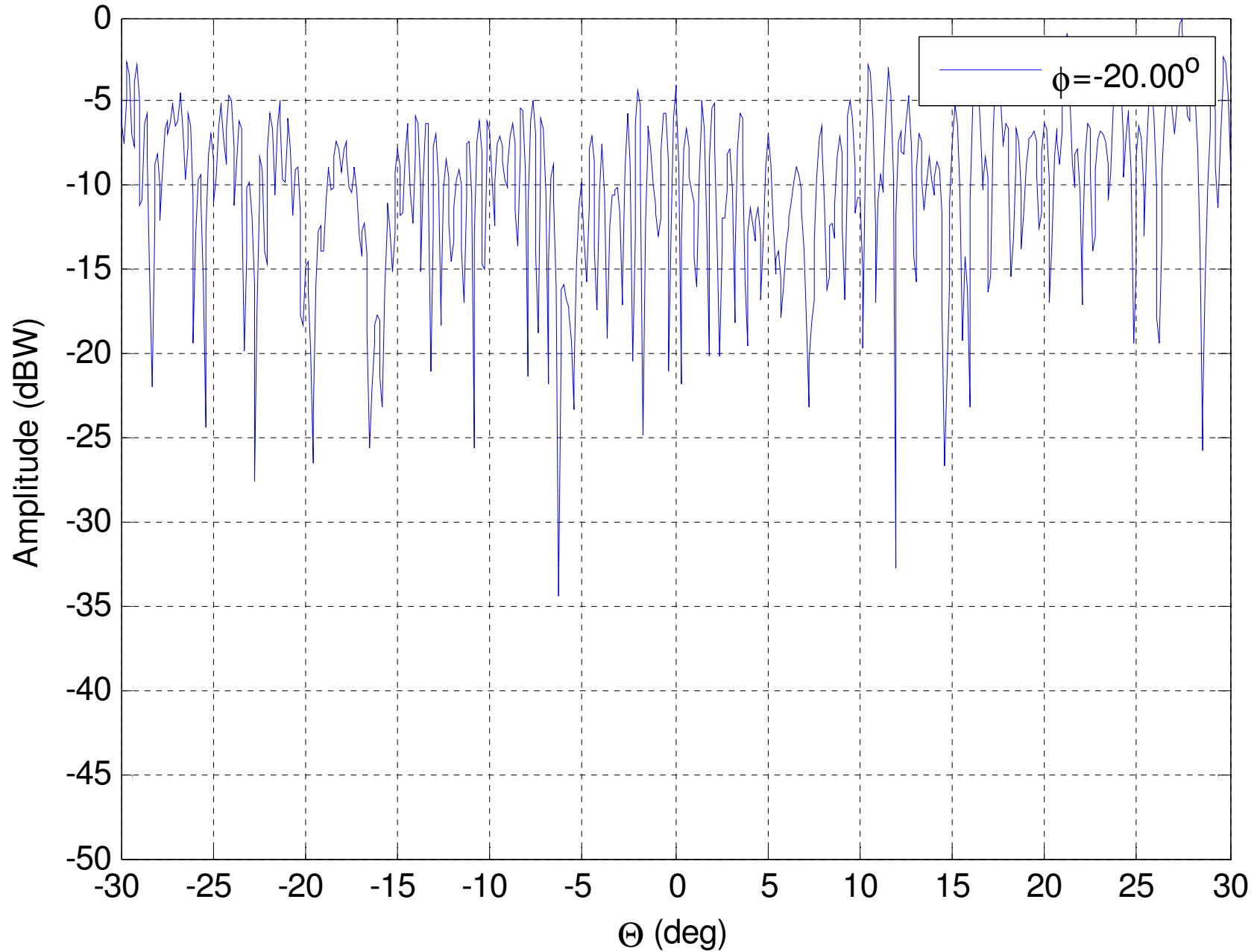
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -10.19 dBW, Date: 14-Dec-2011



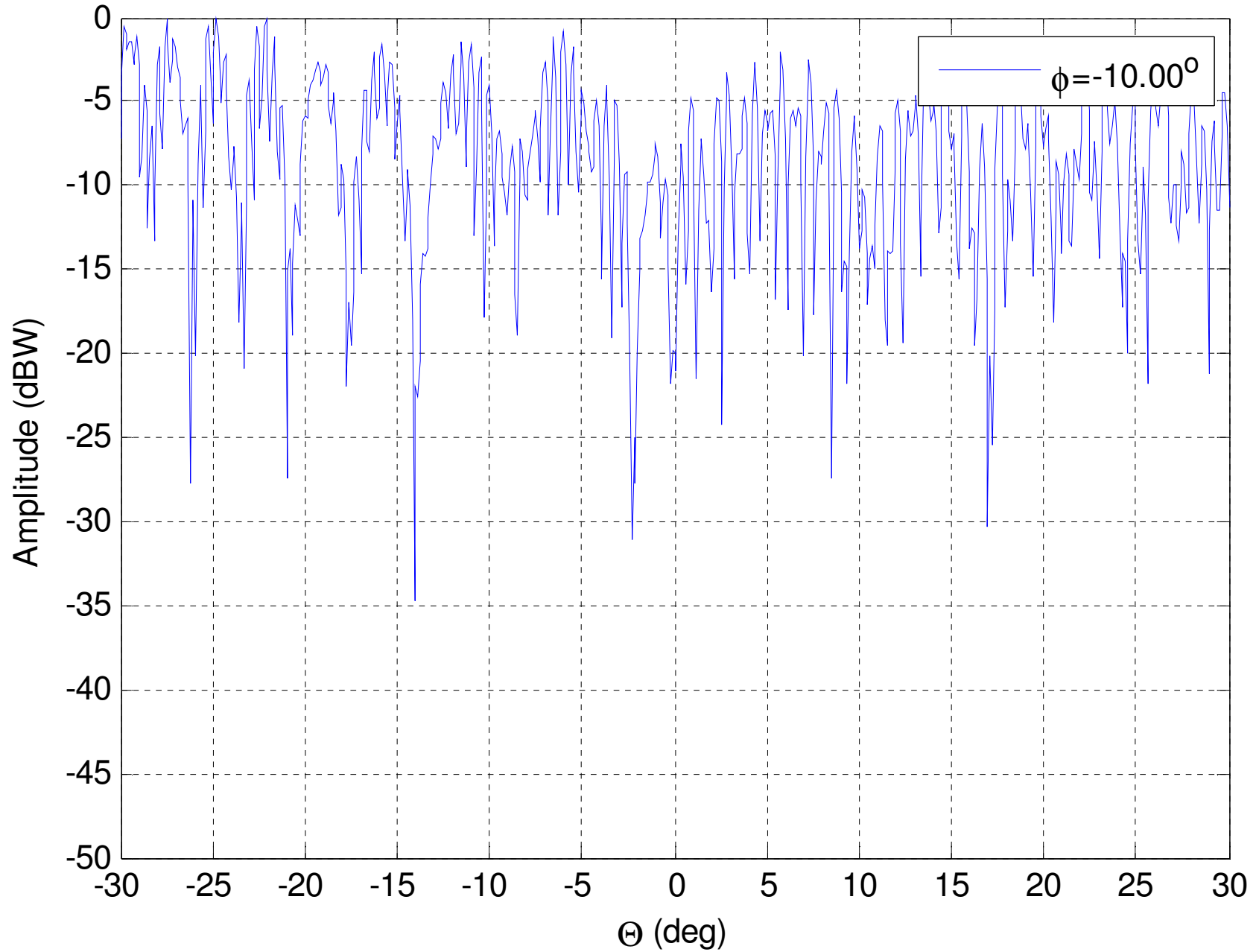
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -9.08 dBW, Date: 14-Dec-2011



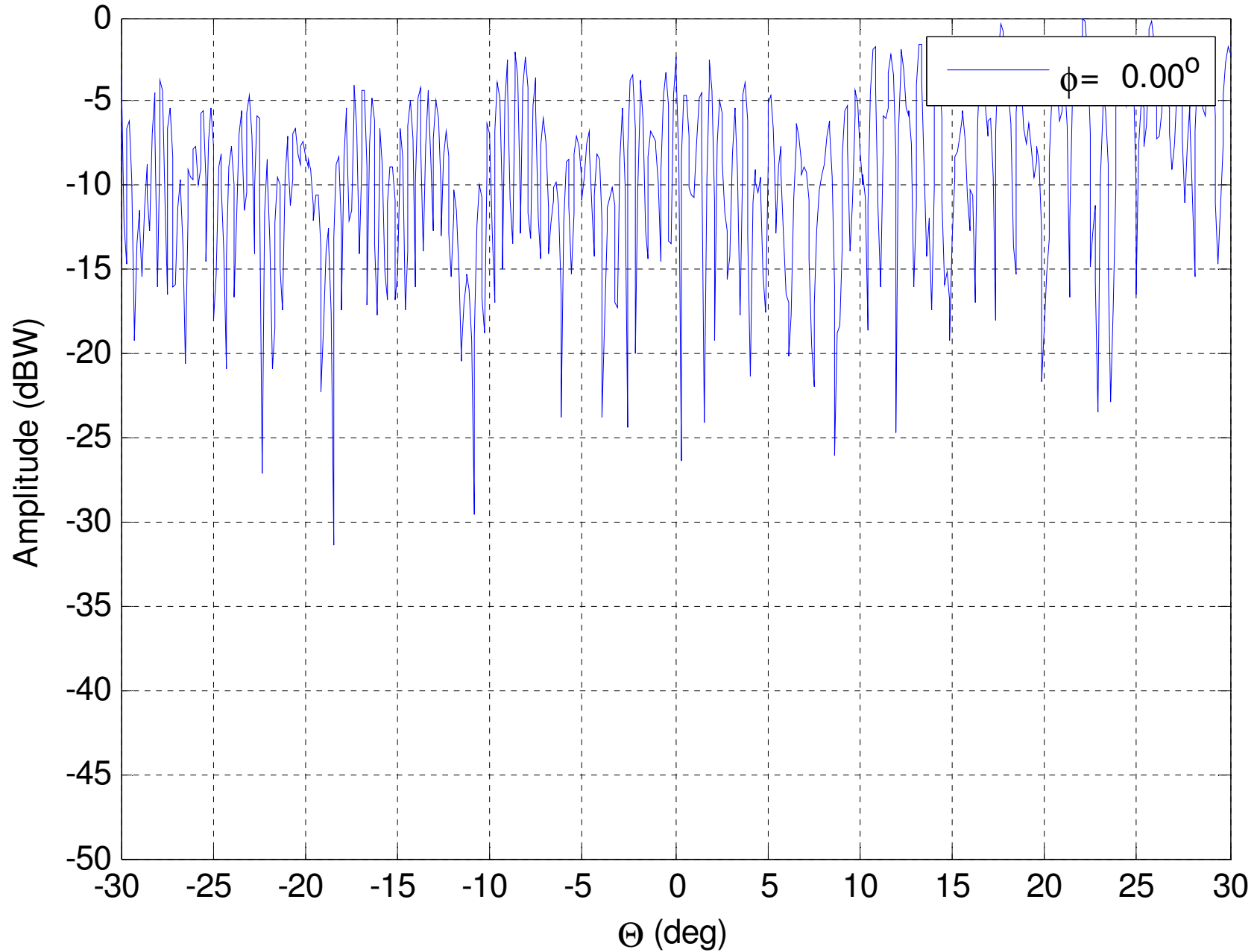
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -11.90 dBW, Date: 14-Dec-2011



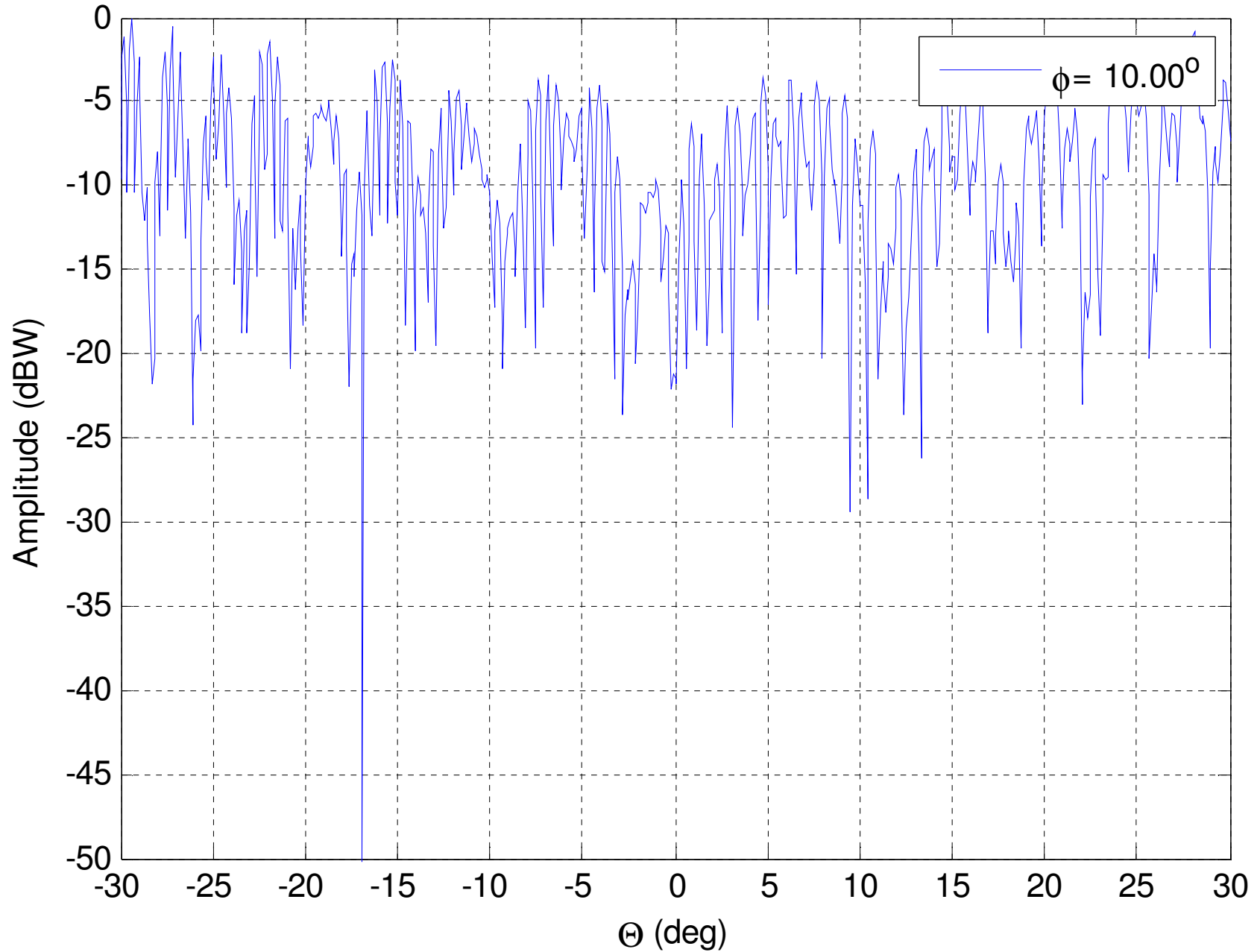
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -10.73 dBW, Date: 14-Dec-2011



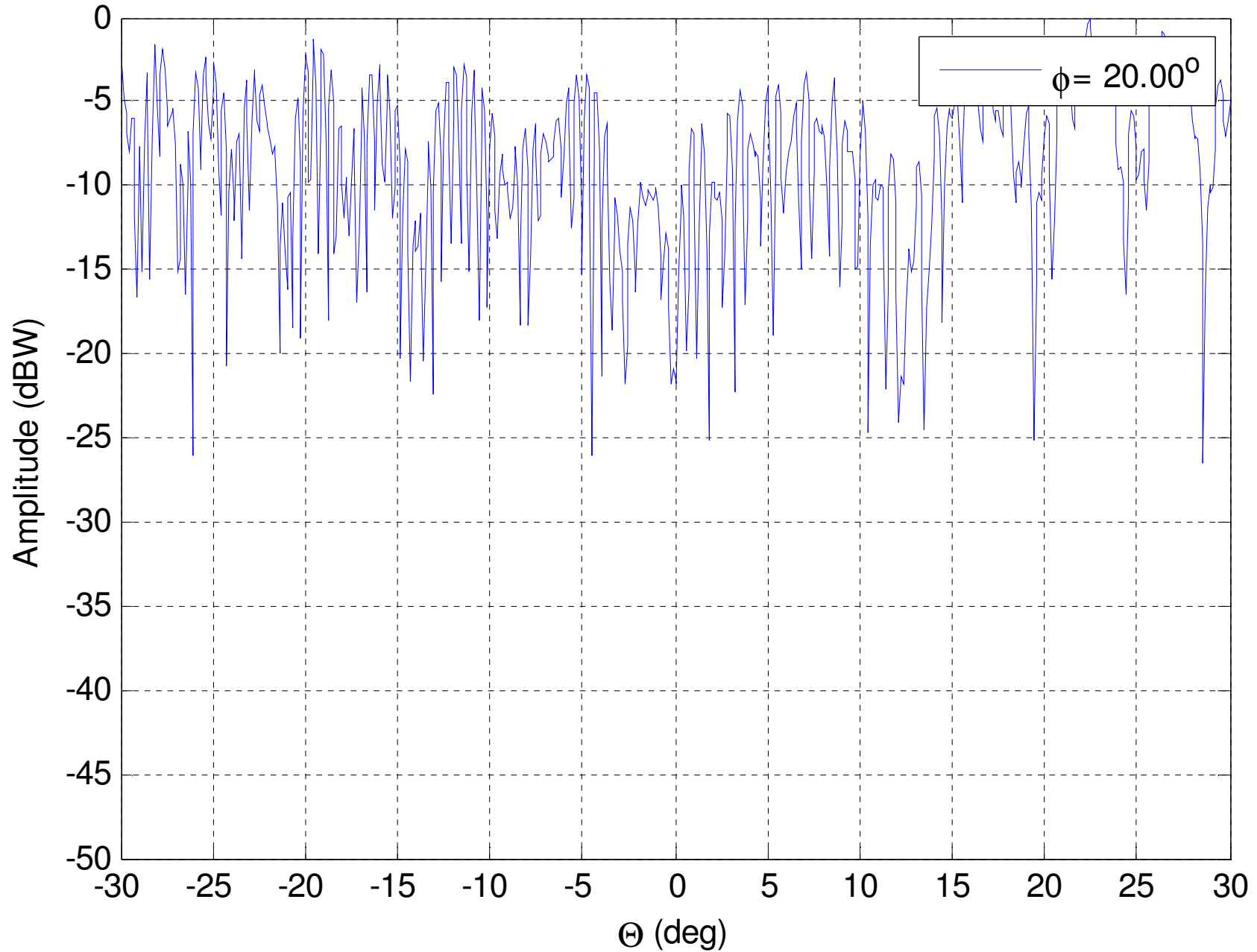
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -10.32 dBW, Date: 14-Dec-2011



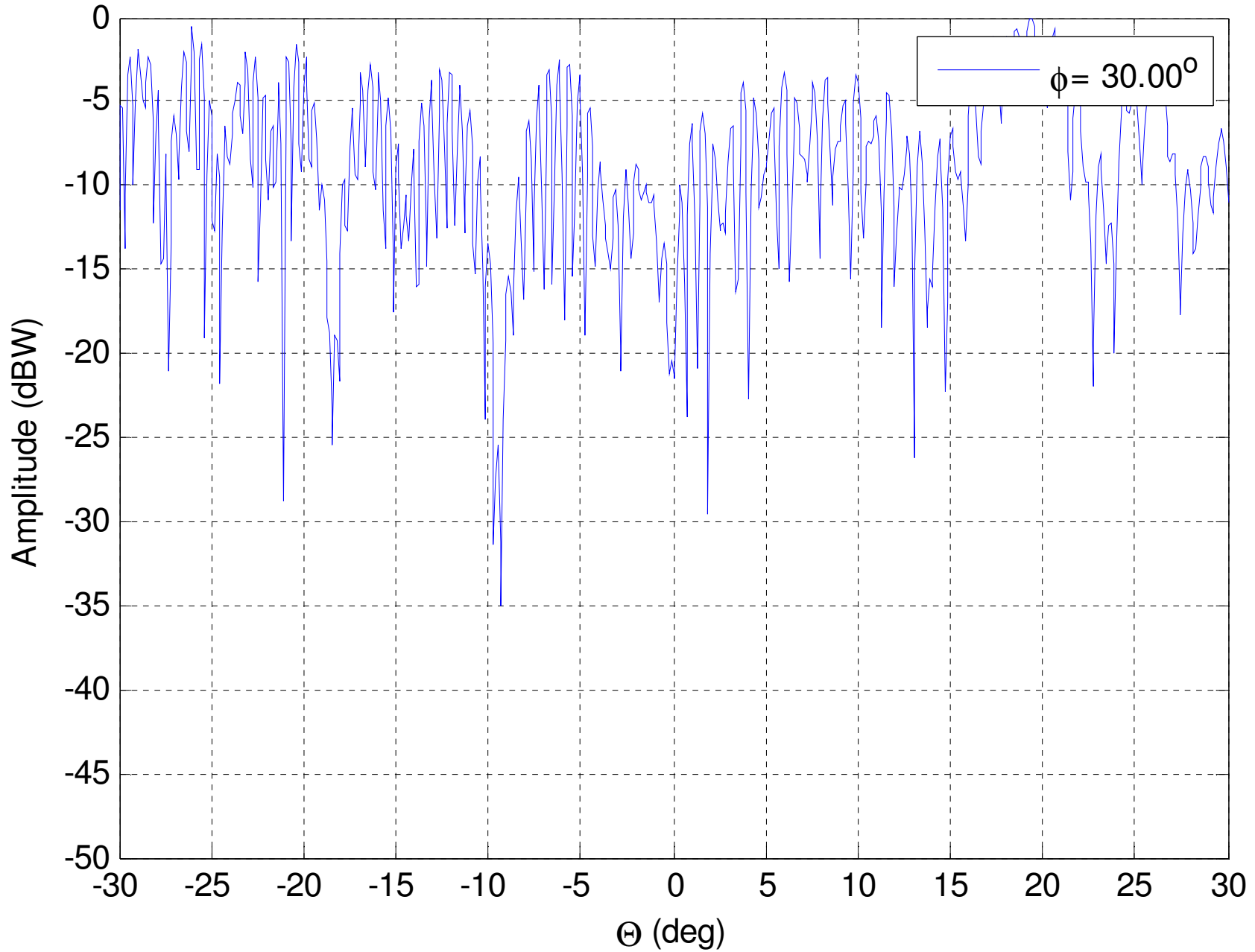
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -10.28 dBW, Date: 14-Dec-2011



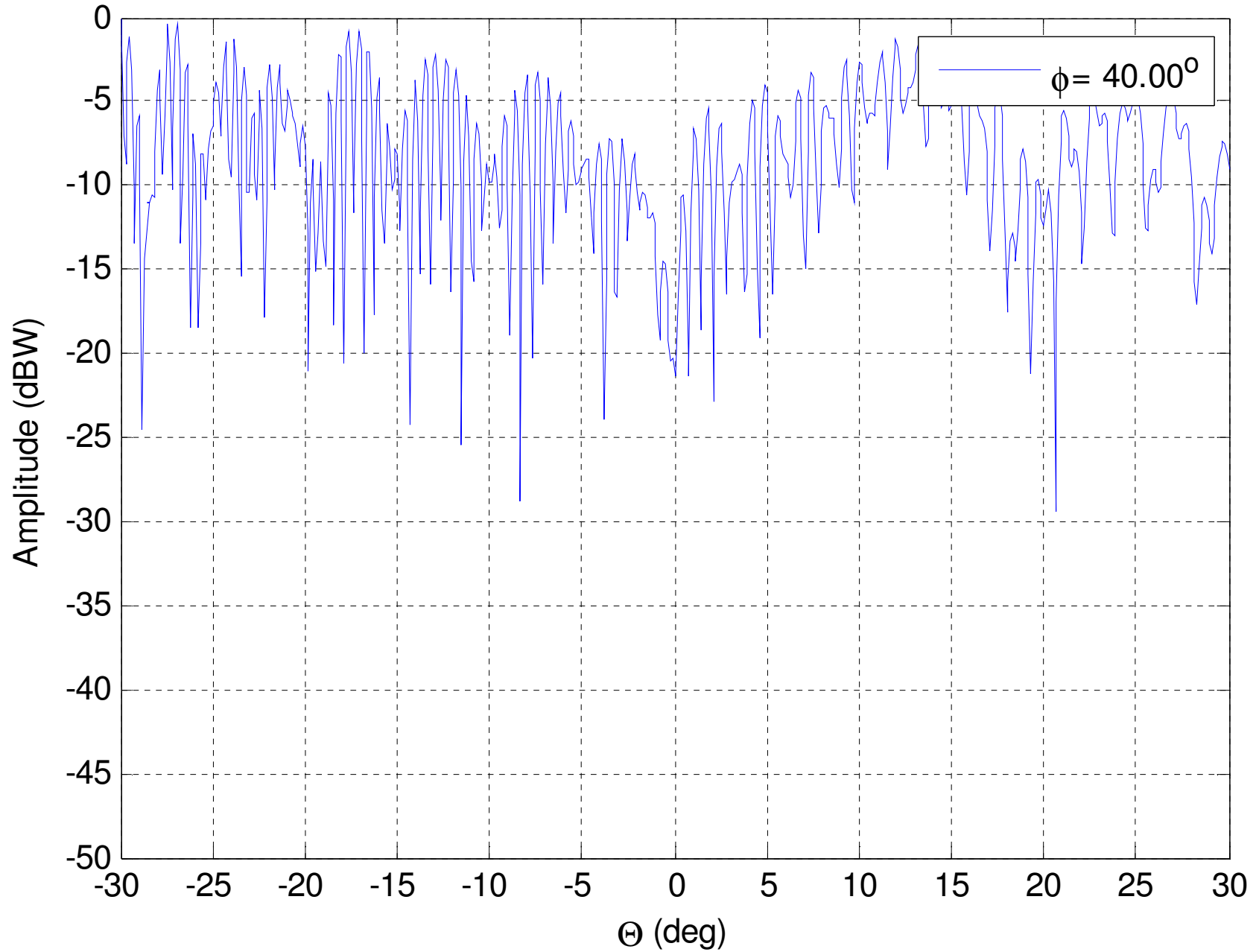
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.51 dBW, Date: 14-Dec-2011



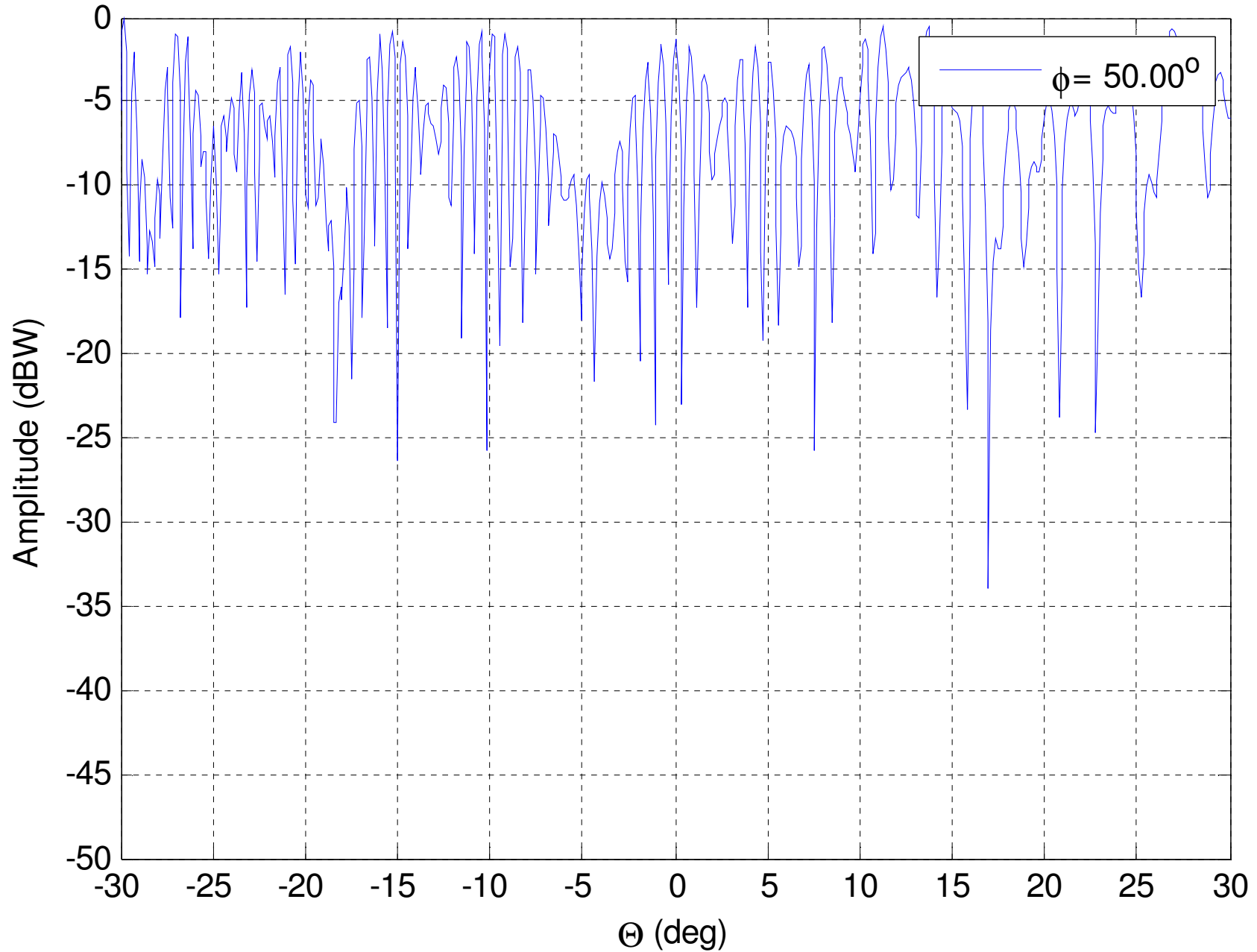
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.54 dBW, Date: 14-Dec-2011



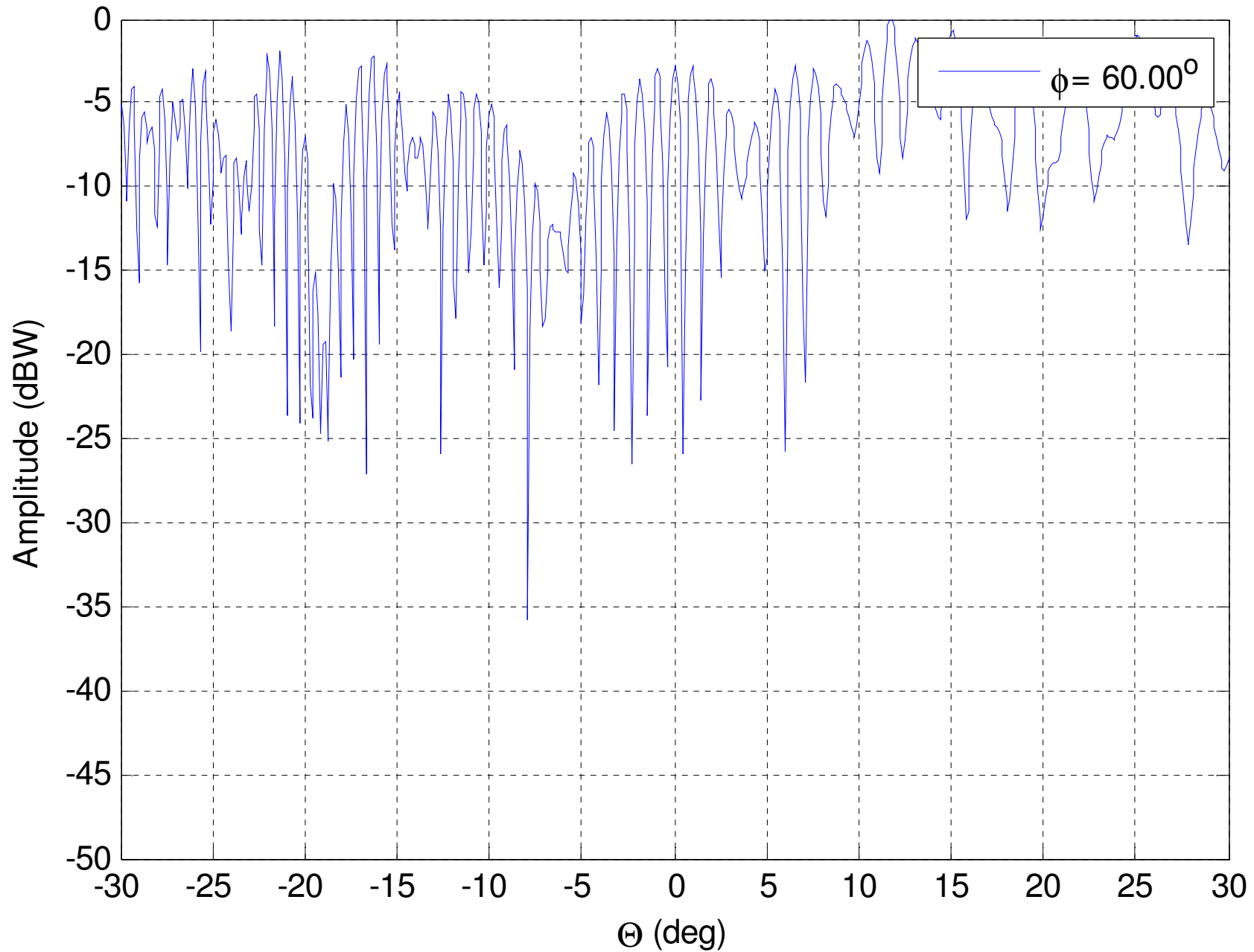
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.85 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

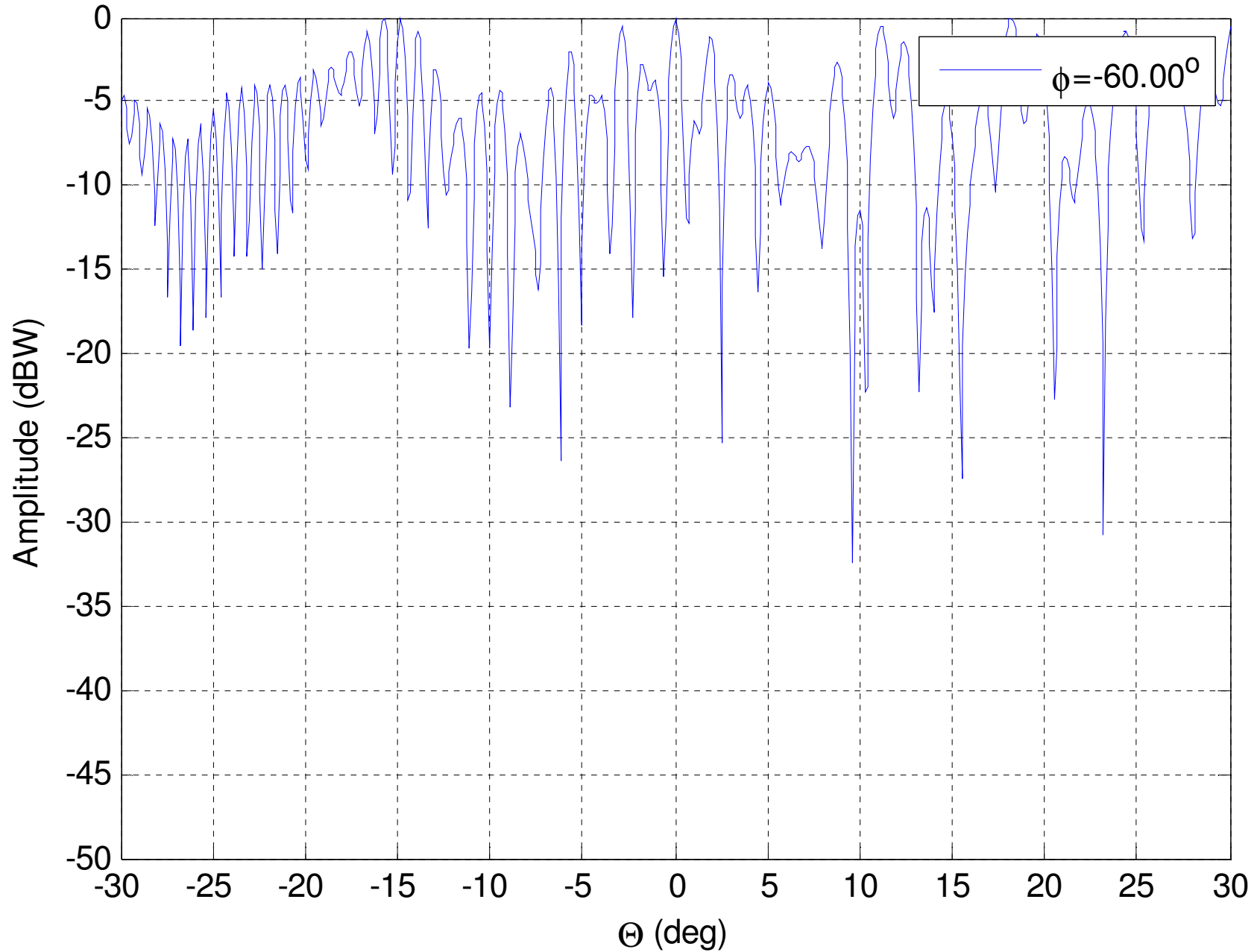
Input file: tx-17.5-rhcp-60.cut, Peak: -10.35 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

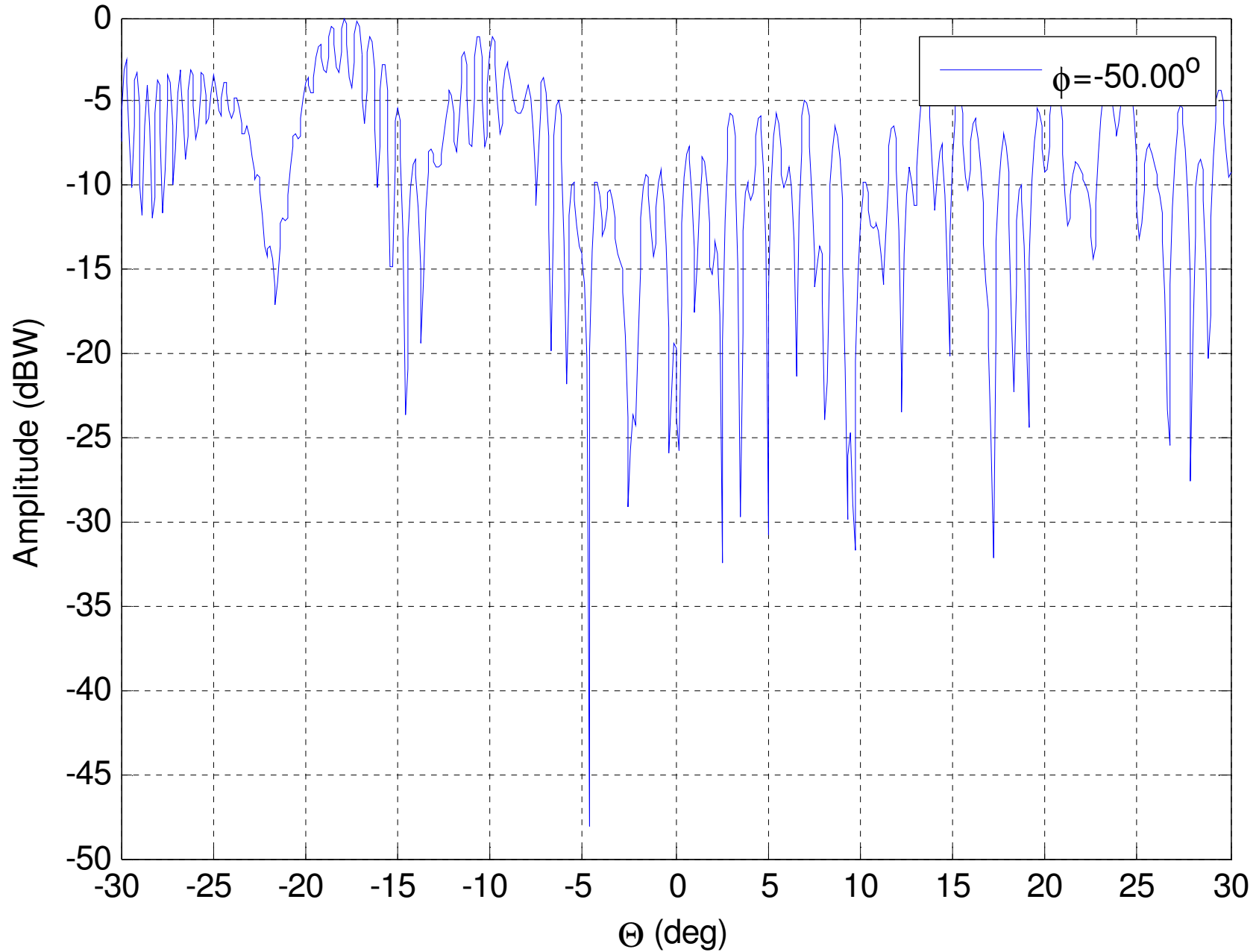
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -12.19 dBW, Date: 14-Dec-2011



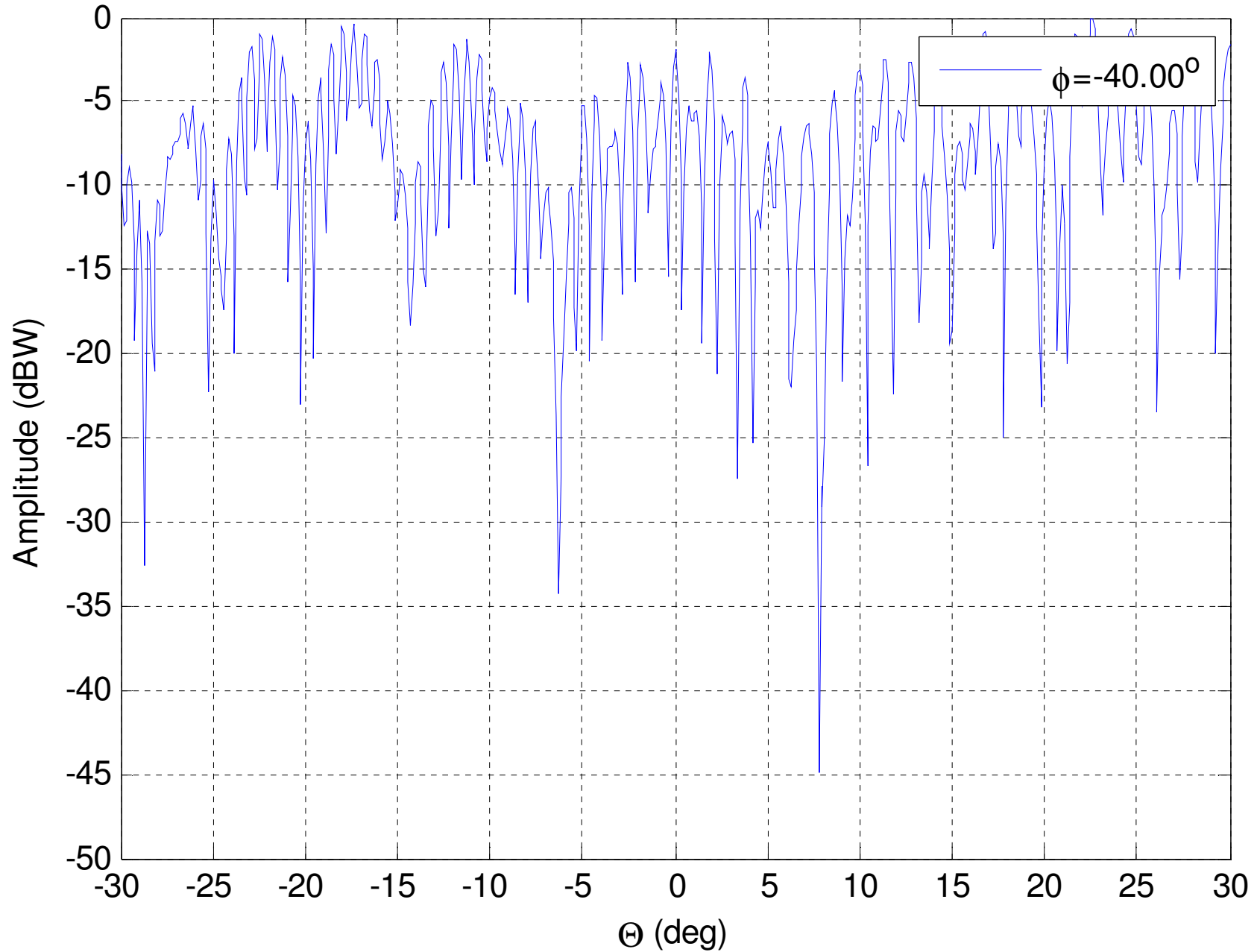
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -10.09 dBW, Date: 14-Dec-2011



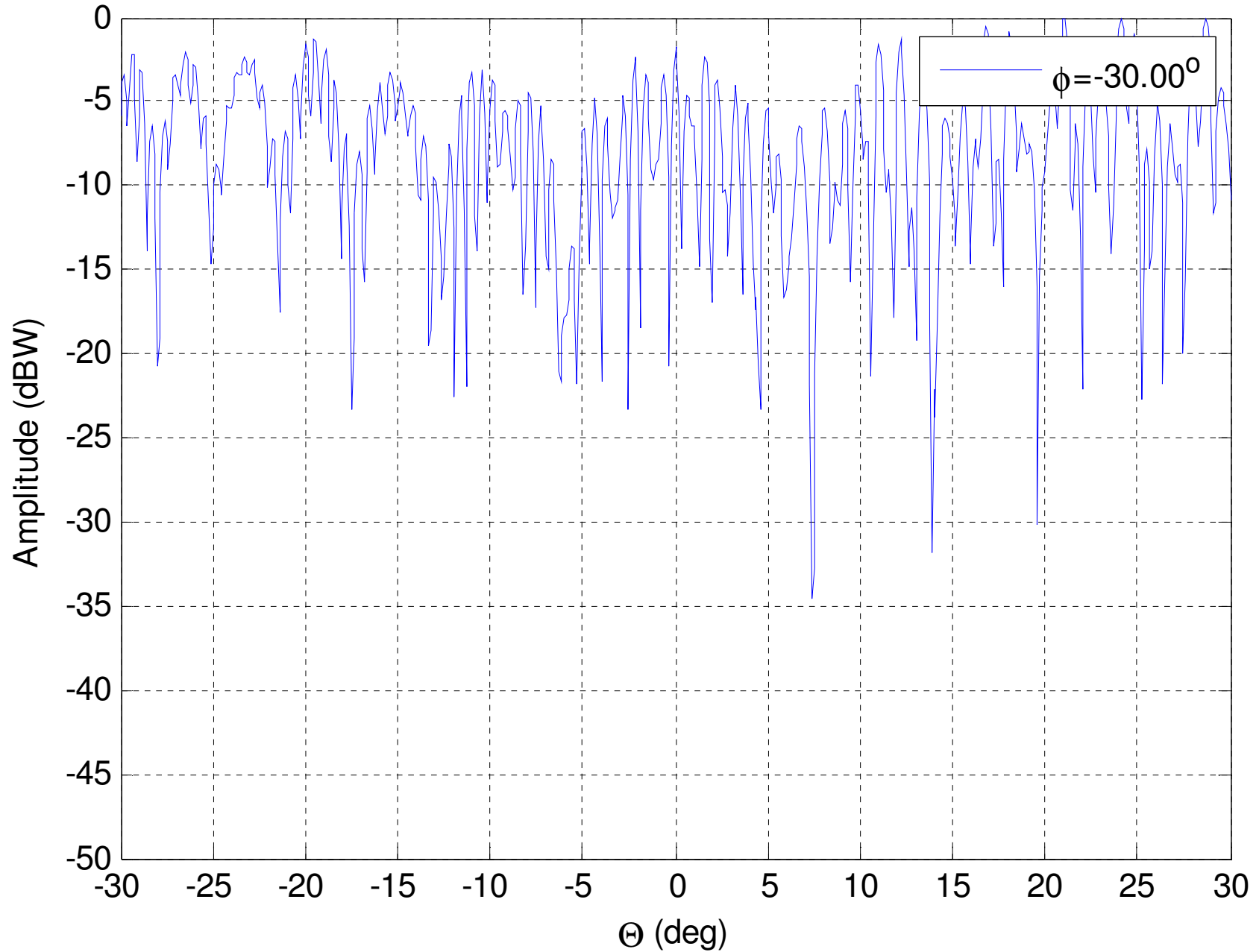
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.46 dBW, Date: 14-Dec-2011



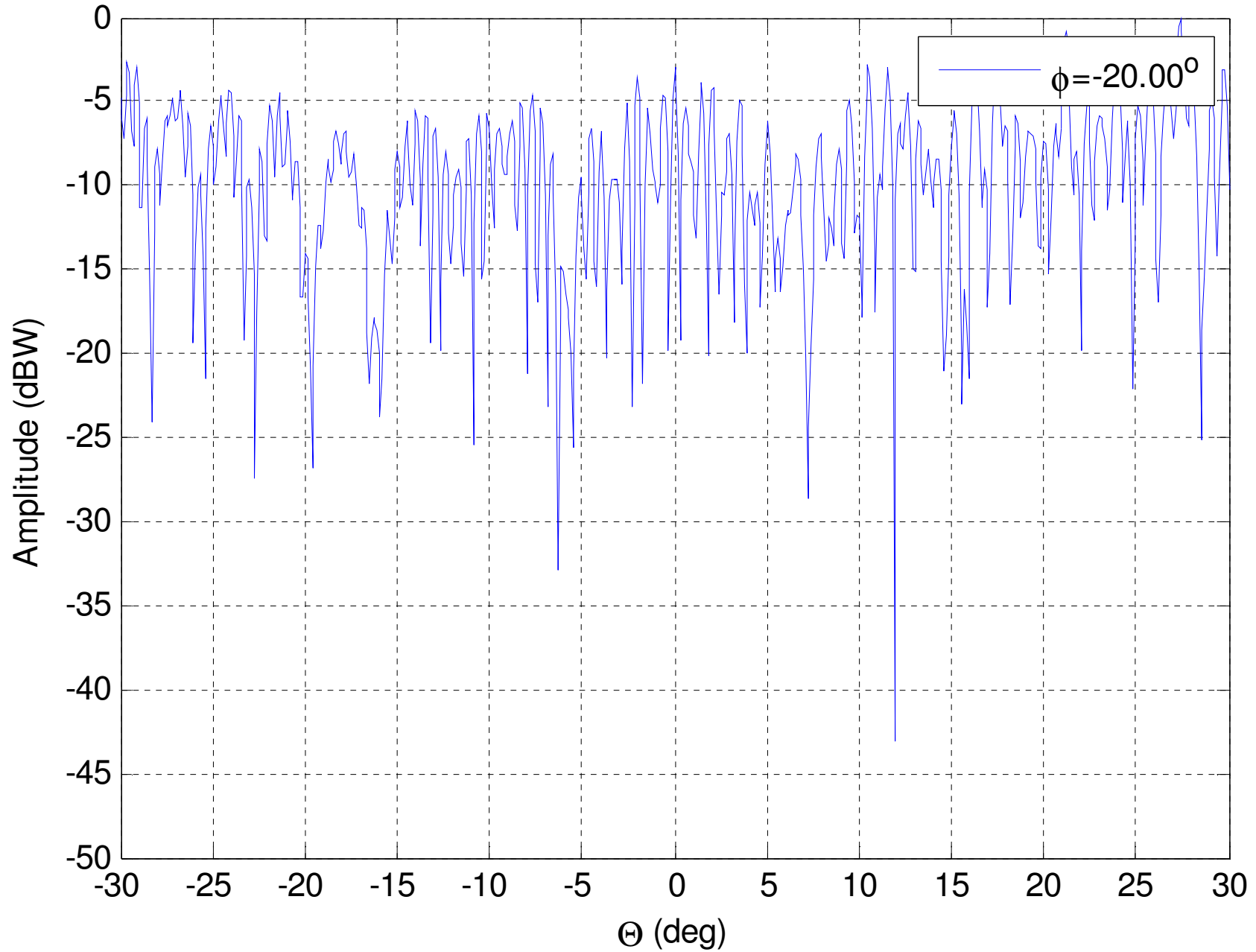
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.56 dBW, Date: 14-Dec-2011



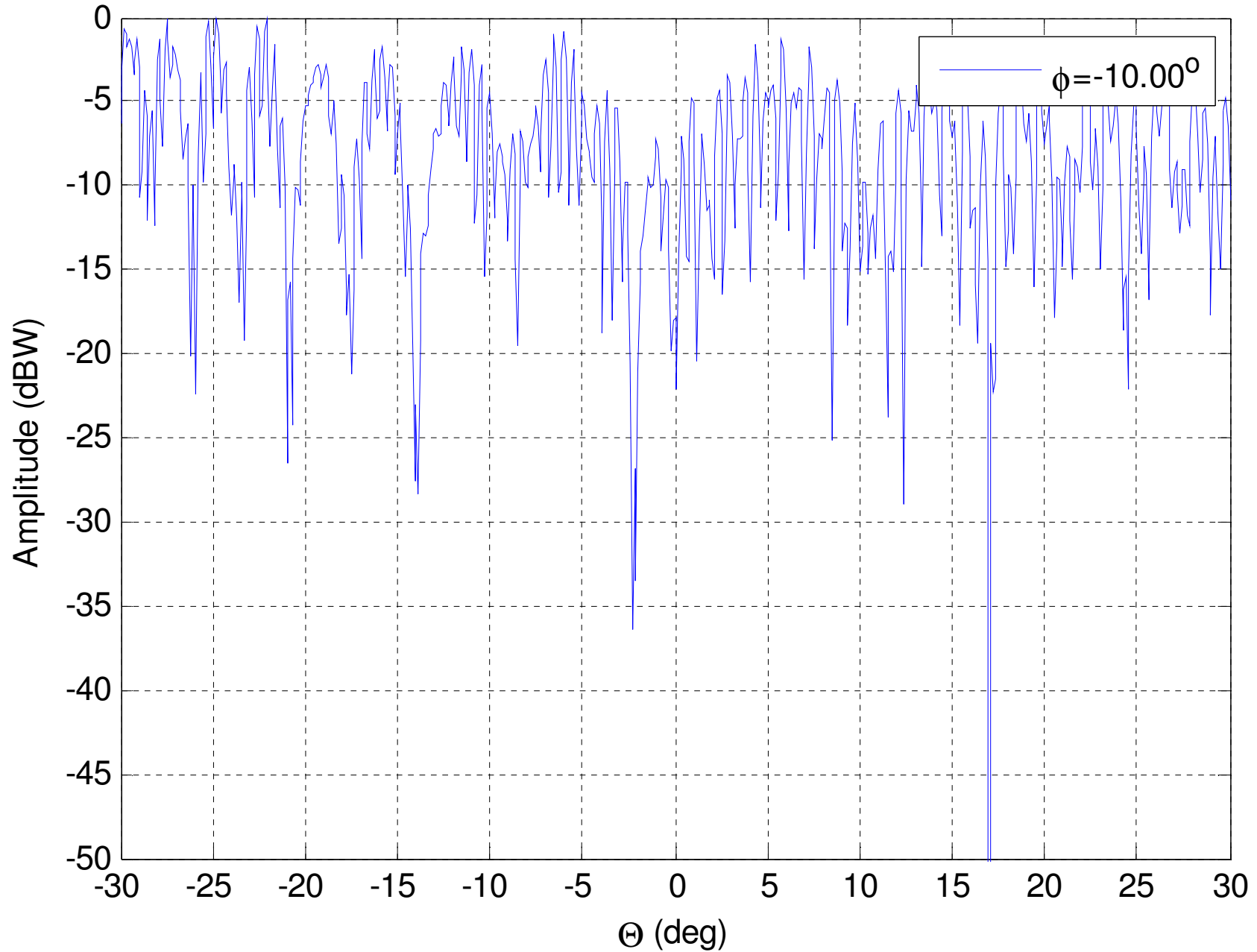
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -9.29 dBW, Date: 14-Dec-2011



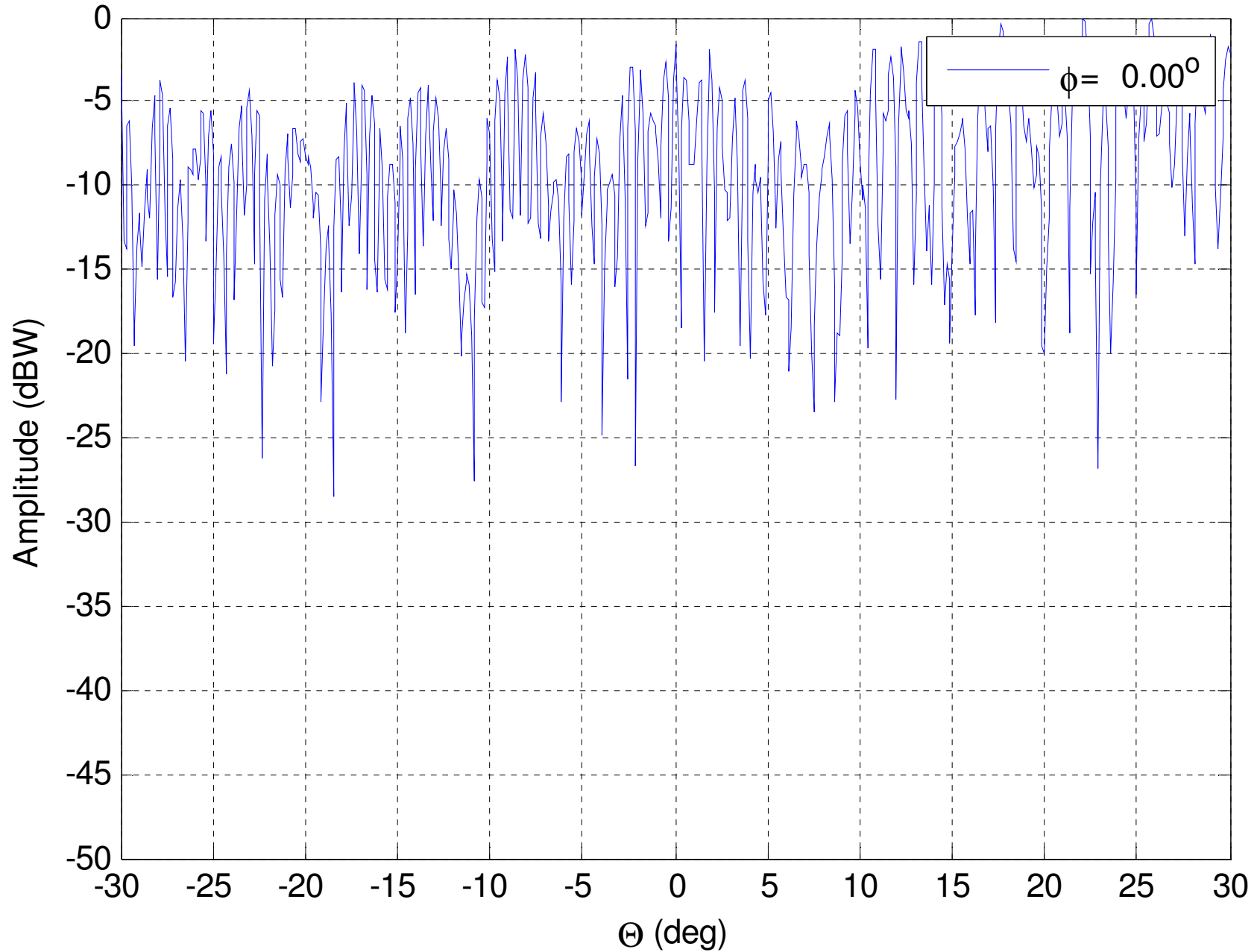
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -11.89 dBW, Date: 14-Dec-2011



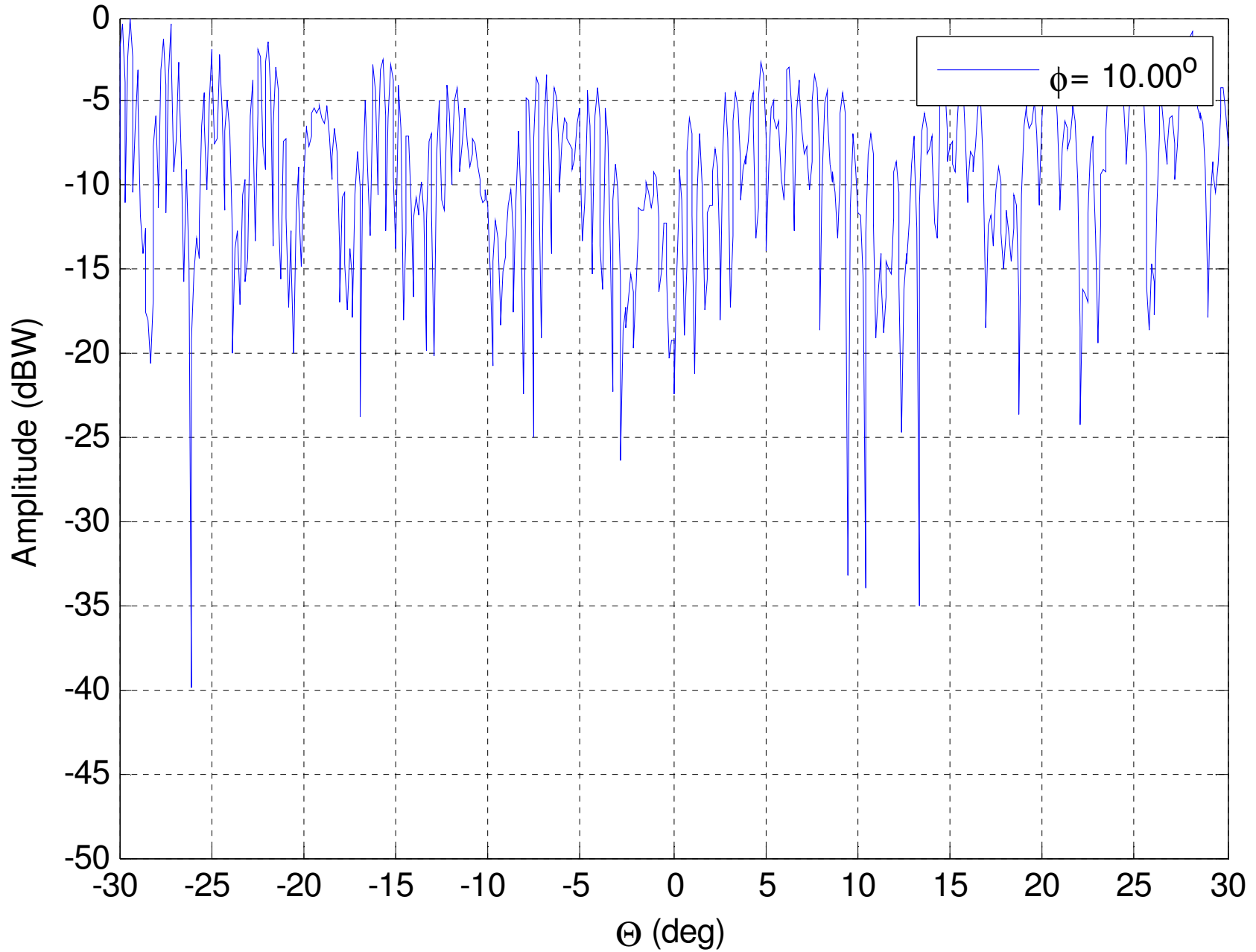
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -10.69 dBW, Date: 14-Dec-2011



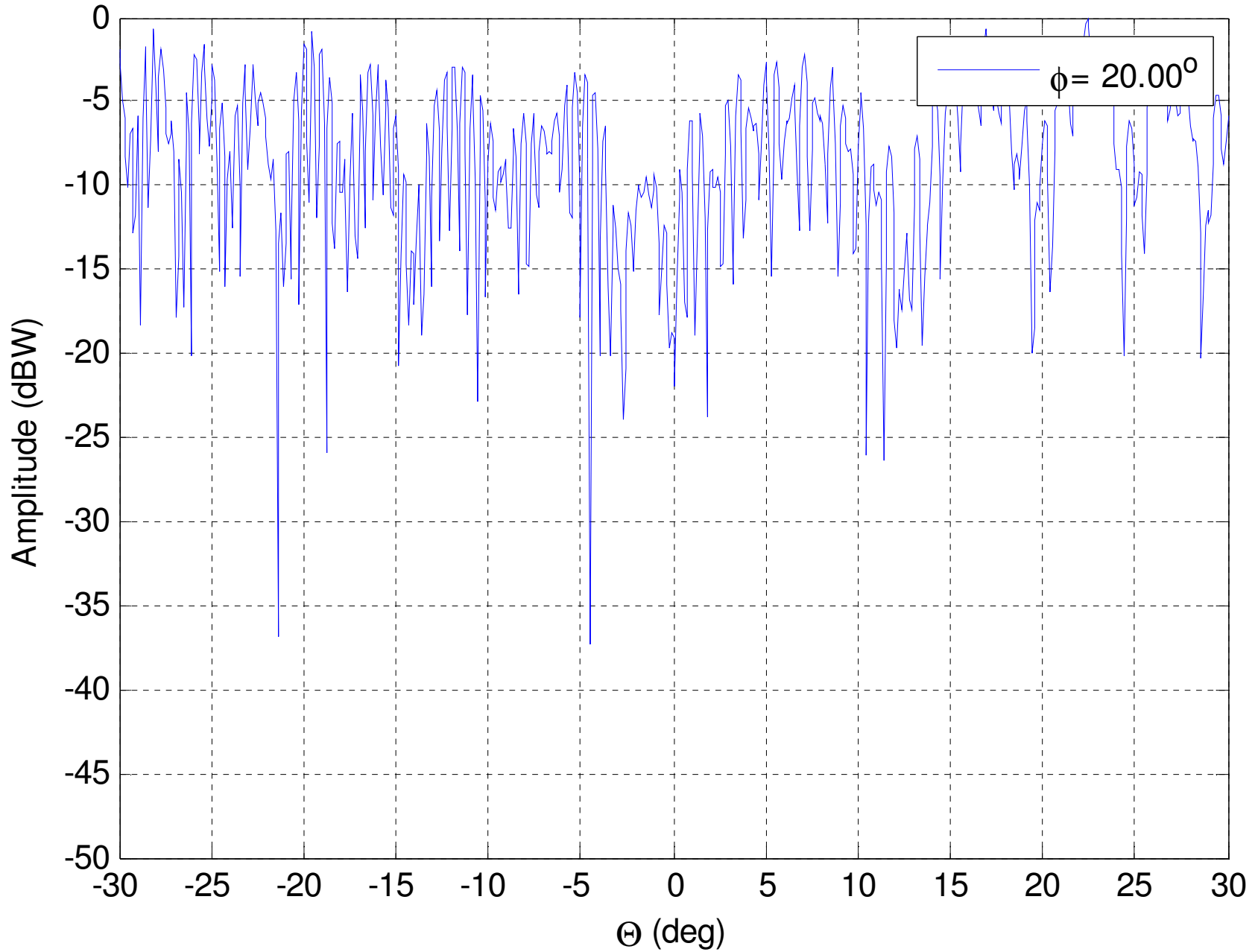
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -10.47 dBW, Date: 14-Dec-2011



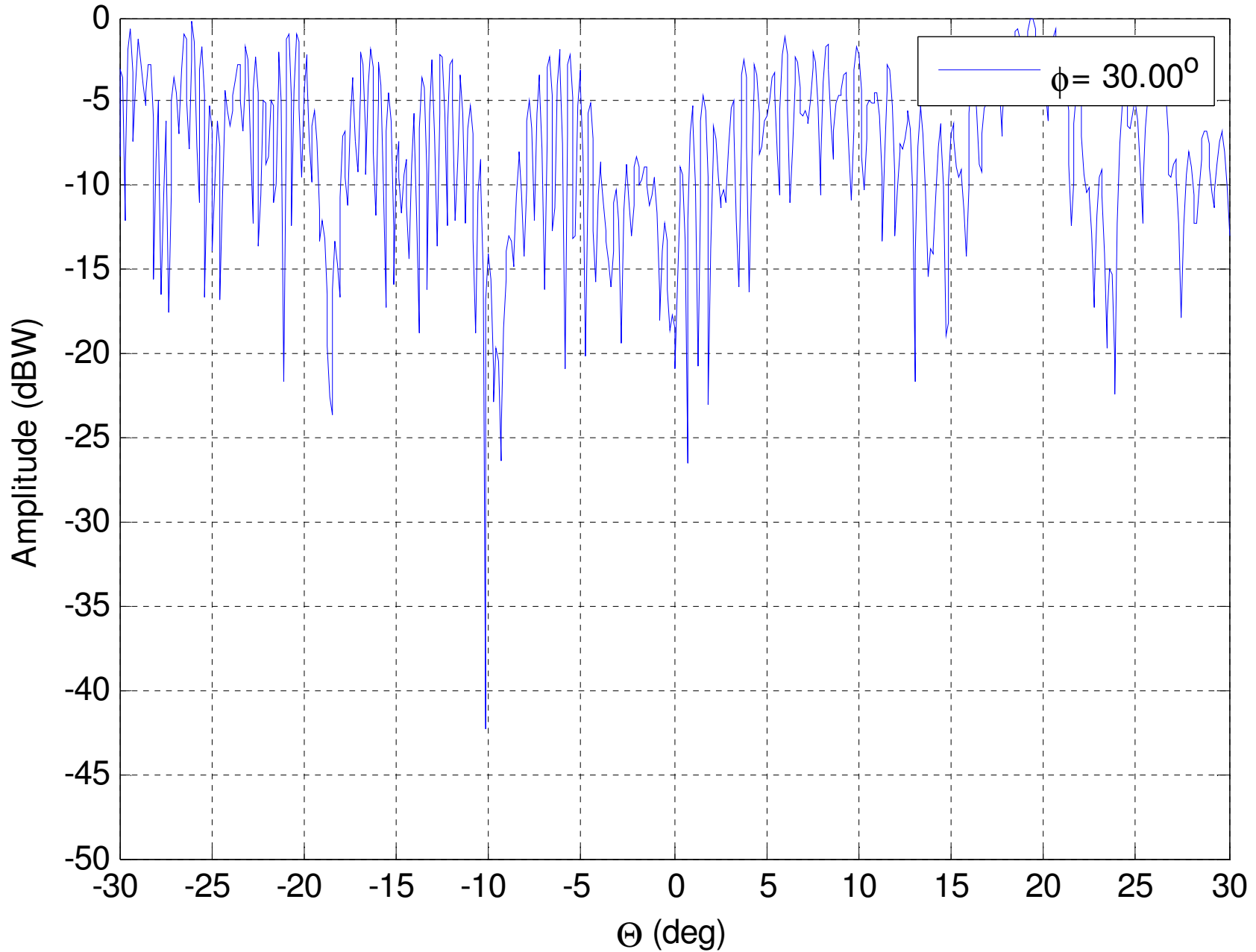
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -10.68 dBW, Date: 14-Dec-2011



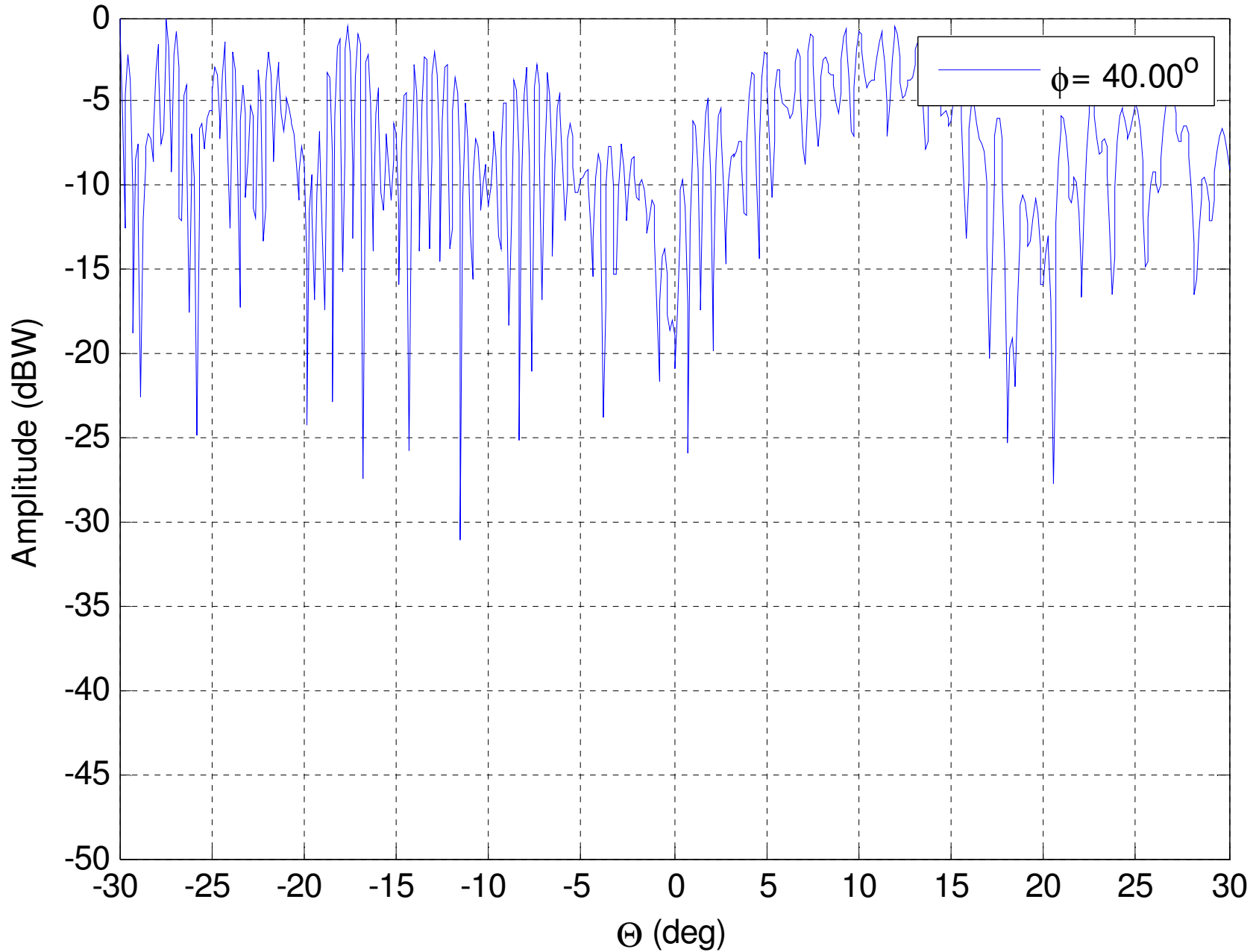
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.33 dBW, Date: 14-Dec-2011



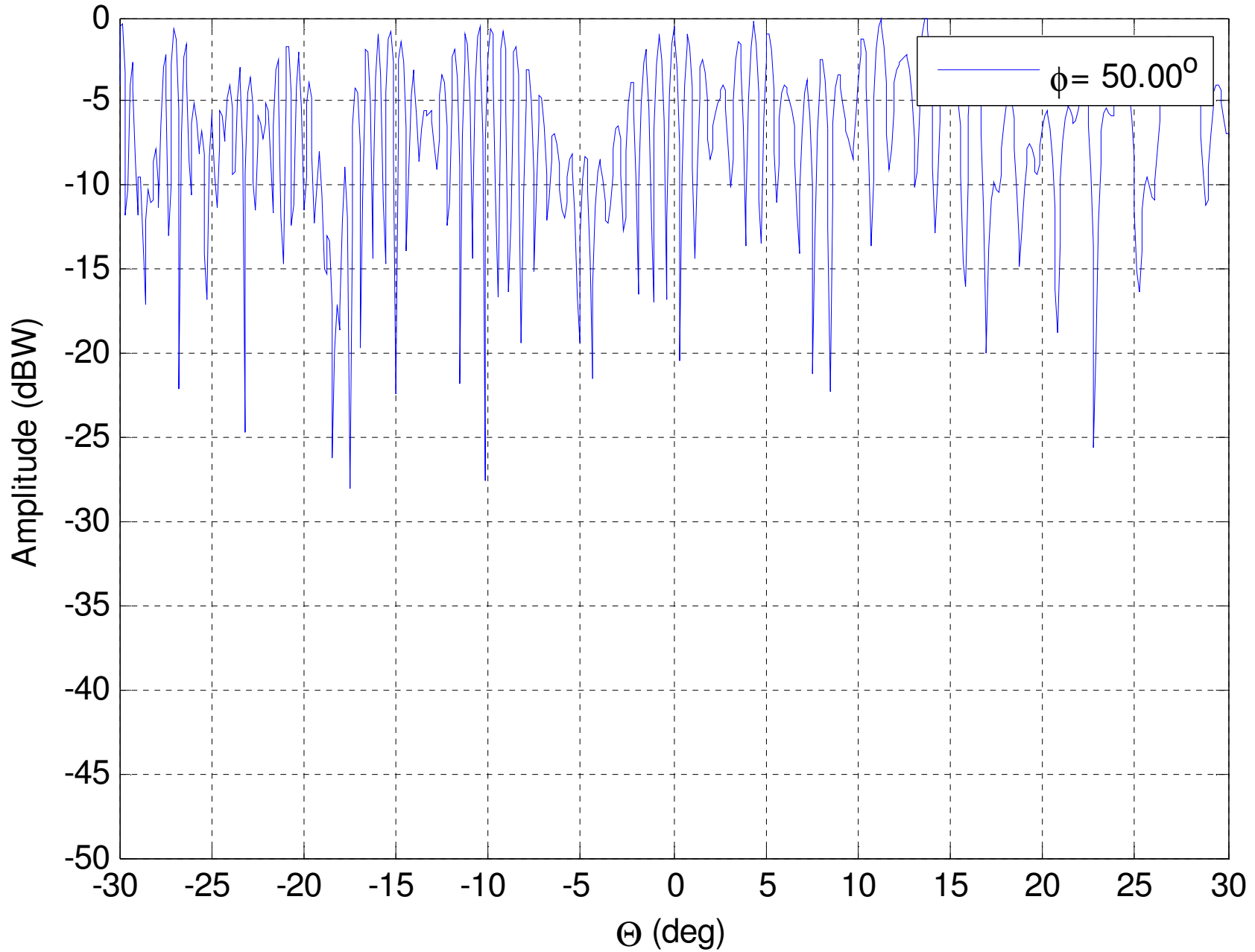
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -10.83 dBW, Date: 14-Dec-2011



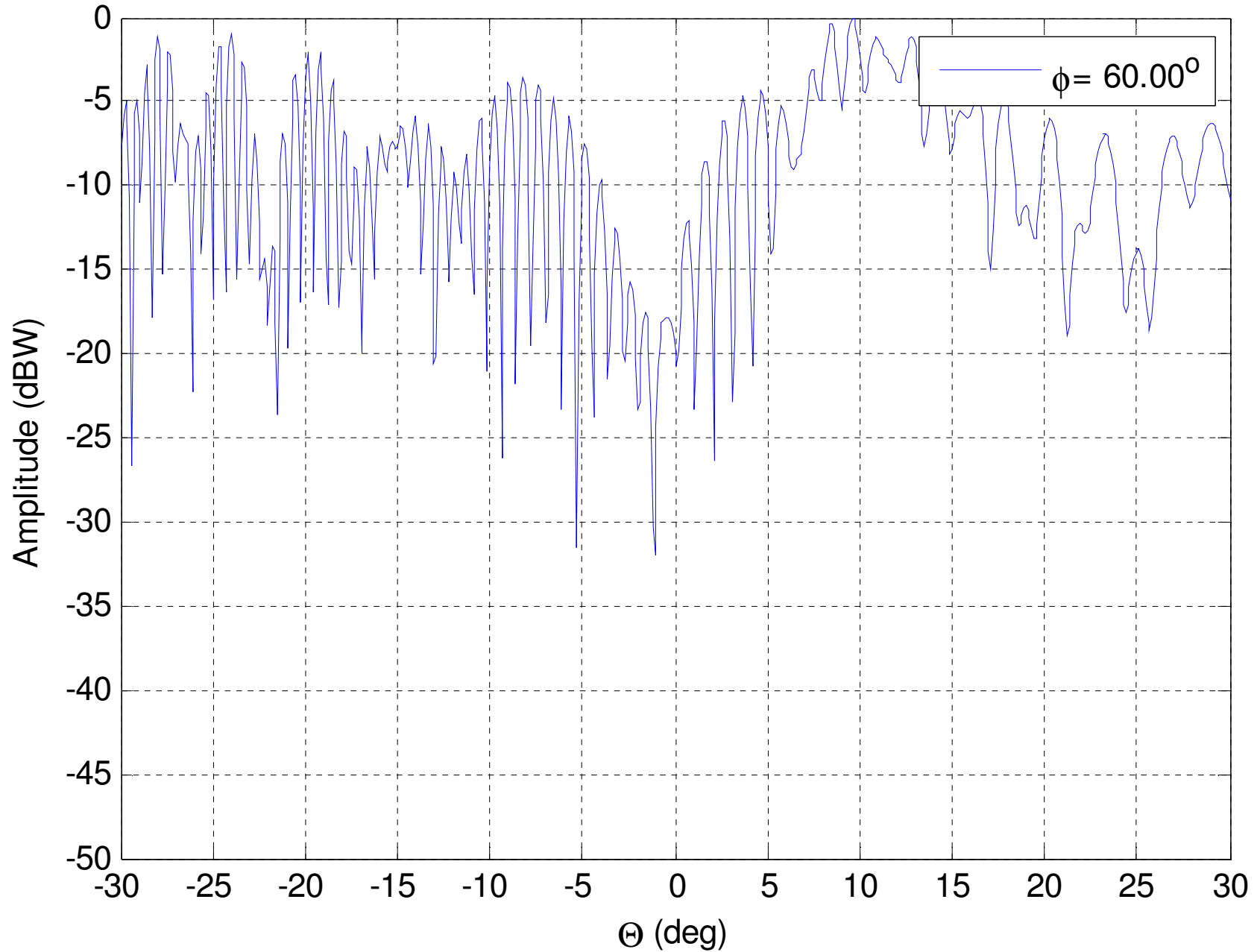
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.74 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

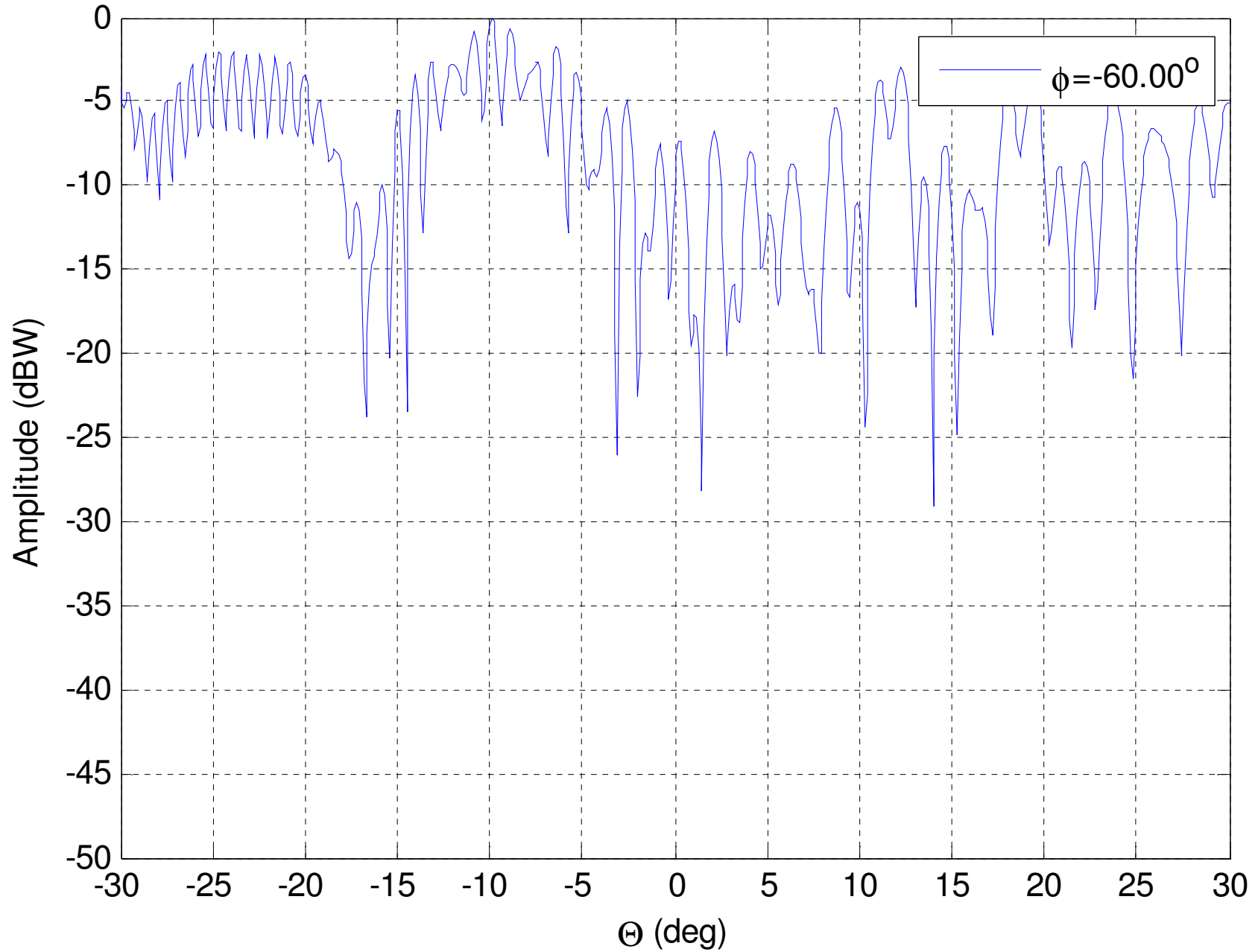
Input file: tx-17.5-lhcp-60.cut, Peak: -9.84 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

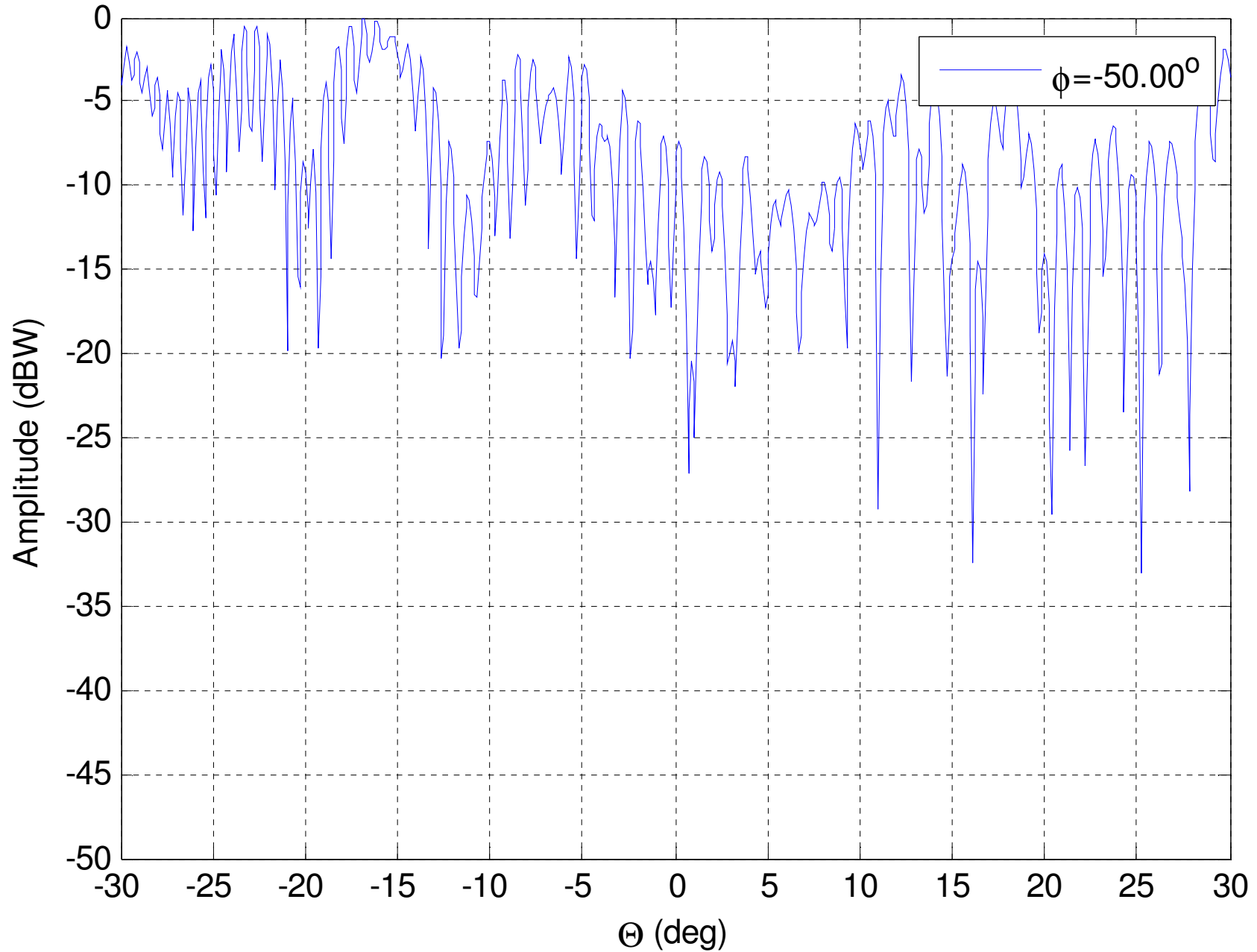
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.37 dBW, Date: 14-Dec-2011



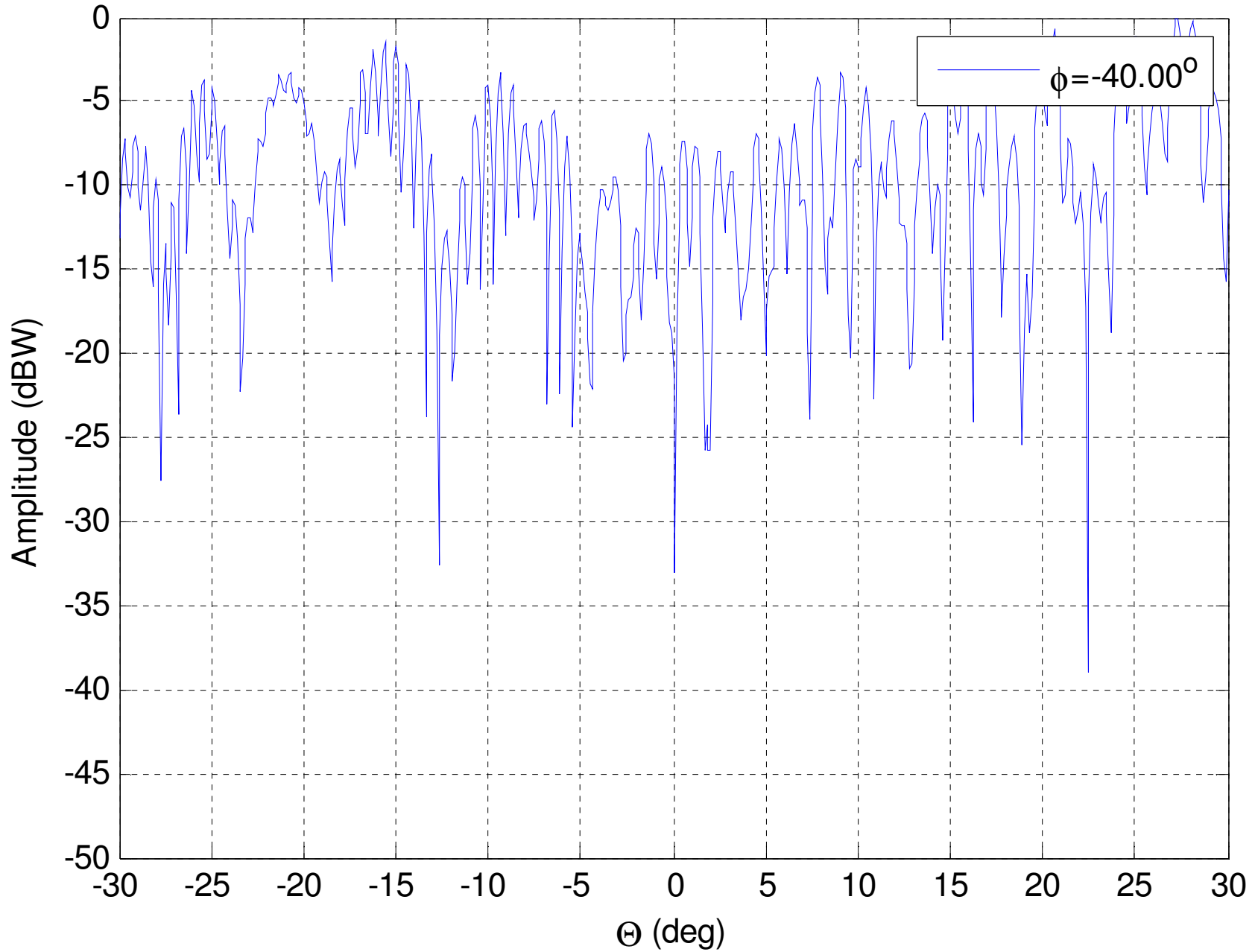
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -11.19 dBW, Date: 14-Dec-2011



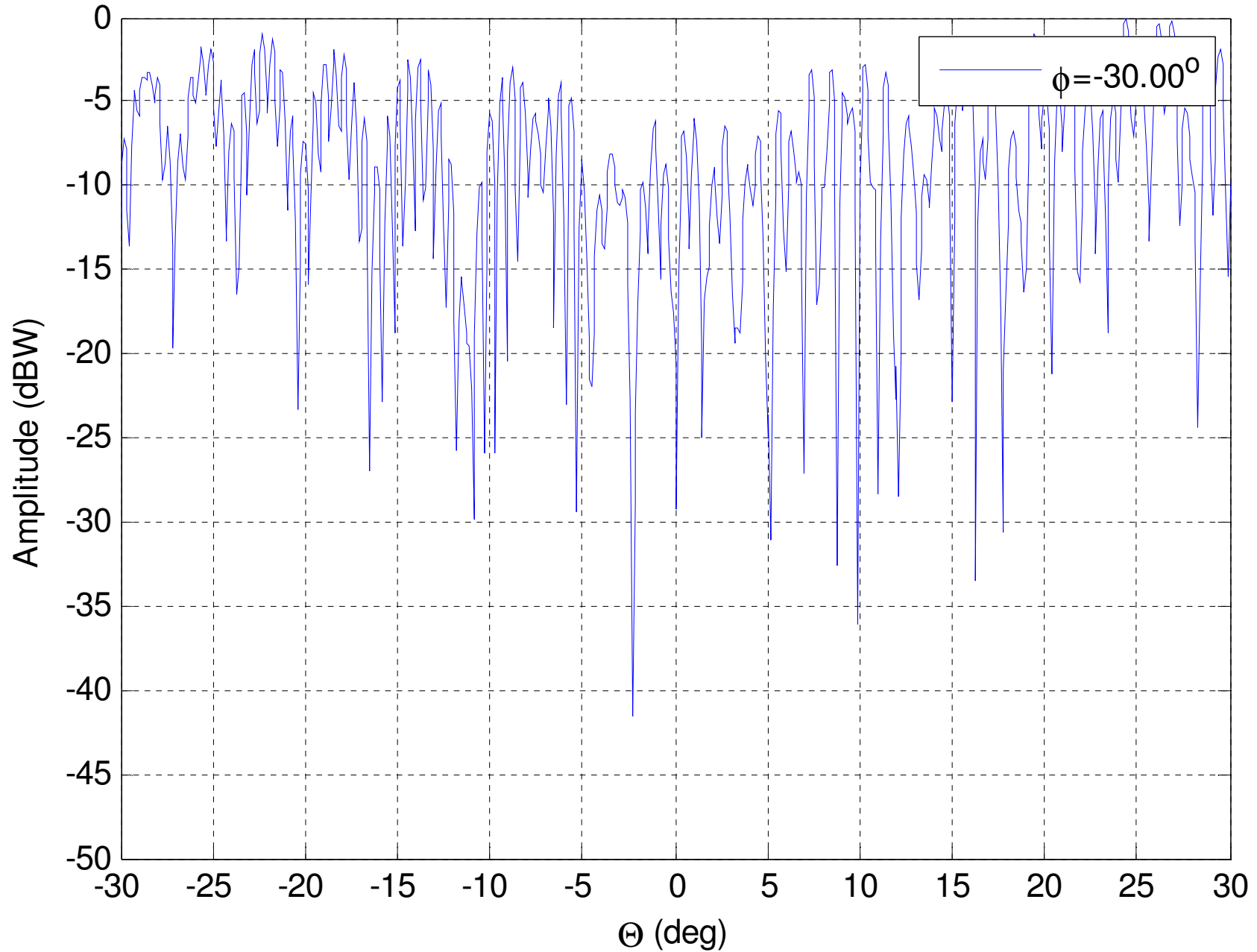
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -9.81 dBW, Date: 14-Dec-2011



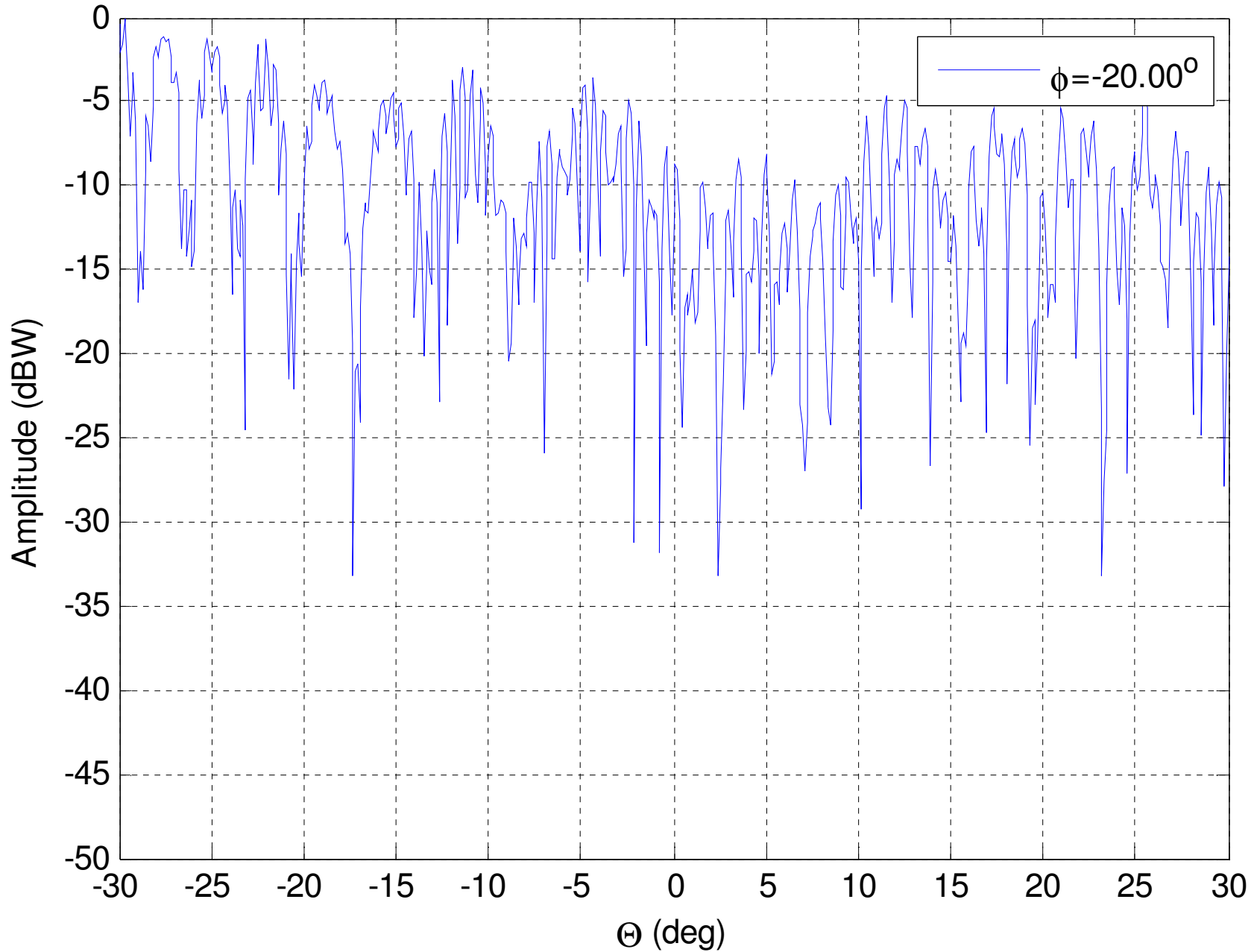
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -10.62 dBW, Date: 14-Dec-2011



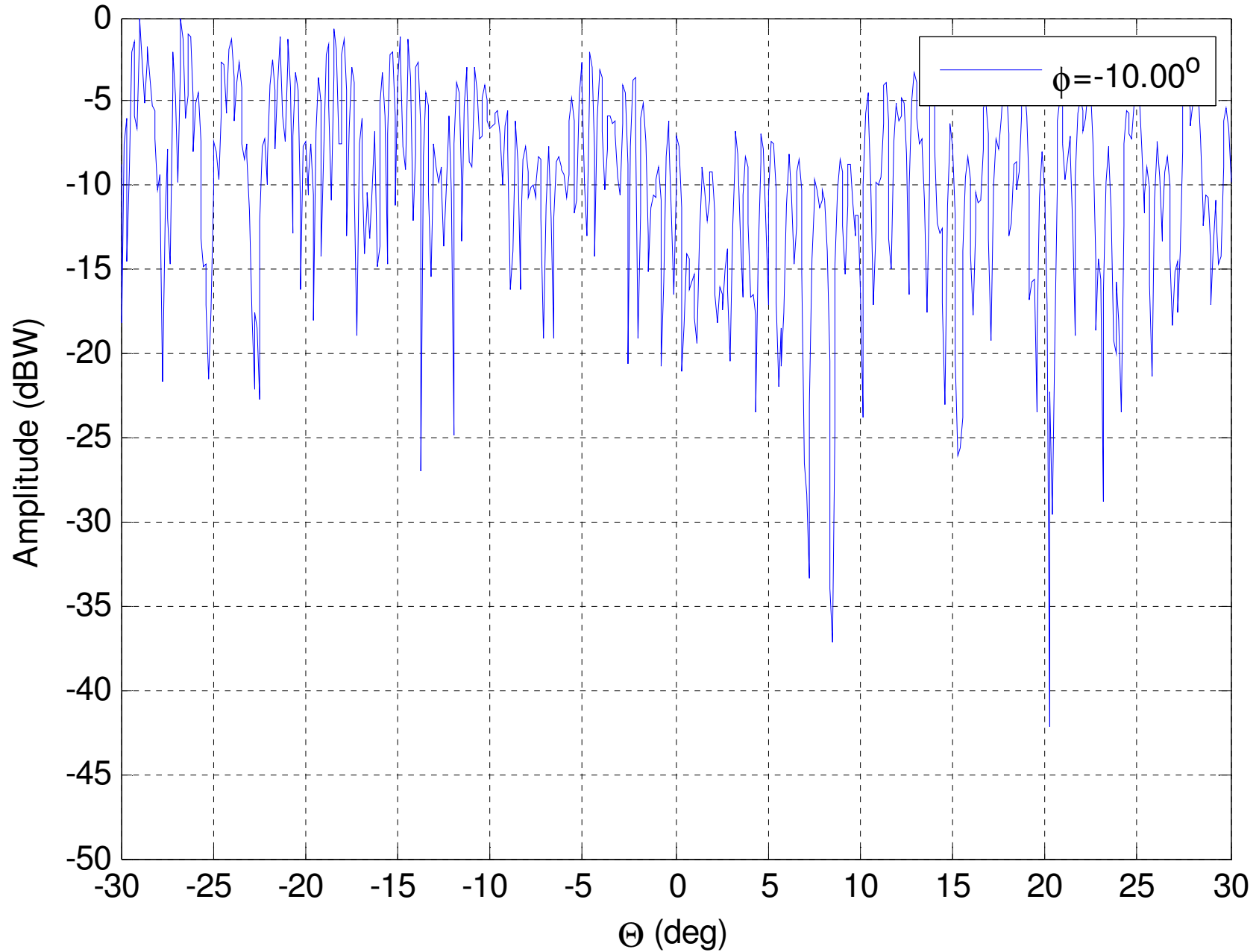
Normalized pattern cuts - farfield

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



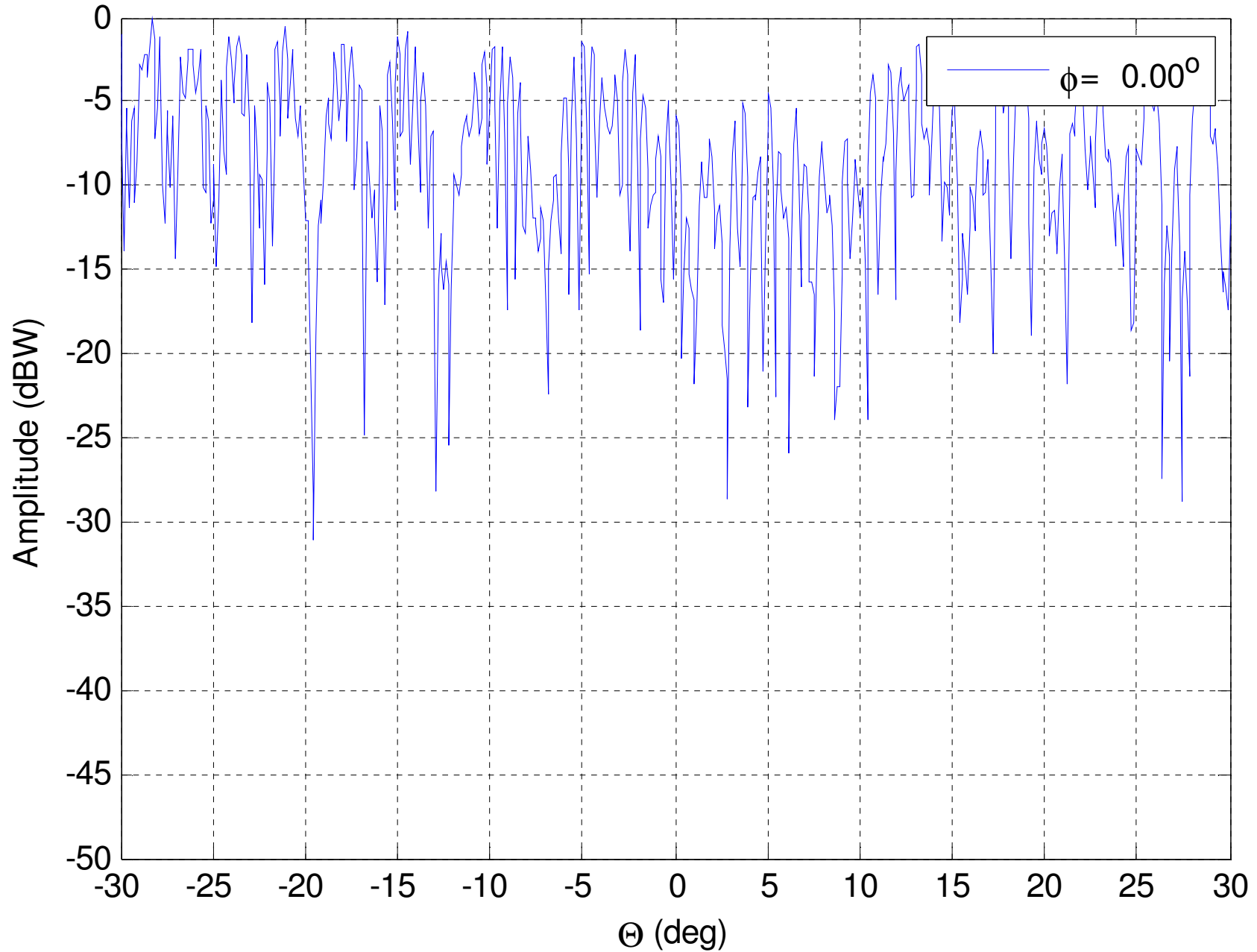
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -11.31 dBW, Date: 14-Dec-2011



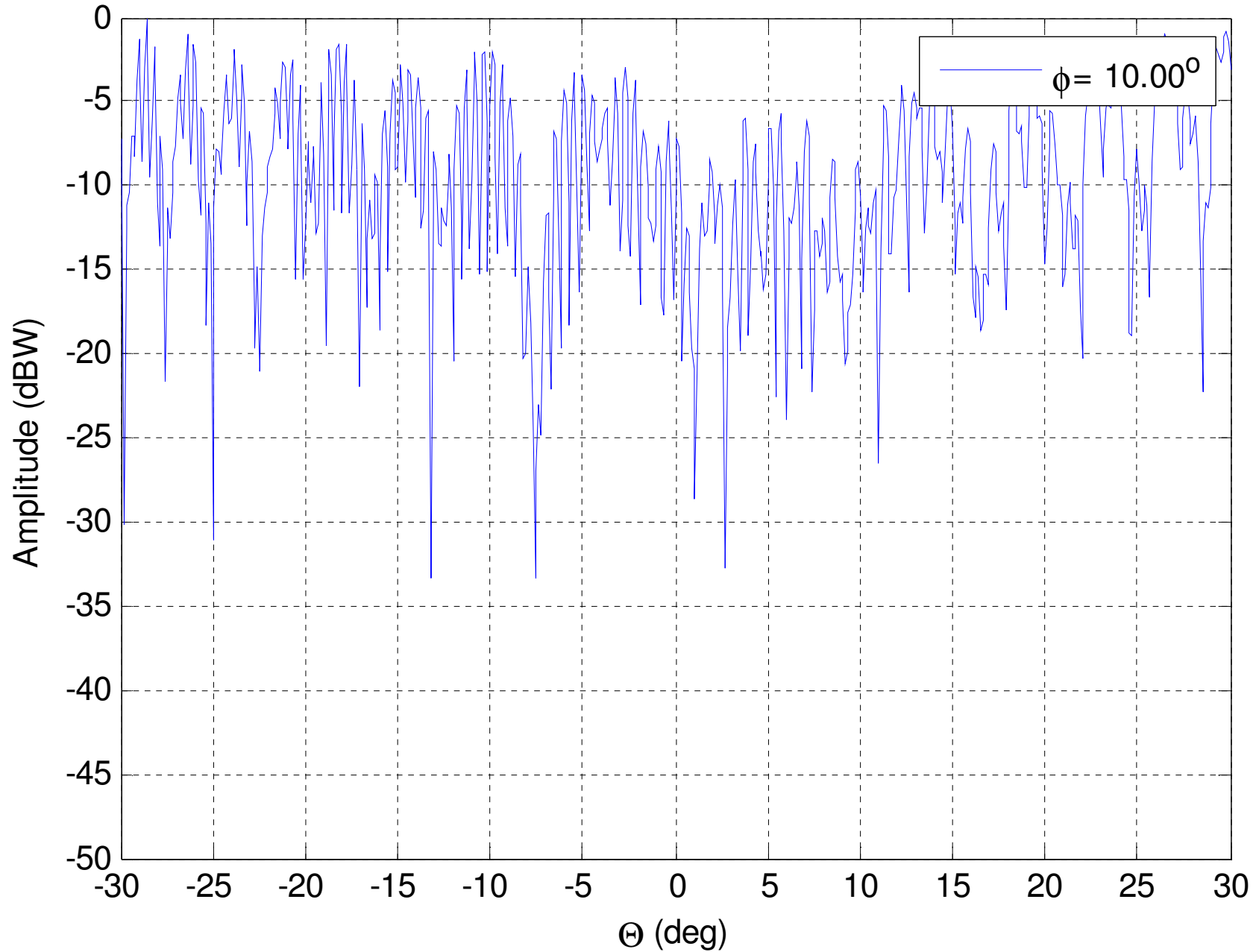
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -12.47 dBW, Date: 14-Dec-2011



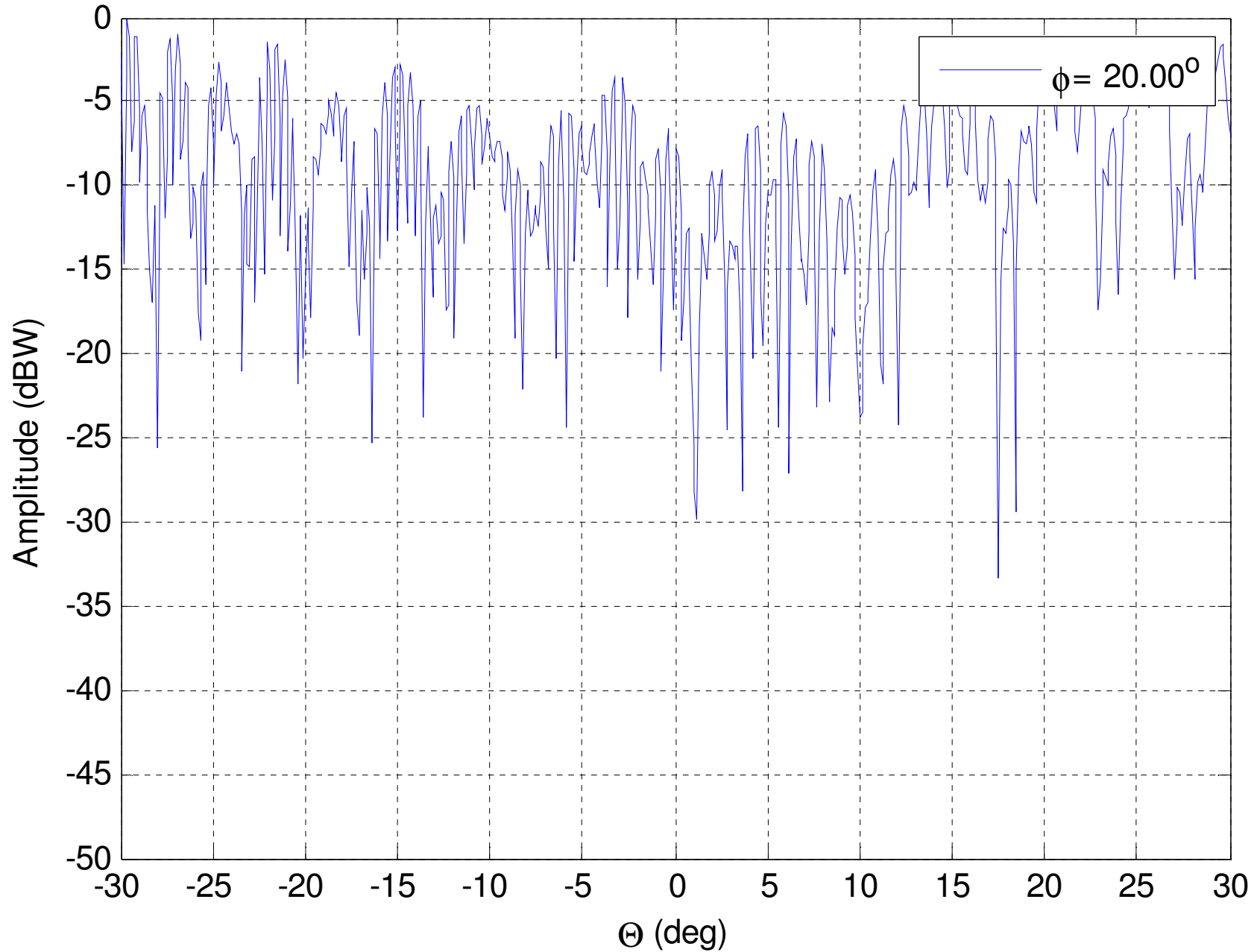
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -11.18 dBW, Date: 14-Dec-2011



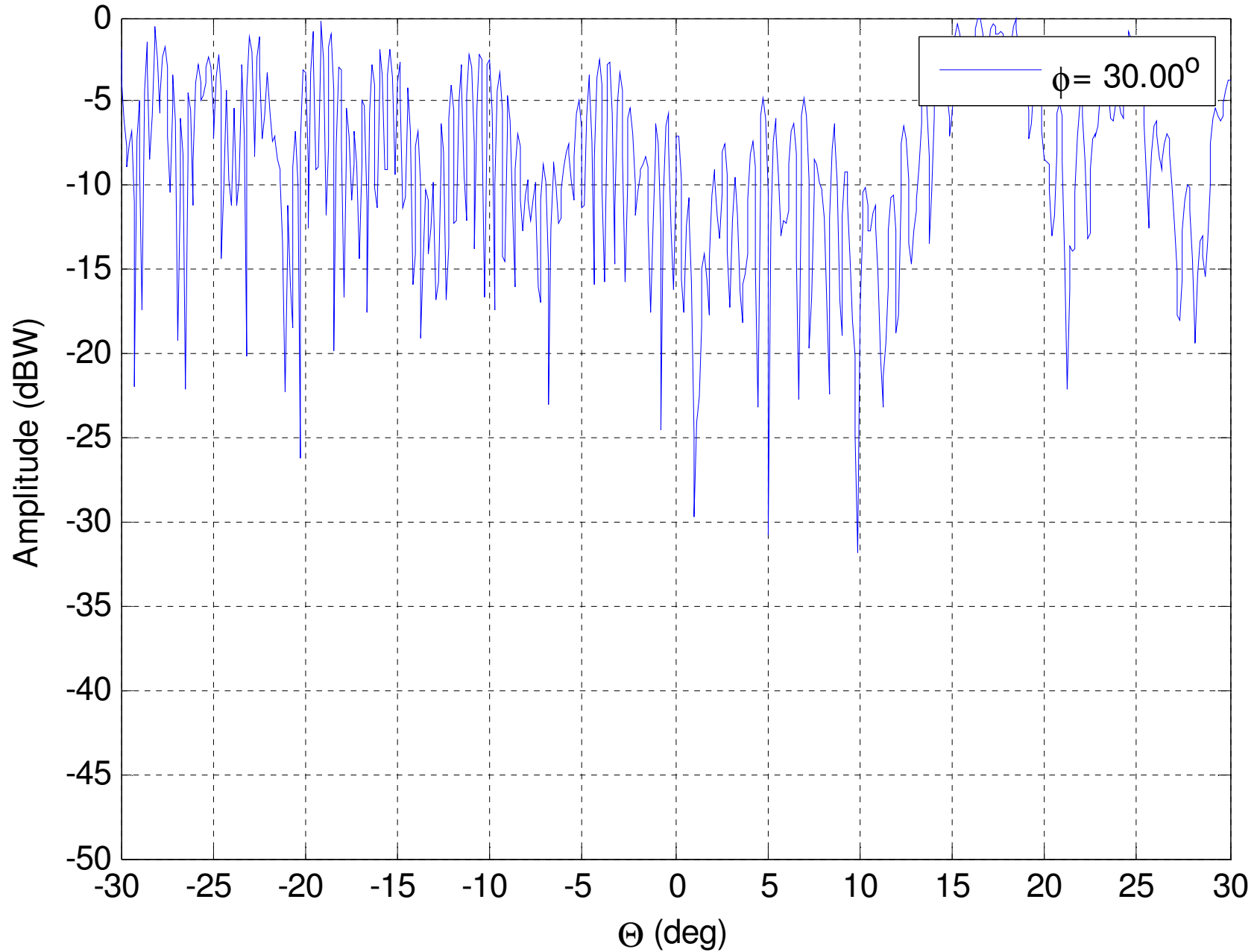
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -10.51 dBW, Date: 14-Dec-2011



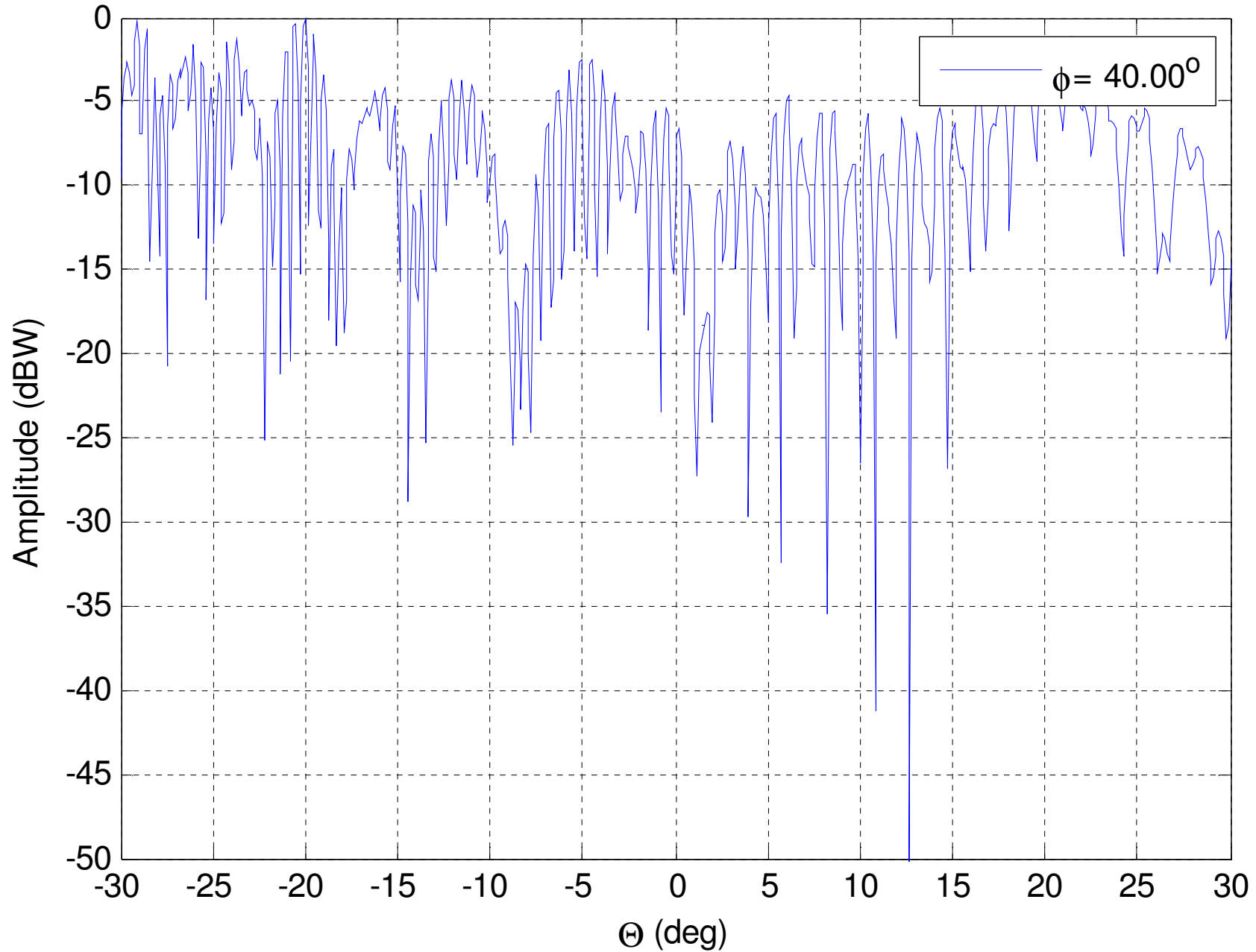
Normalized pattern cuts - farfield

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



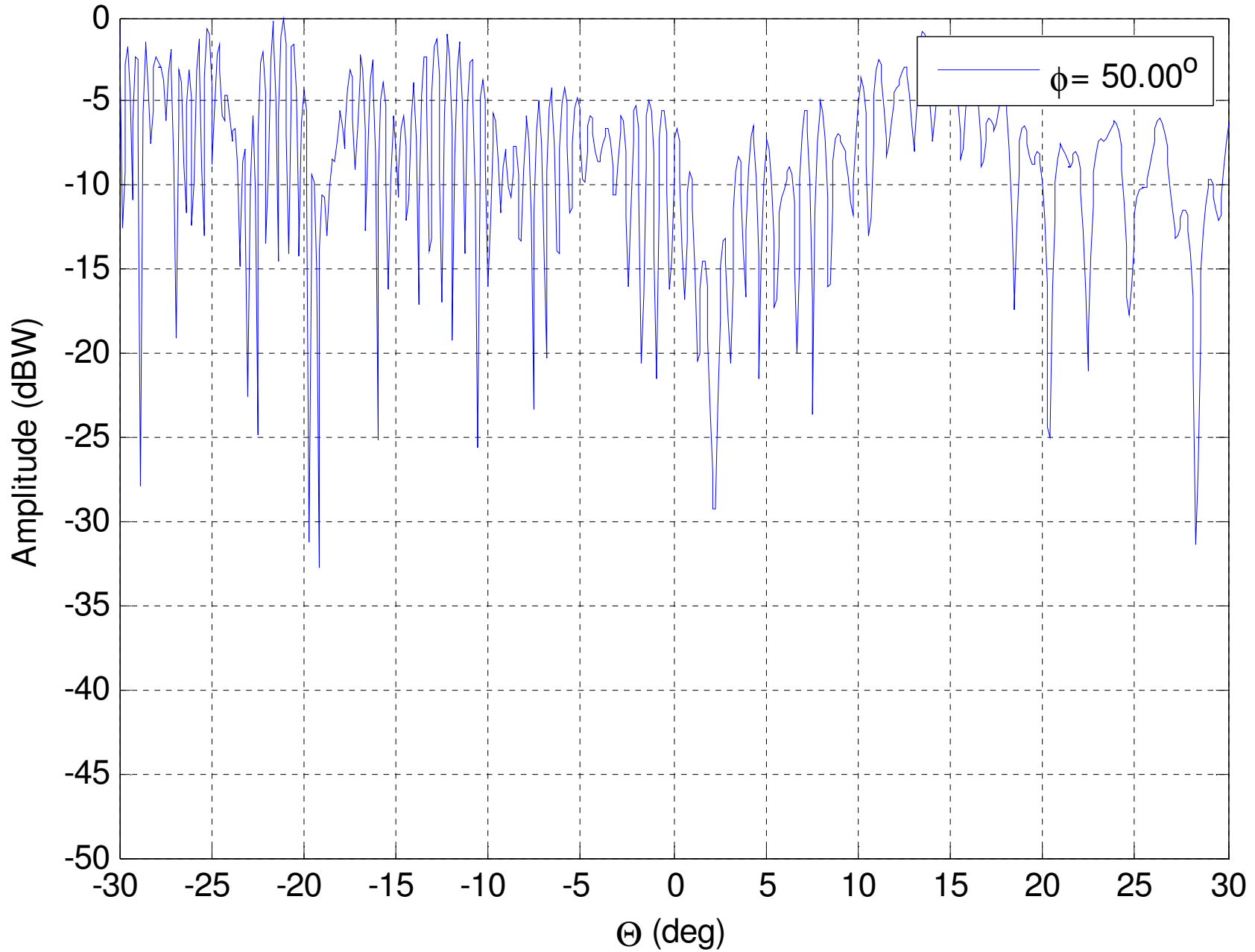
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.56 dBW, Date: 14-Dec-2011



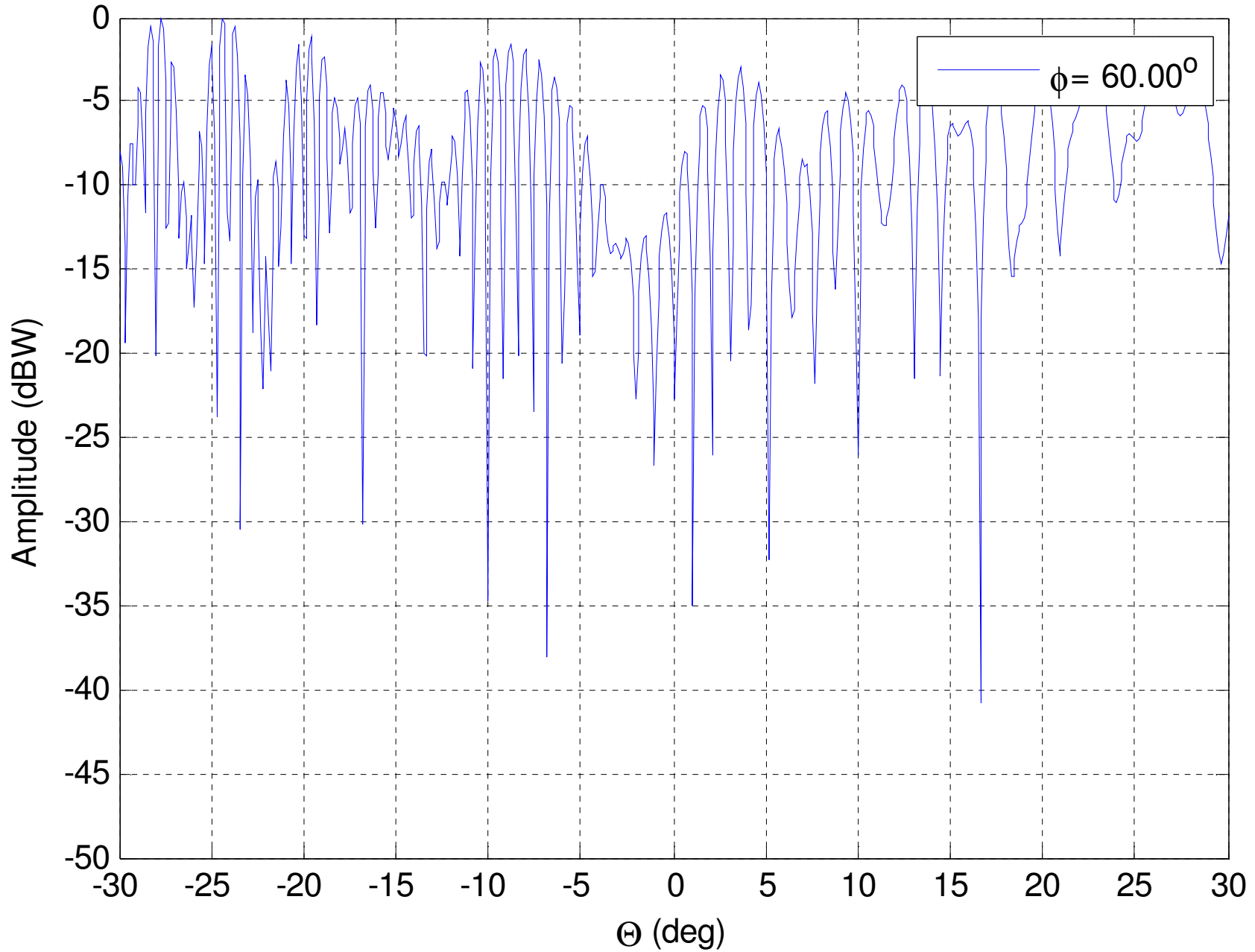
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.53 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

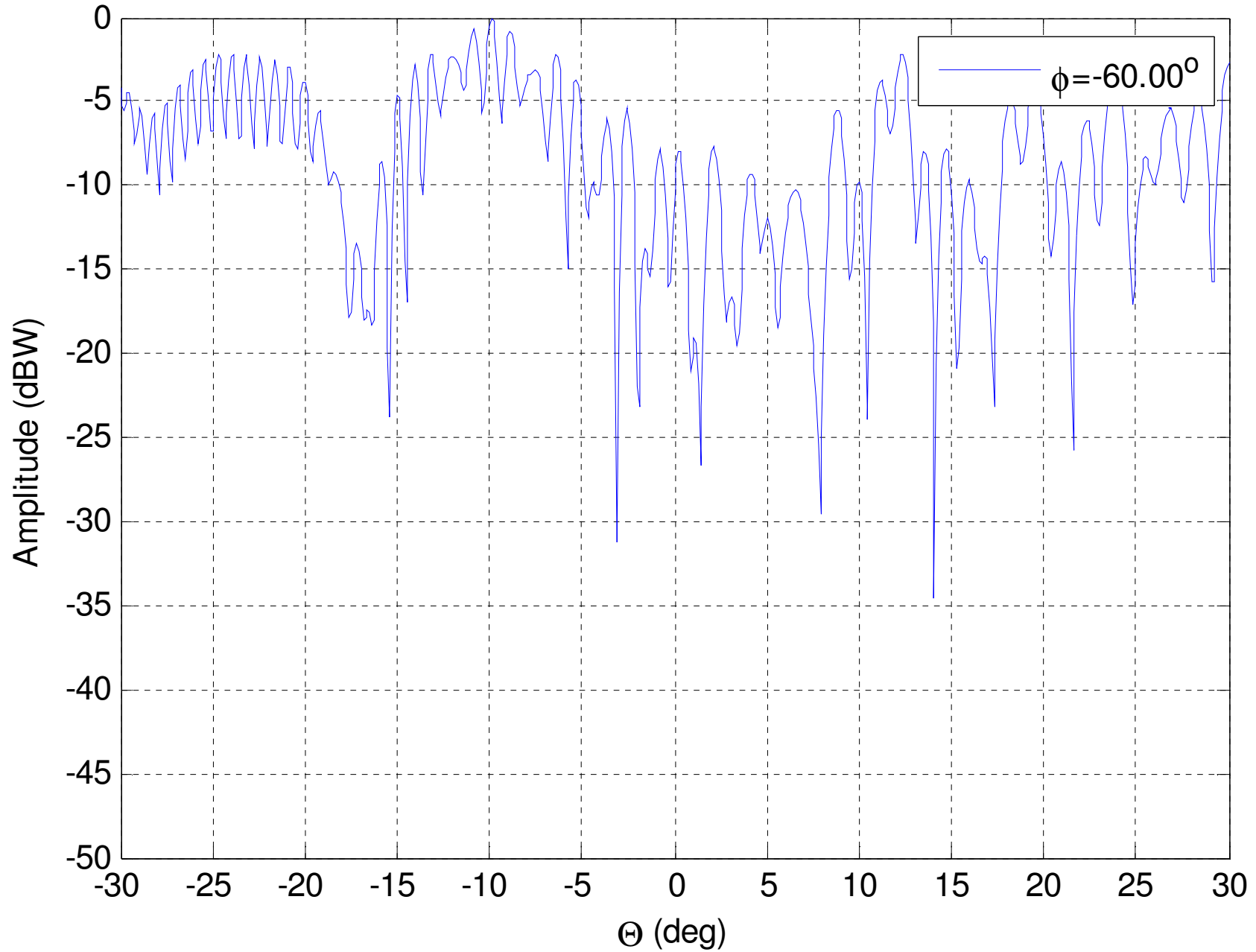
Input file: tx-17.7-rhcp-60.cut, Peak: -11.97 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

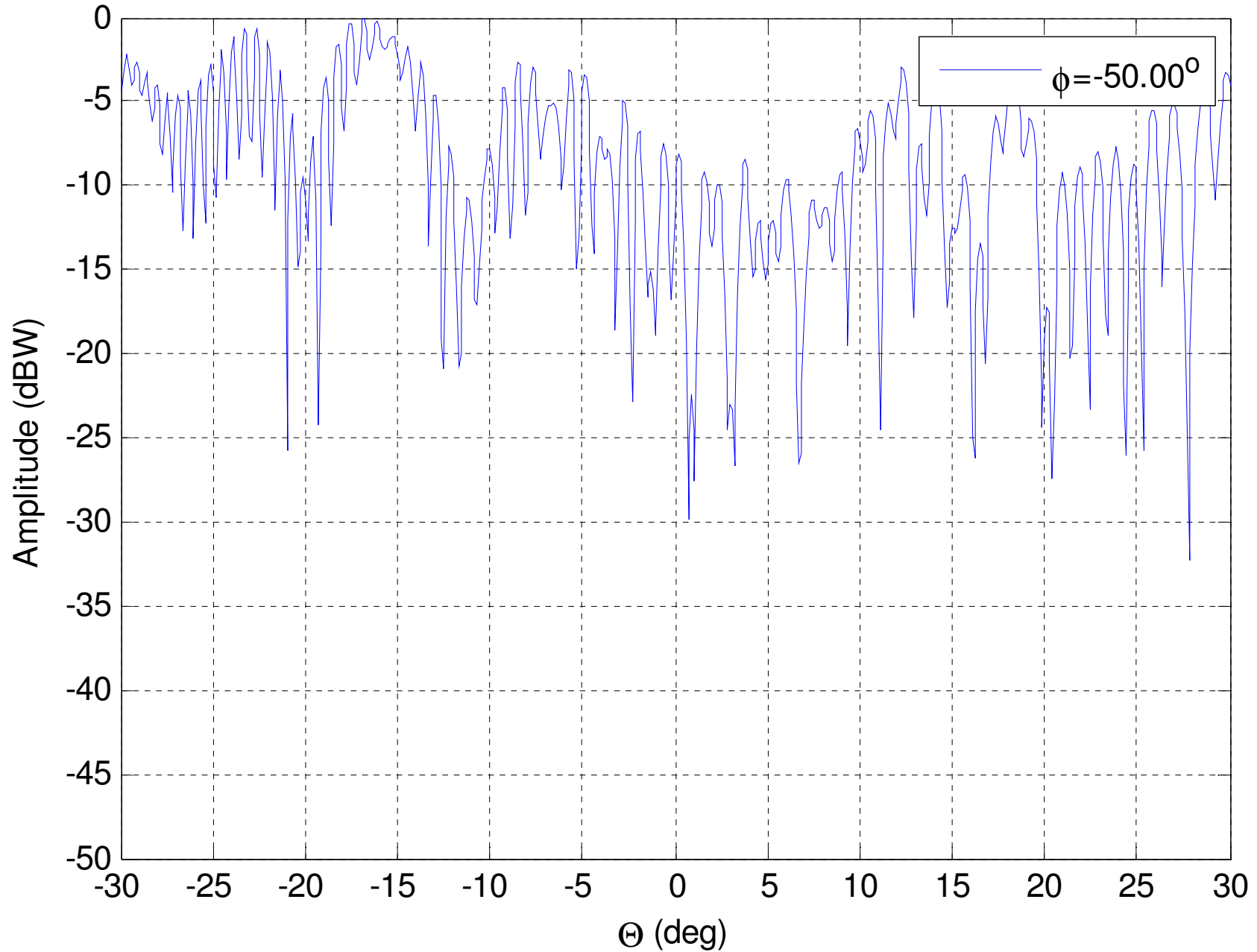
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.27 dBW, Date: 14-Dec-2011



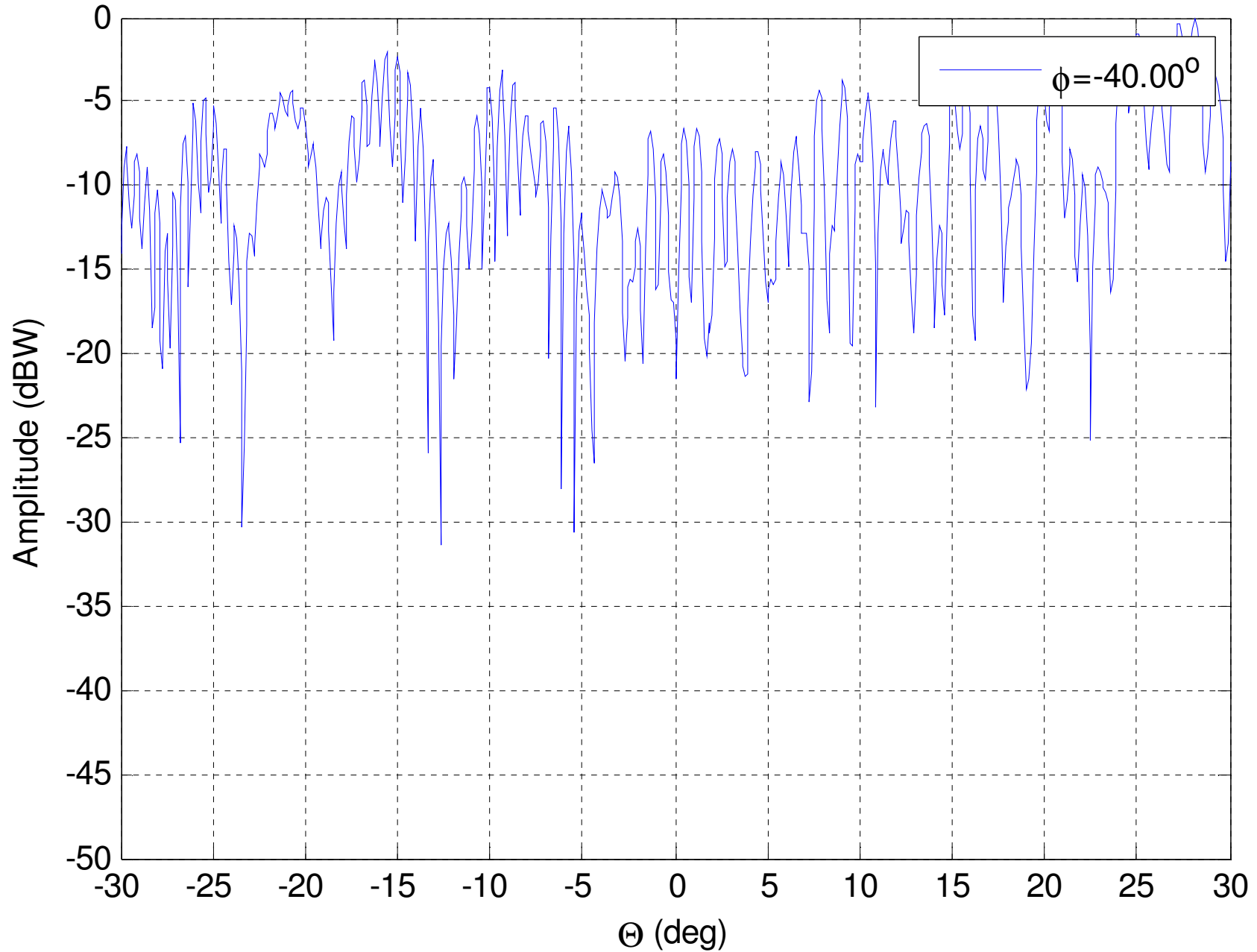
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -10.92 dBW, Date: 14-Dec-2011



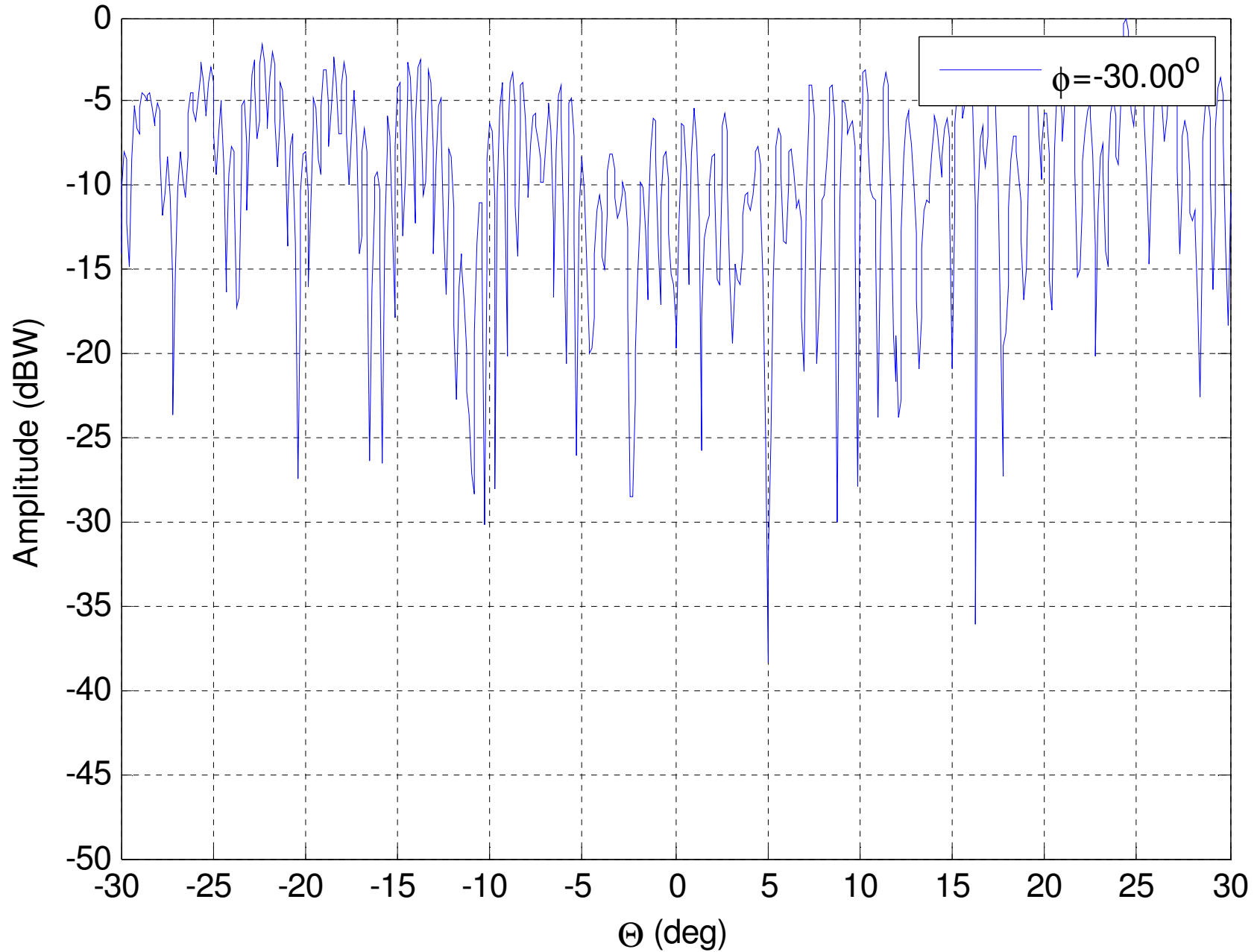
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -9.52 dBW, Date: 14-Dec-2011



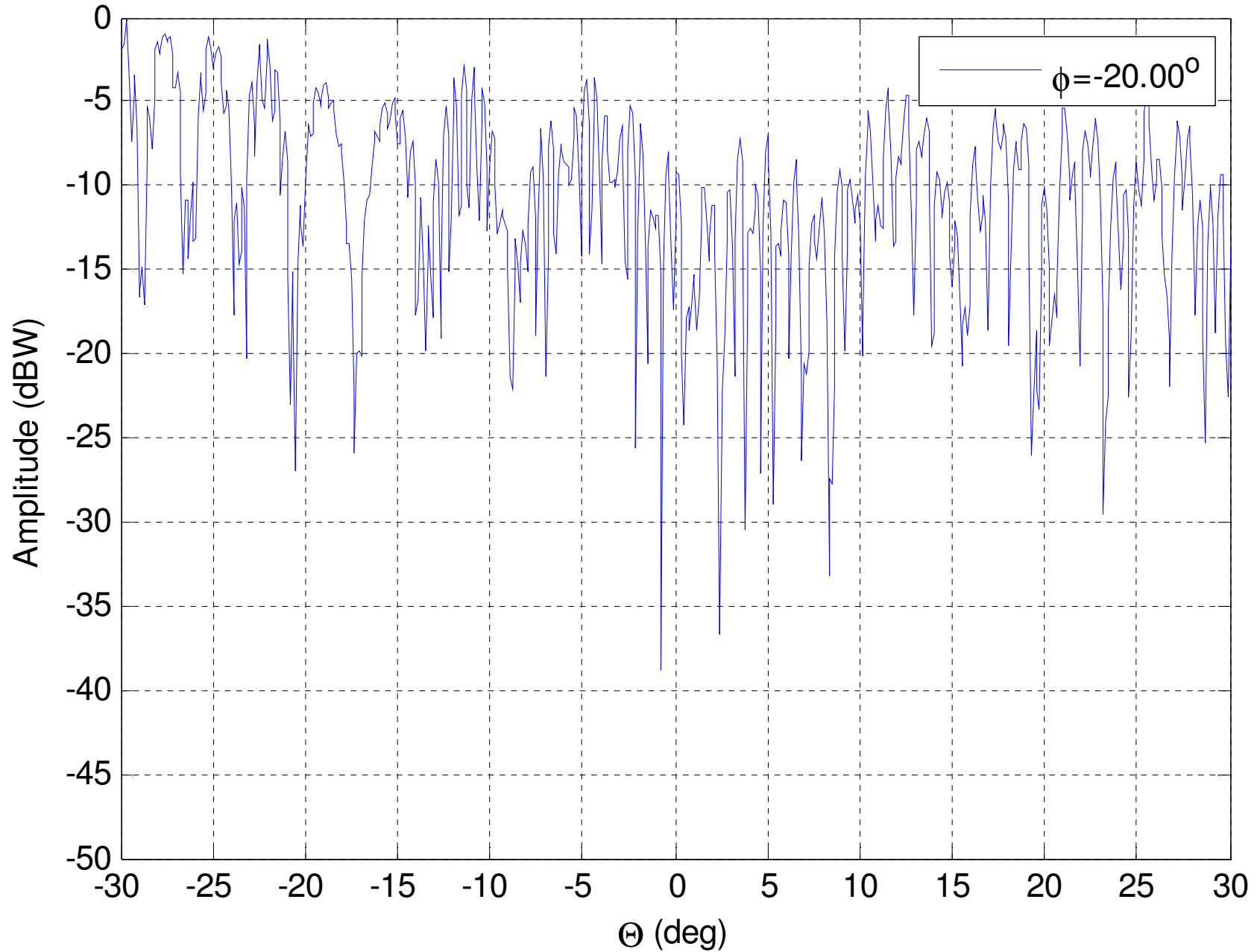
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -10.27 dBW, Date: 14-Dec-2011



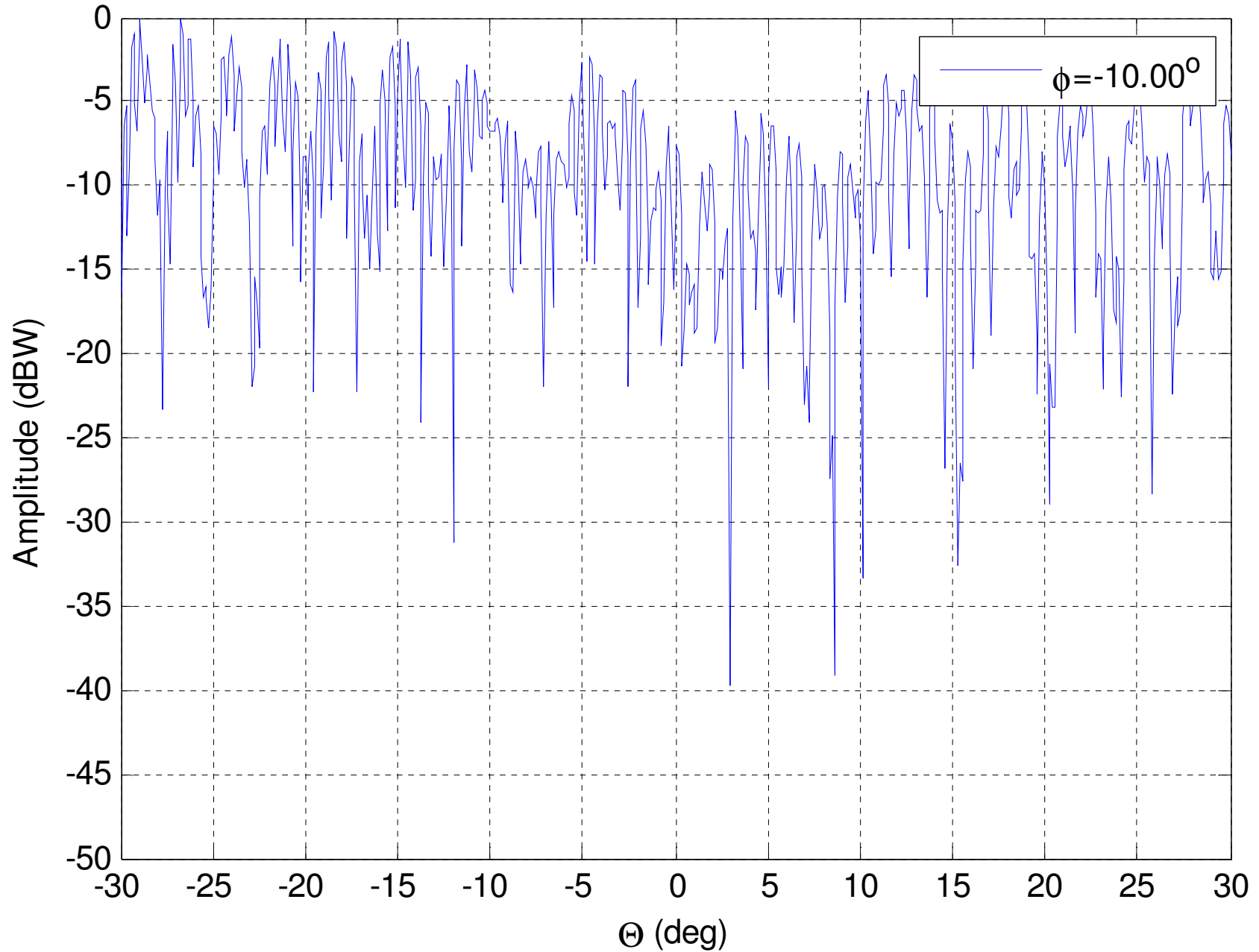
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -9.85 dBW, Date: 14-Dec-2011



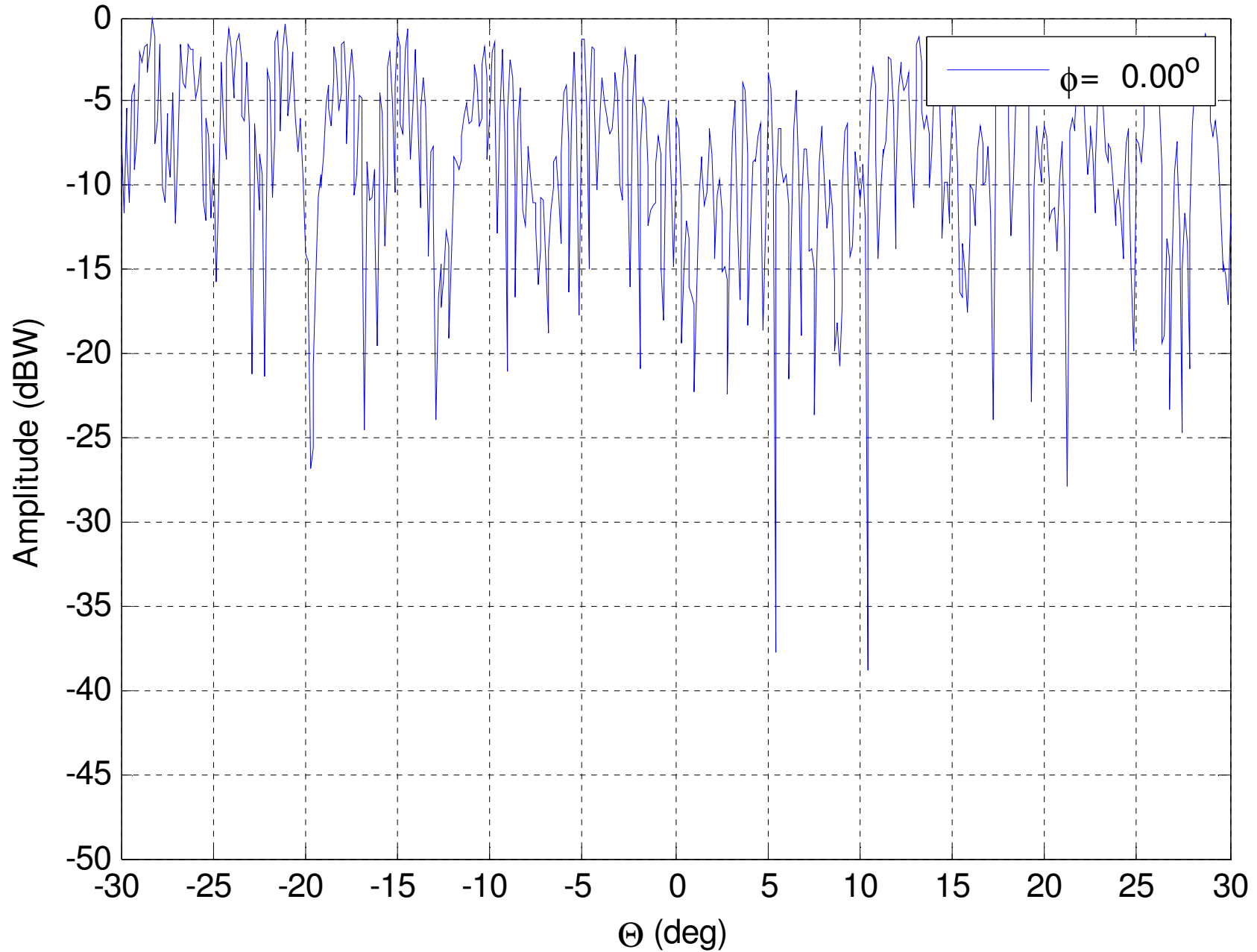
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -11.26 dBW, Date: 14-Dec-2011



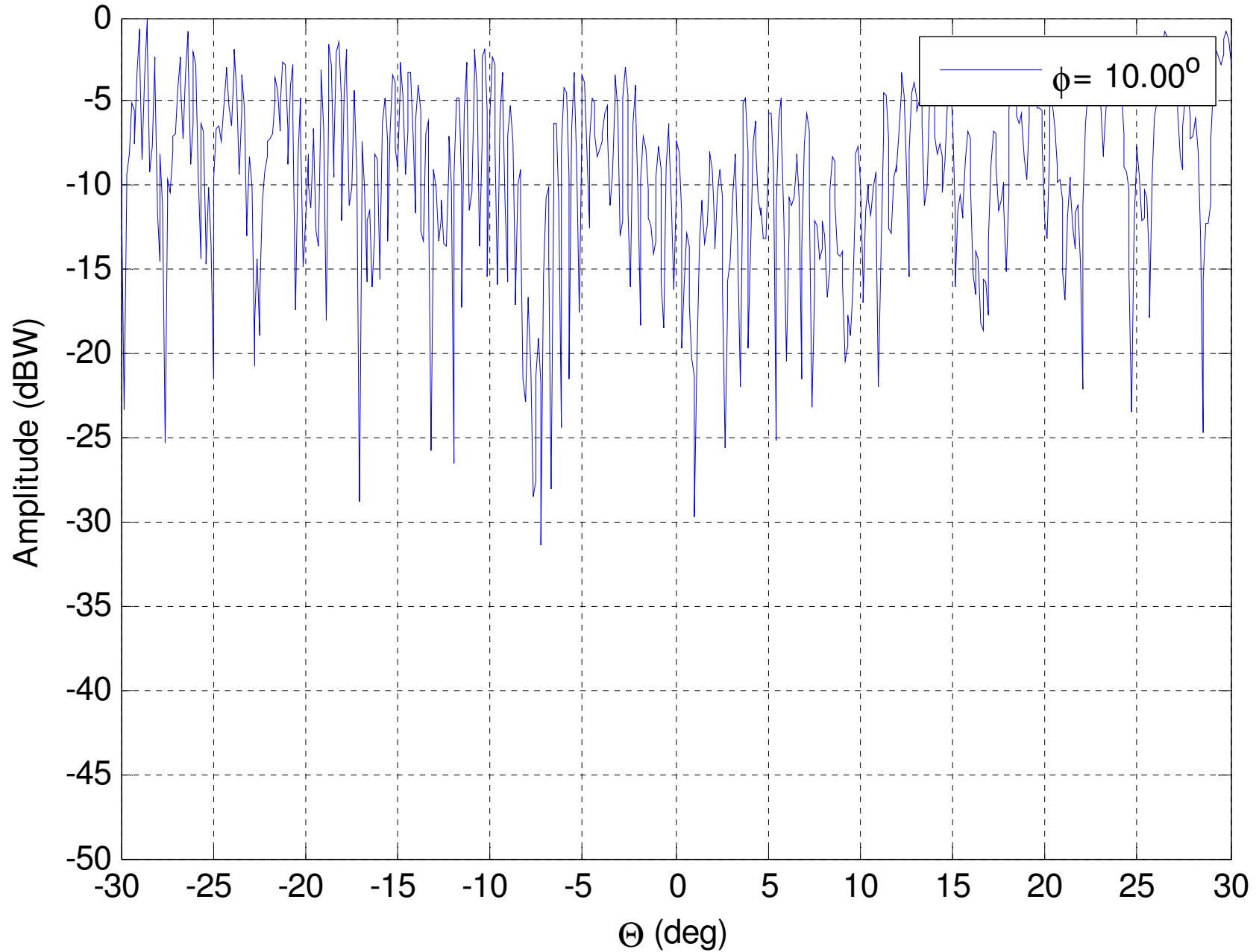
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -12.79 dBW, Date: 14-Dec-2011



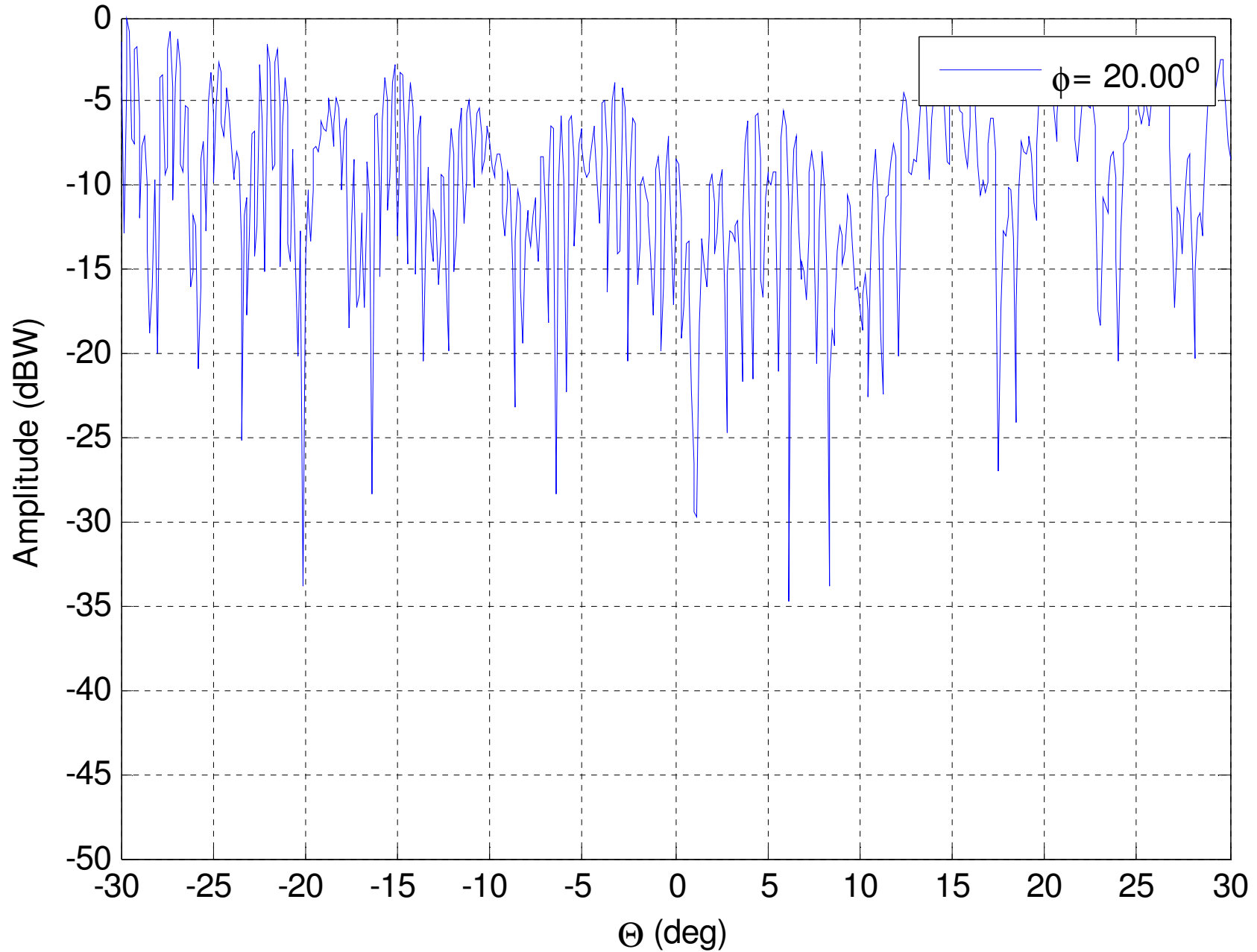
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -11.41 dBW, Date: 14-Dec-2011



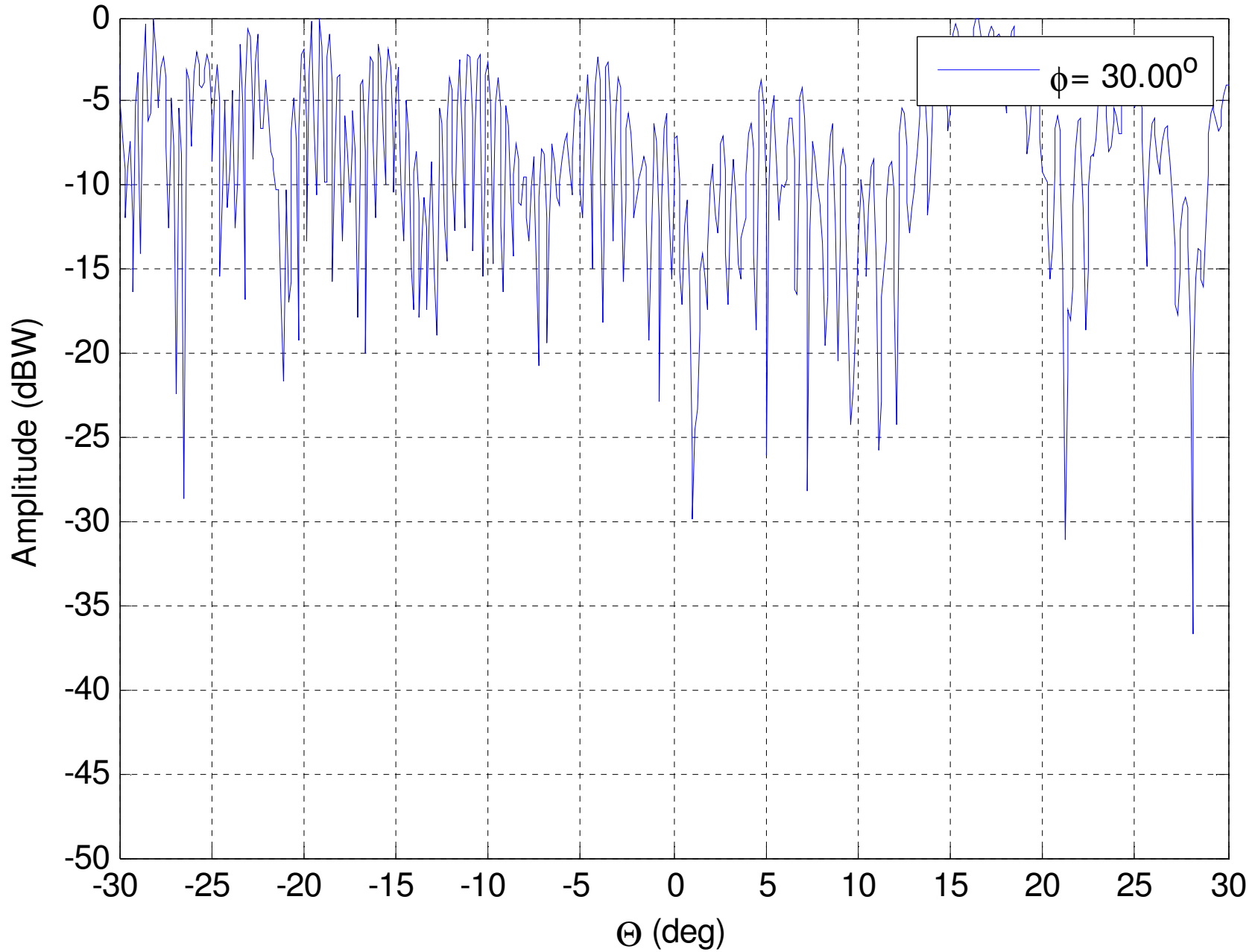
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -10.37 dBW, Date: 14-Dec-2011



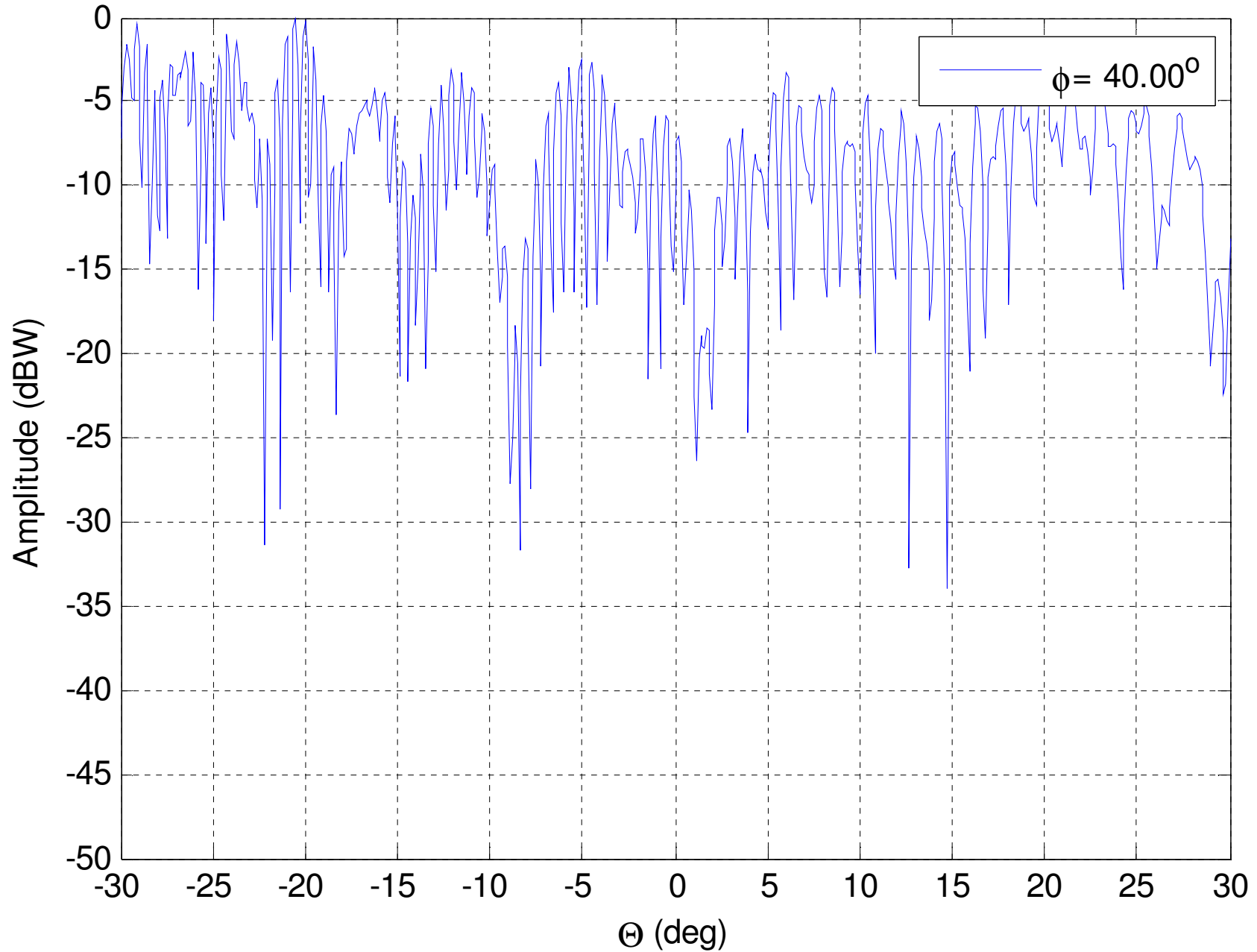
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -11.73 dBW, Date: 14-Dec-2011



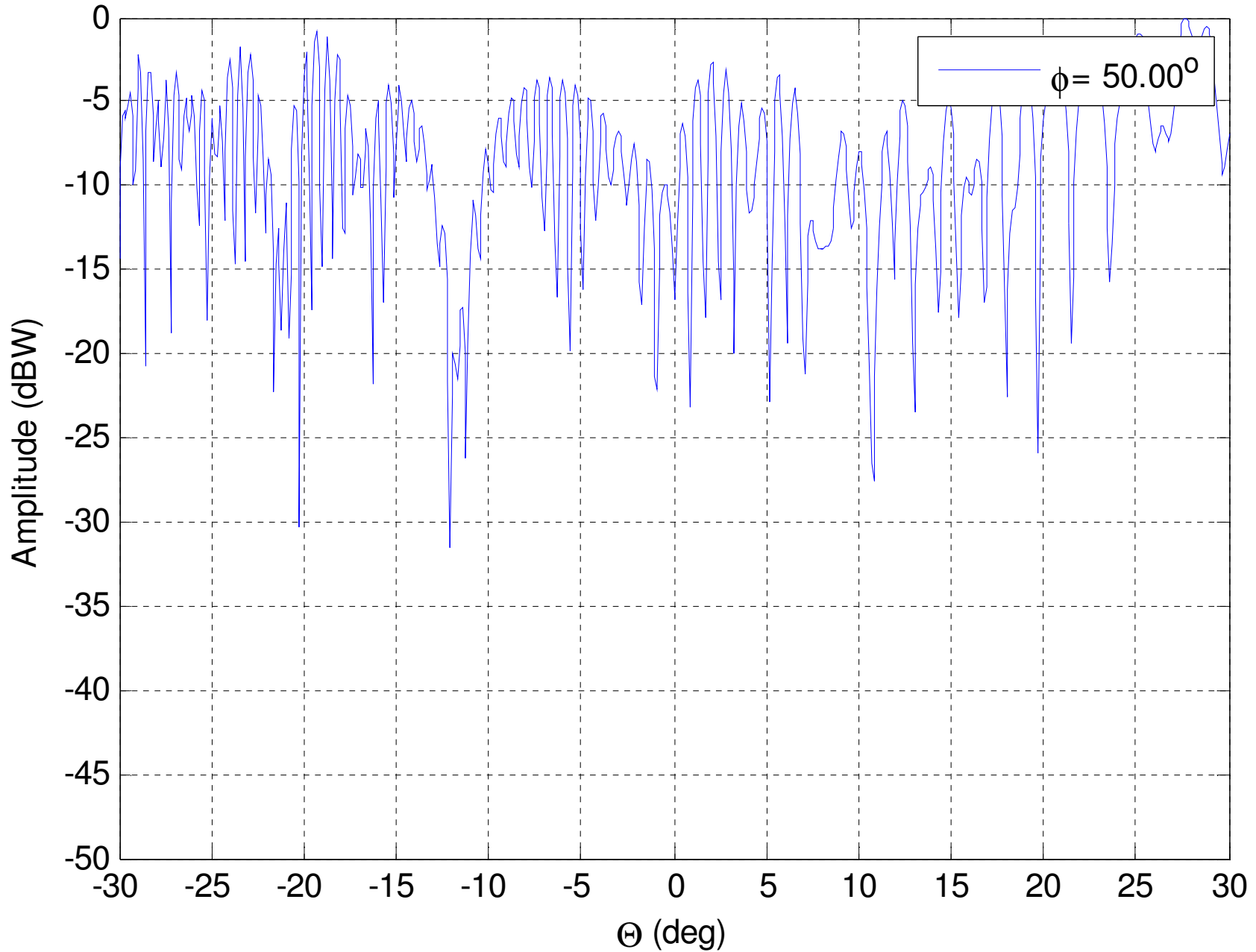
Normalized pattern cuts - farfield

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



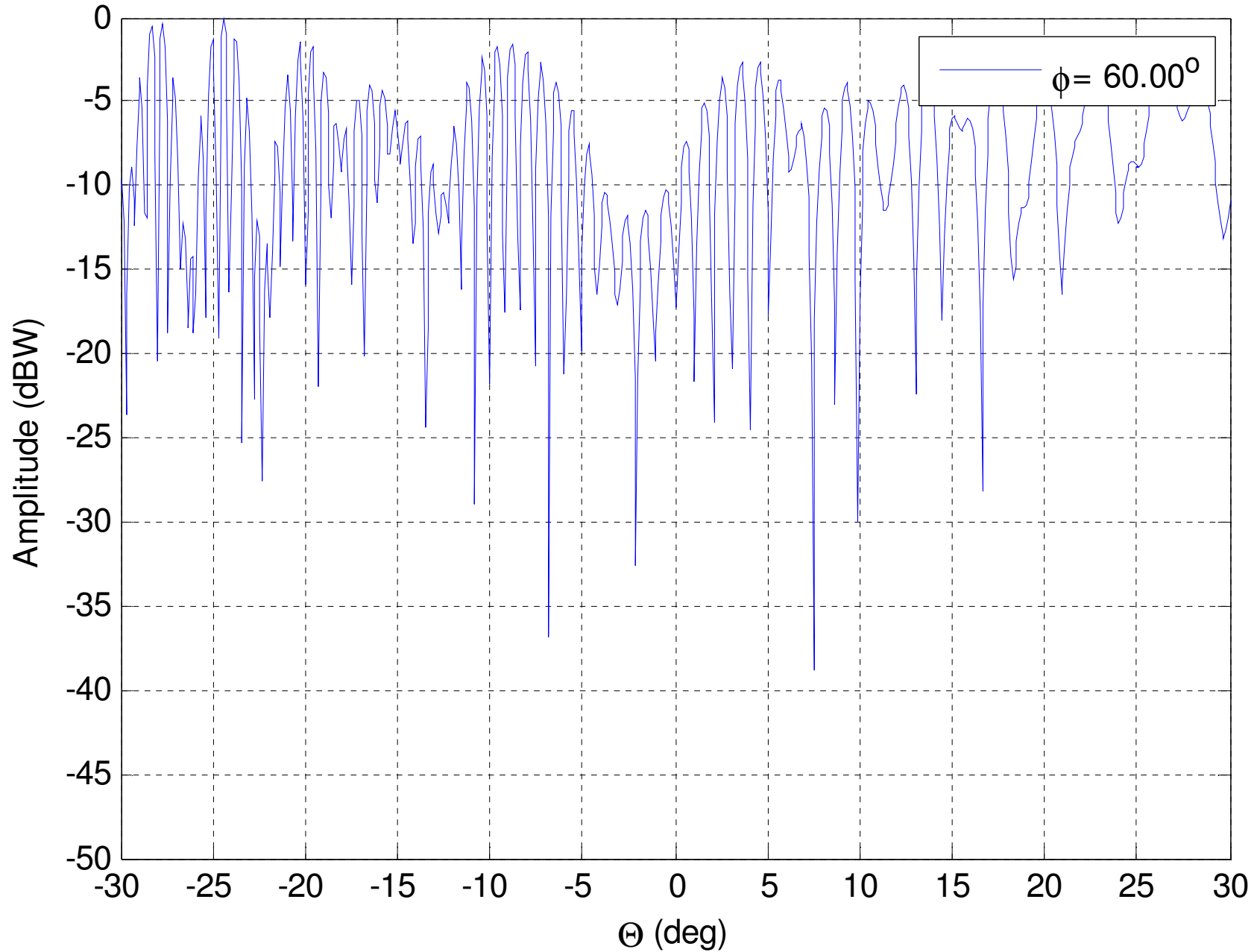
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -11.90 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -11.45 dBW, Date: 14-Dec-2011



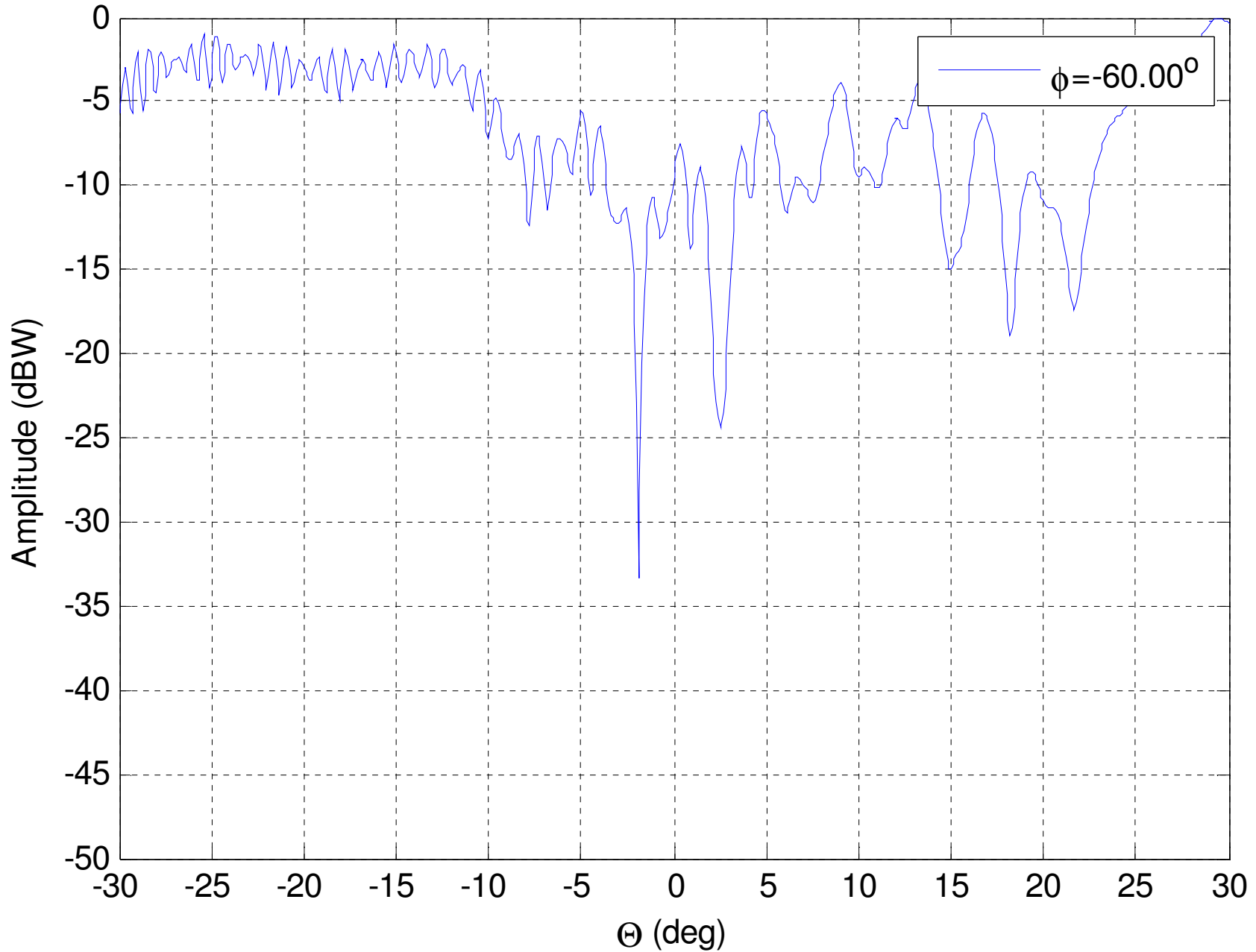
Spot Beam20, +X Axis Plots

- 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

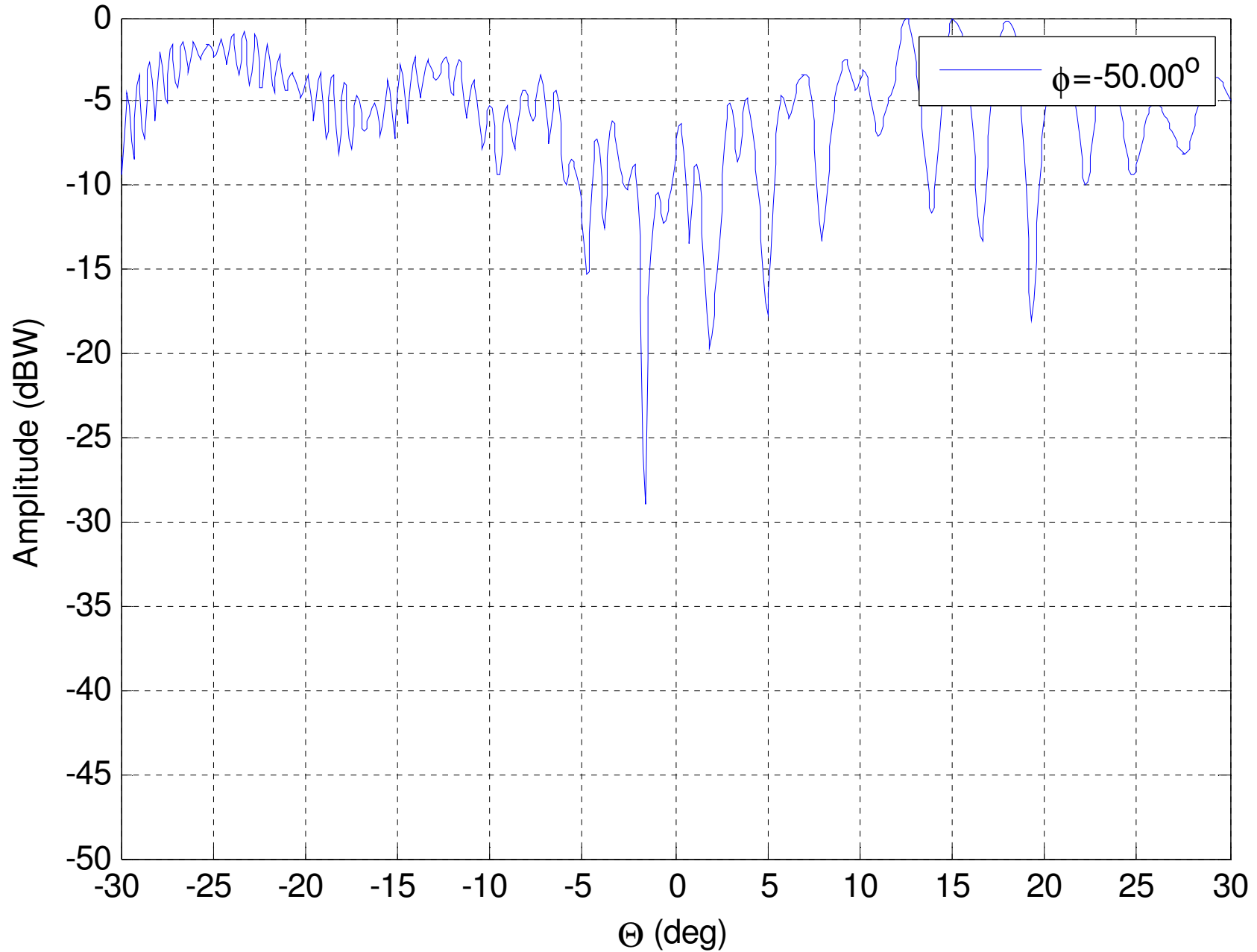
Normalized pattern cuts - farfield

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



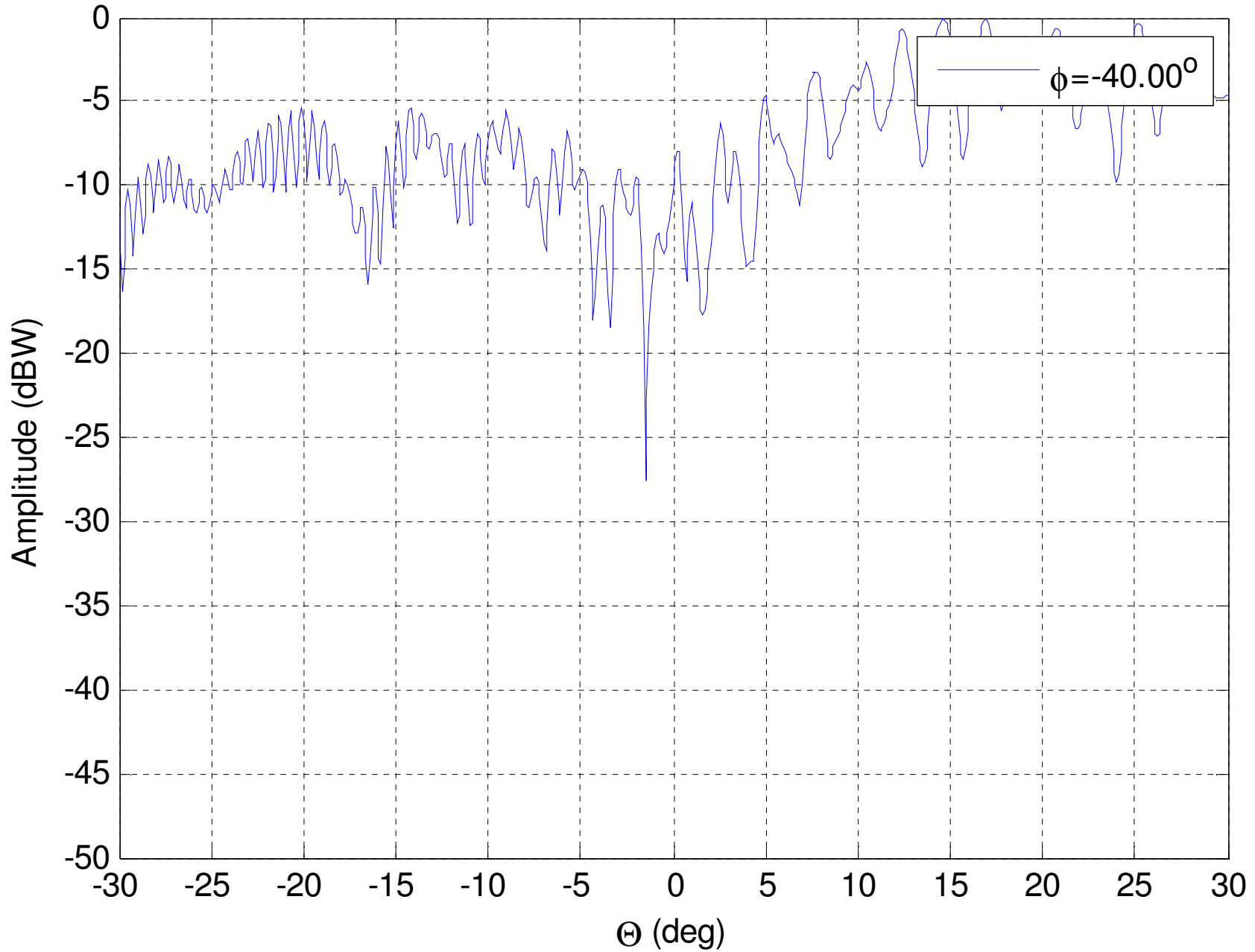
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -11.06 dBW, Date: 14-Dec-2011



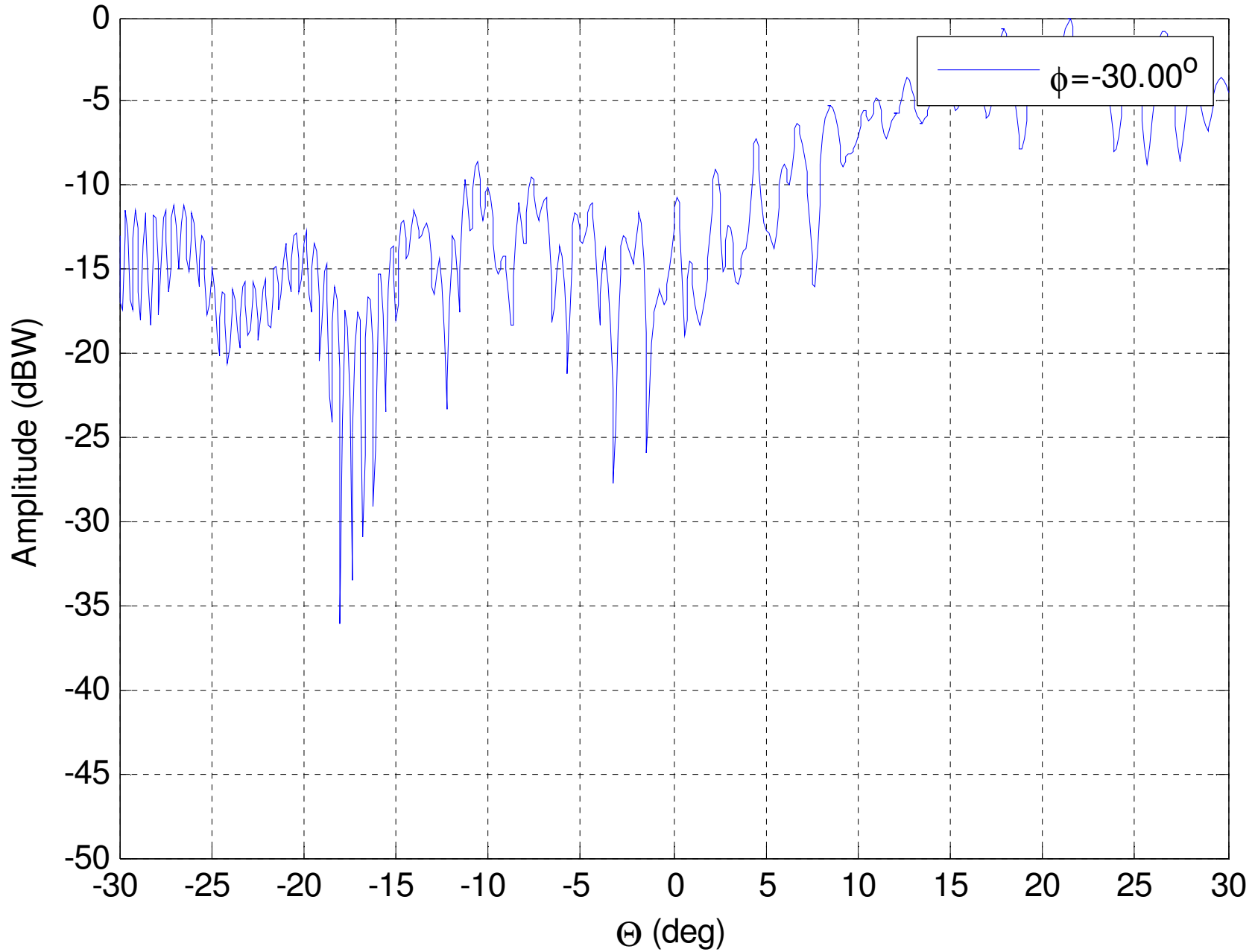
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -9.48 dBW, Date: 14-Dec-2011



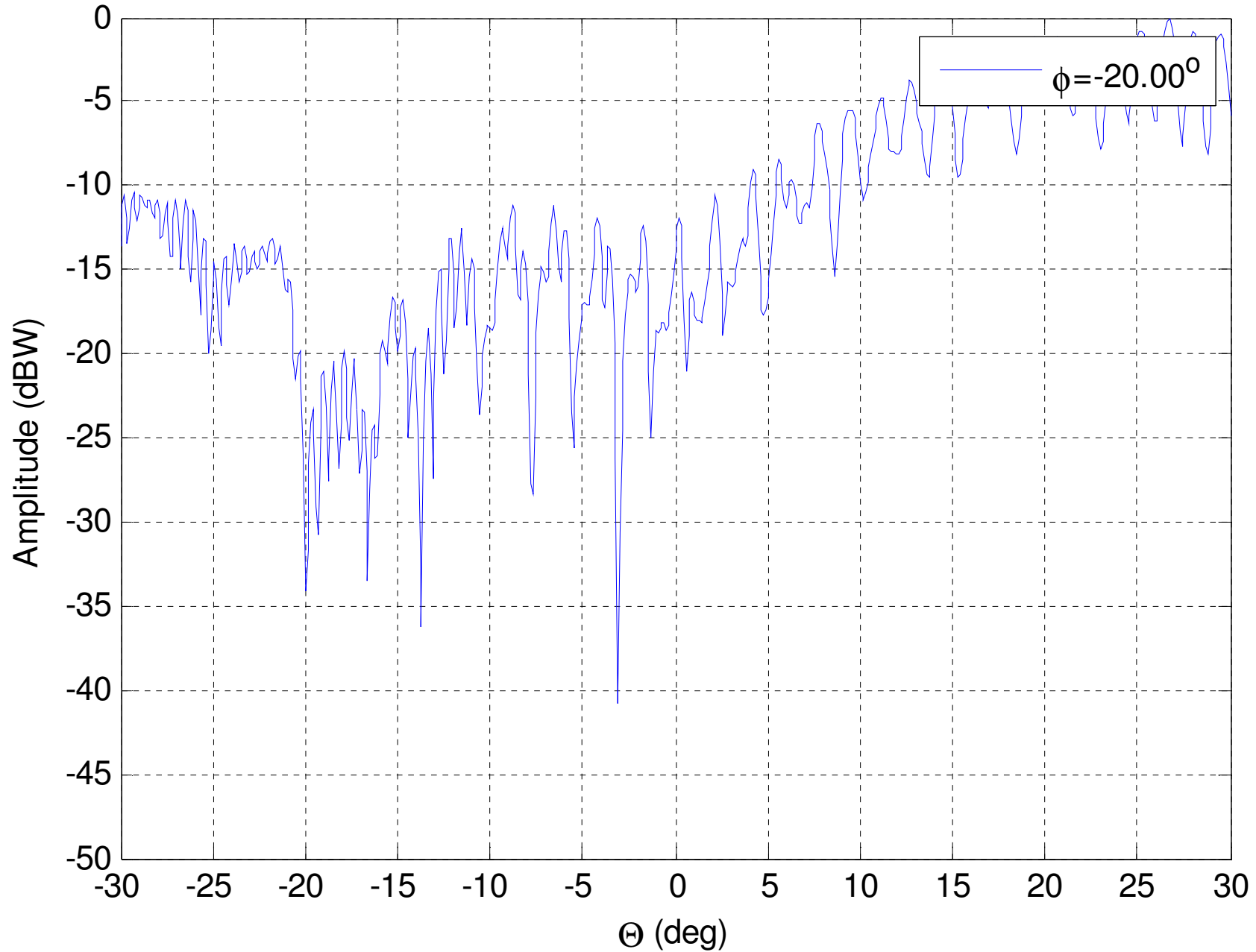
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.81 dBW, Date: 14-Dec-2011



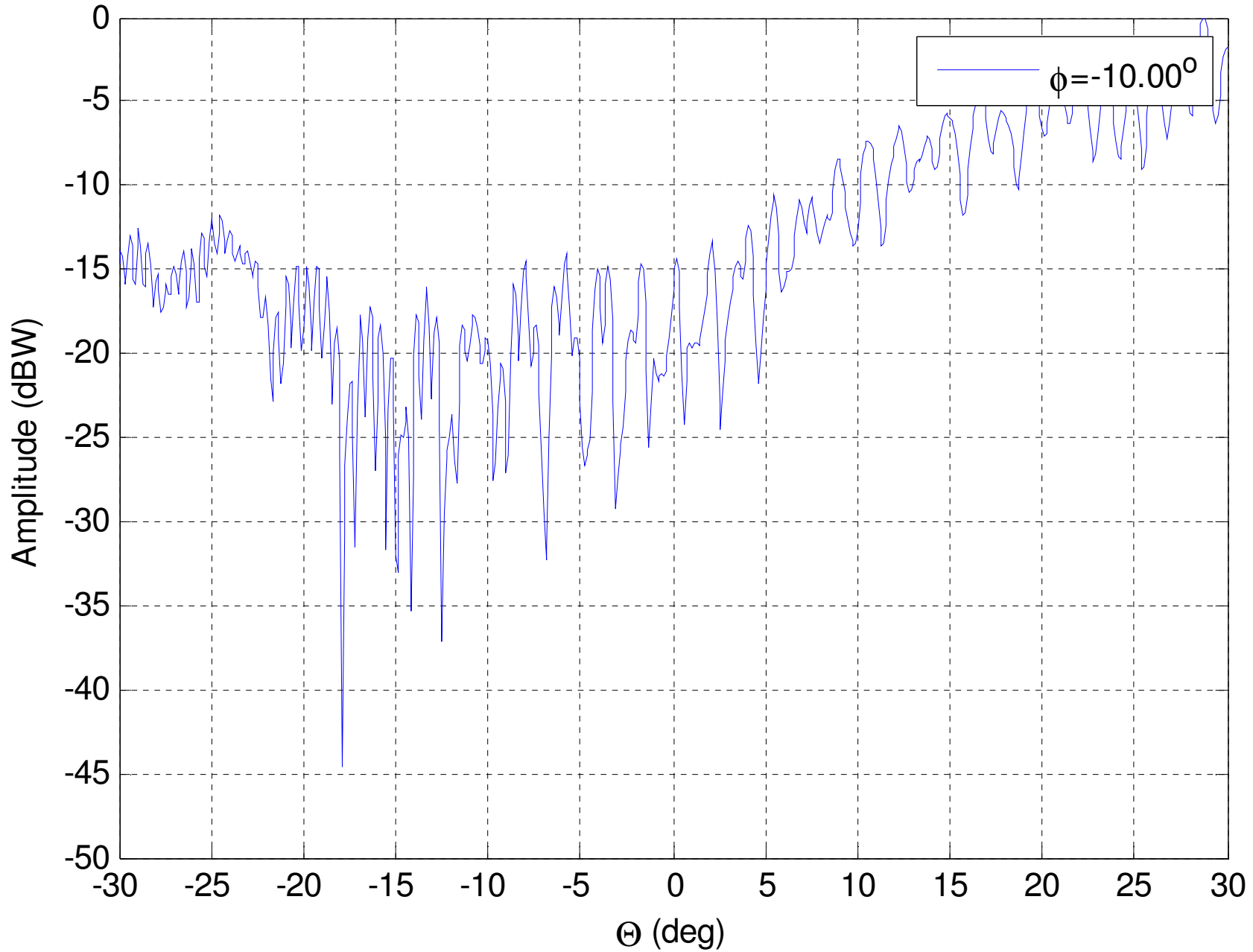
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -5.54 dBW, Date: 14-Dec-2011



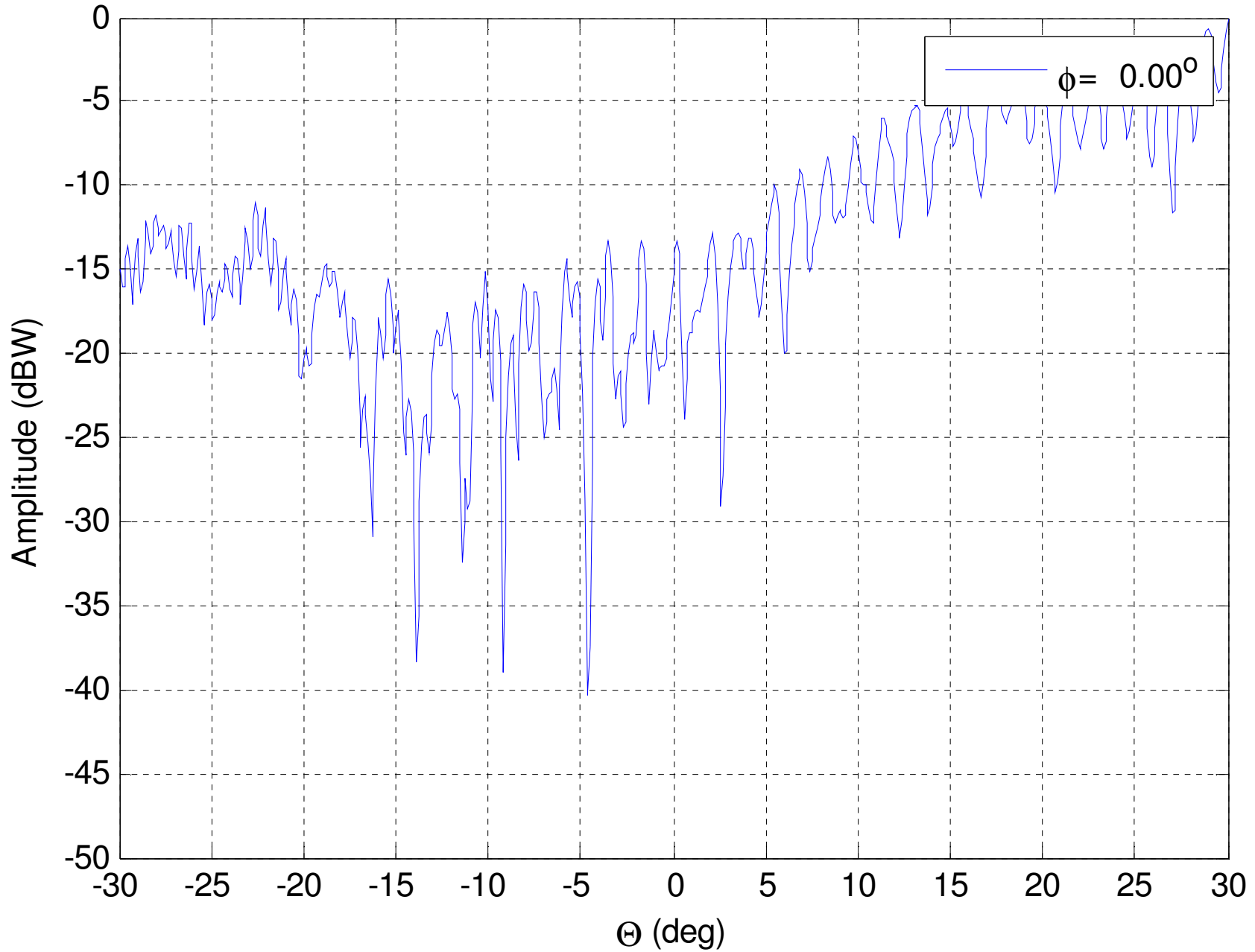
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -3.09 dBW, Date: 14-Dec-2011



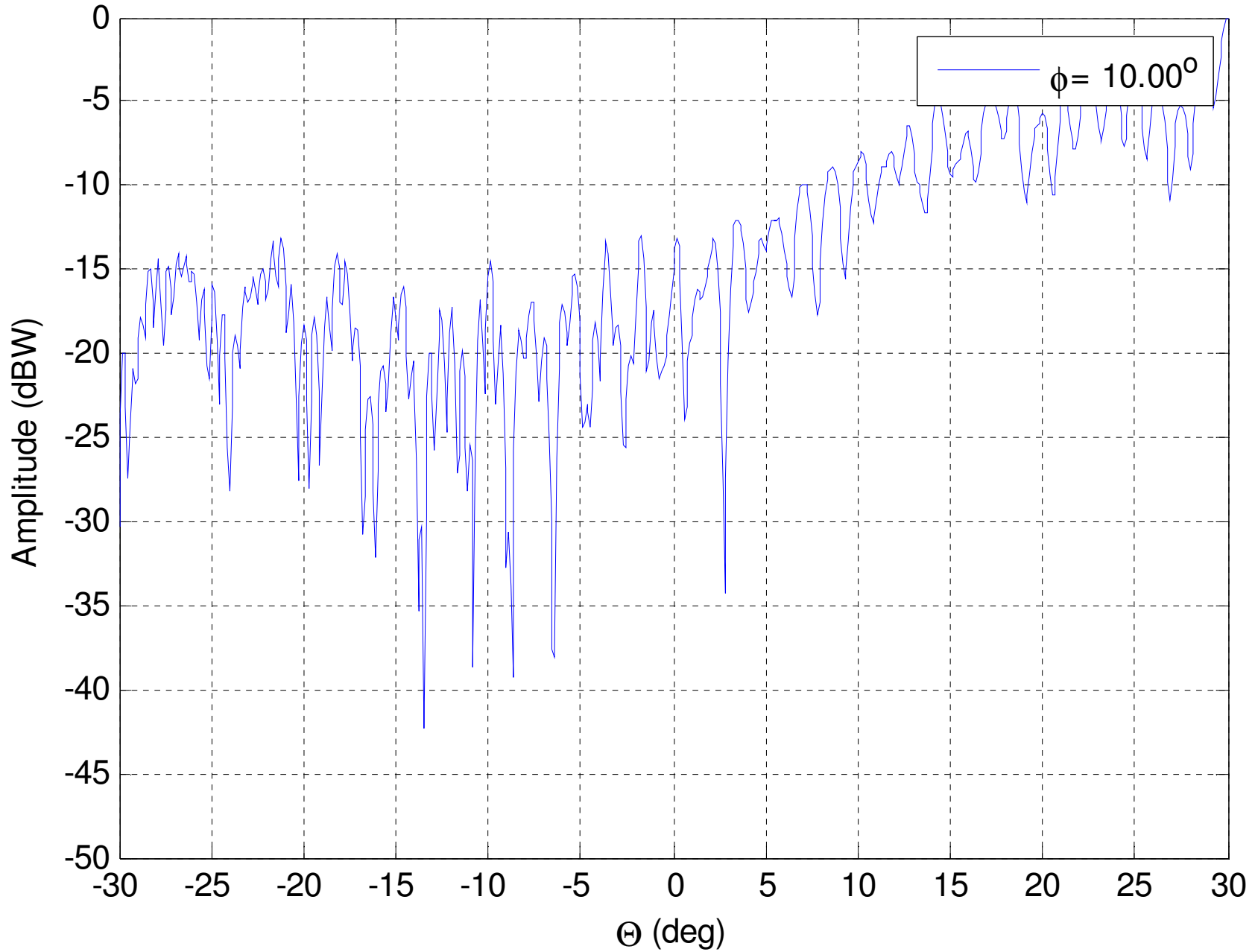
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -4.17 dBW, Date: 14-Dec-2011



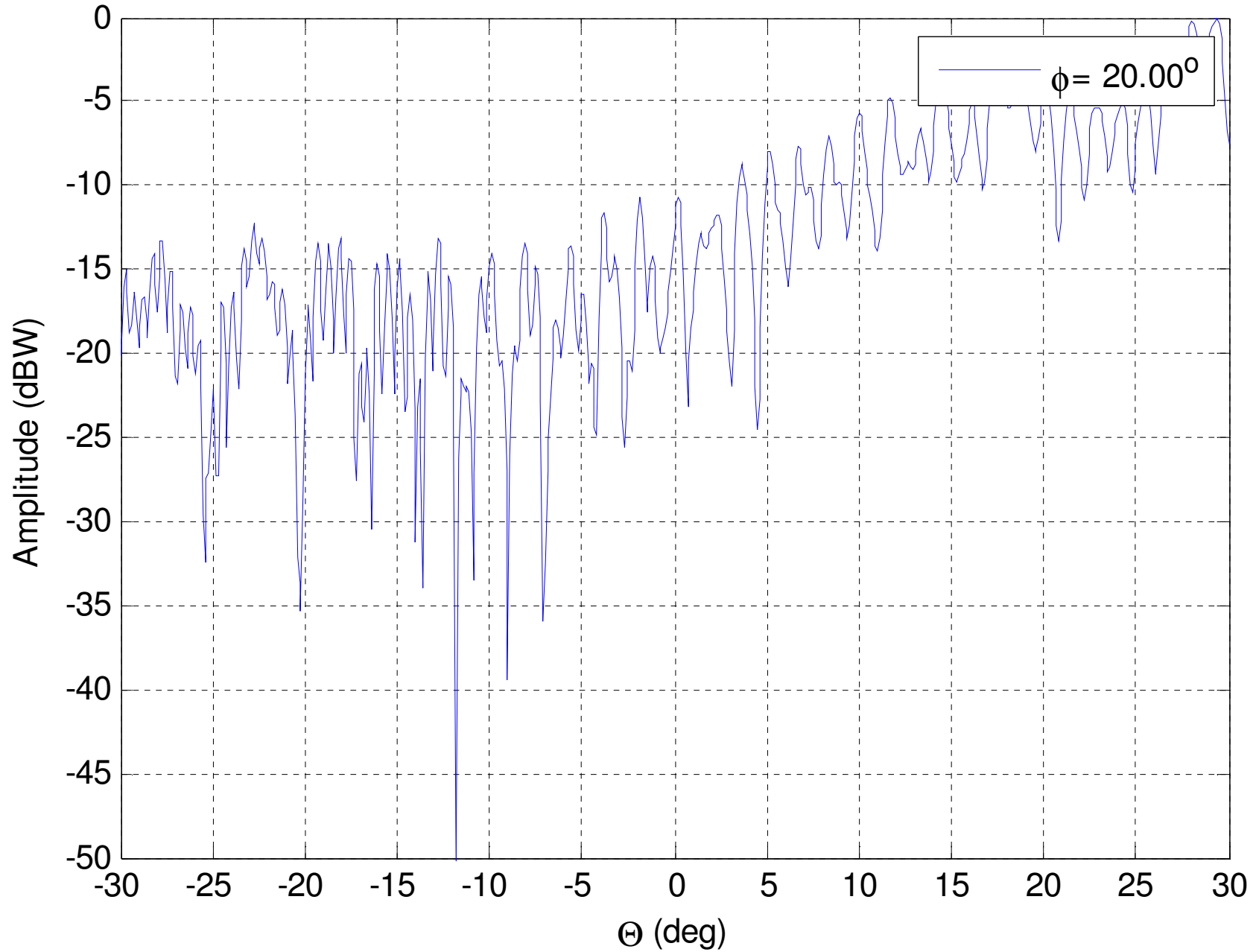
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -4.41 dBW, Date: 14-Dec-2011



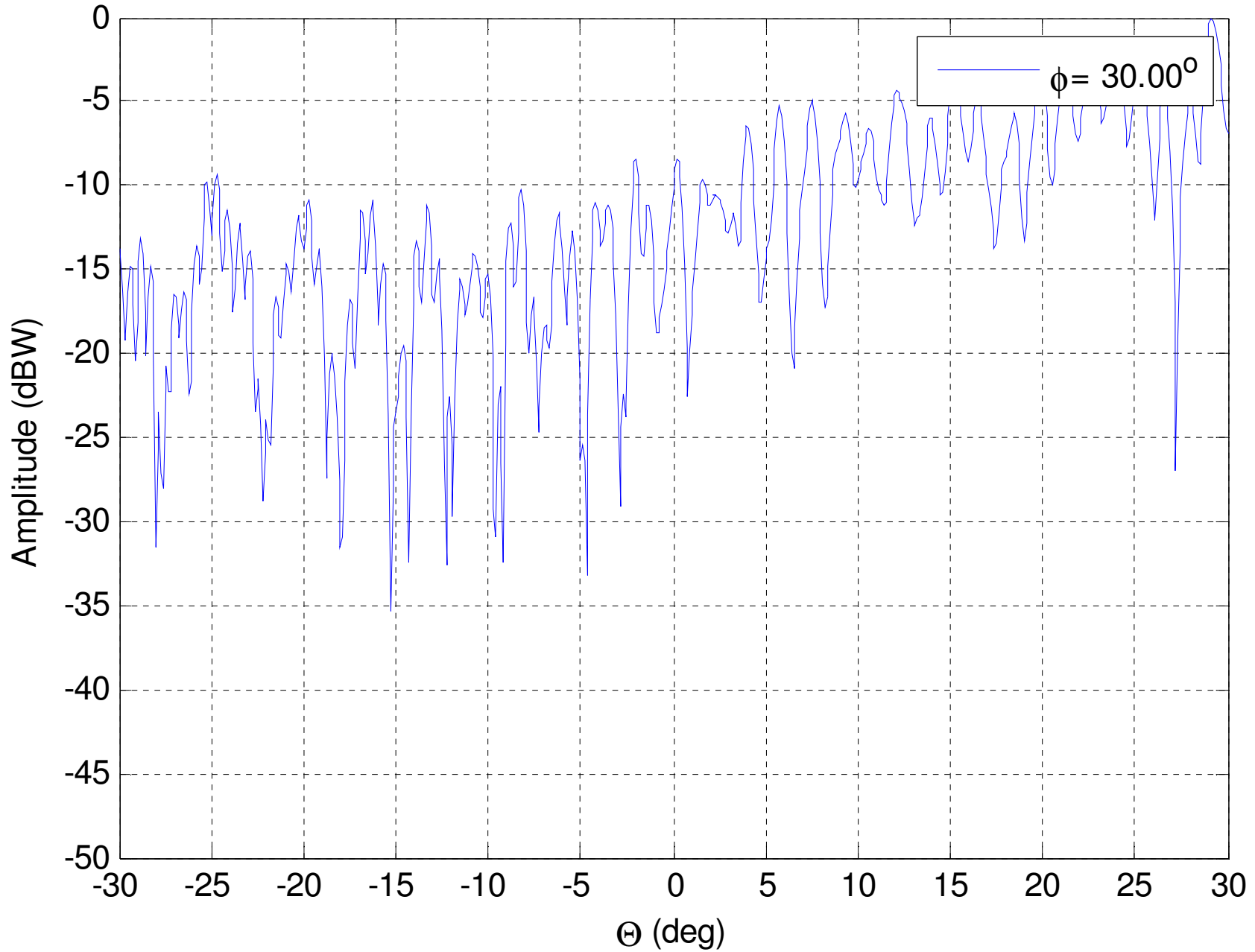
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -6.93 dBW, Date: 14-Dec-2011



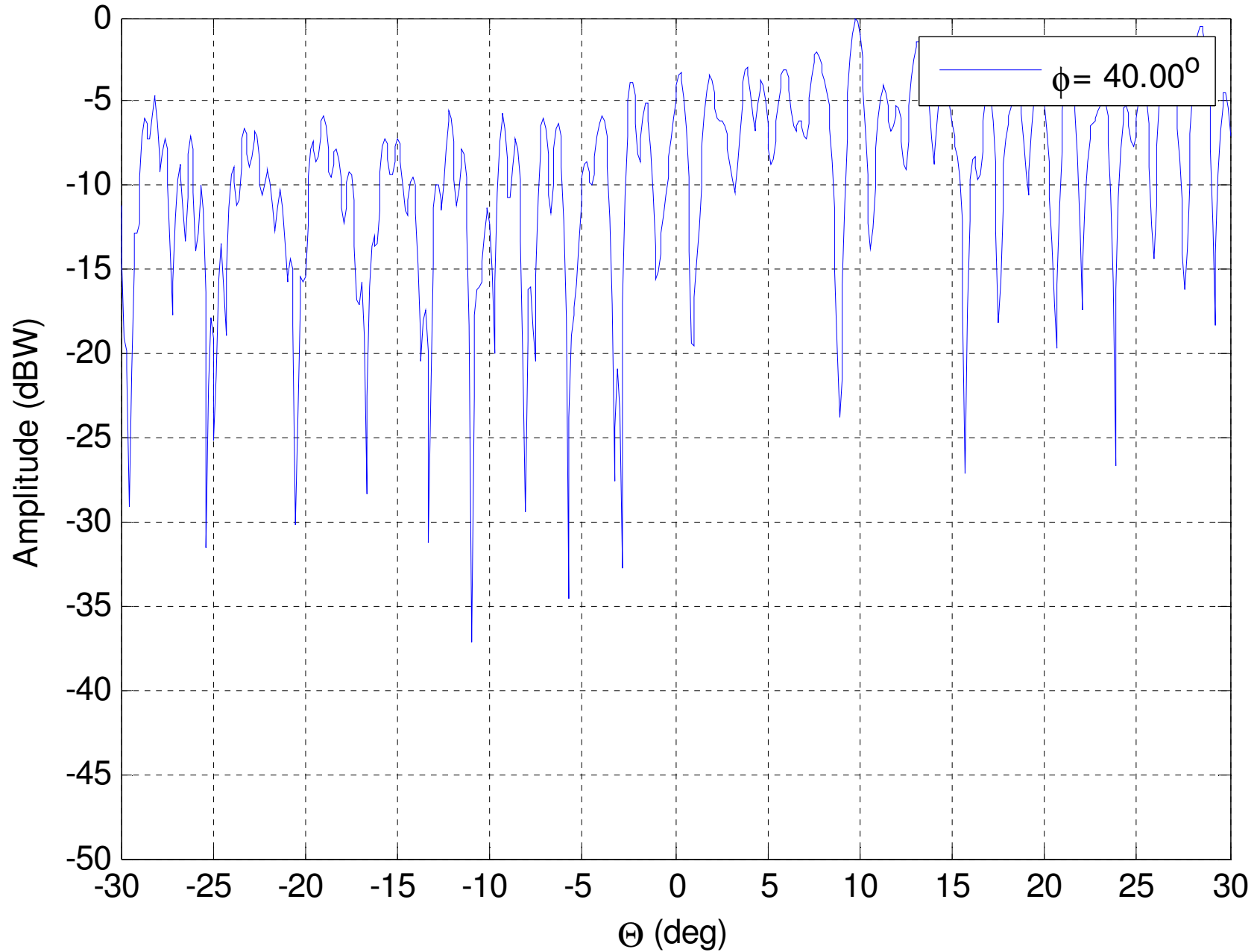
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -9.25 dBW, Date: 14-Dec-2011



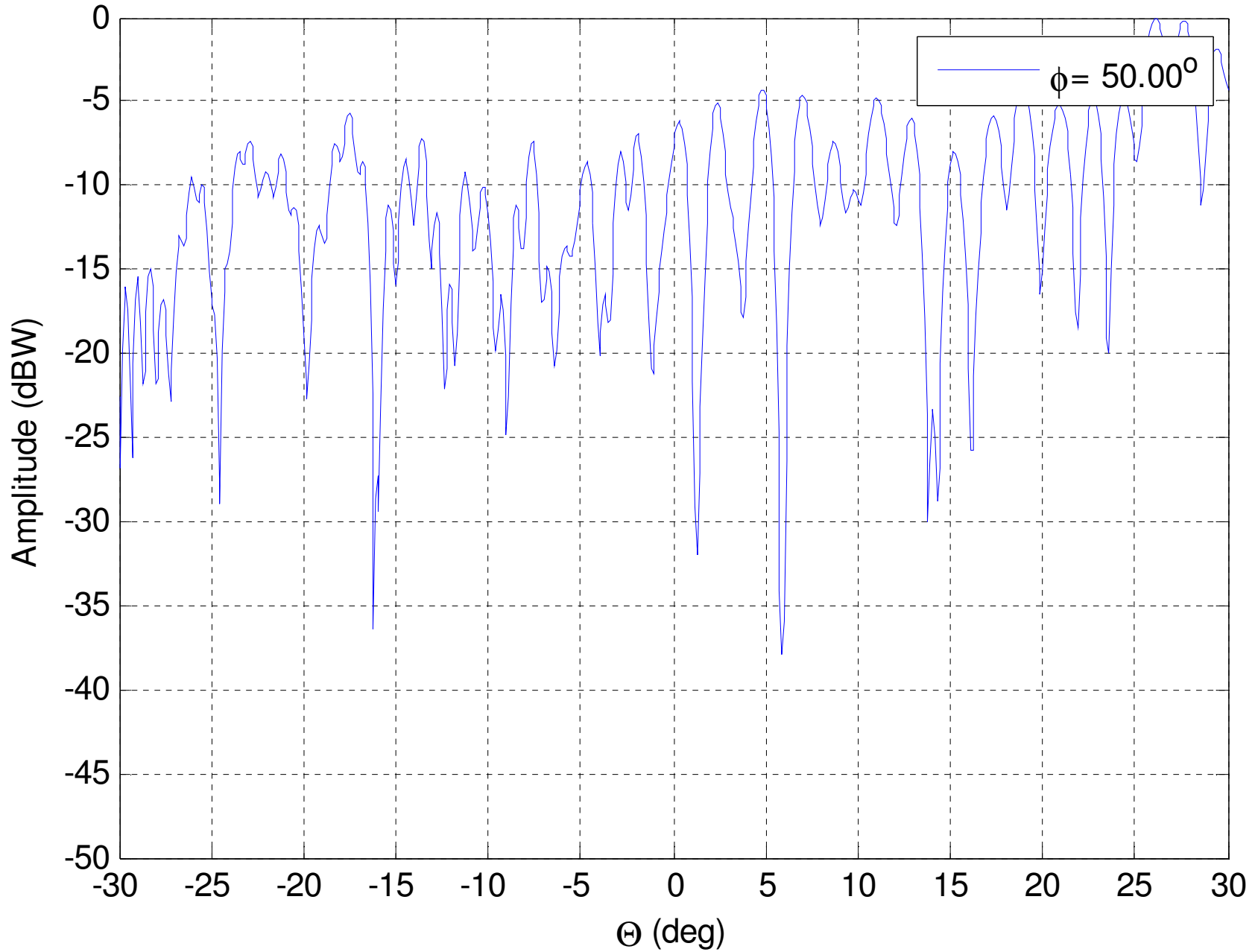
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -14.44 dBW, Date: 14-Dec-2011



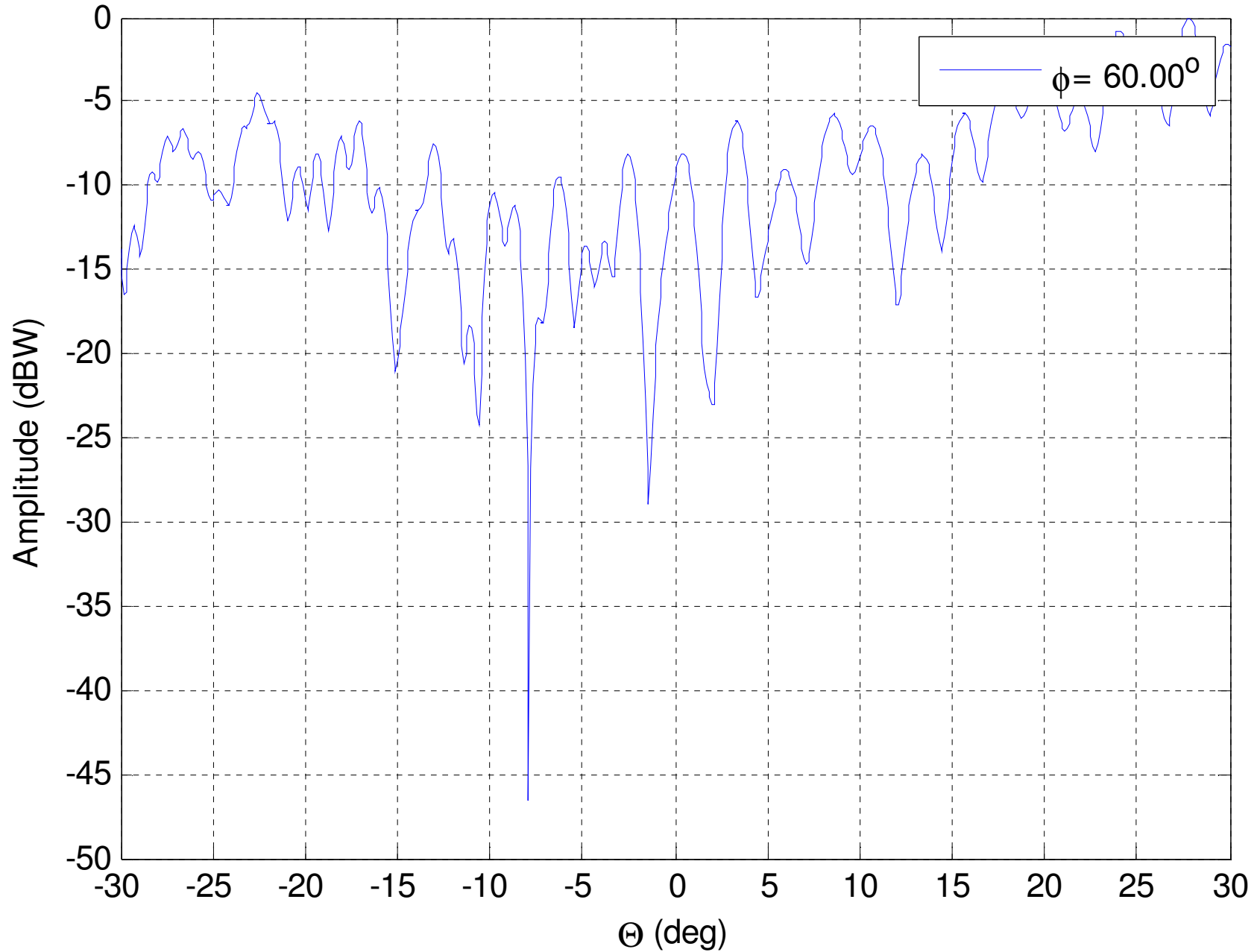
Normalized pattern cuts - farfield

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



Normalized pattern cuts - farfield

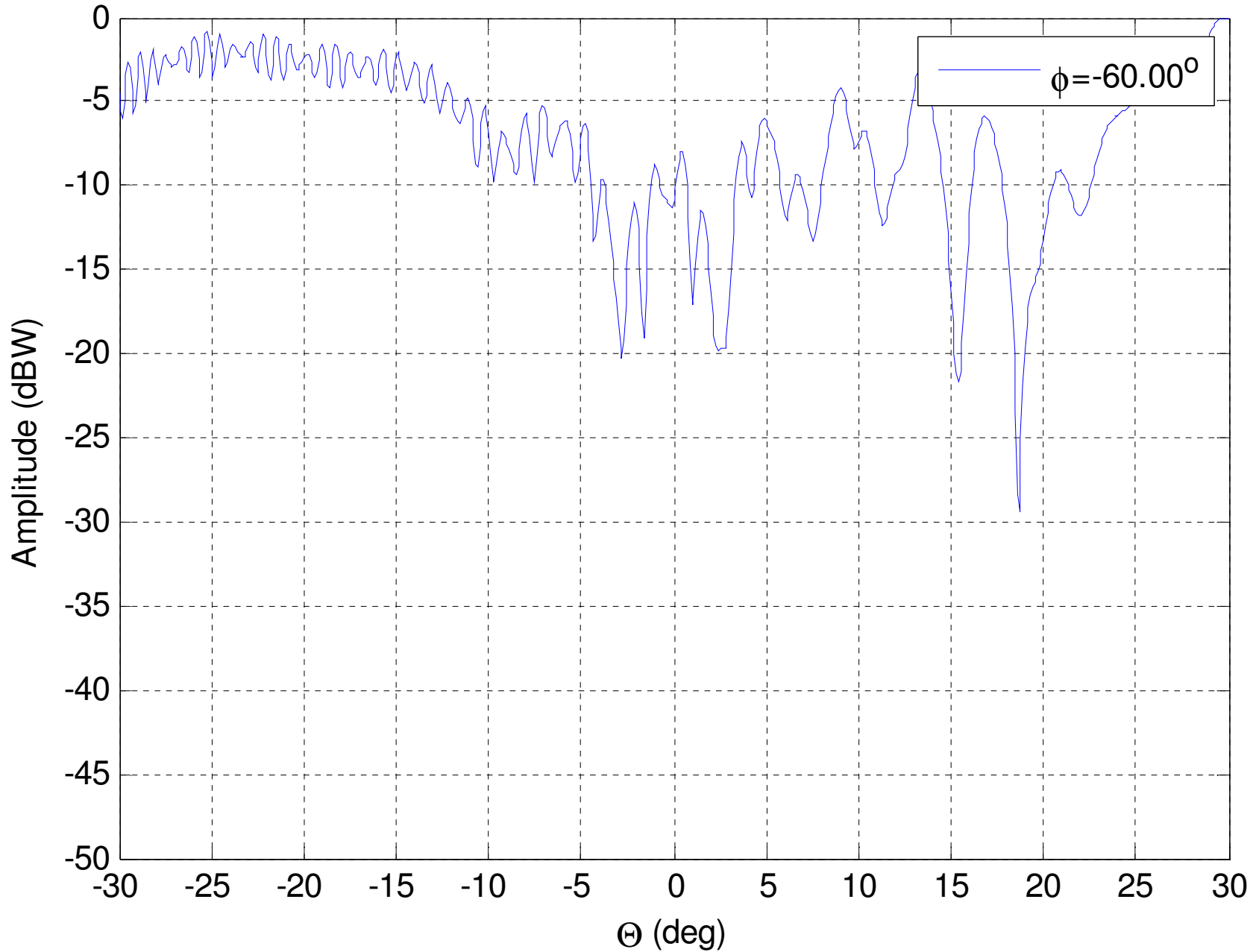
Input file: tx-17.3-rhcp-60.cut, Peak: -9.90 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

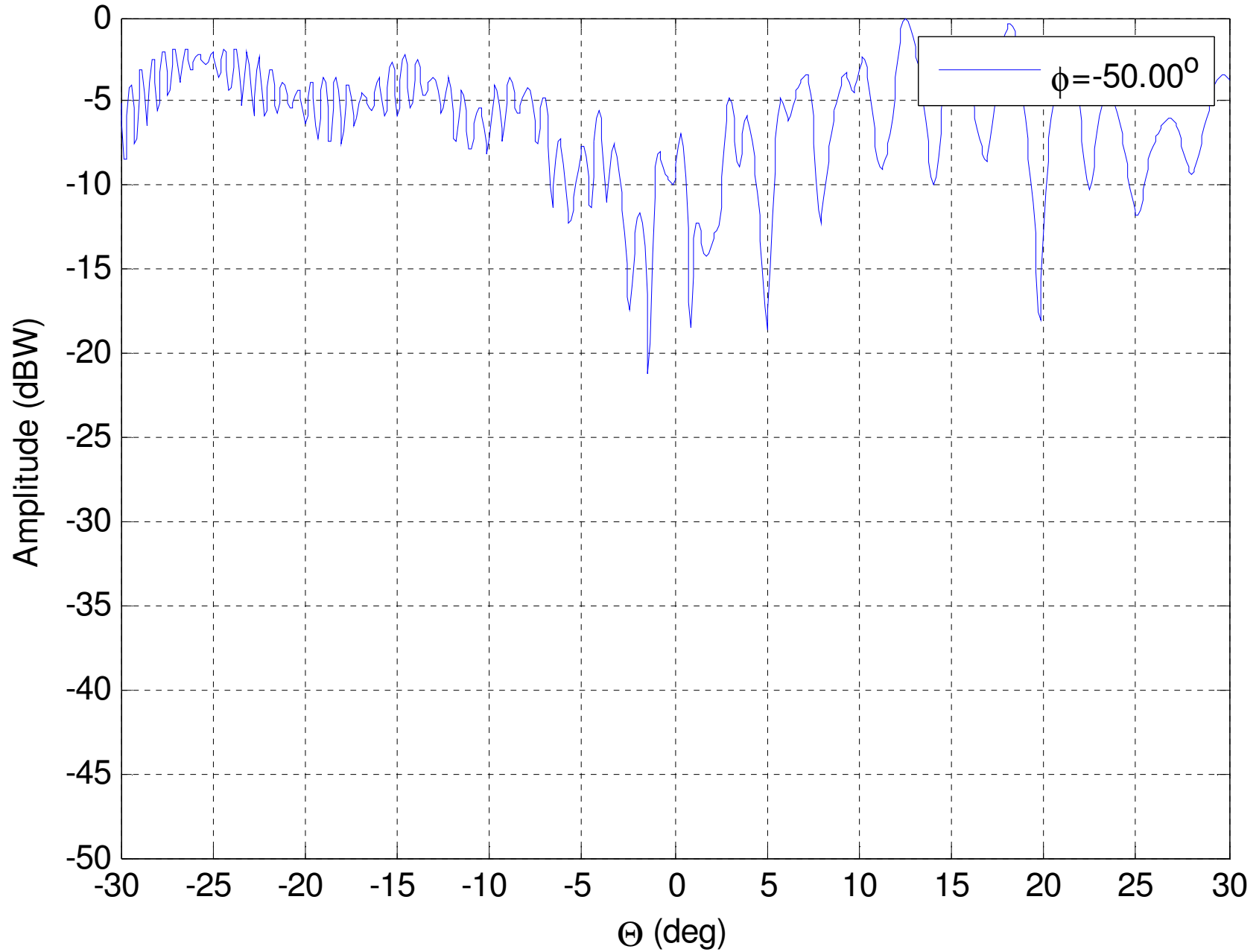
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.54 dBW, Date: 14-Dec-2011



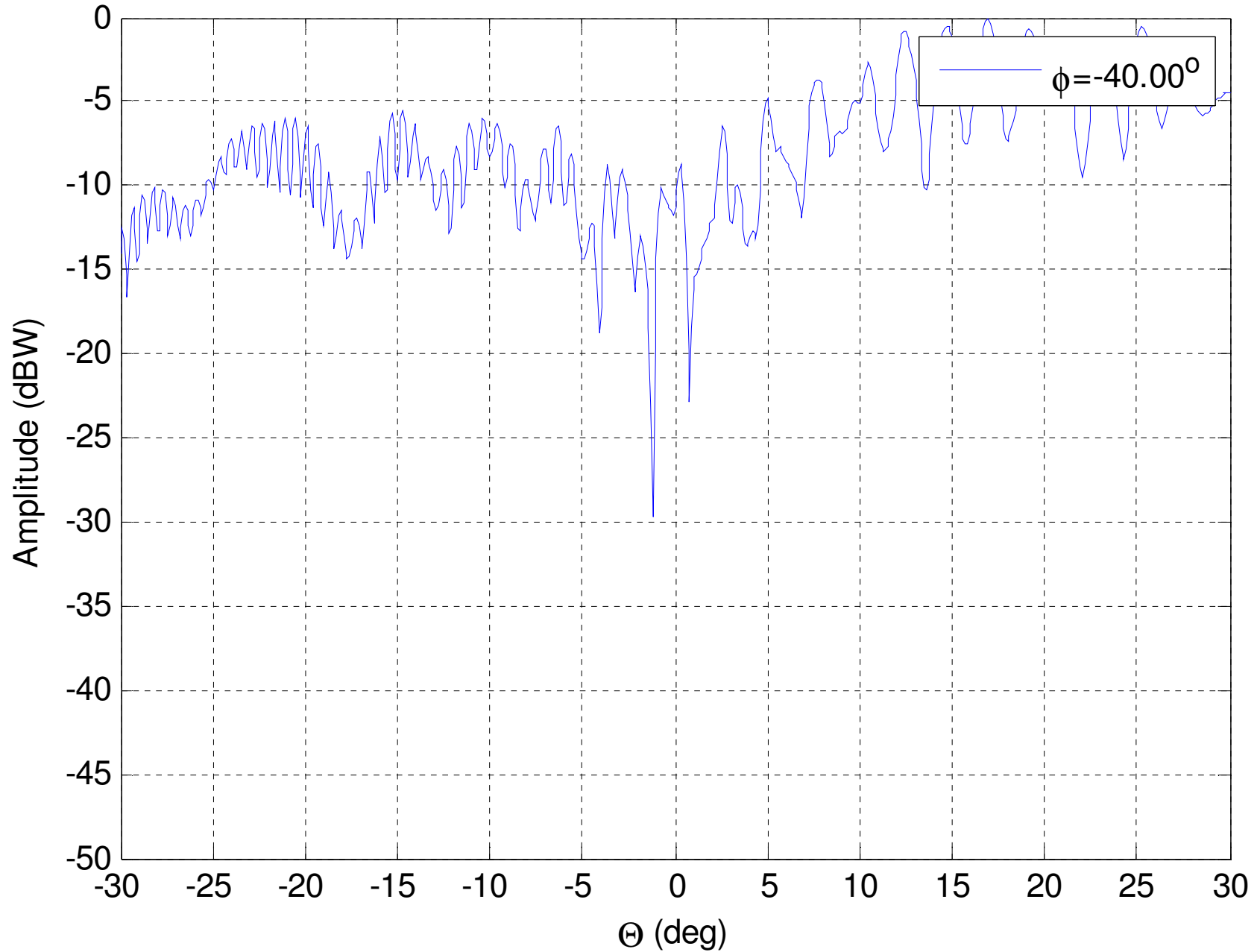
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -10.81 dBW, Date: 14-Dec-2011



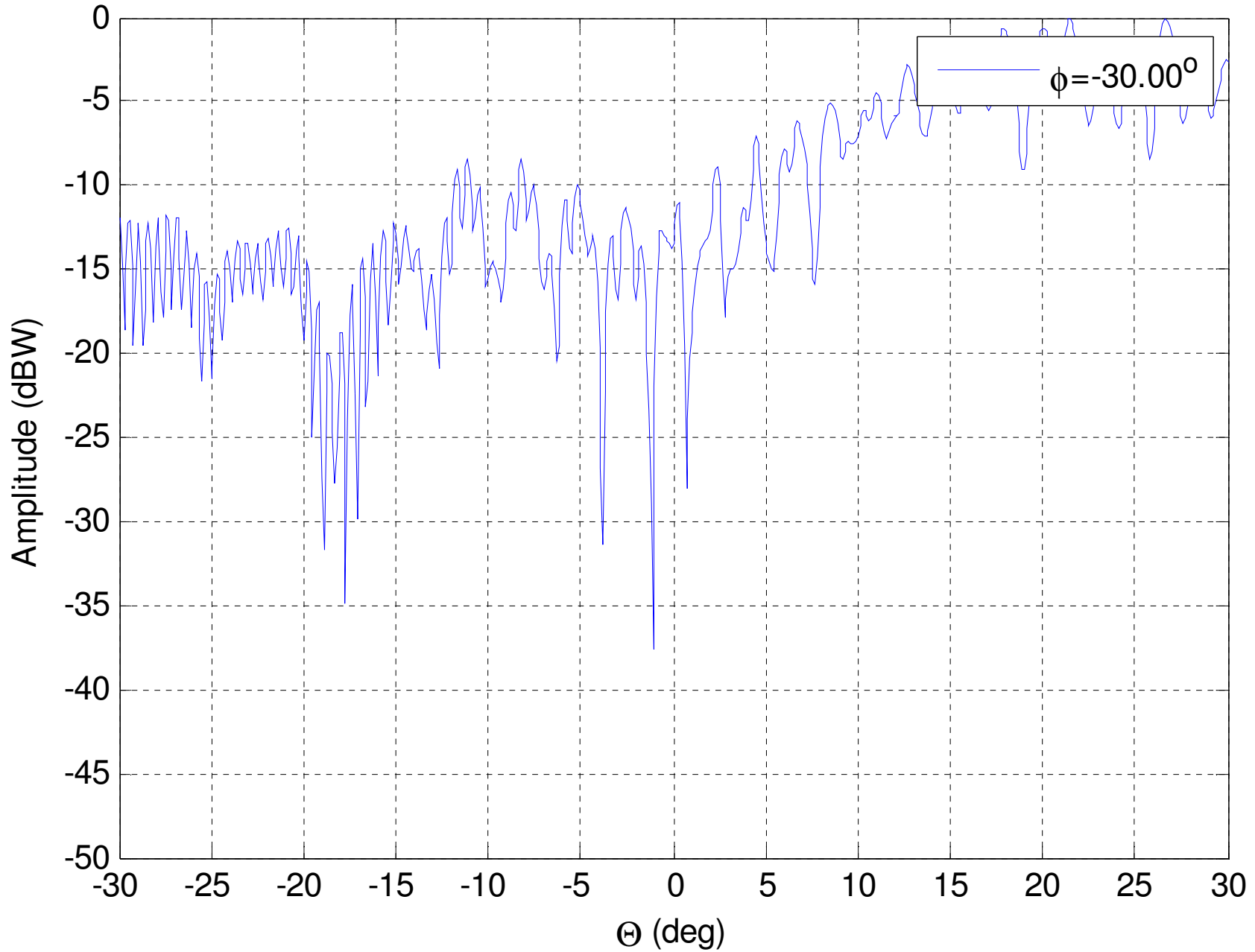
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.09 dBW, Date: 14-Dec-2011



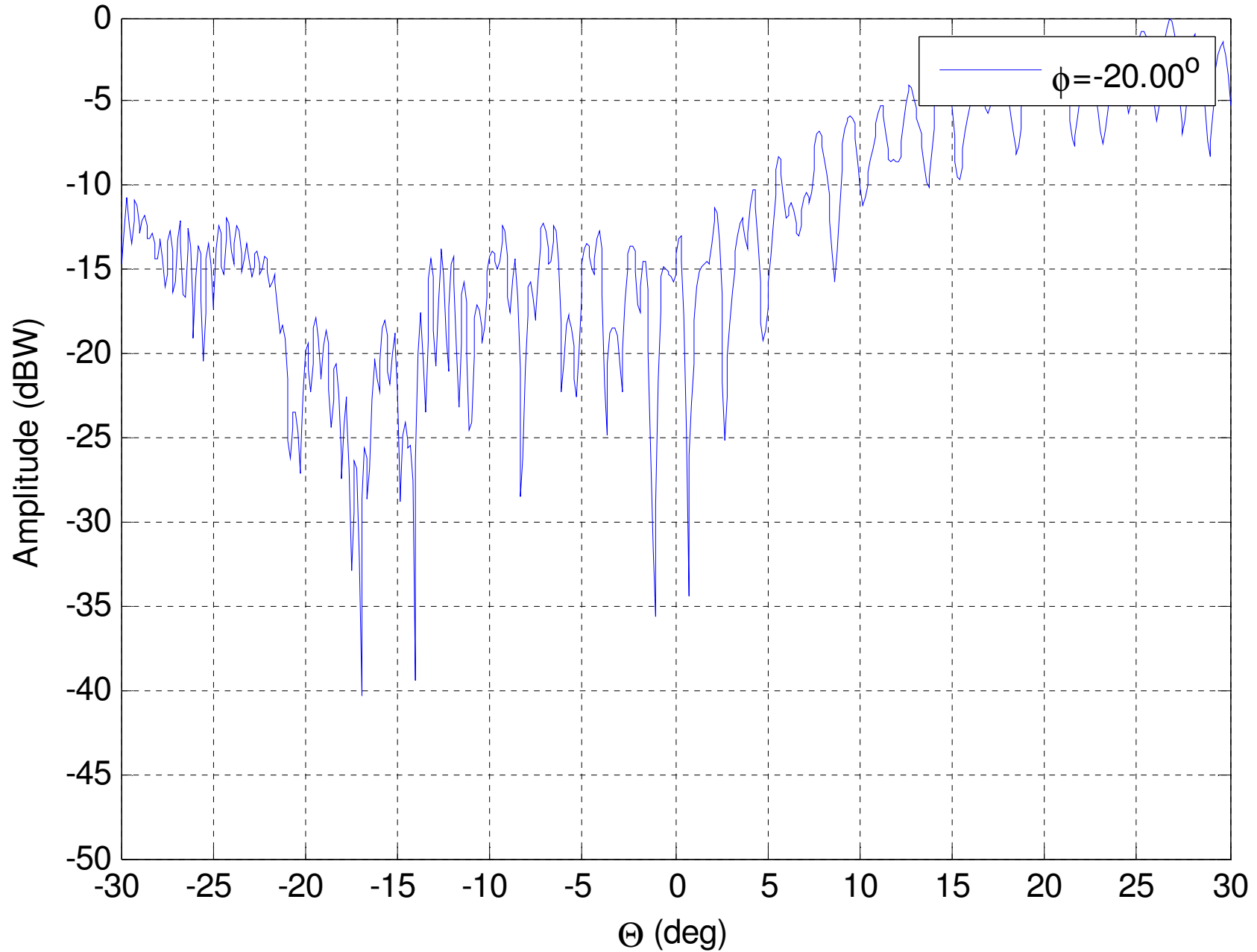
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -7.04 dBW, Date: 14-Dec-2011



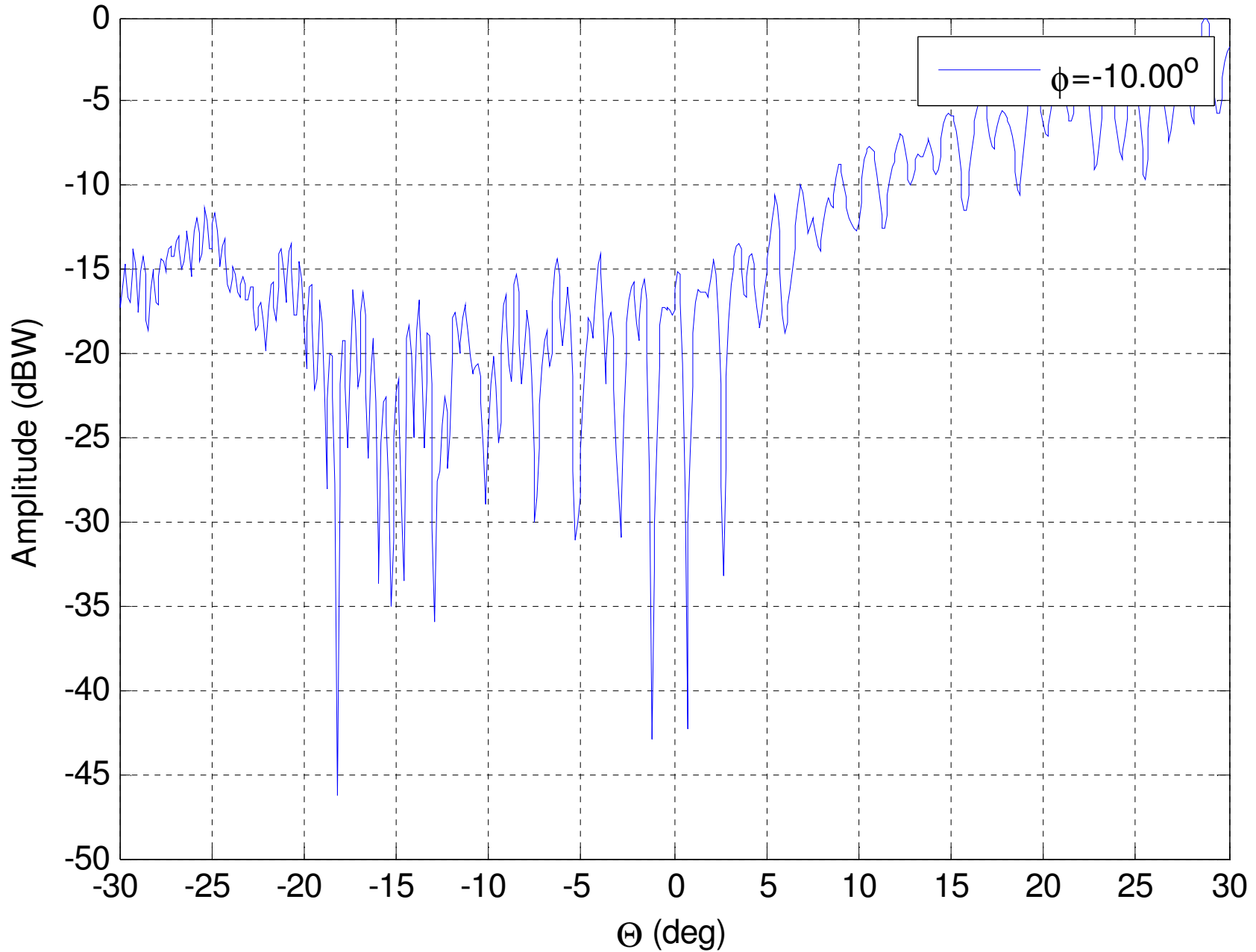
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -5.13 dBW, Date: 14-Dec-2011



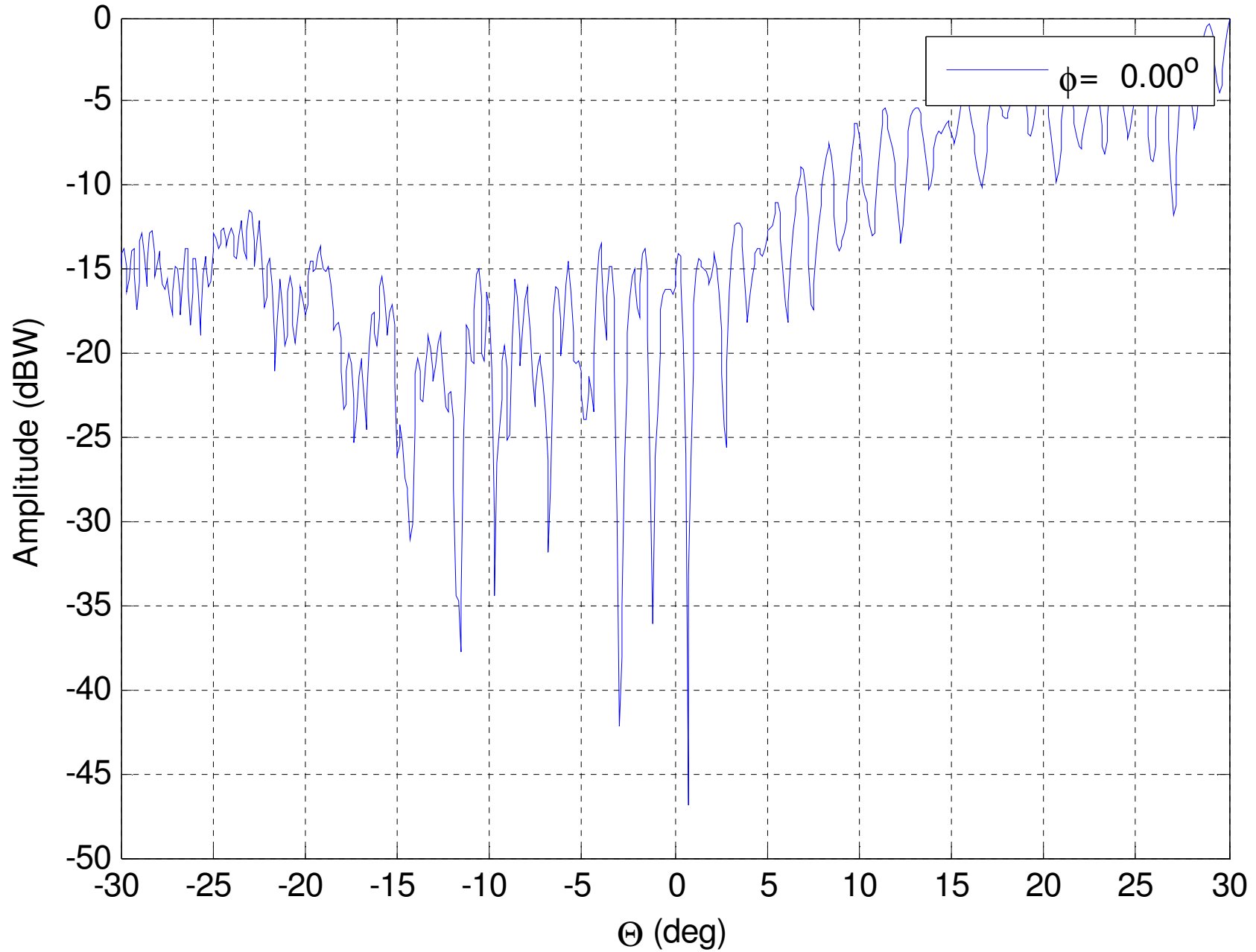
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -3.08 dBW, Date: 14-Dec-2011



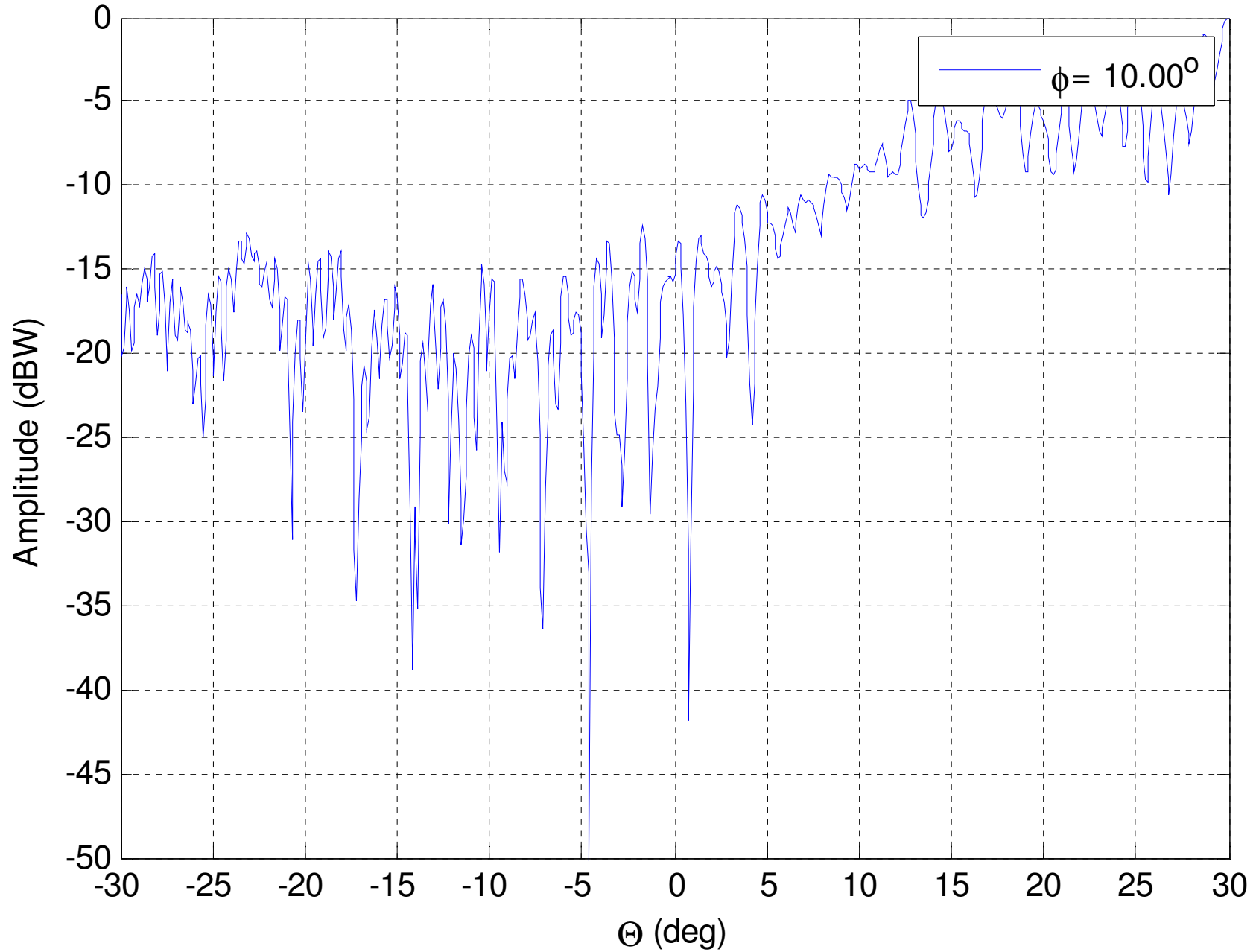
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -4.34 dBW, Date: 14-Dec-2011



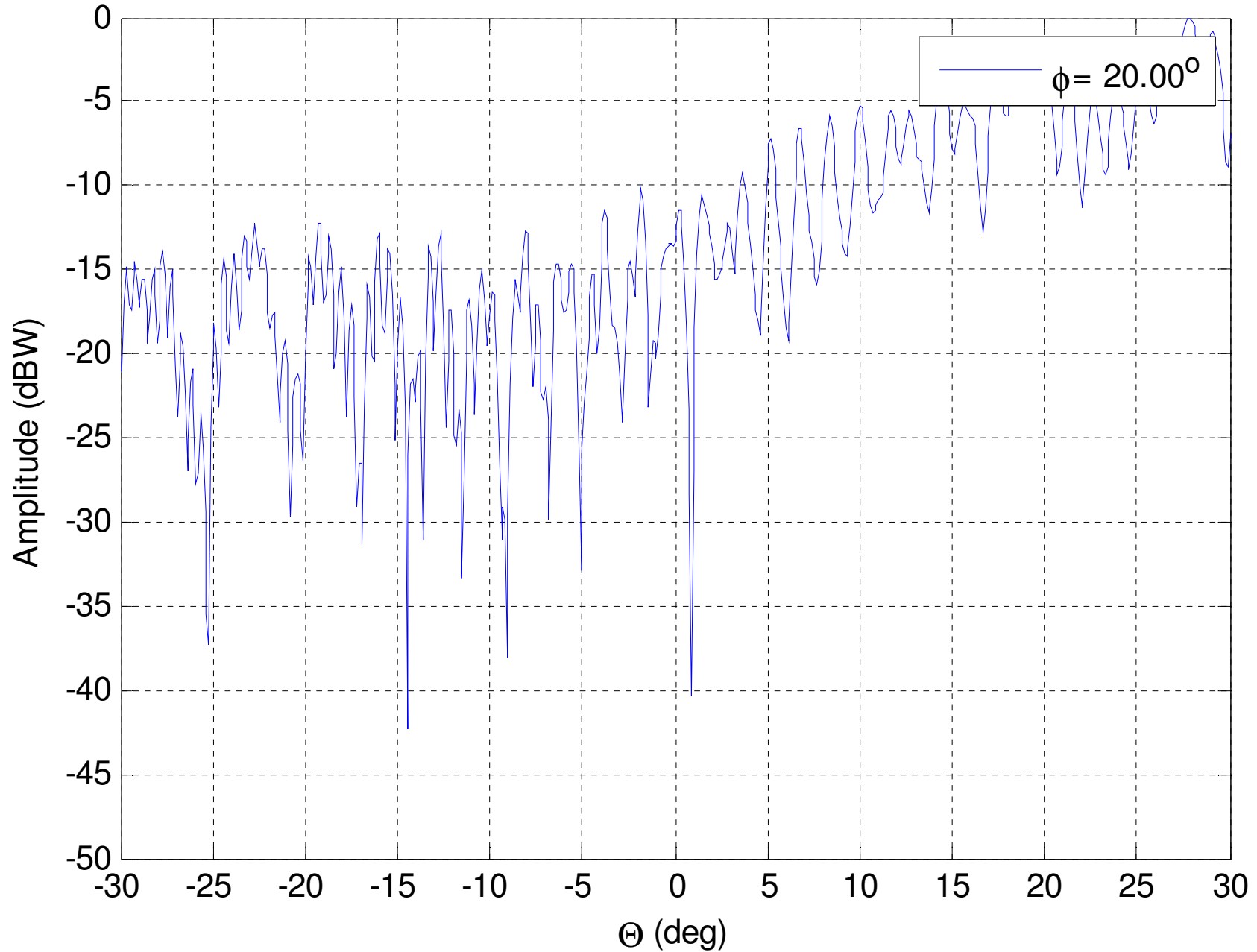
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.11 dBW, Date: 14-Dec-2011



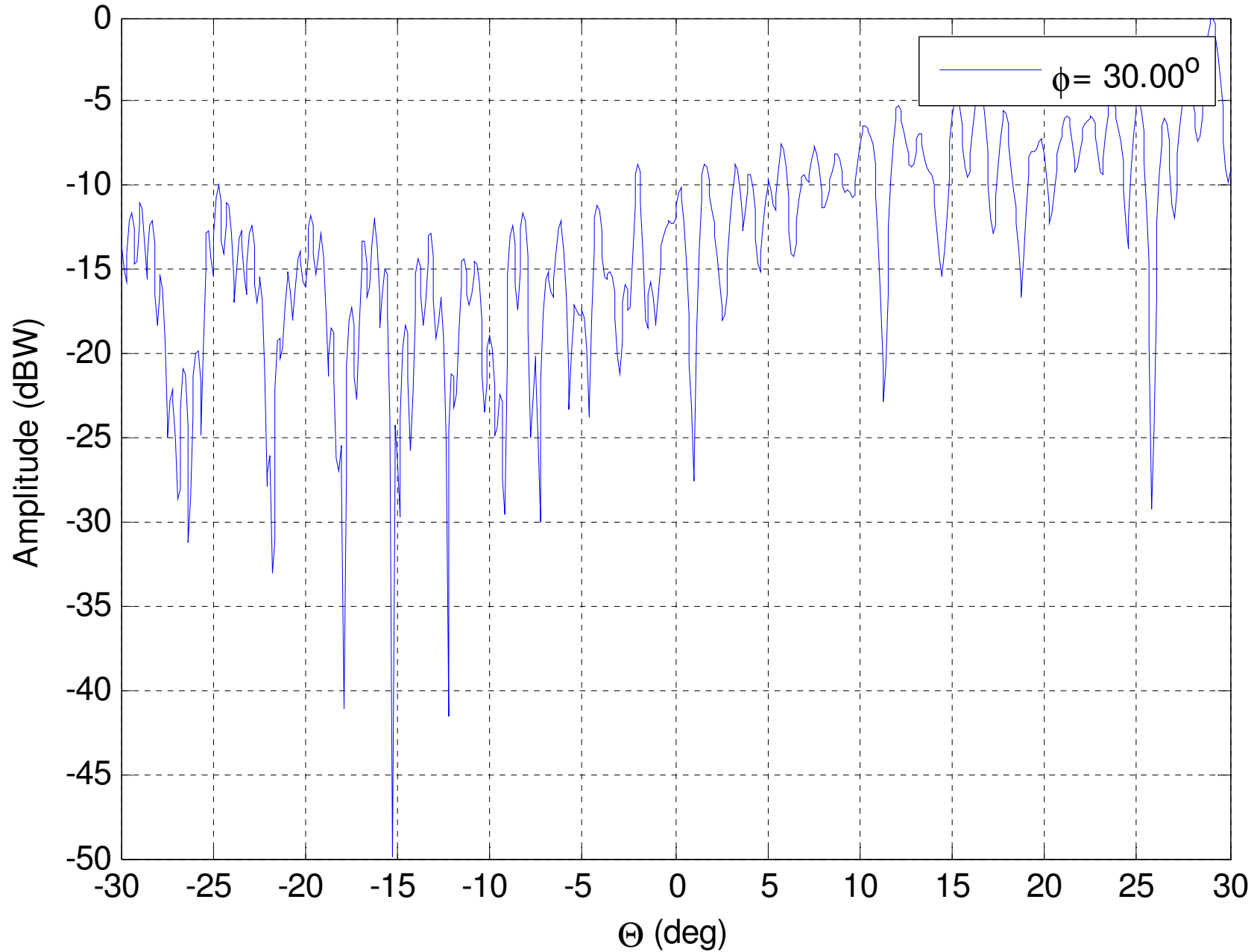
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.16 dBW, Date: 14-Dec-2011



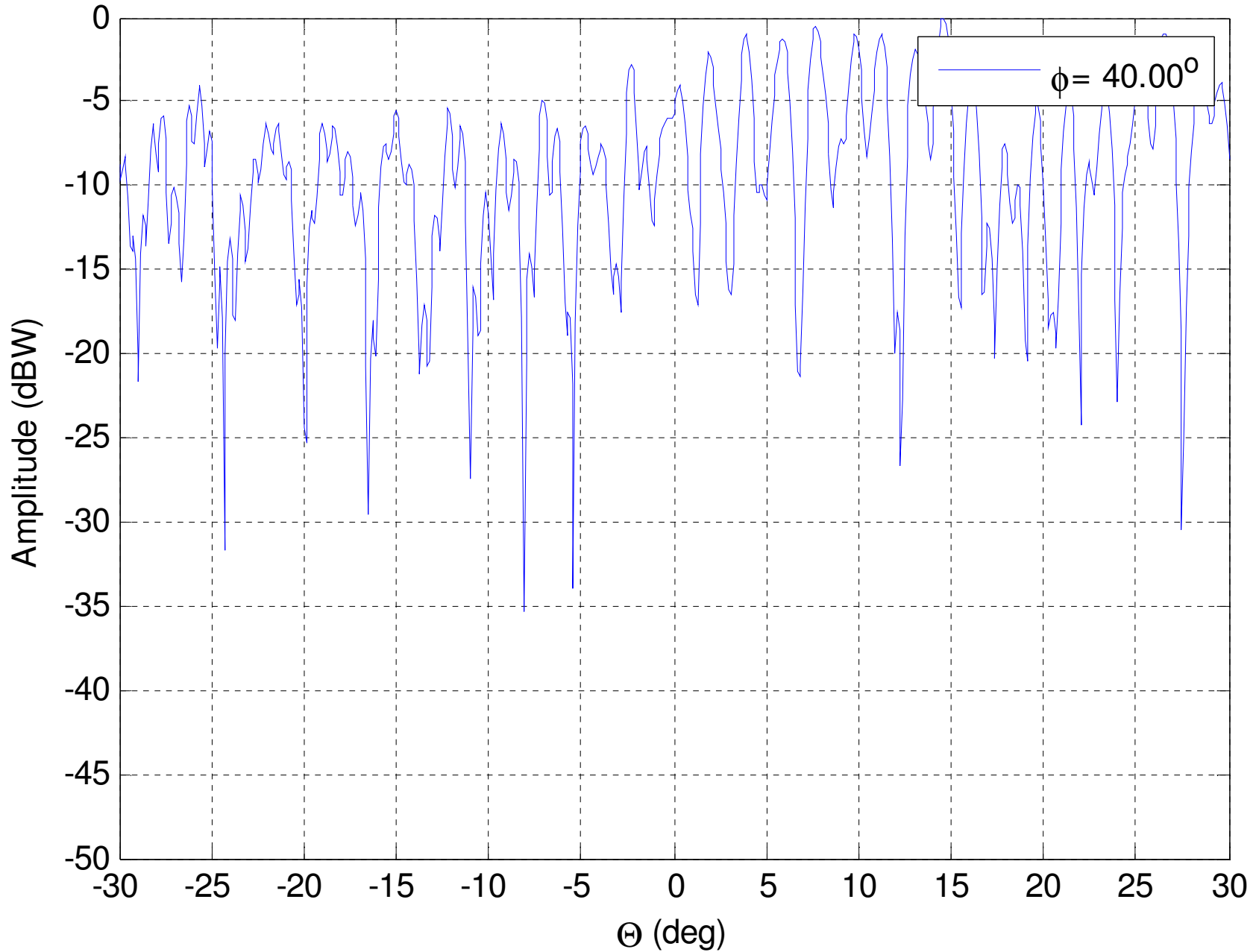
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -8.52 dBW, Date: 14-Dec-2011



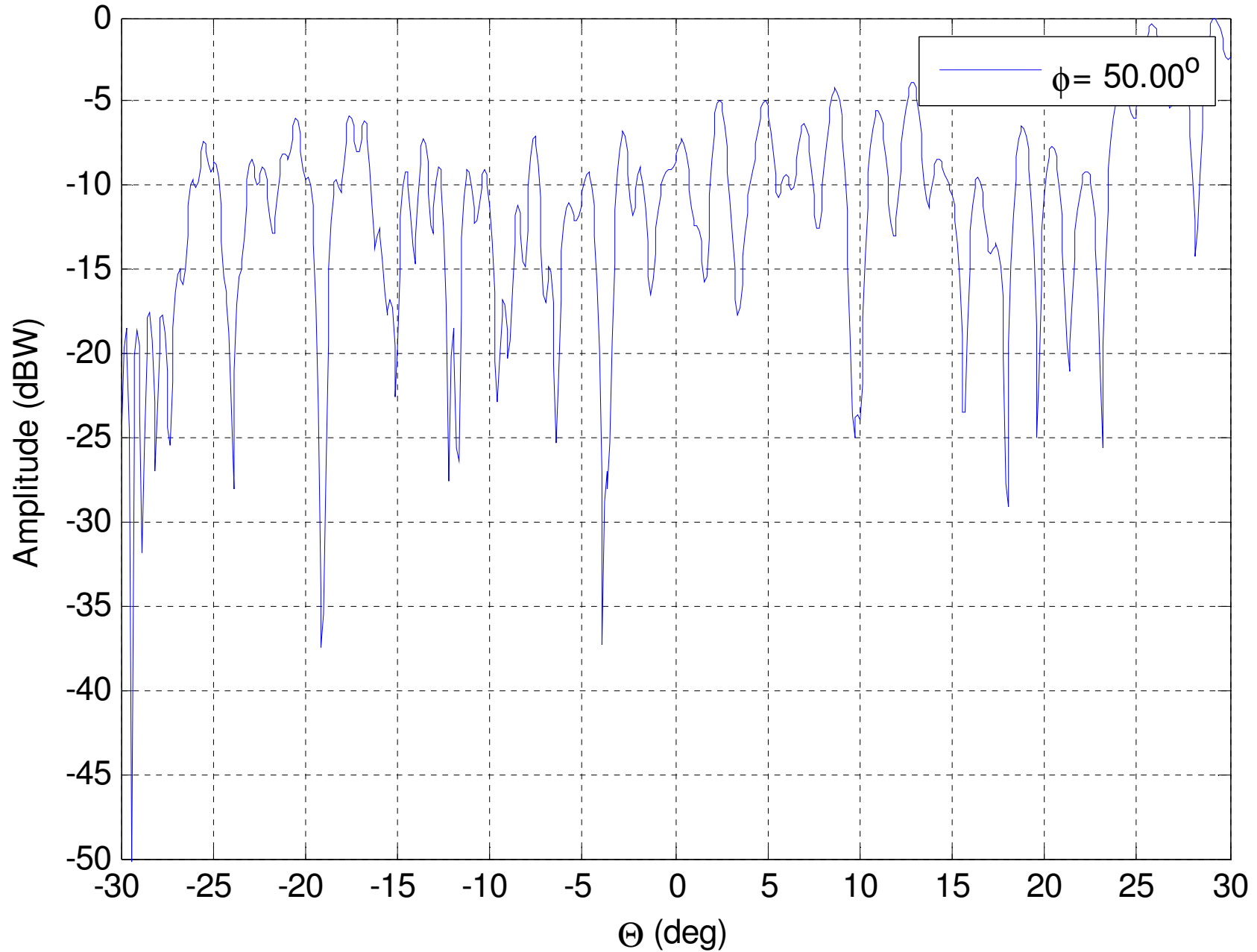
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -14.79 dBW, Date: 14-Dec-2011



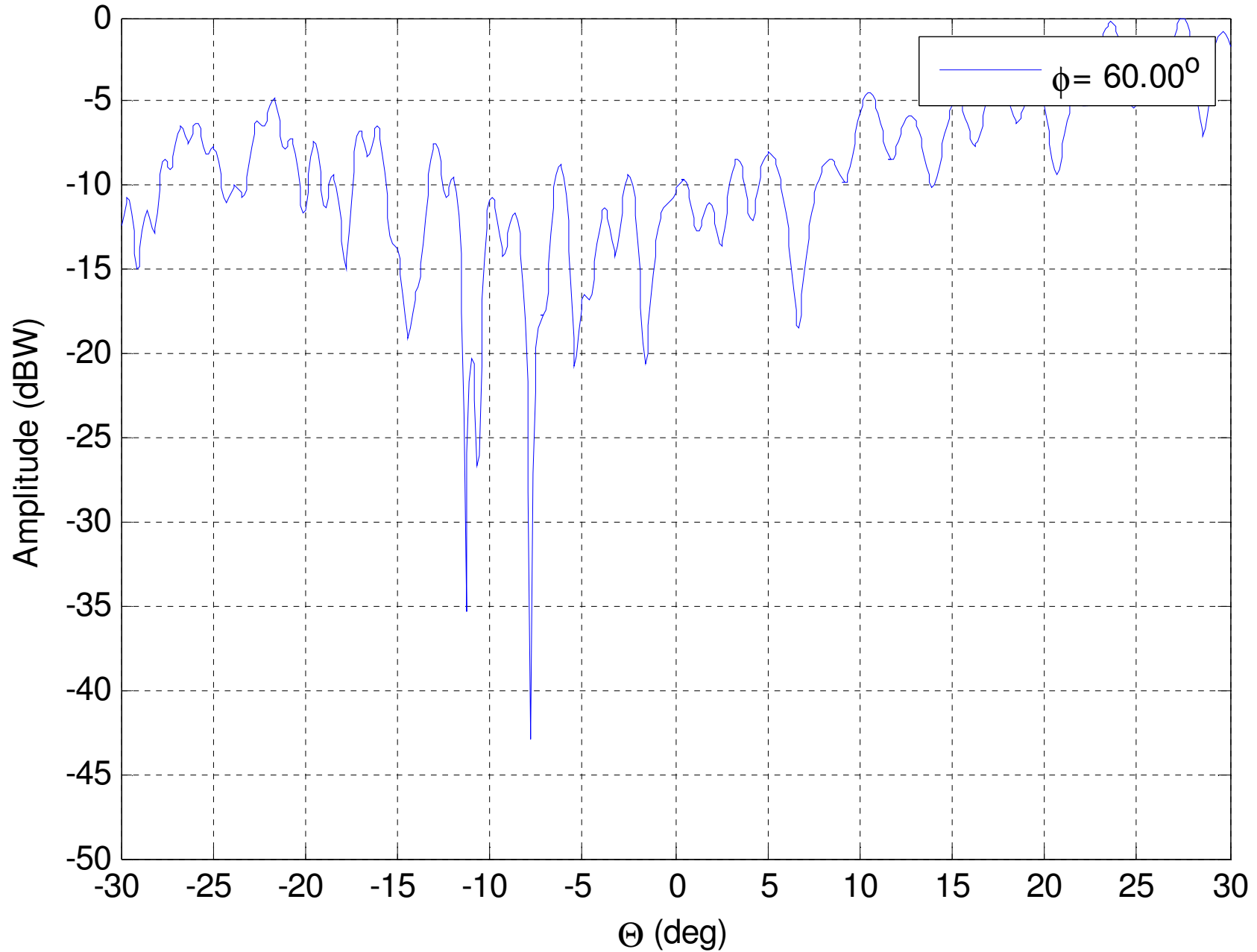
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.87 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

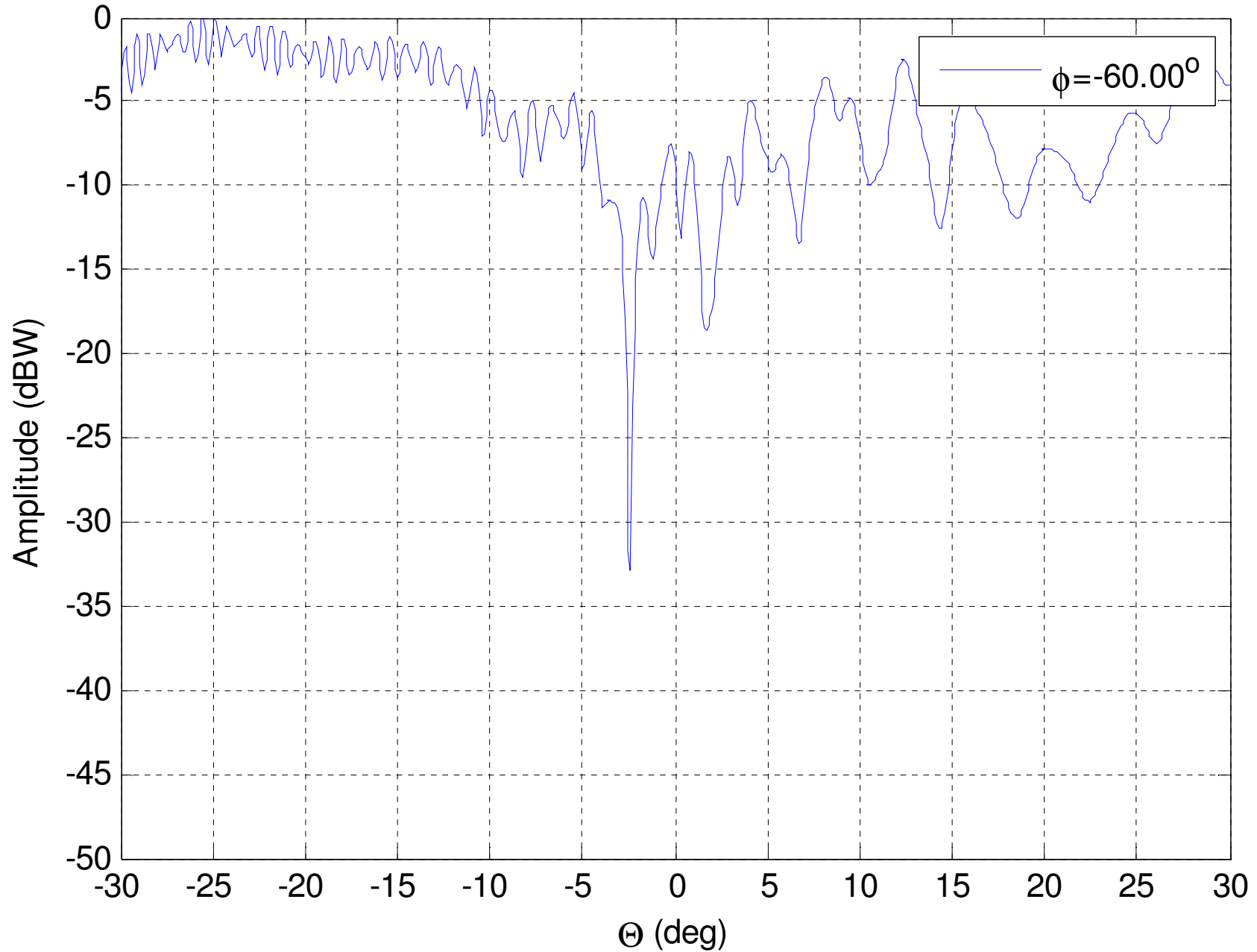
Input file: tx-17.3-lhcp-60.cut, Peak: -9.99 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

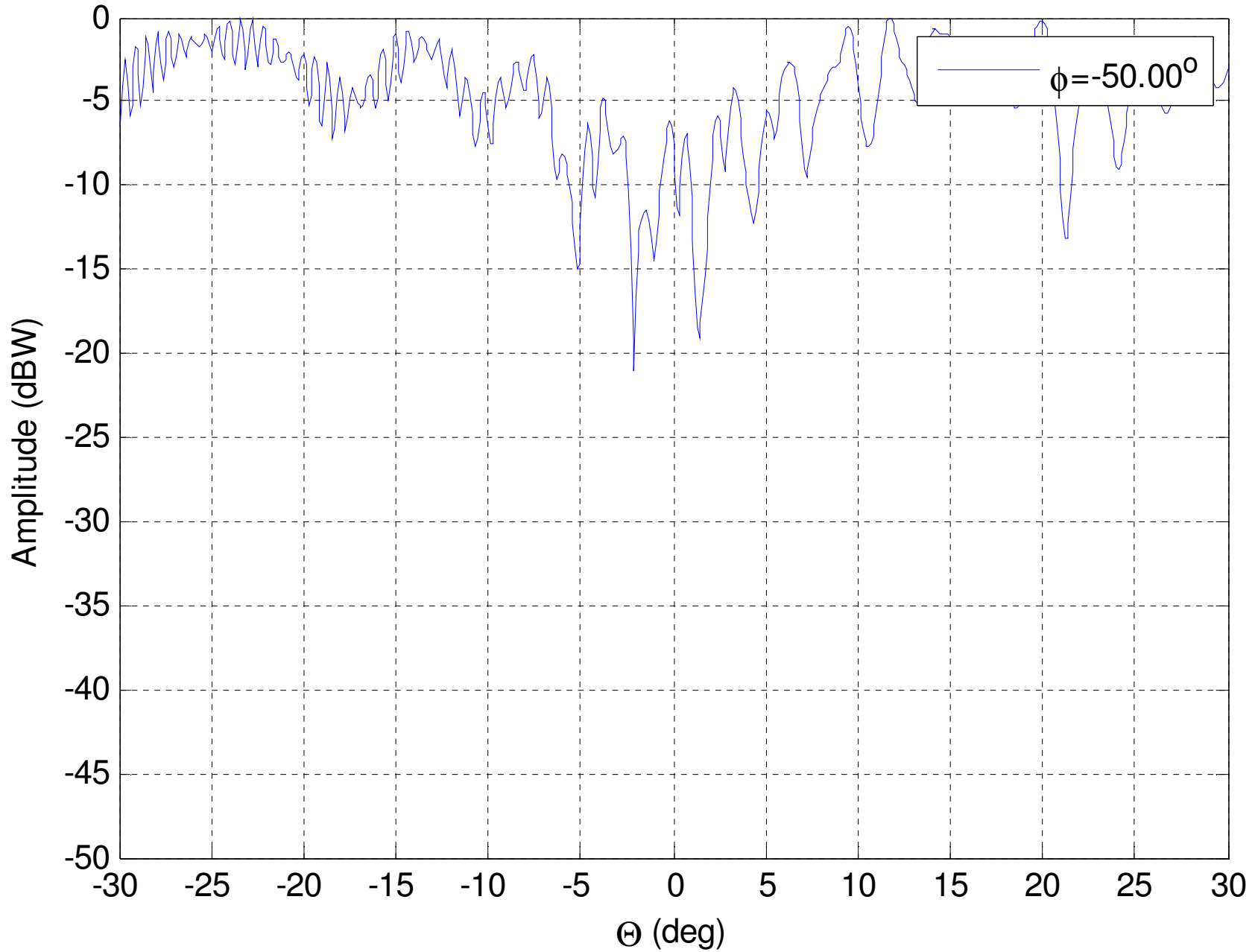
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.59 dBW, Date: 14-Dec-2011



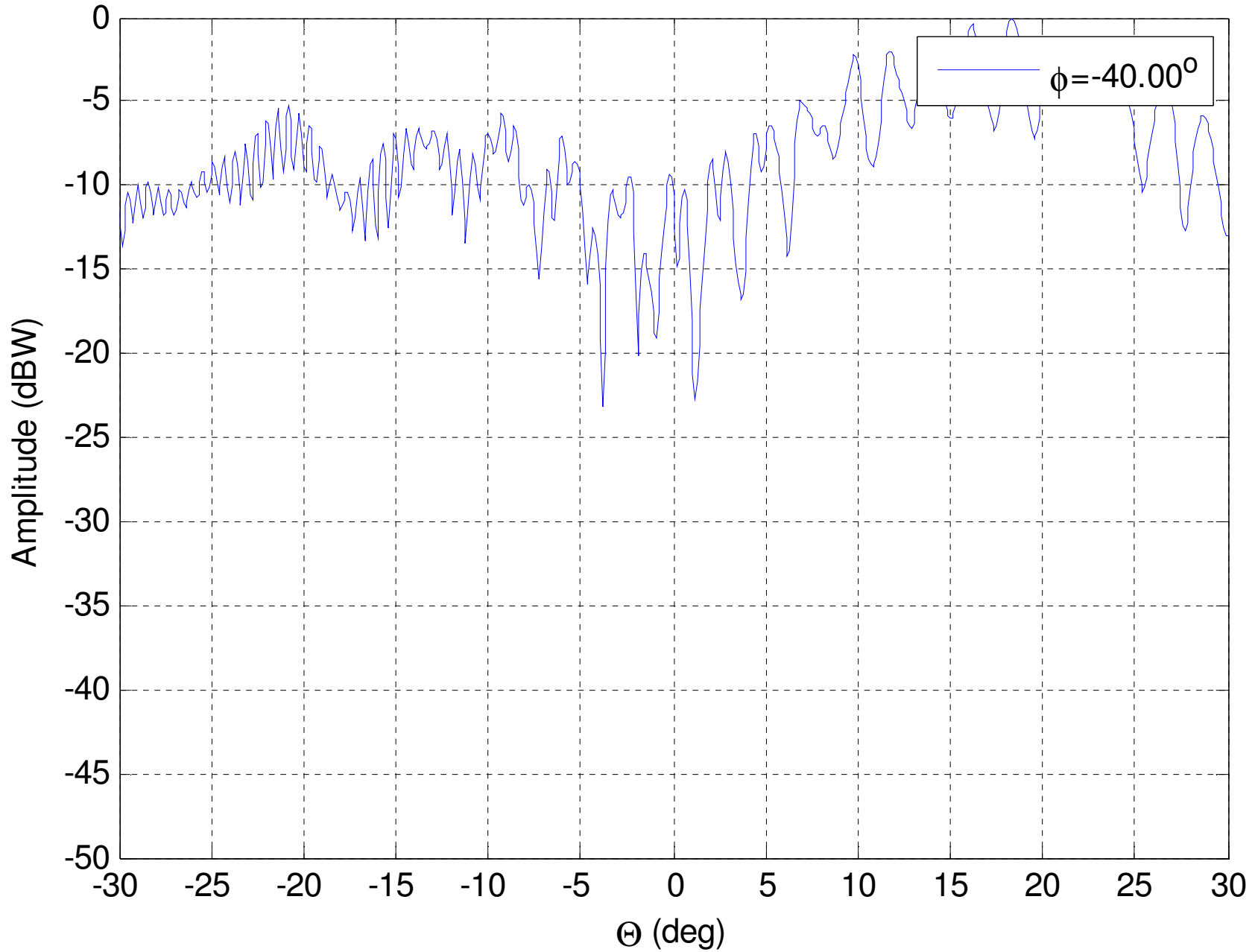
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -11.94 dBW, Date: 14-Dec-2011



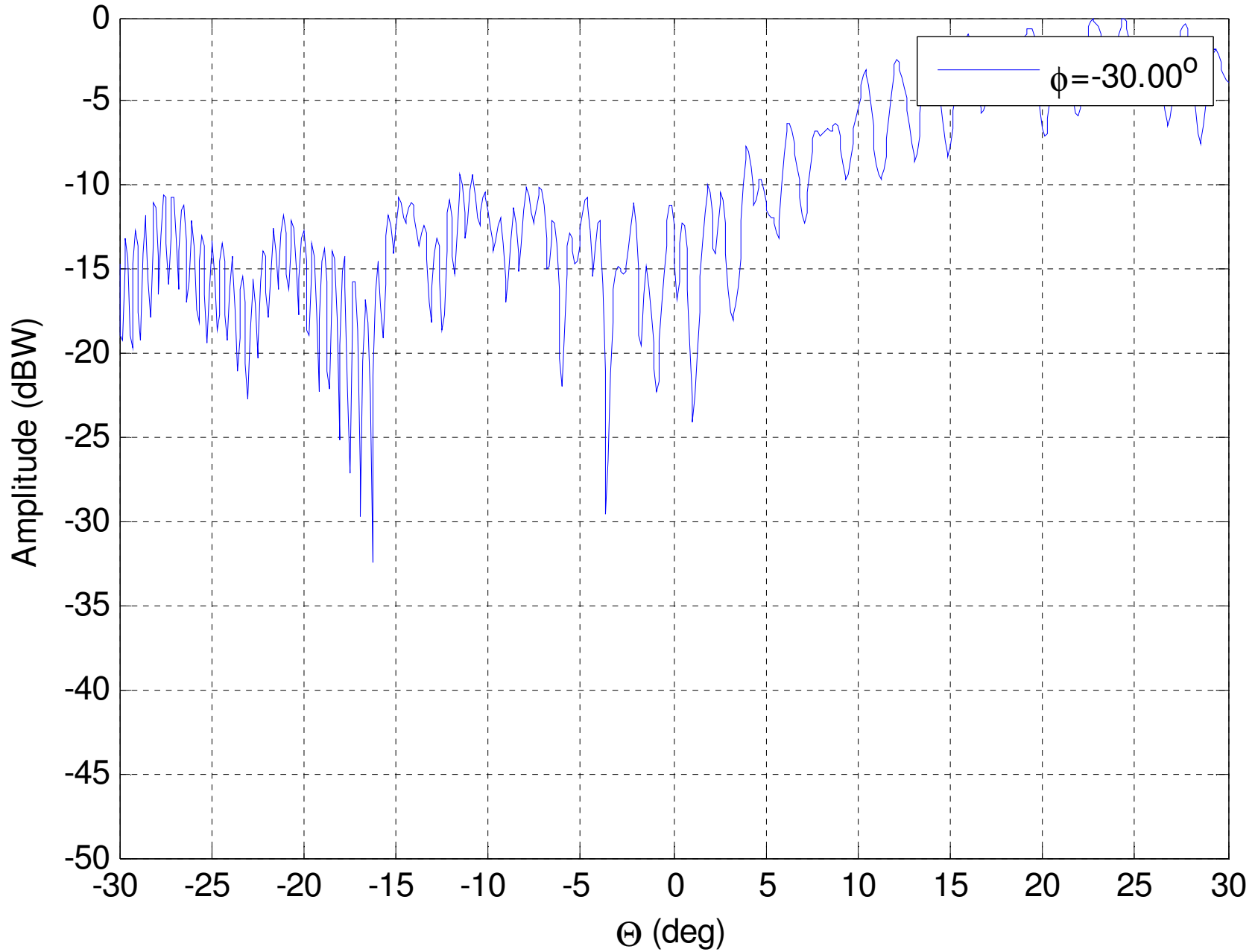
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -8.85 dBW, Date: 14-Dec-2011



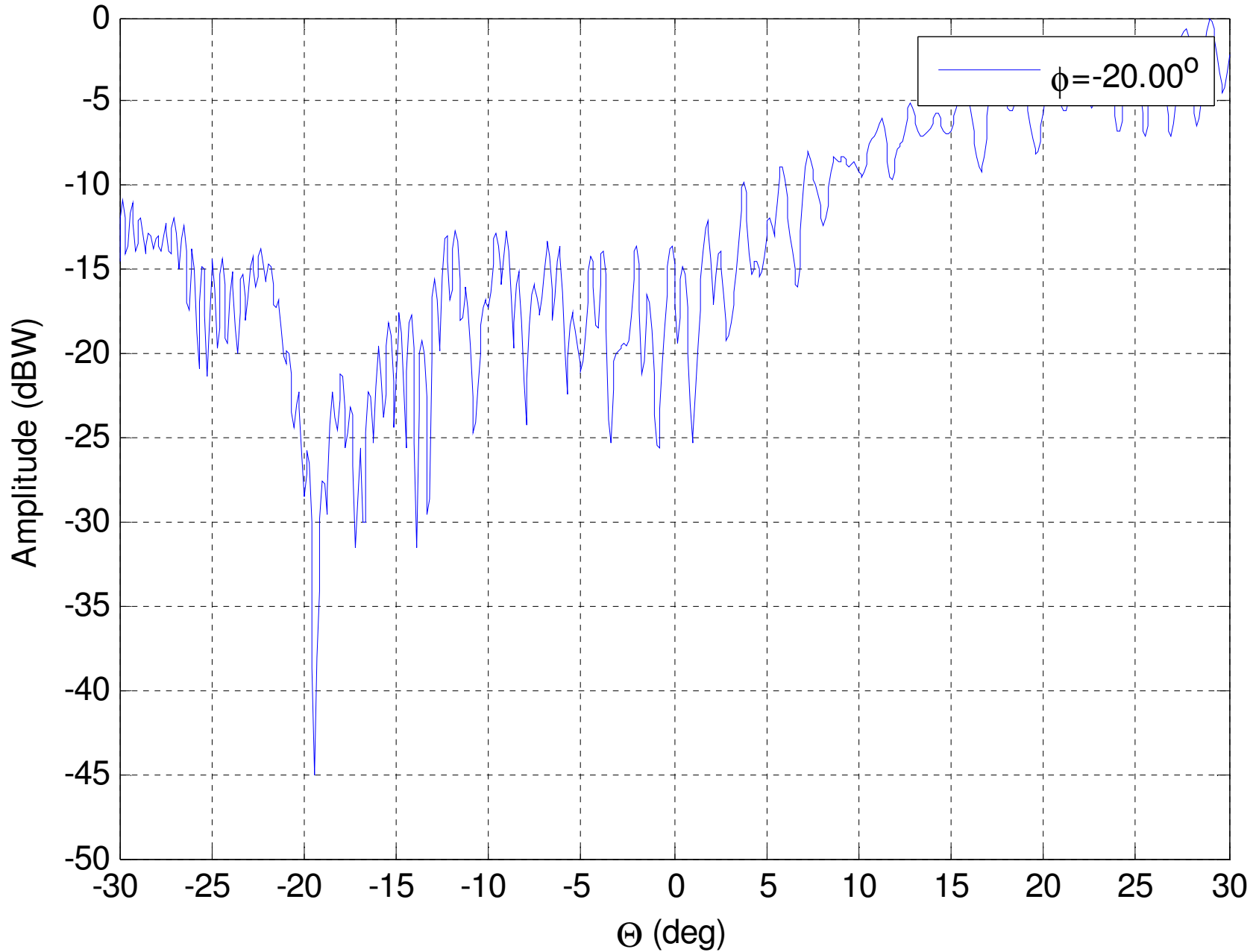
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.09 dBW, Date: 14-Dec-2011



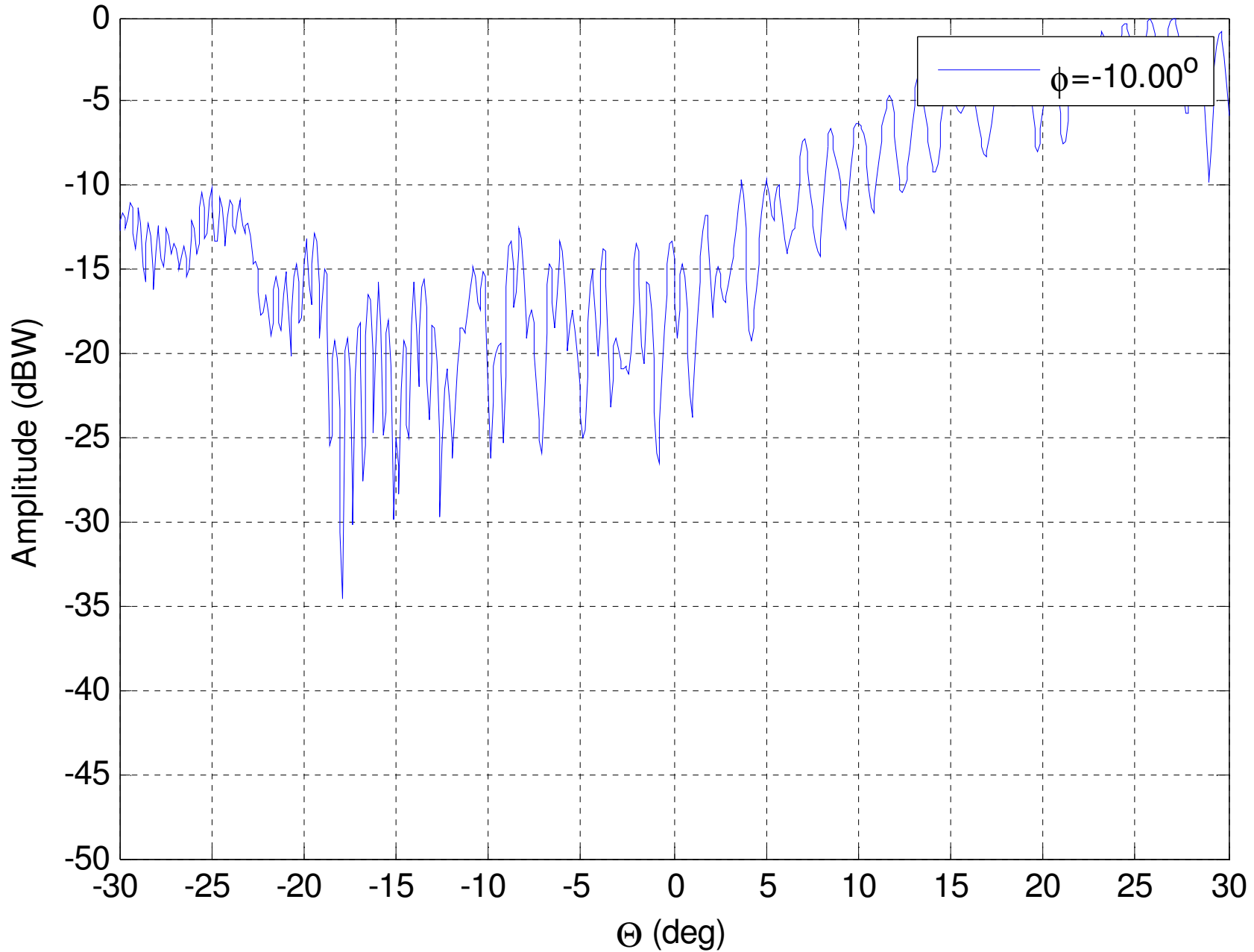
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -4.71 dBW, Date: 14-Dec-2011



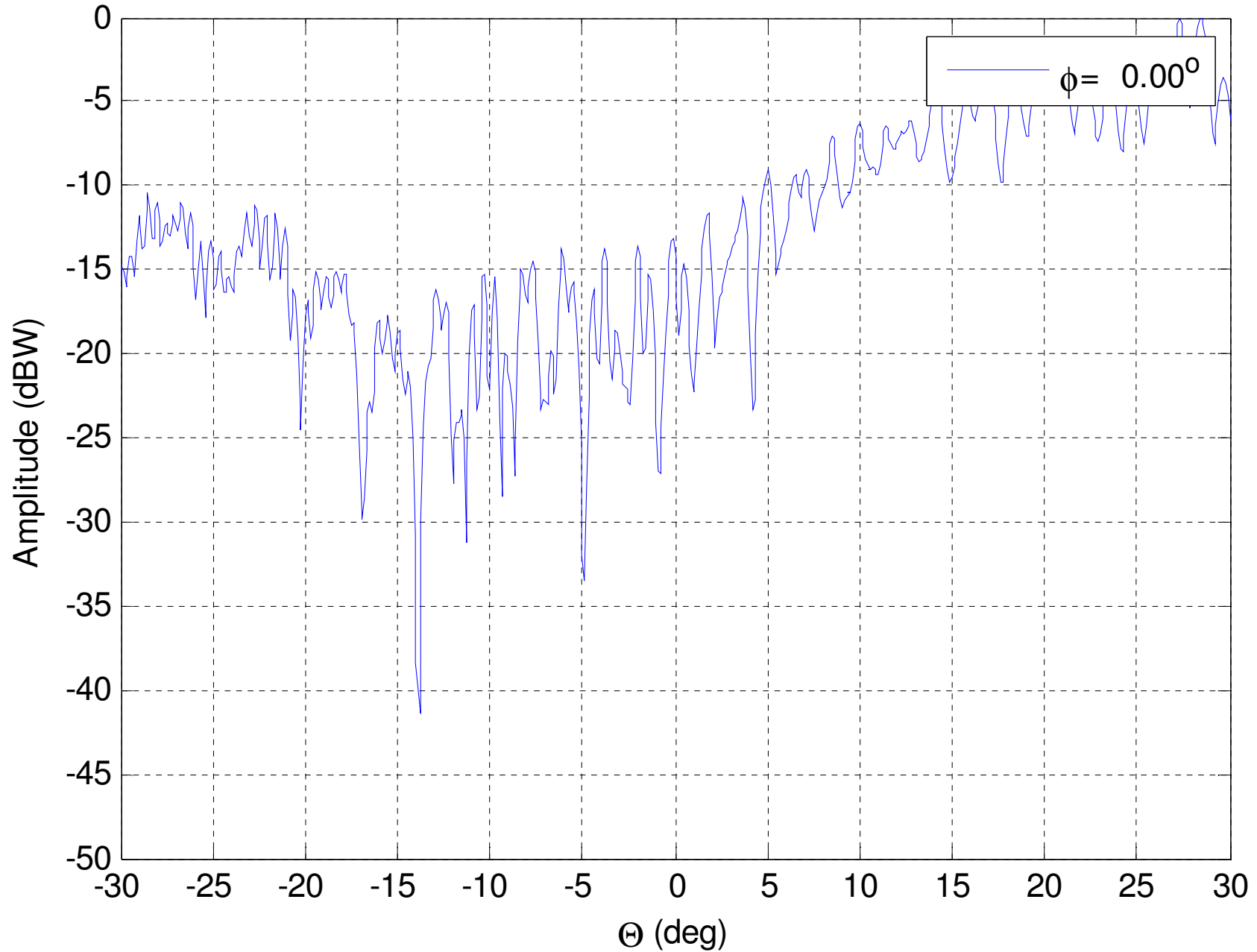
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -5.06 dBW, Date: 14-Dec-2011



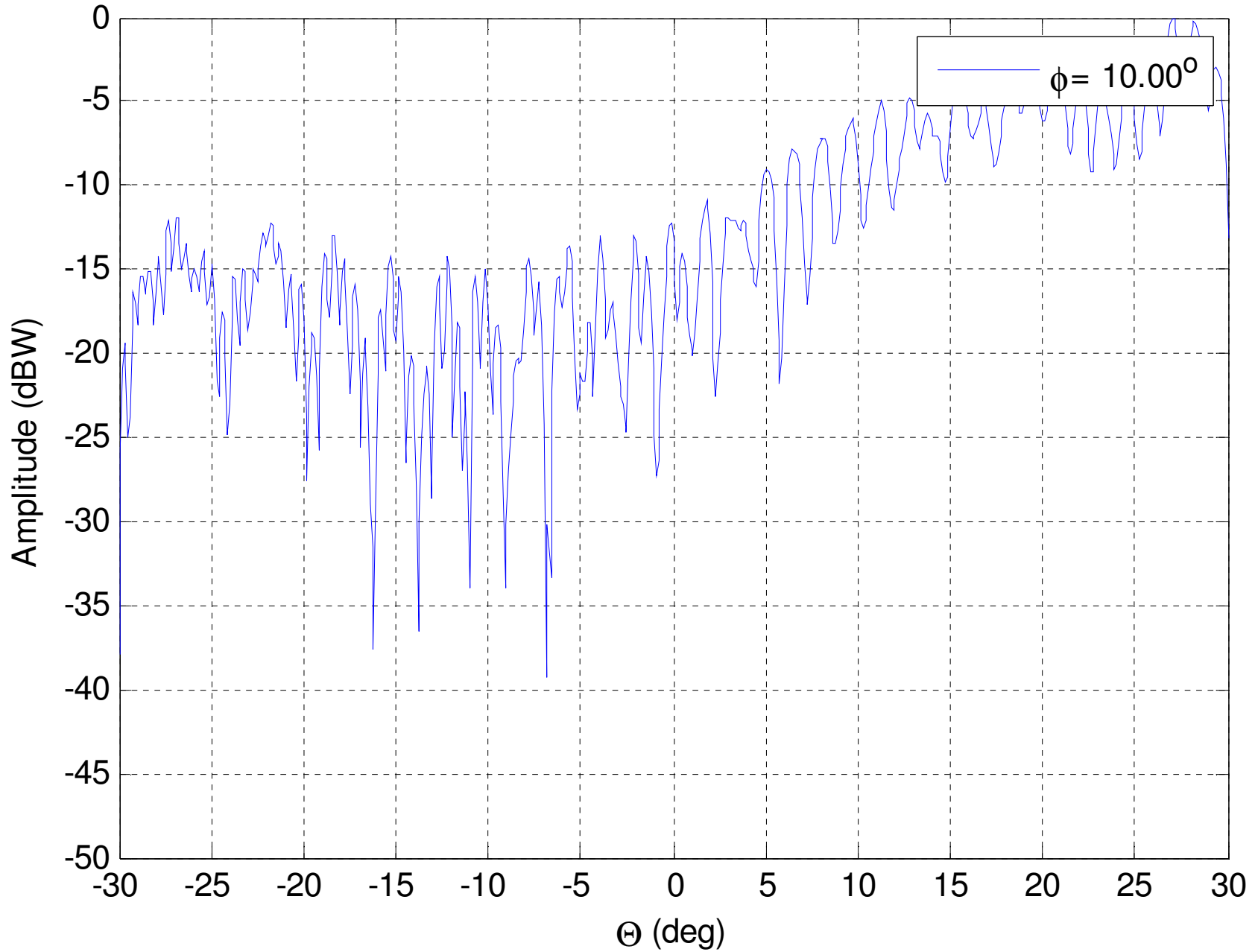
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -5.18 dBW, Date: 14-Dec-2011



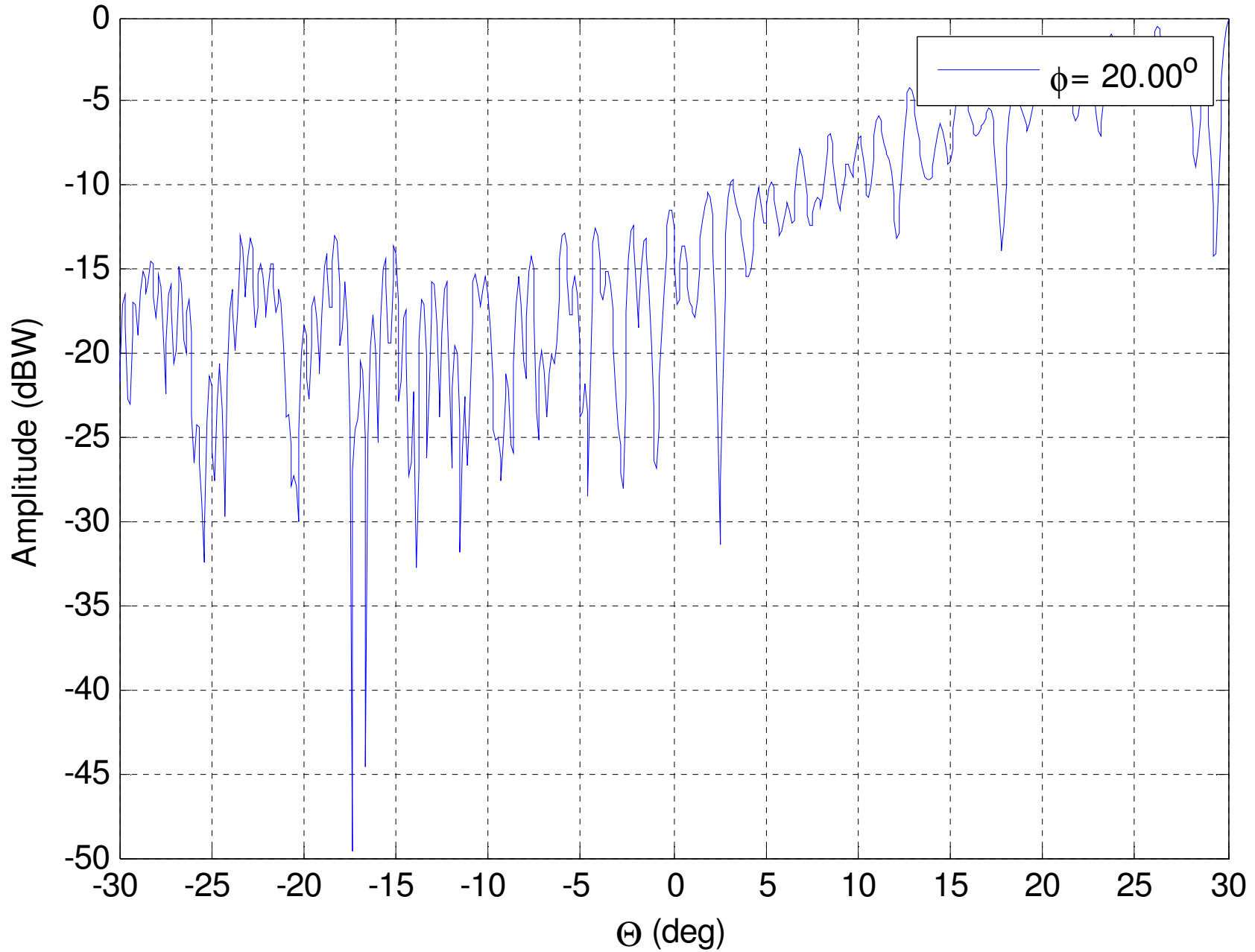
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -6.08 dBW, Date: 14-Dec-2011



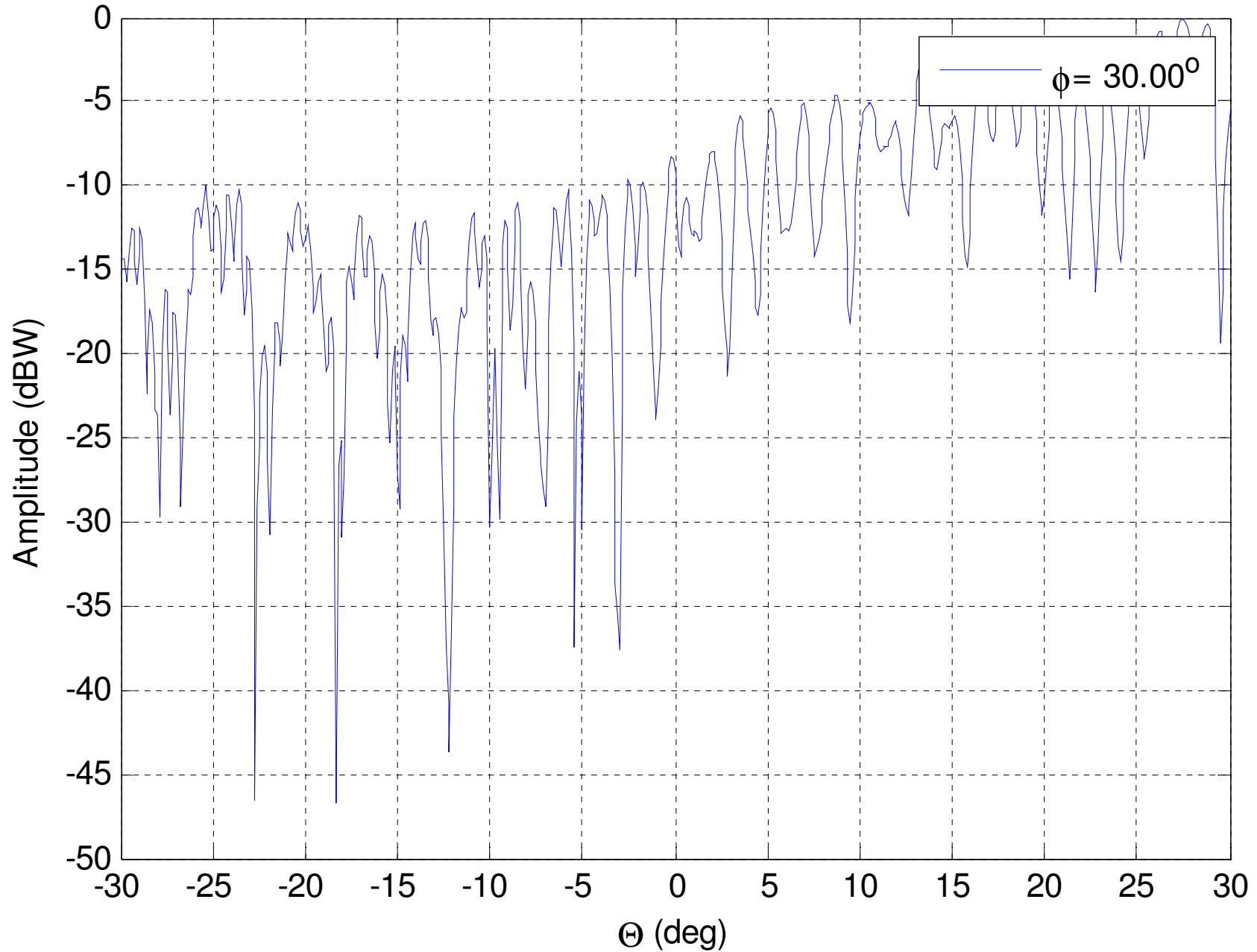
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -6.95 dBW, Date: 14-Dec-2011



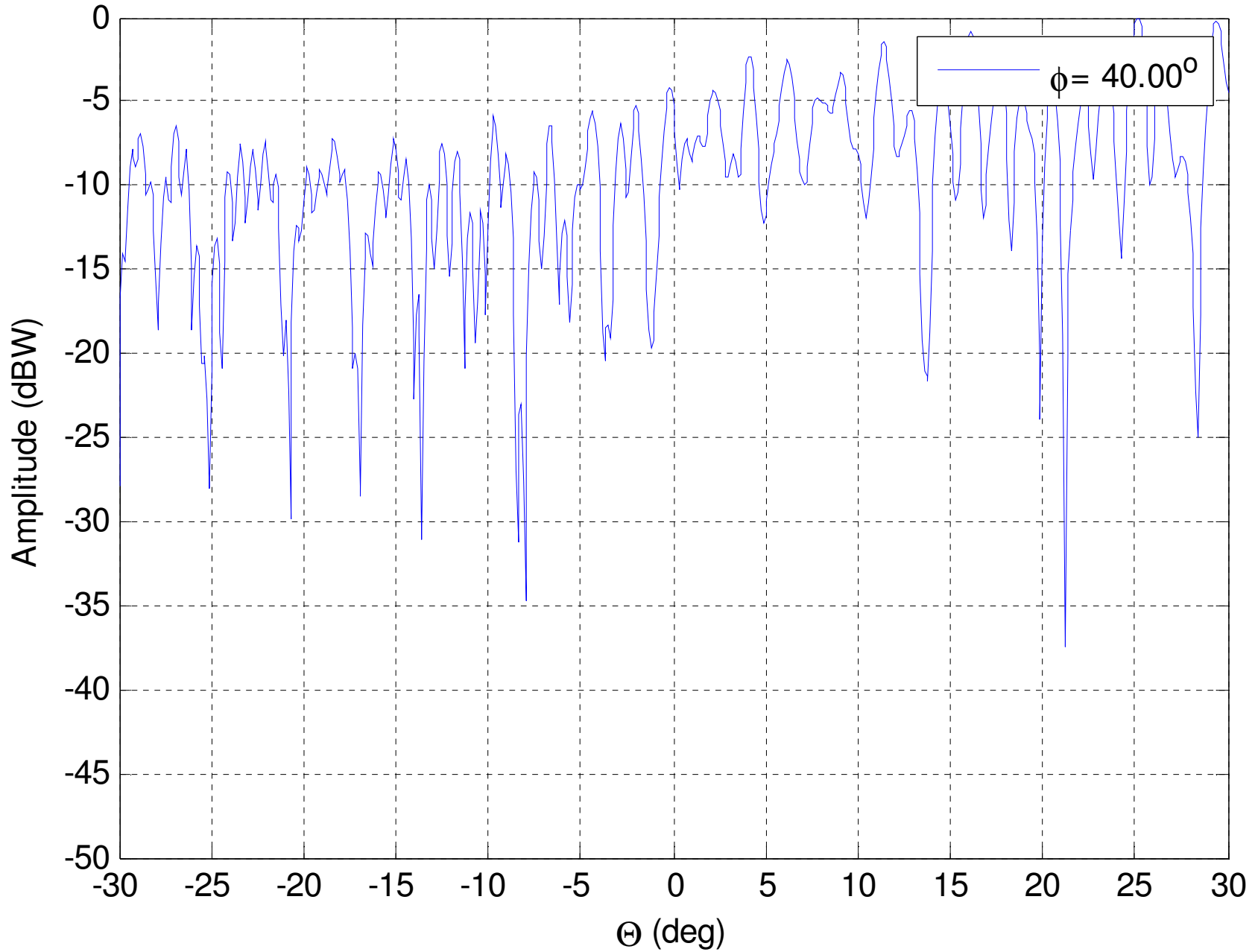
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.06 dBW, Date: 14-Dec-2011



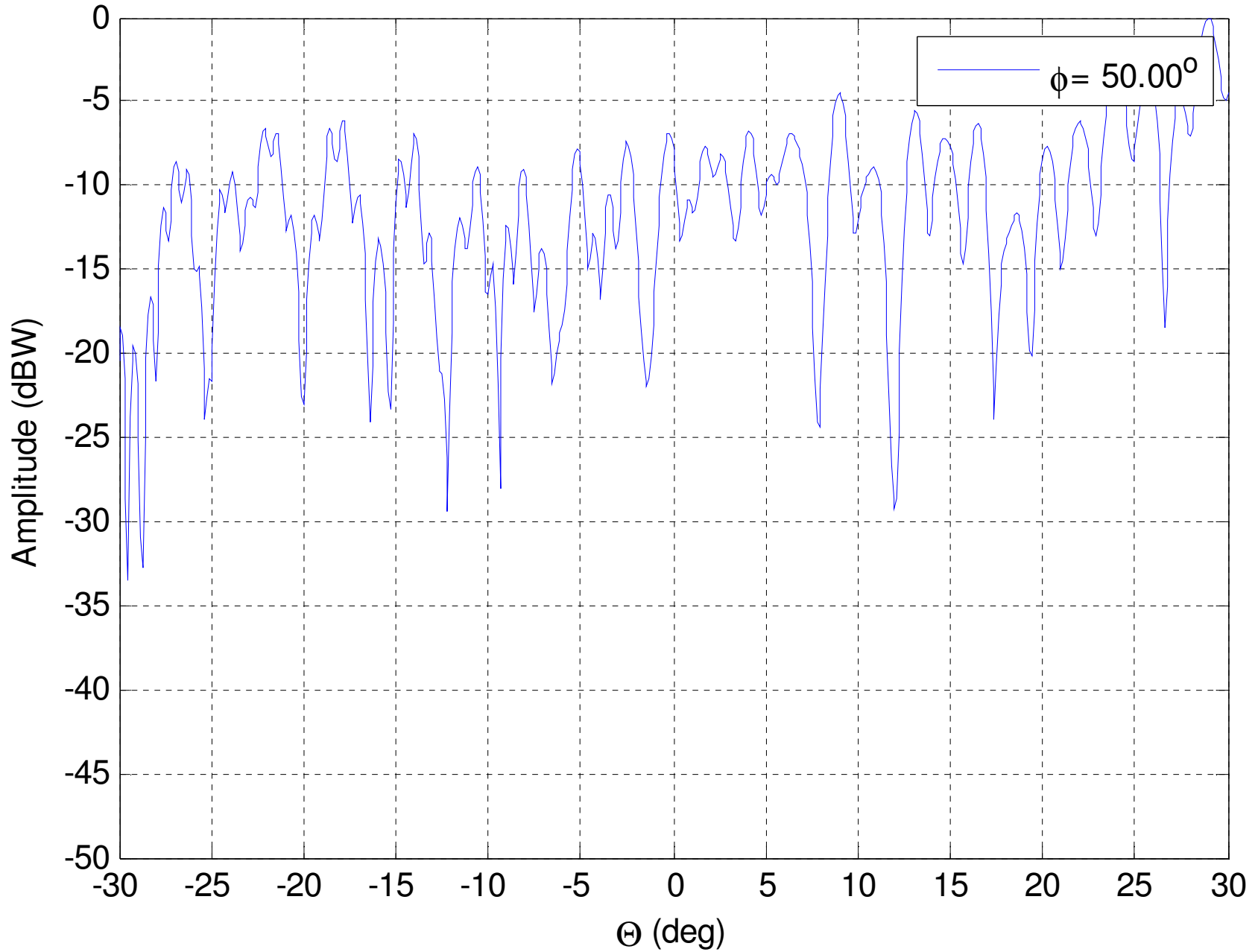
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -14.19 dBW, Date: 14-Dec-2011



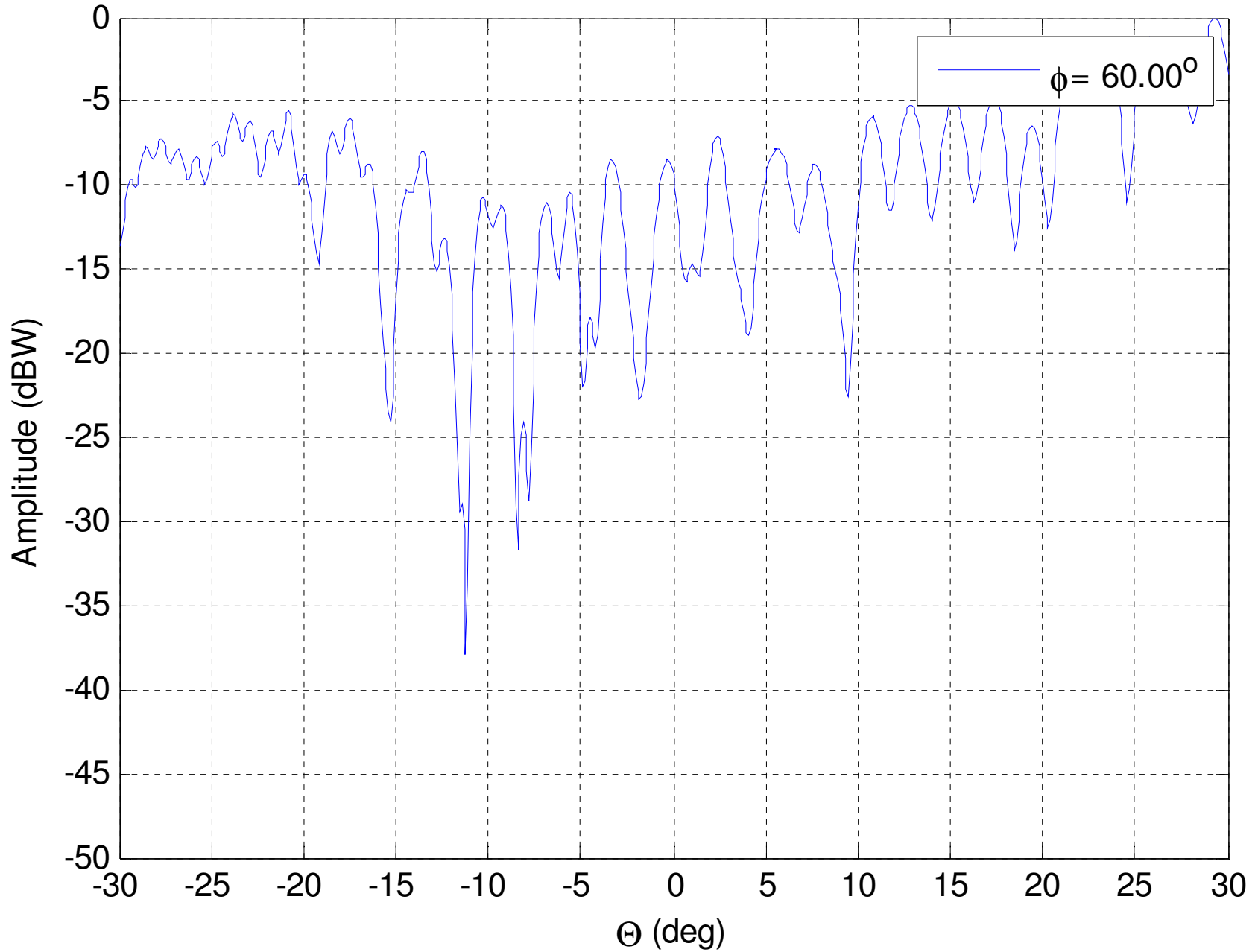
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.54 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

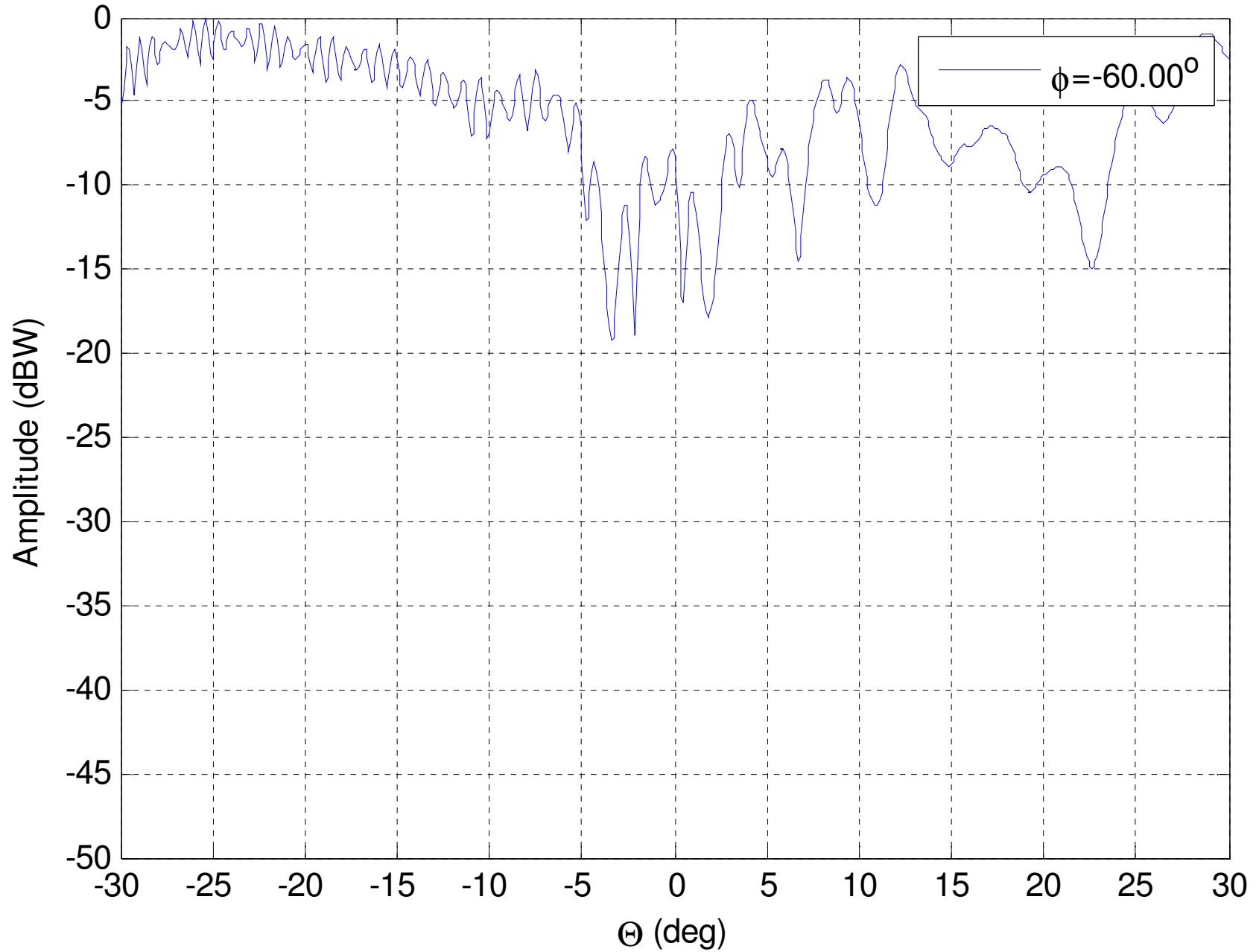
Input file: tx-17.5-rhcp-60.cut, Peak: -10.03 dBW, Date: 14-Dec-2011



LHCP at 17.5 GHz

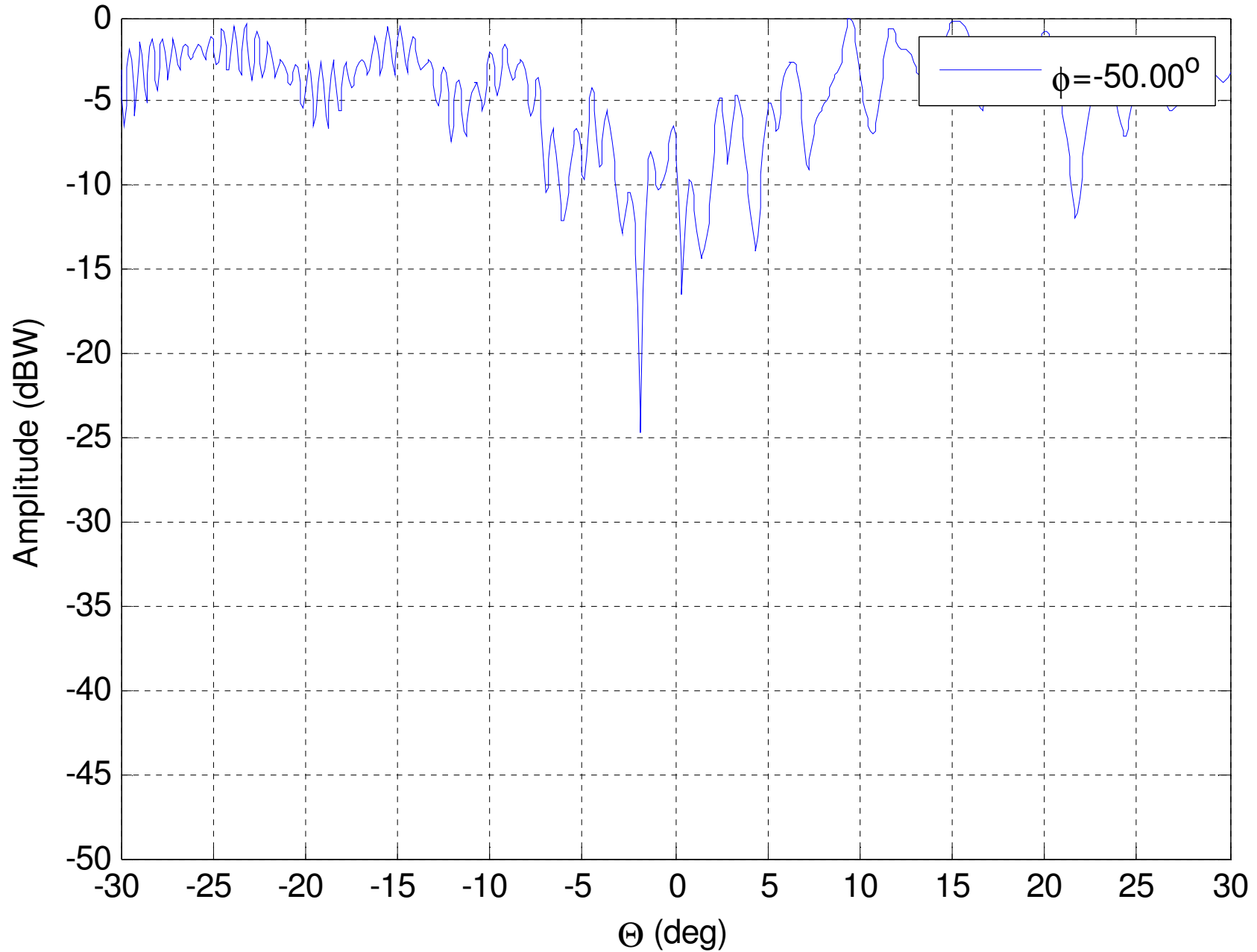
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -10.65 dBW, Date: 14-Dec-2011



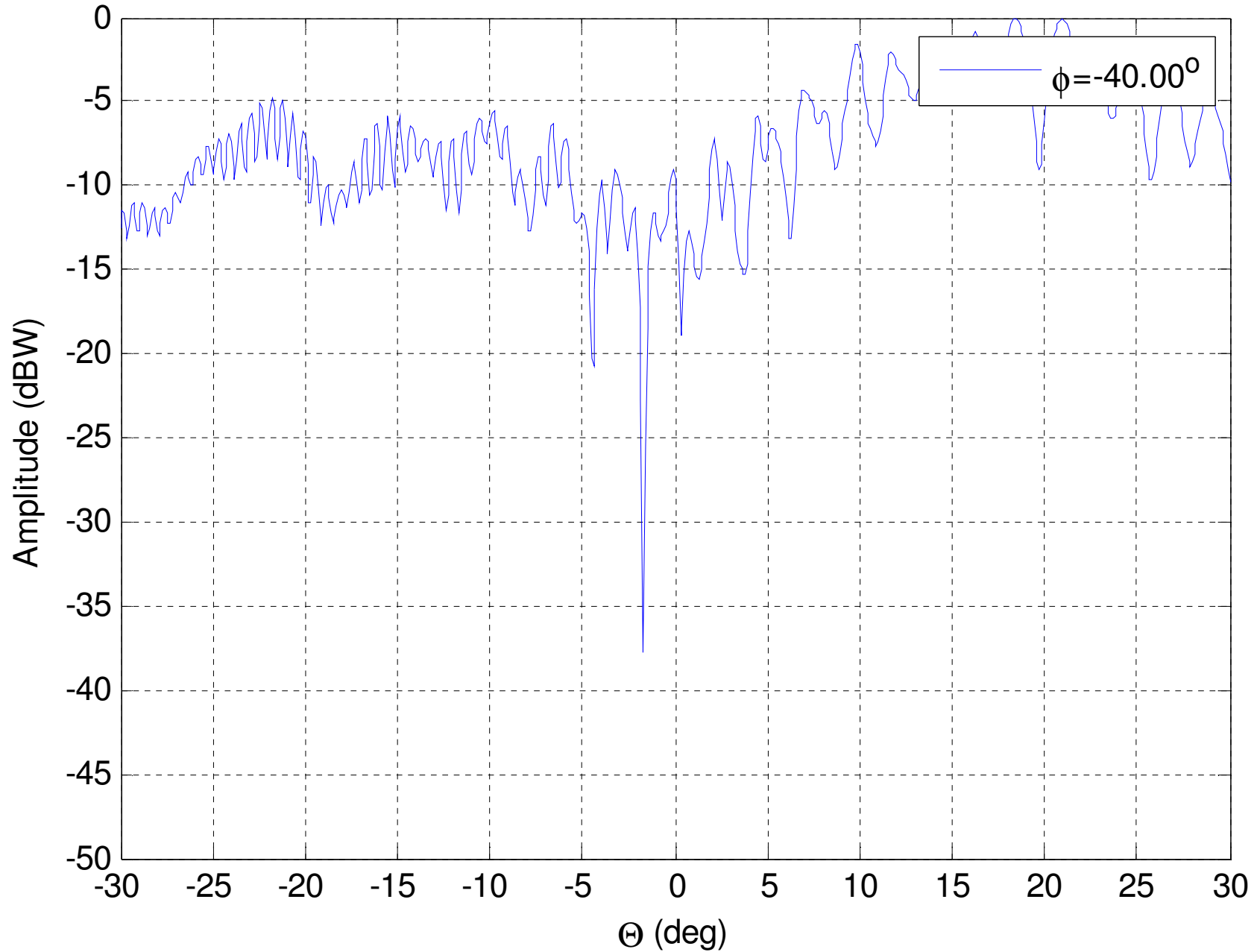
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.99 dBW, Date: 14-Dec-2011



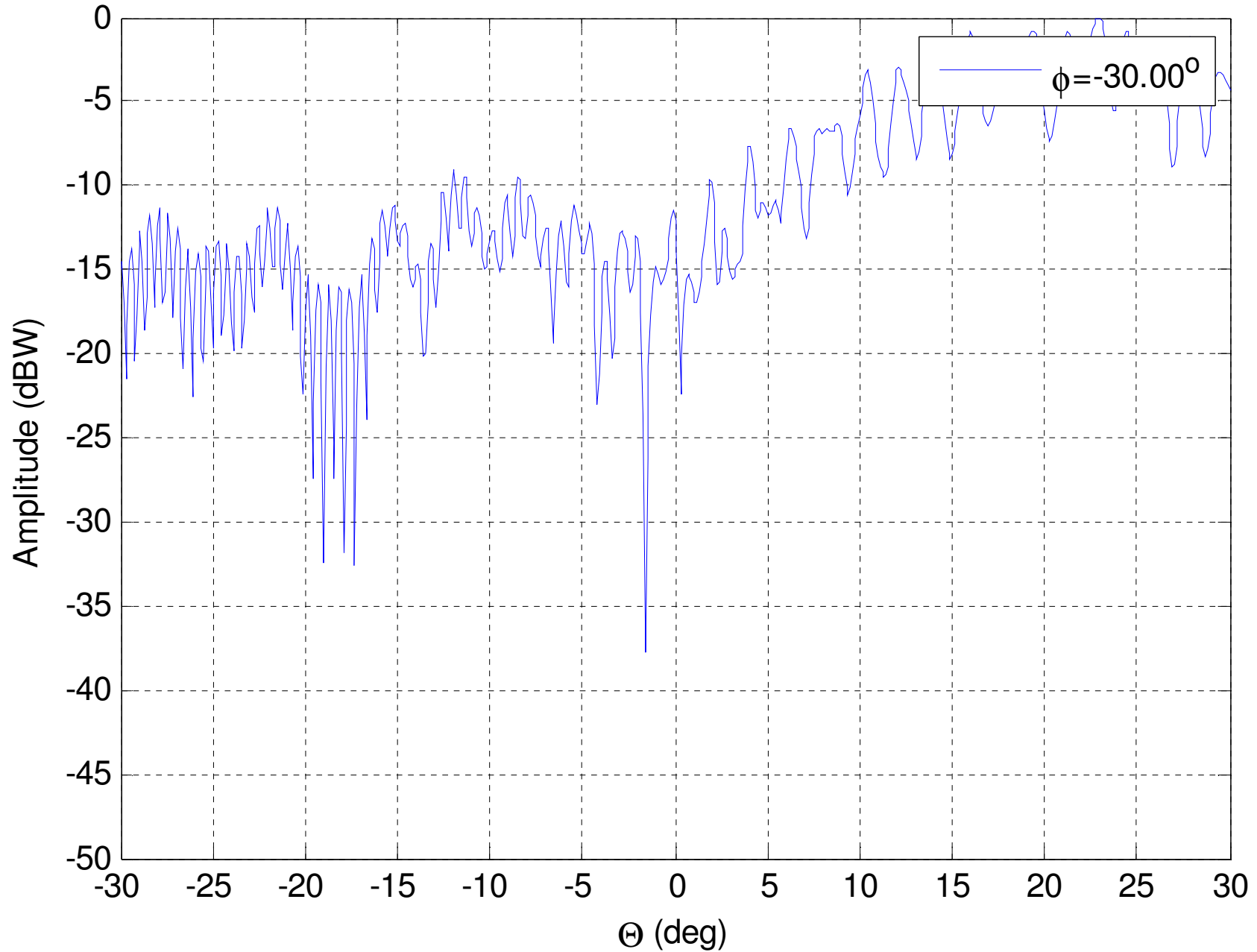
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.36 dBW, Date: 14-Dec-2011



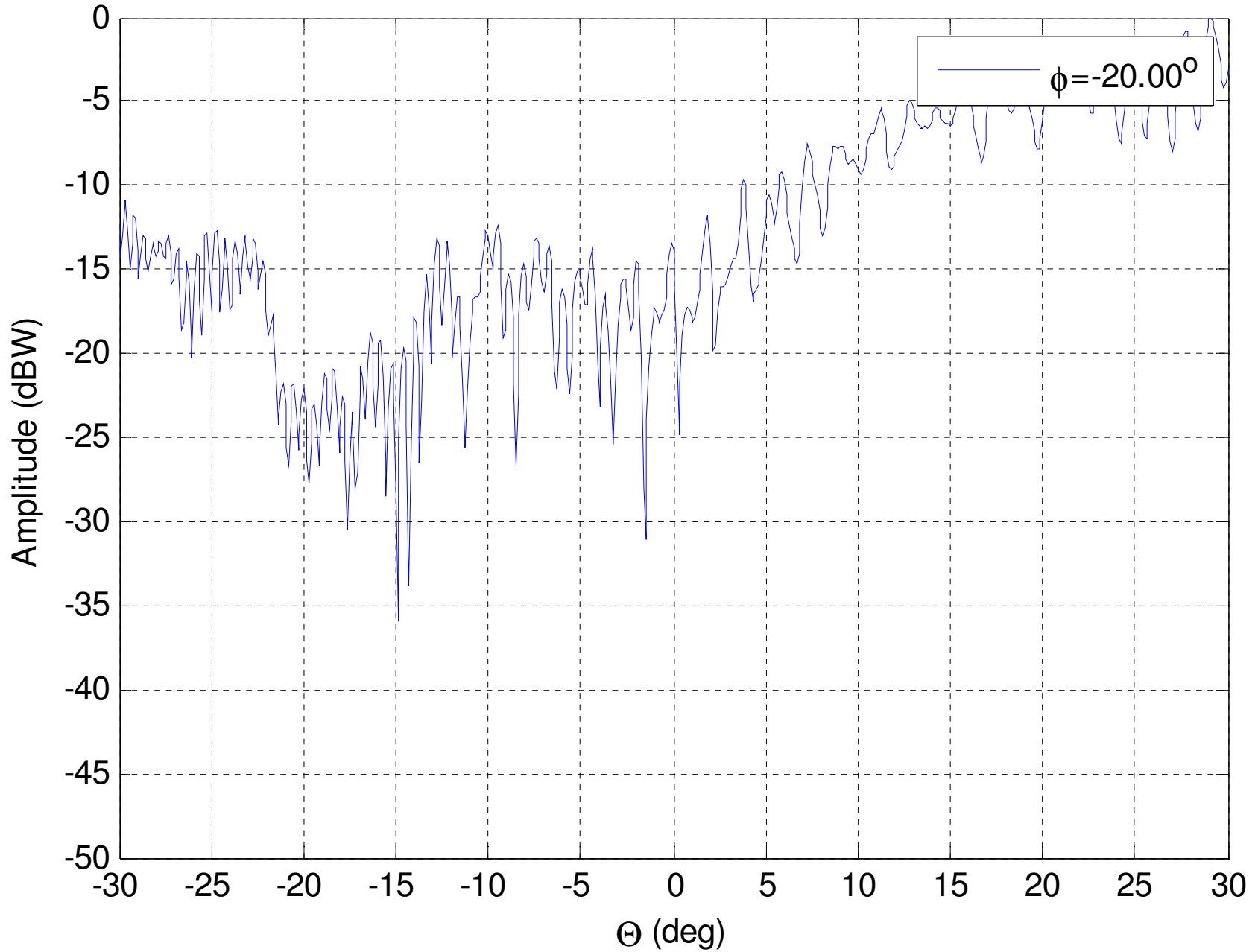
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -6.95 dBW, Date: 14-Dec-2011



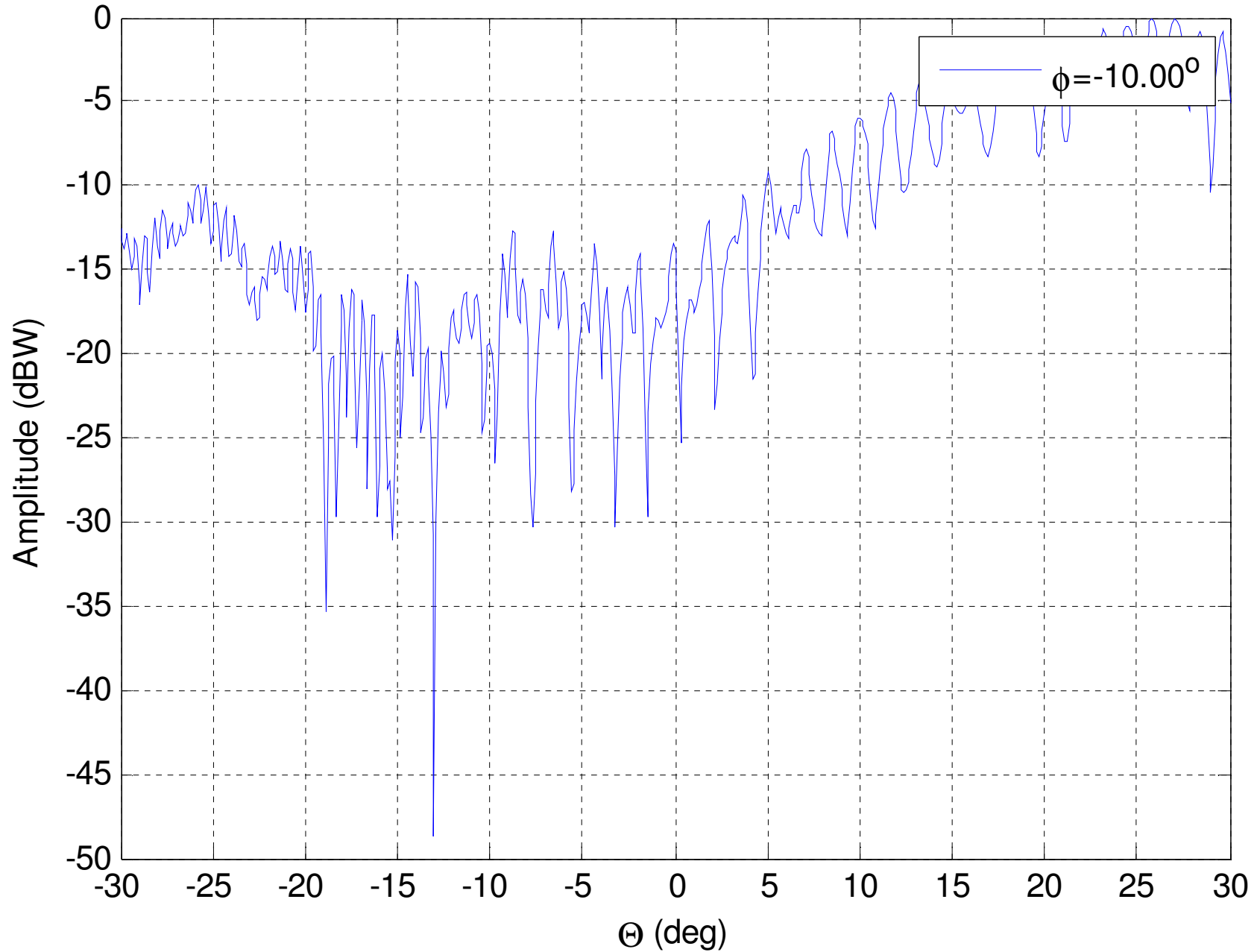
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -5.03 dBW, Date: 14-Dec-2011



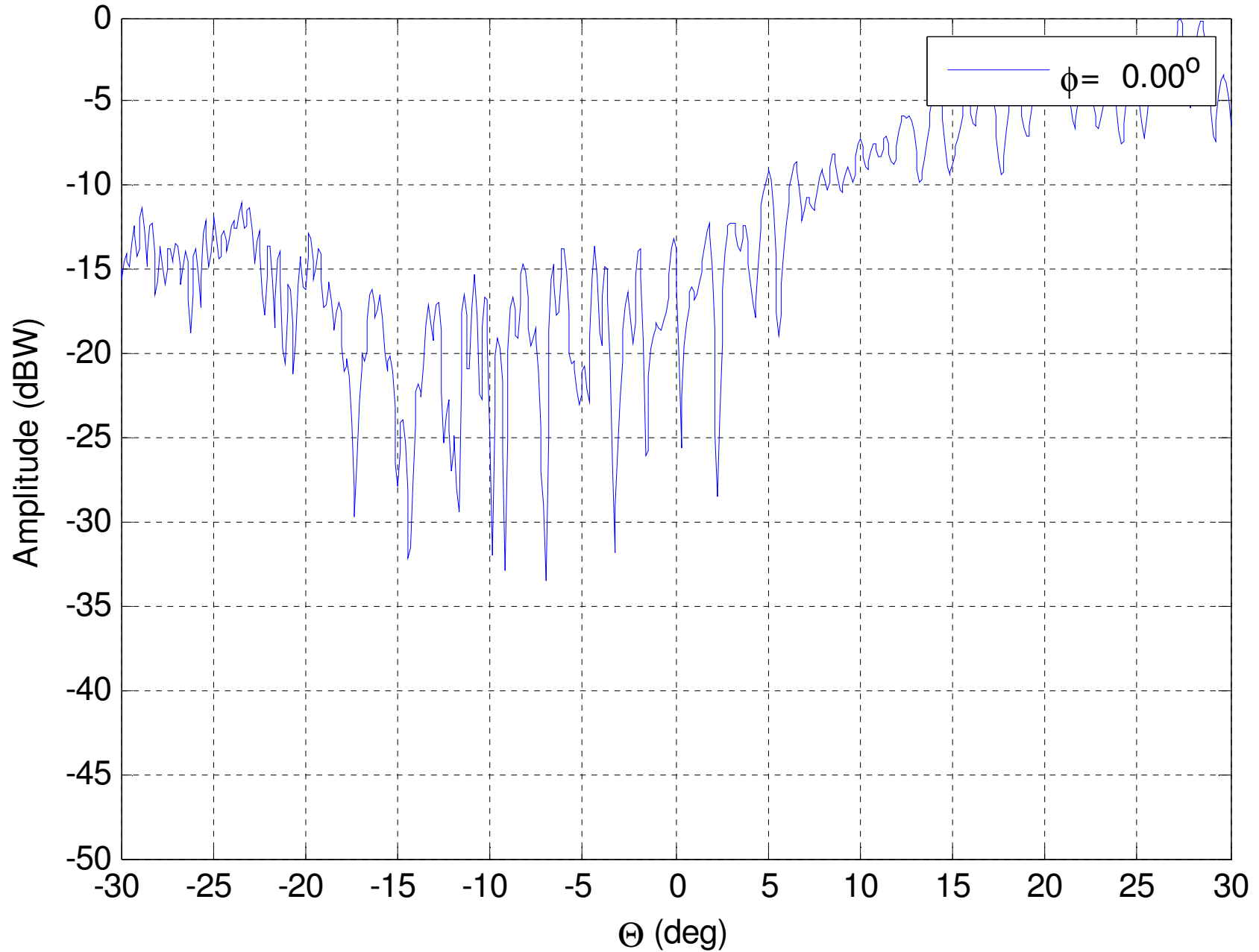
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -5.01 dBW, Date: 14-Dec-2011



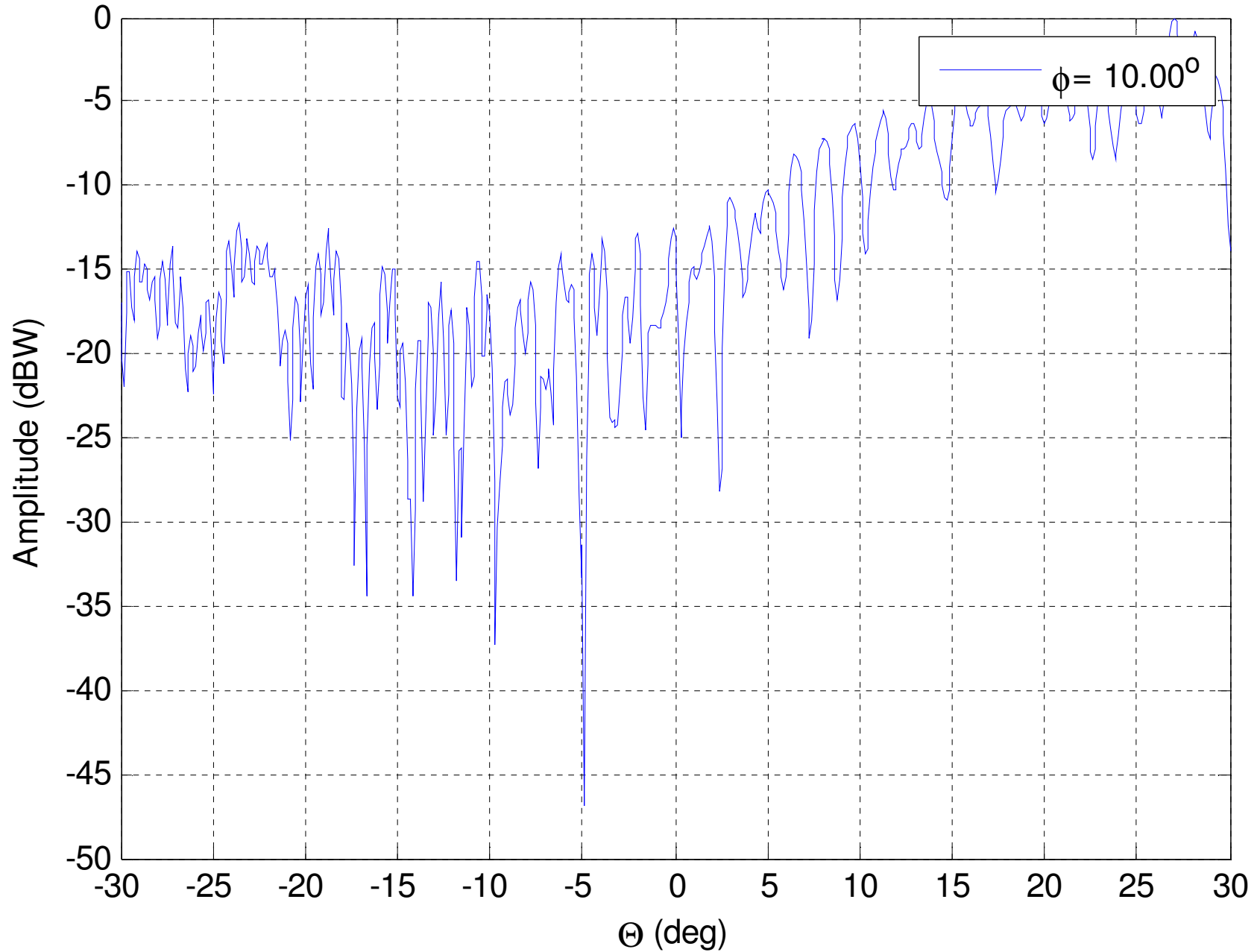
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -5.20 dBW, Date: 14-Dec-2011



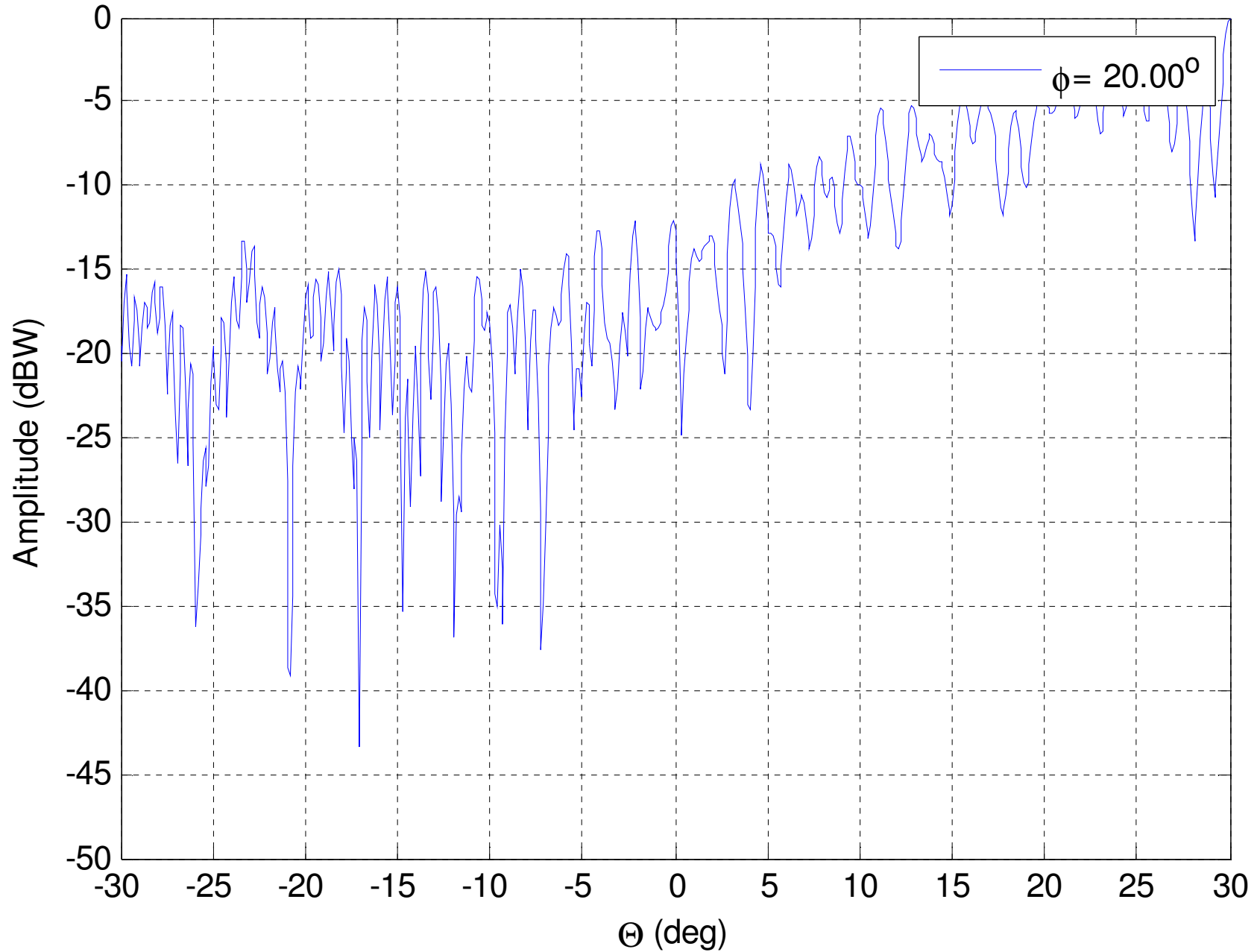
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -5.83 dBW, Date: 14-Dec-2011



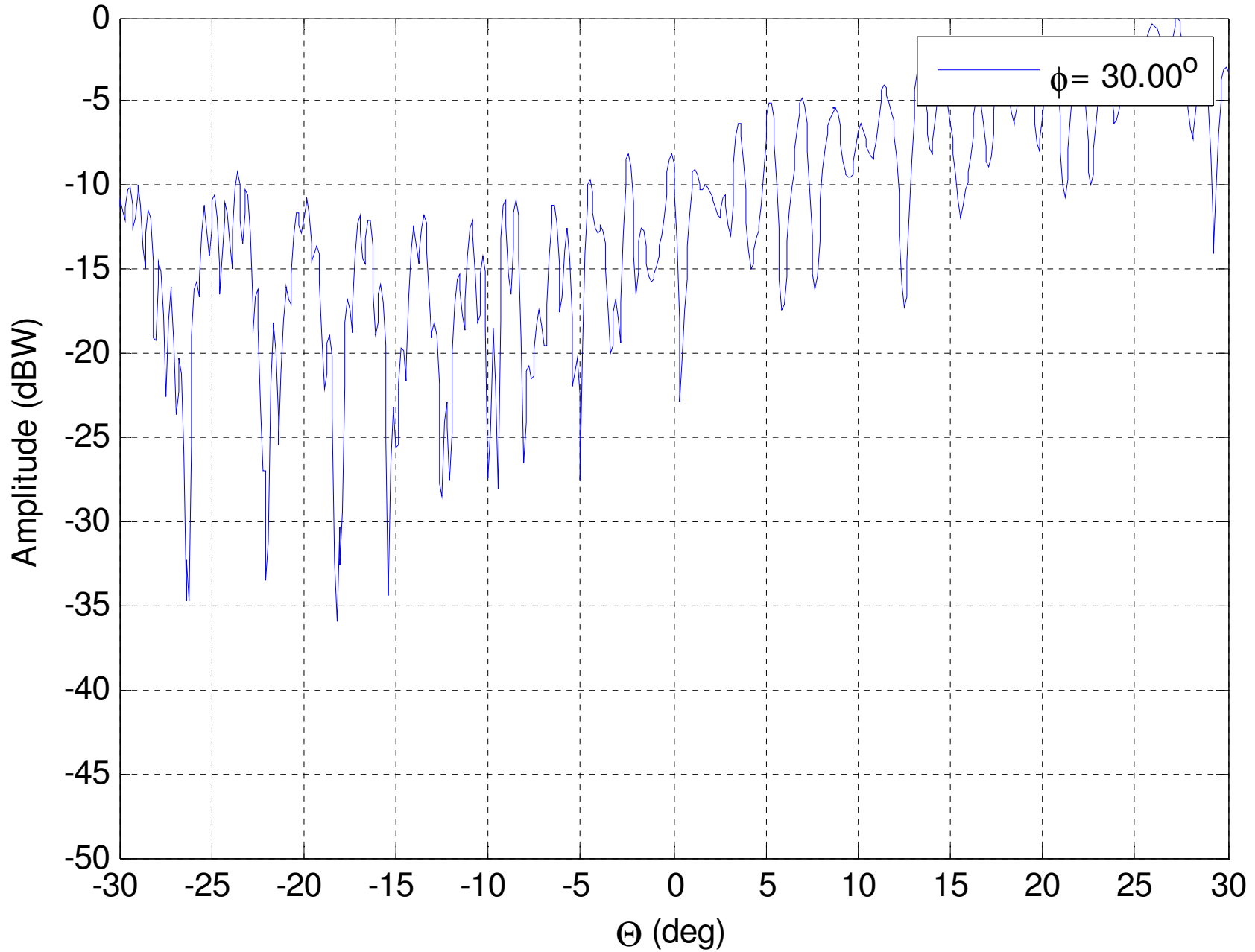
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -6.33 dBW, Date: 14-Dec-2011



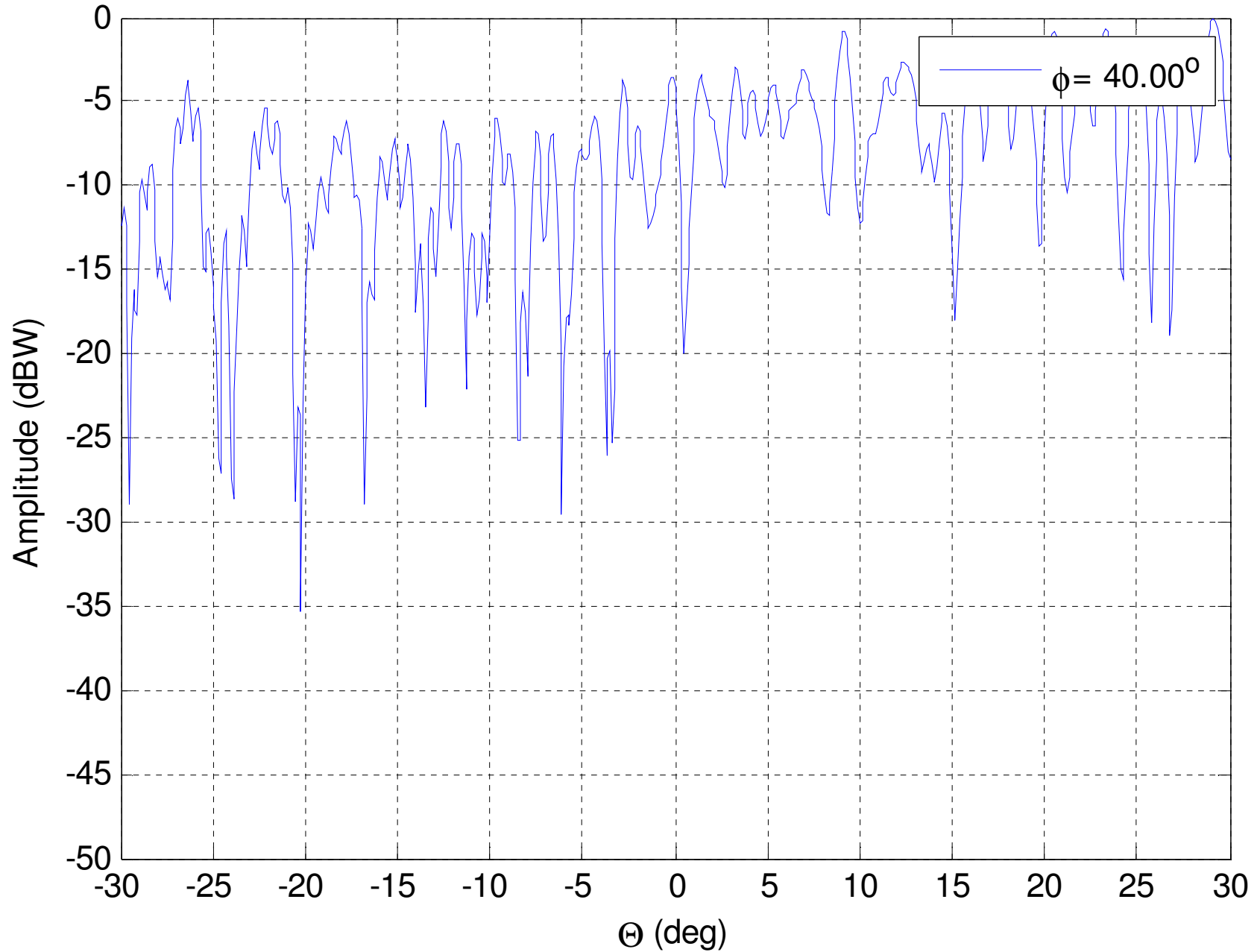
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.20 dBW, Date: 14-Dec-2011



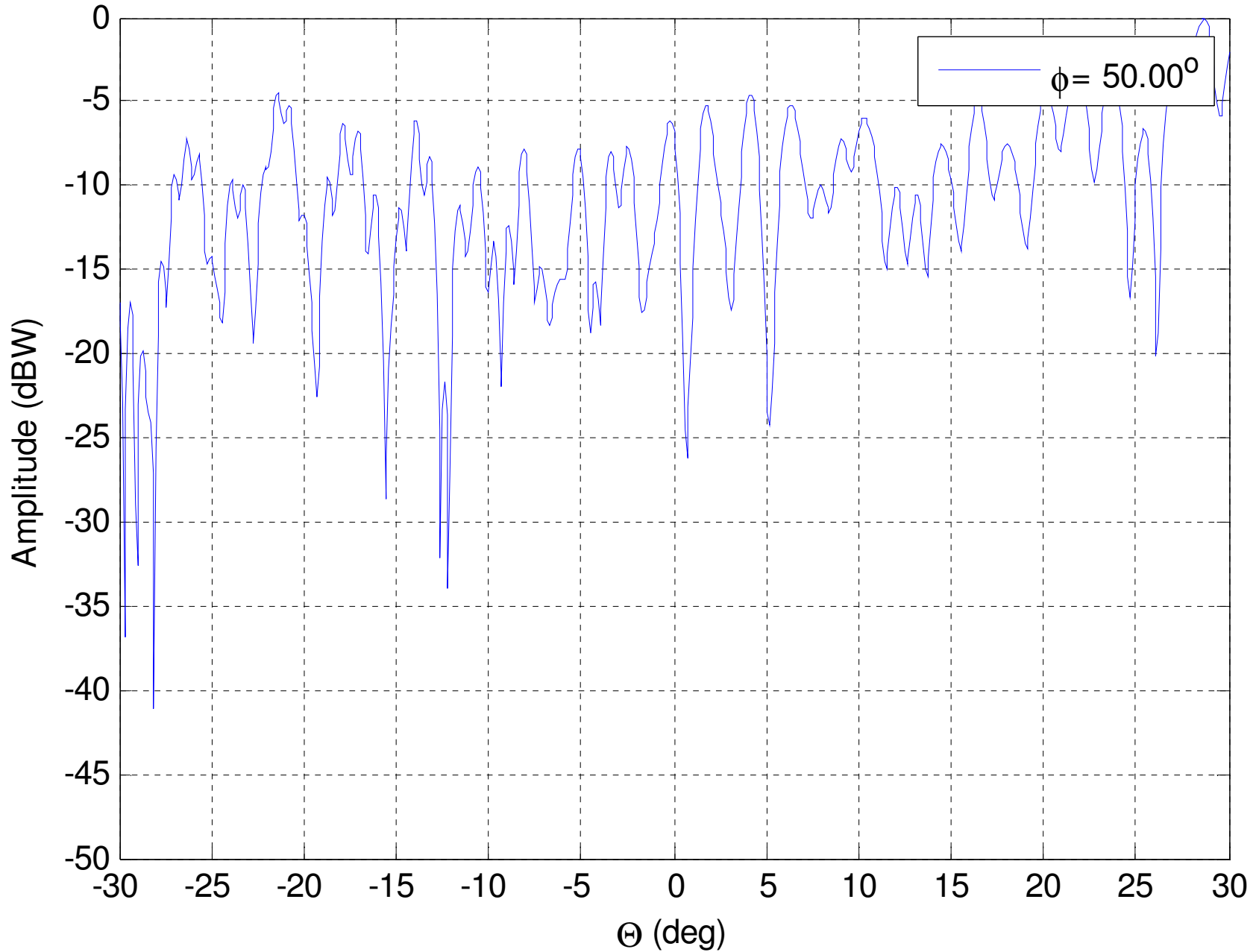
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -14.87 dBW, Date: 14-Dec-2011



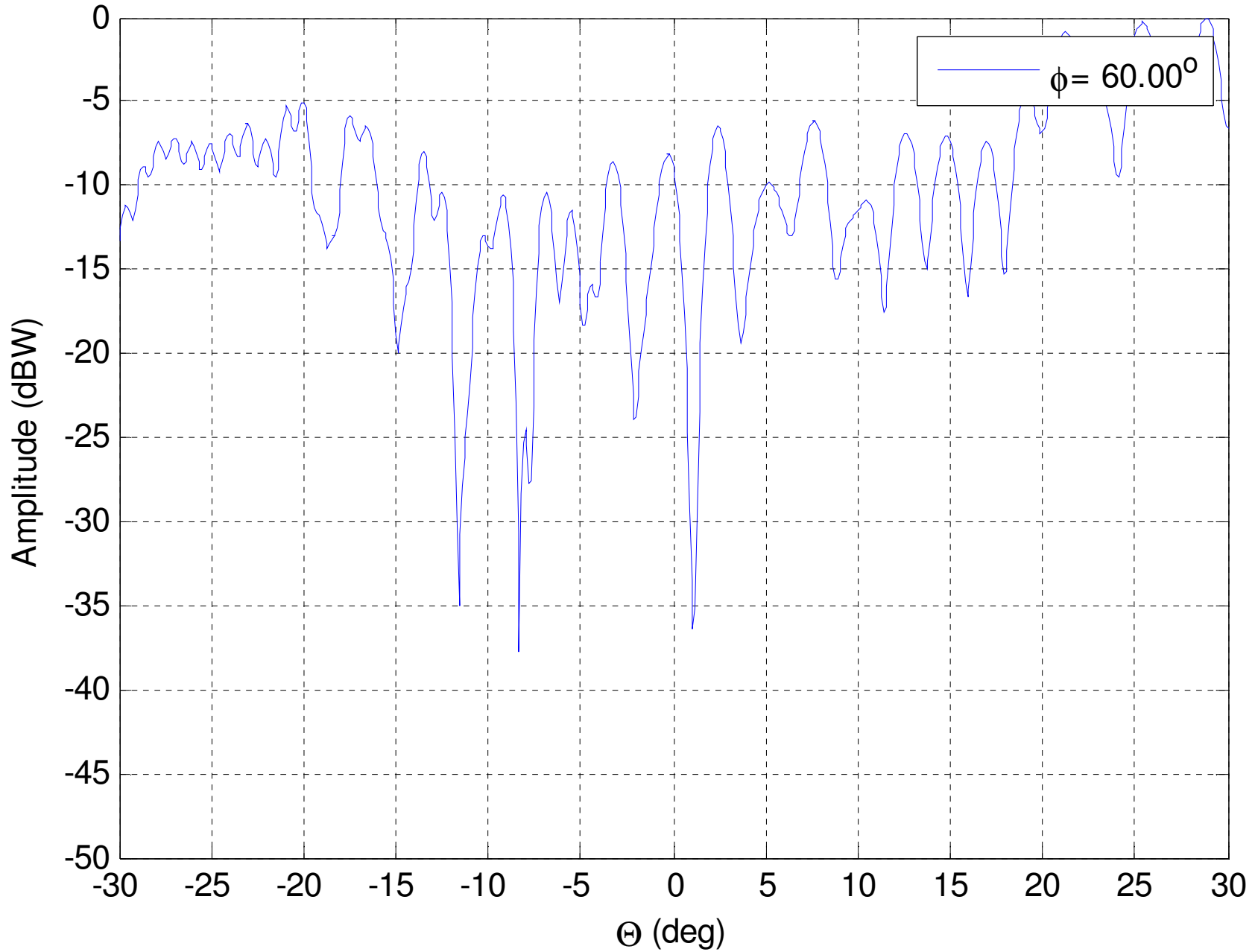
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.15 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

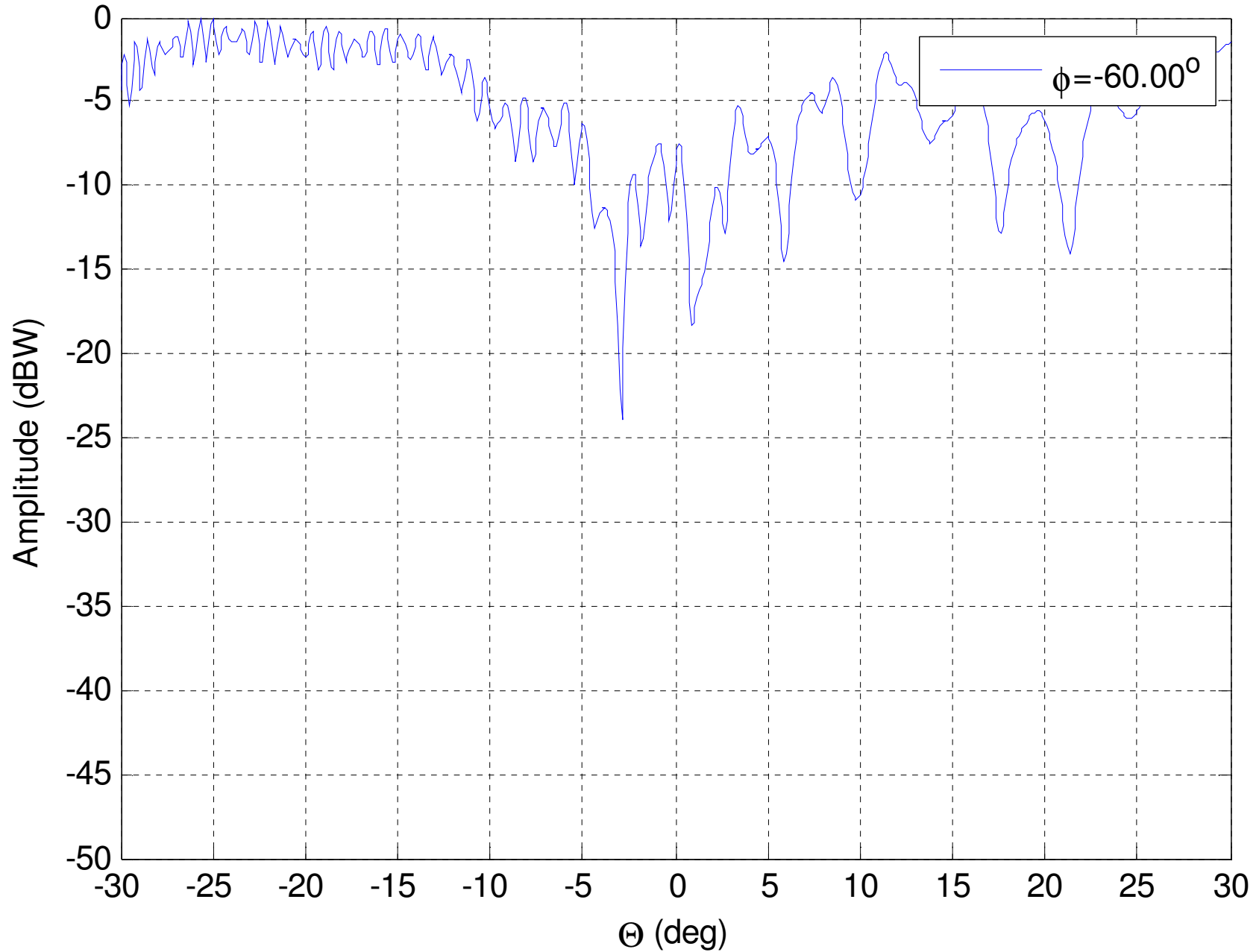
Input file: tx-17.5-lhcp-60.cut, Peak: -10.11 dBW, Date: 14-Dec-2011



RHCP at 17.7 GHz

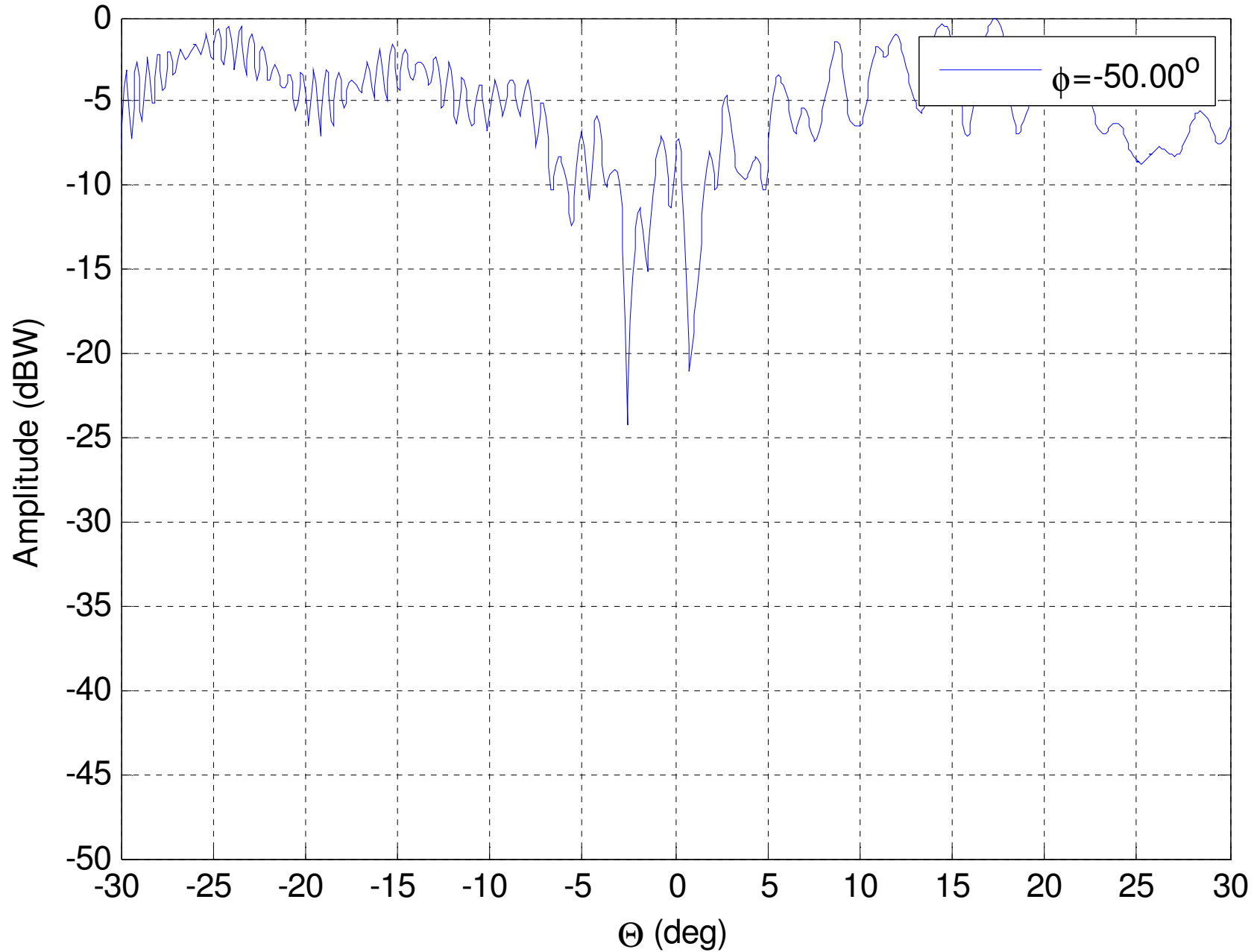
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -10.90 dBW, Date: 14-Dec-2011



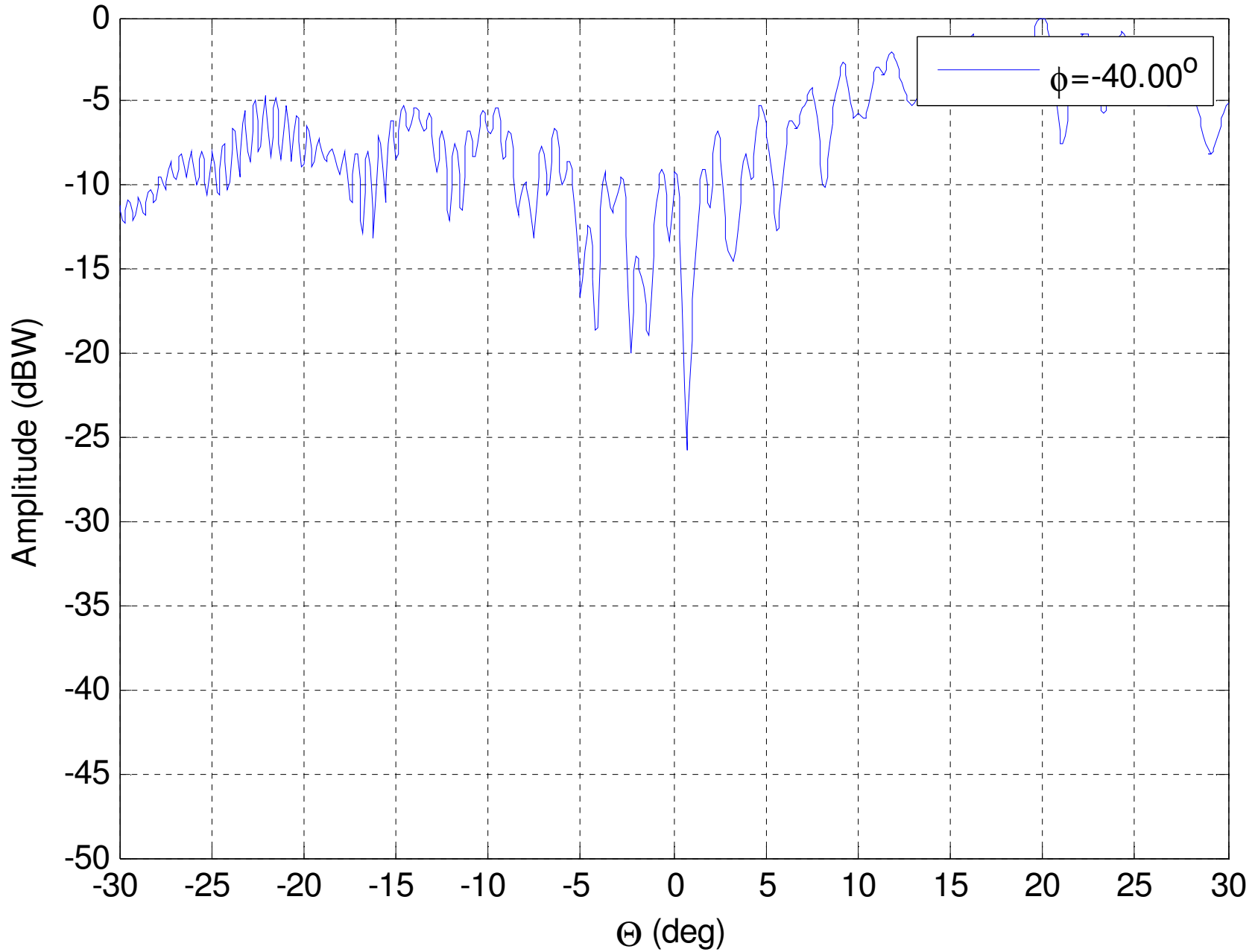
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -11.27 dBW, Date: 14-Dec-2011



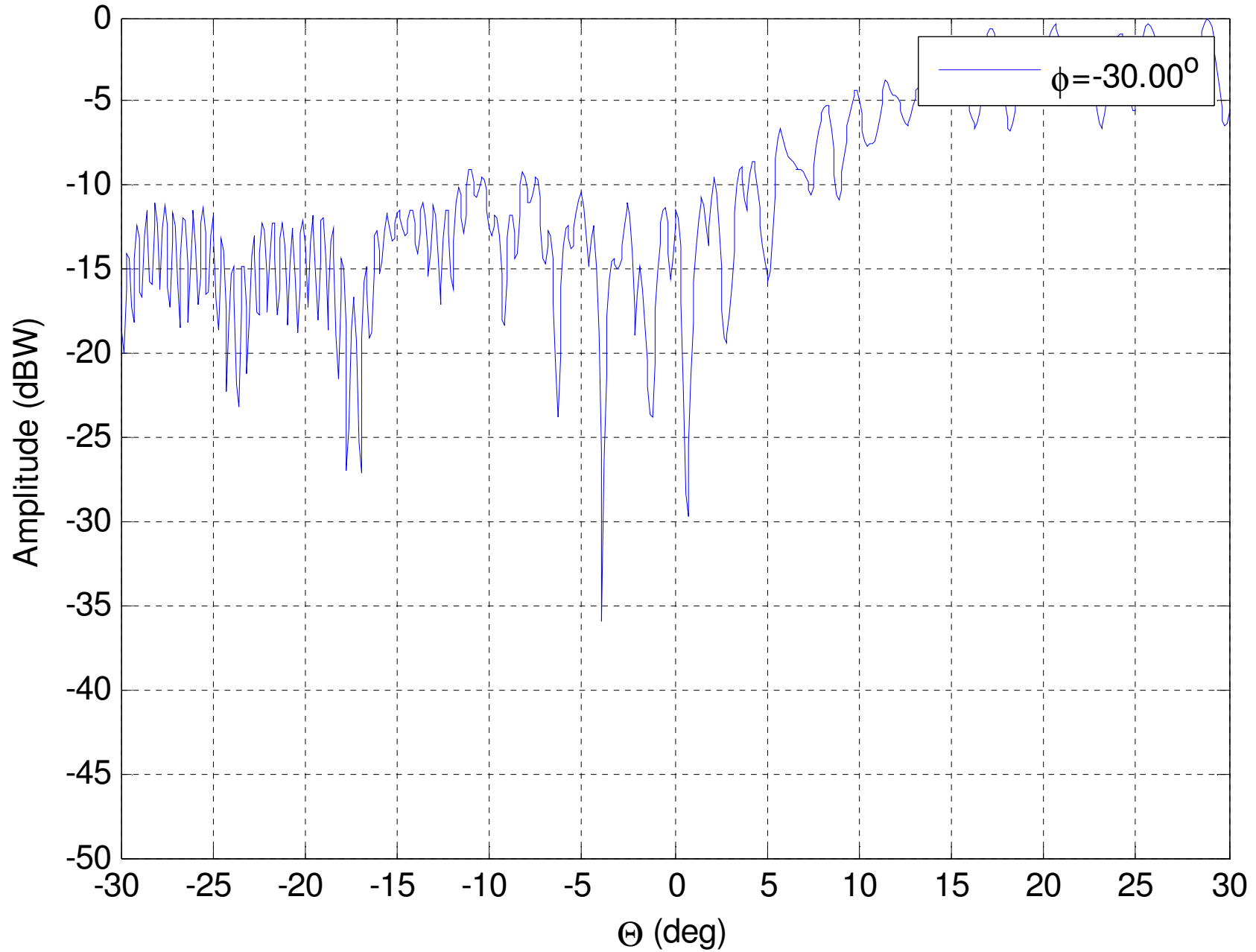
Normalized pattern cuts - farfield

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



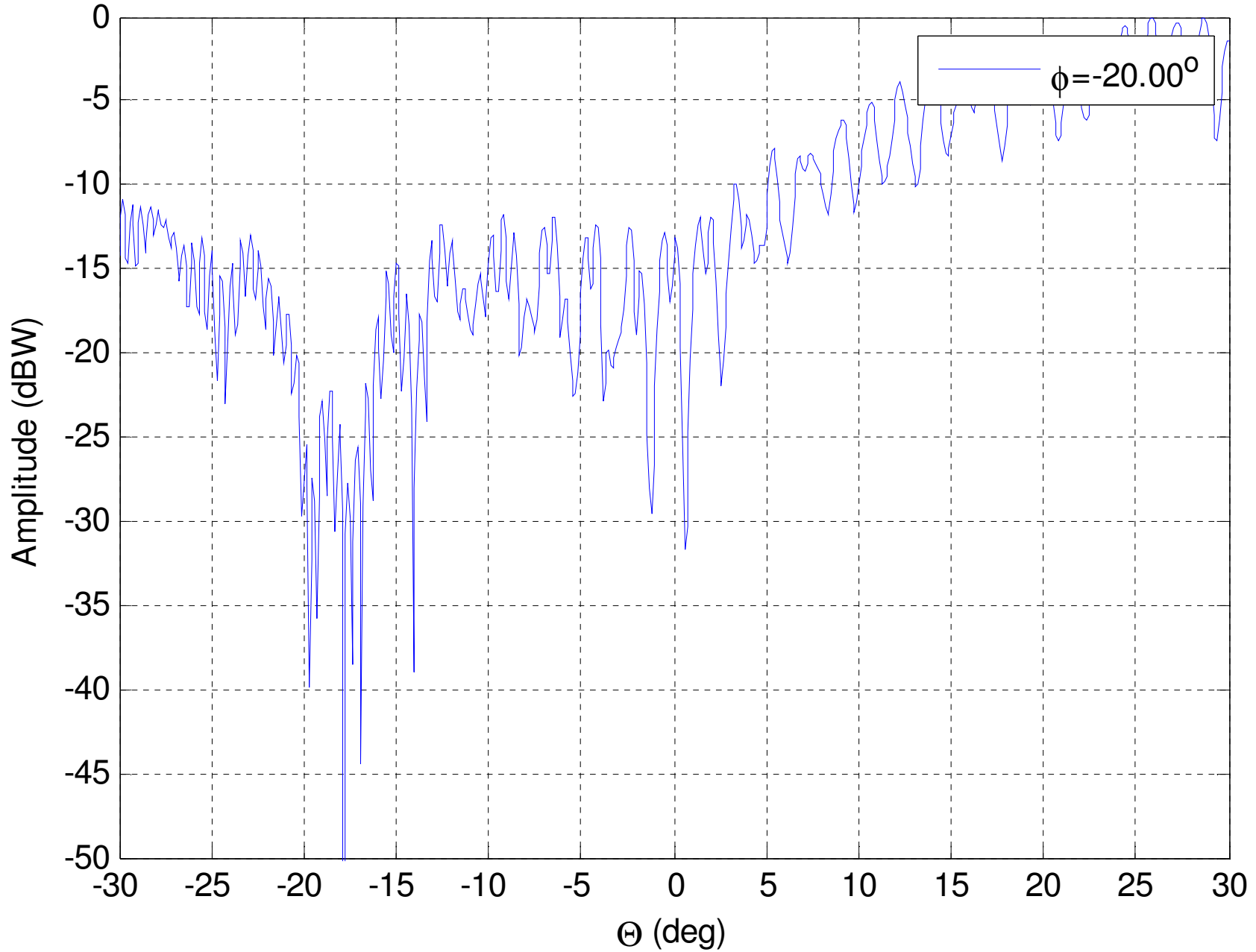
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.13 dBW, Date: 14-Dec-2011



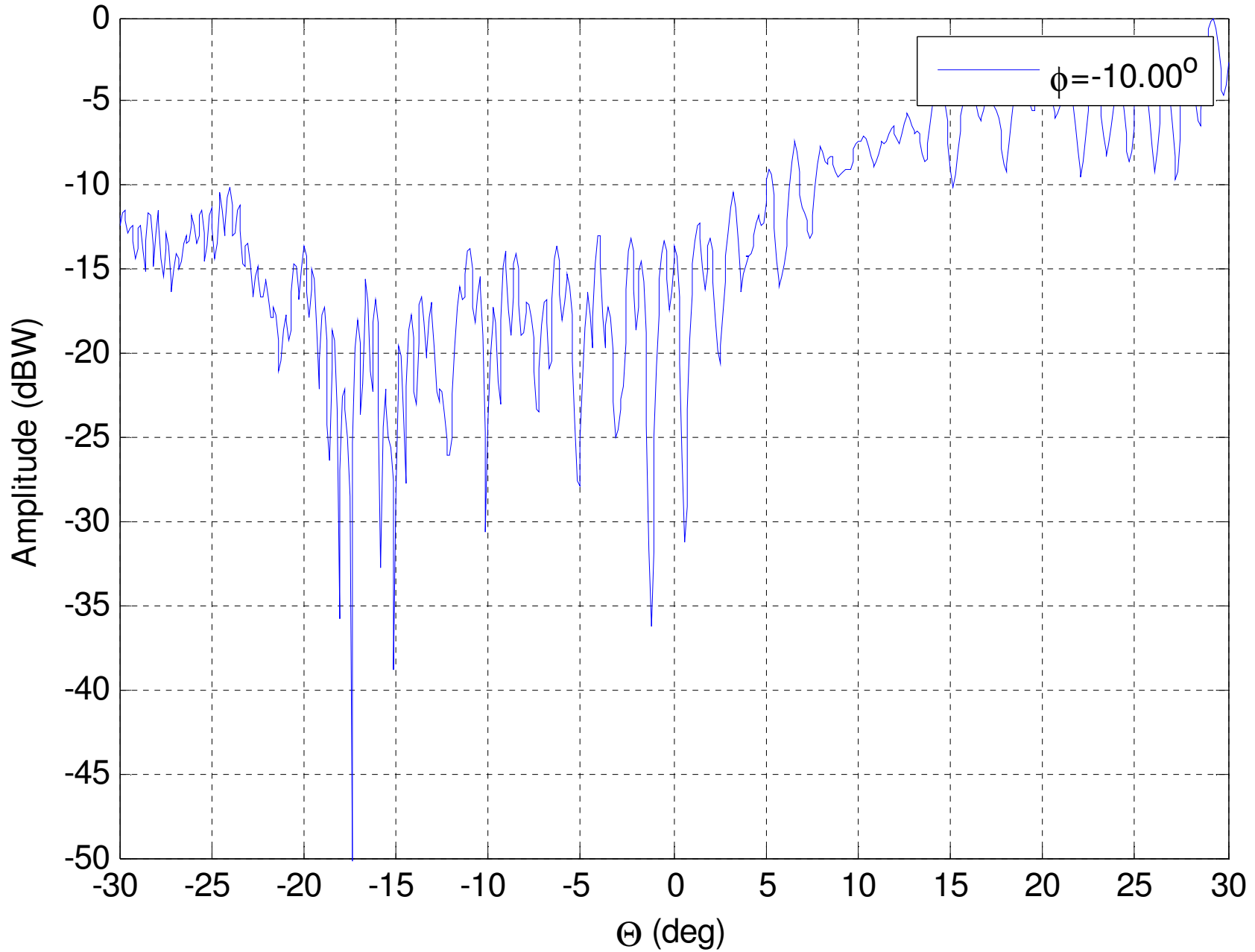
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -5.57 dBW, Date: 14-Dec-2011



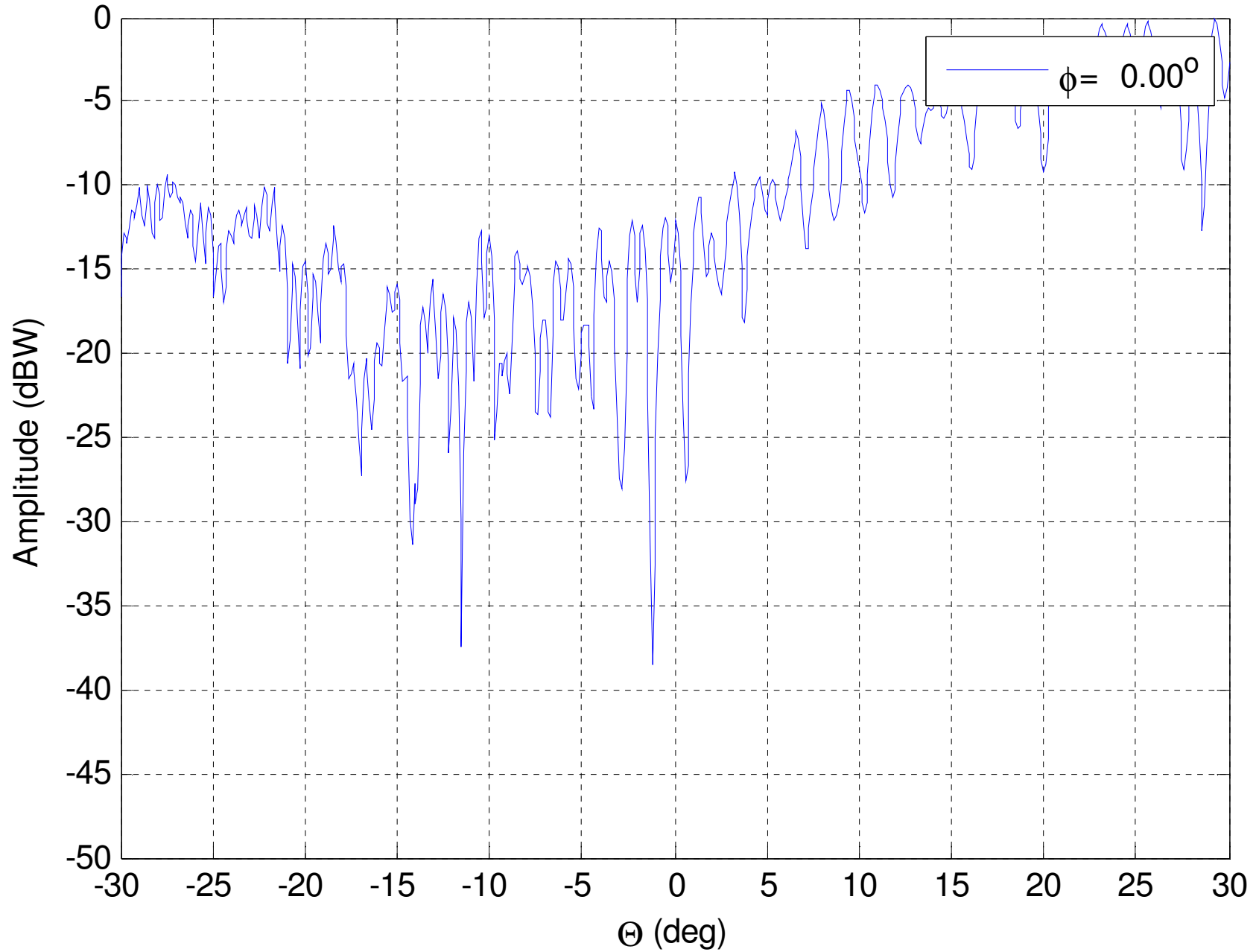
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -5.18 dBW, Date: 14-Dec-2011



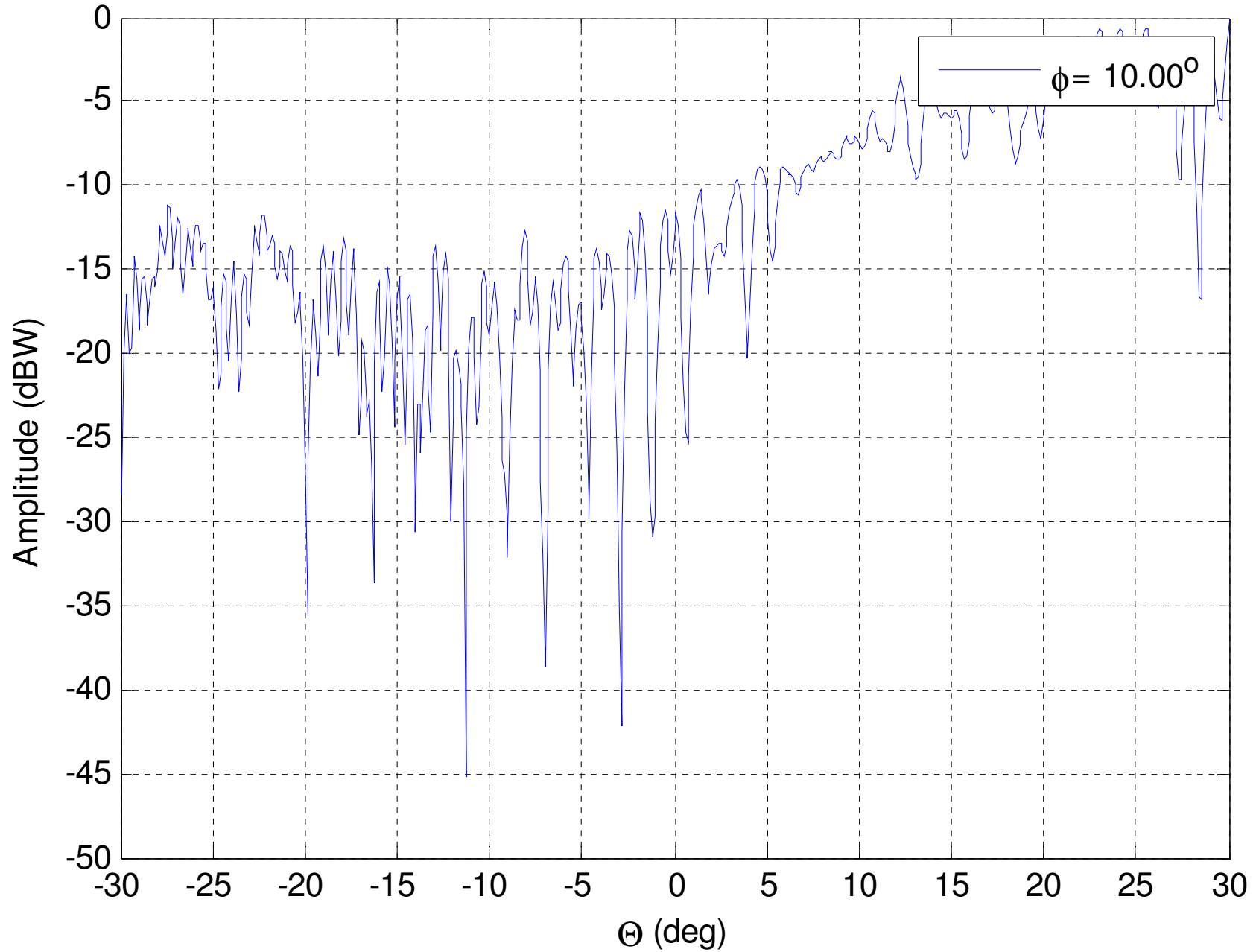
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



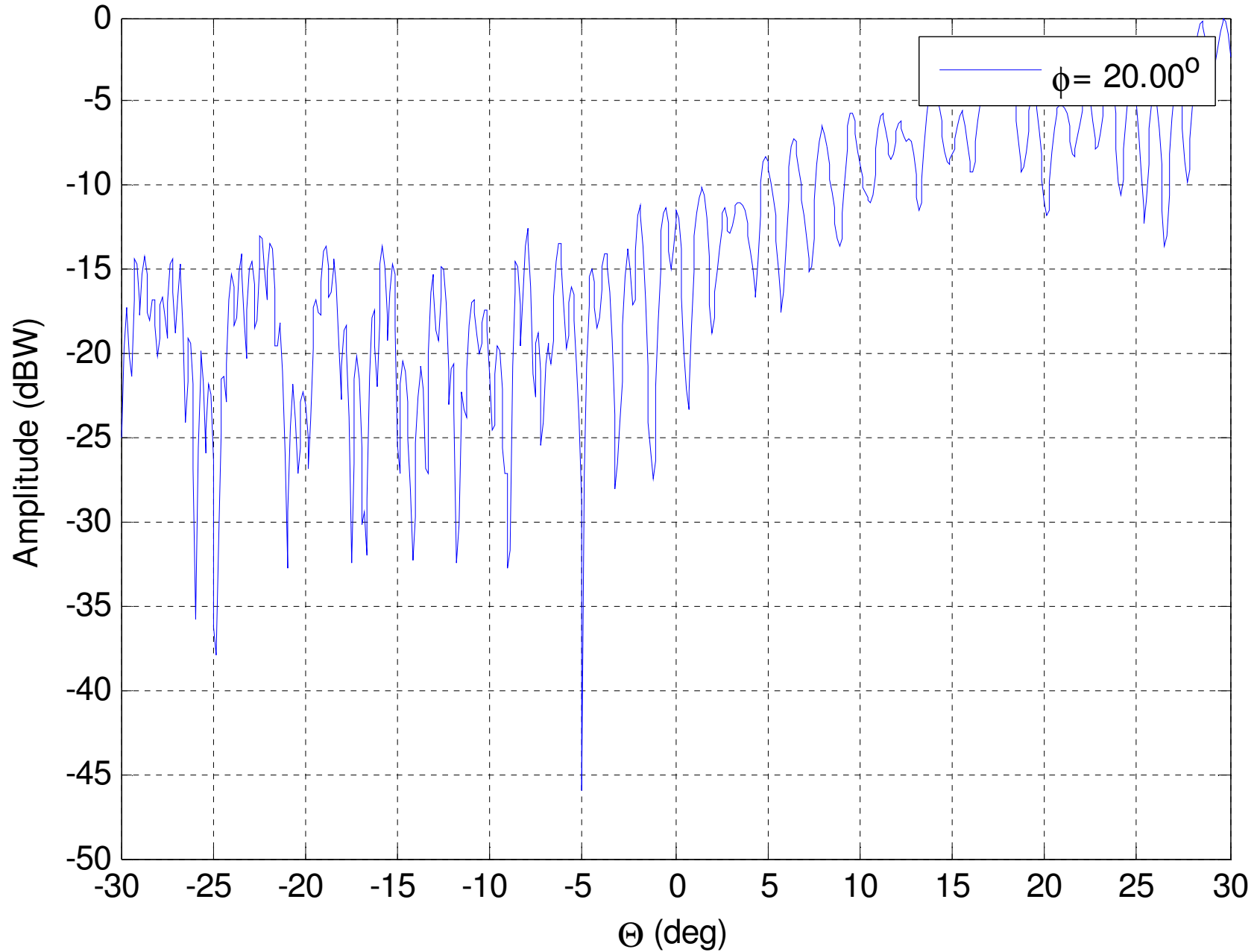
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.20 dBW, Date: 14-Dec-2011



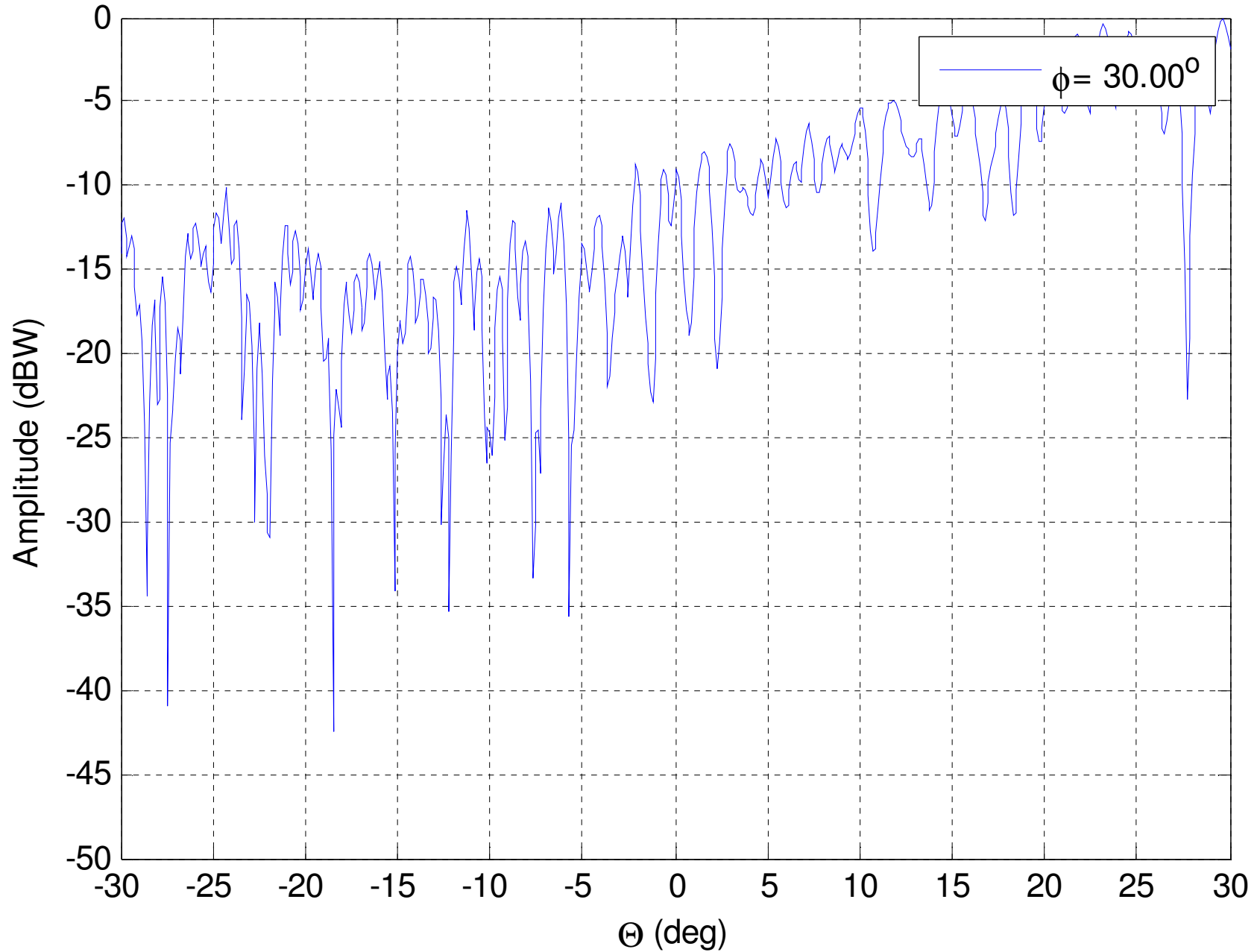
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.49 dBW, Date: 14-Dec-2011



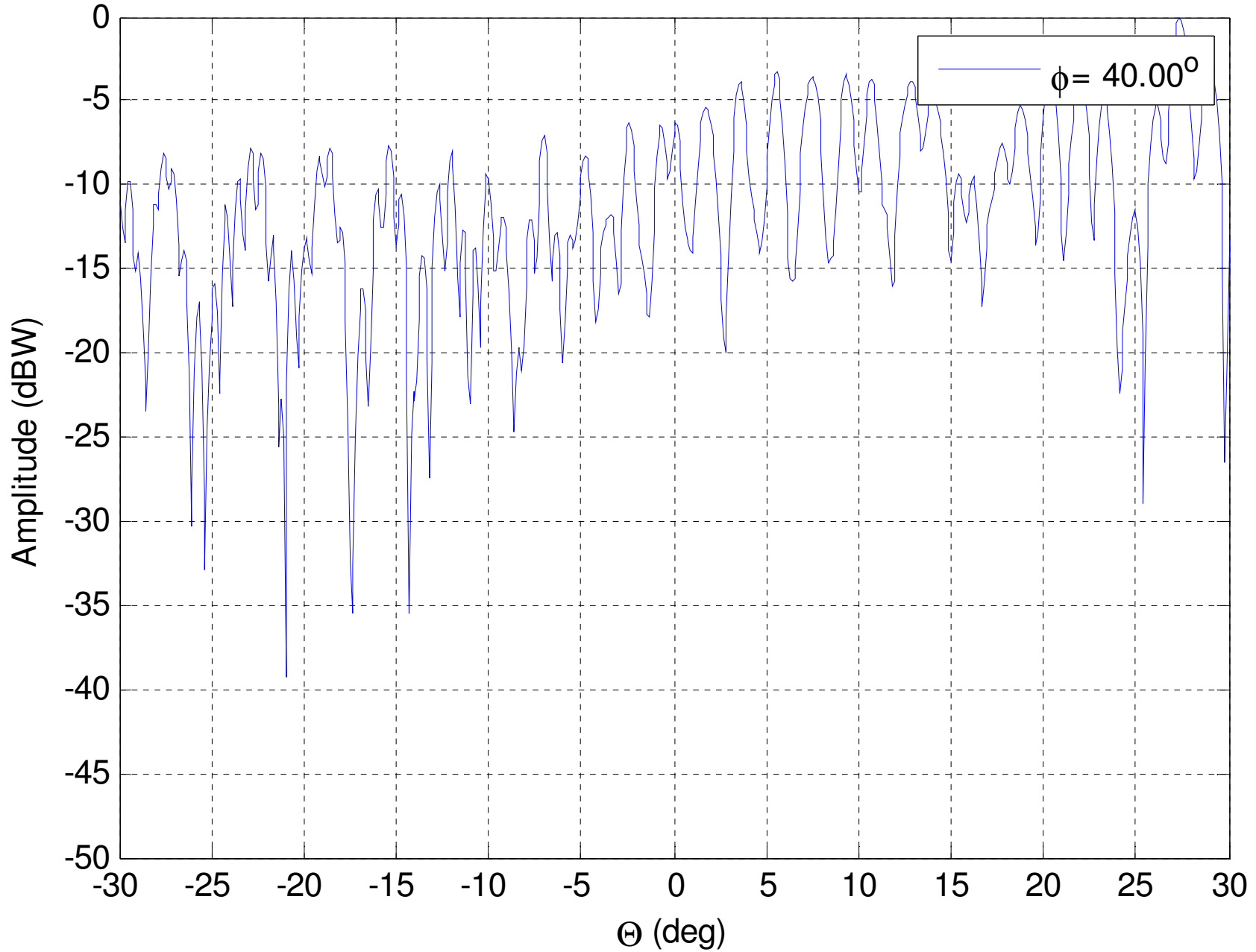
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.91 dBW, Date: 14-Dec-2011



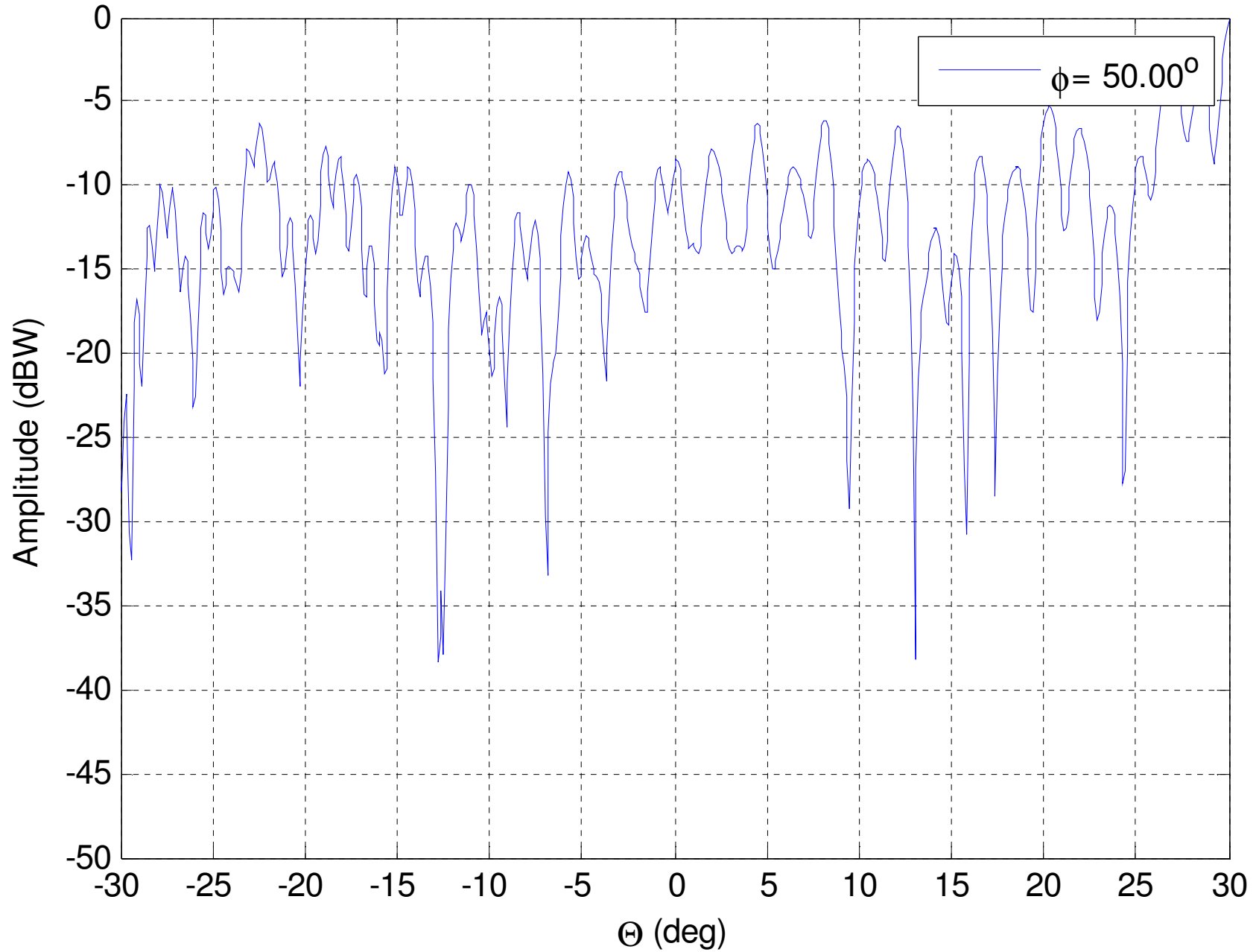
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -12.74 dBW, Date: 14-Dec-2011



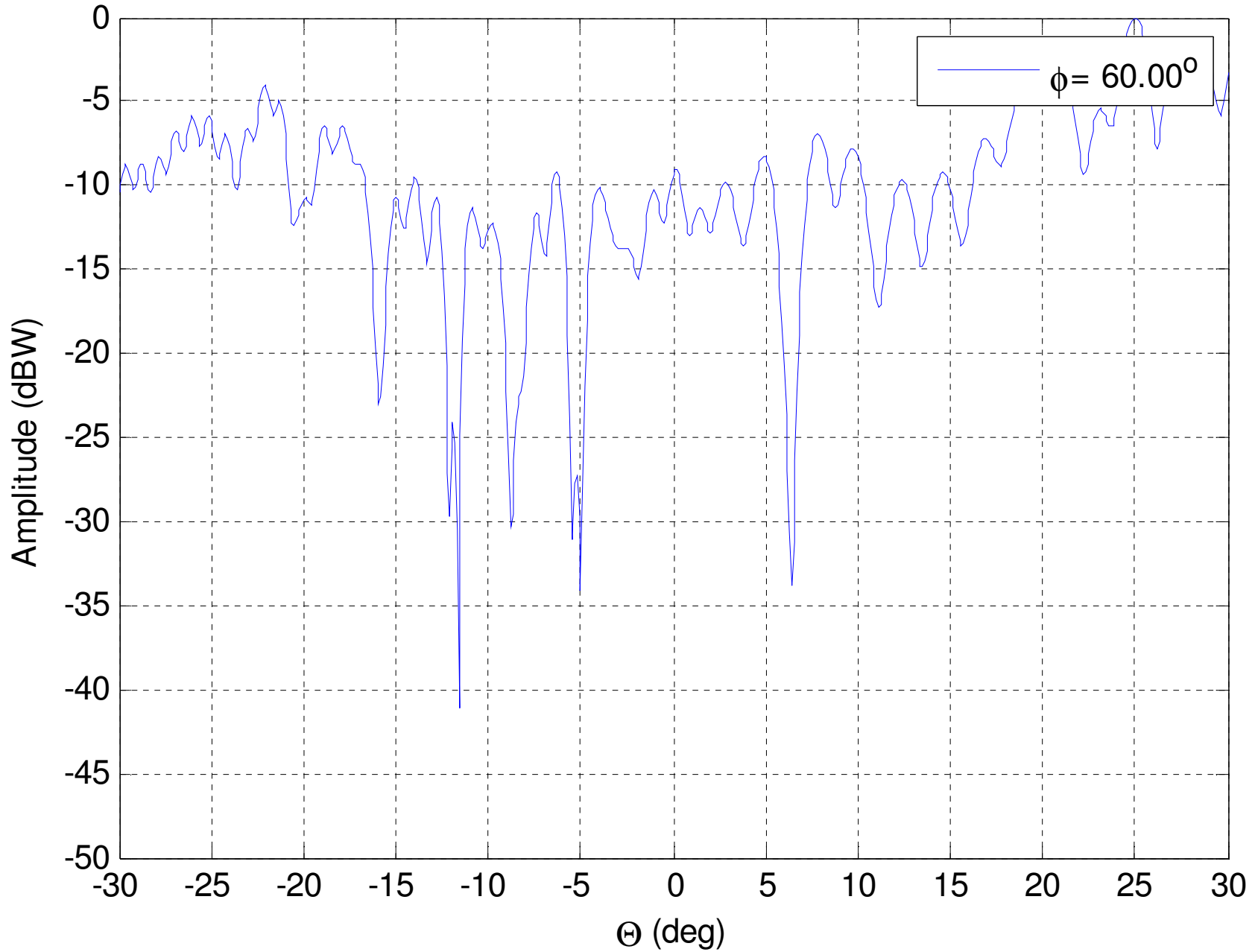
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -10.73 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

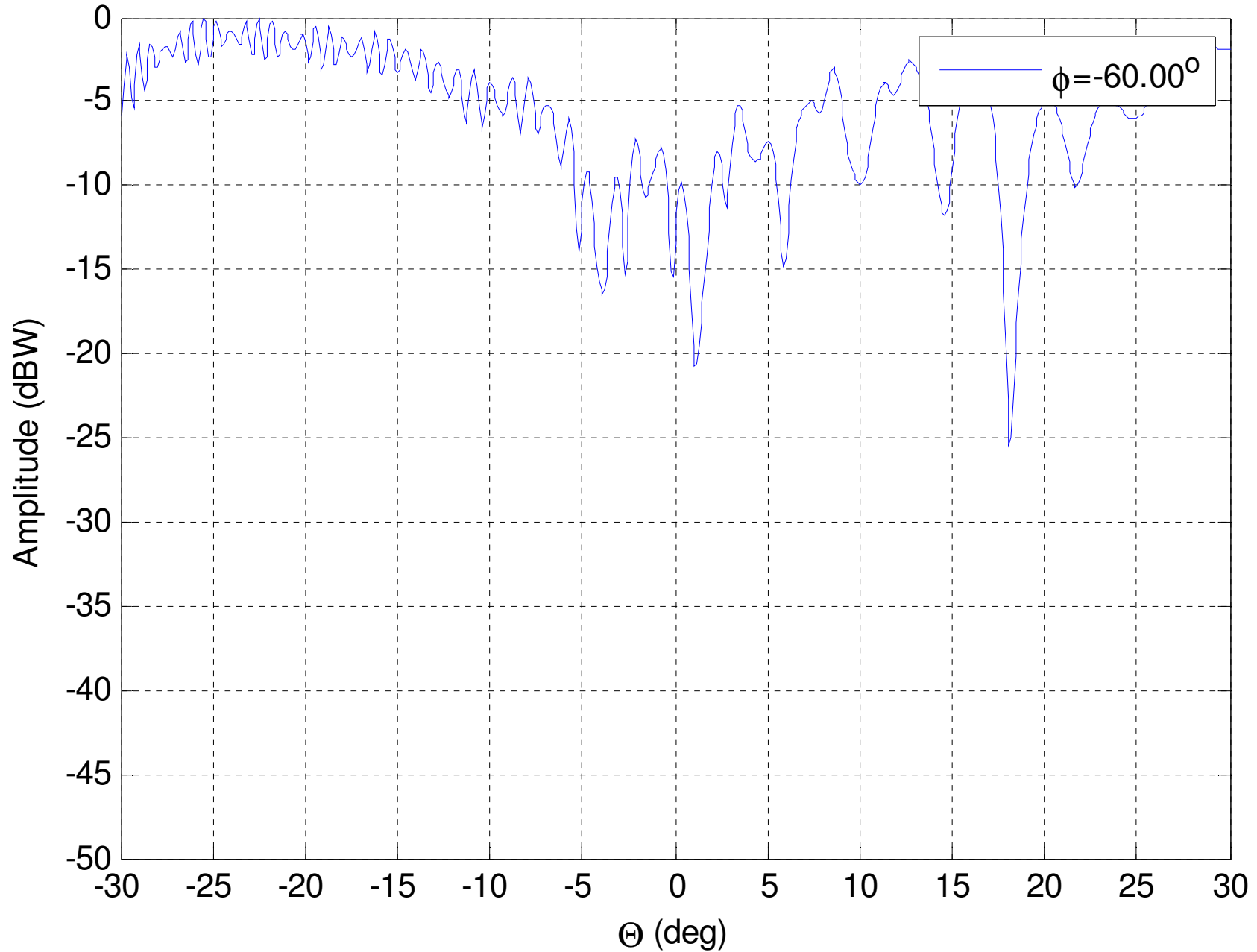
Input file: tx-17.7-rhcp-60.cut, Peak: -10.25 dBW, Date: 14-Dec-2011



LHCP at 17.7 GHz

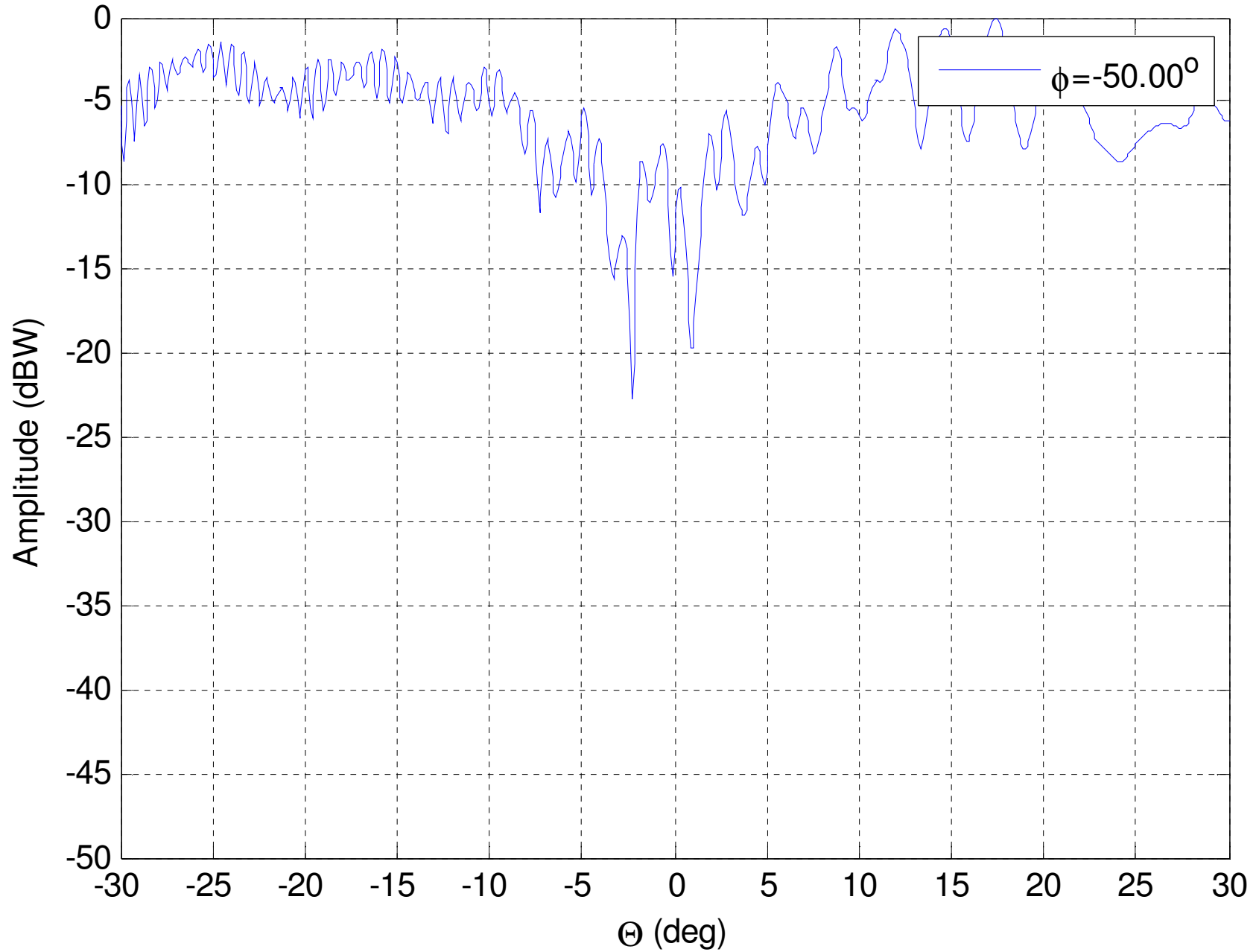
Normalized pattern cuts - farfield

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



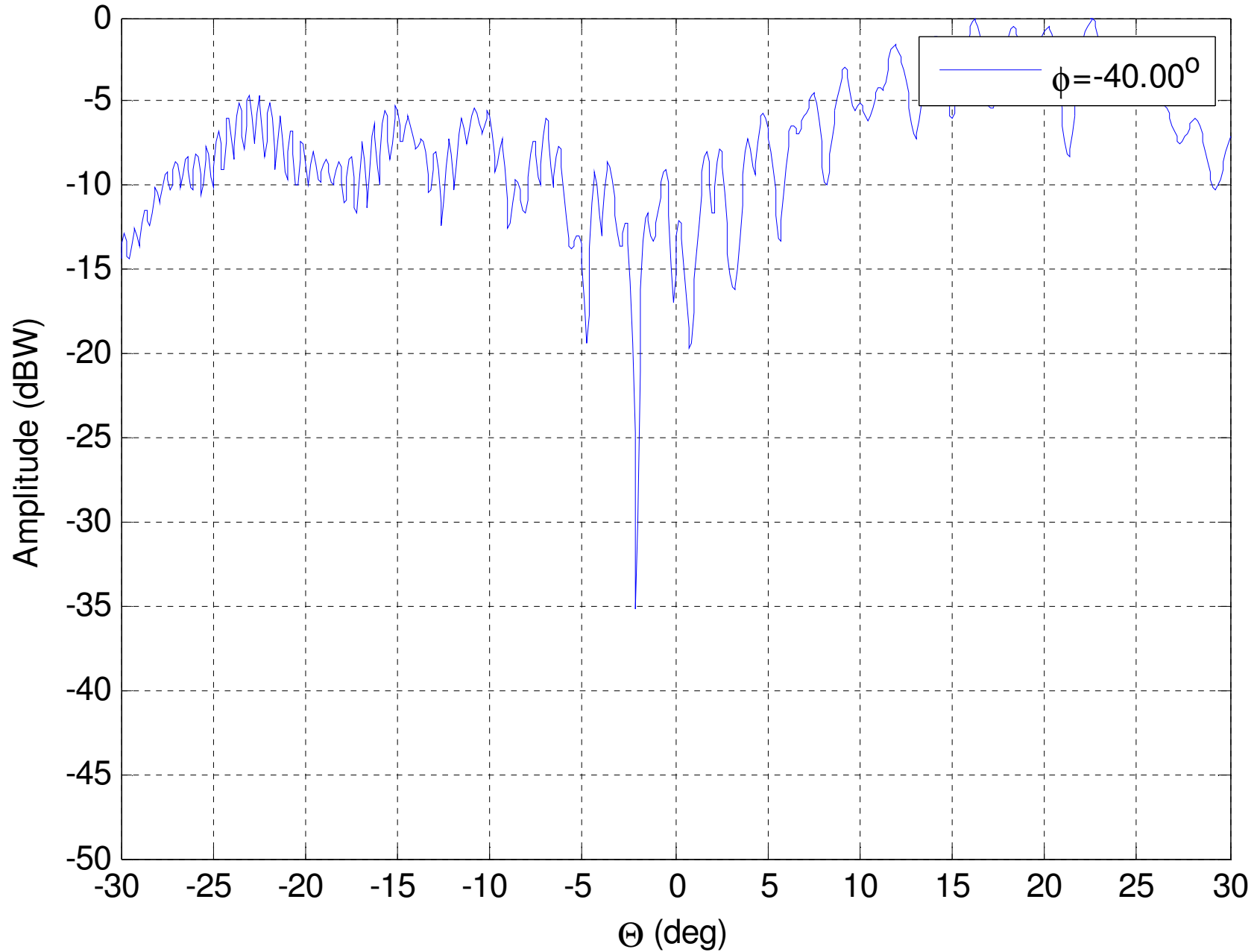
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -10.92 dBW, Date: 14-Dec-2011



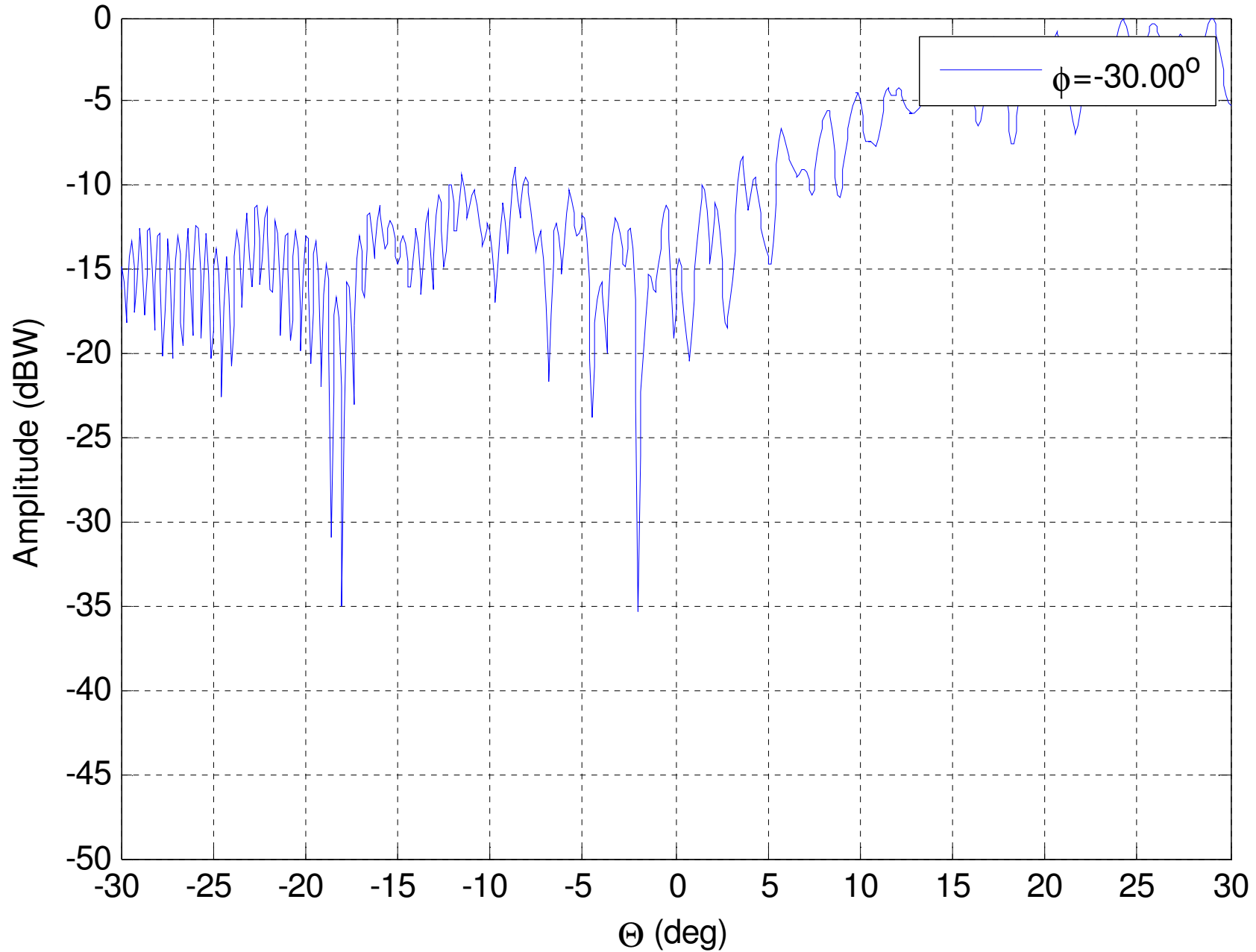
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -9.24 dBW, Date: 14-Dec-2011



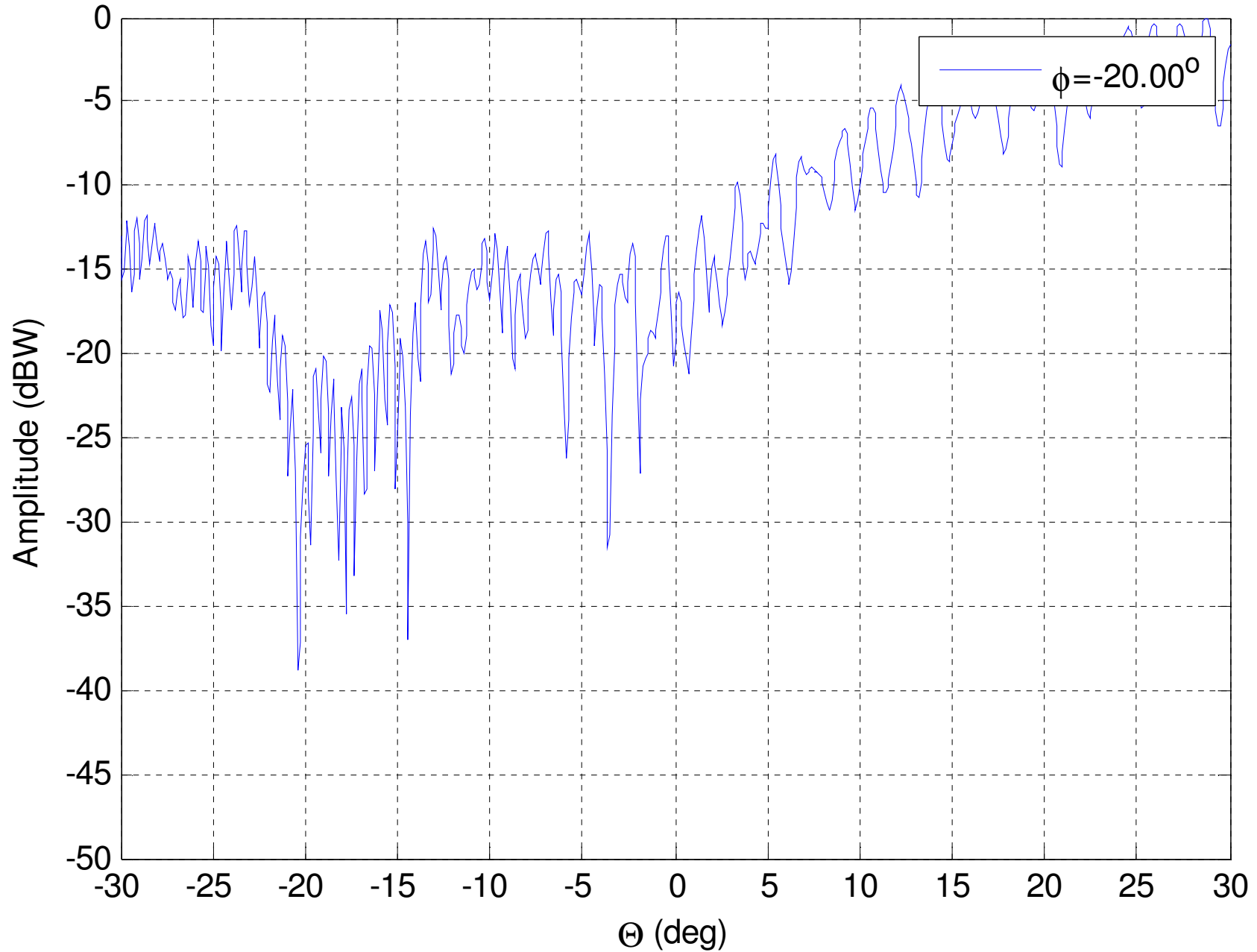
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.01 dBW, Date: 14-Dec-2011



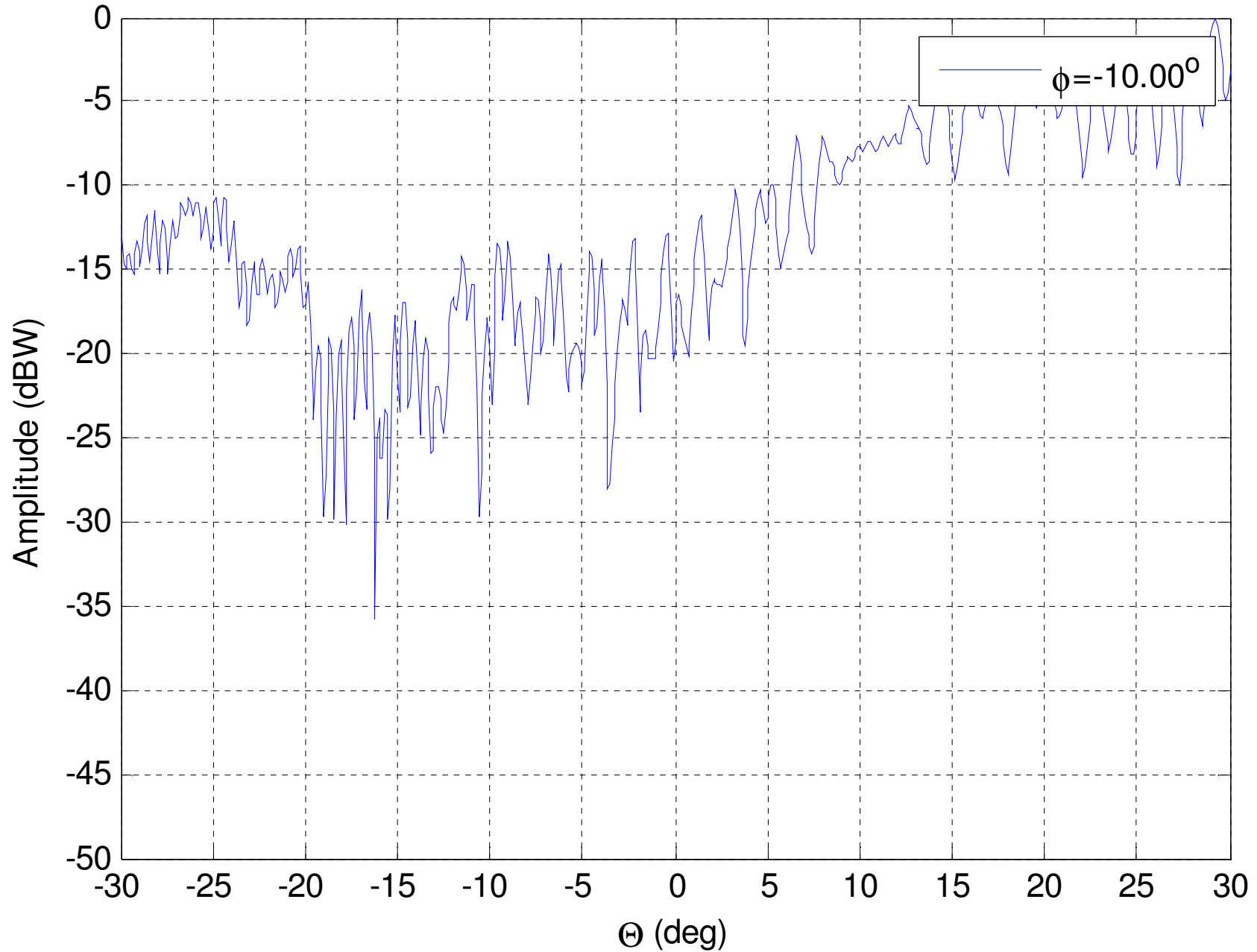
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -5.24 dBW, Date: 14-Dec-2011



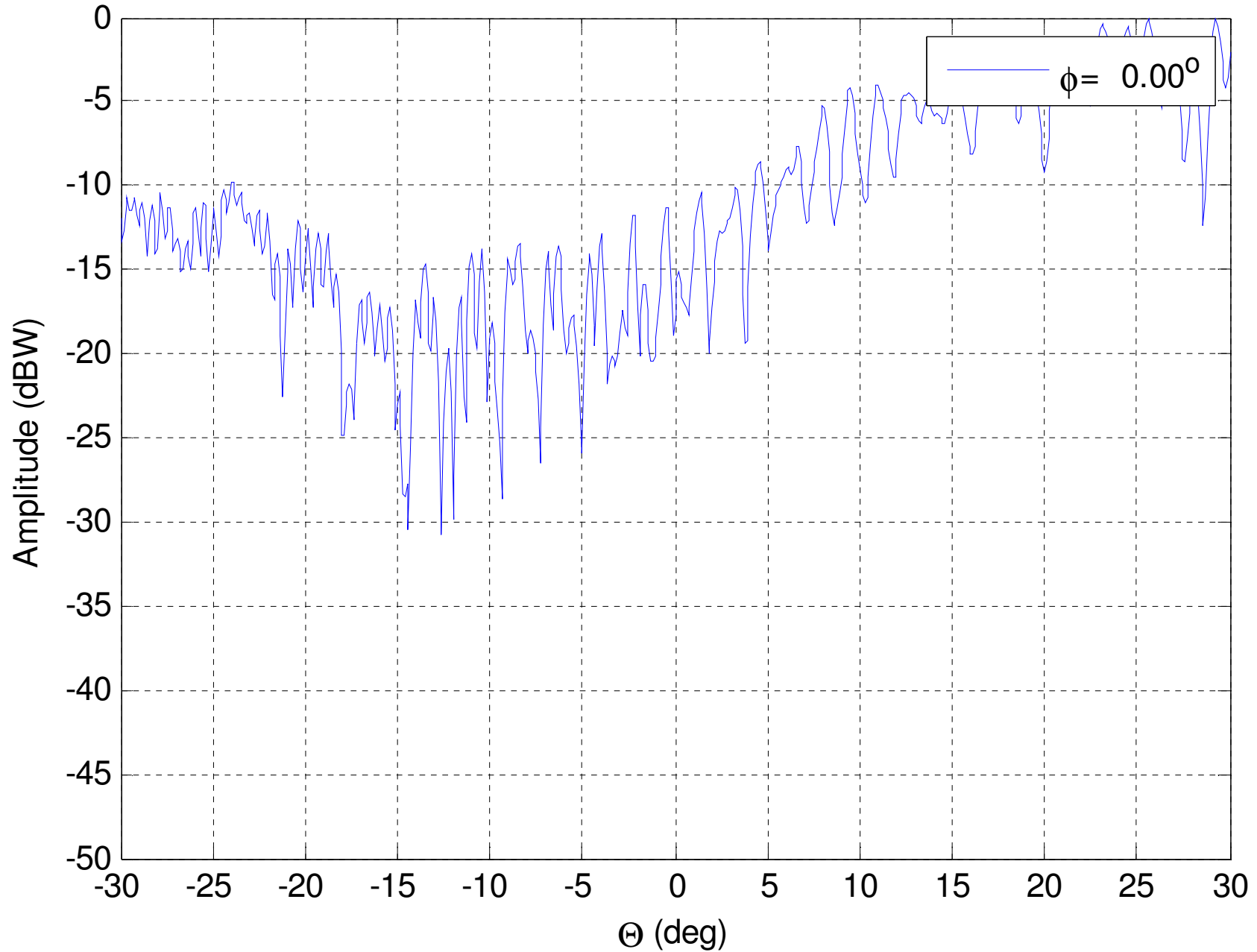
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -5.29 dBW, Date: 14-Dec-2011



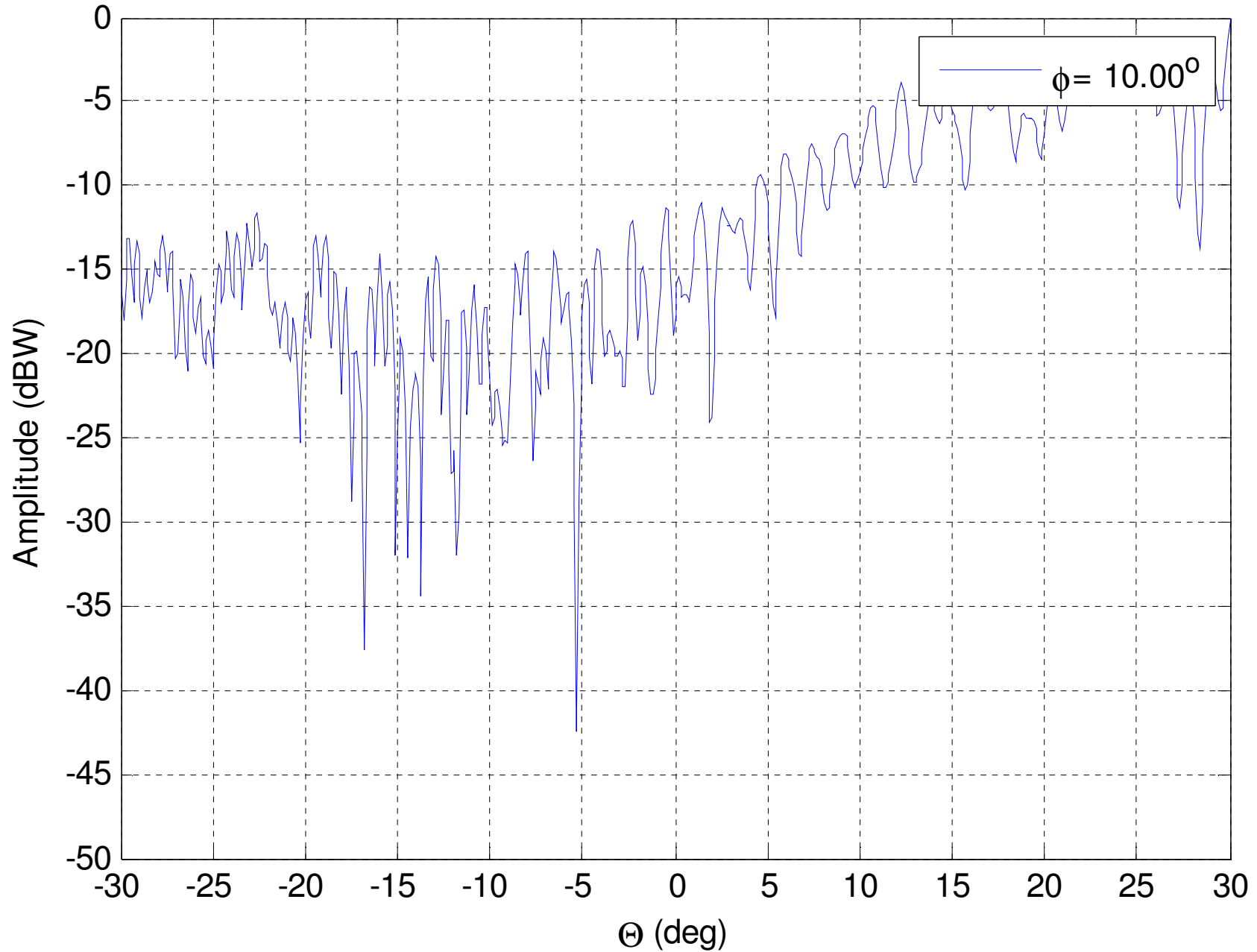
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -6.81 dBW, Date: 14-Dec-2011



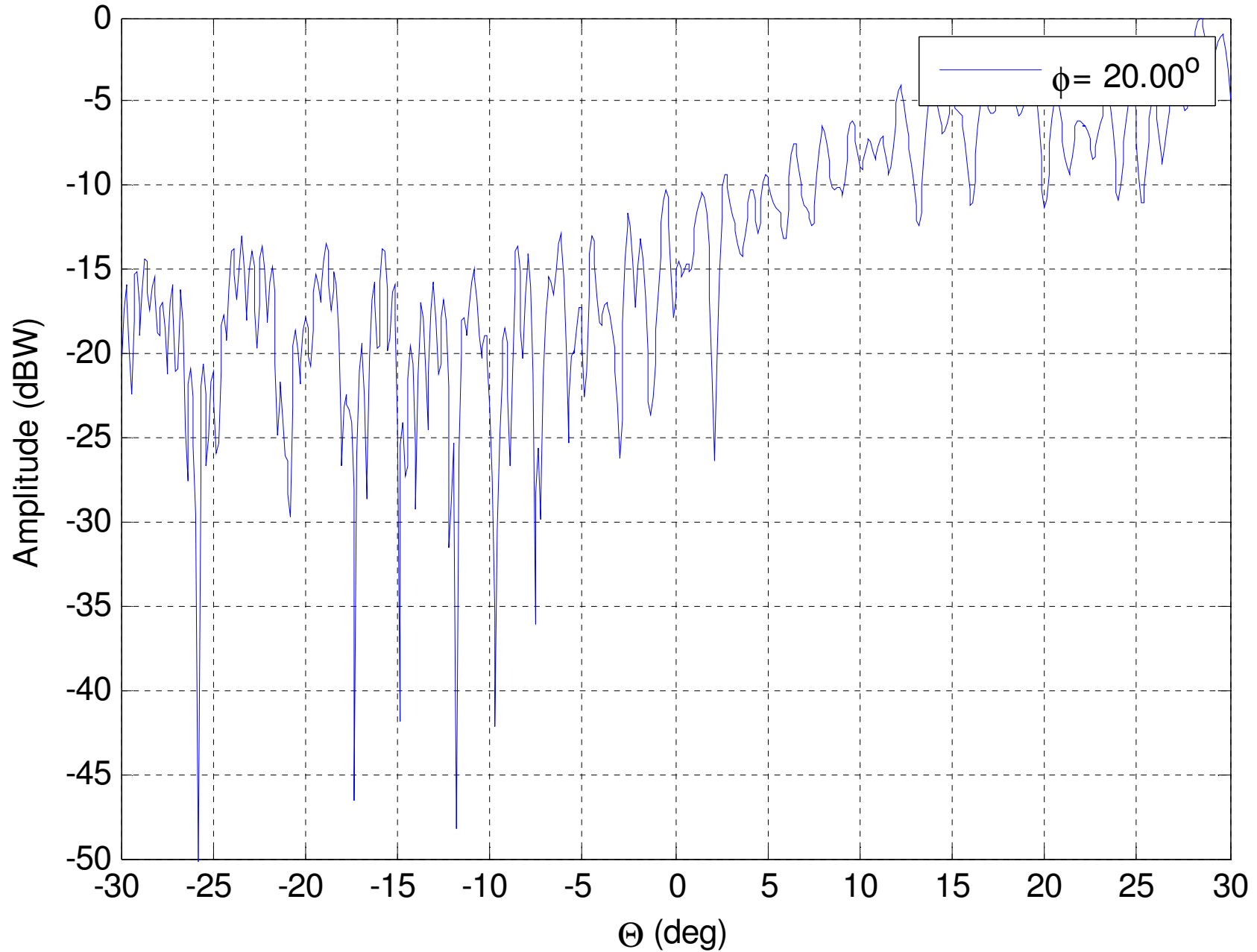
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -6.72 dBW, Date: 14-Dec-2011



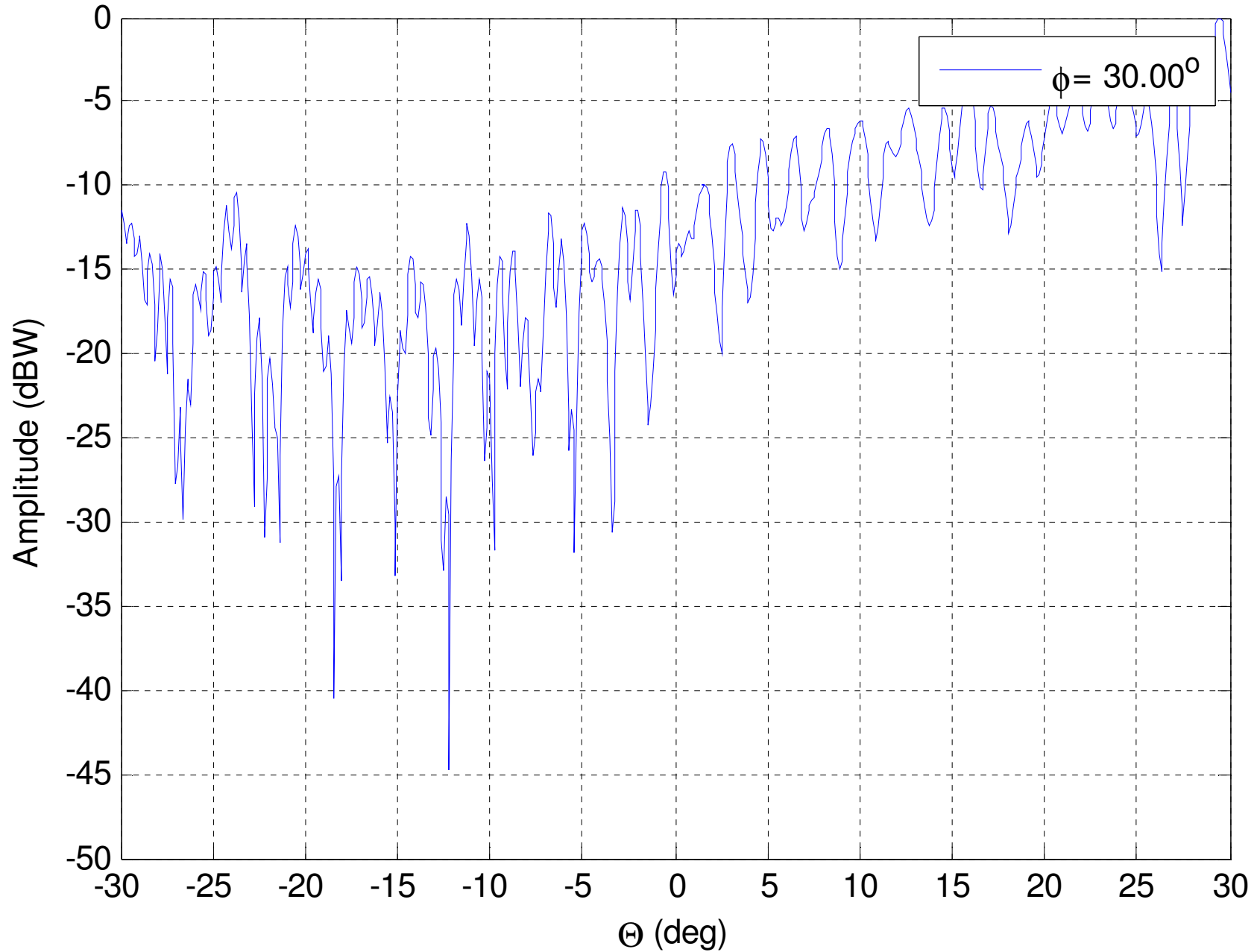
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -7.79 dBW, Date: 14-Dec-2011



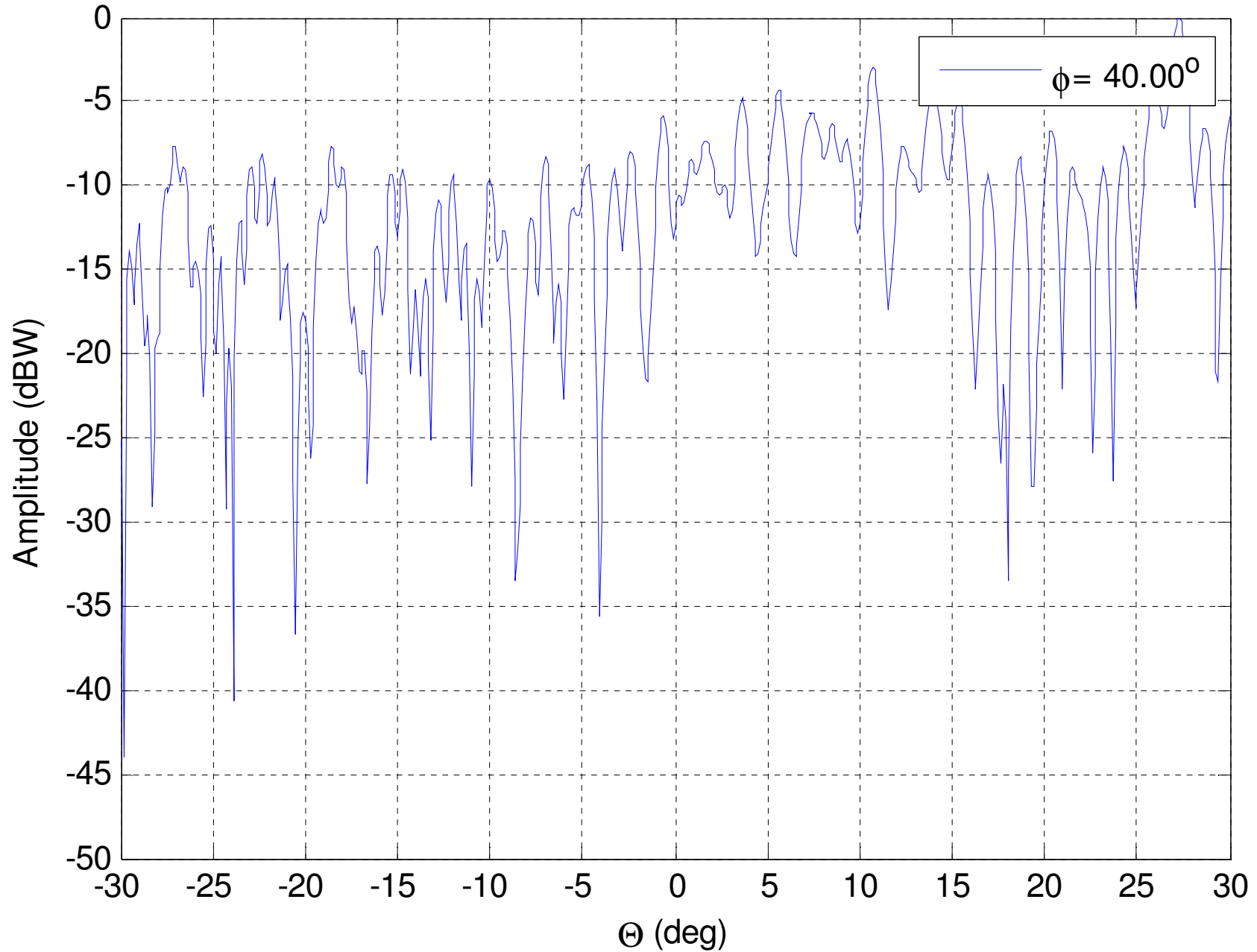
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.02 dBW, Date: 14-Dec-2011



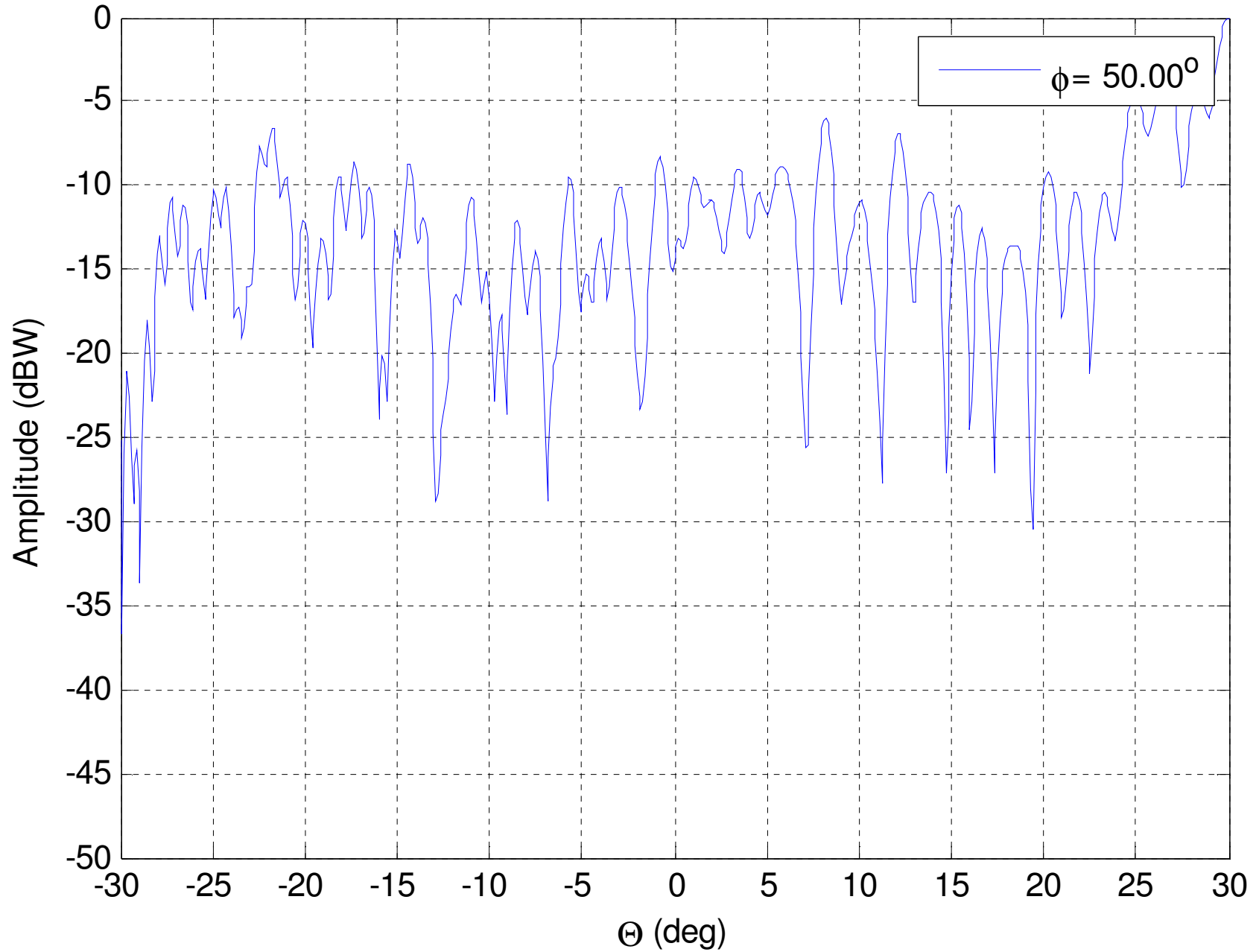
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -12.24 dBW, Date: 14-Dec-2011



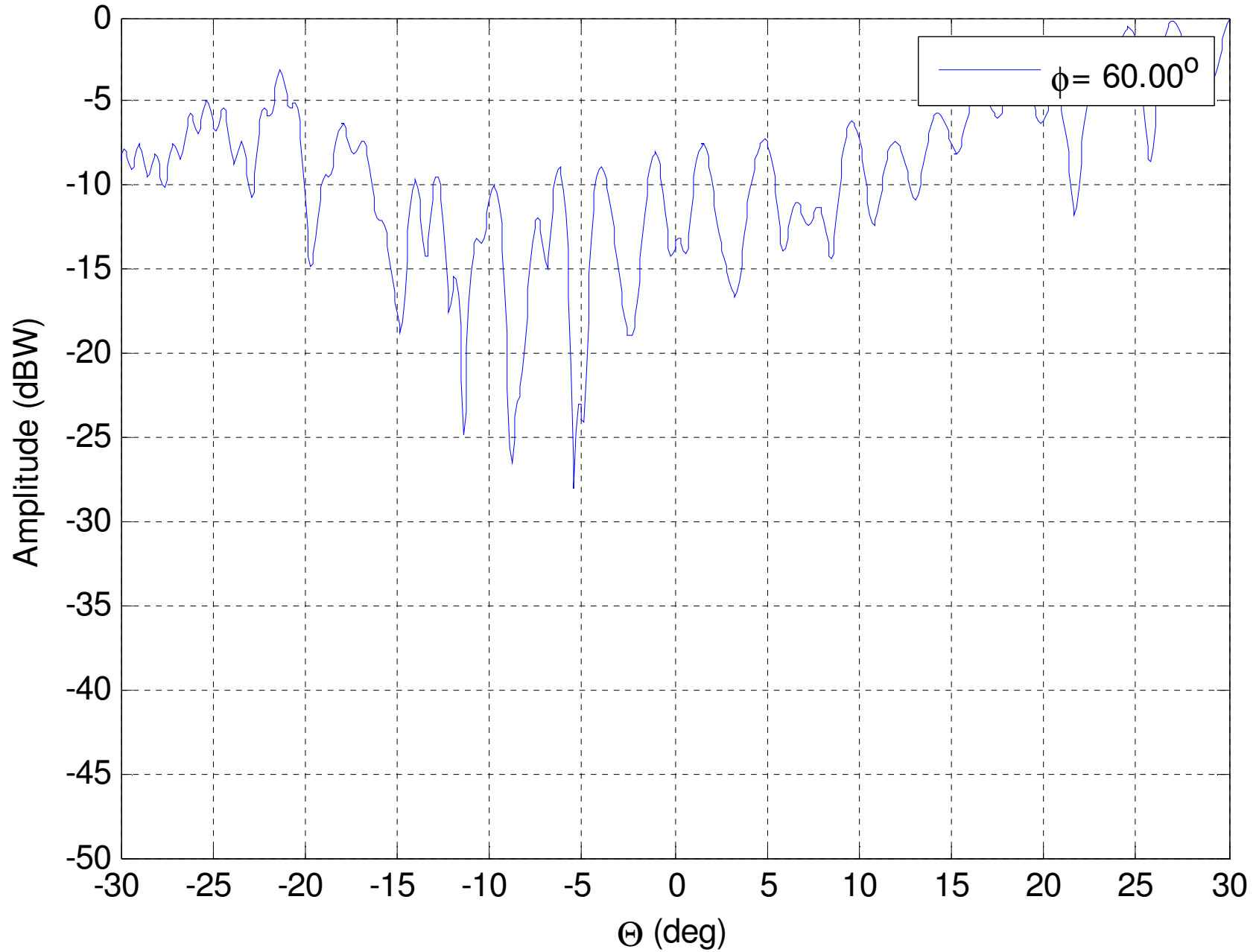
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -10.06 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.73 dBW, Date: 14-Dec-2011



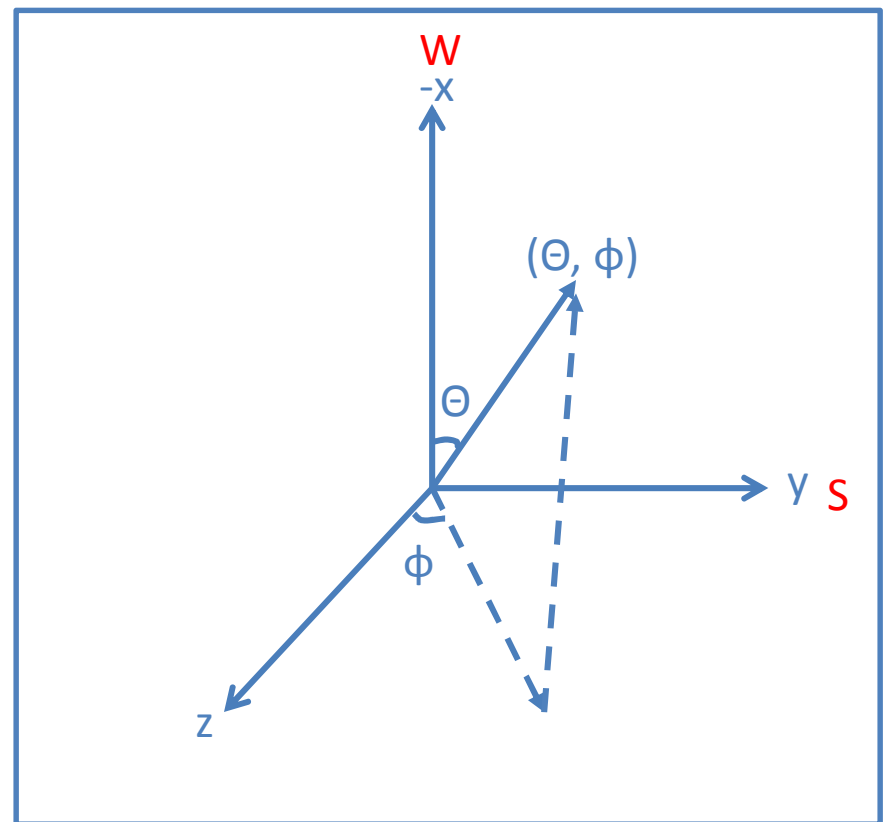
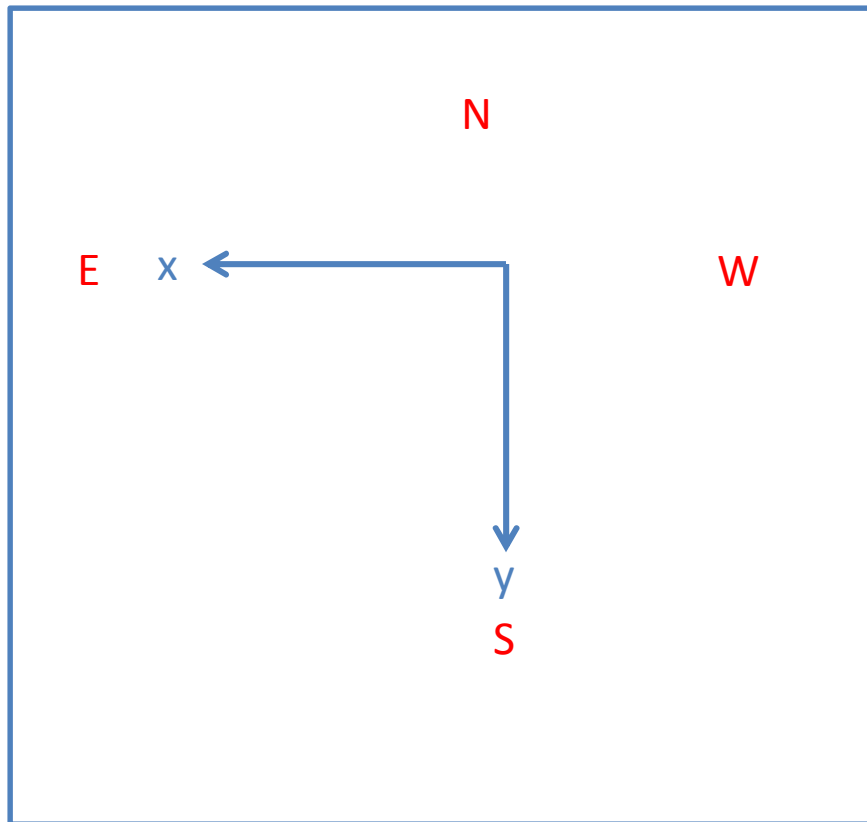
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 21

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



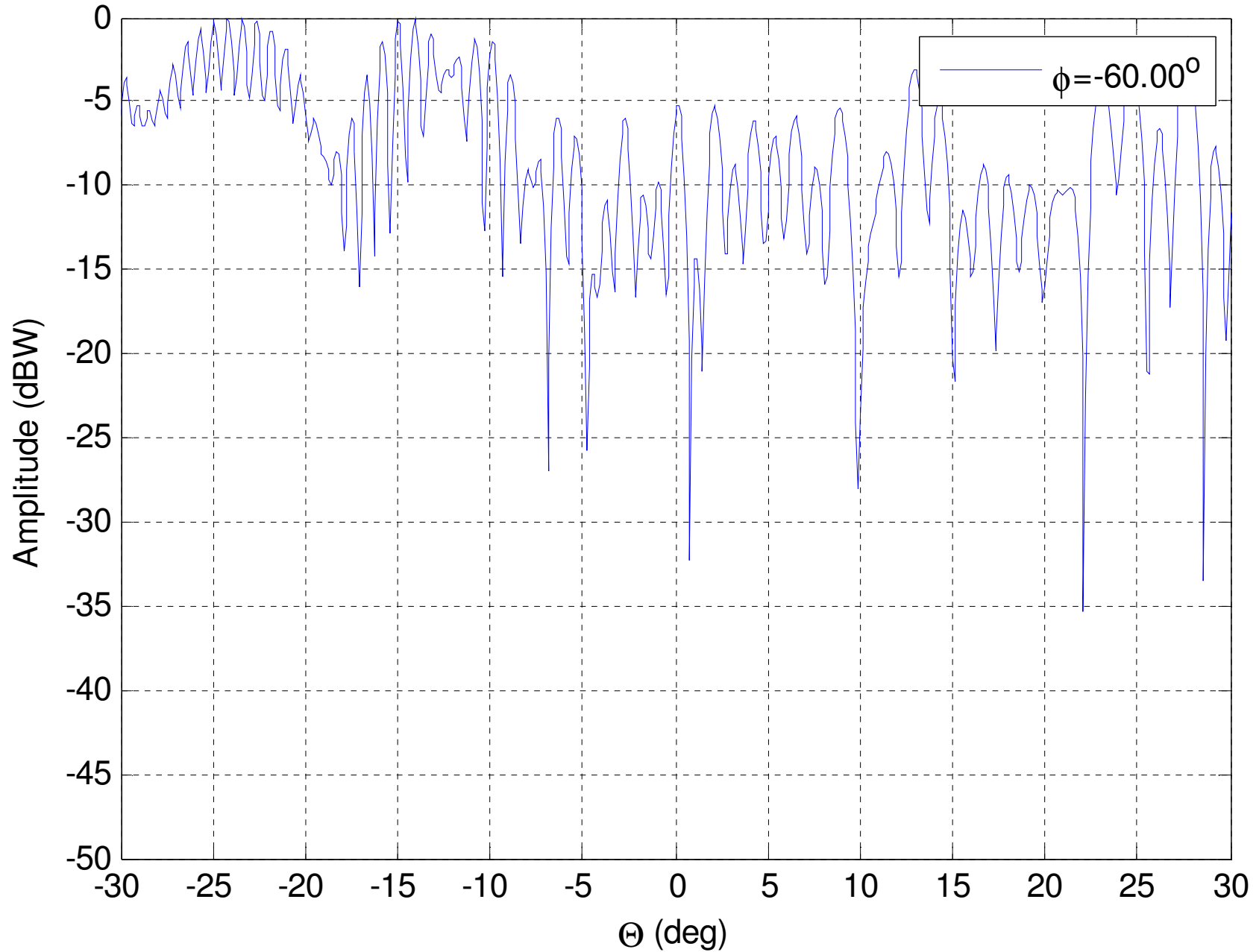
Spot Beam21, -X Axis Plots

- 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

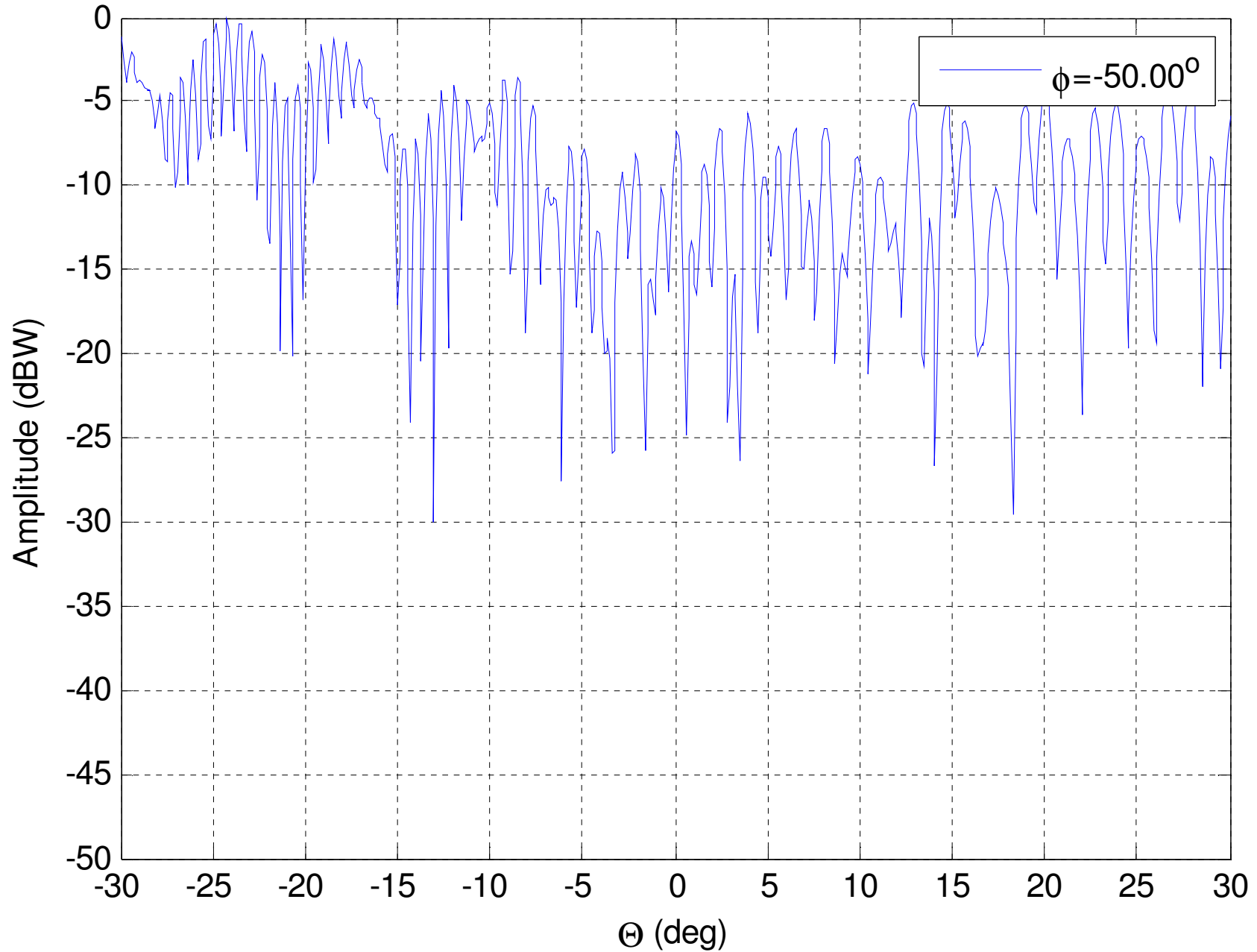
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -12.24 dBW, Date: 15-Dec-2011



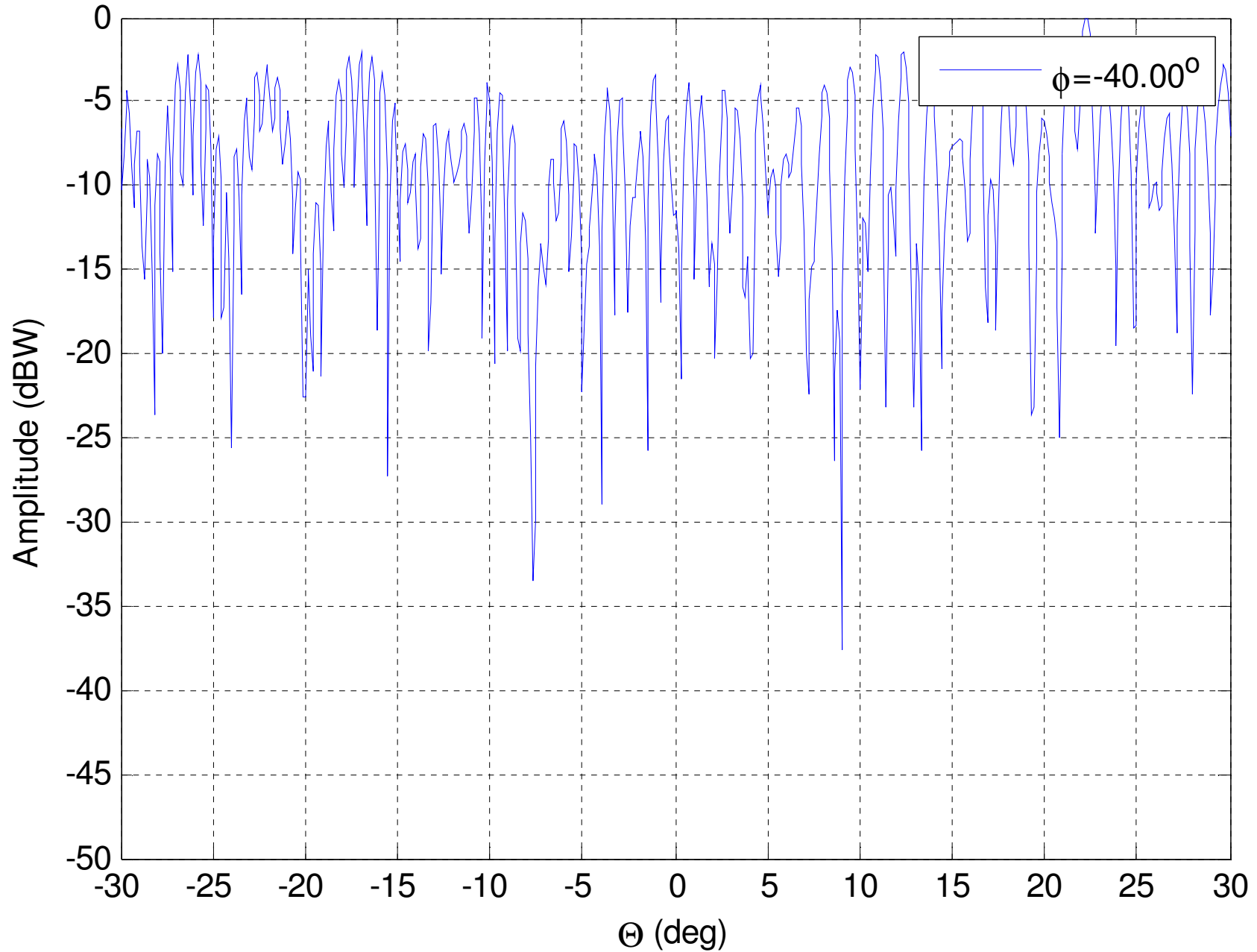
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -10.65 dBW, Date: 15-Dec-2011



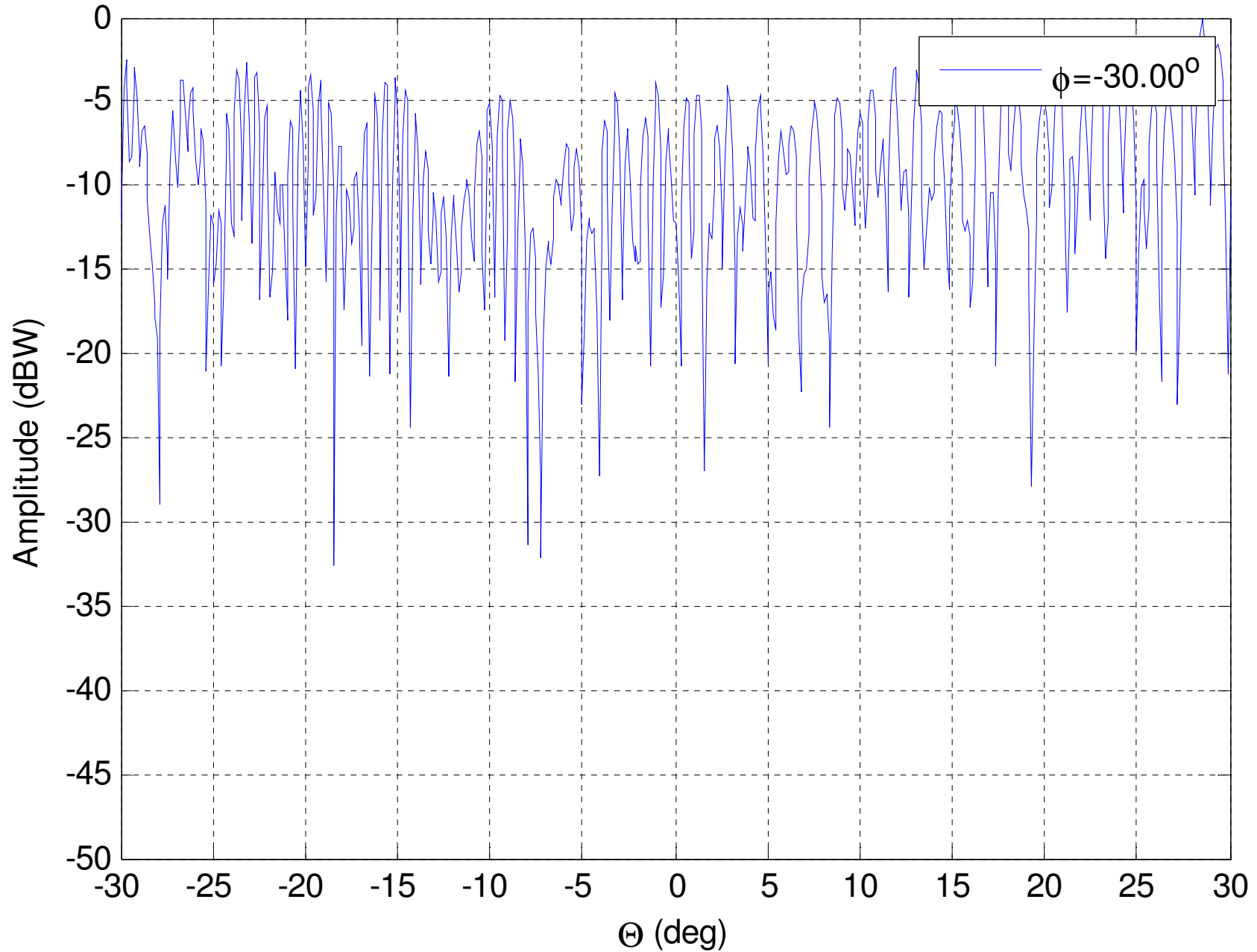
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -11.37 dBW, Date: 15-Dec-2011



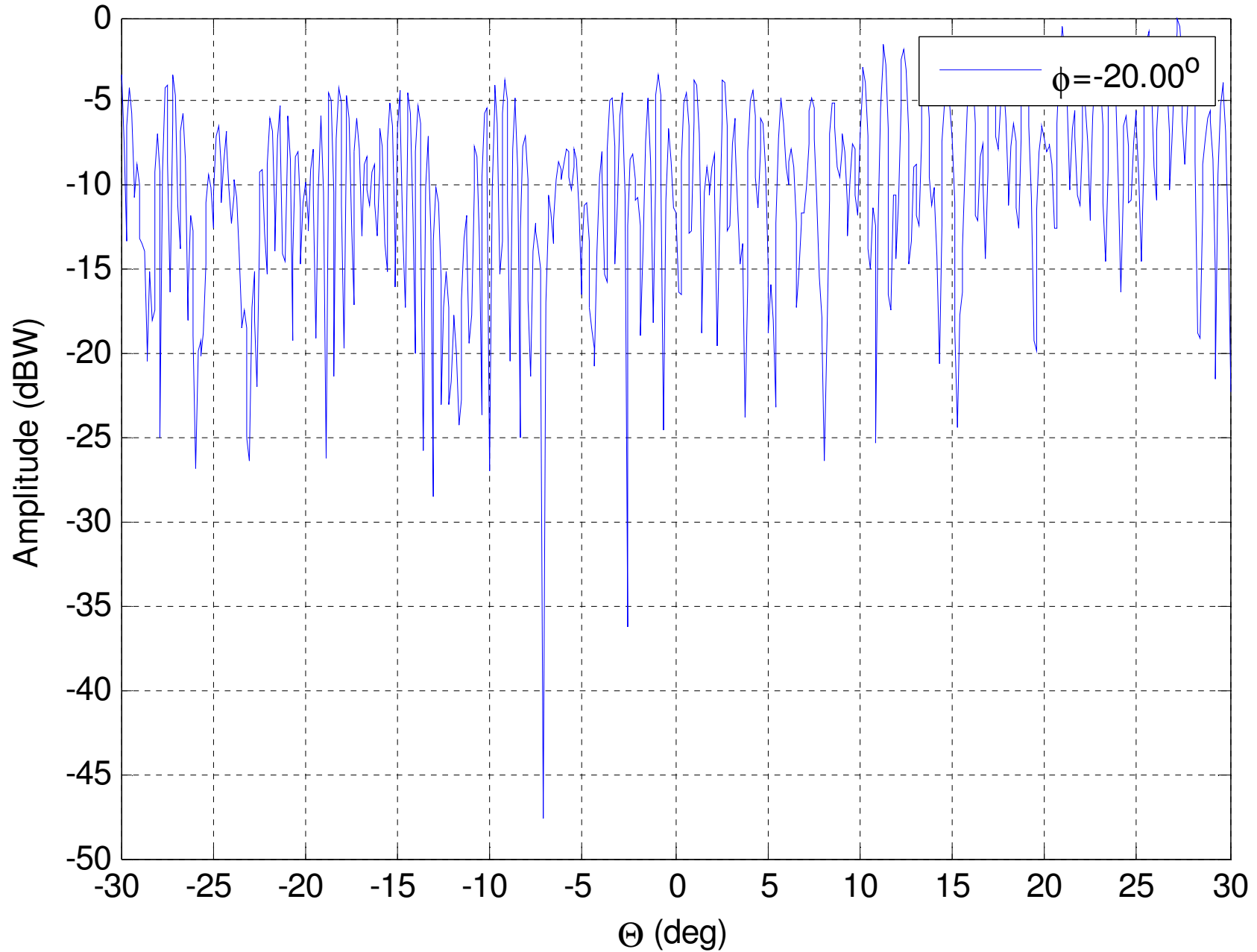
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -10.90 dBW, Date: 15-Dec-2011



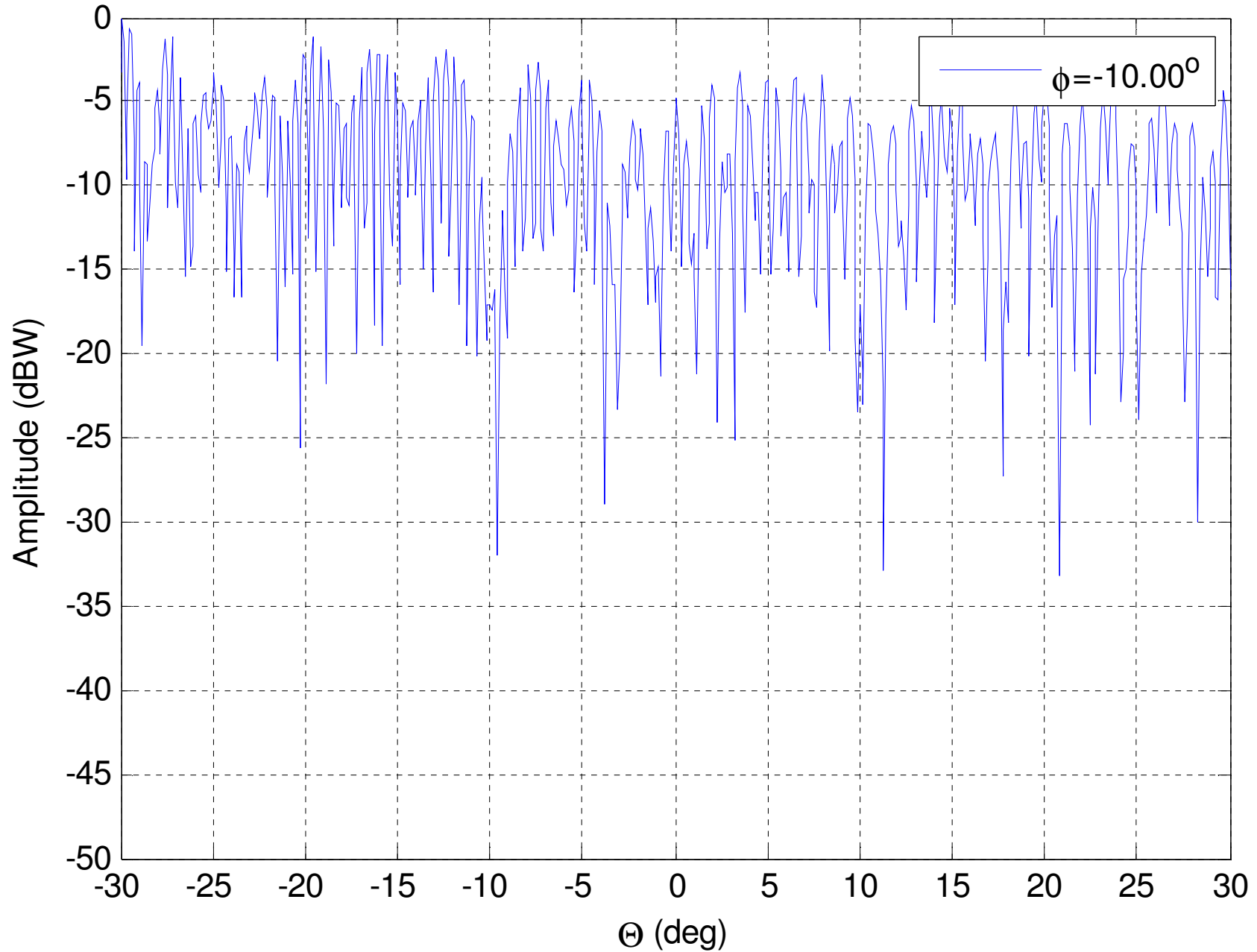
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -11.41 dBW, Date: 15-Dec-2011



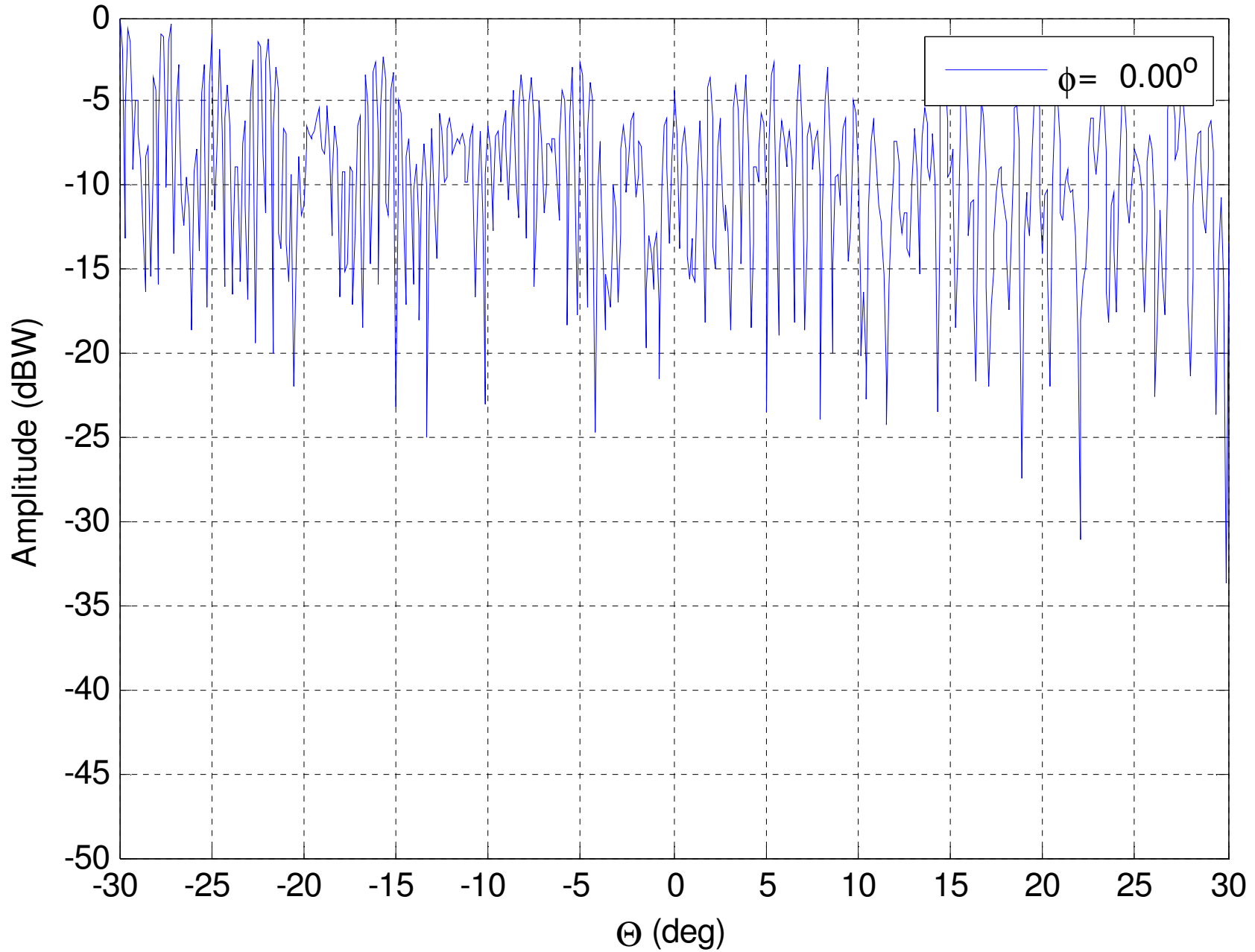
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -12.71 dBW, Date: 15-Dec-2011



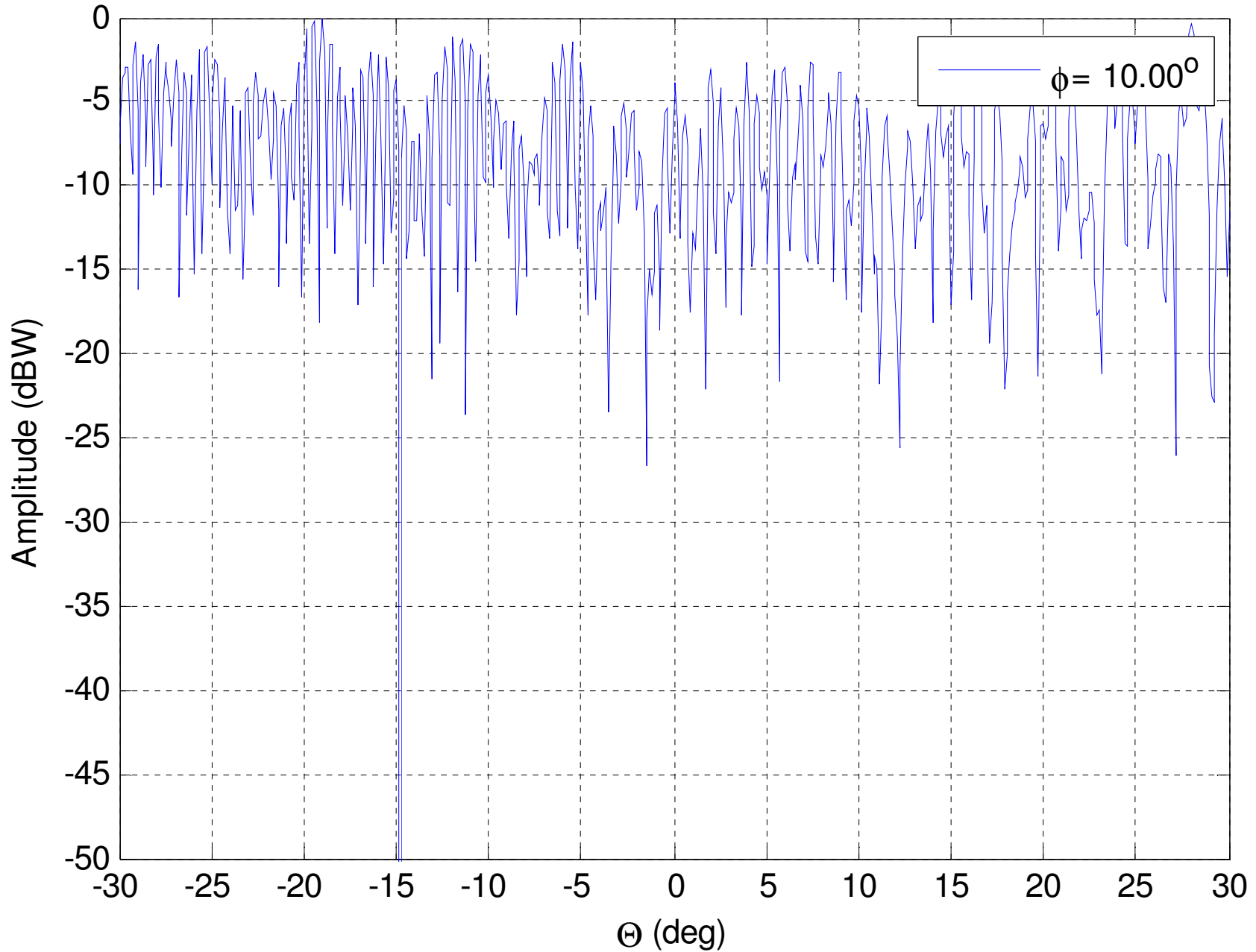
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -13.03 dBW, Date: 15-Dec-2011



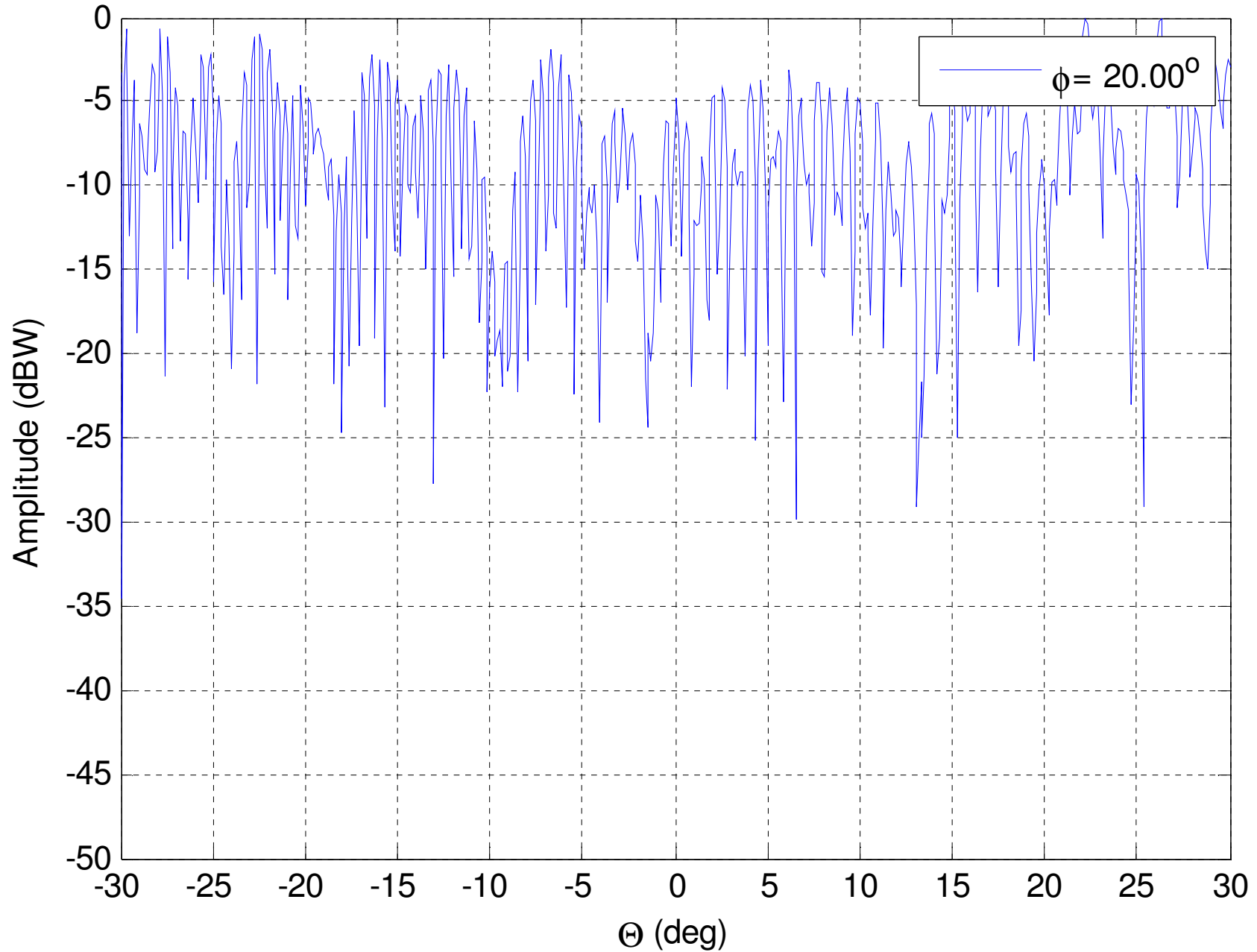
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -13.47 dBW, Date: 15-Dec-2011



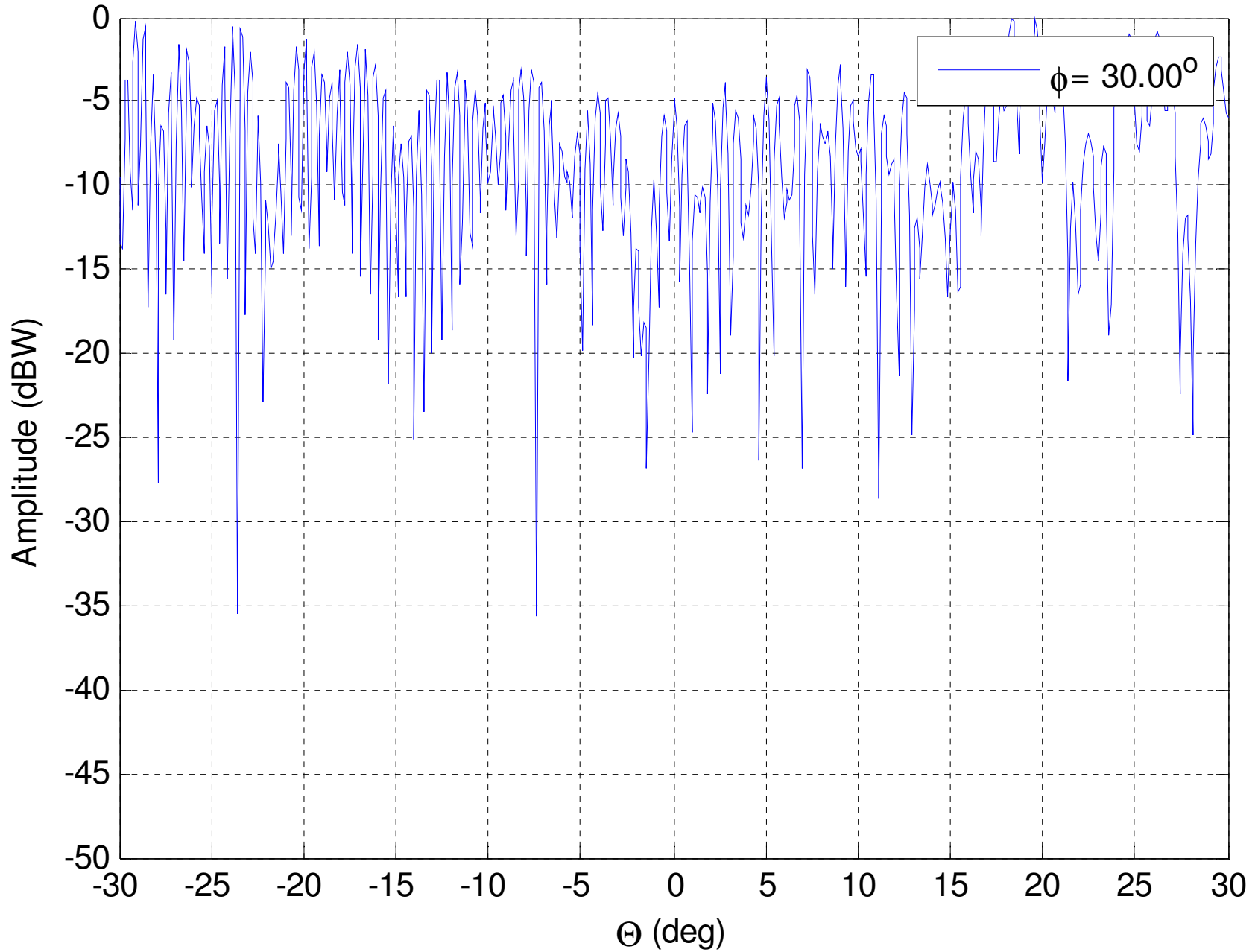
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -12.61 dBW, Date: 15-Dec-2011



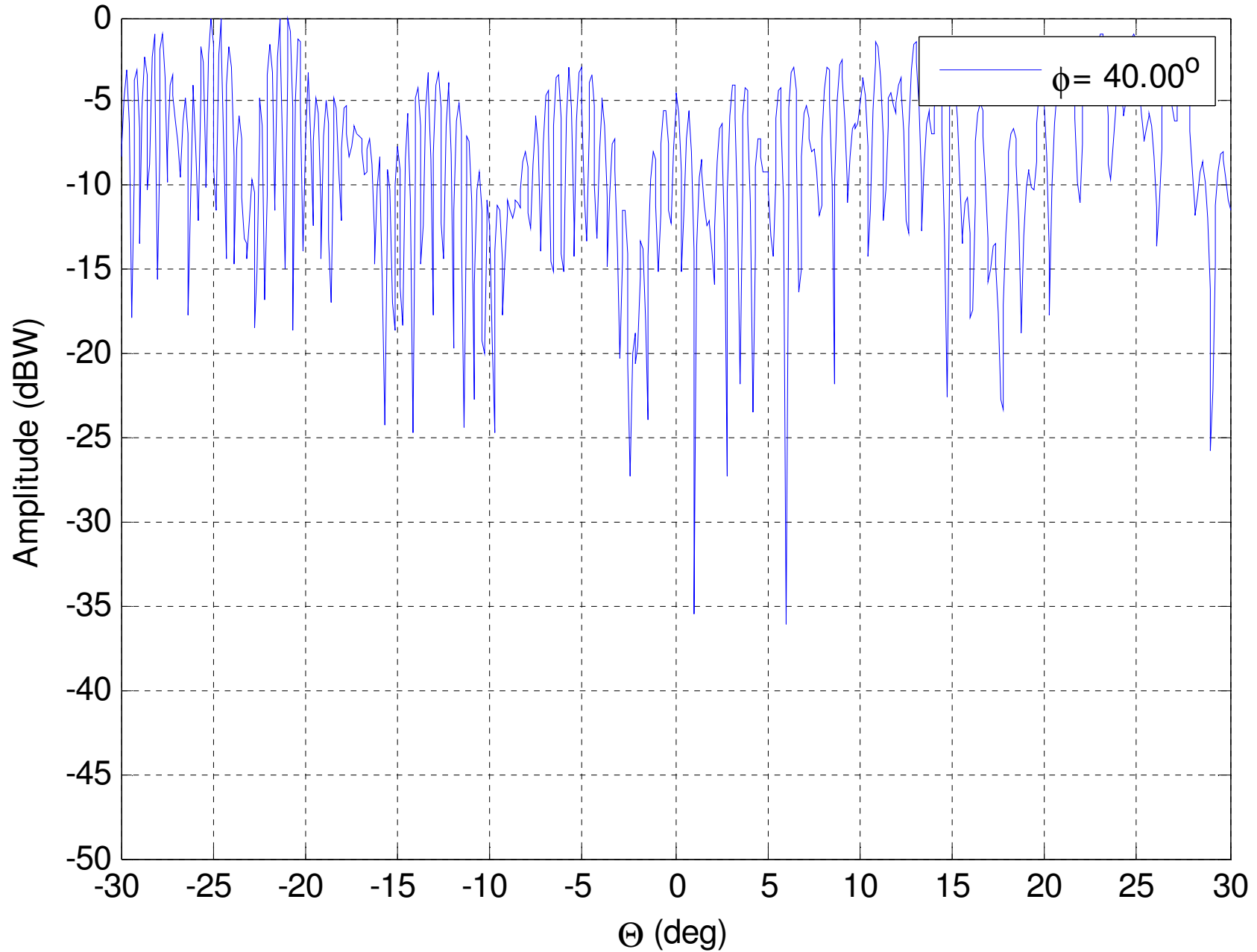
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -12.53 dBW, Date: 15-Dec-2011



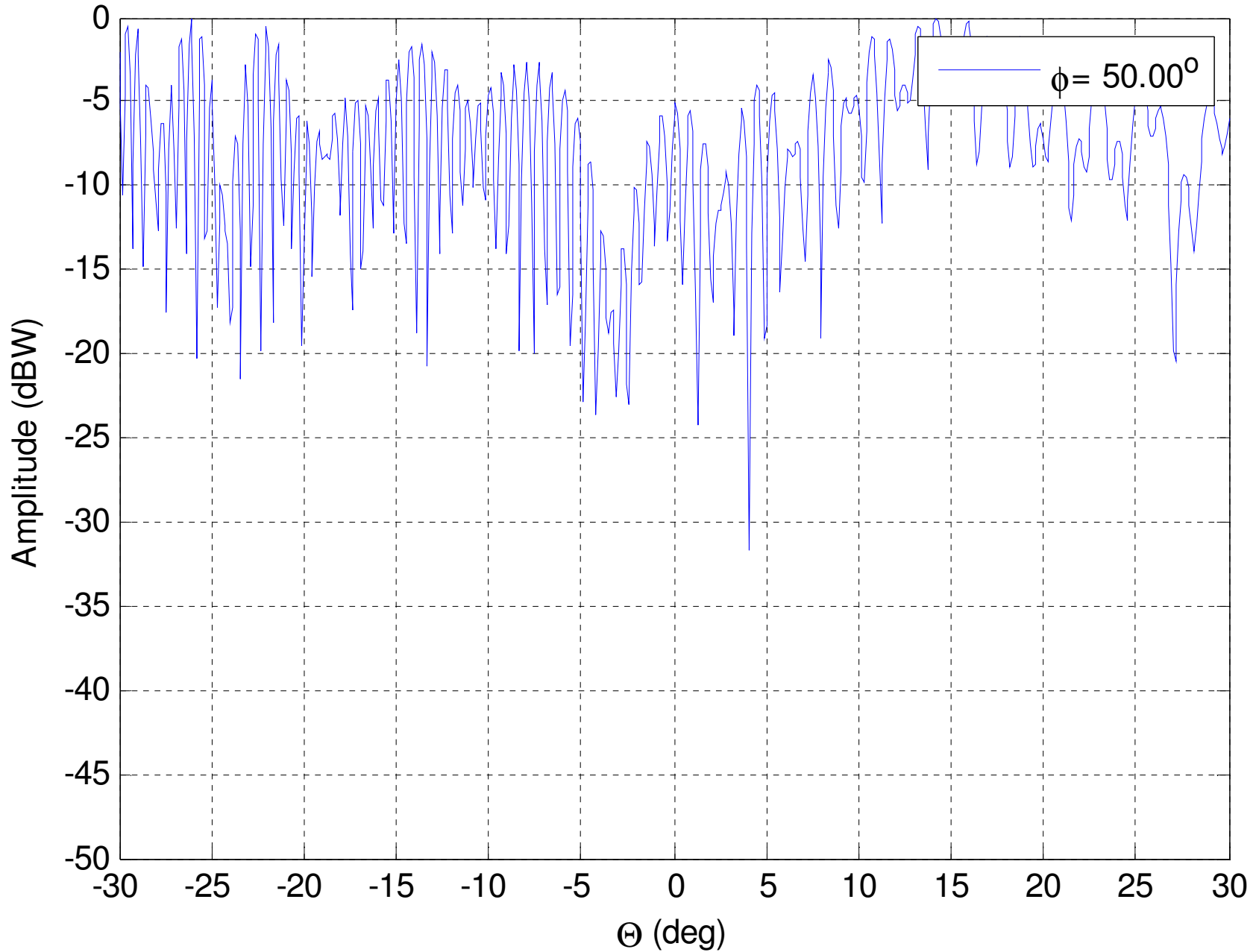
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -12.77 dBW, Date: 15-Dec-2011



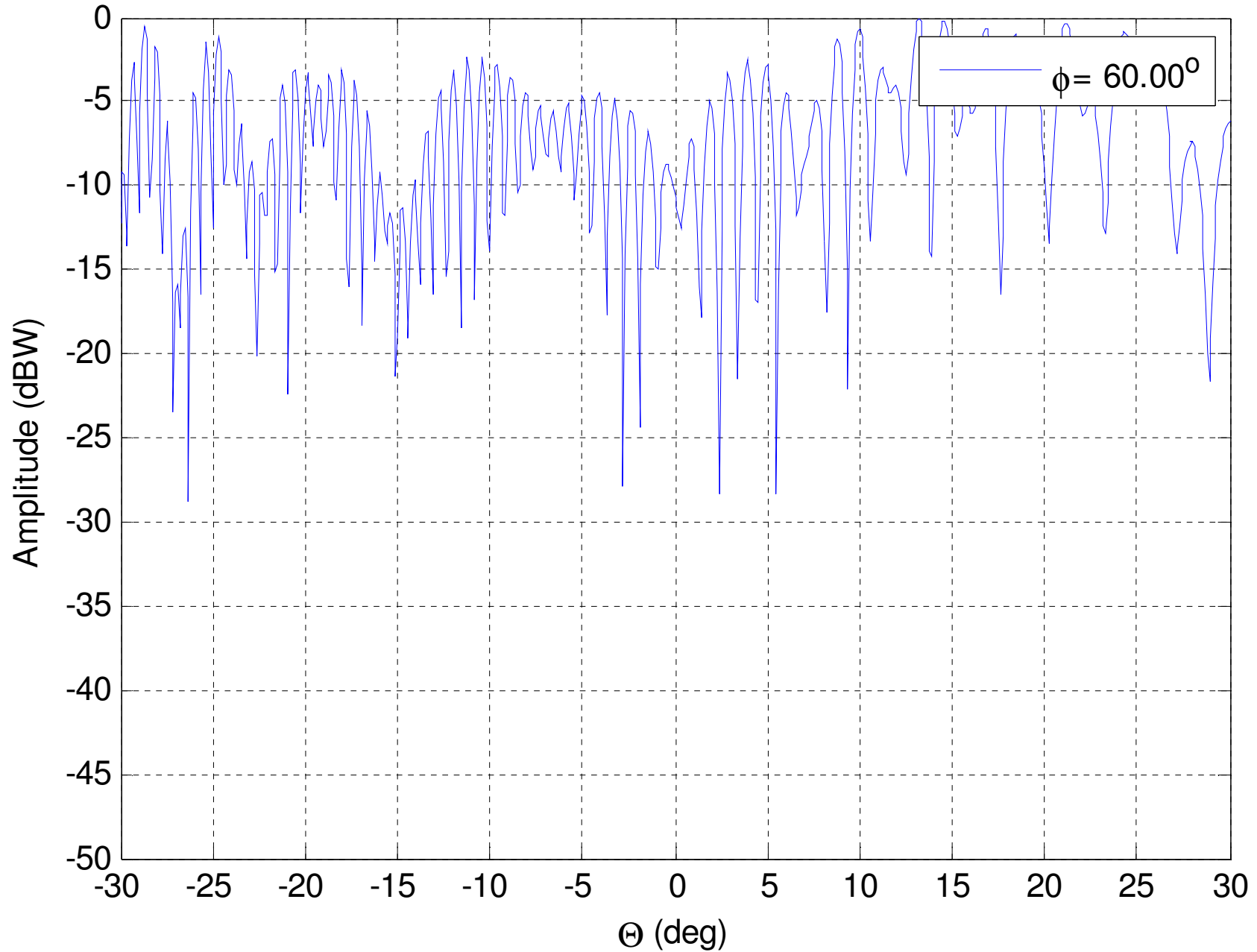
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -12.21 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

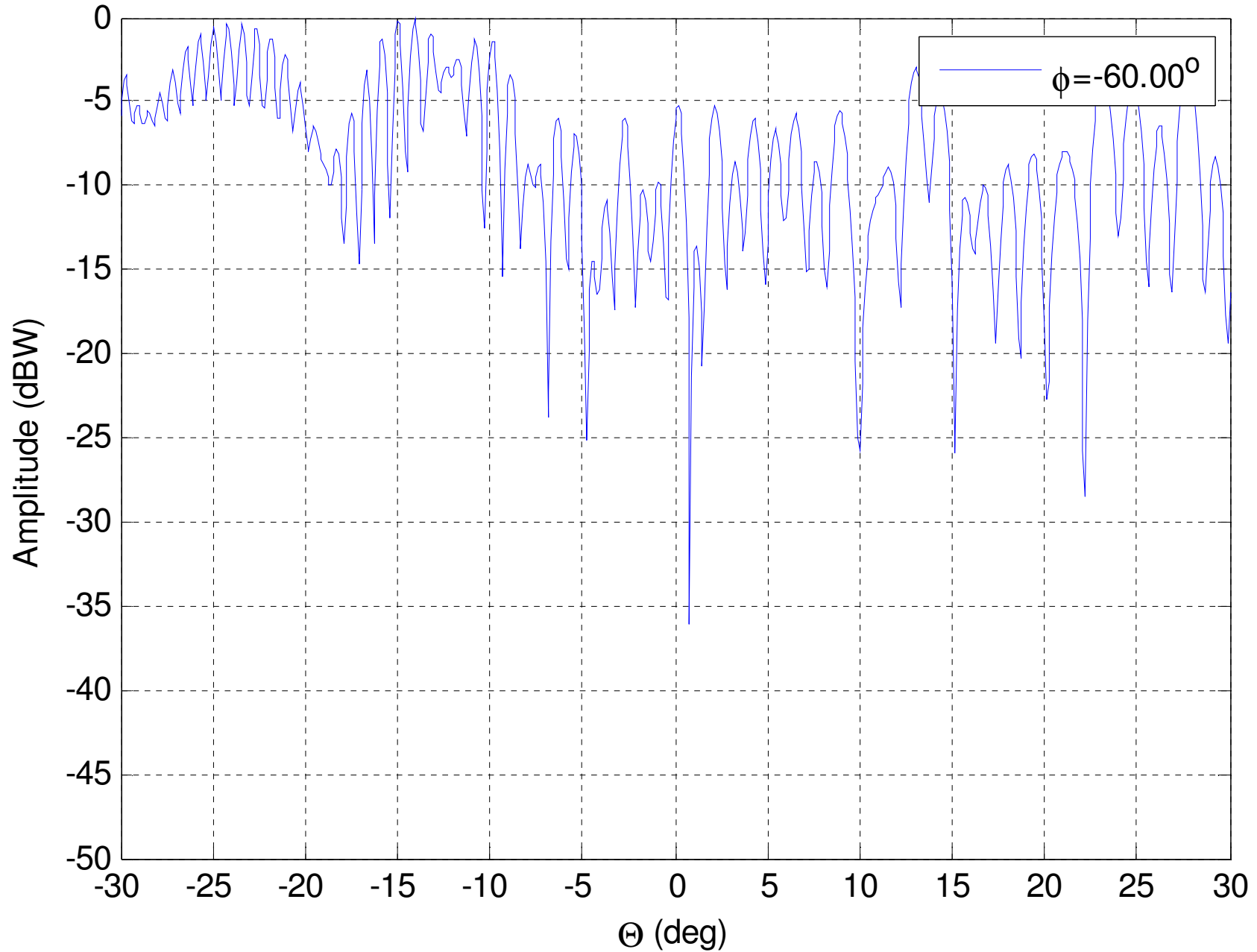
Input file: tx-17.3-rhcp-60.cut, Peak: -12.27 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

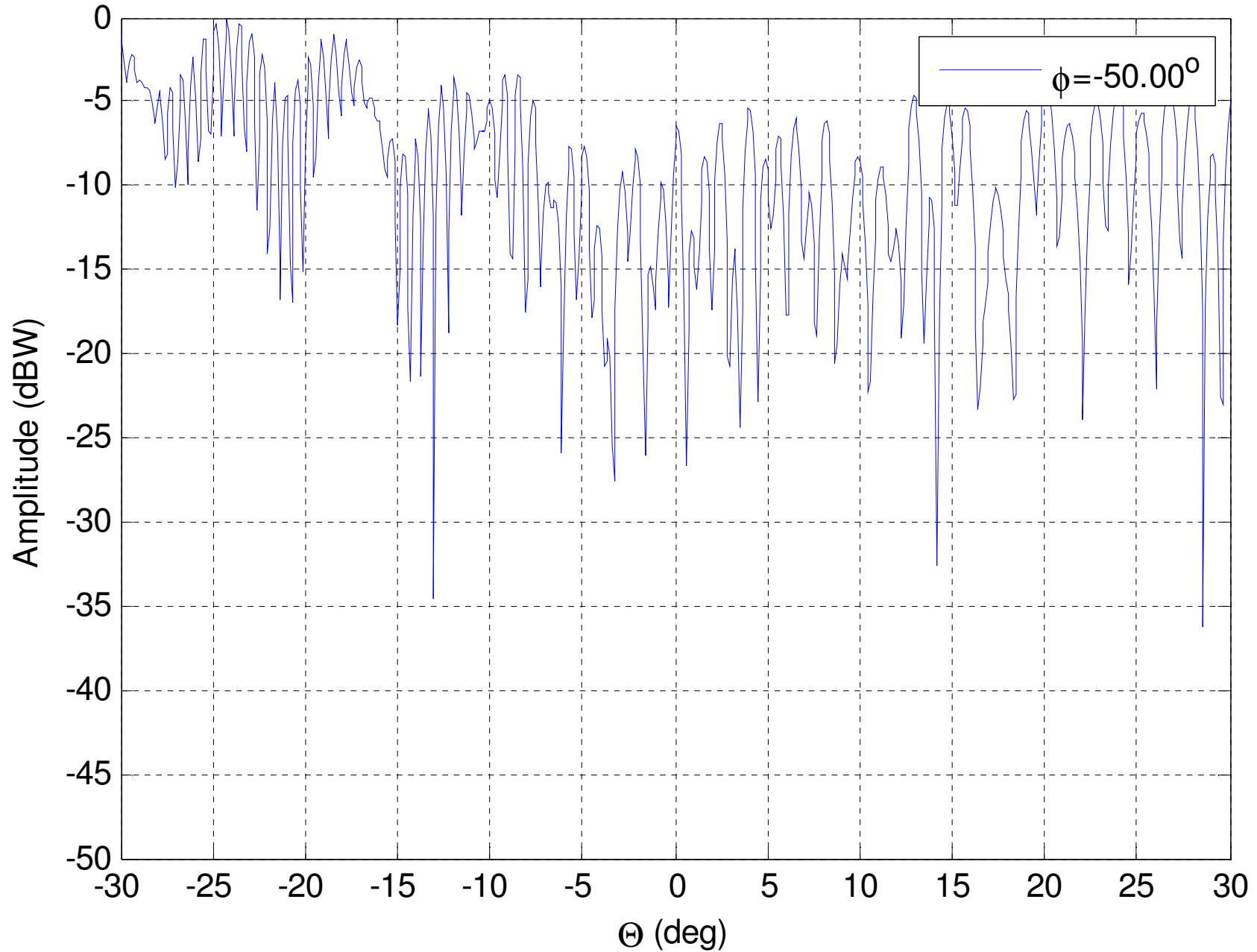
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -12.08 dBW, Date: 15-Dec-2011



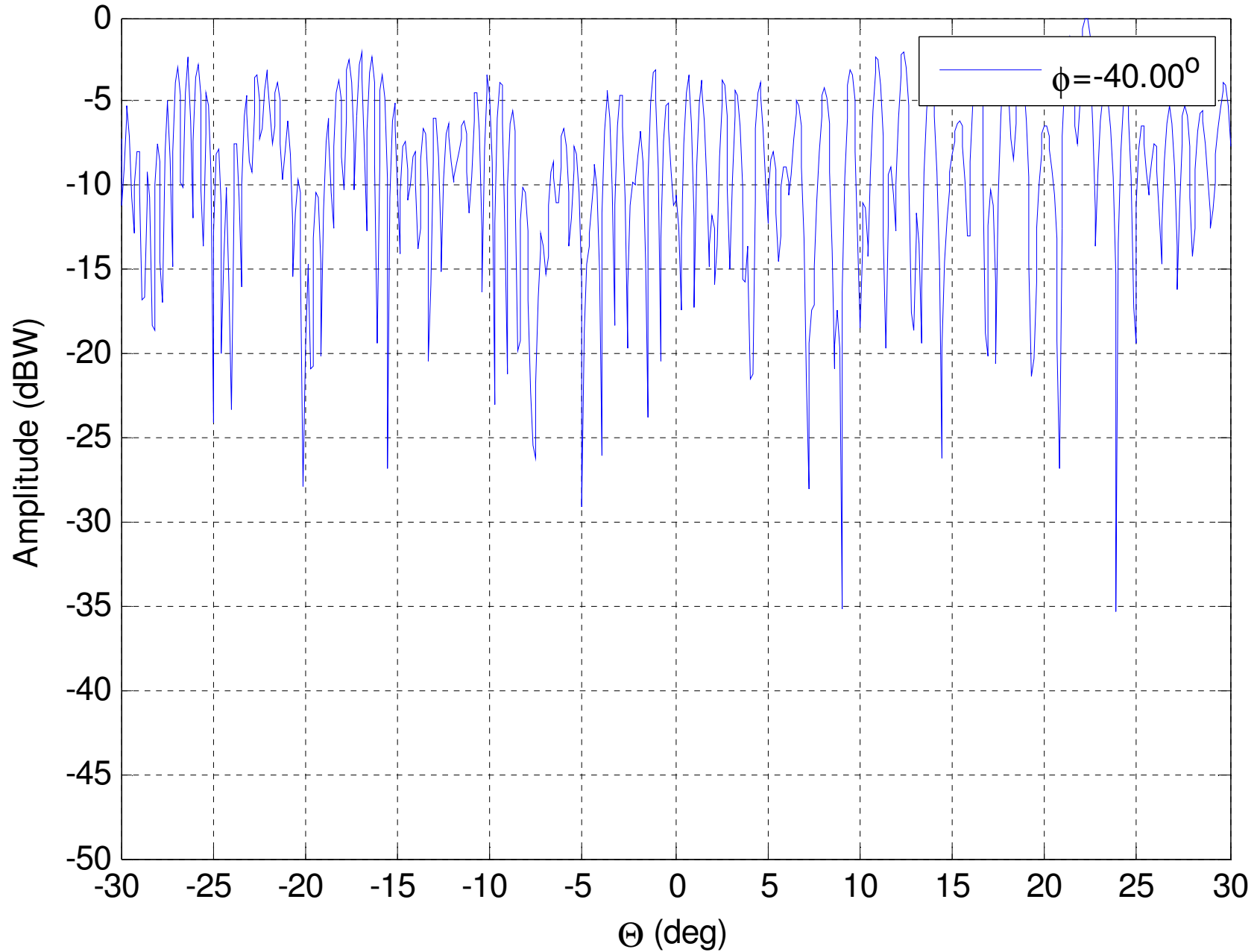
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -10.80 dBW, Date: 15-Dec-2011



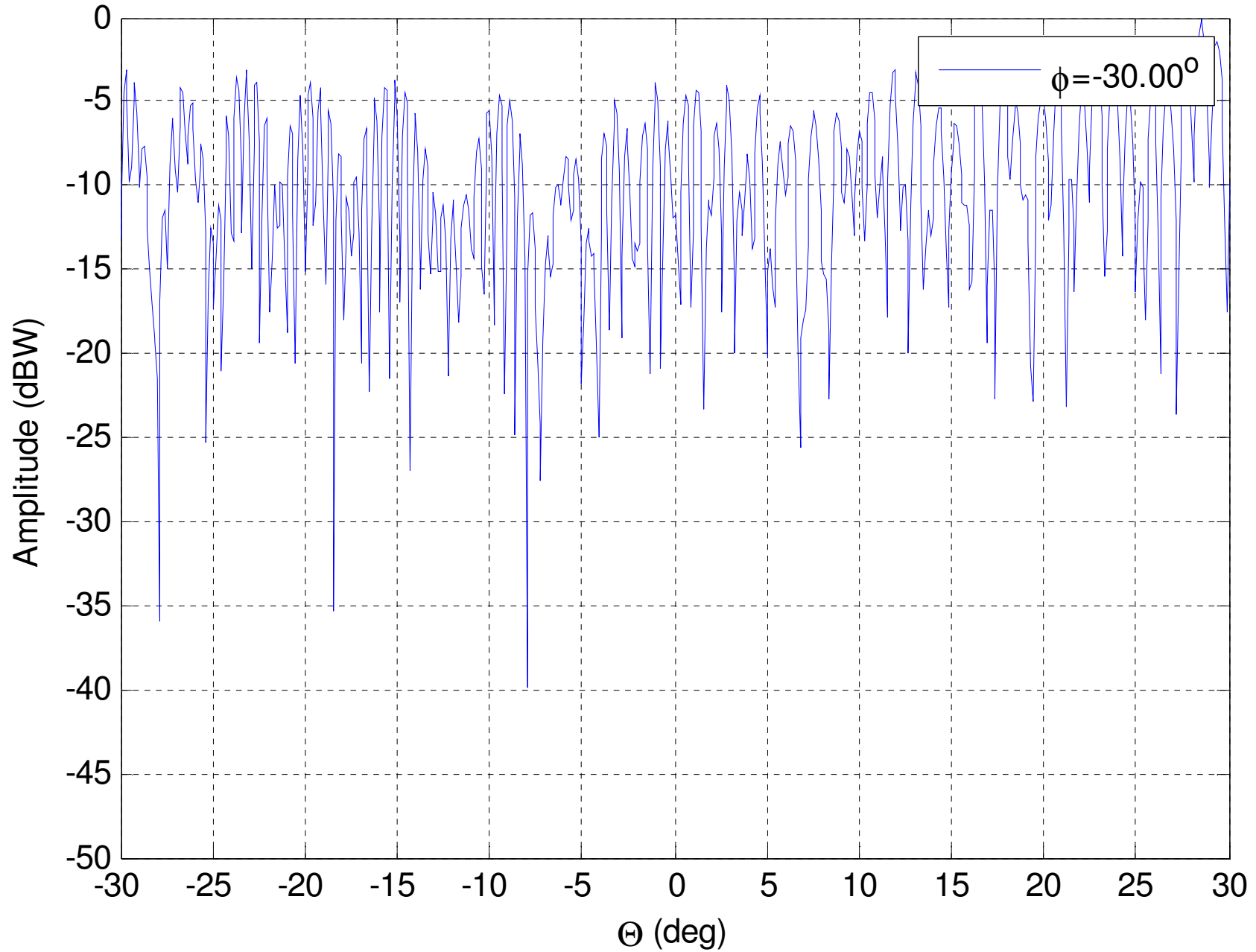
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -11.41 dBW, Date: 15-Dec-2011



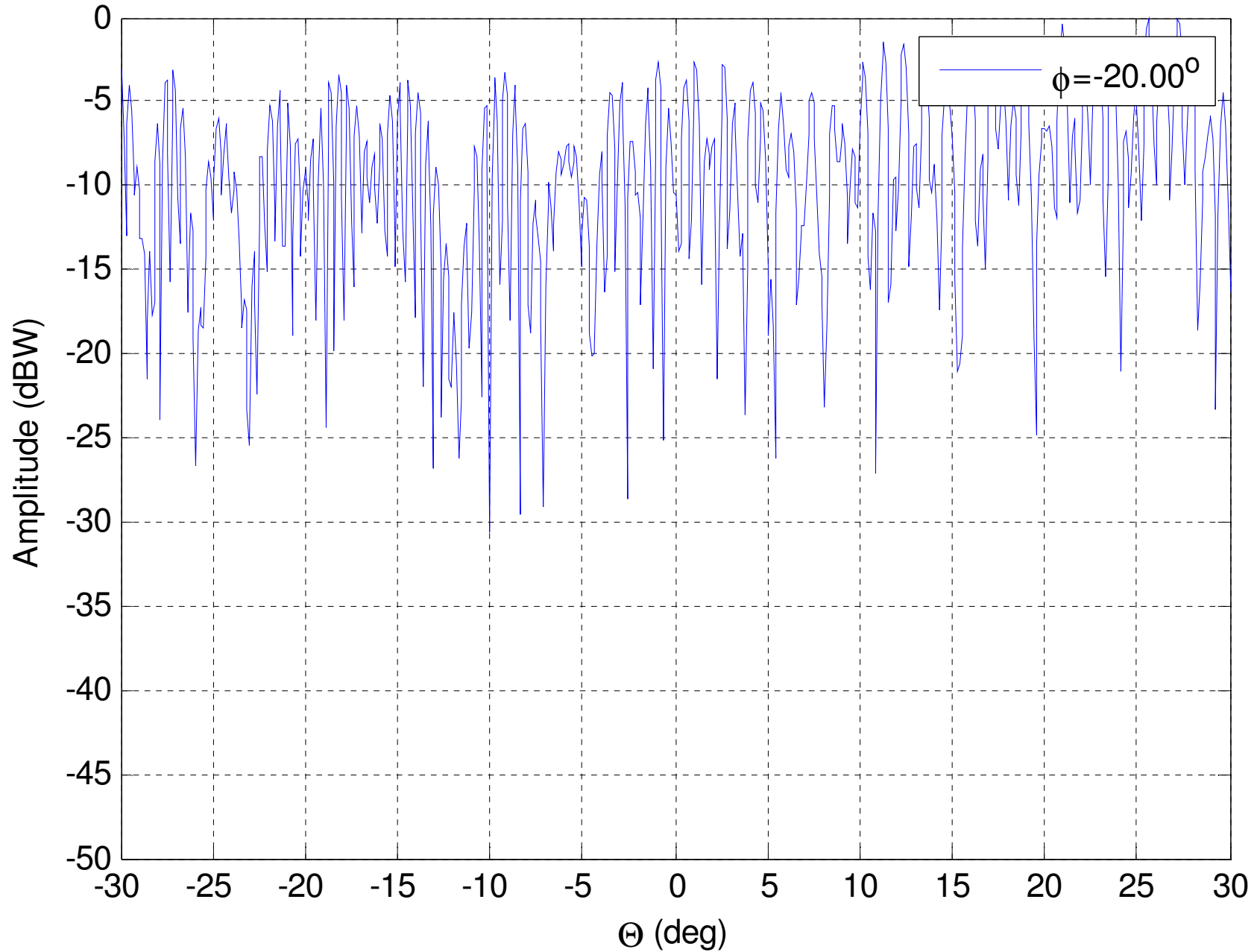
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -10.47 dBW, Date: 15-Dec-2011



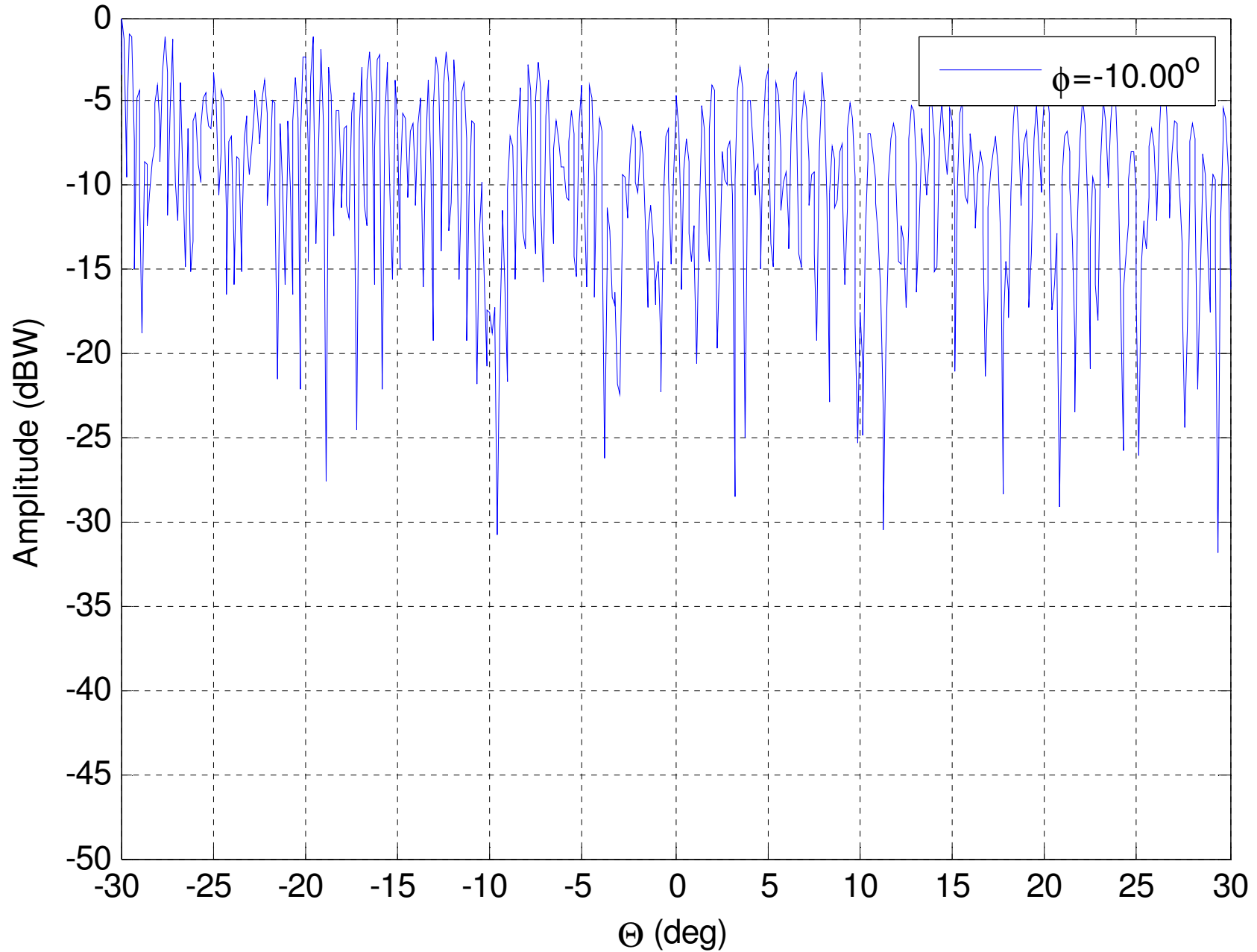
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -11.77 dBW, Date: 15-Dec-2011



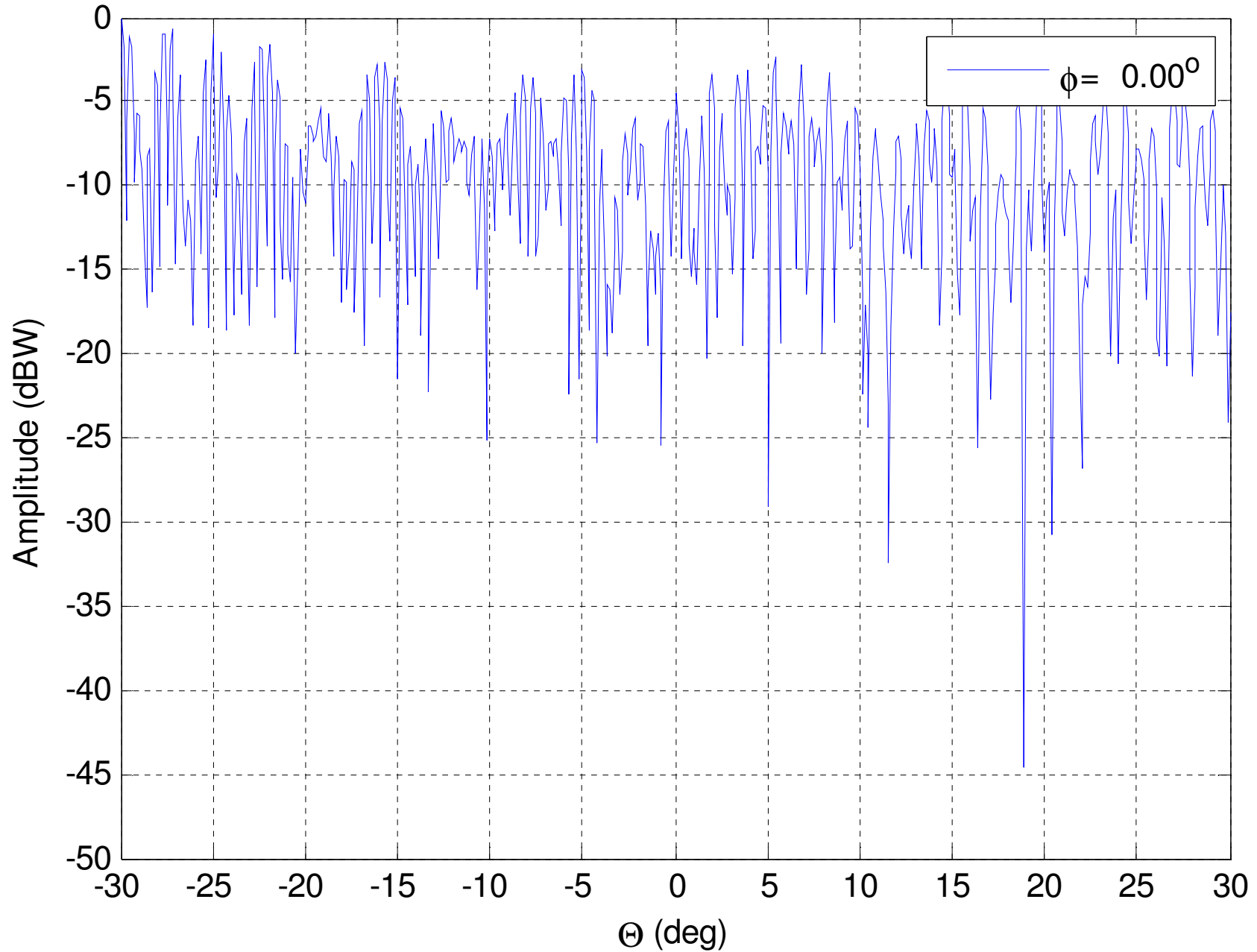
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -12.57 dBW, Date: 15-Dec-2011



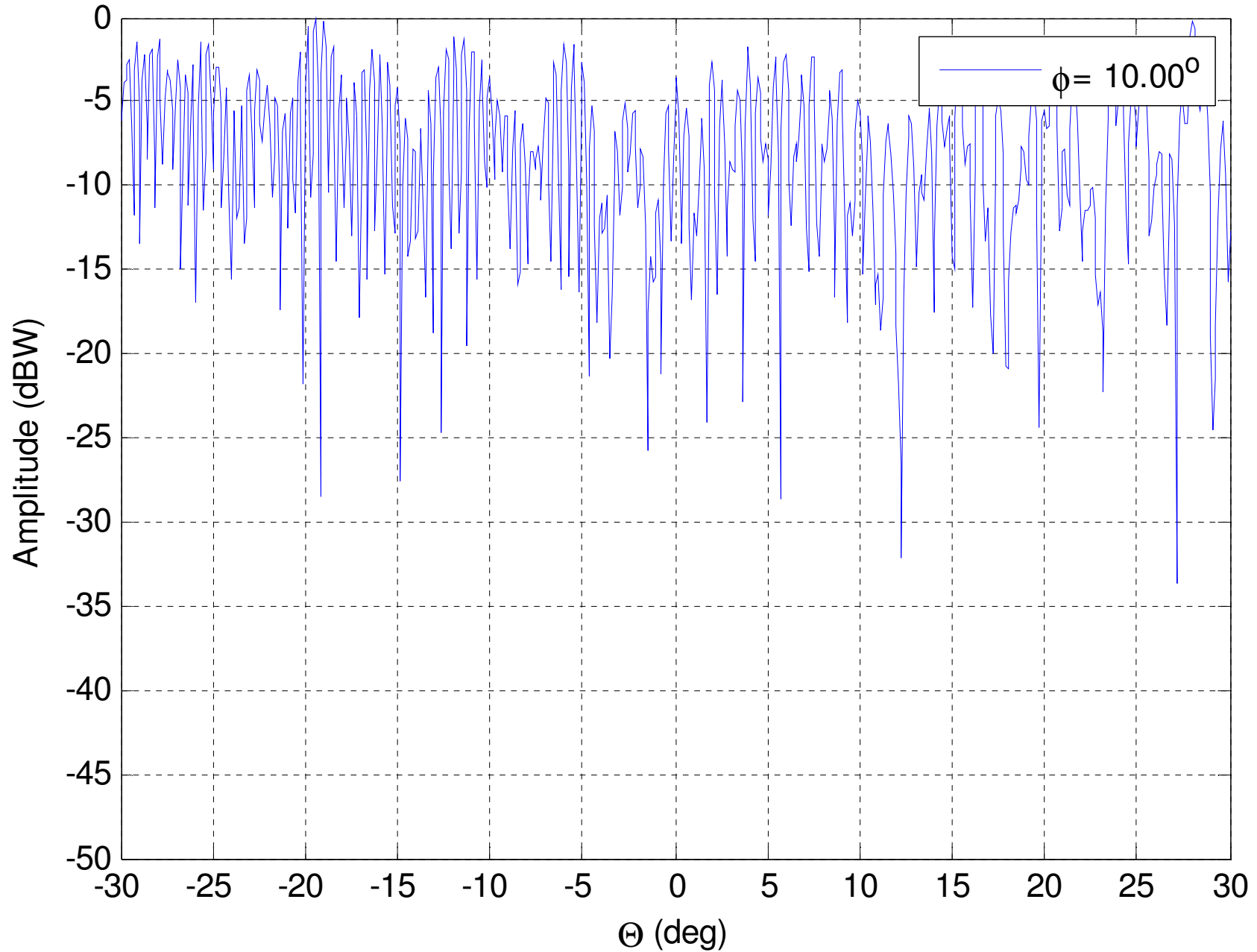
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -12.83 dBW, Date: 15-Dec-2011



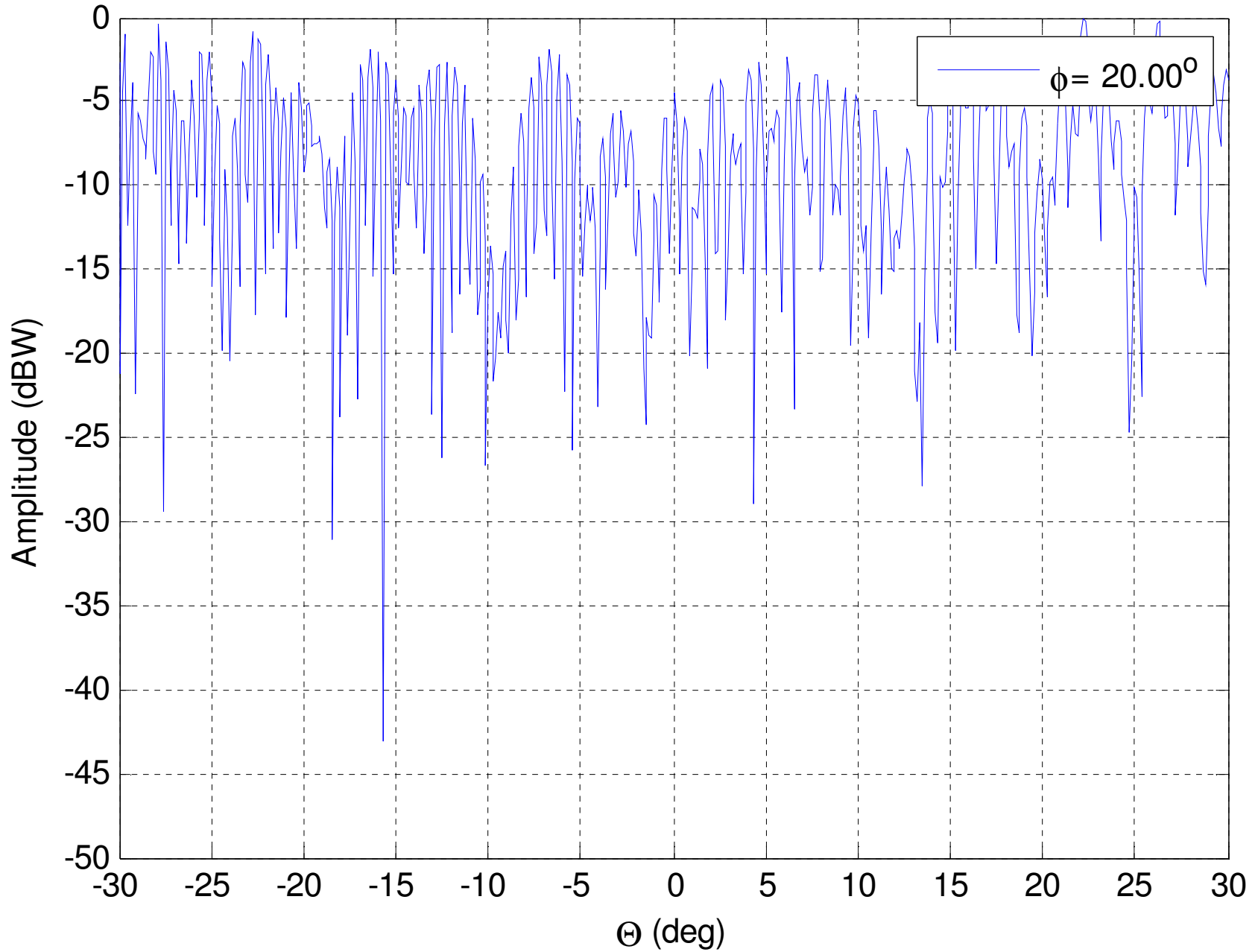
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -13.60 dBW, Date: 15-Dec-2011



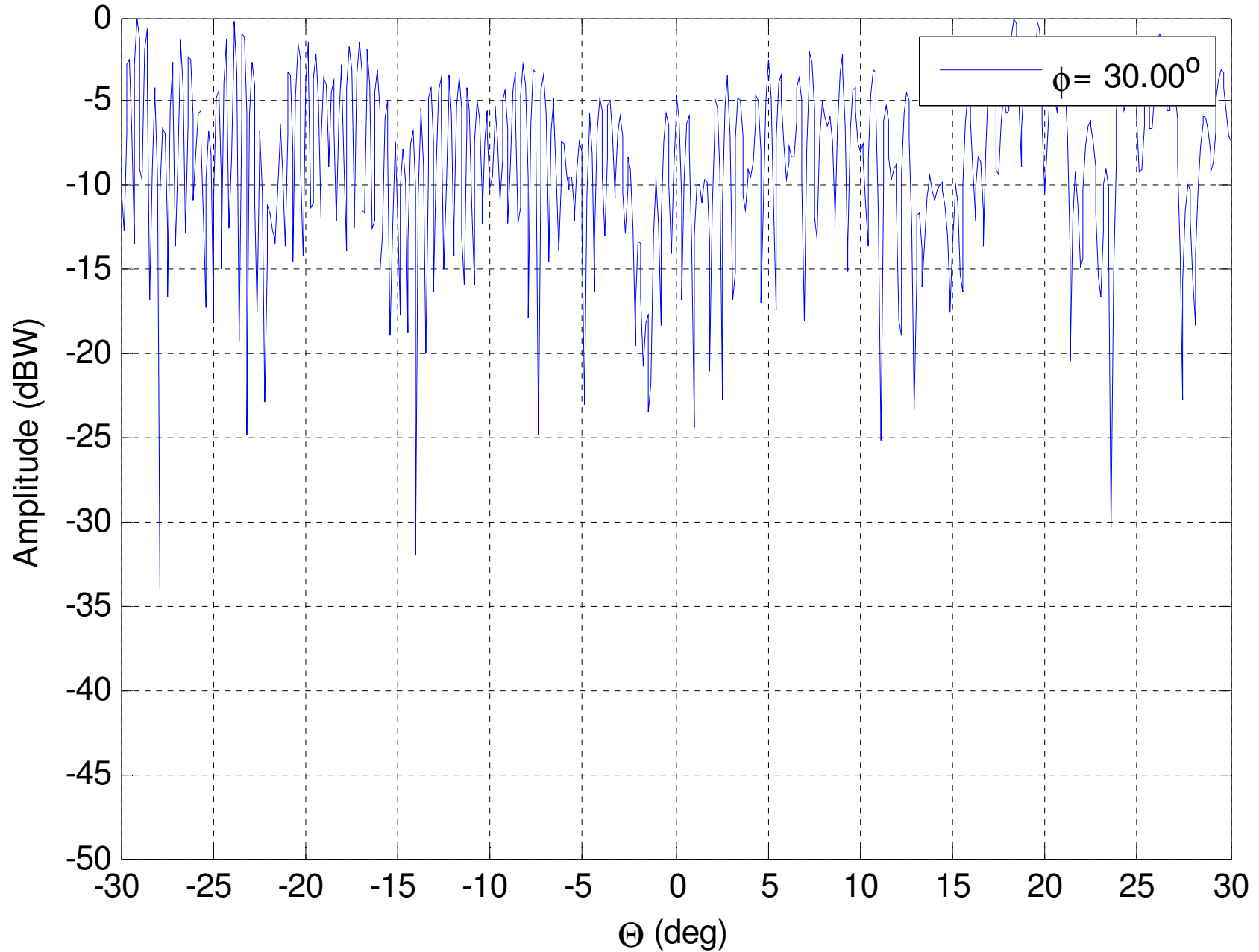
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -12.75 dBW, Date: 15-Dec-2011



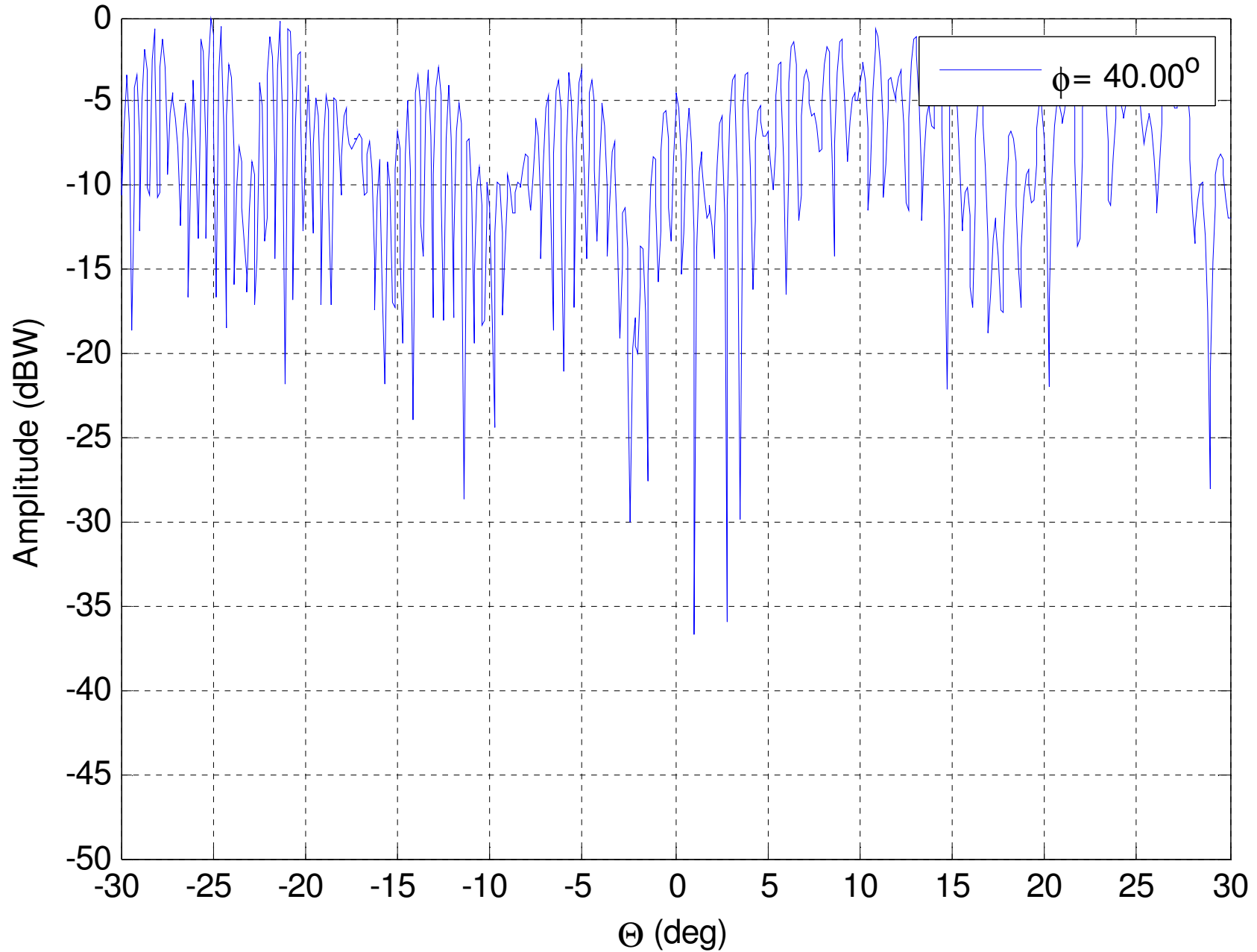
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -12.61 dBW, Date: 15-Dec-2011



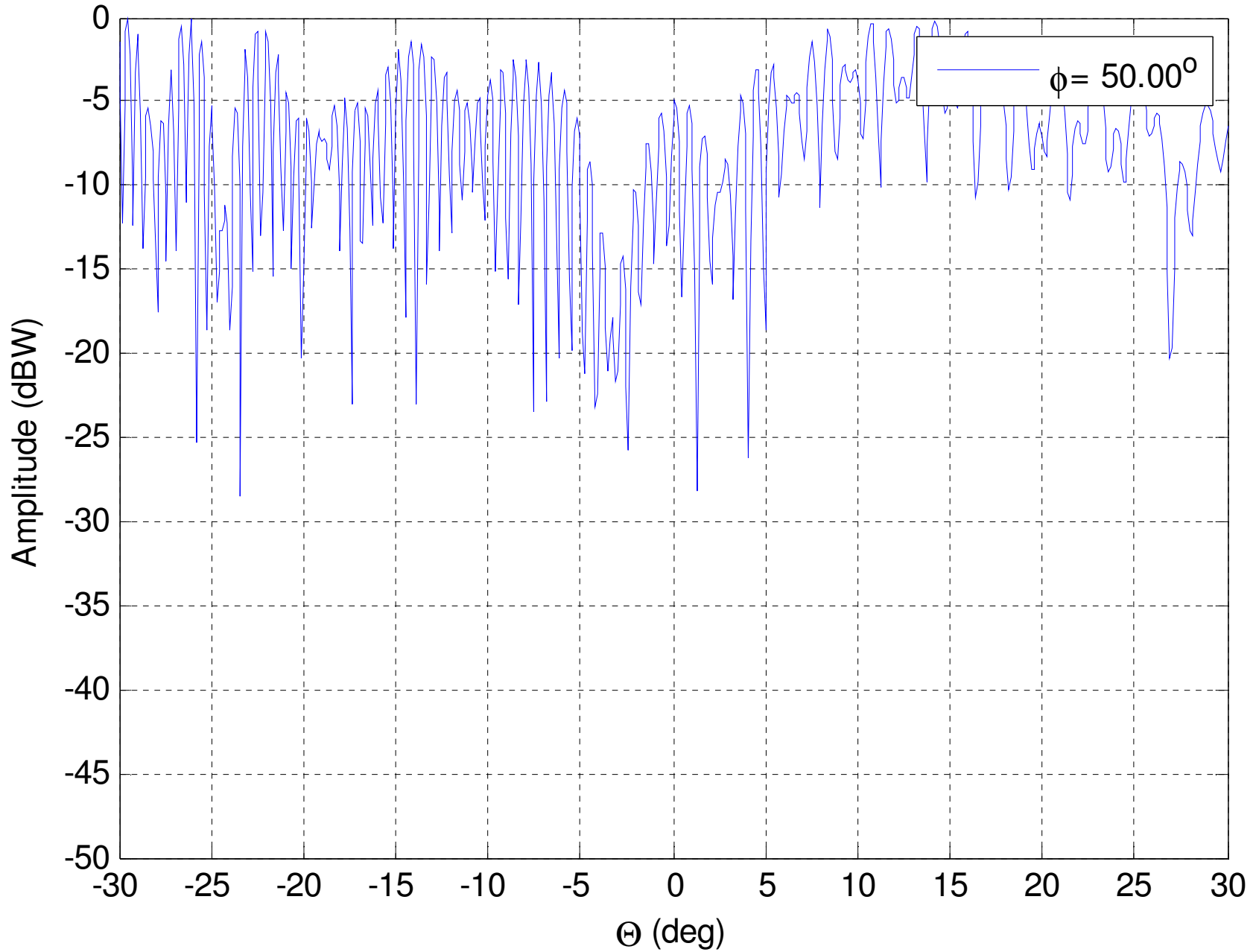
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -12.71 dBW, Date: 15-Dec-2011



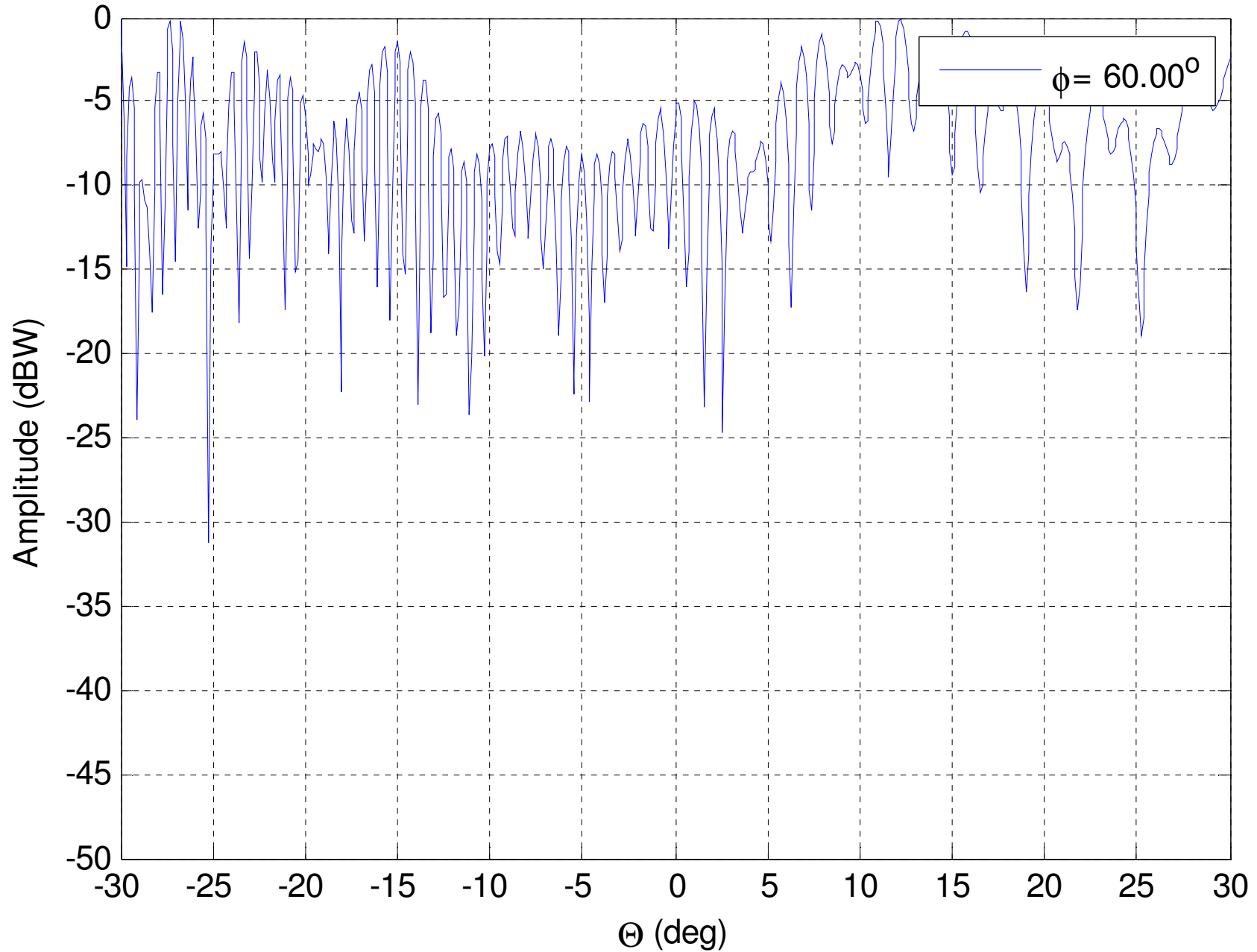
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -12.25 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

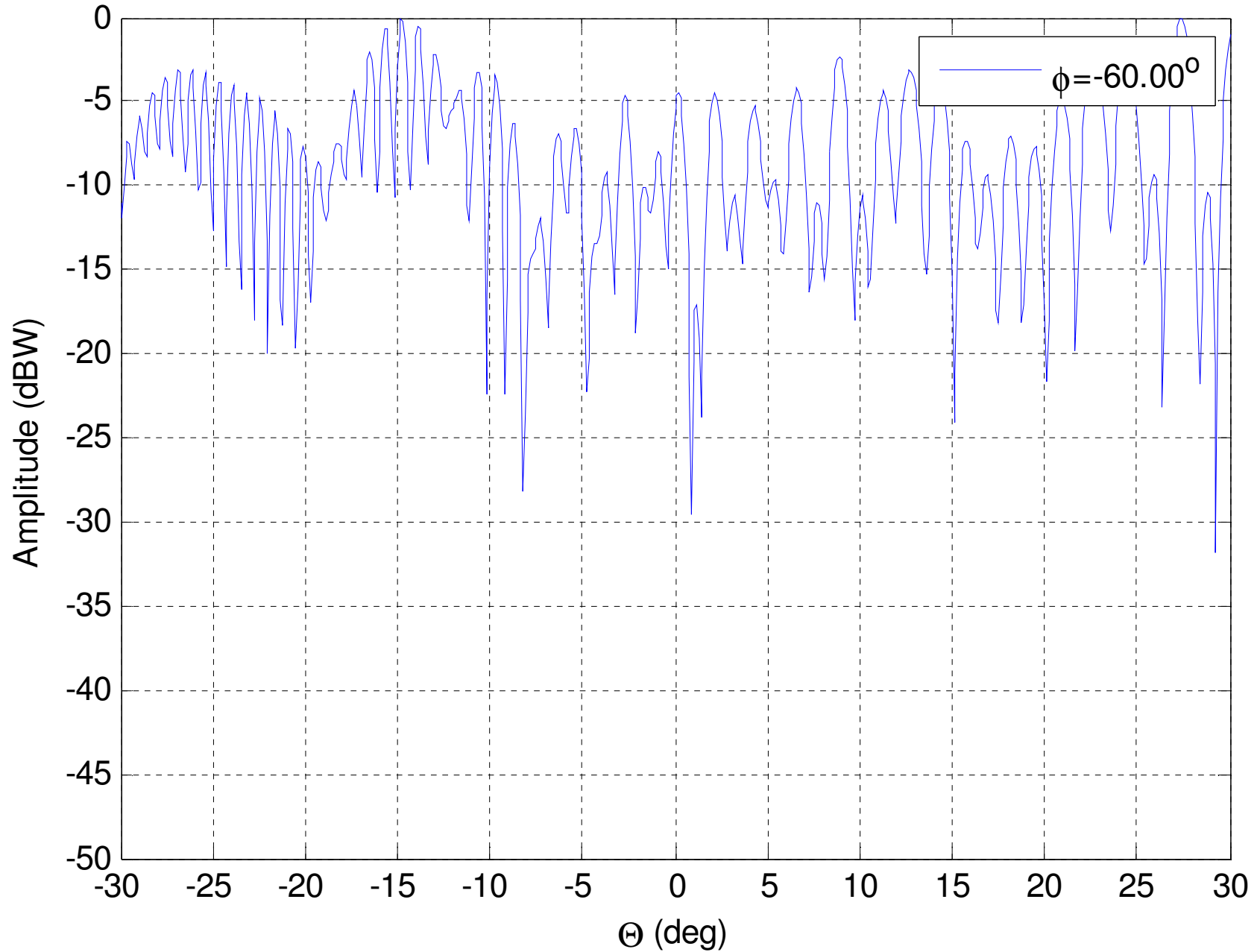
Input file: tx-17.3-lhcp-60.cut, Peak: -12.19 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

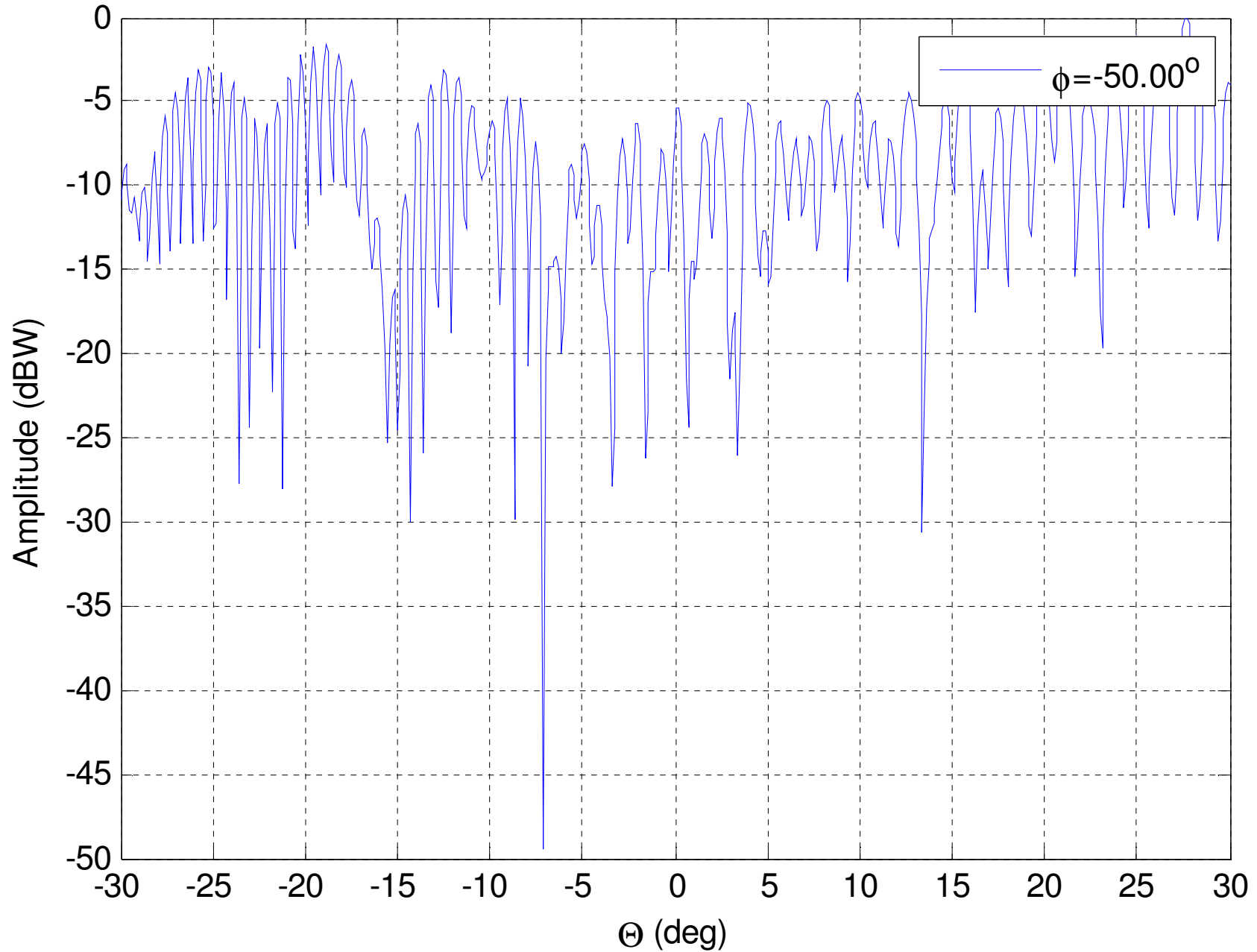
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -12.13 dBW, Date: 15-Dec-2011



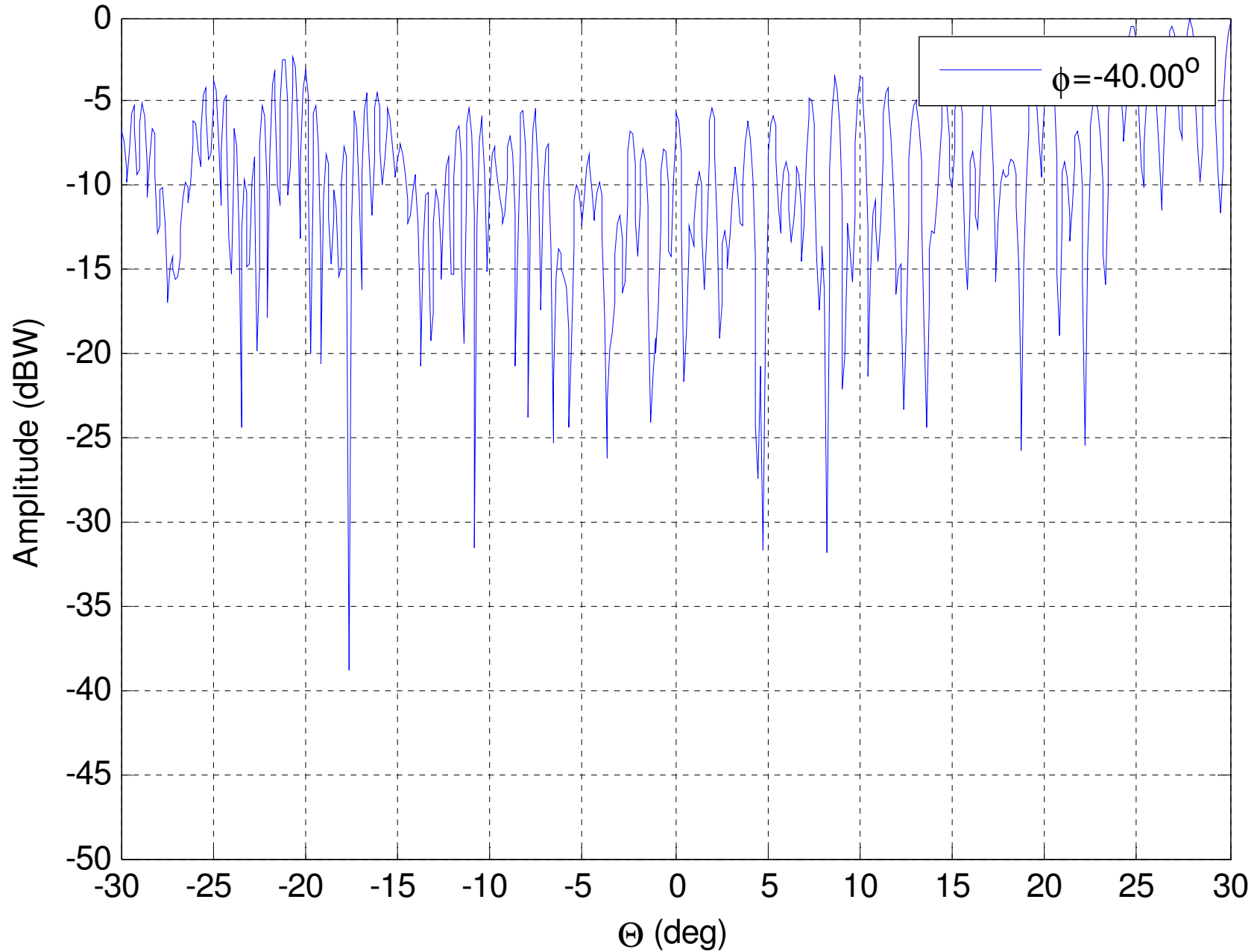
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -11.25 dBW, Date: 15-Dec-2011



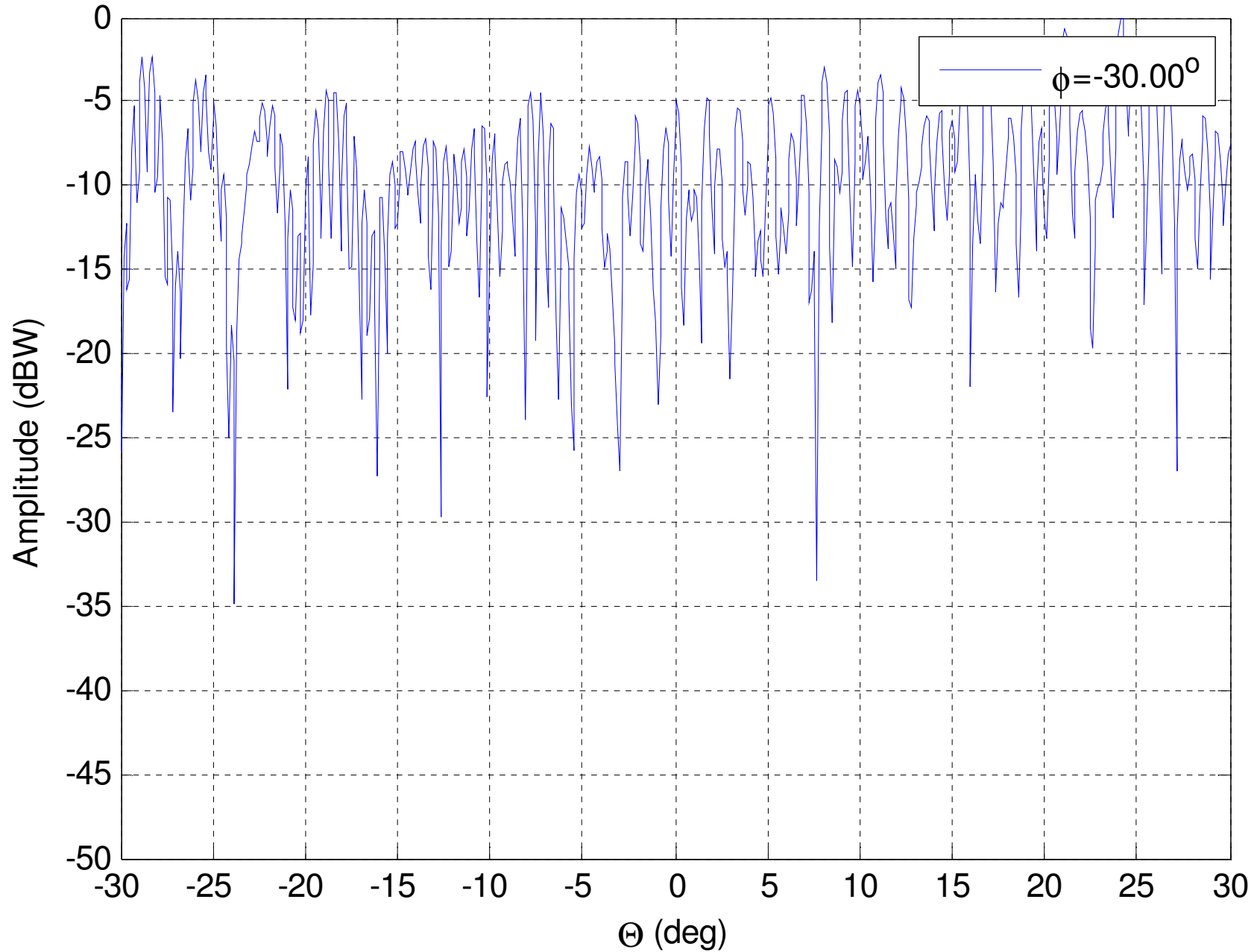
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.78 dBW, Date: 15-Dec-2011



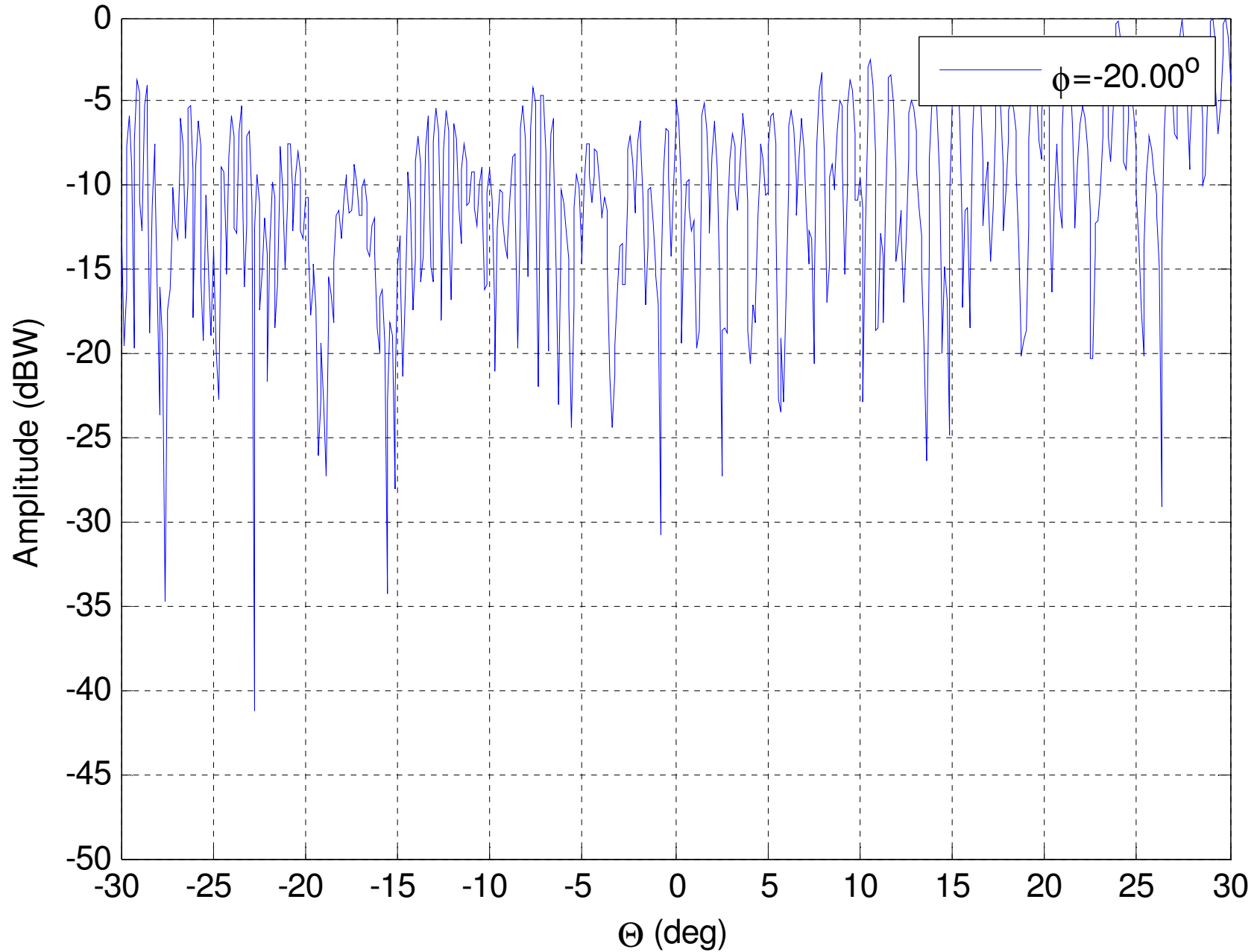
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -11.53 dBW, Date: 15-Dec-2011



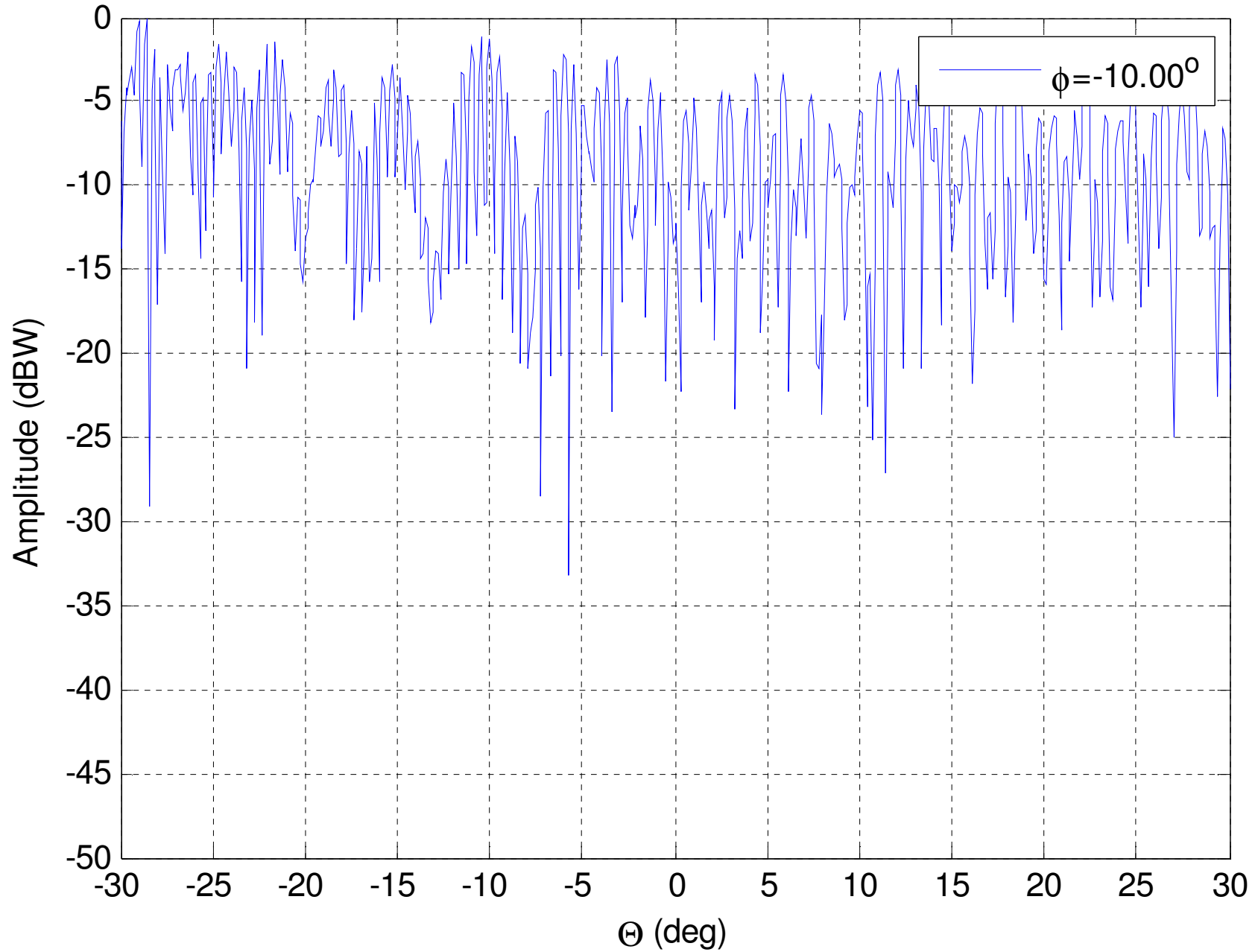
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -11.45 dBW, Date: 15-Dec-2011



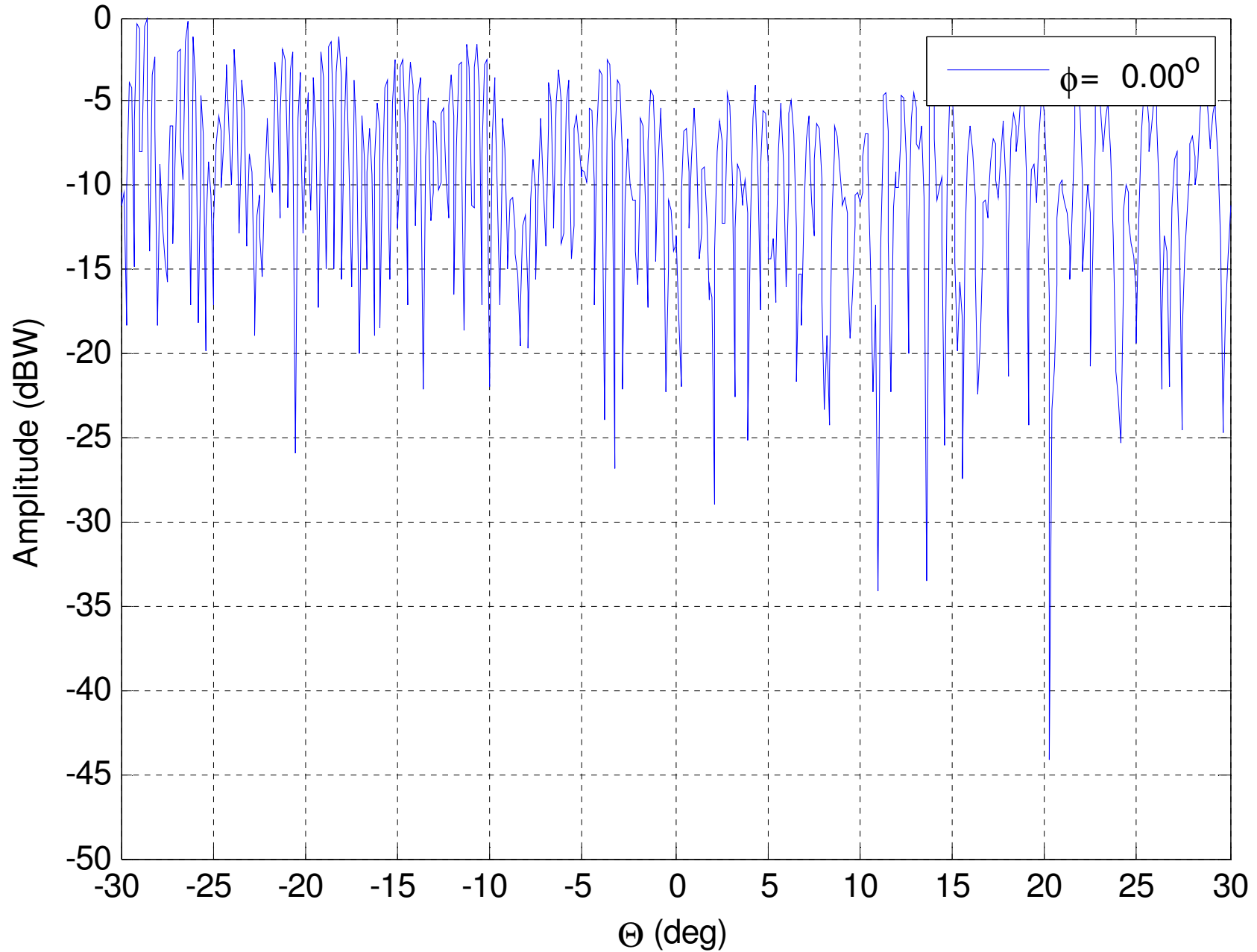
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -14.09 dBW, Date: 15-Dec-2011



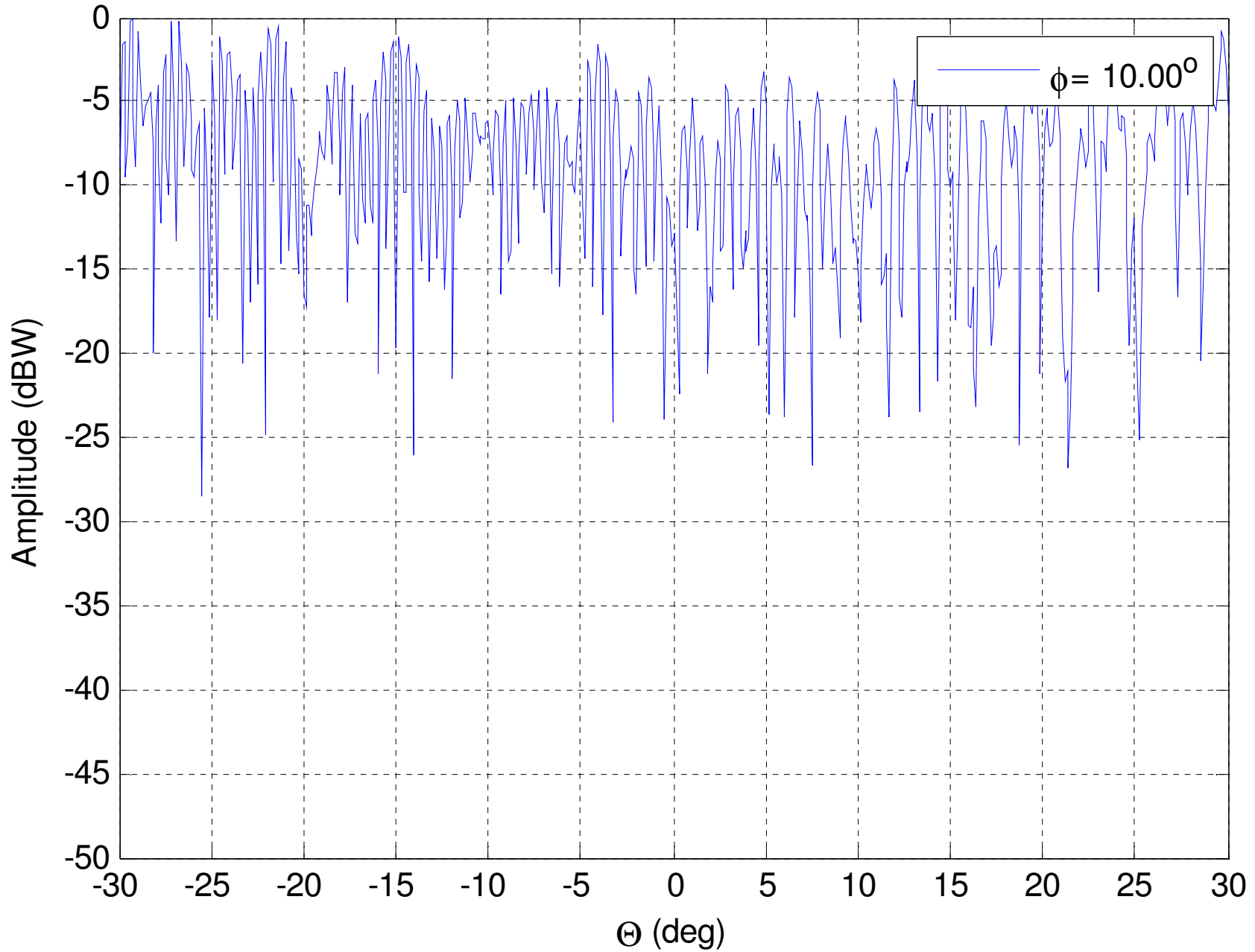
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -13.50 dBW, Date: 15-Dec-2011



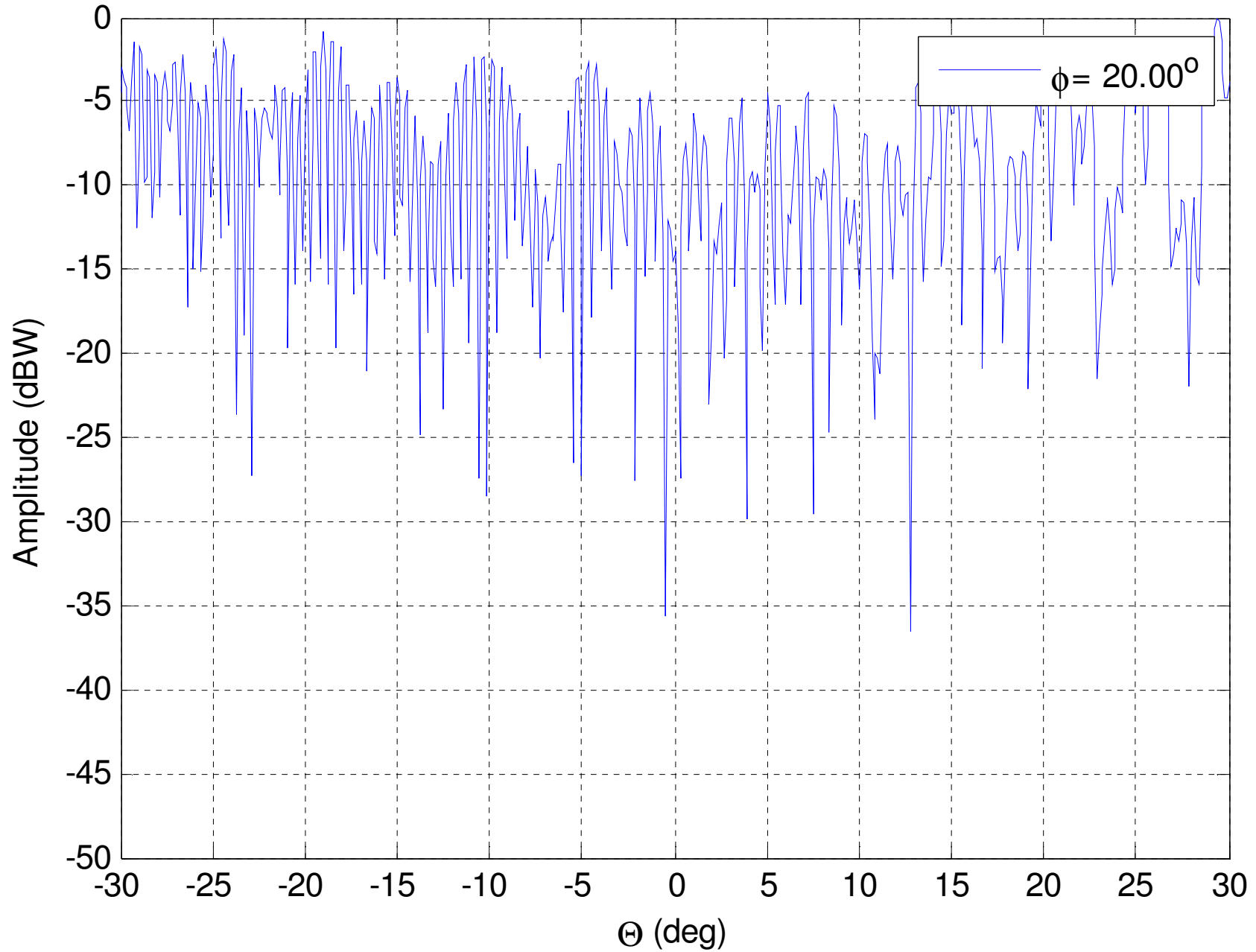
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -13.95 dBW, Date: 15-Dec-2011



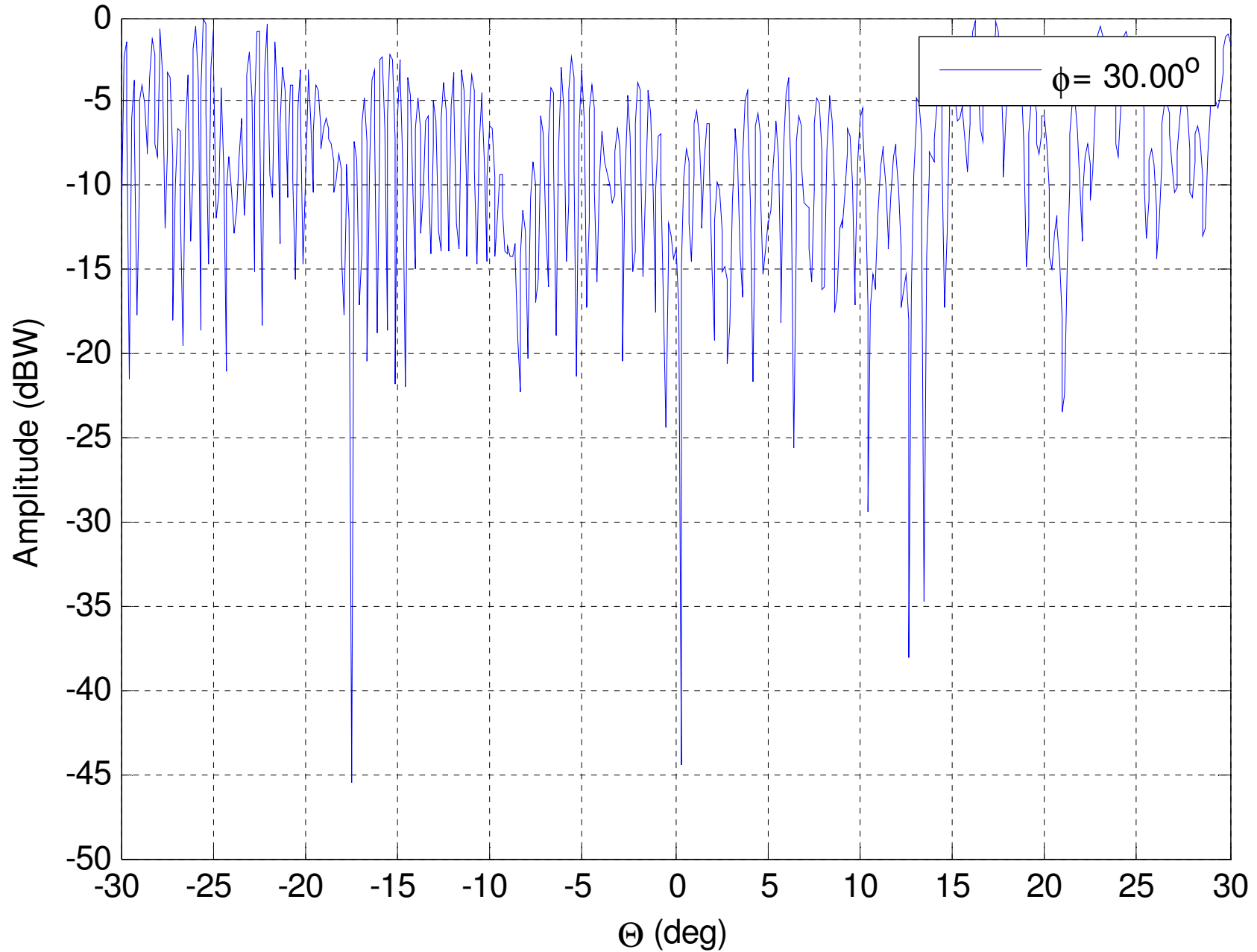
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -12.95 dBW, Date: 15-Dec-2011



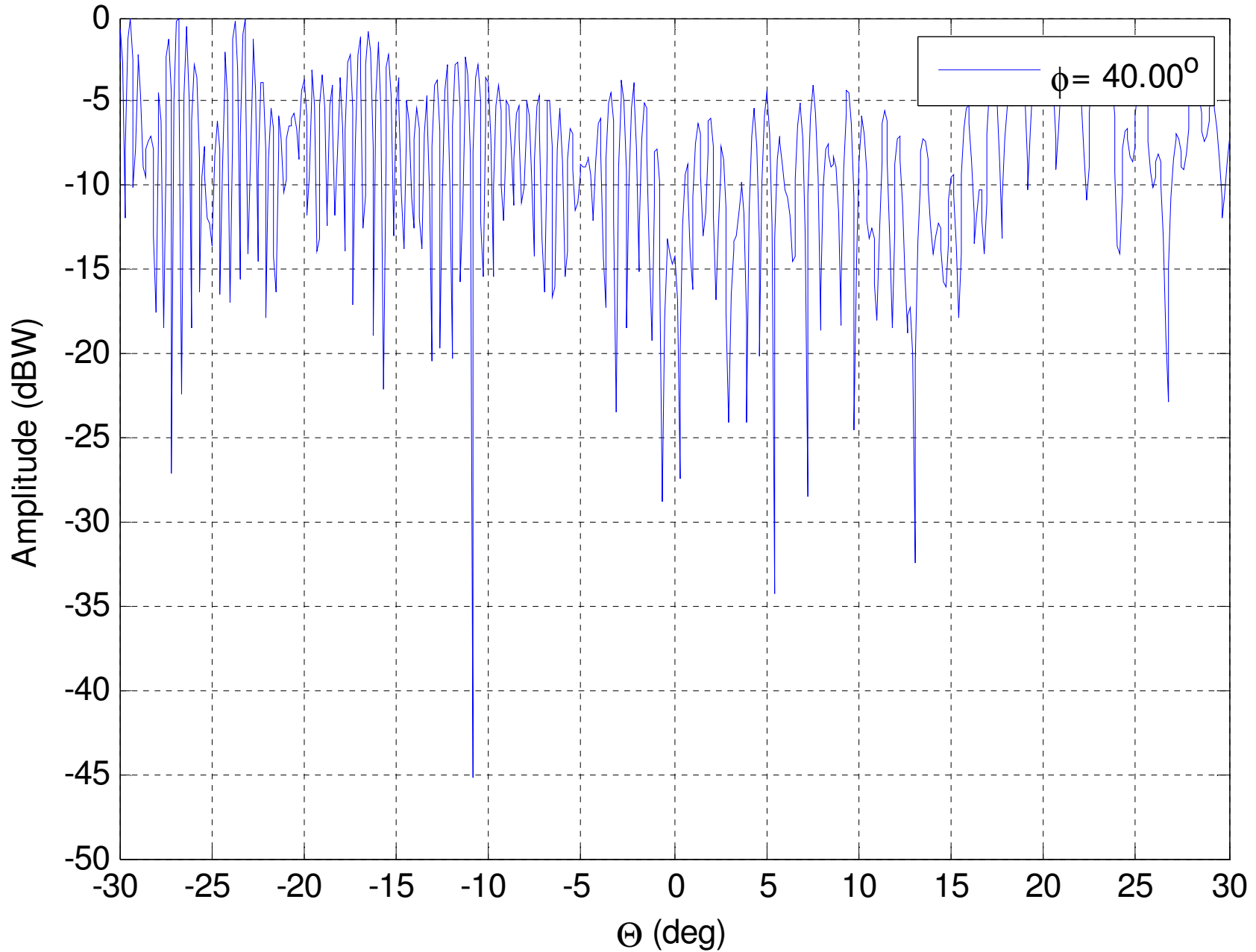
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -13.18 dBW, Date: 15-Dec-2011



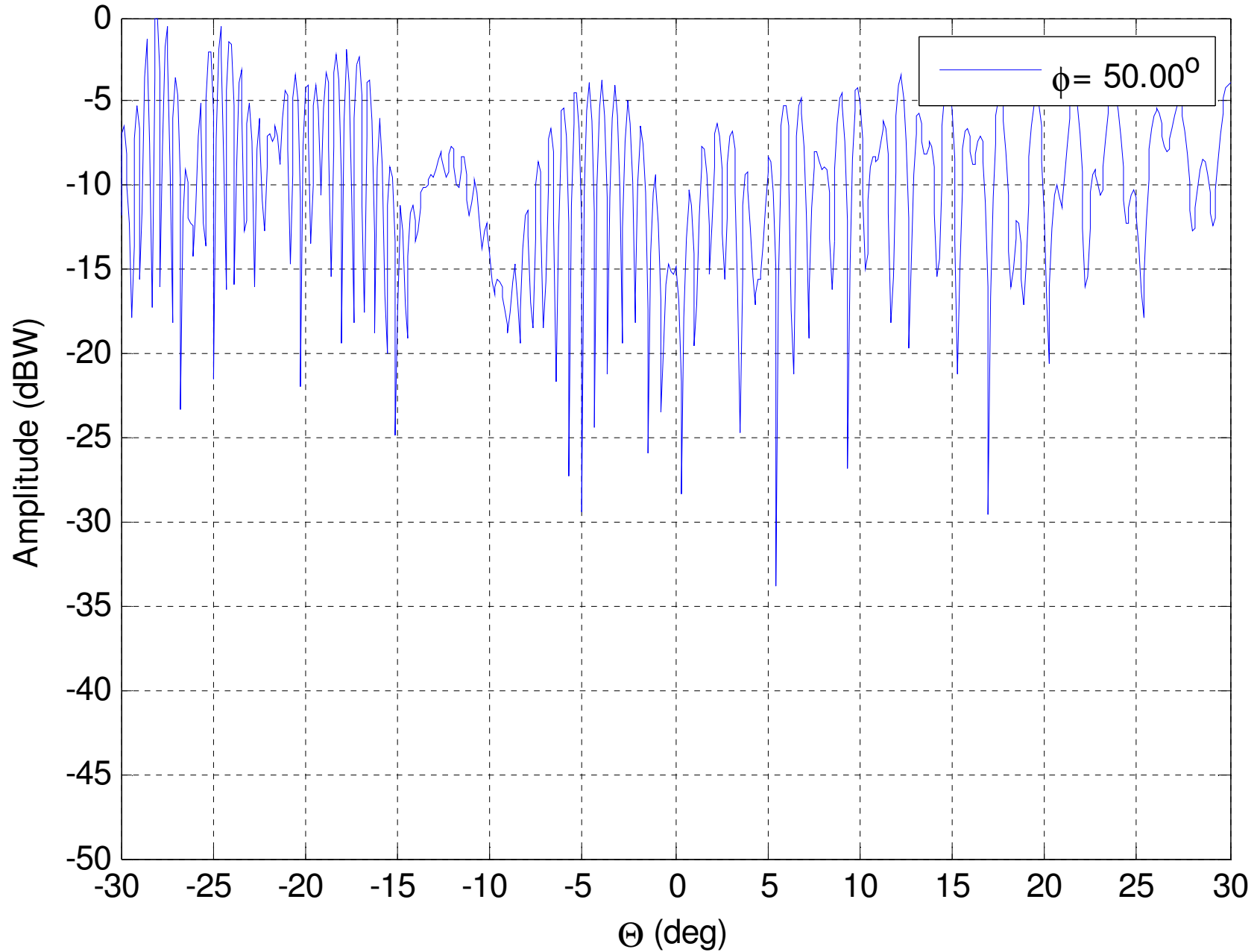
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -12.82 dBW, Date: 15-Dec-2011



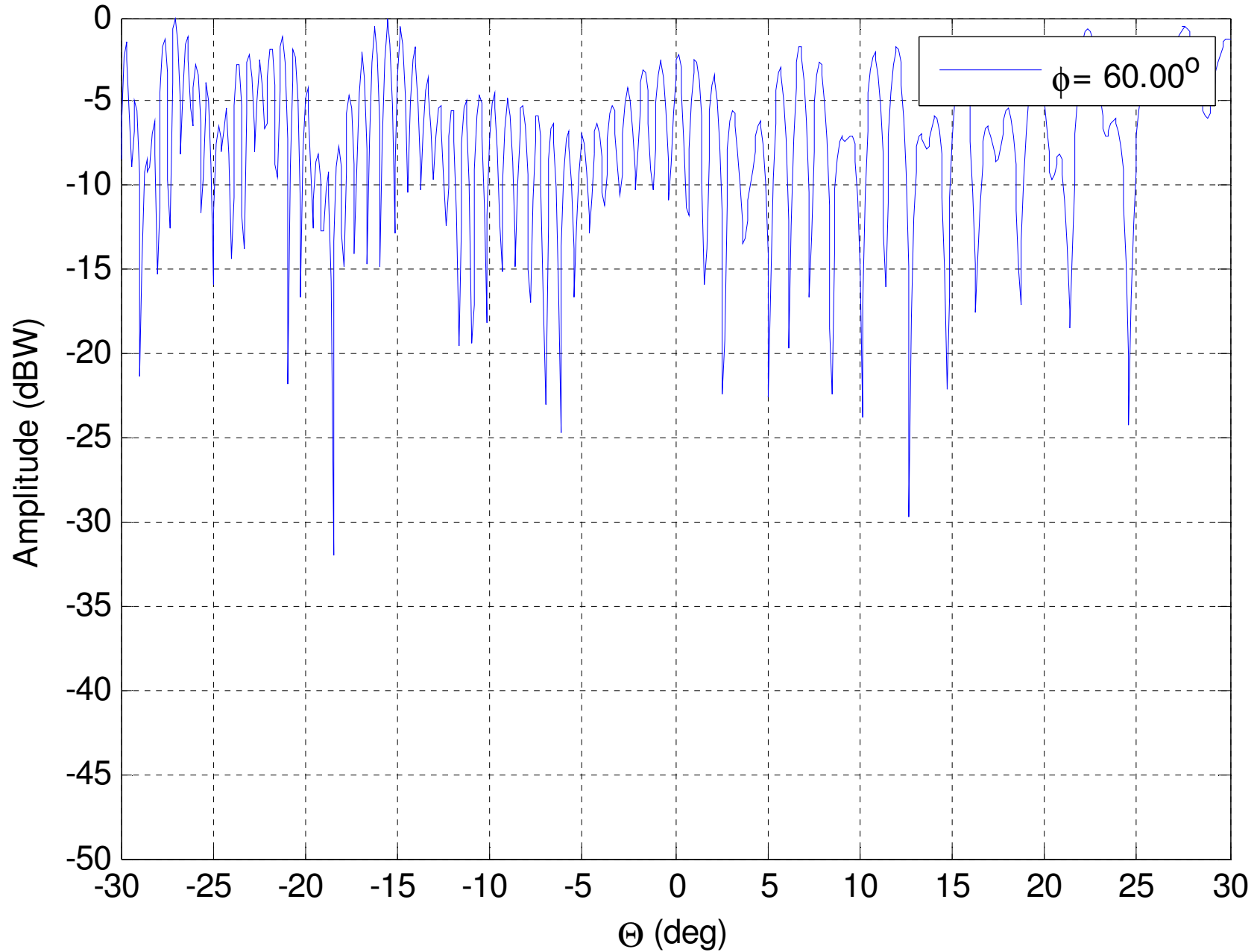
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -12.16 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

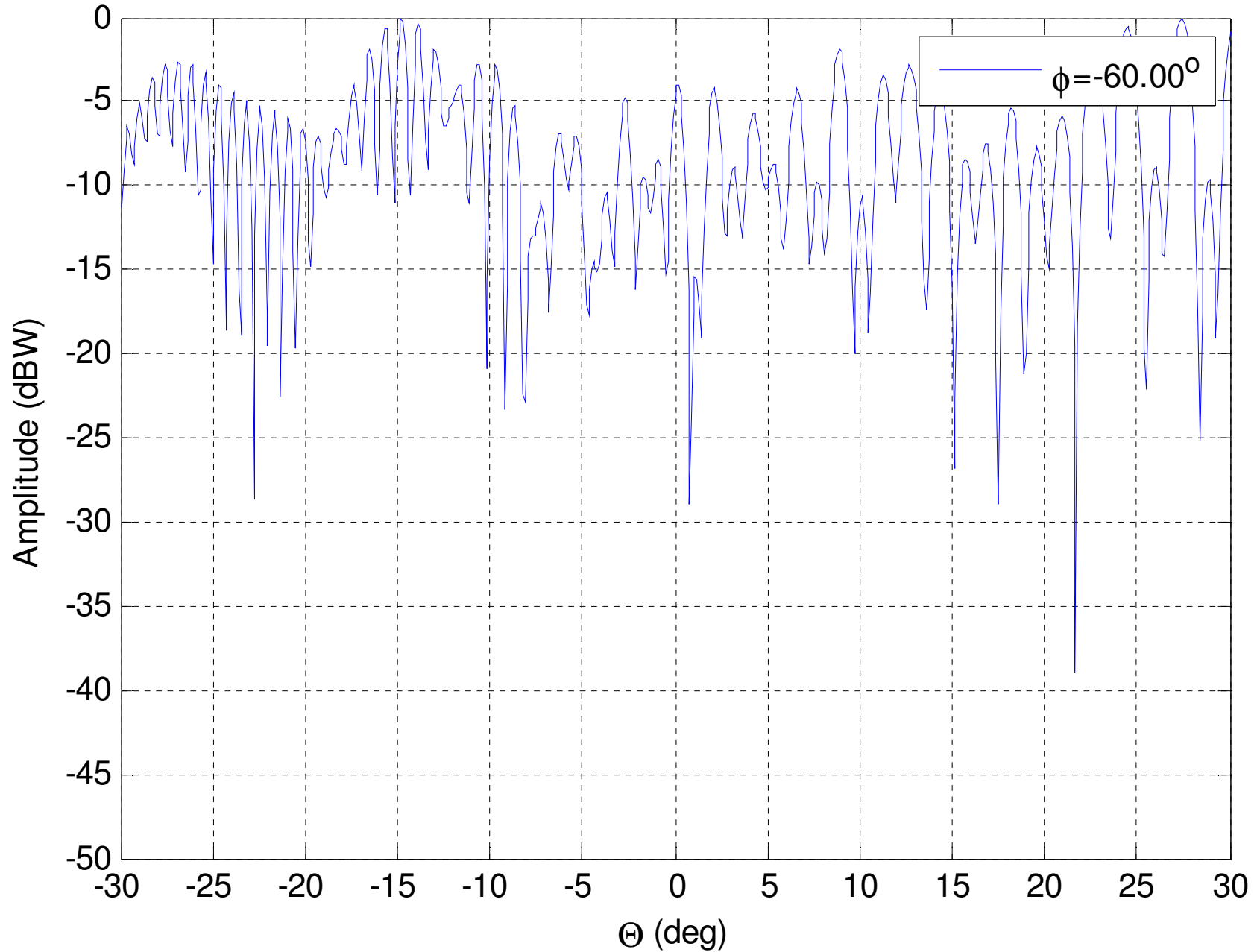
Input file: tx-17.5-rhcp-60.cut, Peak: -14.04 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

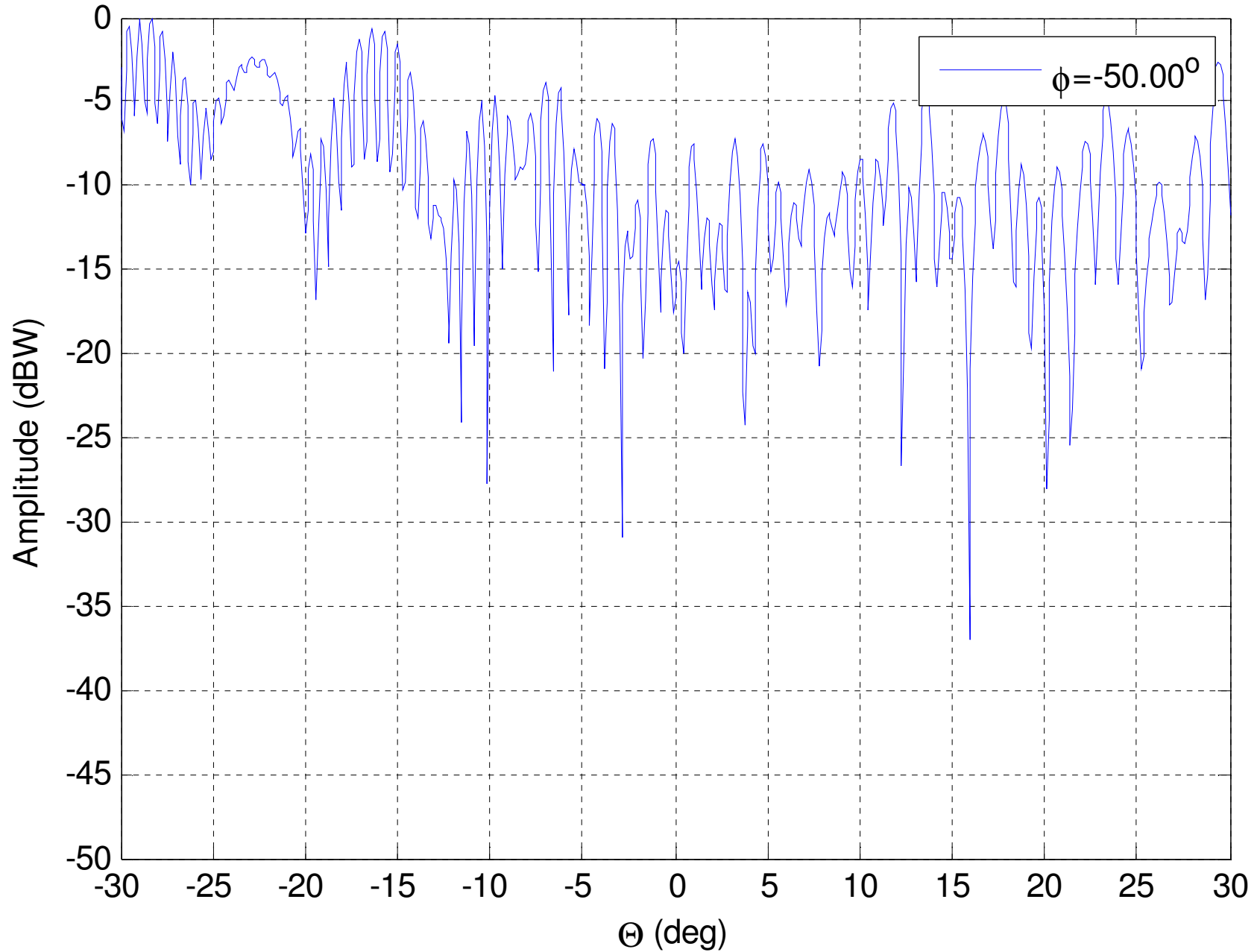
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -12.38 dBW, Date: 15-Dec-2011



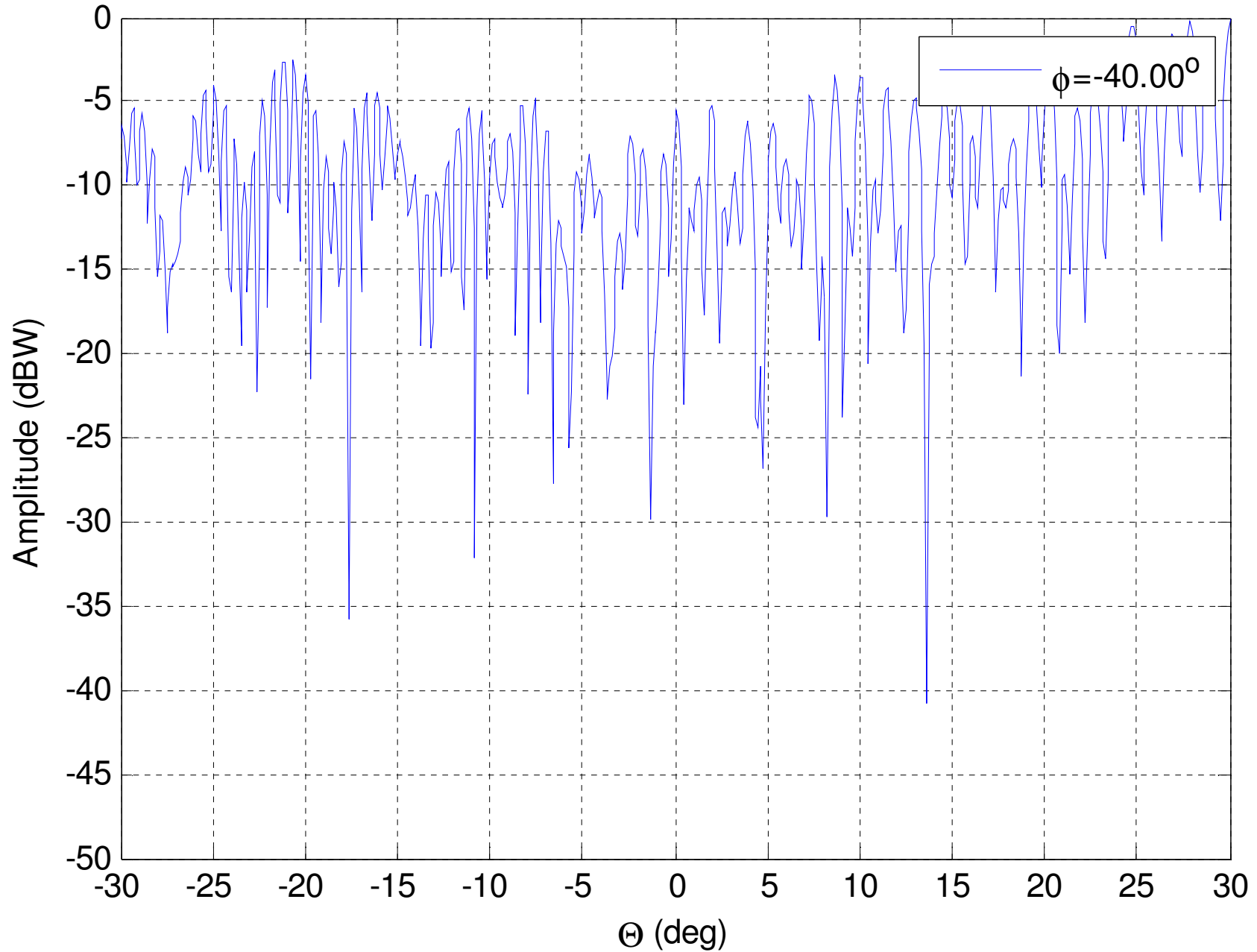
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.10 dBW, Date: 15-Dec-2011



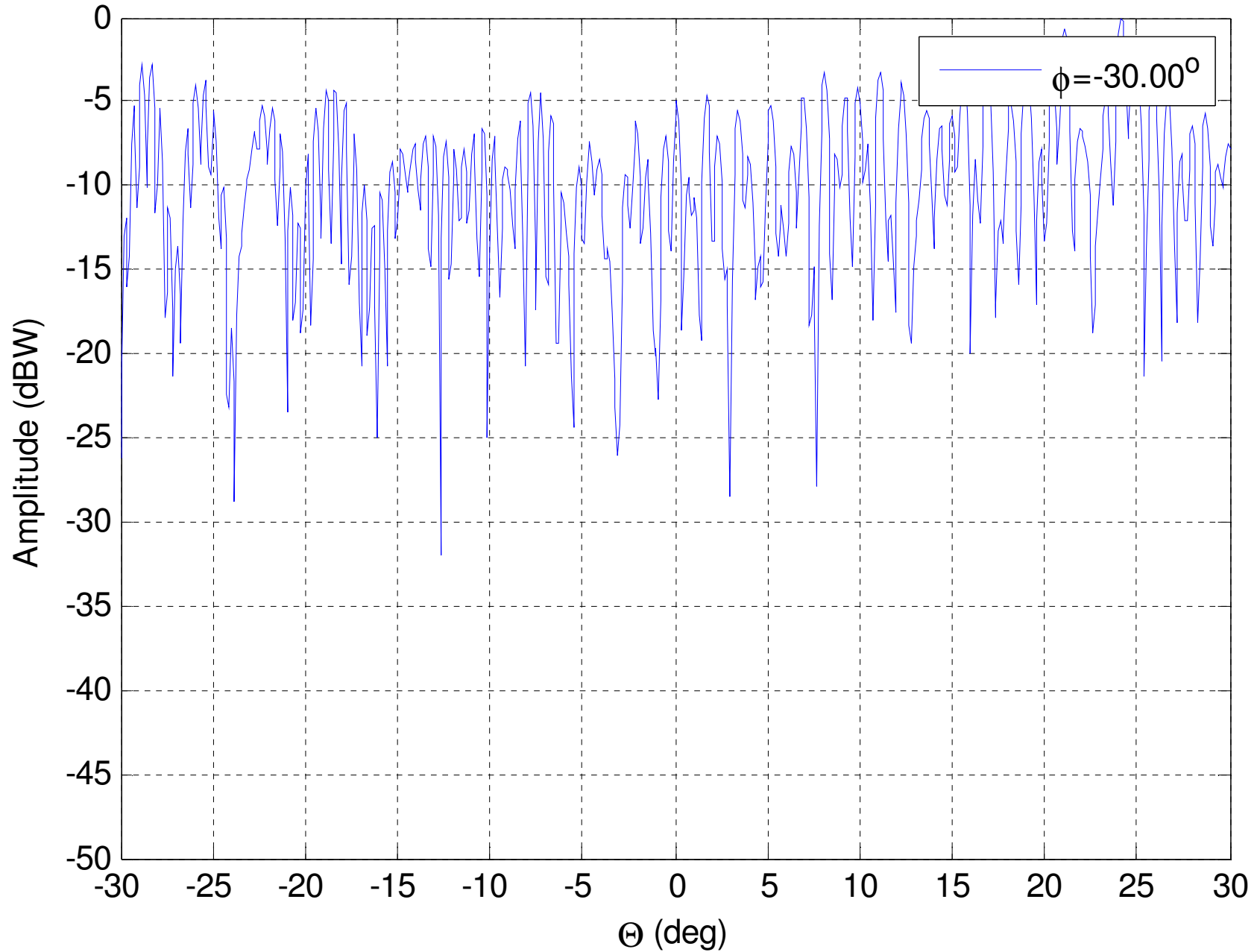
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.73 dBW, Date: 15-Dec-2011



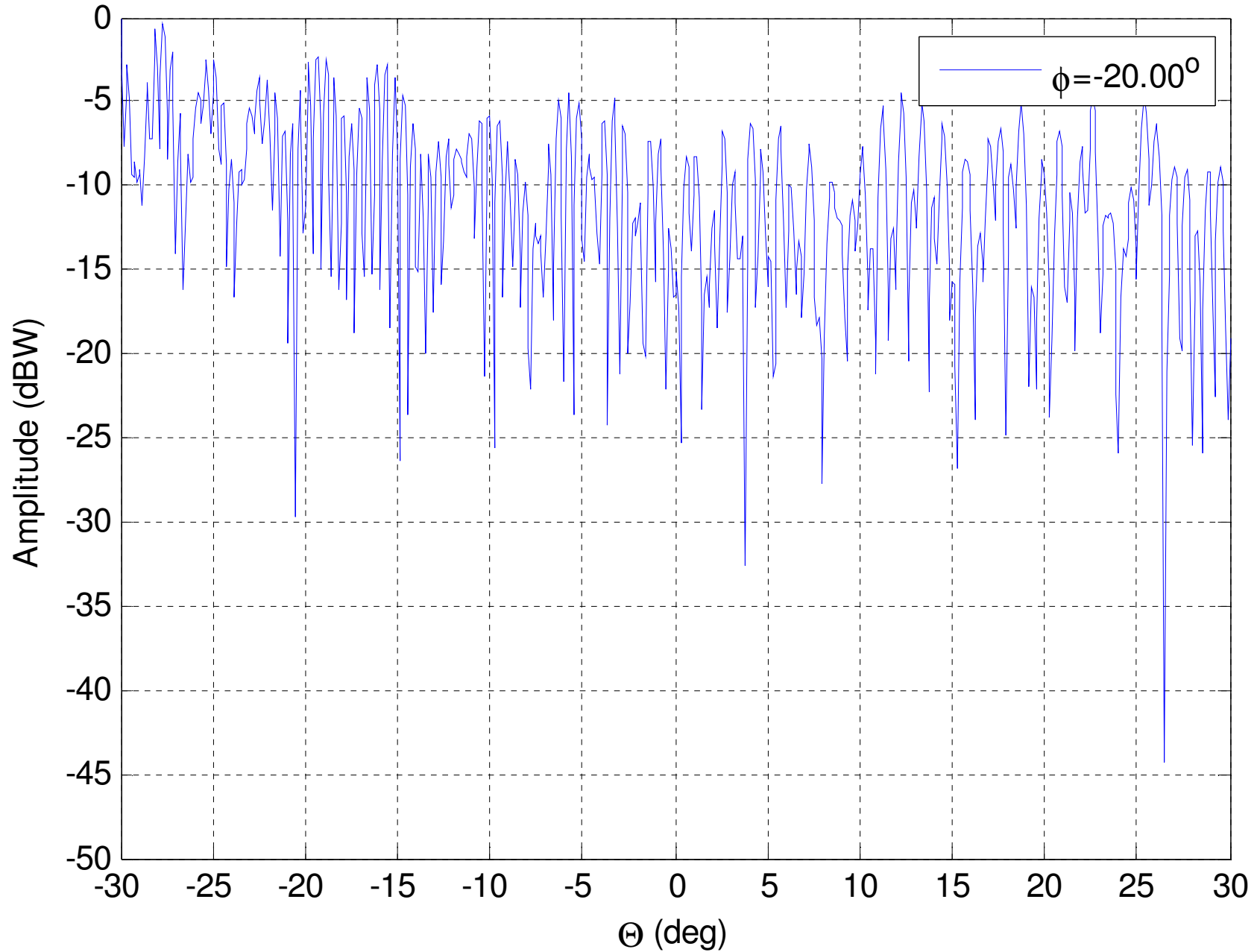
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -11.35 dBW, Date: 15-Dec-2011



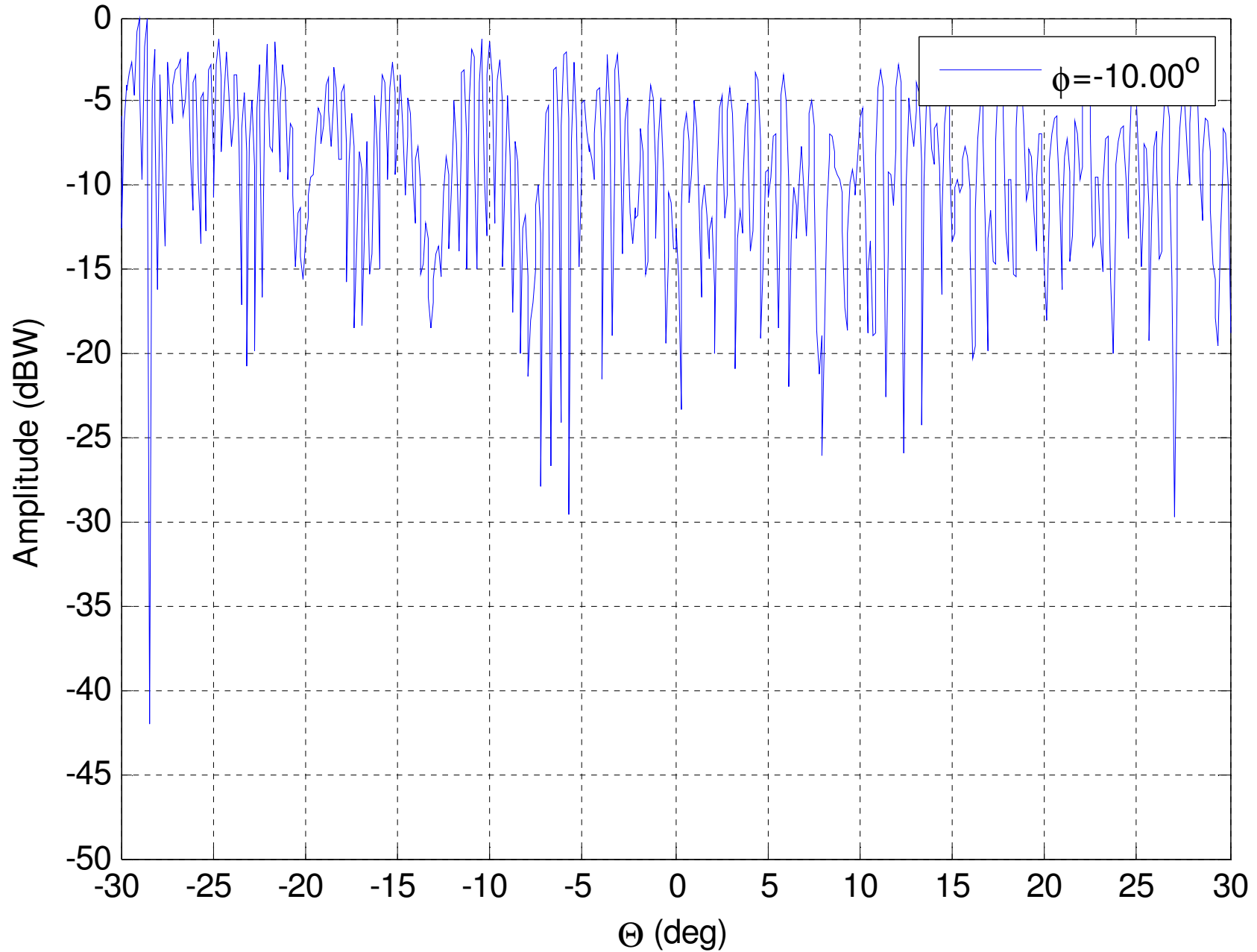
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -11.33 dBW, Date: 15-Dec-2011



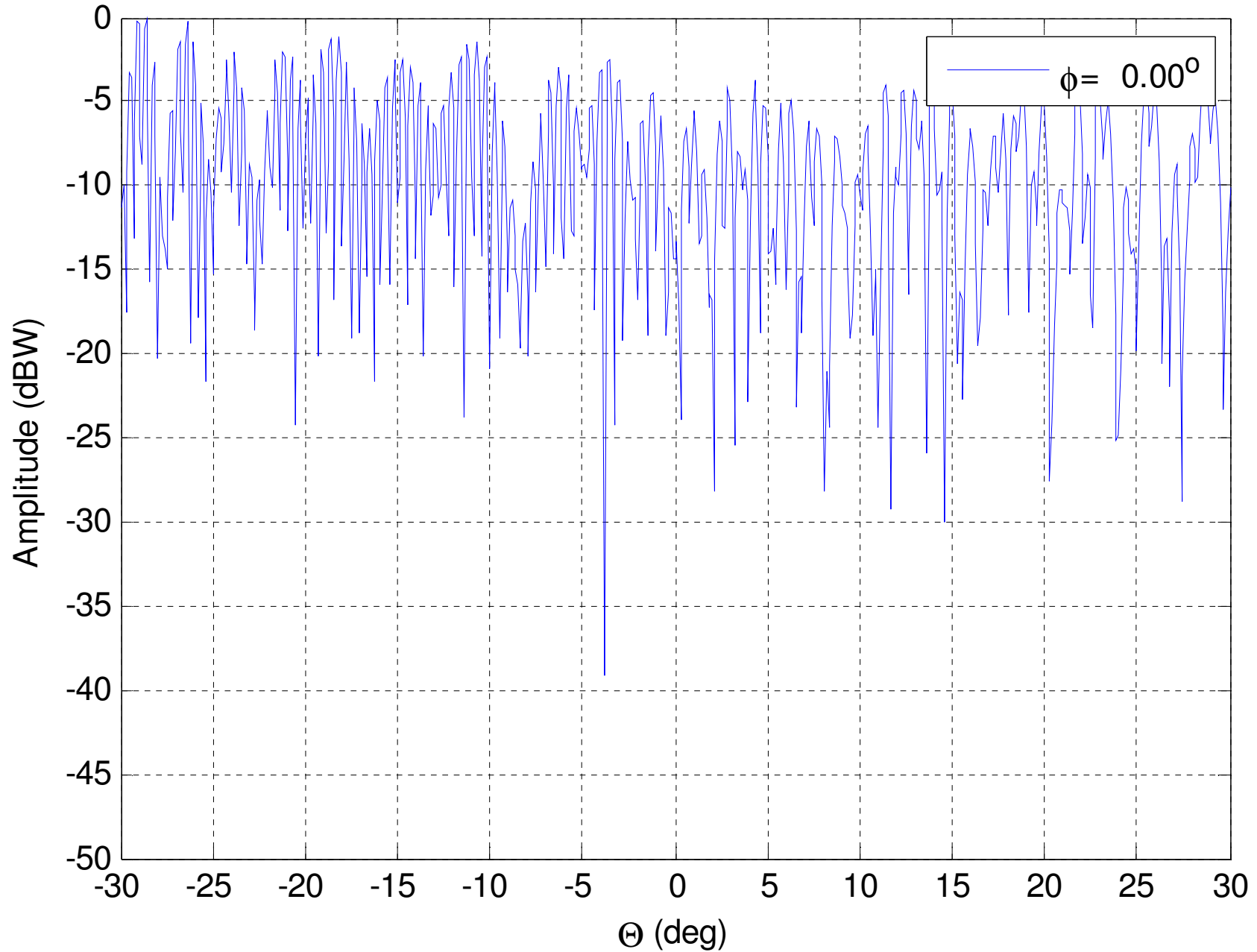
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -14.06 dBW, Date: 15-Dec-2011



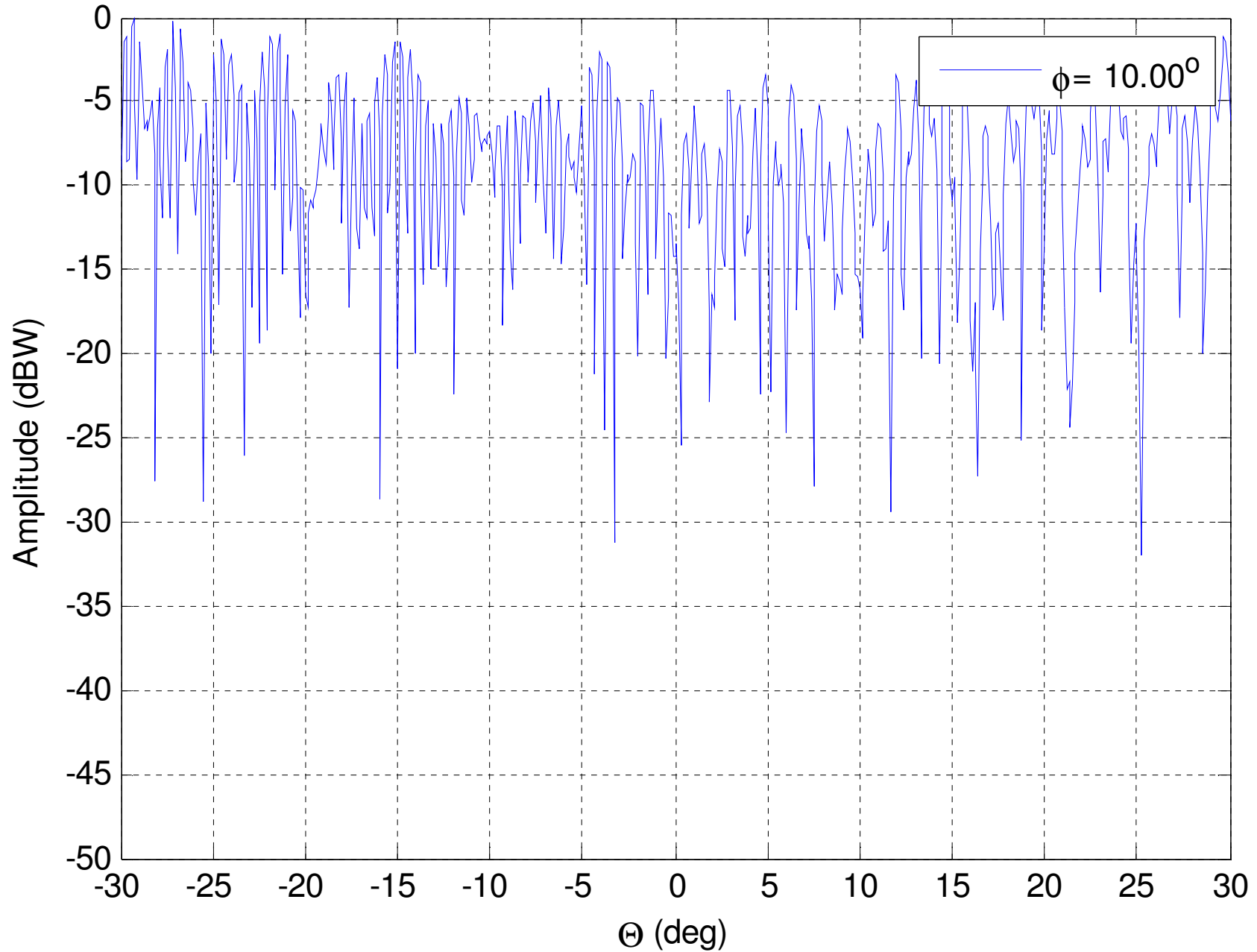
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -13.52 dBW, Date: 15-Dec-2011



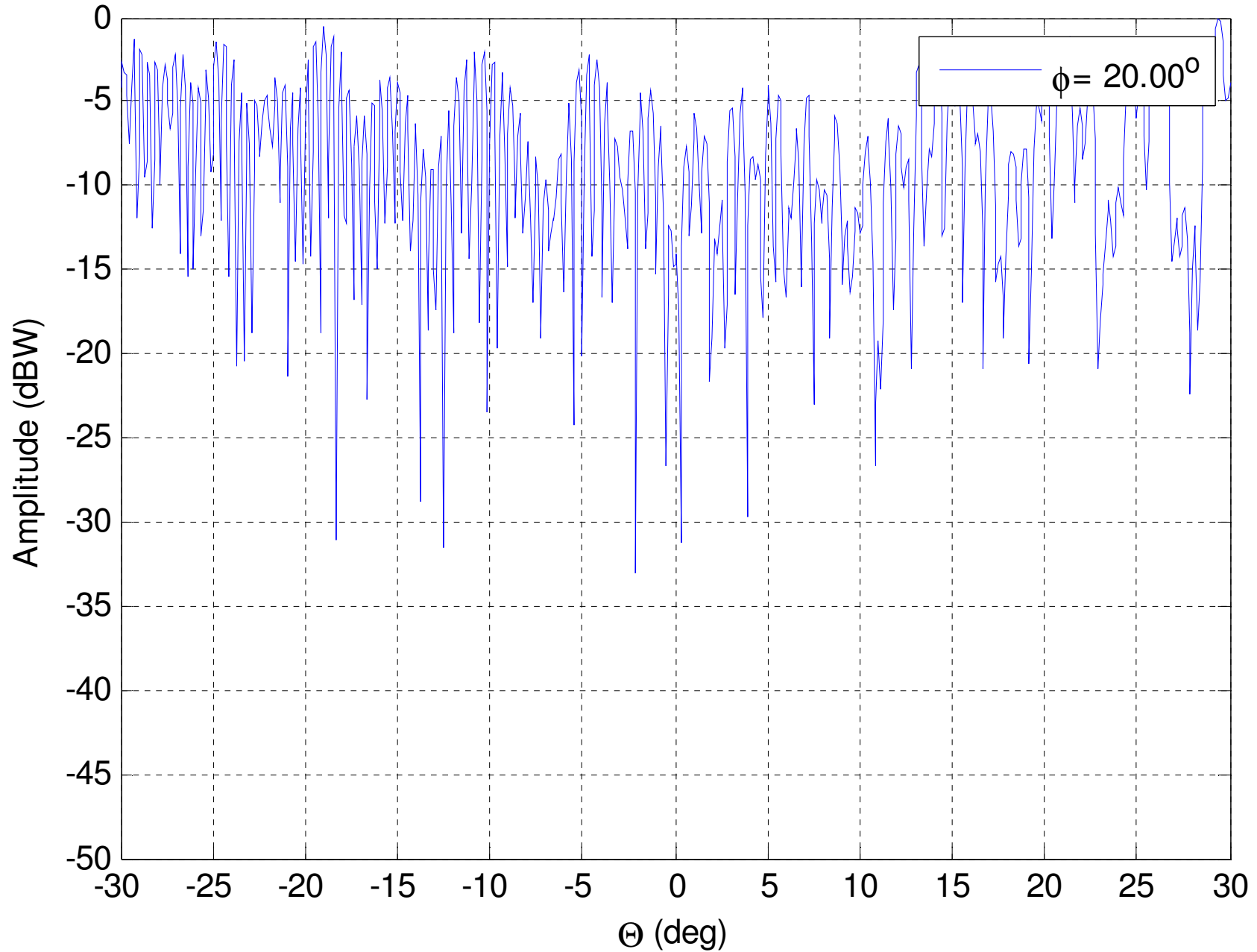
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -13.63 dBW, Date: 15-Dec-2011



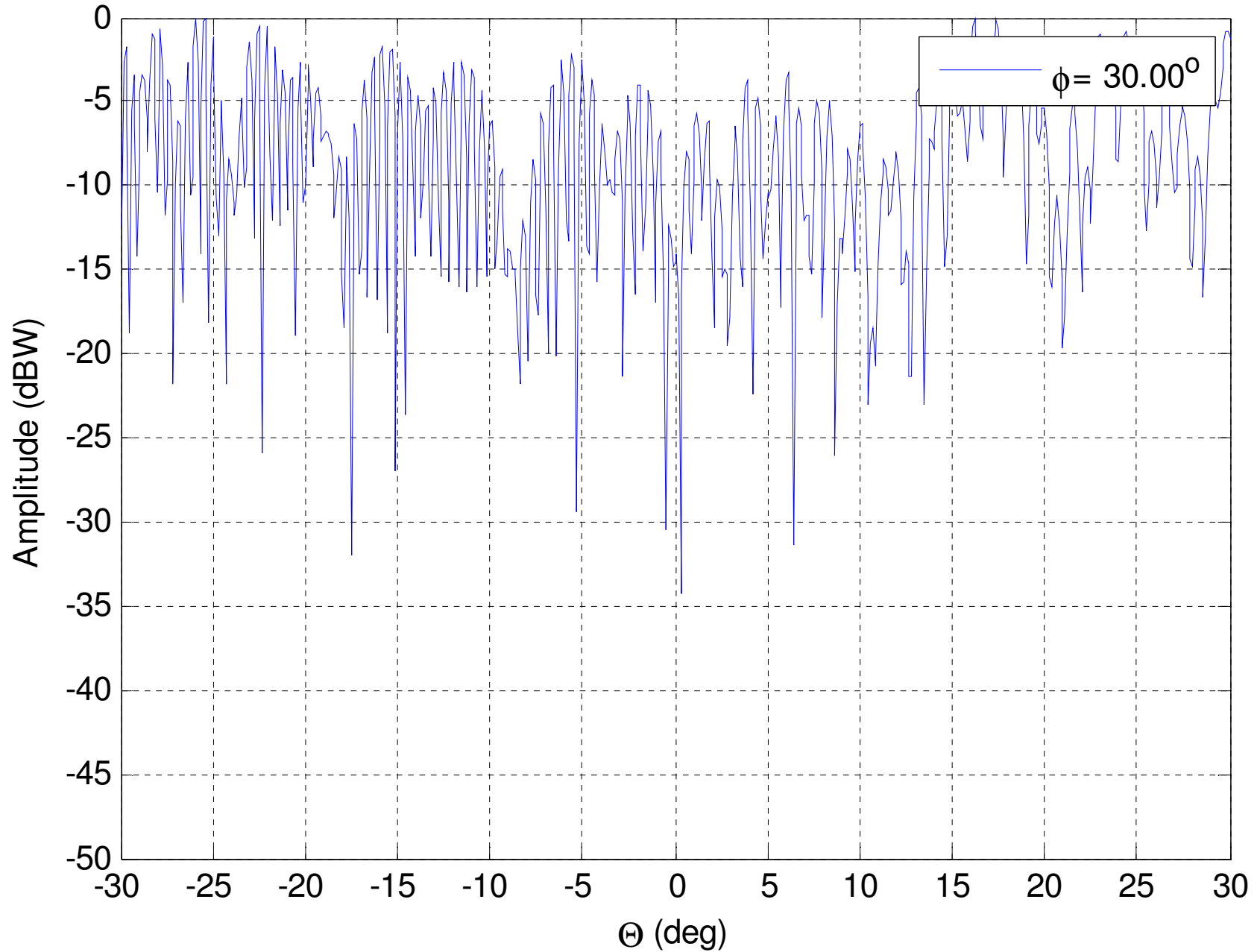
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -13.16 dBW, Date: 15-Dec-2011



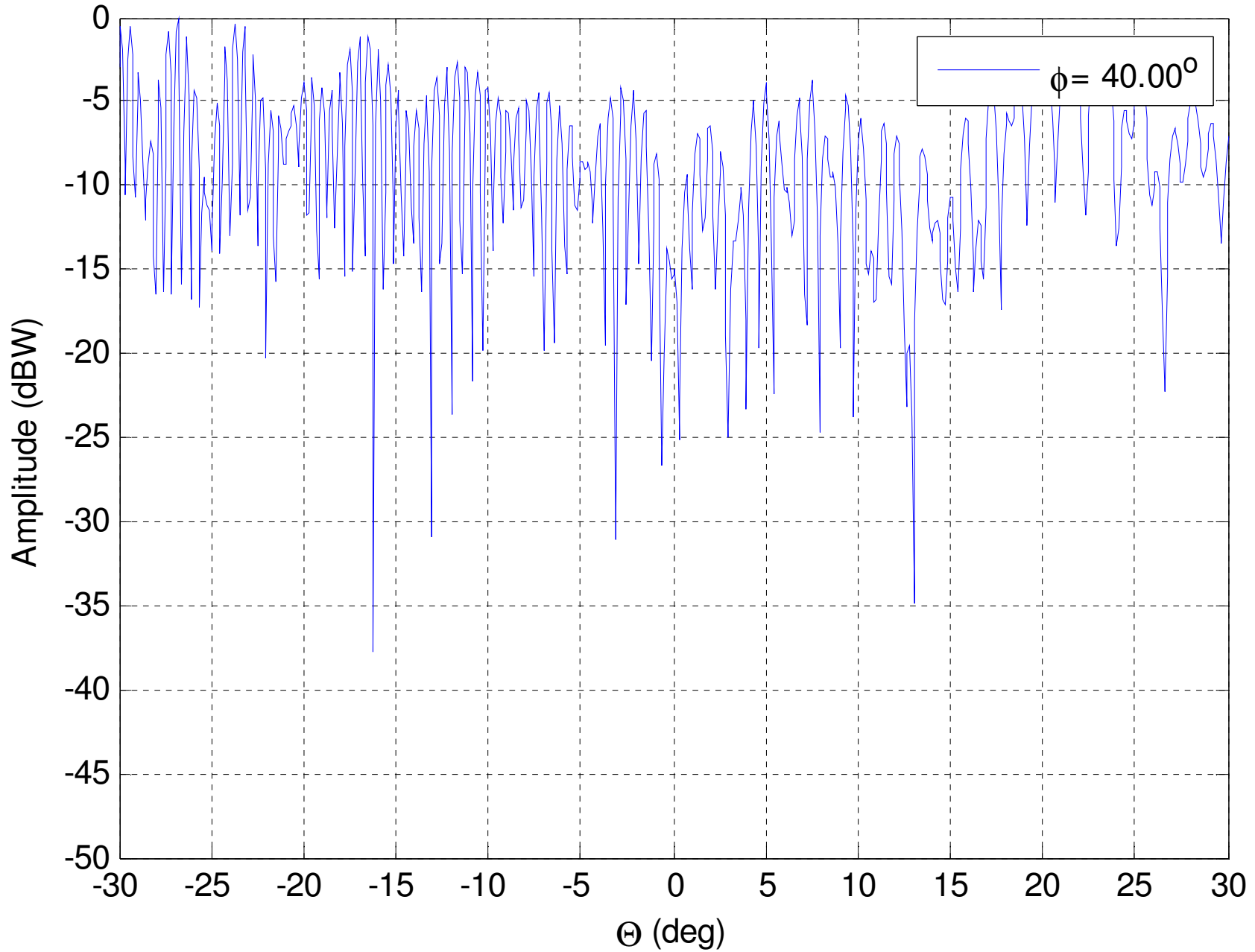
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -13.35 dBW, Date: 15-Dec-2011



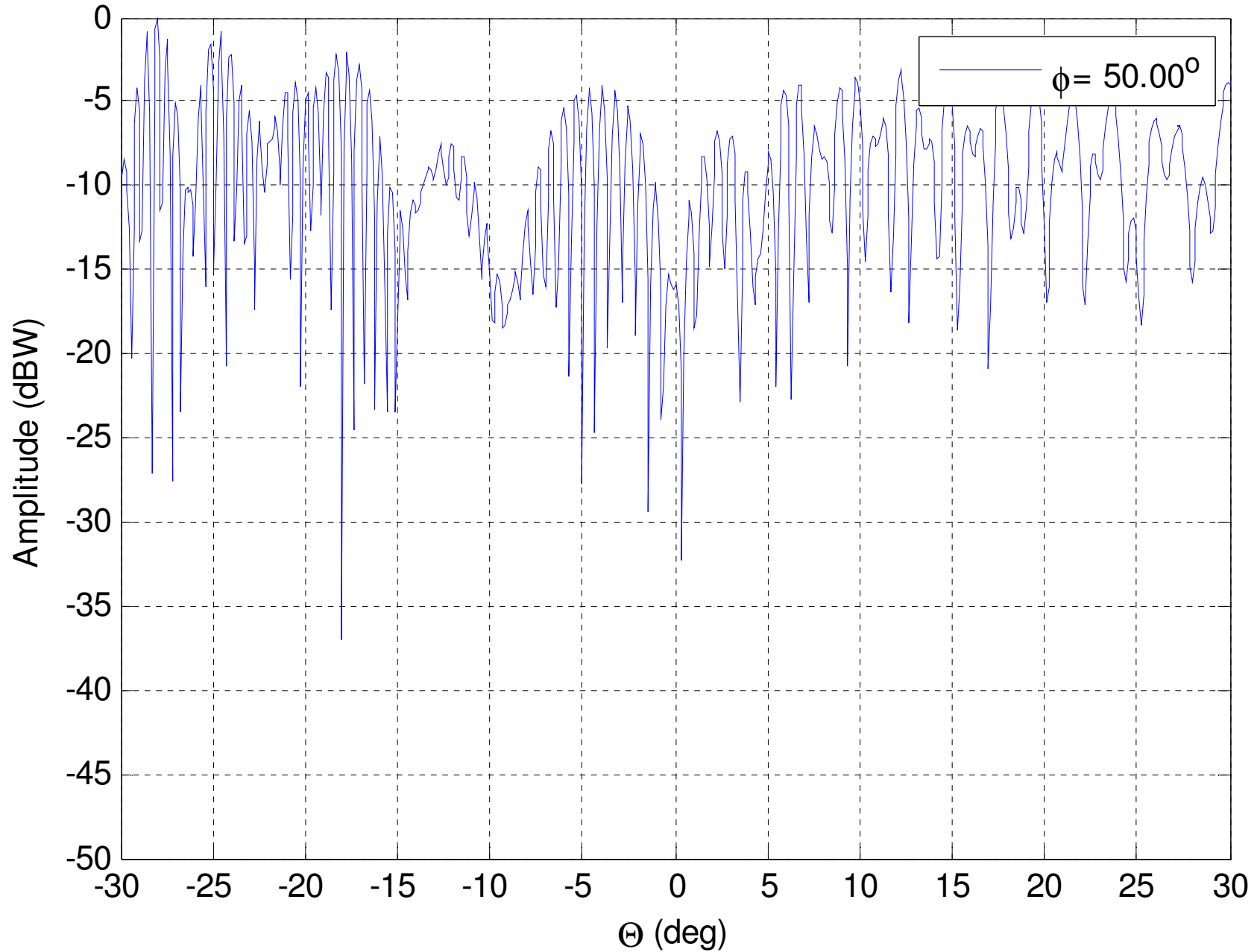
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -12.57 dBW, Date: 15-Dec-2011



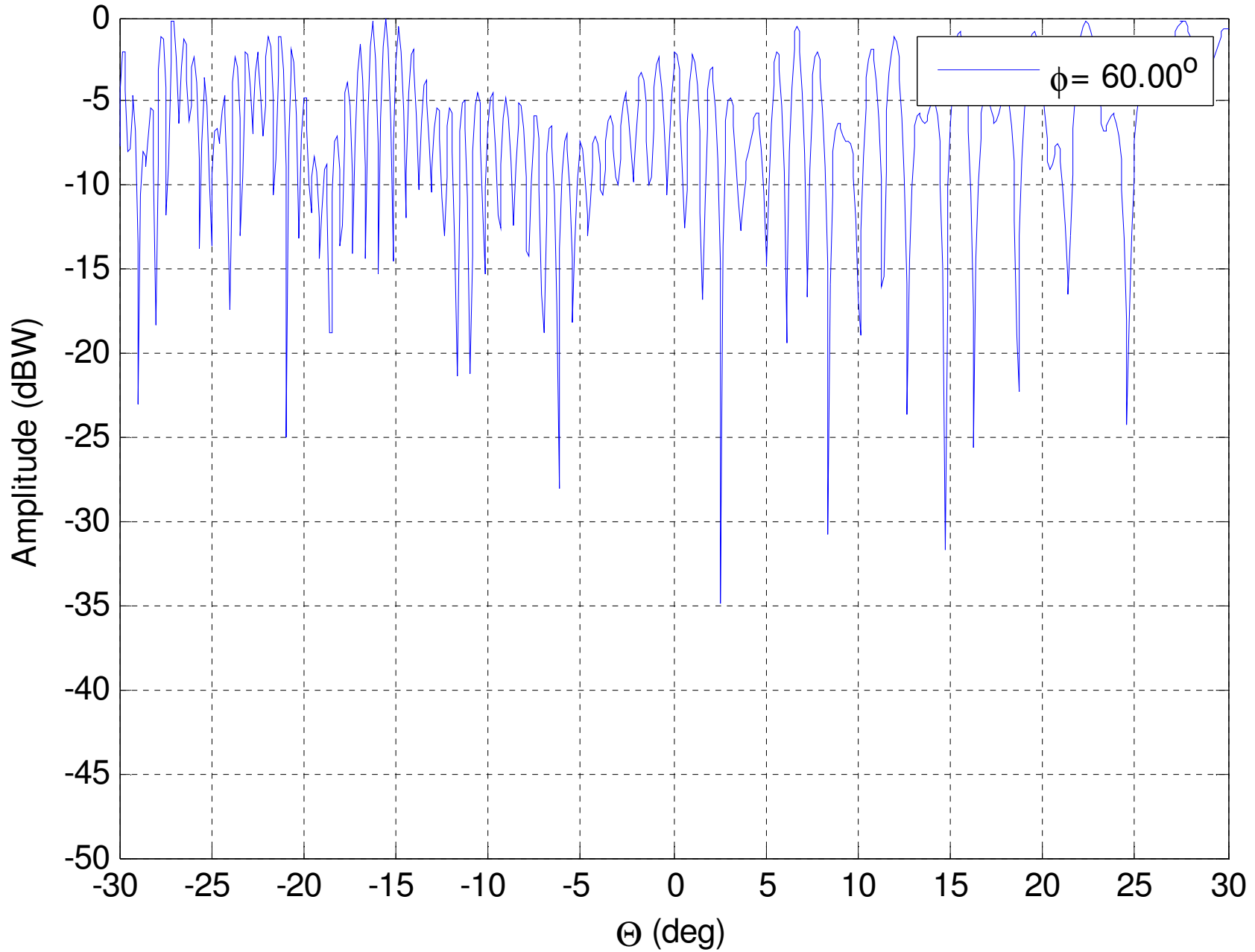
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.93 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

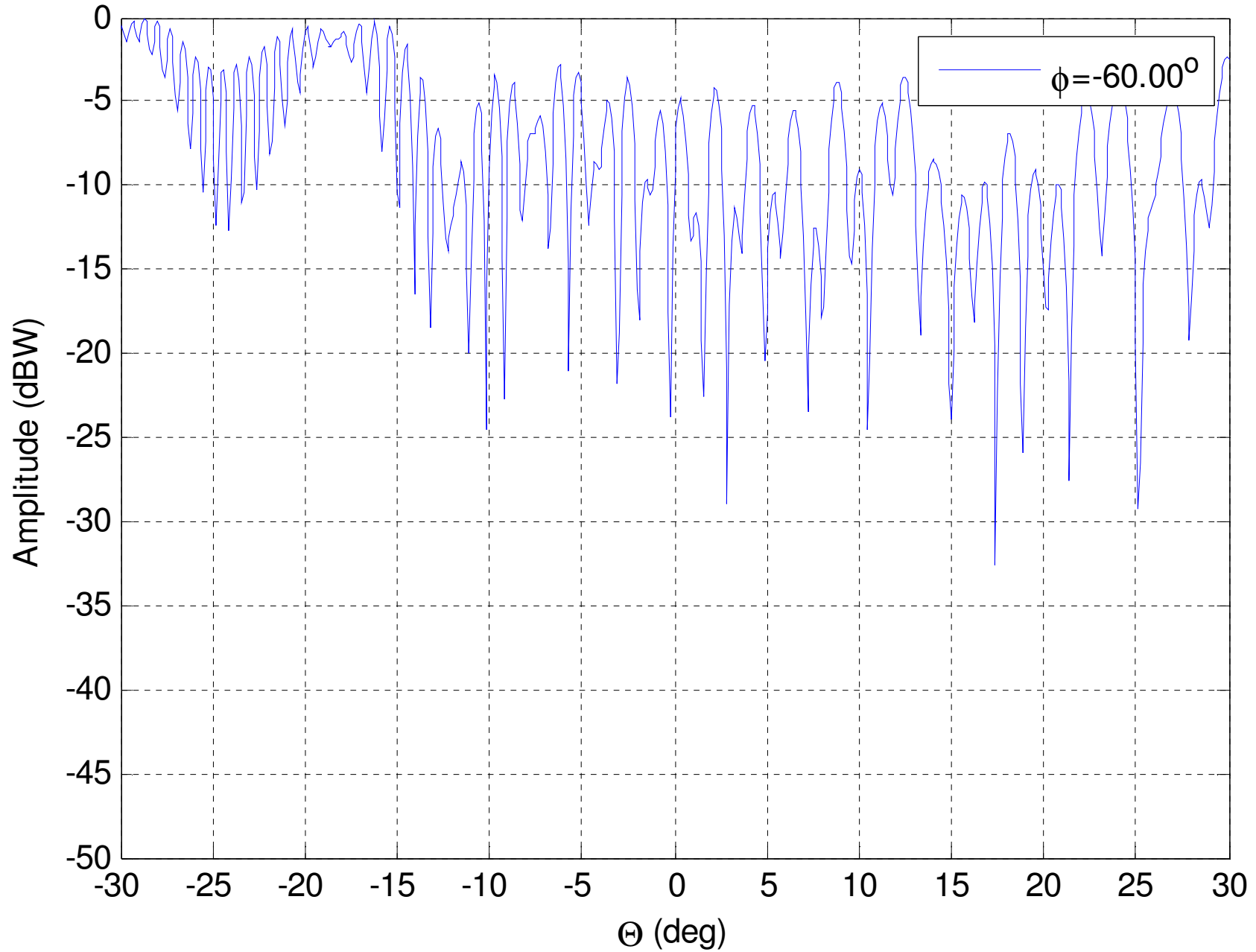
Input file: tx-17.5-lhcp-60.cut, Peak: -14.14 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

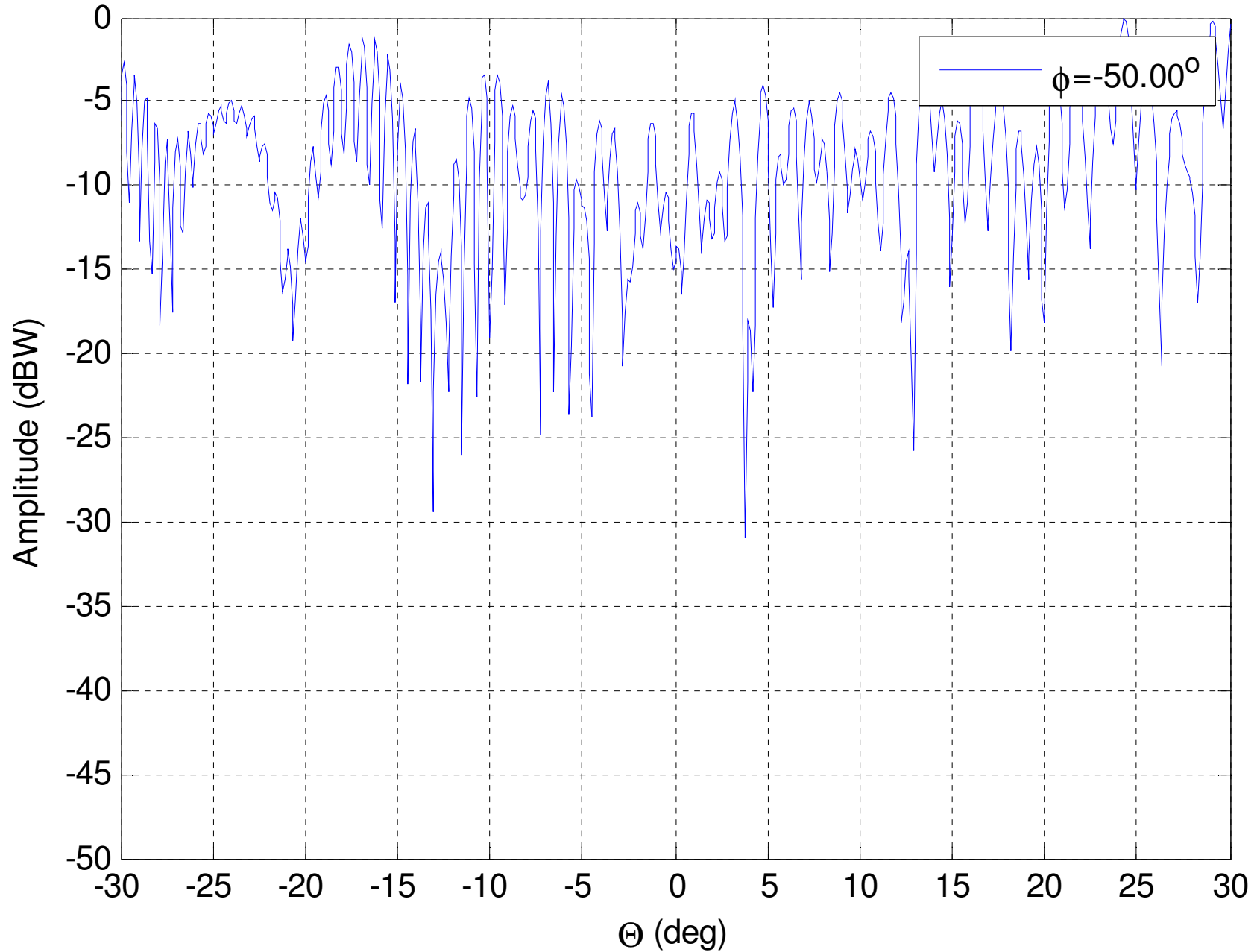
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -12.92 dBW, Date: 15-Dec-2011



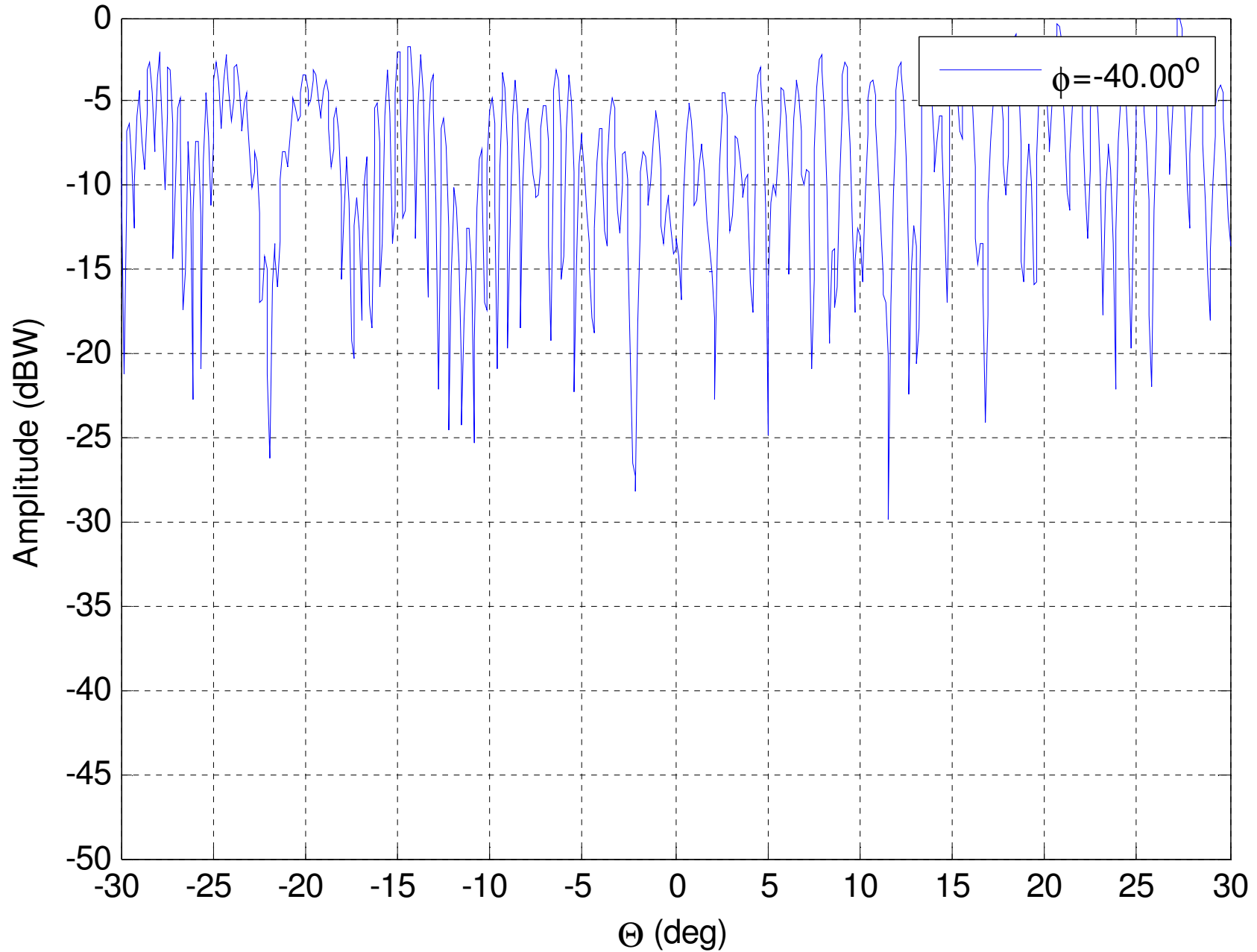
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.29 dBW, Date: 15-Dec-2011



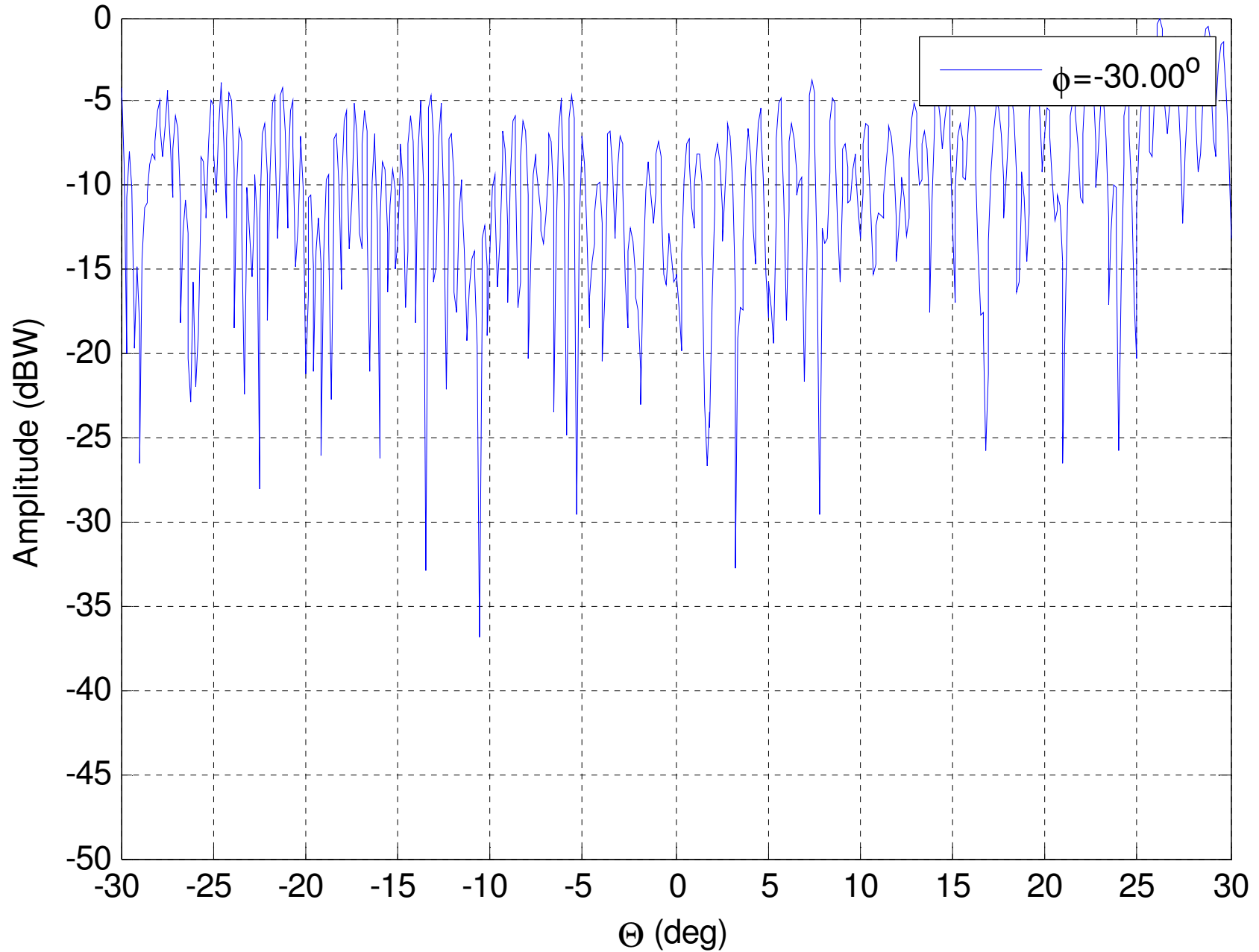
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -13.01 dBW, Date: 15-Dec-2011



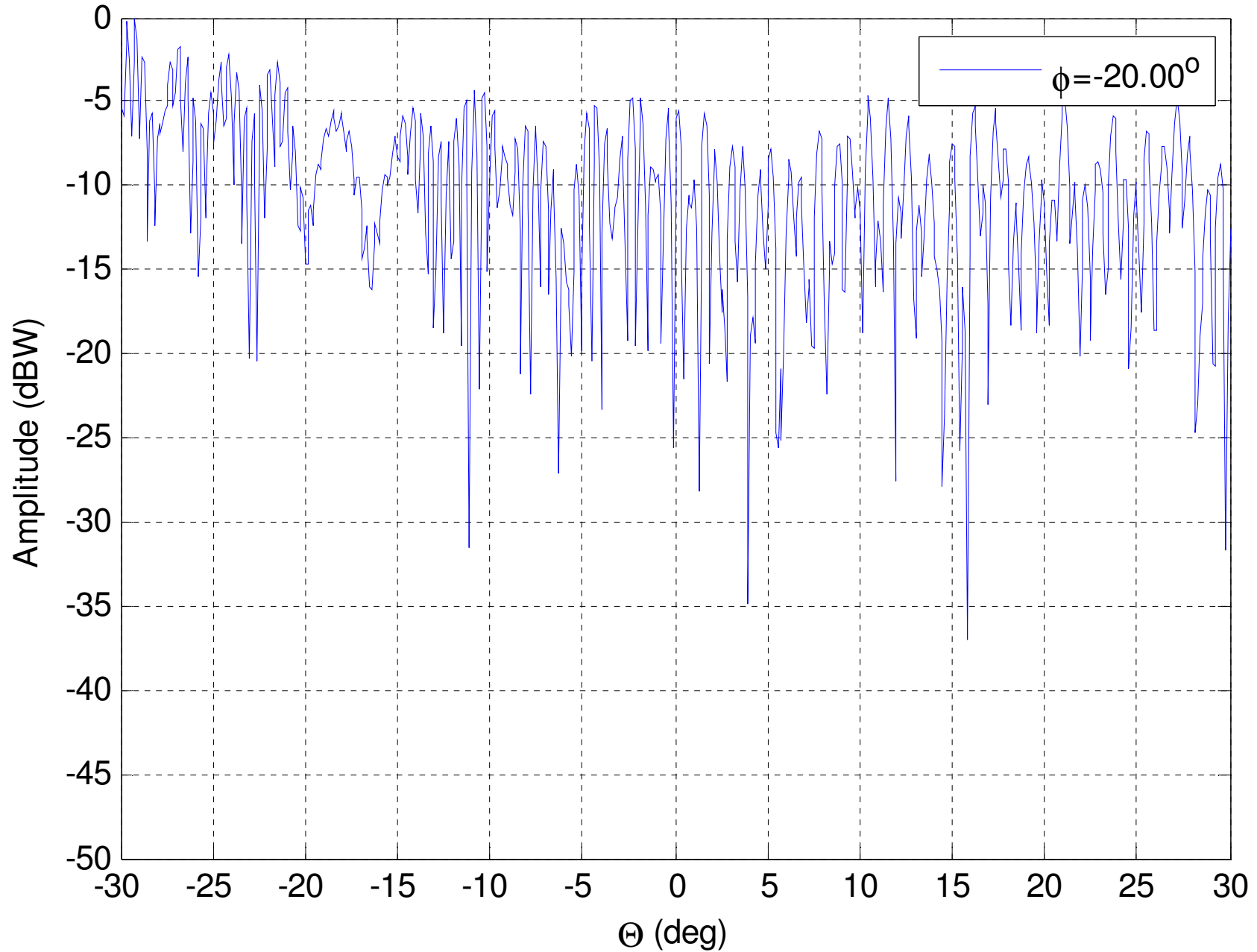
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -11.29 dBW, Date: 15-Dec-2011



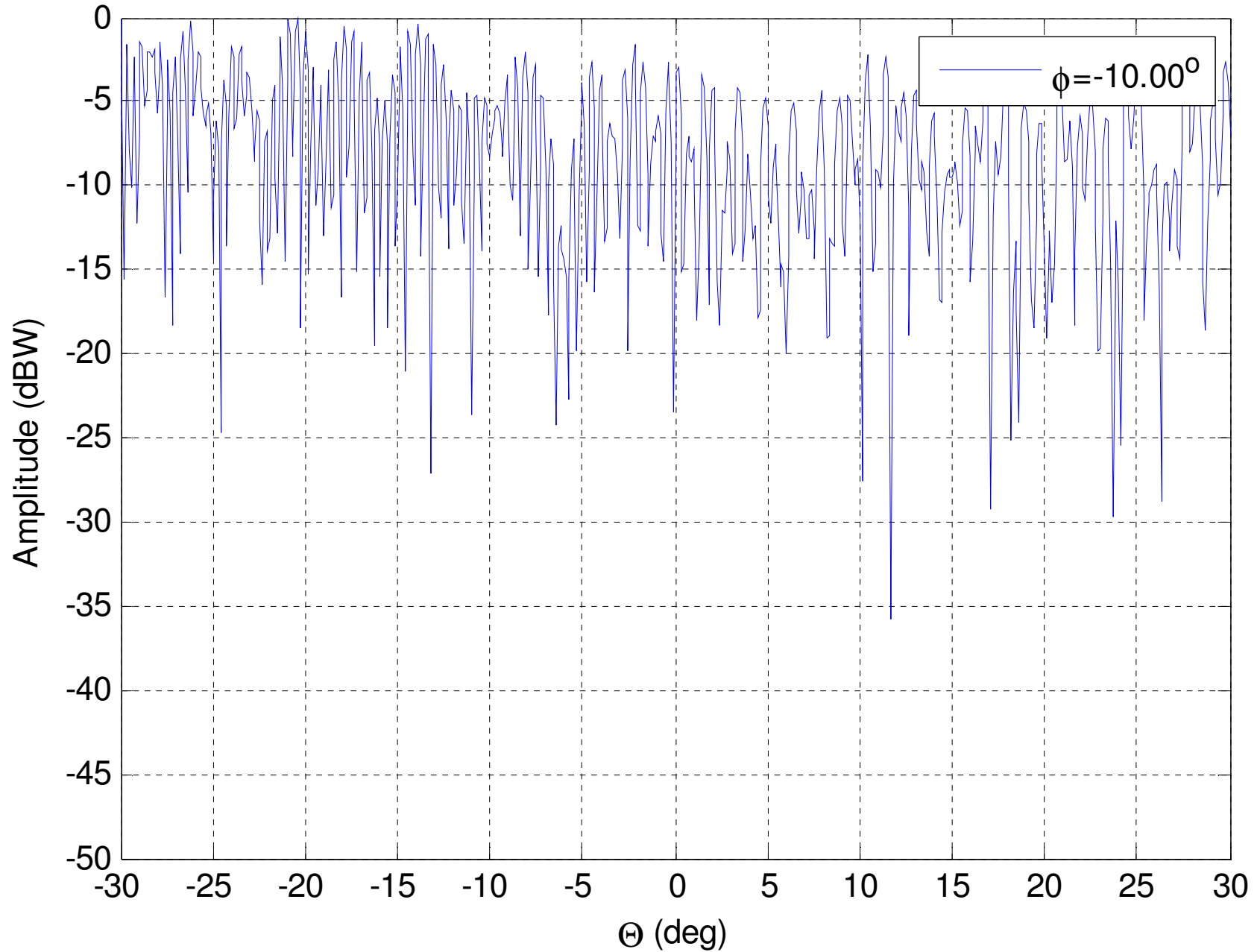
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -11.96 dBW, Date: 15-Dec-2011



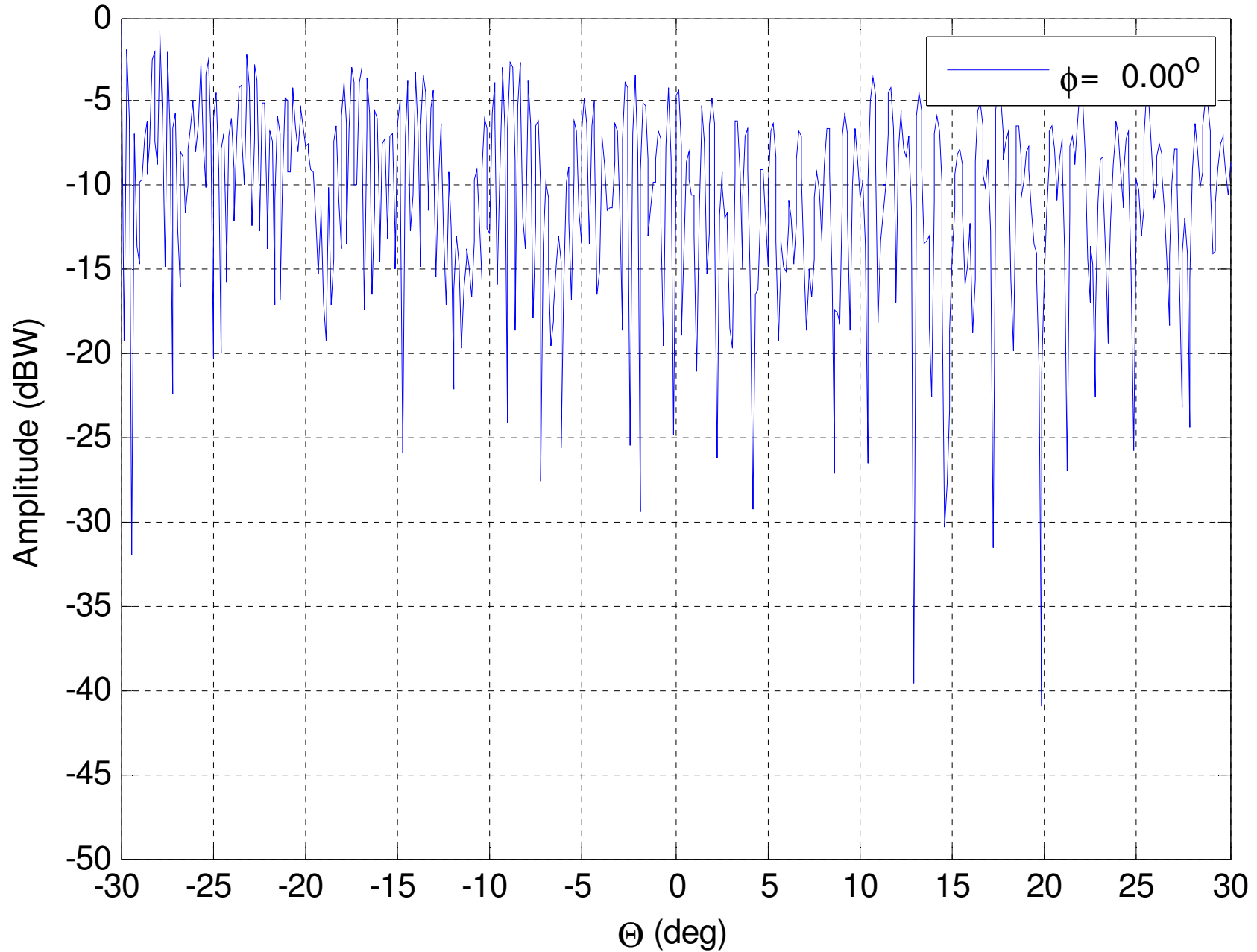
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -14.67 dBW, Date: 15-Dec-2011



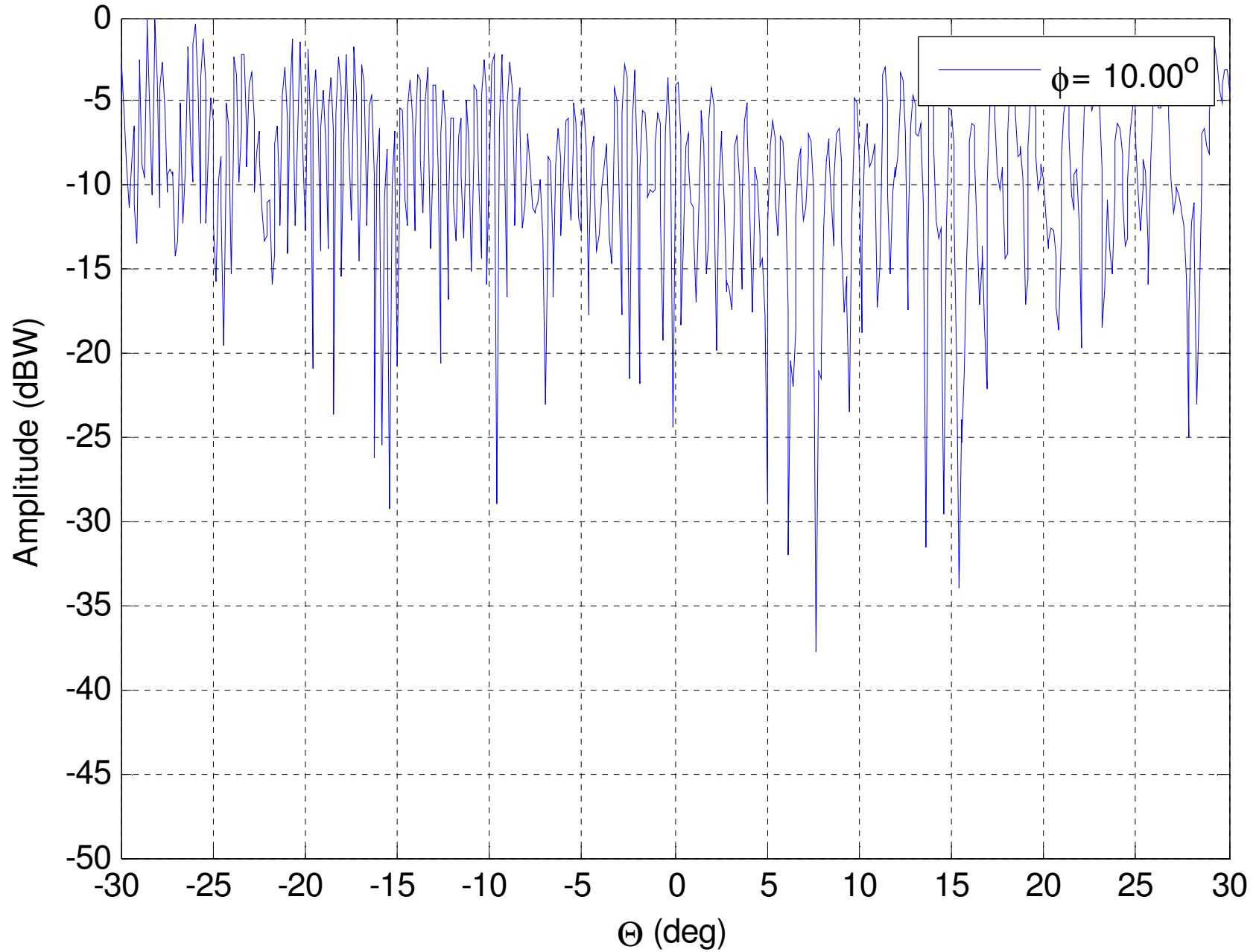
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -13.25 dBW, Date: 15-Dec-2011



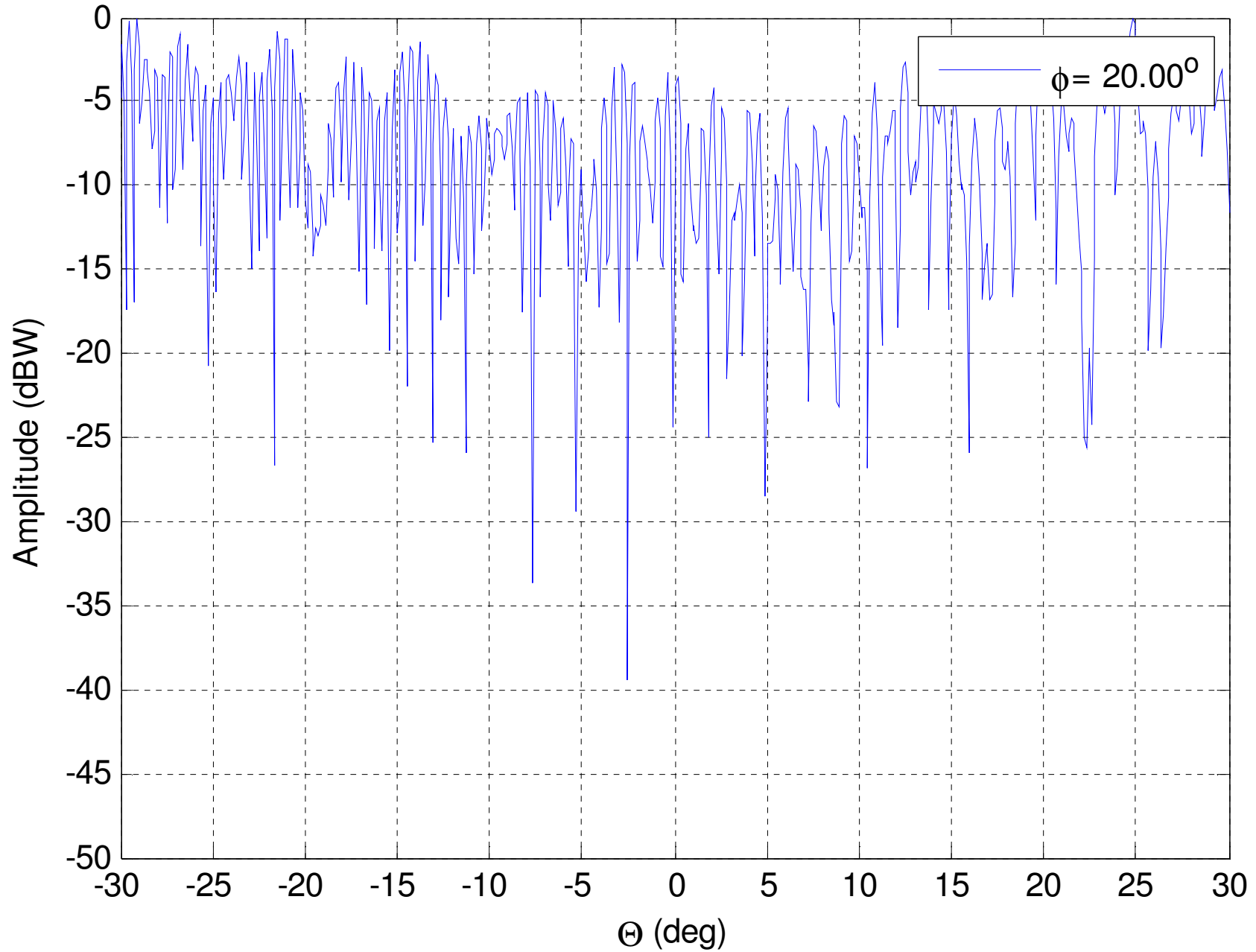
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -13.72 dBW, Date: 15-Dec-2011



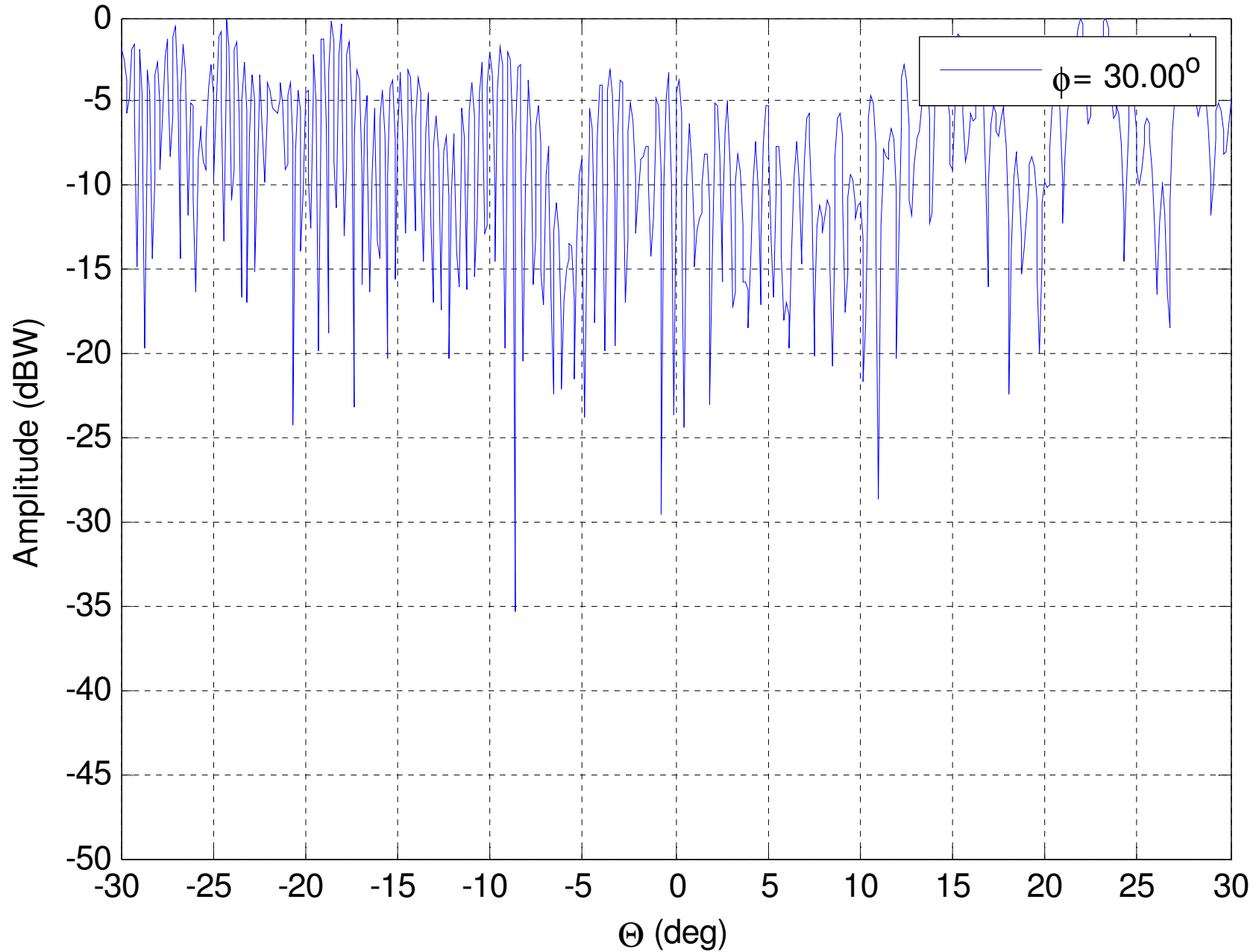
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -13.84 dBW, Date: 15-Dec-2011



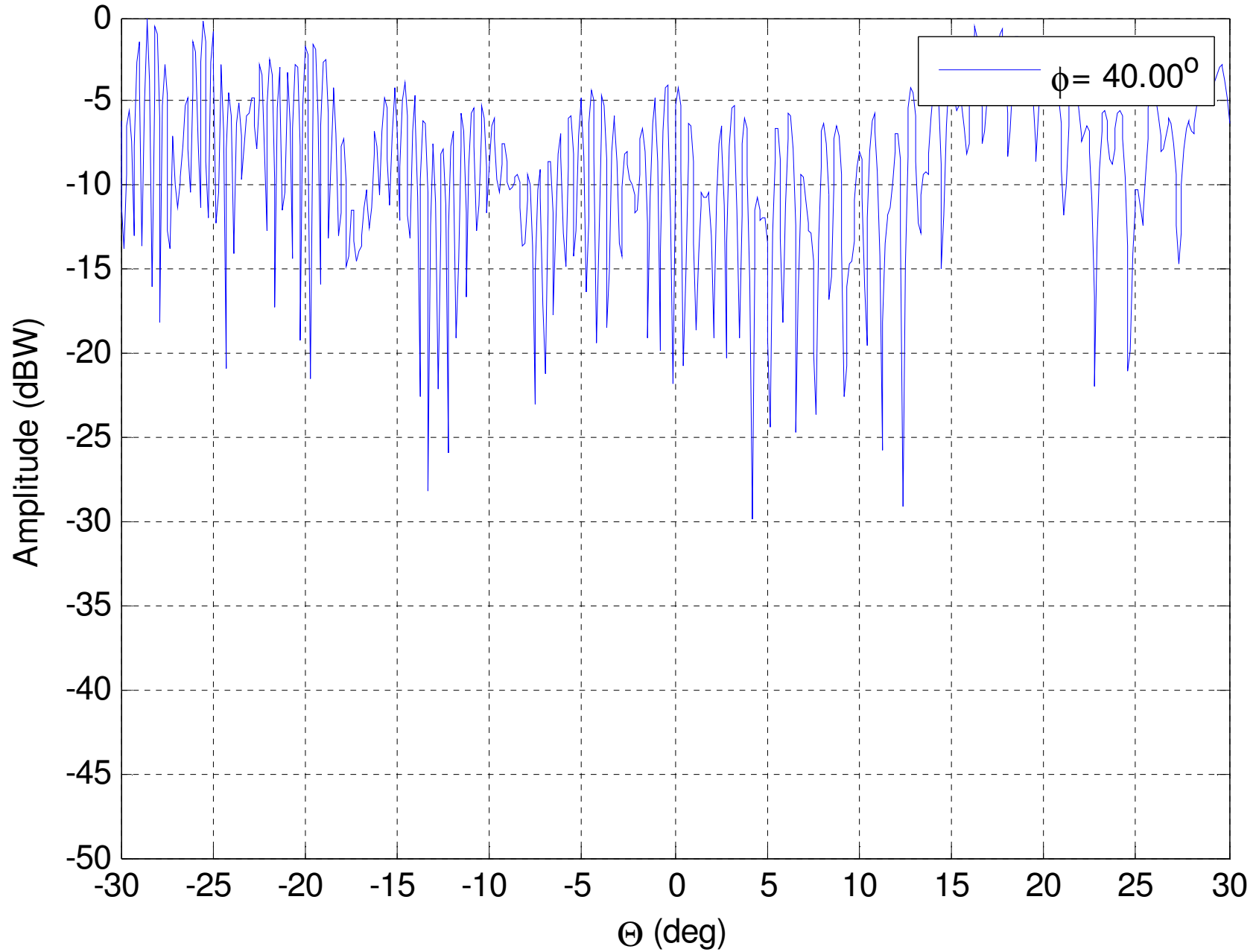
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -13.55 dBW, Date: 15-Dec-2011



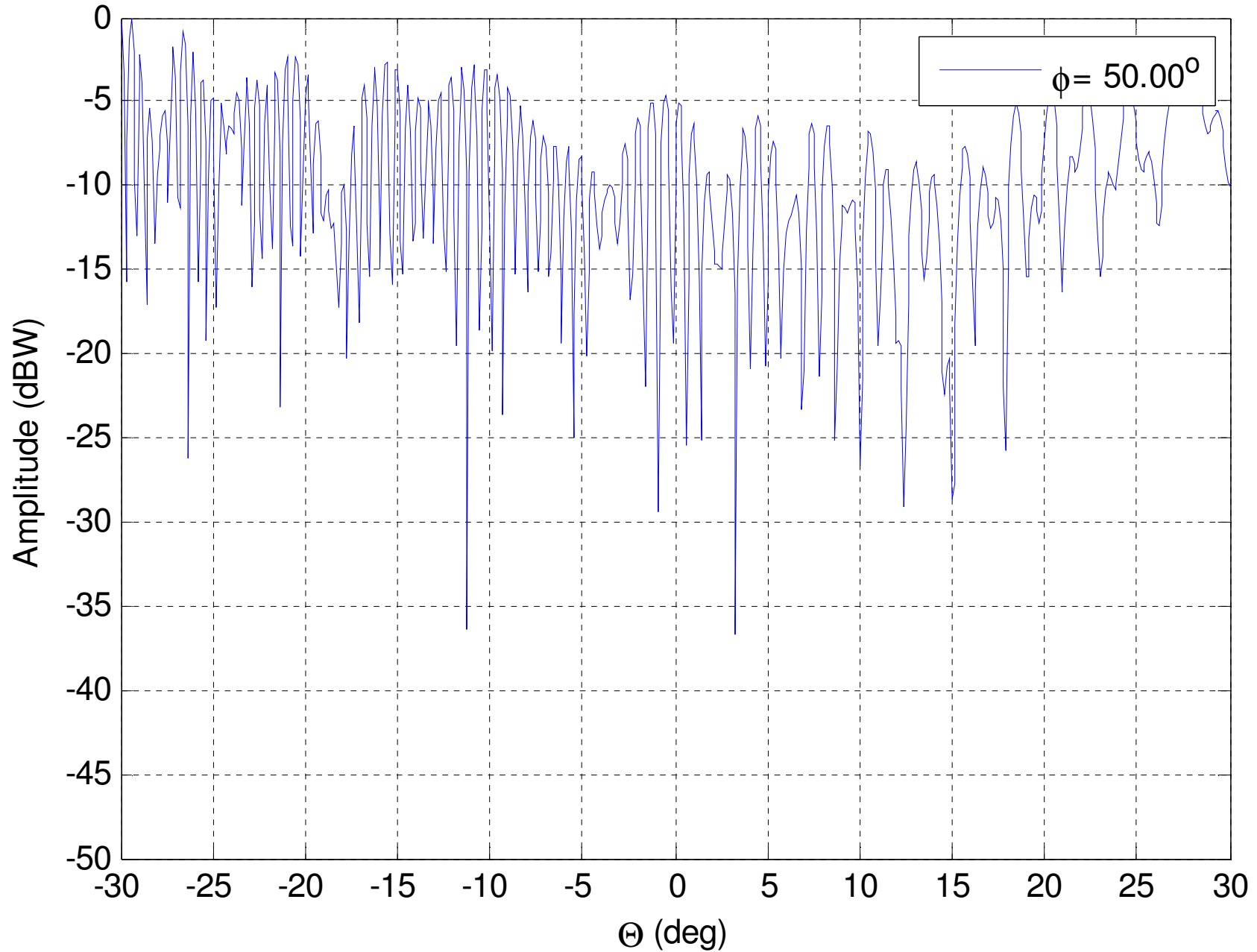
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -12.94 dBW, Date: 15-Dec-2011



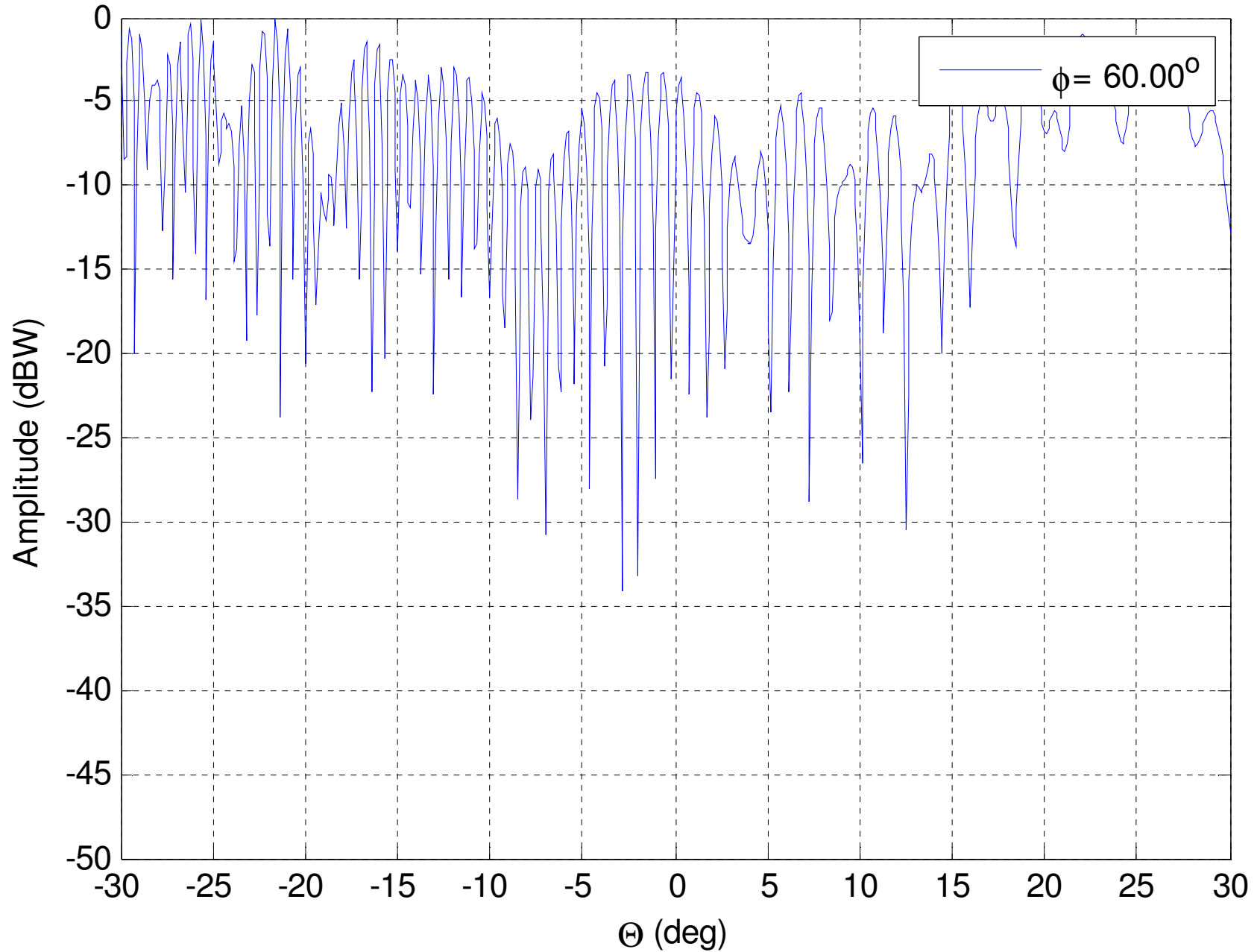
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -12.16 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

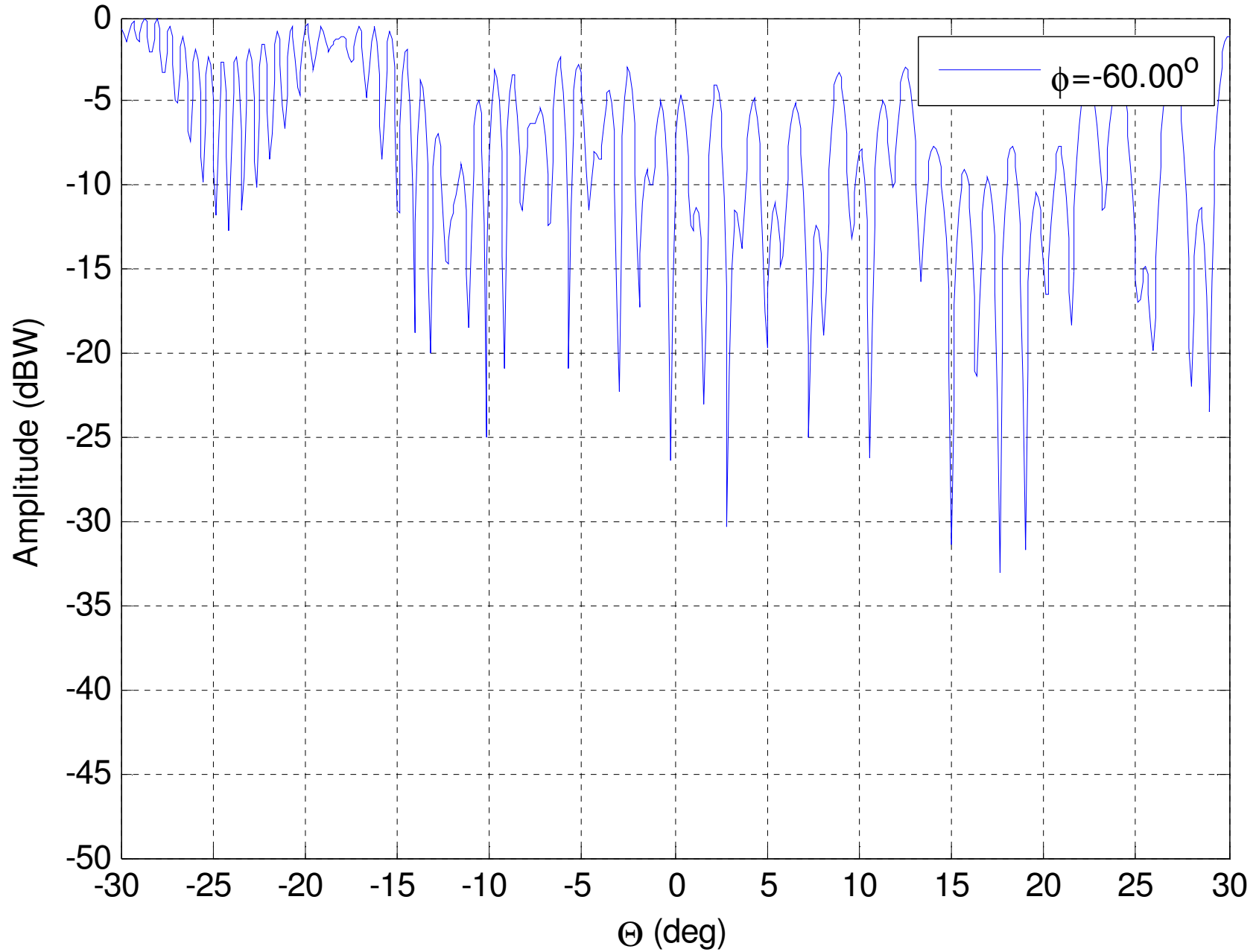
Input file: tx-17.7-rhcp-60.cut, Peak: -13.43 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

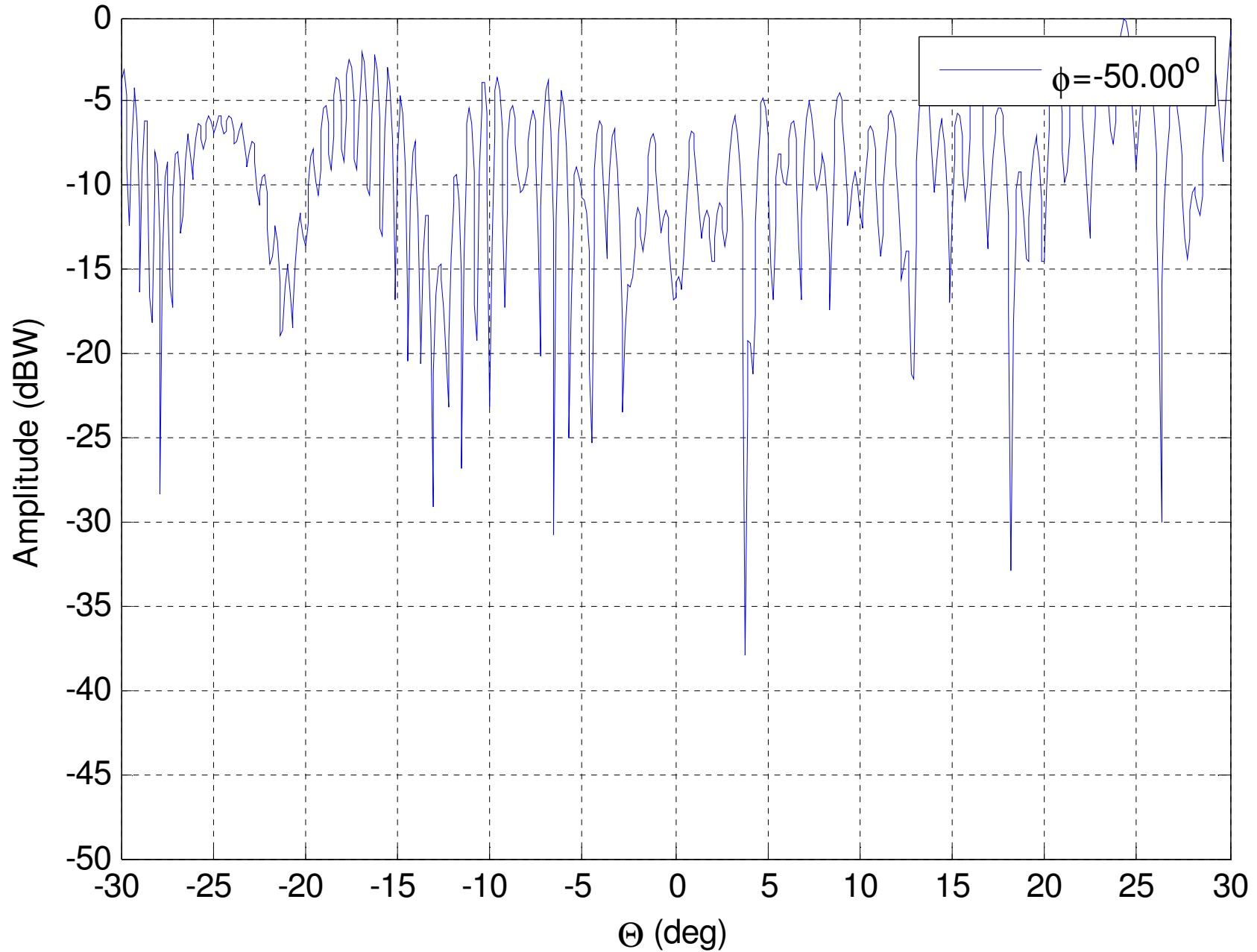
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -13.15 dBW, Date: 15-Dec-2011



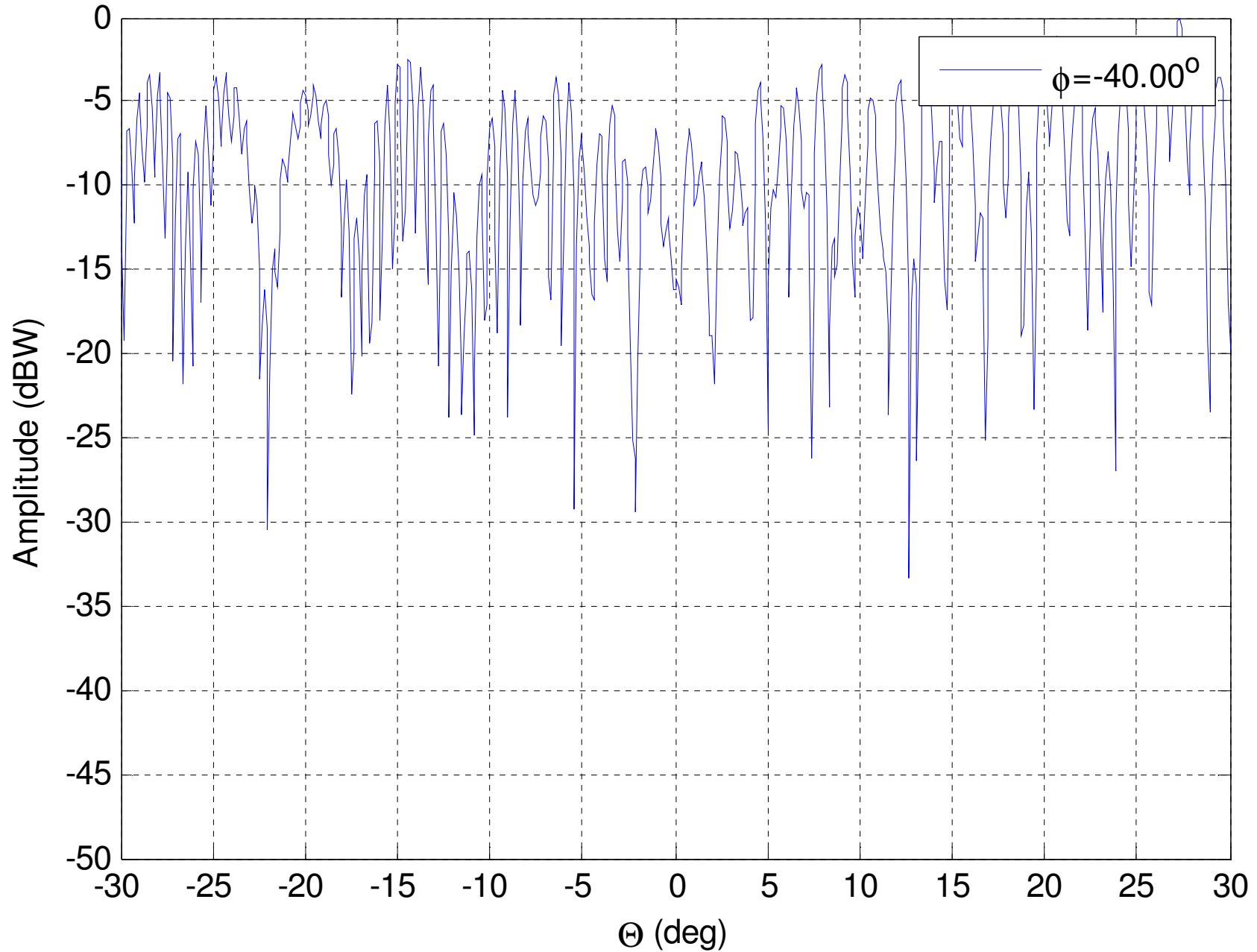
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -11.68 dBW, Date: 15-Dec-2011



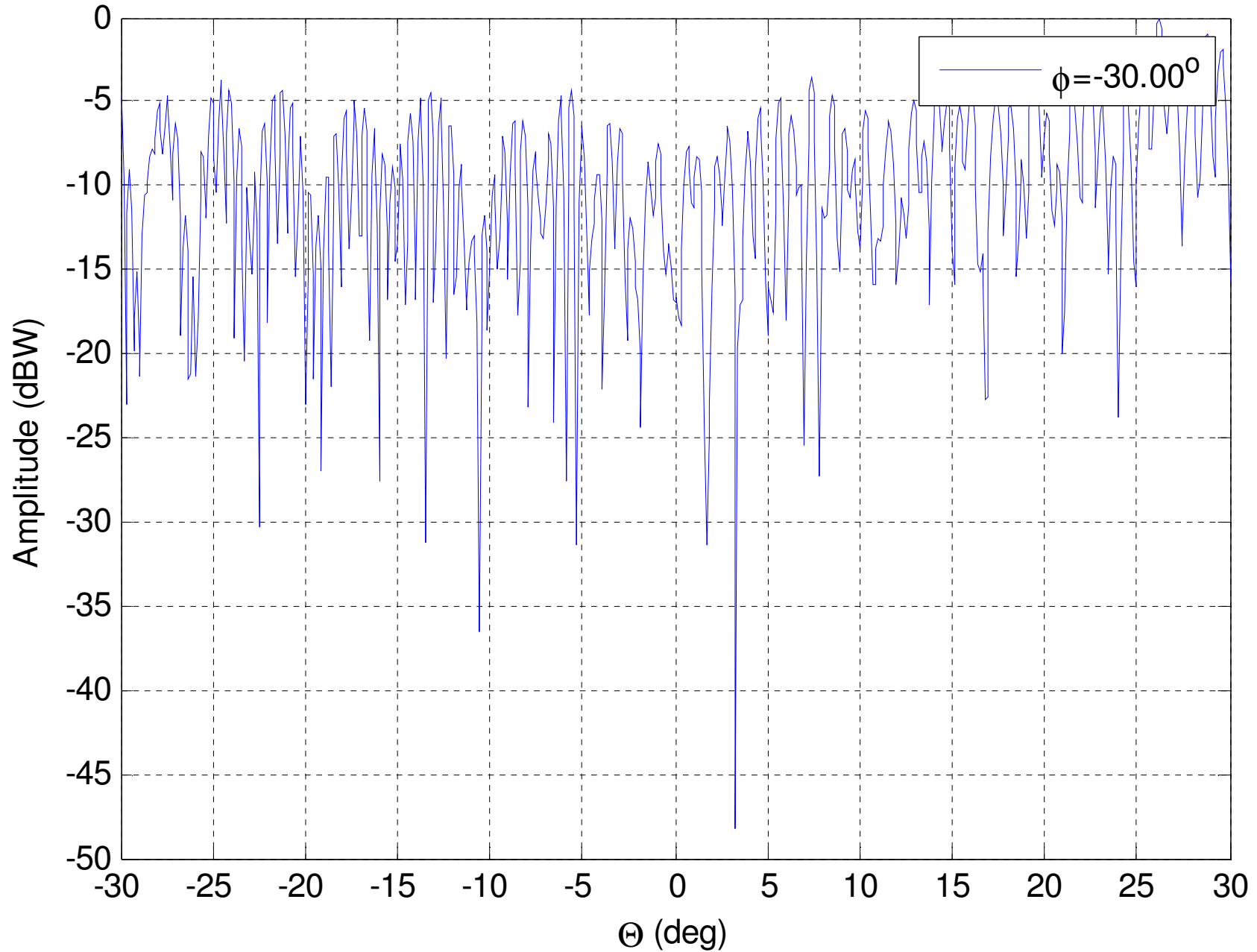
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -12.06 dBW, Date: 15-Dec-2011



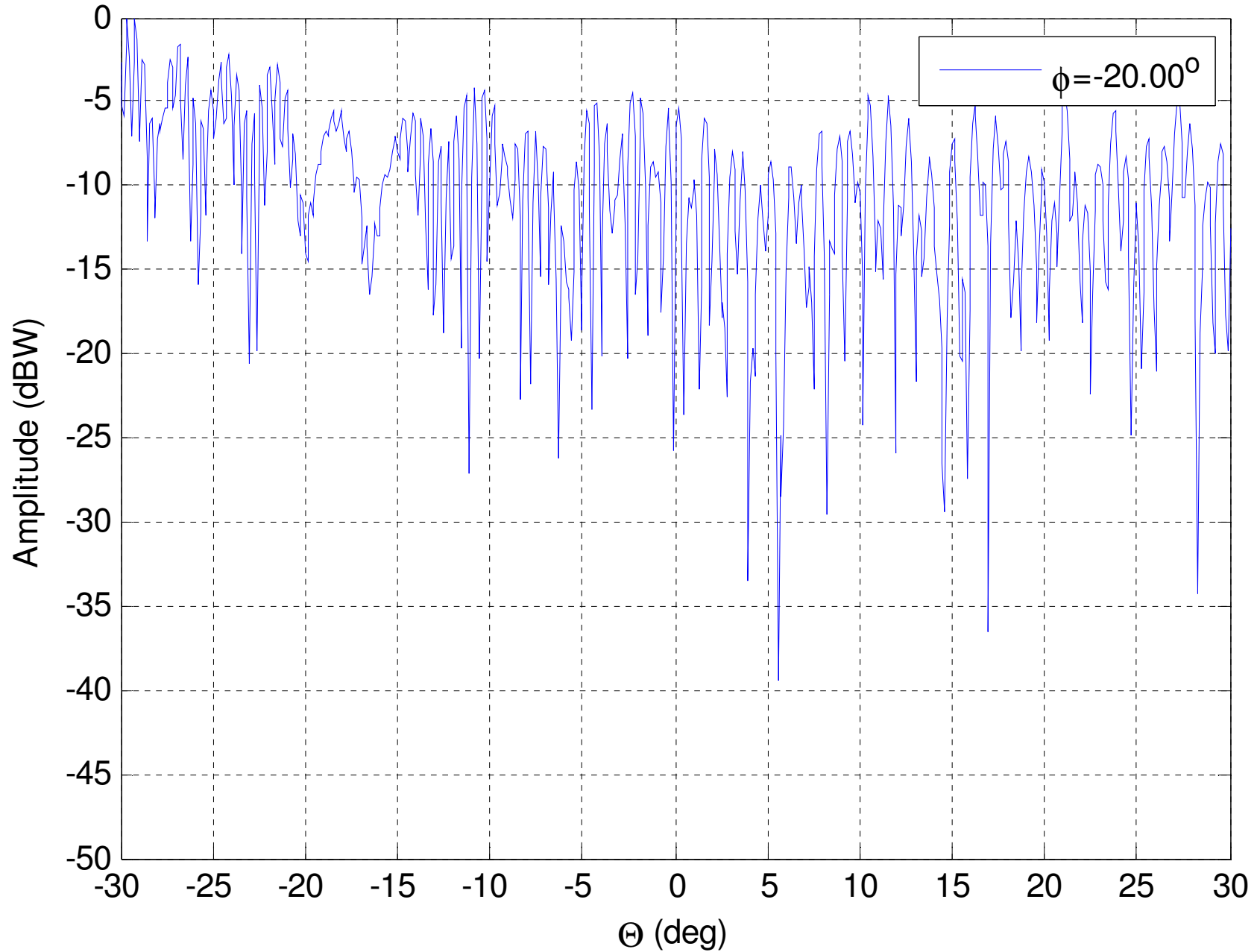
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -11.30 dBW, Date: 15-Dec-2011



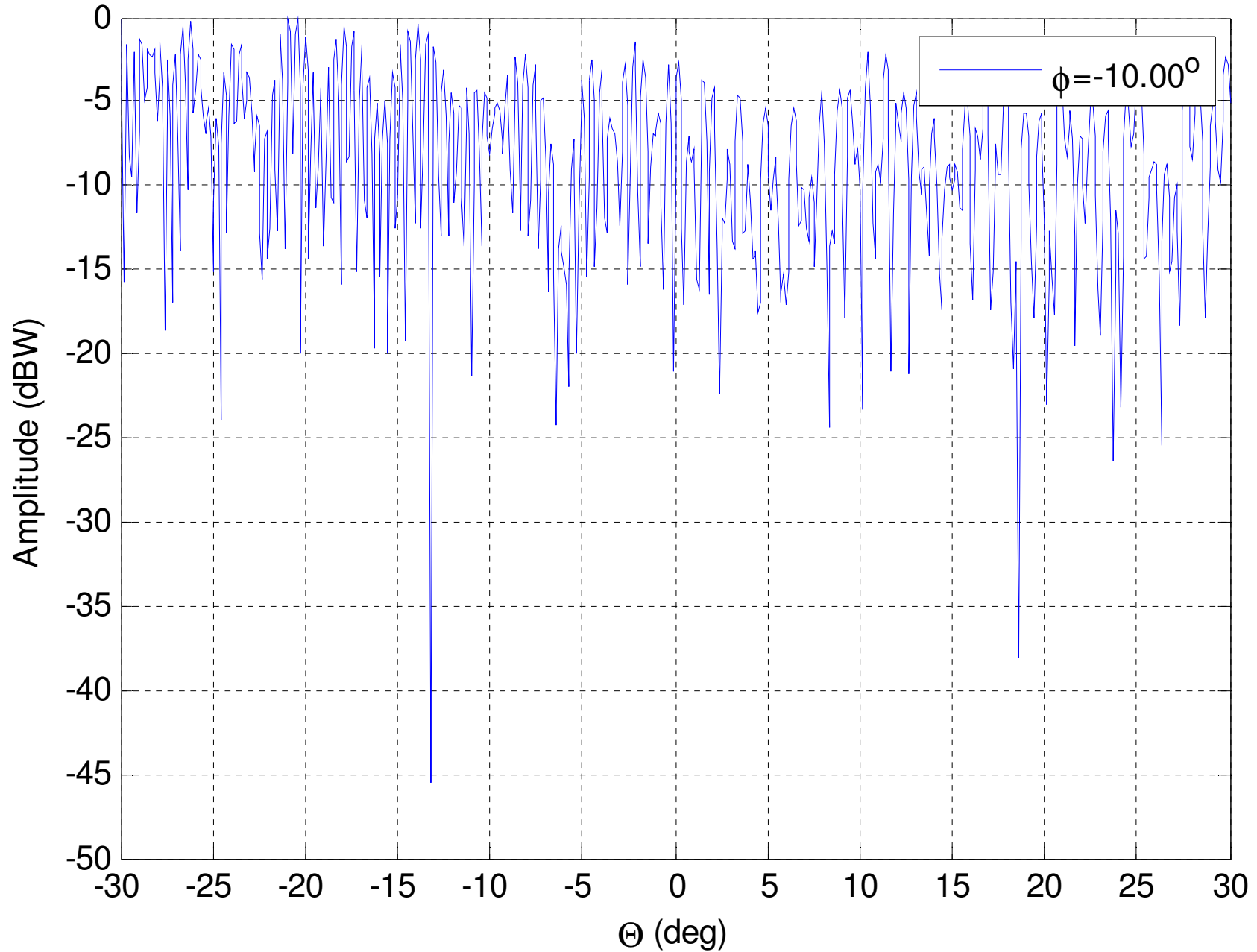
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -11.85 dBW, Date: 15-Dec-2011



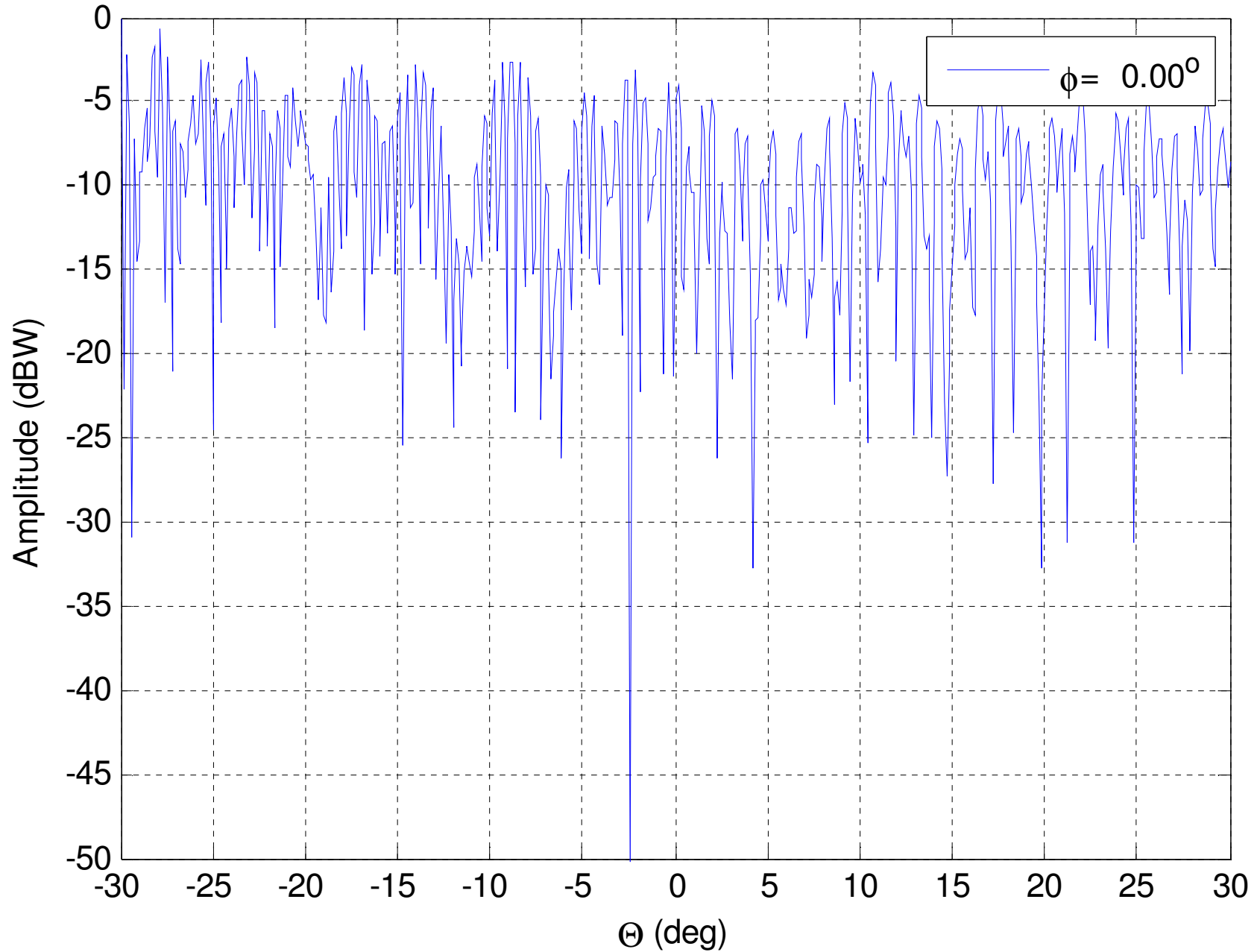
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -14.62 dBW, Date: 15-Dec-2011



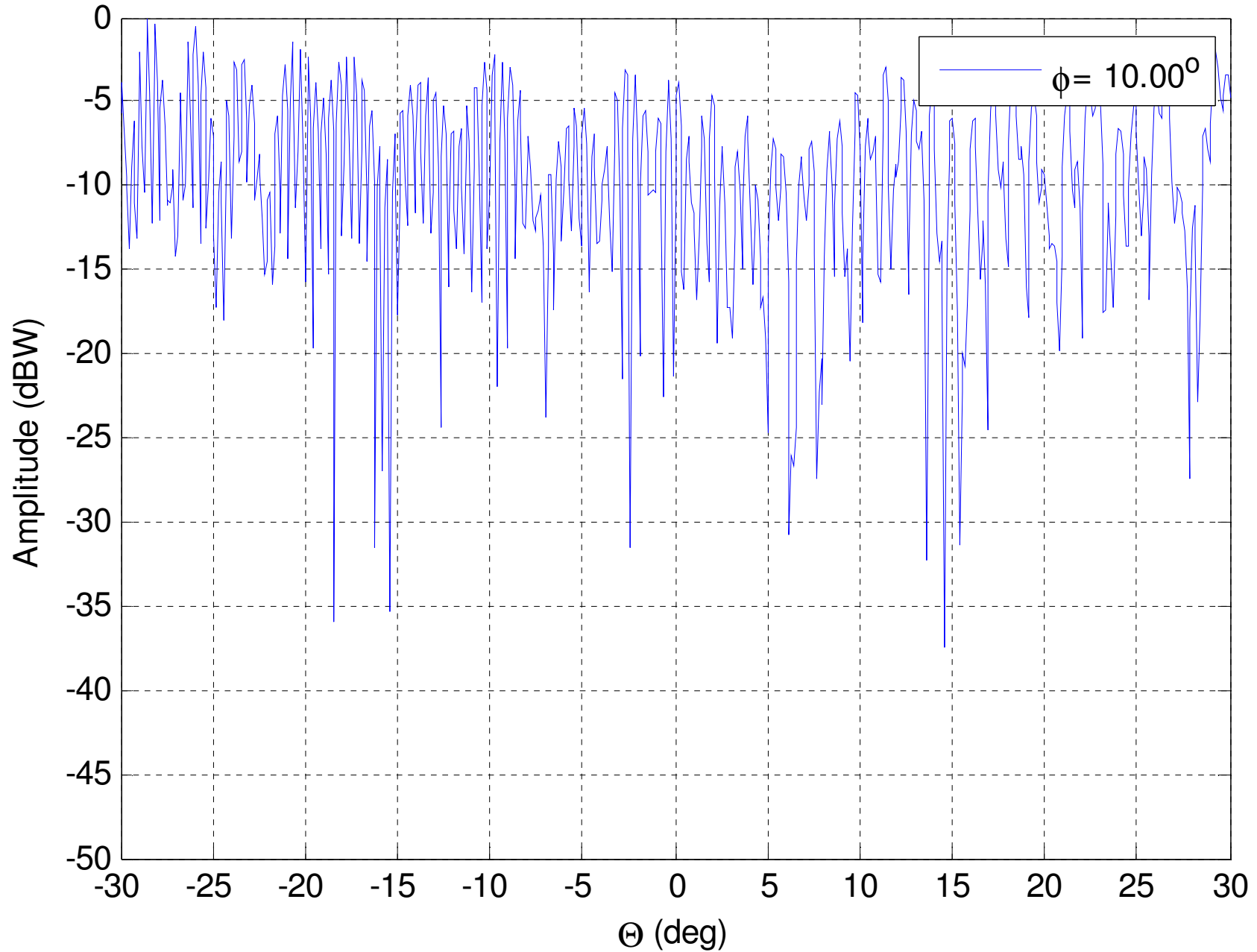
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -13.30 dBW, Date: 15-Dec-2011



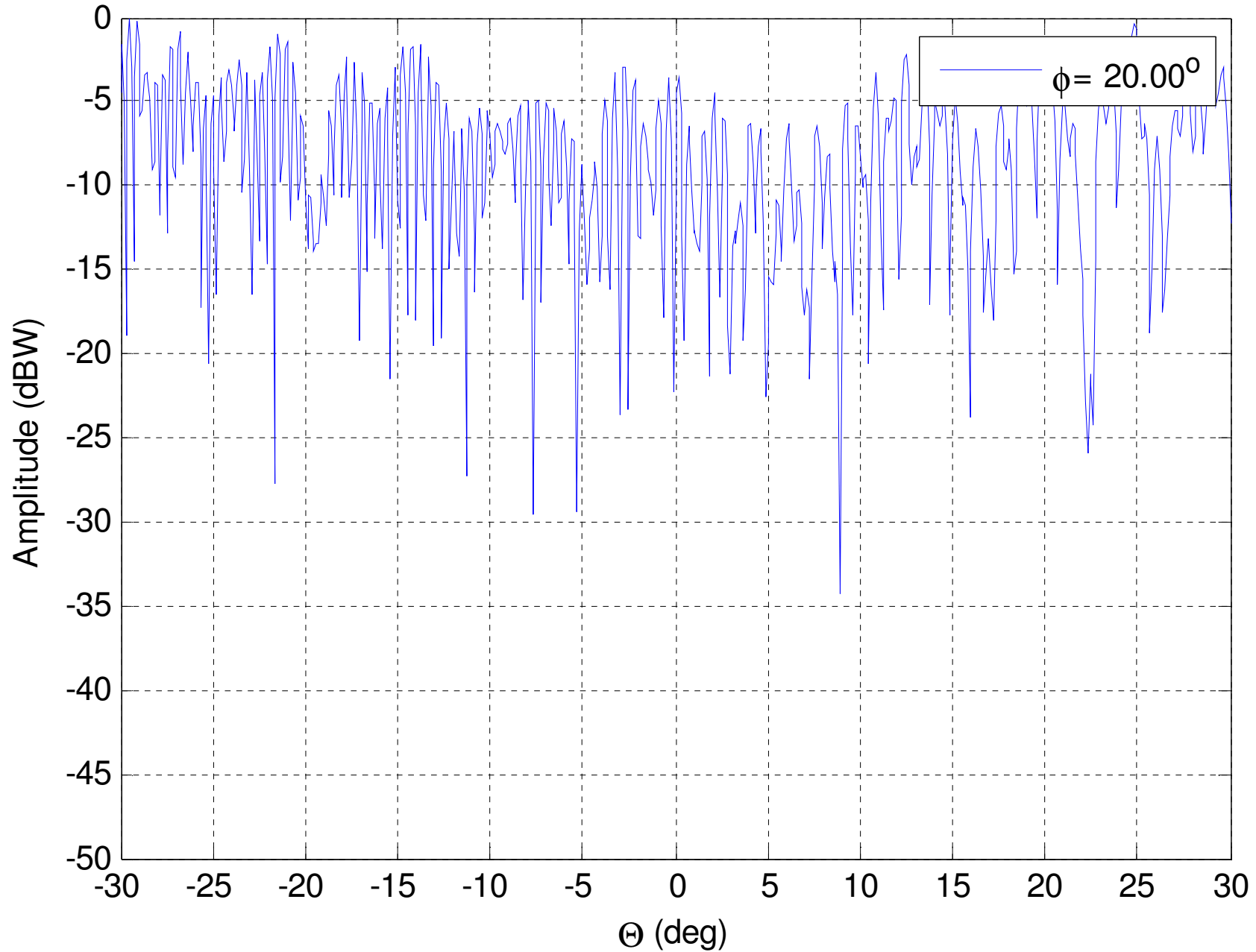
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -13.37 dBW, Date: 15-Dec-2011



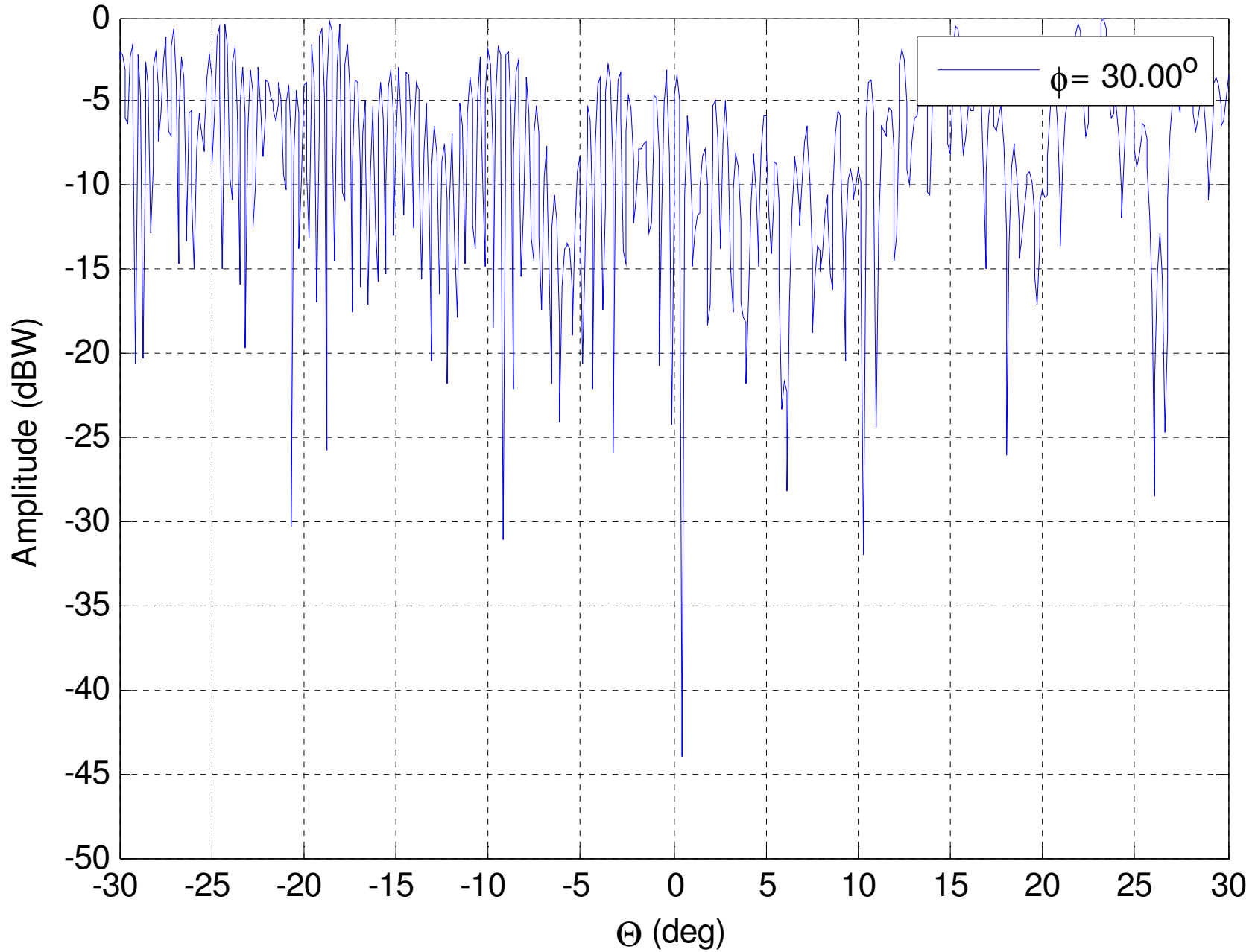
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -13.57 dBW, Date: 15-Dec-2011



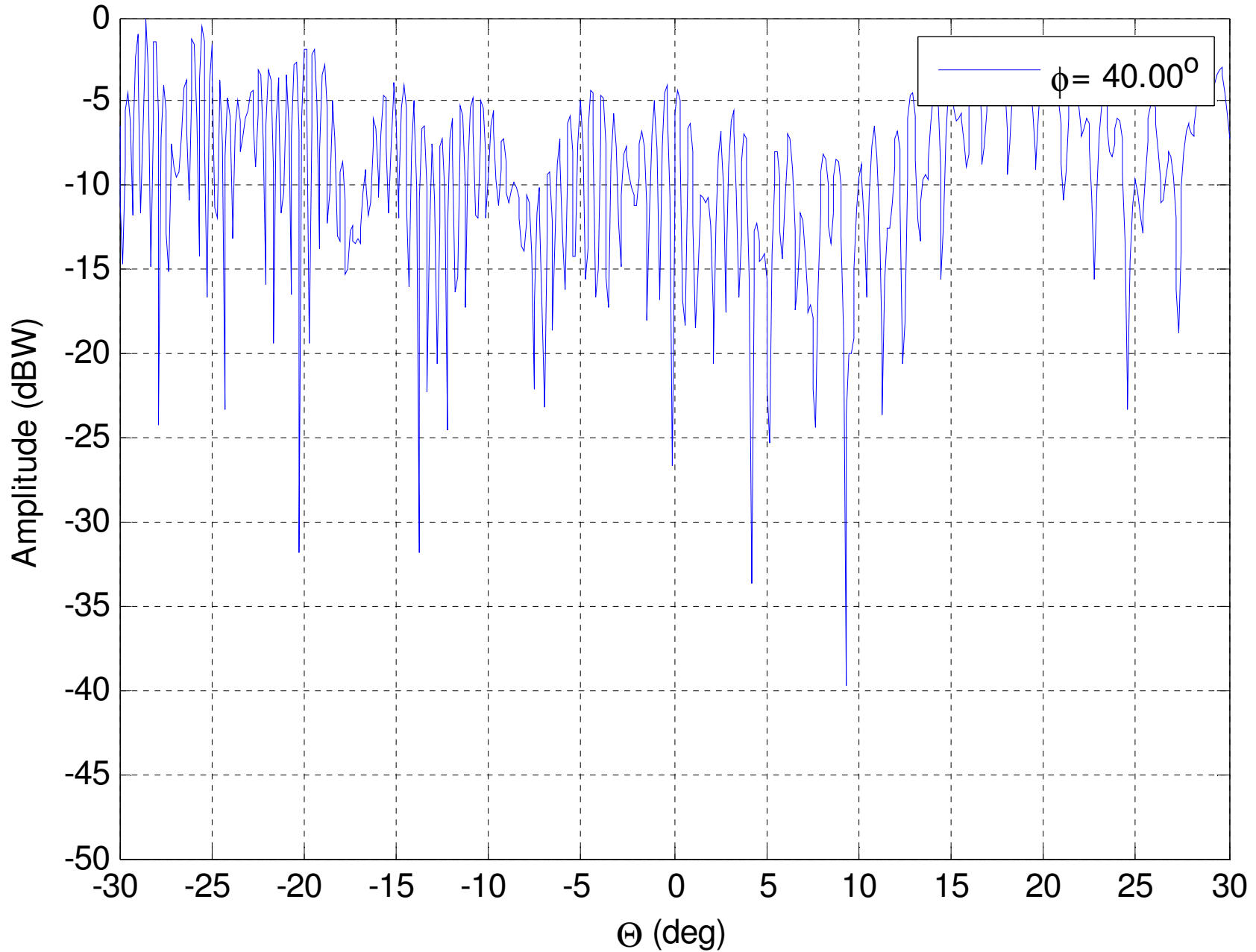
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -13.66 dBW, Date: 15-Dec-2011



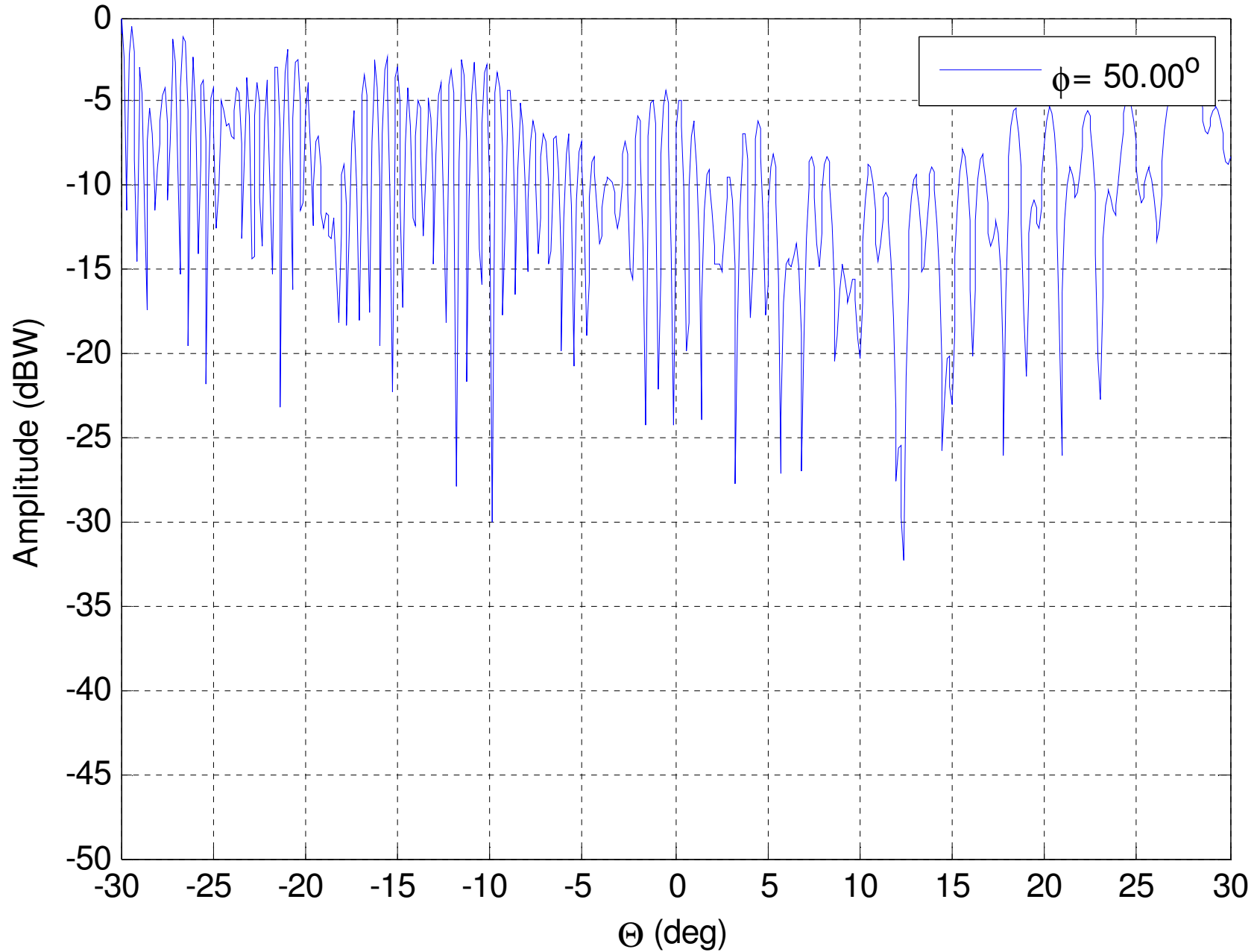
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -12.75 dBW, Date: 15-Dec-2011



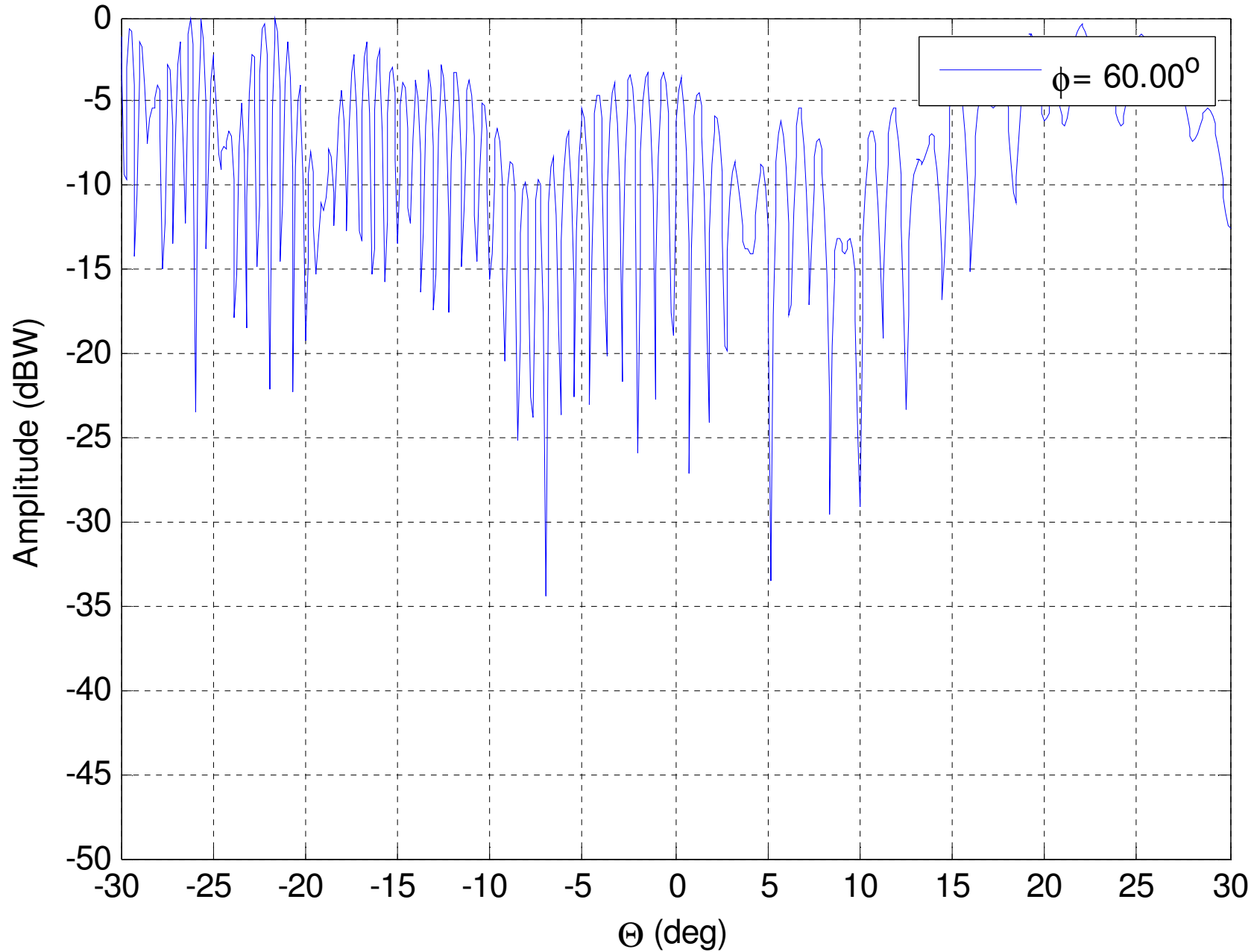
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.23 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -13.29 dBW, Date: 15-Dec-2011



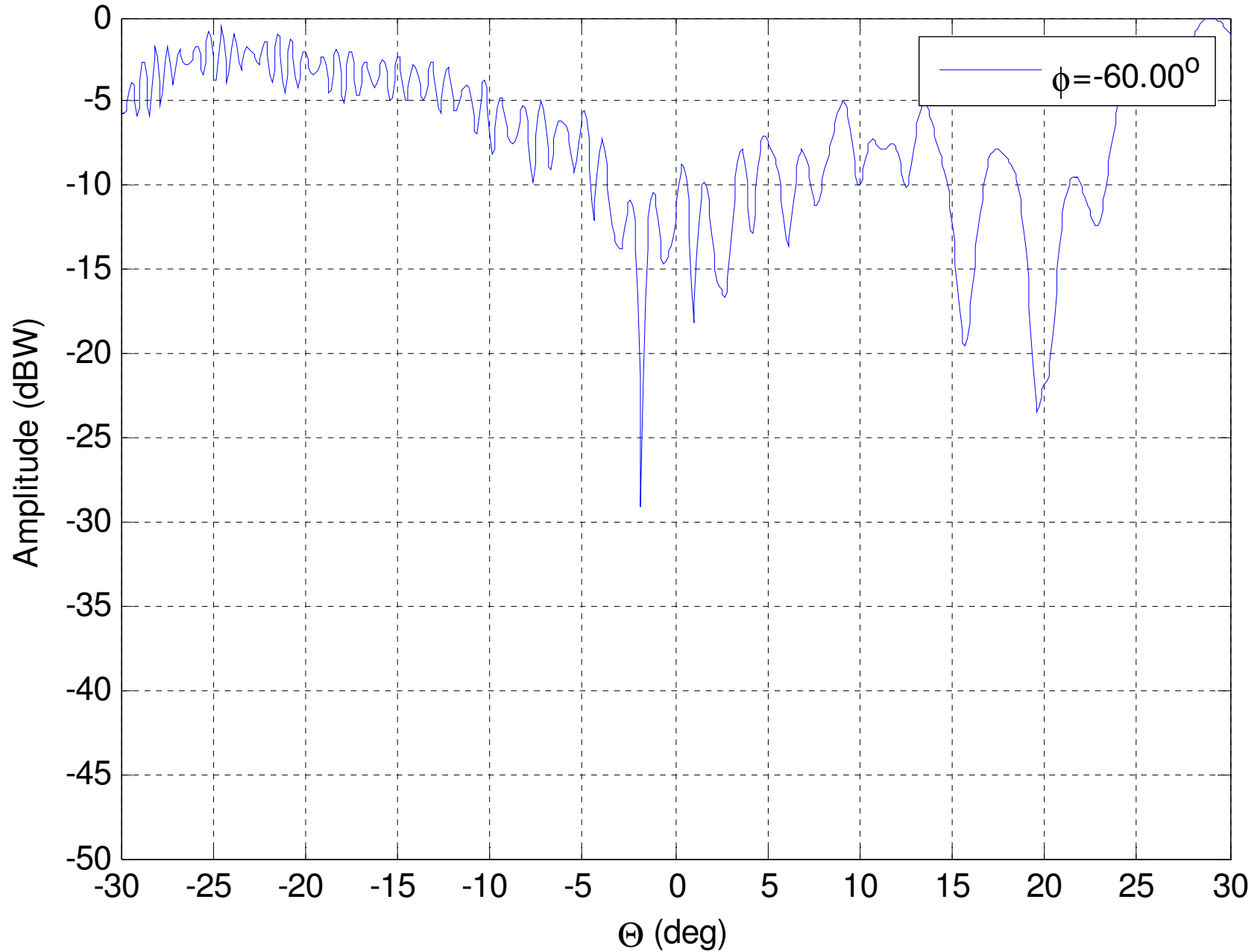
Spot Beam21, +X Axis Plots

- 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

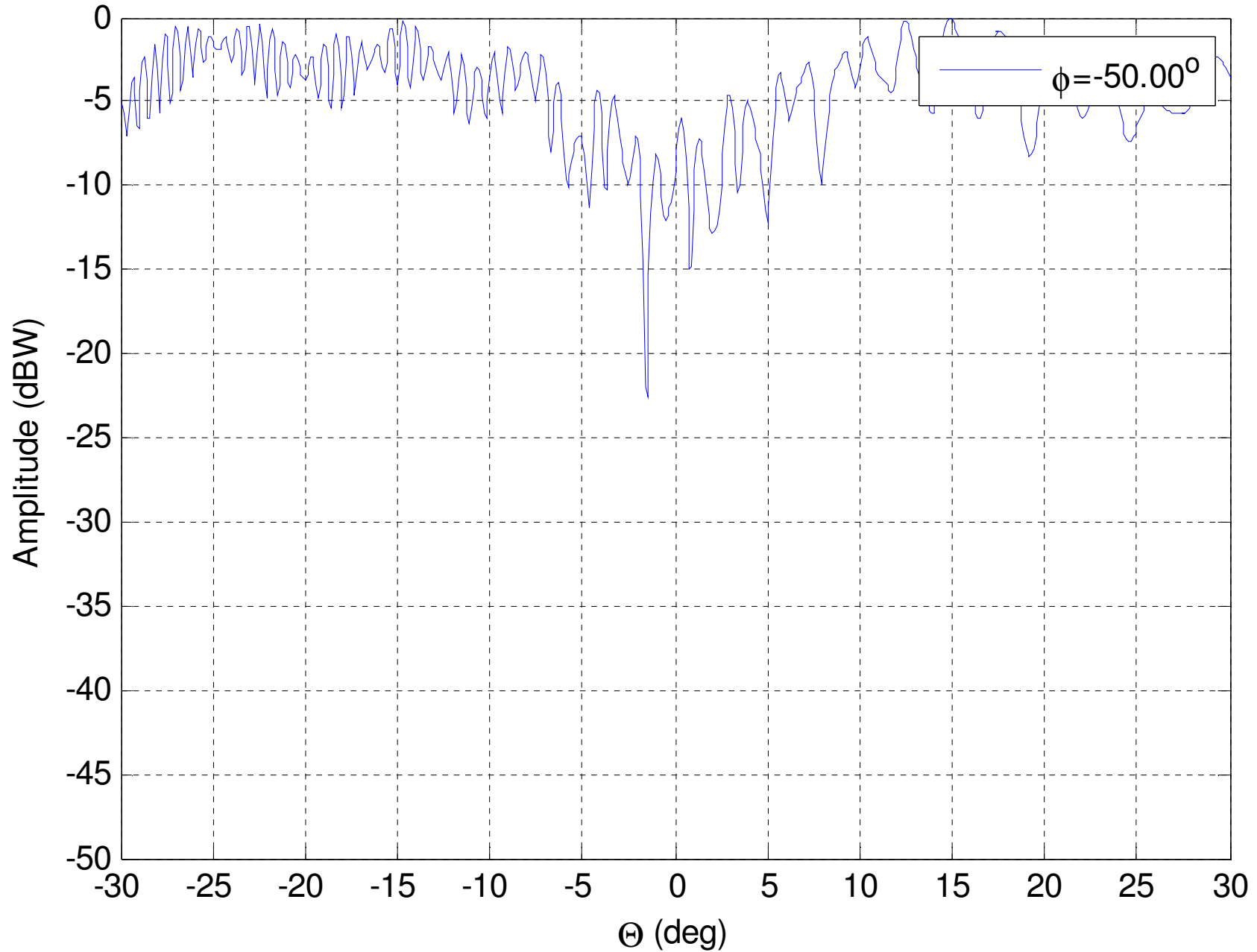
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -11.22 dBW, Date: 14-Dec-2011



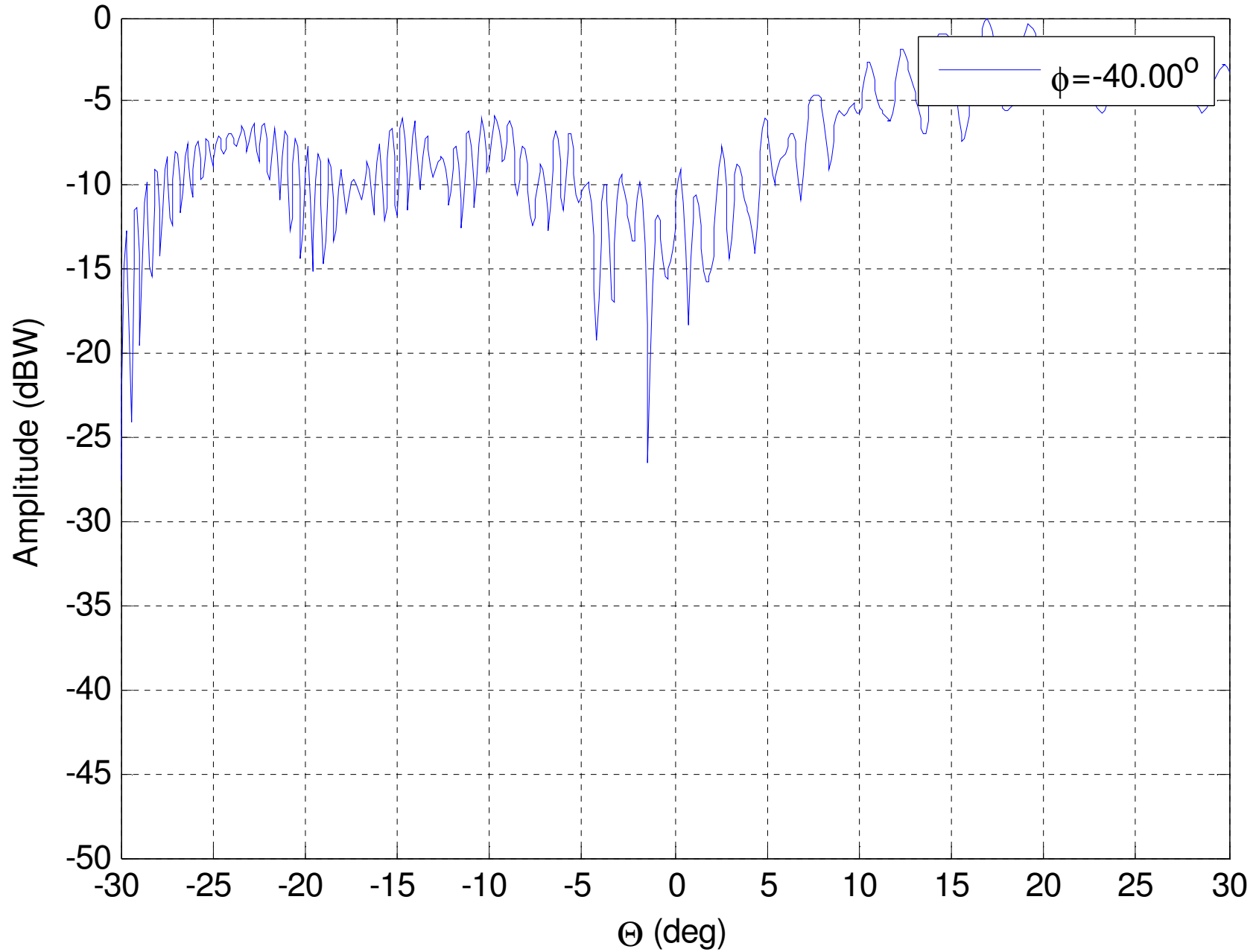
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -14.09 dBW, Date: 14-Dec-2011



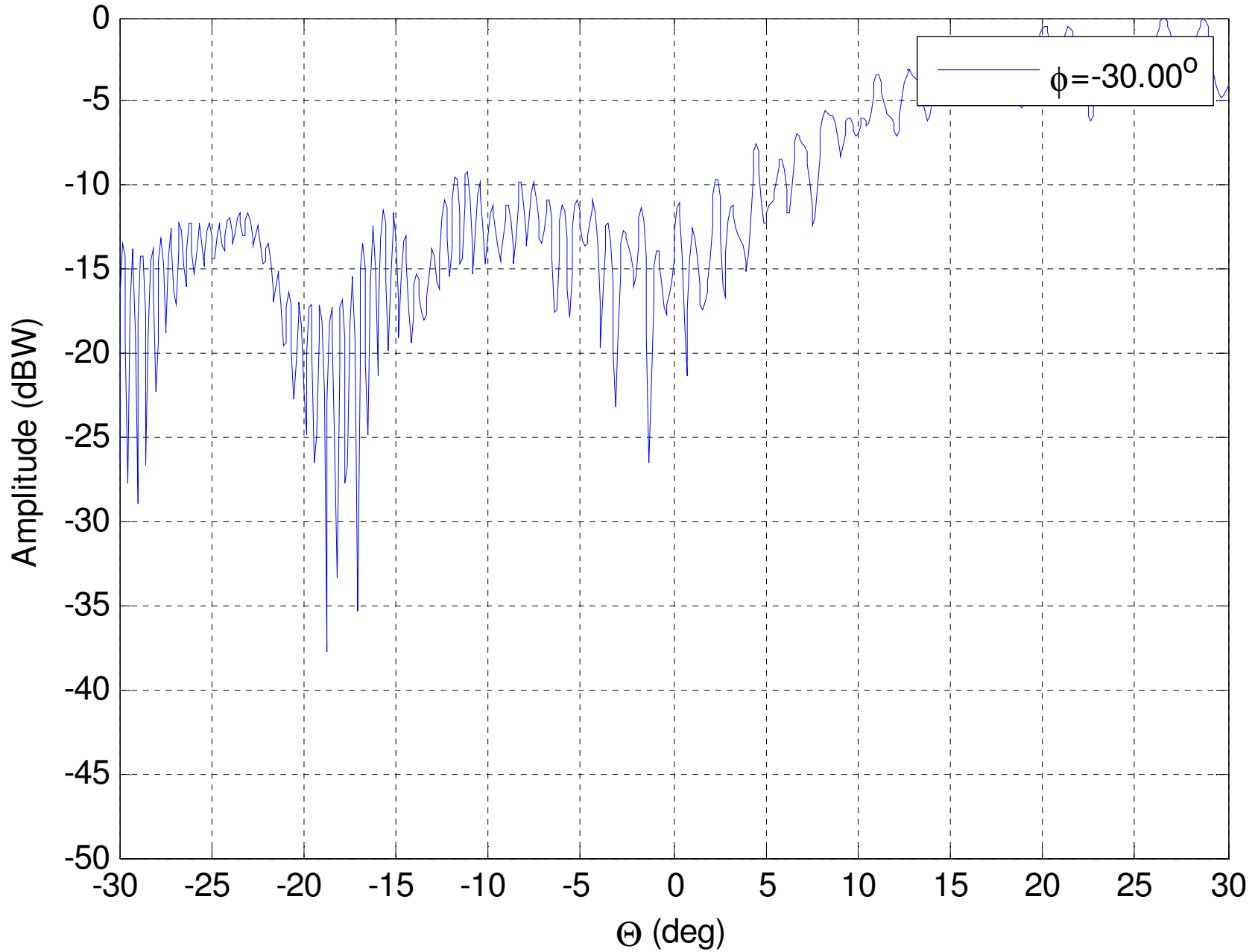
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.84 dBW, Date: 14-Dec-2011



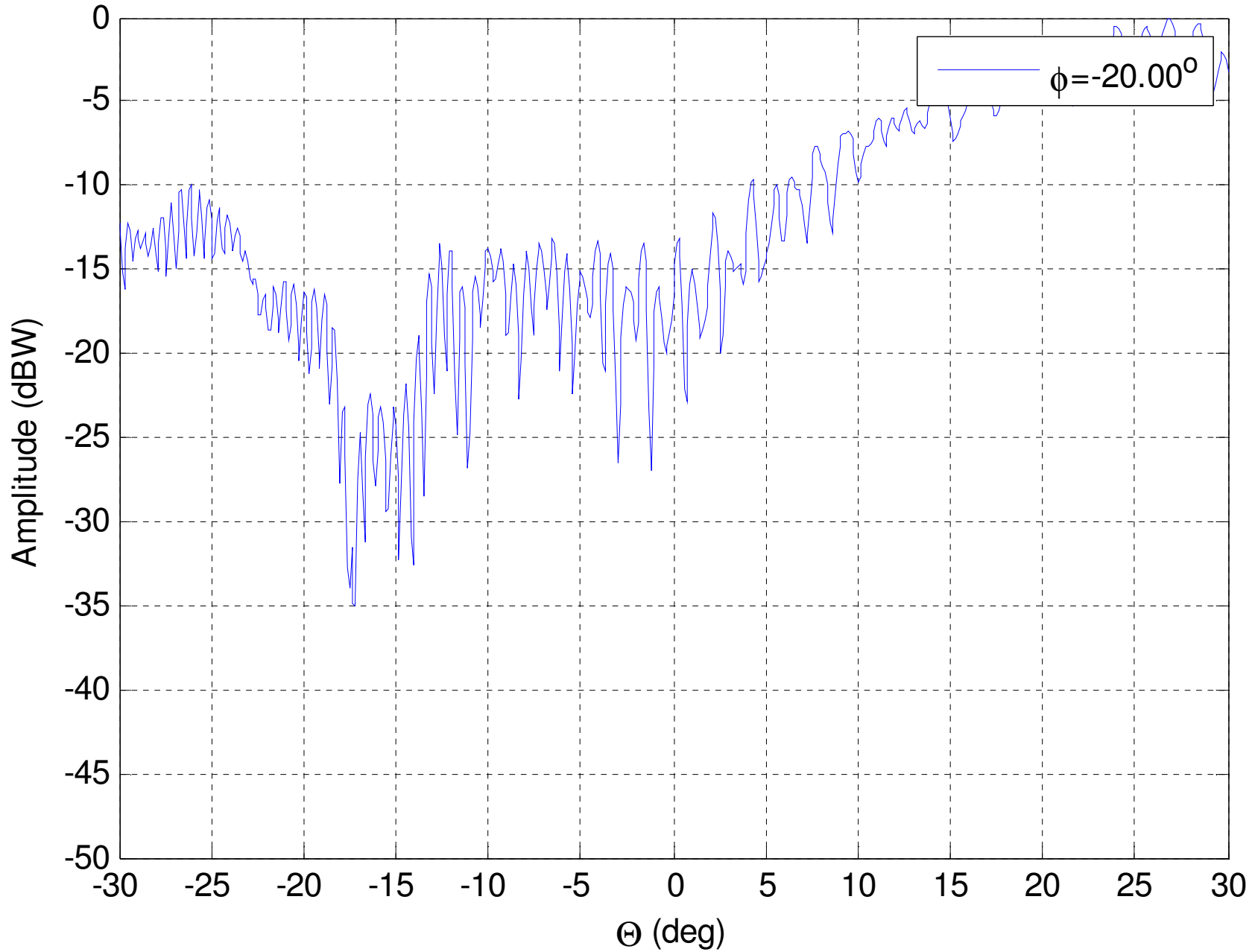
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -8.97 dBW, Date: 14-Dec-2011



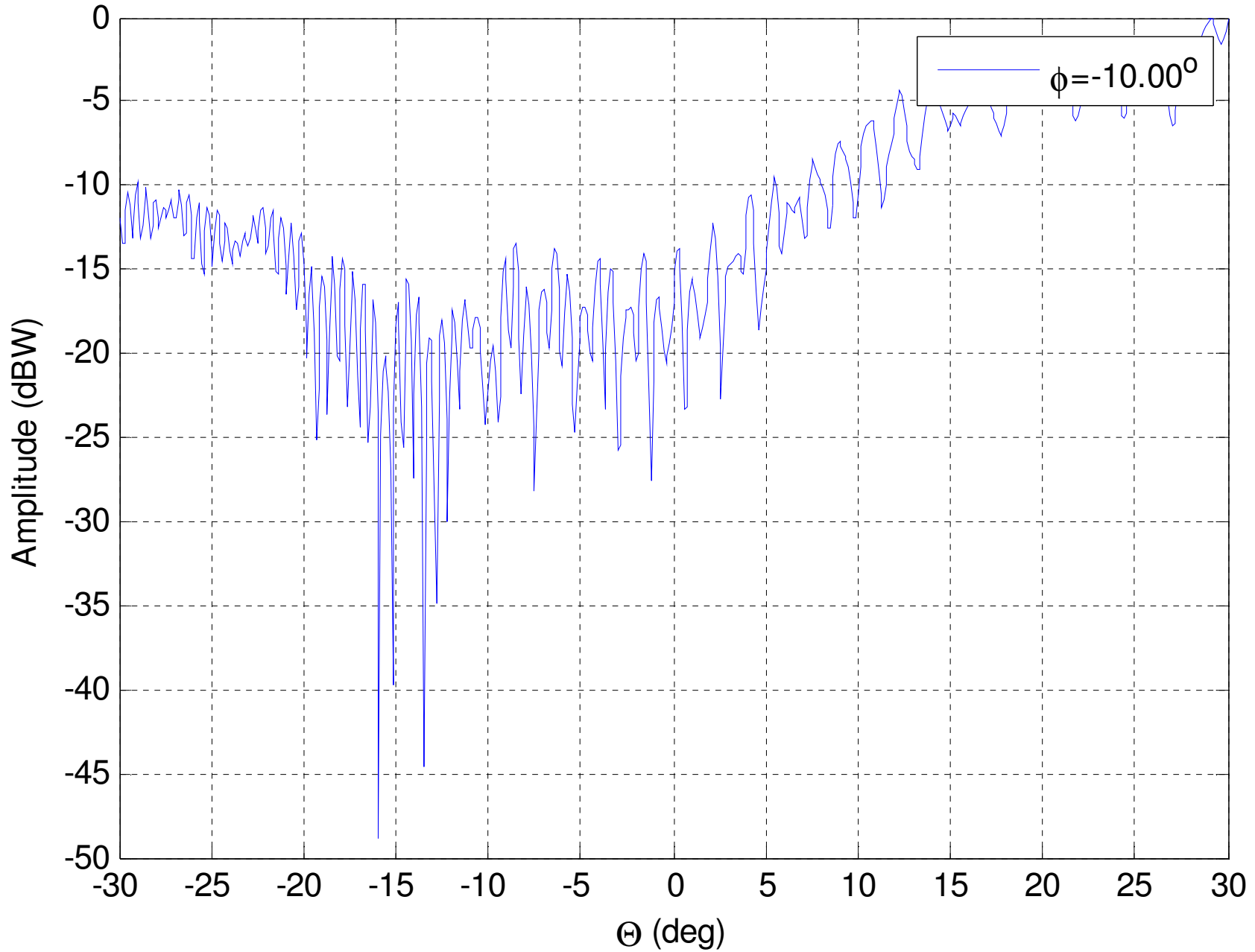
Normalized pattern cuts - farfield

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



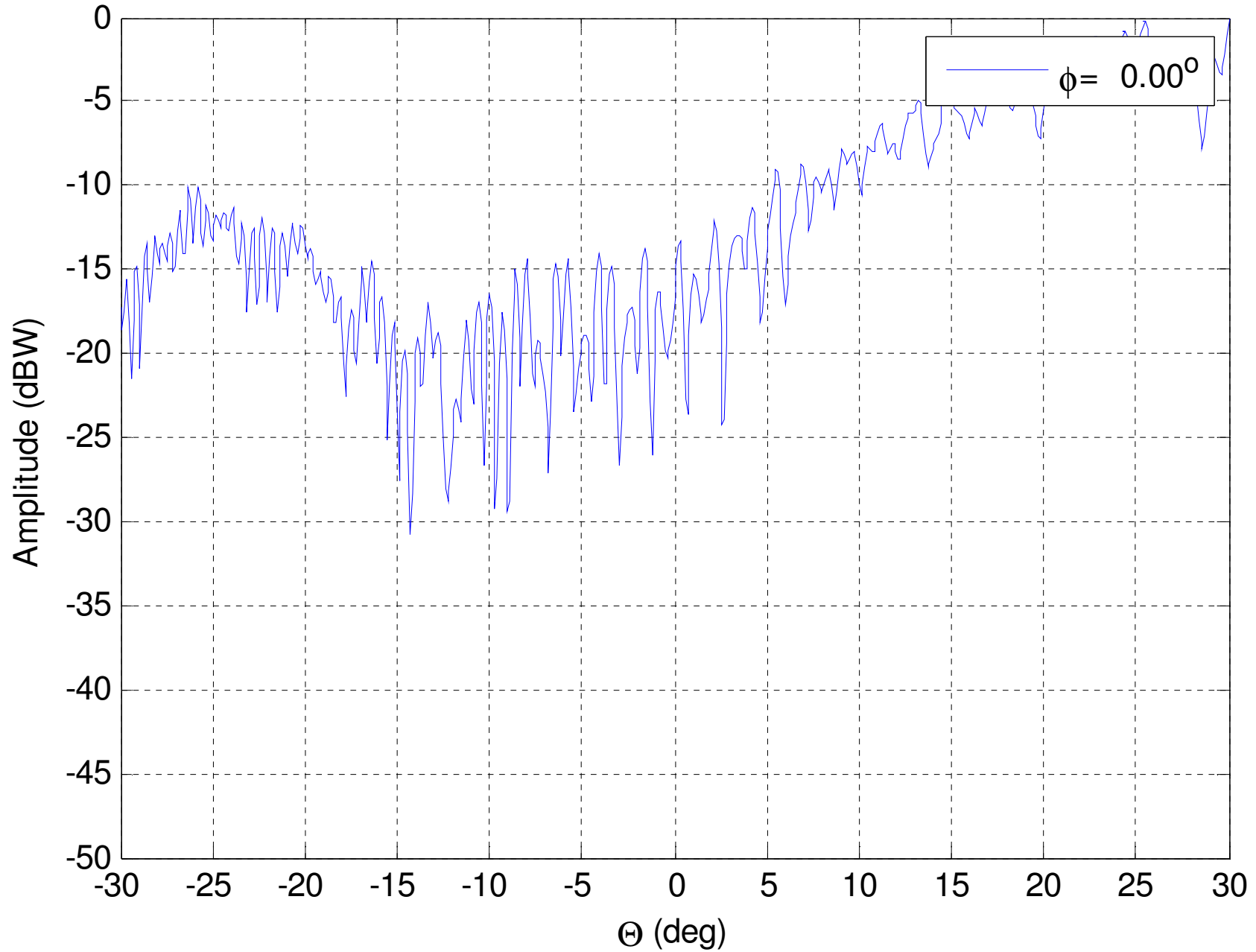
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -6.33 dBW, Date: 14-Dec-2011



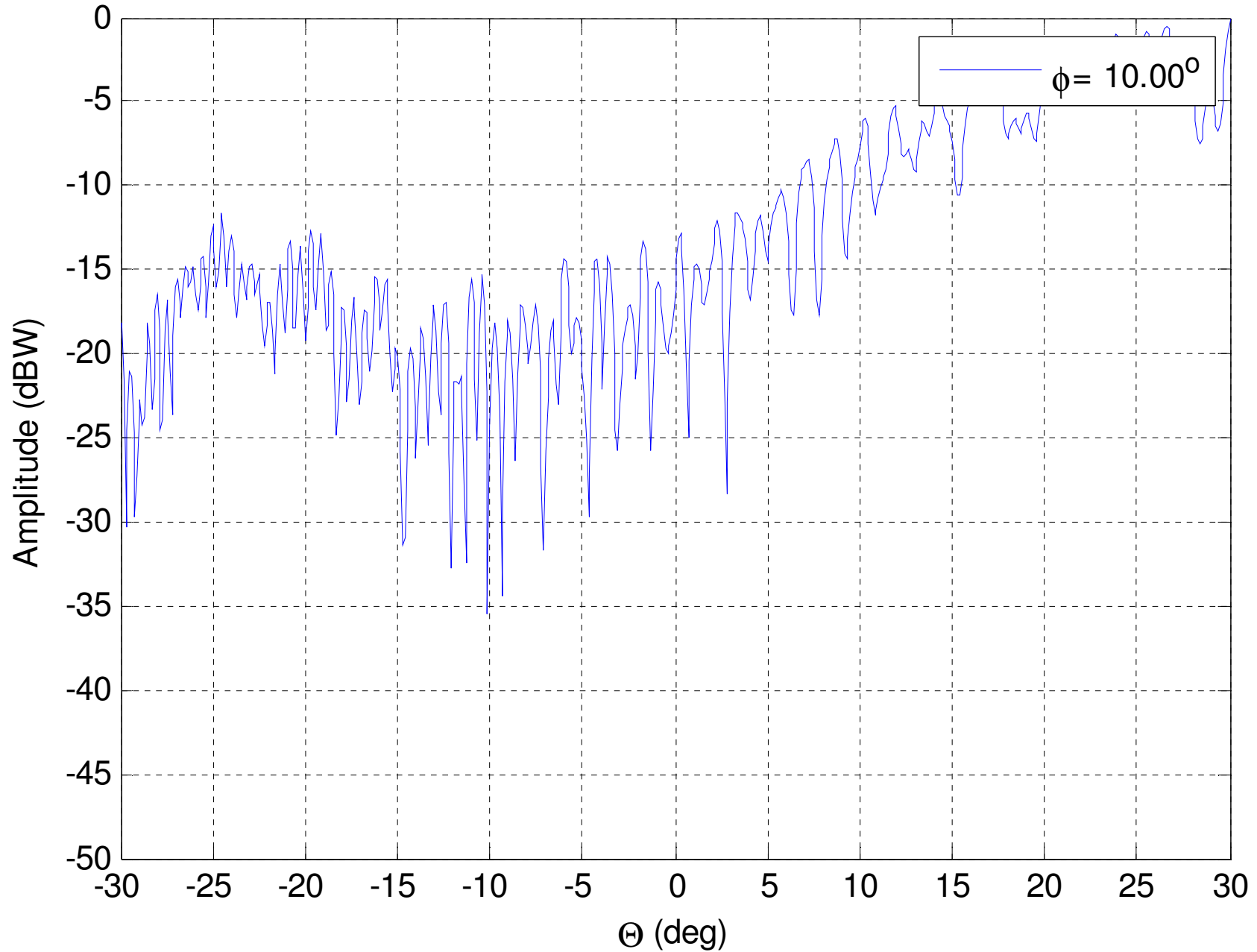
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -6.70 dBW, Date: 14-Dec-2011



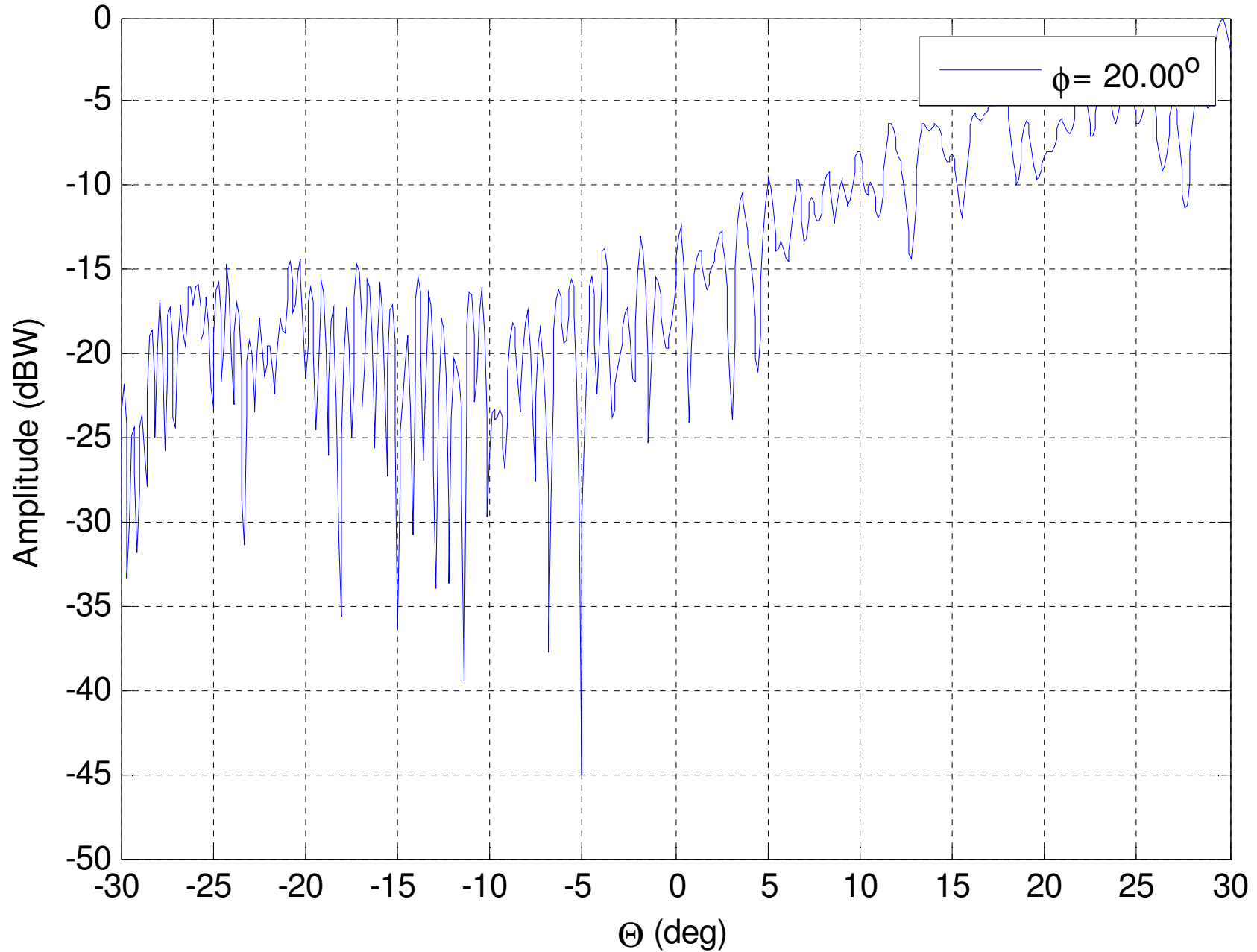
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -7.16 dBW, Date: 14-Dec-2011



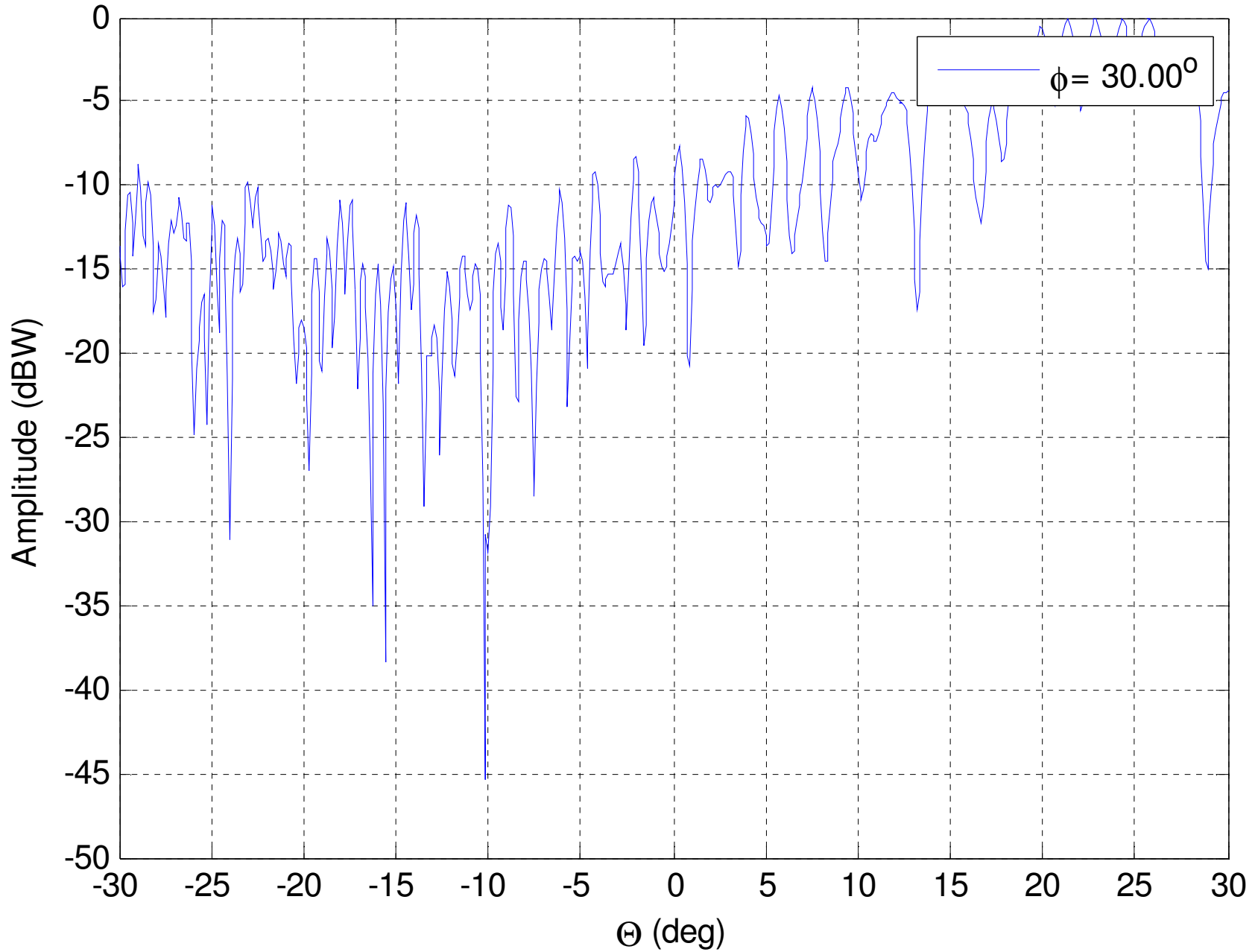
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.50 dBW, Date: 14-Dec-2011



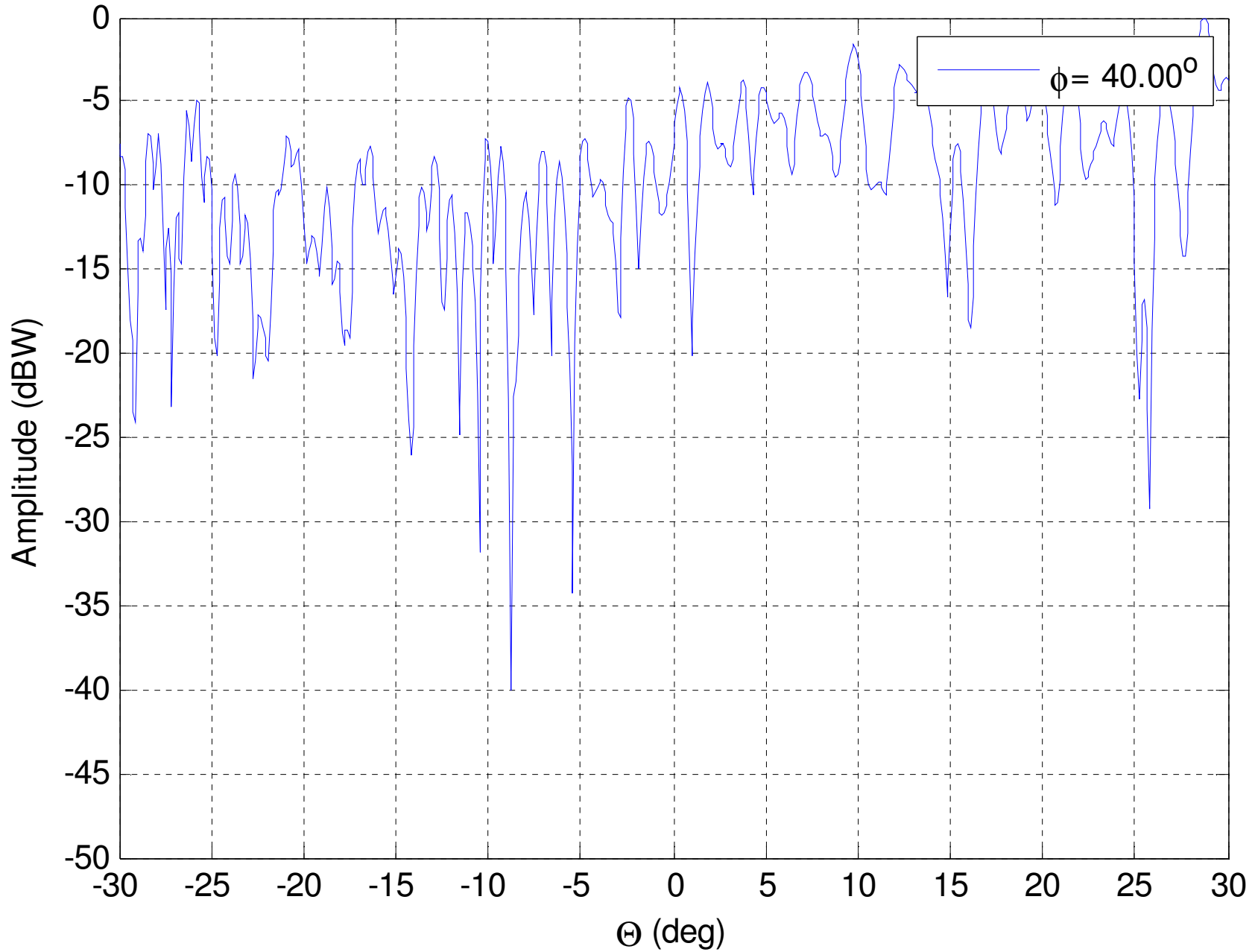
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -12.28 dBW, Date: 14-Dec-2011



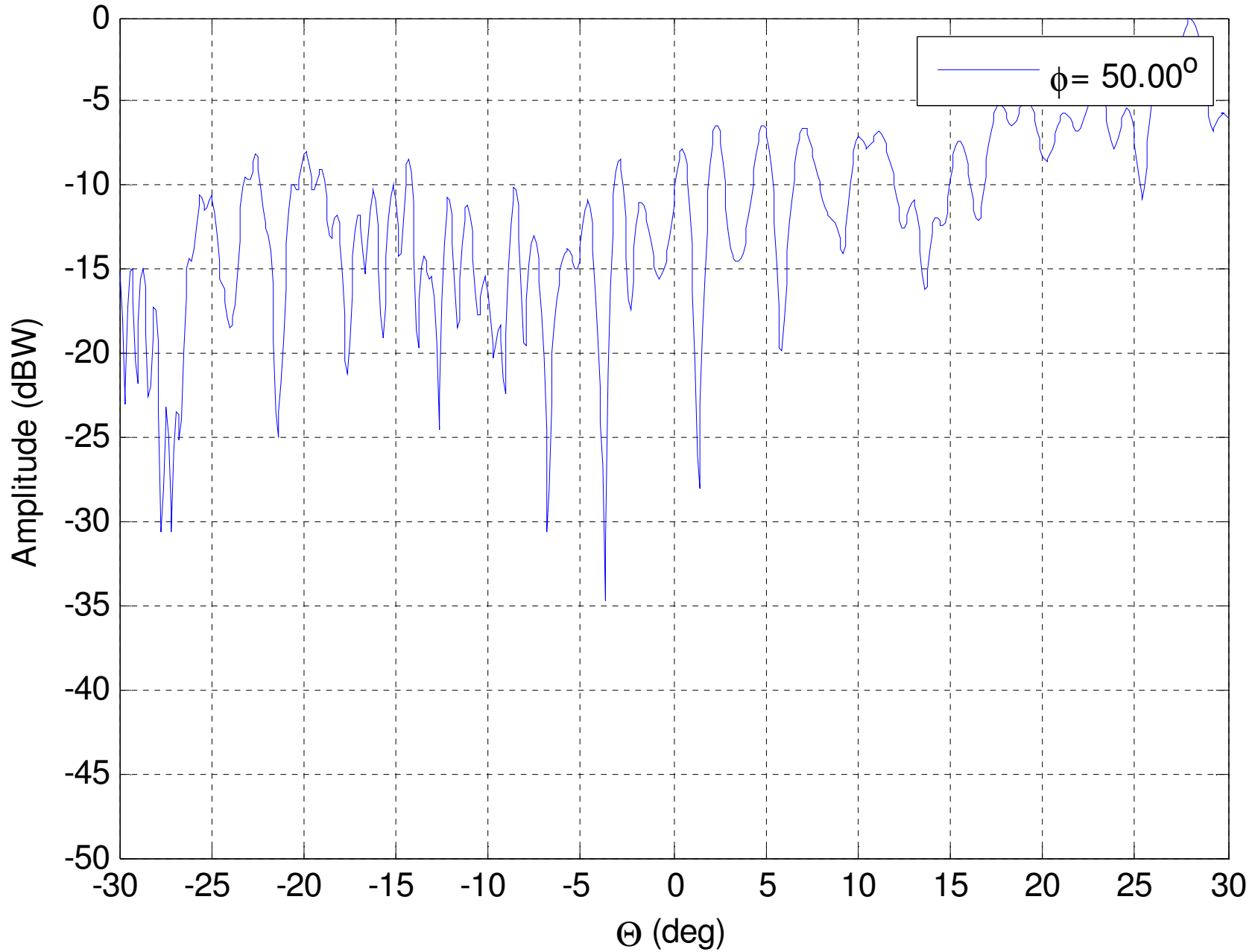
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -15.76 dBW, Date: 14-Dec-2011



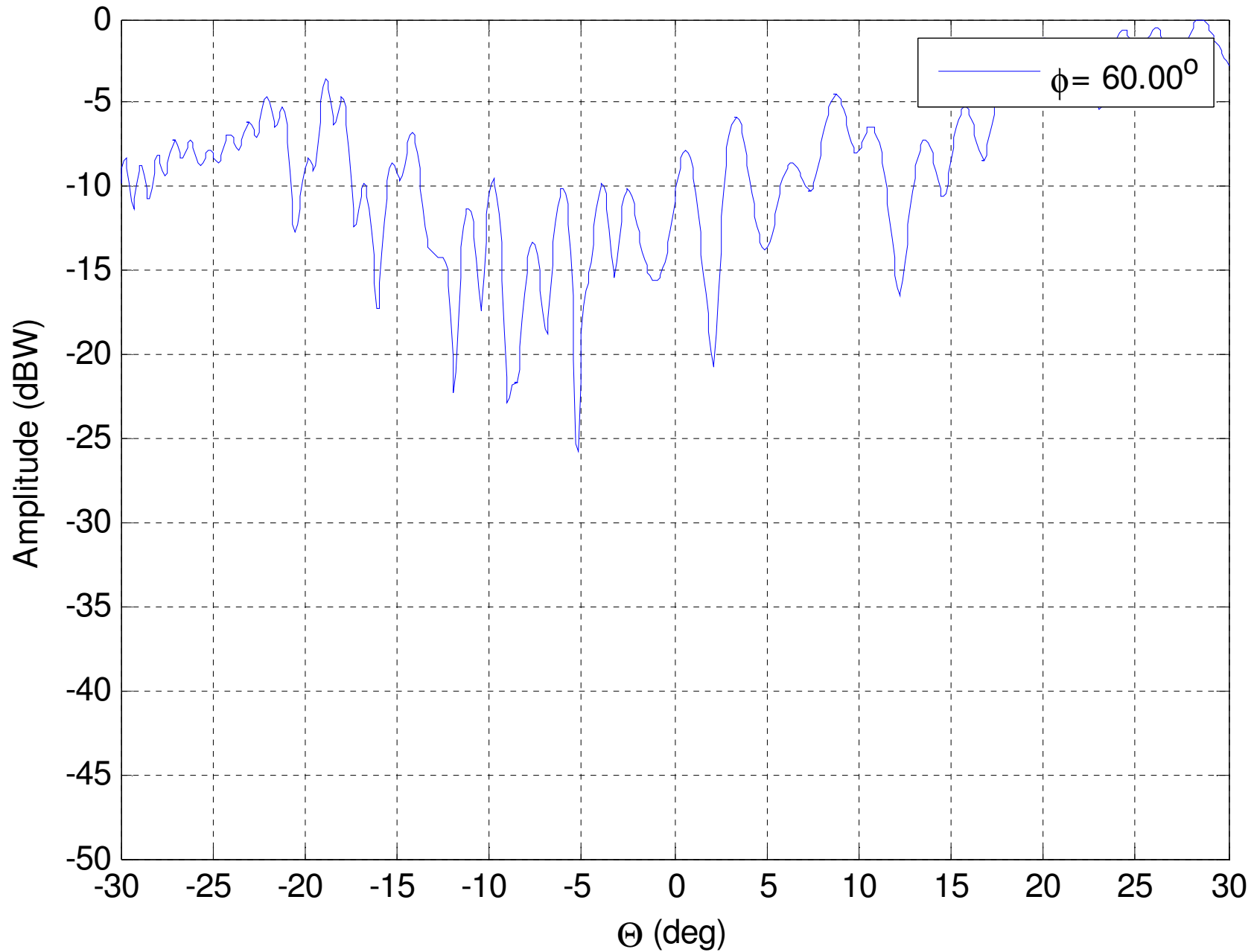
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -12.20 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

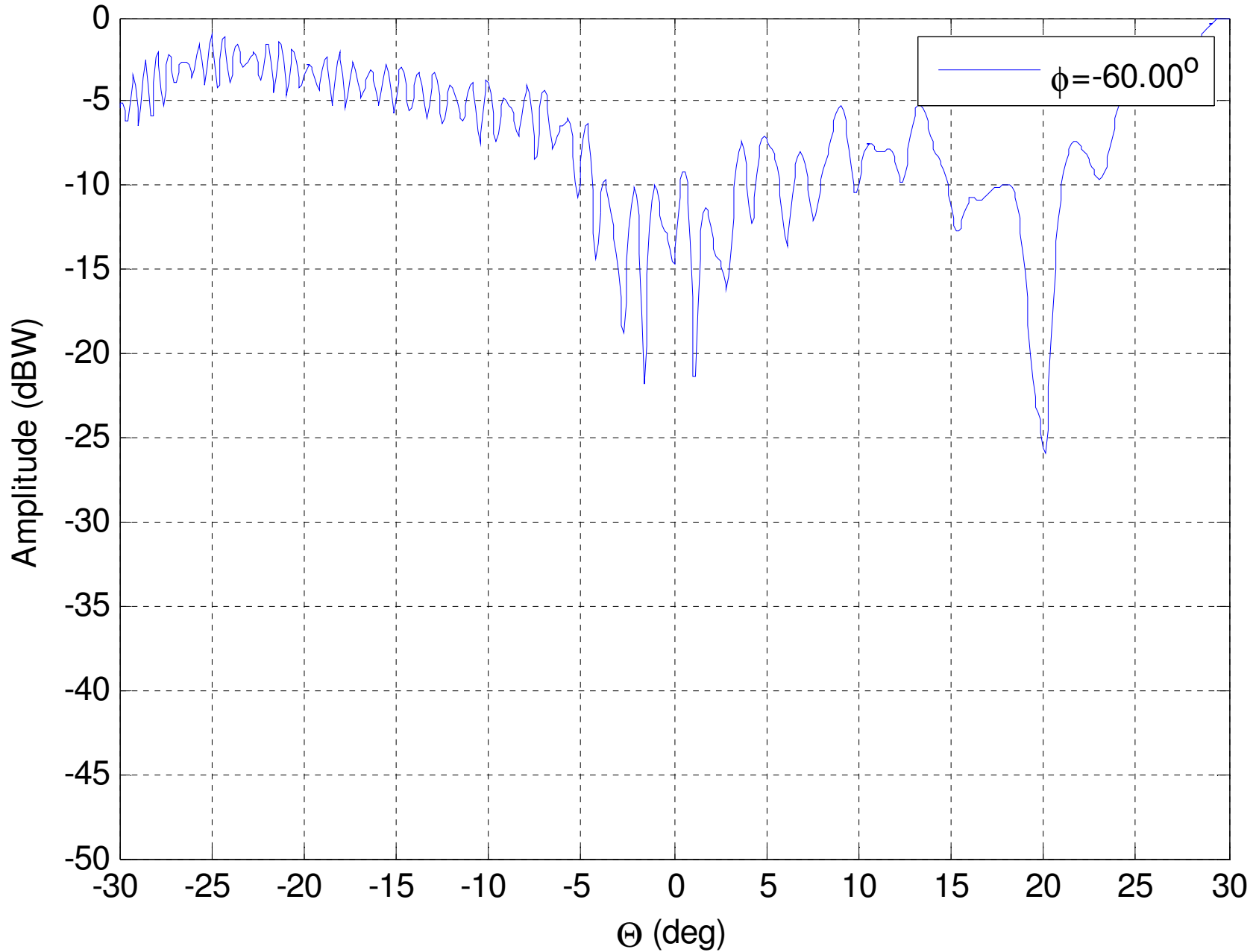
Input file: tx-17.3-rhcp-60.cut, Peak: -12.39 dBW, Date: 14-Dec-2011



LHCP at 17.3 GHz

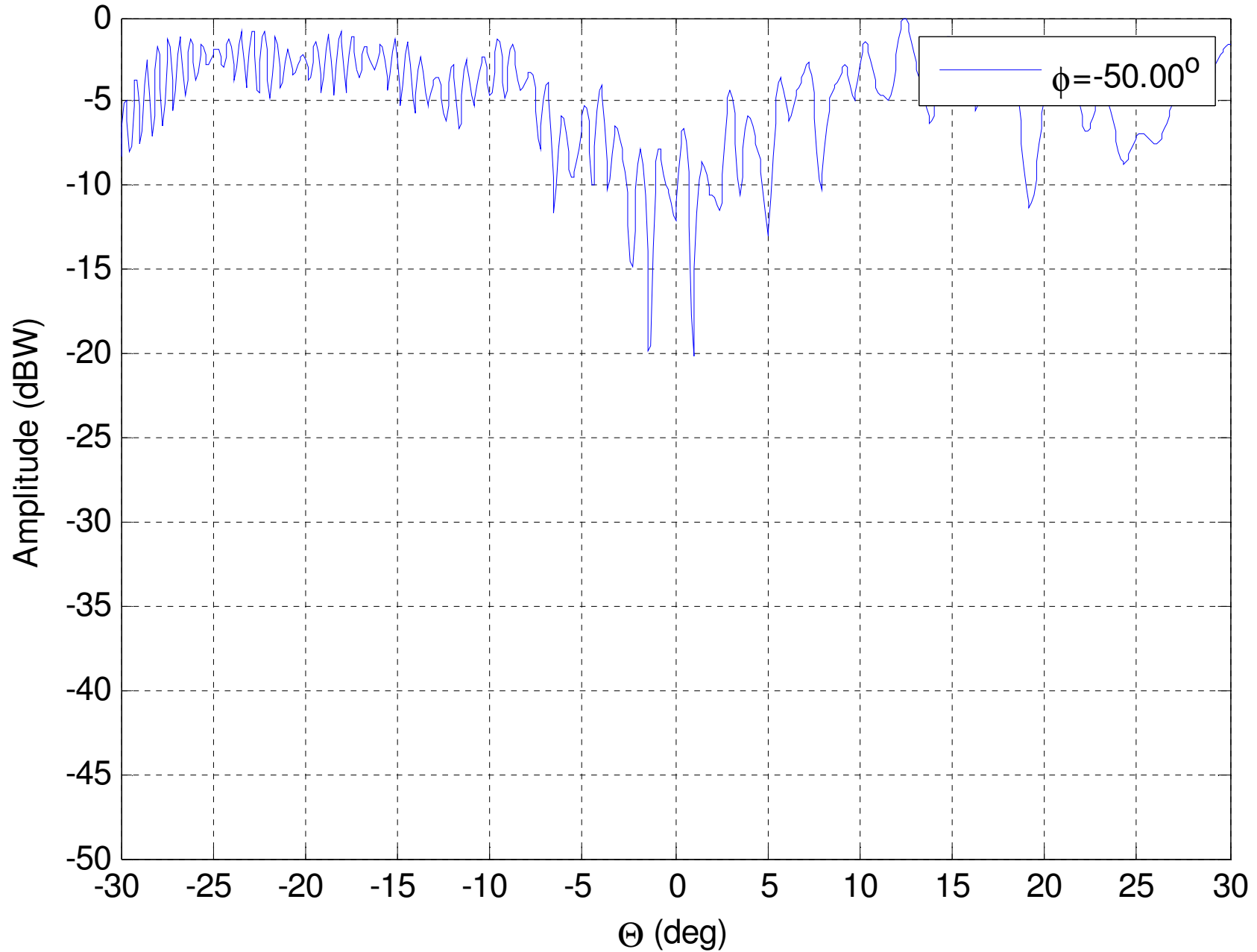
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -11.12 dBW, Date: 14-Dec-2011



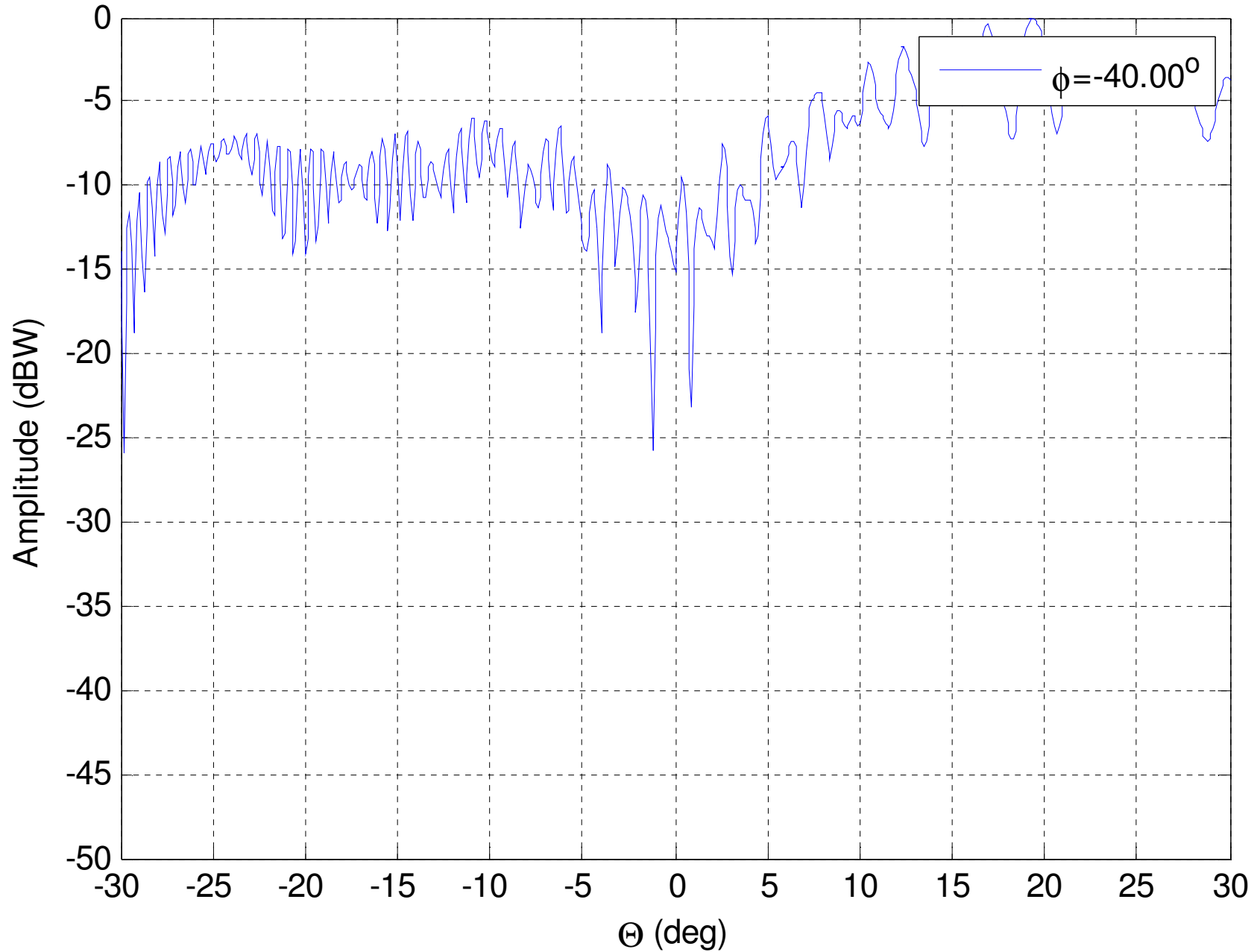
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -13.68 dBW, Date: 14-Dec-2011



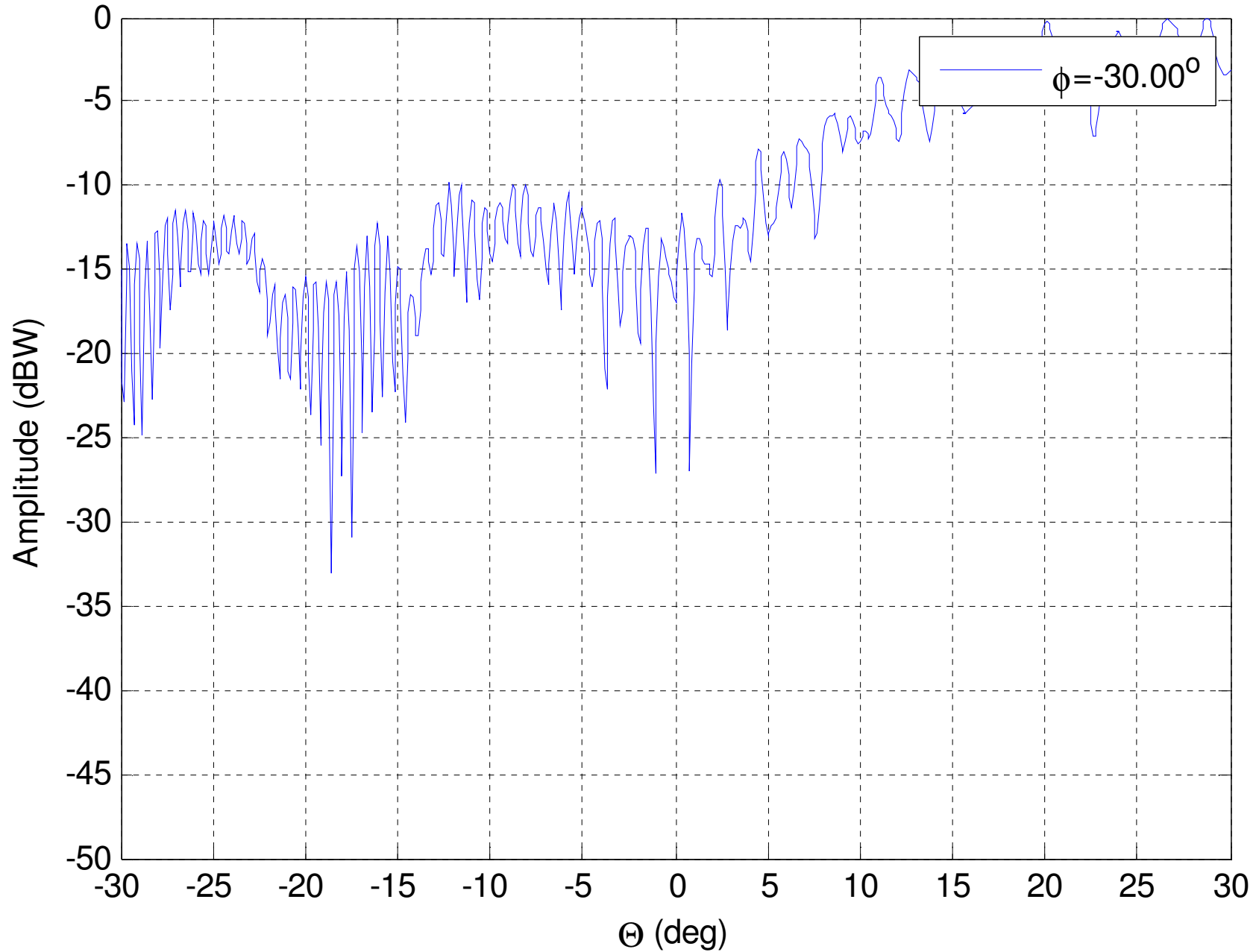
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.70 dBW, Date: 14-Dec-2011



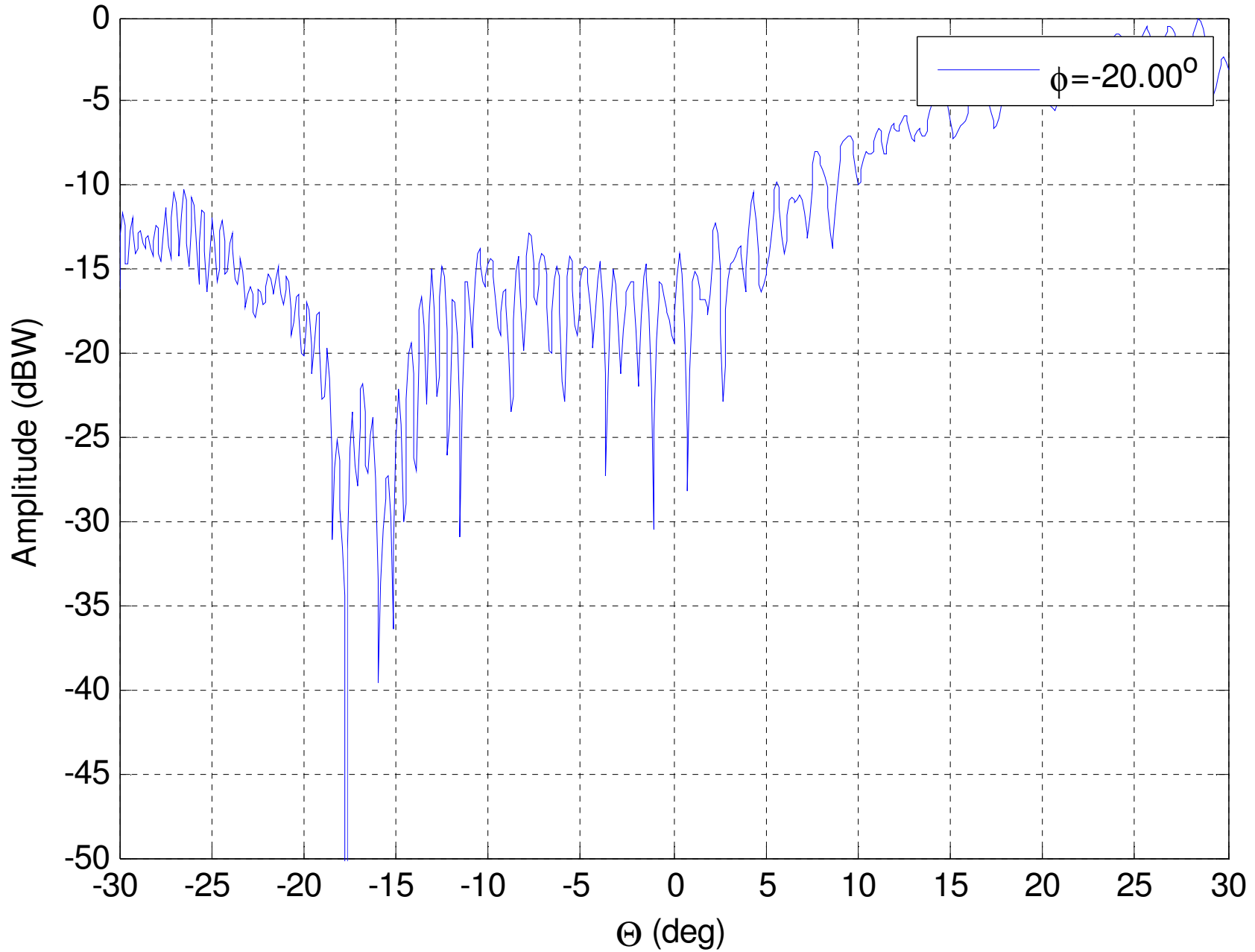
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -8.77 dBW, Date: 14-Dec-2011



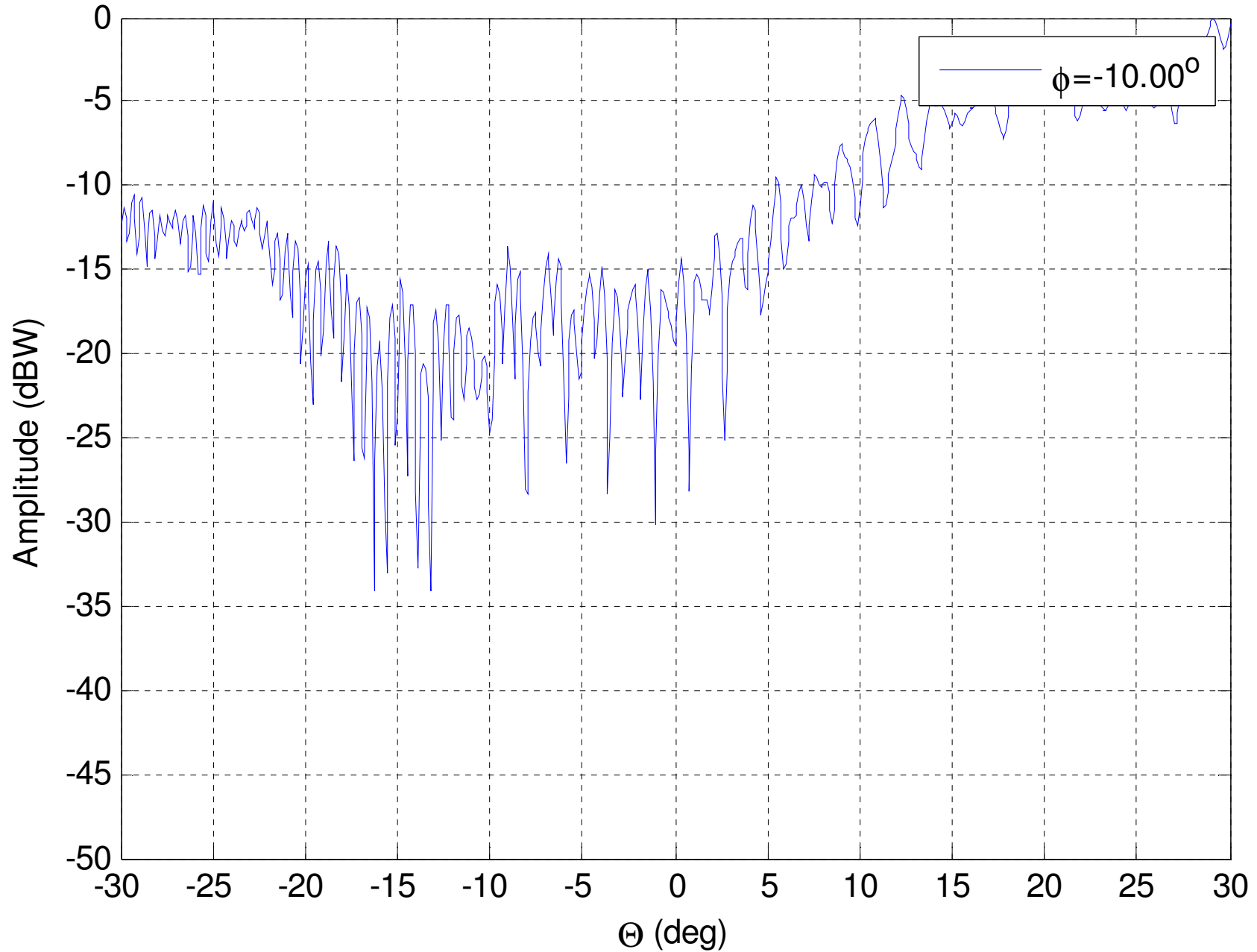
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.41 dBW, Date: 14-Dec-2011



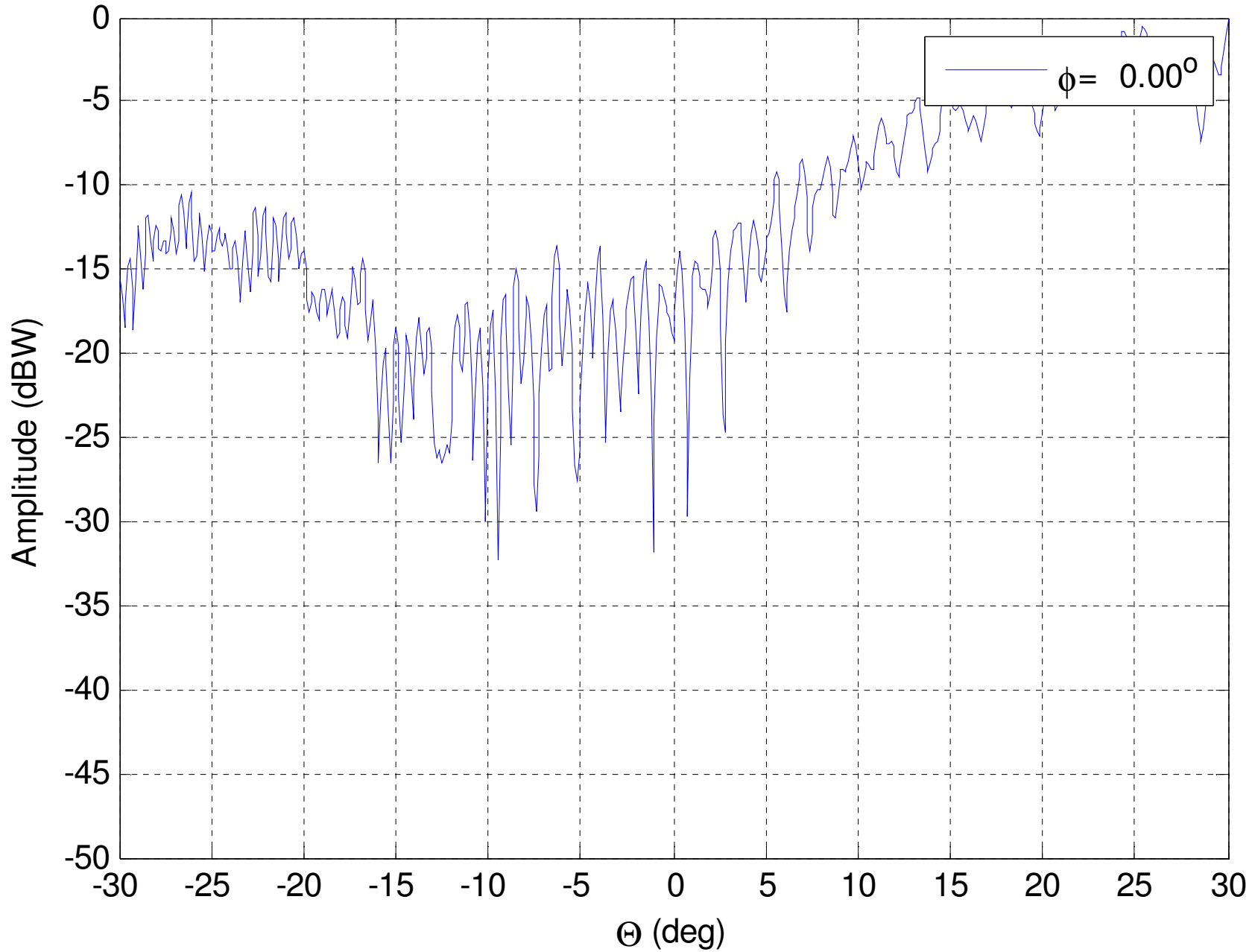
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -6.17 dBW, Date: 14-Dec-2011



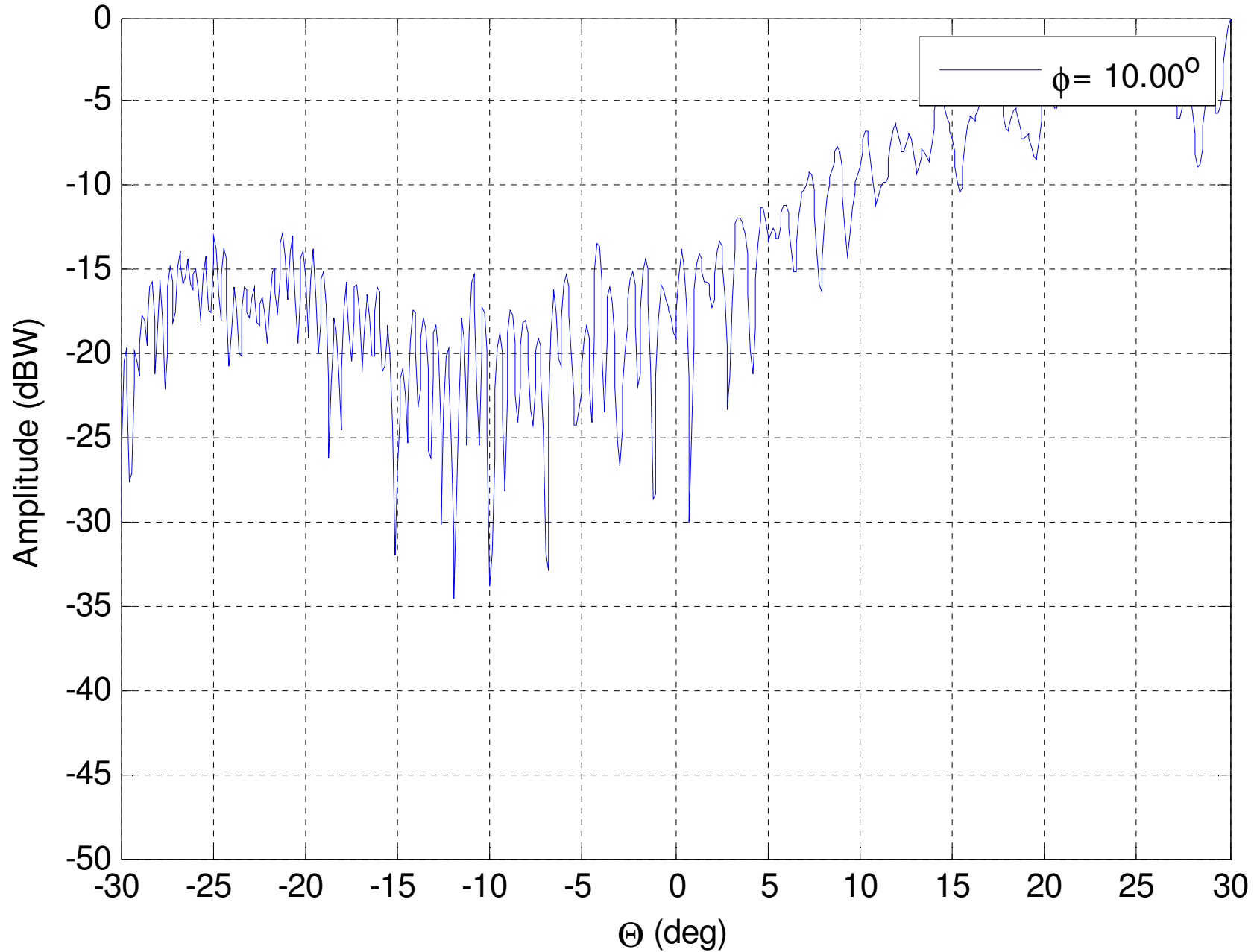
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -6.59 dBW, Date: 14-Dec-2011



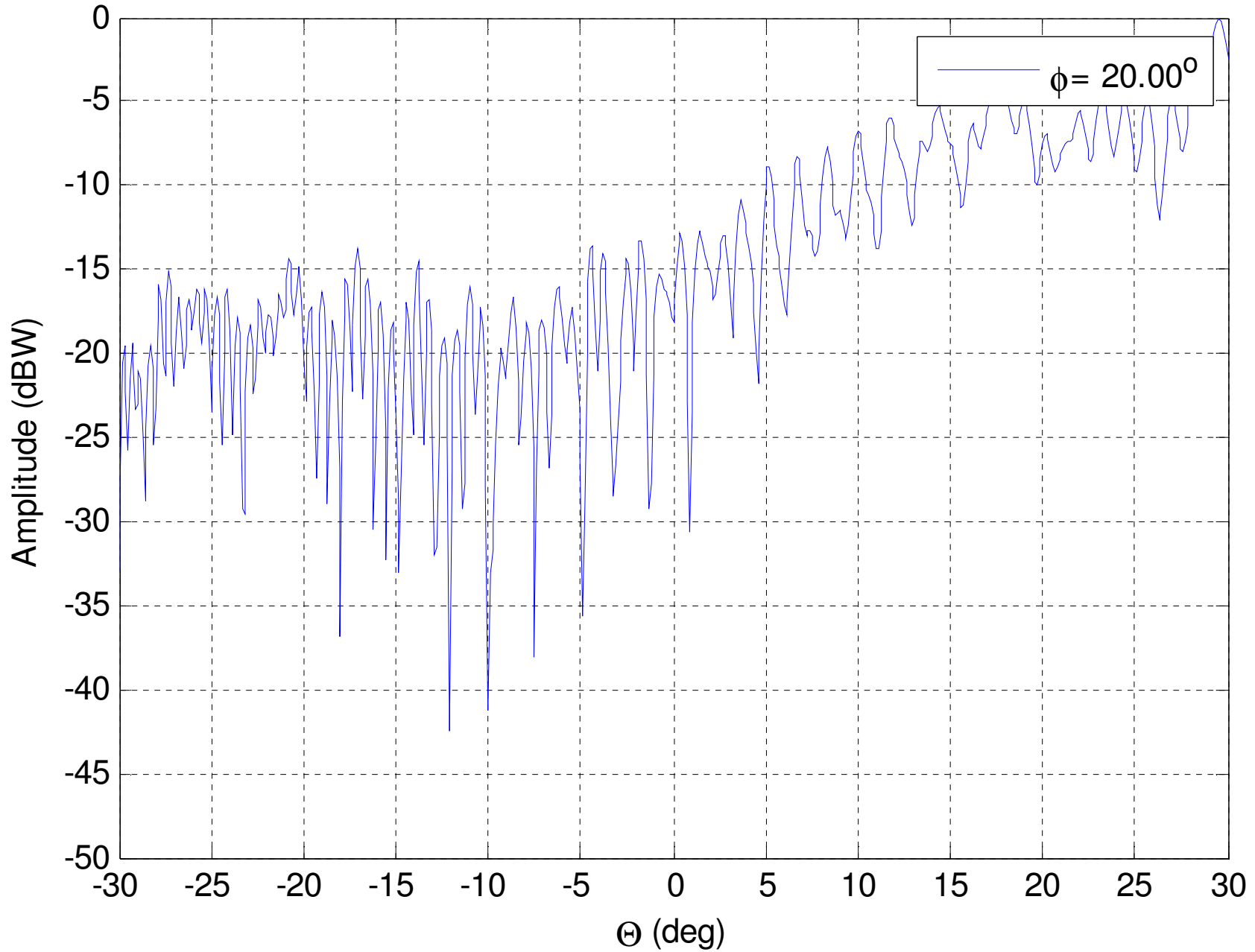
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -6.71 dBW, Date: 14-Dec-2011



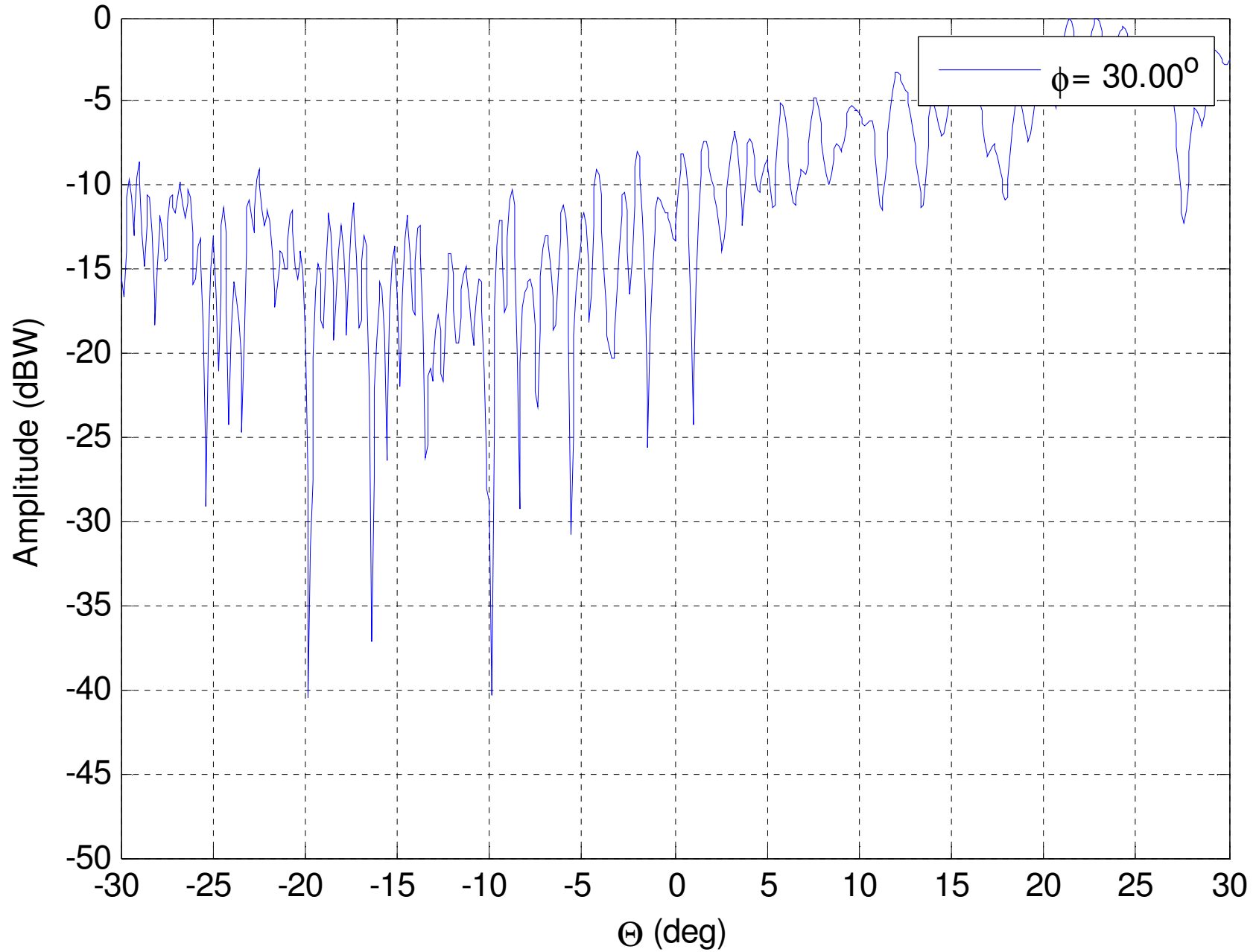
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.66 dBW, Date: 14-Dec-2011



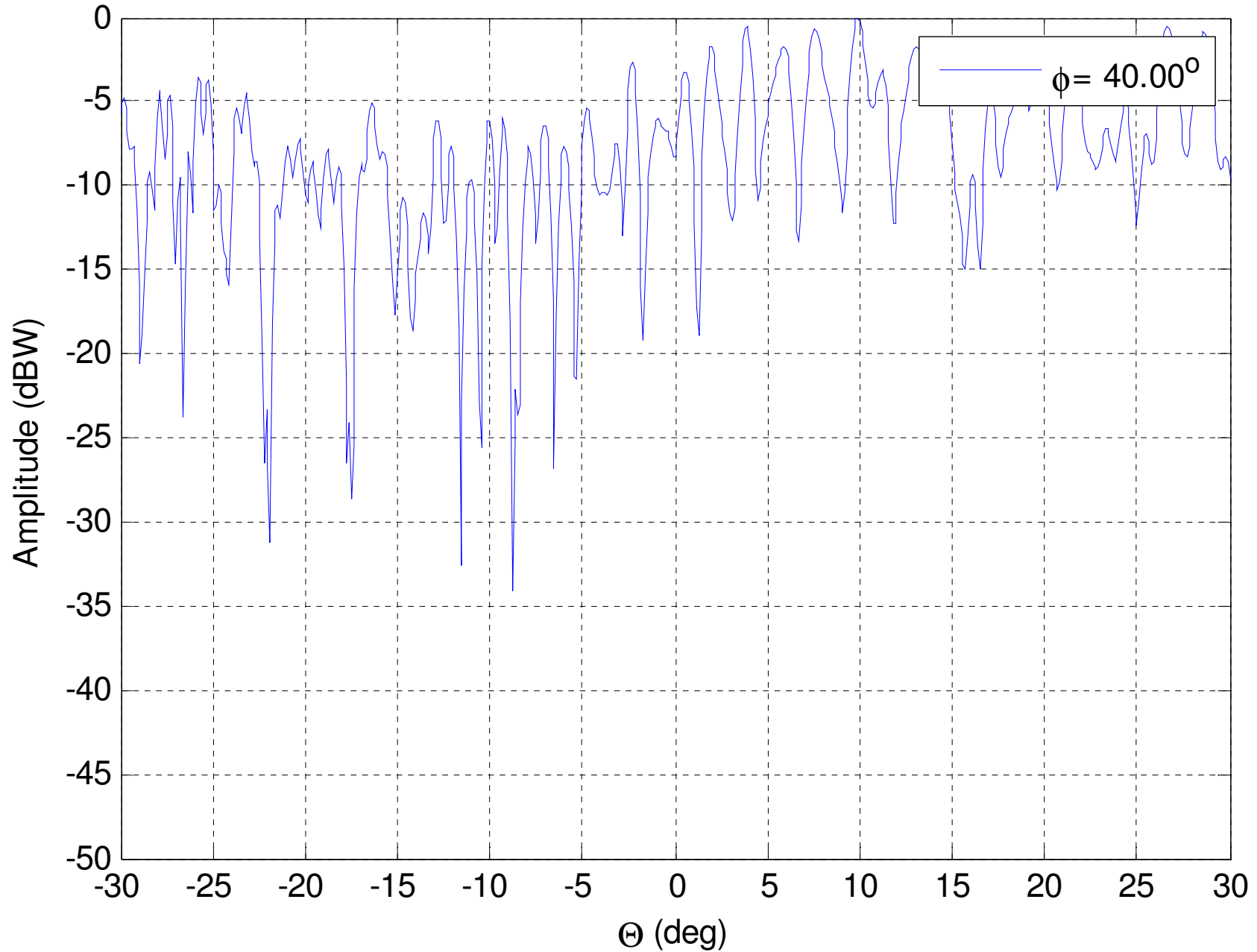
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -12.45 dBW, Date: 14-Dec-2011



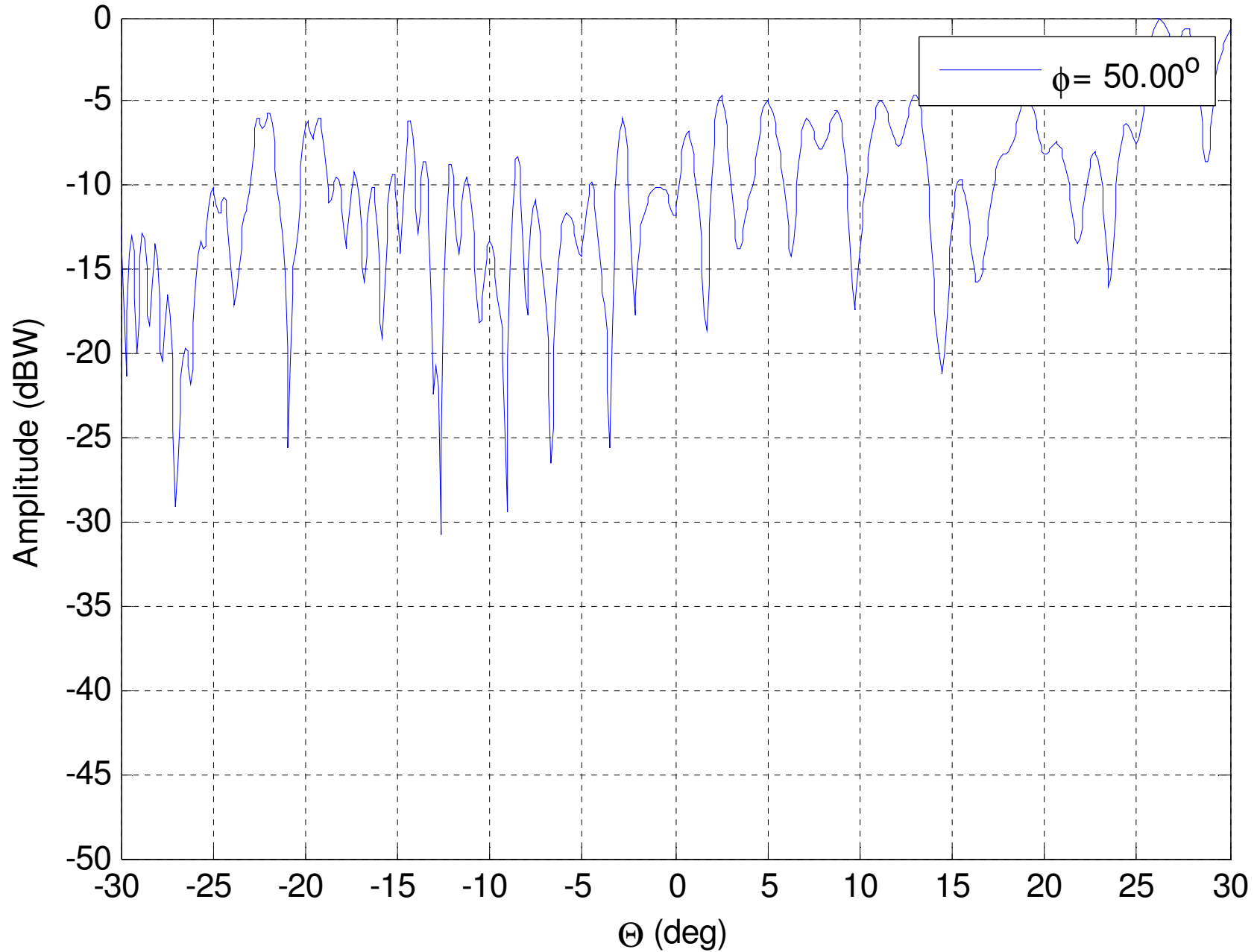
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -17.42 dBW, Date: 14-Dec-2011



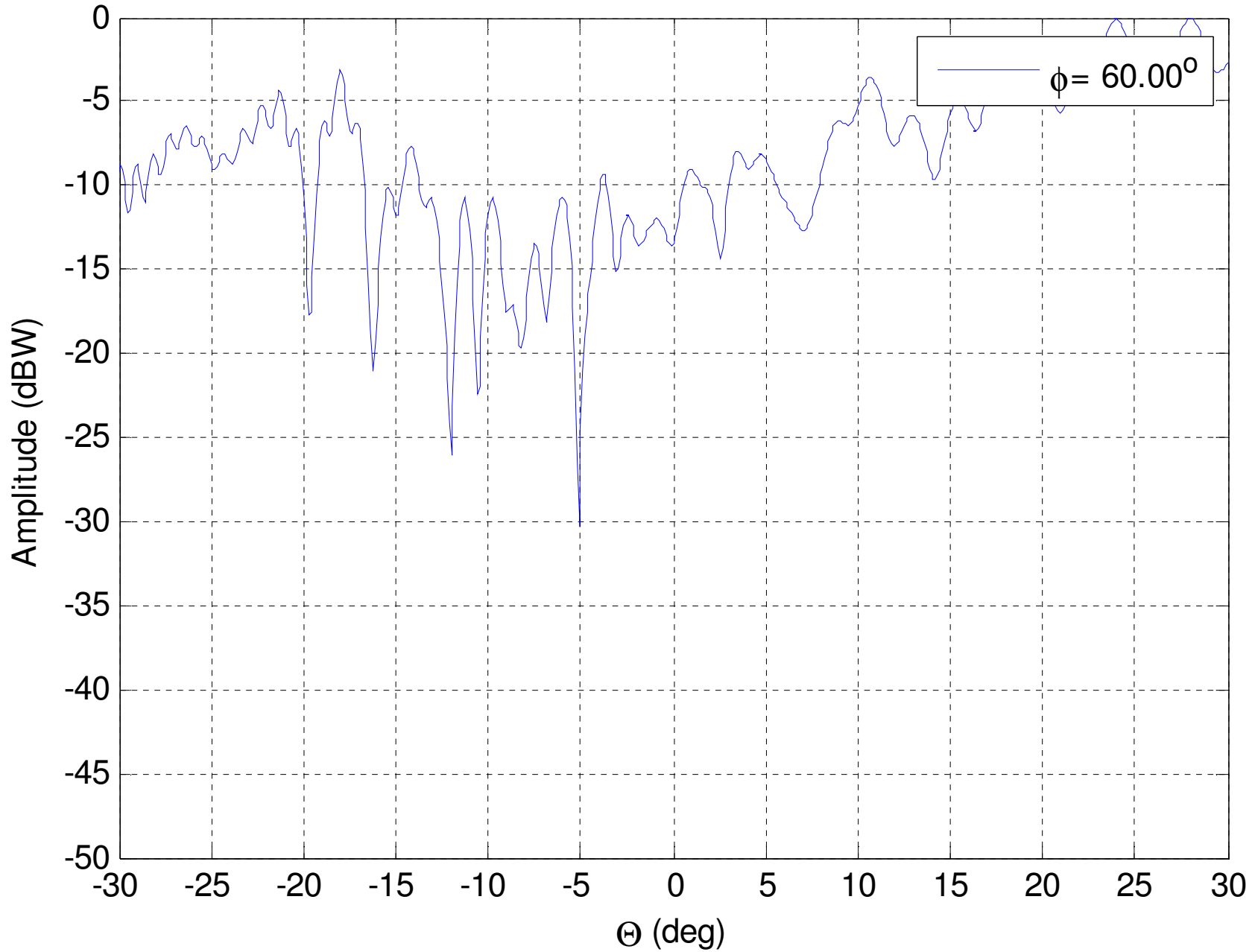
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -13.99 dBW, Date: 14-Dec-2011



Normalized pattern cuts - farfield

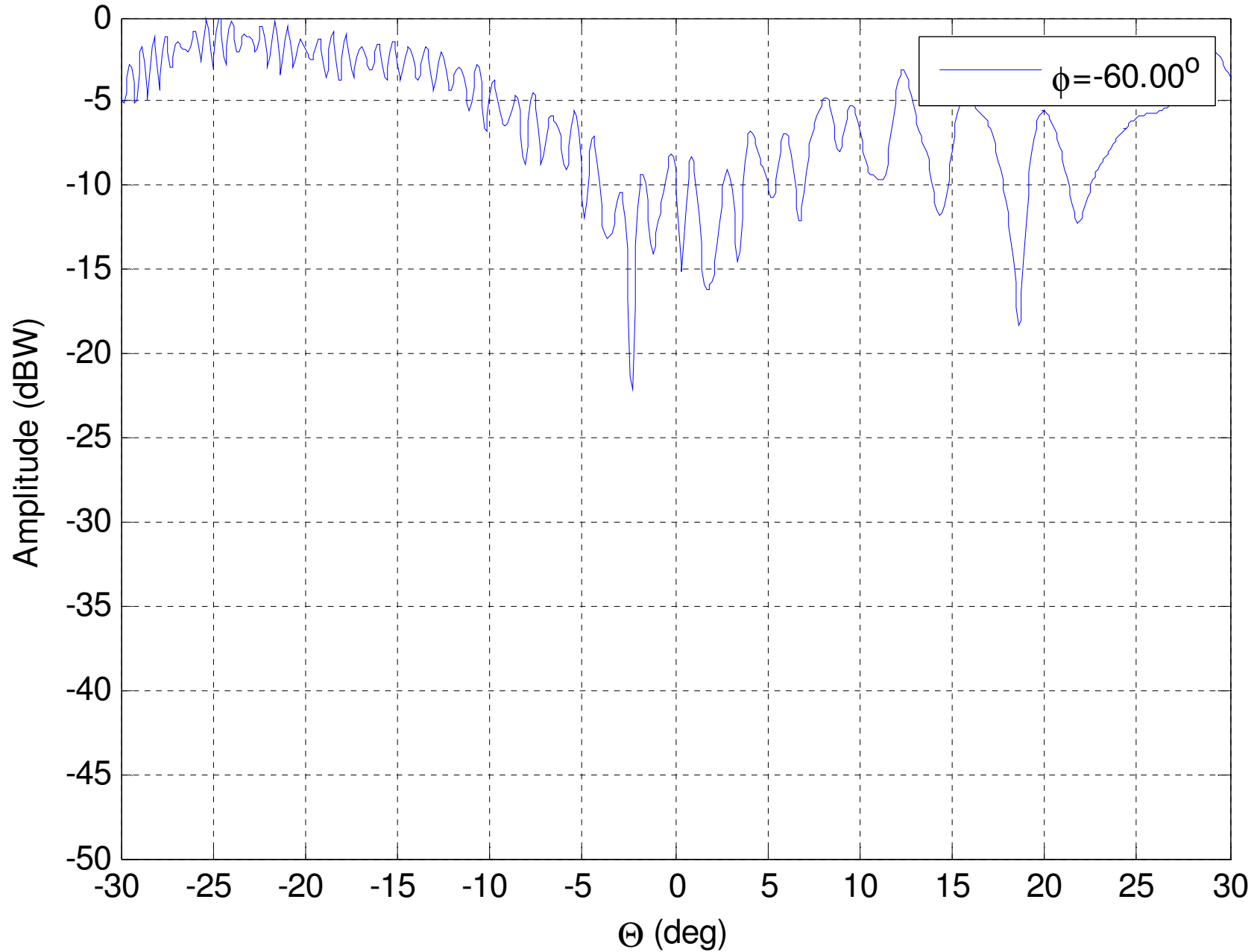
Input file: tx-17.3-lhcp-60.cut, Peak: -12.27 dBW, Date: 14-Dec-2011



RHCP at 17.5 GHz

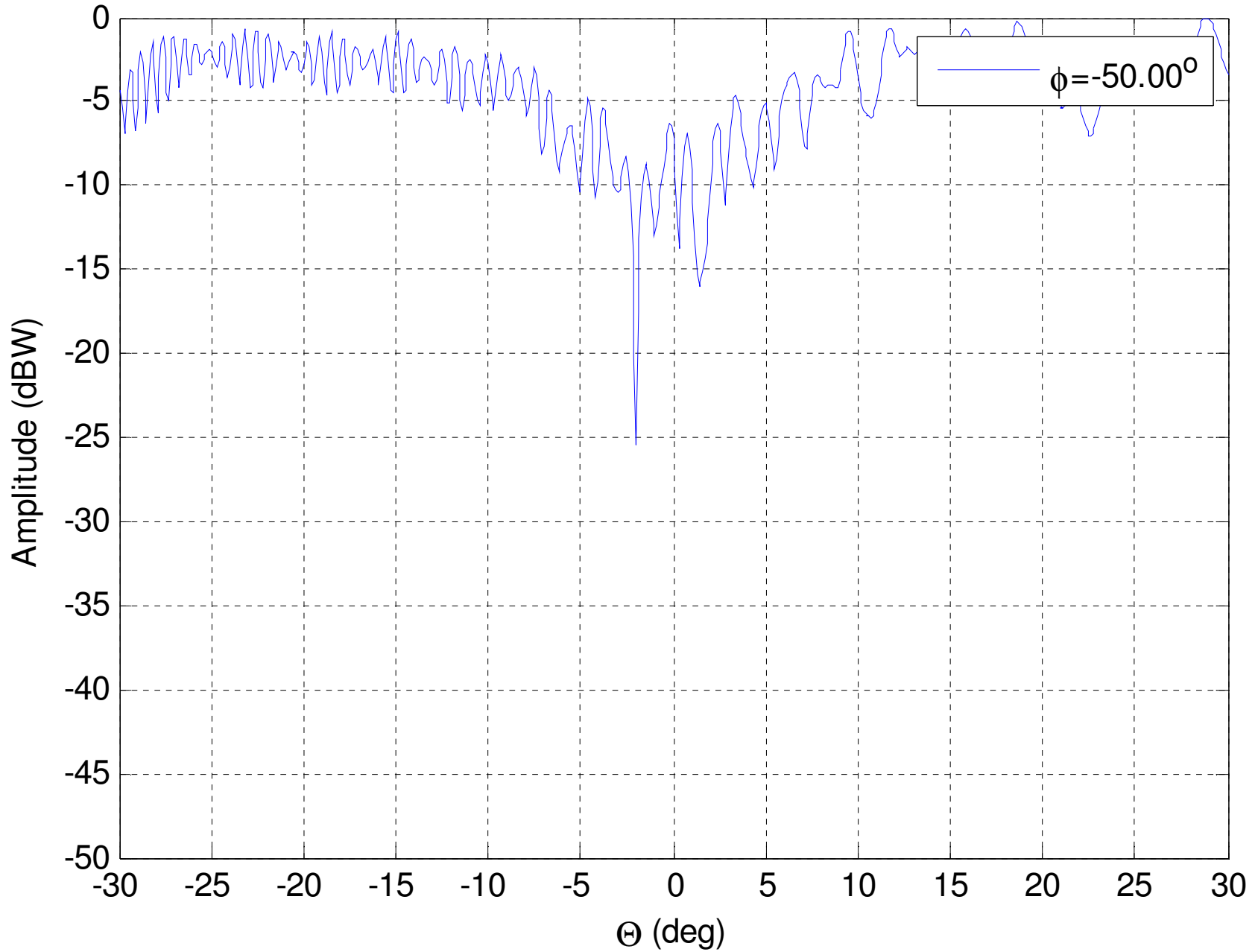
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.89 dBW, Date: 14-Dec-2011



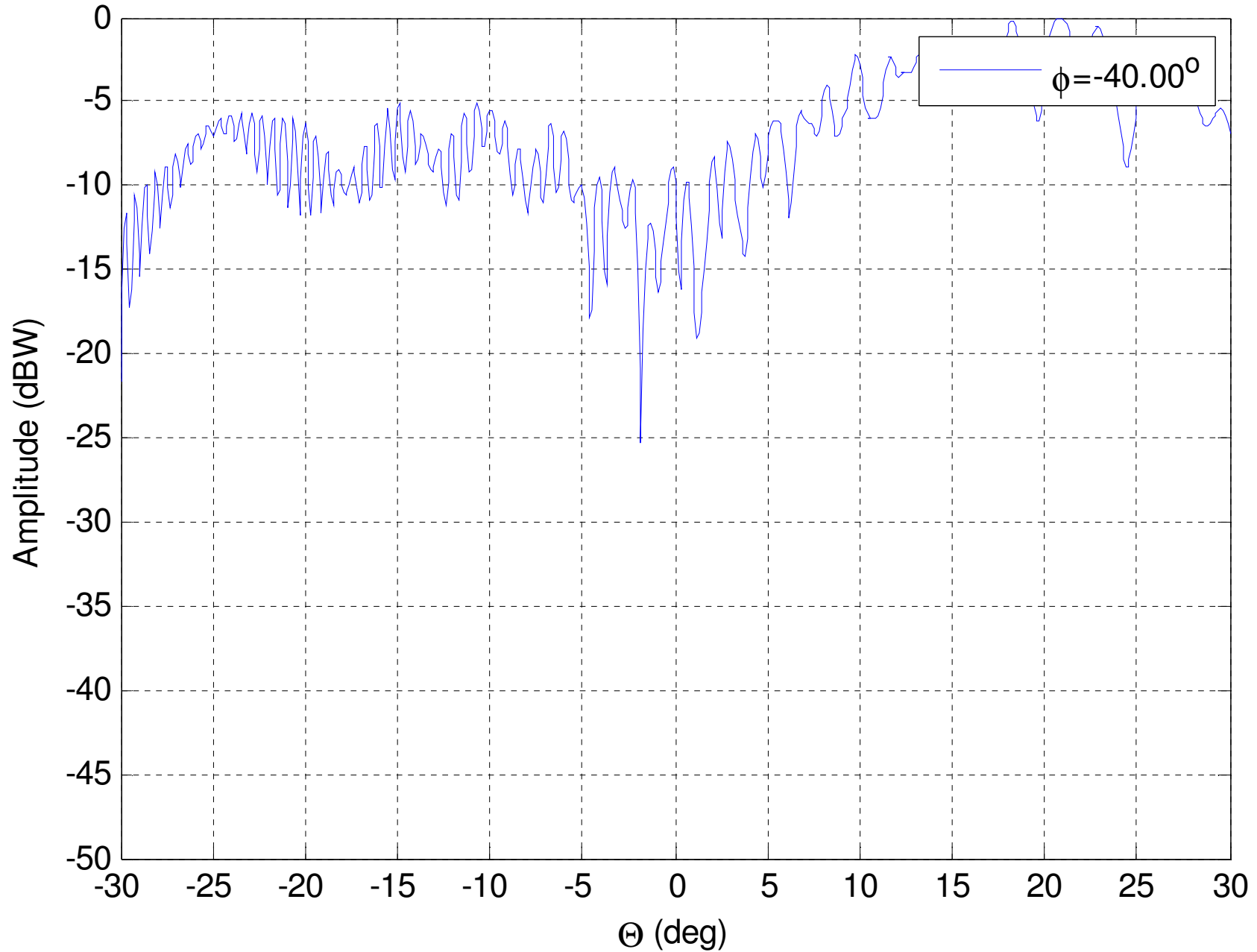
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -13.69 dBW, Date: 14-Dec-2011



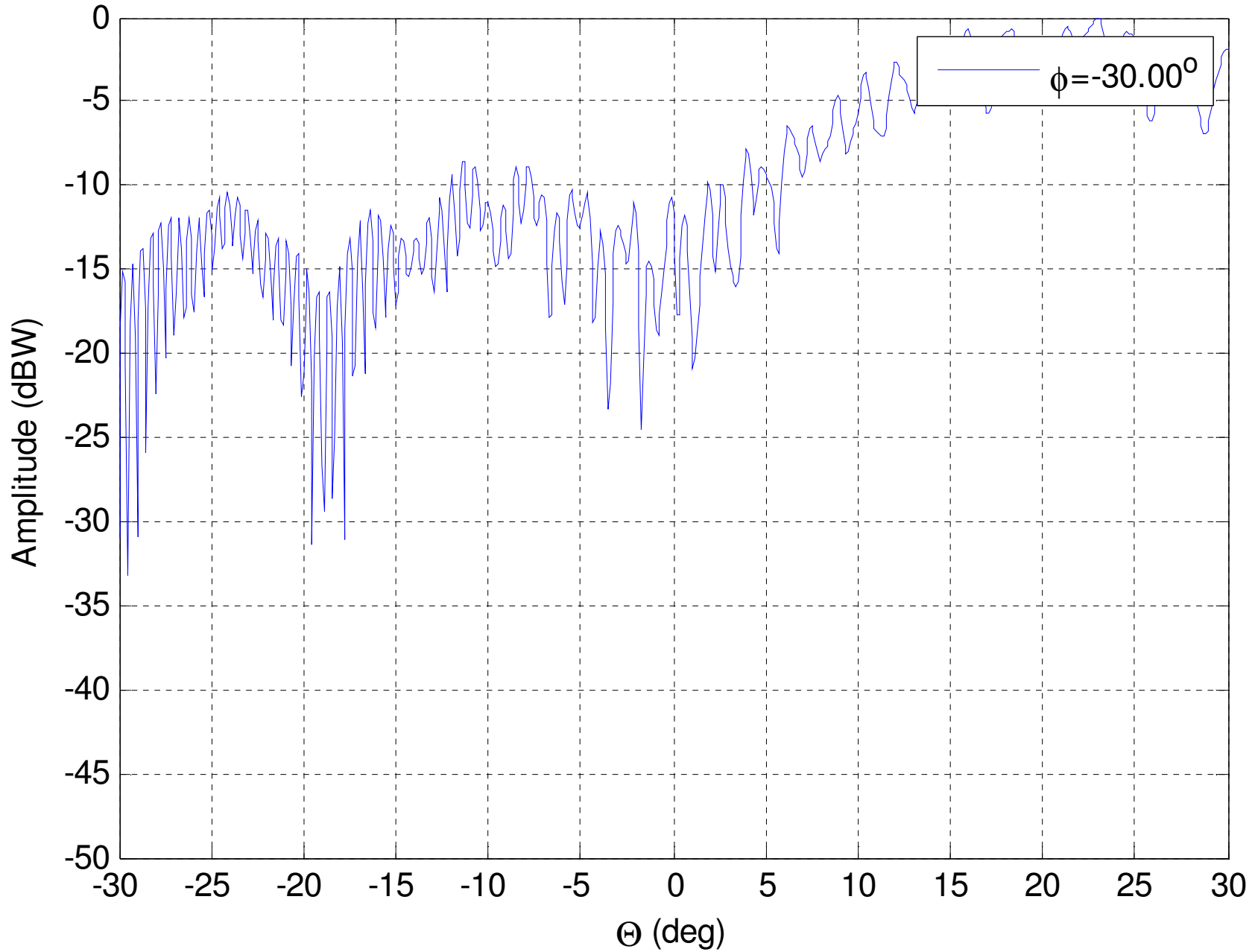
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -11.14 dBW, Date: 14-Dec-2011



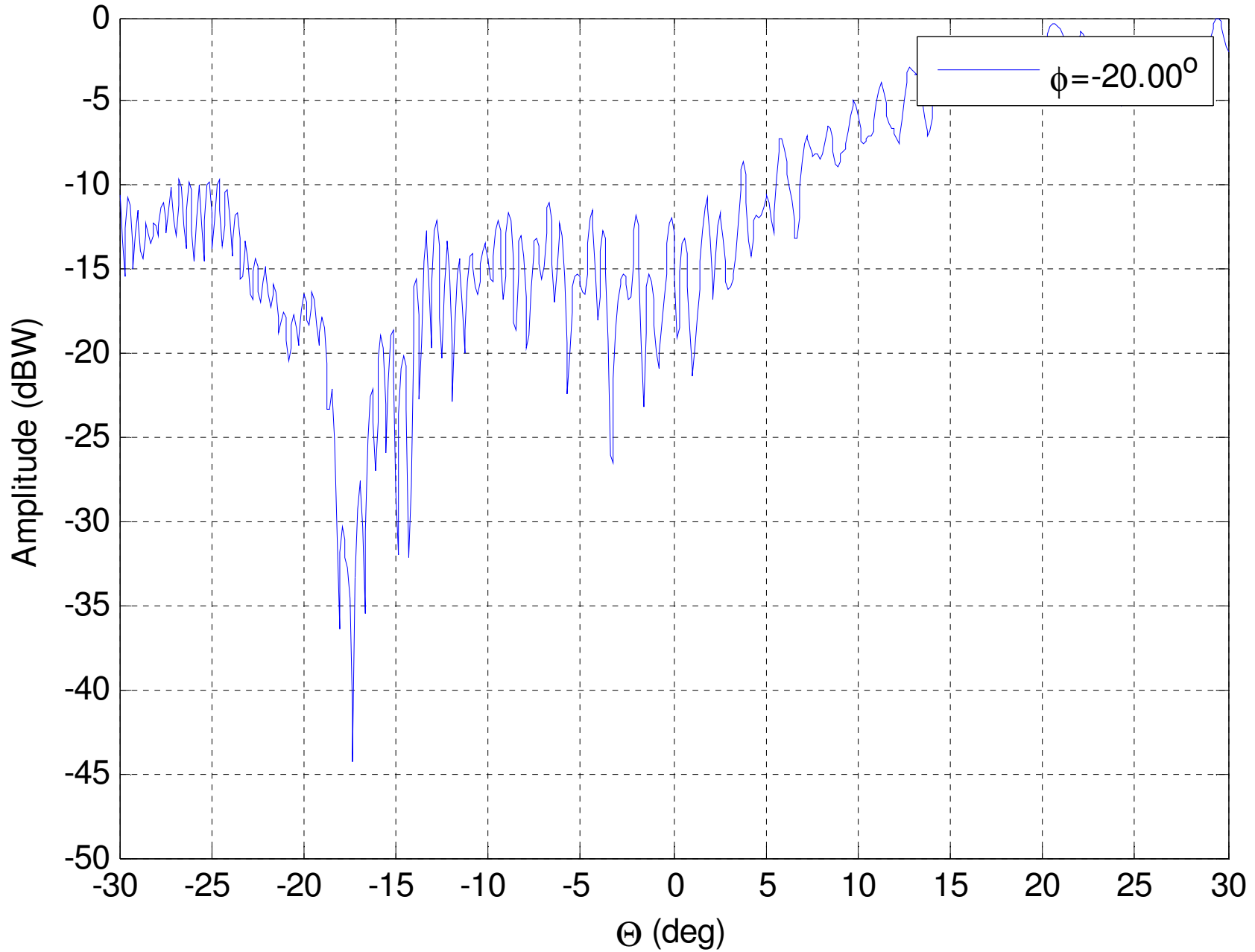
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -9.24 dBW, Date: 15-Dec-2011



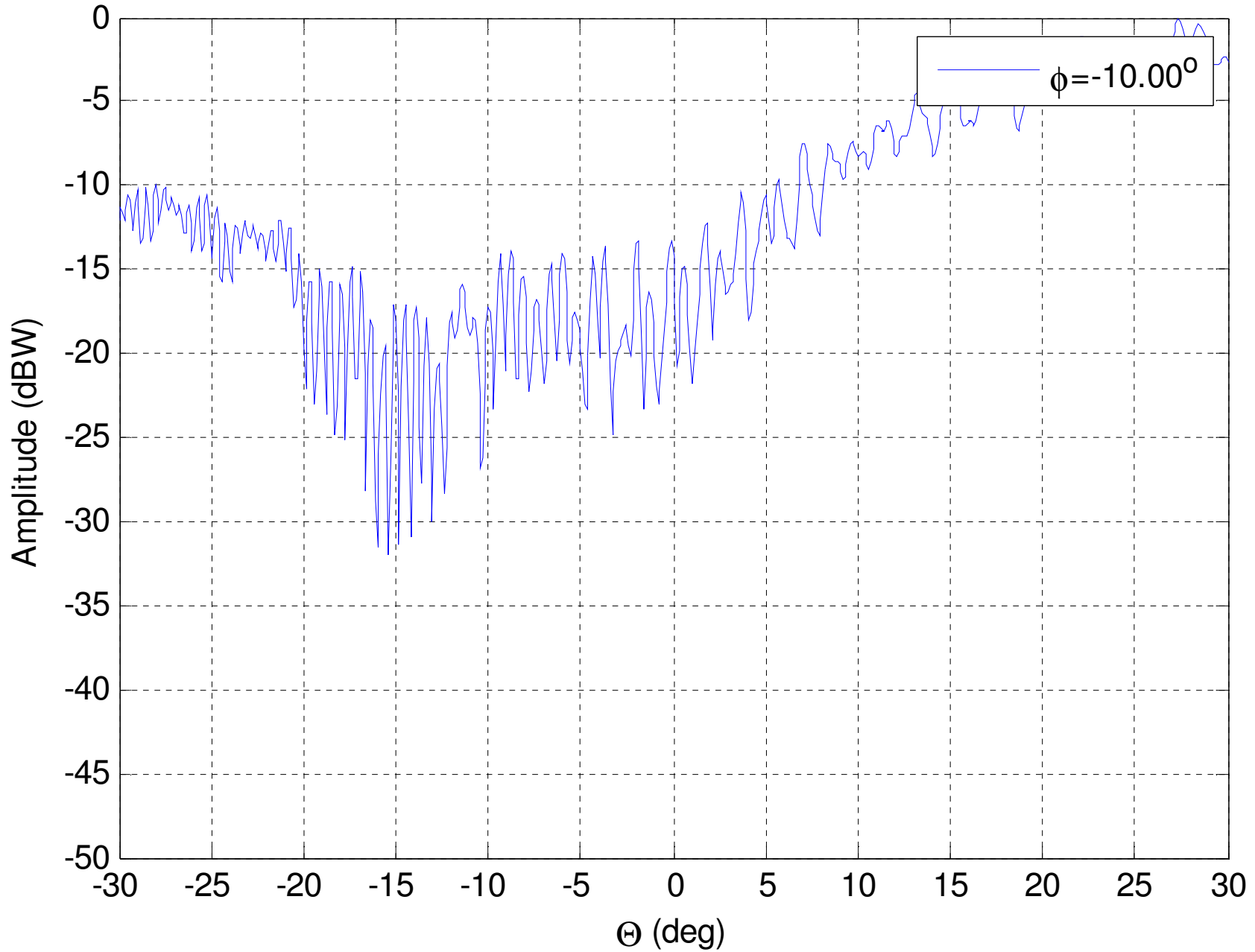
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -8.11 dBW, Date: 15-Dec-2011



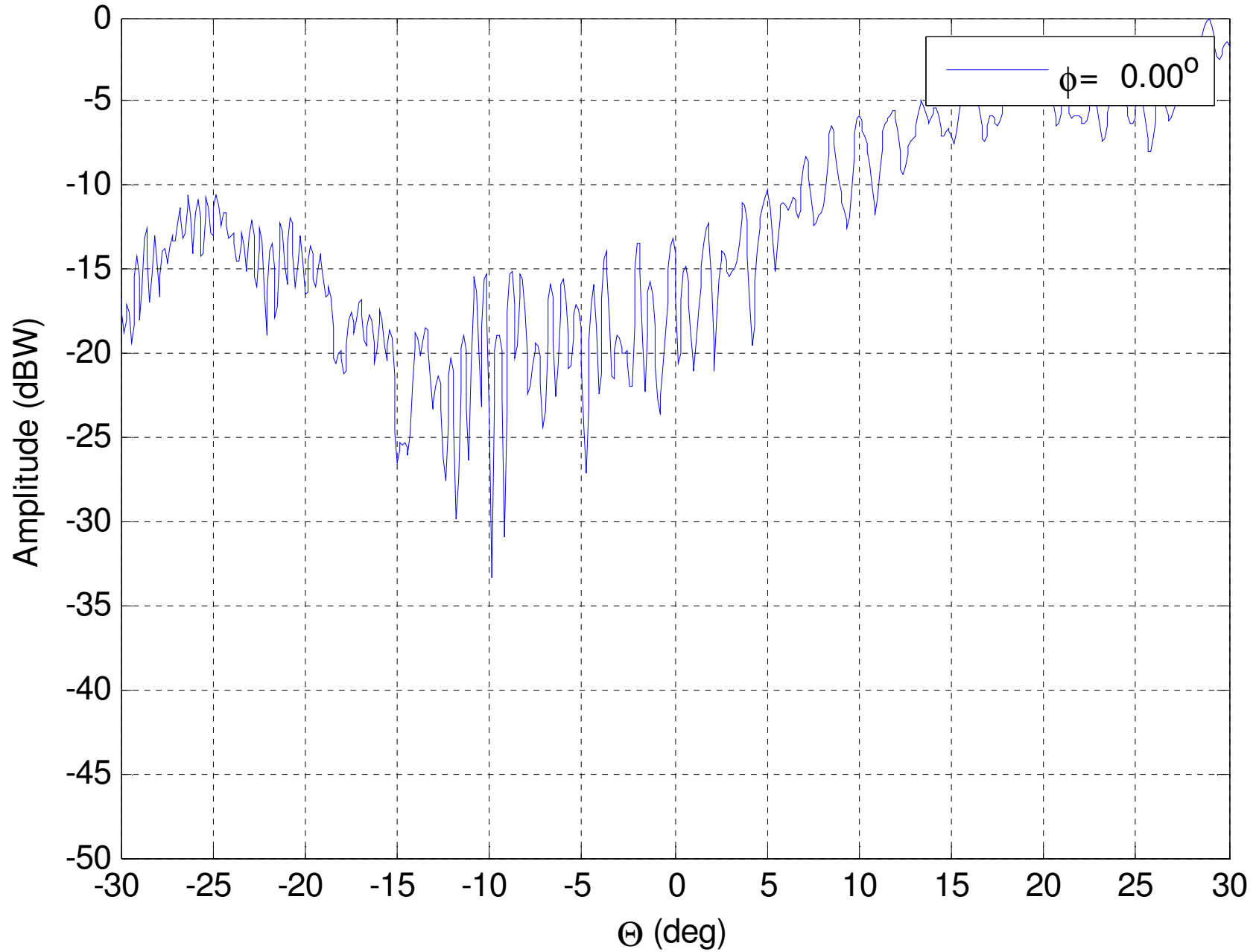
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -6.66 dBW, Date: 15-Dec-2011



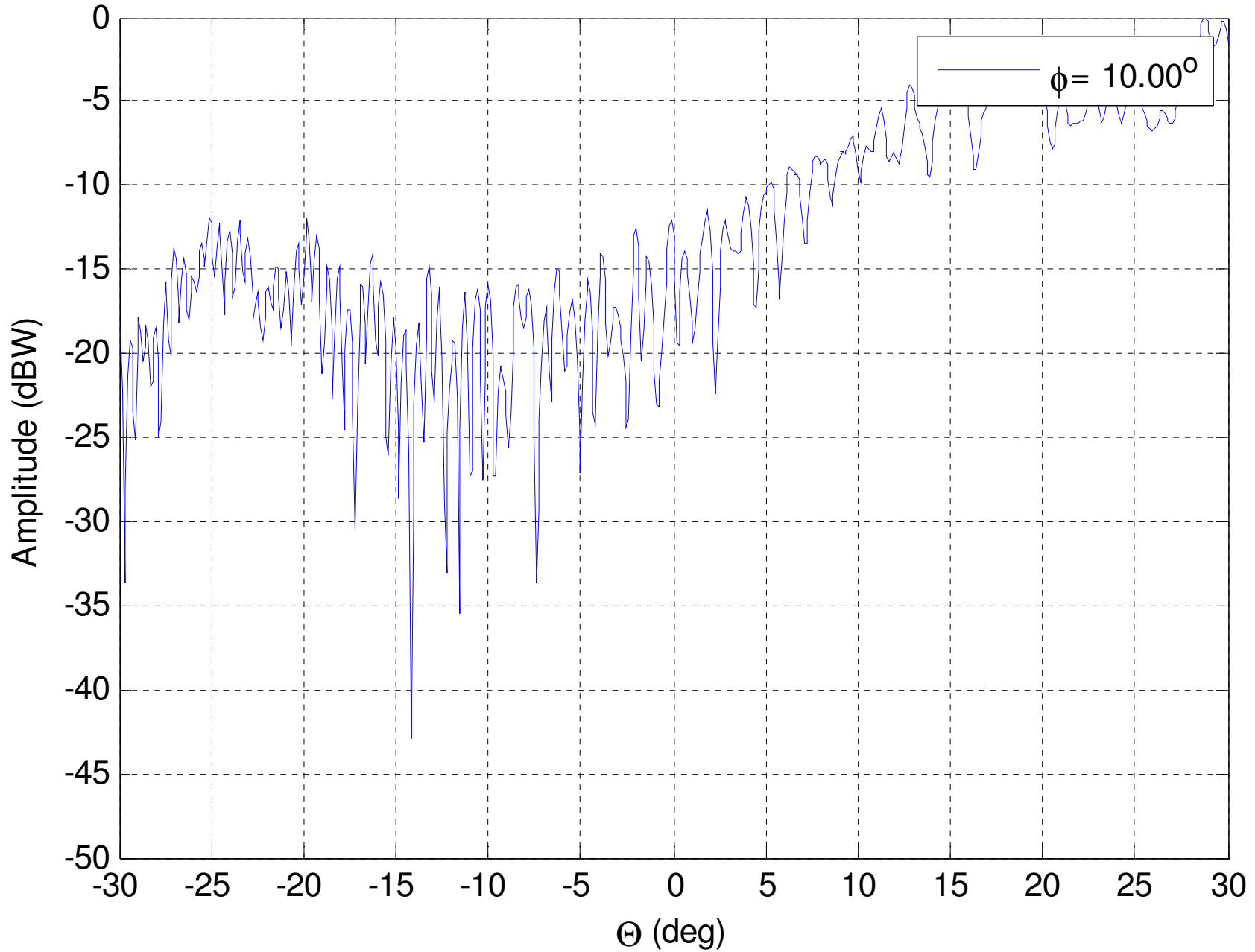
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -6.81 dBW, Date: 15-Dec-2011



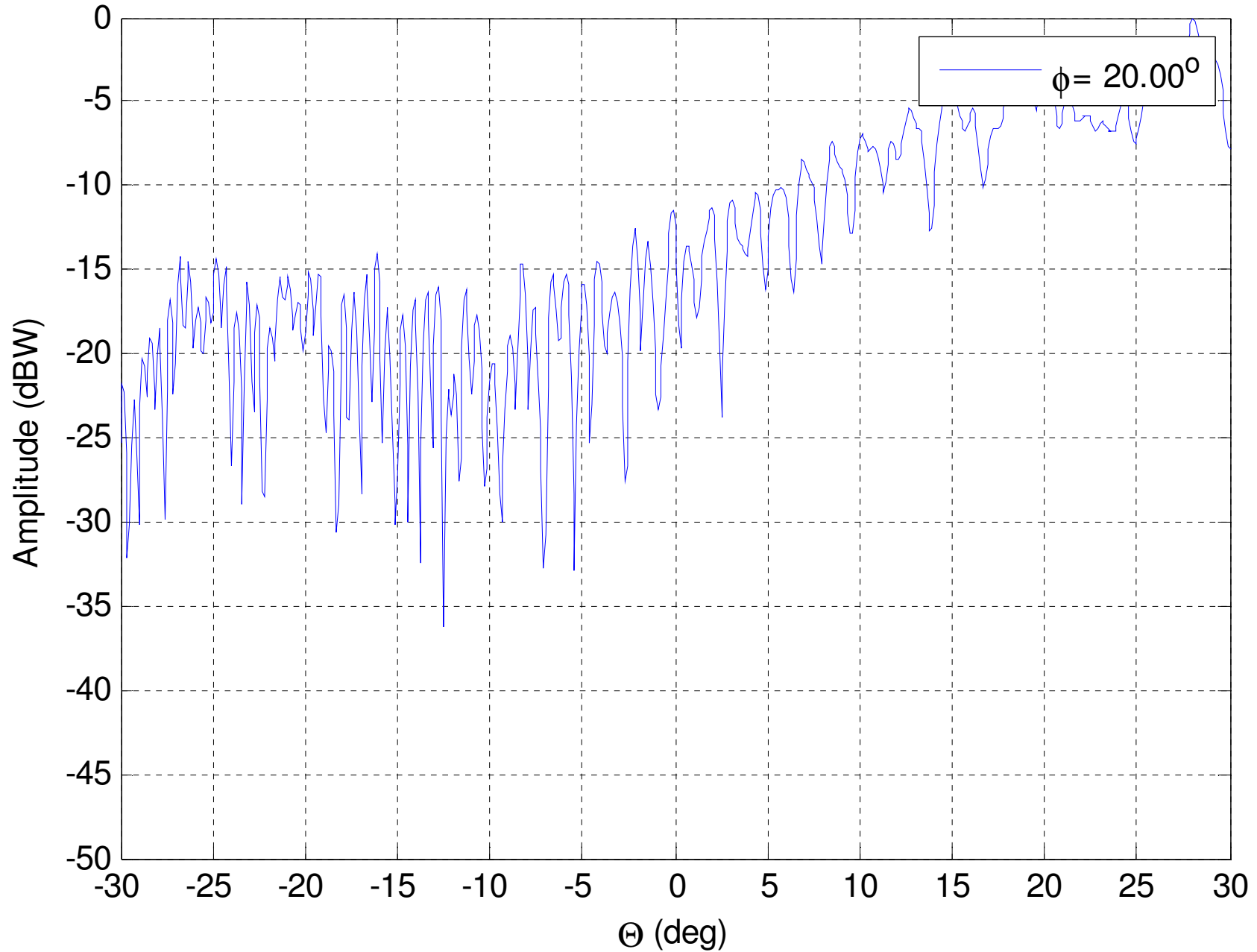
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -7.93 dBW, Date: 15-Dec-2011



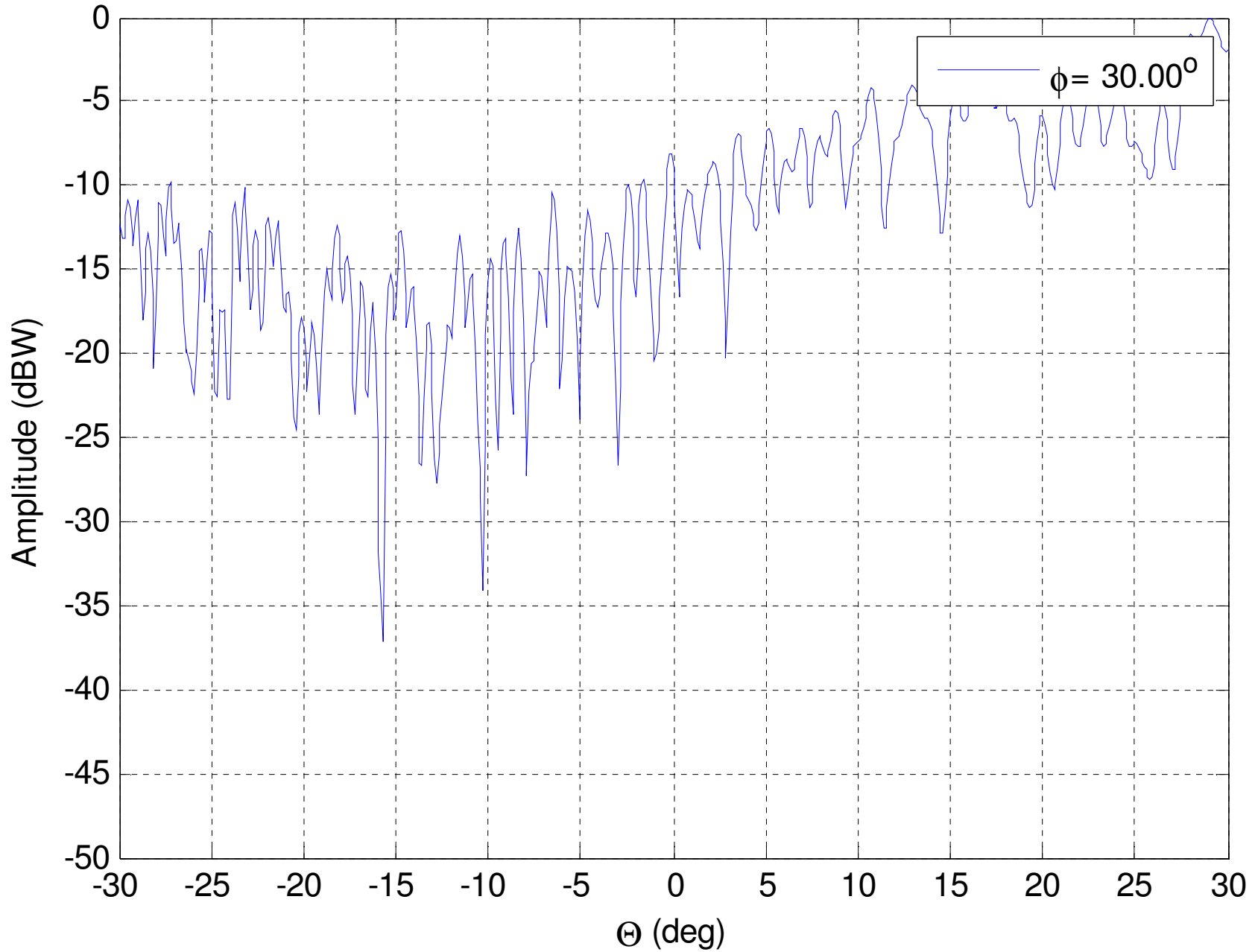
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -8.56 dBW, Date: 15-Dec-2011



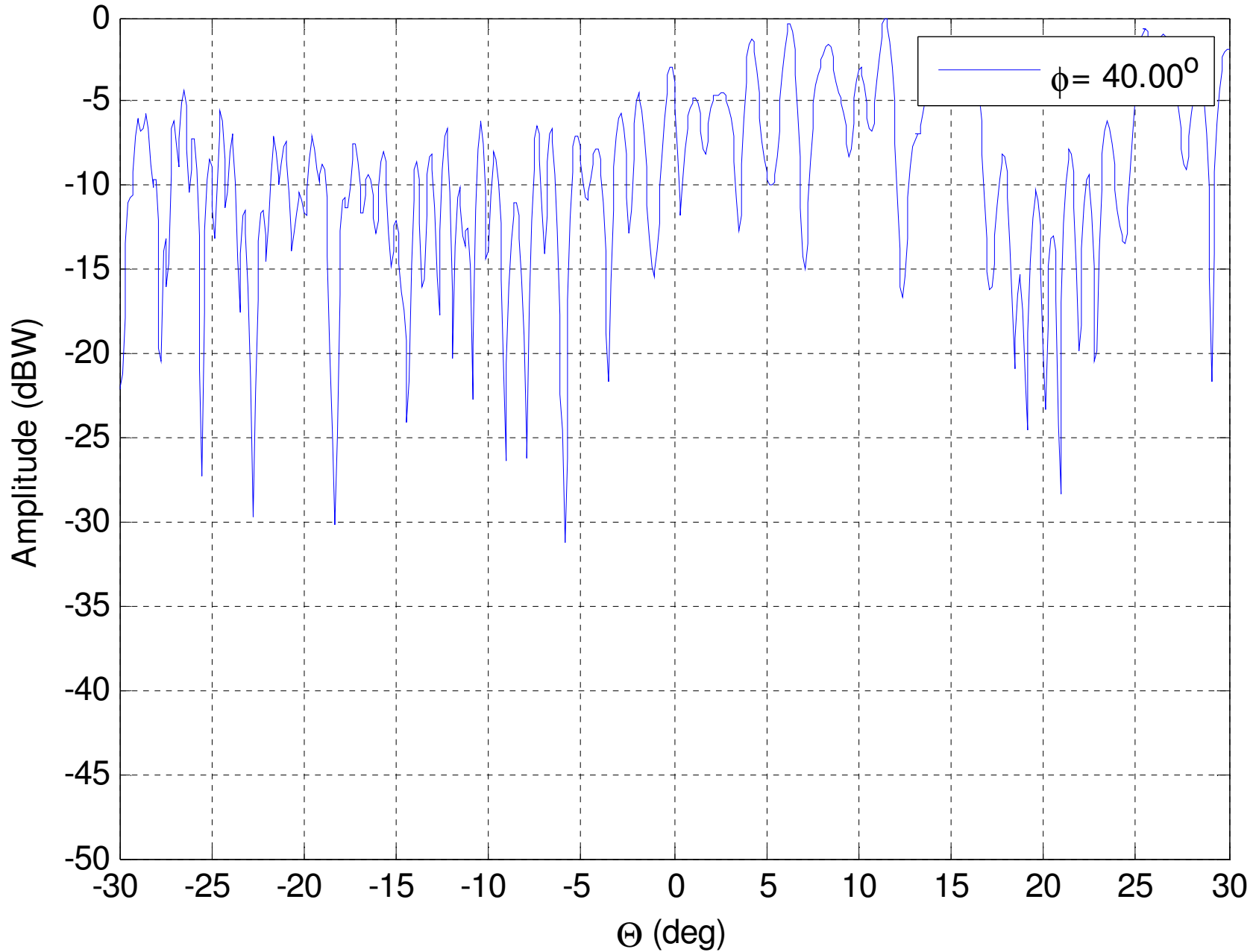
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -11.96 dBW, Date: 15-Dec-2011



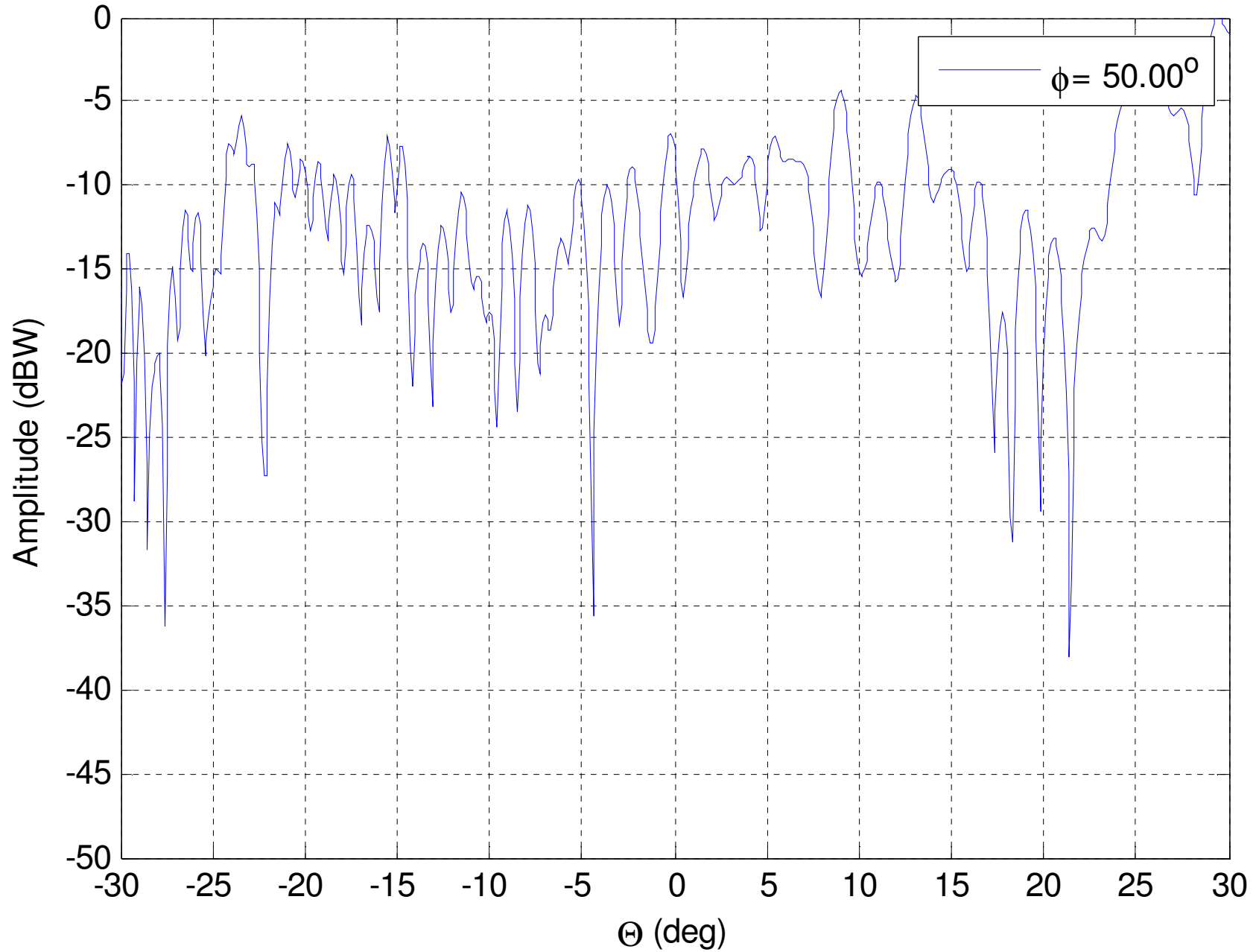
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -17.11 dBW, Date: 15-Dec-2011



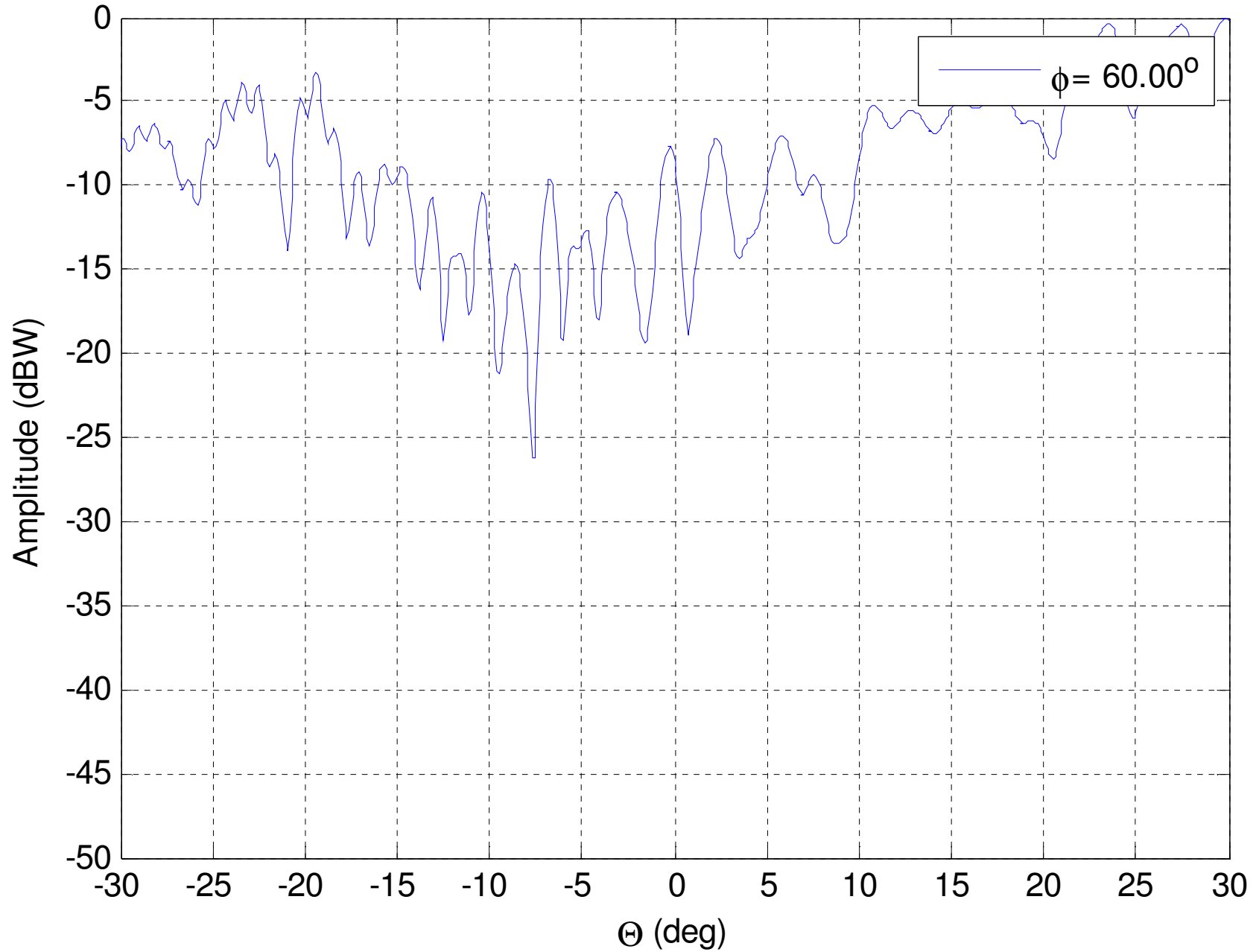
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -13.08 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

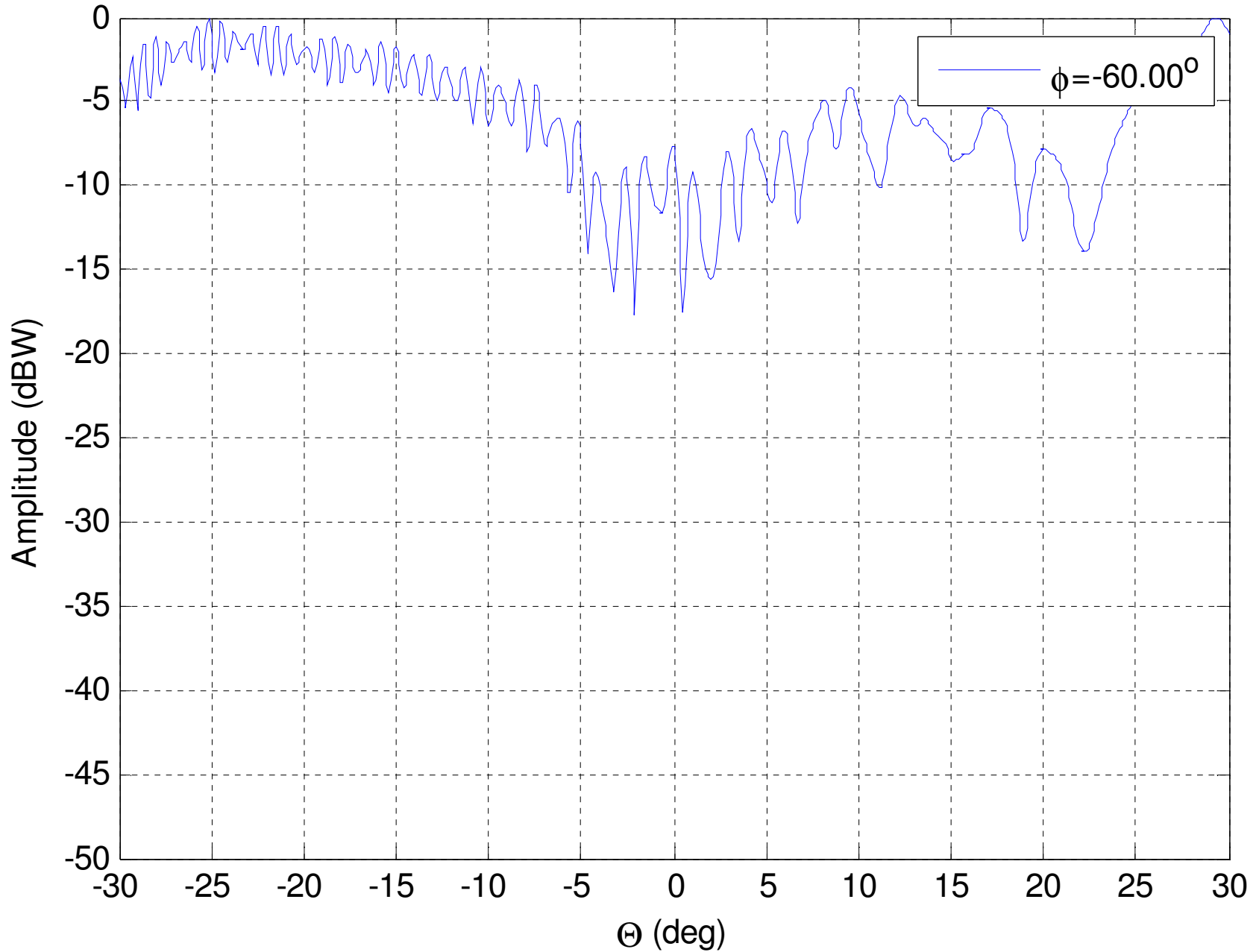
Input file: tx-17.5-rhcp-60.cut, Peak: -12.34 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

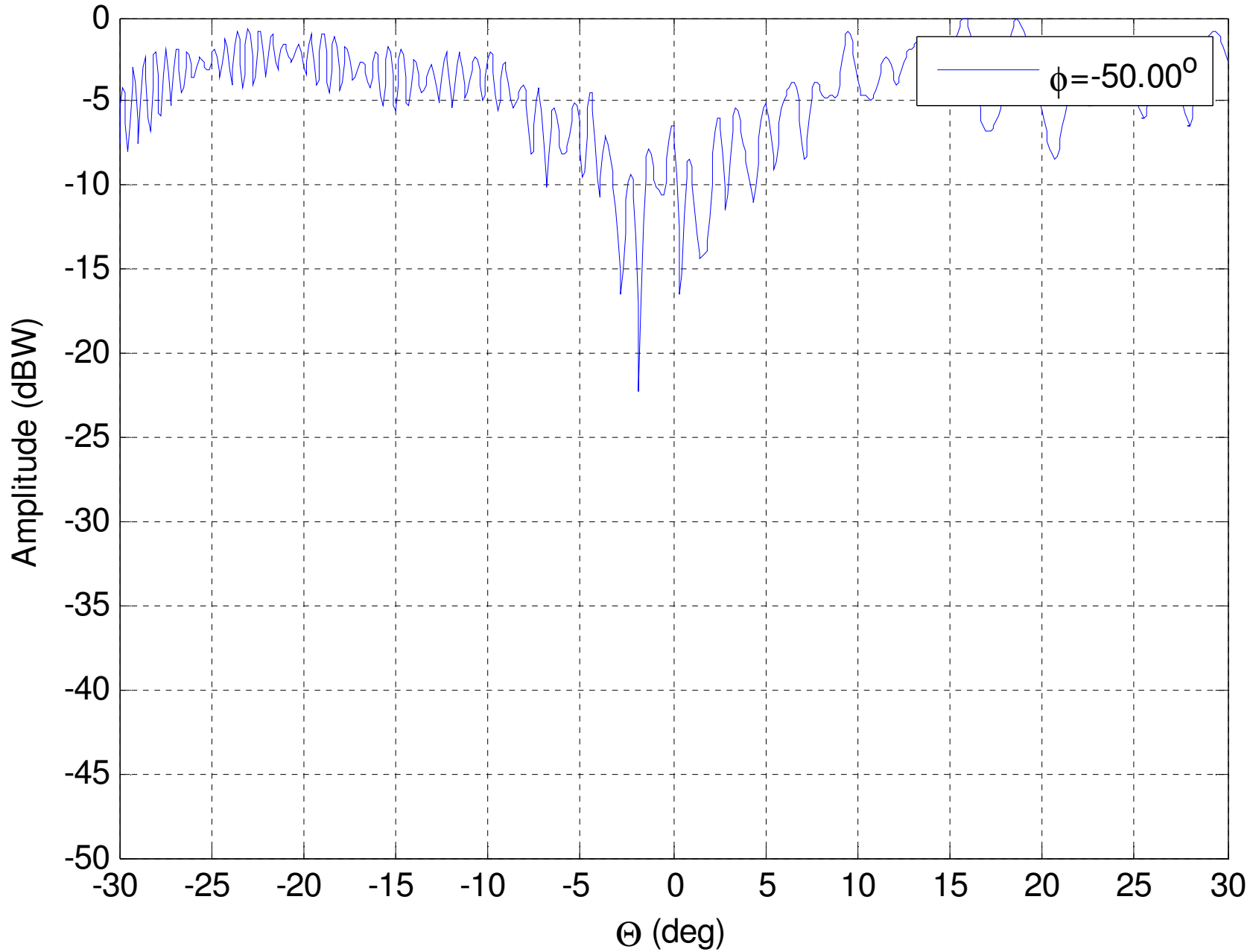
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -12.06 dBW, Date: 15-Dec-2011



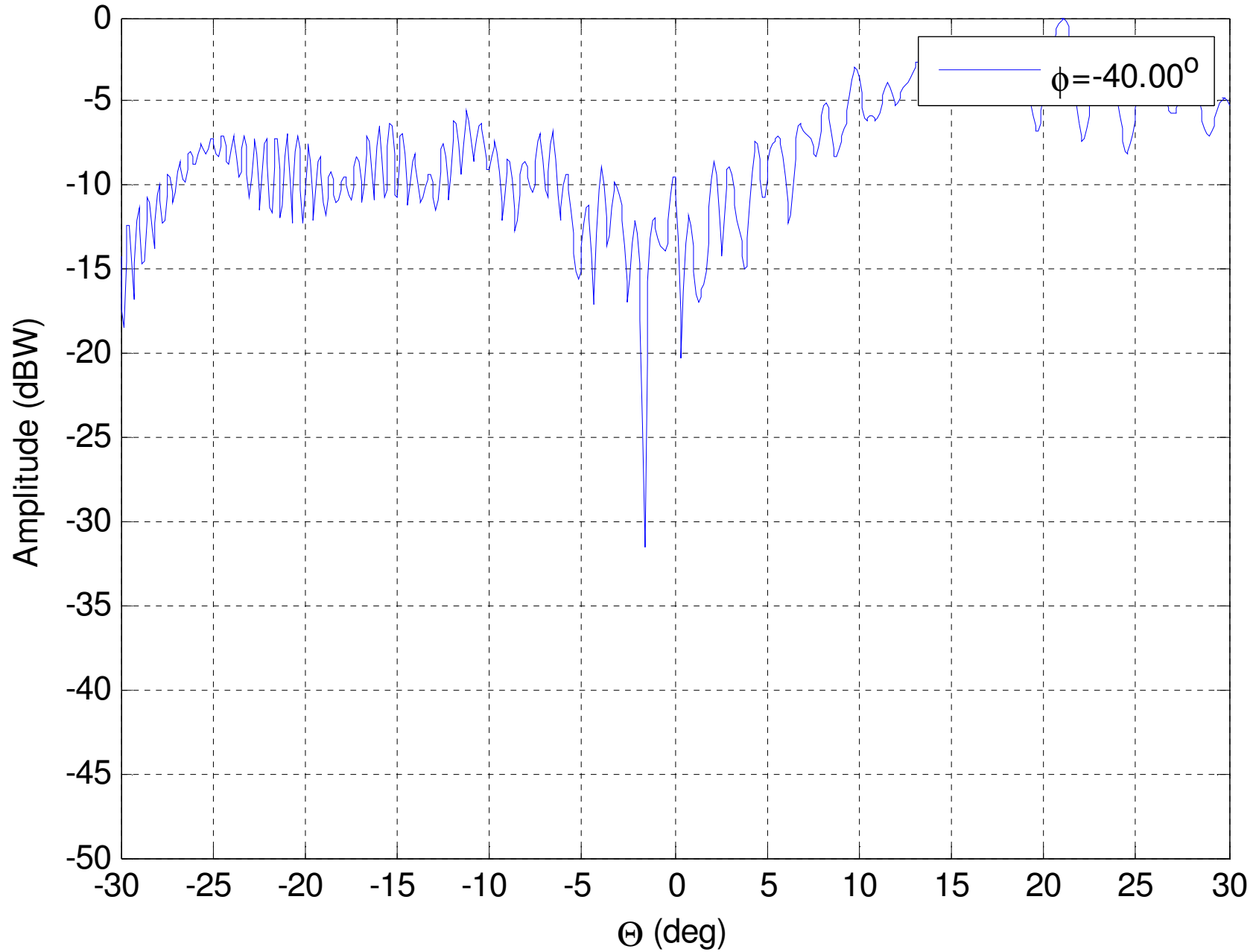
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -13.35 dBW, Date: 15-Dec-2011



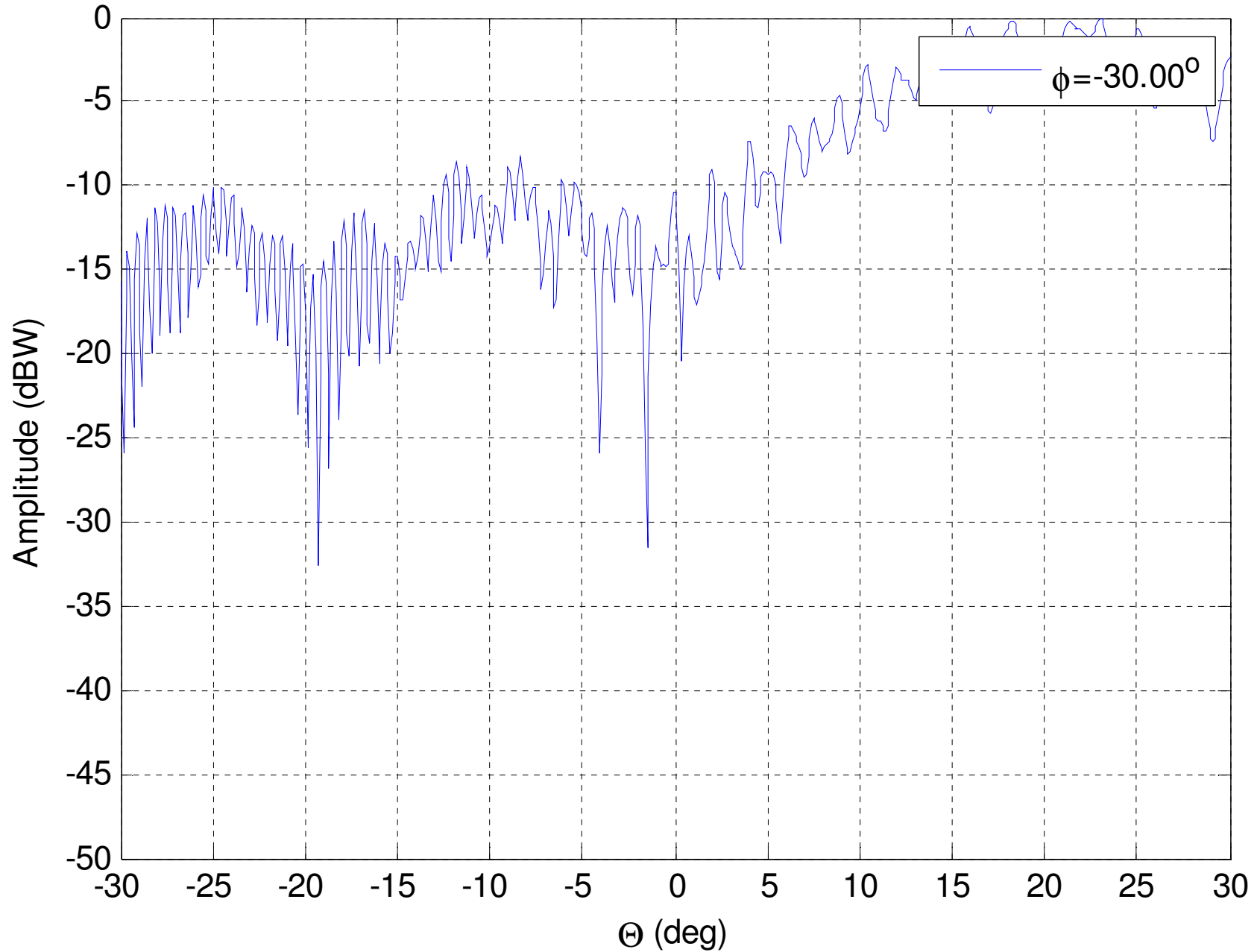
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.28 dBW, Date: 15-Dec-2011



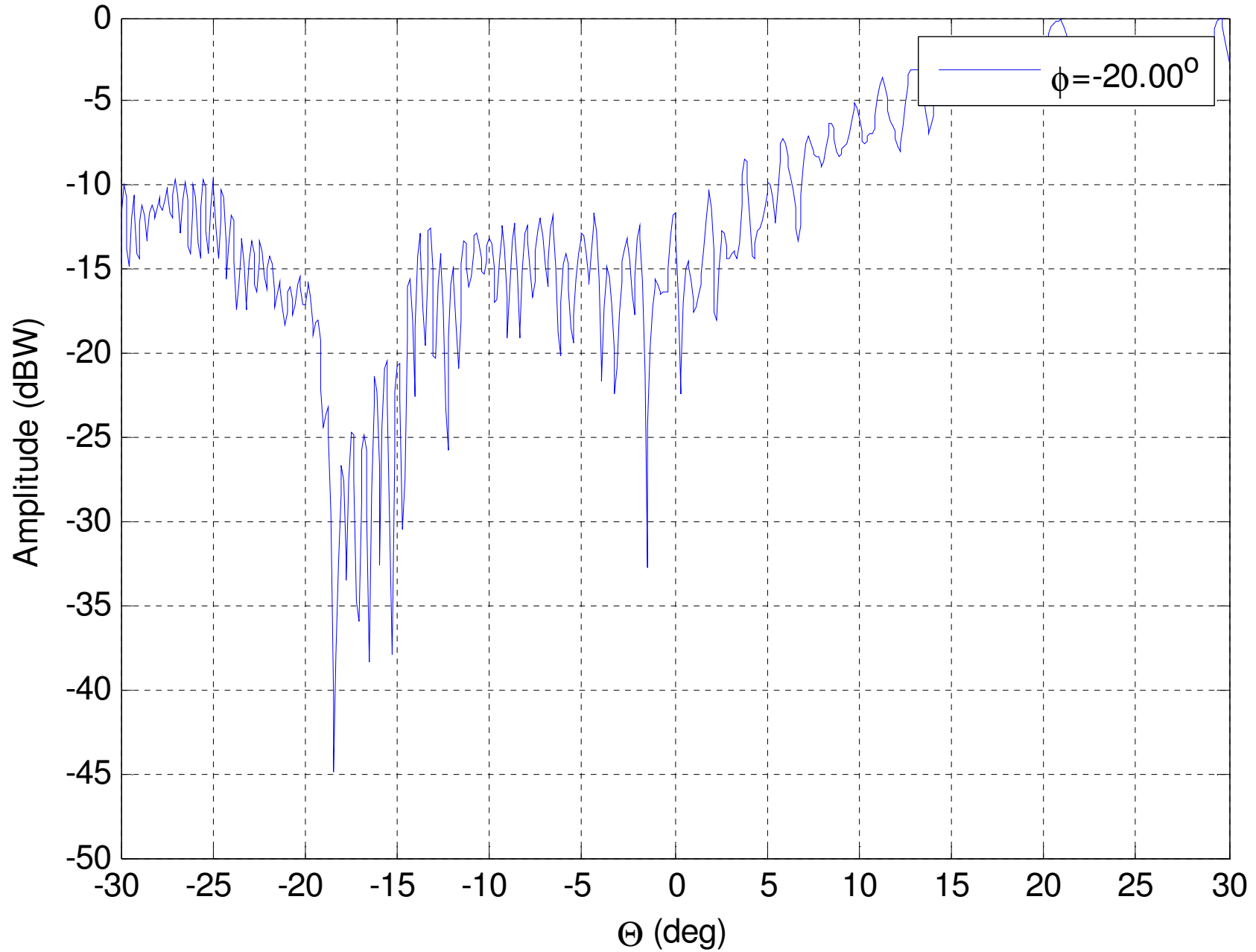
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -9.45 dBW, Date: 15-Dec-2011



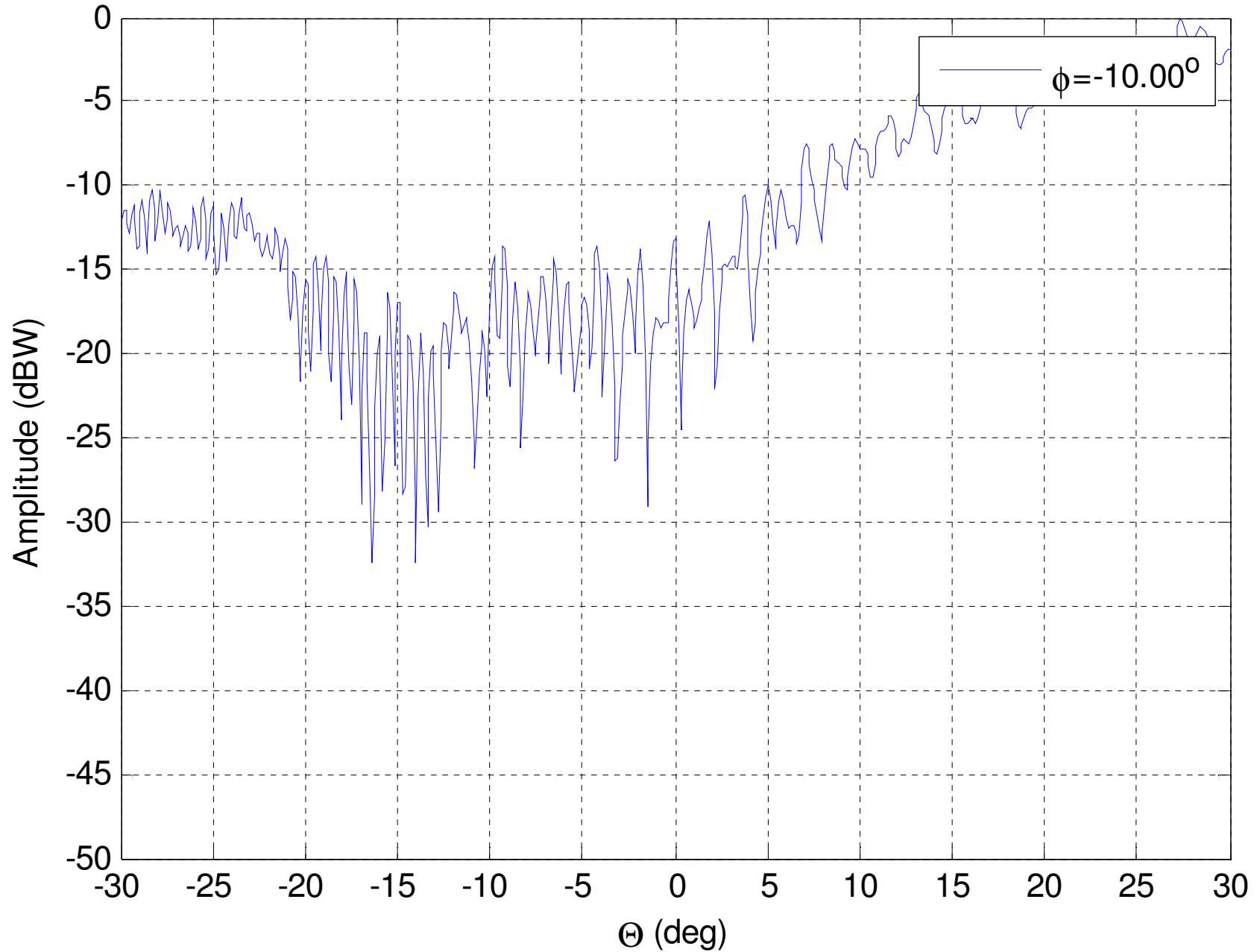
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -8.19 dBW, Date: 15-Dec-2011



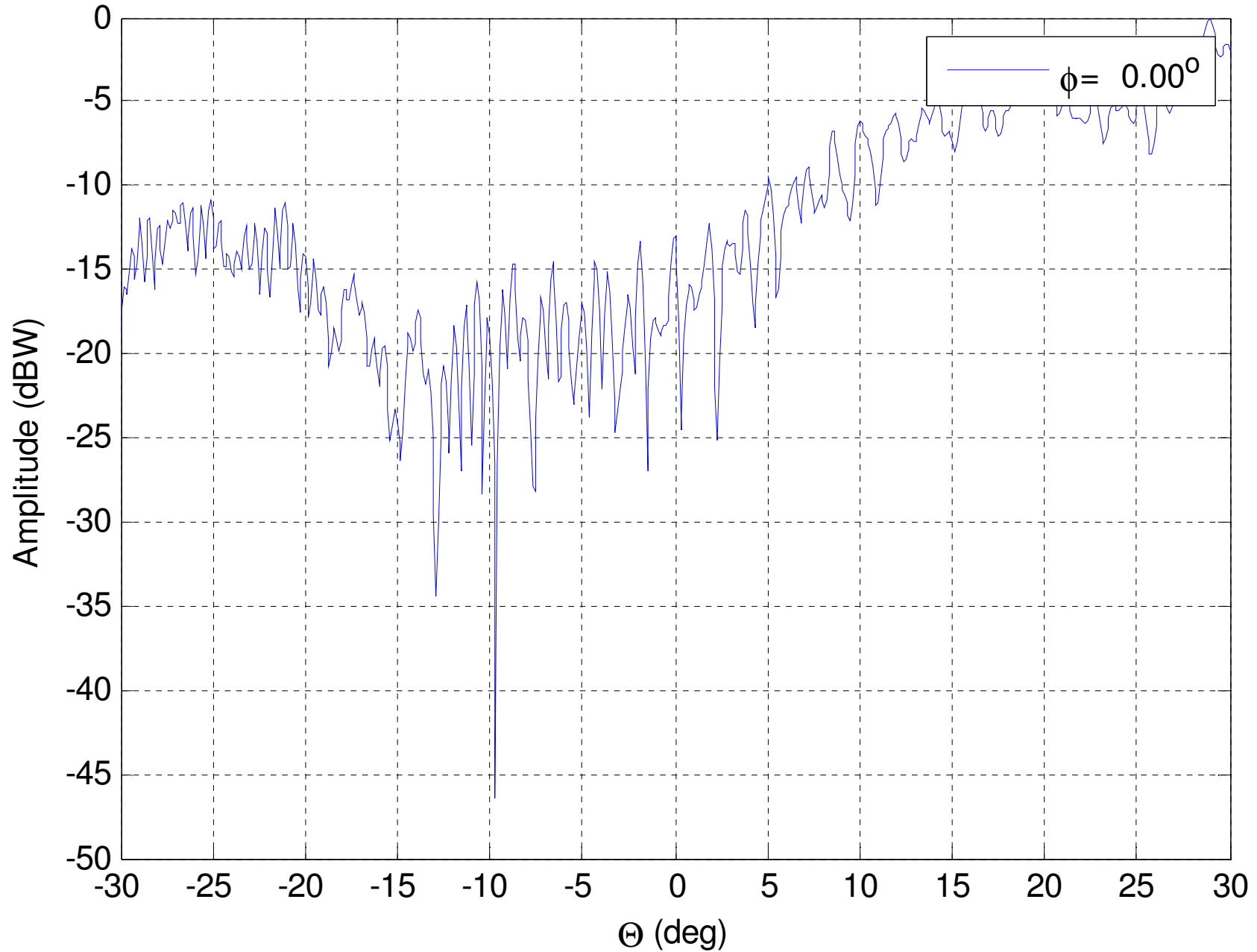
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -6.60 dBW, Date: 15-Dec-2011



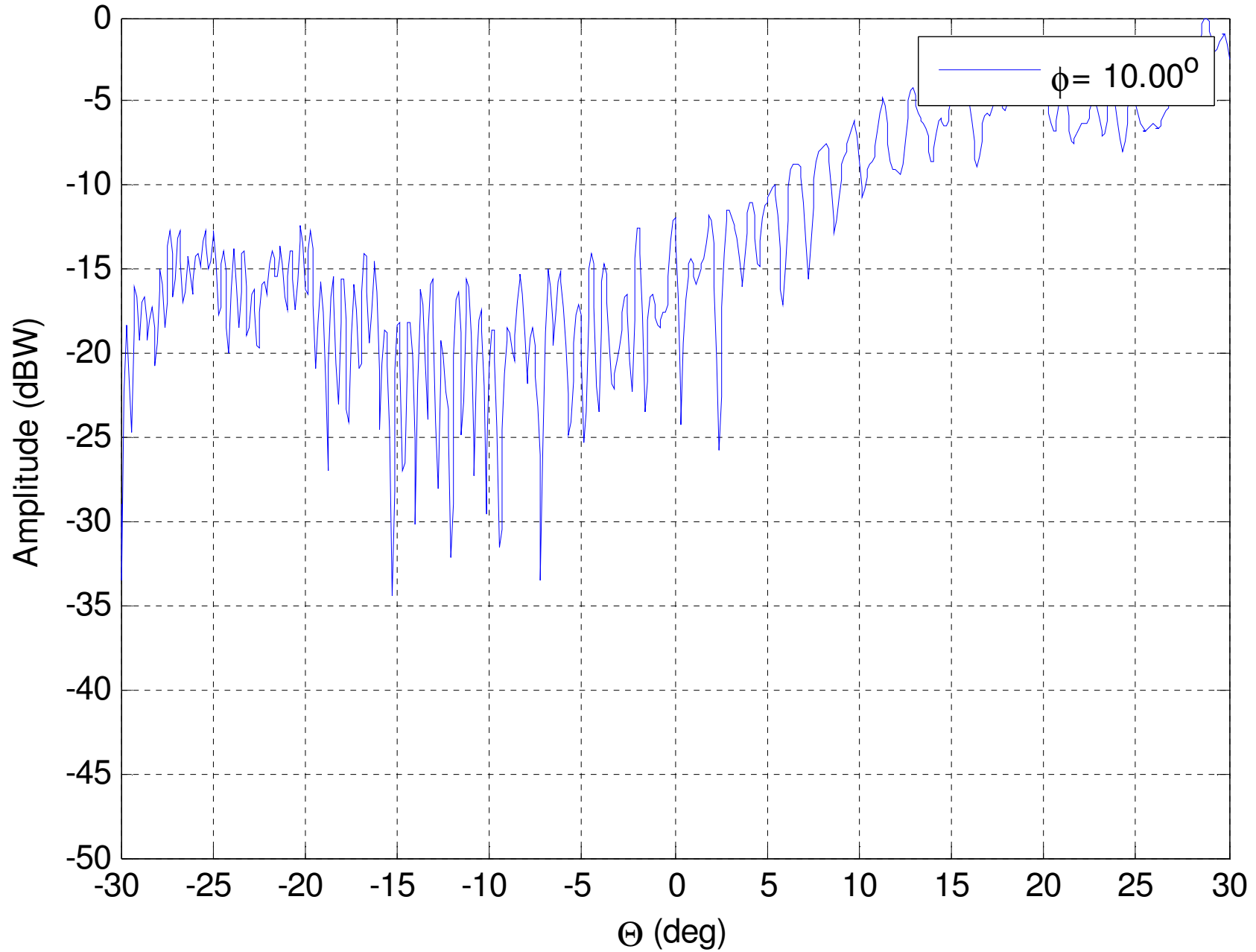
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -6.81 dBW, Date: 15-Dec-2011



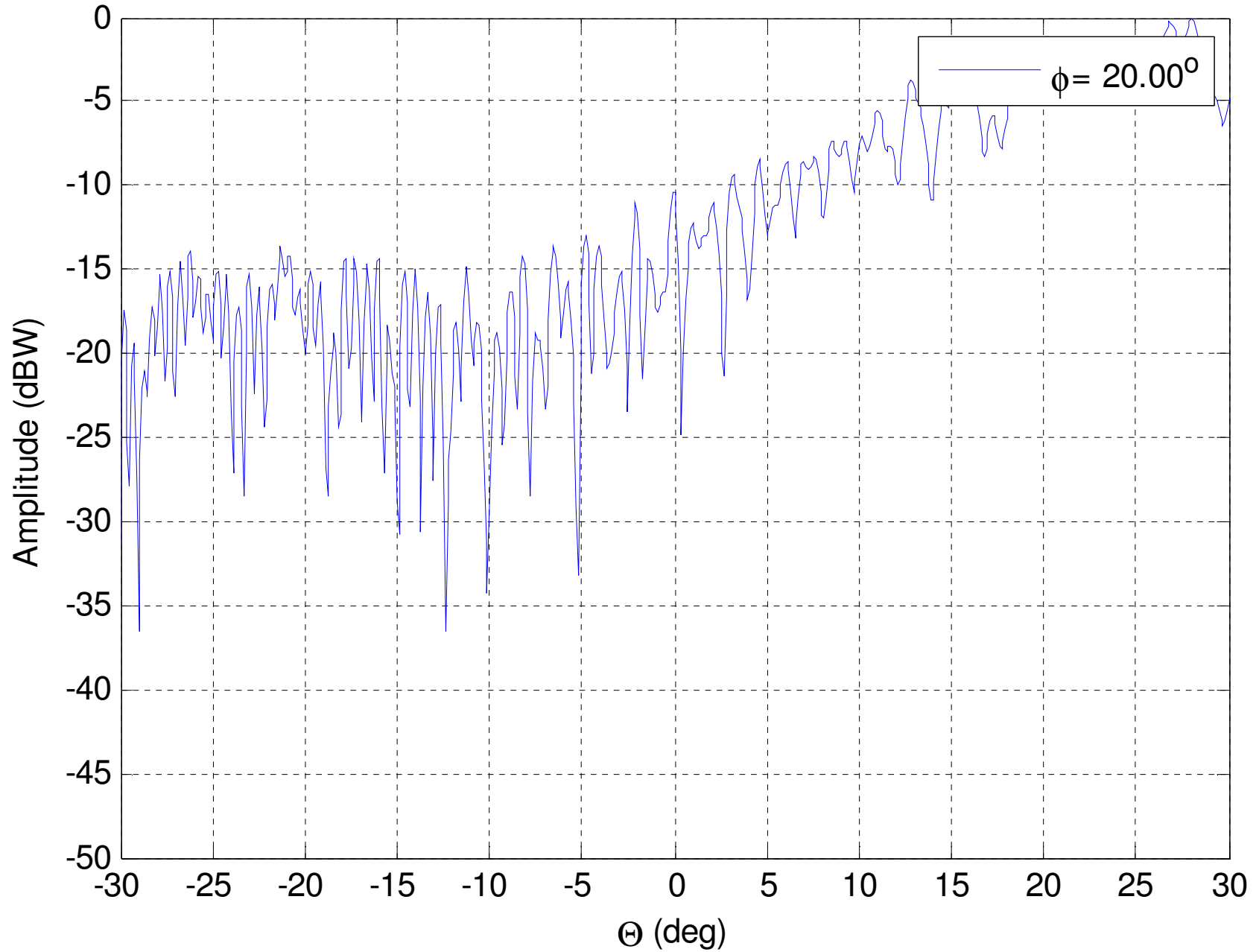
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -7.84 dBW, Date: 15-Dec-2011



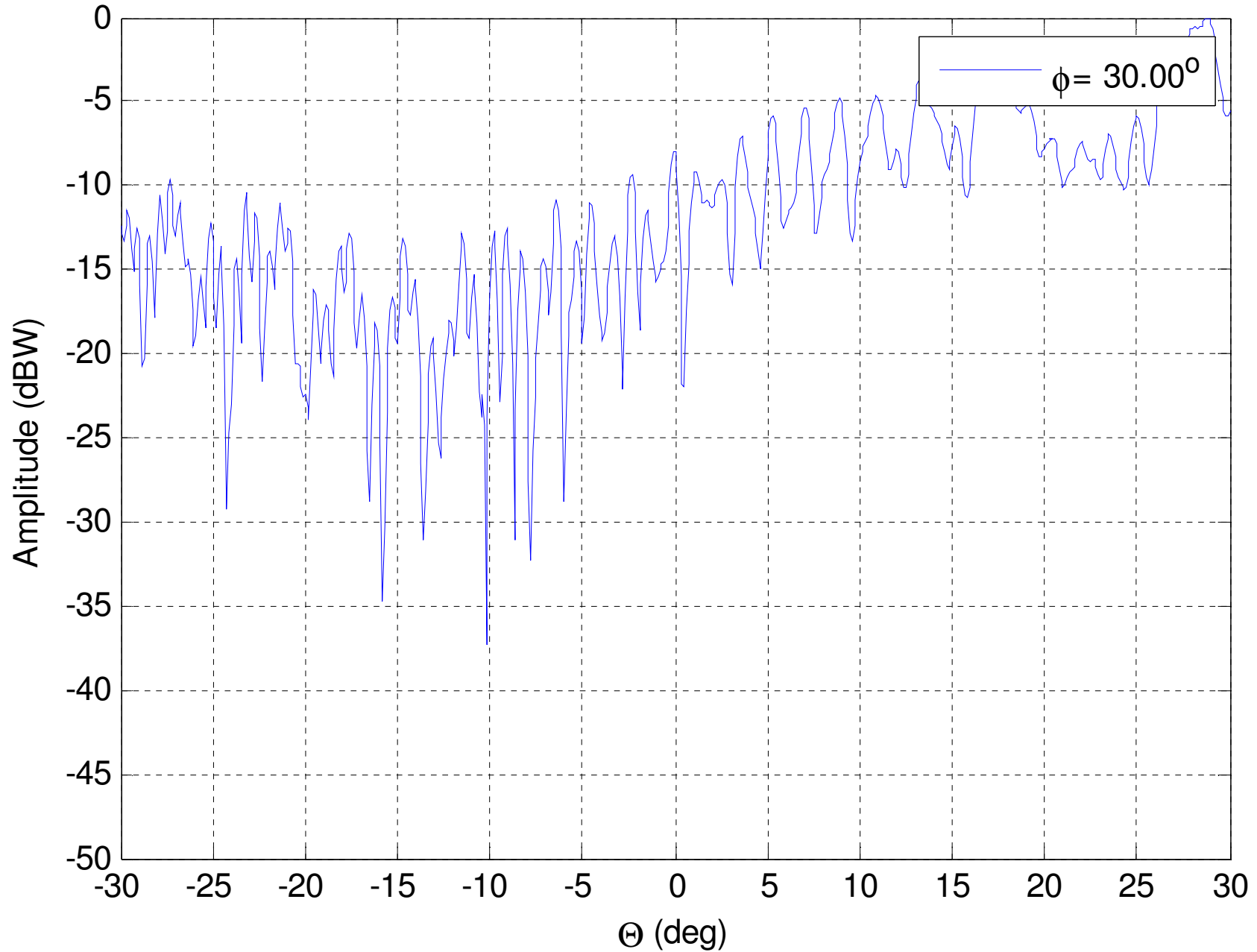
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -9.45 dBW, Date: 15-Dec-2011



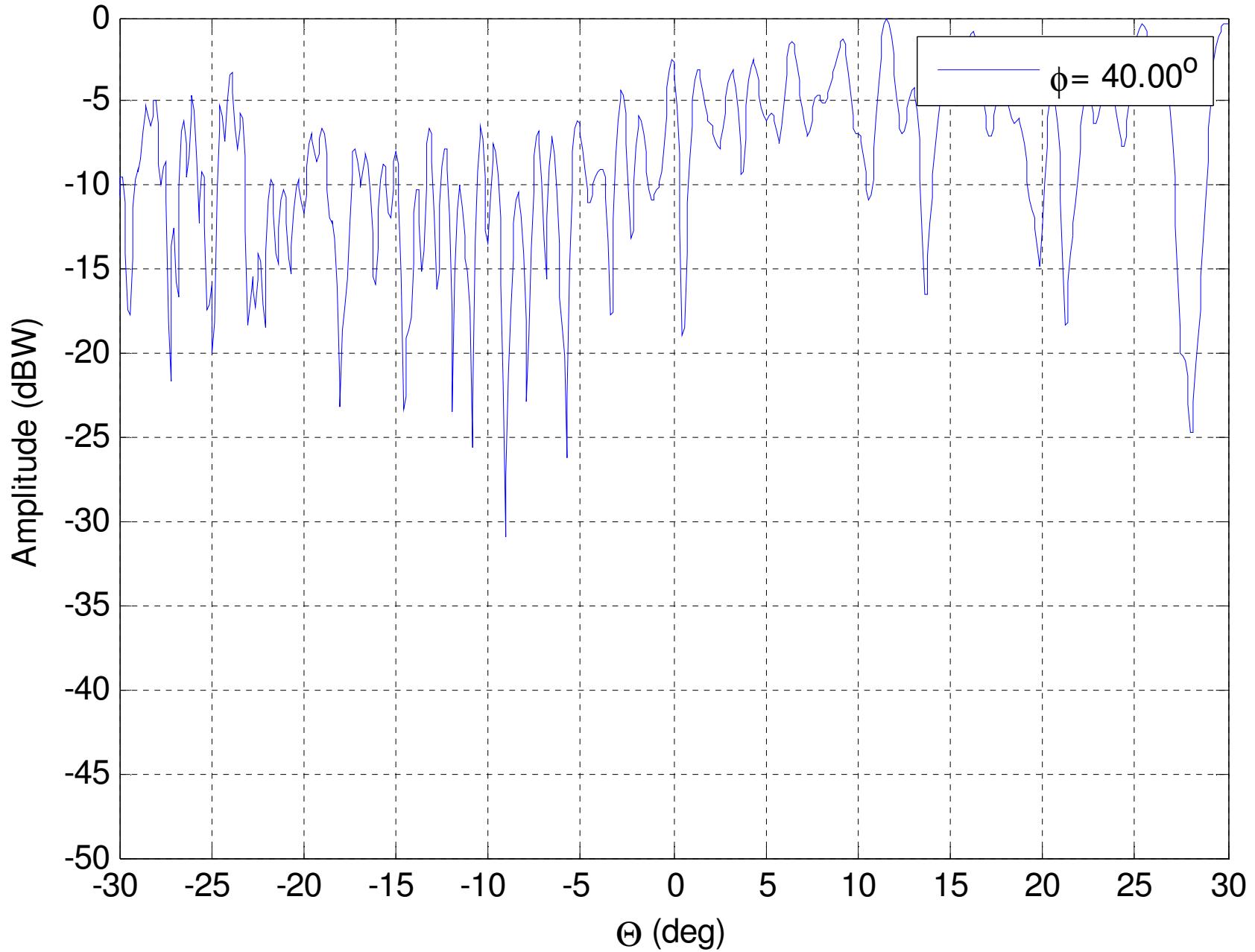
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.81 dBW, Date: 15-Dec-2011



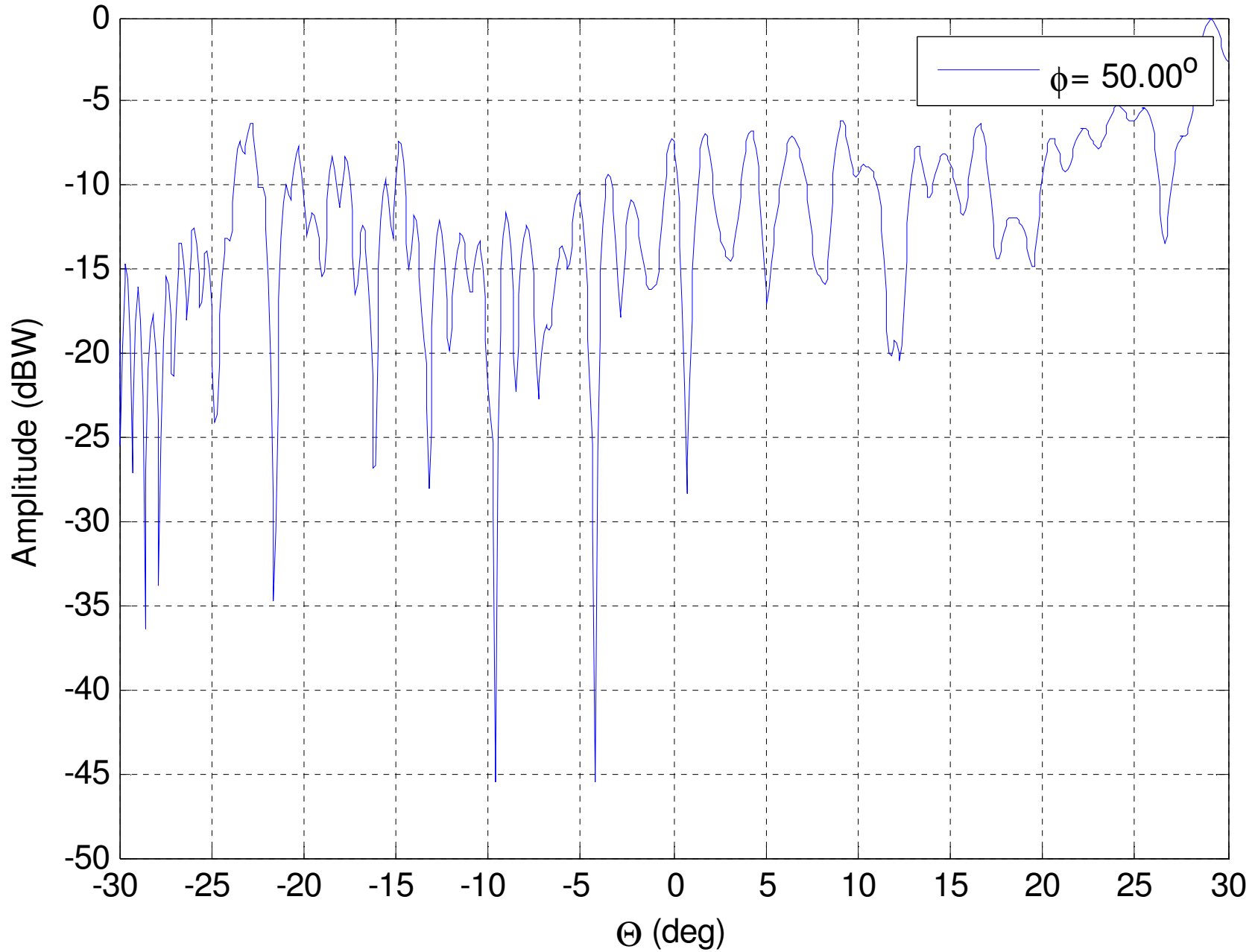
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -17.15 dBW, Date: 15-Dec-2011



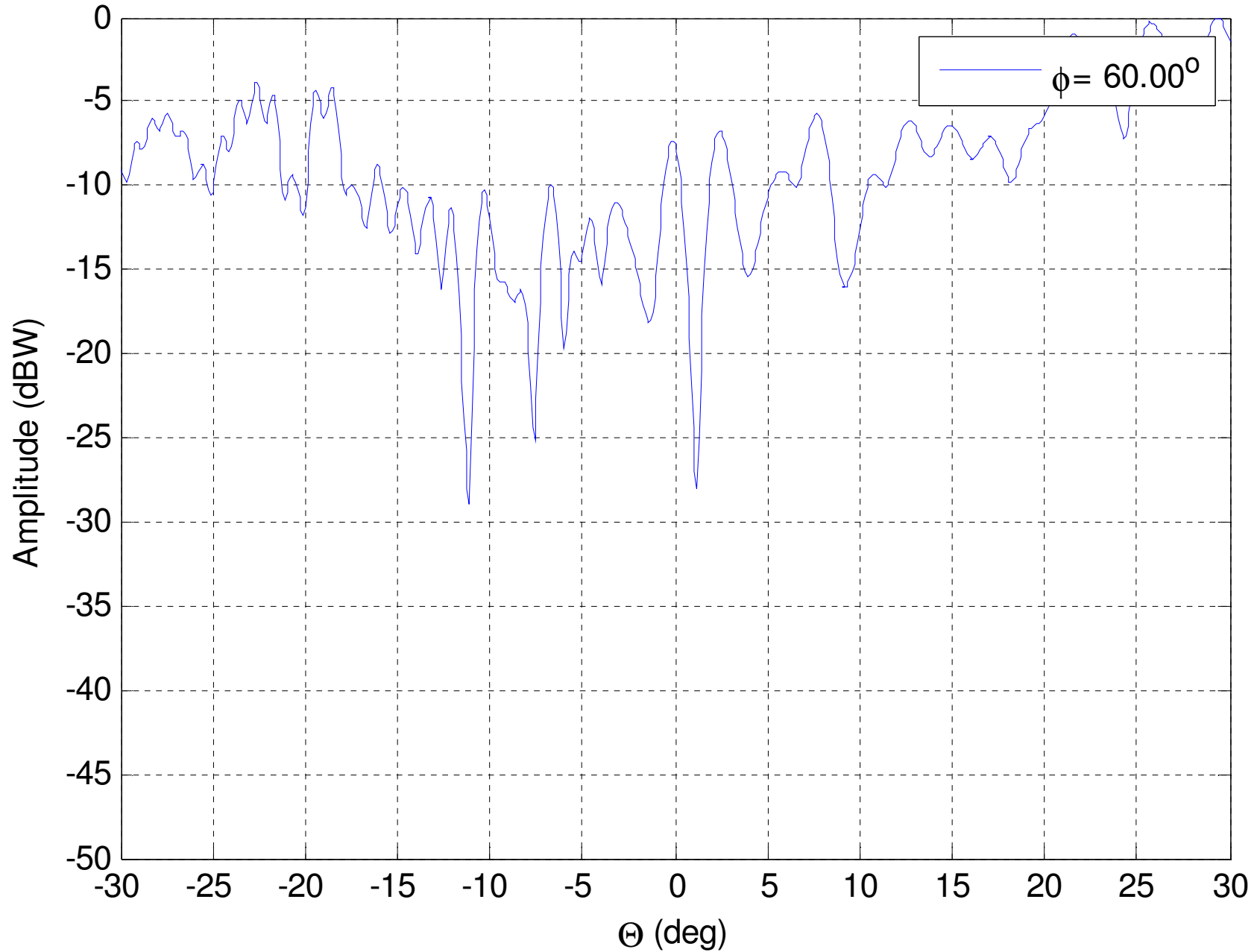
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.41 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

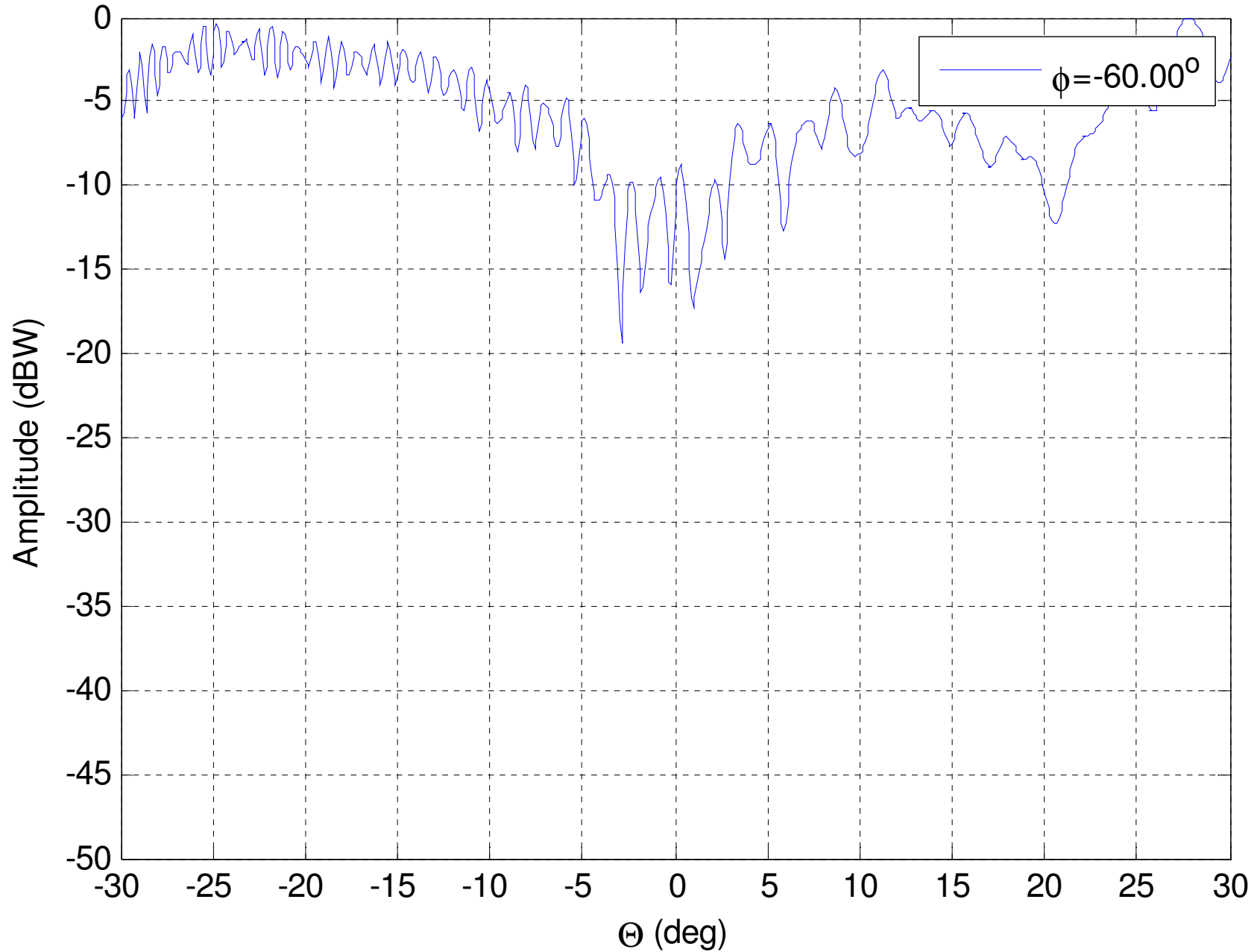
Input file: tx-17.5-lhcp-60.cut, Peak: -12.24 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

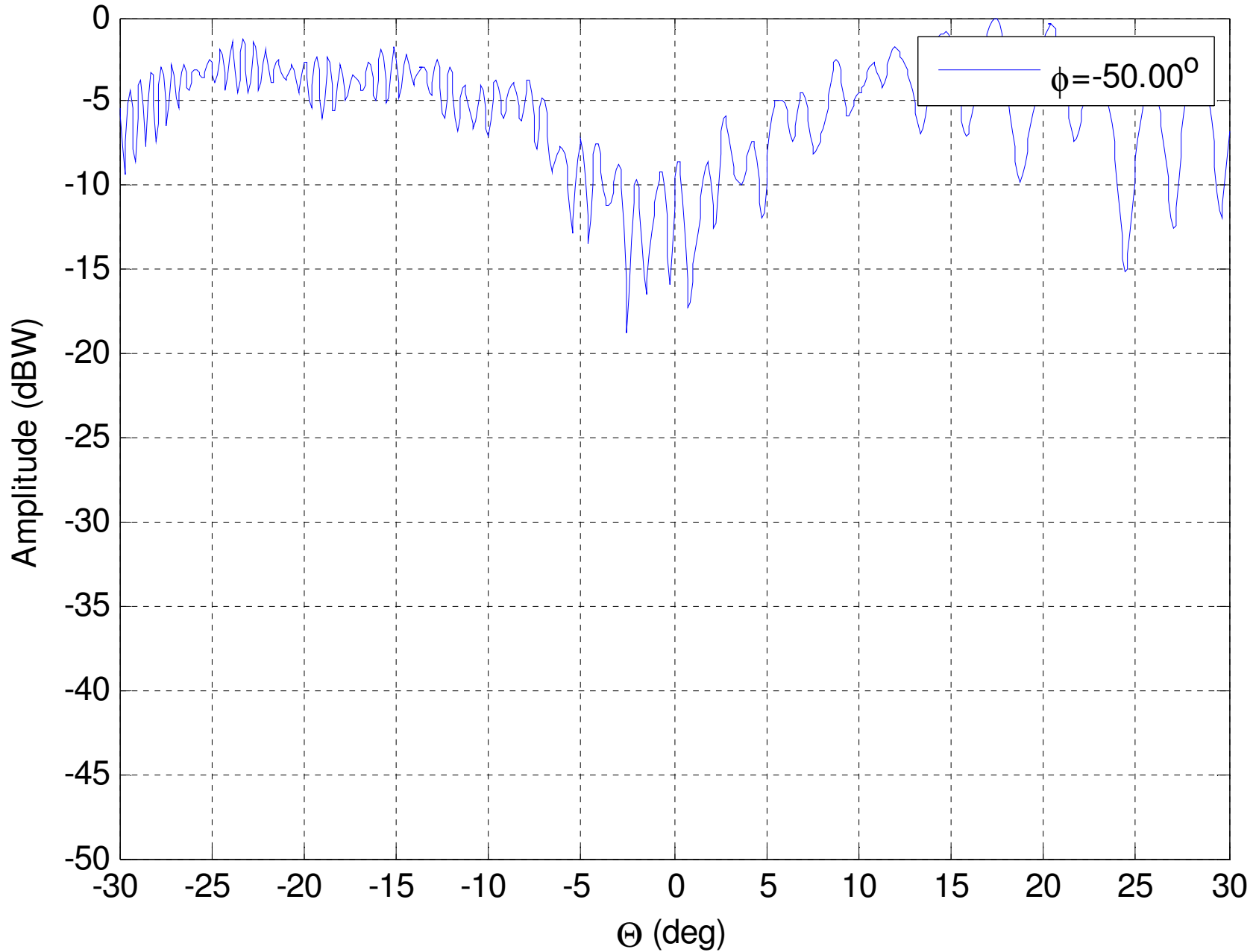
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -12.15 dBW, Date: 15-Dec-2011



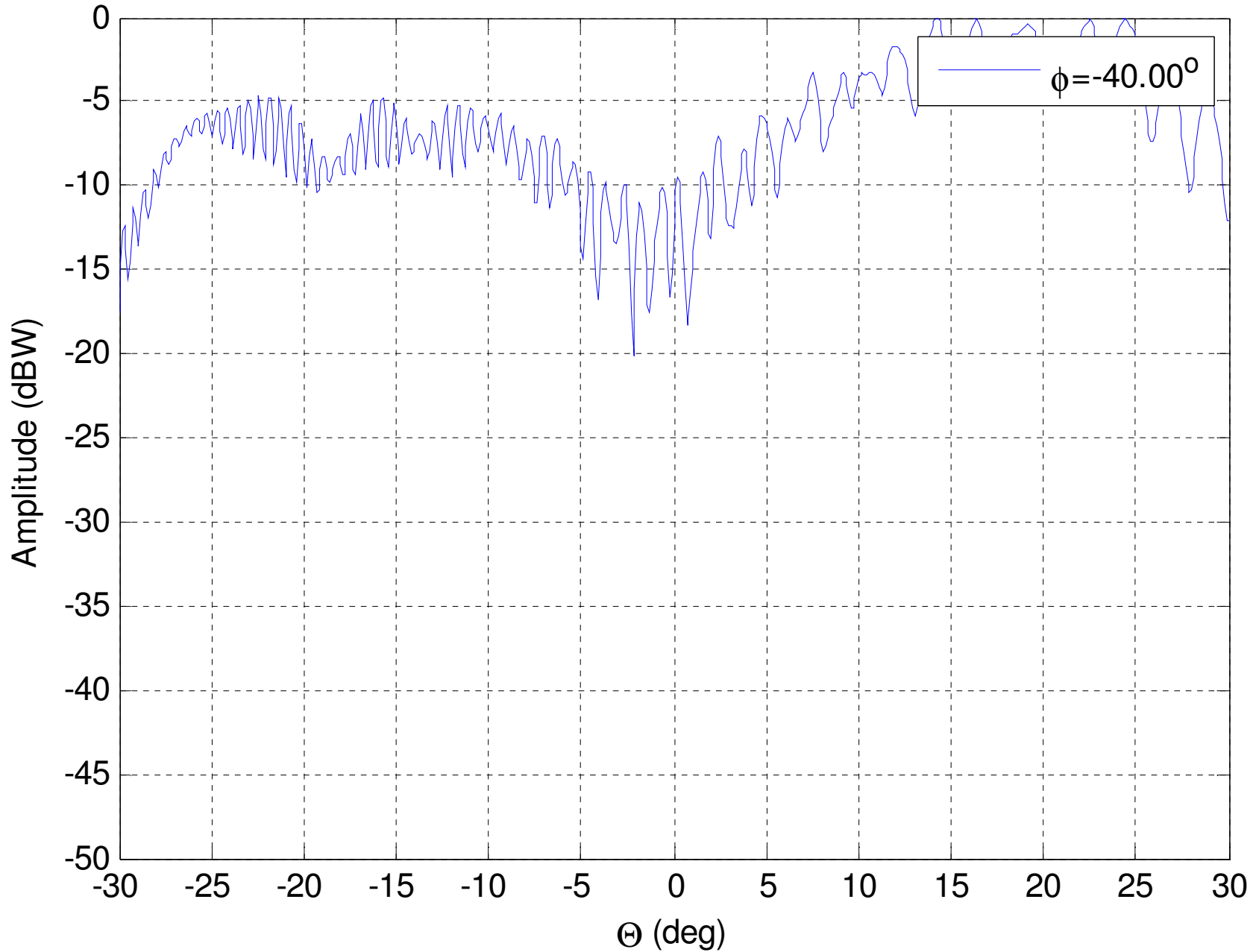
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.44 dBW, Date: 15-Dec-2011



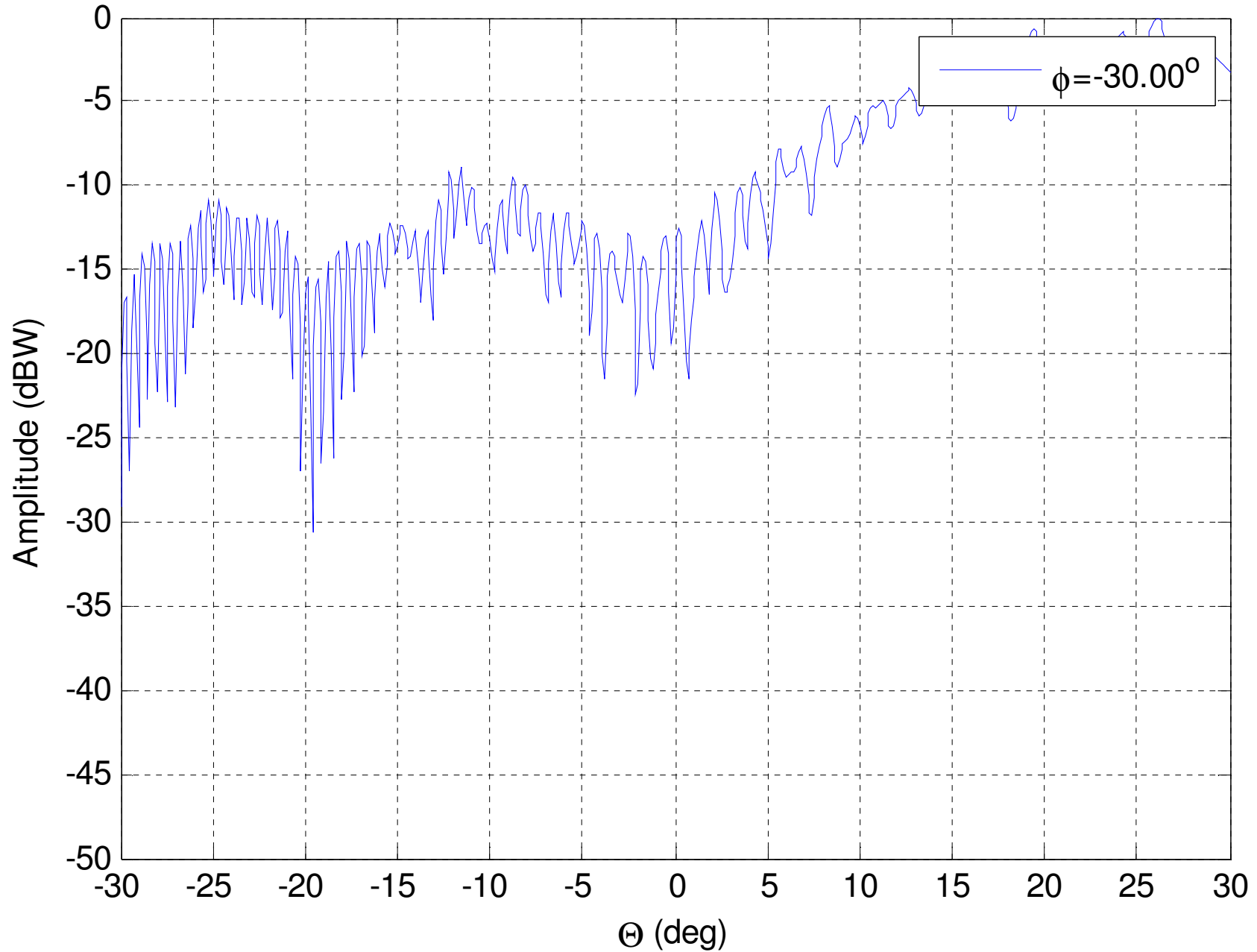
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -11.46 dBW, Date: 15-Dec-2011



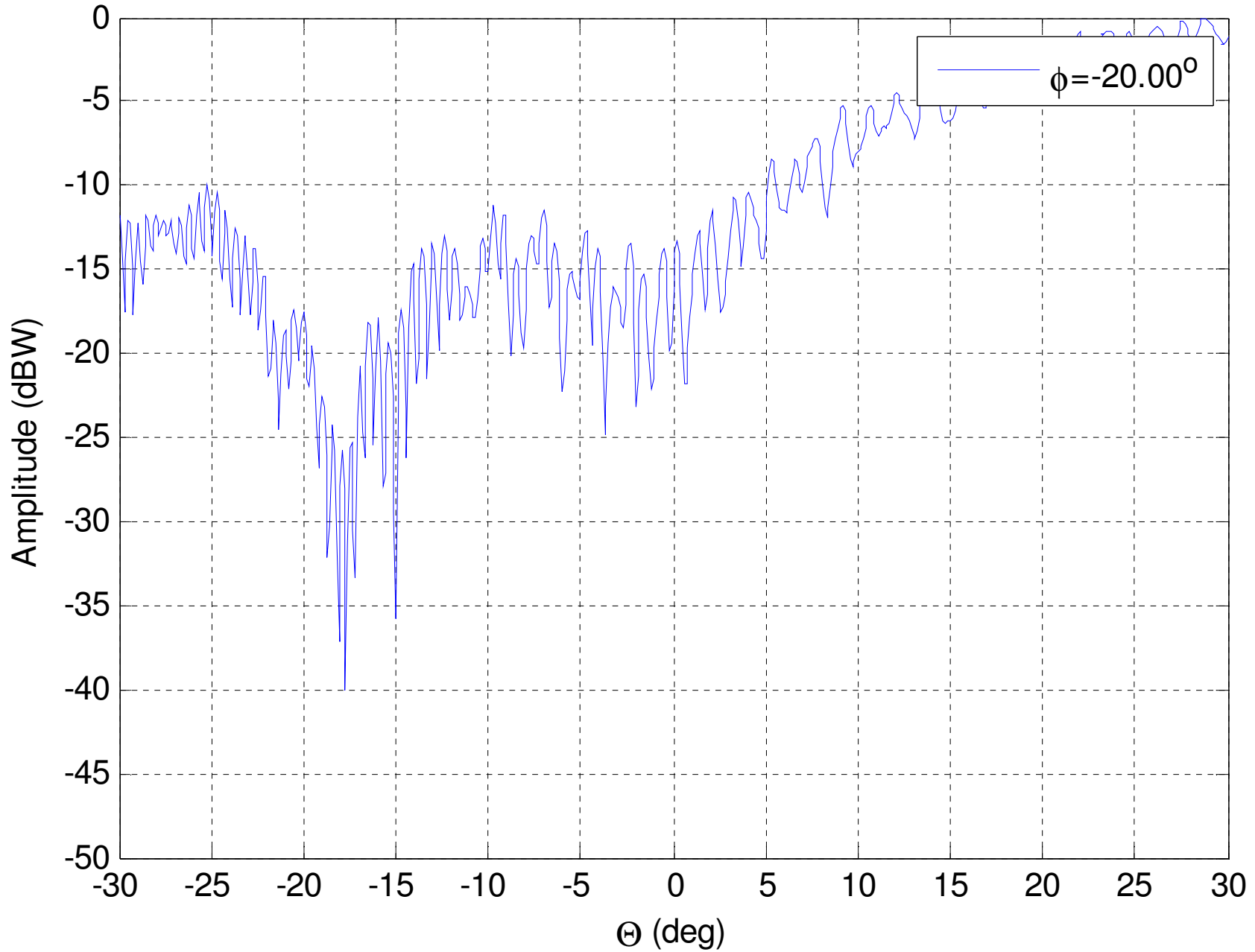
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -8.49 dBW, Date: 15-Dec-2011



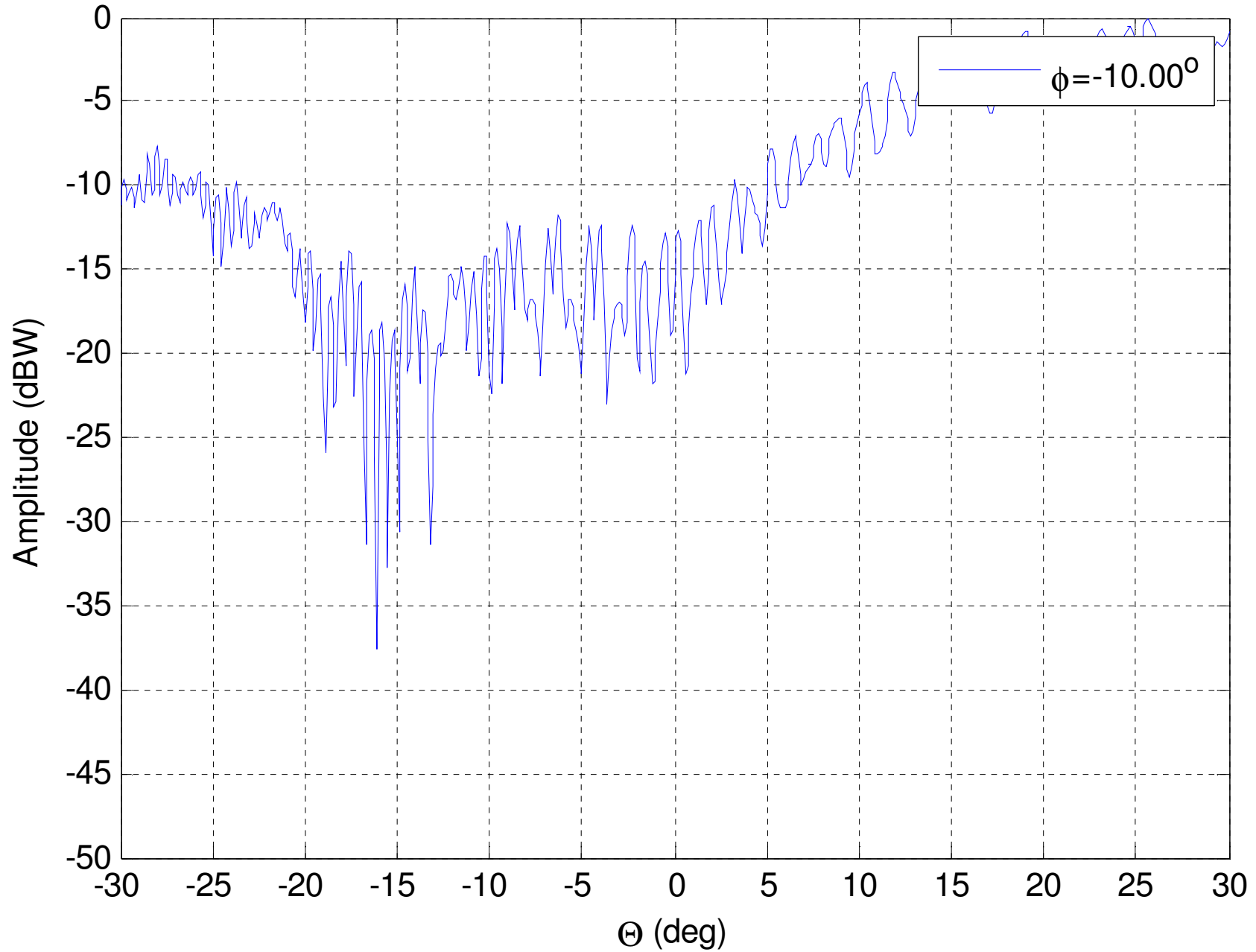
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -7.70 dBW, Date: 15-Dec-2011



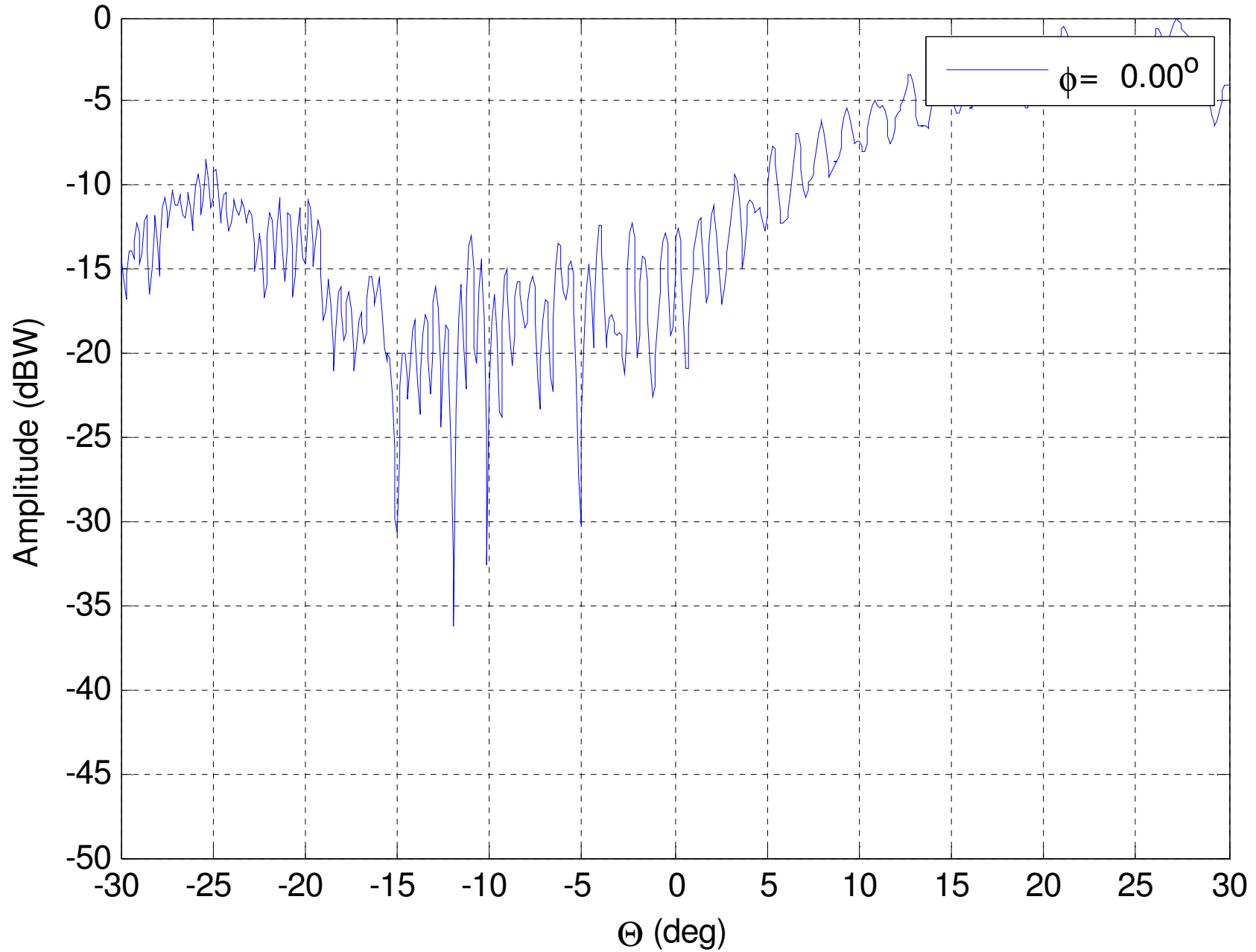
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -8.47 dBW, Date: 15-Dec-2011



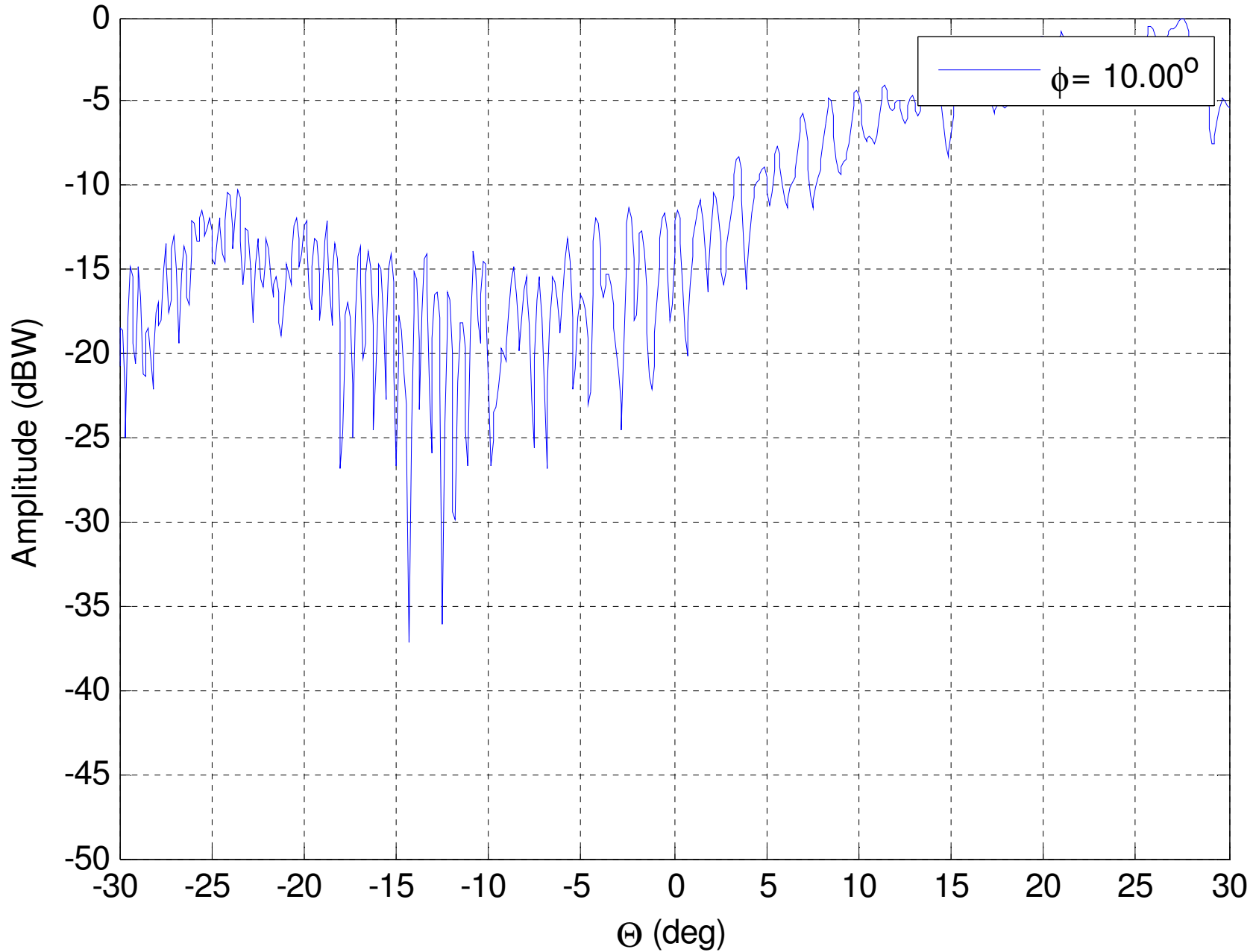
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -8.55 dBW, Date: 15-Dec-2011



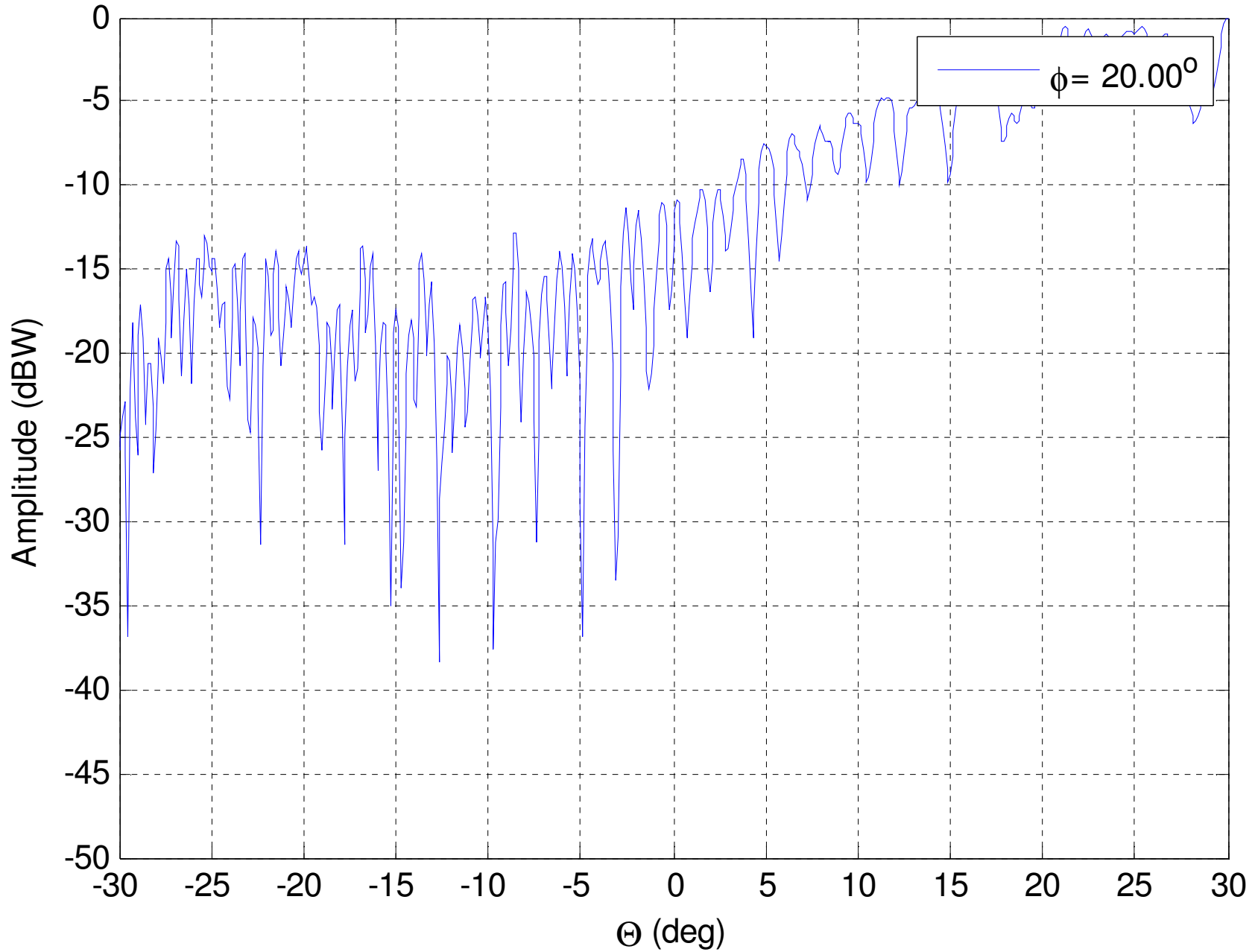
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -9.67 dBW, Date: 15-Dec-2011



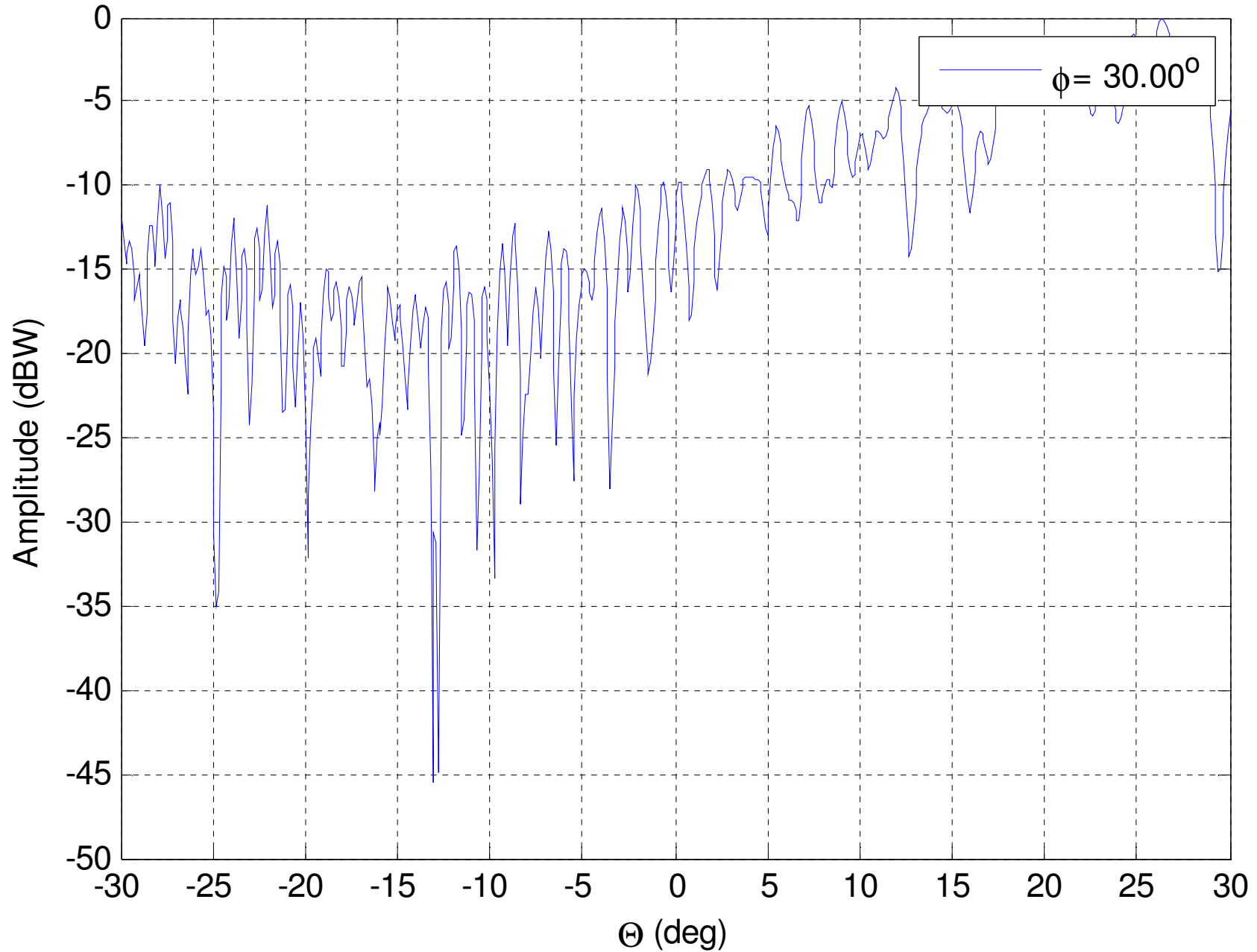
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -10.36 dBW, Date: 15-Dec-2011



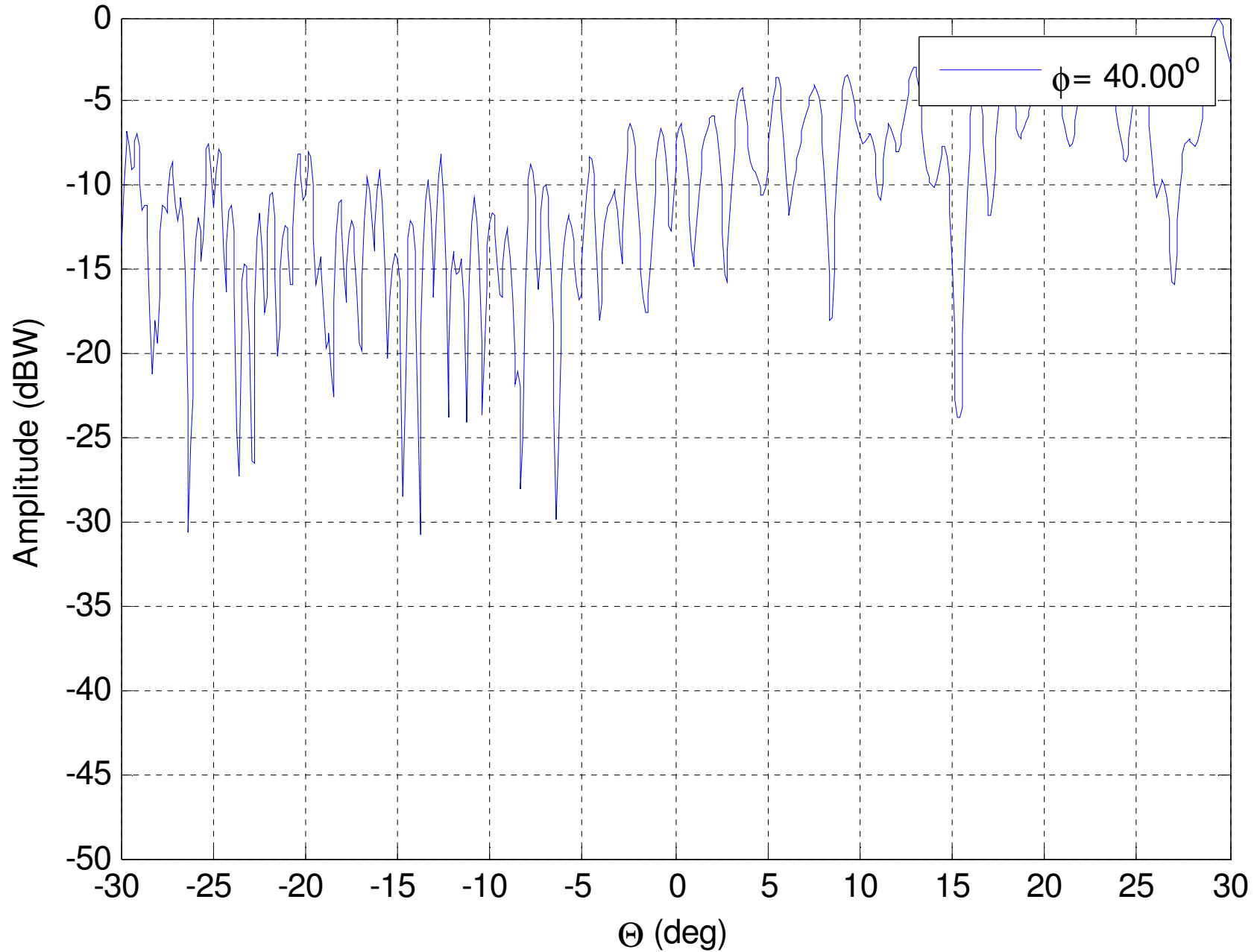
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -11.50 dBW, Date: 15-Dec-2011



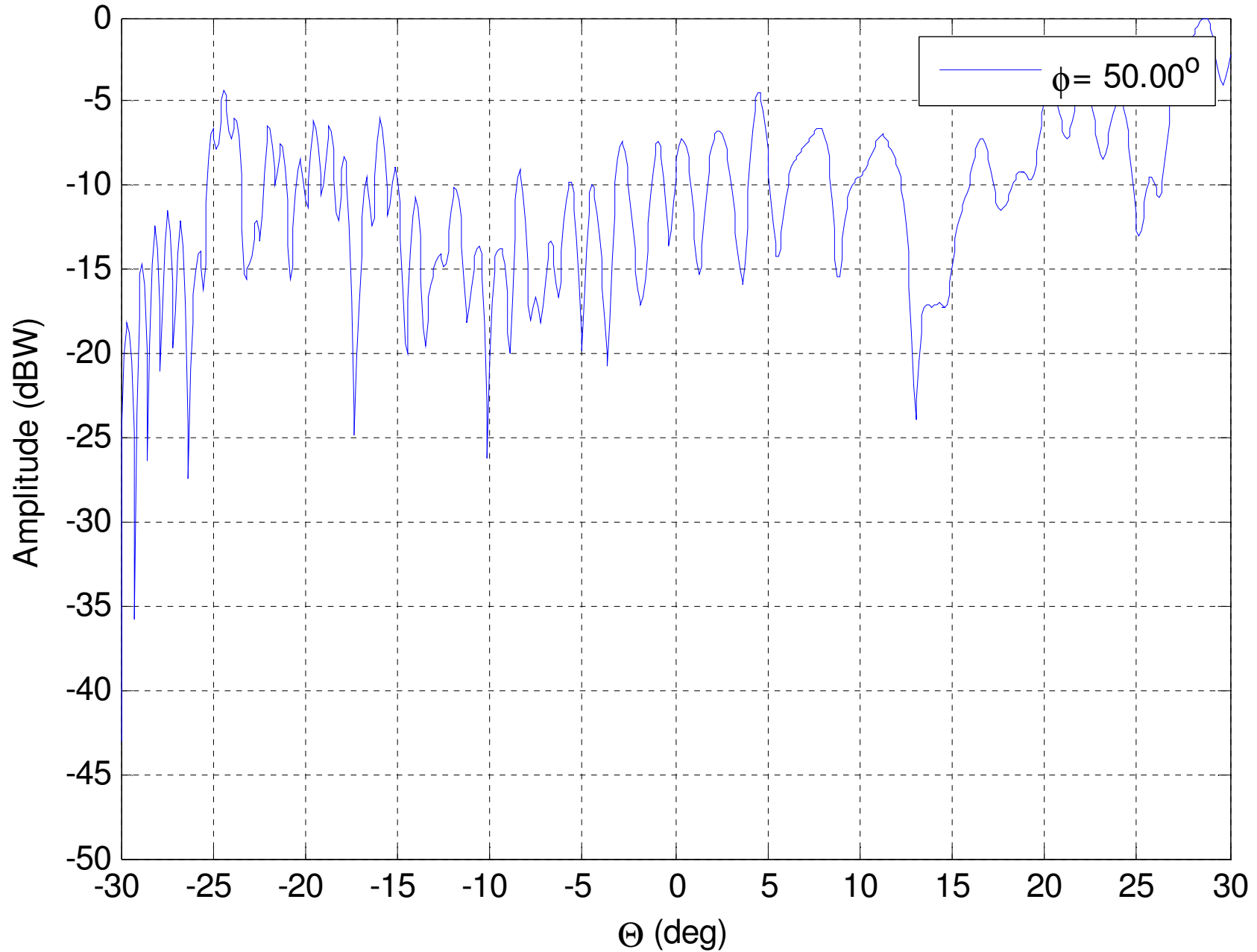
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -14.85 dBW, Date: 15-Dec-2011



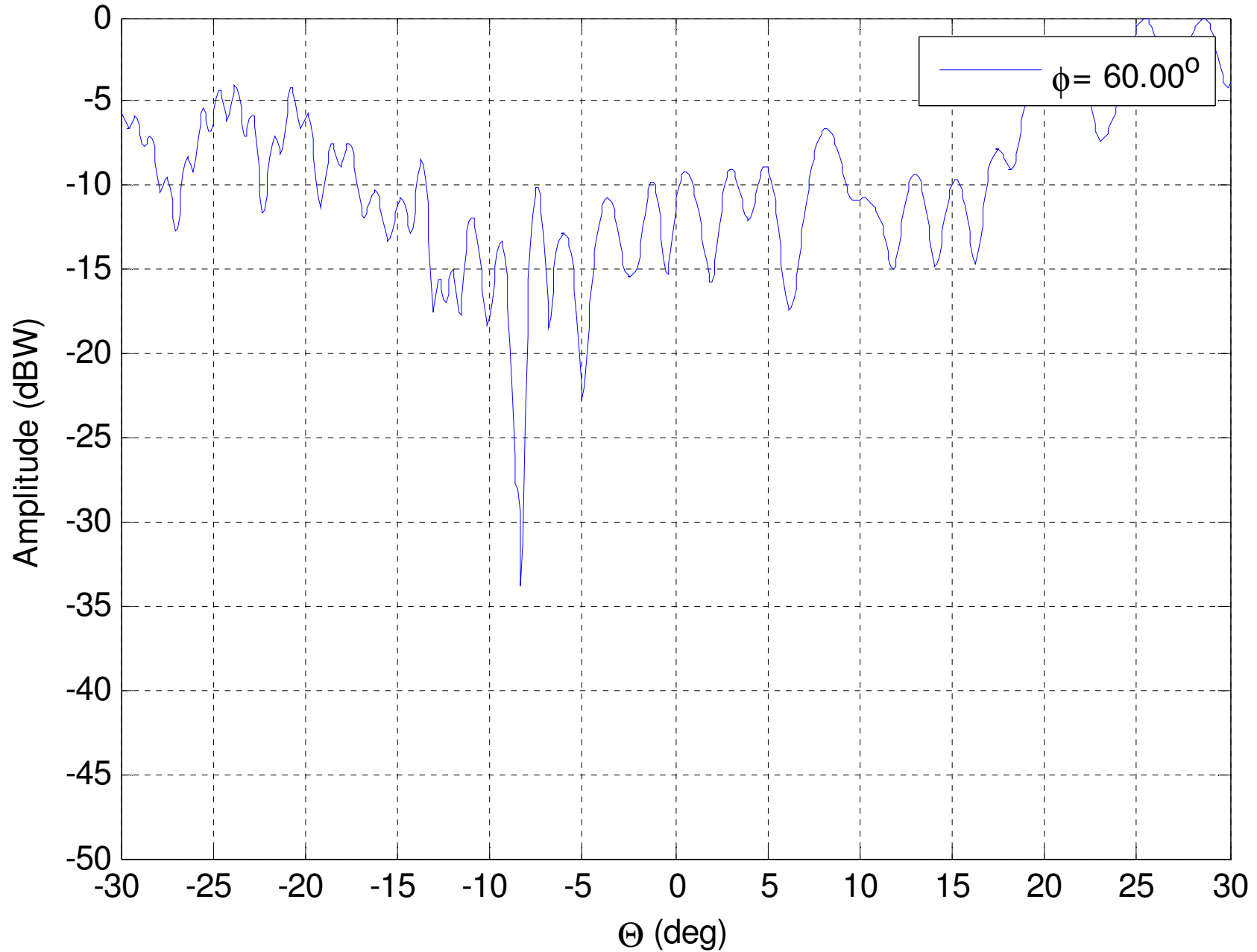
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -14.12 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

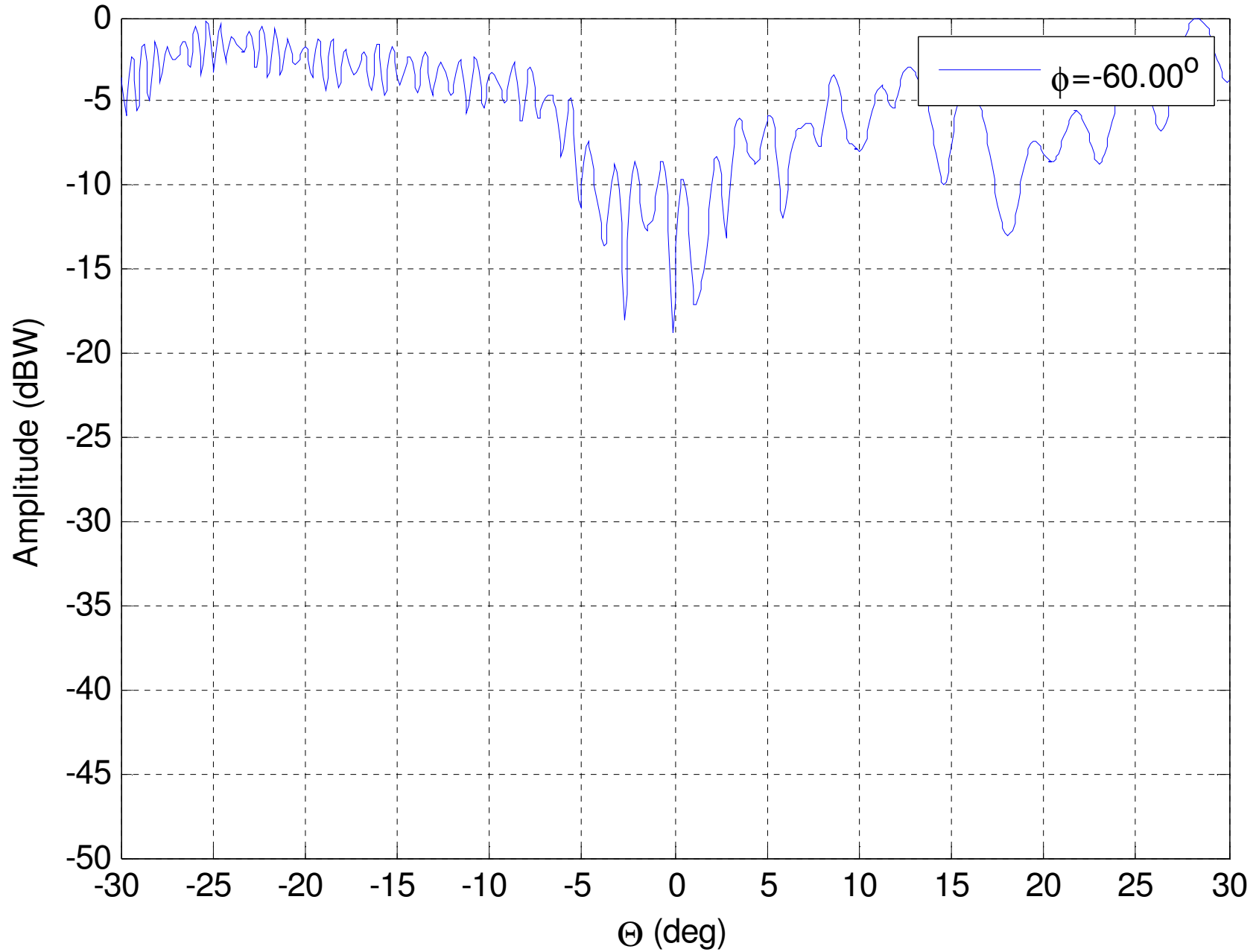
Input file: tx-17.7-rhcp-60.cut, Peak: -12.16 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

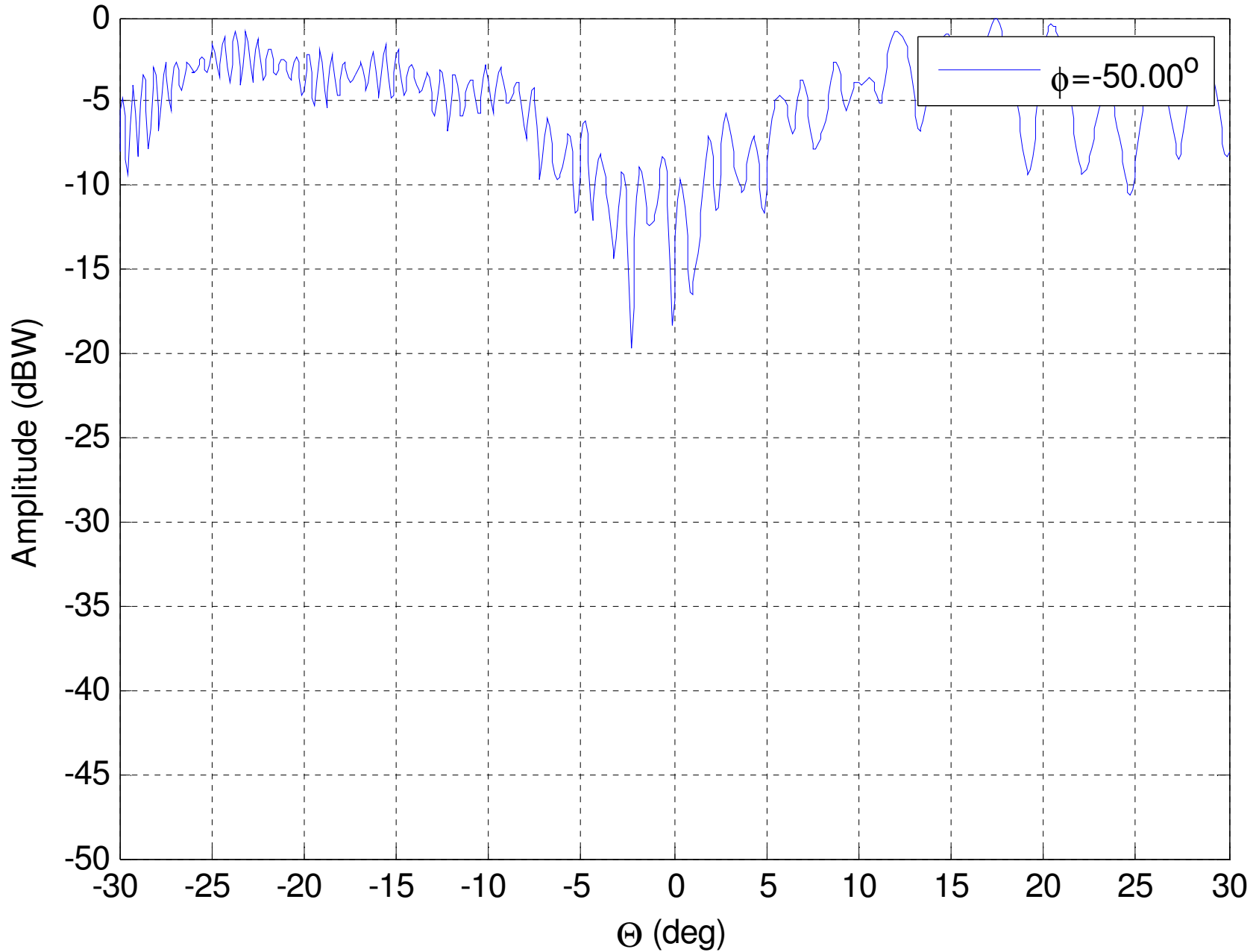
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -12.53 dBW, Date: 15-Dec-2011



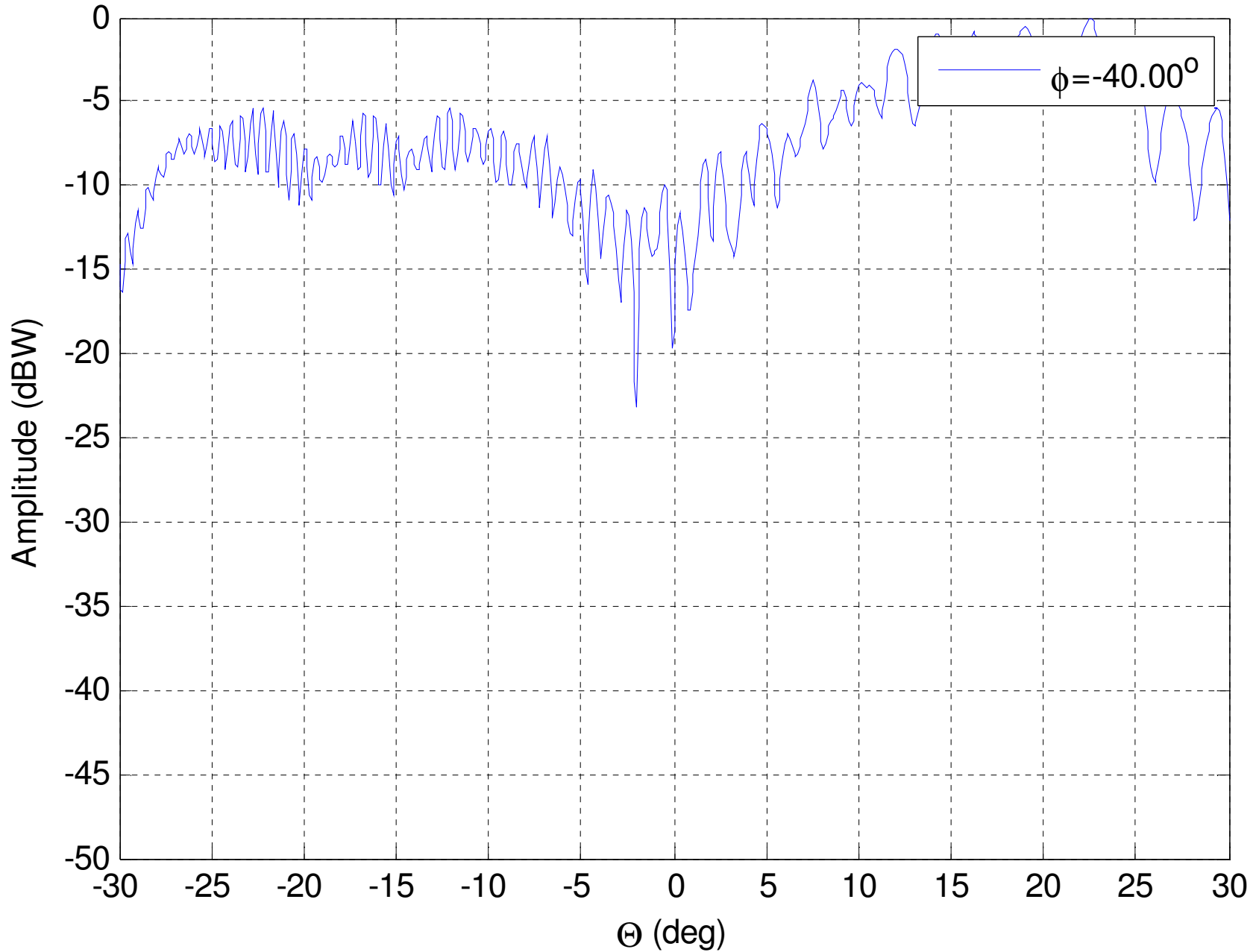
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -12.61 dBW, Date: 15-Dec-2011



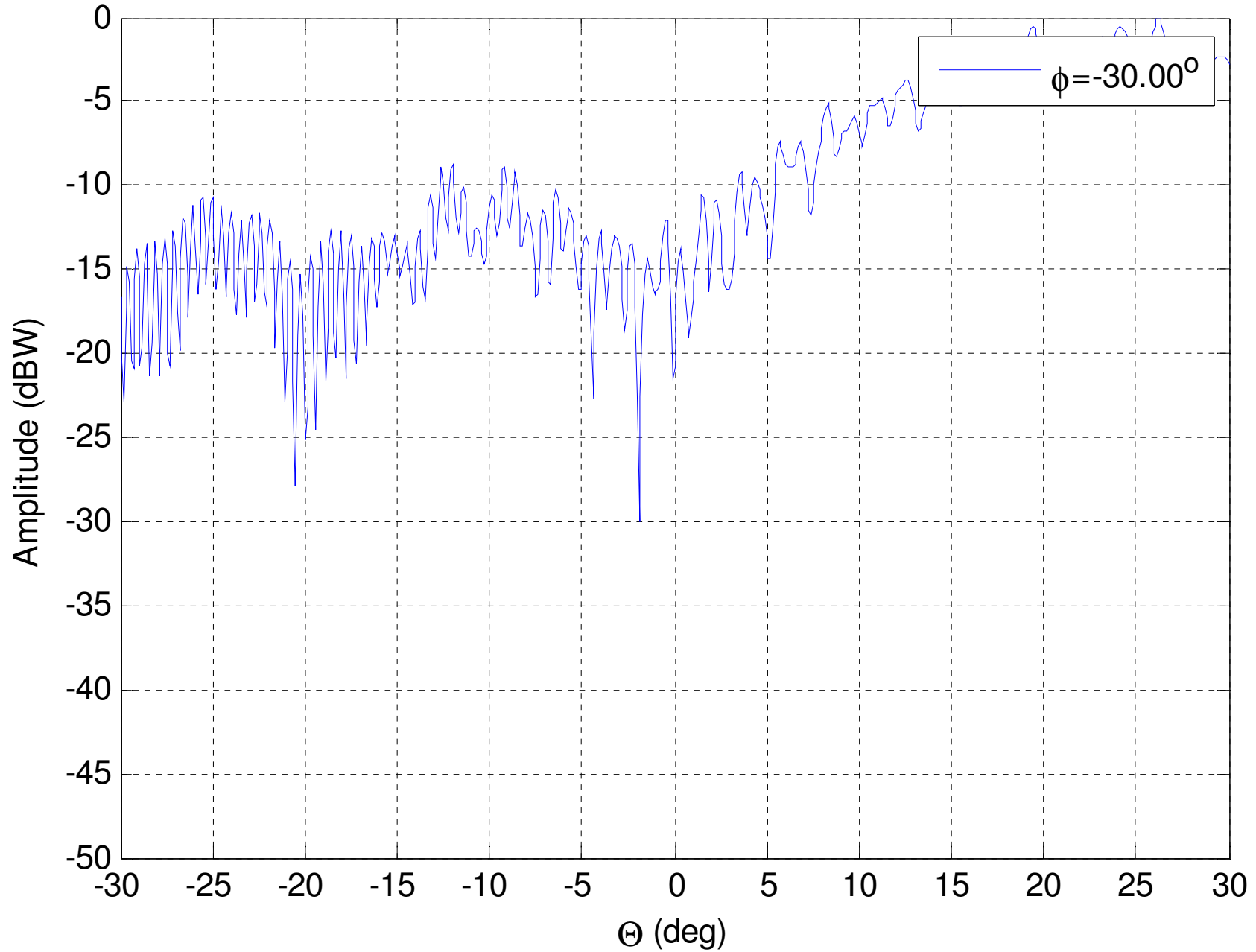
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.82 dBW, Date: 15-Dec-2011



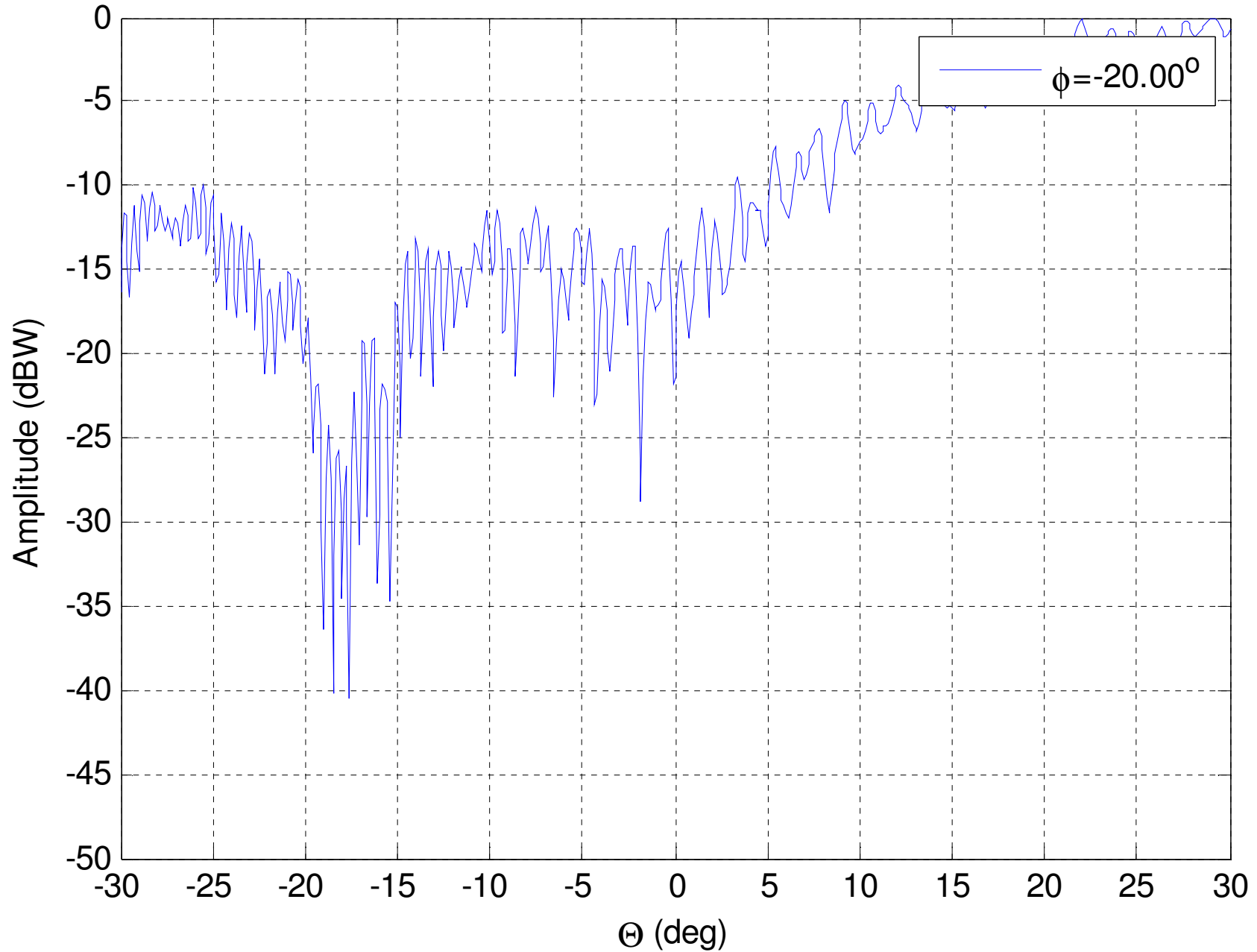
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -8.66 dBW, Date: 15-Dec-2011



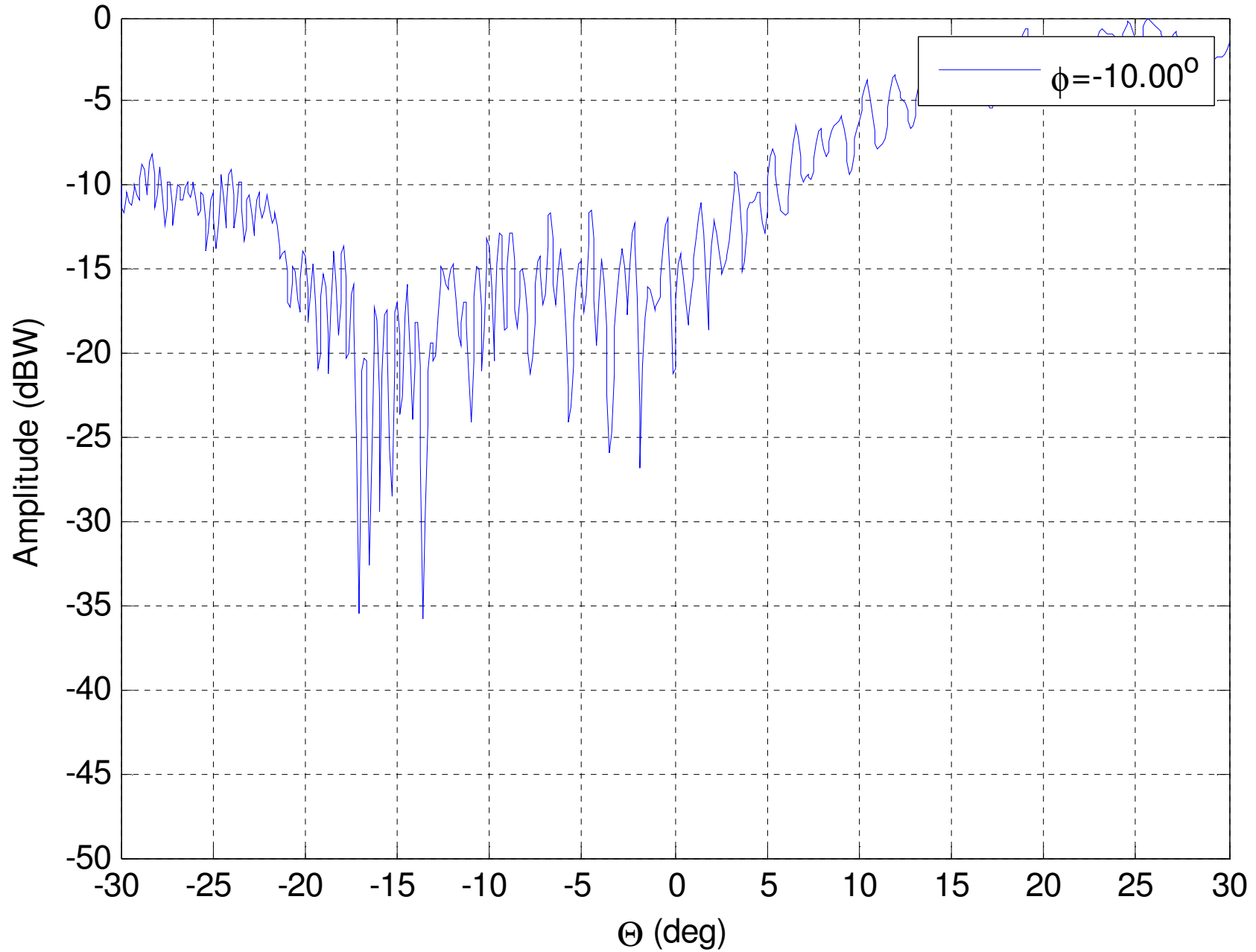
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -8.02 dBW, Date: 15-Dec-2011



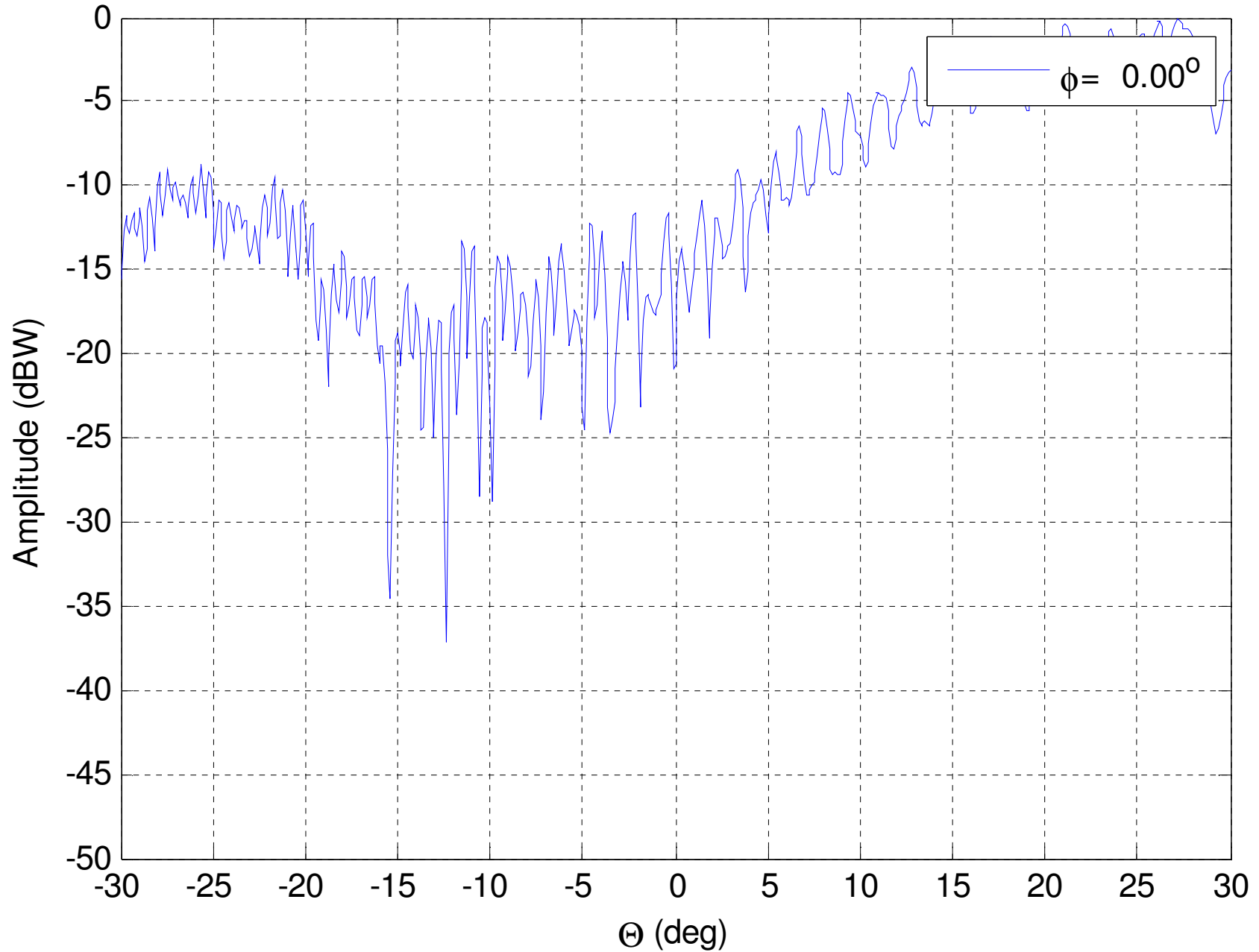
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -8.48 dBW, Date: 15-Dec-2011



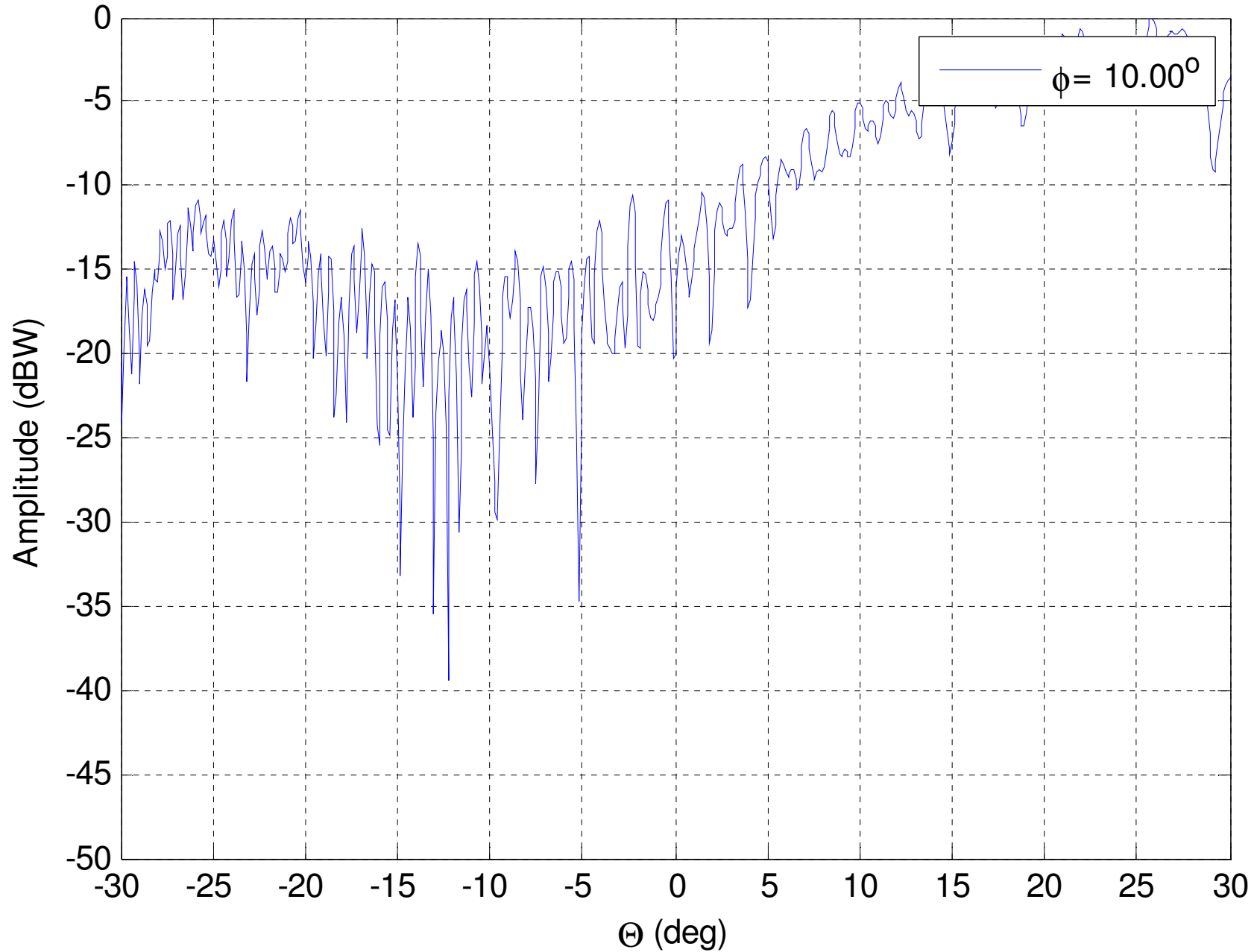
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -8.76 dBW, Date: 15-Dec-2011



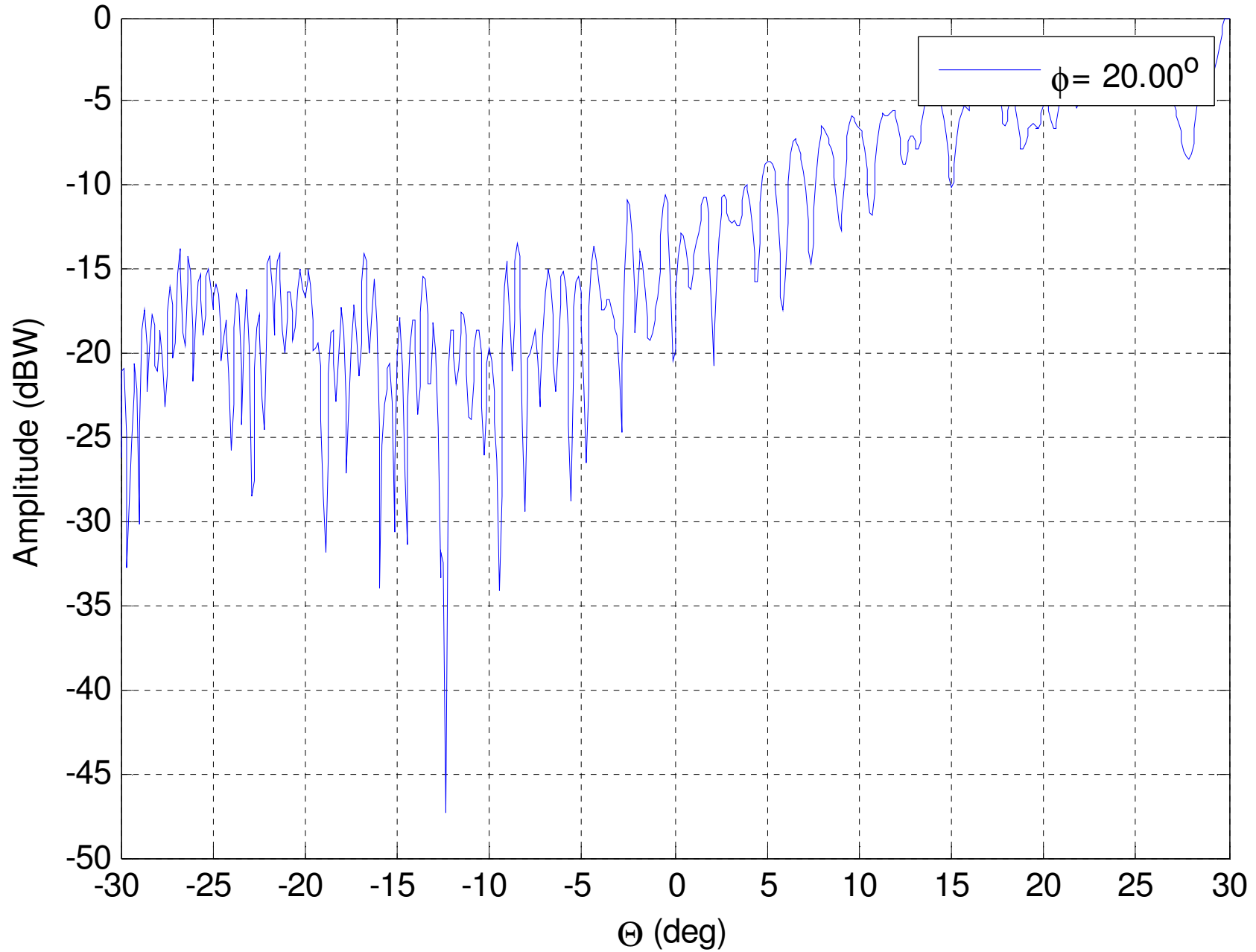
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -9.48 dBW, Date: 15-Dec-2011



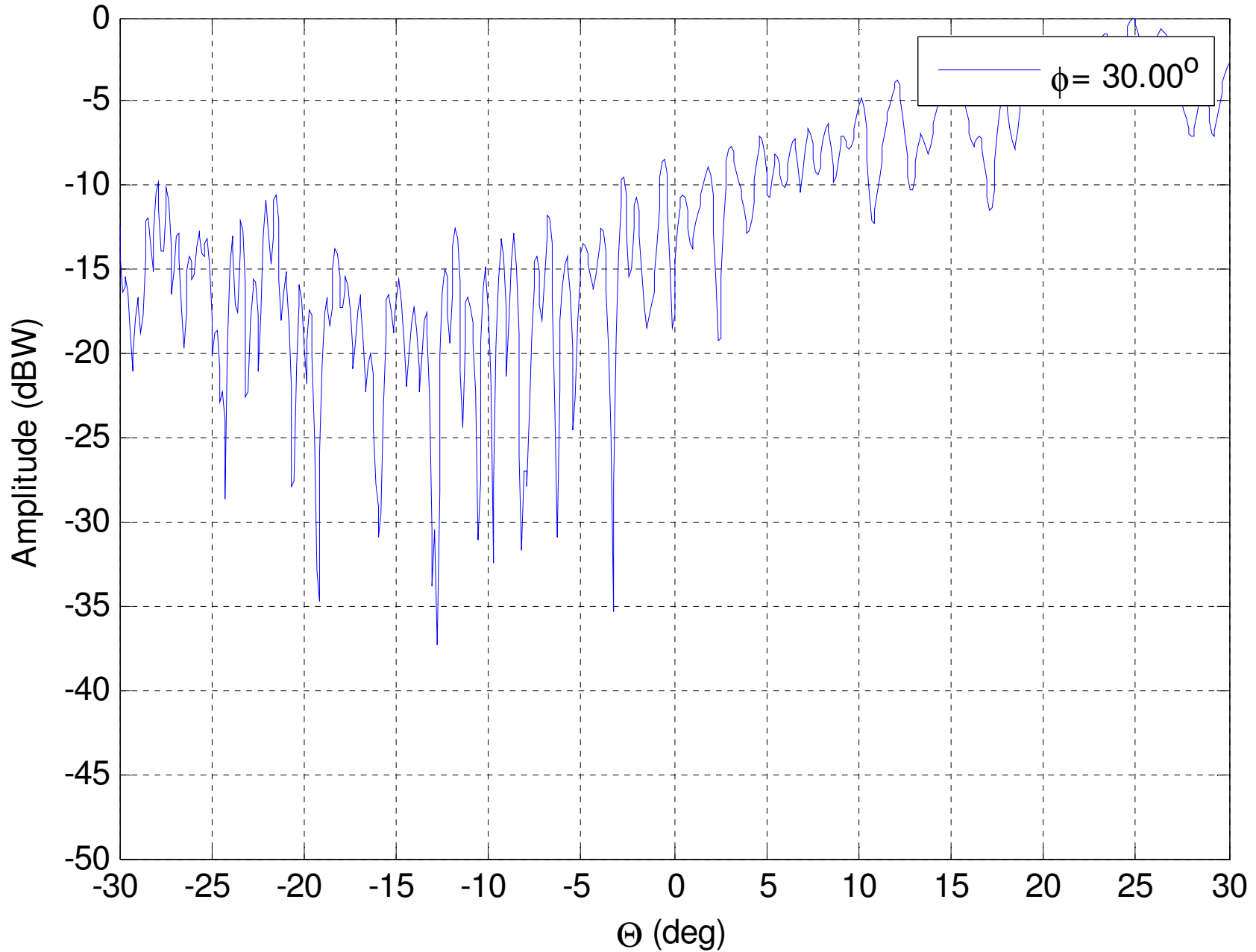
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -9.57 dBW, Date: 15-Dec-2011



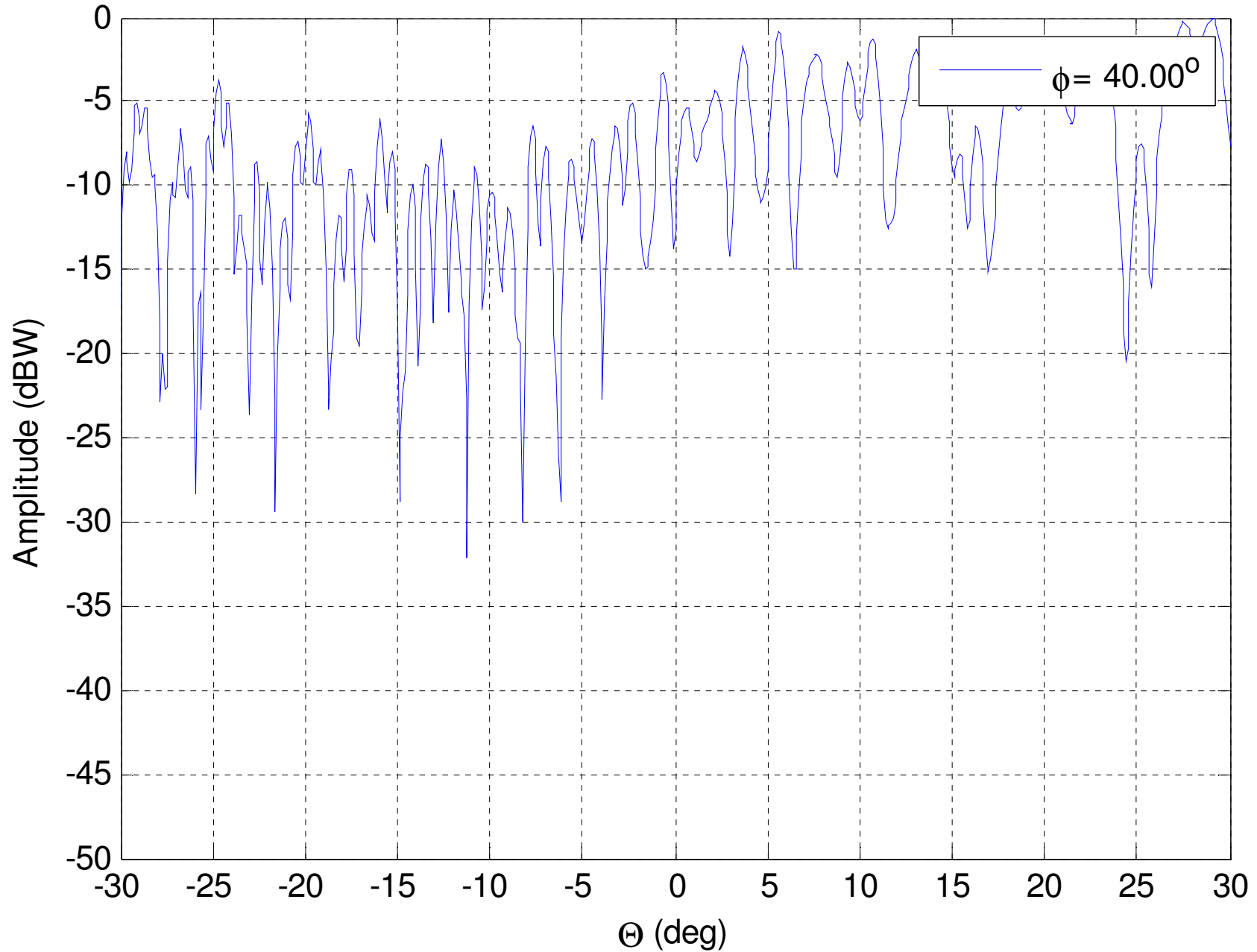
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -11.75 dBW, Date: 15-Dec-2011



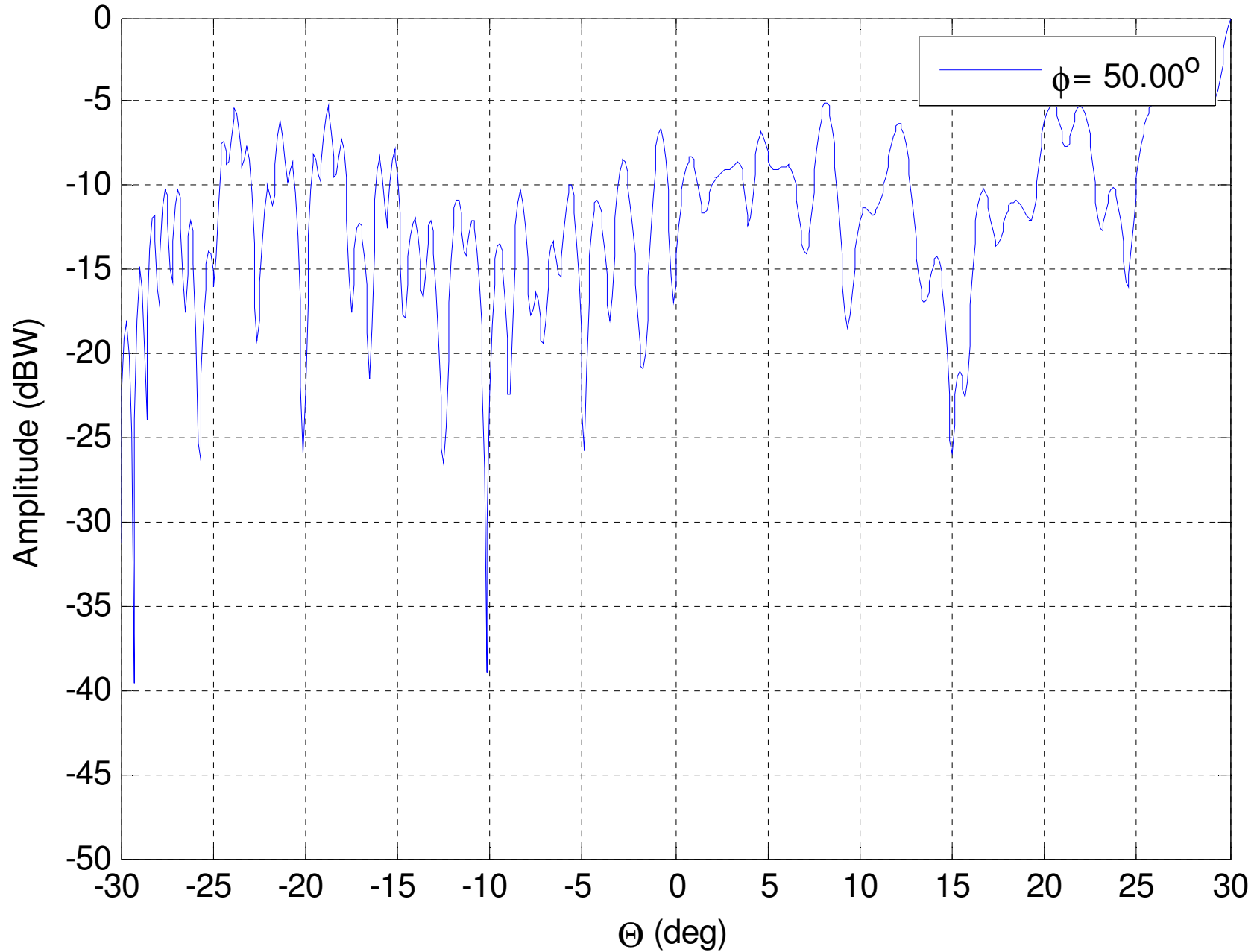
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -16.76 dBW, Date: 15-Dec-2011



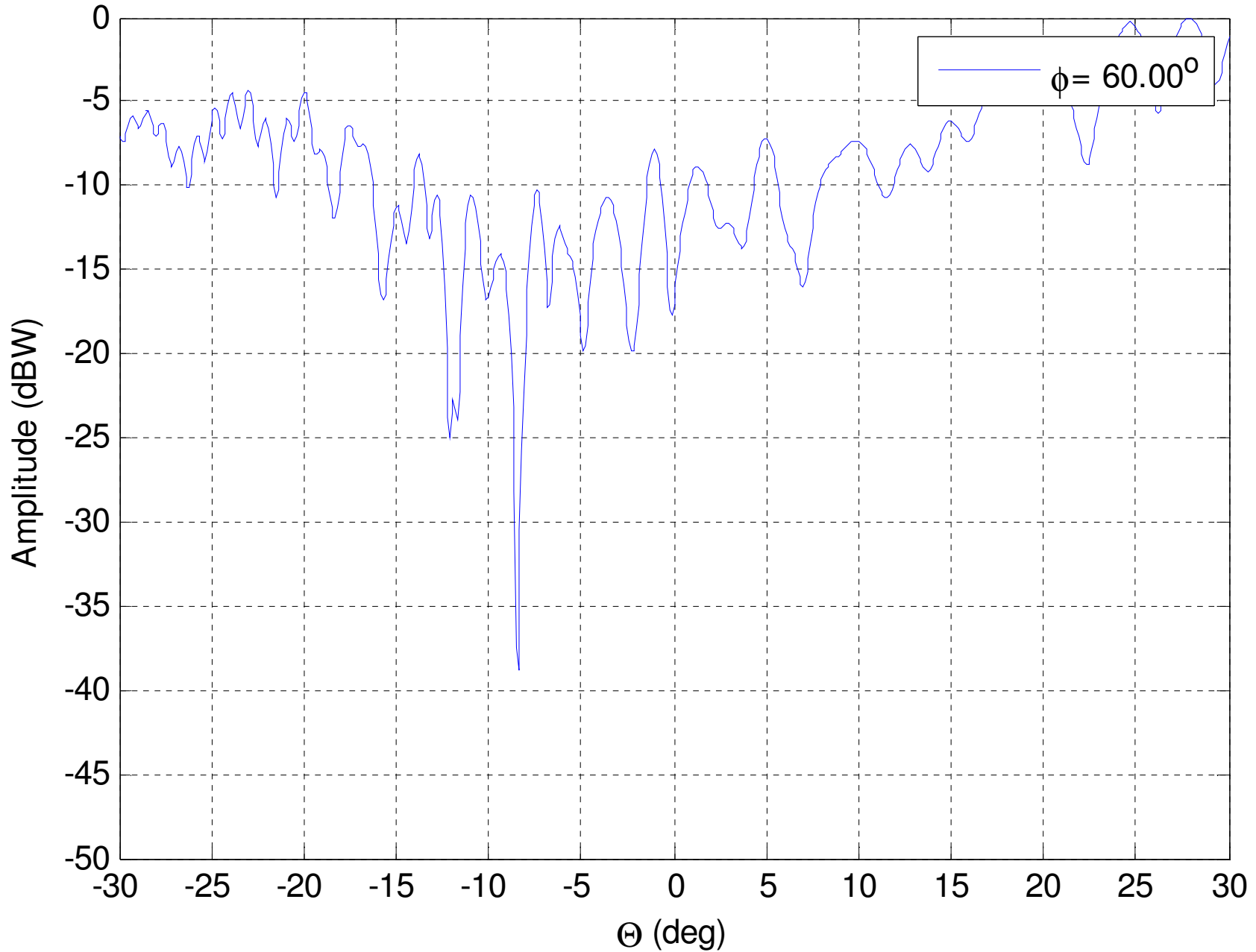
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -13.49 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -12.35 dBW, Date: 15-Dec-2011



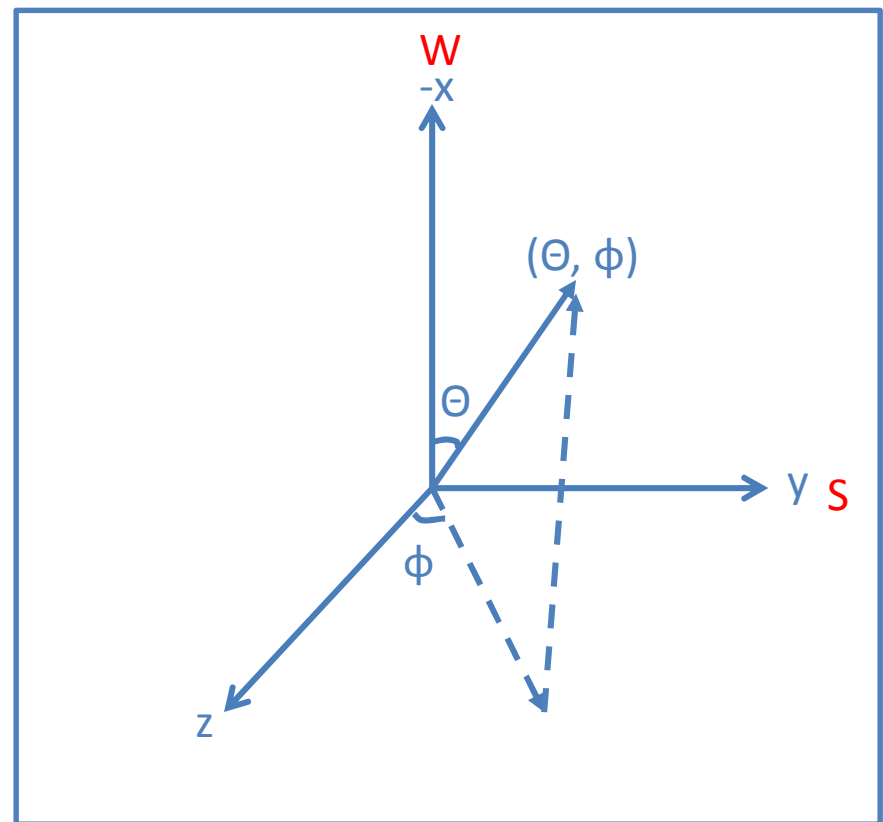
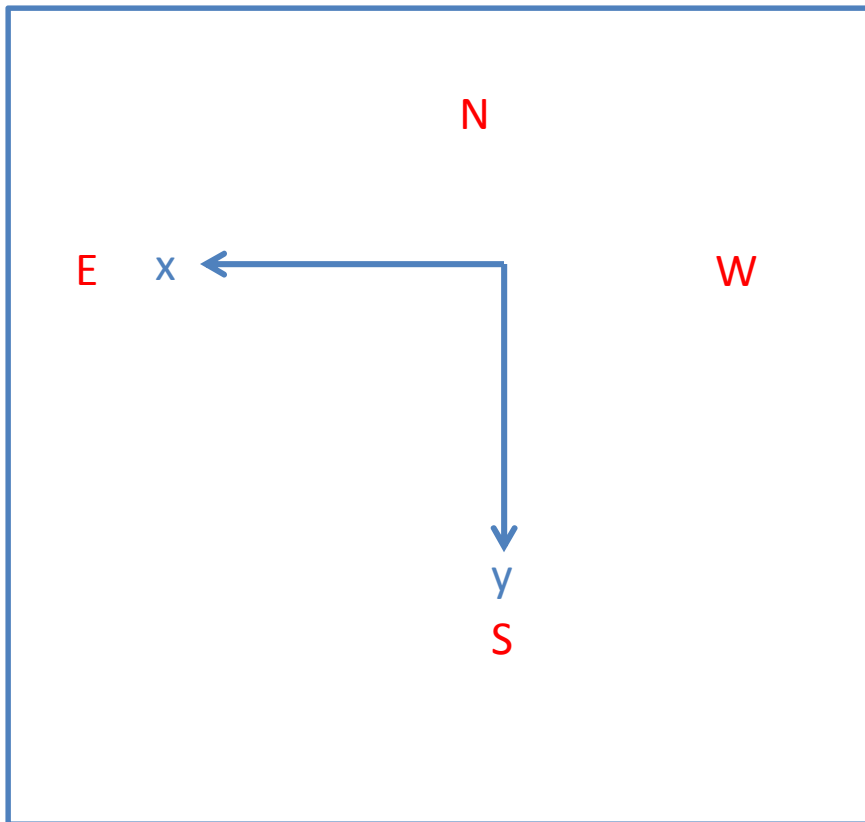
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 22

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



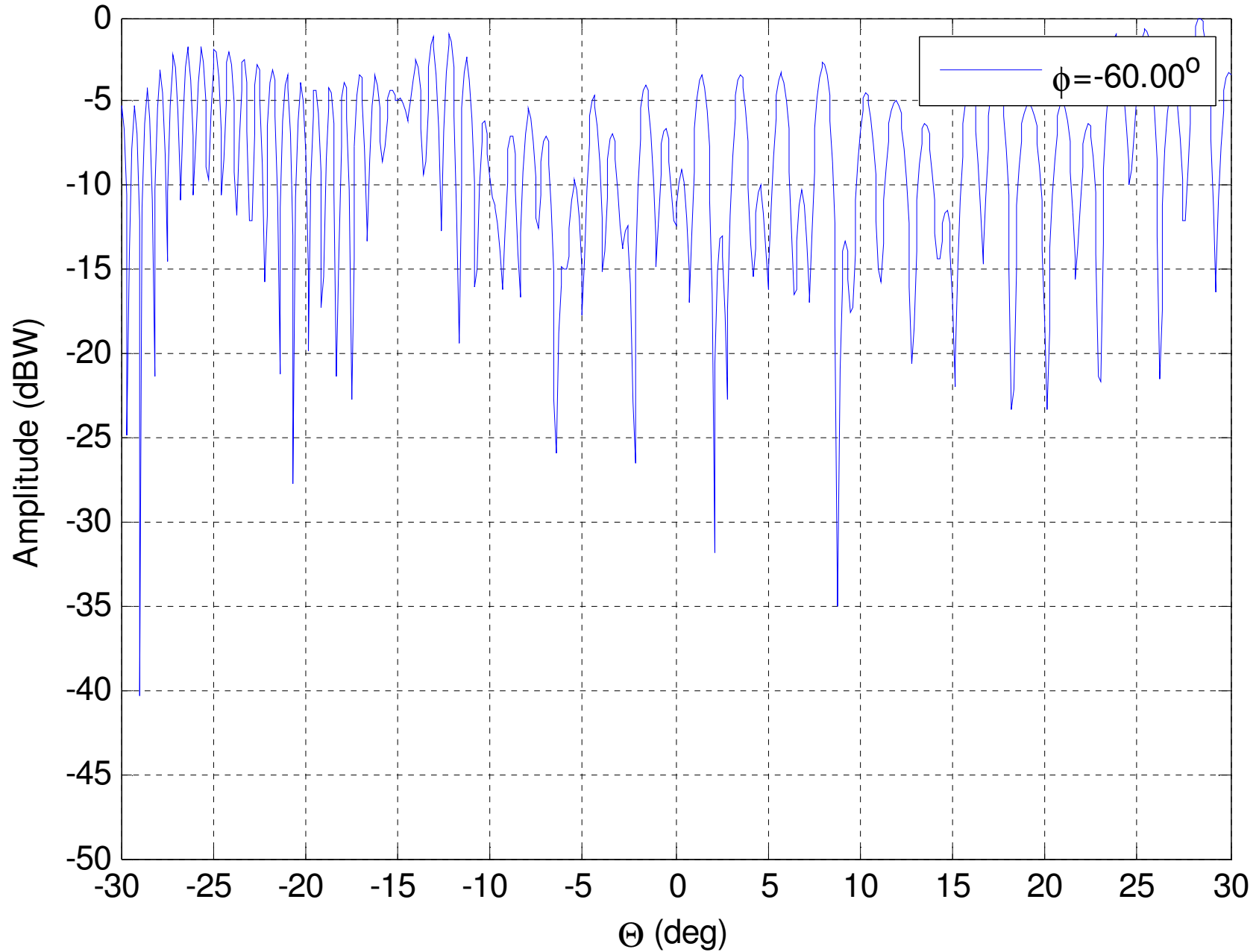
Spot Beam22, -X Axis Plots

- 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

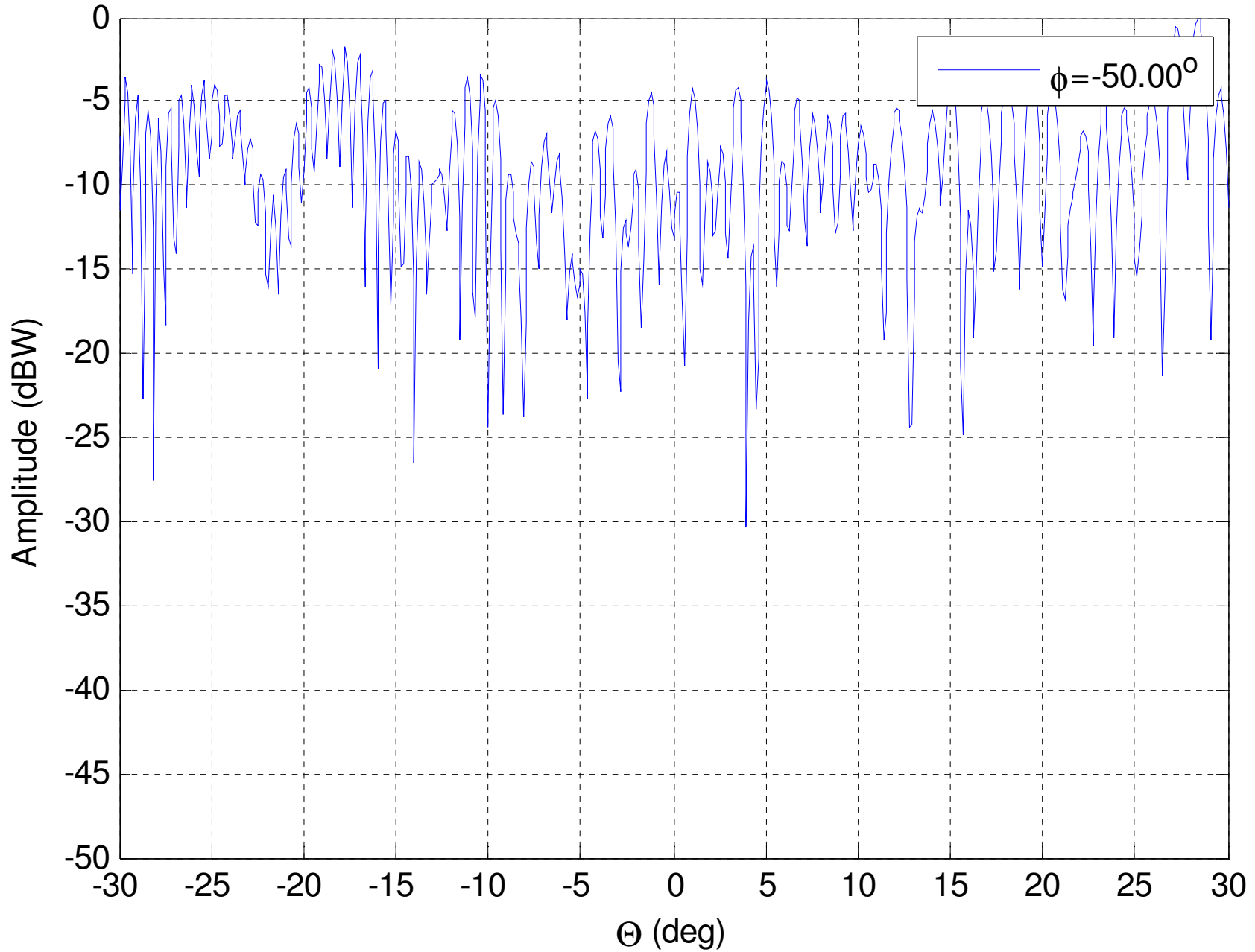
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -10.02 dBW, Date: 15-Dec-2011



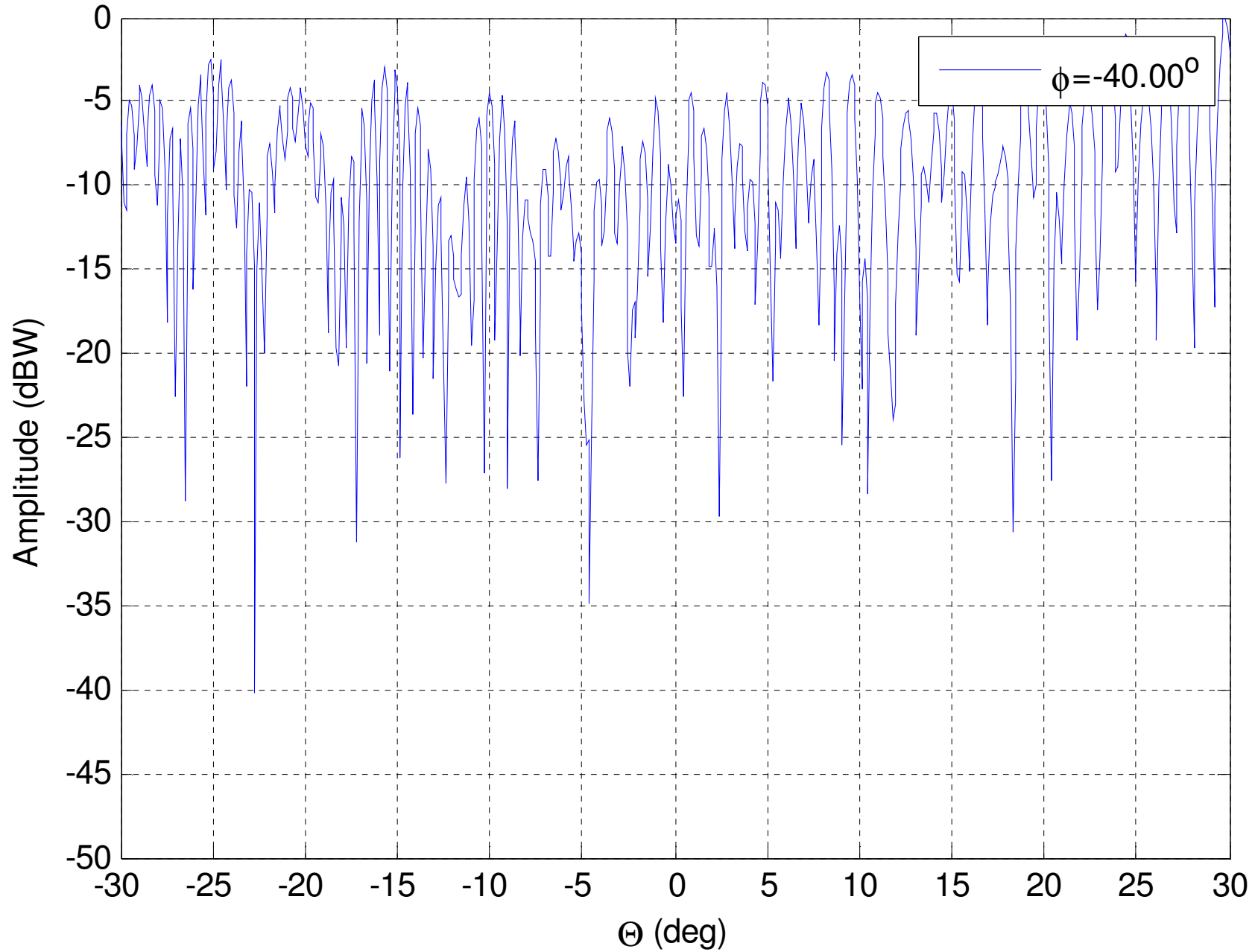
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -9.25 dBW, Date: 15-Dec-2011



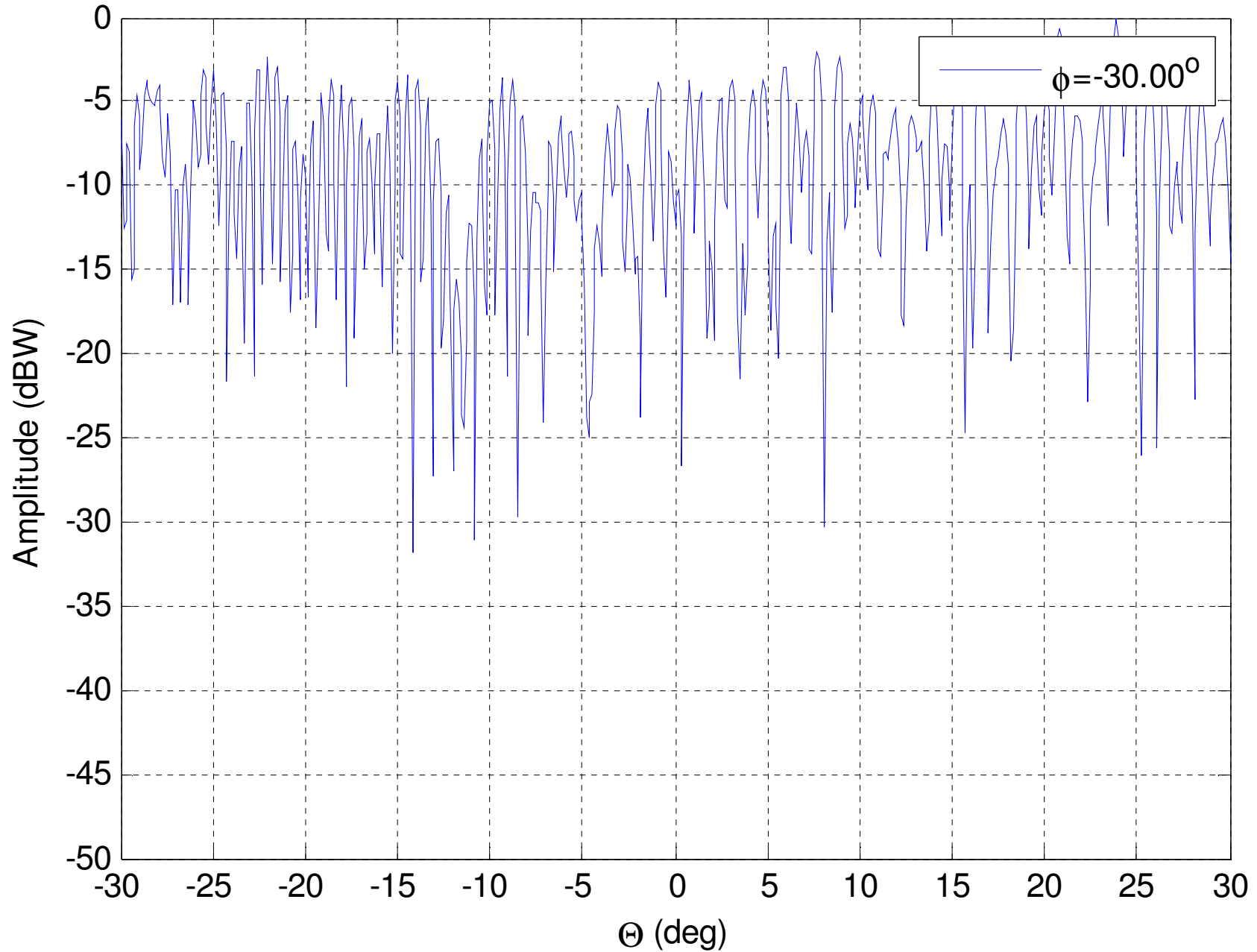
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -9.04 dBW, Date: 15-Dec-2011



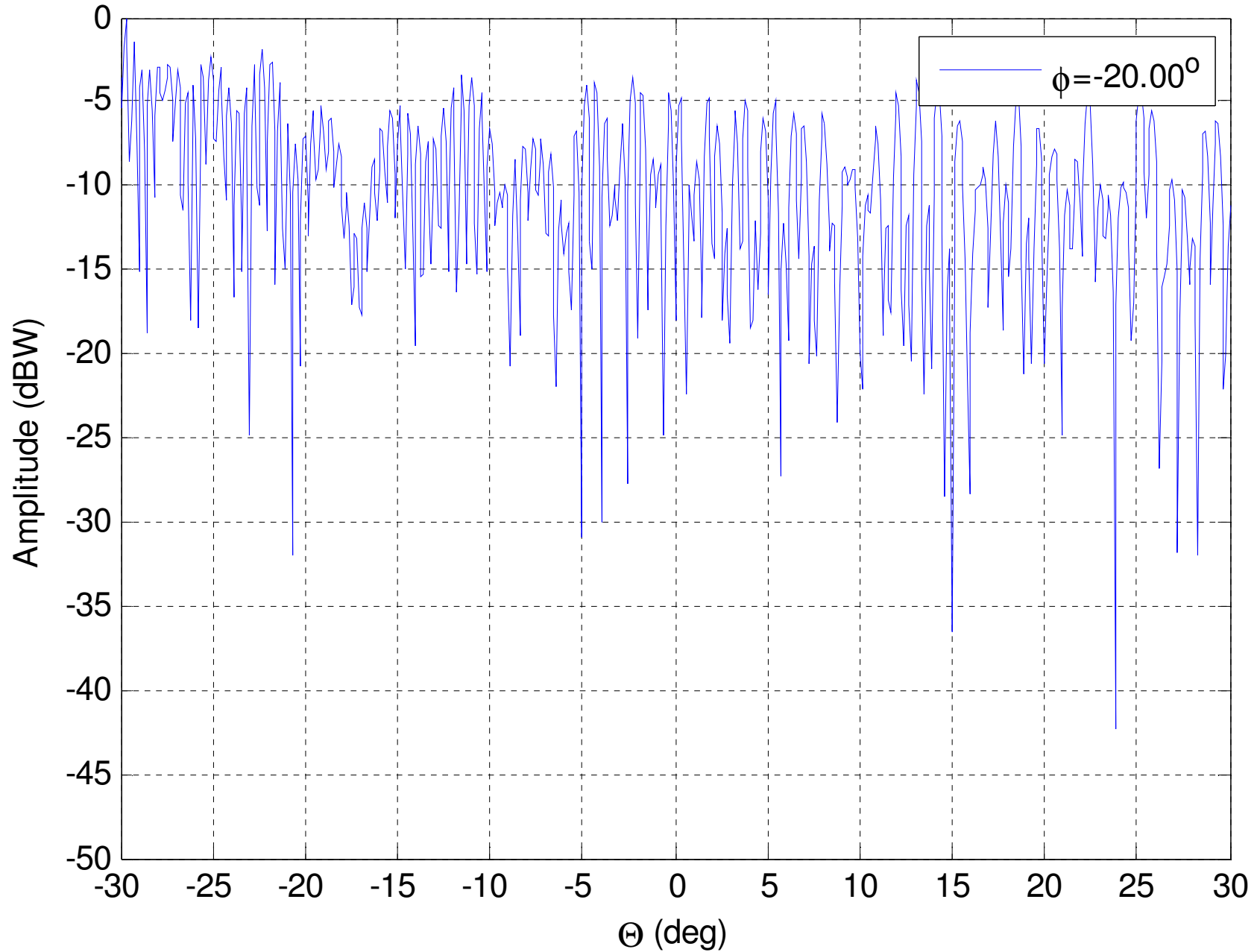
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -10.11 dBW, Date: 15-Dec-2011



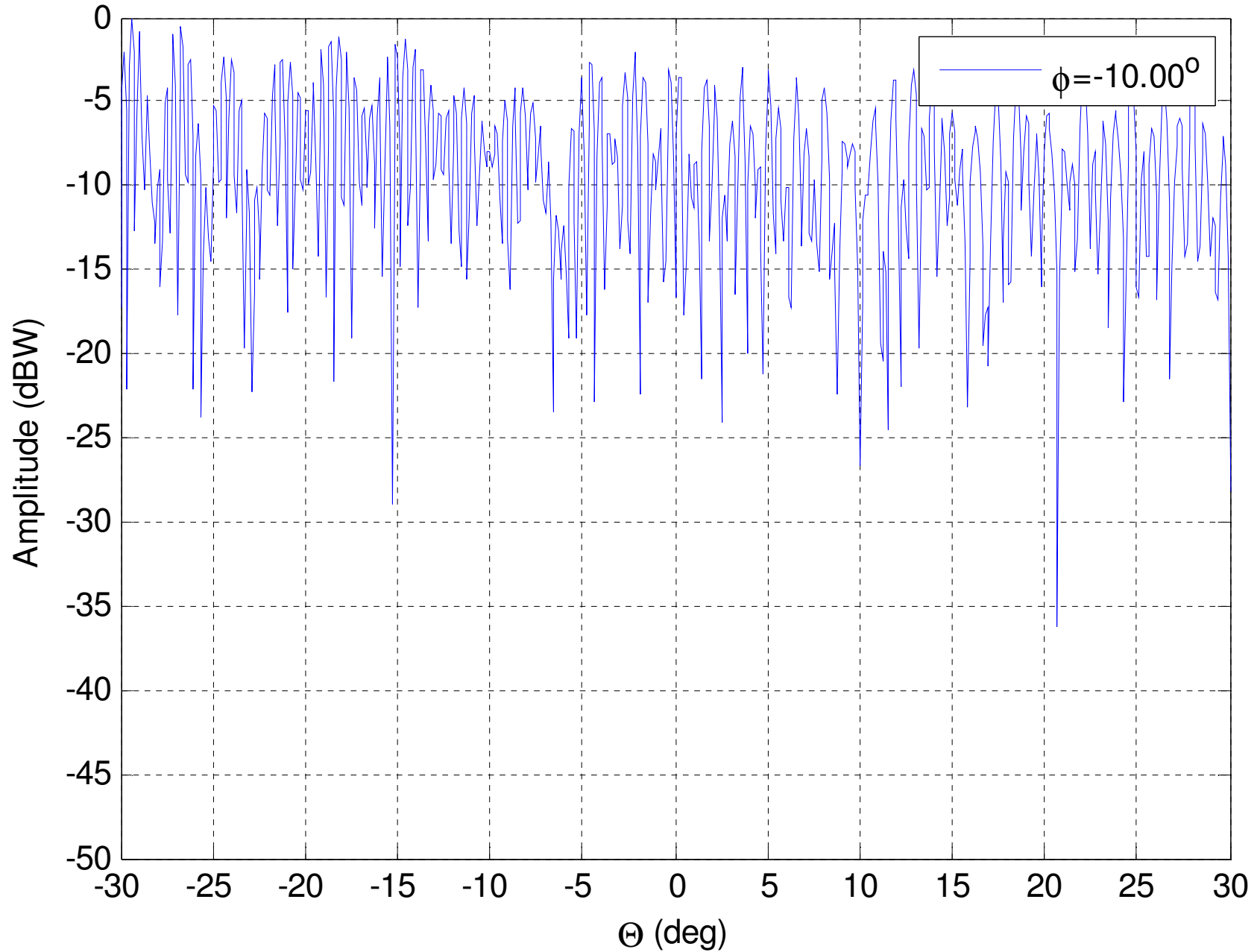
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -10.11 dBW, Date: 15-Dec-2011



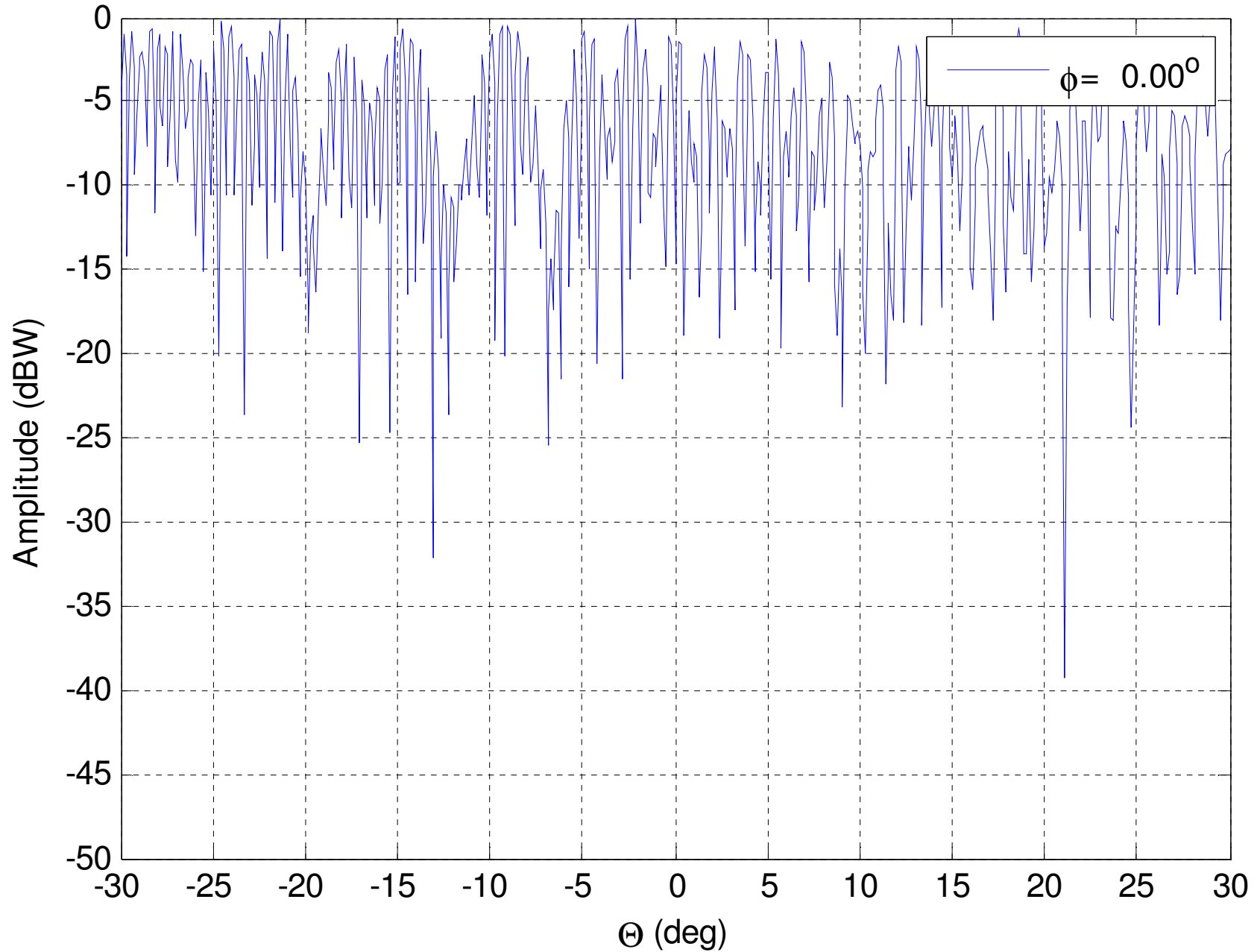
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -11.52 dBW, Date: 15-Dec-2011



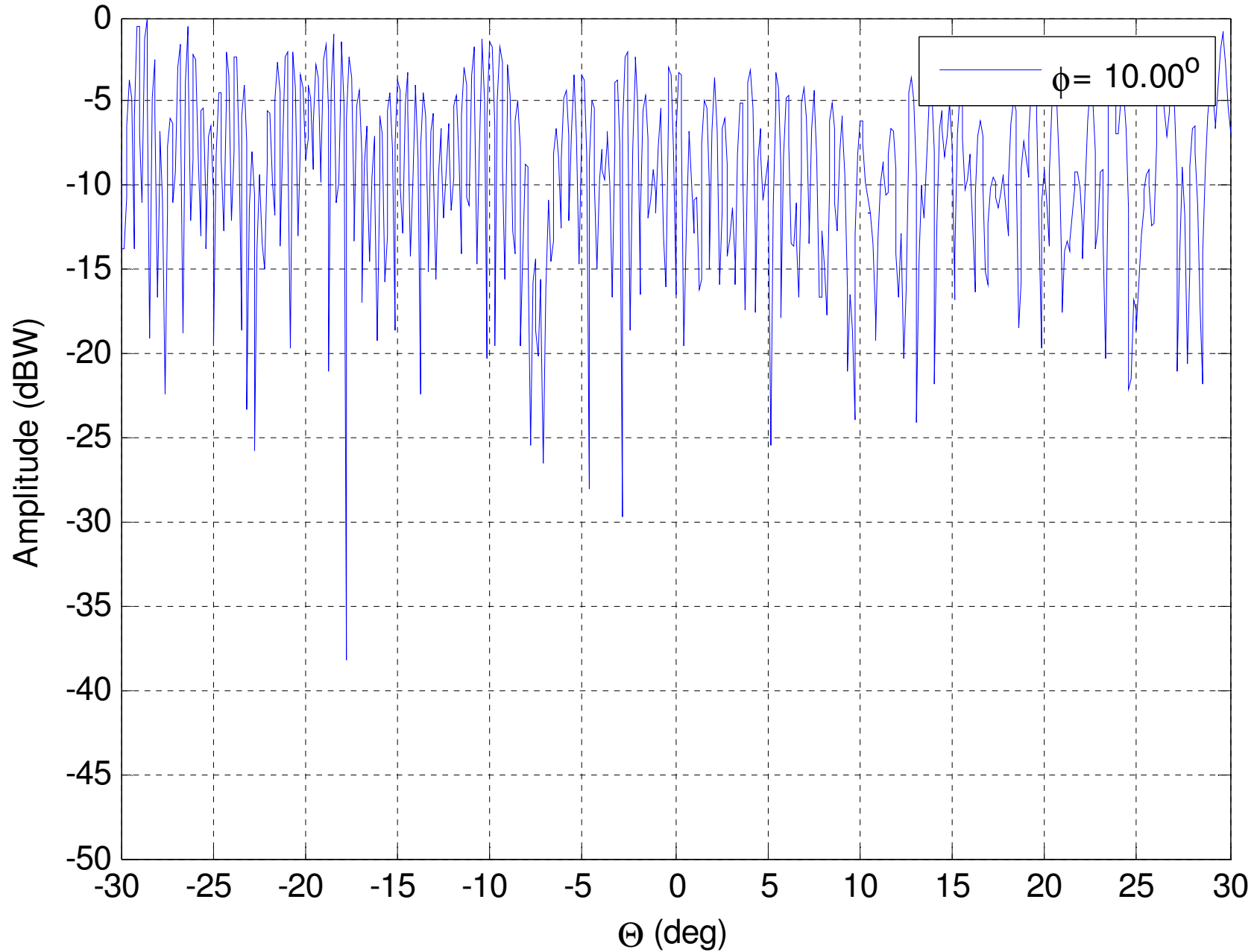
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -13.57 dBW, Date: 15-Dec-2011



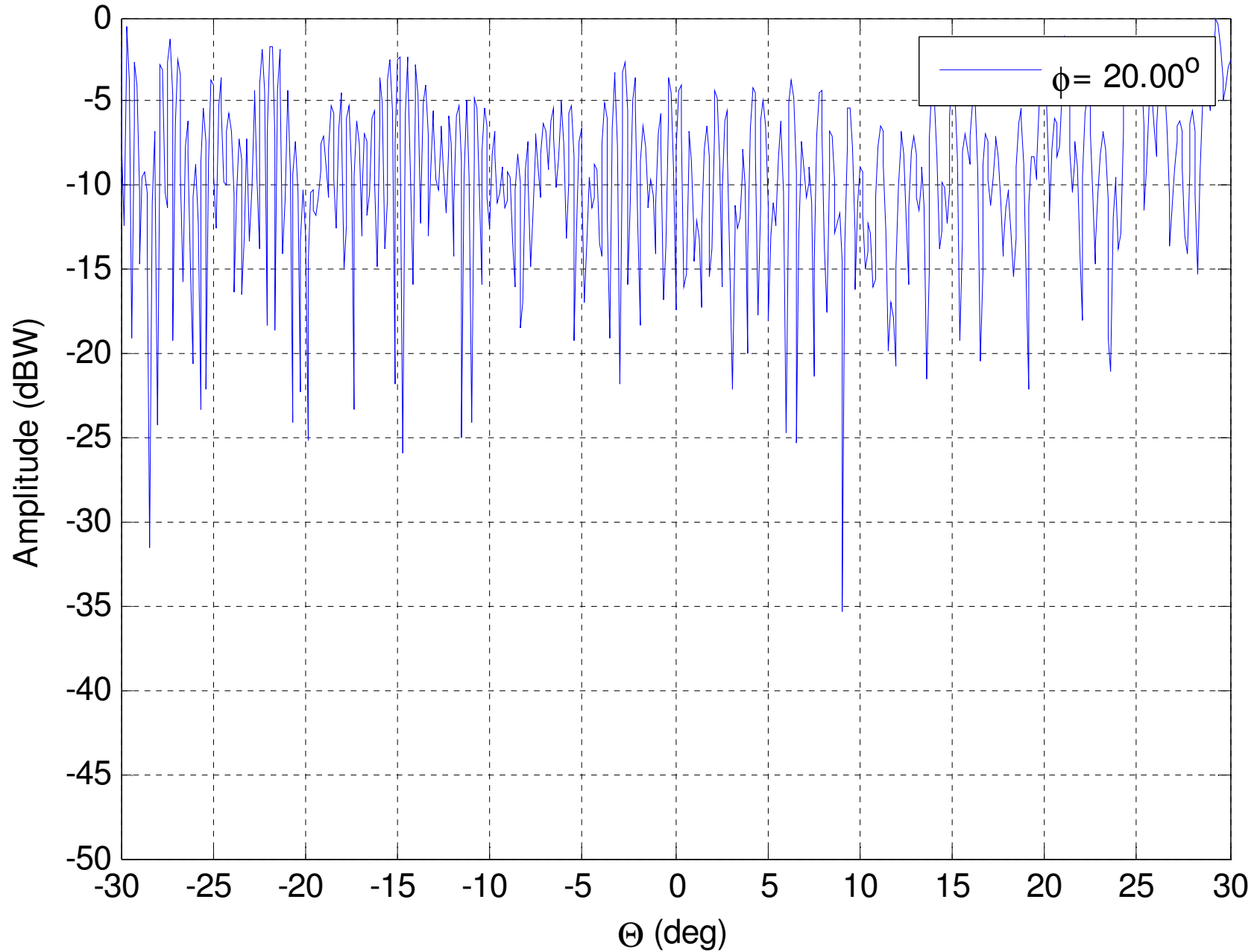
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -11.65 dBW, Date: 15-Dec-2011



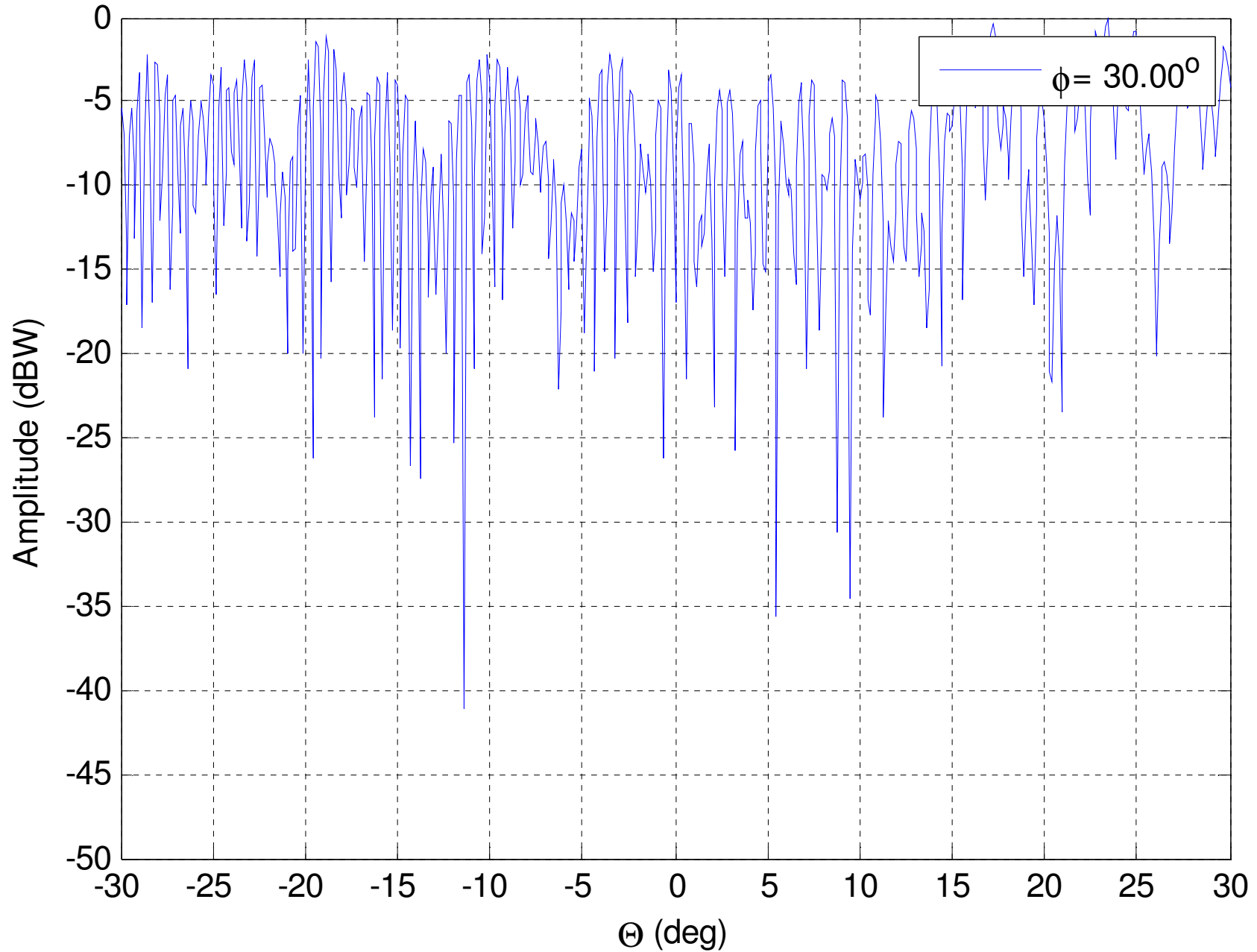
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -10.81 dBW, Date: 15-Dec-2011



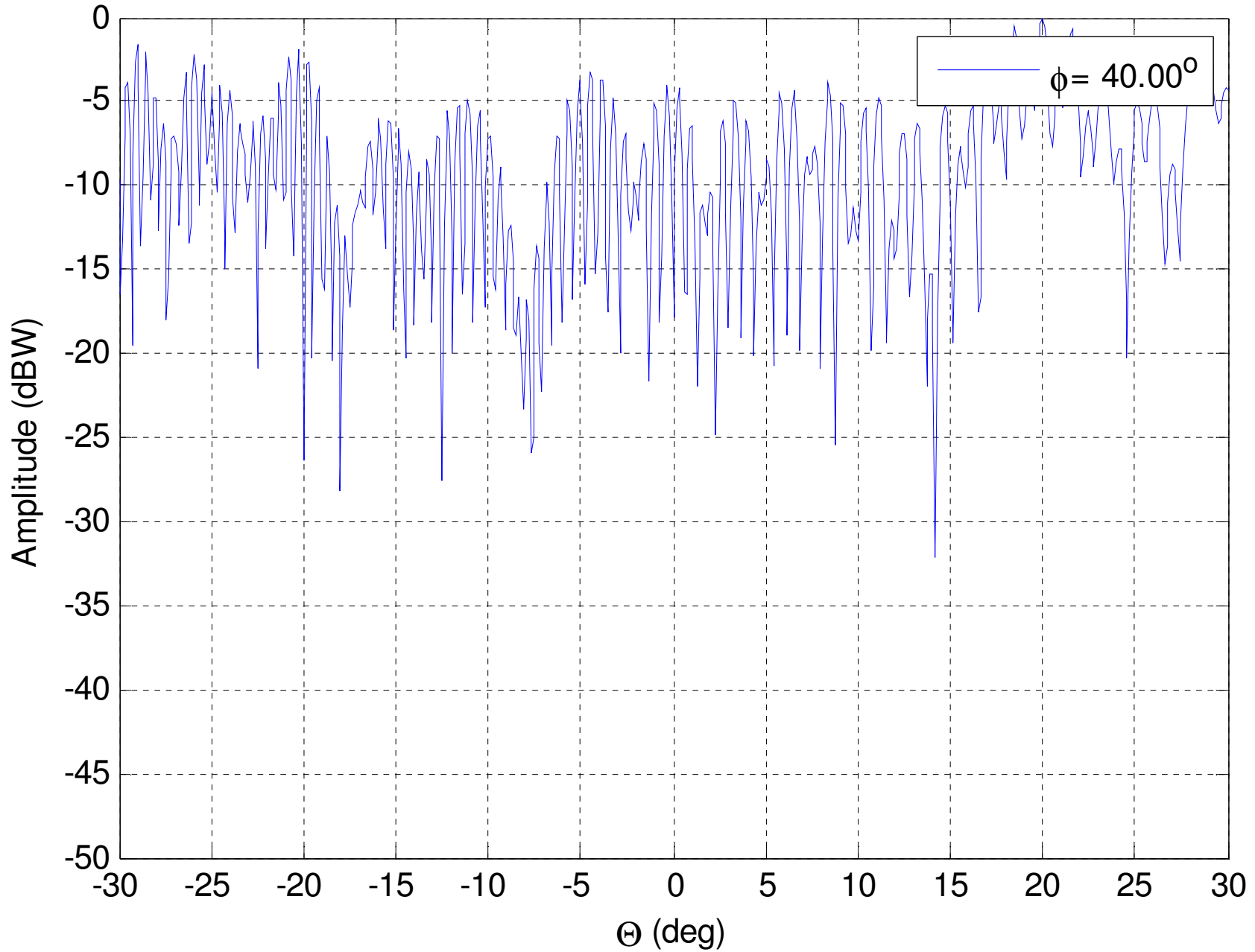
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -11.17 dBW, Date: 15-Dec-2011



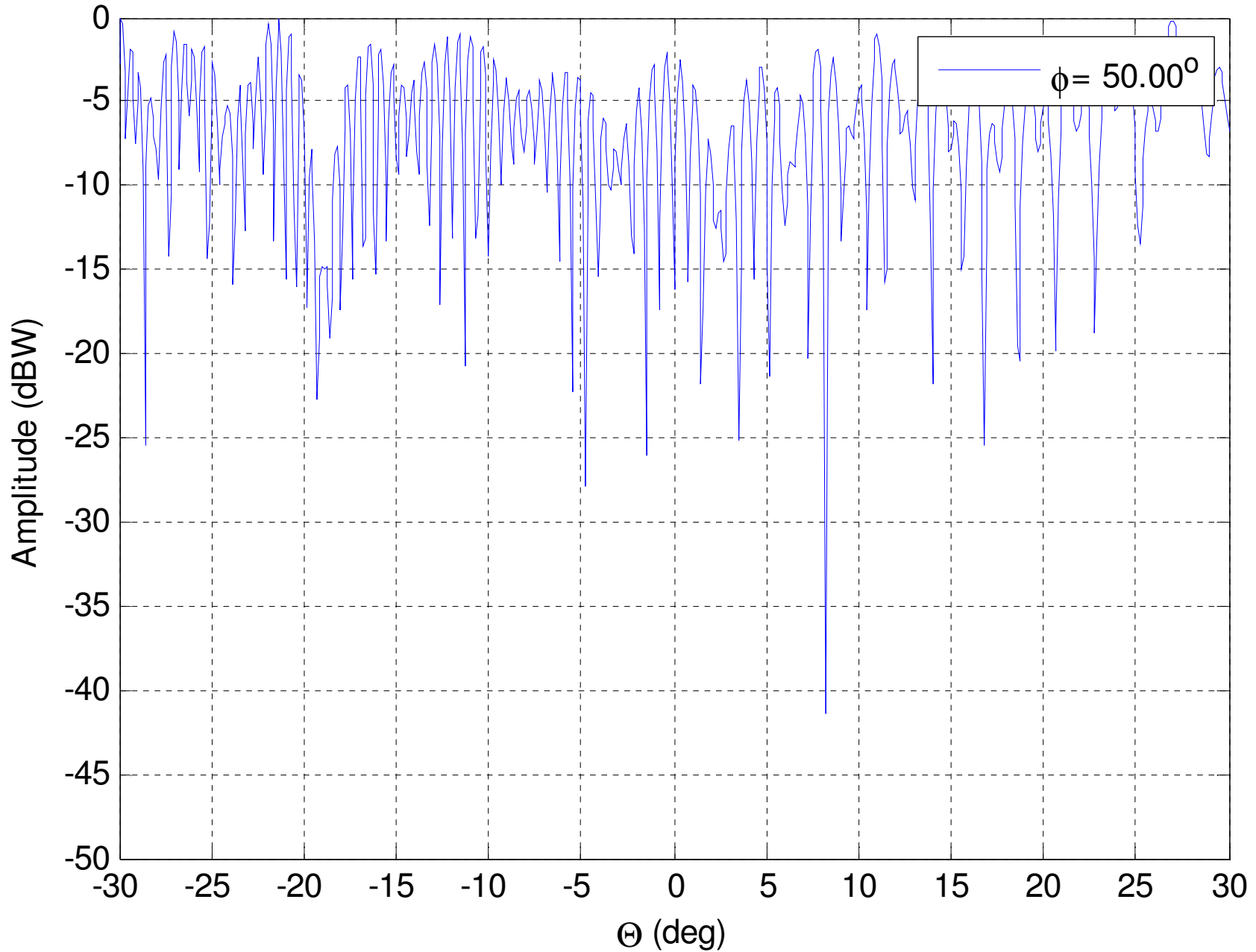
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -10.31 dBW, Date: 15-Dec-2011



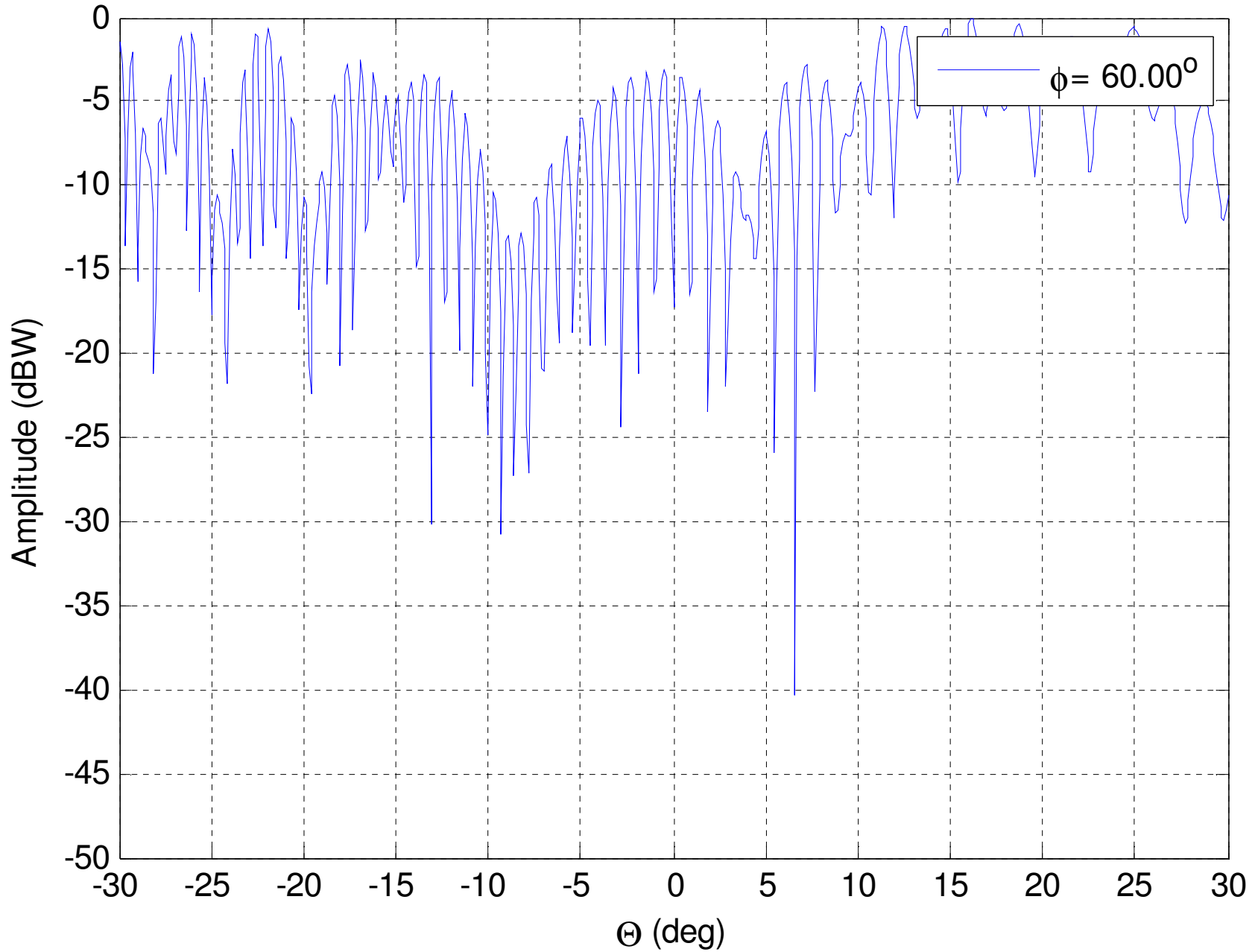
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -12.04 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

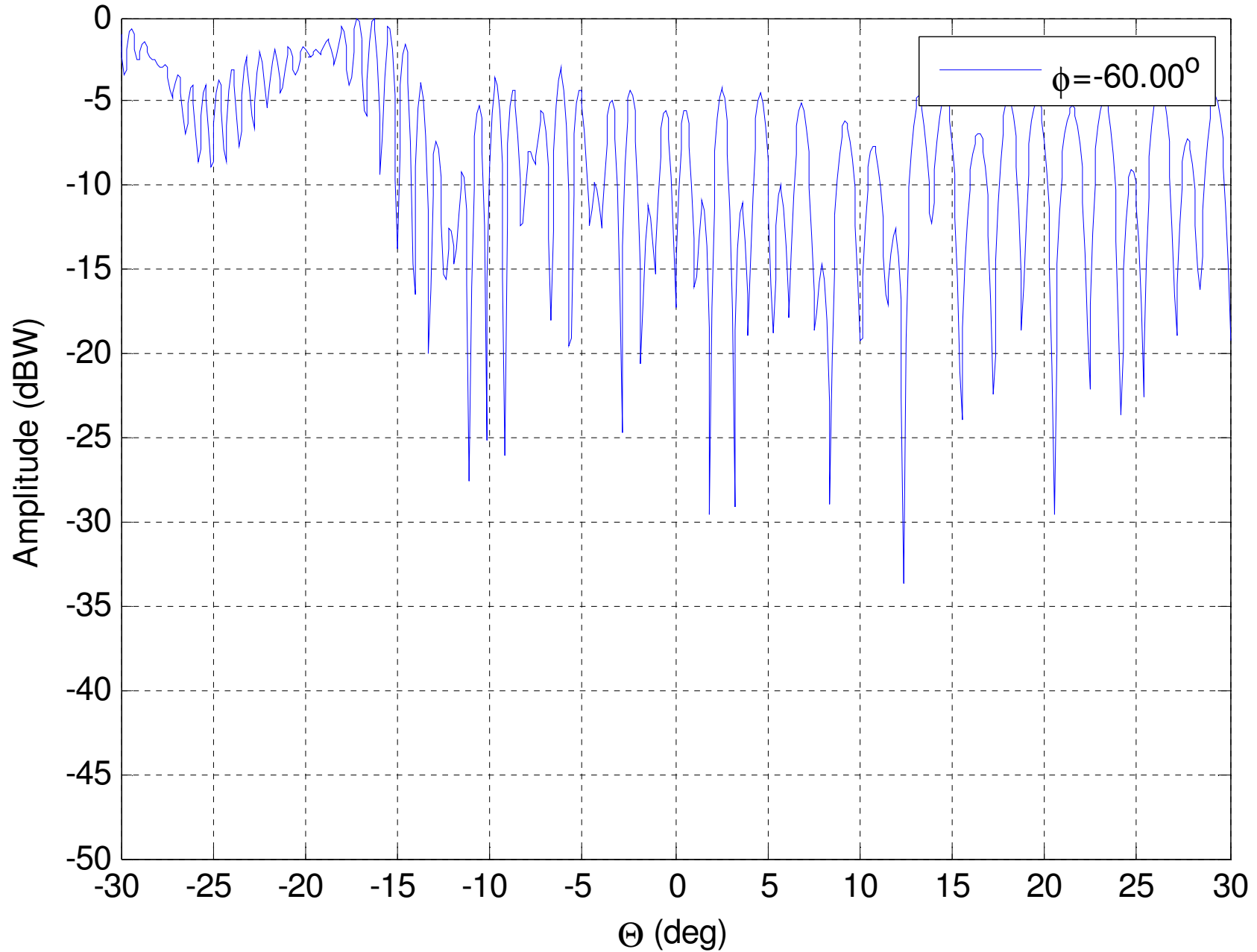
Input file: tx-17.3-rhcp-60.cut, Peak: -10.93 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

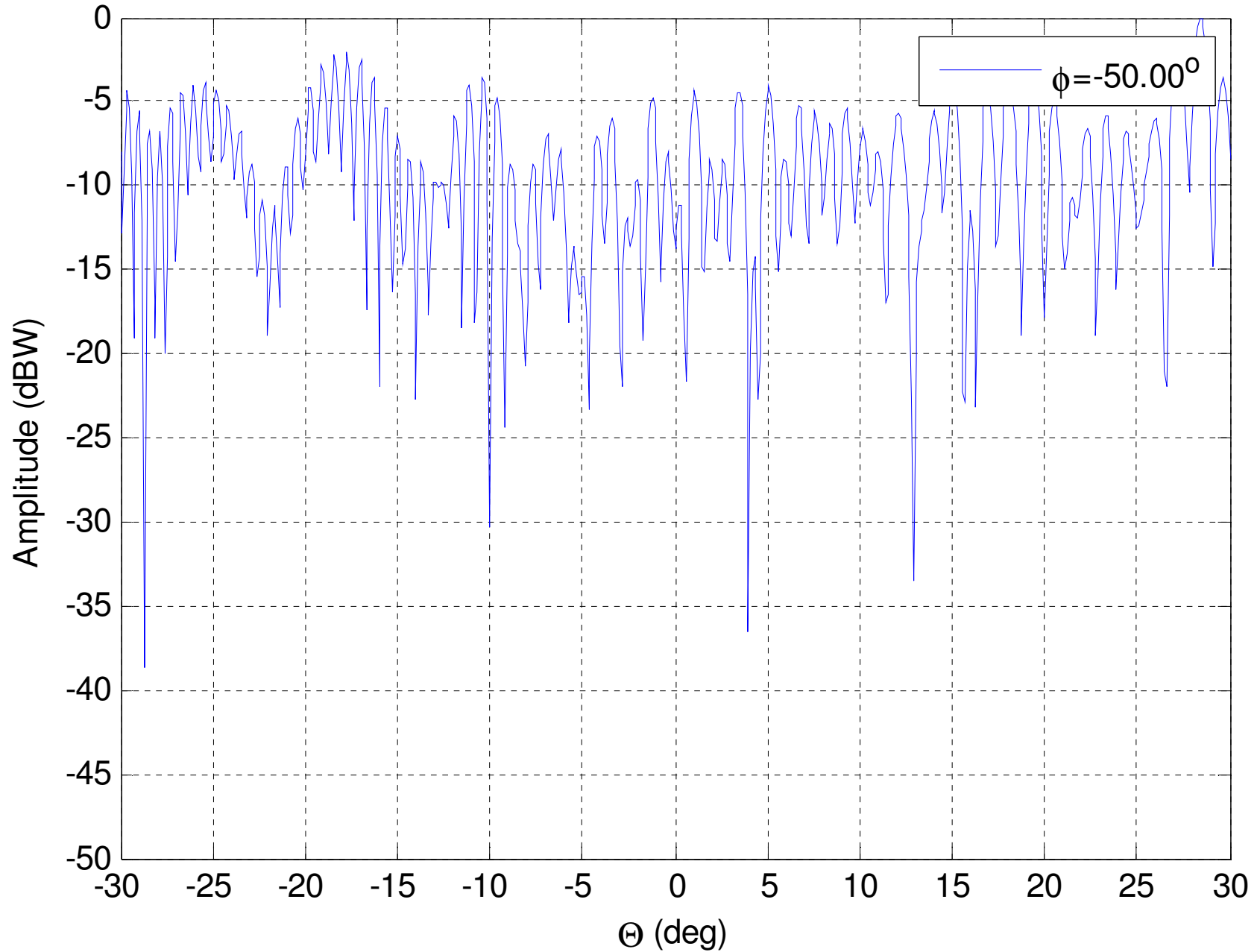
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -10.07 dBW, Date: 15-Dec-2011



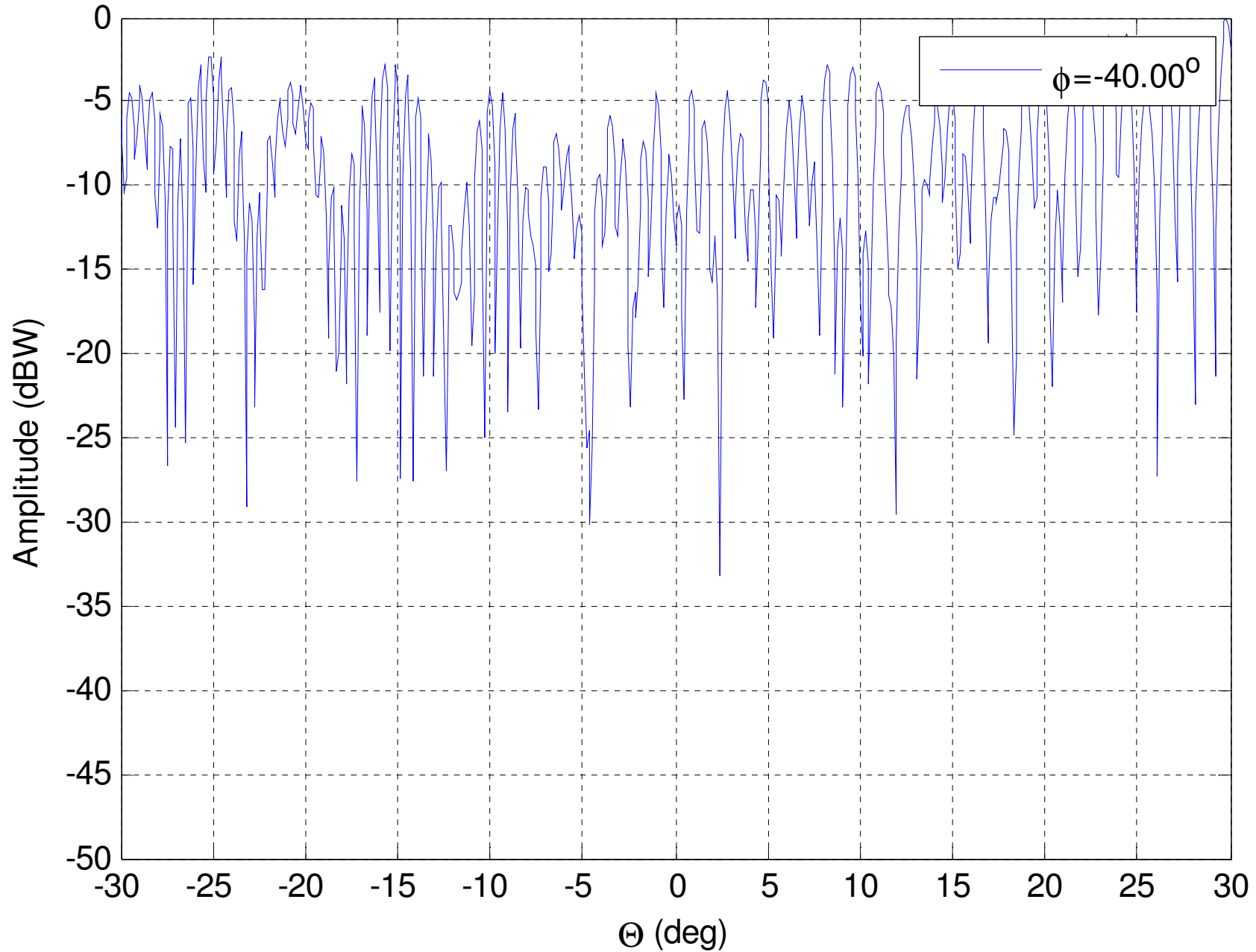
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -9.01 dBW, Date: 15-Dec-2011



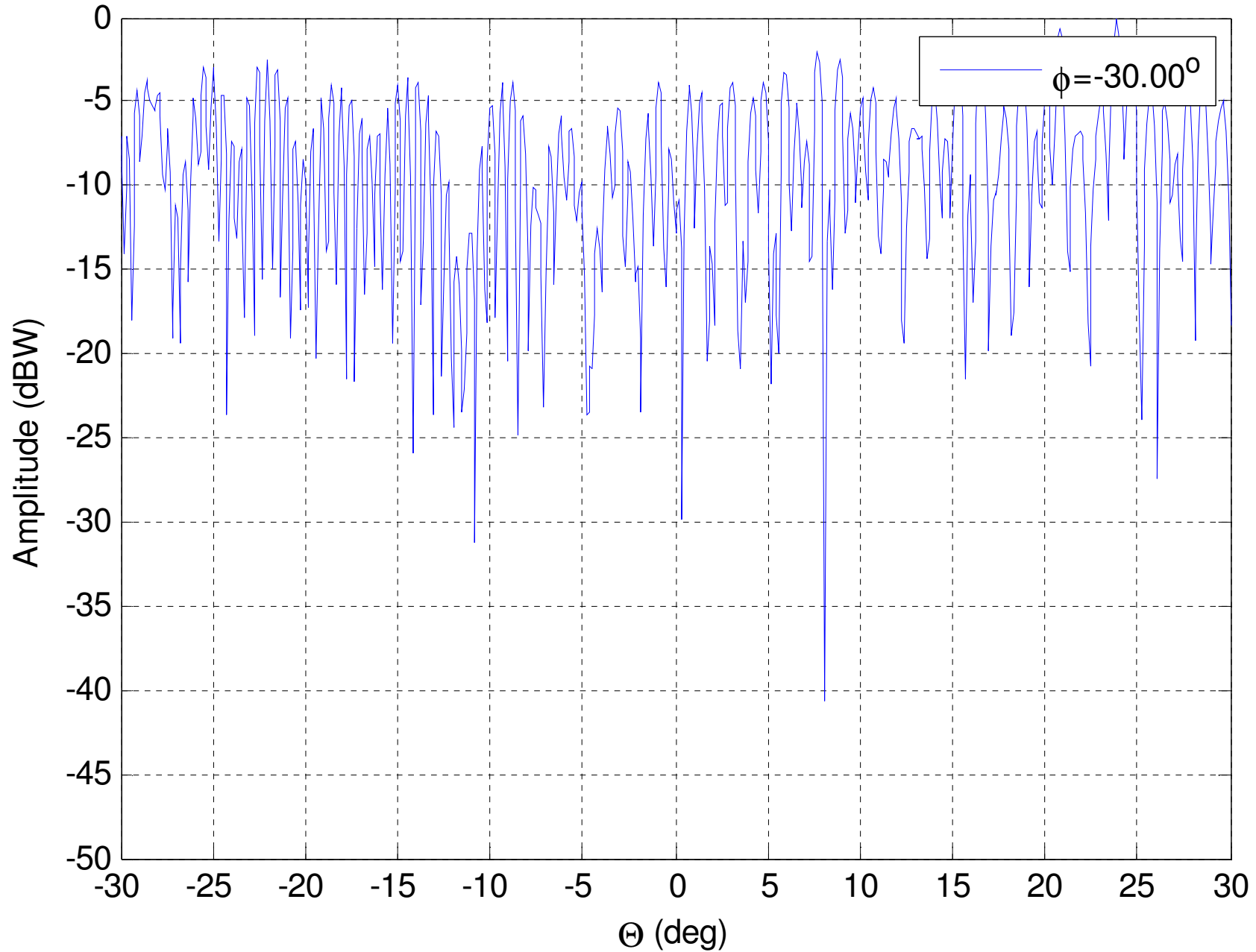
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.24 dBW, Date: 15-Dec-2011



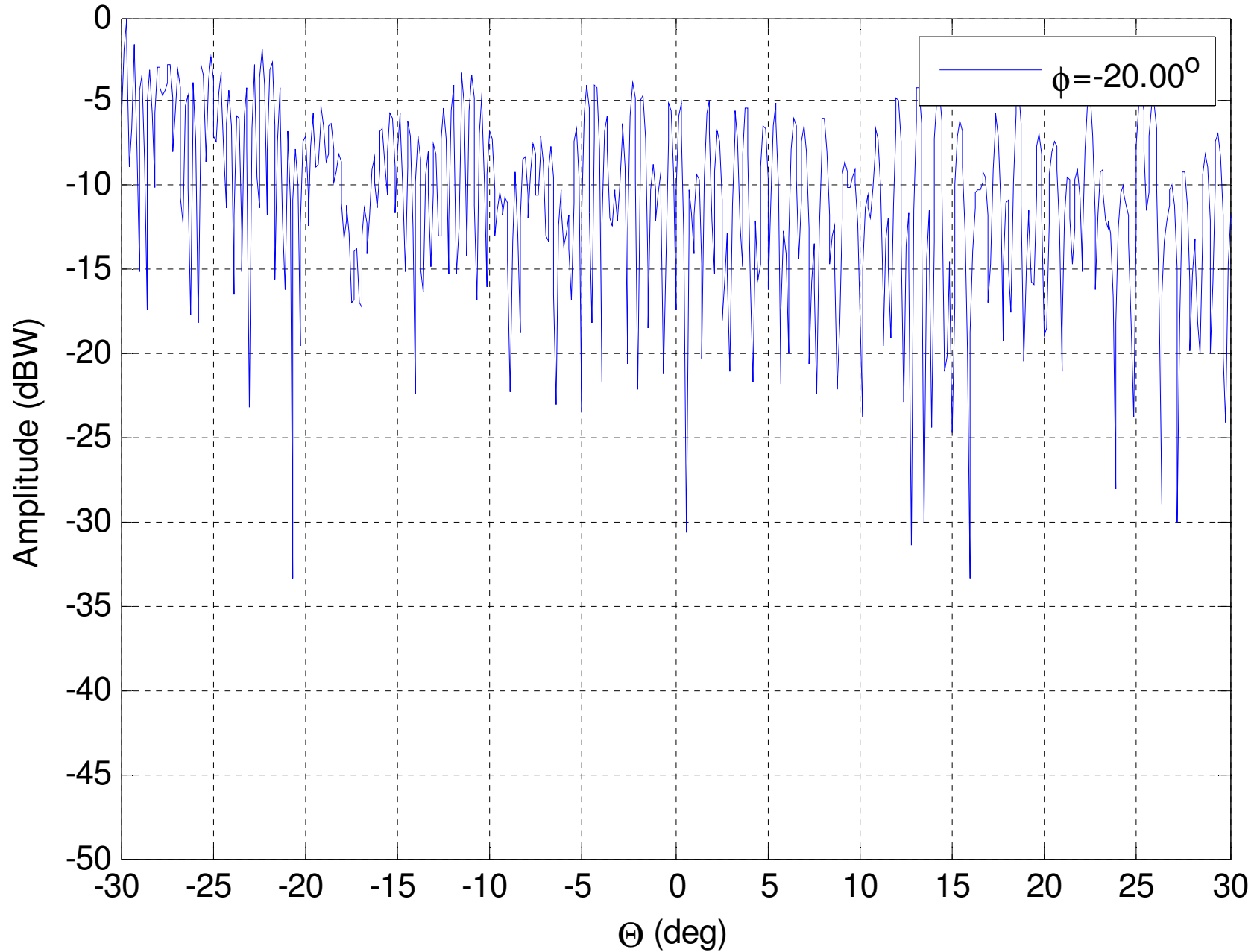
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -9.94 dBW, Date: 15-Dec-2011



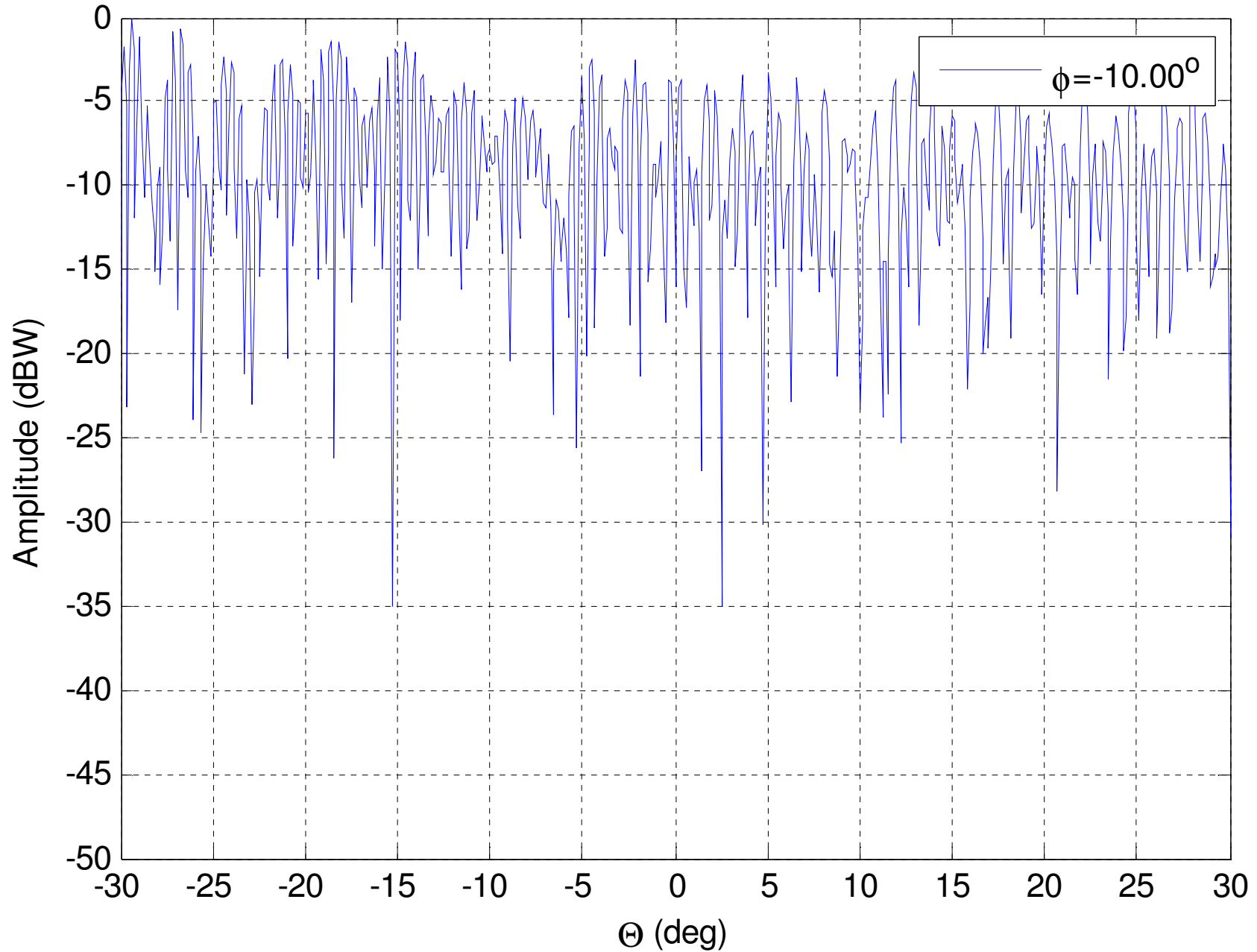
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -9.92 dBW, Date: 15-Dec-2011



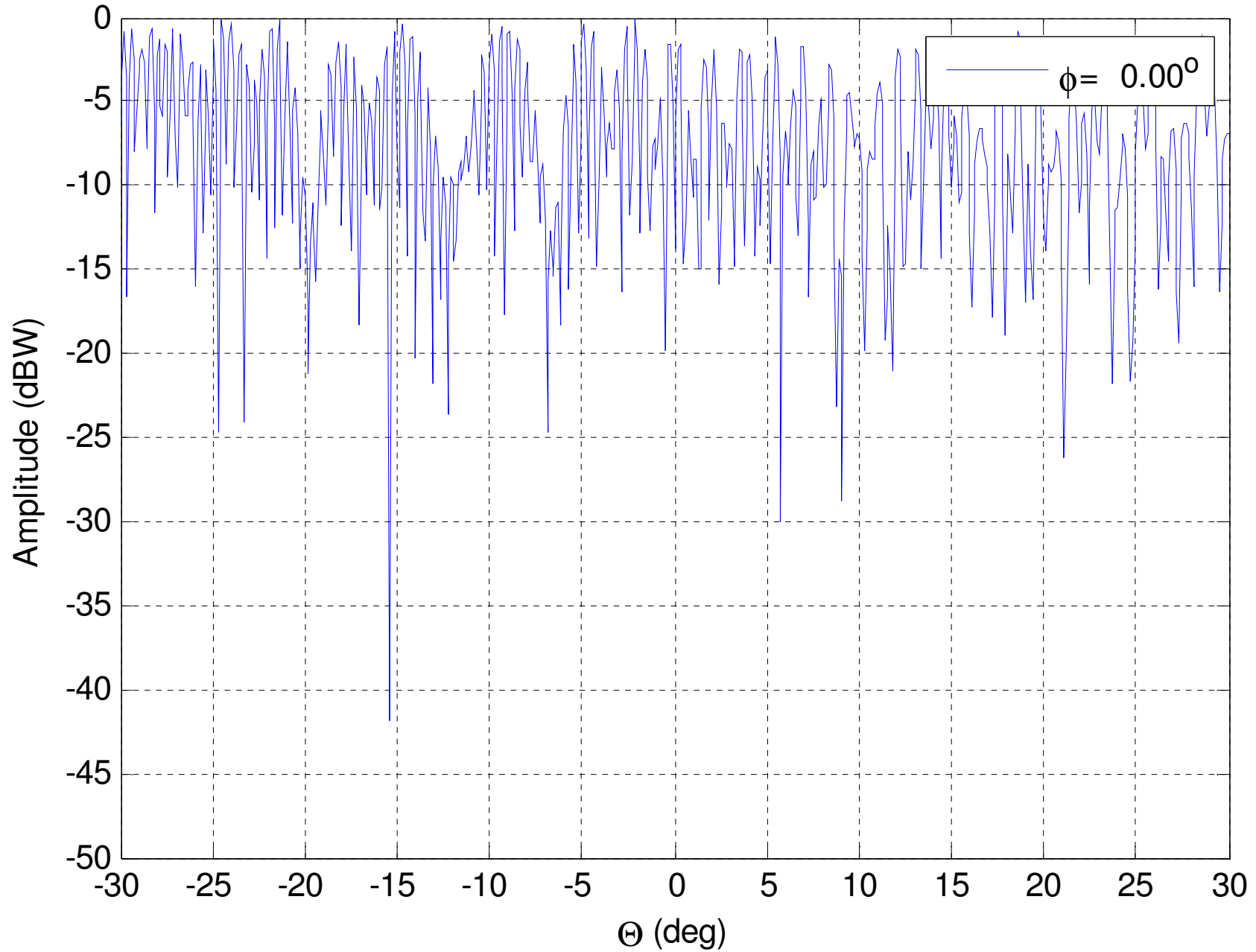
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -11.30 dBW, Date: 15-Dec-2011



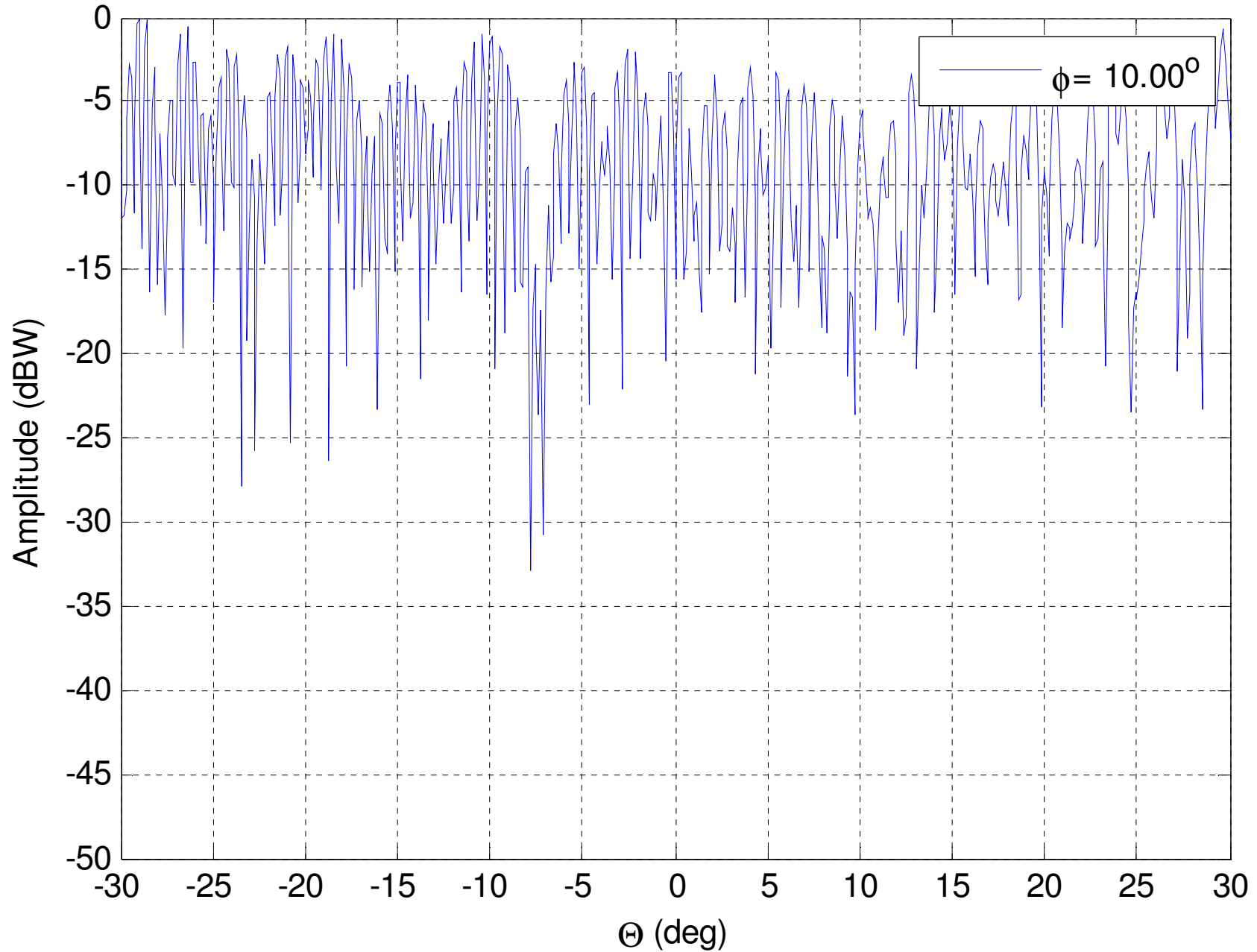
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -13.50 dBW, Date: 15-Dec-2011



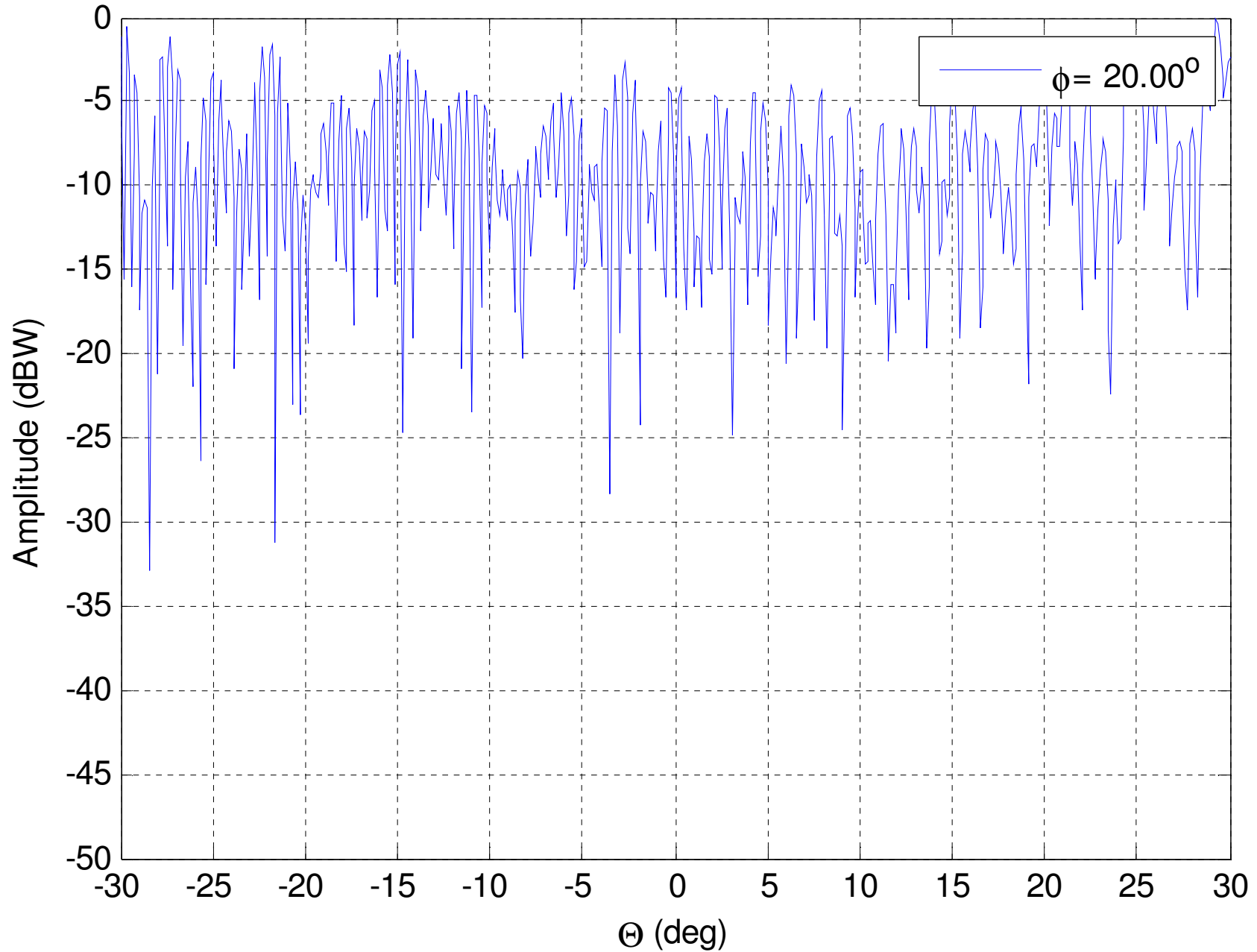
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -11.74 dBW, Date: 15-Dec-2011



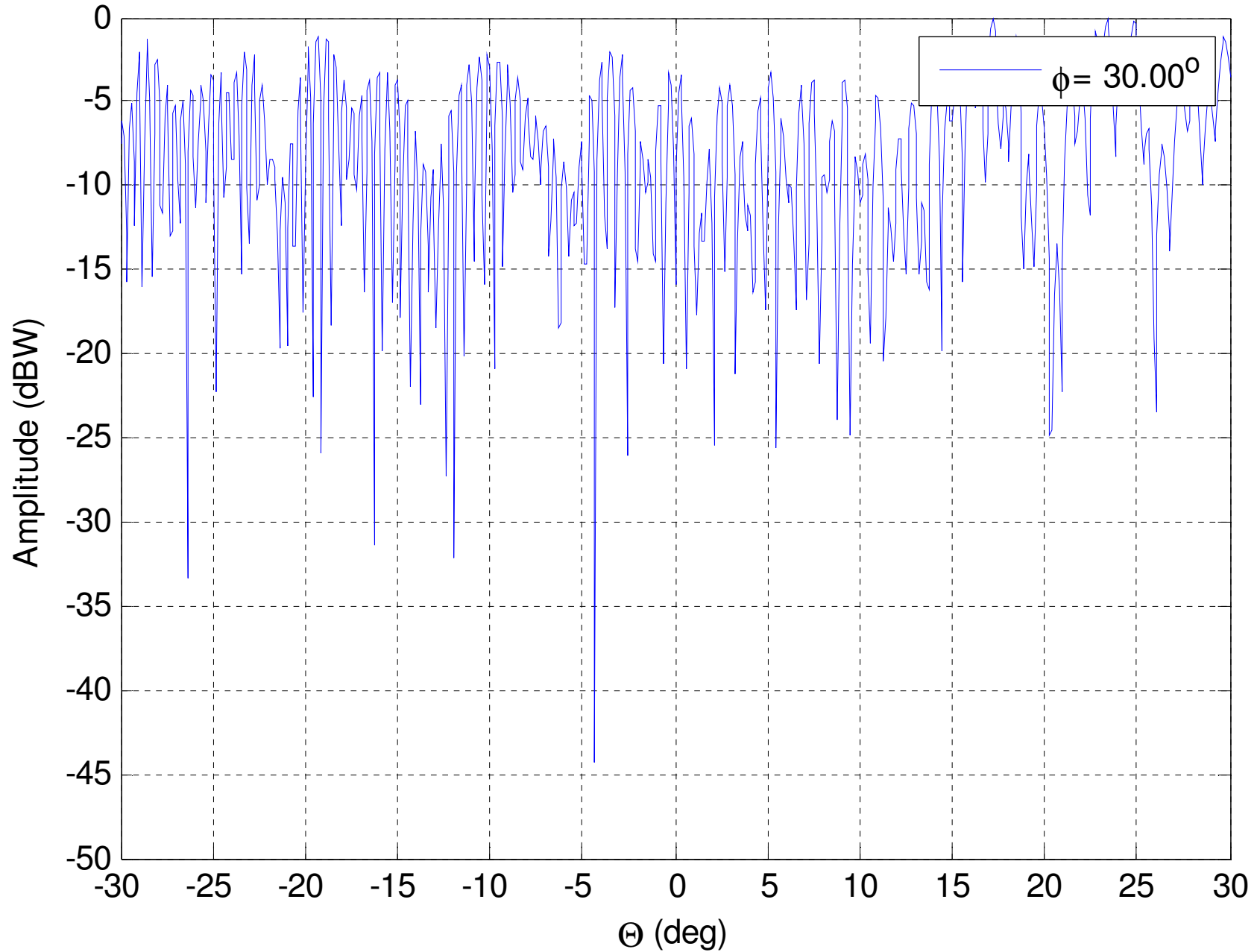
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -10.67 dBW, Date: 15-Dec-2011



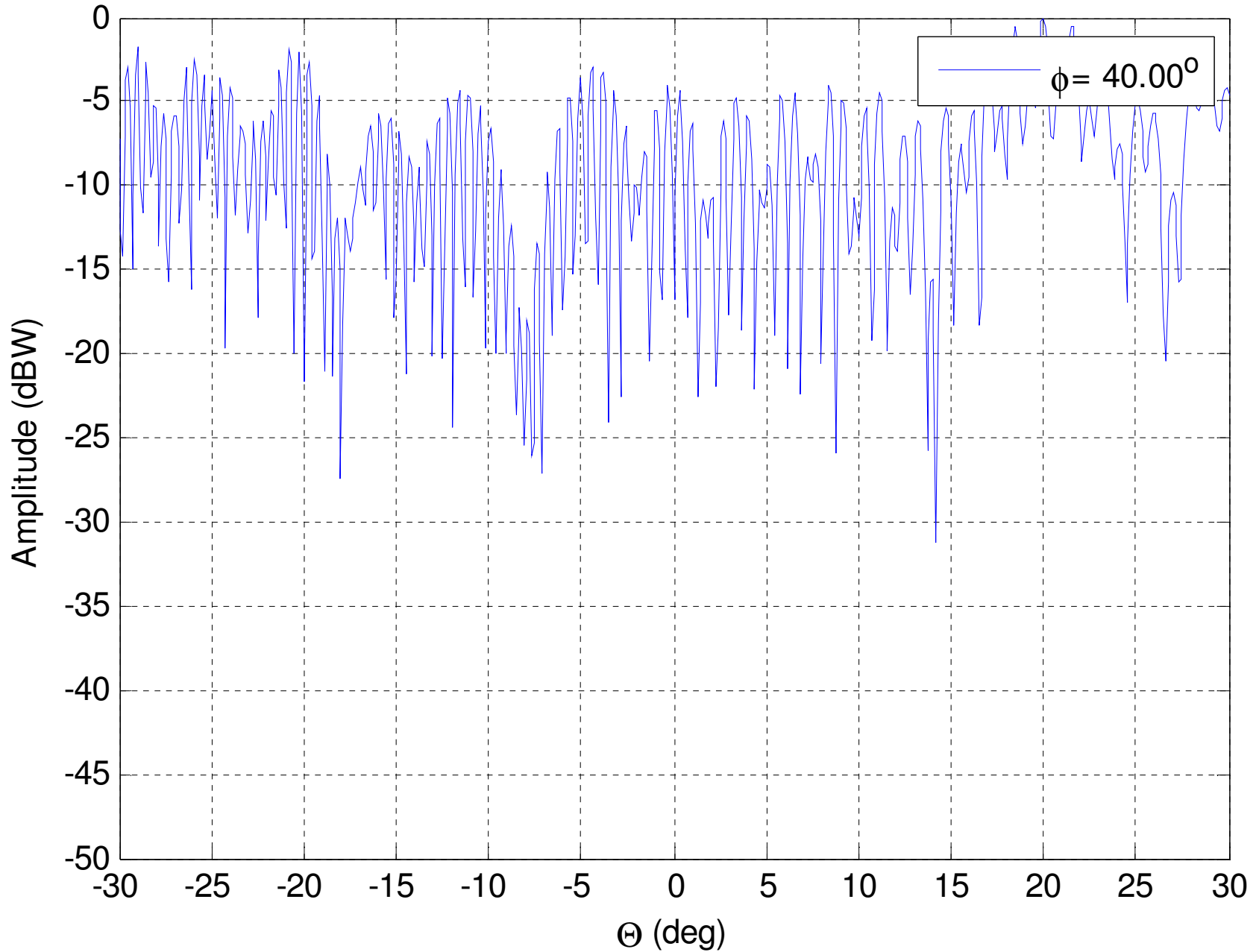
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -11.34 dBW, Date: 15-Dec-2011



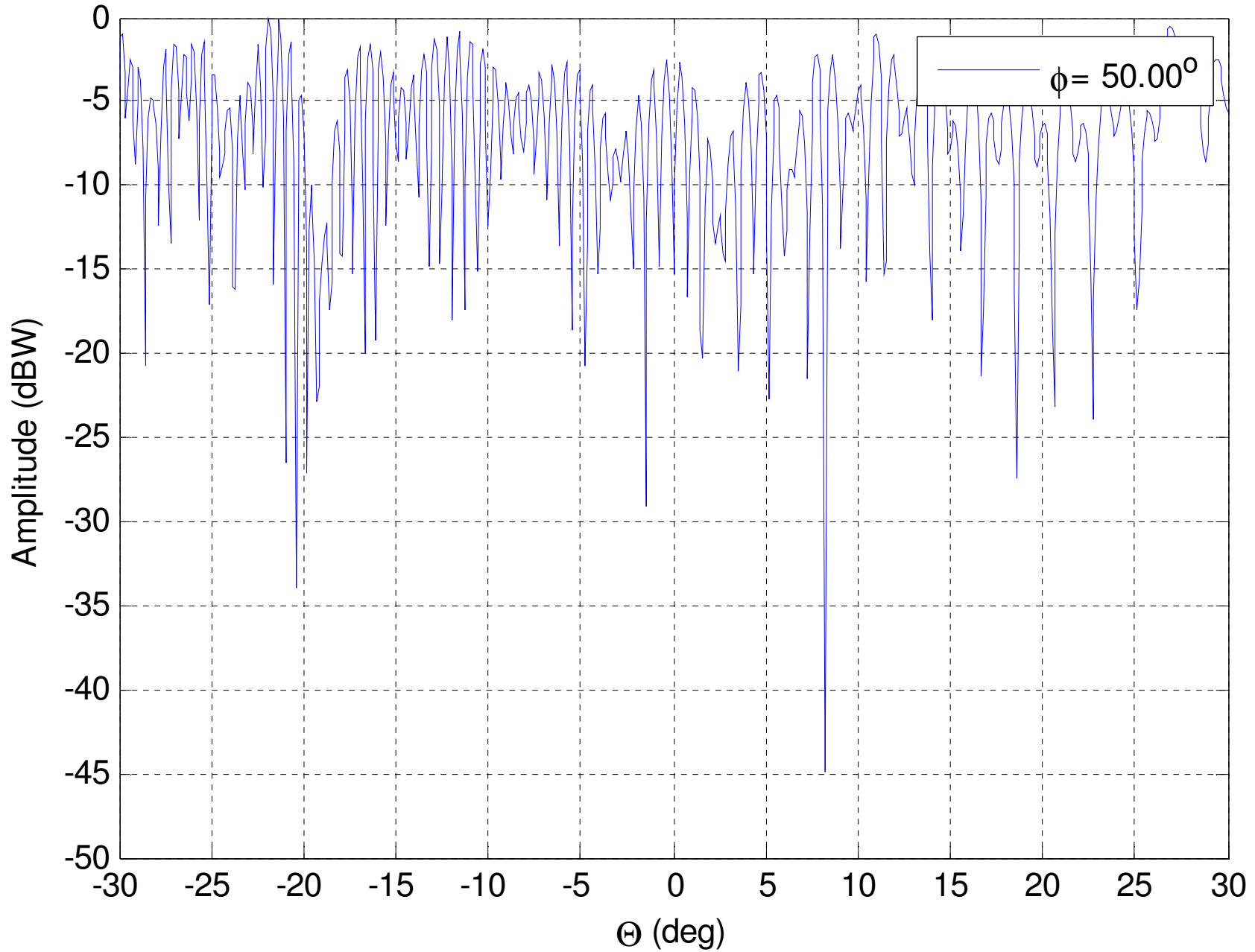
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -10.43 dBW, Date: 15-Dec-2011



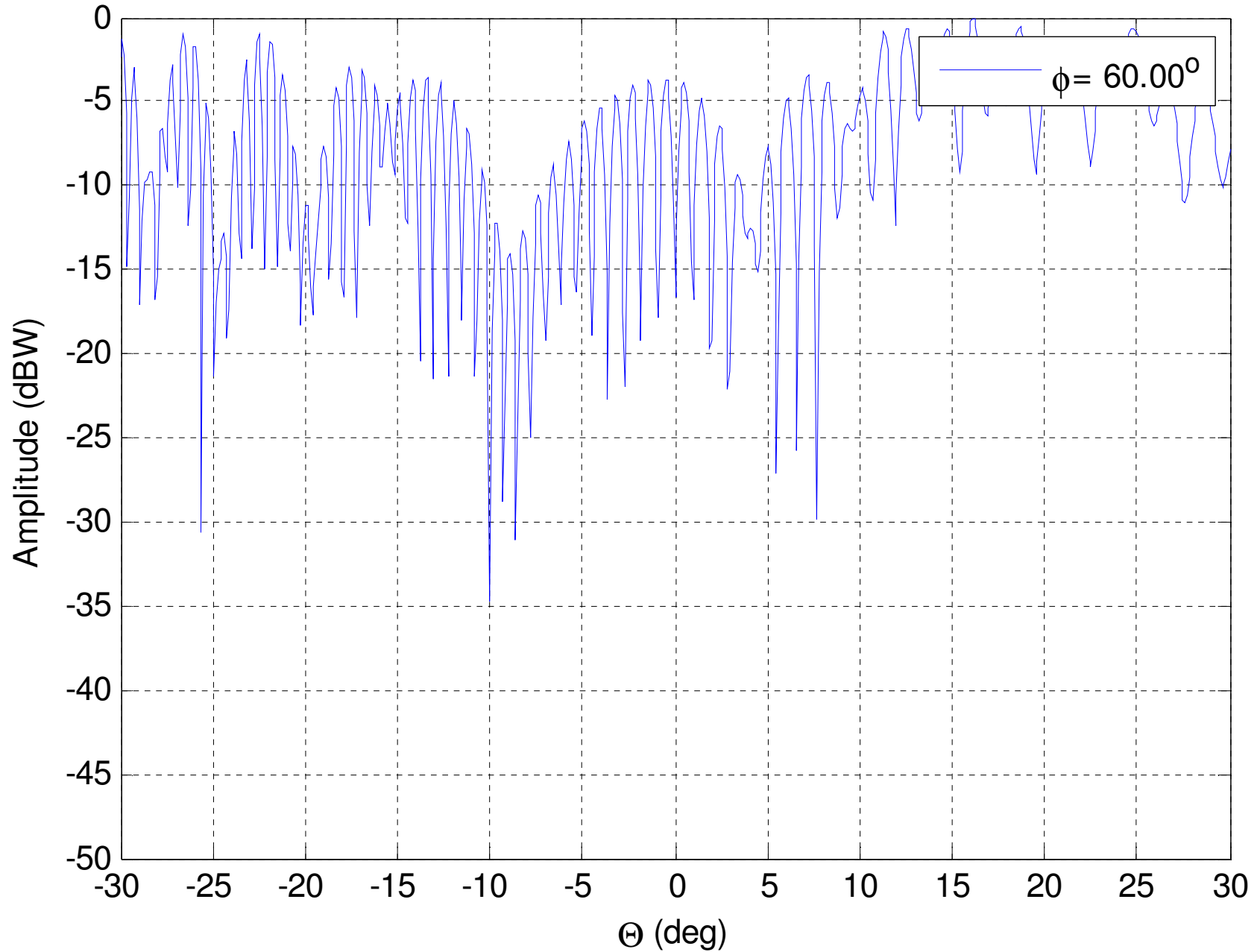
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.95 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

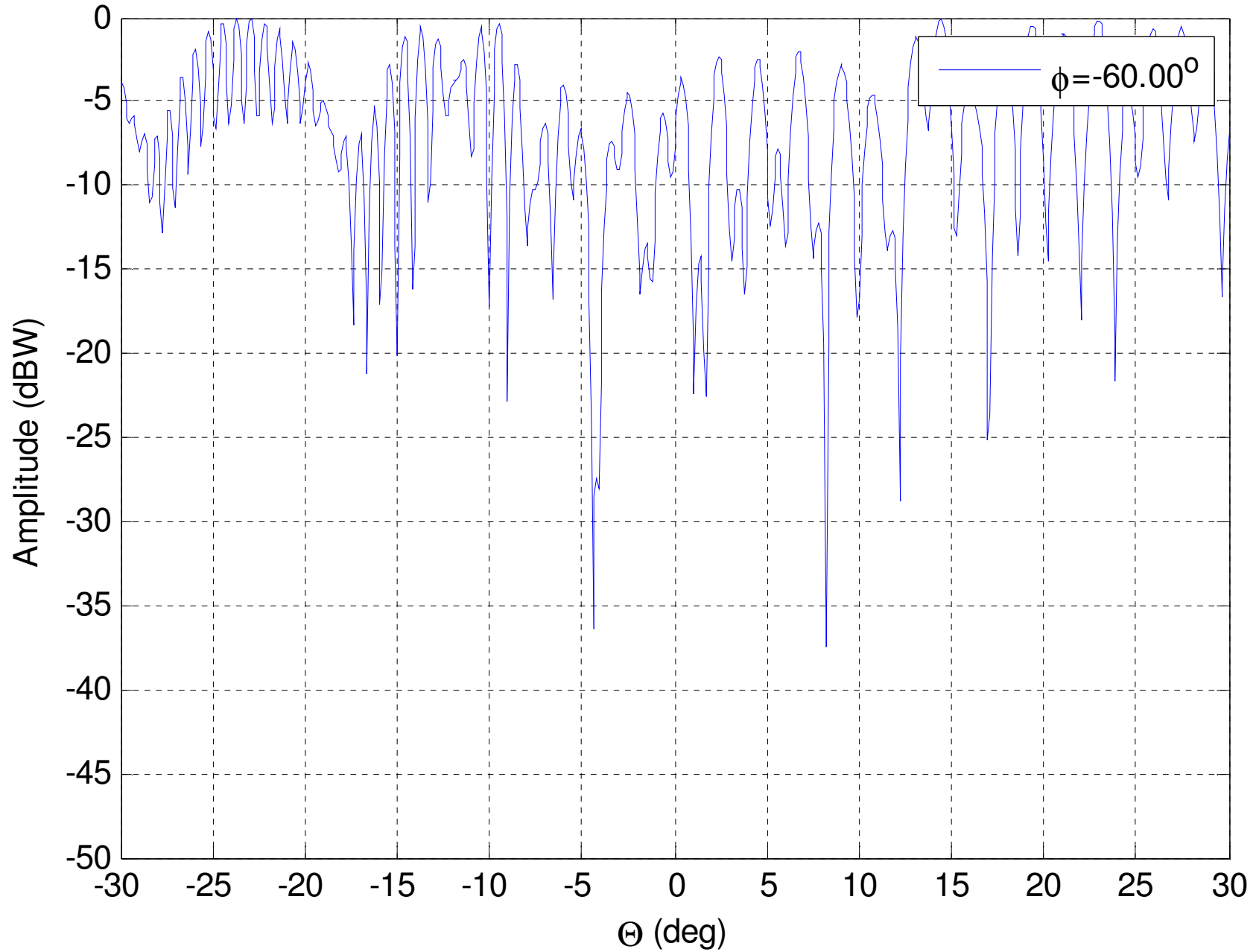
Input file: tx-17.3-lhcp-60.cut, Peak: -10.65 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

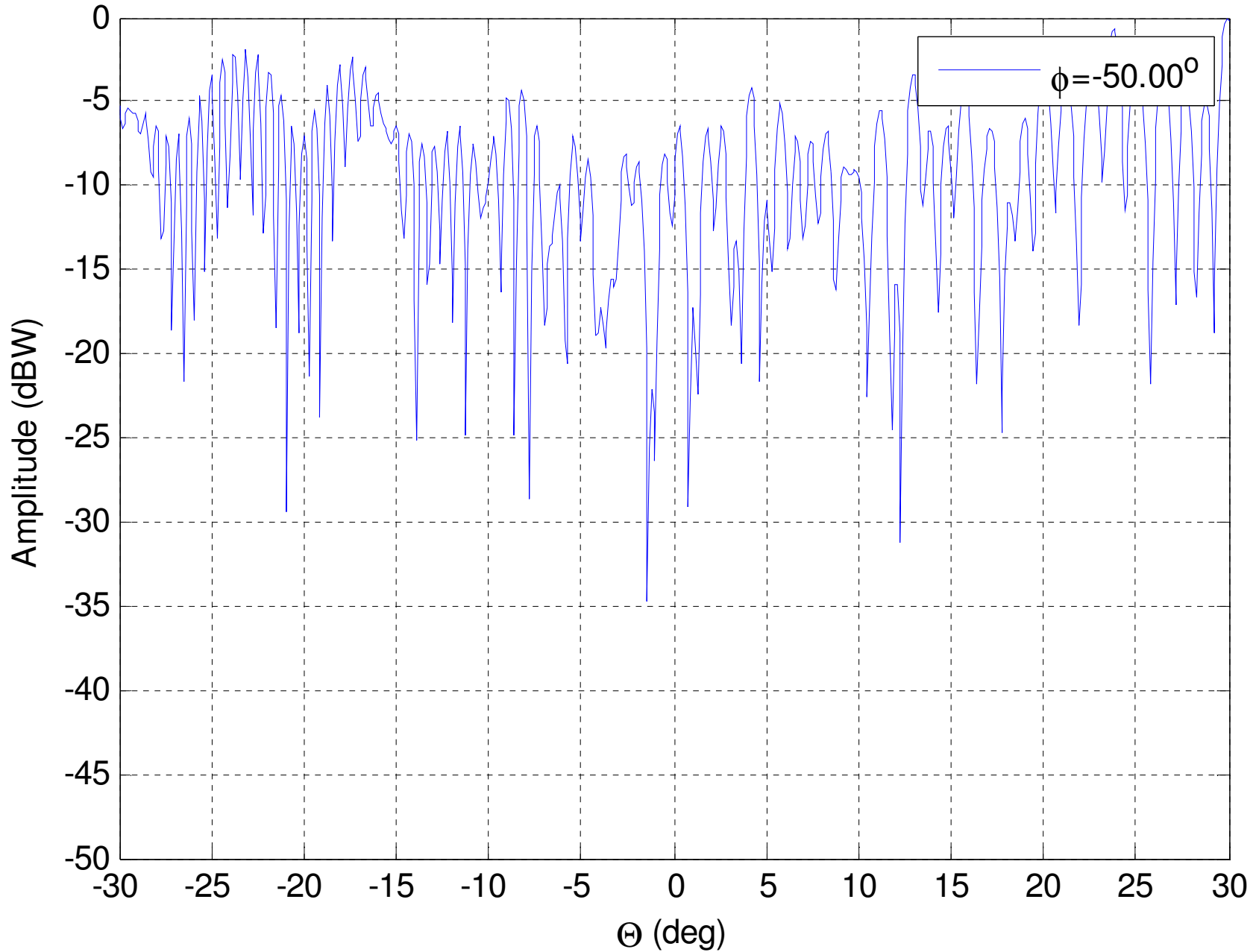
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -12.26 dBW, Date: 15-Dec-2011



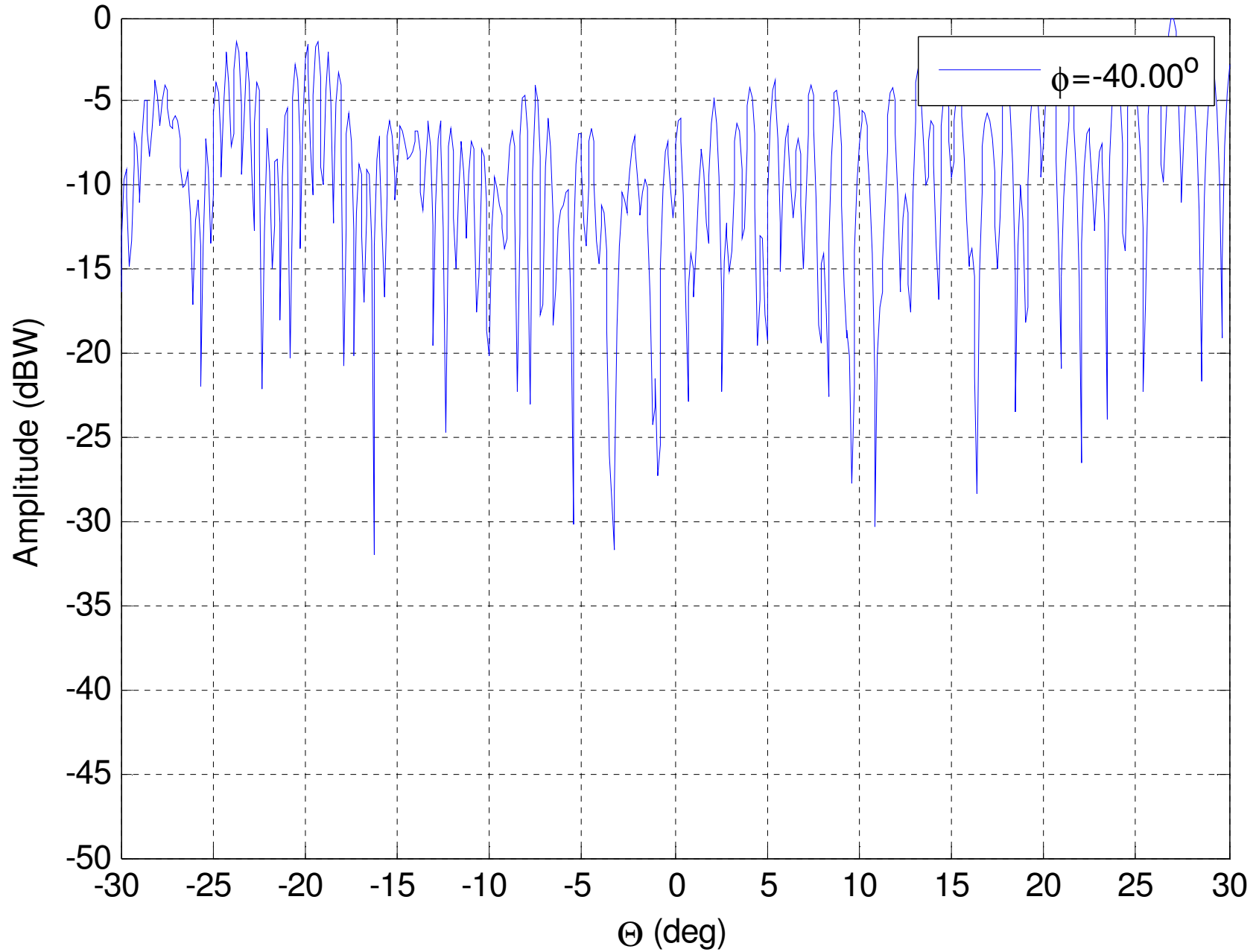
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -9.29 dBW, Date: 15-Dec-2011



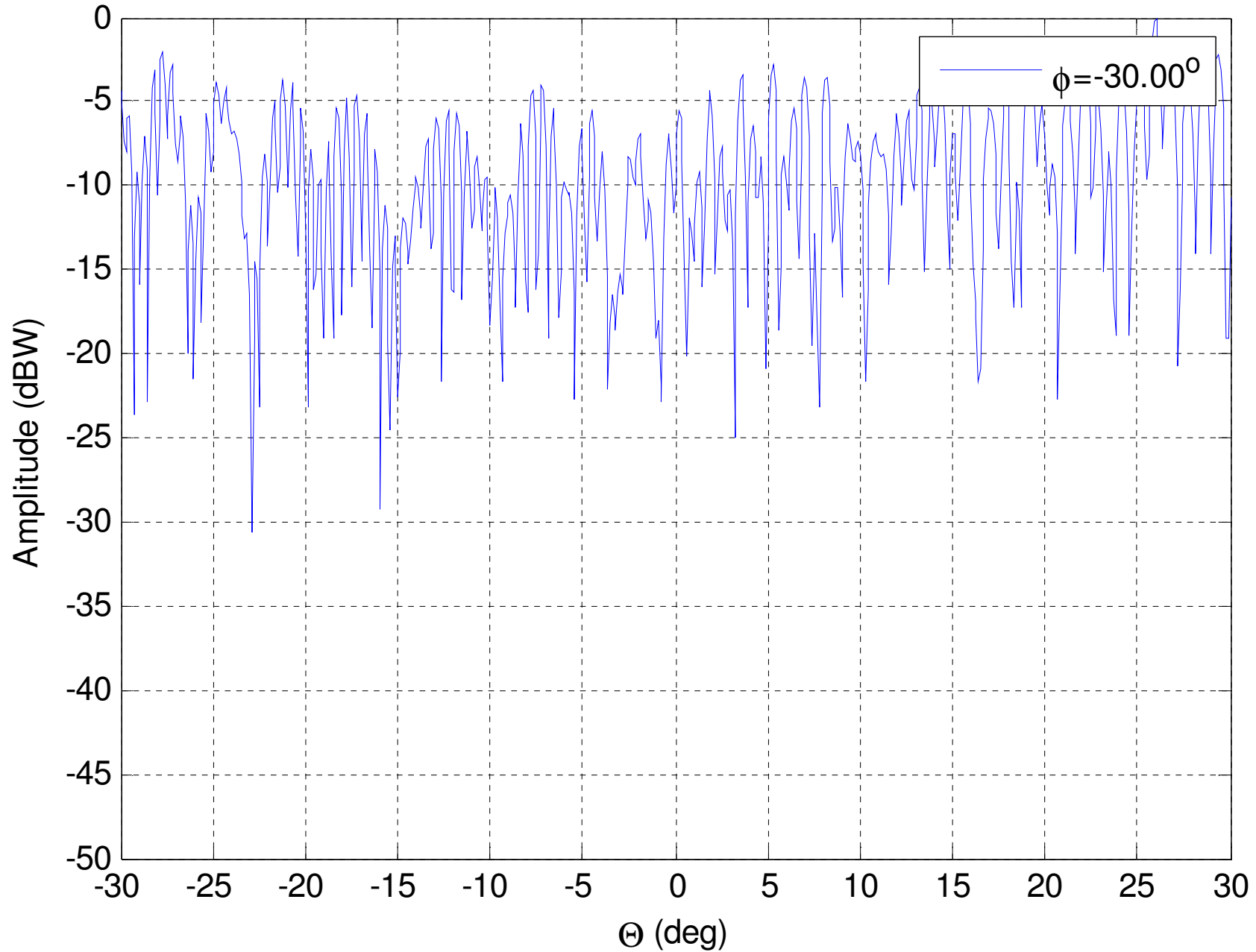
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.69 dBW, Date: 15-Dec-2011



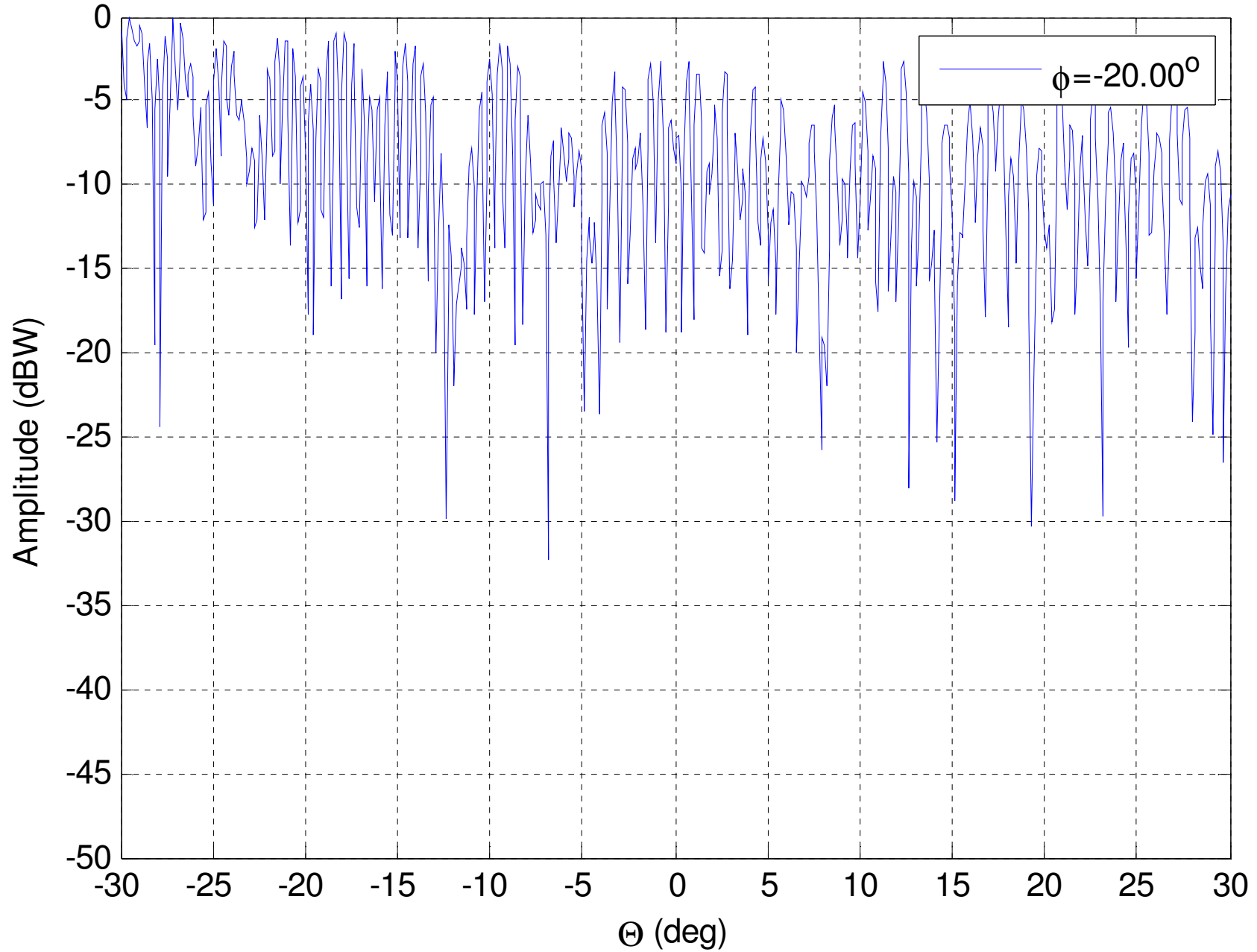
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -9.98 dBW, Date: 15-Dec-2011



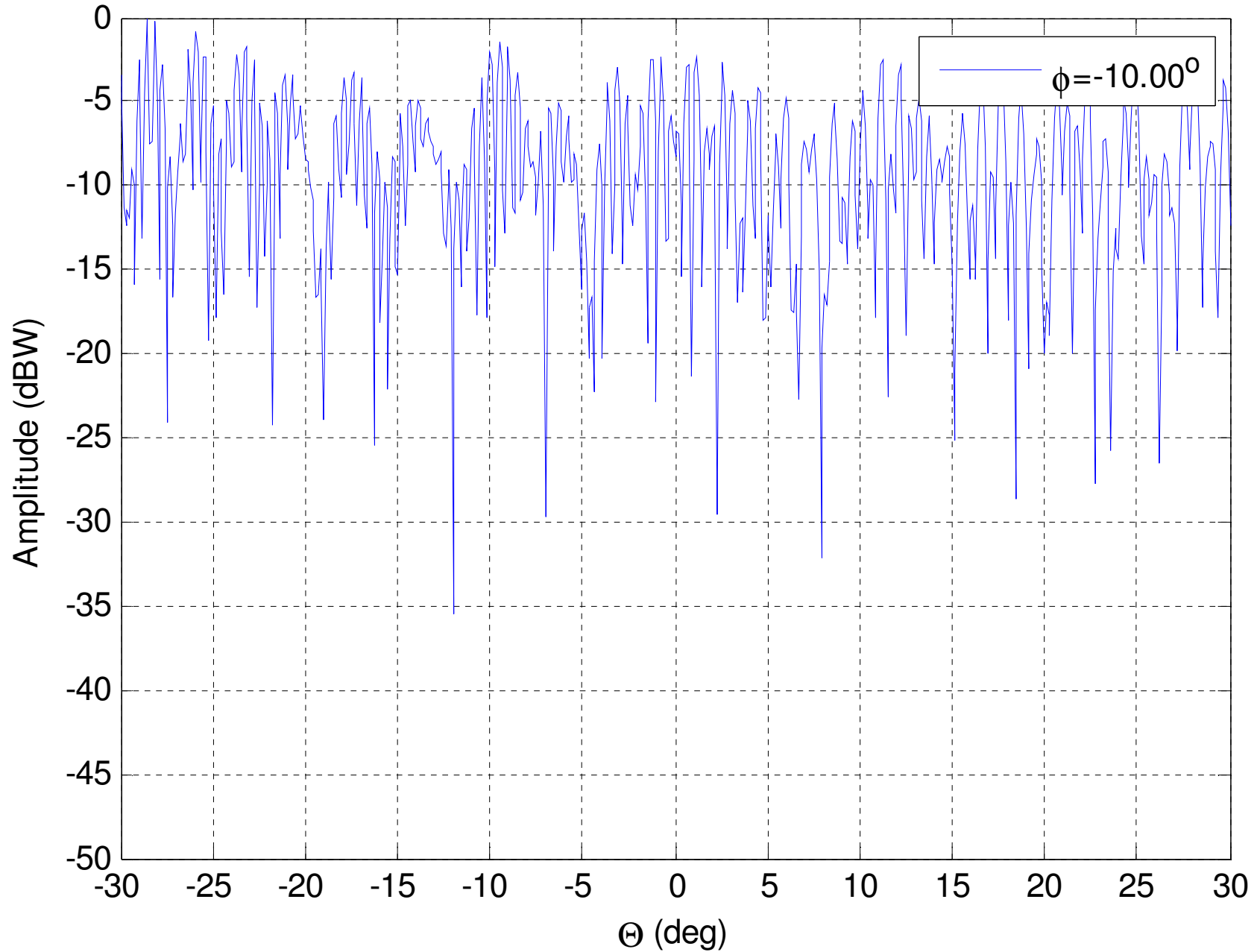
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -11.68 dBW, Date: 15-Dec-2011



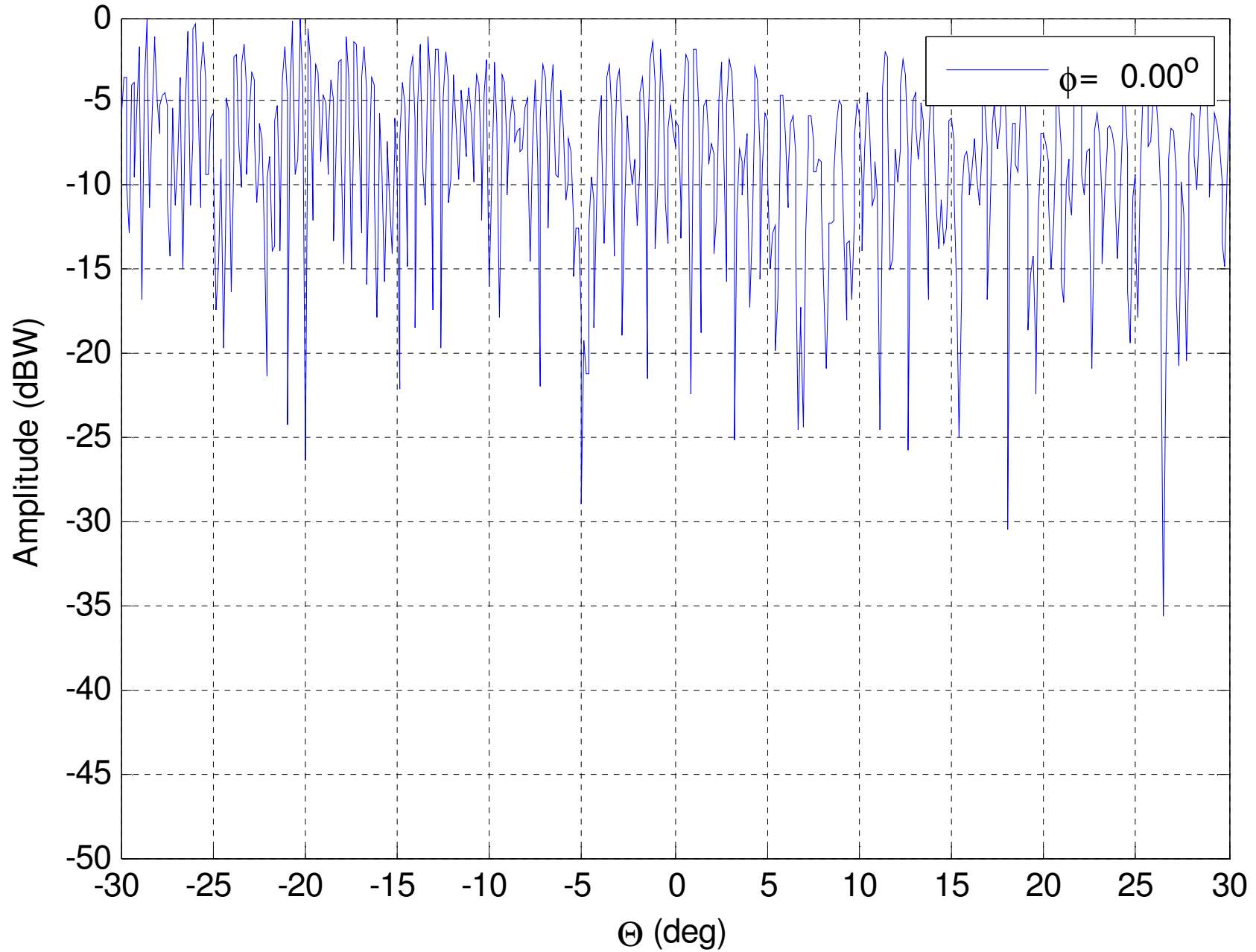
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -12.09 dBW, Date: 15-Dec-2011



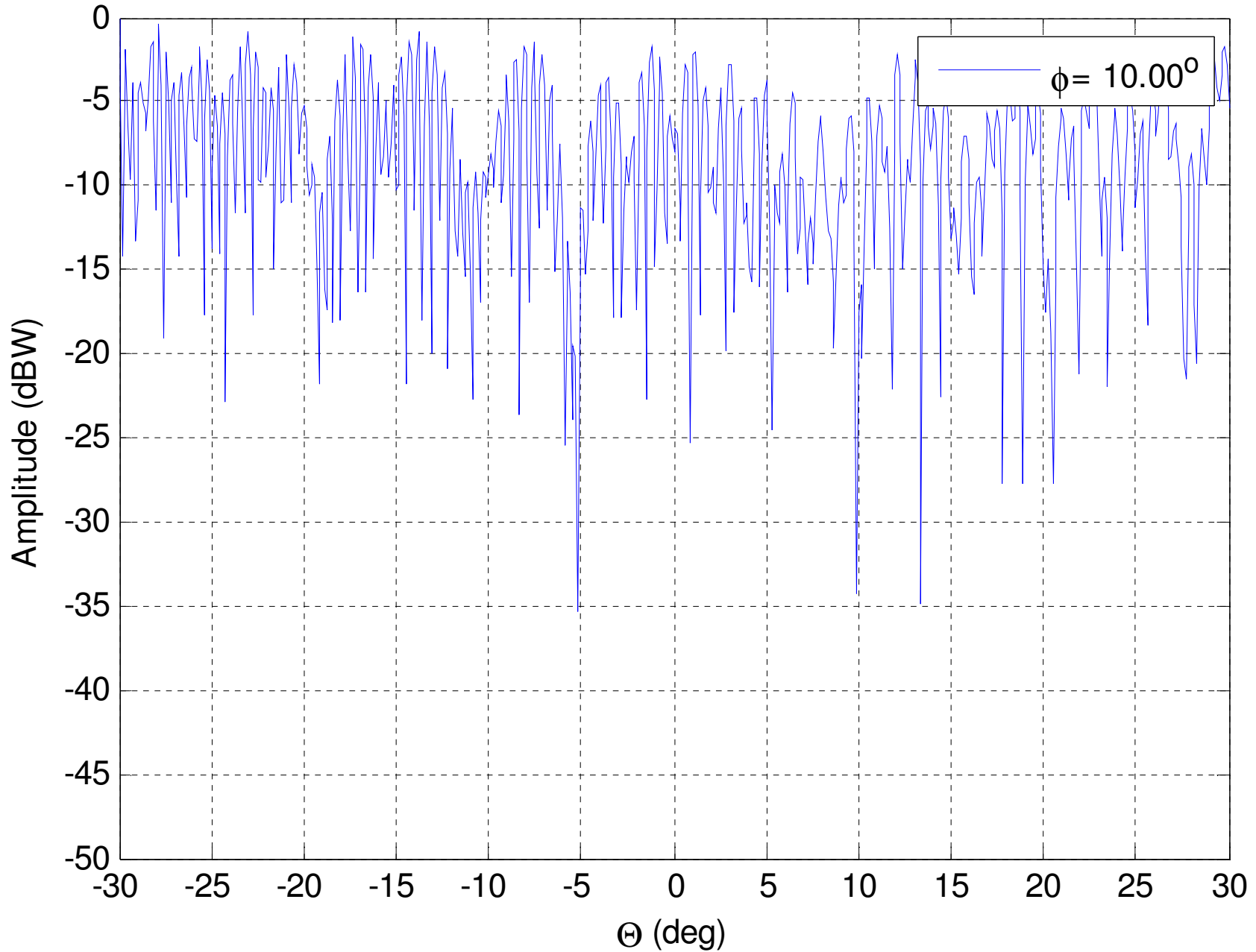
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -12.74 dBW, Date: 15-Dec-2011



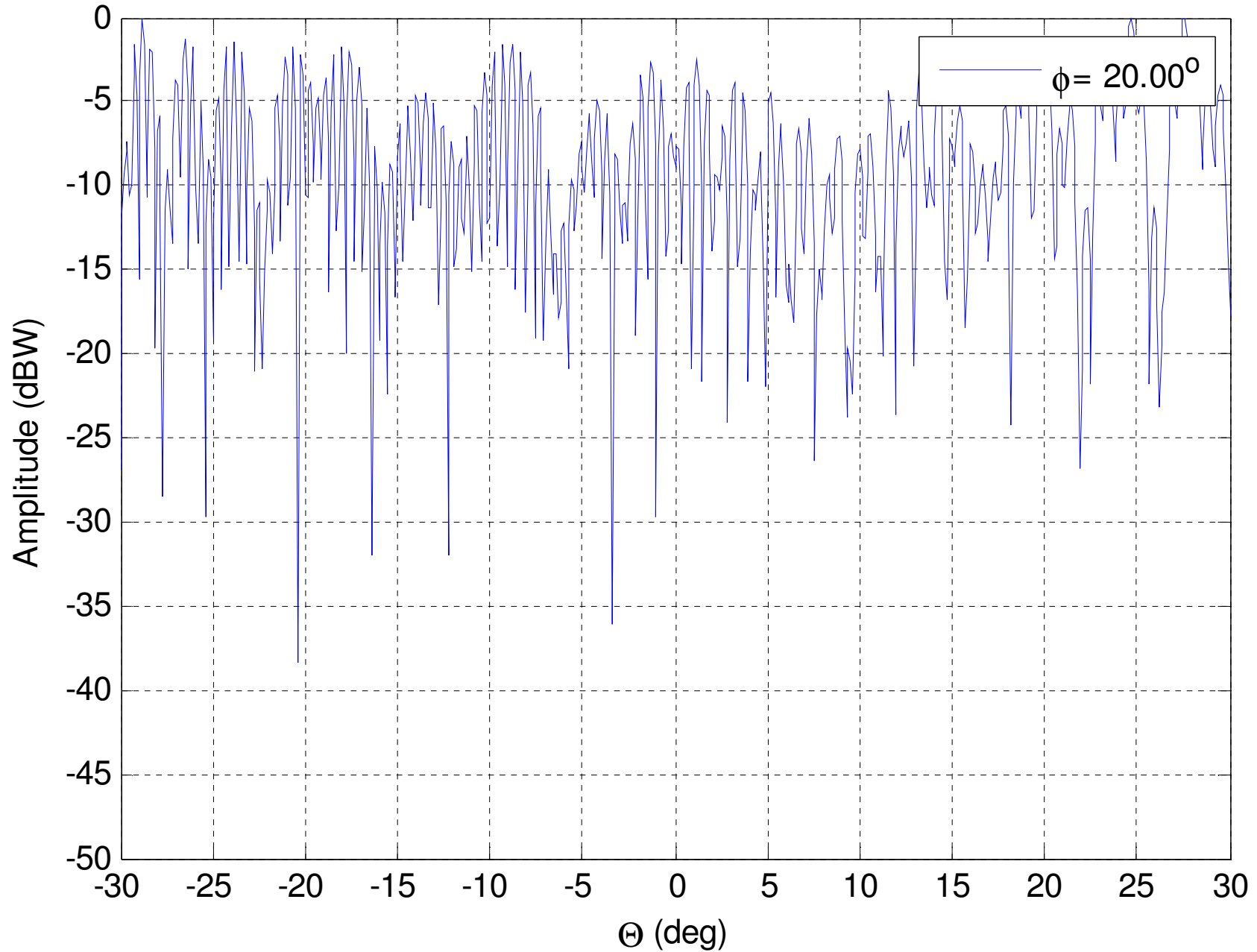
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -12.37 dBW, Date: 15-Dec-2011



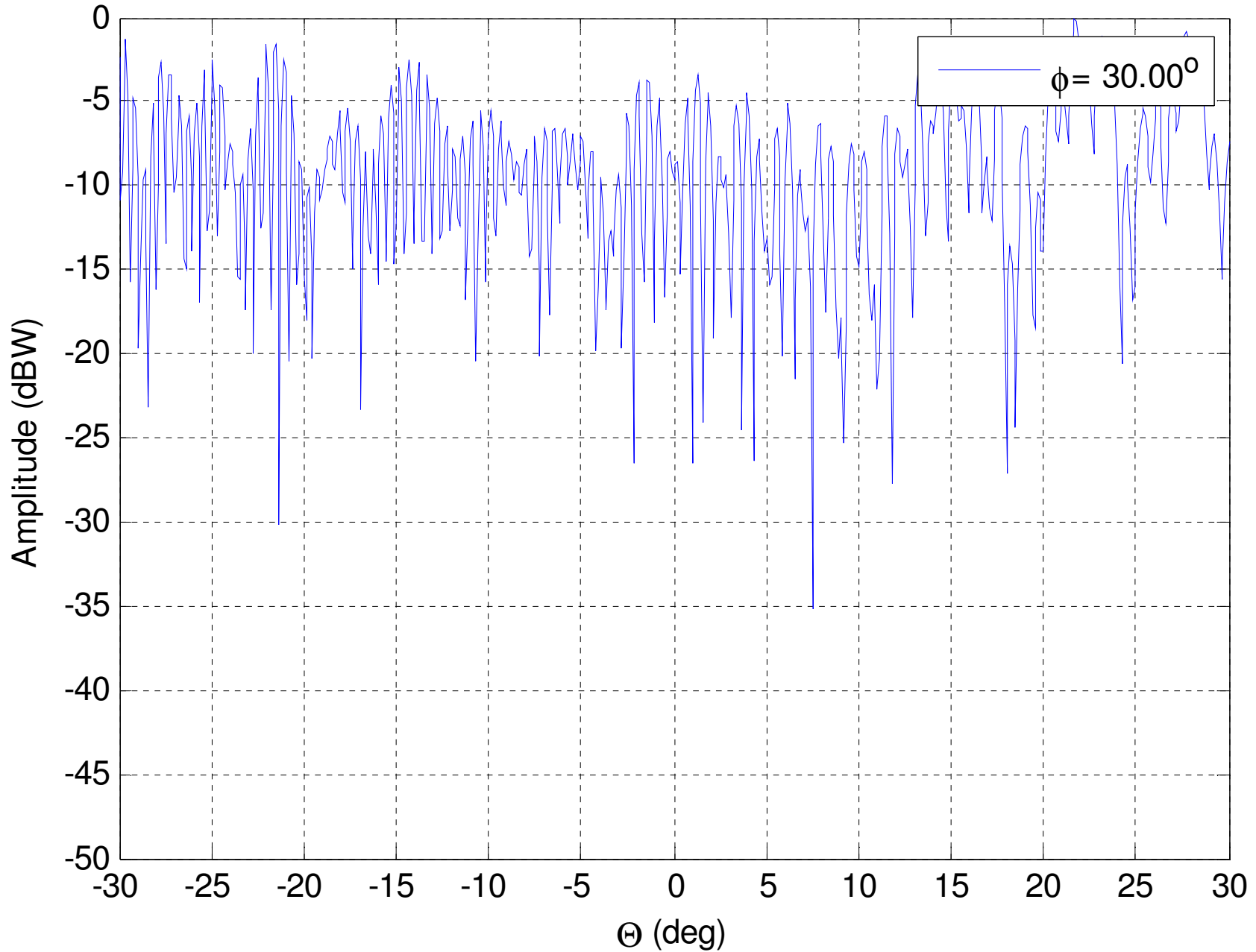
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -11.48 dBW, Date: 15-Dec-2011



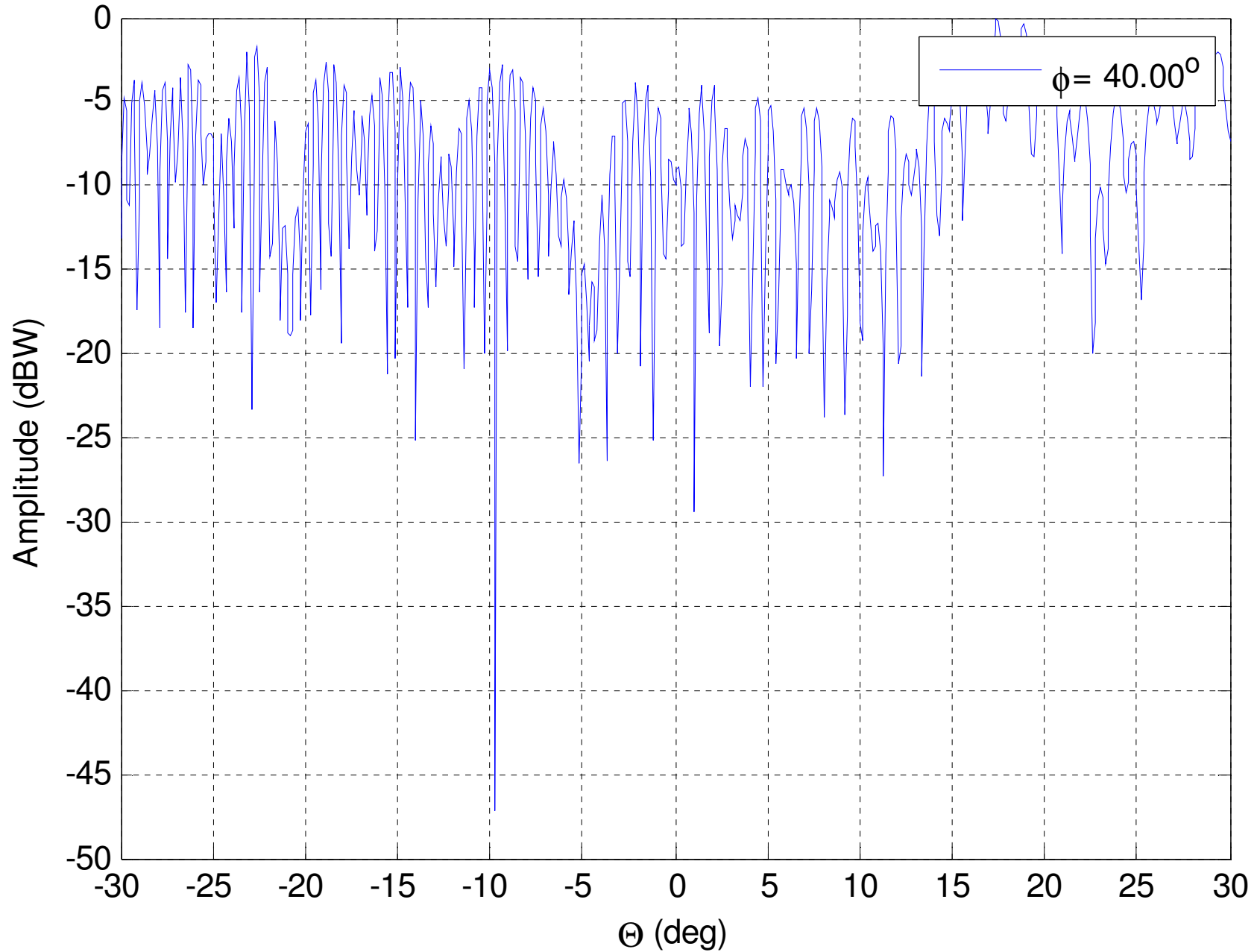
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.64 dBW, Date: 15-Dec-2011



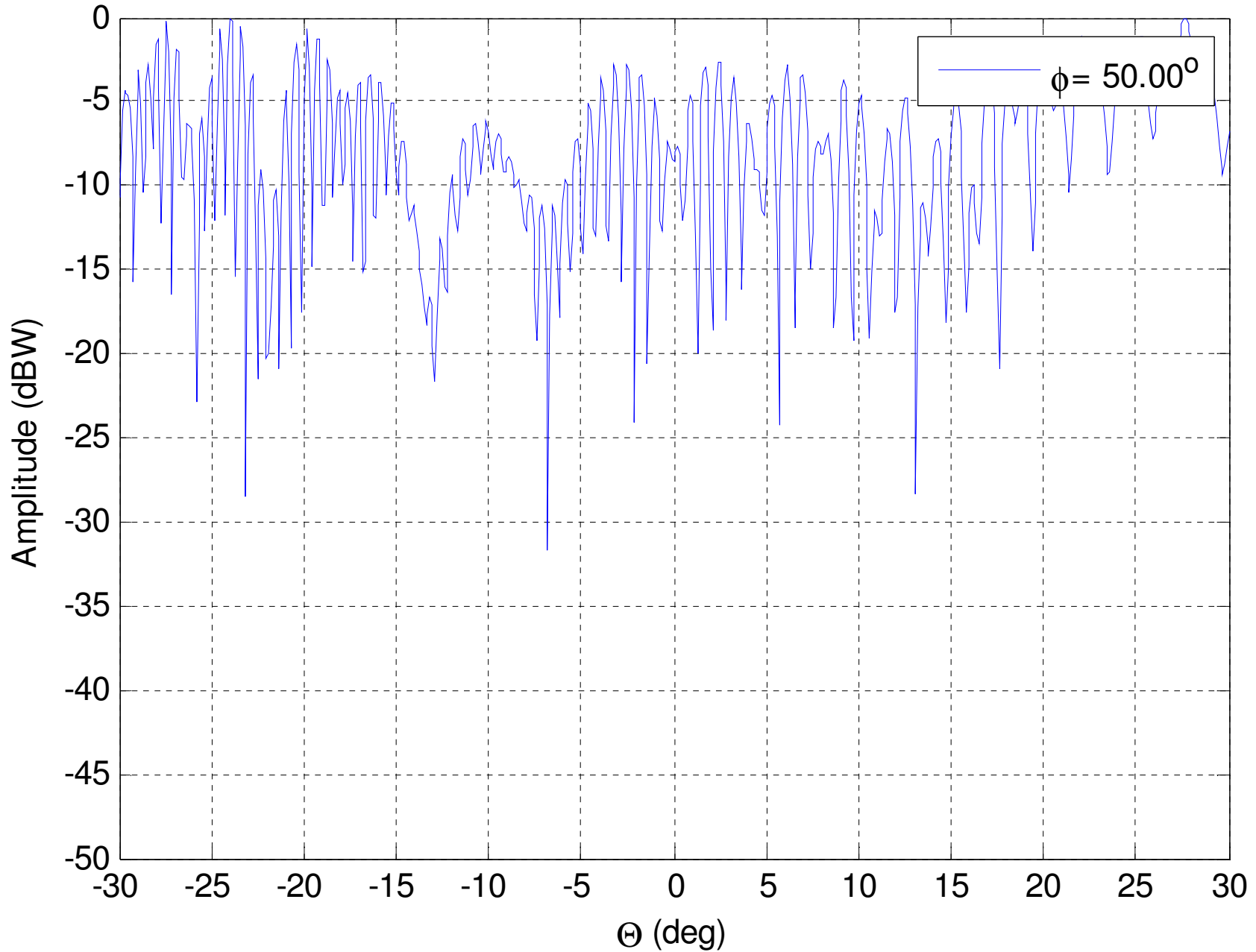
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.41 dBW, Date: 15-Dec-2011



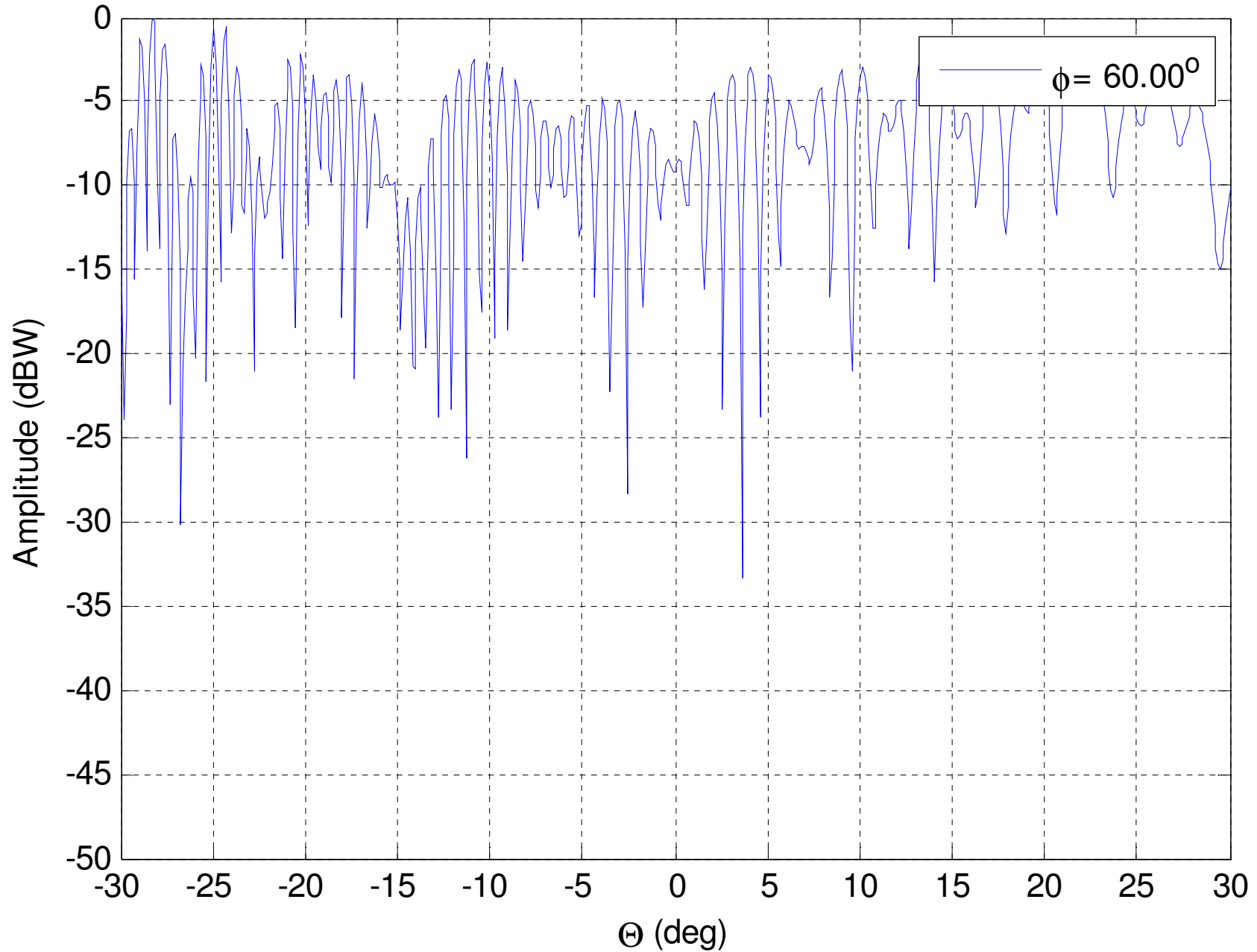
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.78 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

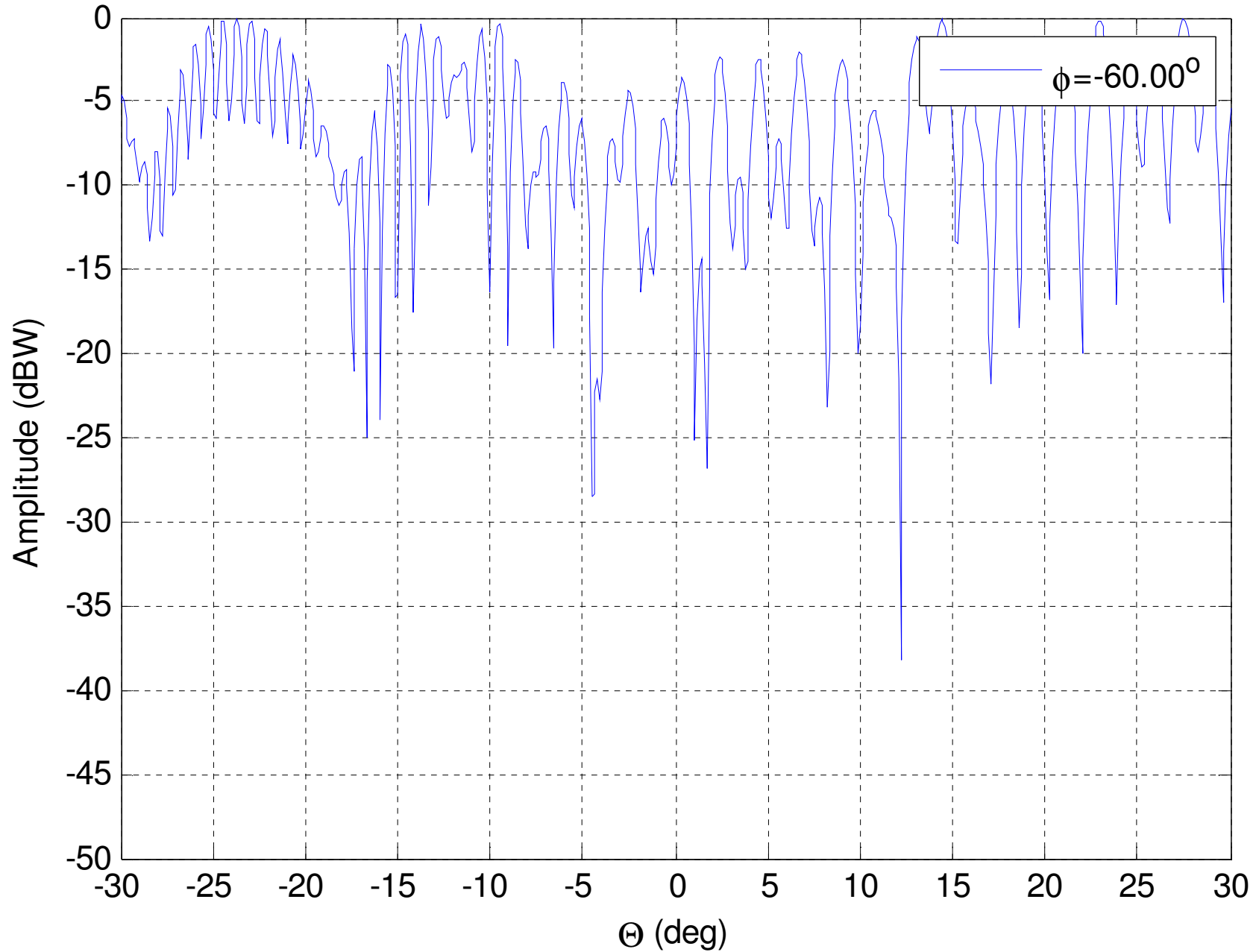
Input file: tx-17.5-rhcp-60.cut, Peak: -11.20 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

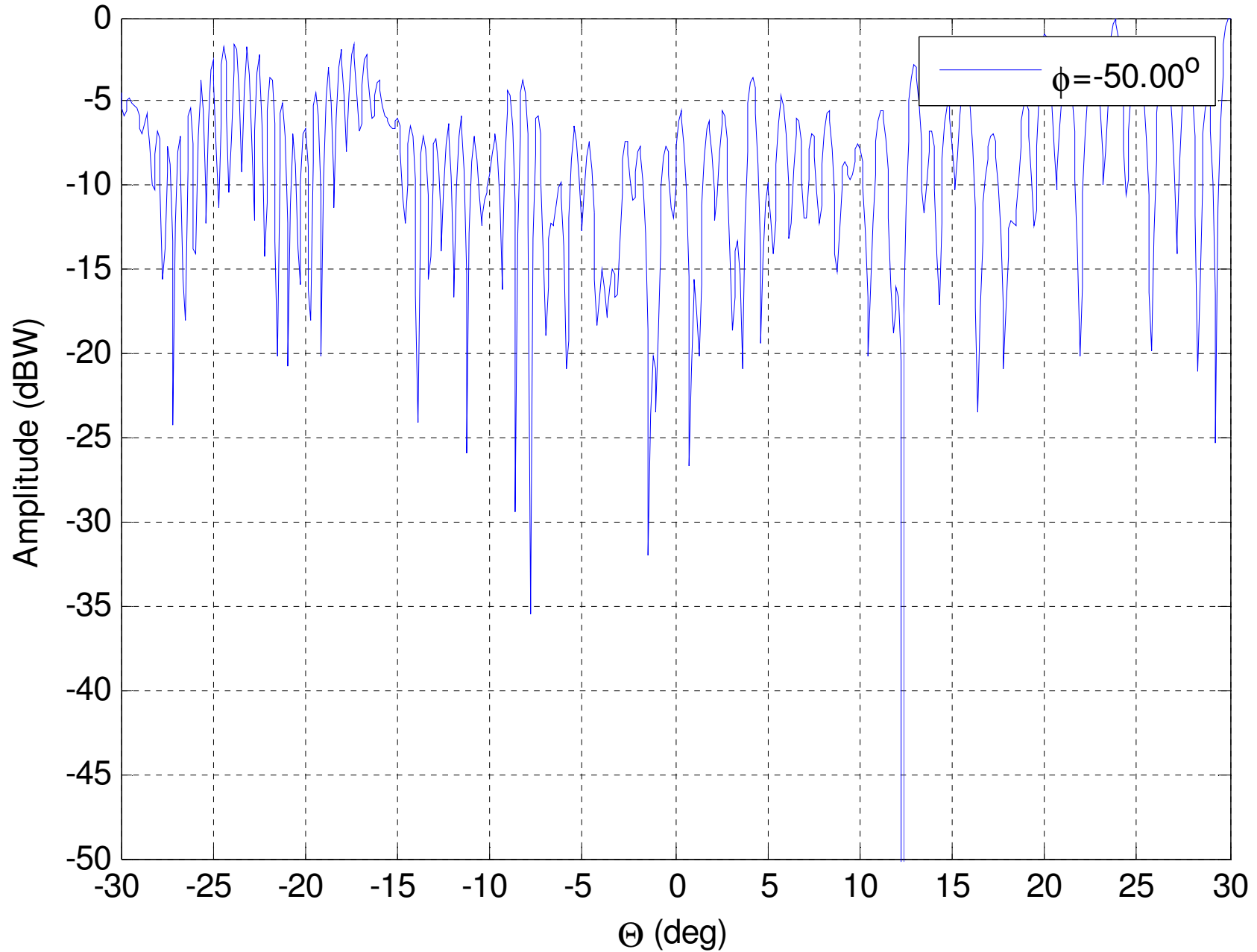
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -12.11 dBW, Date: 15-Dec-2011



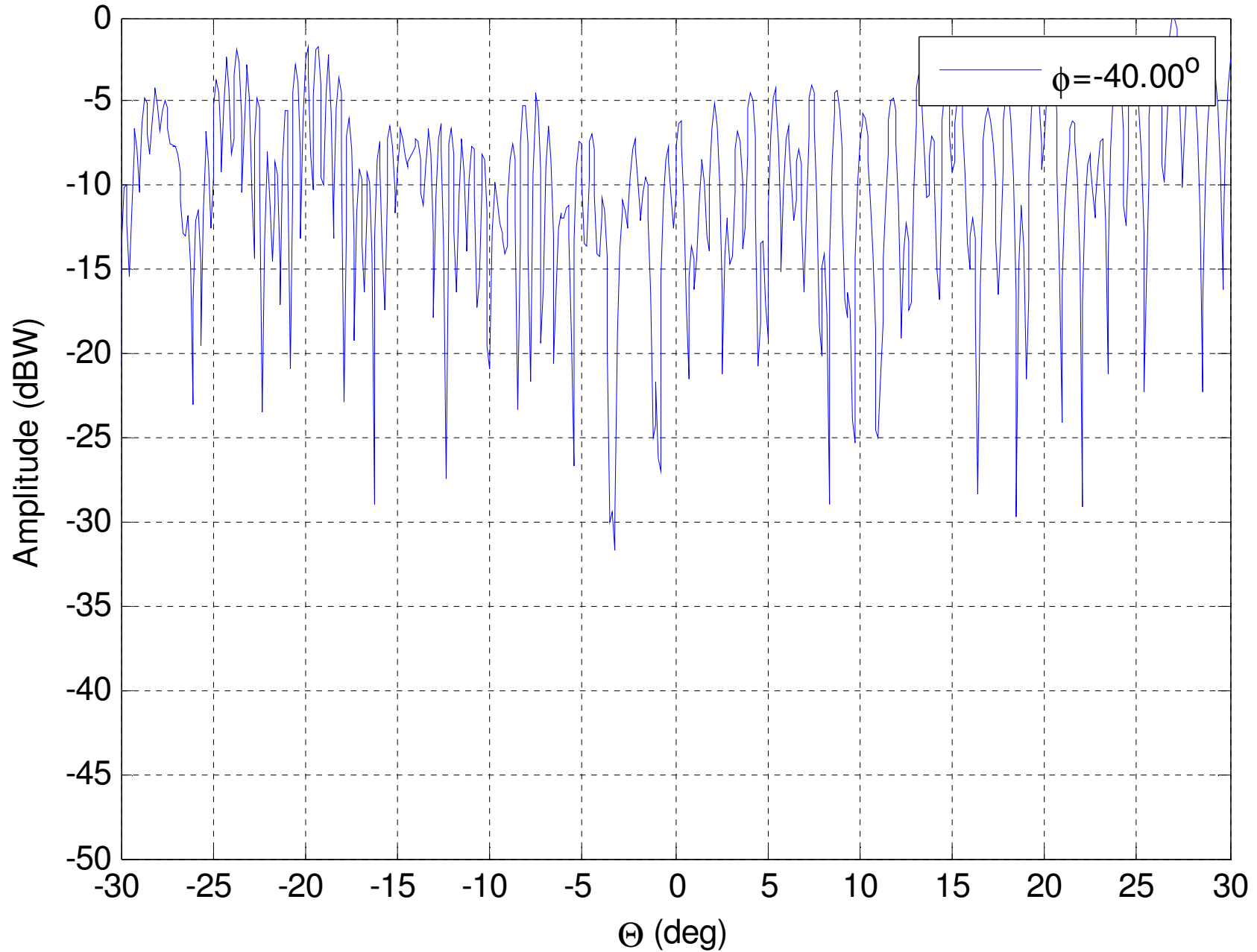
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -9.82 dBW, Date: 15-Dec-2011



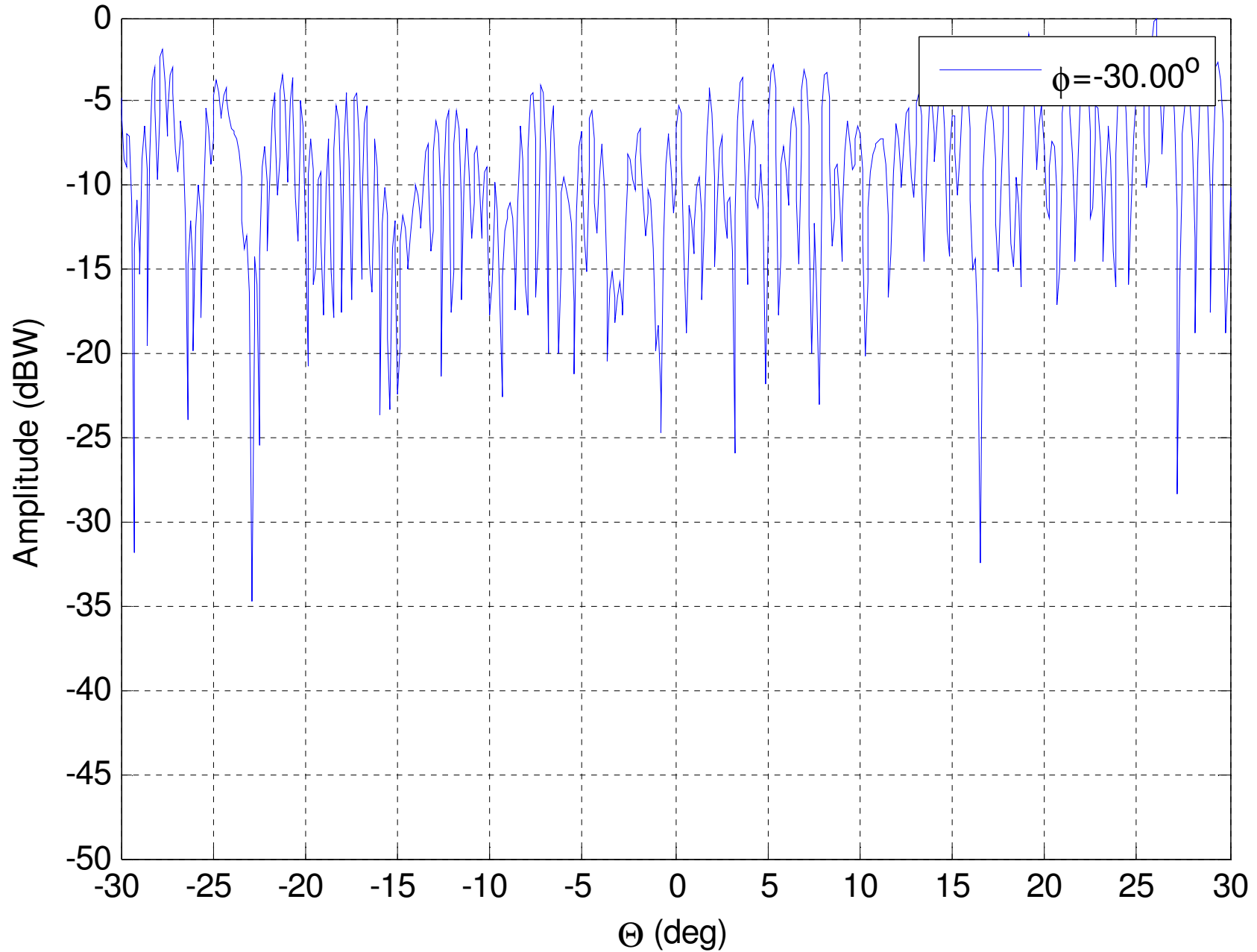
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.30 dBW, Date: 15-Dec-2011



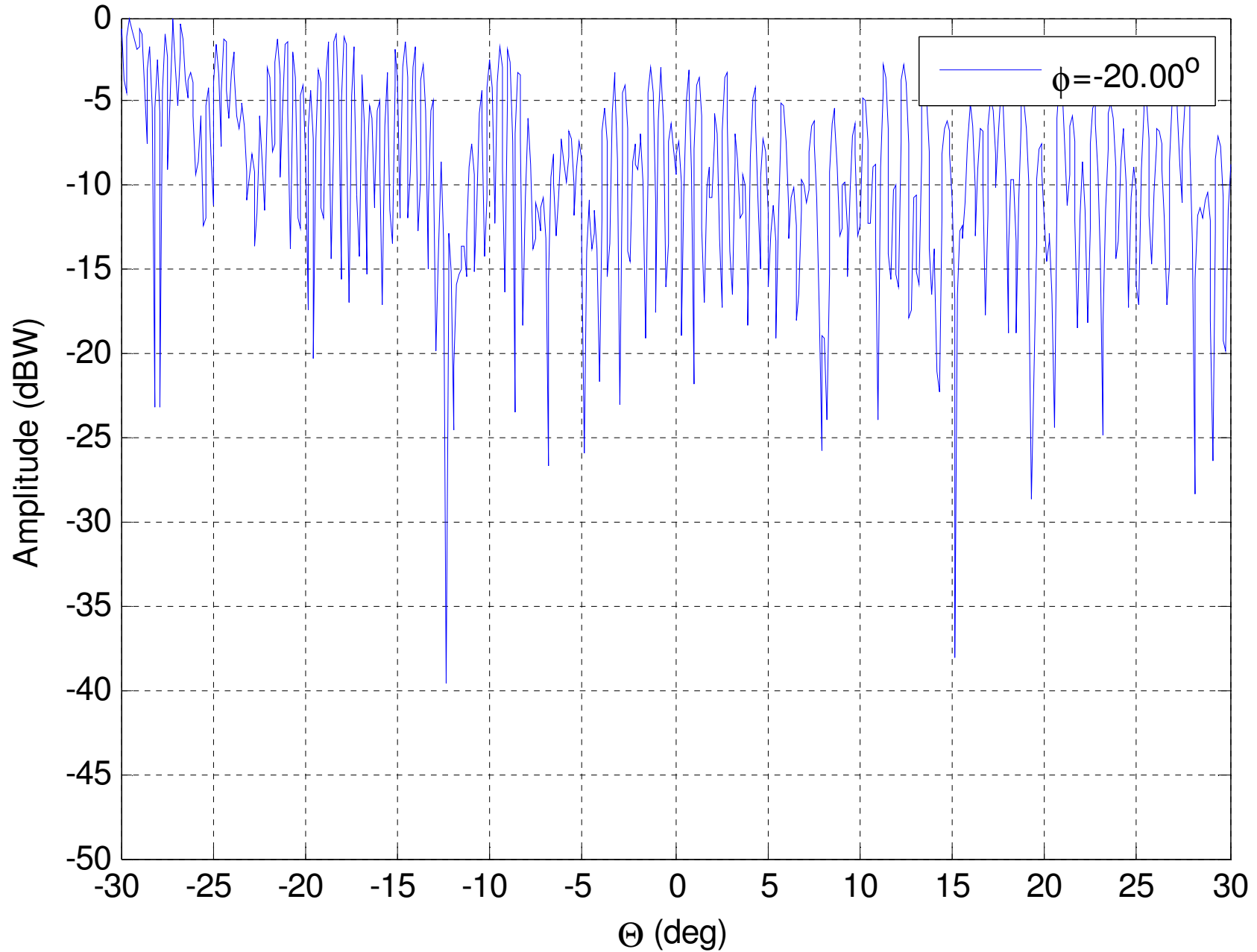
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.04 dBW, Date: 15-Dec-2011



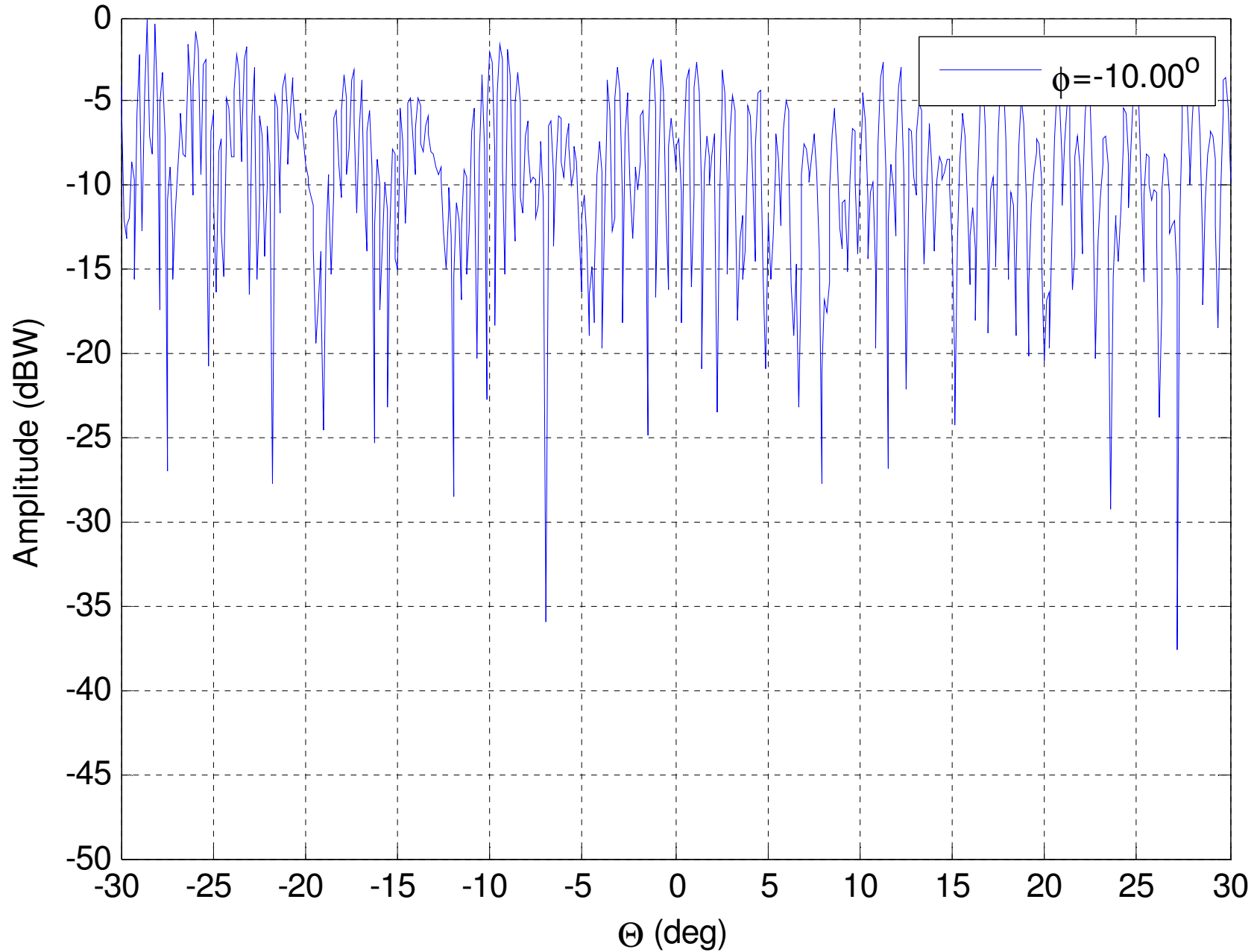
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -11.50 dBW, Date: 15-Dec-2011



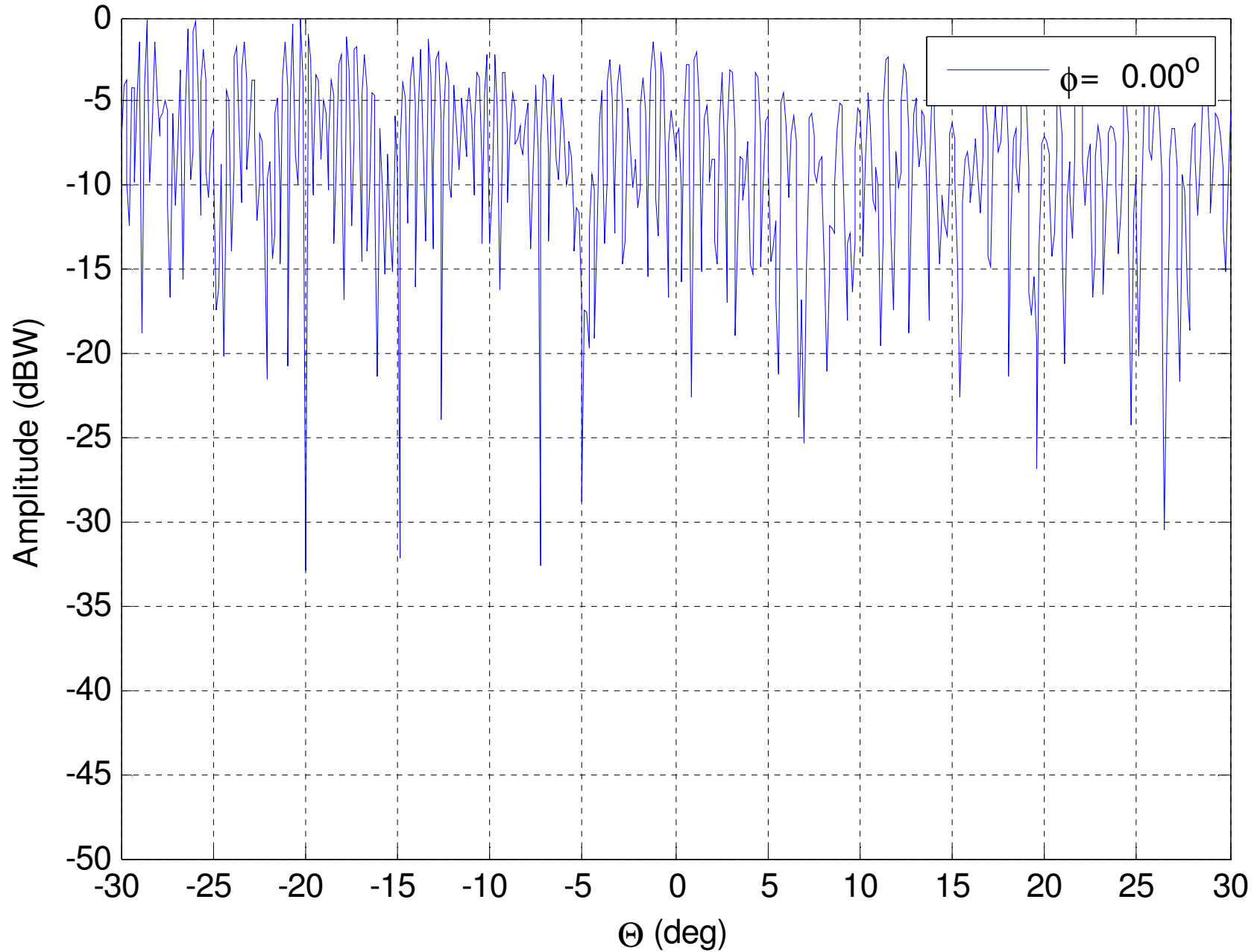
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -11.85 dBW, Date: 15-Dec-2011



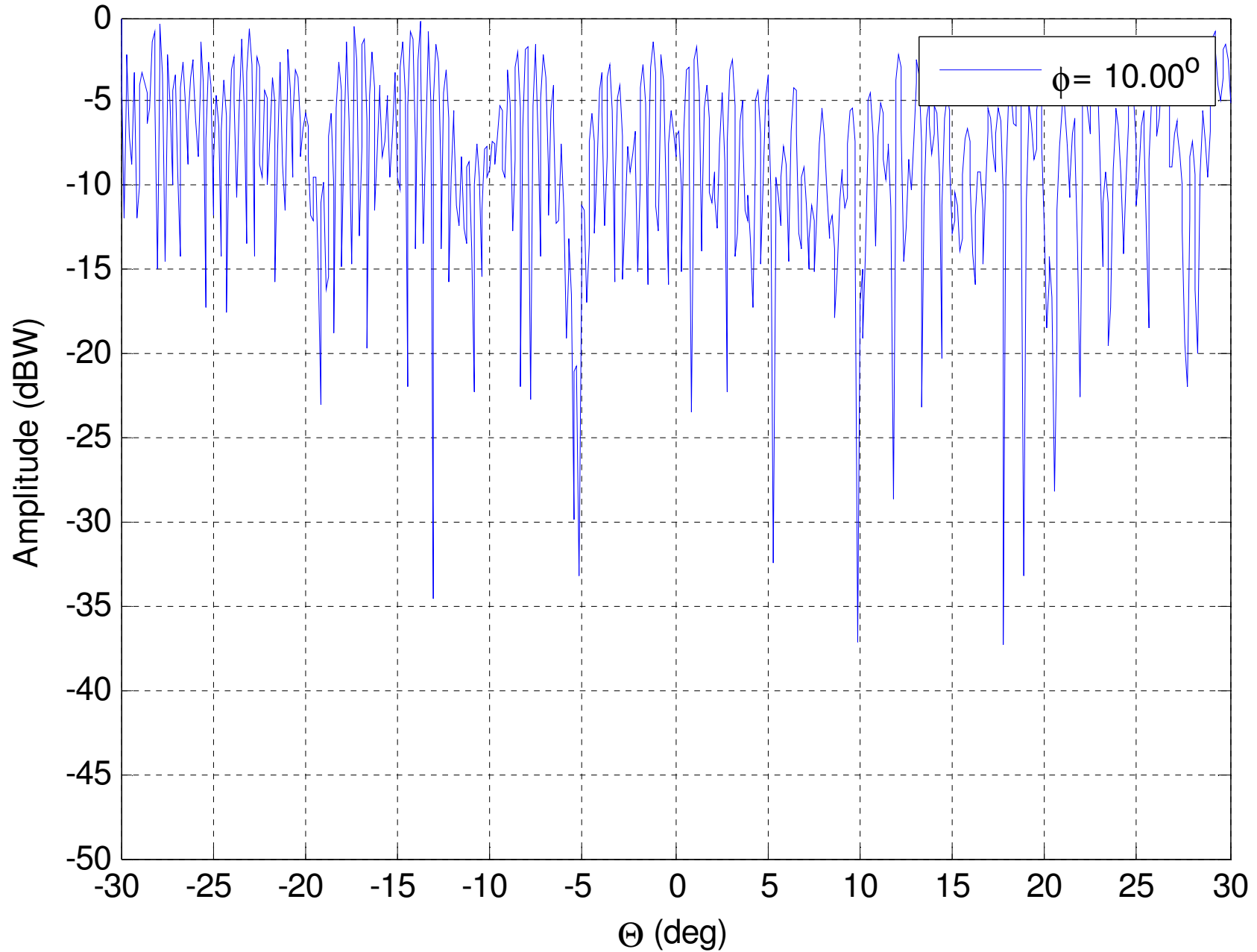
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -12.56 dBW, Date: 15-Dec-2011



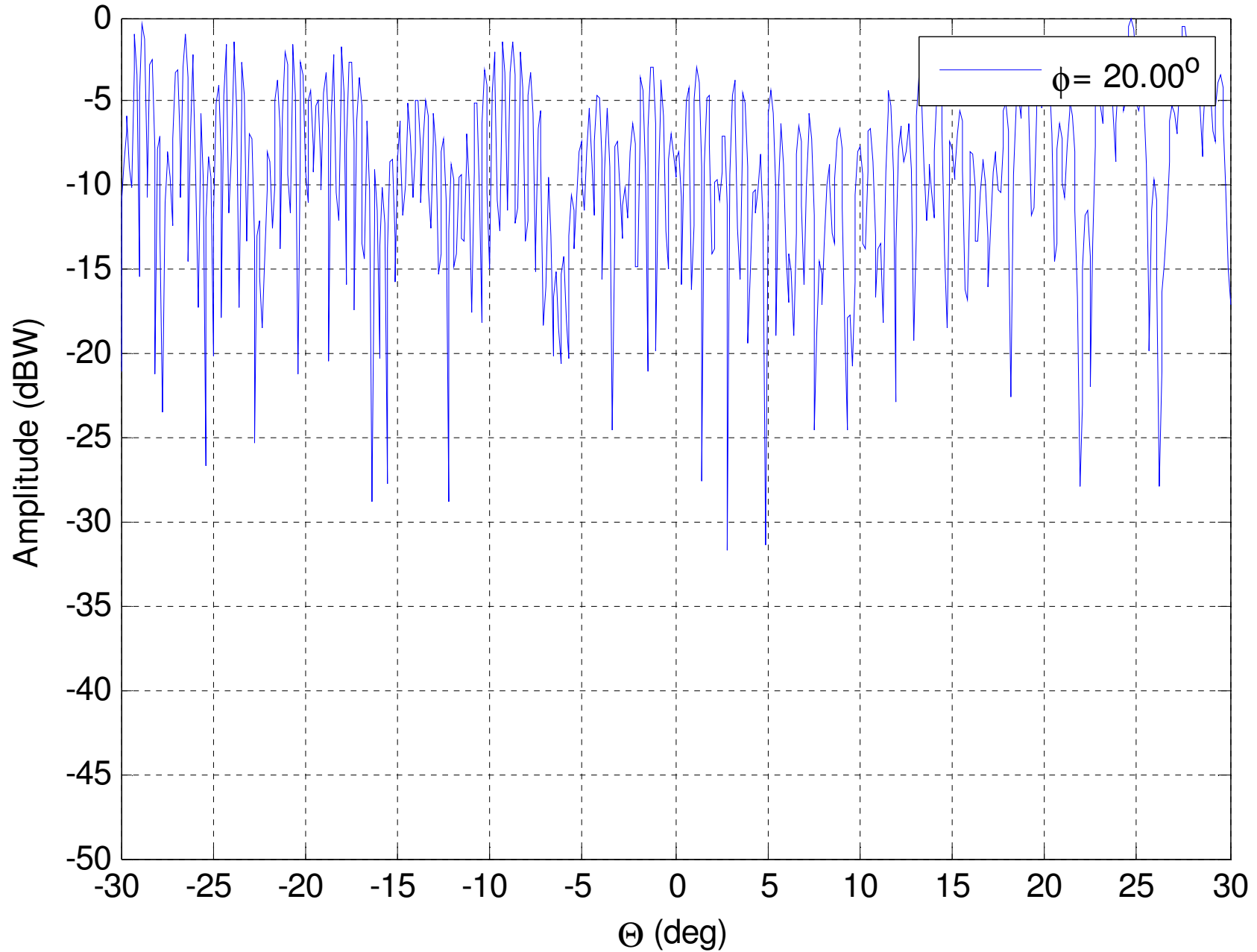
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -12.57 dBW, Date: 15-Dec-2011



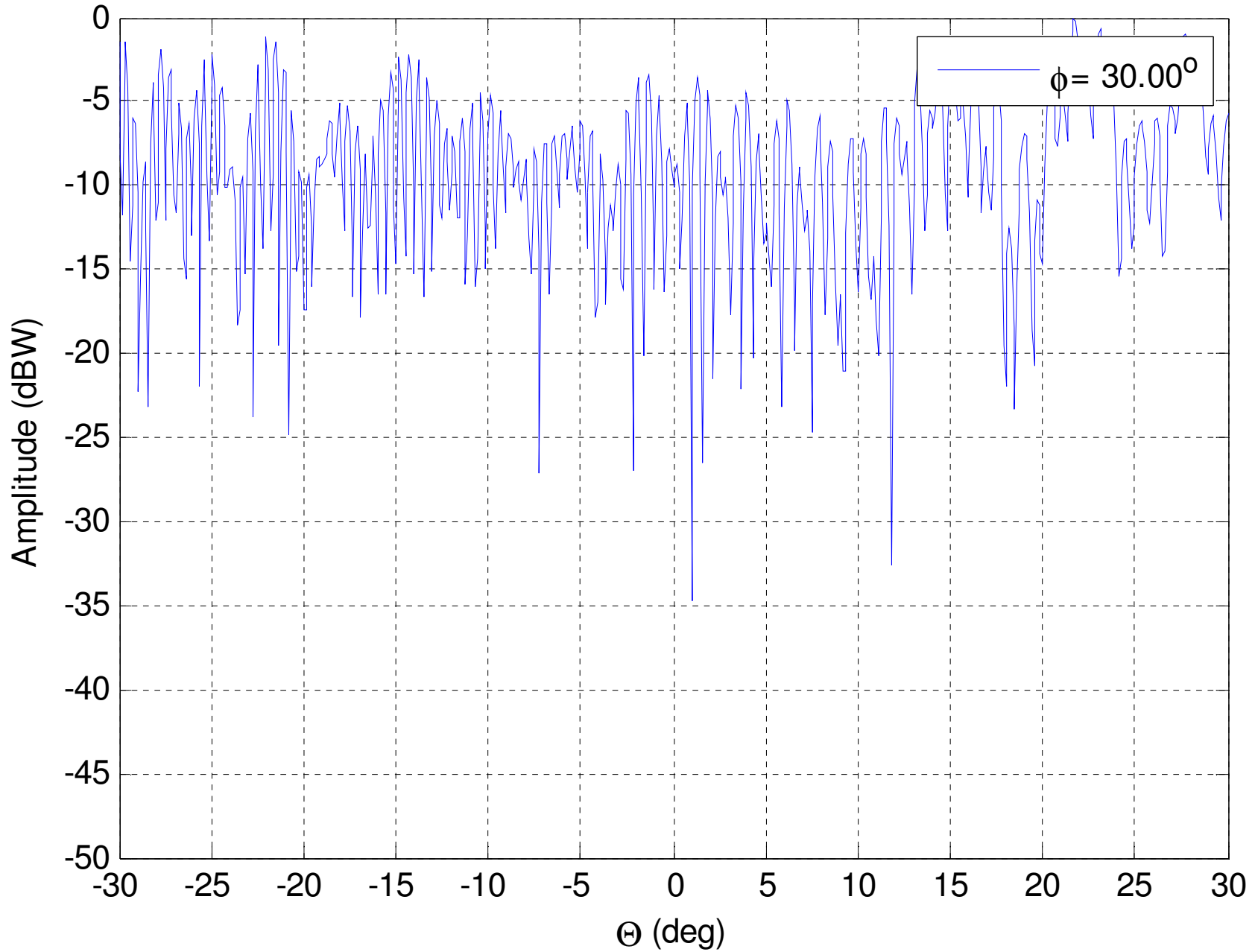
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -11.36 dBW, Date: 15-Dec-2011



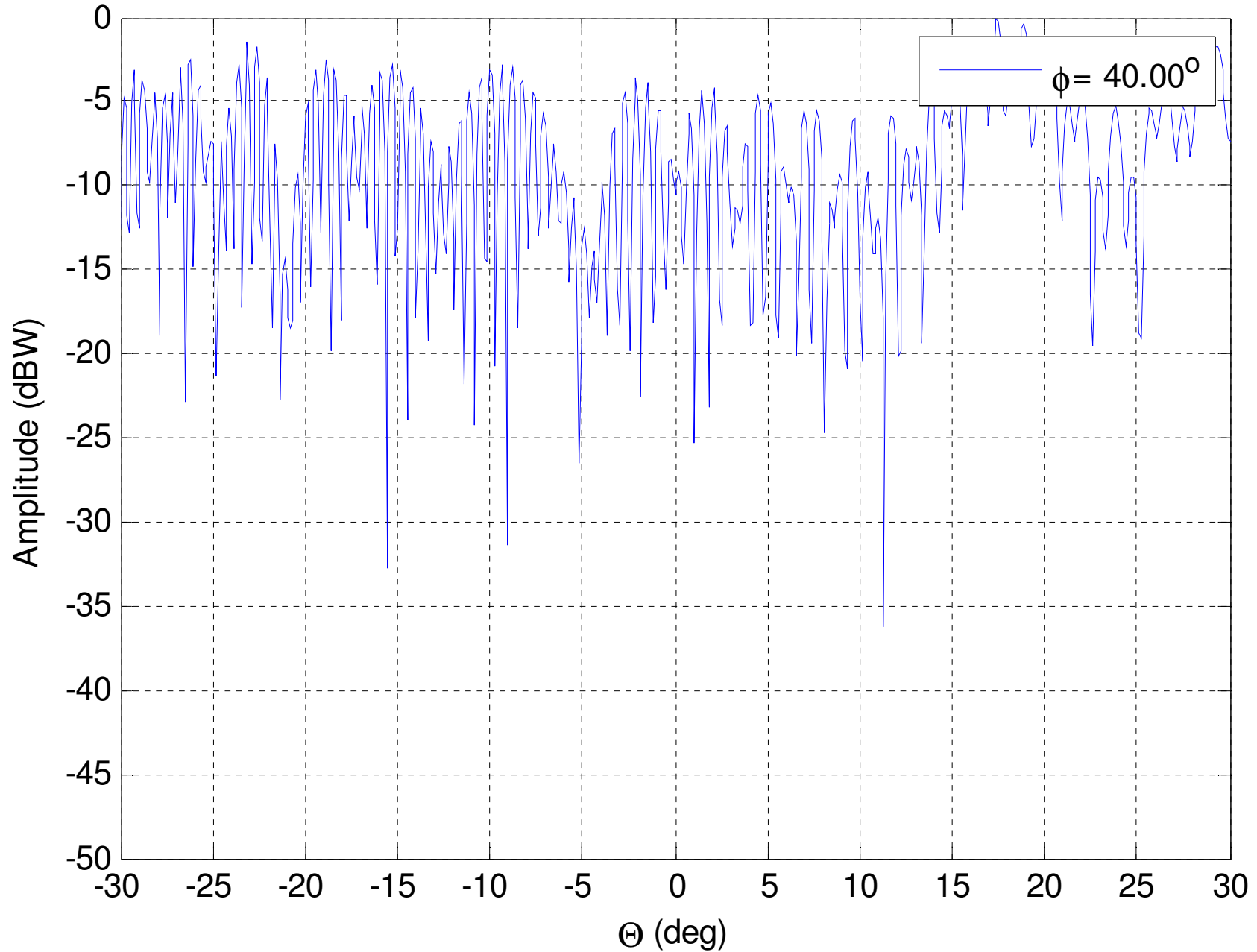
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.76 dBW, Date: 15-Dec-2011



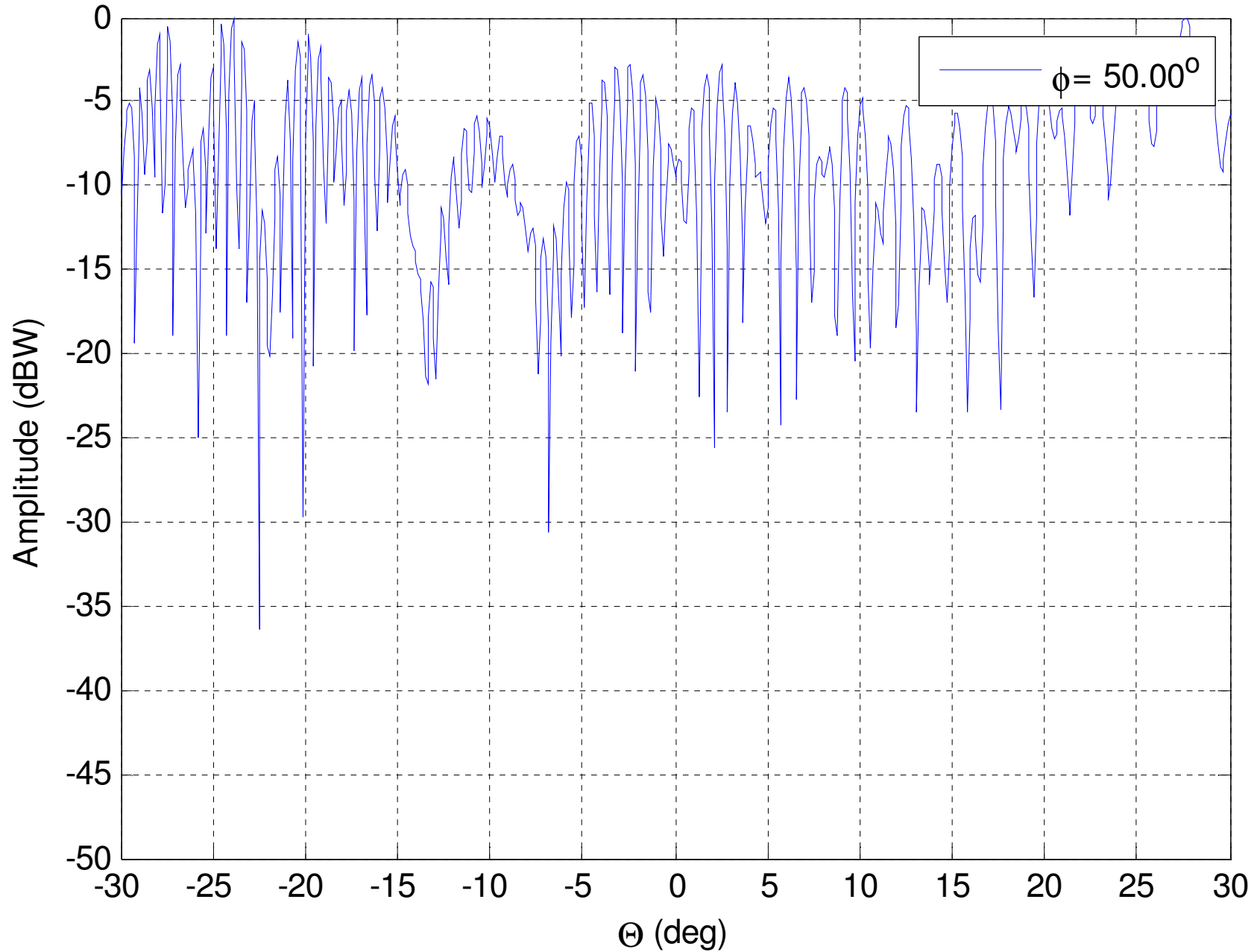
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -10.39 dBW, Date: 15-Dec-2011



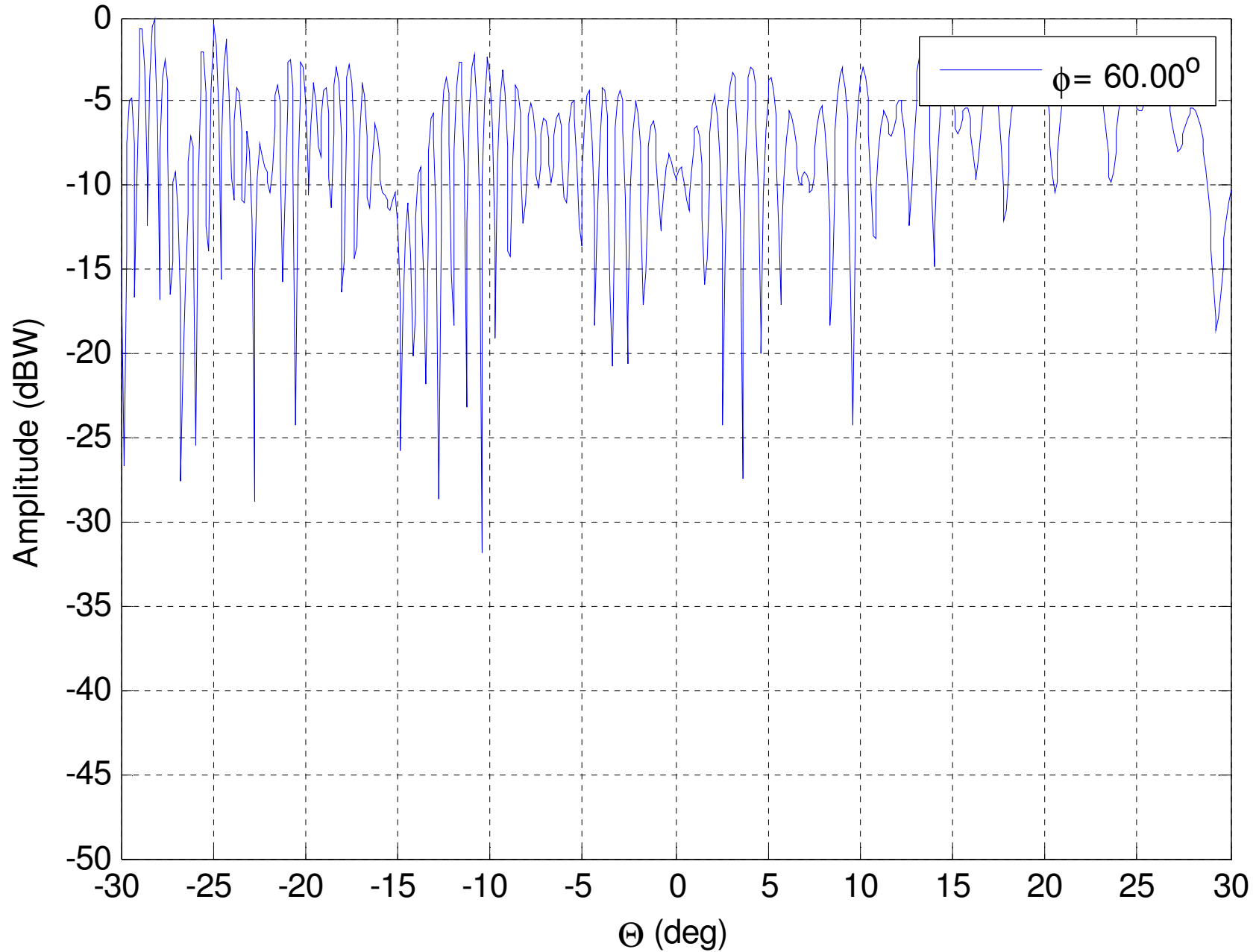
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.47 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

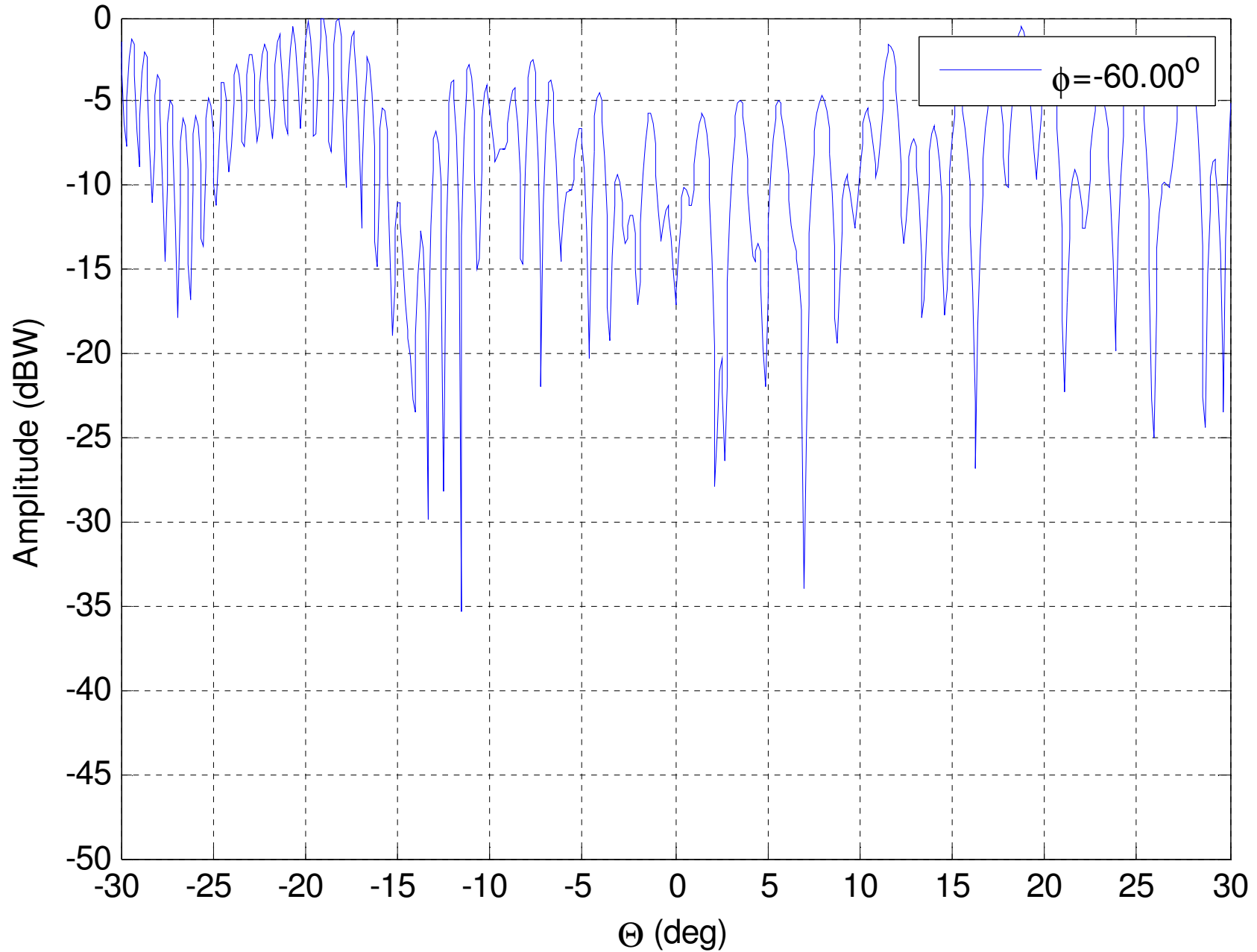
Input file: tx-17.5-lhcp-60.cut, Peak: -11.29 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

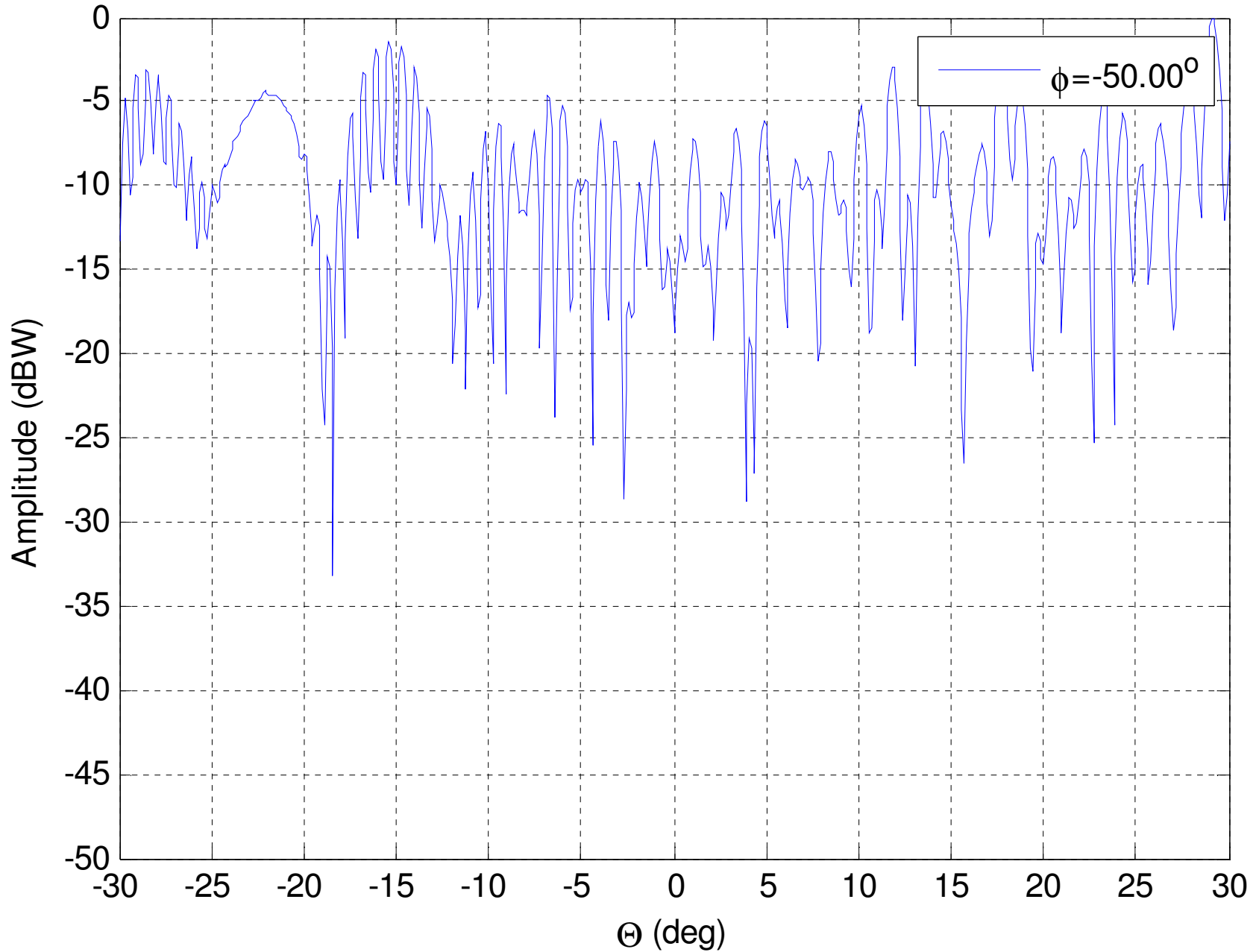
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.22 dBW, Date: 15-Dec-2011



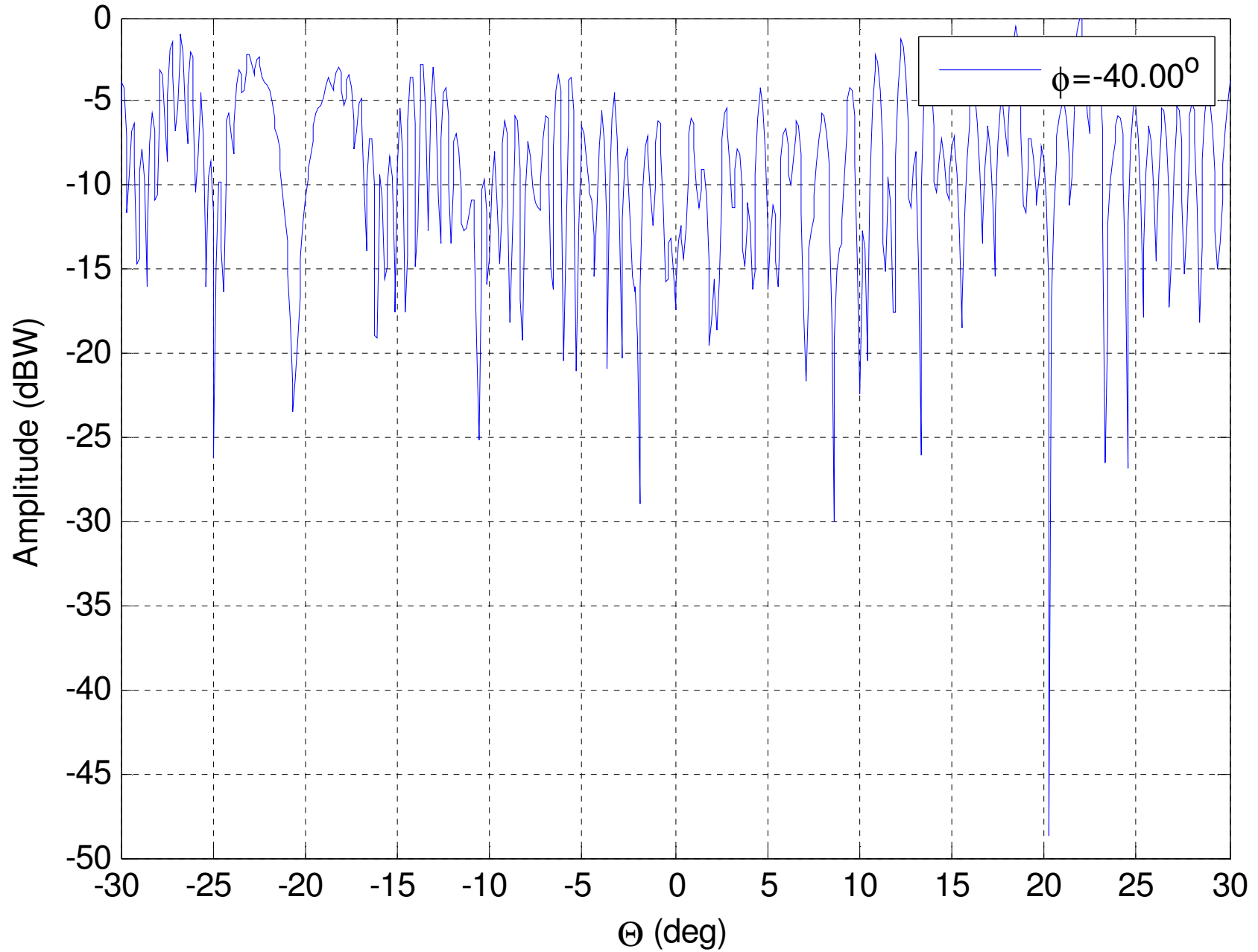
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -9.53 dBW, Date: 15-Dec-2011



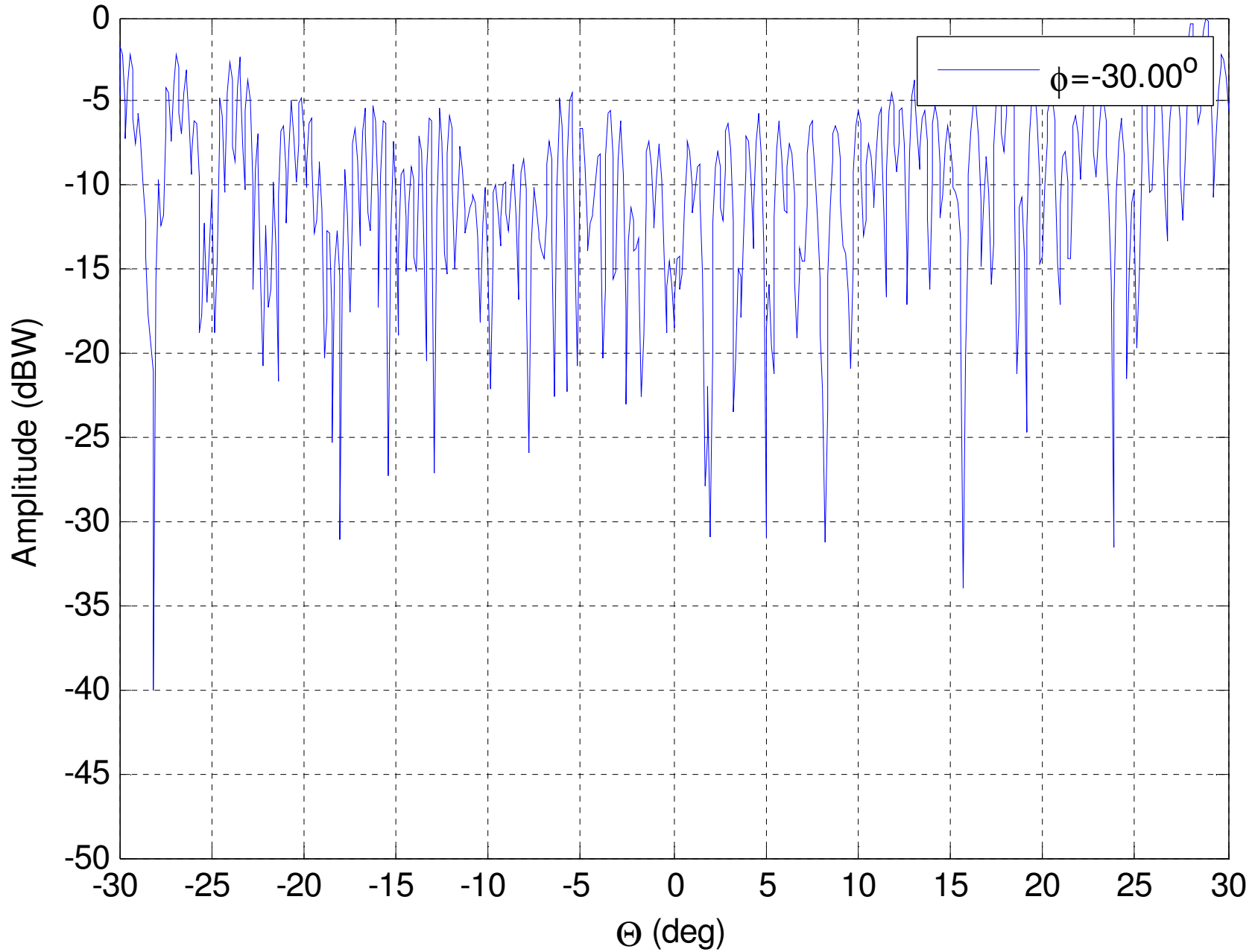
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -10.88 dBW, Date: 15-Dec-2011



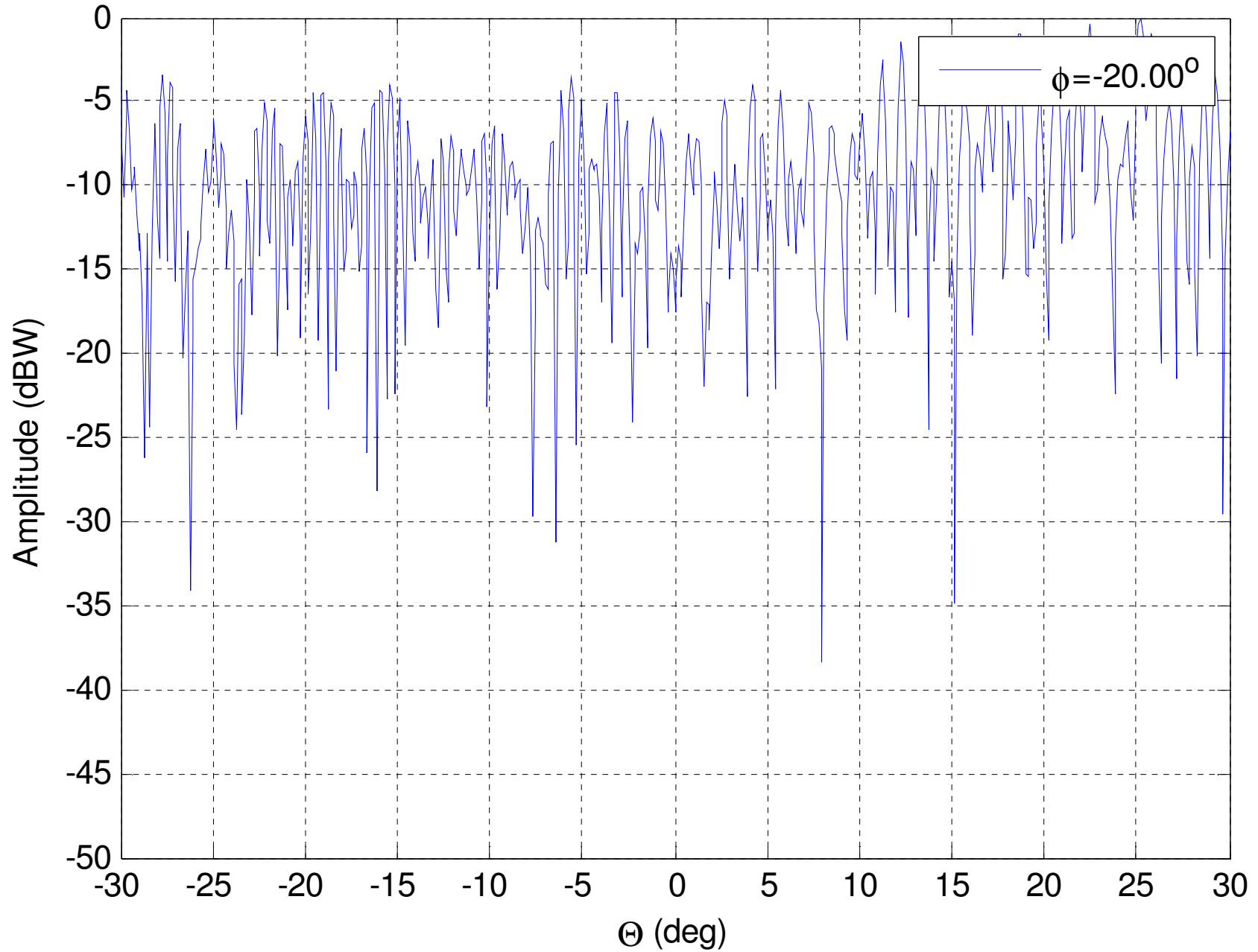
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -9.76 dBW, Date: 15-Dec-2011



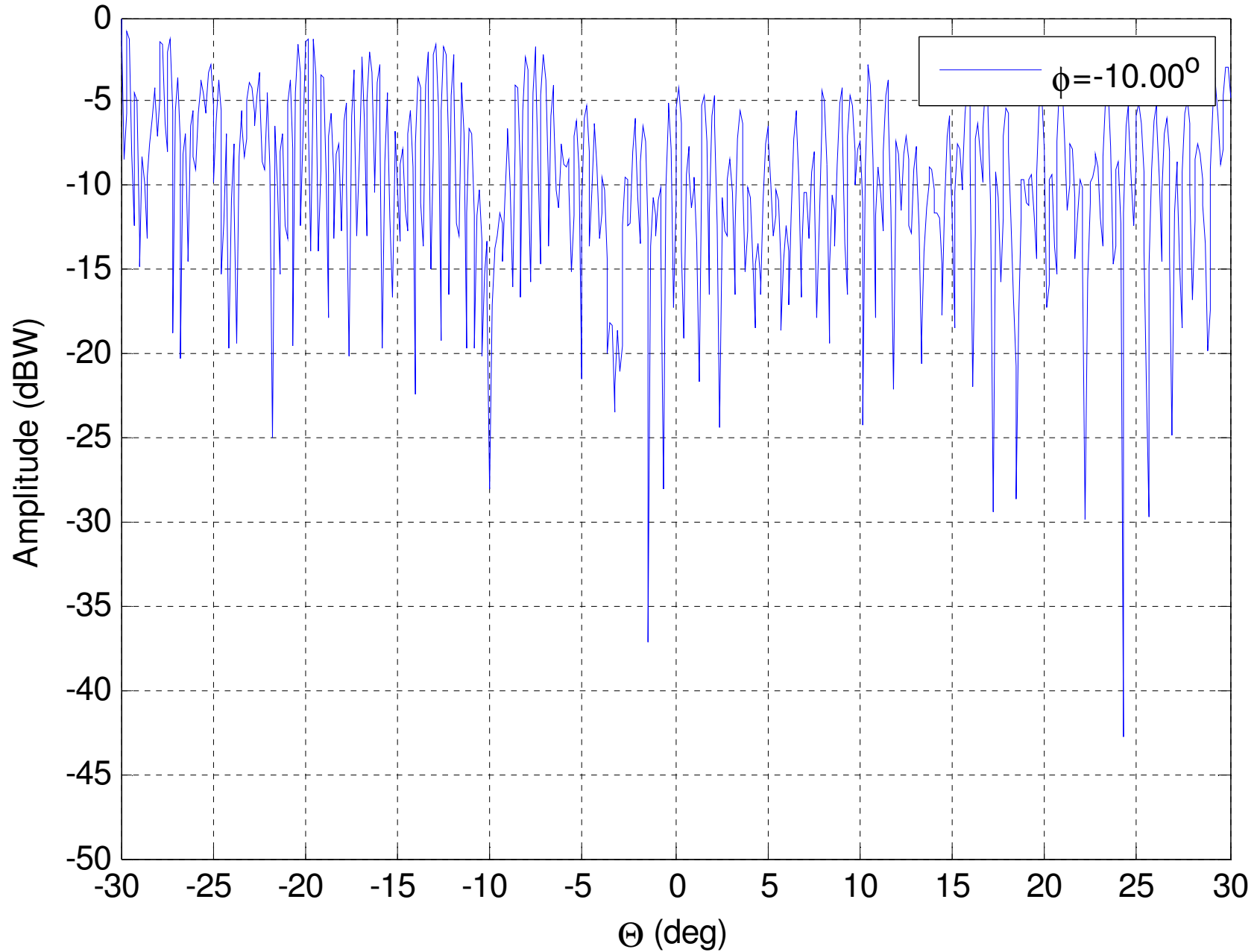
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -10.65 dBW, Date: 15-Dec-2011



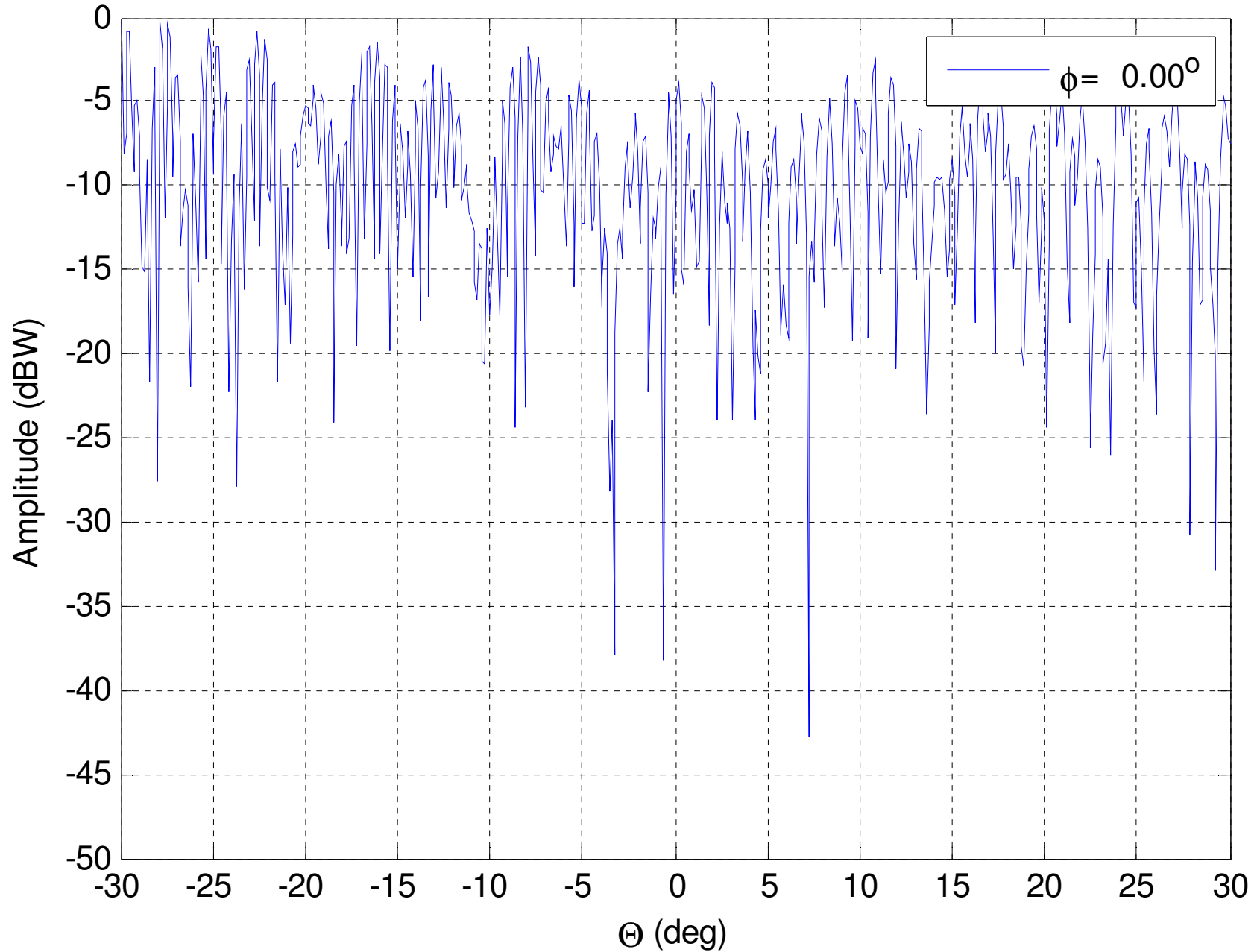
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -11.84 dBW, Date: 15-Dec-2011



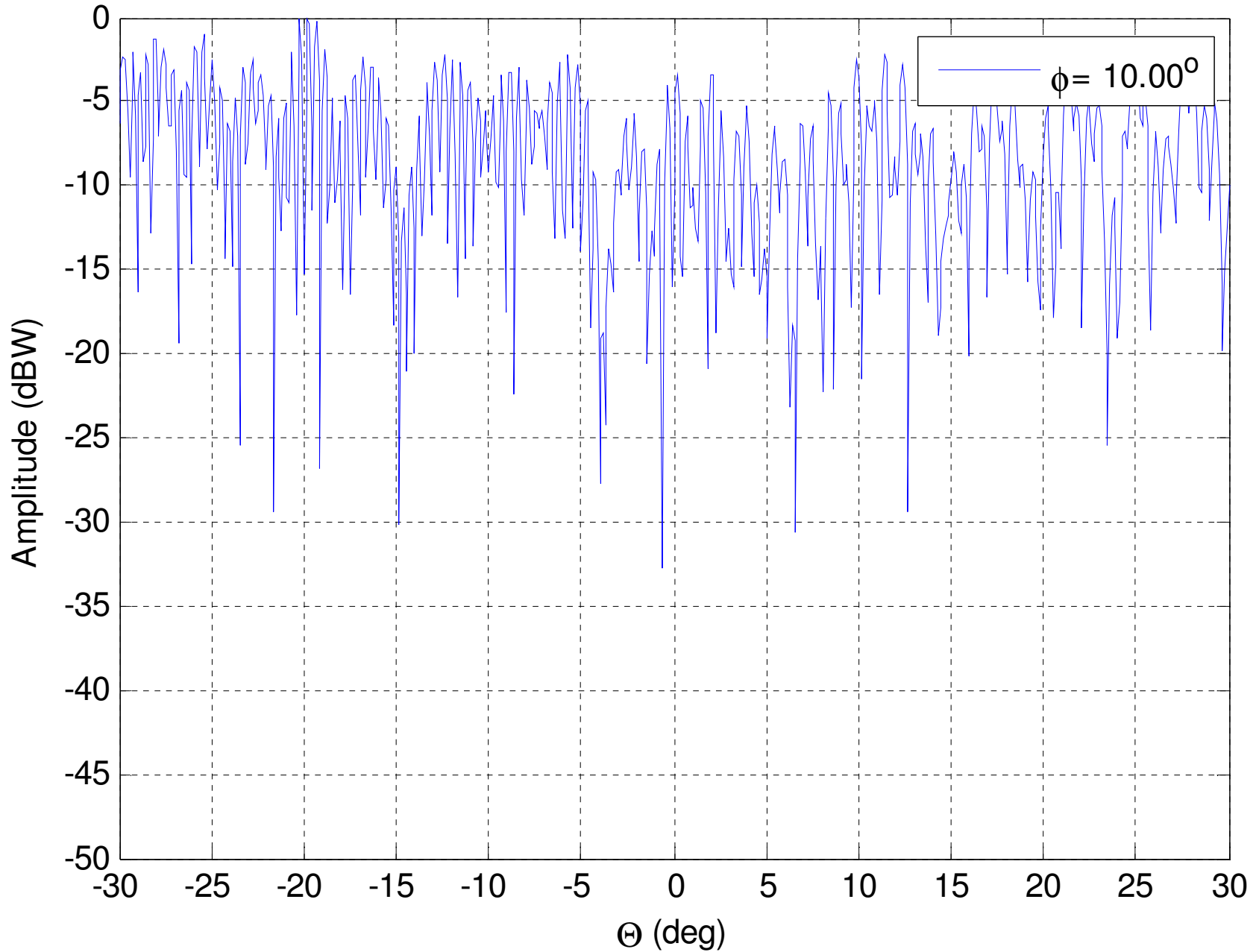
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -12.21 dBW, Date: 15-Dec-2011



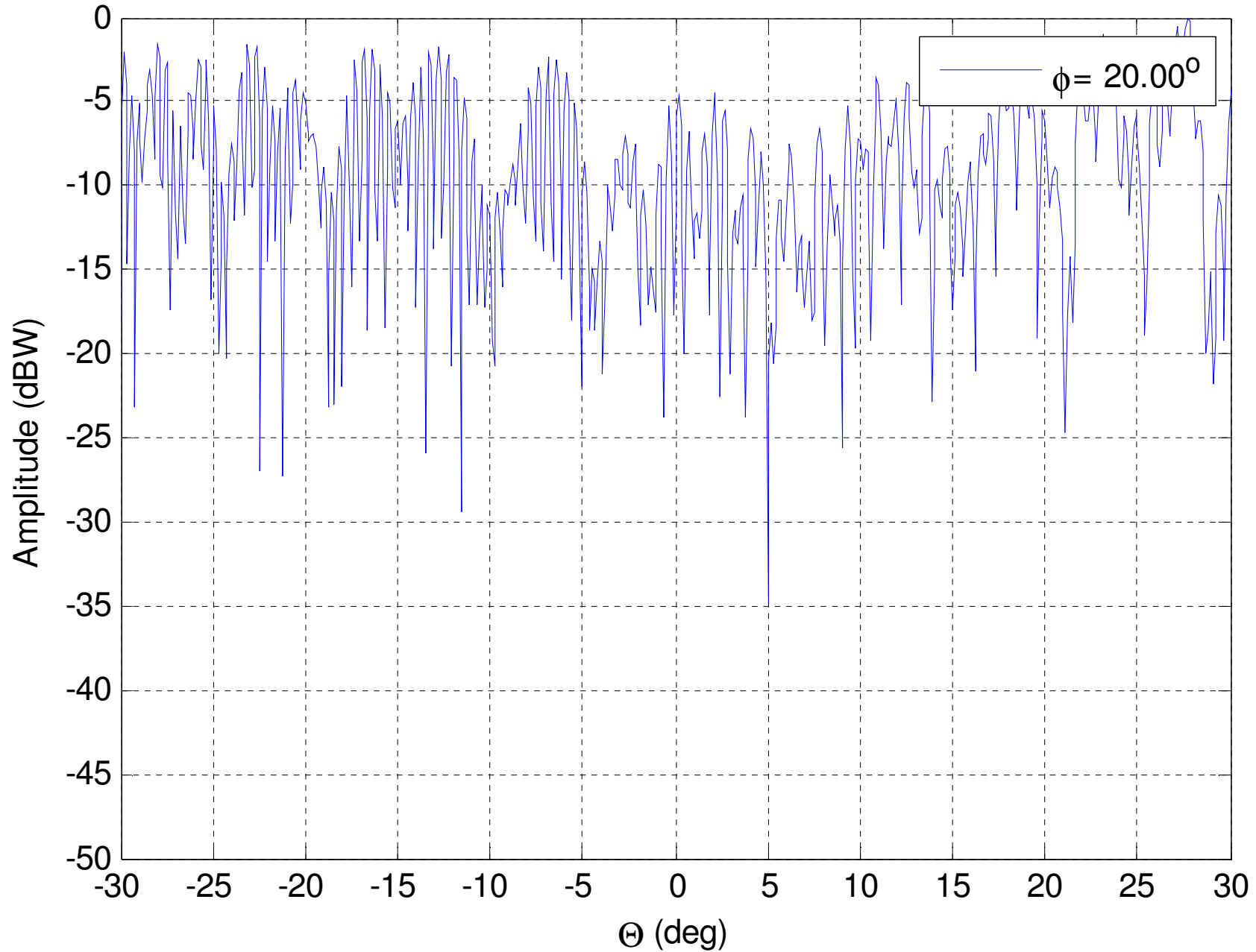
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -12.66 dBW, Date: 15-Dec-2011



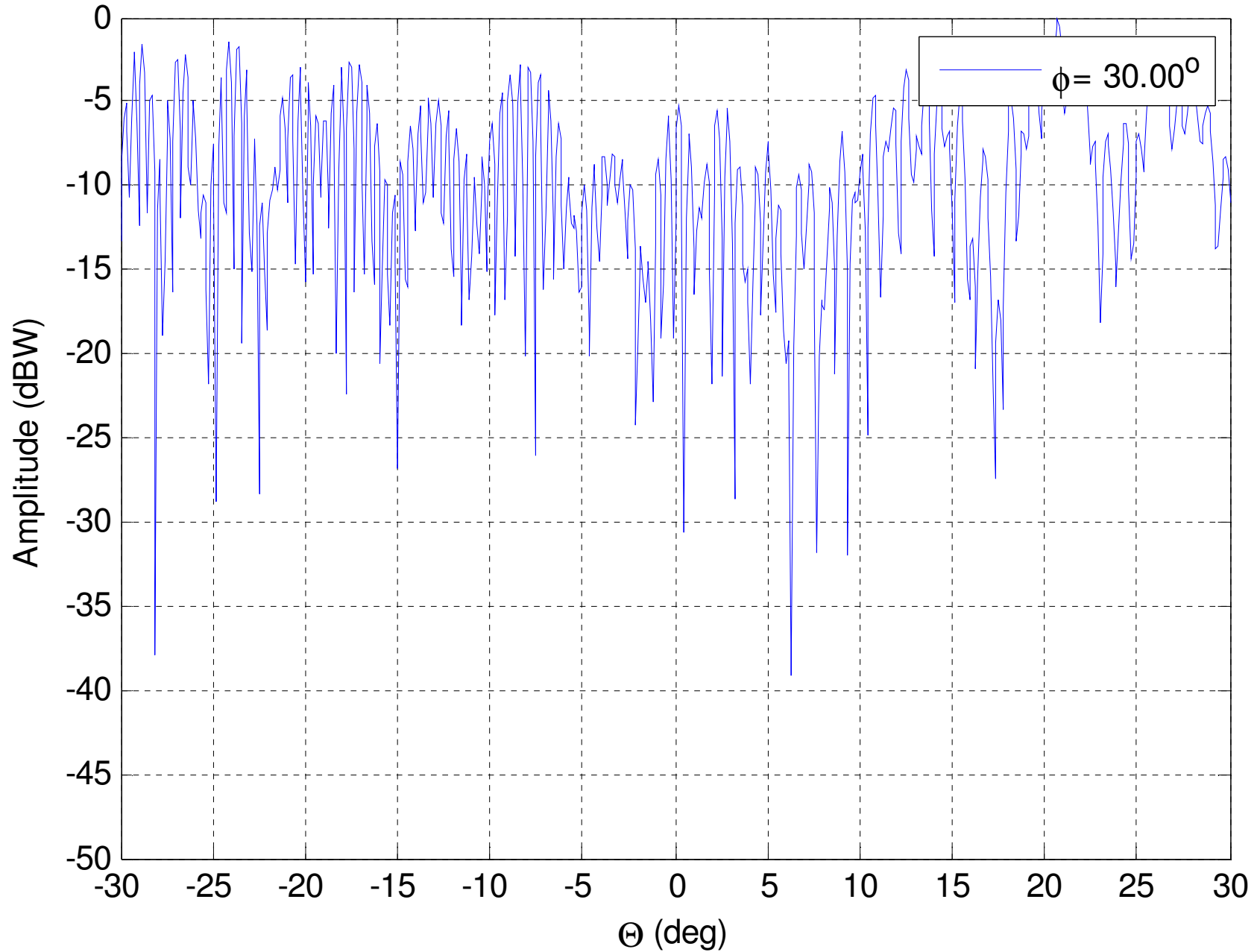
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -11.38 dBW, Date: 15-Dec-2011



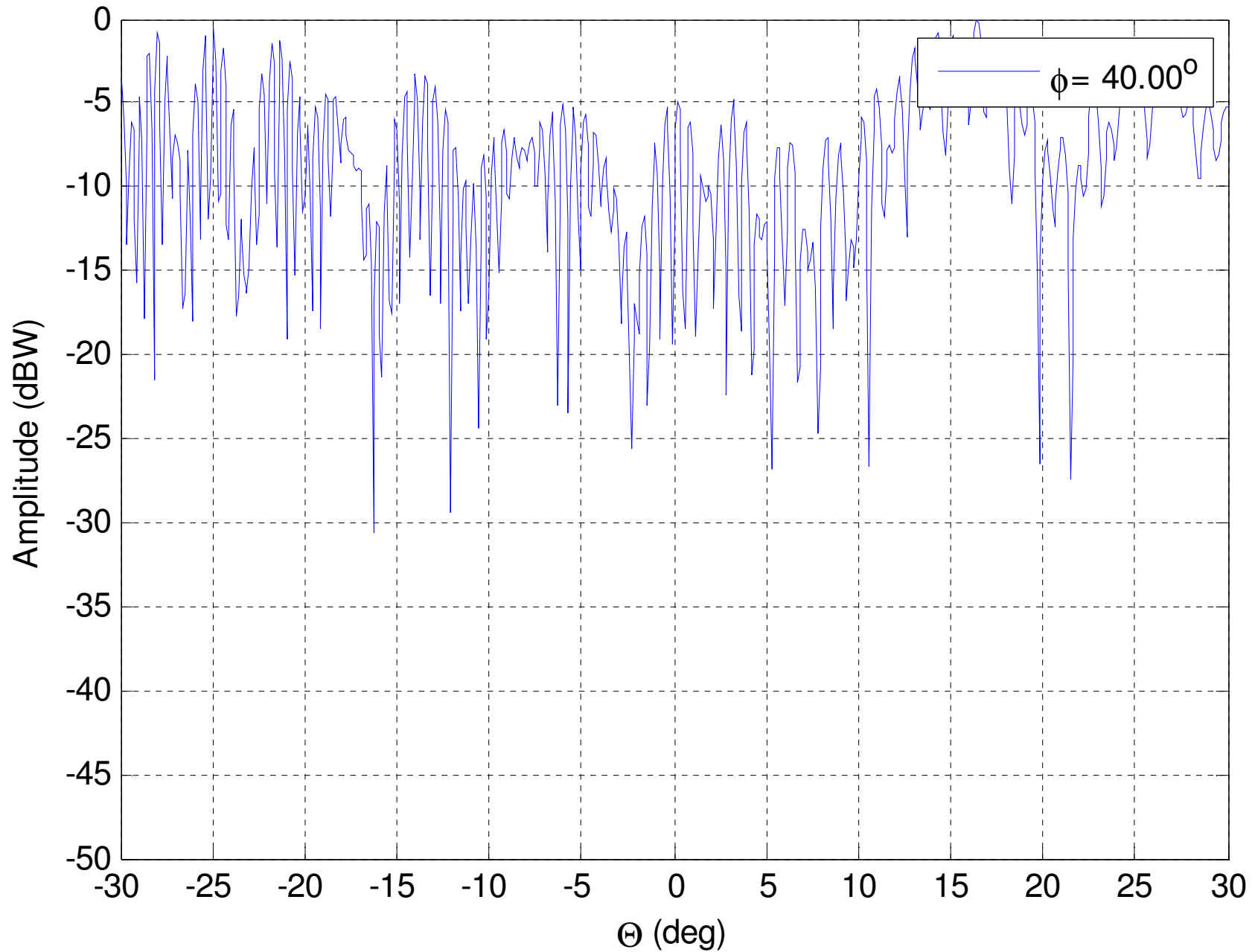
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -10.67 dBW, Date: 15-Dec-2011



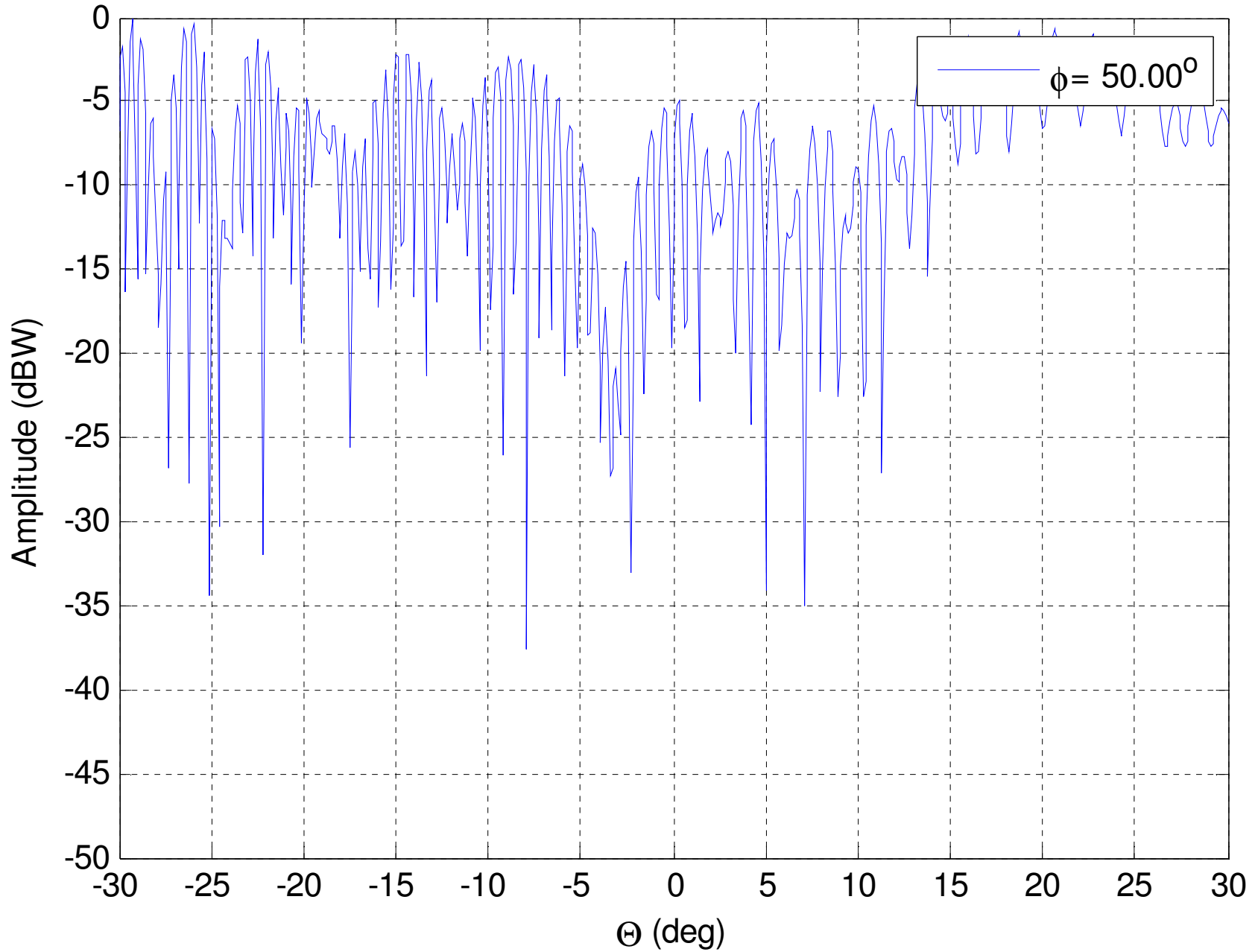
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.05 dBW, Date: 15-Dec-2011



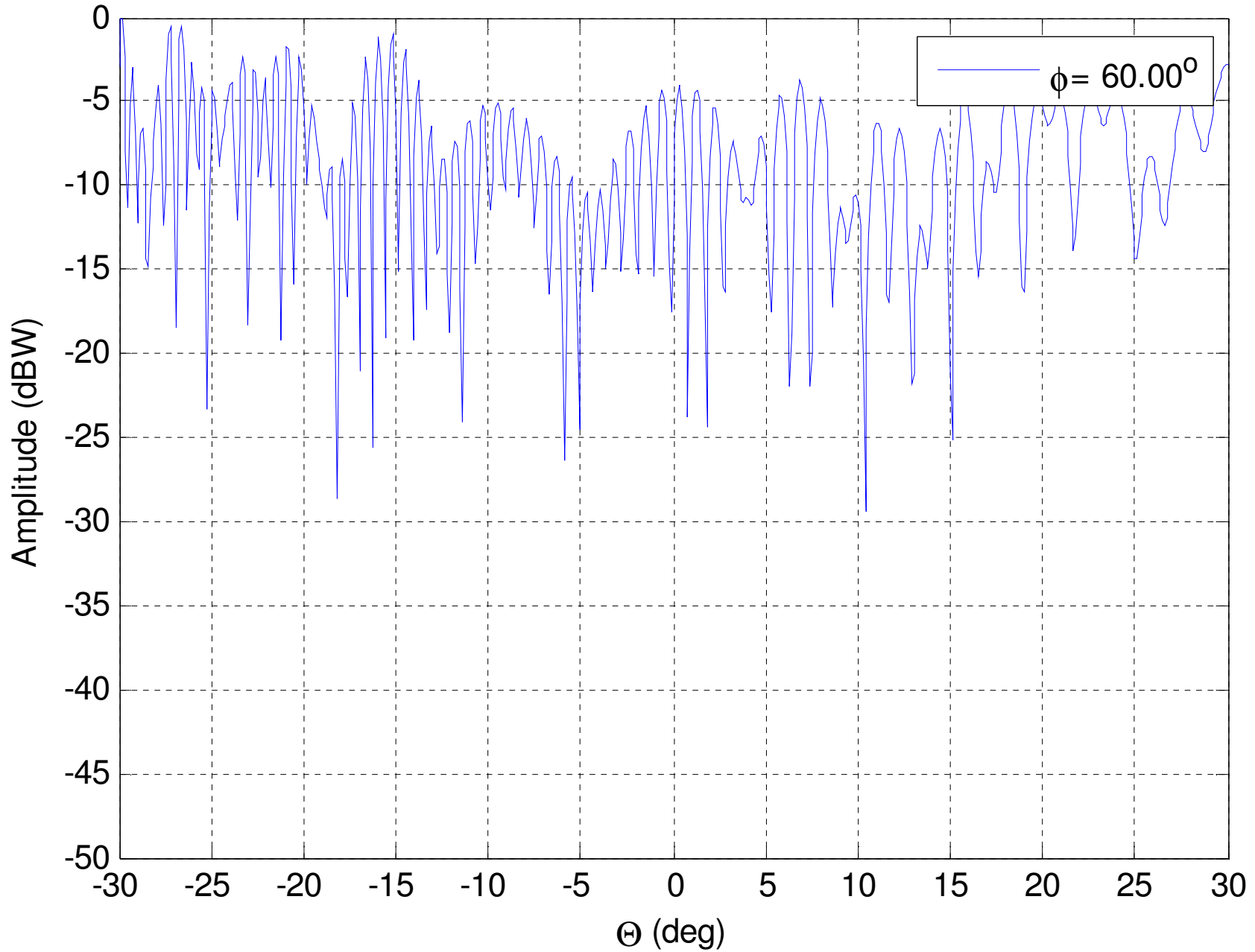
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -10.92 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

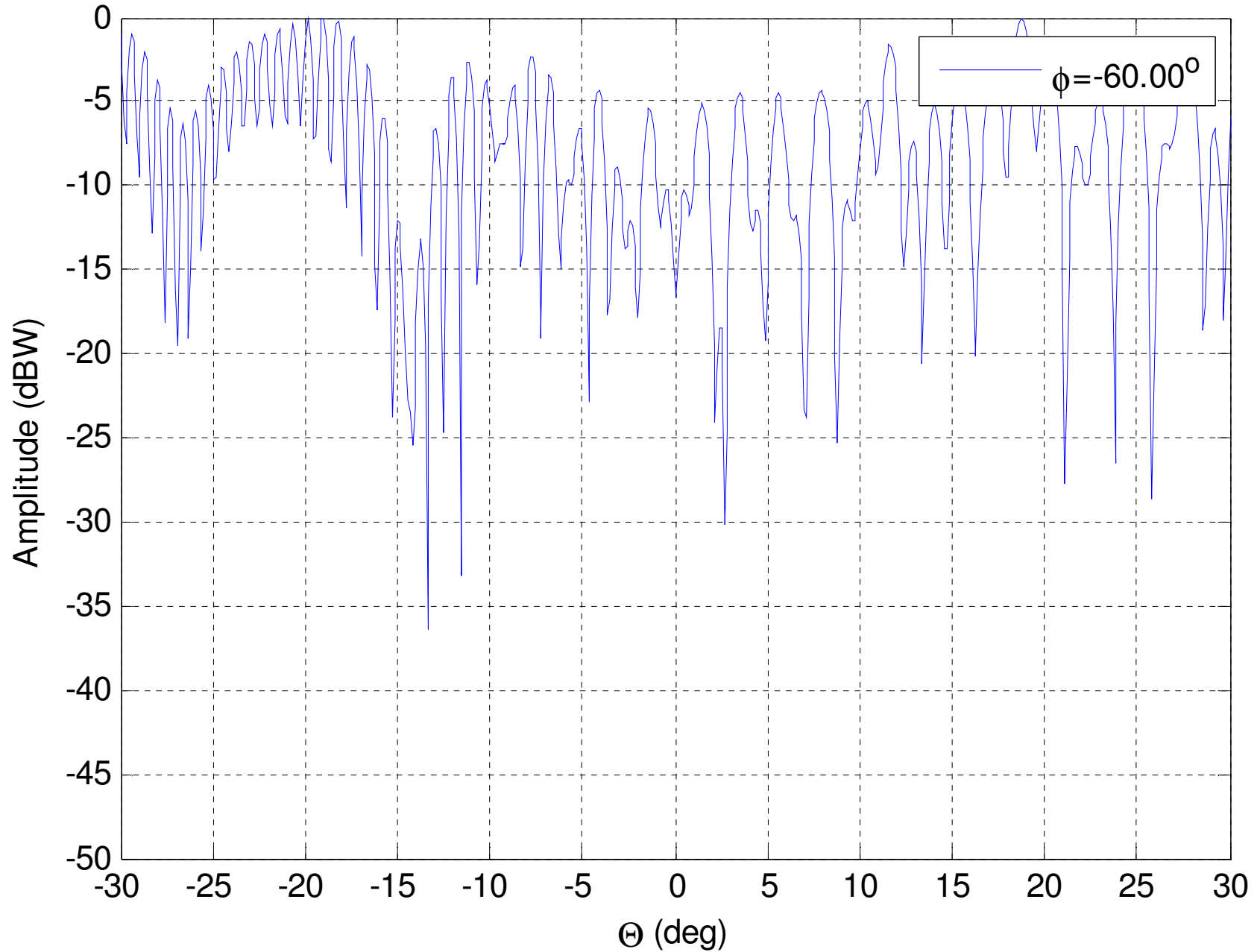
Input file: tx-17.7-rhcp-60.cut, Peak: -11.76 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

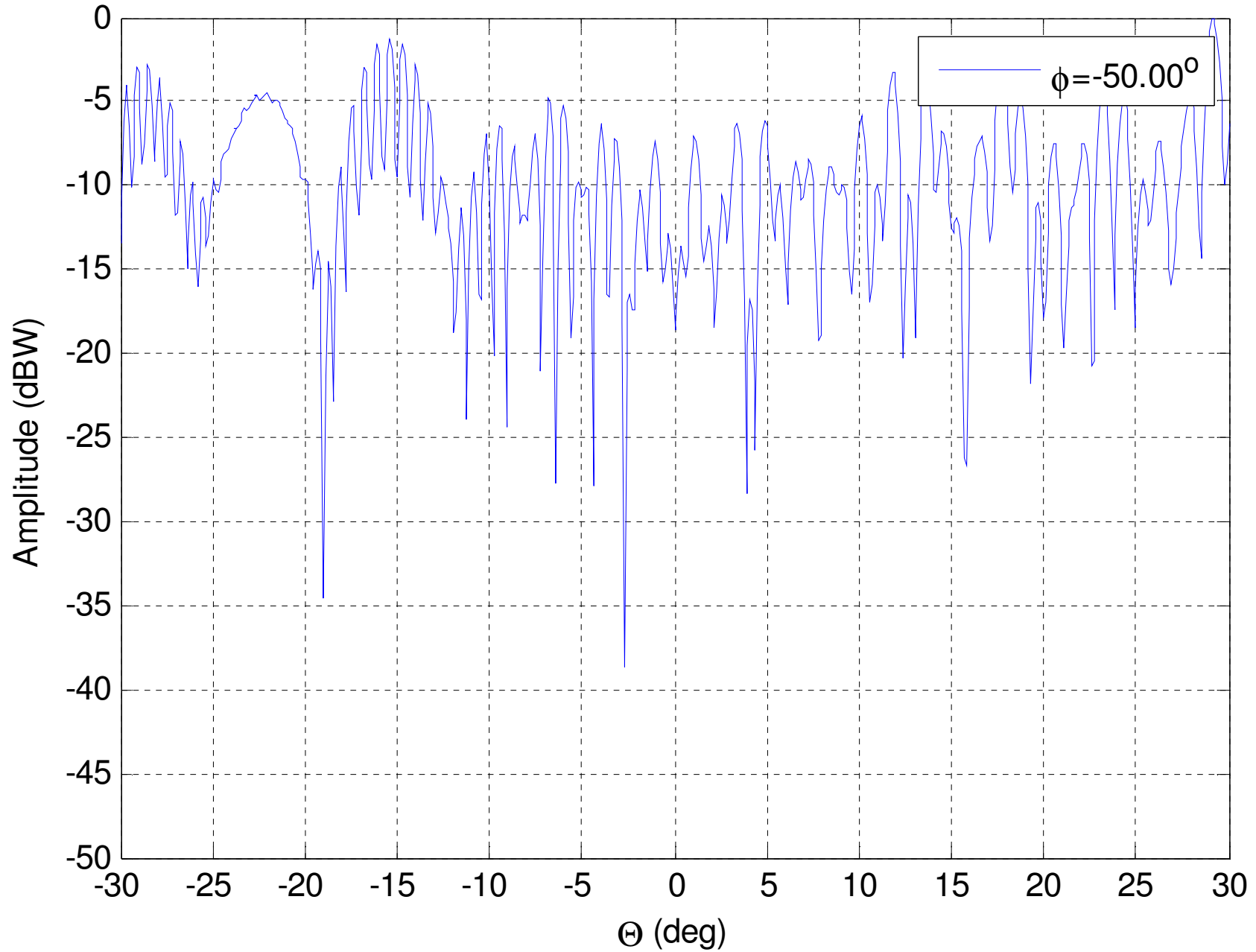
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.50 dBW, Date: 15-Dec-2011



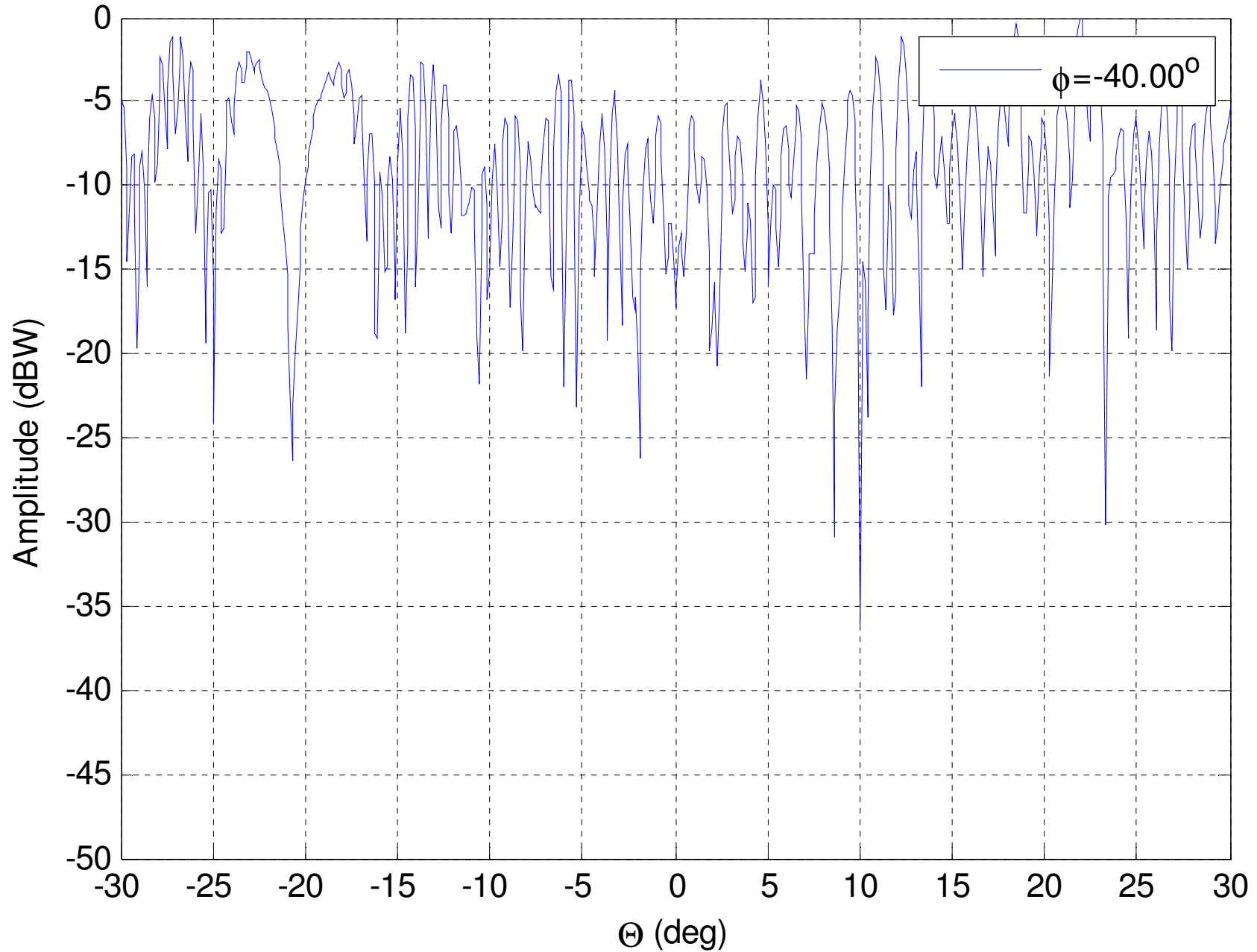
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.53 dBW, Date: 15-Dec-2011



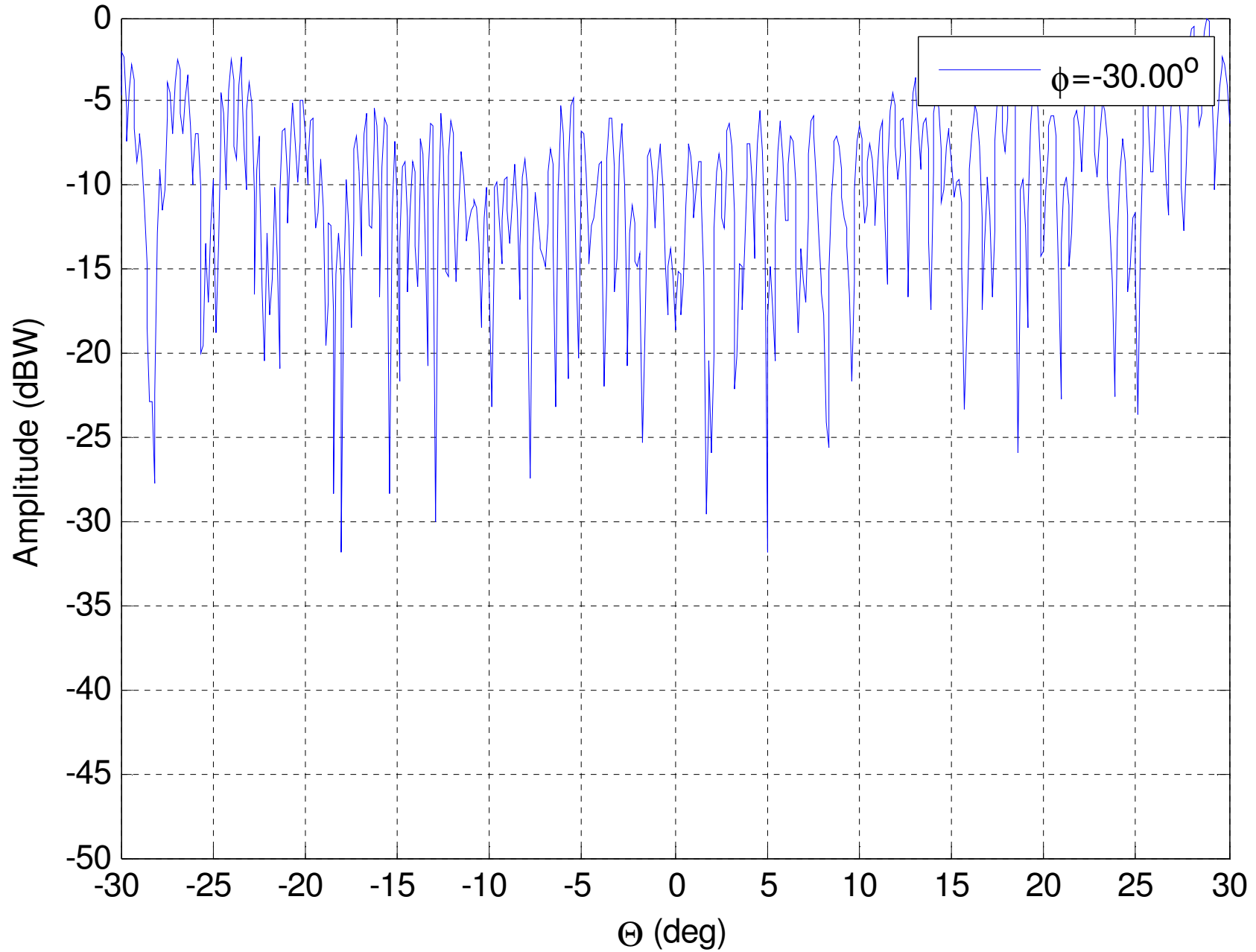
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.99 dBW, Date: 15-Dec-2011



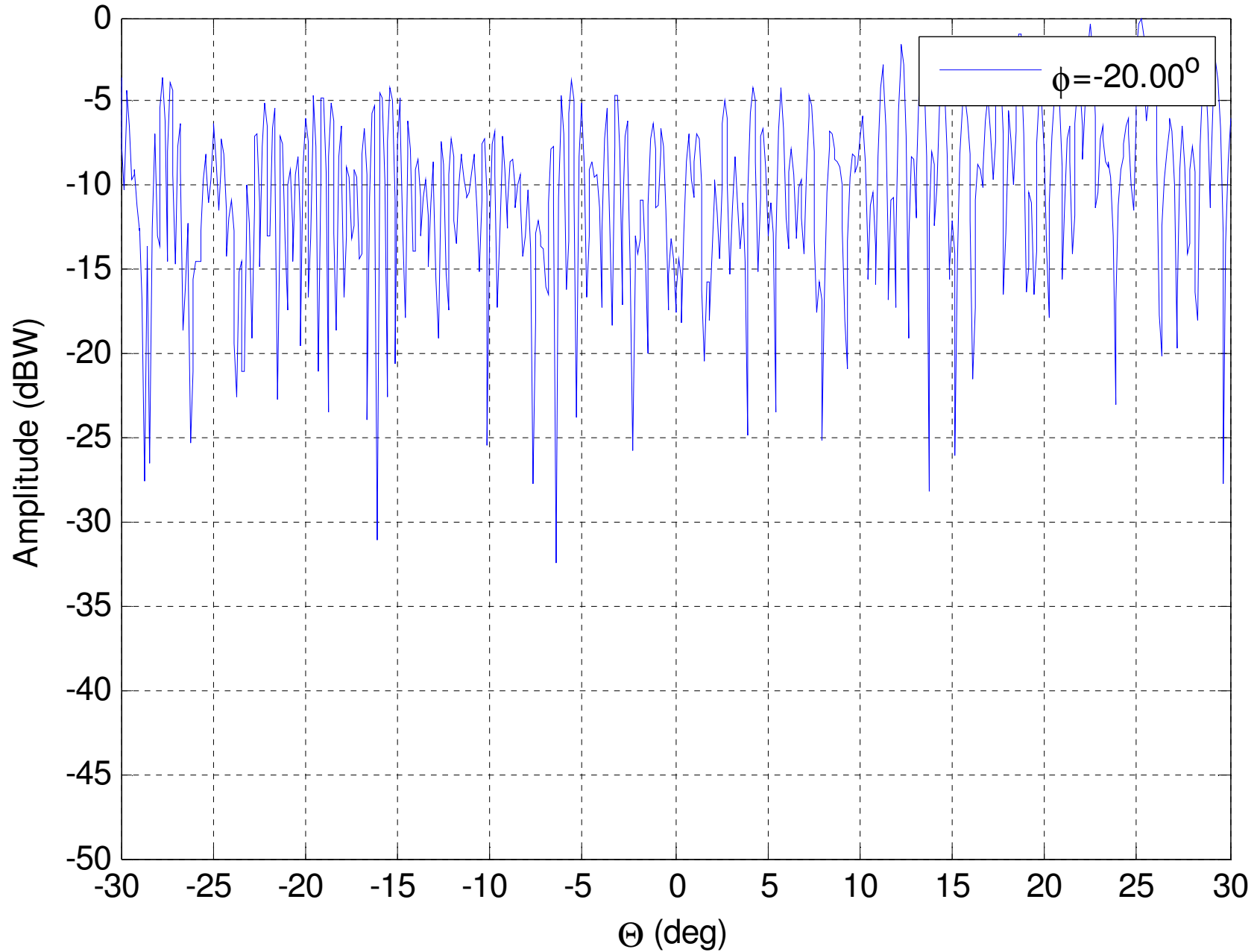
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -9.58 dBW, Date: 15-Dec-2011



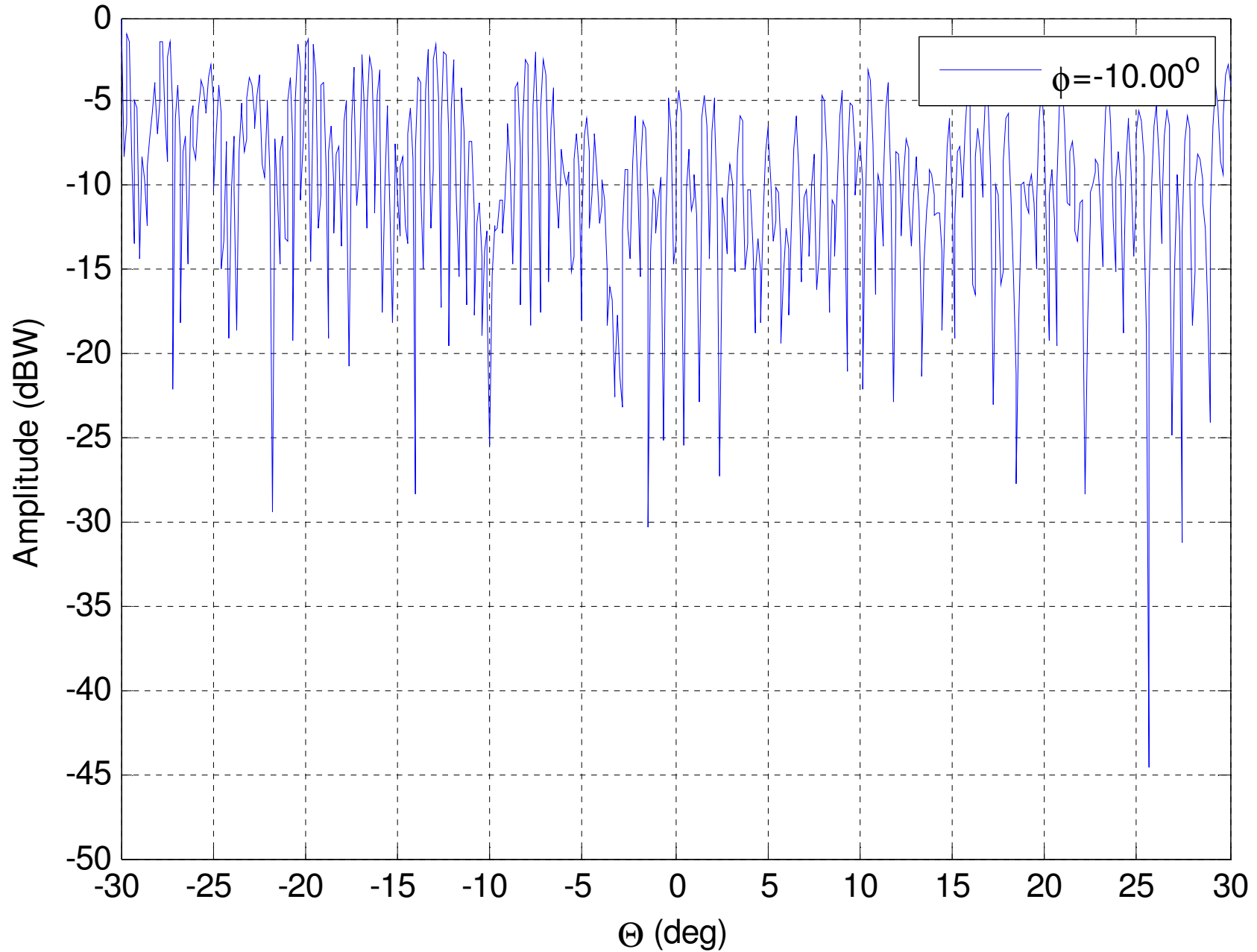
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -10.54 dBW, Date: 15-Dec-2011



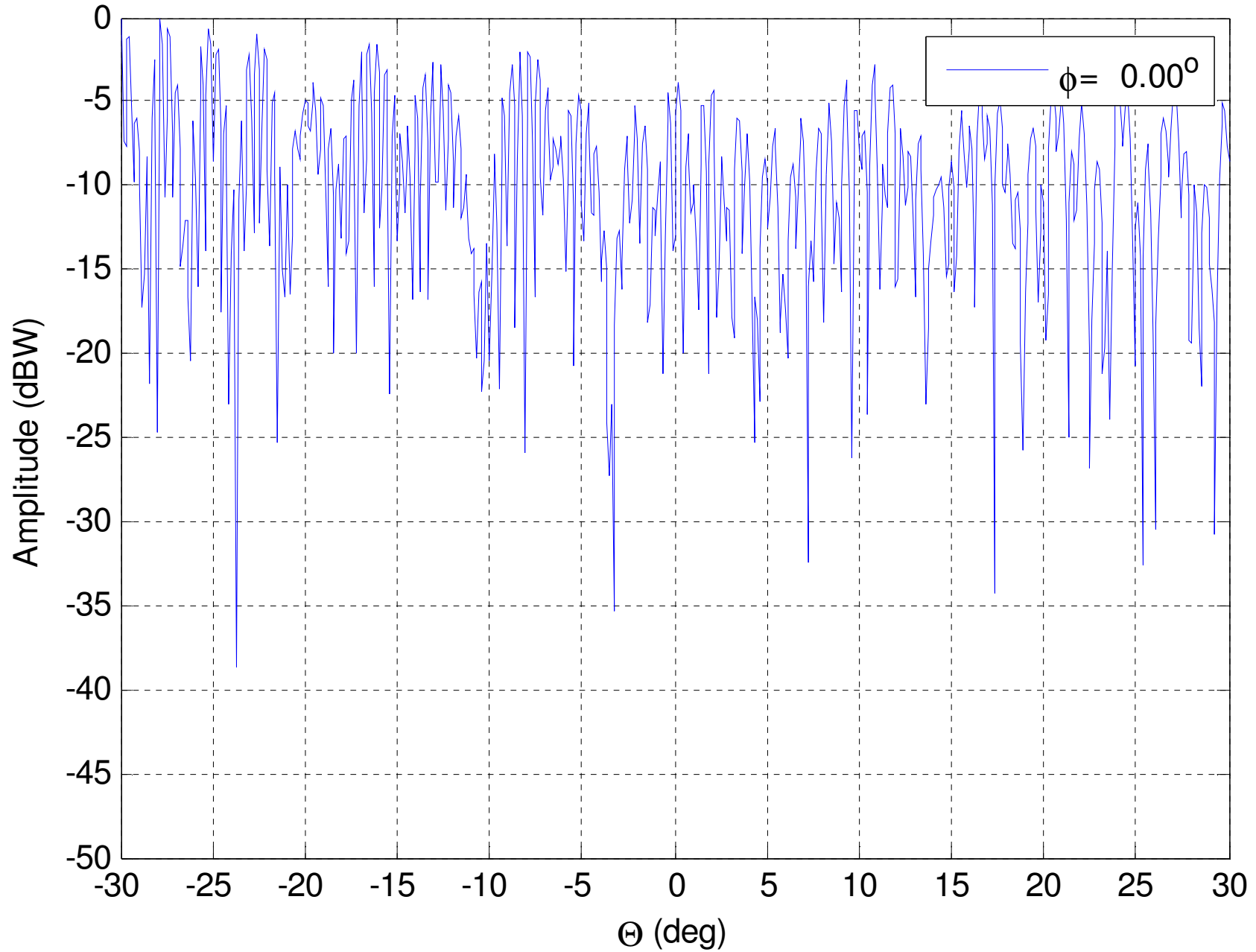
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -11.68 dBW, Date: 15-Dec-2011



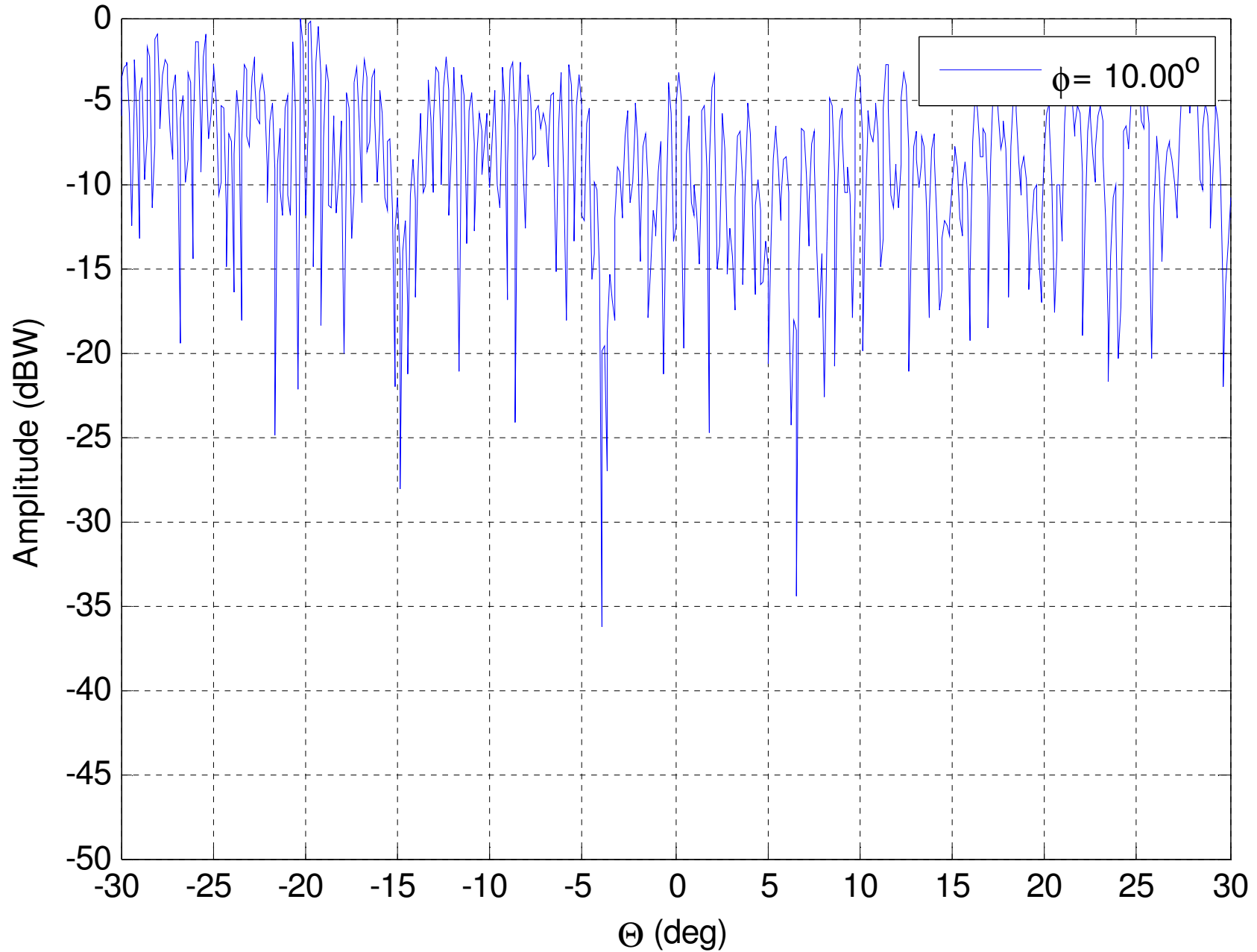
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -11.98 dBW, Date: 15-Dec-2011



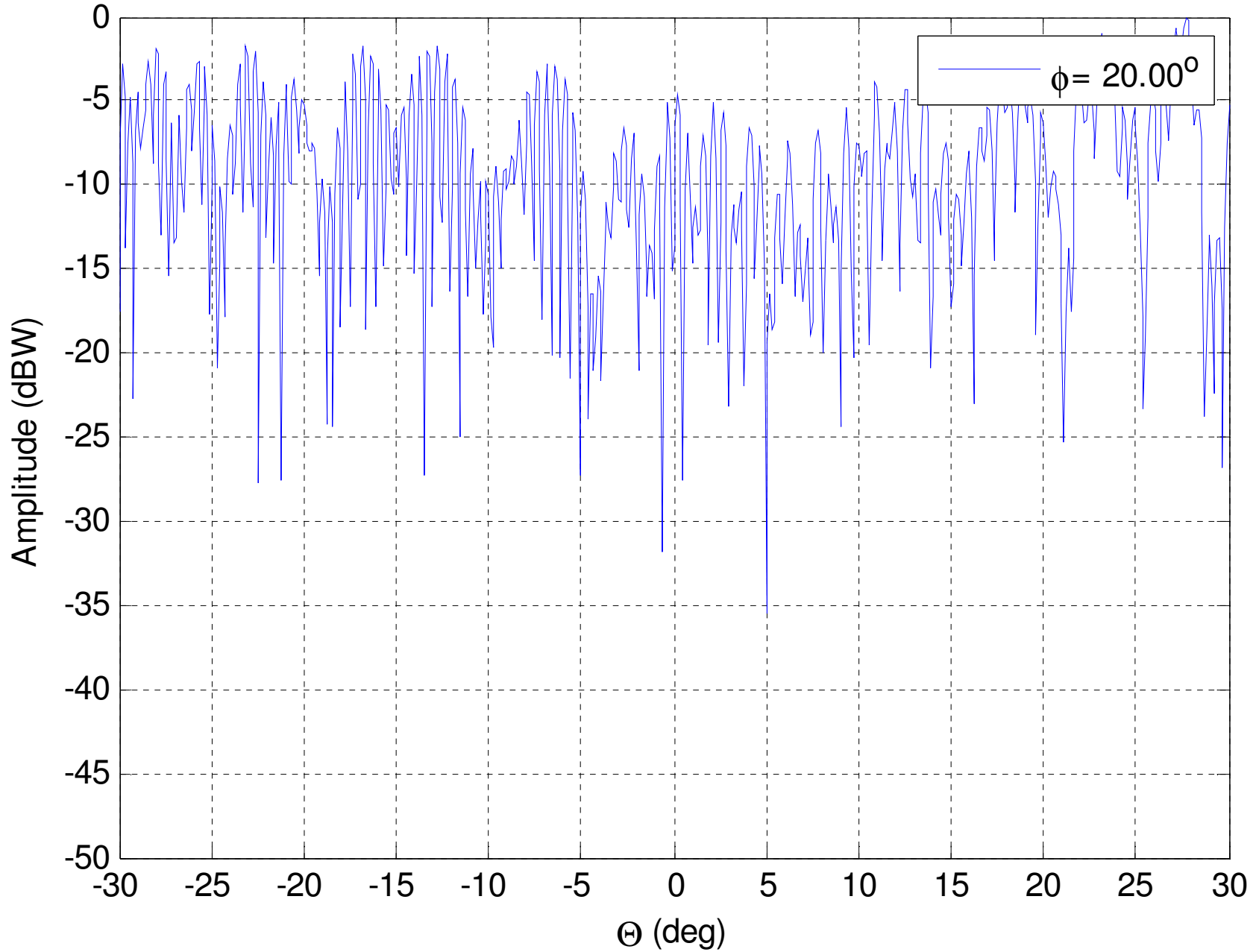
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -12.53 dBW, Date: 15-Dec-2011



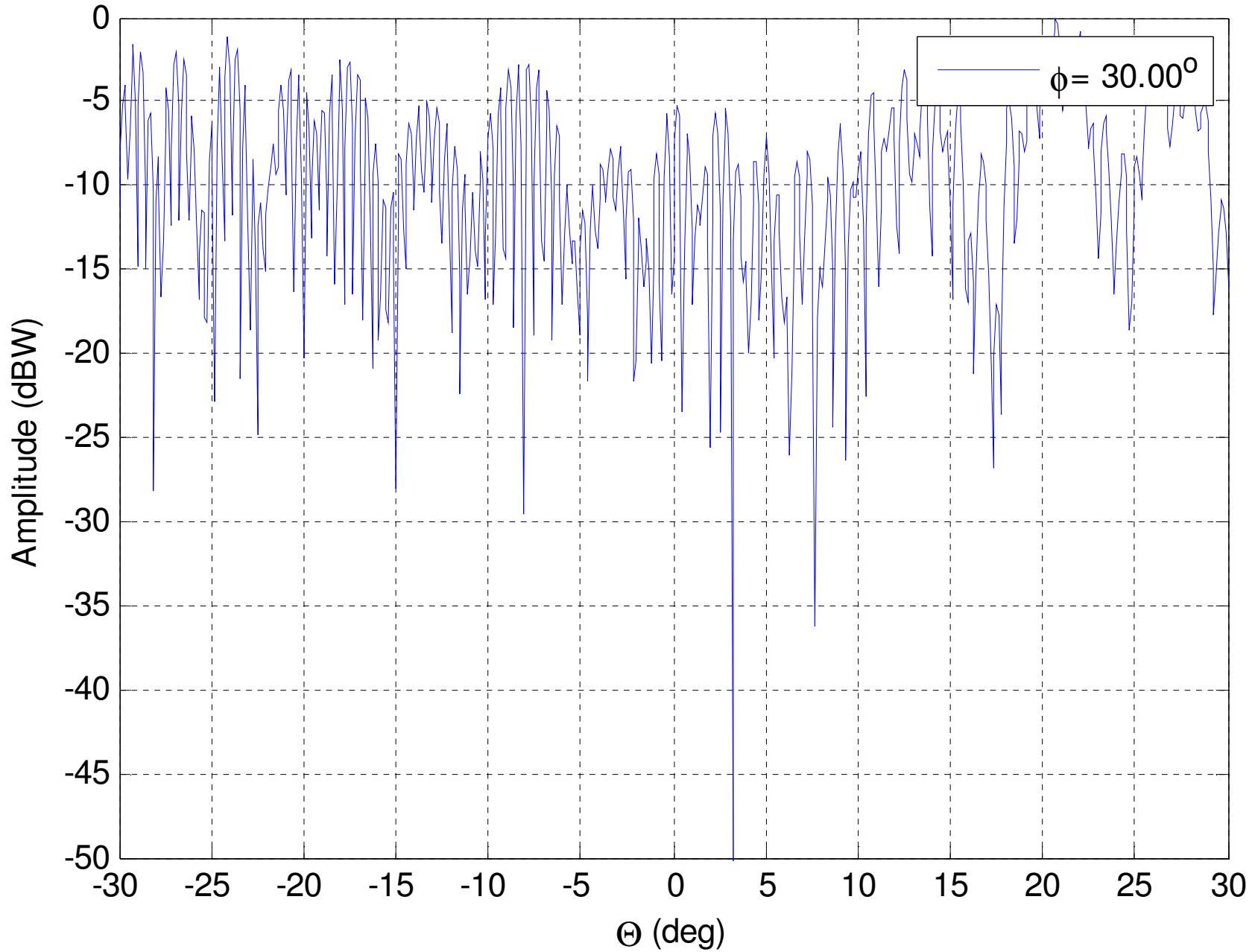
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -11.26 dBW, Date: 15-Dec-2011



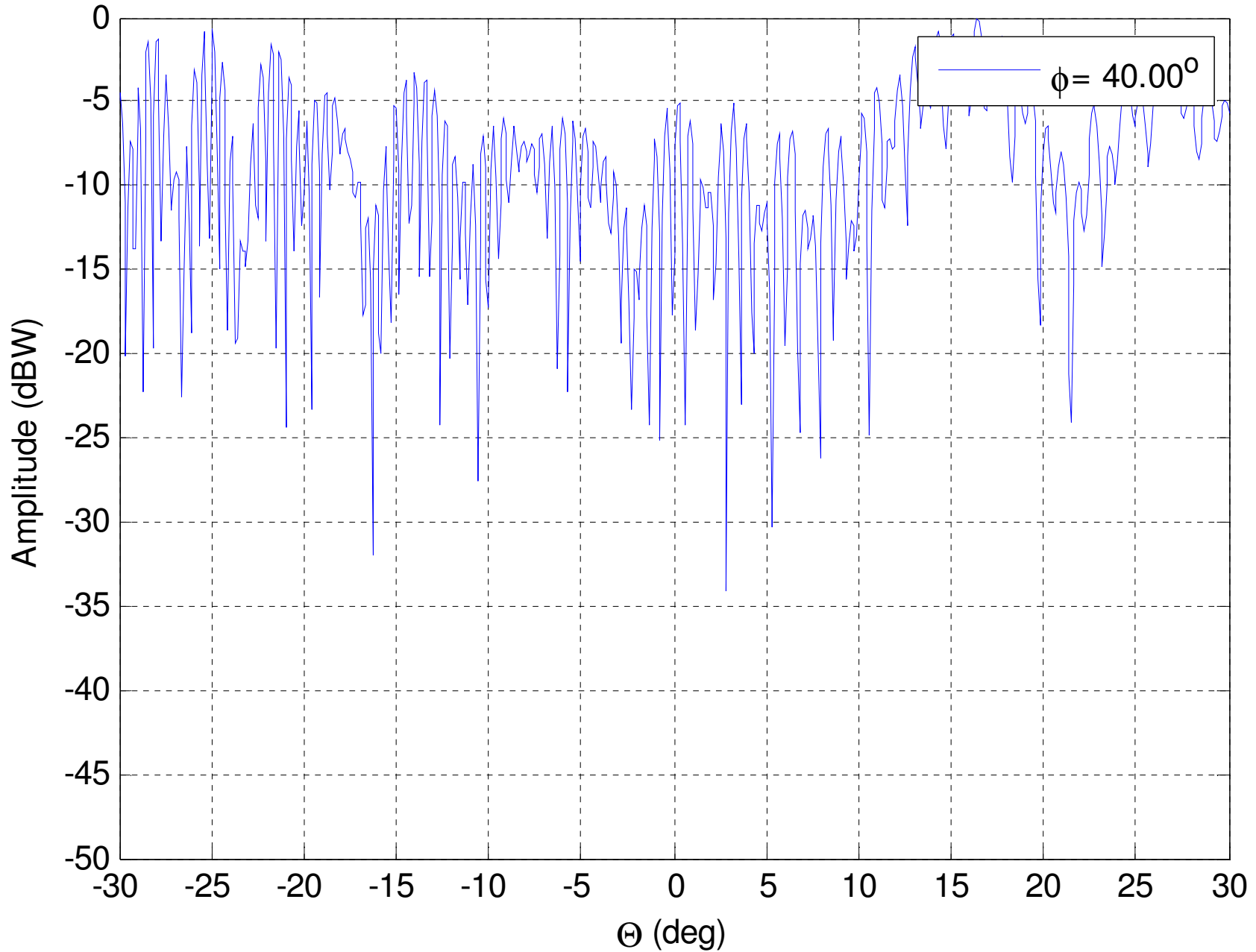
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -10.65 dBW, Date: 15-Dec-2011



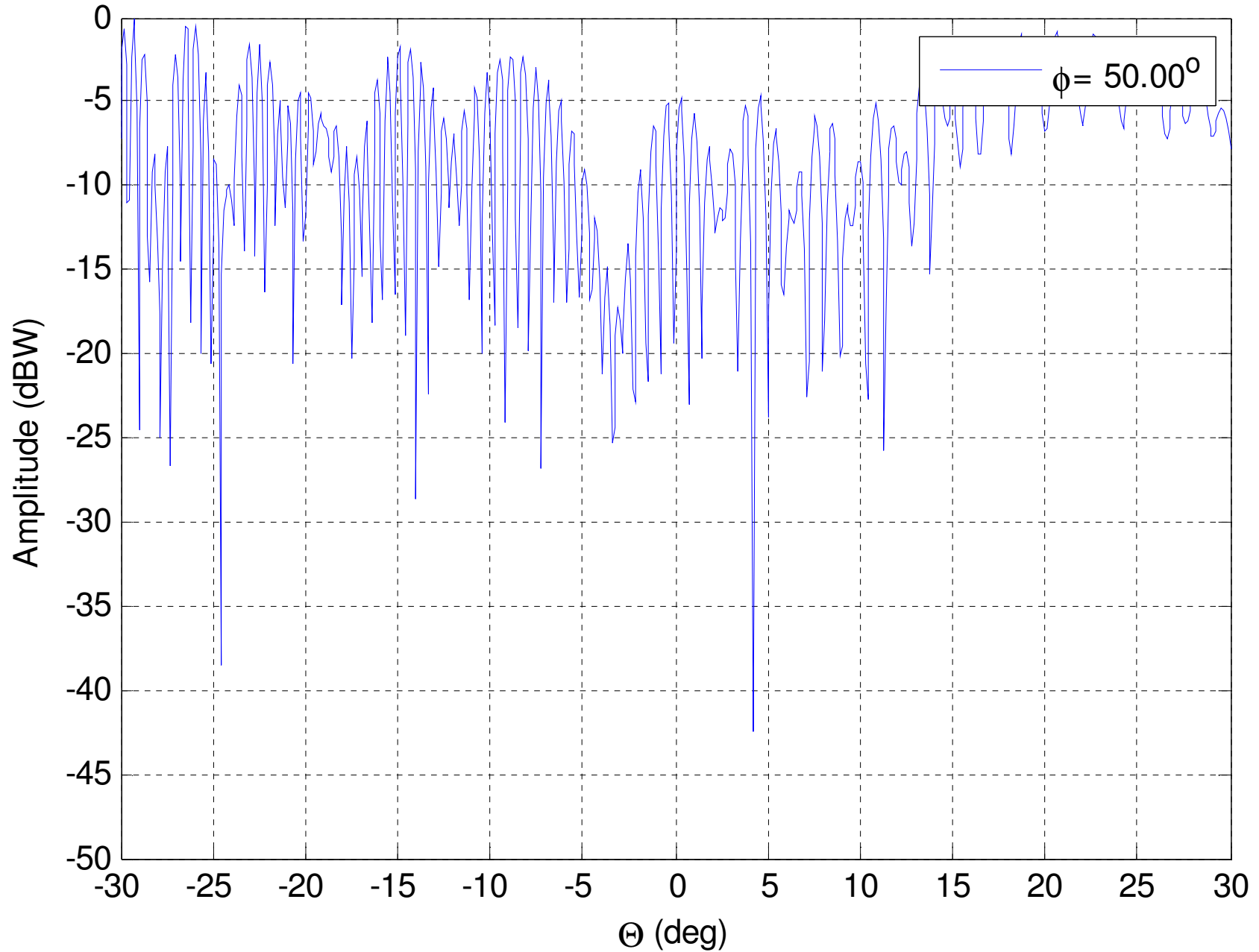
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -10.83 dBW, Date: 15-Dec-2011



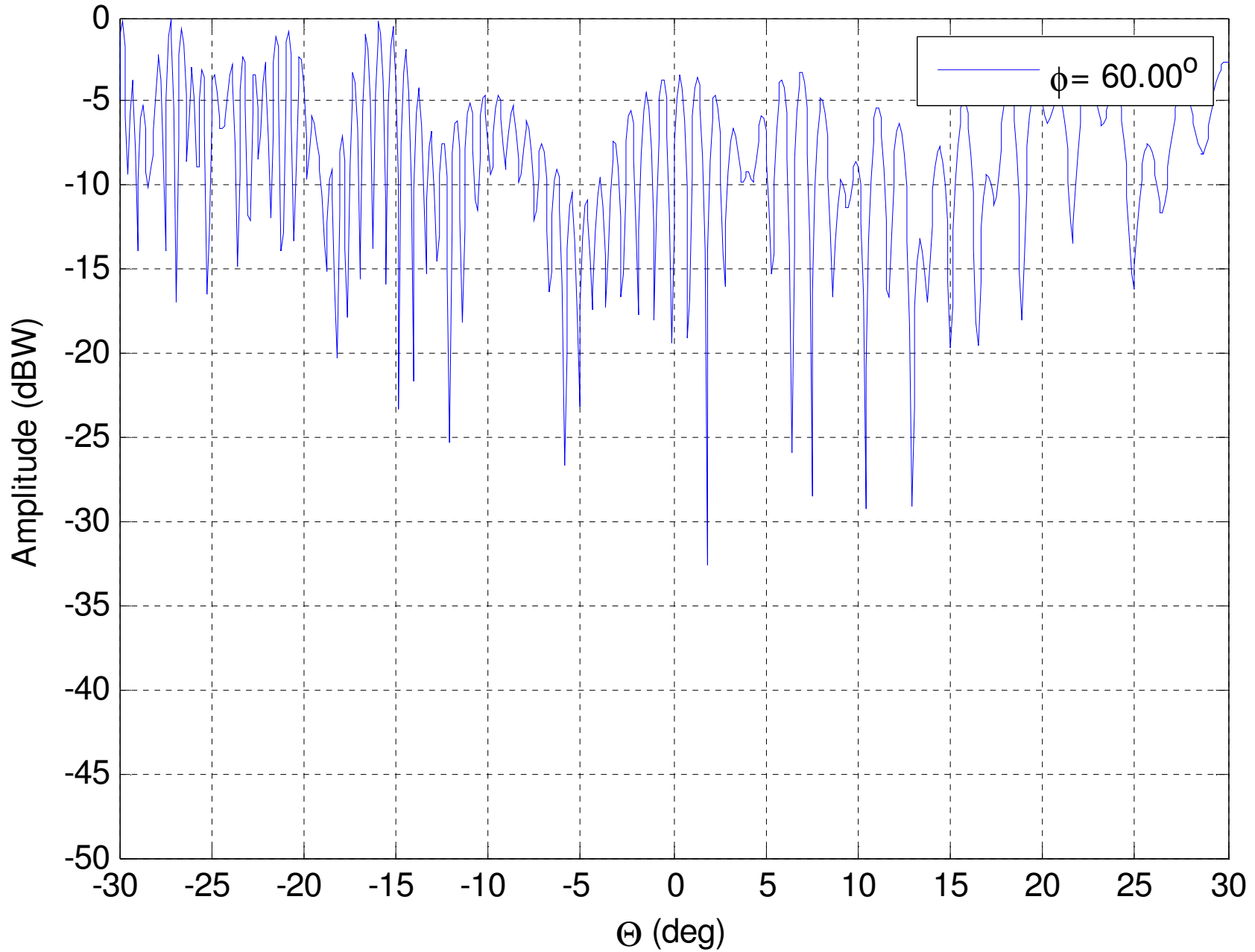
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -11.02 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -12.36 dBW, Date: 15-Dec-2011



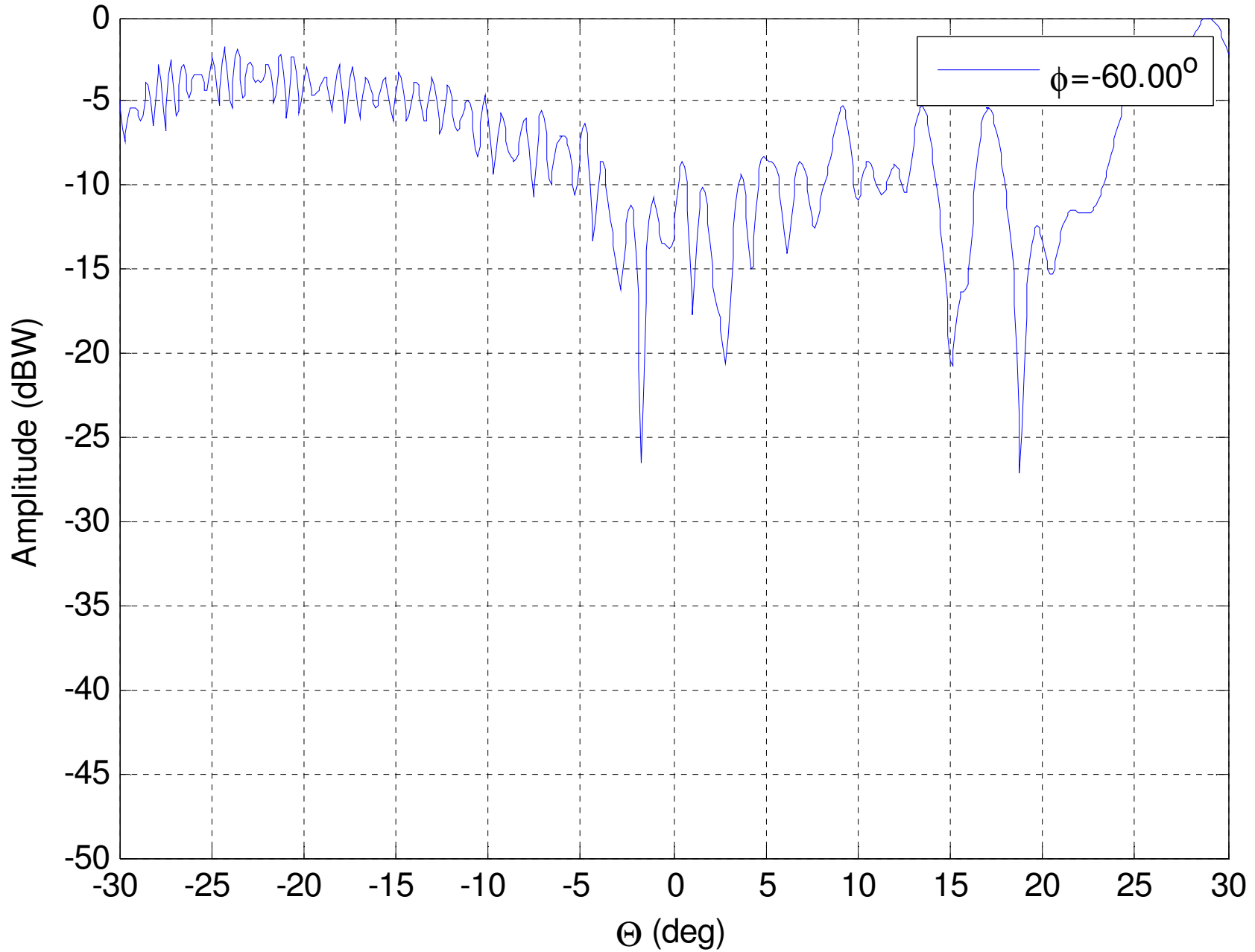
Spot Beam22, +X Axis Plots

- 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

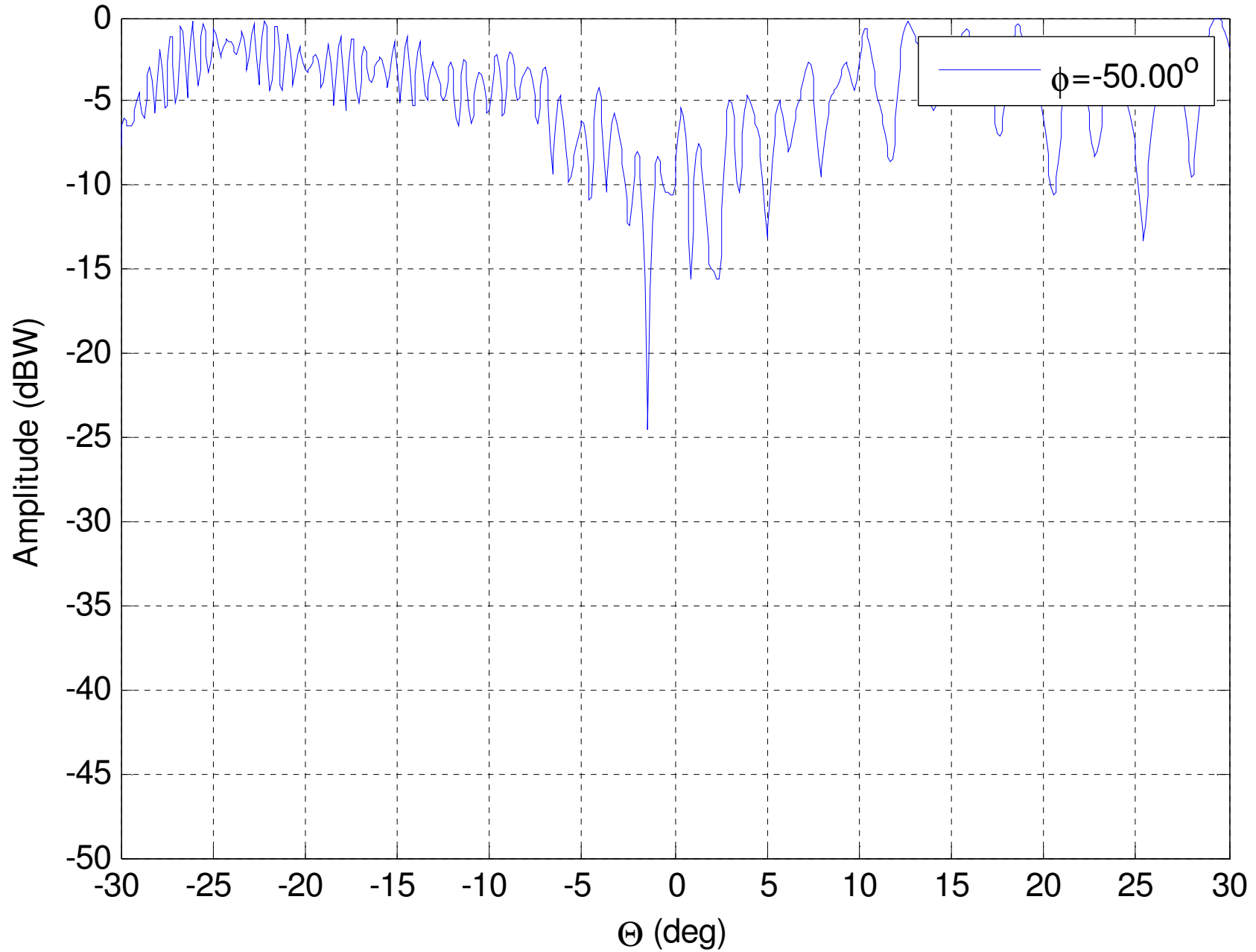
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.29 dBW, Date: 15-Dec-2011



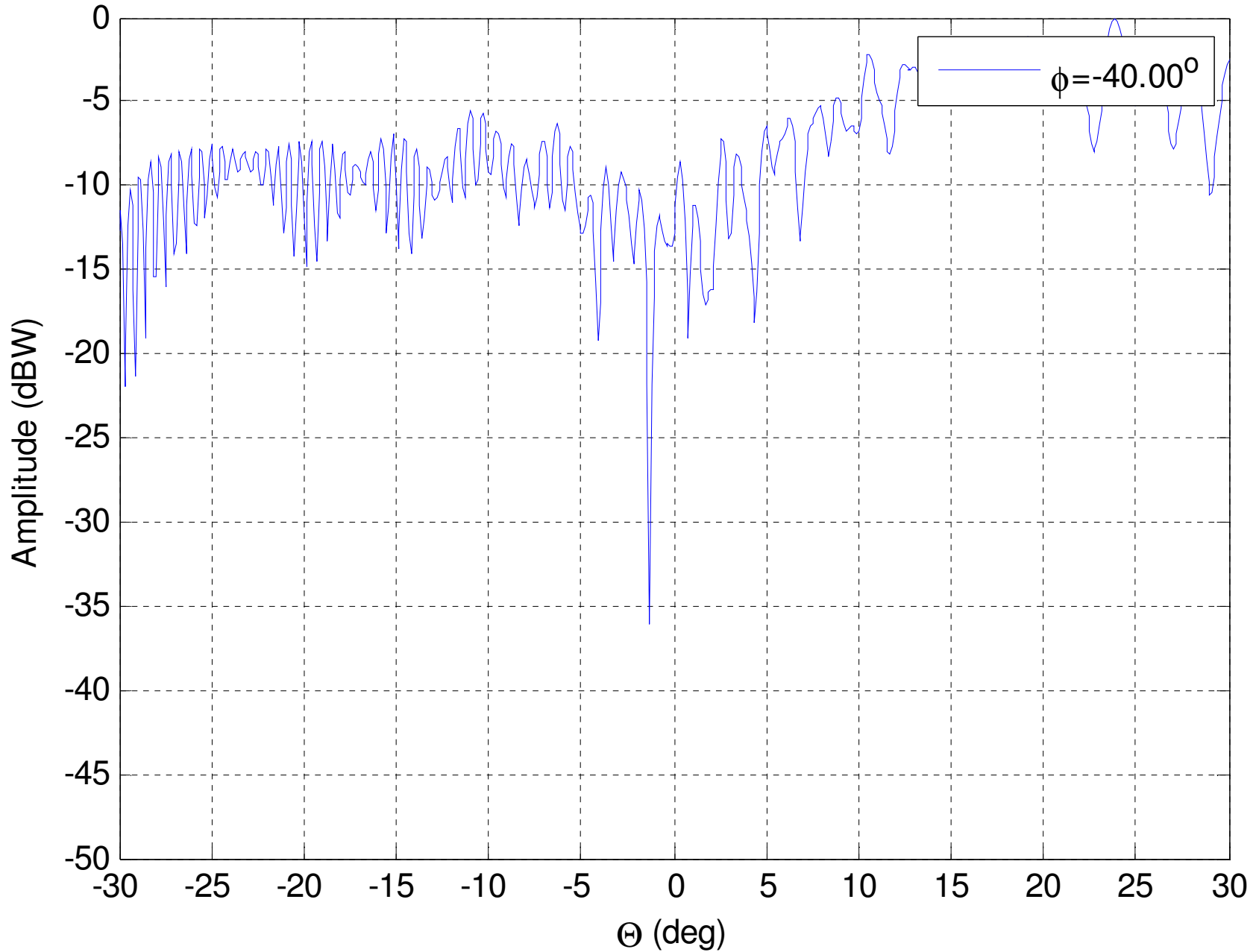
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -12.48 dBW, Date: 15-Dec-2011



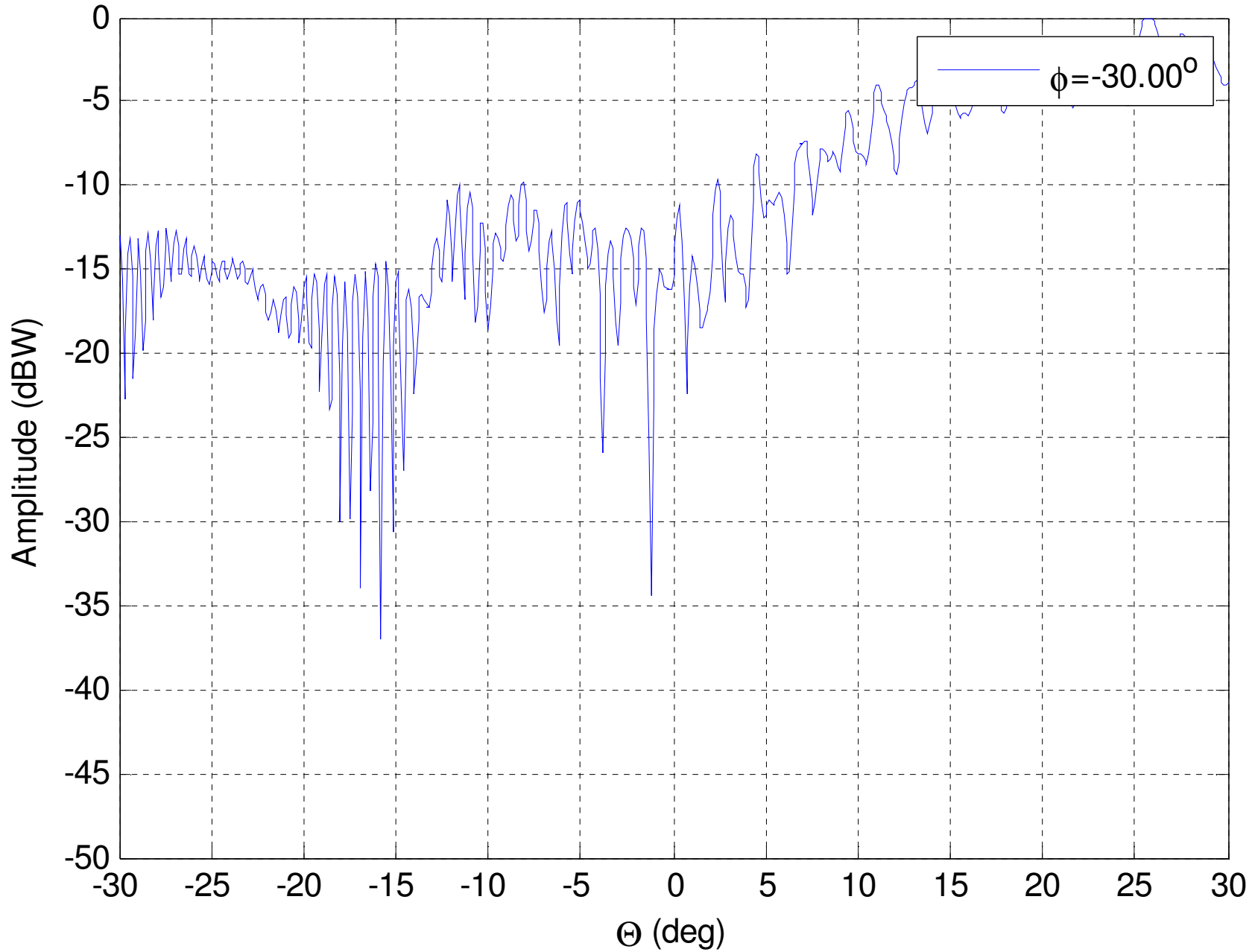
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -9.57 dBW, Date: 15-Dec-2011



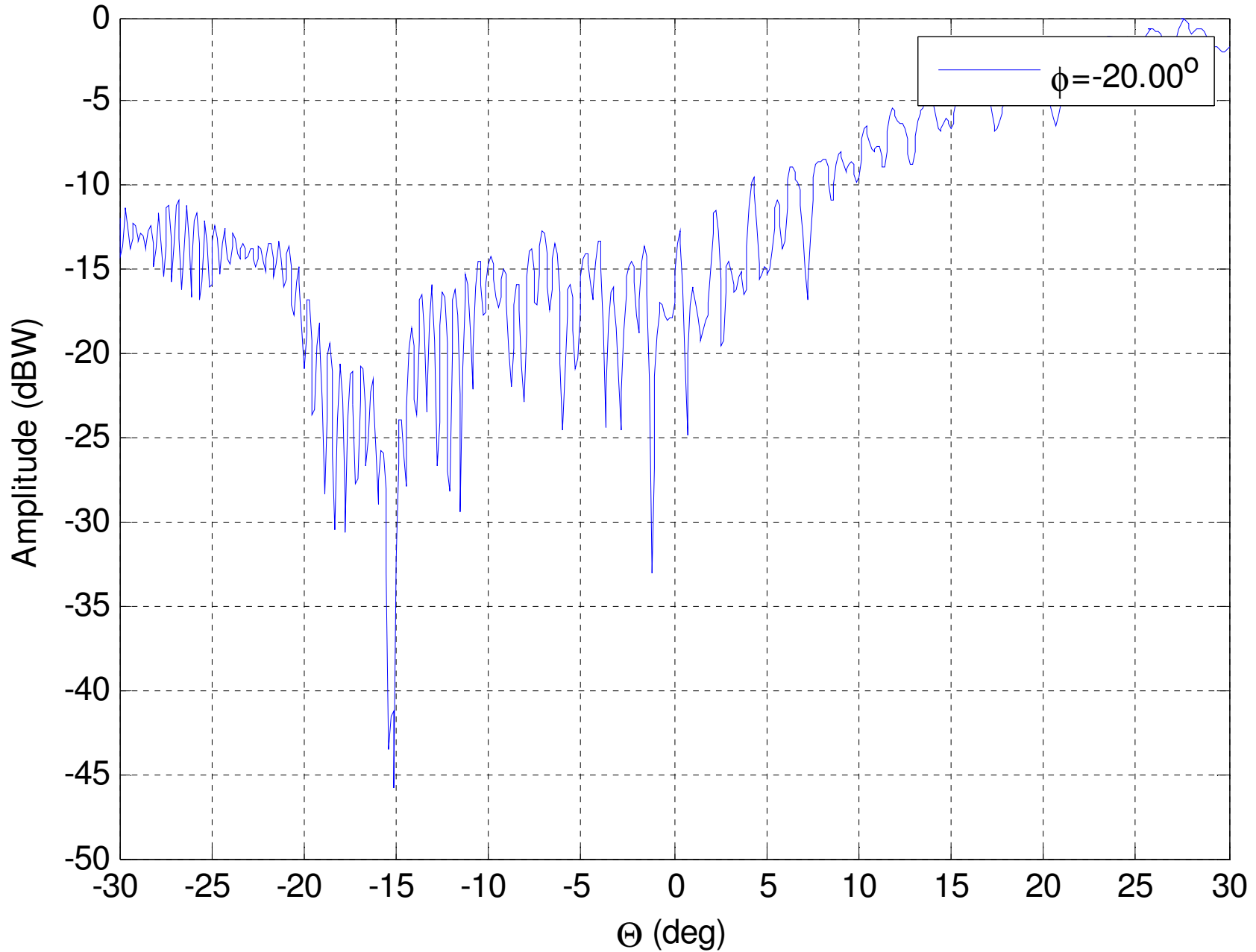
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.93 dBW, Date: 15-Dec-2011



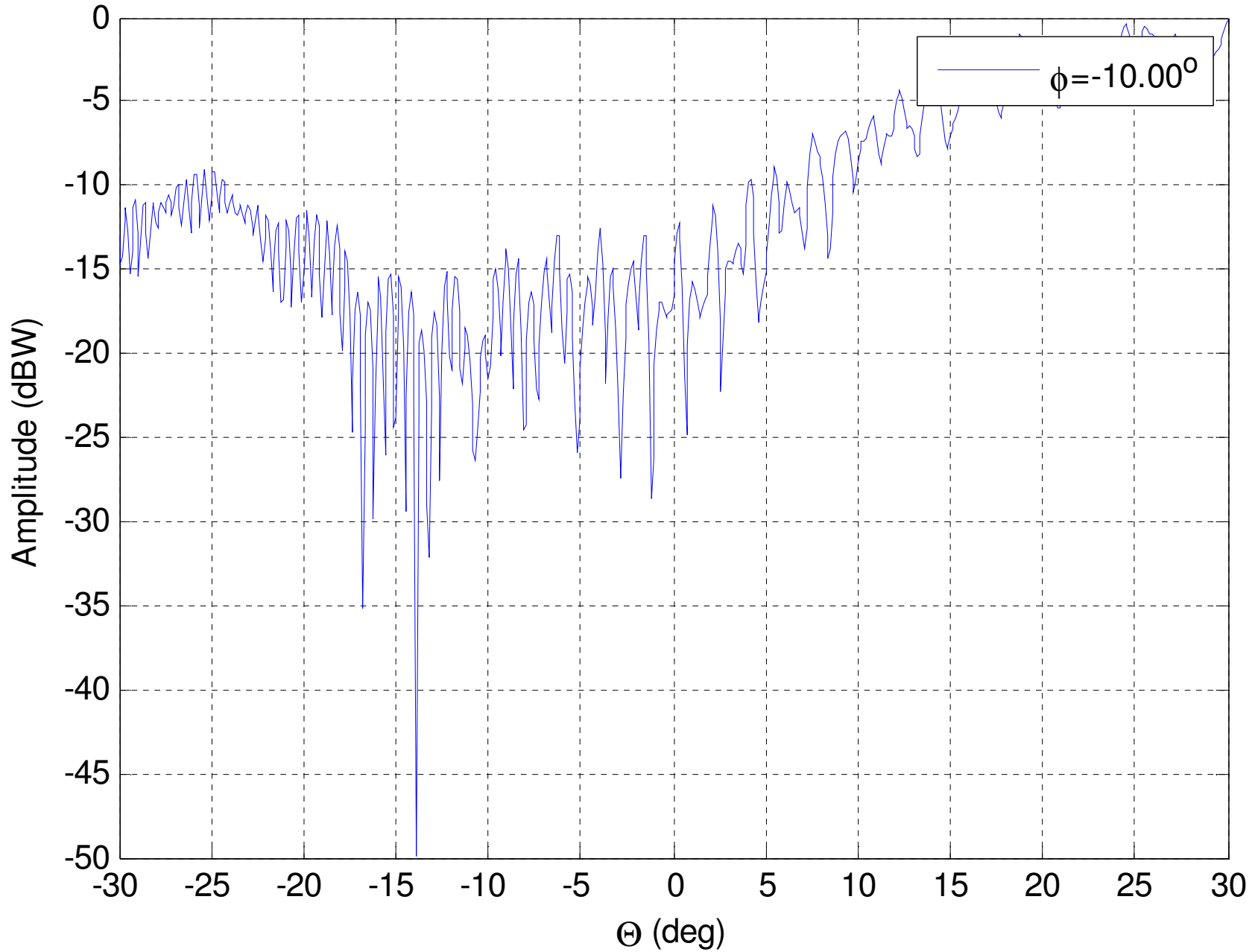
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -5.35 dBW, Date: 15-Dec-2011



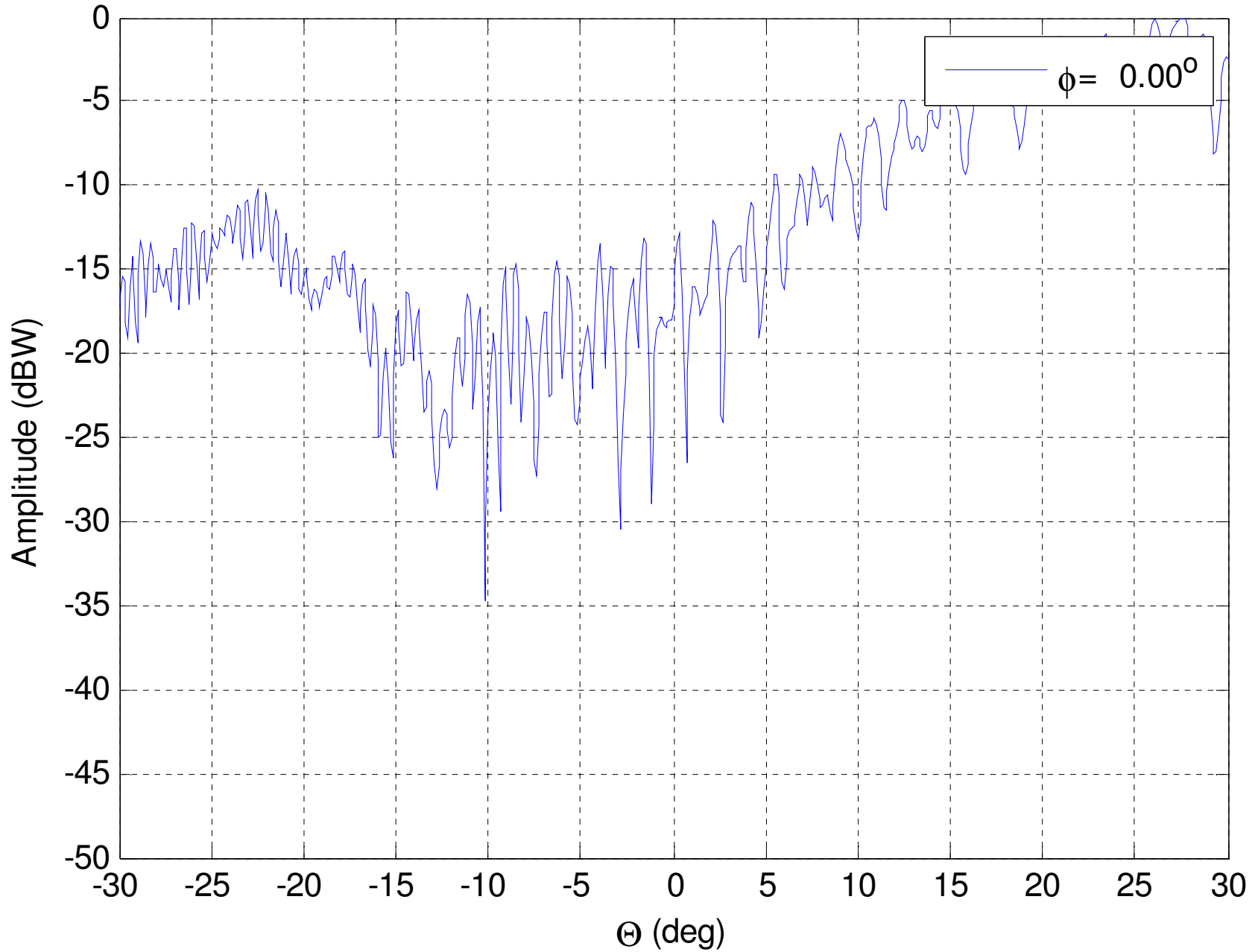
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -5.81 dBW, Date: 15-Dec-2011



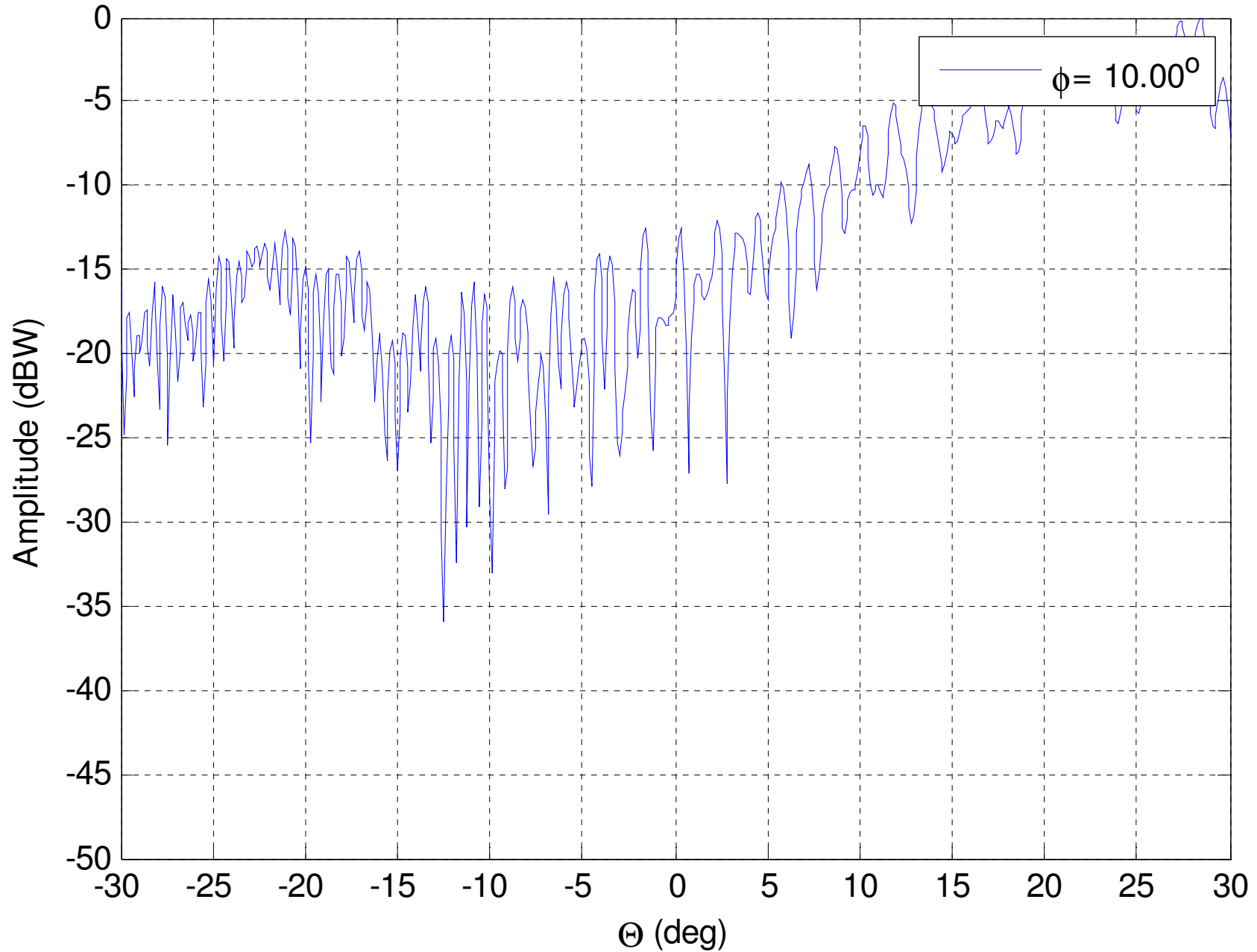
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -5.34 dBW, Date: 15-Dec-2011



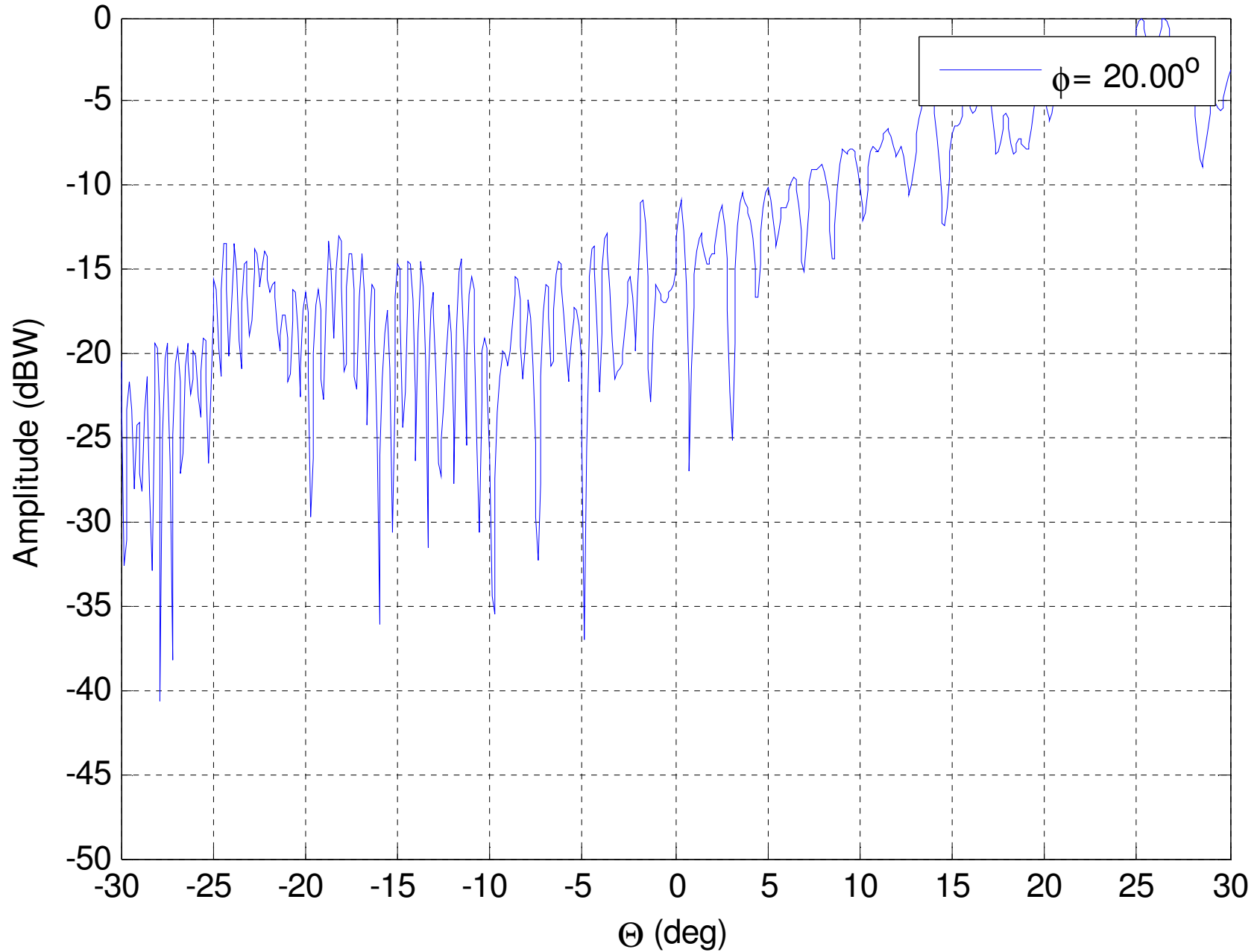
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -5.71 dBW, Date: 15-Dec-2011



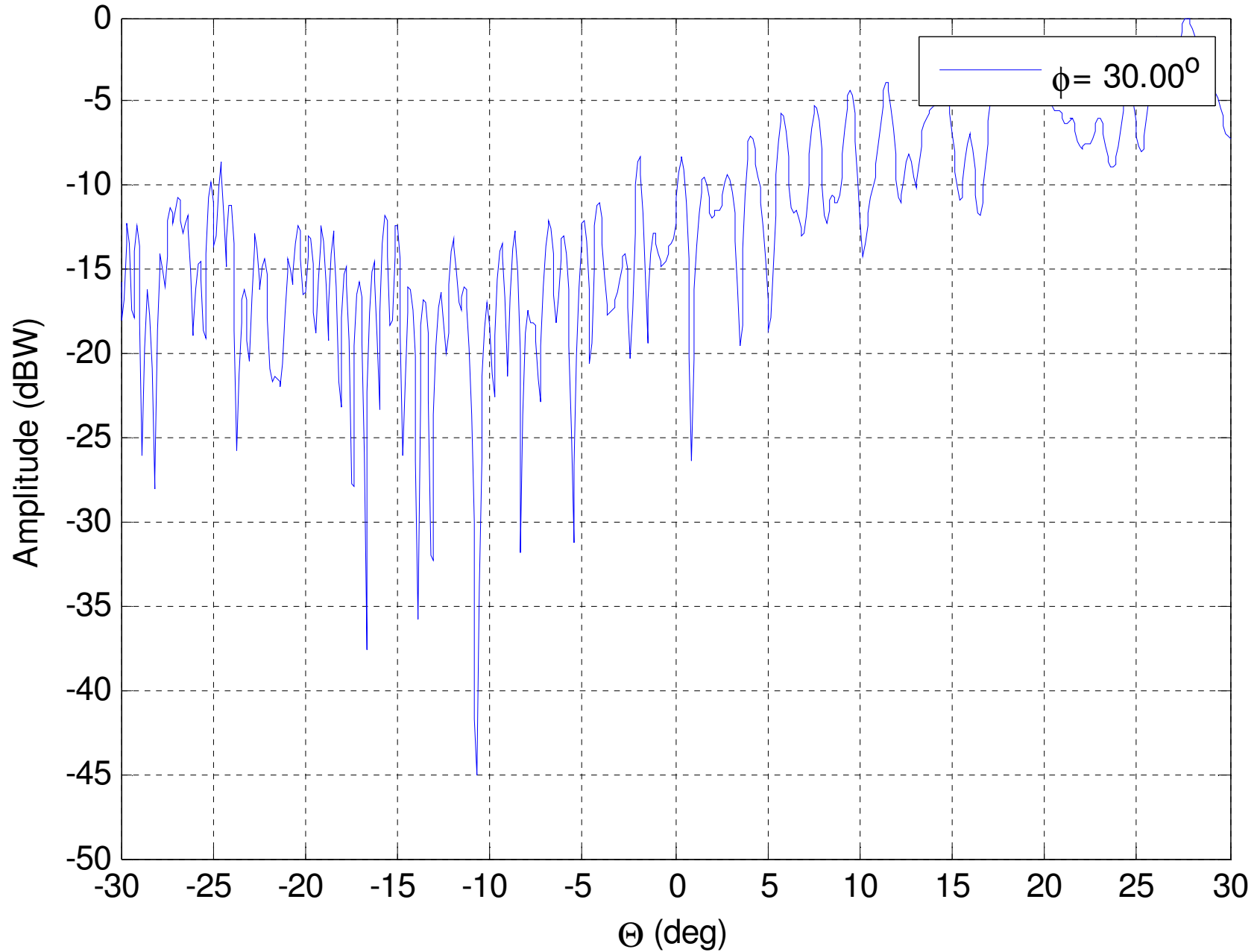
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.41 dBW, Date: 15-Dec-2011



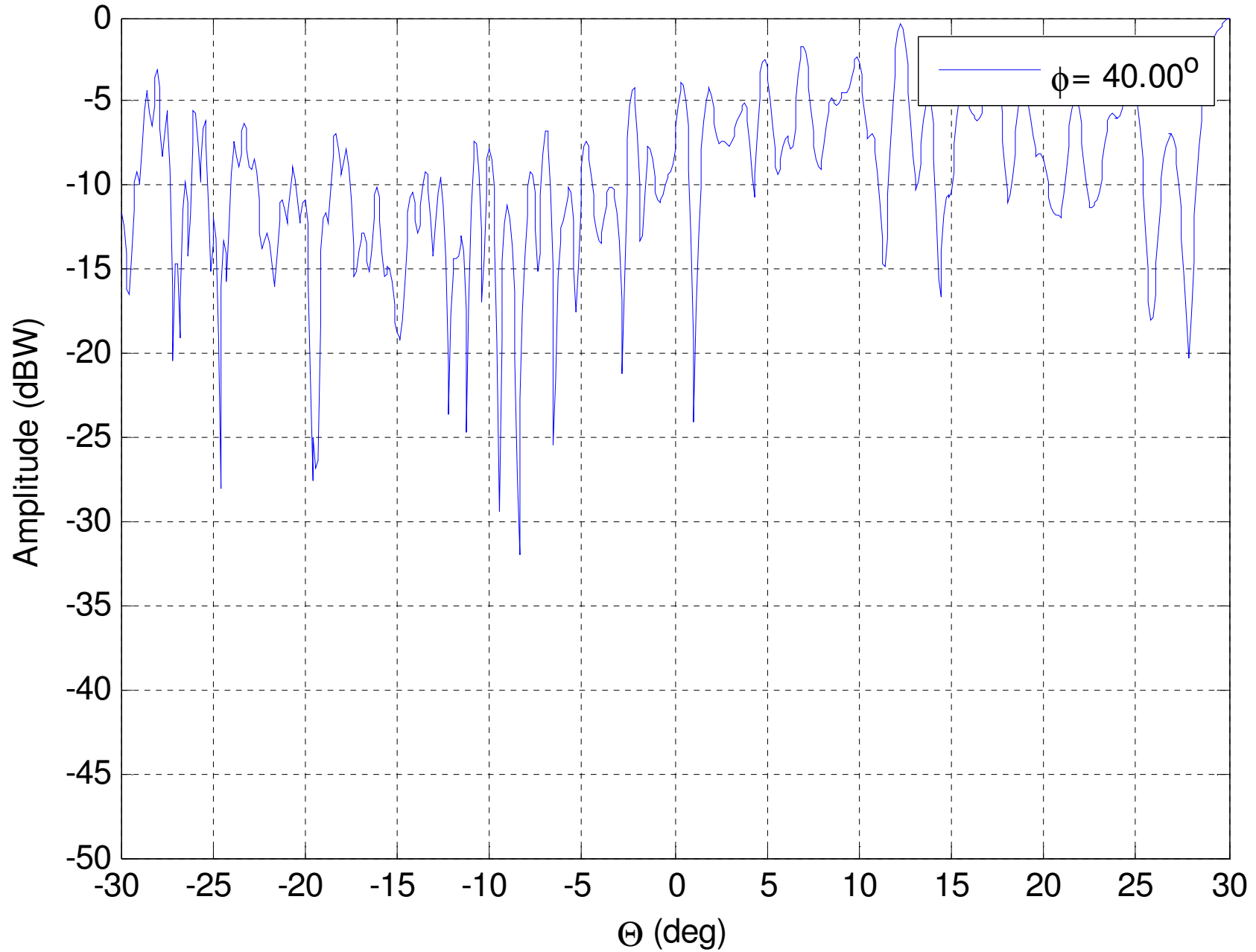
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.11 dBW, Date: 15-Dec-2011



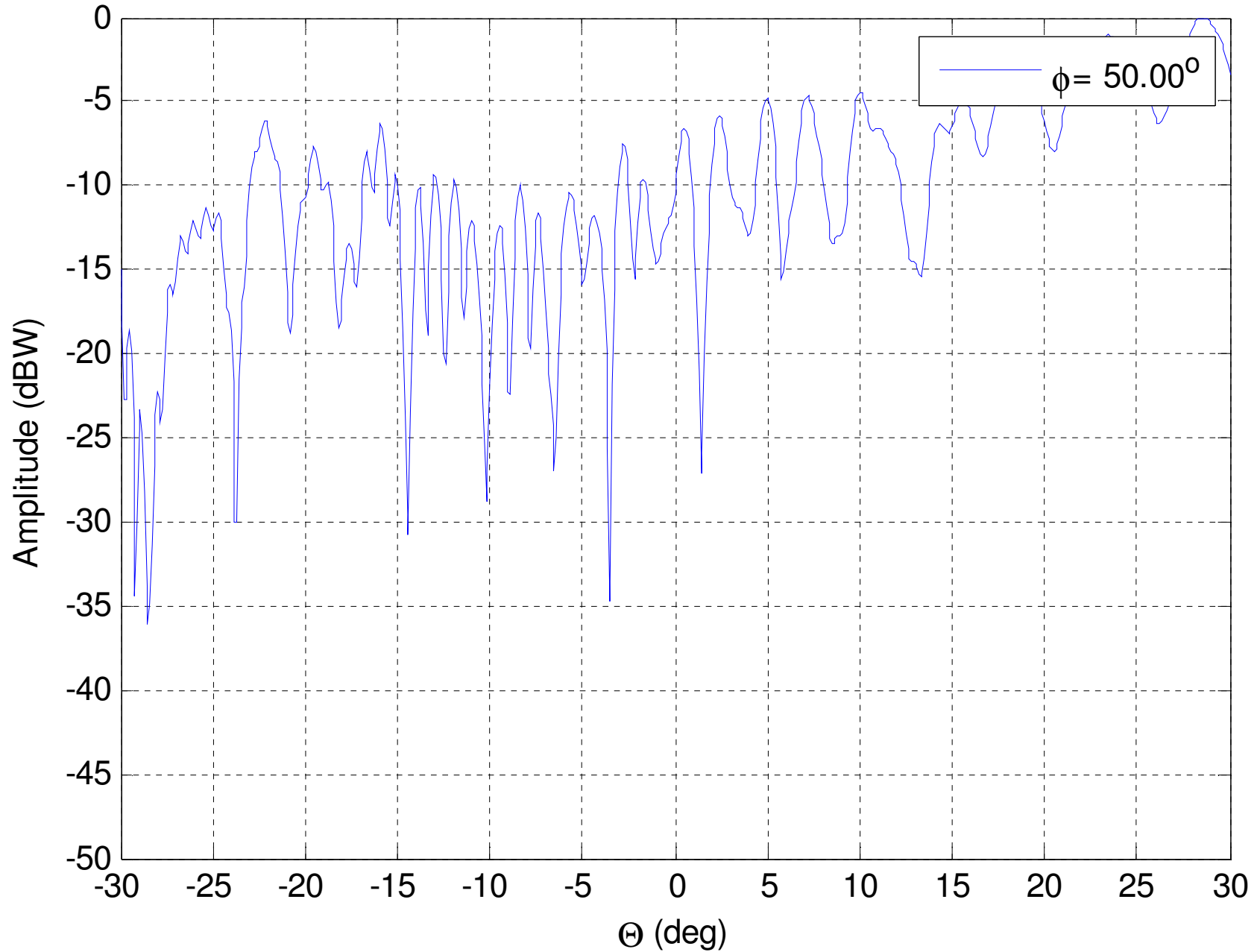
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -14.56 dBW, Date: 15-Dec-2011



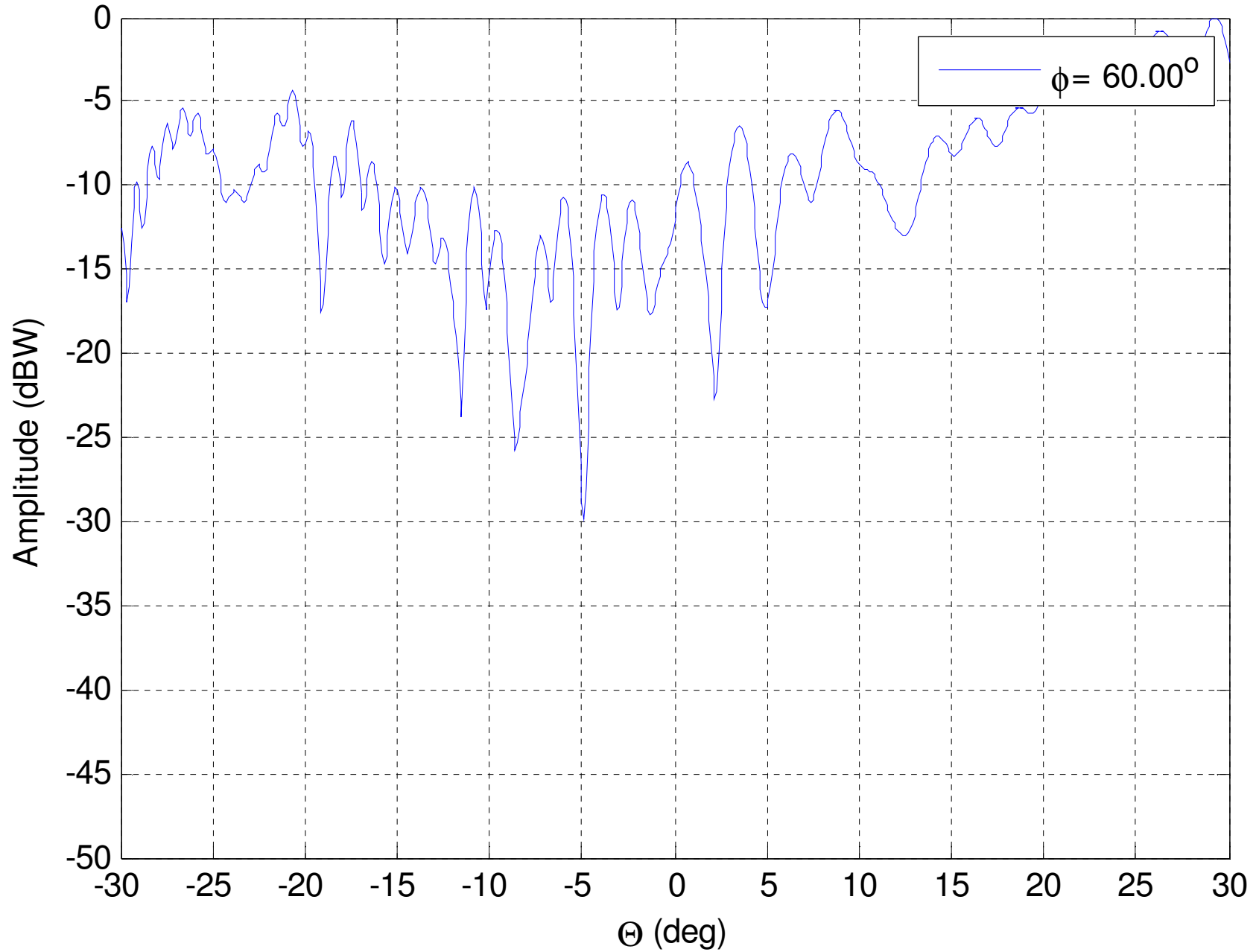
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -11.98 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

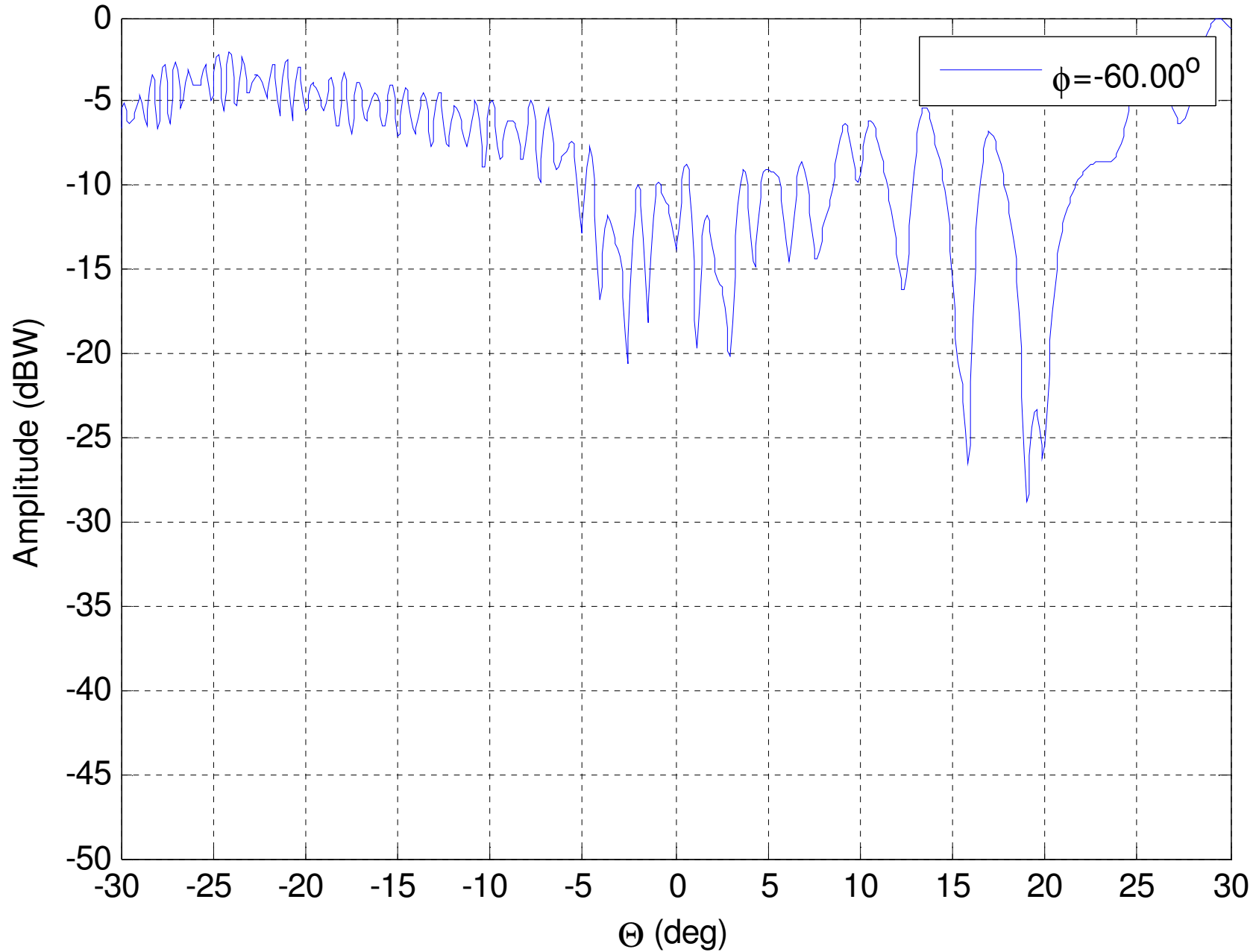
Input file: tx-17.3-rhcp-60.cut, Peak: -10.22 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

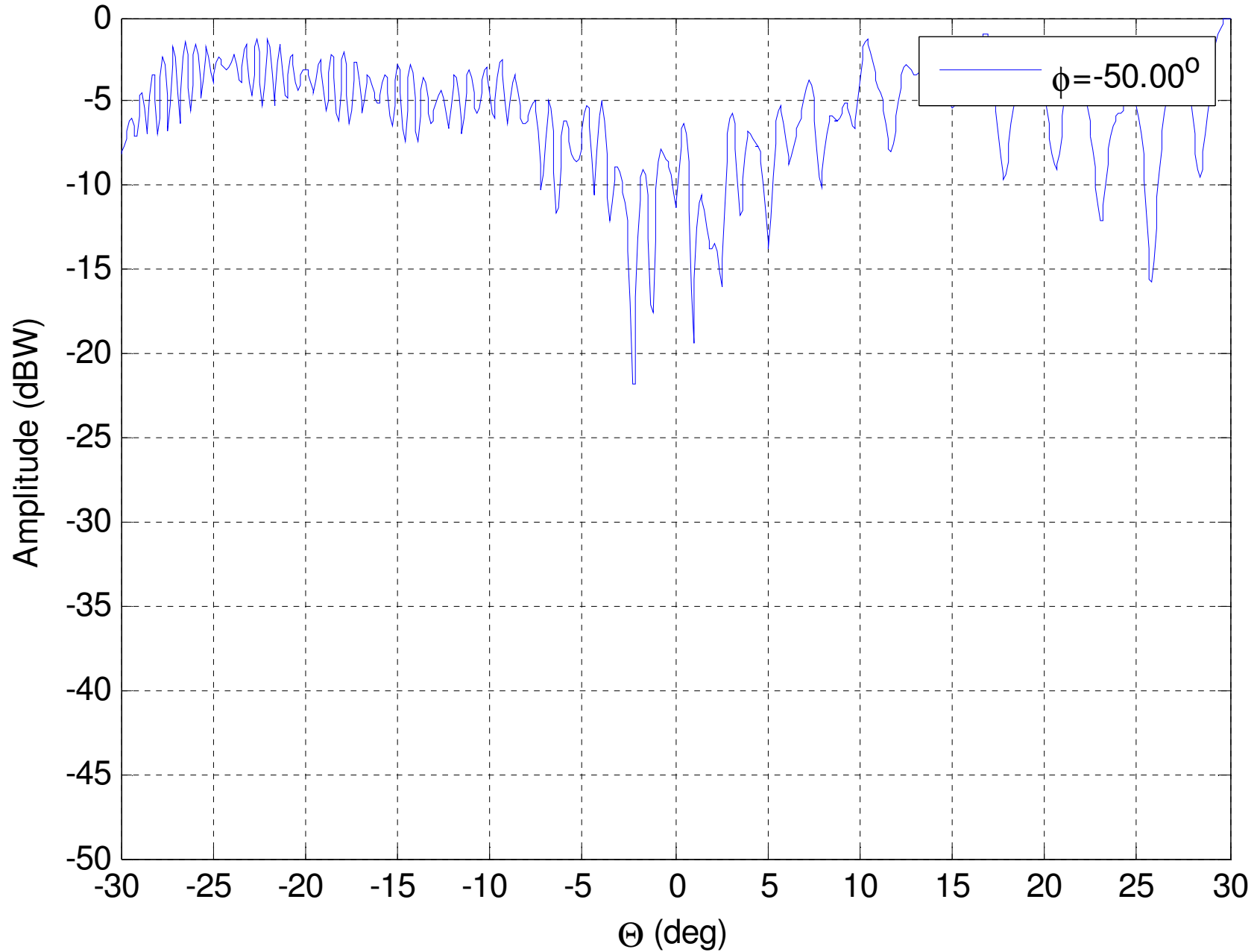
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -8.95 dBW, Date: 15-Dec-2011



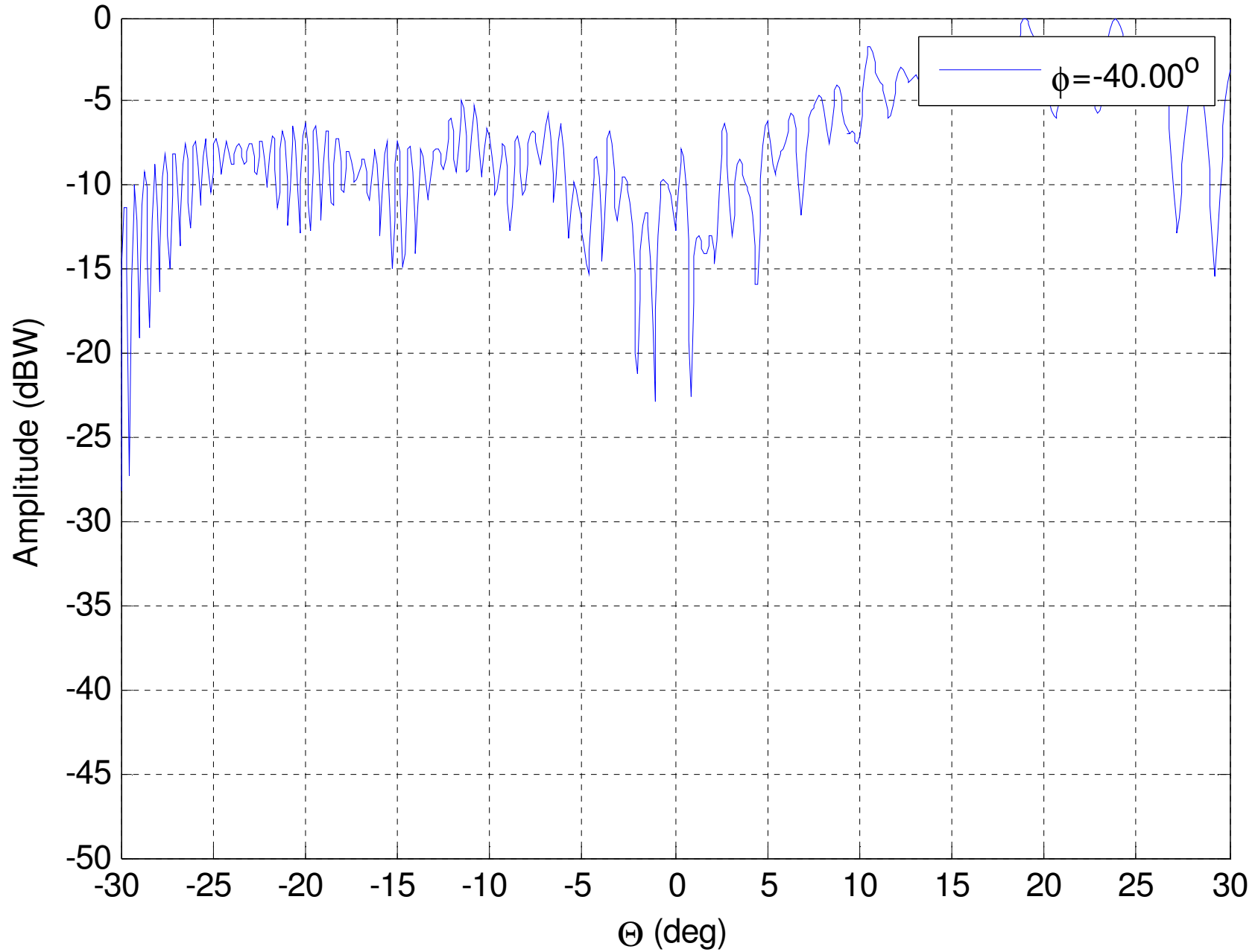
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -11.44 dBW, Date: 15-Dec-2011



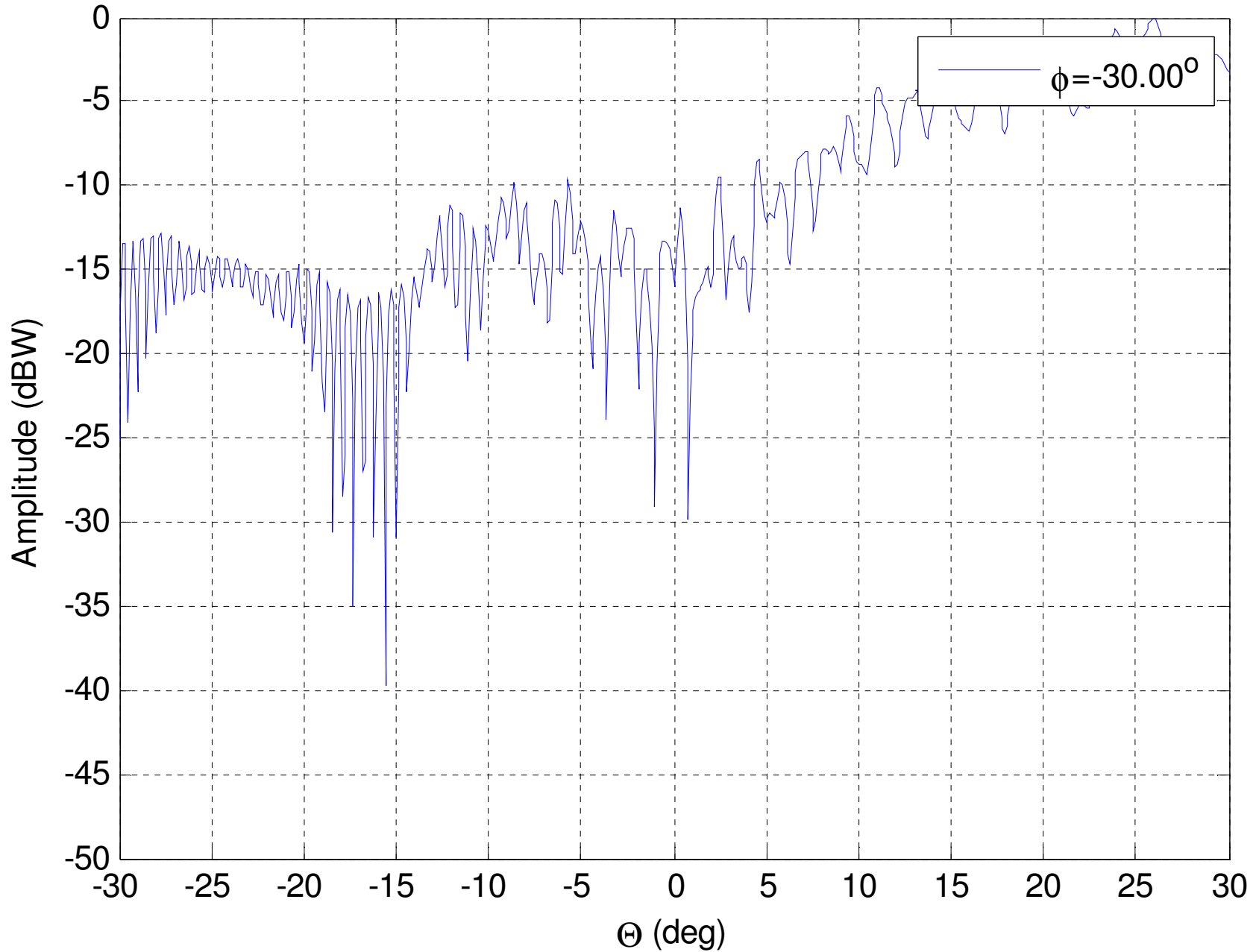
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.06 dBW, Date: 15-Dec-2011



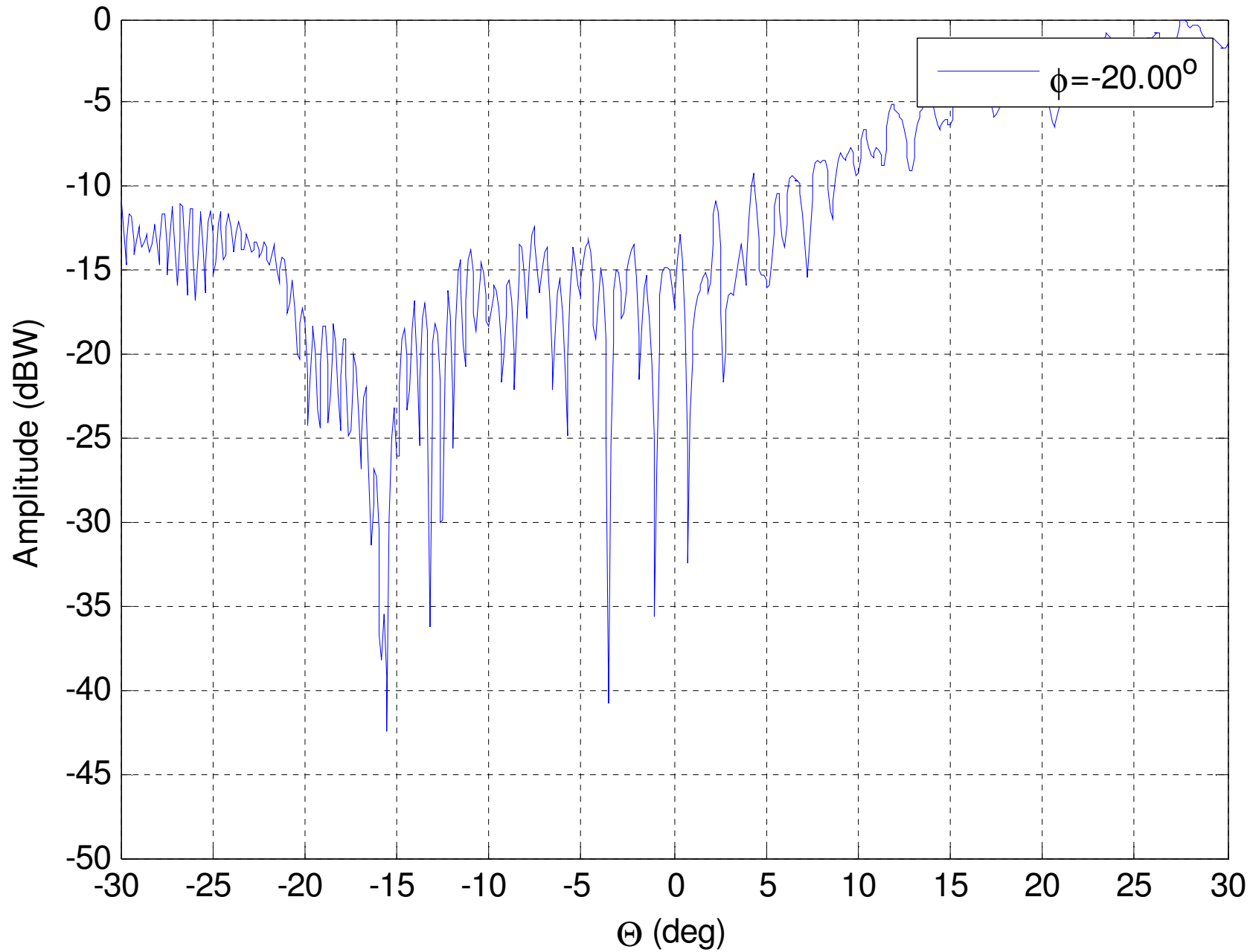
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -6.76 dBW, Date: 15-Dec-2011



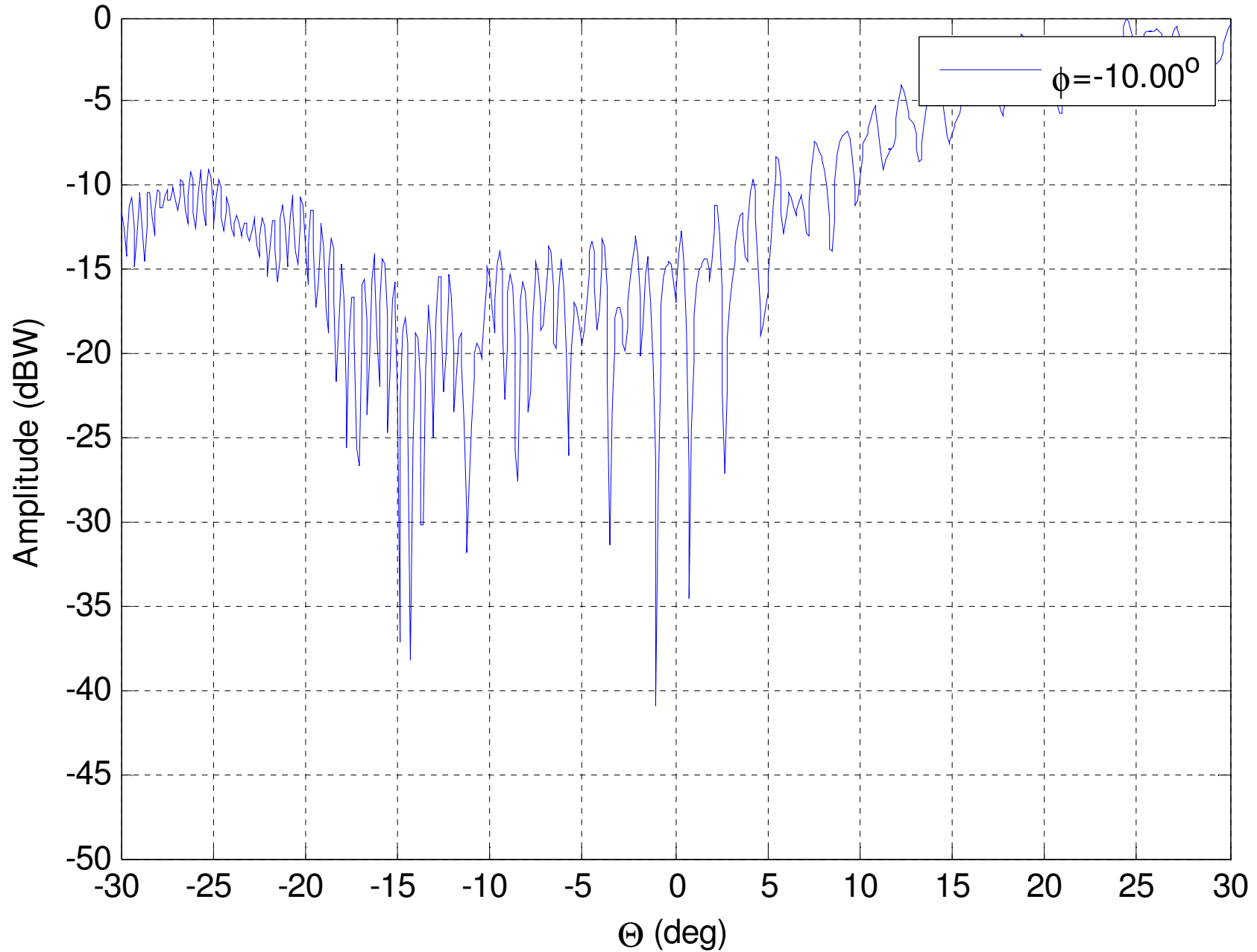
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -5.48 dBW, Date: 15-Dec-2011



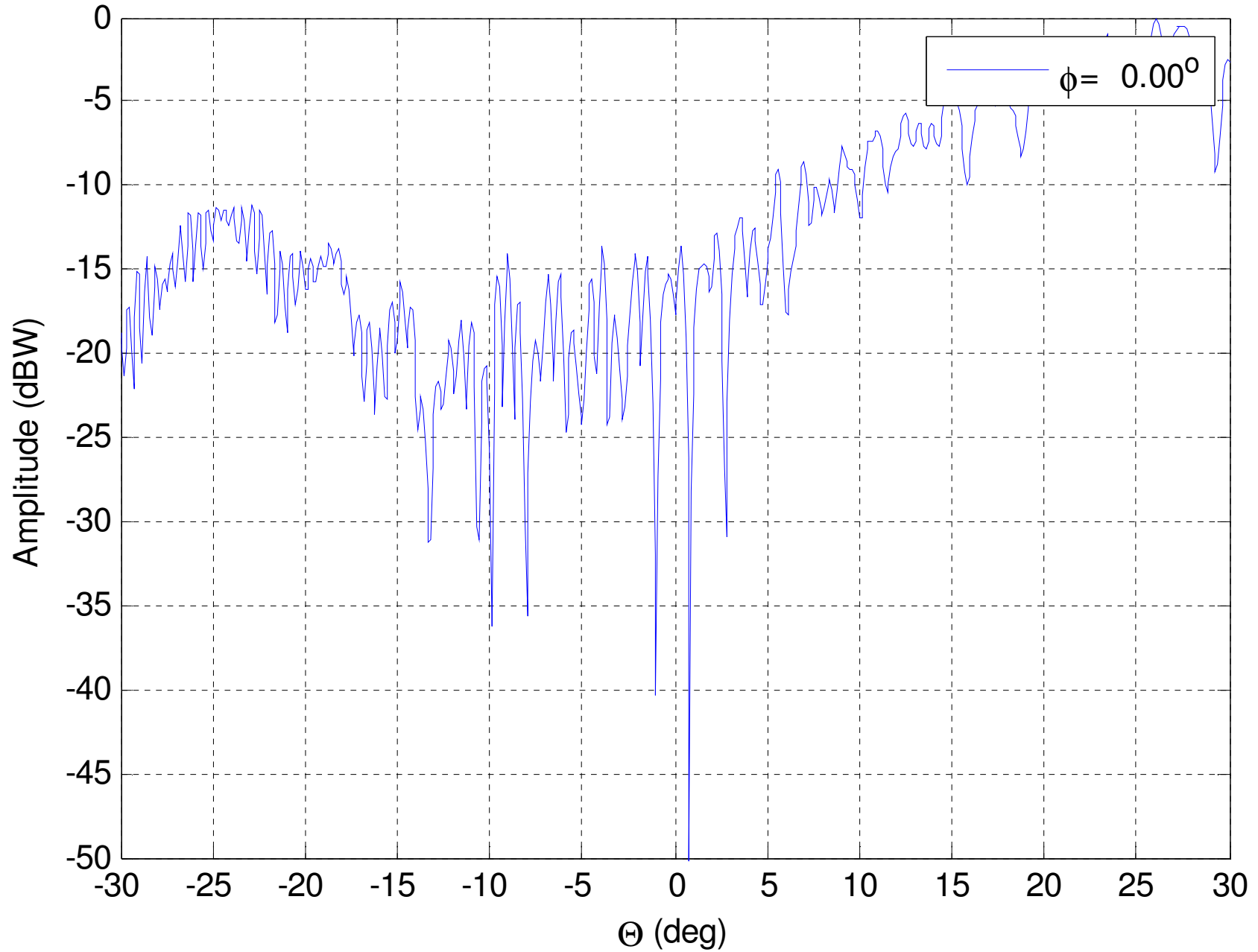
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -5.80 dBW, Date: 15-Dec-2011



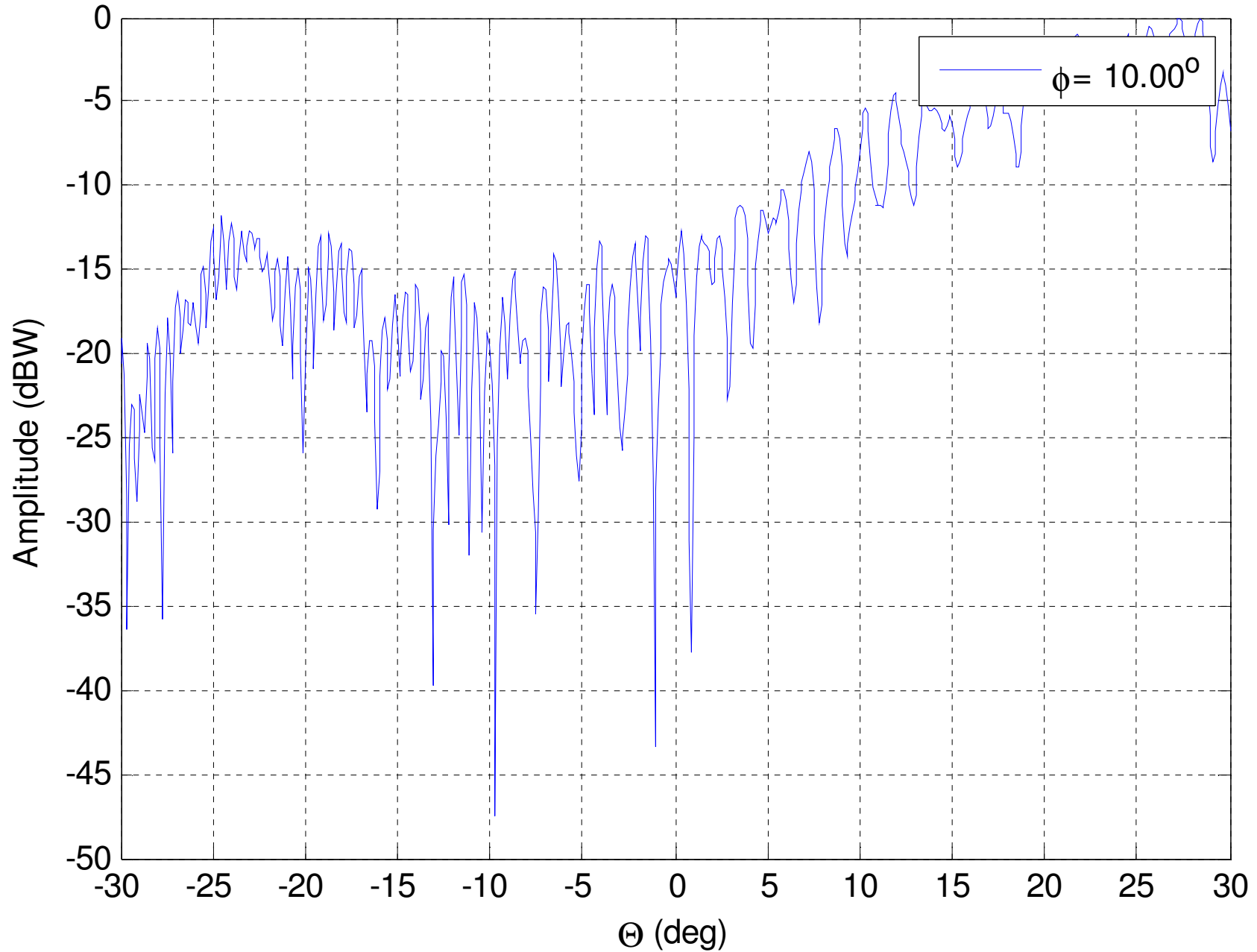
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.04 dBW, Date: 15-Dec-2011



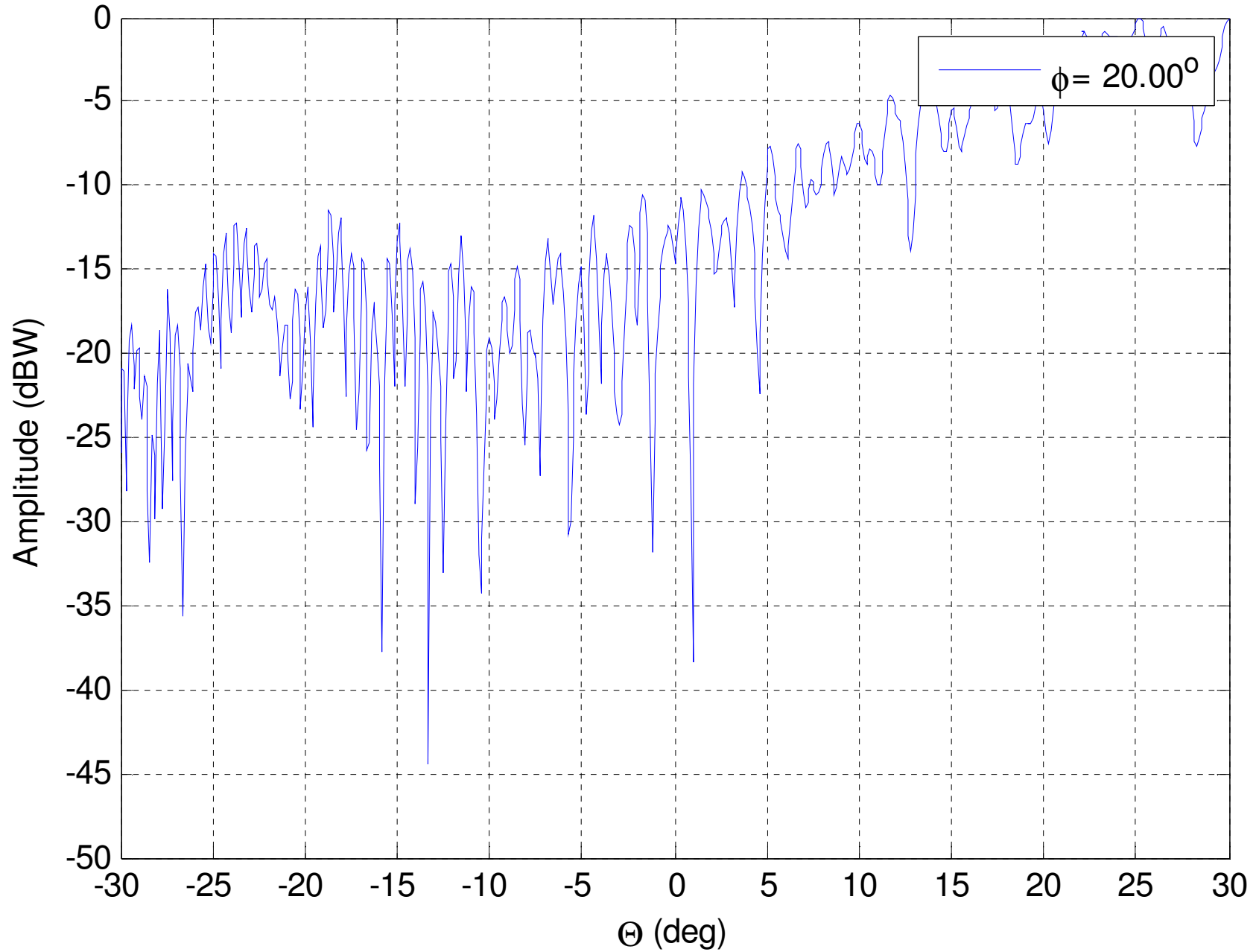
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -6.04 dBW, Date: 15-Dec-2011



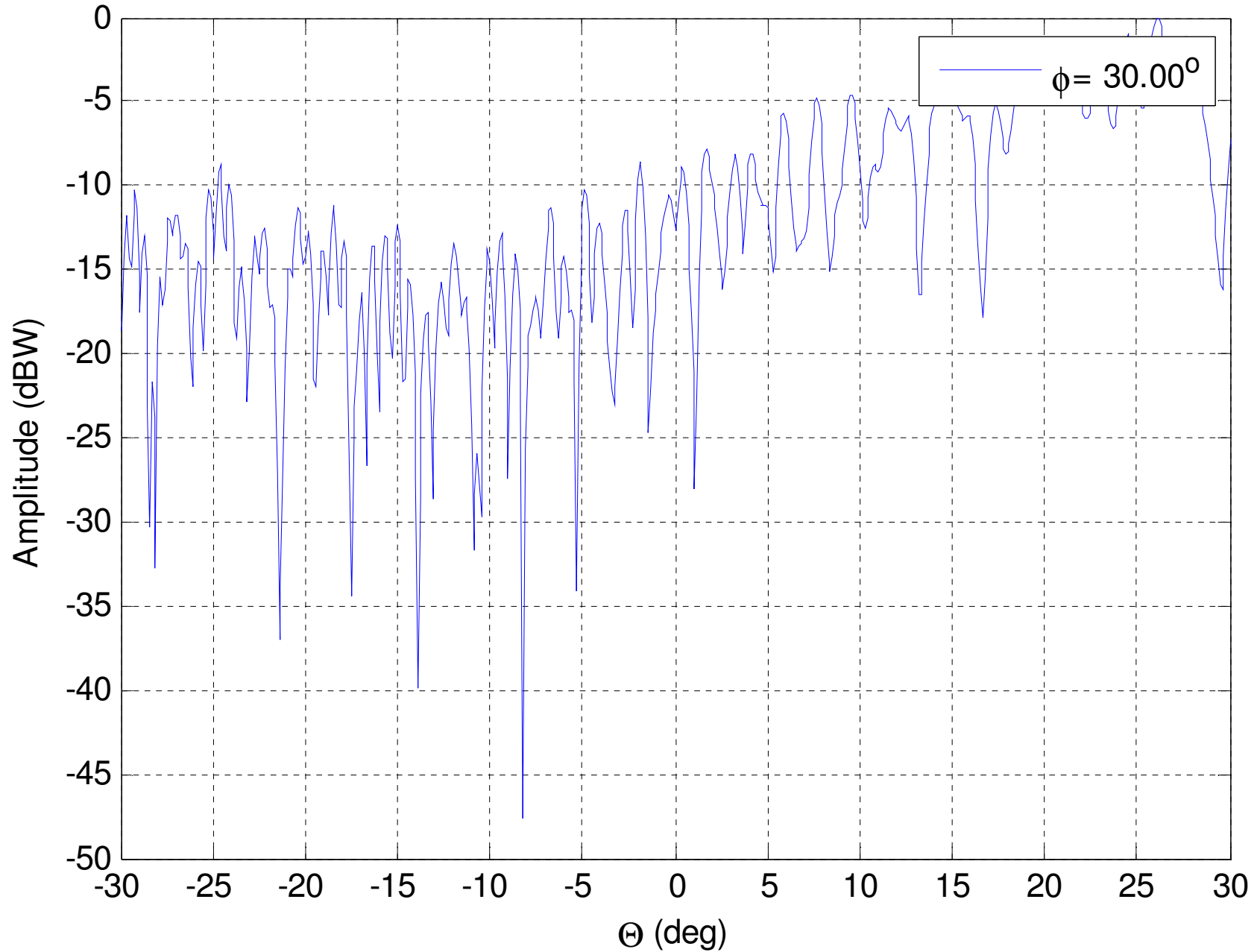
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -8.12 dBW, Date: 15-Dec-2011



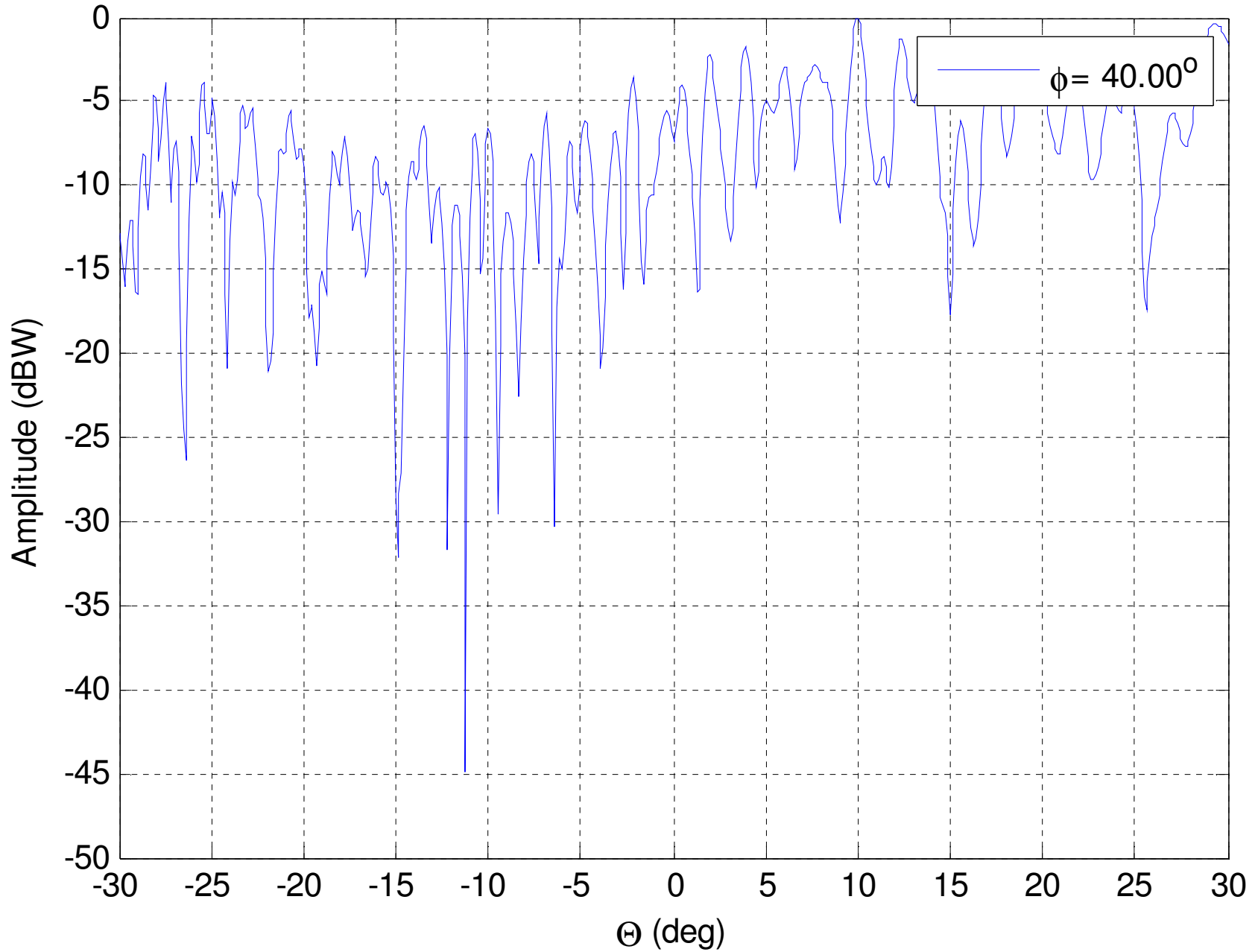
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -10.05 dBW, Date: 15-Dec-2011



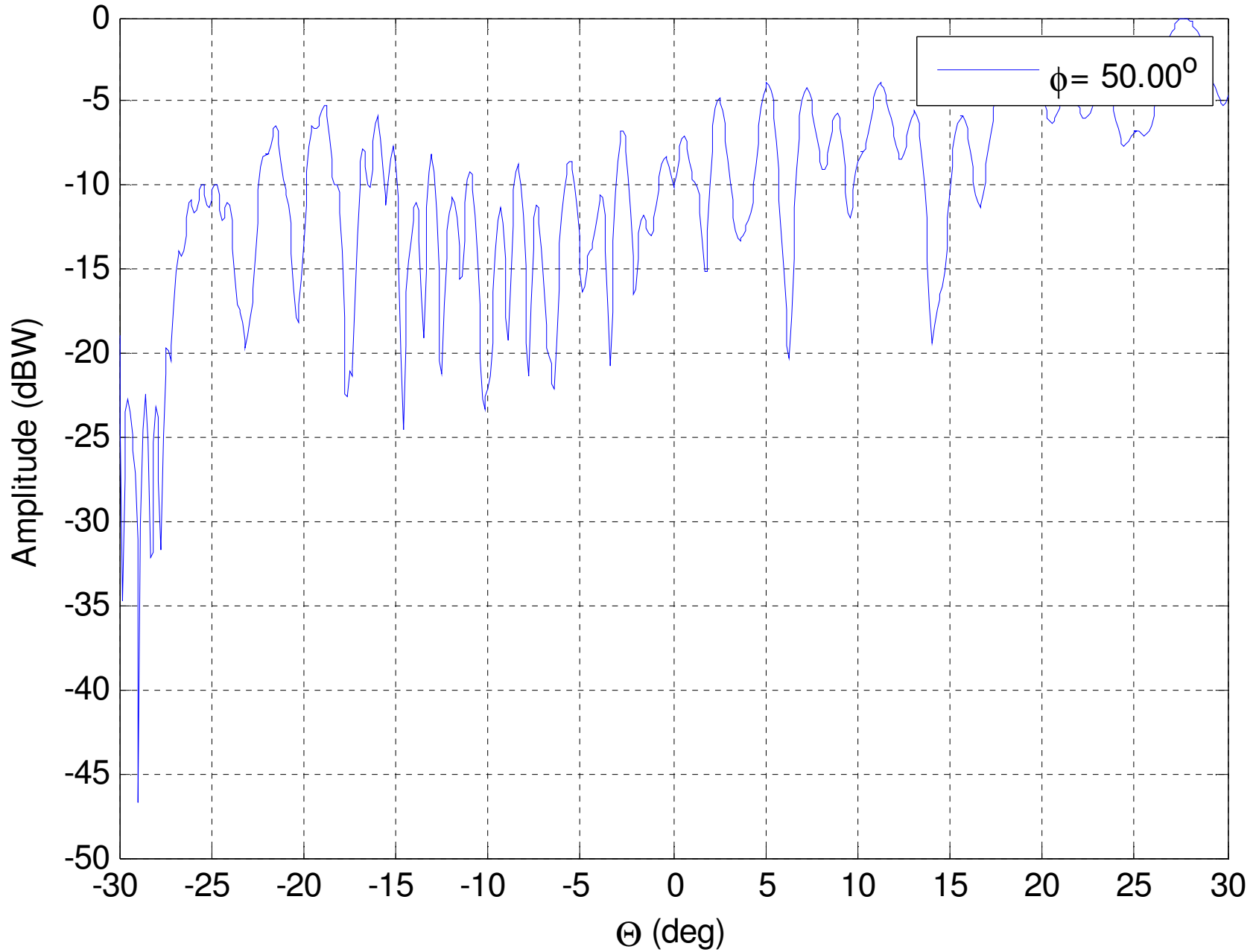
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -15.32 dBW, Date: 15-Dec-2011



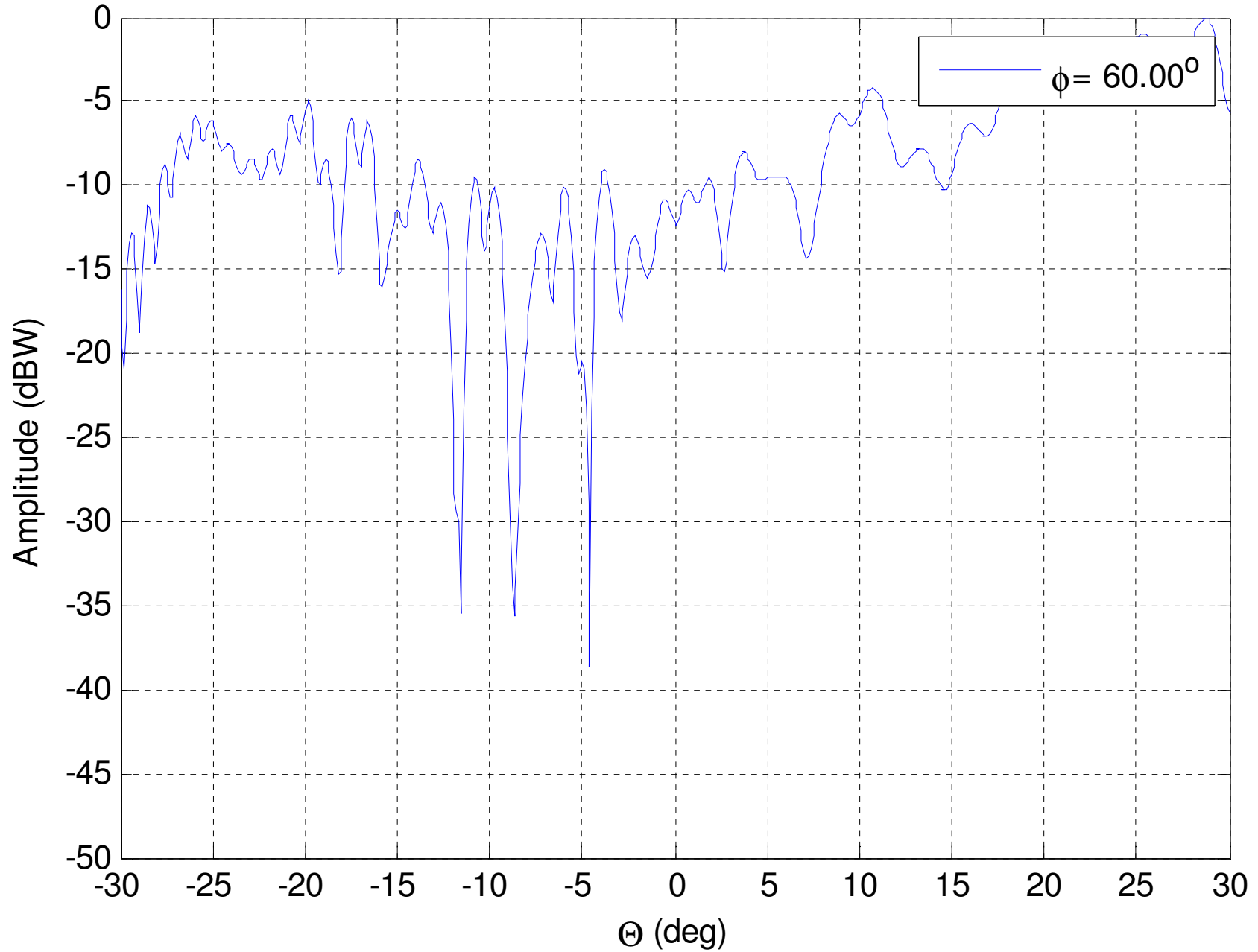
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -12.69 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

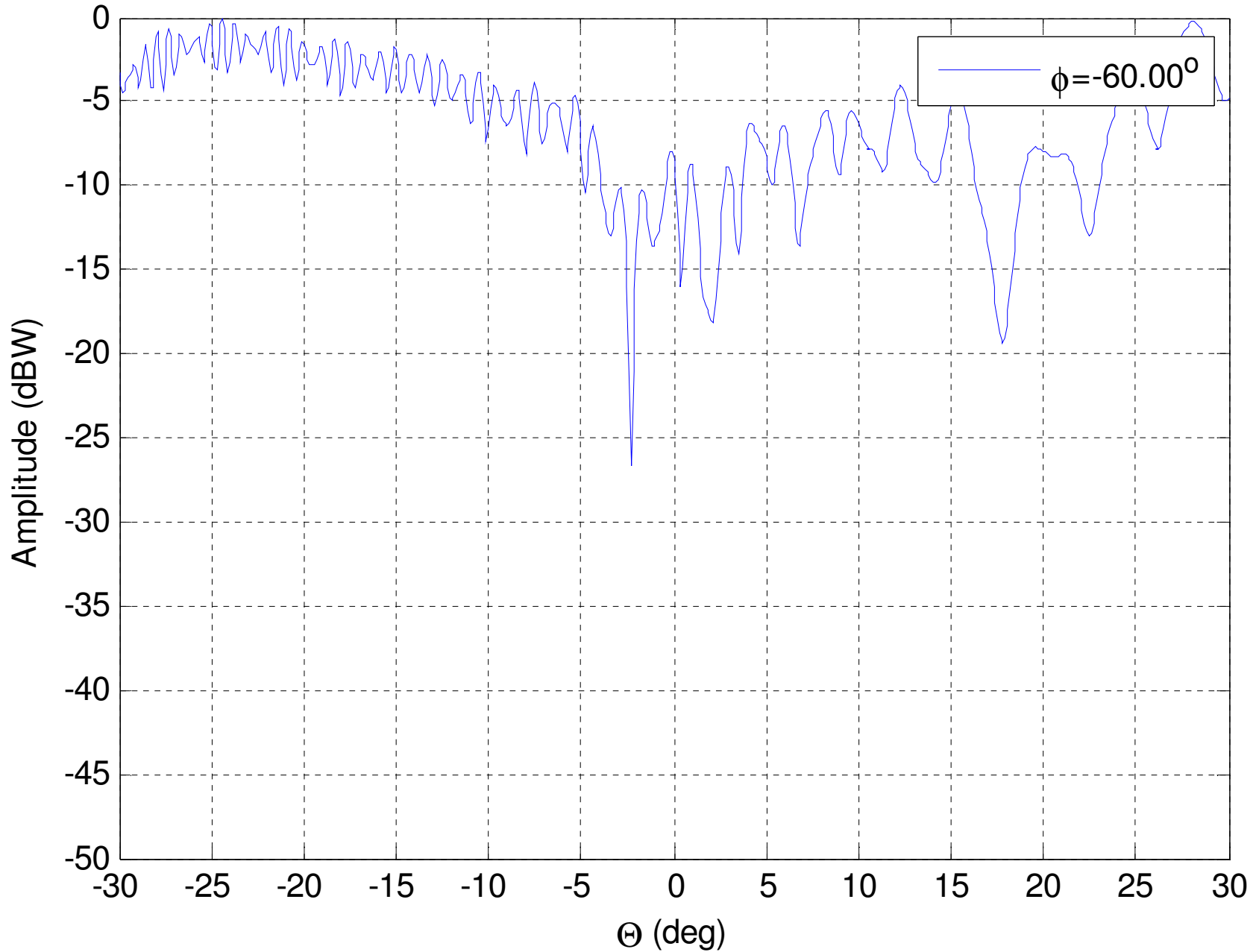
Input file: tx-17.3-lhcp-60.cut, Peak: -10.46 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

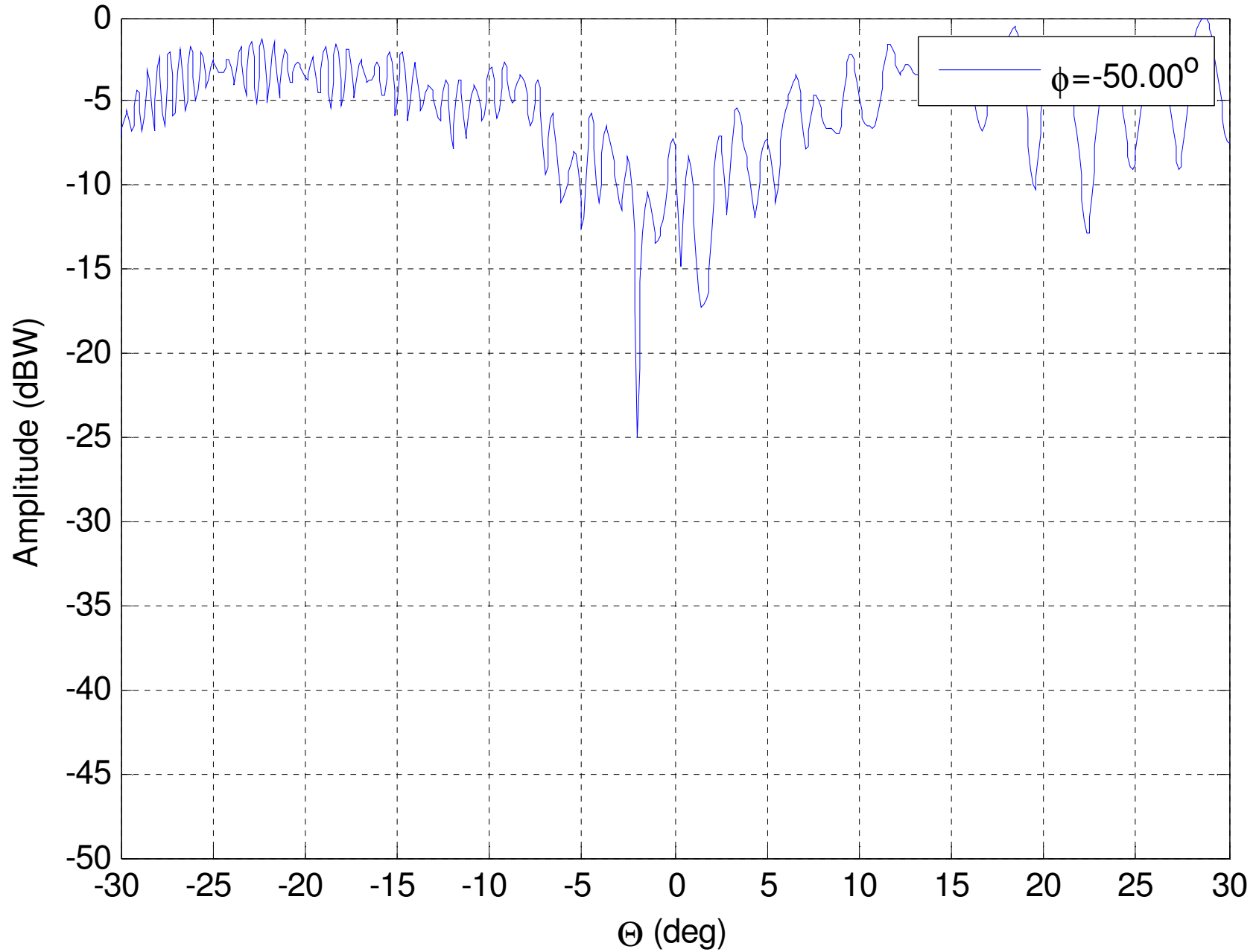
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.69 dBW, Date: 15-Dec-2011



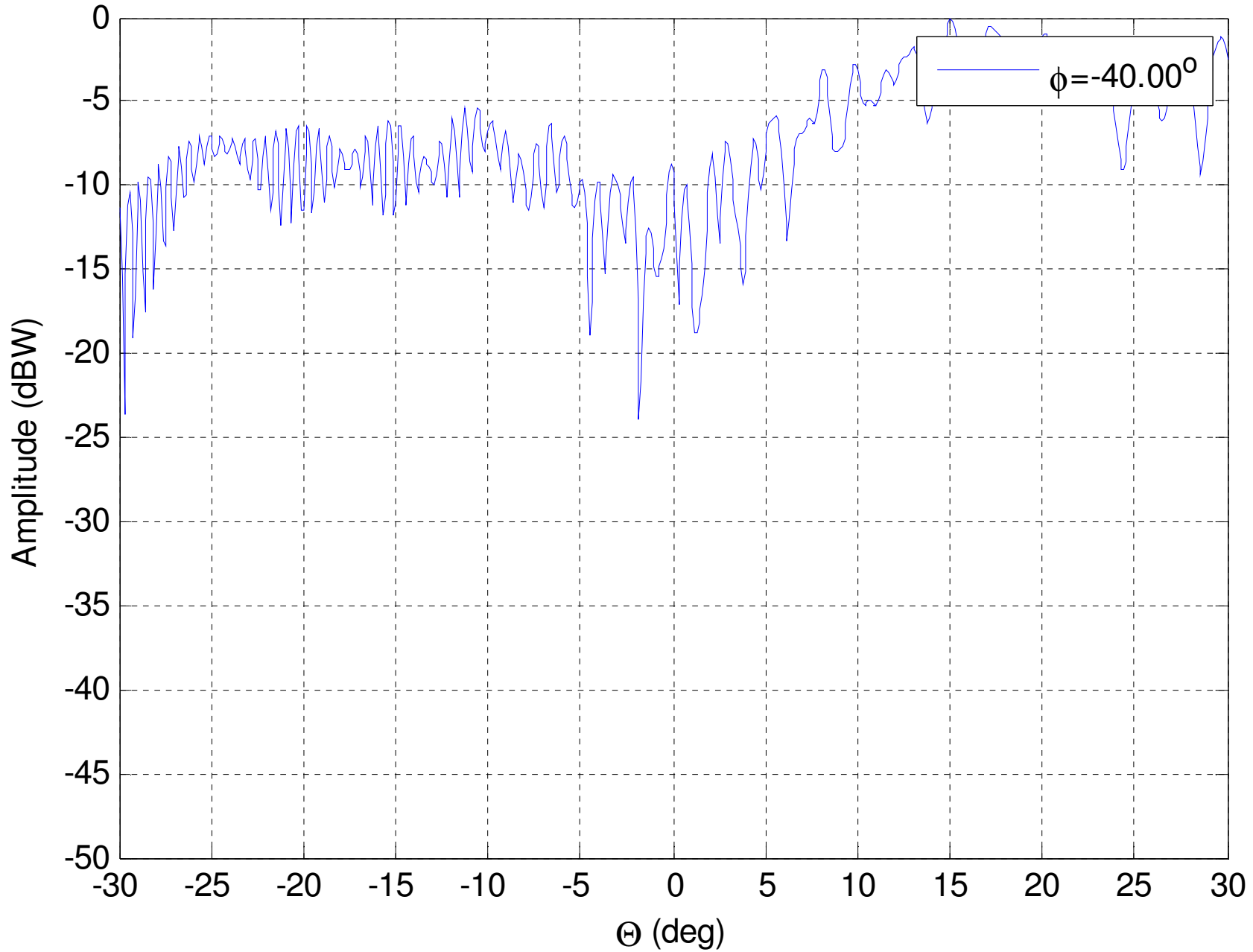
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -11.40 dBW, Date: 15-Dec-2011



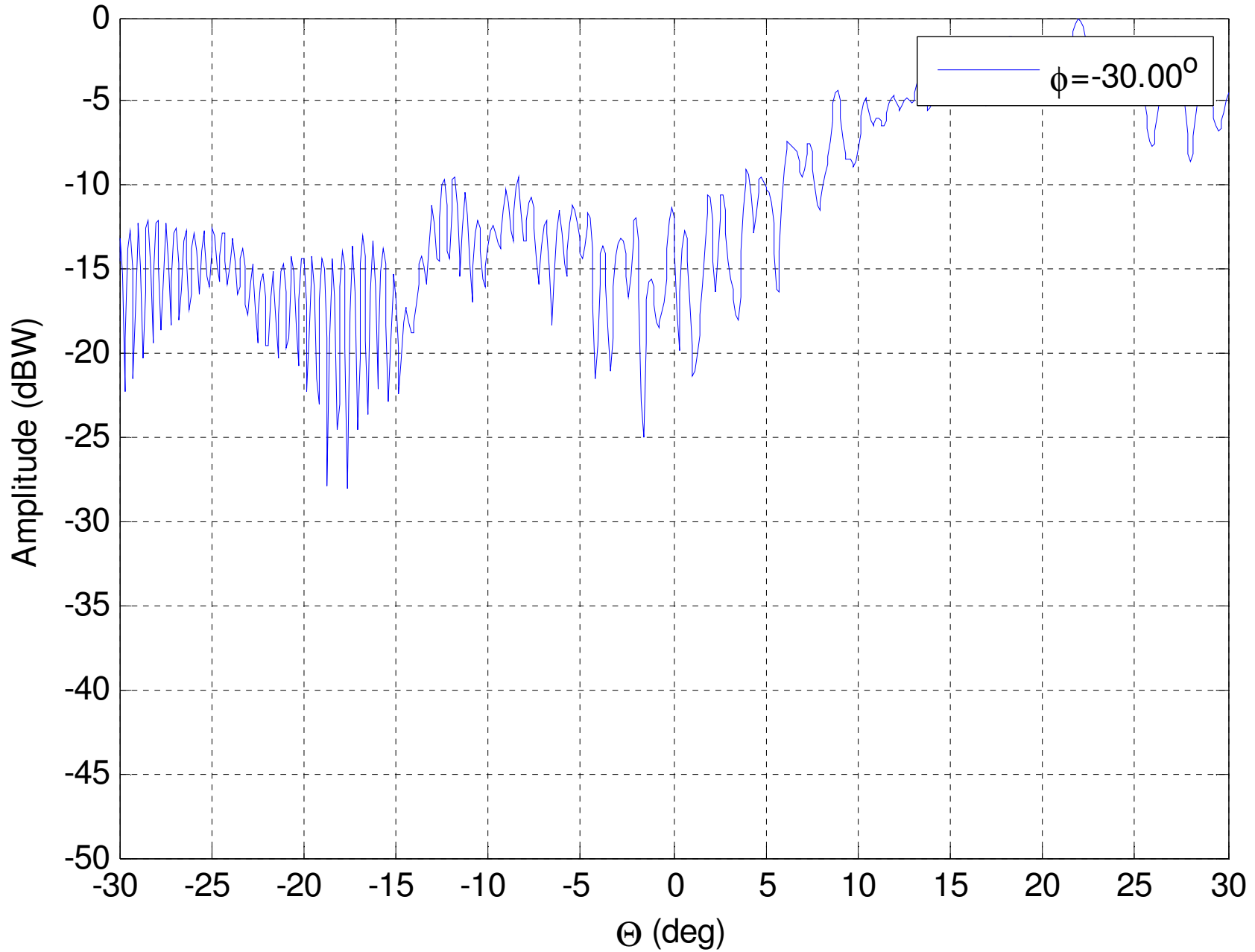
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.84 dBW, Date: 15-Dec-2011



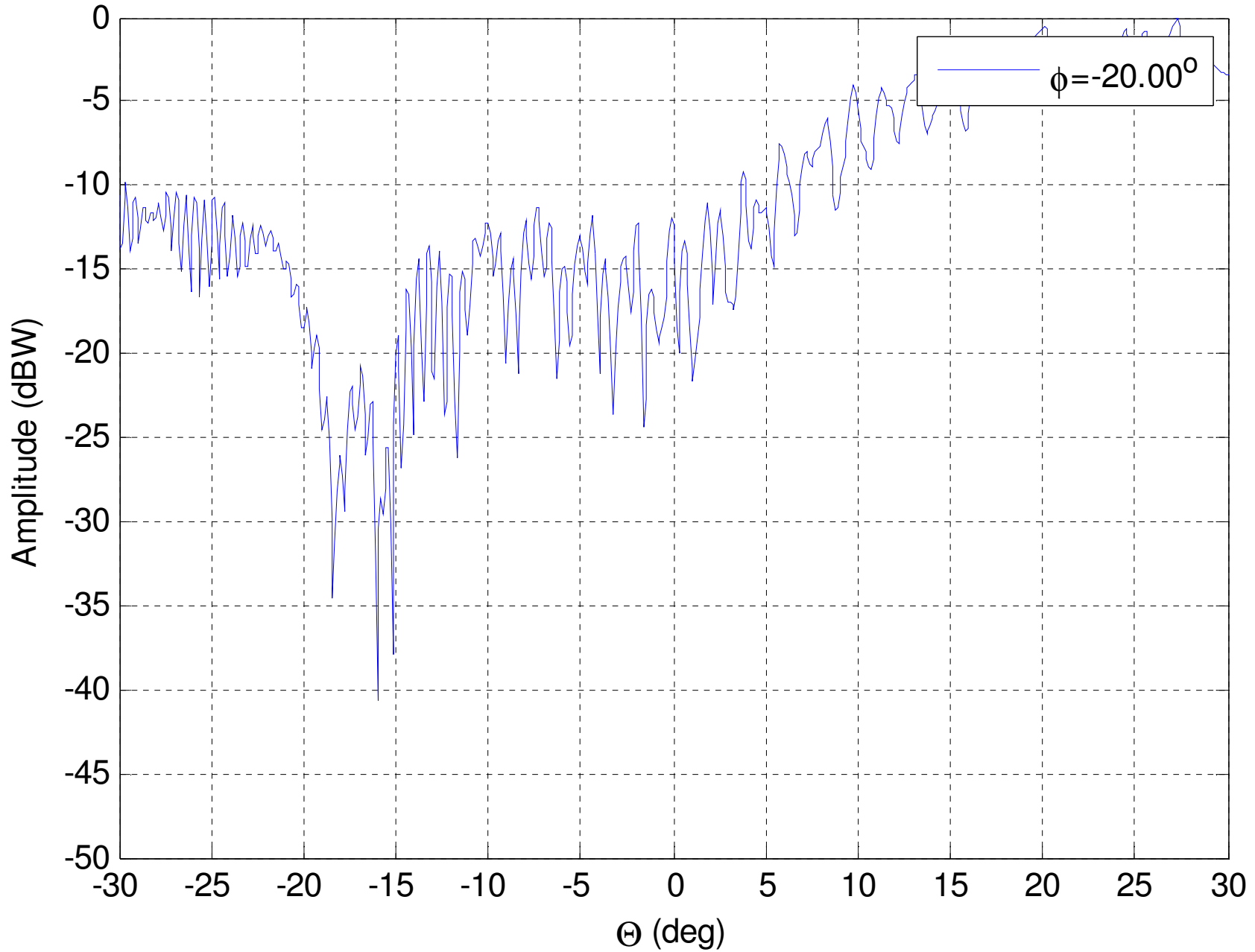
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.21 dBW, Date: 15-Dec-2011



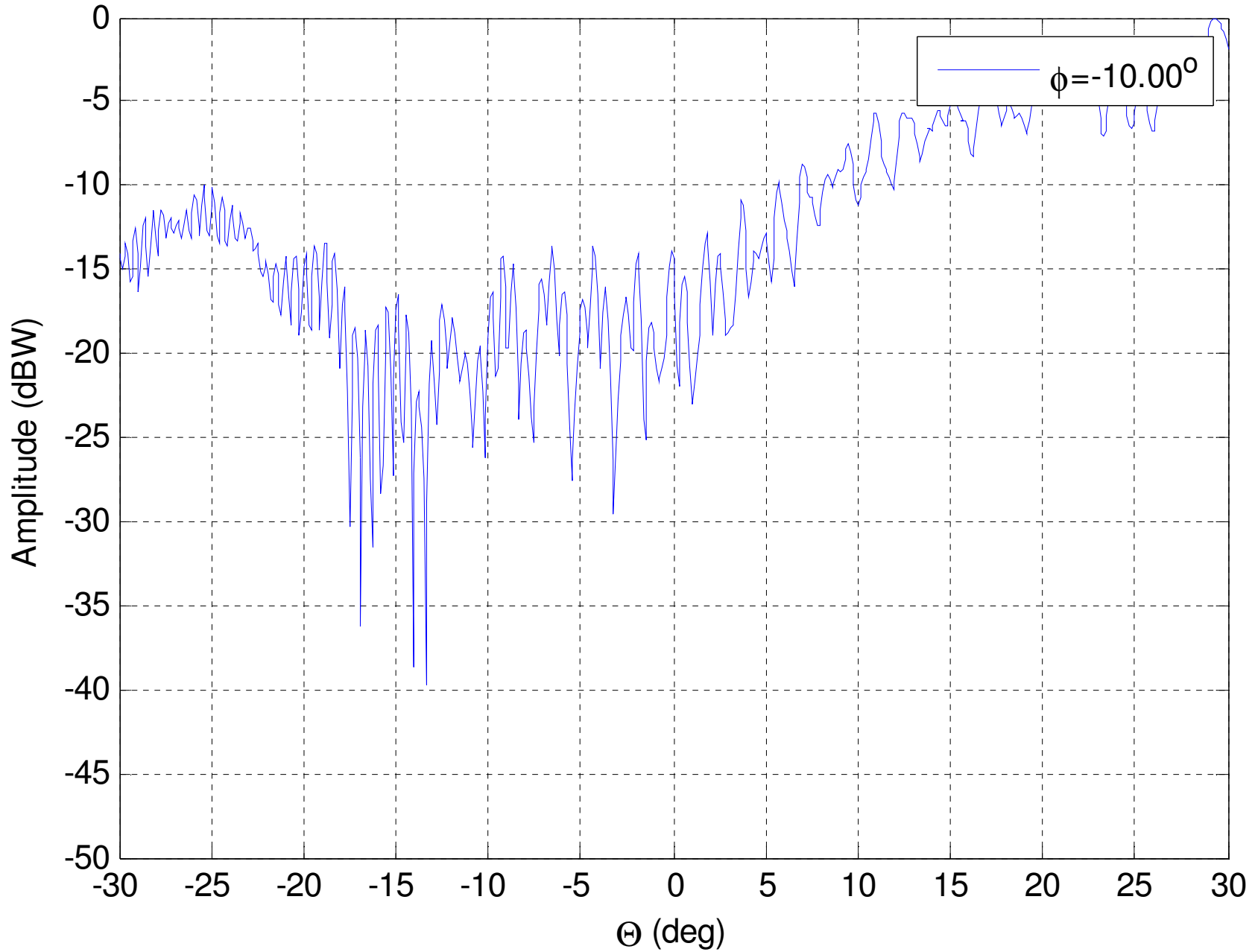
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -6.74 dBW, Date: 15-Dec-2011



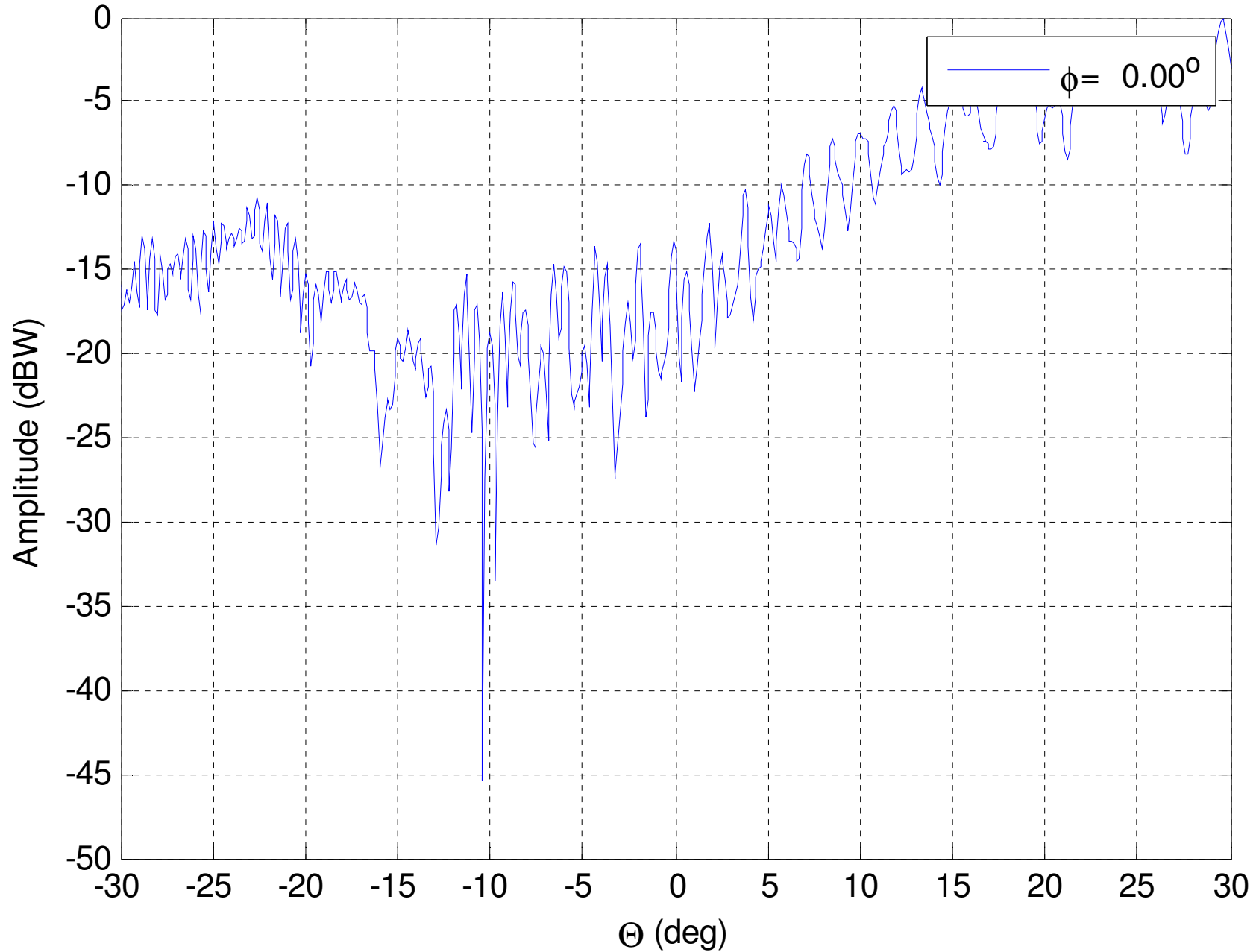
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -4.75 dBW, Date: 15-Dec-2011



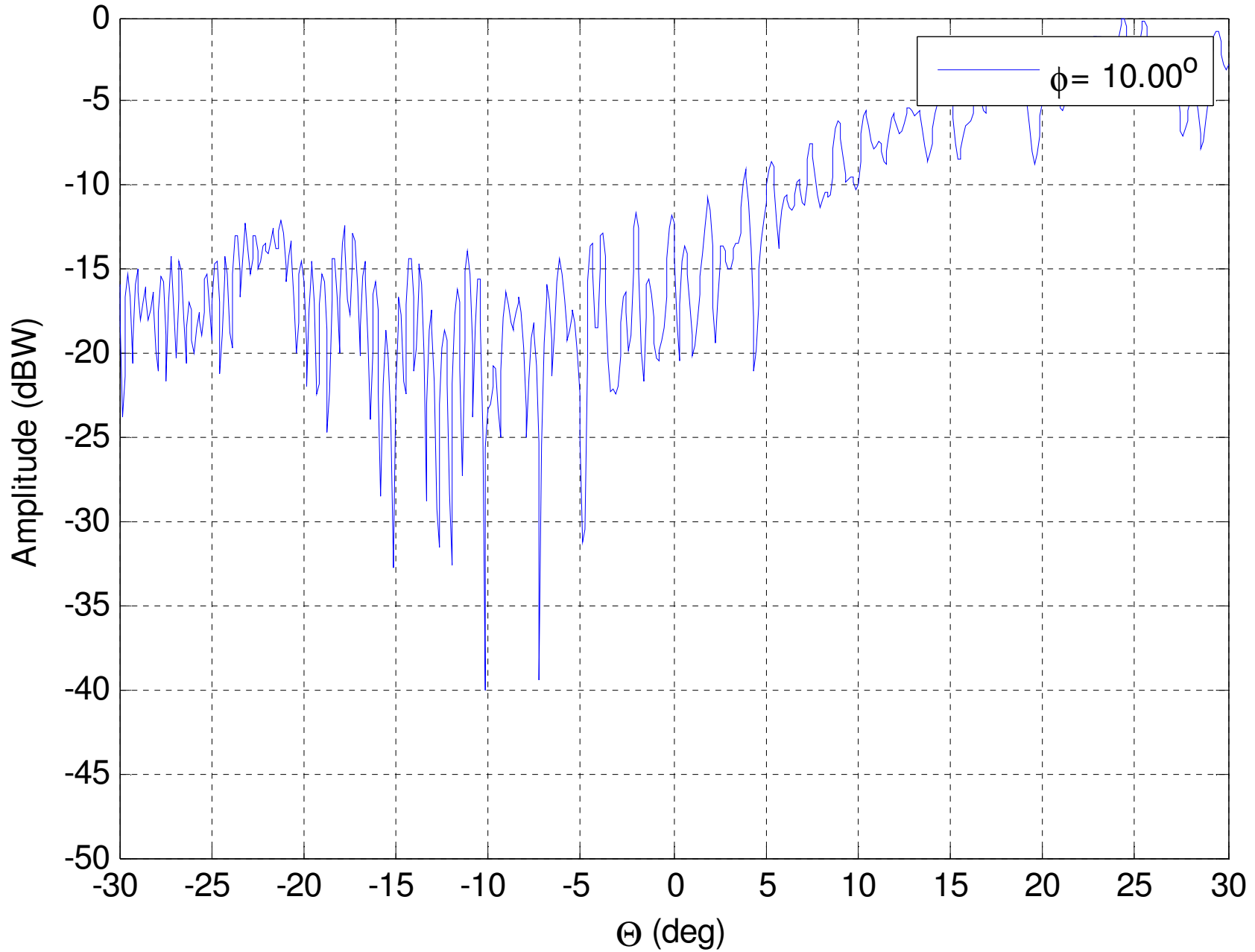
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -5.26 dBW, Date: 15-Dec-2011



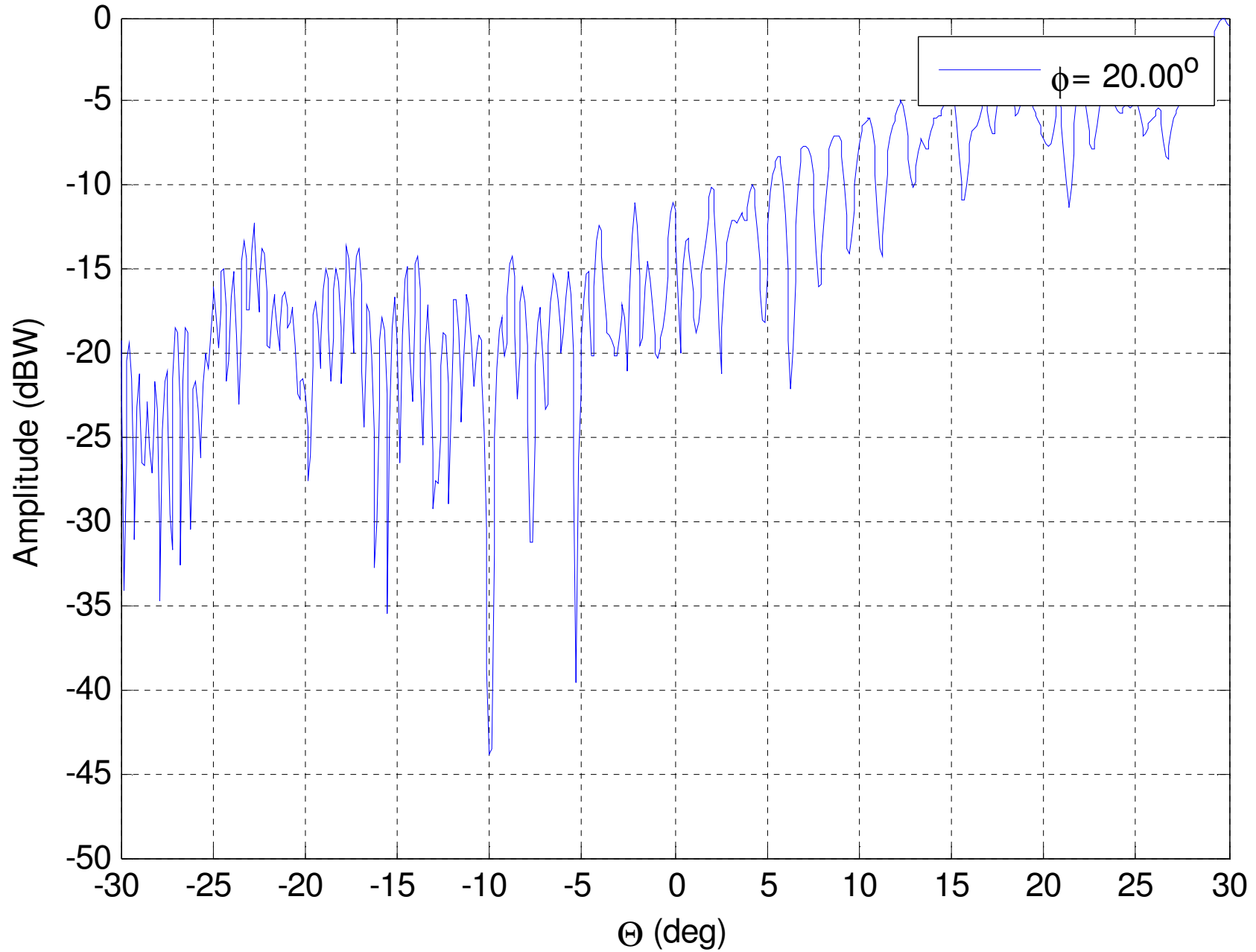
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -6.83 dBW, Date: 15-Dec-2011



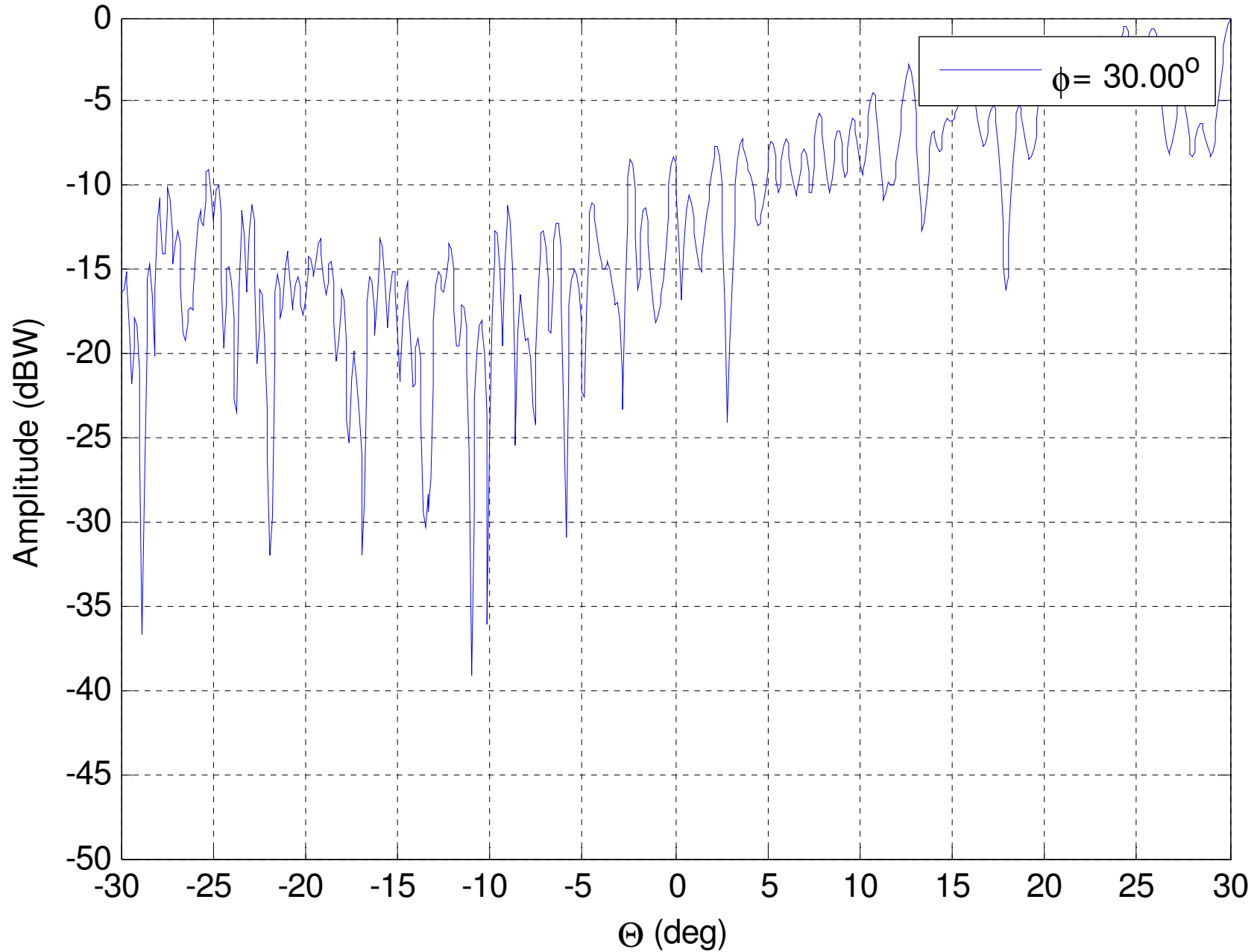
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -7.59 dBW, Date: 15-Dec-2011



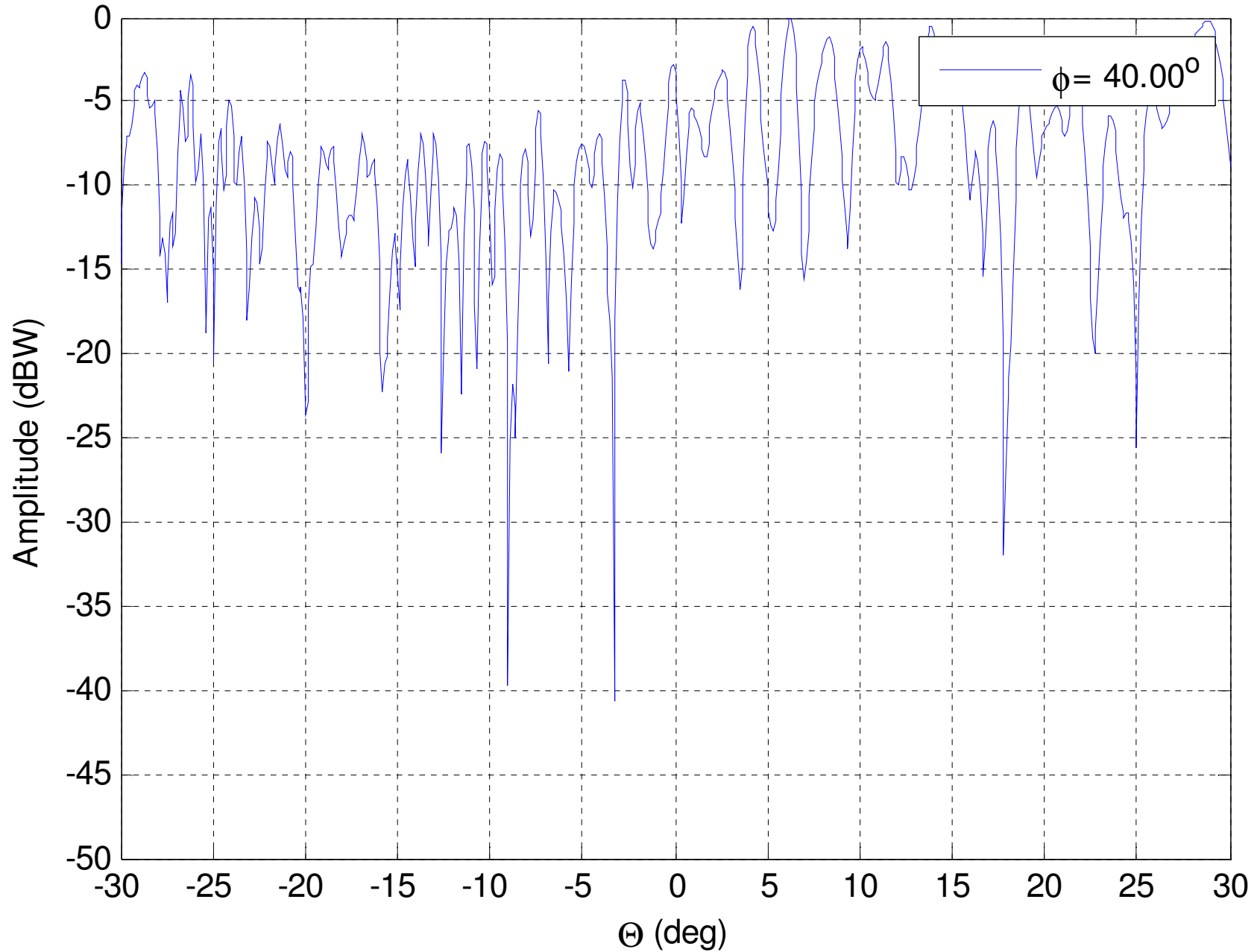
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.31 dBW, Date: 15-Dec-2011



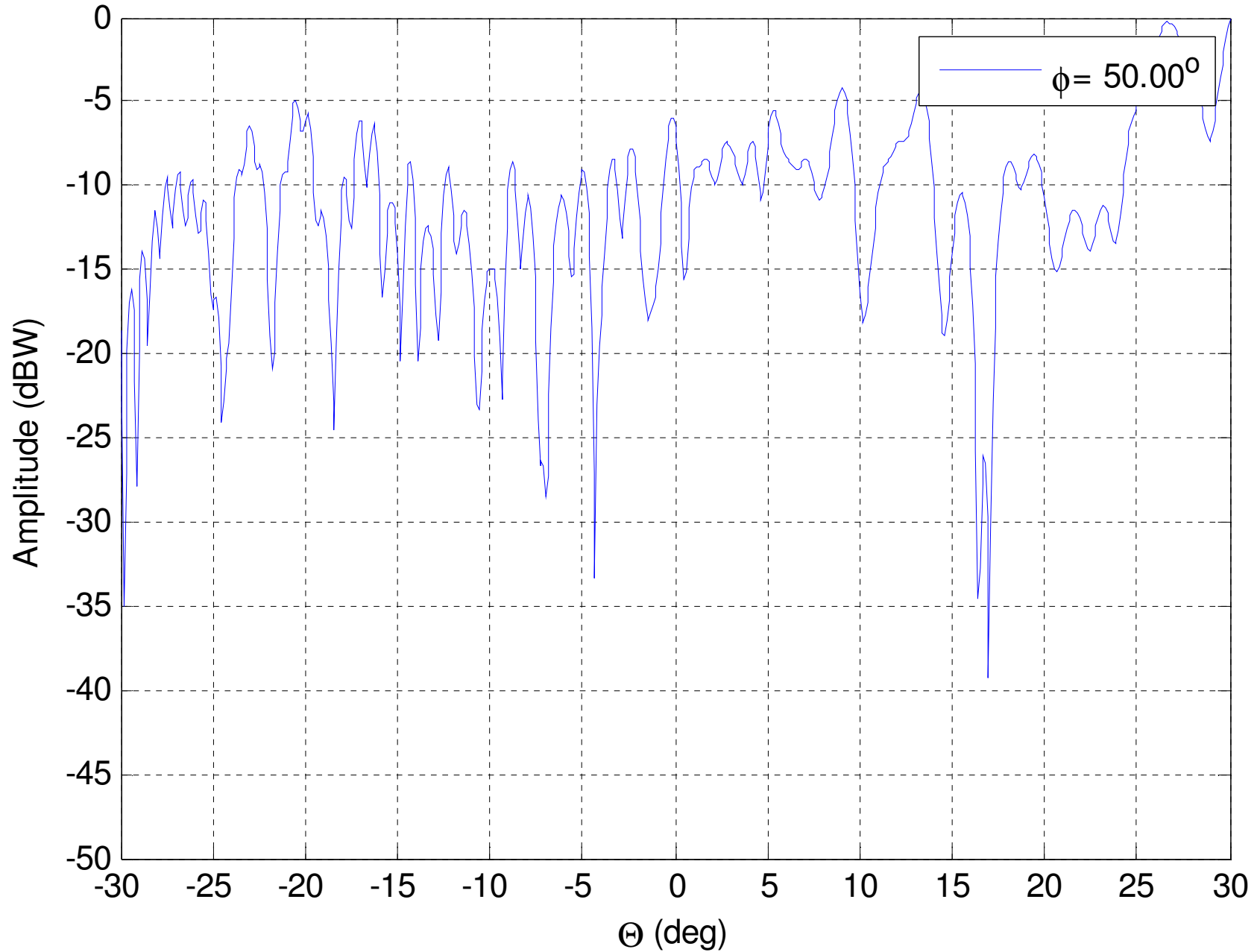
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -15.76 dBW, Date: 15-Dec-2011



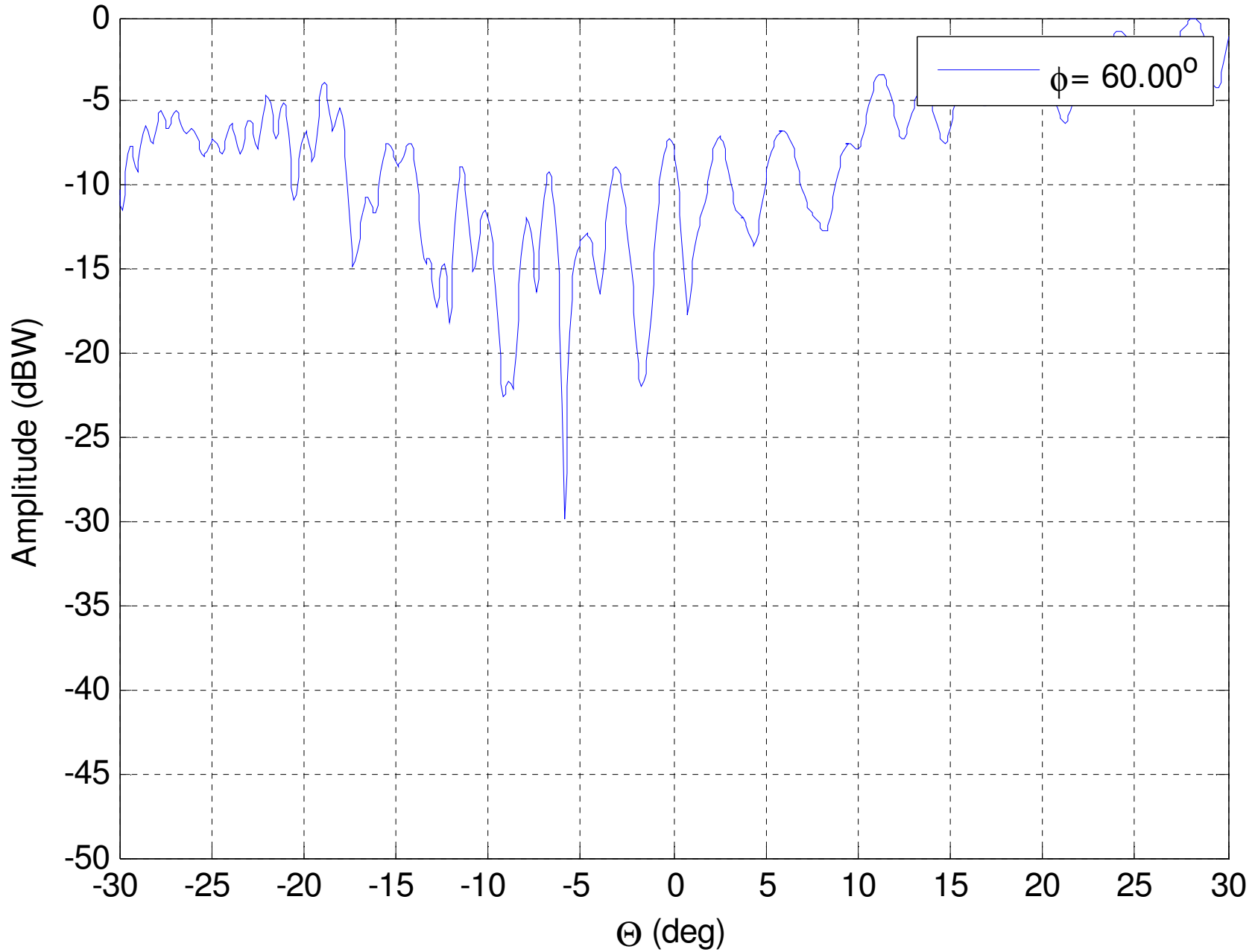
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -12.62 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

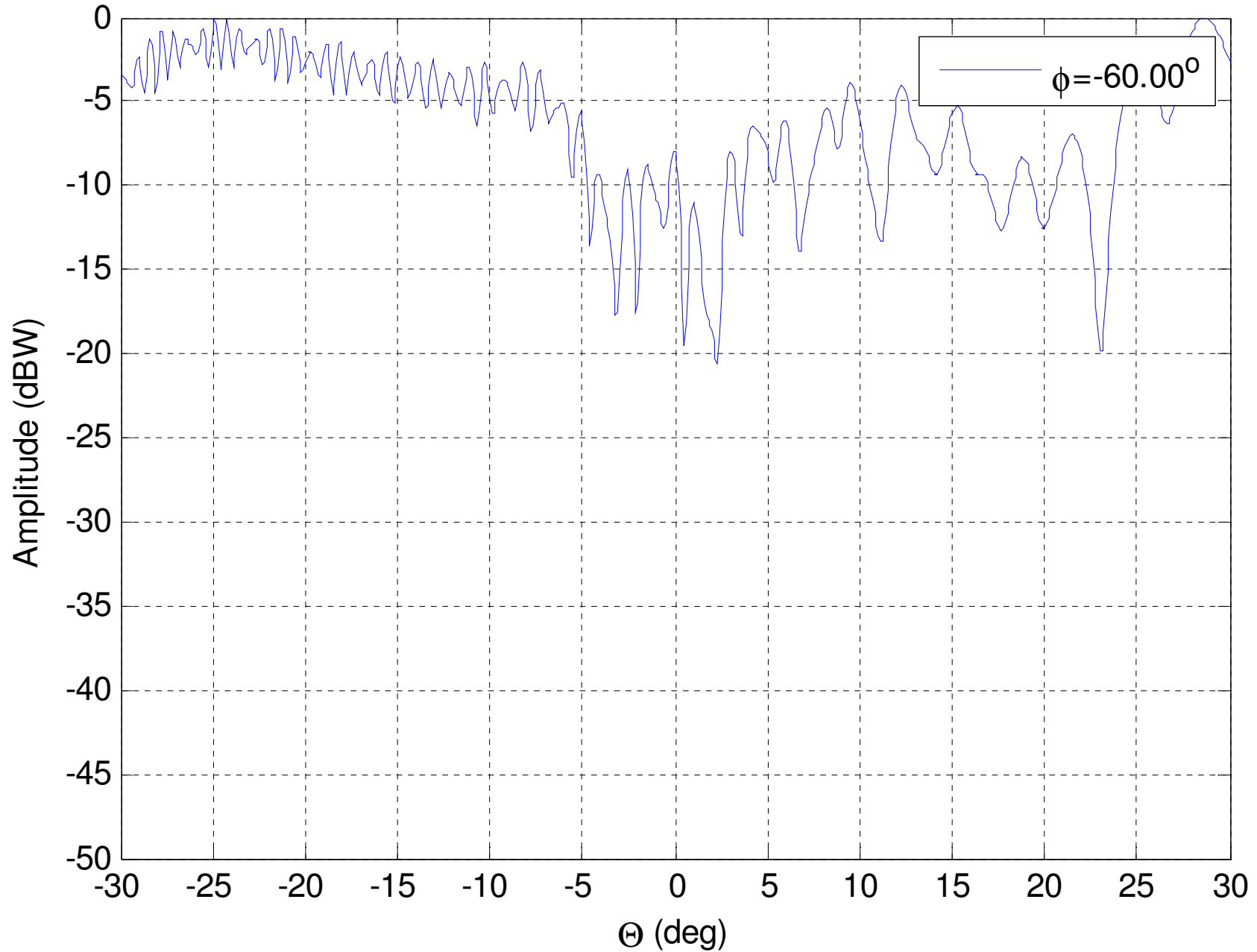
Input file: tx-17.5-rhcp-60.cut, Peak: -11.34 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

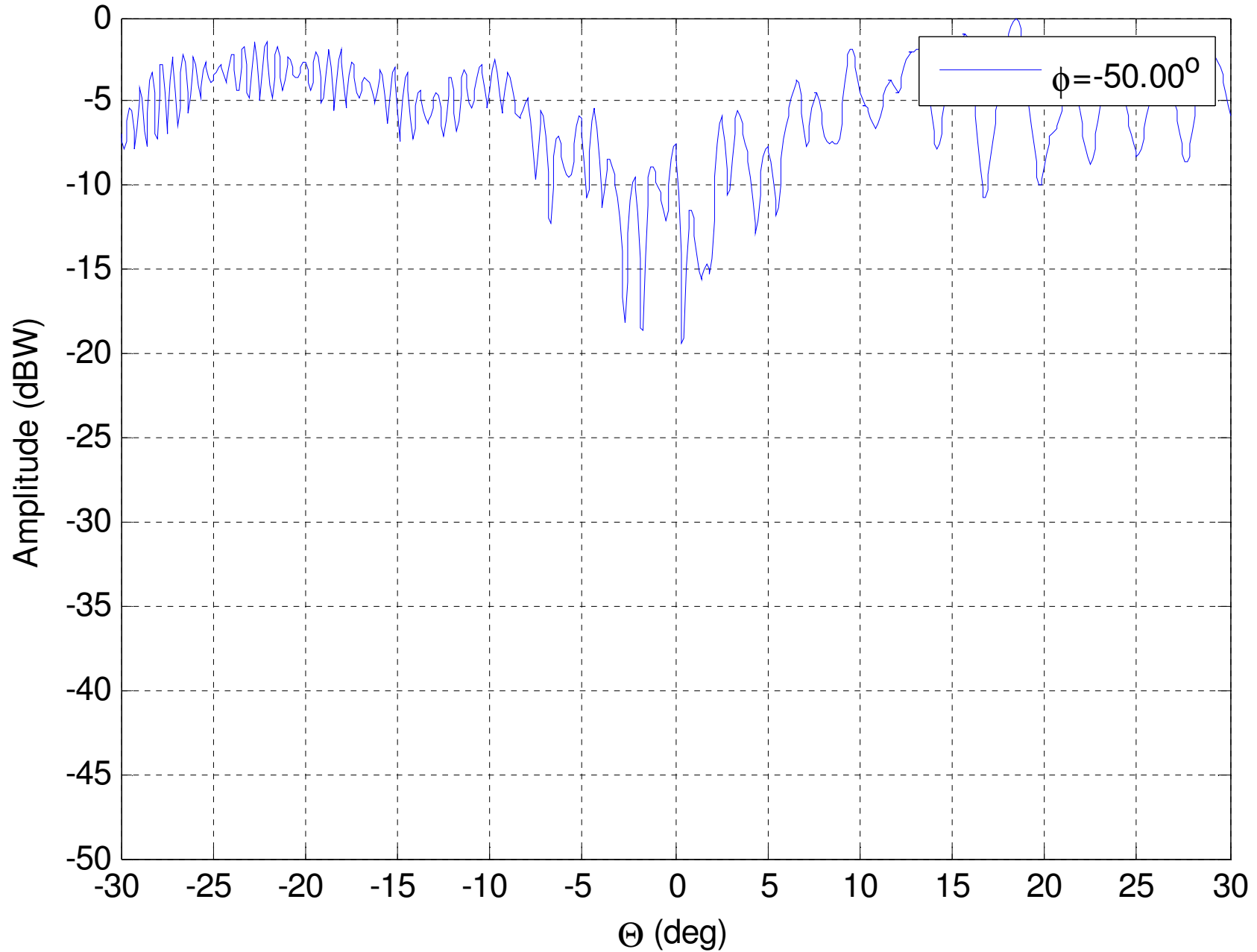
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -10.68 dBW, Date: 15-Dec-2011



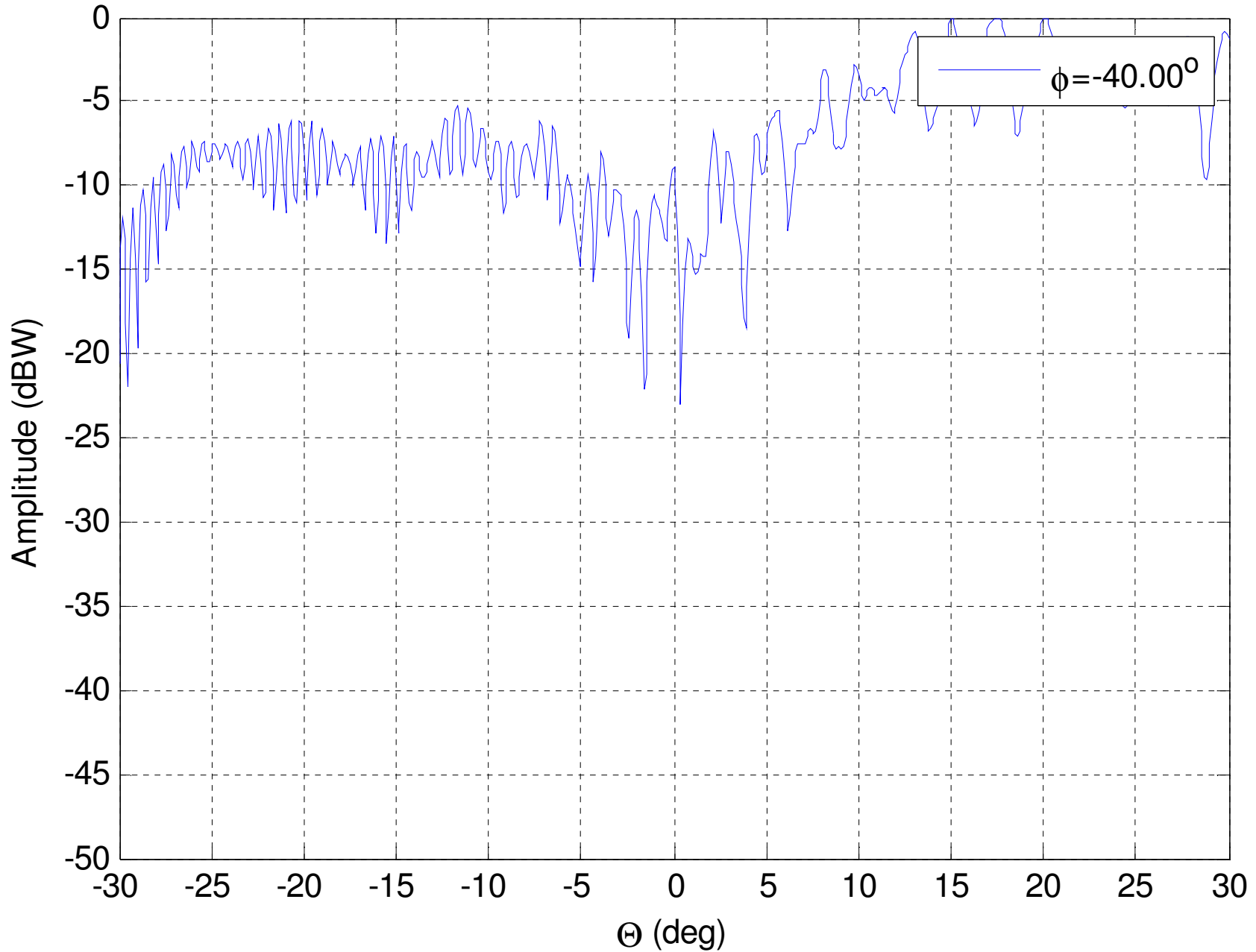
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.12 dBW, Date: 15-Dec-2011



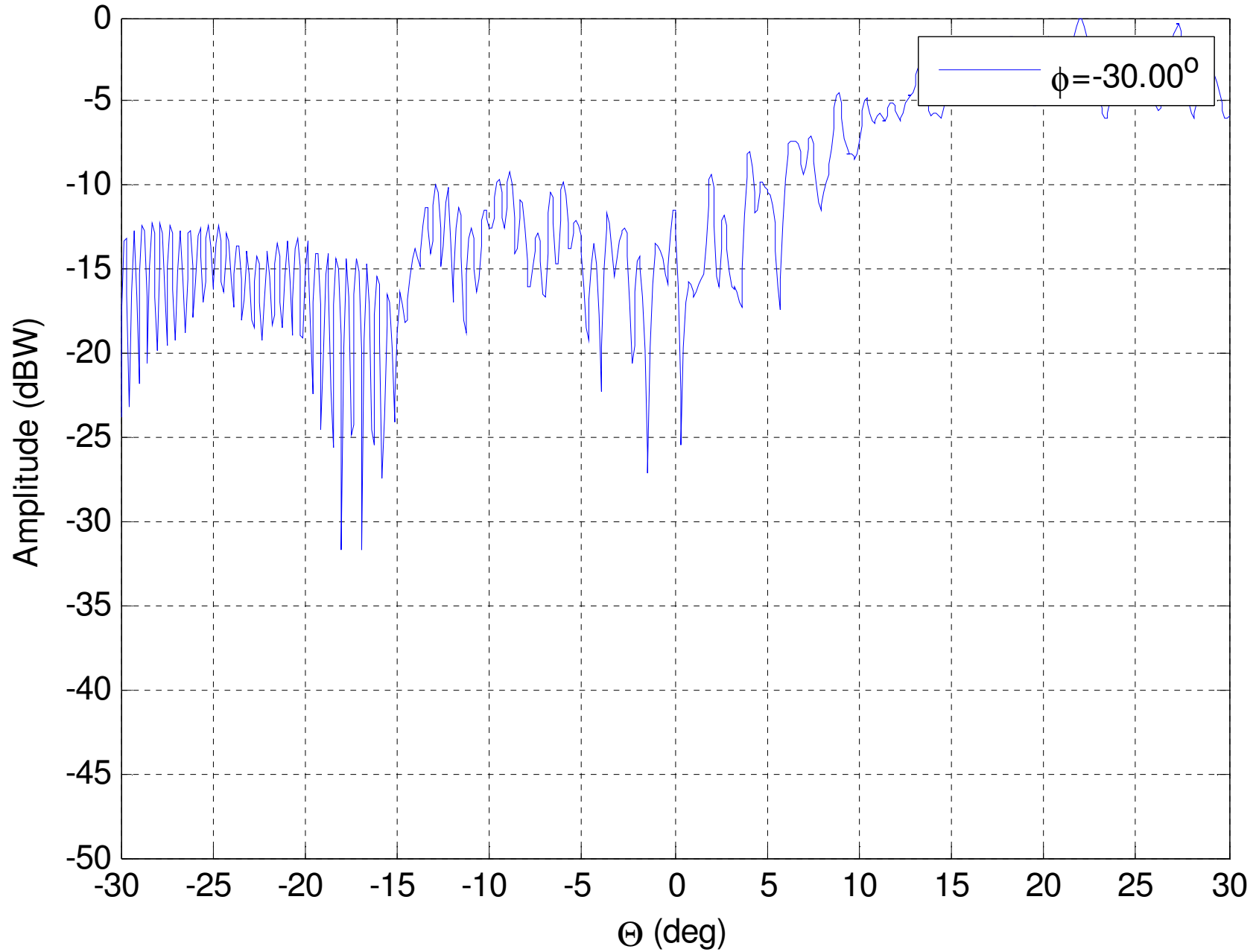
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.75 dBW, Date: 15-Dec-2011



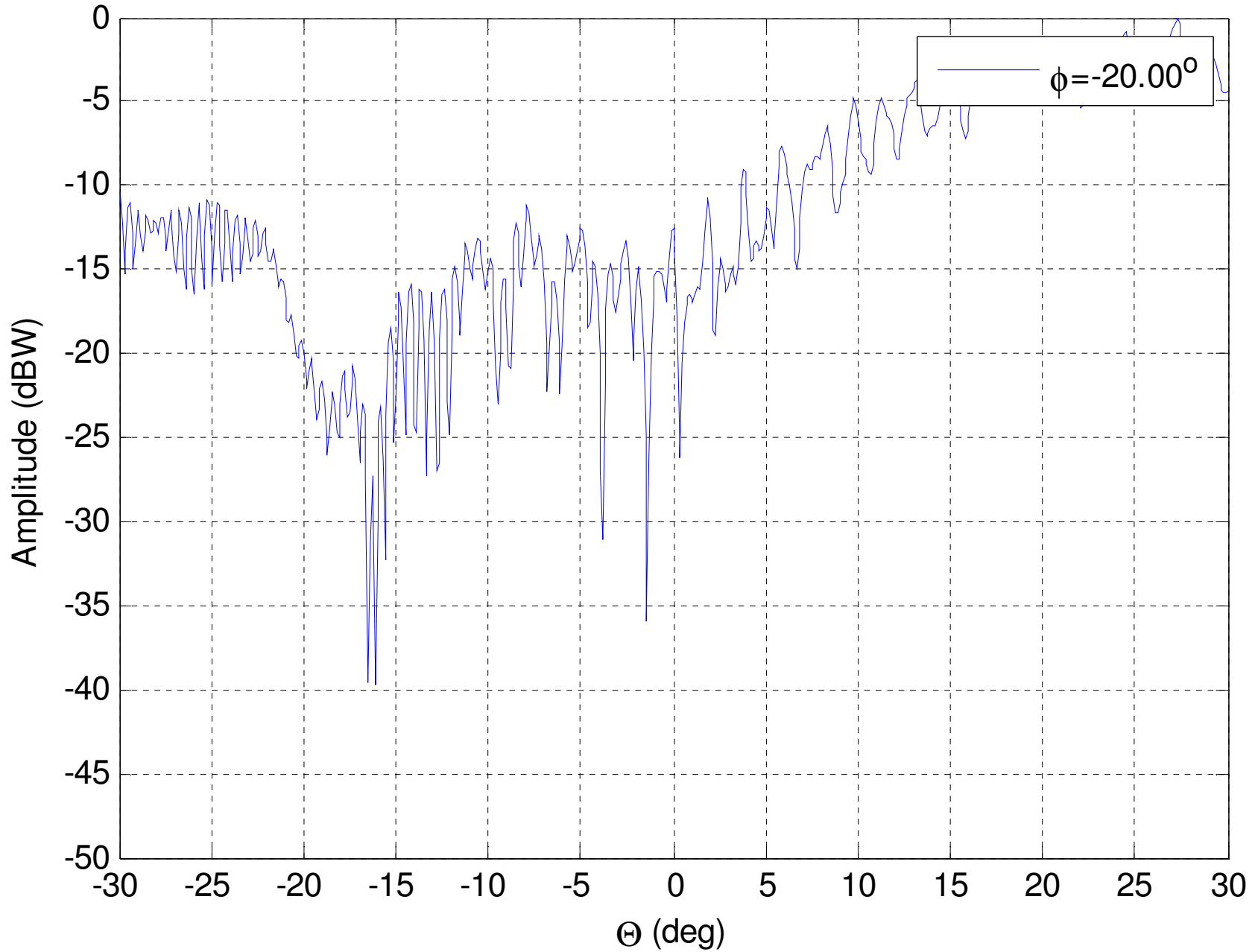
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.26 dBW, Date: 15-Dec-2011



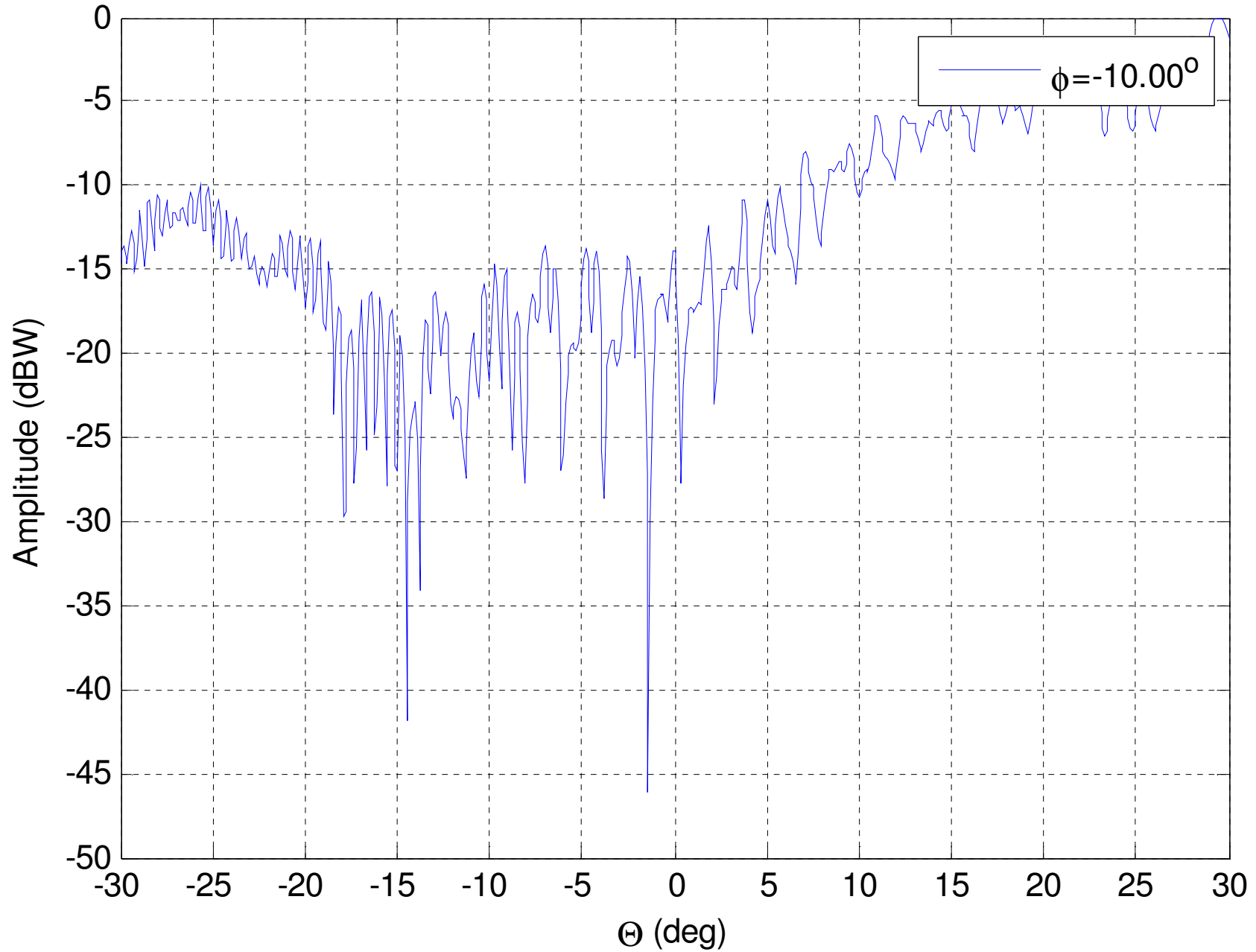
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -6.10 dBW, Date: 15-Dec-2011



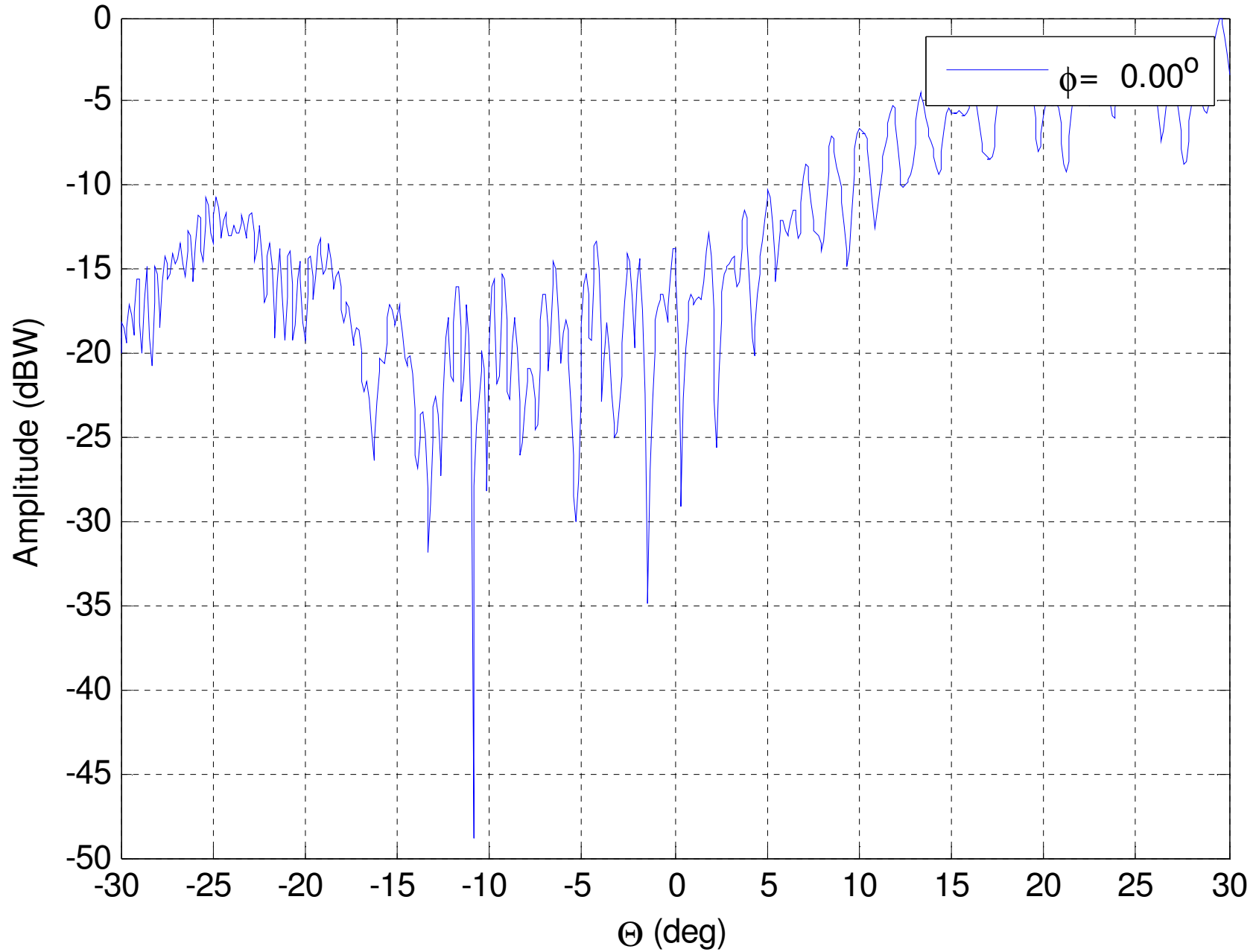
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -4.86 dBW, Date: 15-Dec-2011



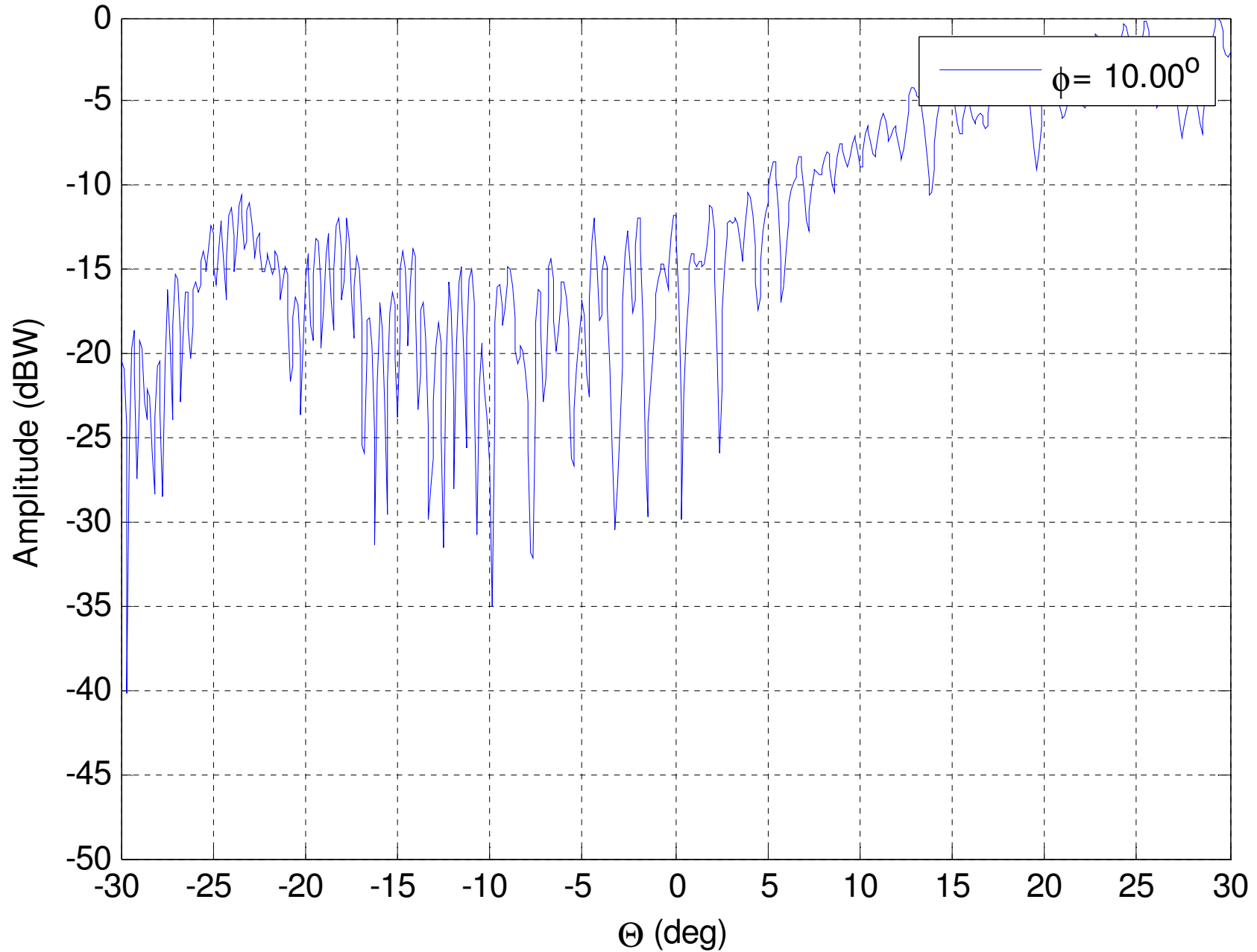
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -4.96 dBW, Date: 15-Dec-2011



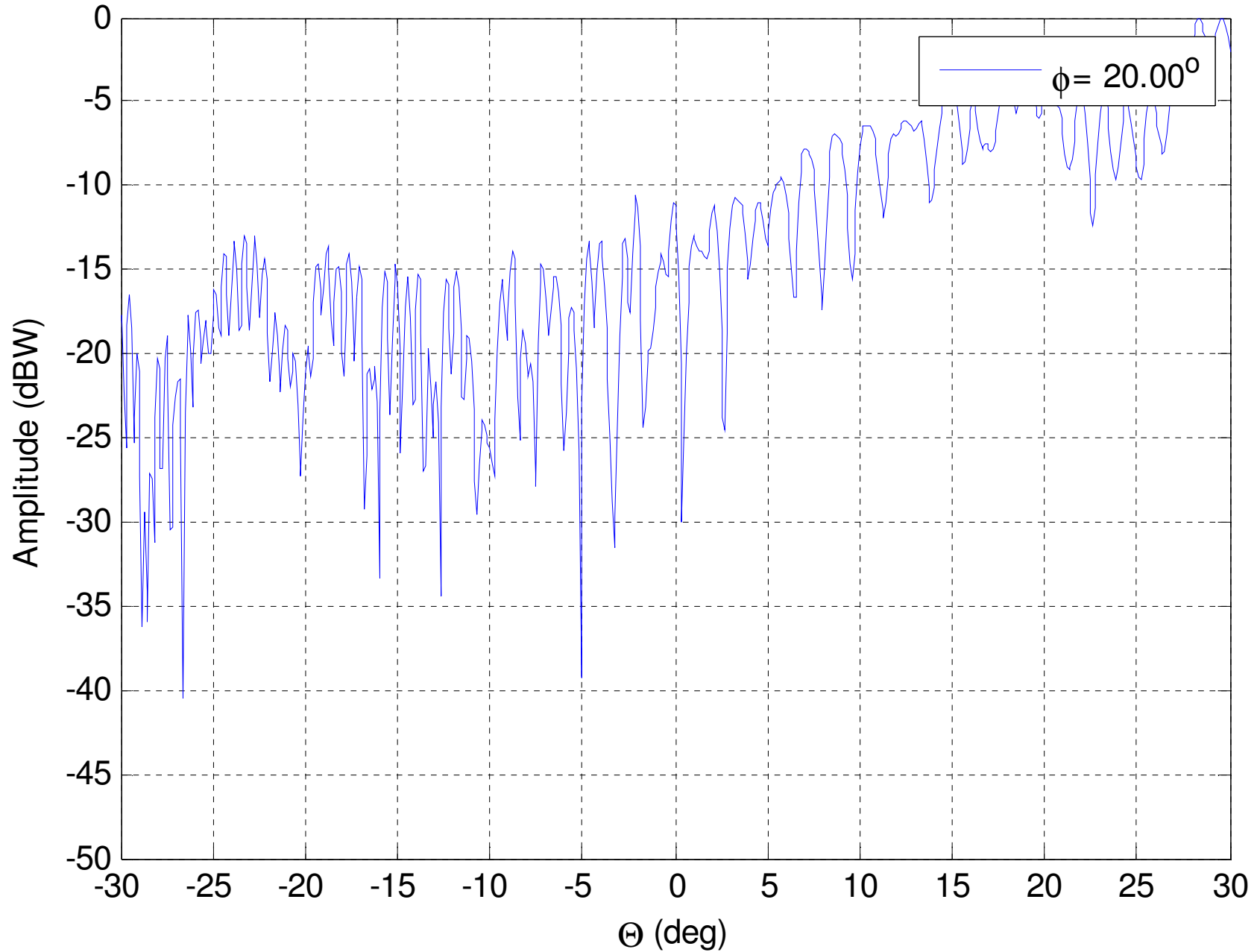
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -6.96 dBW, Date: 15-Dec-2011



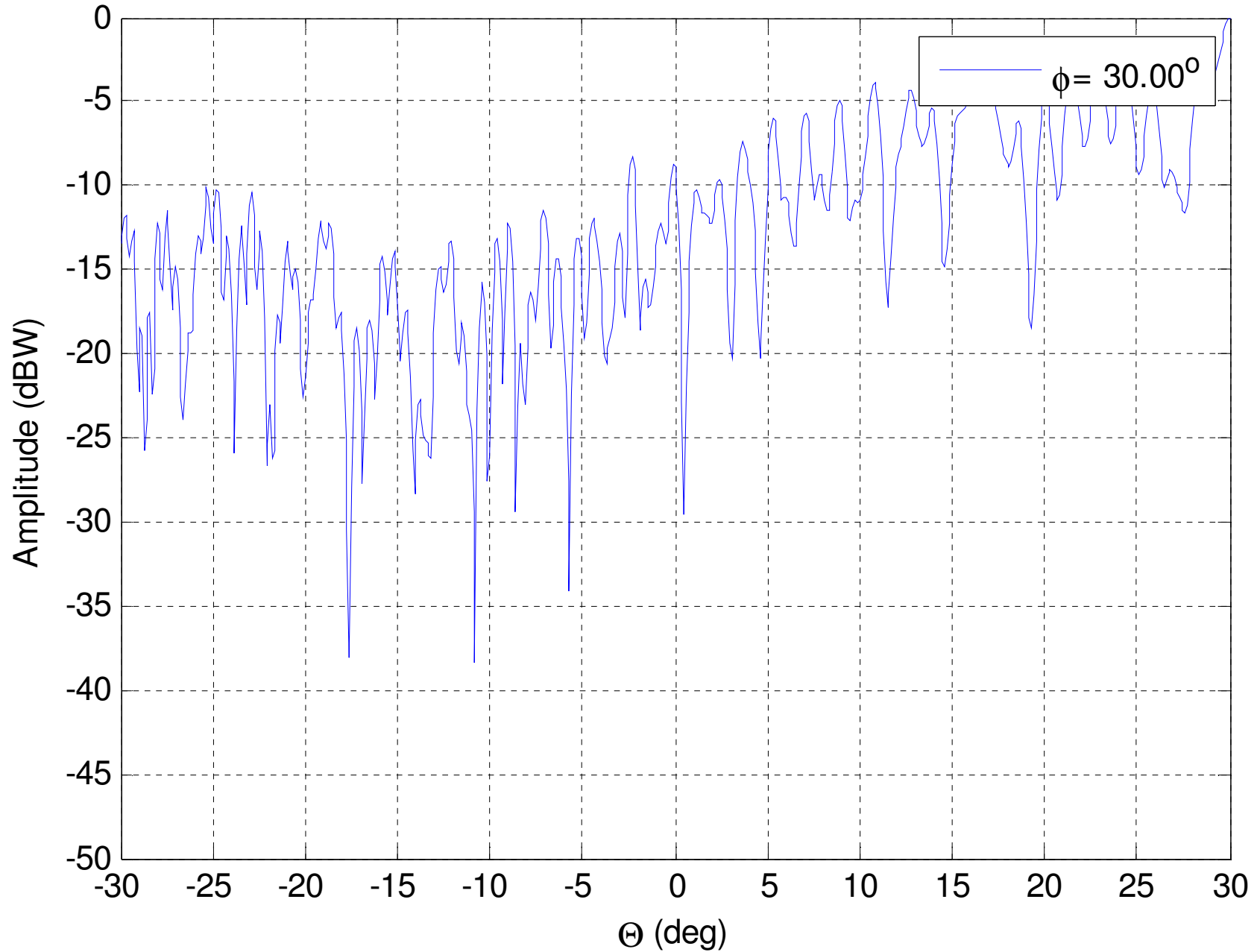
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.58 dBW, Date: 15-Dec-2011



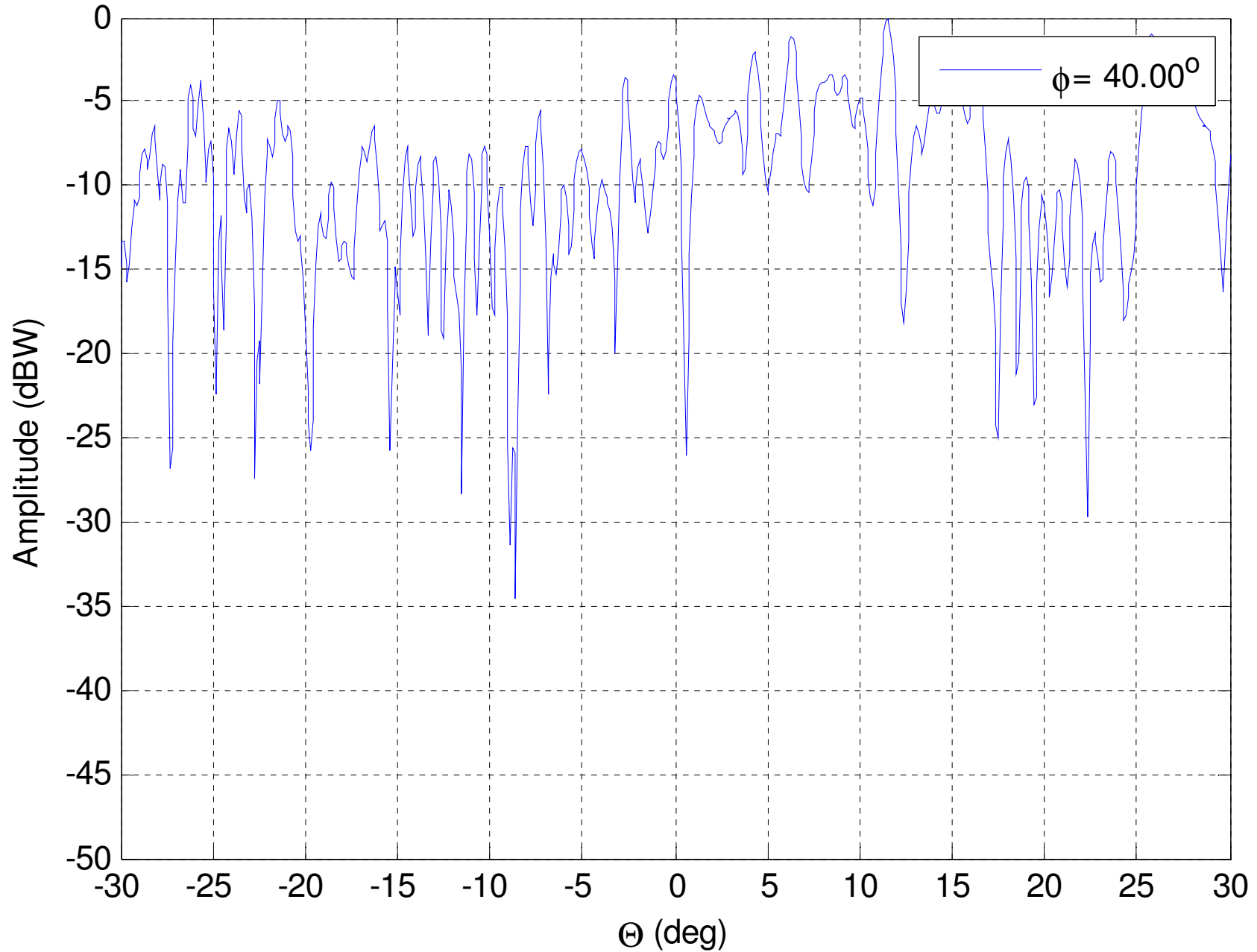
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -9.82 dBW, Date: 15-Dec-2011



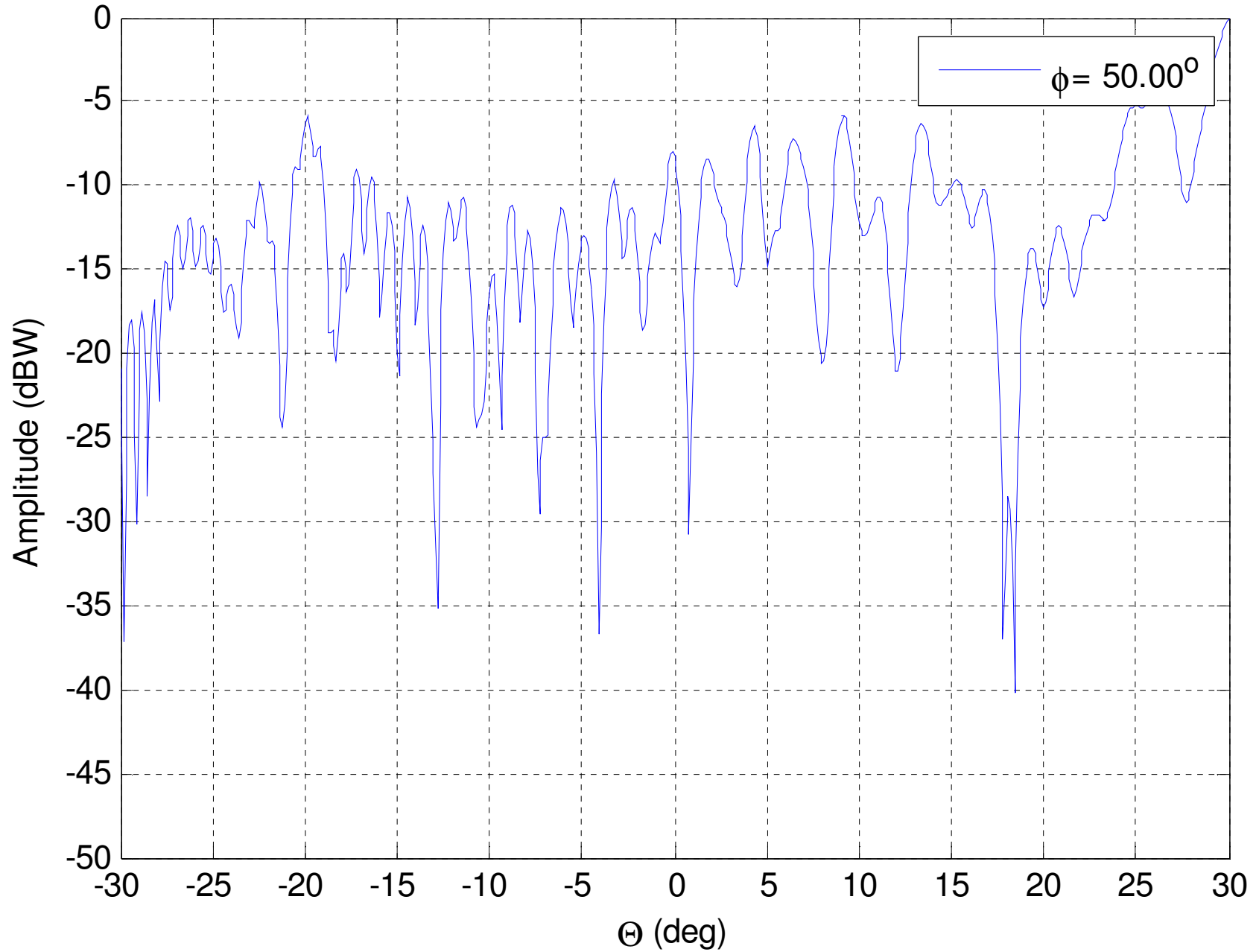
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -14.98 dBW, Date: 15-Dec-2011



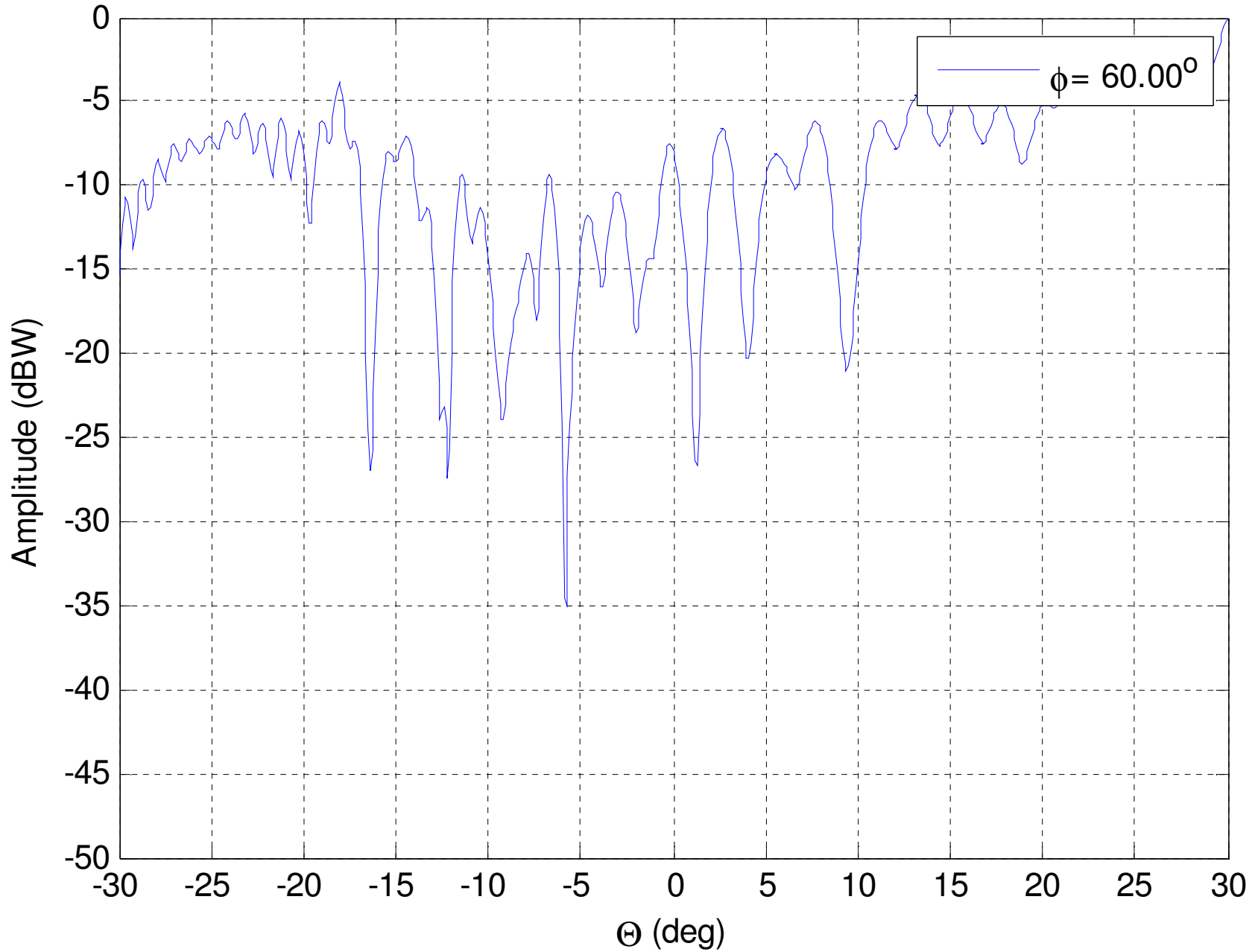
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -10.43 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

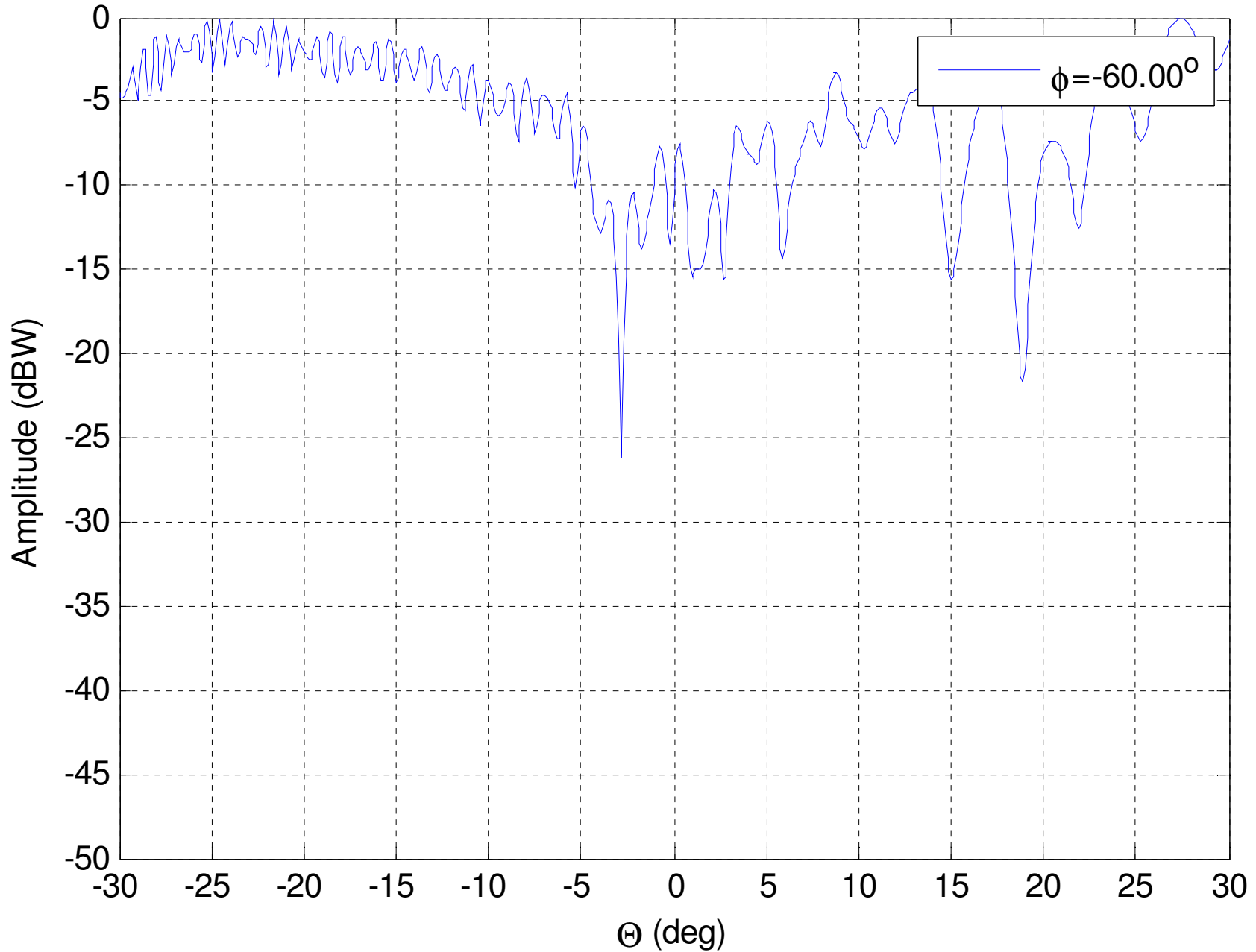
Input file: tx-17.5-lhcp-60.cut, Peak: -10.77 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

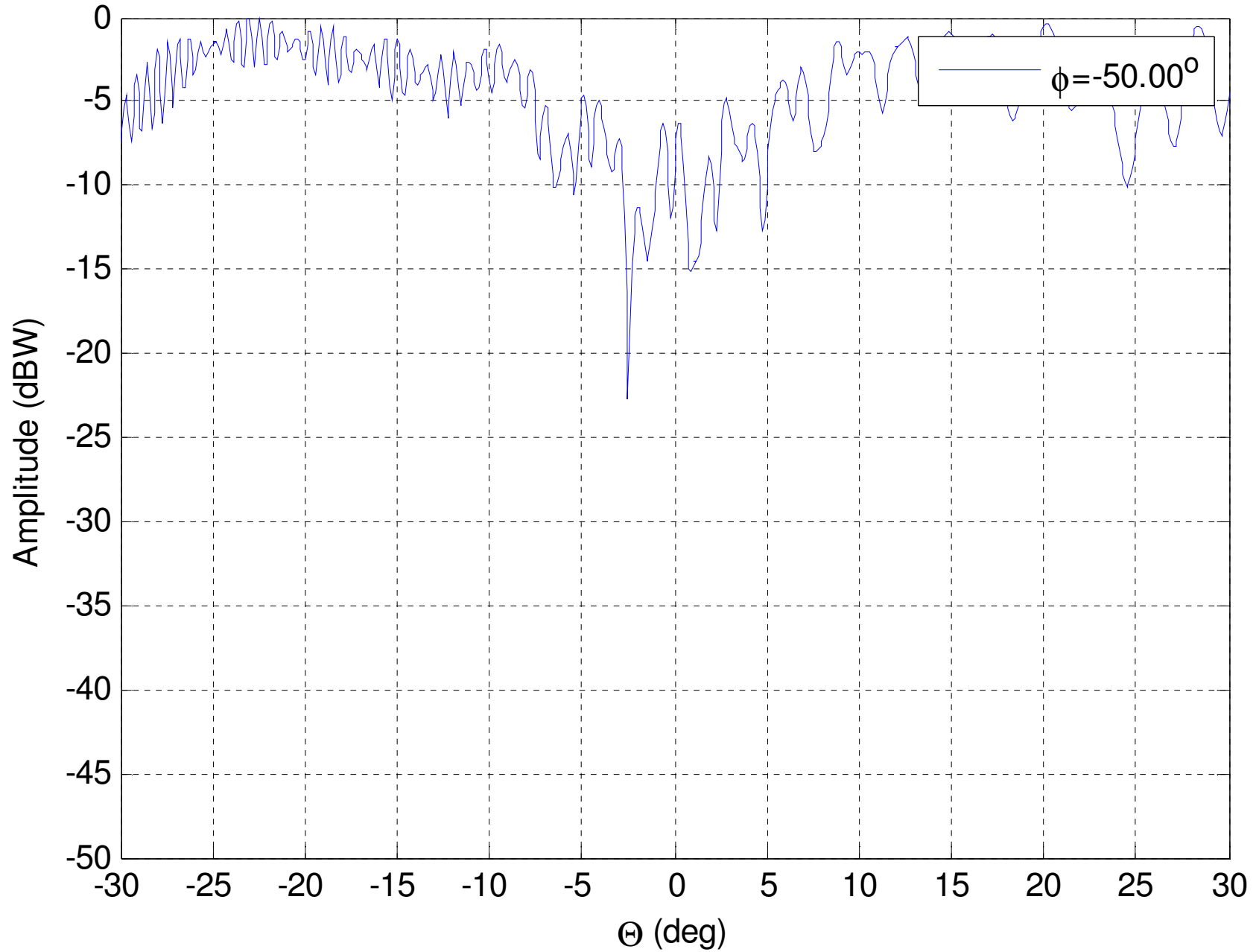
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -10.95 dBW, Date: 15-Dec-2011



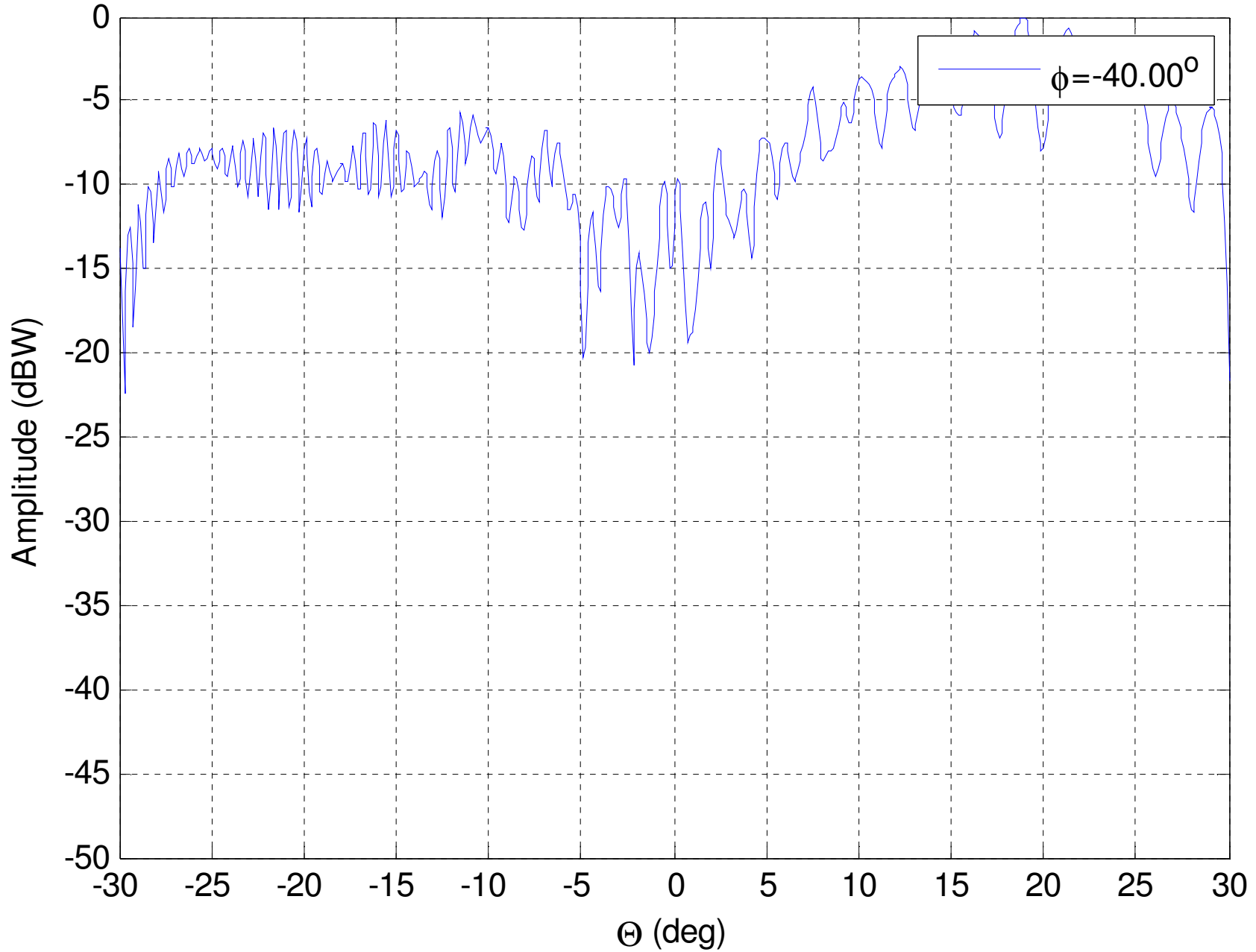
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.34 dBW, Date: 15-Dec-2011



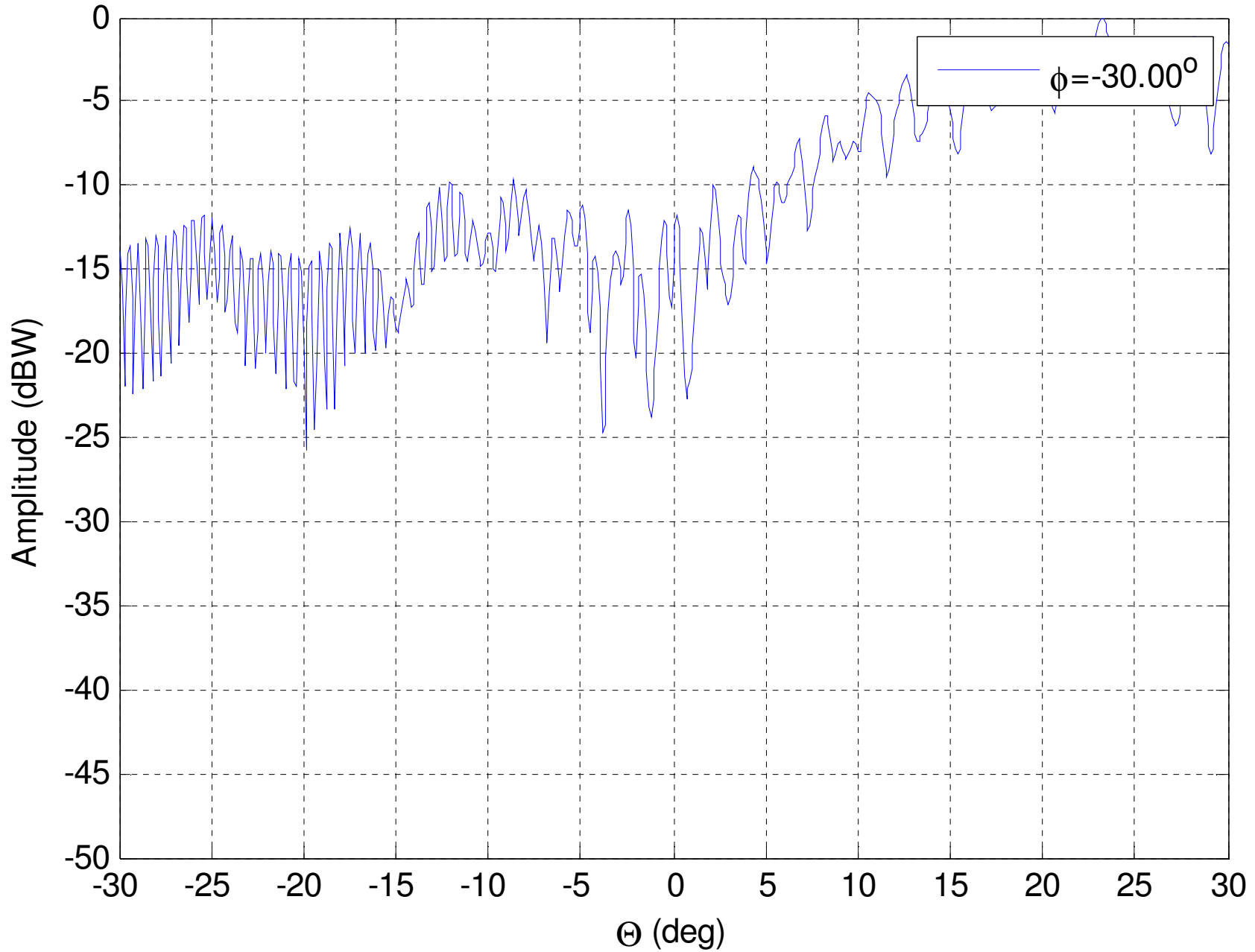
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -9.00 dBW, Date: 15-Dec-2011



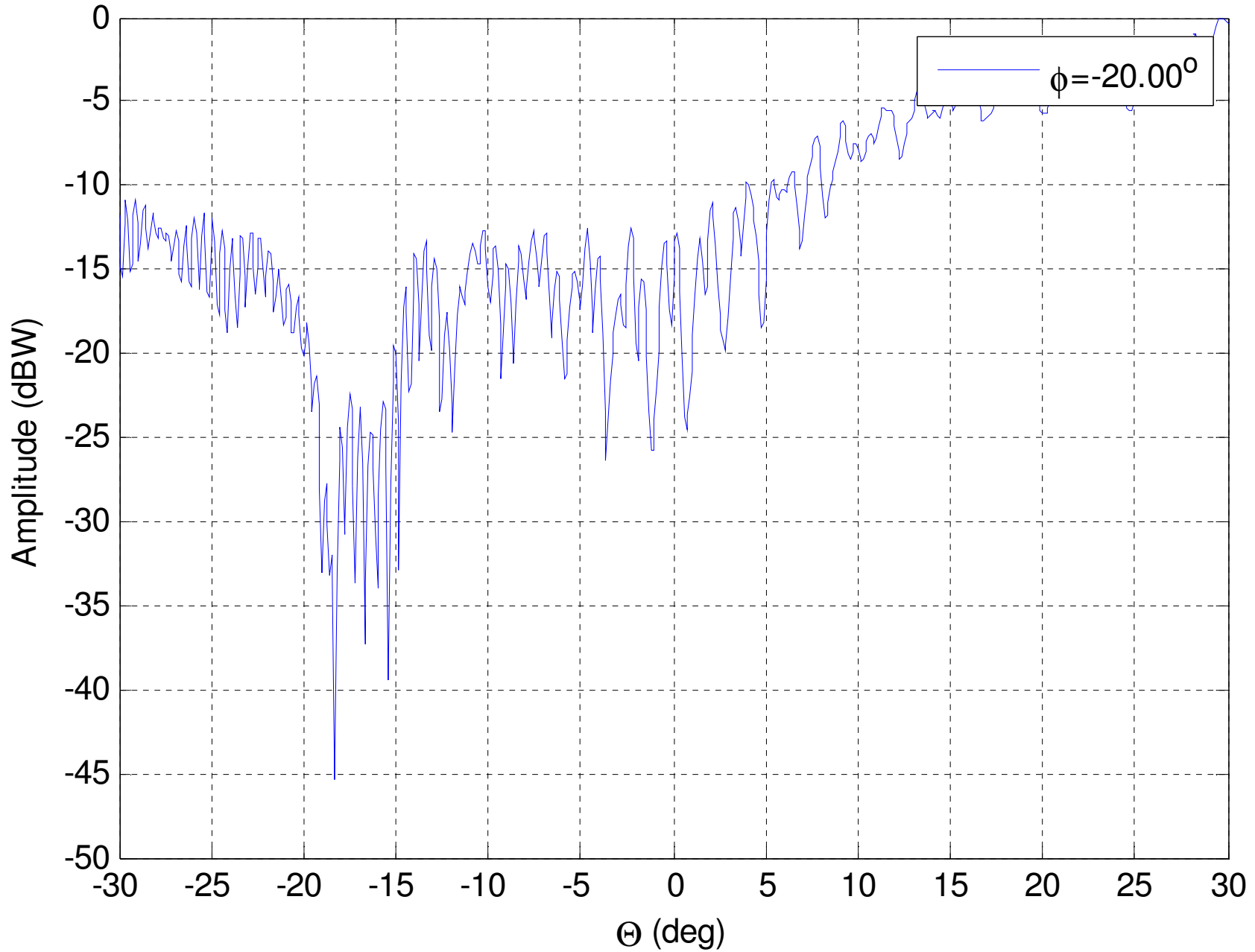
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -6.84 dBW, Date: 15-Dec-2011



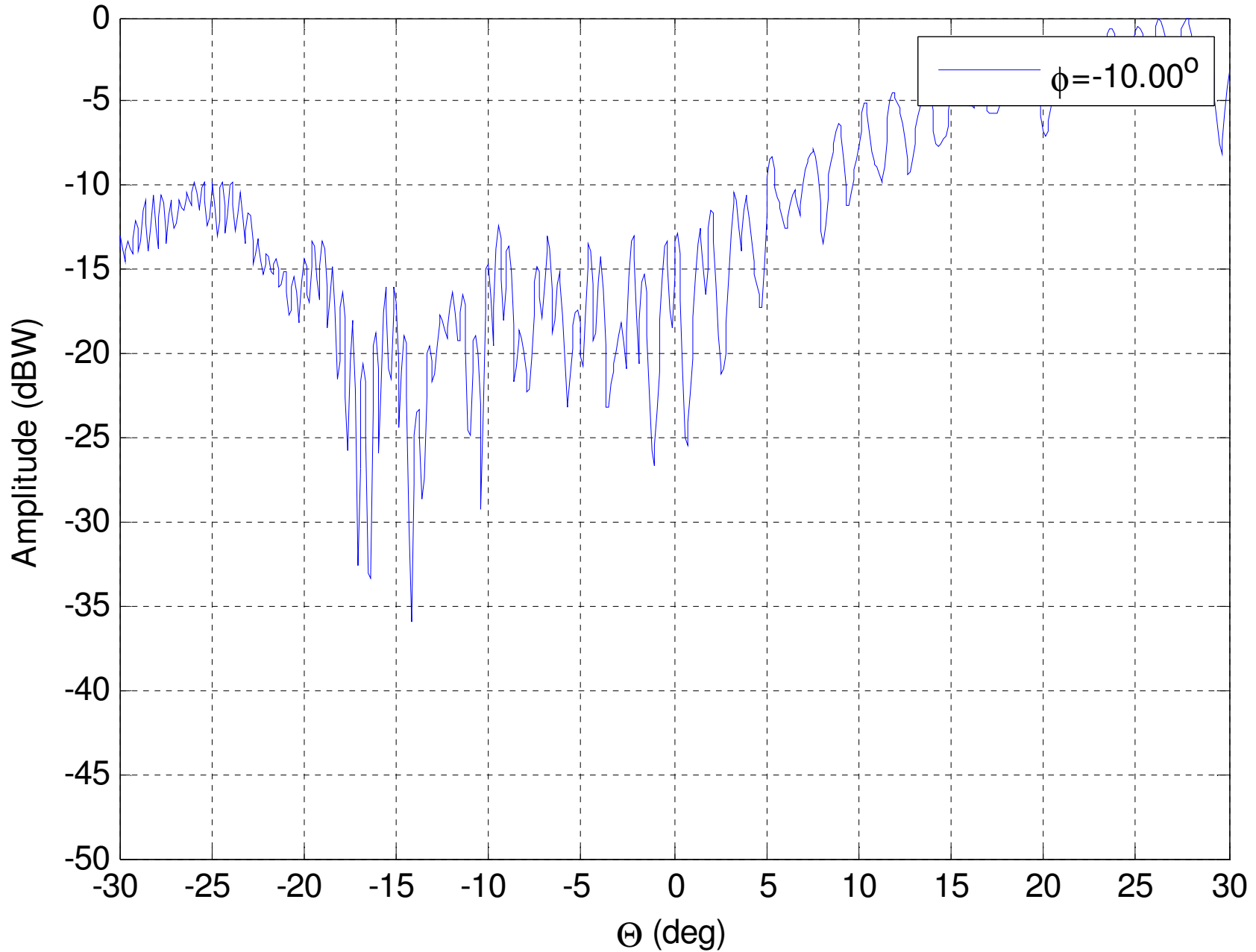
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -5.87 dBW, Date: 15-Dec-2011



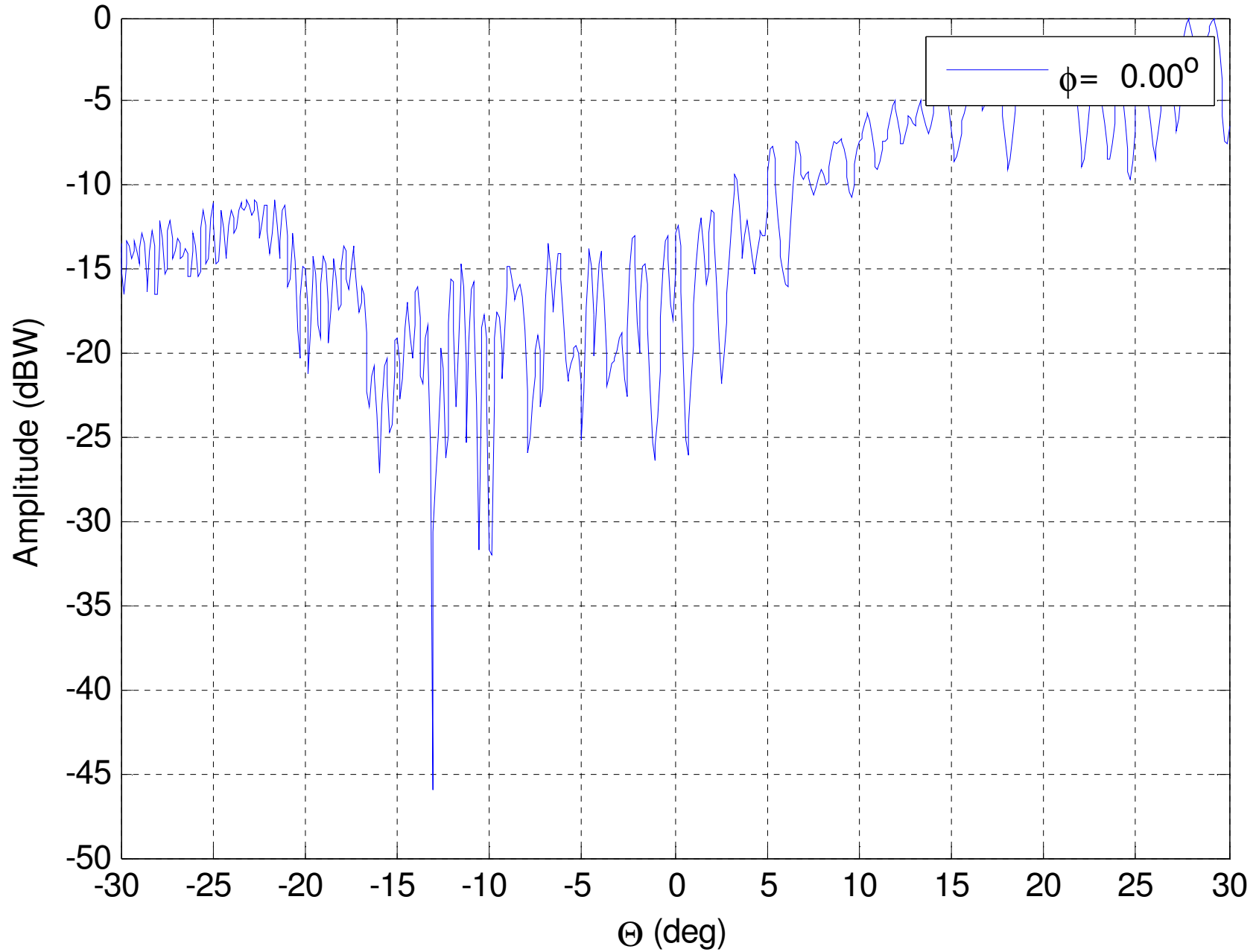
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -5.82 dBW, Date: 15-Dec-2011



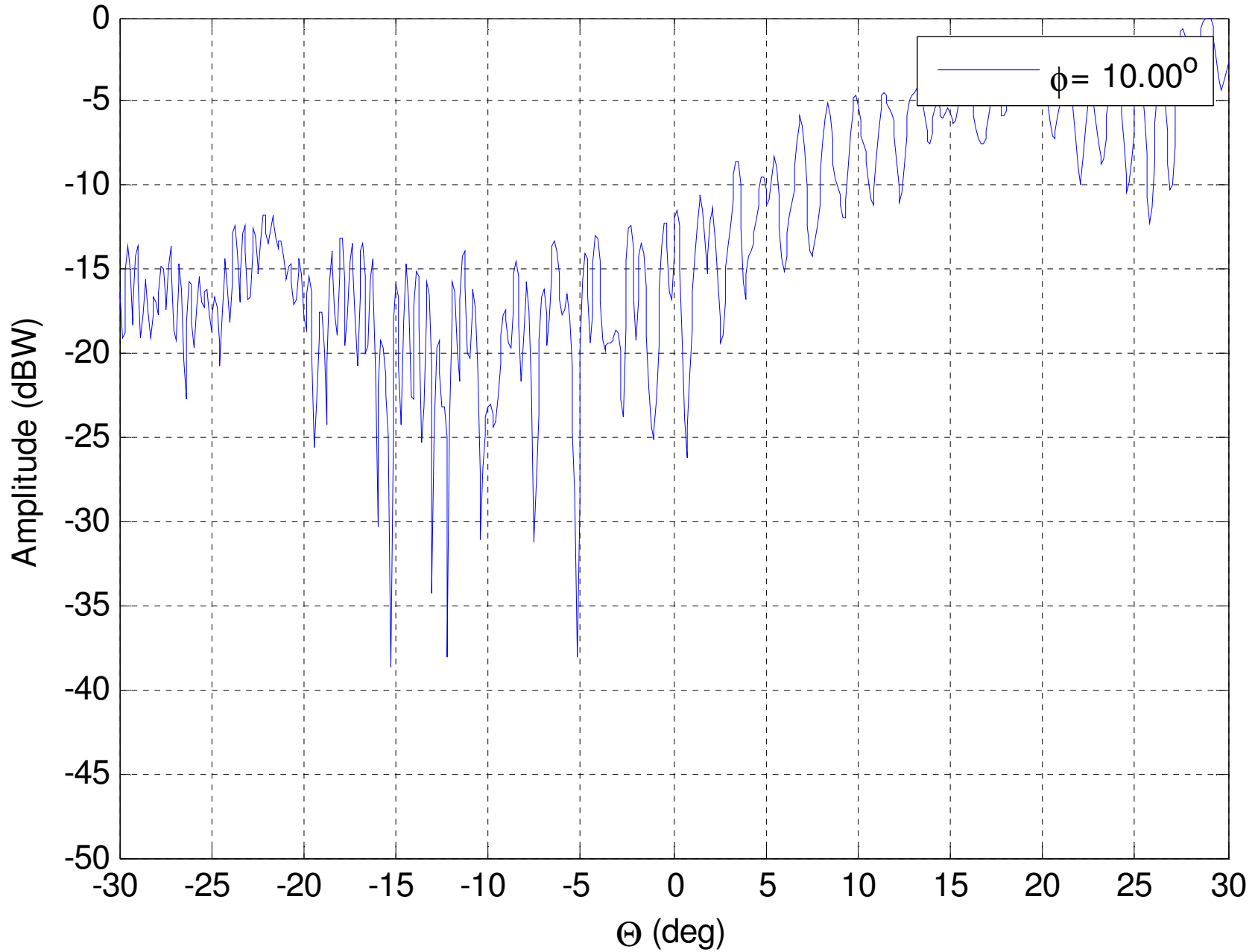
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -6.26 dBW, Date: 15-Dec-2011



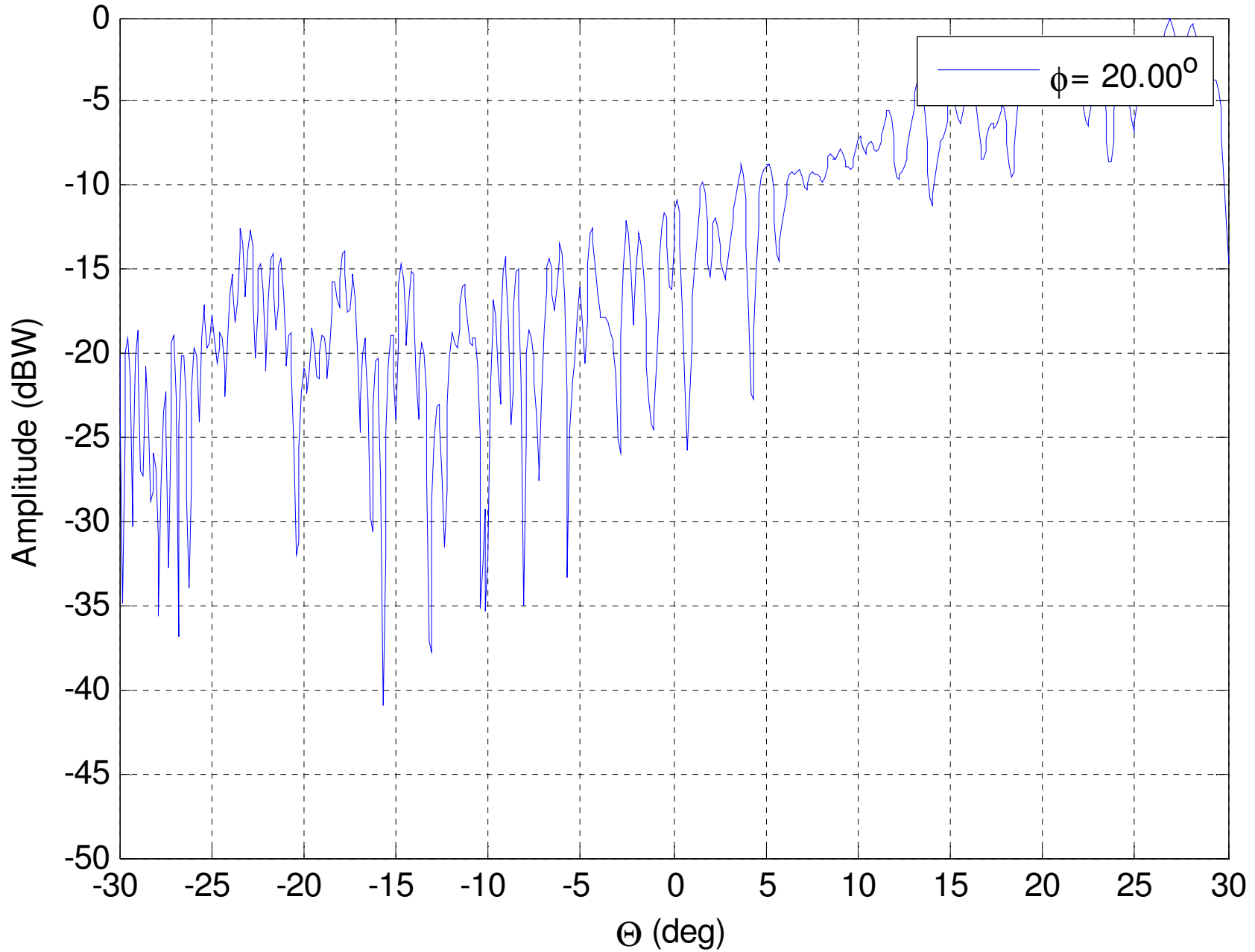
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.28 dBW, Date: 15-Dec-2011



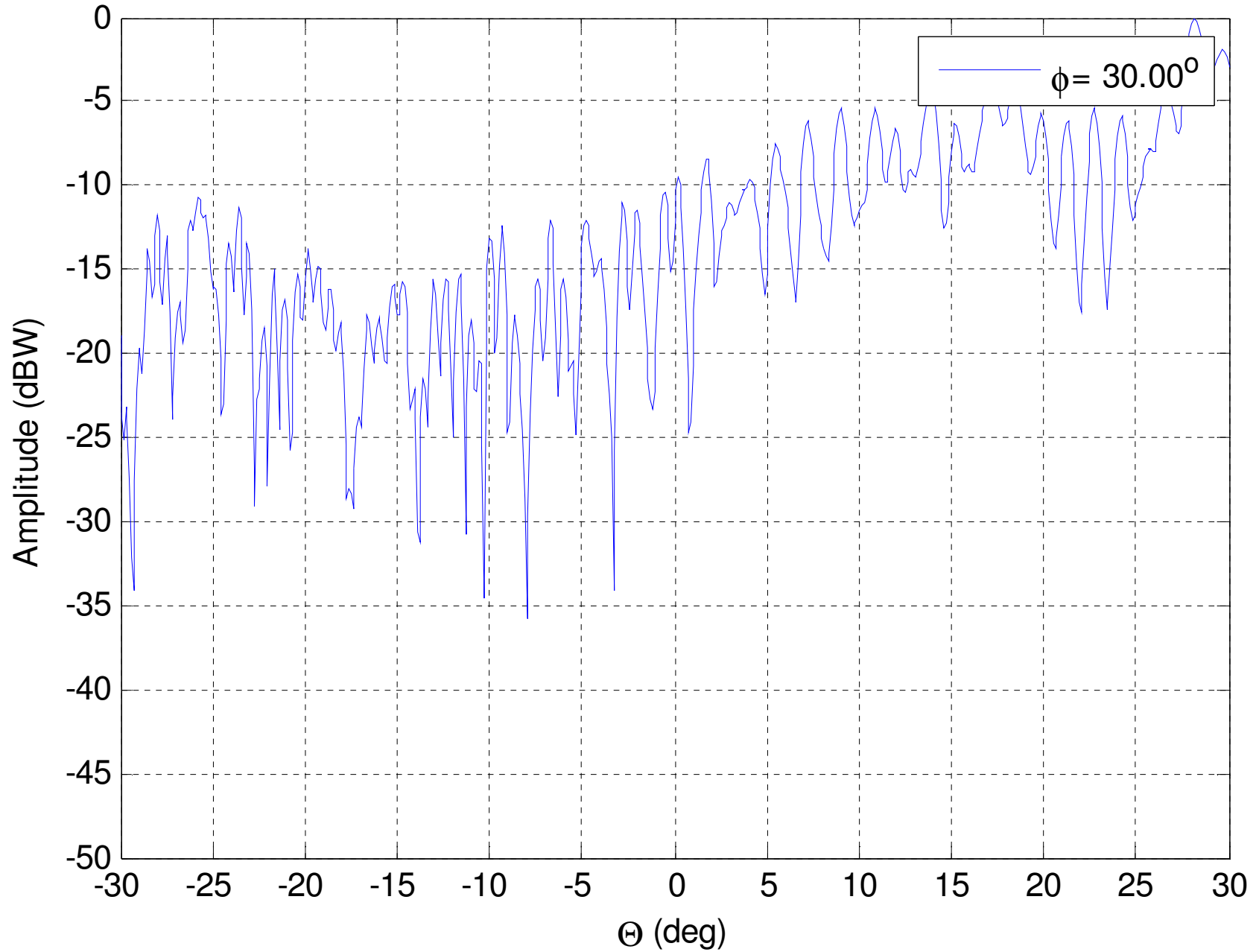
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.88 dBW, Date: 15-Dec-2011



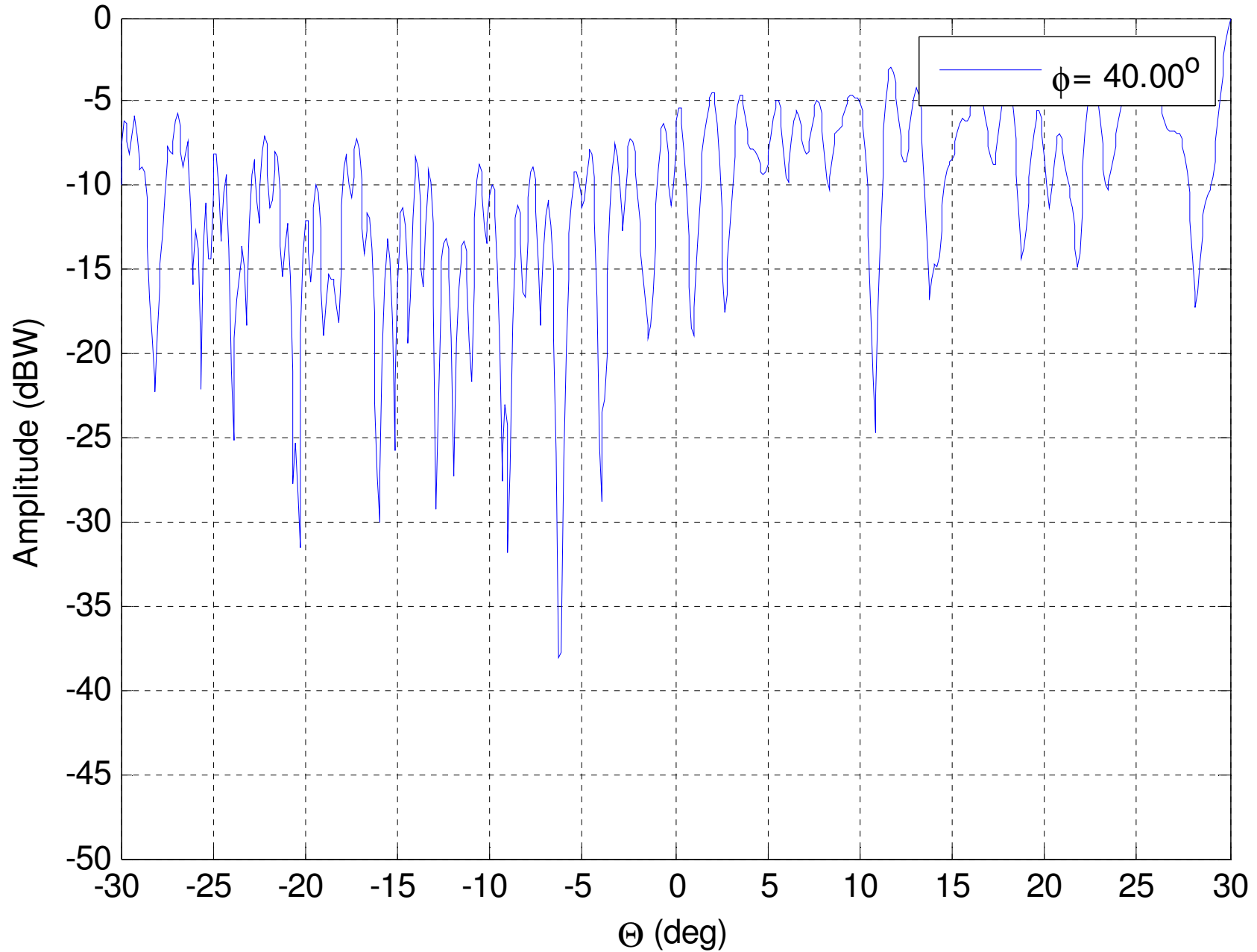
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.24 dBW, Date: 15-Dec-2011



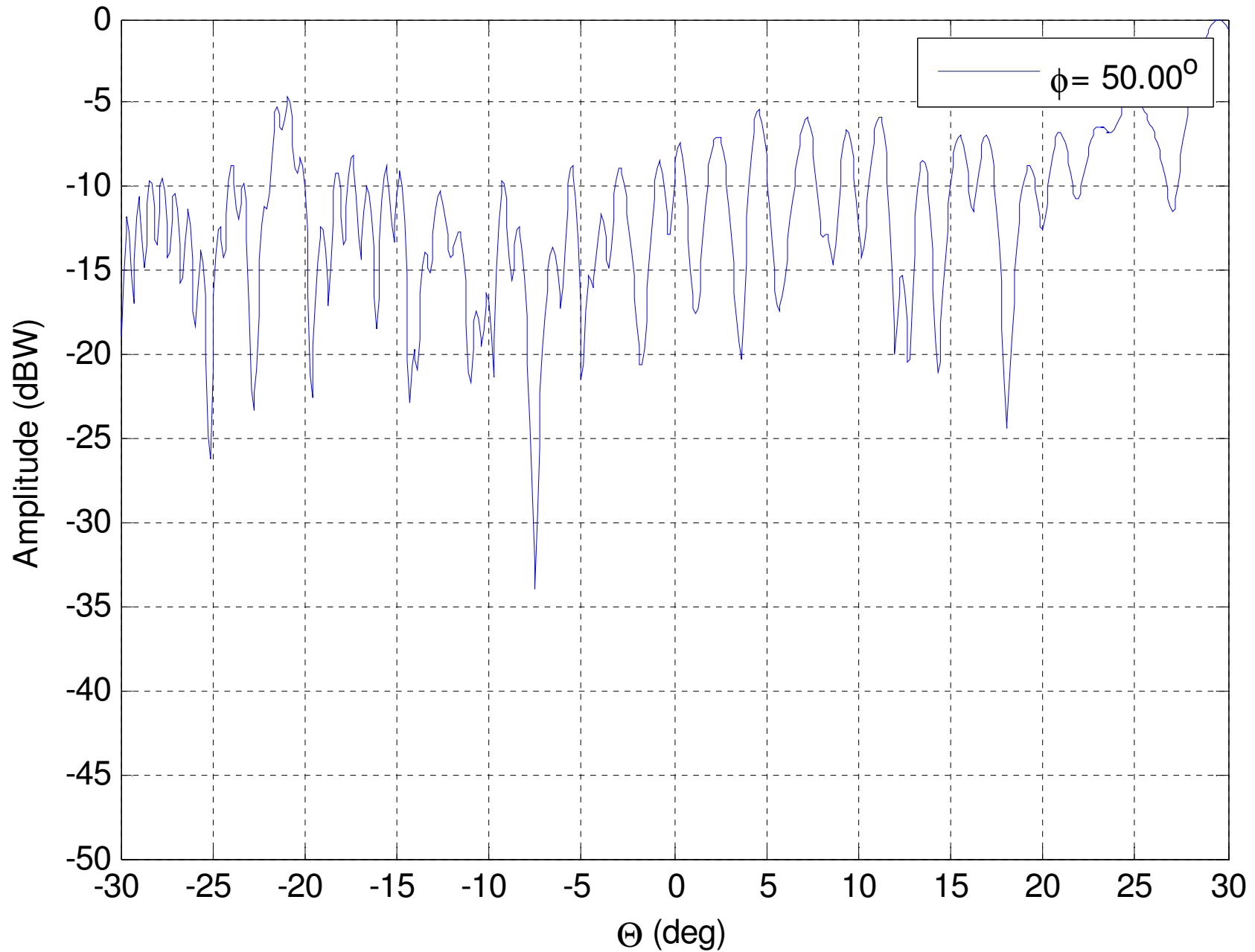
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -13.50 dBW, Date: 15-Dec-2011



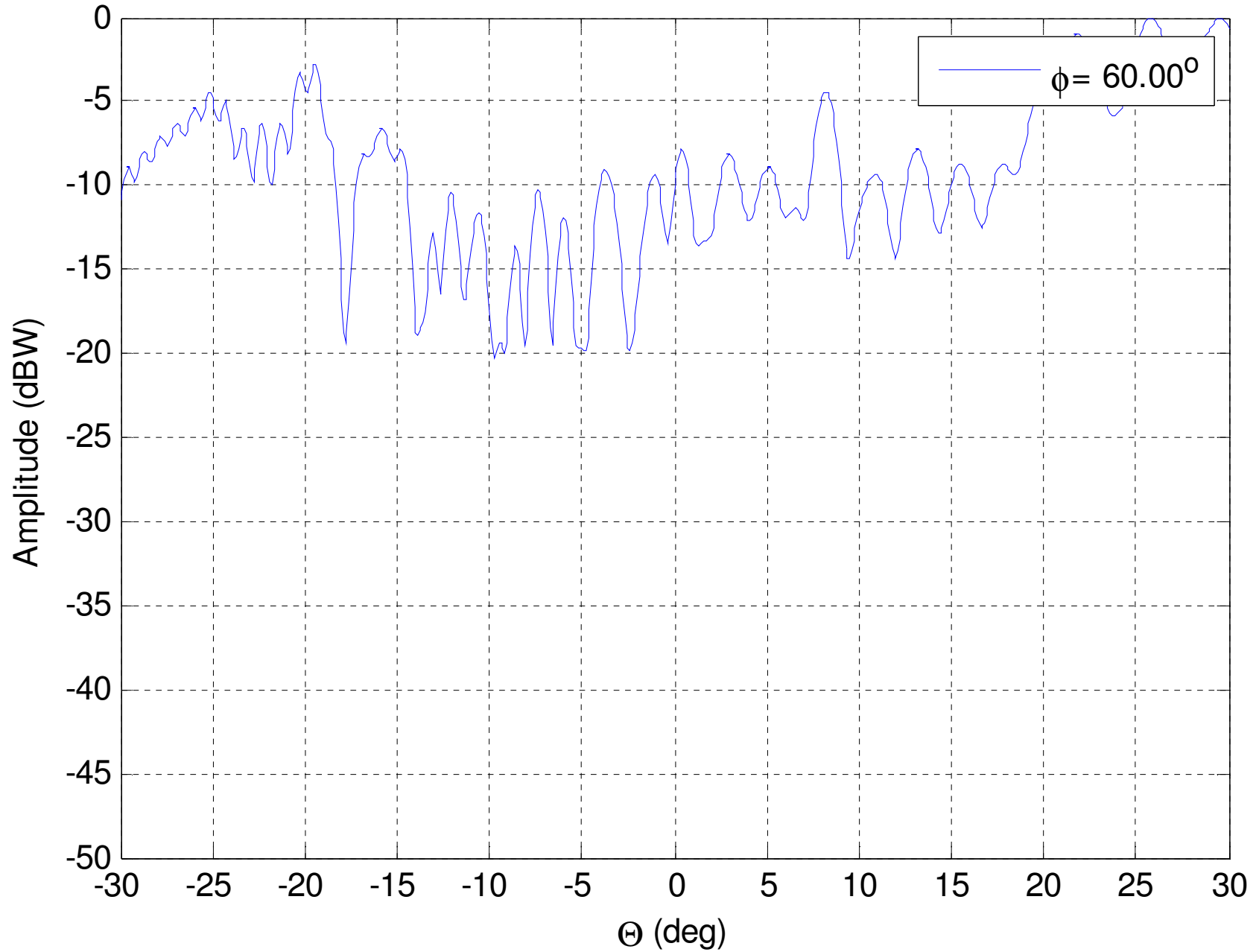
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.62 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

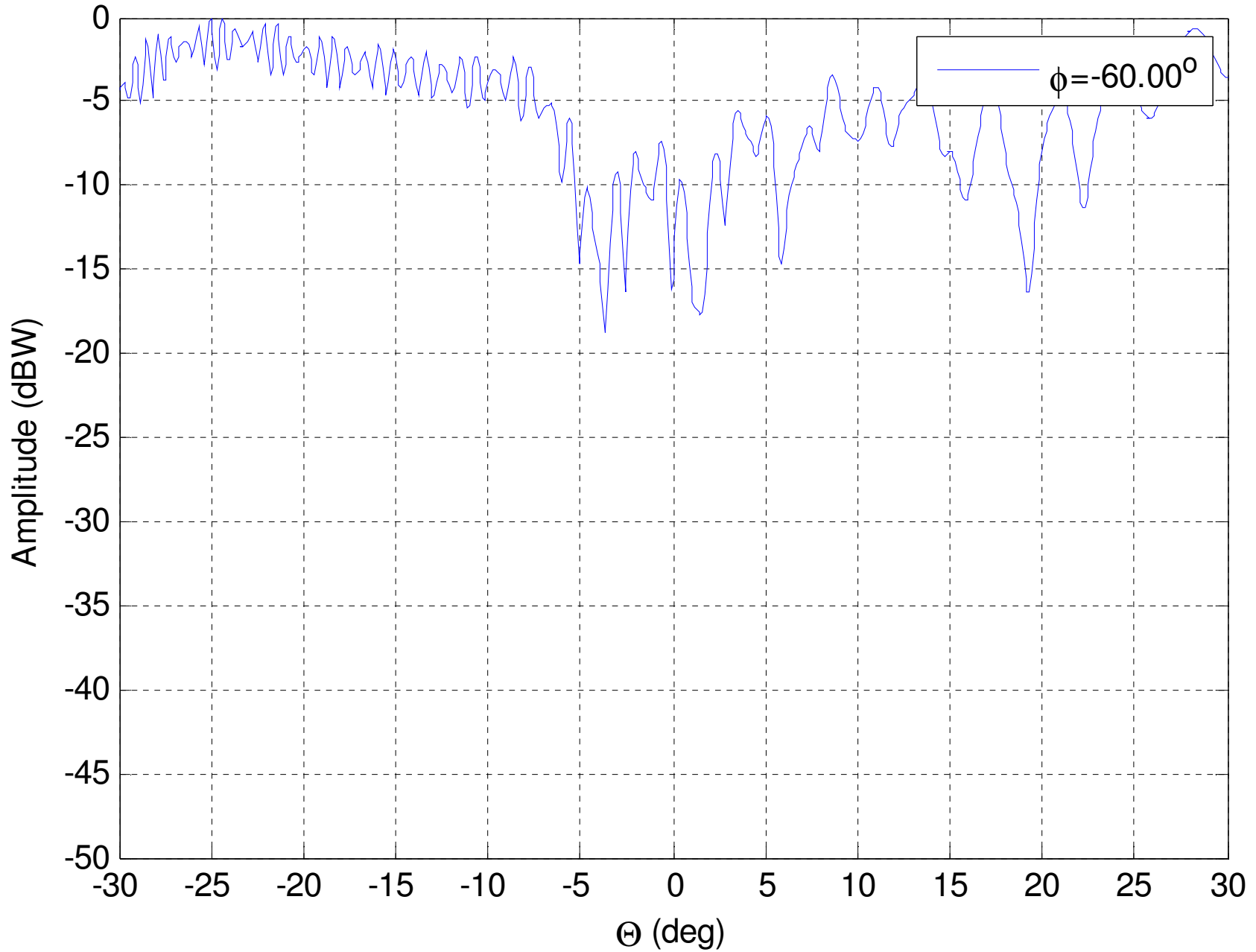
Input file: tx-17.7-rhcp-60.cut, Peak: -11.30 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

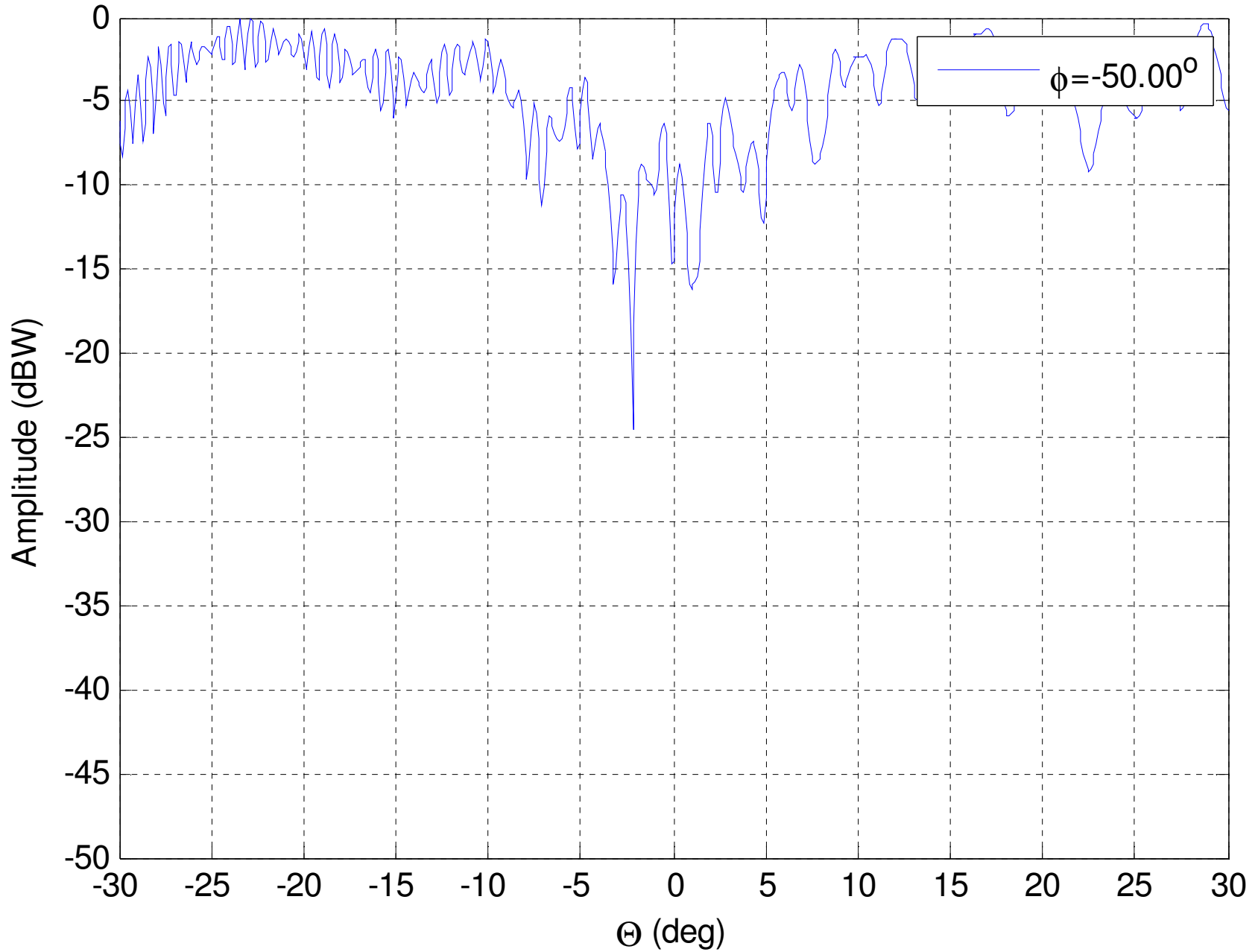
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.11 dBW, Date: 15-Dec-2011



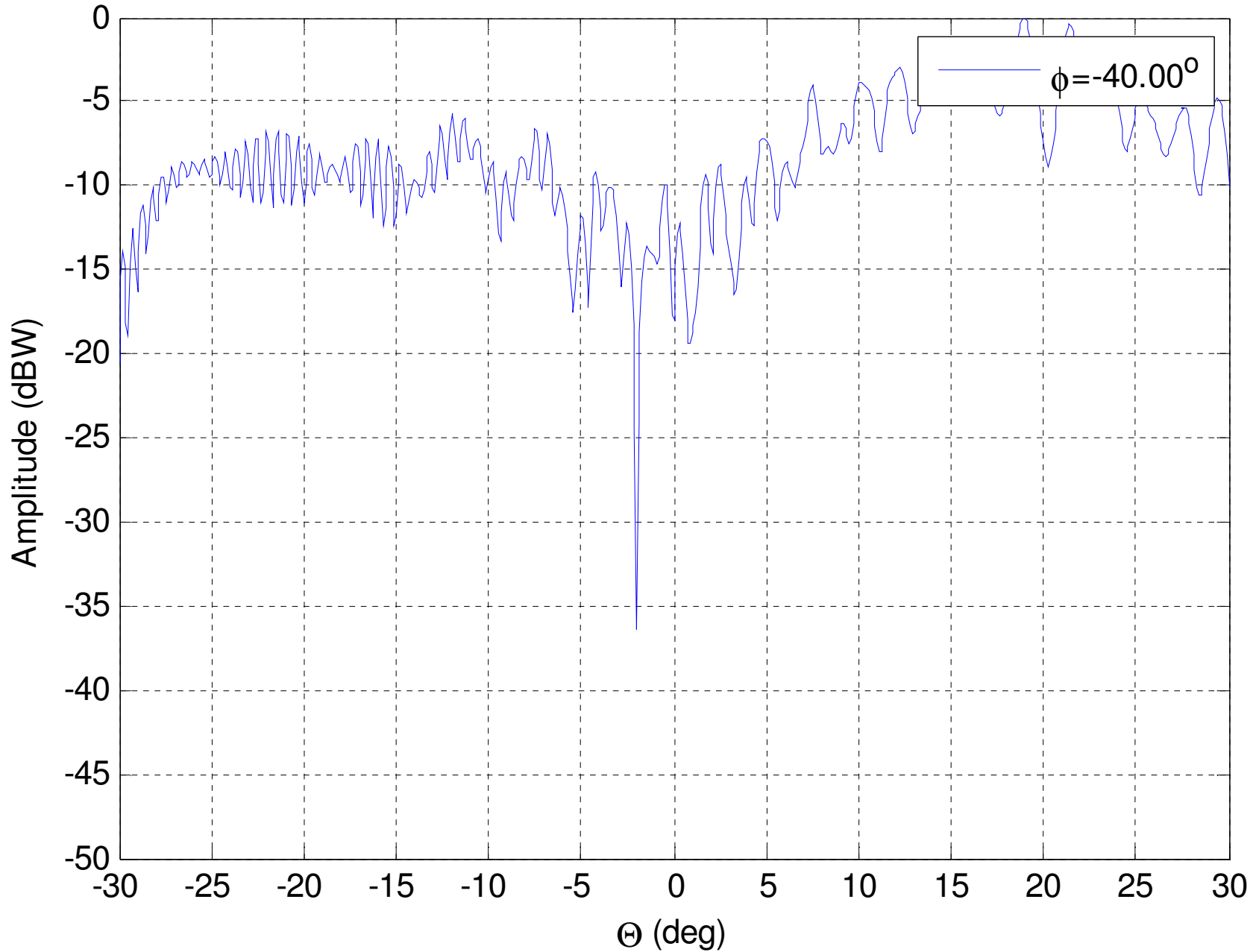
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -12.18 dBW, Date: 15-Dec-2011



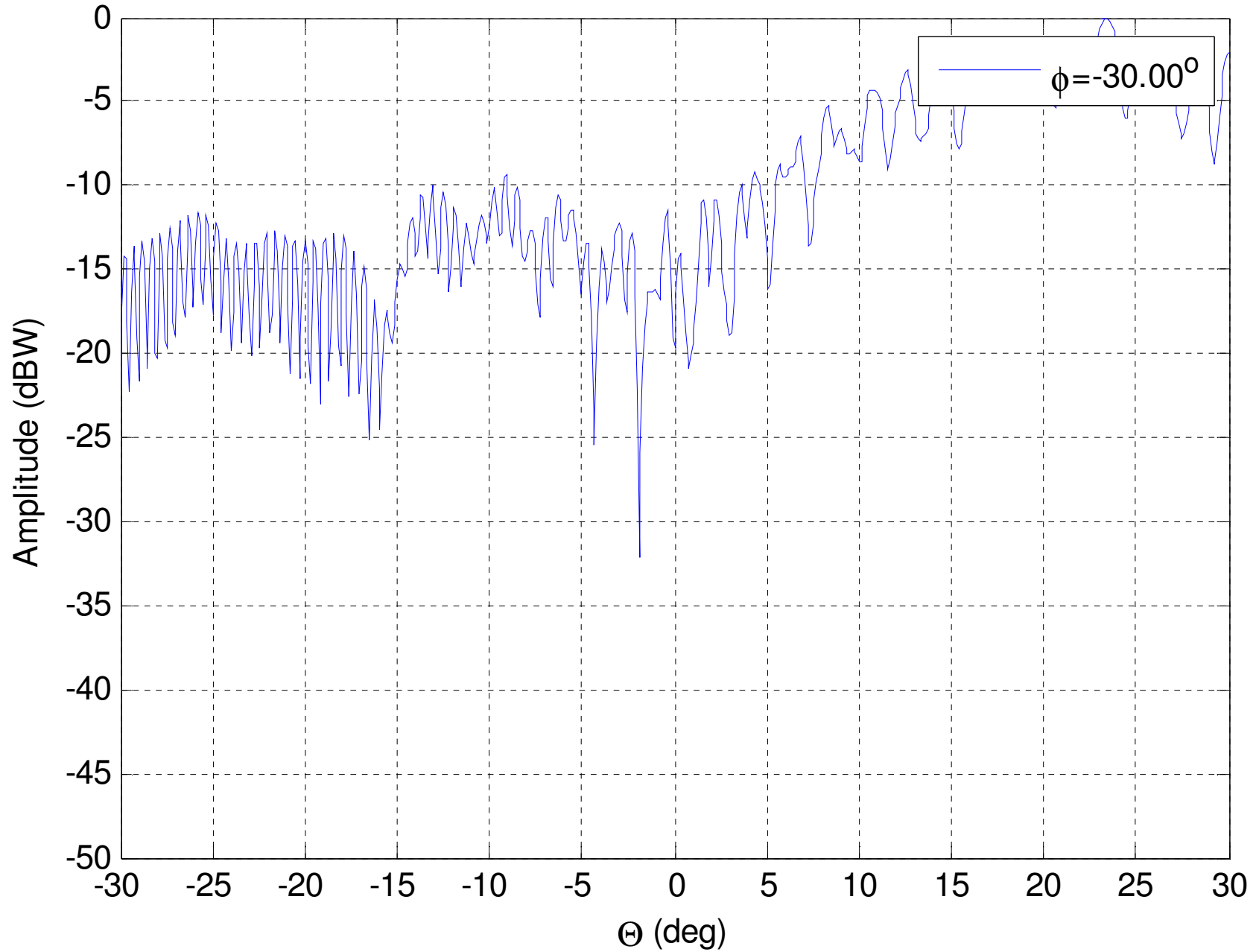
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -8.68 dBW, Date: 15-Dec-2011



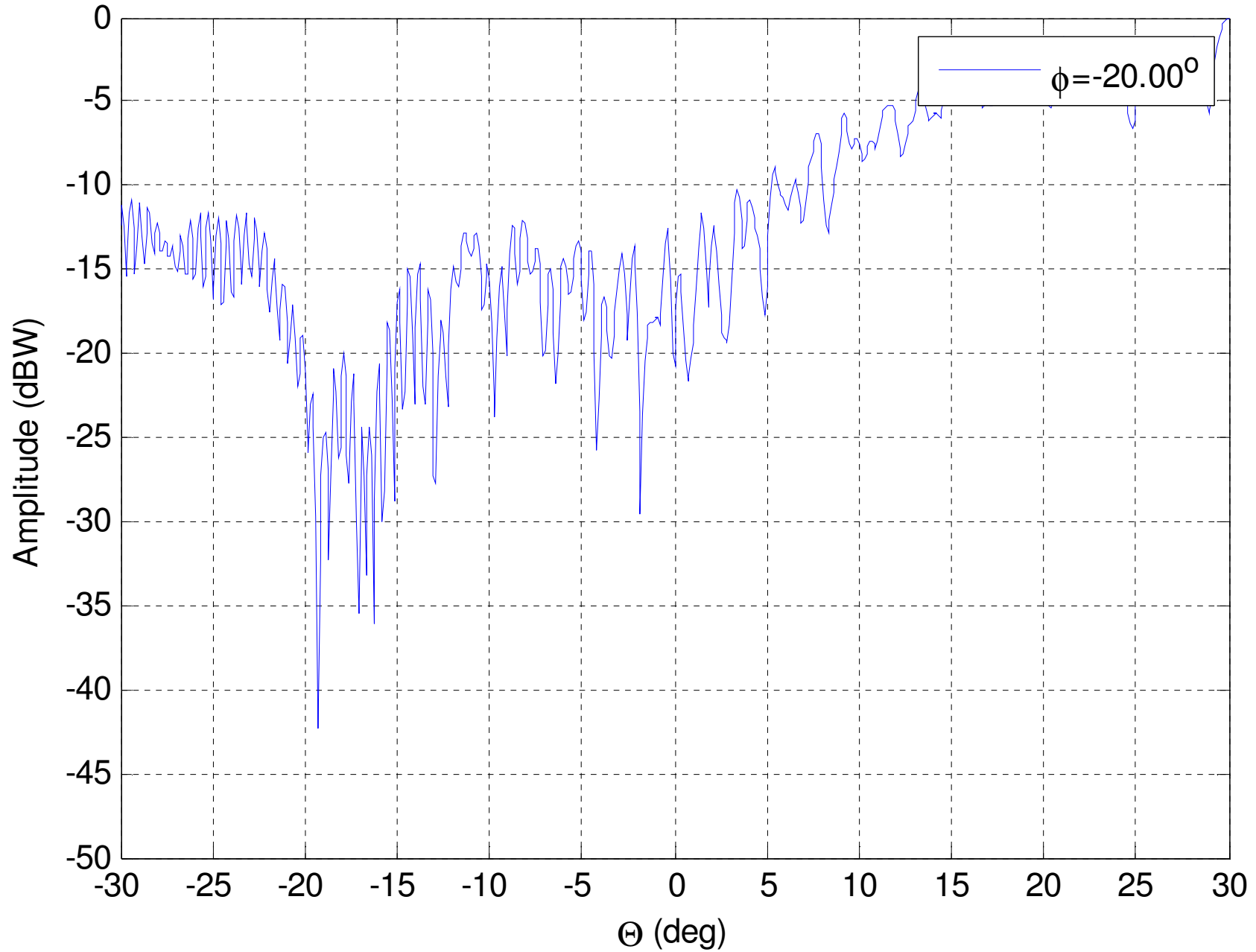
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.04 dBW, Date: 15-Dec-2011



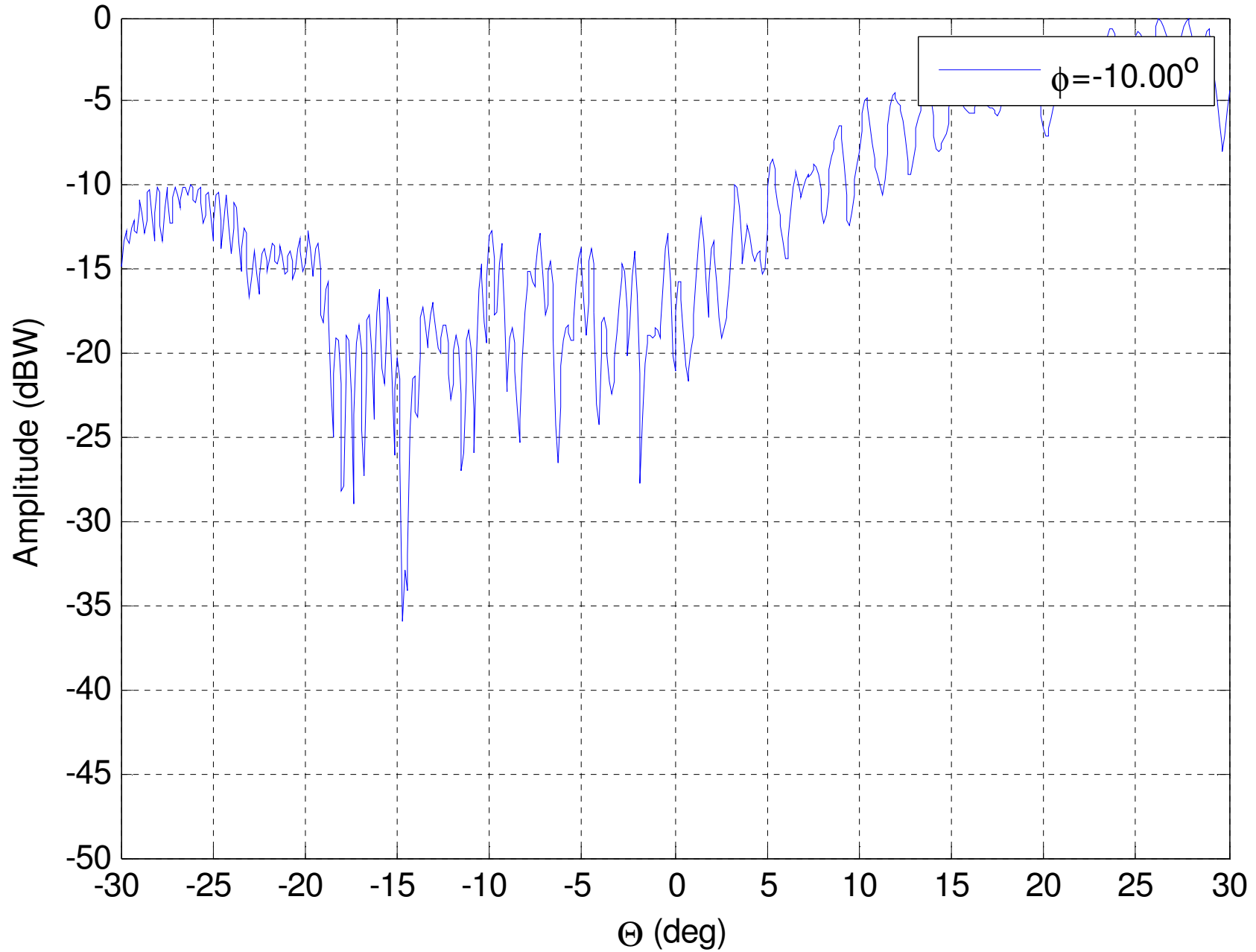
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -5.93 dBW, Date: 15-Dec-2011



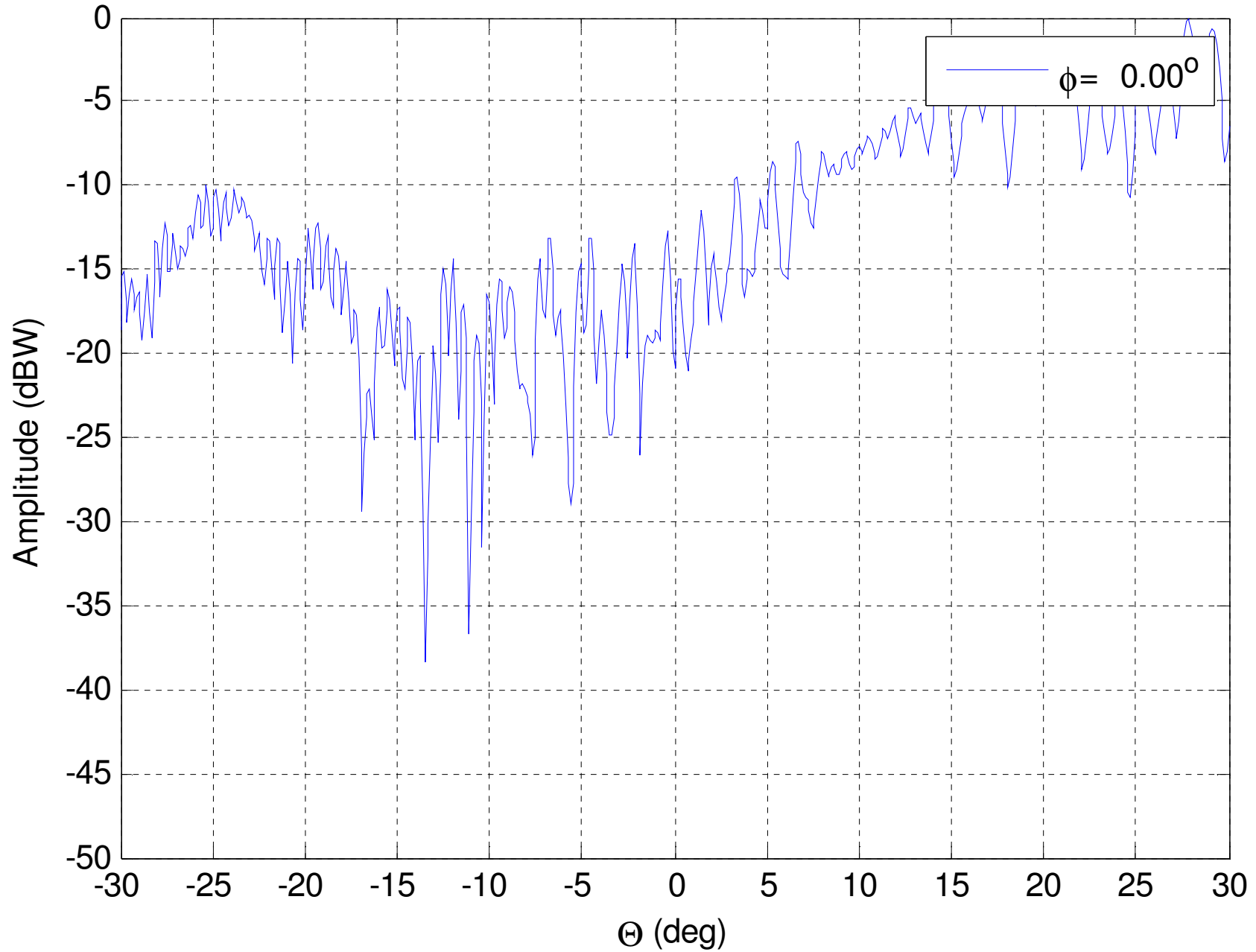
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -5.67 dBW, Date: 15-Dec-2011



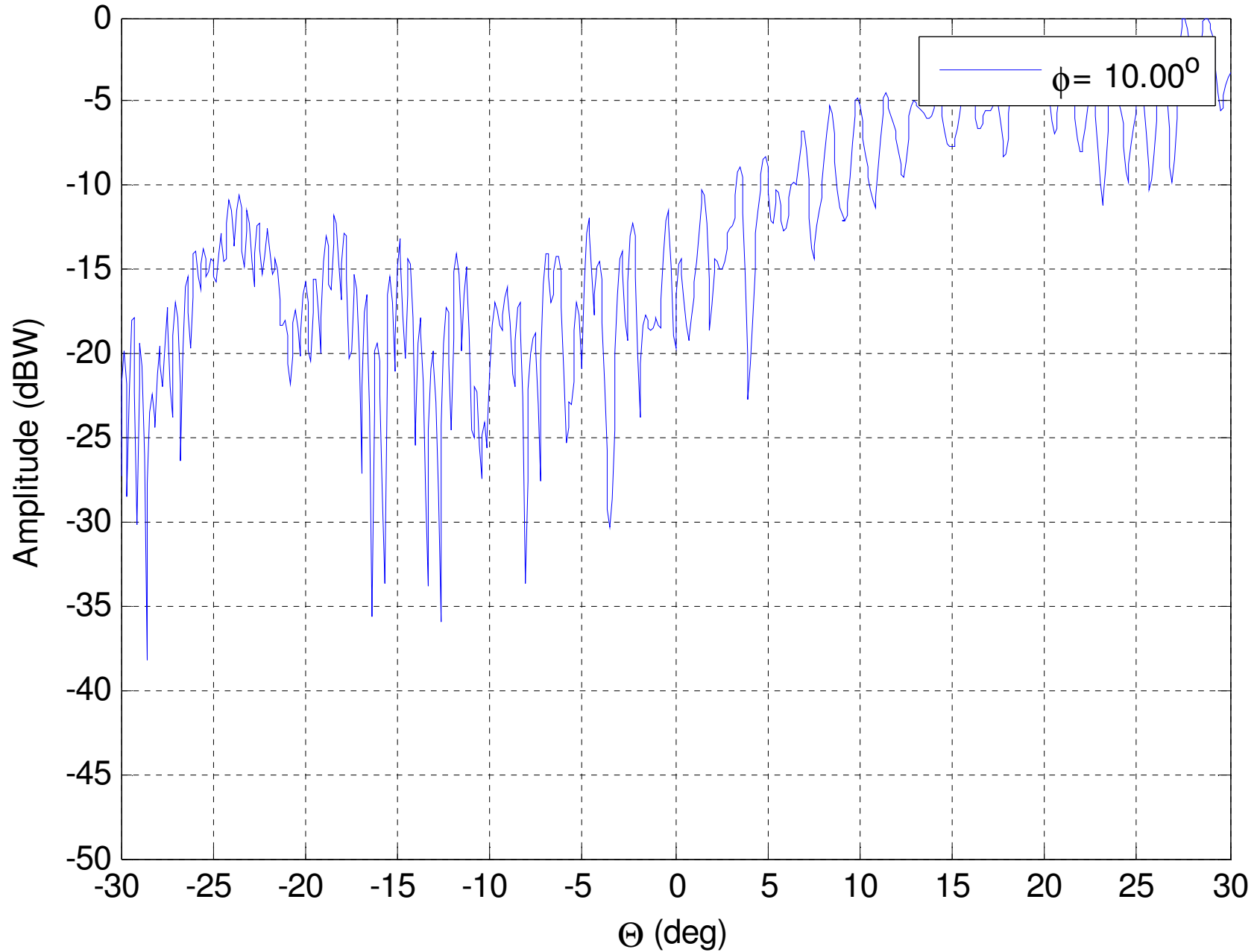
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -5.90 dBW, Date: 15-Dec-2011



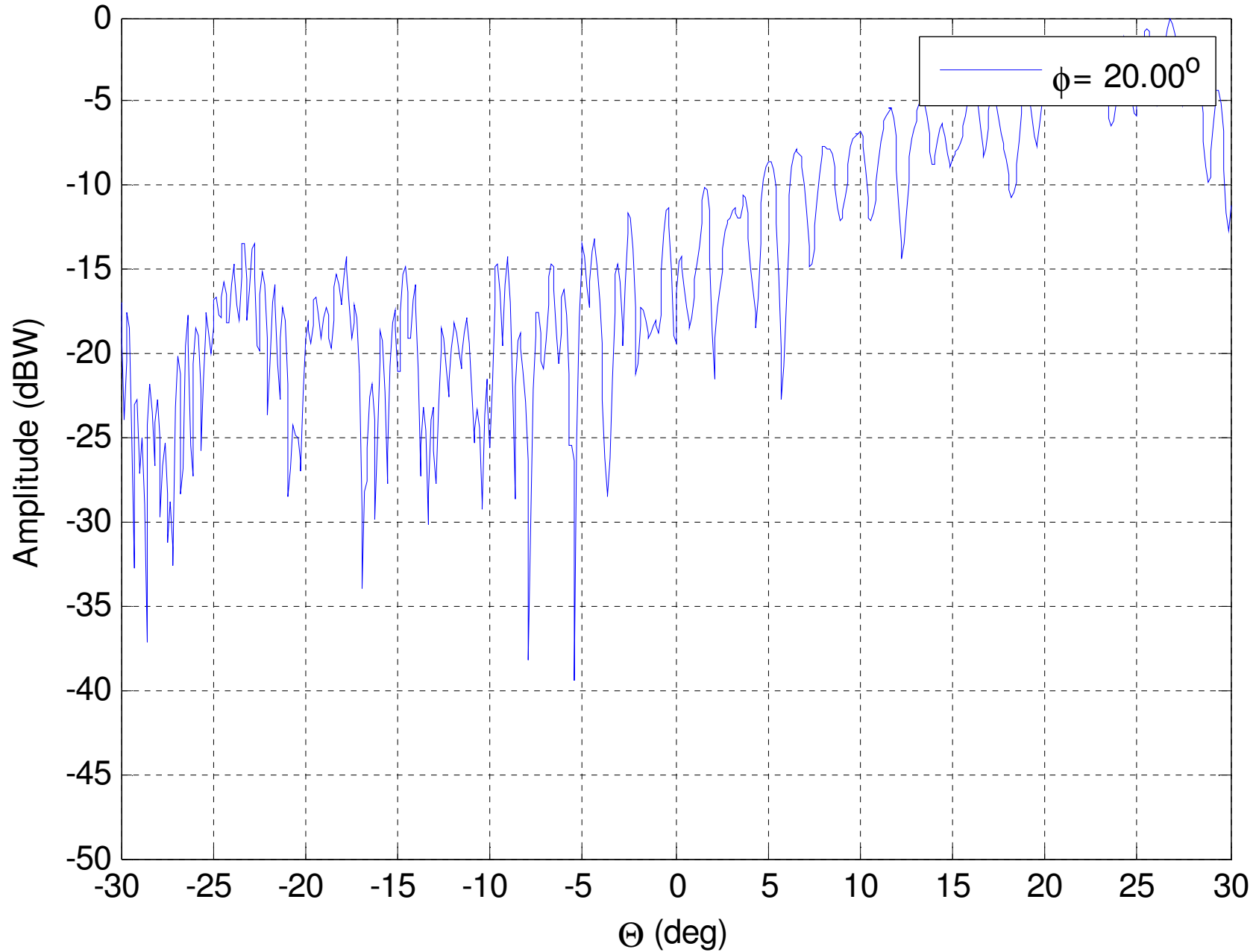
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -7.05 dBW, Date: 15-Dec-2011



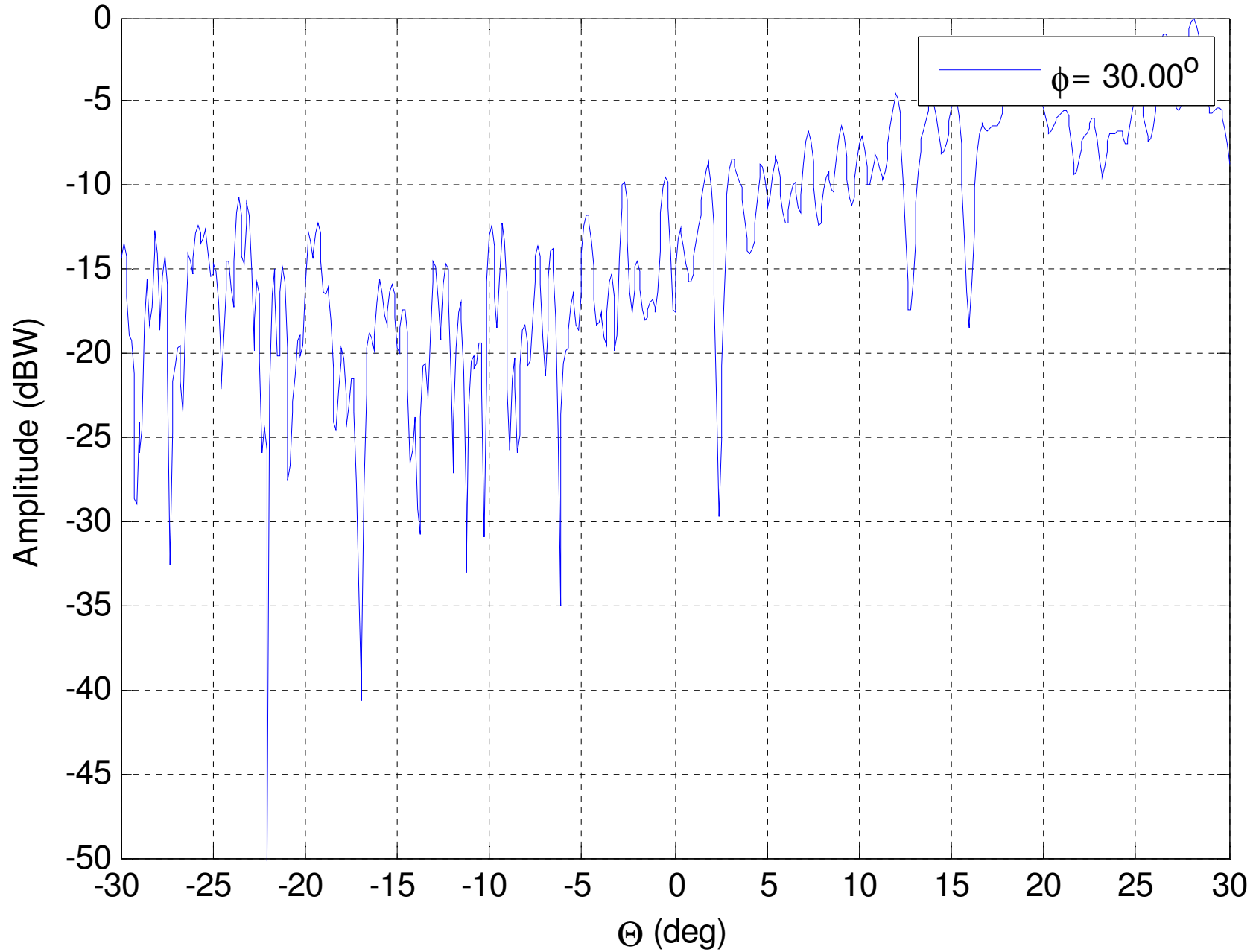
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -7.33 dBW, Date: 15-Dec-2011



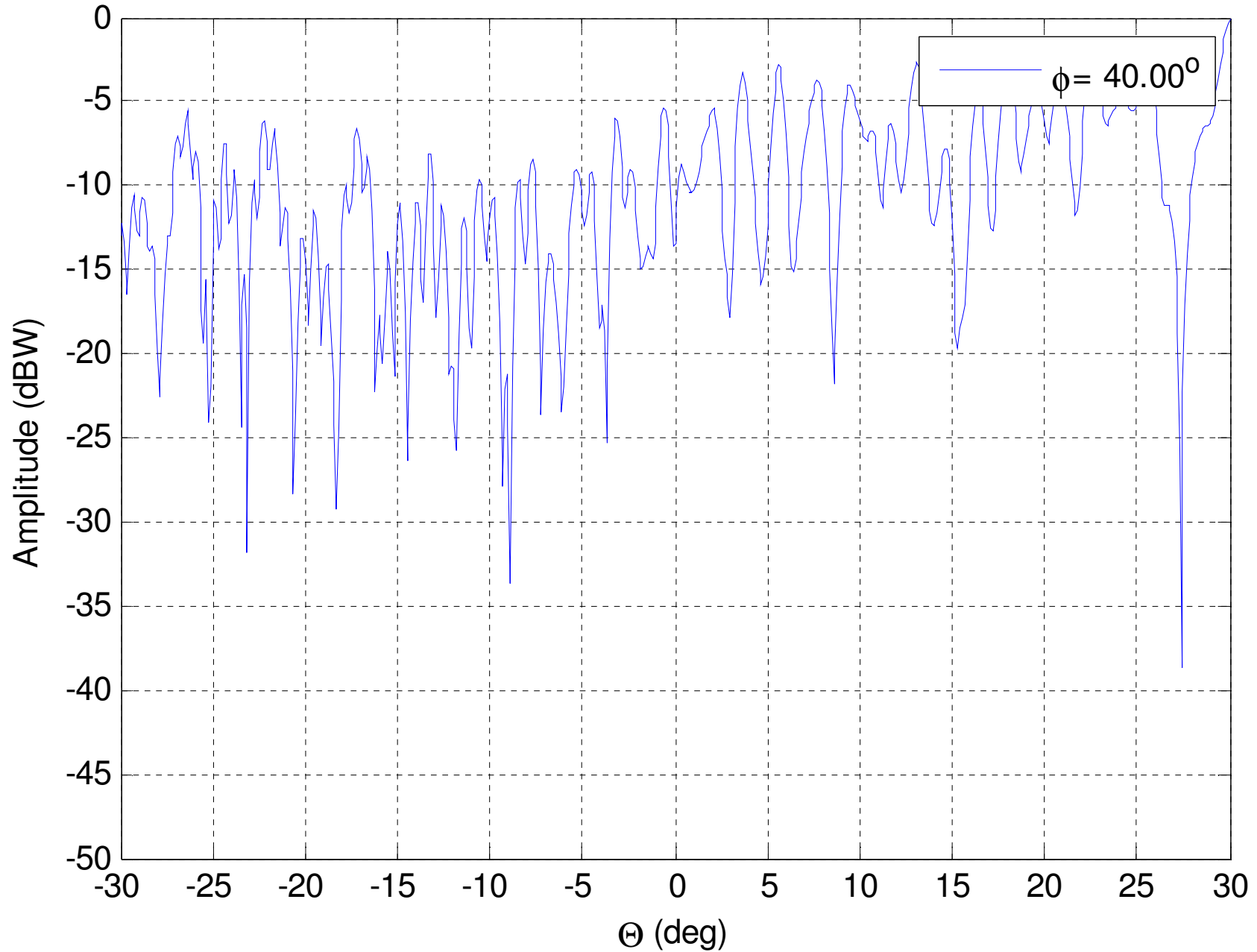
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.12 dBW, Date: 15-Dec-2011



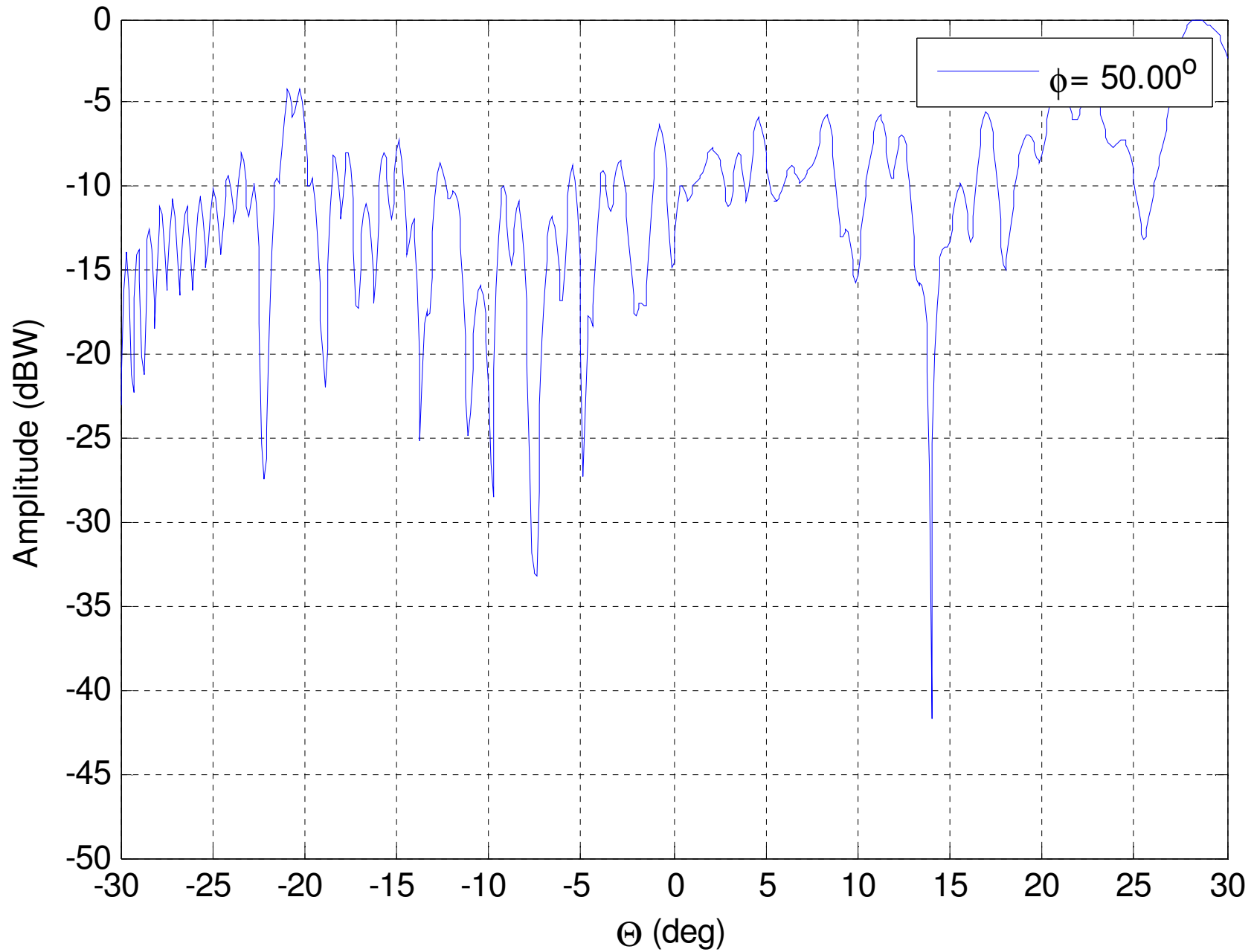
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -13.23 dBW, Date: 15-Dec-2011



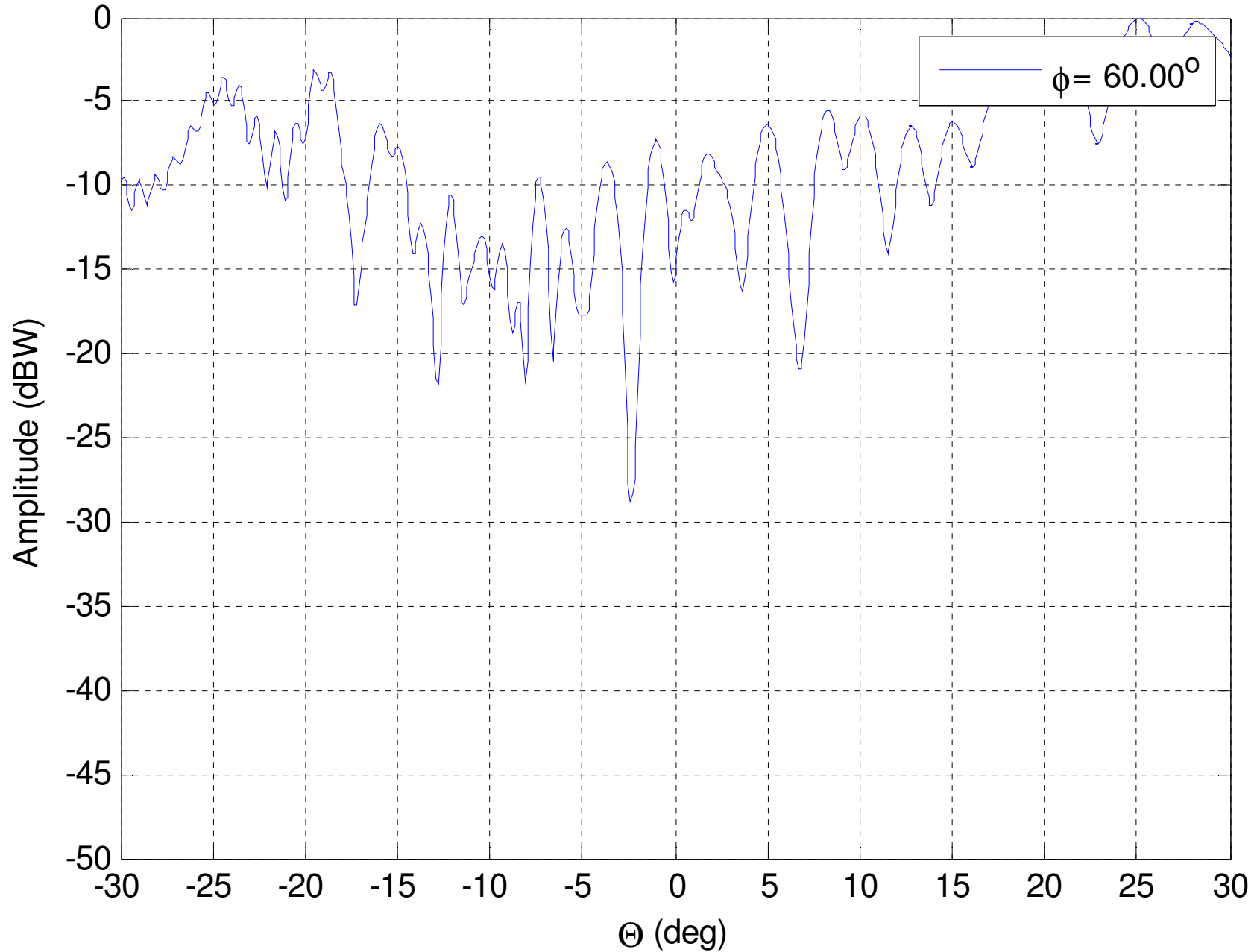
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.30 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -11.43 dBW, Date: 15-Dec-2011



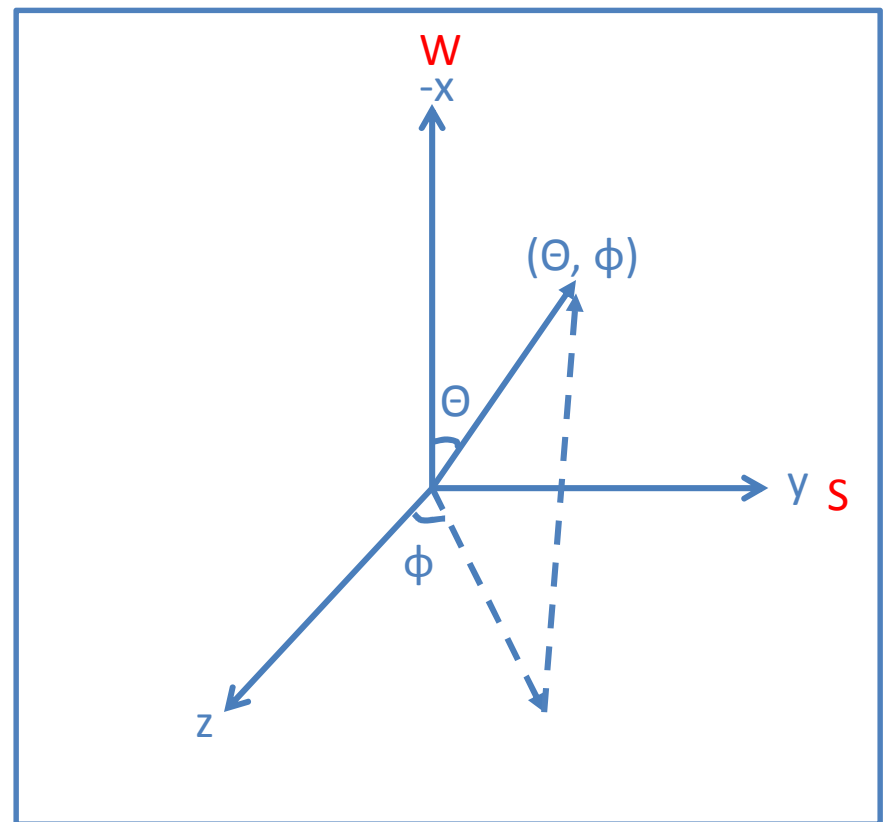
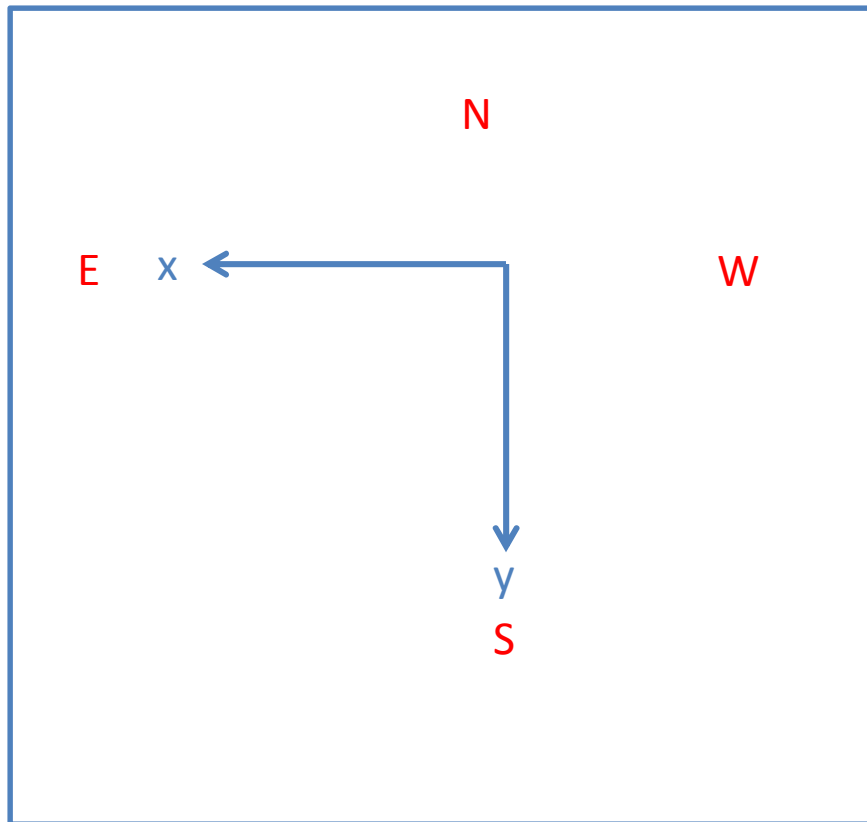
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 23

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



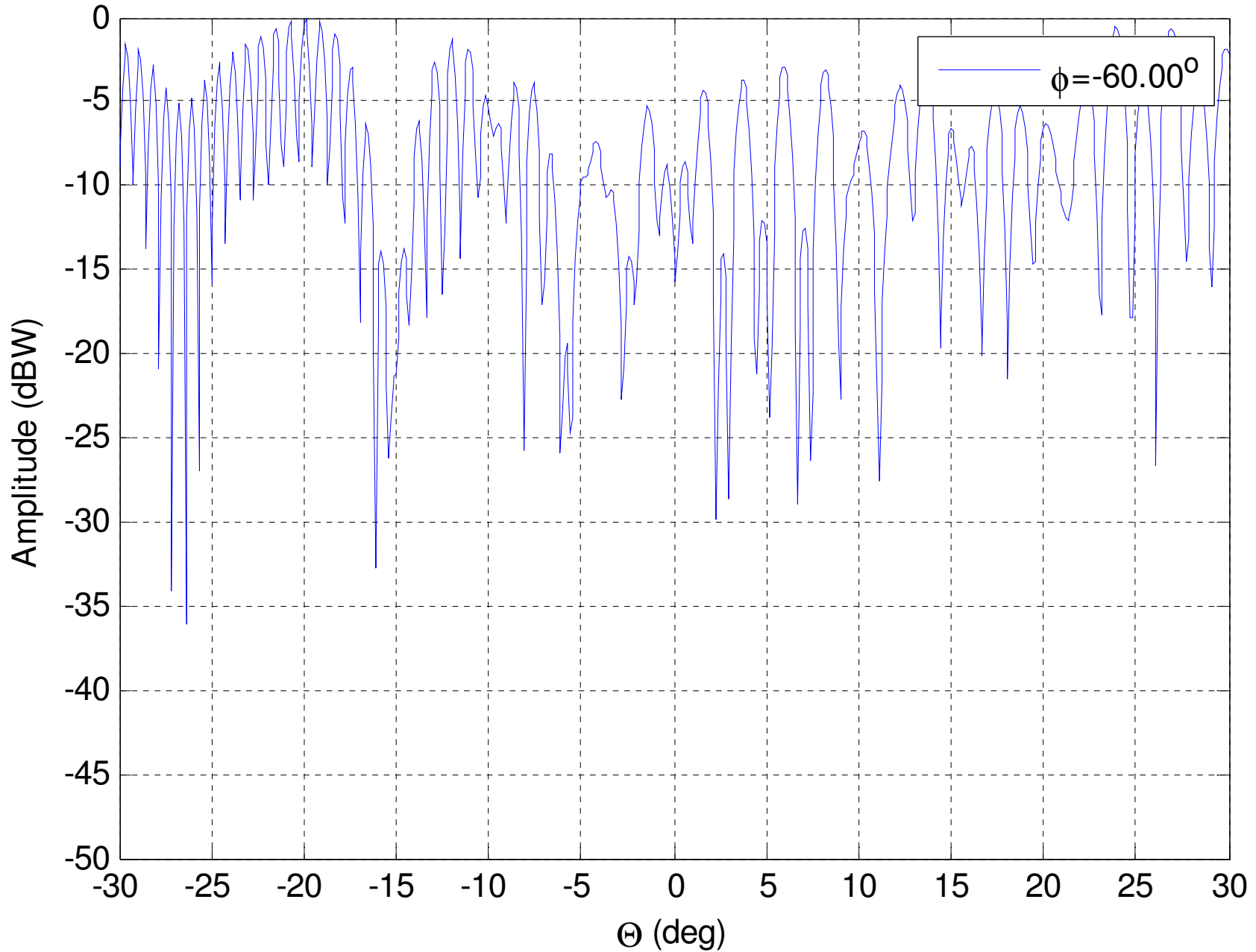
Spot Beam23, -X Axis Plots

- 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

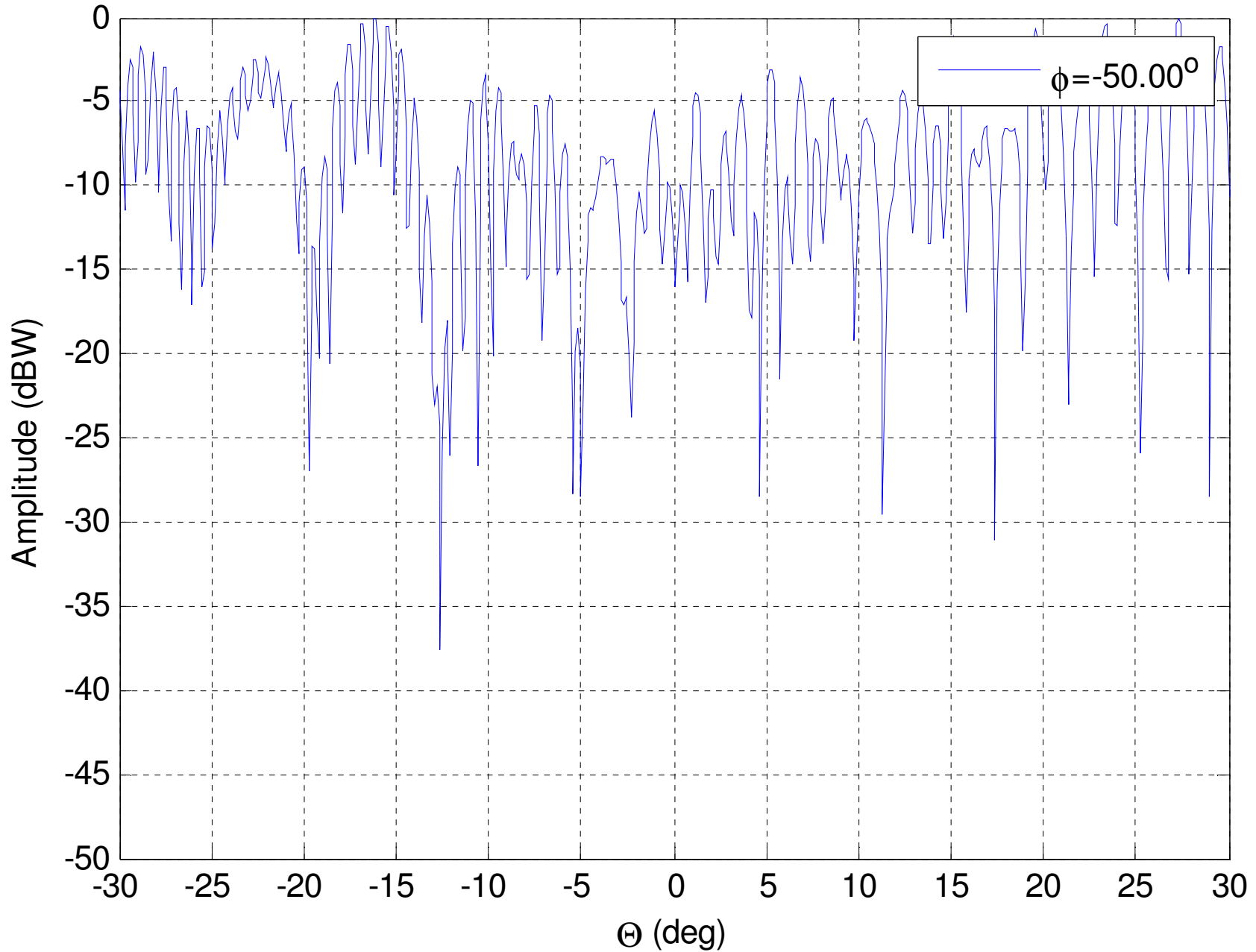
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -8.91 dBW, Date: 15-Dec-2011



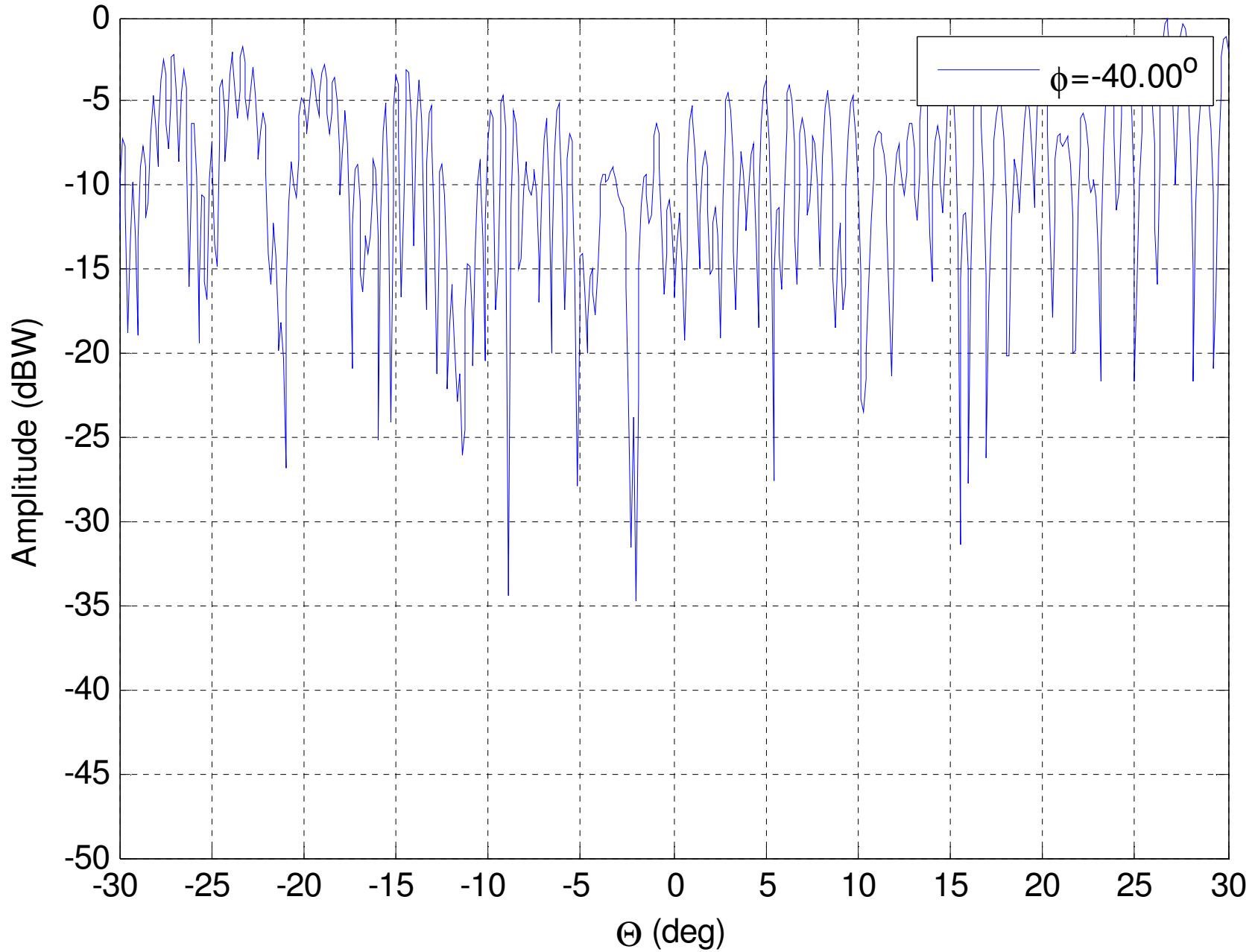
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -8.49 dBW, Date: 15-Dec-2011



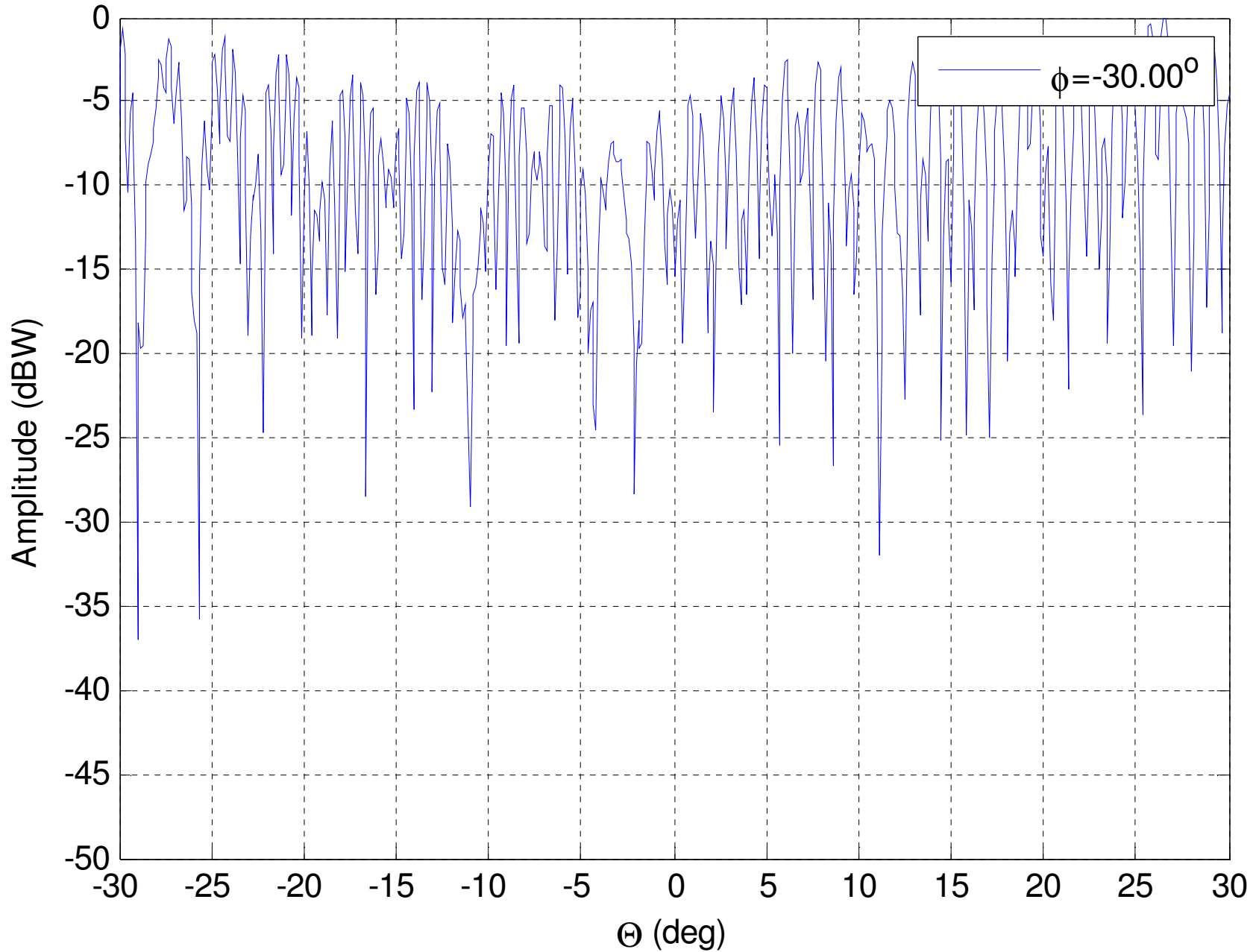
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -7.71 dBW, Date: 15-Dec-2011



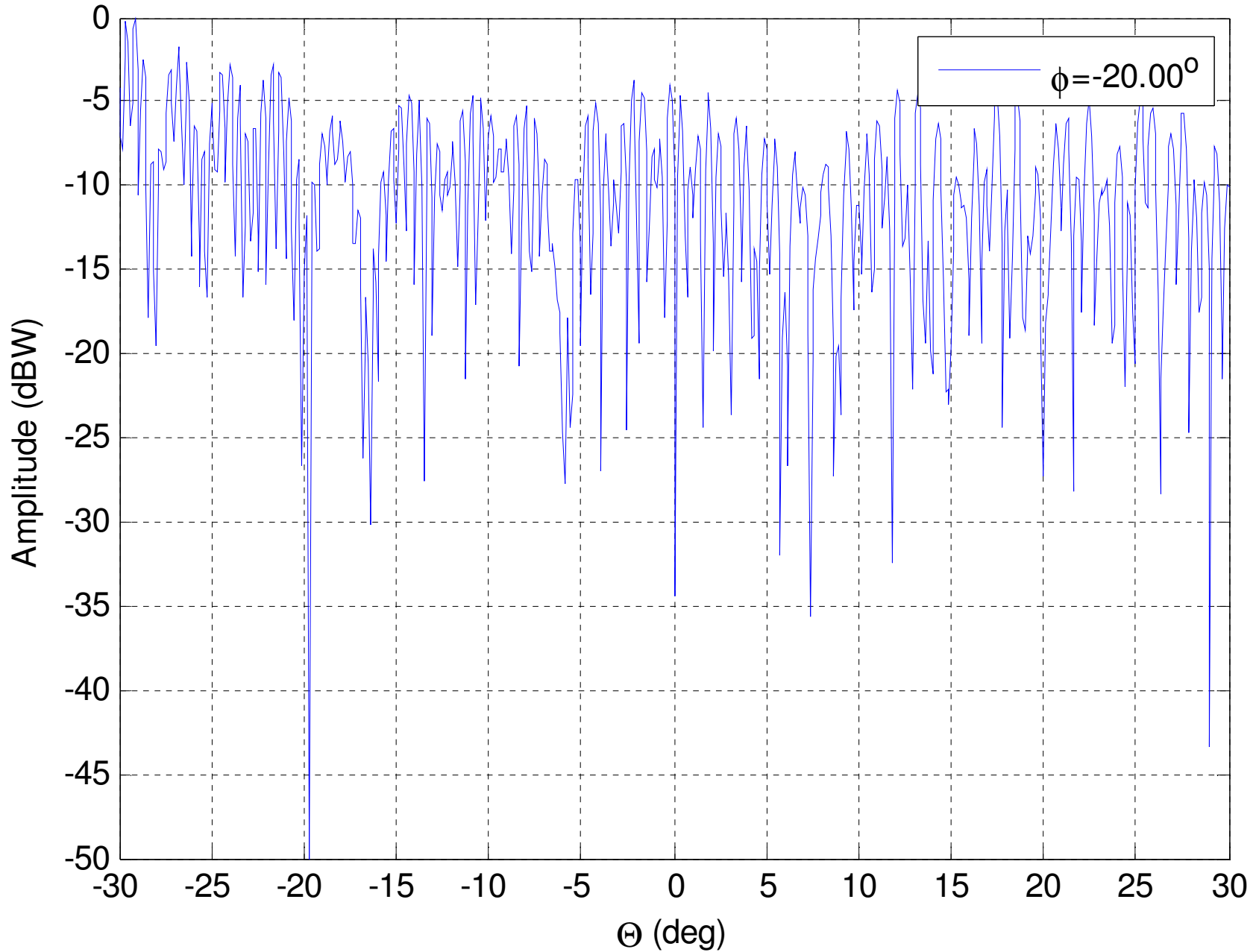
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -8.65 dBW, Date: 15-Dec-2011



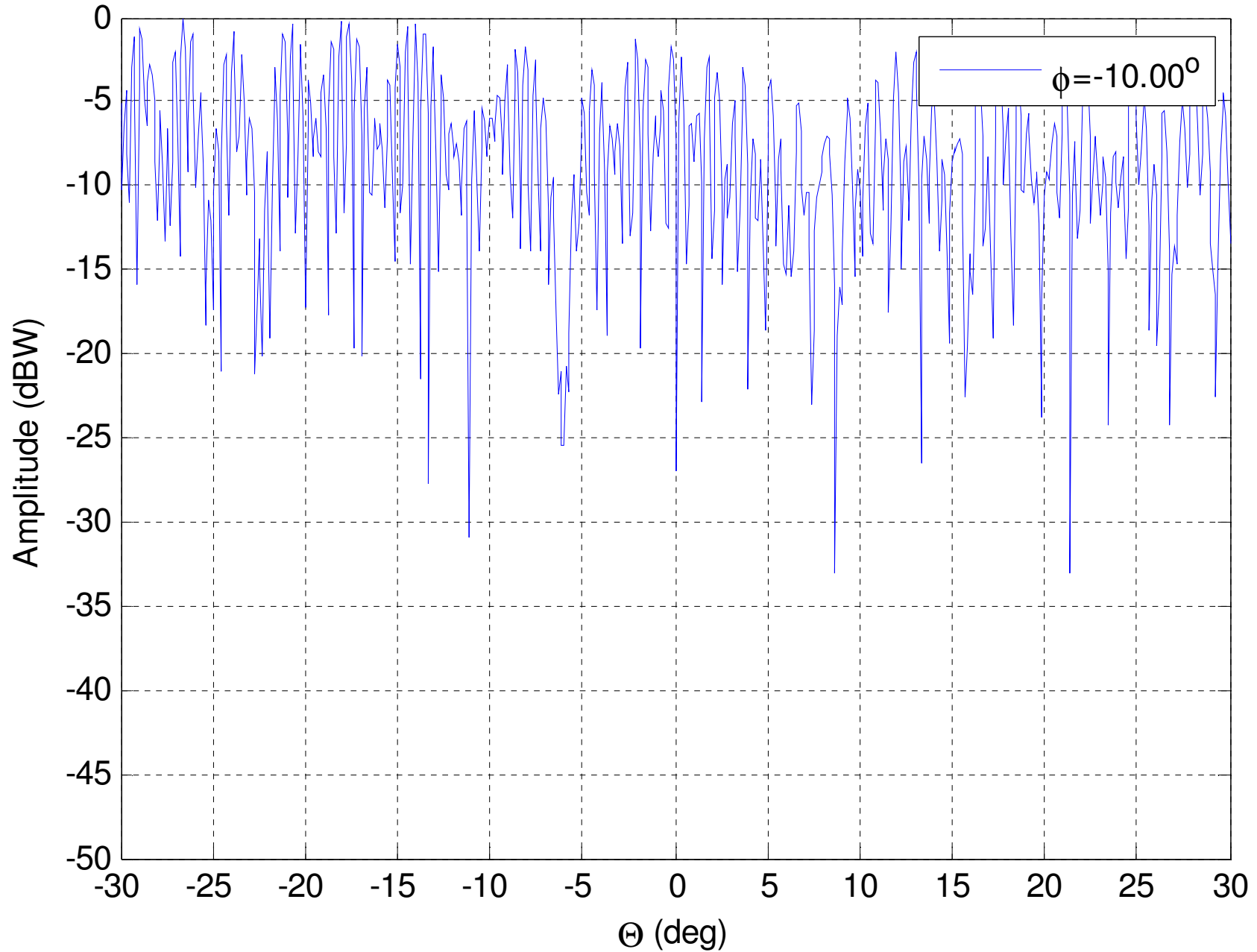
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



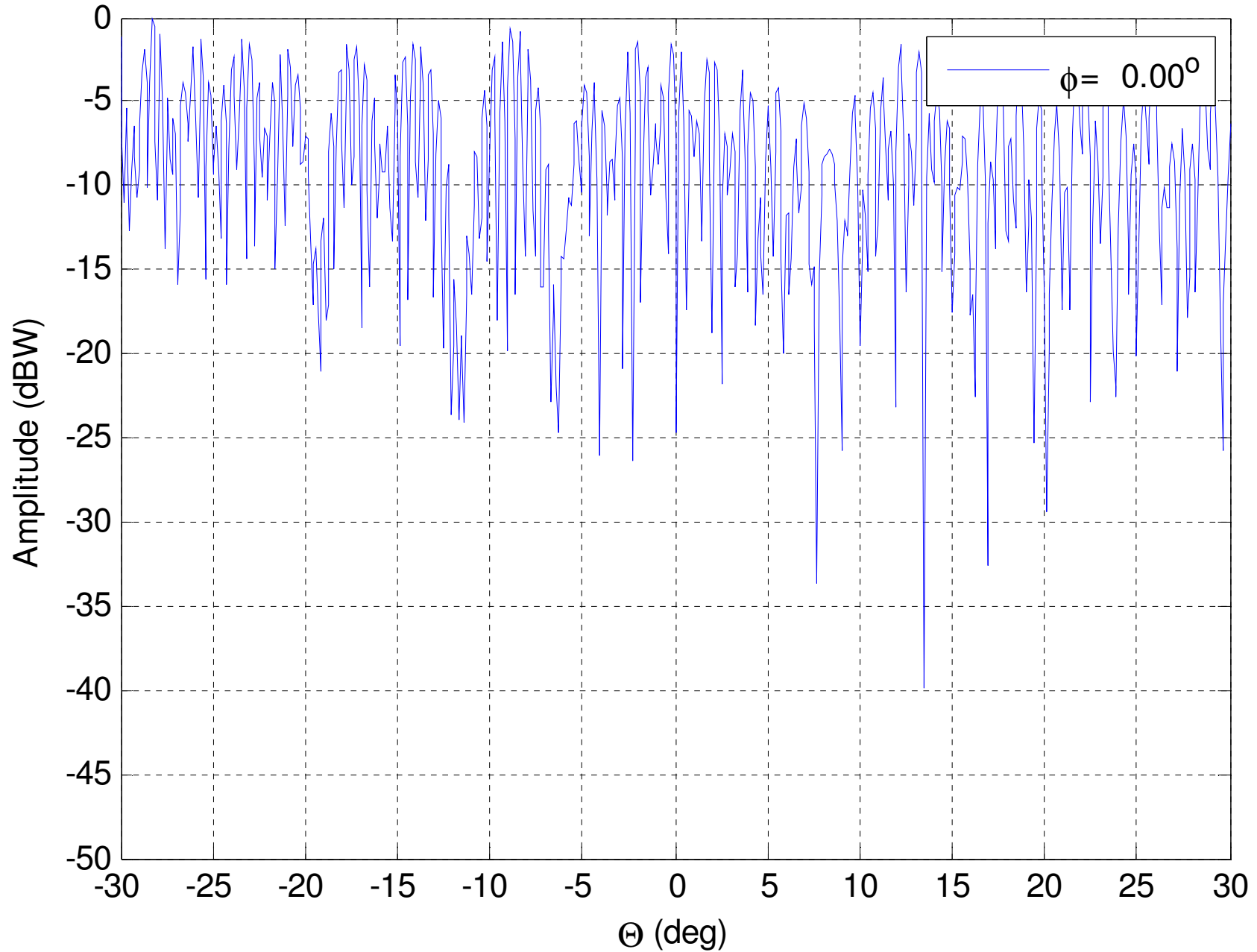
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -10.57 dBW, Date: 15-Dec-2011



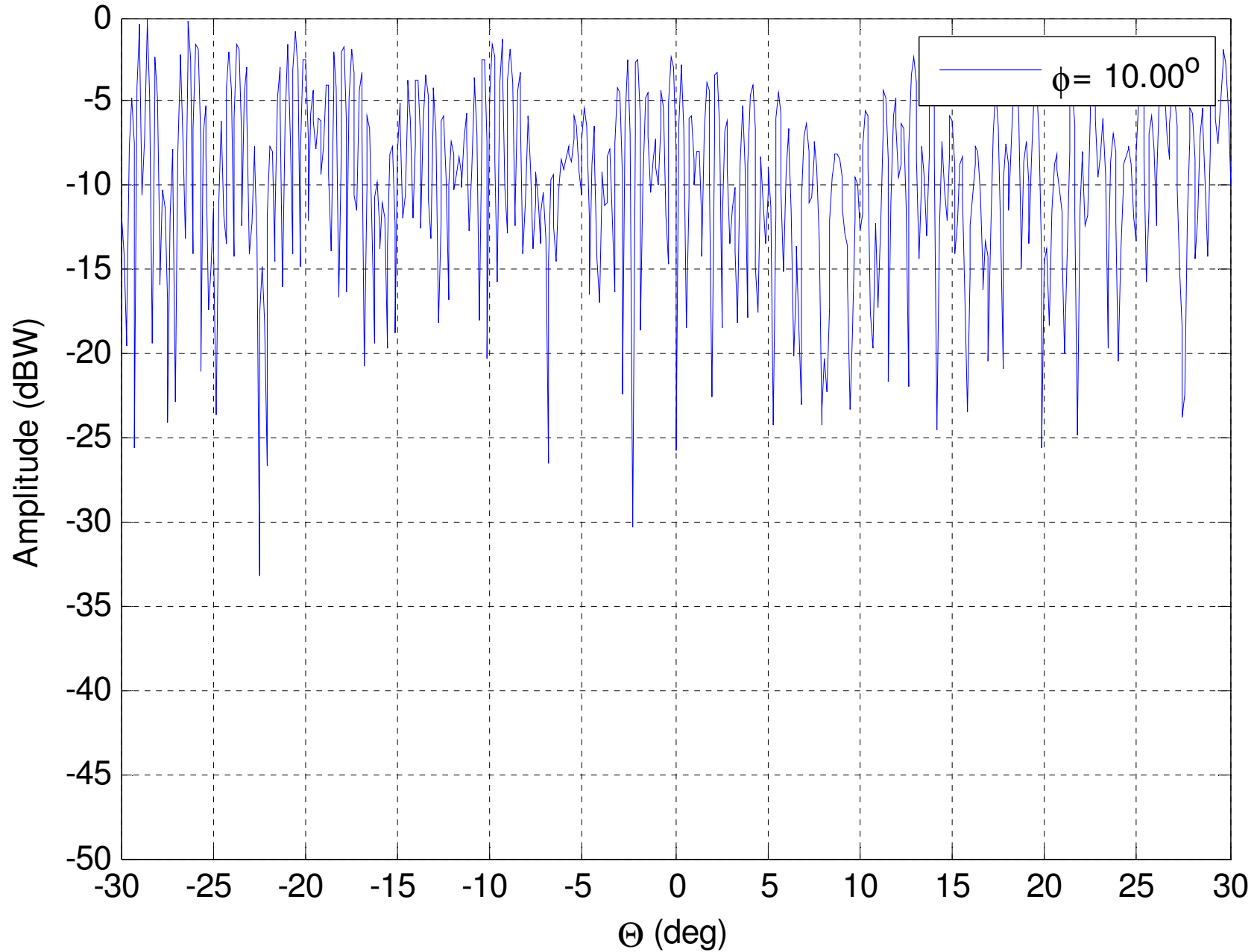
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -10.70 dBW, Date: 15-Dec-2011



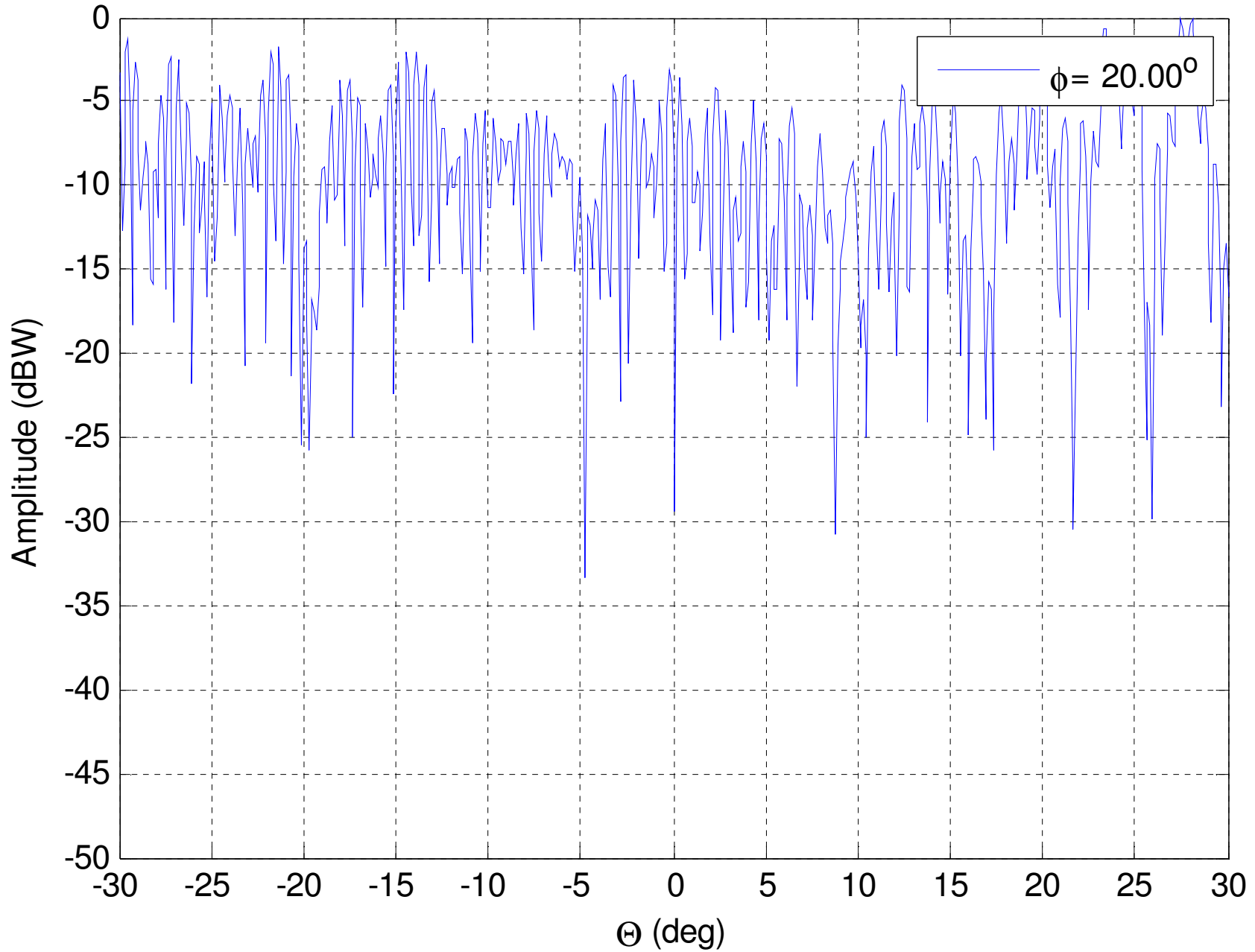
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -9.94 dBW, Date: 15-Dec-2011



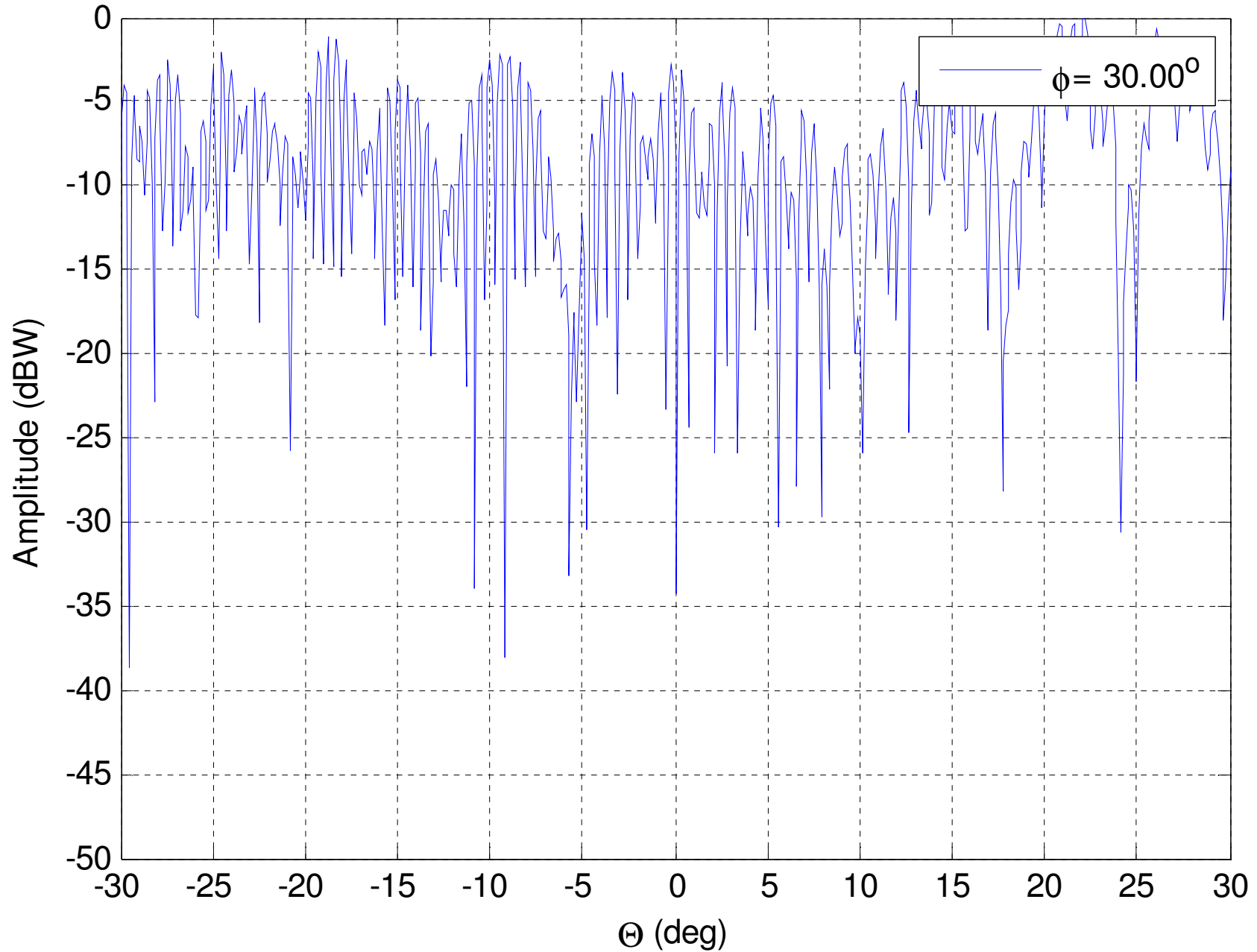
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -9.00 dBW, Date: 15-Dec-2011



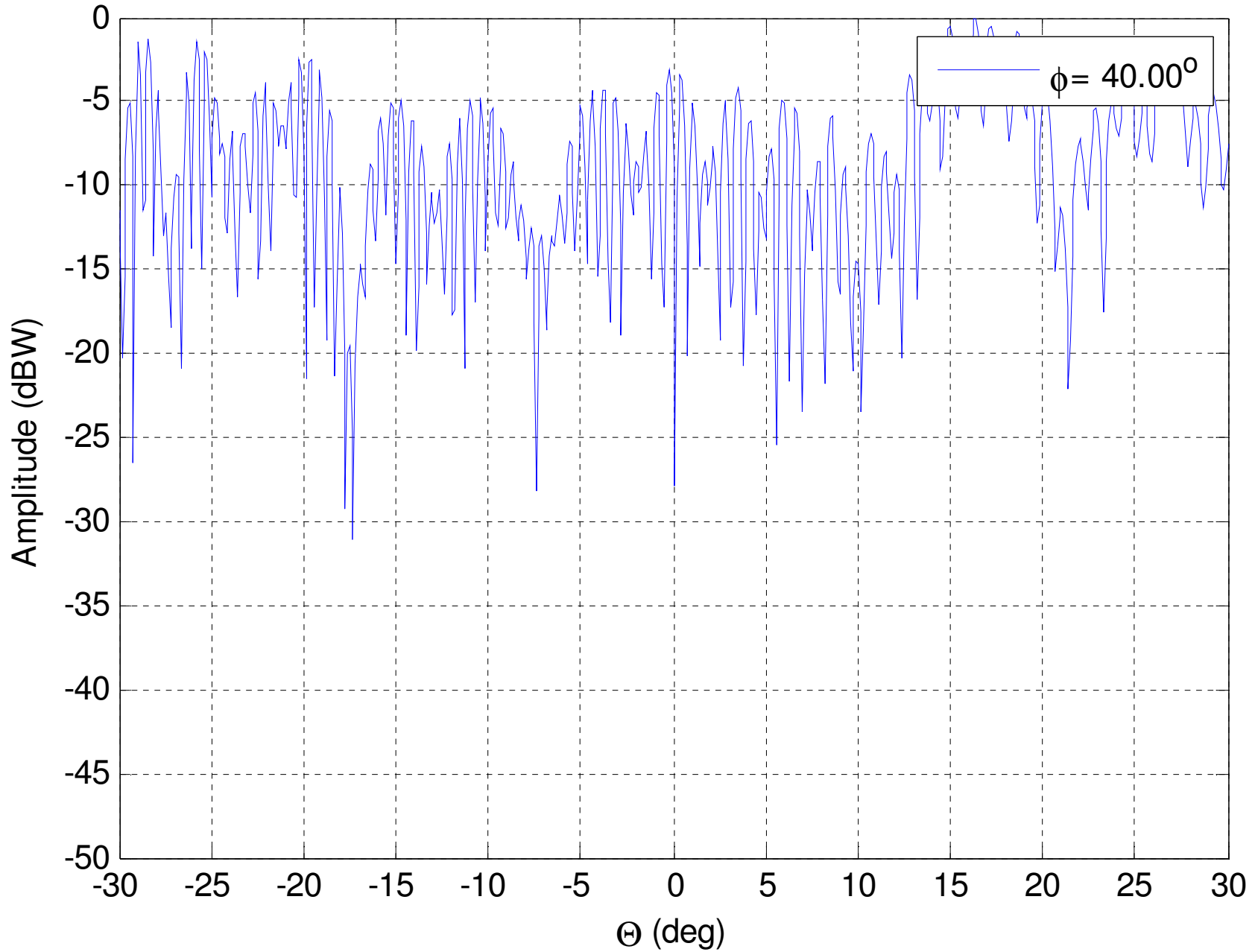
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -9.23 dBW, Date: 15-Dec-2011



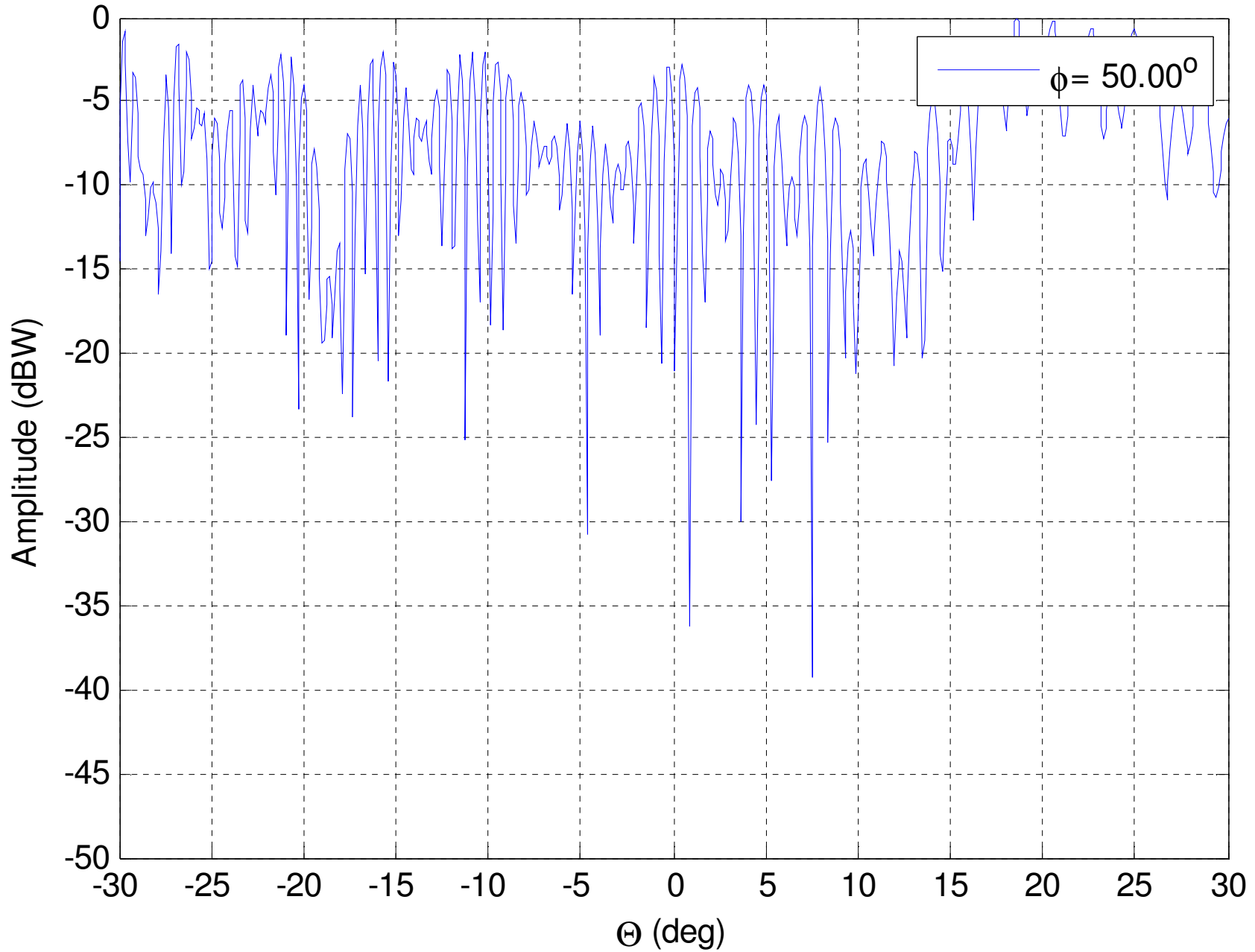
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -8.89 dBW, Date: 15-Dec-2011



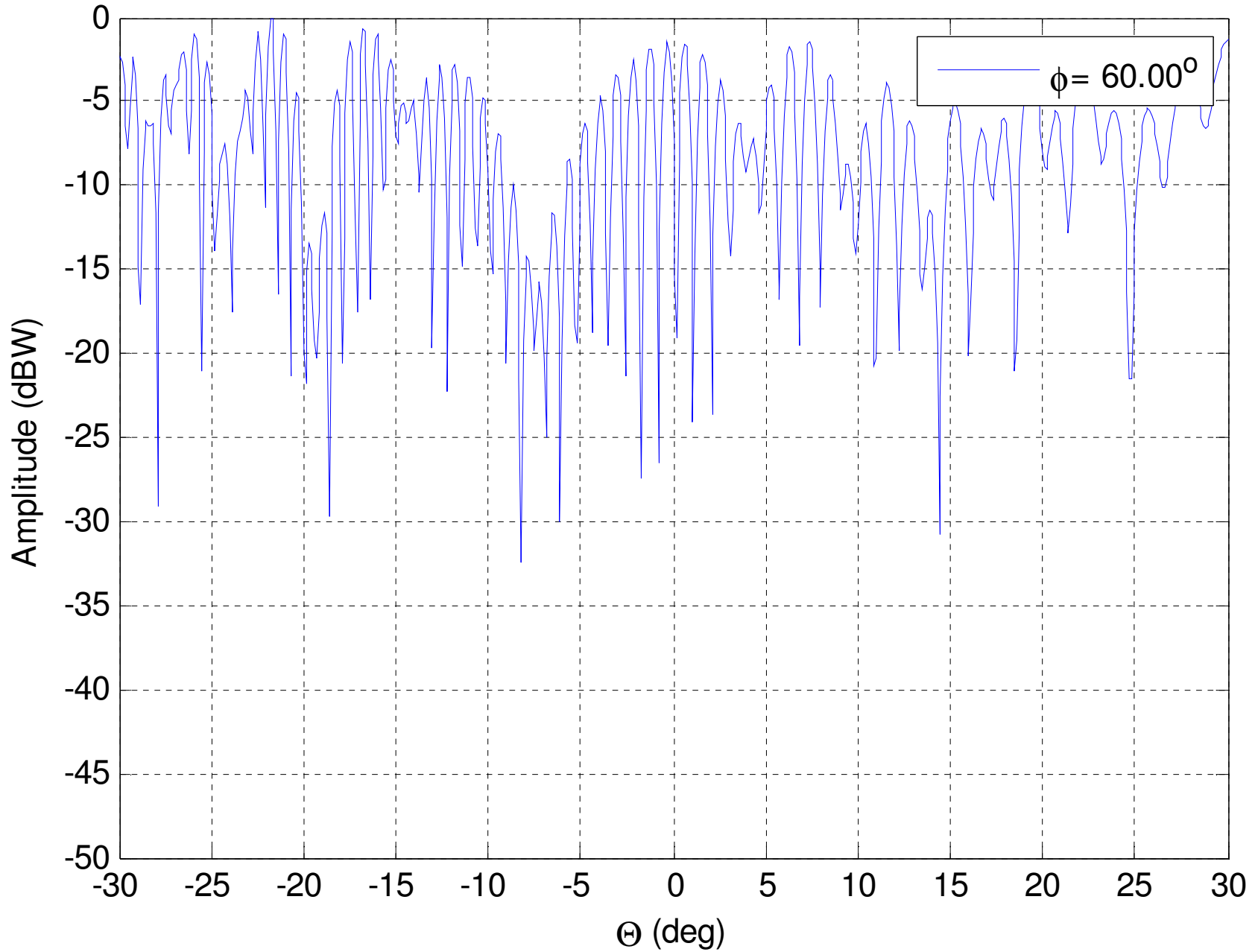
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -9.25 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

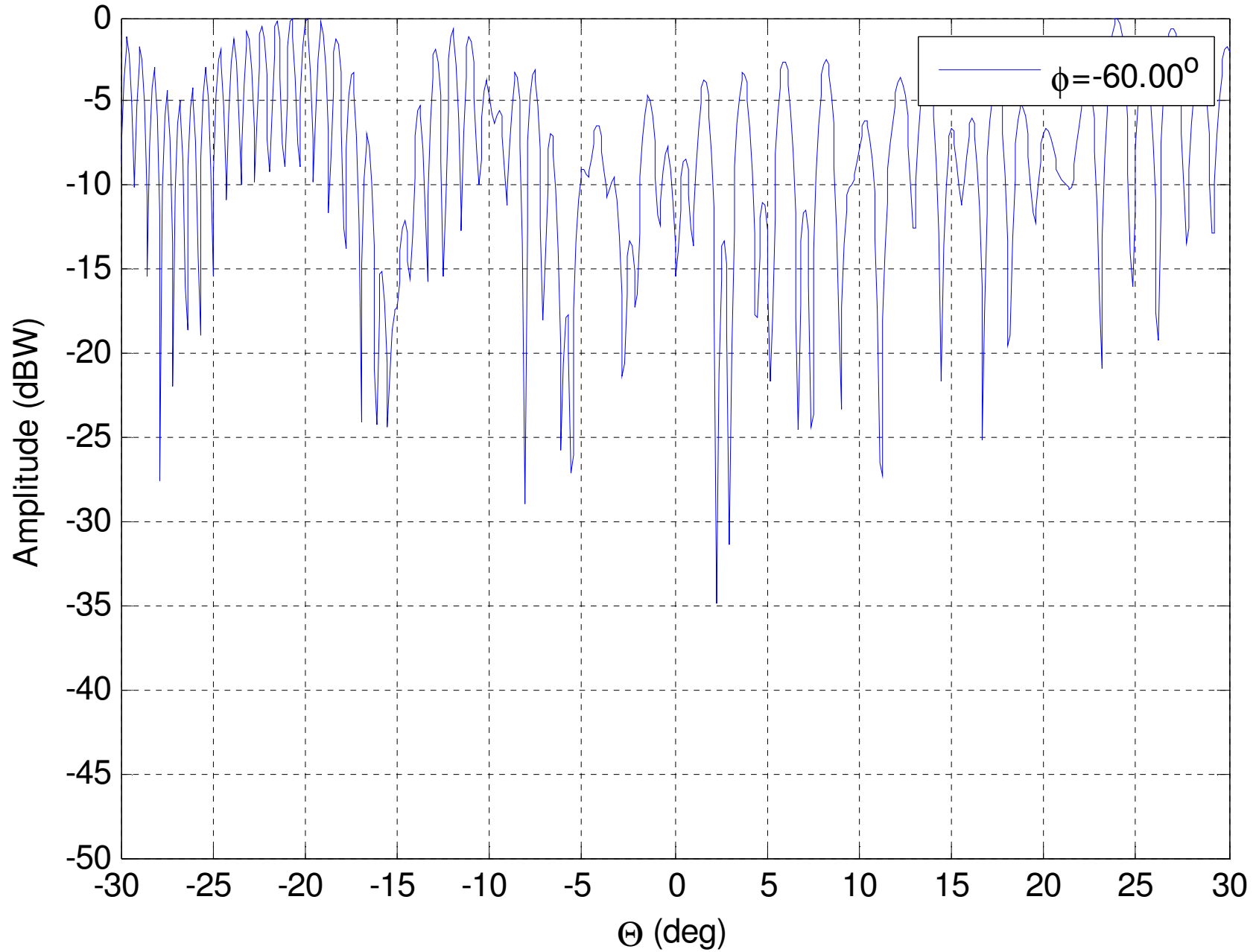
Input file: tx-17.3-rhcp-60.cut, Peak: -10.56 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

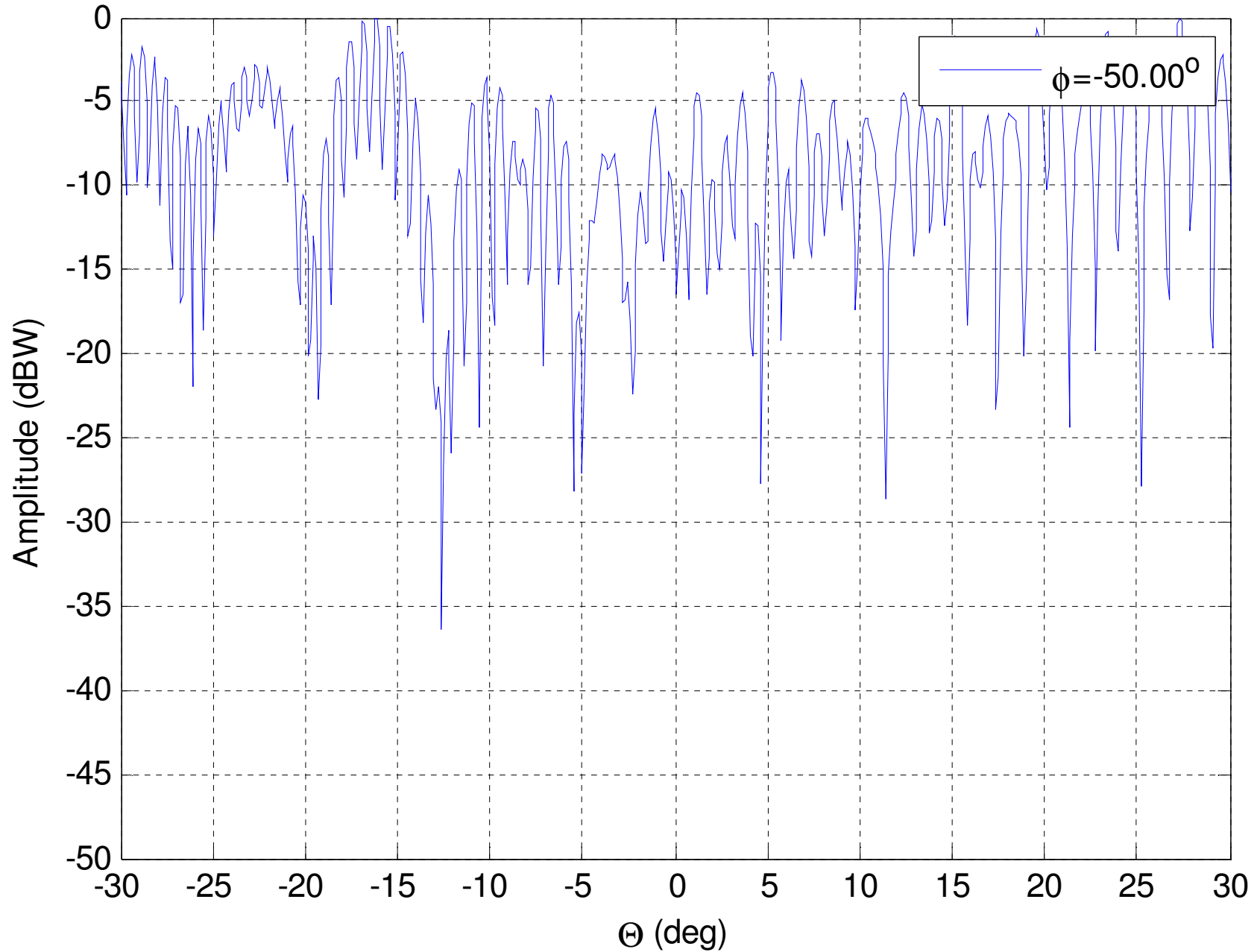
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.38 dBW, Date: 15-Dec-2011



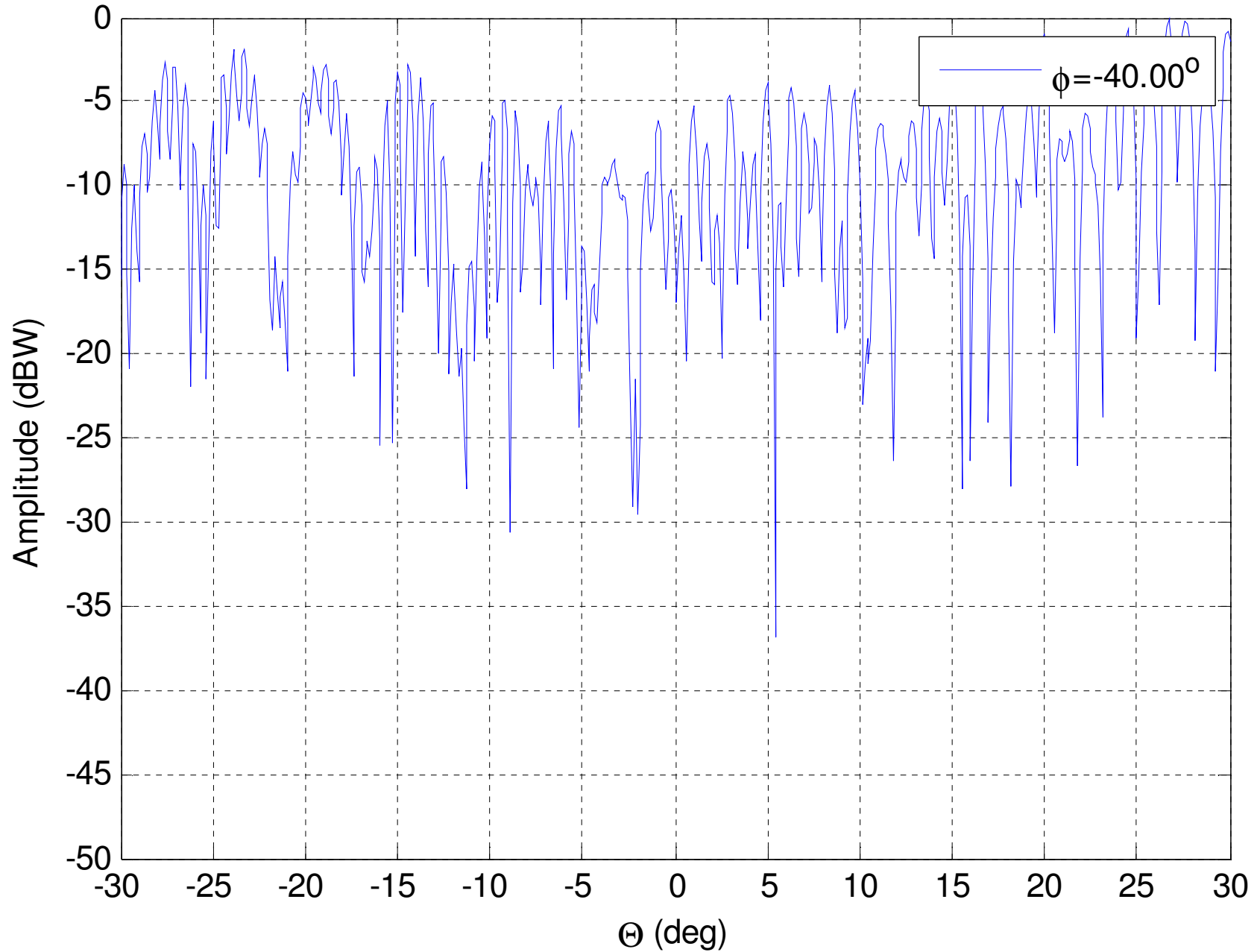
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -8.43 dBW, Date: 15-Dec-2011



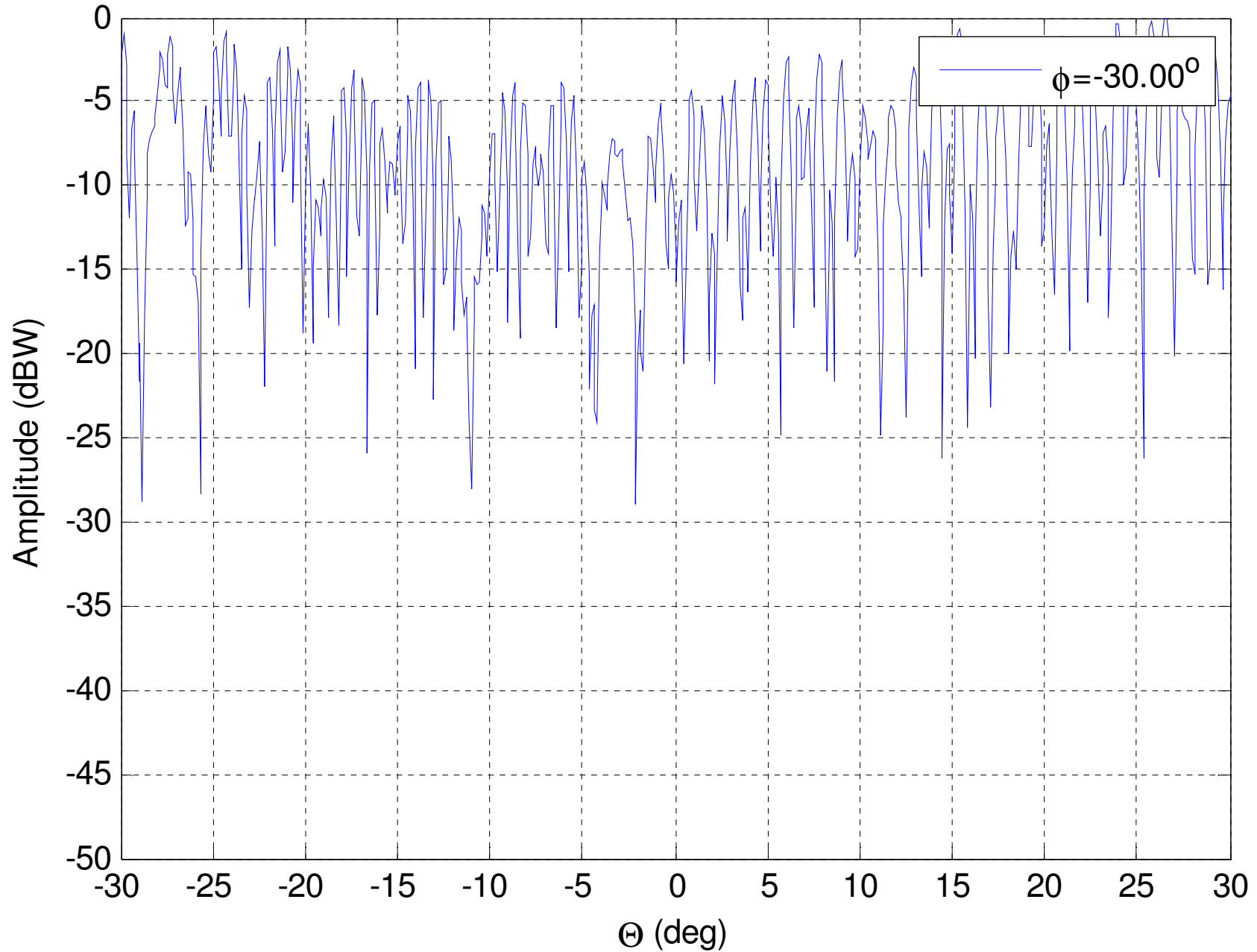
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.73 dBW, Date: 15-Dec-2011



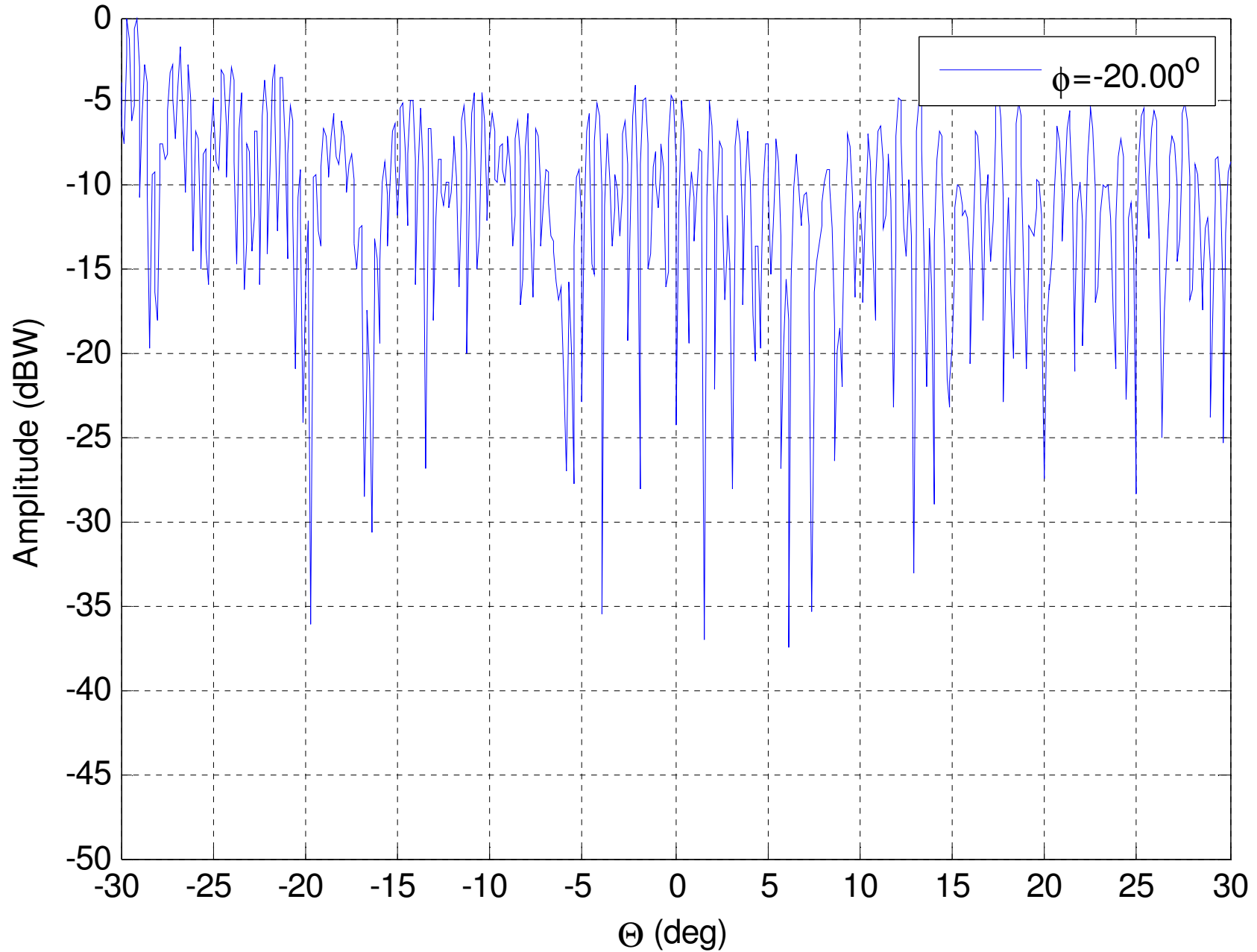
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -8.90 dBW, Date: 15-Dec-2011



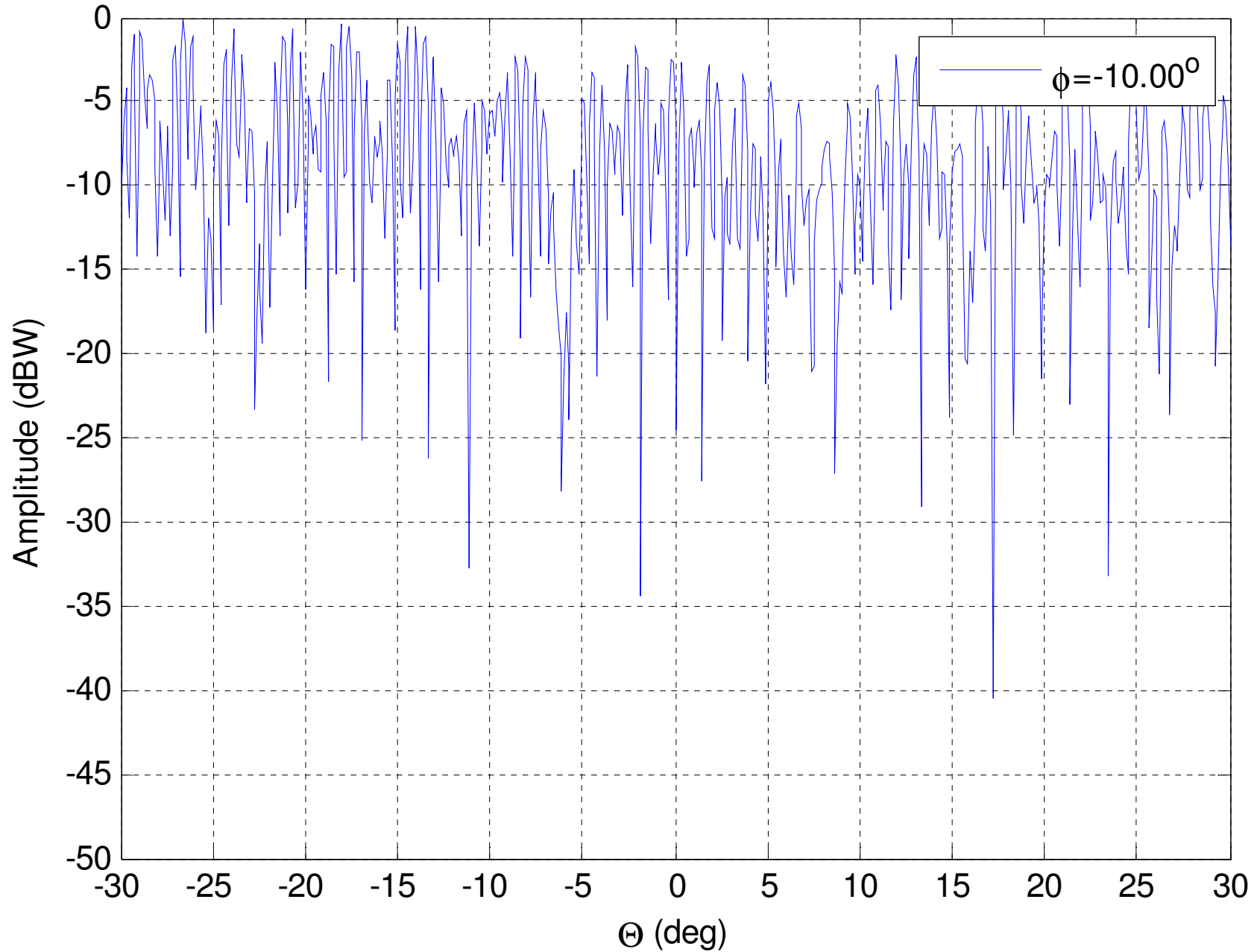
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -8.03 dBW, Date: 15-Dec-2011



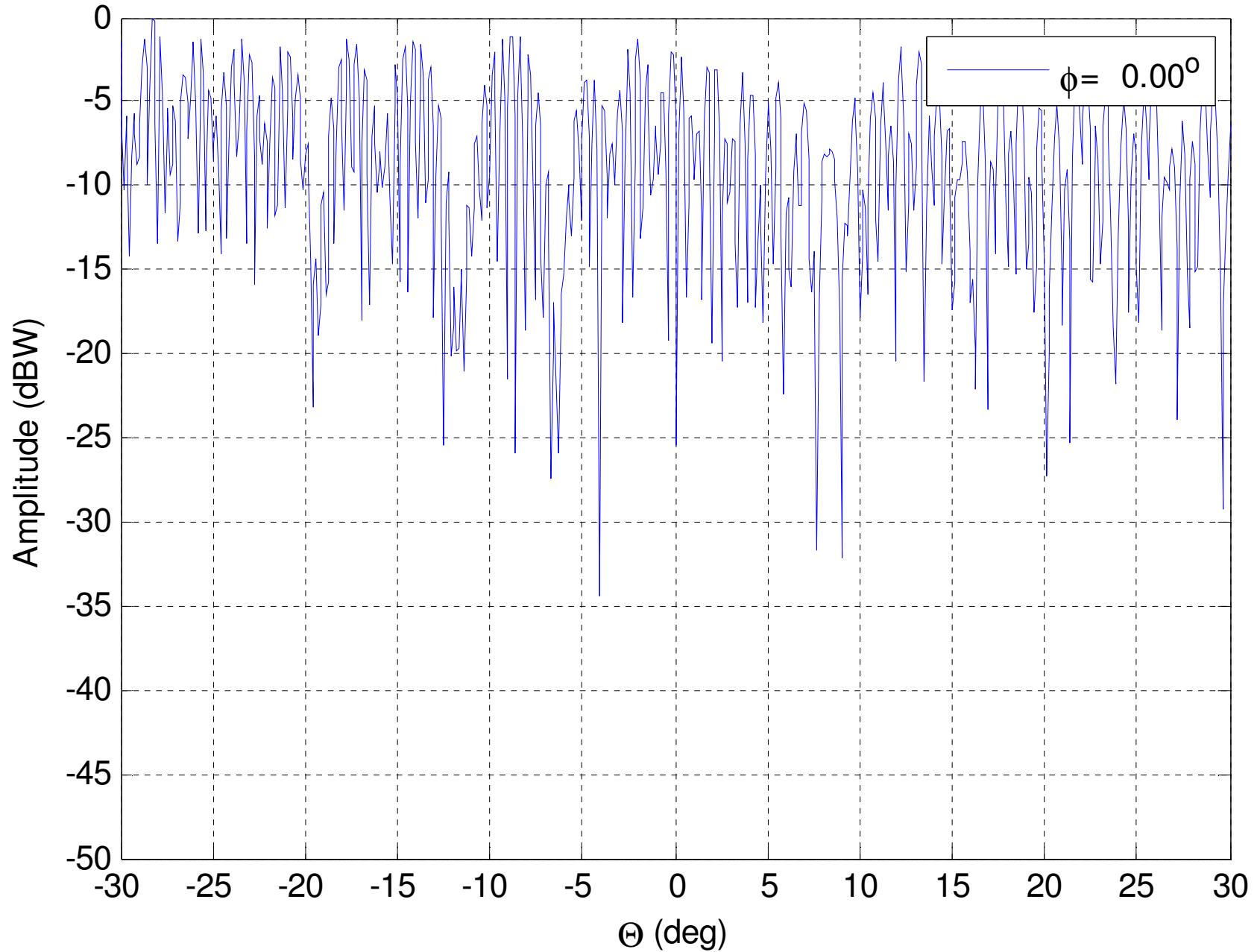
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -10.33 dBW, Date: 15-Dec-2011



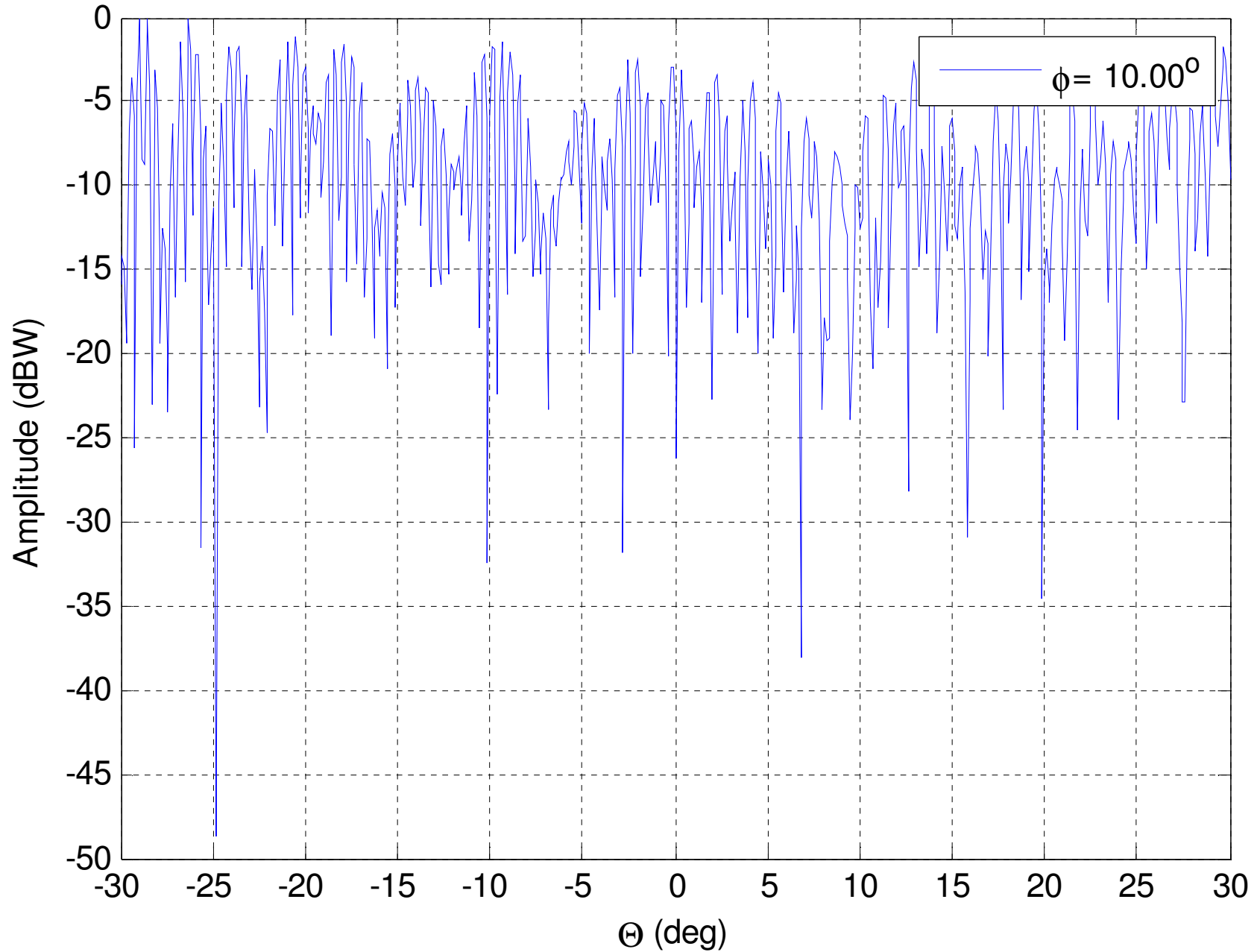
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -10.72 dBW, Date: 15-Dec-2011



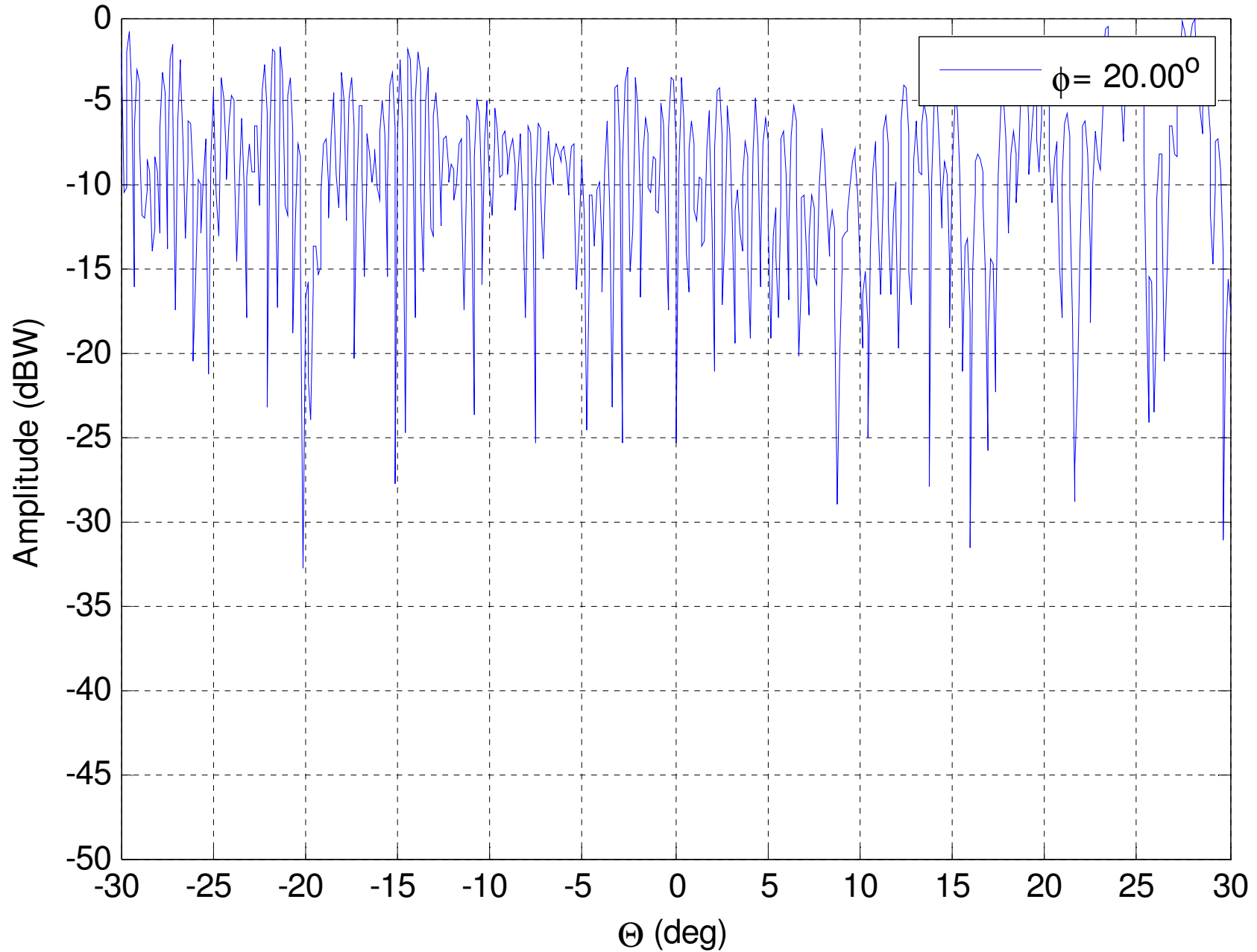
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -9.84 dBW, Date: 15-Dec-2011



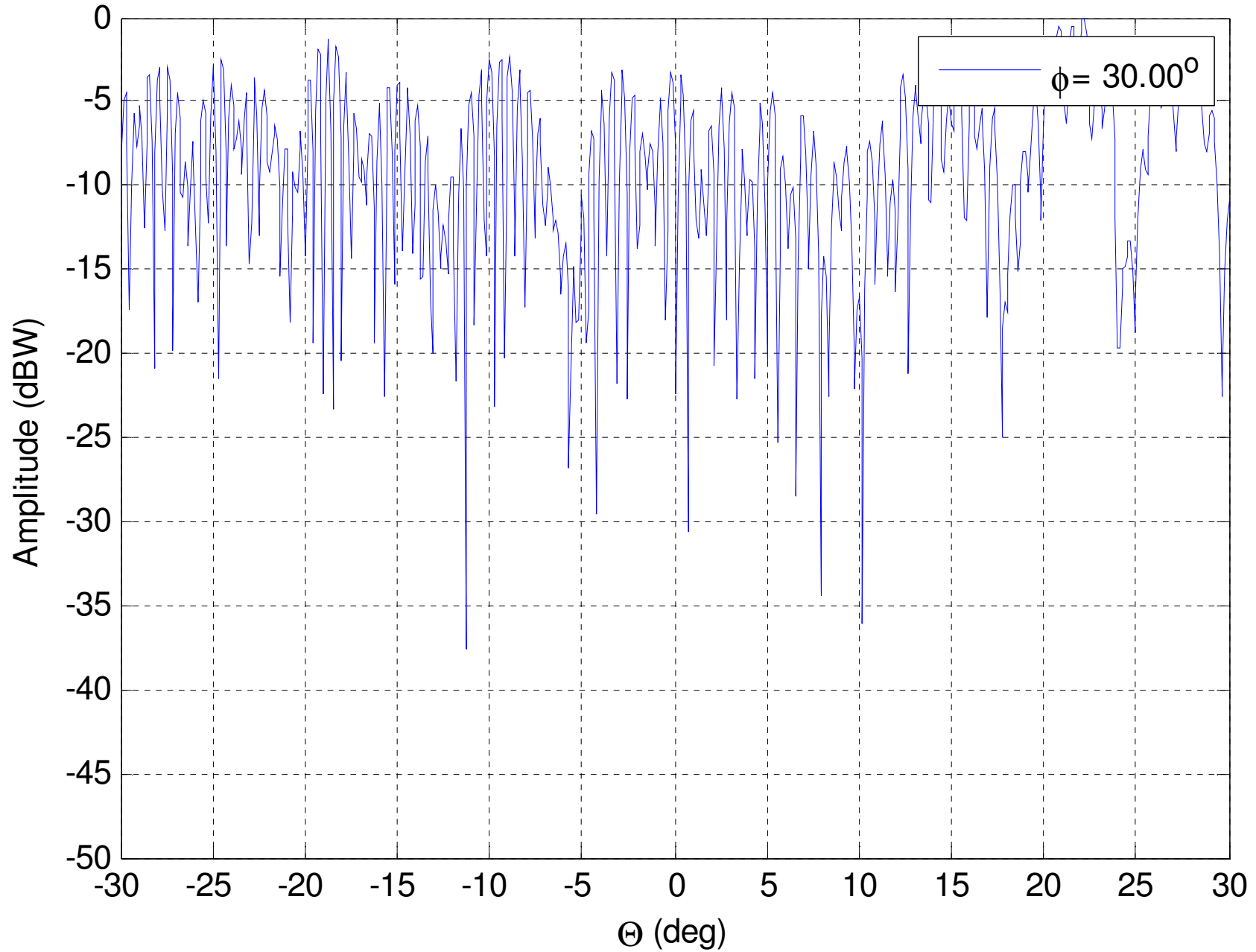
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -9.12 dBW, Date: 15-Dec-2011



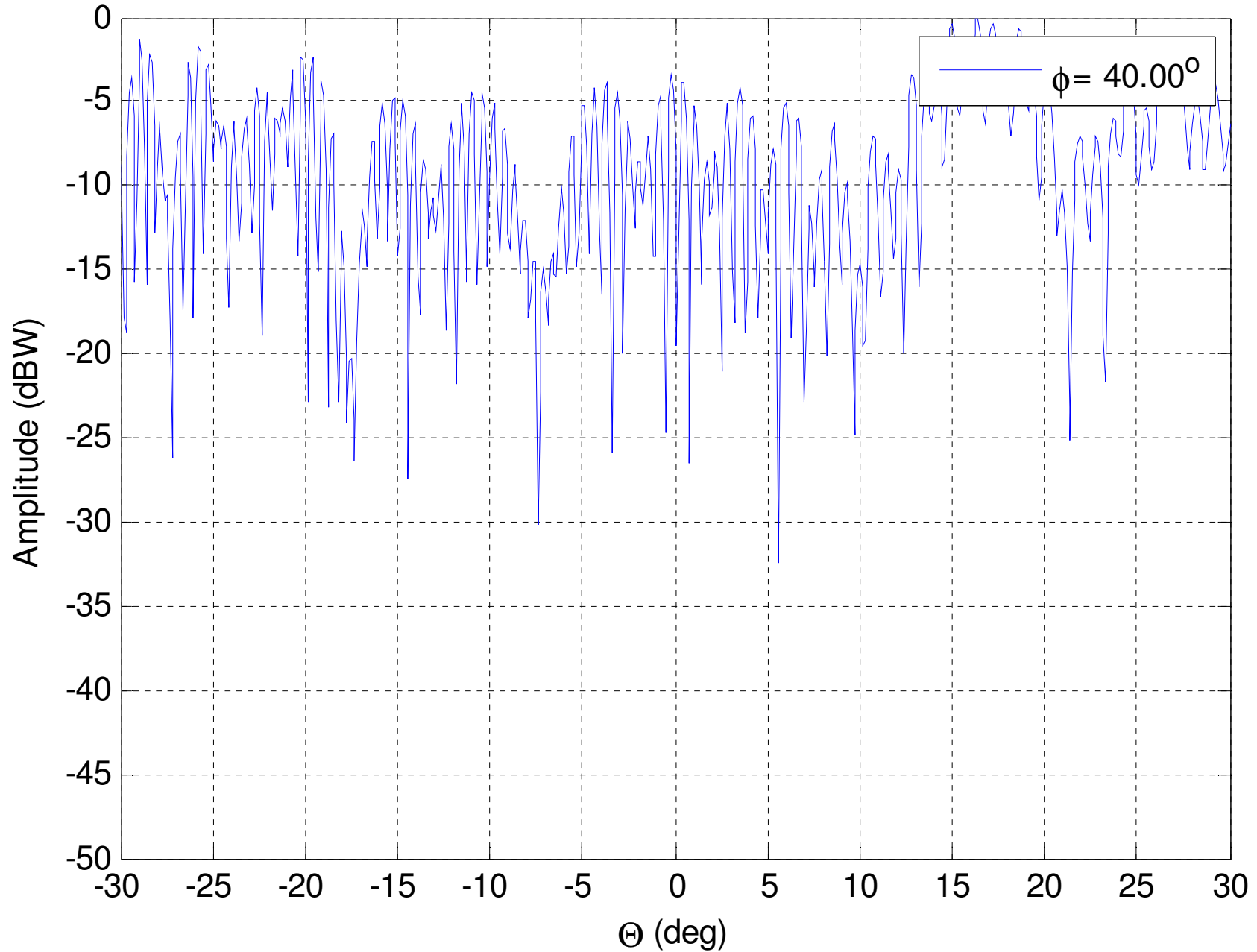
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -9.21 dBW, Date: 15-Dec-2011



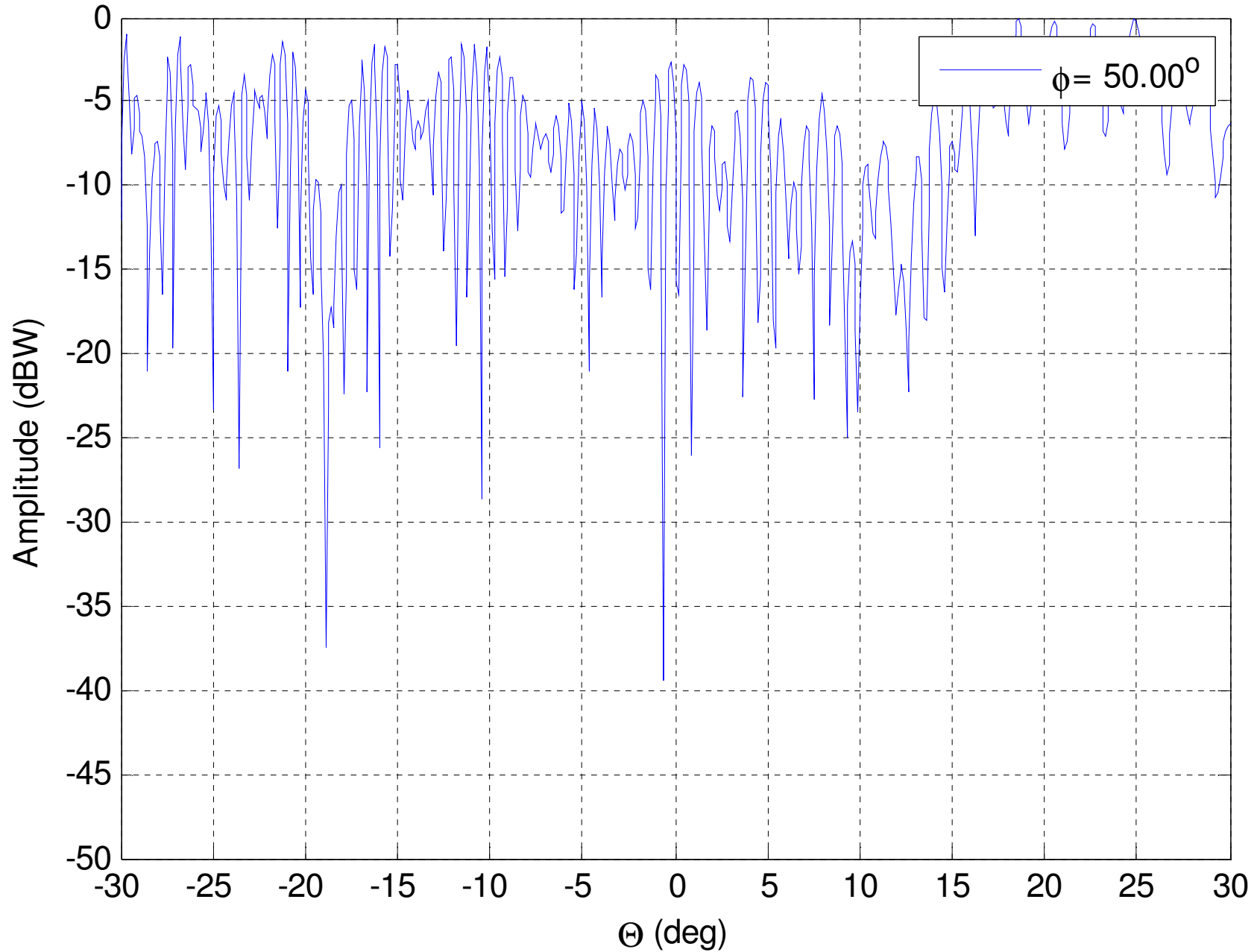
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -8.88 dBW, Date: 15-Dec-2011



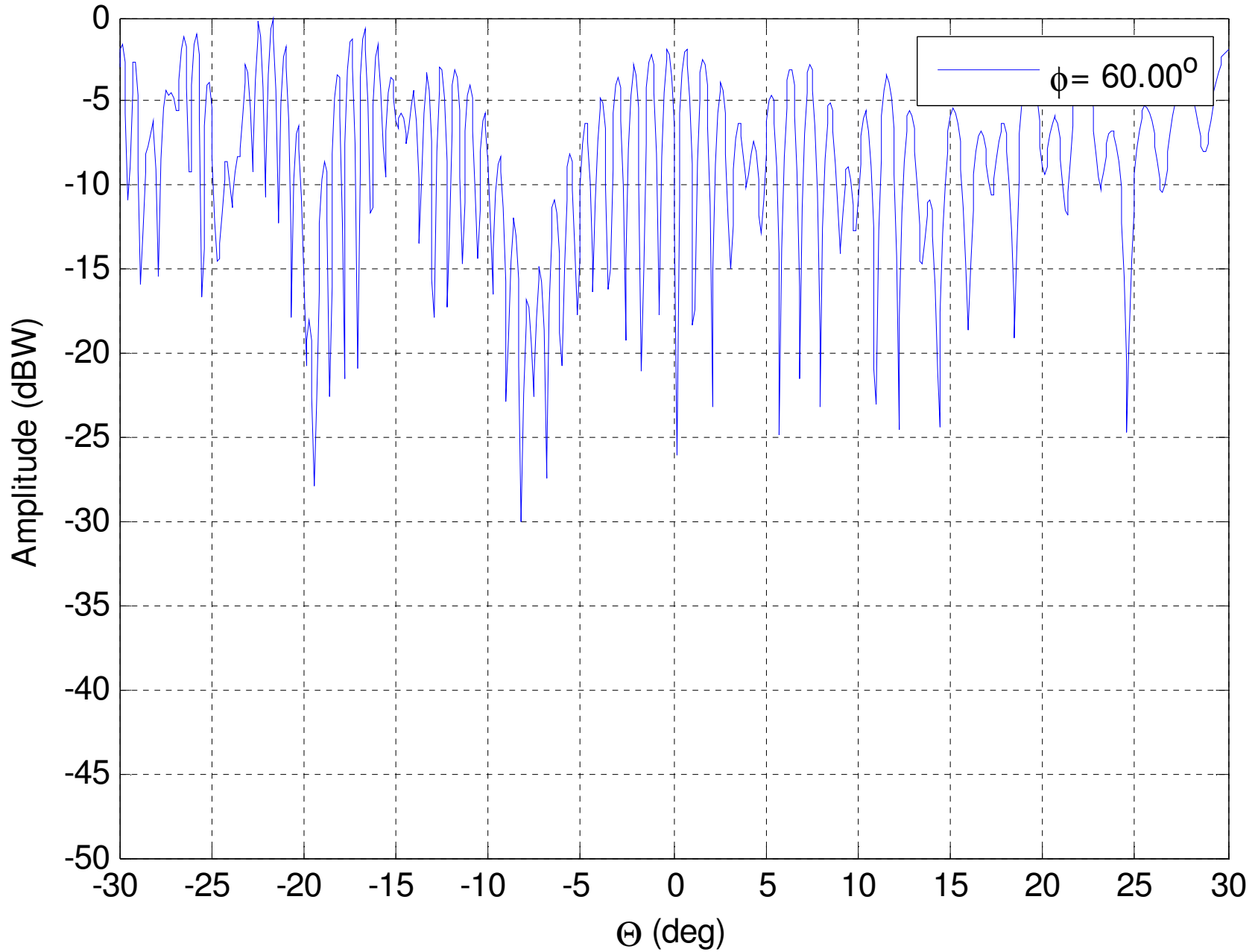
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -9.70 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

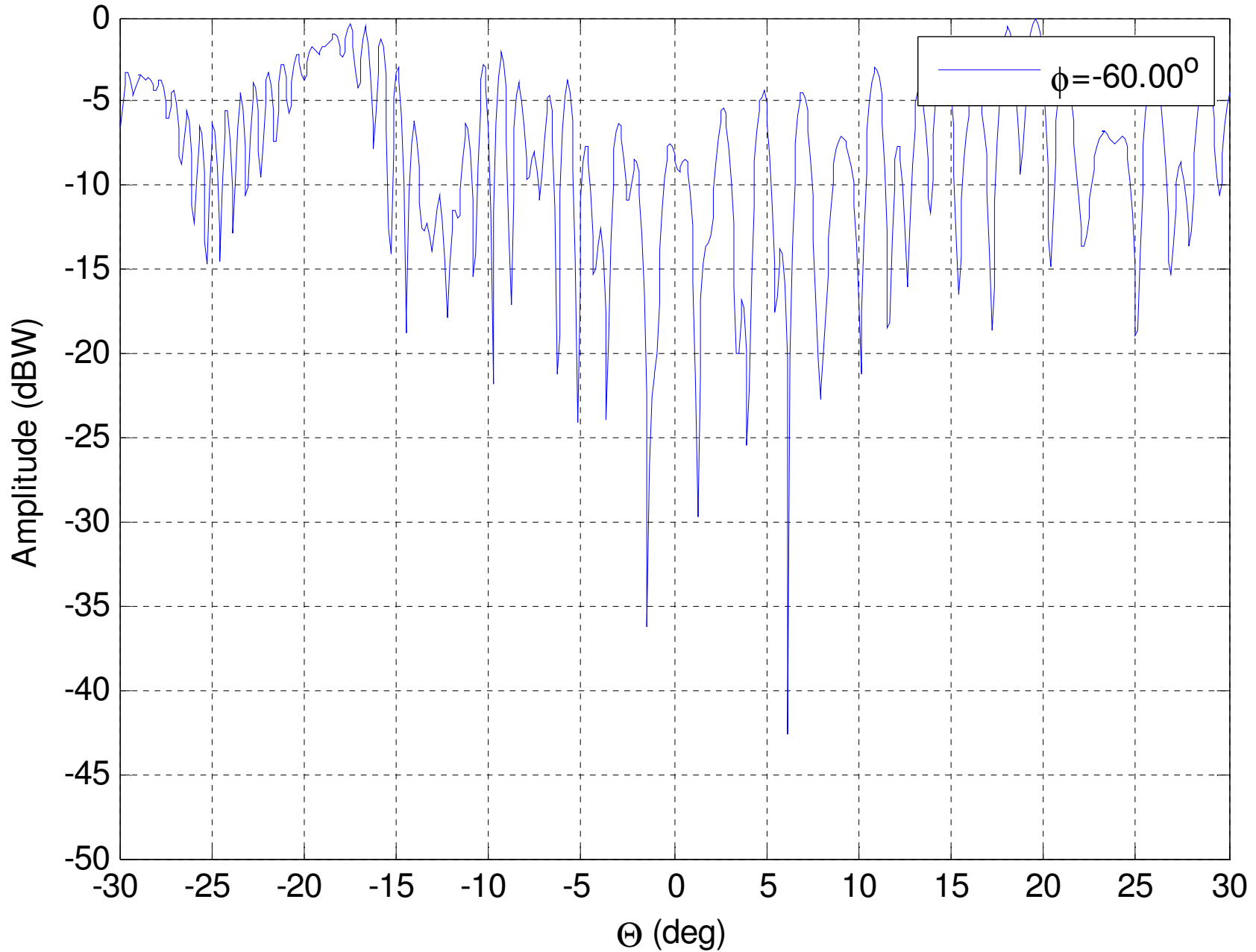
Input file: tx-17.3-lhcp-60.cut, Peak: -10.43 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

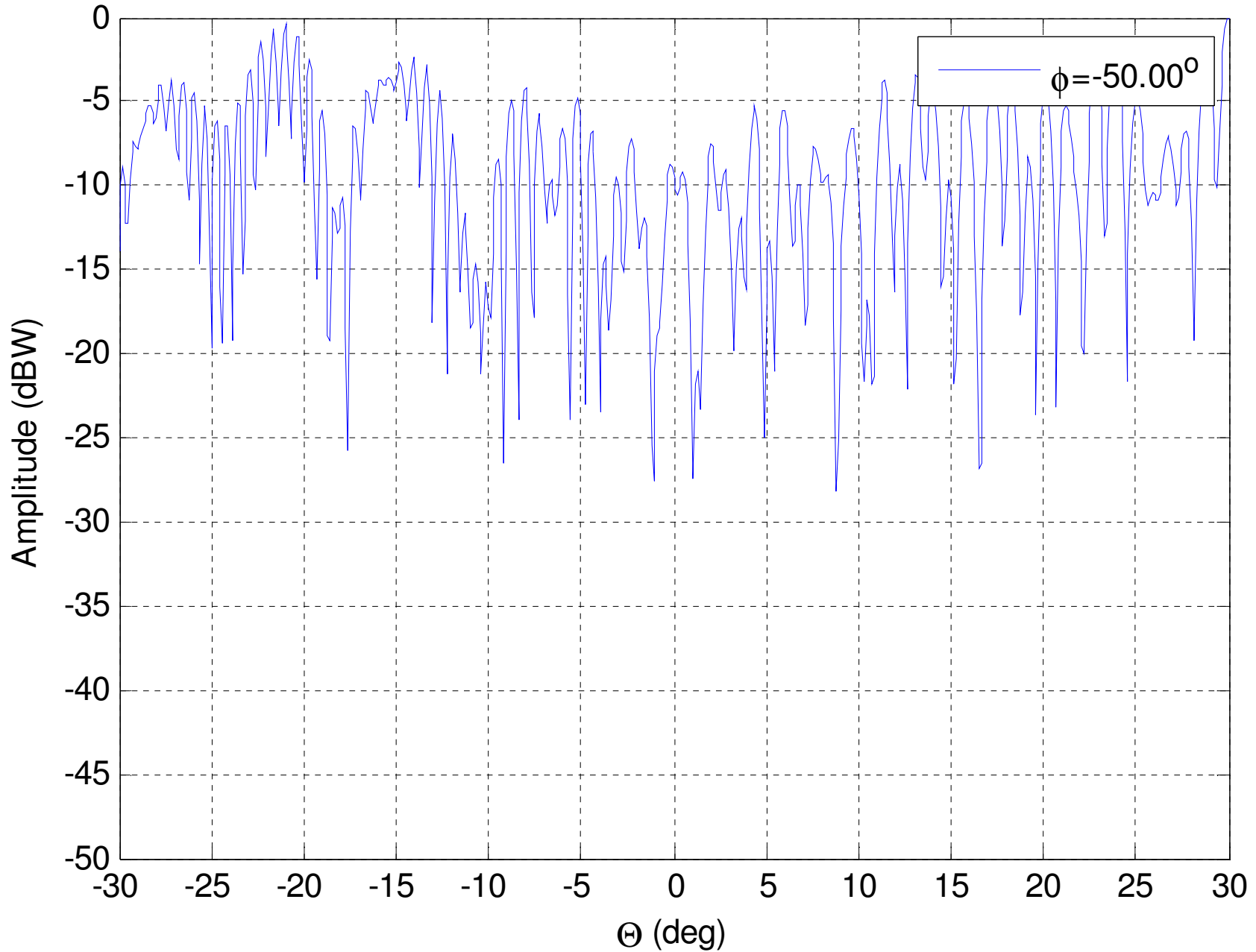
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -9.51 dBW, Date: 15-Dec-2011



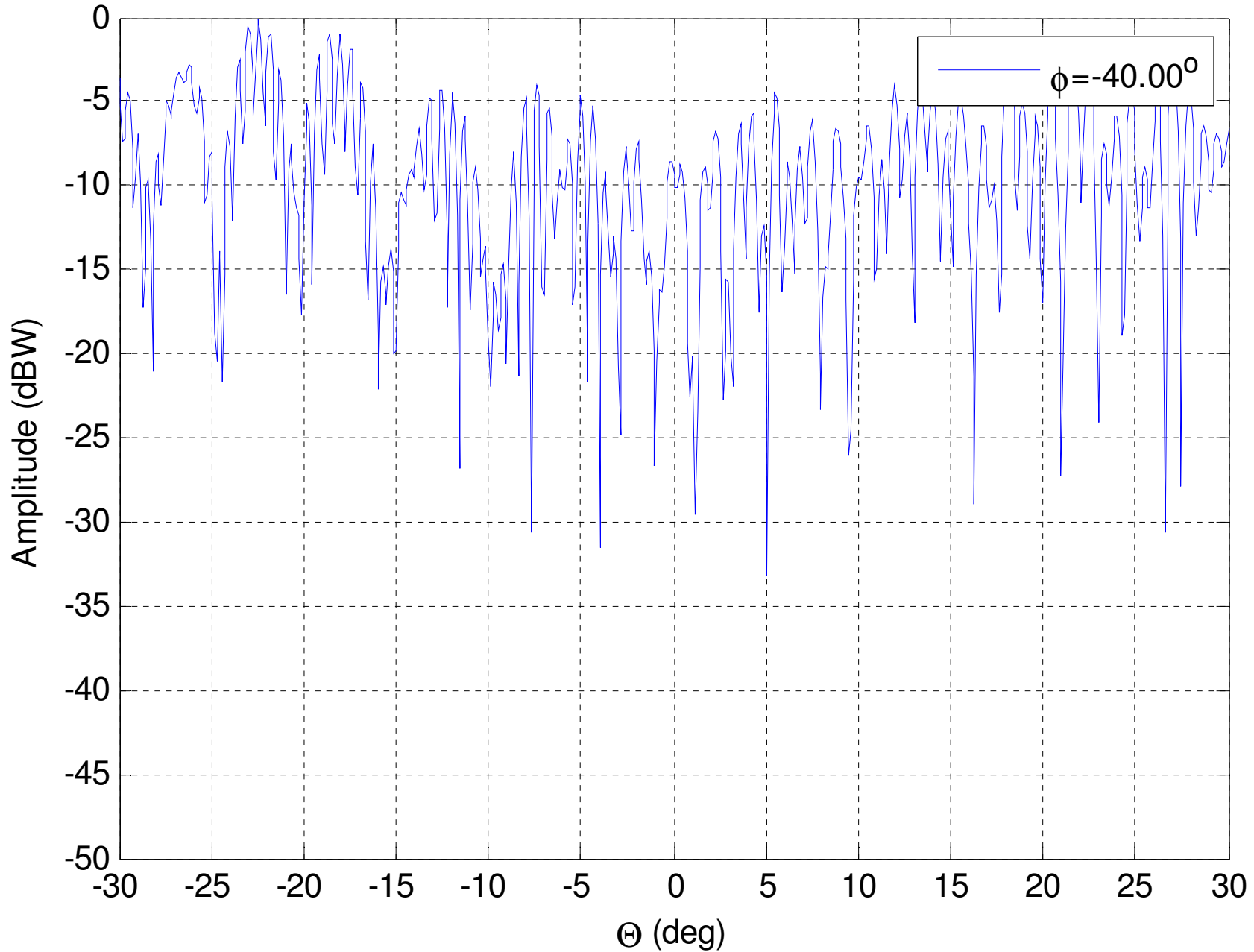
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.10 dBW, Date: 15-Dec-2011



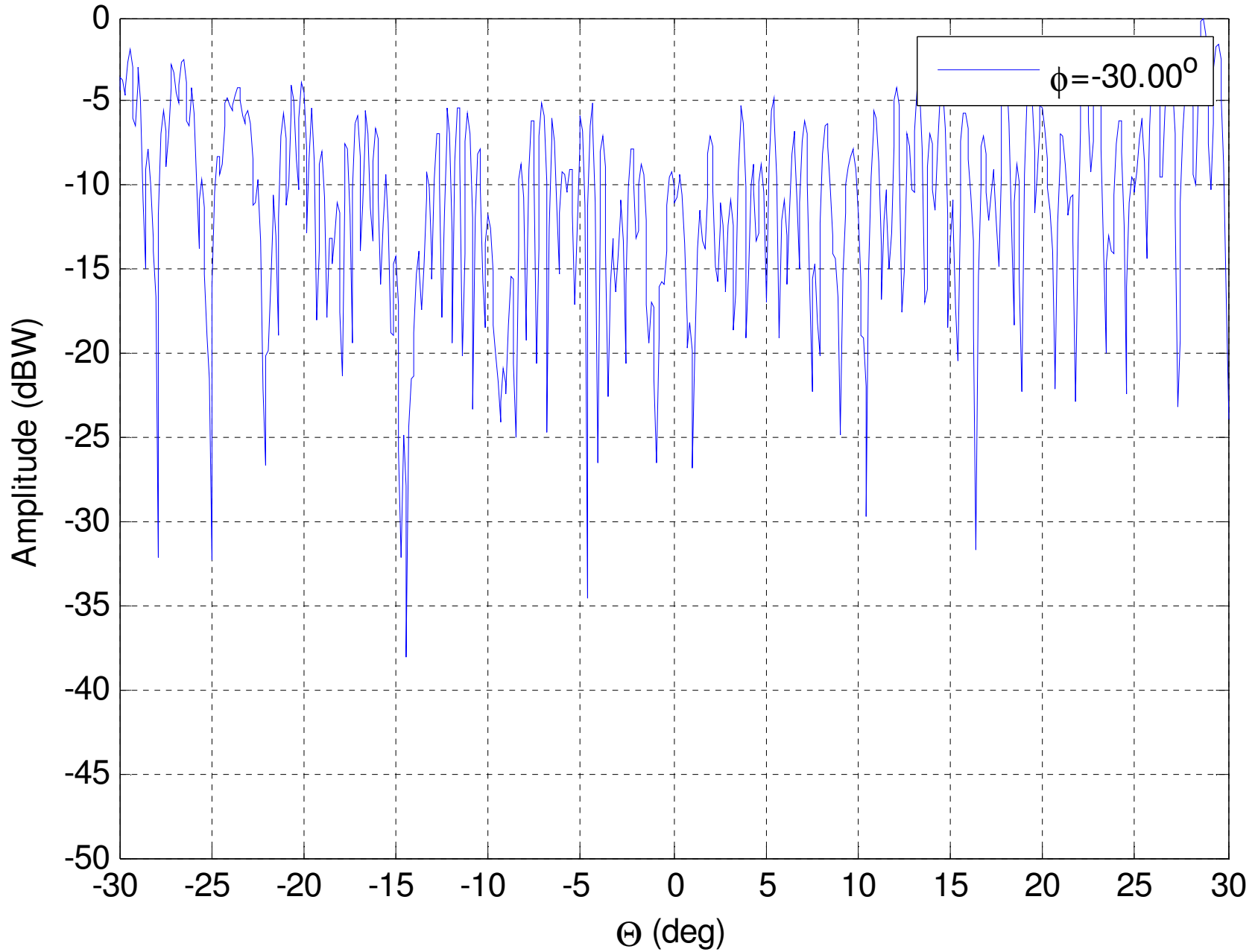
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -8.27 dBW, Date: 15-Dec-2011



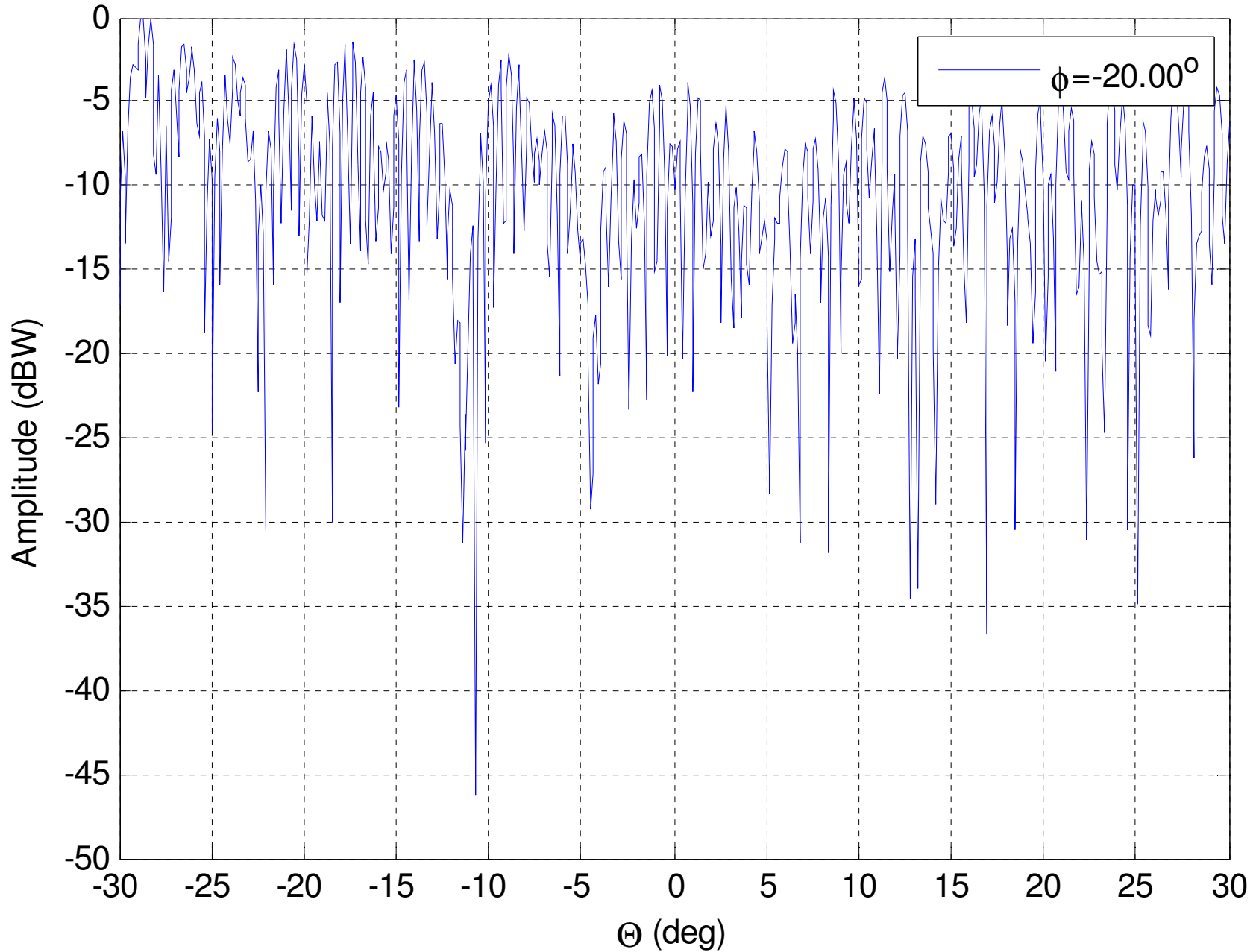
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.51 dBW, Date: 15-Dec-2011



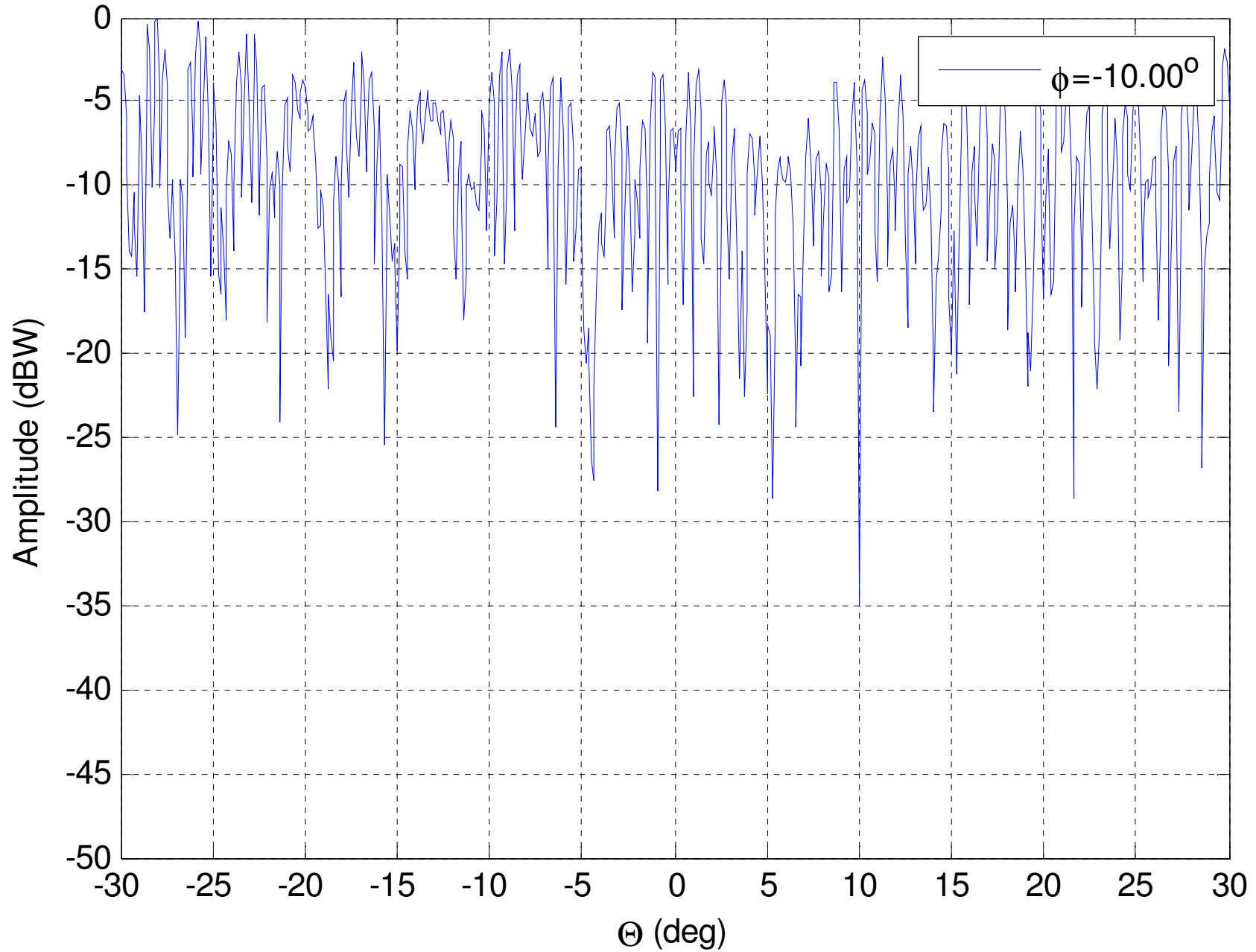
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -9.51 dBW, Date: 15-Dec-2011



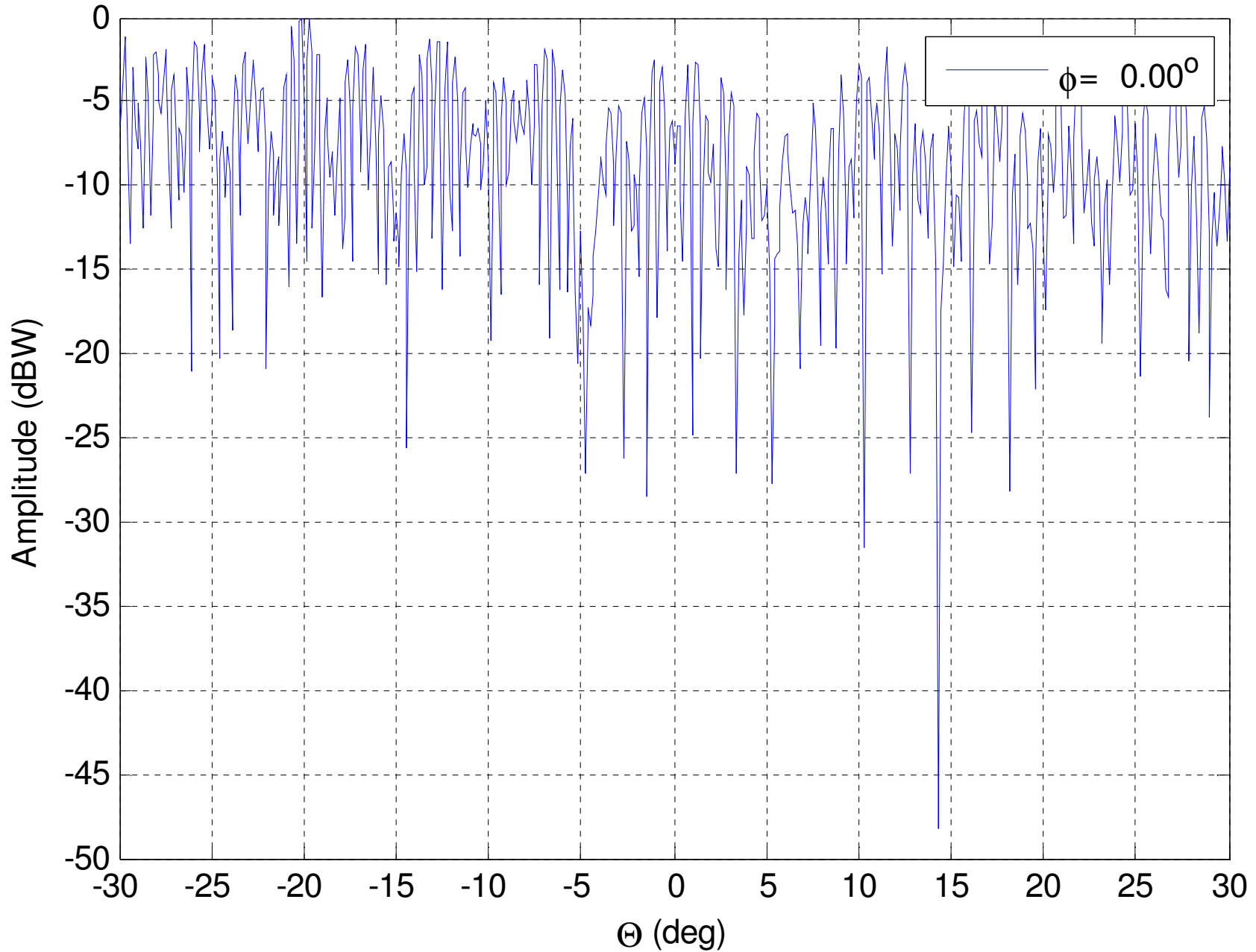
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -10.52 dBW, Date: 15-Dec-2011



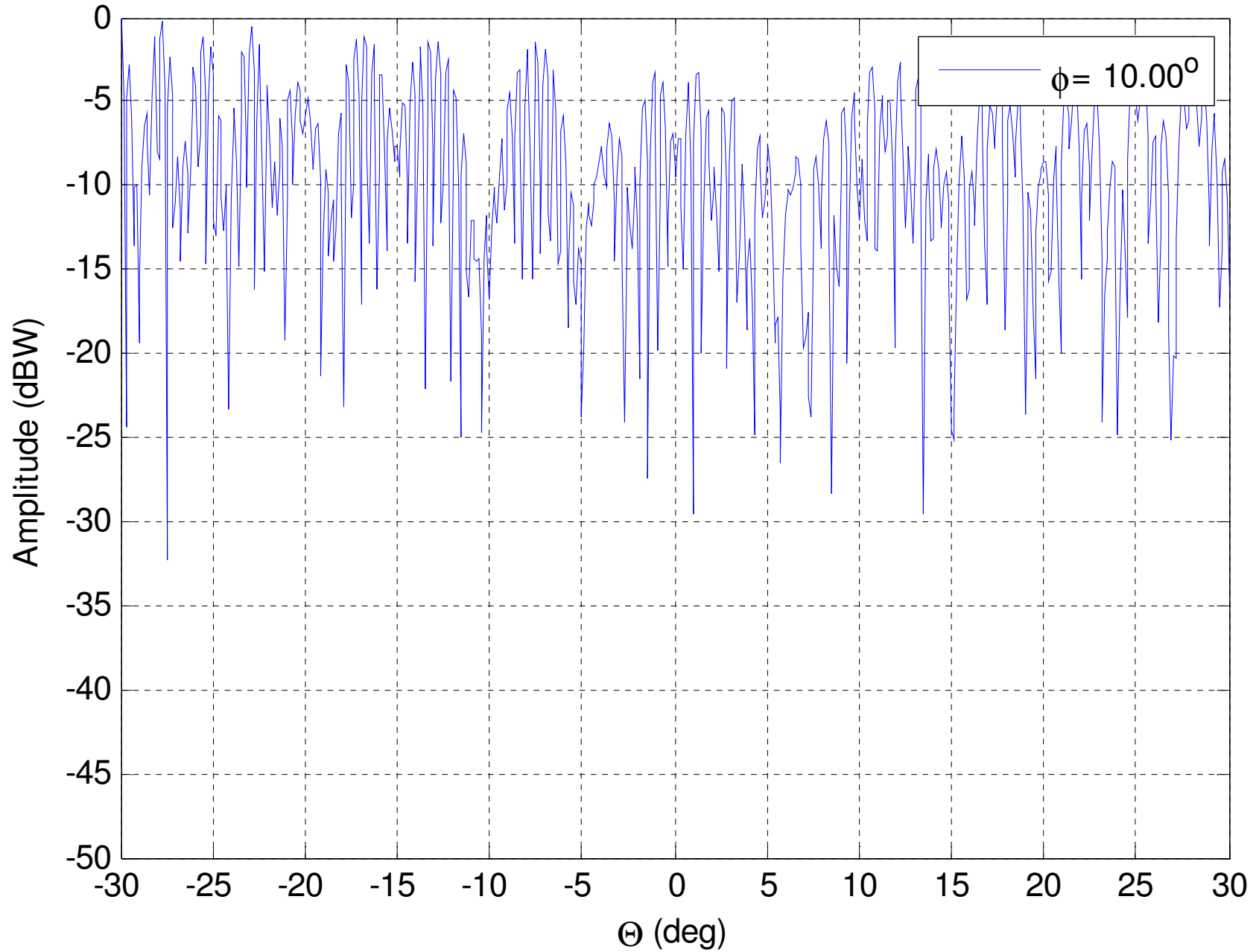
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -11.00 dBW, Date: 15-Dec-2011



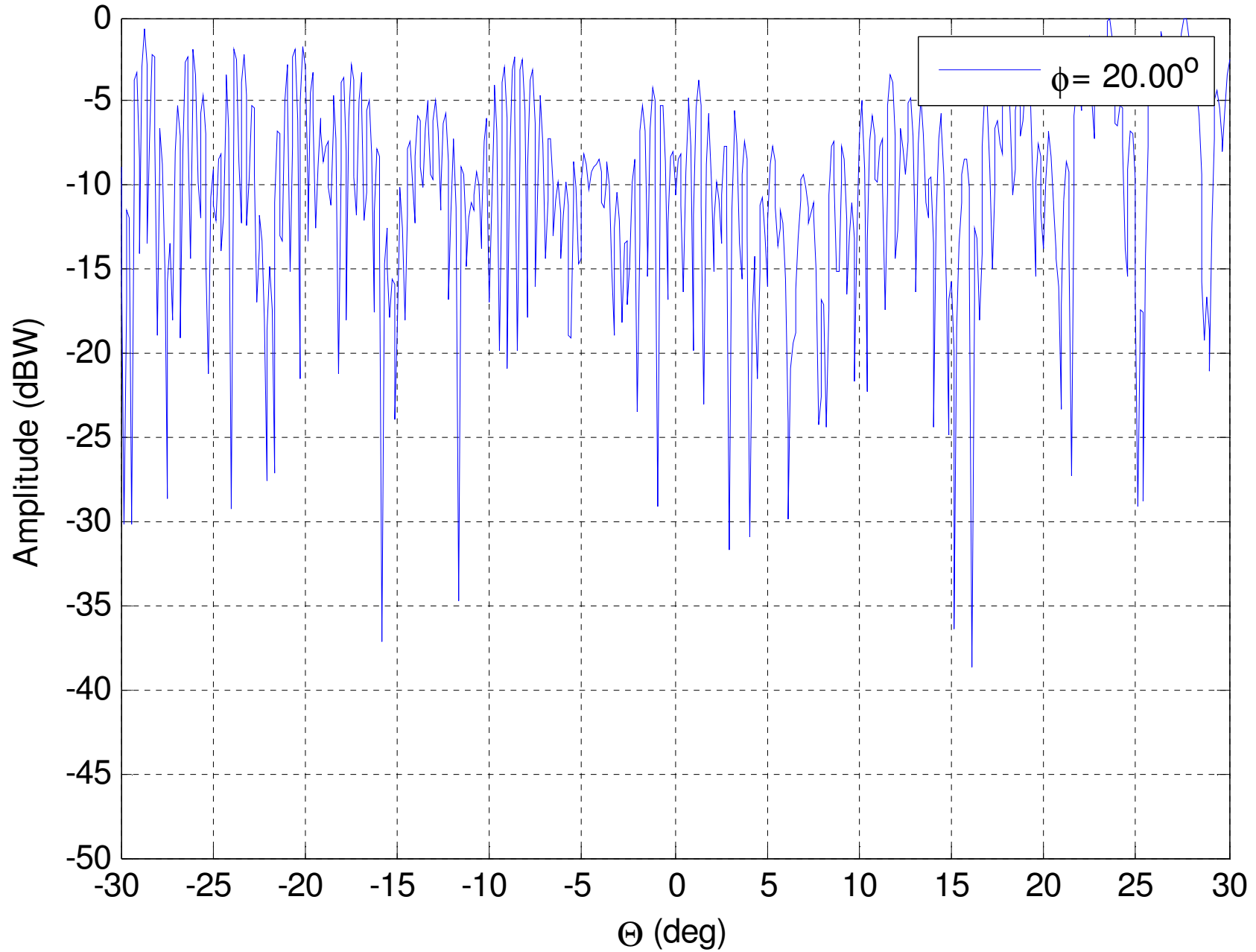
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -10.28 dBW, Date: 15-Dec-2011



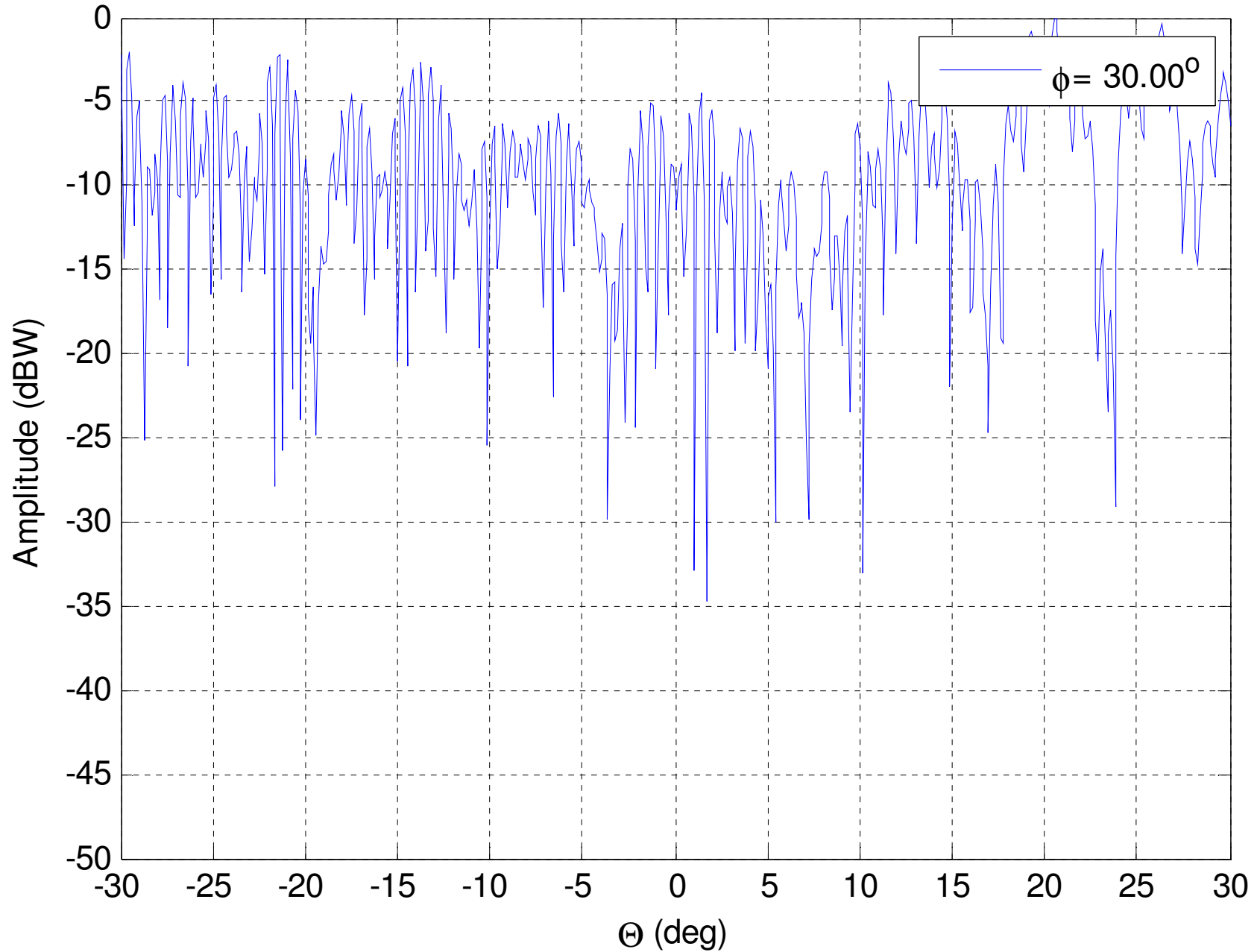
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -9.33 dBW, Date: 15-Dec-2011



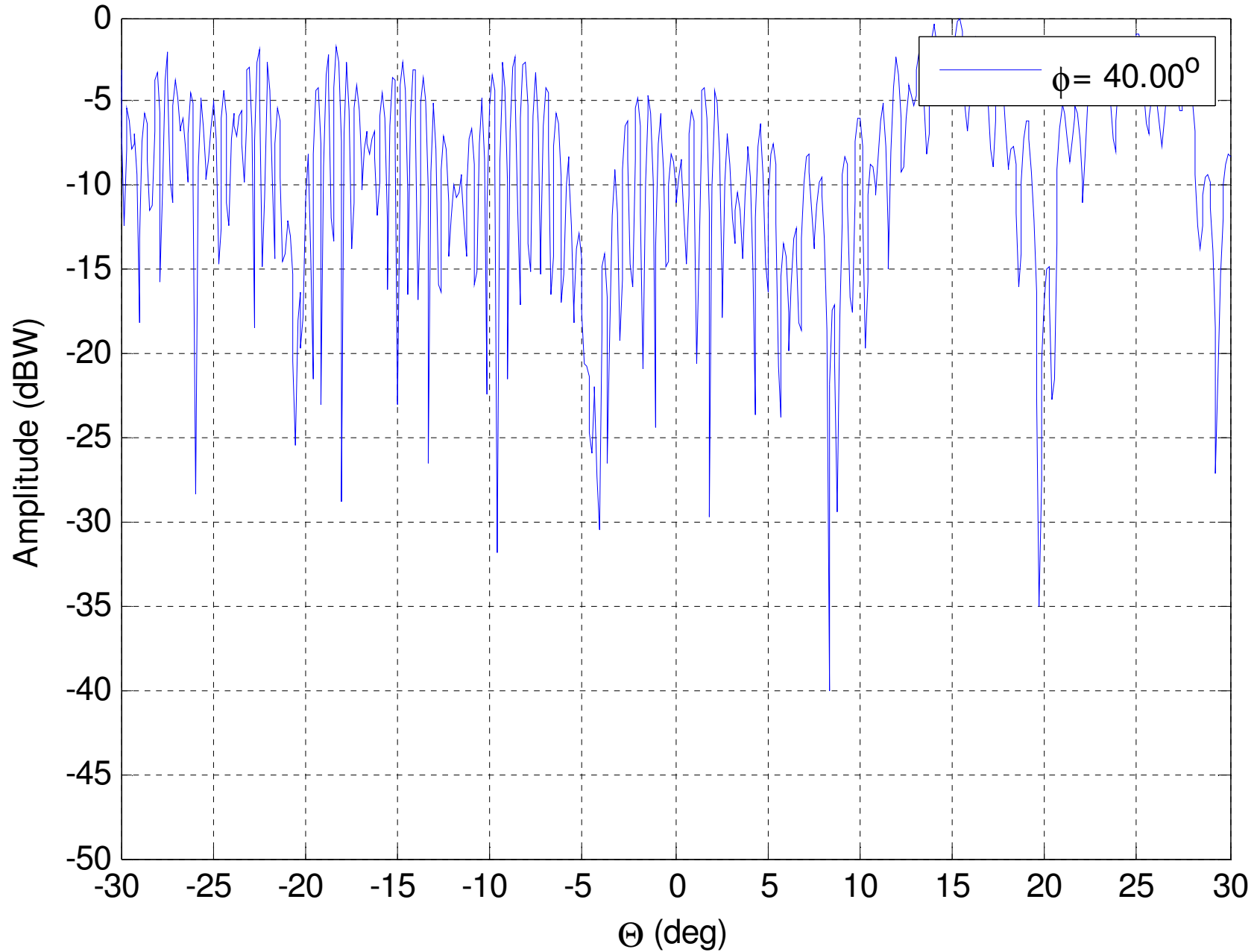
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -8.67 dBW, Date: 15-Dec-2011



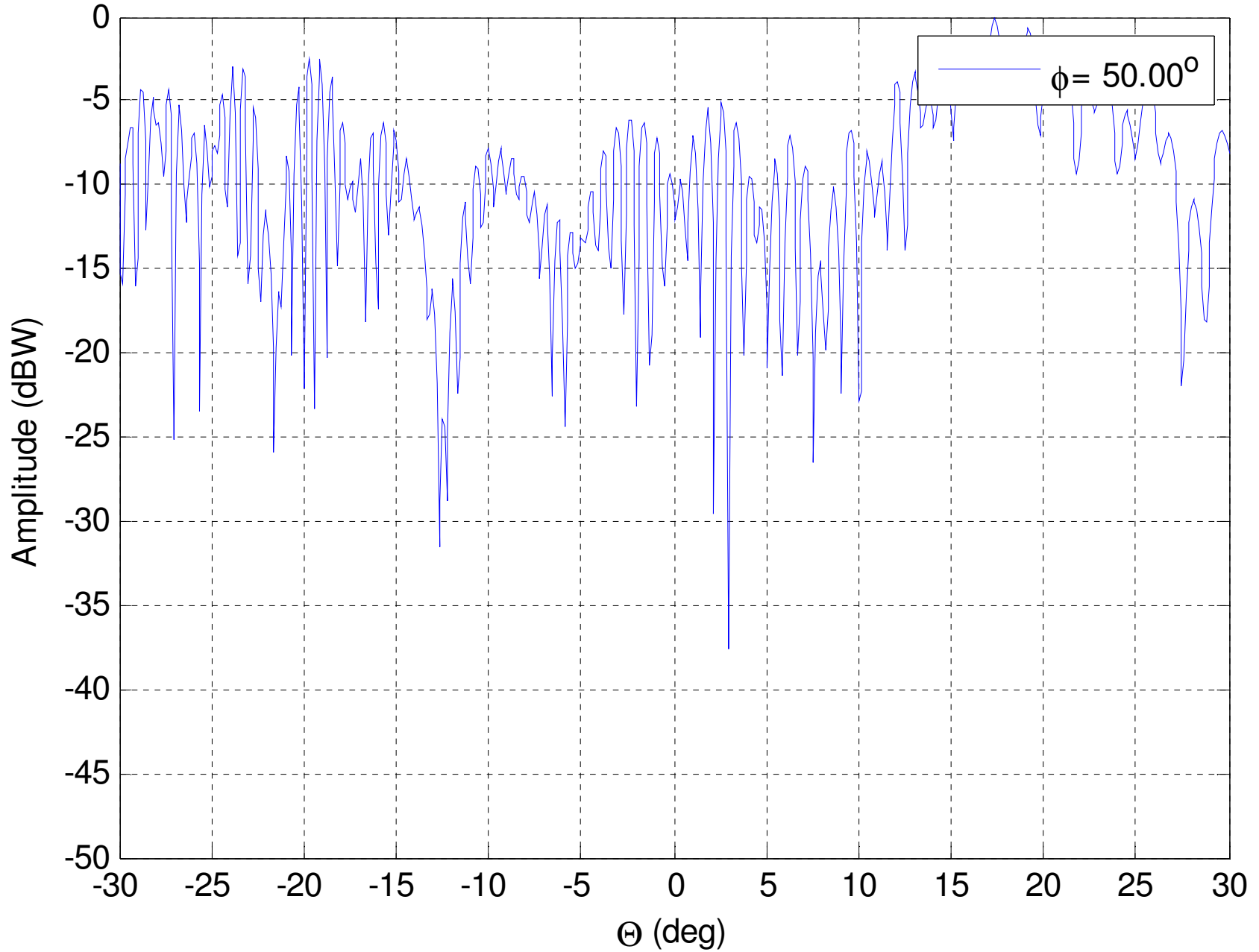
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -9.20 dBW, Date: 15-Dec-2011



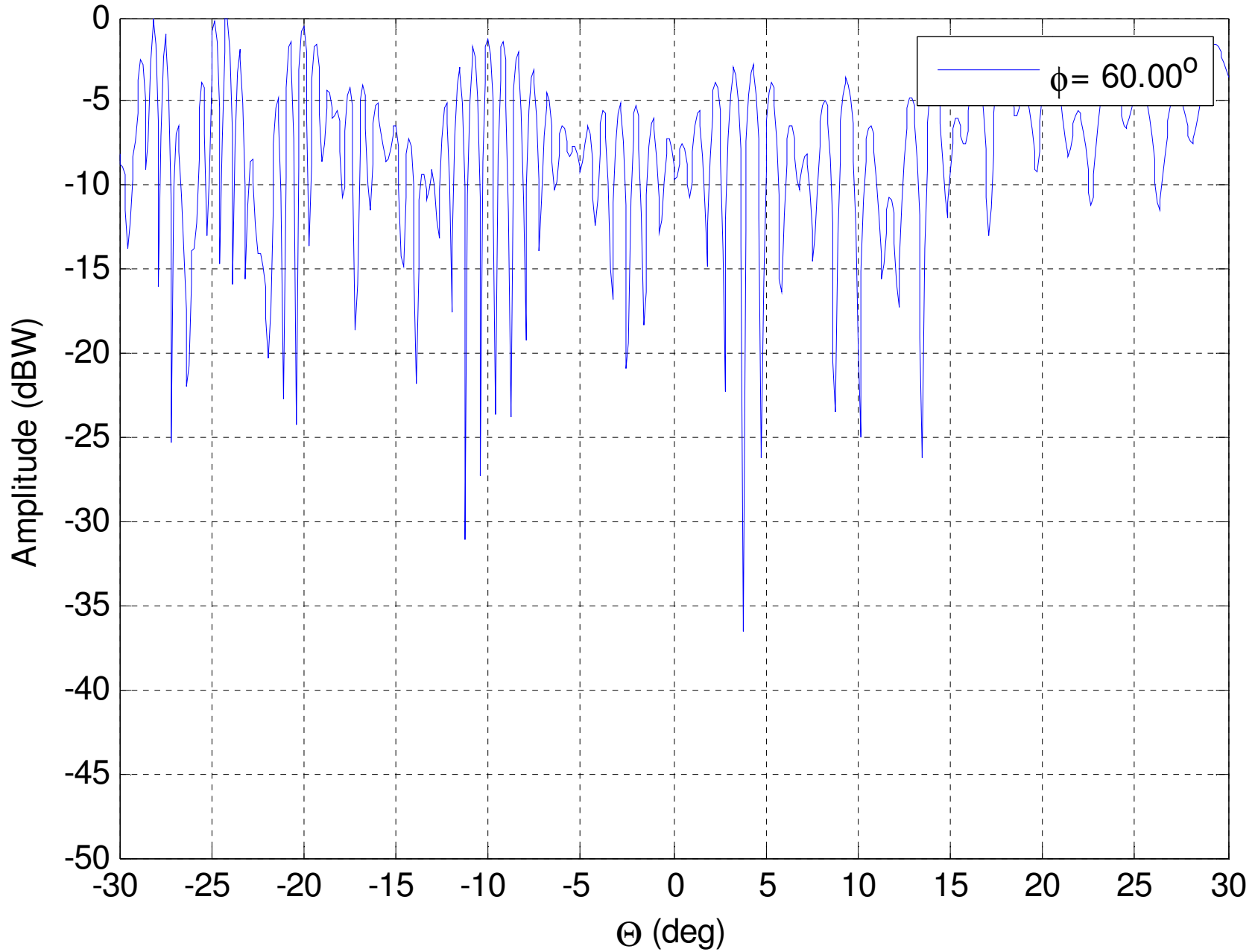
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

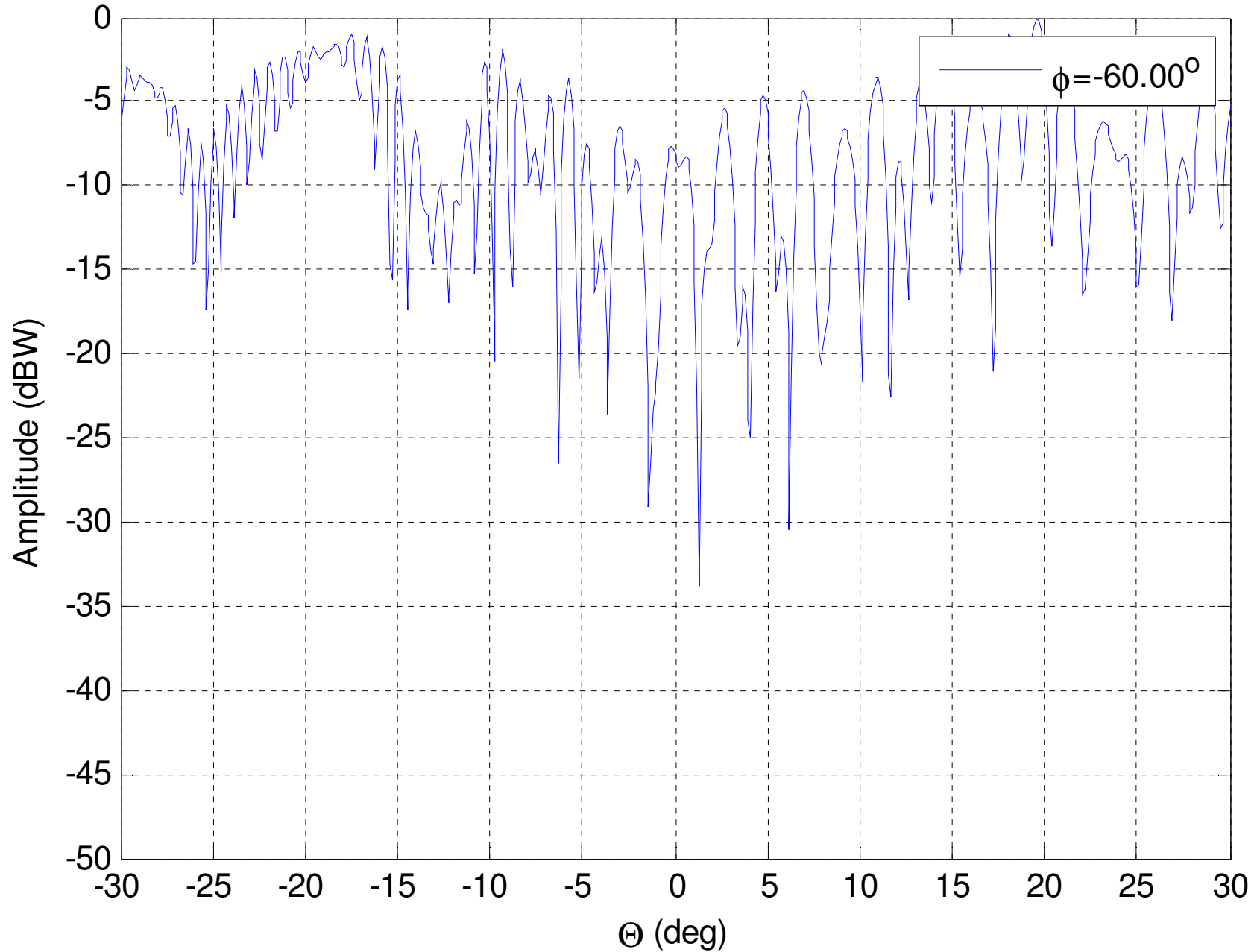
Input file: tx-17.5-rhcp-60.cut, Peak: -10.54 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

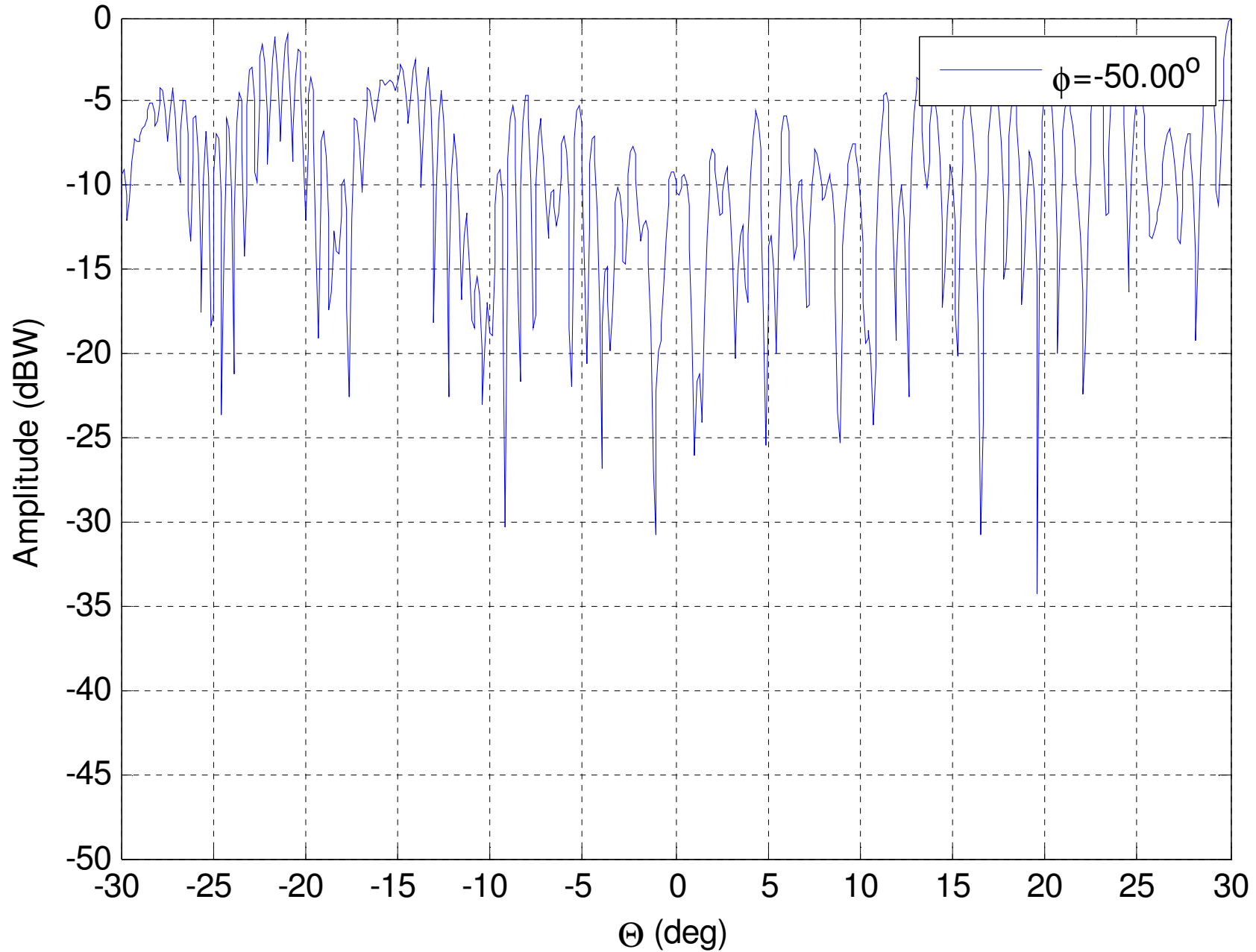
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -9.47 dBW, Date: 15-Dec-2011



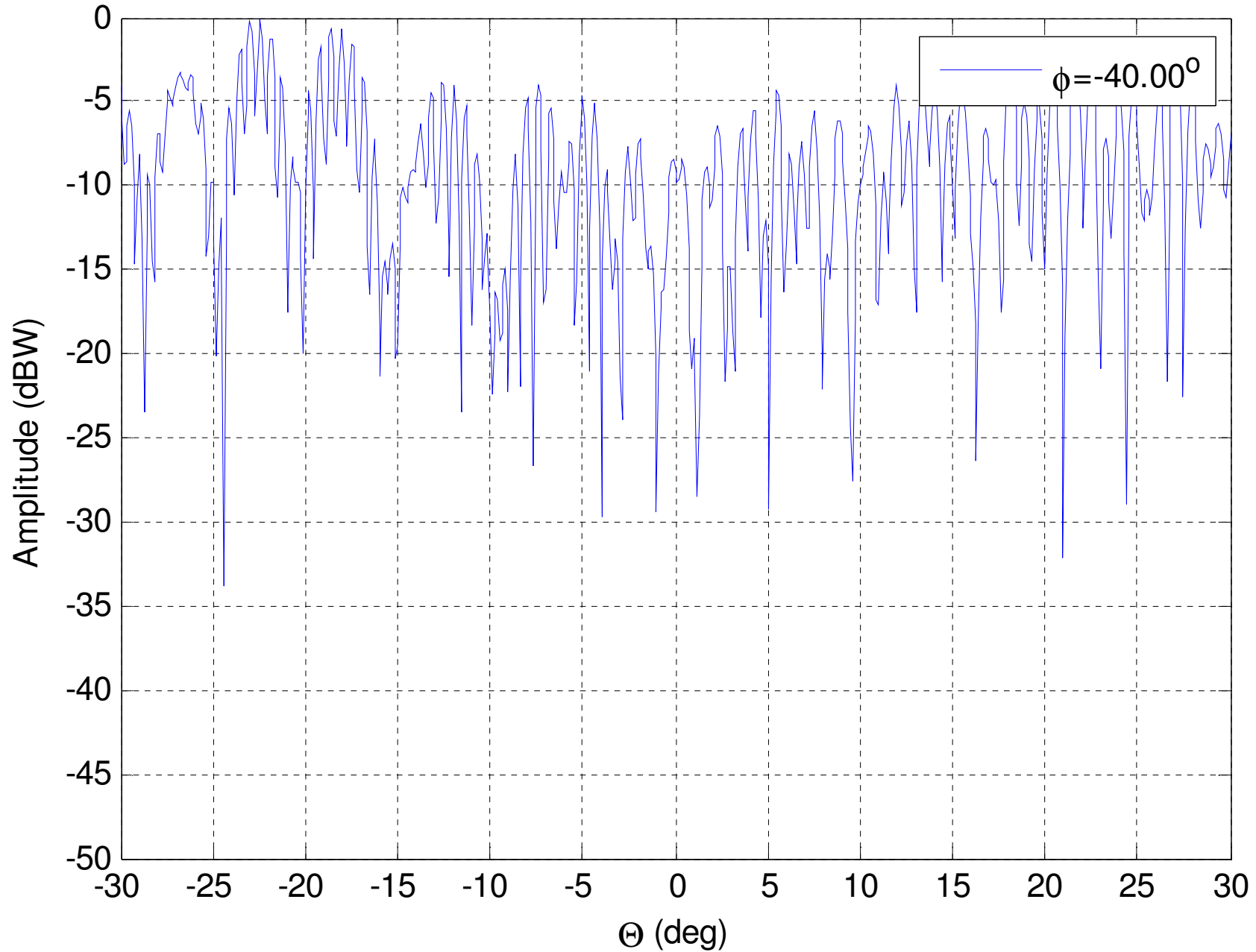
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.82 dBW, Date: 15-Dec-2011



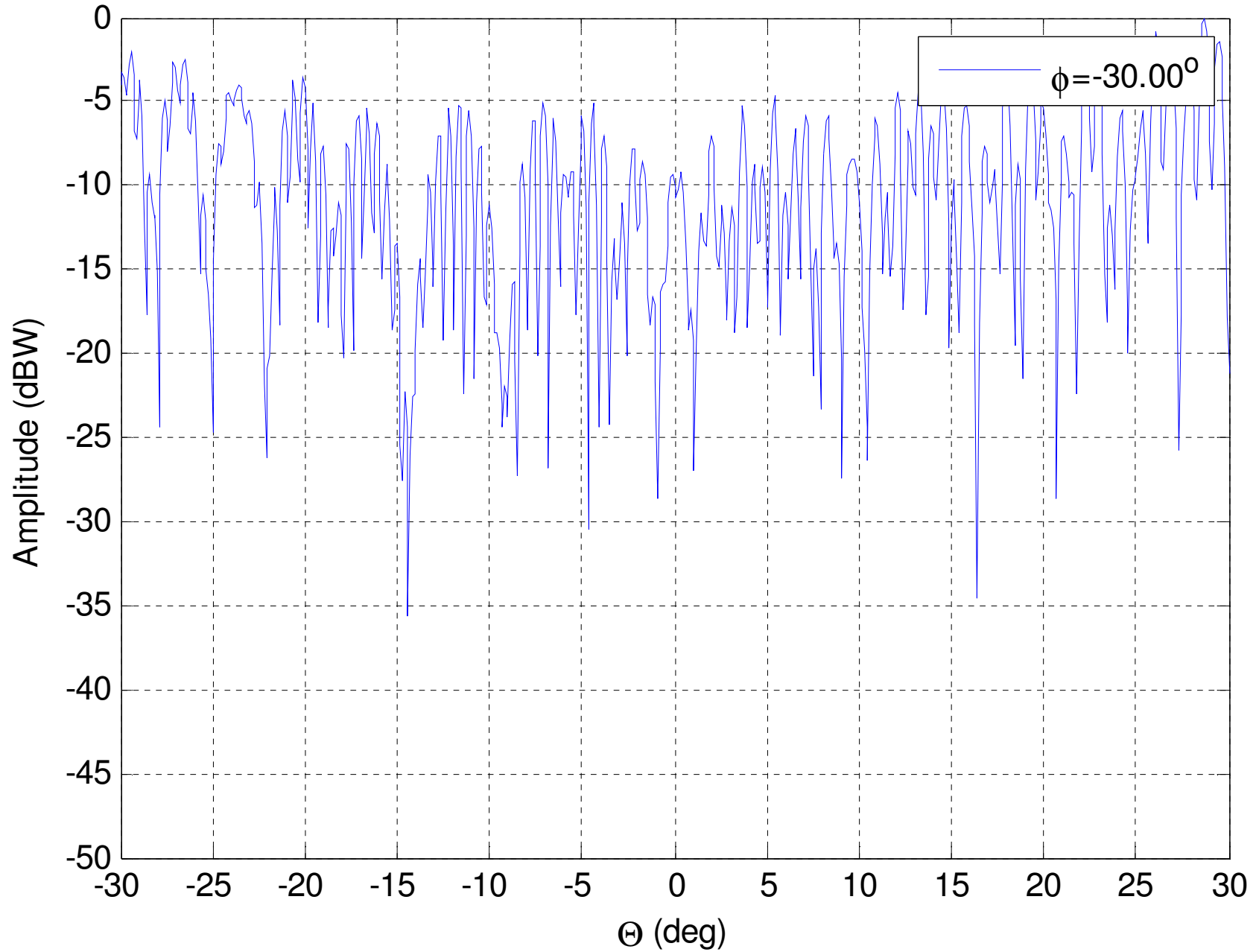
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -8.45 dBW, Date: 15-Dec-2011



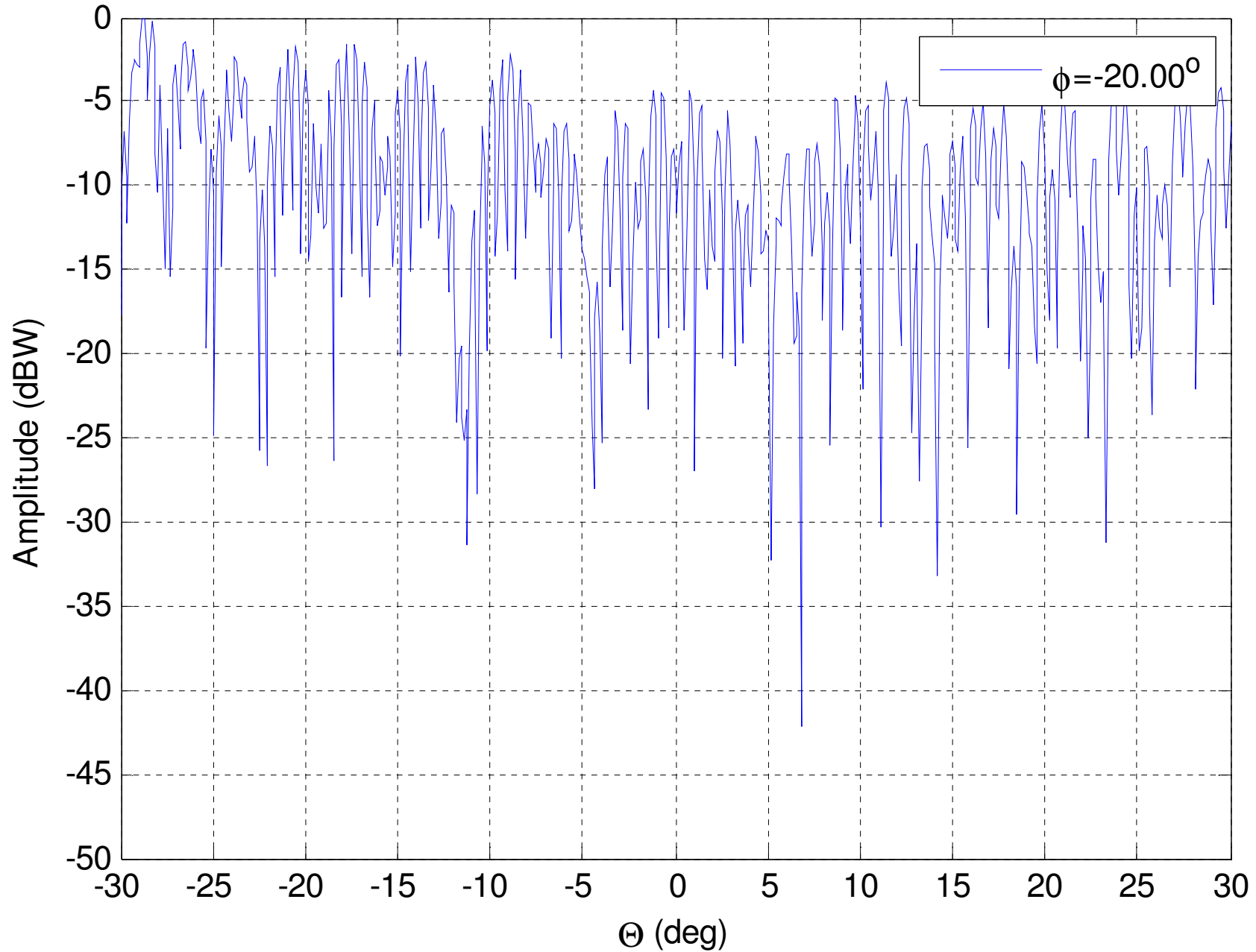
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.58 dBW, Date: 15-Dec-2011



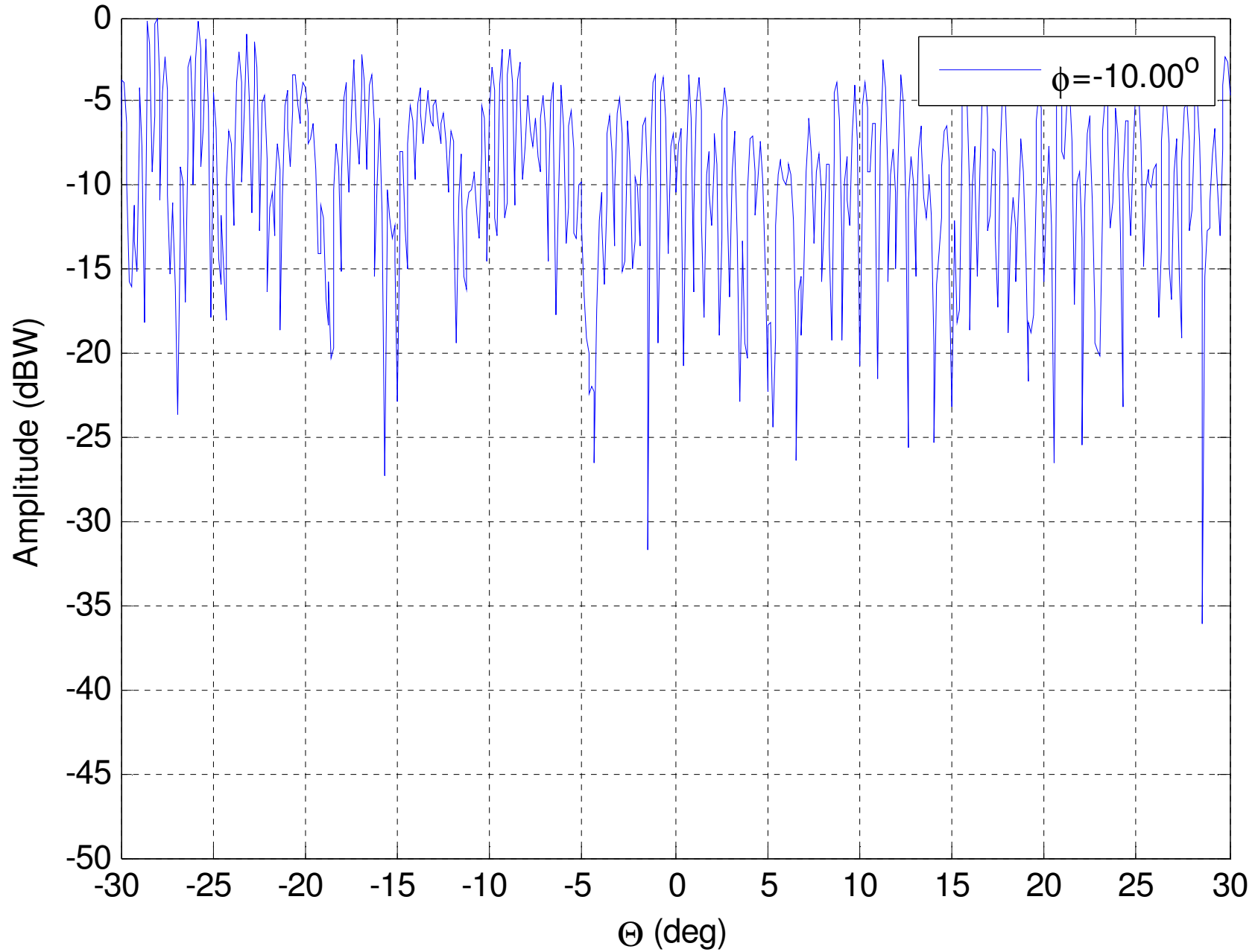
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -9.28 dBW, Date: 15-Dec-2011



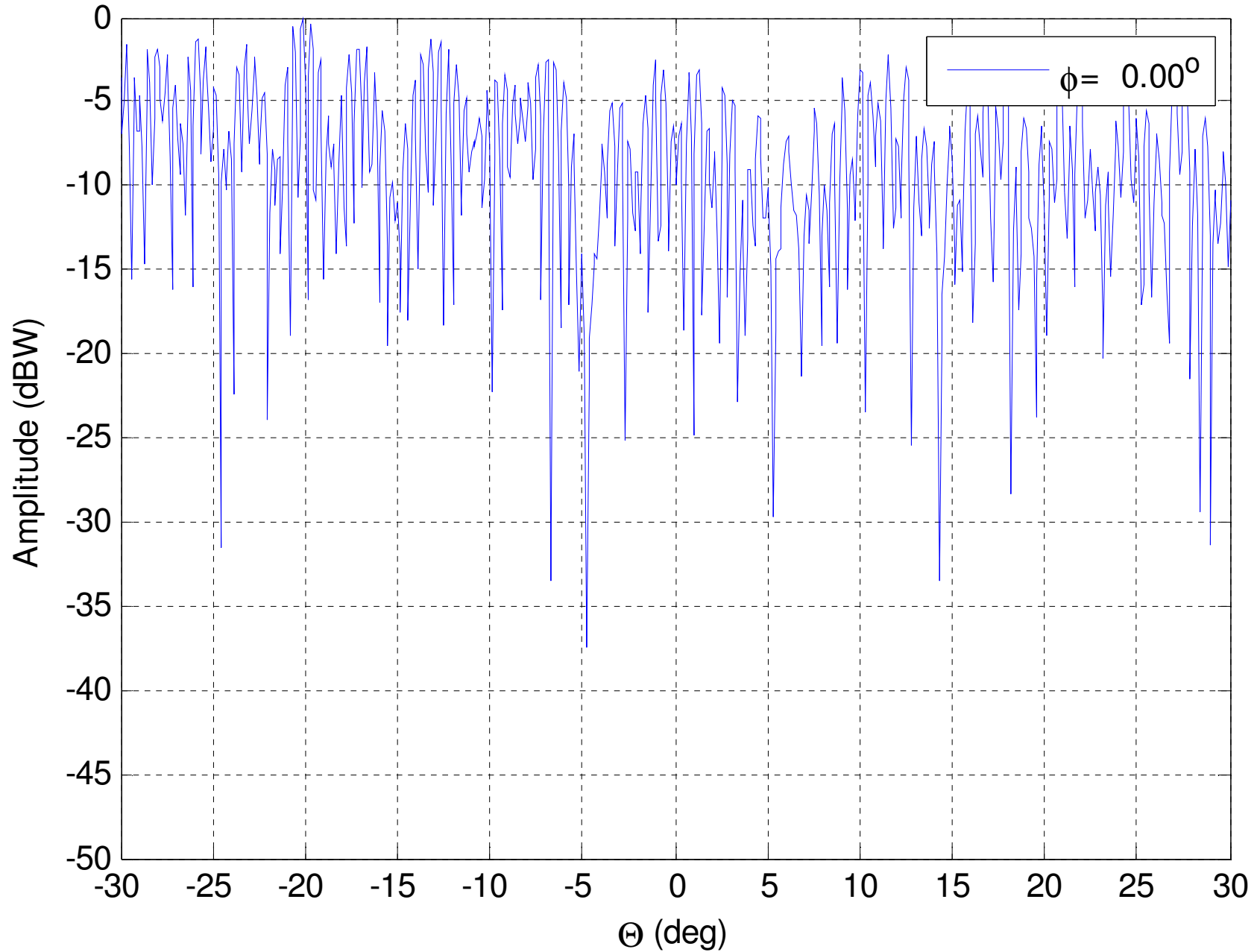
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -10.32 dBW, Date: 15-Dec-2011



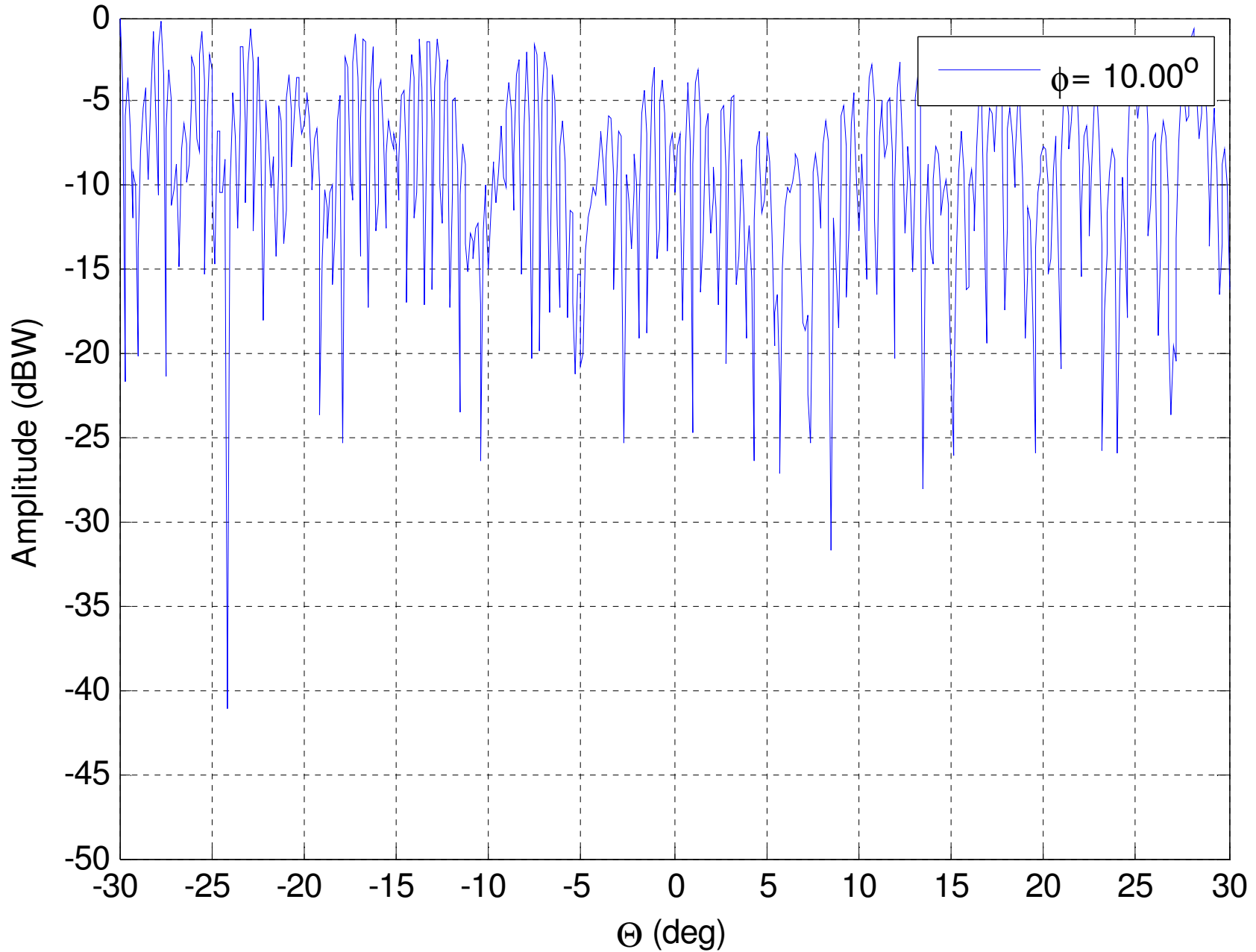
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -10.83 dBW, Date: 15-Dec-2011



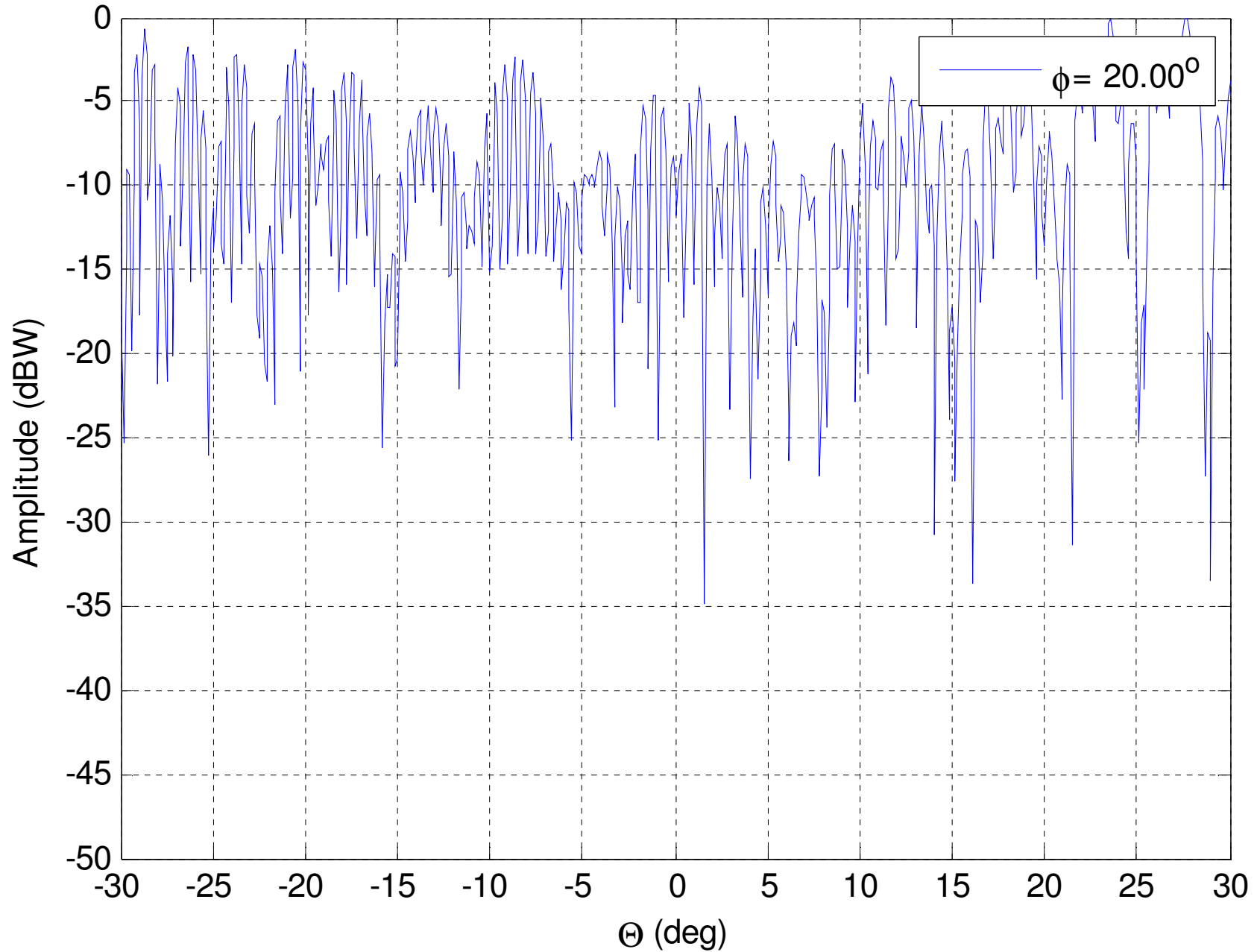
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -10.43 dBW, Date: 15-Dec-2011



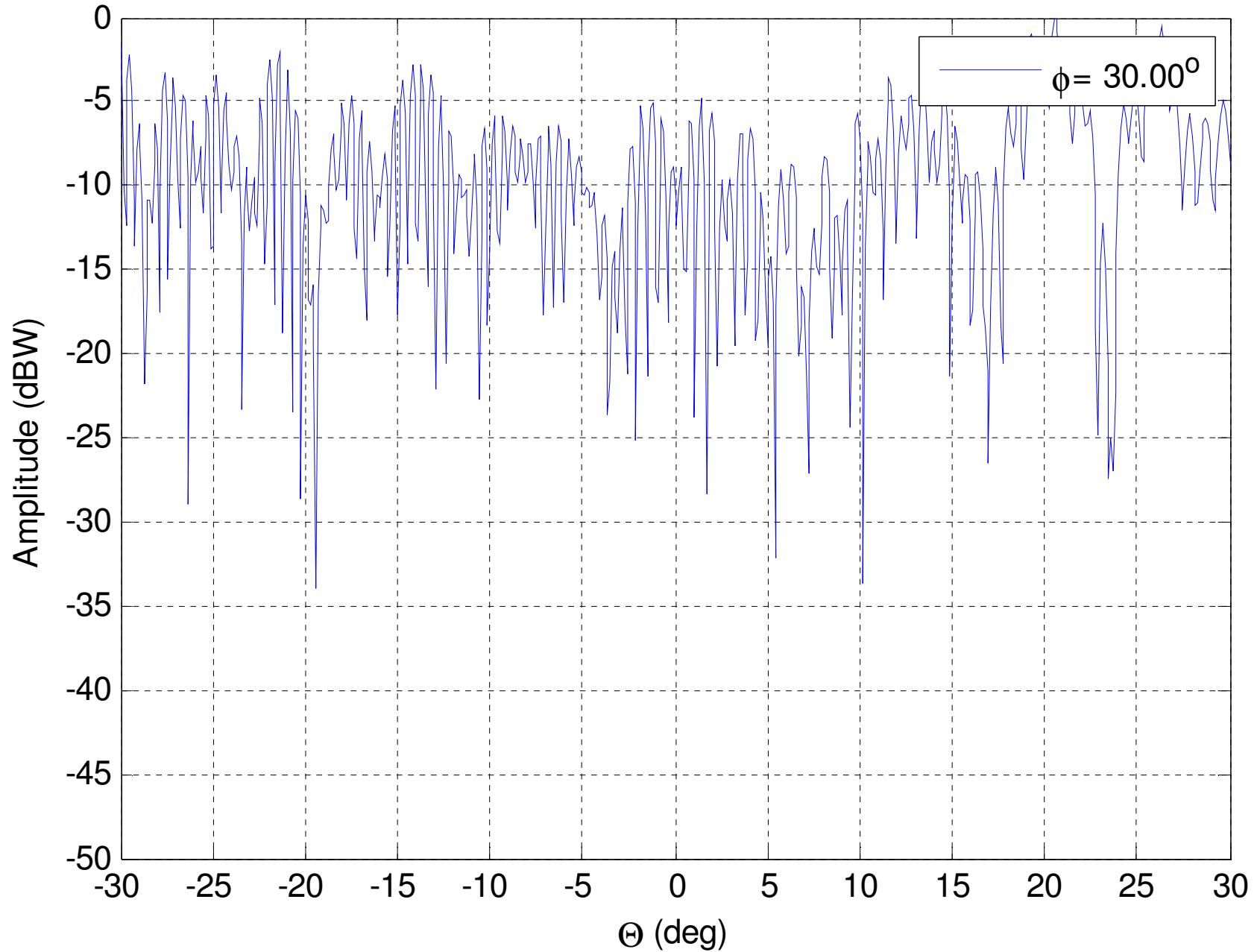
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -9.14 dBW, Date: 15-Dec-2011



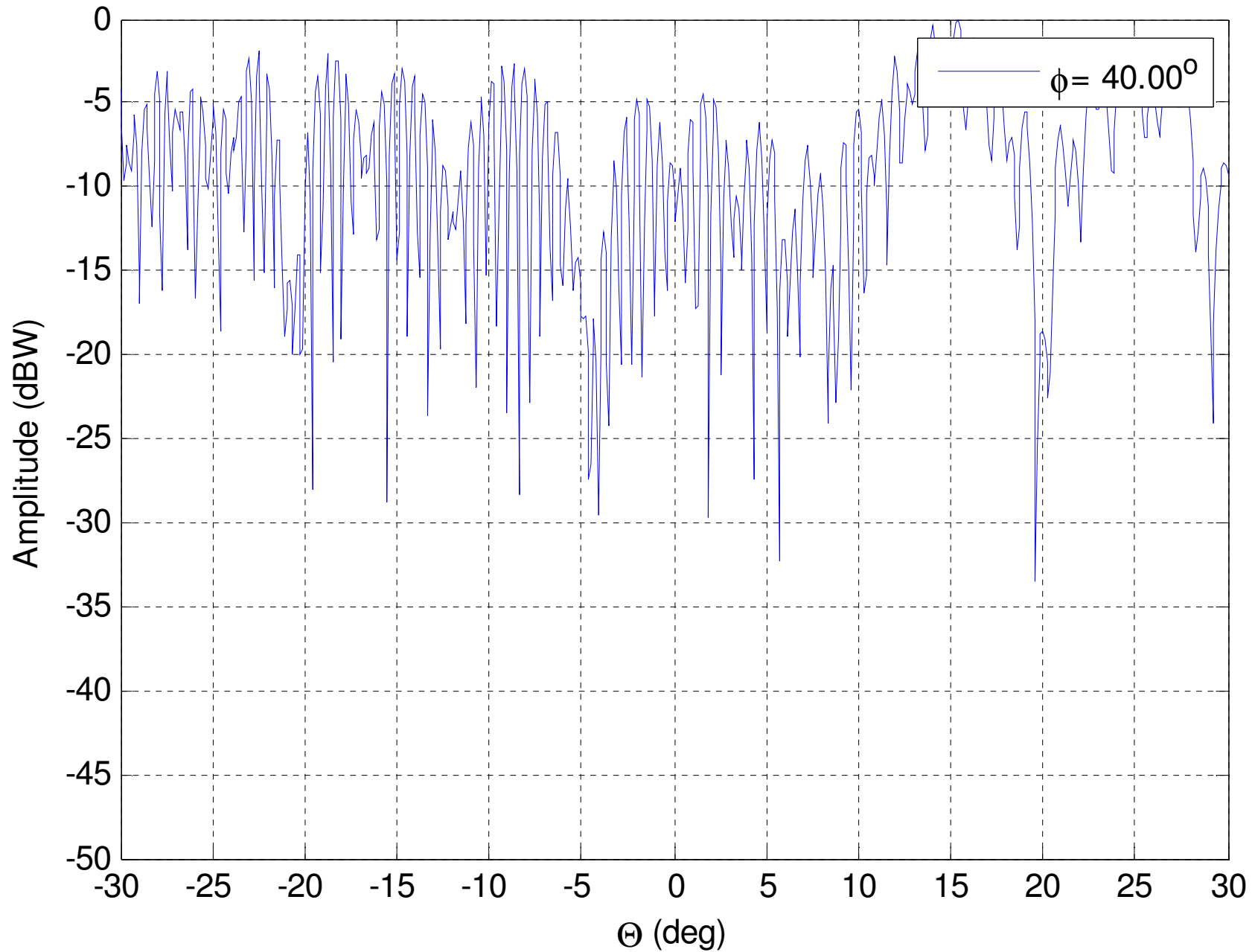
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -8.62 dBW, Date: 15-Dec-2011



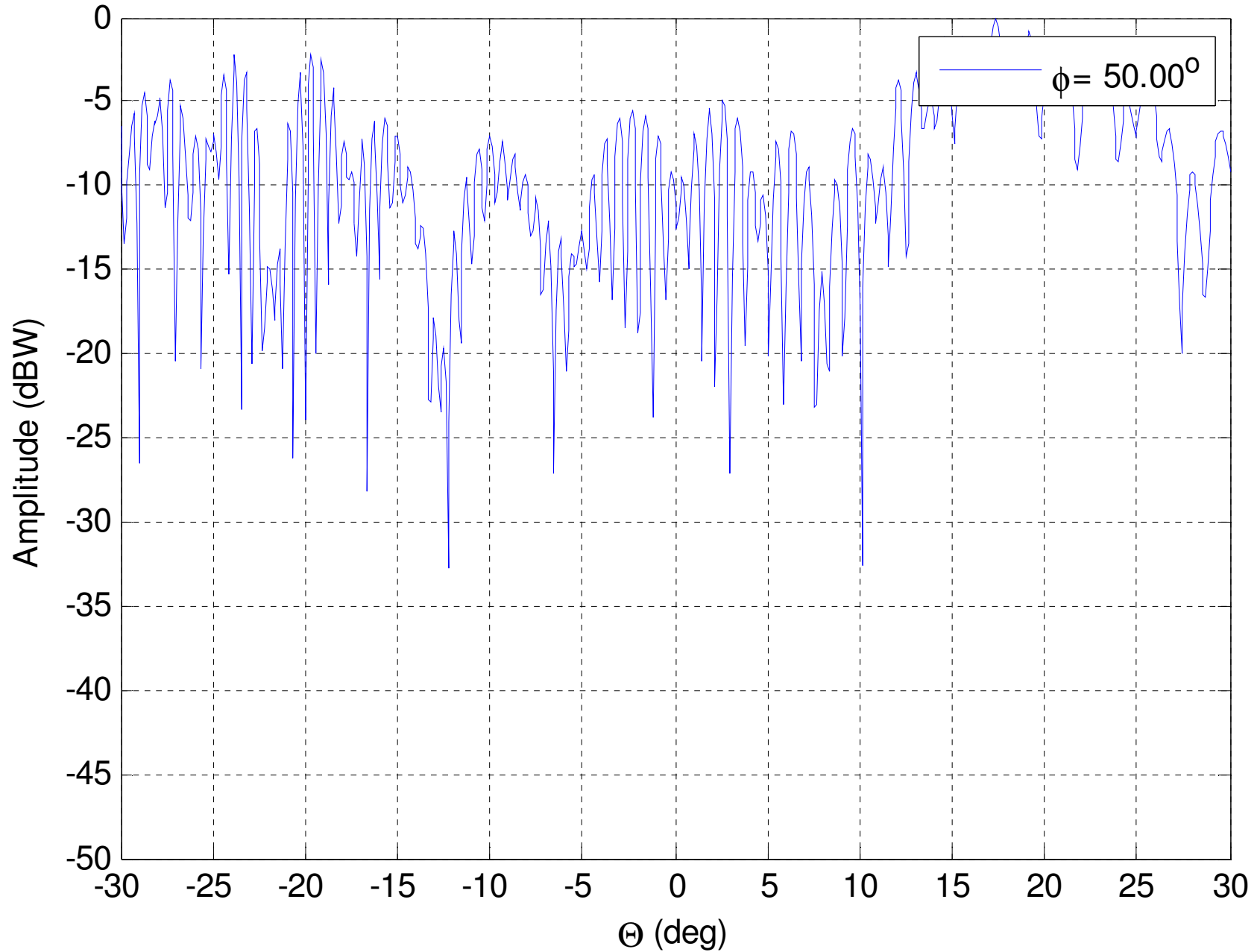
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -9.01 dBW, Date: 15-Dec-2011



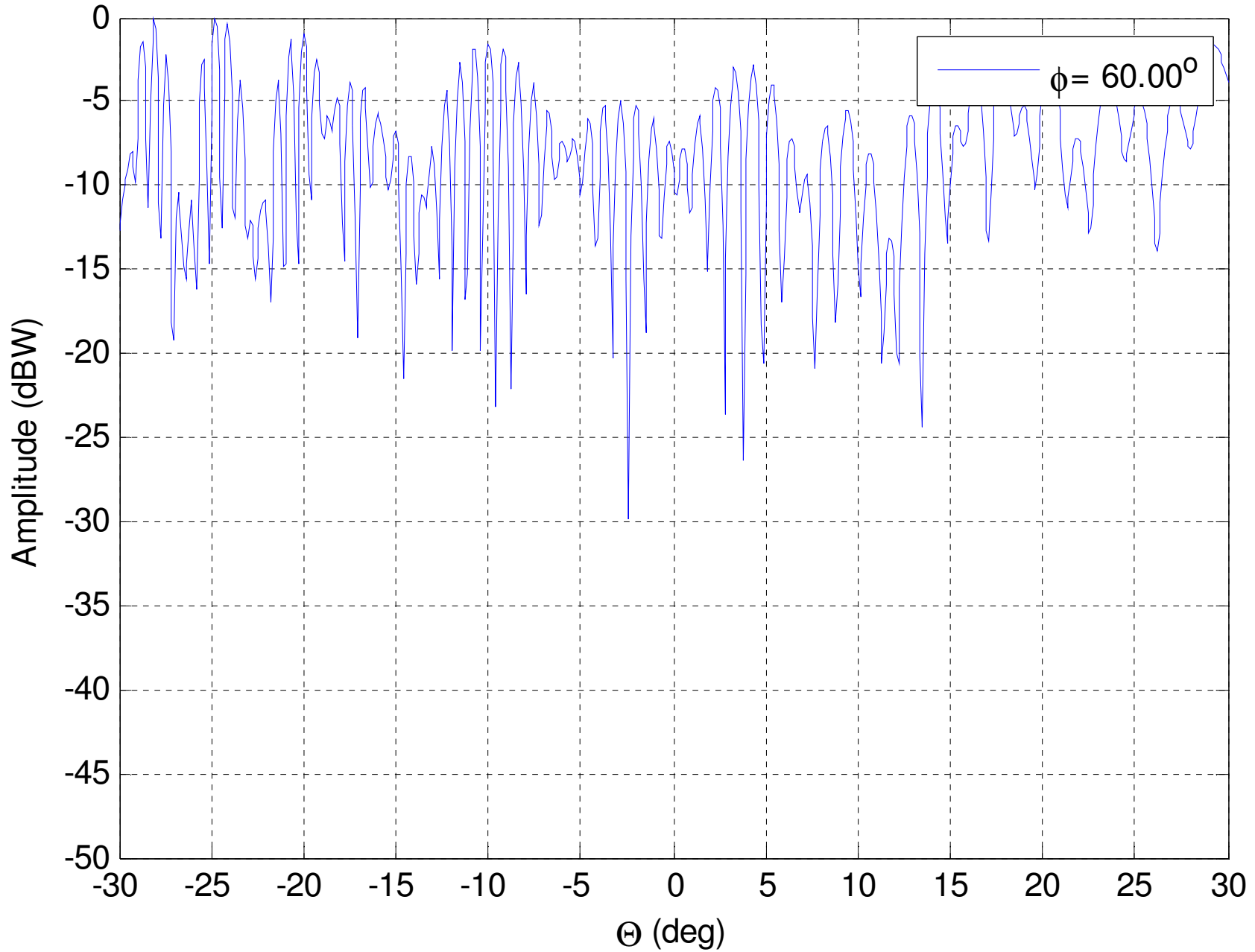
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -8.41 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

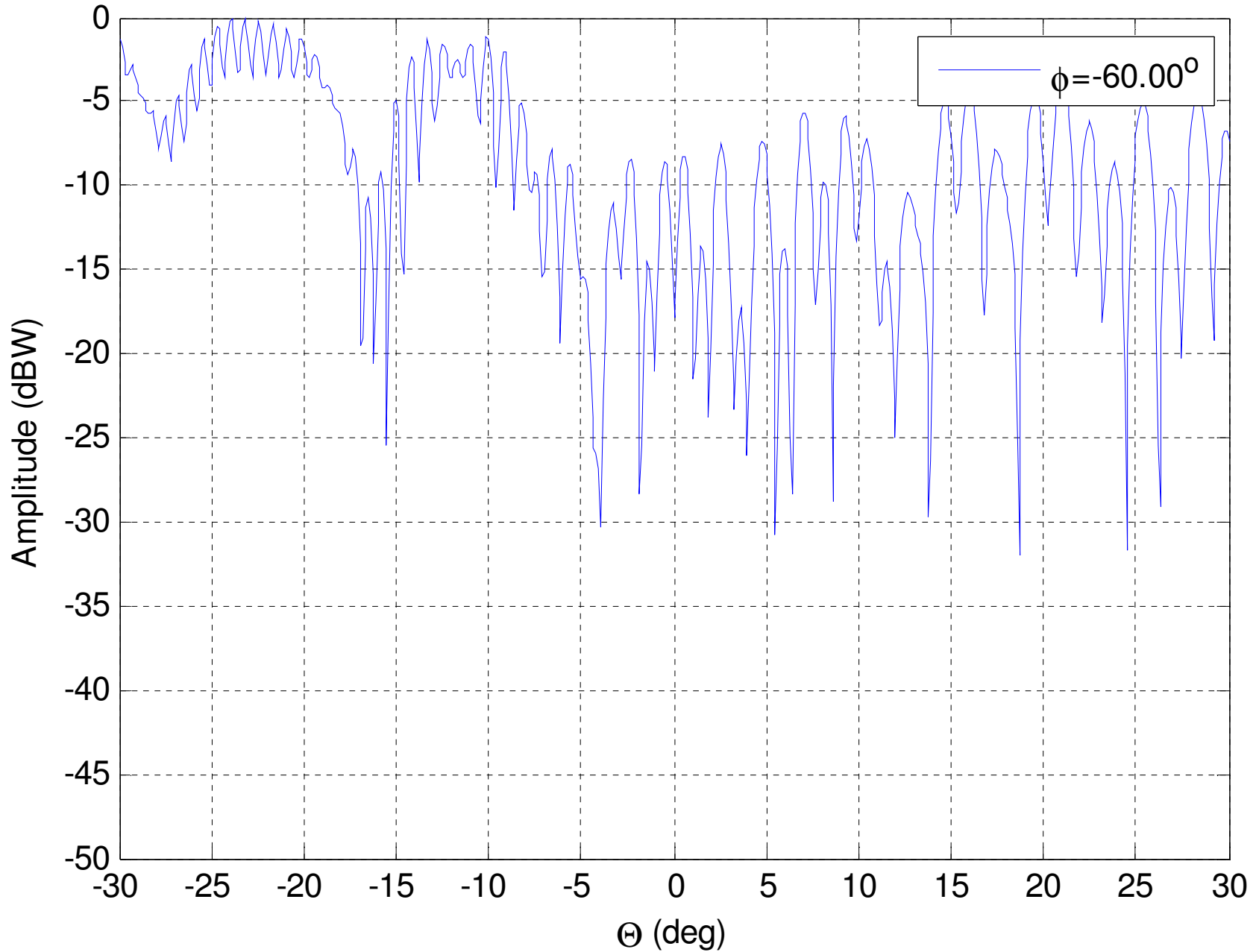
Input file: tx-17.5-lhcp-60.cut, Peak: -10.37 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

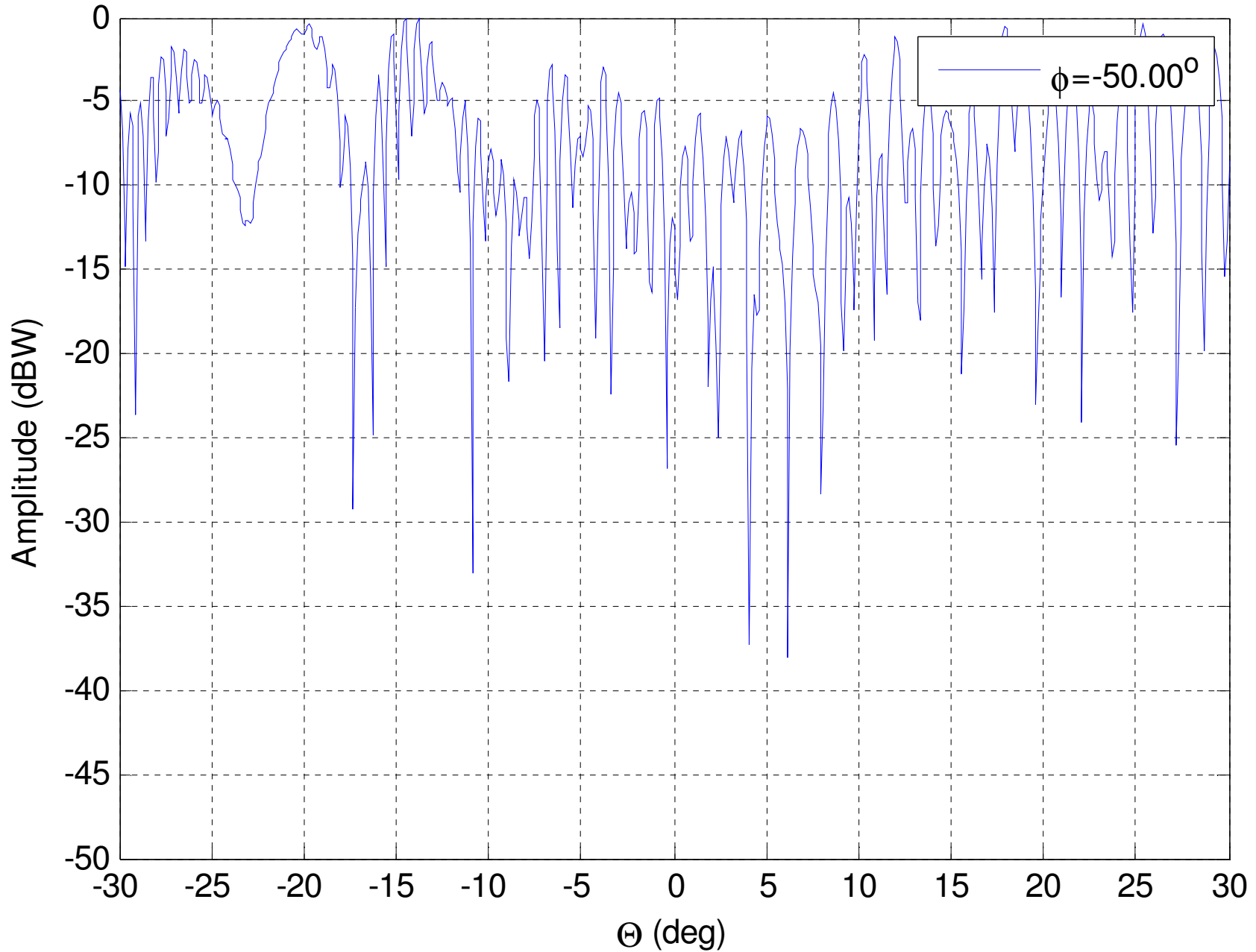
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -8.74 dBW, Date: 15-Dec-2011



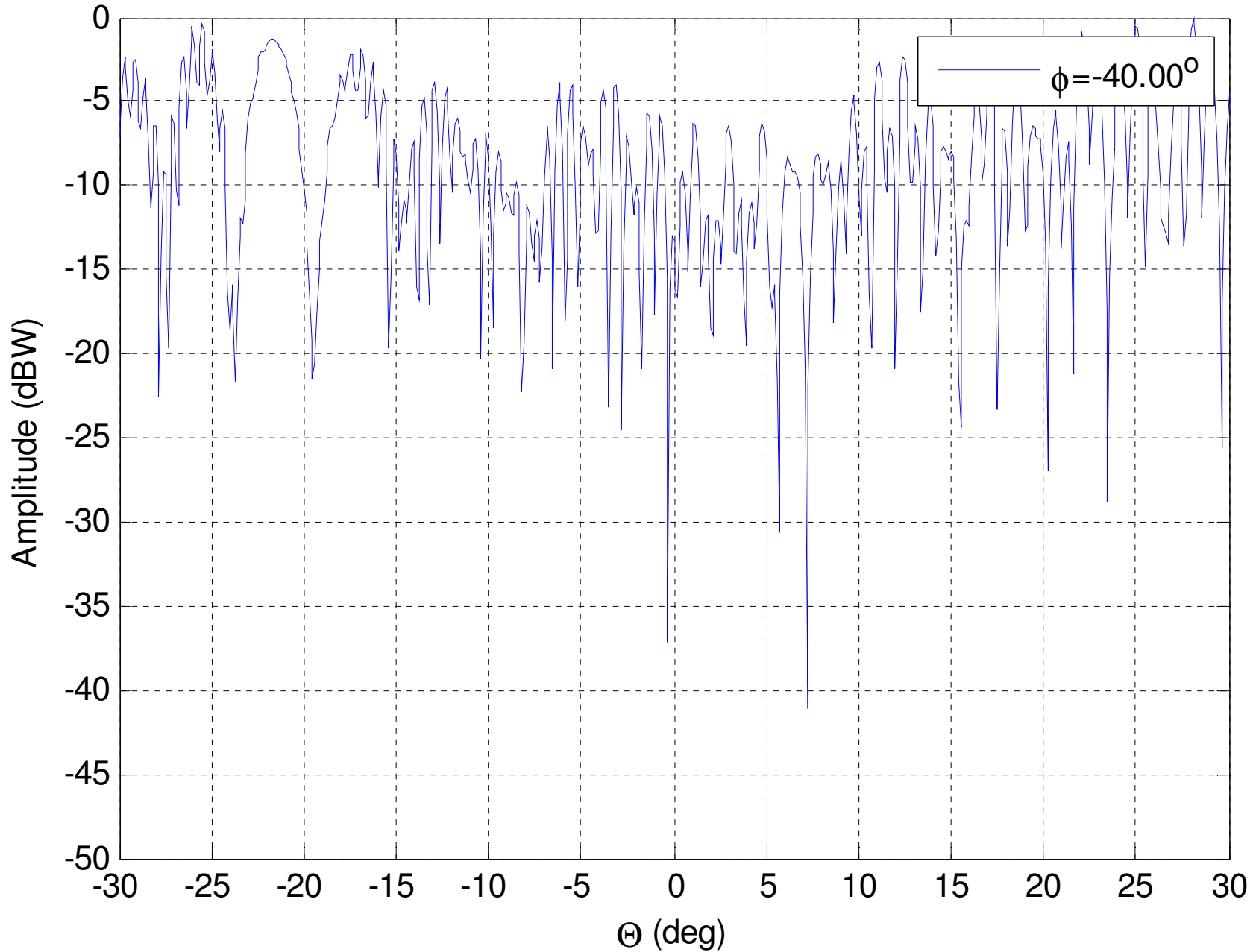
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -9.70 dBW, Date: 15-Dec-2011



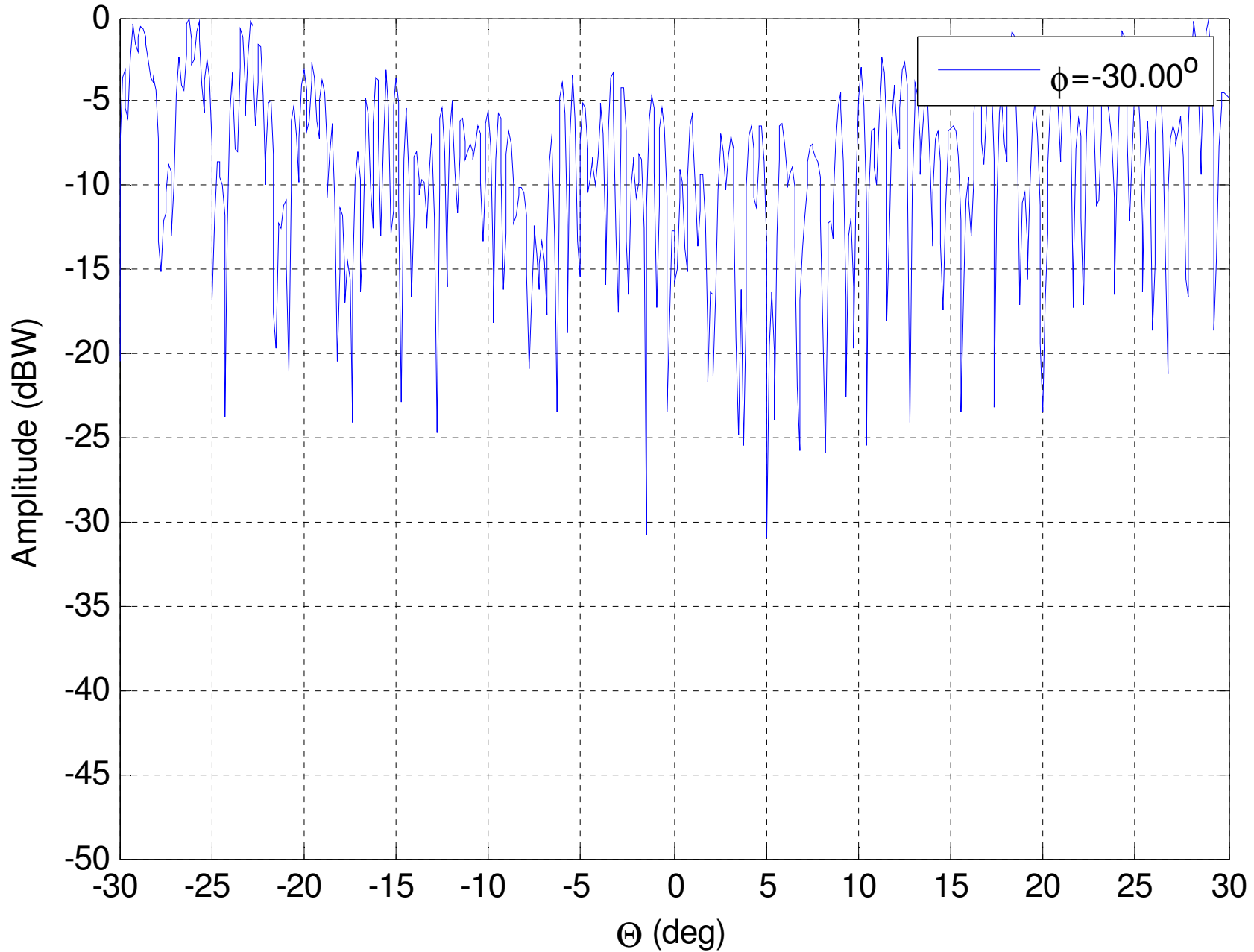
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -8.94 dBW, Date: 15-Dec-2011



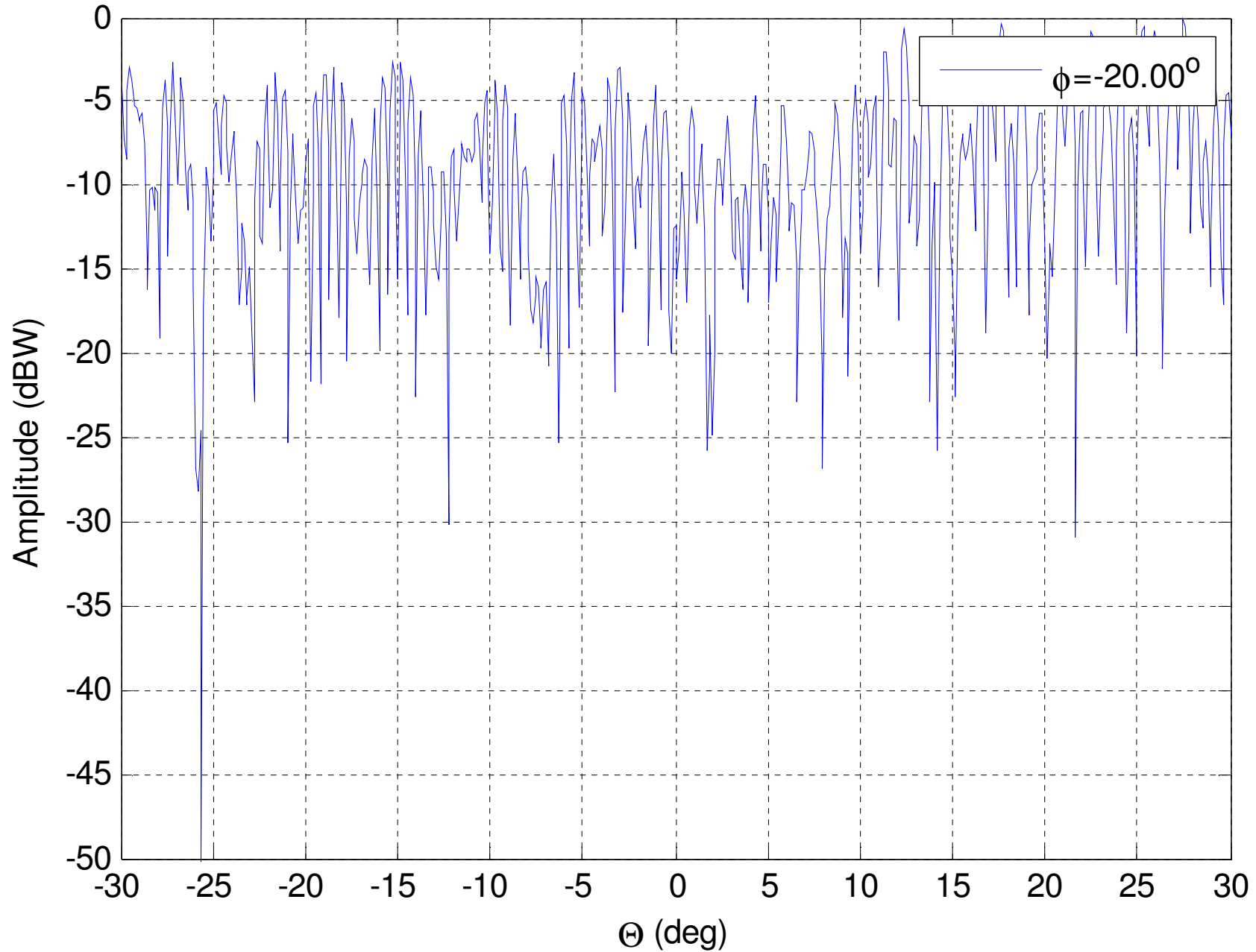
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -9.55 dBW, Date: 15-Dec-2011



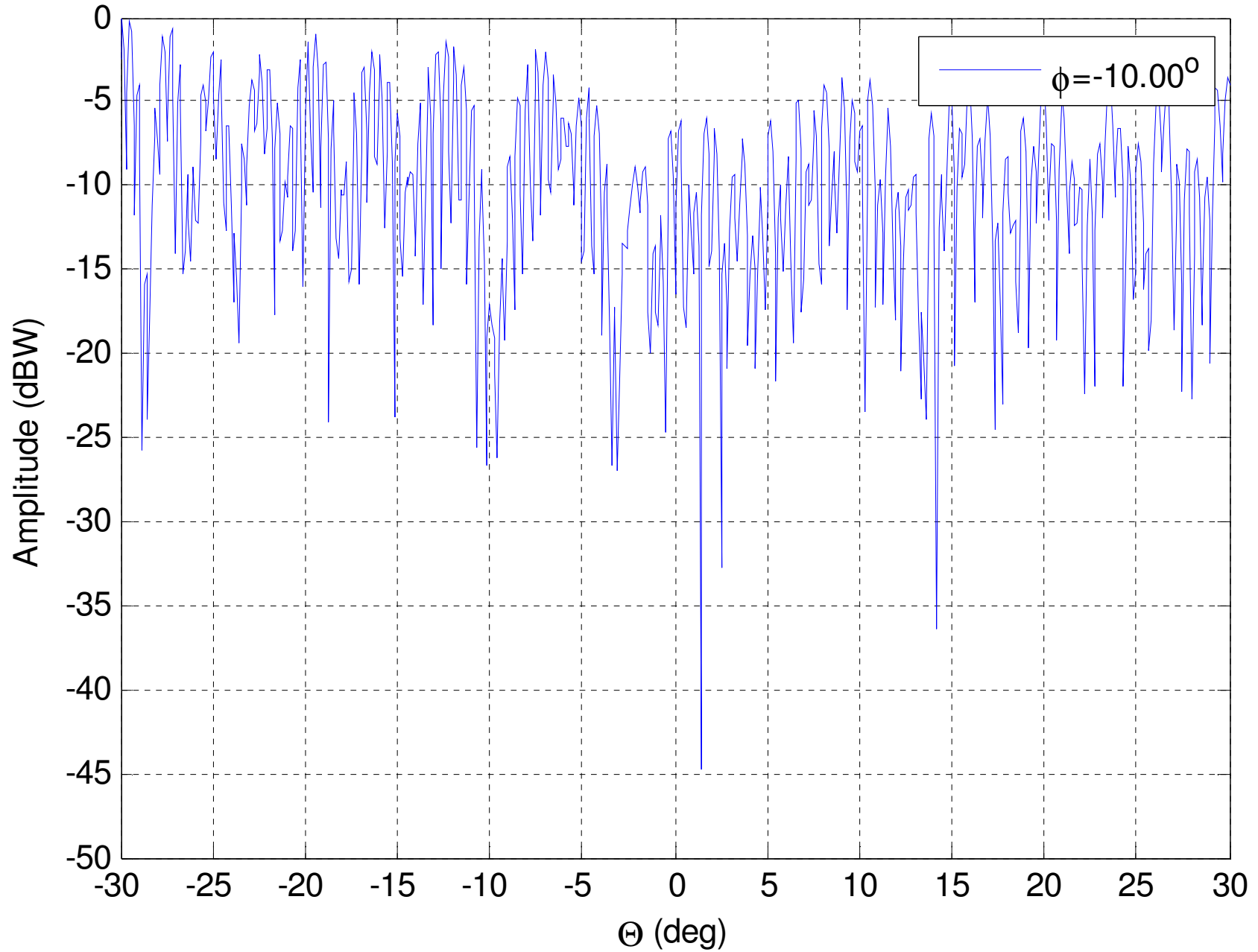
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -9.86 dBW, Date: 15-Dec-2011



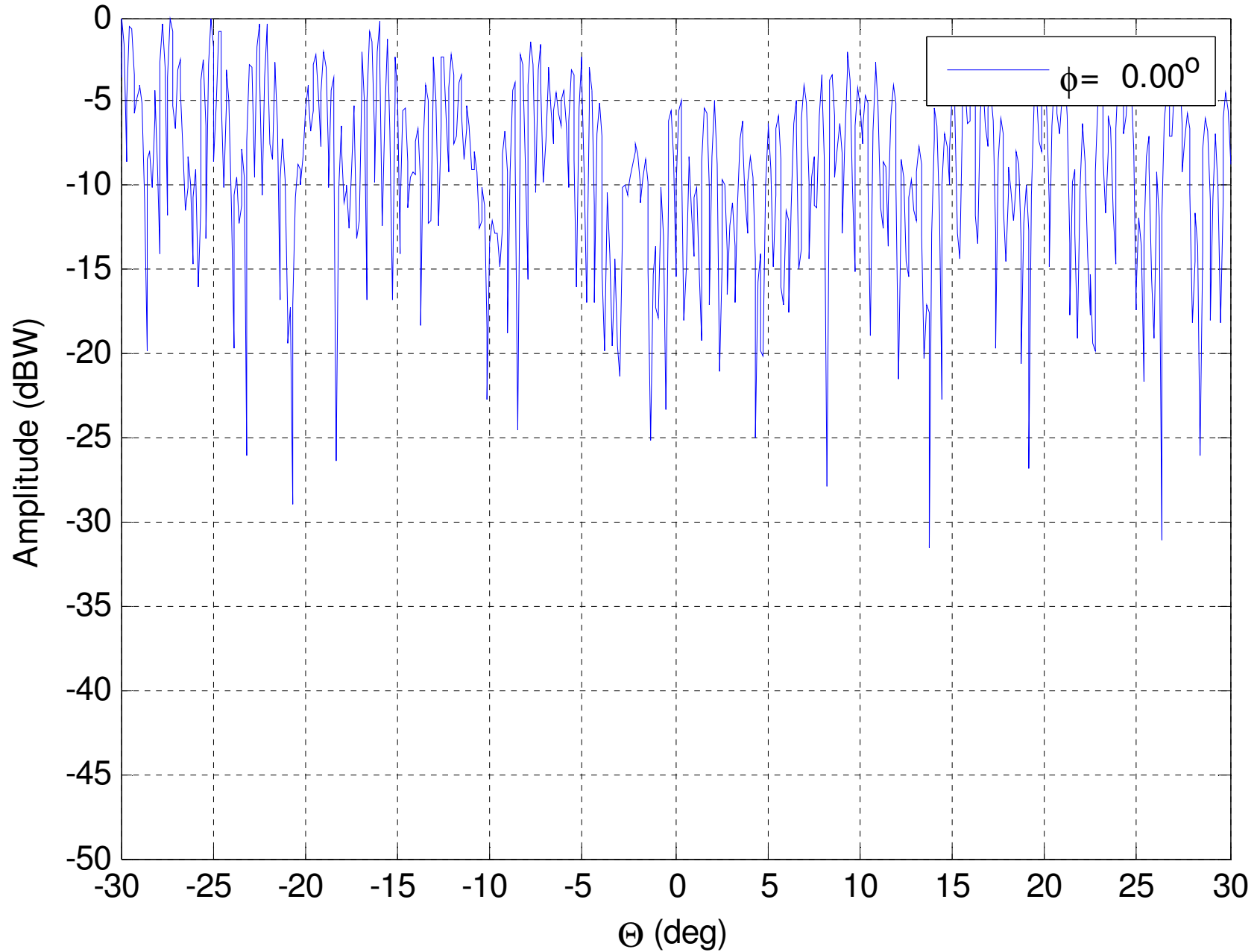
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -10.05 dBW, Date: 15-Dec-2011



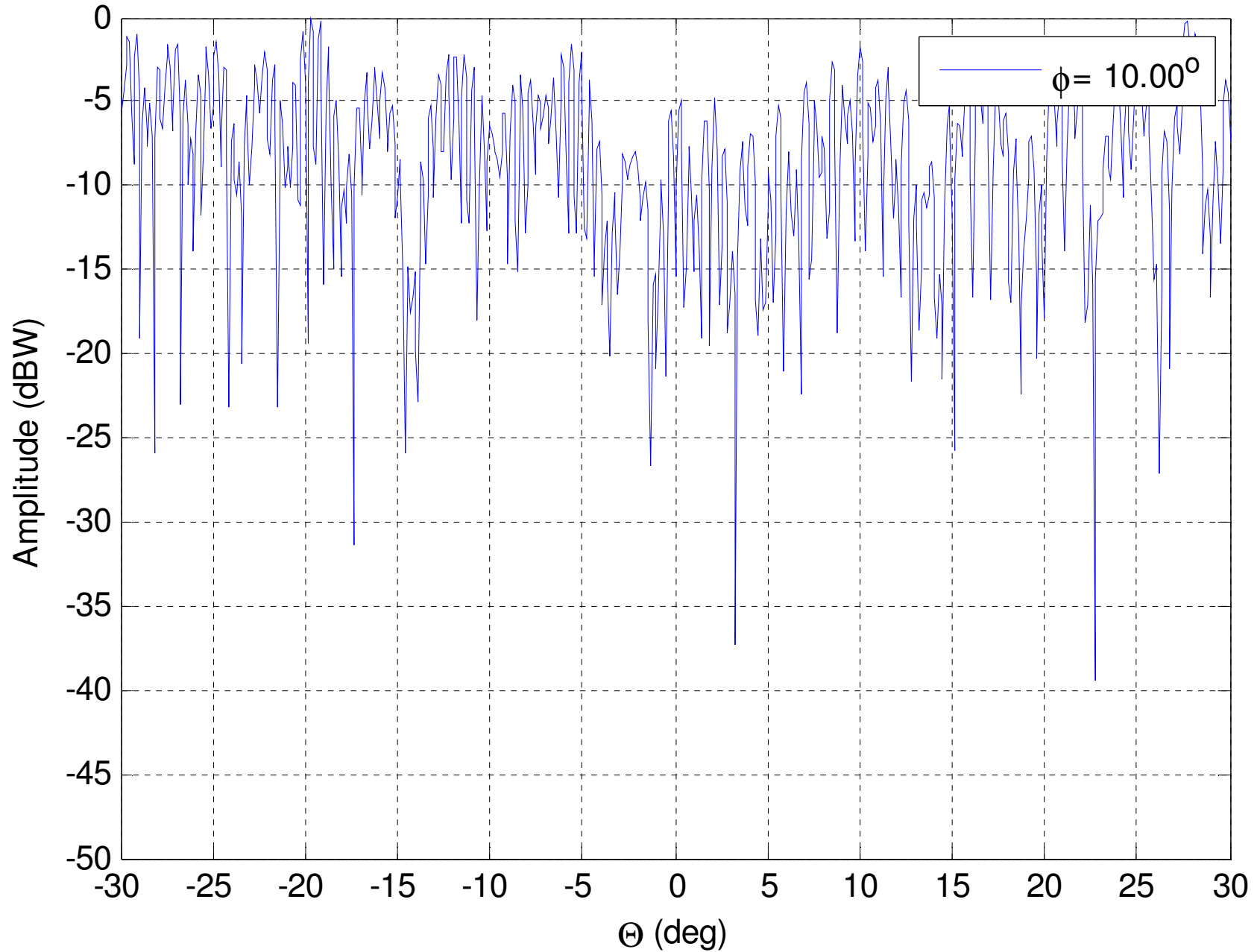
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -11.20 dBW, Date: 15-Dec-2011



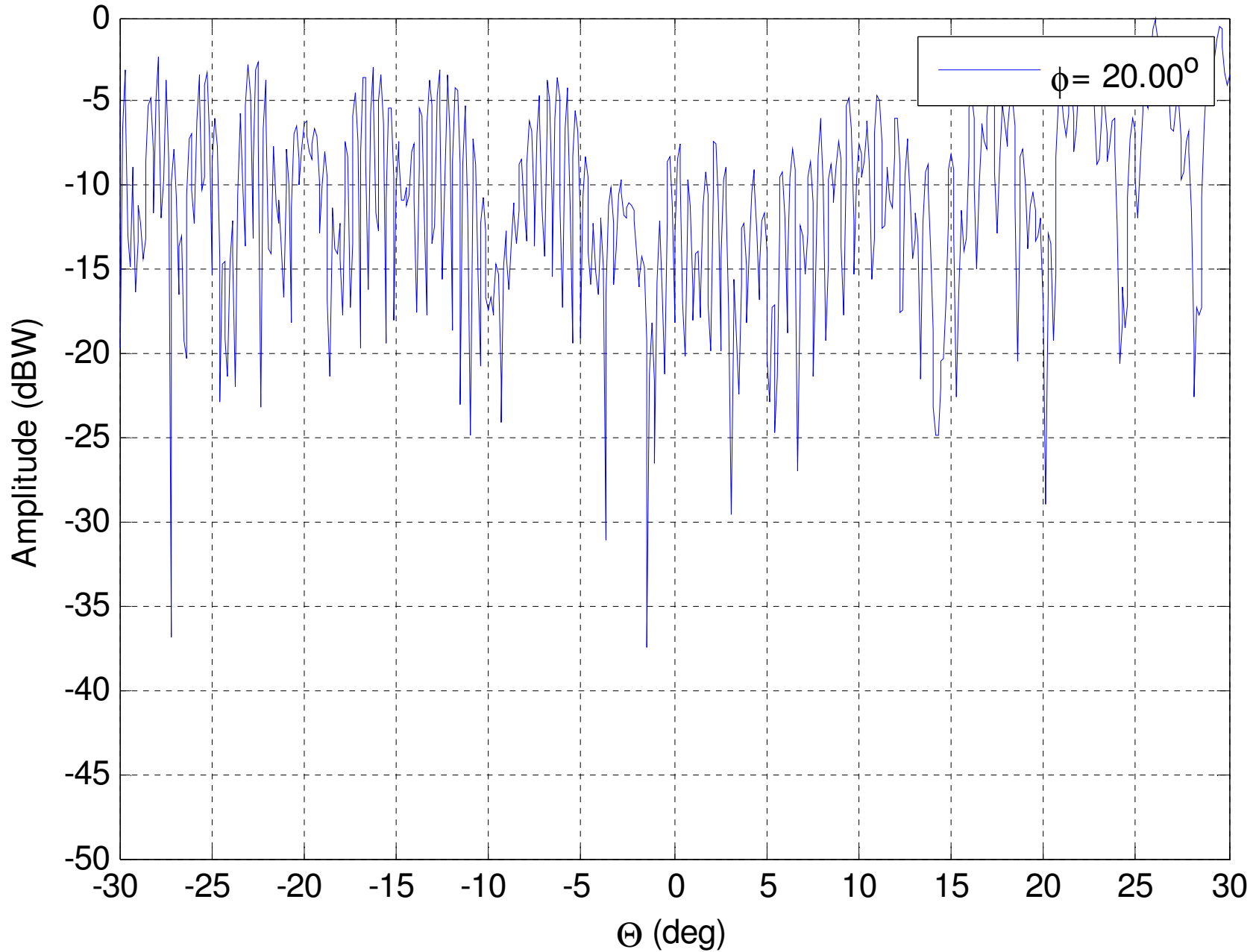
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -11.10 dBW, Date: 15-Dec-2011



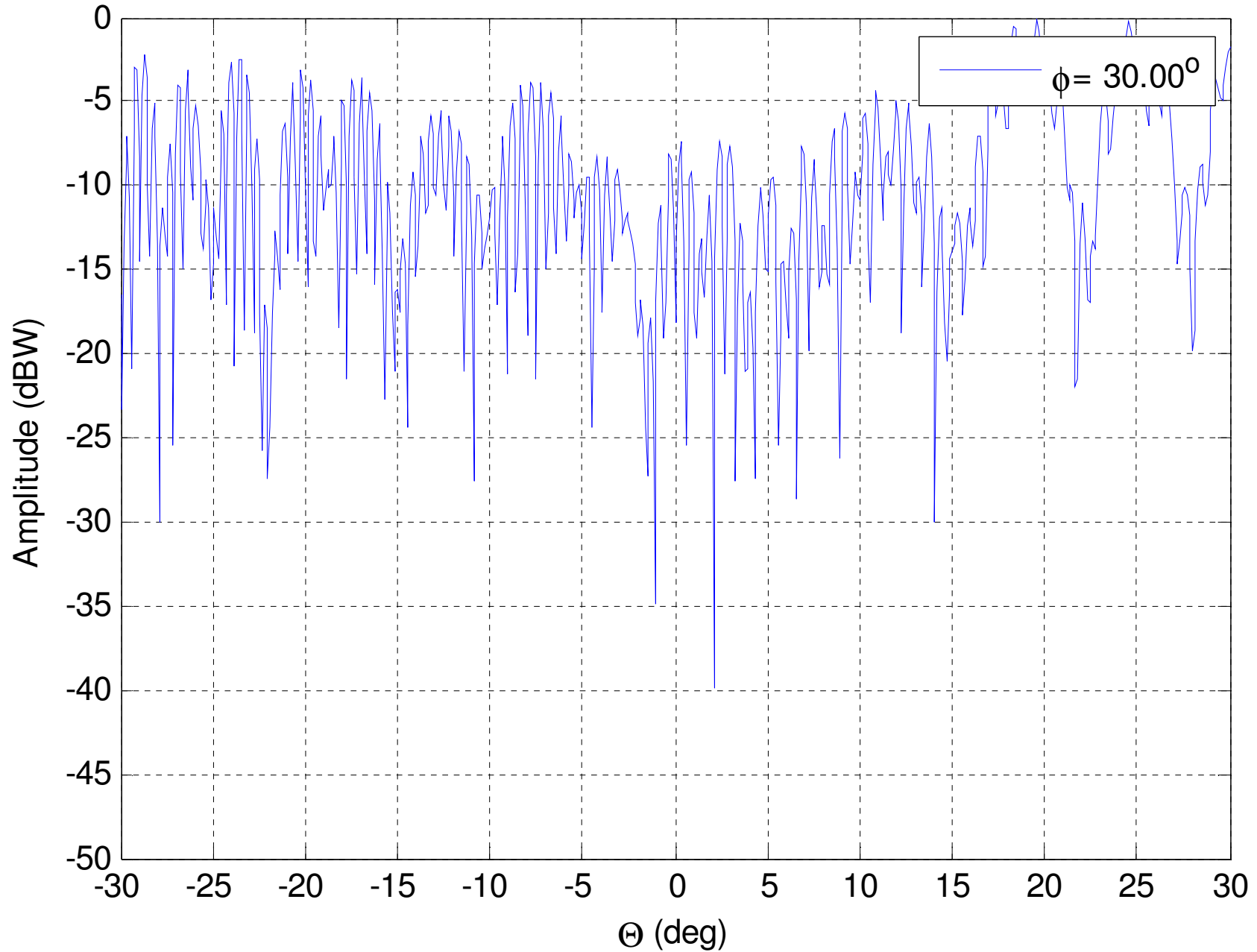
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.42 dBW, Date: 15-Dec-2011



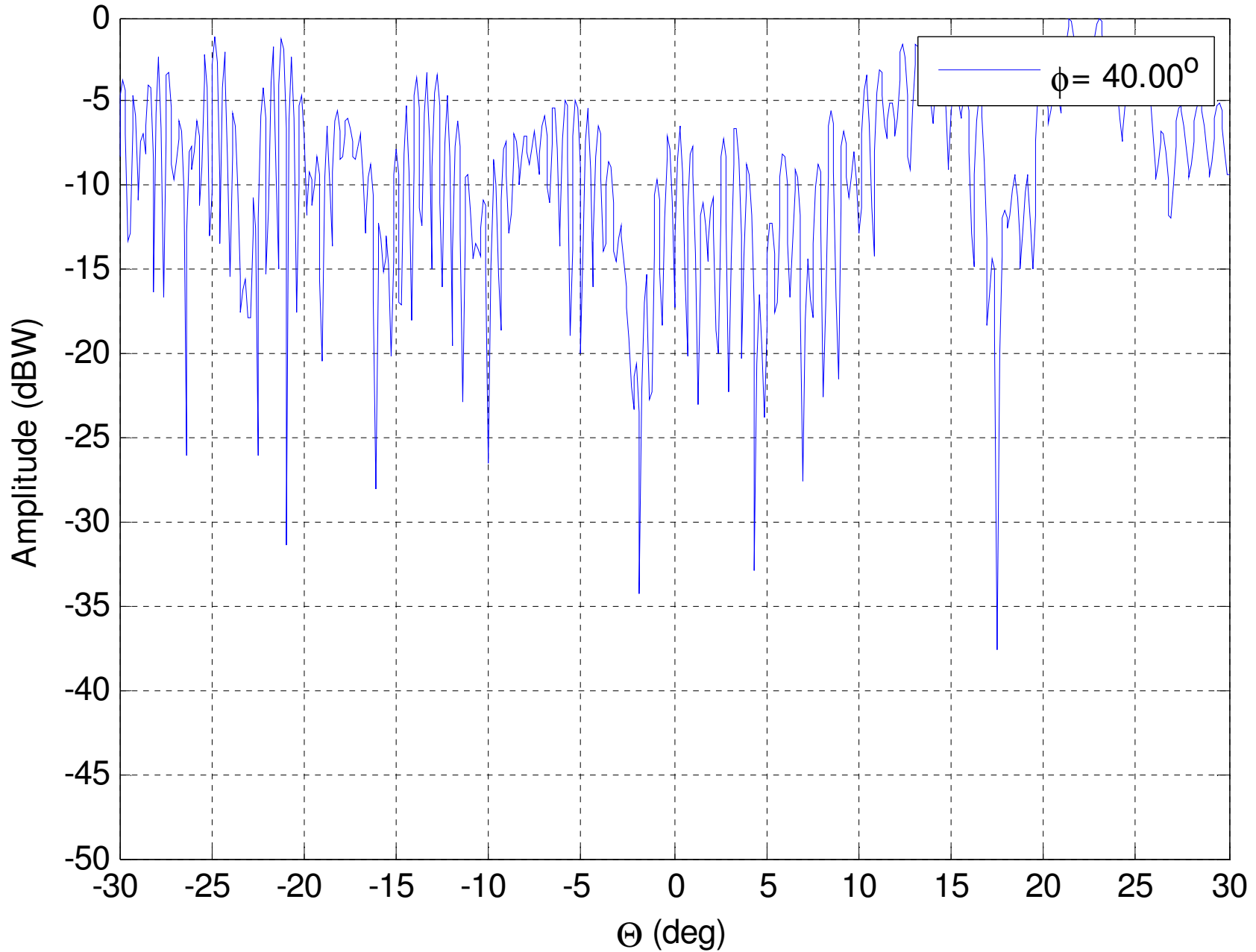
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -8.43 dBW, Date: 15-Dec-2011



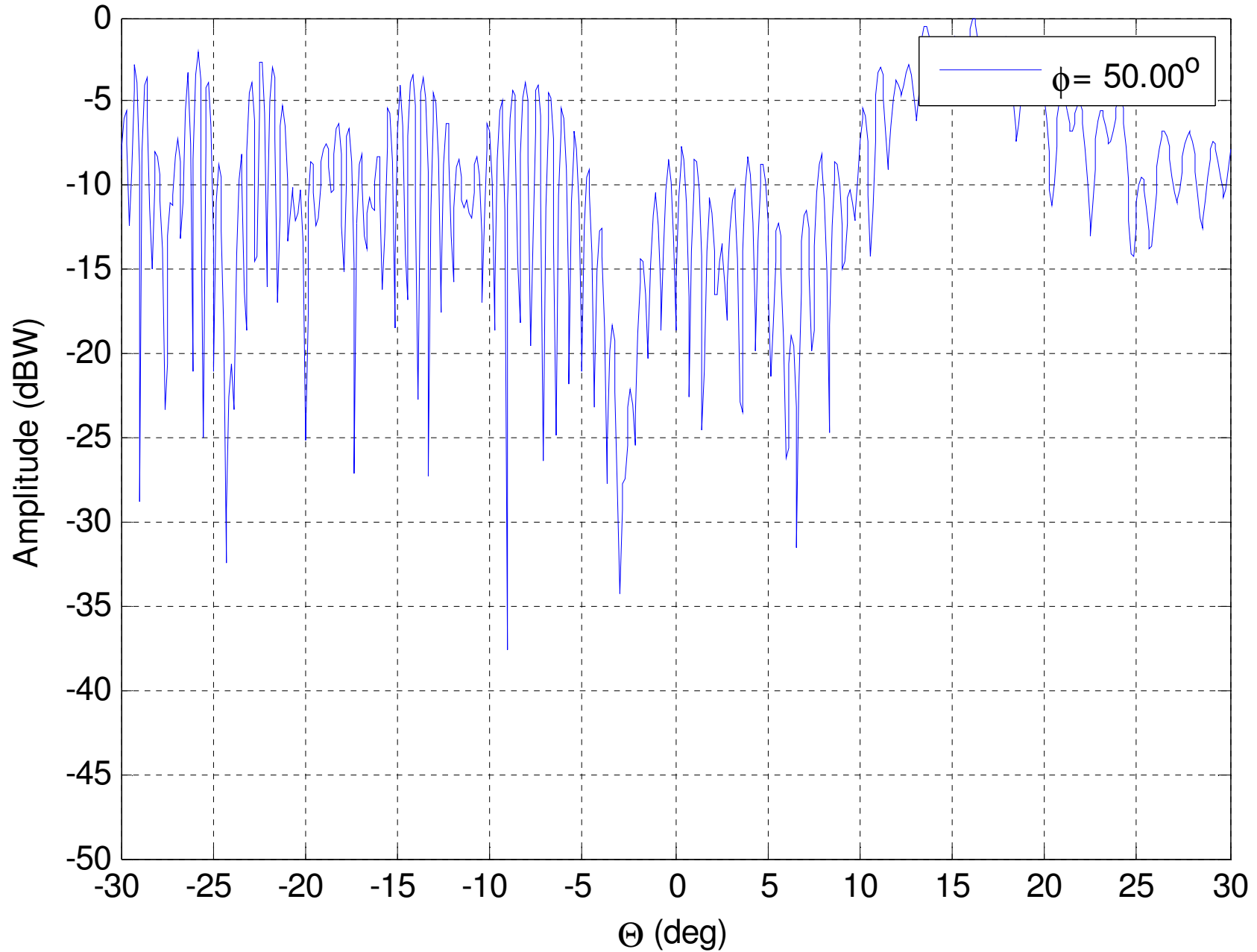
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -9.35 dBW, Date: 15-Dec-2011



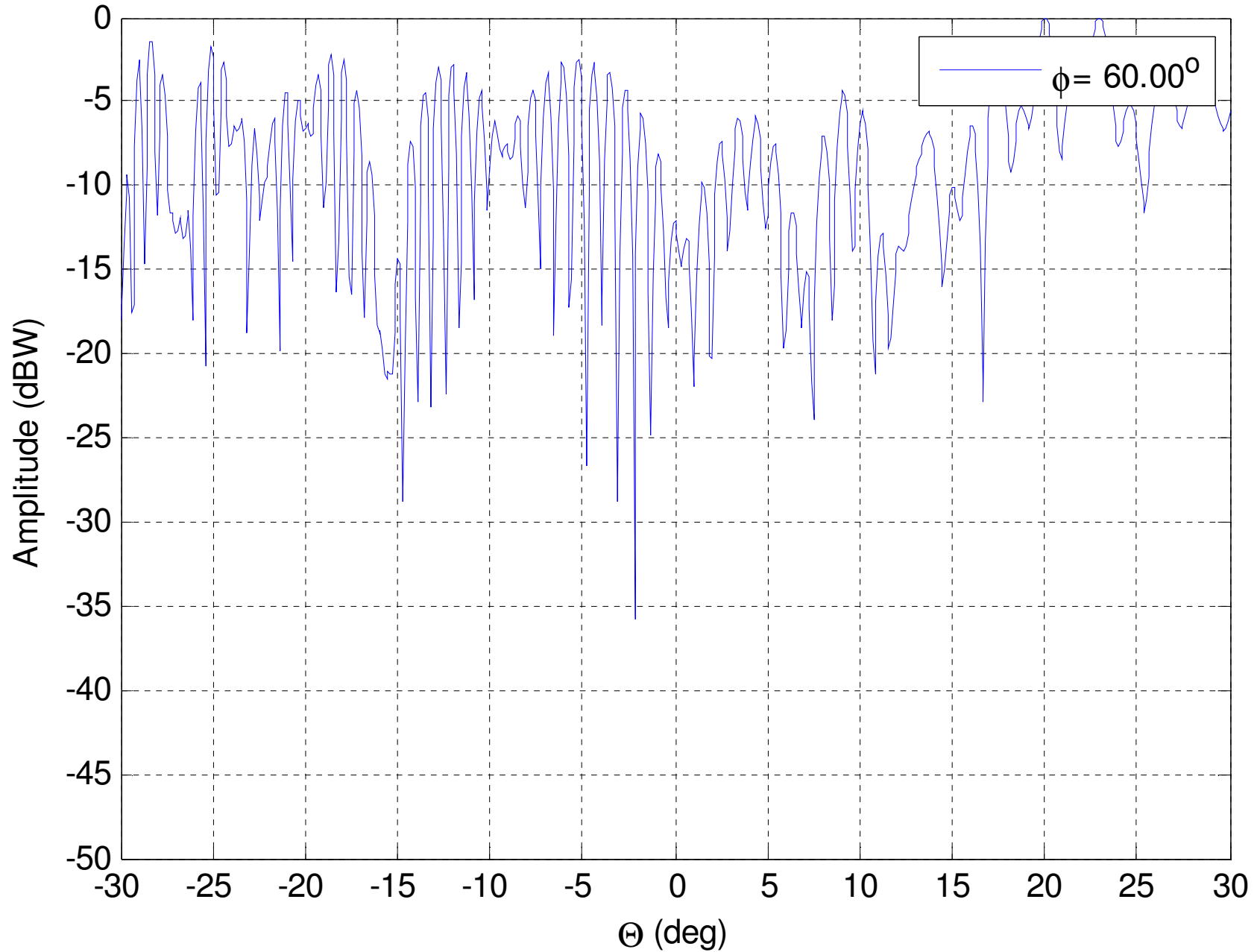
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -8.00 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

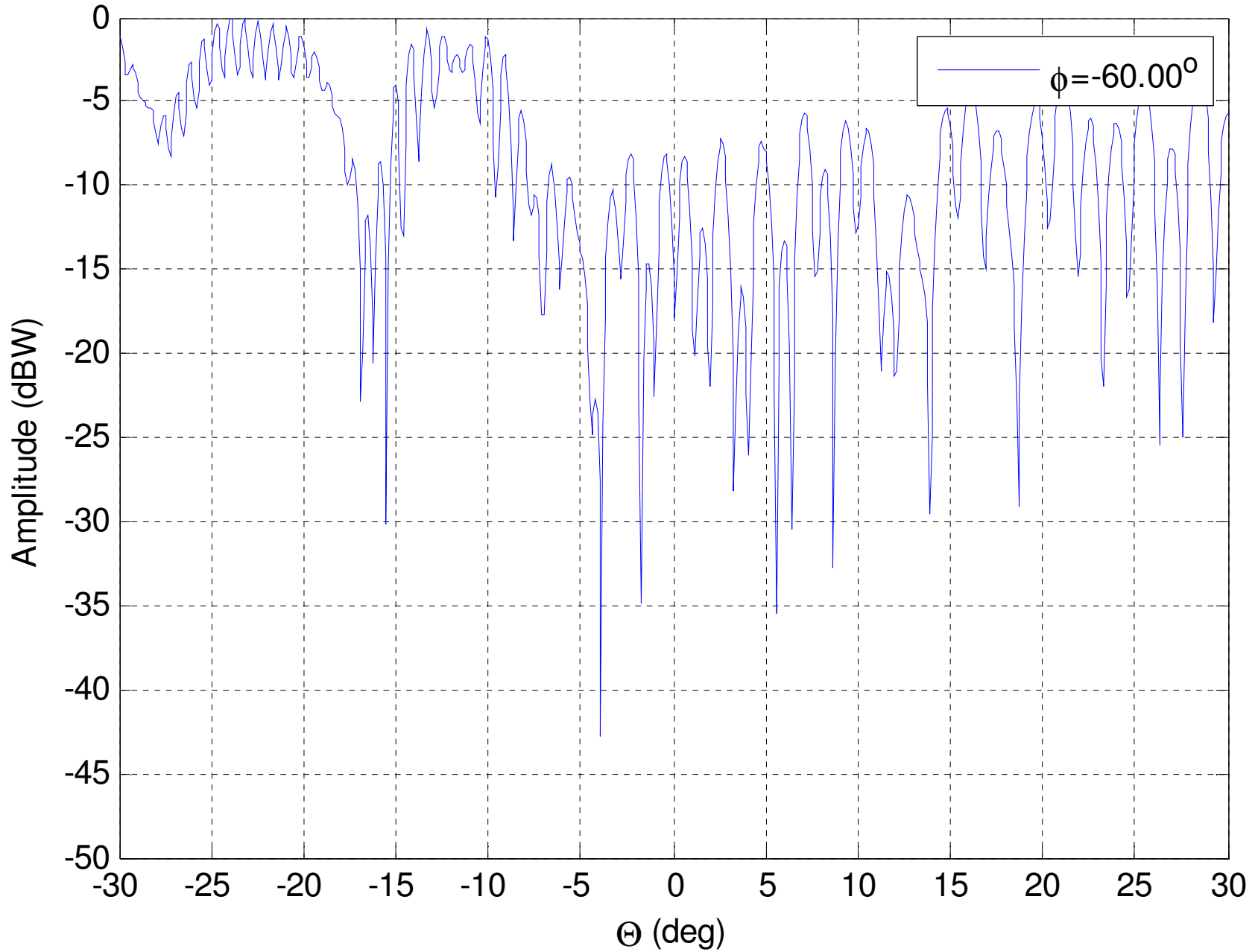
Input file: tx-17.7-rhcp-60.cut, Peak: -10.18 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

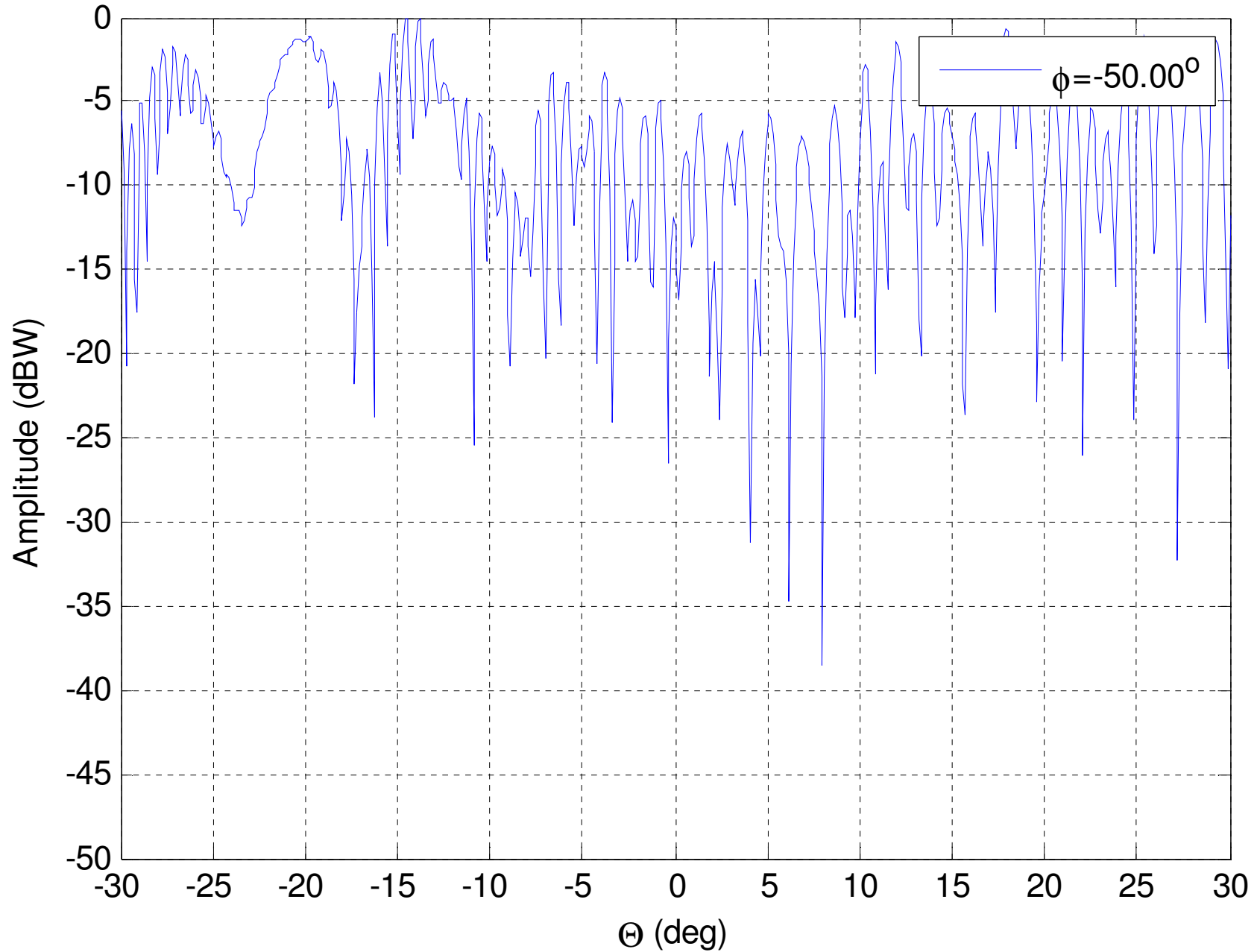
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -8.88 dBW, Date: 15-Dec-2011



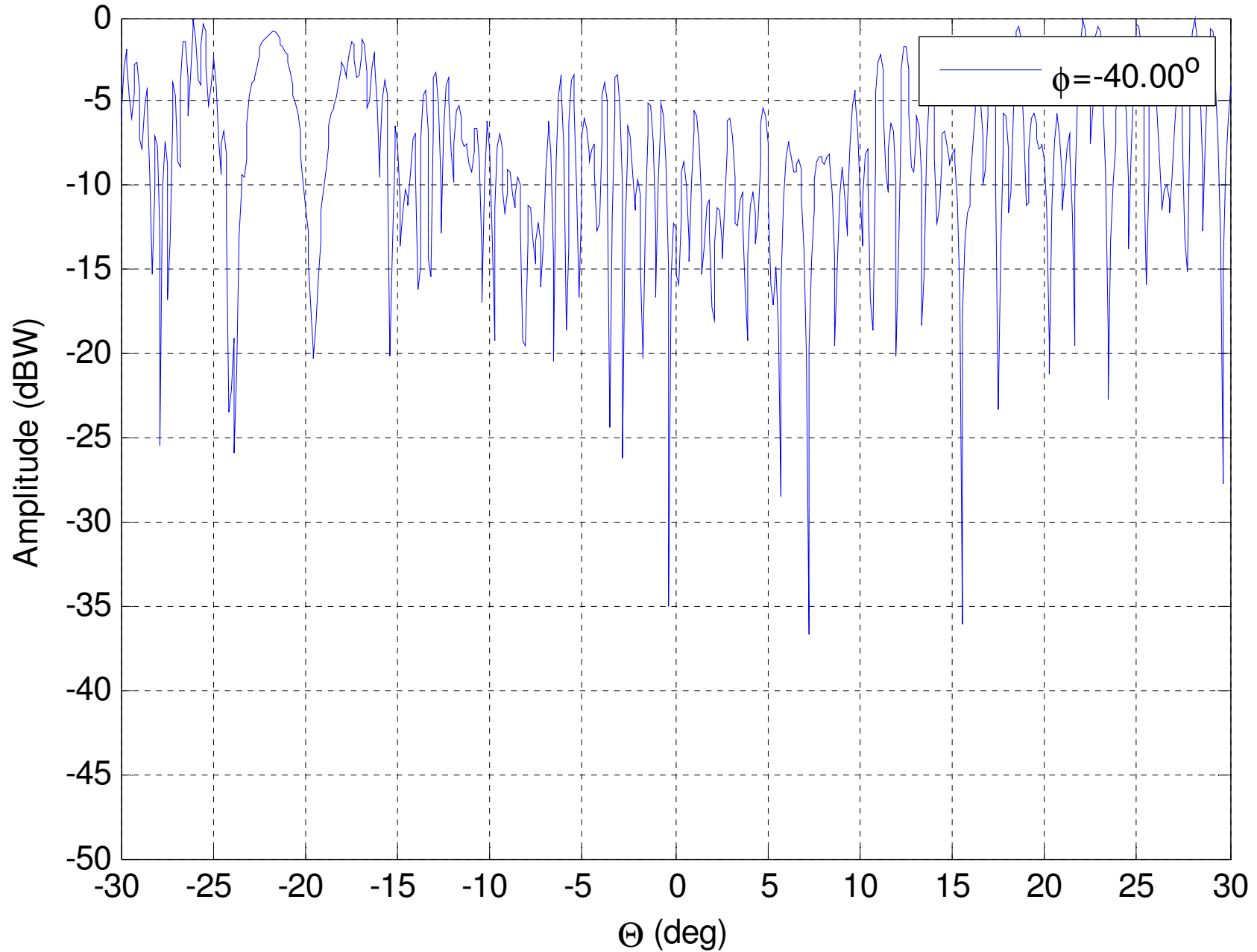
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.52 dBW, Date: 15-Dec-2011



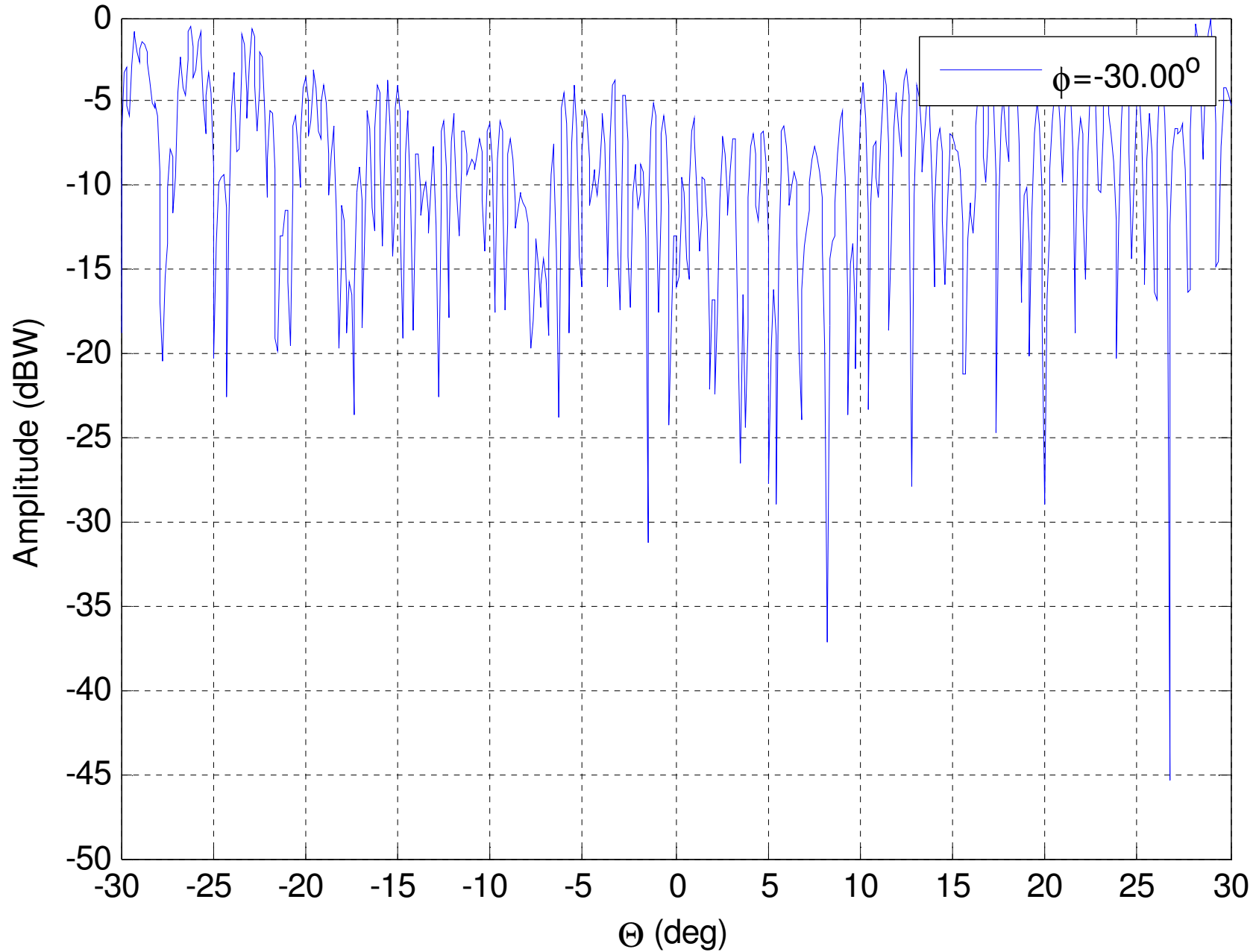
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -9.55 dBW, Date: 15-Dec-2011



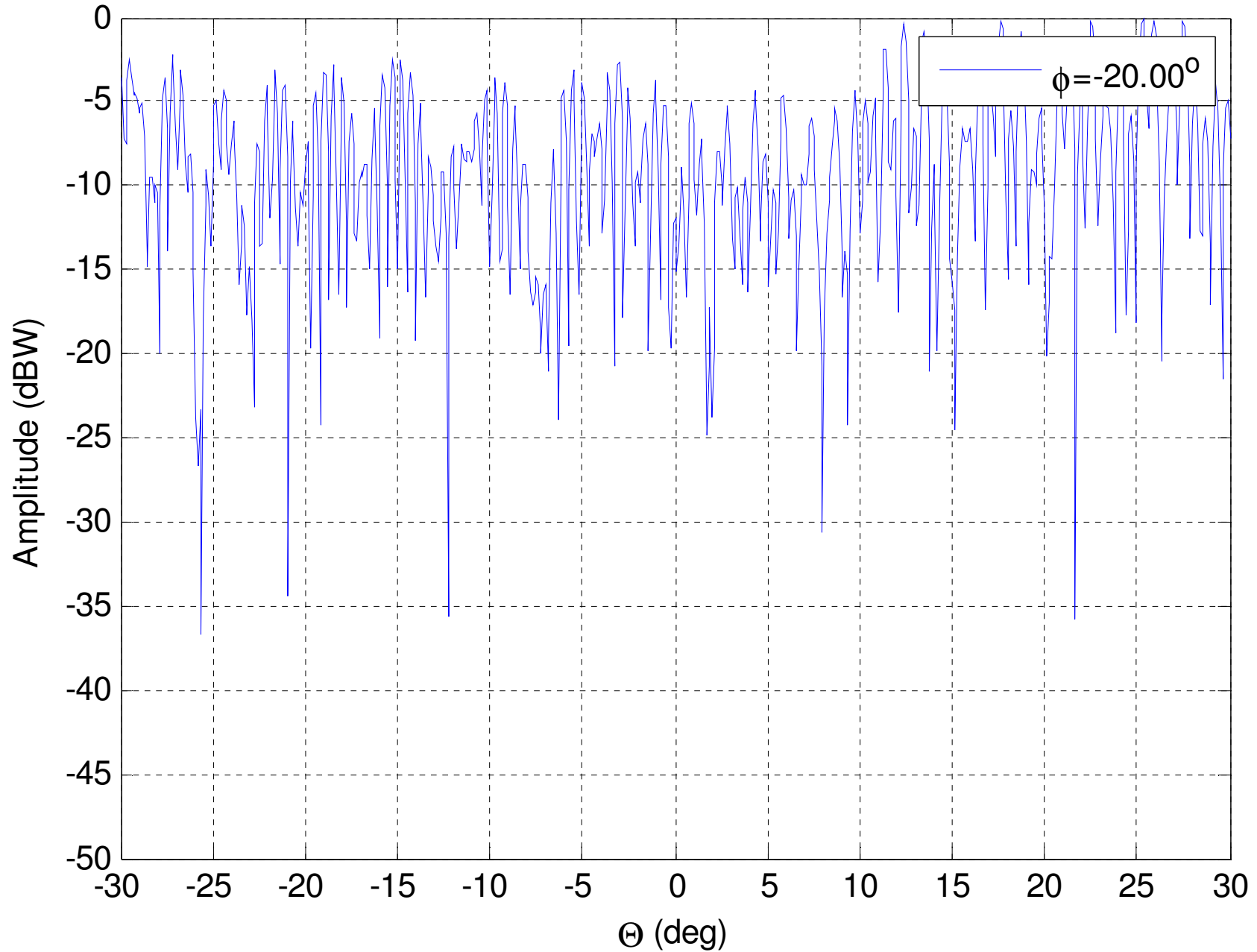
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -9.04 dBW, Date: 15-Dec-2011



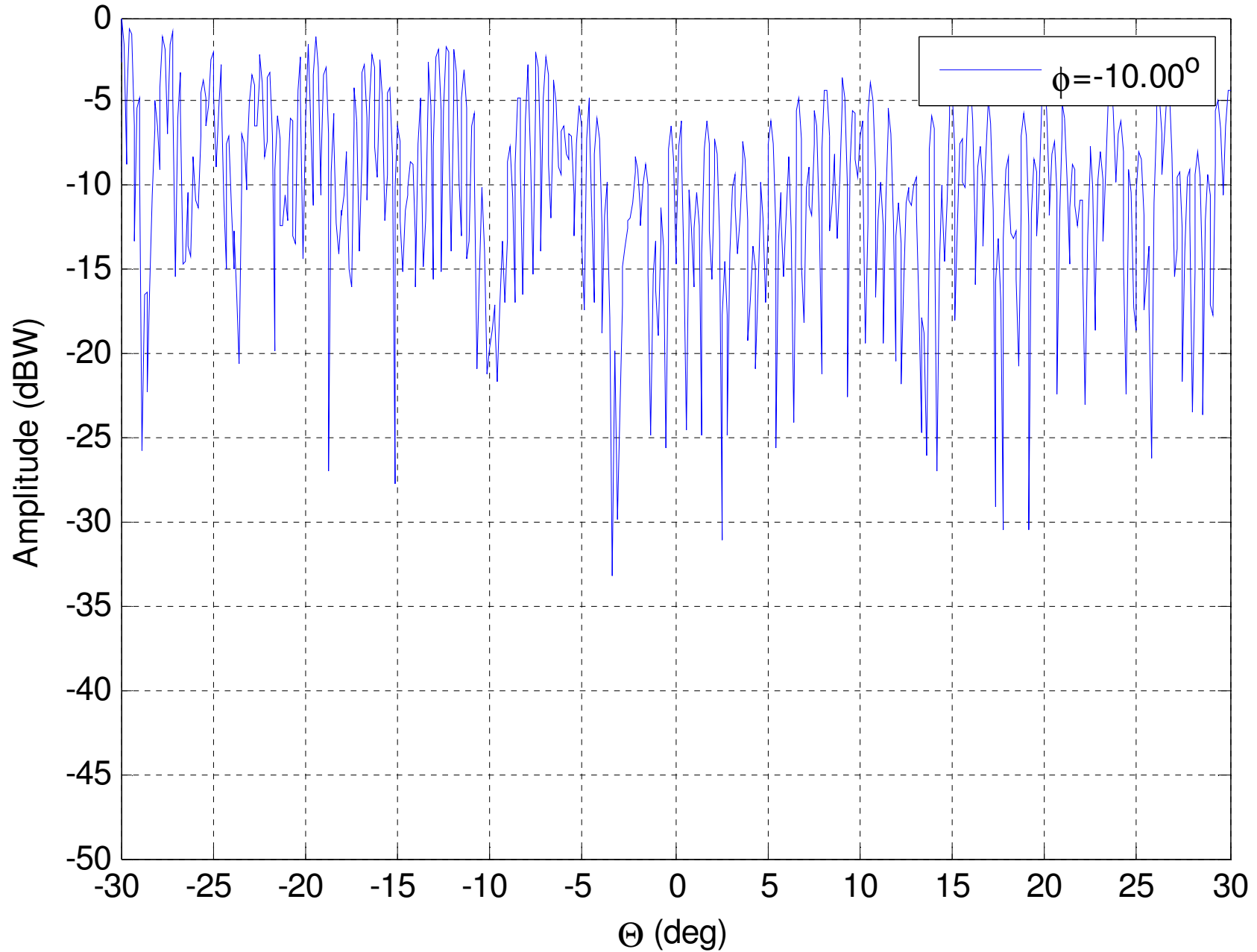
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -10.12 dBW, Date: 15-Dec-2011



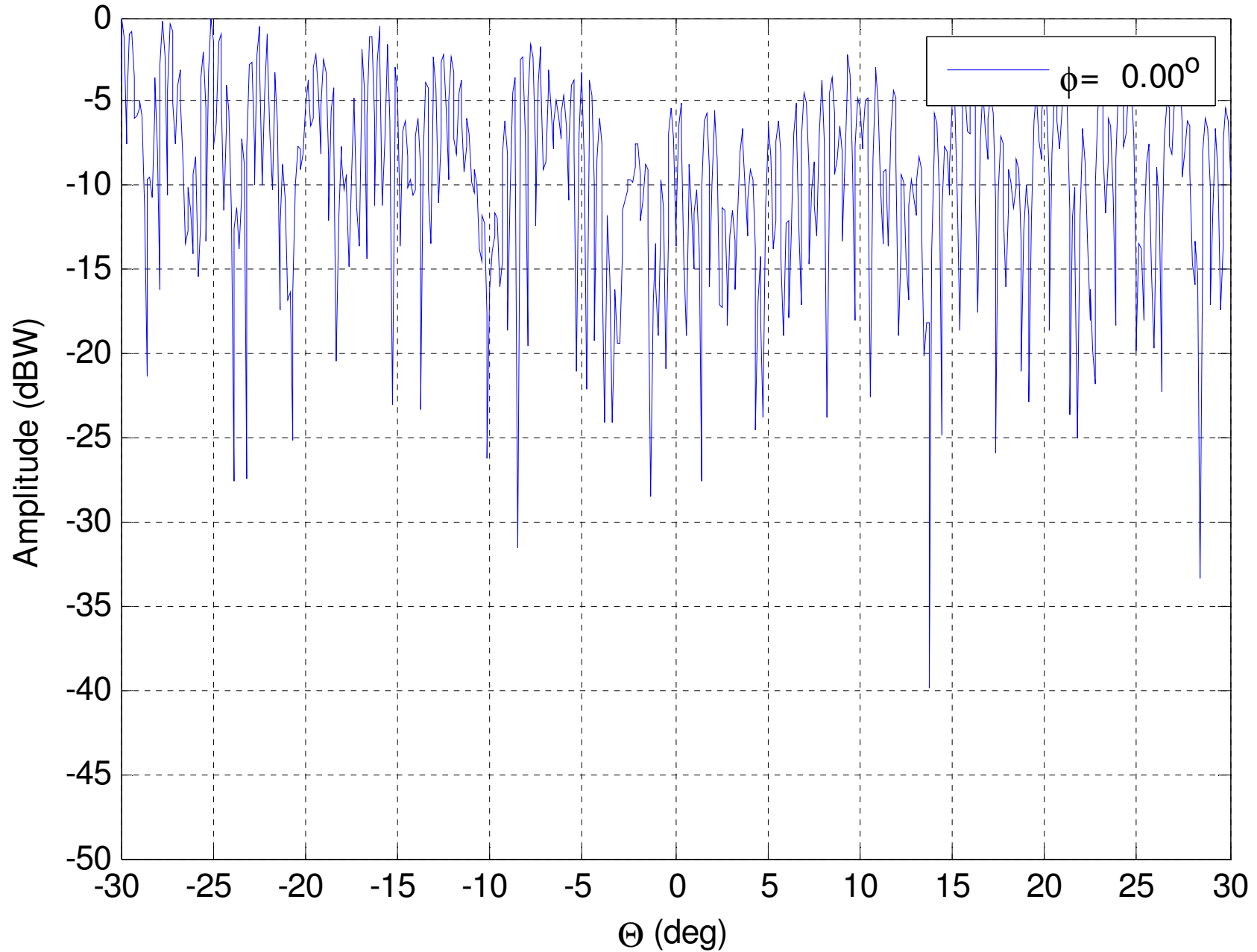
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -9.83 dBW, Date: 15-Dec-2011



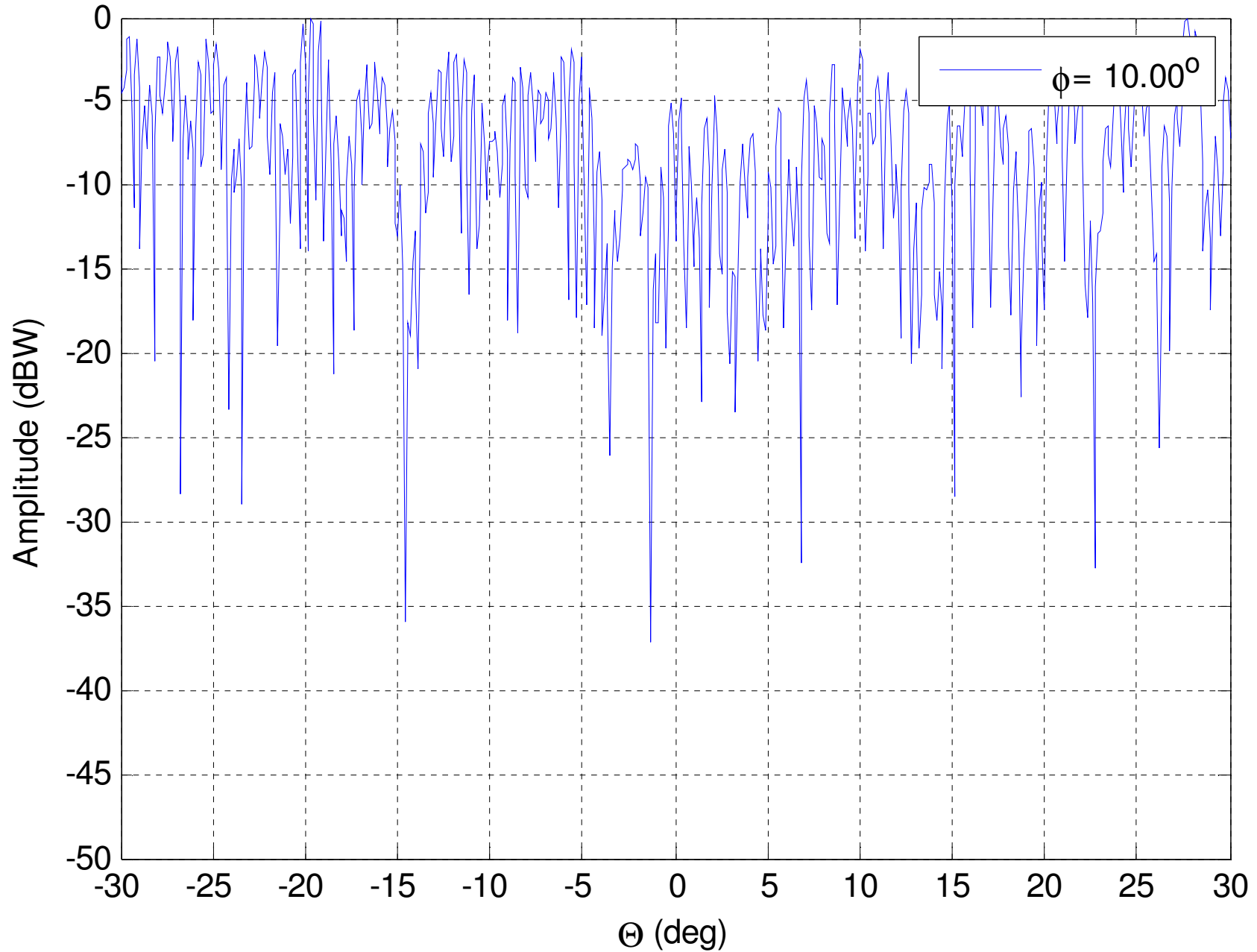
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -10.88 dBW, Date: 15-Dec-2011



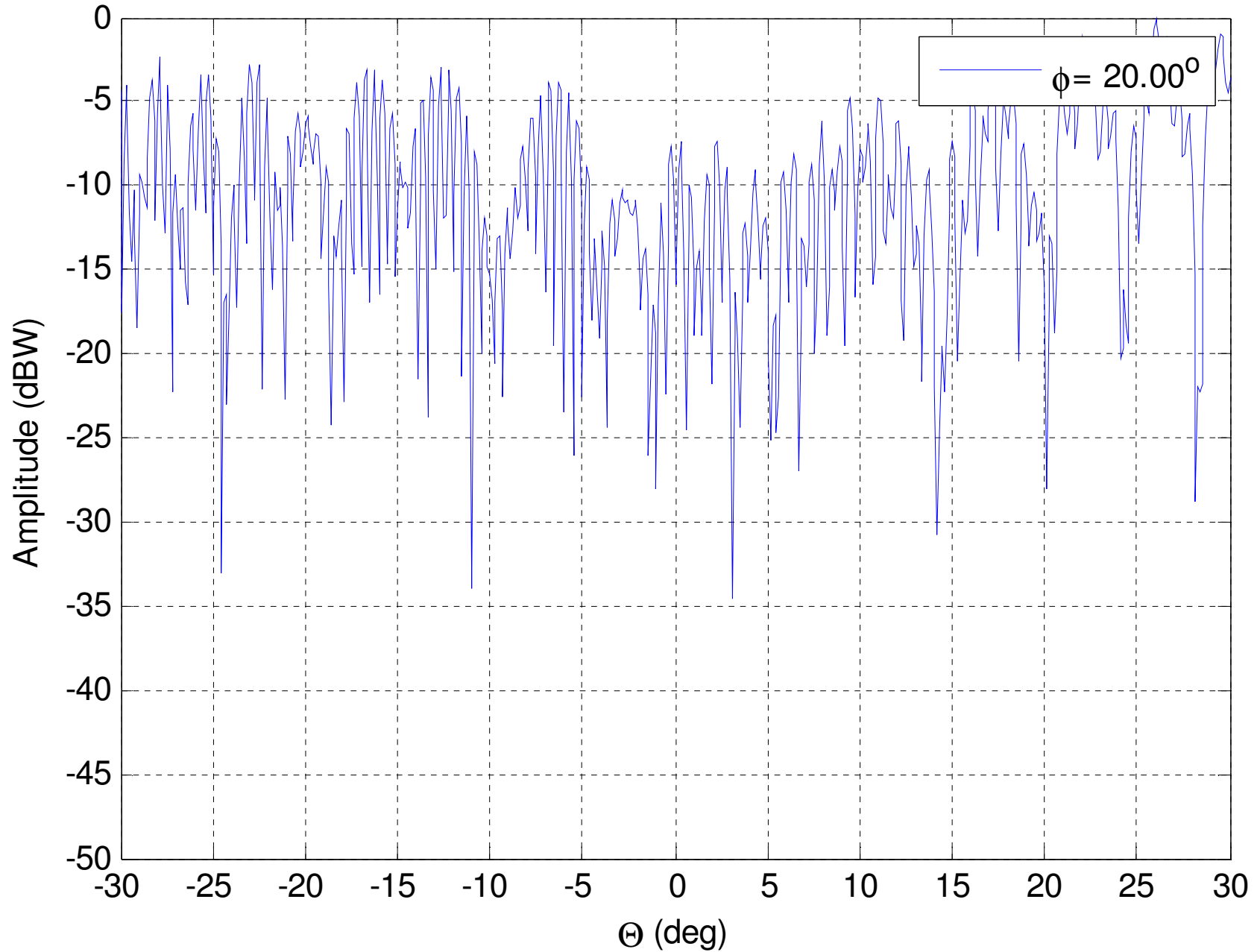
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -11.16 dBW, Date: 15-Dec-2011



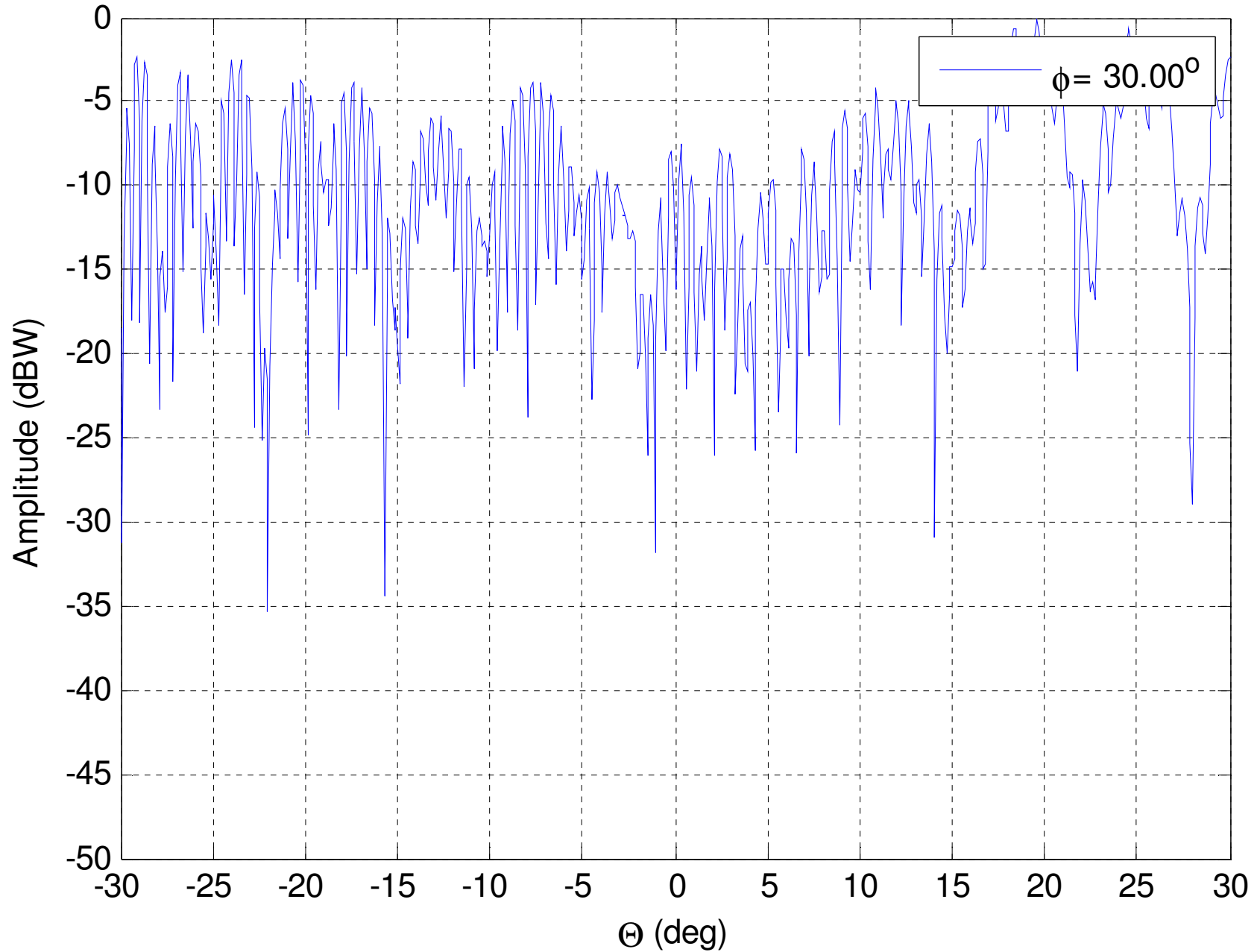
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -8.52 dBW, Date: 15-Dec-2011



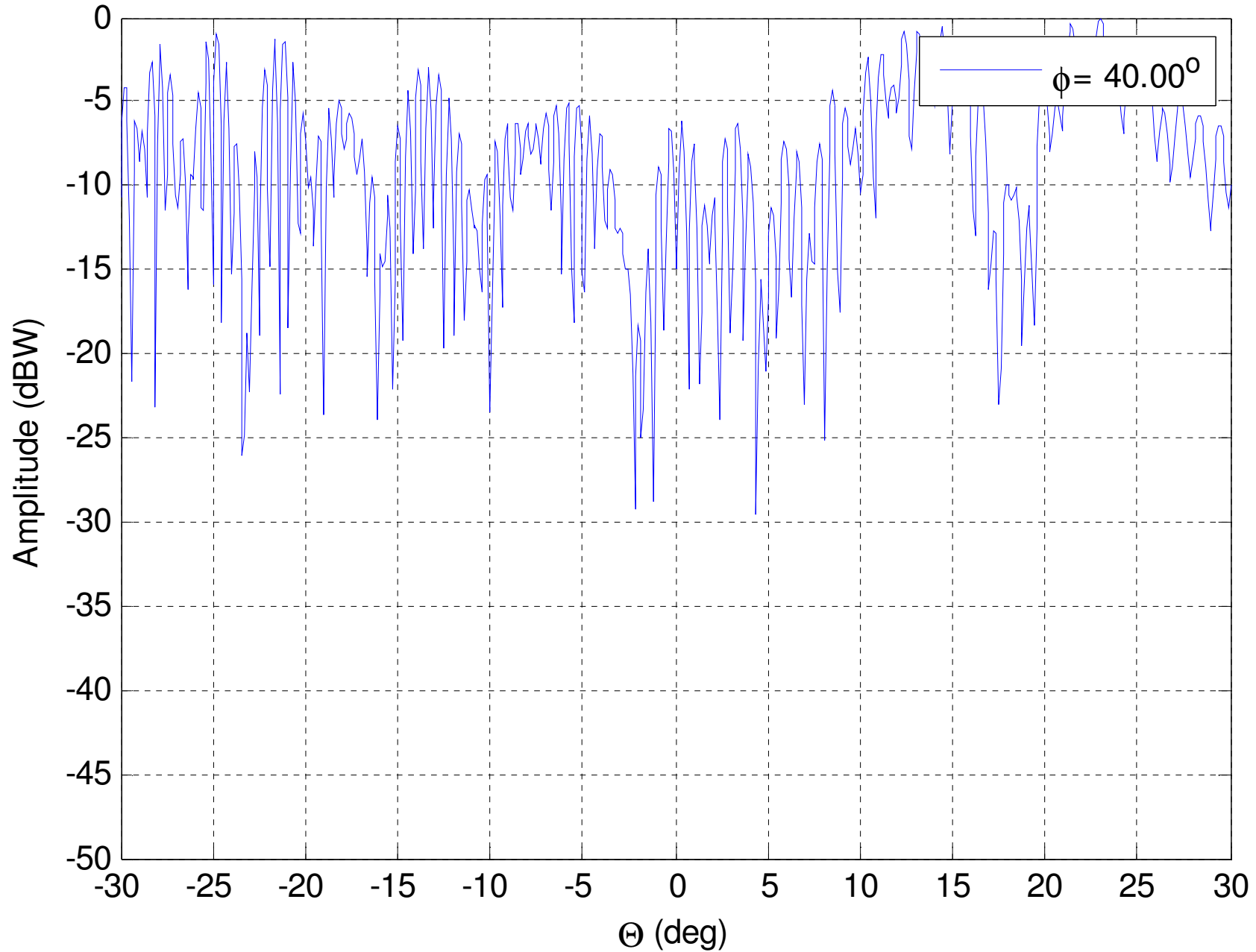
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -8.32 dBW, Date: 15-Dec-2011



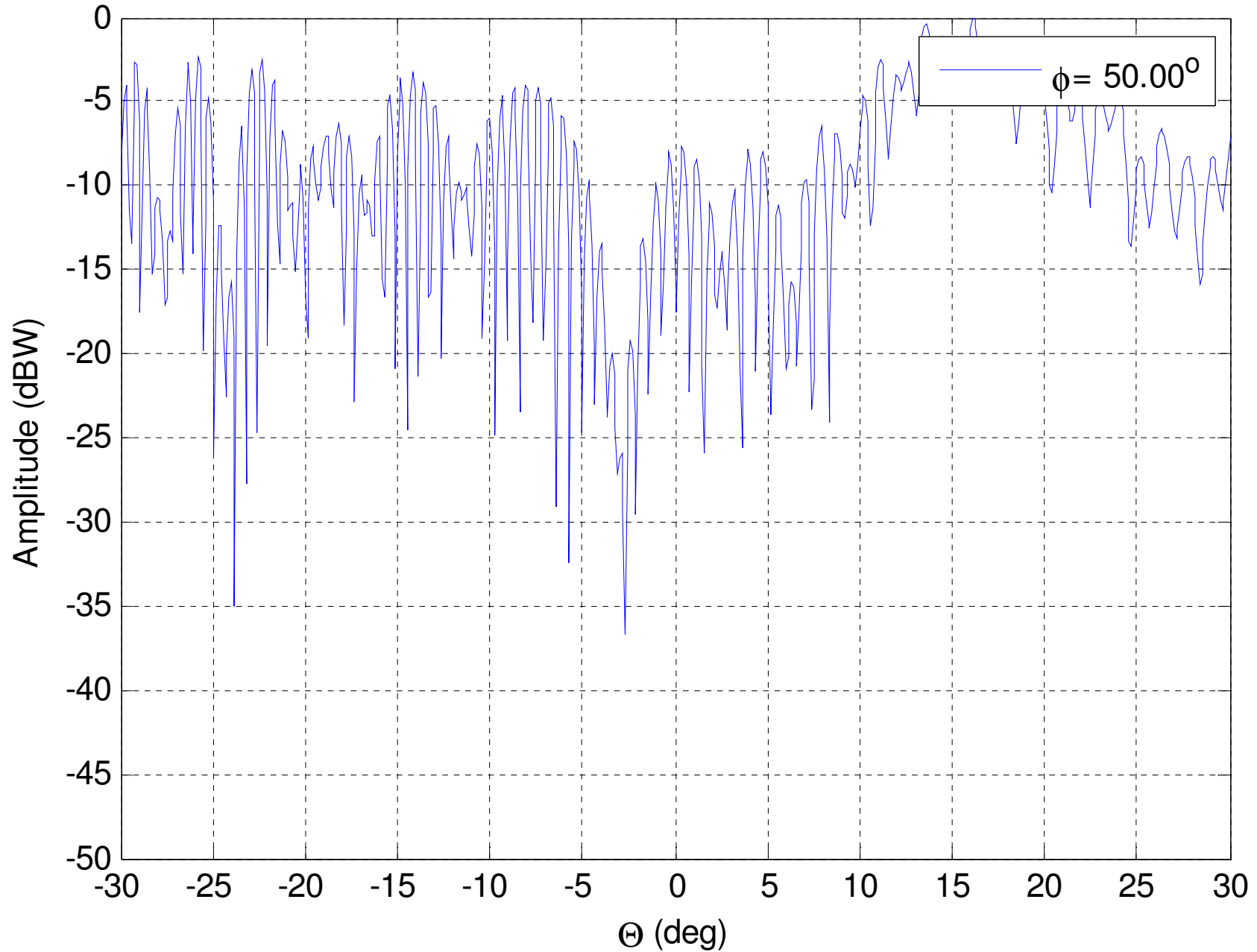
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -9.65 dBW, Date: 15-Dec-2011



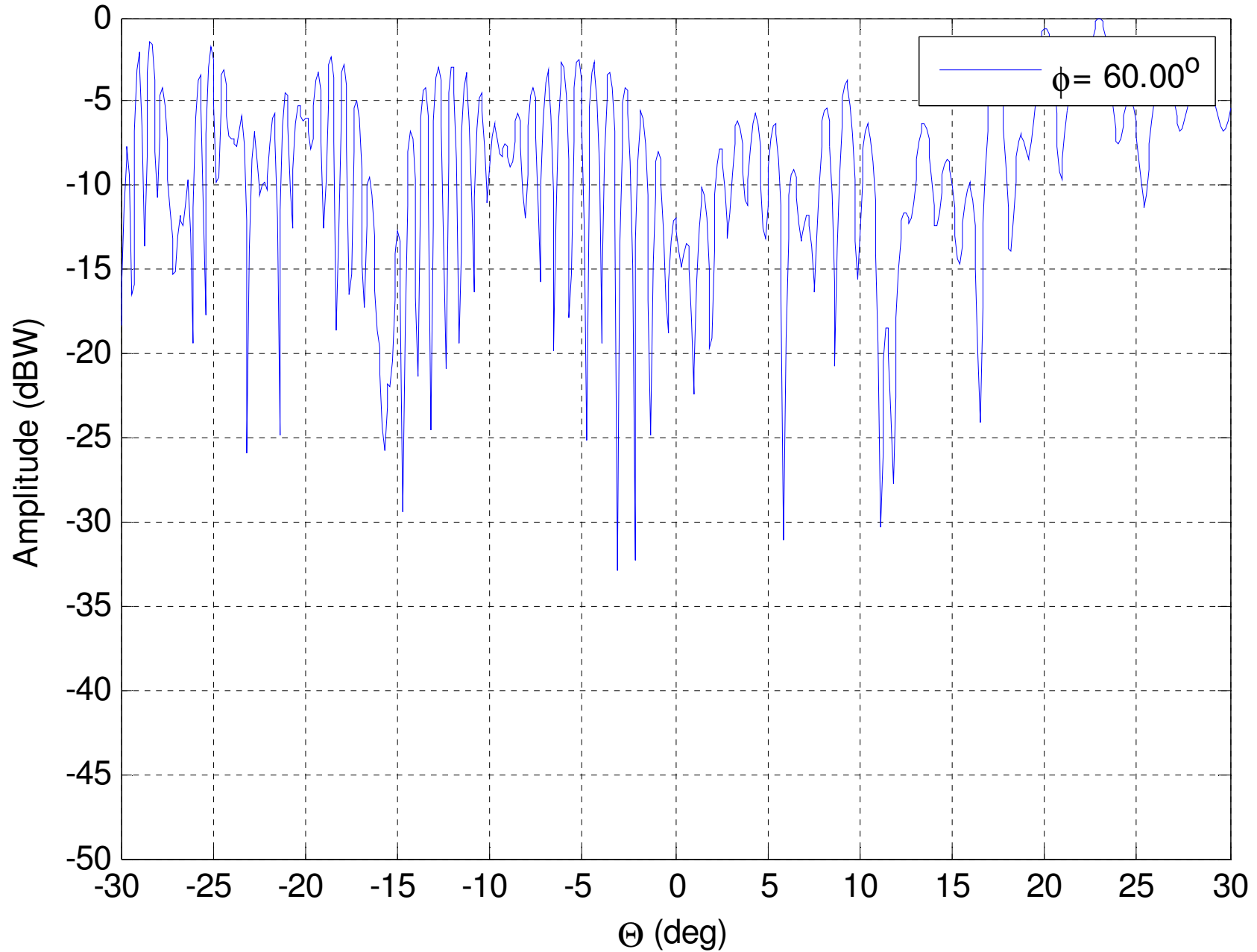
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -8.05 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.16 dBW, Date: 15-Dec-2011



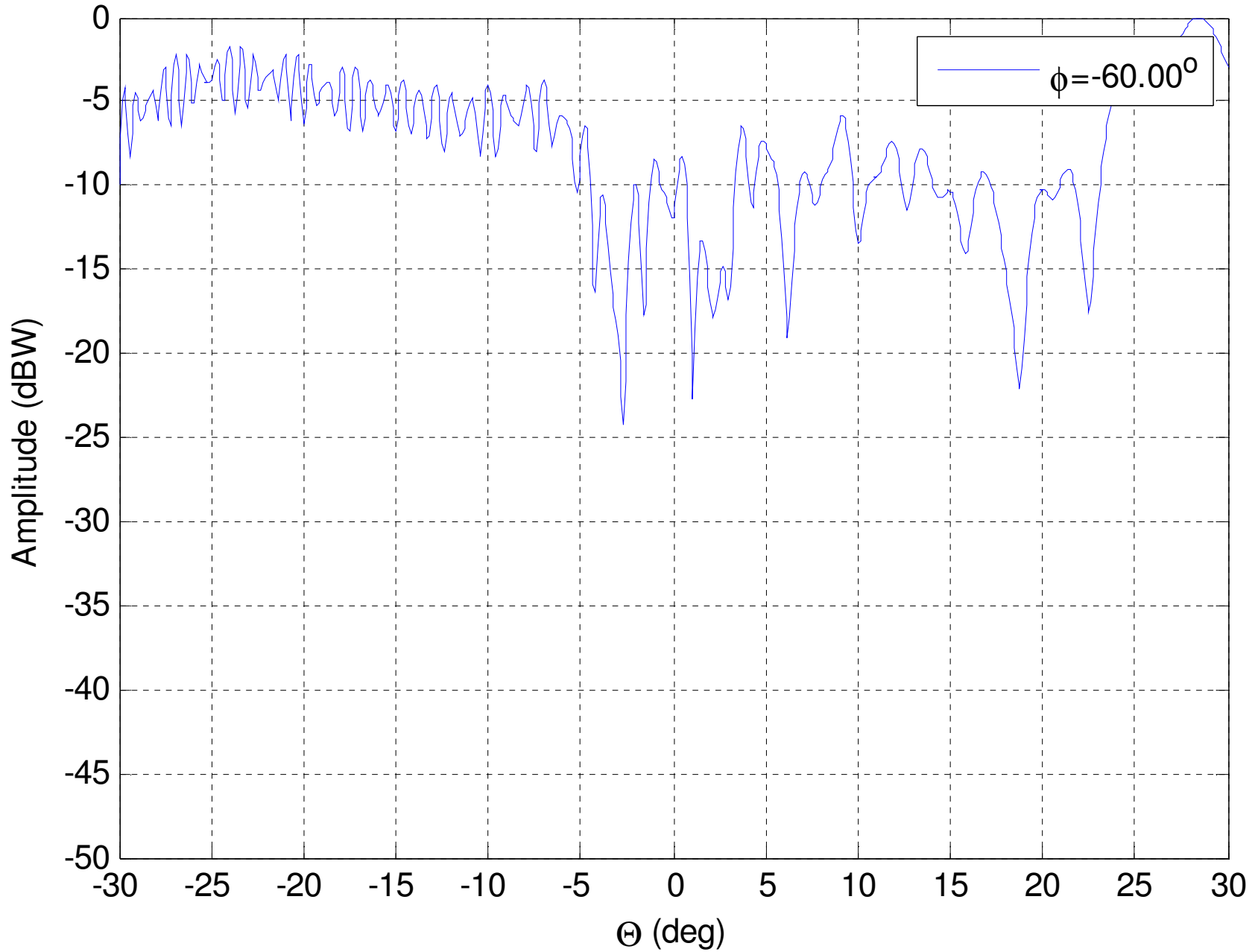
Spot Beam23, +X Axis Plots

- 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

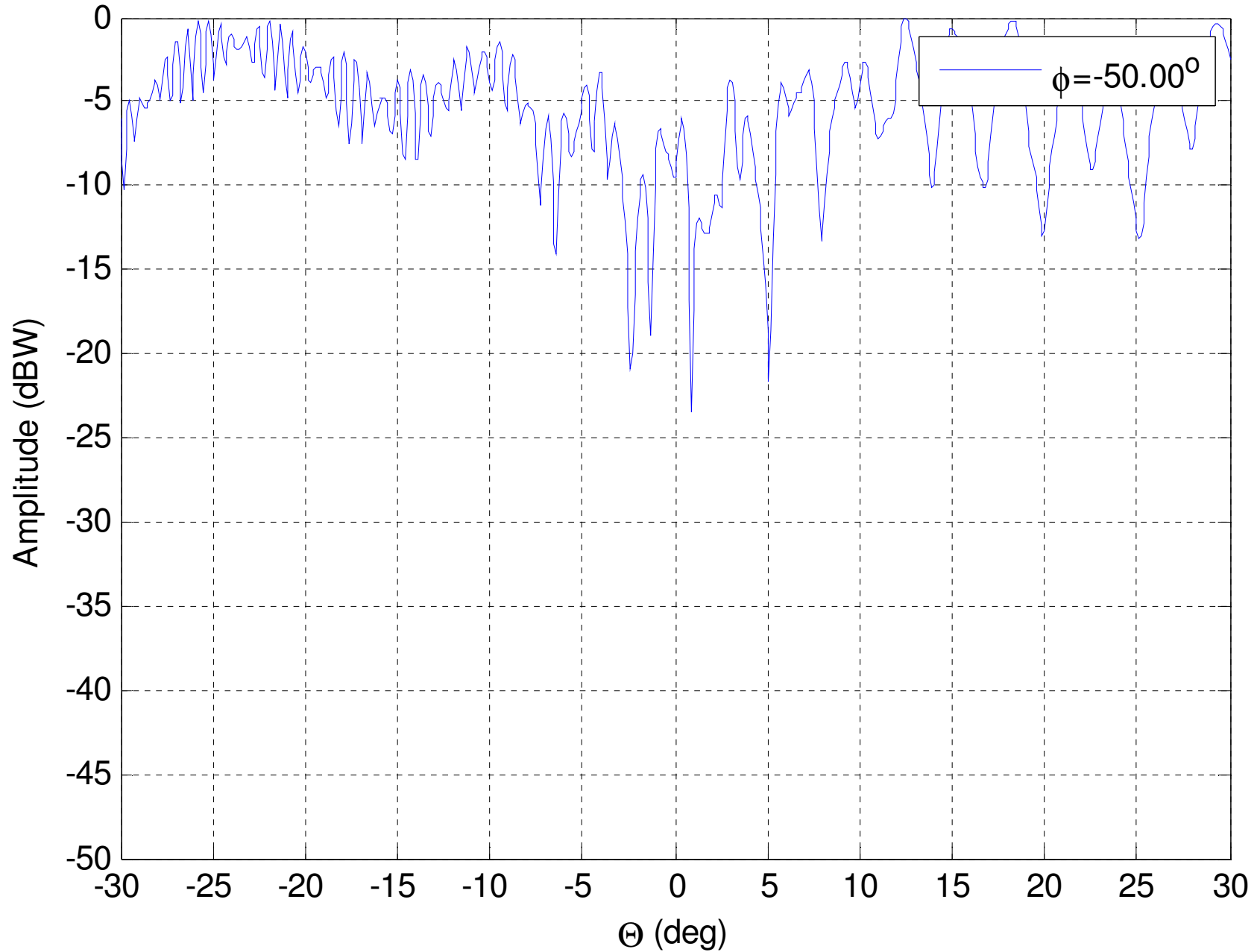
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -8.59 dBW, Date: 15-Dec-2011



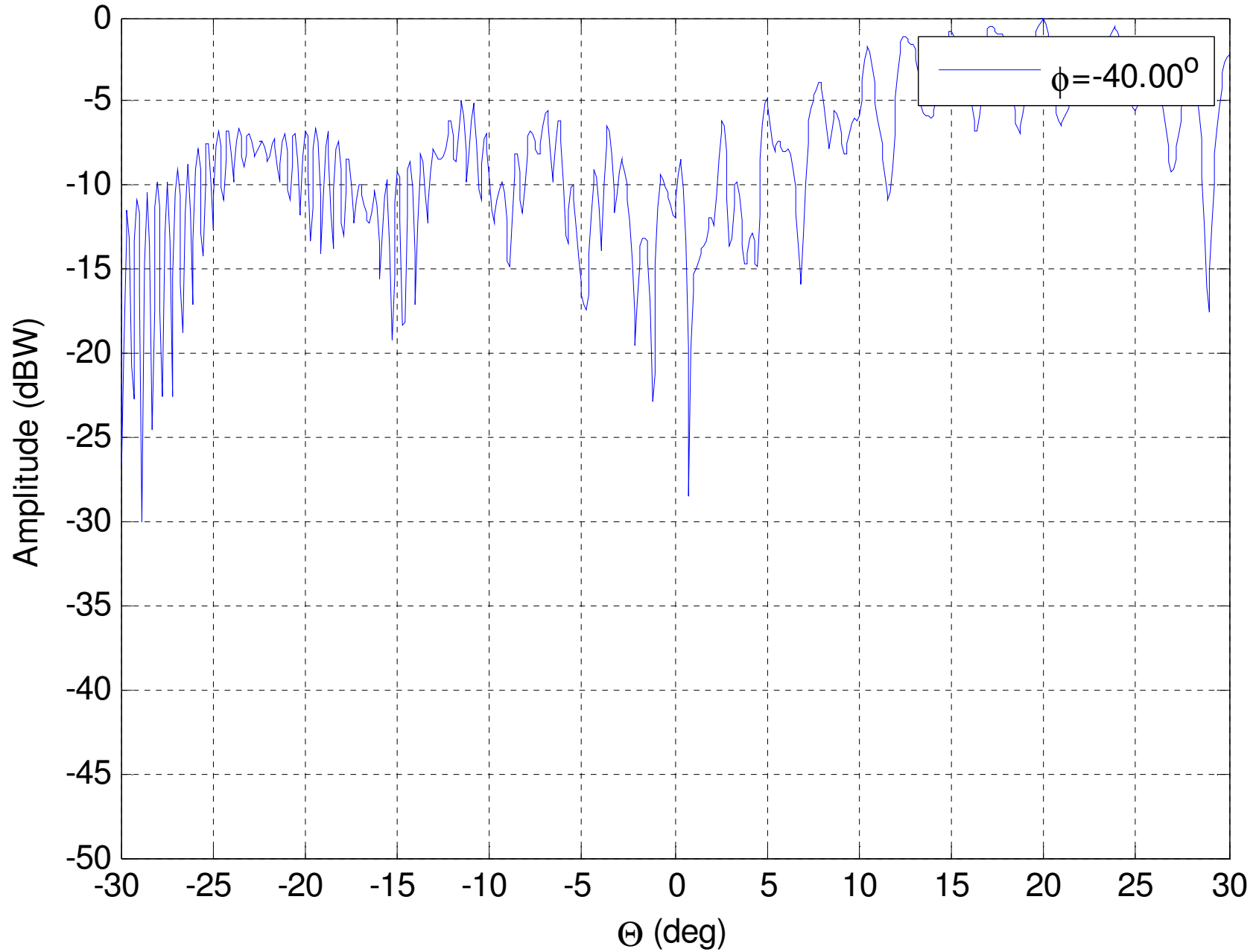
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -11.00 dBW, Date: 15-Dec-2011



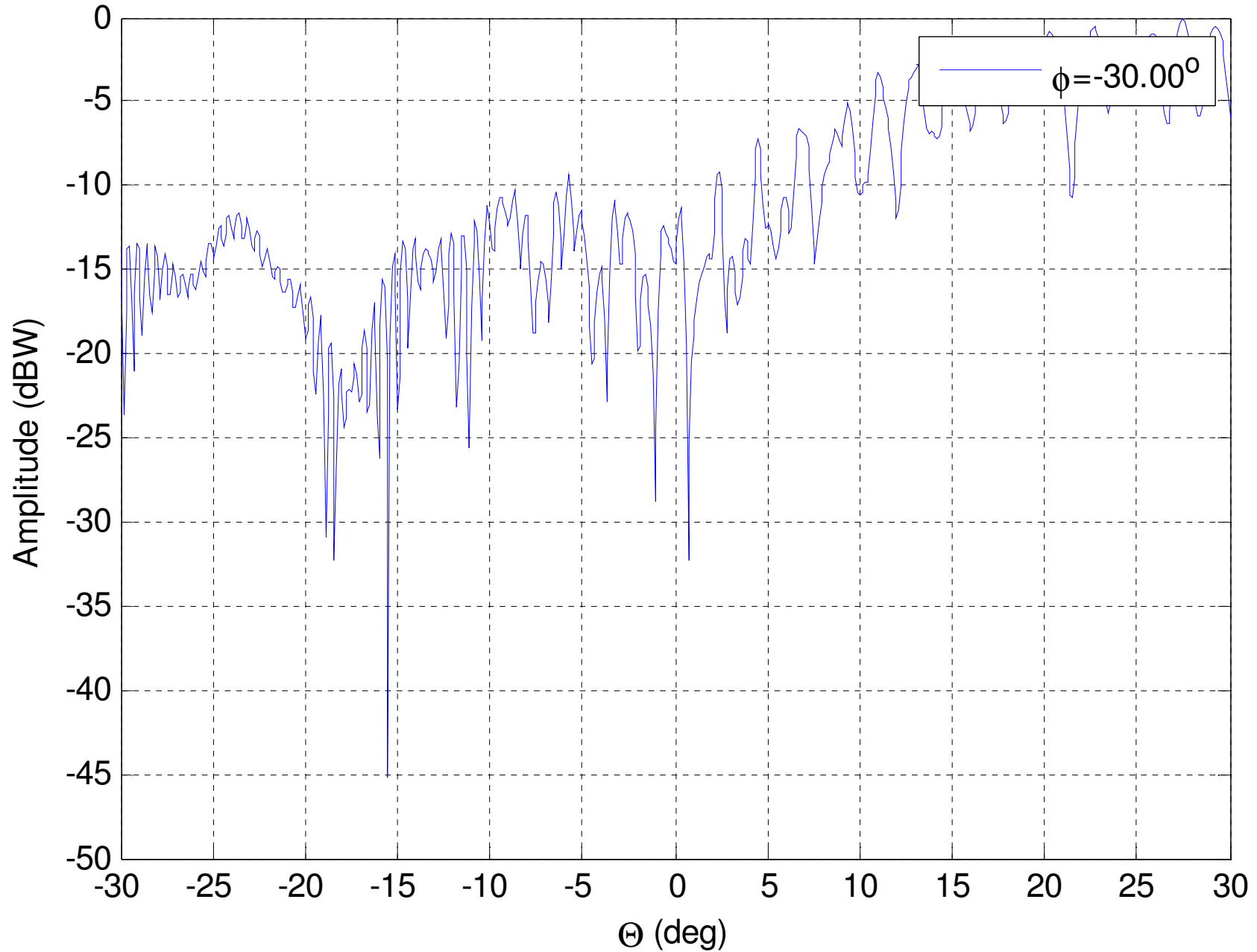
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -8.61 dBW, Date: 15-Dec-2011



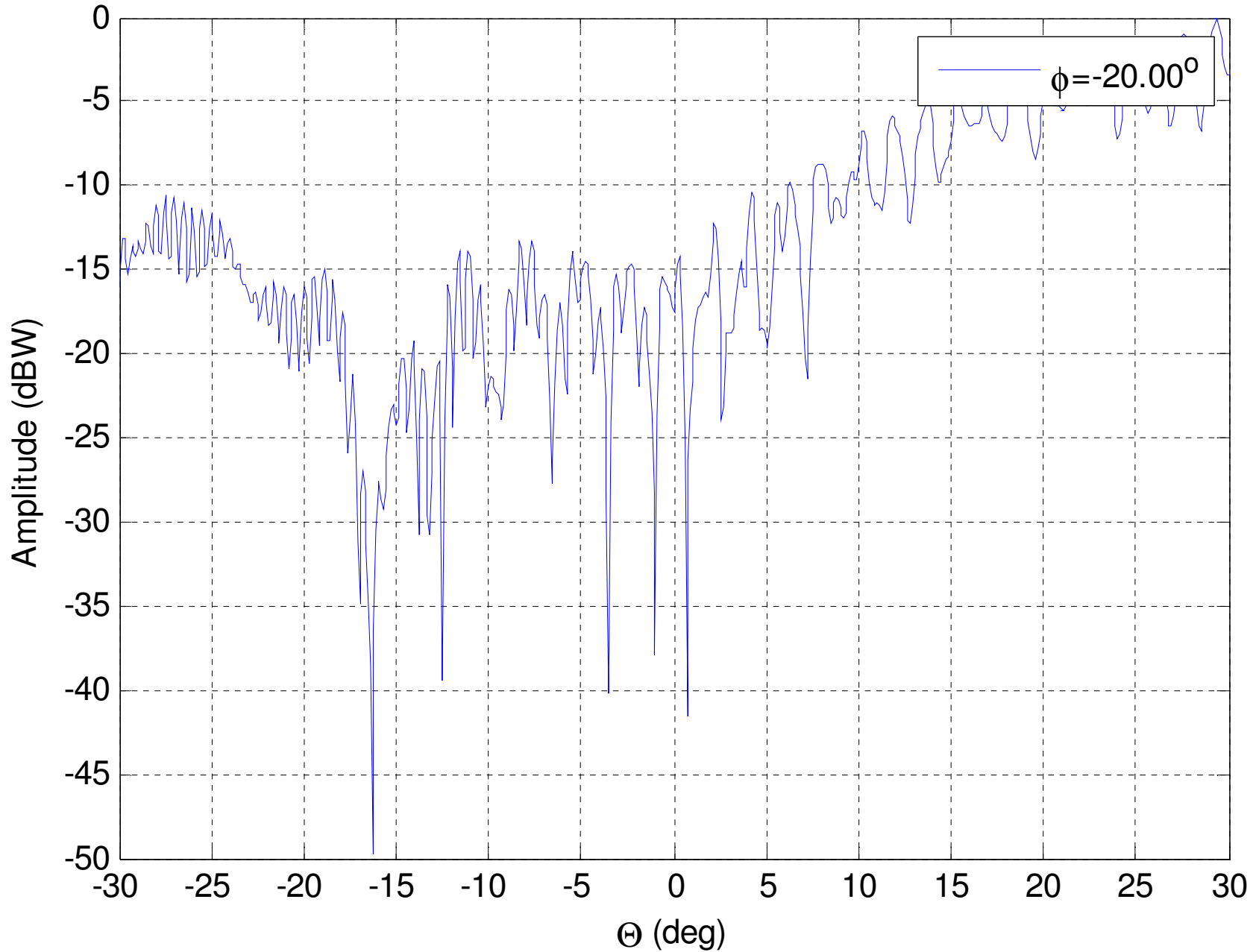
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -5.85 dBW, Date: 15-Dec-2011



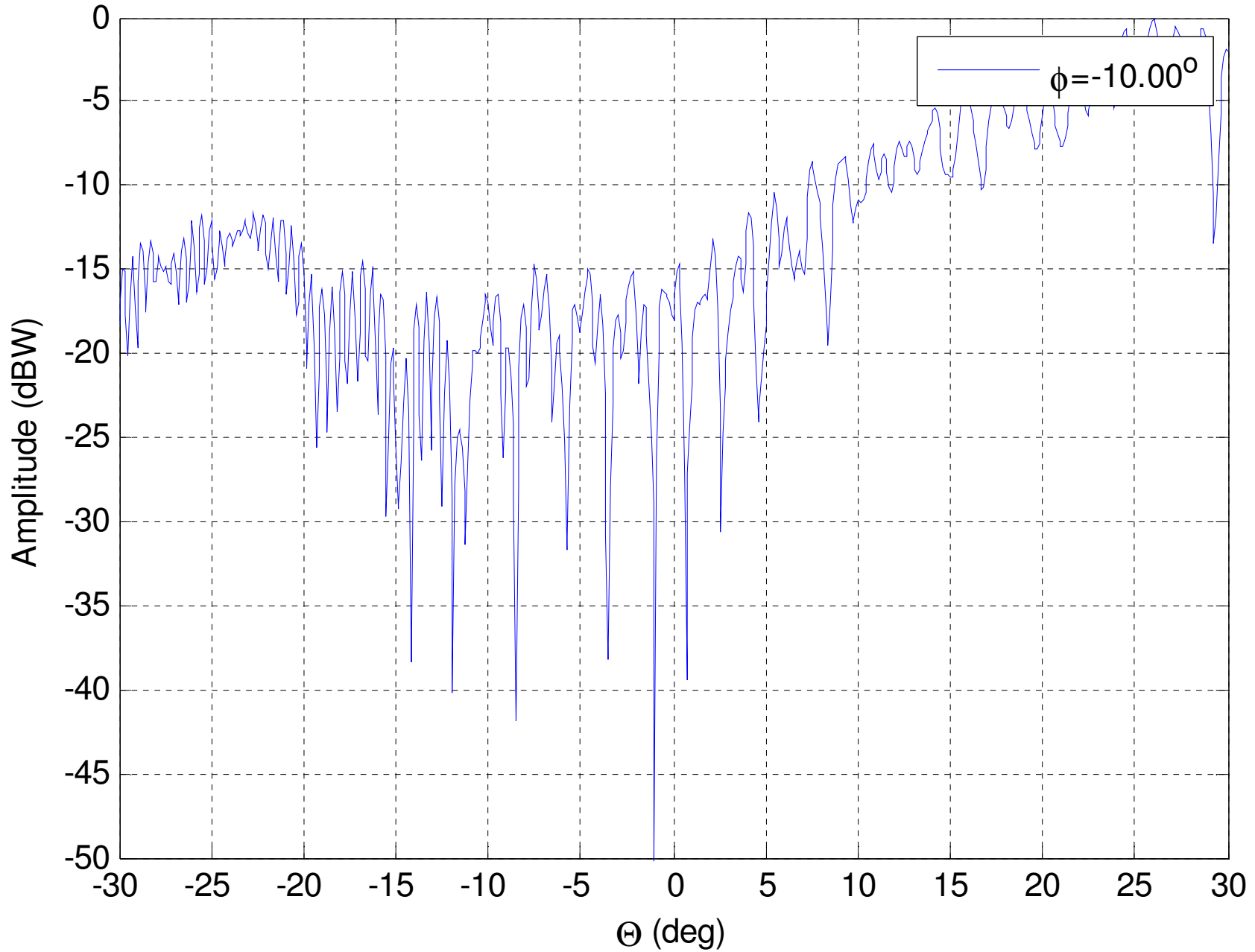
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -3.06 dBW, Date: 15-Dec-2011



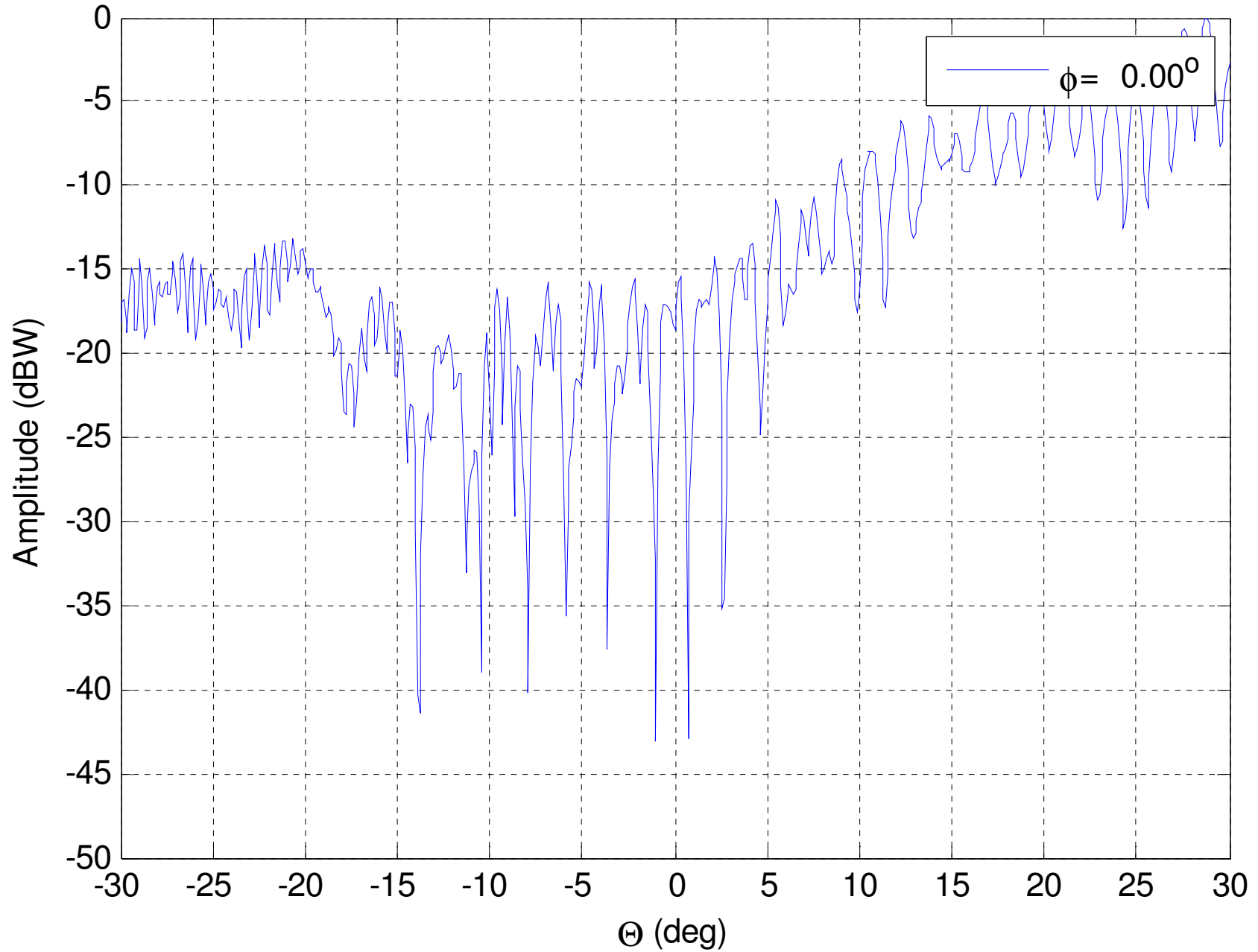
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -2.61 dBW, Date: 15-Dec-2011



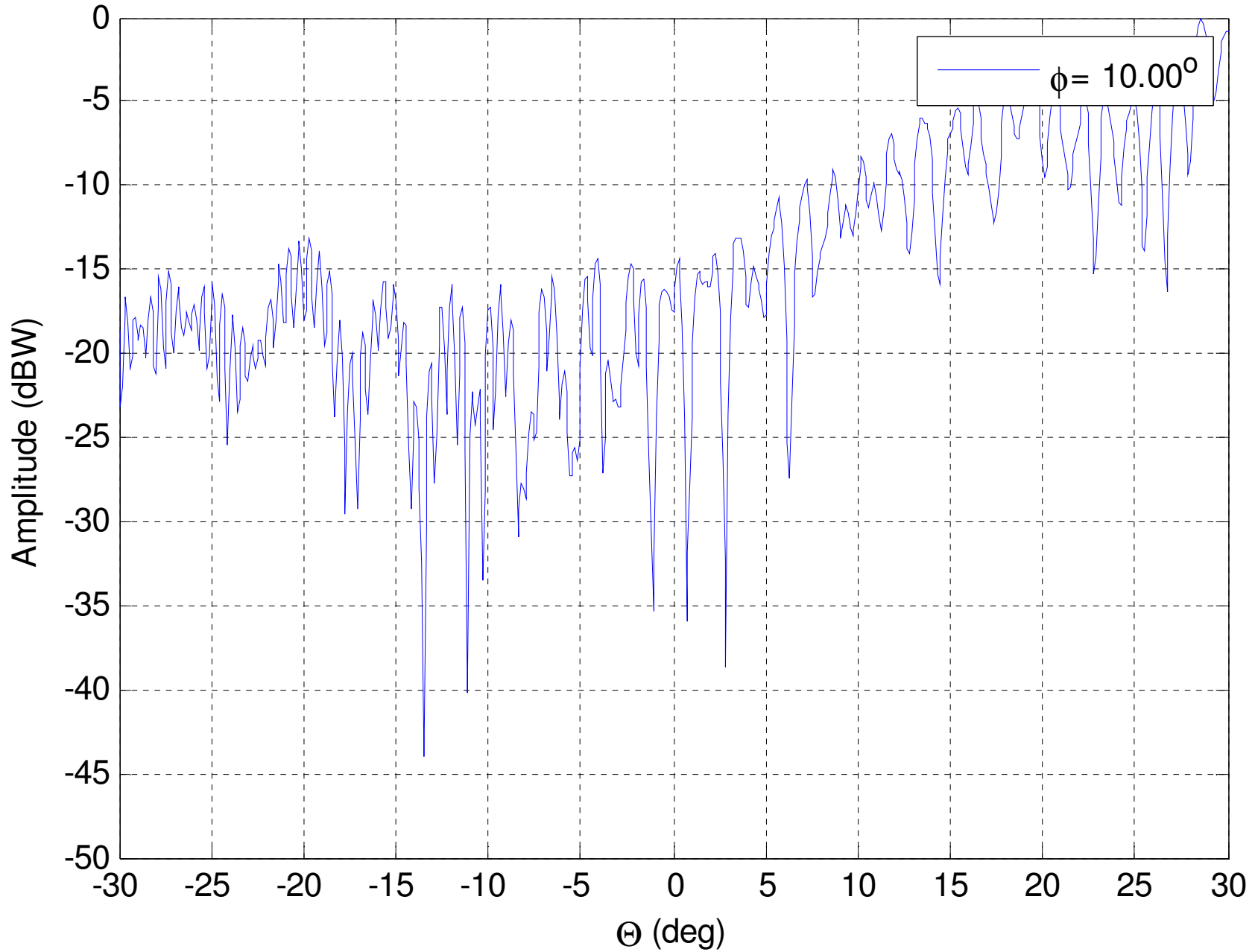
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -2.00 dBW, Date: 15-Dec-2011



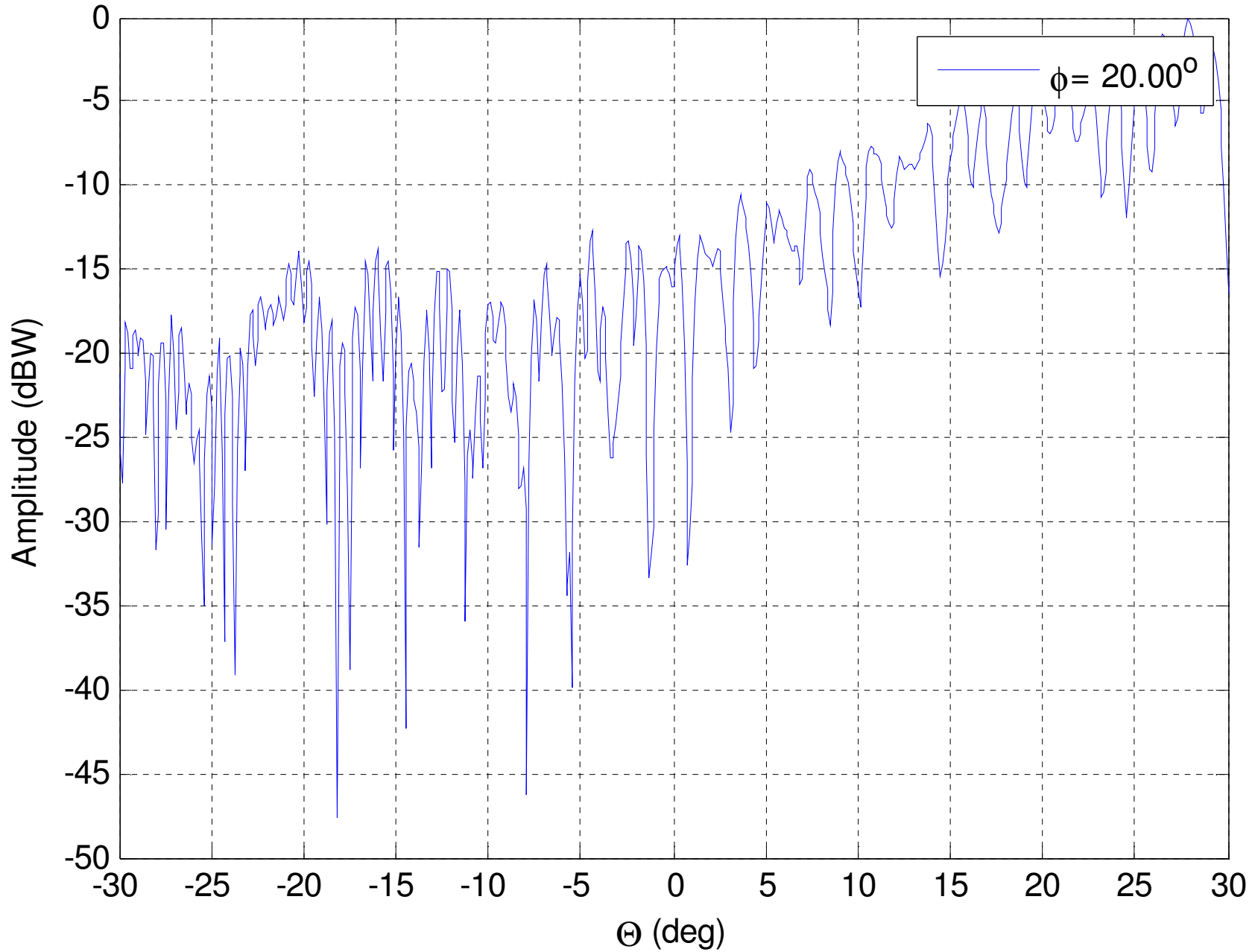
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -3.03 dBW, Date: 15-Dec-2011



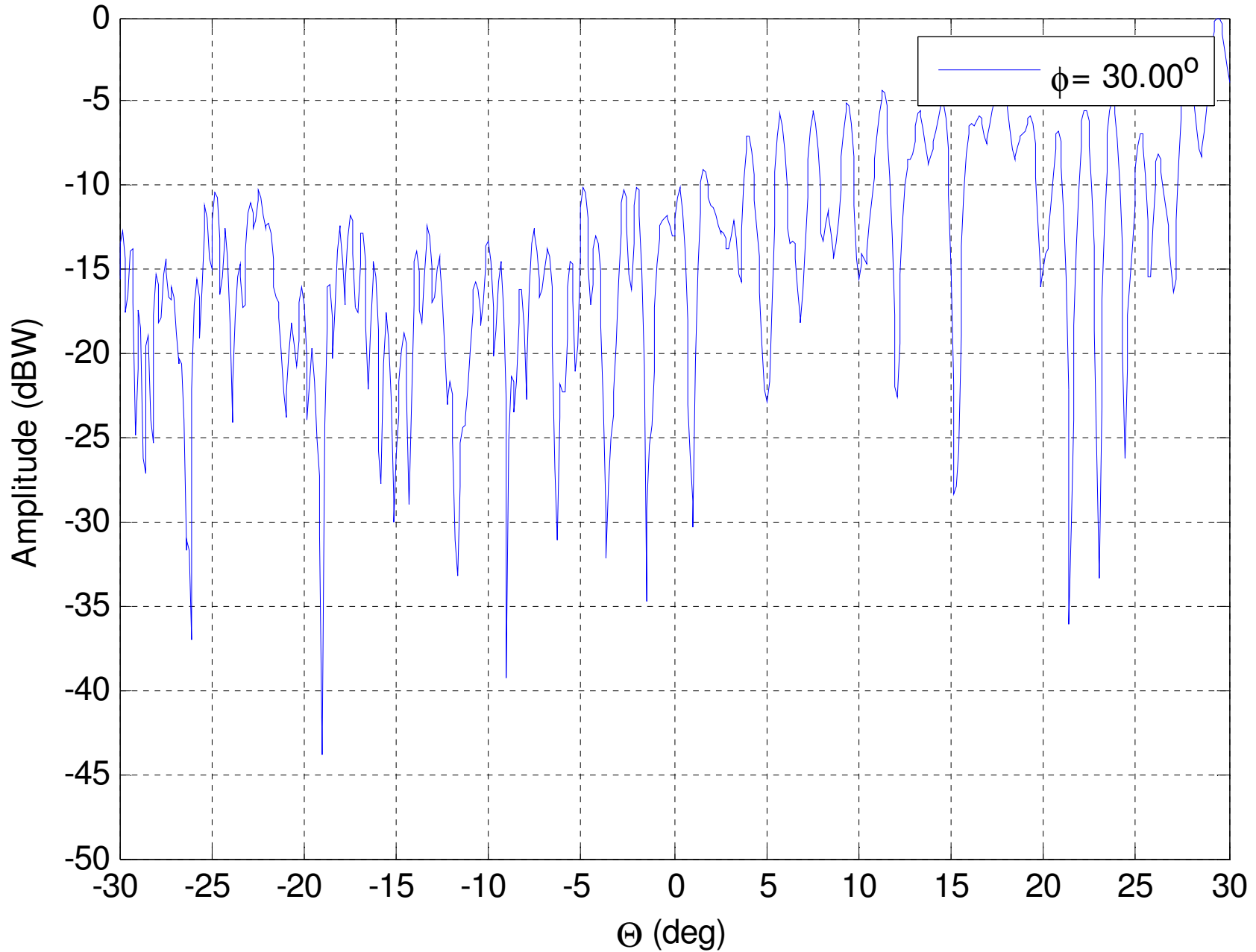
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -4.47 dBW, Date: 15-Dec-2011



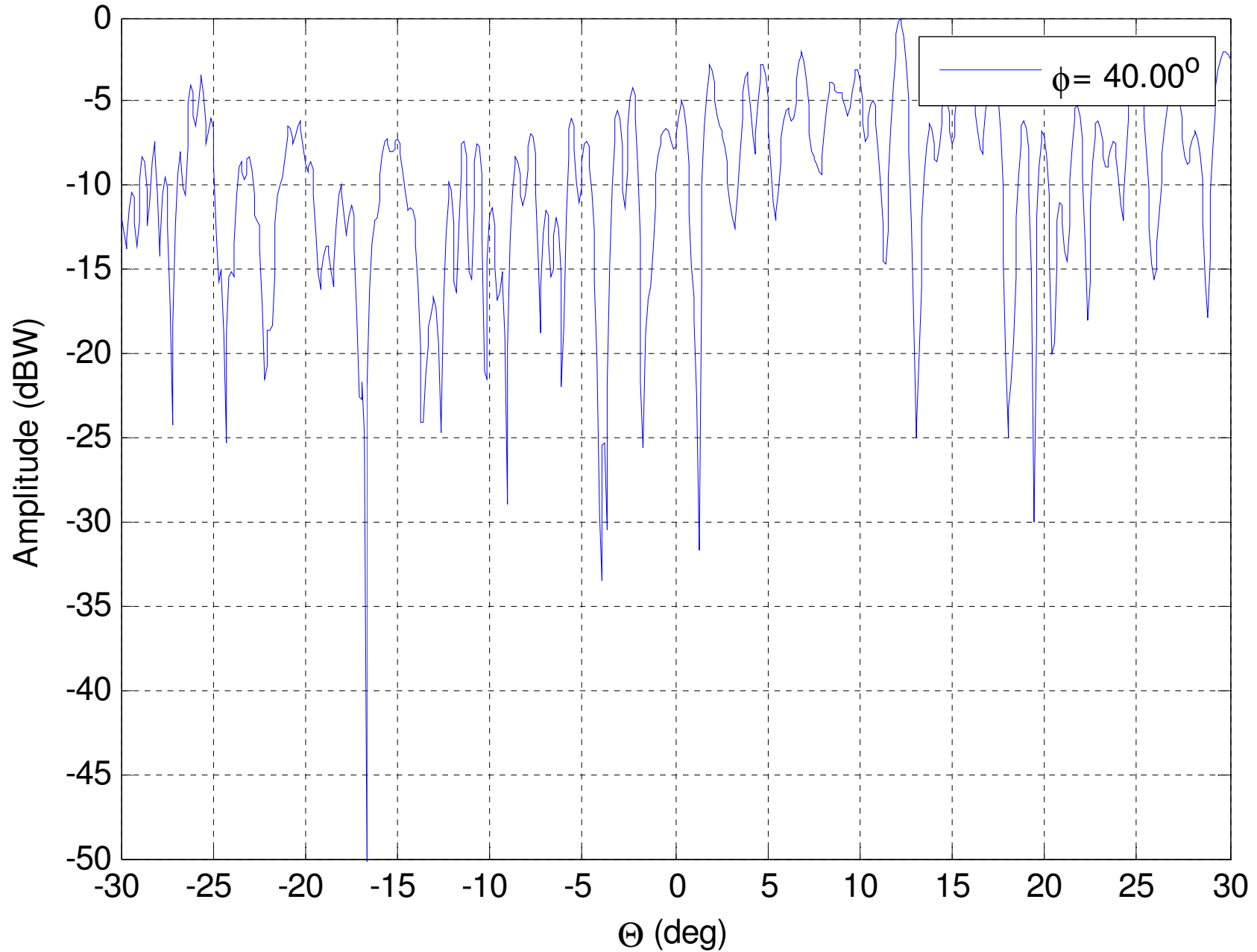
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -7.58 dBW, Date: 15-Dec-2011



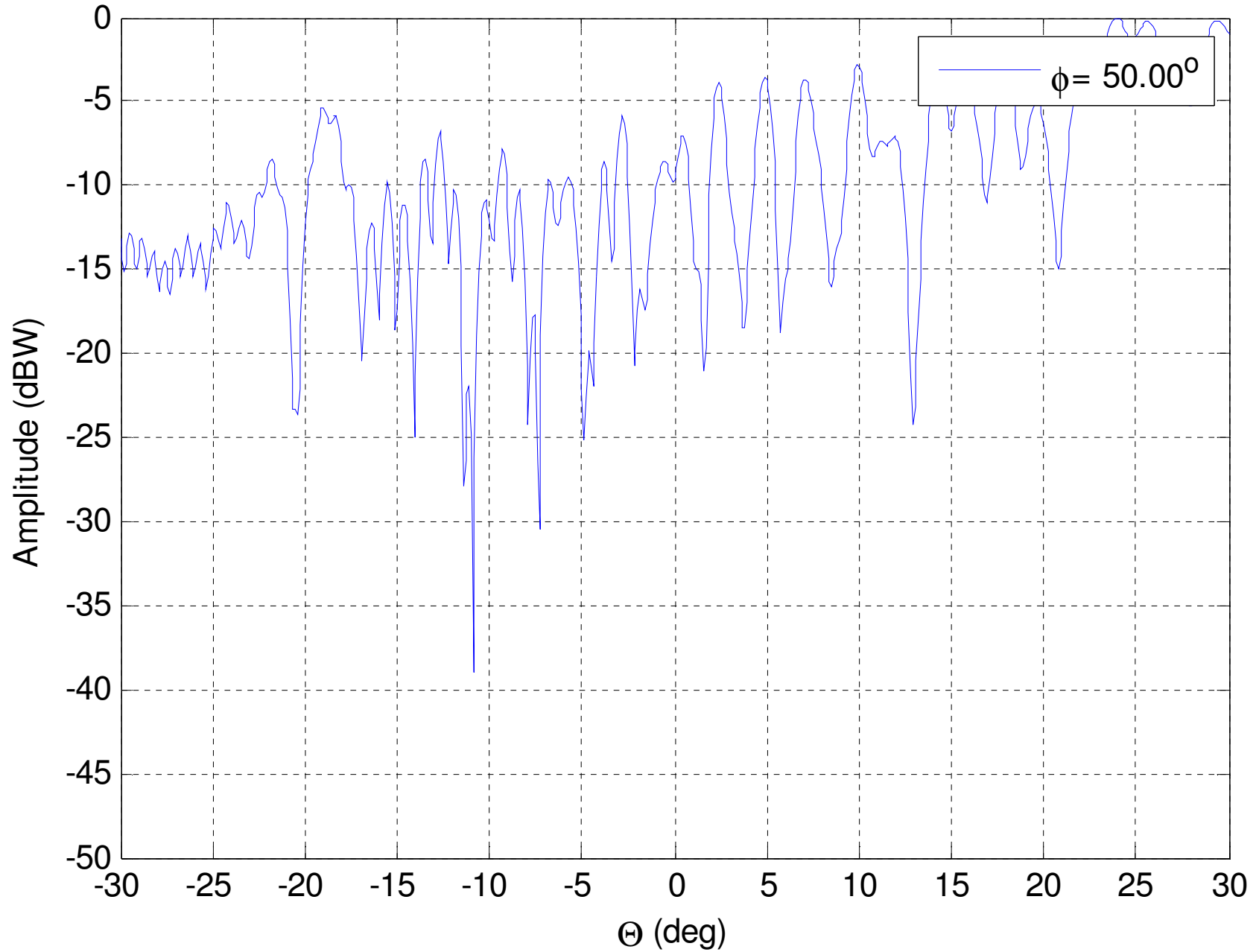
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -12.89 dBW, Date: 15-Dec-2011



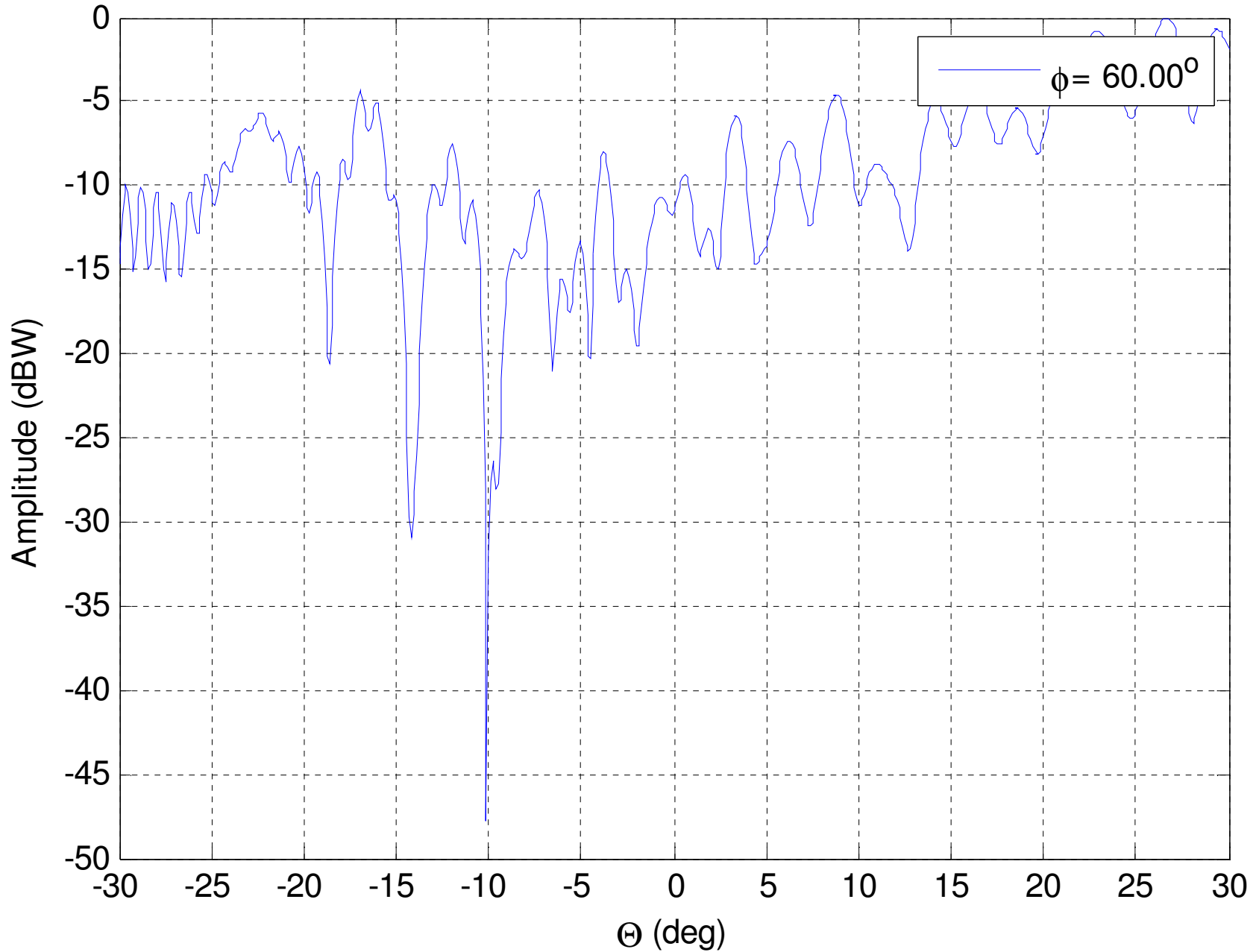
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -10.92 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

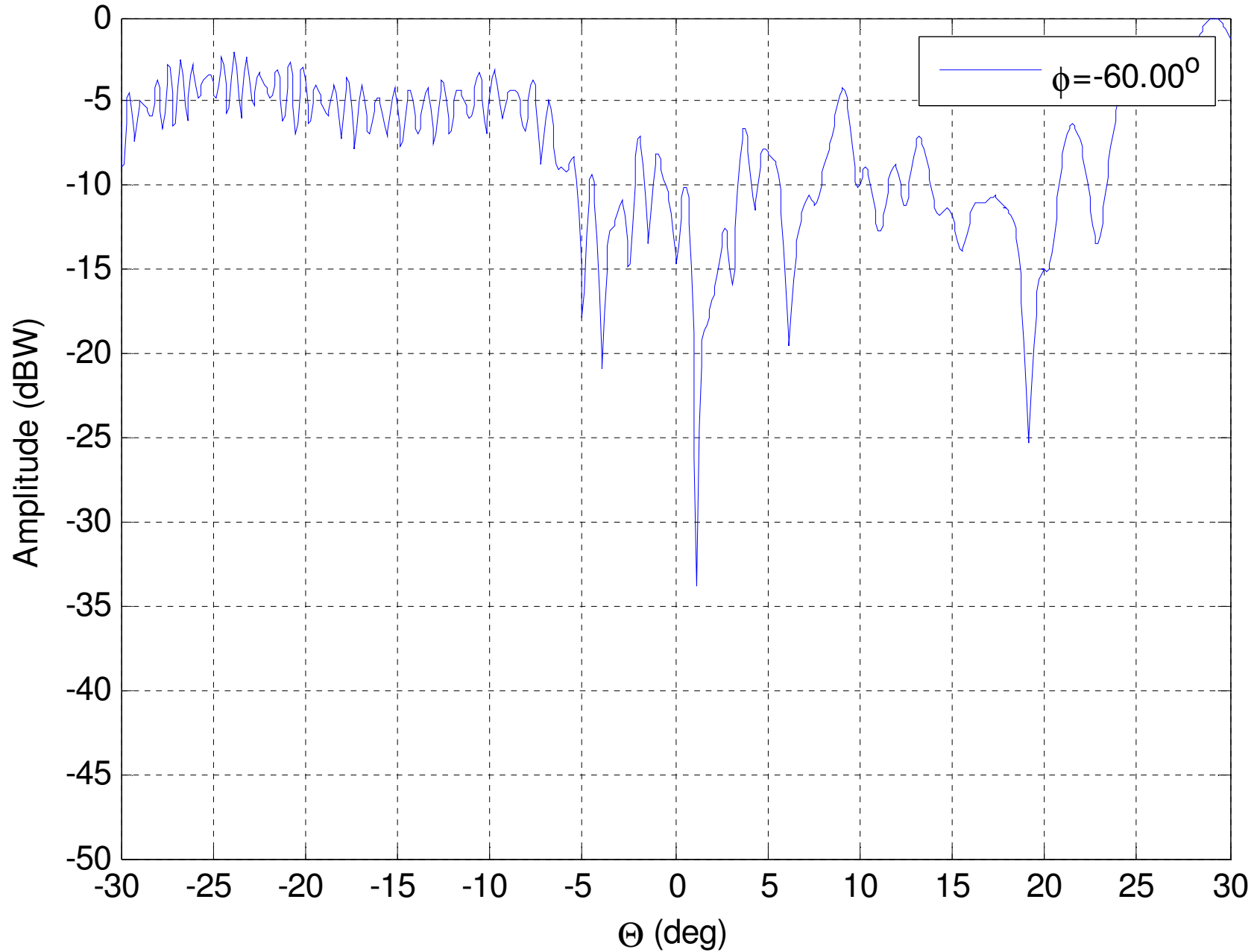
Input file: tx-17.3-rhcp-60.cut, Peak: -9.02 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

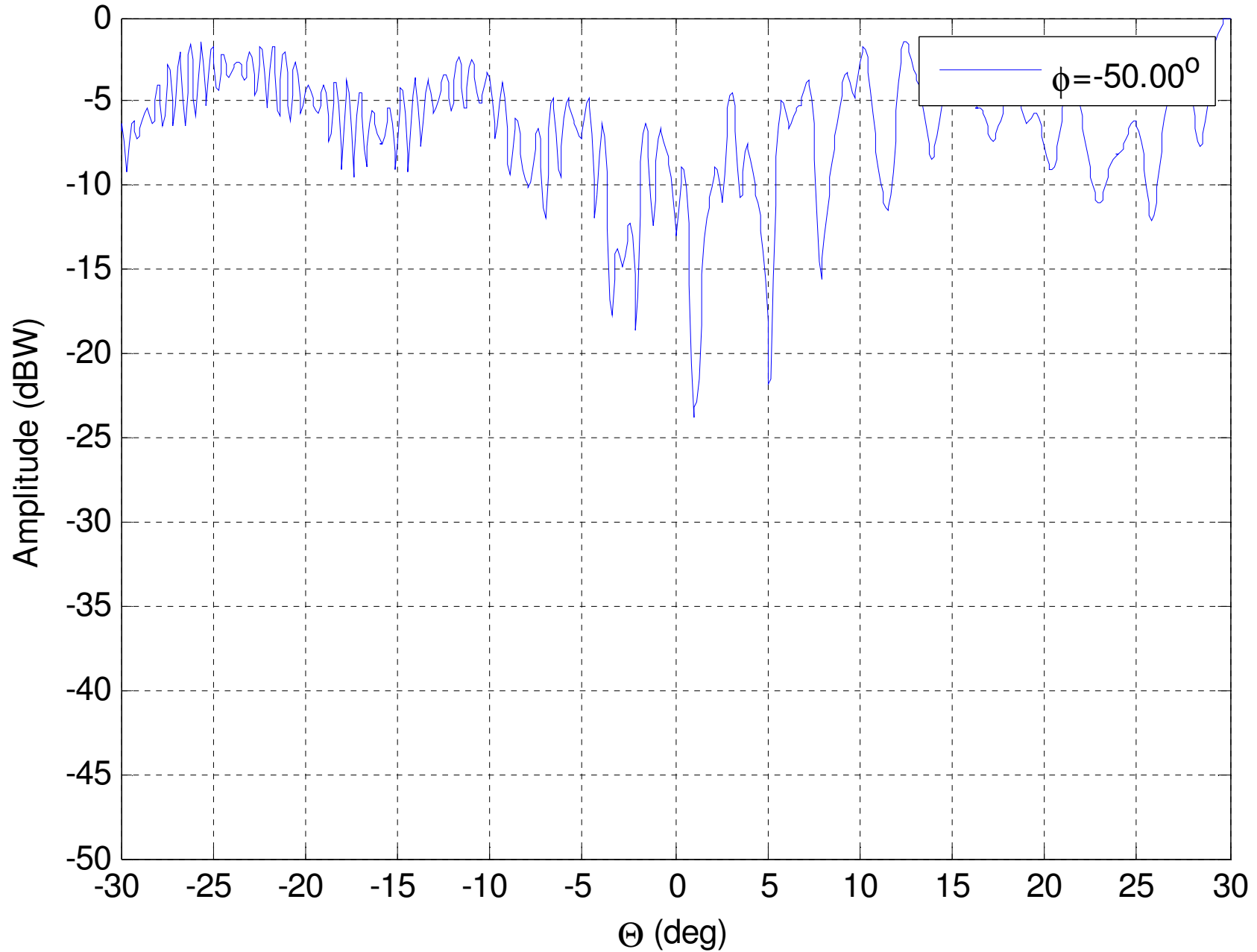
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -8.32 dBW, Date: 15-Dec-2011



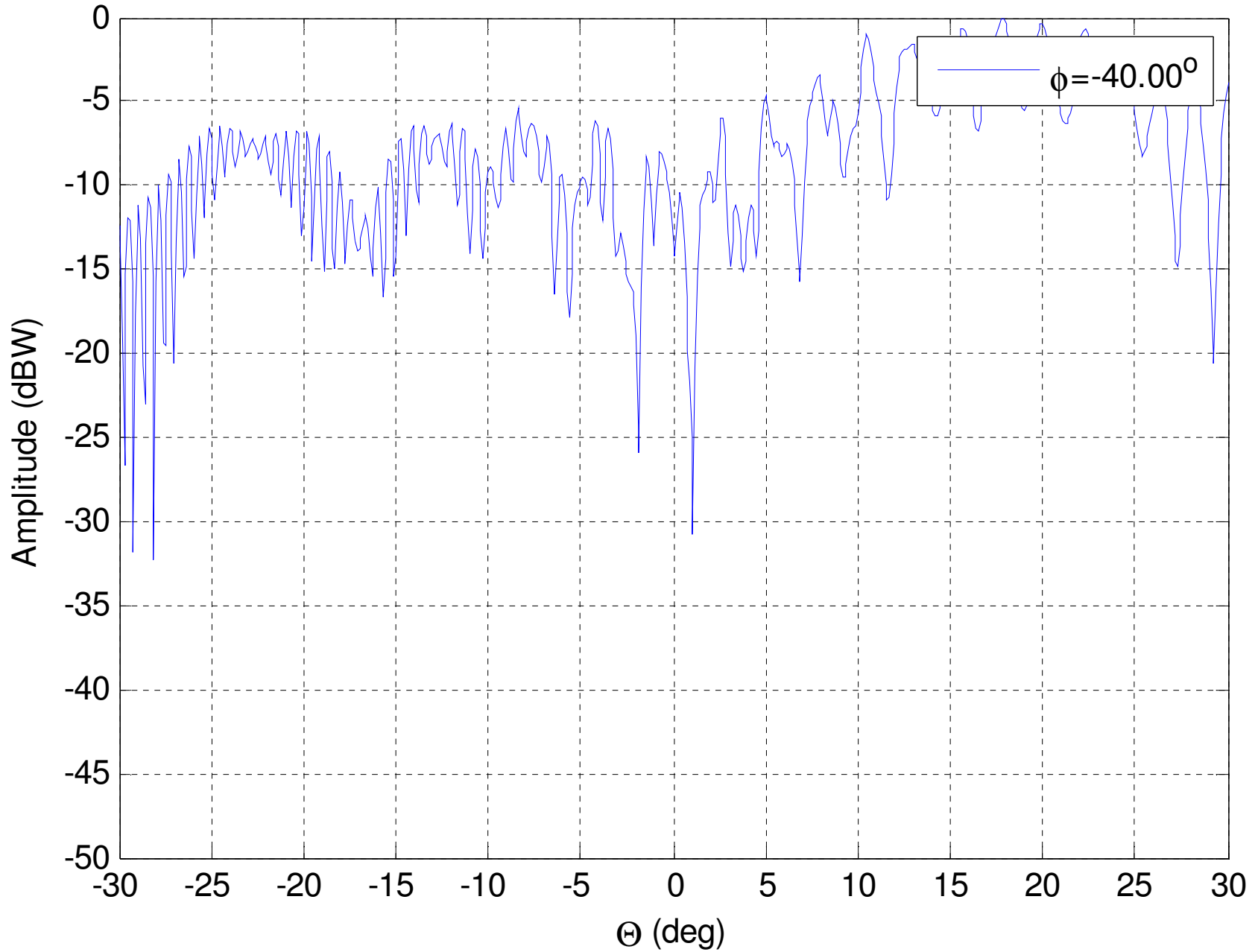
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -9.91 dBW, Date: 15-Dec-2011



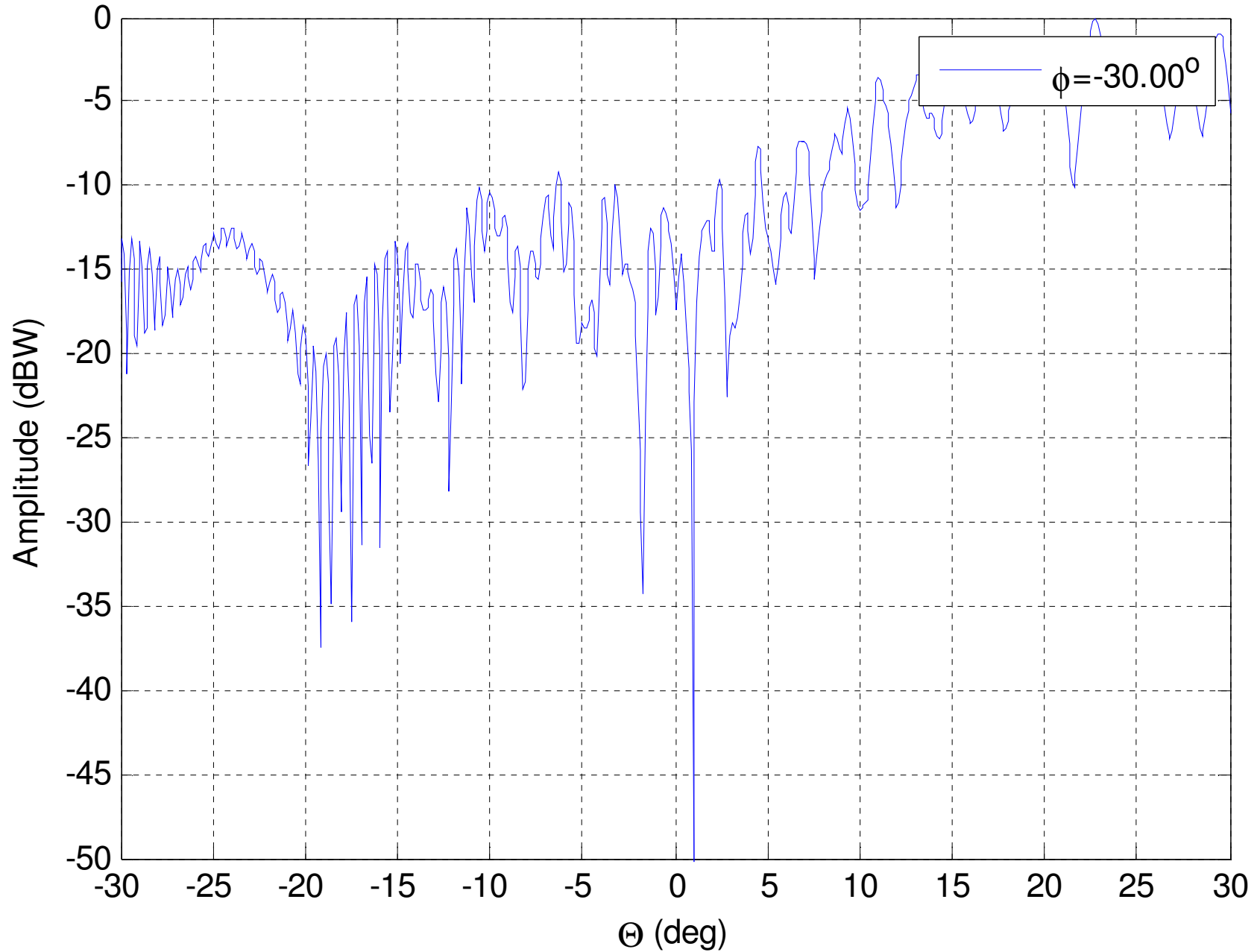
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -8.72 dBW, Date: 15-Dec-2011



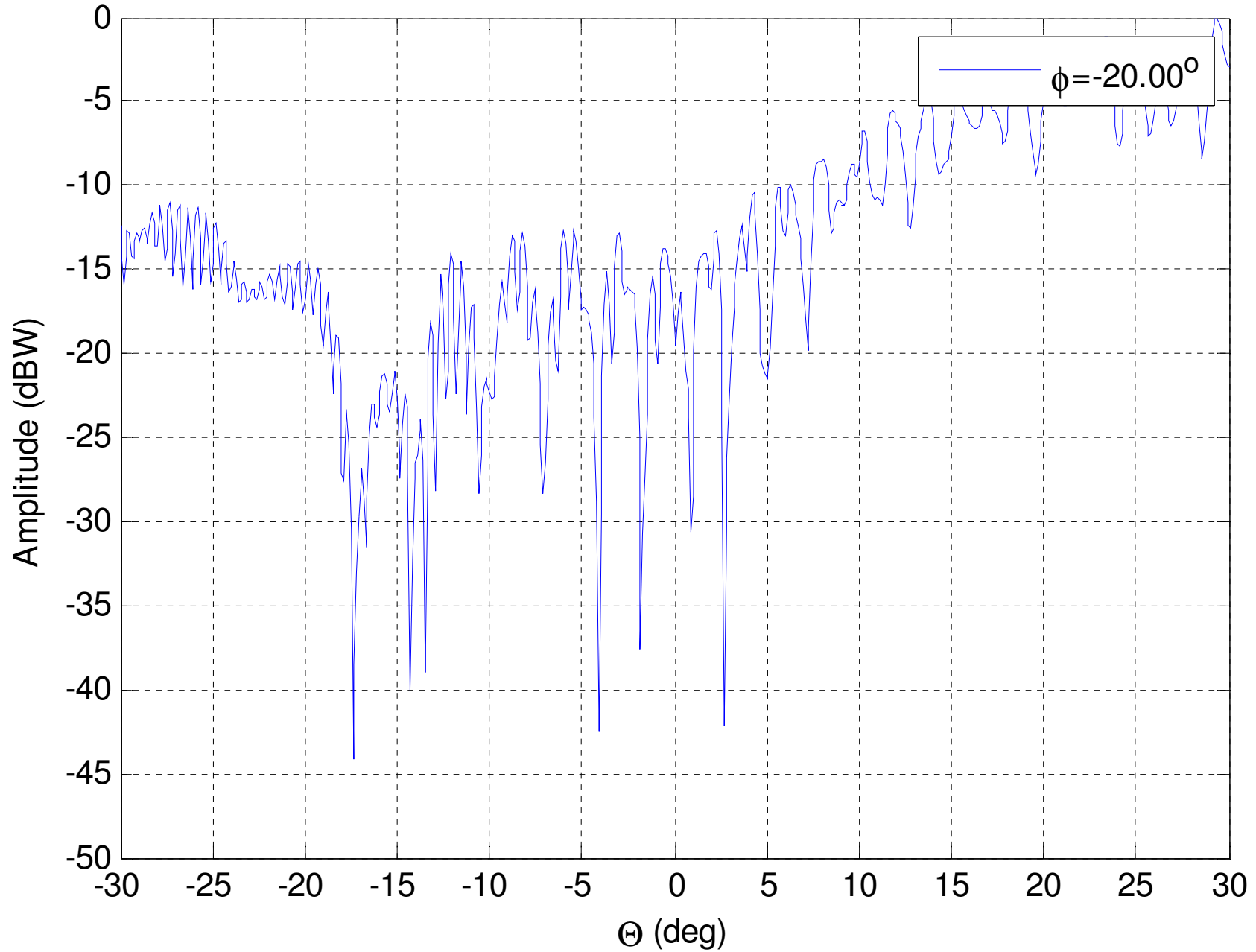
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -5.42 dBW, Date: 15-Dec-2011



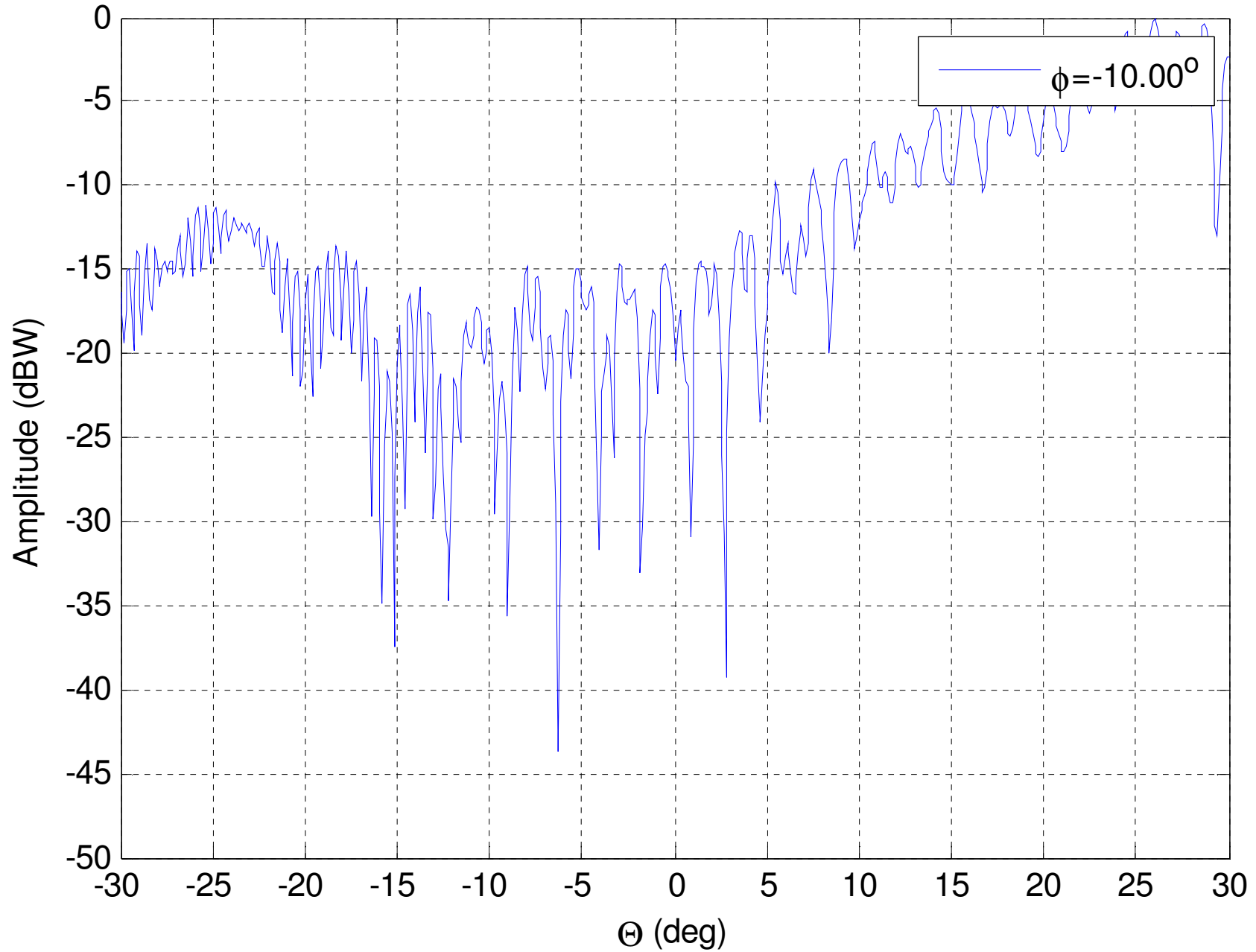
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -3.28 dBW, Date: 15-Dec-2011



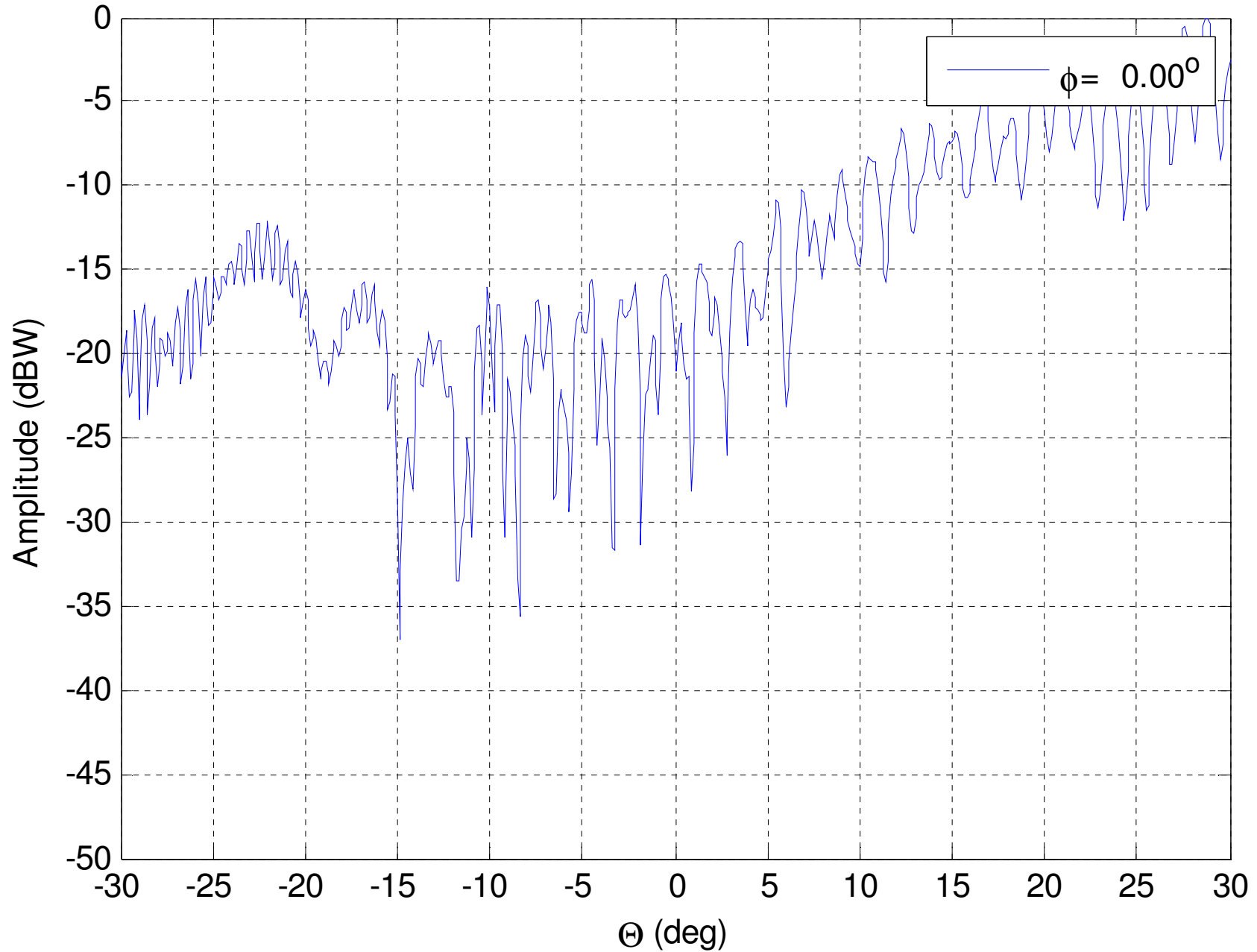
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -2.40 dBW, Date: 15-Dec-2011



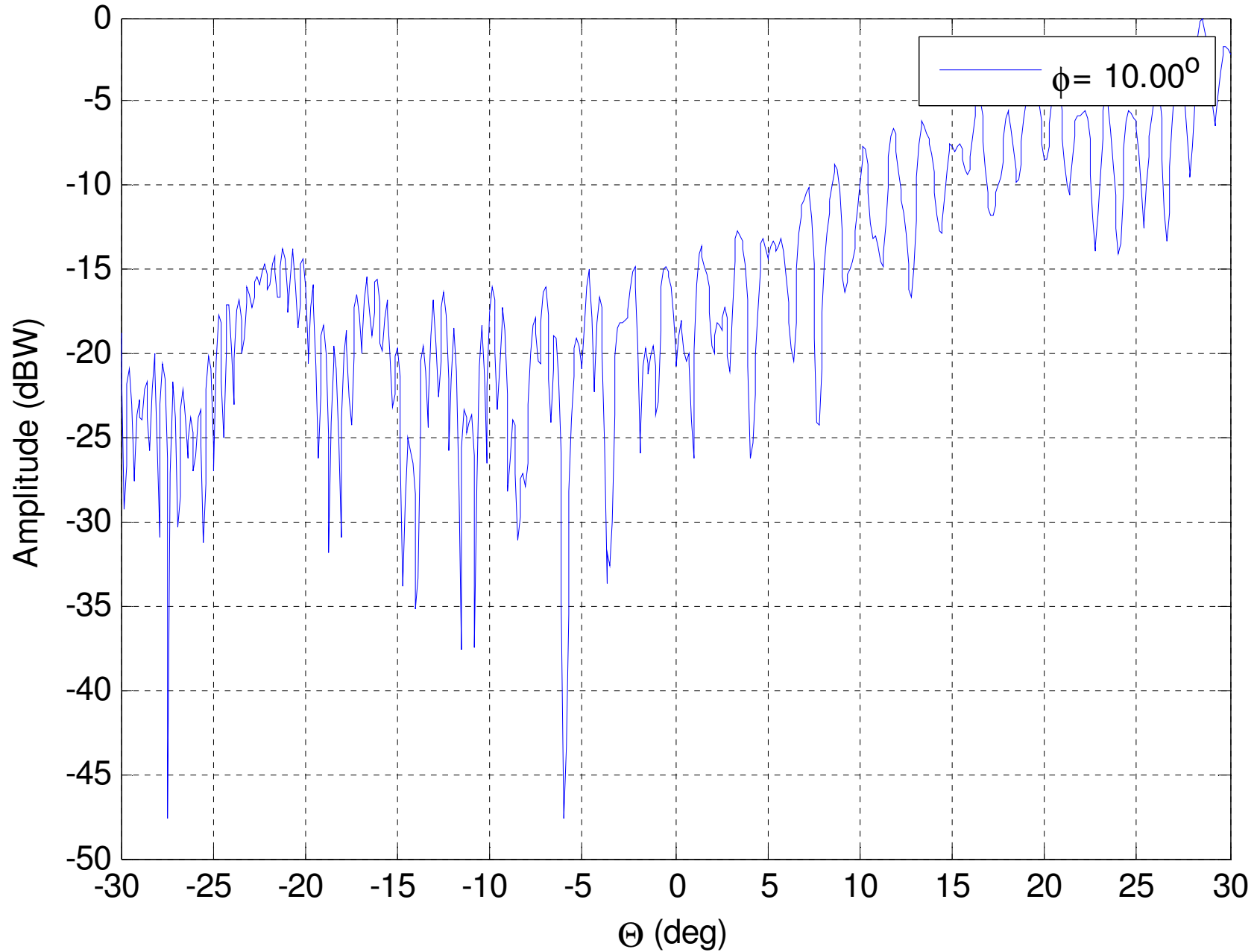
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -1.92 dBW, Date: 15-Dec-2011



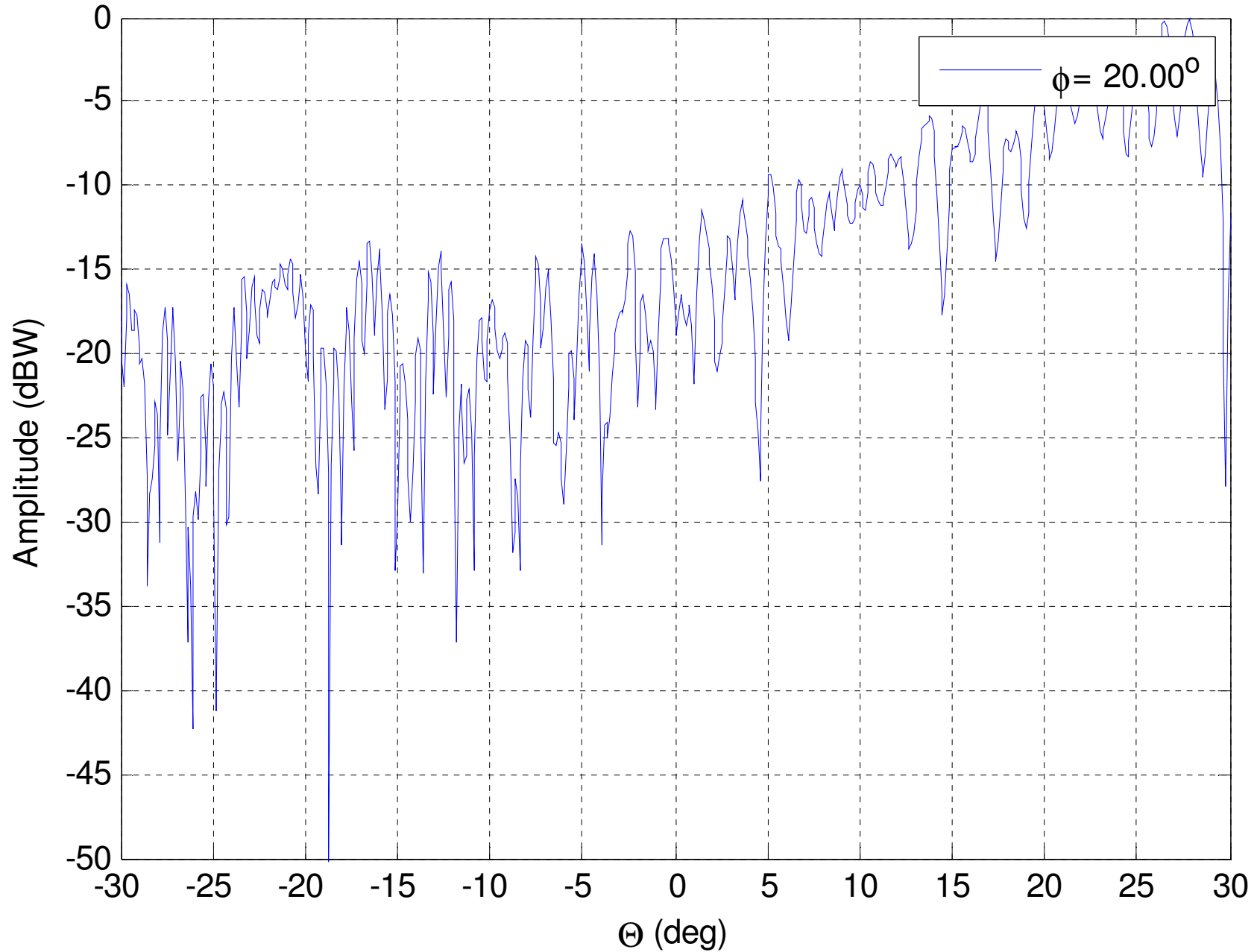
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -2.44 dBW, Date: 15-Dec-2011



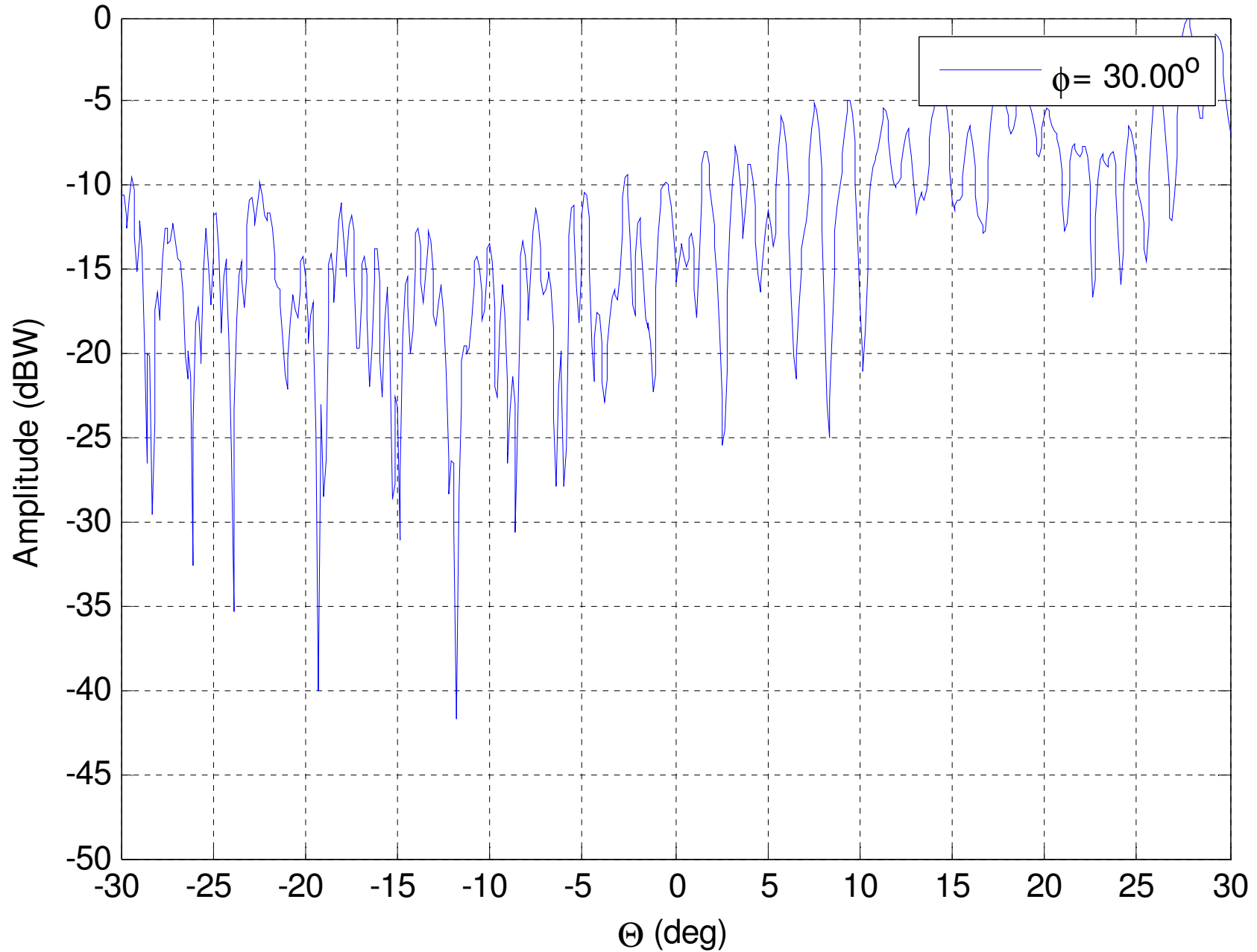
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -4.34 dBW, Date: 15-Dec-2011



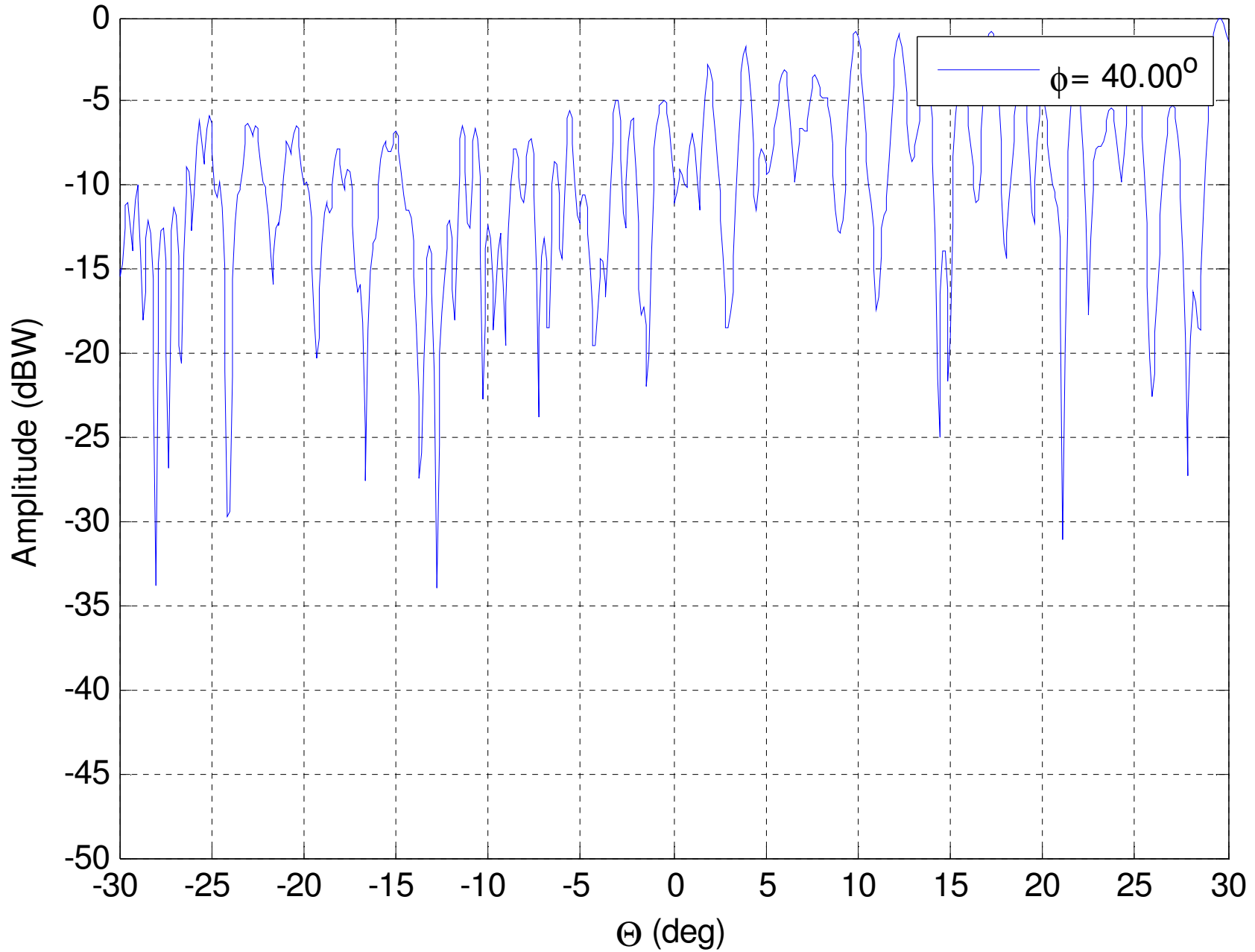
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -7.69 dBW, Date: 15-Dec-2011



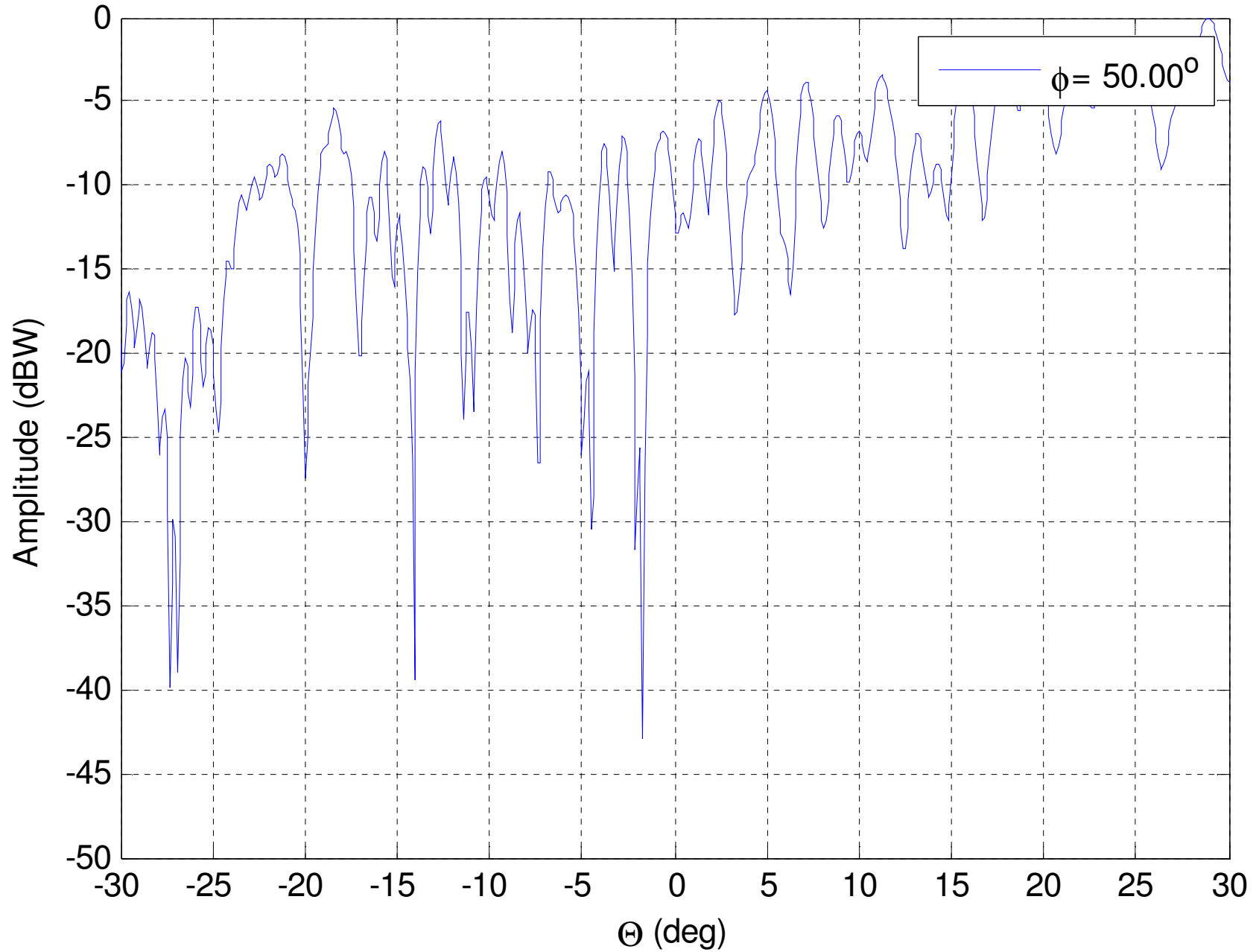
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -12.57 dBW, Date: 15-Dec-2011



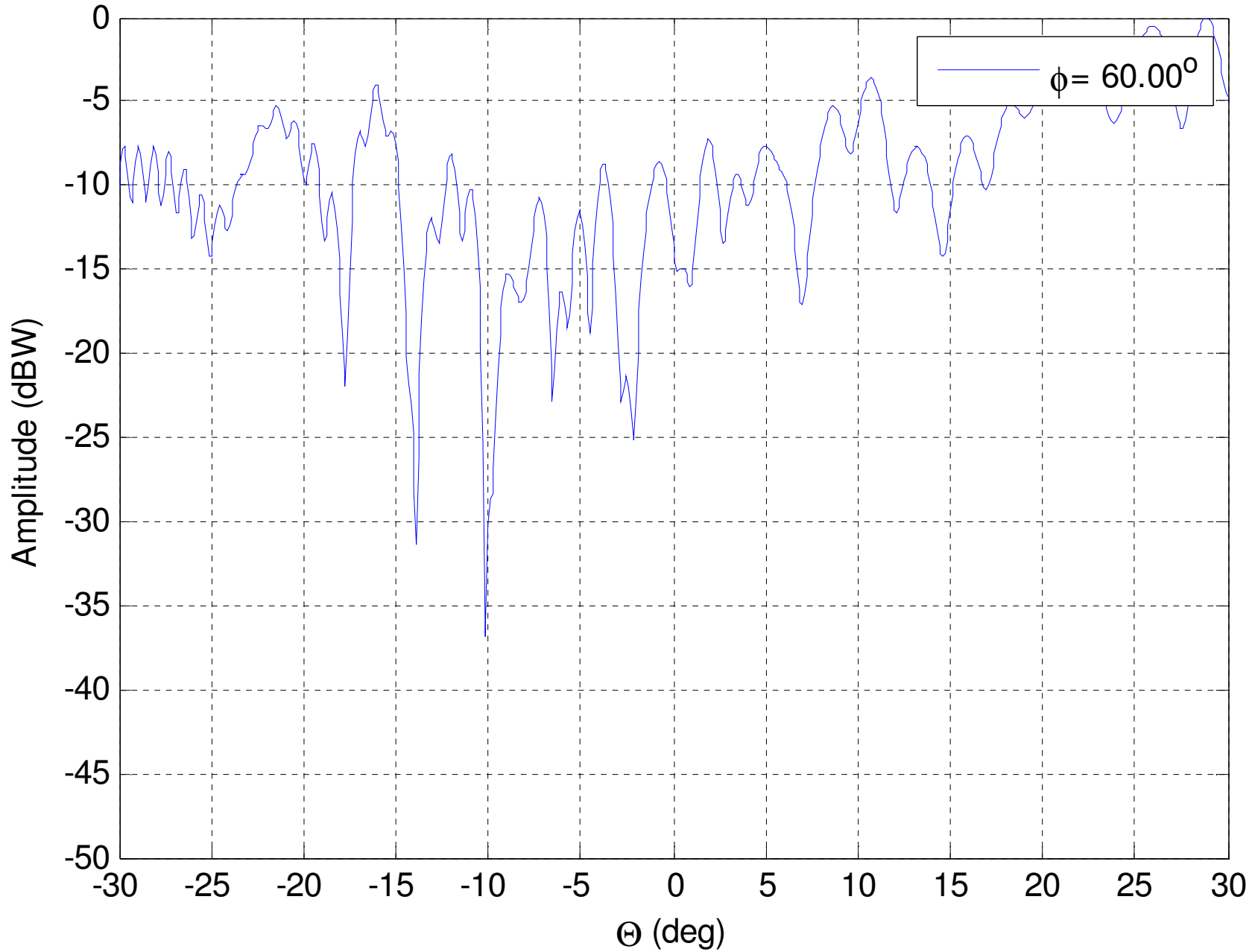
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -10.77 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

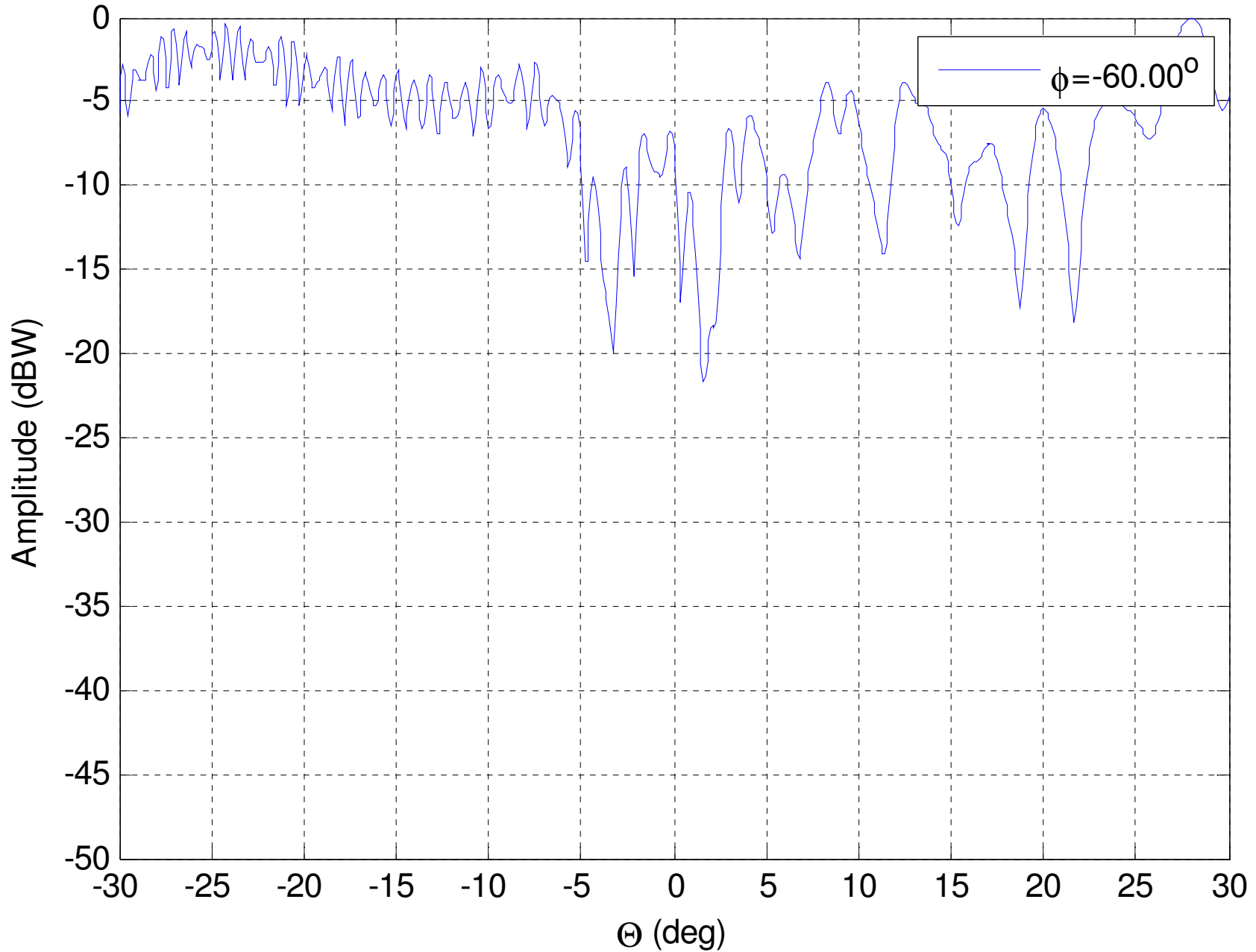
Input file: tx-17.3-lhcp-60.cut, Peak: -8.96 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

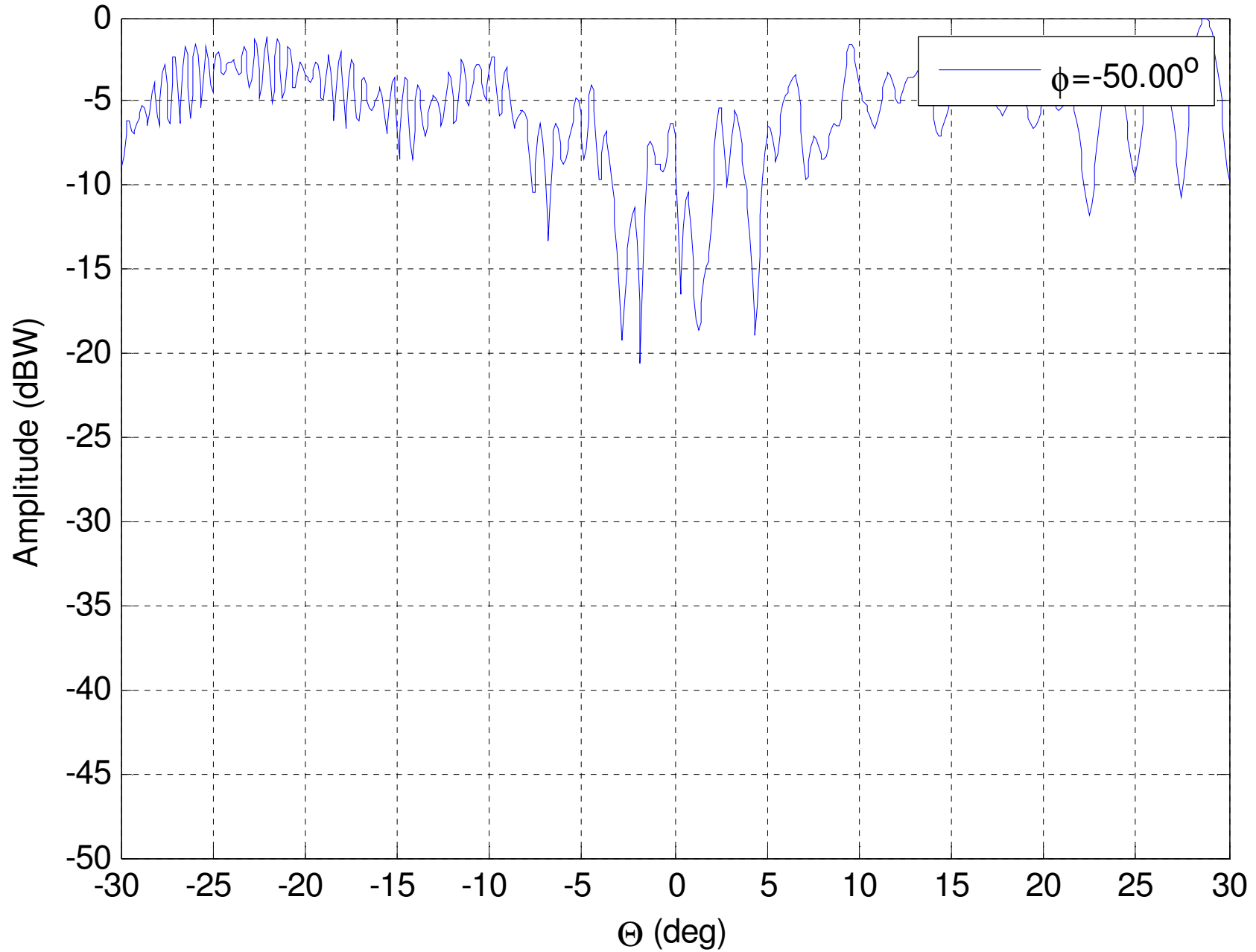
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -9.69 dBW, Date: 15-Dec-2011



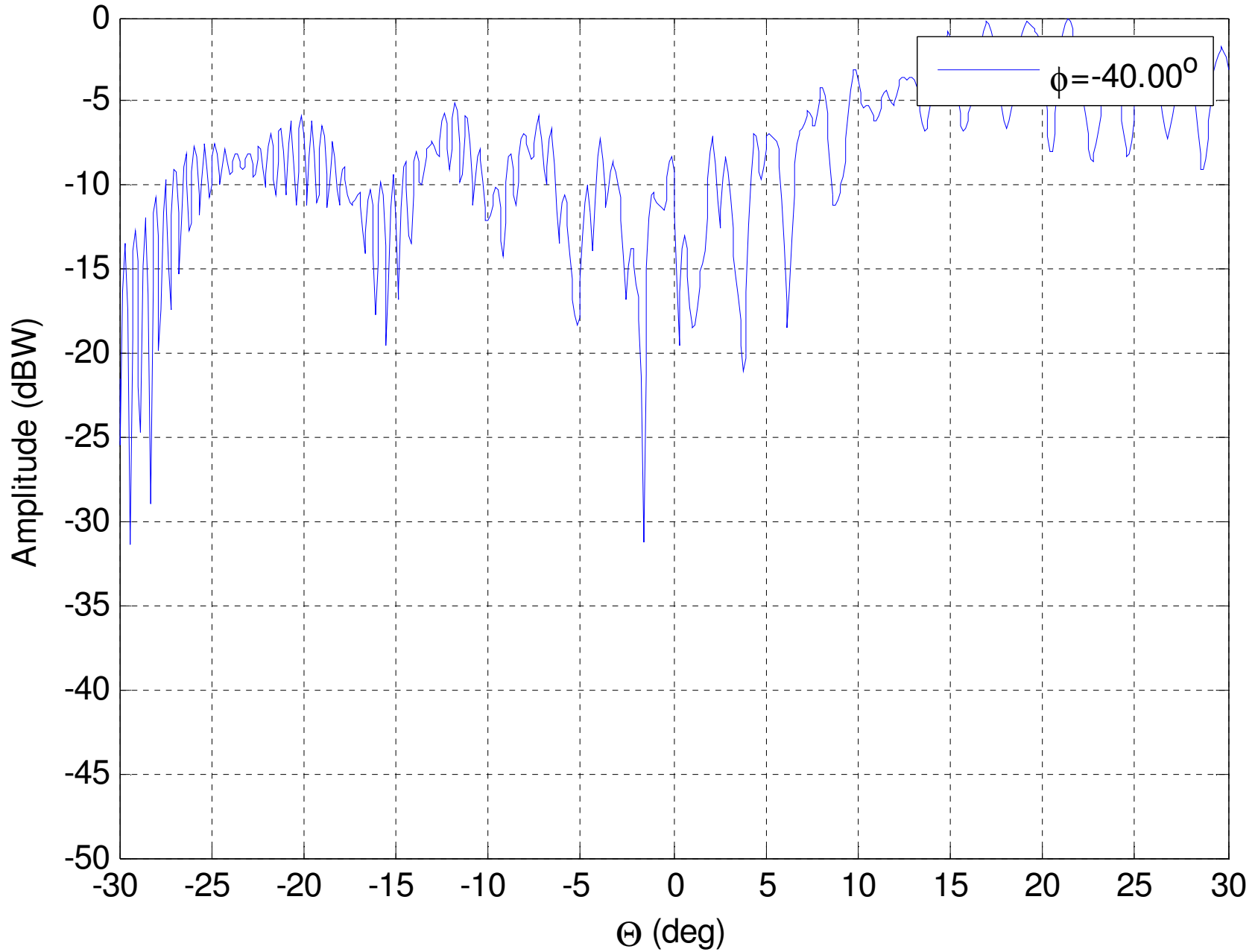
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.22 dBW, Date: 15-Dec-2011



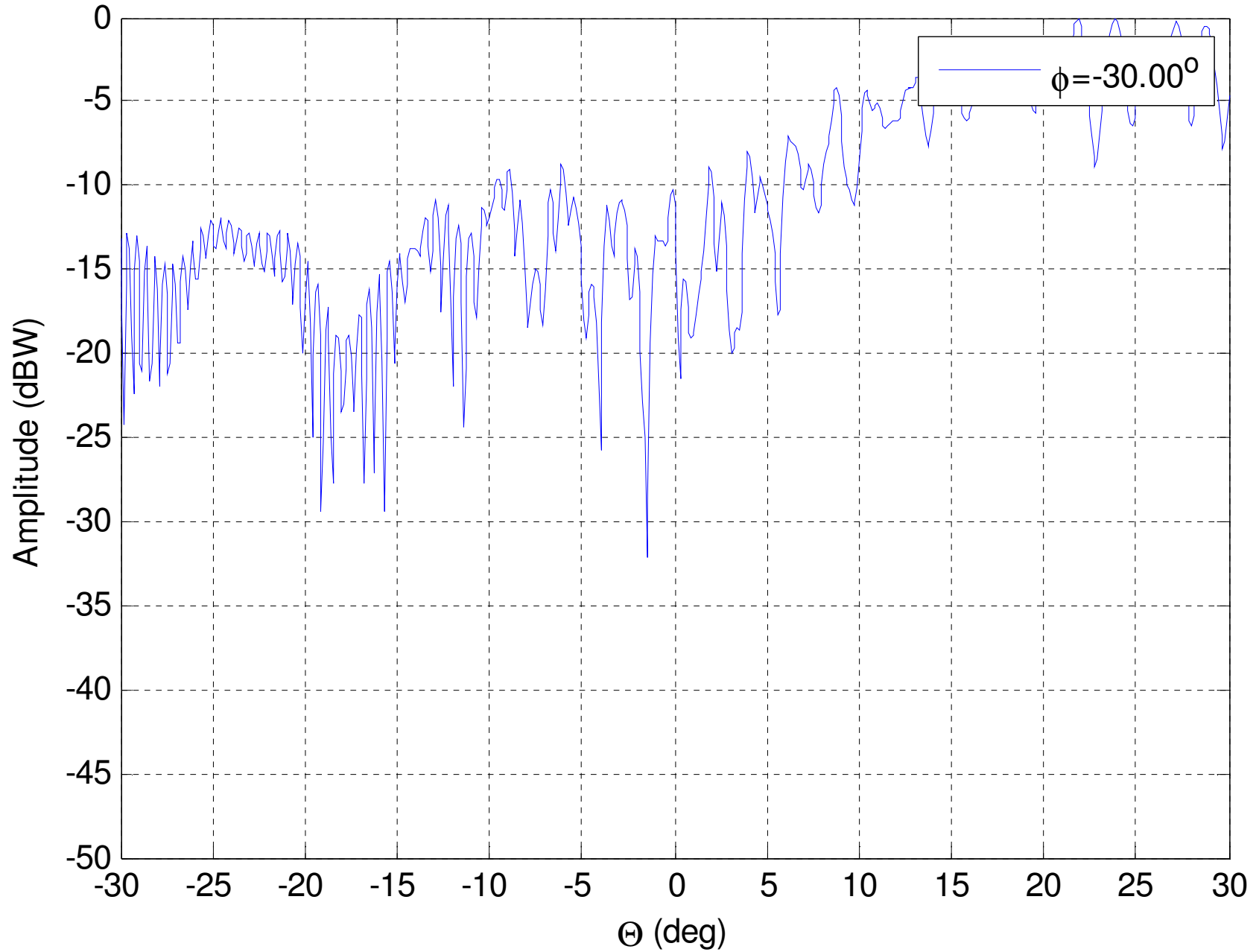
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -8.07 dBW, Date: 15-Dec-2011



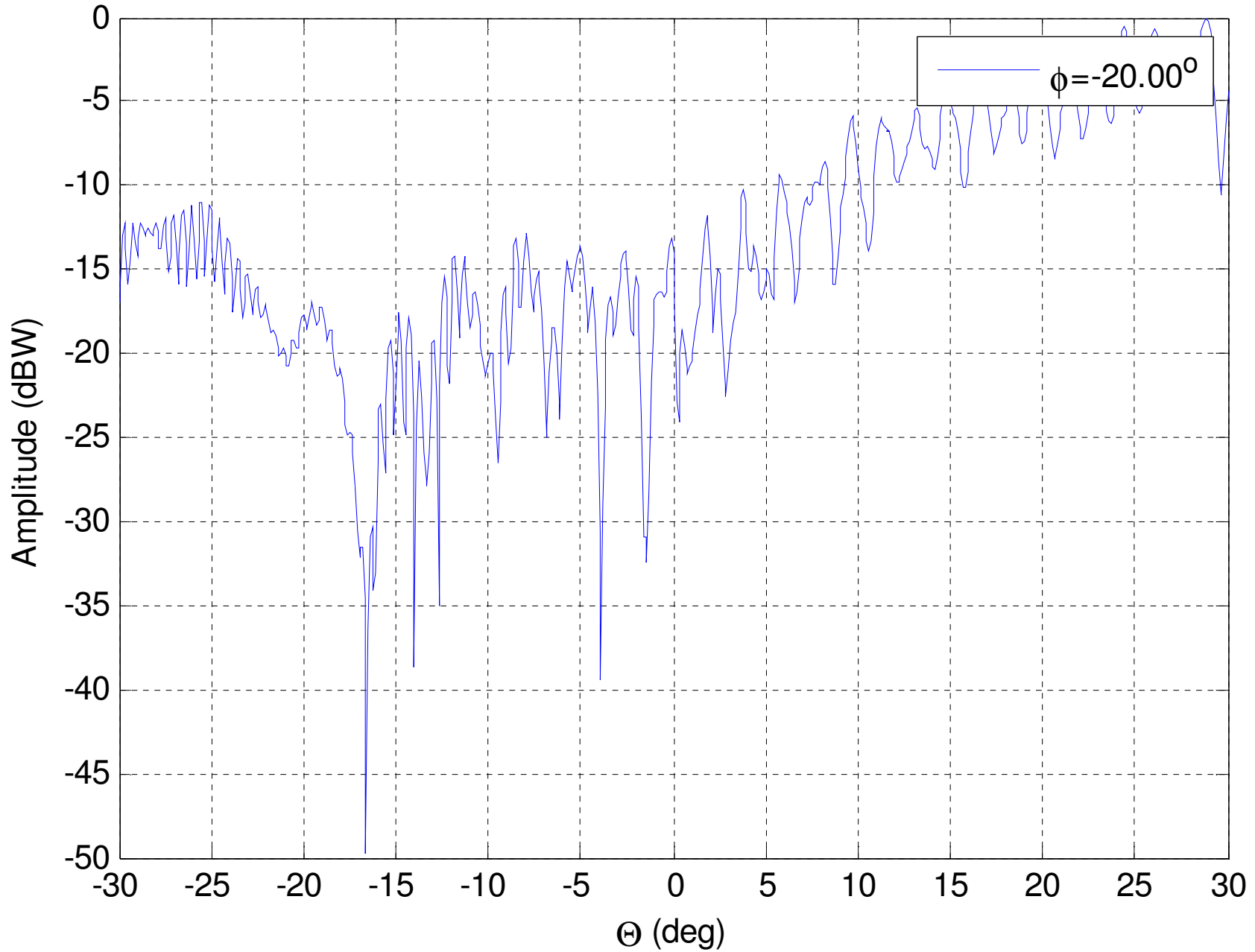
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -6.09 dBW, Date: 15-Dec-2011



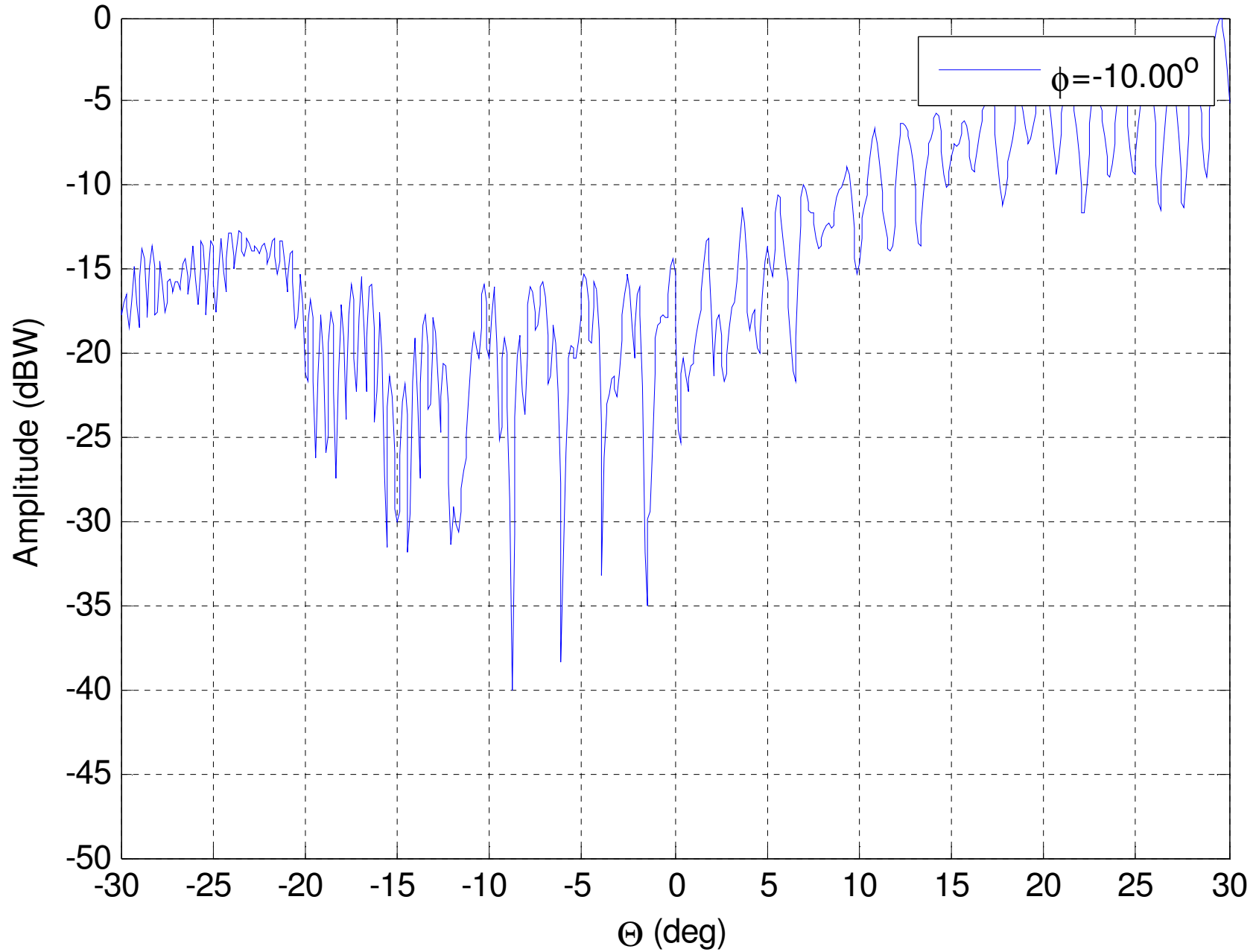
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -3.22 dBW, Date: 15-Dec-2011



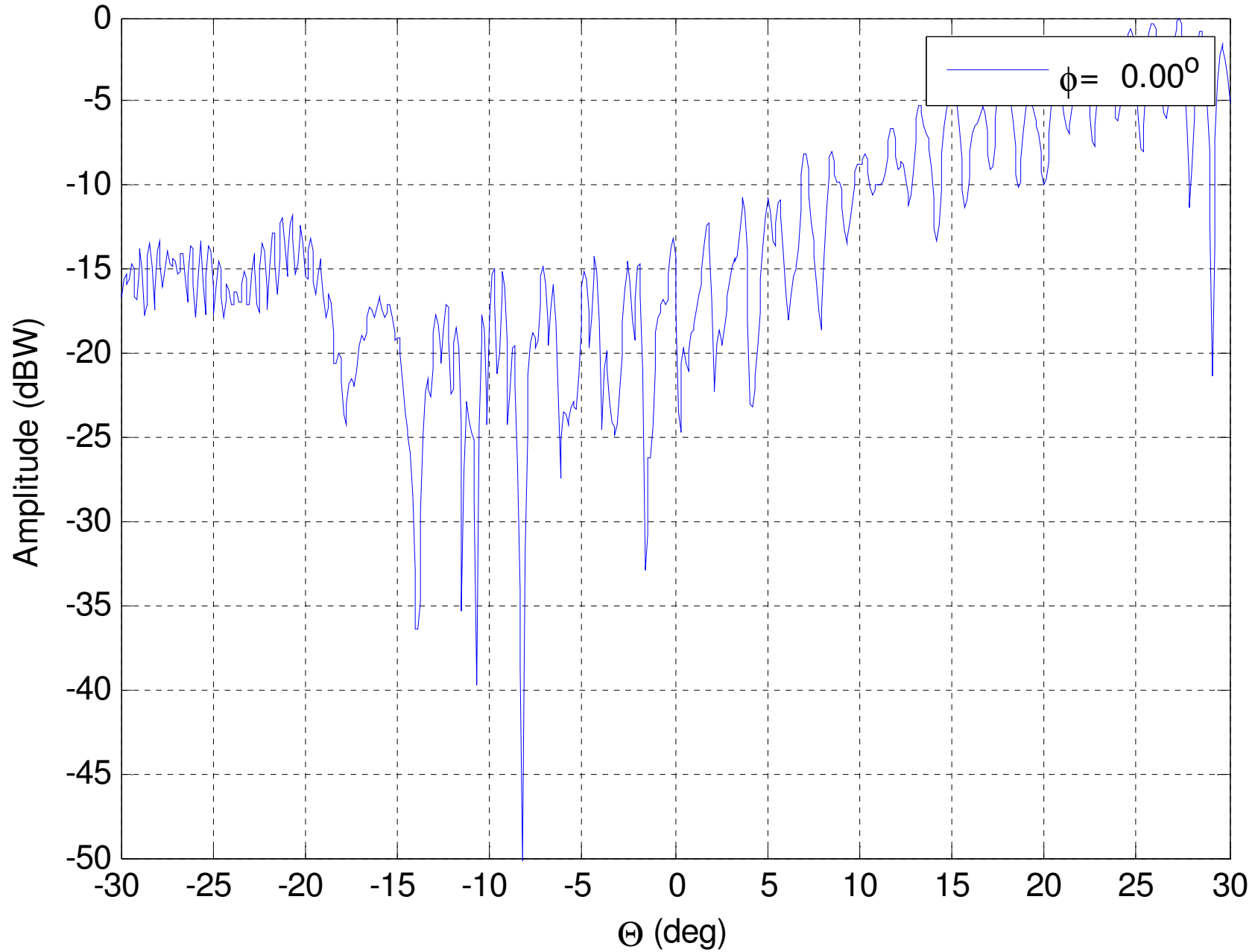
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.01 dBW, Date: 15-Dec-2011



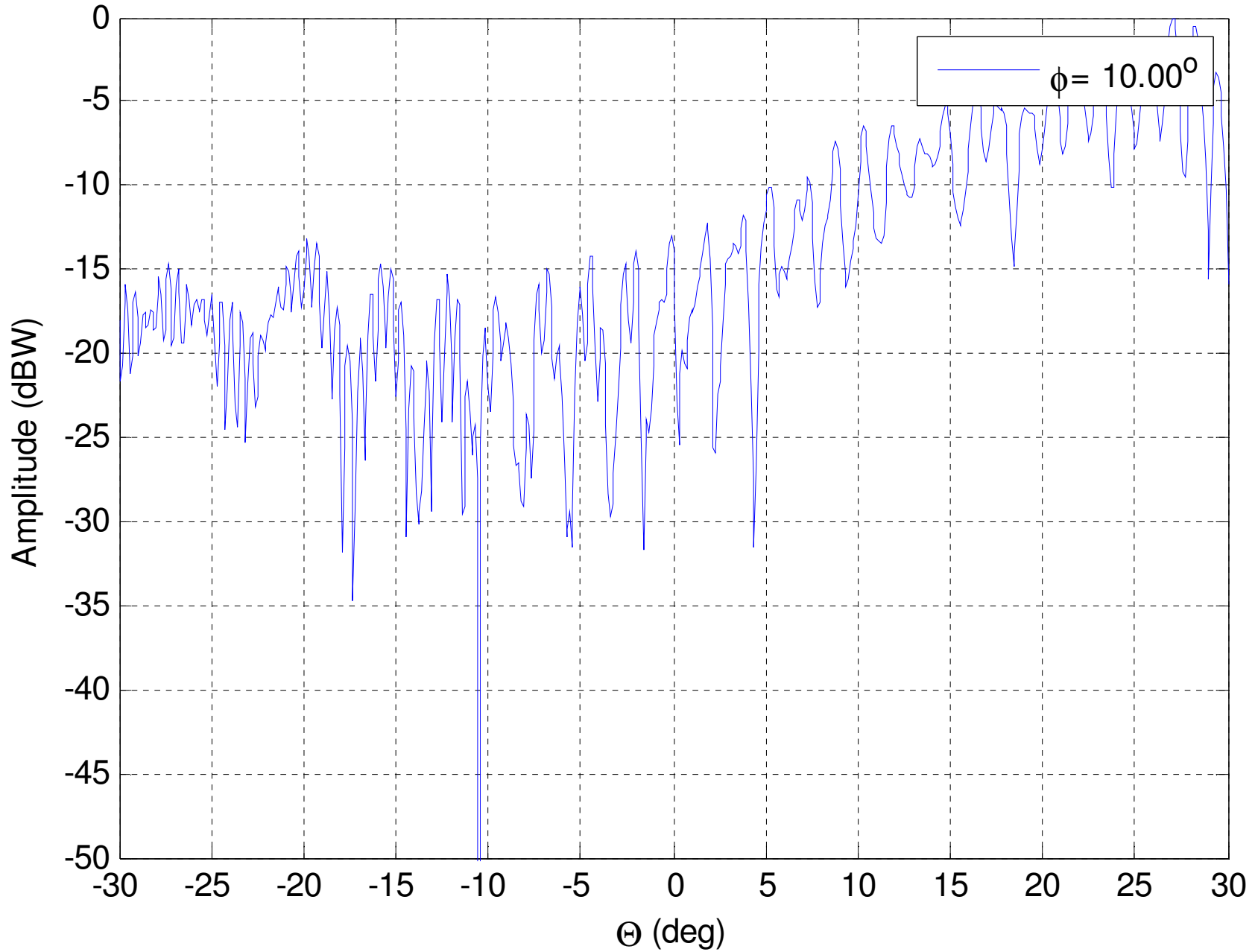
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -3.07 dBW, Date: 15-Dec-2011



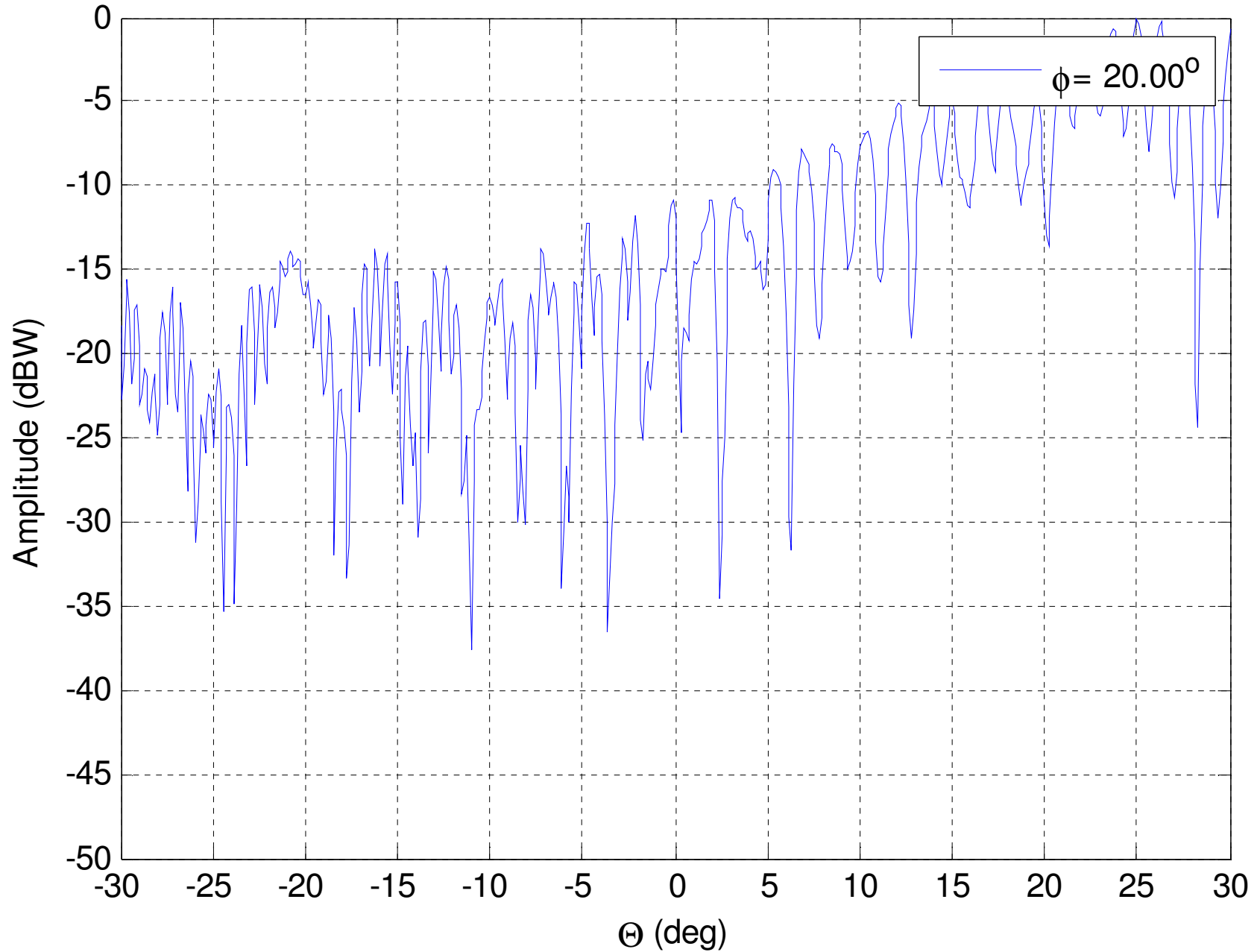
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.34 dBW, Date: 15-Dec-2011



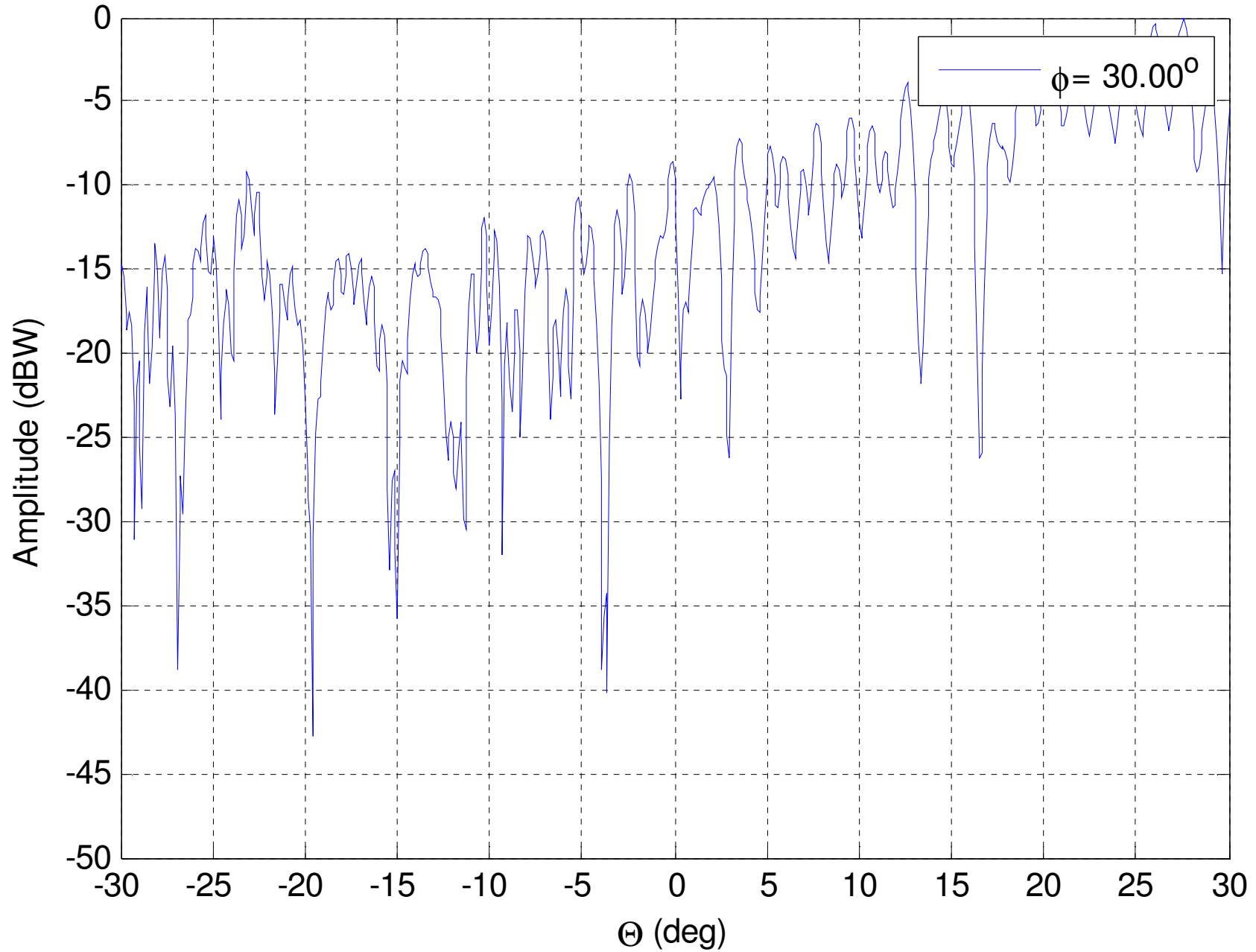
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -5.44 dBW, Date: 15-Dec-2011



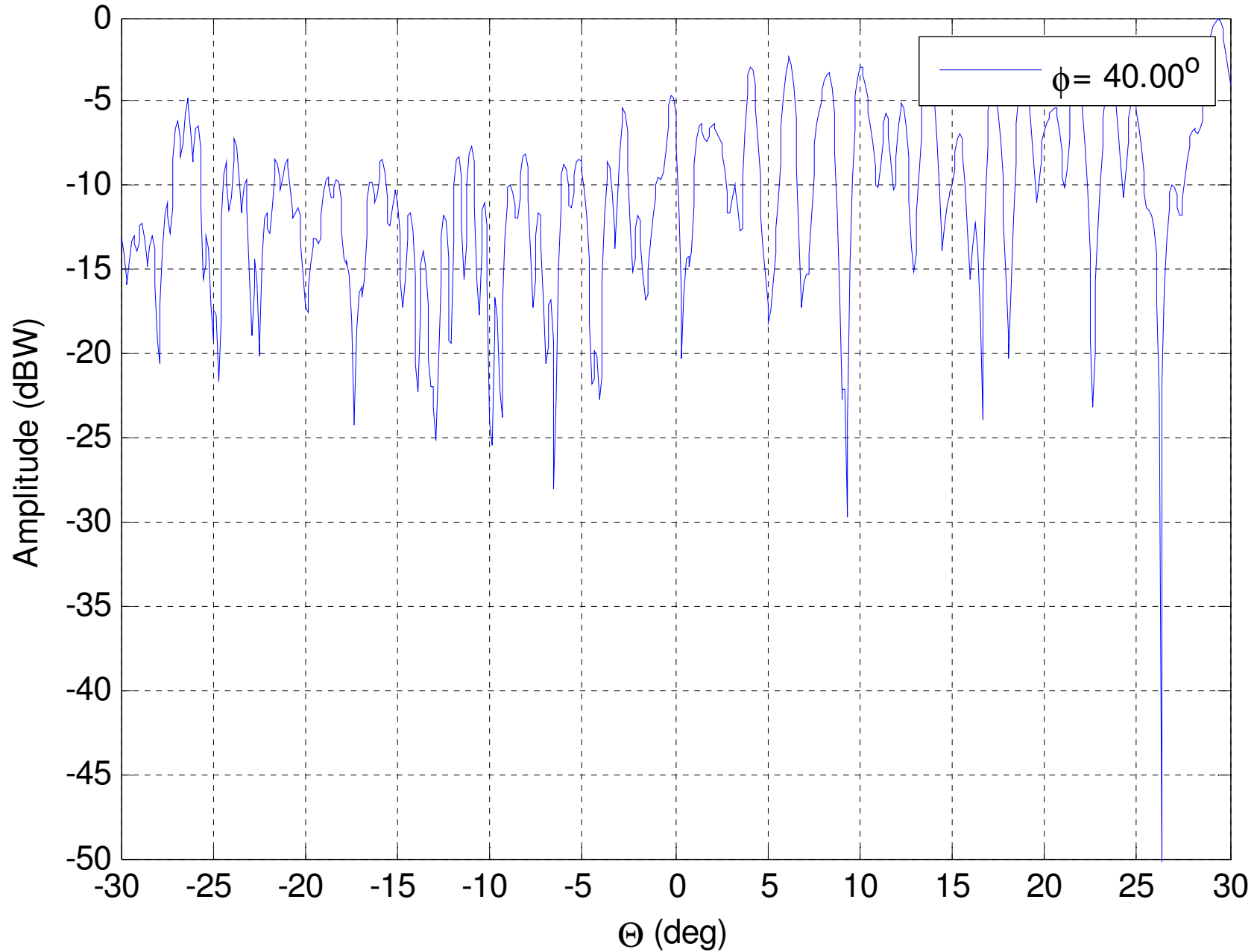
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -7.71 dBW, Date: 15-Dec-2011



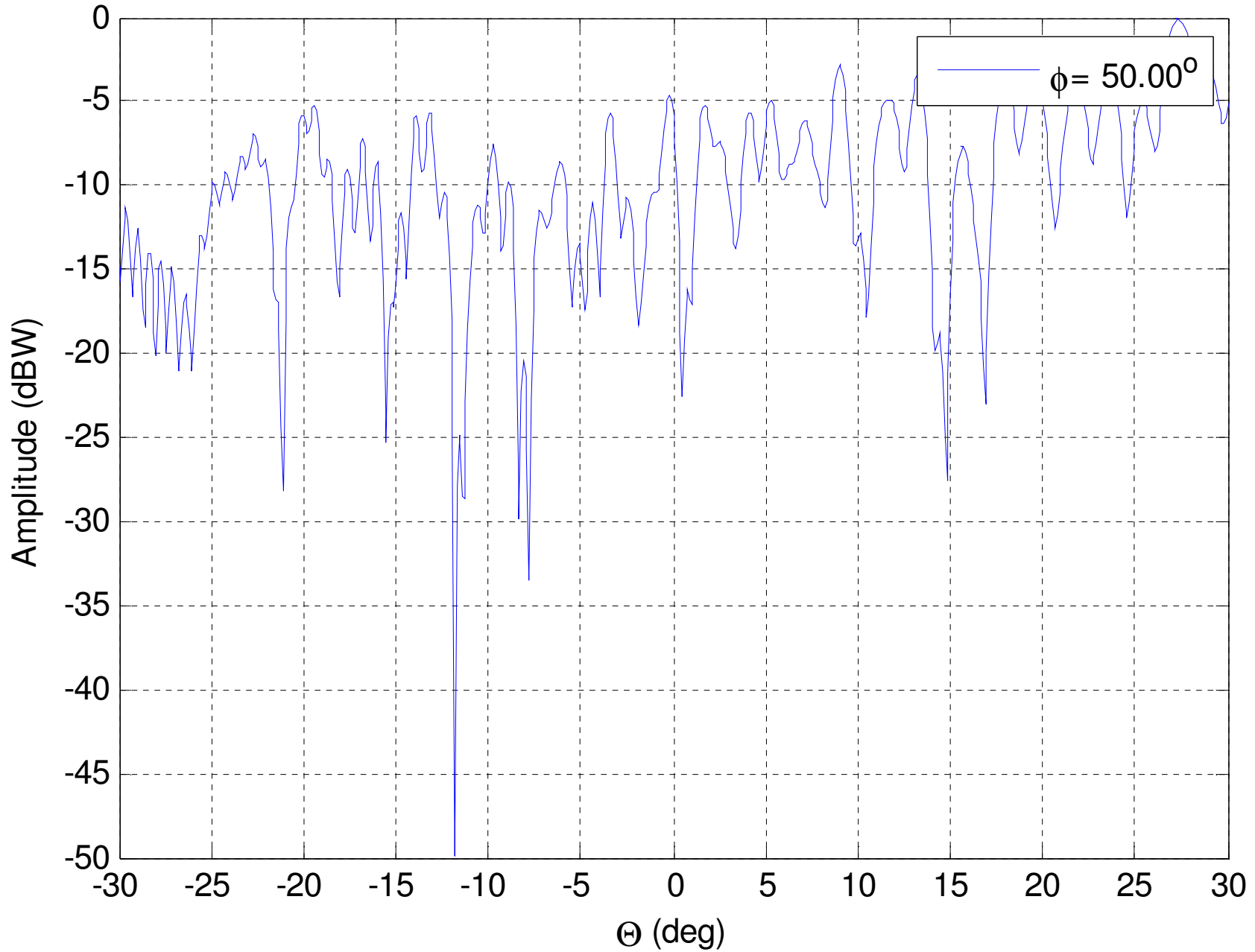
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -11.61 dBW, Date: 15-Dec-2011



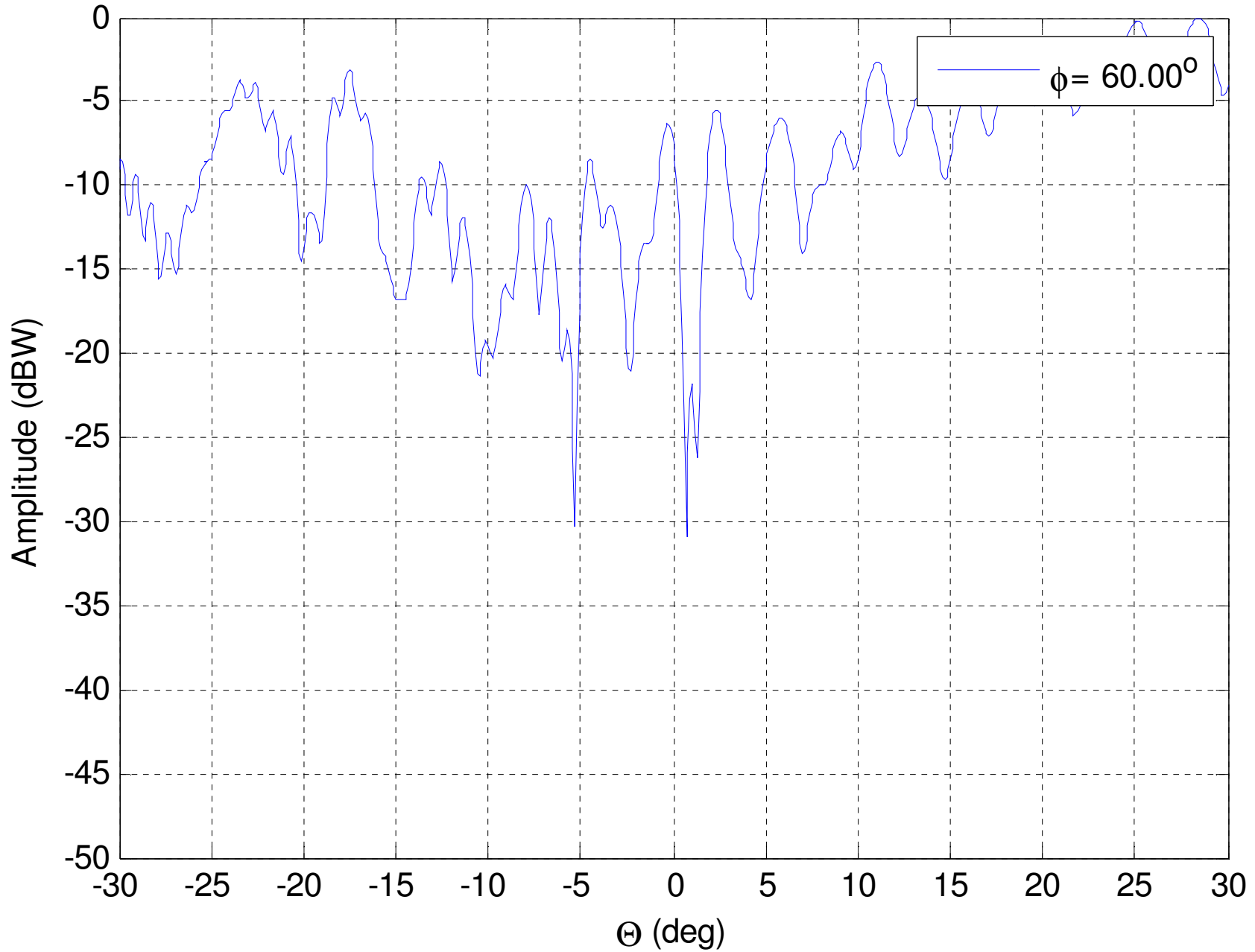
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.47 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

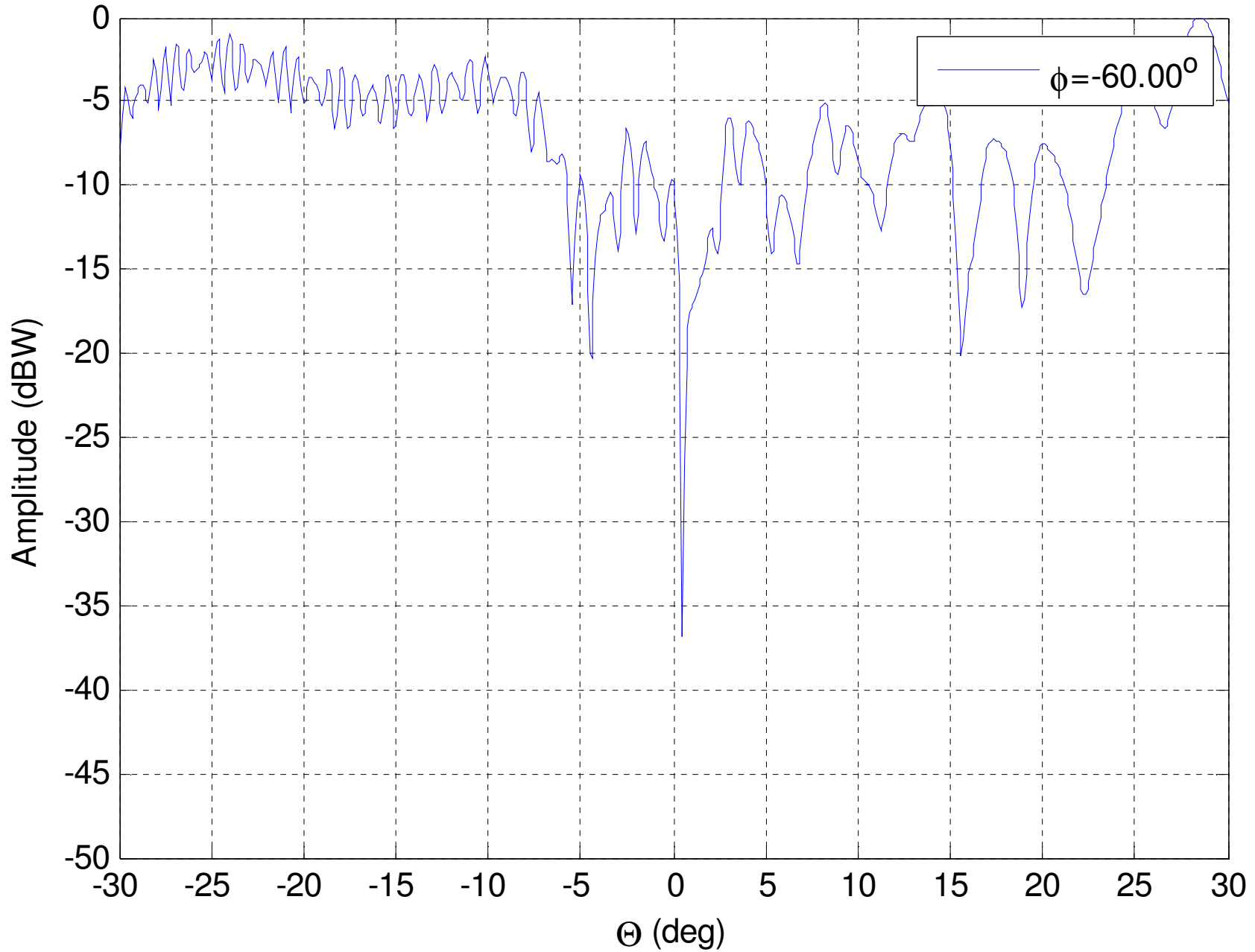
Input file: tx-17.5-rhcp-60.cut, Peak: -9.80 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

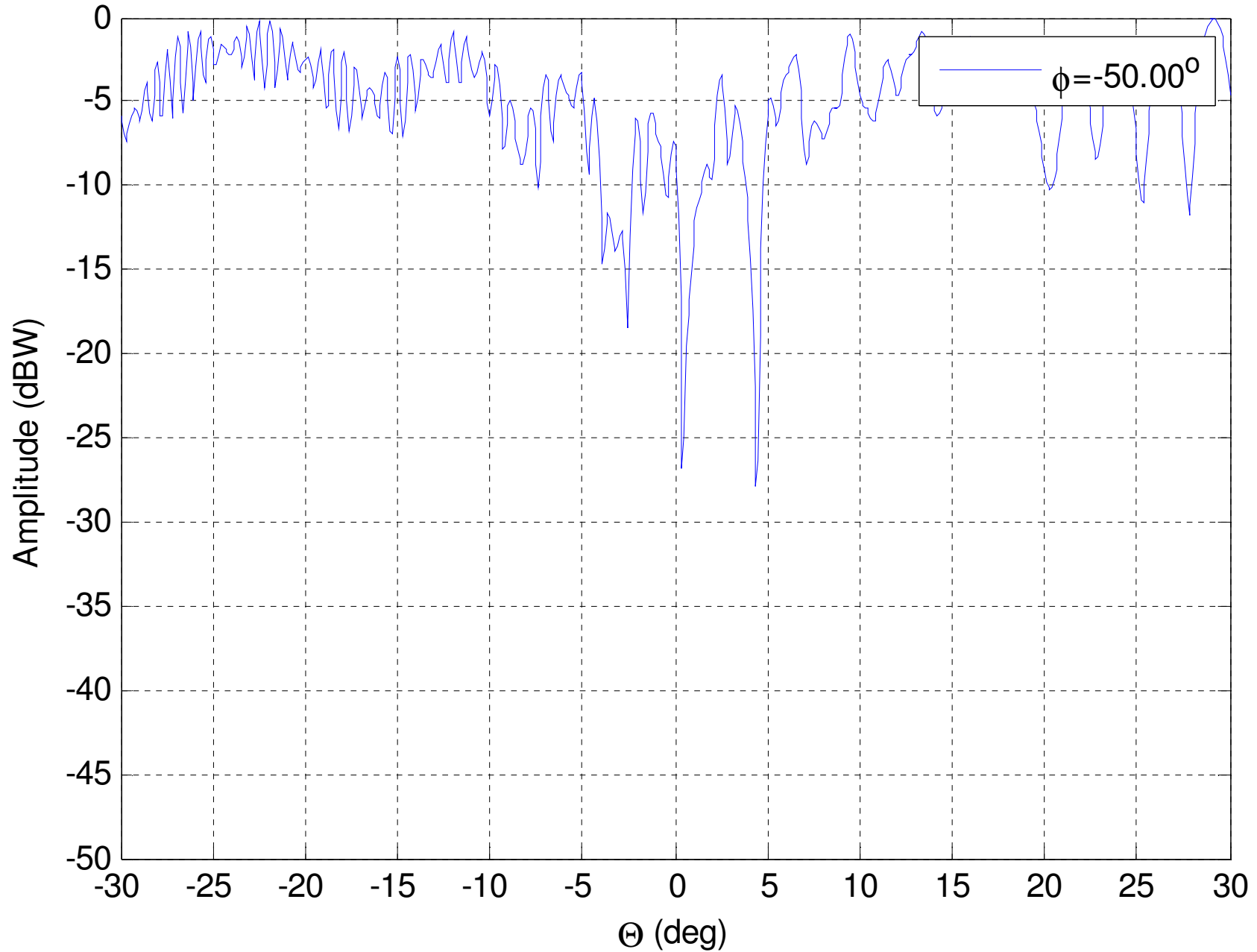
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.91 dBW, Date: 15-Dec-2011



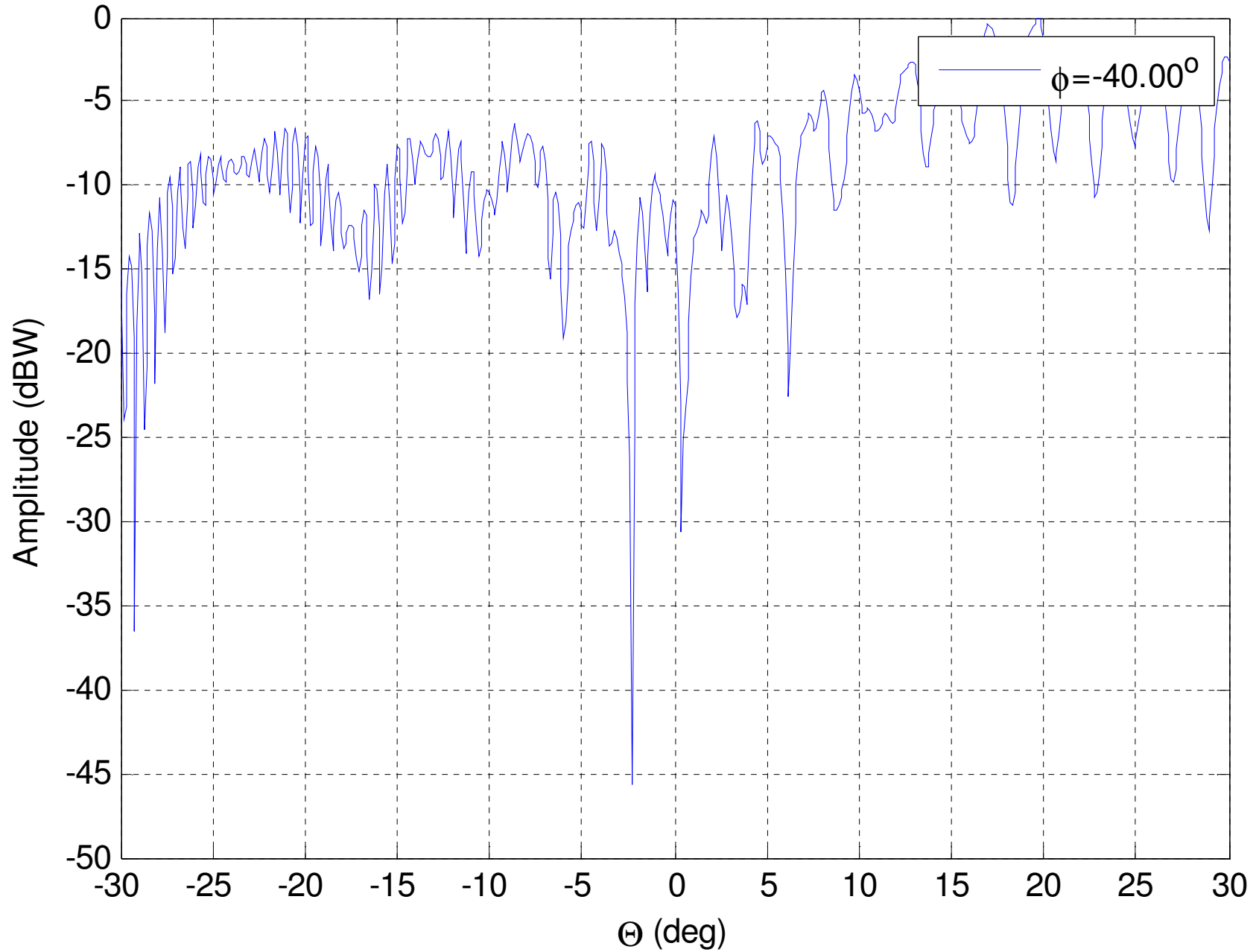
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.08 dBW, Date: 15-Dec-2011



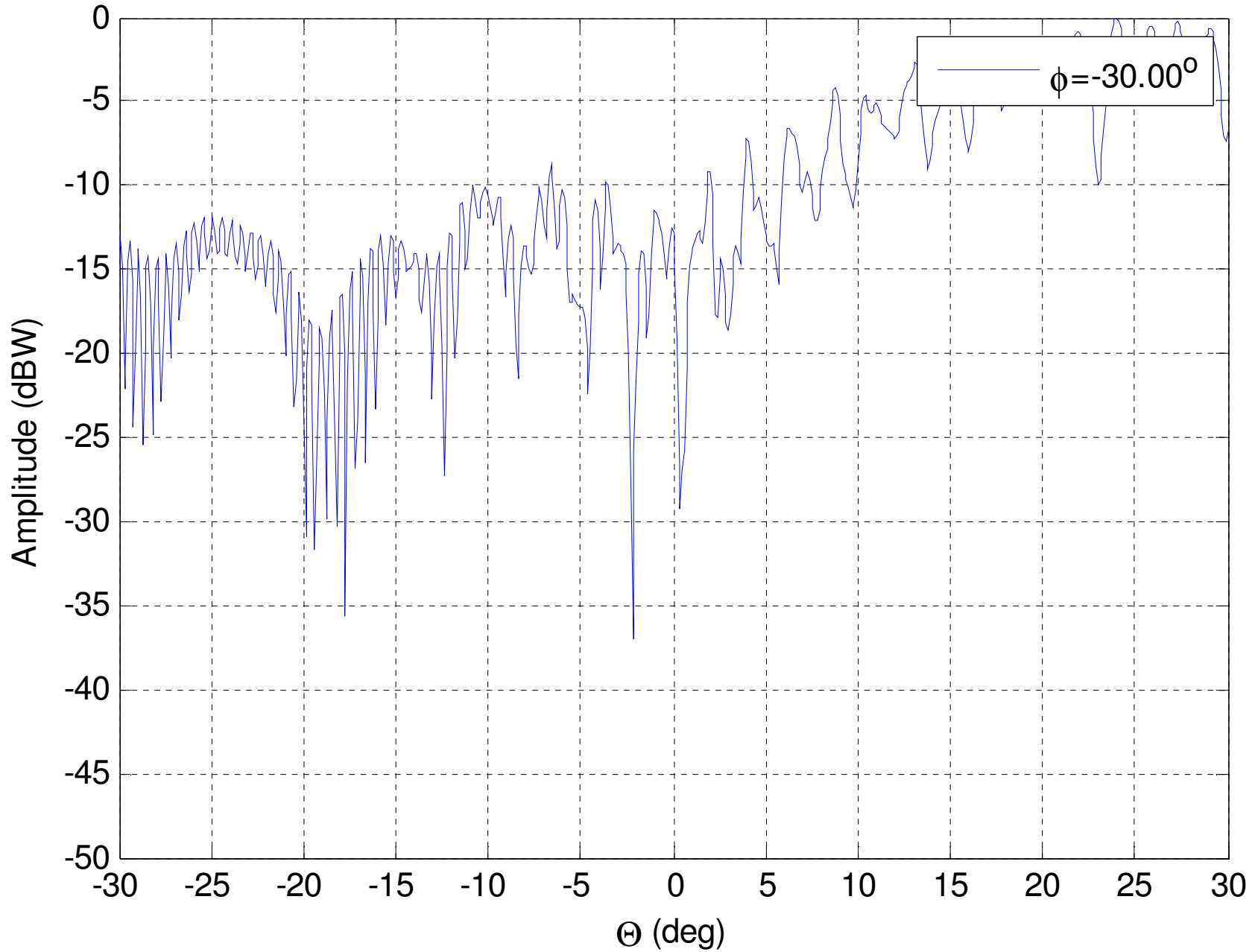
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.64 dBW, Date: 15-Dec-2011



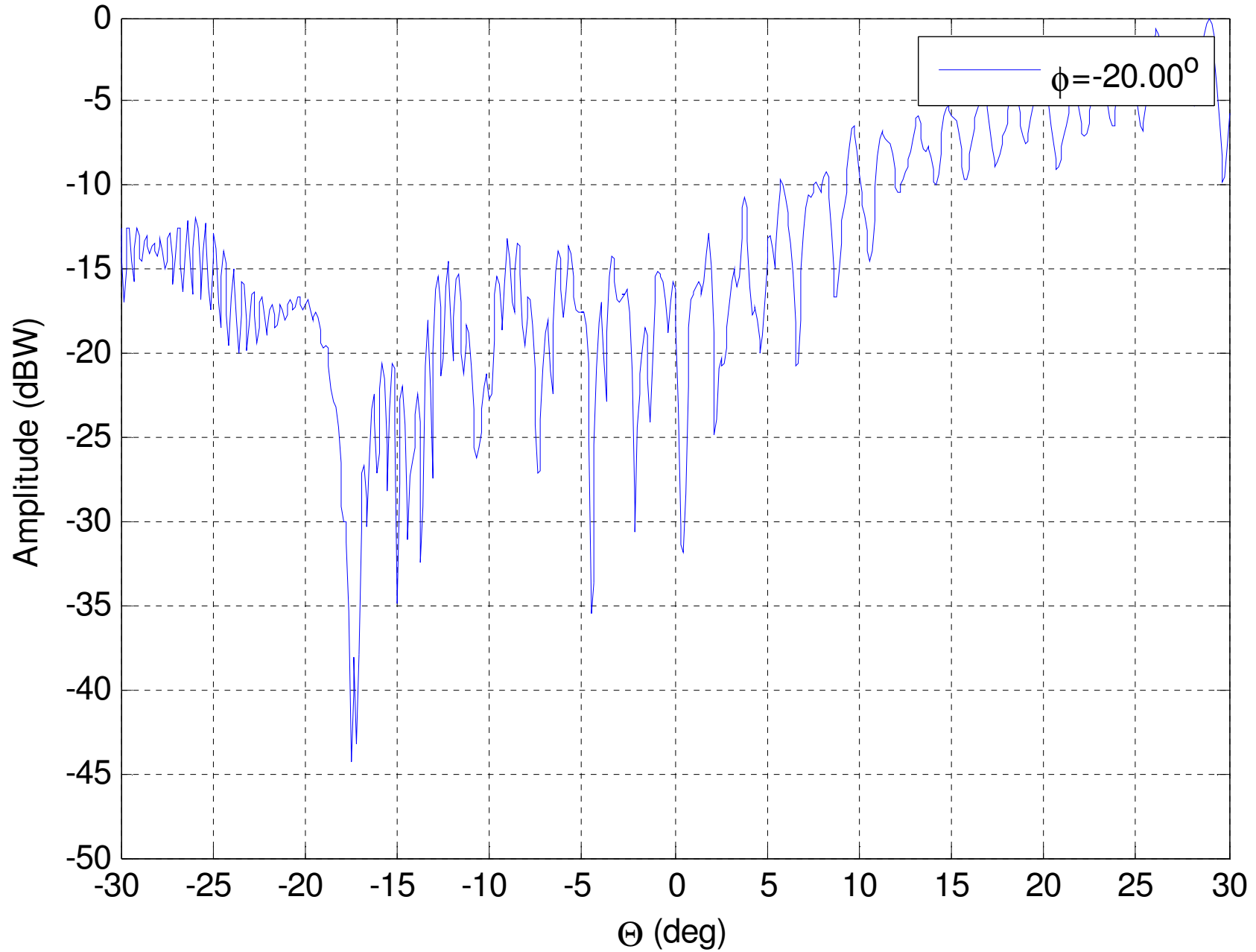
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -5.93 dBW, Date: 15-Dec-2011



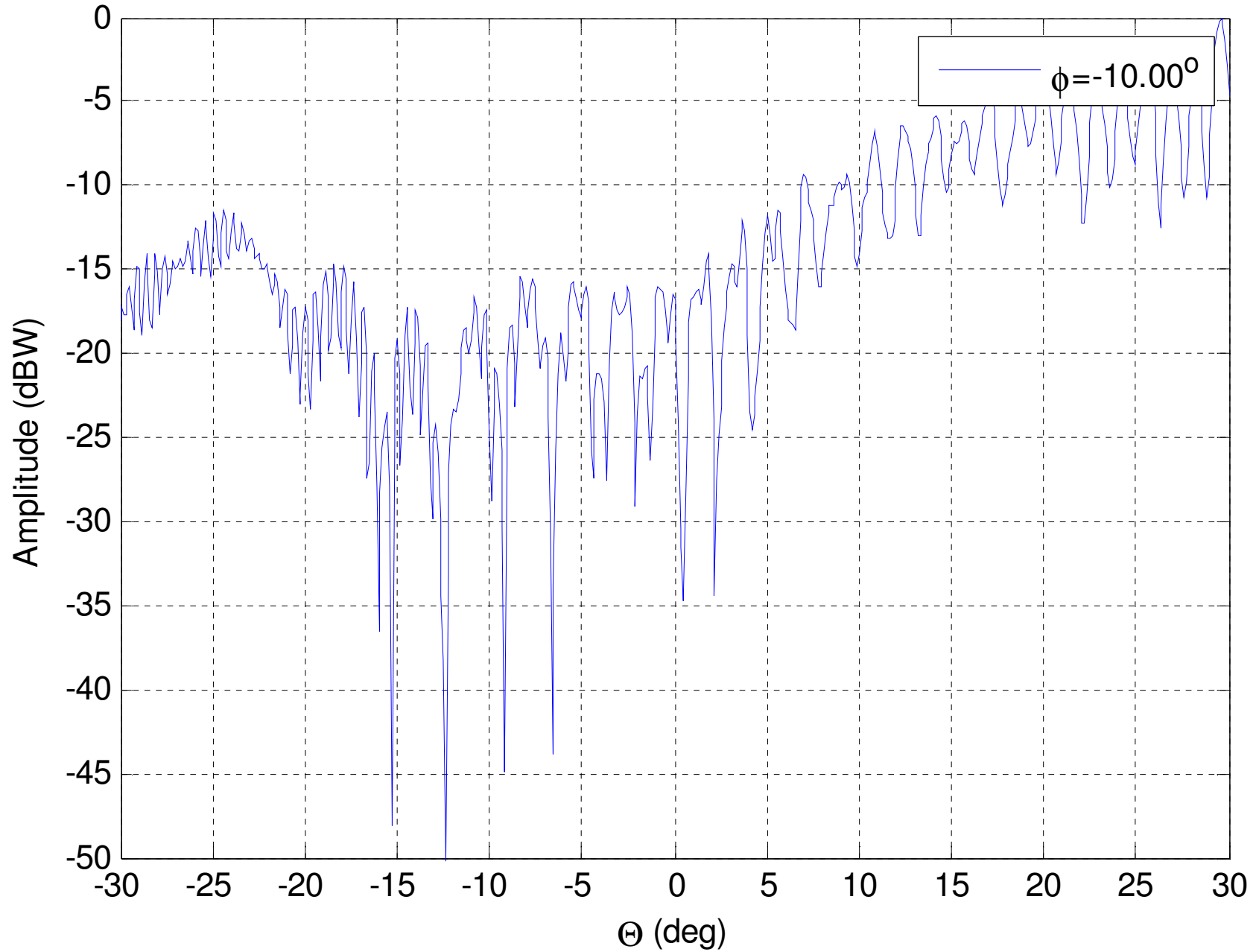
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -2.62 dBW, Date: 15-Dec-2011



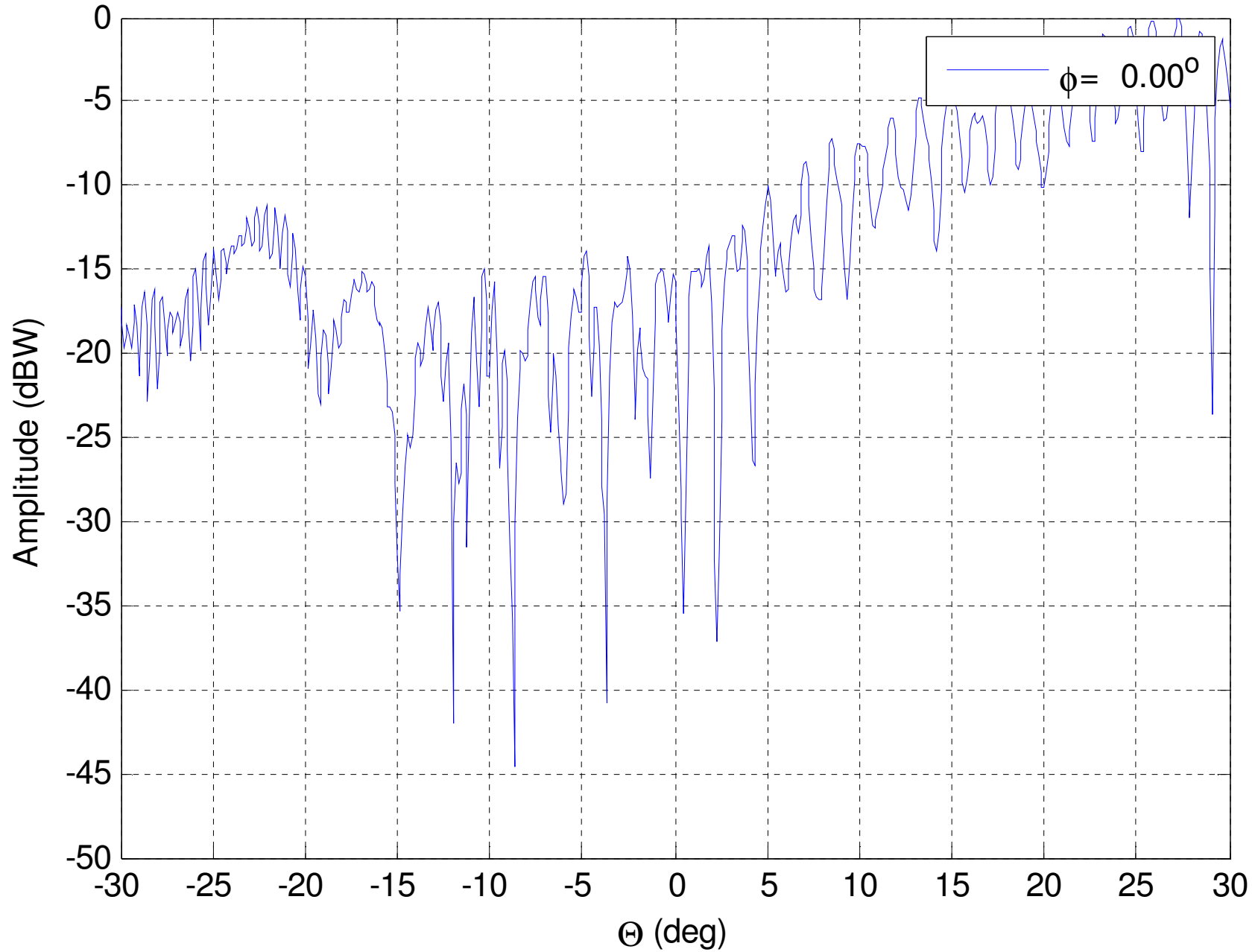
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -1.92 dBW, Date: 15-Dec-2011



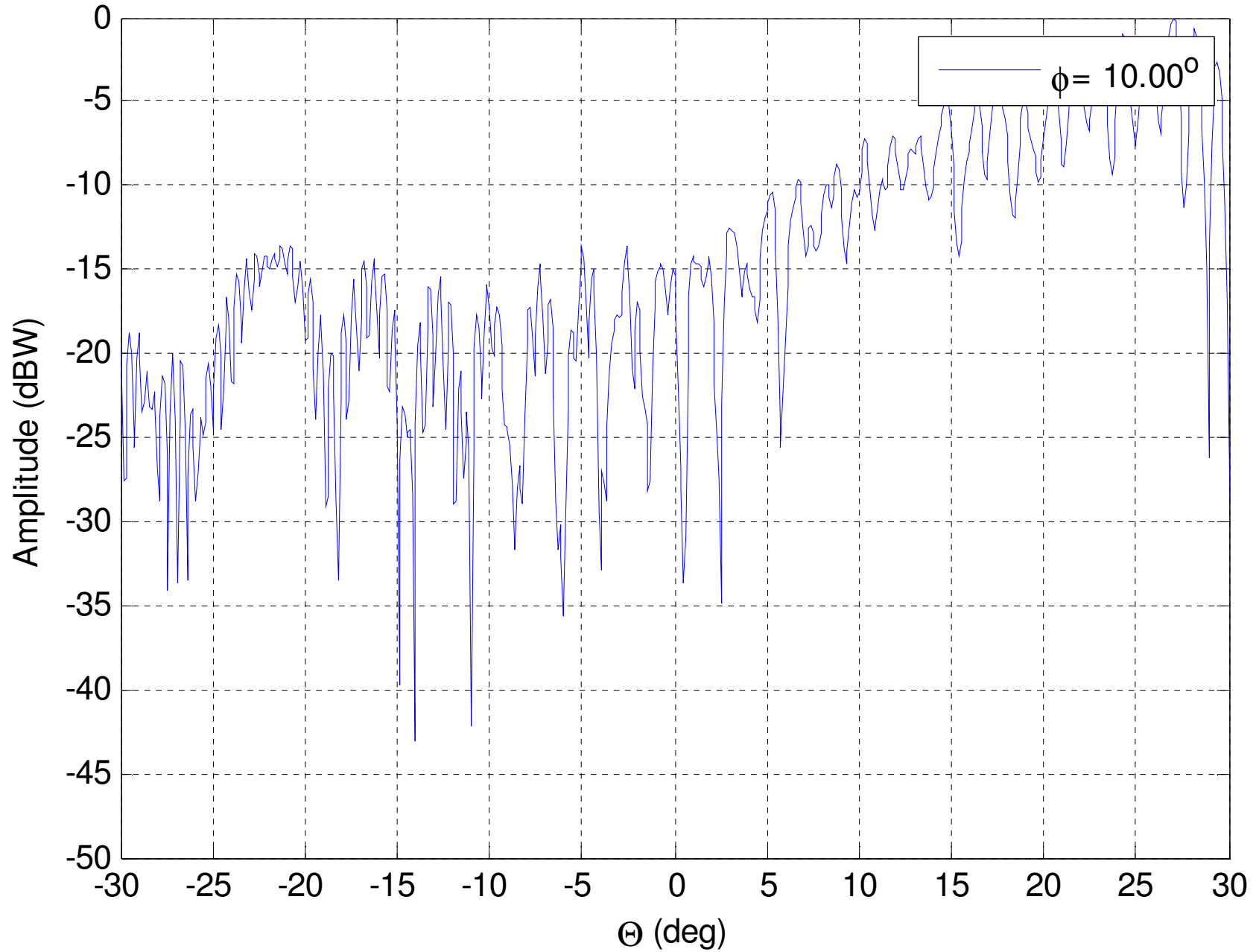
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -3.08 dBW, Date: 15-Dec-2011



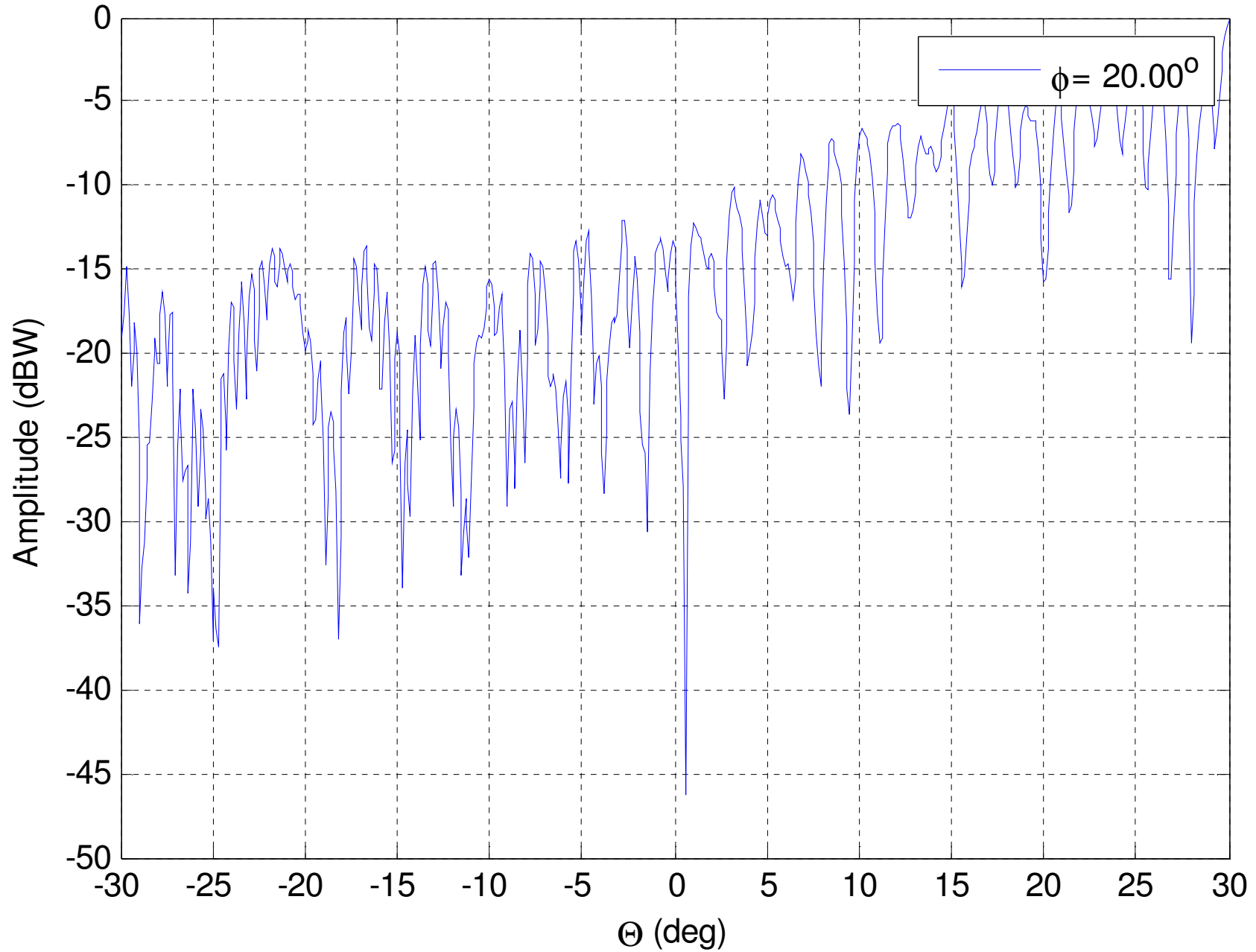
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -3.37 dBW, Date: 15-Dec-2011



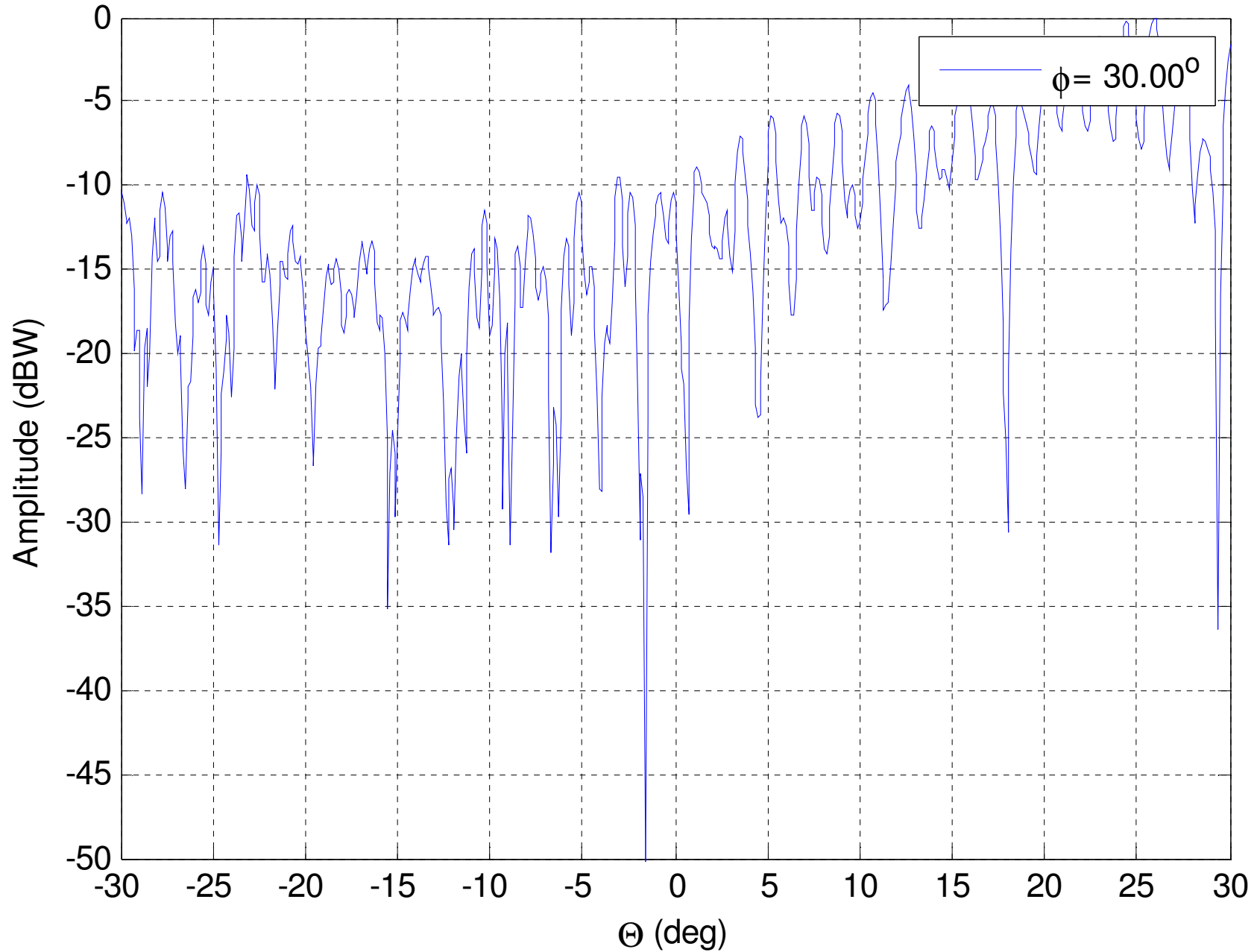
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -4.96 dBW, Date: 15-Dec-2011



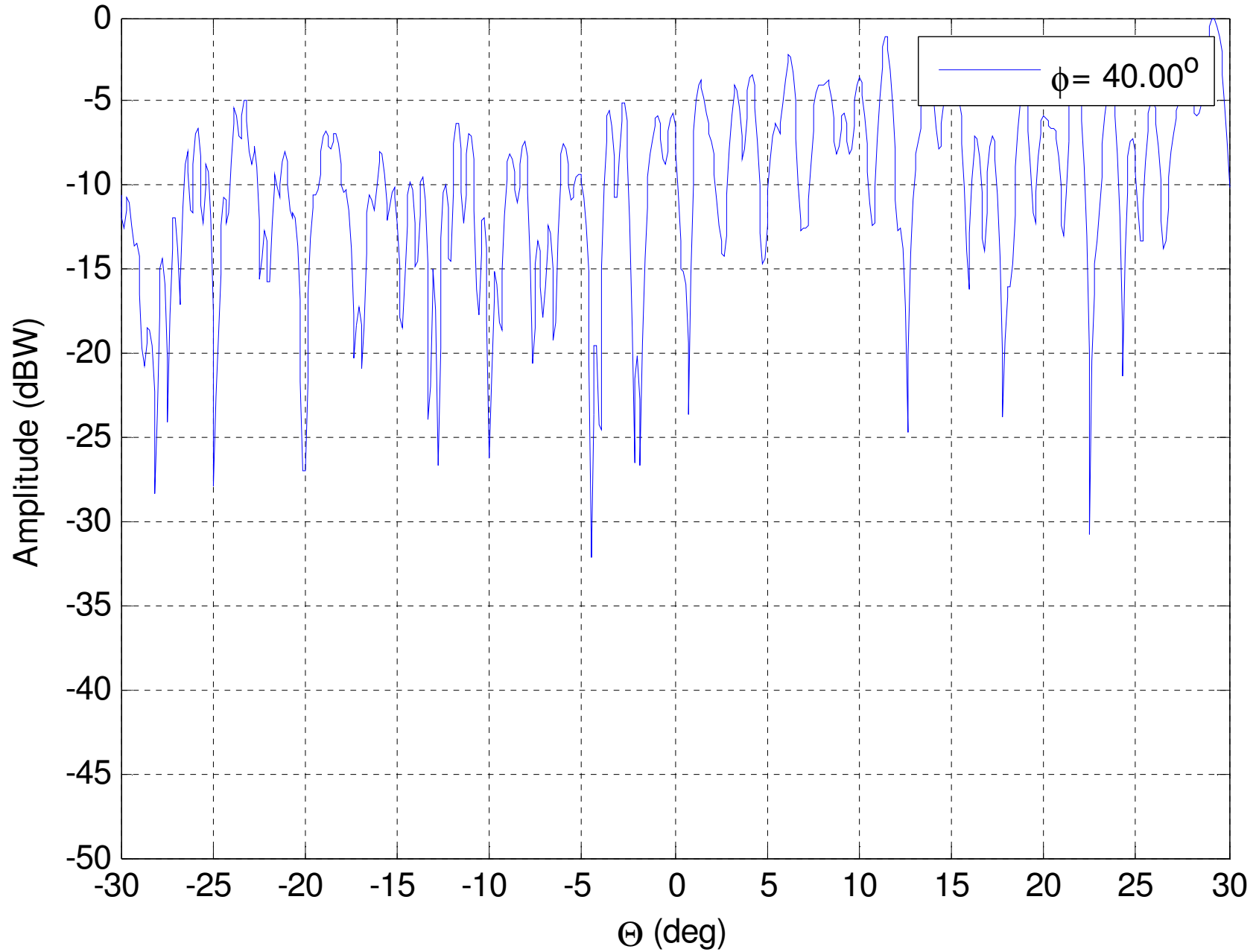
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -7.74 dBW, Date: 15-Dec-2011



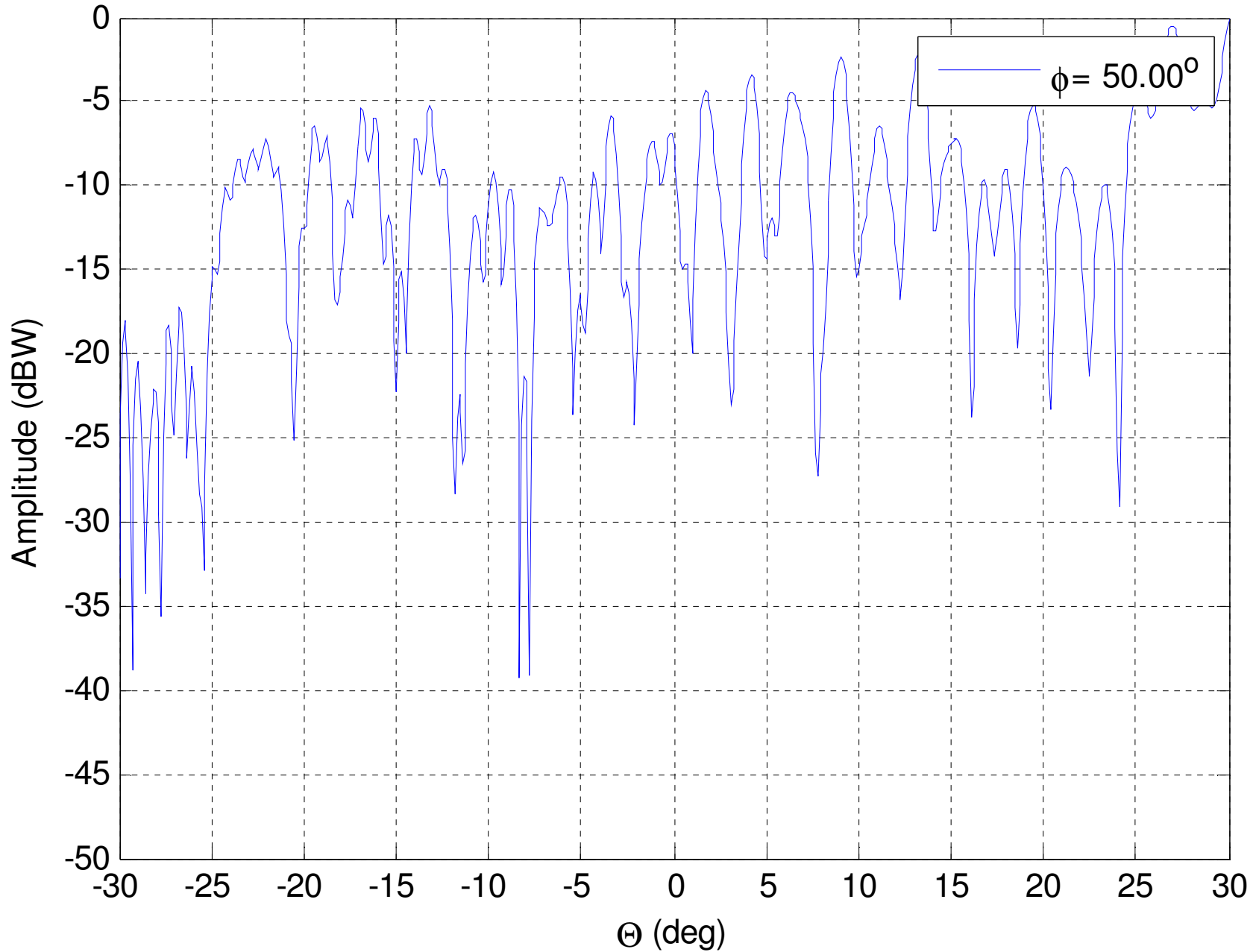
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -12.33 dBW, Date: 15-Dec-2011



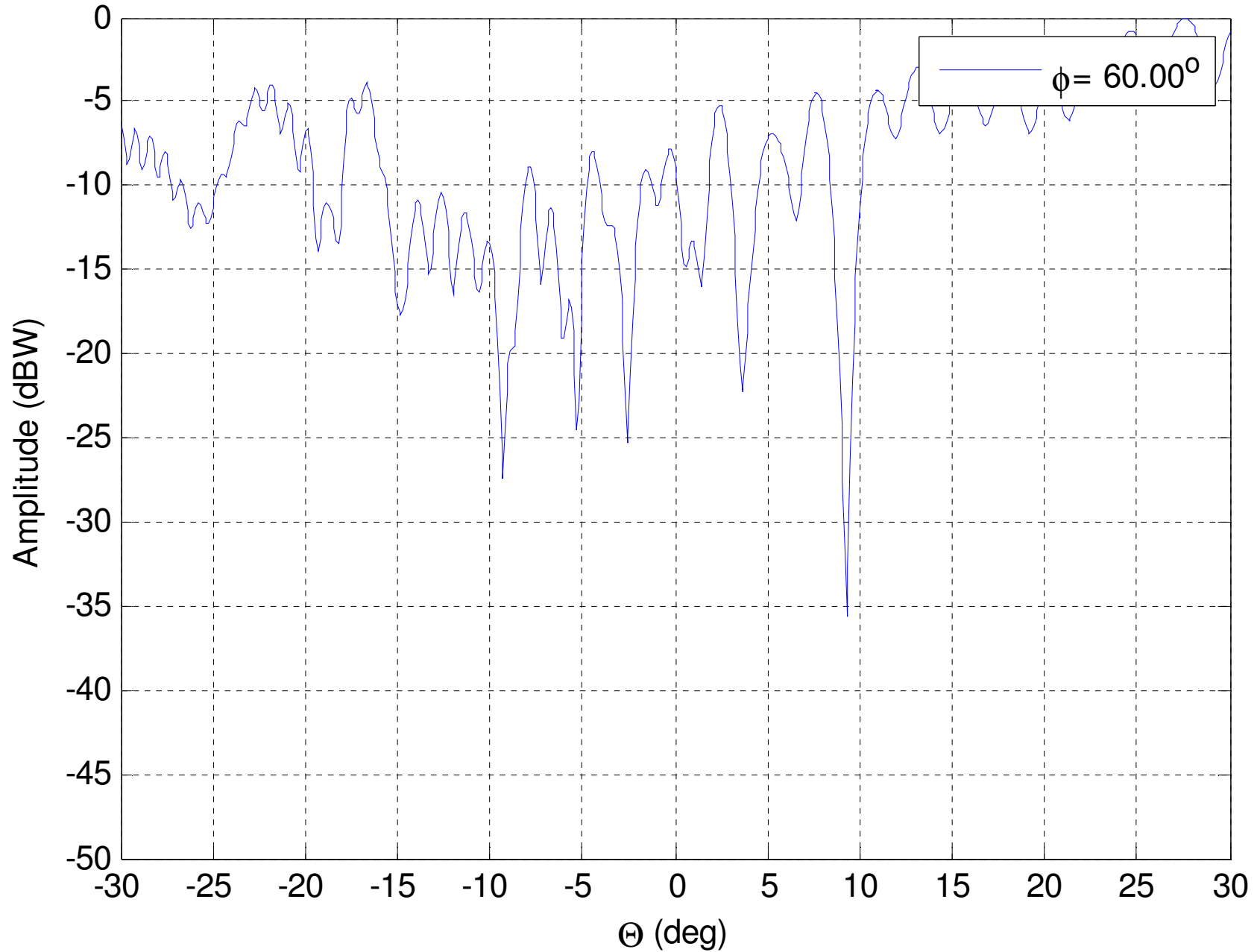
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -11.11 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

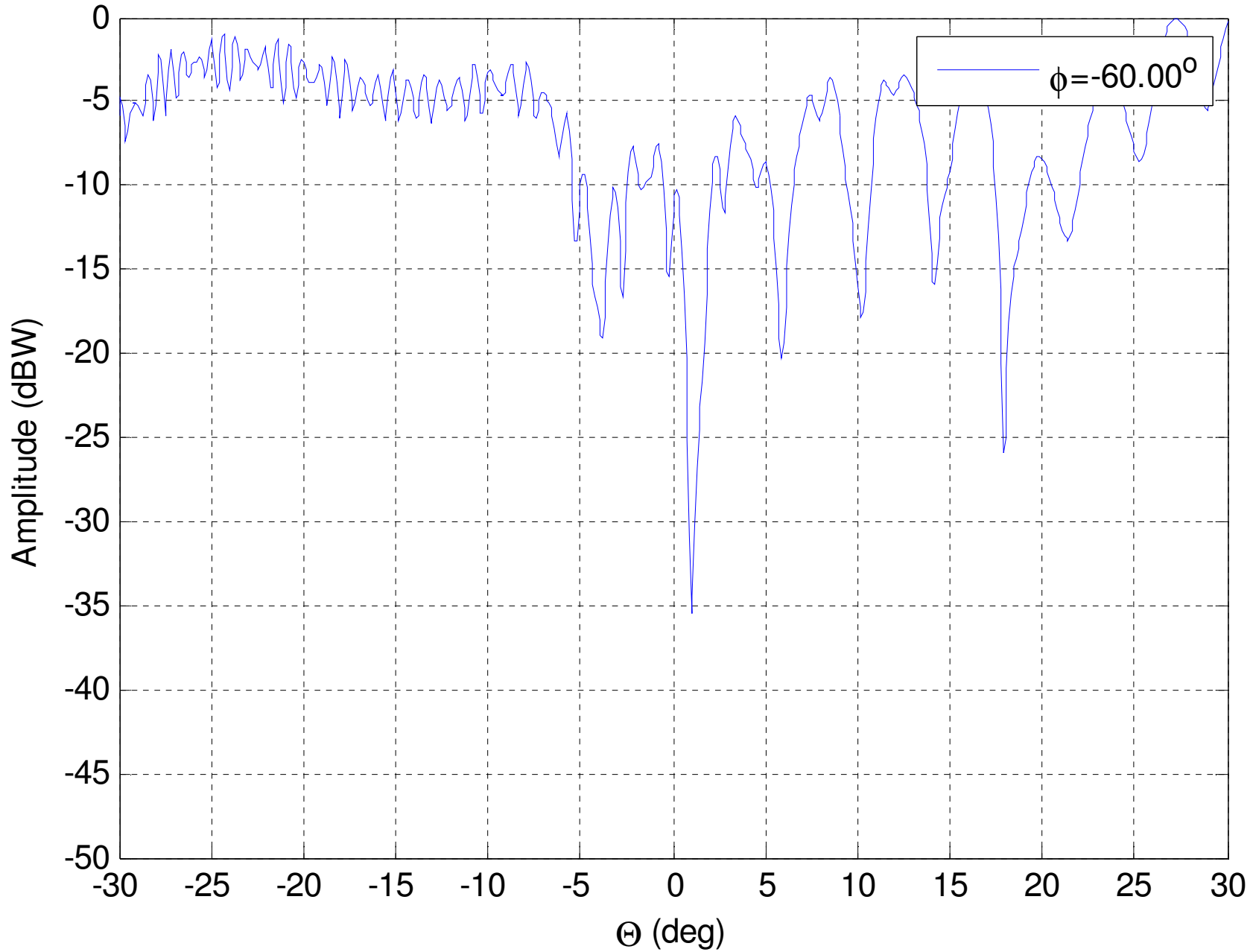
Input file: tx-17.5-lhcp-60.cut, Peak: -9.93 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

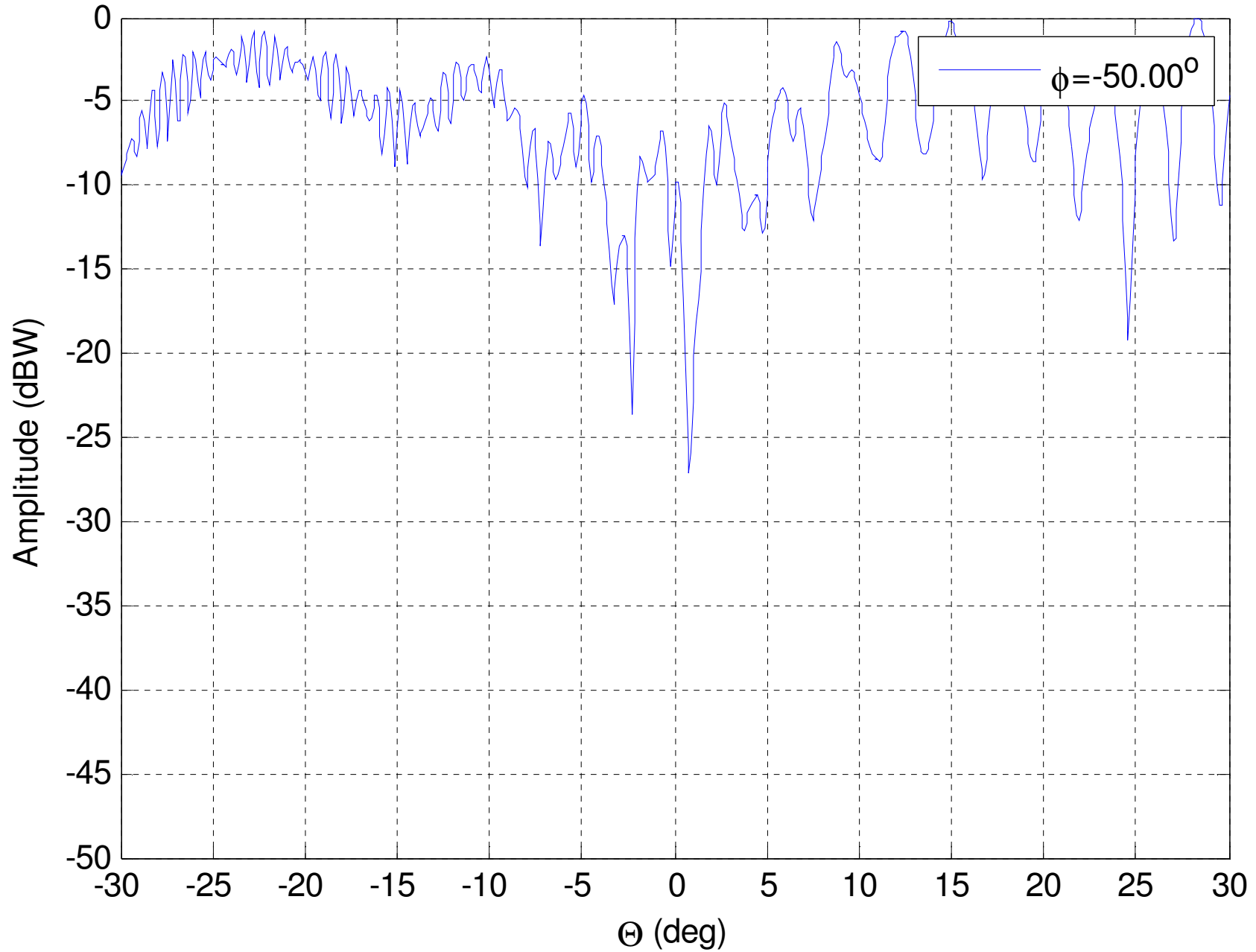
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.14 dBW, Date: 15-Dec-2011



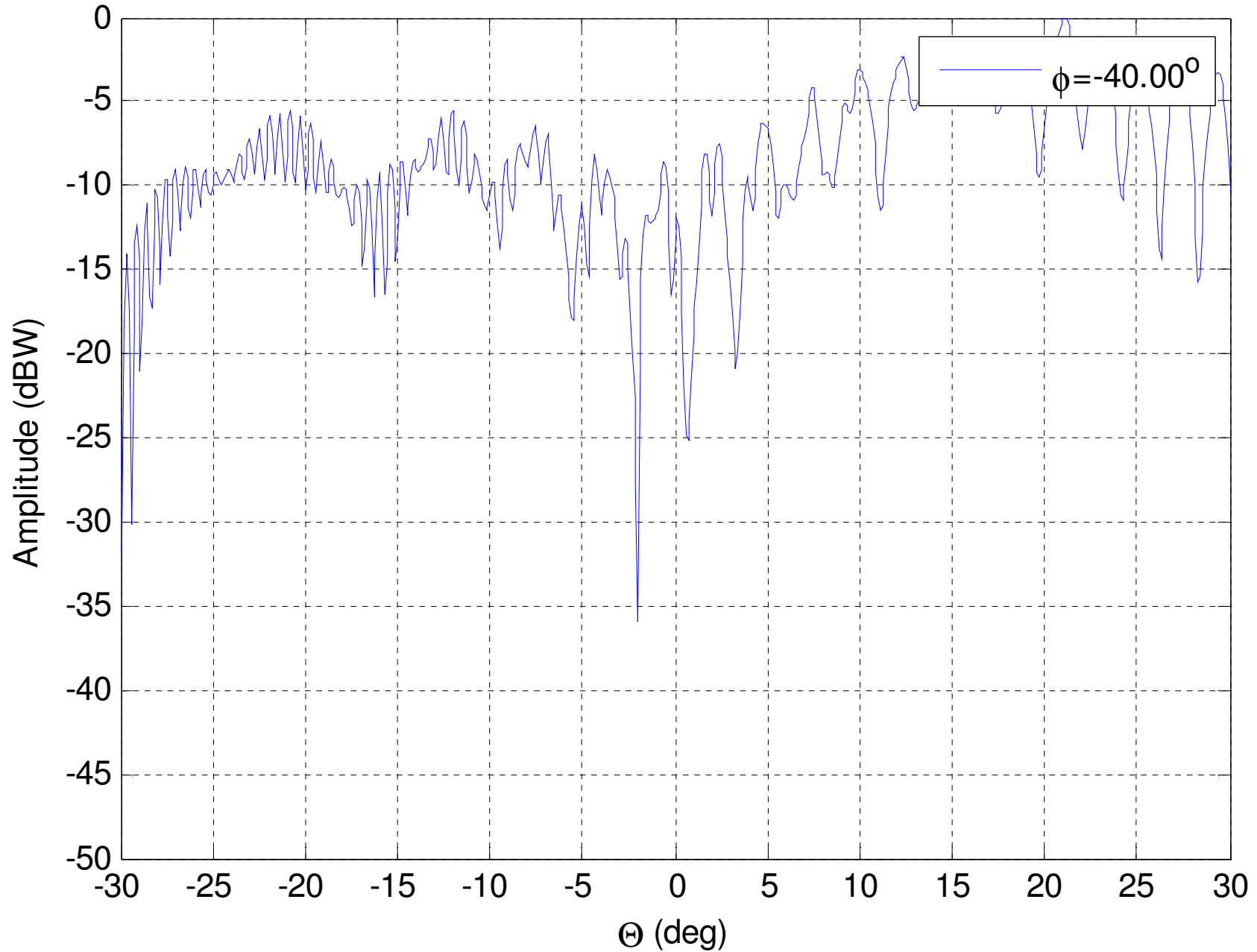
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -9.78 dBW, Date: 15-Dec-2011



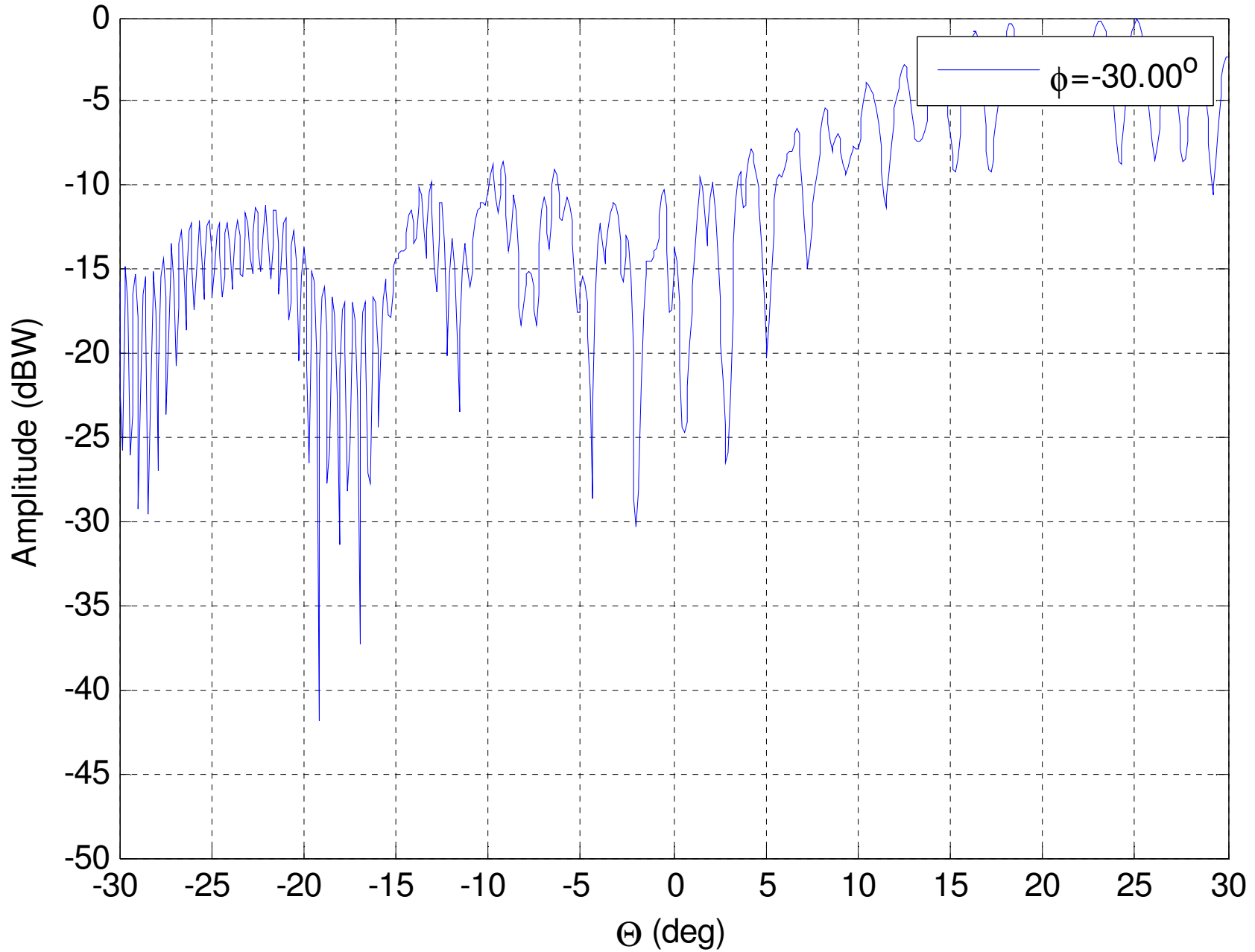
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.67 dBW, Date: 15-Dec-2011



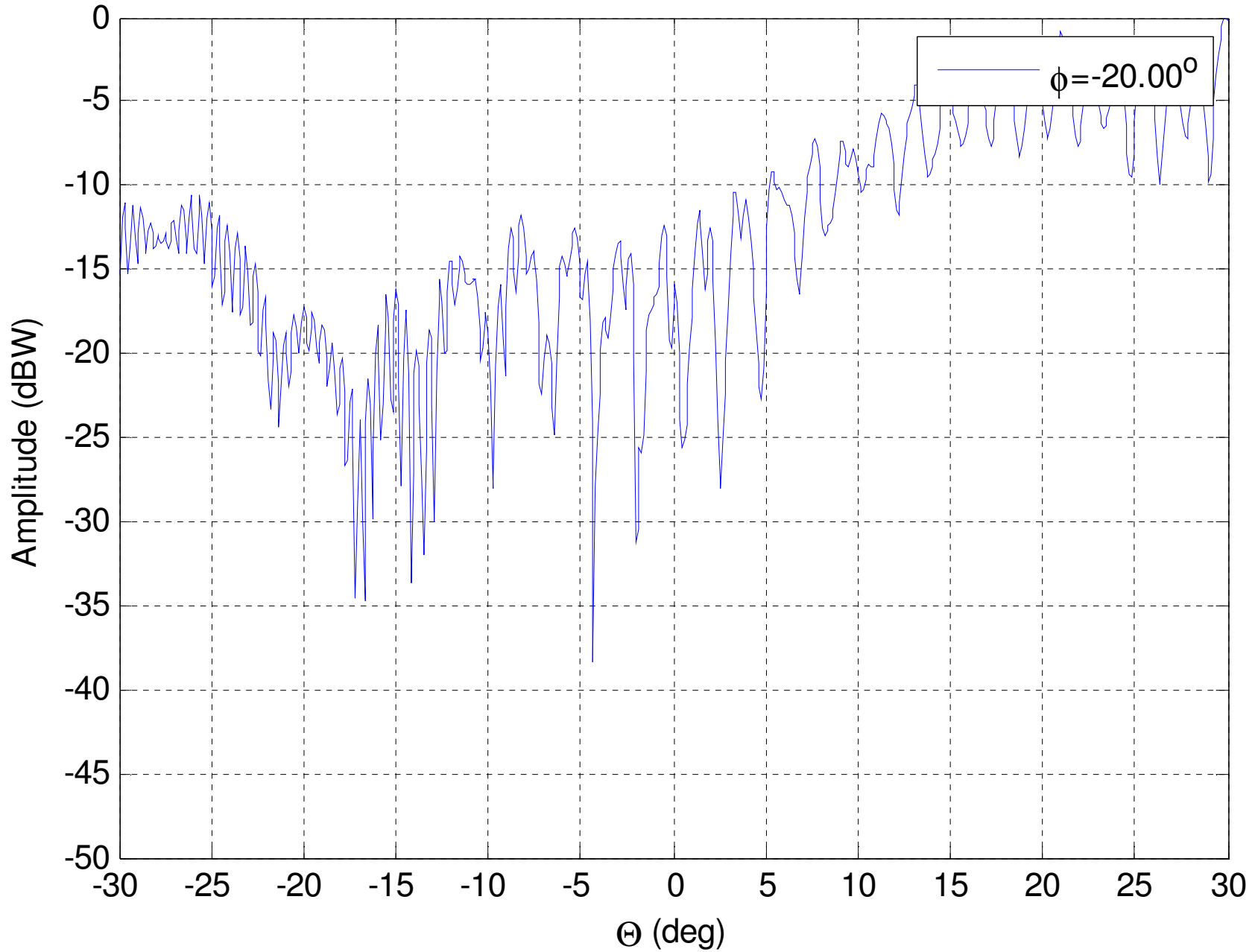
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -5.96 dBW, Date: 15-Dec-2011



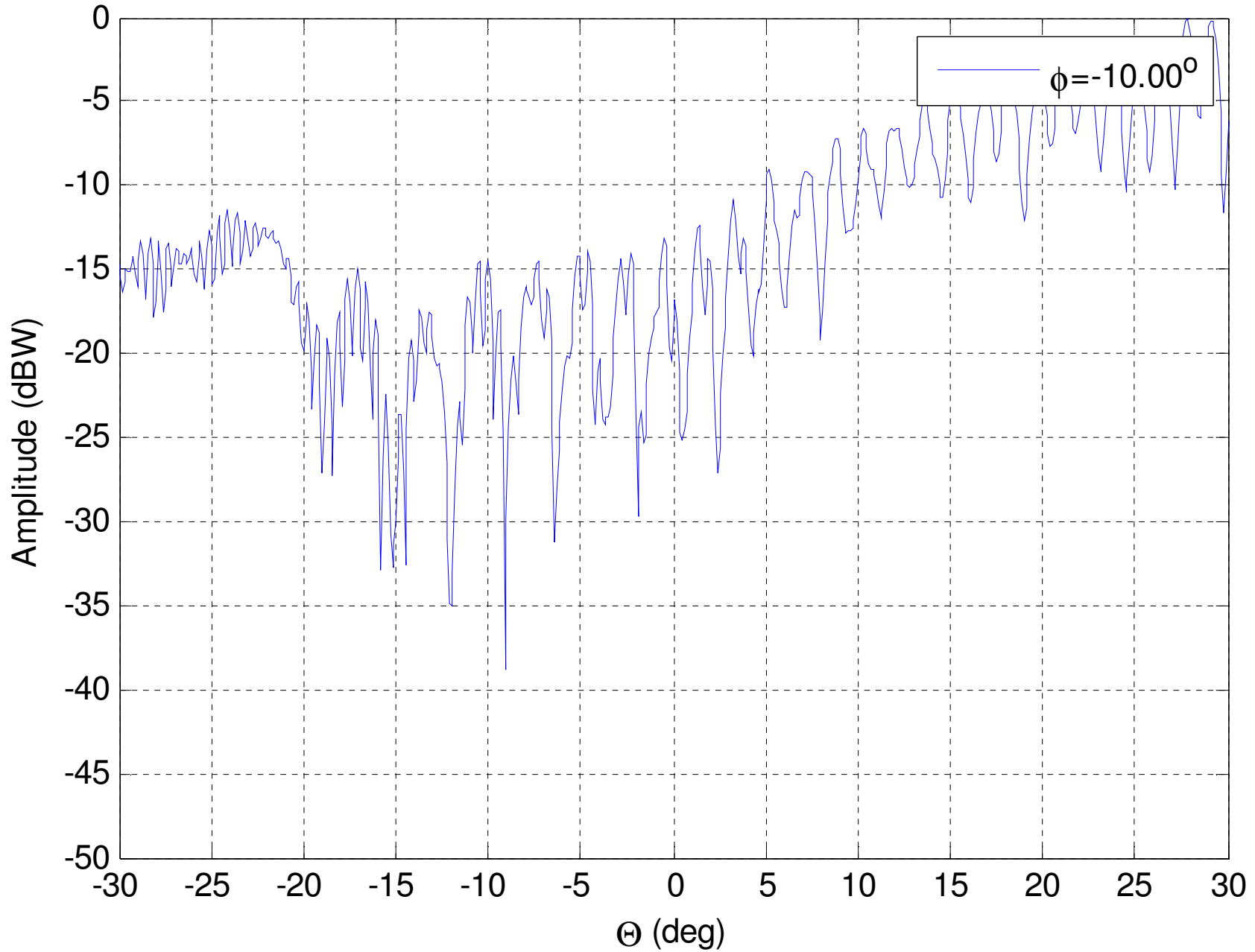
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -3.79 dBW, Date: 15-Dec-2011



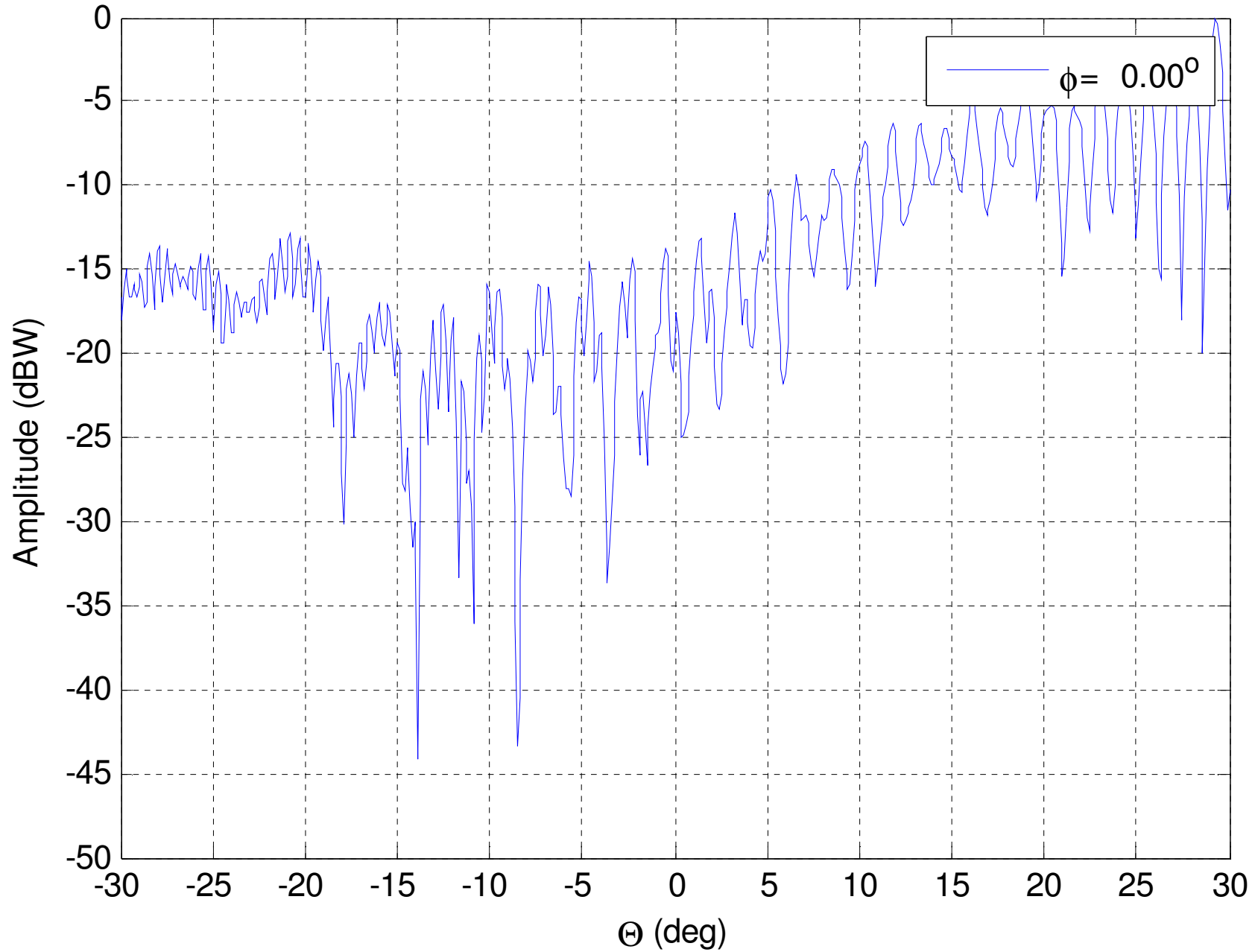
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -3.05 dBW, Date: 15-Dec-2011



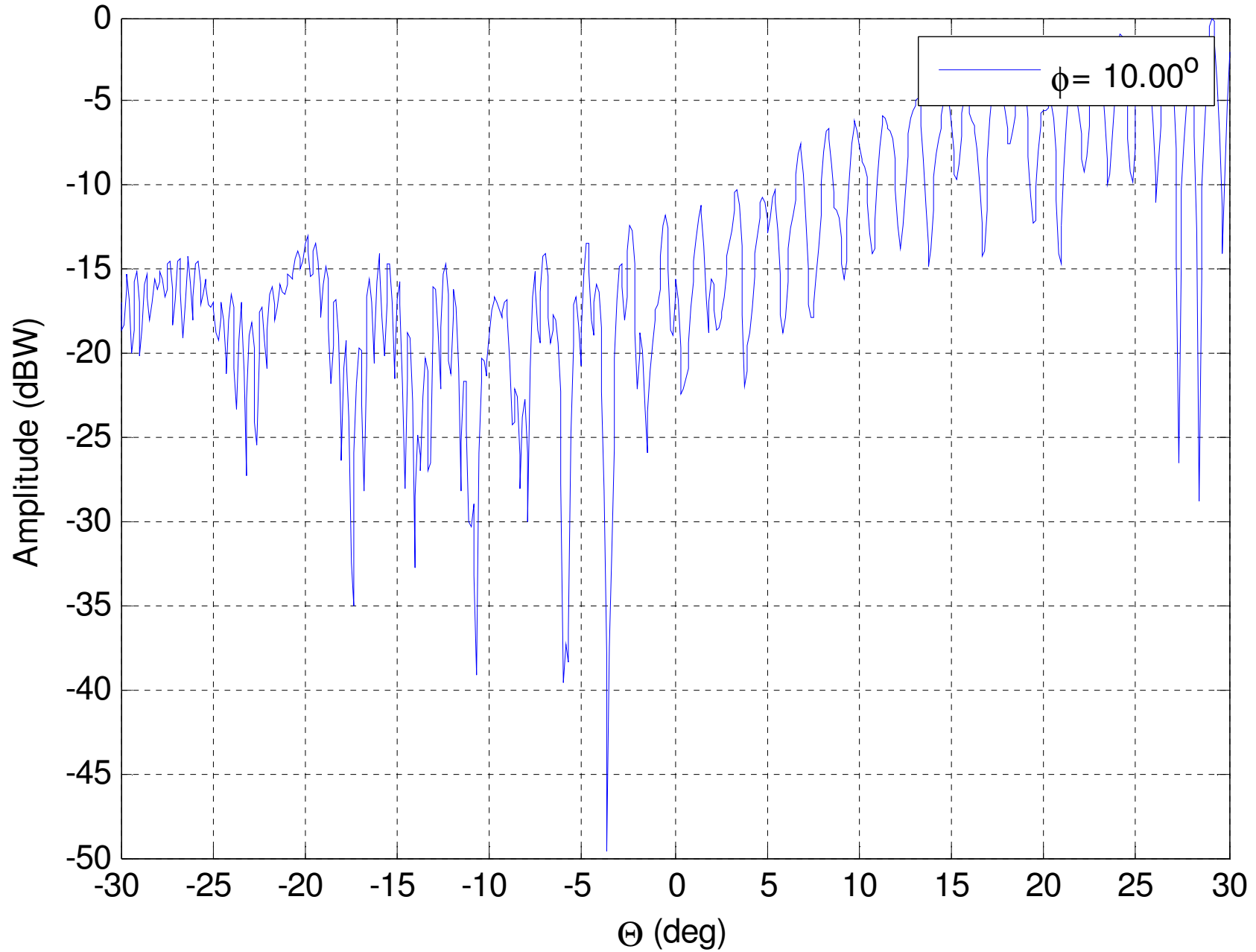
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -2.34 dBW, Date: 15-Dec-2011



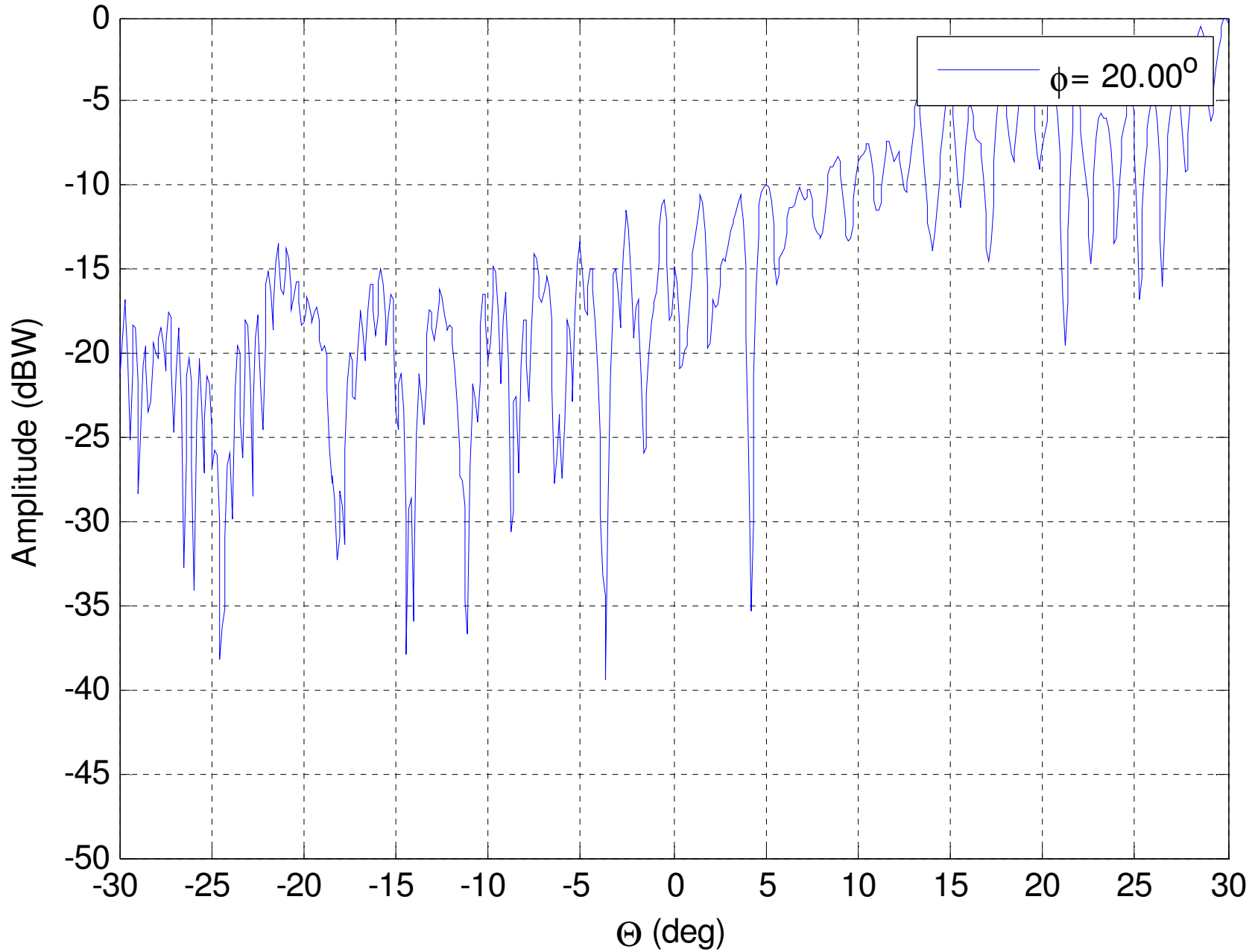
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -4.30 dBW, Date: 15-Dec-2011



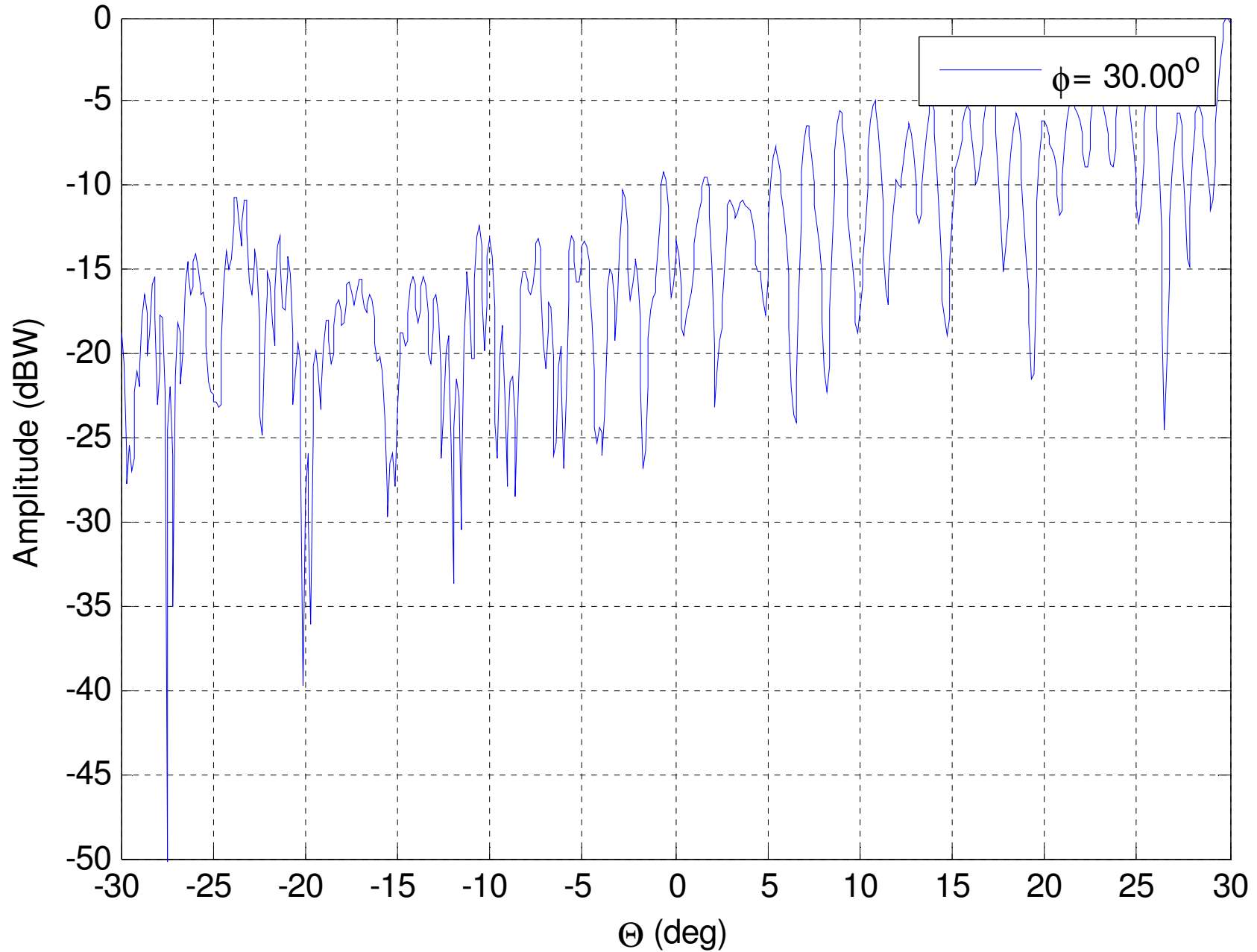
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -5.18 dBW, Date: 15-Dec-2011



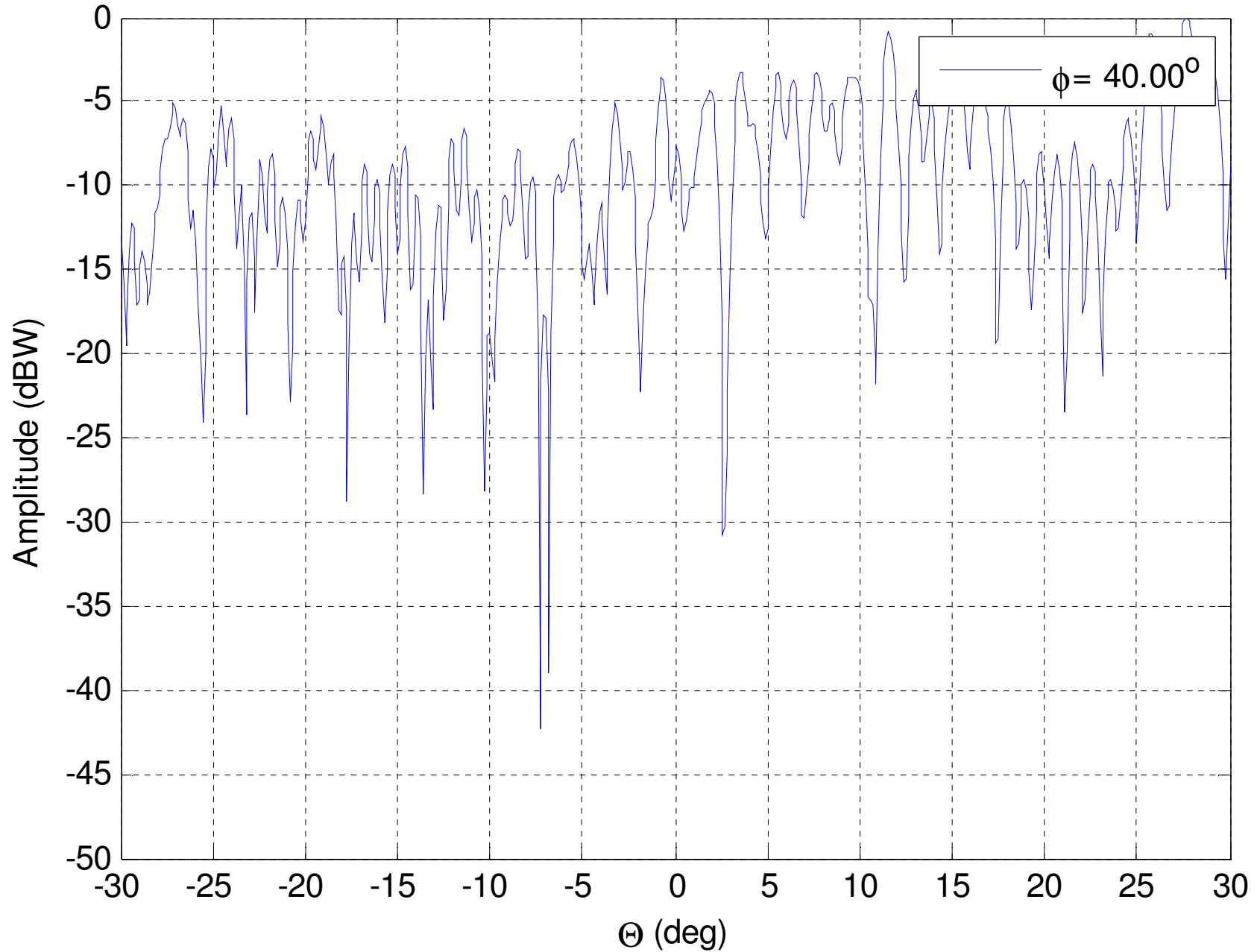
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -6.73 dBW, Date: 15-Dec-2011



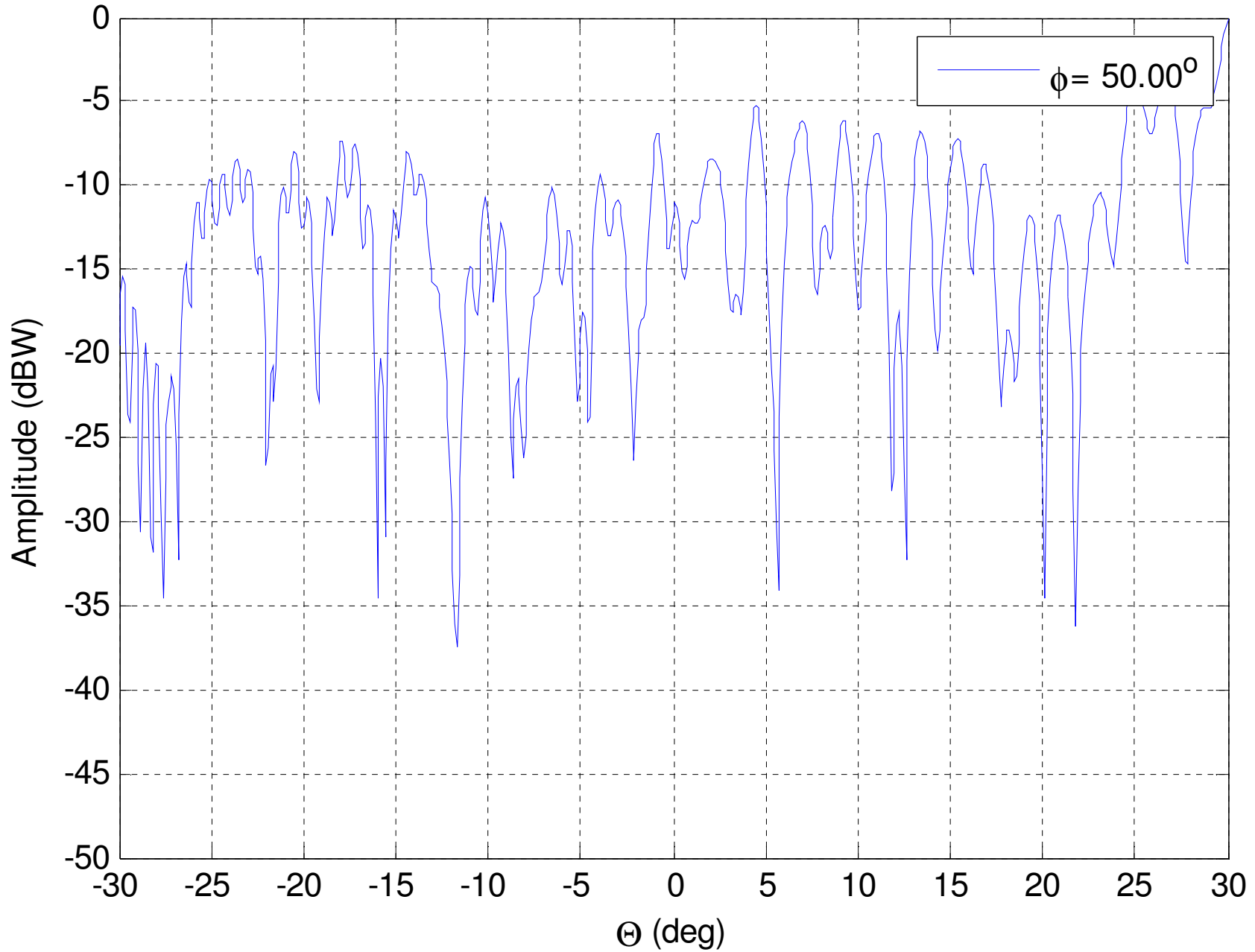
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -12.50 dBW, Date: 15-Dec-2011



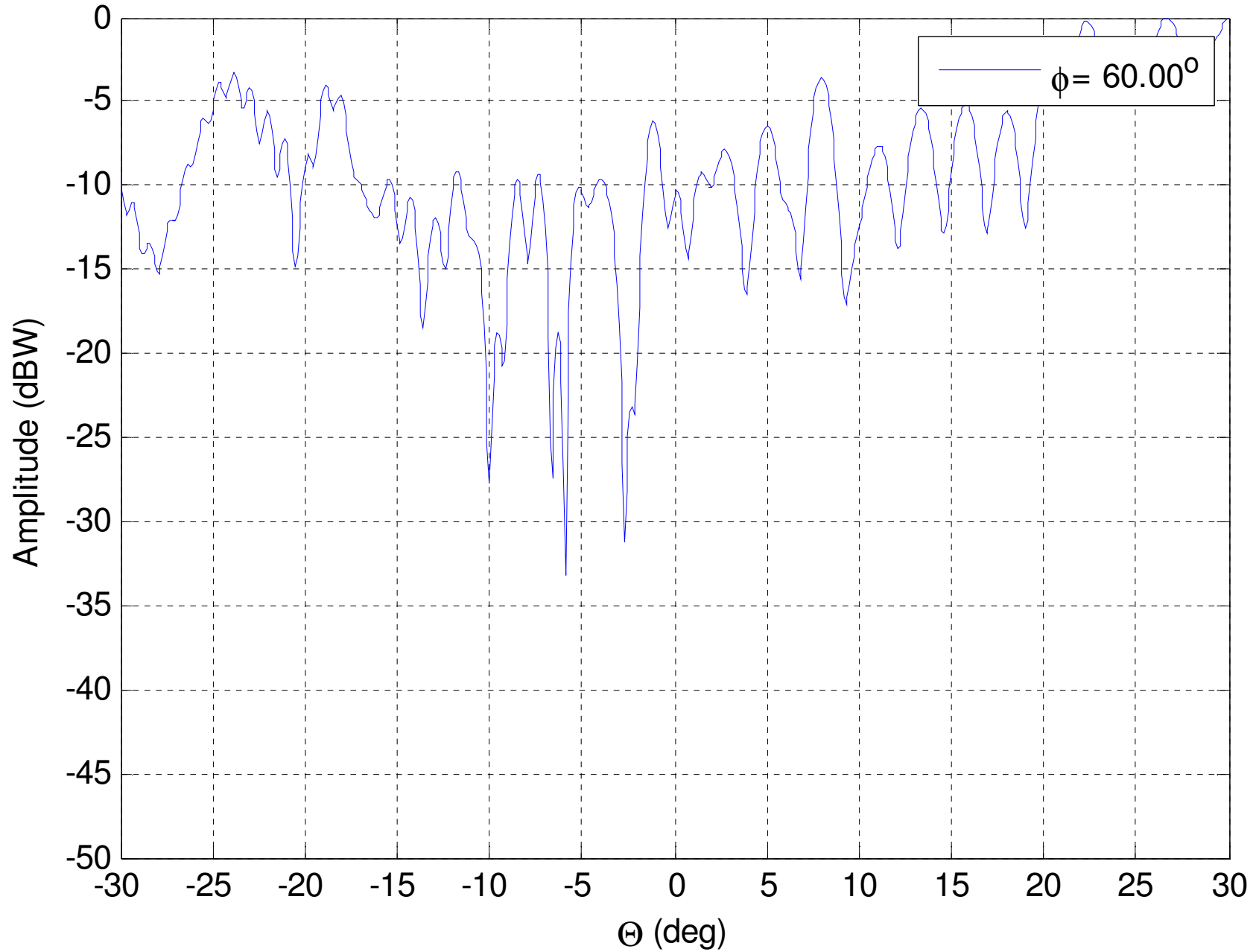
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.17 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

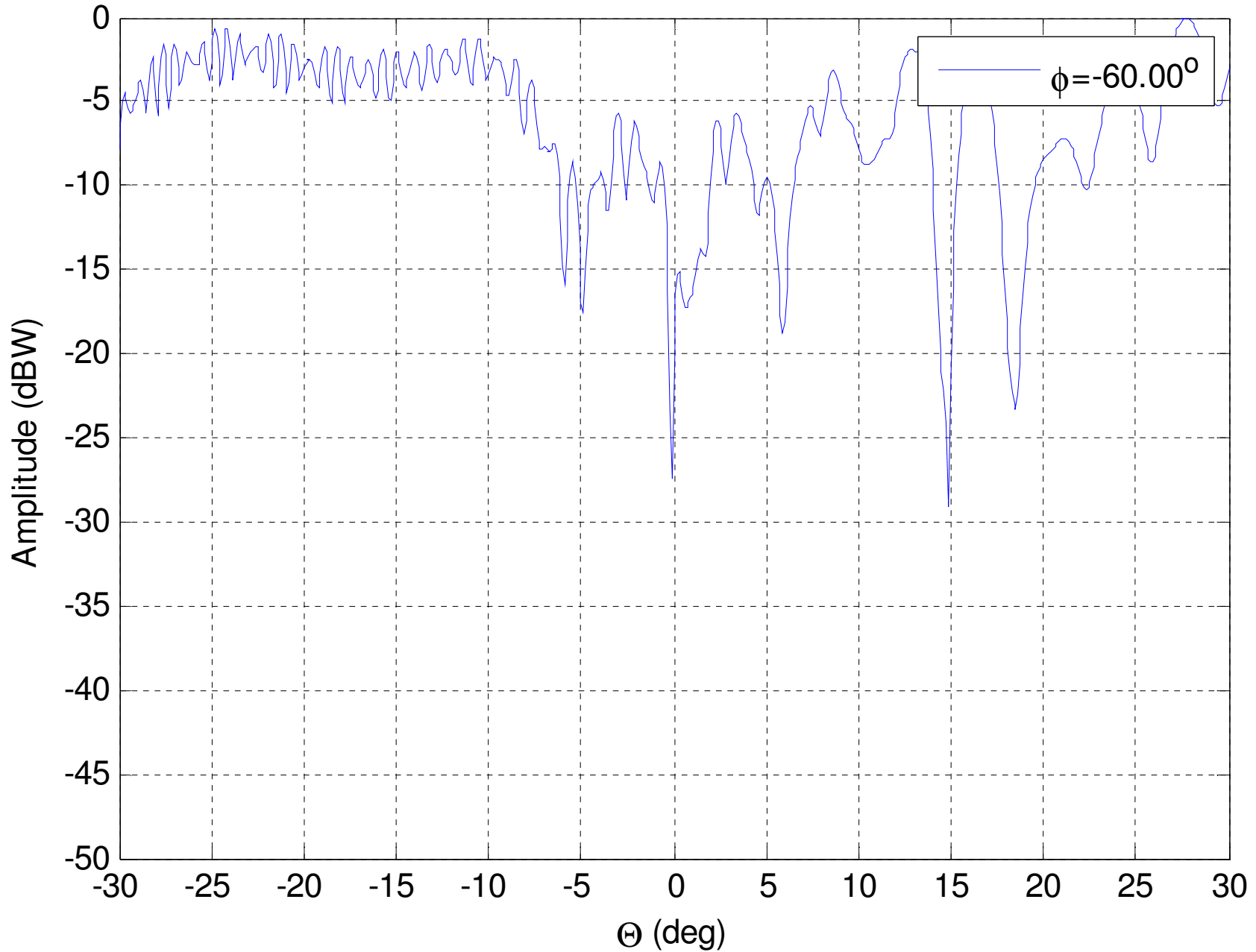
Input file: tx-17.7-rhcp-60.cut, Peak: -10.12 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

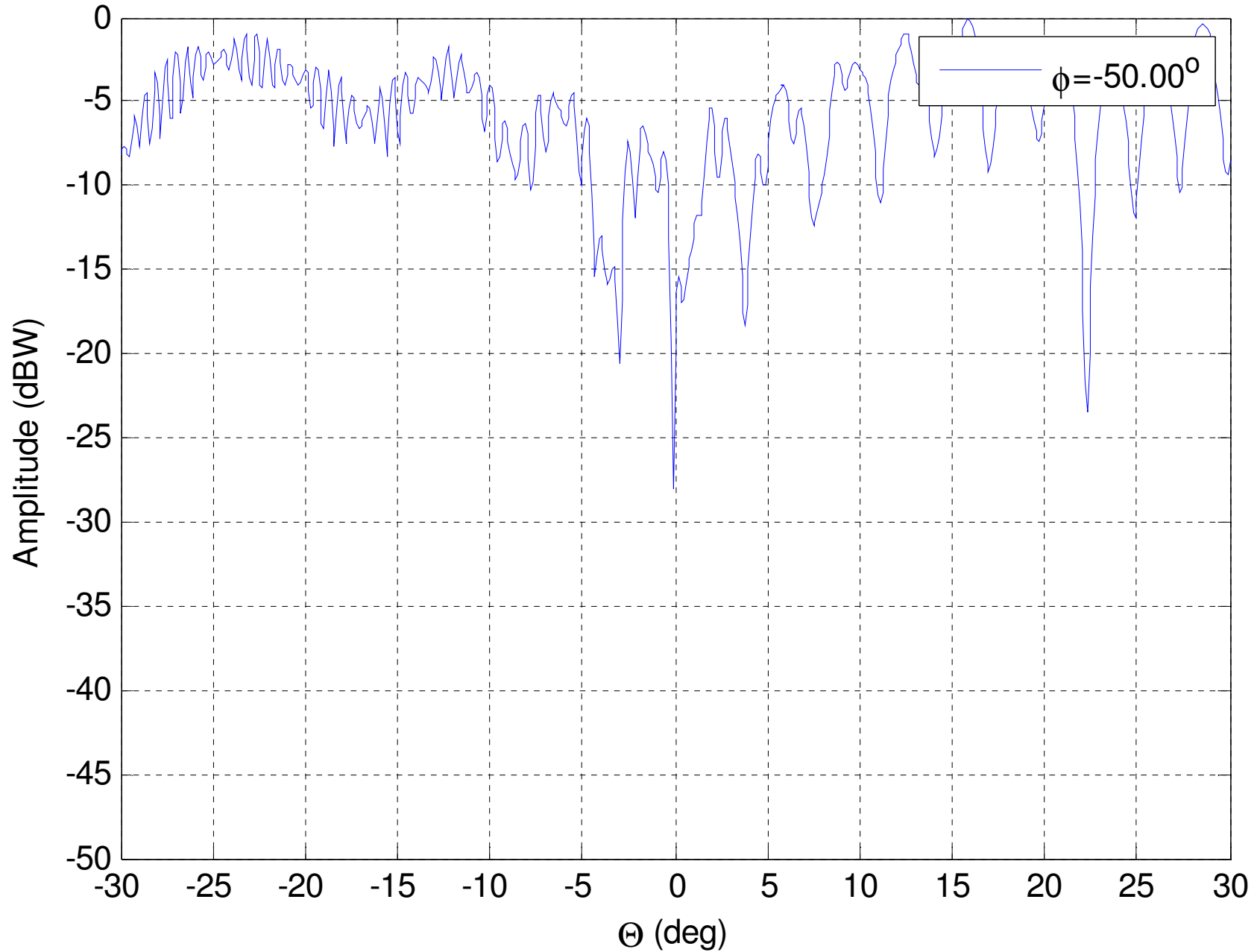
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -9.71 dBW, Date: 15-Dec-2011



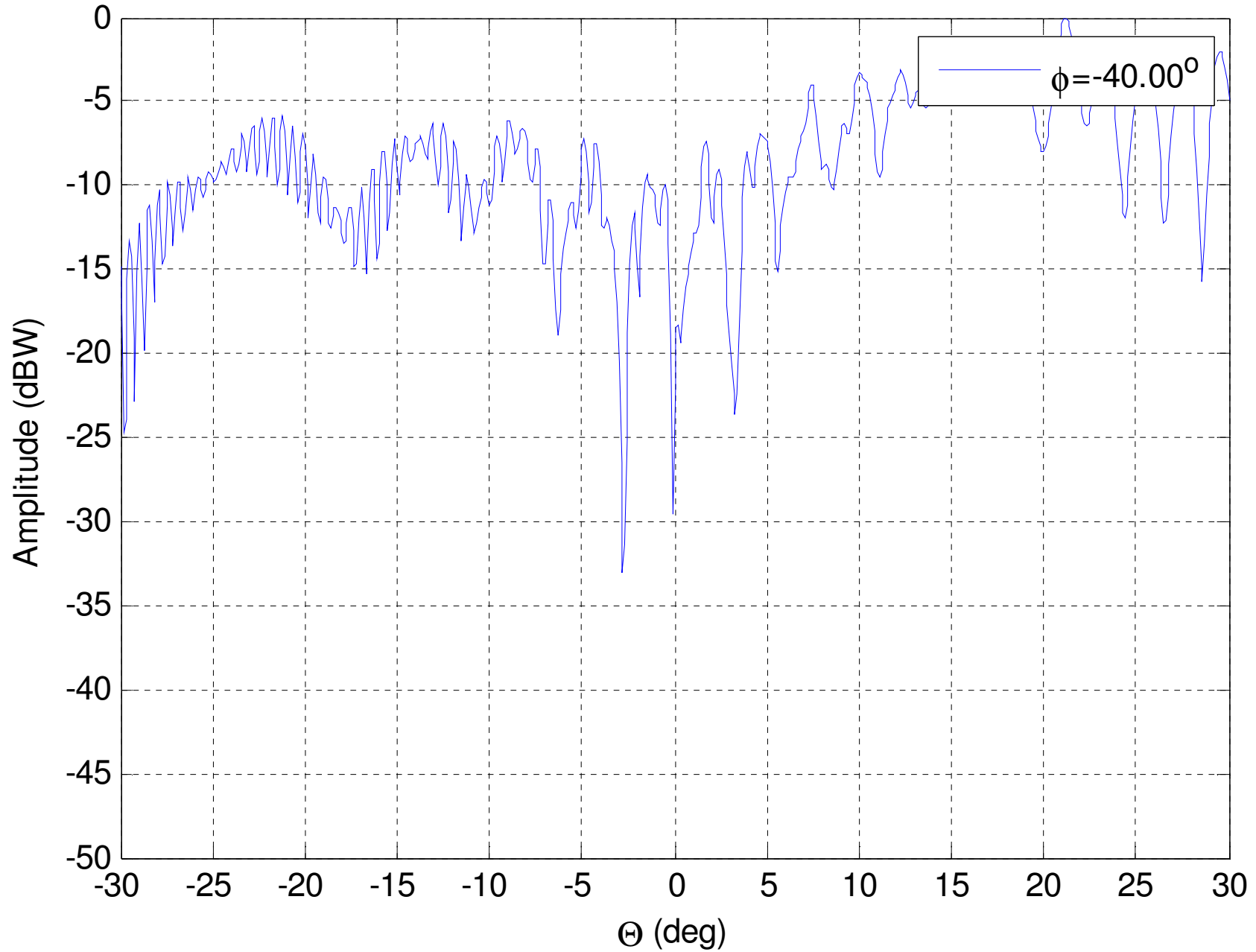
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.83 dBW, Date: 15-Dec-2011



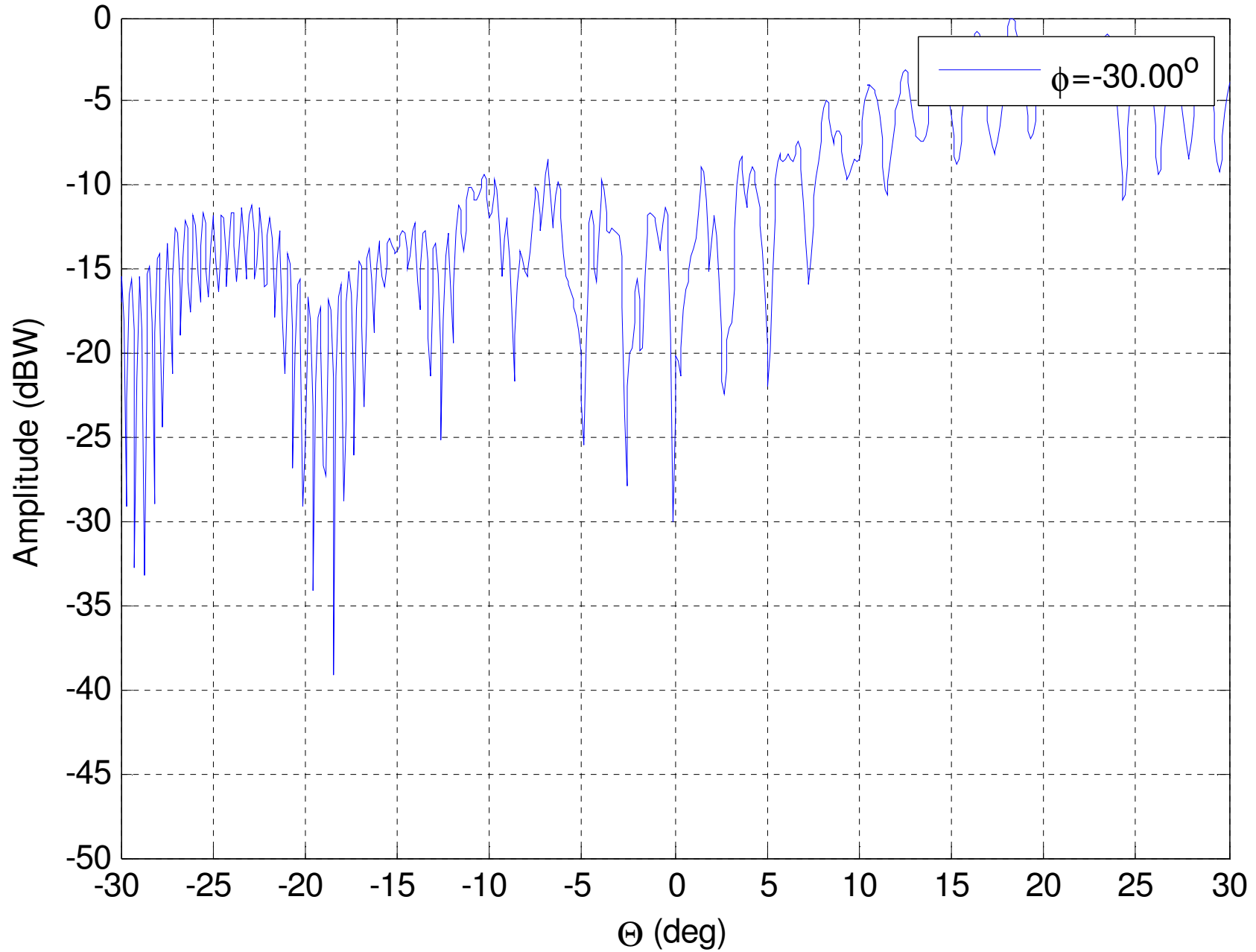
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -7.55 dBW, Date: 15-Dec-2011



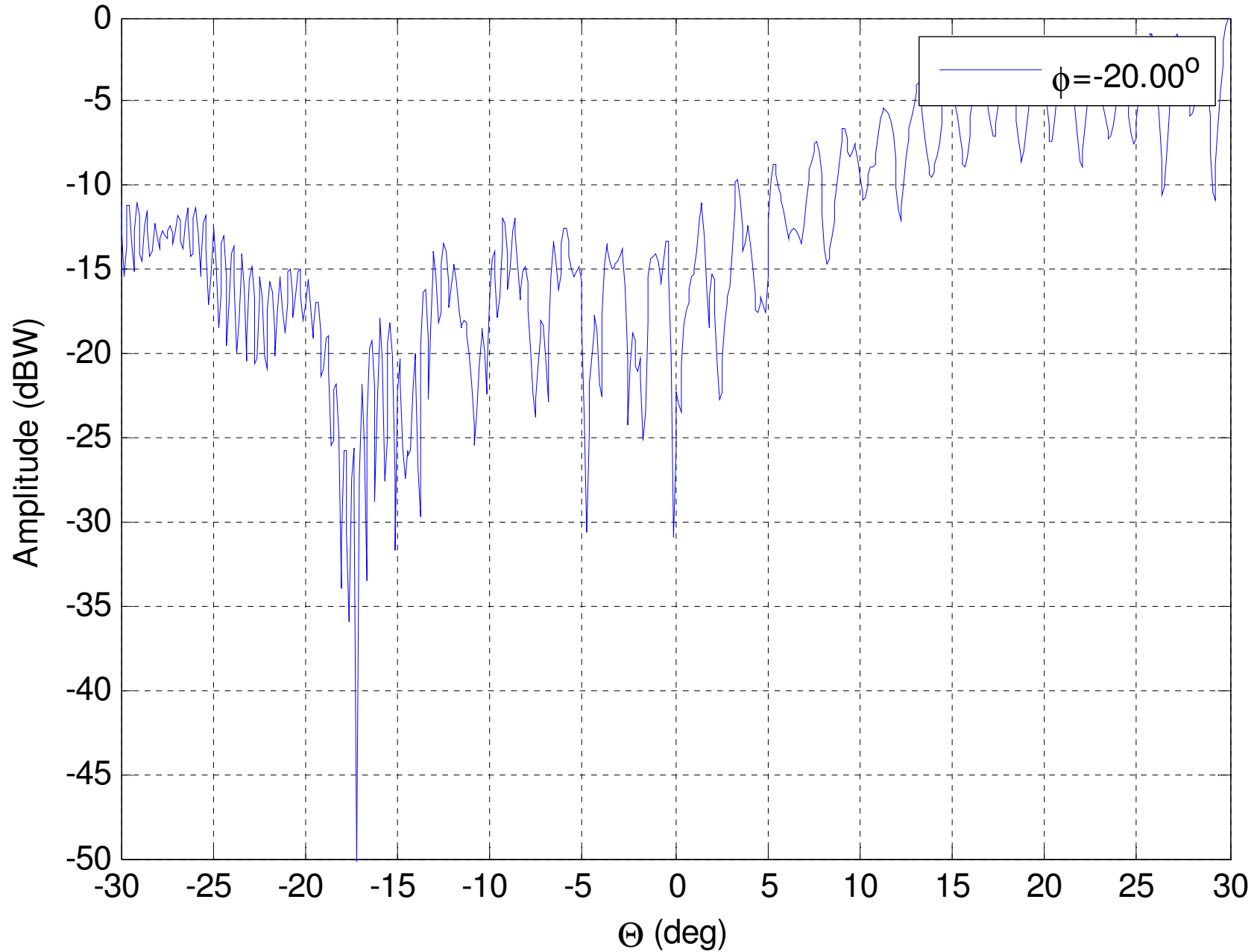
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -5.95 dBW, Date: 15-Dec-2011



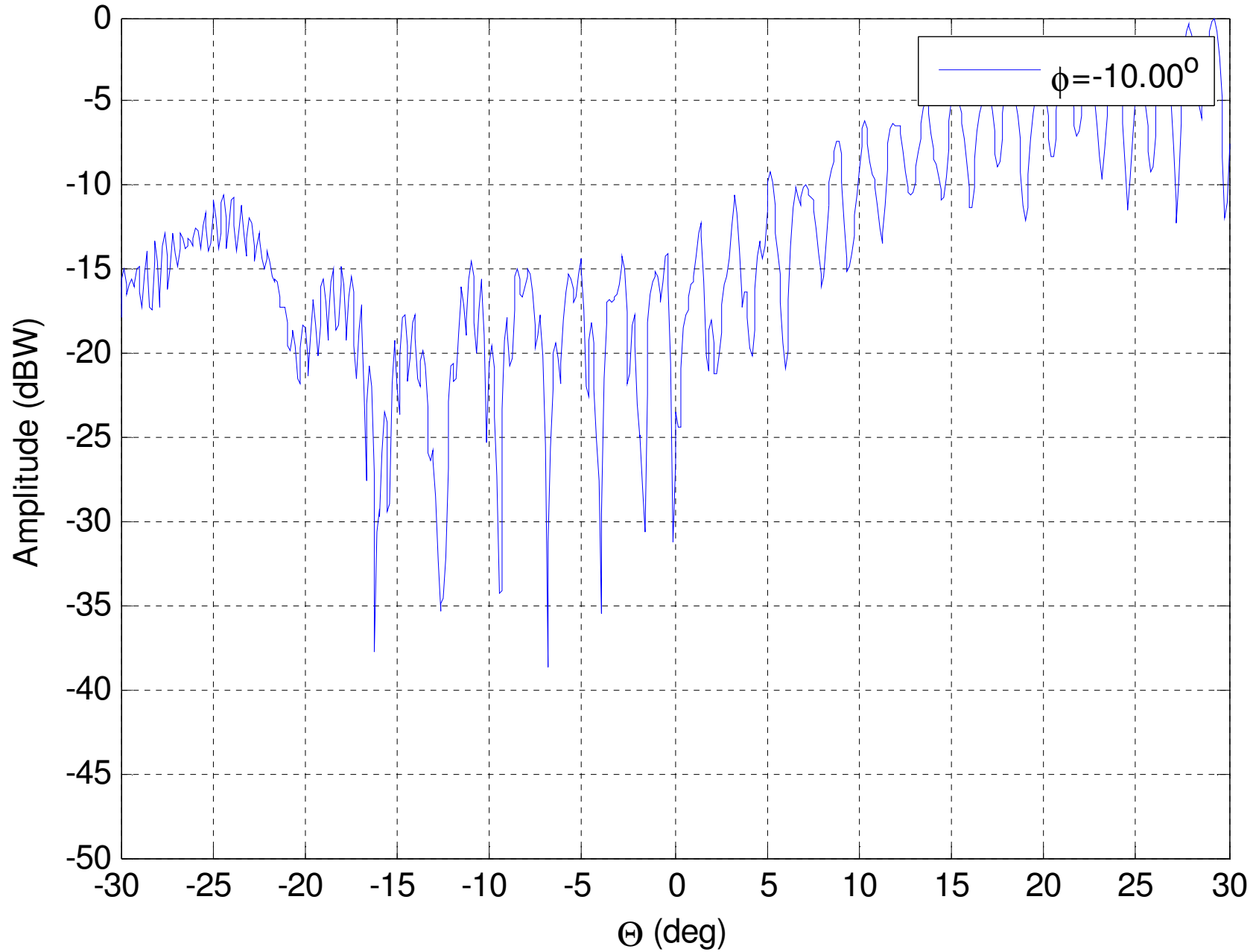
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -3.90 dBW, Date: 15-Dec-2011



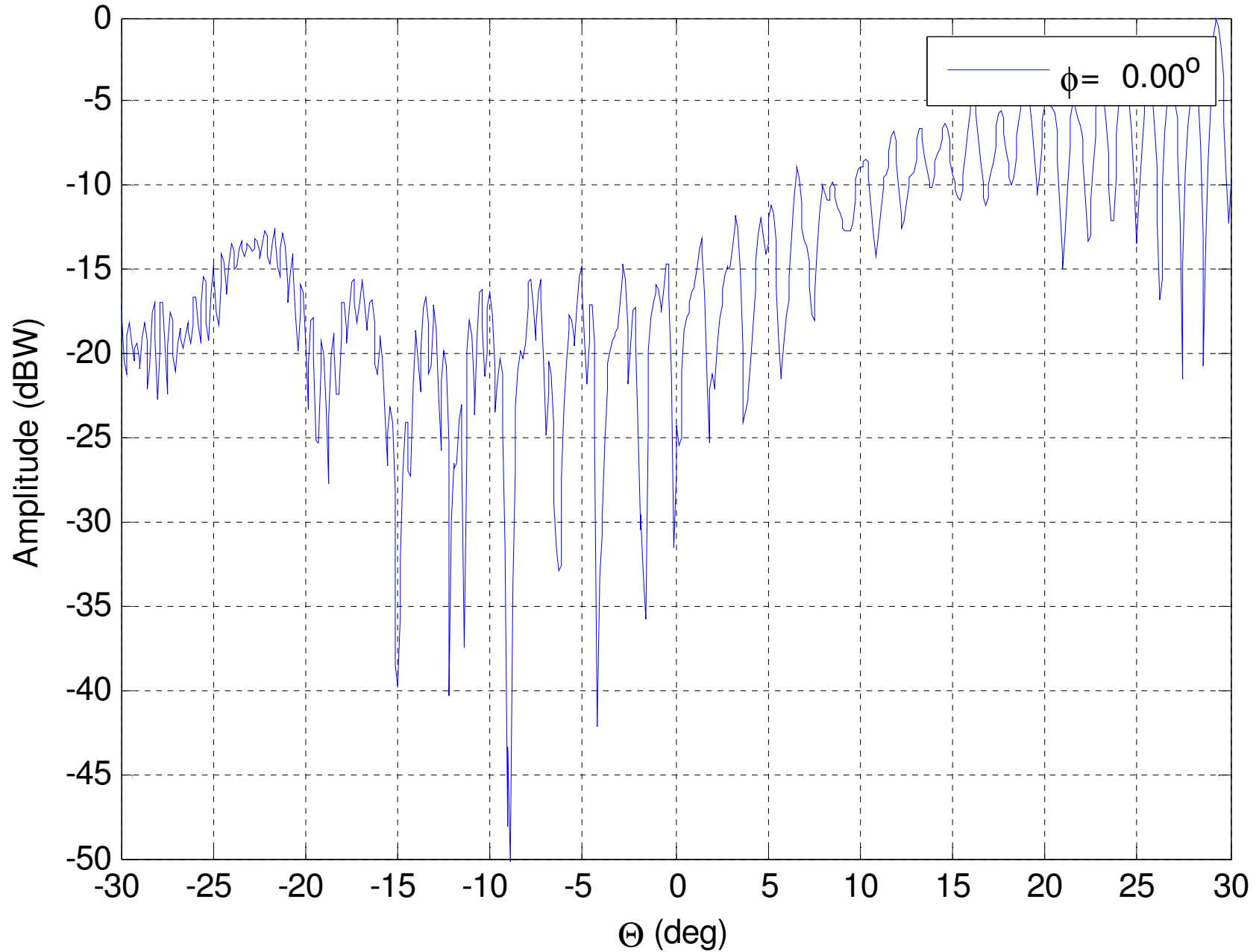
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -2.92 dBW, Date: 15-Dec-2011



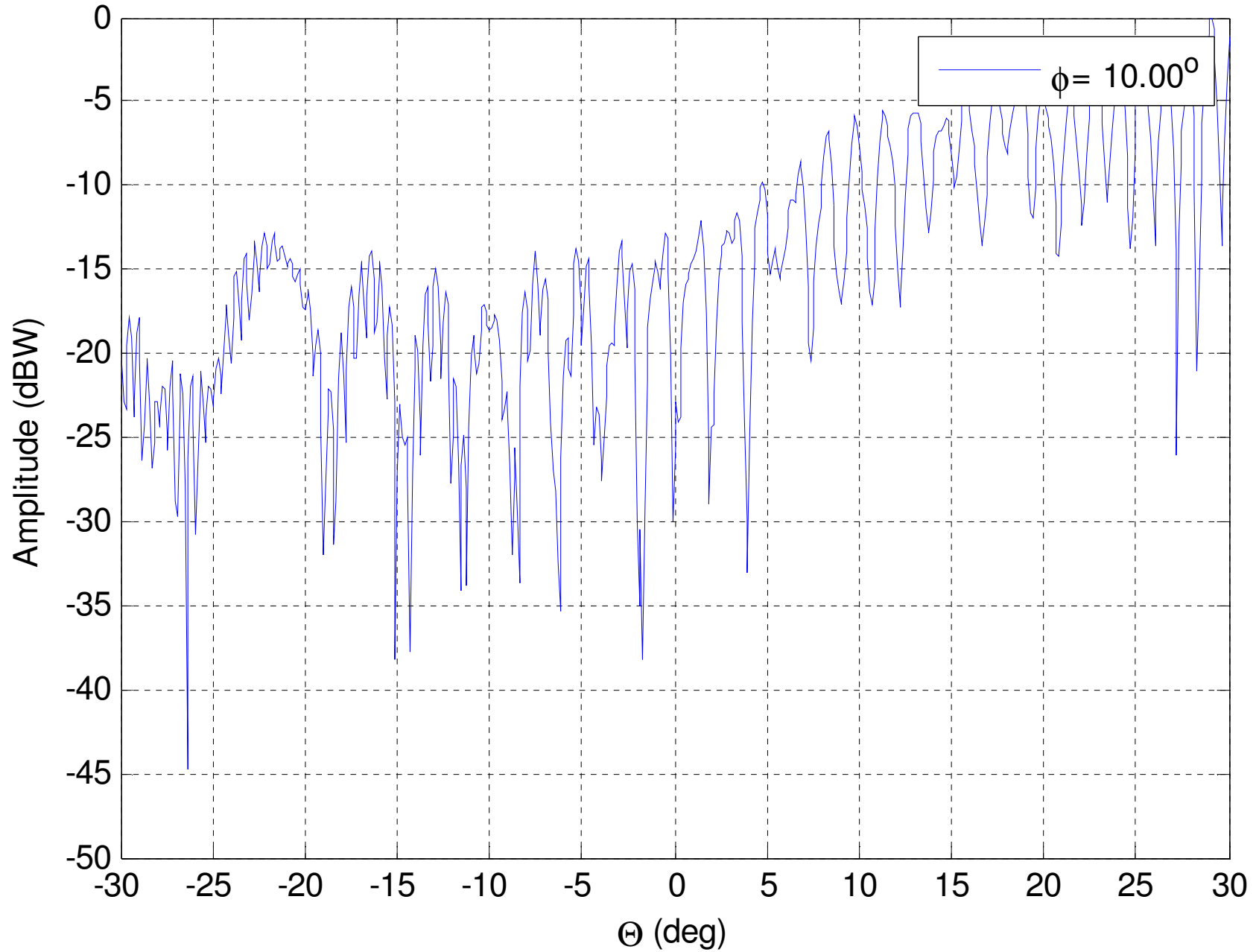
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -2.30 dBW, Date: 15-Dec-2011



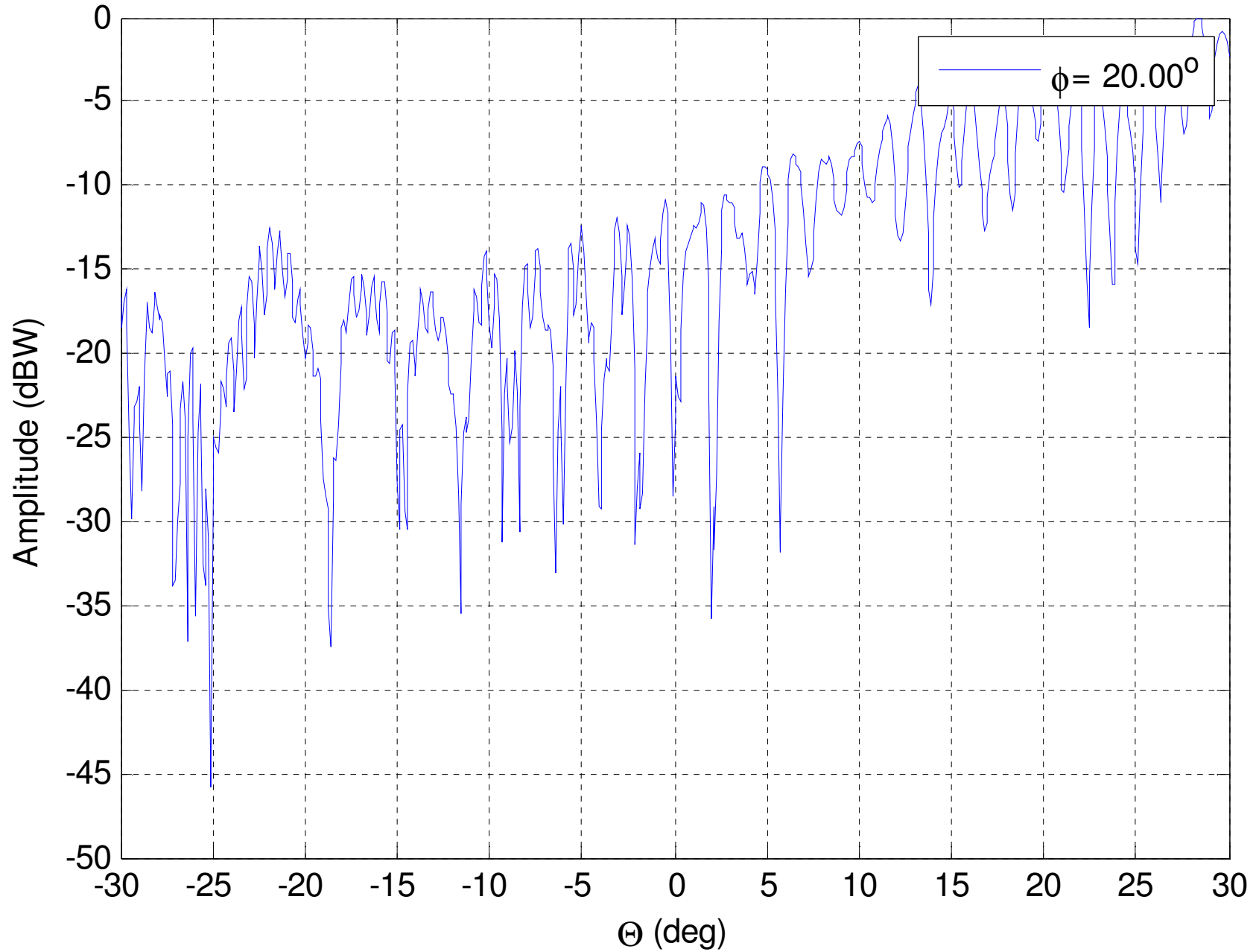
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -3.84 dBW, Date: 15-Dec-2011



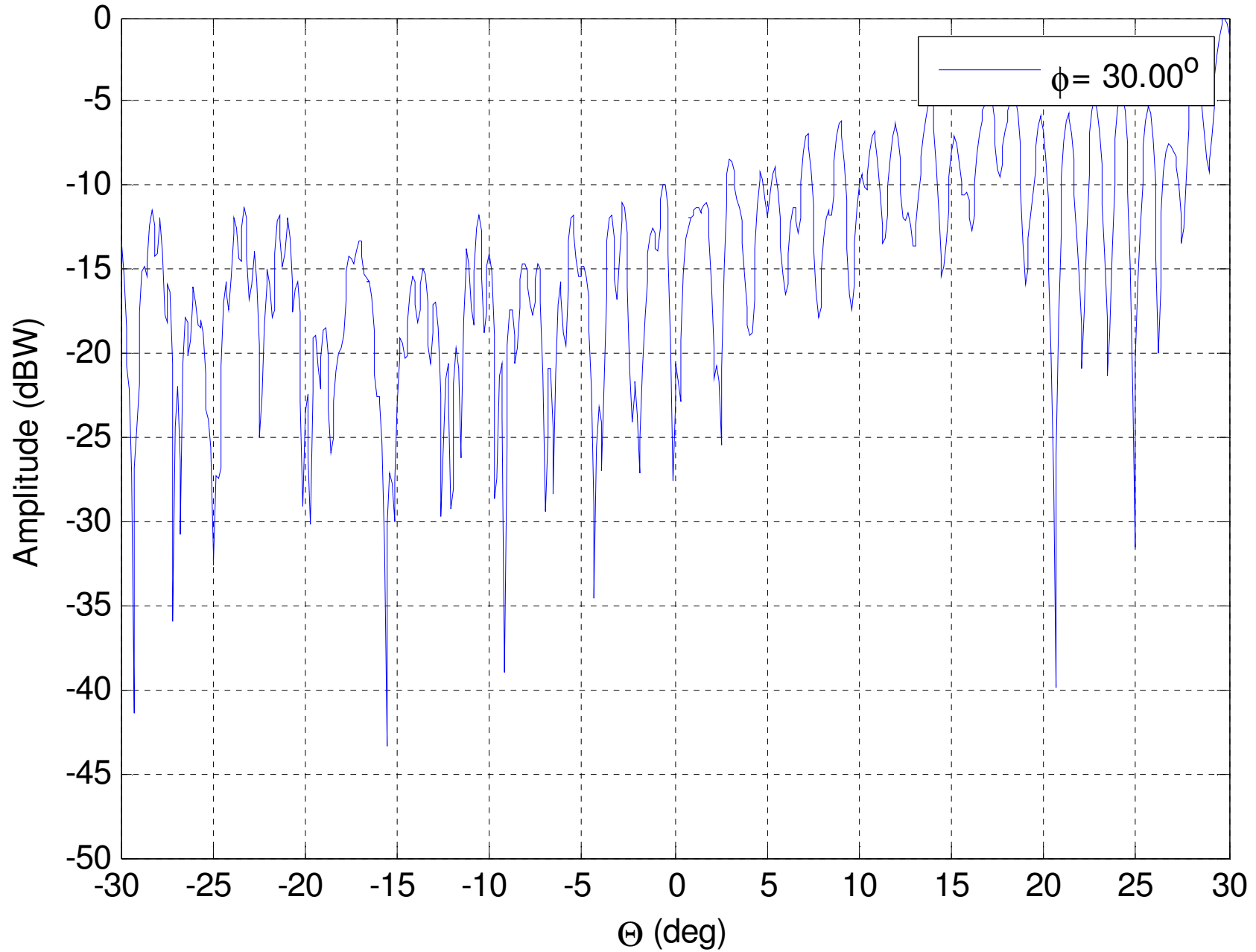
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -5.55 dBW, Date: 15-Dec-2011



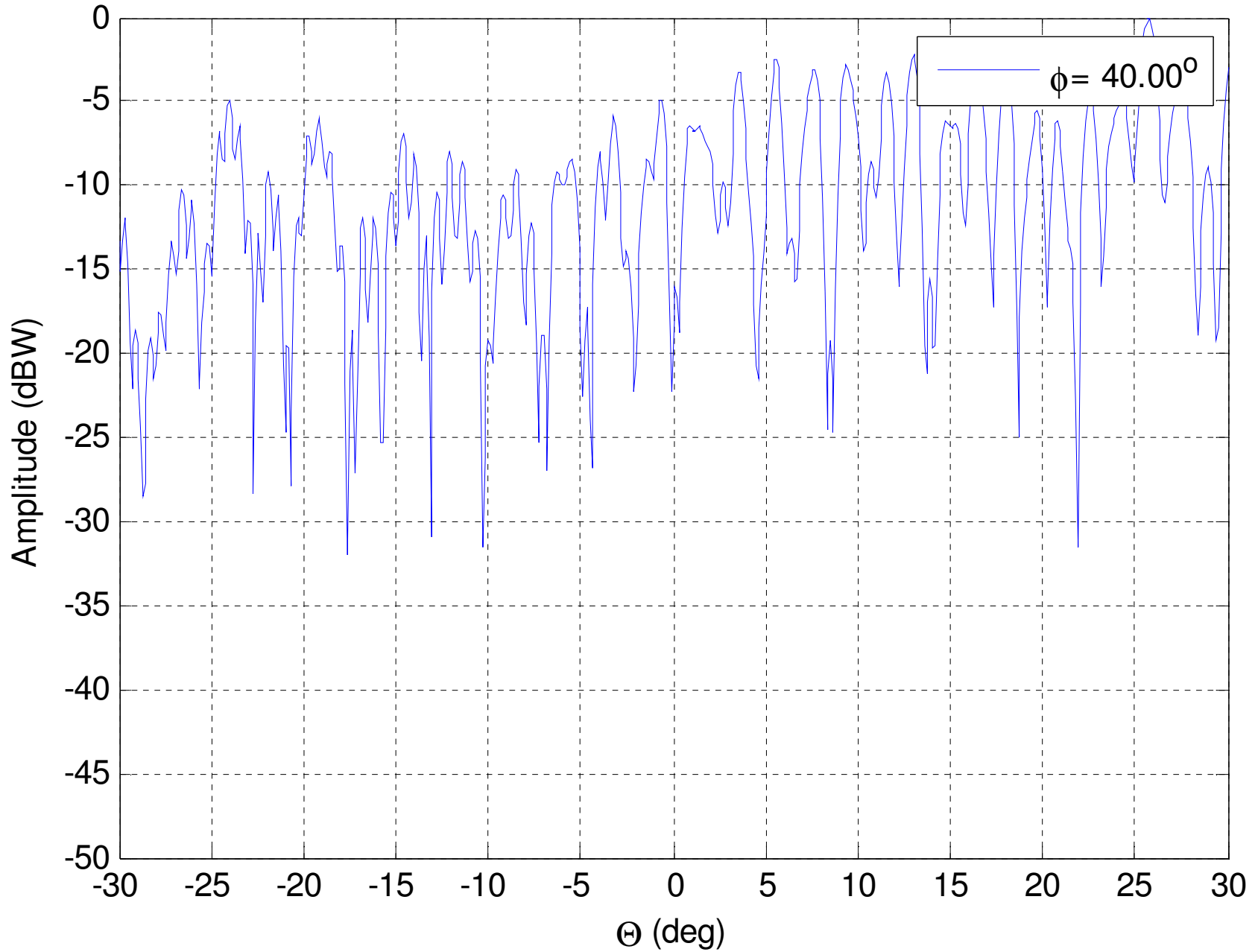
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.55 dBW, Date: 15-Dec-2011



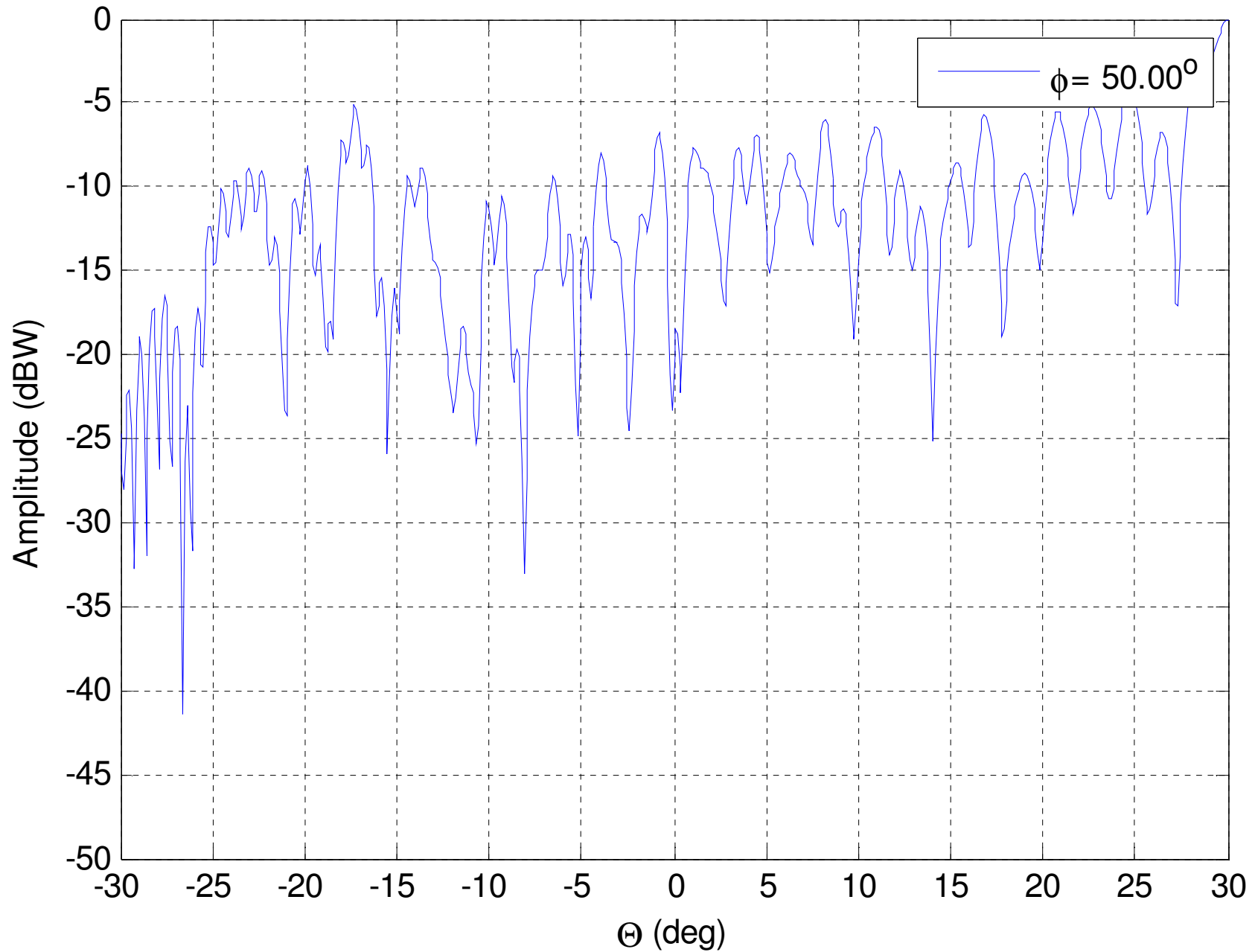
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -11.40 dBW, Date: 15-Dec-2011



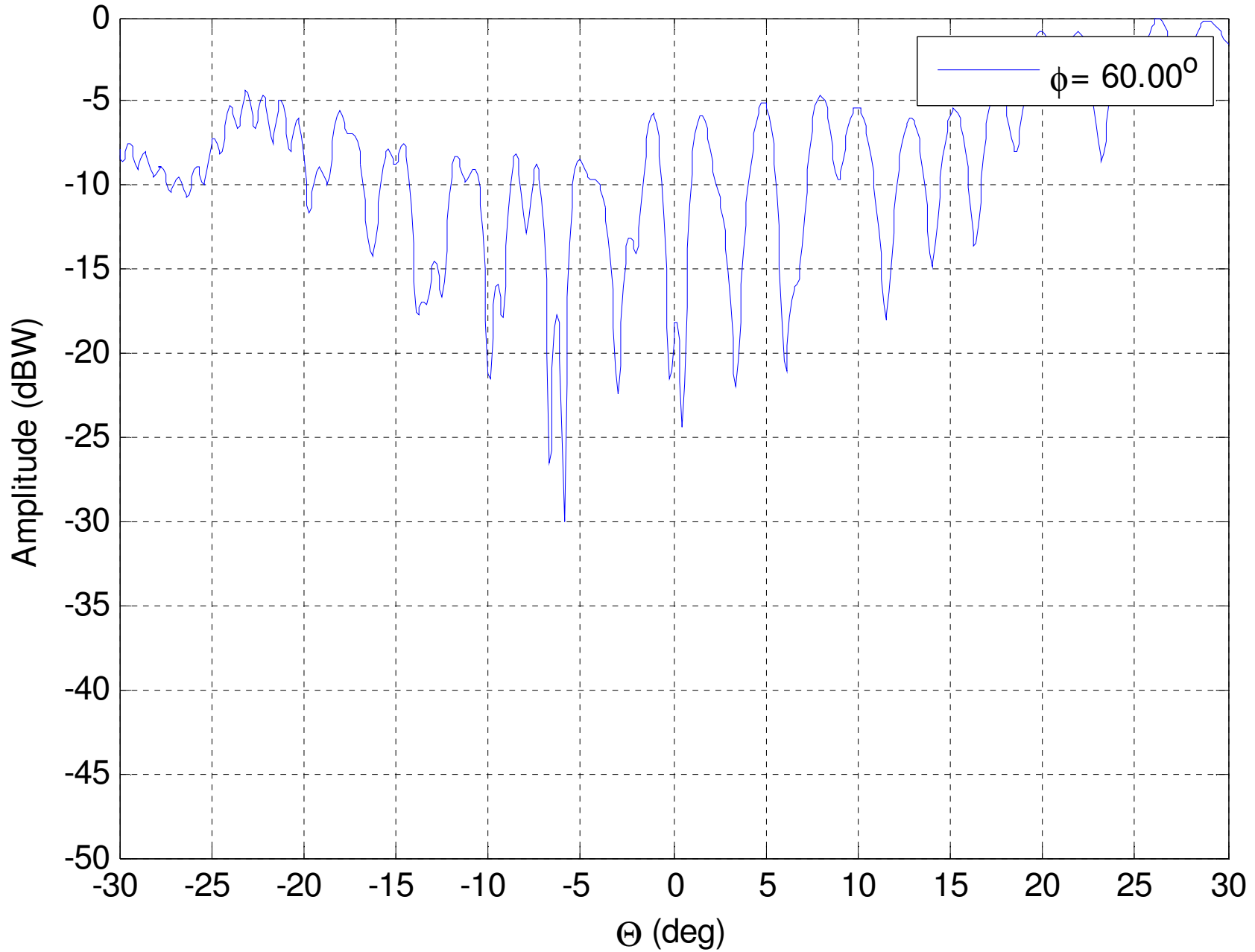
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -9.32 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.20 dBW, Date: 15-Dec-2011



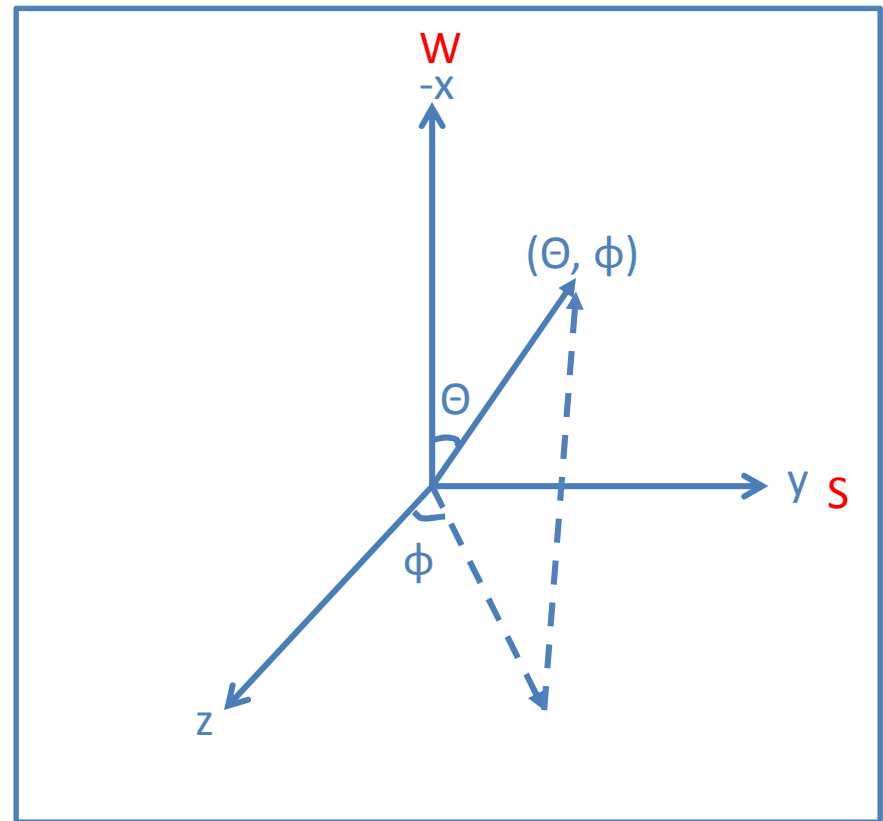
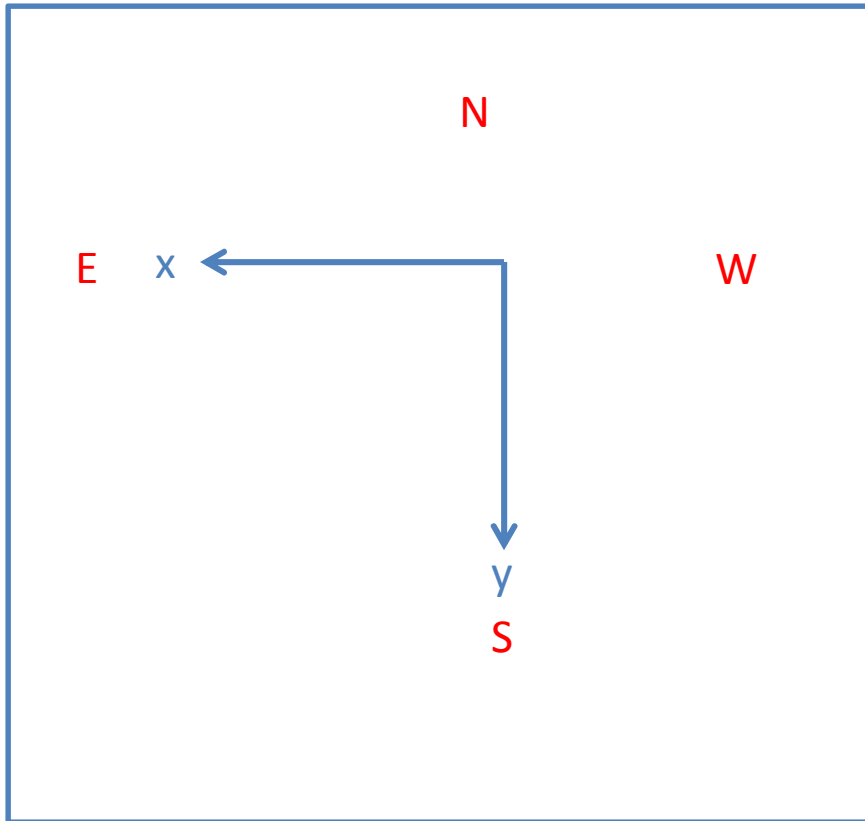
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 24

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



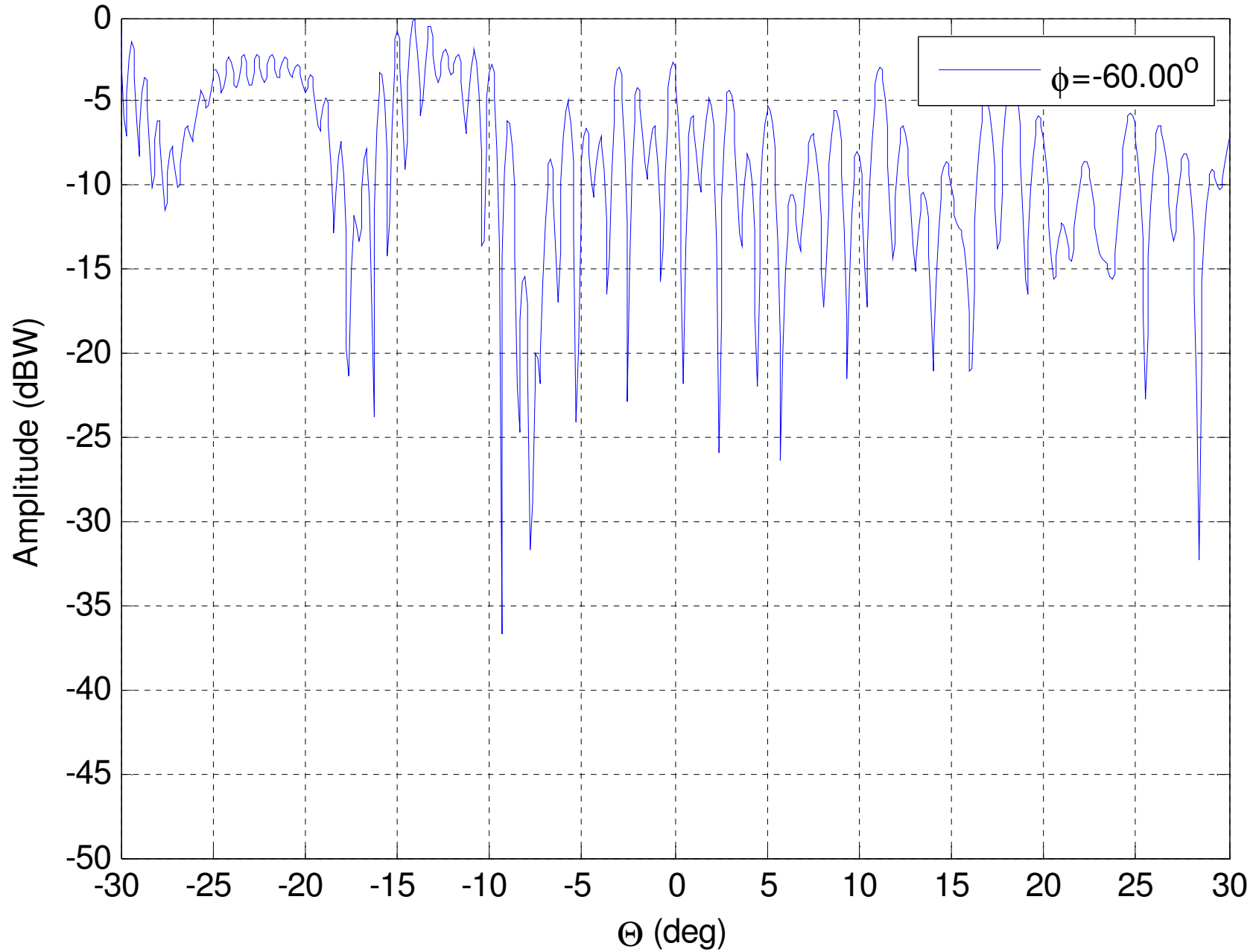
Spot Beam24, -X Axis Plots

- 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

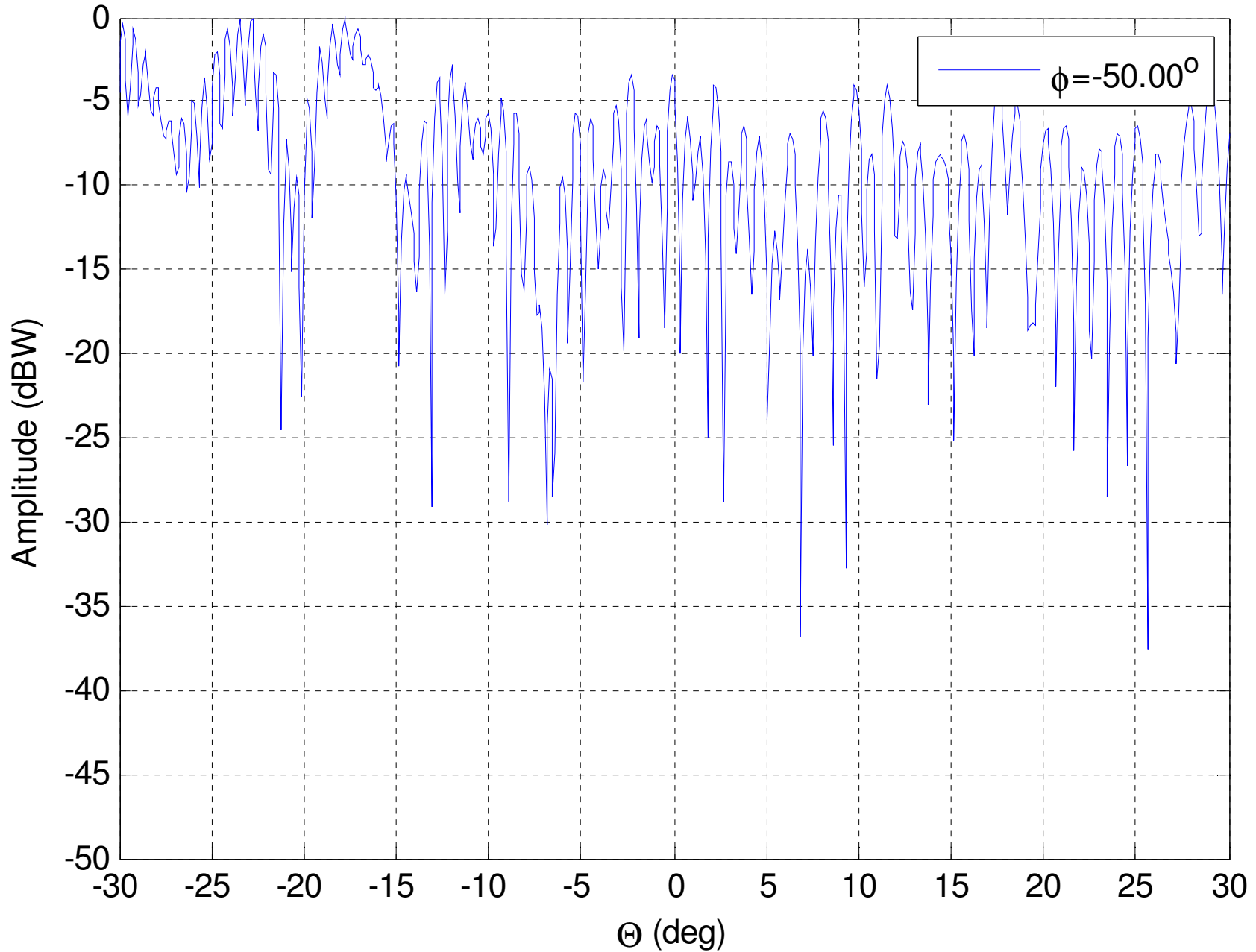
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -6.93 dBW, Date: 15-Dec-2011



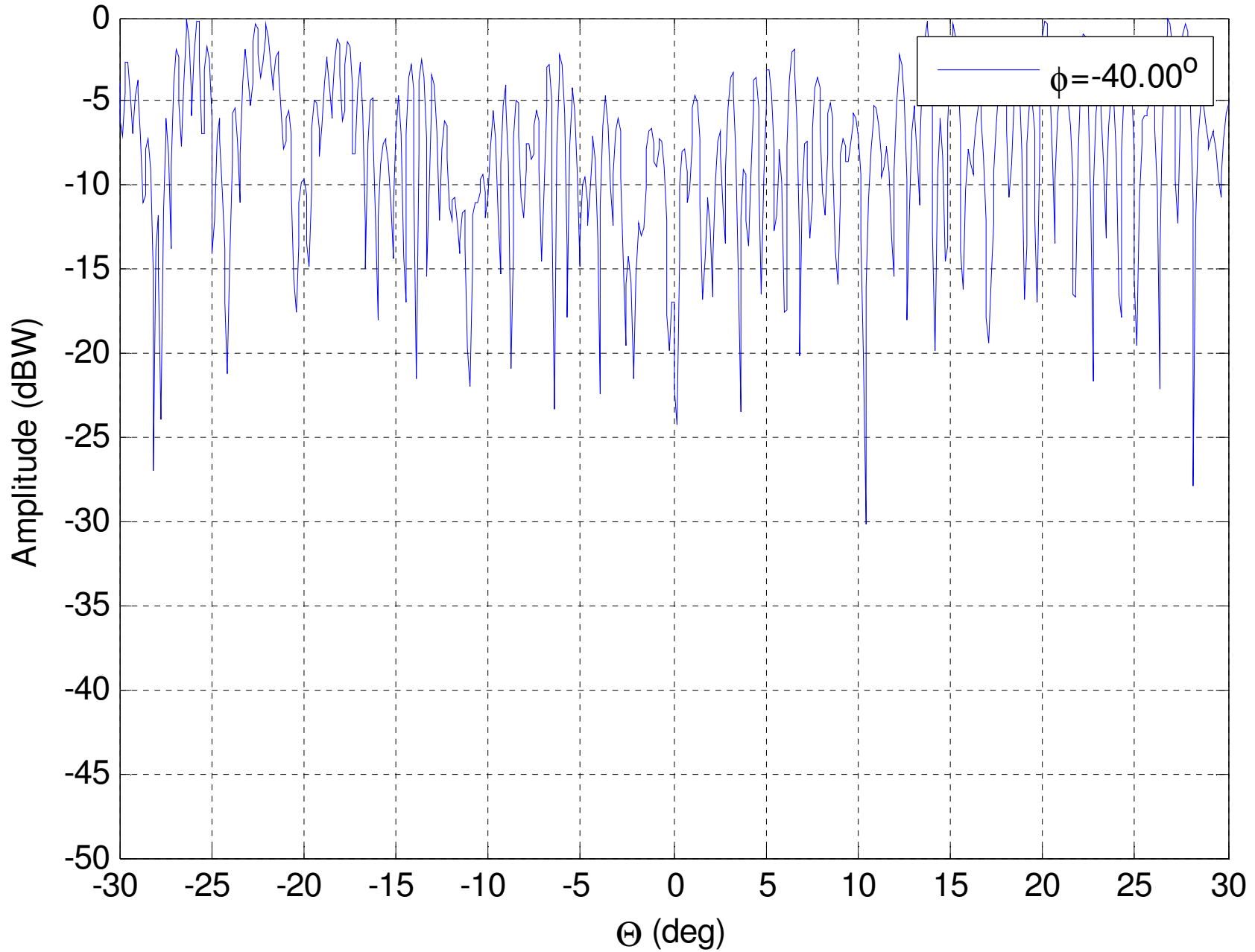
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.21 dBW, Date: 15-Dec-2011



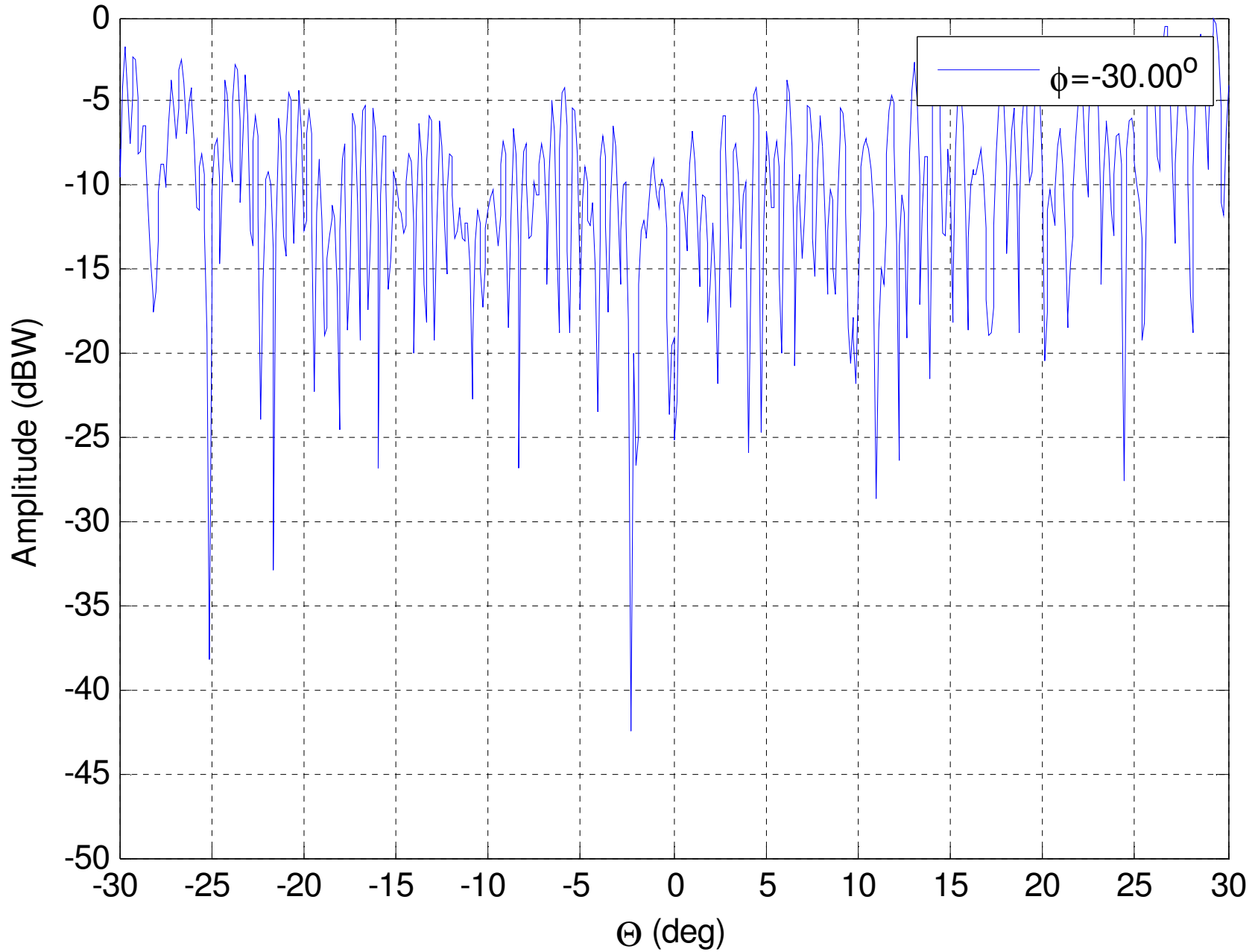
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -7.24 dBW, Date: 15-Dec-2011



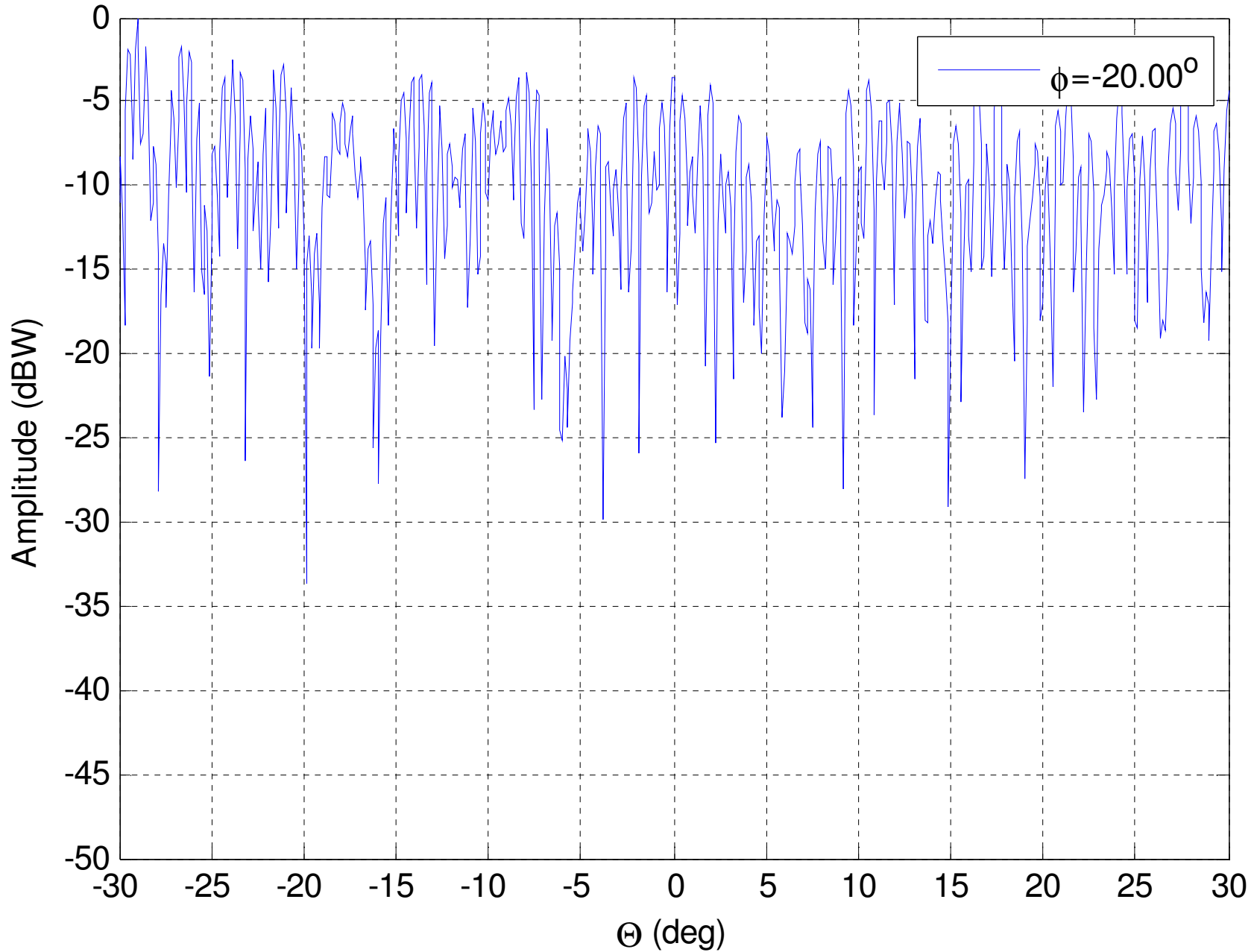
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -5.09 dBW, Date: 15-Dec-2011



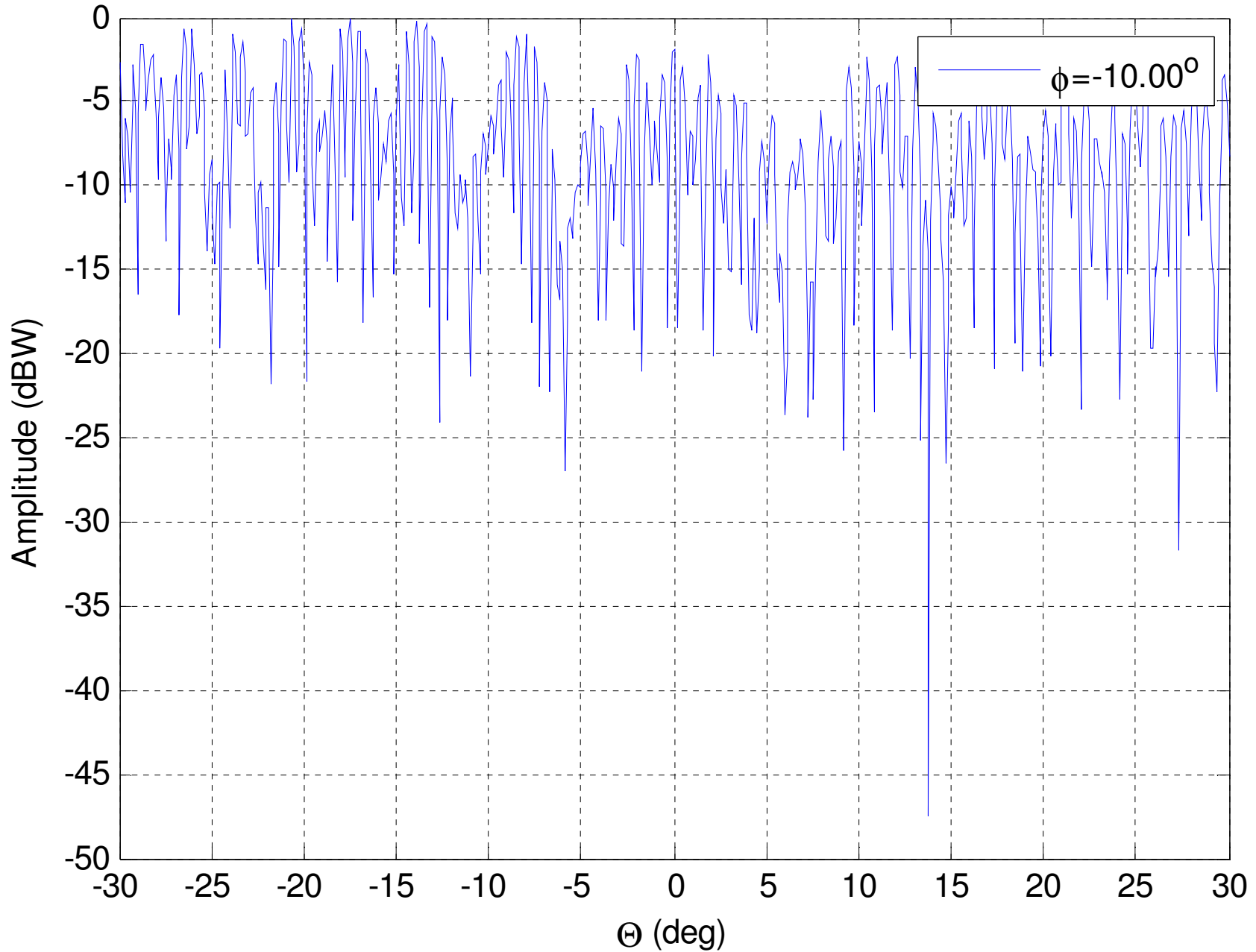
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -6.38 dBW, Date: 15-Dec-2011



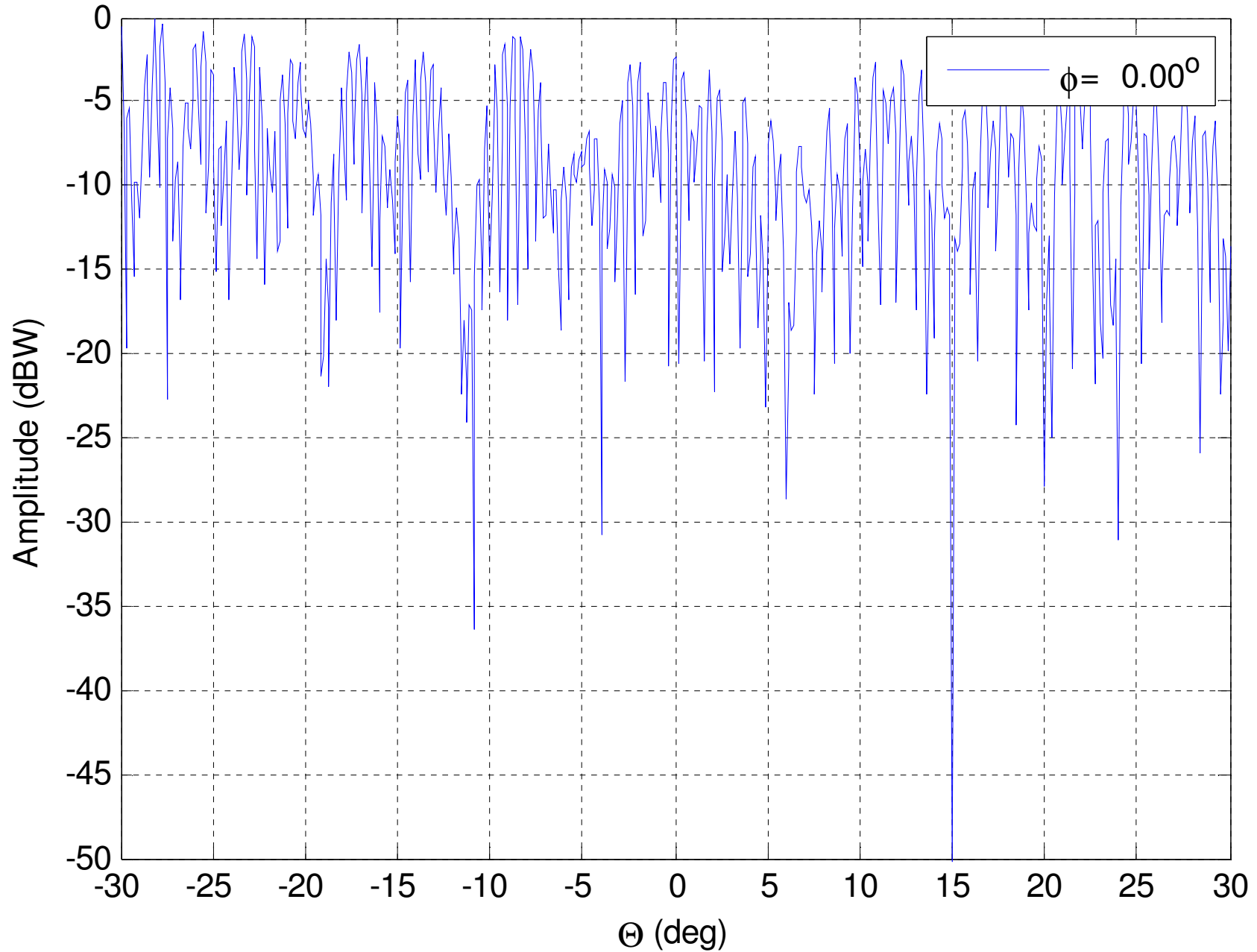
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -8.01 dBW, Date: 15-Dec-2011



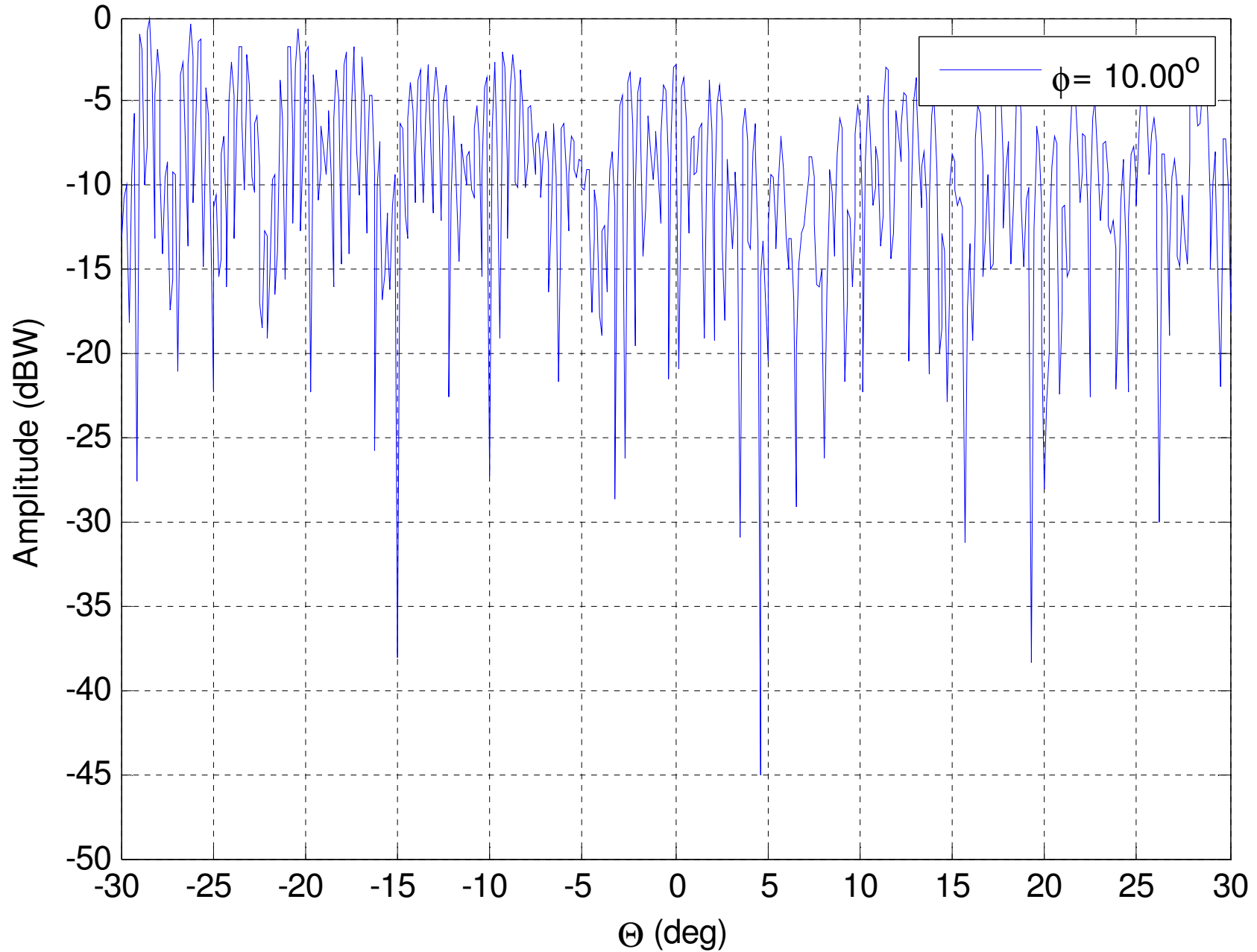
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -7.63 dBW, Date: 15-Dec-2011



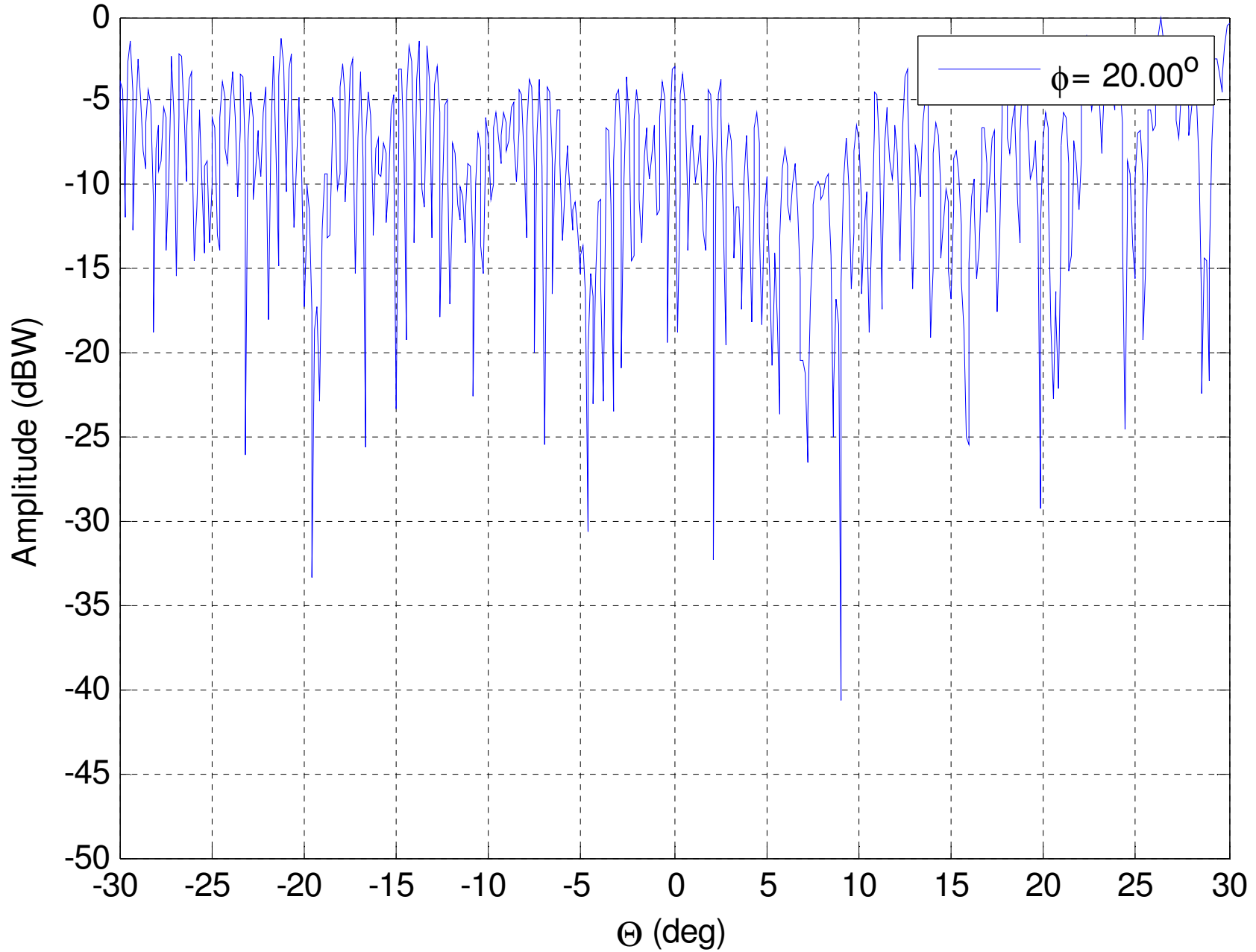
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -7.13 dBW, Date: 15-Dec-2011



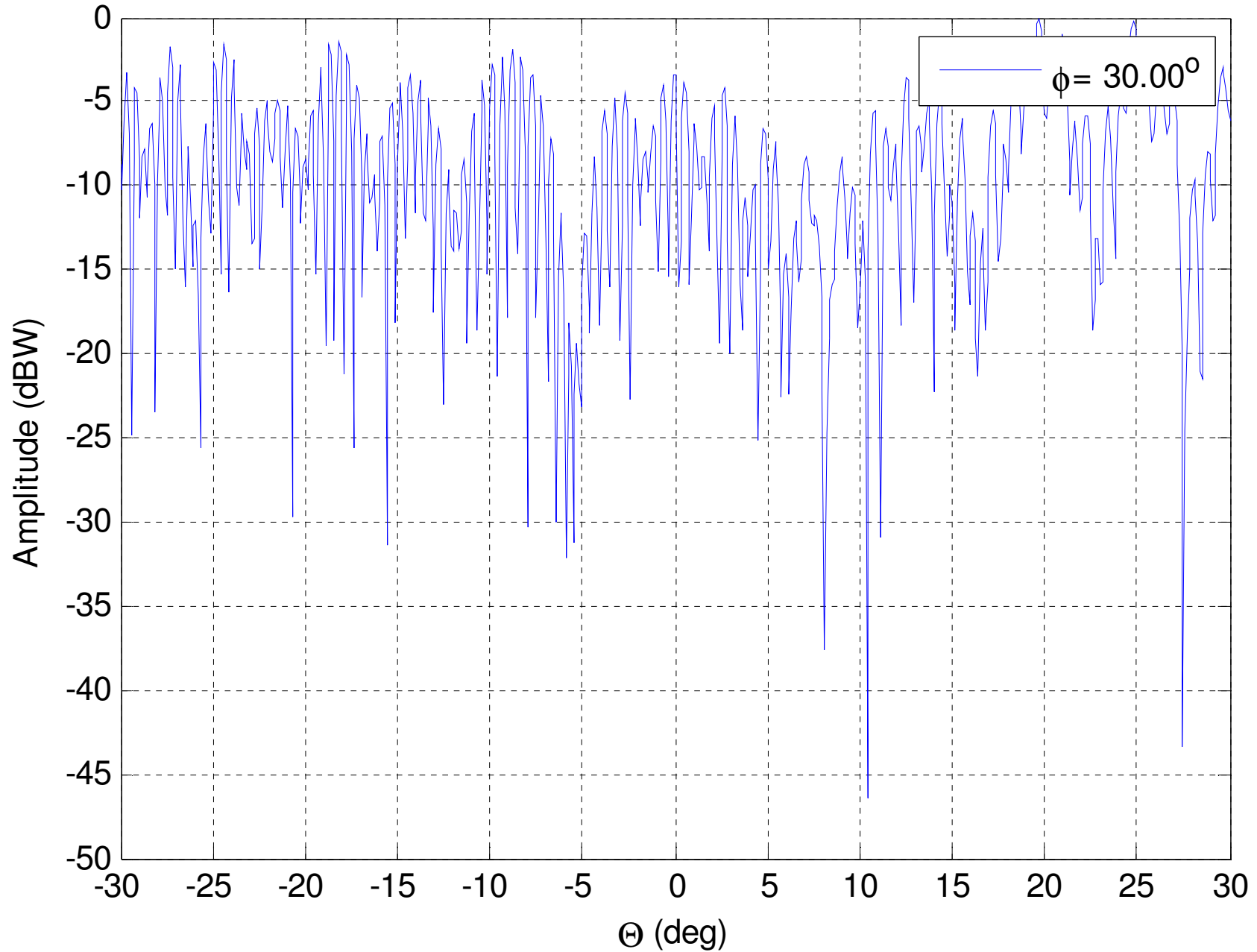
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -6.96 dBW, Date: 15-Dec-2011



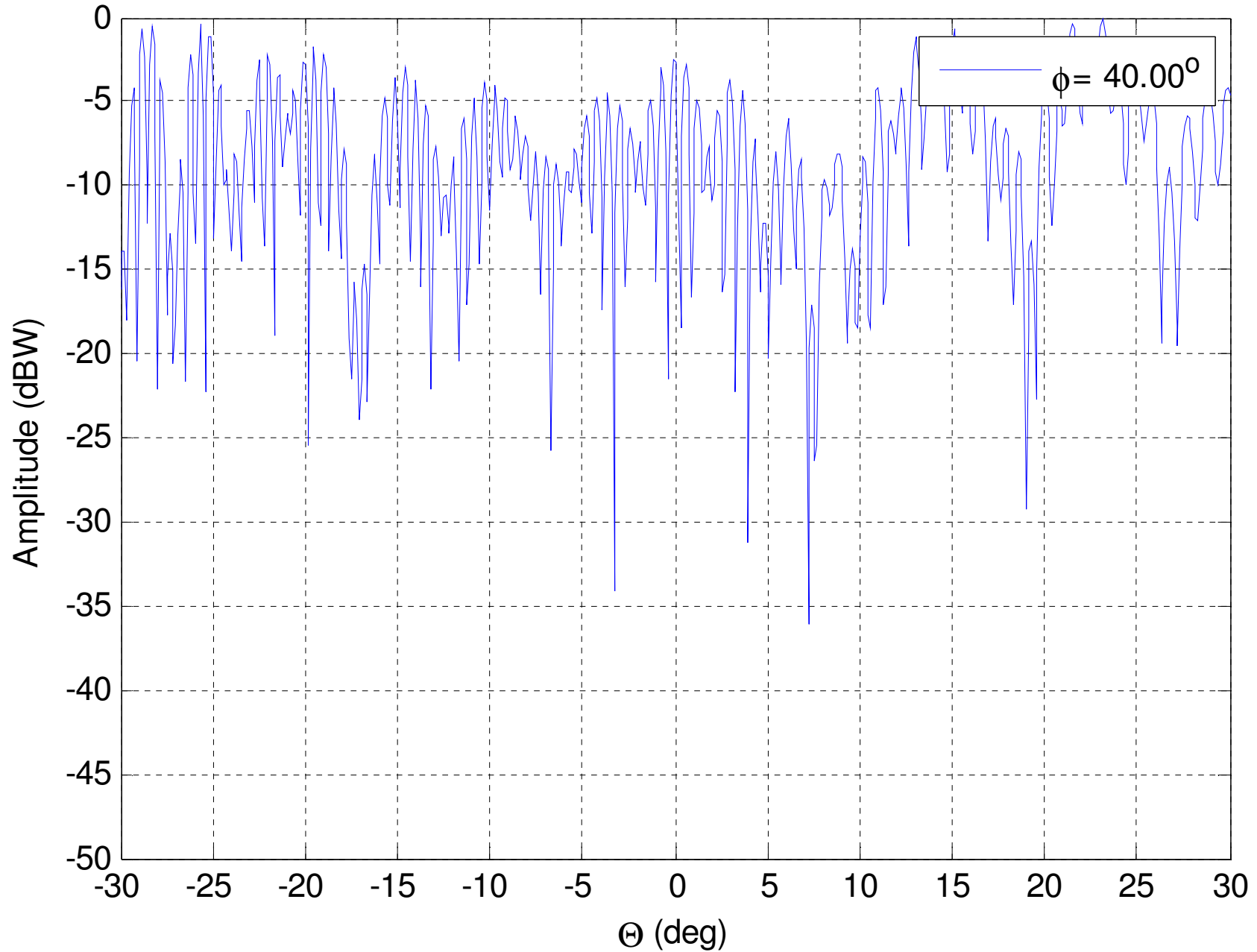
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -6.54 dBW, Date: 15-Dec-2011



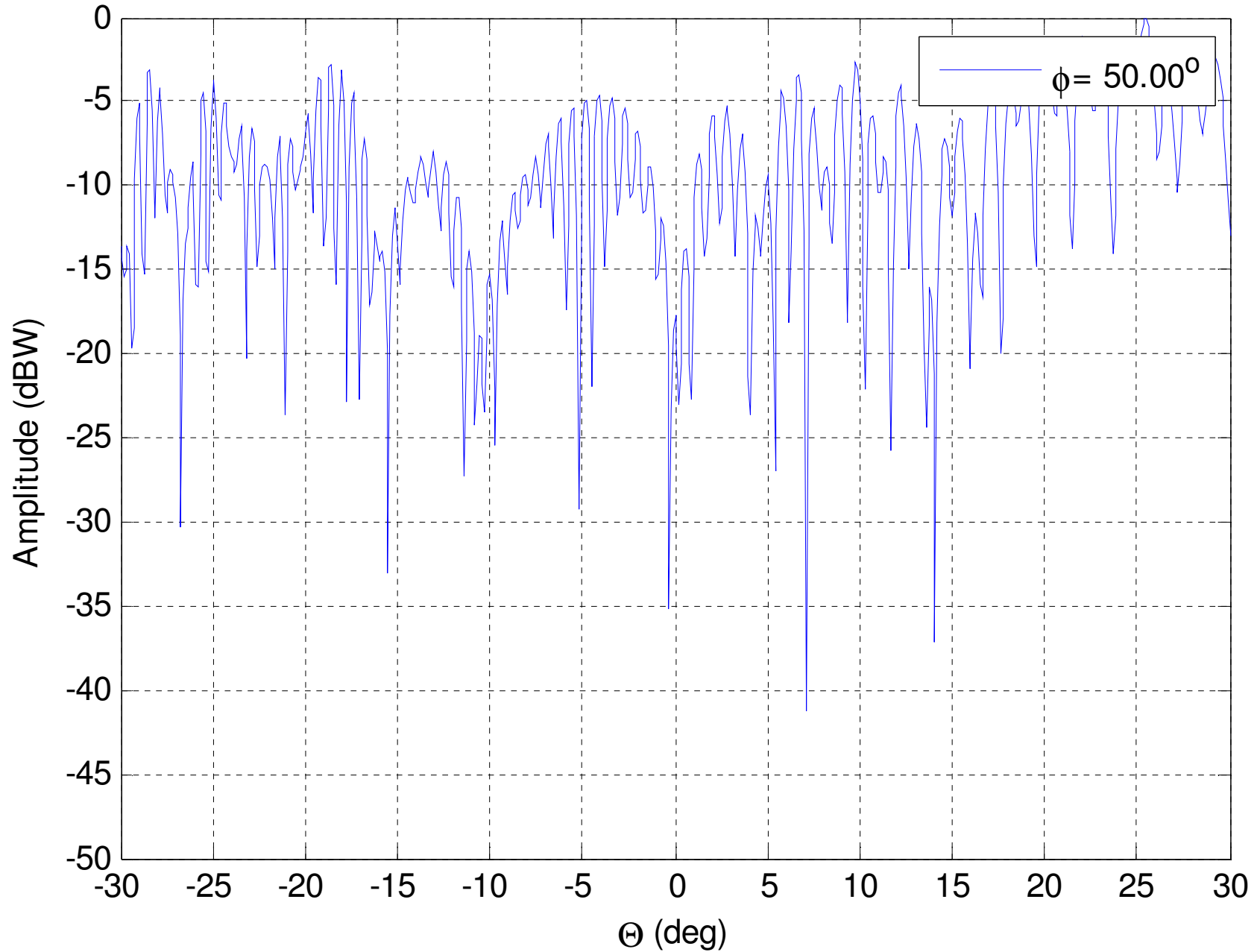
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.29 dBW, Date: 15-Dec-2011



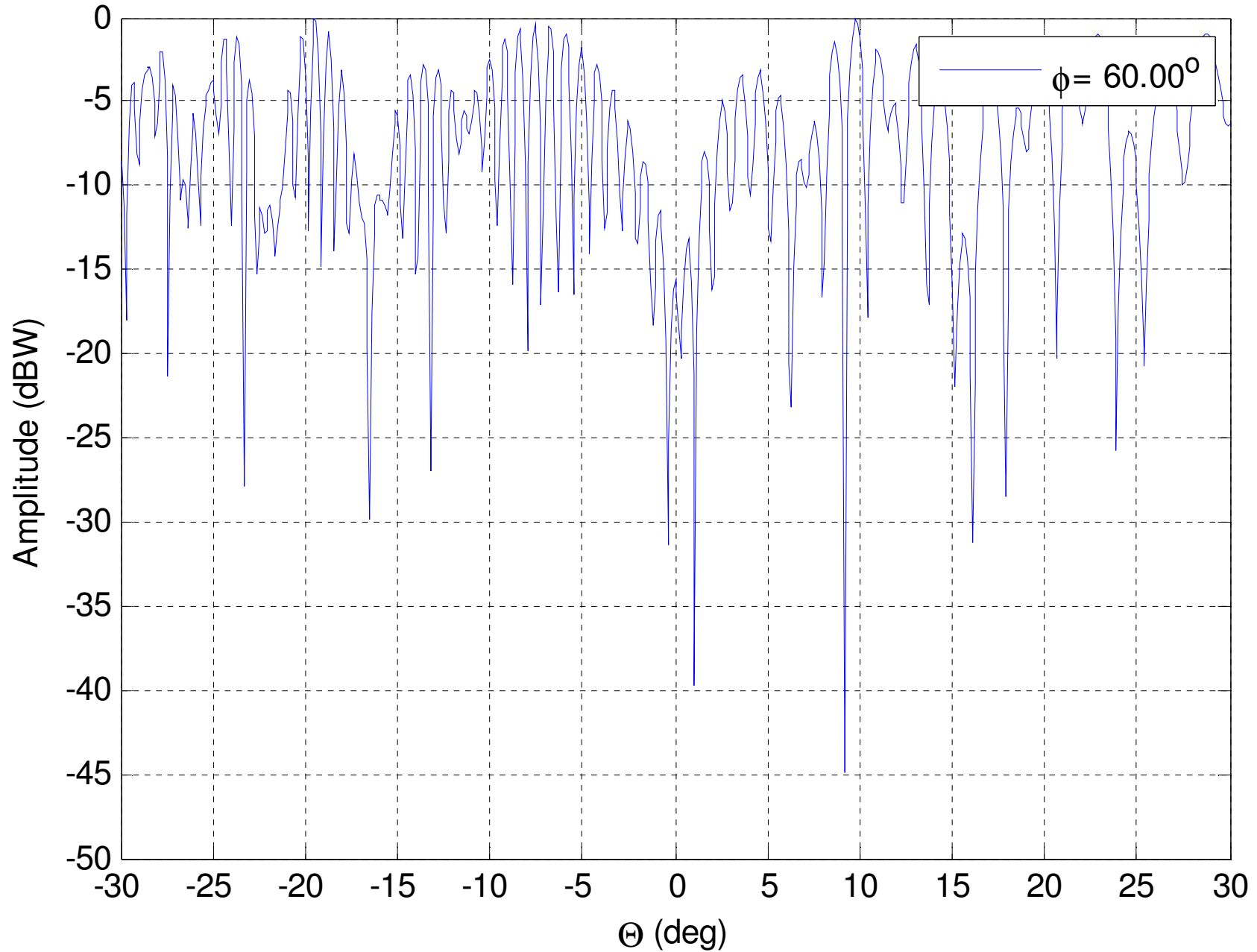
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -6.48 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

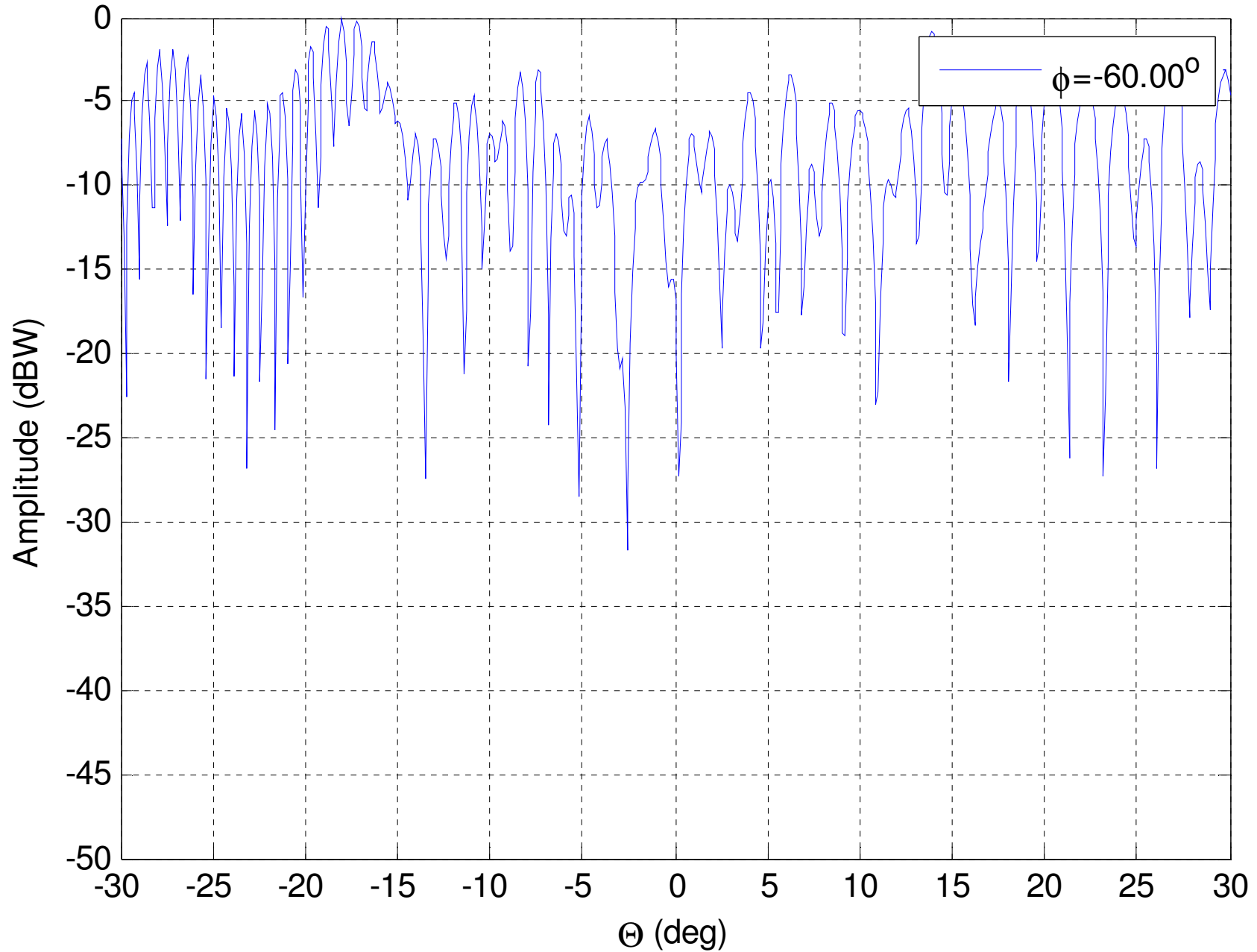
Input file: tx-17.3-rhcp-60.cut, Peak: -8.65 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

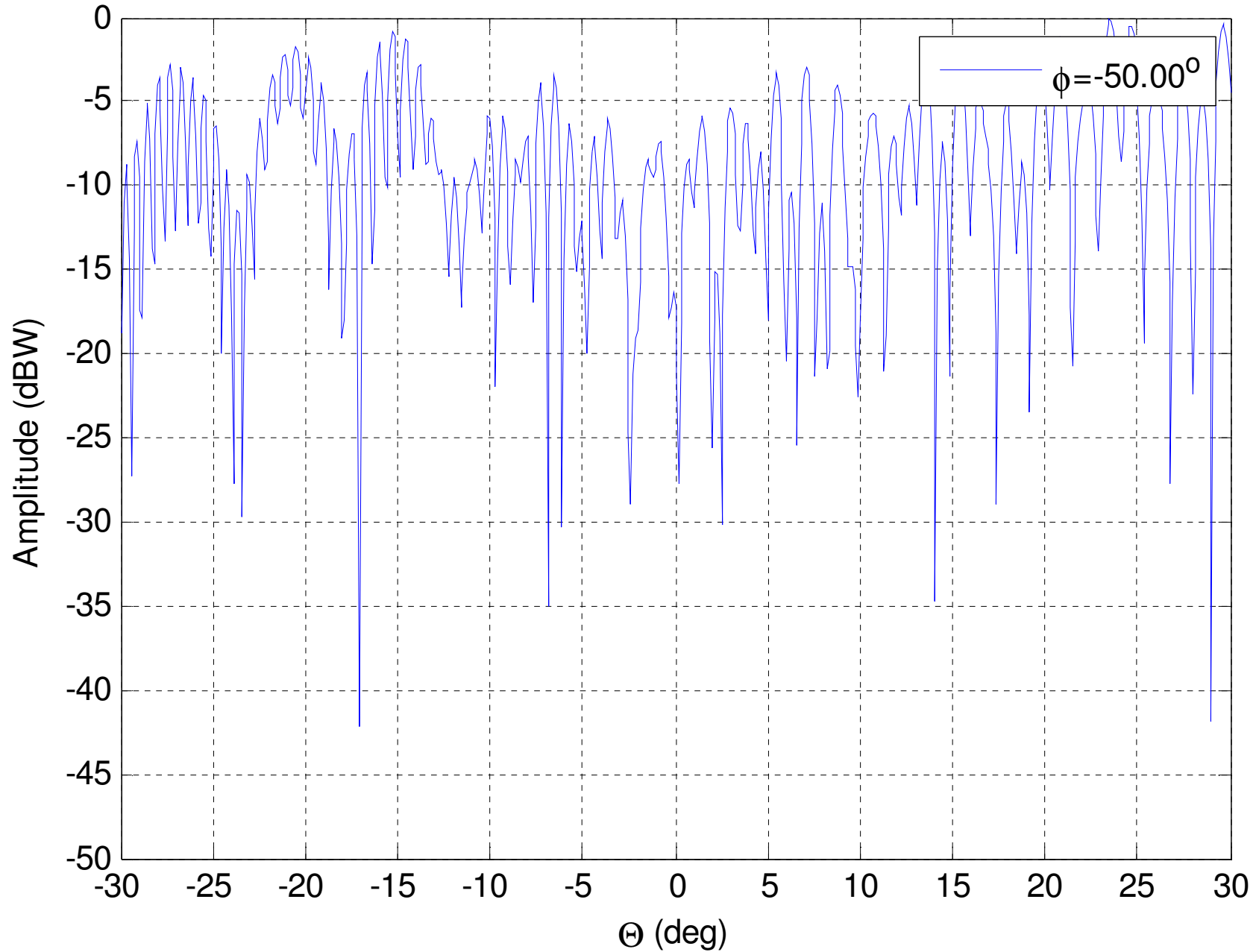
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -6.74 dBW, Date: 15-Dec-2011



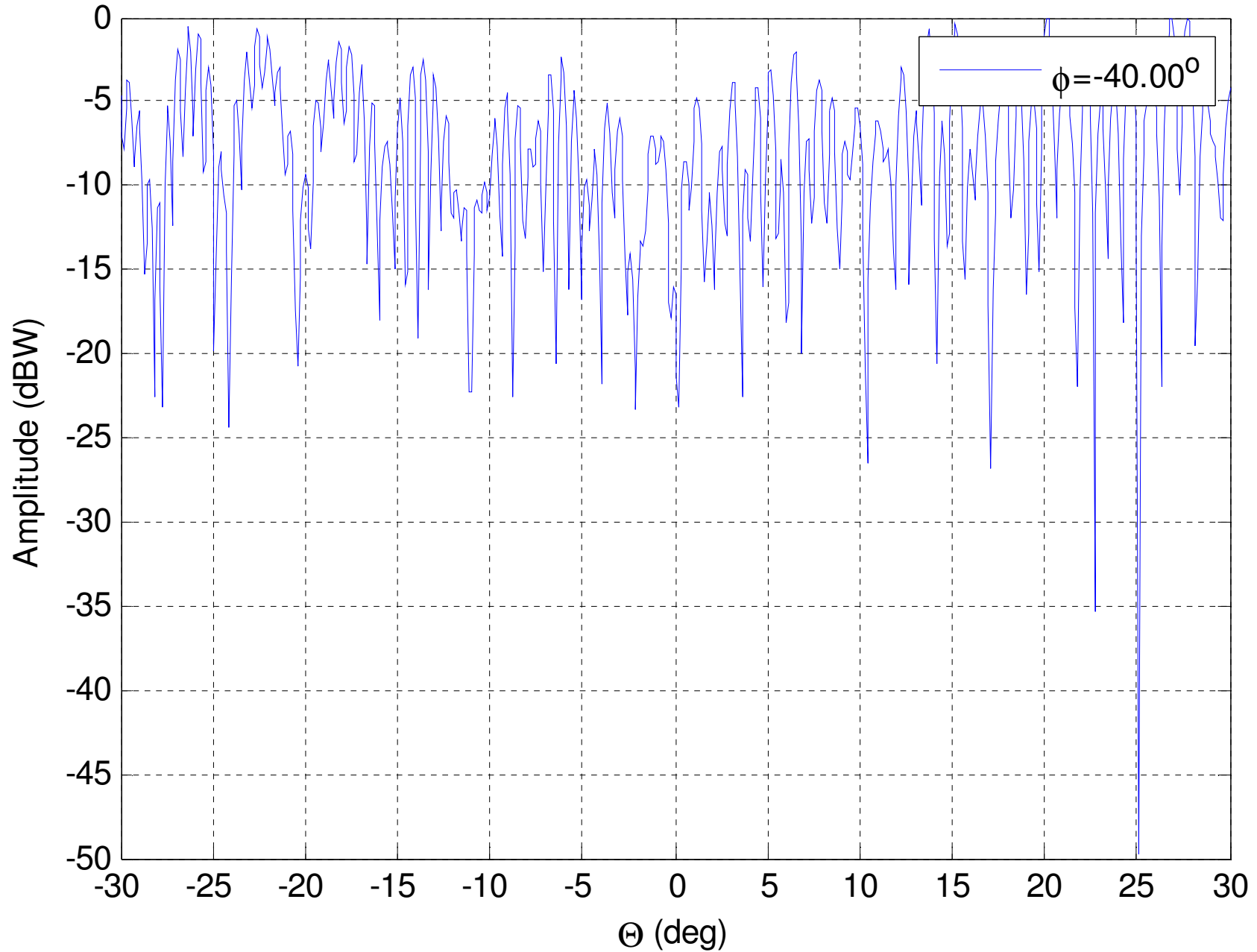
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -6.29 dBW, Date: 15-Dec-2011



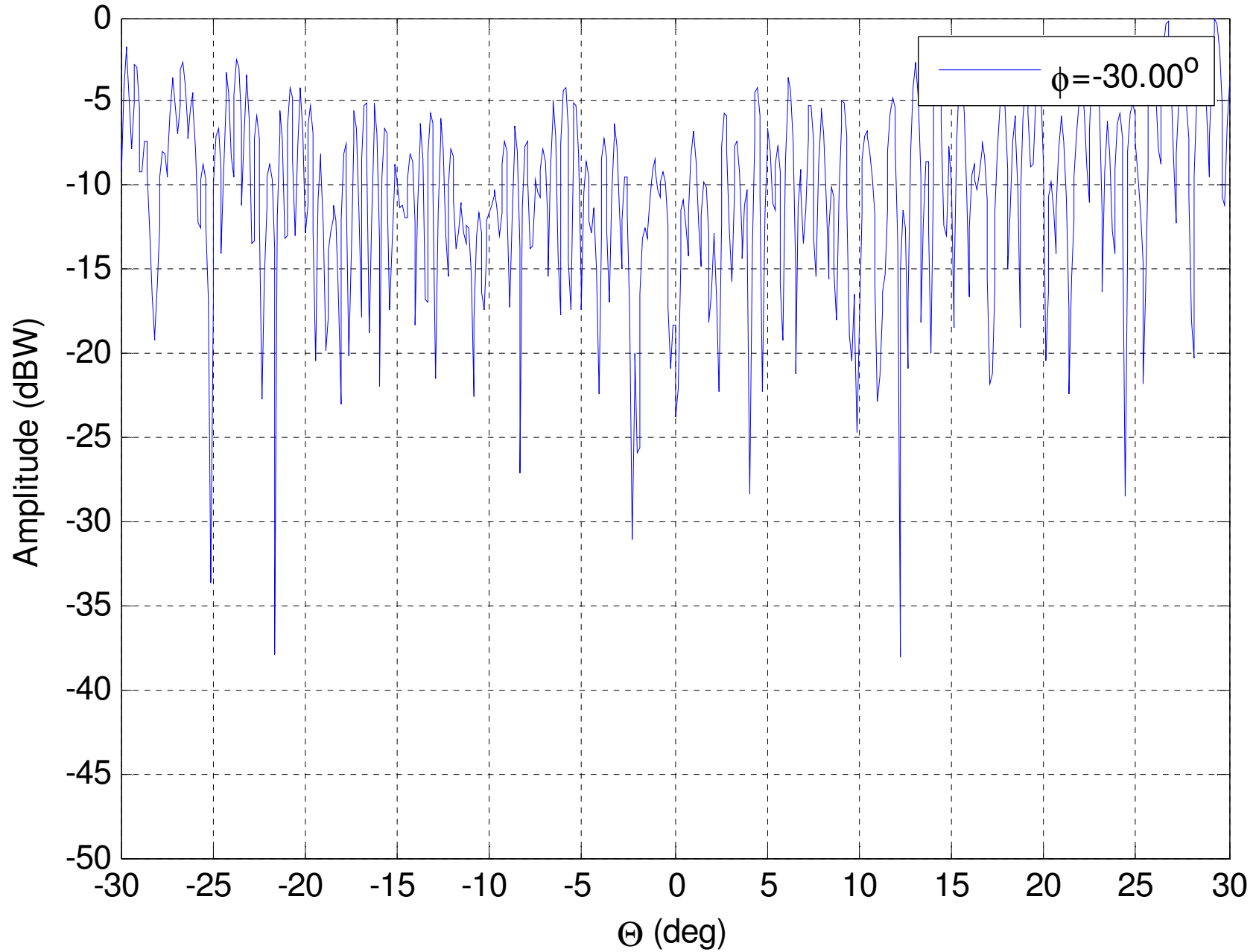
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -6.98 dBW, Date: 15-Dec-2011



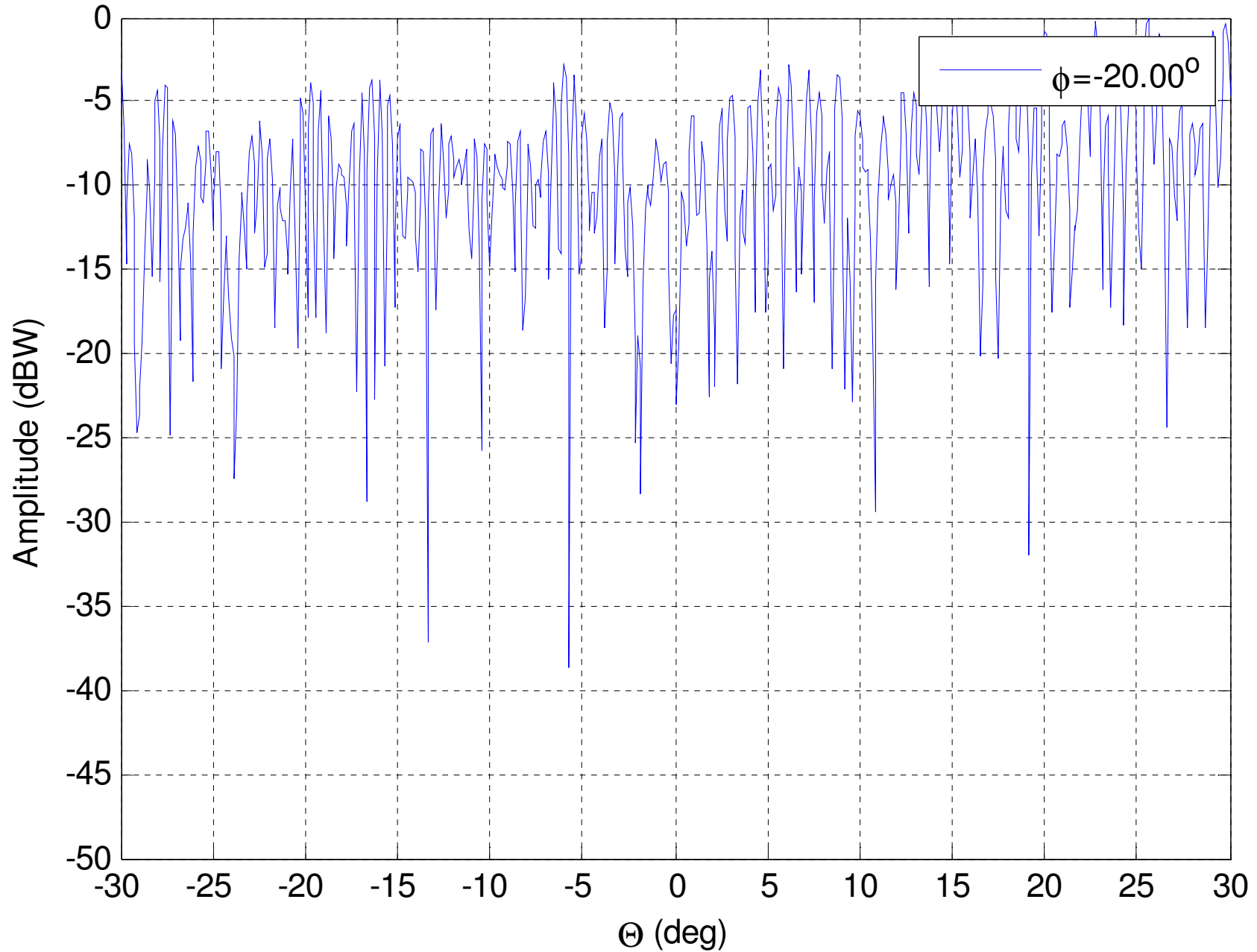
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -5.17 dBW, Date: 15-Dec-2011



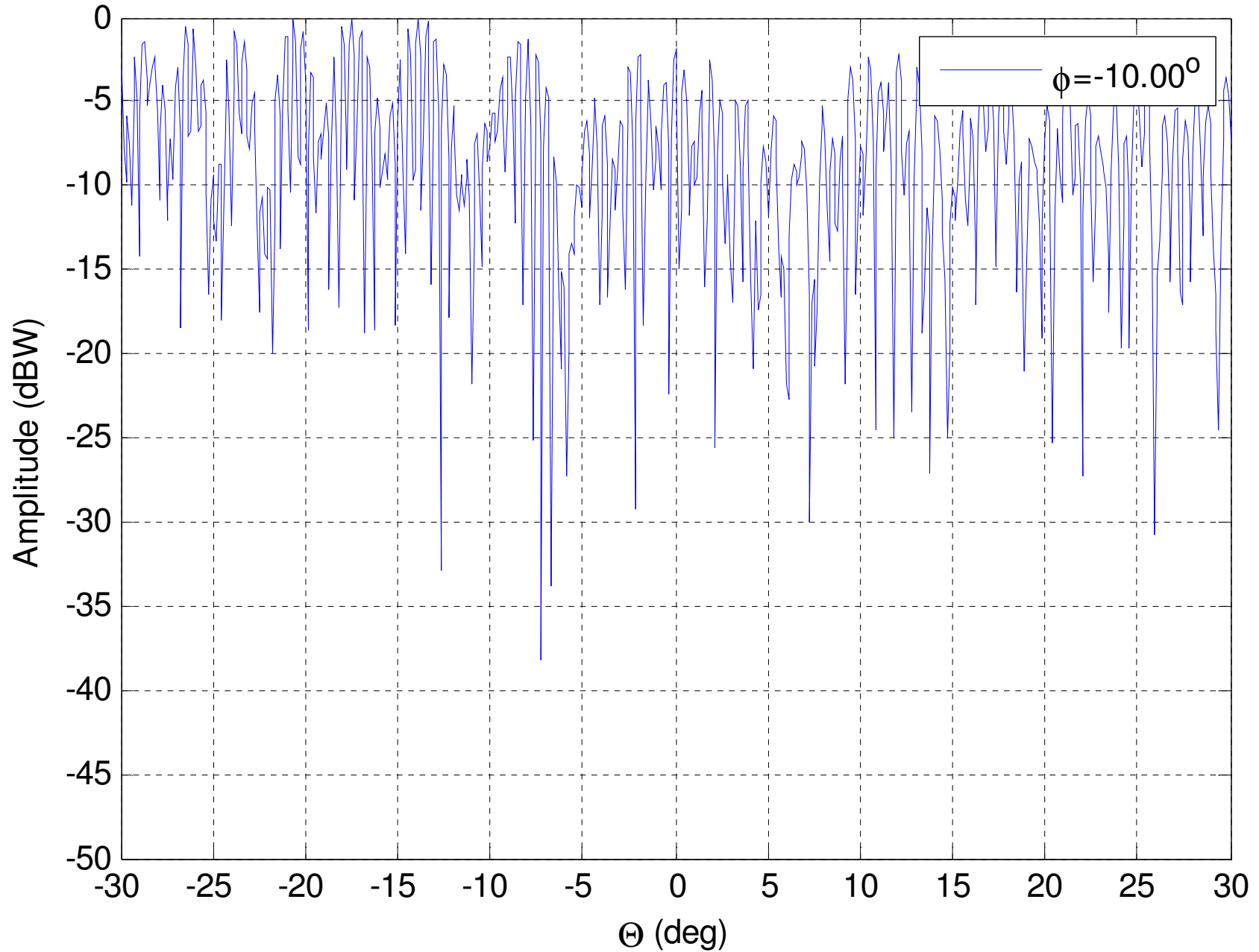
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -6.19 dBW, Date: 15-Dec-2011



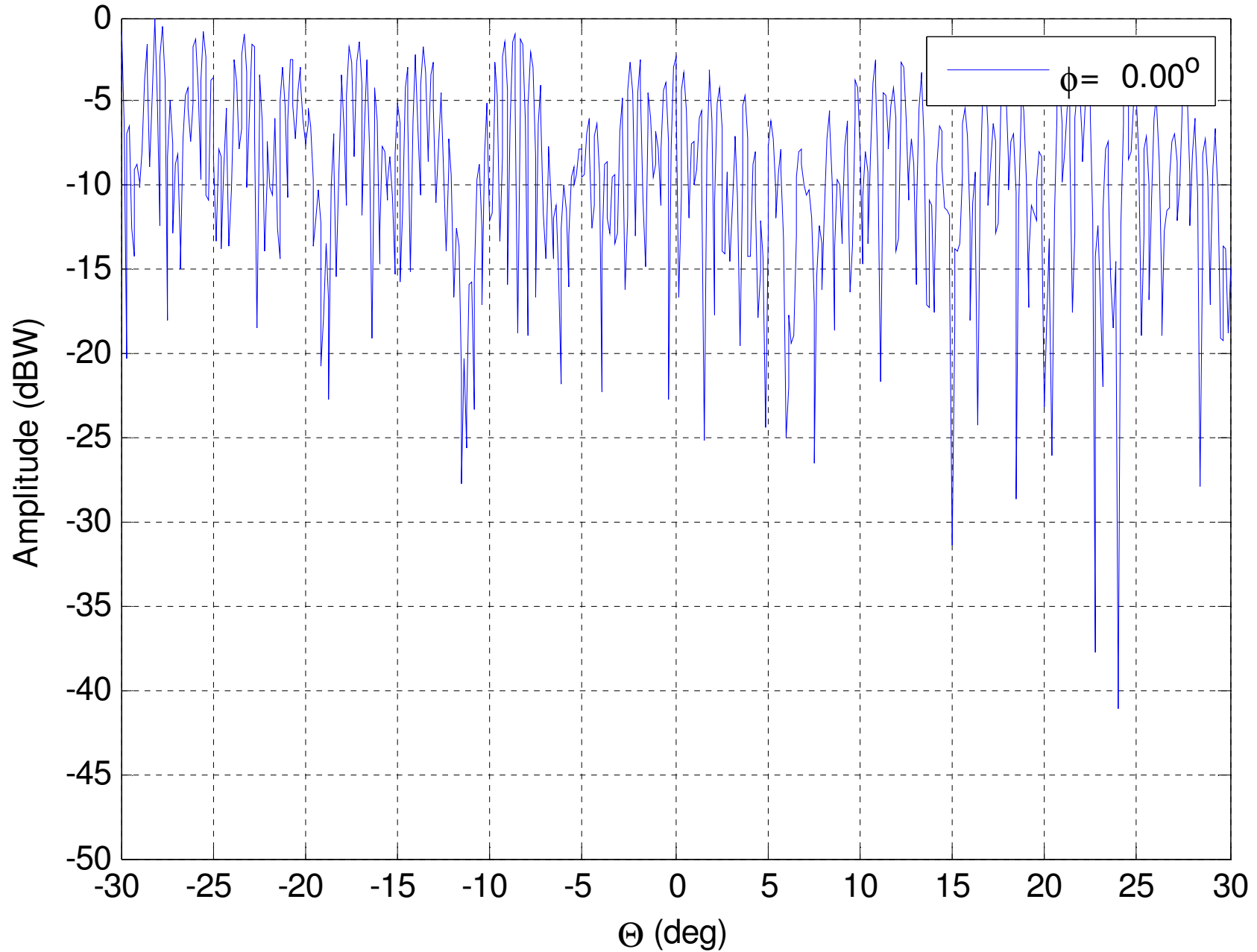
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -7.87 dBW, Date: 15-Dec-2011



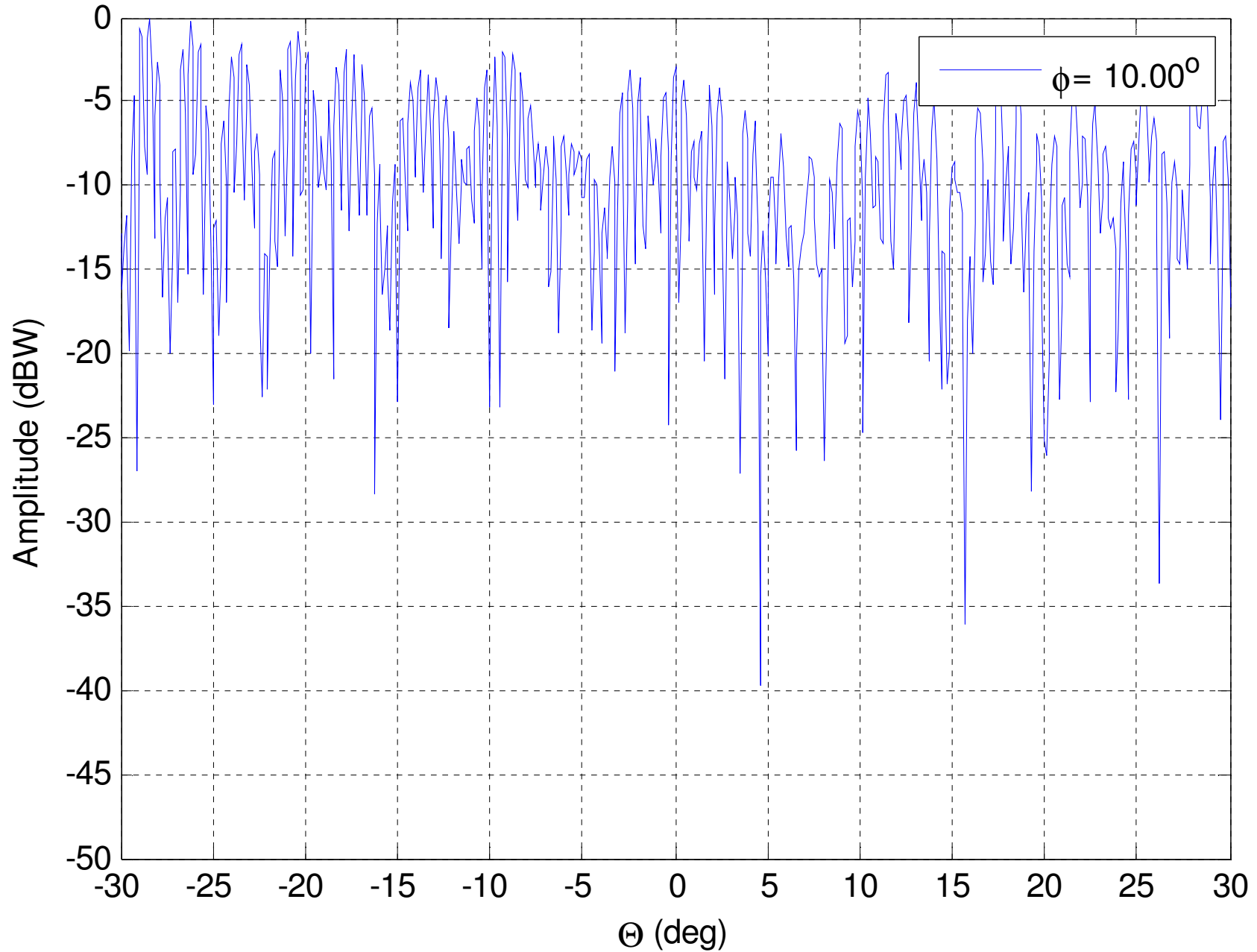
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -7.55 dBW, Date: 15-Dec-2011



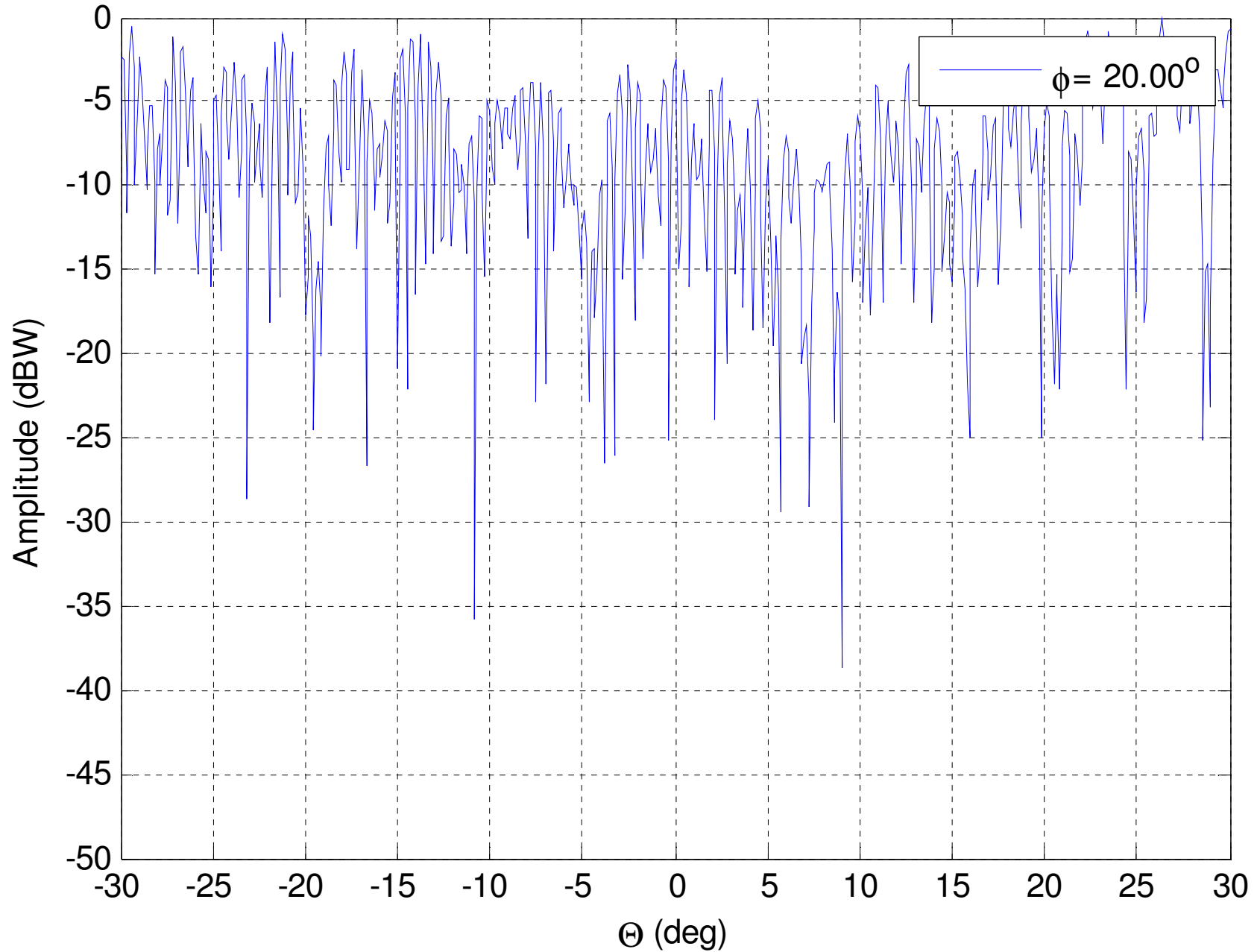
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -6.91 dBW, Date: 15-Dec-2011



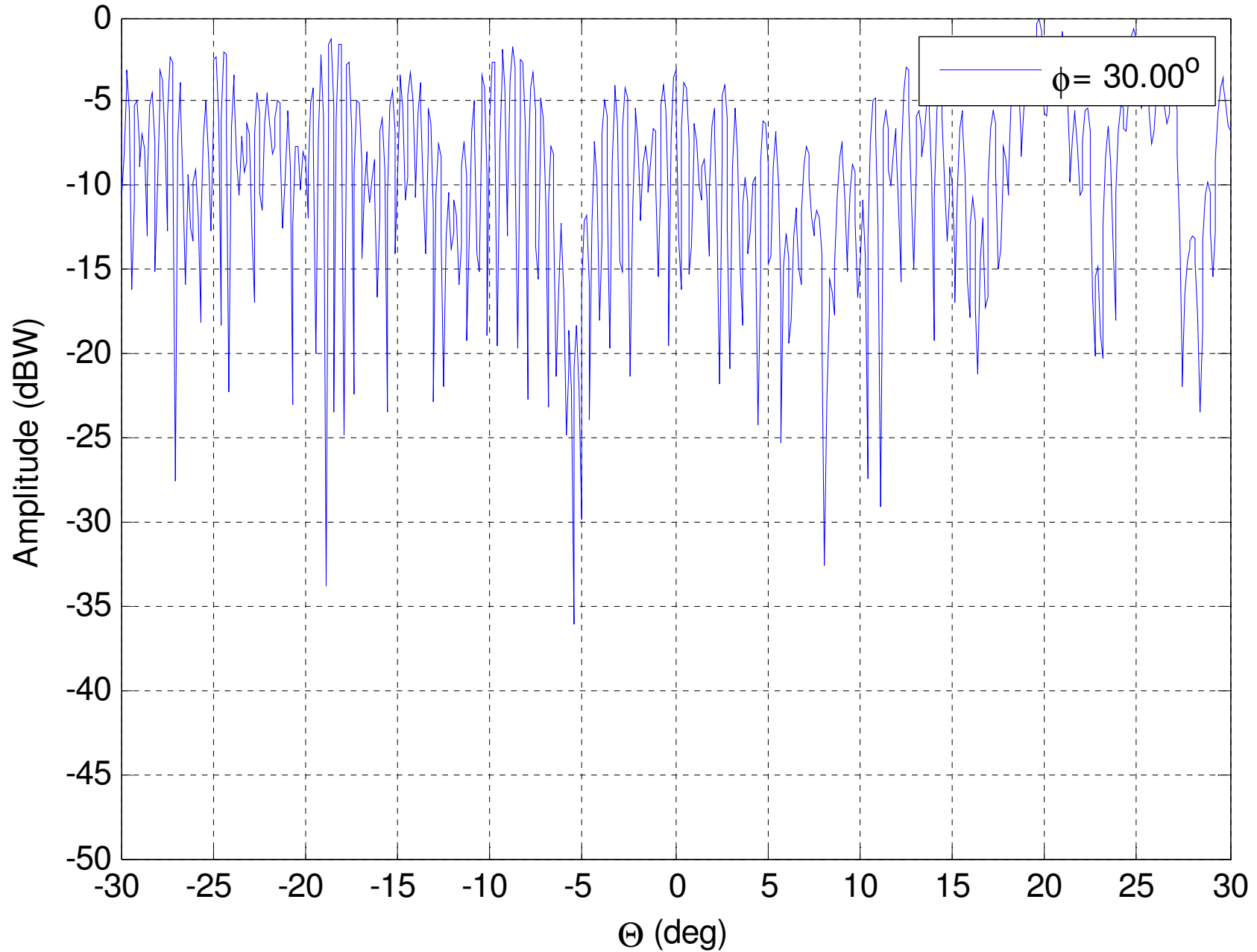
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.30 dBW, Date: 15-Dec-2011



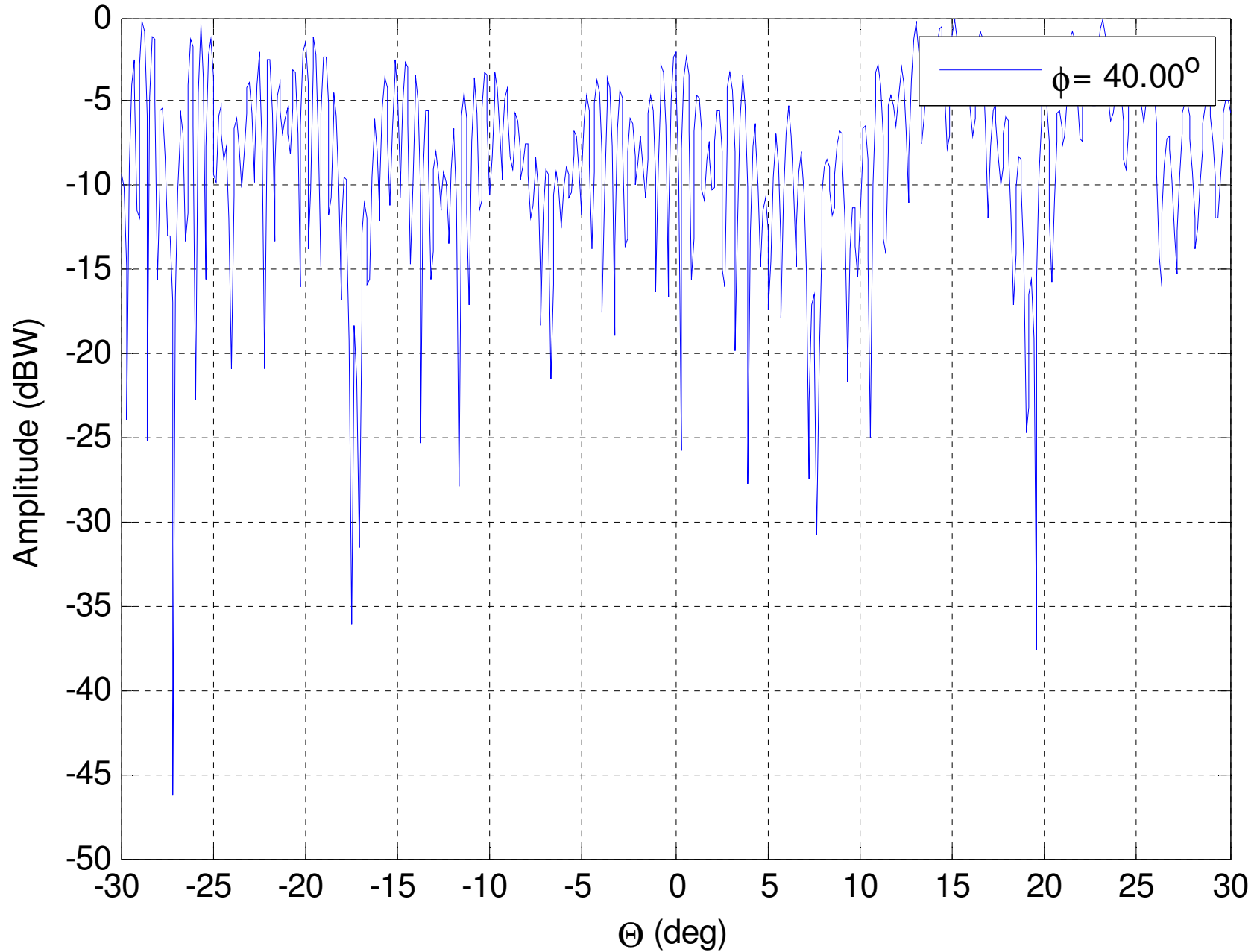
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -6.68 dBW, Date: 15-Dec-2011



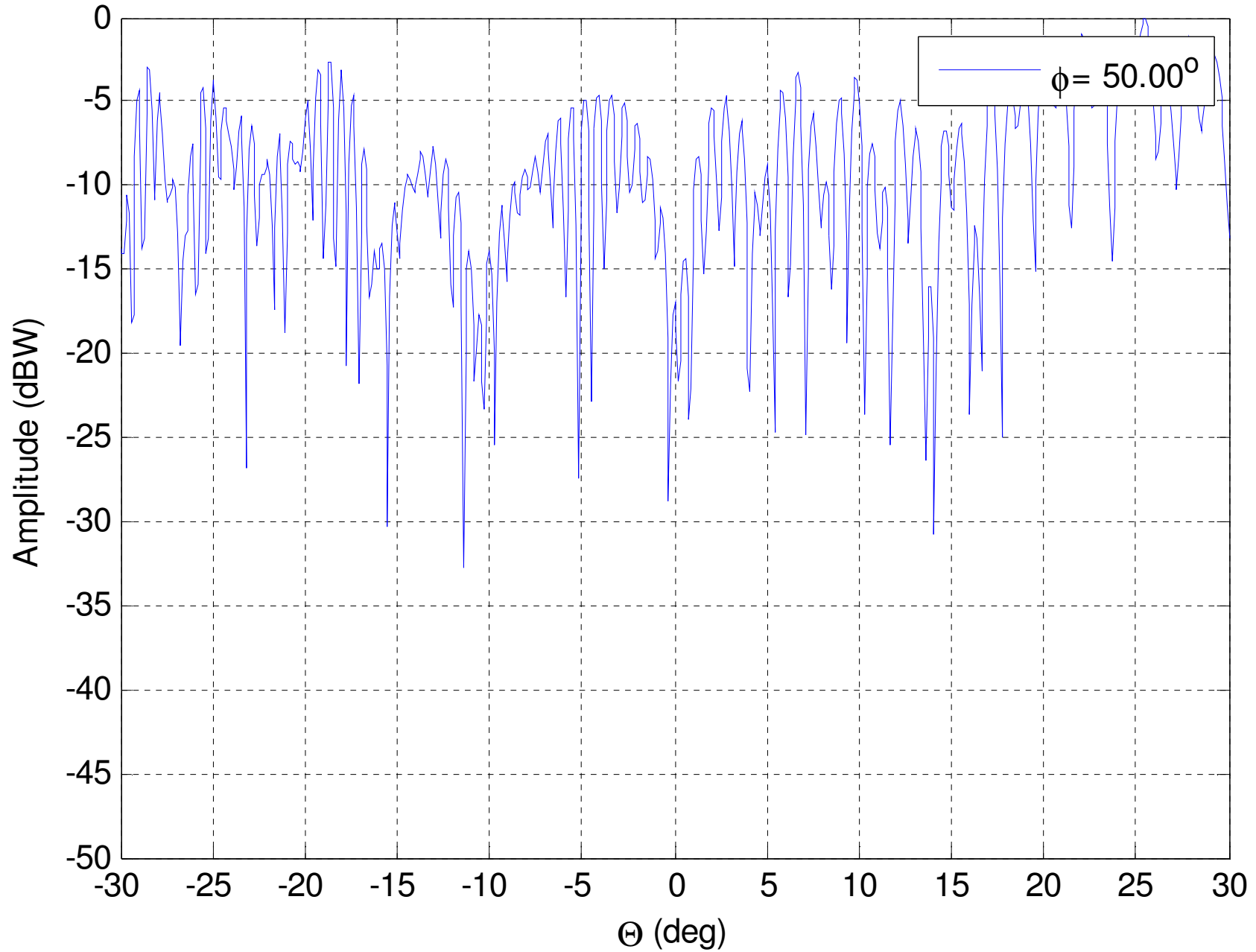
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -7.77 dBW, Date: 15-Dec-2011



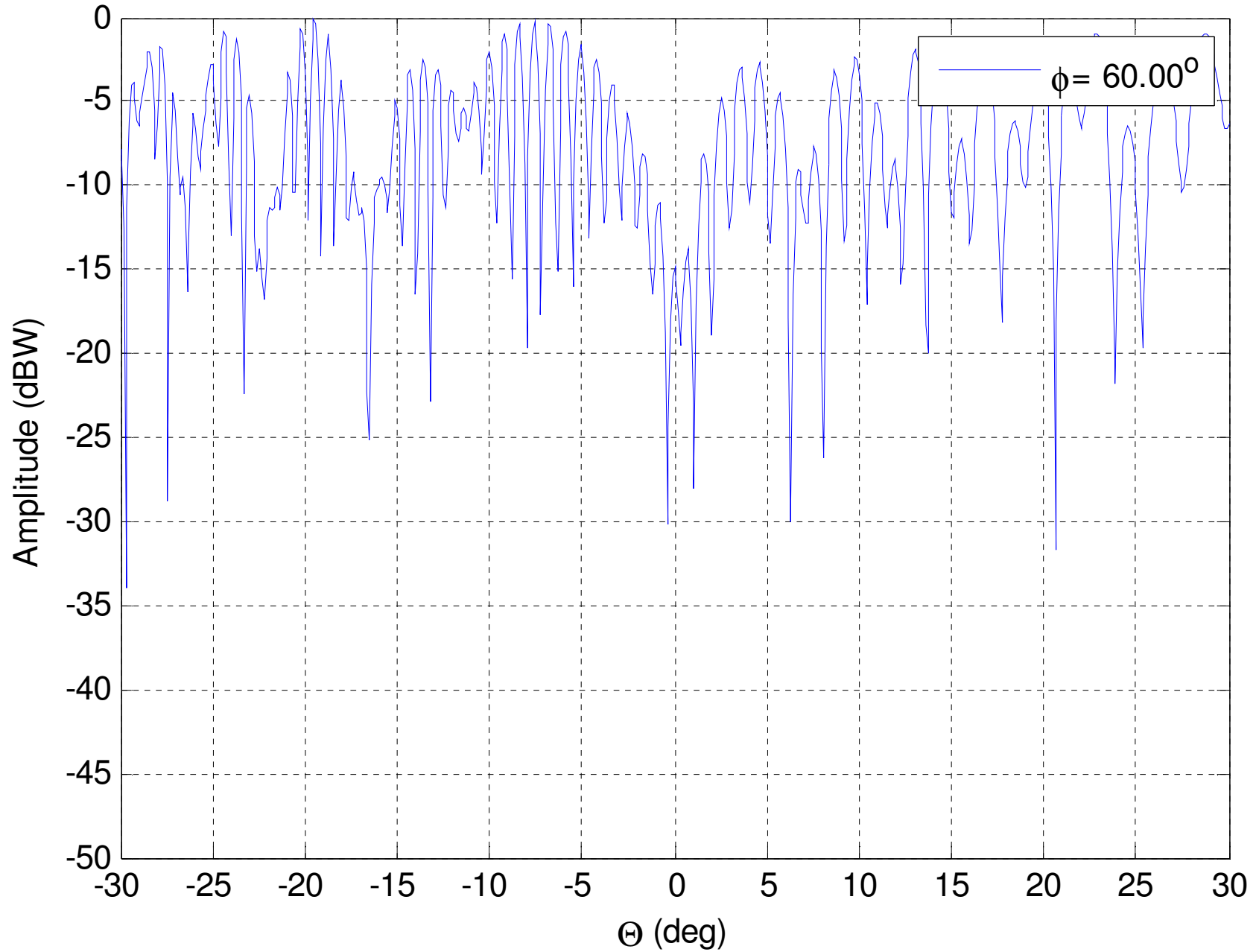
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -6.63 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

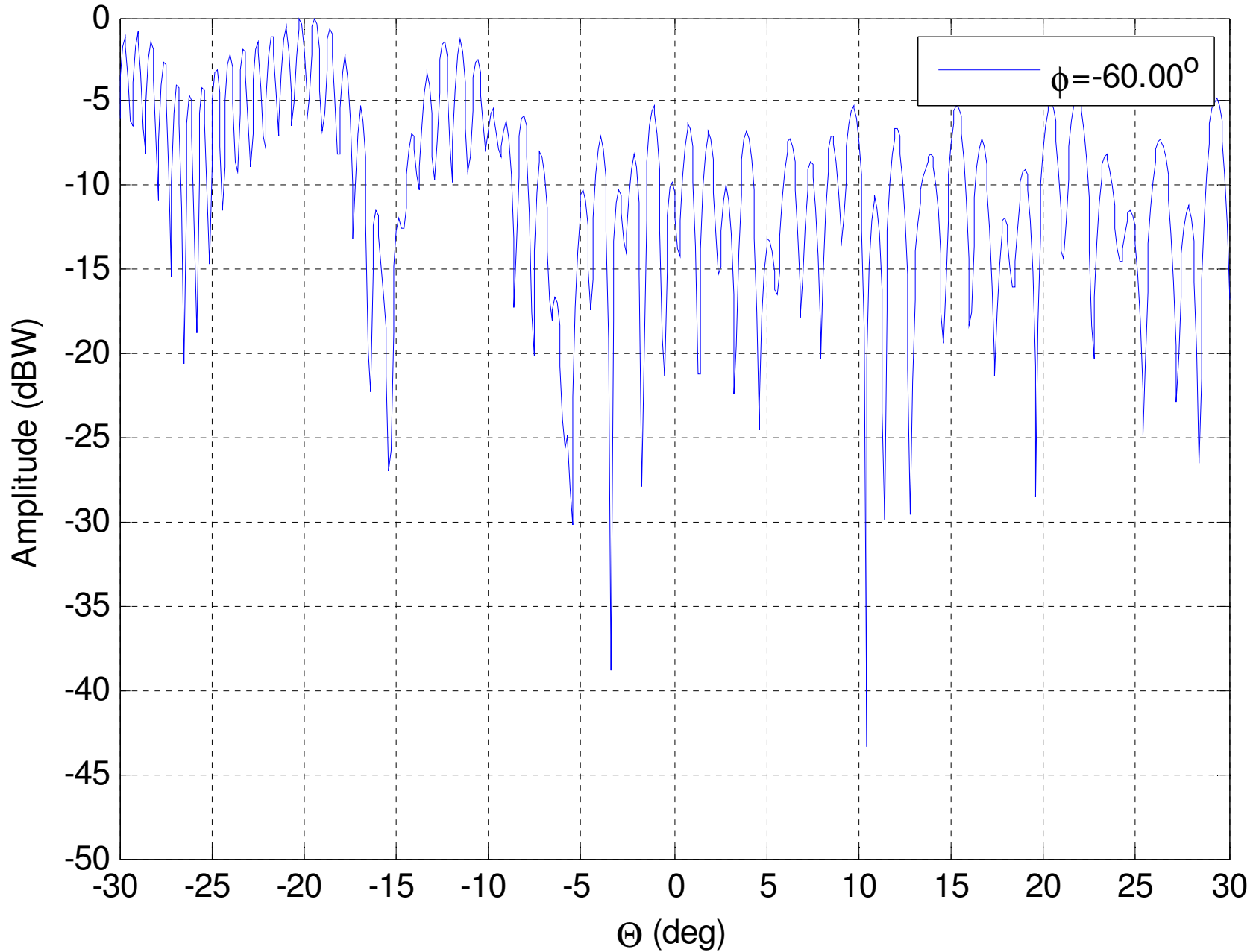
Input file: tx-17.3-lhcp-60.cut, Peak: -8.68 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

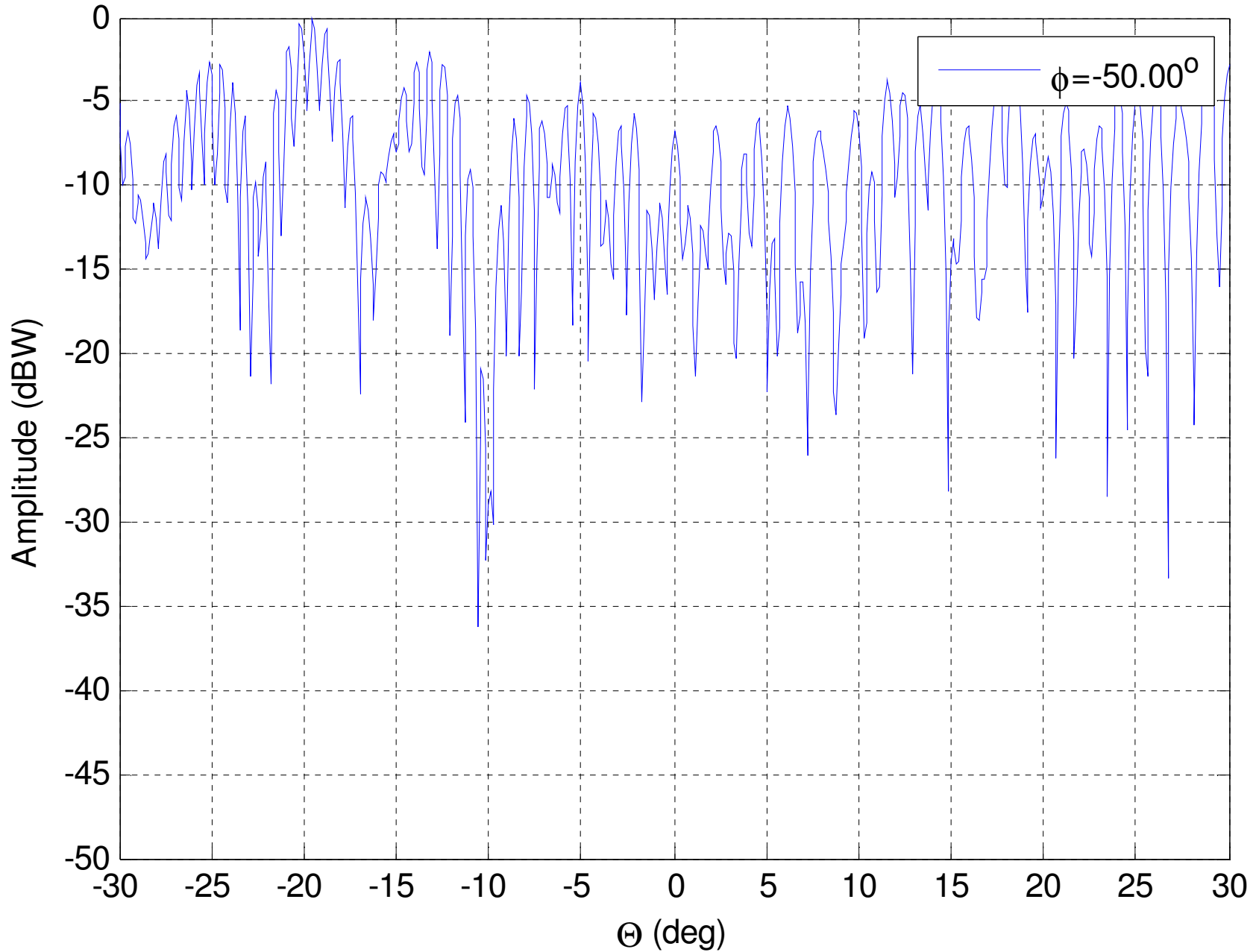
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -6.04 dBW, Date: 15-Dec-2011



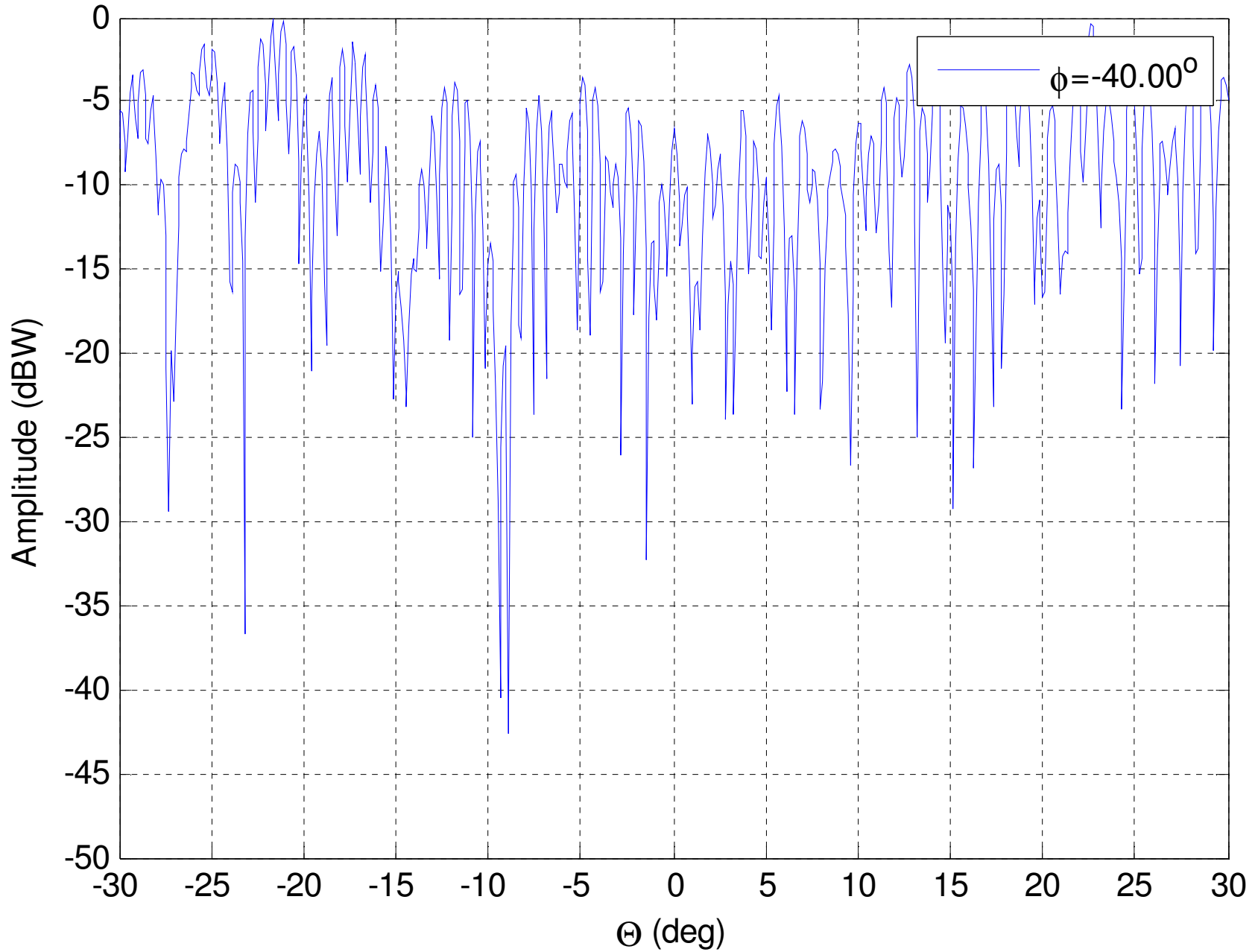
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.01 dBW, Date: 15-Dec-2011



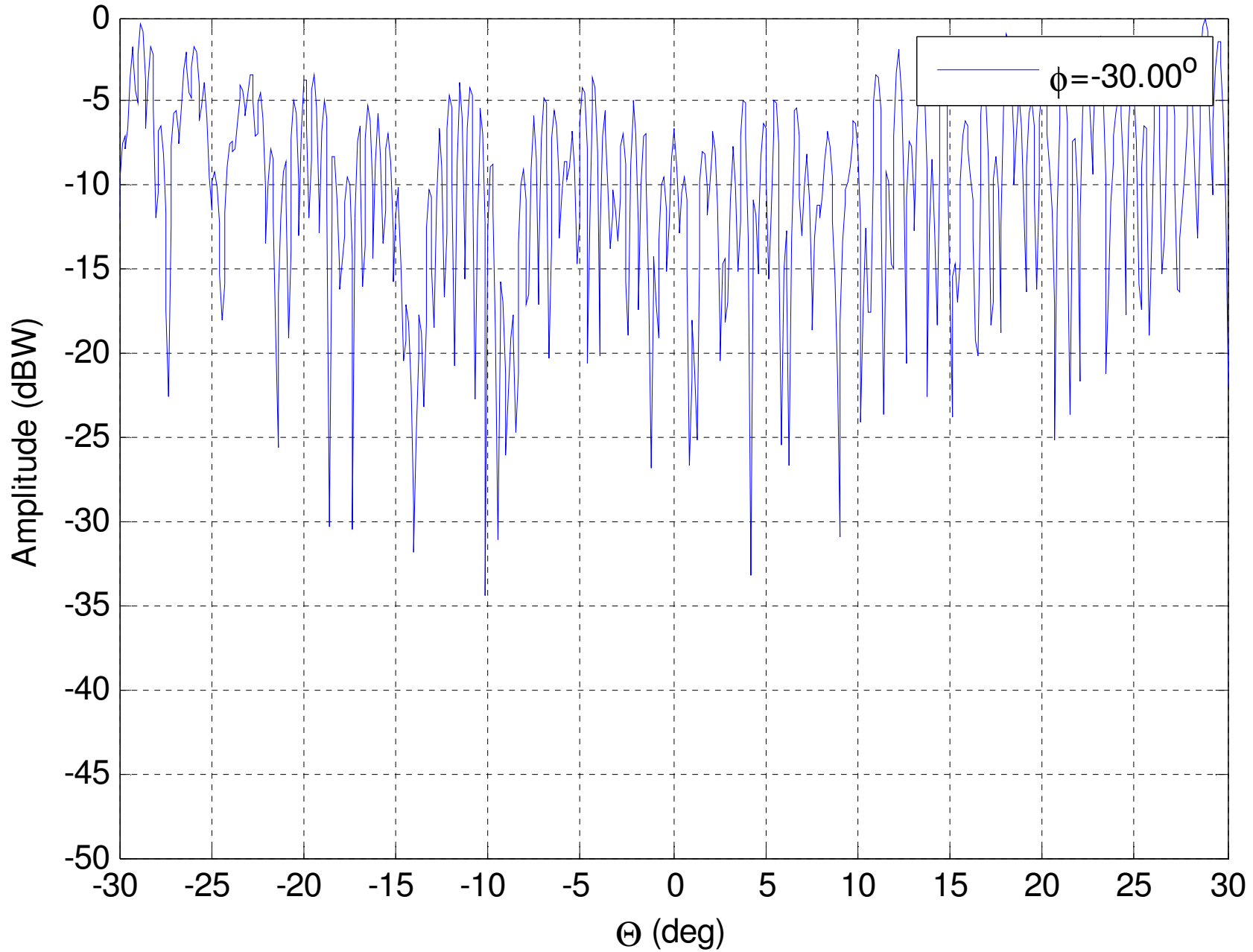
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -6.16 dBW, Date: 15-Dec-2011



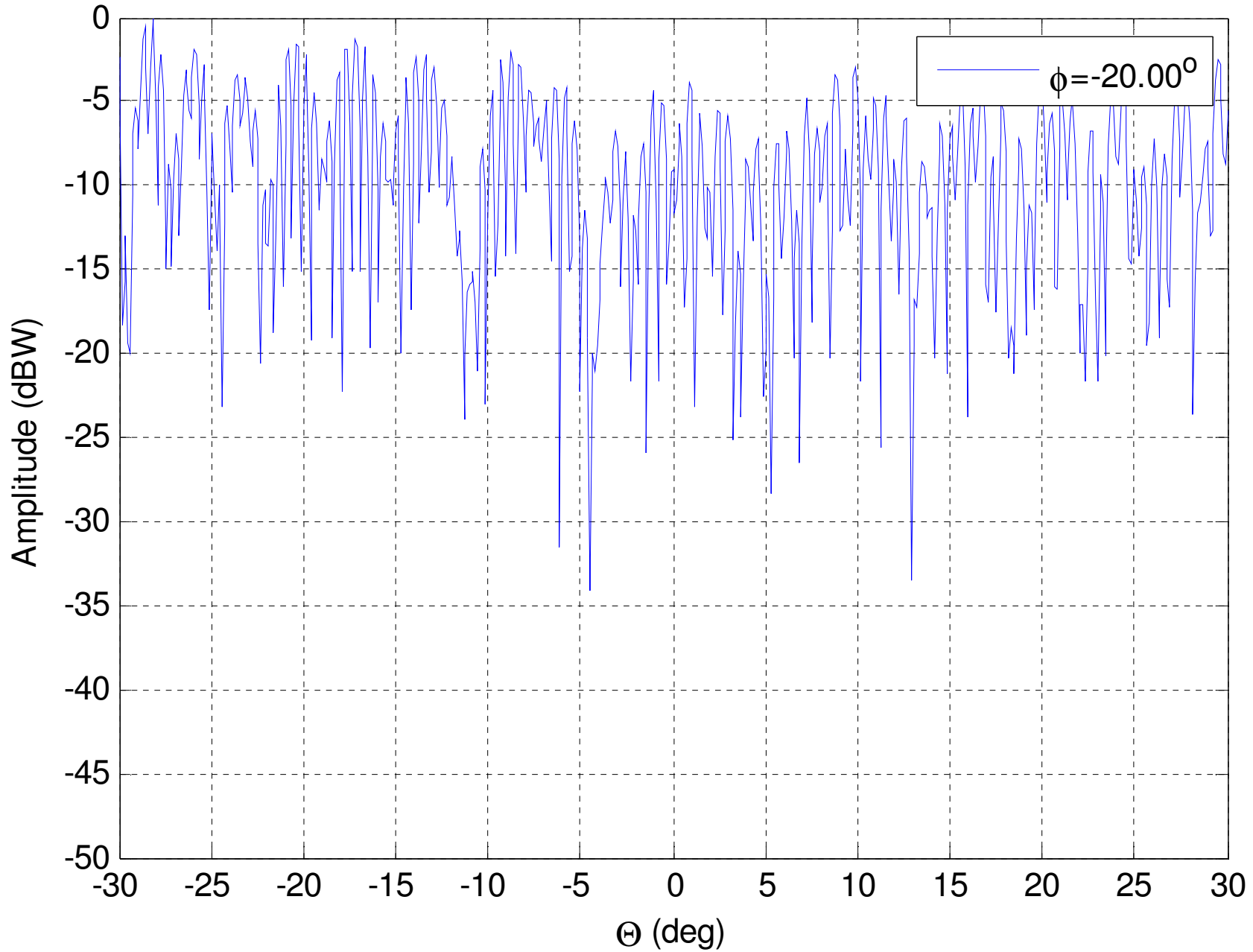
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -6.14 dBW, Date: 15-Dec-2011



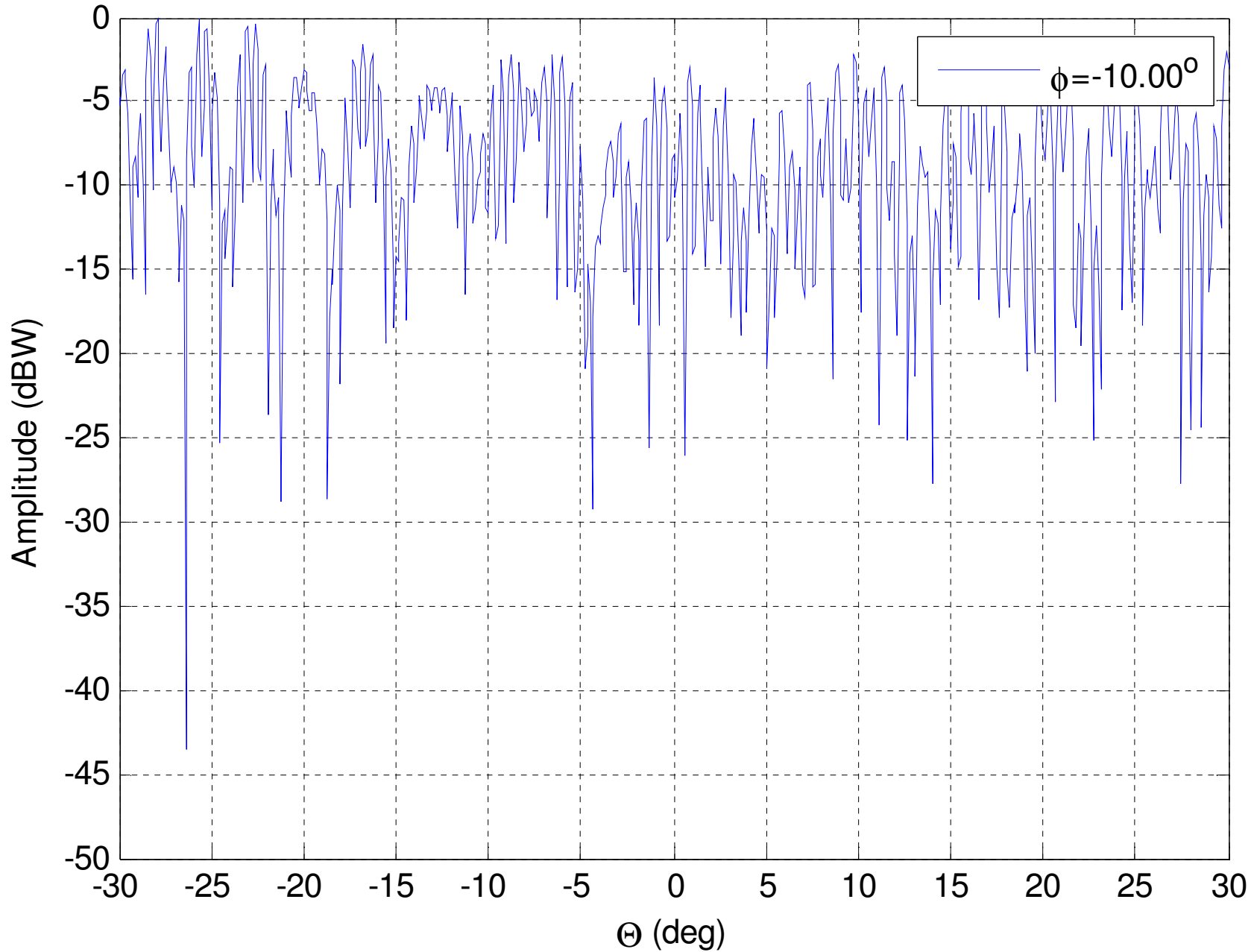
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -7.34 dBW, Date: 15-Dec-2011



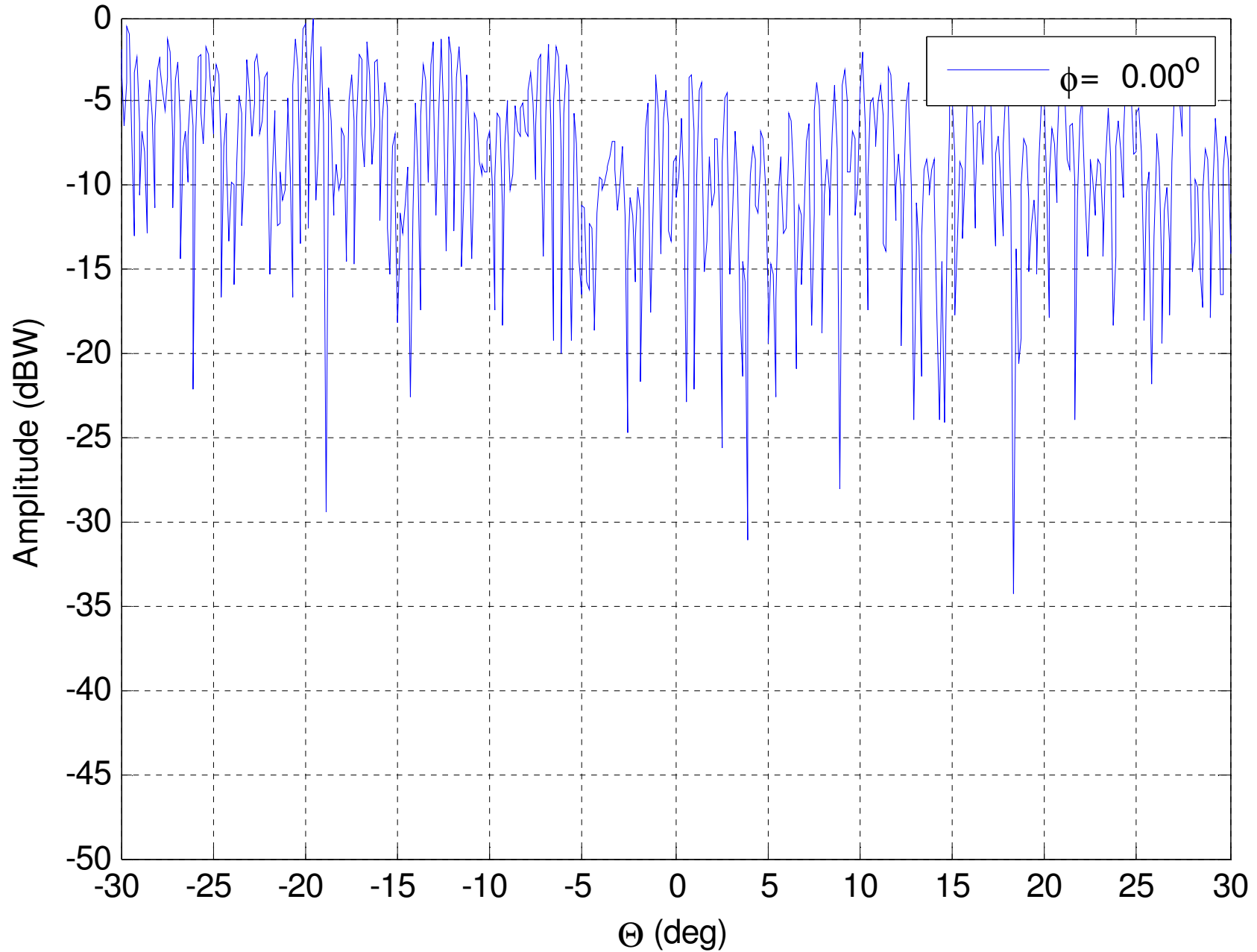
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -8.25 dBW, Date: 15-Dec-2011



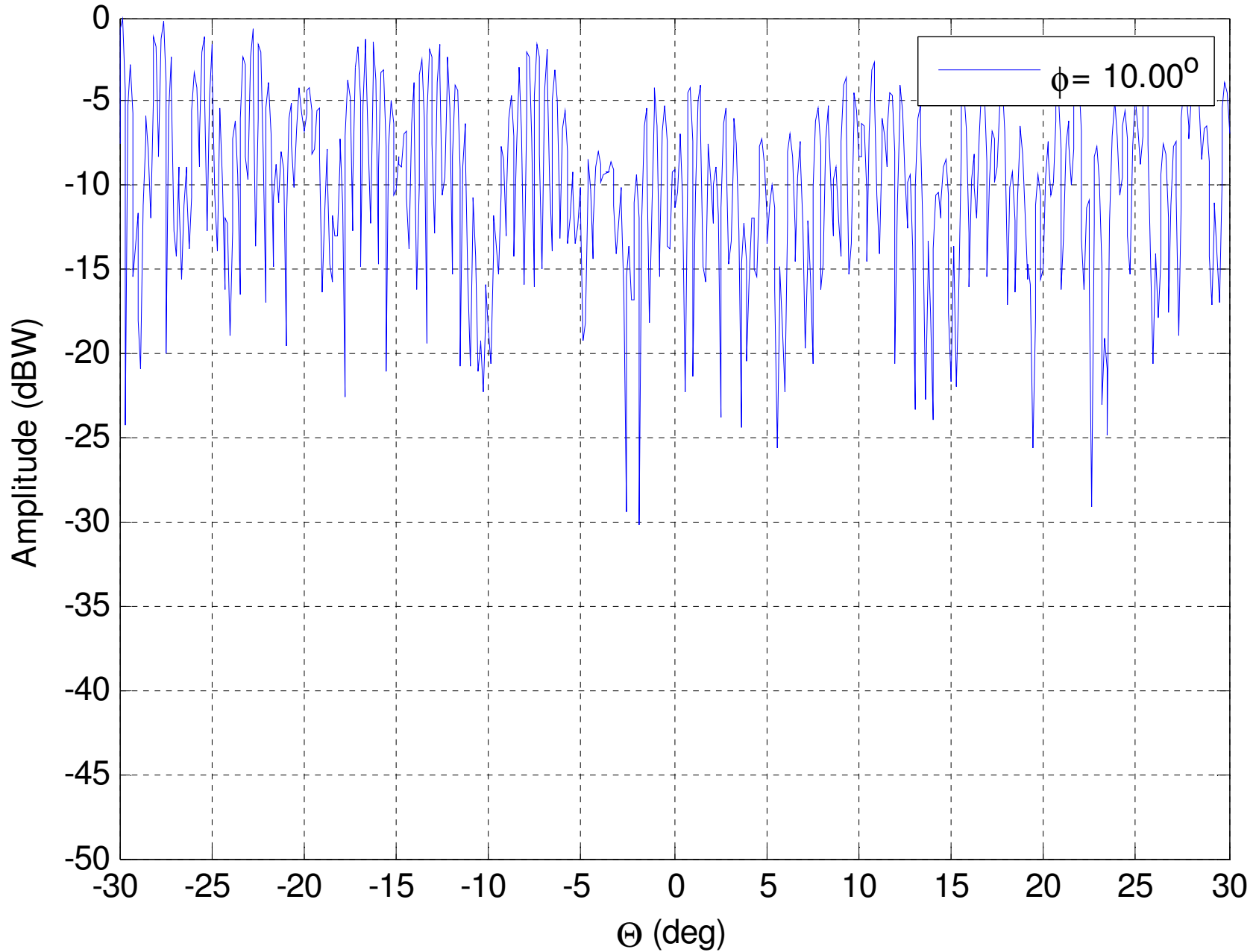
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



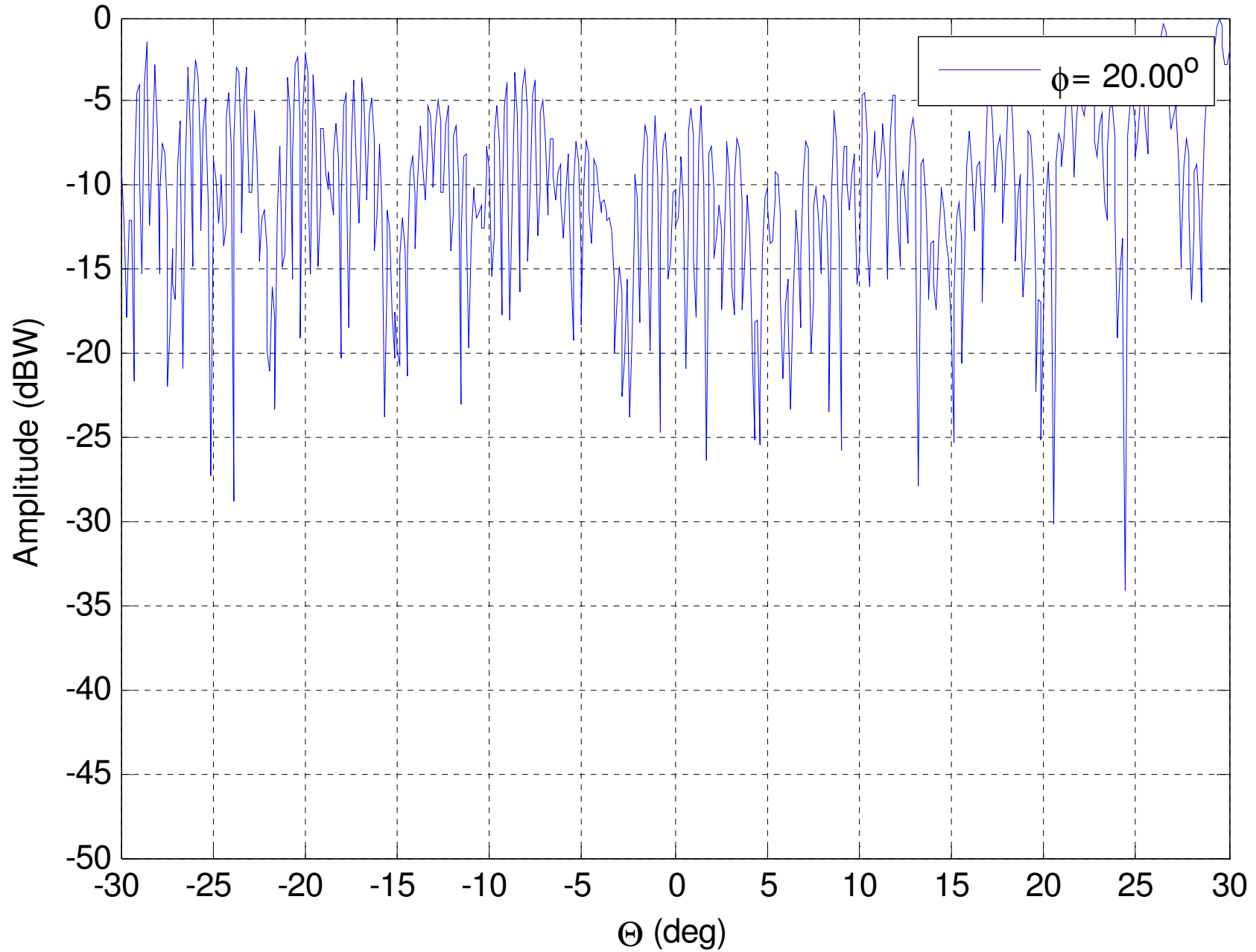
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -7.48 dBW, Date: 15-Dec-2011



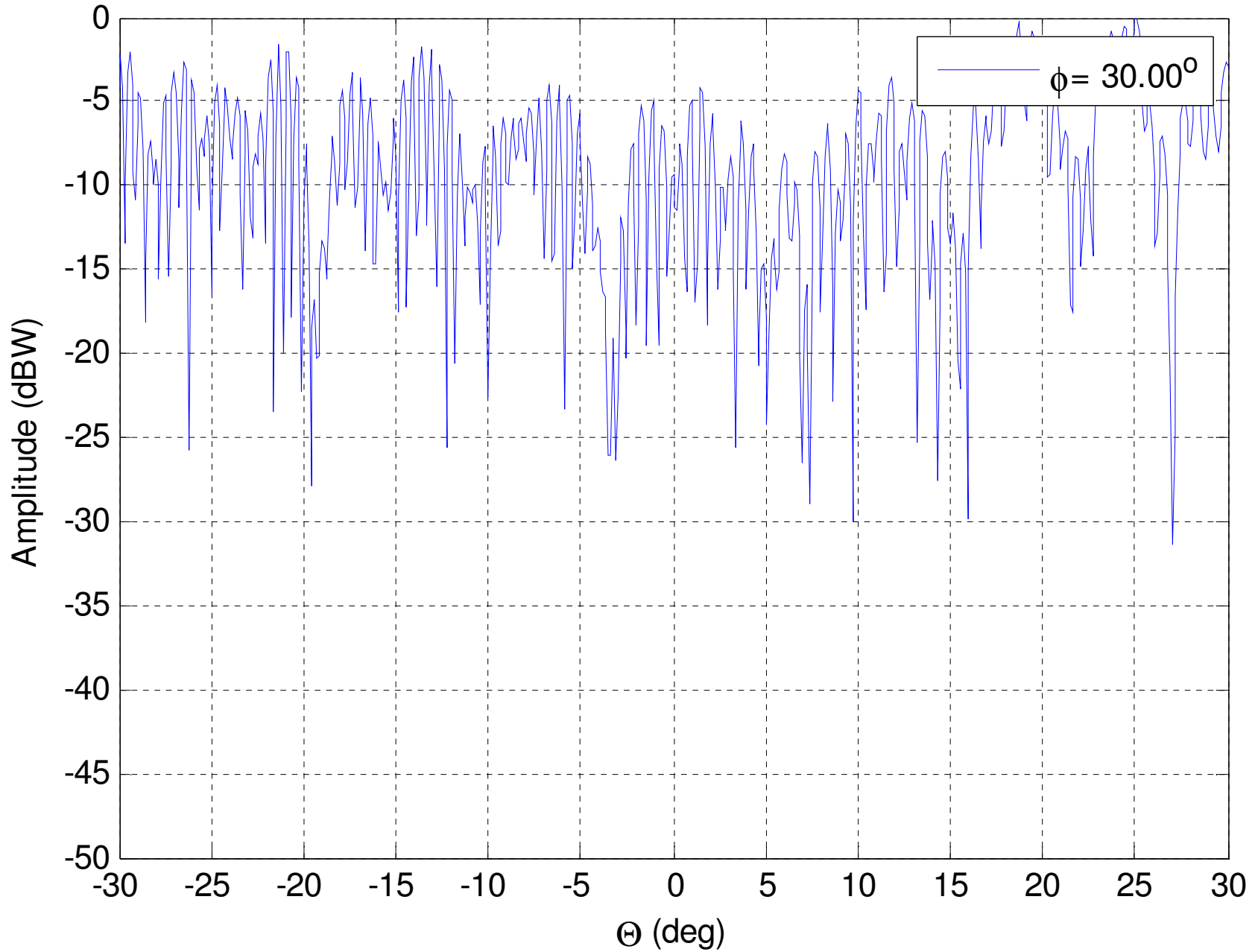
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -6.18 dBW, Date: 15-Dec-2011



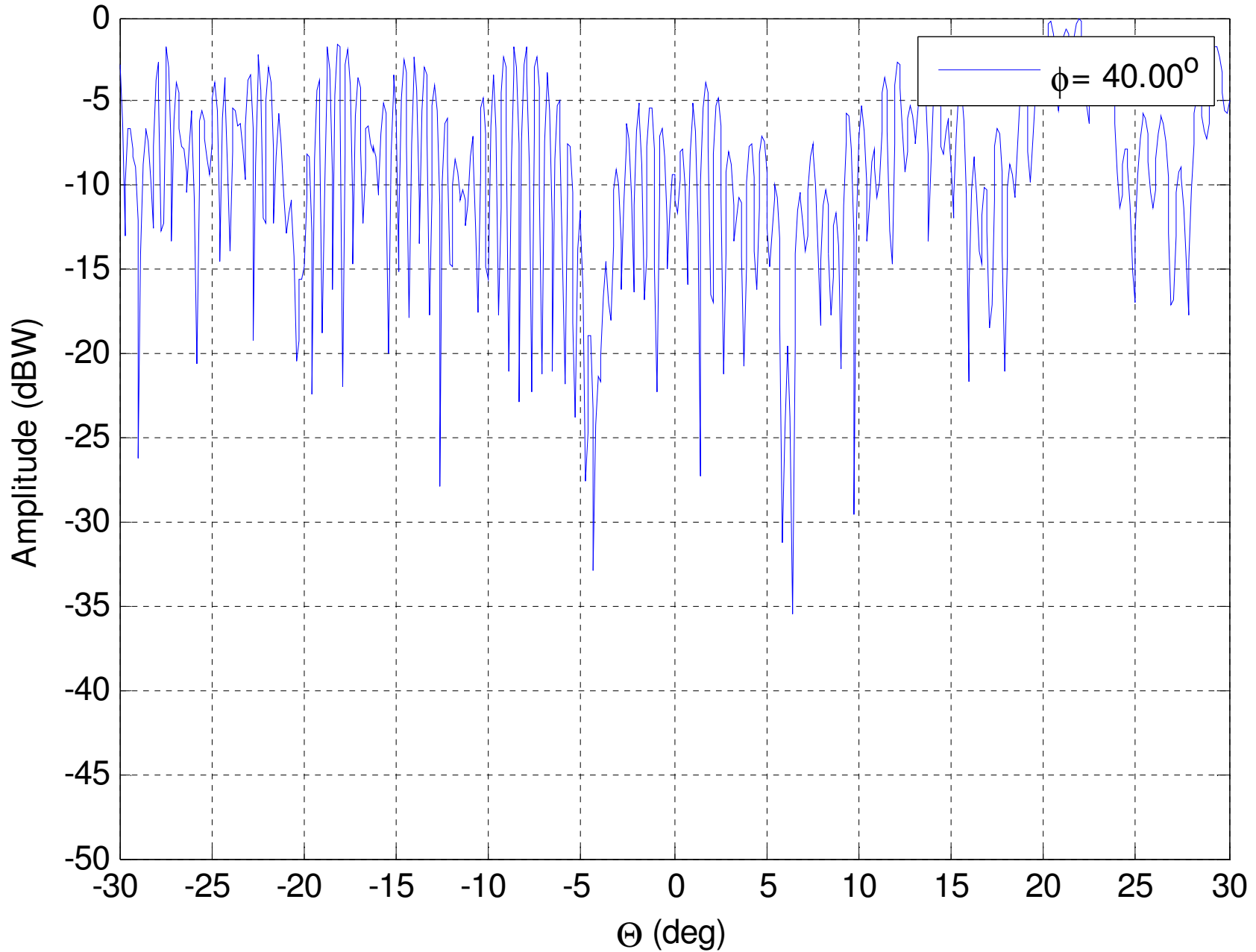
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -7.05 dBW, Date: 15-Dec-2011



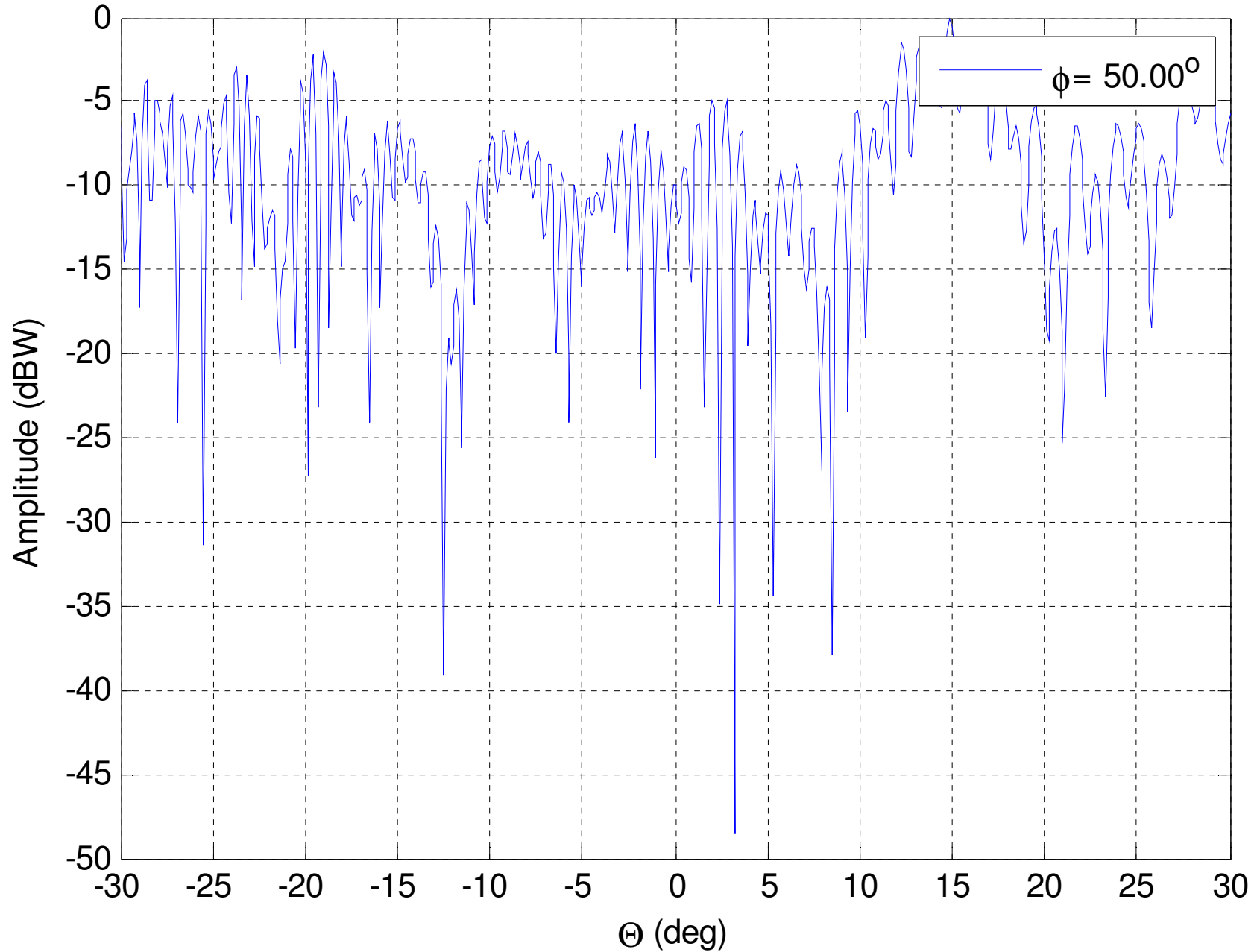
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.16 dBW, Date: 15-Dec-2011



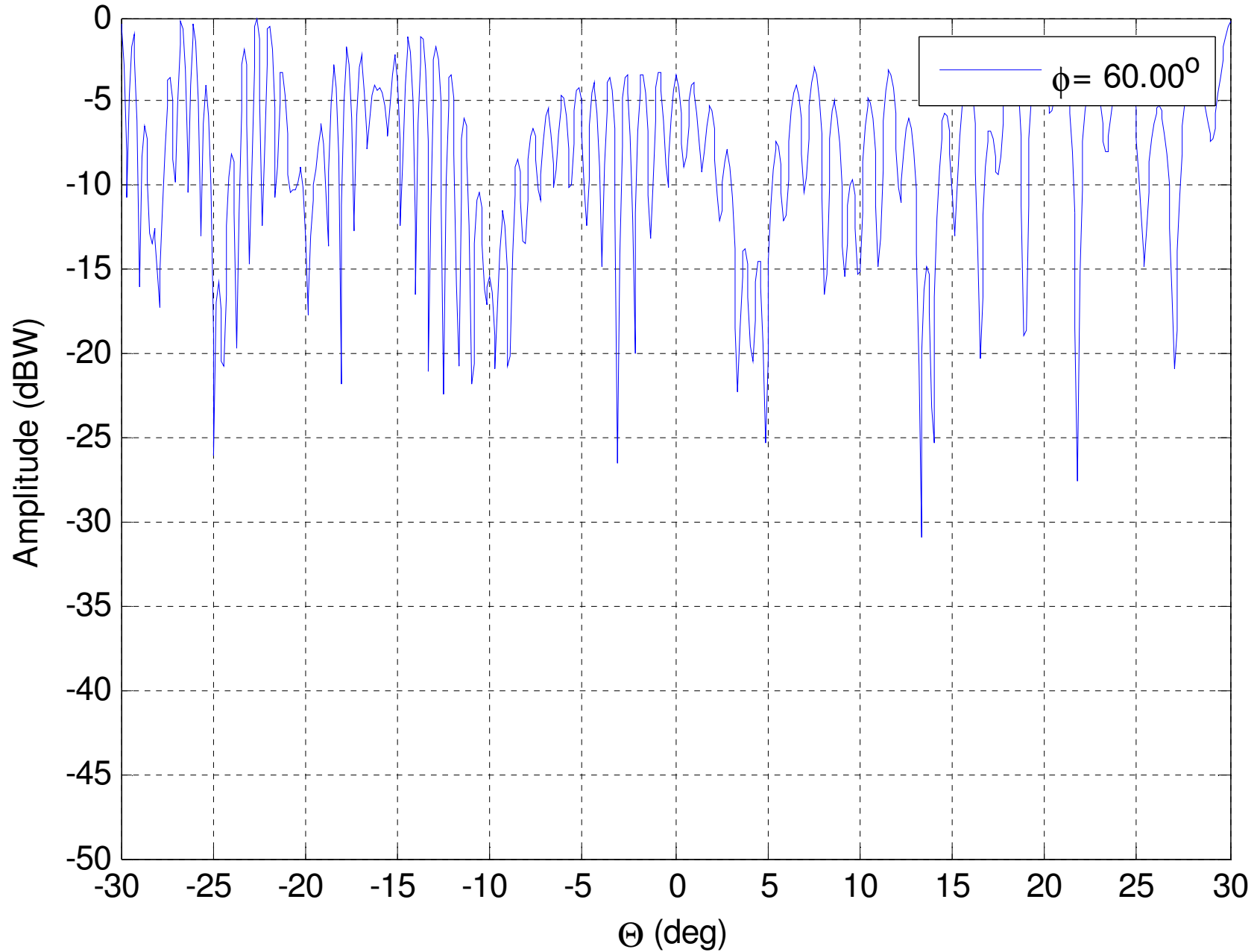
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -6.45 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

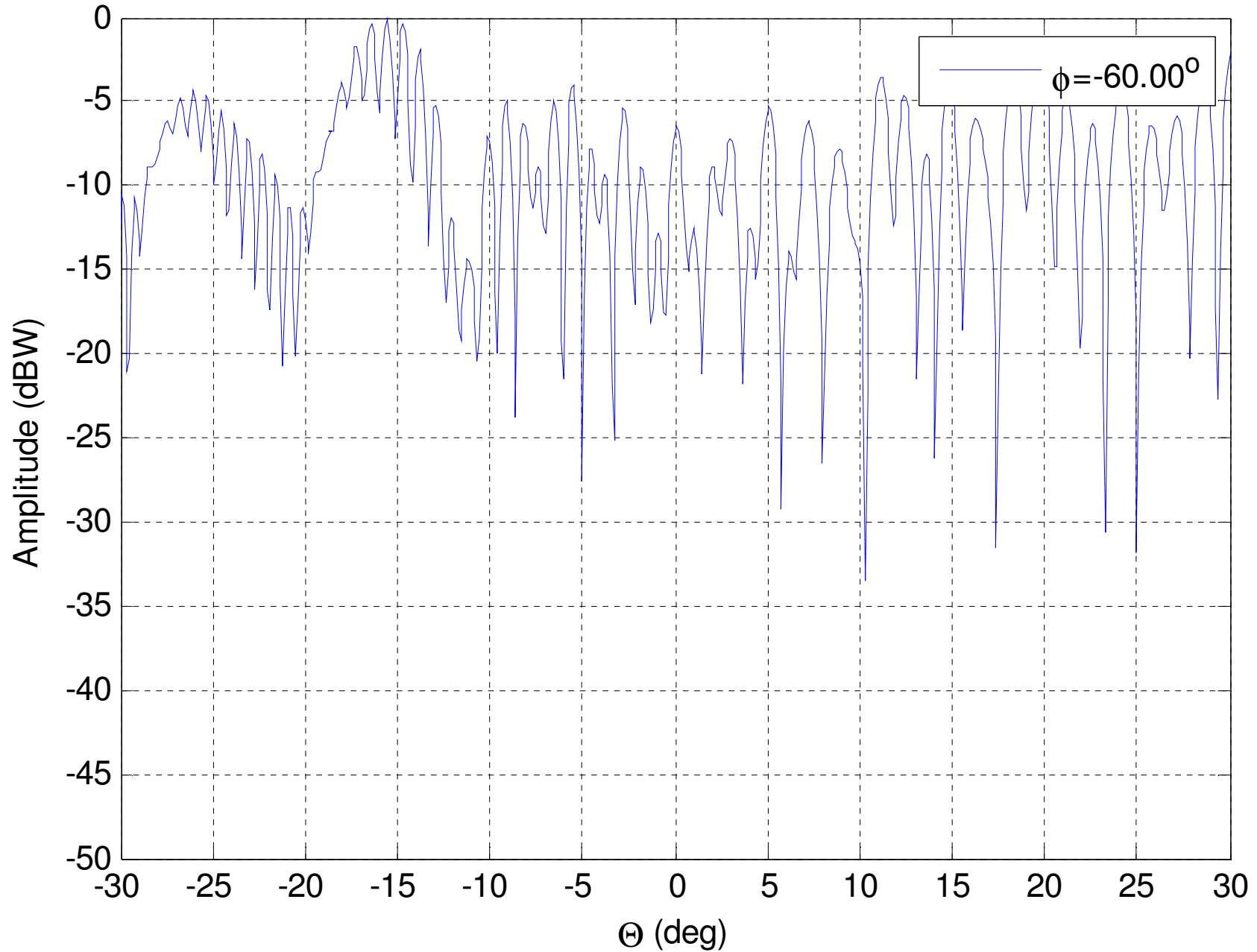
Input file: tx-17.5-rhcp-60.cut, Peak: -9.30 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

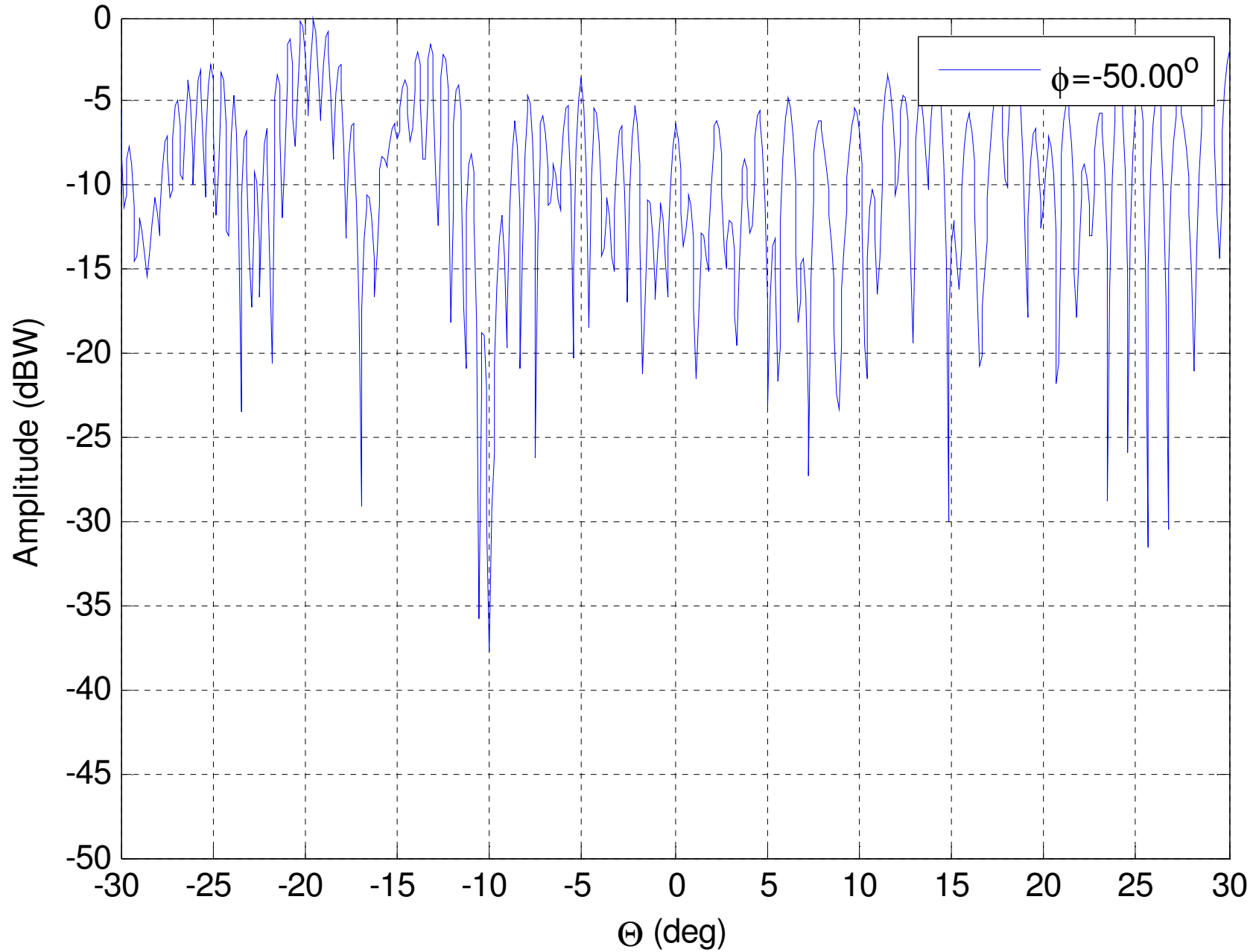
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -6.21 dBW, Date: 15-Dec-2011



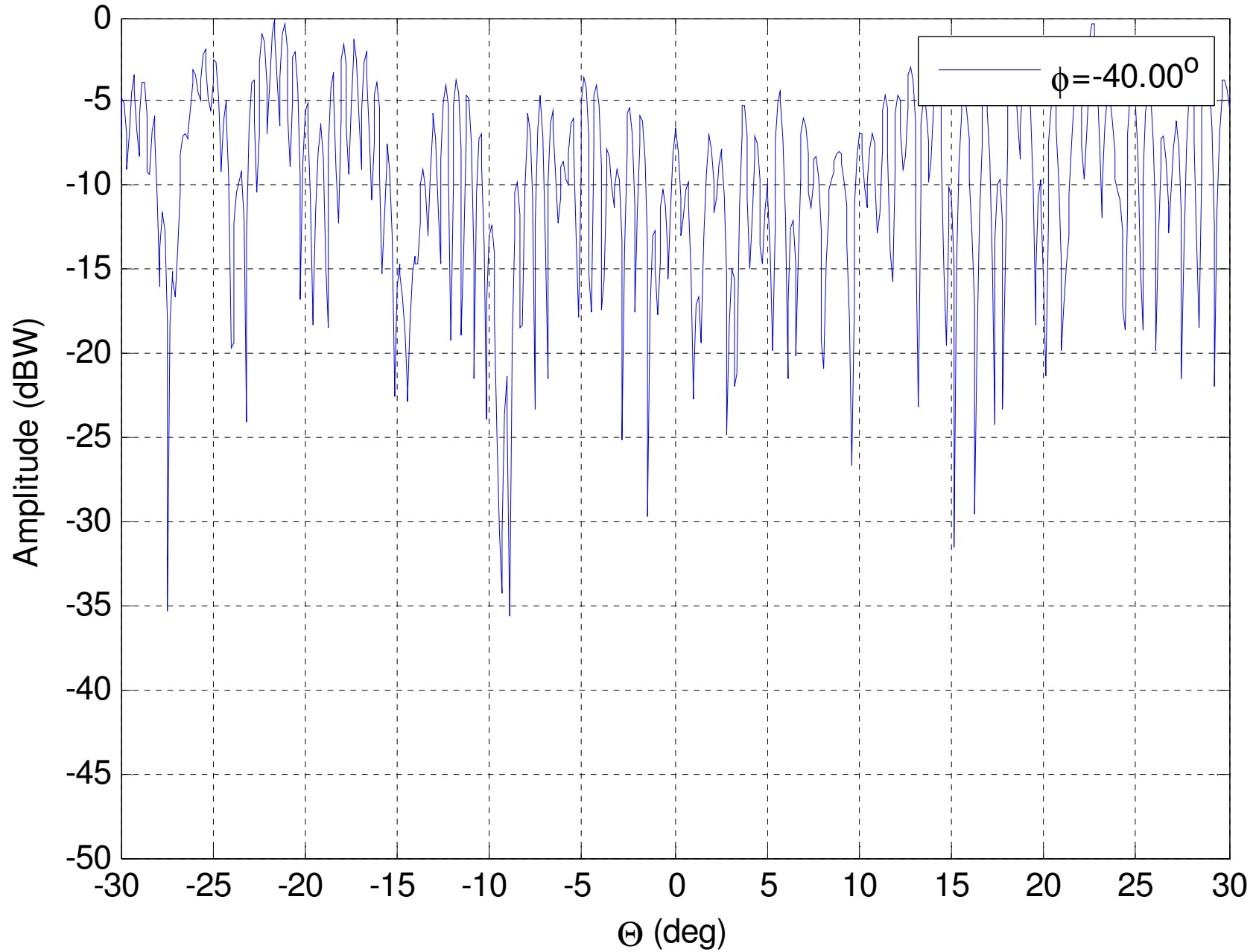
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -6.35 dBW, Date: 15-Dec-2011



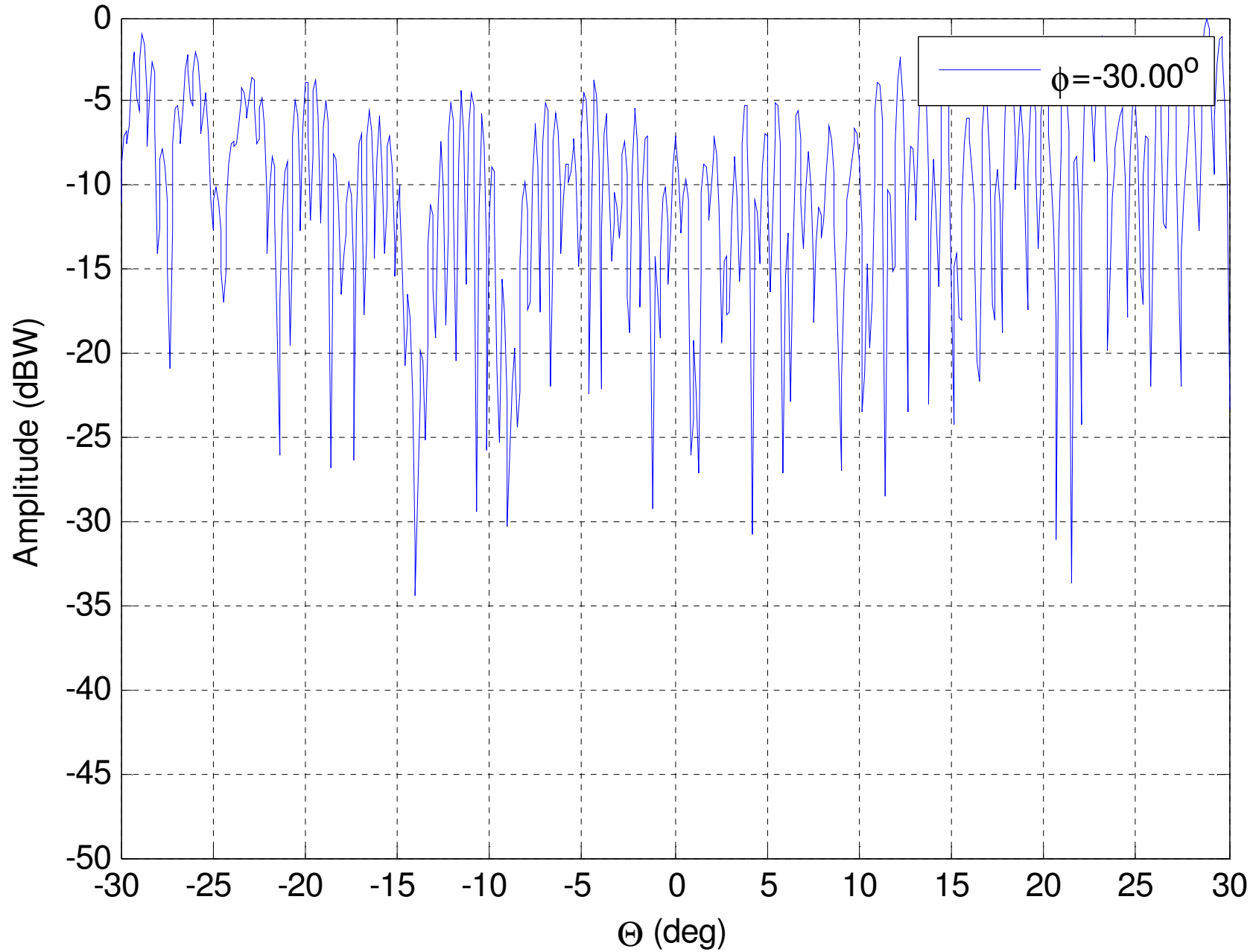
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -6.26 dBW, Date: 15-Dec-2011



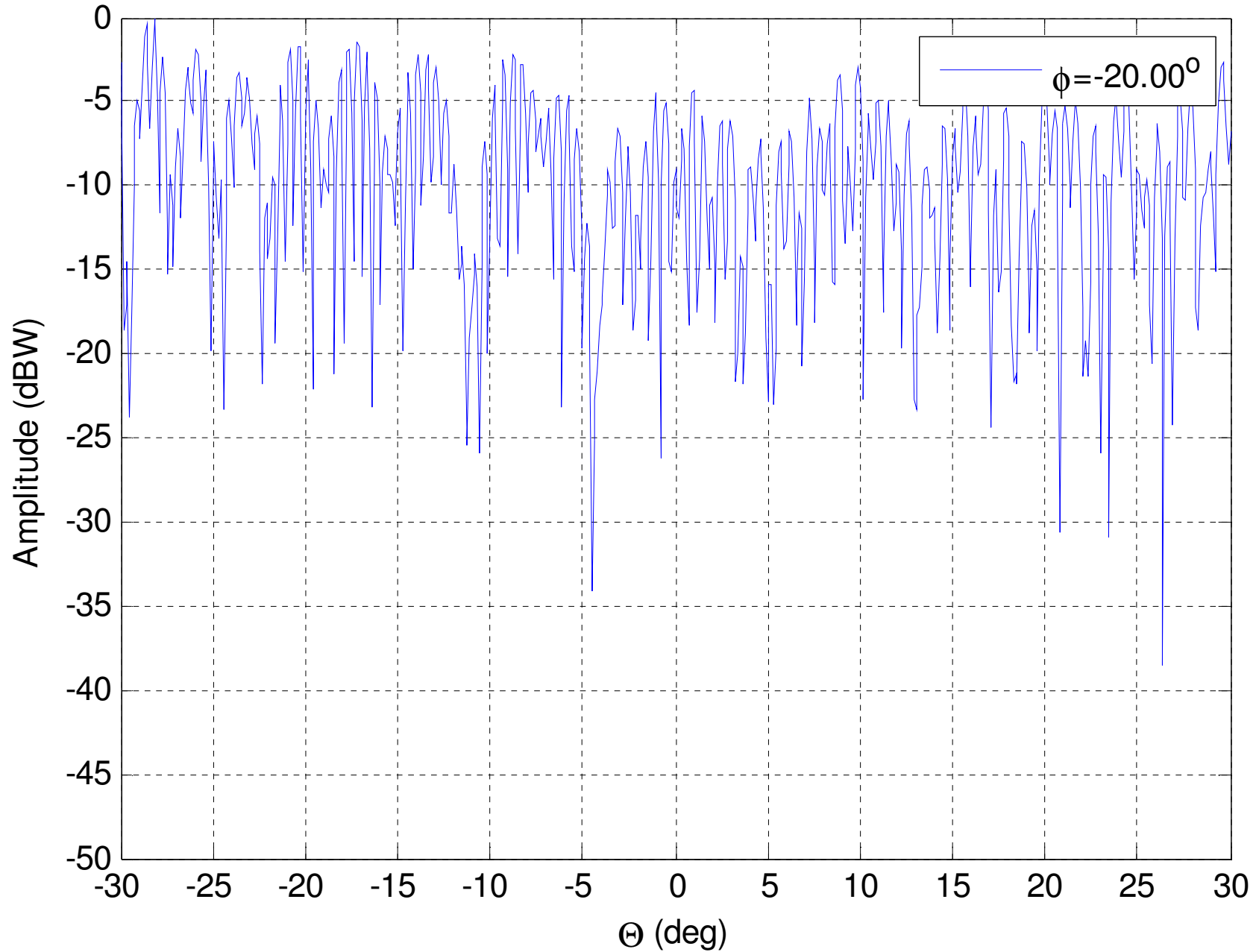
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -5.83 dBW, Date: 15-Dec-2011



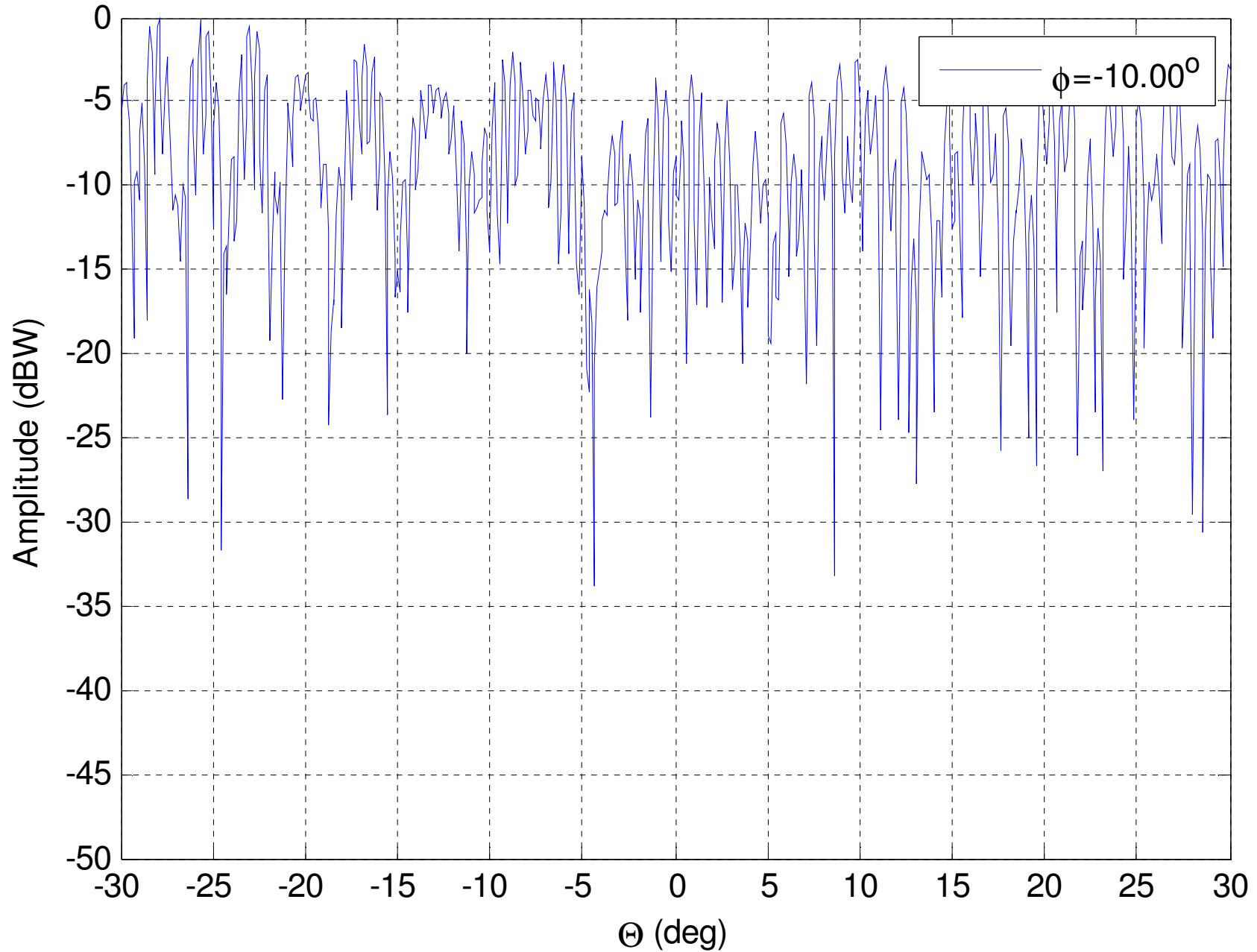
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -7.22 dBW, Date: 15-Dec-2011



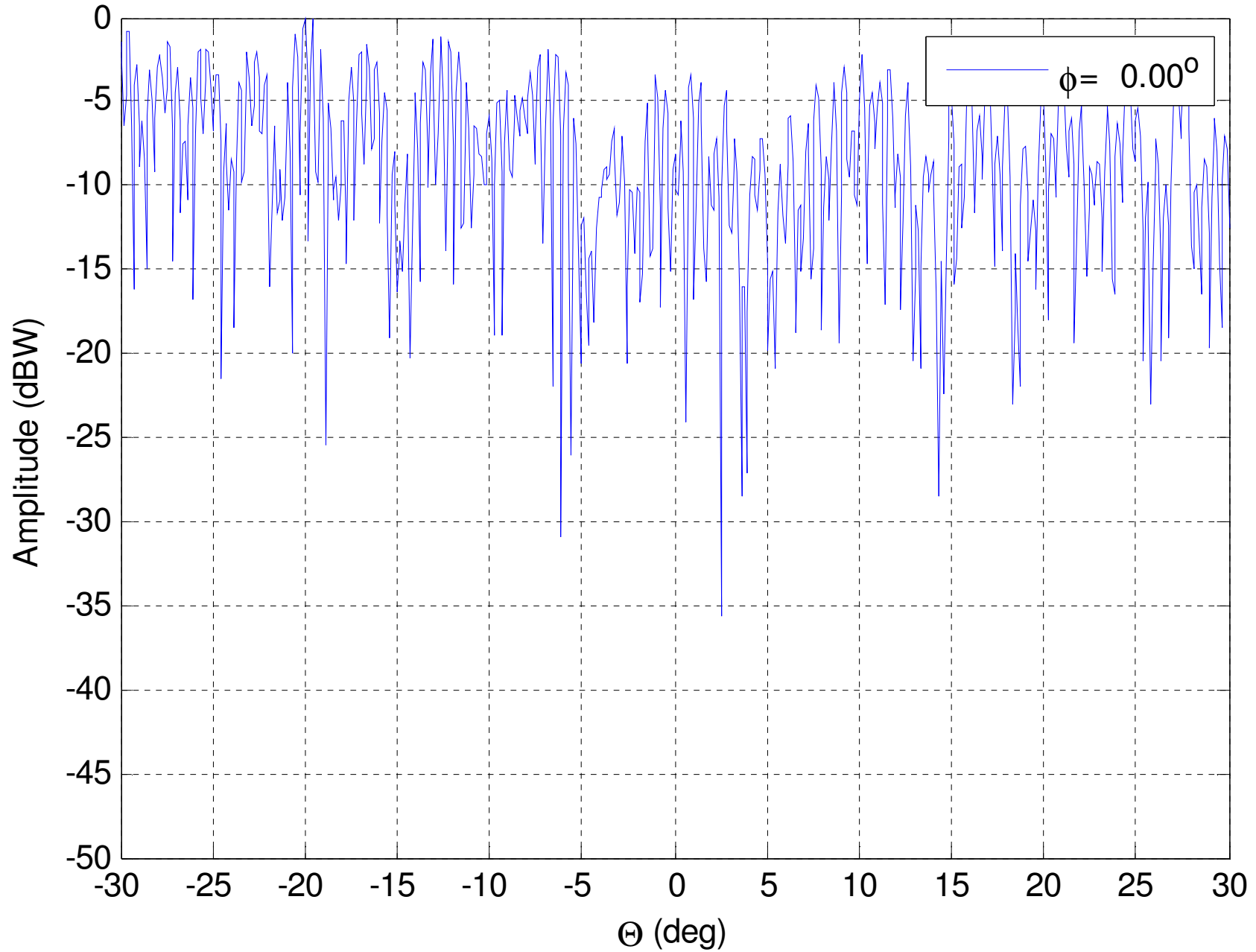
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -7.97 dBW, Date: 15-Dec-2011



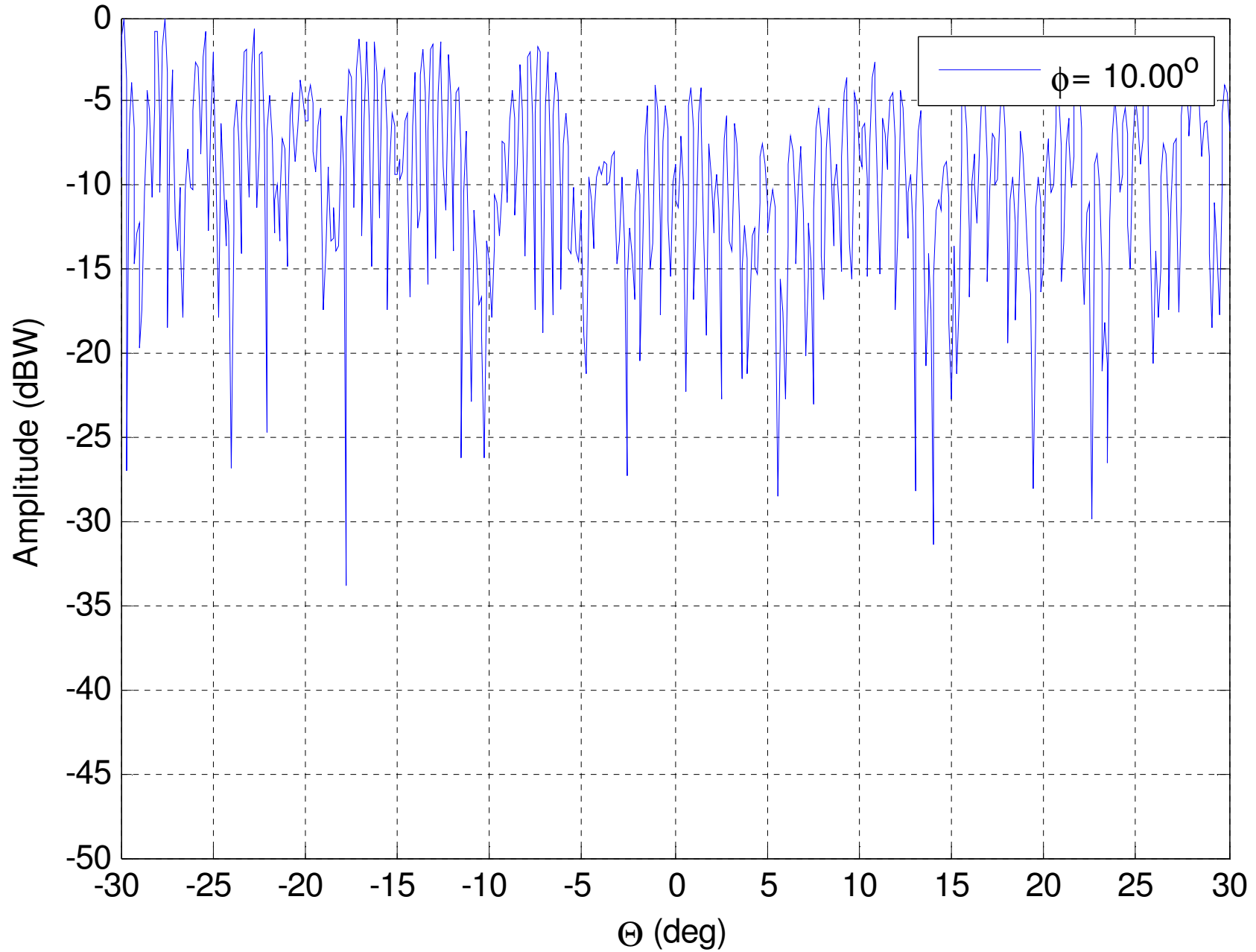
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



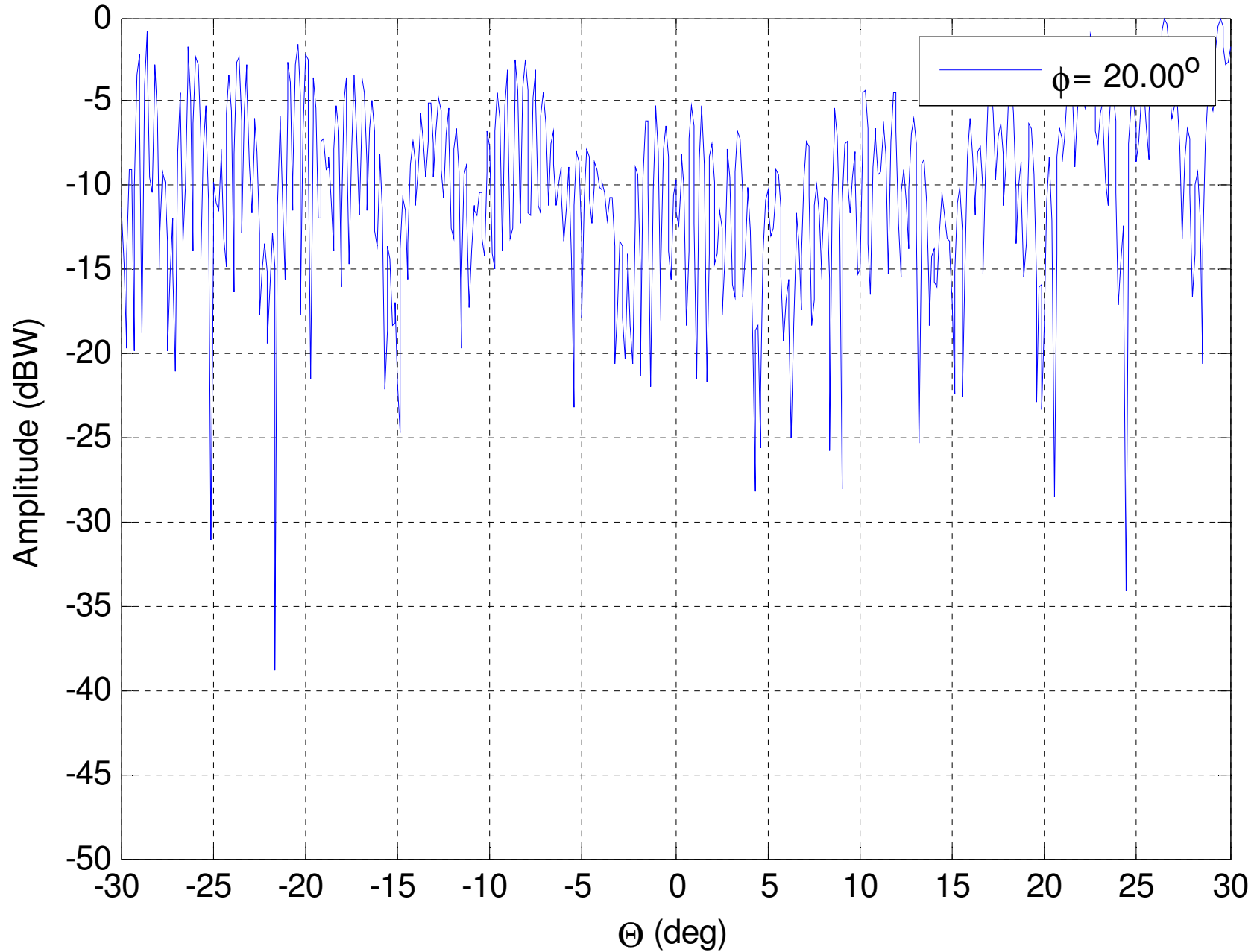
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -7.51 dBW, Date: 15-Dec-2011



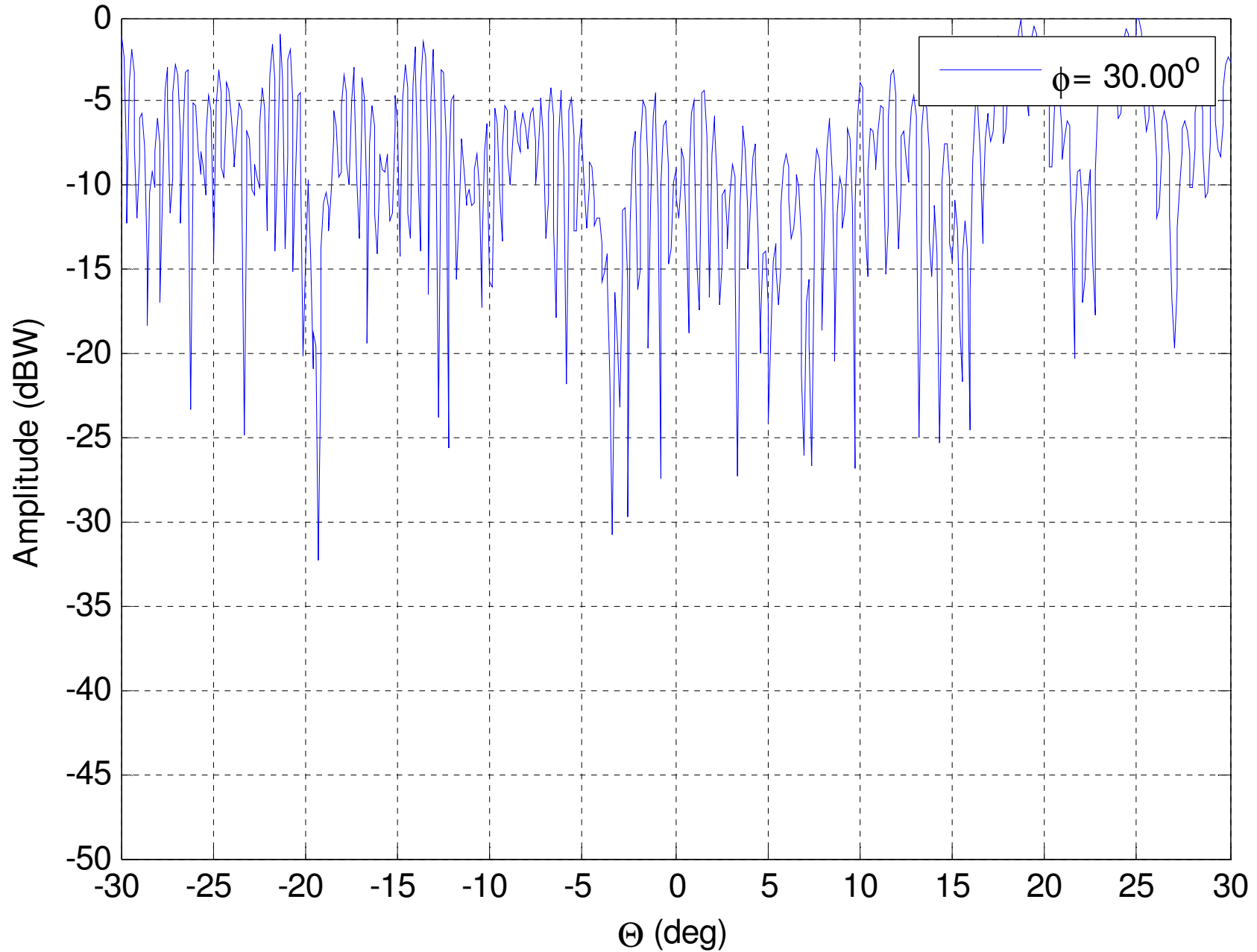
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -6.57 dBW, Date: 15-Dec-2011



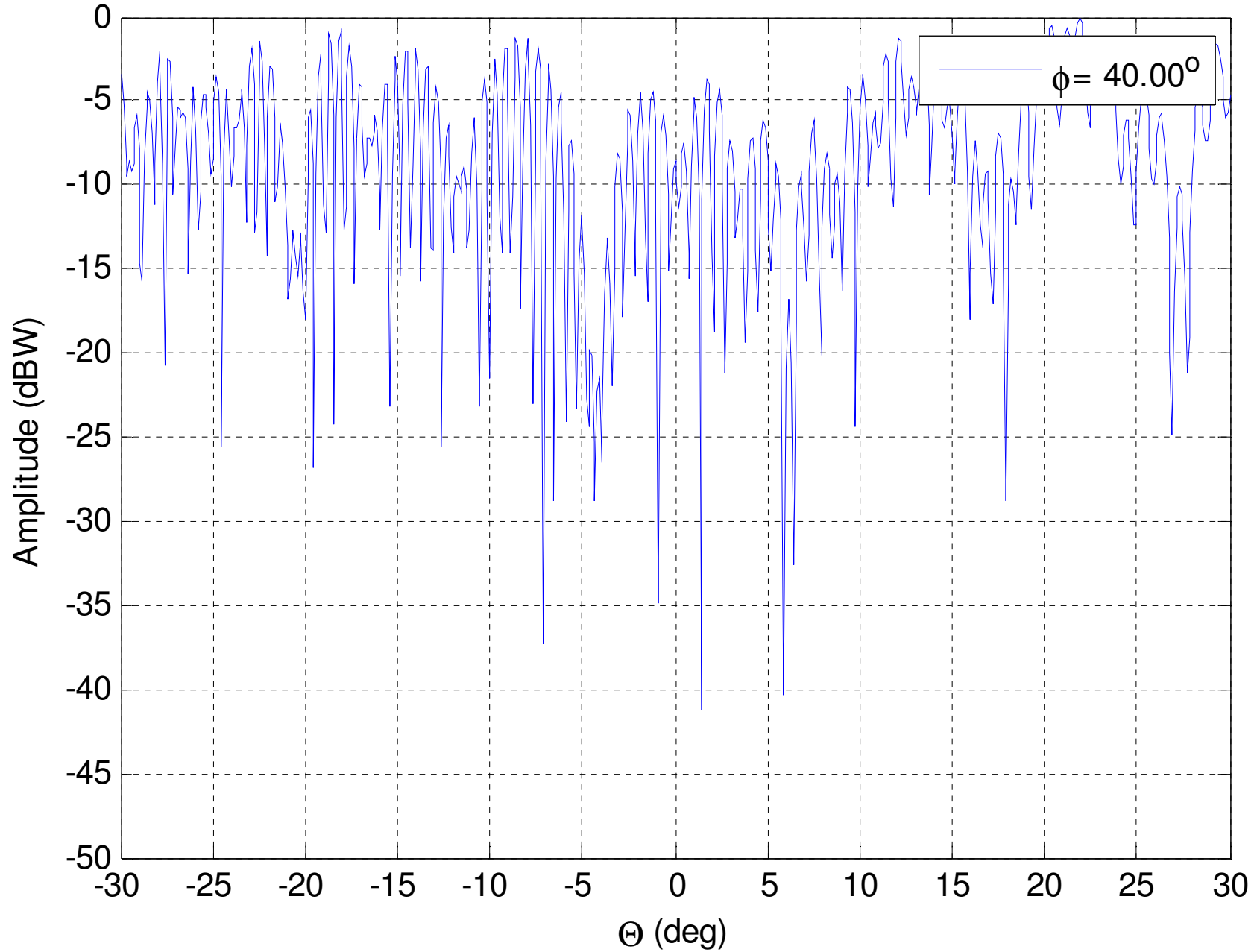
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -7.24 dBW, Date: 15-Dec-2011



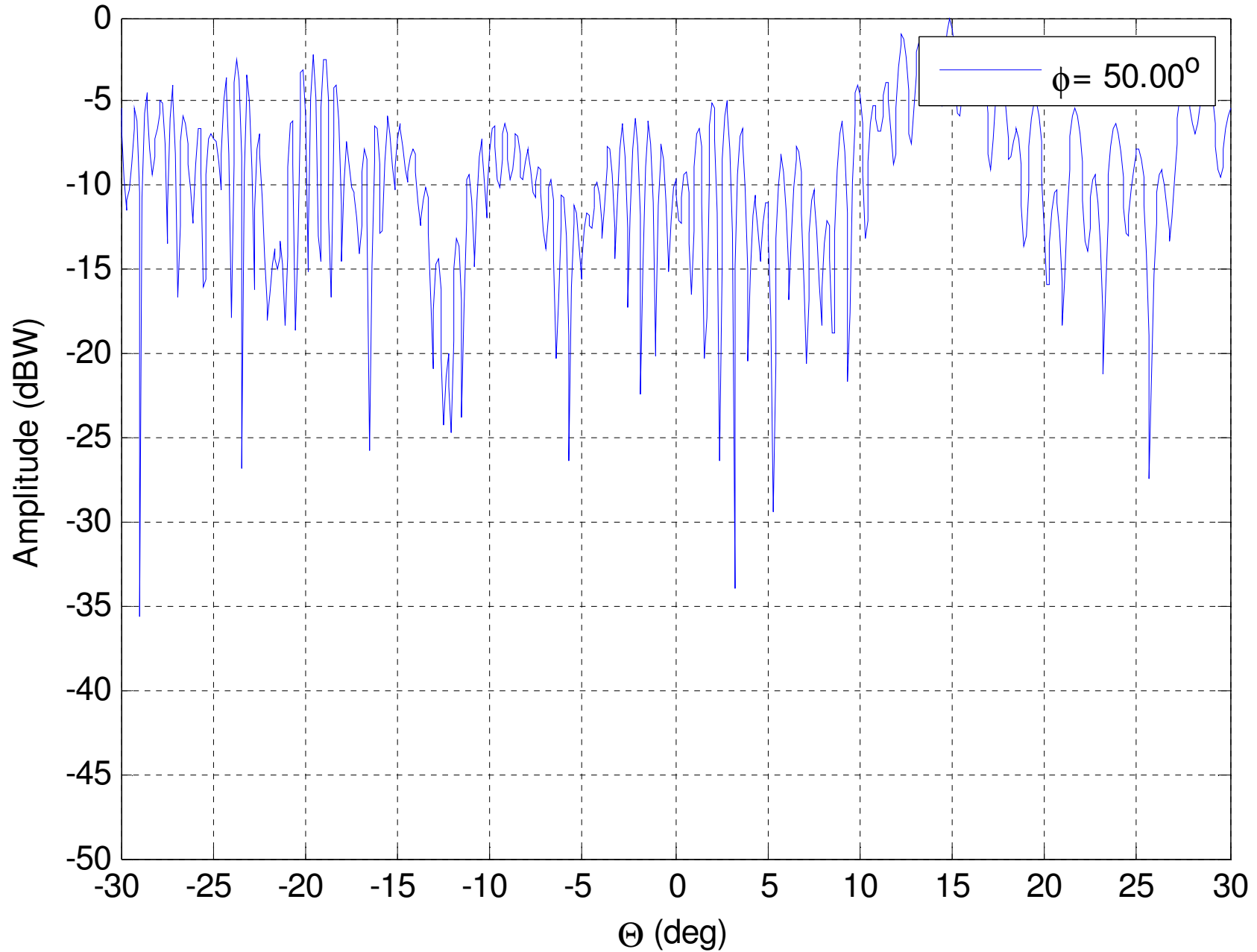
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.72 dBW, Date: 15-Dec-2011



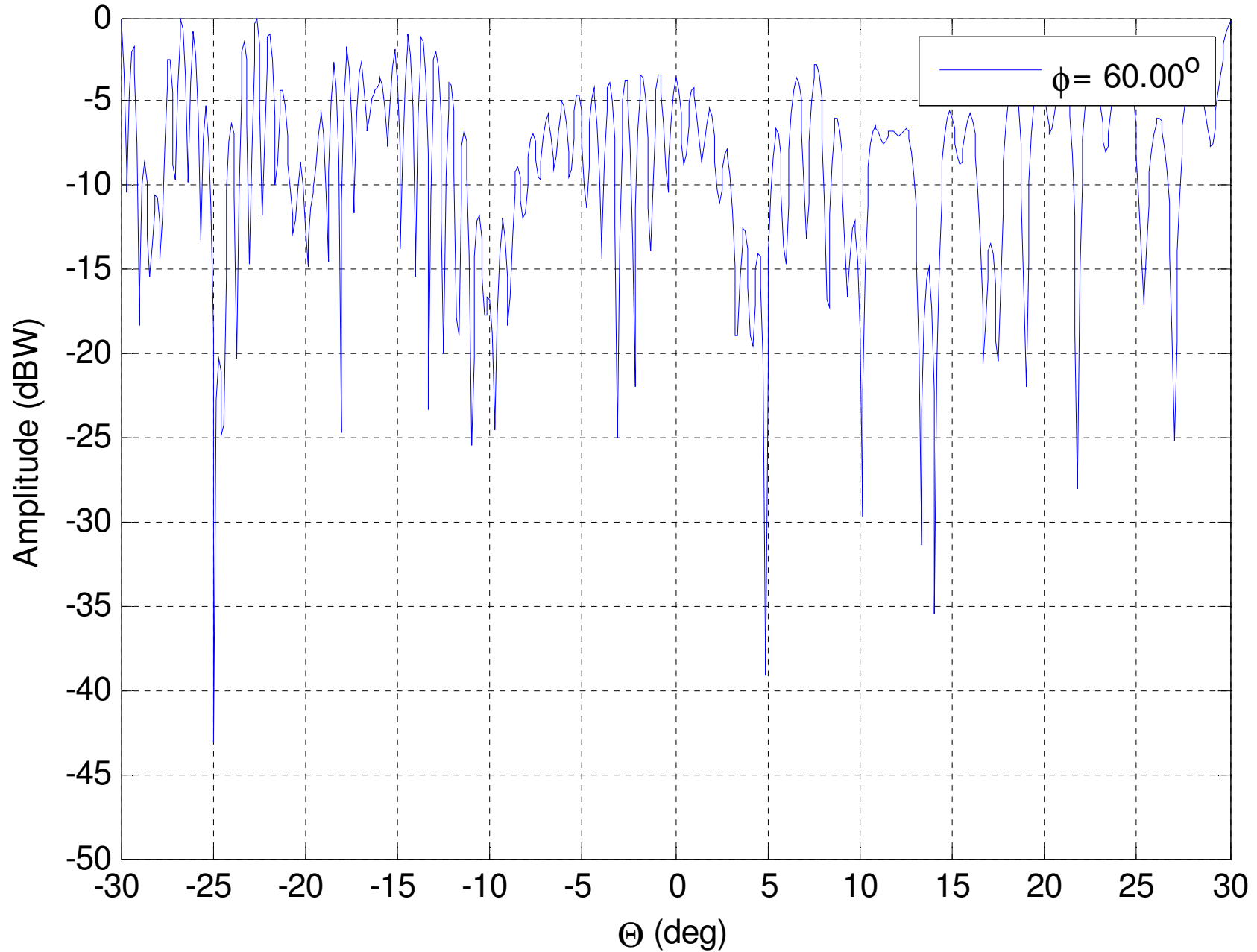
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -6.53 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

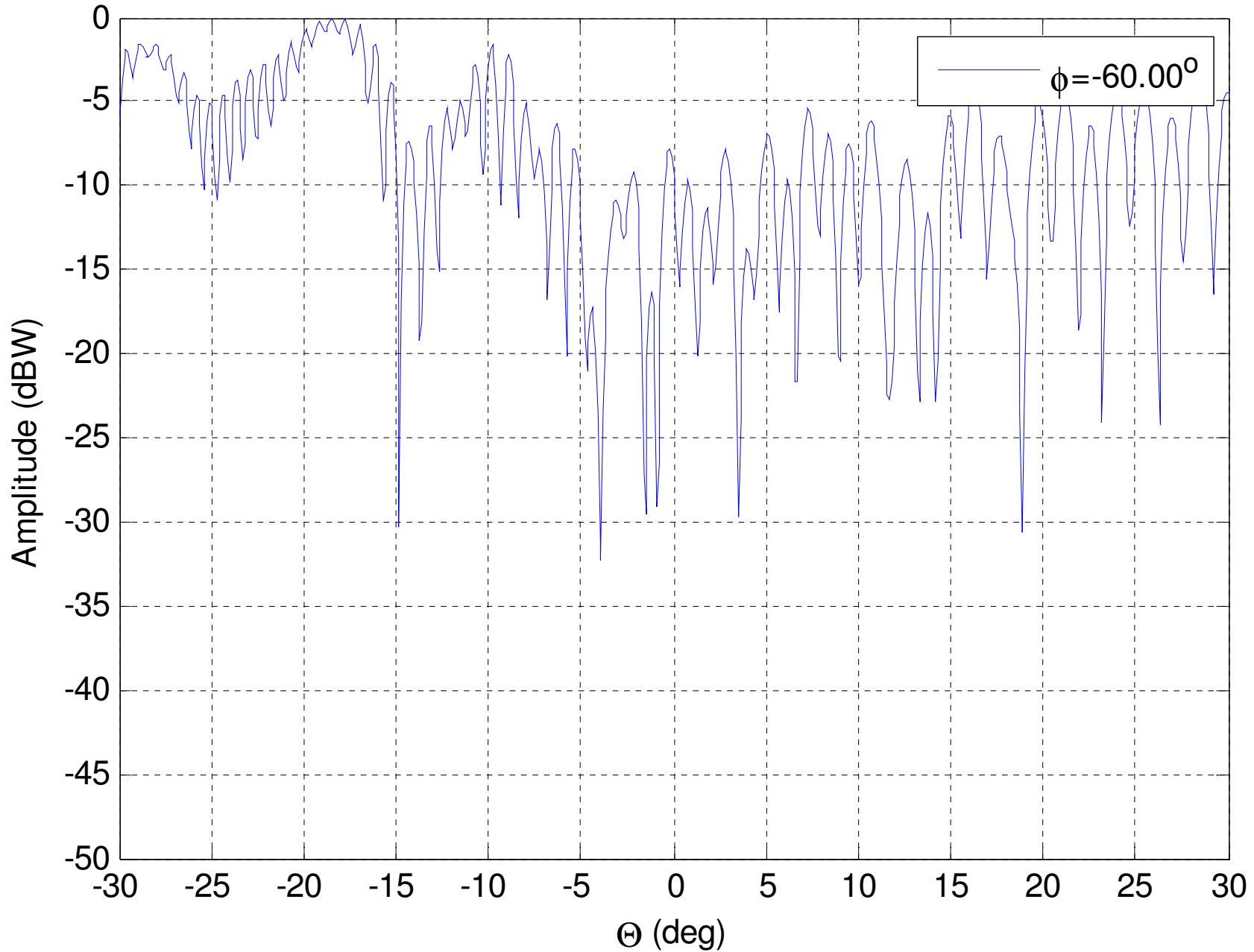
Input file: tx-17.5-lhcp-60.cut, Peak: -9.23 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

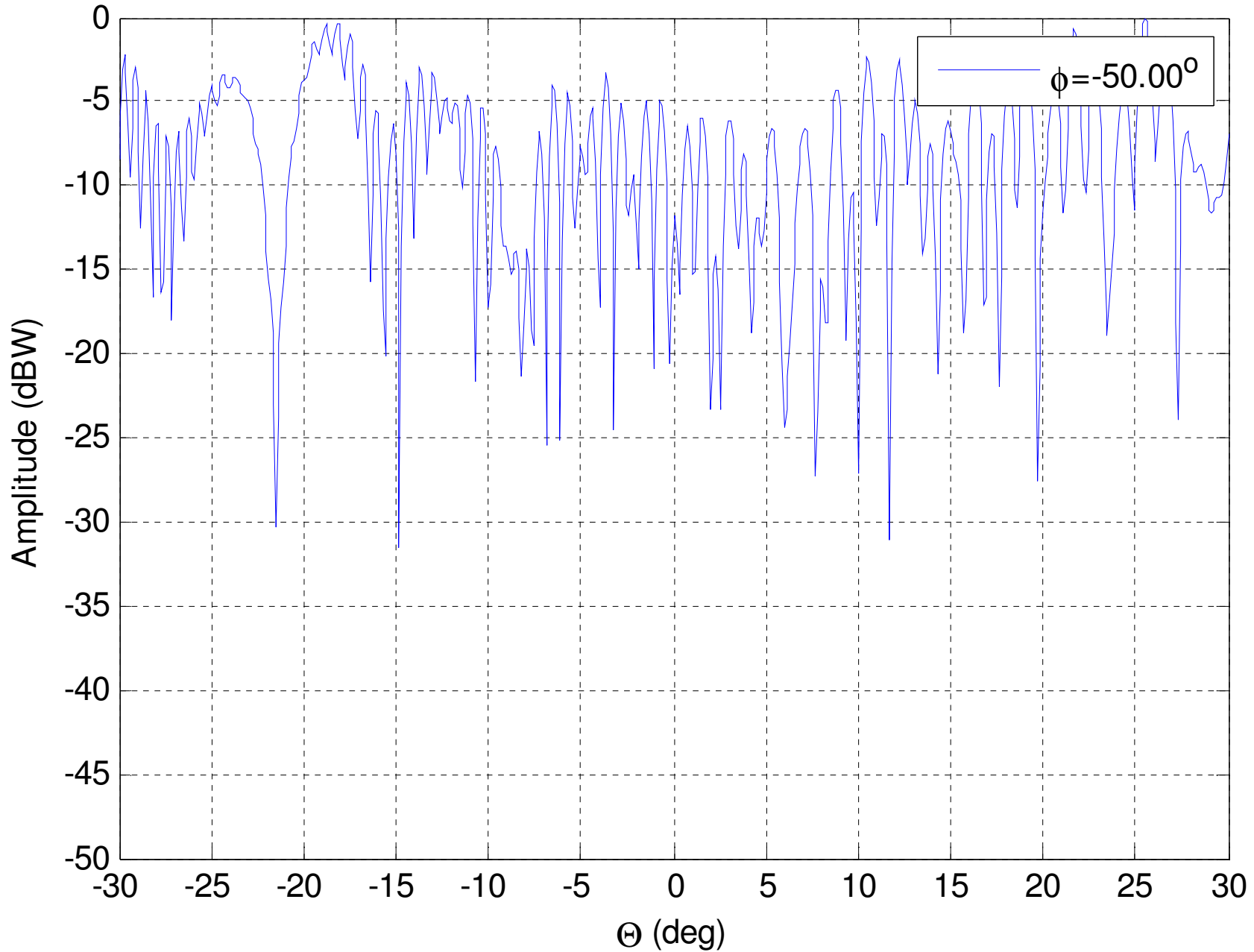
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -7.07 dBW, Date: 15-Dec-2011



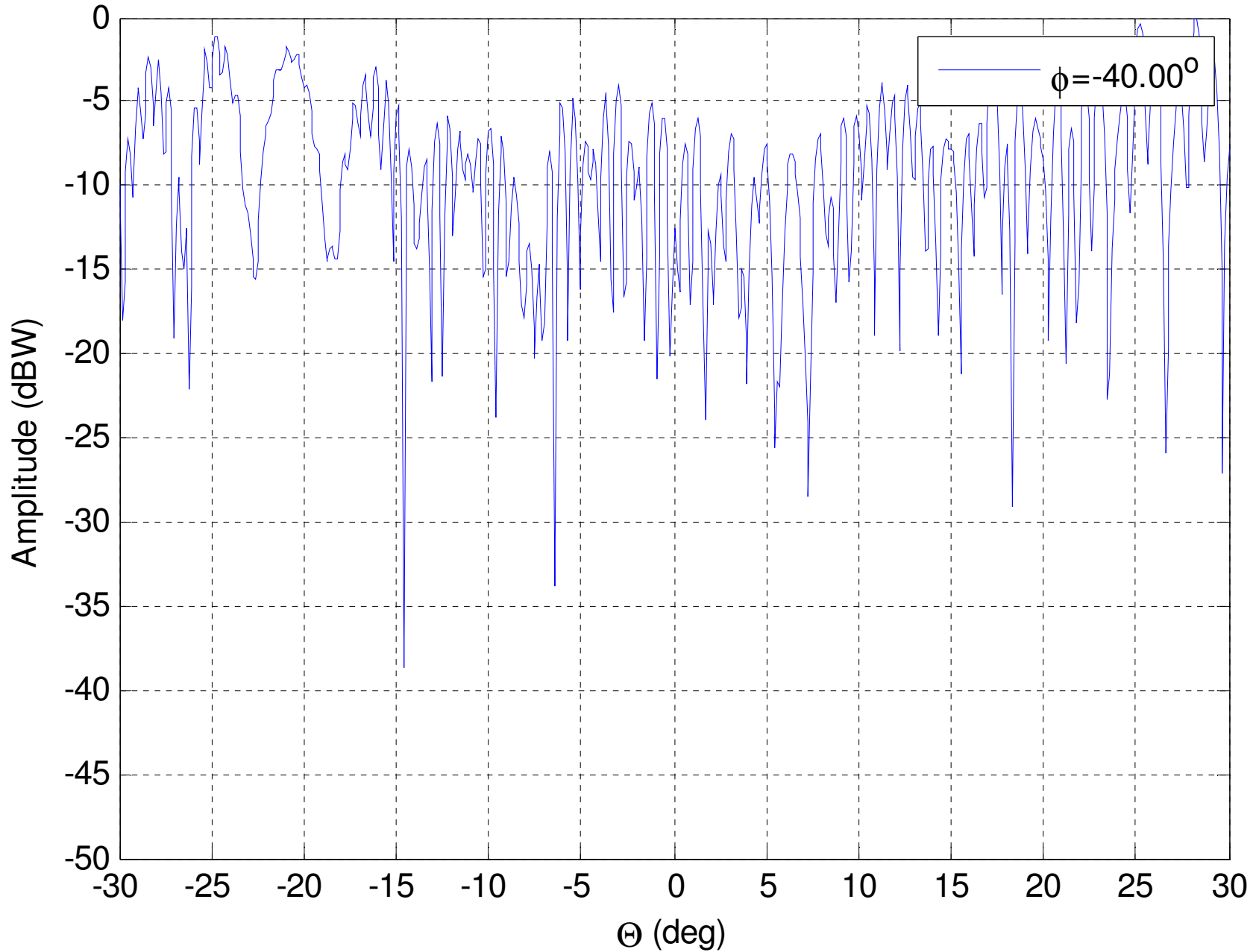
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.84 dBW, Date: 15-Dec-2011



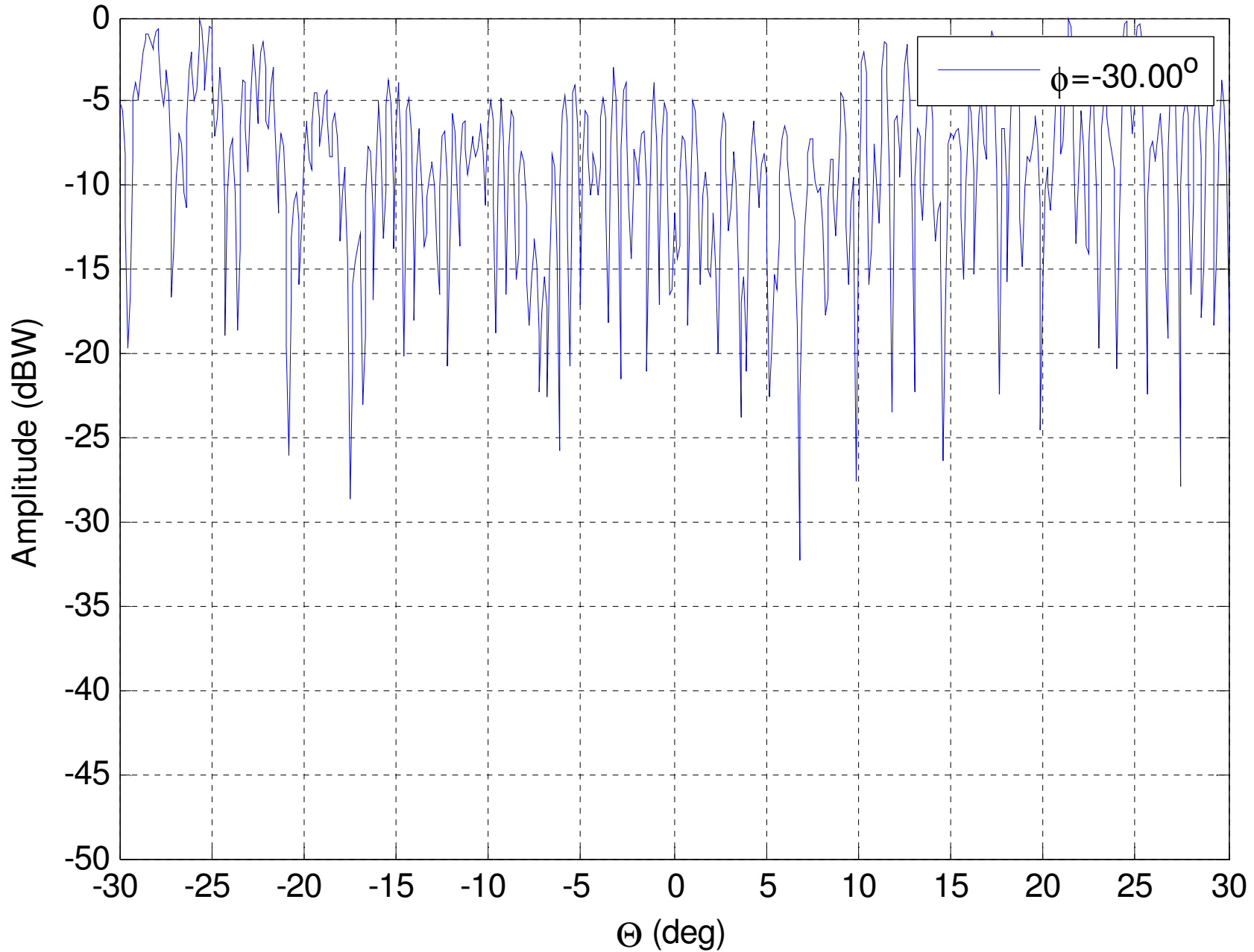
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -6.19 dBW, Date: 15-Dec-2011



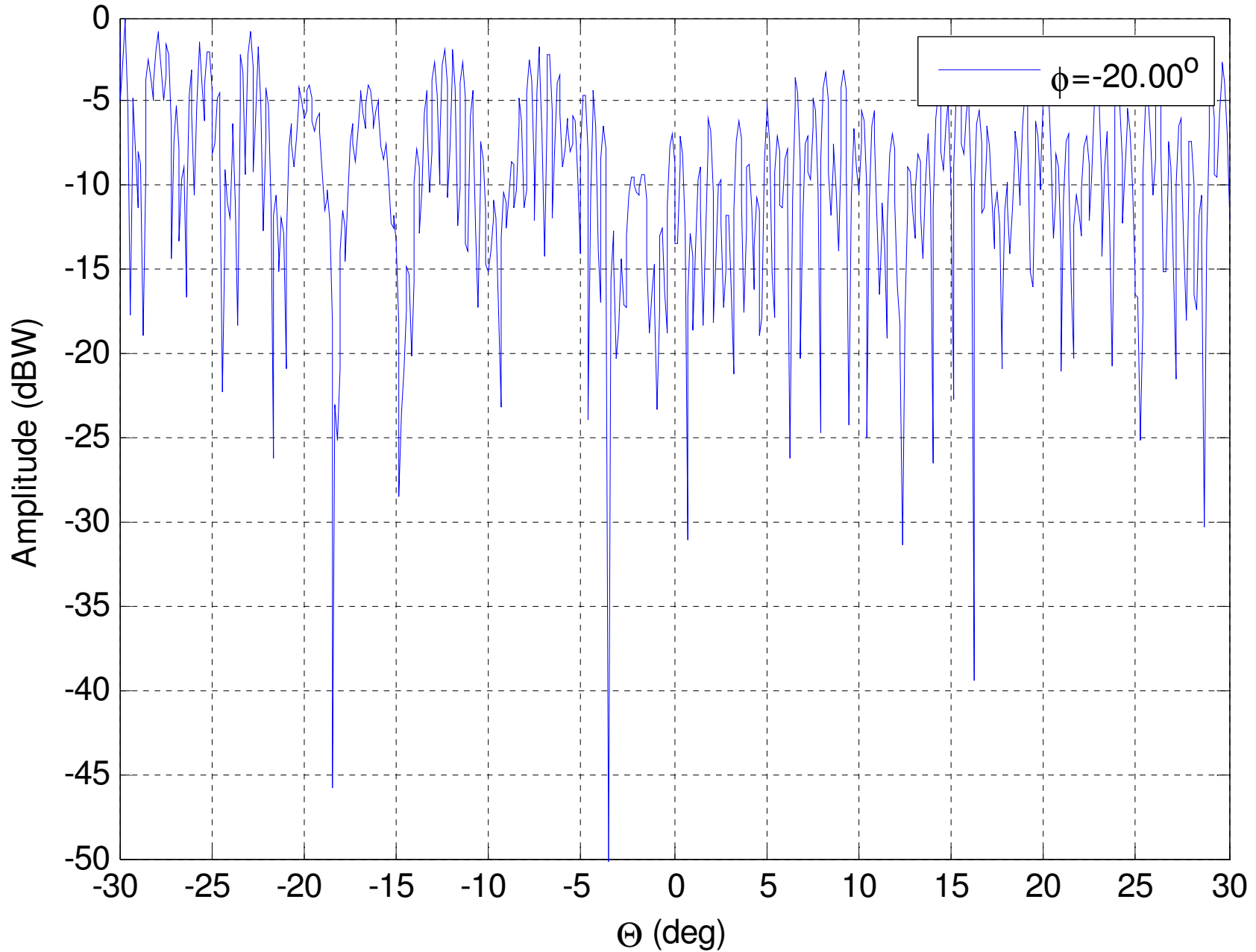
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.20 dBW, Date: 15-Dec-2011



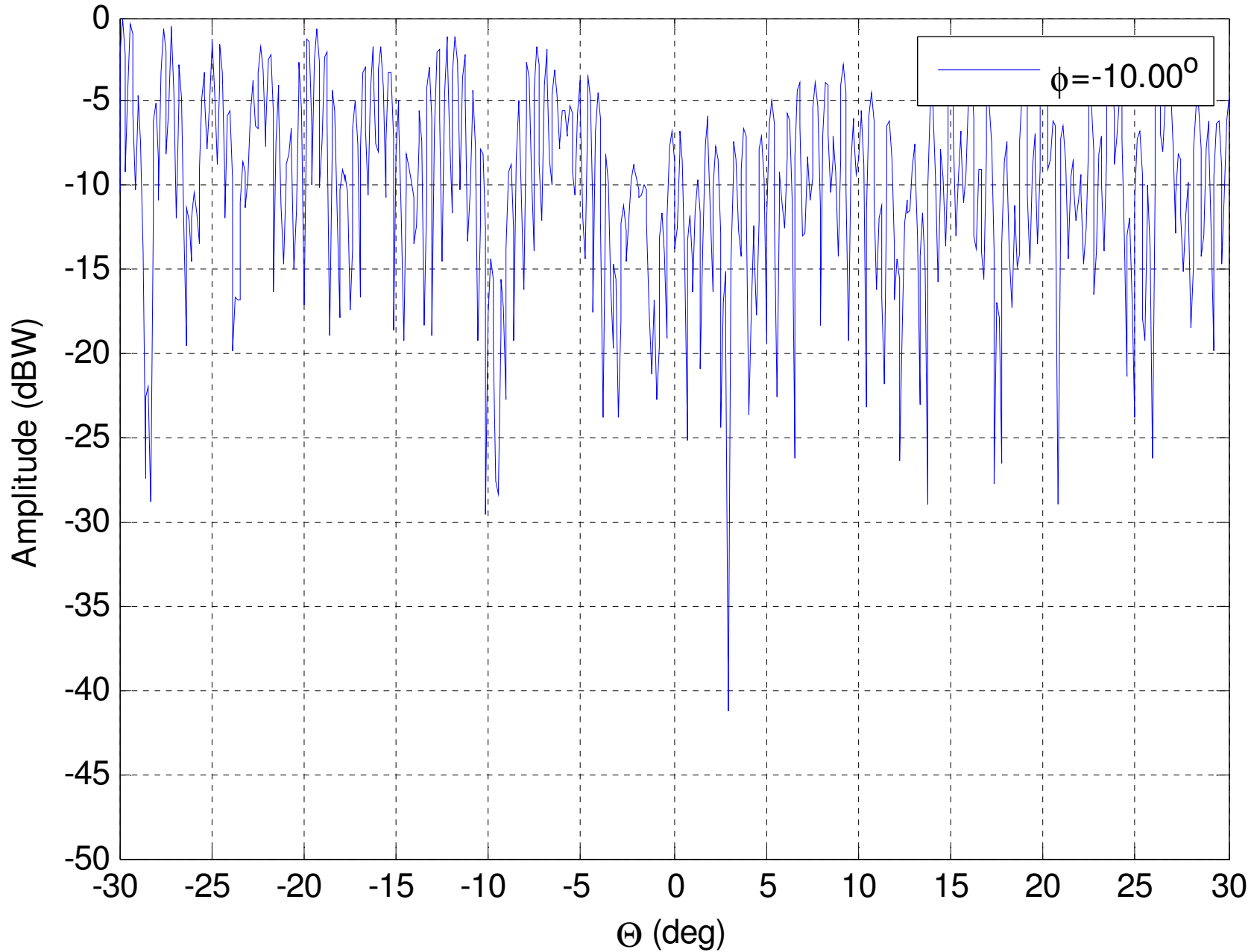
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -7.81 dBW, Date: 15-Dec-2011



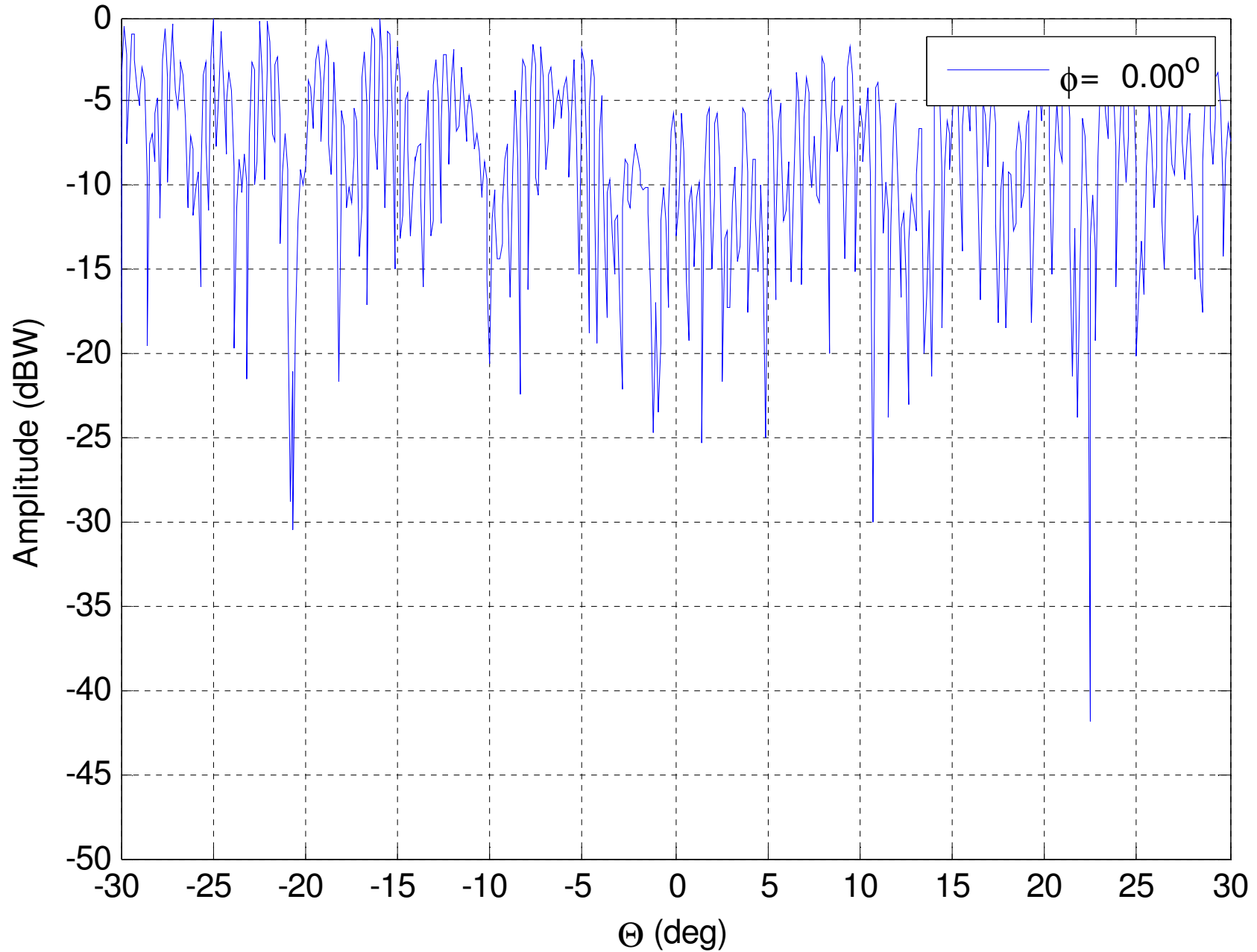
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -7.93 dBW, Date: 15-Dec-2011



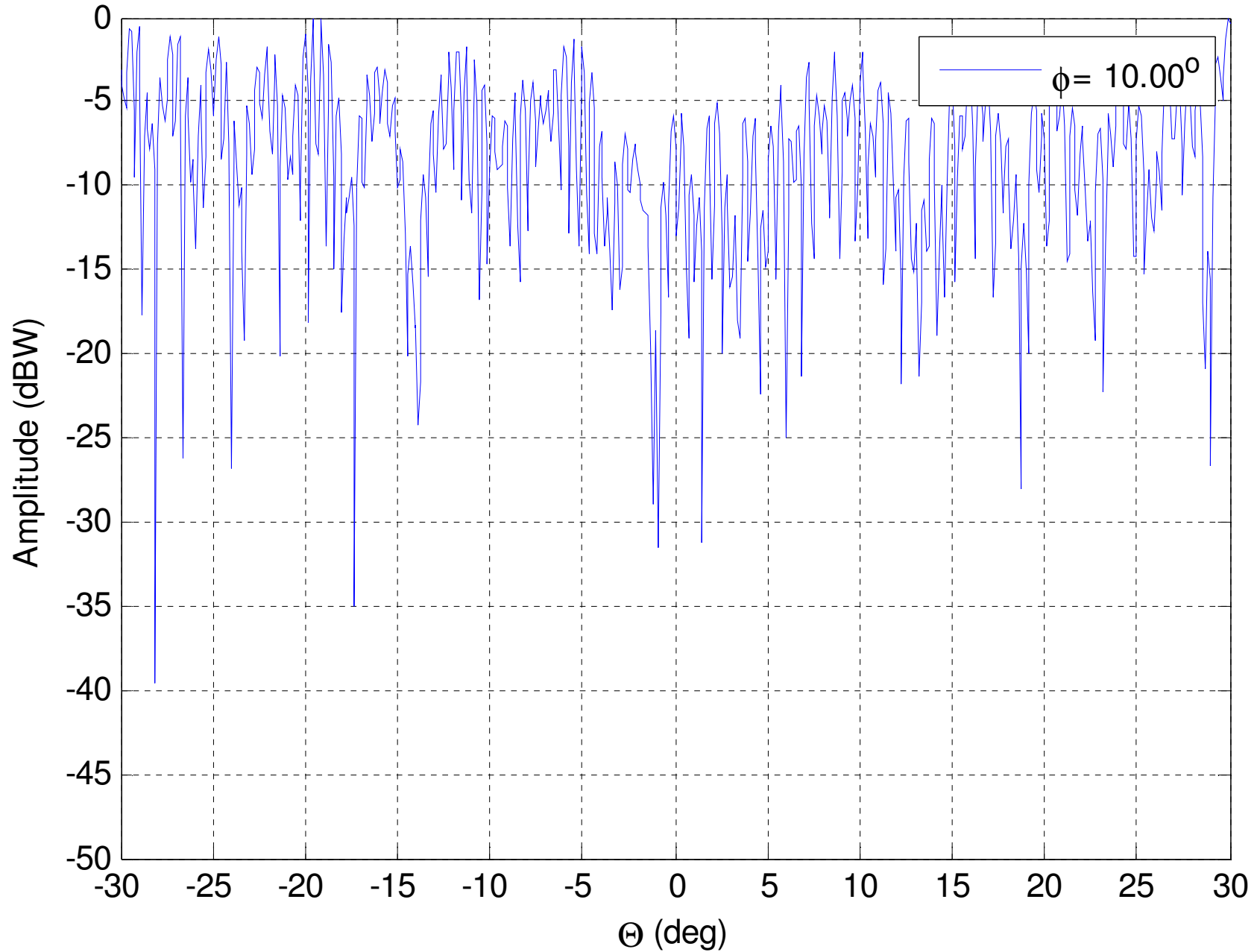
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -8.90 dBW, Date: 15-Dec-2011



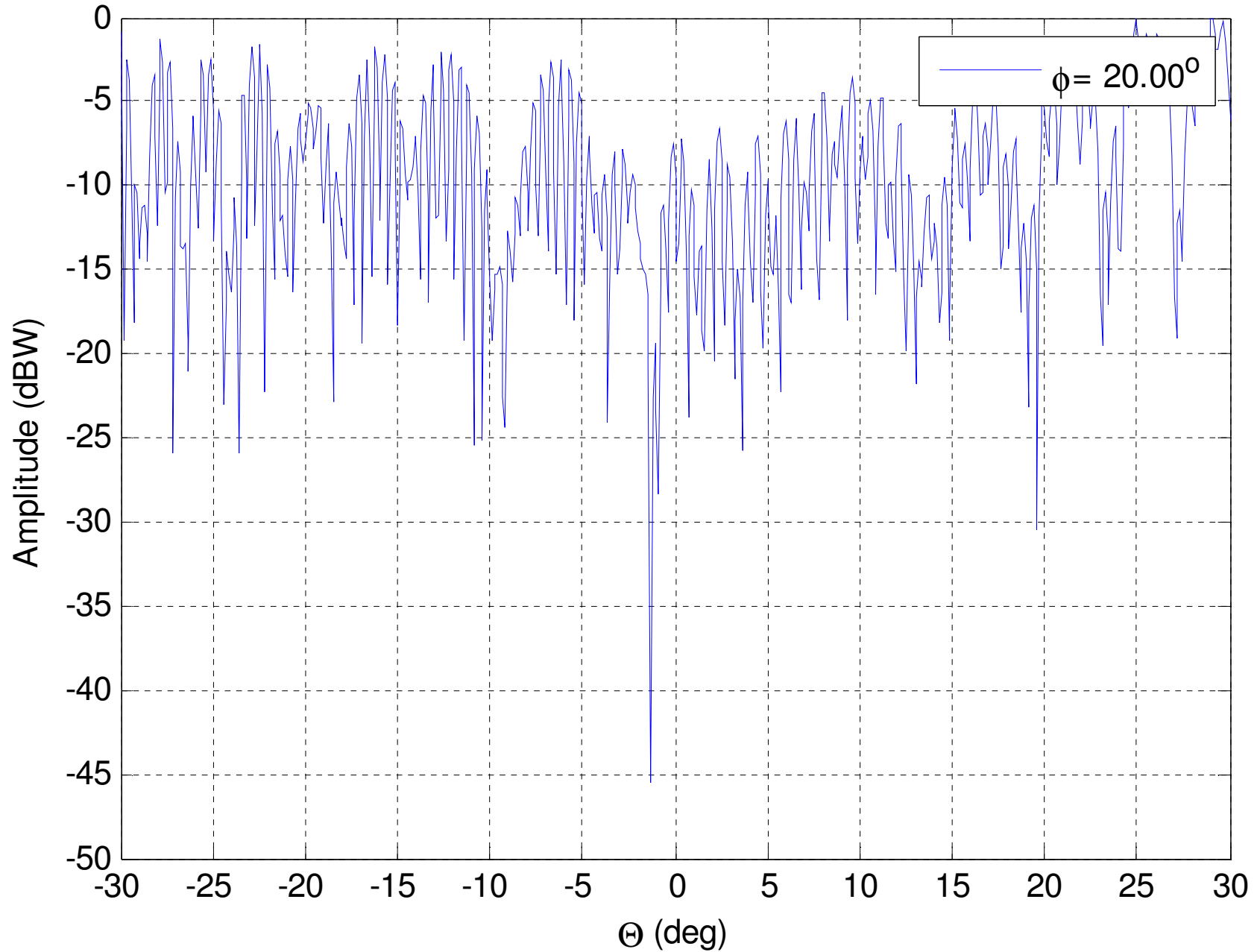
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -8.79 dBW, Date: 15-Dec-2011



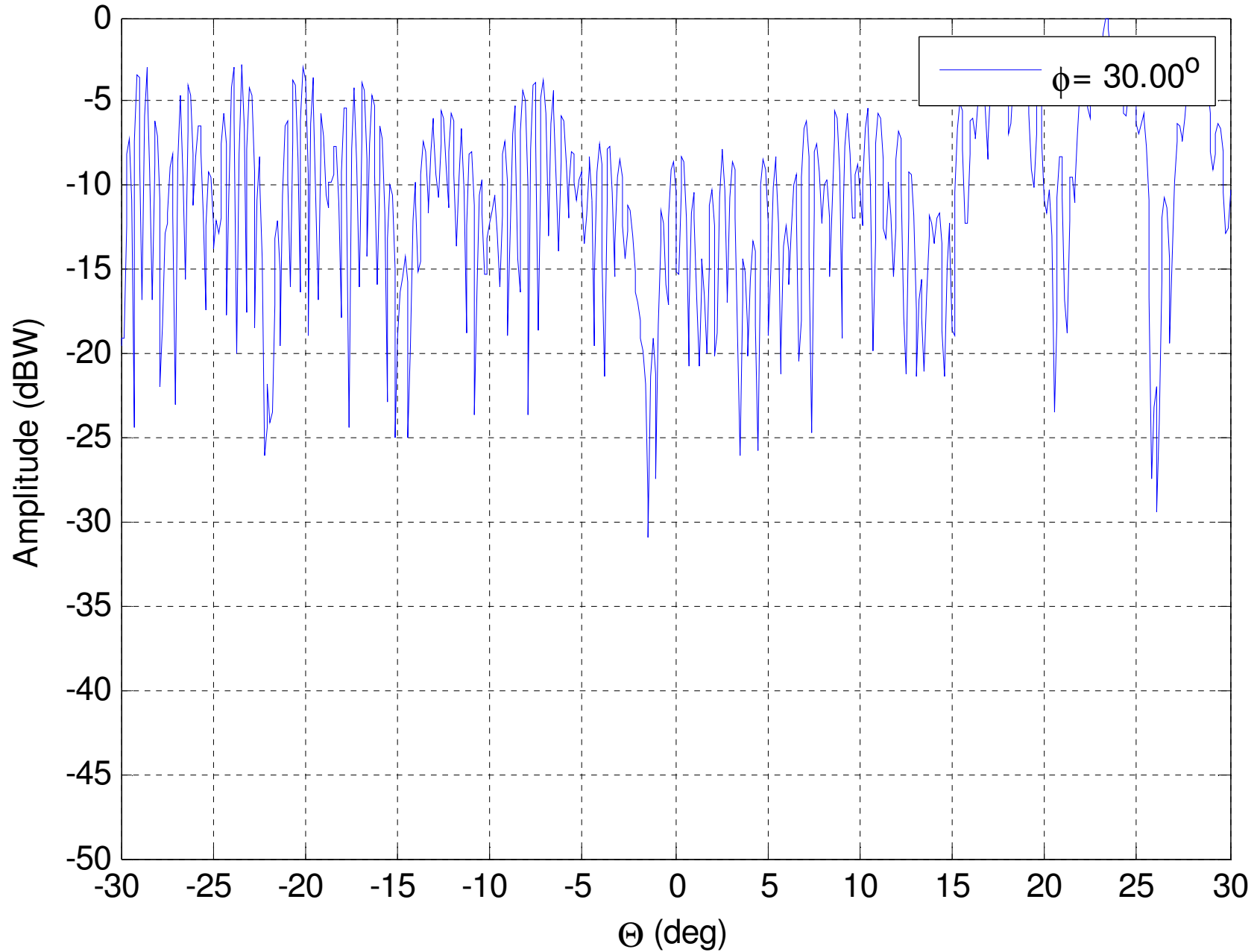
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.09 dBW, Date: 15-Dec-2011



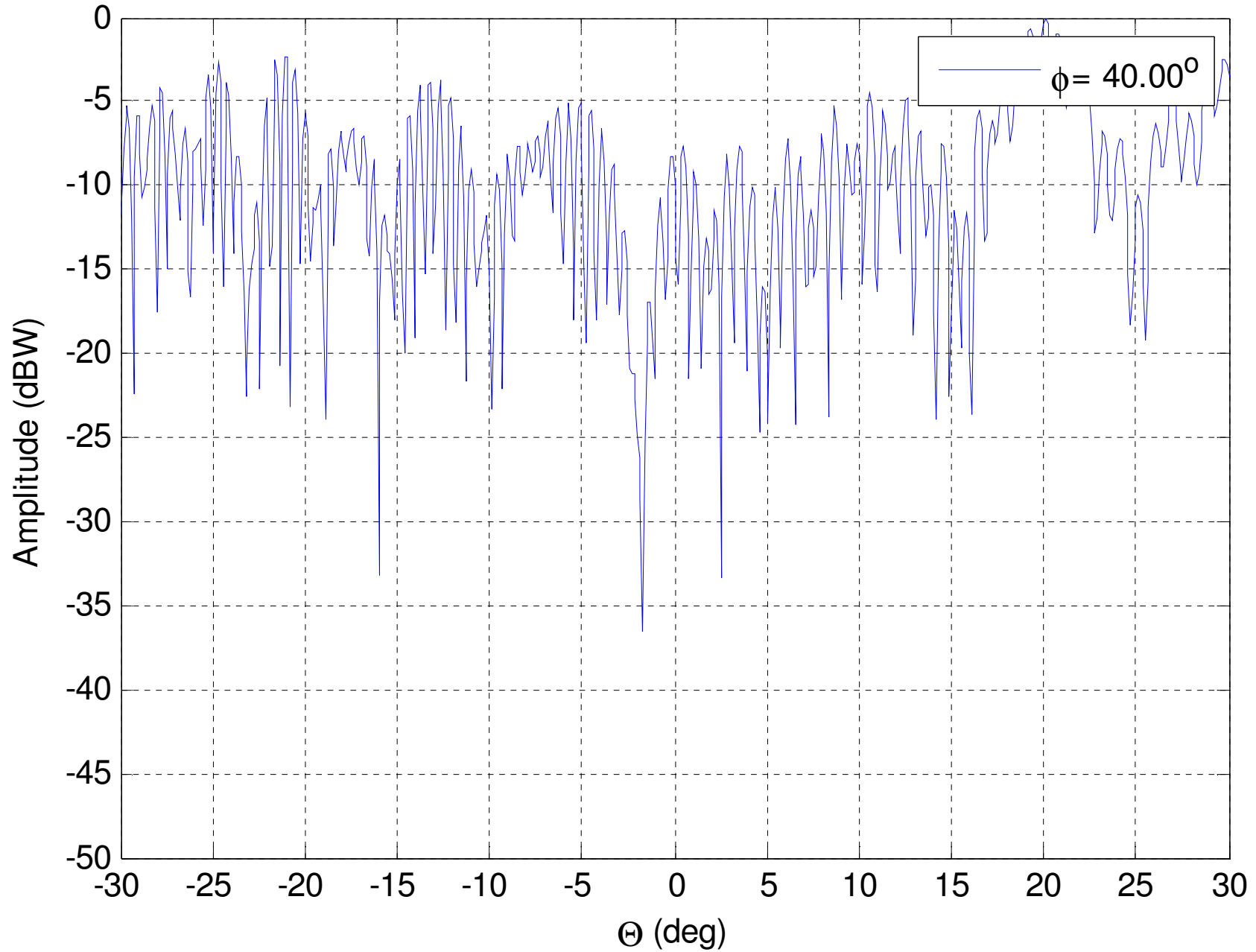
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -6.12 dBW, Date: 15-Dec-2011



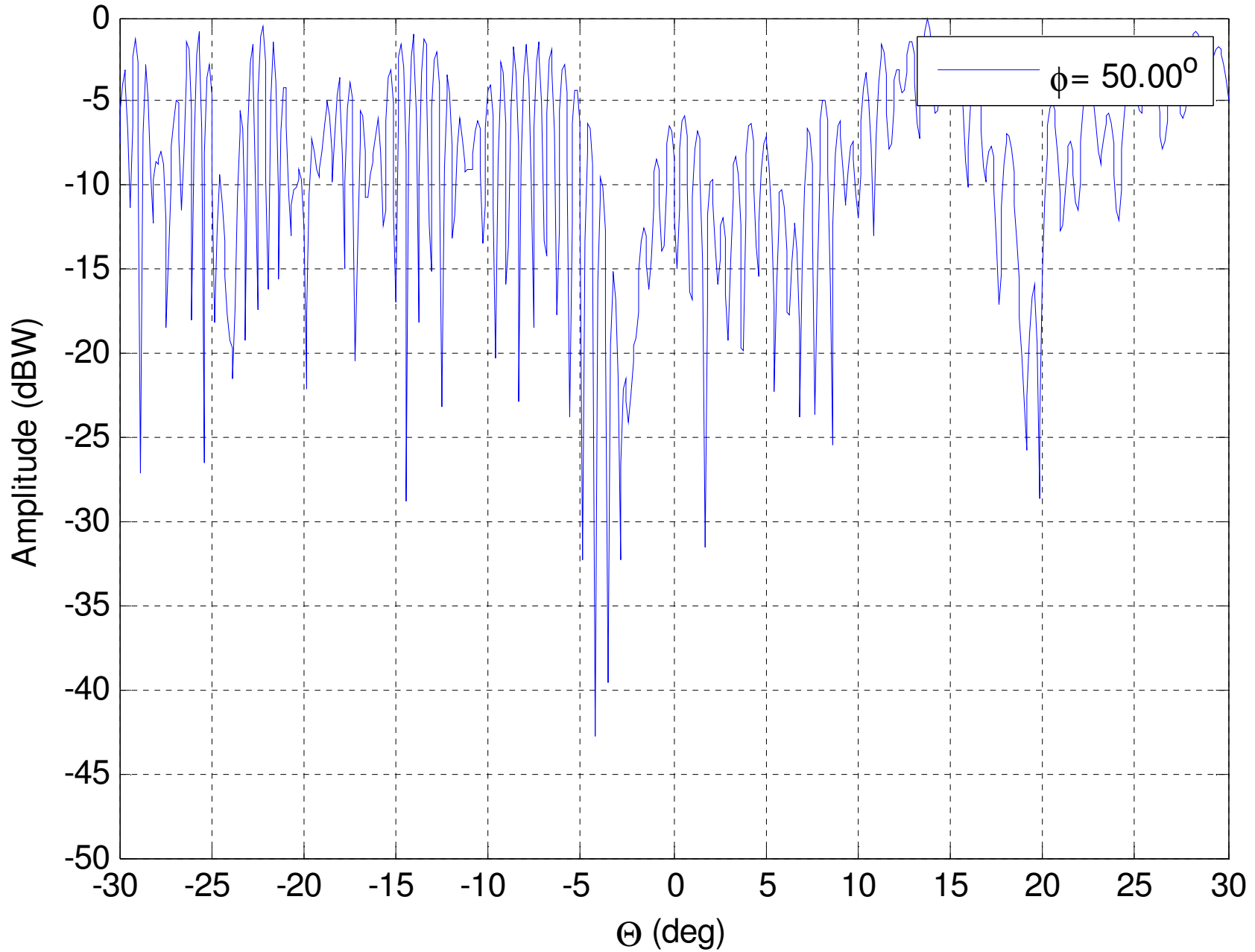
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.48 dBW, Date: 15-Dec-2011



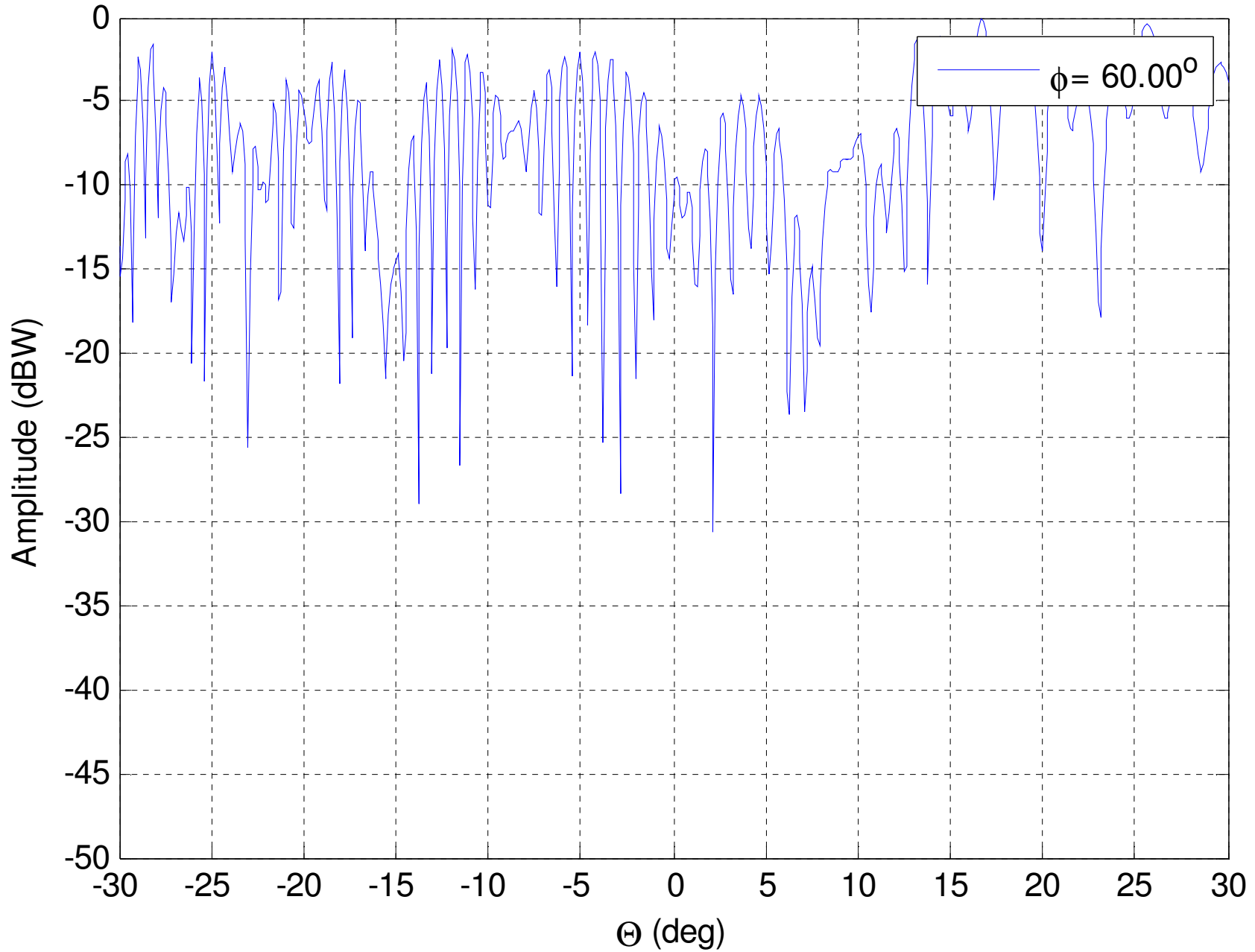
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -8.12 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

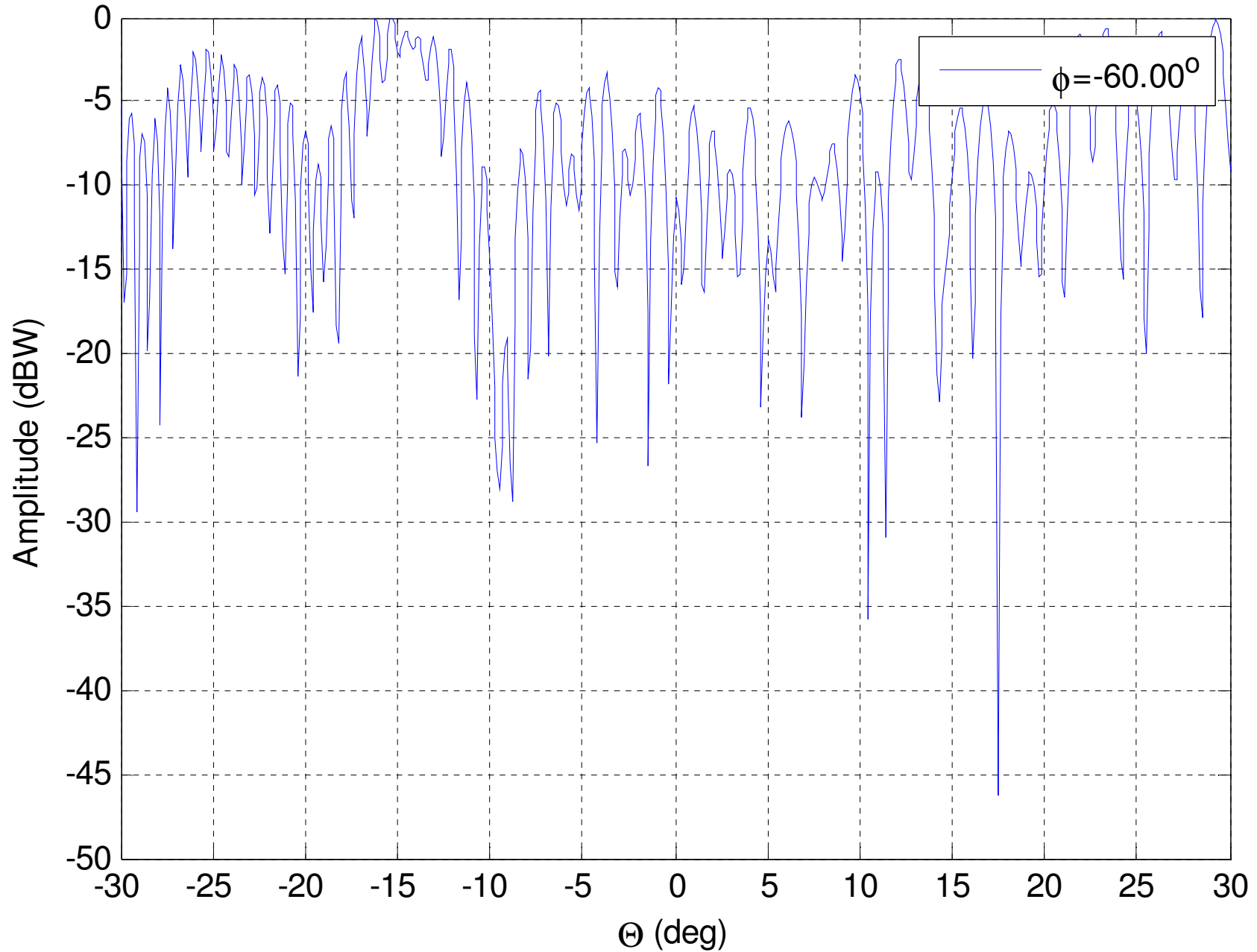
Input file: tx-17.7-rhcp-60.cut, Peak: -8.34 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

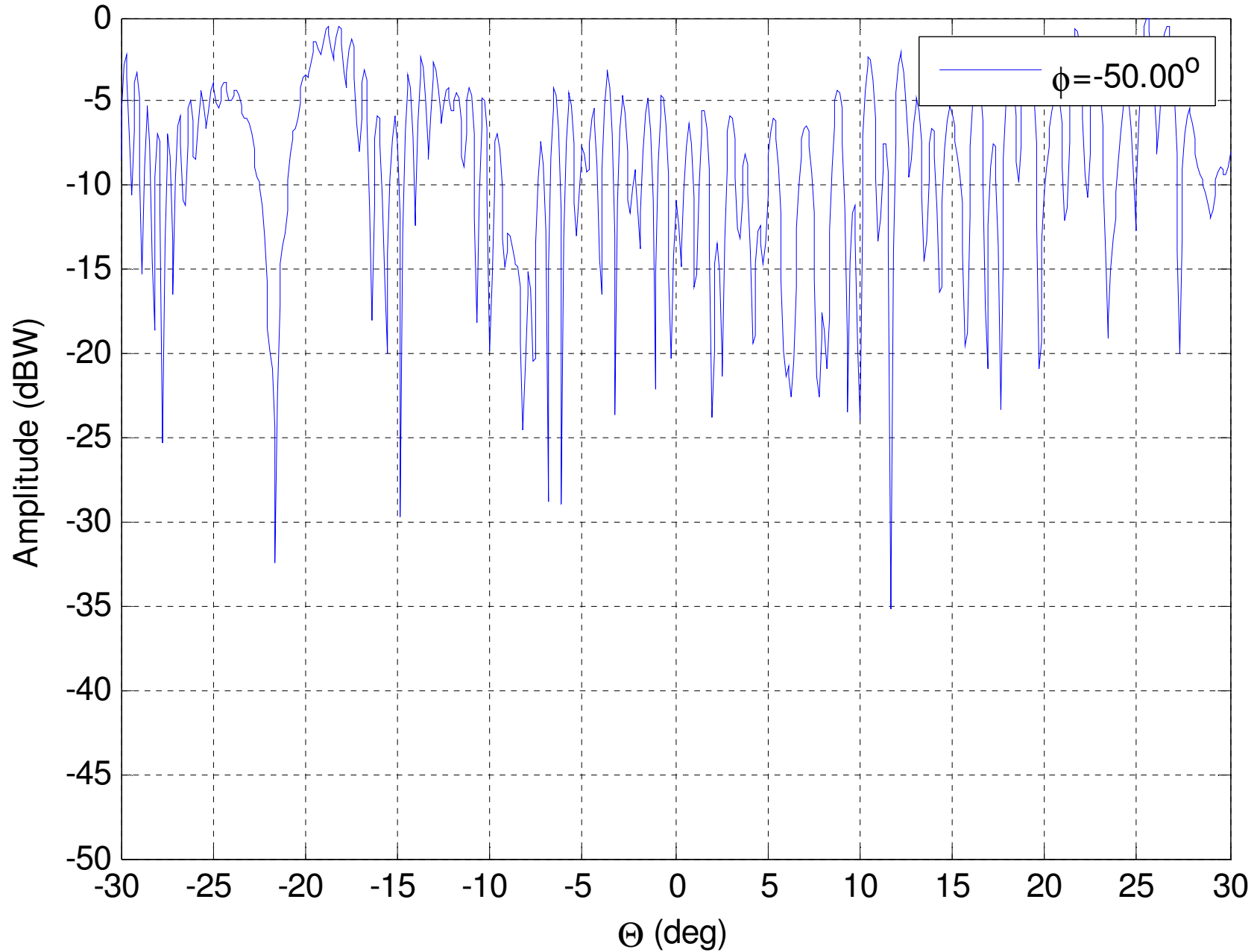
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.21 dBW, Date: 15-Dec-2011



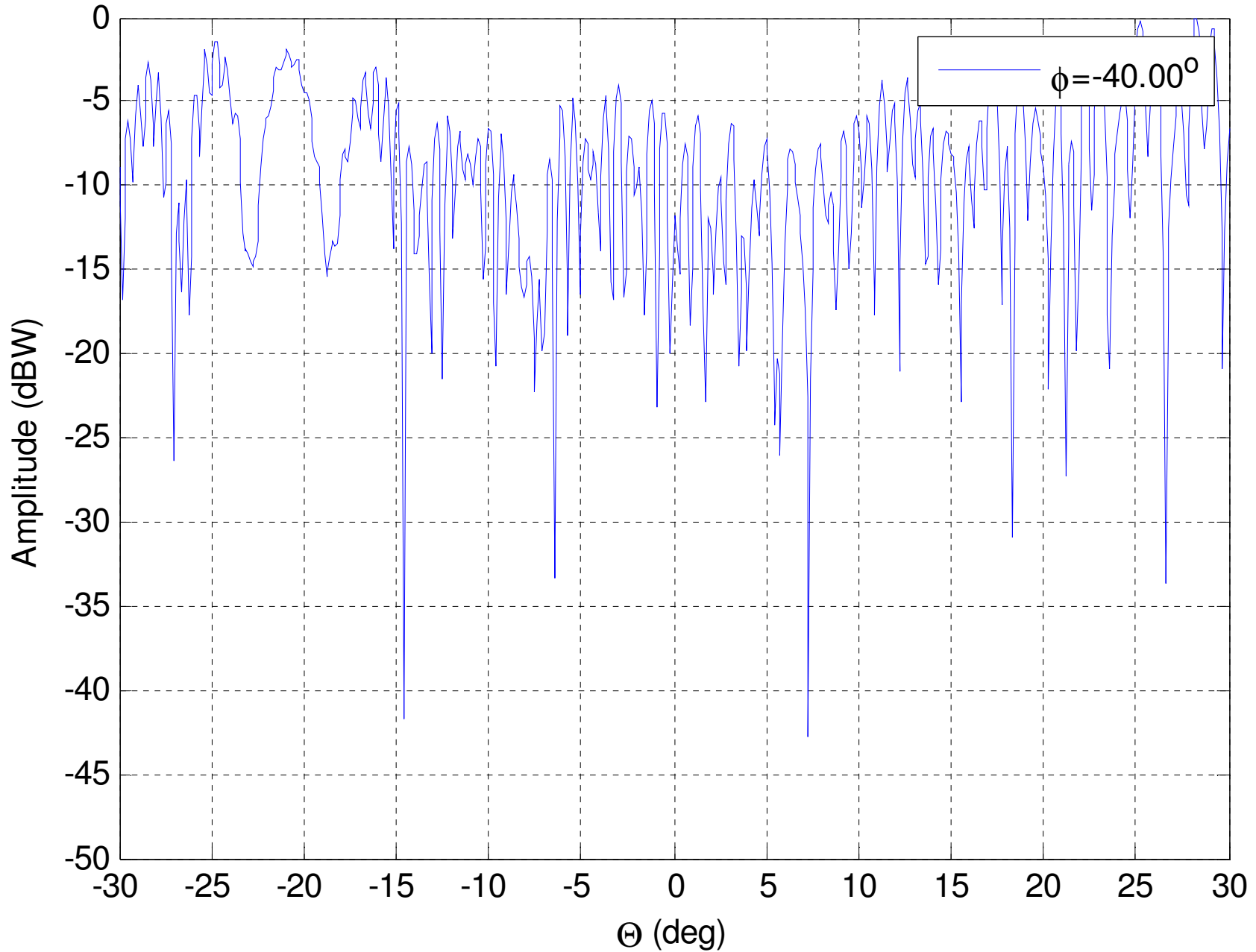
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.06 dBW, Date: 15-Dec-2011



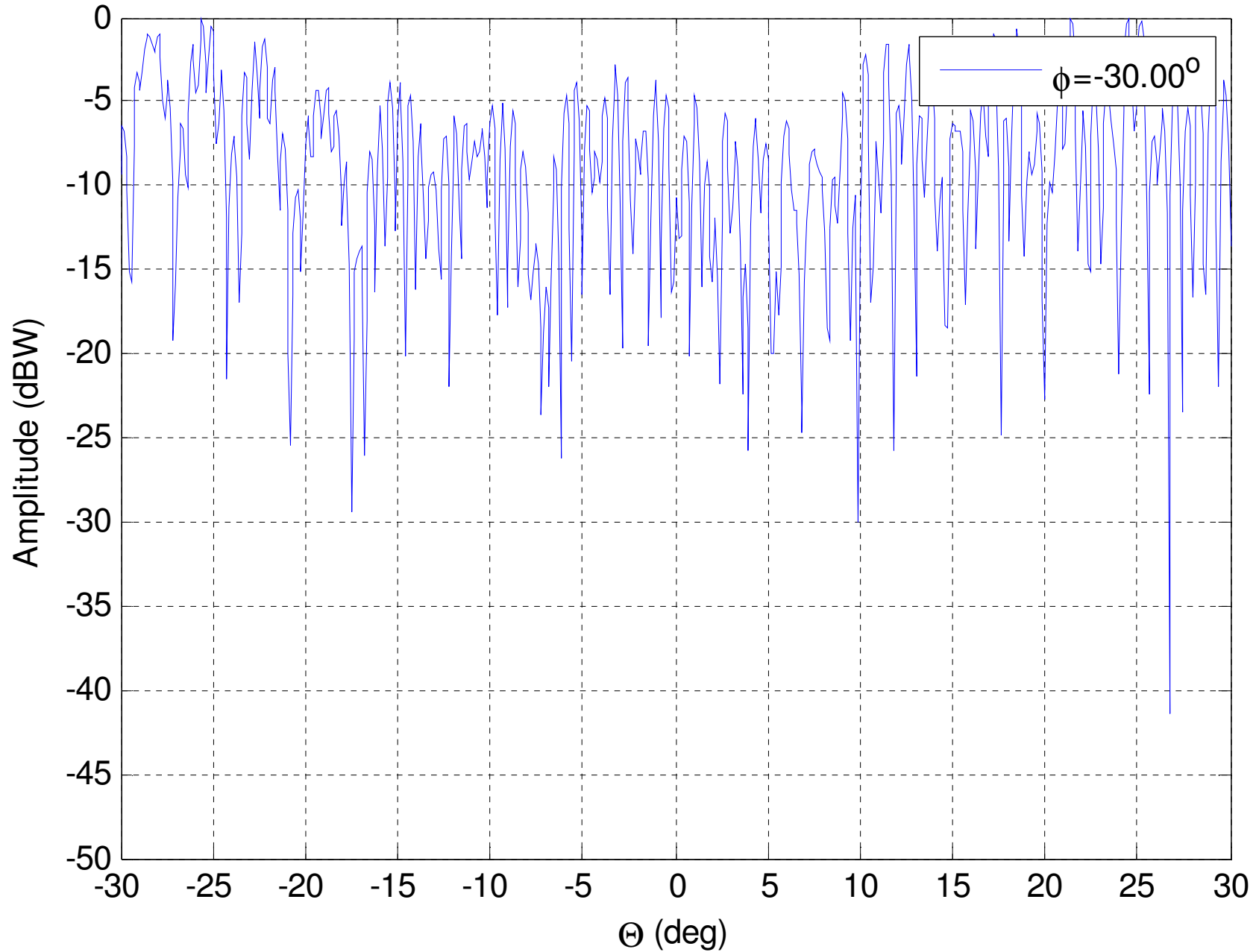
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -6.24 dBW, Date: 15-Dec-2011



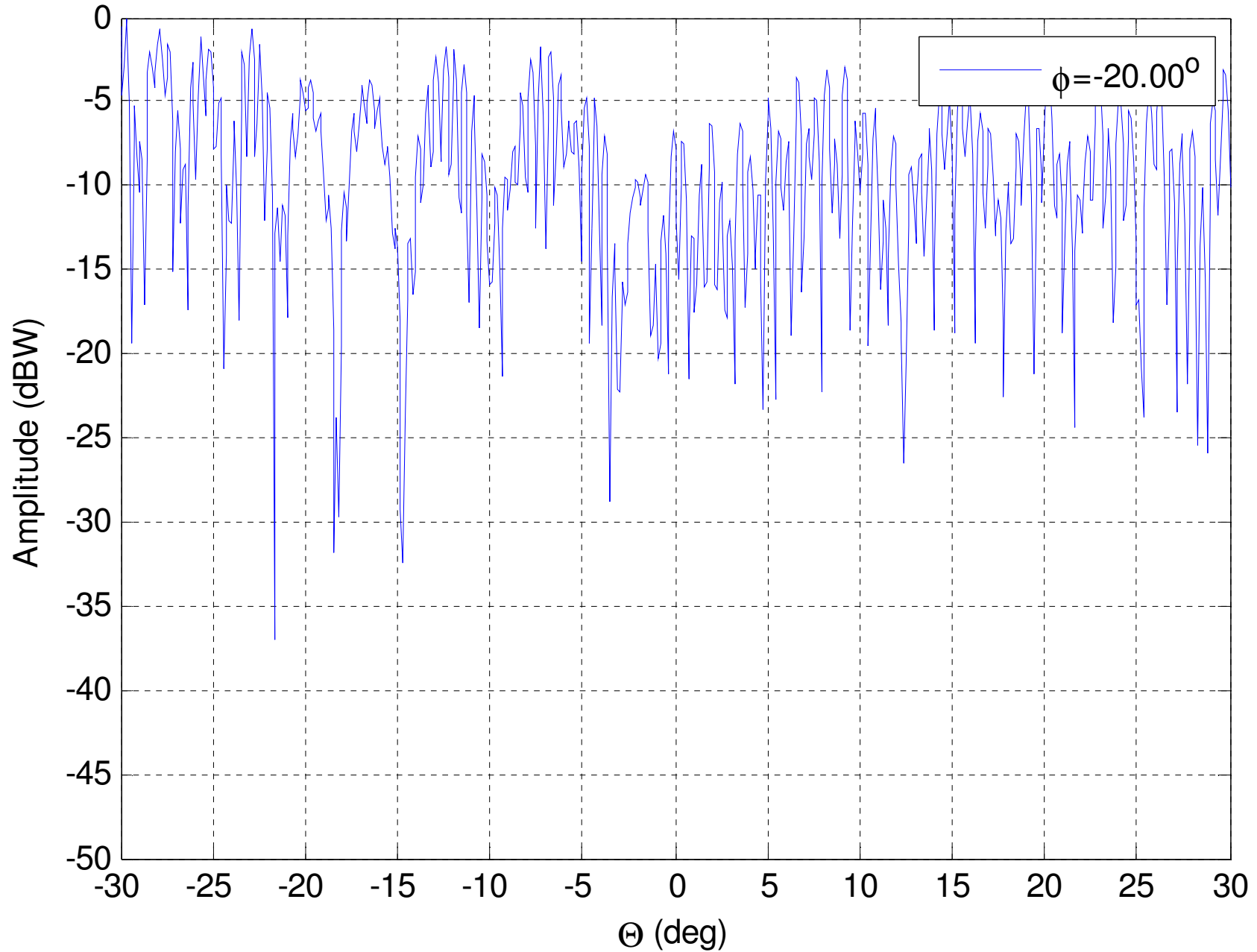
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.32 dBW, Date: 15-Dec-2011



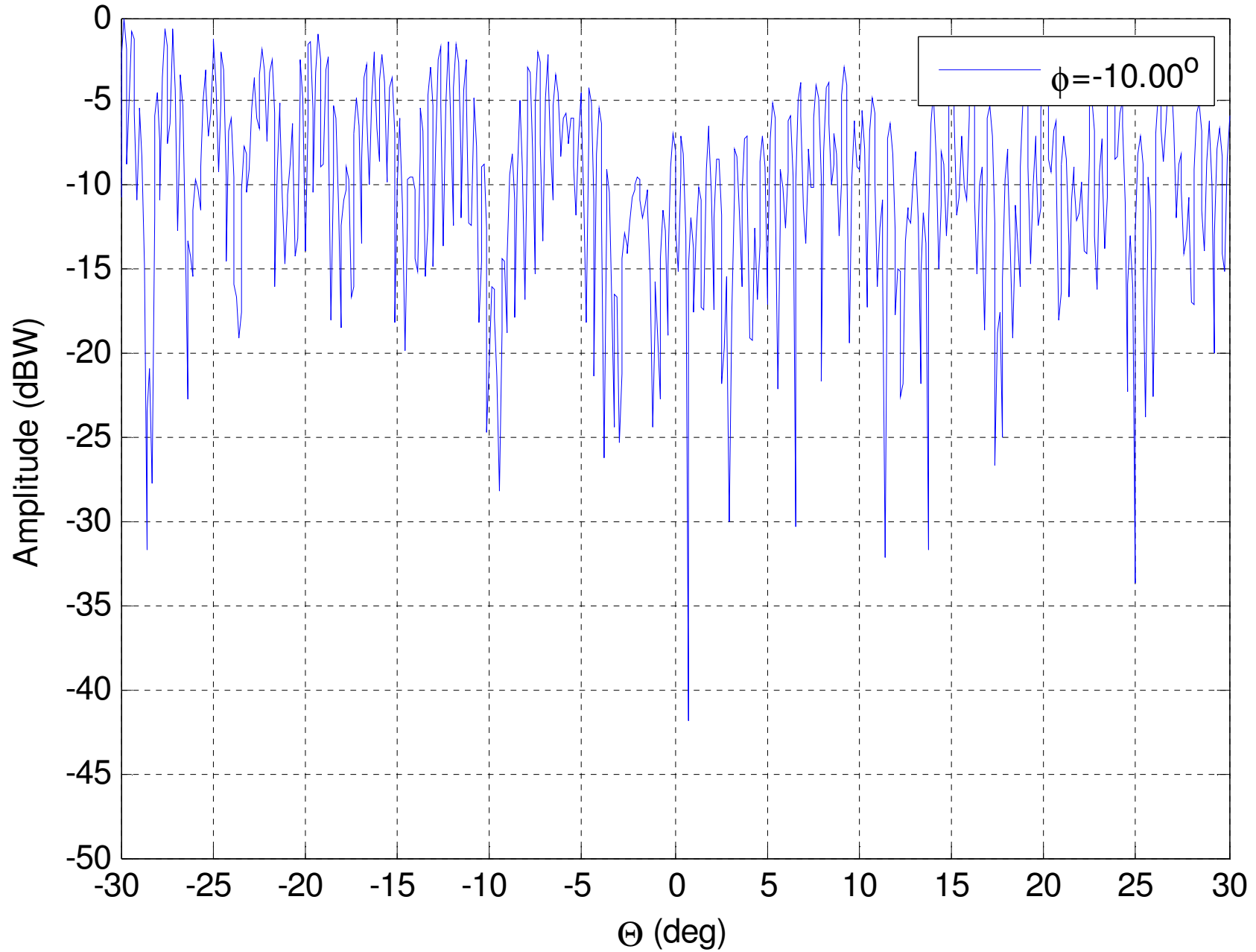
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -7.90 dBW, Date: 15-Dec-2011



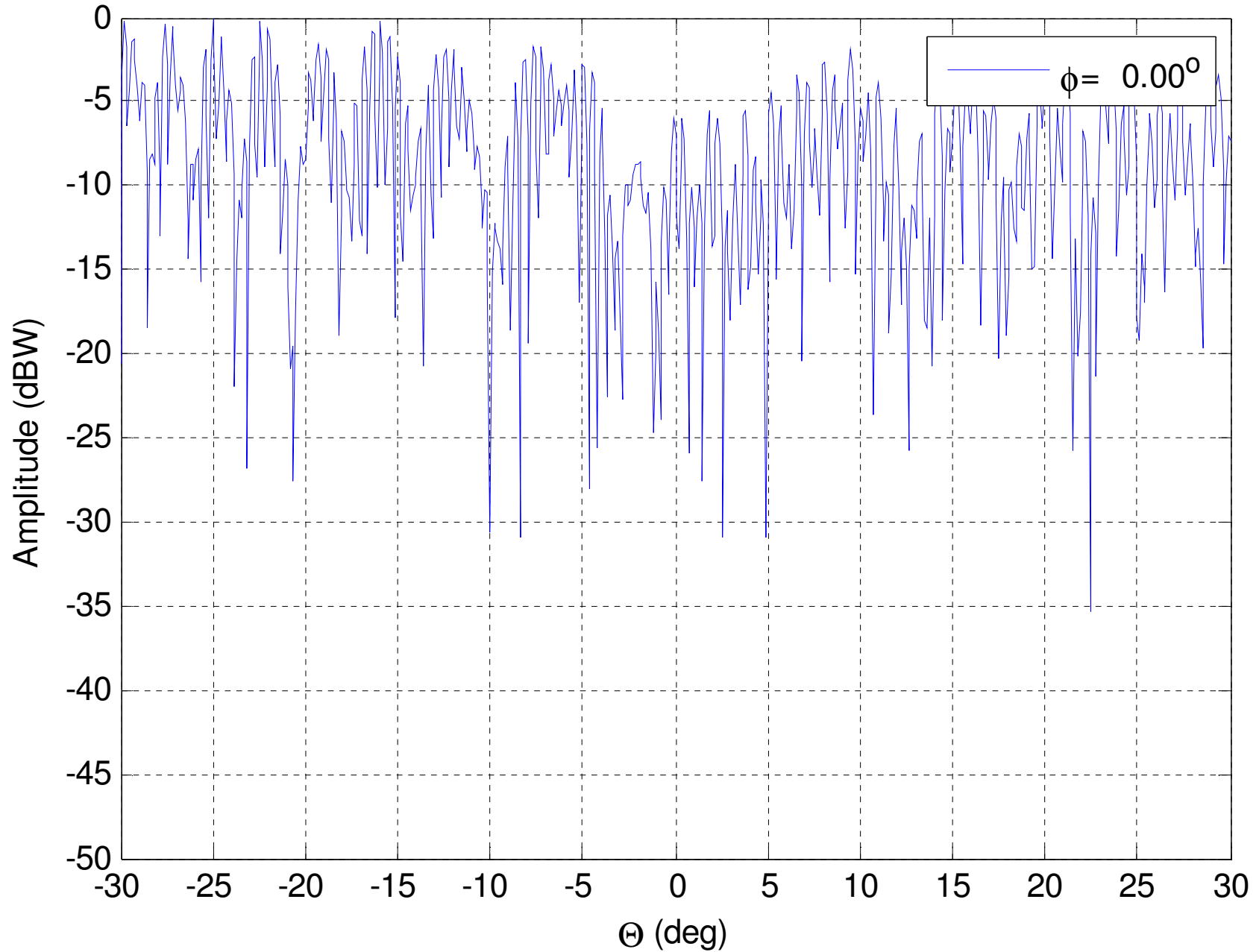
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -7.73 dBW, Date: 15-Dec-2011



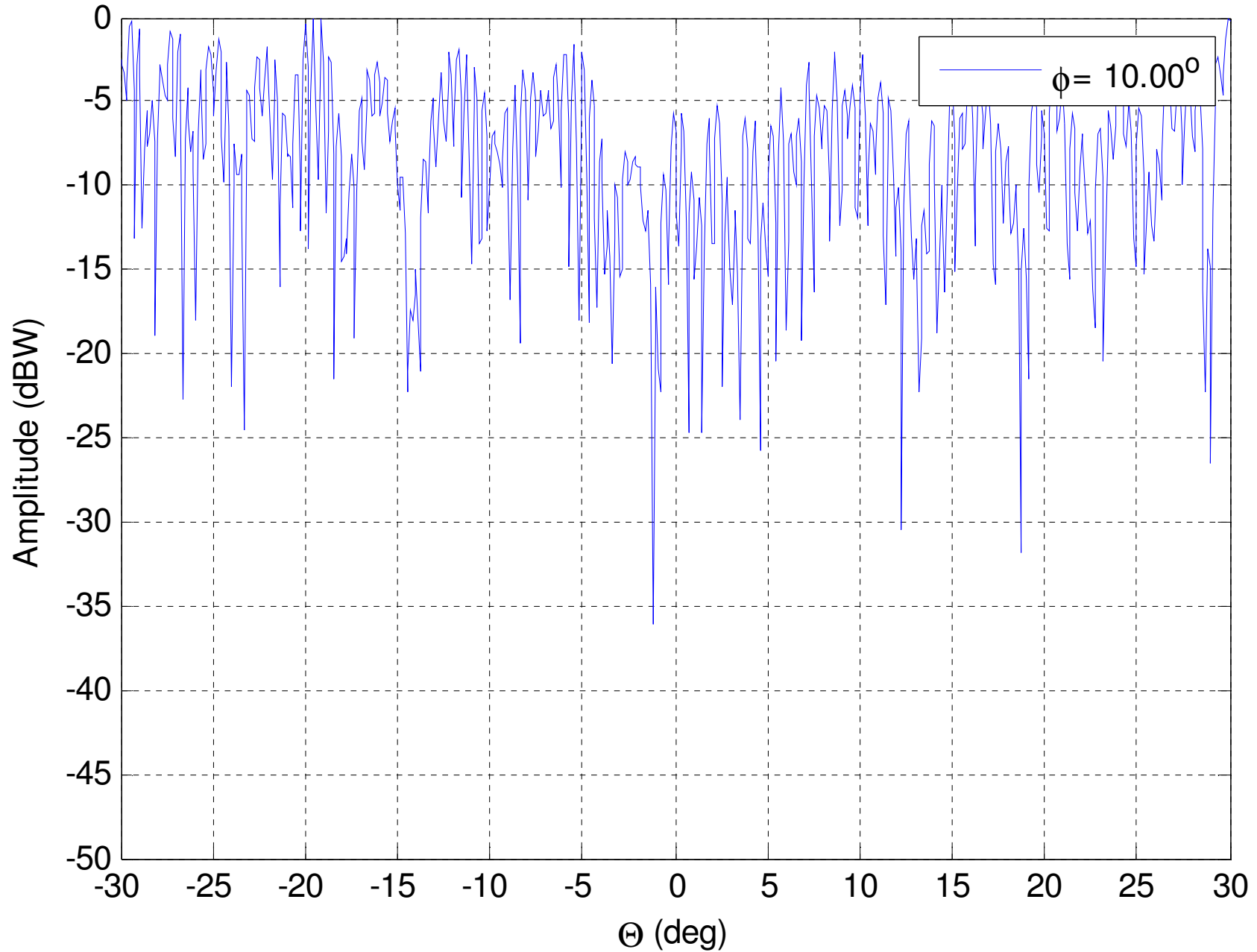
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -8.71 dBW, Date: 15-Dec-2011



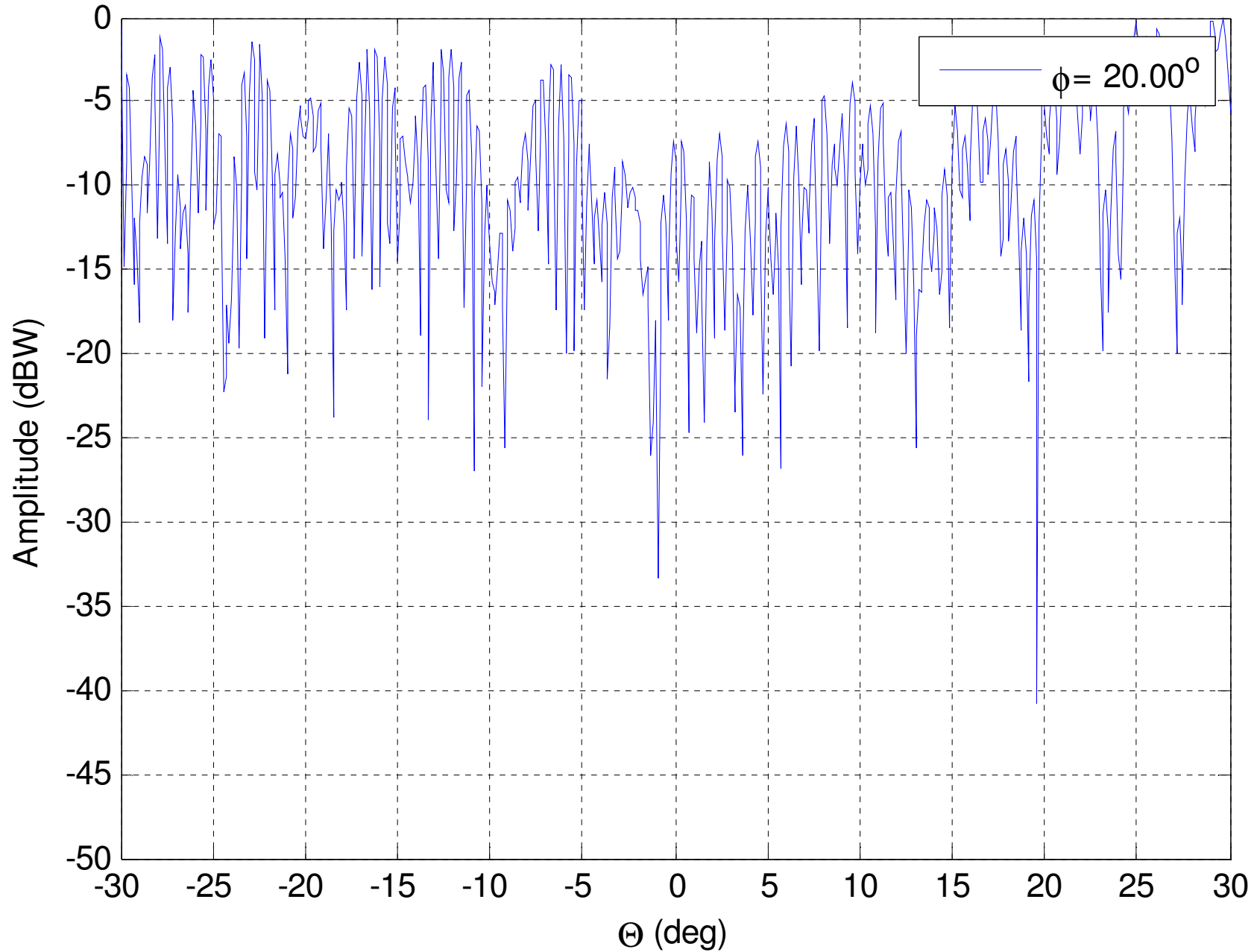
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.92 dBW, Date: 15-Dec-2011



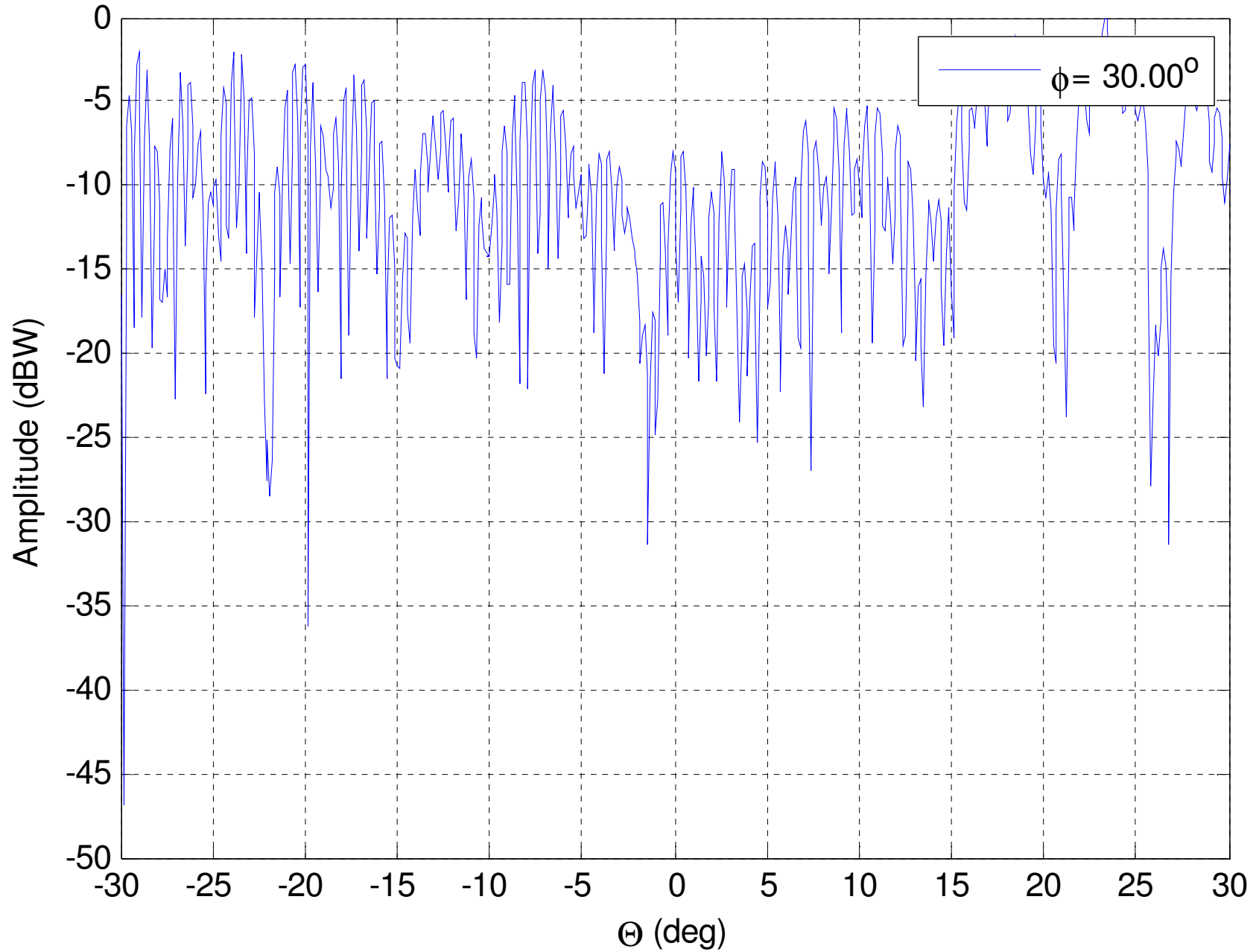
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -7.19 dBW, Date: 15-Dec-2011



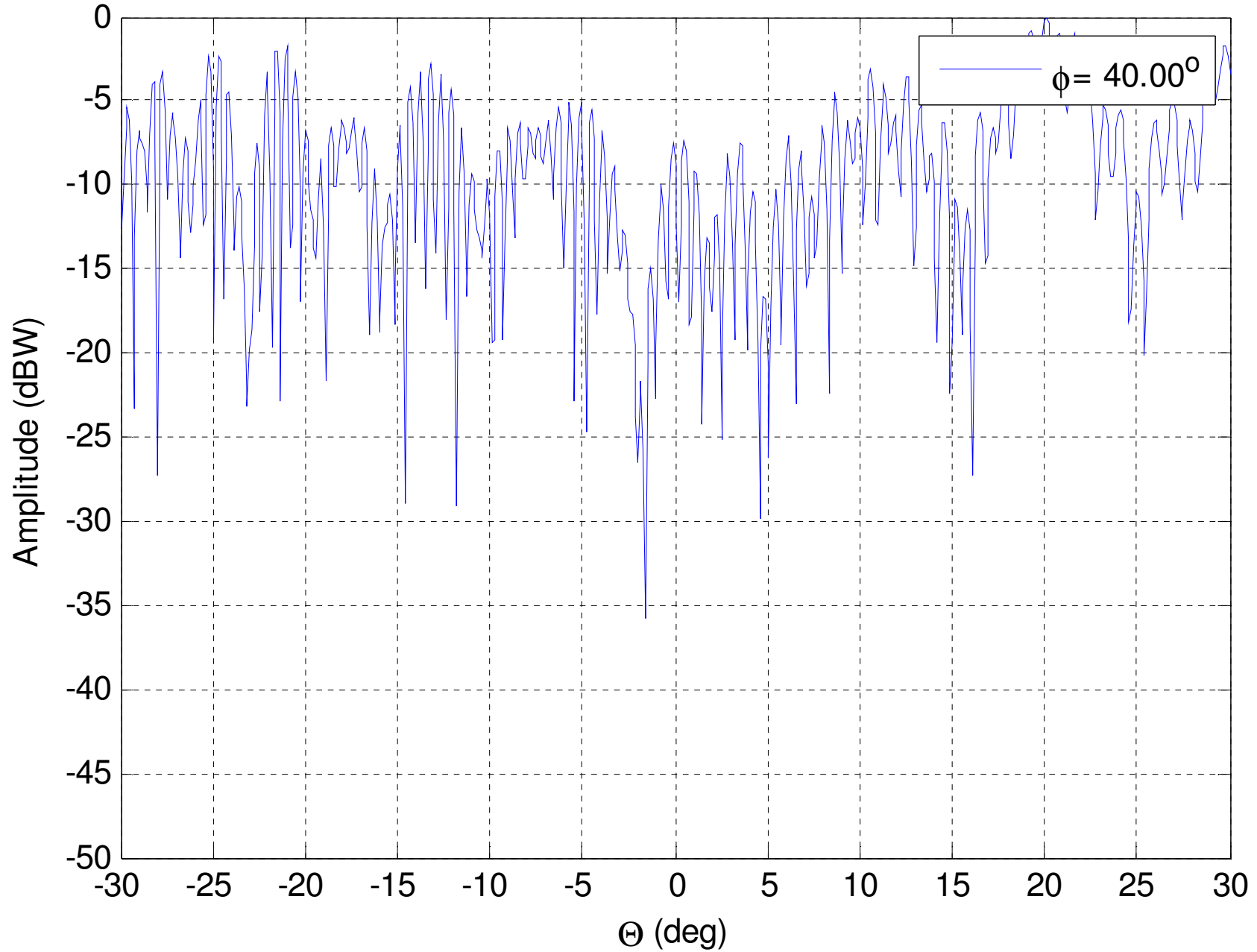
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.54 dBW, Date: 15-Dec-2011



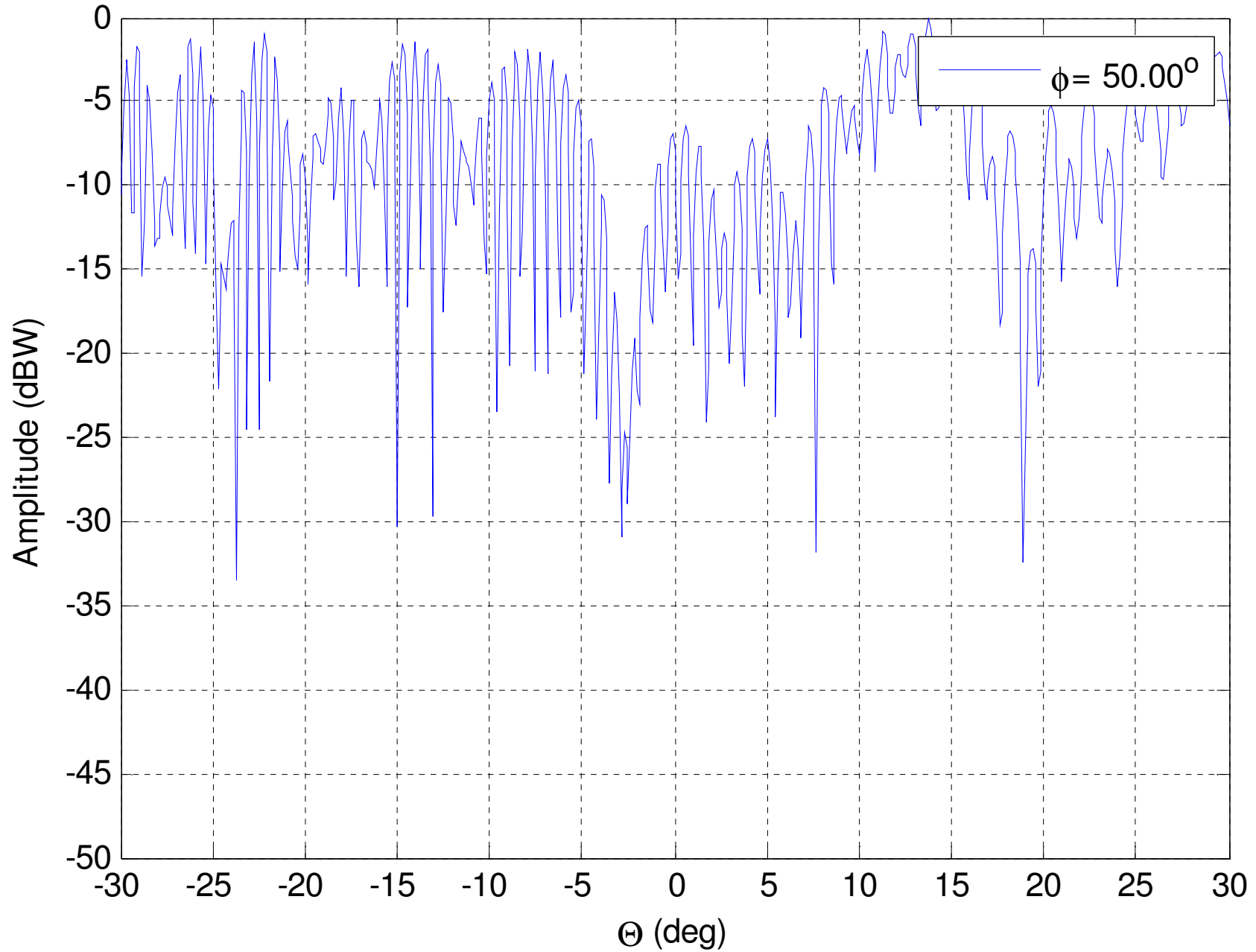
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.96 dBW, Date: 15-Dec-2011



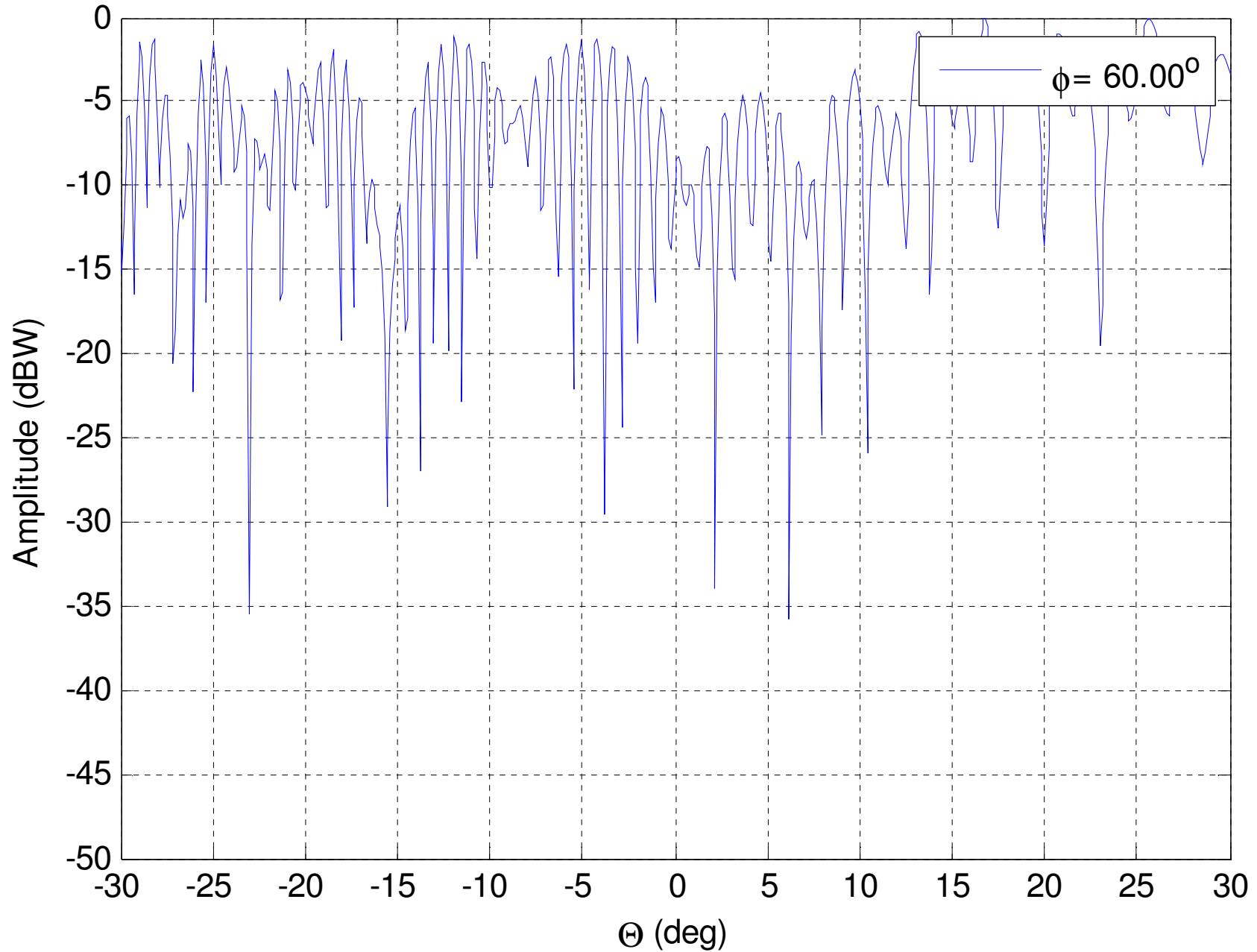
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.72 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -8.90 dBW, Date: 15-Dec-2011



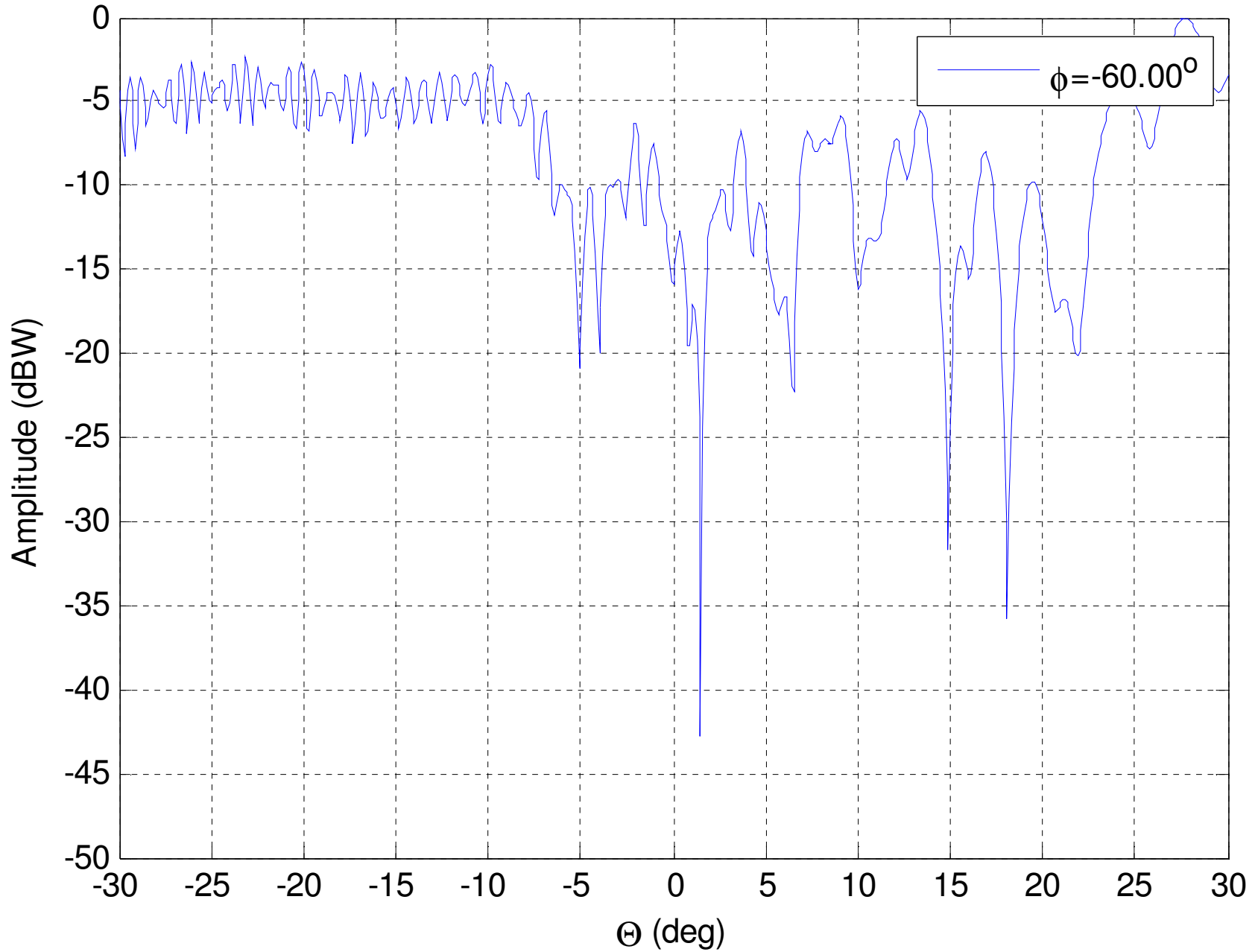
Spot Beam24, +X Axis Plots

- 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

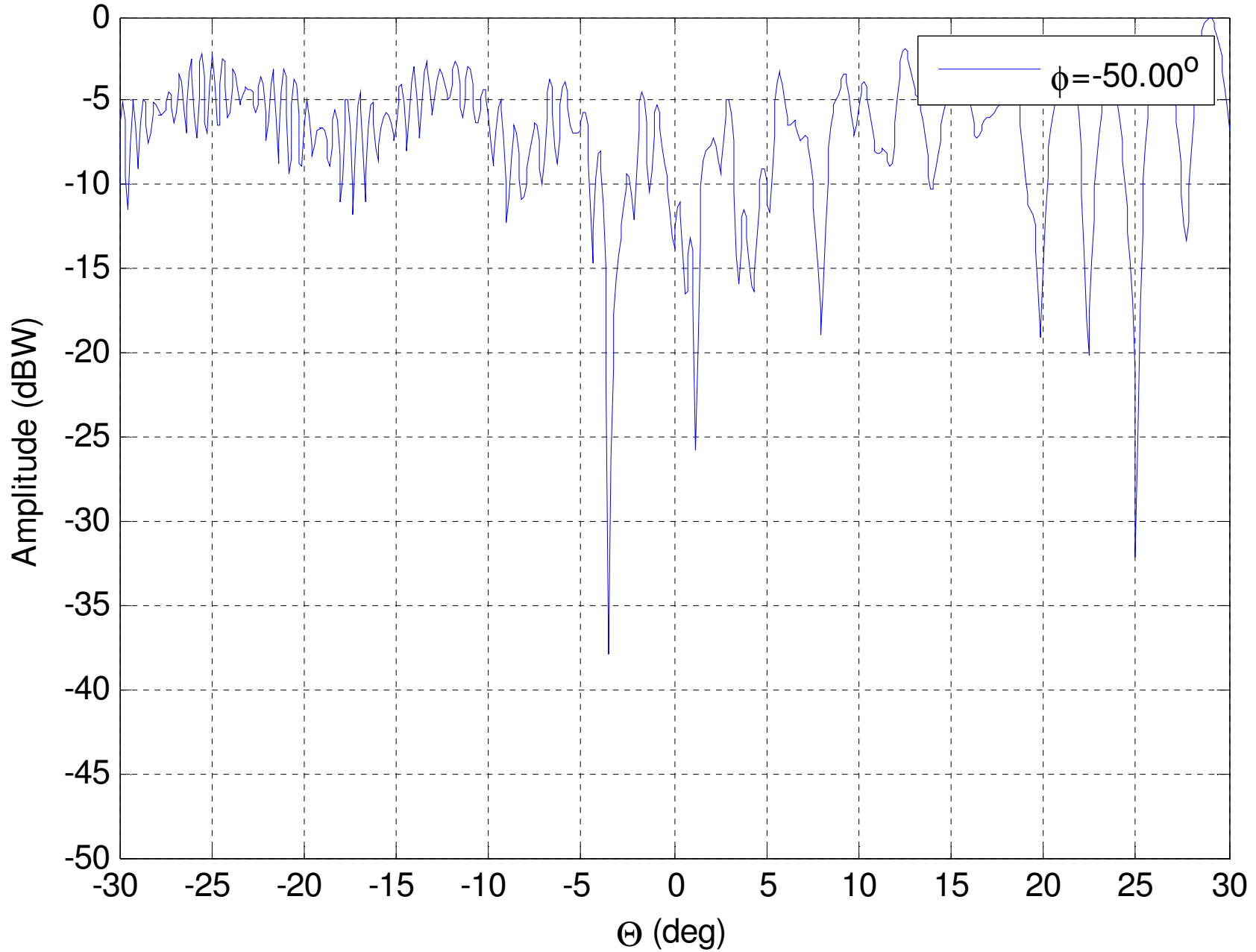
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -6.41 dBW, Date: 15-Dec-2011



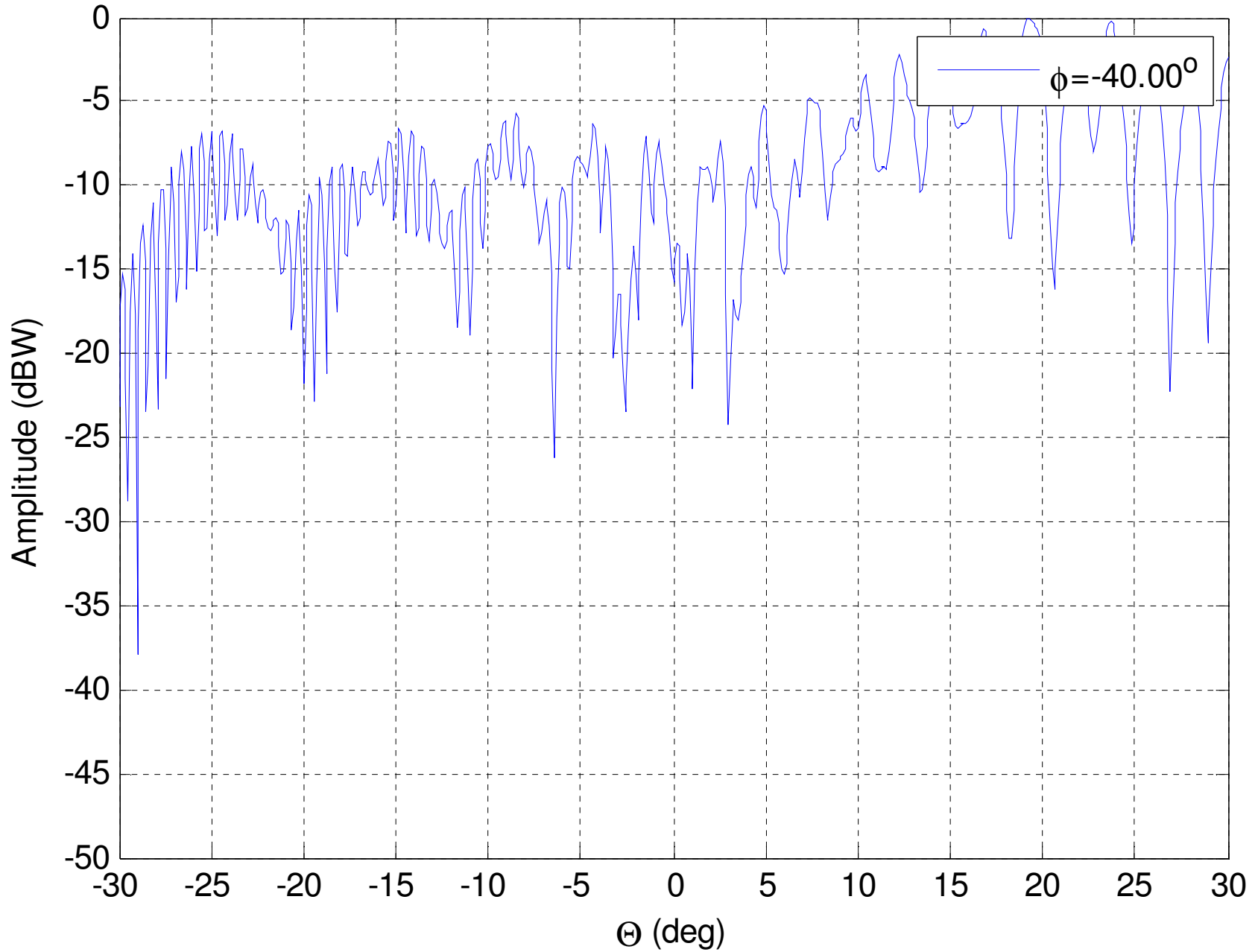
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -8.55 dBW, Date: 15-Dec-2011



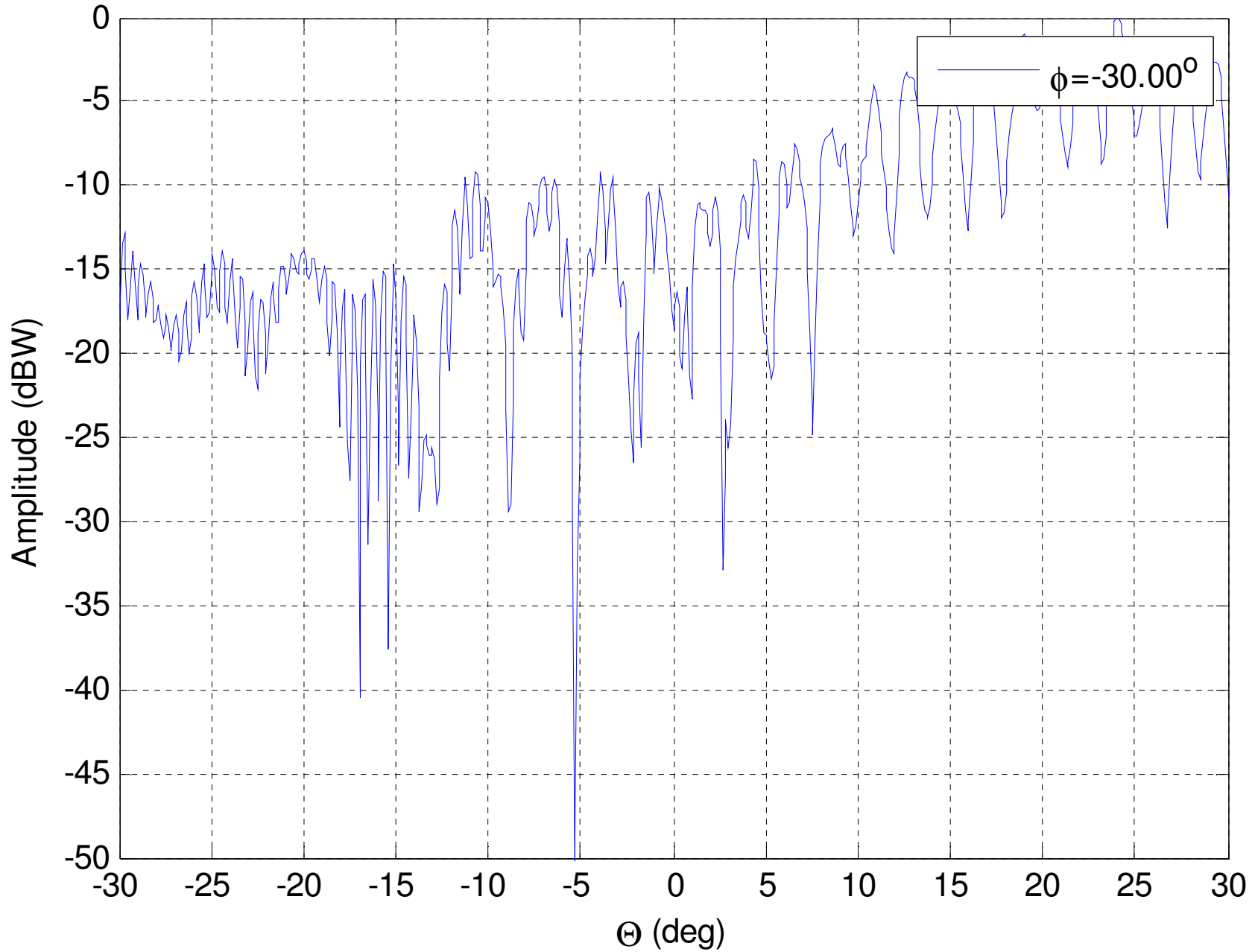
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -6.52 dBW, Date: 15-Dec-2011



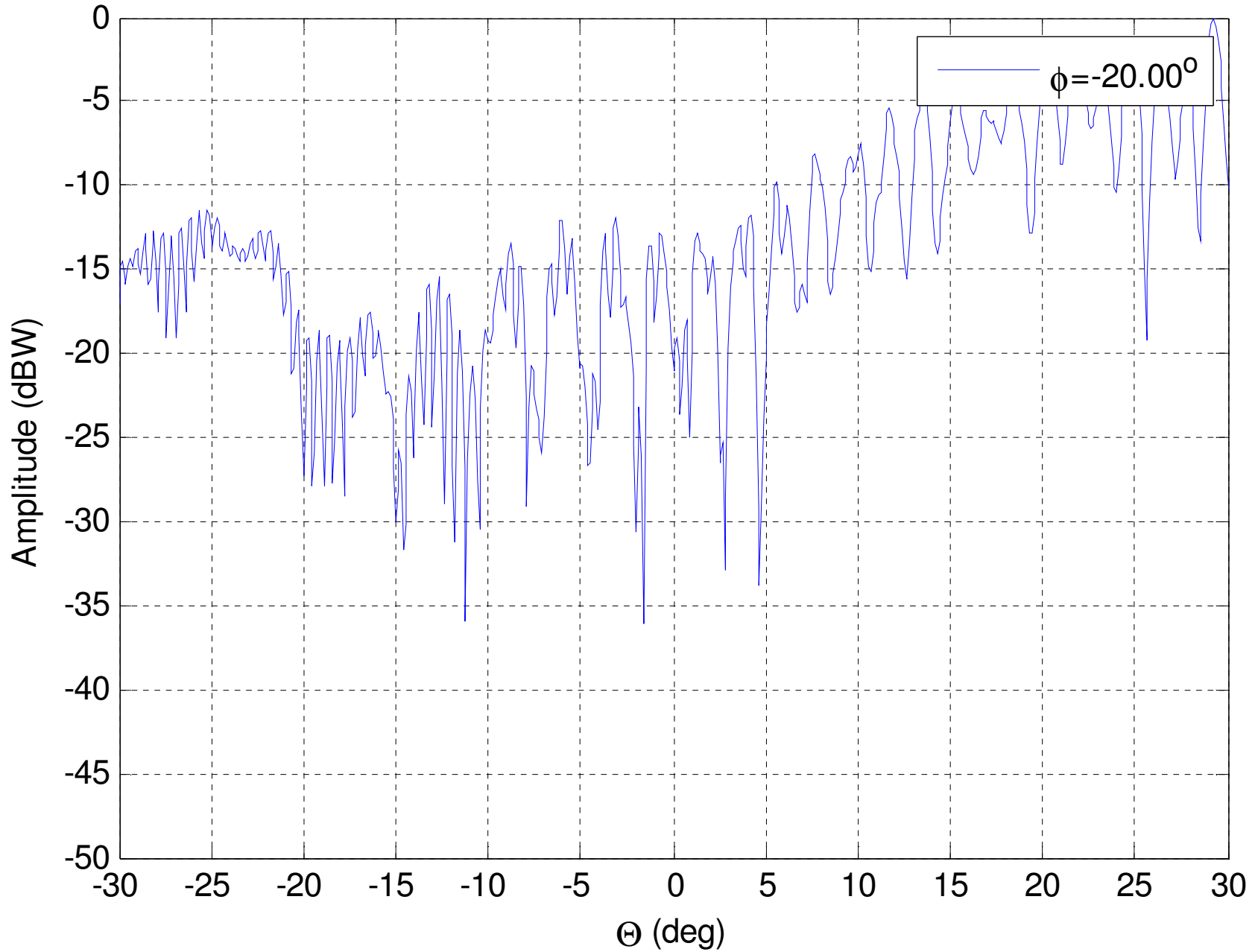
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -3.74 dBW, Date: 15-Dec-2011



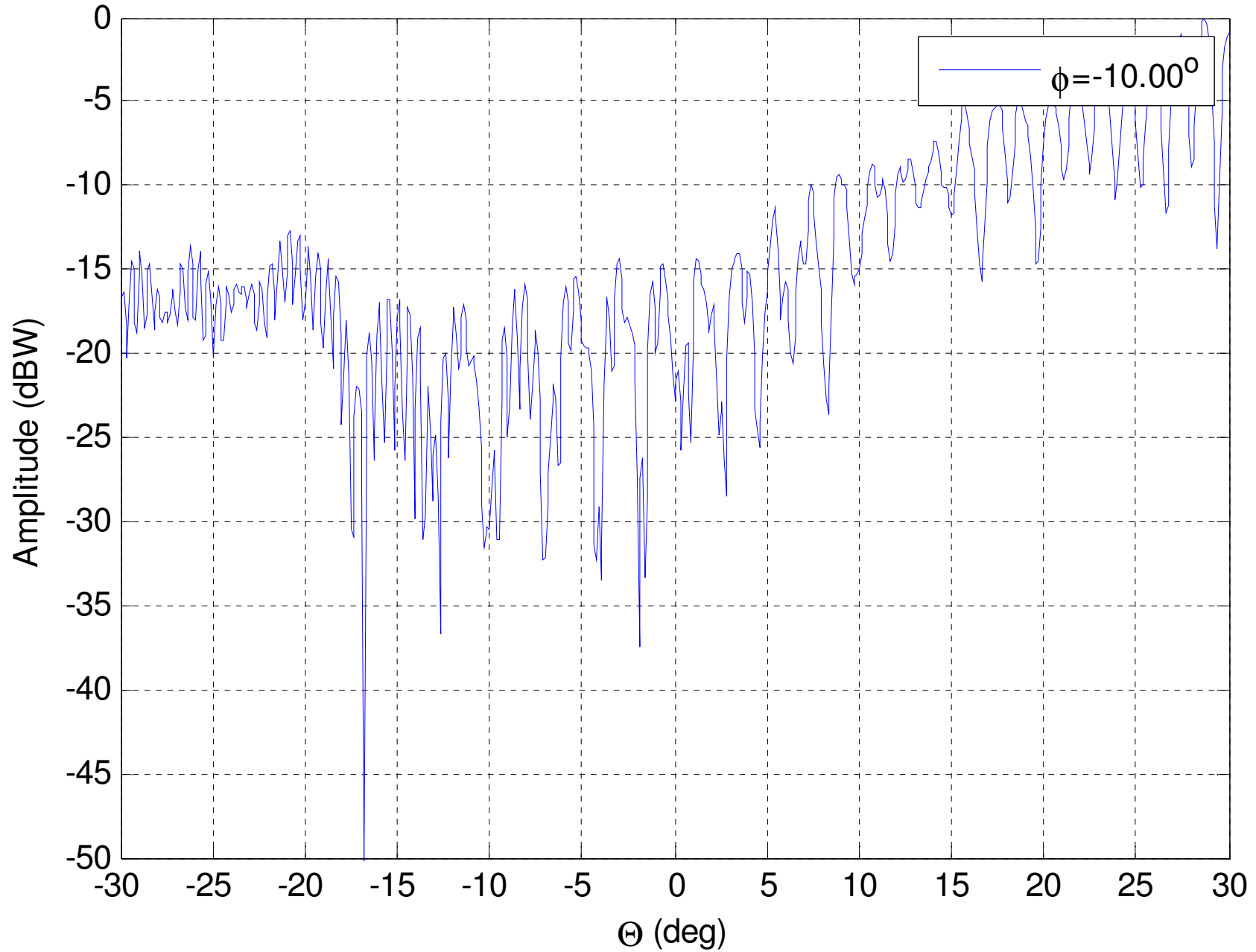
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -1.26 dBW, Date: 15-Dec-2011



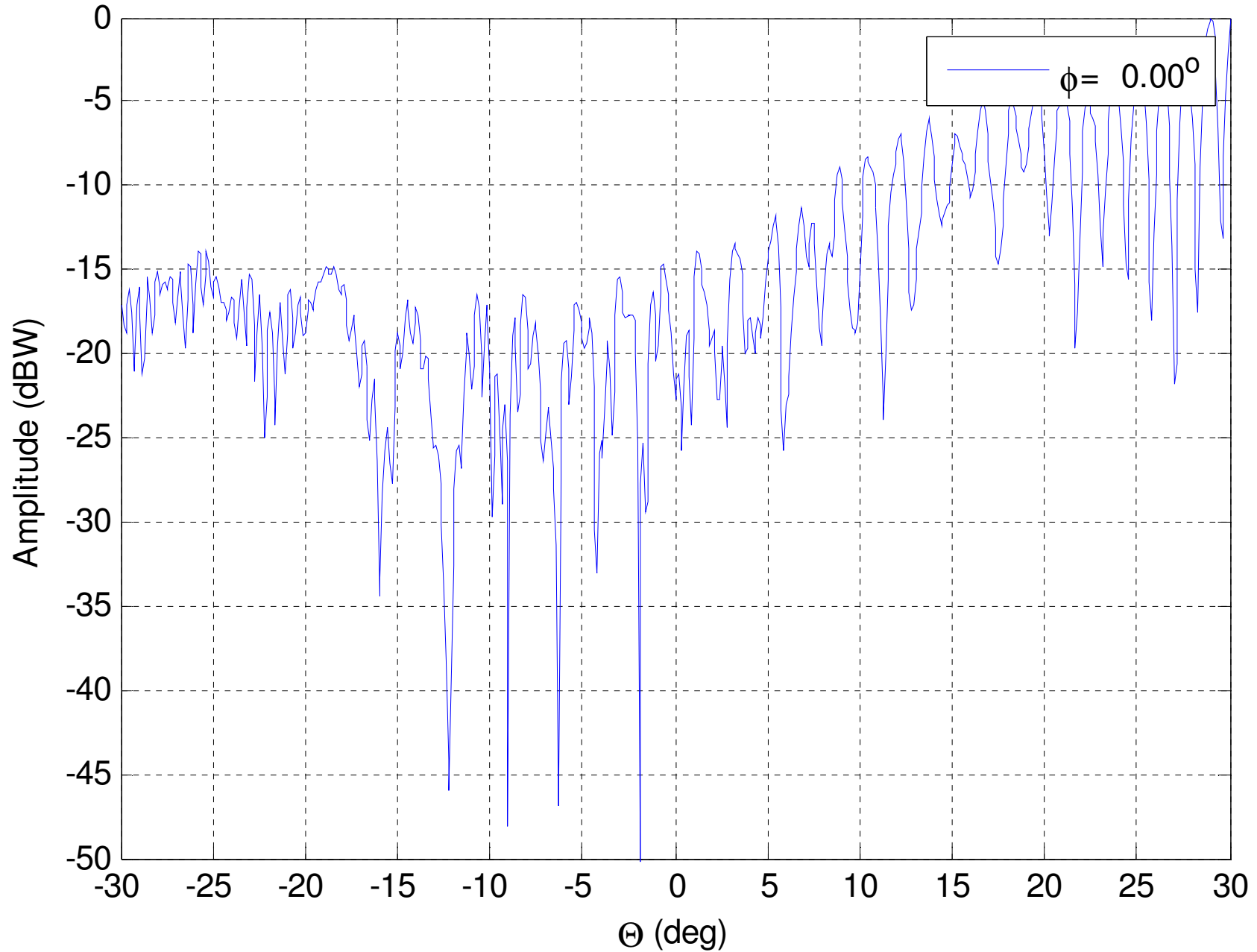
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 0.51 dBW, Date: 15-Dec-2011



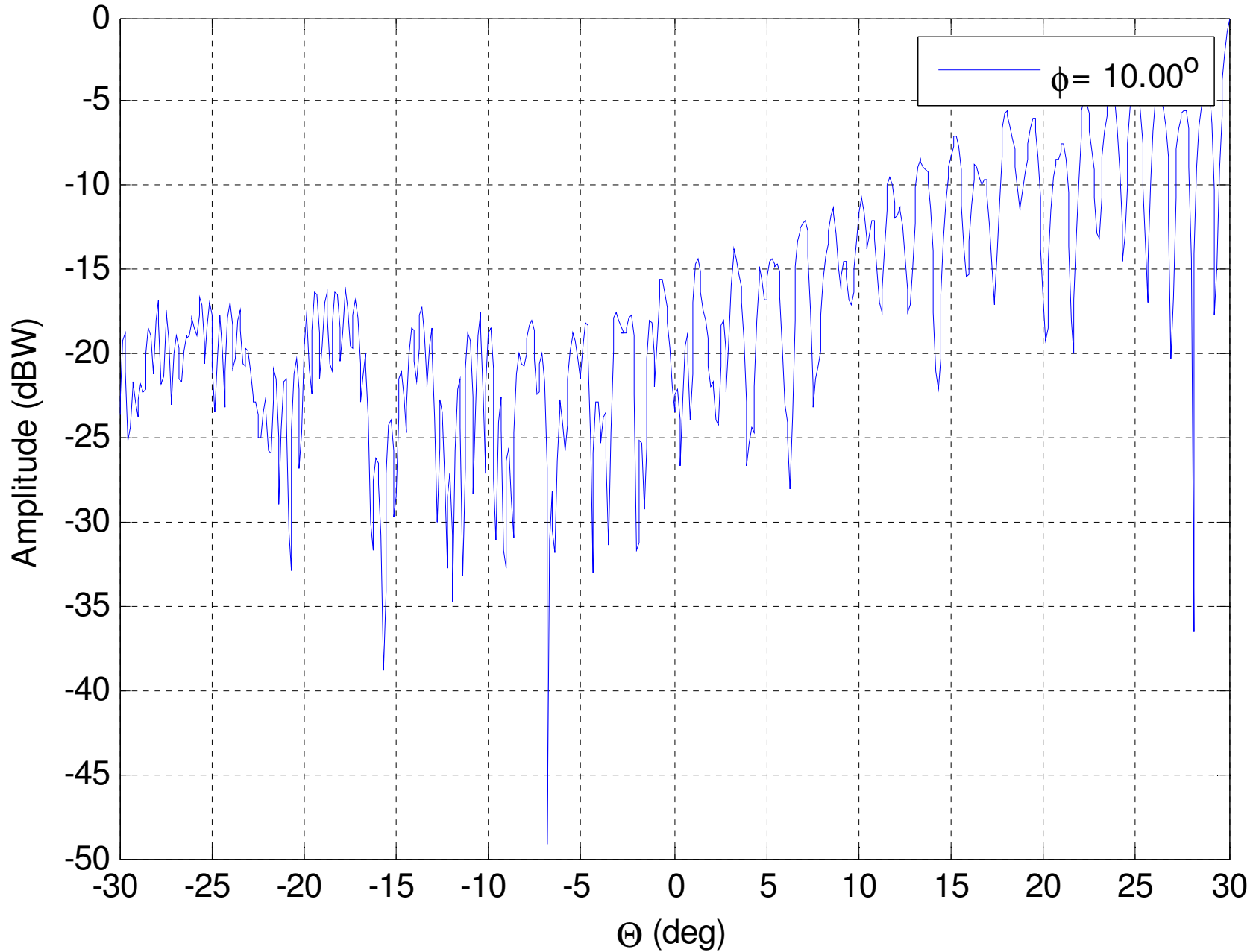
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 0.38 dBW, Date: 15-Dec-2011



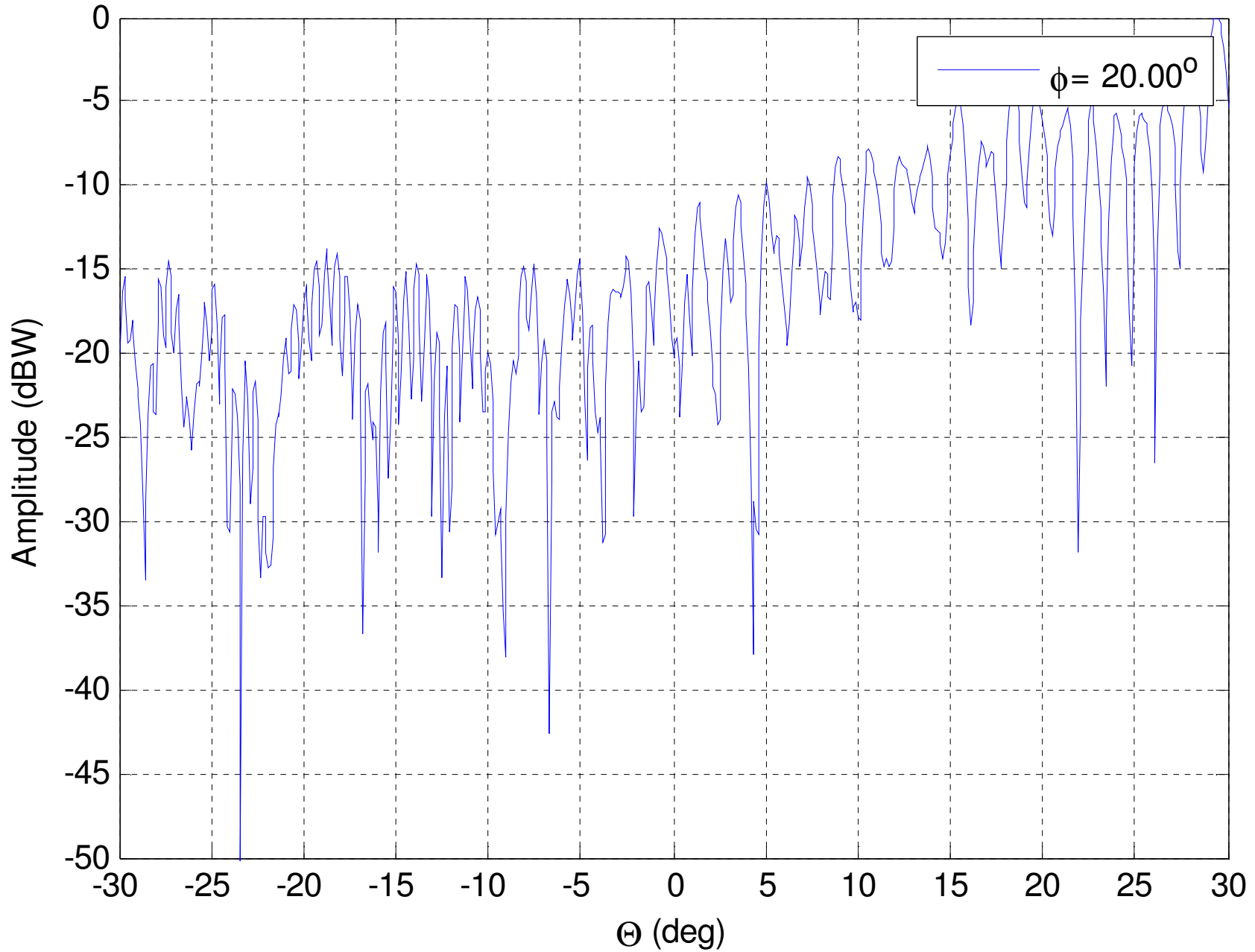
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 1.11 dBW, Date: 15-Dec-2011



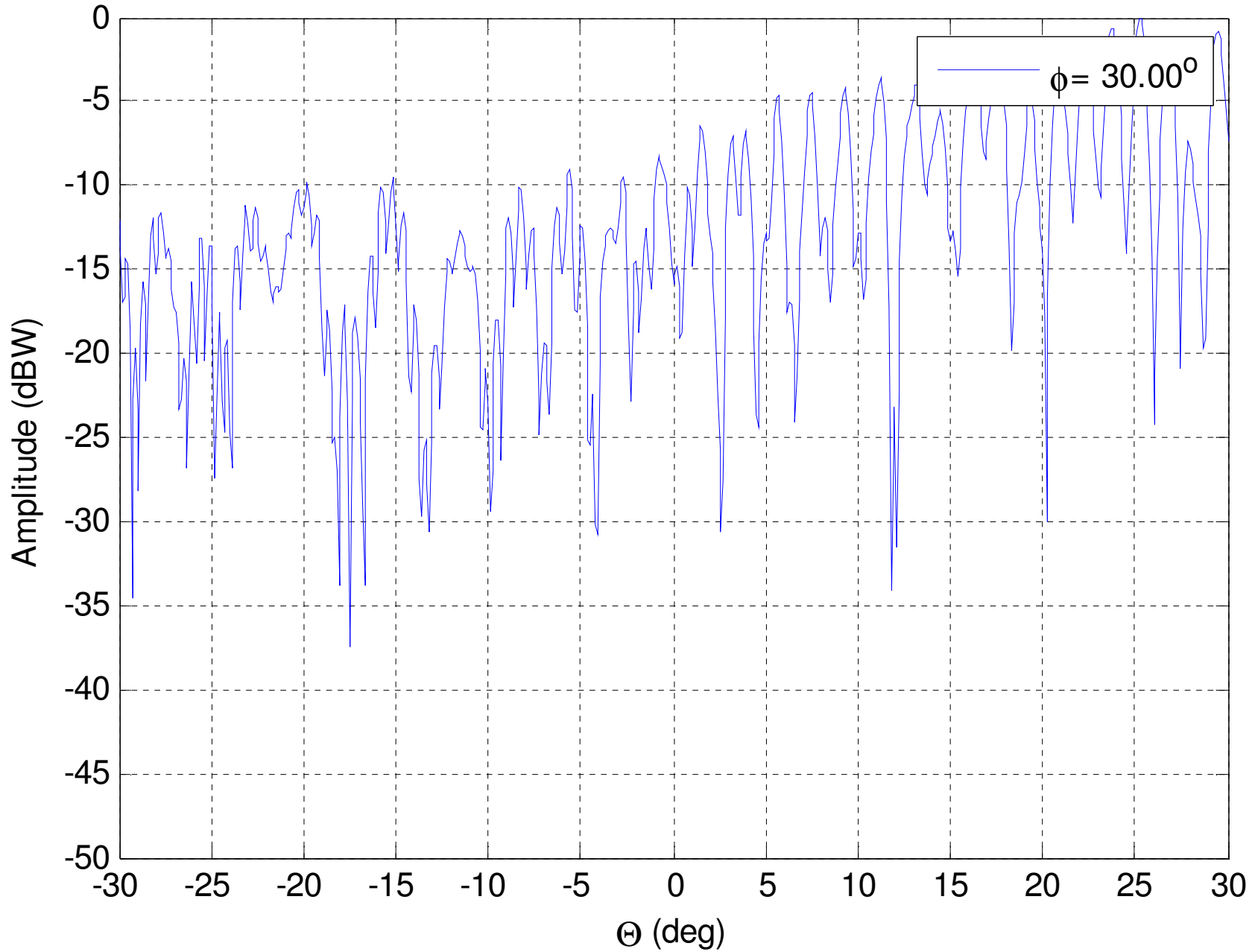
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -1.96 dBW, Date: 15-Dec-2011



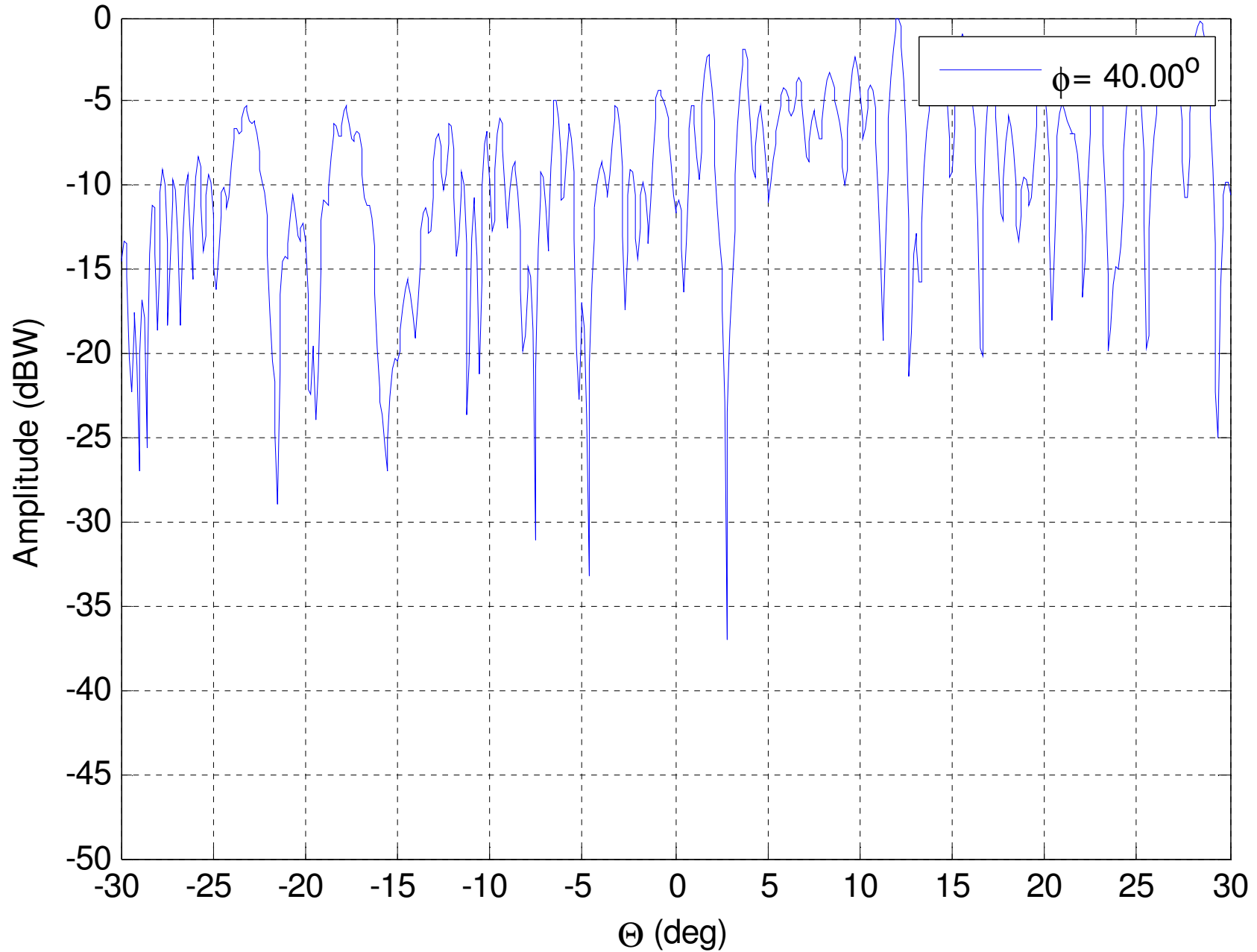
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -6.43 dBW, Date: 15-Dec-2011



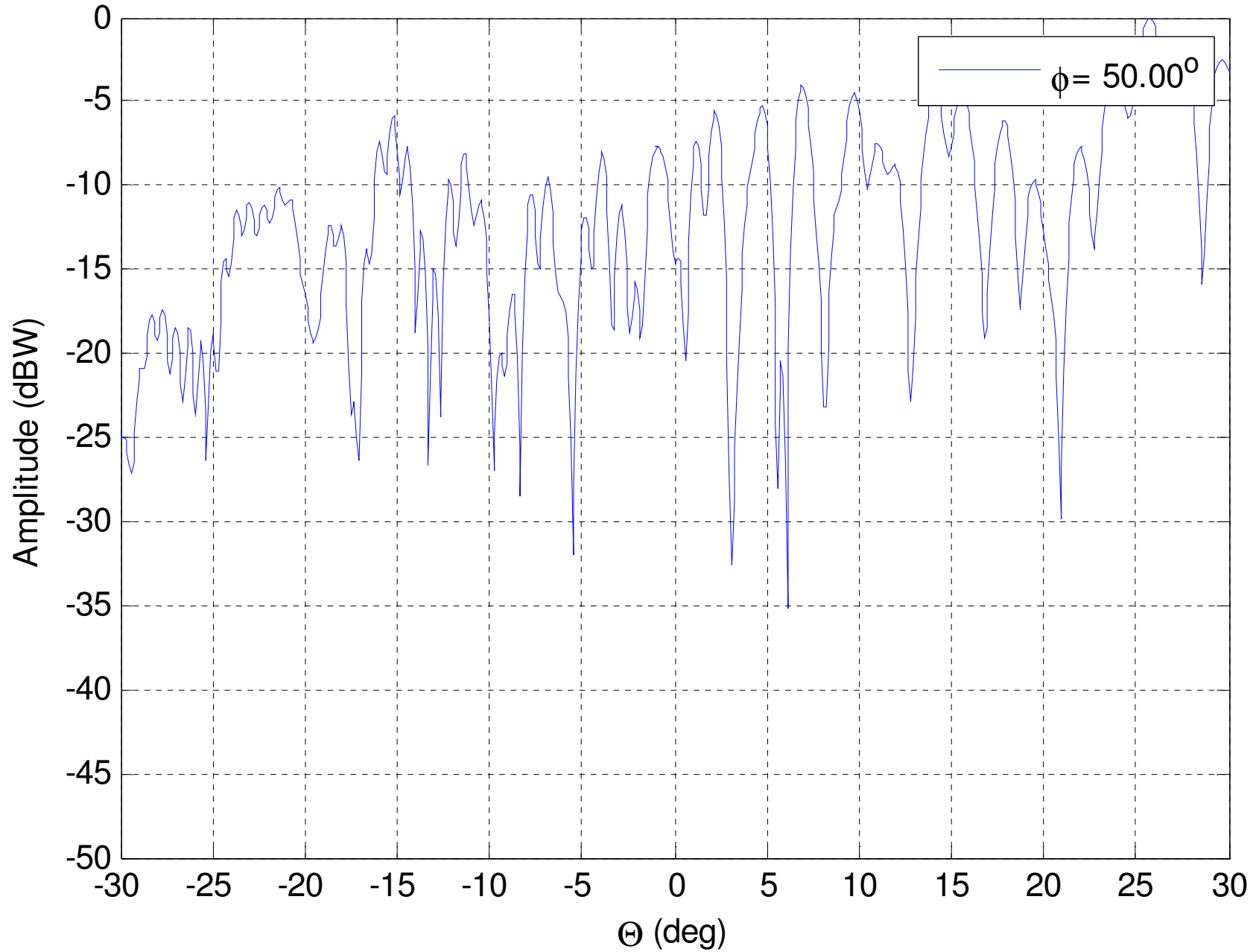
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -10.72 dBW, Date: 15-Dec-2011



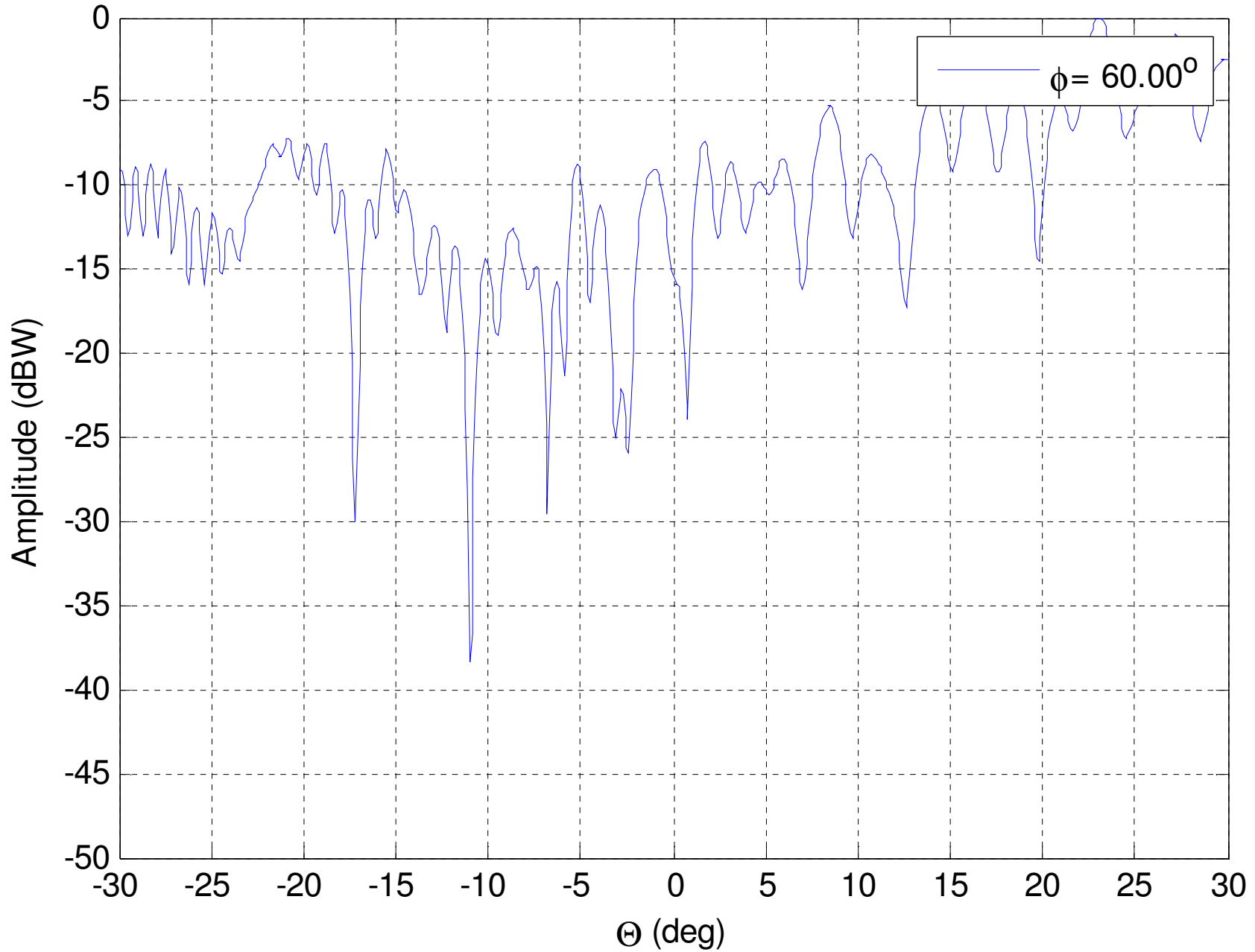
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -7.68 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

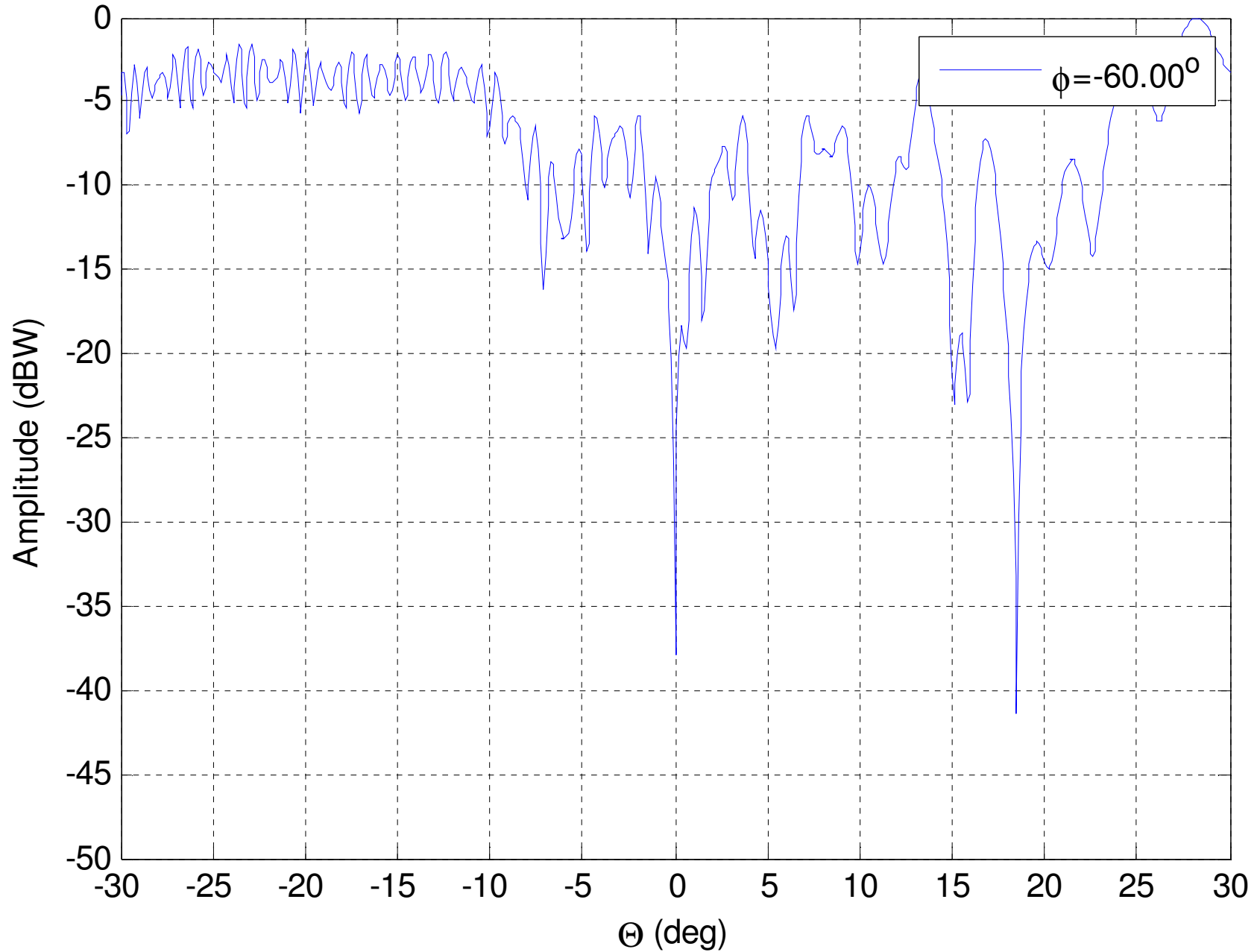
Input file: tx-17.3-rhcp-60.cut, Peak: -6.62 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

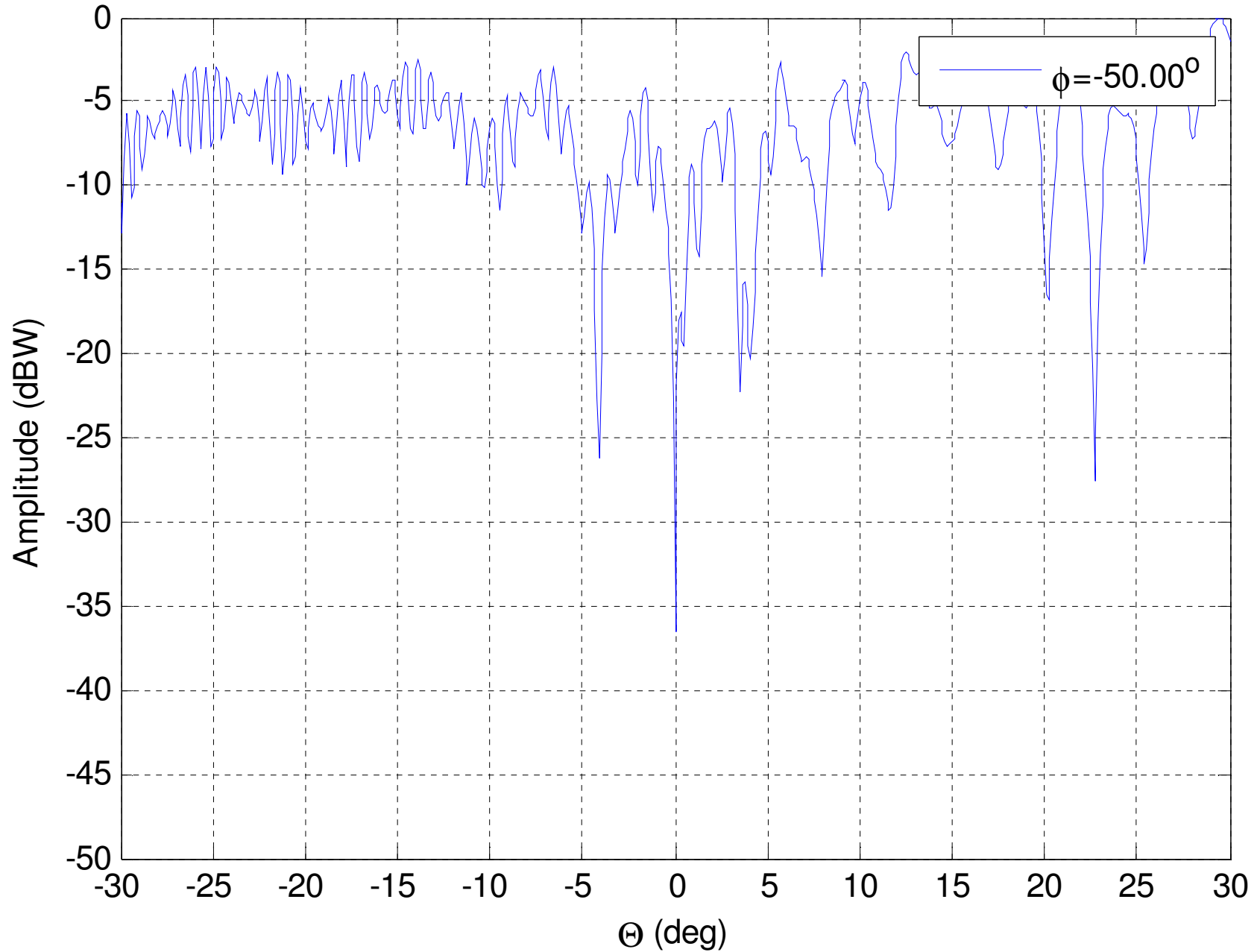
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -7.04 dBW, Date: 15-Dec-2011



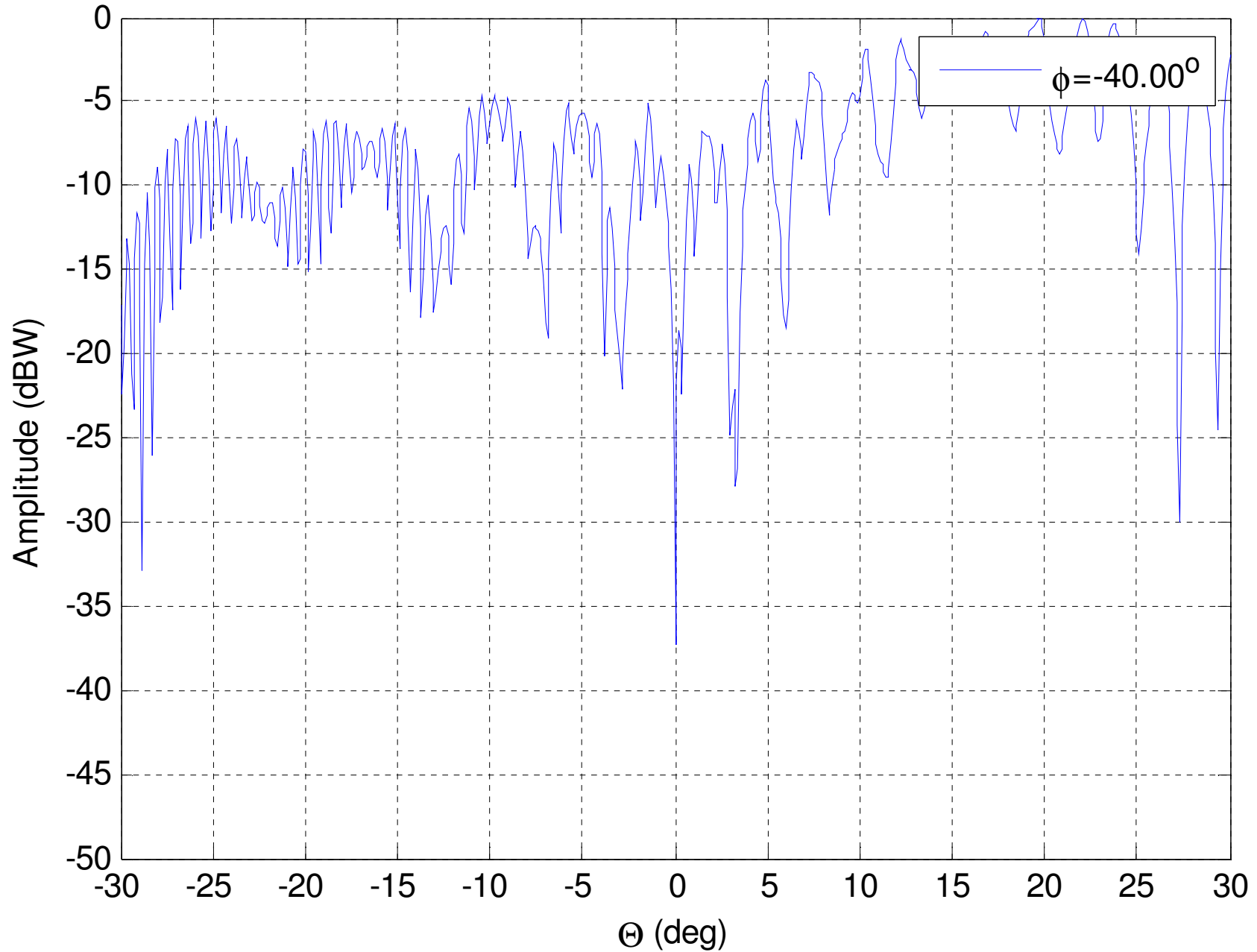
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -8.47 dBW, Date: 15-Dec-2011



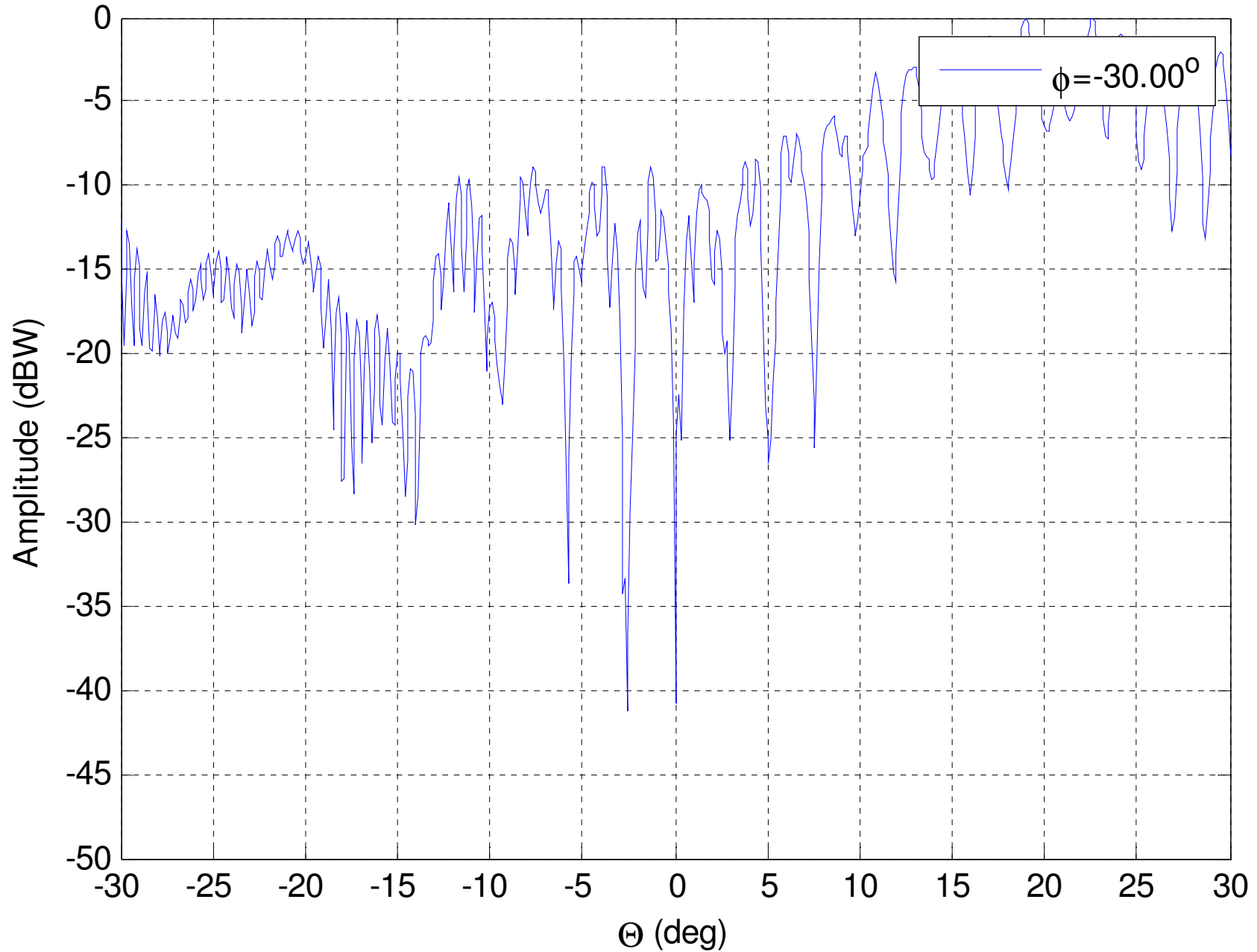
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.71 dBW, Date: 15-Dec-2011



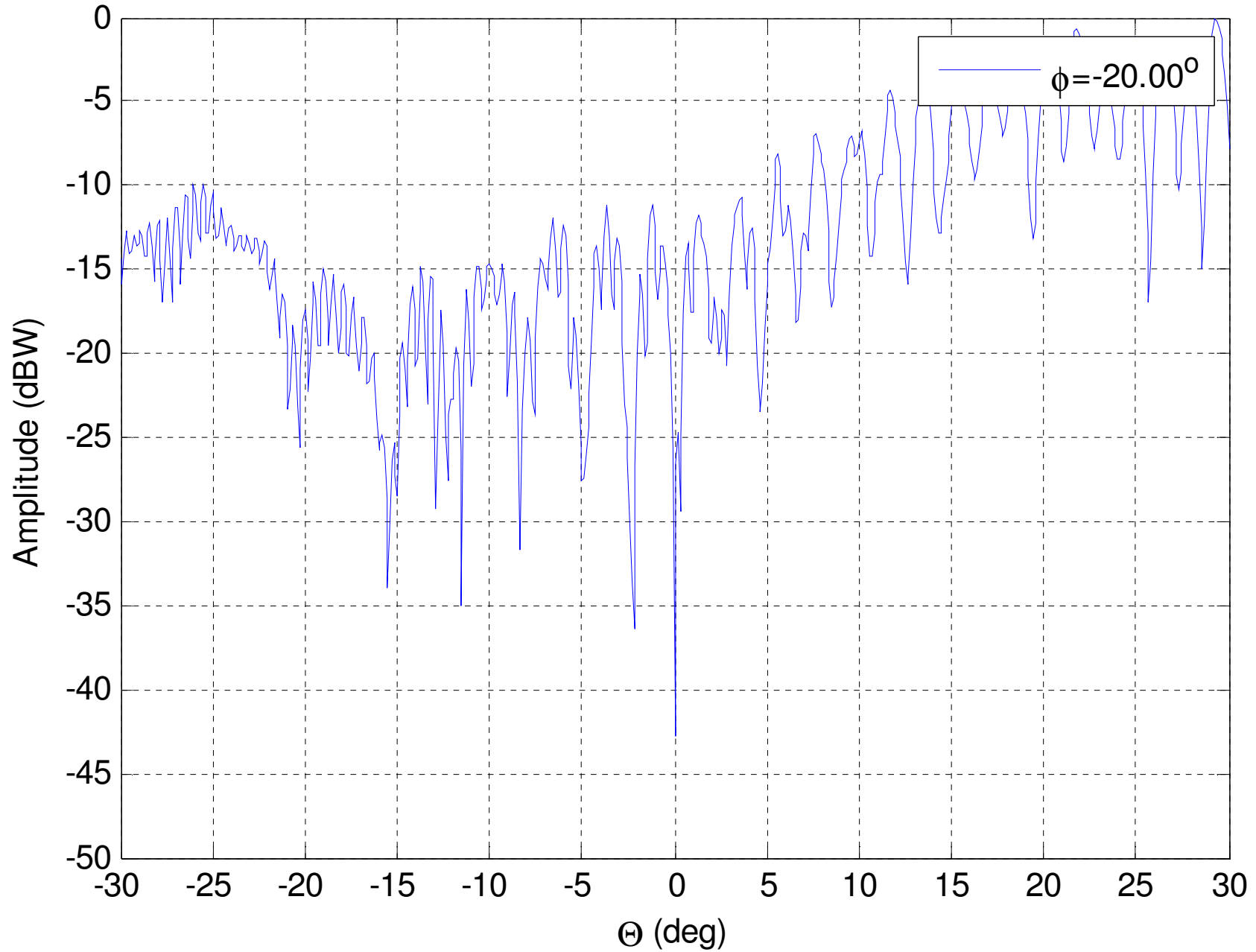
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -4.19 dBW, Date: 15-Dec-2011



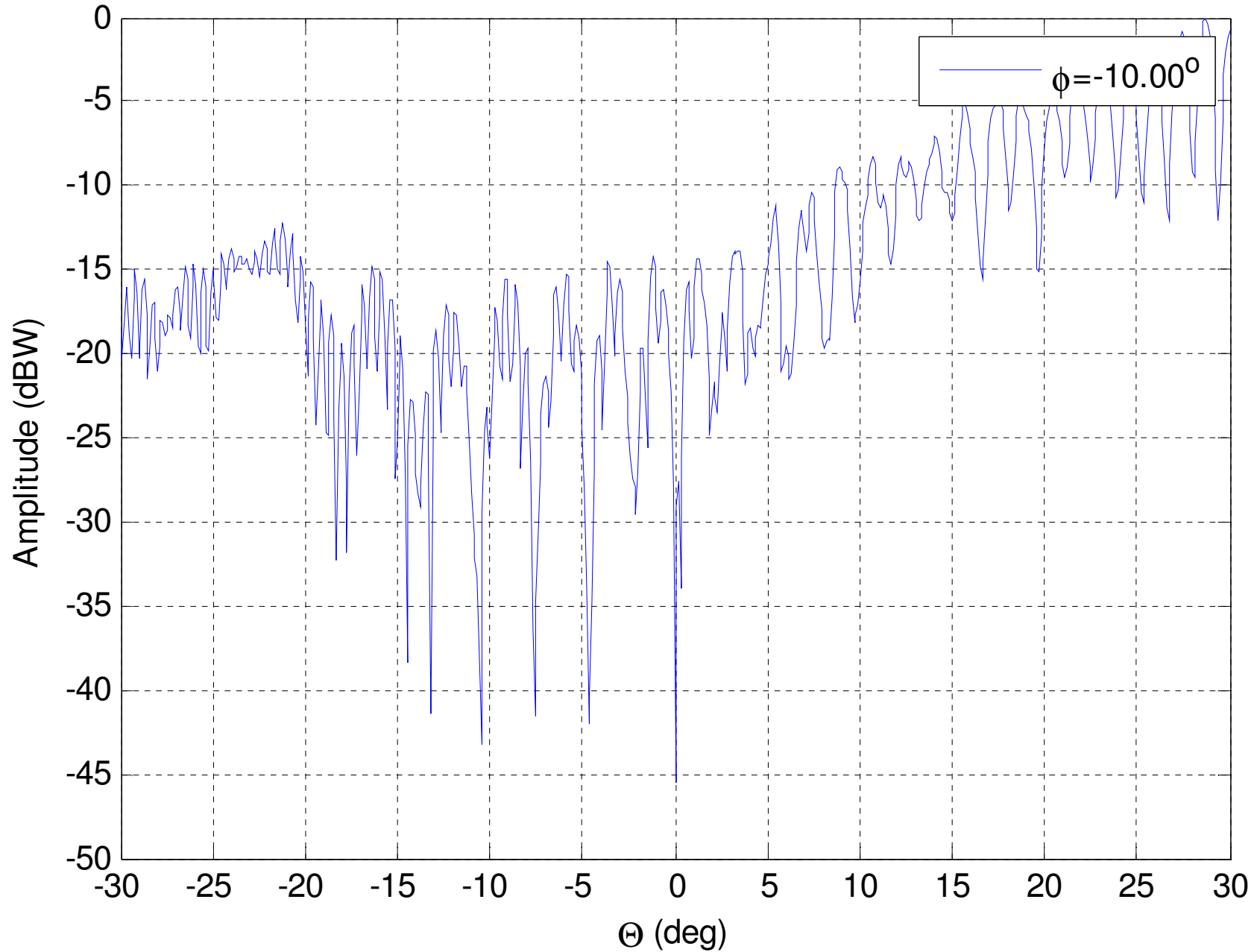
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.15 dBW, Date: 15-Dec-2011



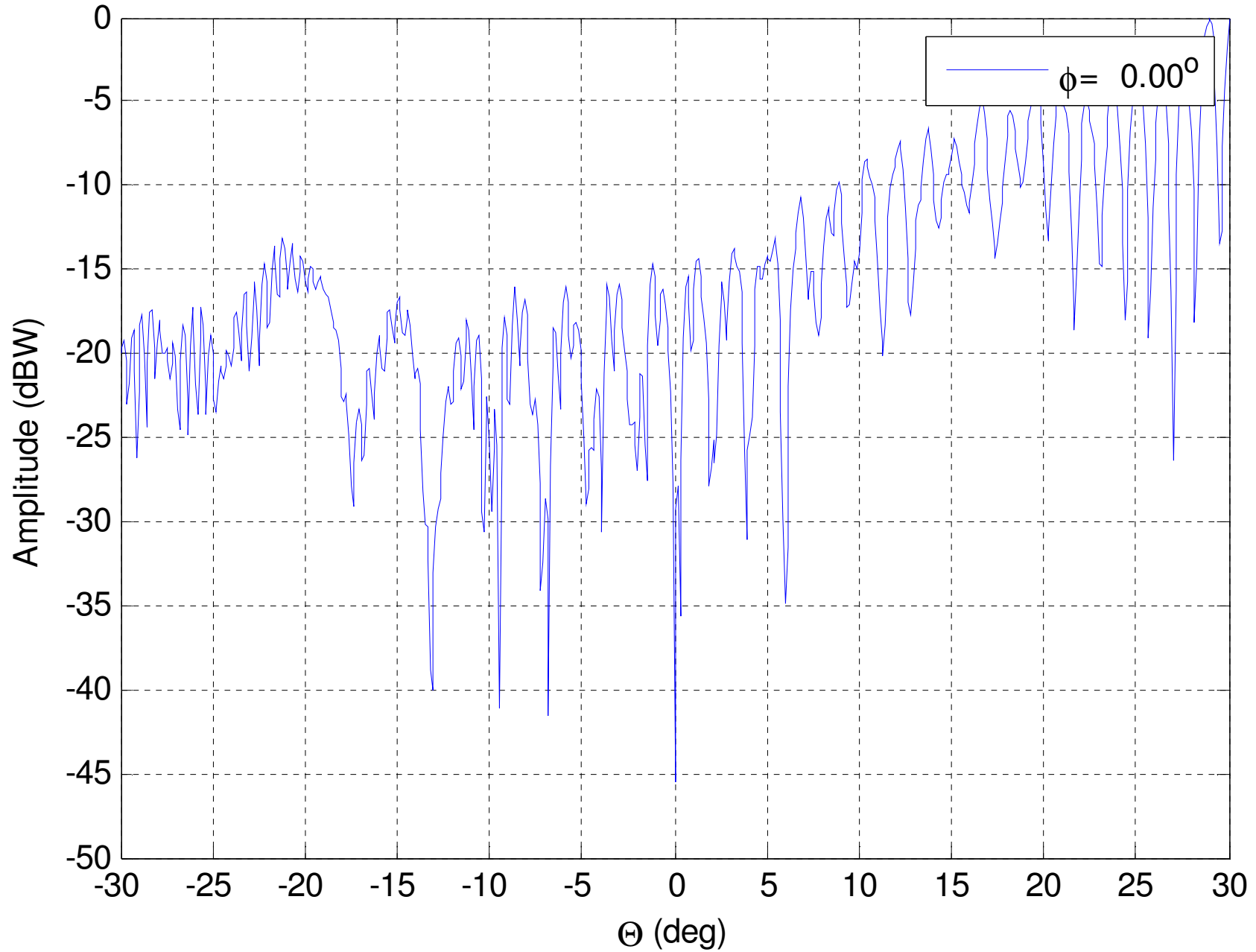
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 0.50 dBW, Date: 15-Dec-2011



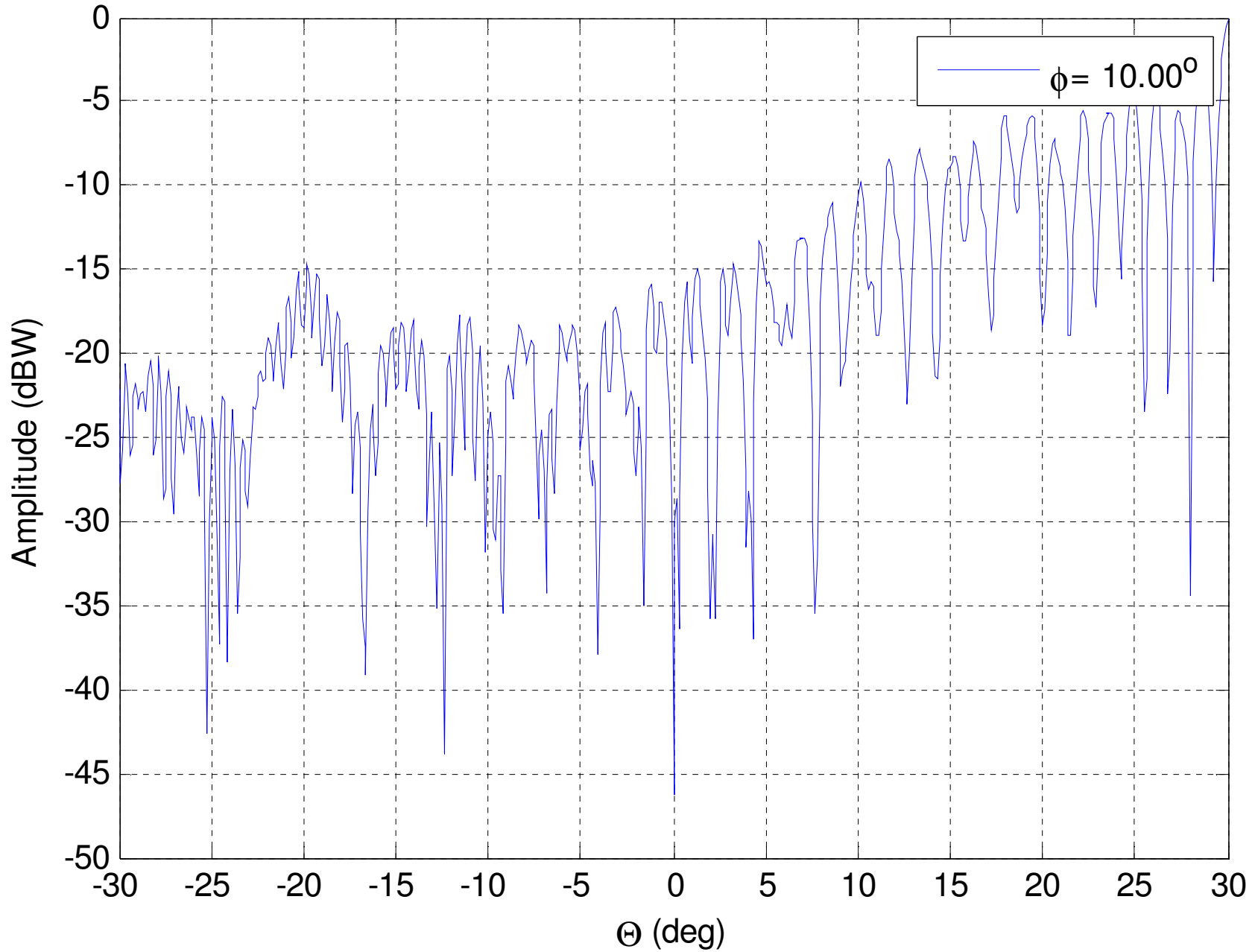
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 0.60 dBW, Date: 15-Dec-2011



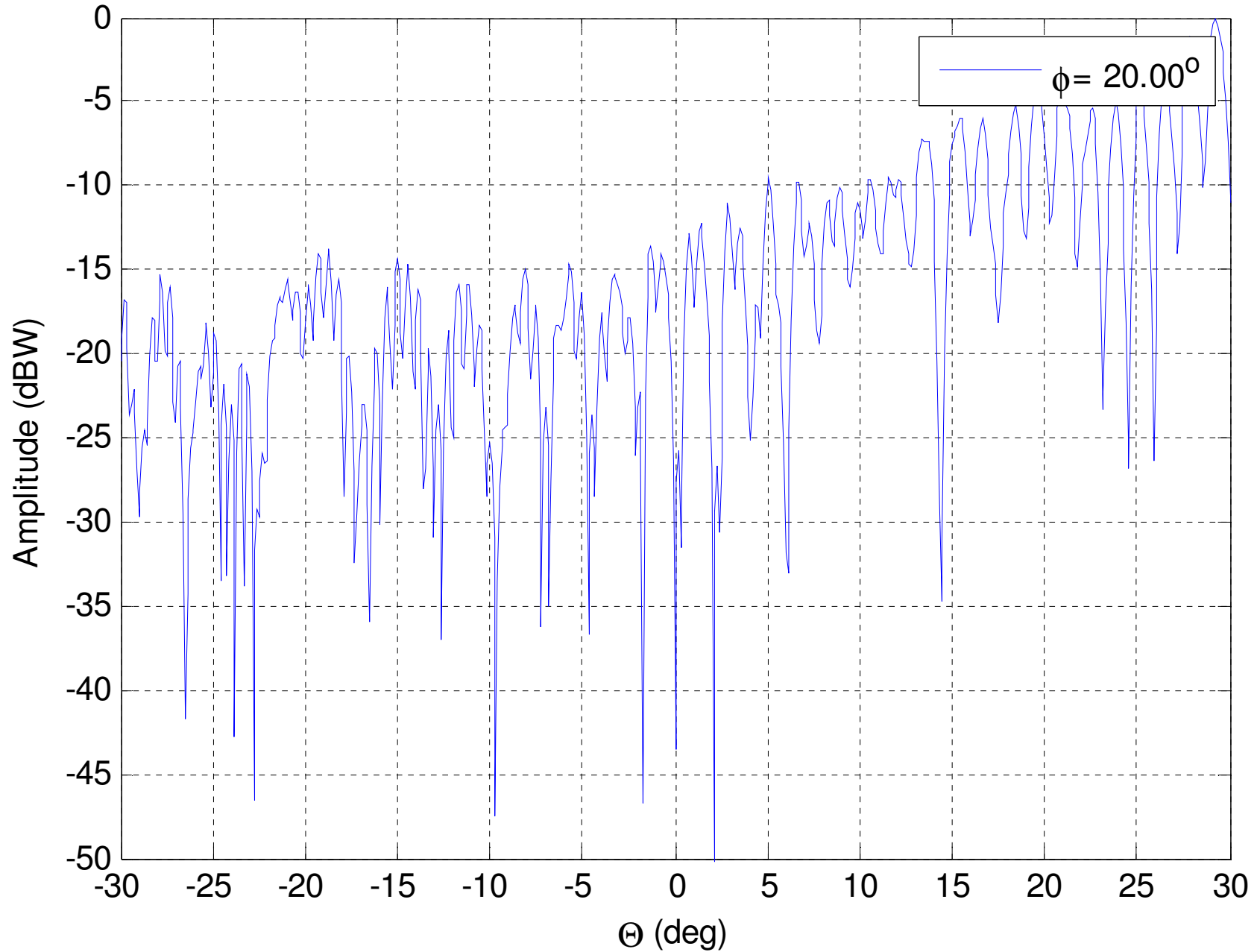
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 1.31 dBW, Date: 15-Dec-2011



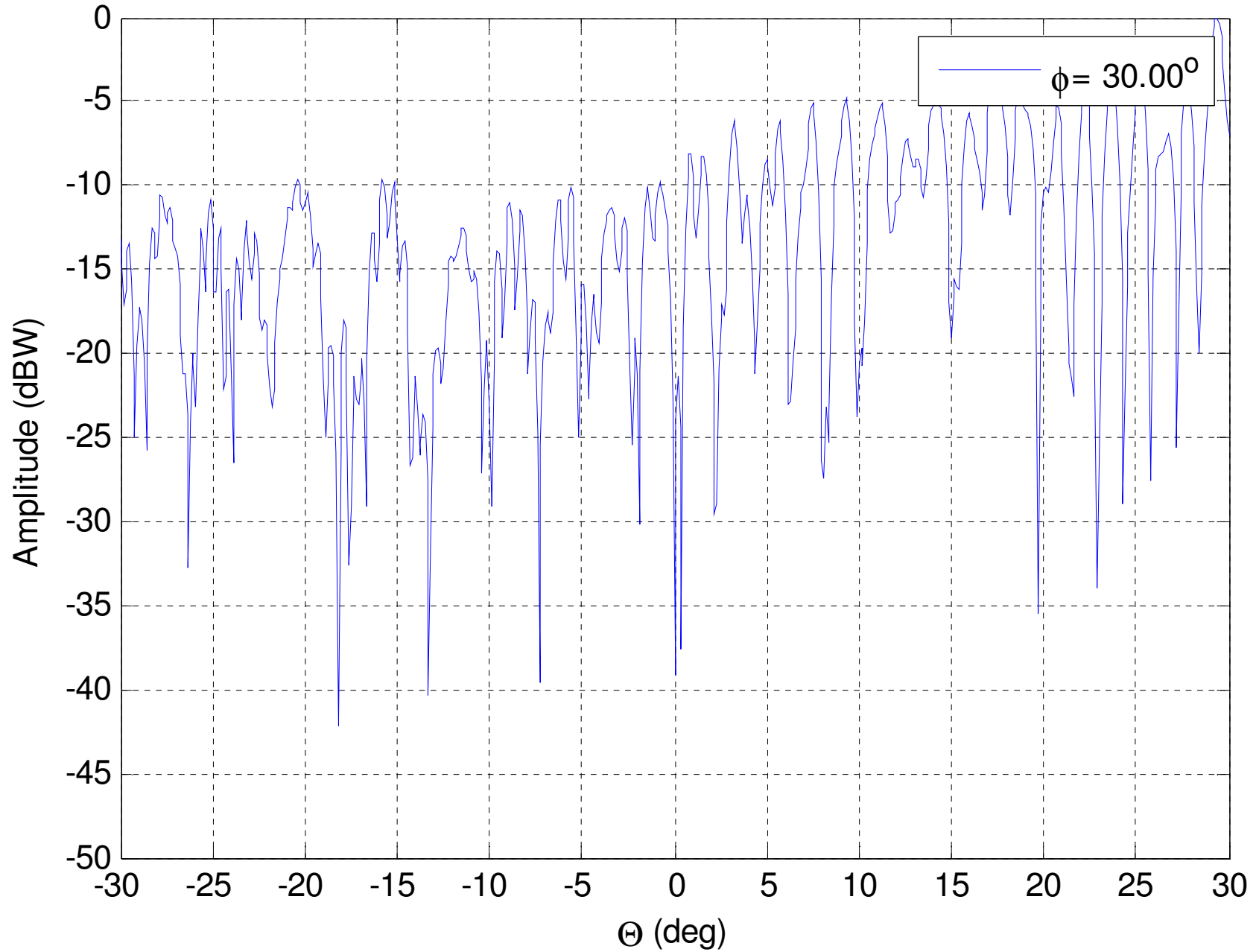
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -1.48 dBW, Date: 15-Dec-2011



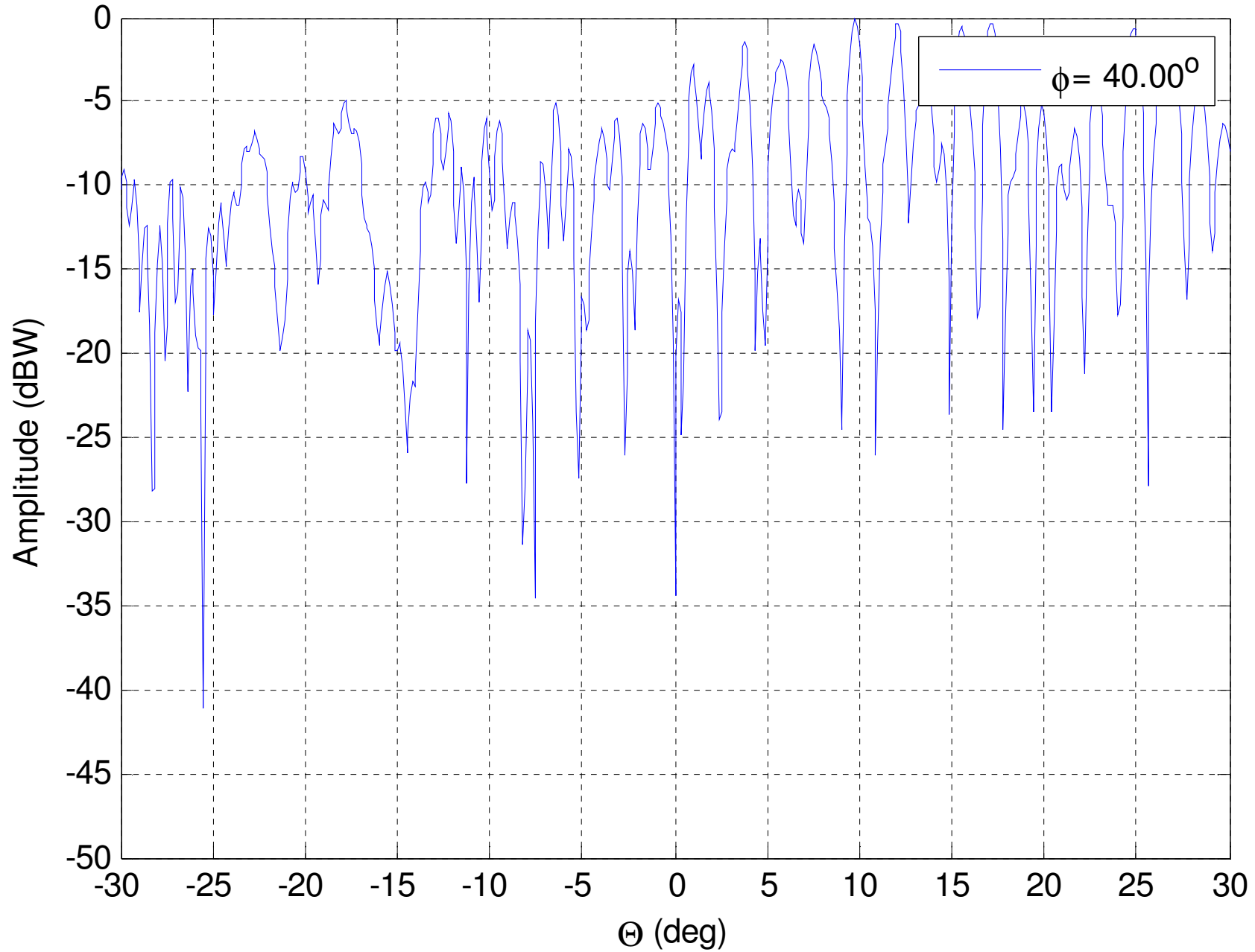
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -5.80 dBW, Date: 15-Dec-2011



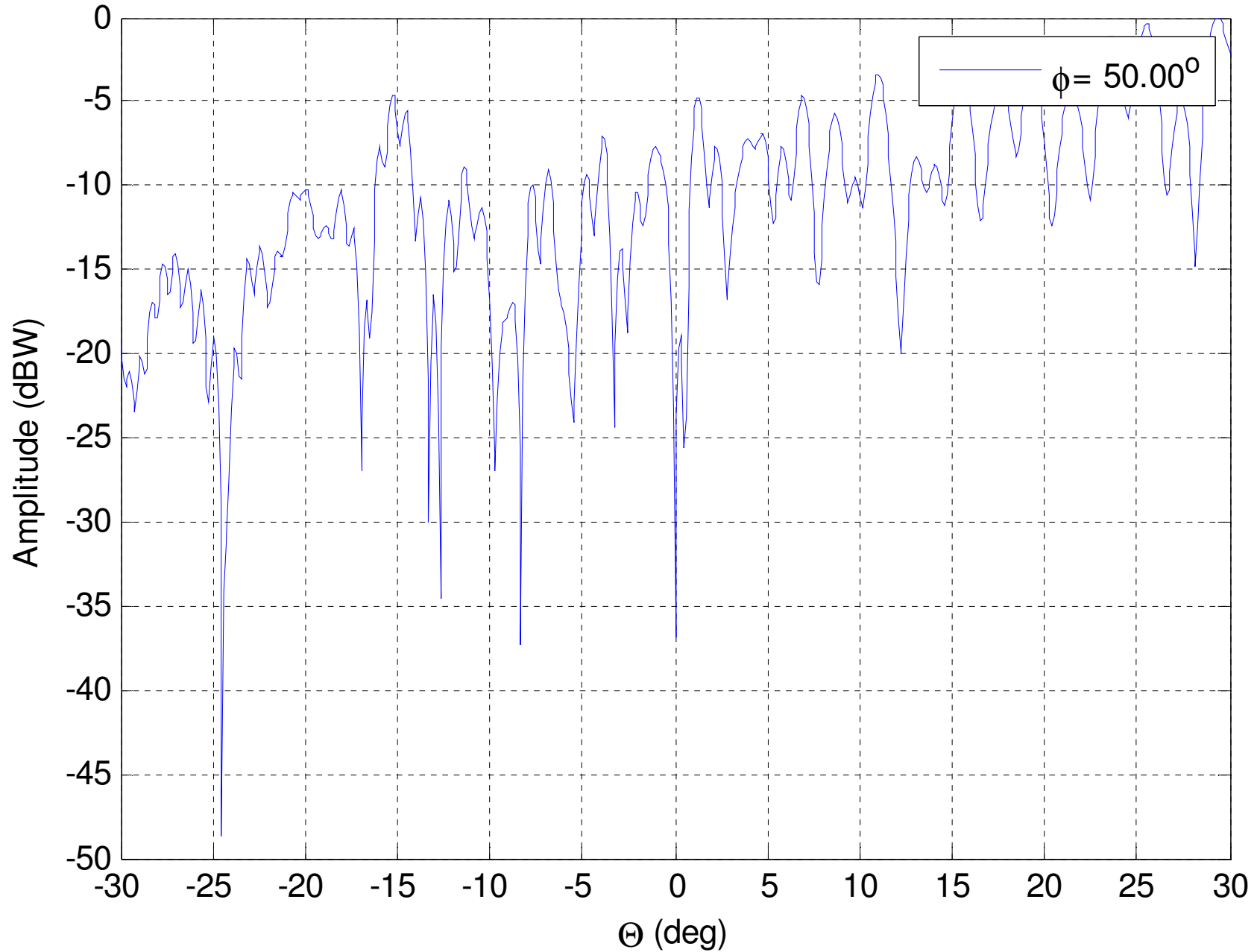
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -10.50 dBW, Date: 15-Dec-2011



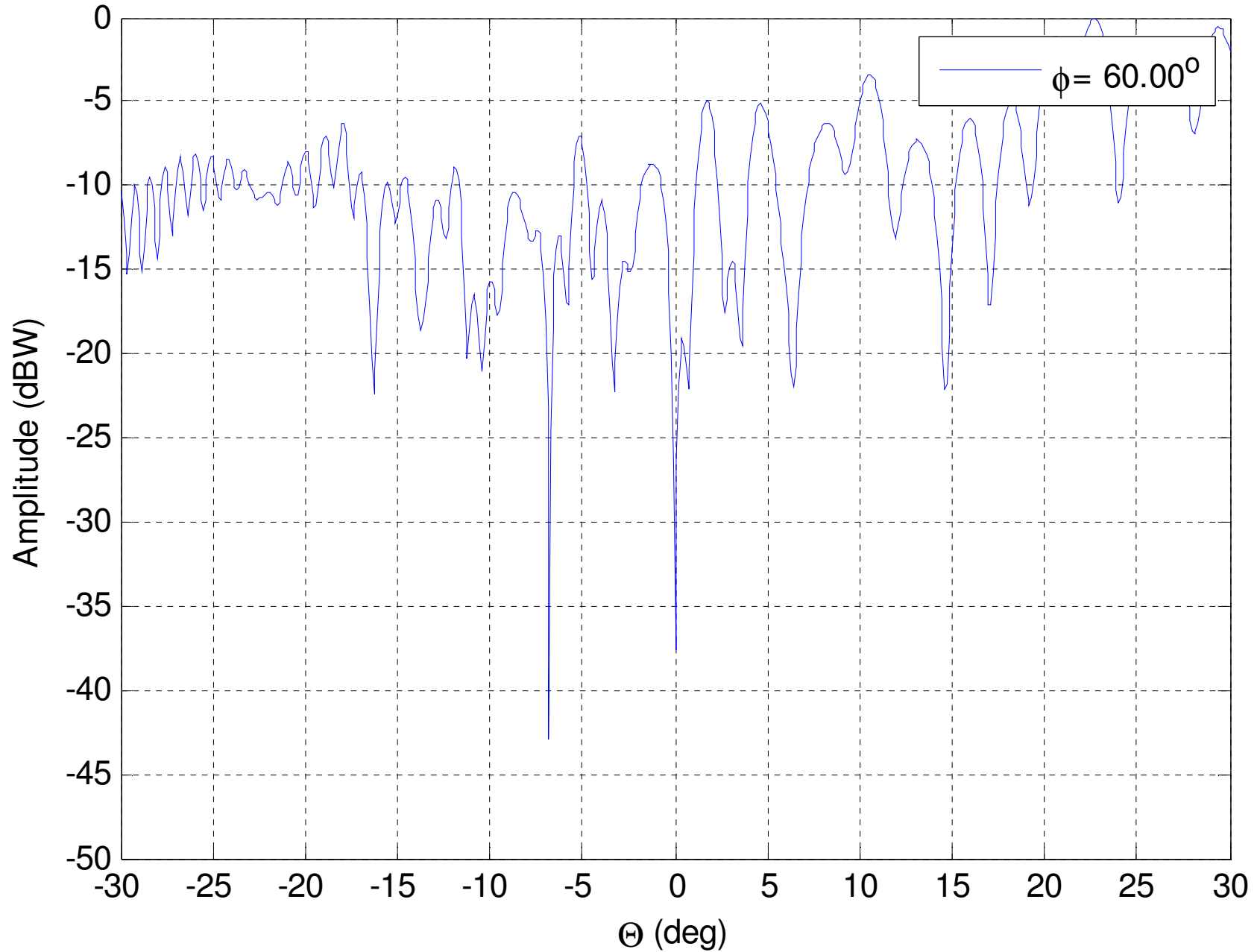
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

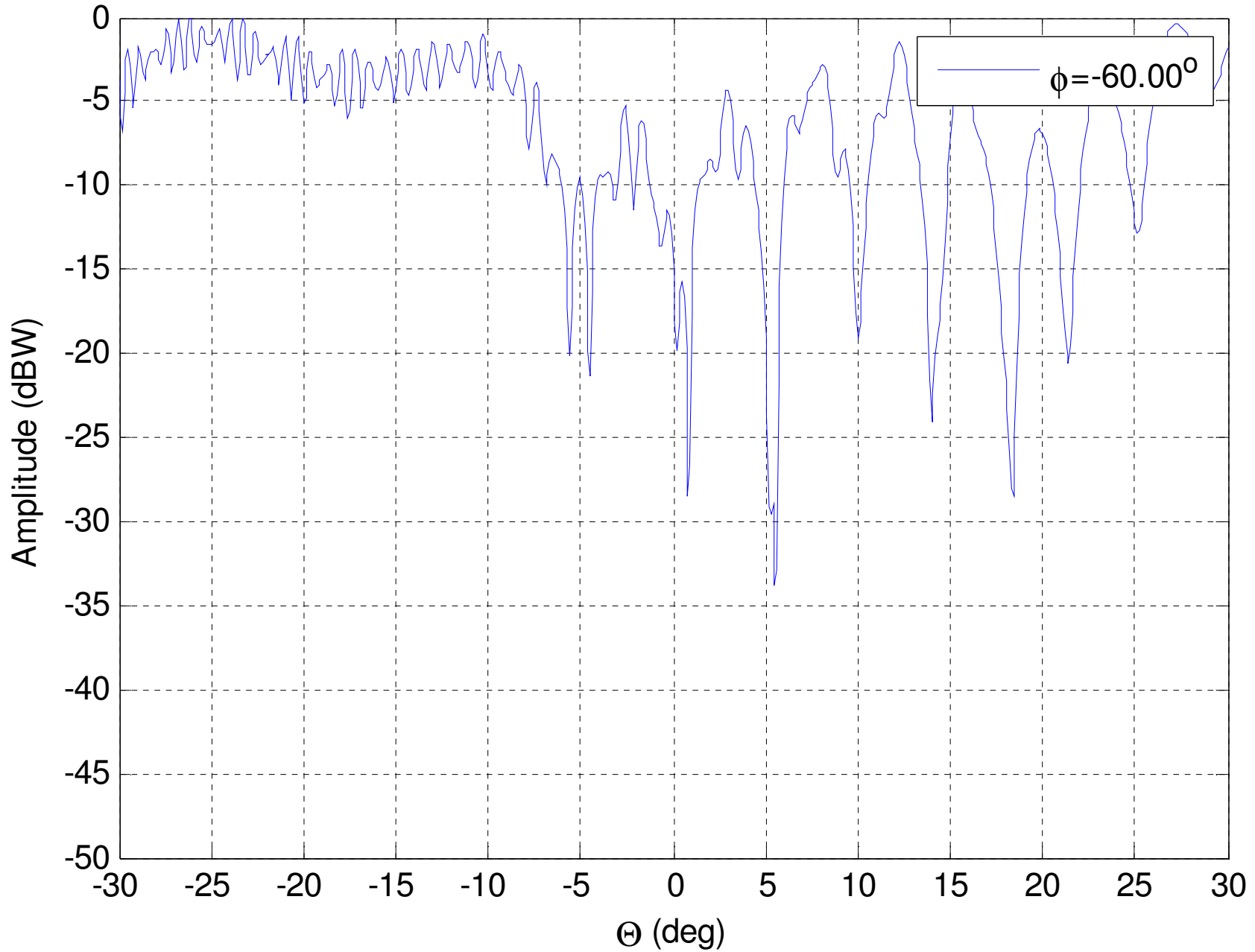
Input file: tx-17.3-lhcp-60.cut, Peak: -7.39 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

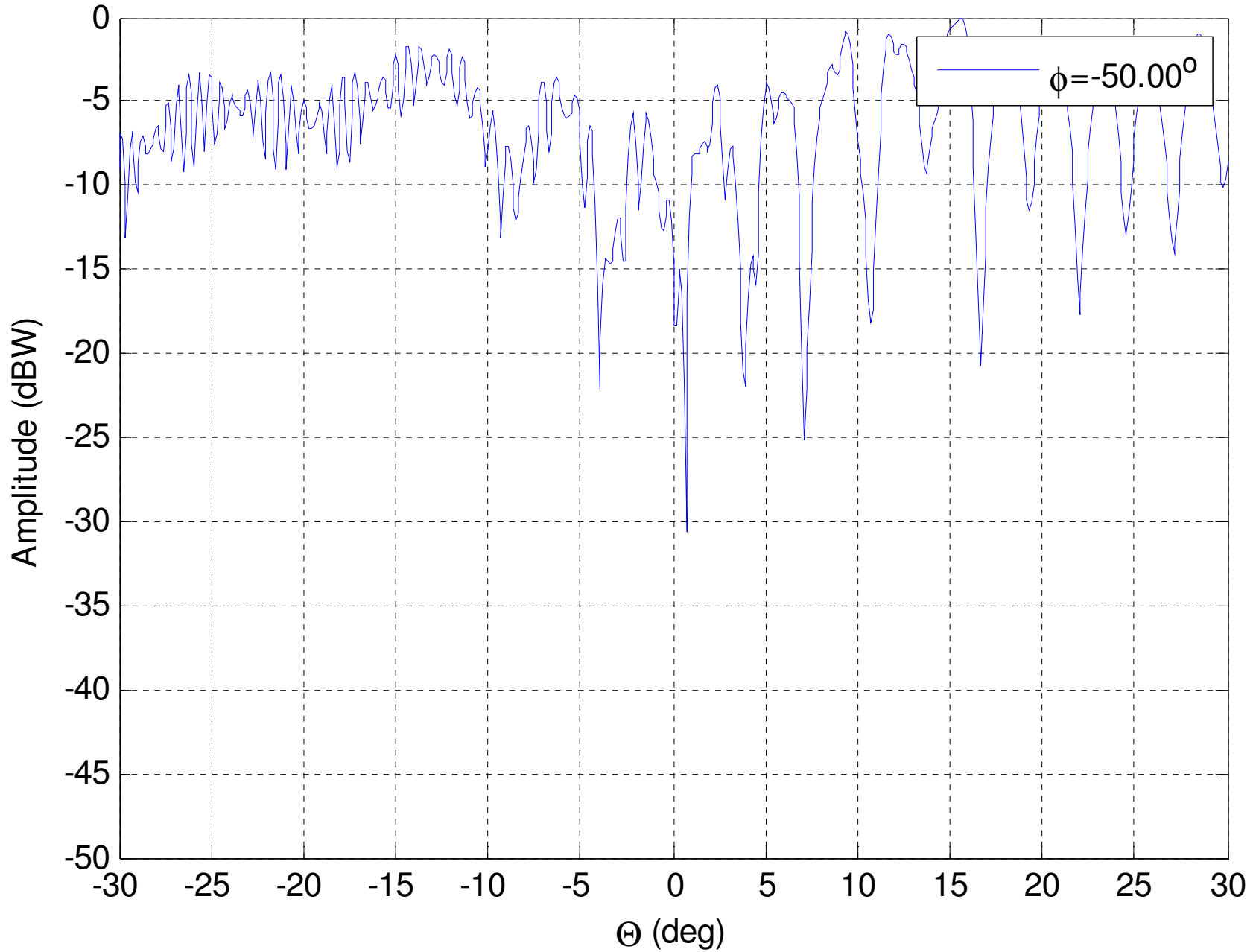
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -8.26 dBW, Date: 15-Dec-2011



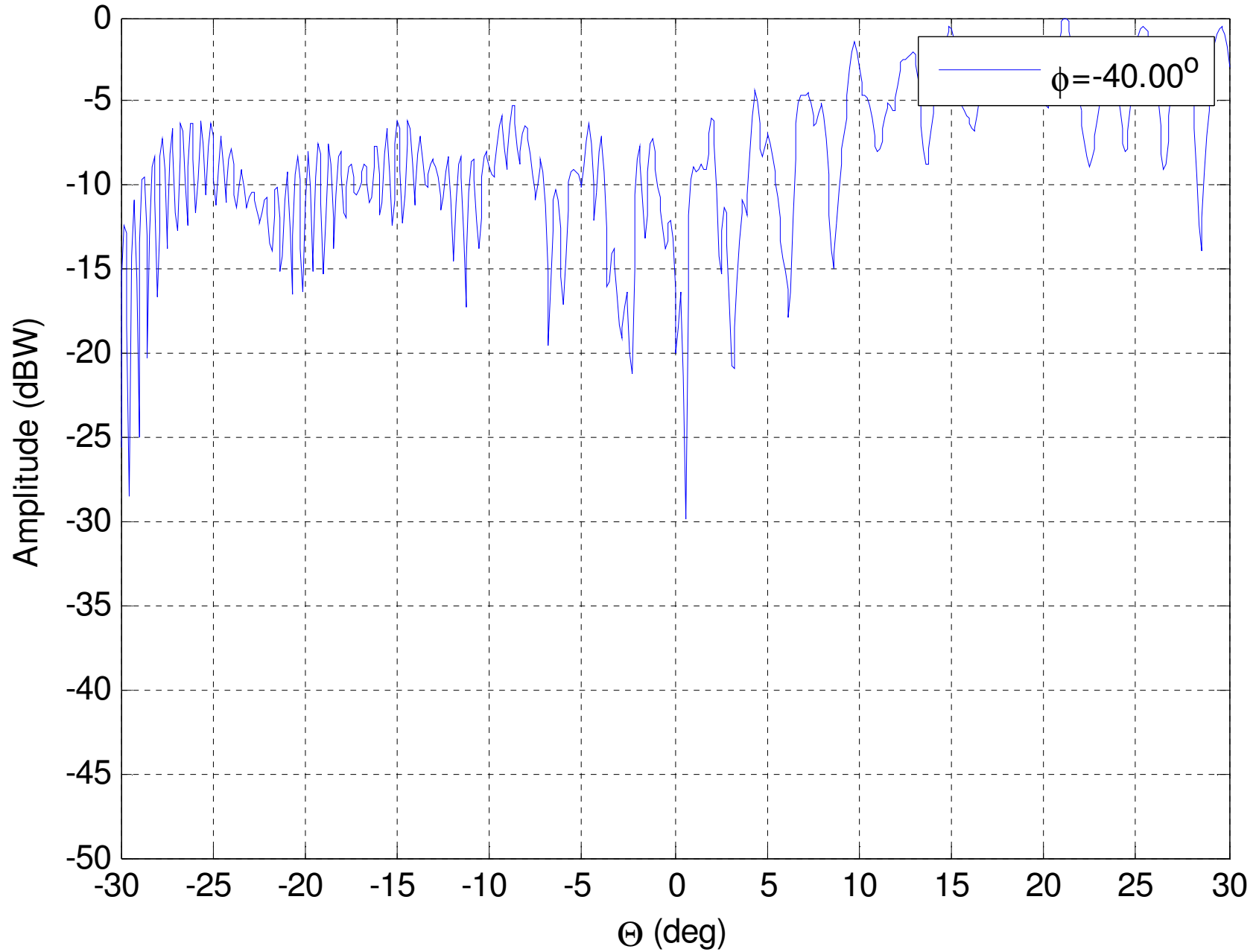
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.60 dBW, Date: 15-Dec-2011



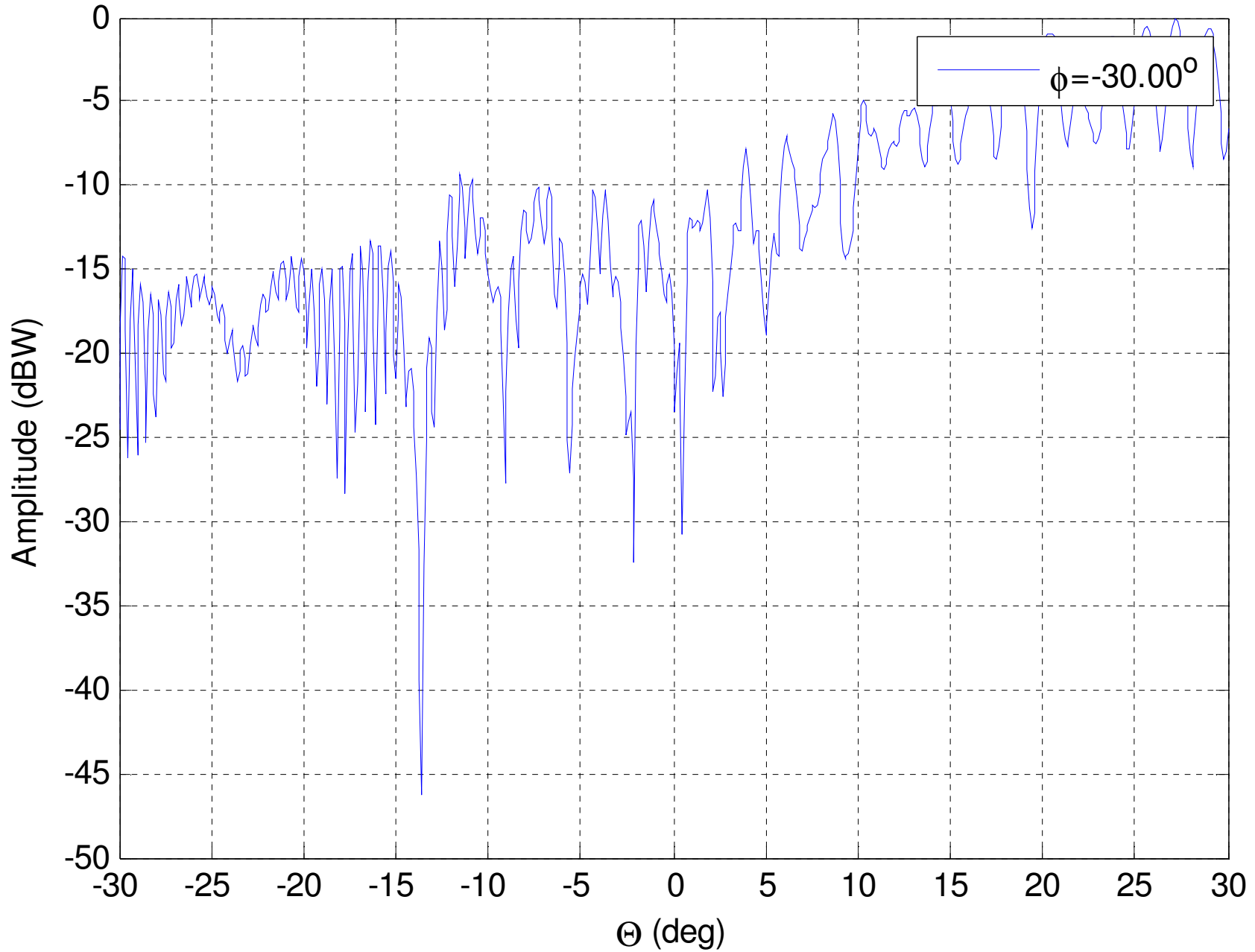
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -7.12 dBW, Date: 15-Dec-2011



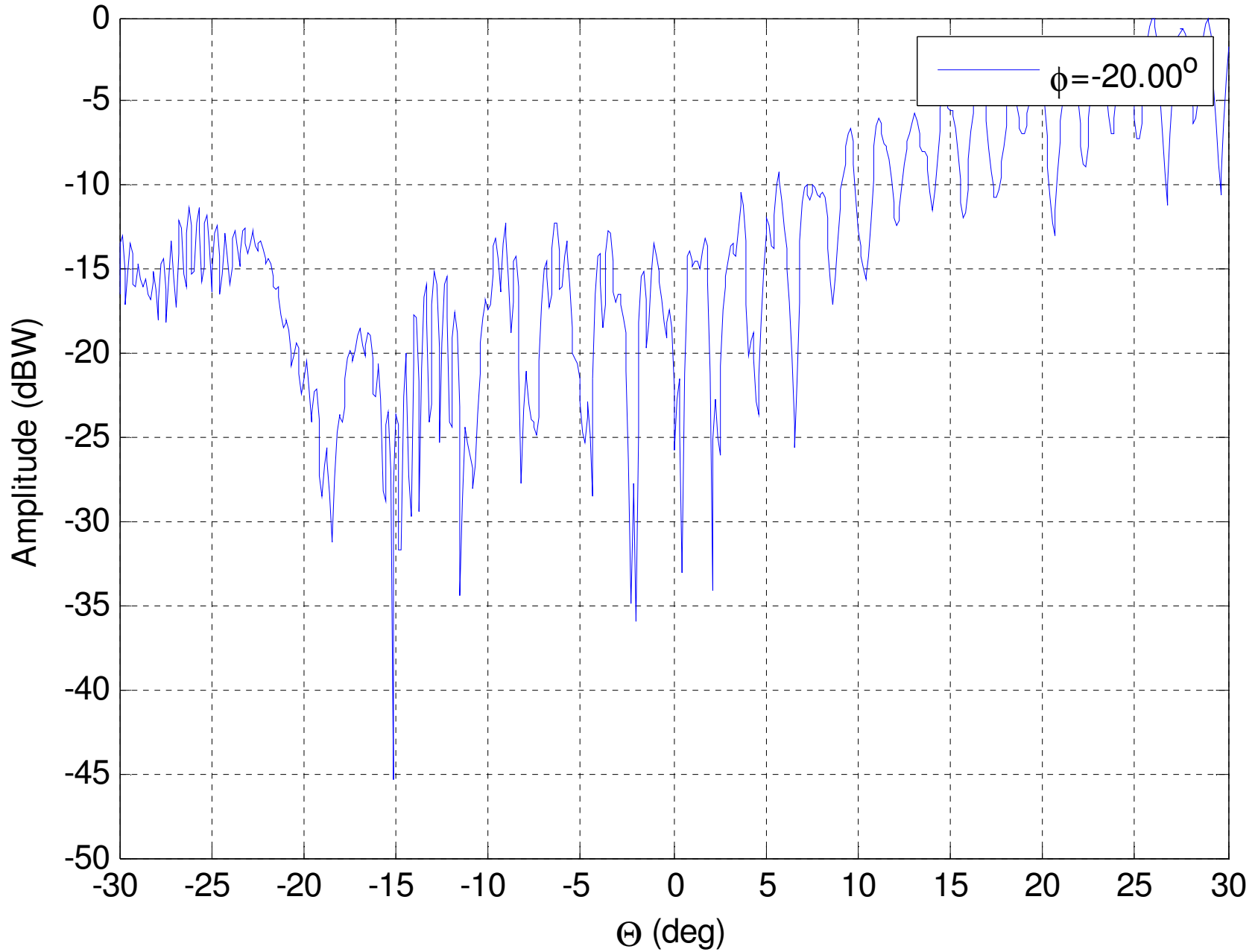
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -3.60 dBW, Date: 15-Dec-2011



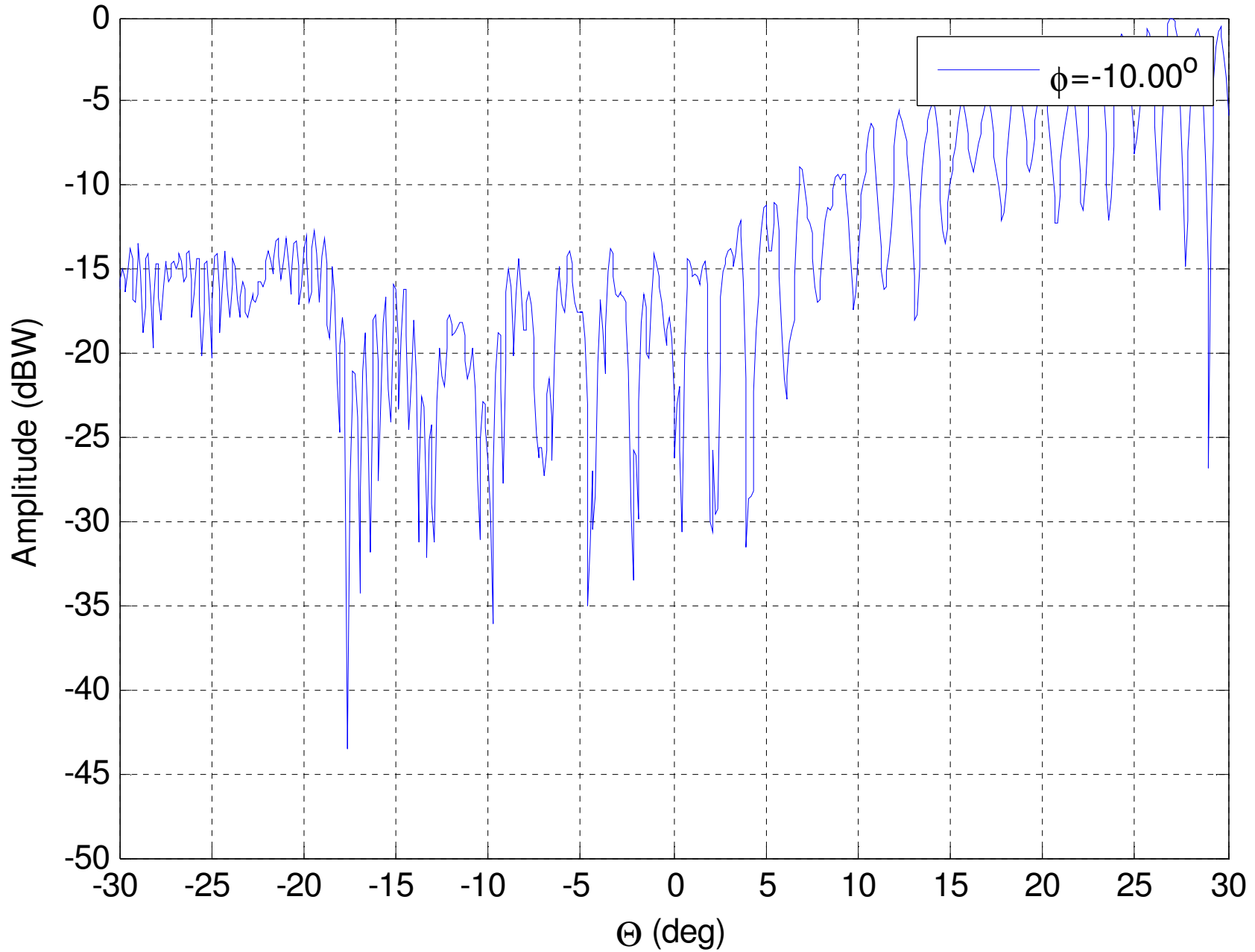
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -1.27 dBW, Date: 15-Dec-2011



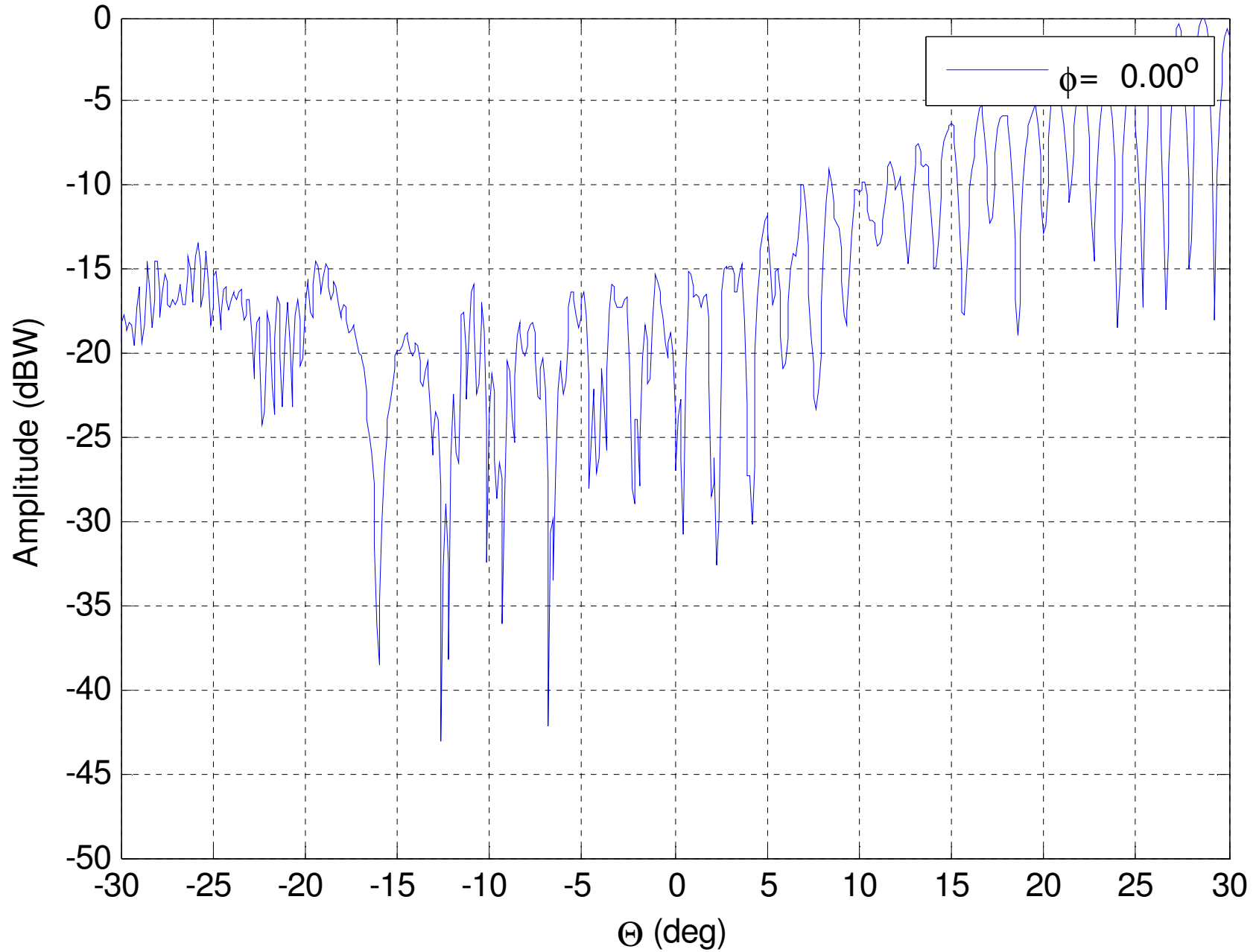
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -0.62 dBW, Date: 15-Dec-2011



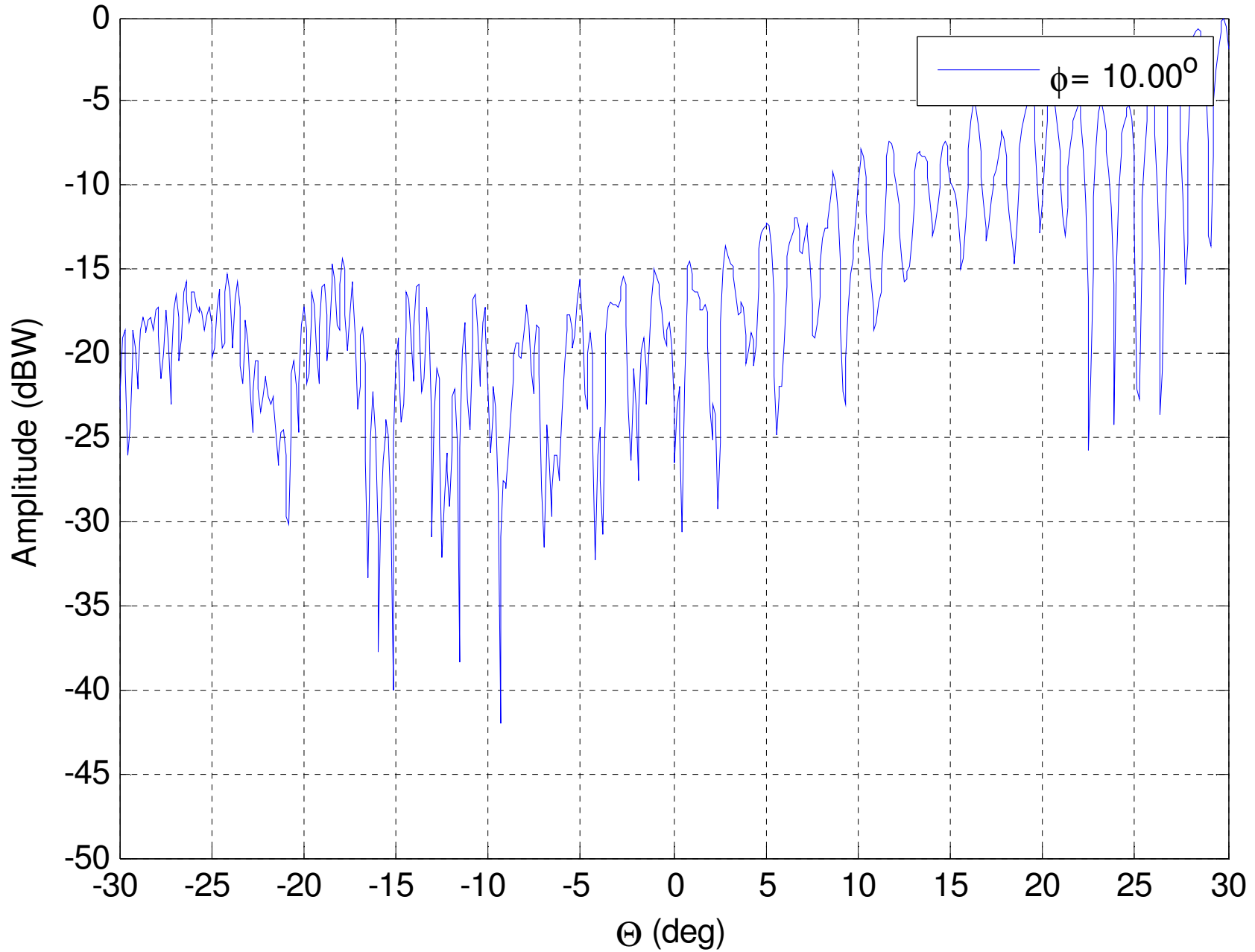
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 0.38 dBW, Date: 15-Dec-2011



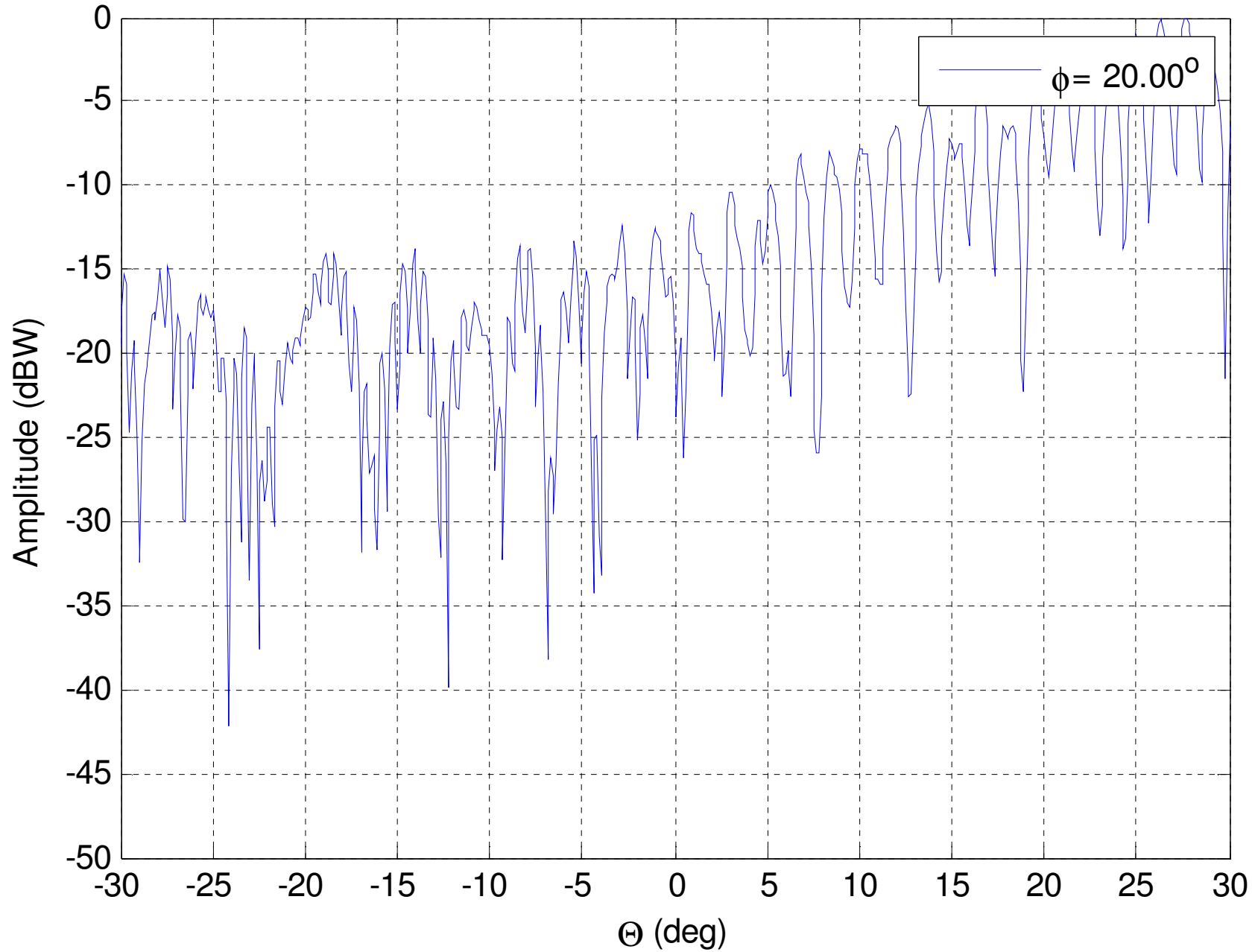
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -0.04 dBW, Date: 15-Dec-2011



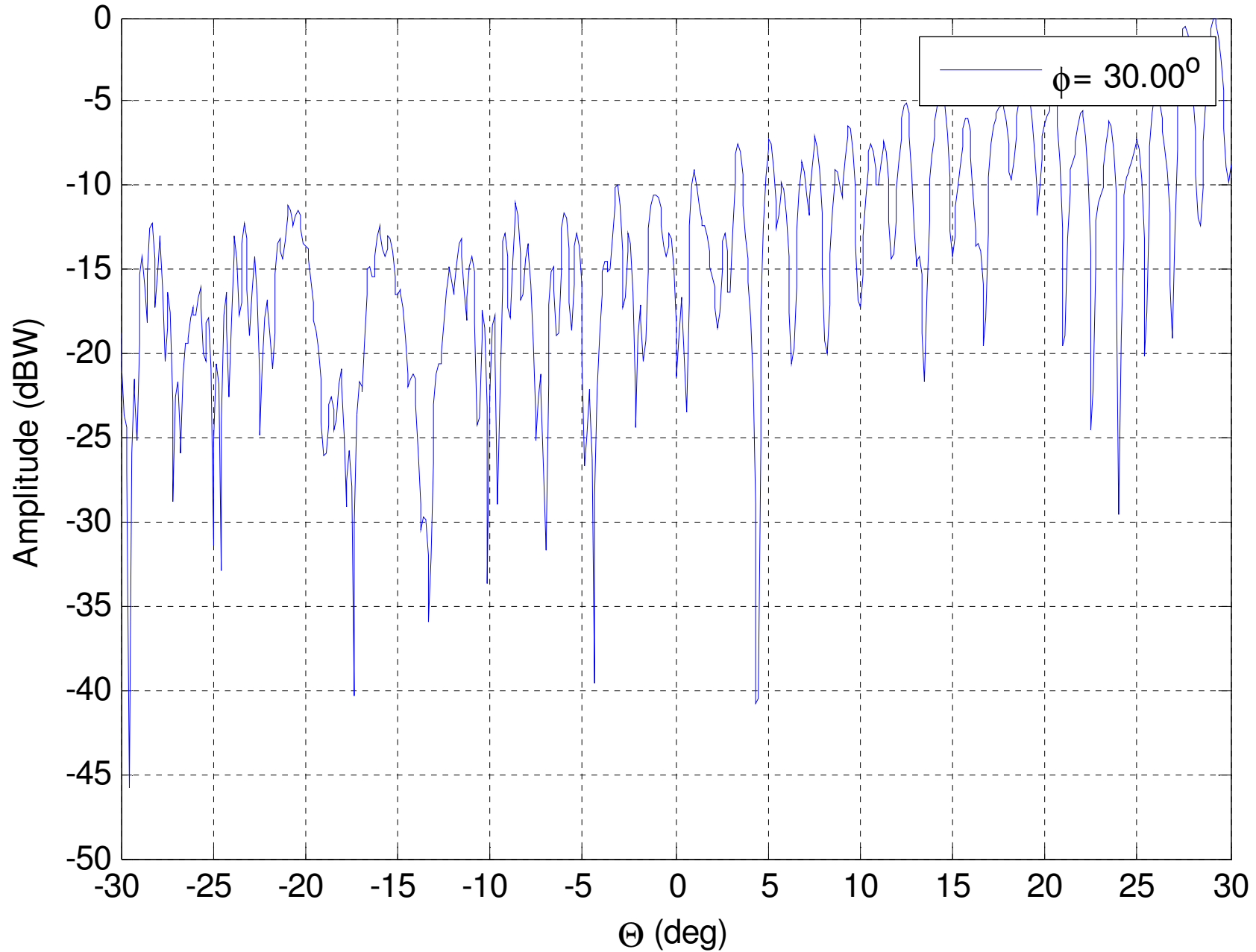
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -2.69 dBW, Date: 15-Dec-2011



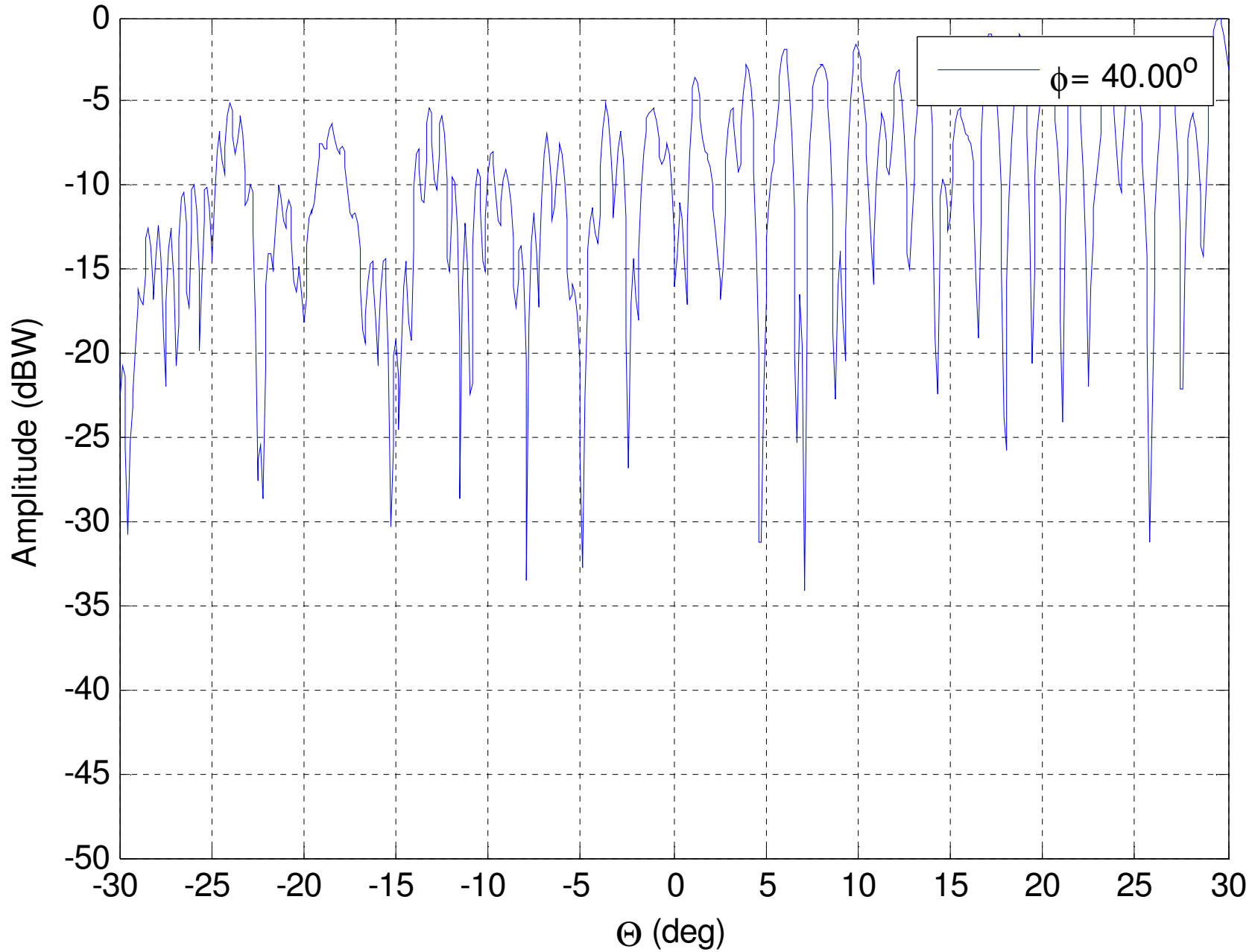
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -5.00 dBW, Date: 15-Dec-2011



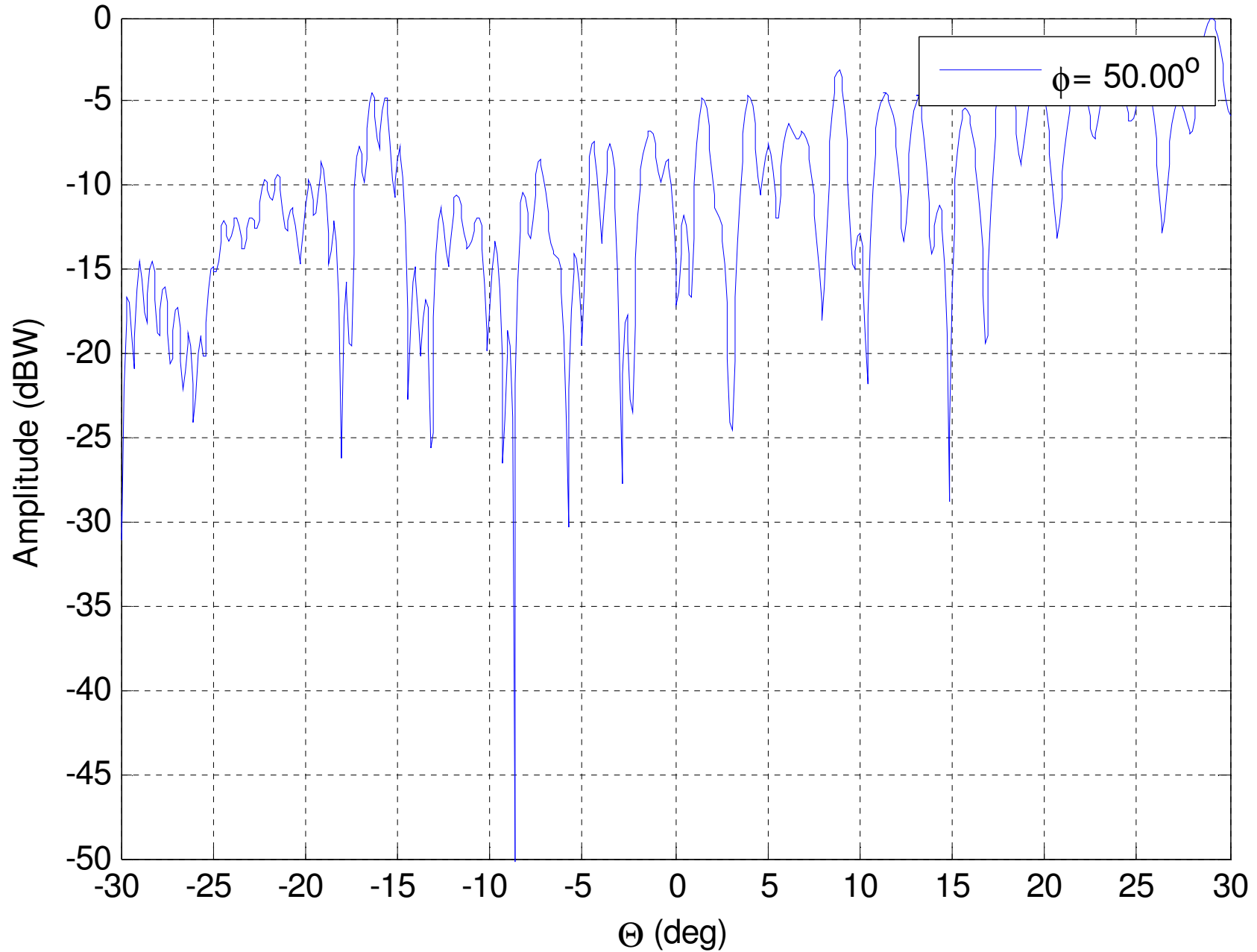
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.12 dBW, Date: 15-Dec-2011



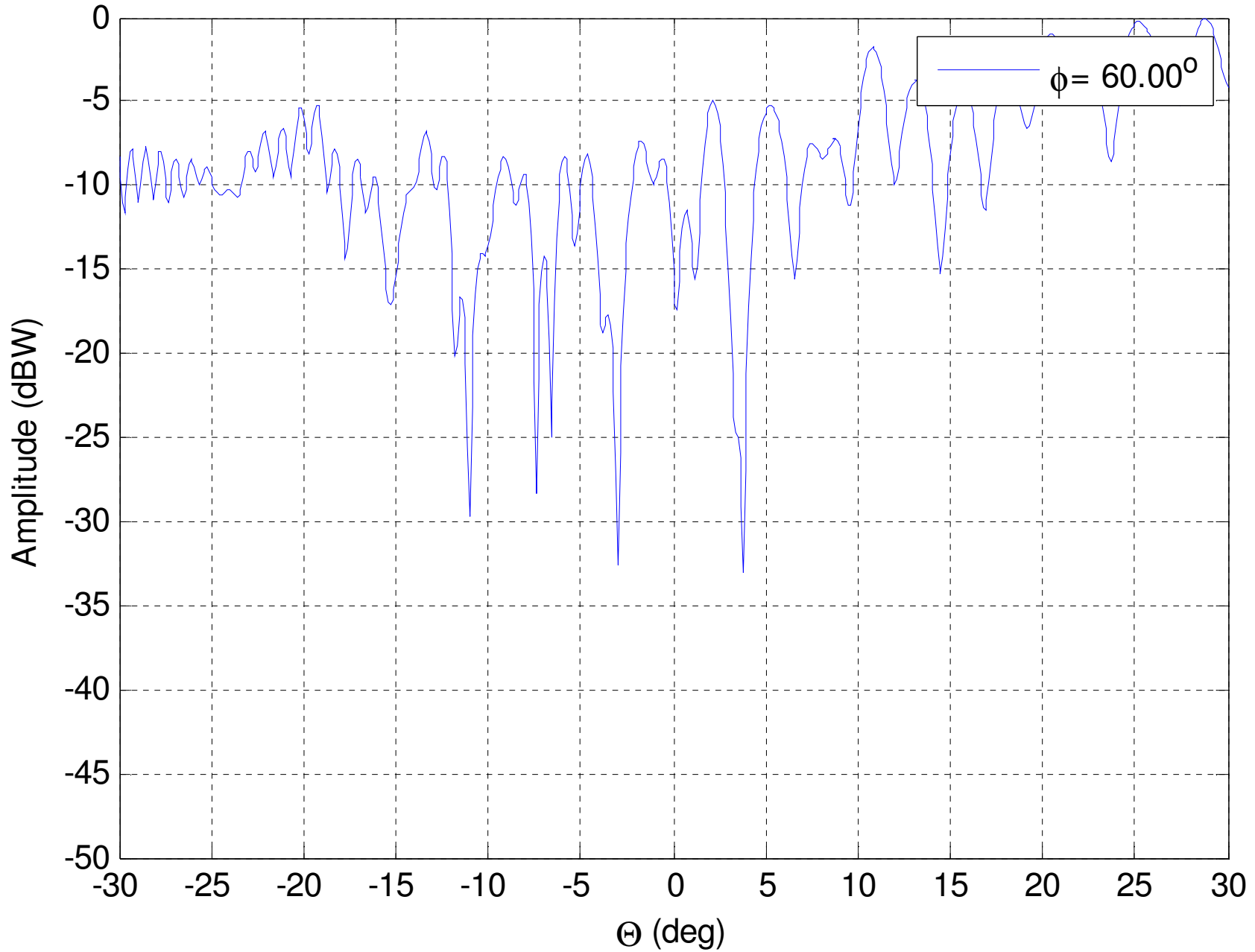
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -8.75 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

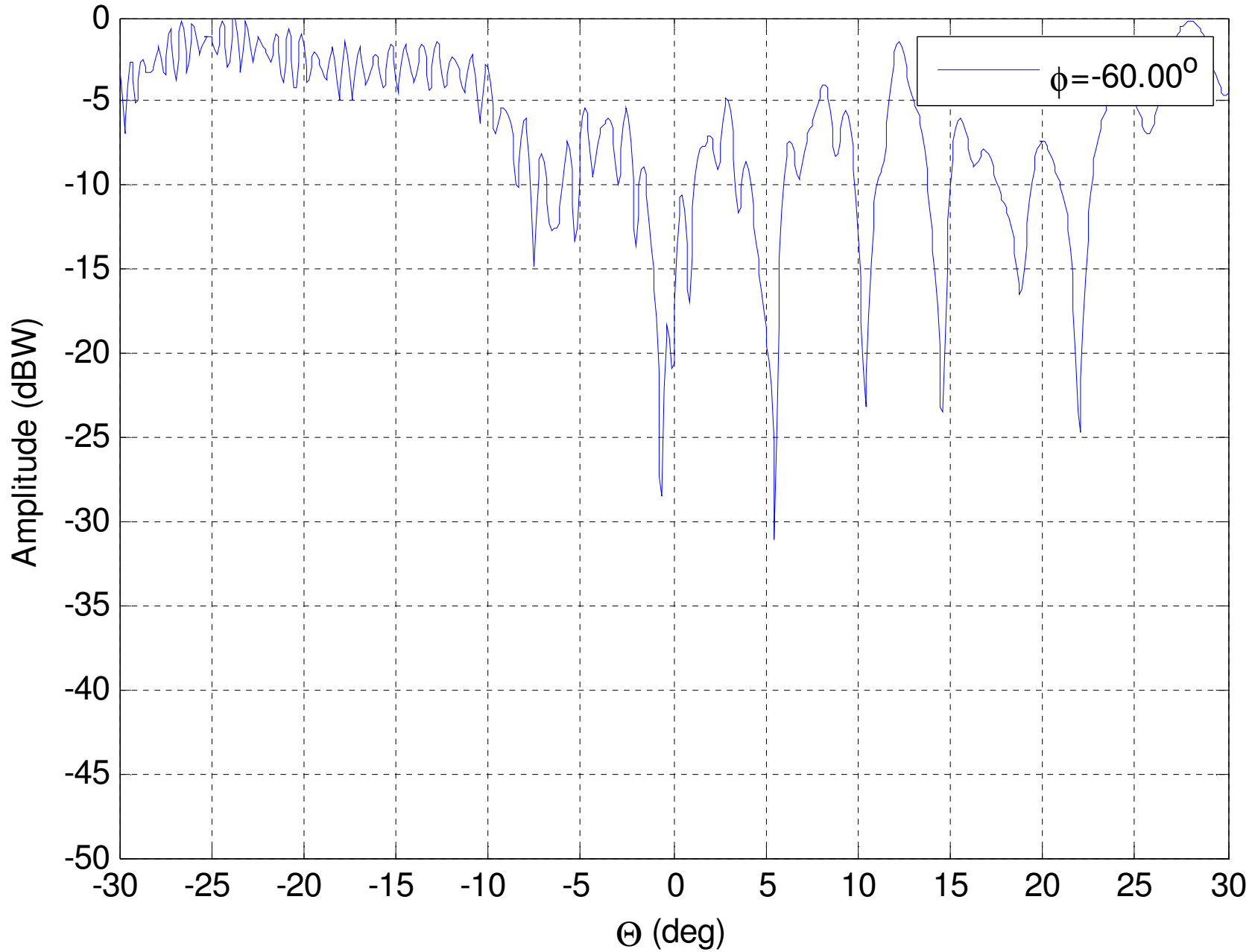
Input file: tx-17.5-rhcp-60.cut, Peak: -8.27 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

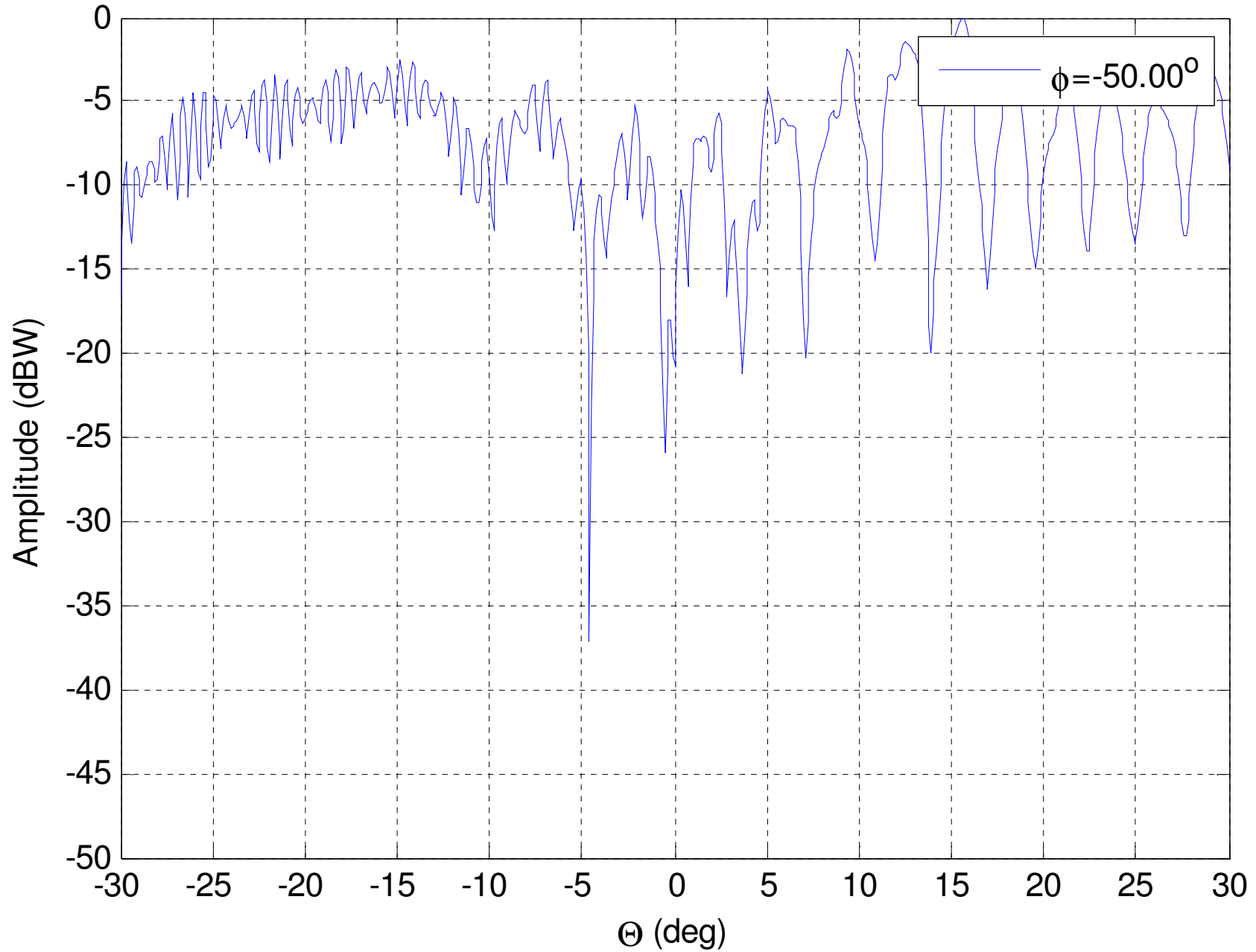
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -7.86 dBW, Date: 15-Dec-2011



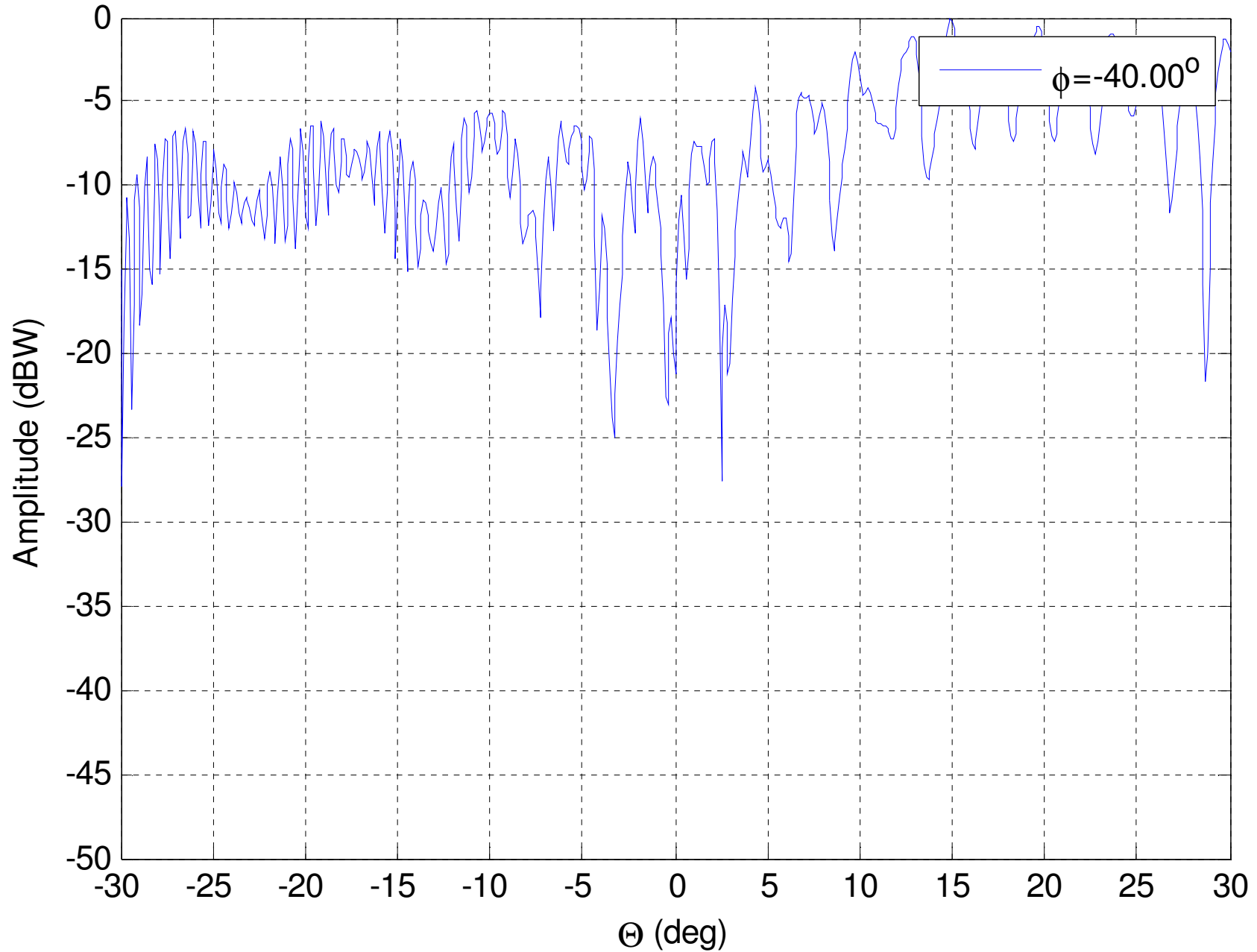
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.69 dBW, Date: 15-Dec-2011



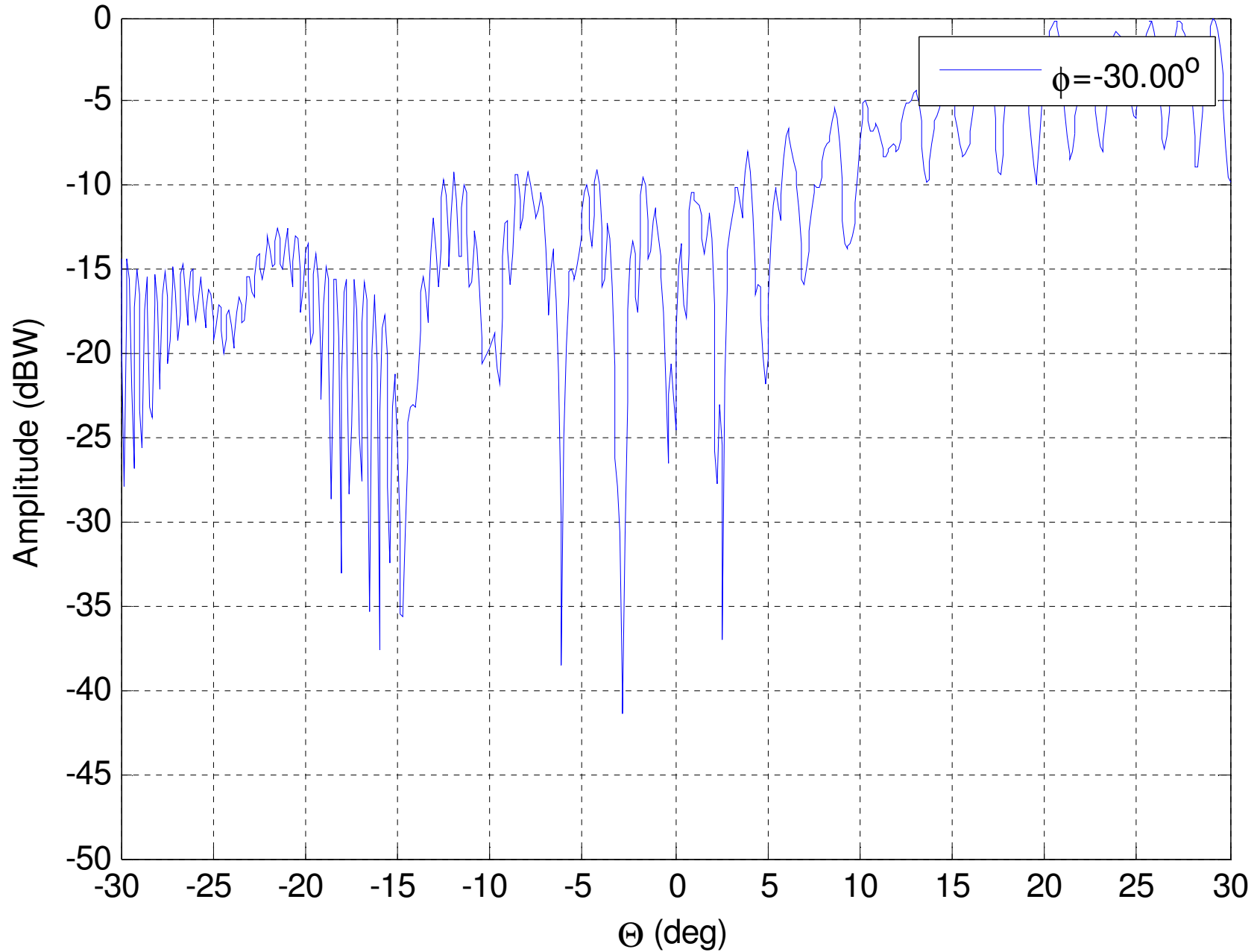
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.20 dBW, Date: 15-Dec-2011



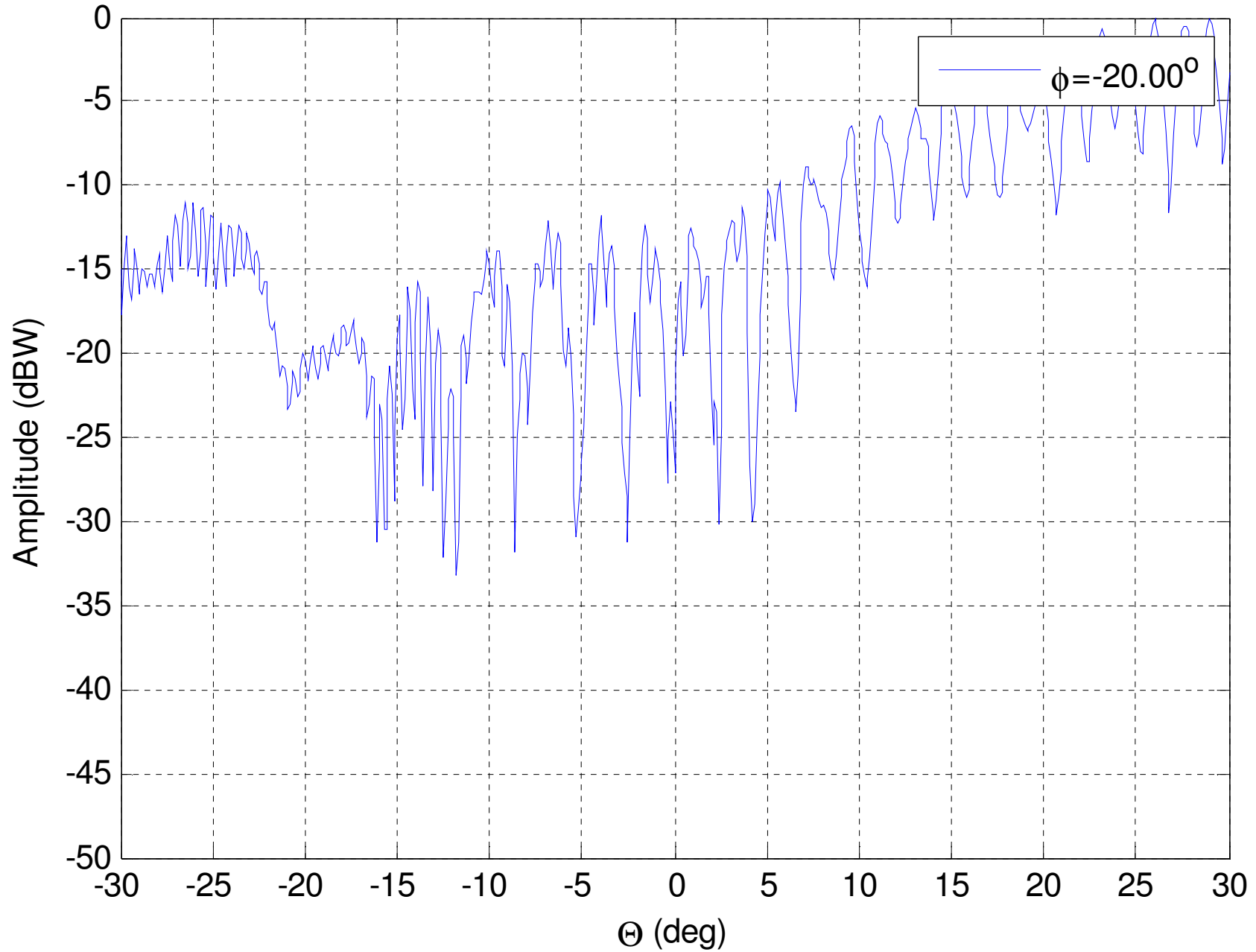
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -3.92 dBW, Date: 15-Dec-2011



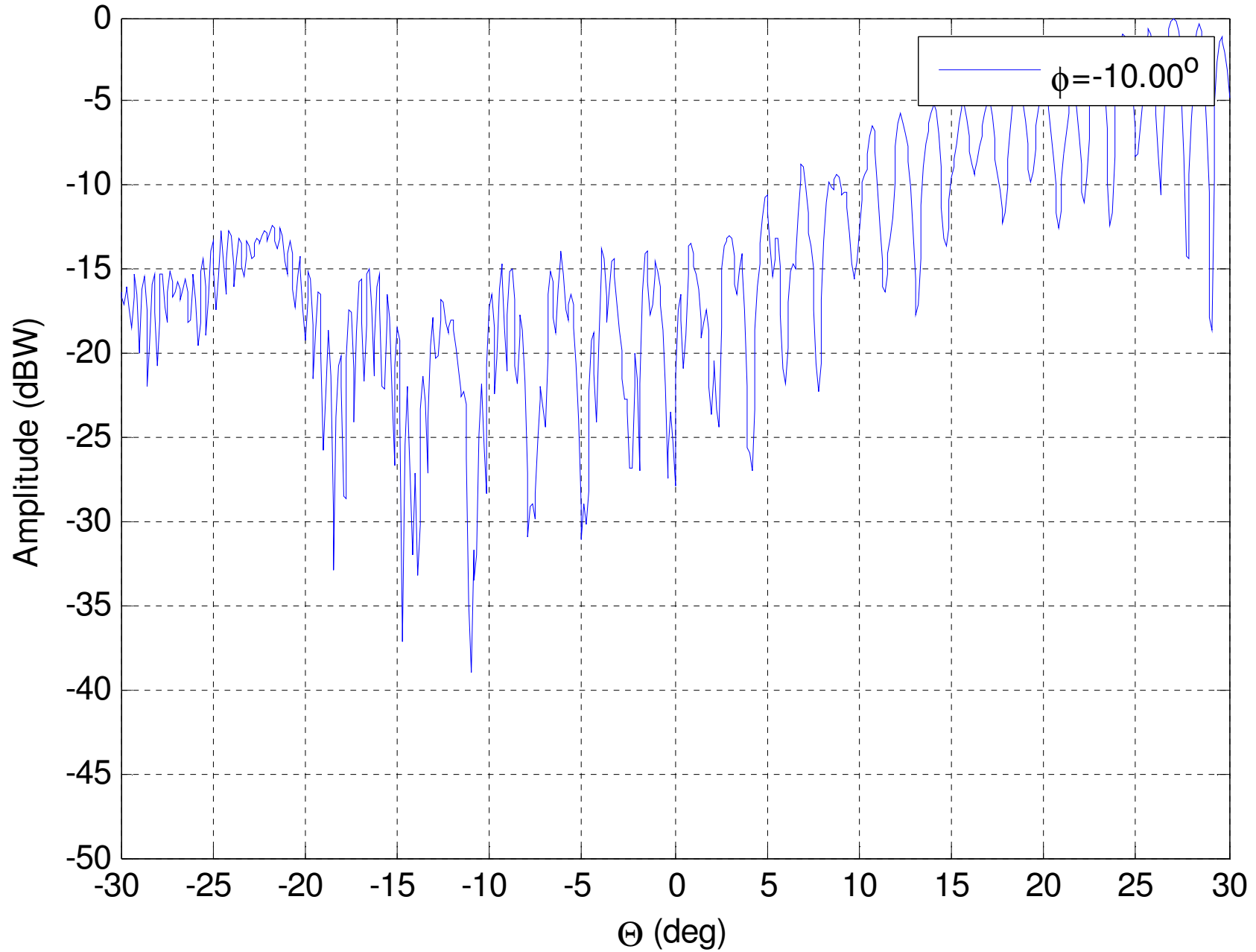
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -1.39 dBW, Date: 15-Dec-2011



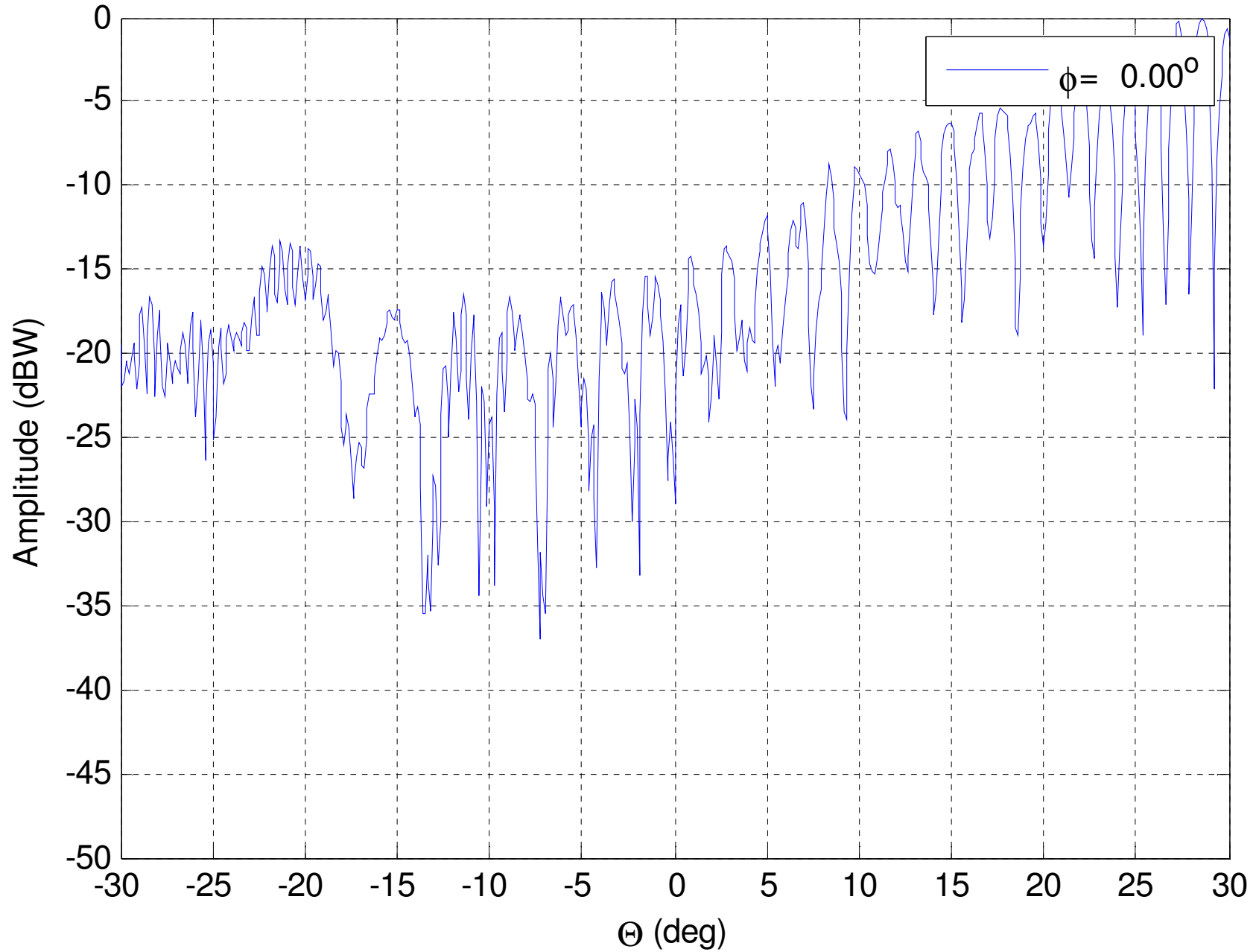
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -0.50 dBW, Date: 15-Dec-2011



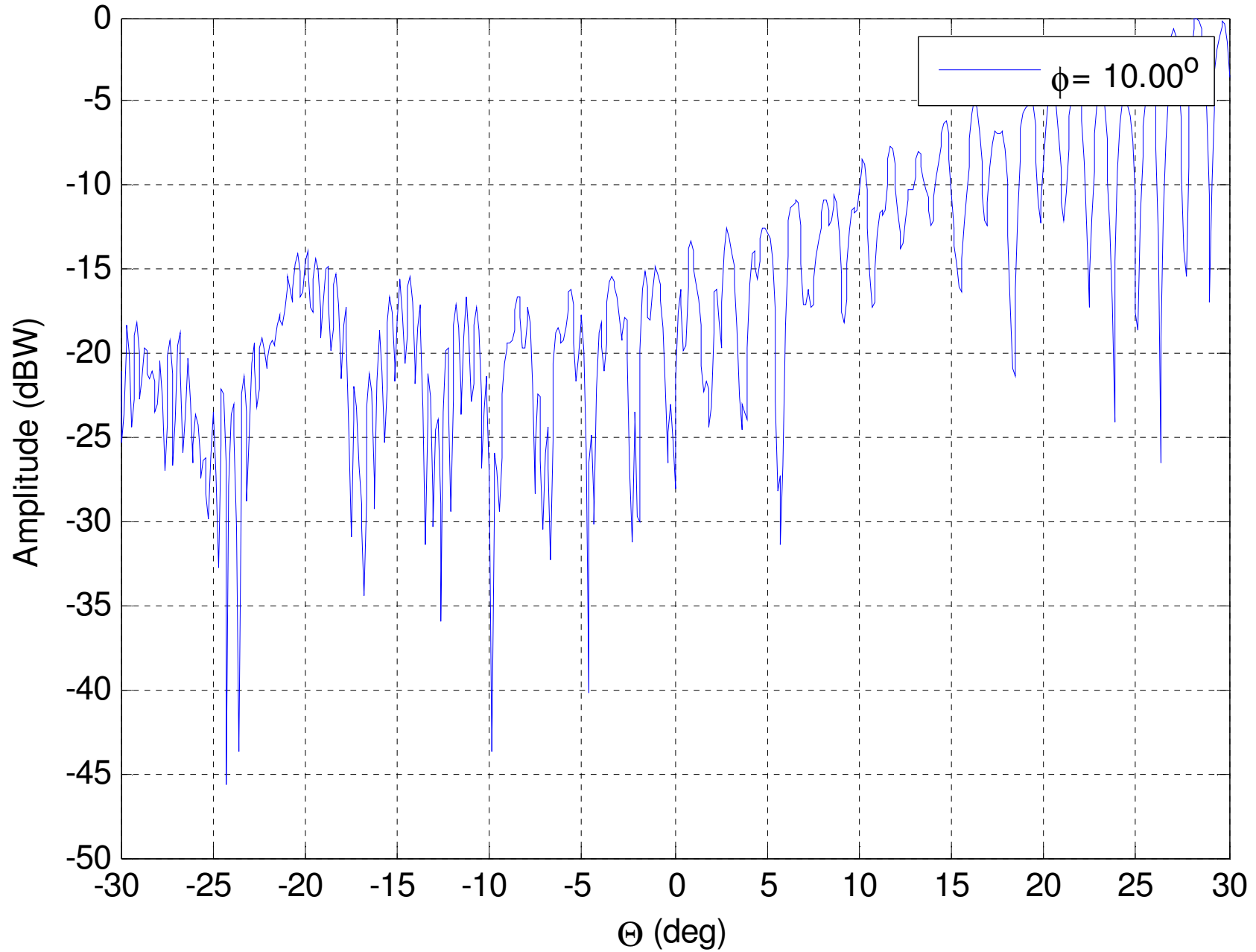
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 0.42 dBW, Date: 15-Dec-2011



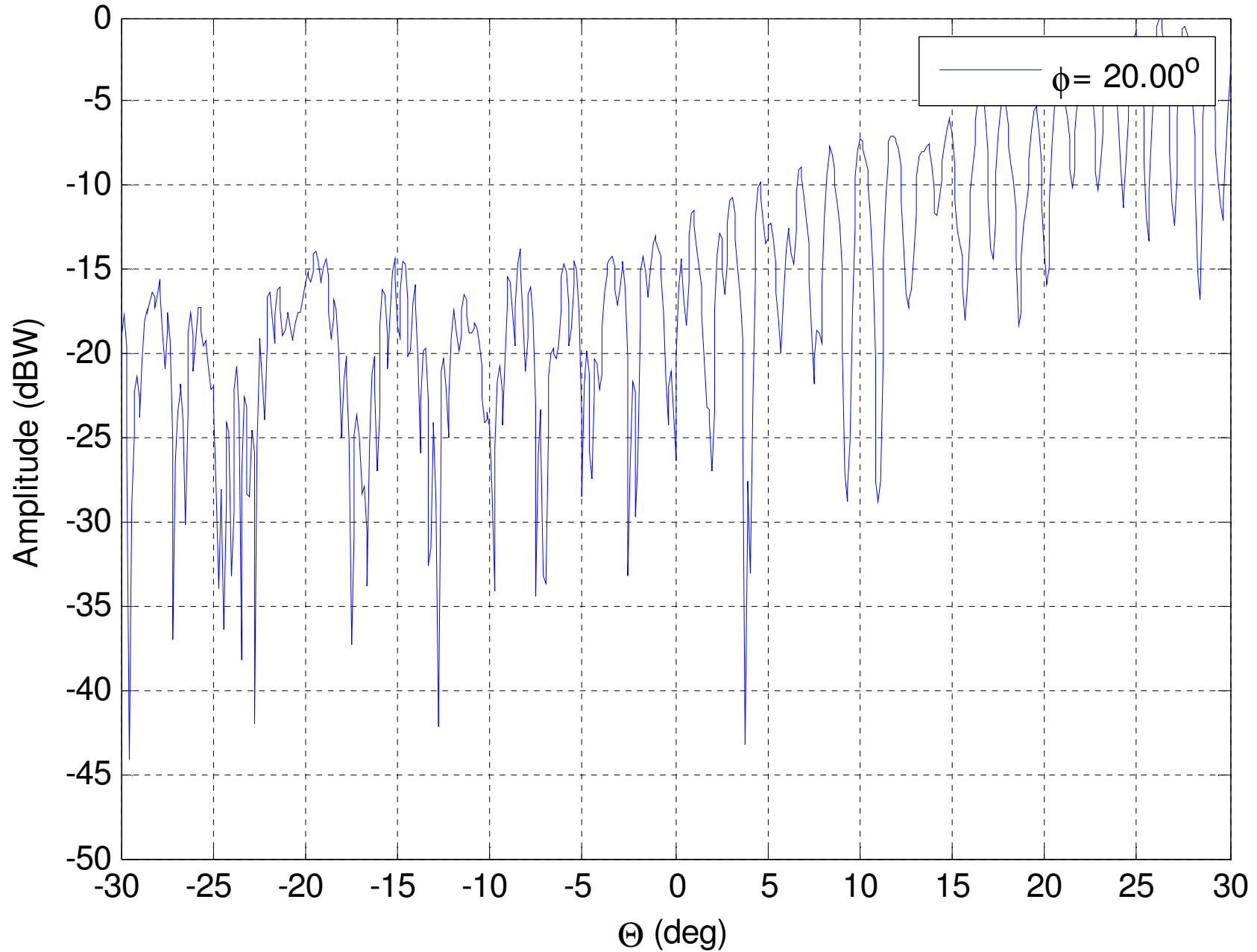
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -0.37 dBW, Date: 15-Dec-2011



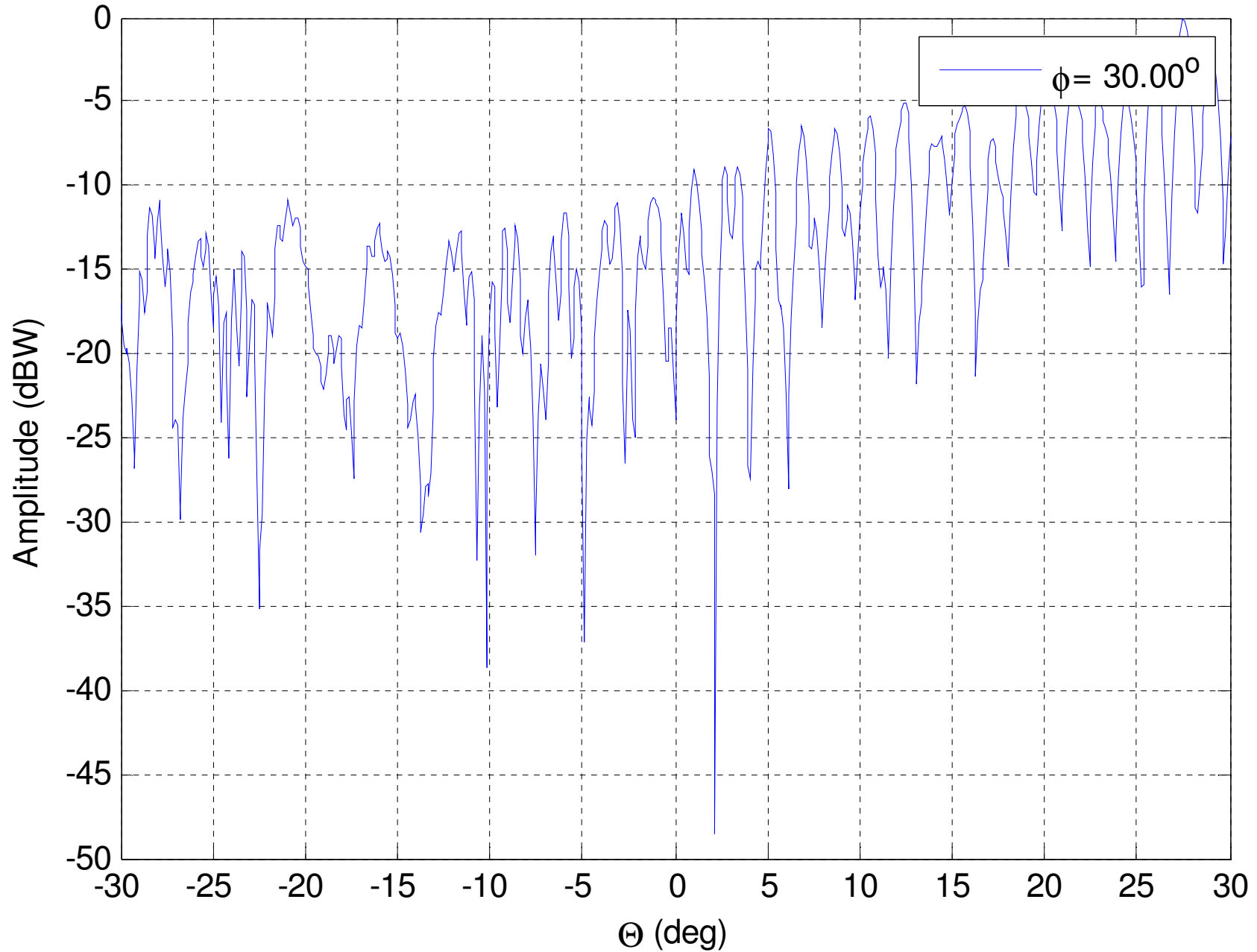
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -2.10 dBW, Date: 15-Dec-2011



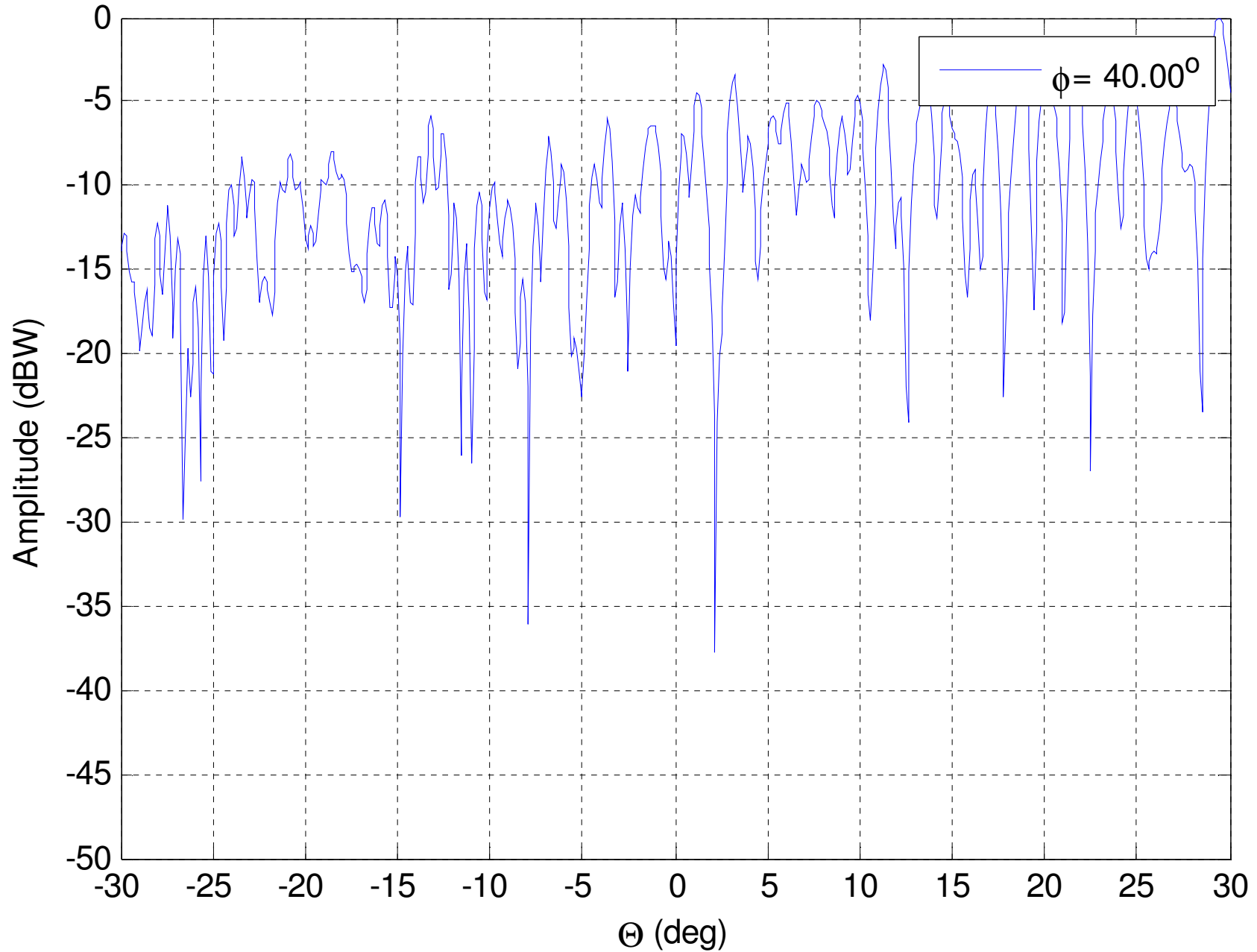
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -4.57 dBW, Date: 15-Dec-2011



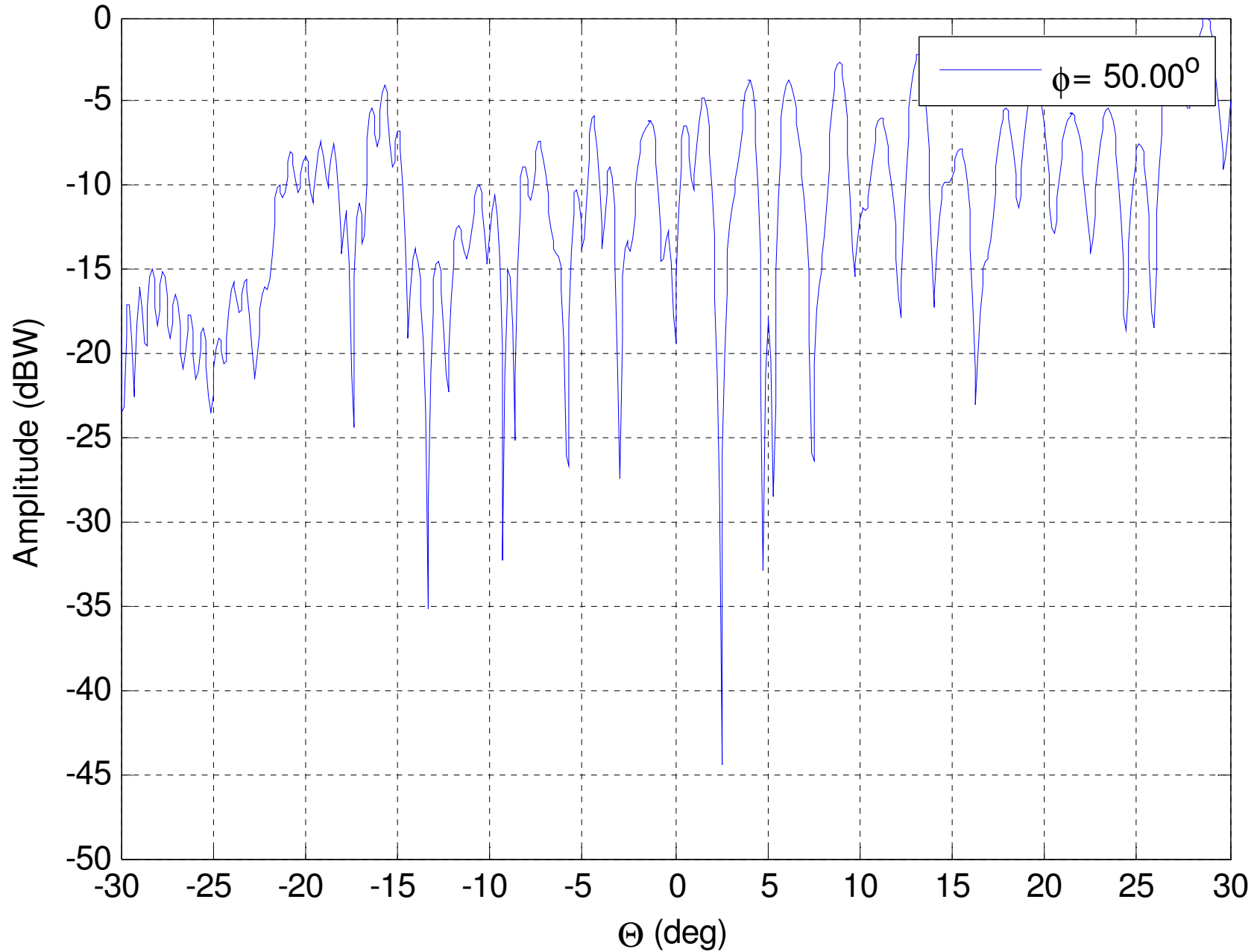
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -9.00 dBW, Date: 15-Dec-2011



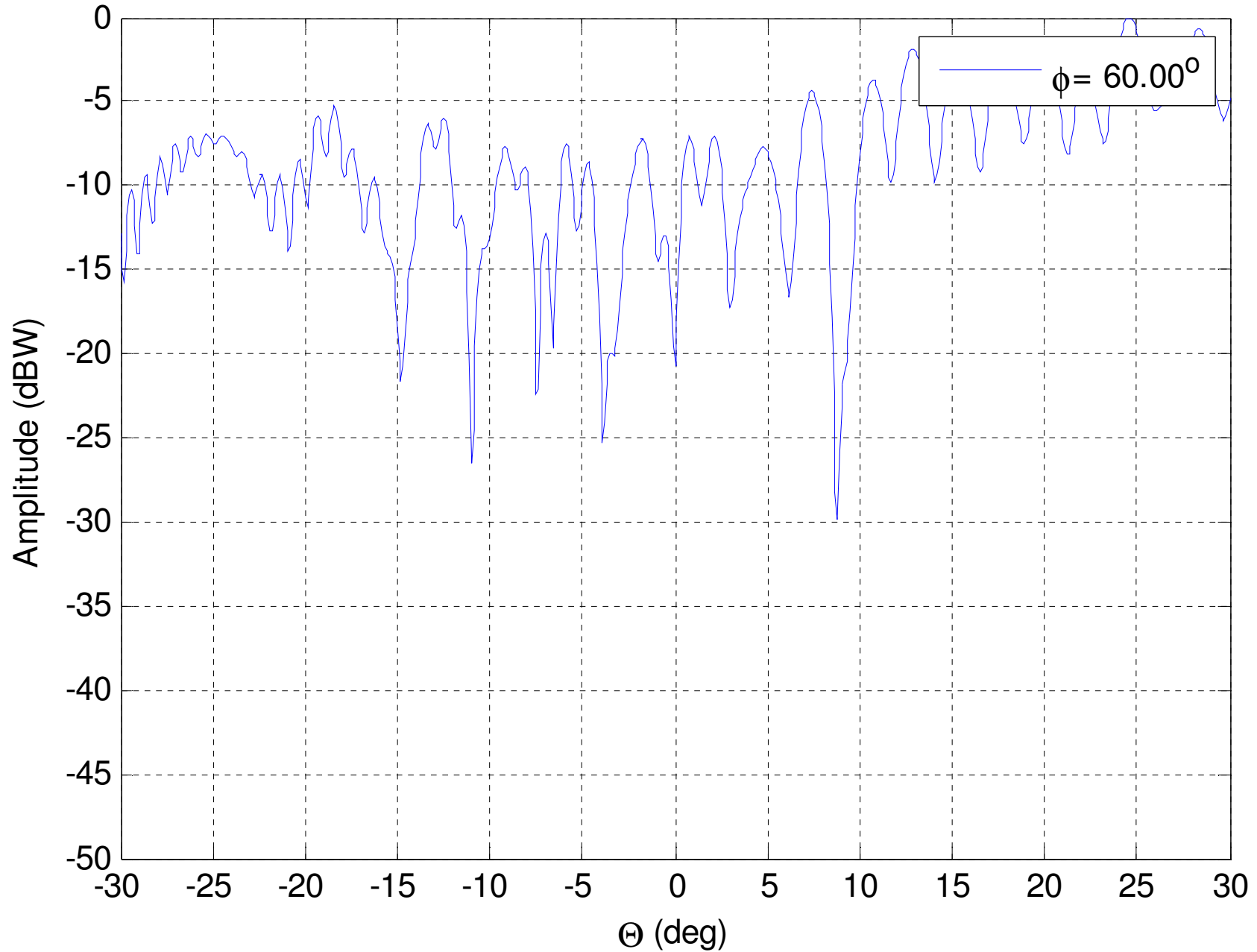
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -9.02 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

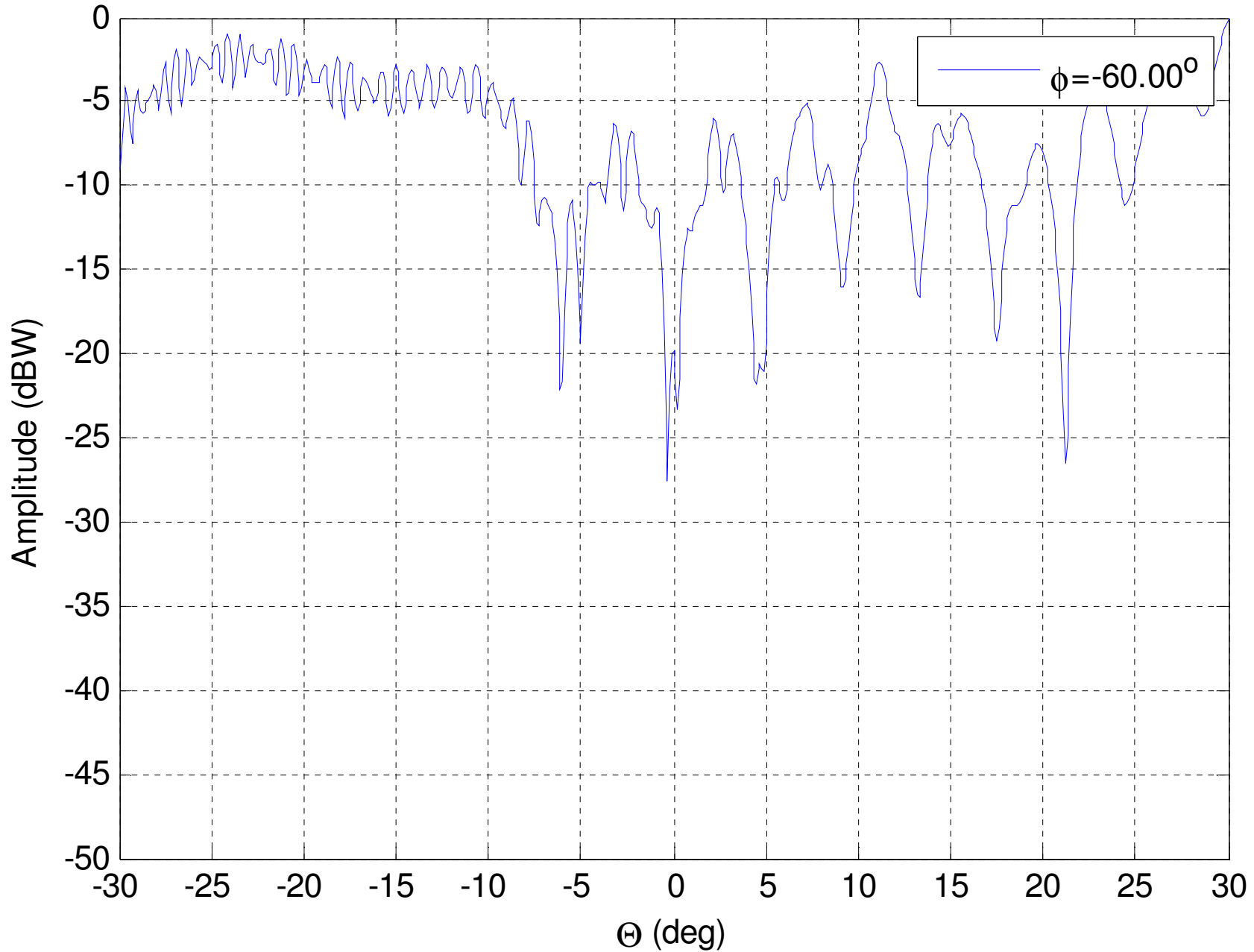
Input file: tx-17.5-lhcp-60.cut, Peak: -7.68 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

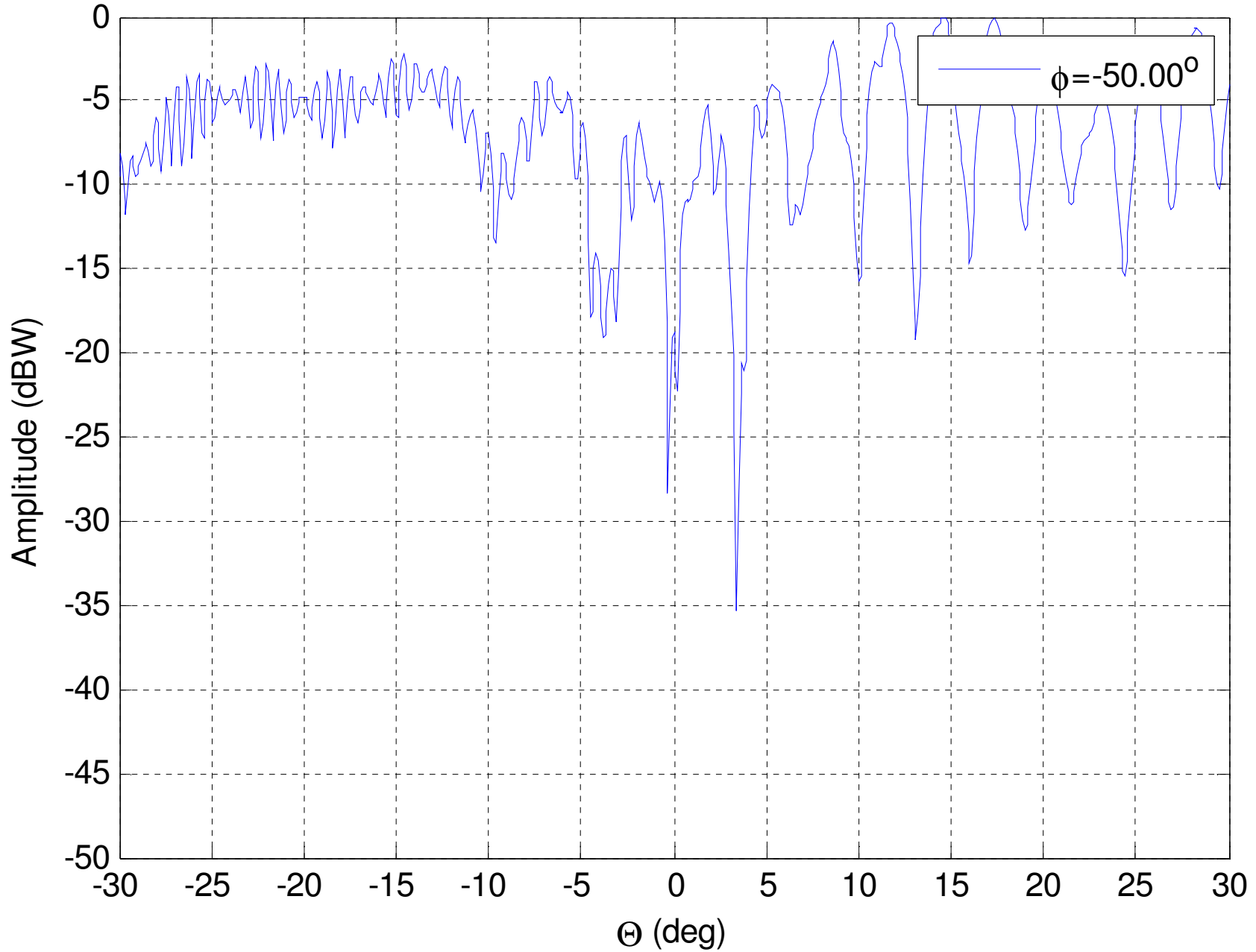
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.87 dBW, Date: 15-Dec-2011



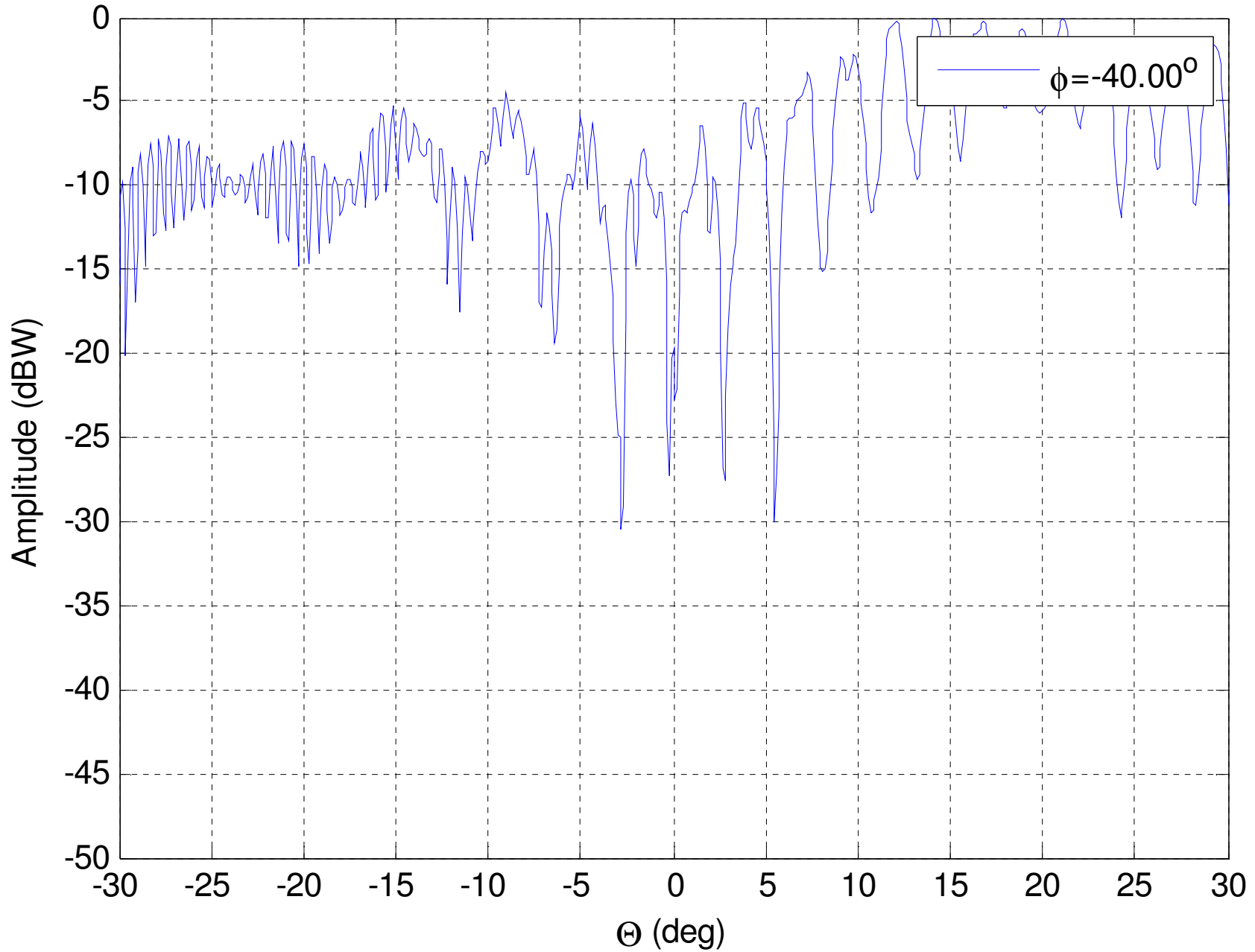
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -7.95 dBW, Date: 15-Dec-2011



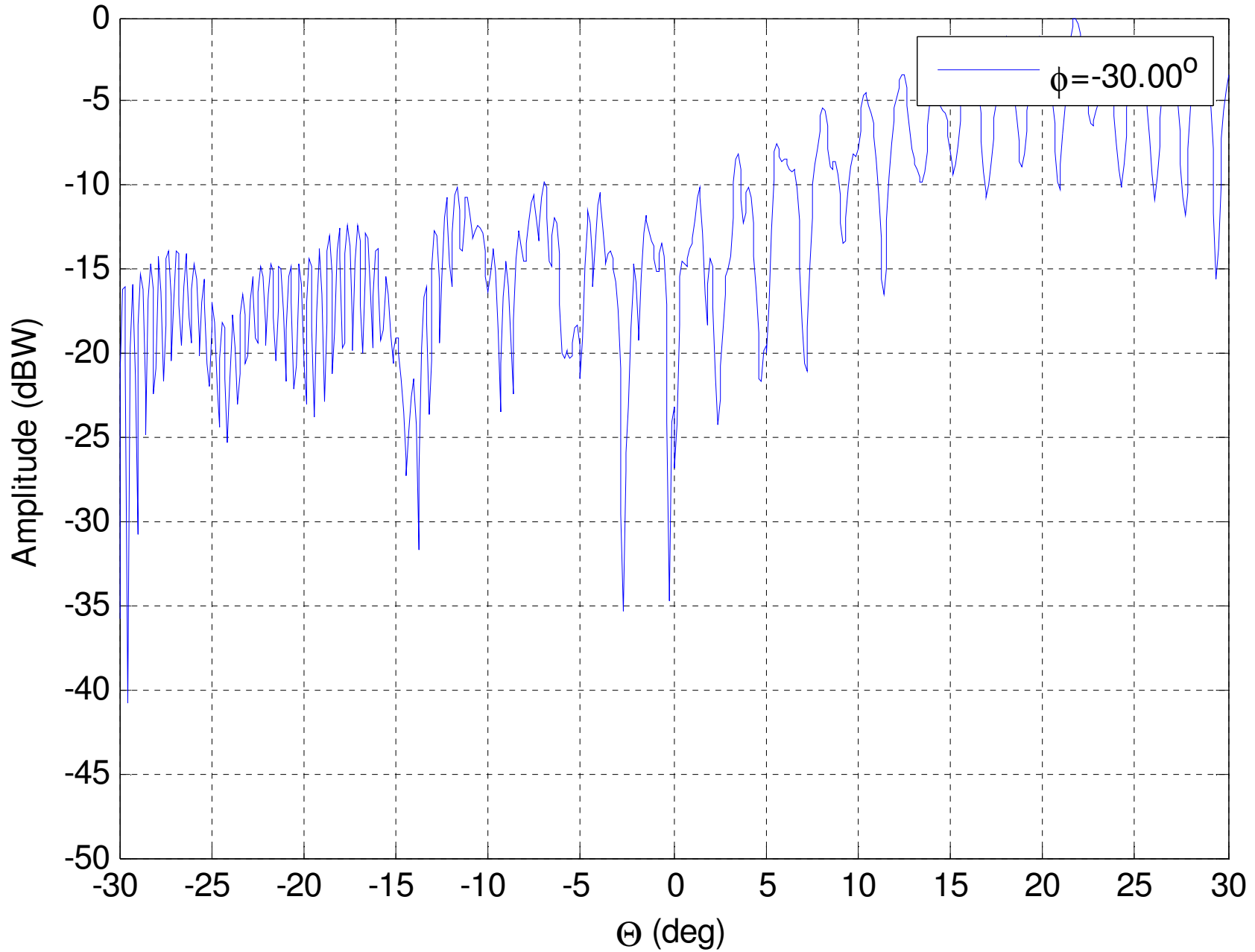
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.00 dBW, Date: 15-Dec-2011



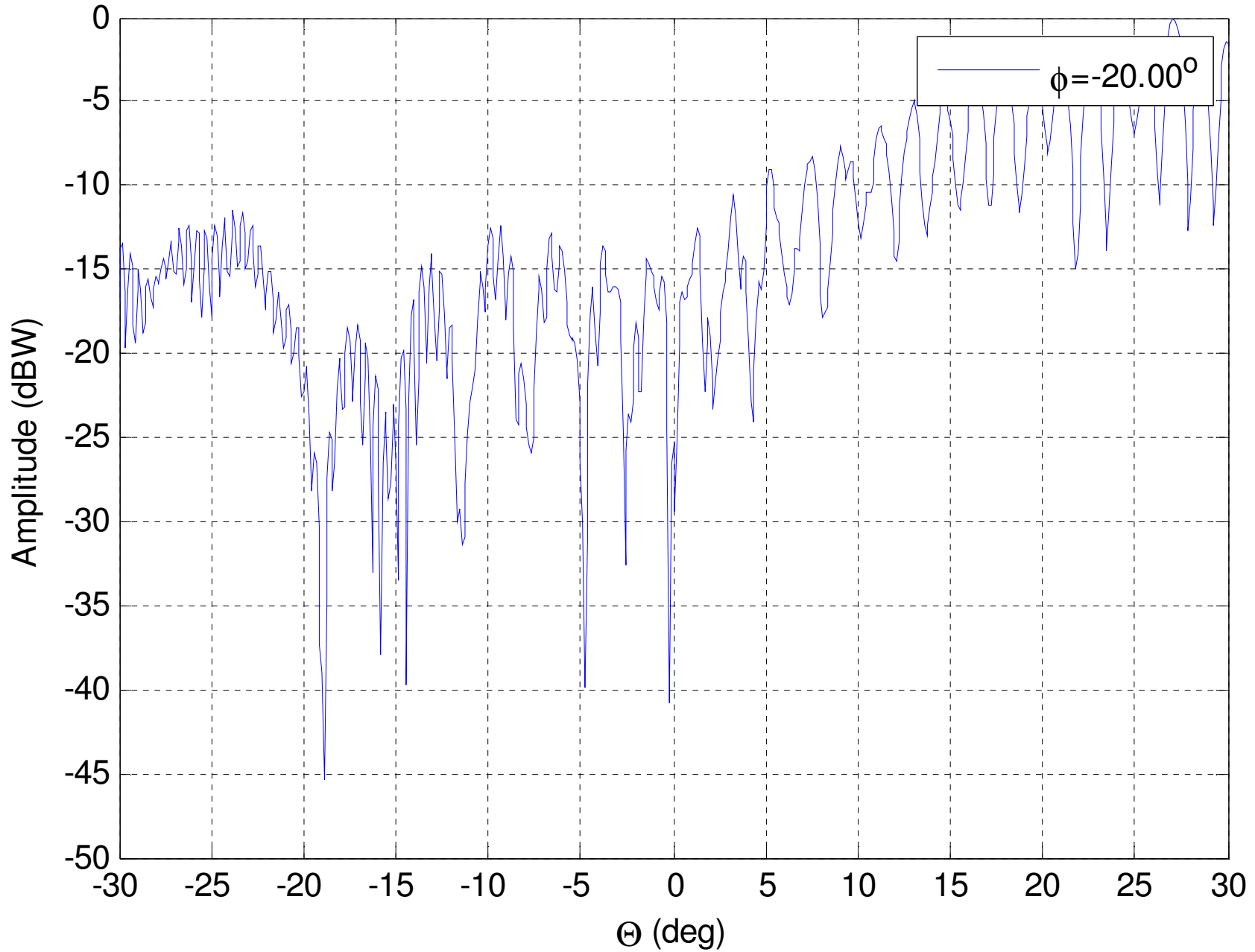
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -3.52 dBW, Date: 15-Dec-2011



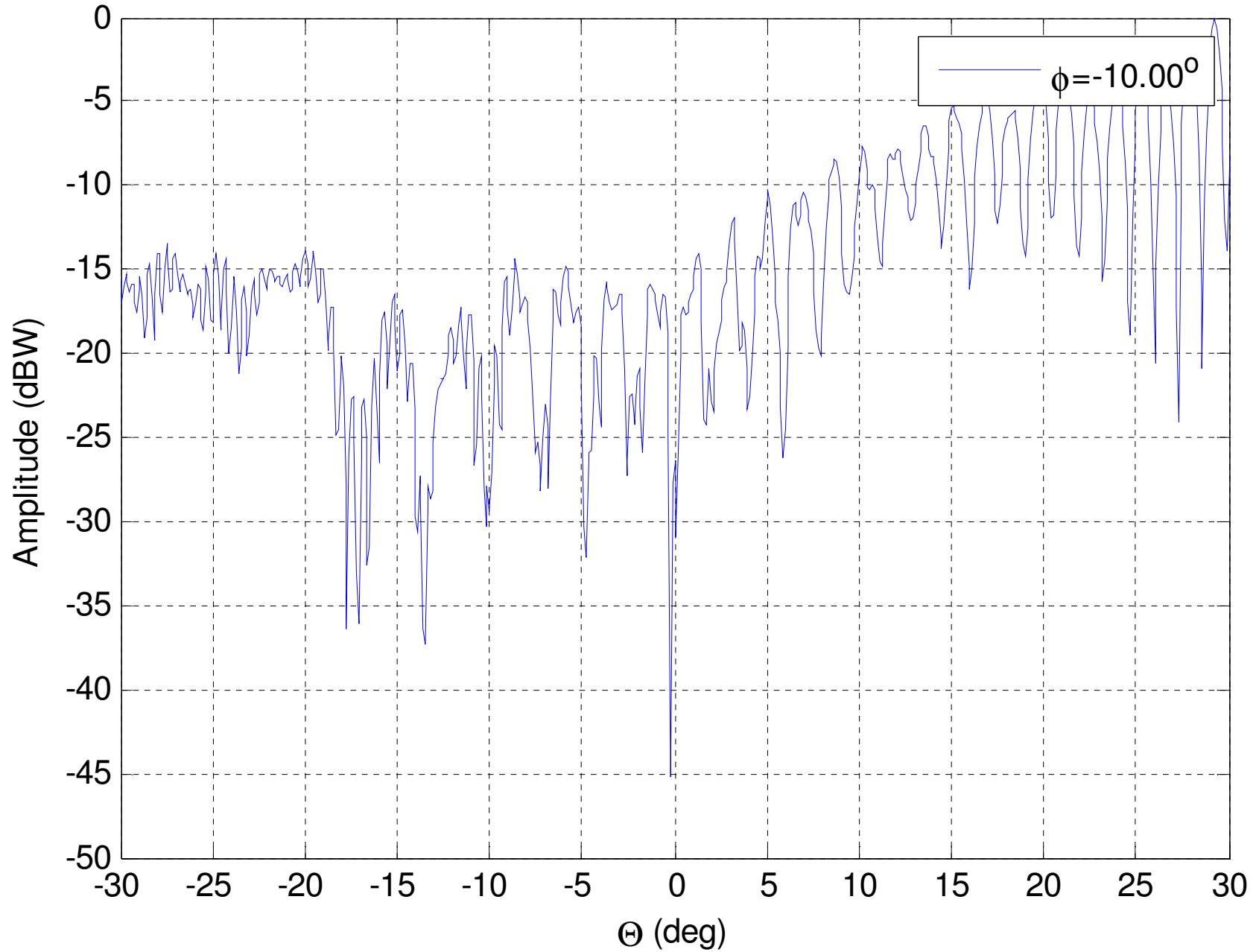
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -1.38 dBW, Date: 15-Dec-2011



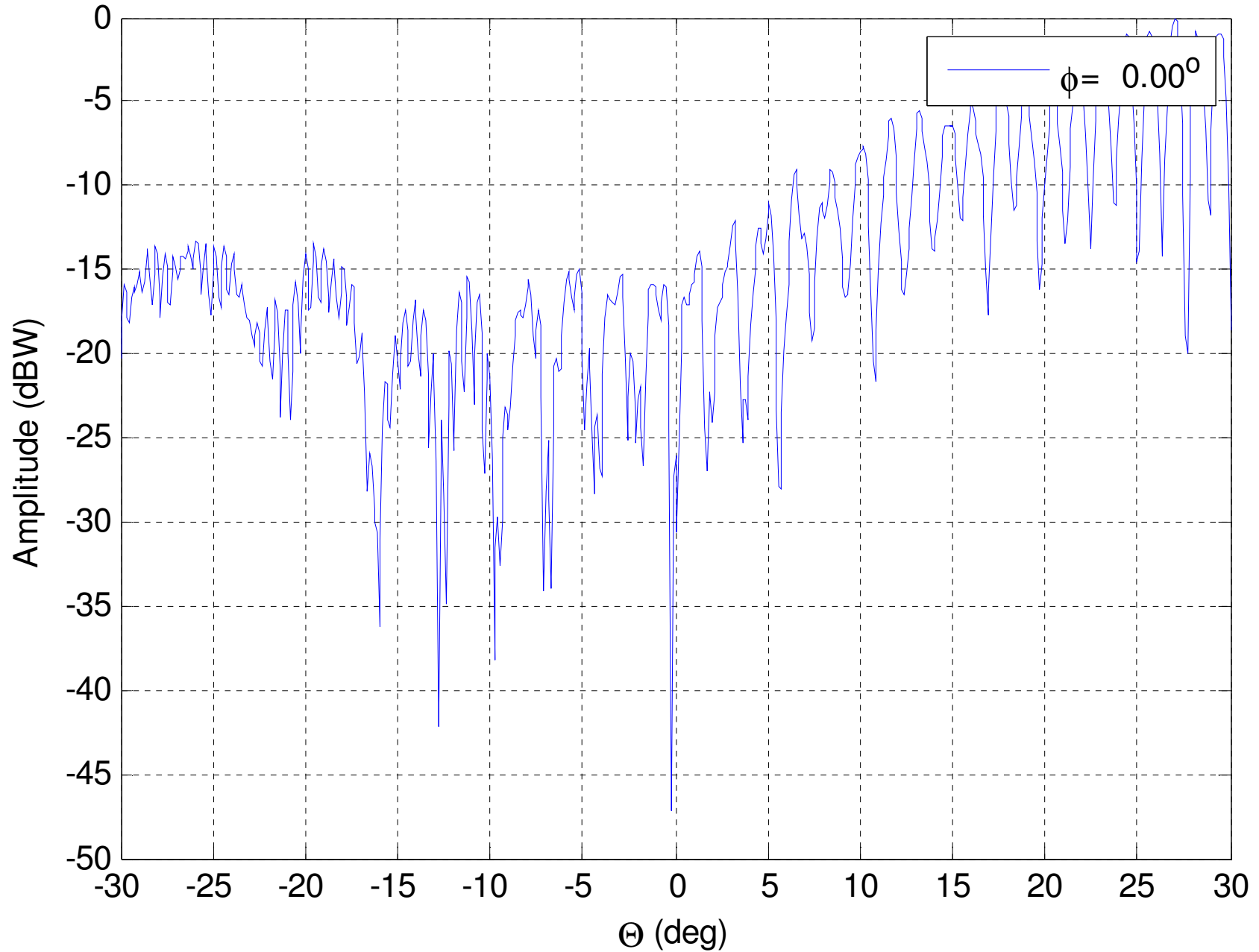
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -0.26 dBW, Date: 15-Dec-2011



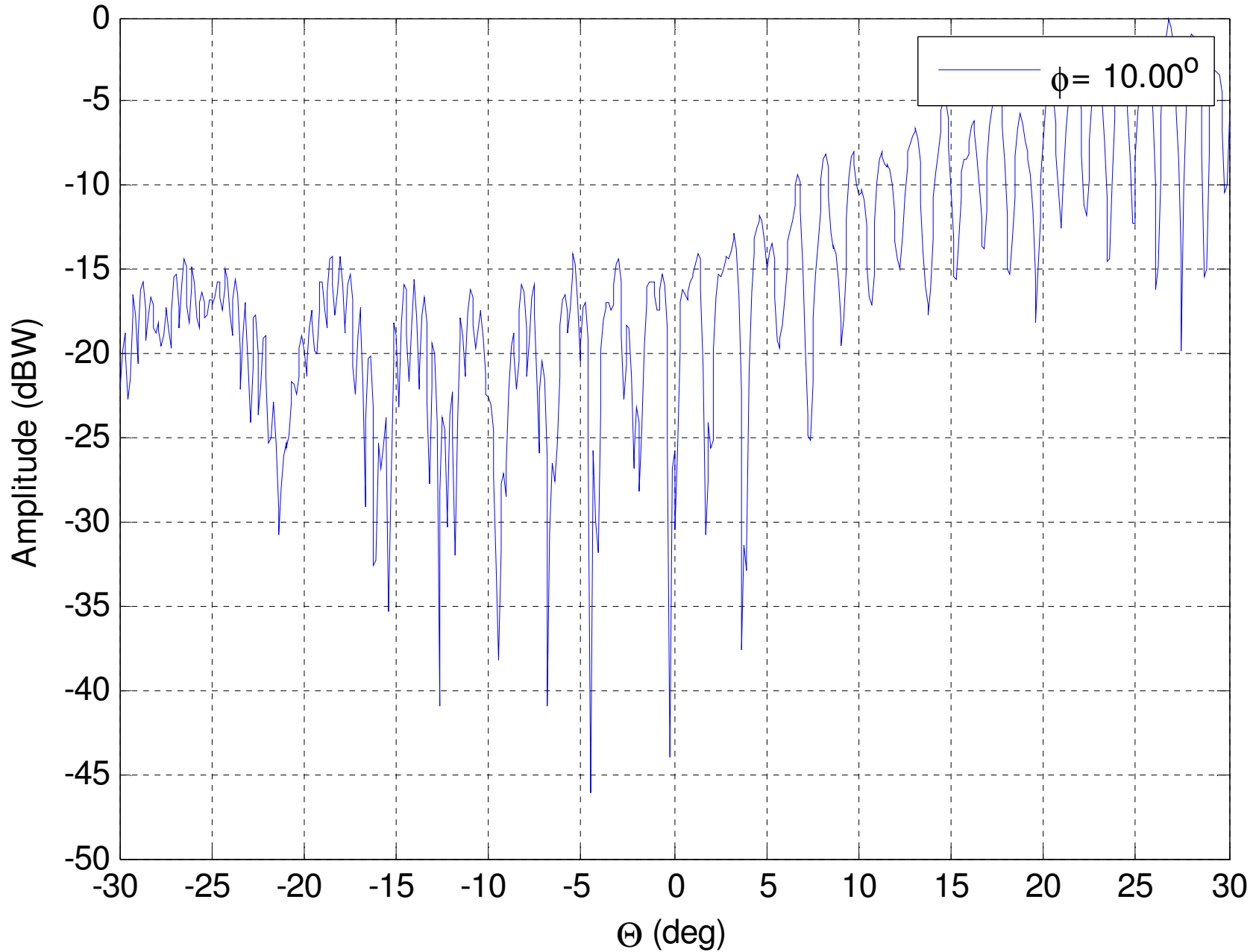
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -0.65 dBW, Date: 15-Dec-2011



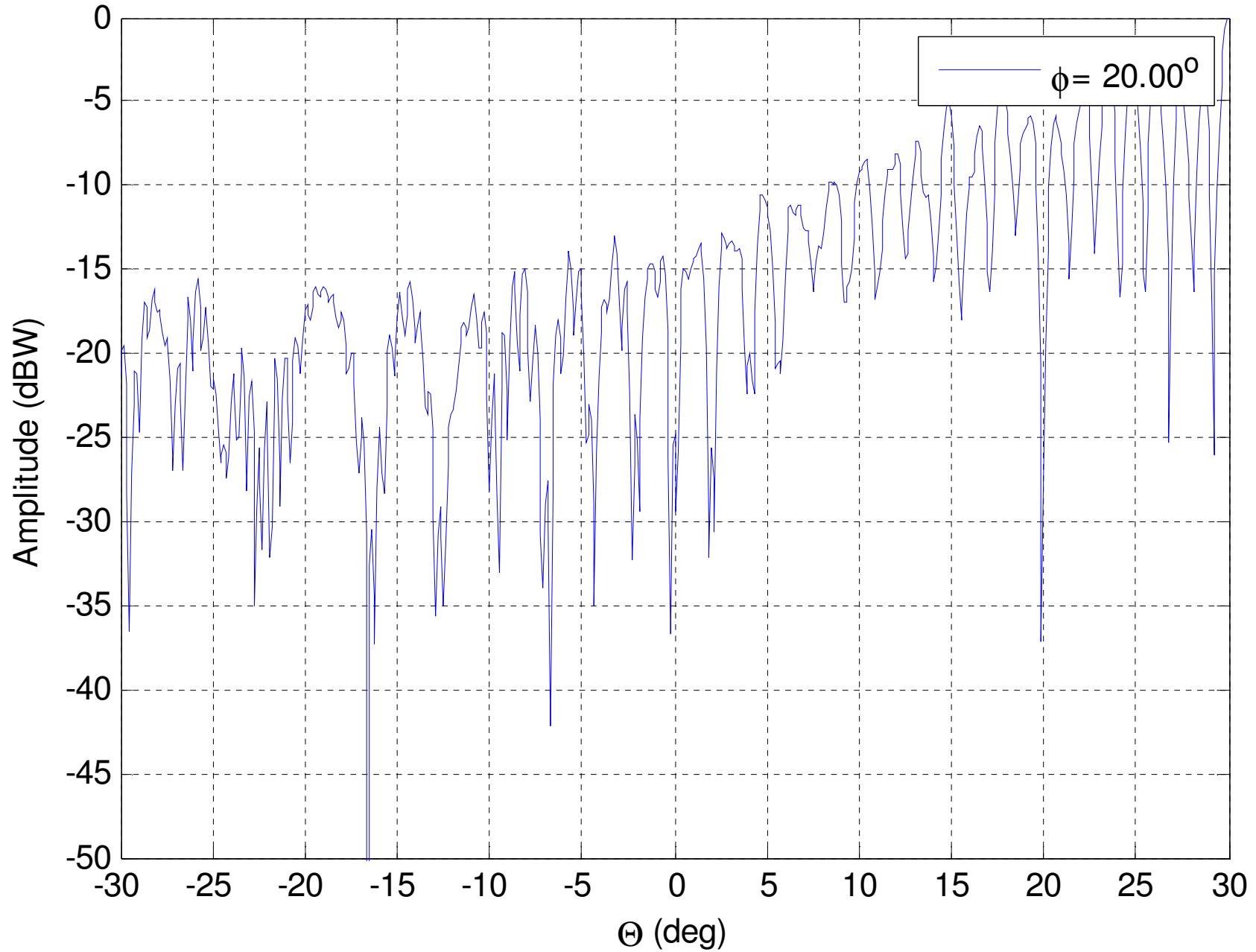
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -0.91 dBW, Date: 15-Dec-2011



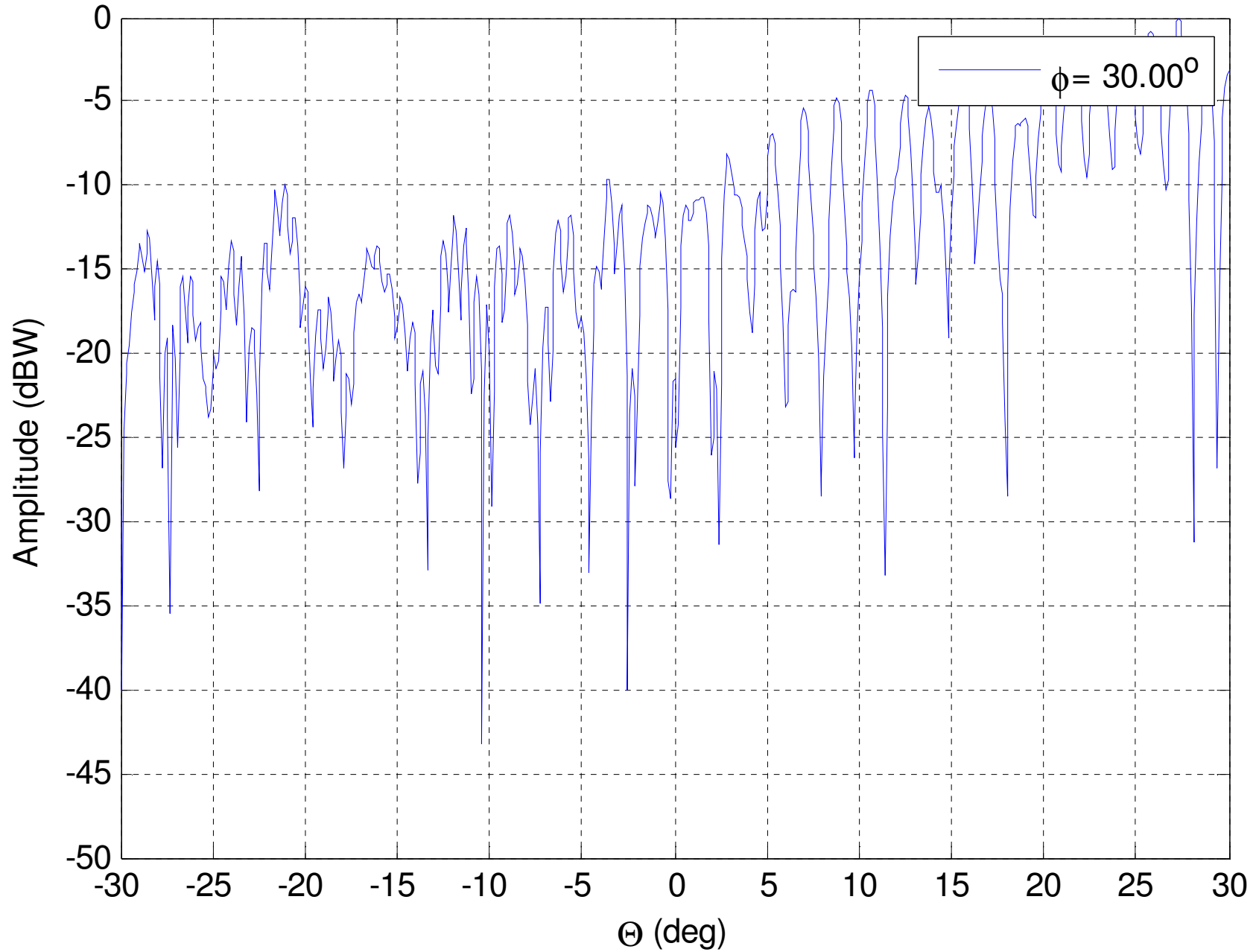
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -1.88 dBW, Date: 15-Dec-2011



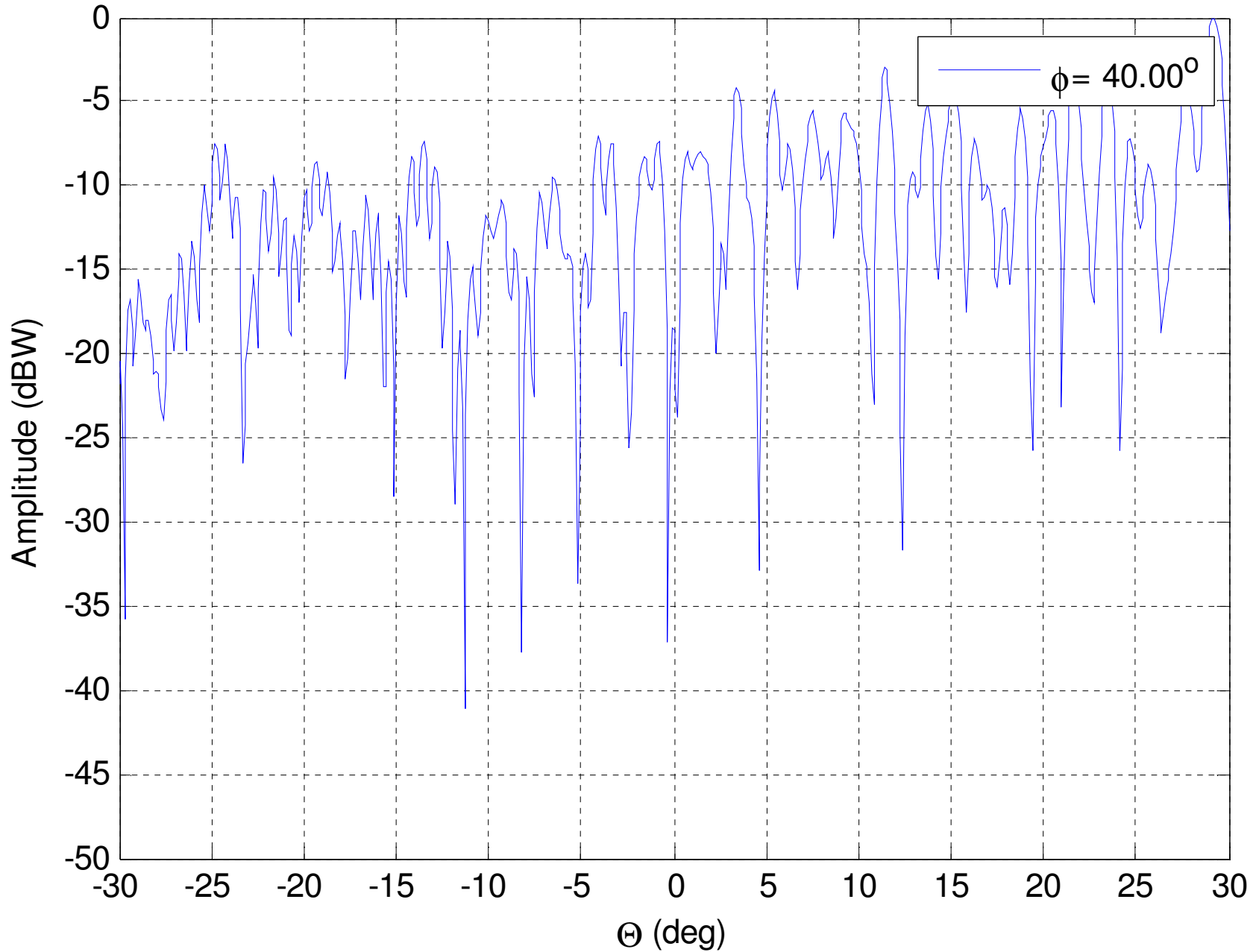
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -5.27 dBW, Date: 15-Dec-2011



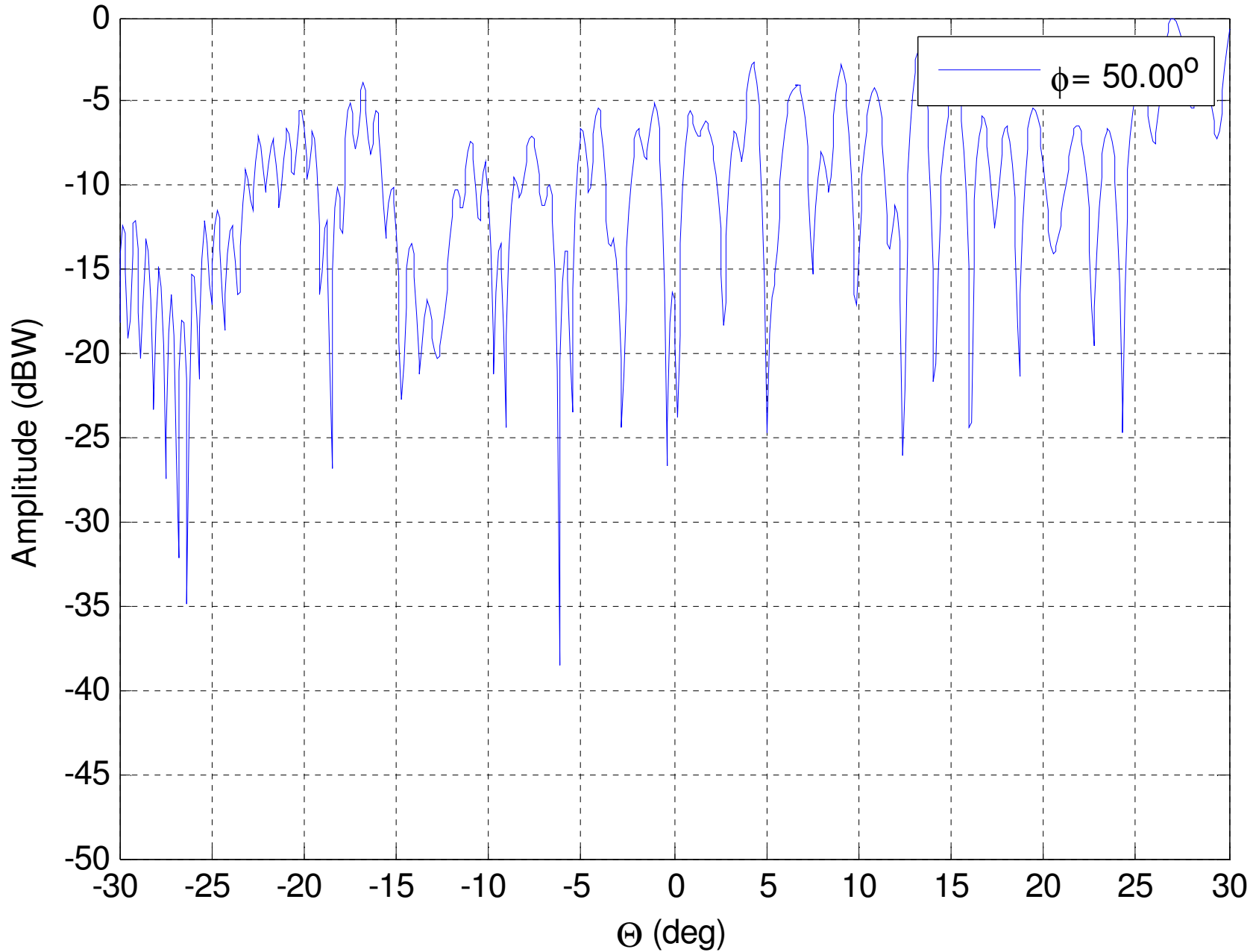
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -8.14 dBW, Date: 15-Dec-2011



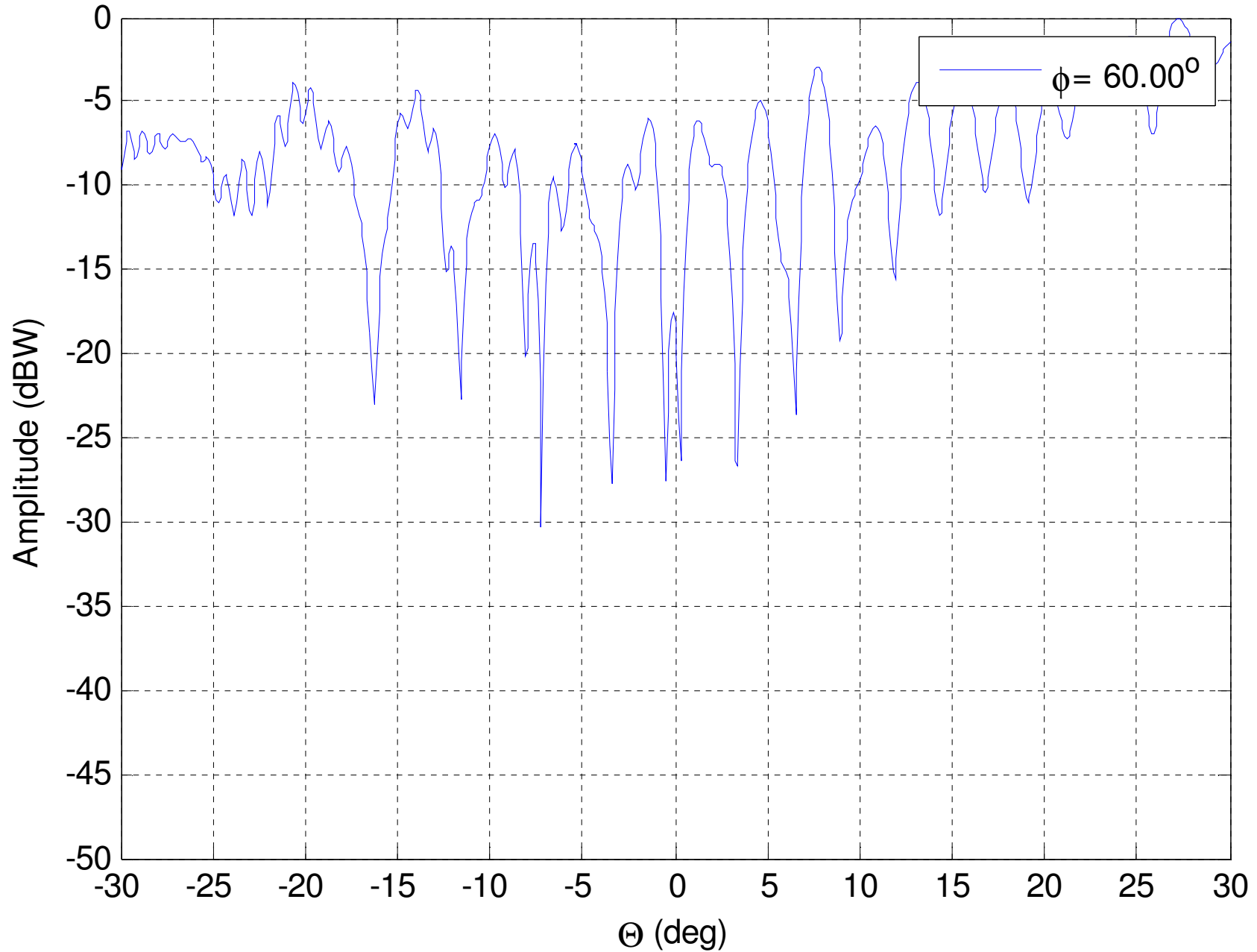
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.95 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

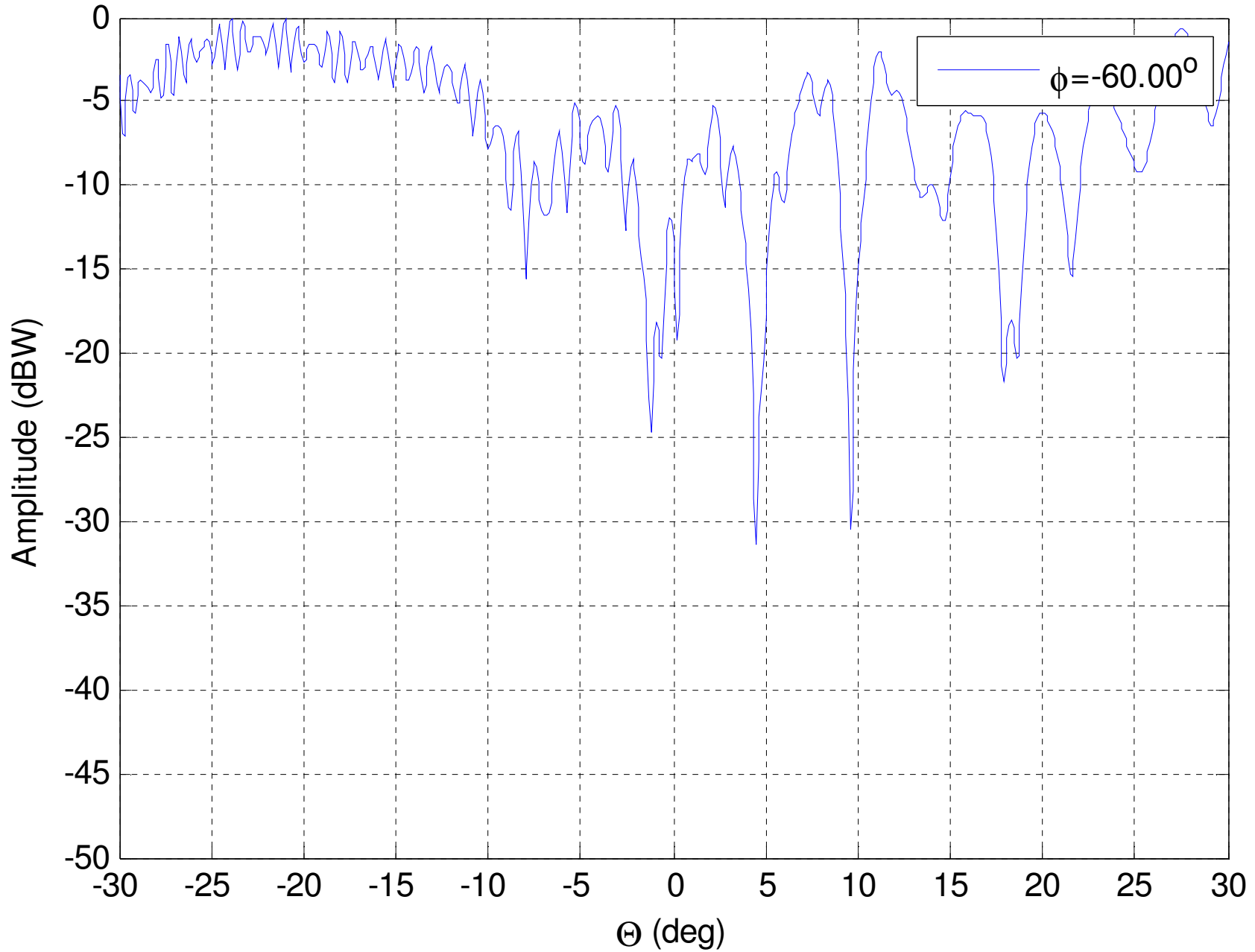
Input file: tx-17.7-rhcp-60.cut, Peak: -8.48 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

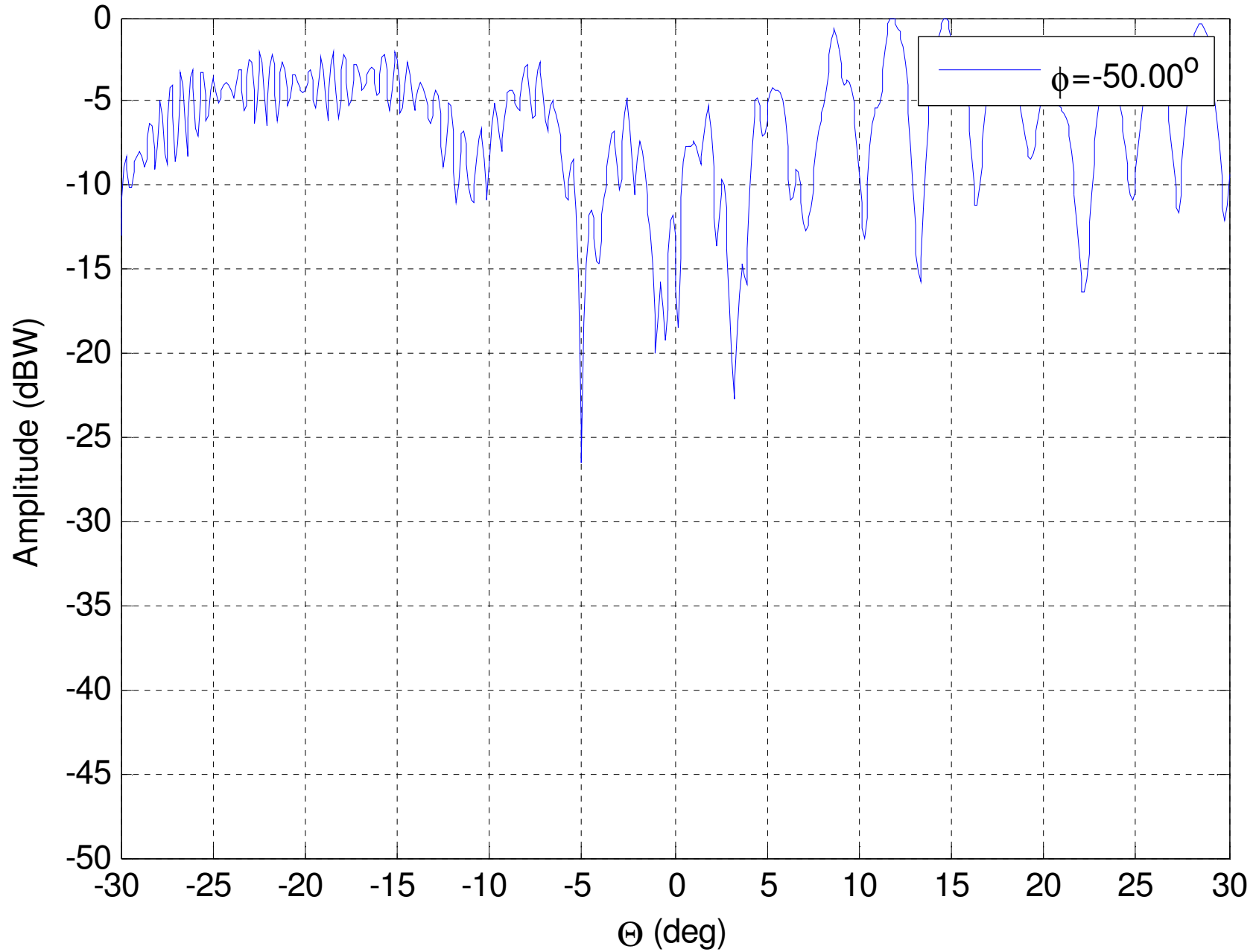
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.83 dBW, Date: 15-Dec-2011



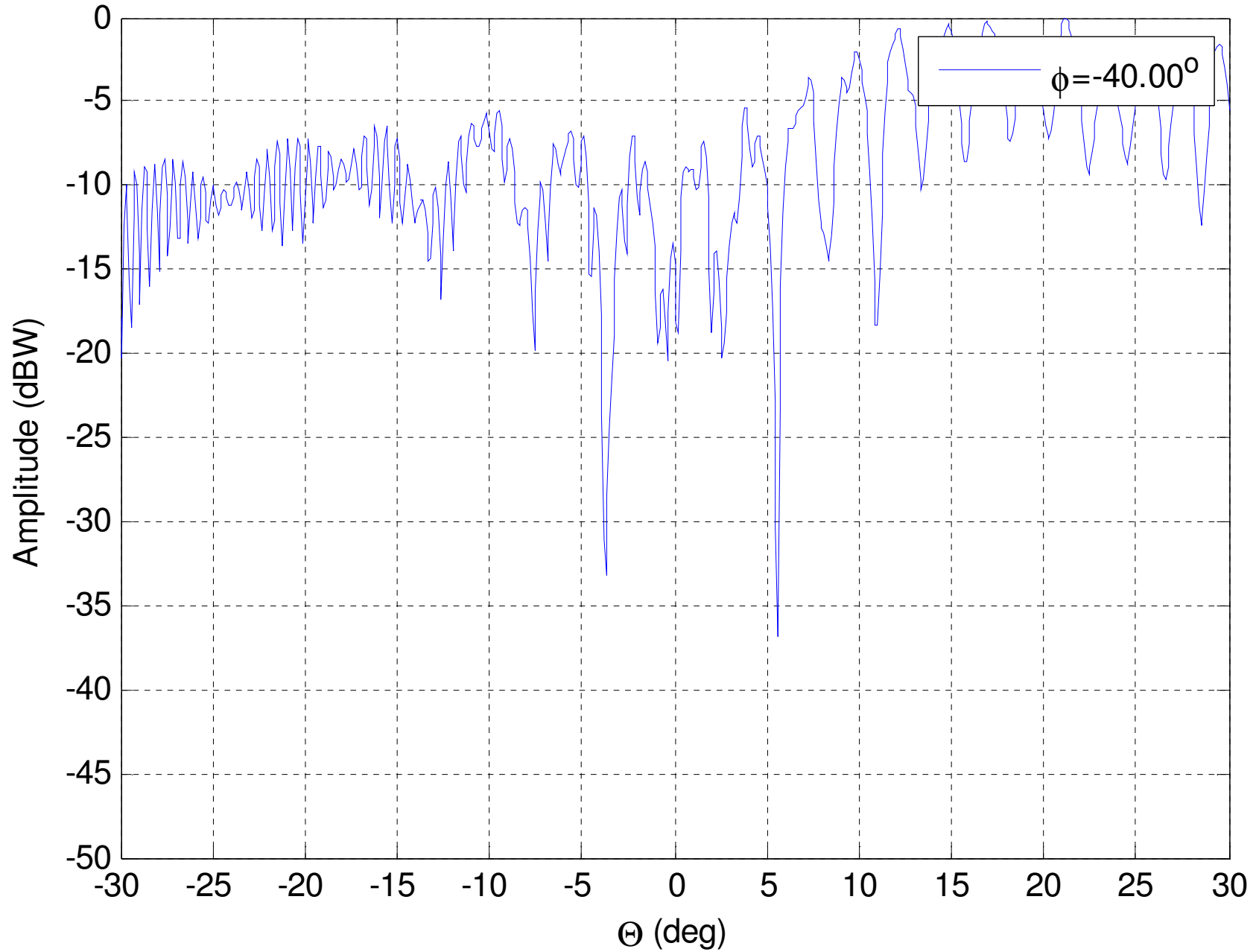
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -8.19 dBW, Date: 15-Dec-2011



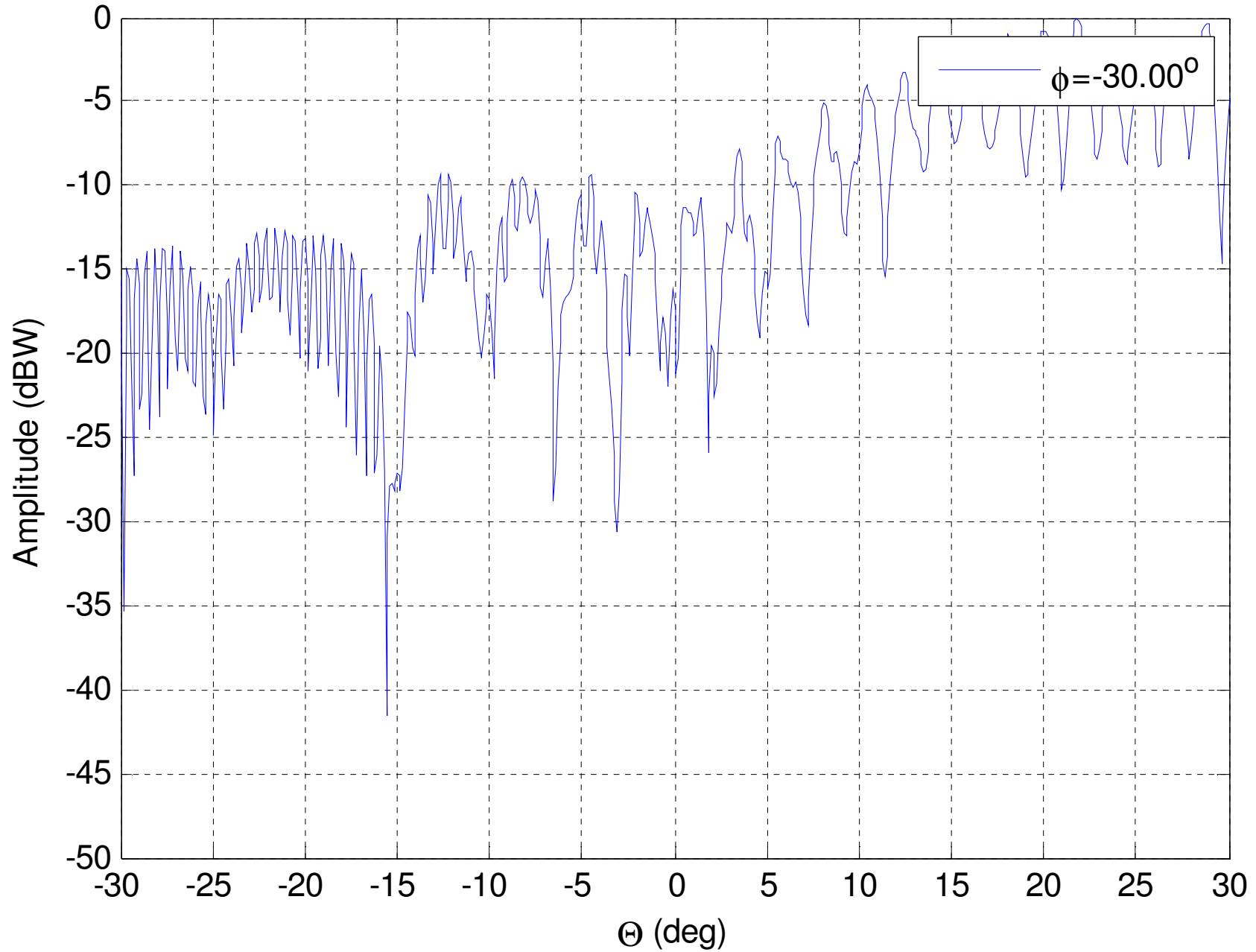
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -6.54 dBW, Date: 15-Dec-2011



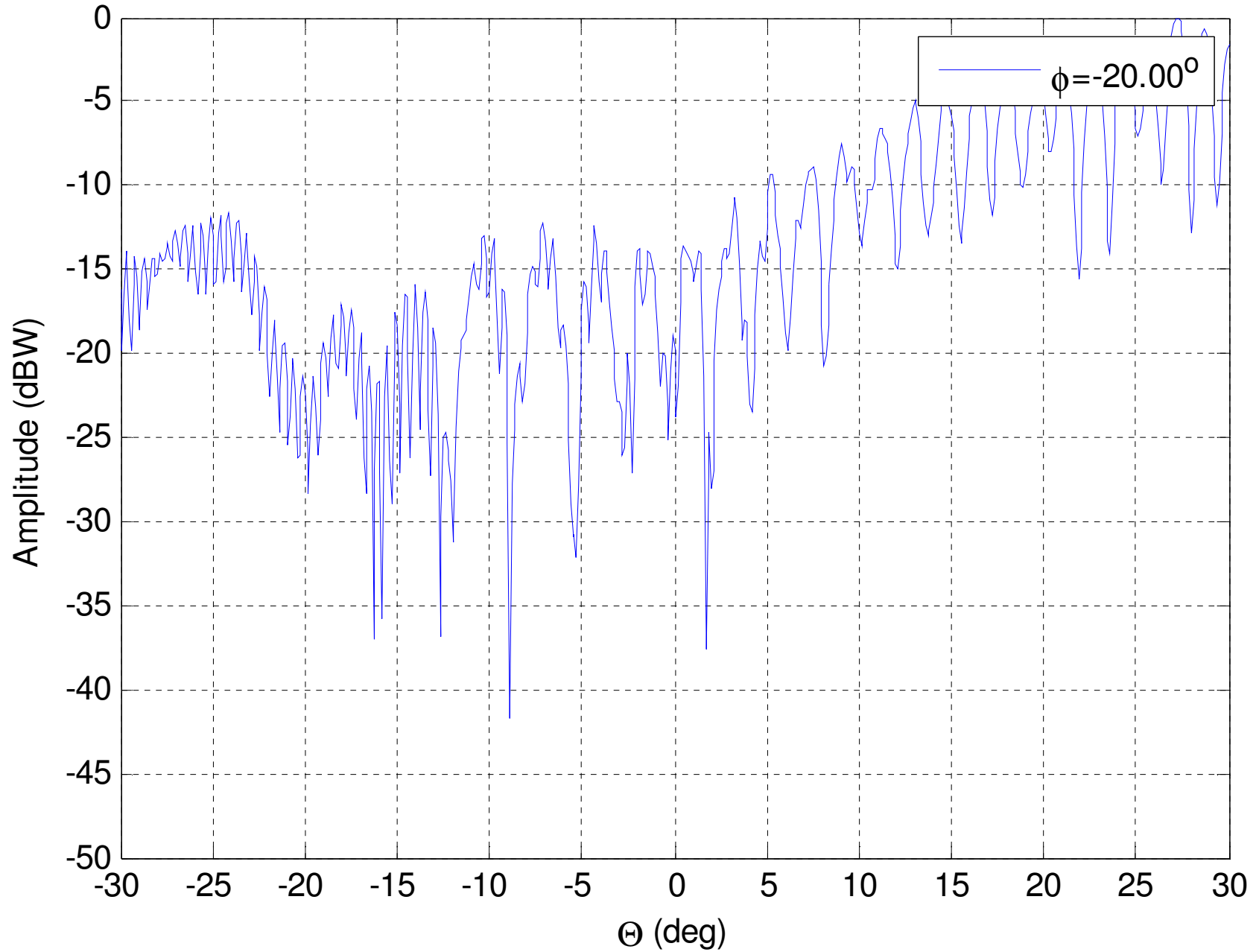
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -3.85 dBW, Date: 15-Dec-2011



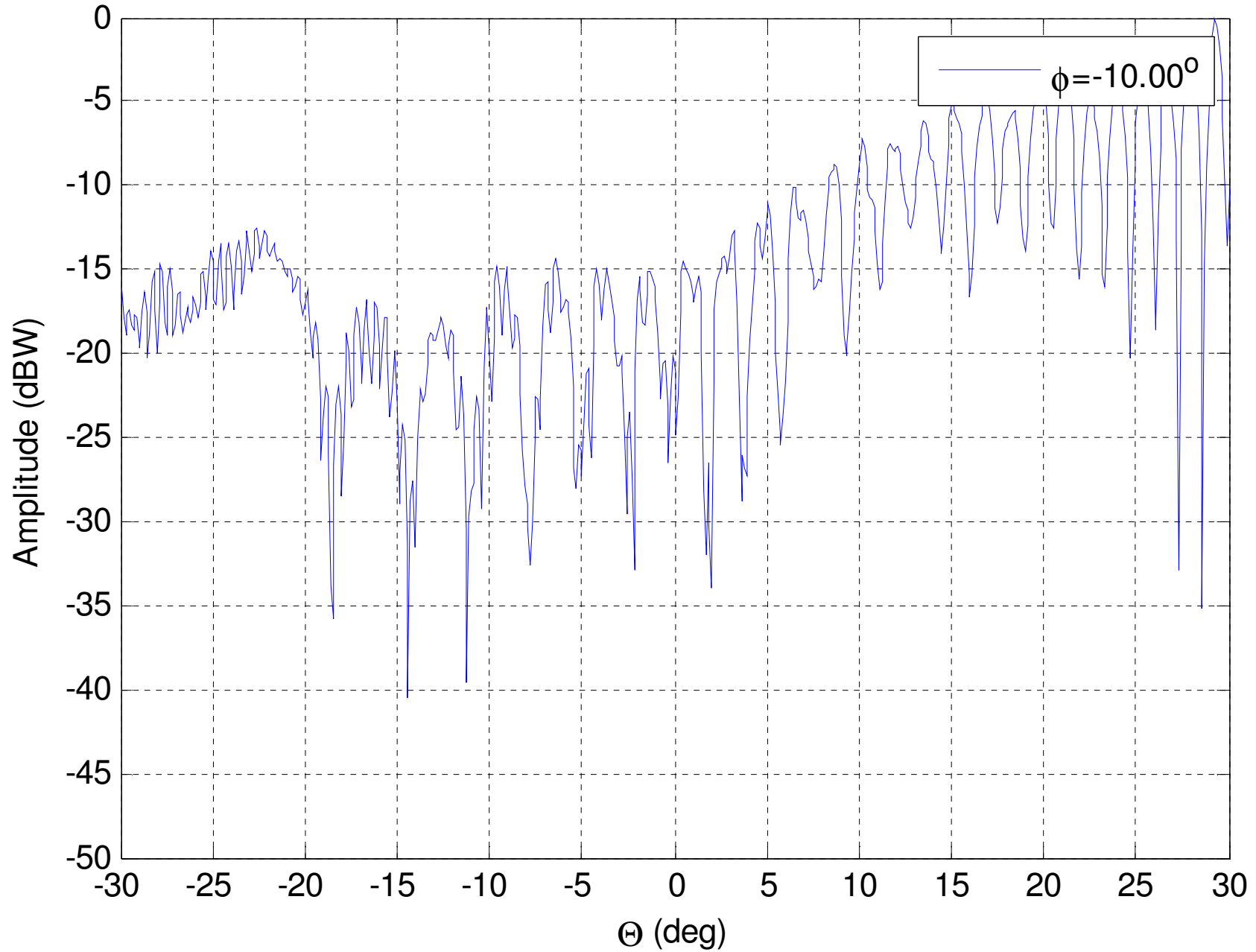
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -1.29 dBW, Date: 15-Dec-2011



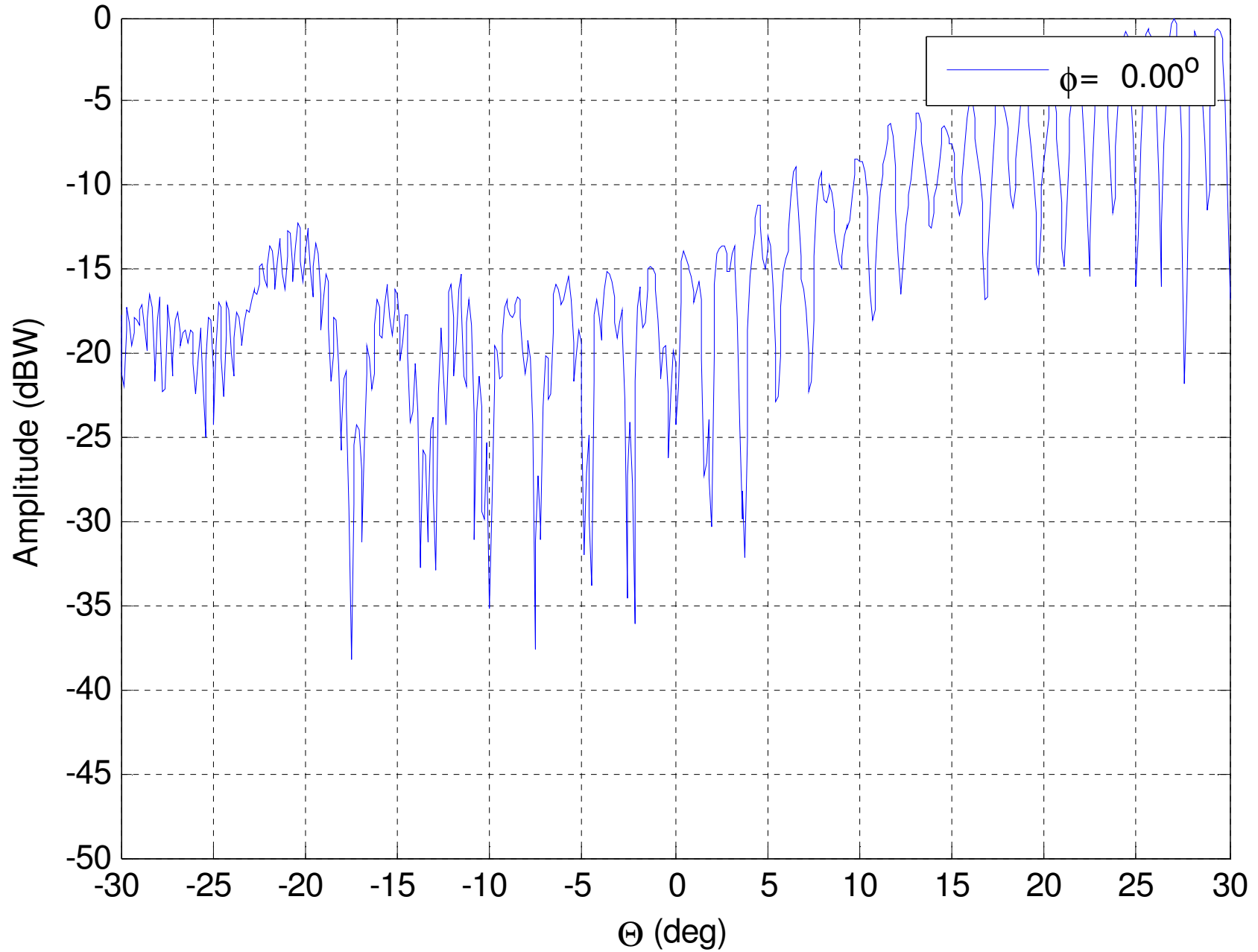
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -0.22 dBW, Date: 15-Dec-2011



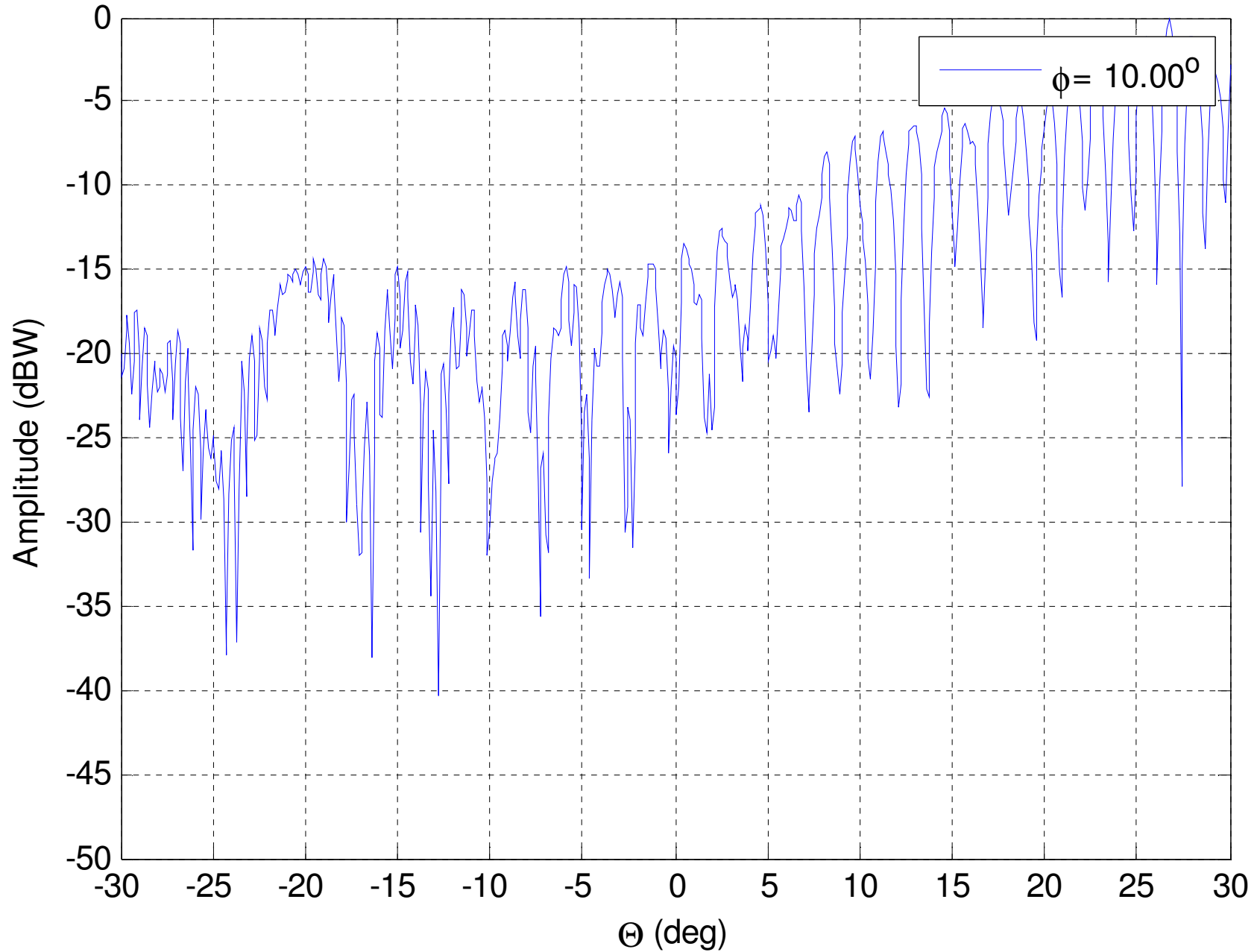
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -0.63 dBW, Date: 15-Dec-2011



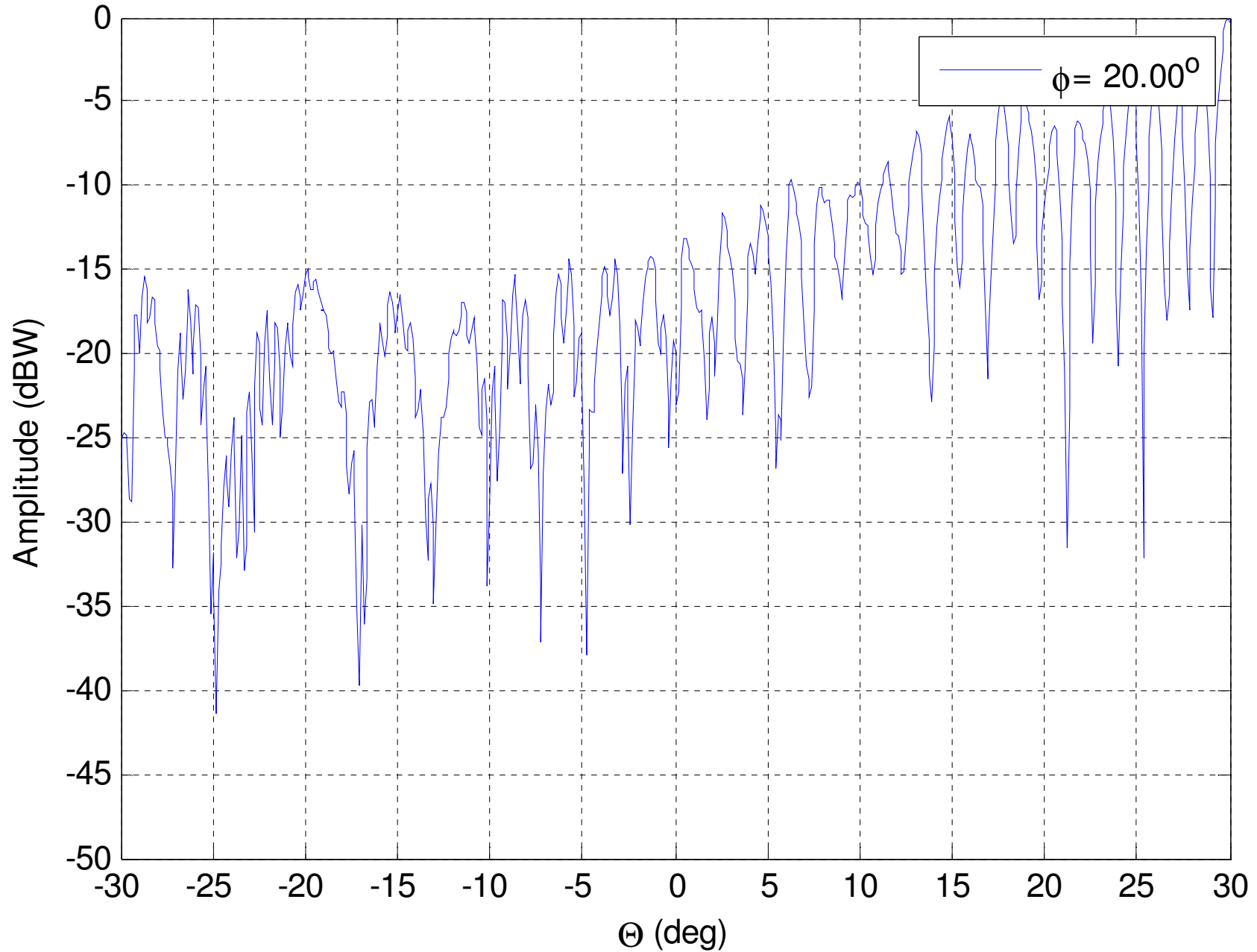
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -0.96 dBW, Date: 15-Dec-2011



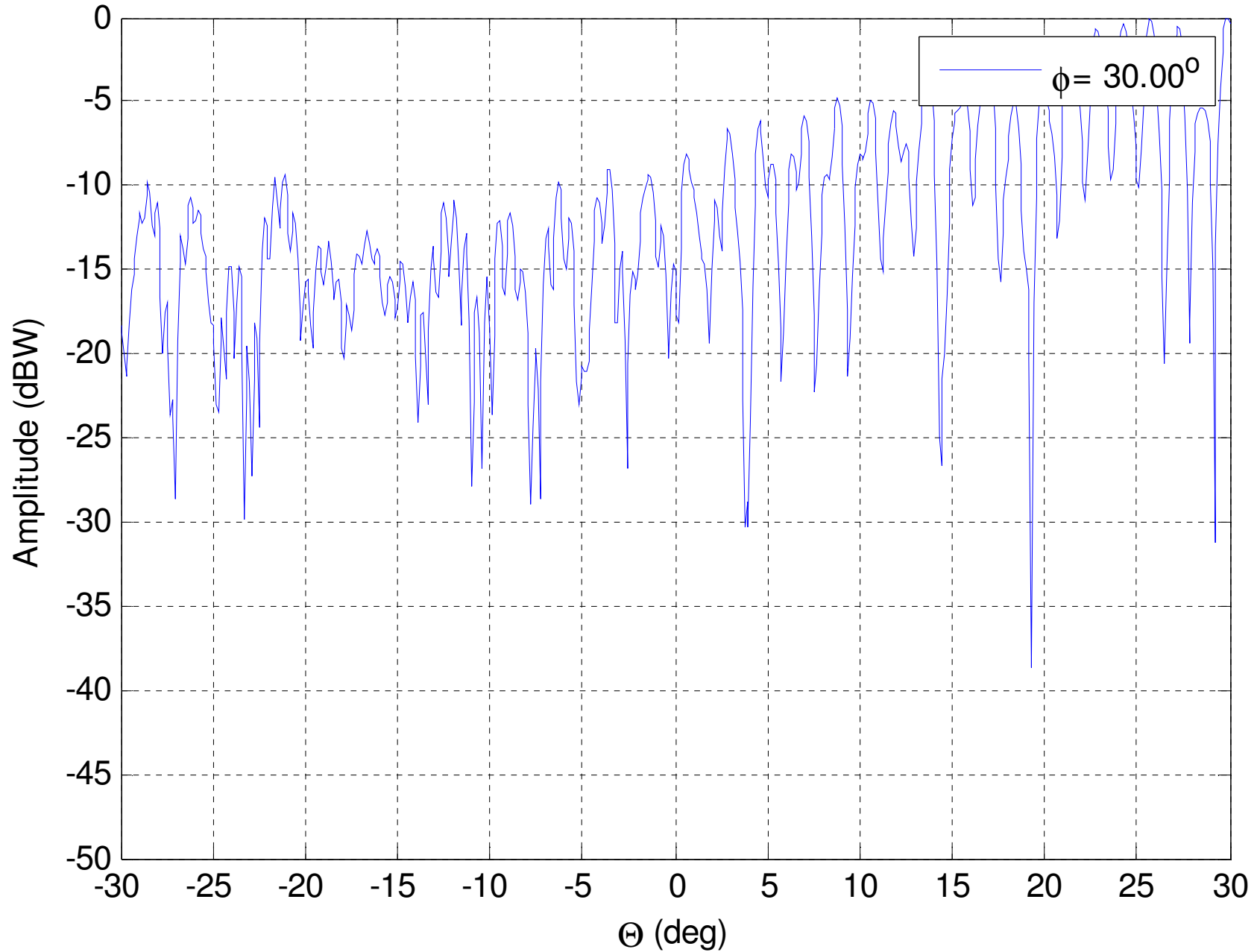
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -1.27 dBW, Date: 15-Dec-2011



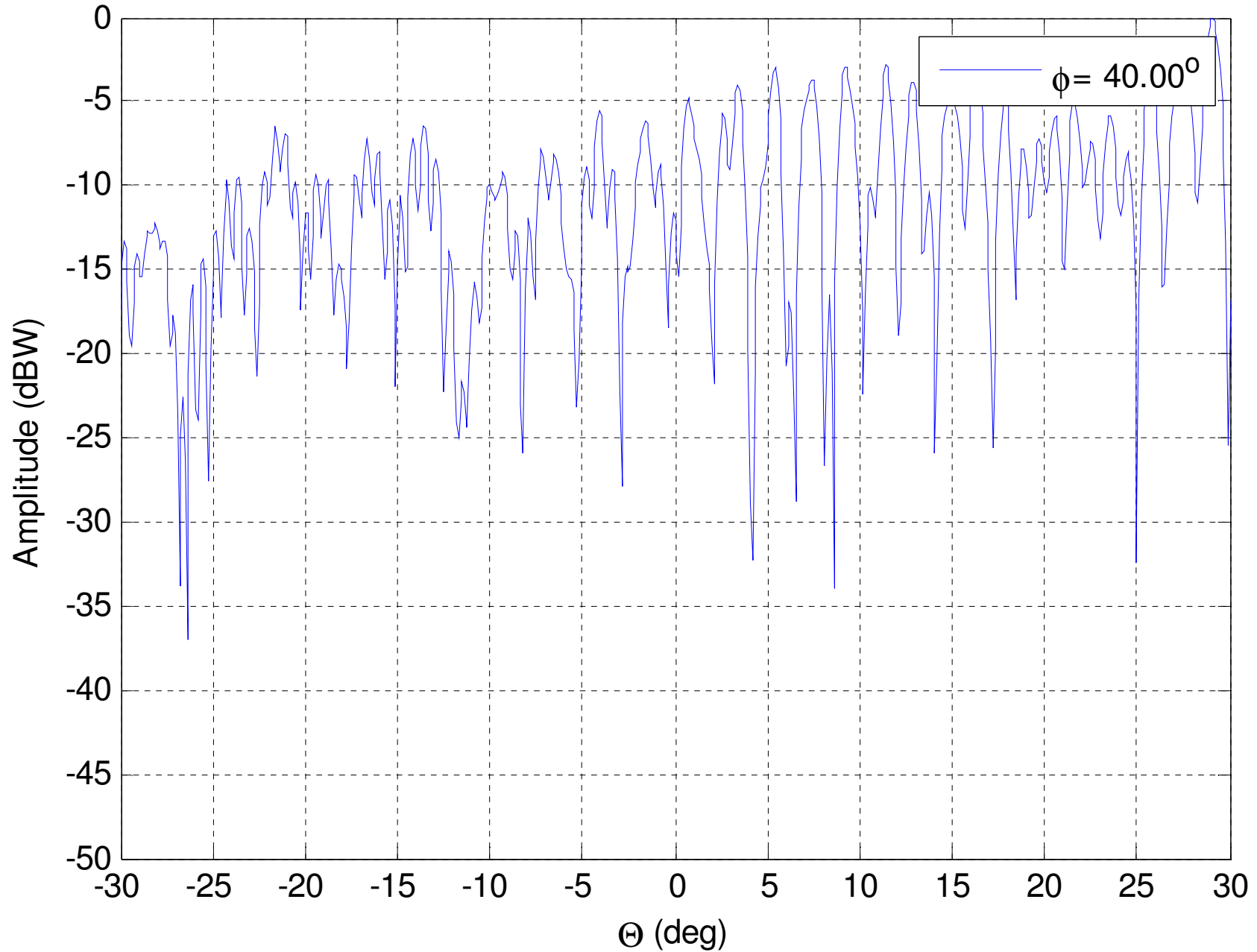
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -6.01 dBW, Date: 15-Dec-2011



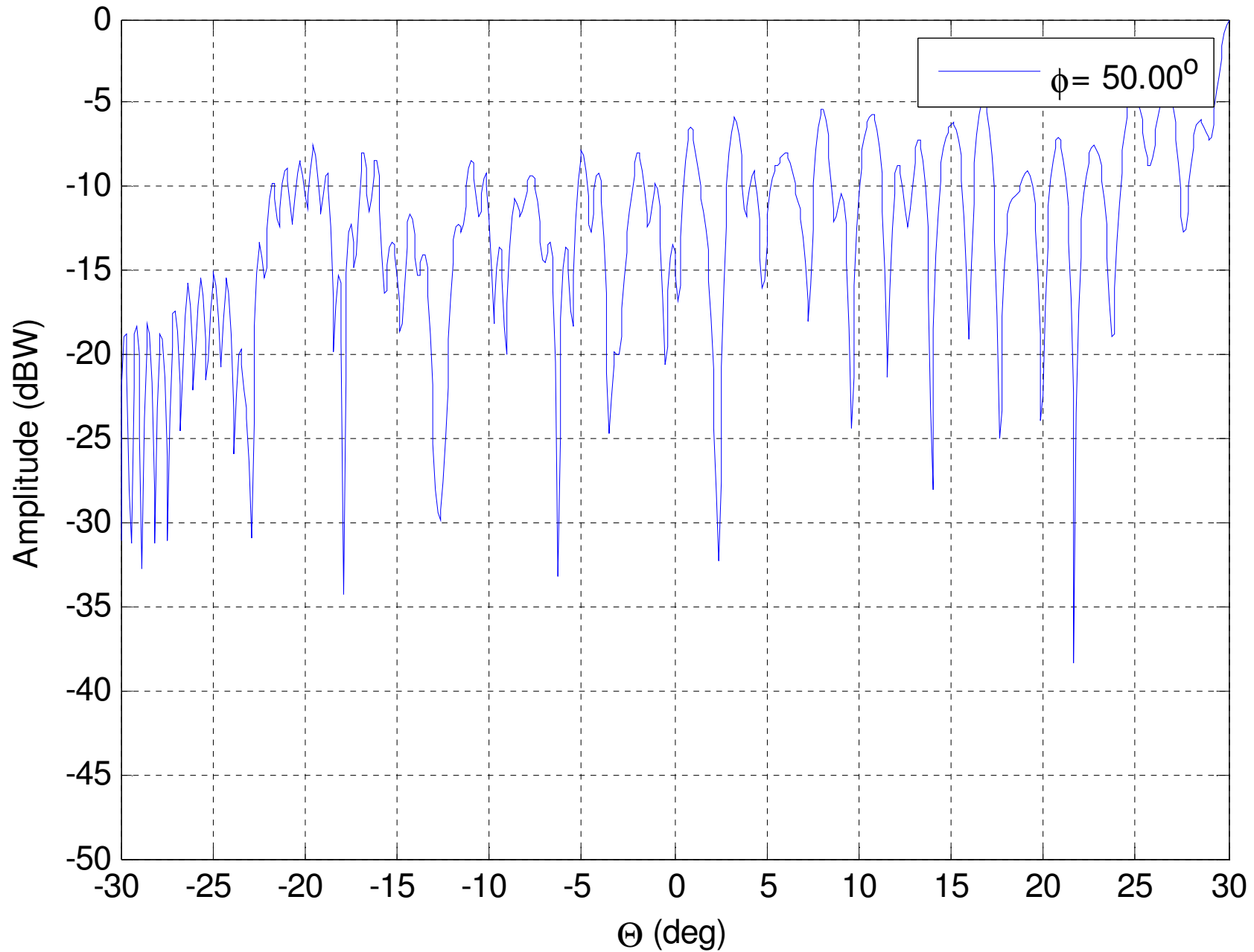
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -9.07 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.28 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -8.34 dBW, Date: 15-Dec-2011

