

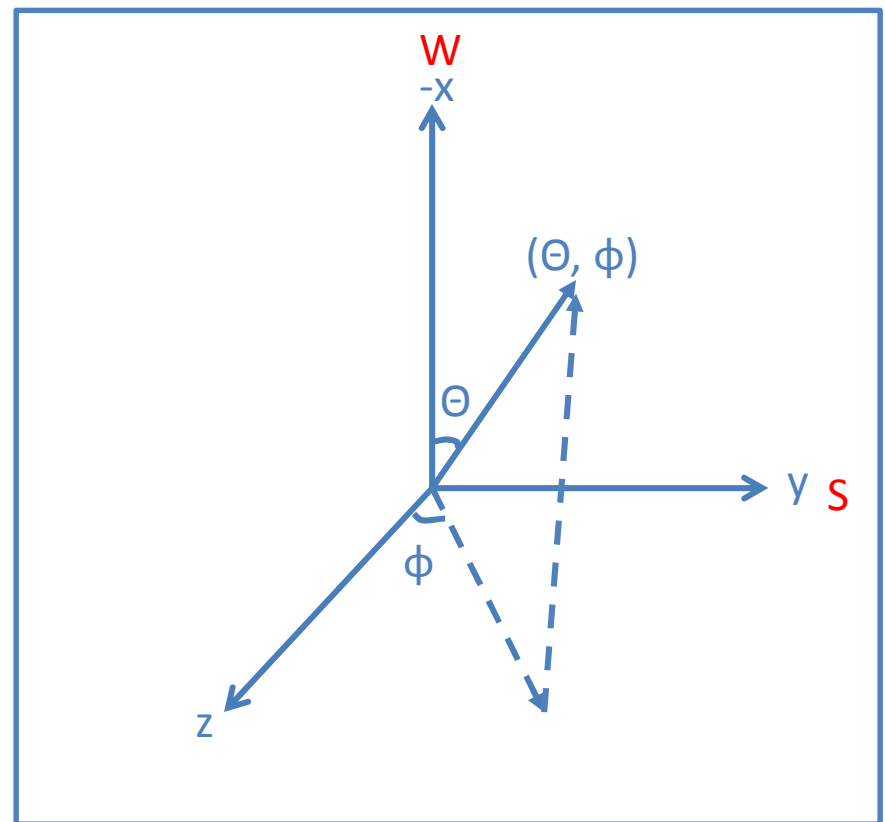
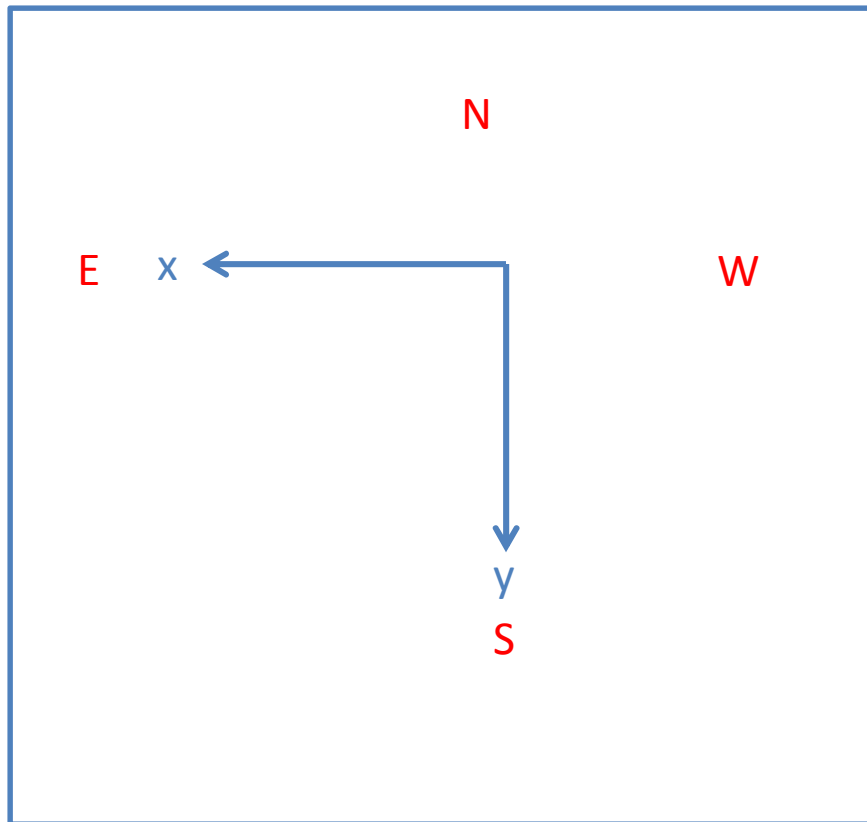
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 25

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



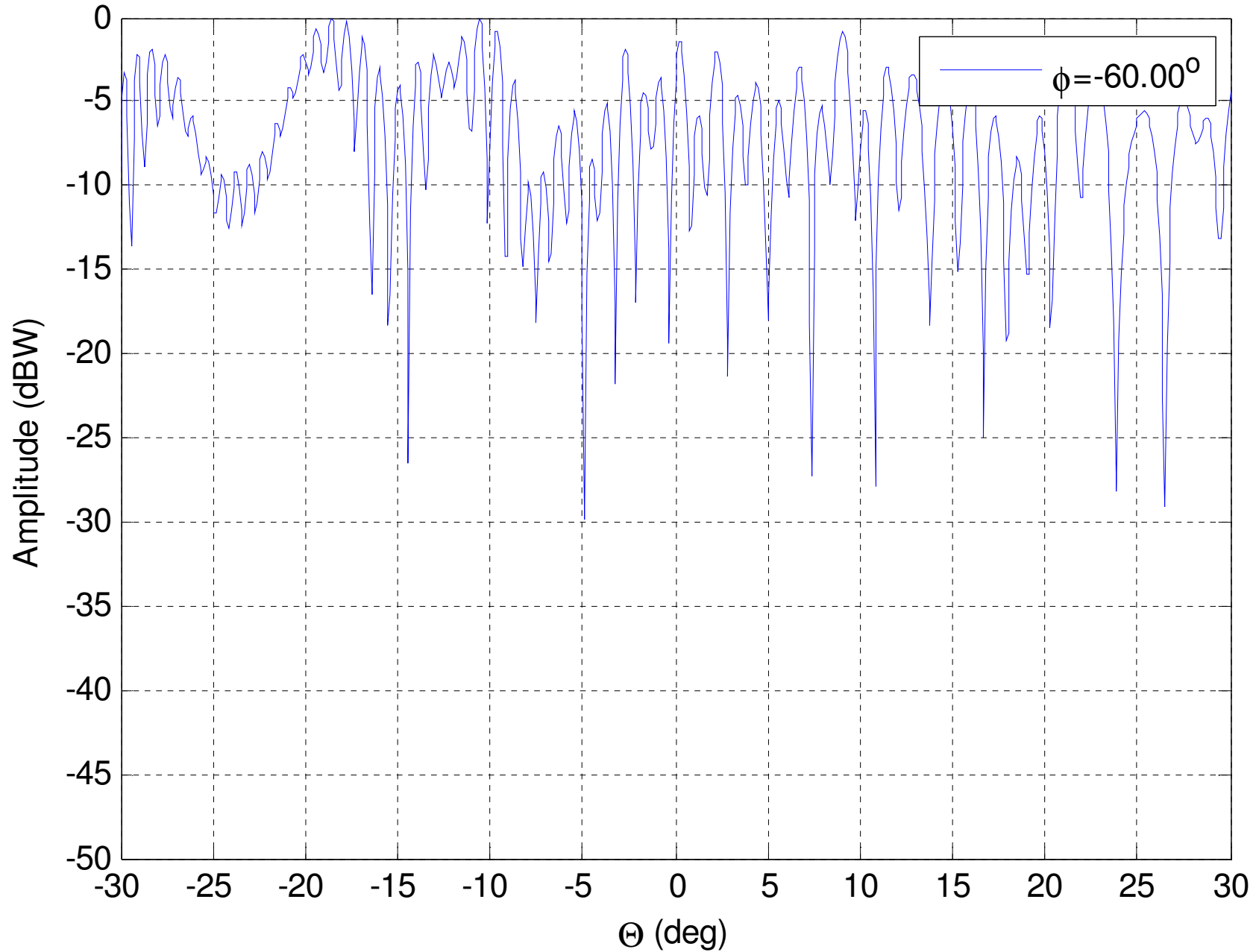
Spot Beam25, -X Axis Plots

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

RHCP at 17.3 GHz

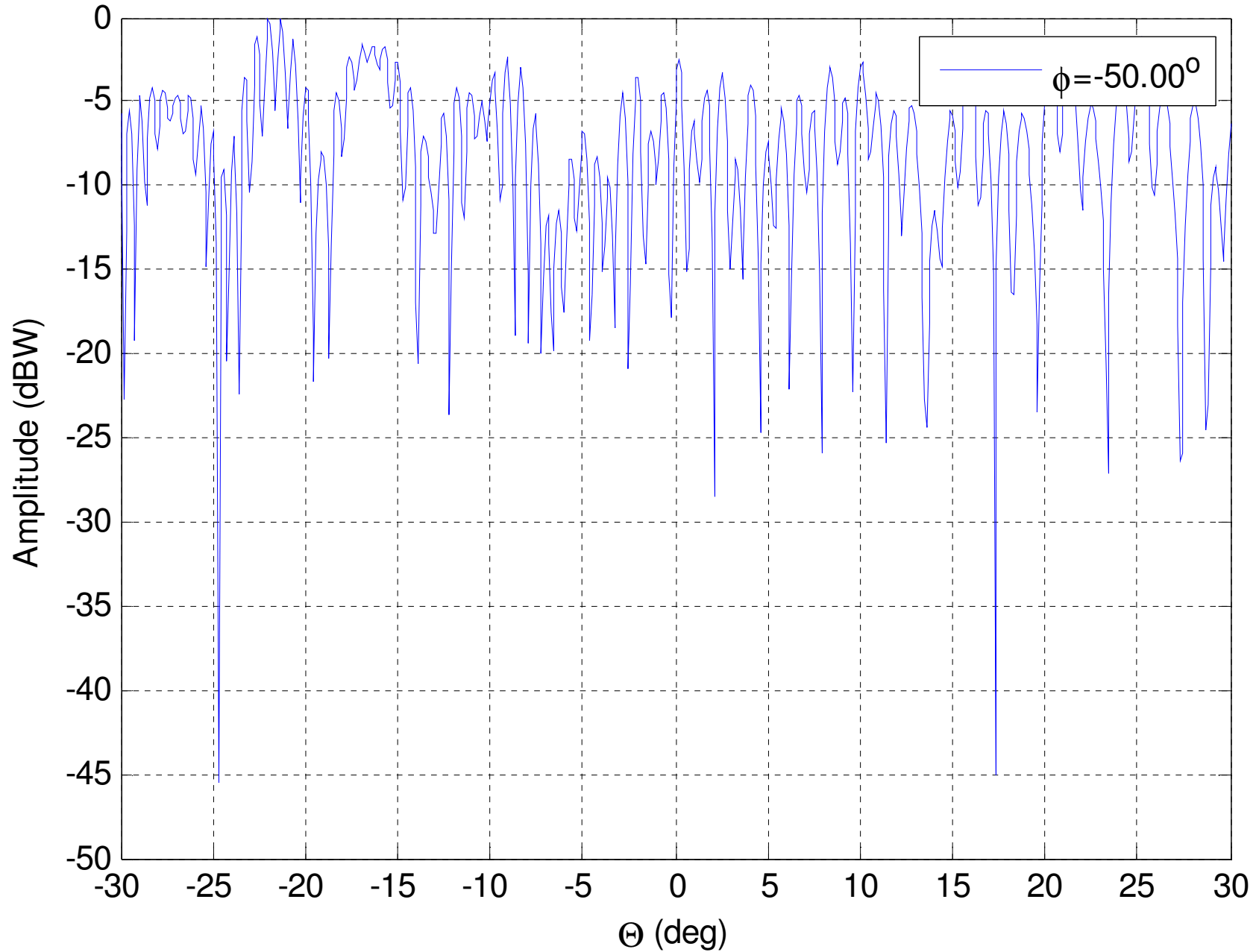
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.63 dBW, Date: 15-Dec-2011



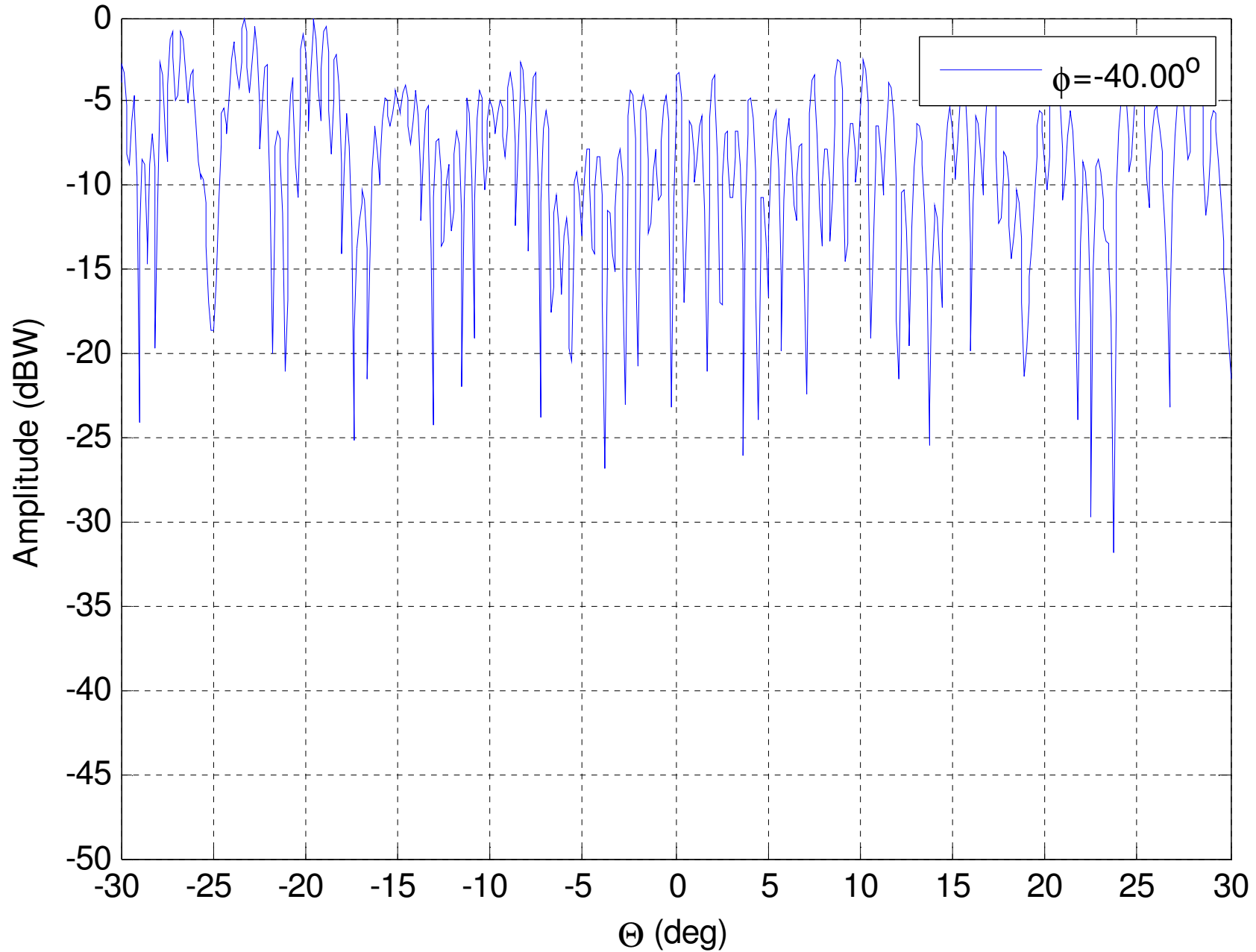
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -4.36 dBW, Date: 15-Dec-2011



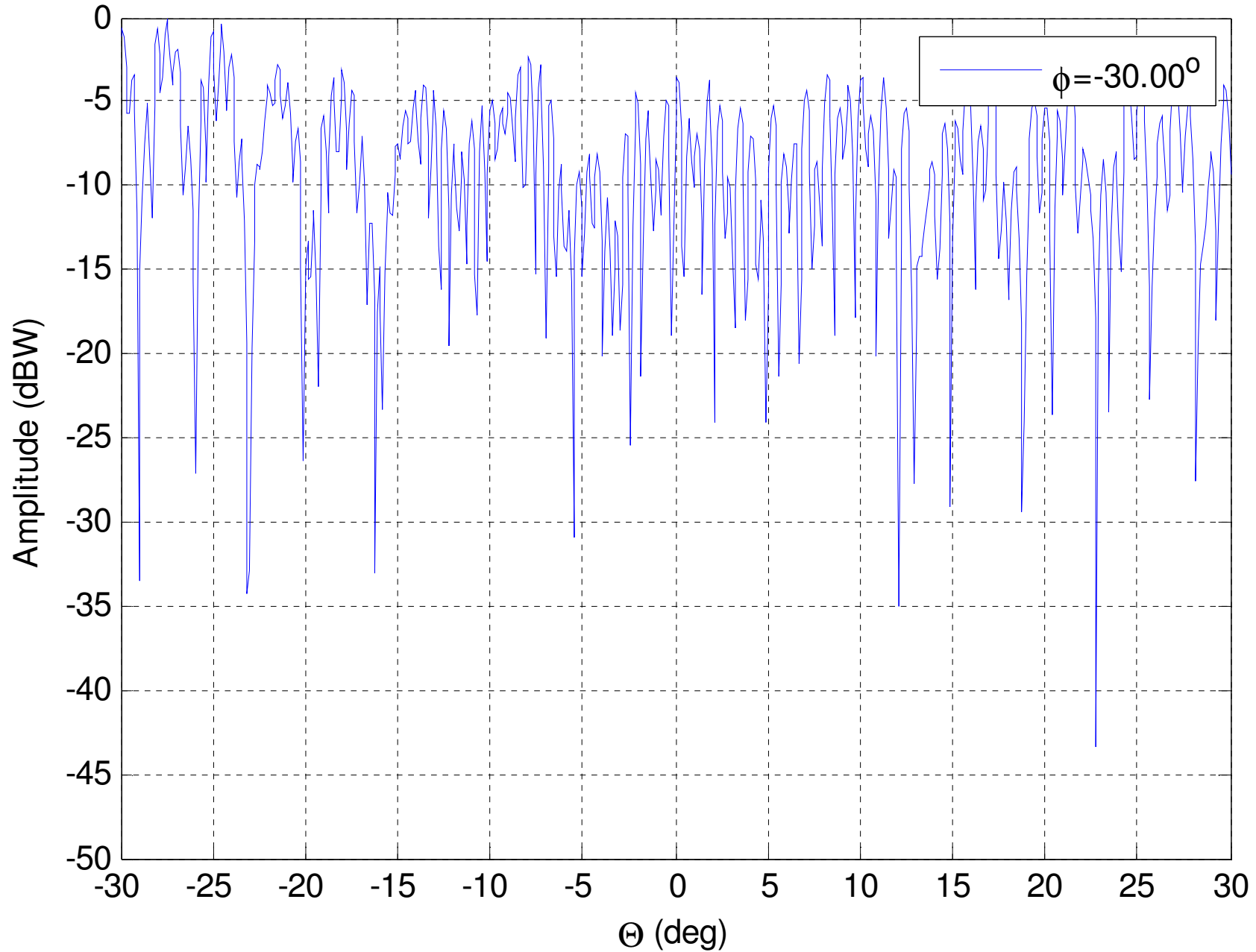
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -3.80 dBW, Date: 15-Dec-2011



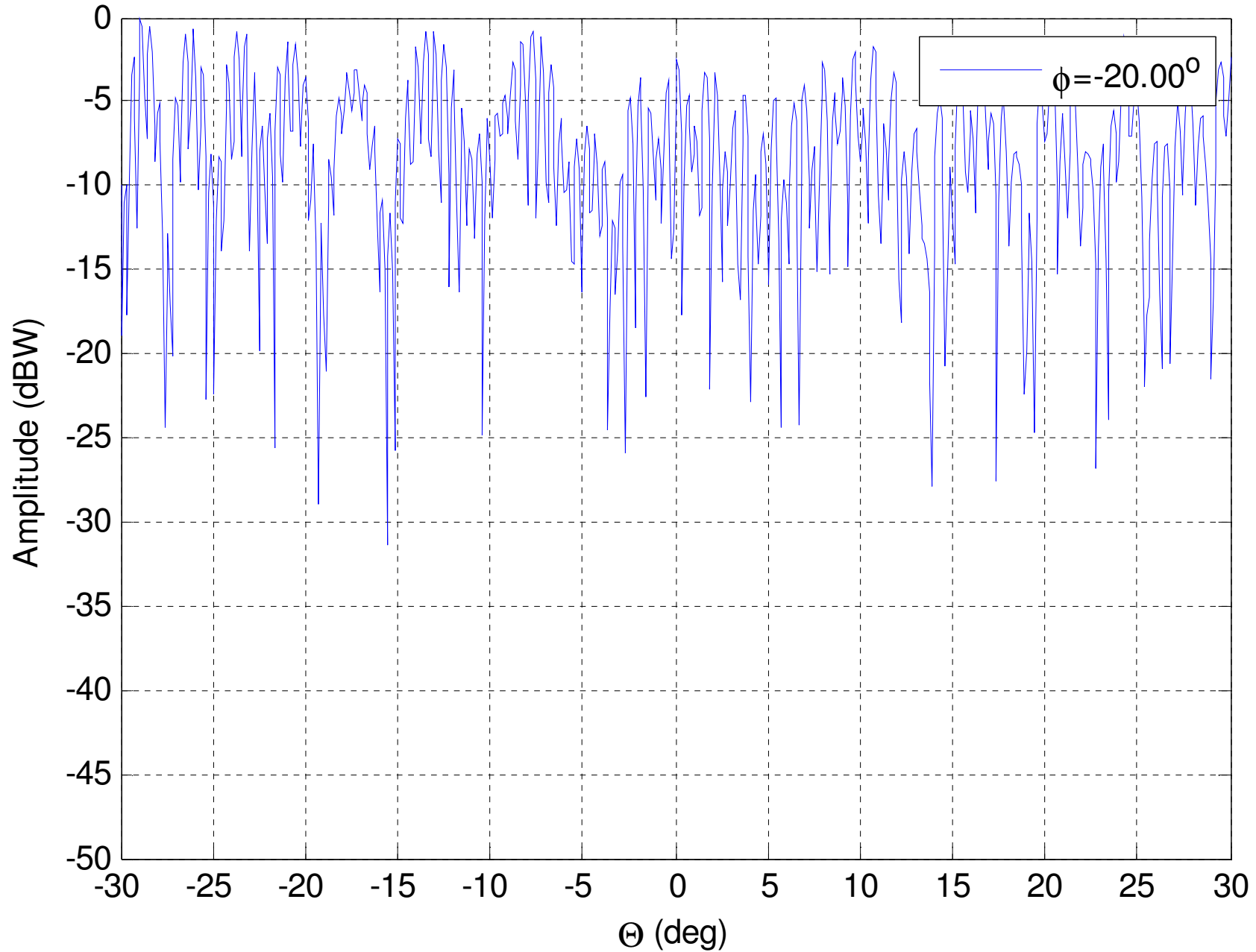
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -3.46 dBW, Date: 15-Dec-2011



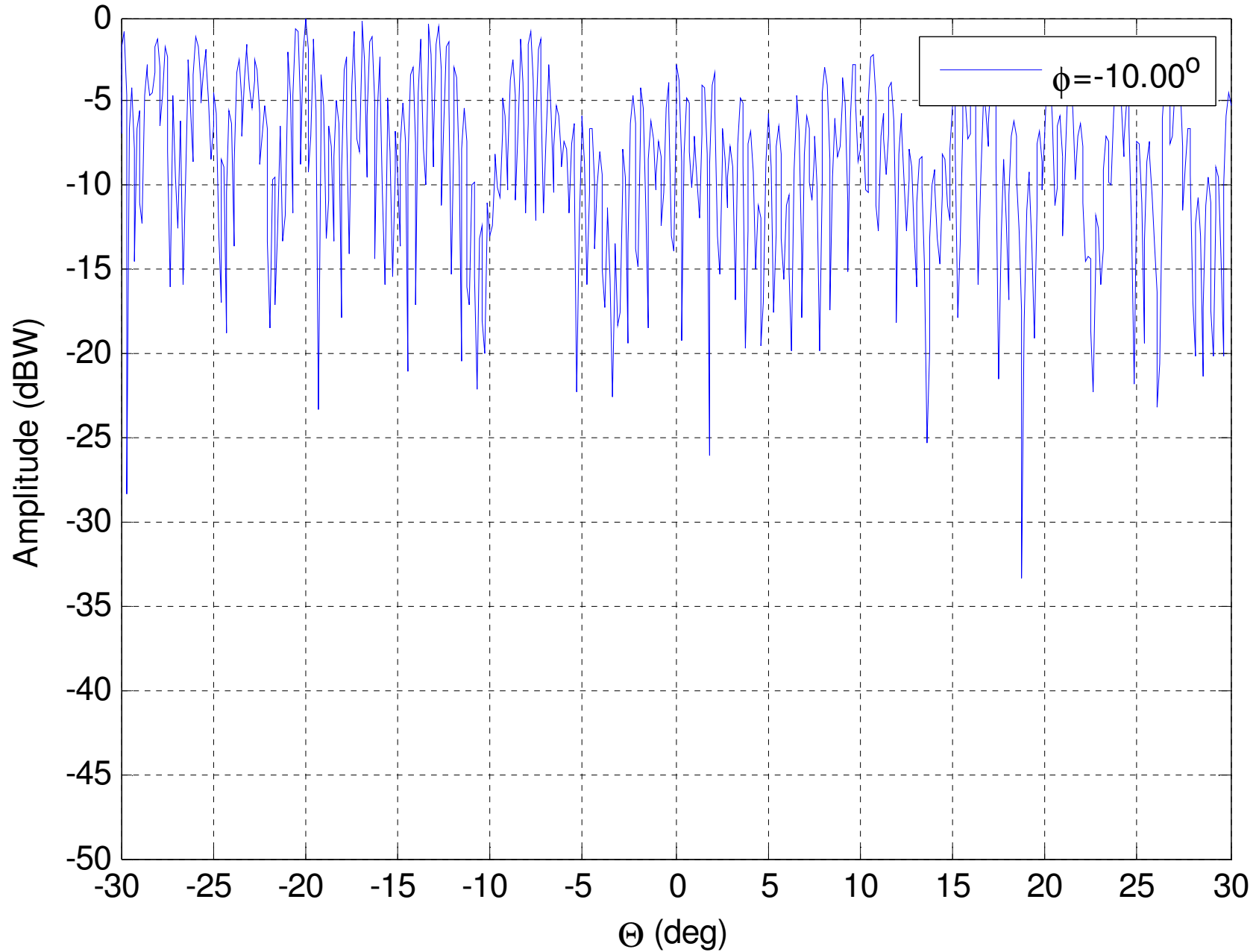
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -4.50 dBW, Date: 15-Dec-2011



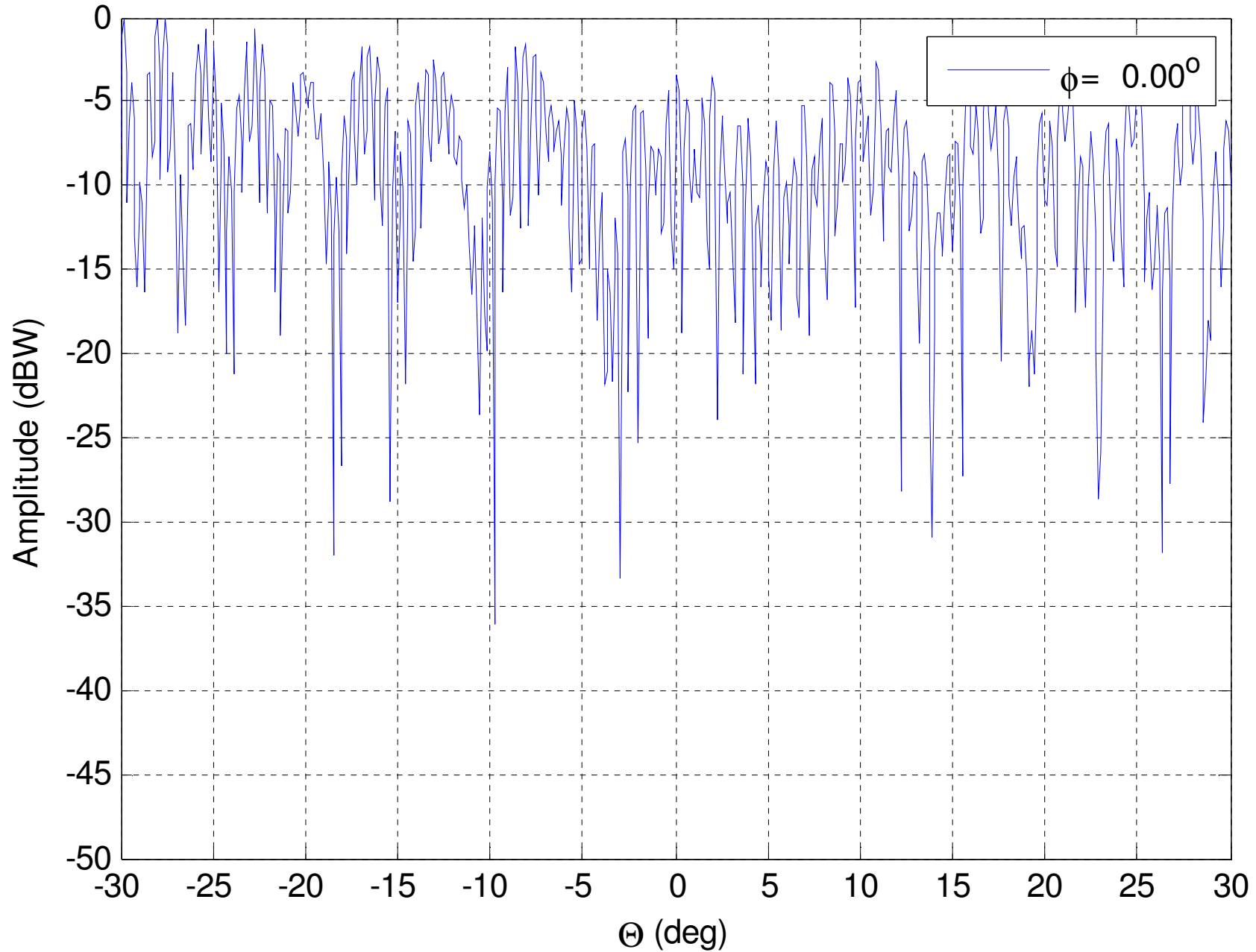
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -4.15 dBW, Date: 15-Dec-2011



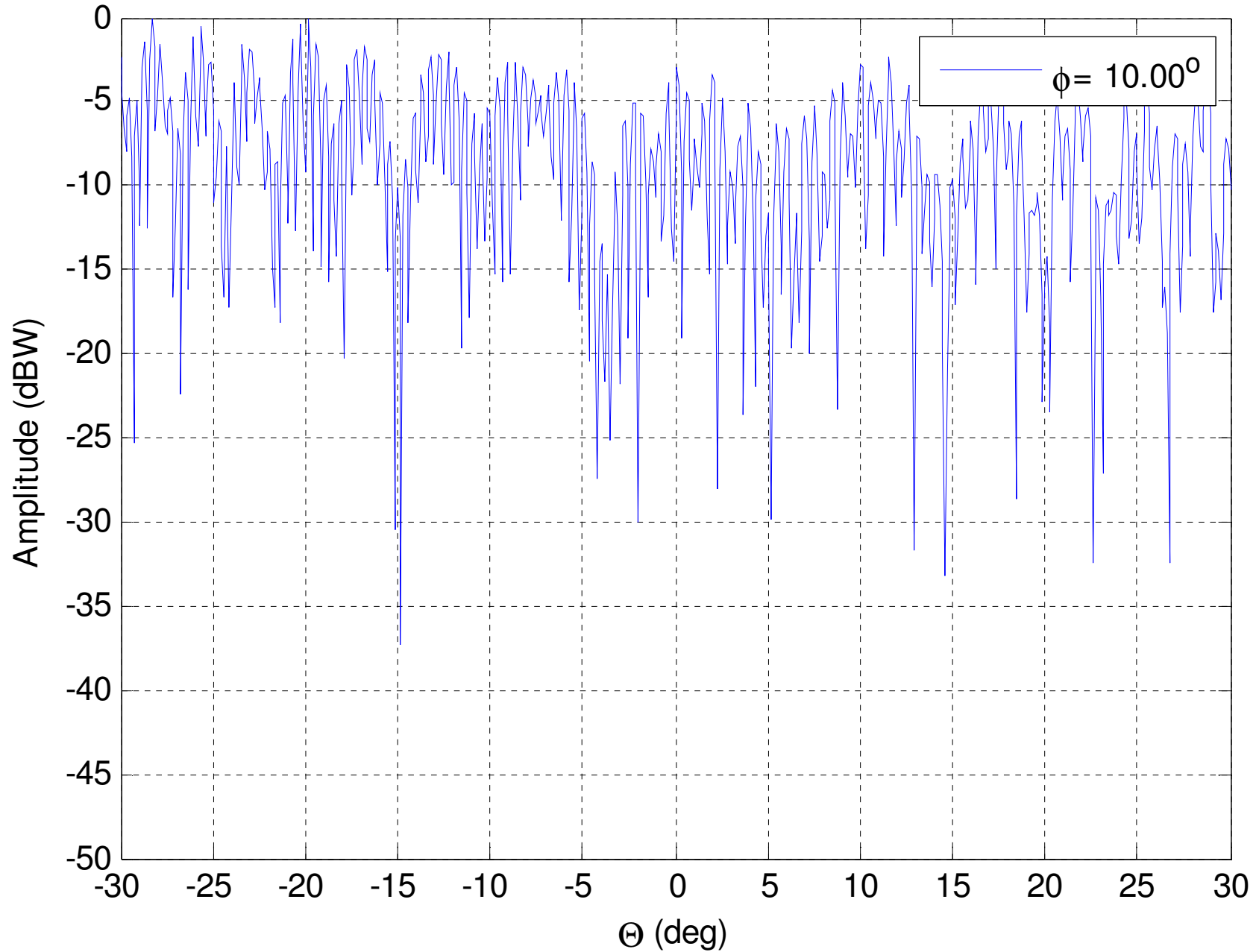
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -3.57 dBW, Date: 15-Dec-2011



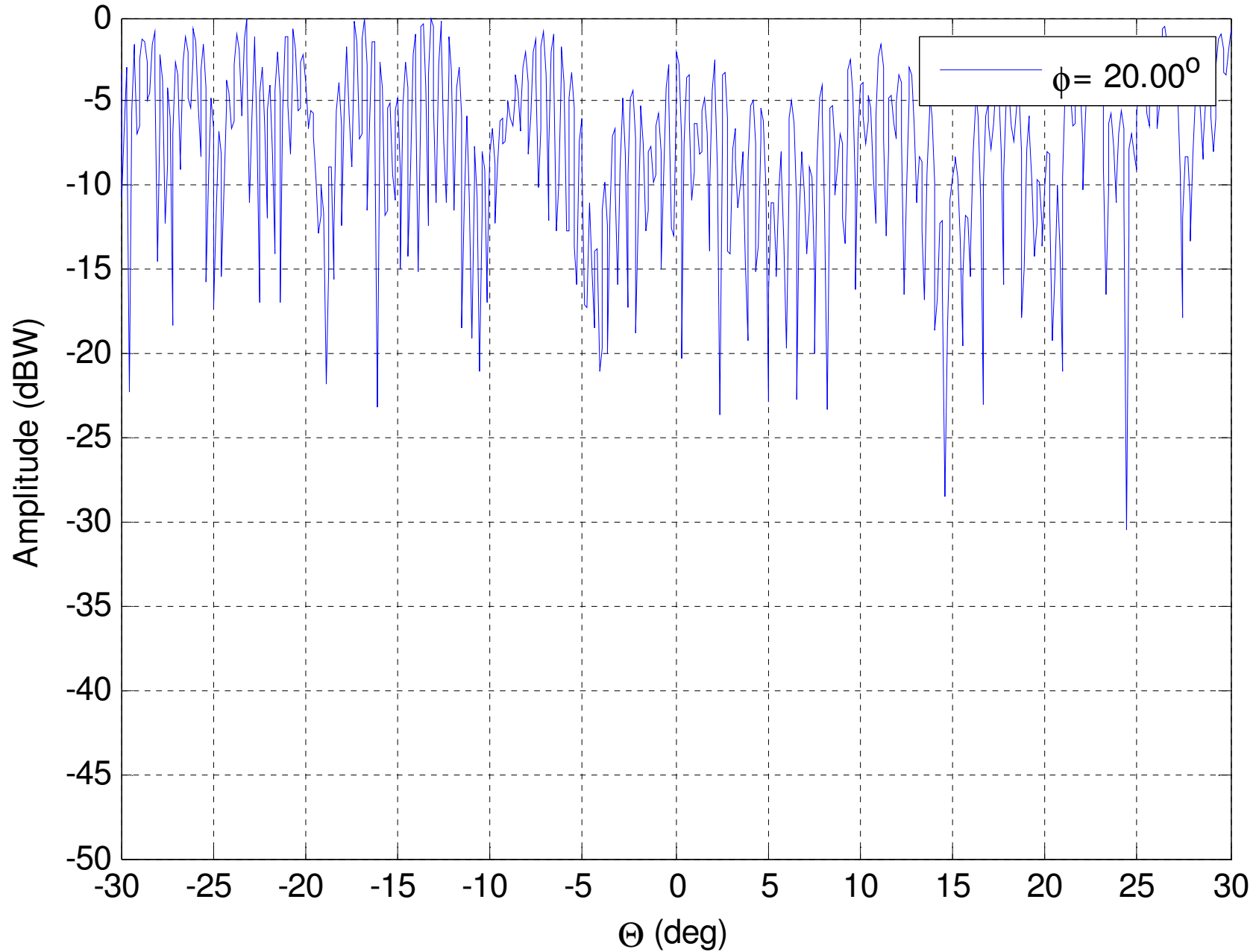
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -3.92 dBW, Date: 15-Dec-2011



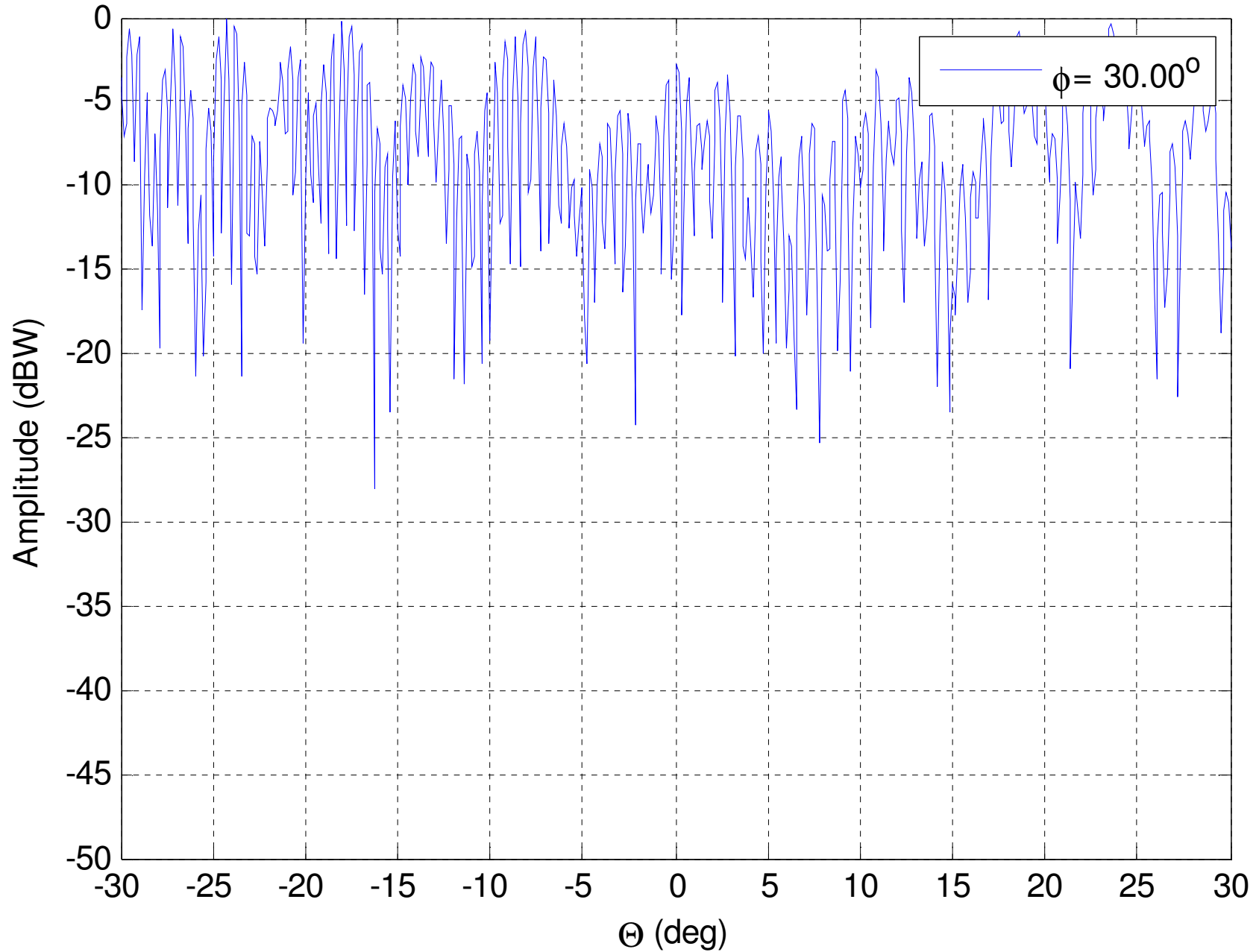
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -4.85 dBW, Date: 15-Dec-2011



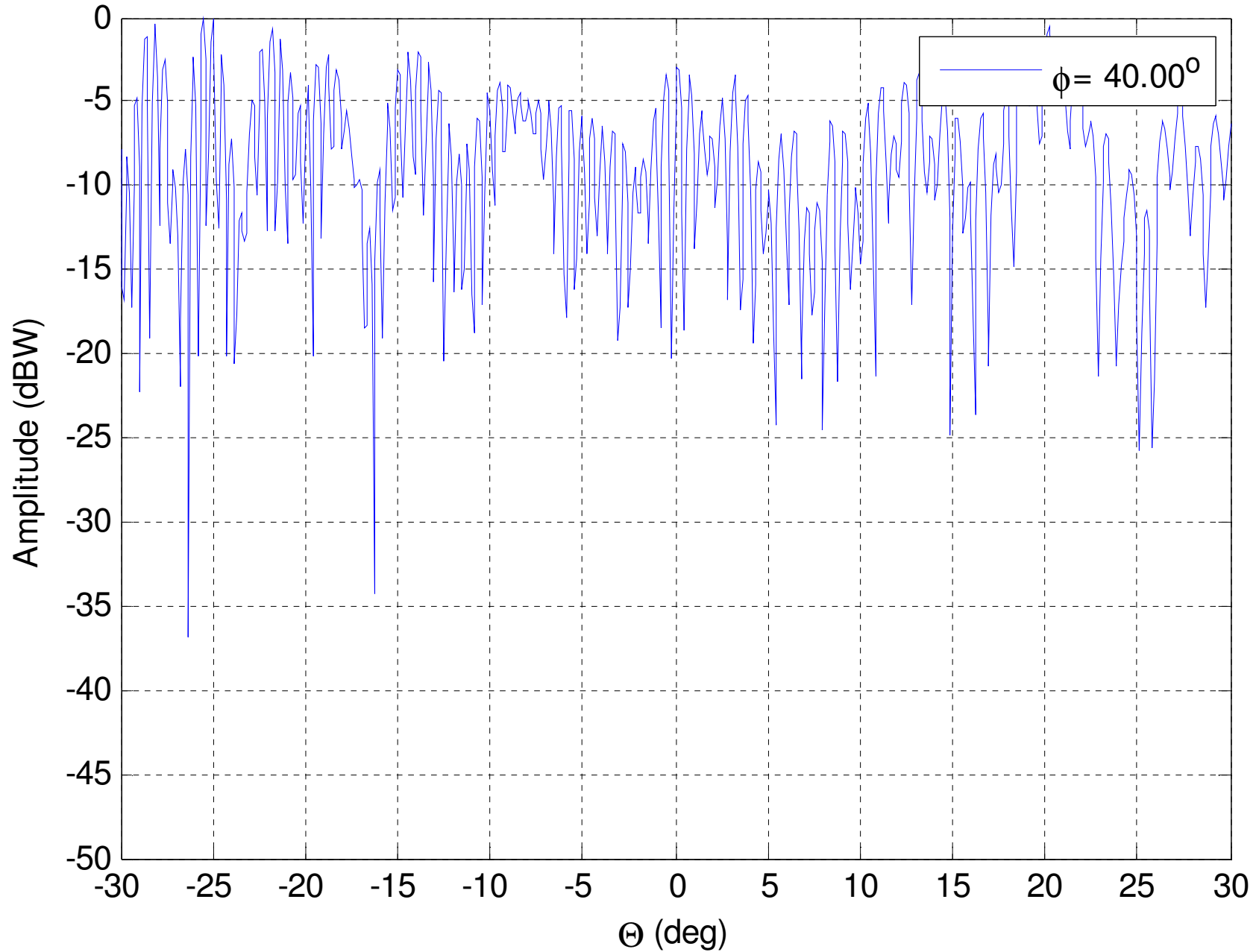
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -4.14 dBW, Date: 15-Dec-2011



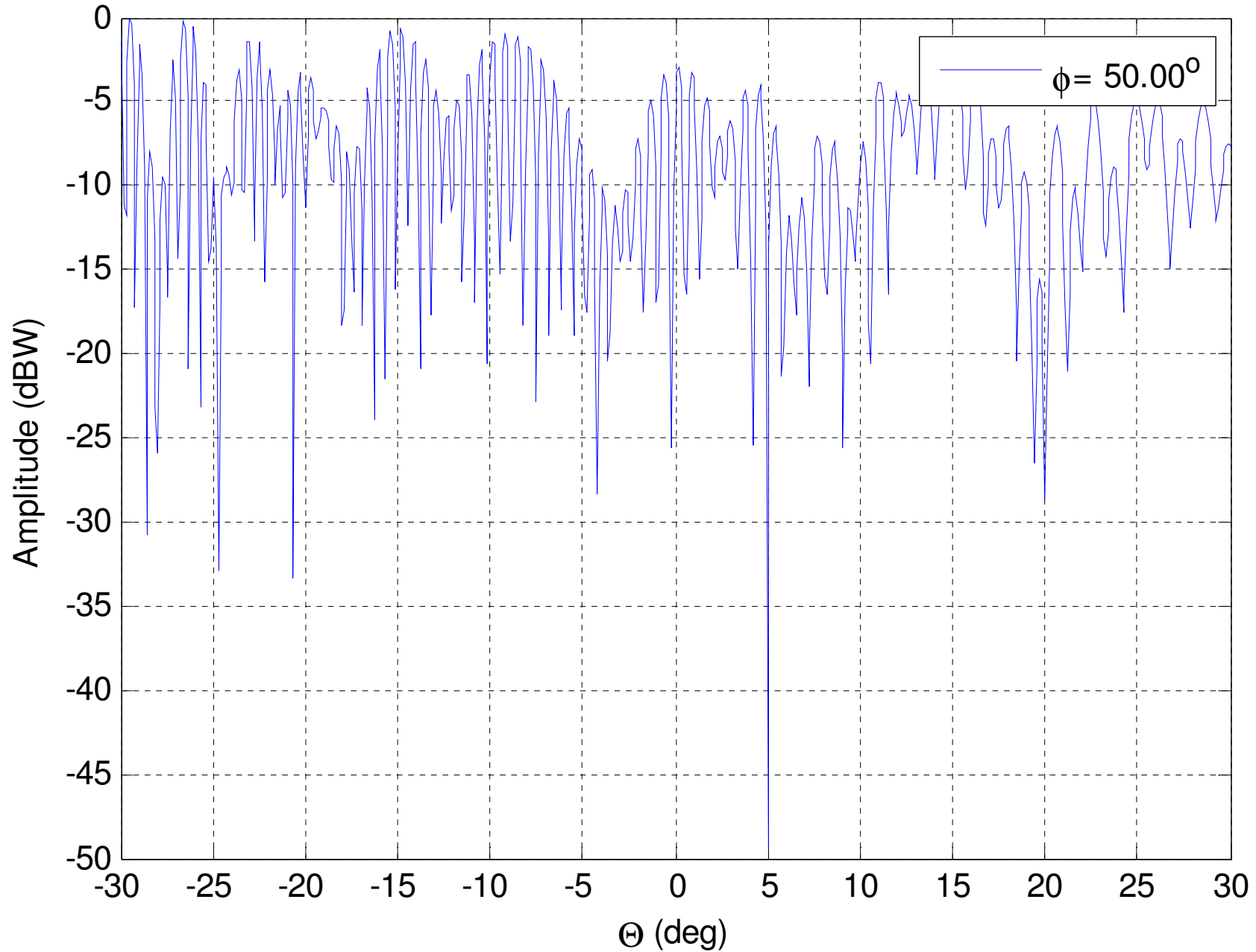
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -4.06 dBW, Date: 15-Dec-2011



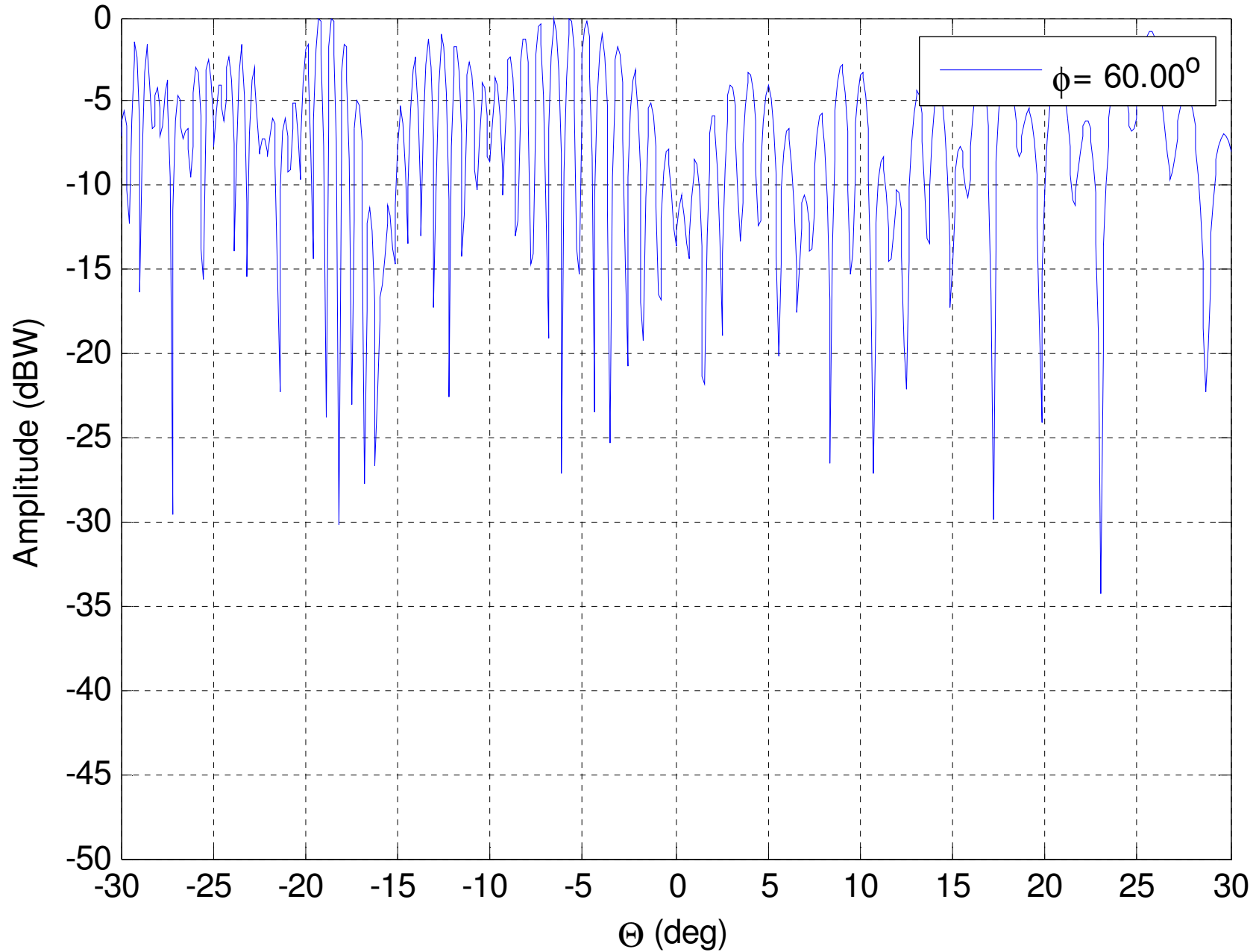
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -3.96 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

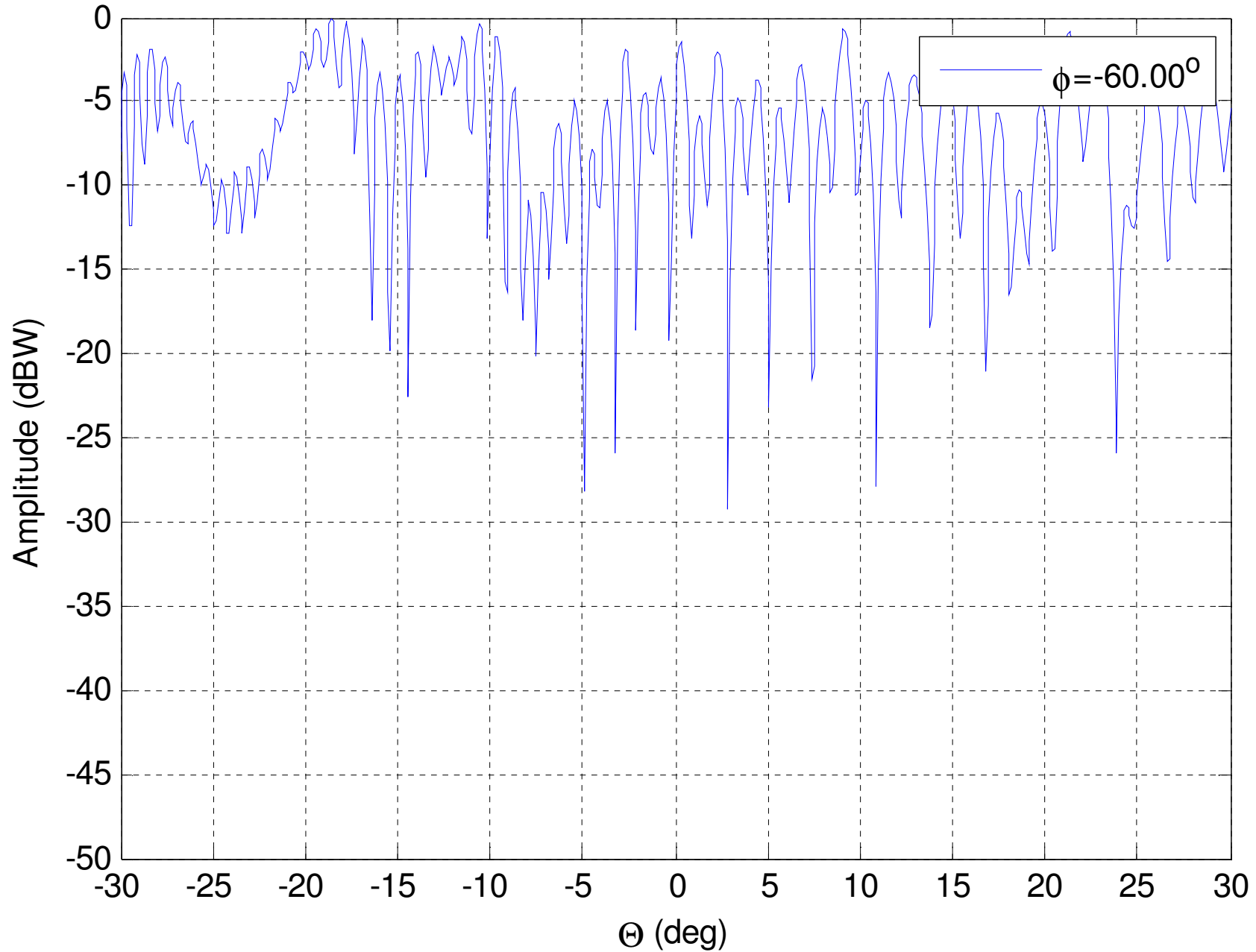
Input file: tx-17.3-rhcp-60.cut, Peak: -5.57 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

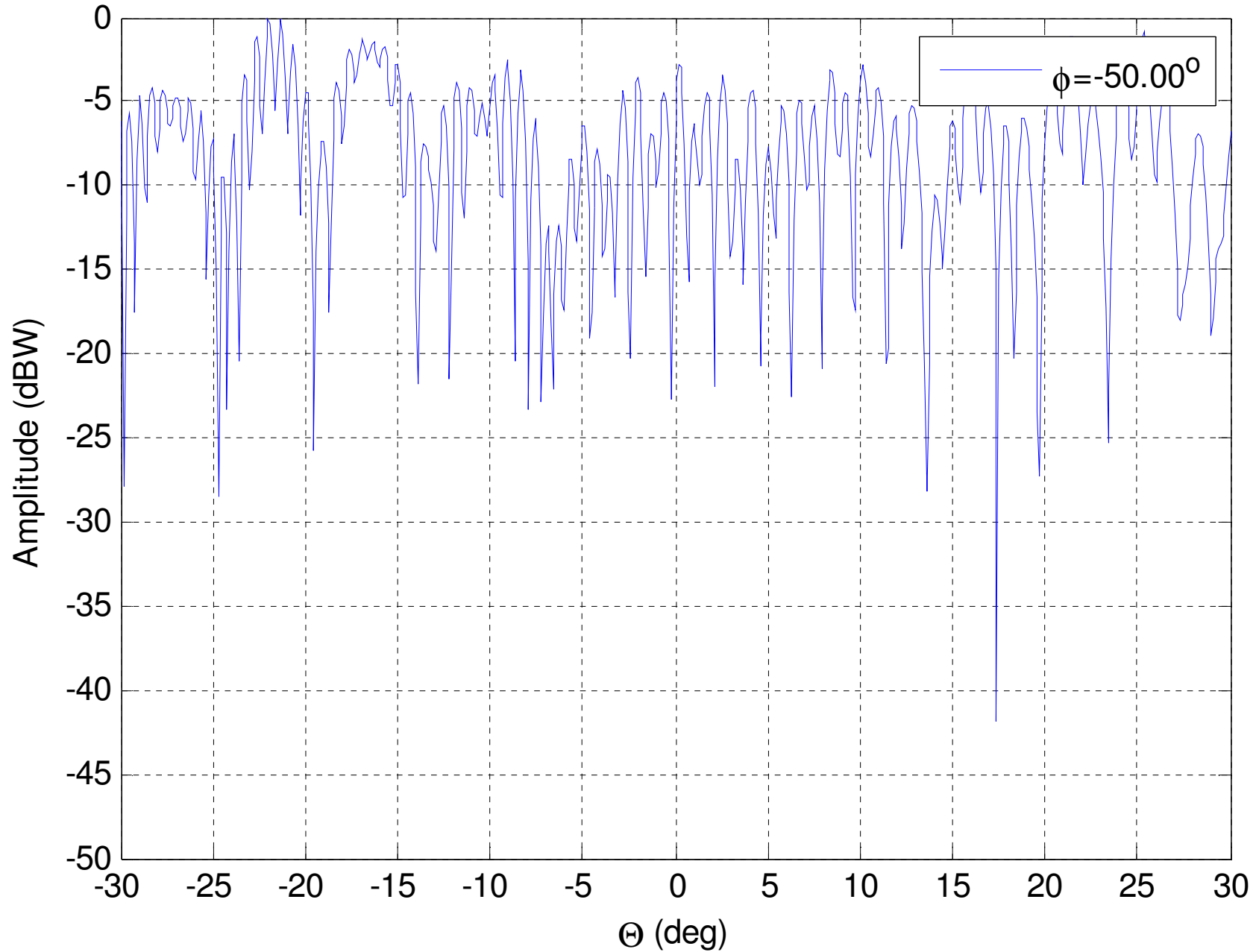
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -5.58 dBW, Date: 15-Dec-2011



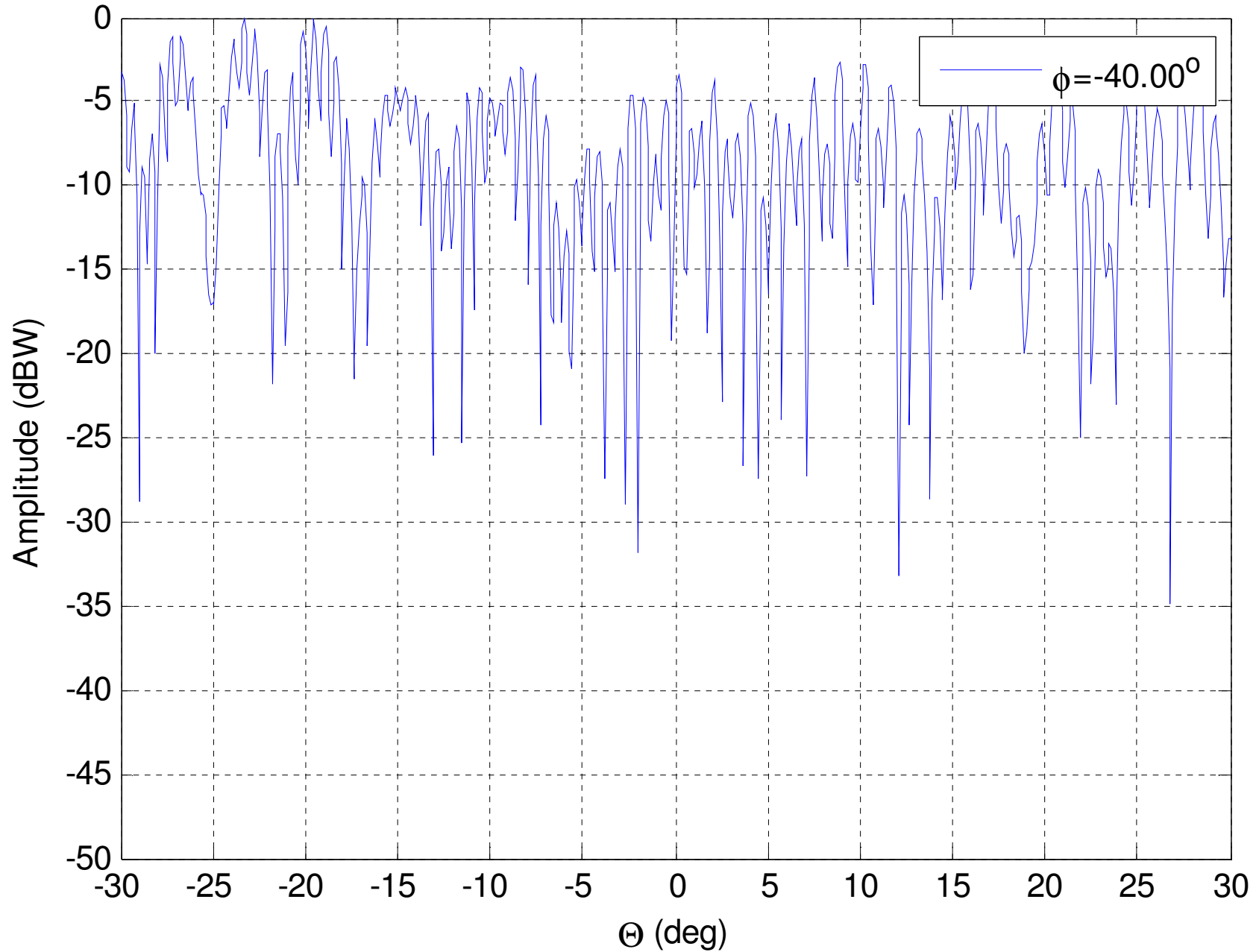
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.29 dBW, Date: 15-Dec-2011



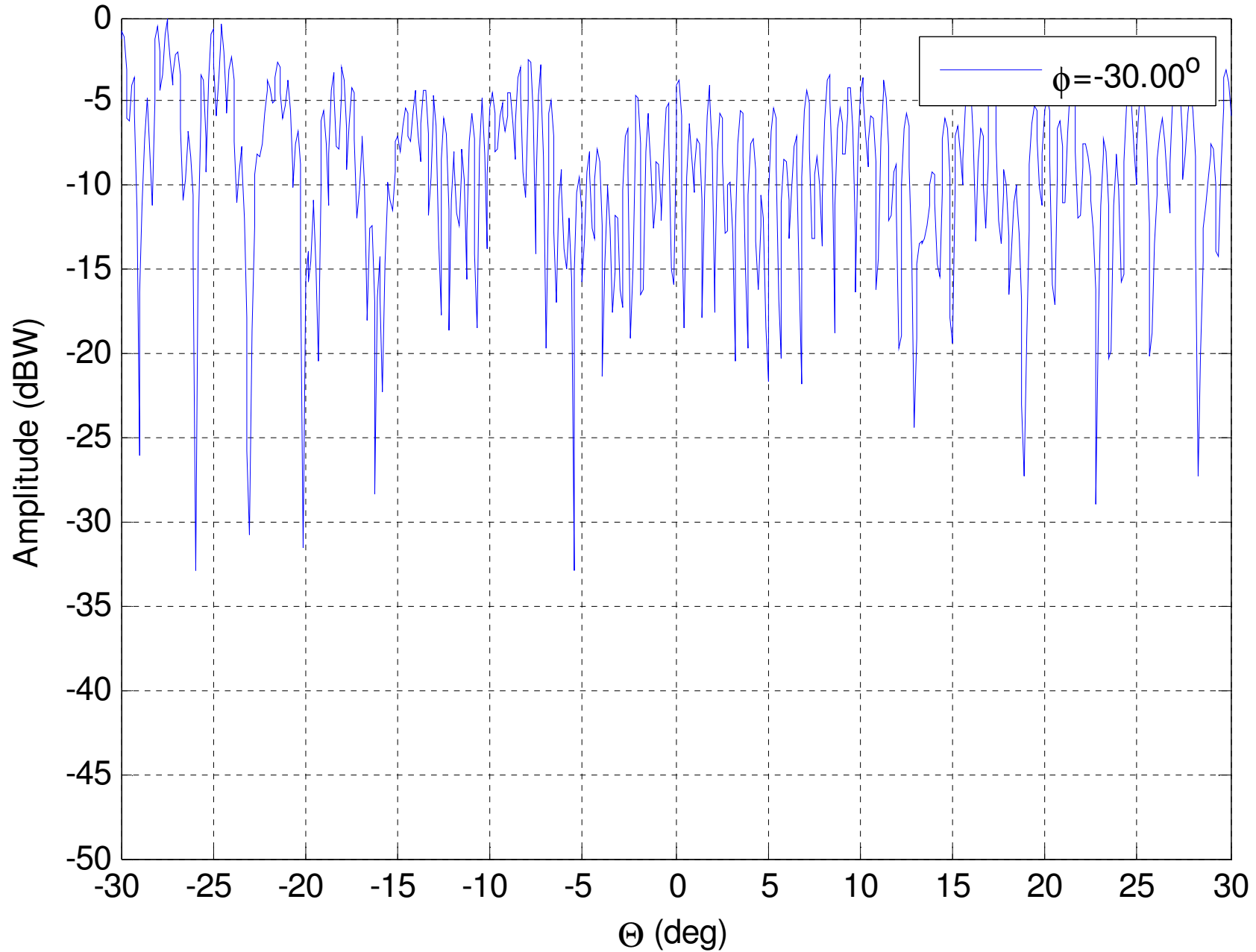
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.56 dBW, Date: 15-Dec-2011



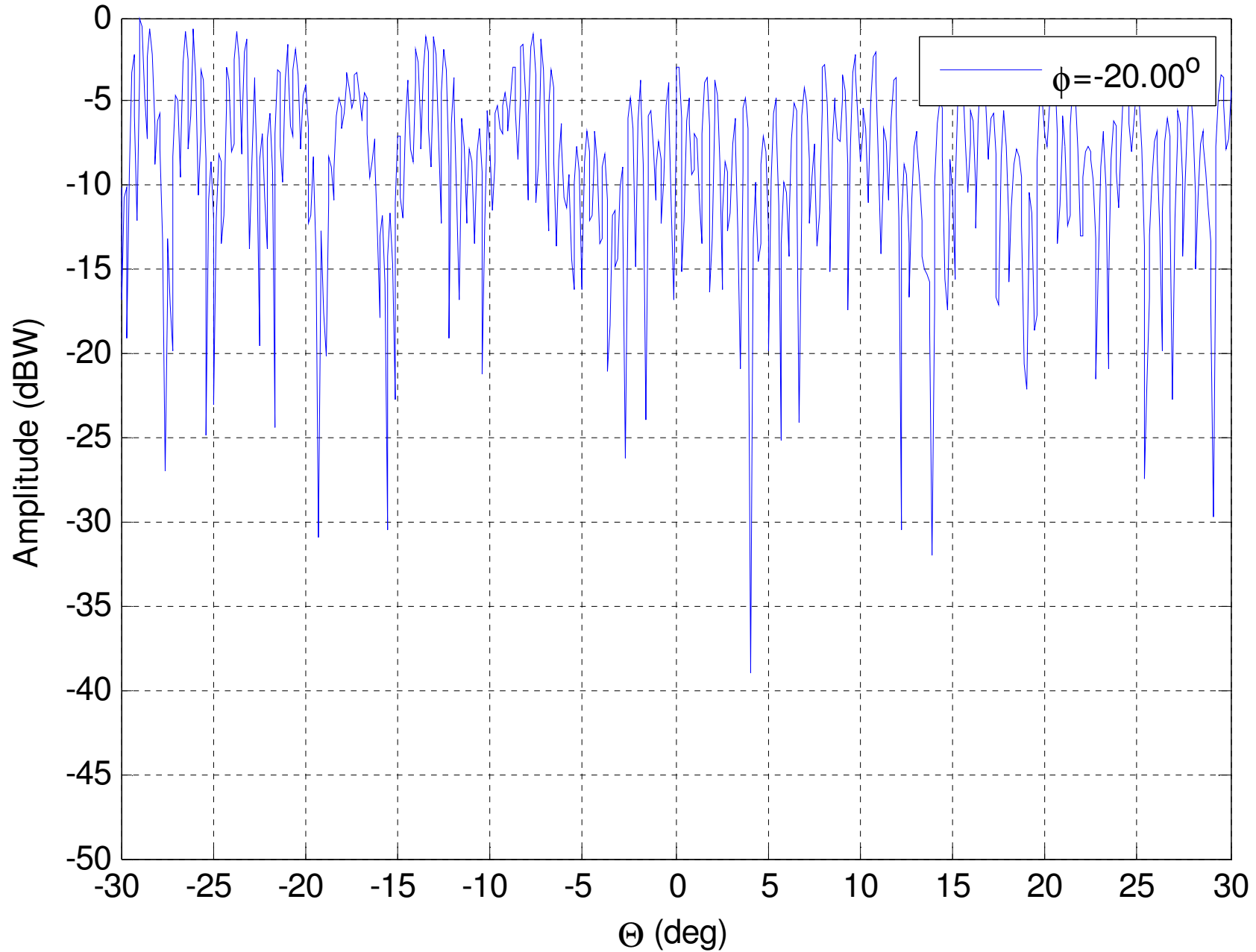
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -3.34 dBW, Date: 15-Dec-2011



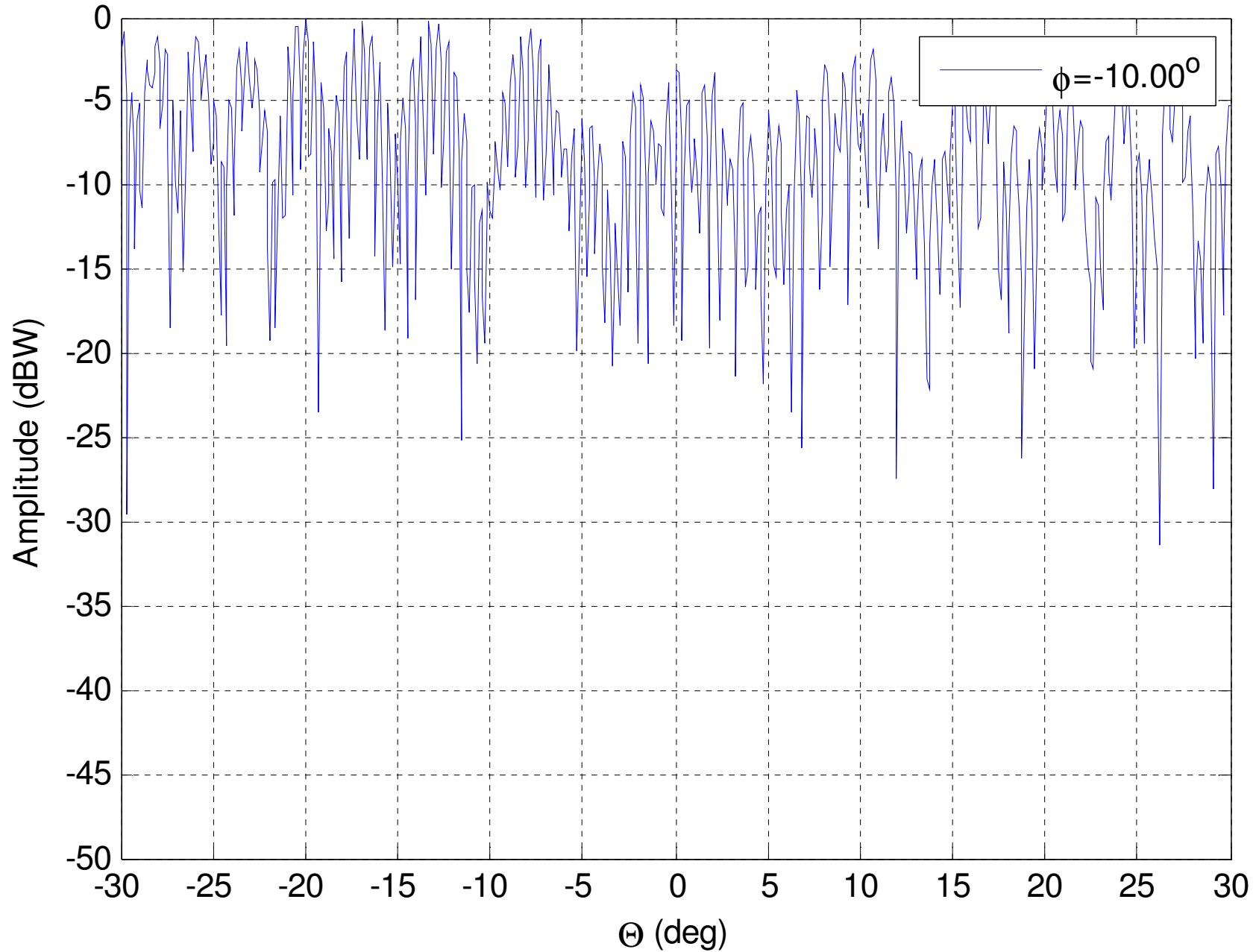
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -4.25 dBW, Date: 15-Dec-2011



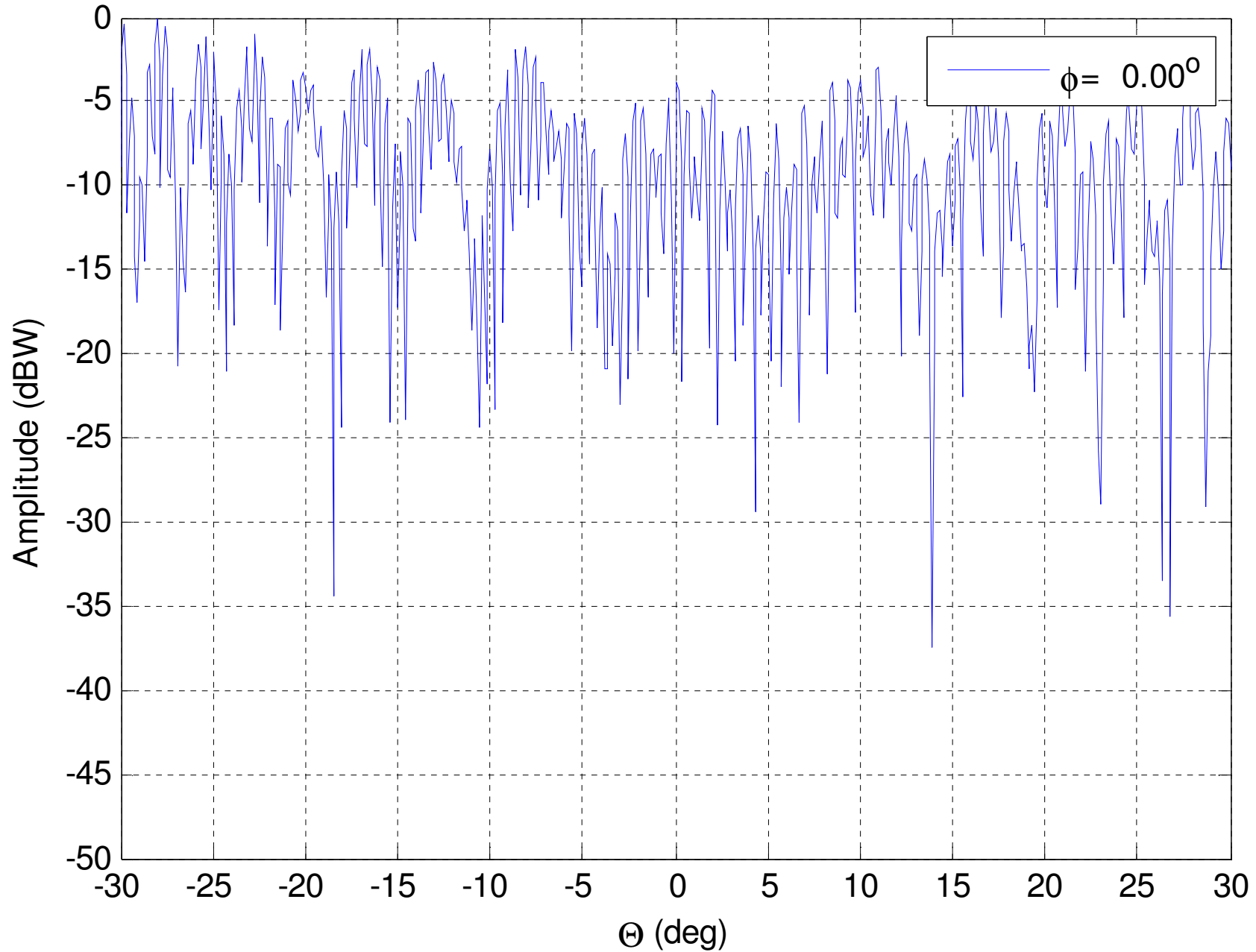
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -4.15 dBW, Date: 15-Dec-2011



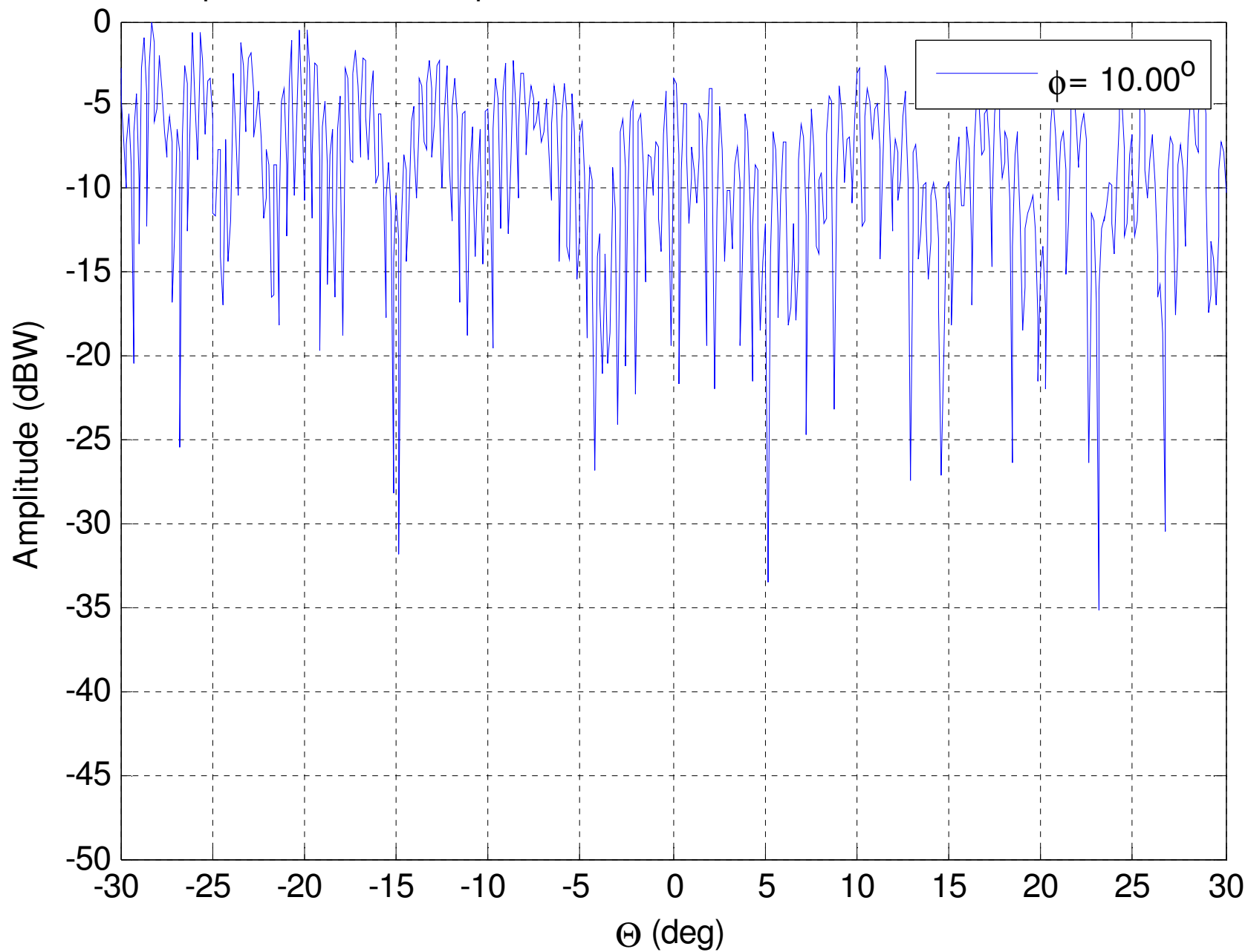
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -3.25 dBW, Date: 15-Dec-2011



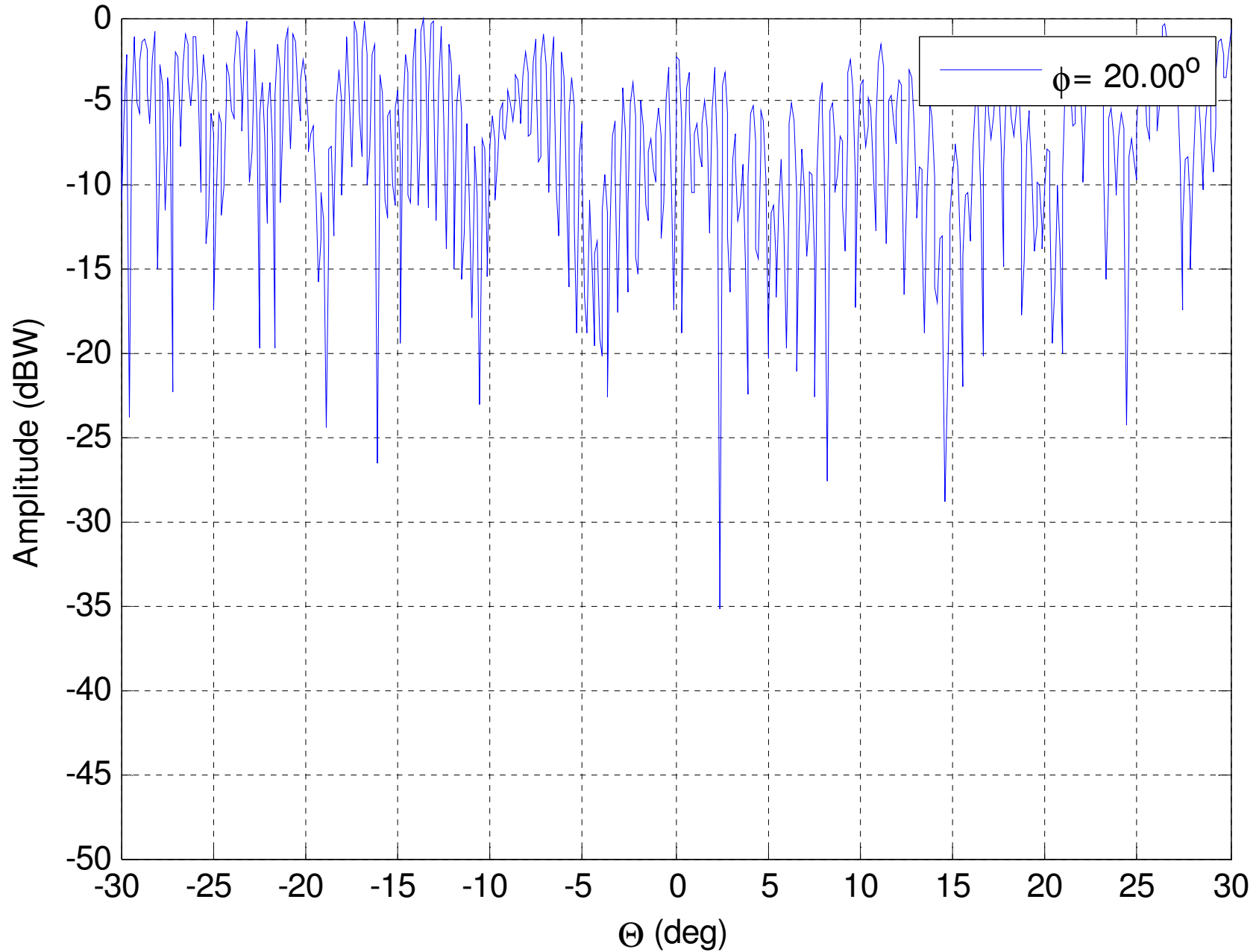
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -3.74 dBW, Date: 15-Dec-2011



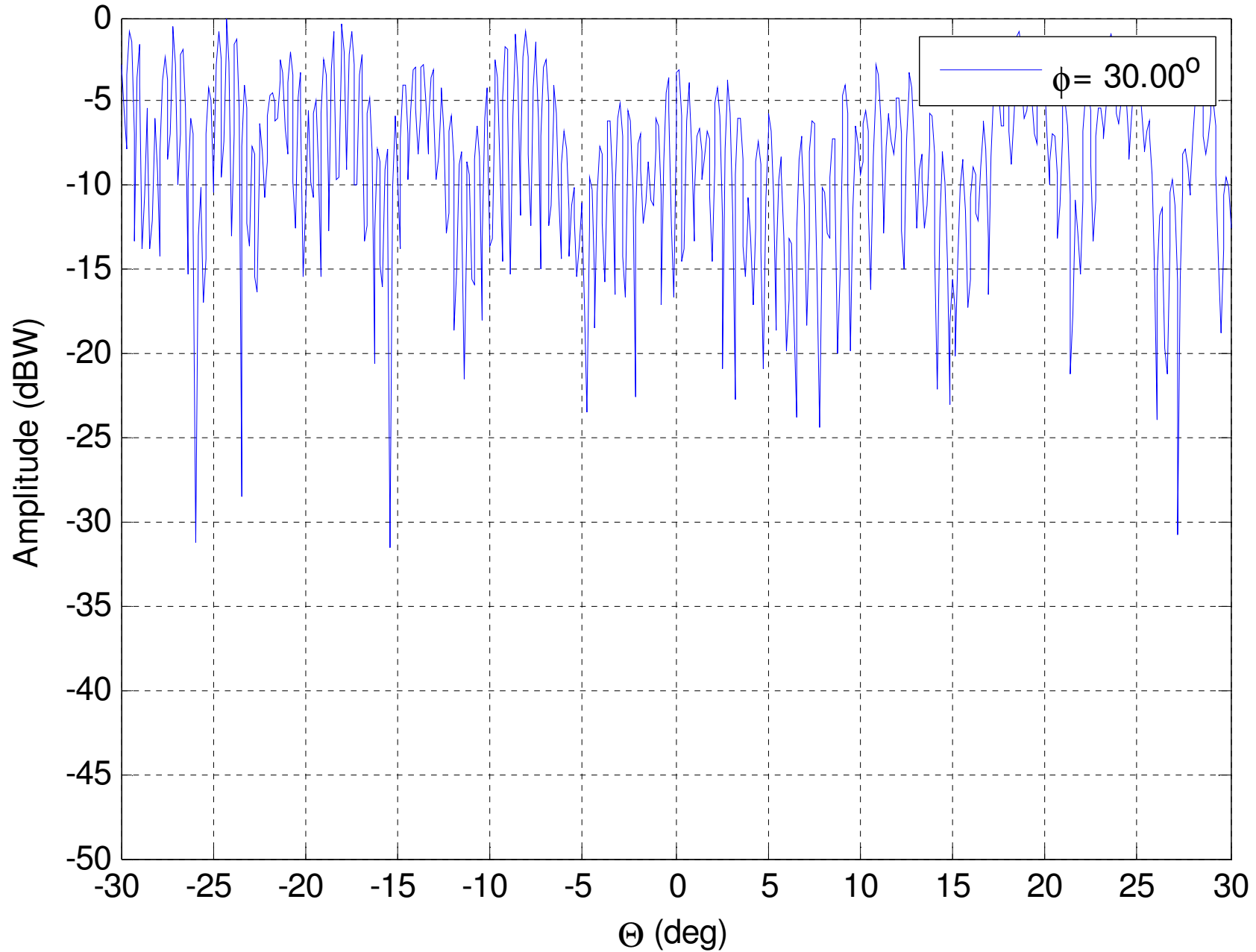
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -4.81 dBW, Date: 15-Dec-2011



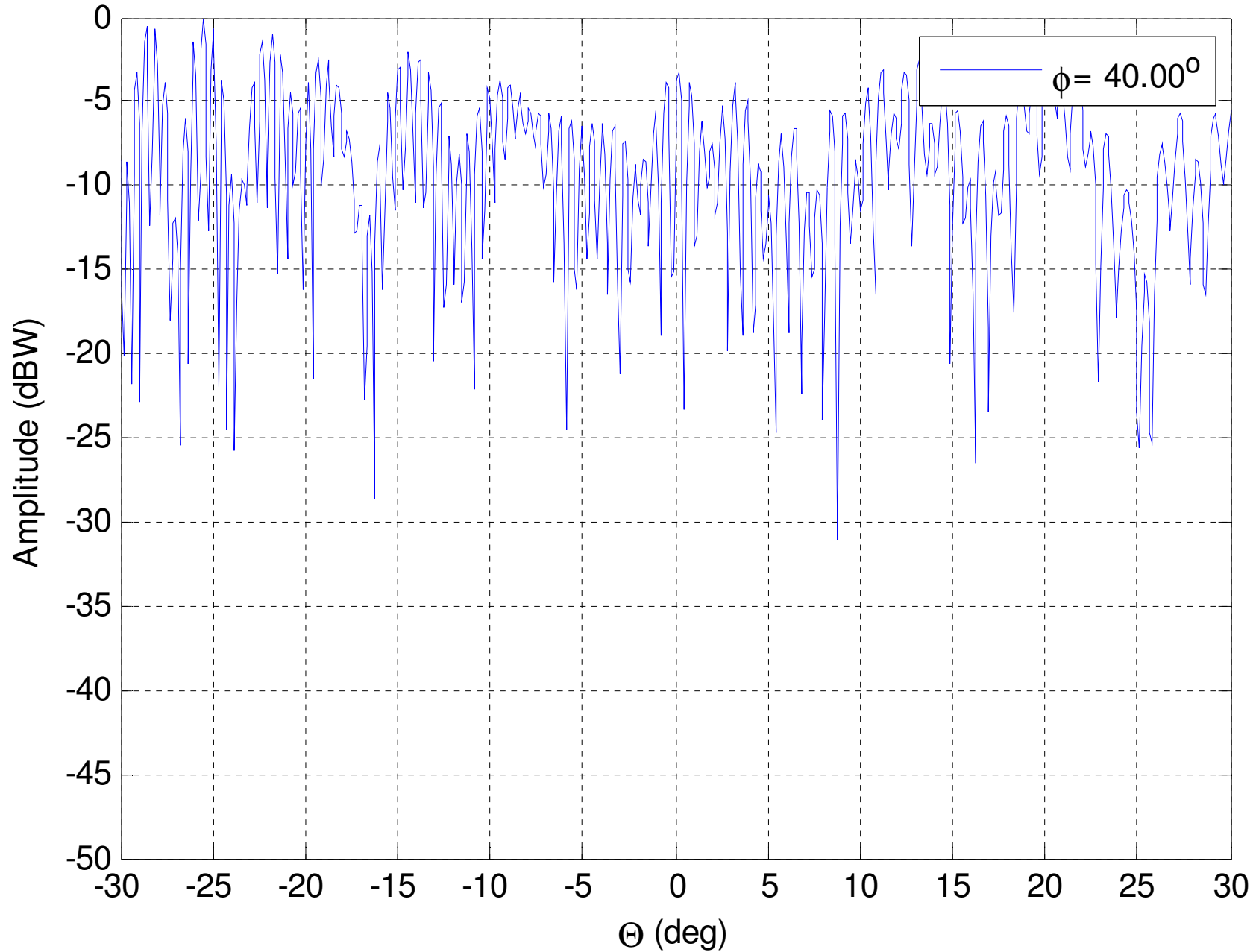
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -3.99 dBW, Date: 15-Dec-2011



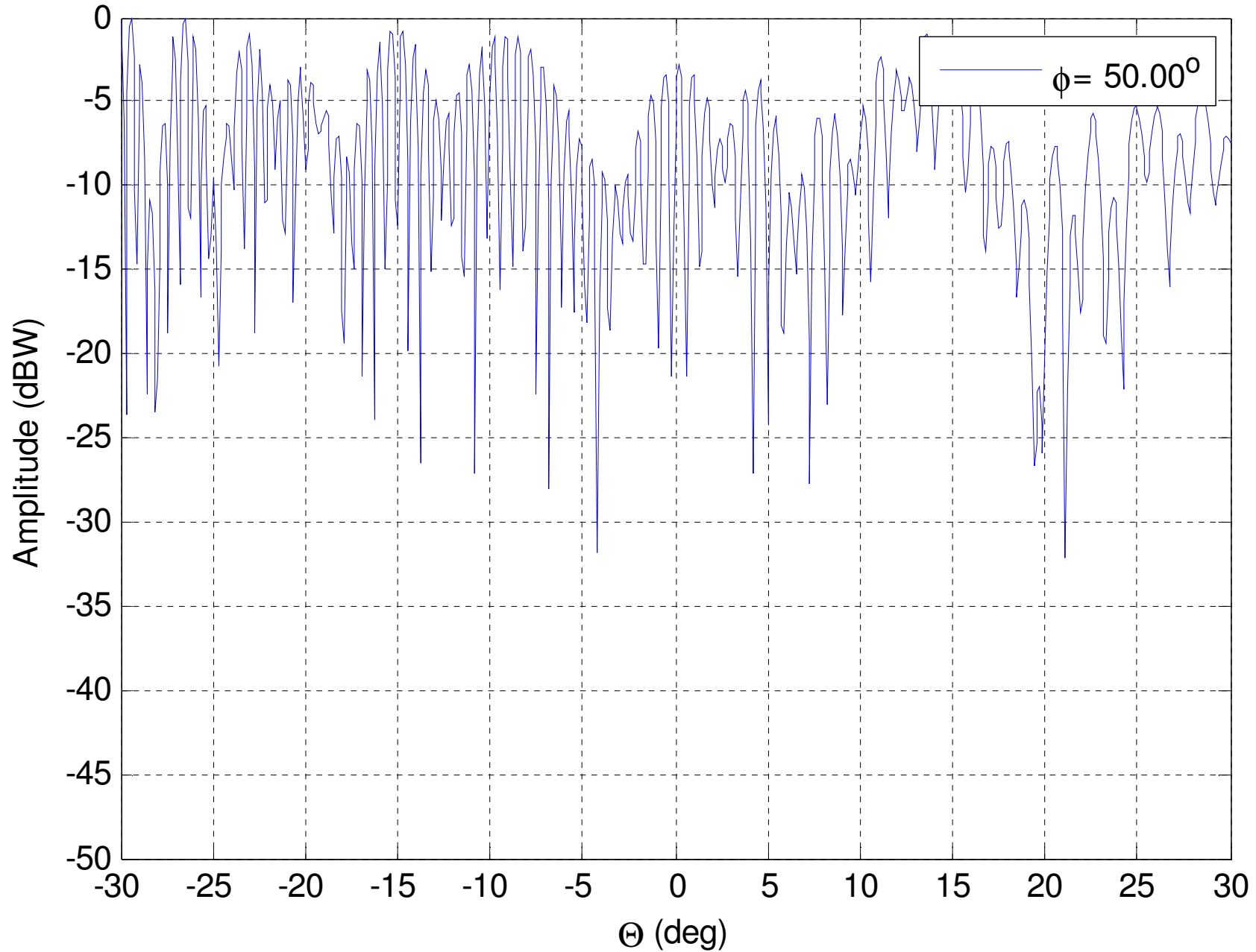
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -3.77 dBW, Date: 15-Dec-2011



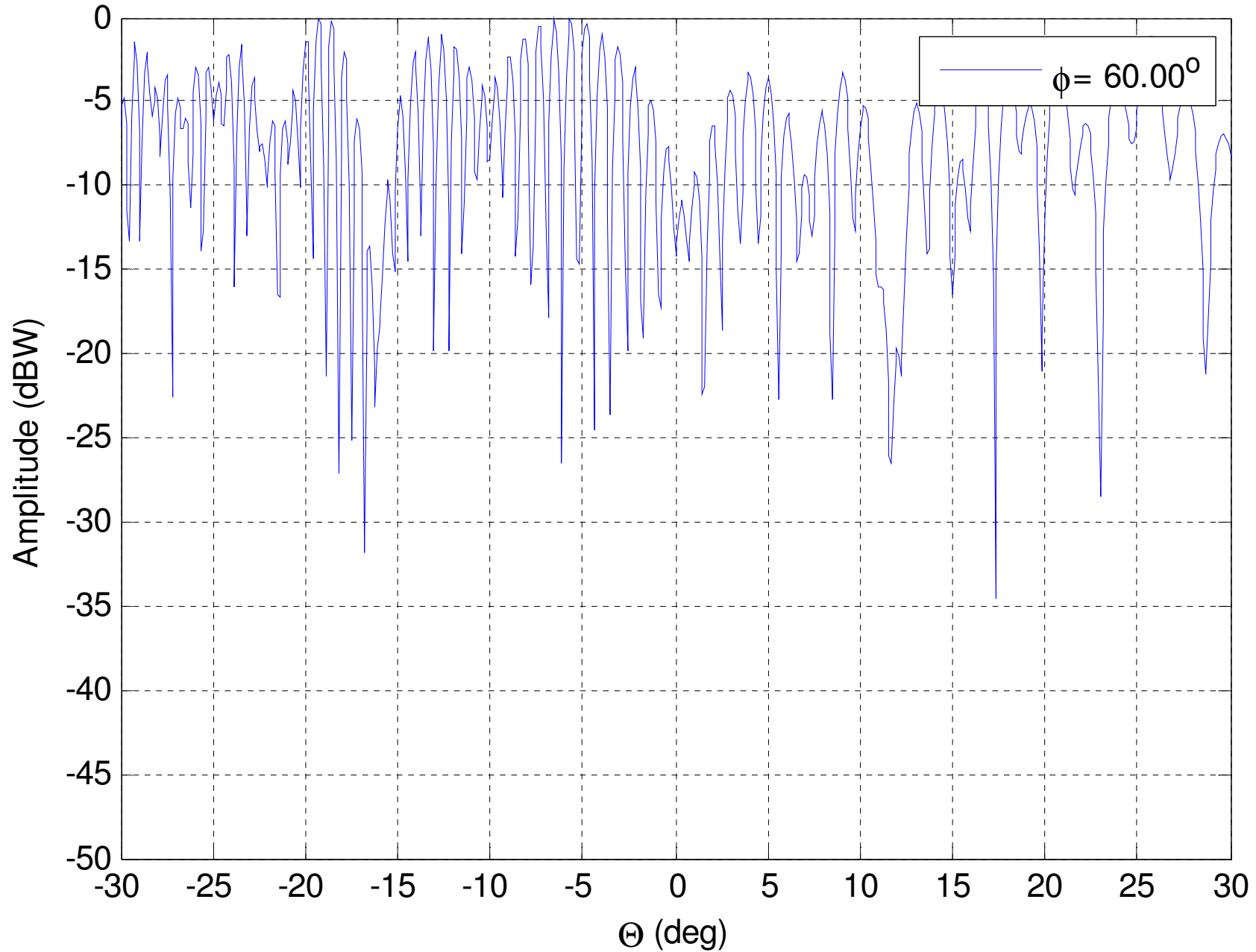
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -4.05 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

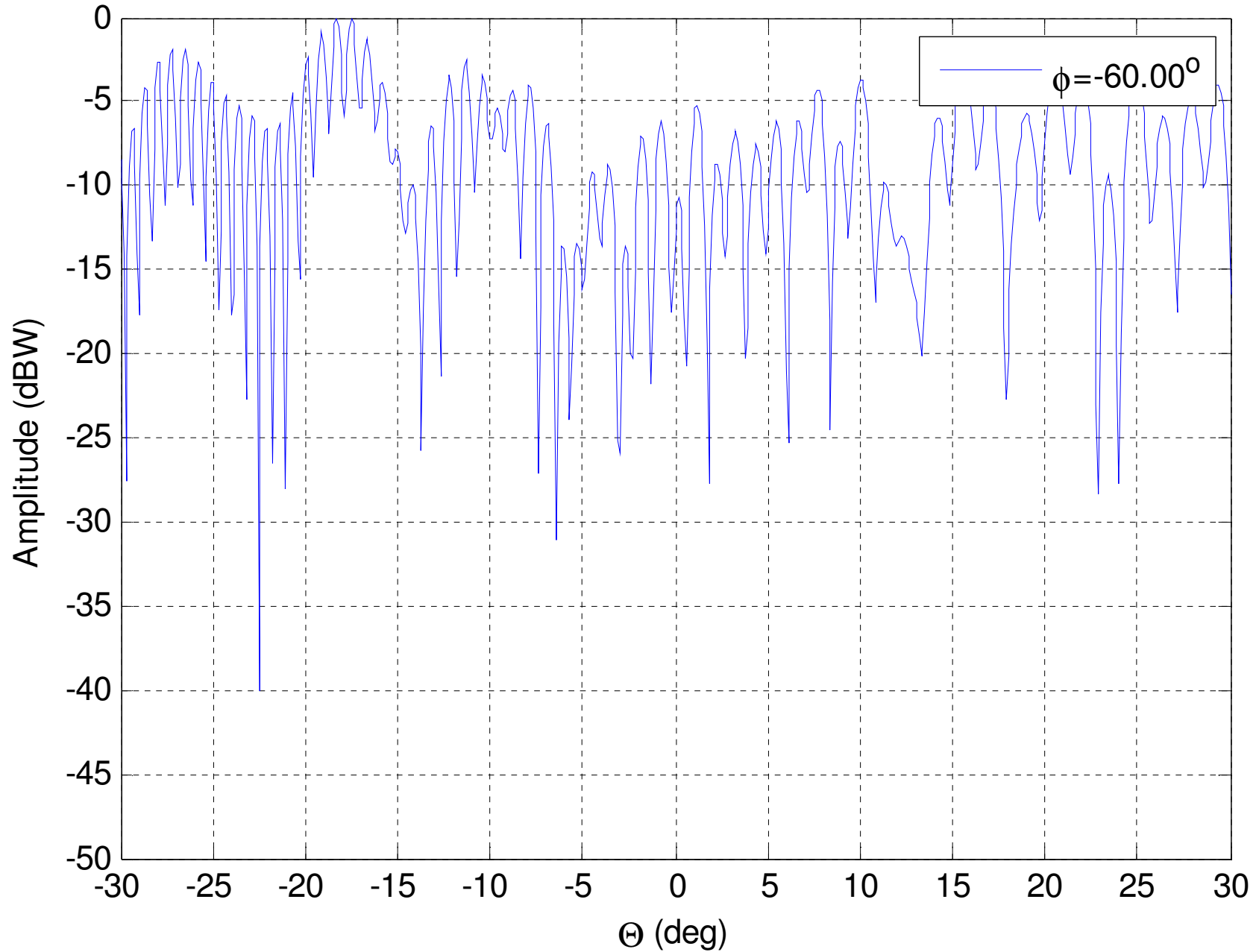
Input file: tx-17.3-lhcp-60.cut, Peak: -5.41 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

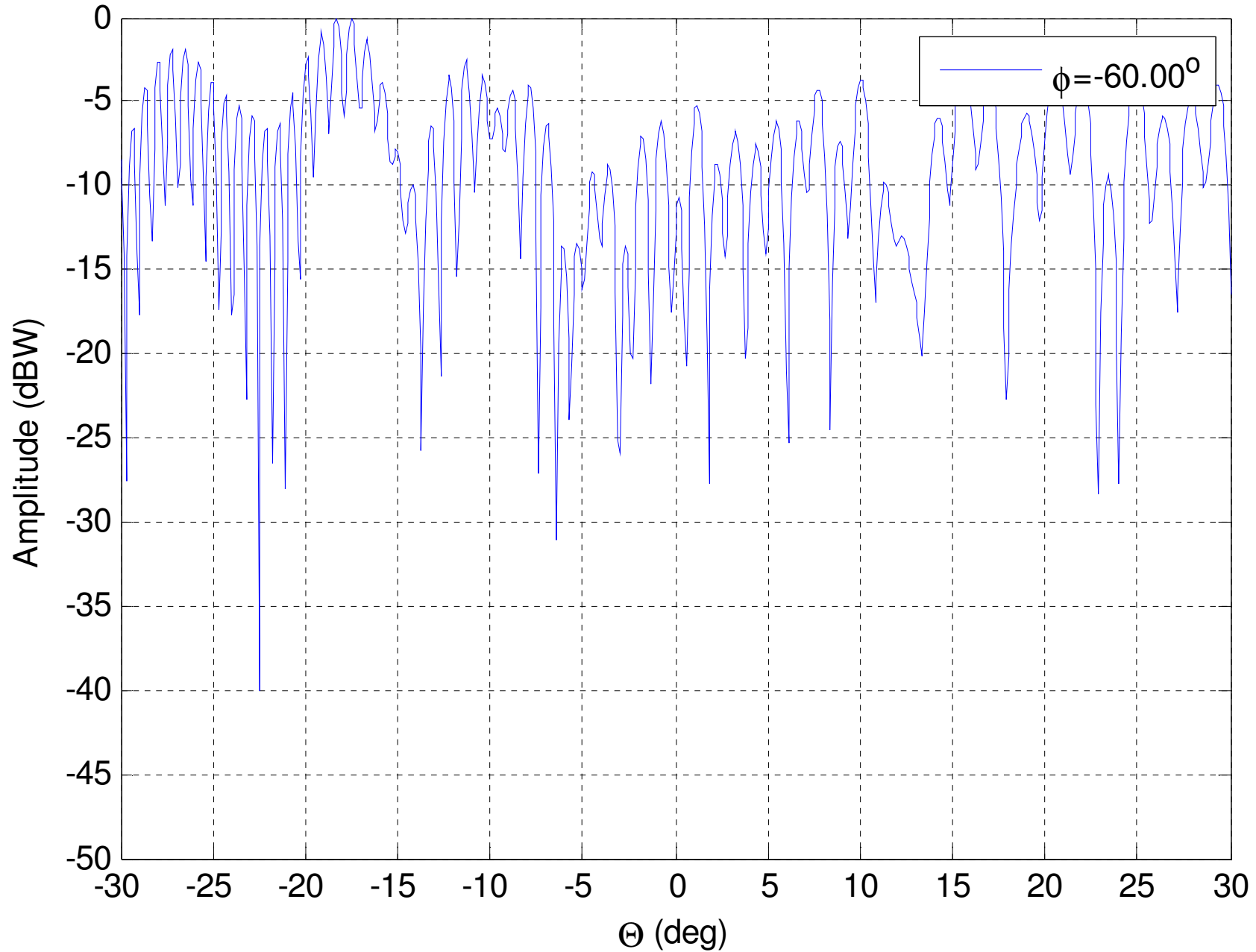
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -3.93 dBW, Date: 15-Dec-2011



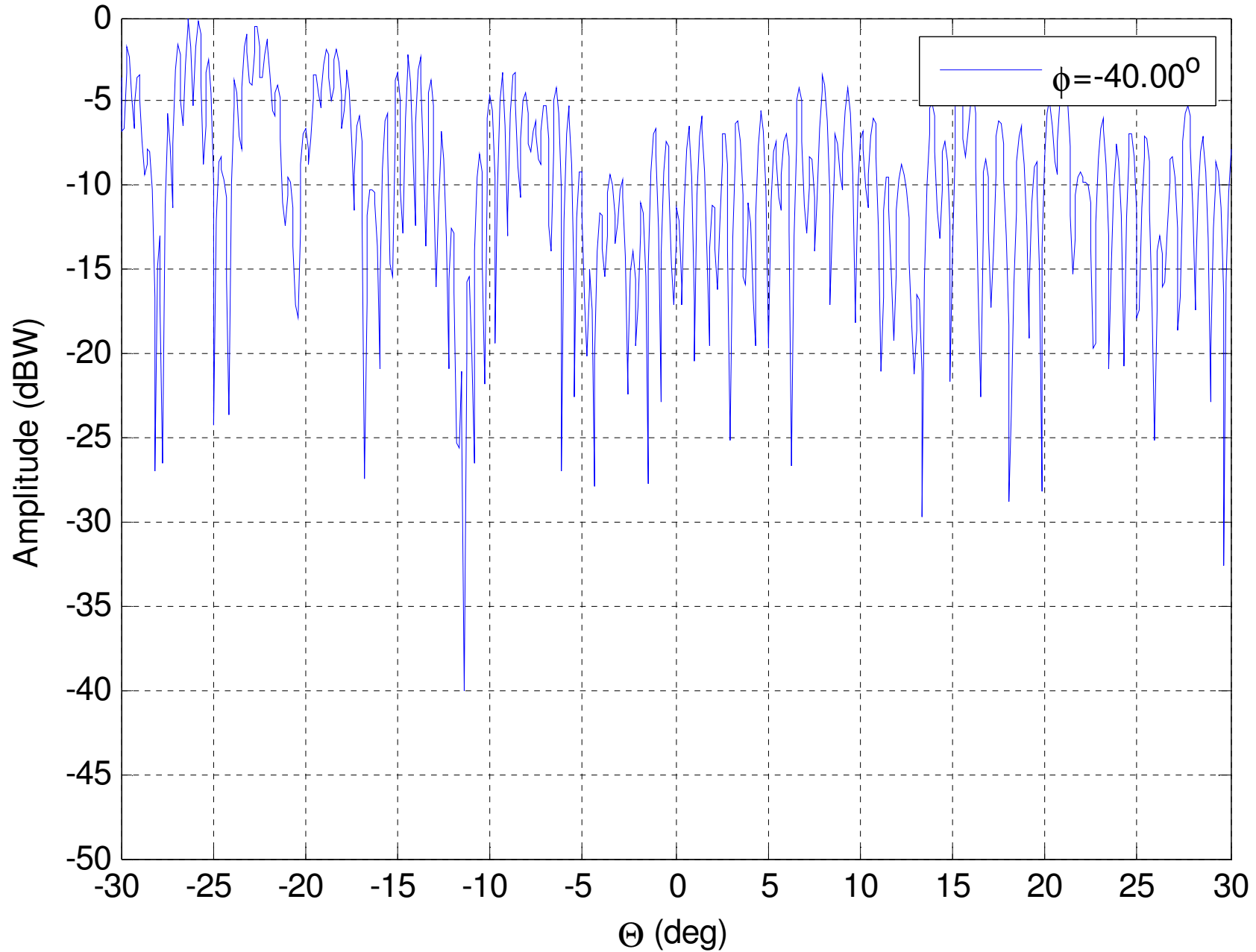
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -3.93 dBW, Date: 15-Dec-2011



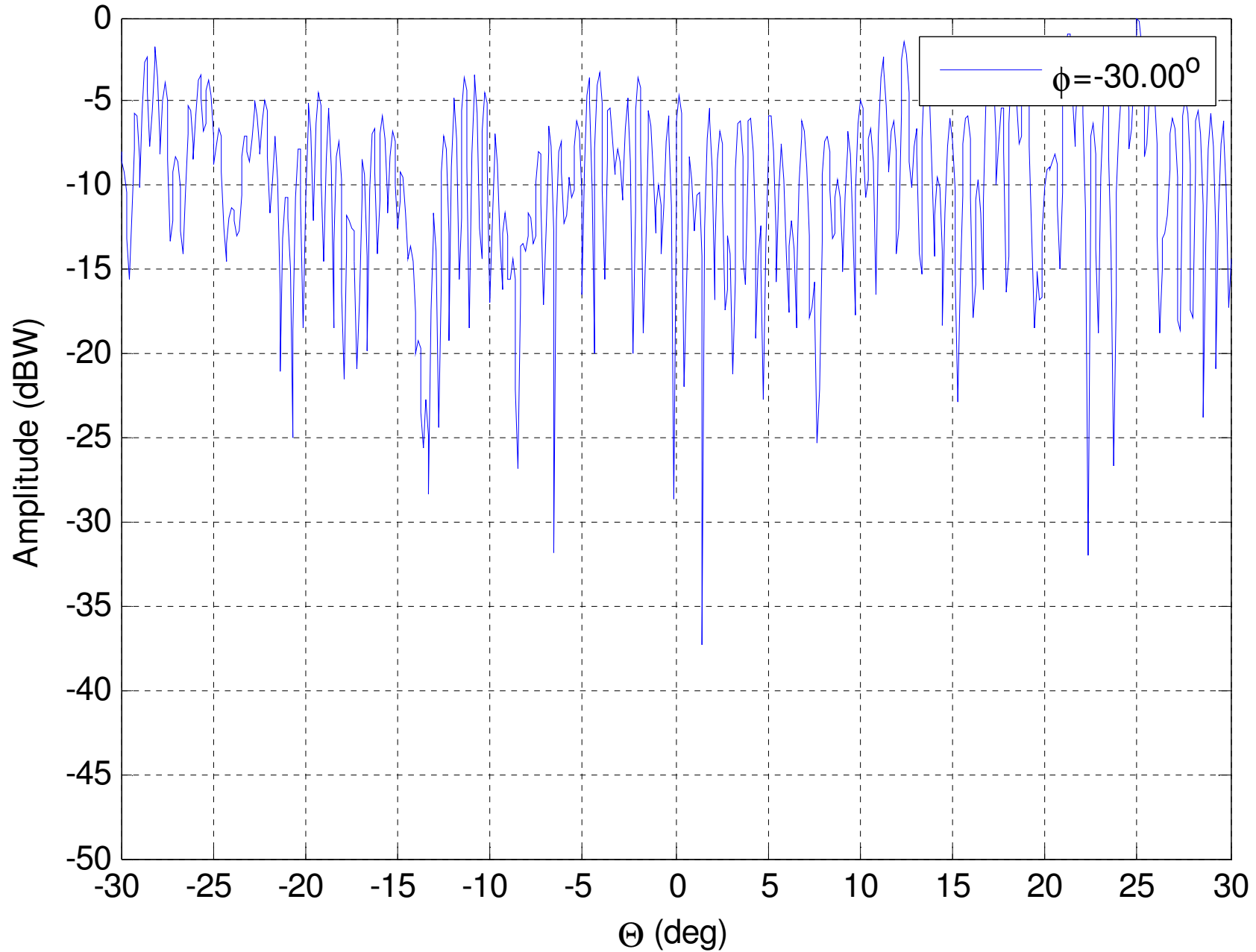
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -3.41 dBW, Date: 15-Dec-2011



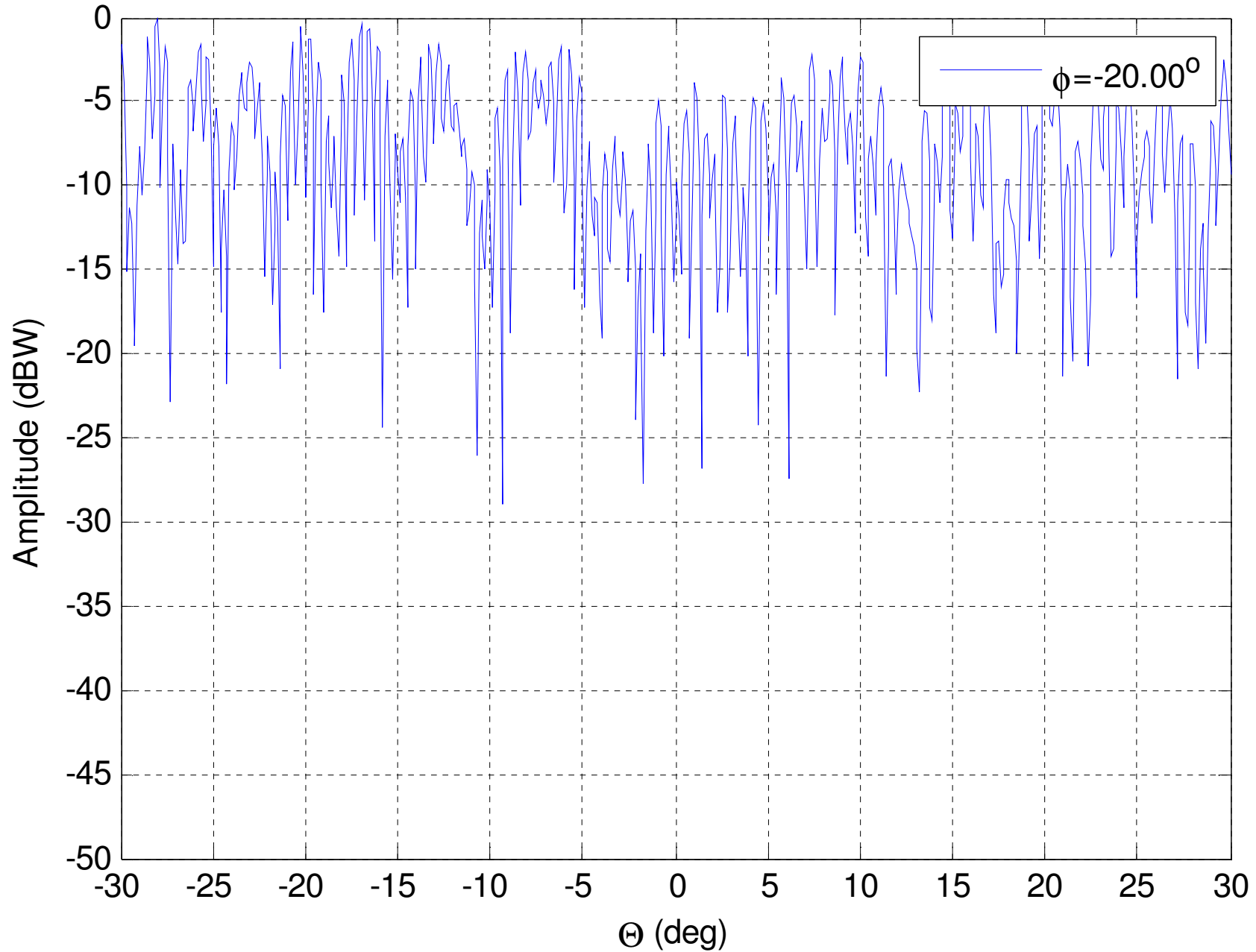
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -3.01 dBW, Date: 15-Dec-2011



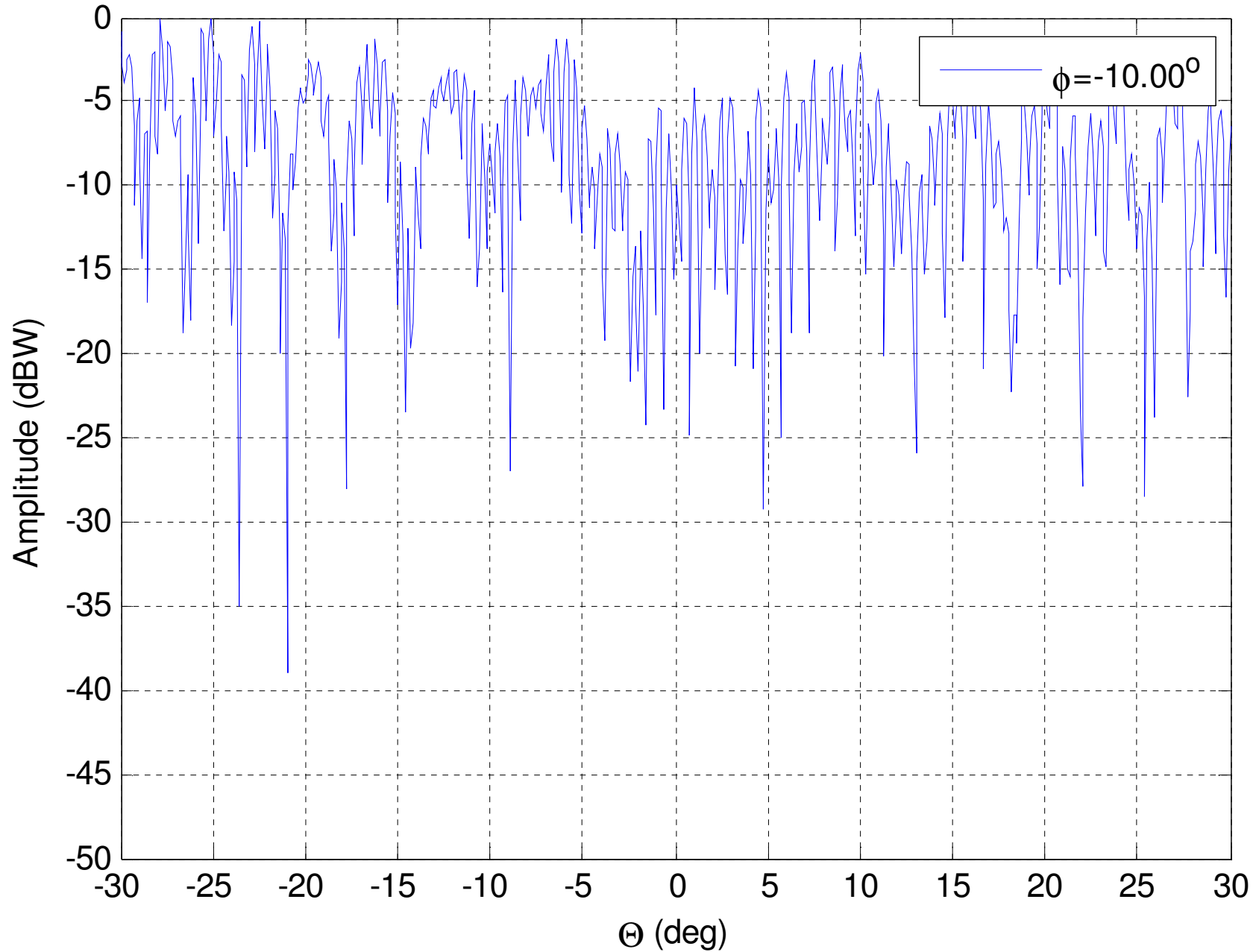
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -4.84 dBW, Date: 15-Dec-2011



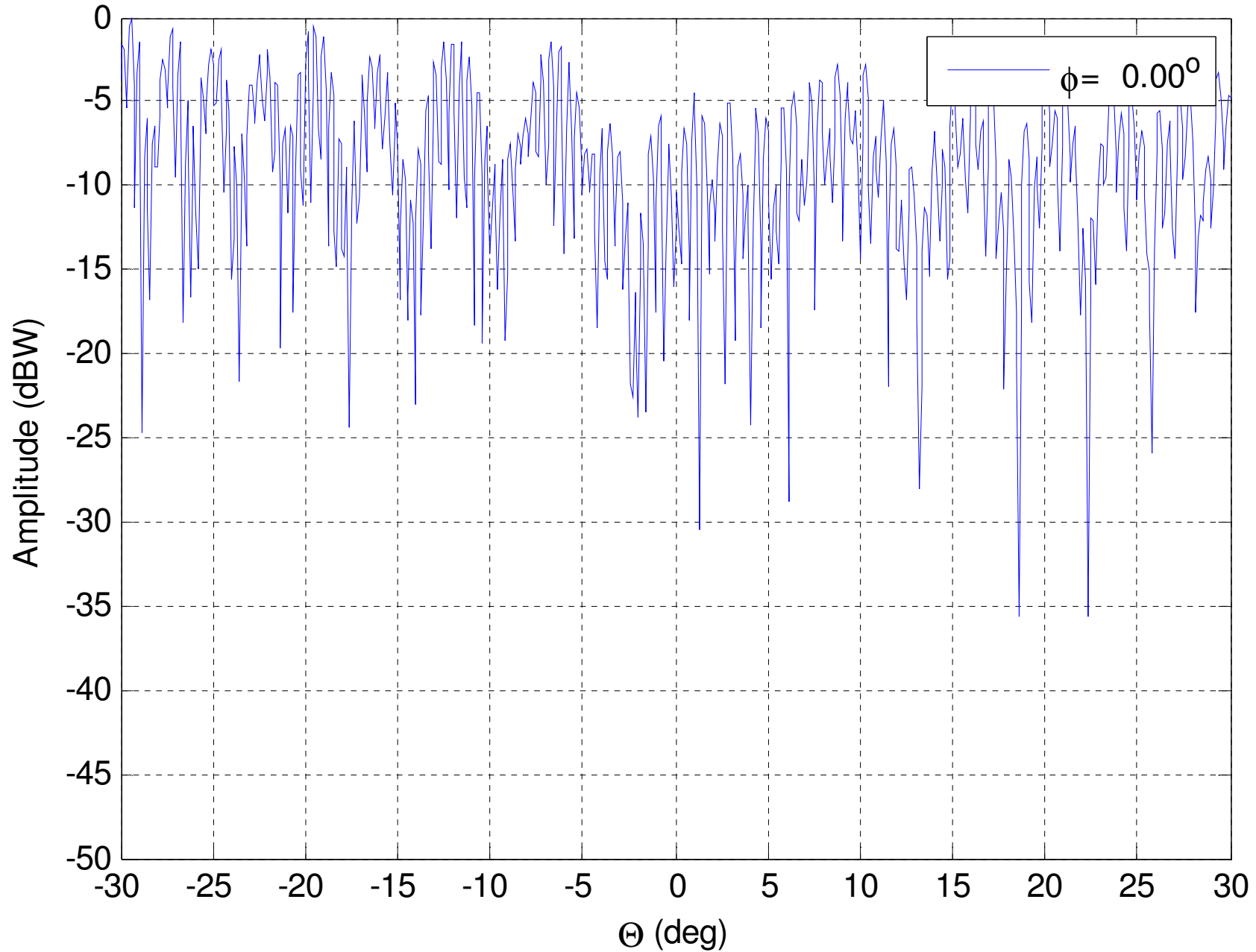
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -4.77 dBW, Date: 15-Dec-2011



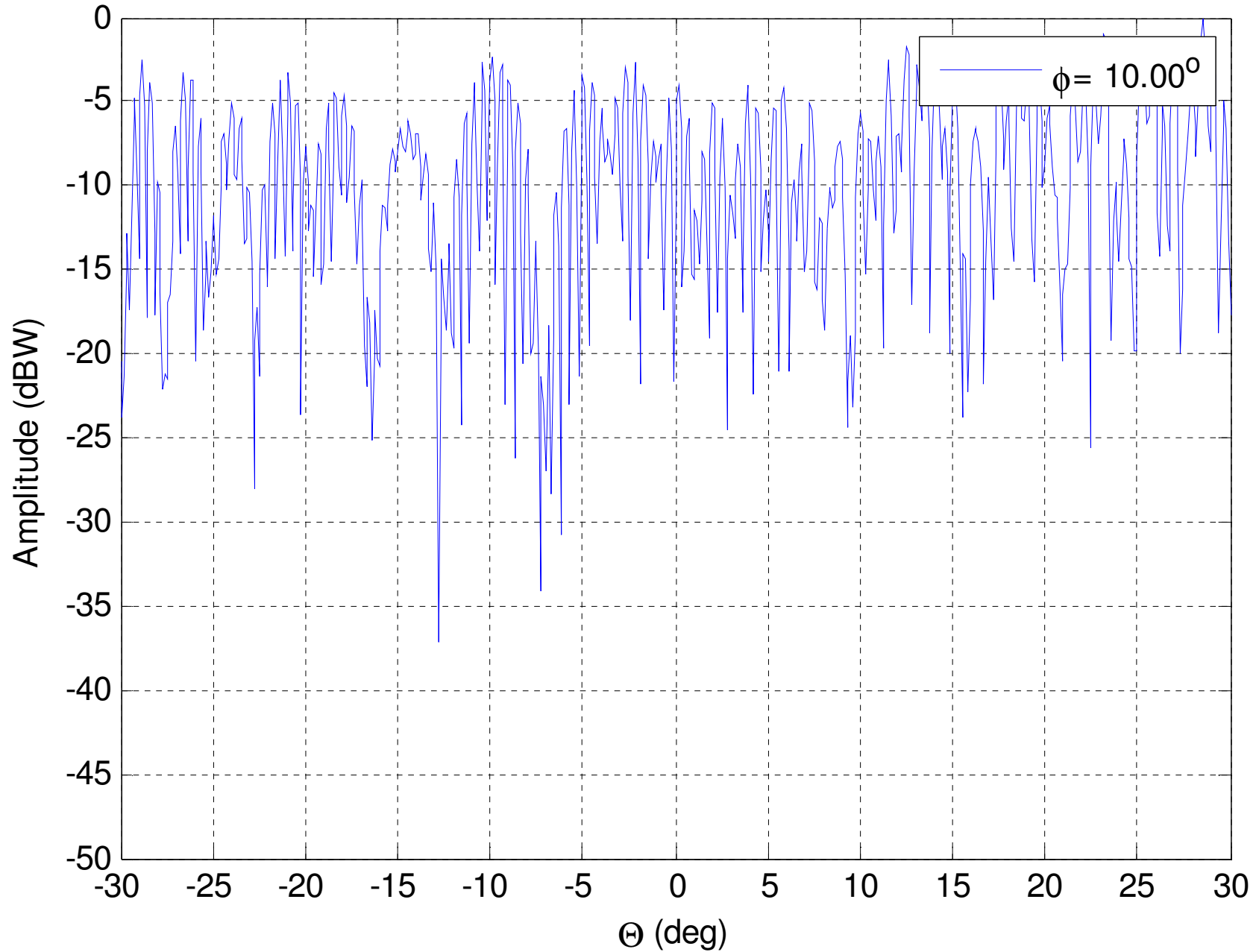
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -4.22 dBW, Date: 15-Dec-2011



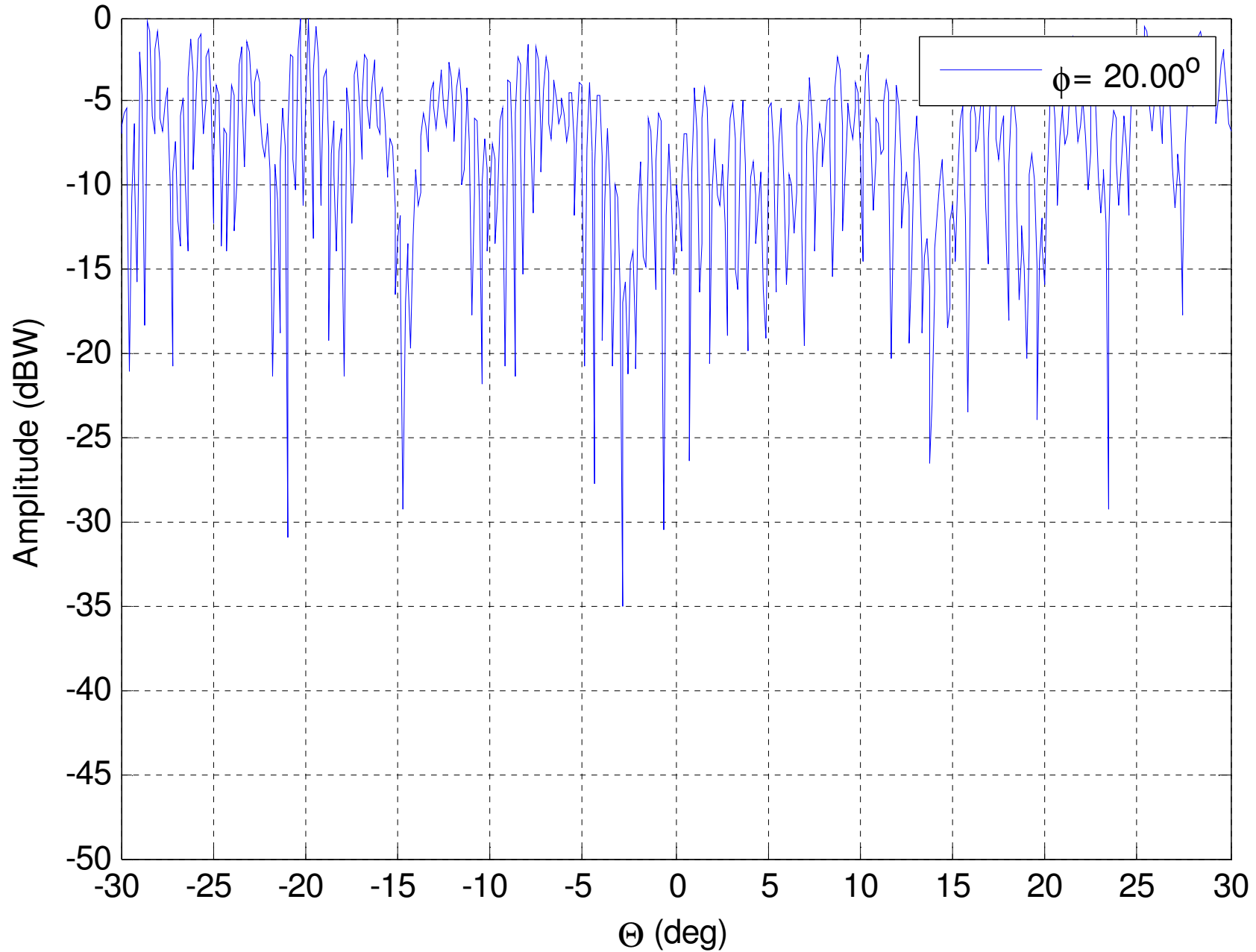
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -3.76 dBW, Date: 15-Dec-2011



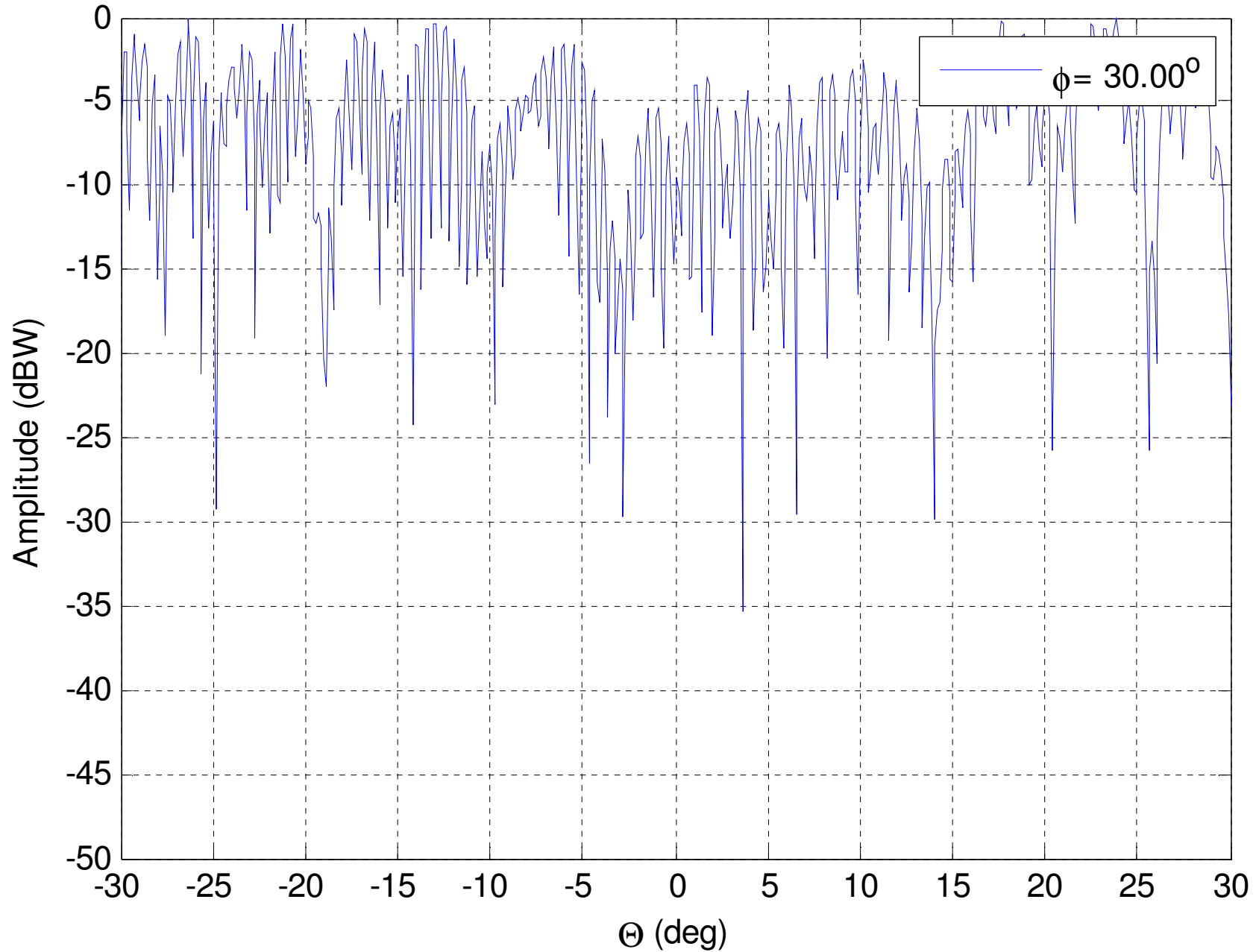
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -4.71 dBW, Date: 15-Dec-2011



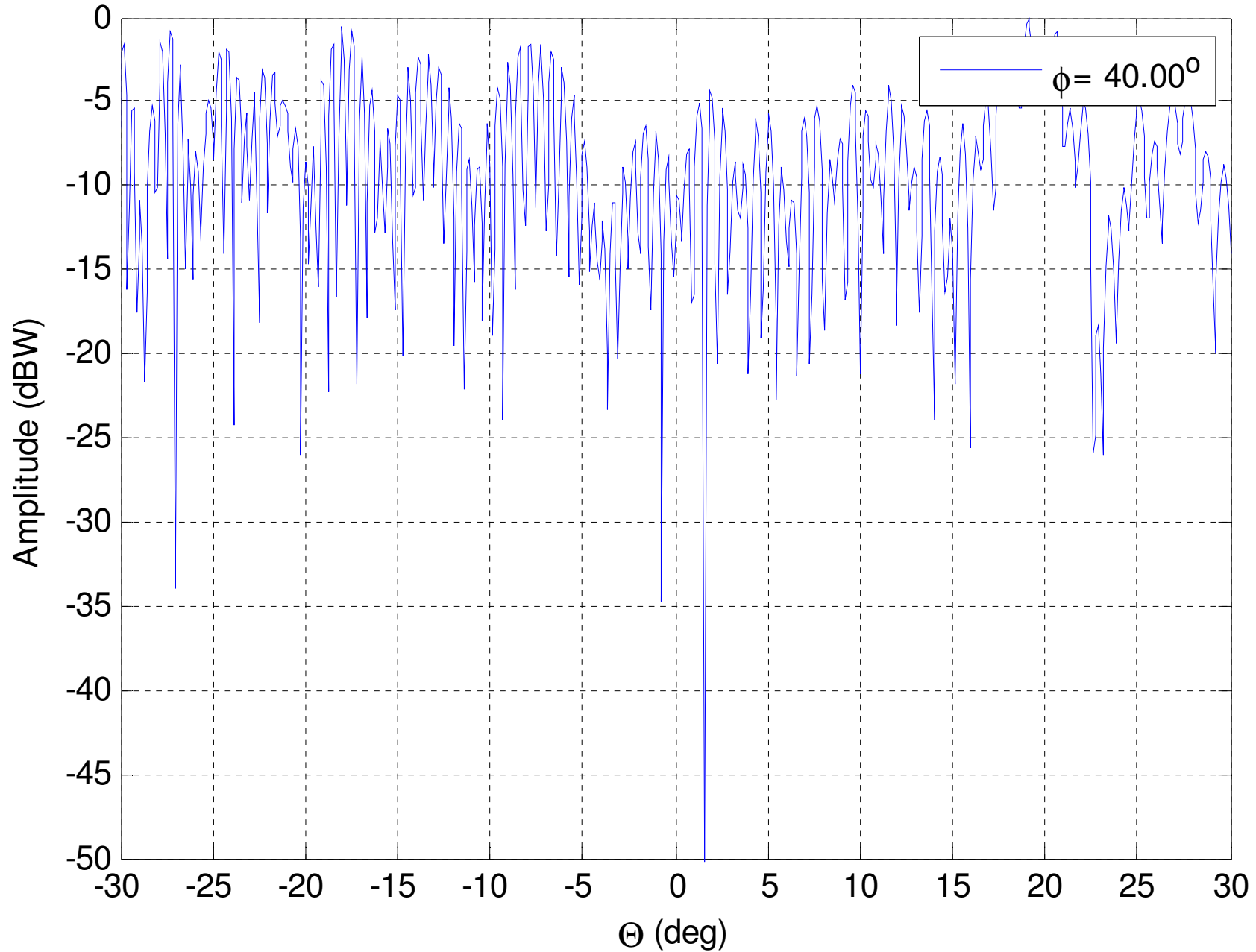
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -5.19 dBW, Date: 15-Dec-2011



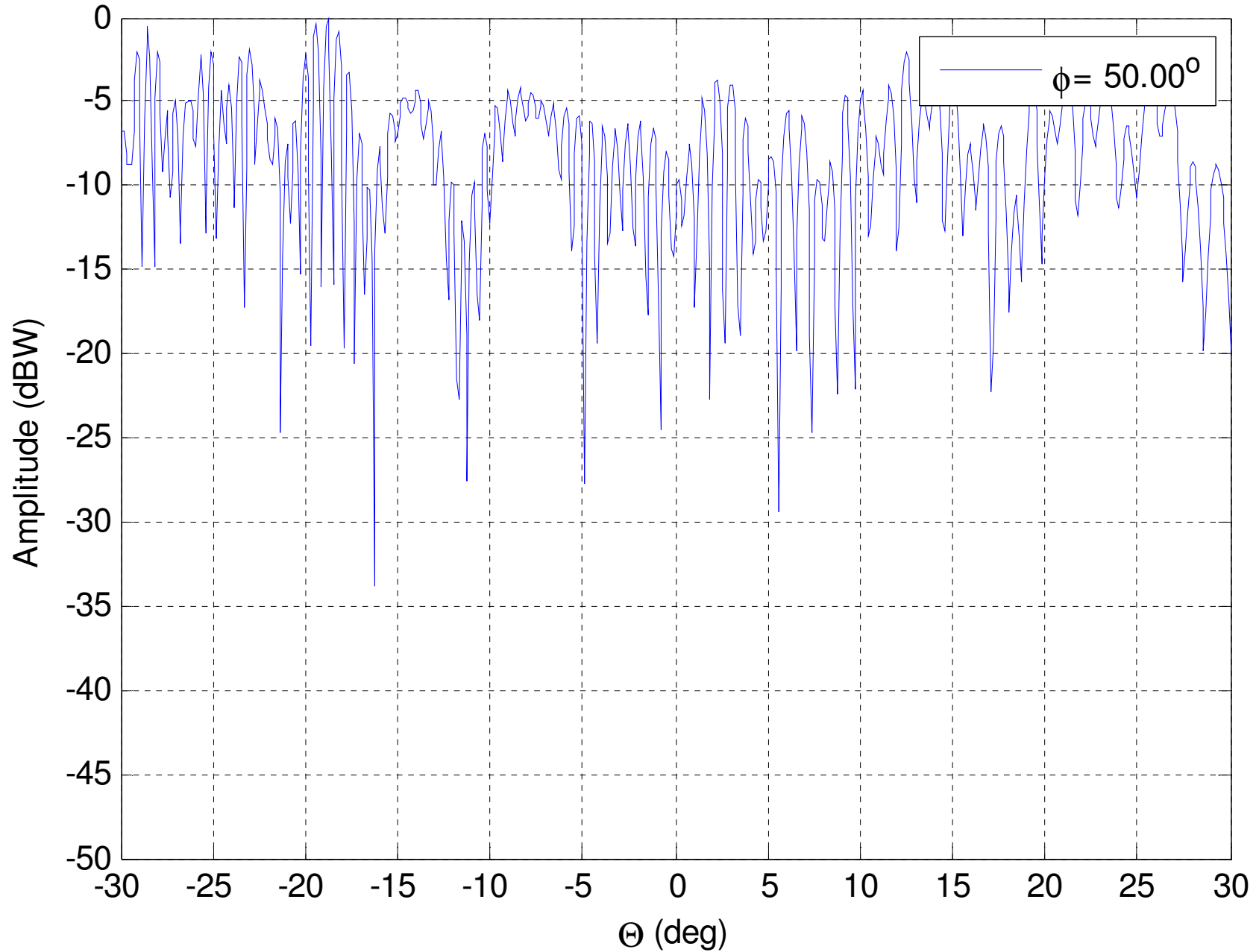
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -4.18 dBW, Date: 15-Dec-2011



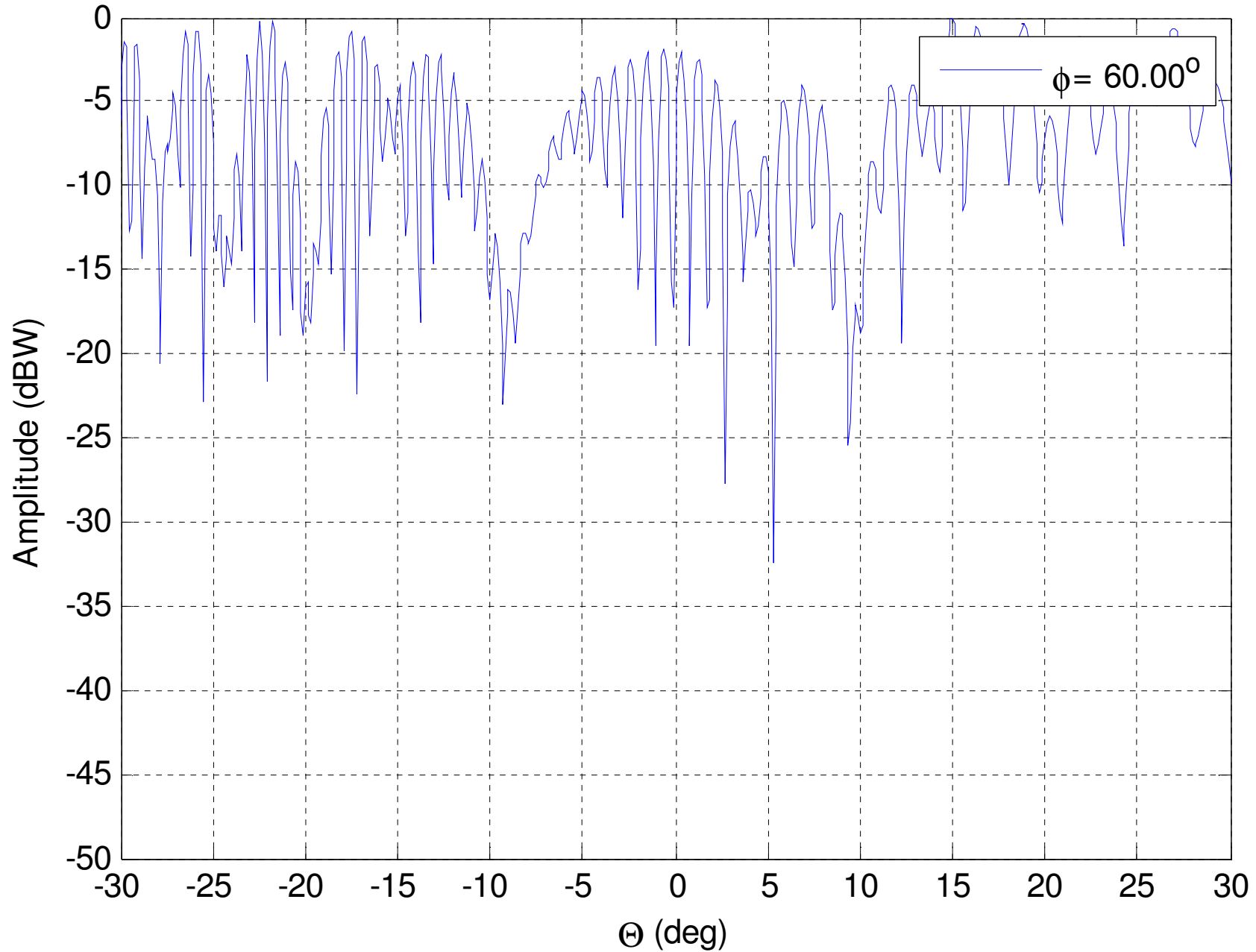
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -4.94 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

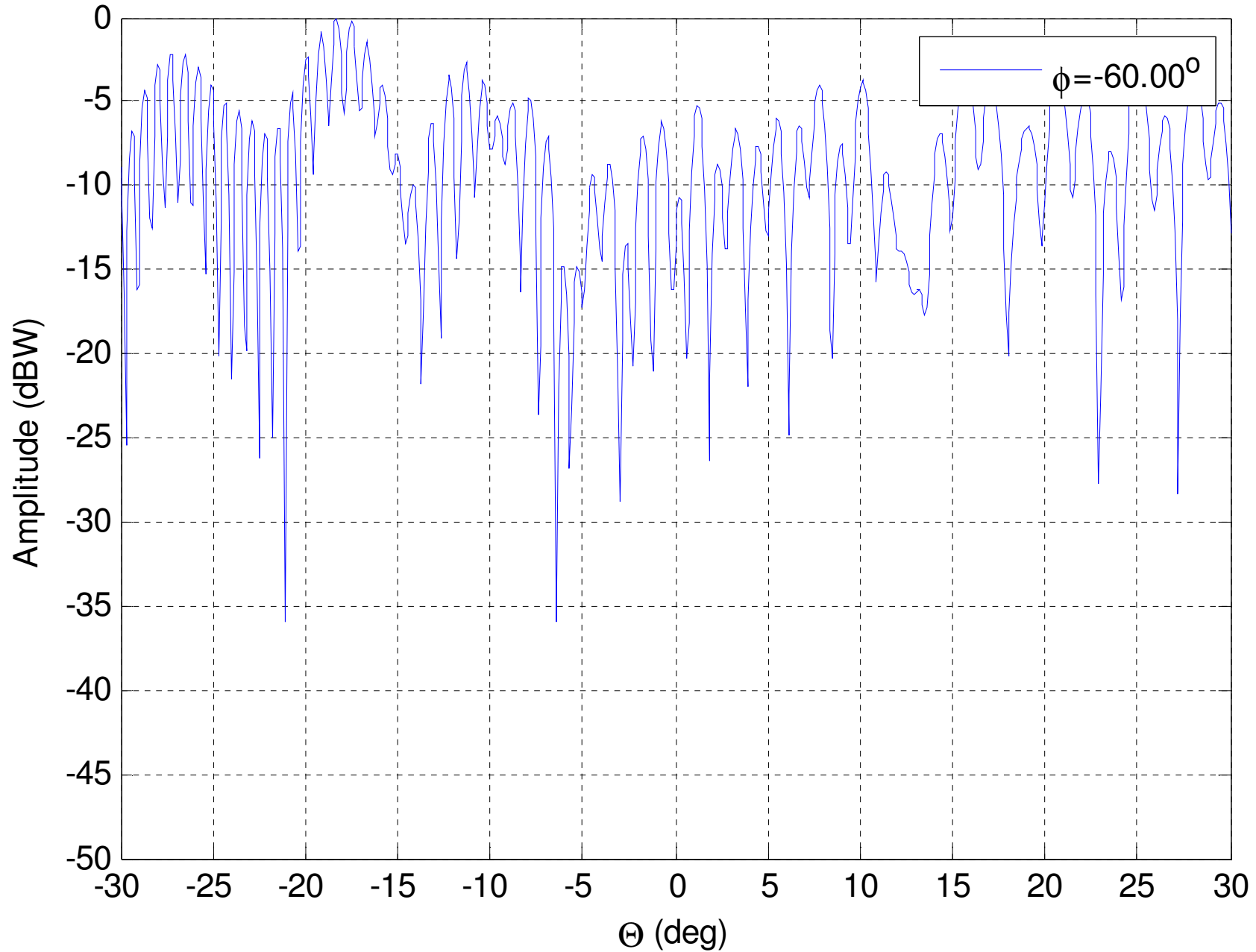
Input file: tx-17.5-rhcp-60.cut, Peak: -5.70 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

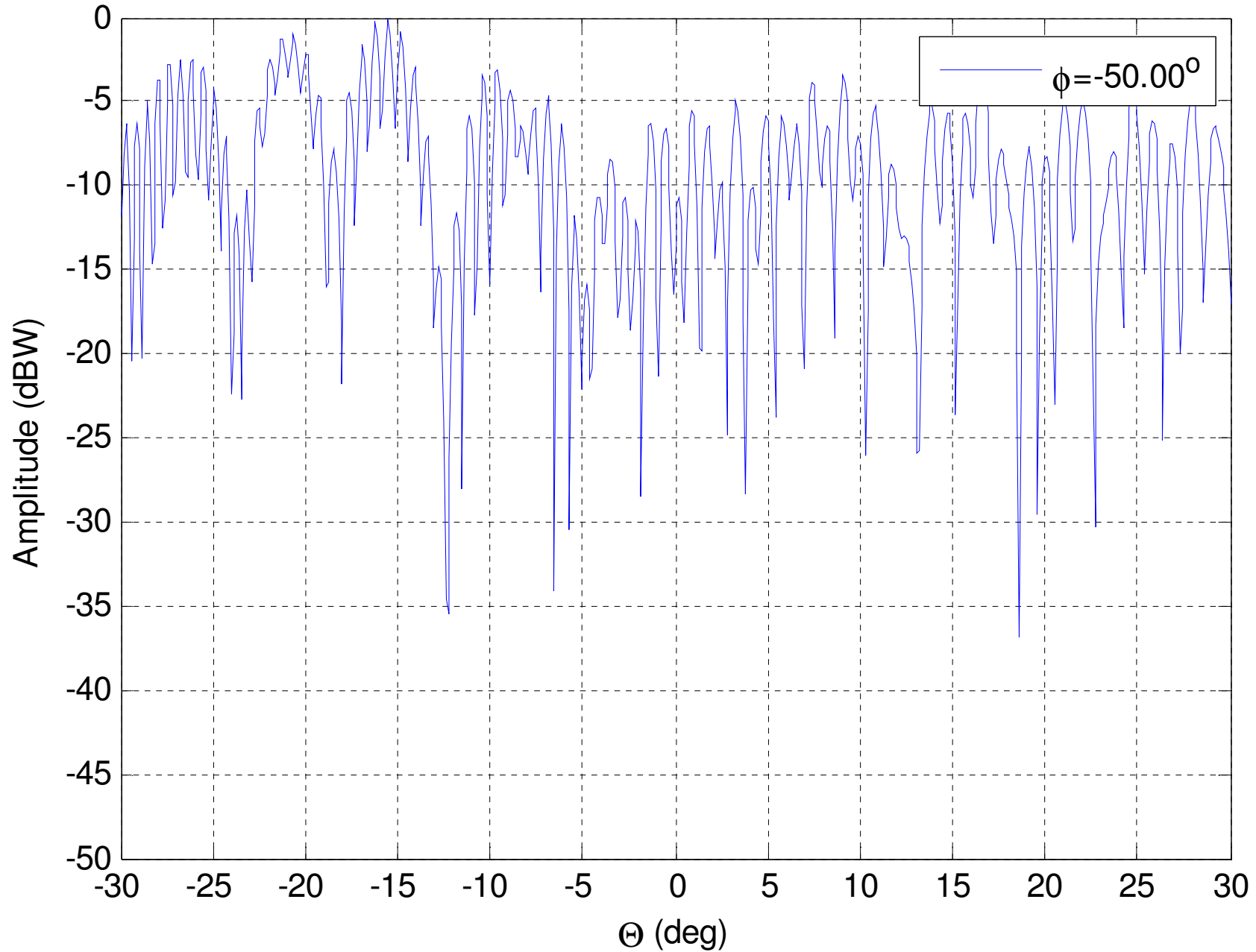
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -3.73 dBW, Date: 15-Dec-2011



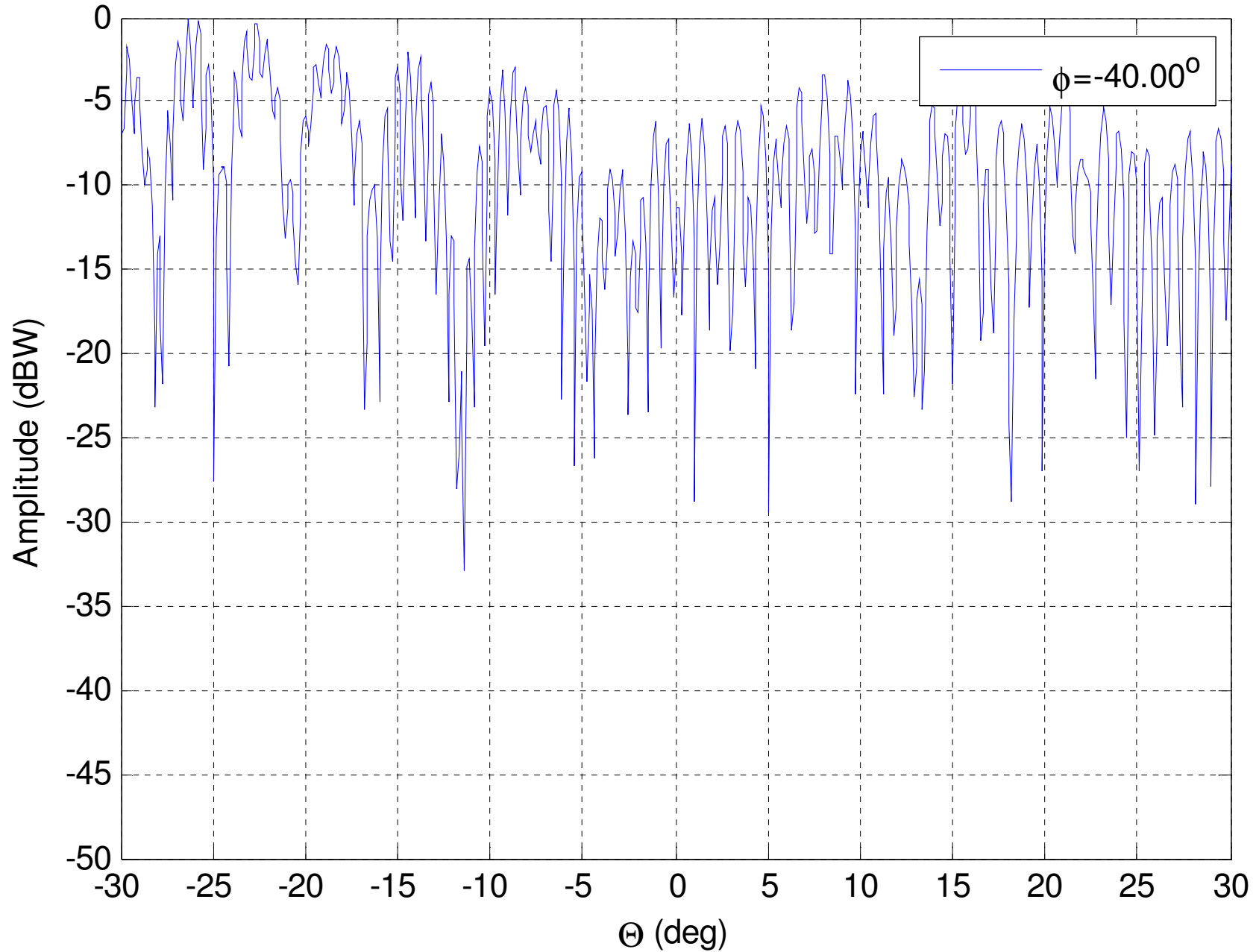
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -3.73 dBW, Date: 15-Dec-2011



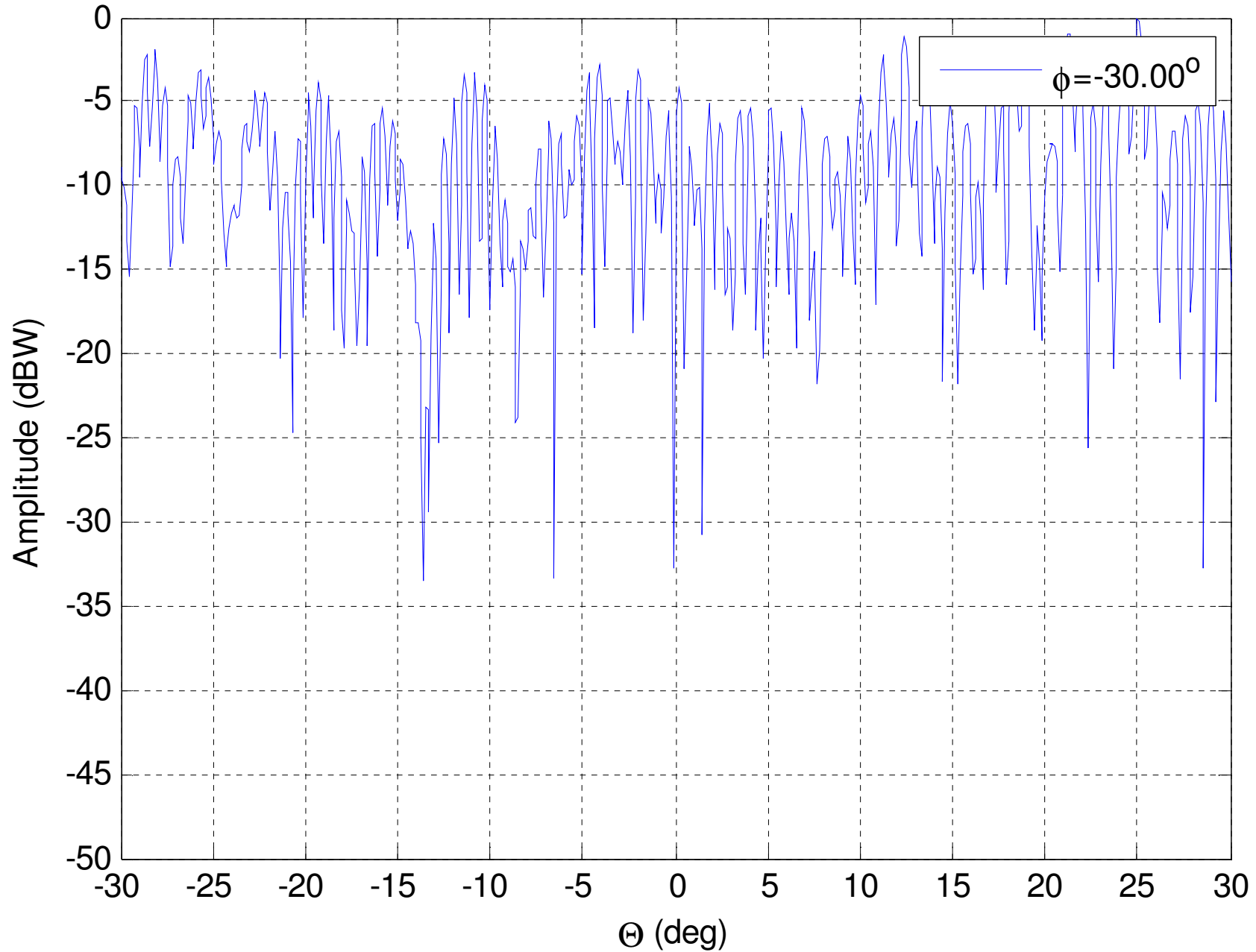
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -3.44 dBW, Date: 15-Dec-2011



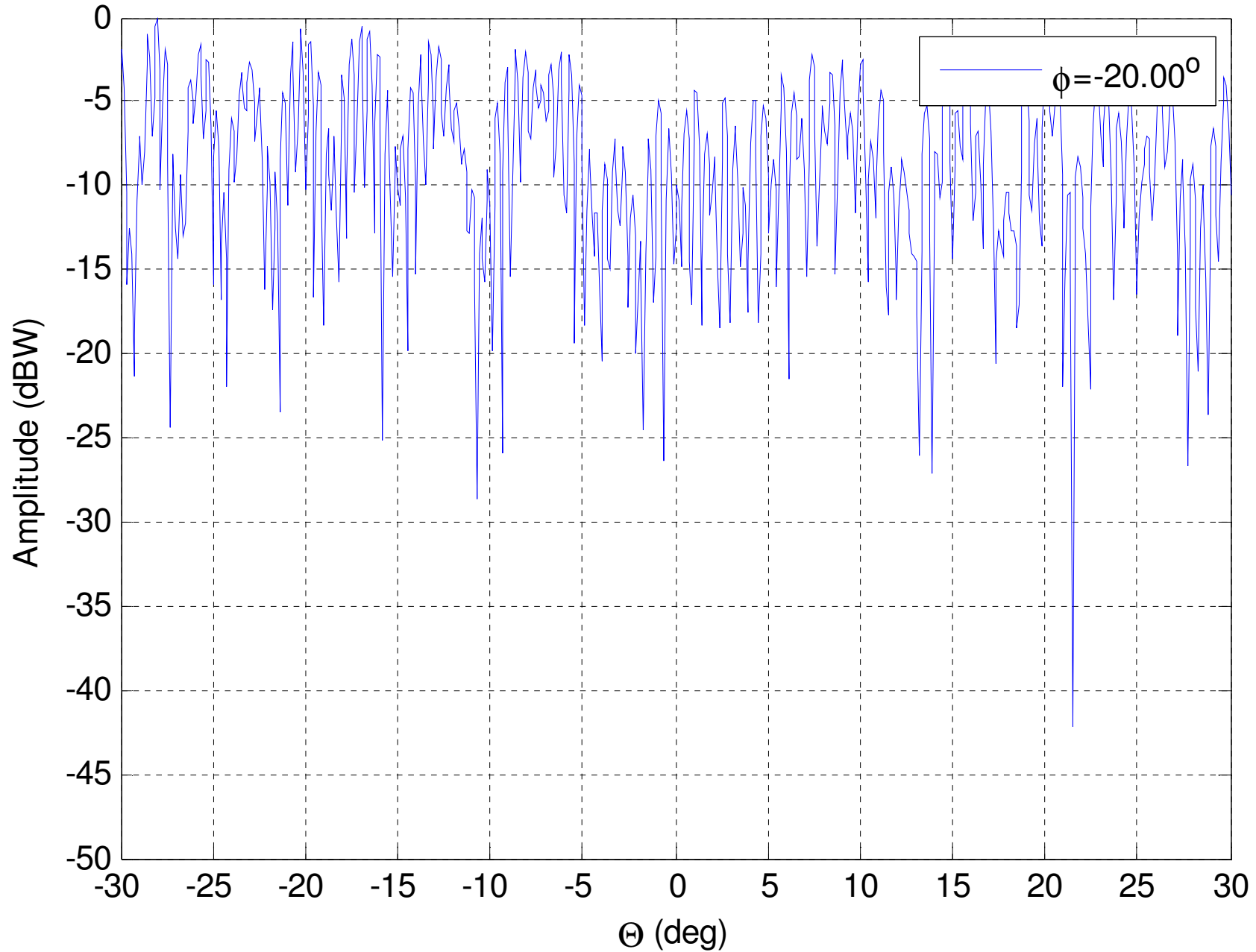
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -3.26 dBW, Date: 15-Dec-2011



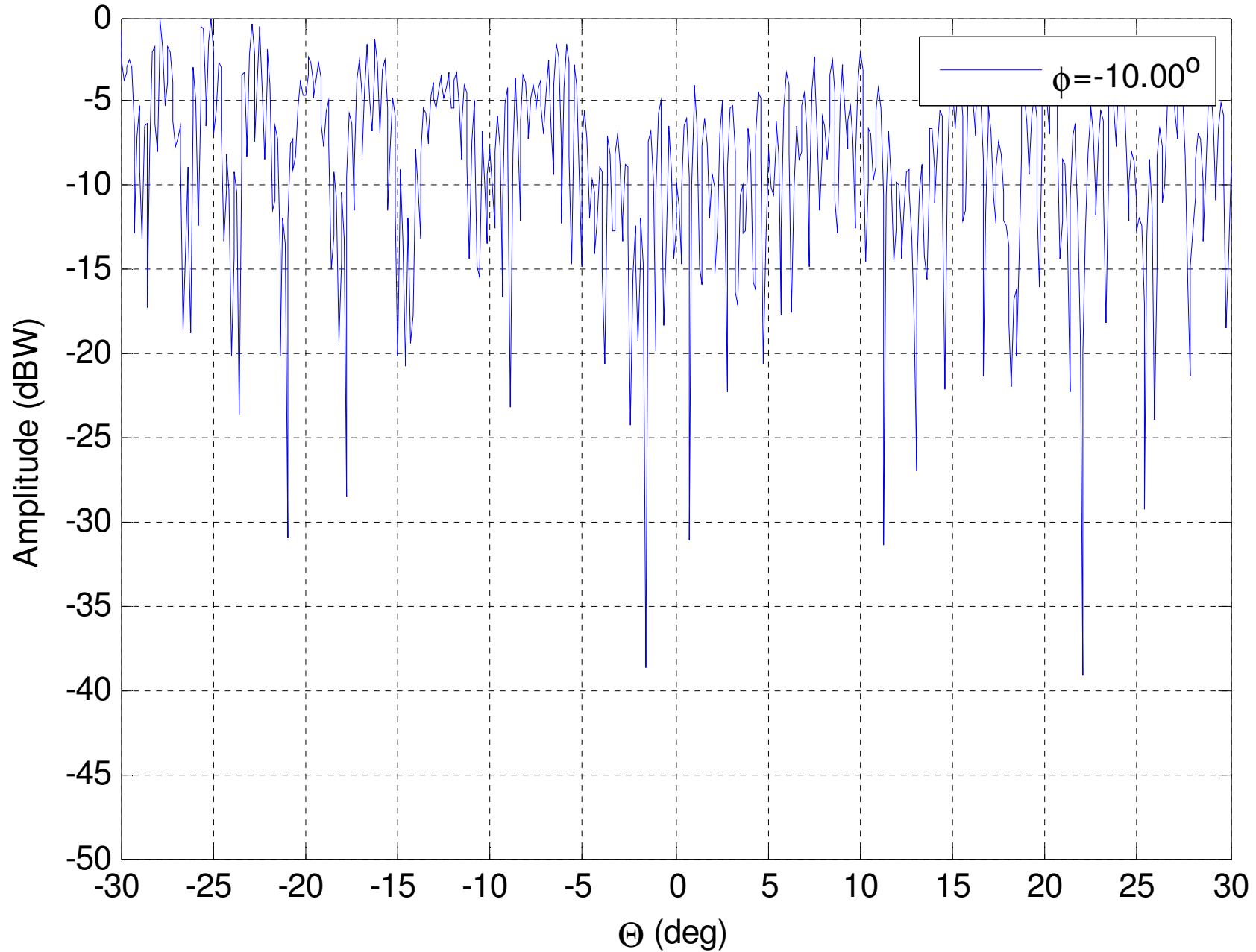
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -4.64 dBW, Date: 15-Dec-2011



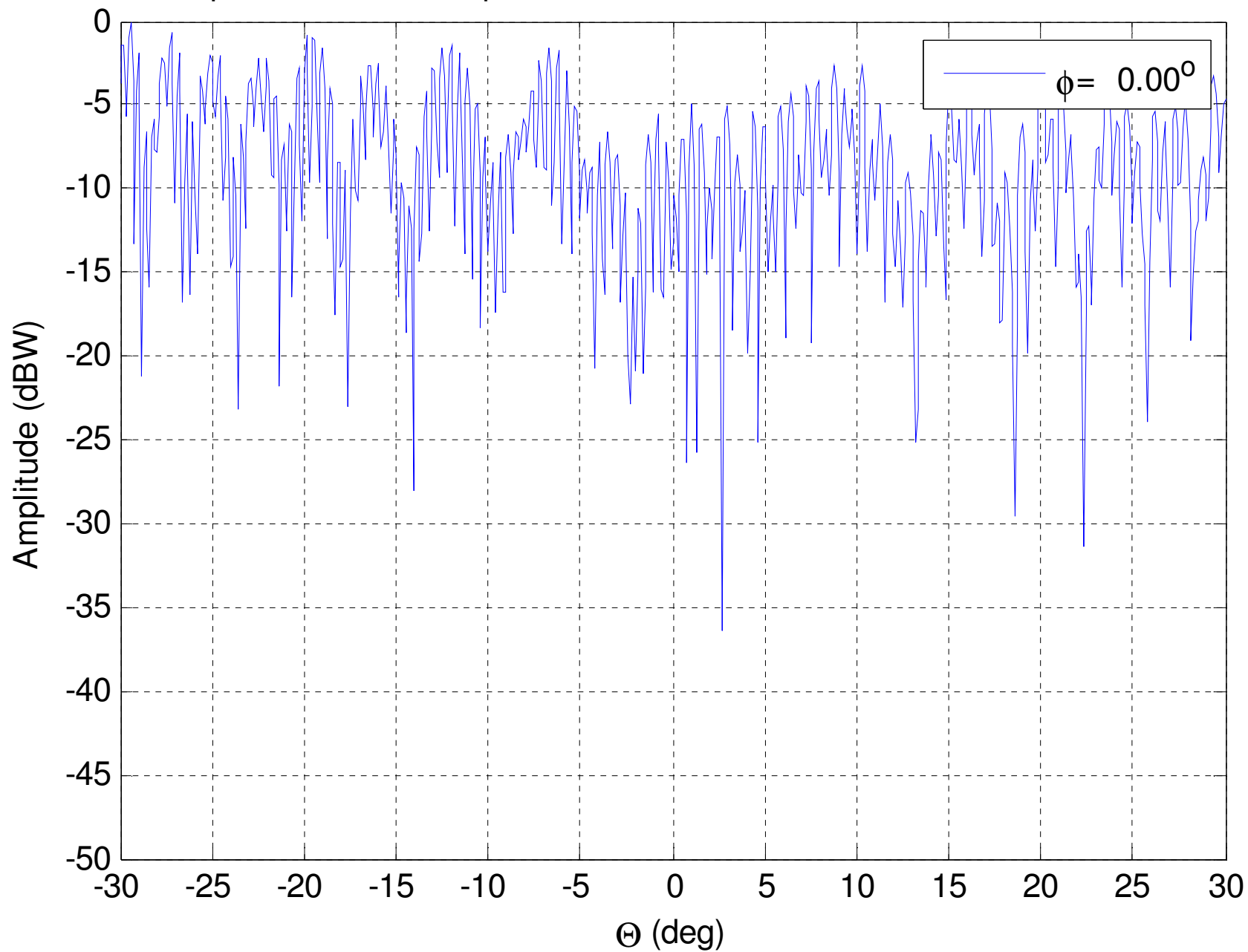
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -4.66 dBW, Date: 15-Dec-2011



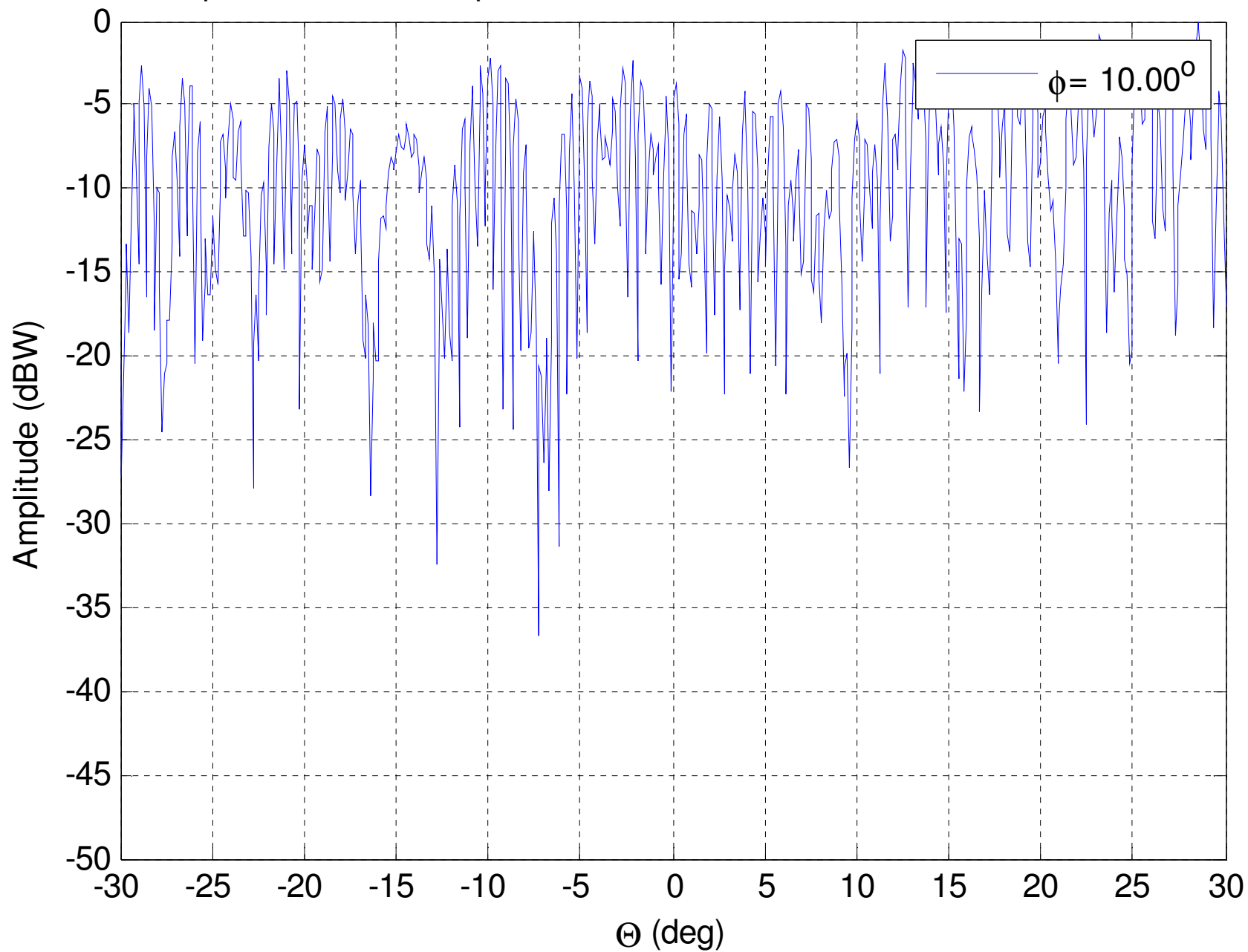
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -4.06 dBW, Date: 15-Dec-2011



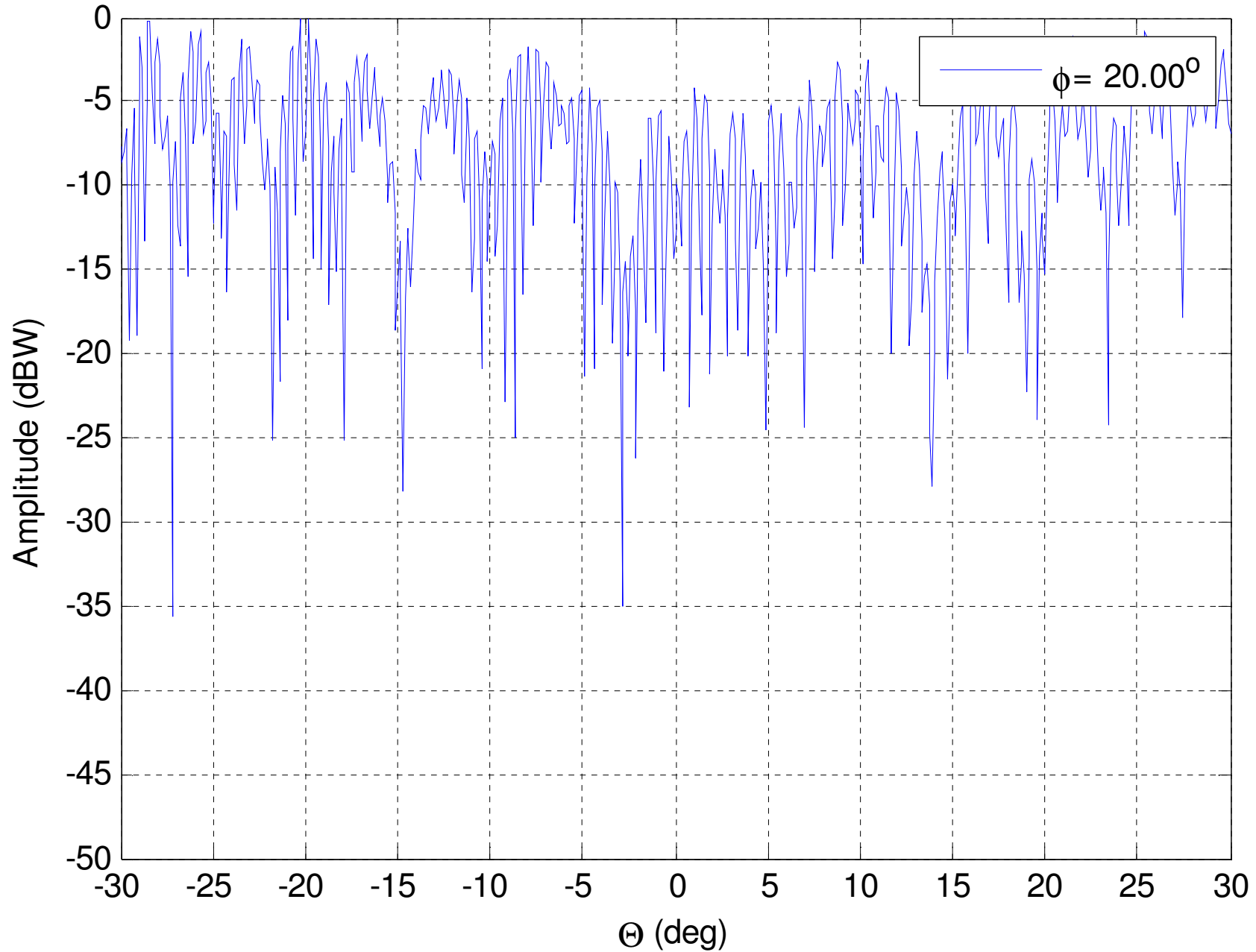
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -3.80 dBW, Date: 15-Dec-2011



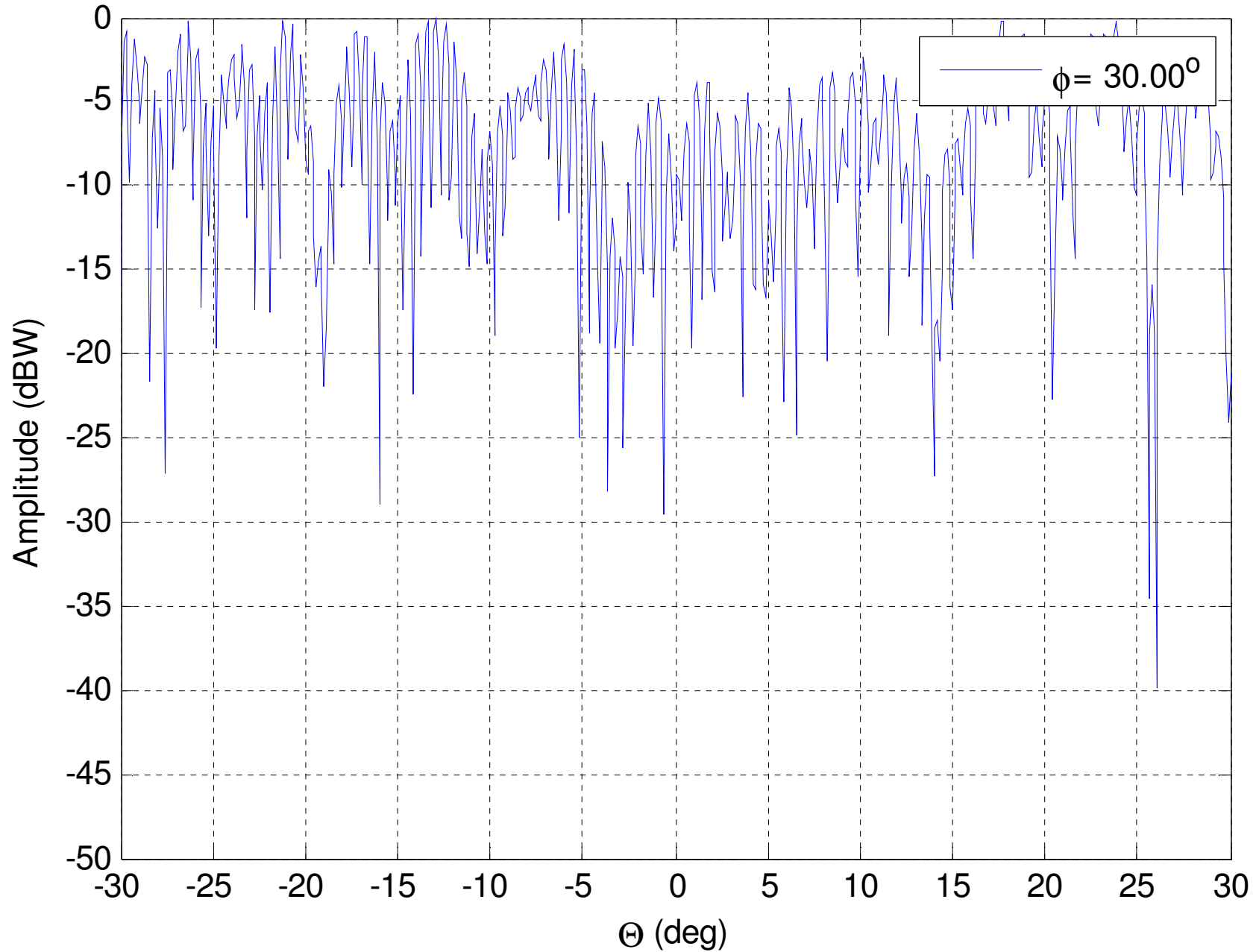
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -4.58 dBW, Date: 15-Dec-2011



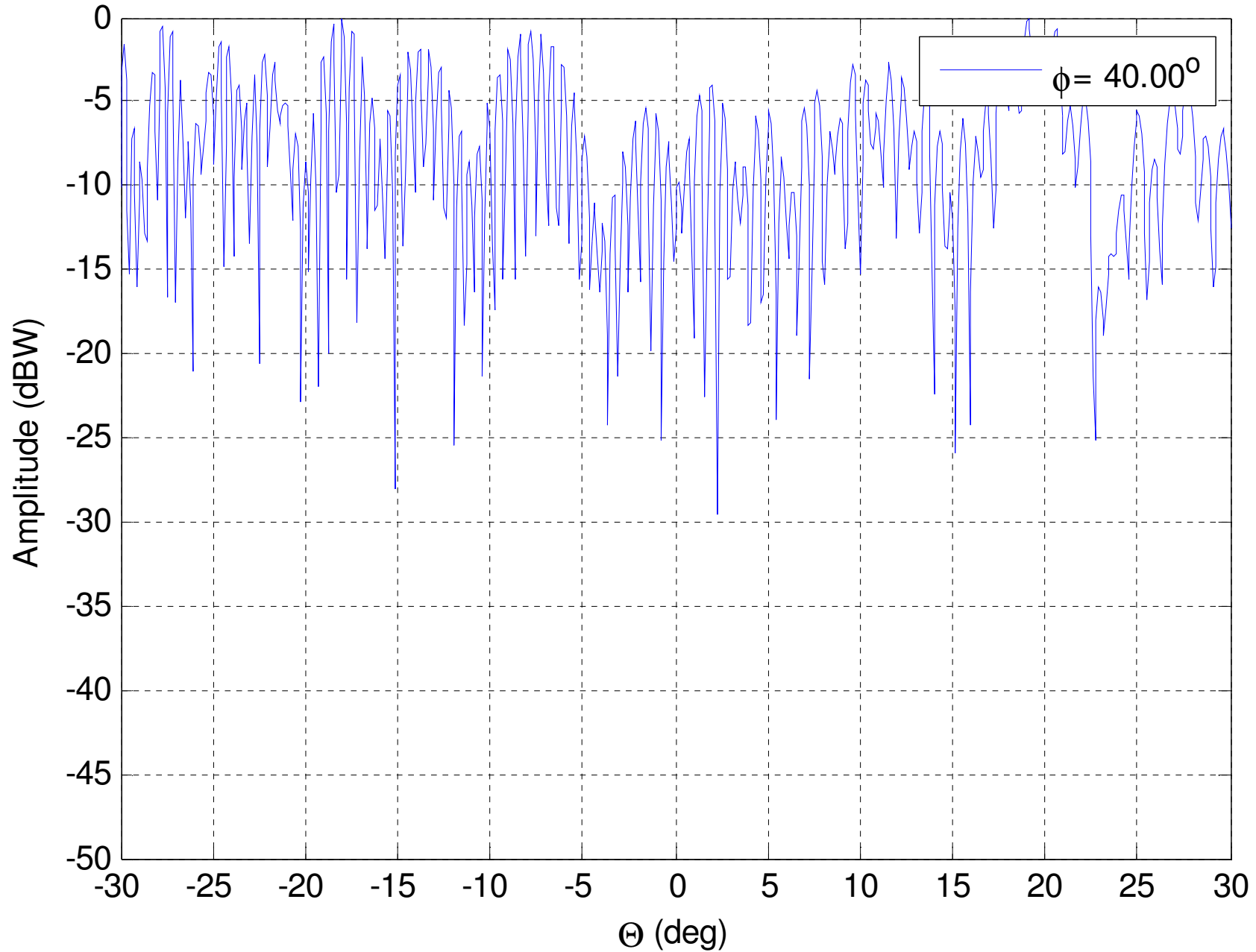
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -5.21 dBW, Date: 15-Dec-2011



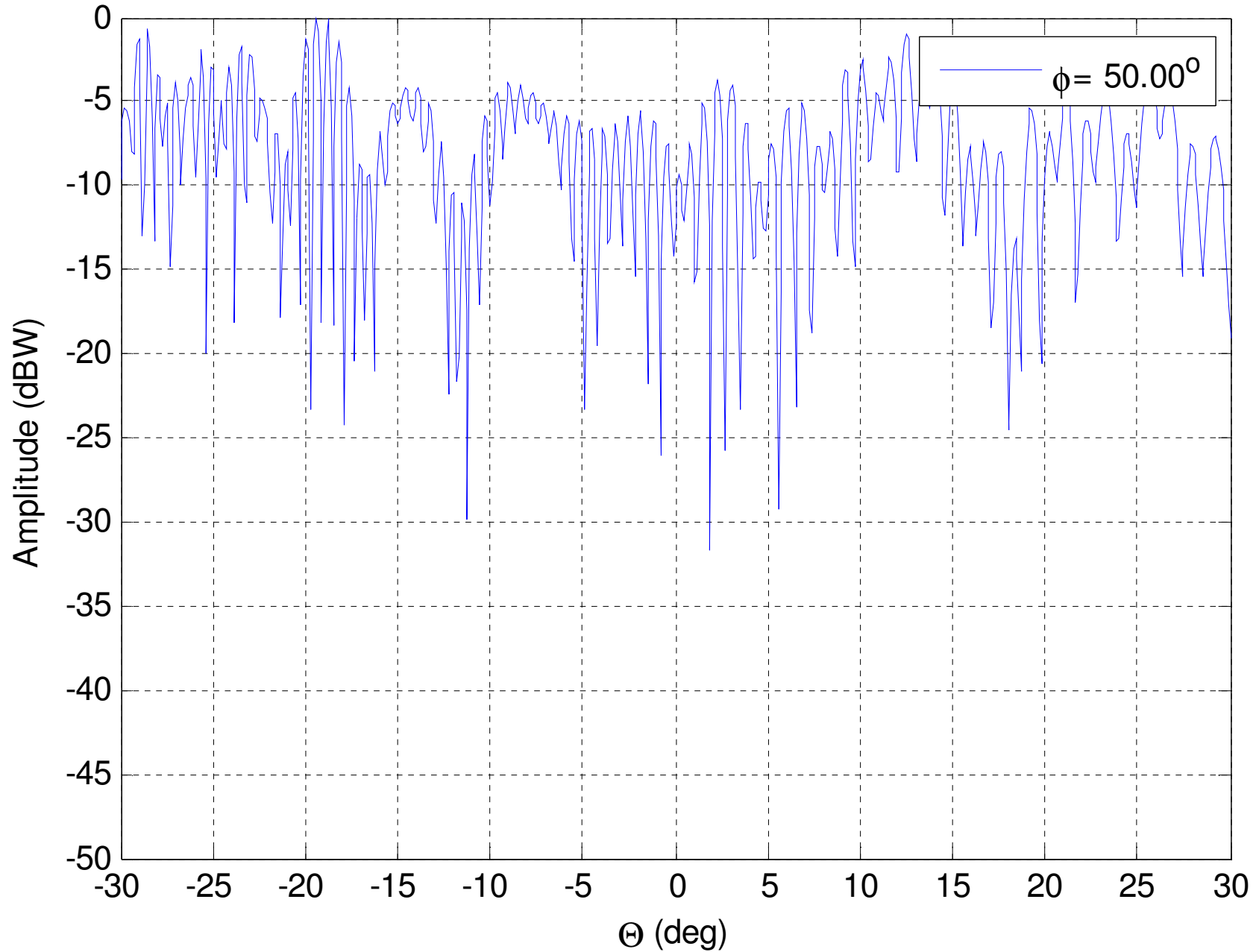
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -4.74 dBW, Date: 15-Dec-2011



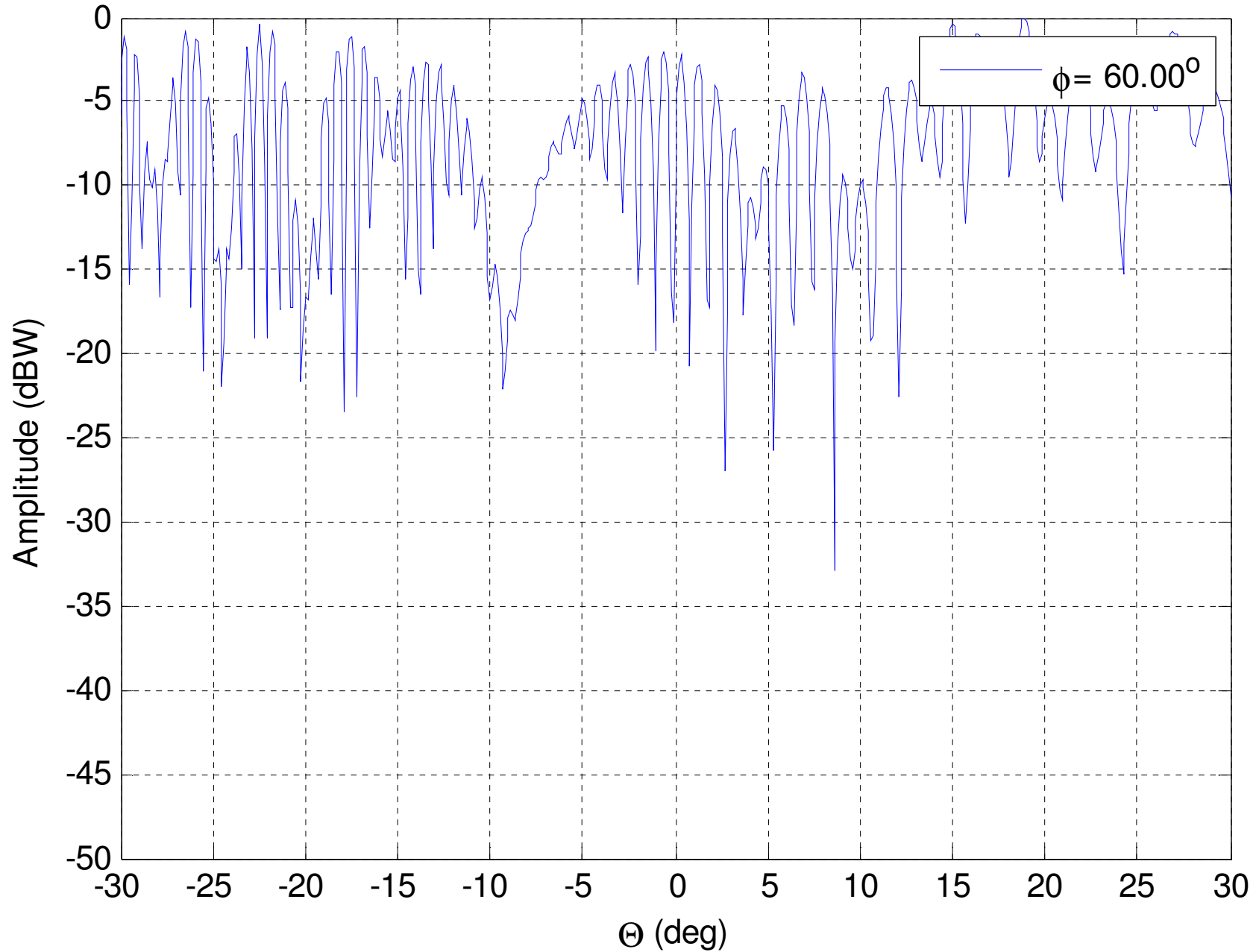
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -4.99 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

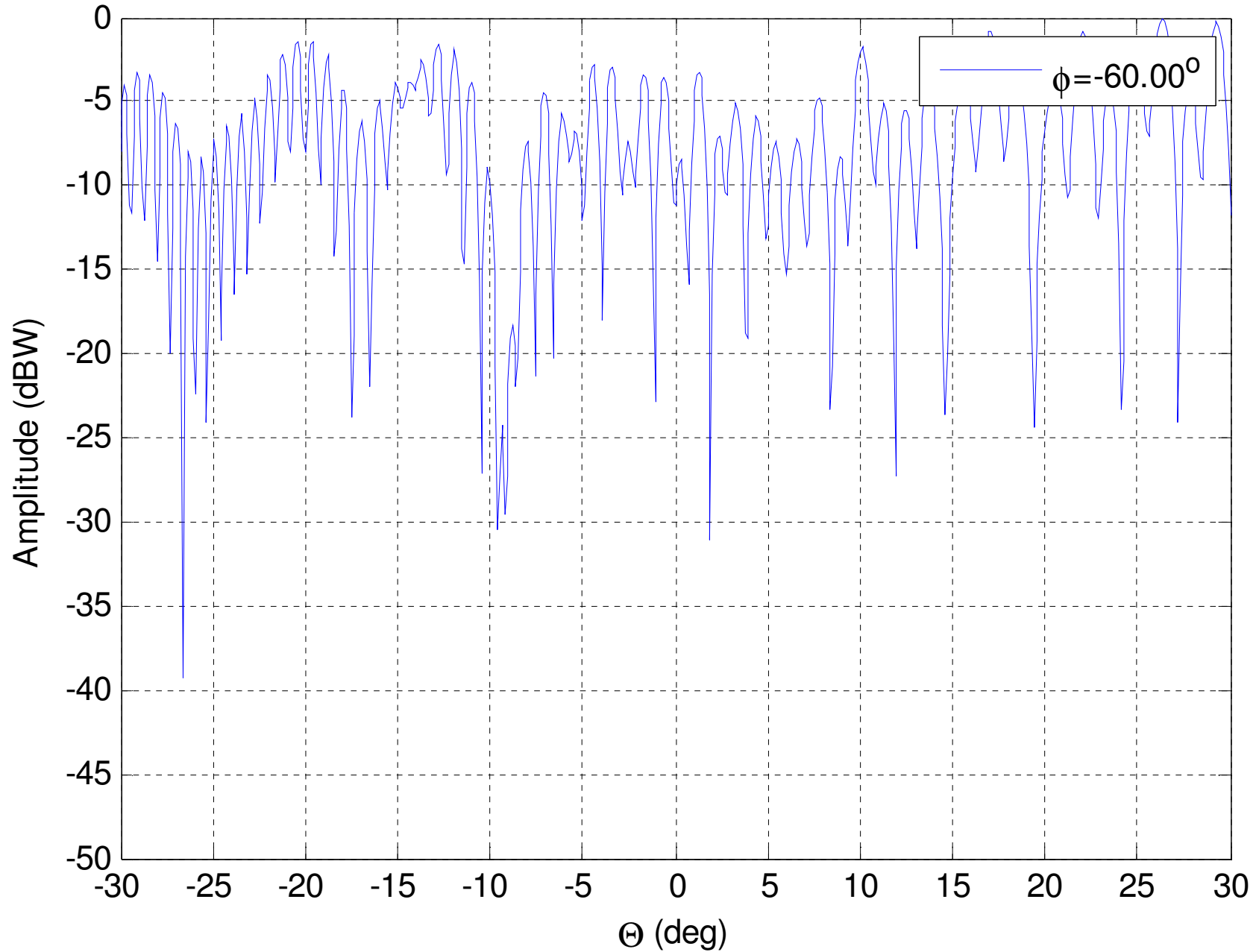
Input file: tx-17.5-lhcp-60.cut, Peak: -5.29 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

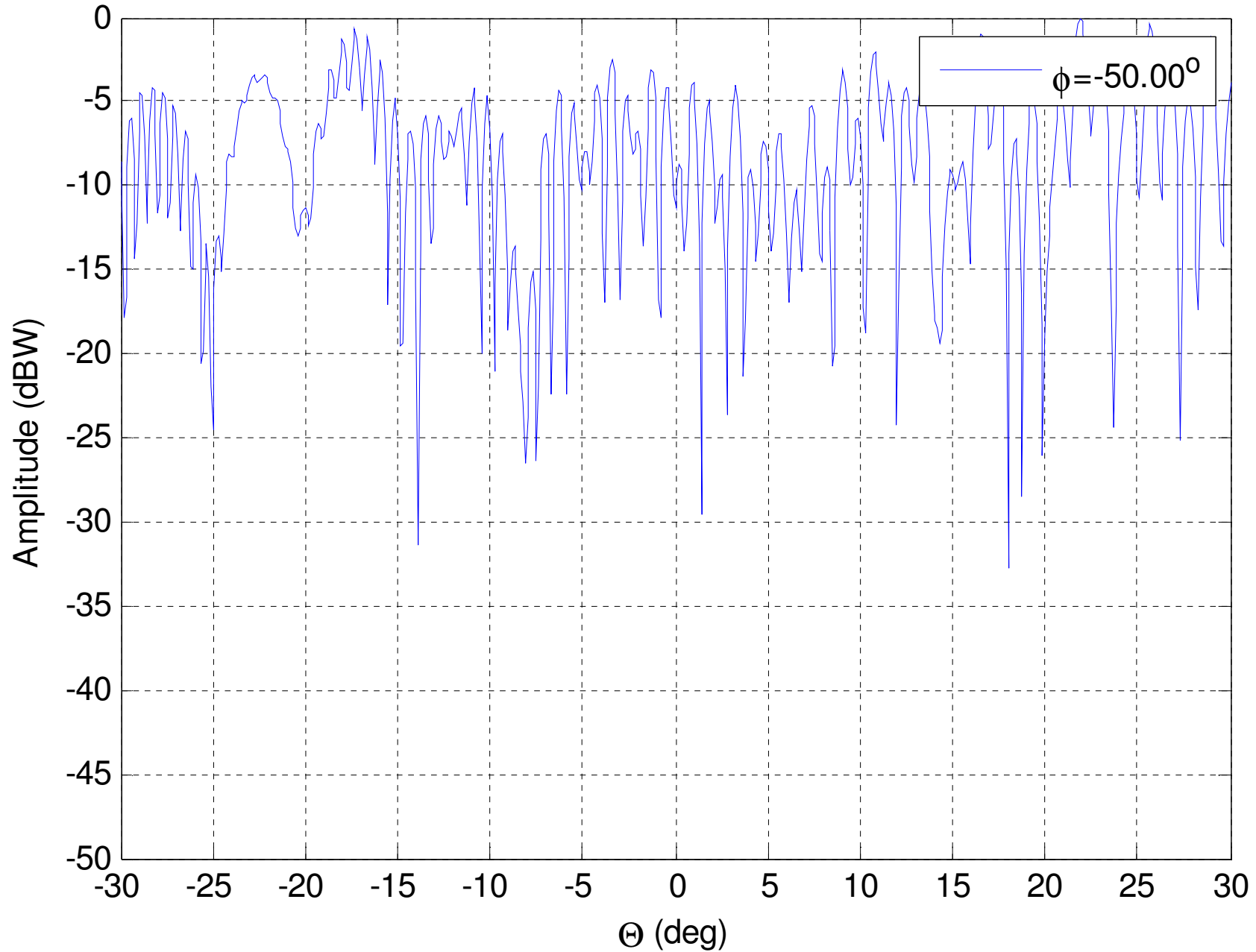
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -4.39 dBW, Date: 15-Dec-2011



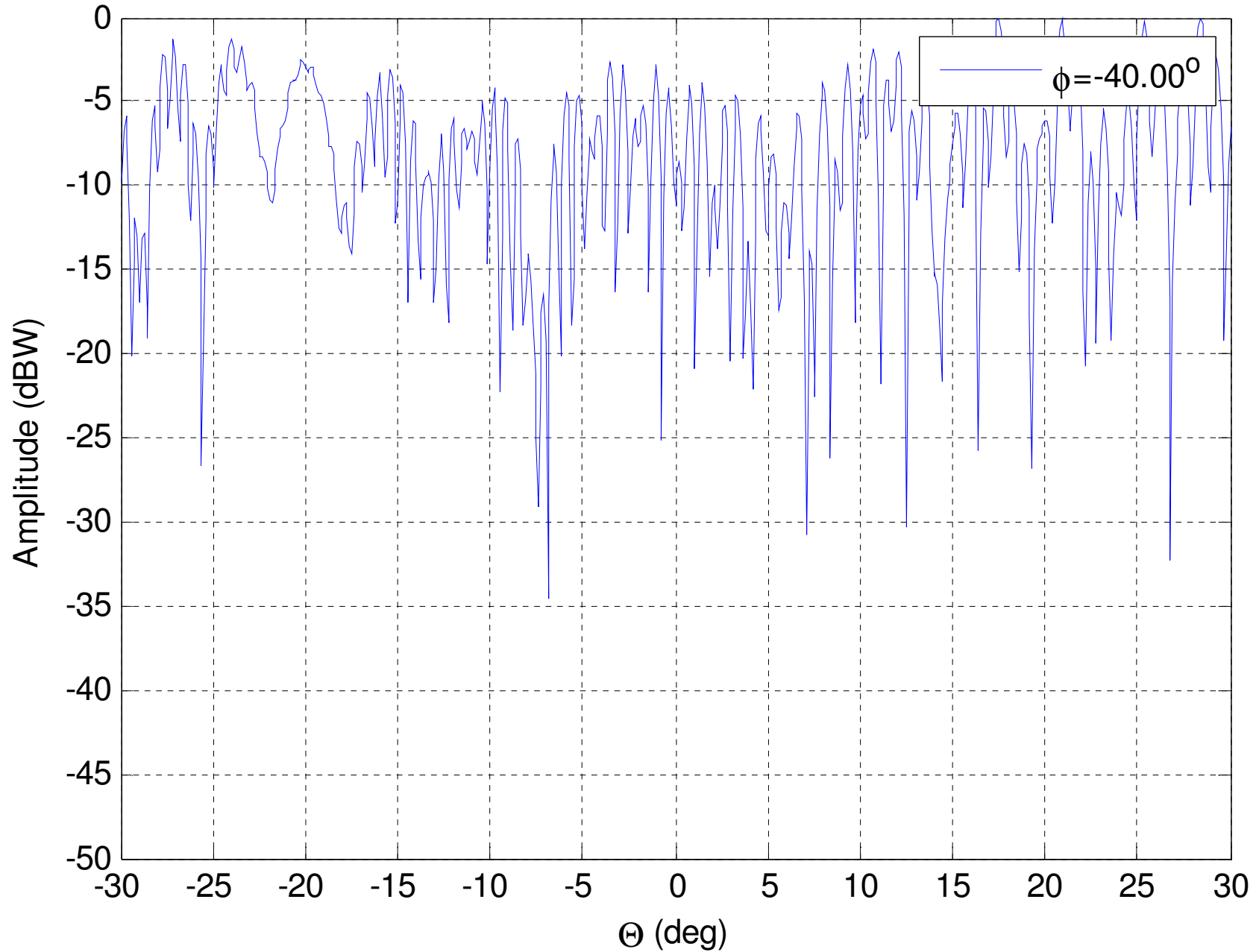
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -4.26 dBW, Date: 15-Dec-2011



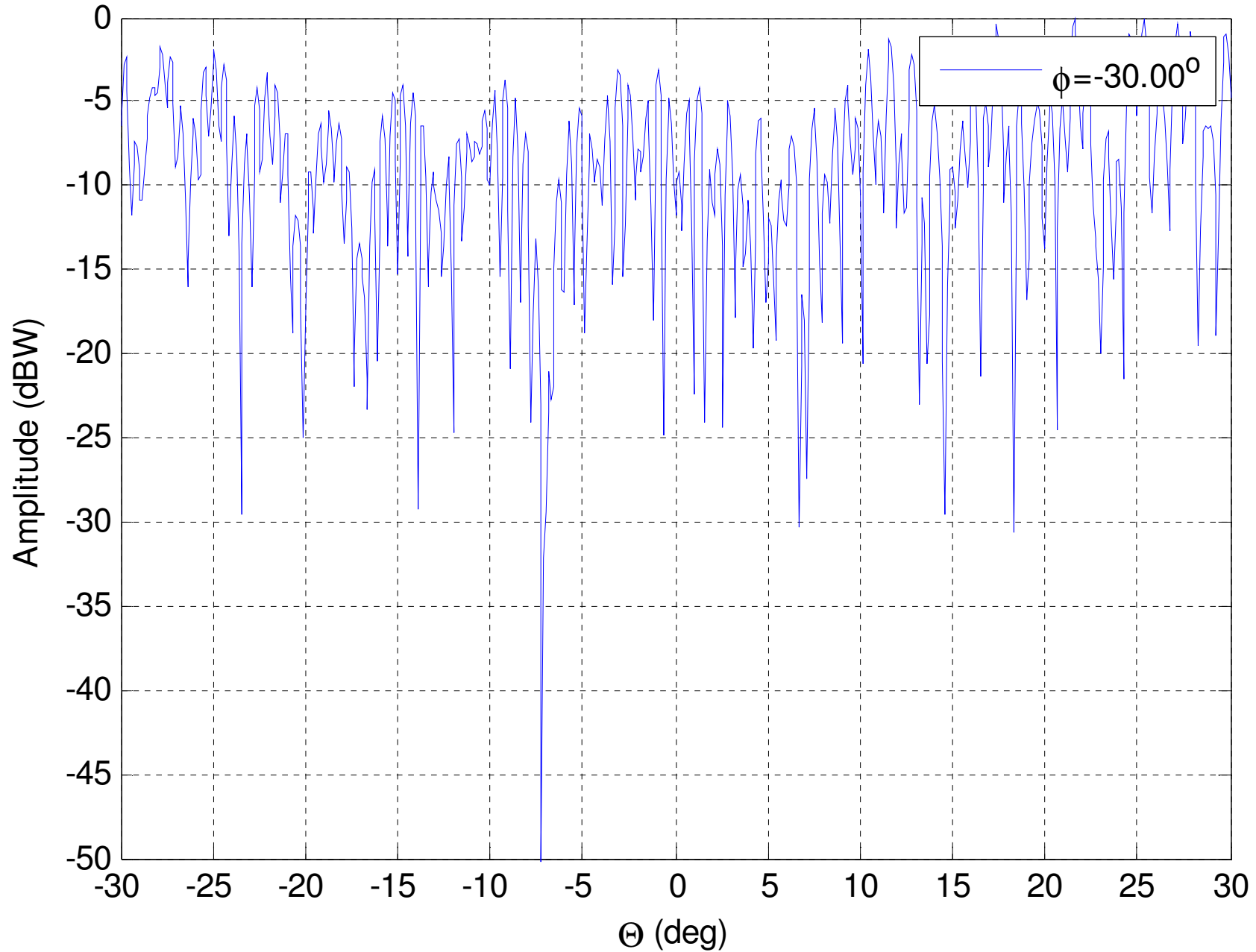
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.44 dBW, Date: 15-Dec-2011



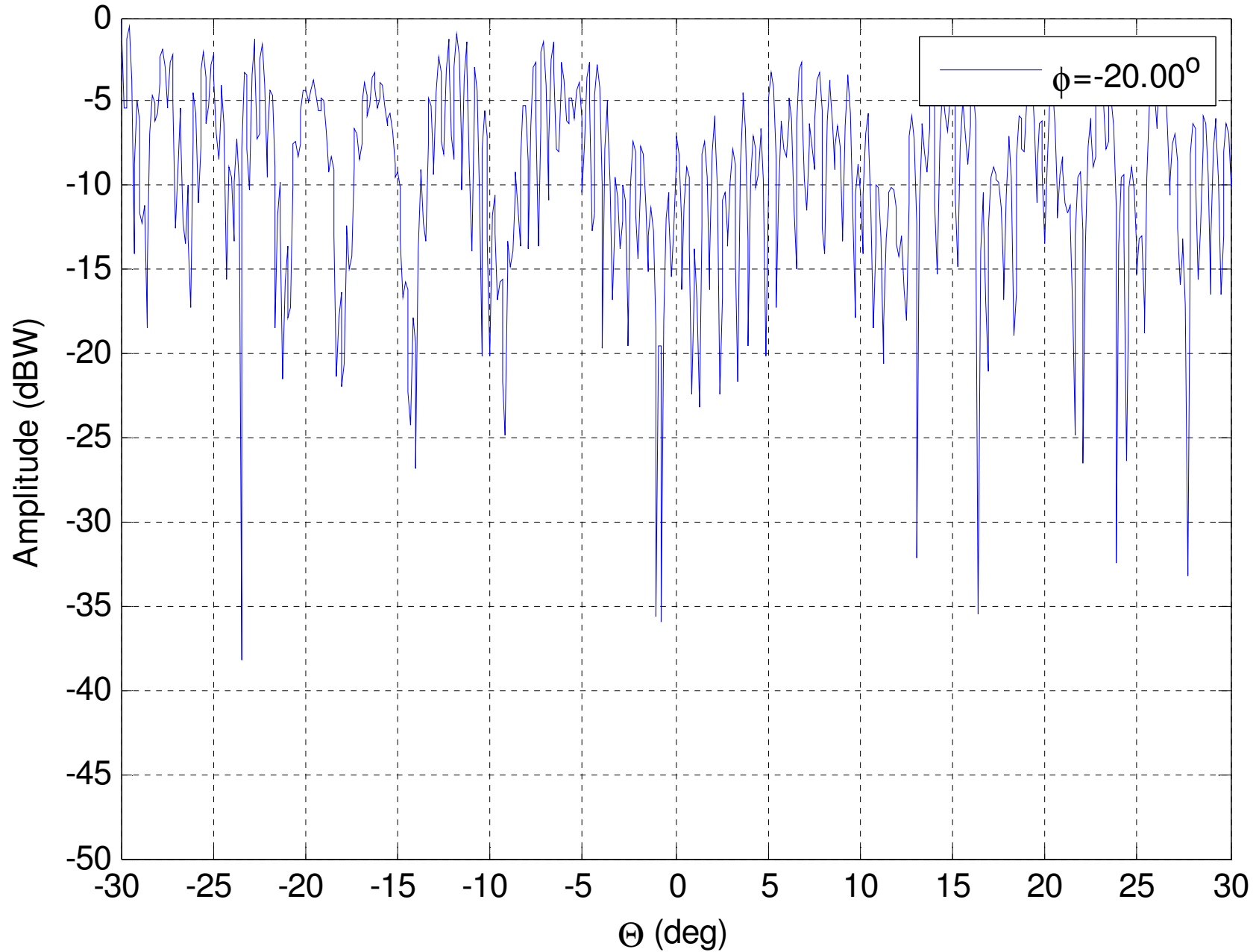
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -3.90 dBW, Date: 15-Dec-2011



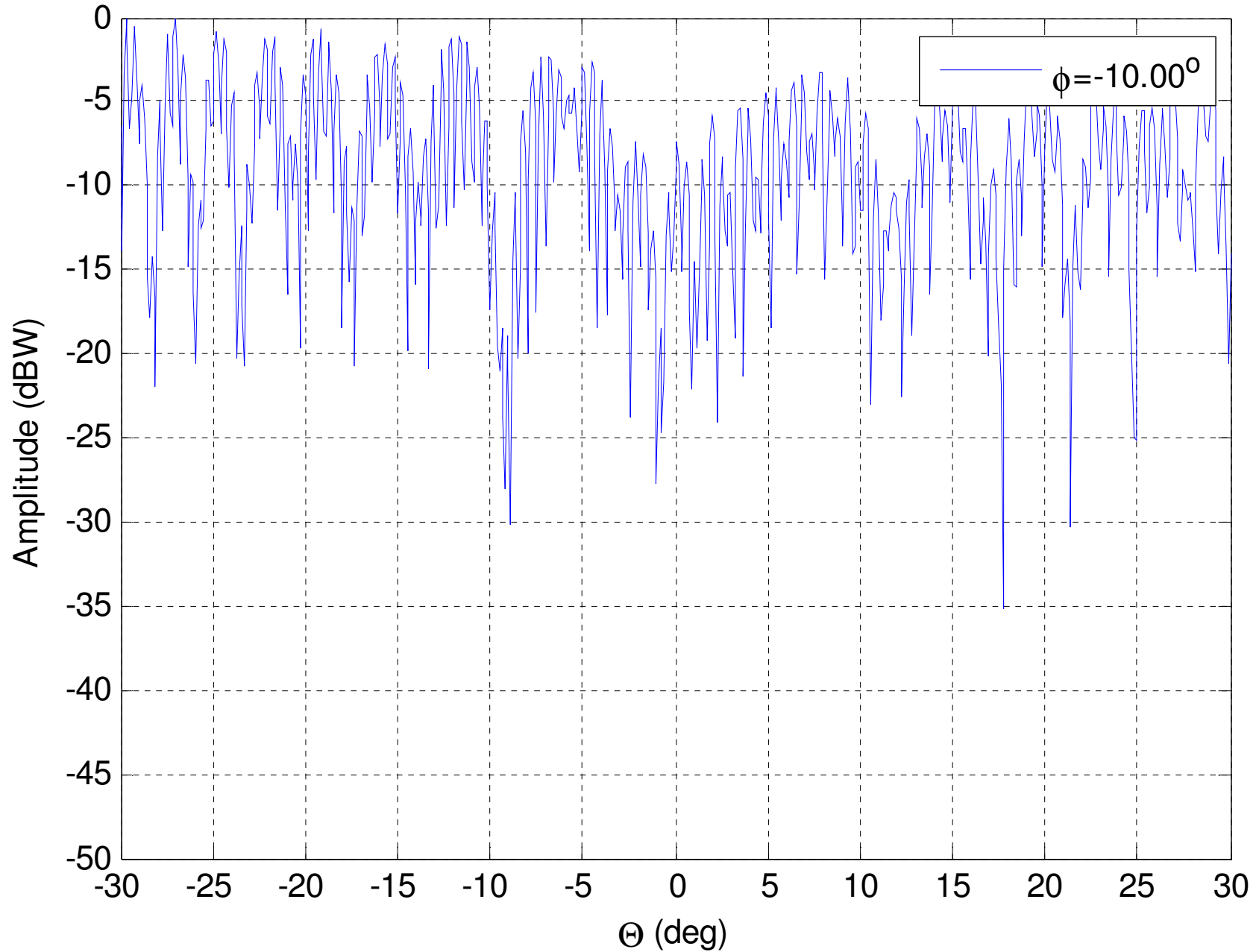
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -4.99 dBW, Date: 15-Dec-2011



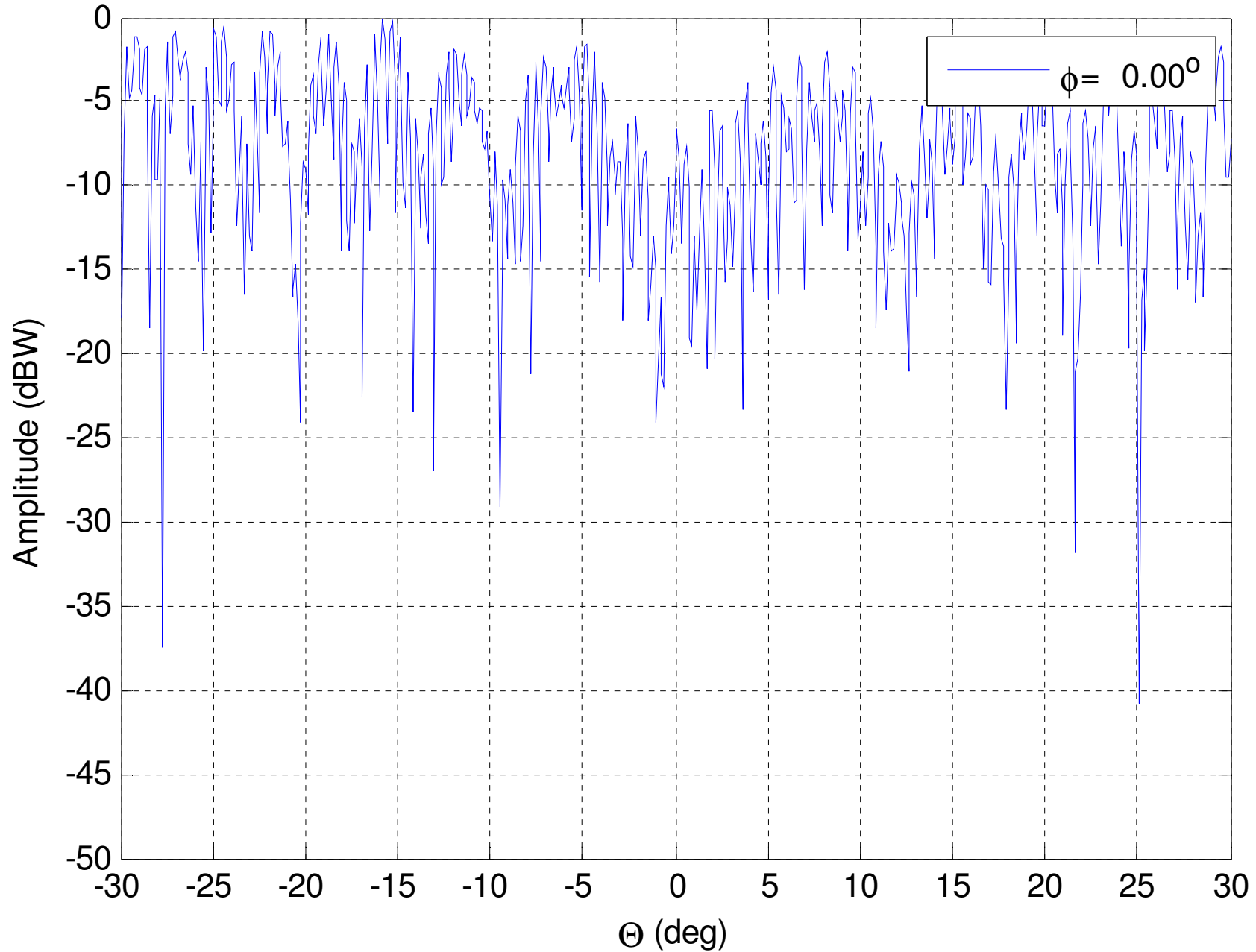
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -4.71 dBW, Date: 15-Dec-2011



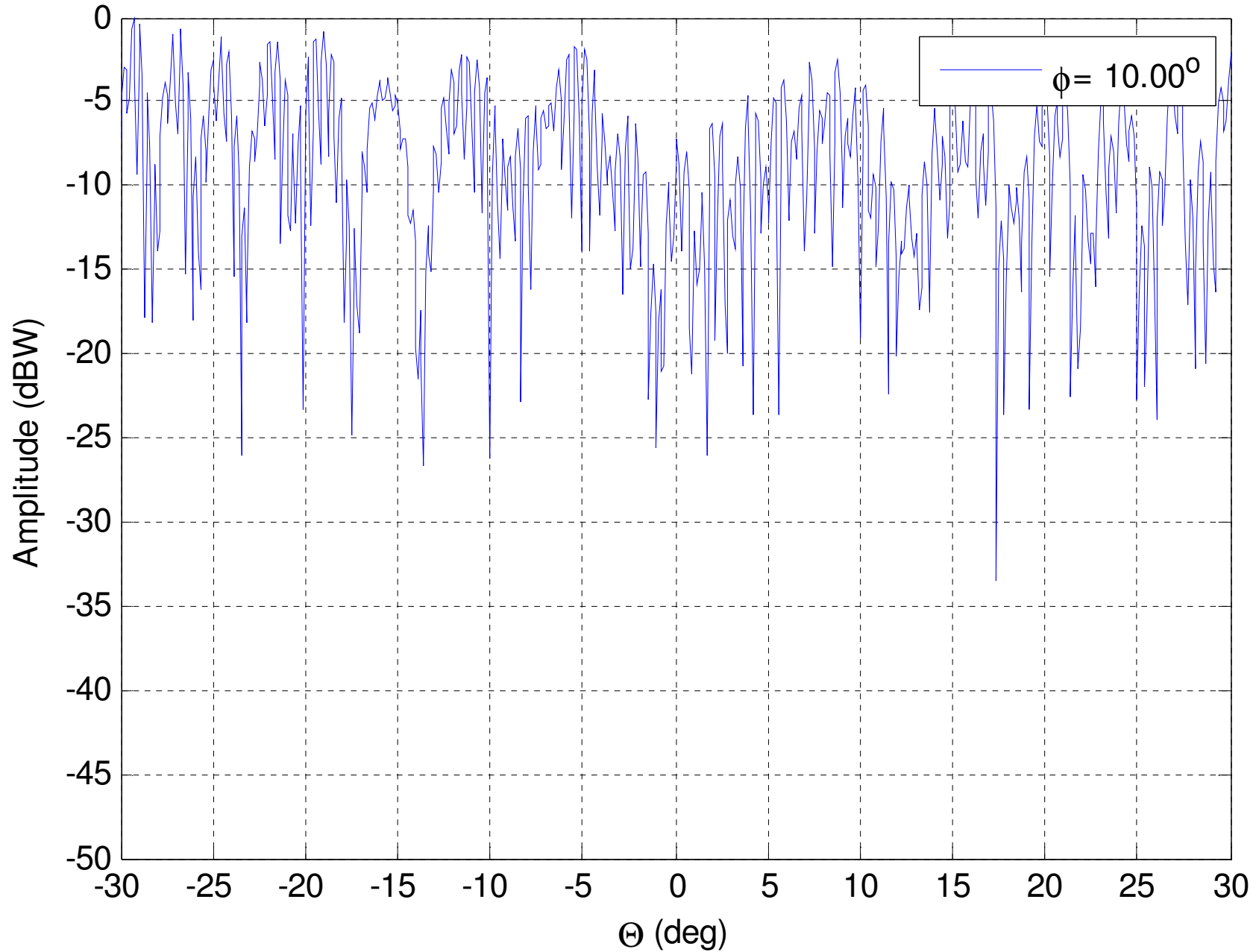
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -5.44 dBW, Date: 15-Dec-2011



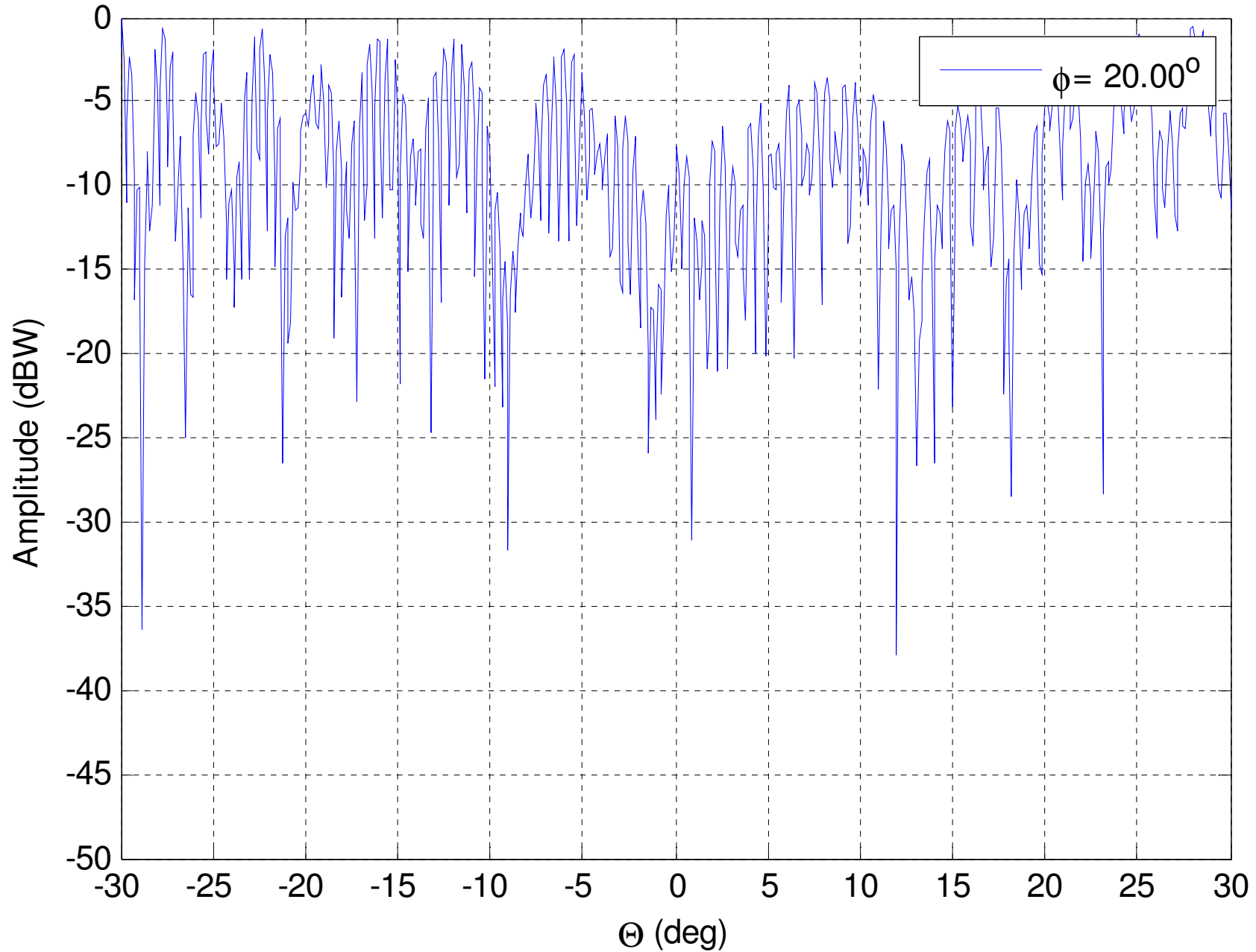
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -4.86 dBW, Date: 15-Dec-2011



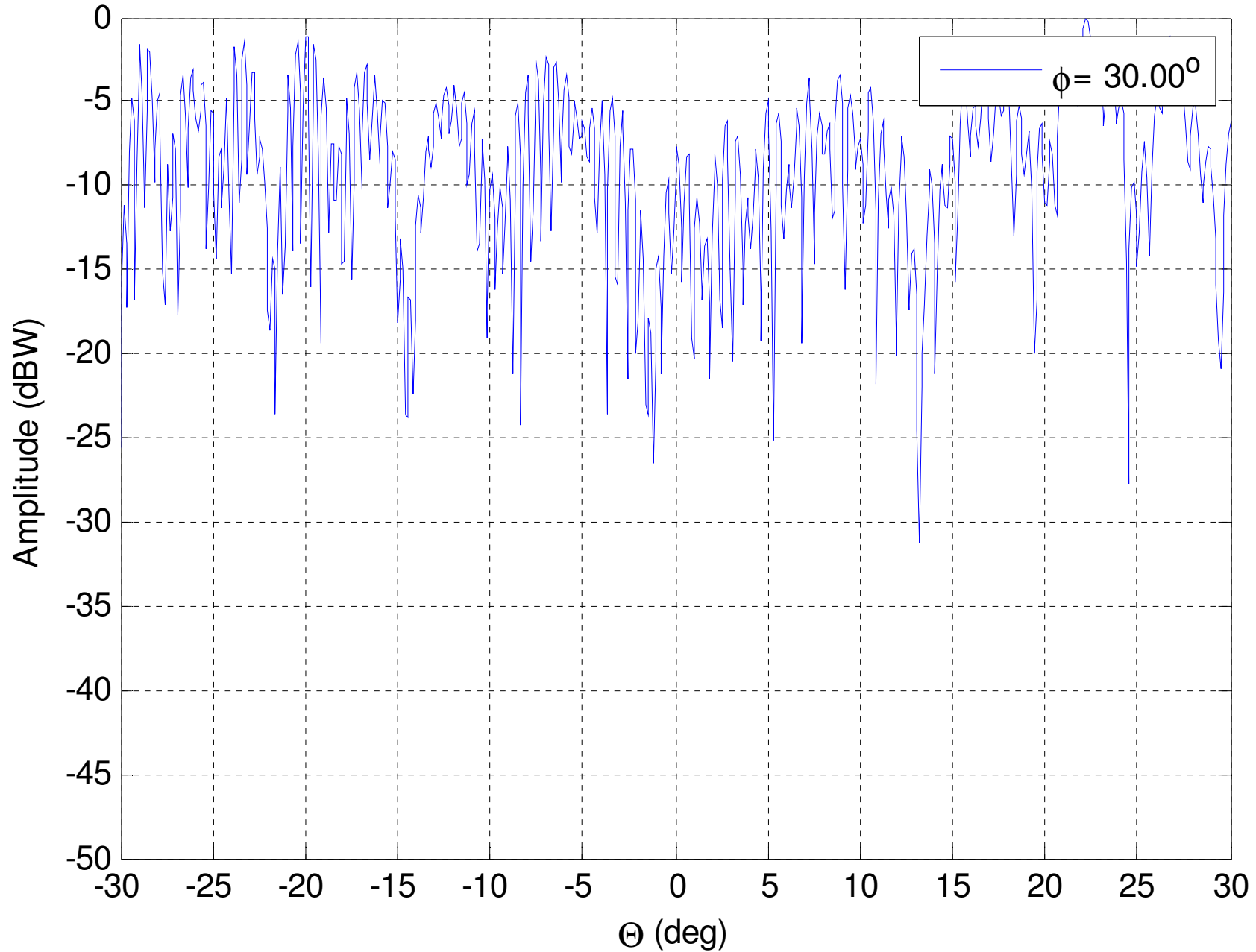
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -4.31 dBW, Date: 15-Dec-2011



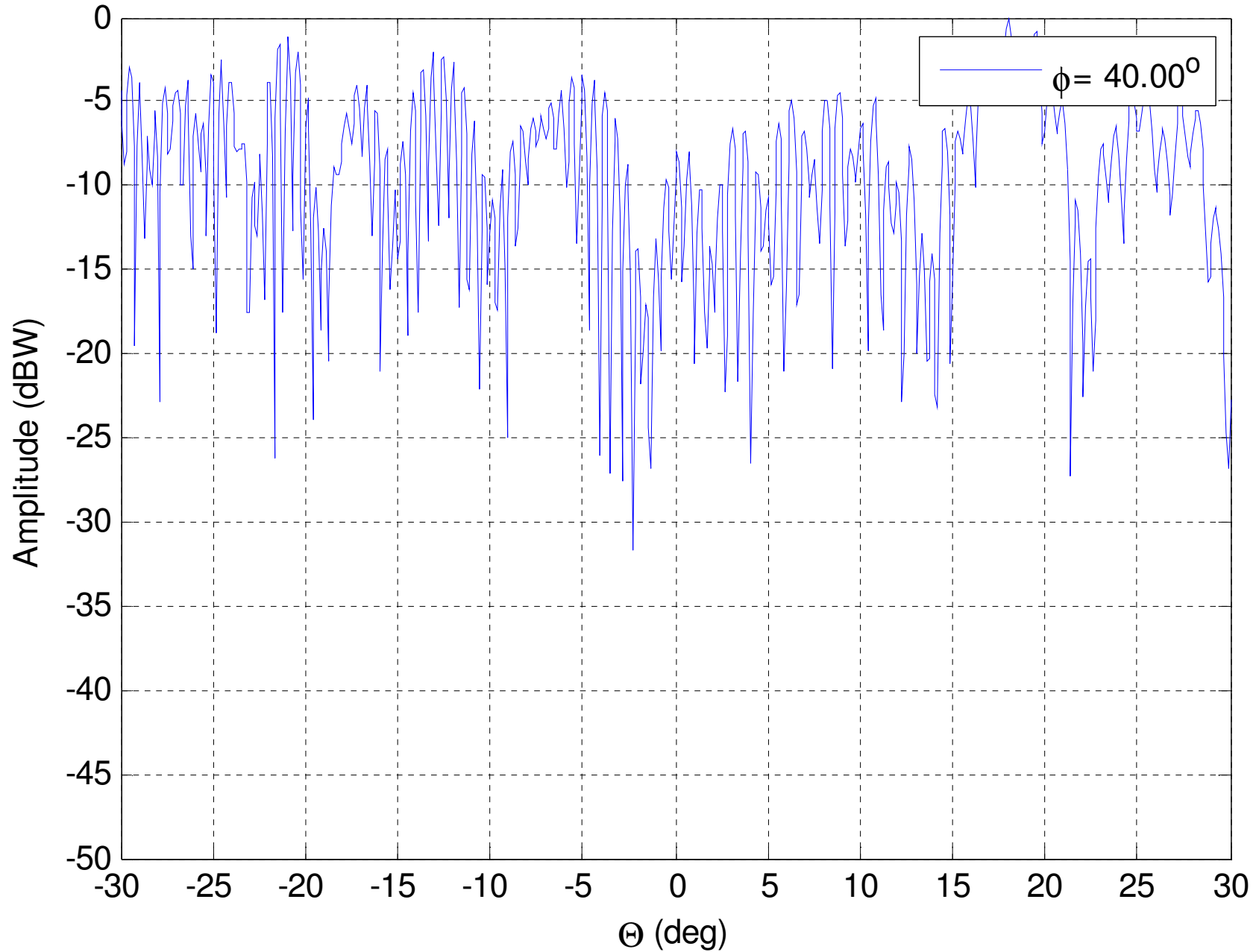
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -4.41 dBW, Date: 15-Dec-2011



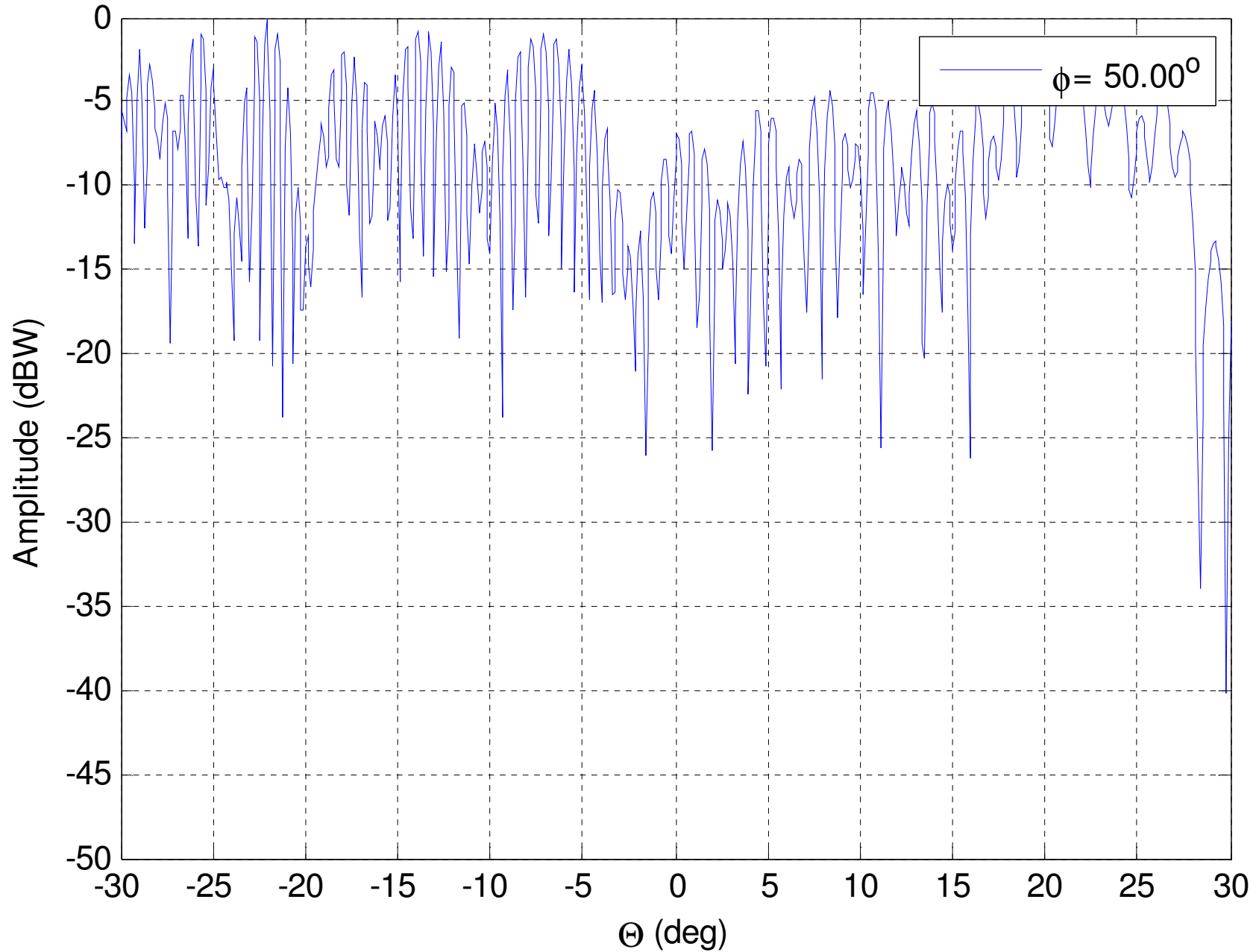
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -4.18 dBW, Date: 15-Dec-2011



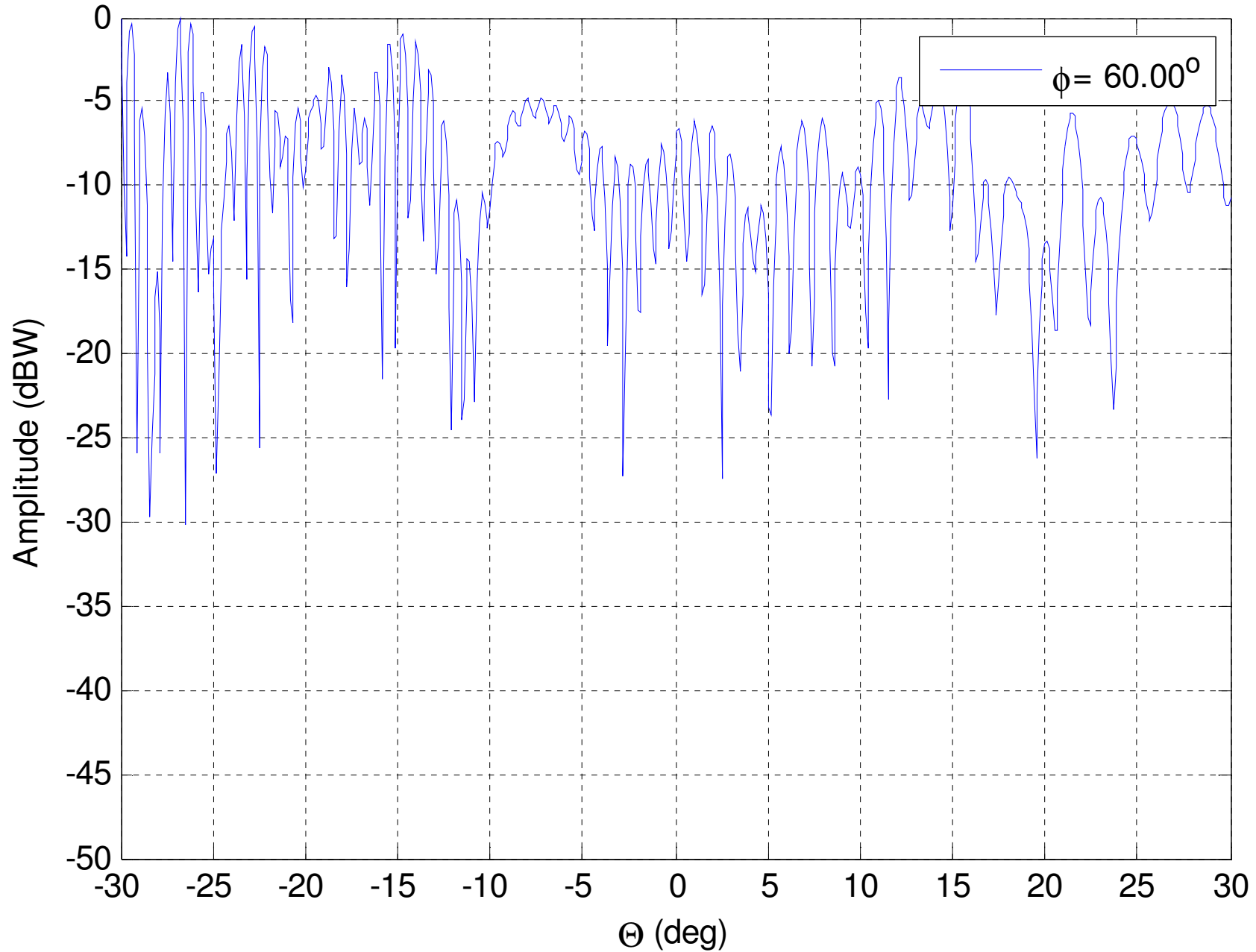
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.21 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

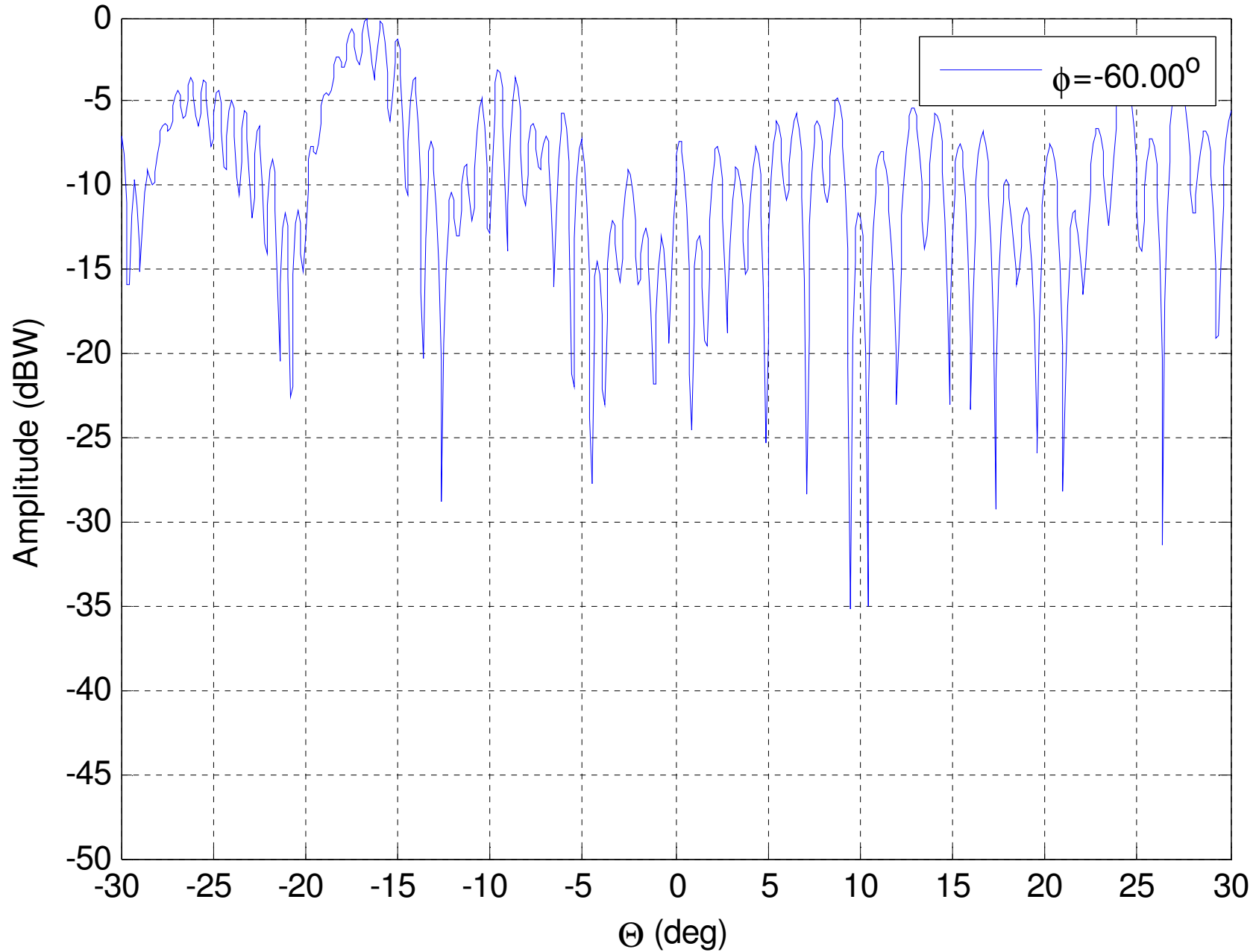
Input file: tx-17.7-rhcp-60.cut, Peak: -5.51 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

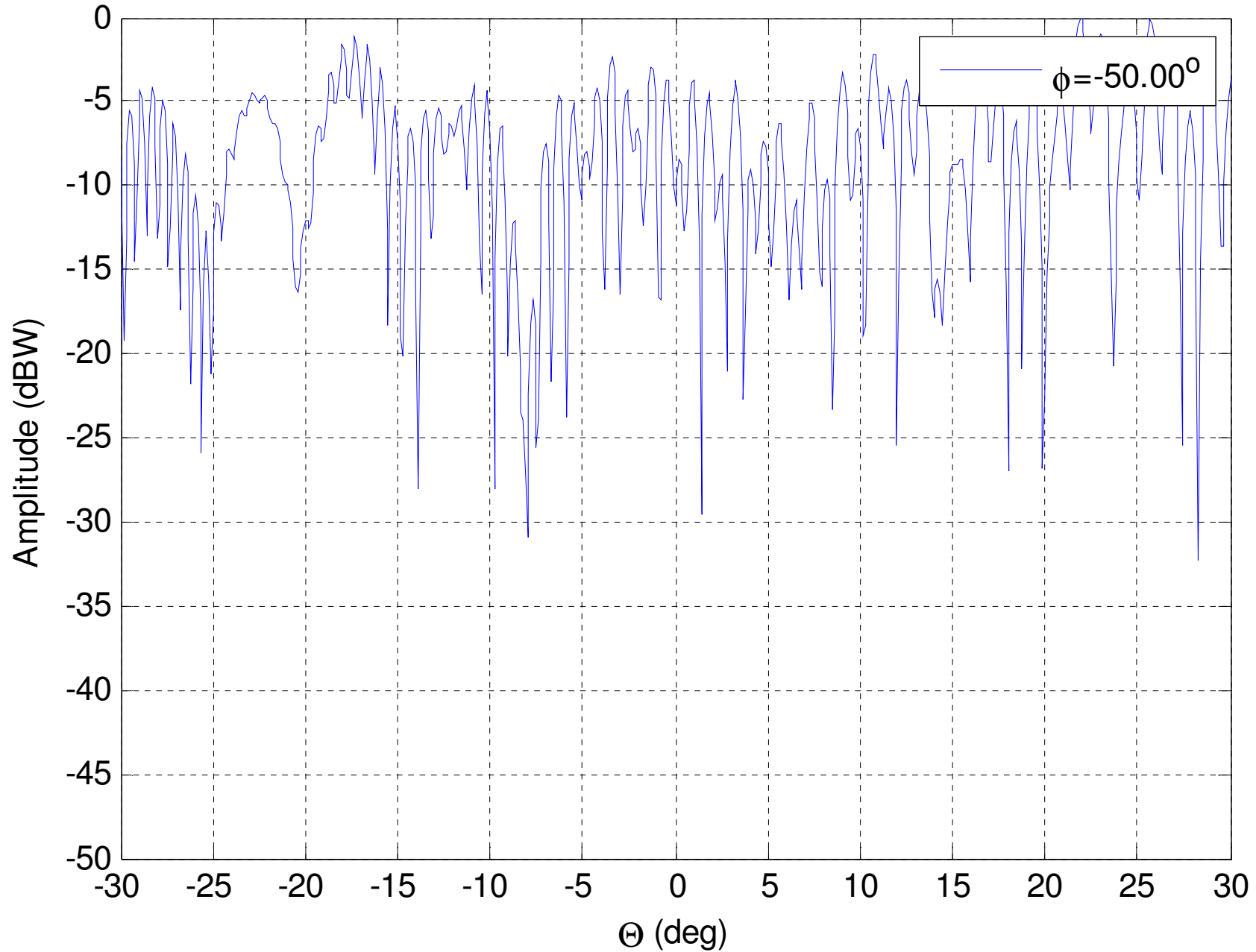
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -4.04 dBW, Date: 15-Dec-2011



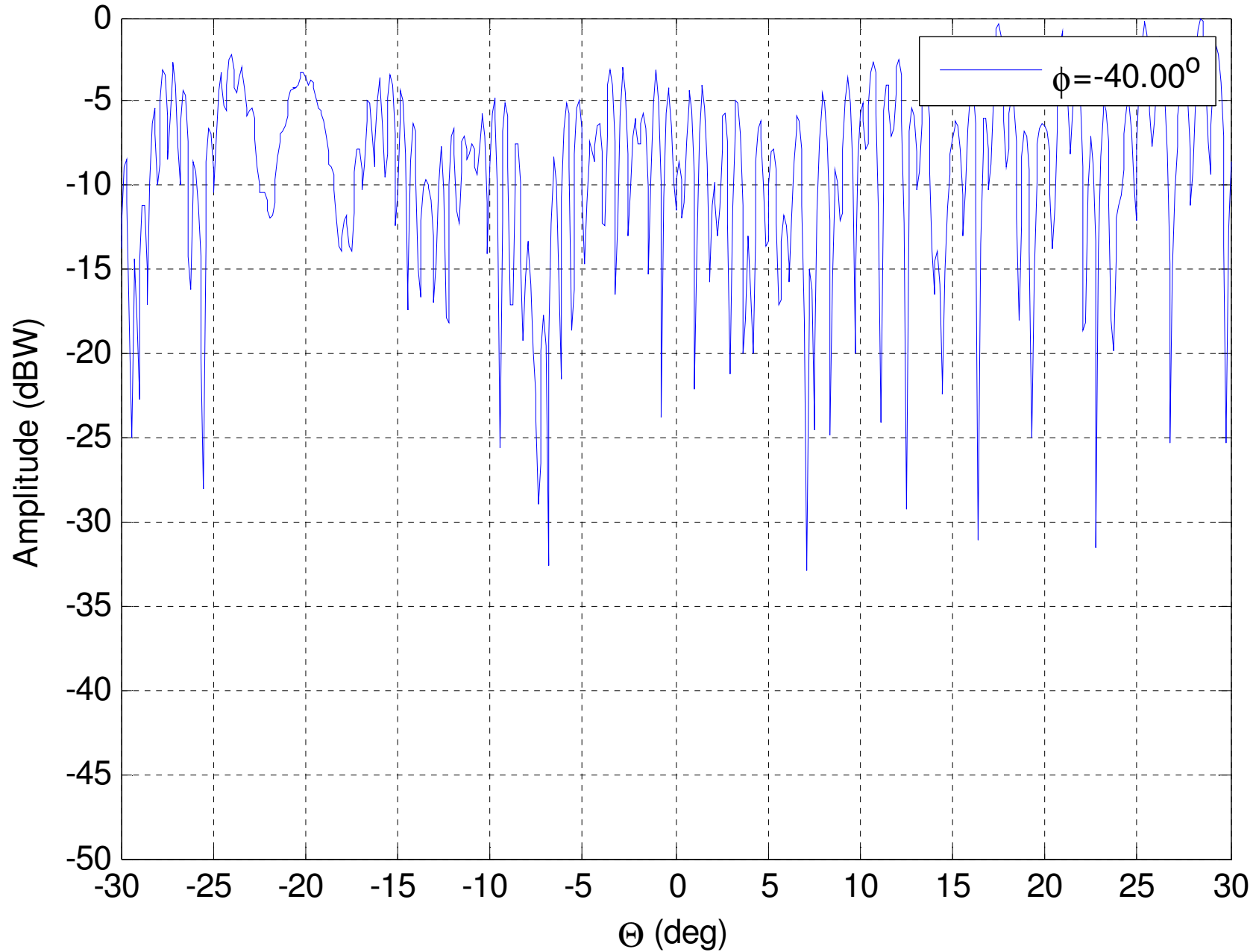
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -4.12 dBW, Date: 15-Dec-2011



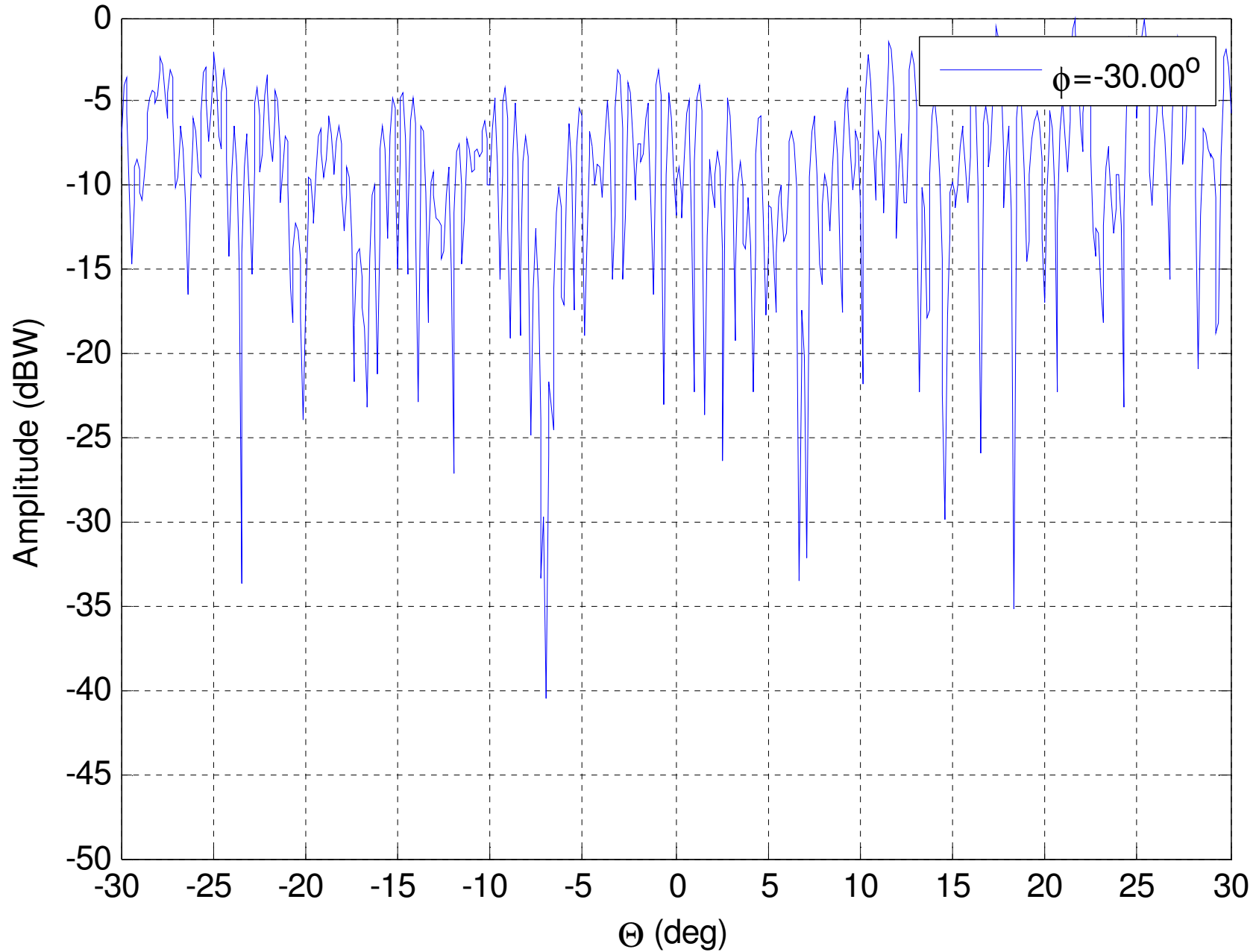
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -3.89 dBW, Date: 15-Dec-2011



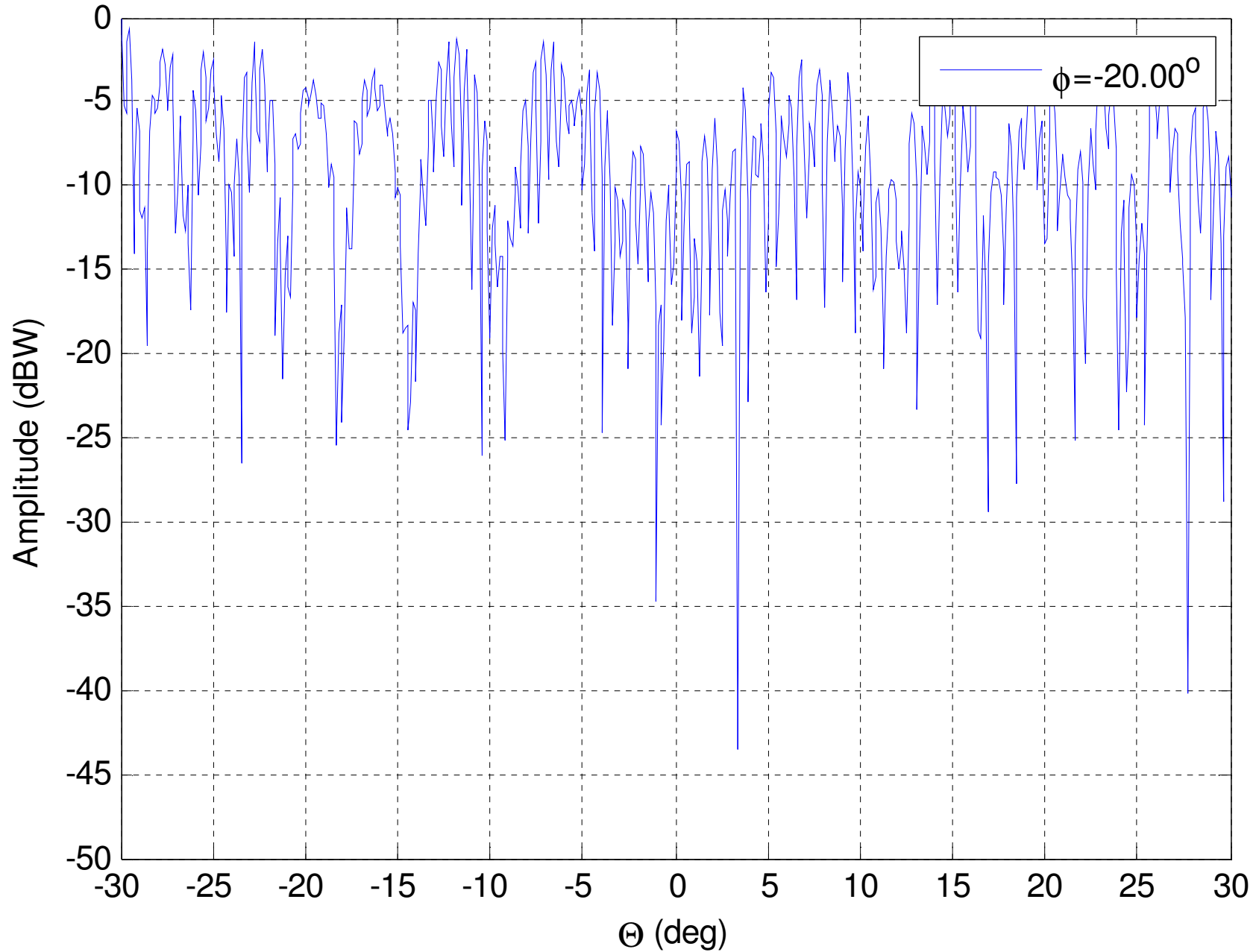
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -3.61 dBW, Date: 15-Dec-2011



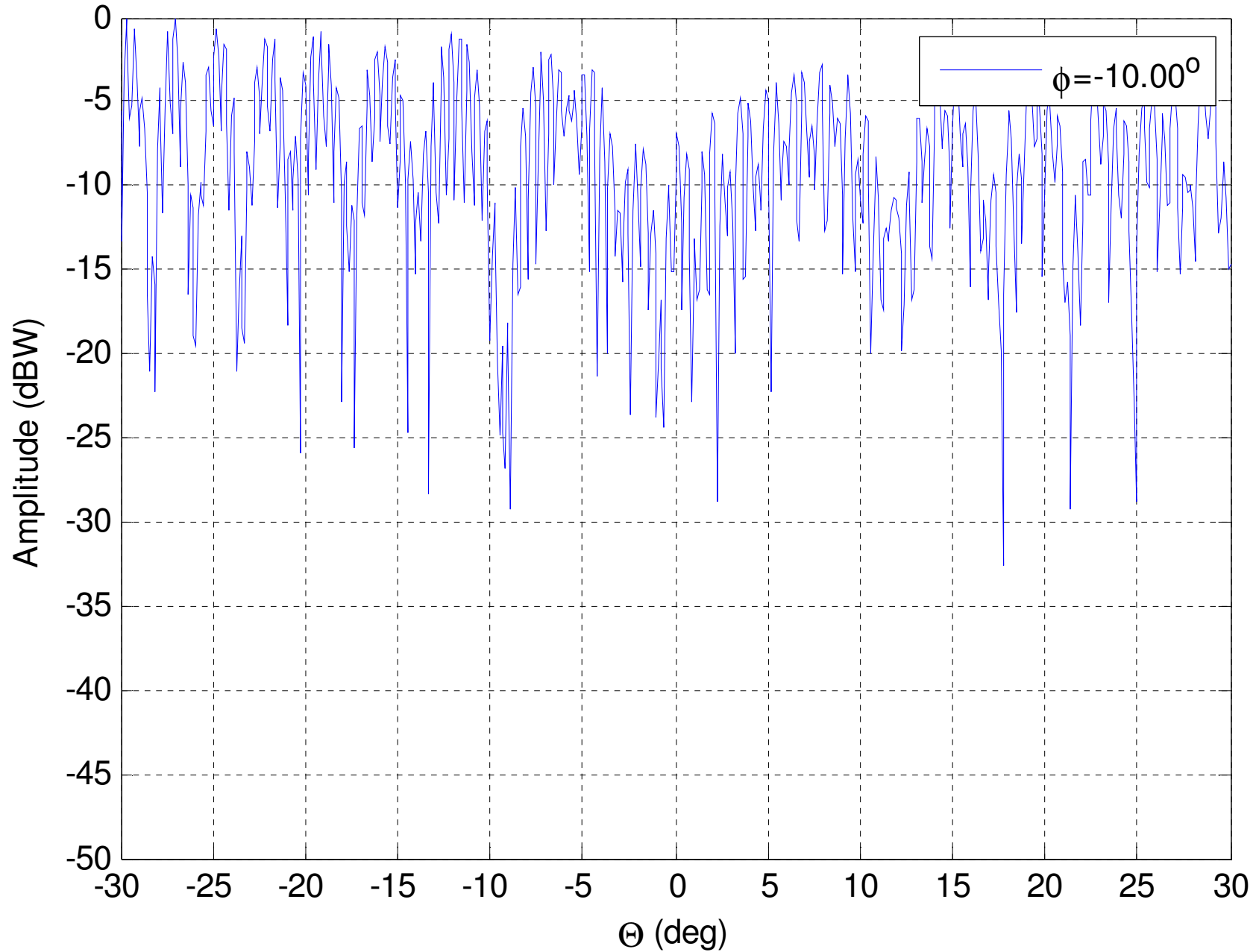
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -4.74 dBW, Date: 15-Dec-2011



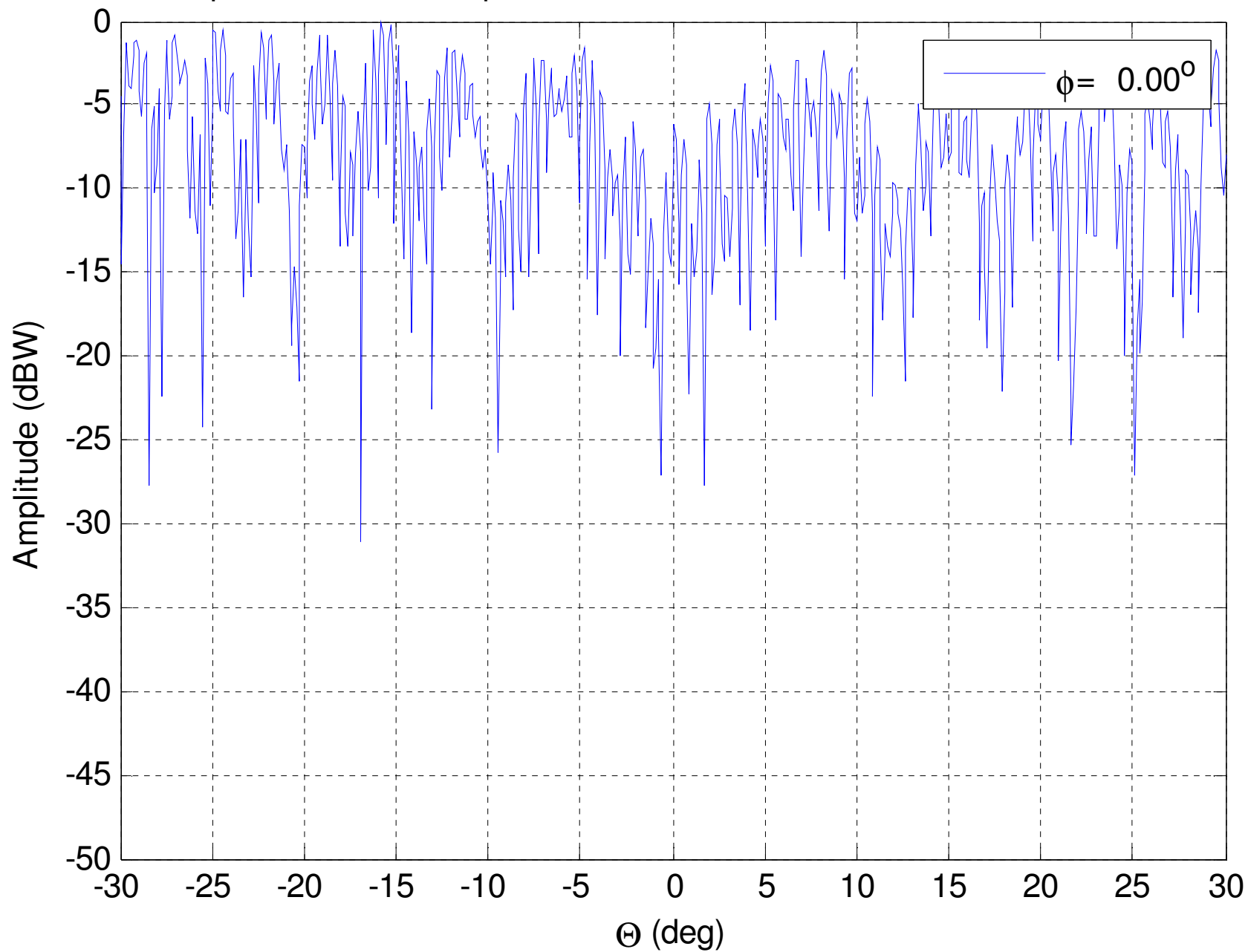
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -4.61 dBW, Date: 15-Dec-2011



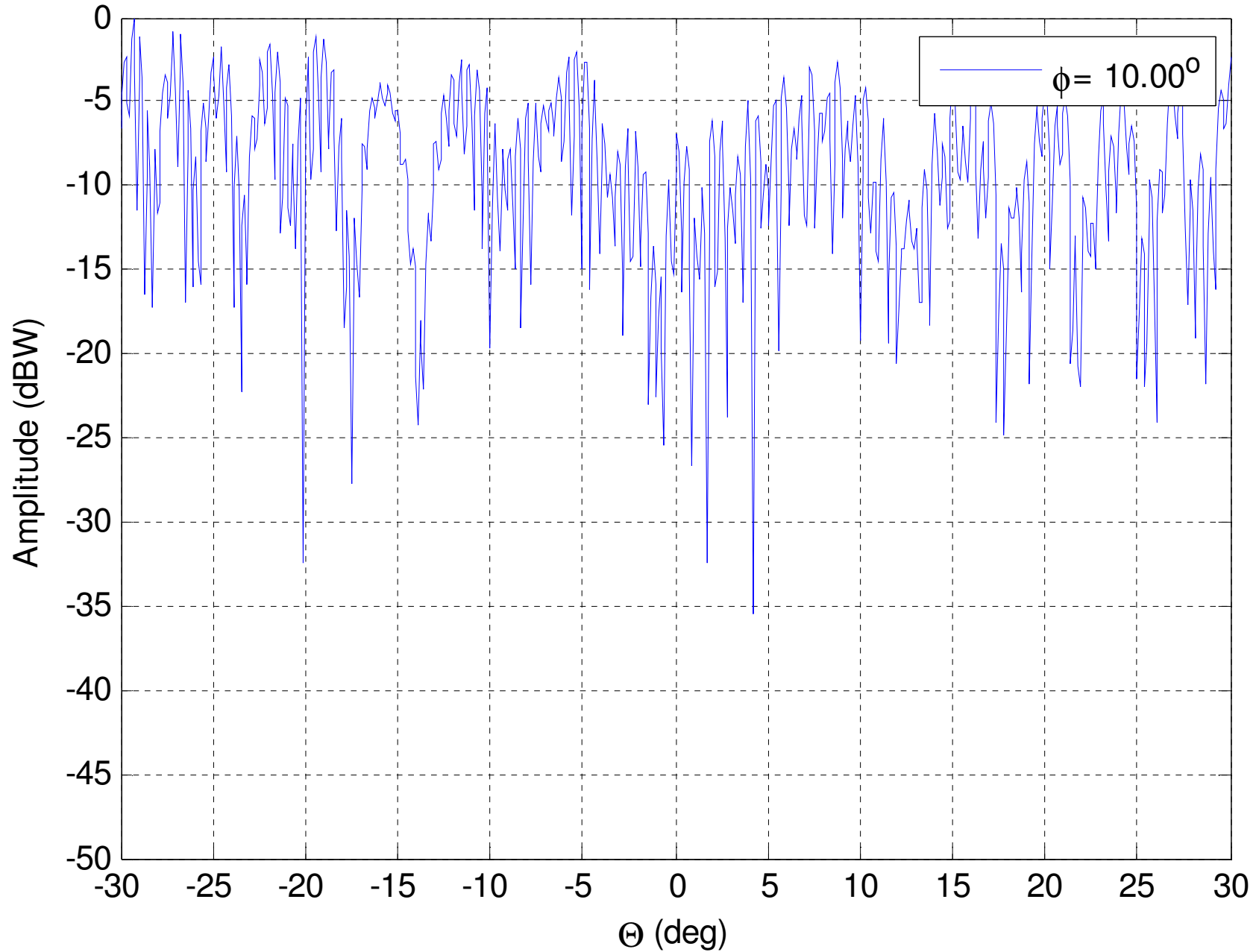
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -5.35 dBW, Date: 15-Dec-2011



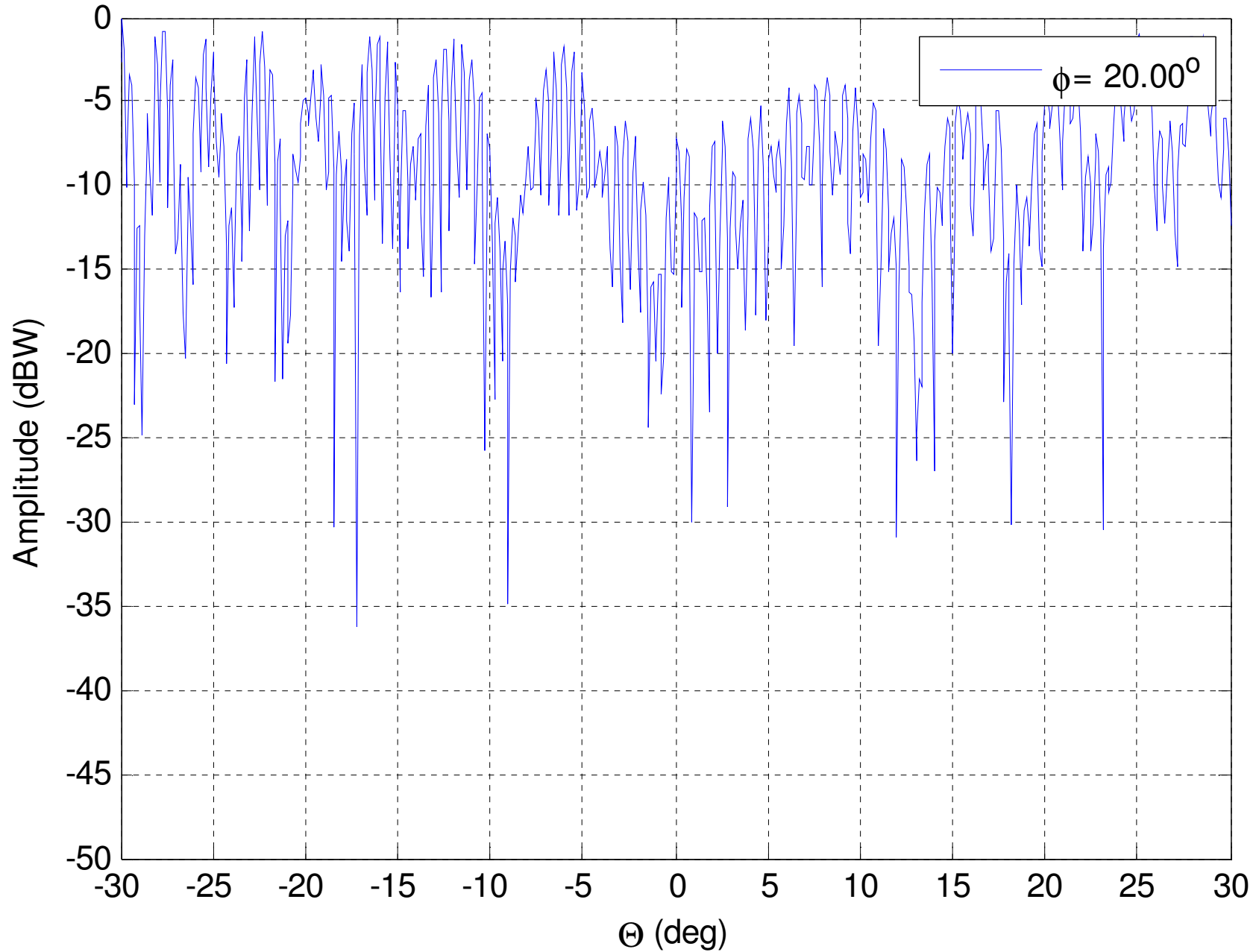
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -4.51 dBW, Date: 15-Dec-2011



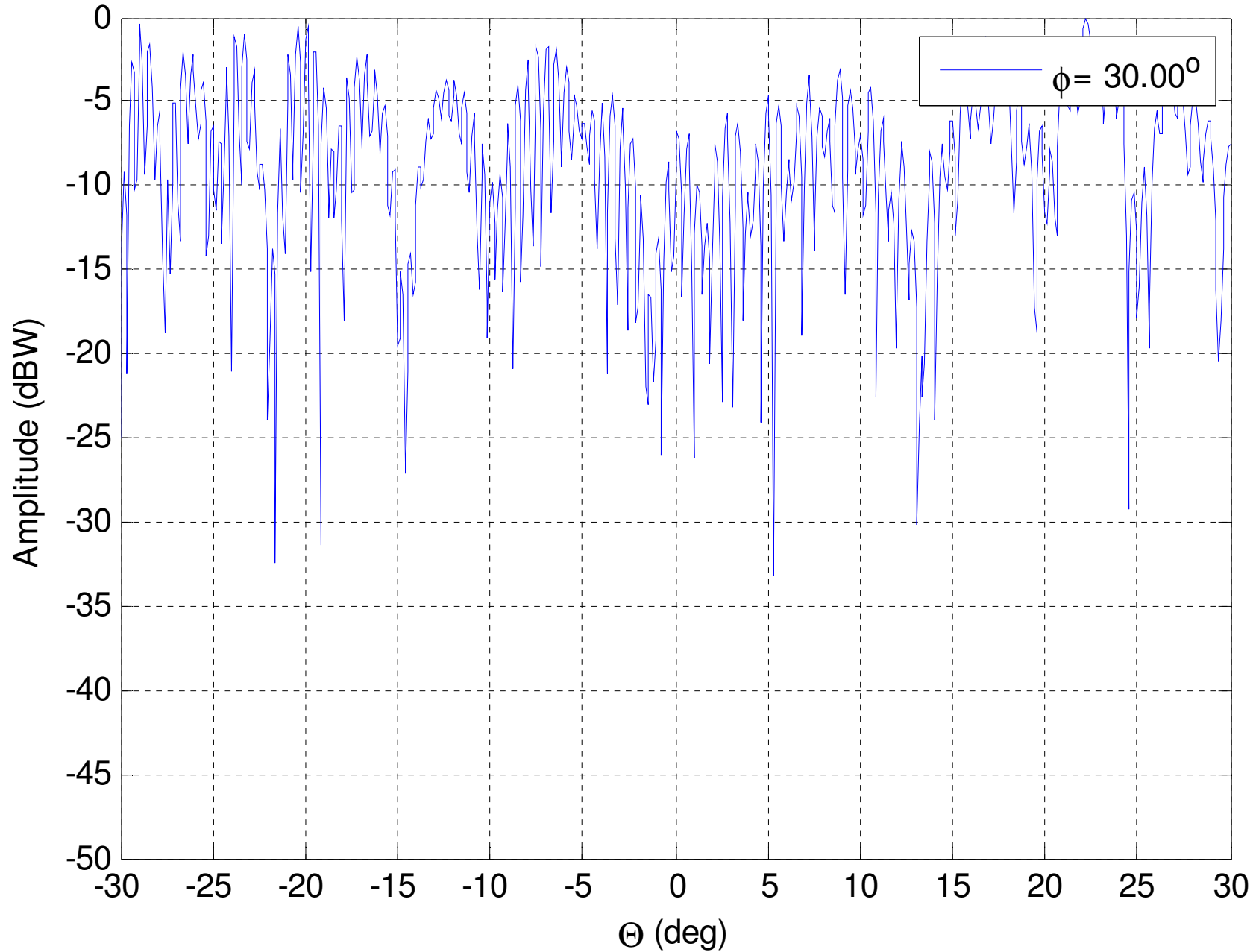
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -4.27 dBW, Date: 15-Dec-2011



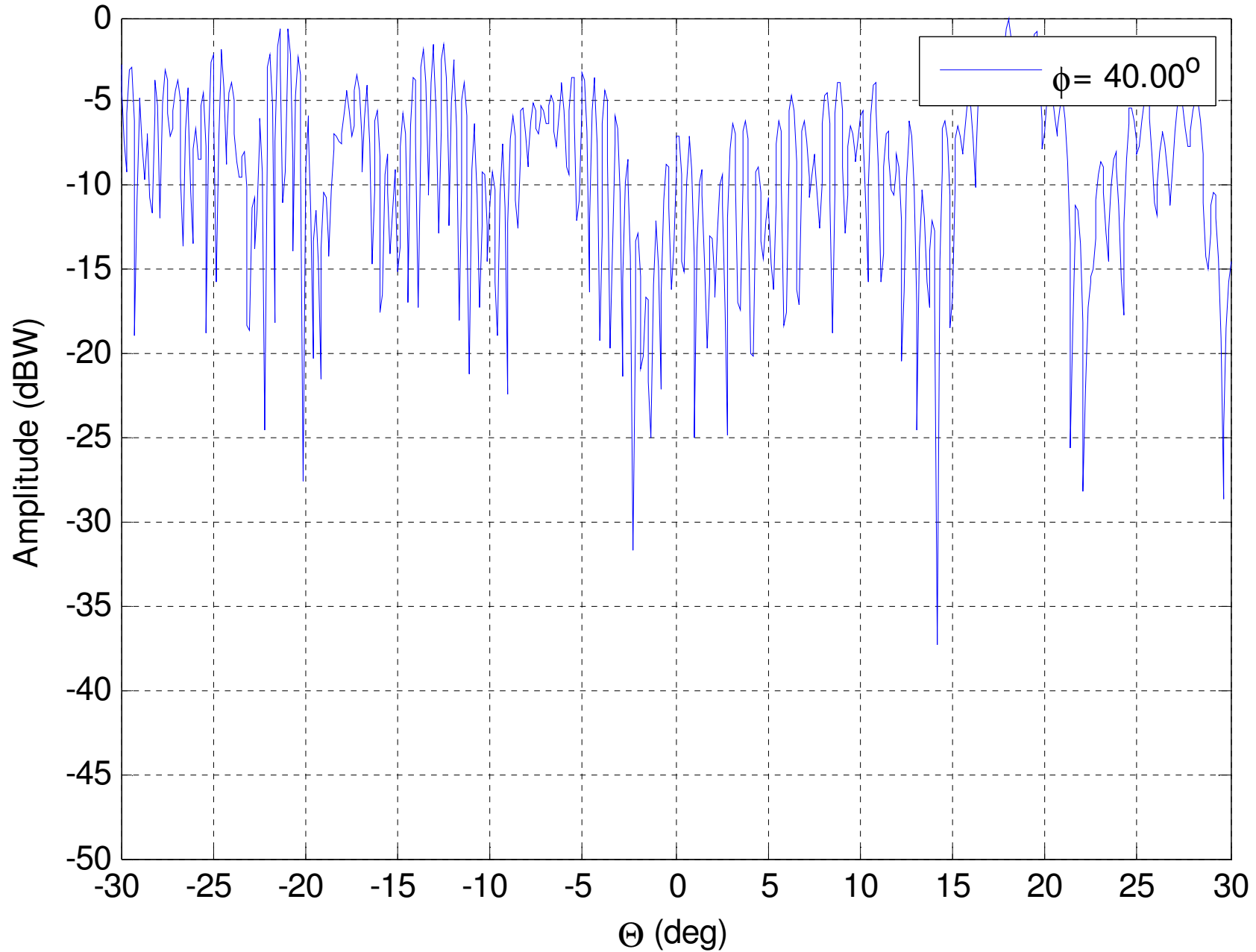
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -4.83 dBW, Date: 15-Dec-2011



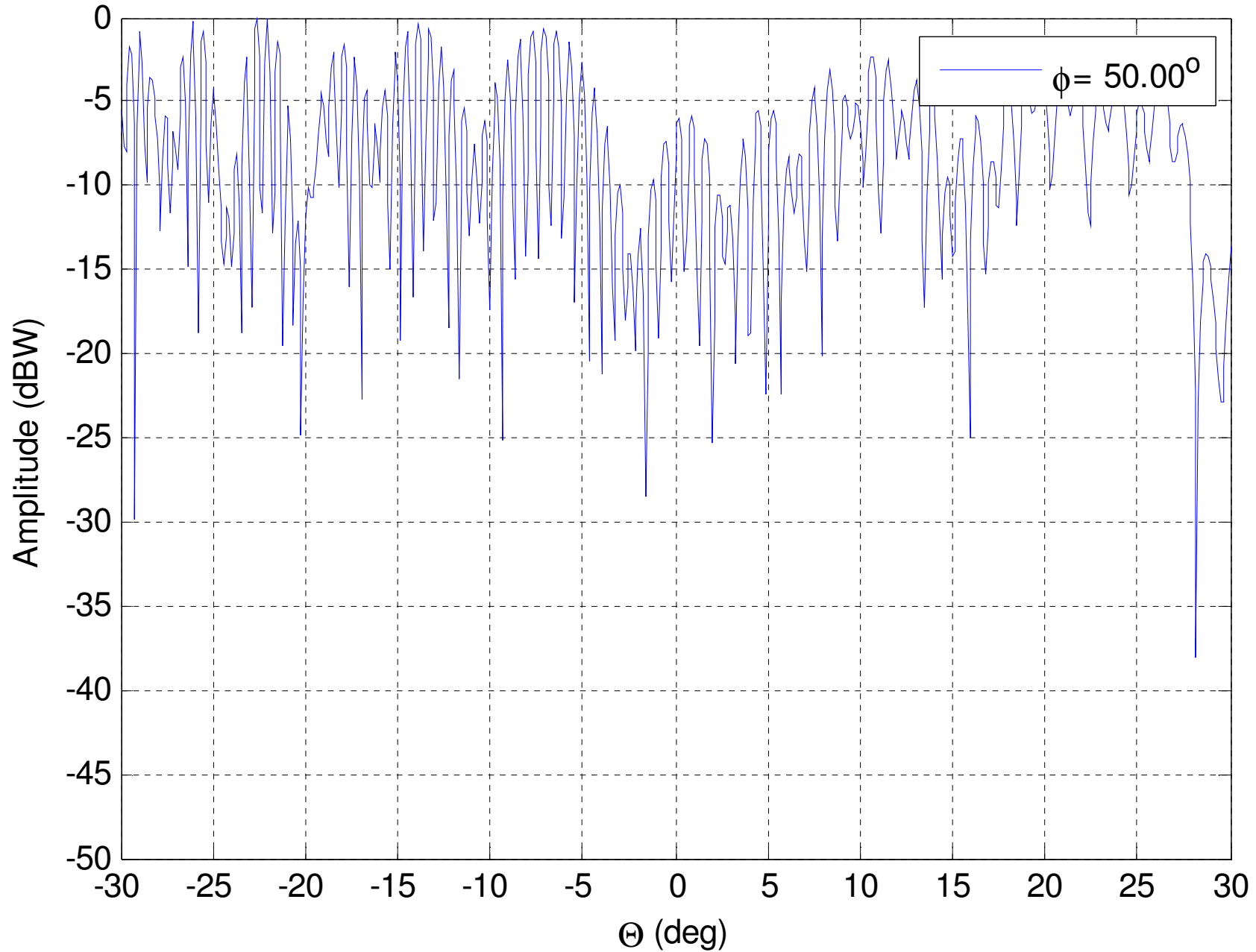
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -4.63 dBW, Date: 15-Dec-2011



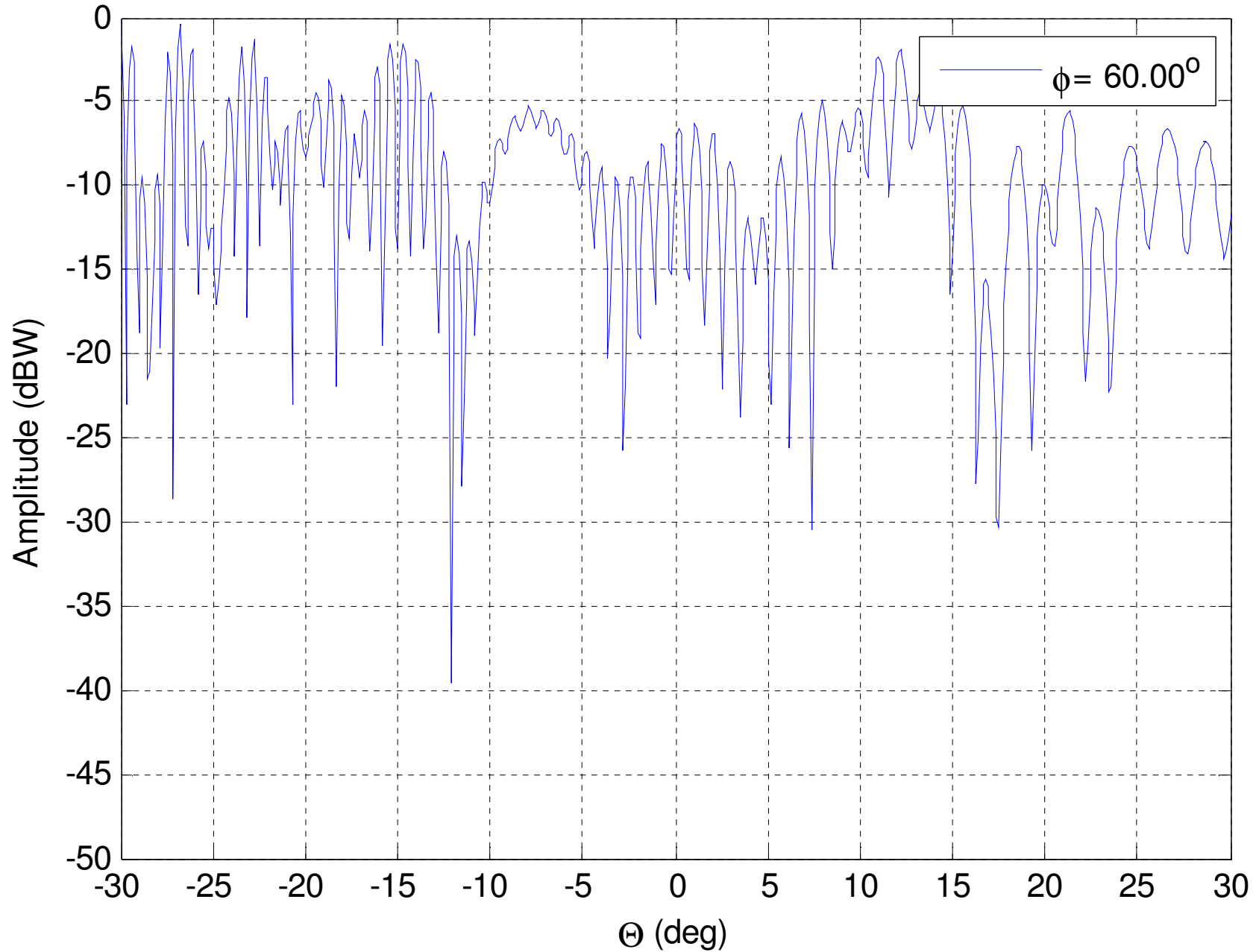
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -5.55 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -4.96 dBW, Date: 15-Dec-2011



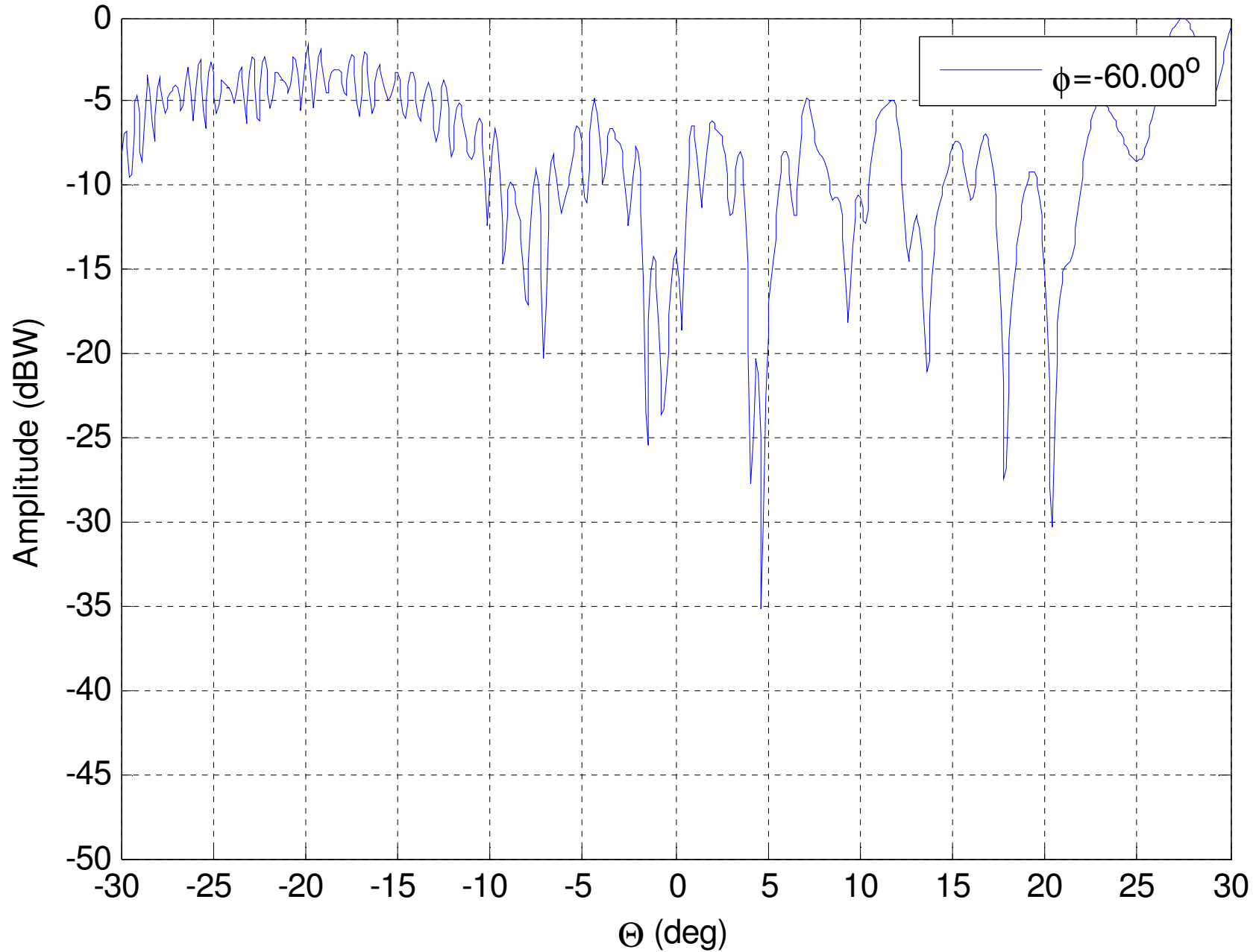
Spot Beam25, +X Axis Plots

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

RHCP at 17.3 GHz

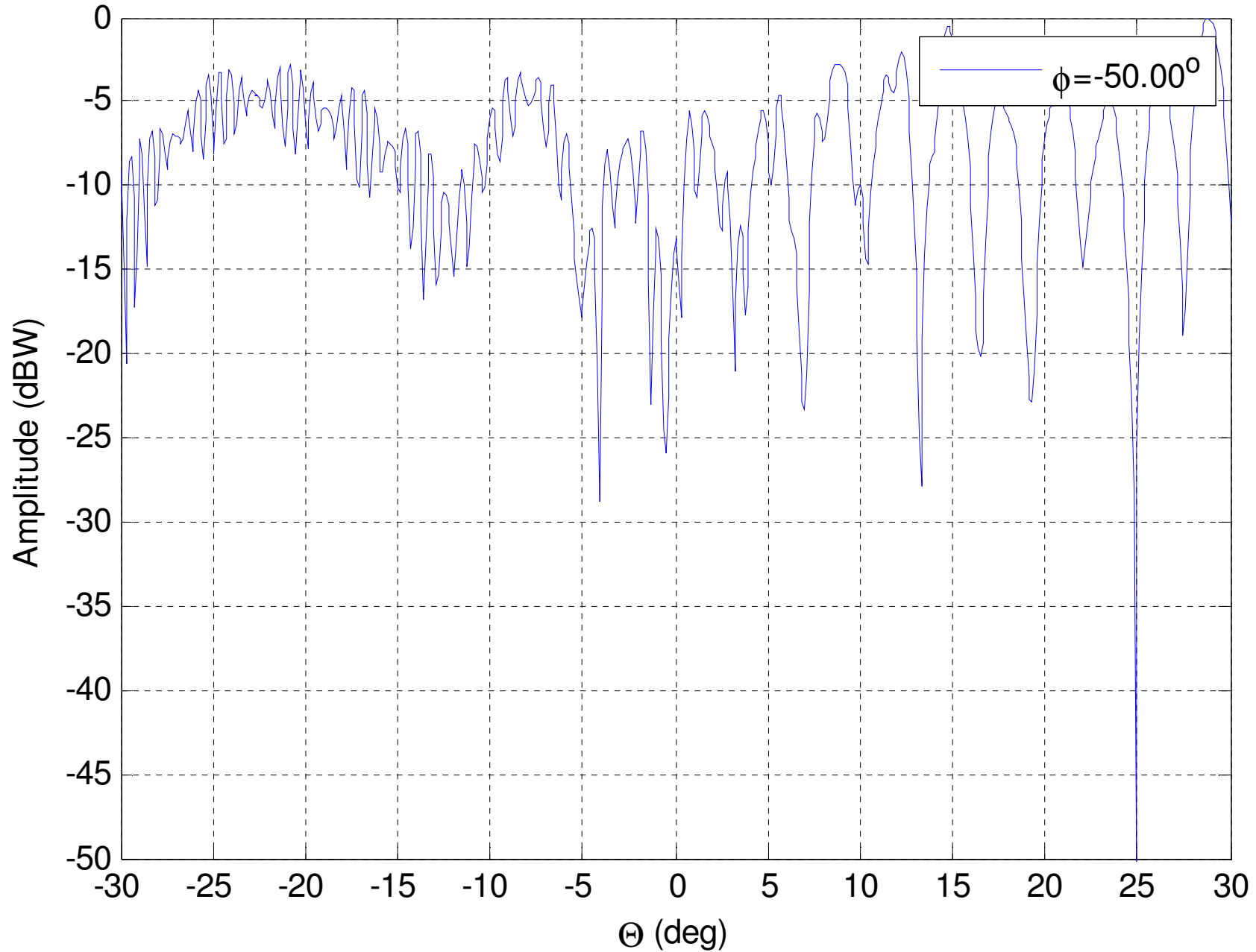
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.00 dBW, Date: 15-Dec-2011



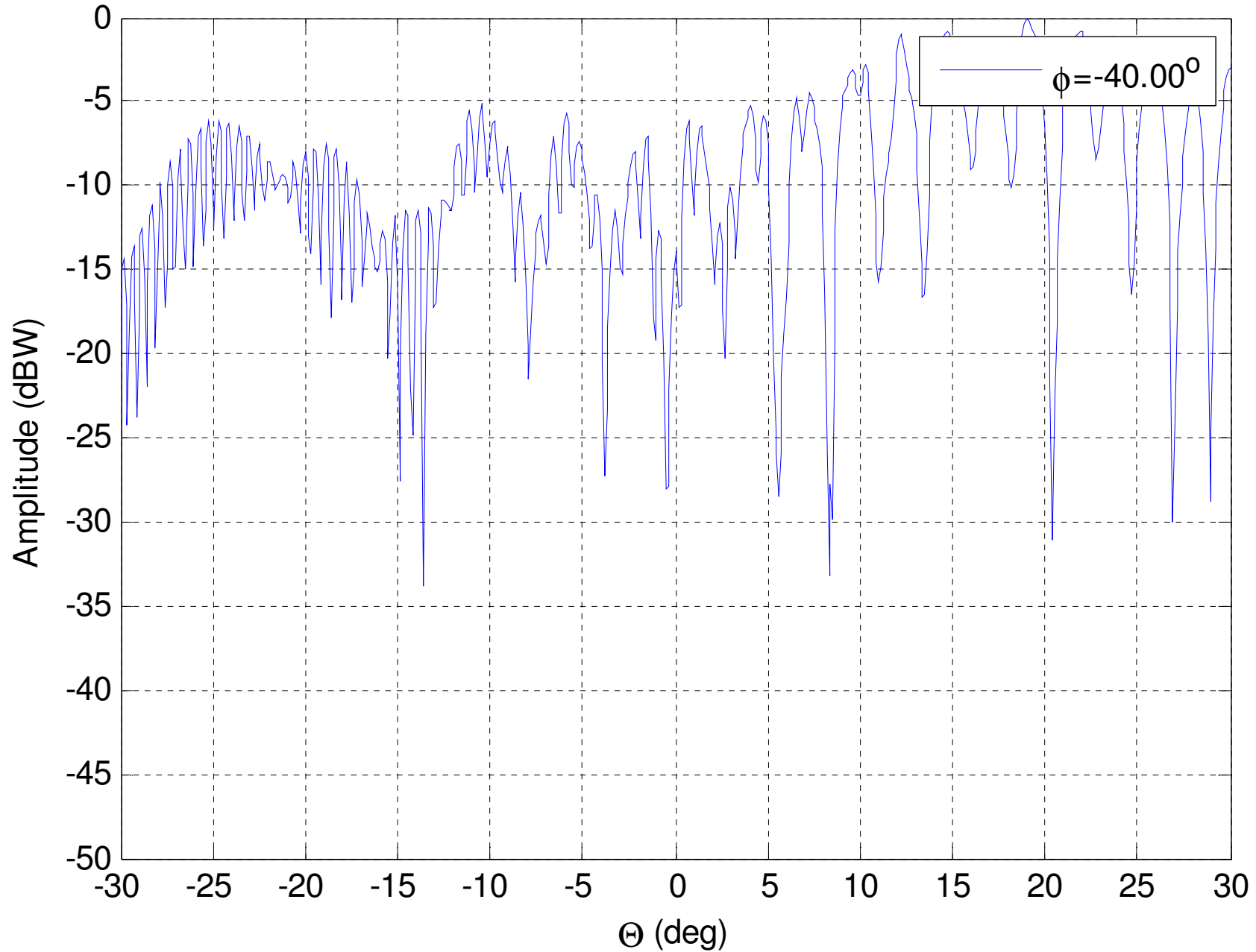
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -5.65 dBW, Date: 15-Dec-2011



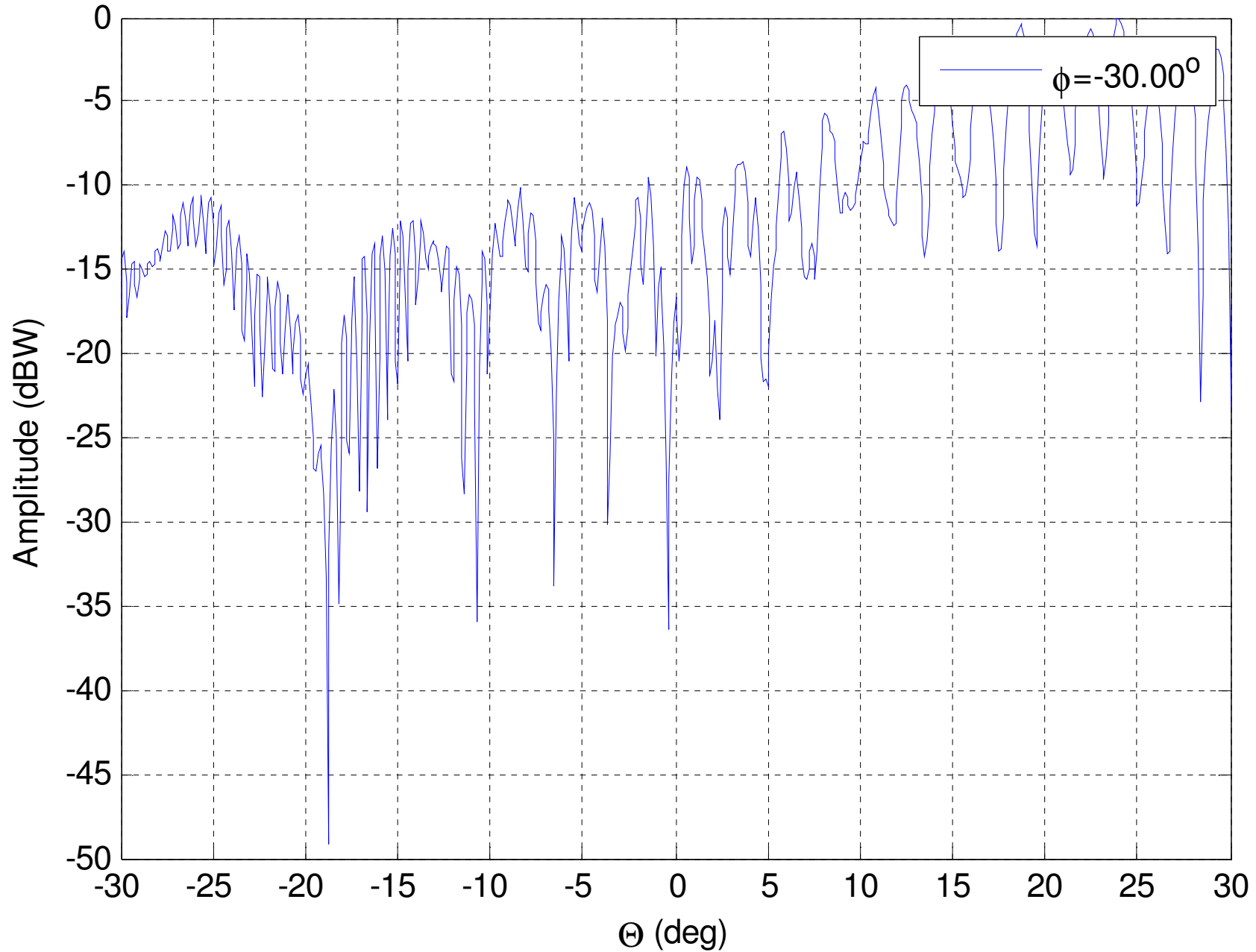
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.95 dBW, Date: 15-Dec-2011



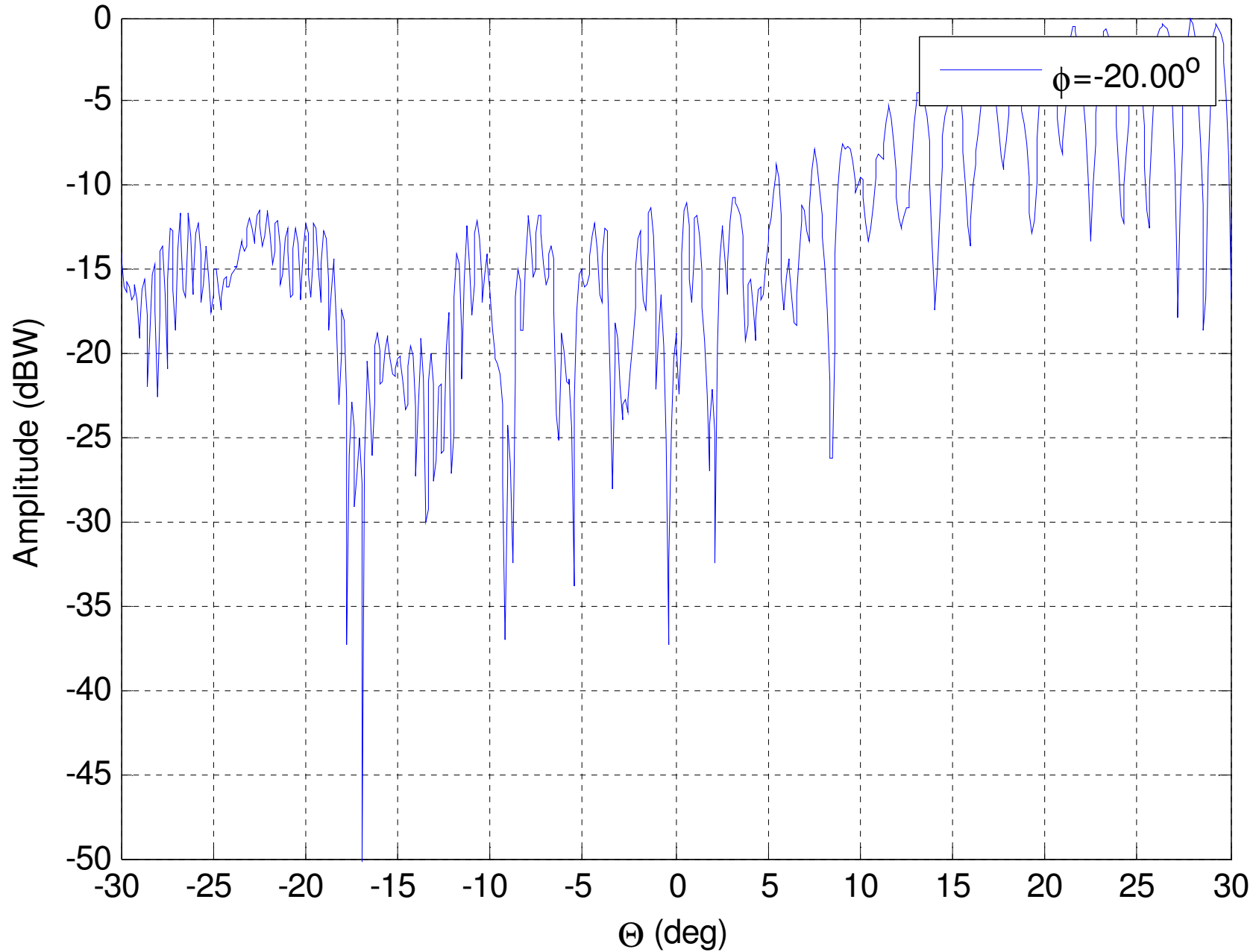
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -2.14 dBW, Date: 15-Dec-2011



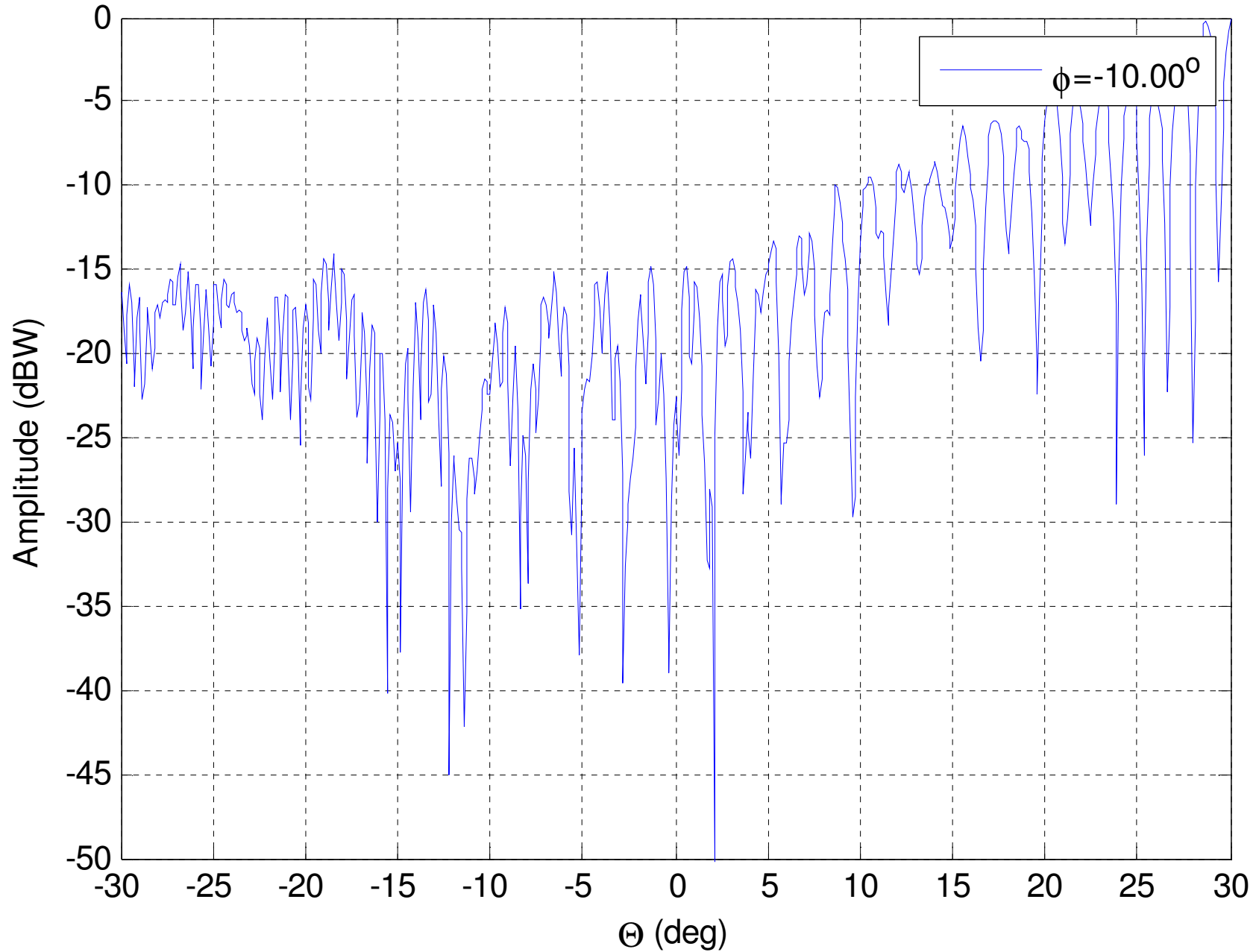
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -0.14 dBW, Date: 15-Dec-2011



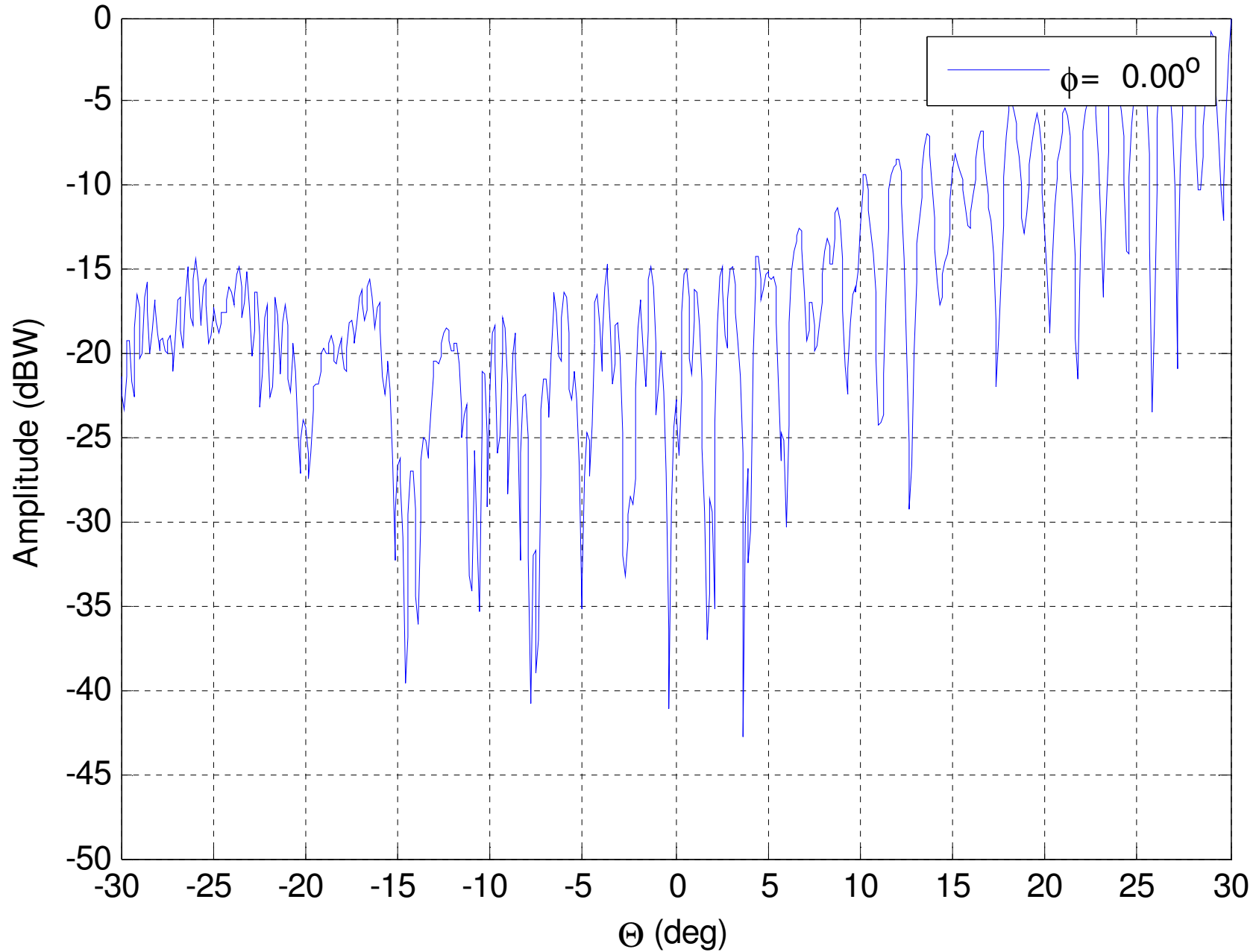
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 3.66 dBW, Date: 15-Dec-2011



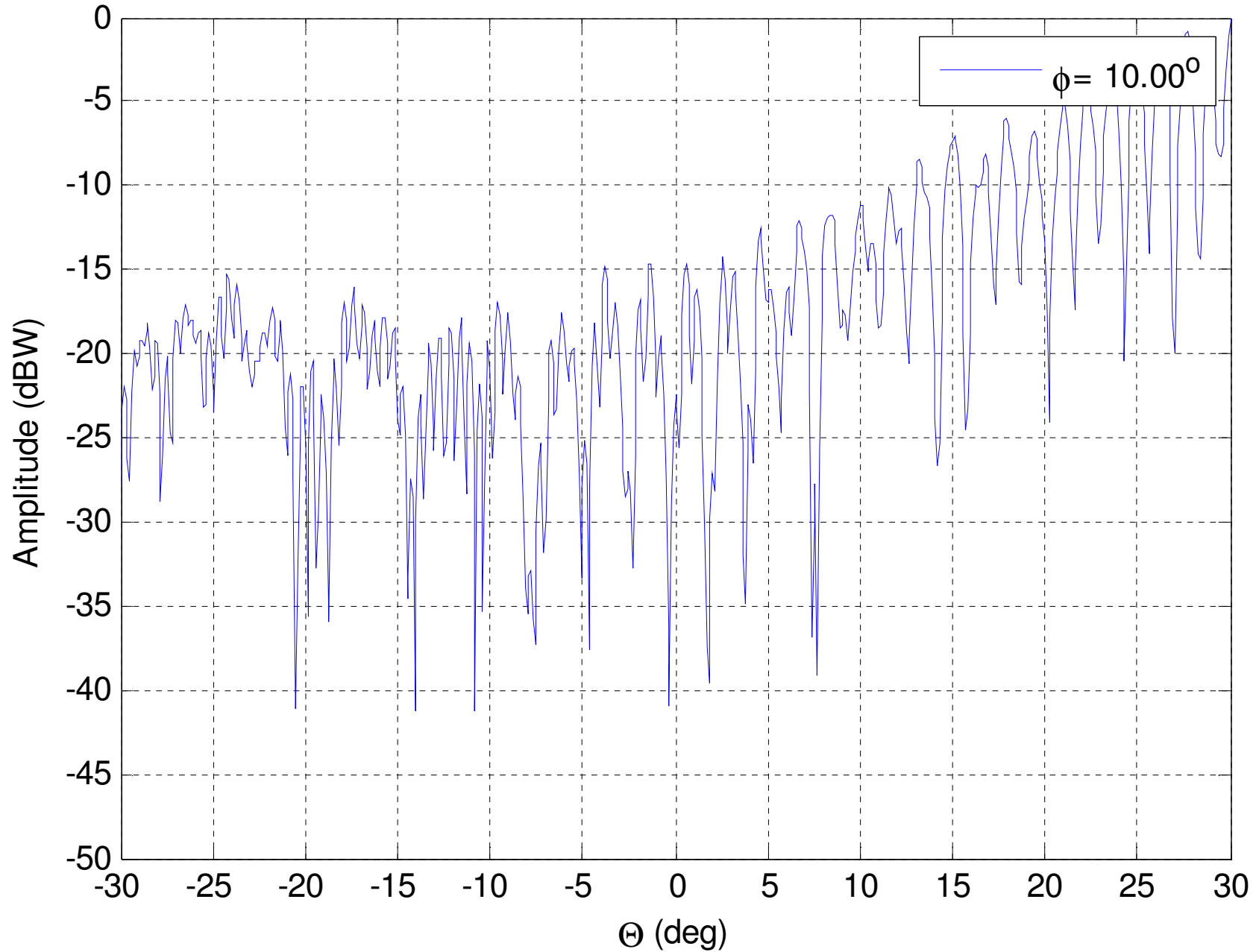
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 3.81 dBW, Date: 15-Dec-2011



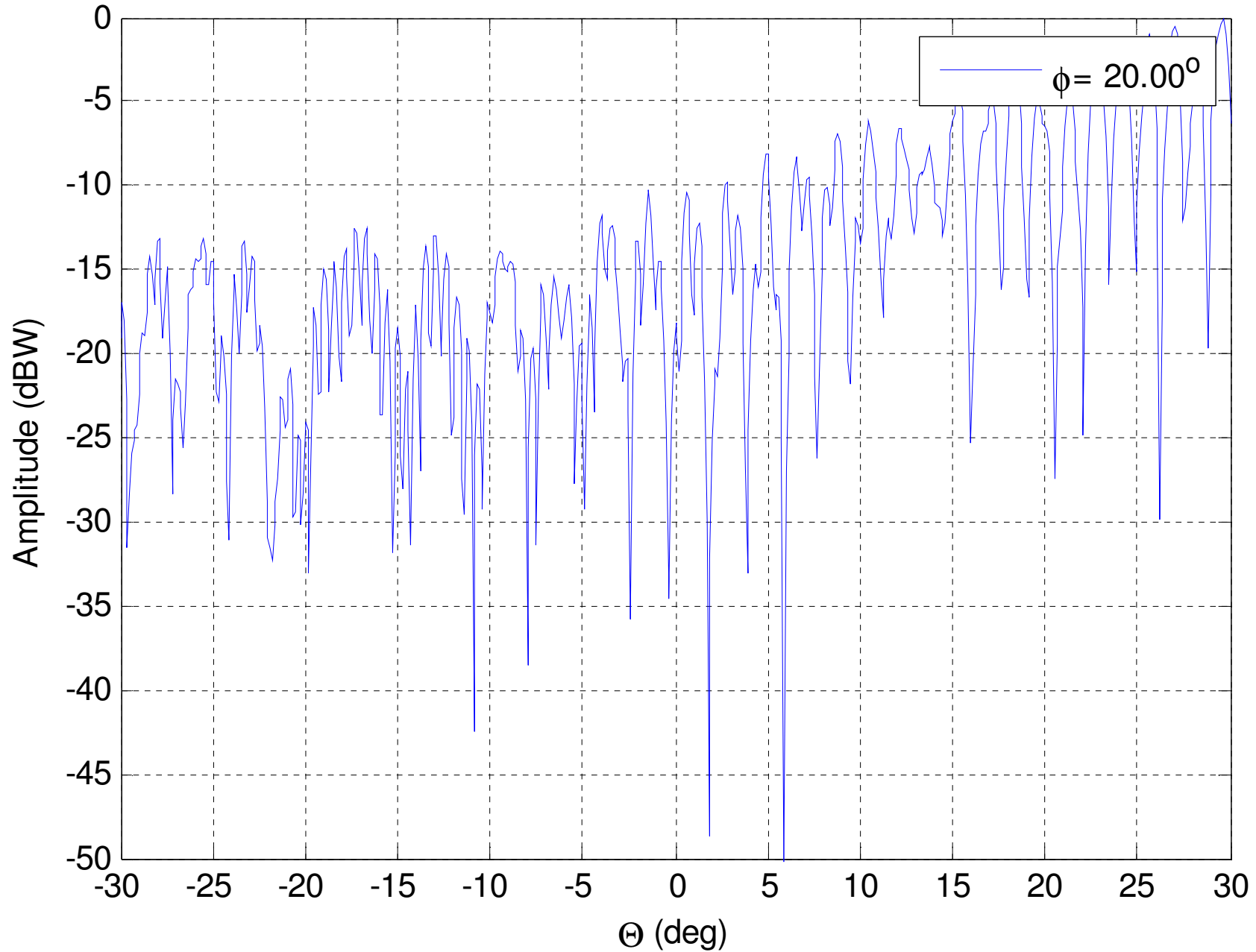
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 3.59 dBW, Date: 15-Dec-2011



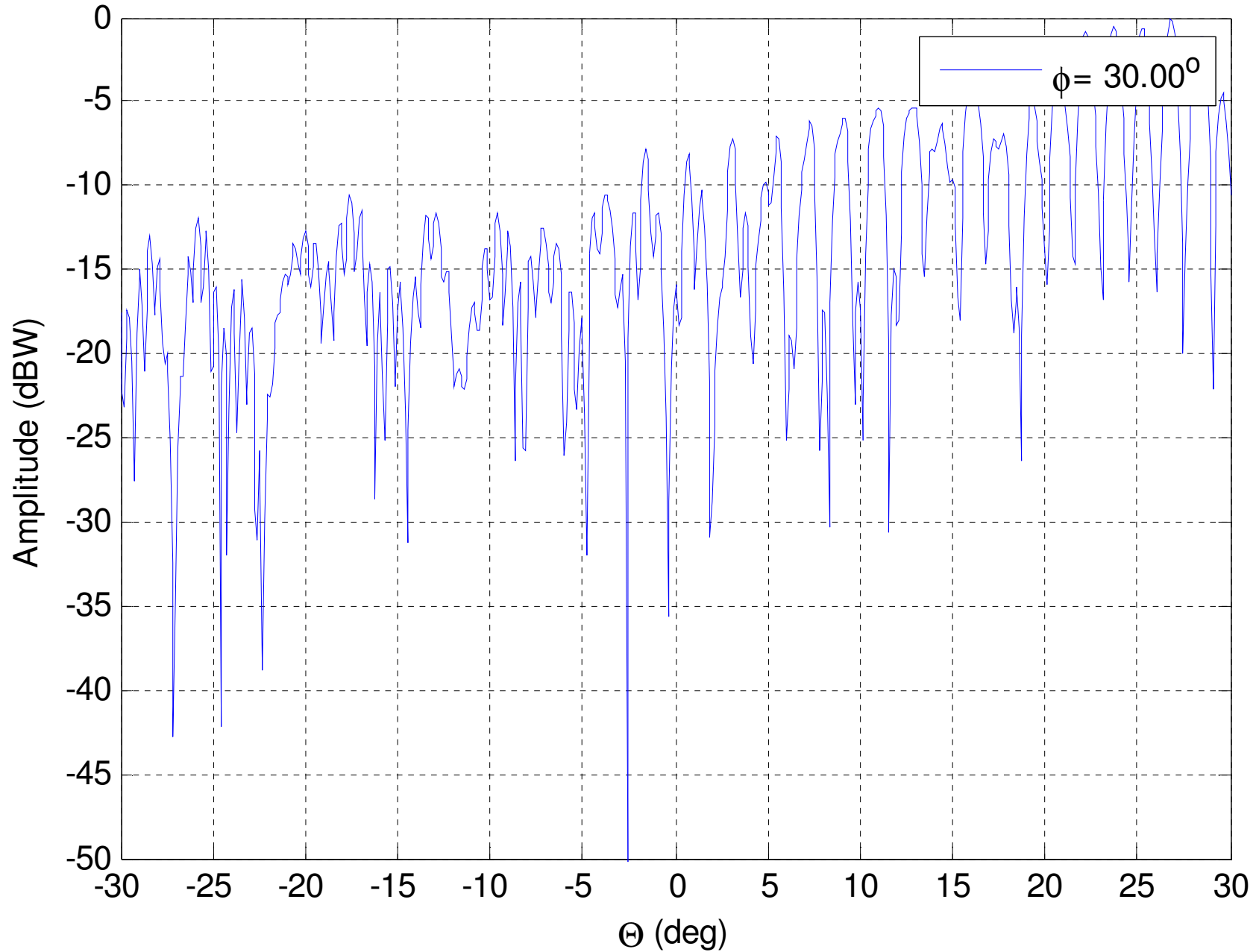
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -0.62 dBW, Date: 15-Dec-2011



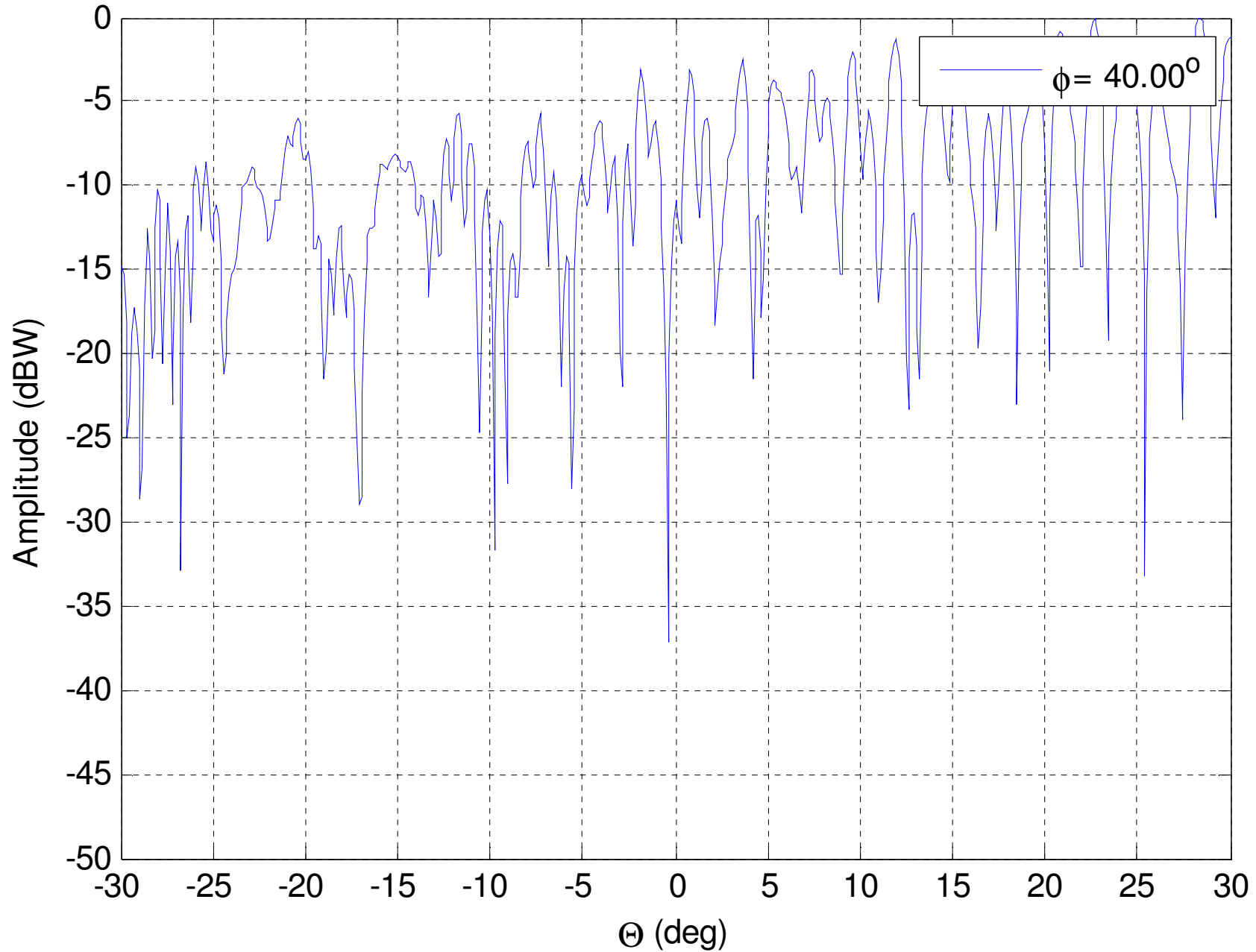
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -2.95 dBW, Date: 15-Dec-2011



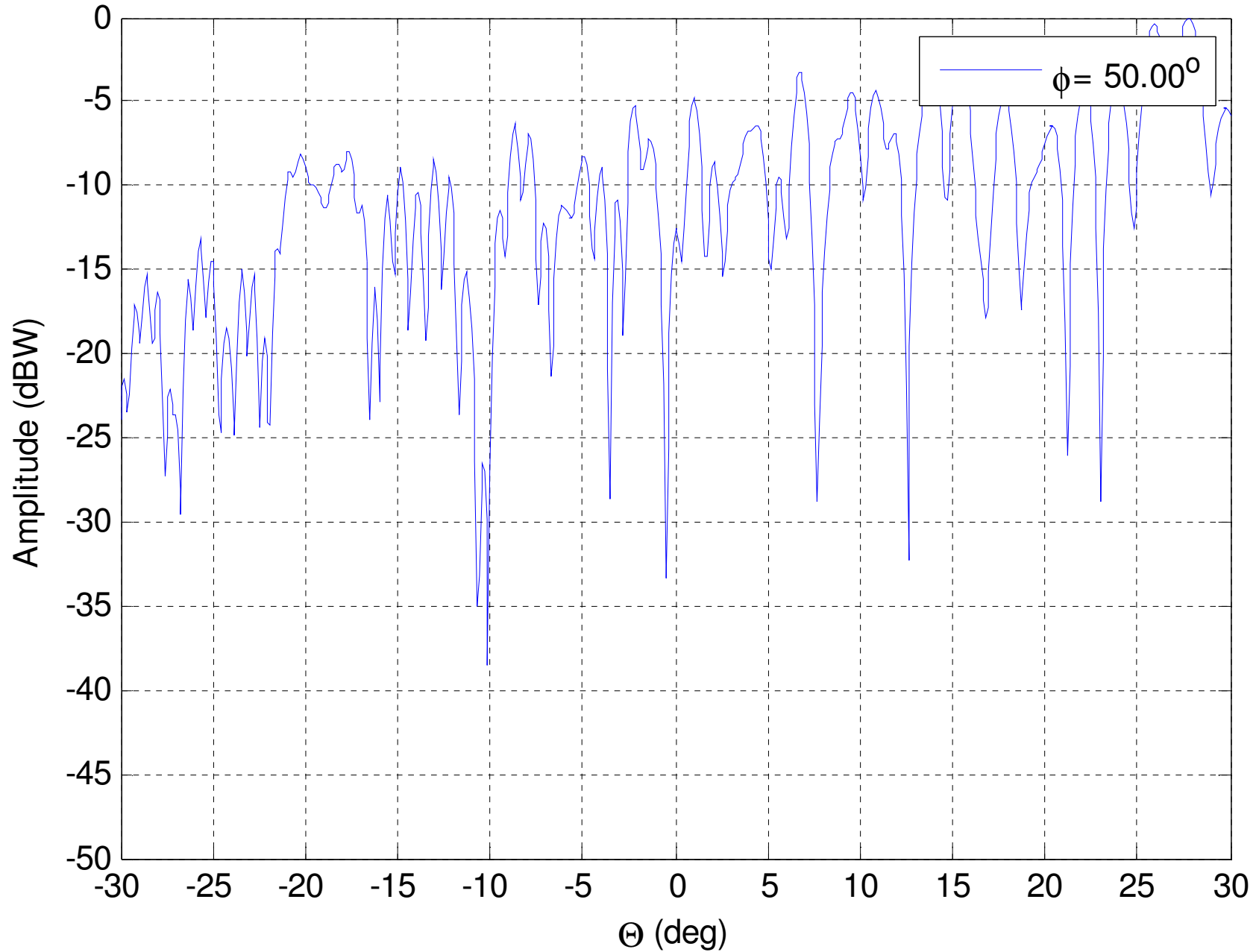
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.92 dBW, Date: 15-Dec-2011



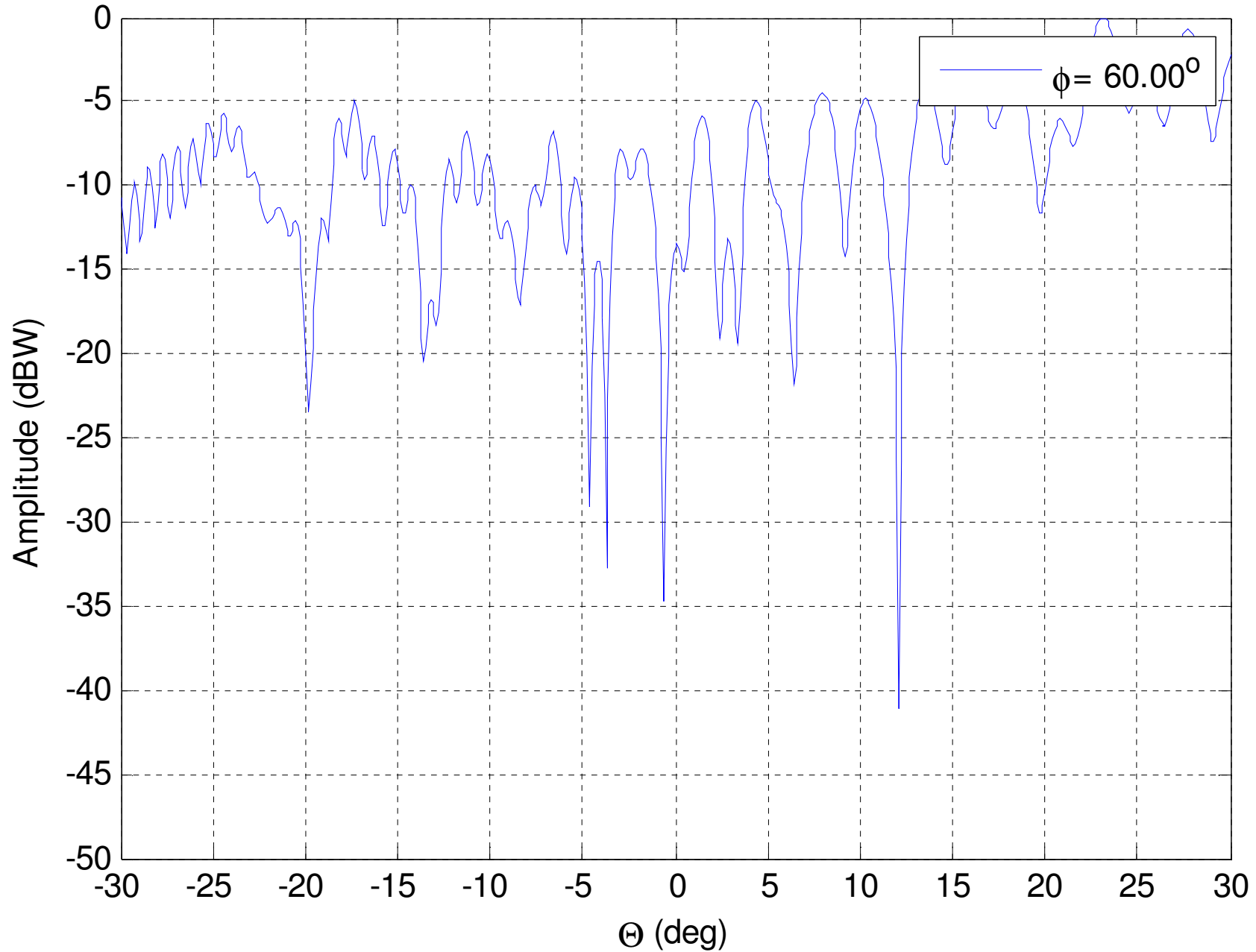
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -6.25 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

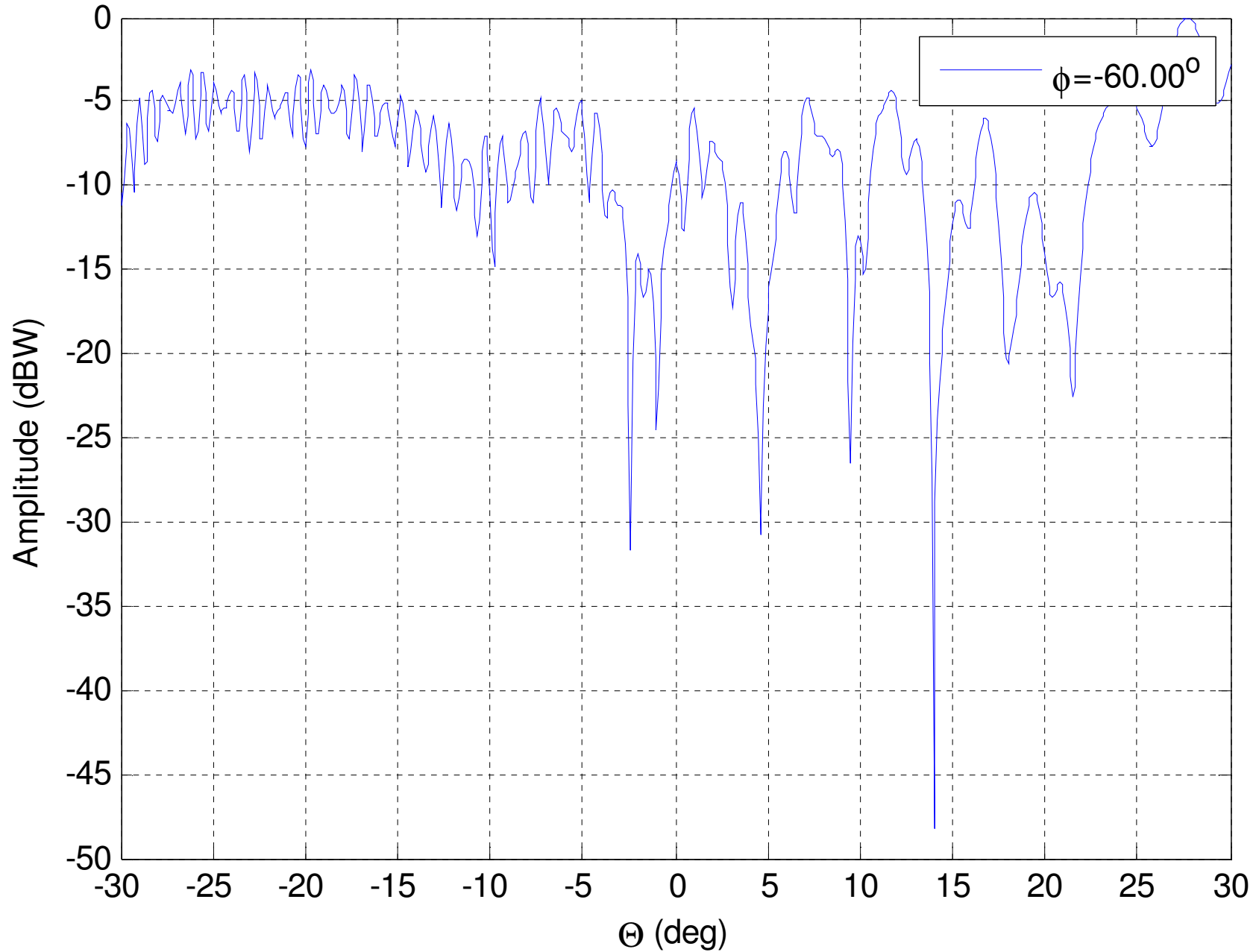
Input file: tx-17.3-rhcp-60.cut, Peak: -5.27 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

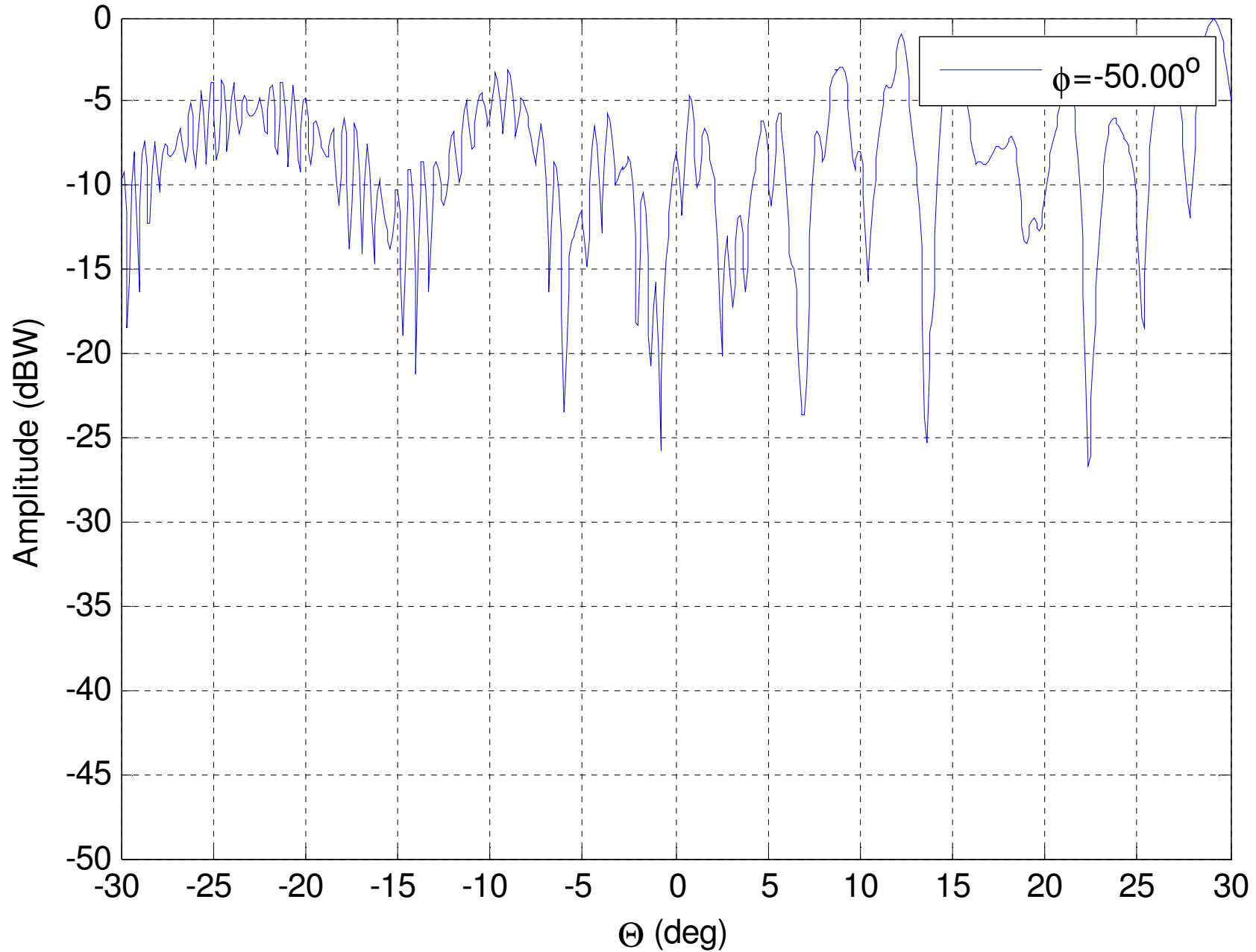
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -4.61 dBW, Date: 15-Dec-2011



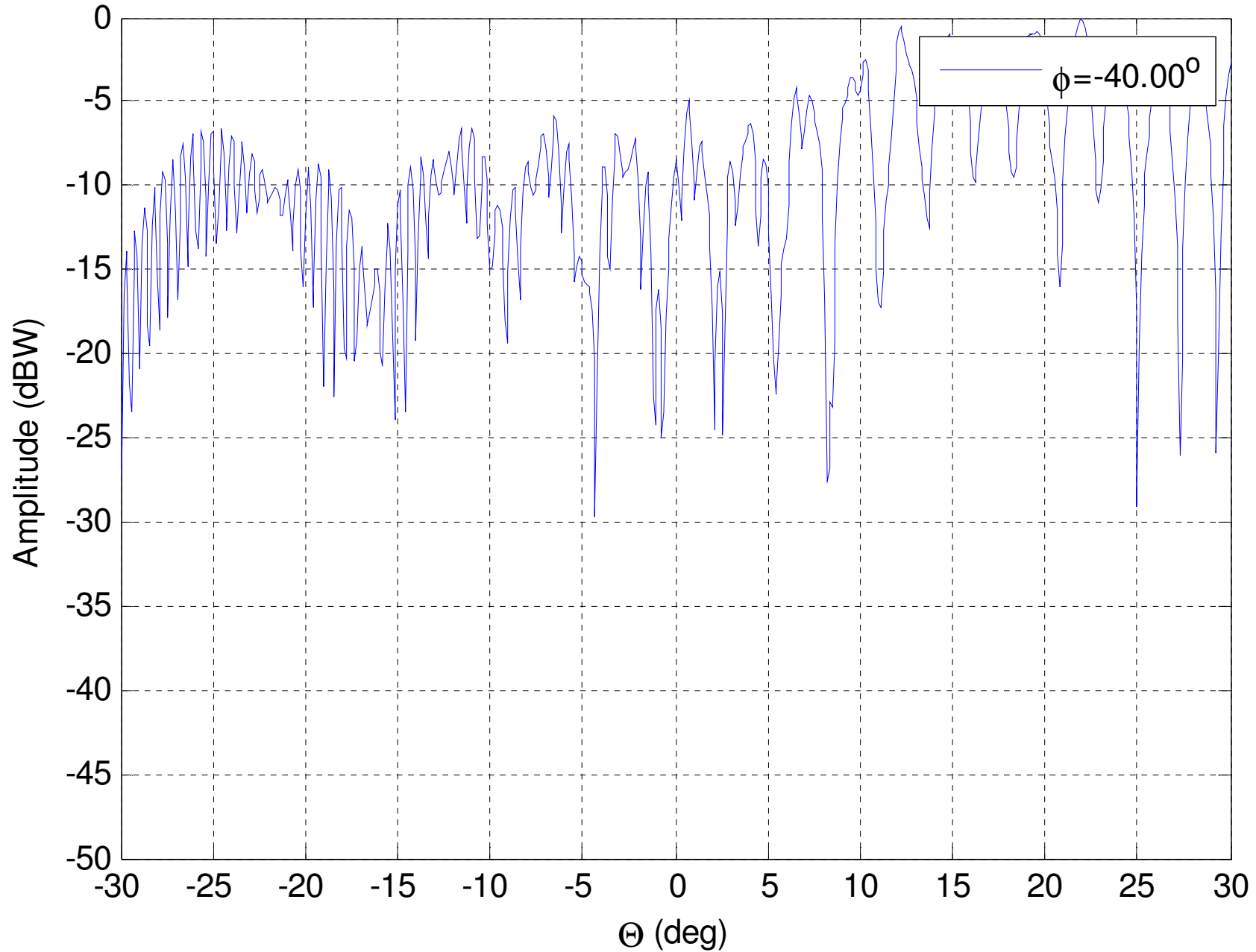
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -5.23 dBW, Date: 15-Dec-2011



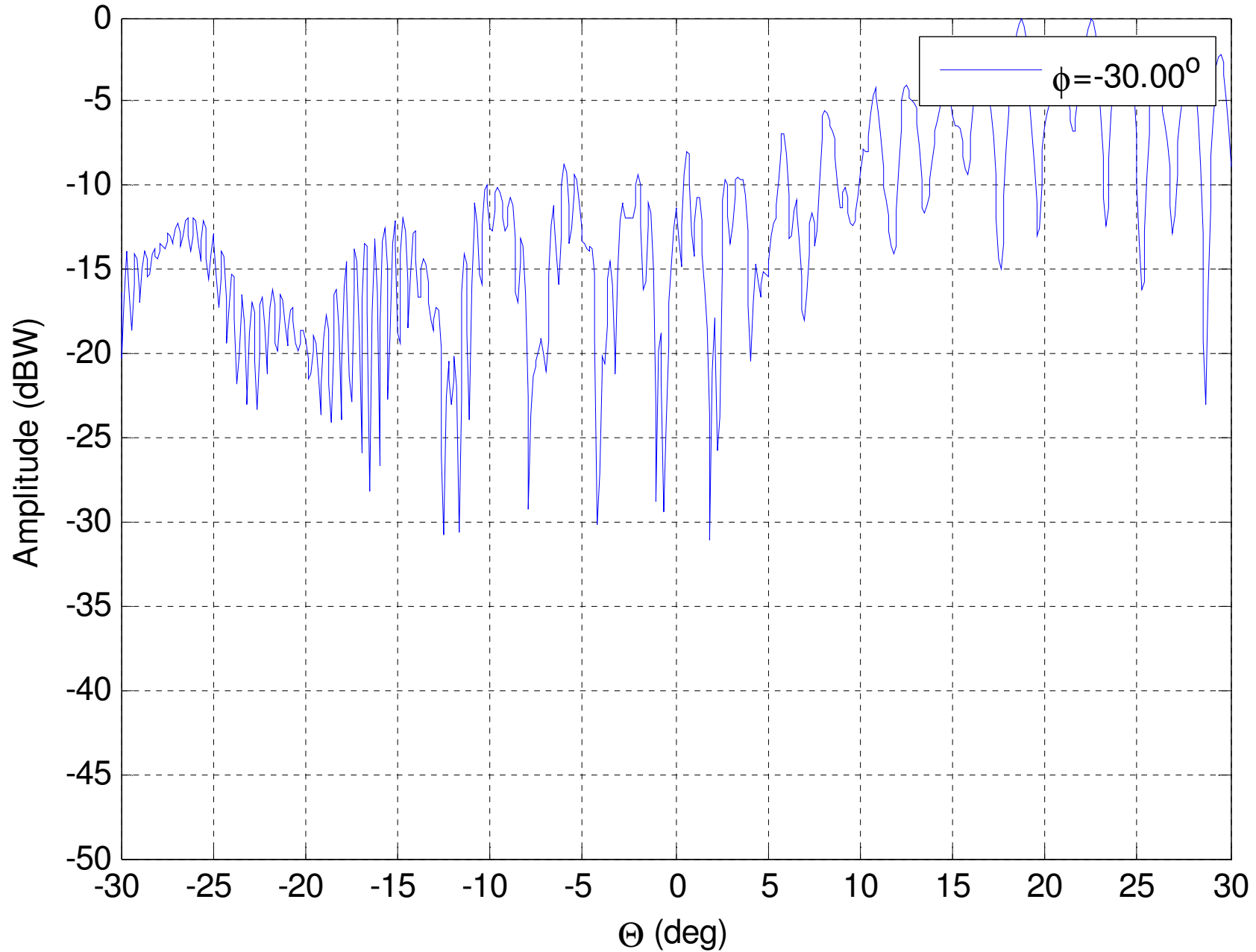
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -4.77 dBW, Date: 15-Dec-2011



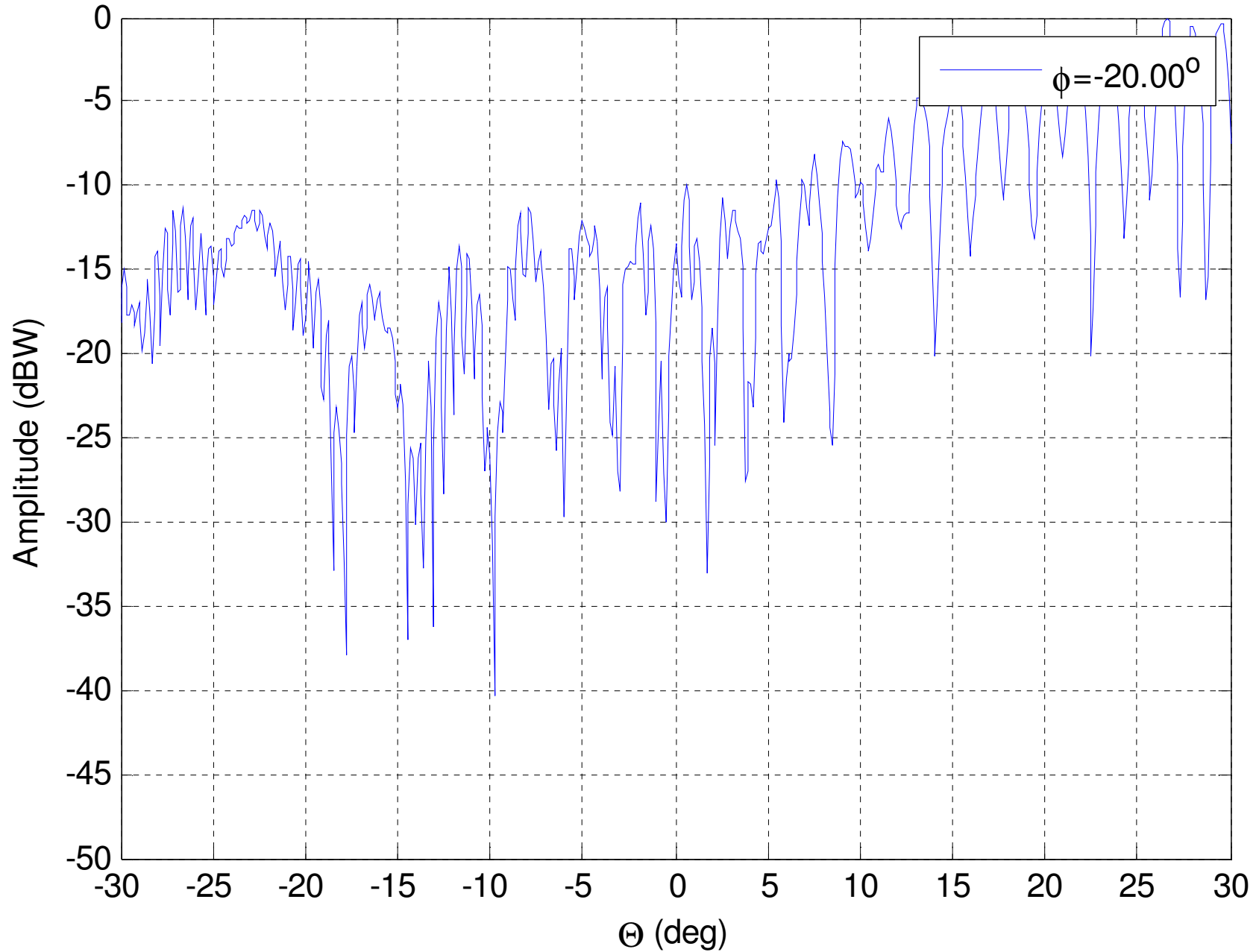
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -1.92 dBW, Date: 15-Dec-2011



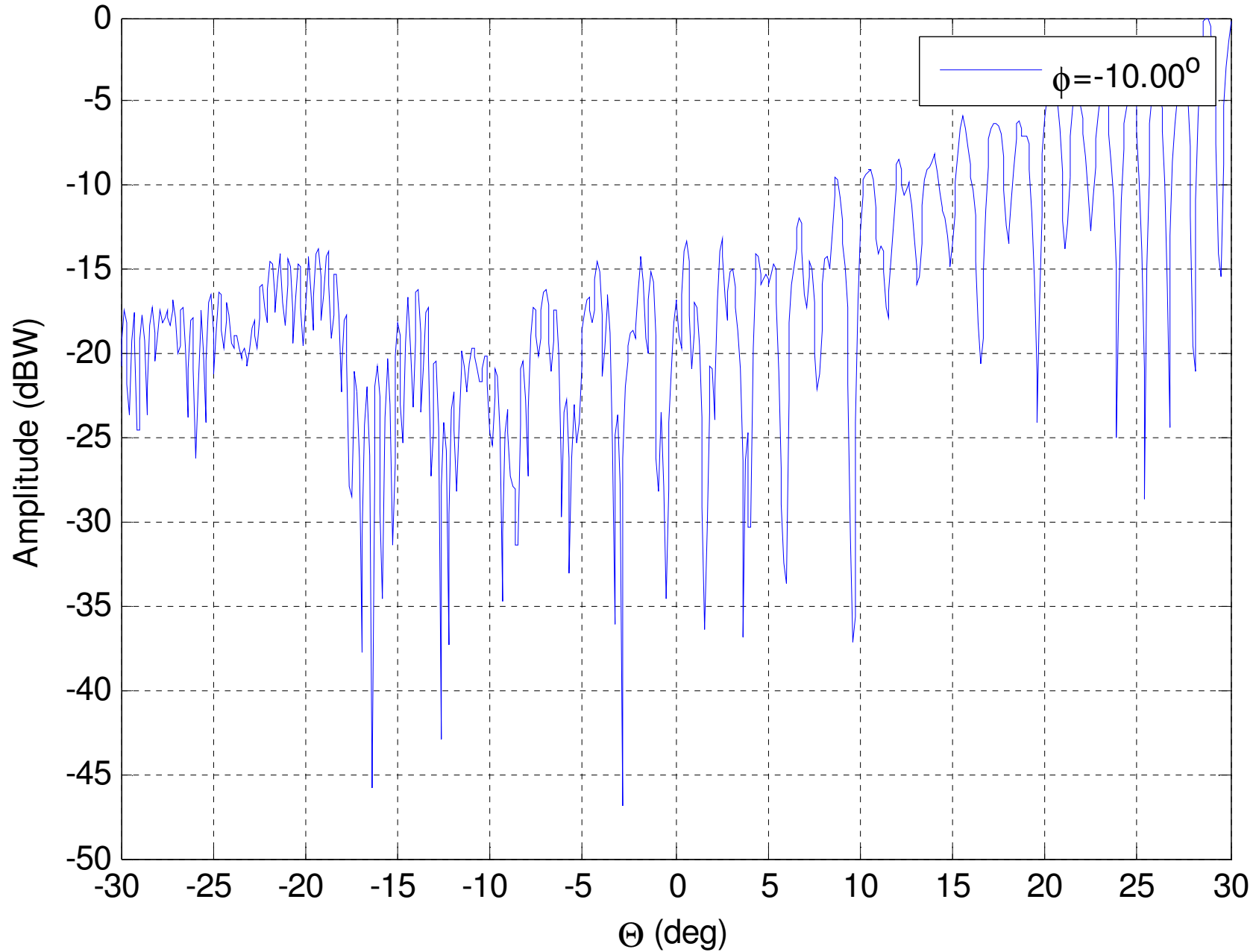
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 0.27 dBW, Date: 15-Dec-2011



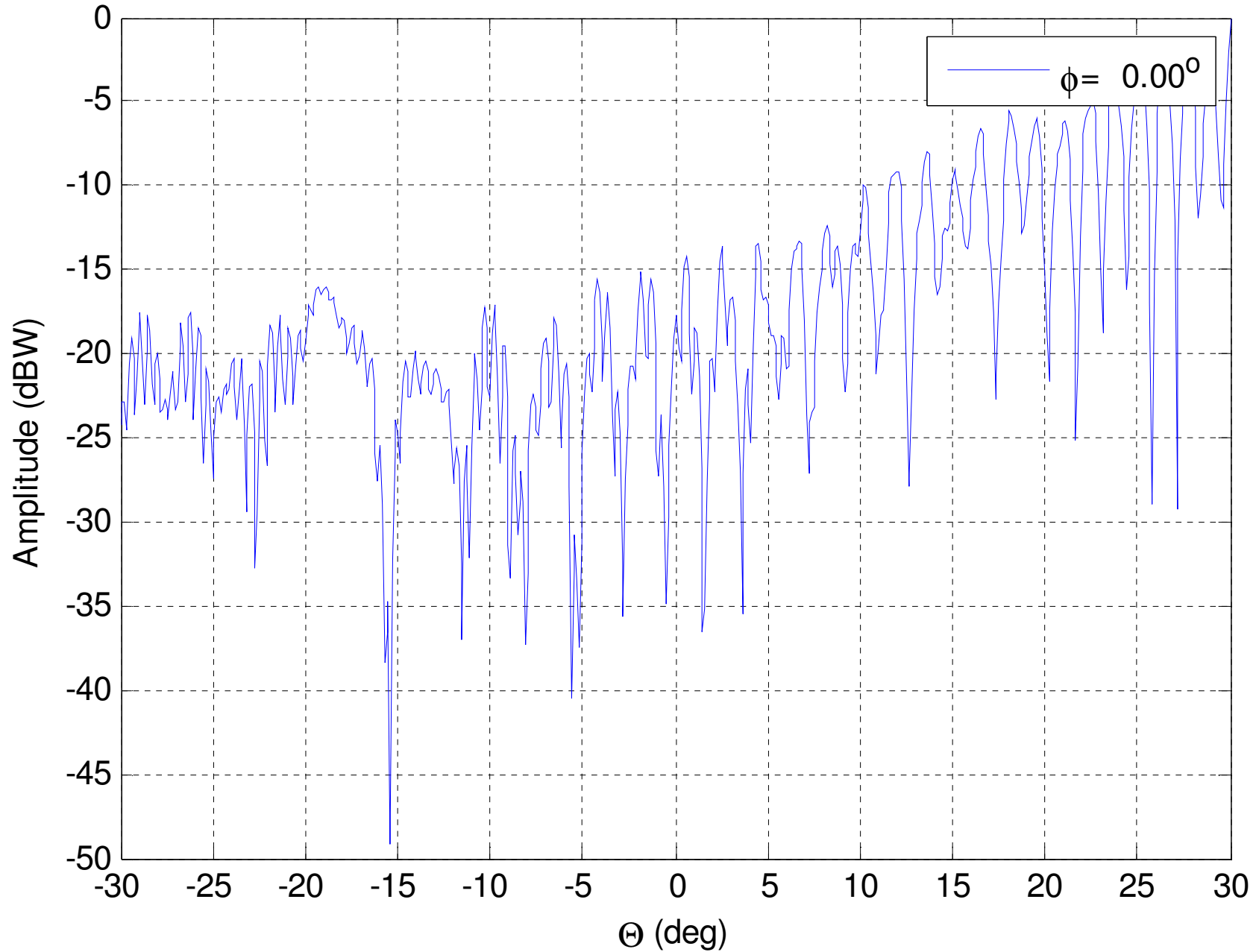
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 3.53 dBW, Date: 15-Dec-2011



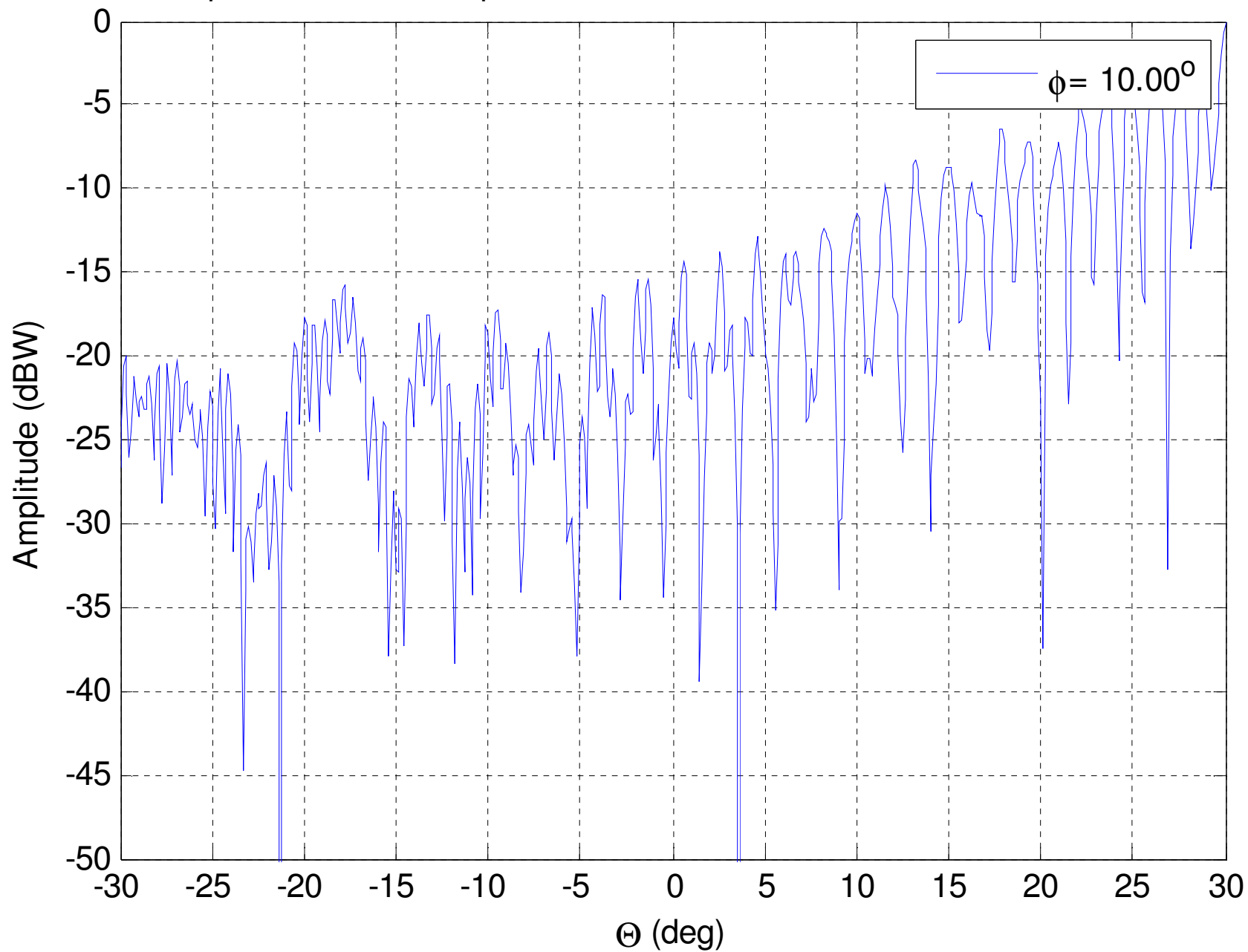
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 4.40 dBW, Date: 15-Dec-2011



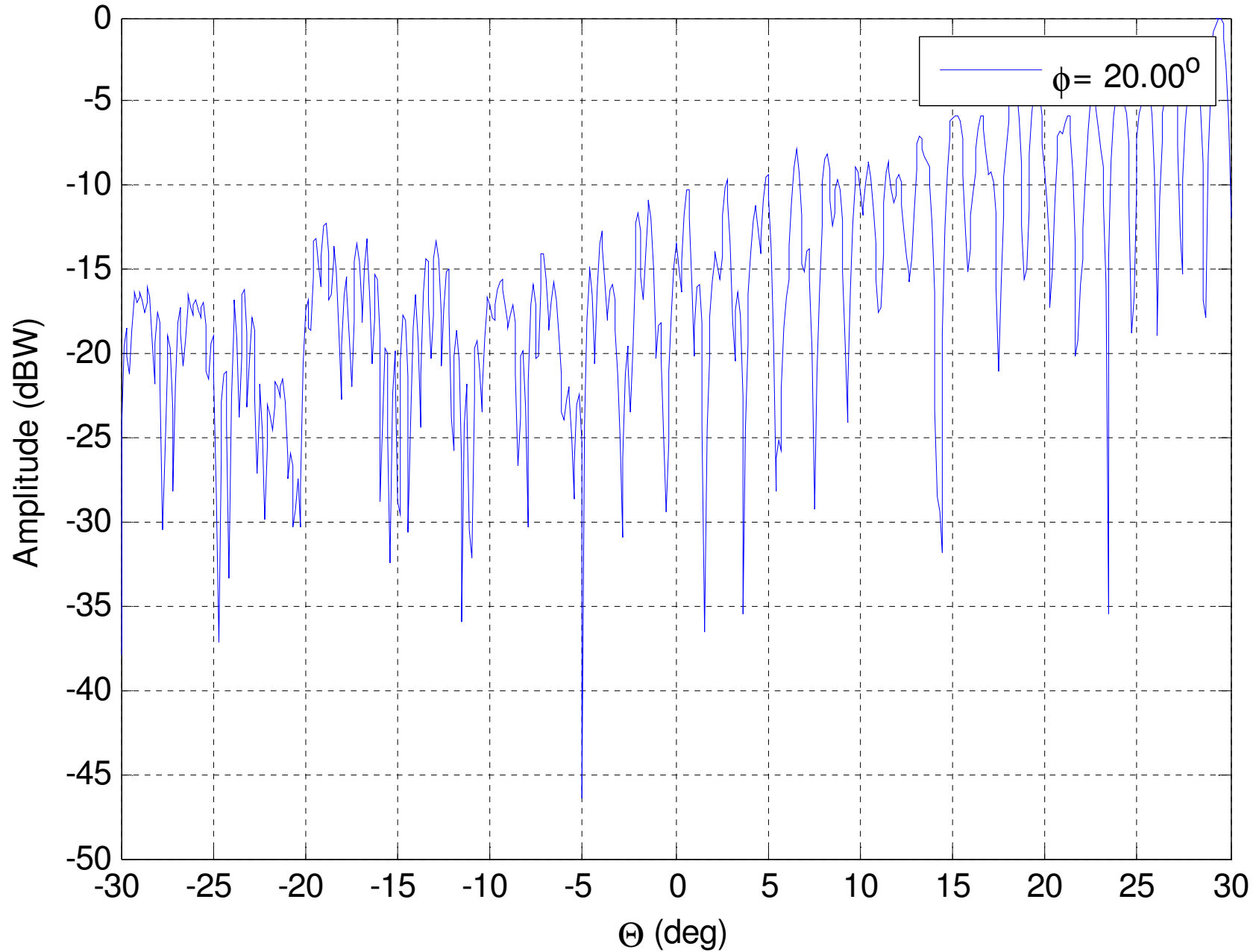
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 4.54 dBW, Date: 15-Dec-2011



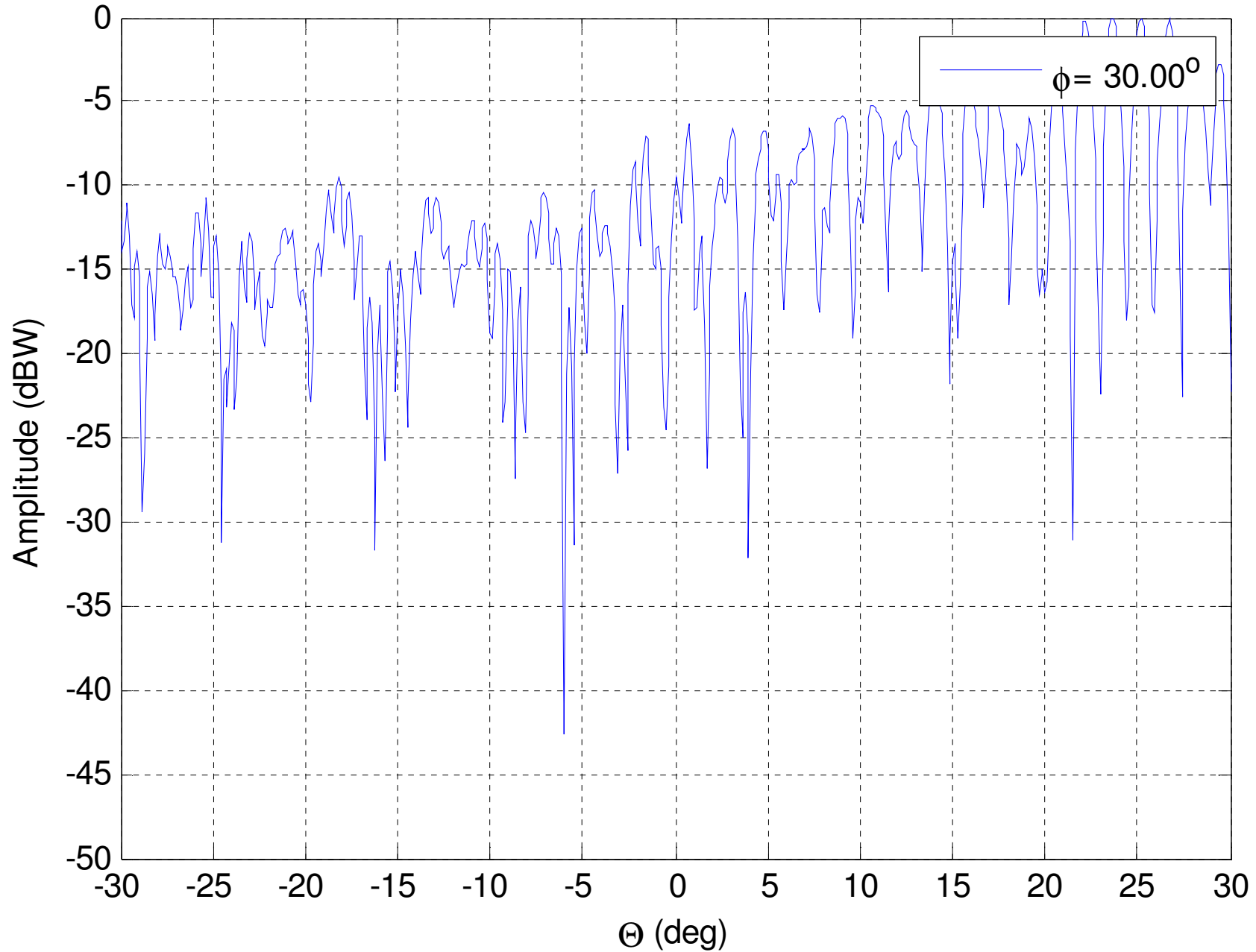
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 0.20 dBW, Date: 15-Dec-2011



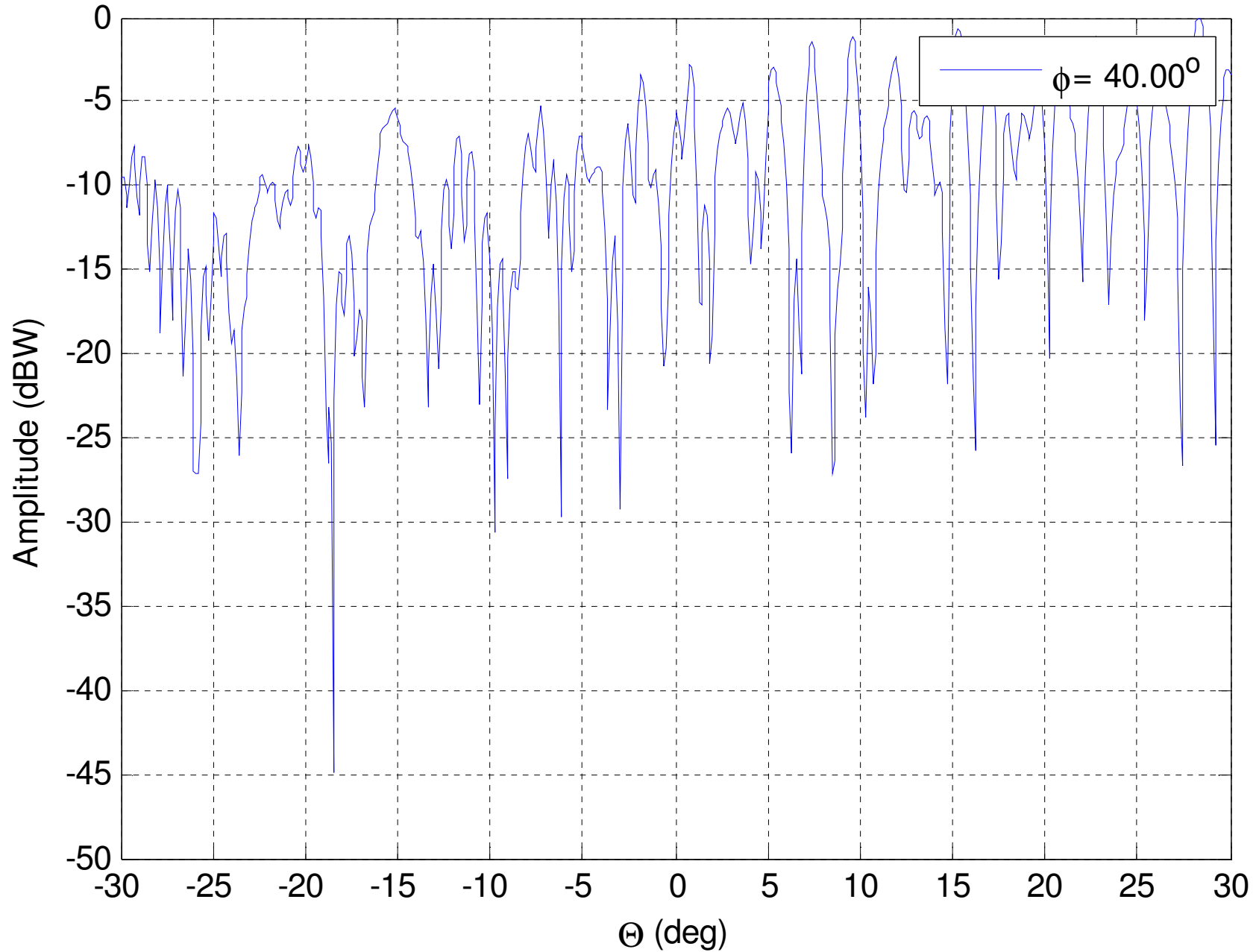
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -3.67 dBW, Date: 15-Dec-2011



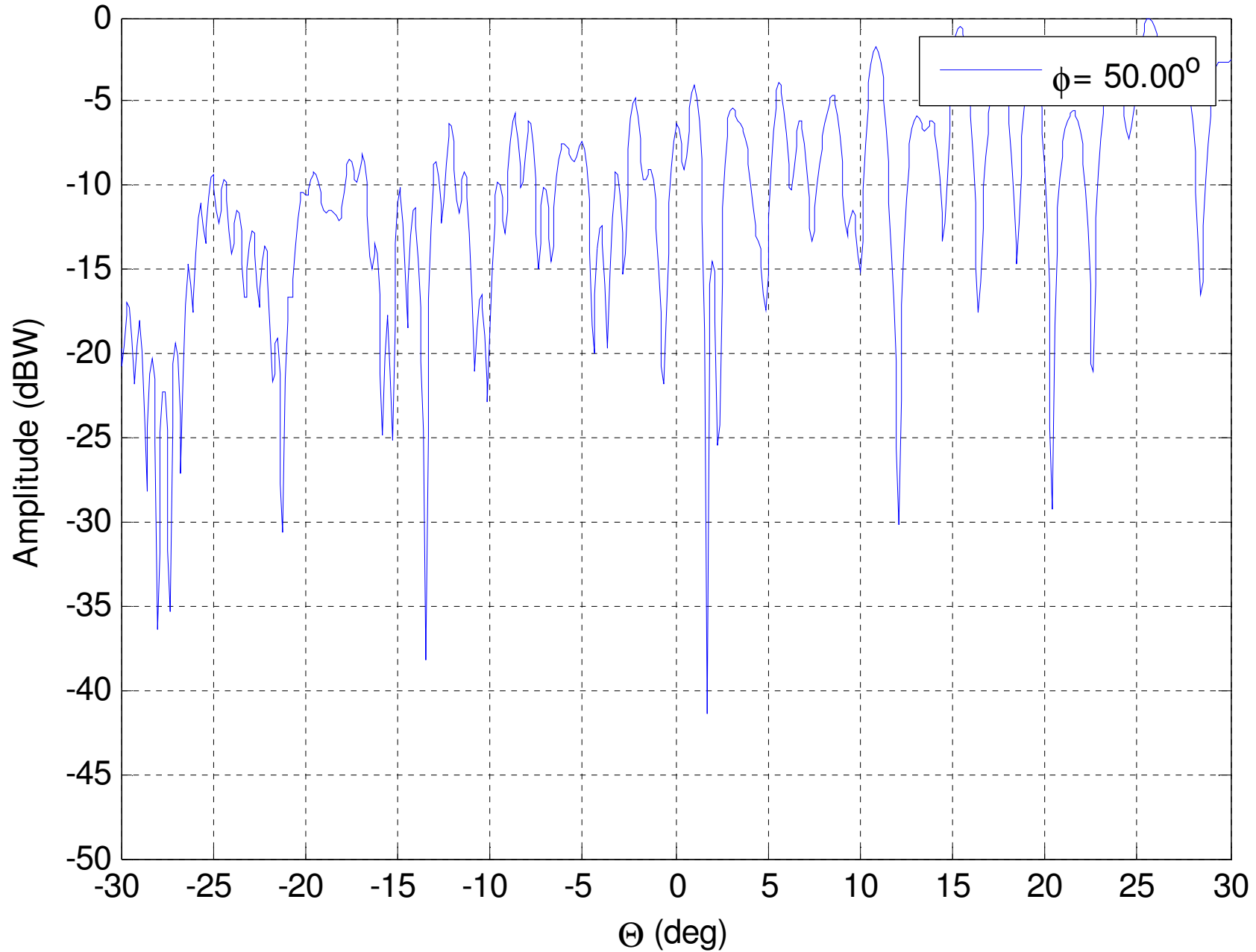
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -7.42 dBW, Date: 15-Dec-2011



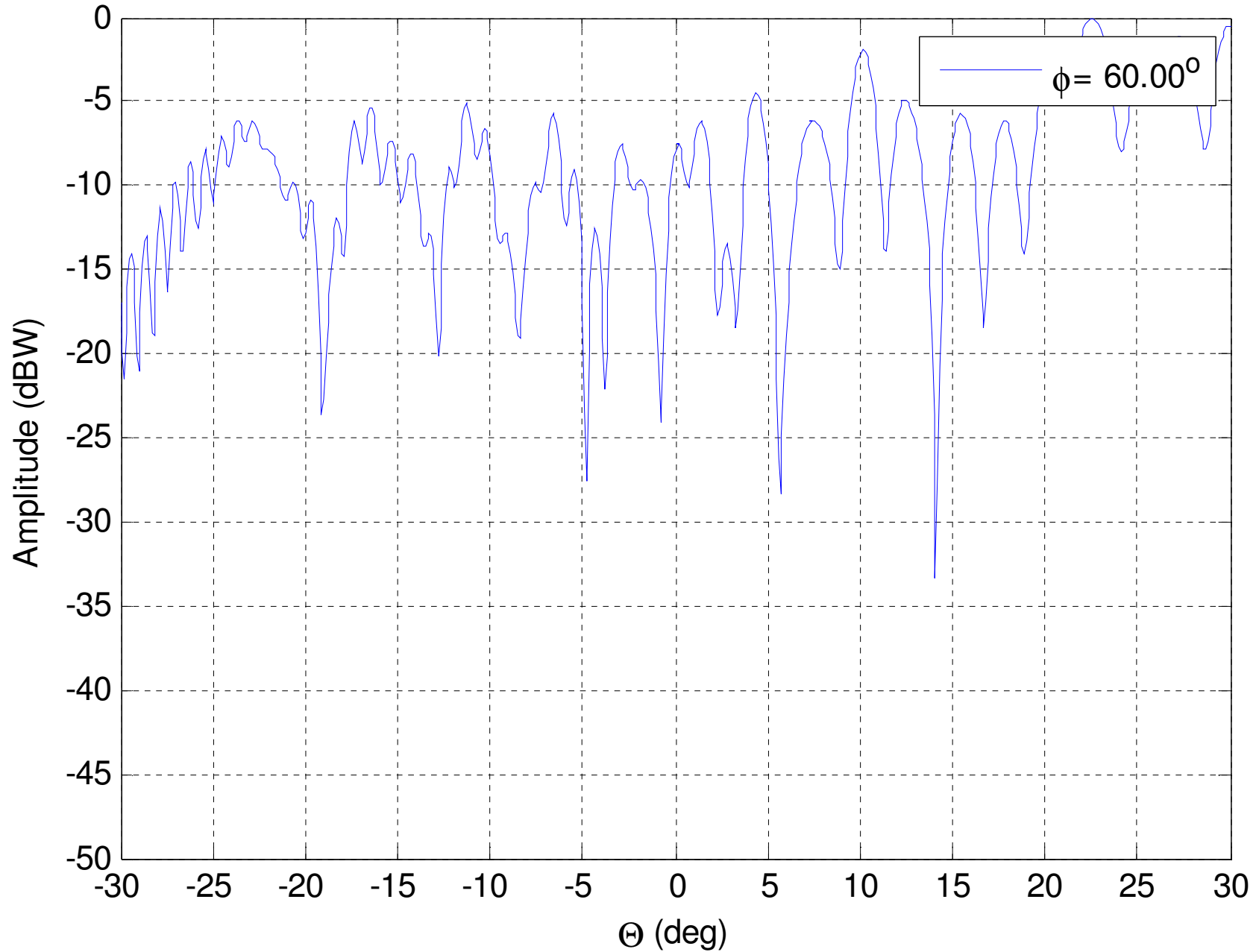
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -6.70 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

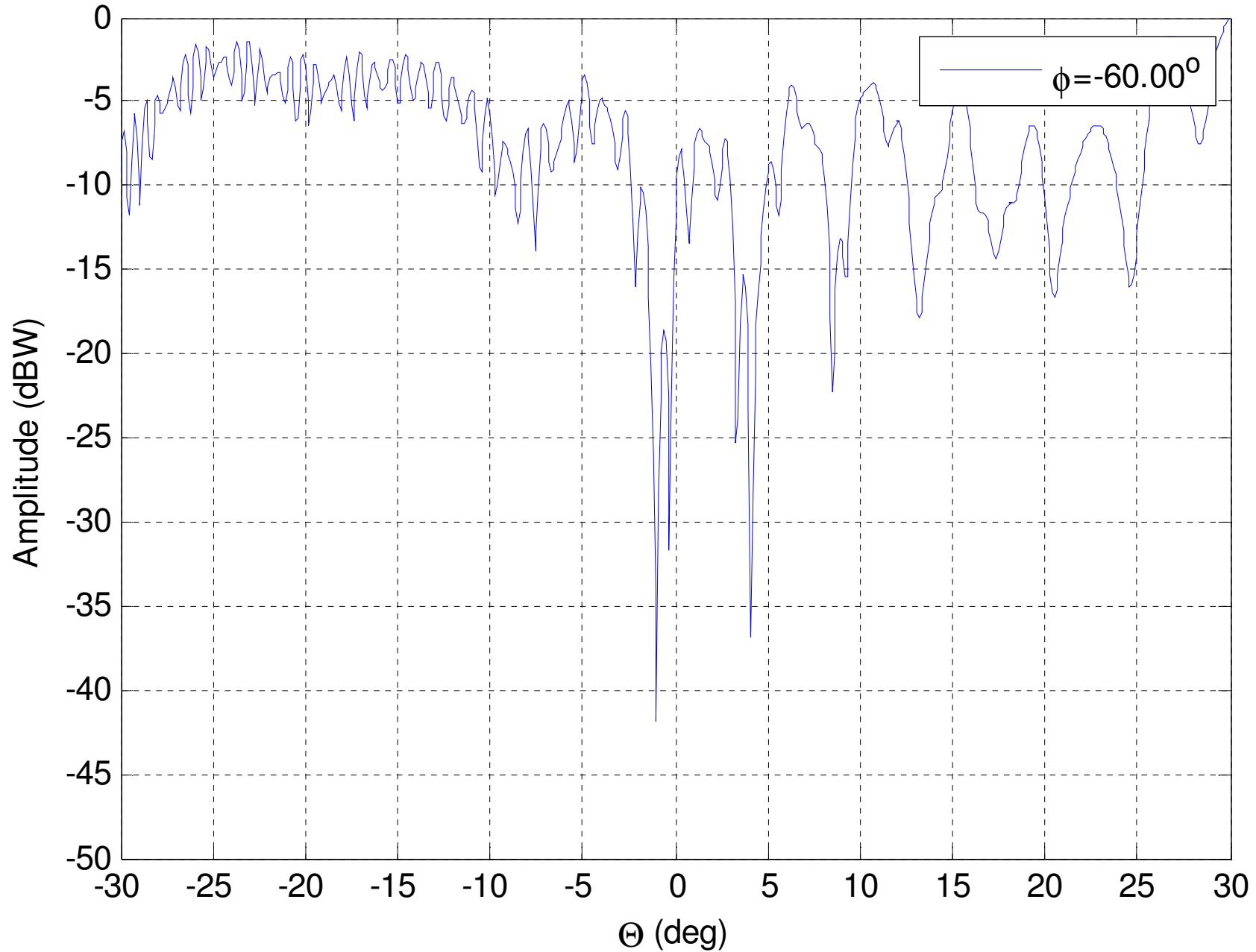
Input file: tx-17.3-lhcp-60.cut, Peak: -5.52 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

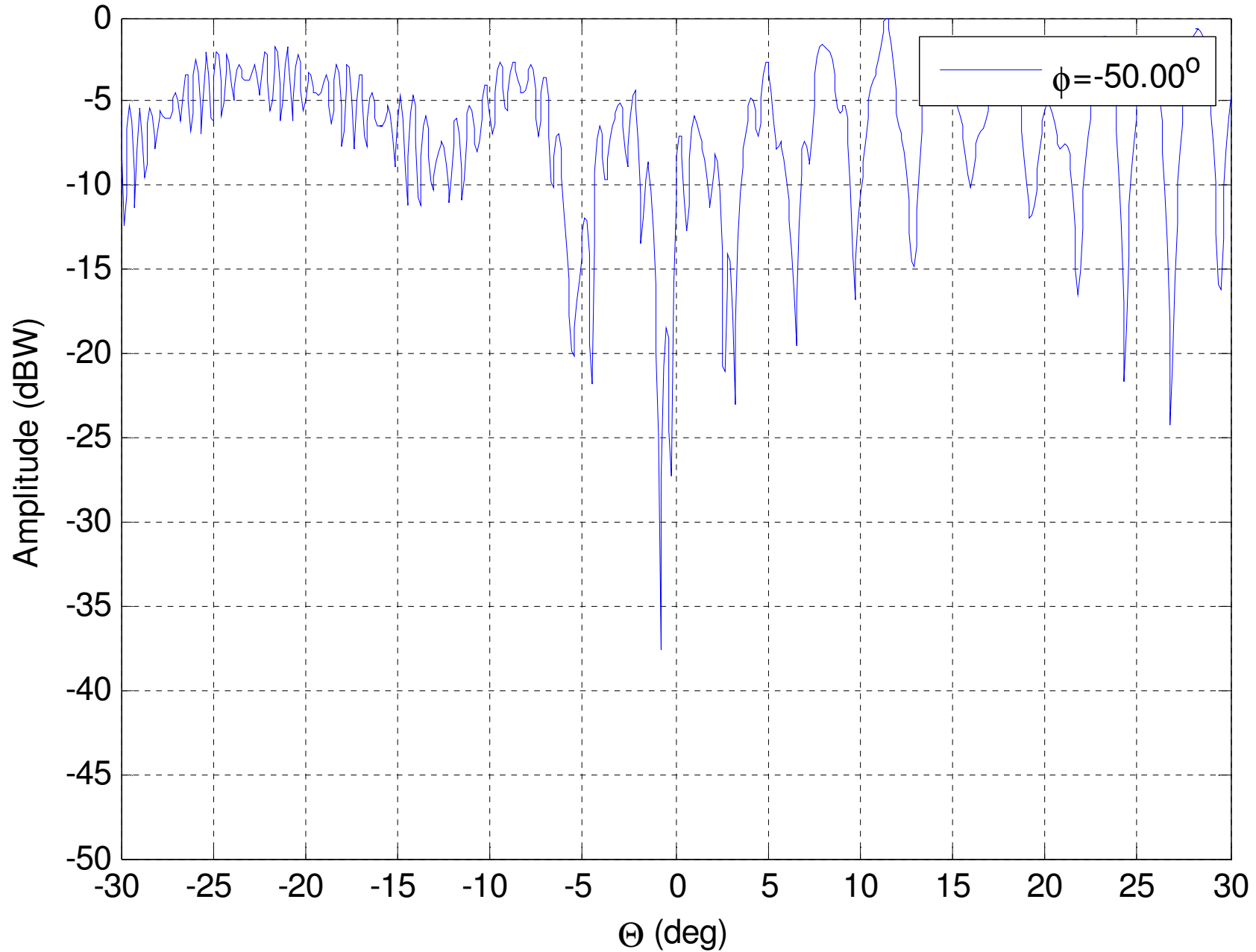
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -5.61 dBW, Date: 15-Dec-2011



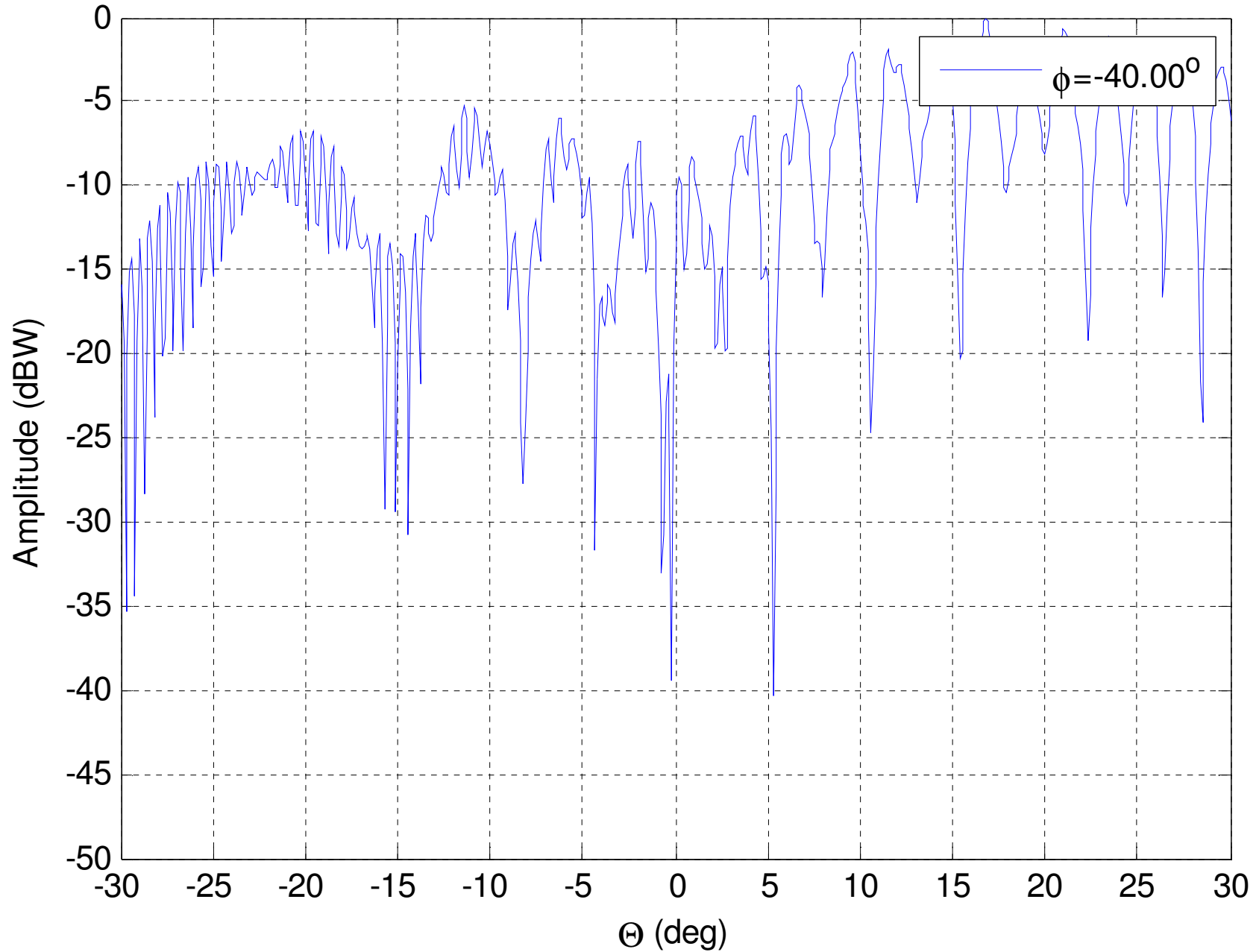
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.49 dBW, Date: 15-Dec-2011



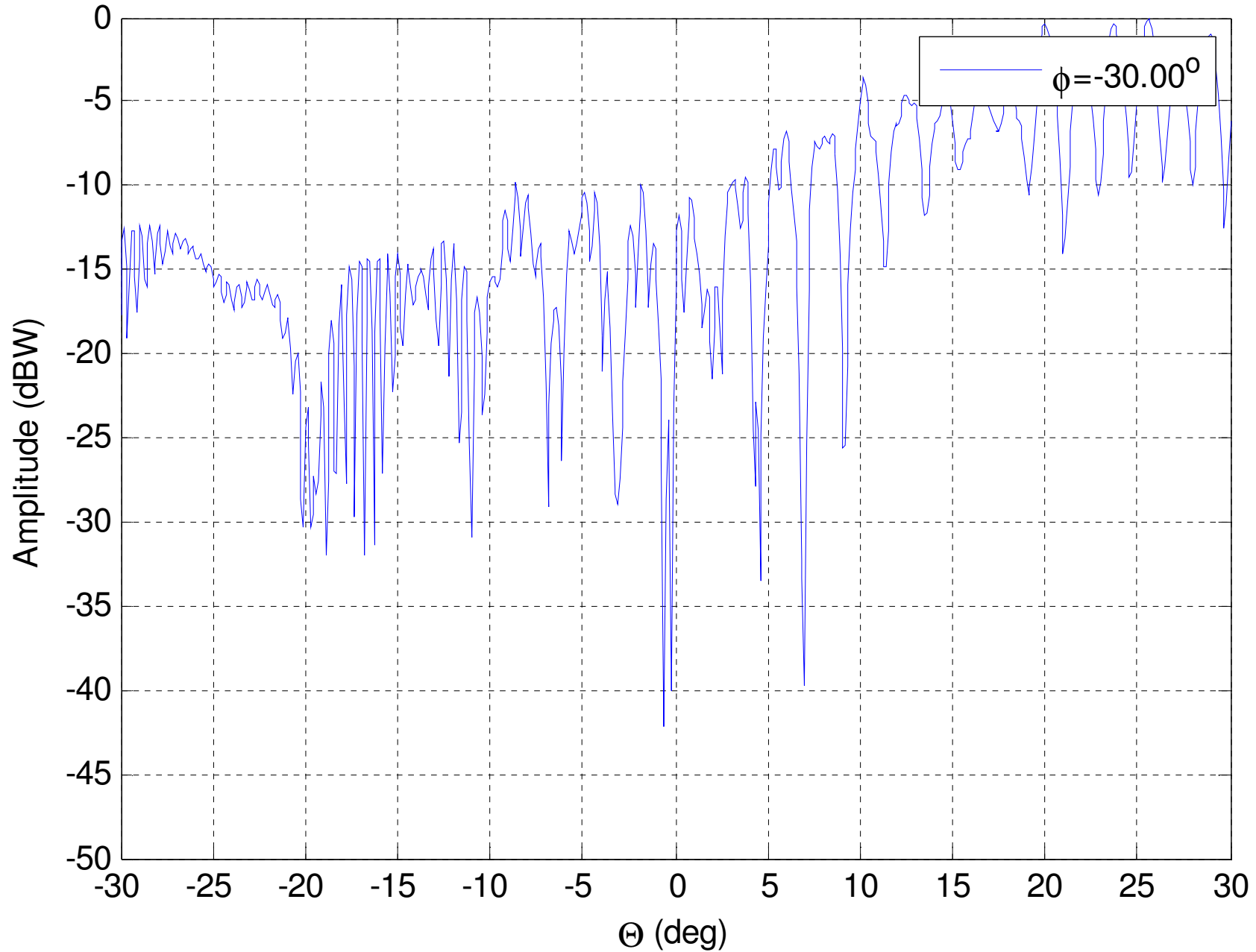
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -3.87 dBW, Date: 15-Dec-2011



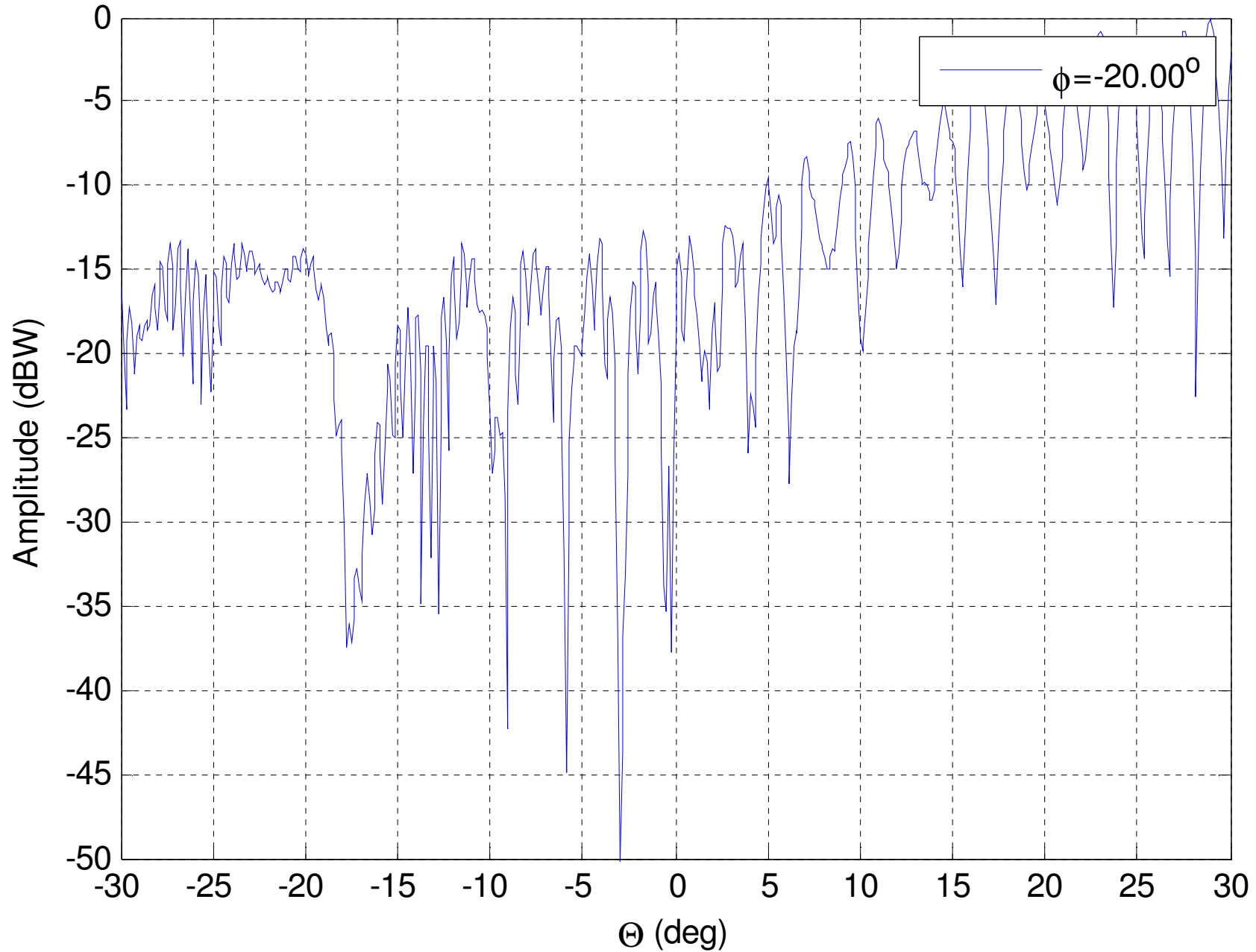
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -1.47 dBW, Date: 15-Dec-2011



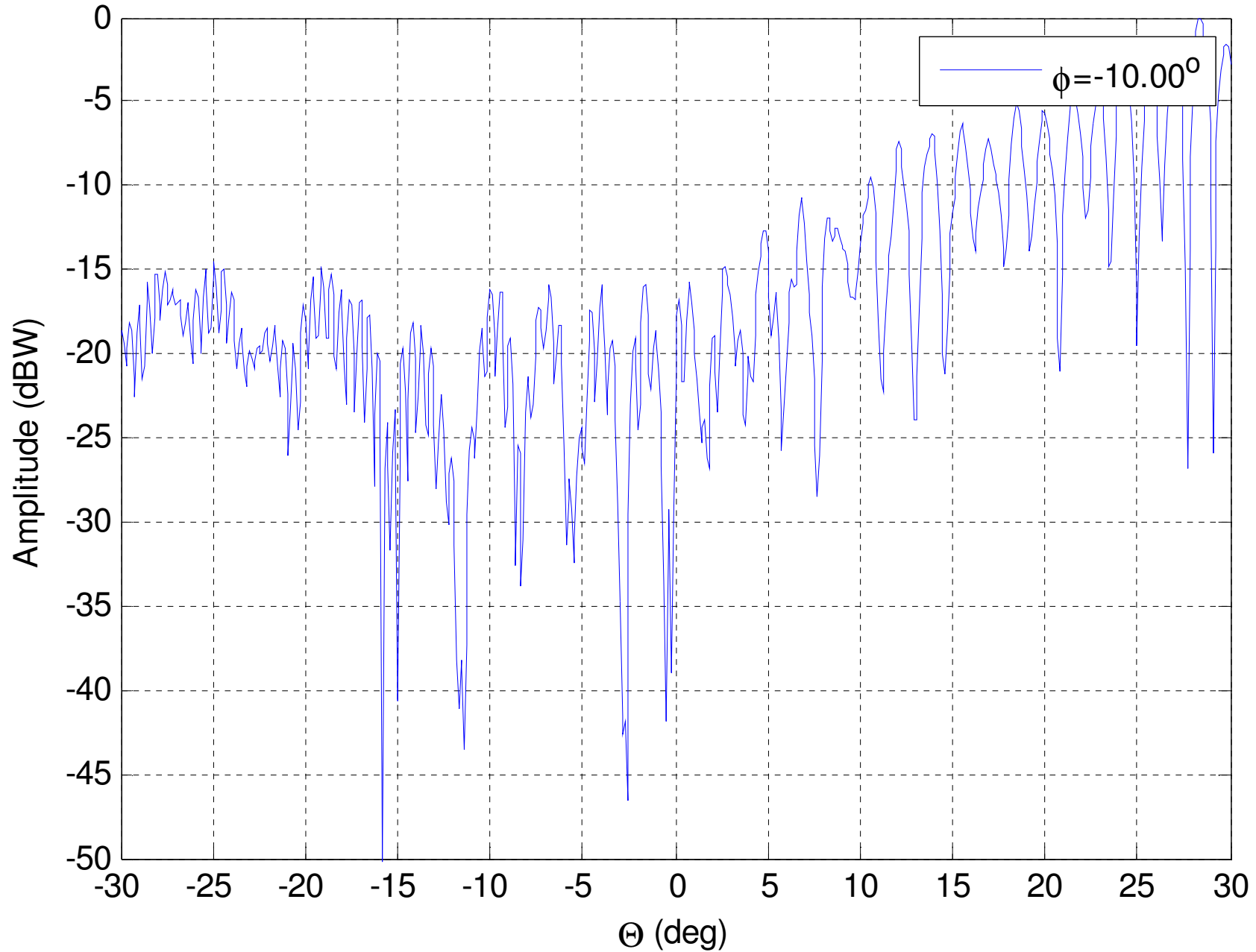
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 0.91 dBW, Date: 15-Dec-2011



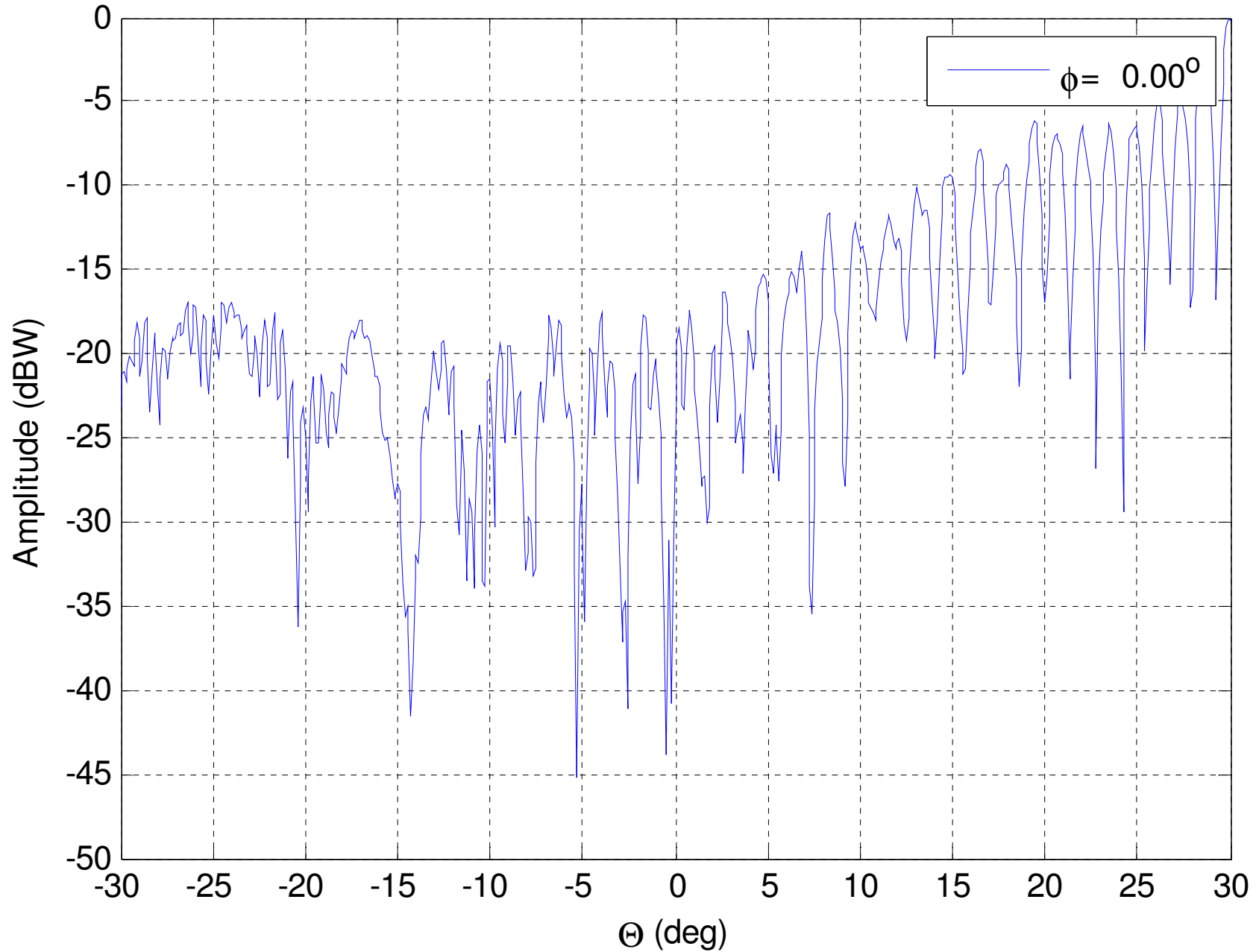
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 3.68 dBW, Date: 15-Dec-2011



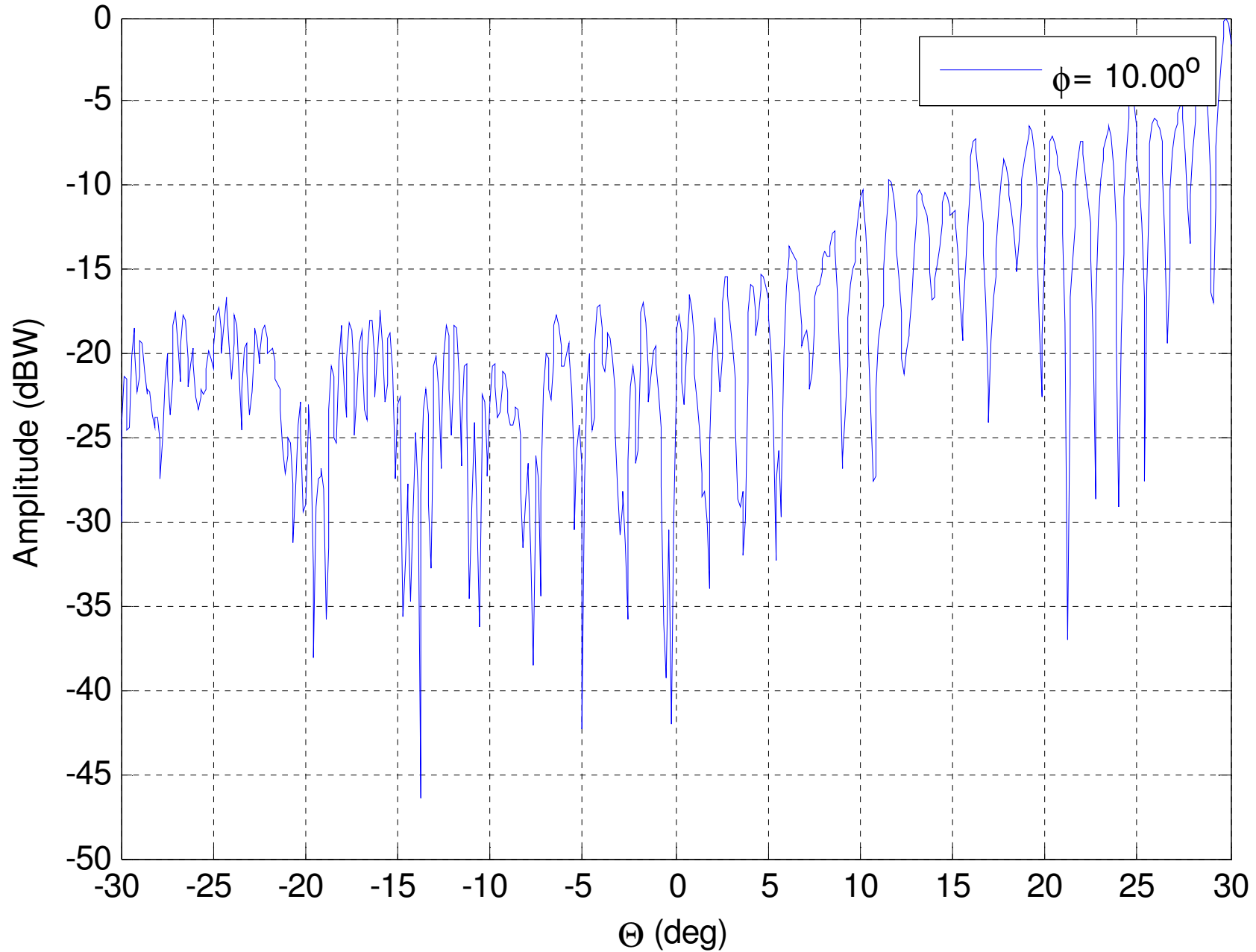
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 5.38 dBW, Date: 15-Dec-2011



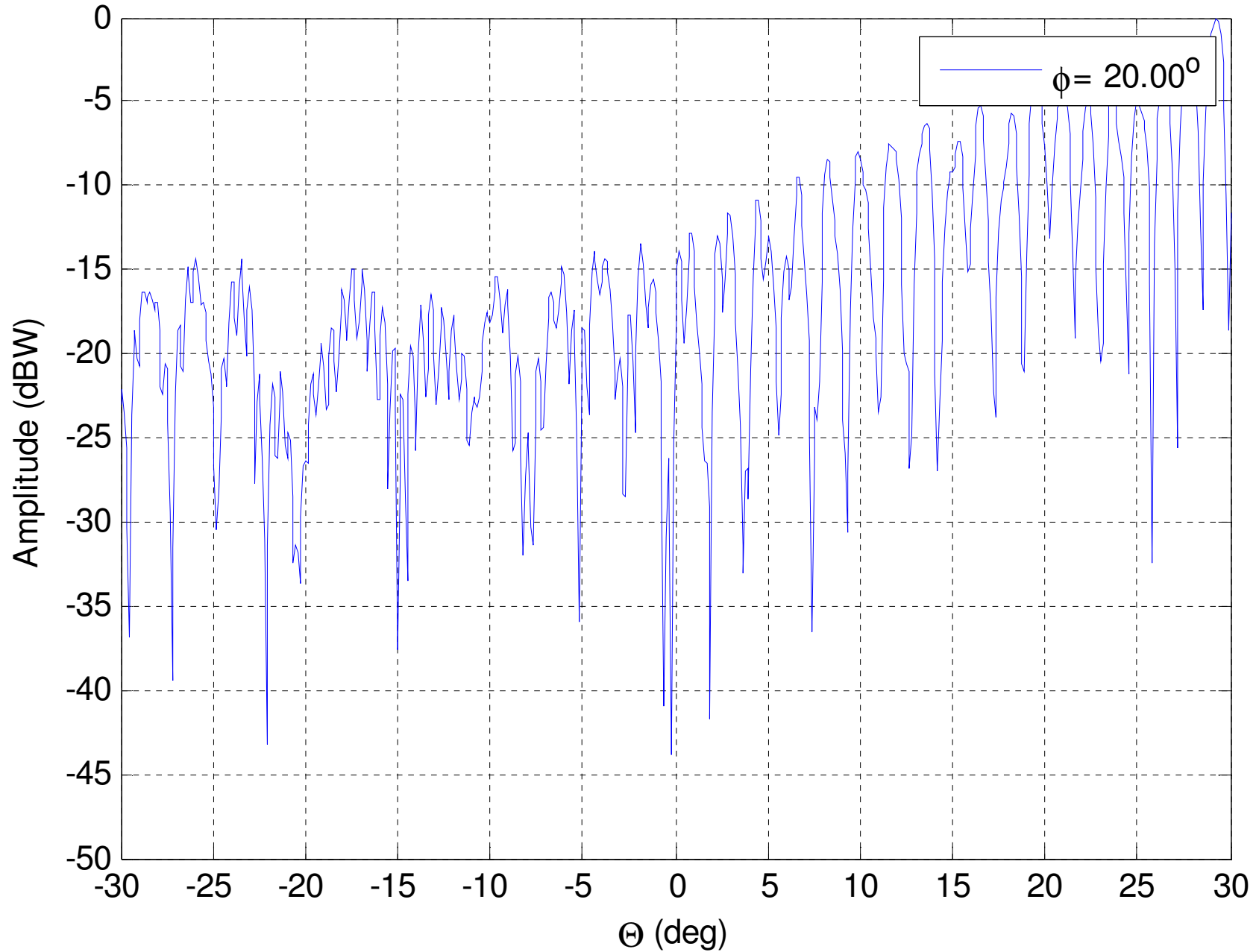
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 4.65 dBW, Date: 15-Dec-2011



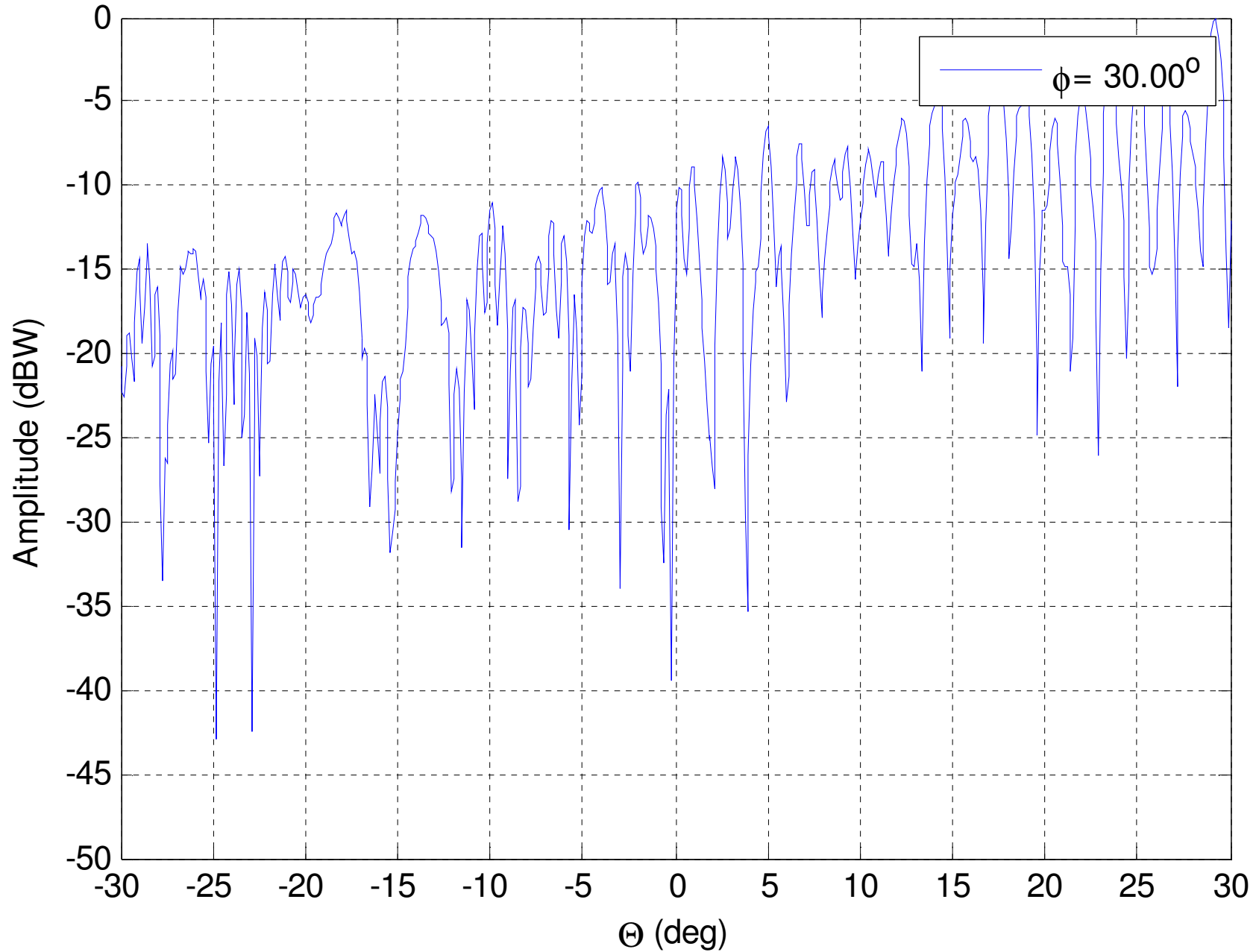
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 0.86 dBW, Date: 15-Dec-2011



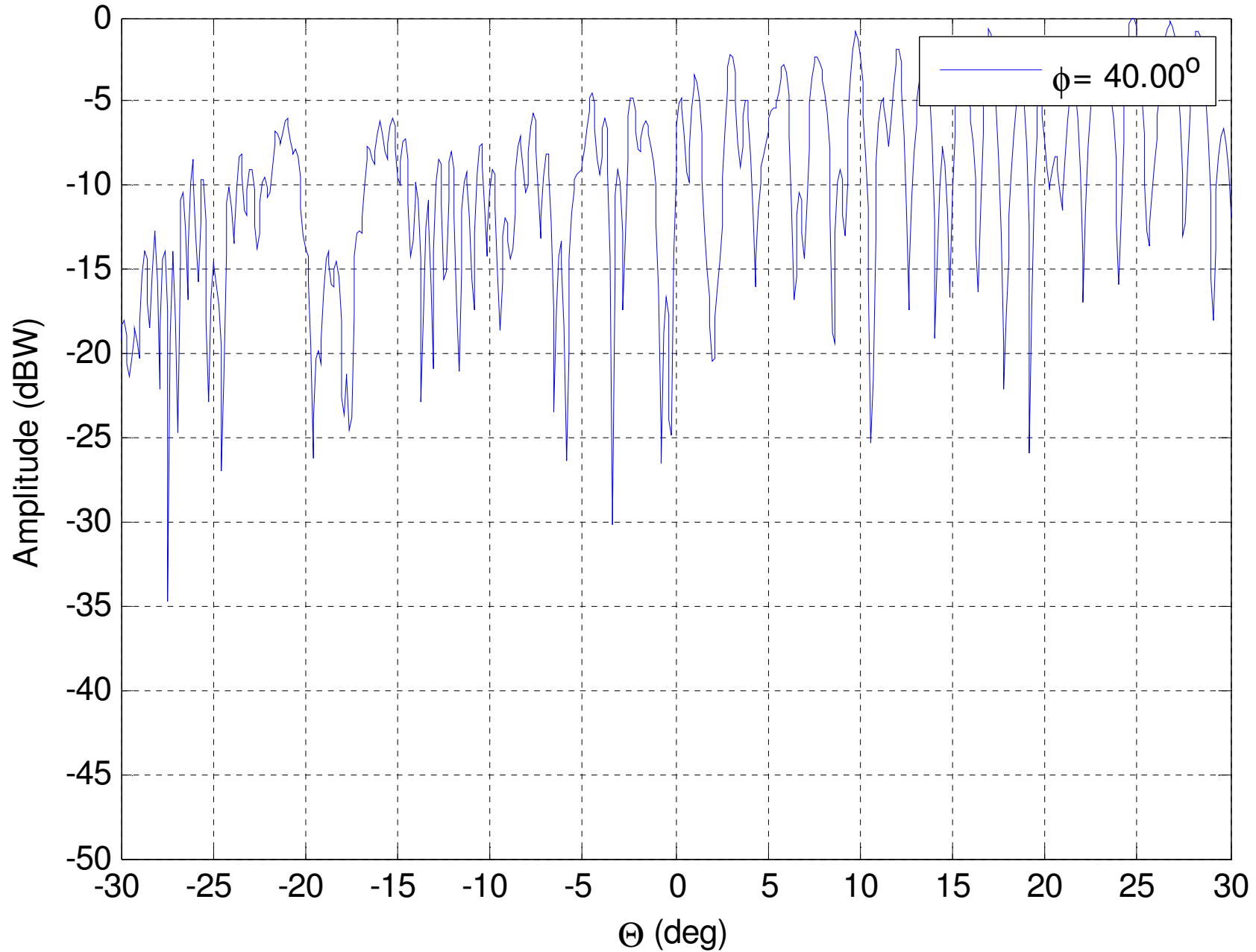
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -2.85 dBW, Date: 15-Dec-2011



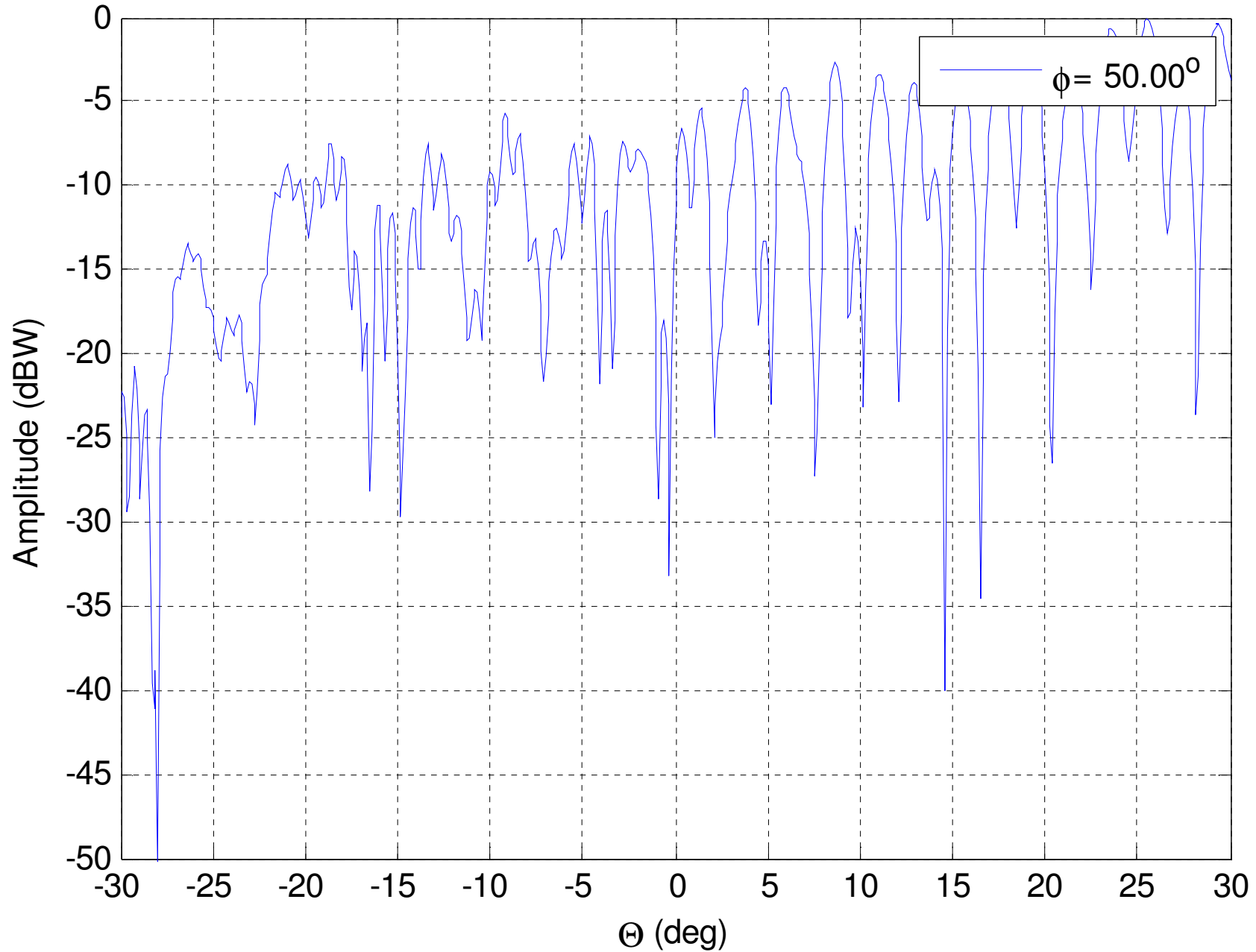
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -8.10 dBW, Date: 15-Dec-2011



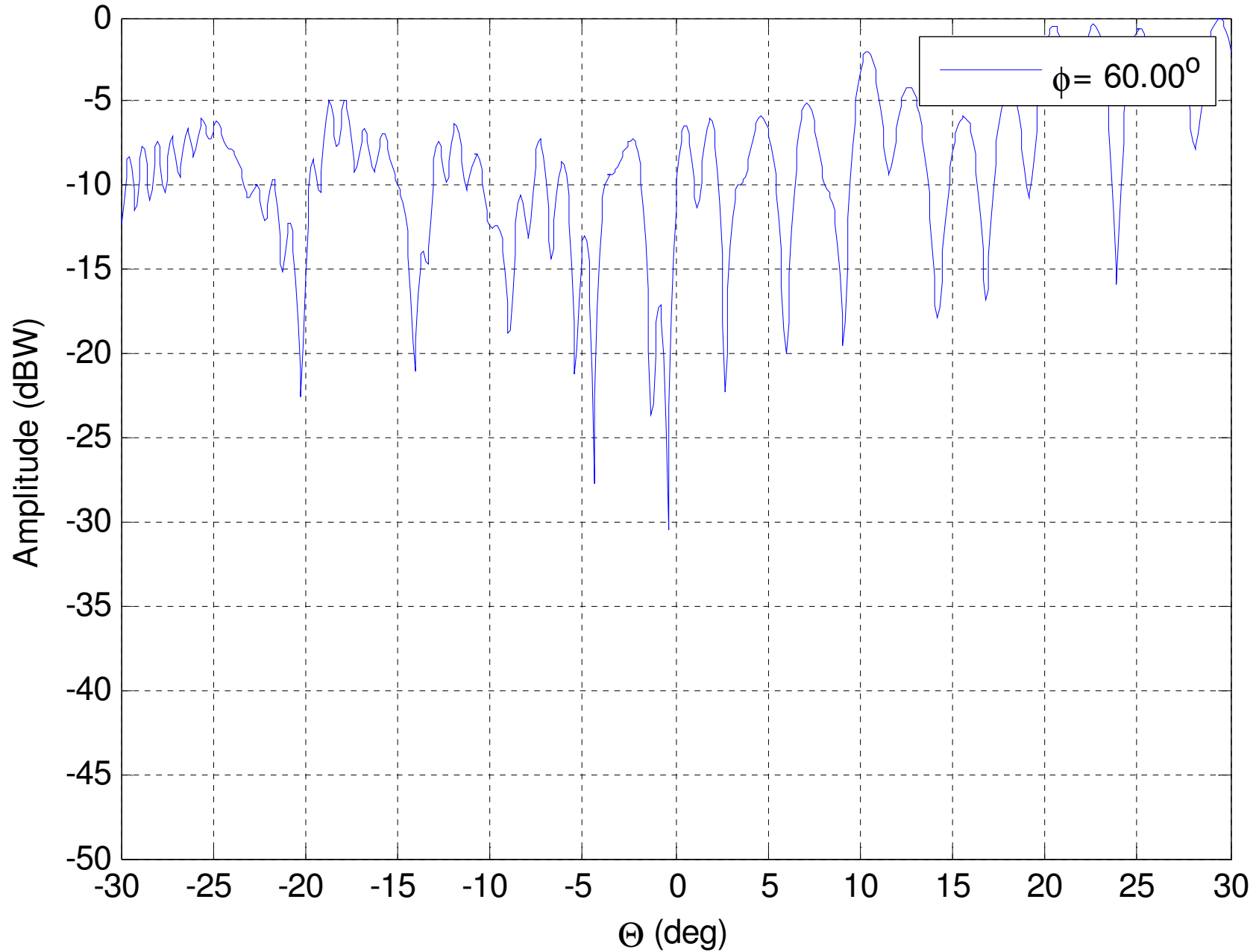
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -6.15 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

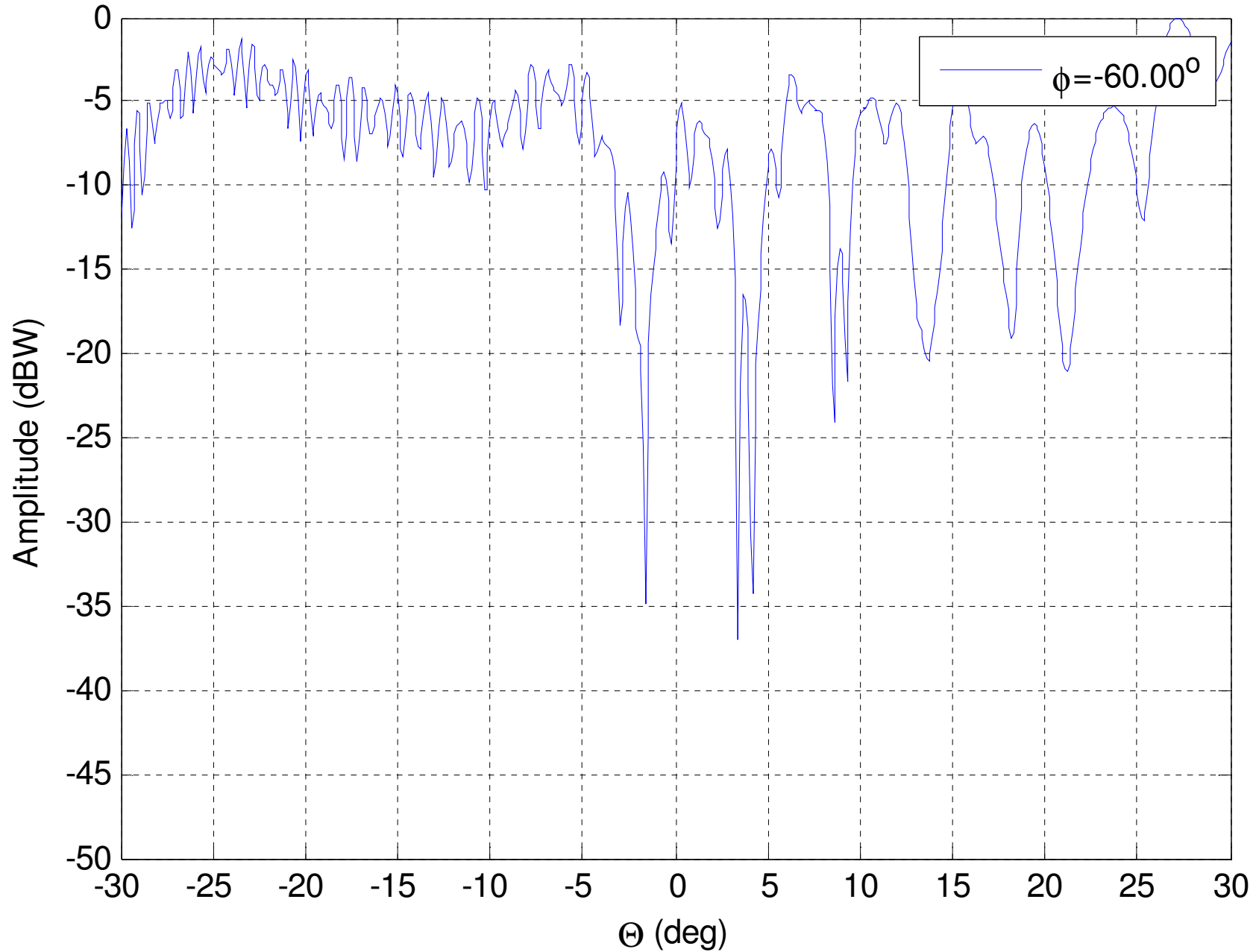
Input file: tx-17.5-rhcp-60.cut, Peak: -5.92 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

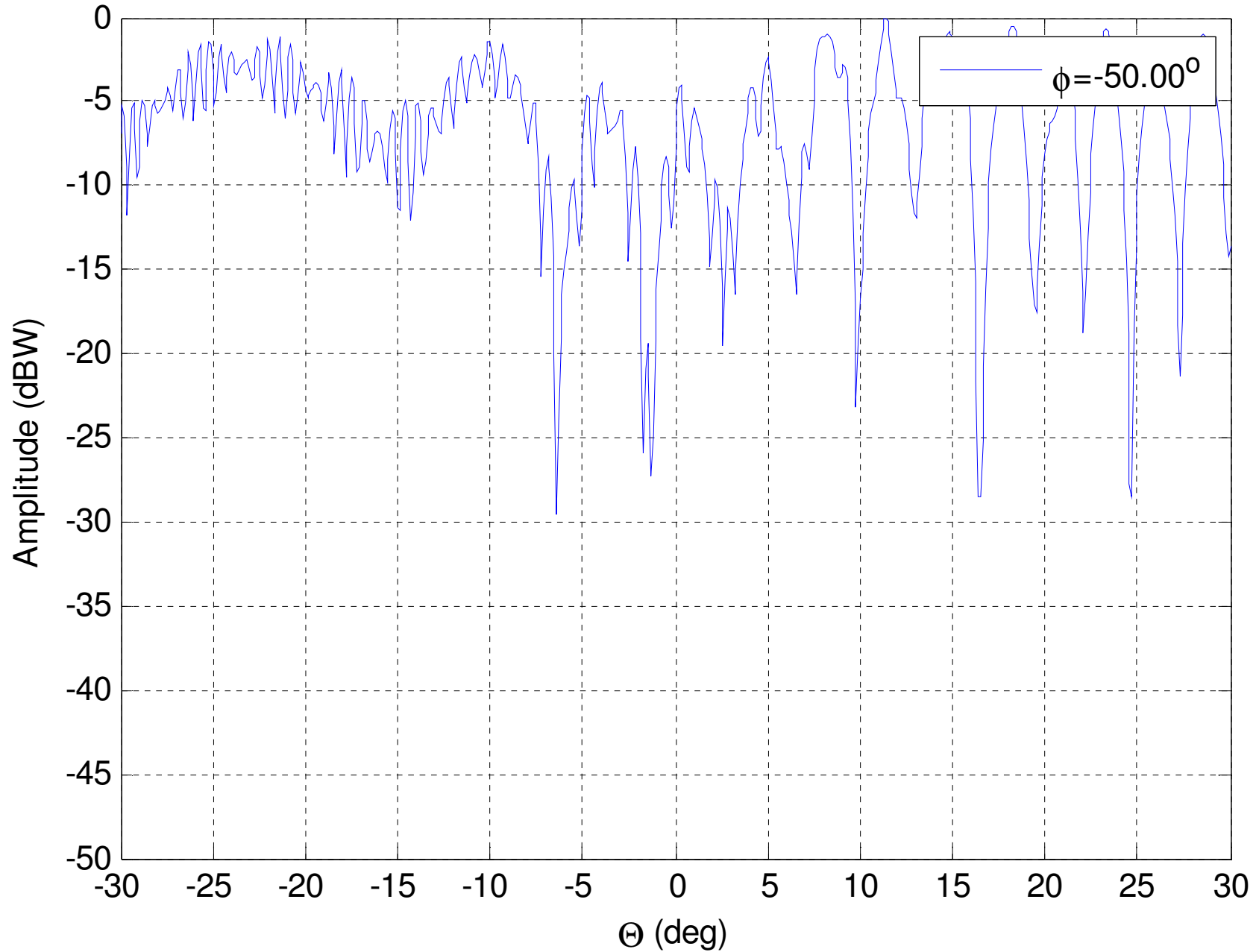
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -5.86 dBW, Date: 15-Dec-2011



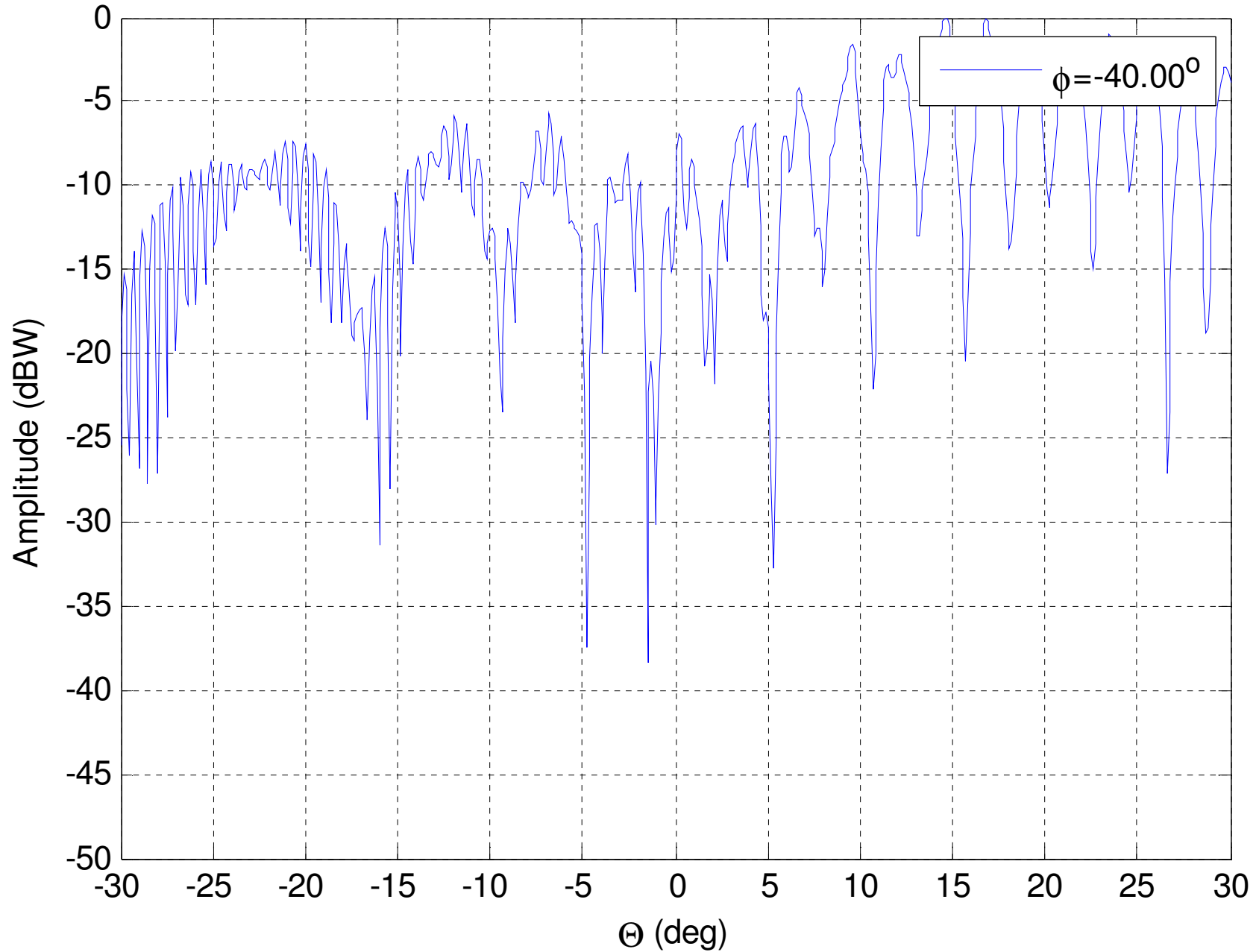
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -6.95 dBW, Date: 15-Dec-2011



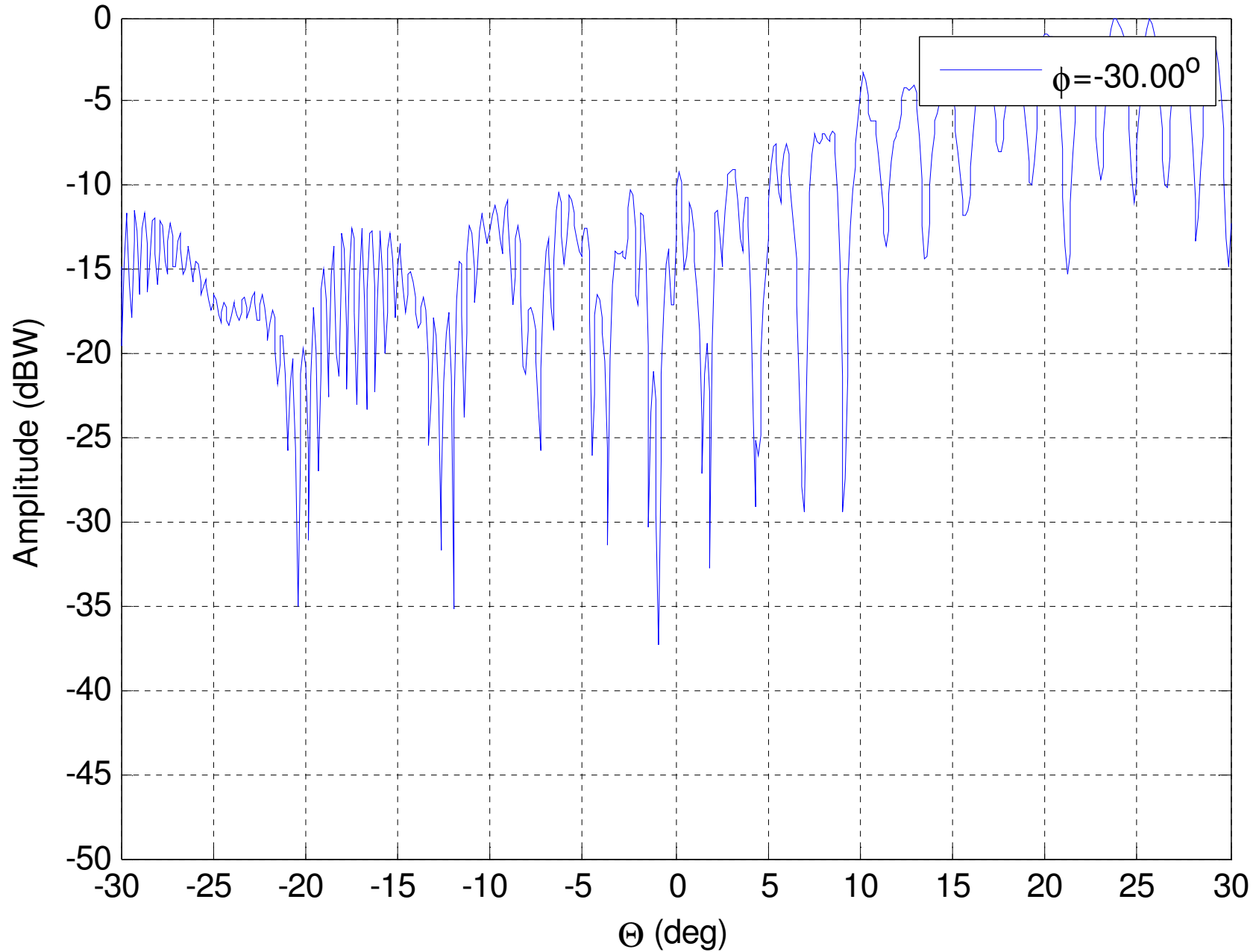
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -4.04 dBW, Date: 15-Dec-2011



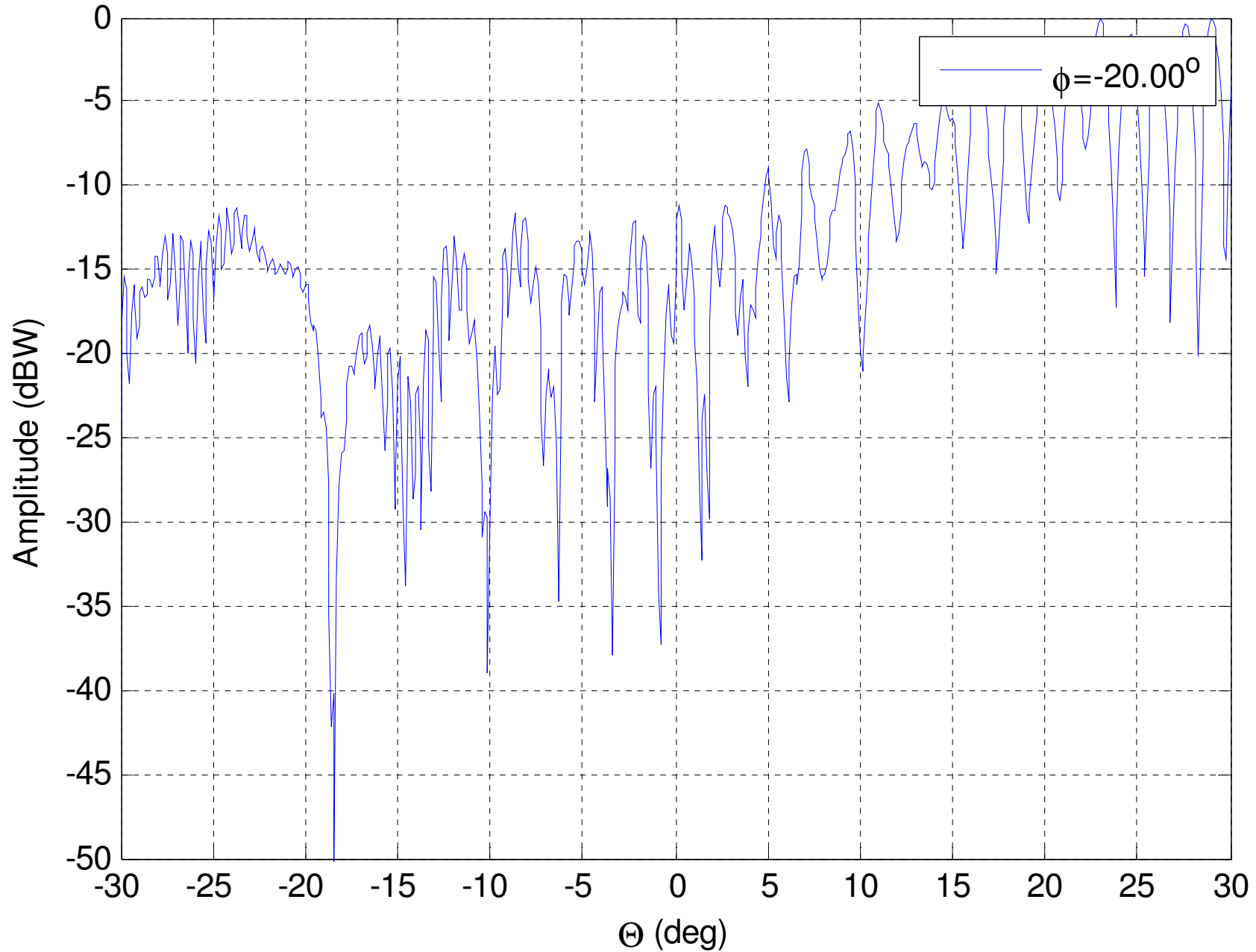
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -1.74 dBW, Date: 15-Dec-2011



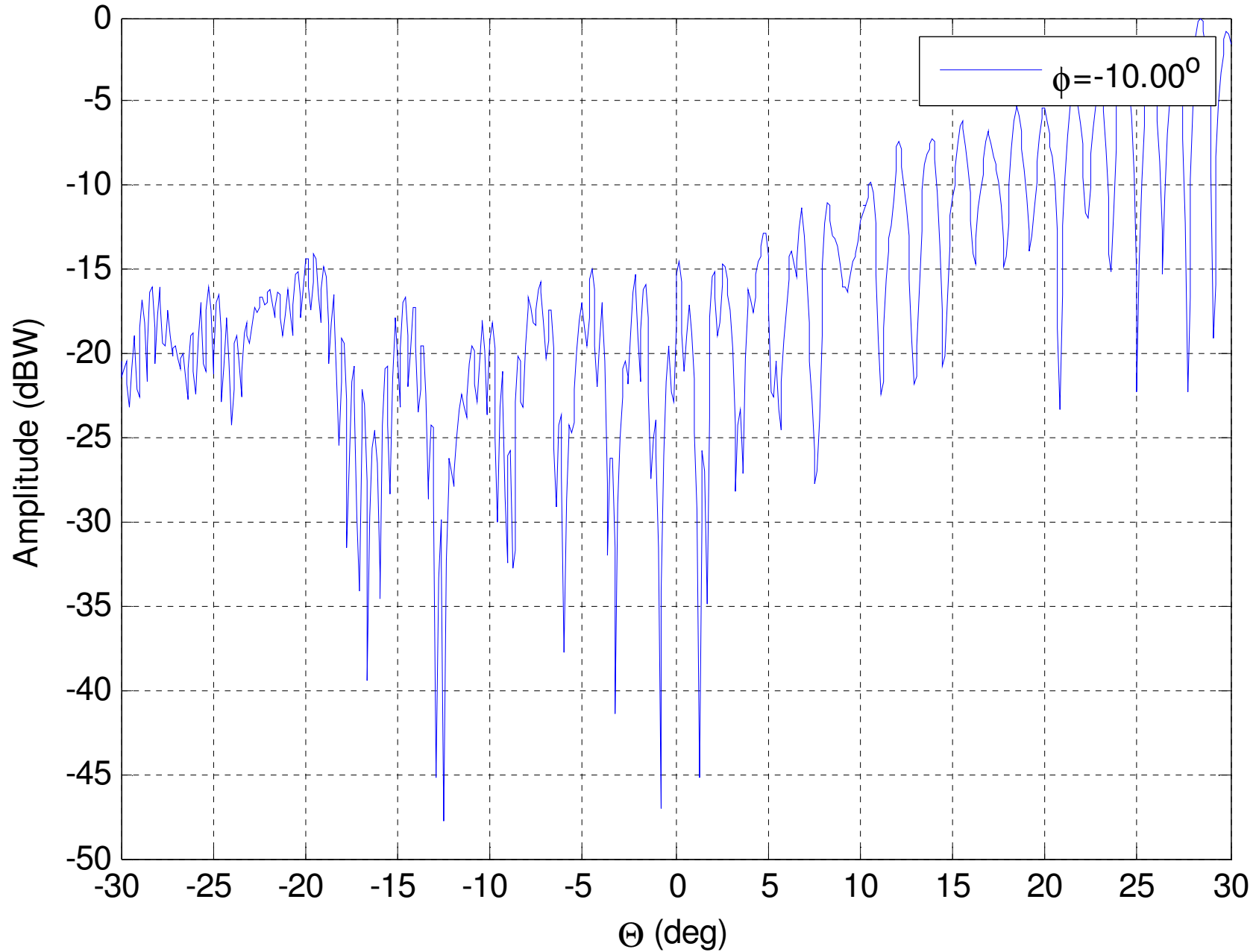
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 0.27 dBW, Date: 15-Dec-2011



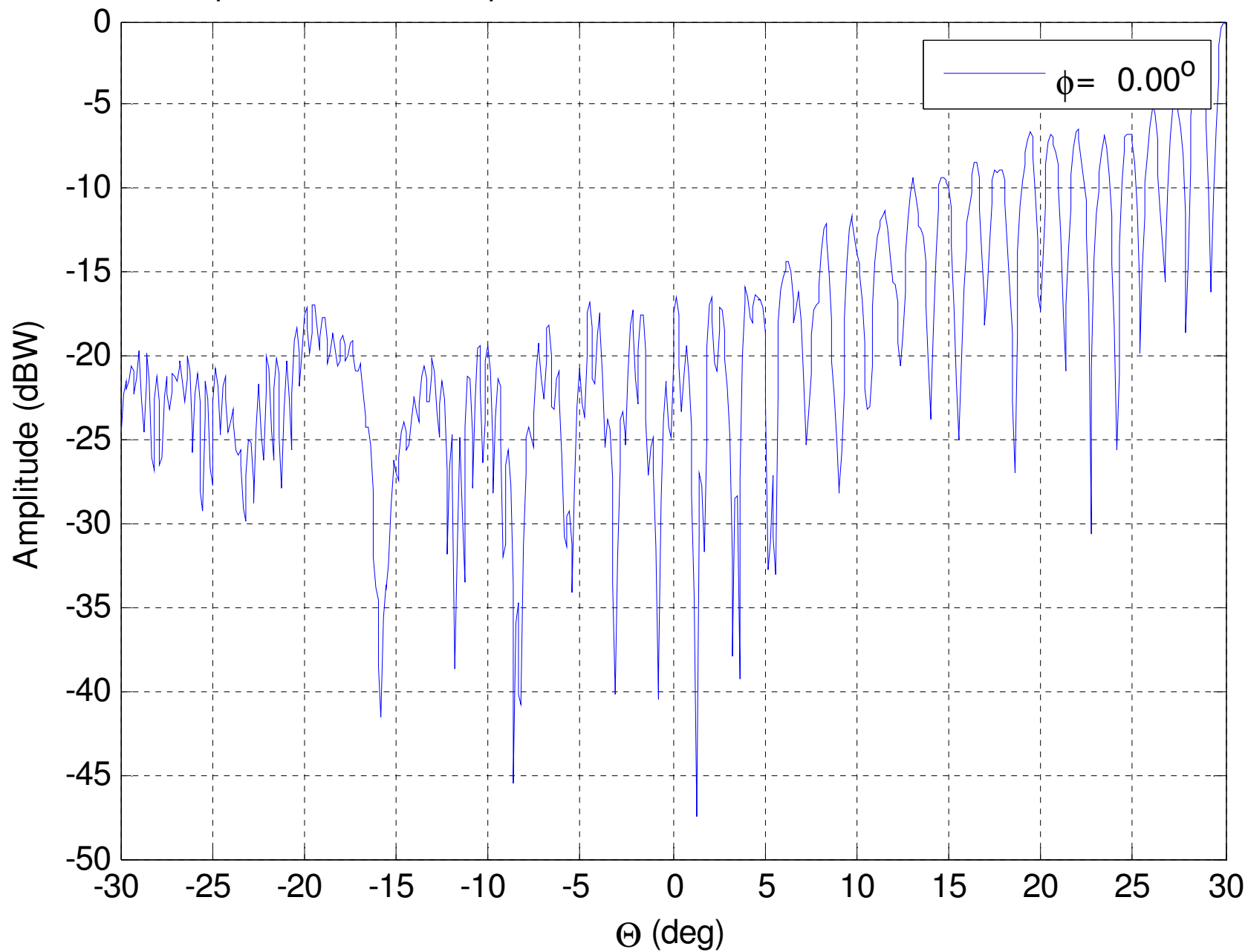
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 3.65 dBW, Date: 15-Dec-2011



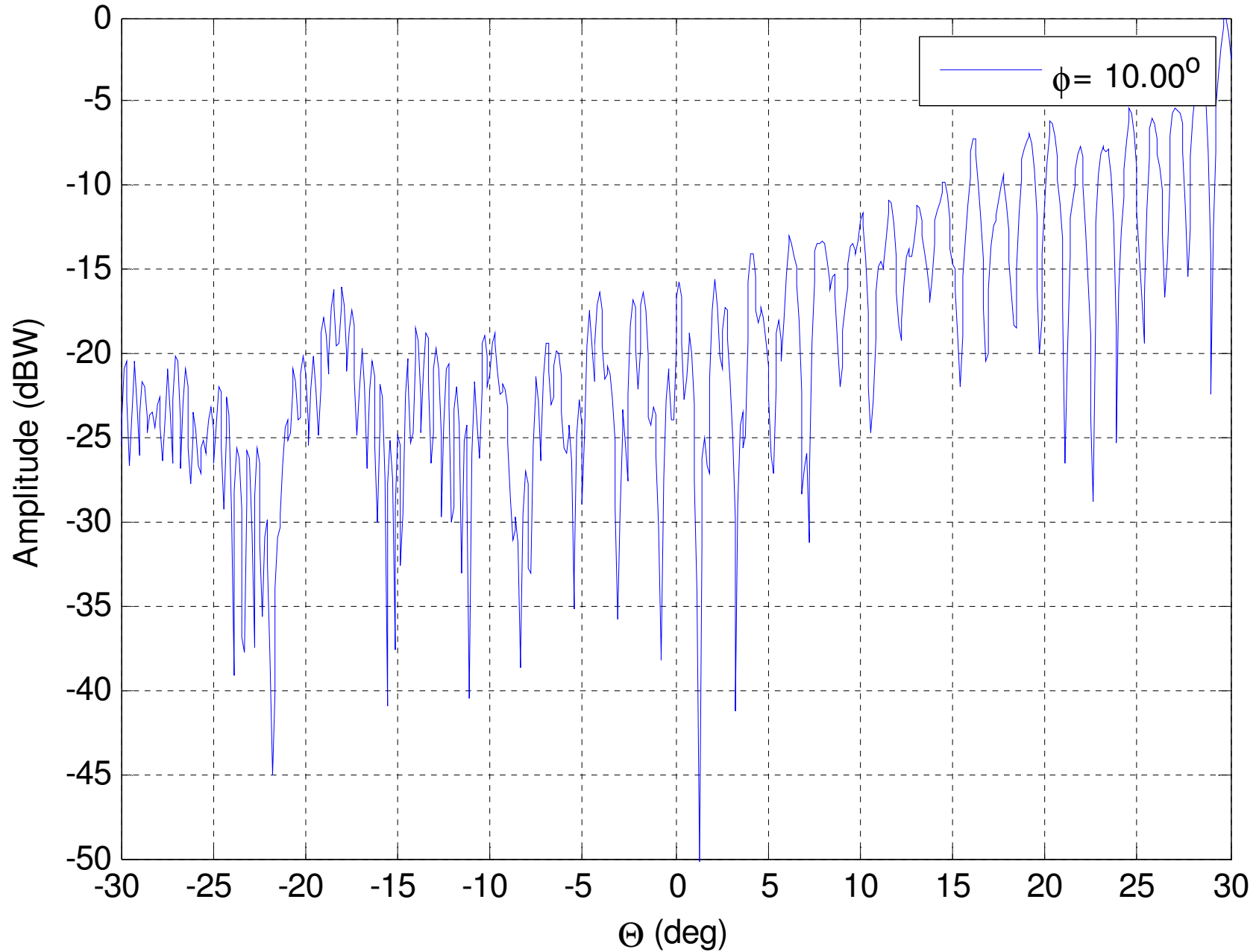
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 5.63 dBW, Date: 15-Dec-2011



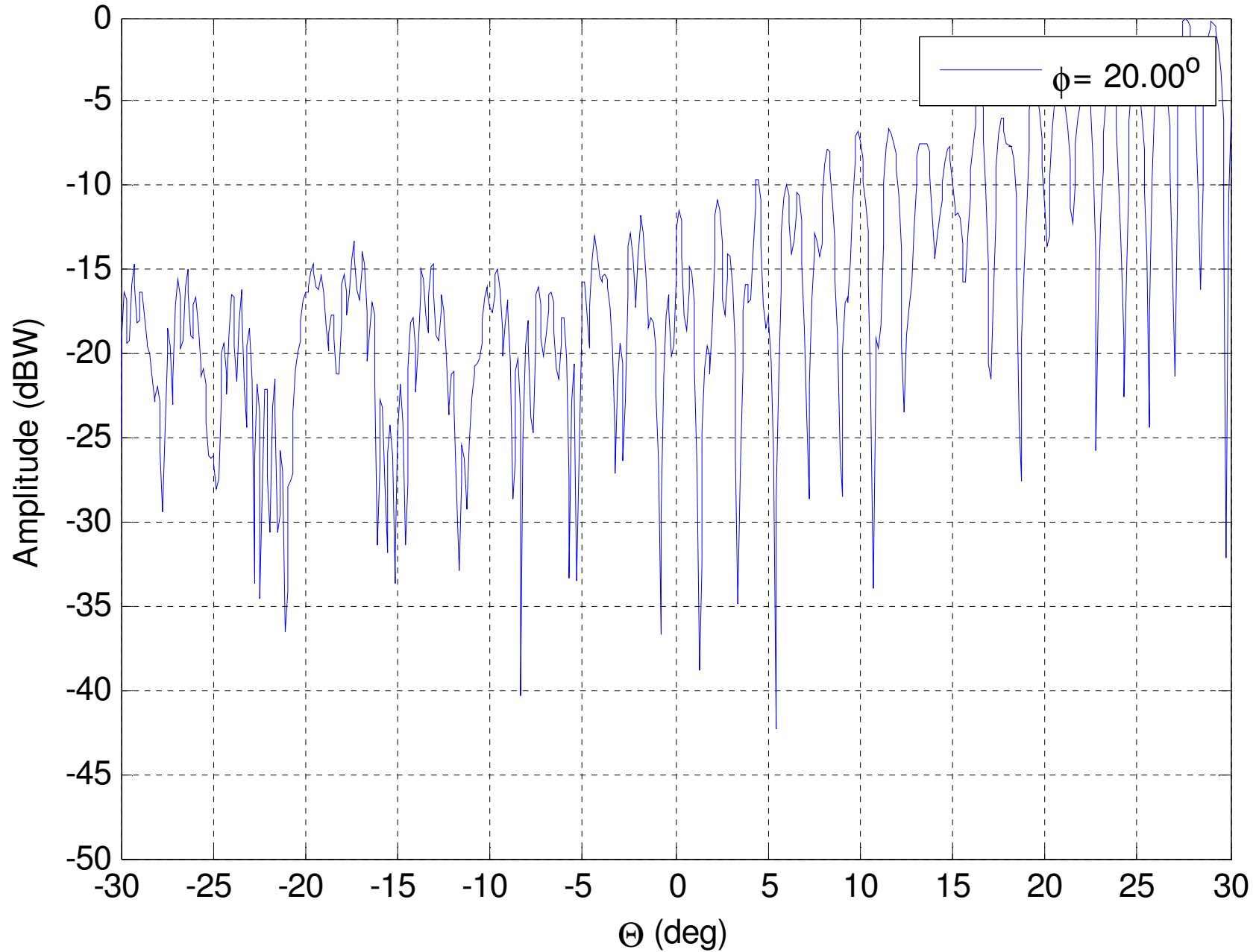
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 4.89 dBW, Date: 15-Dec-2011



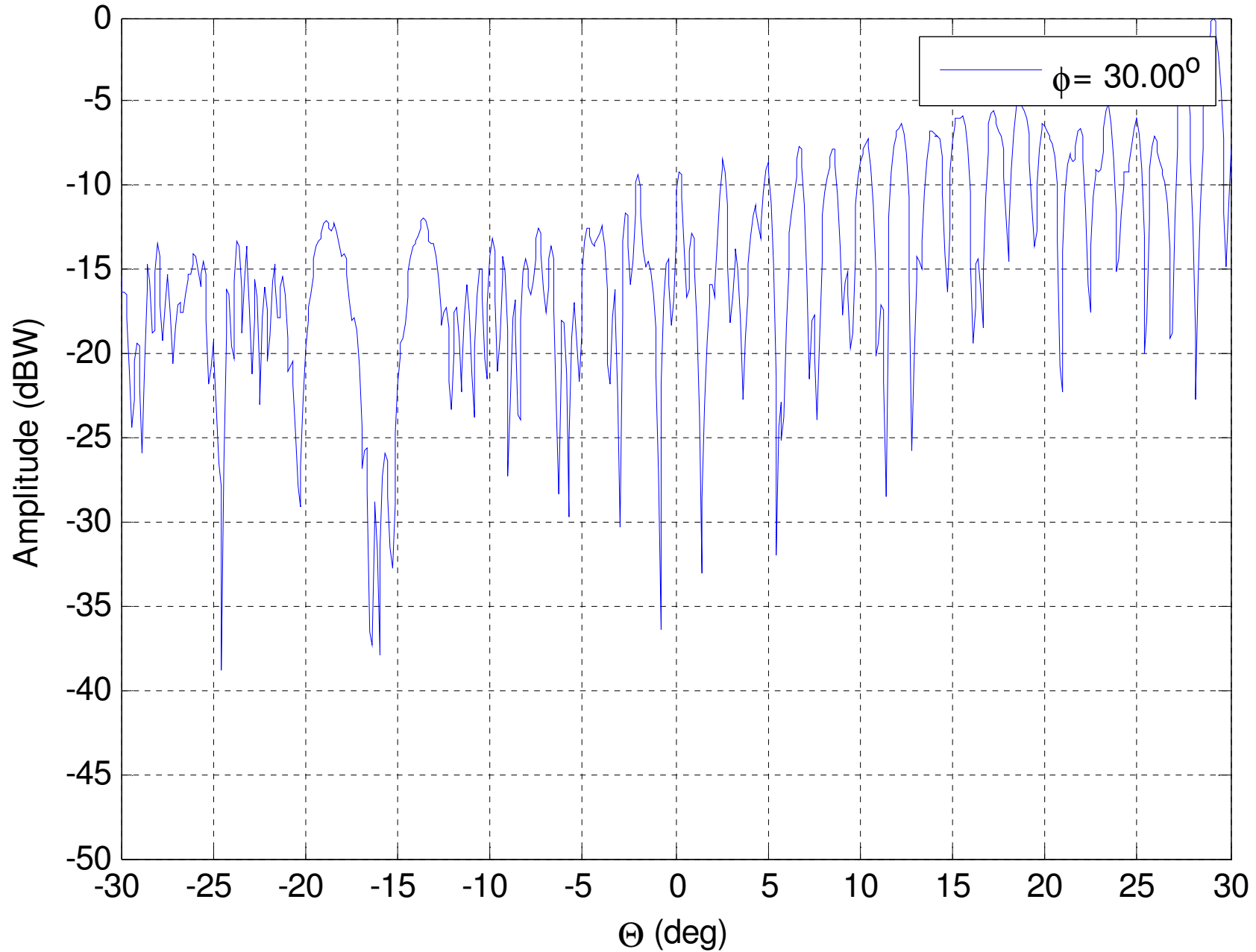
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 0.57 dBW, Date: 15-Dec-2011



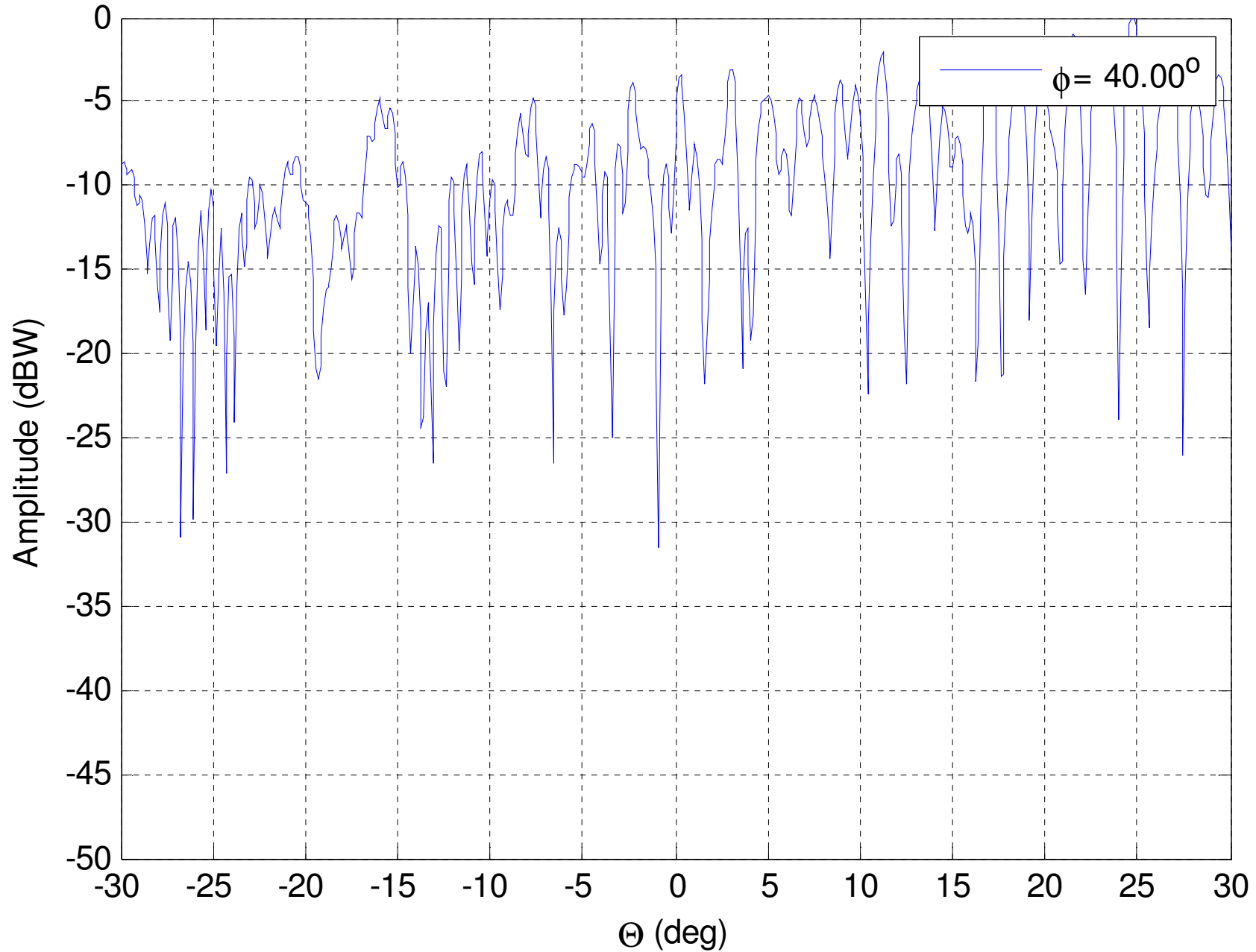
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -1.79 dBW, Date: 15-Dec-2011



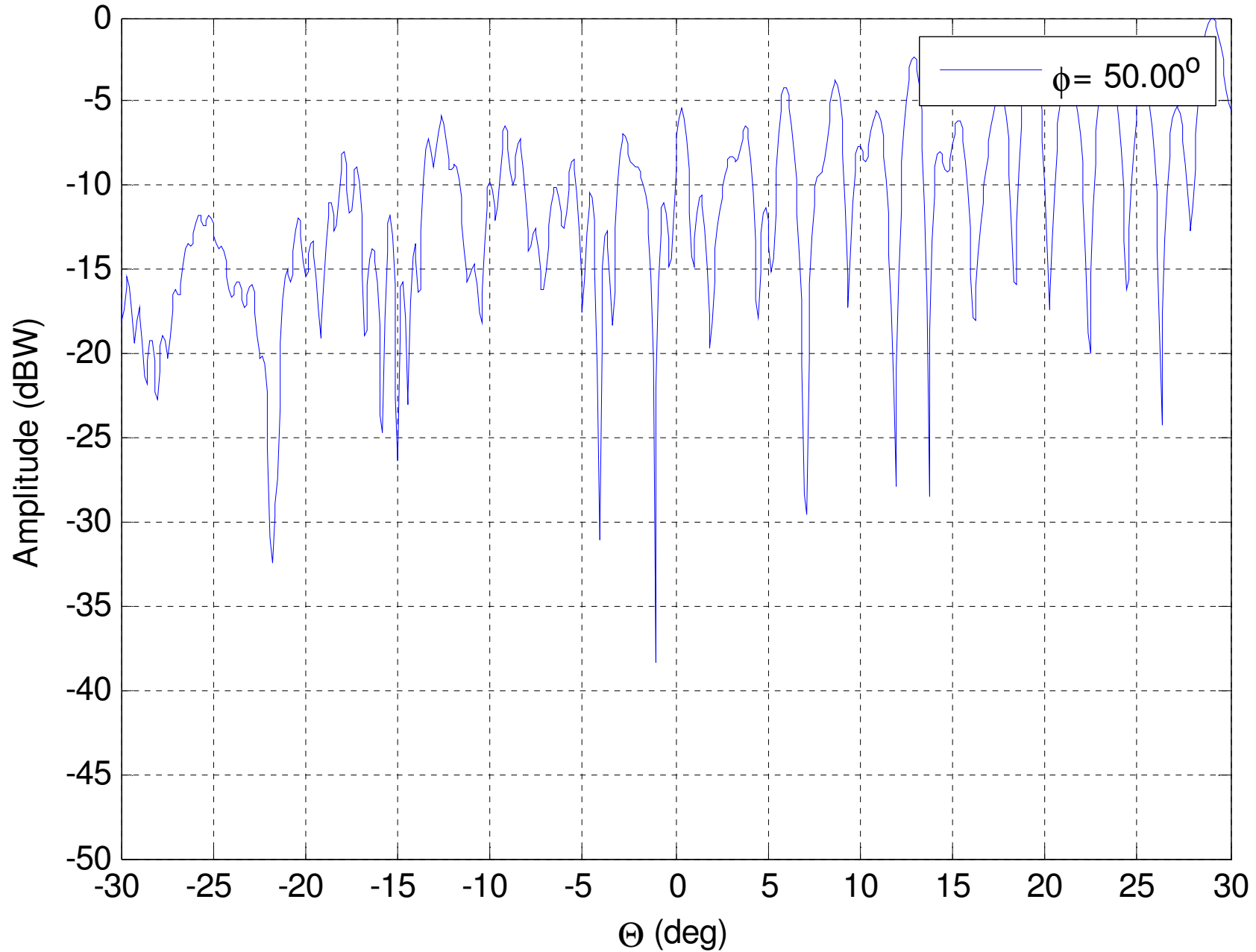
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.56 dBW, Date: 15-Dec-2011



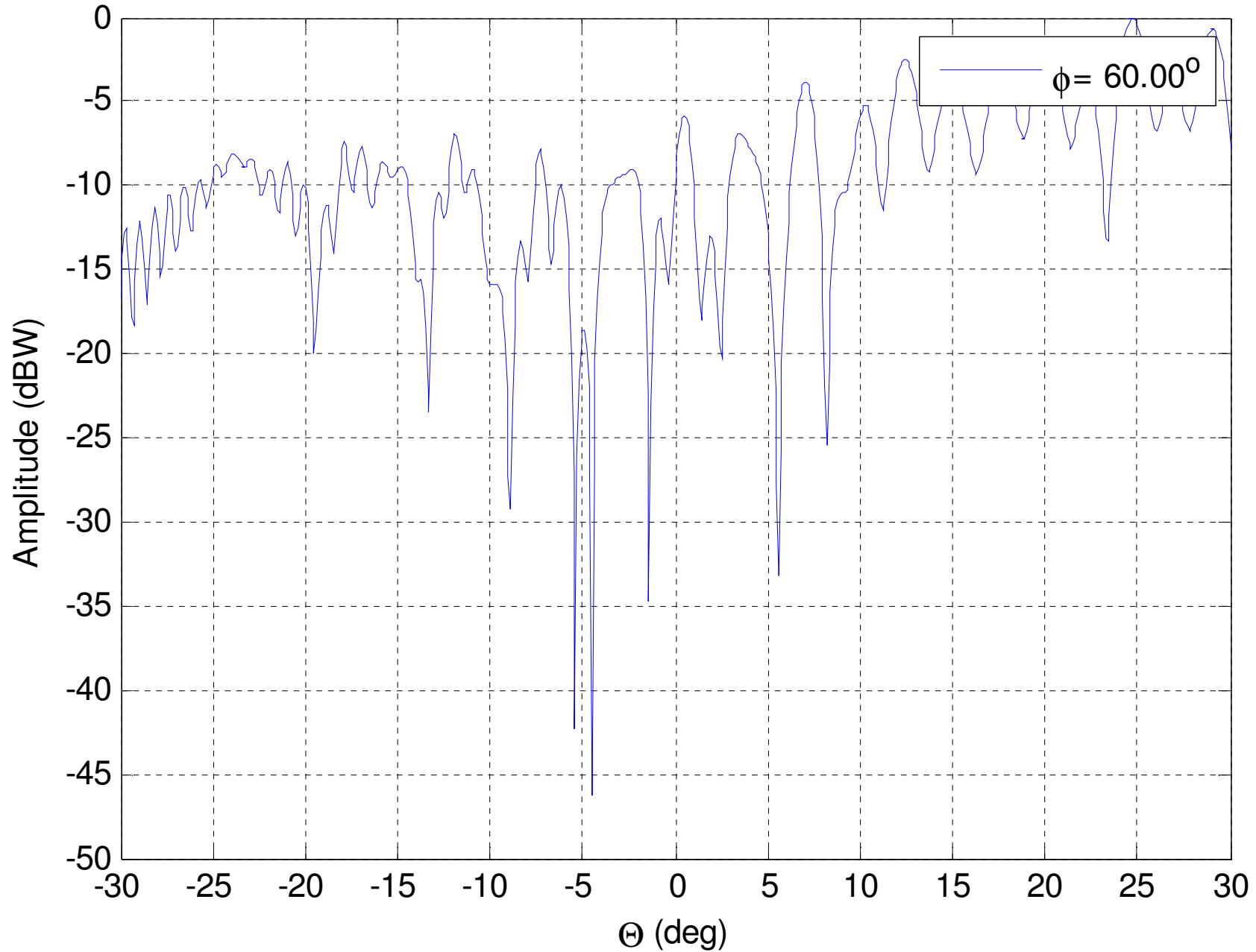
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.60 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

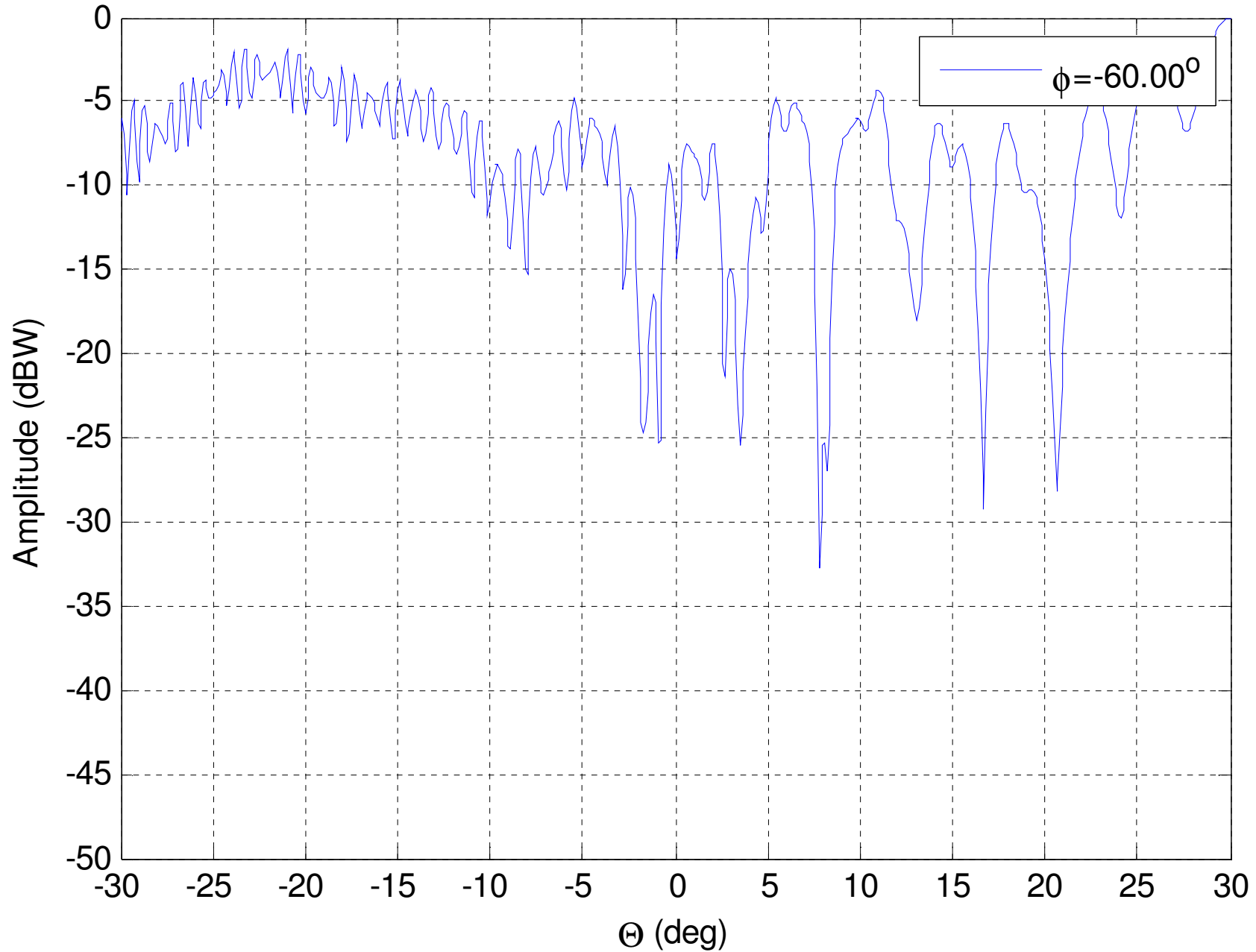
Input file: tx-17.5-lhcp-60.cut, Peak: -5.10 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

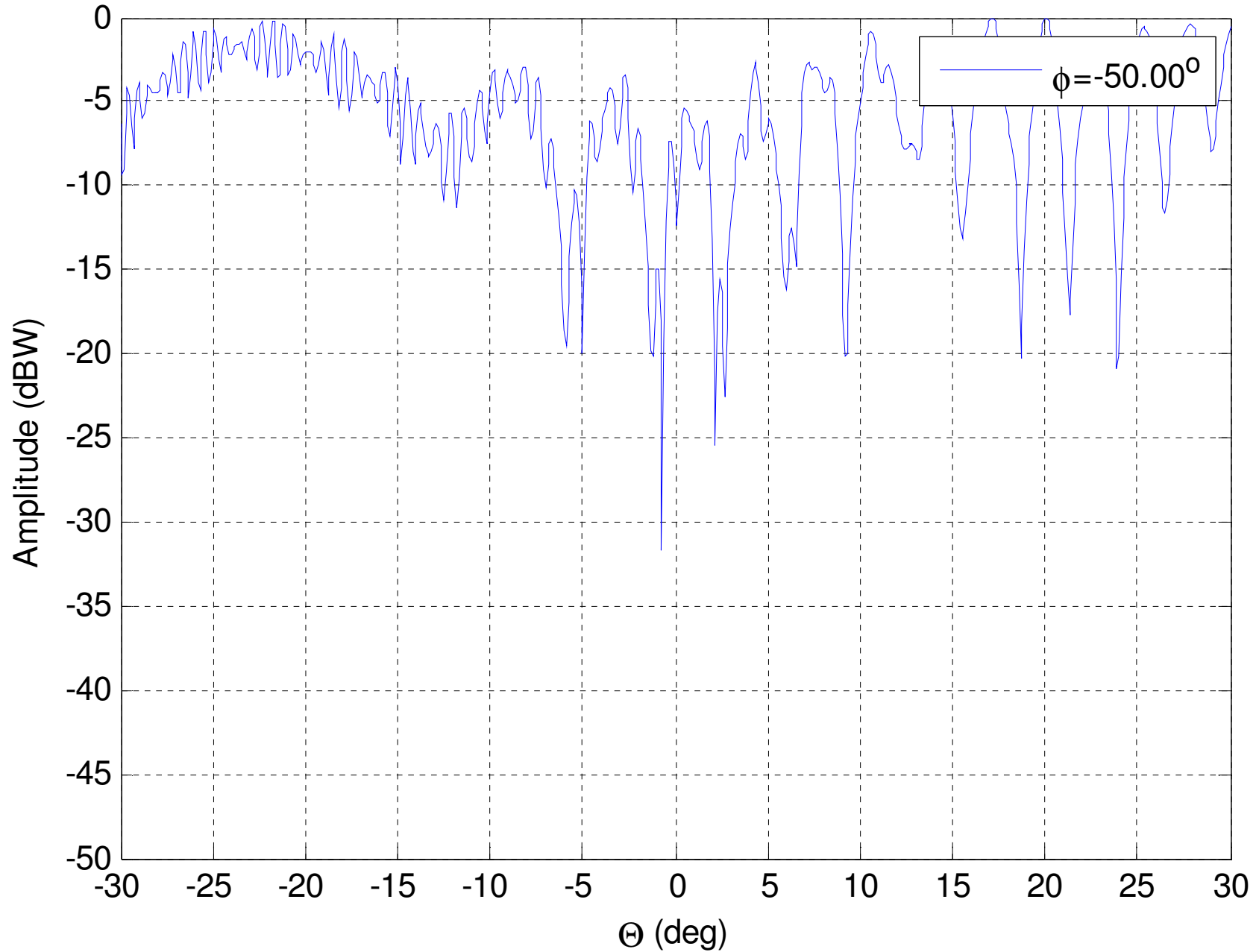
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.21 dBW, Date: 15-Dec-2011



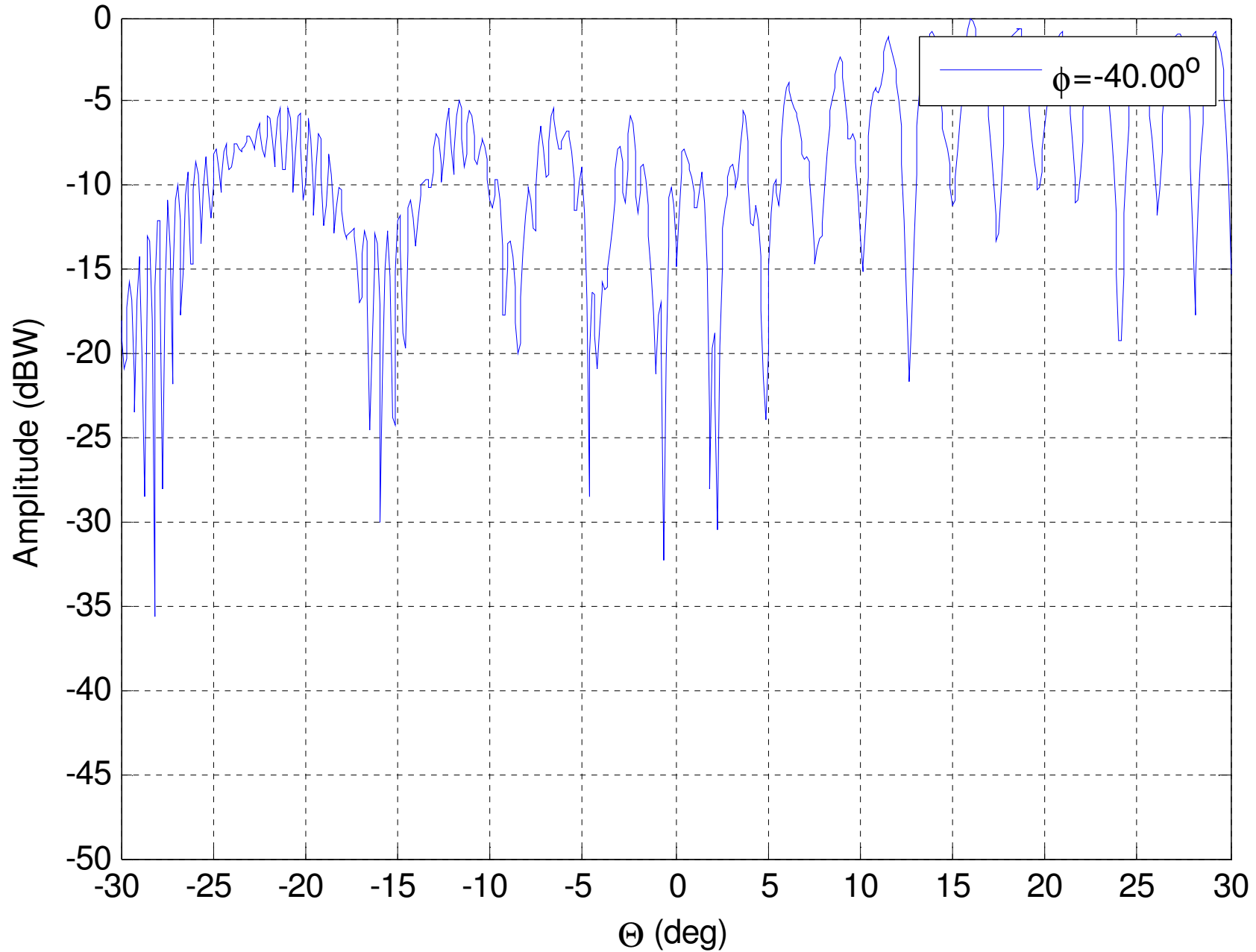
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -6.94 dBW, Date: 15-Dec-2011



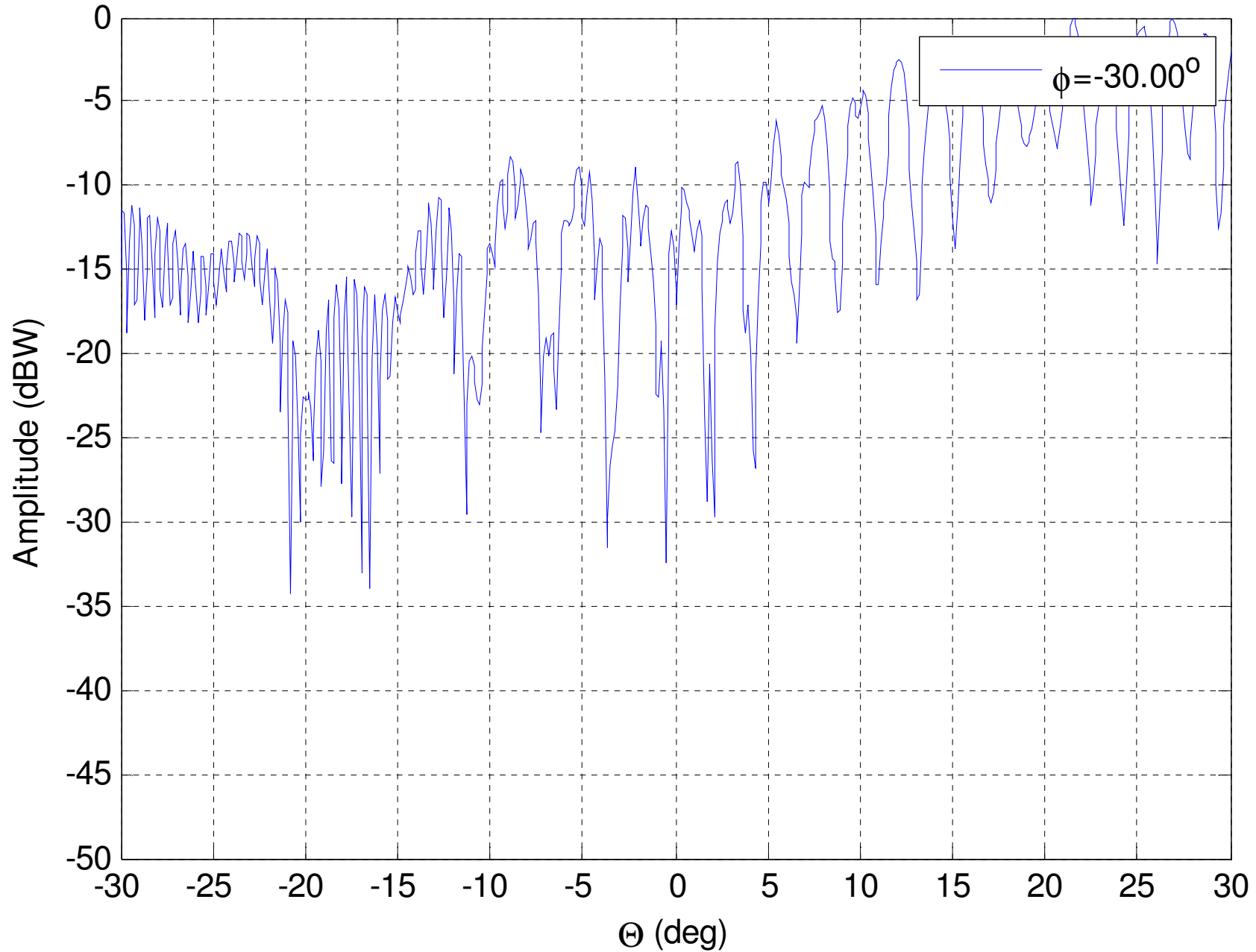
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.35 dBW, Date: 15-Dec-2011



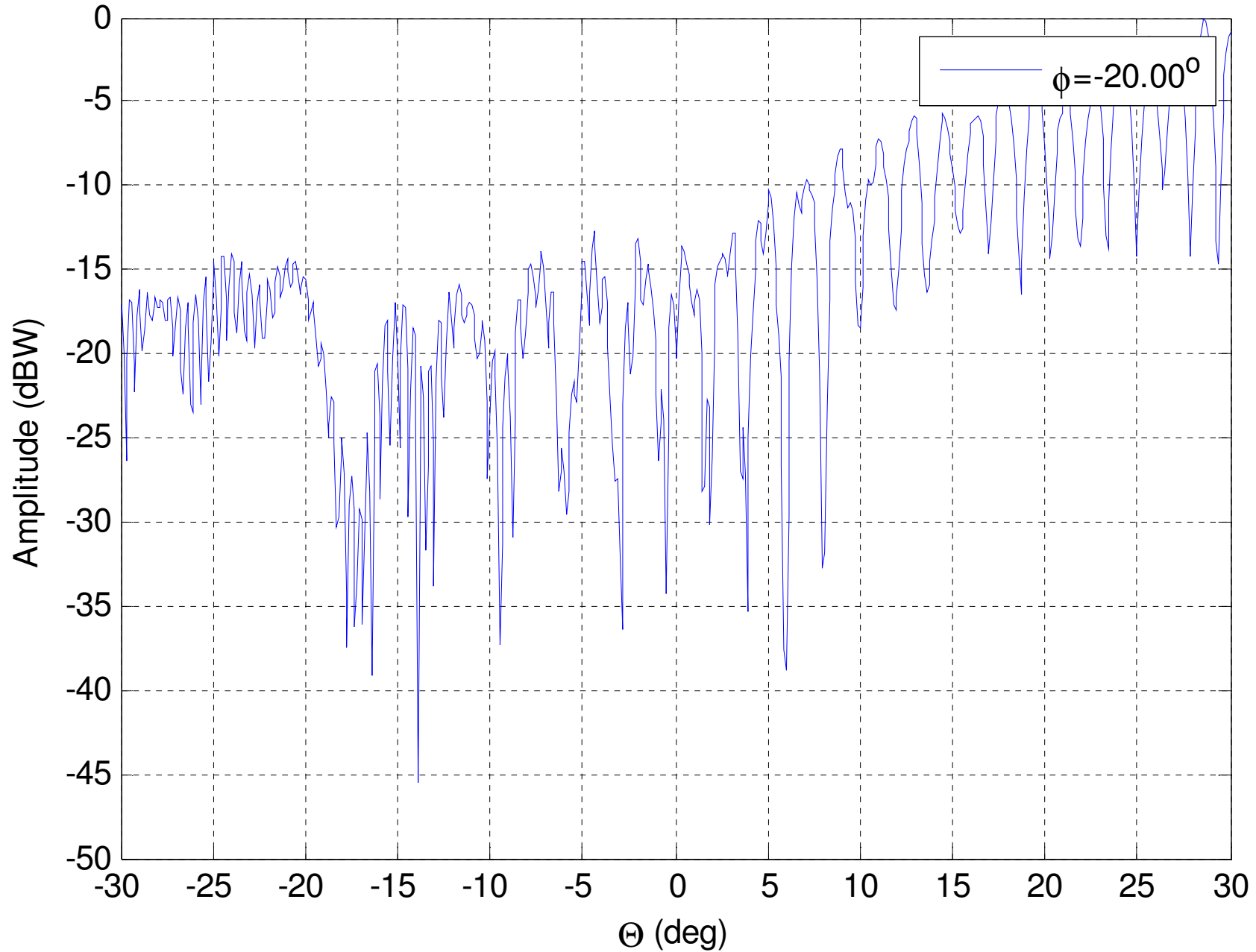
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -1.82 dBW, Date: 15-Dec-2011



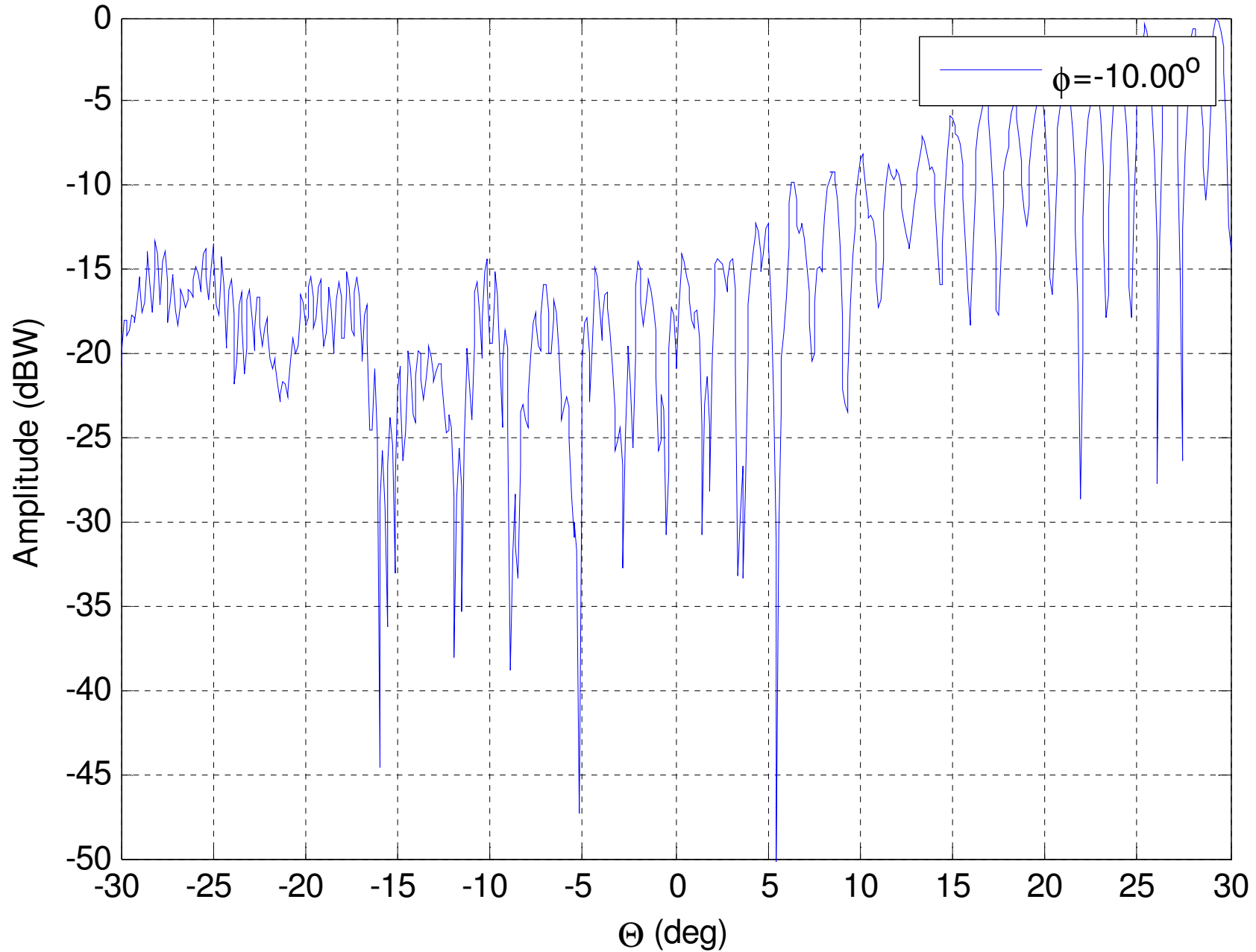
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 1.72 dBW, Date: 15-Dec-2011



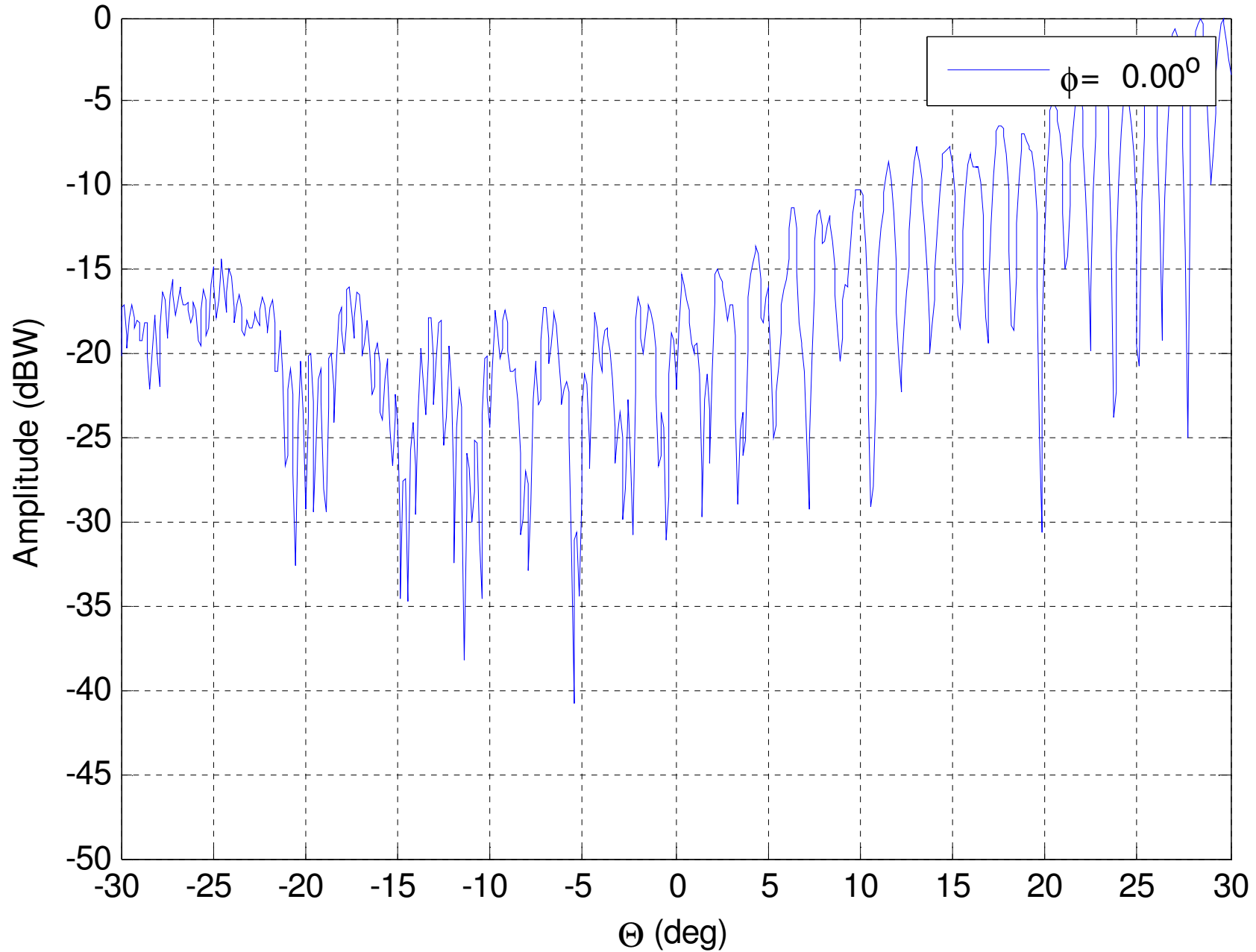
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 2.37 dBW, Date: 15-Dec-2011



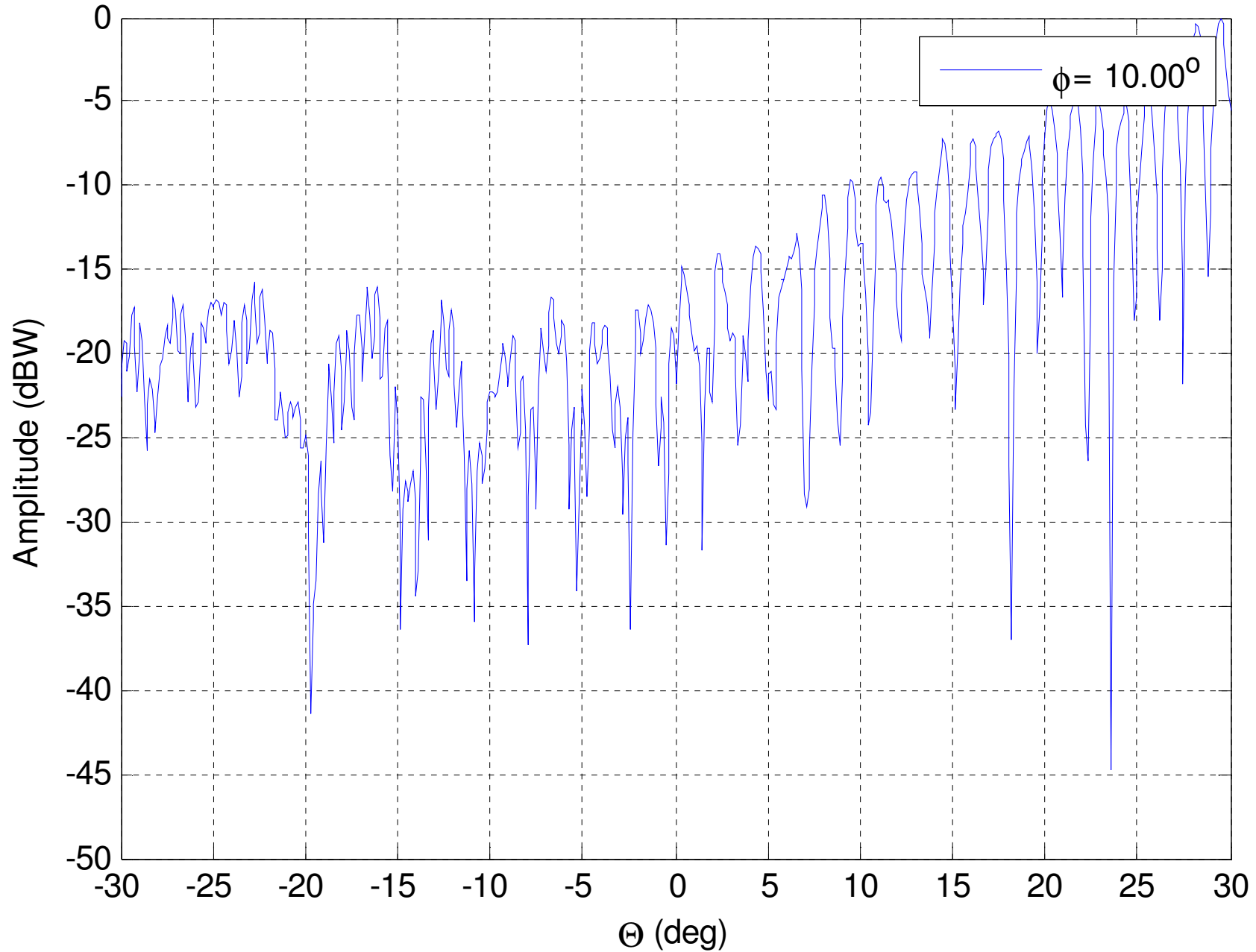
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 3.72 dBW, Date: 15-Dec-2011



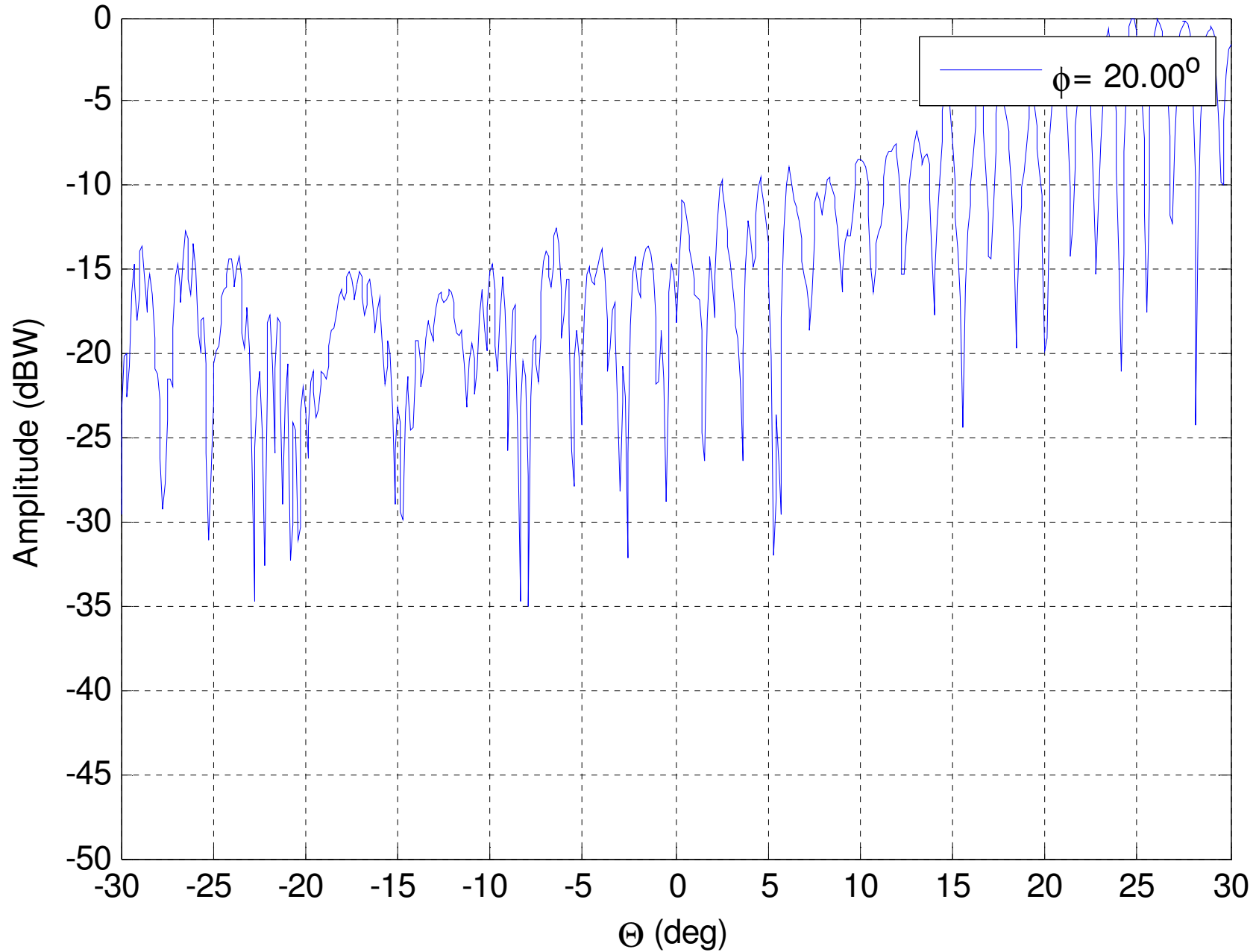
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 3.34 dBW, Date: 15-Dec-2011



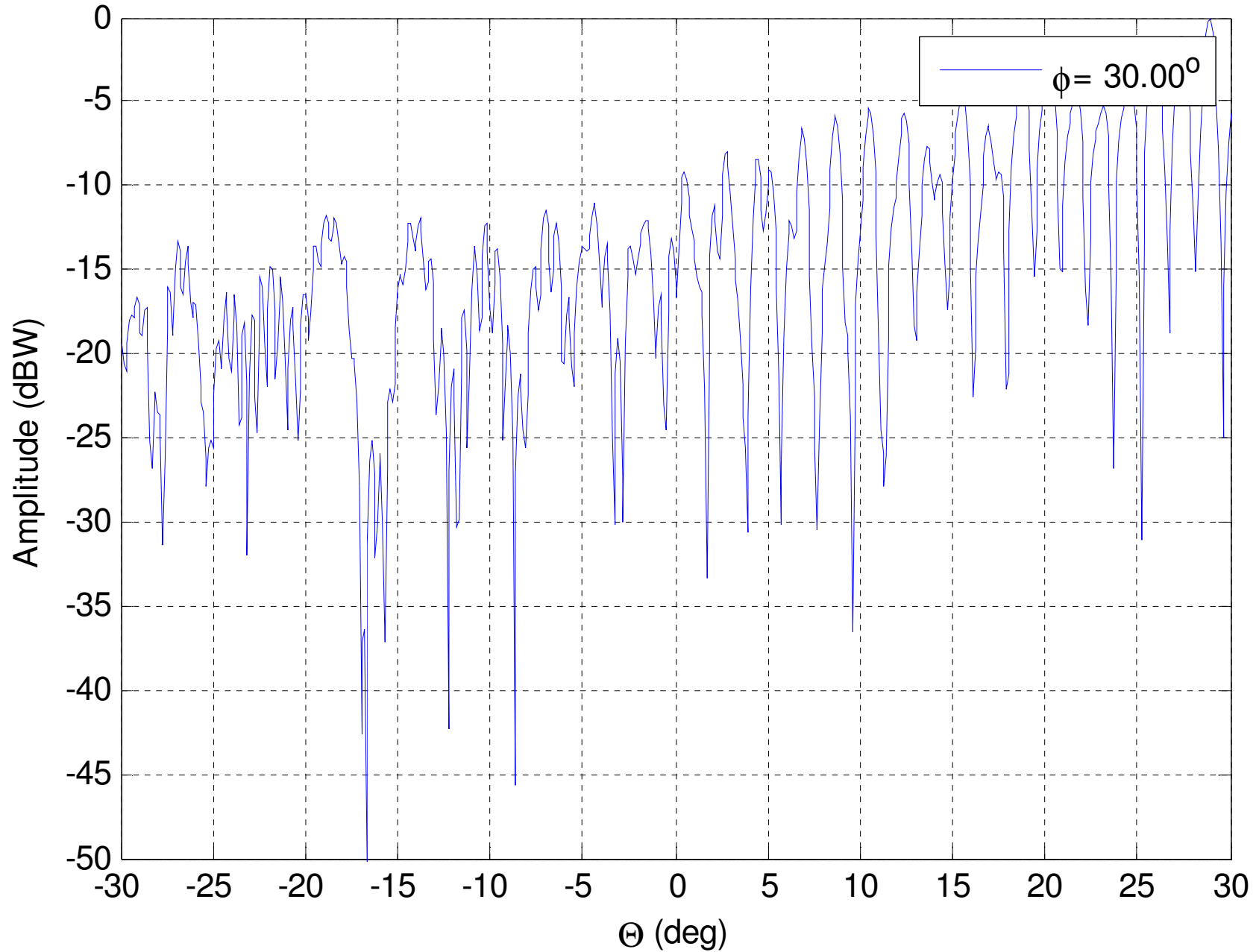
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -0.49 dBW, Date: 15-Dec-2011



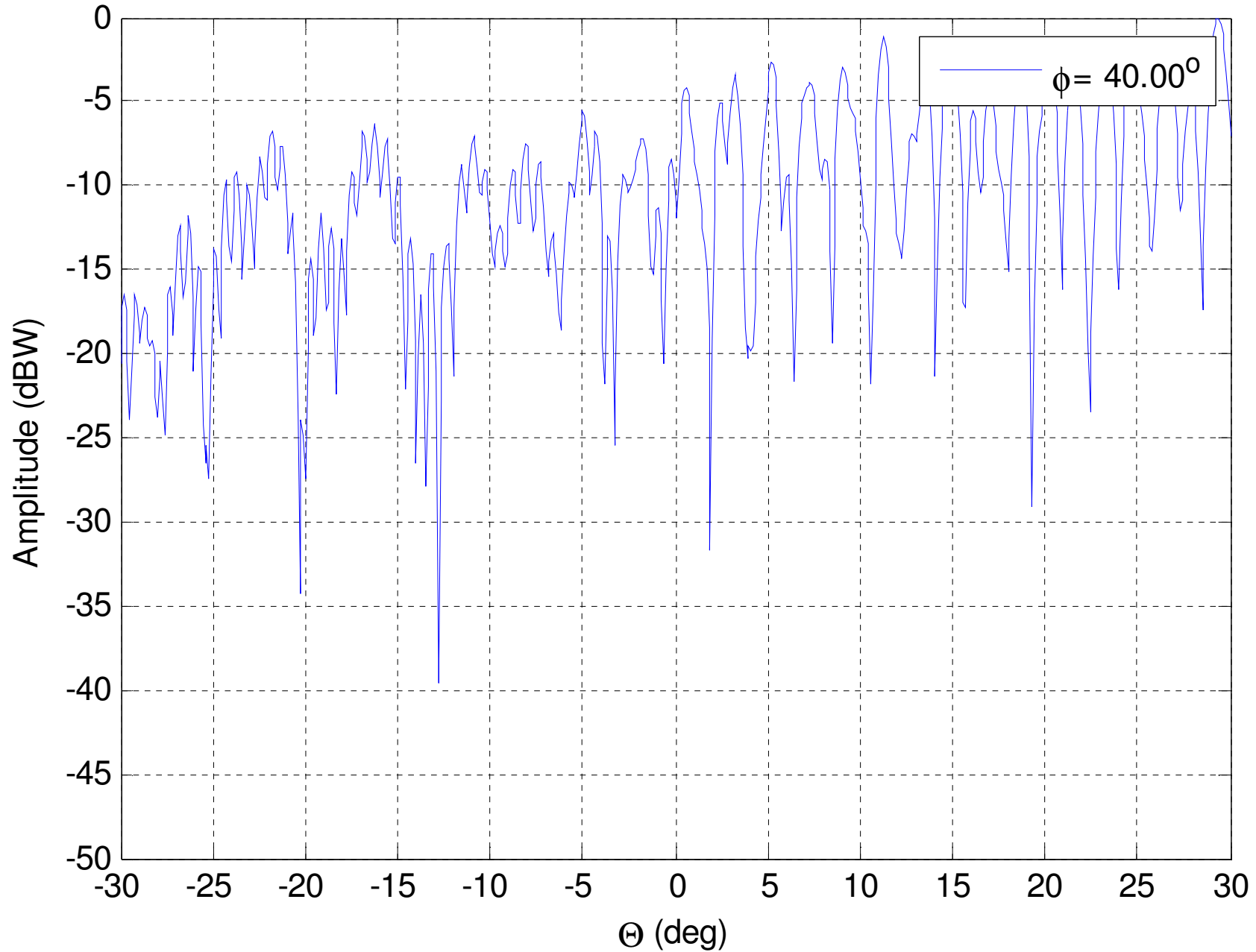
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -2.06 dBW, Date: 15-Dec-2011



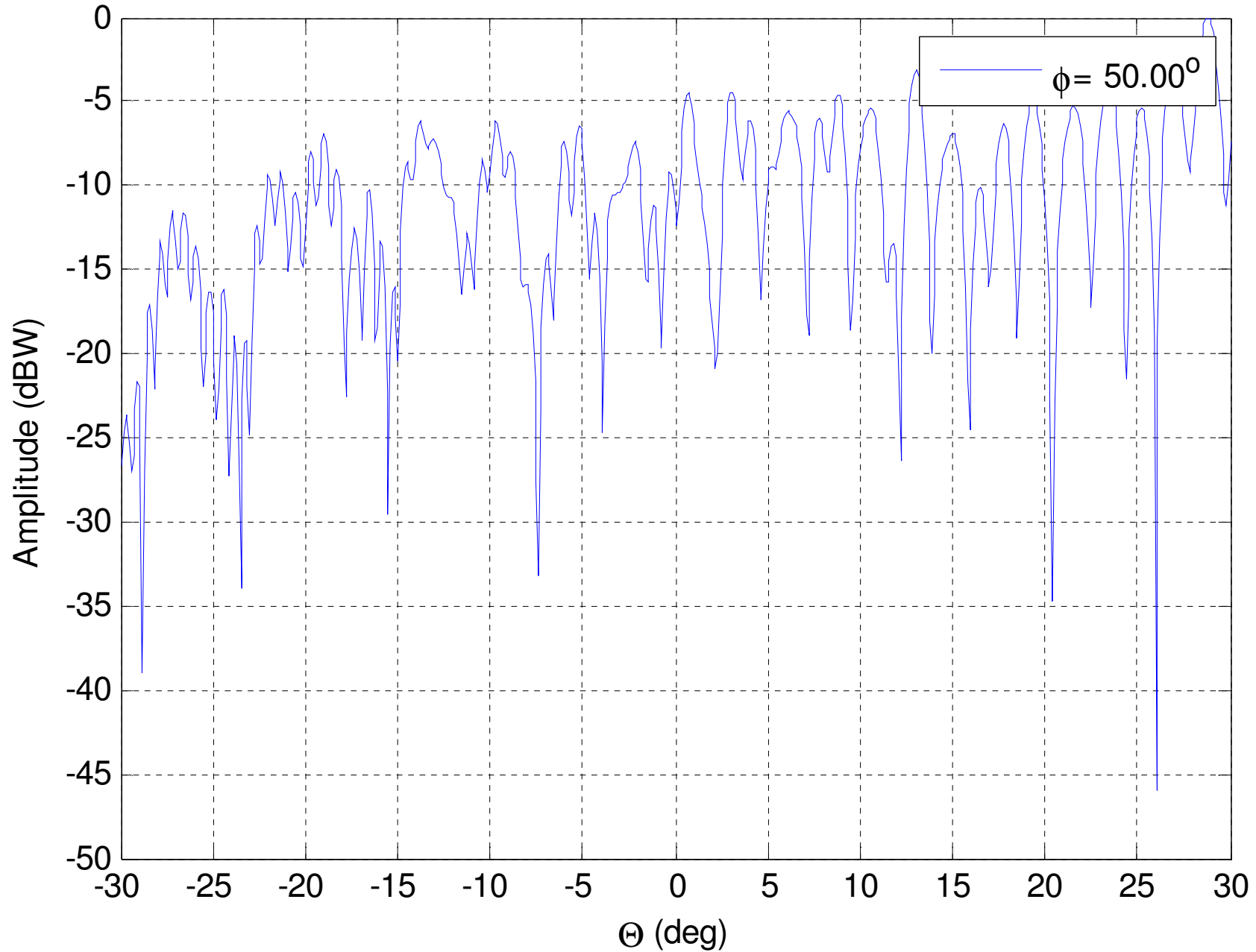
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.96 dBW, Date: 15-Dec-2011



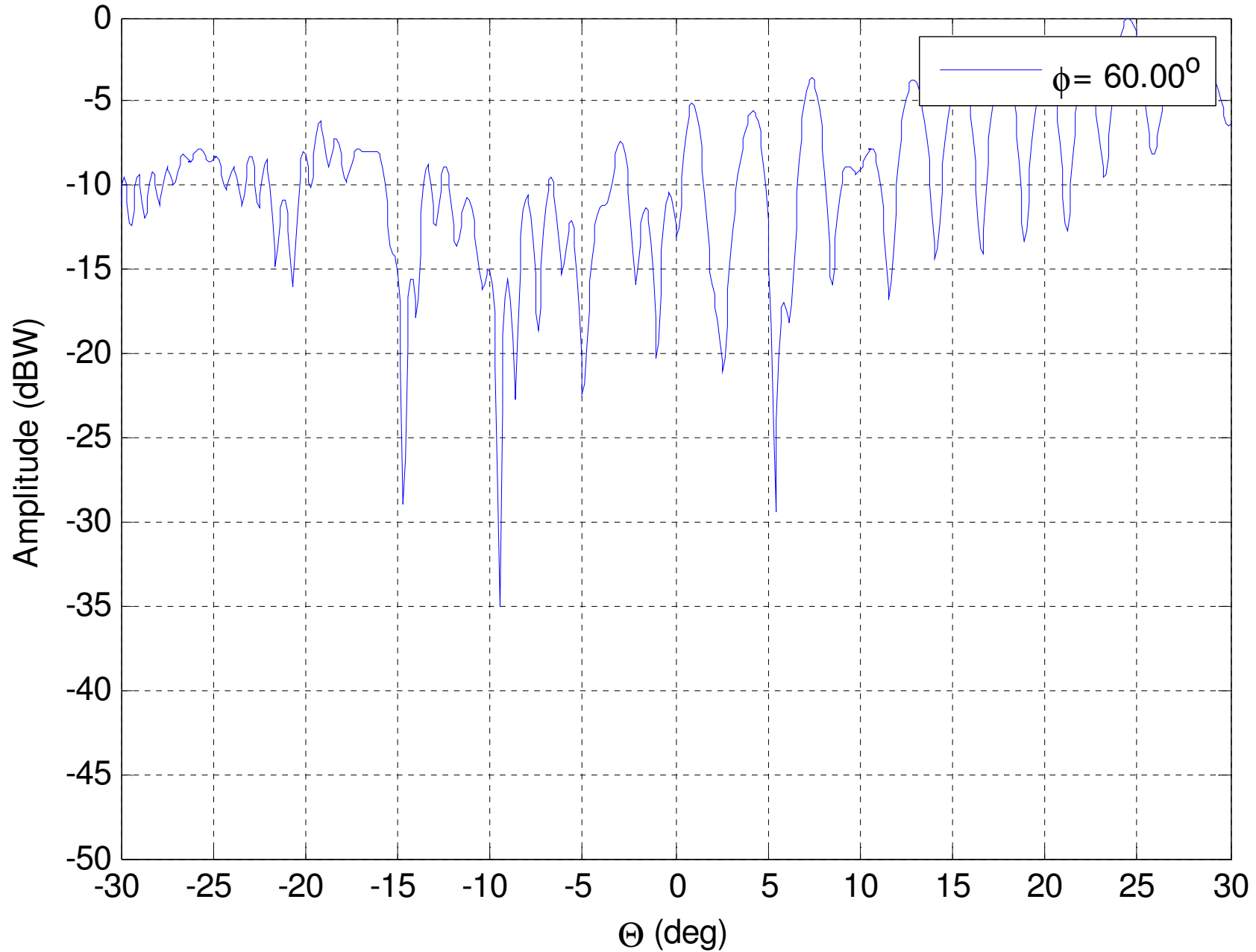
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -6.46 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

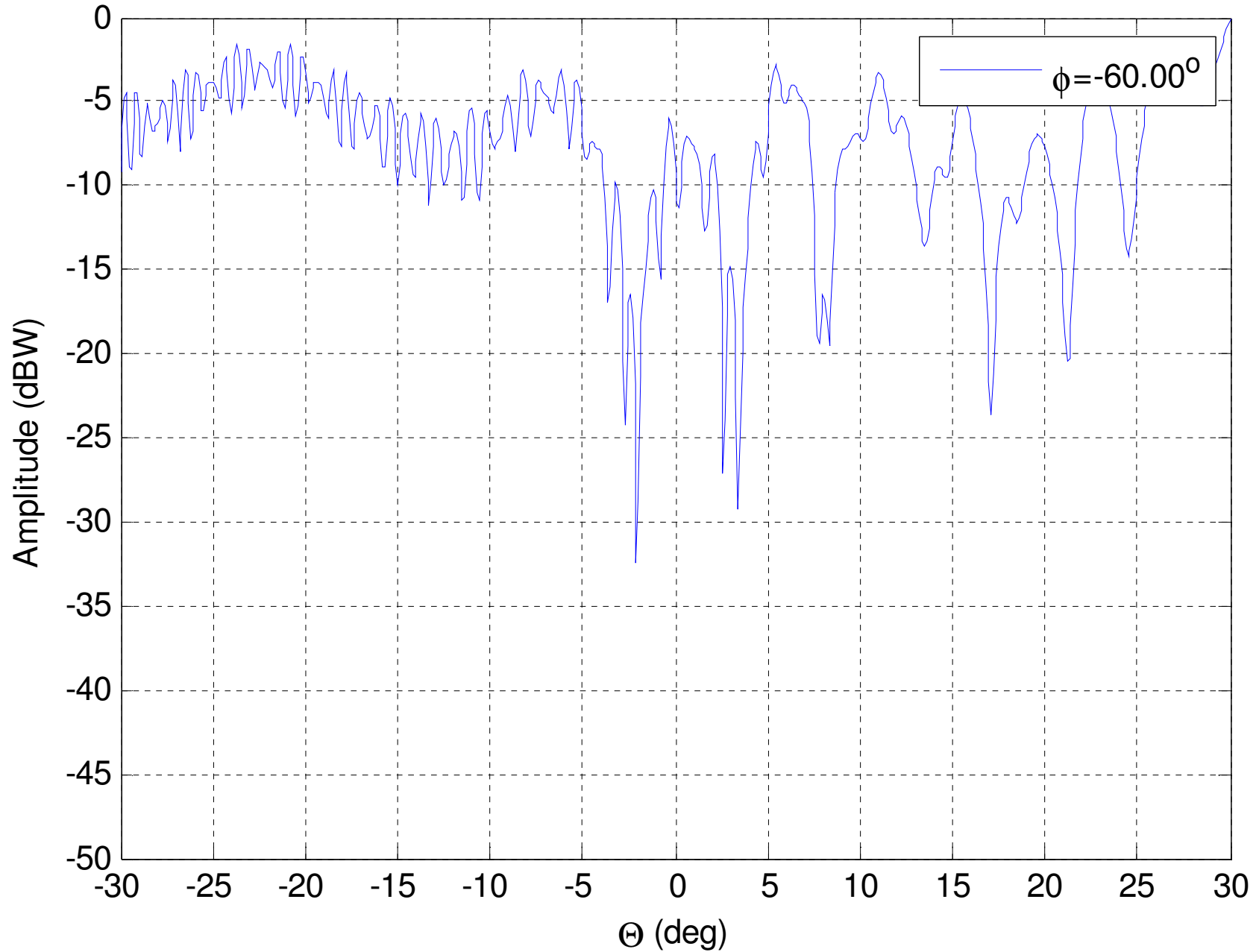
Input file: tx-17.7-rhcp-60.cut, Peak: -5.69 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

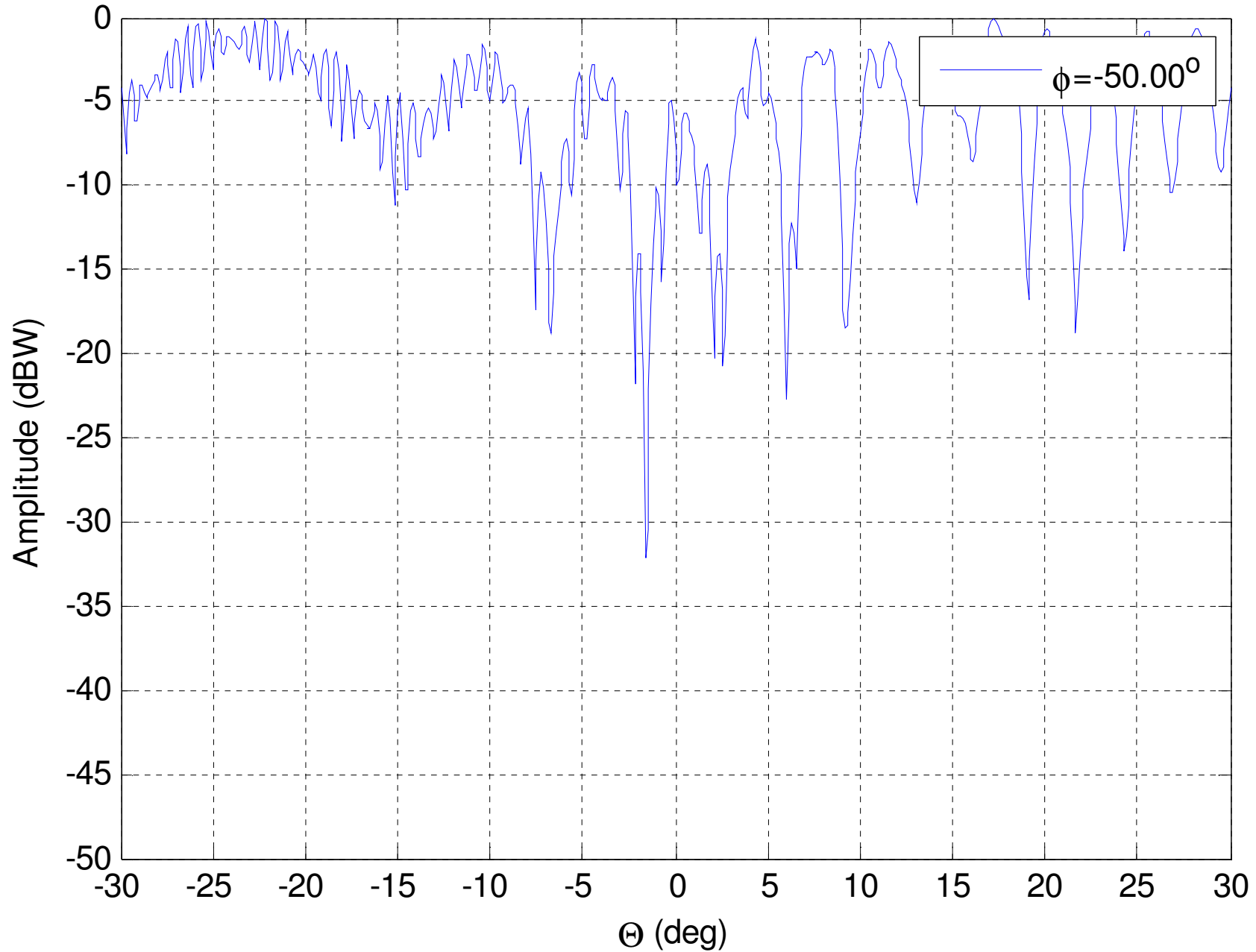
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -6.04 dBW, Date: 15-Dec-2011



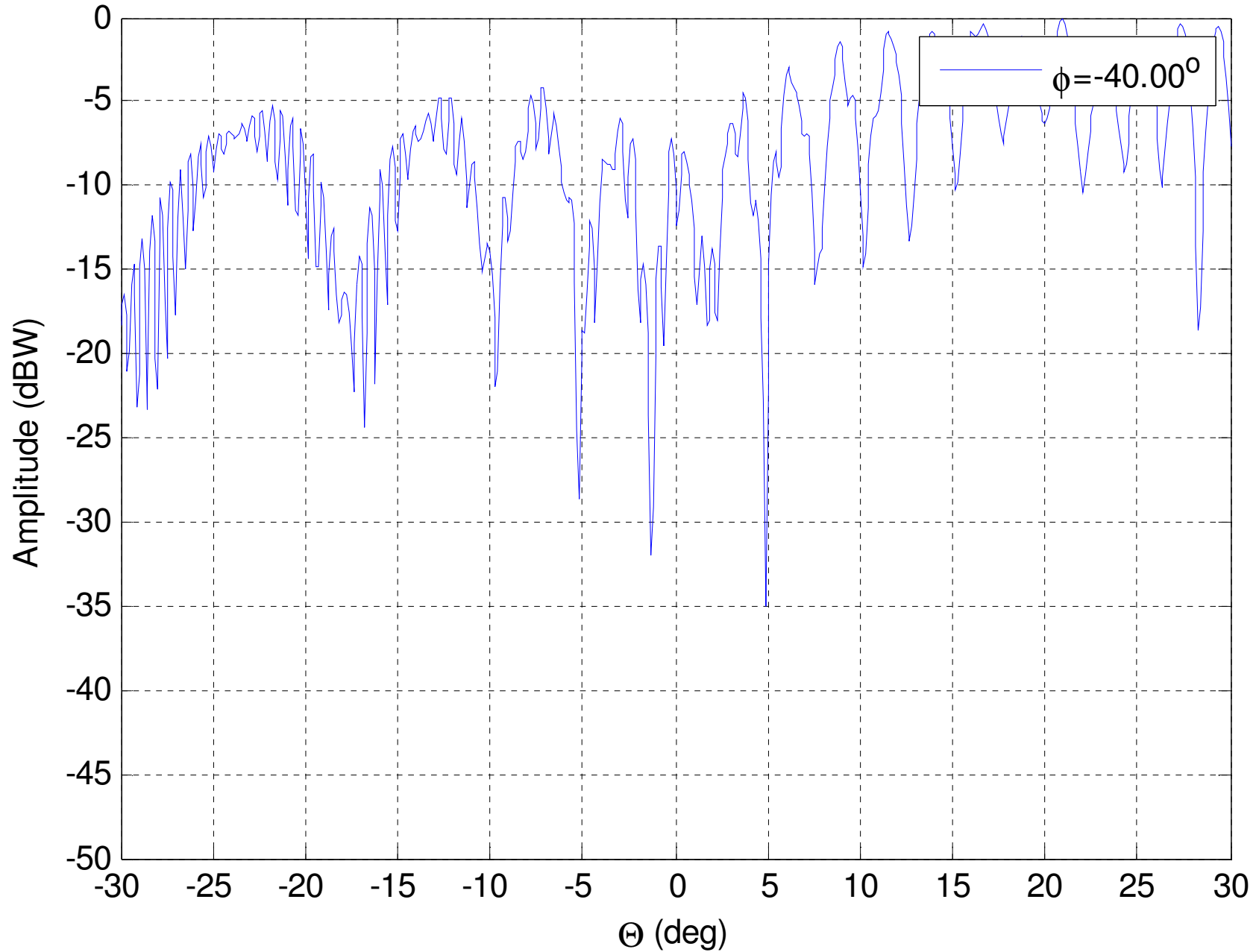
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.35 dBW, Date: 15-Dec-2011



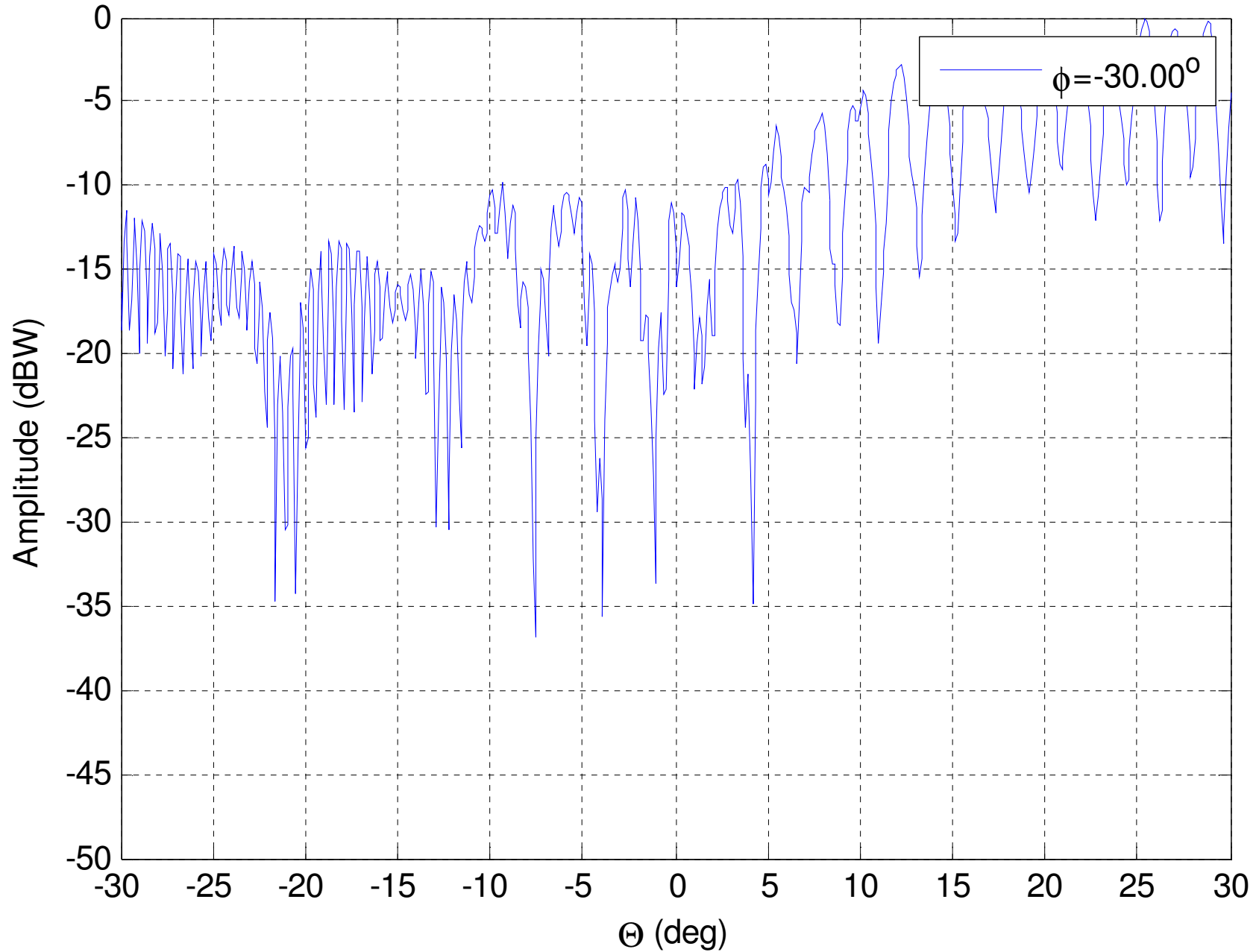
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -4.99 dBW, Date: 15-Dec-2011



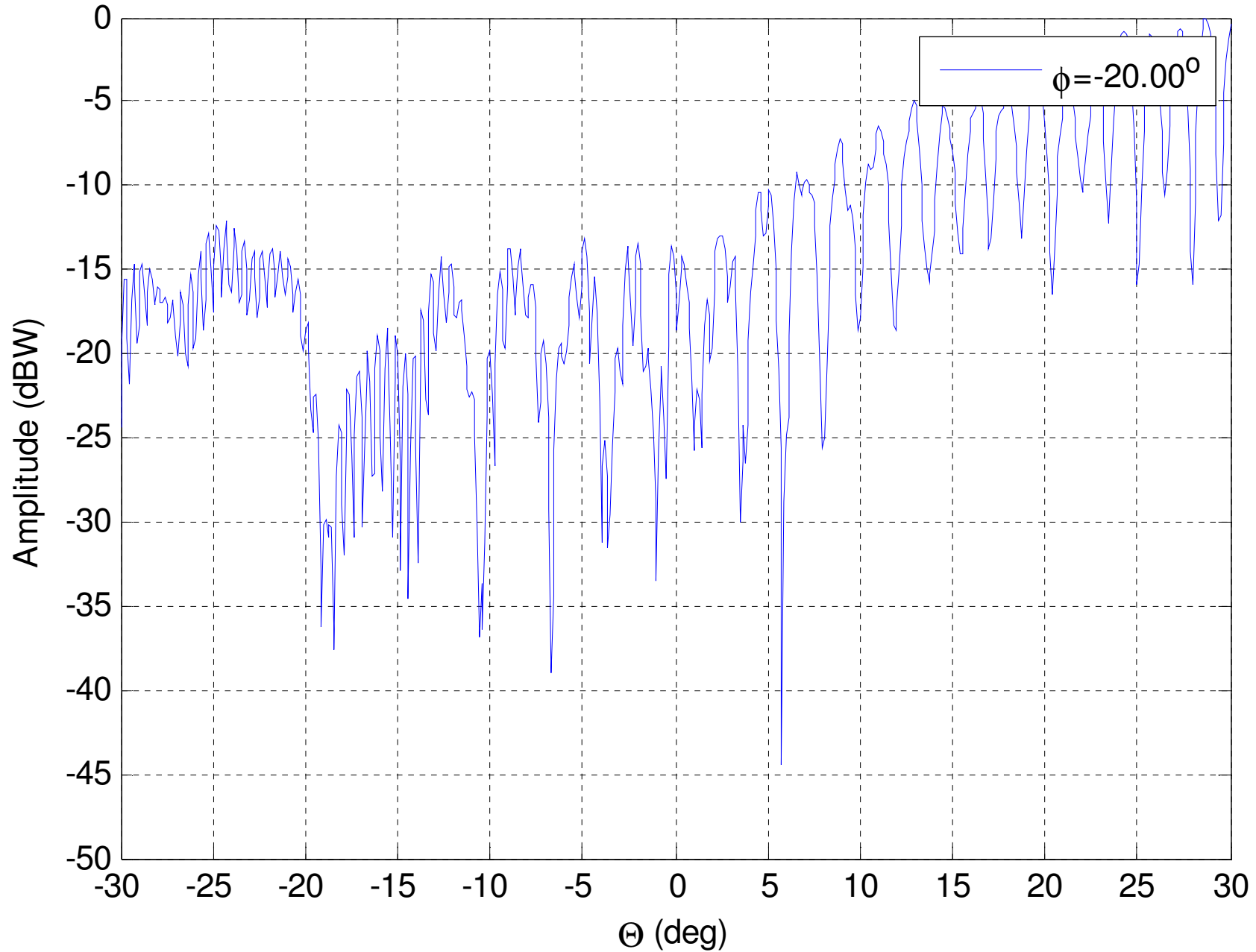
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -1.39 dBW, Date: 15-Dec-2011



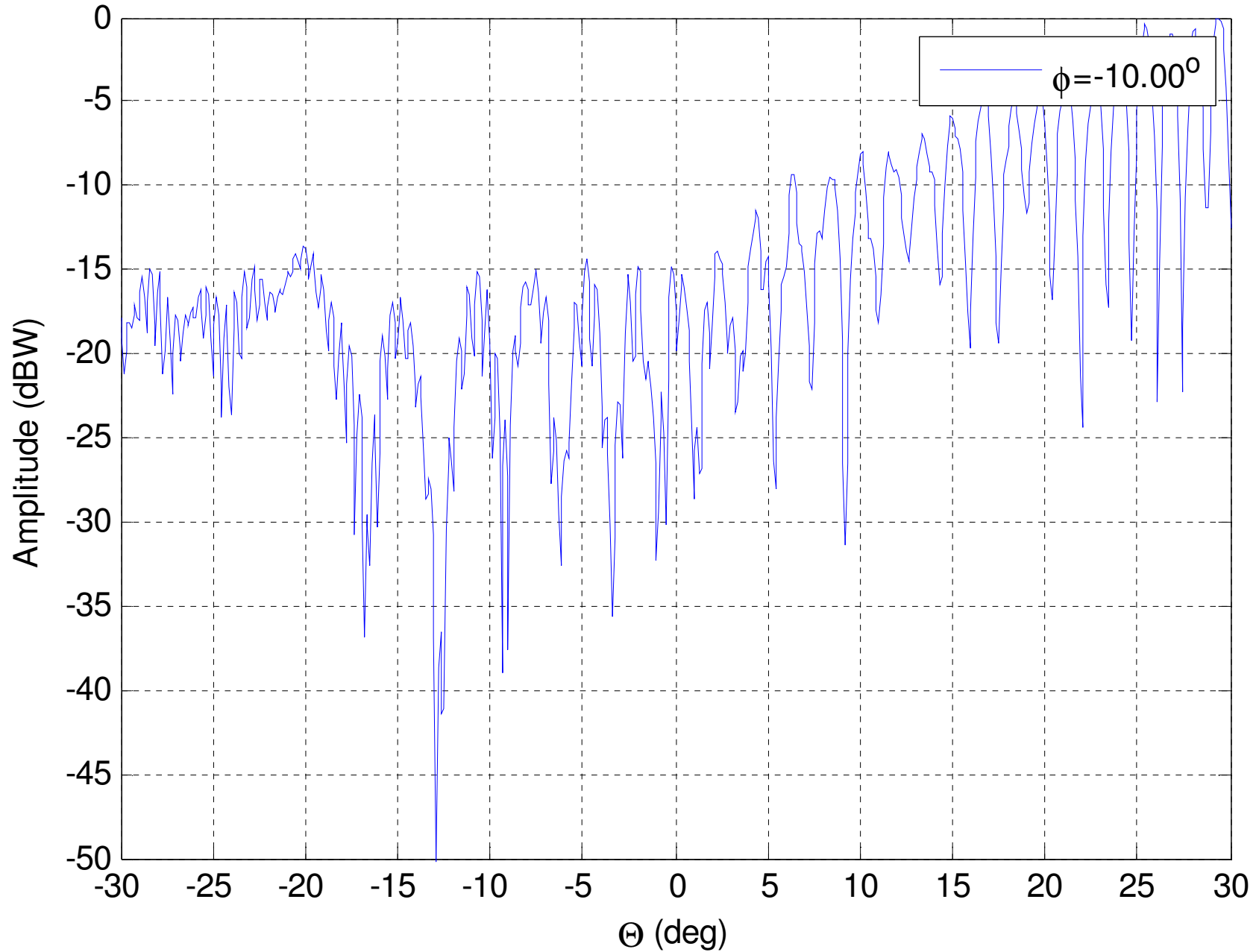
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 1.22 dBW, Date: 15-Dec-2011



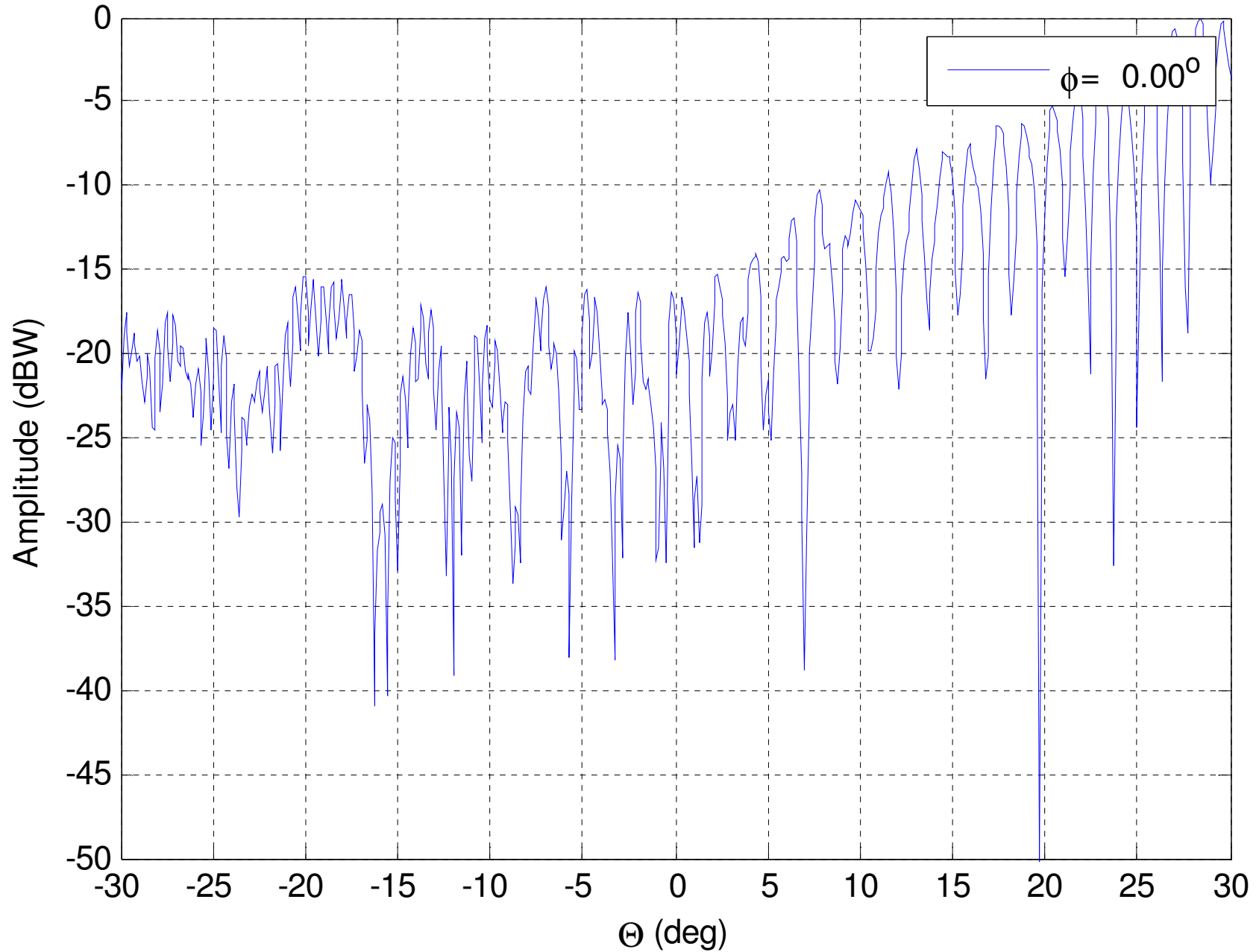
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 2.32 dBW, Date: 15-Dec-2011



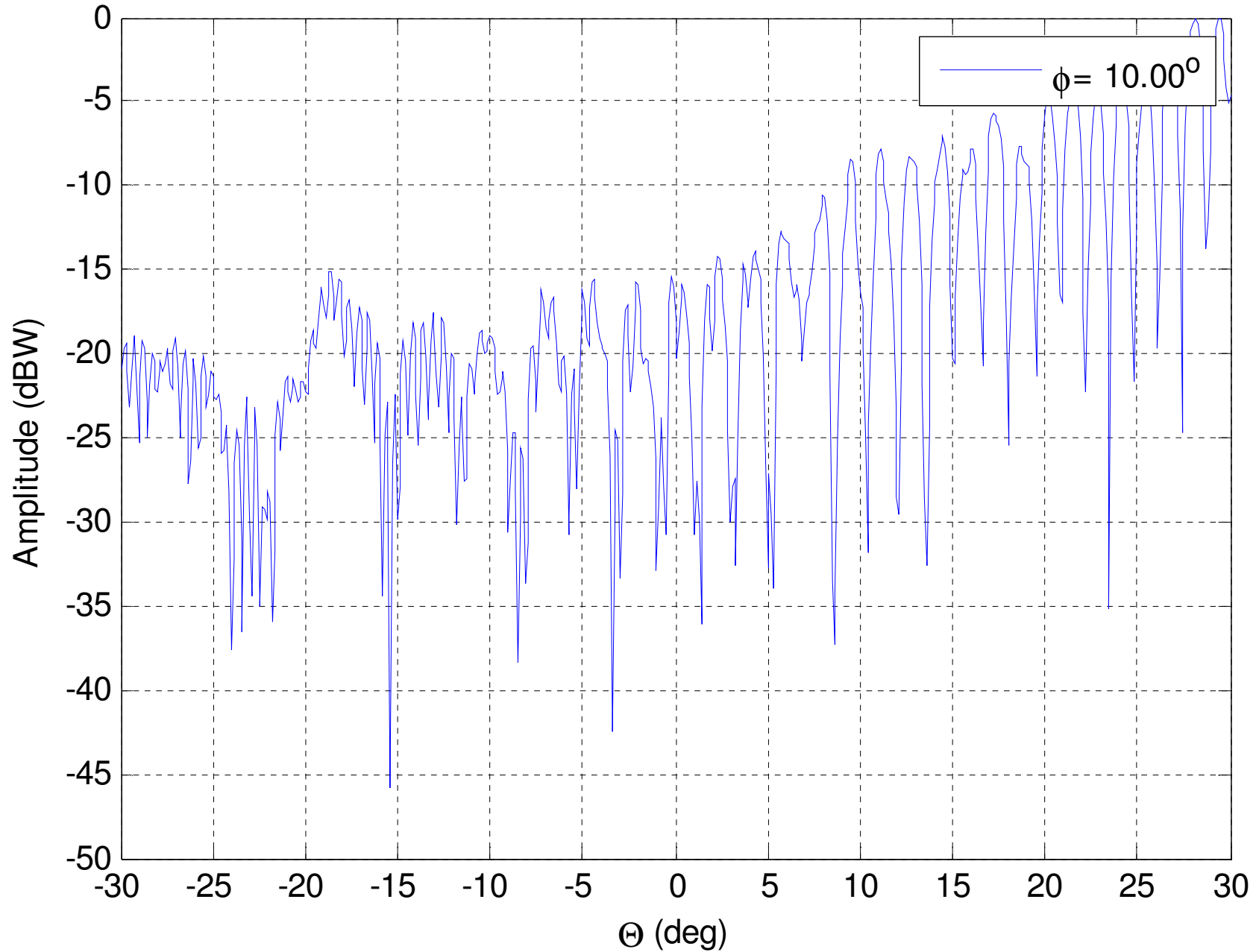
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 3.79 dBW, Date: 15-Dec-2011



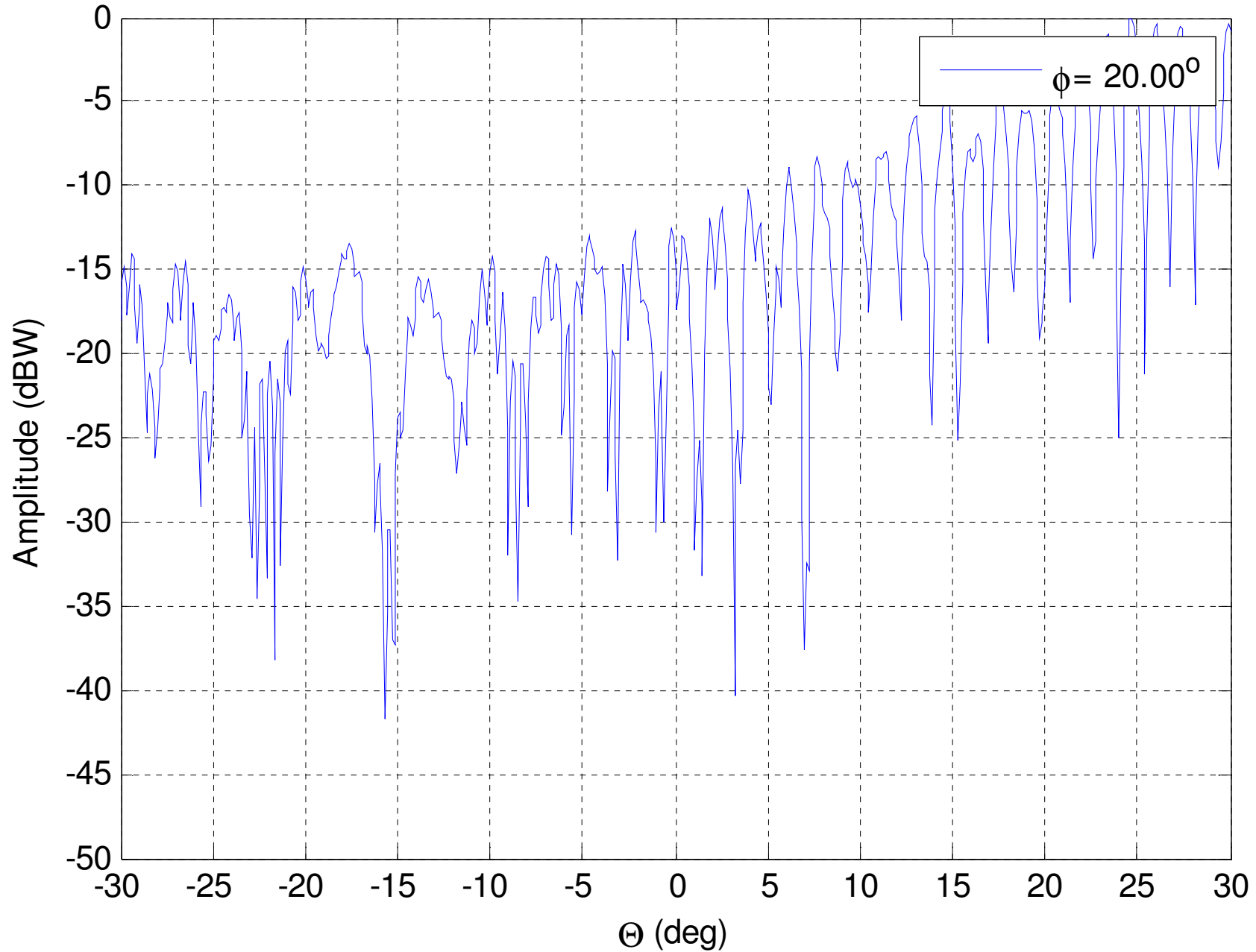
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 2.91 dBW, Date: 15-Dec-2011



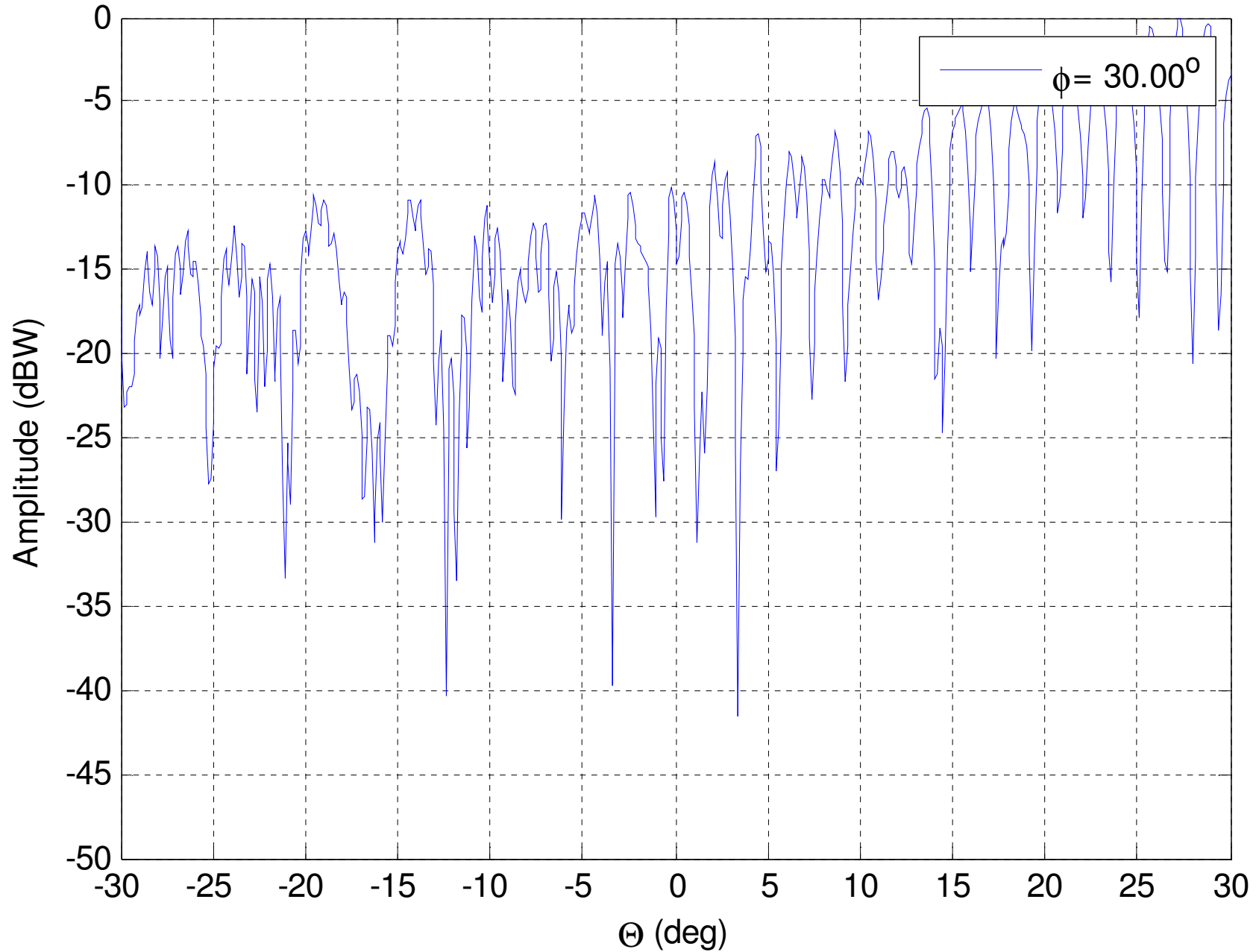
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -0.02 dBW, Date: 15-Dec-2011



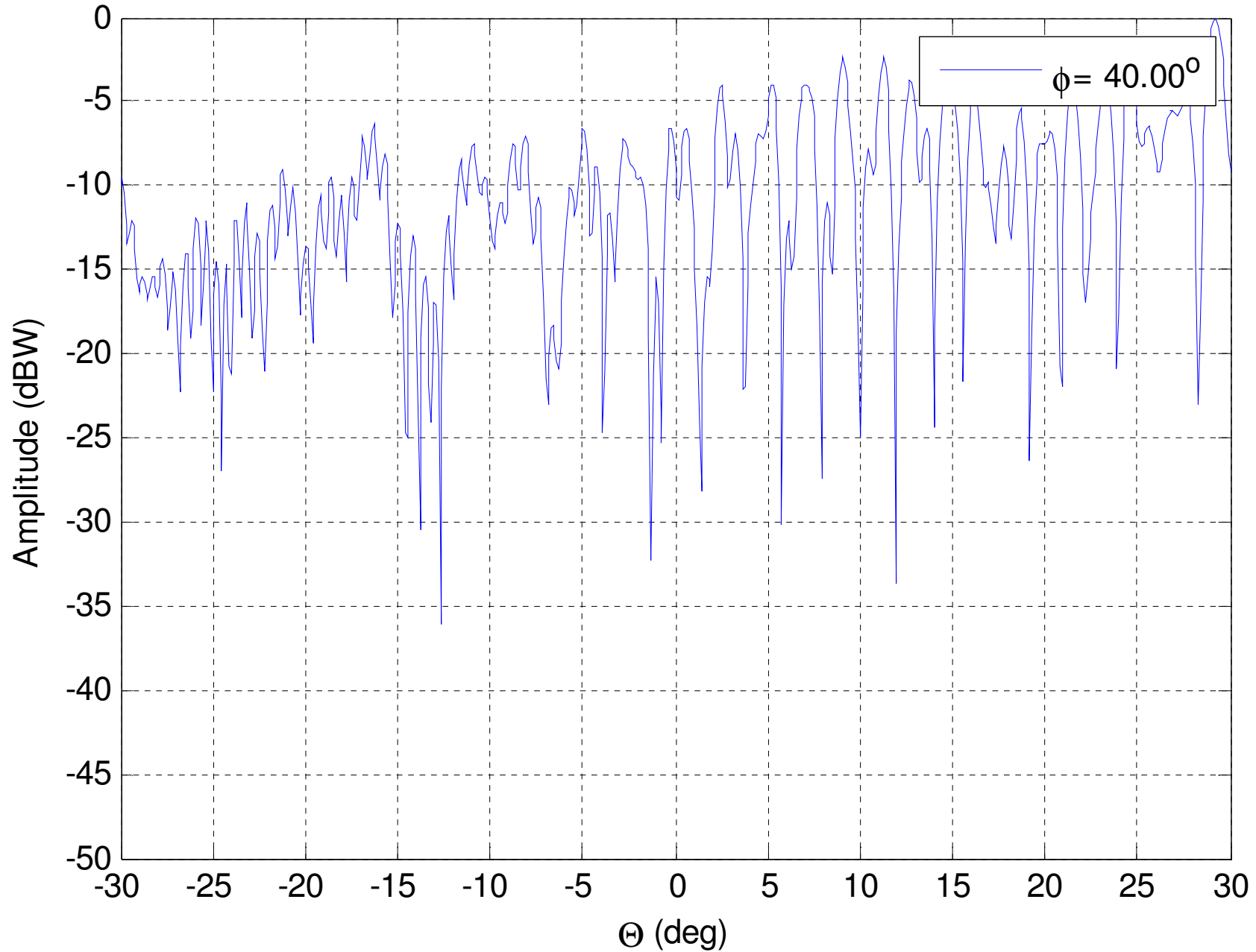
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -2.52 dBW, Date: 15-Dec-2011



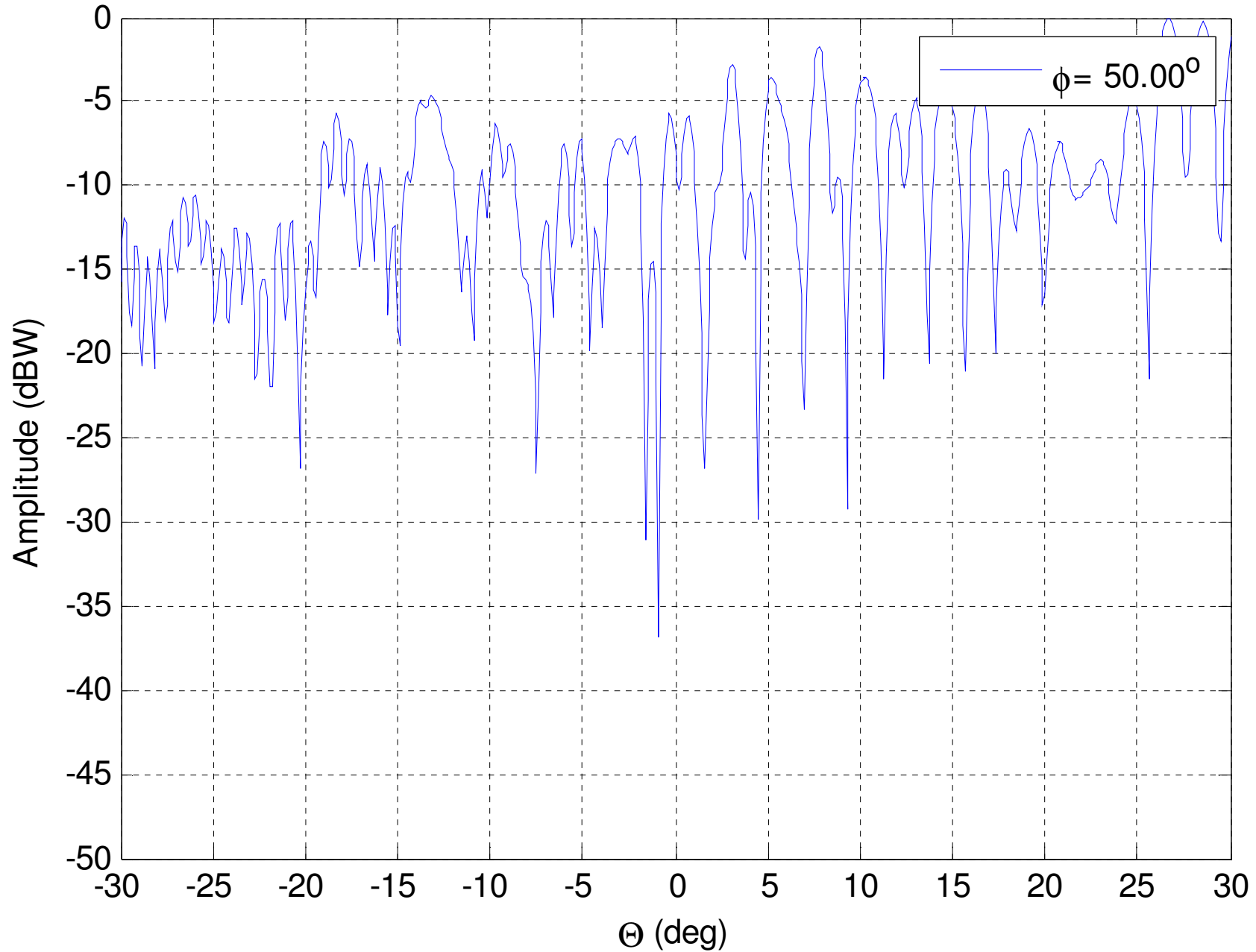
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.27 dBW, Date: 15-Dec-2011



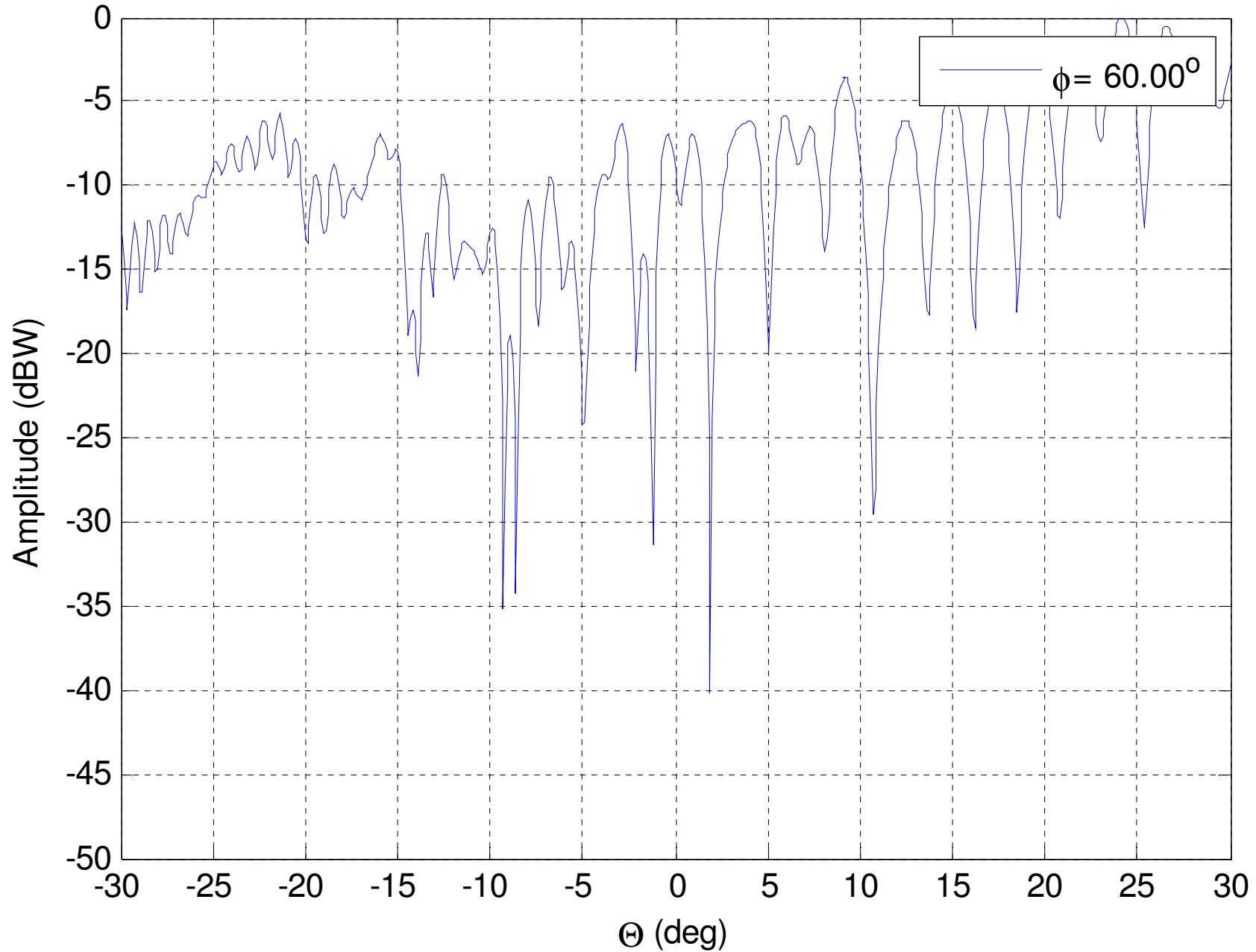
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -7.09 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -6.13 dBW, Date: 15-Dec-2011



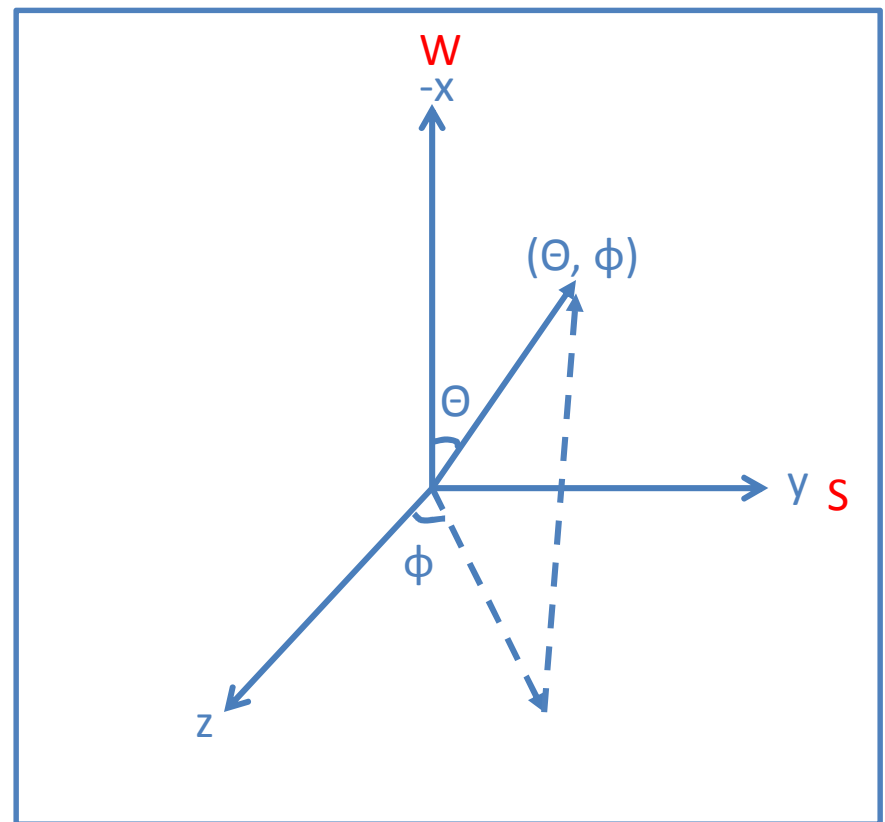
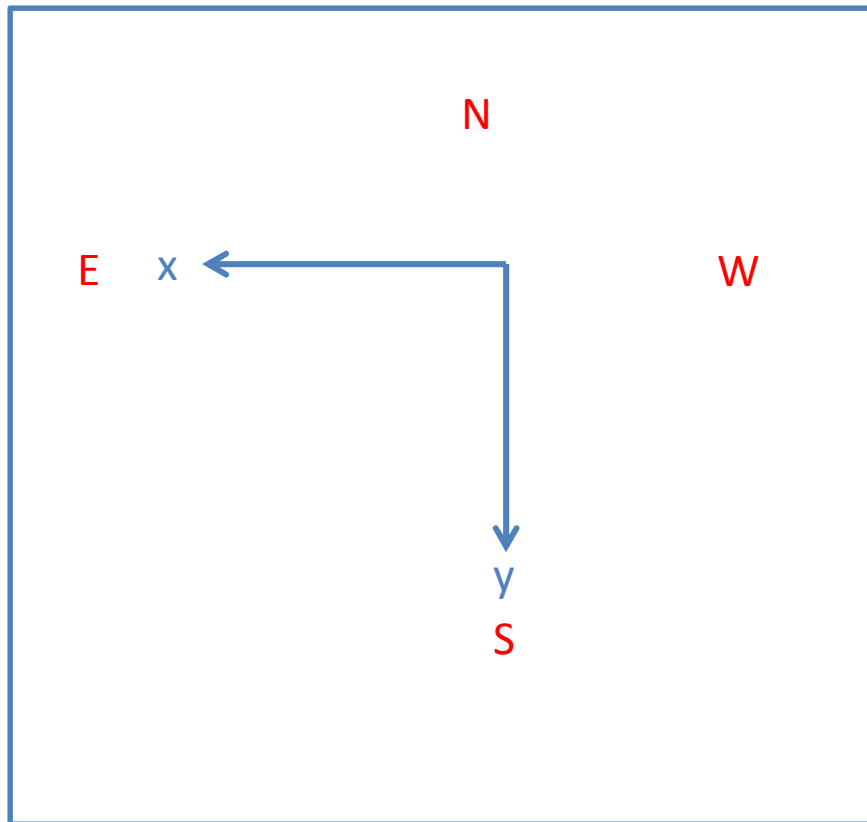
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 26

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



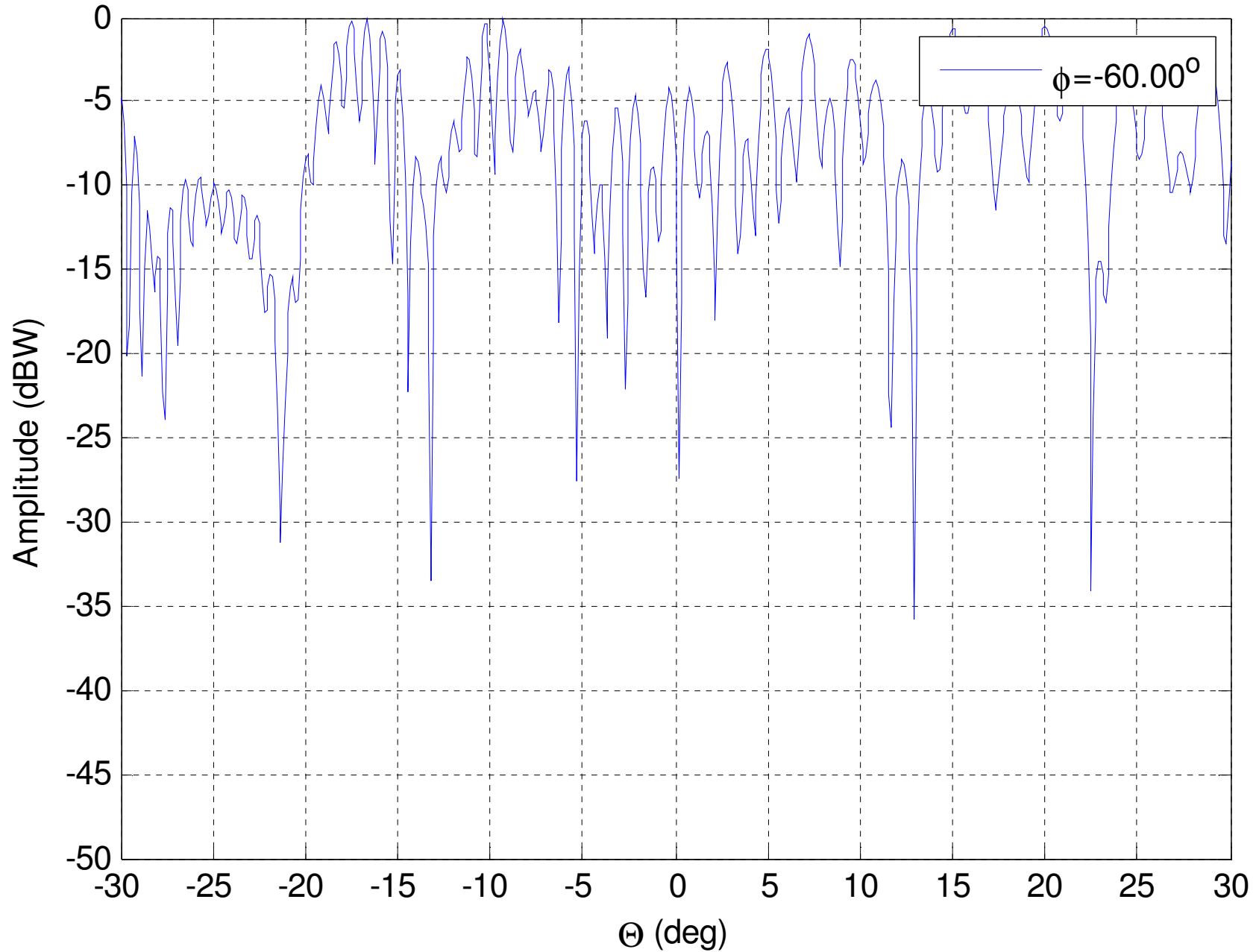
Spot Beam26, -X Axis Plots

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

RHCP at 17.3 GHz

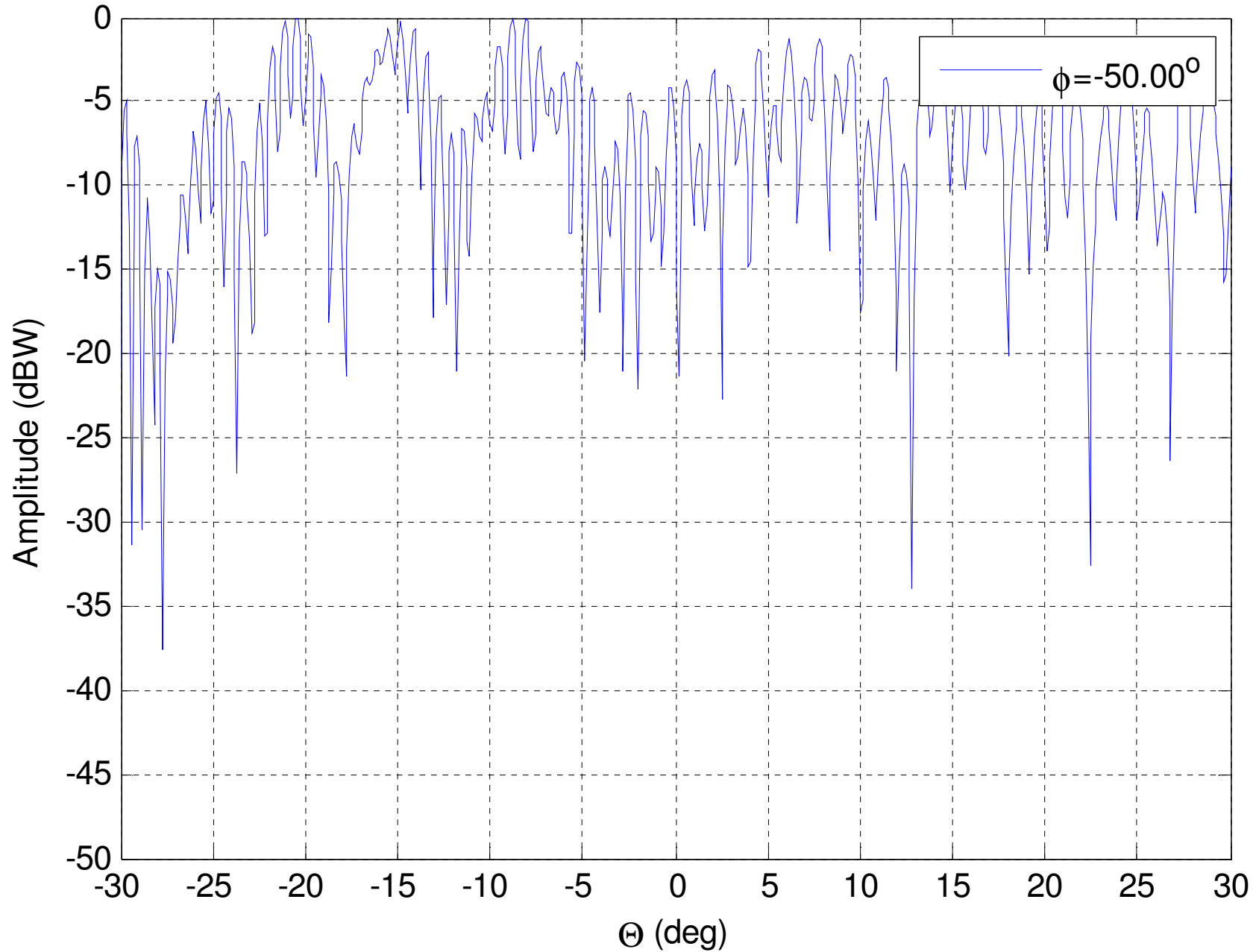
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -3.46 dBW, Date: 15-Dec-2011



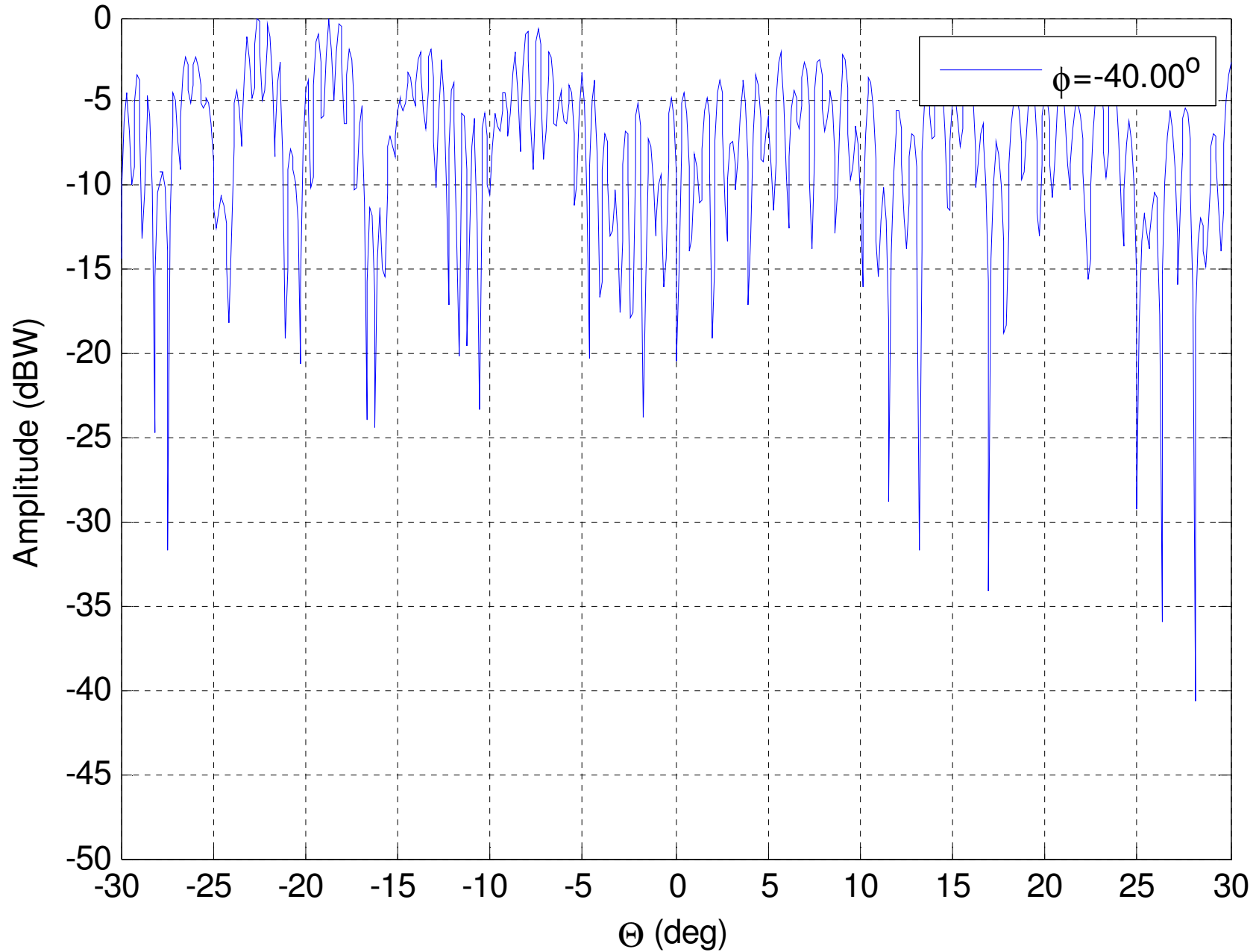
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -3.48 dBW, Date: 15-Dec-2011



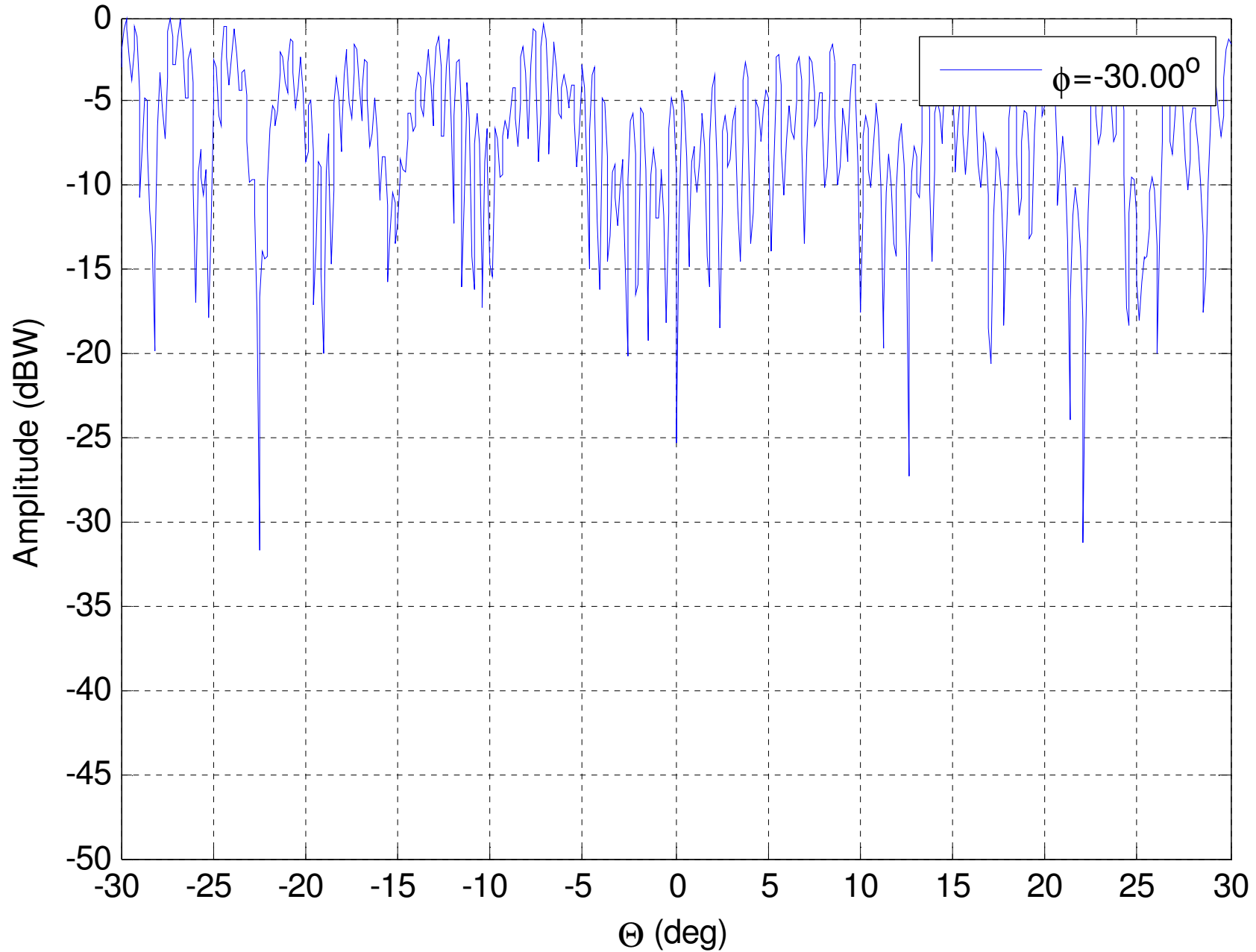
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -2.56 dBW, Date: 15-Dec-2011



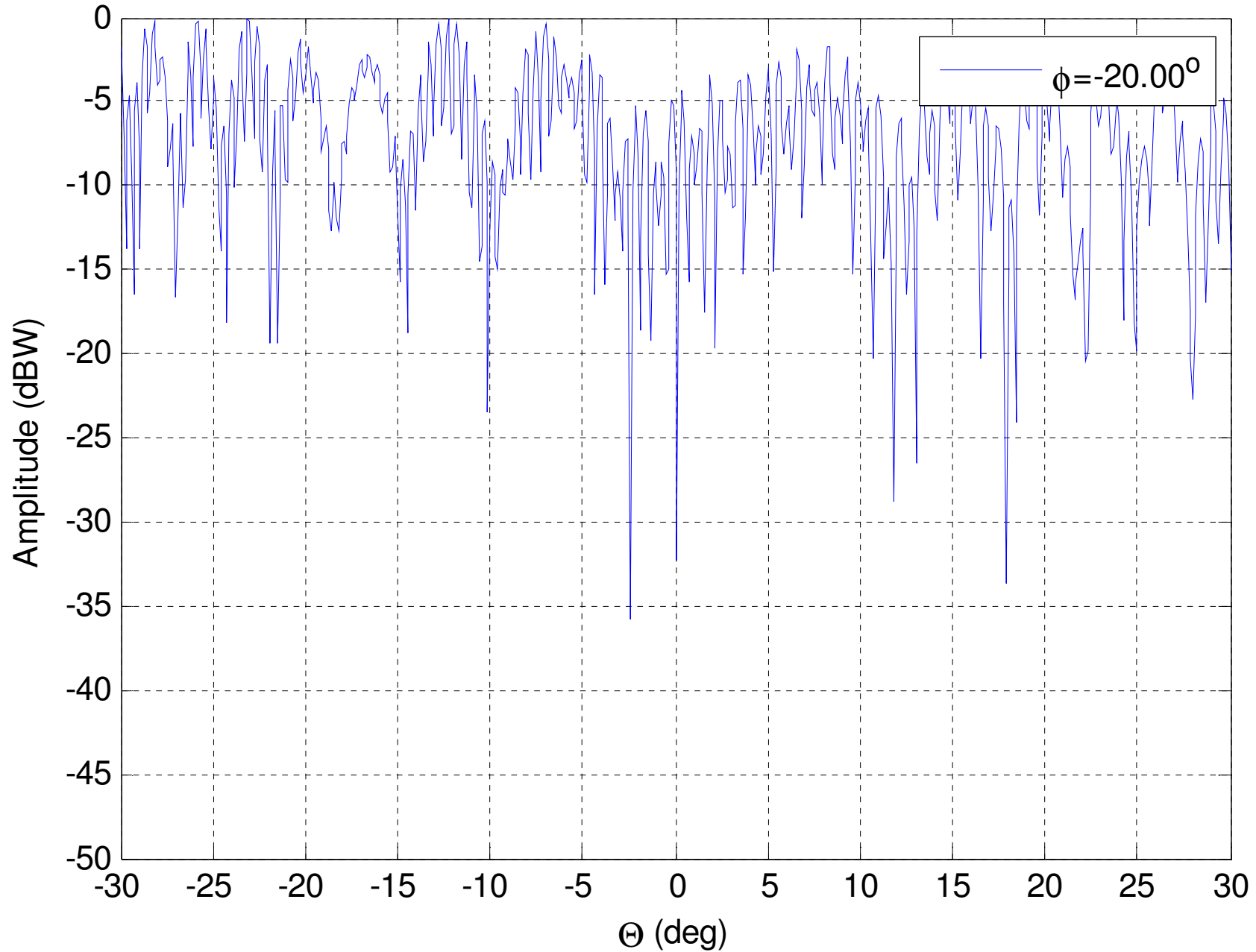
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -2.58 dBW, Date: 15-Dec-2011



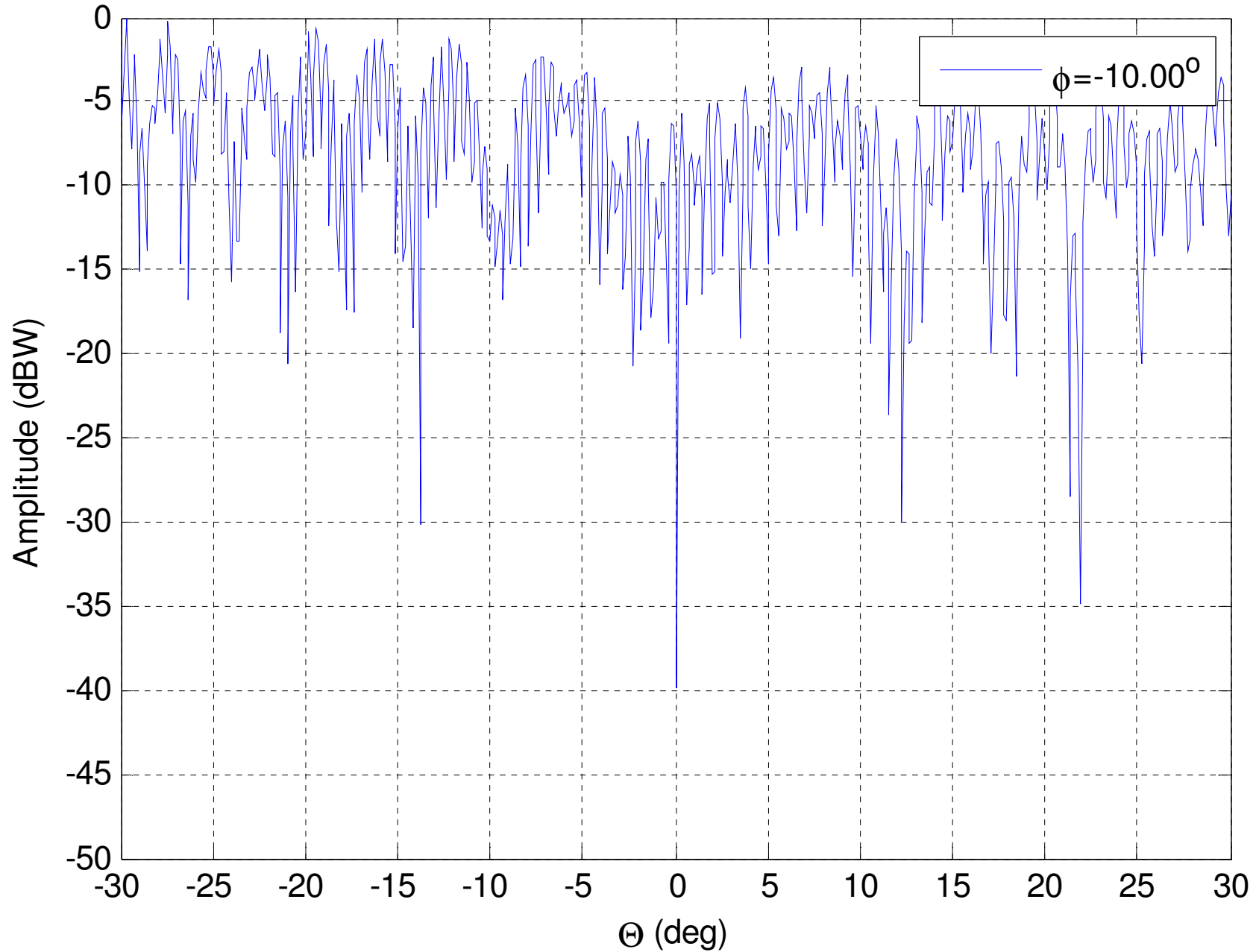
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -2.59 dBW, Date: 15-Dec-2011



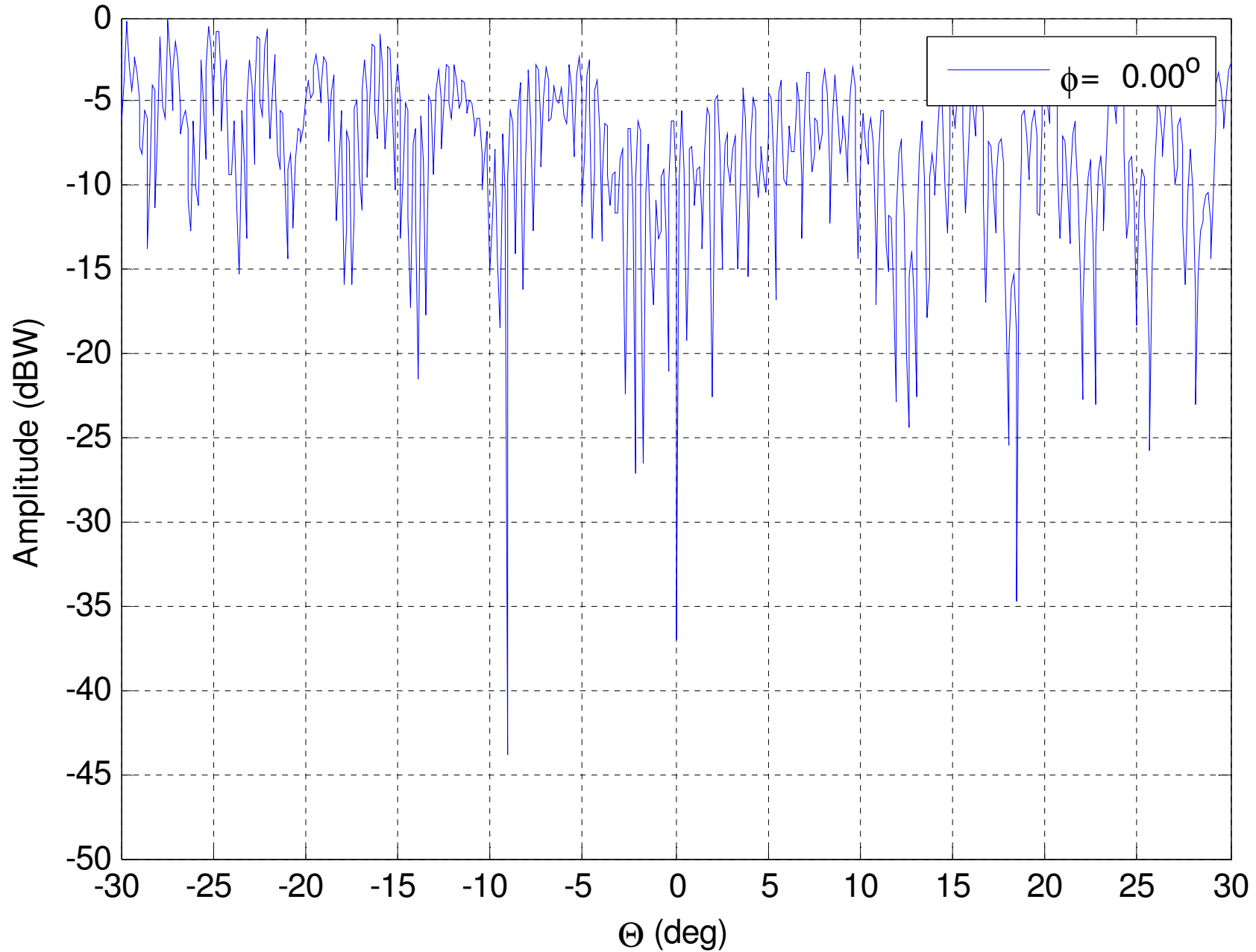
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -1.29 dBW, Date: 15-Dec-2011



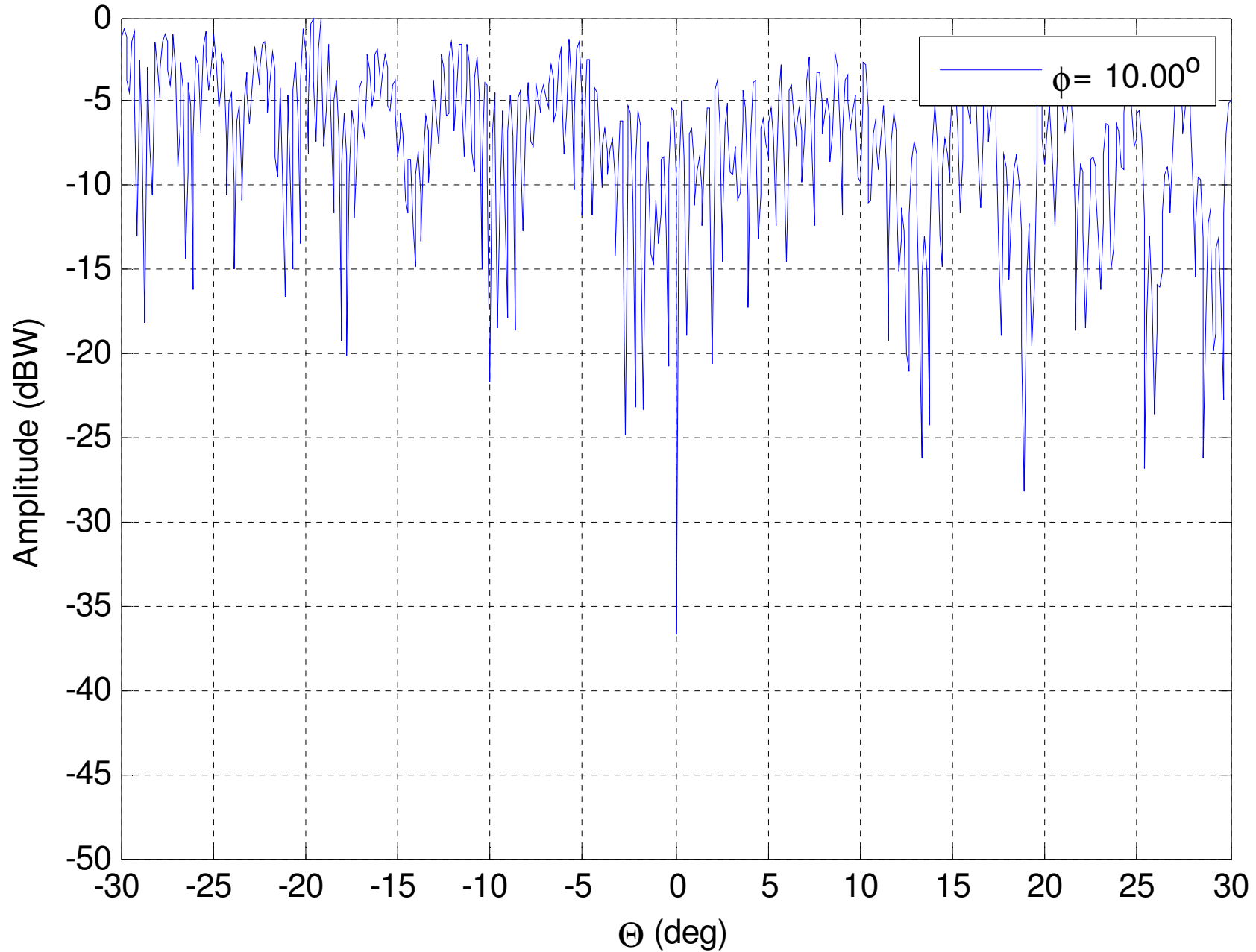
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -1.49 dBW, Date: 15-Dec-2011



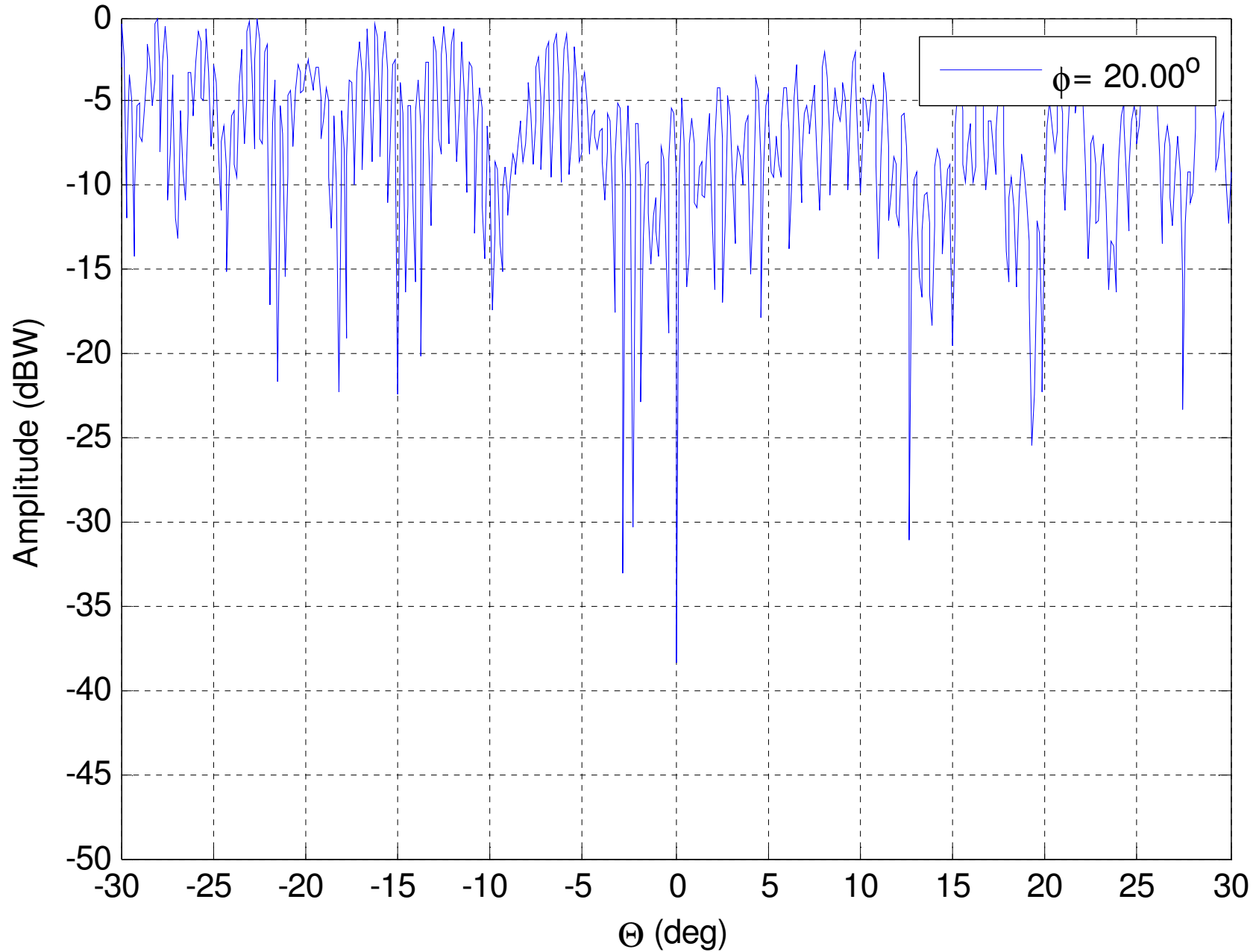
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -2.11 dBW, Date: 15-Dec-2011



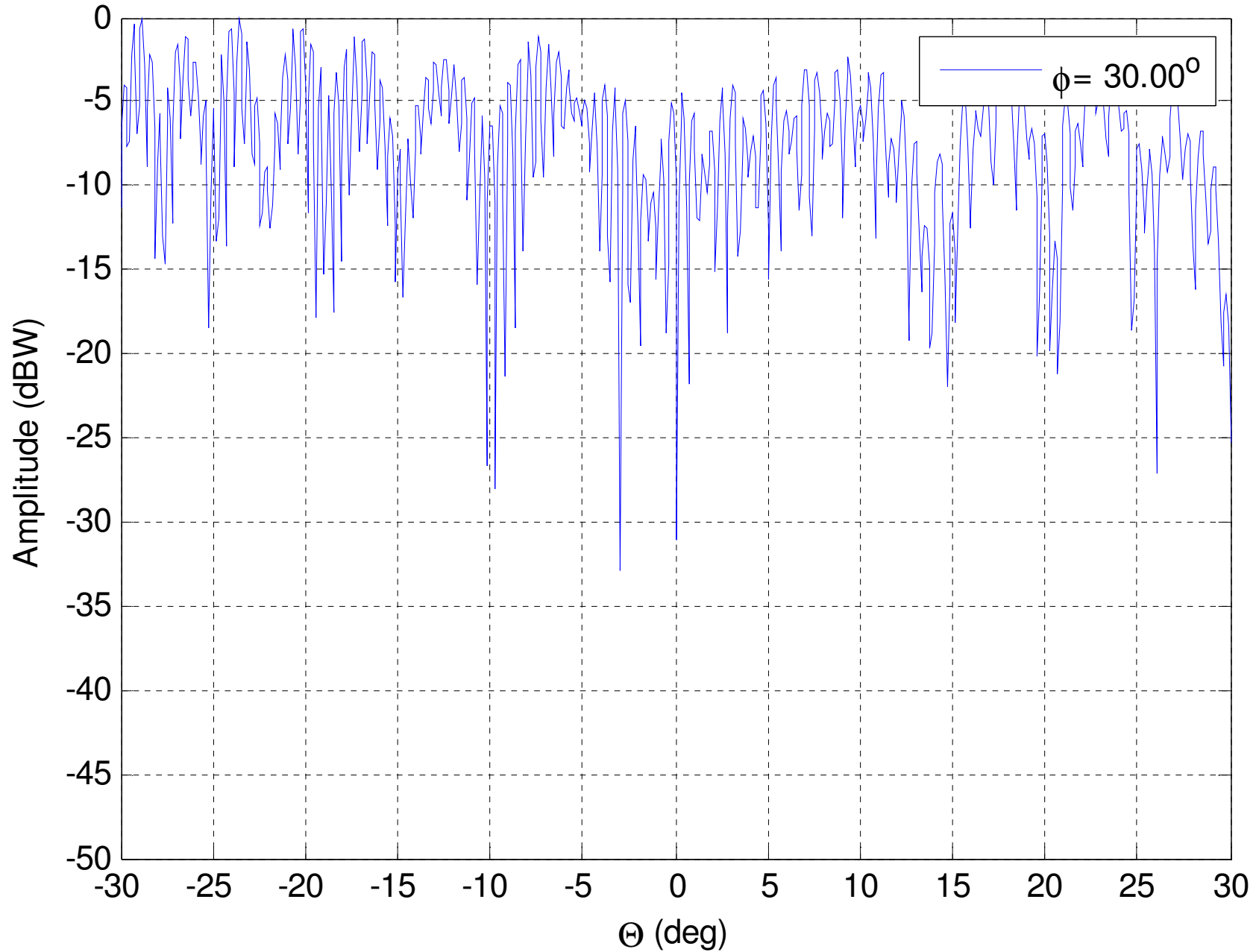
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -2.04 dBW, Date: 15-Dec-2011



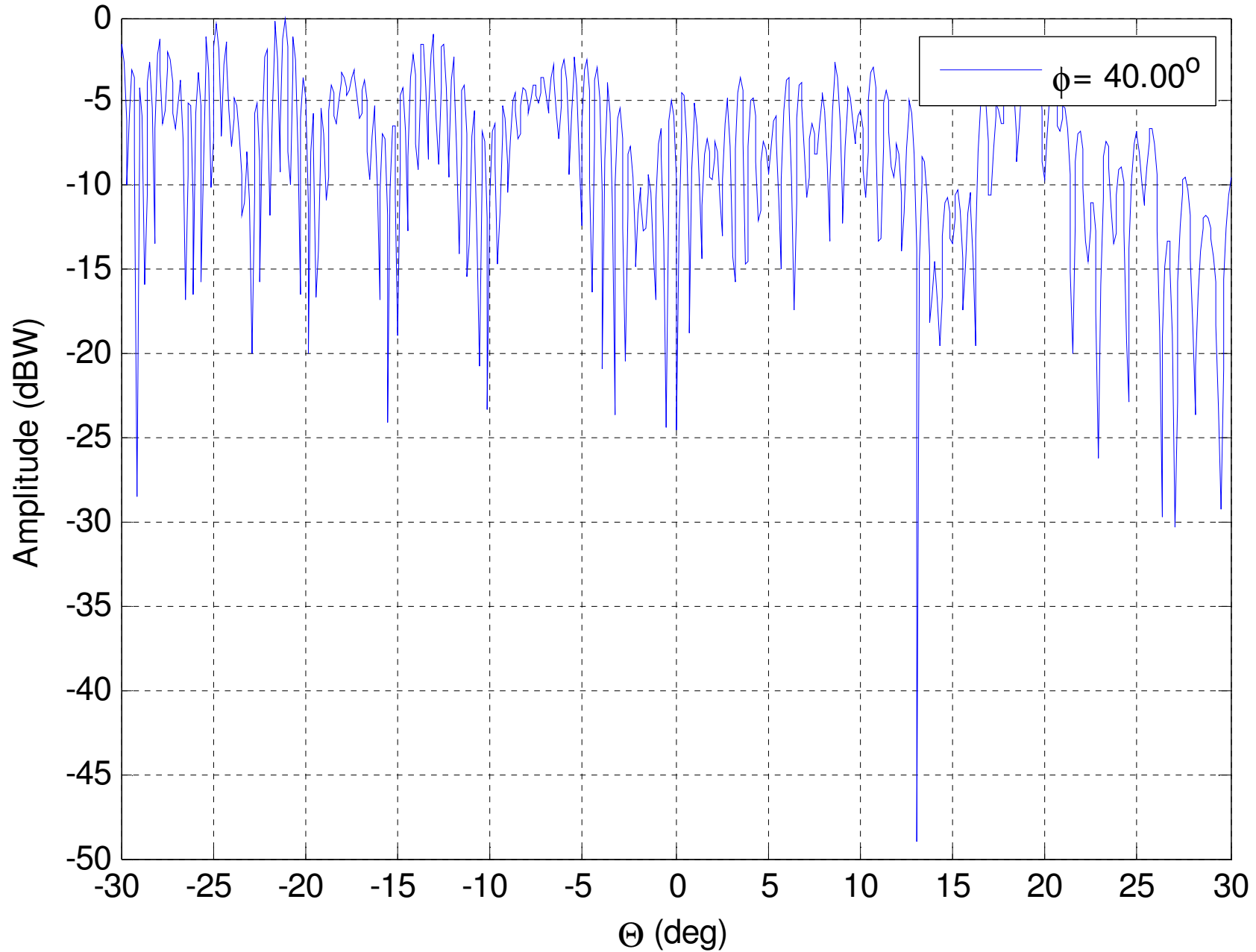
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -2.09 dBW, Date: 15-Dec-2011



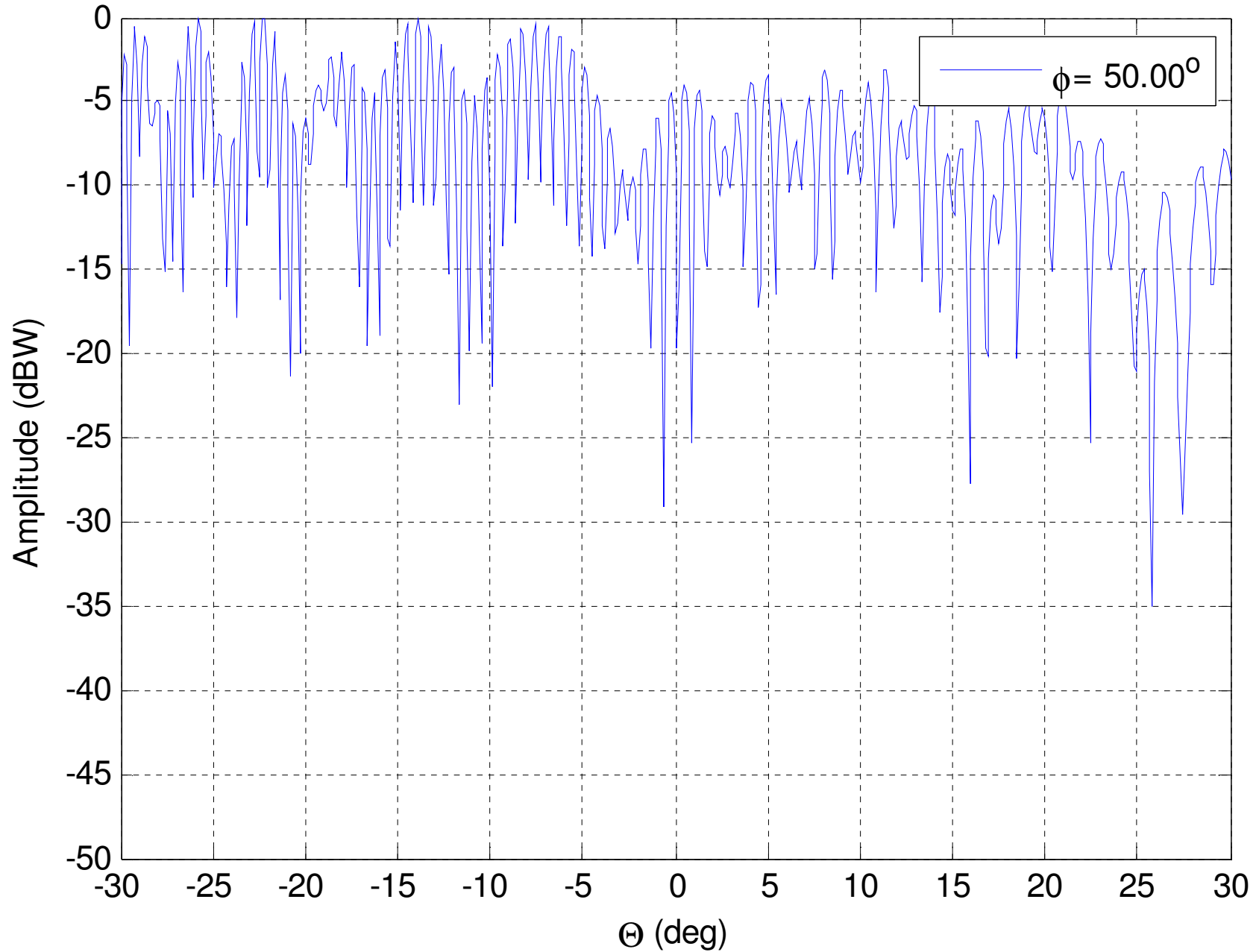
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -2.20 dBW, Date: 15-Dec-2011



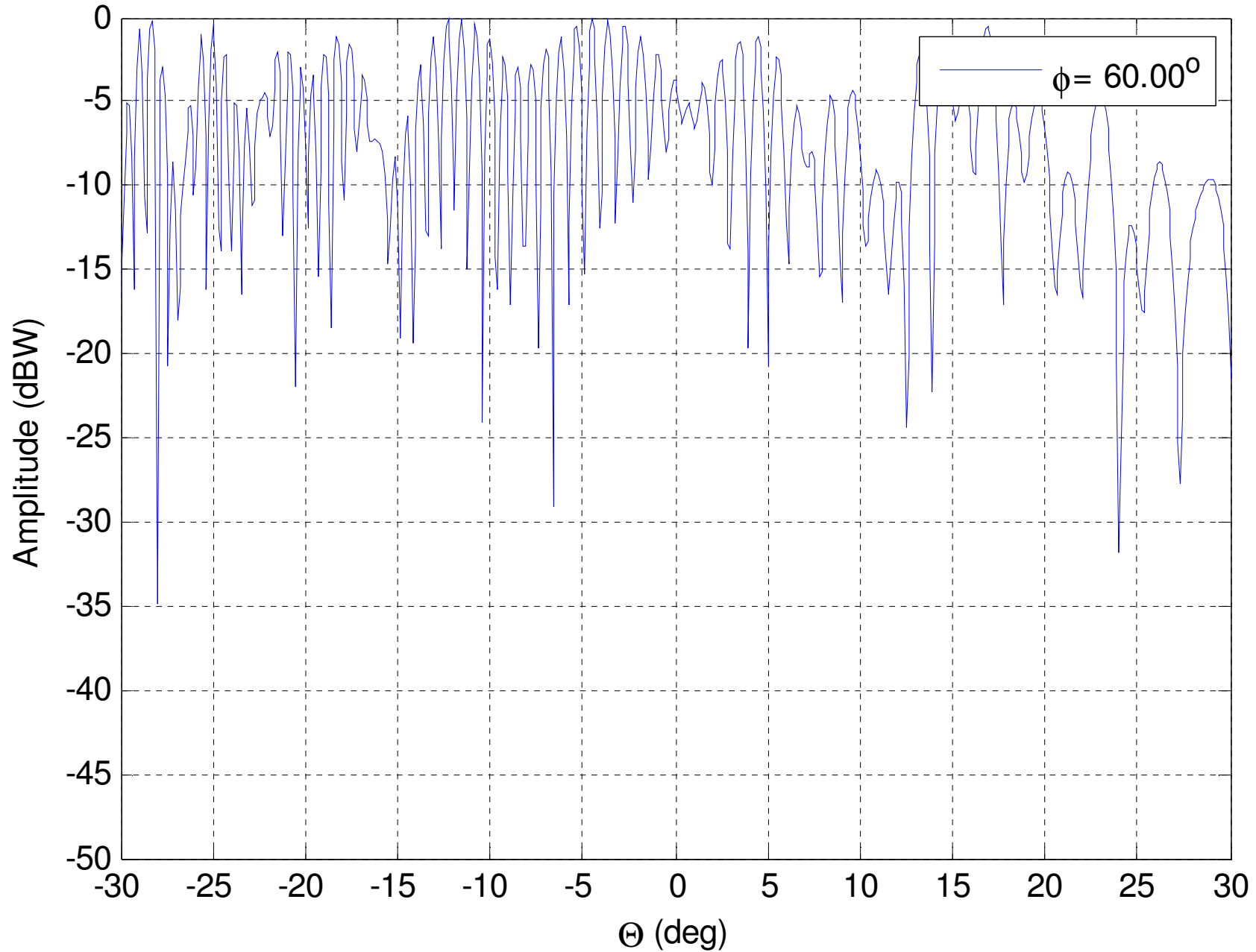
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -2.58 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

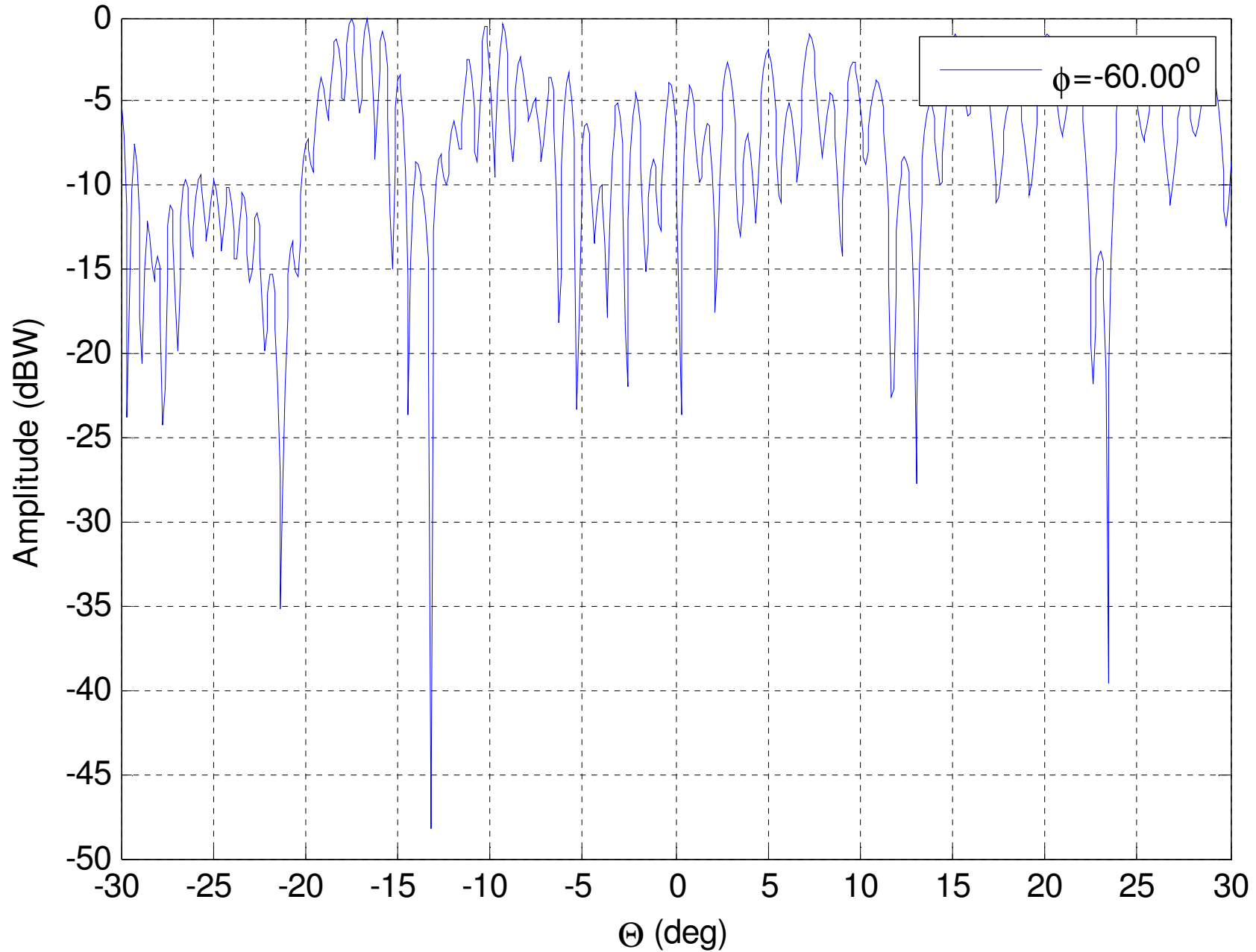
Input file: tx-17.3-rhcp-60.cut, Peak: -3.69 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

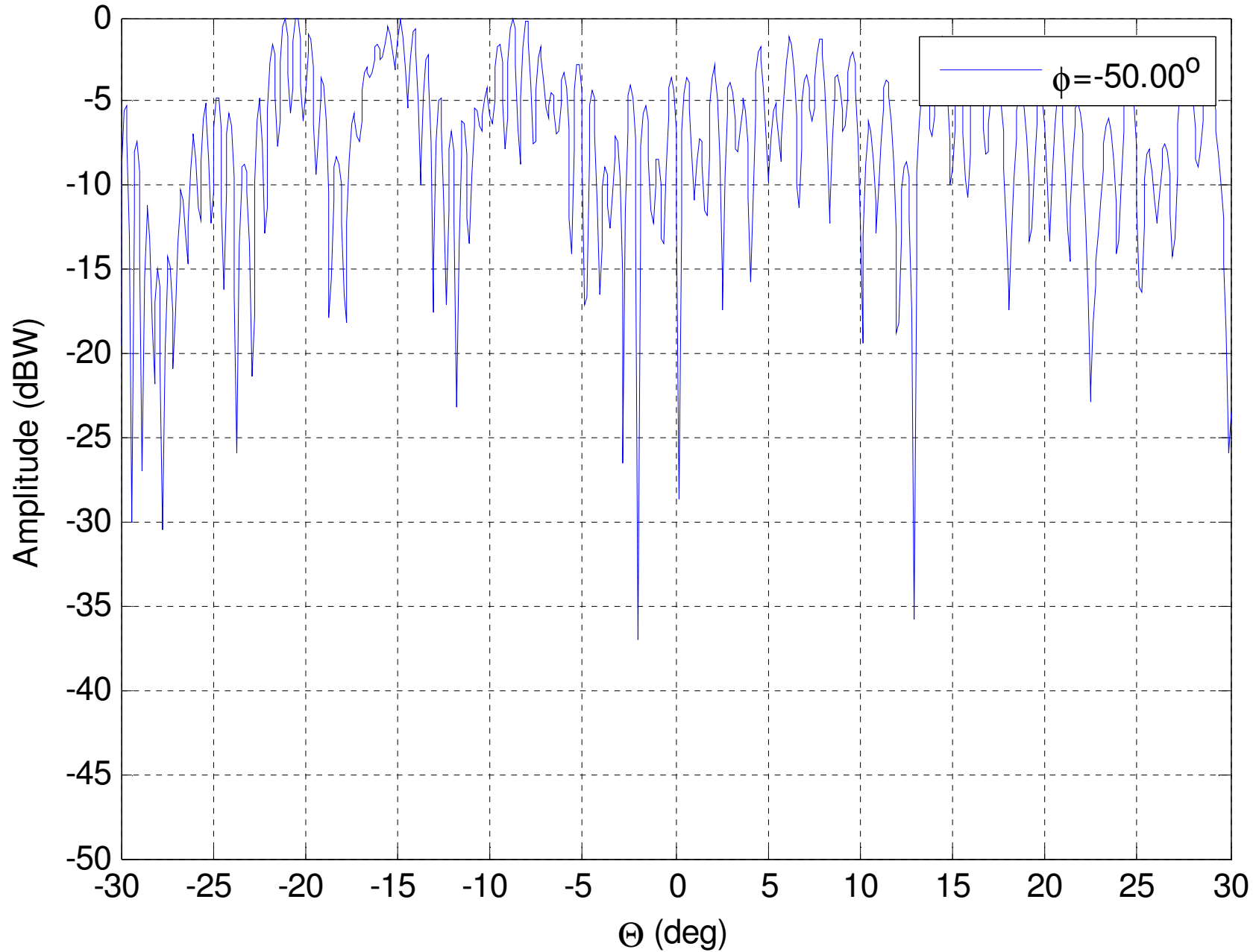
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -3.35 dBW, Date: 15-Dec-2011



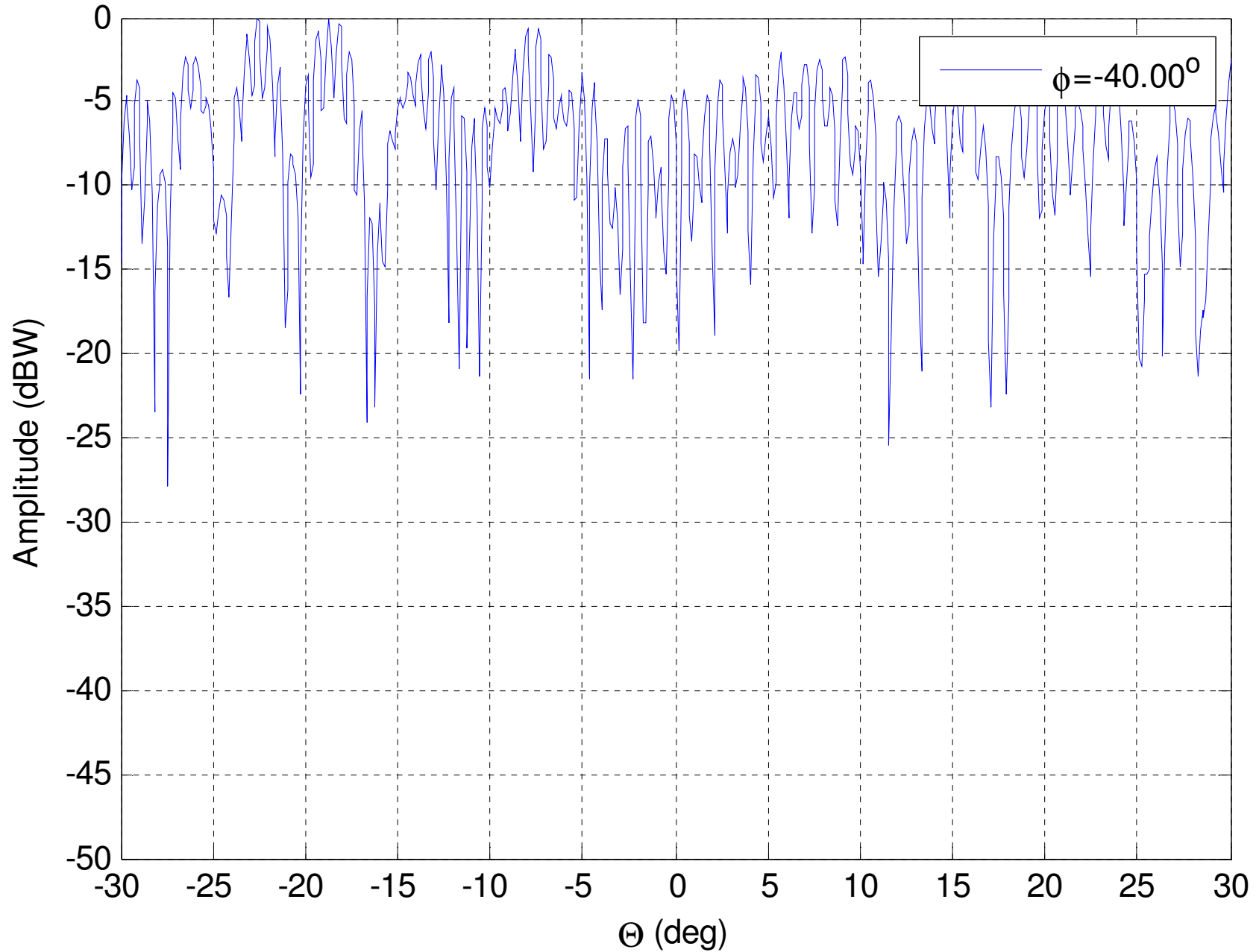
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -3.43 dBW, Date: 15-Dec-2011



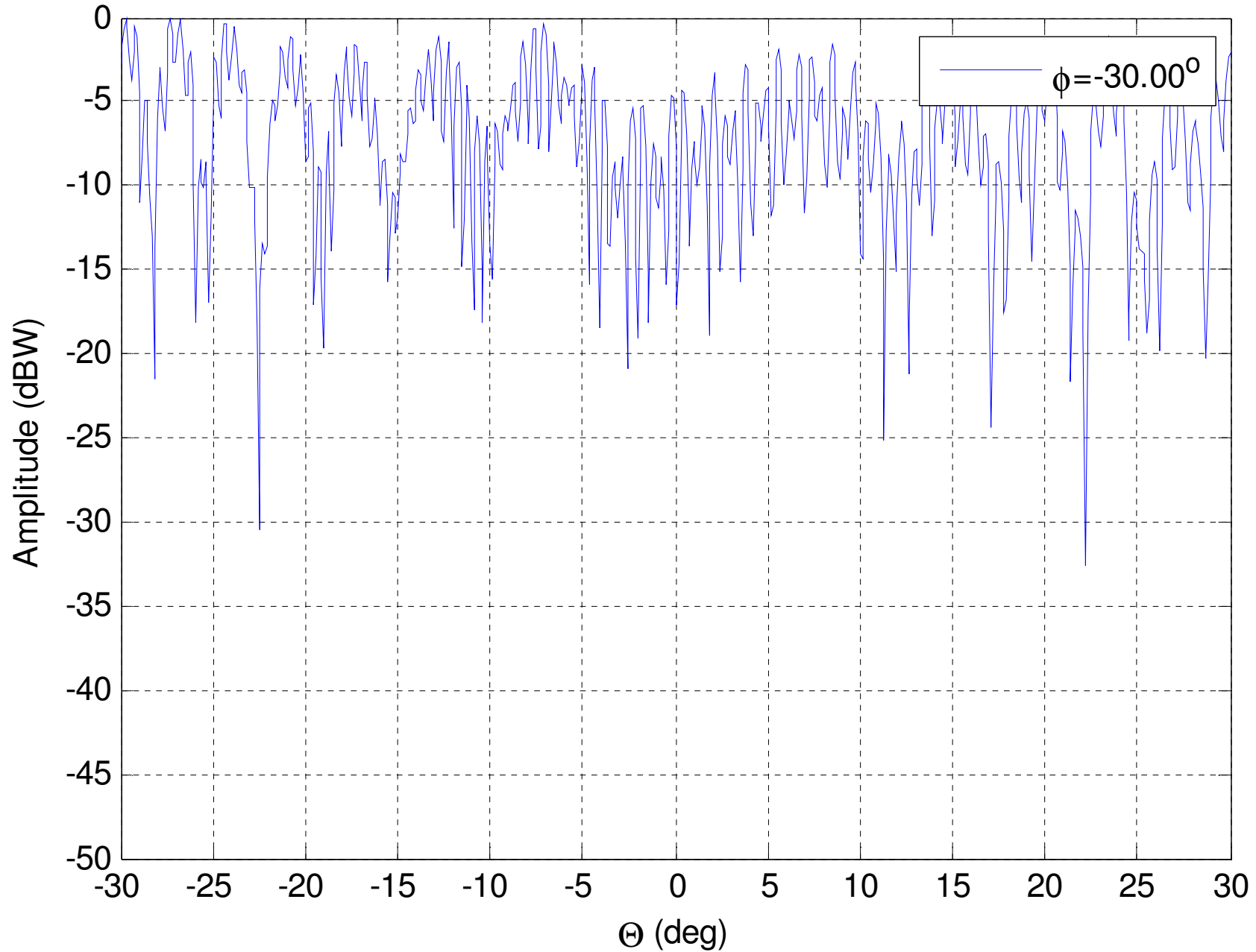
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -2.42 dBW, Date: 15-Dec-2011



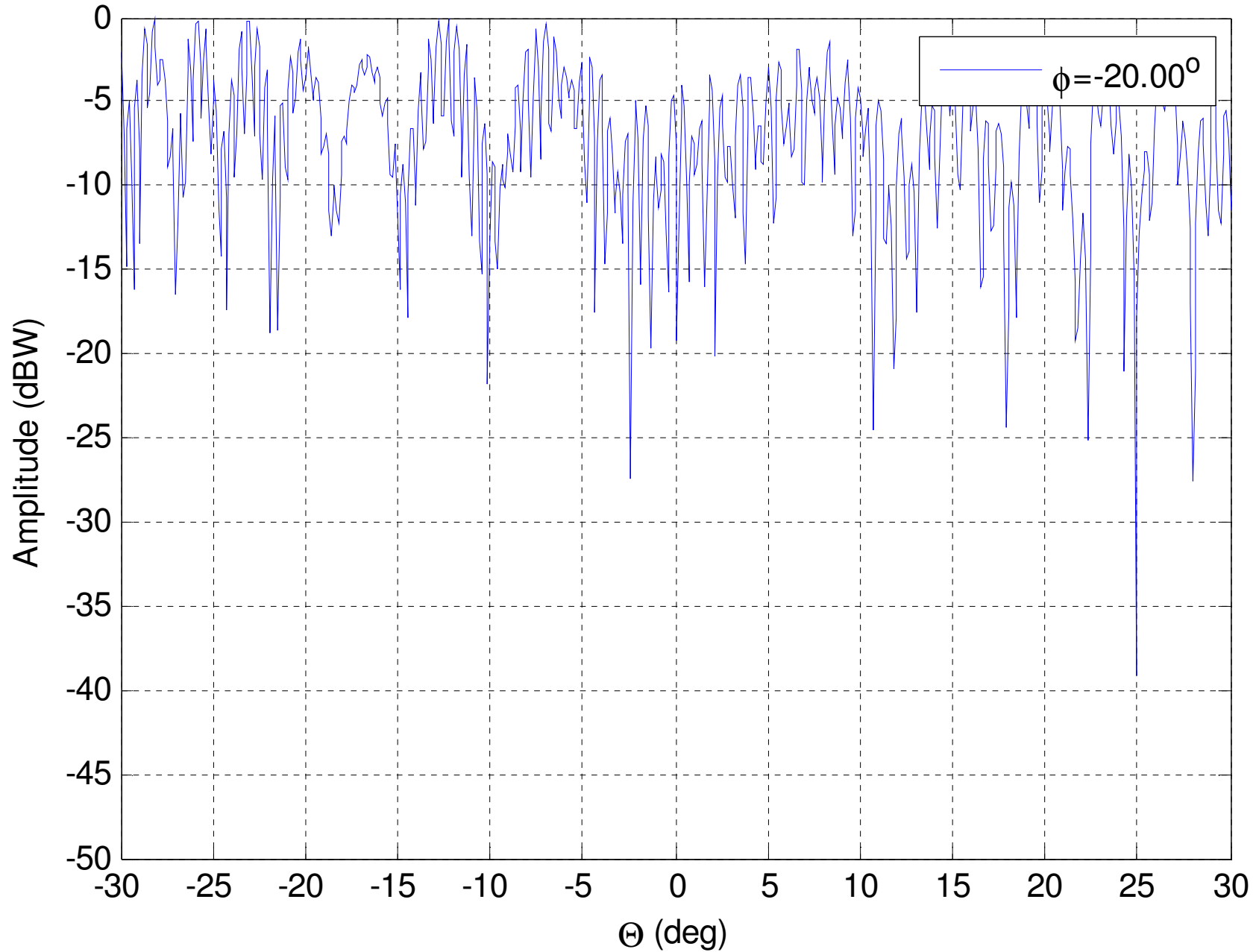
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -2.52 dBW, Date: 15-Dec-2011



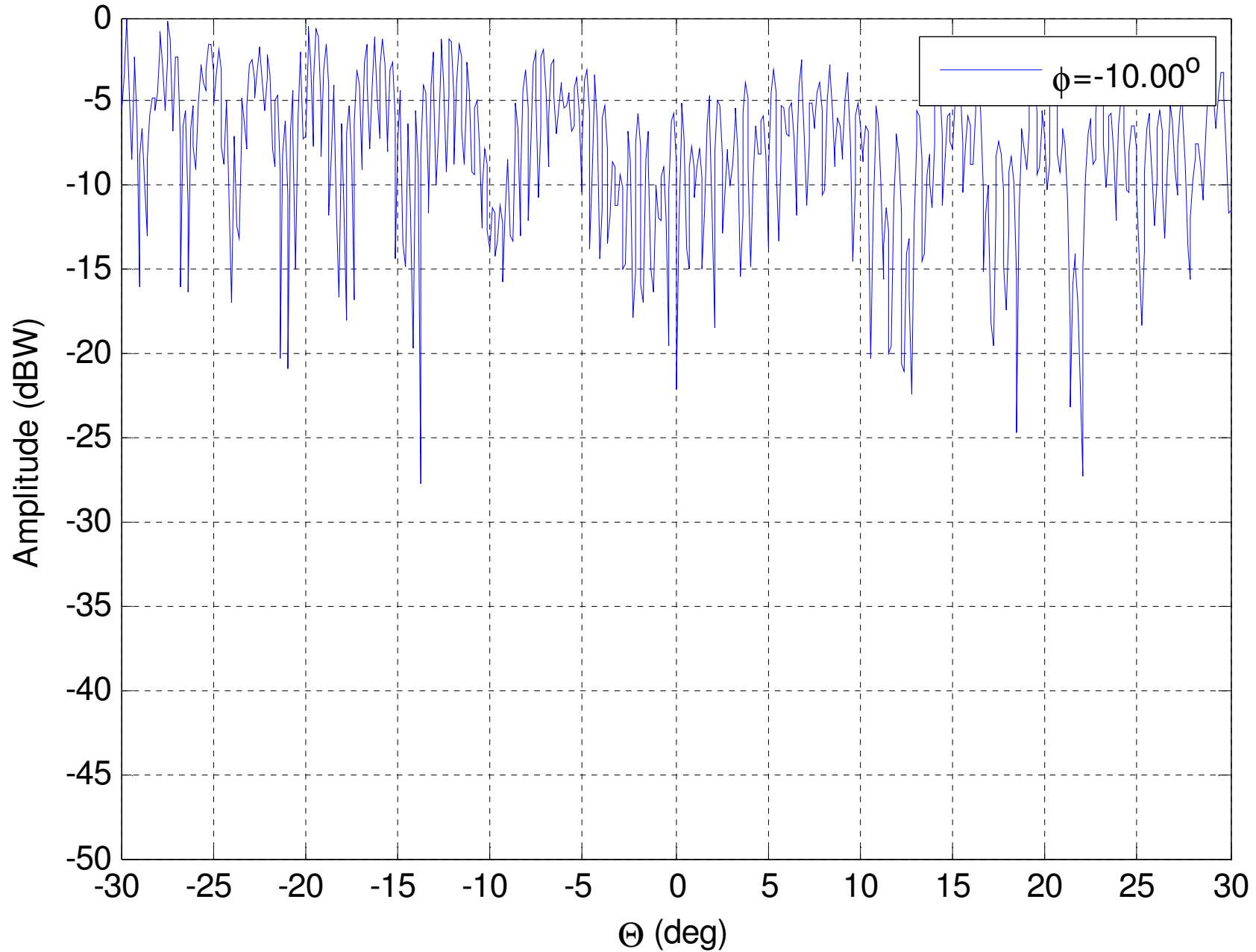
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.50 dBW, Date: 15-Dec-2011



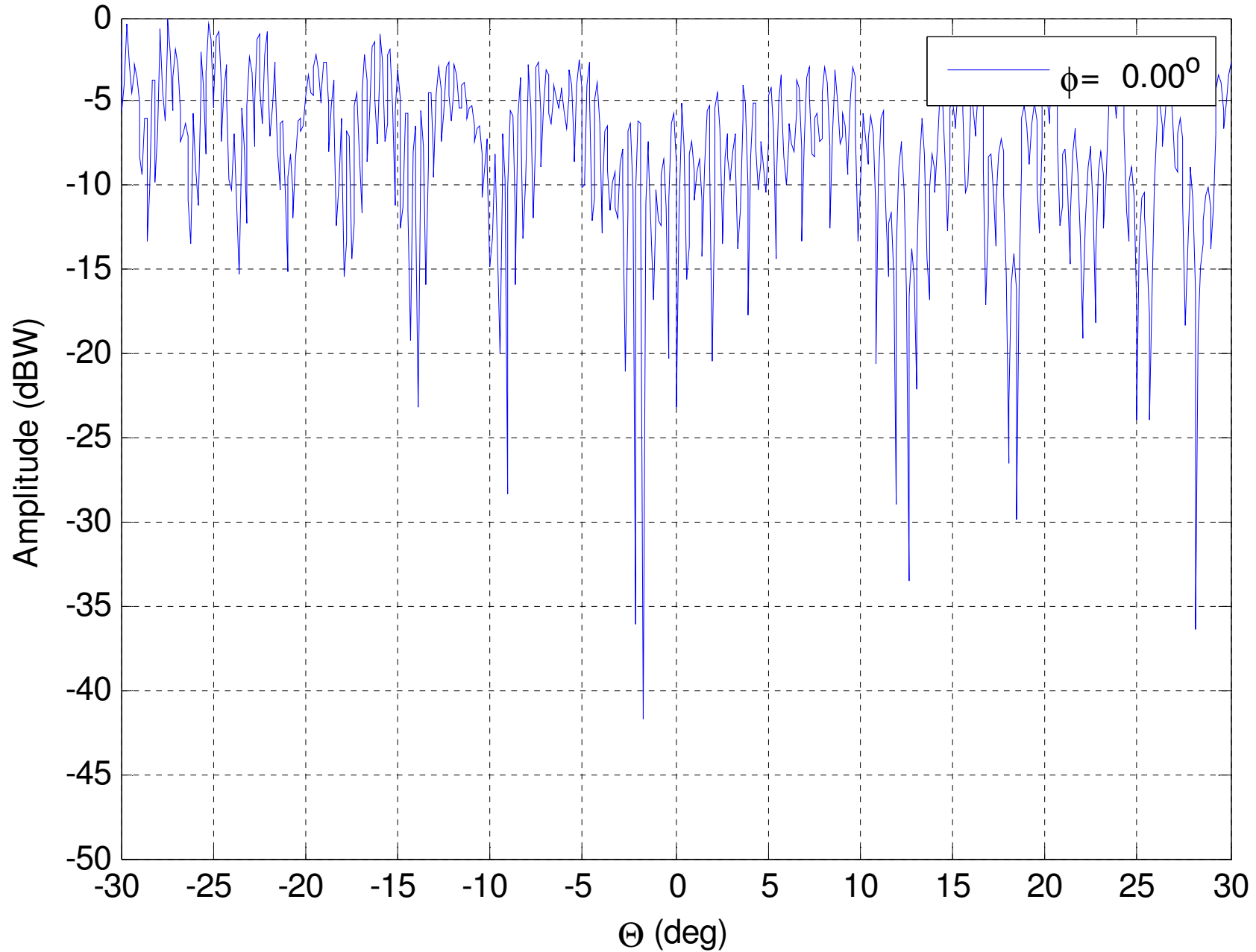
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -1.40 dBW, Date: 15-Dec-2011



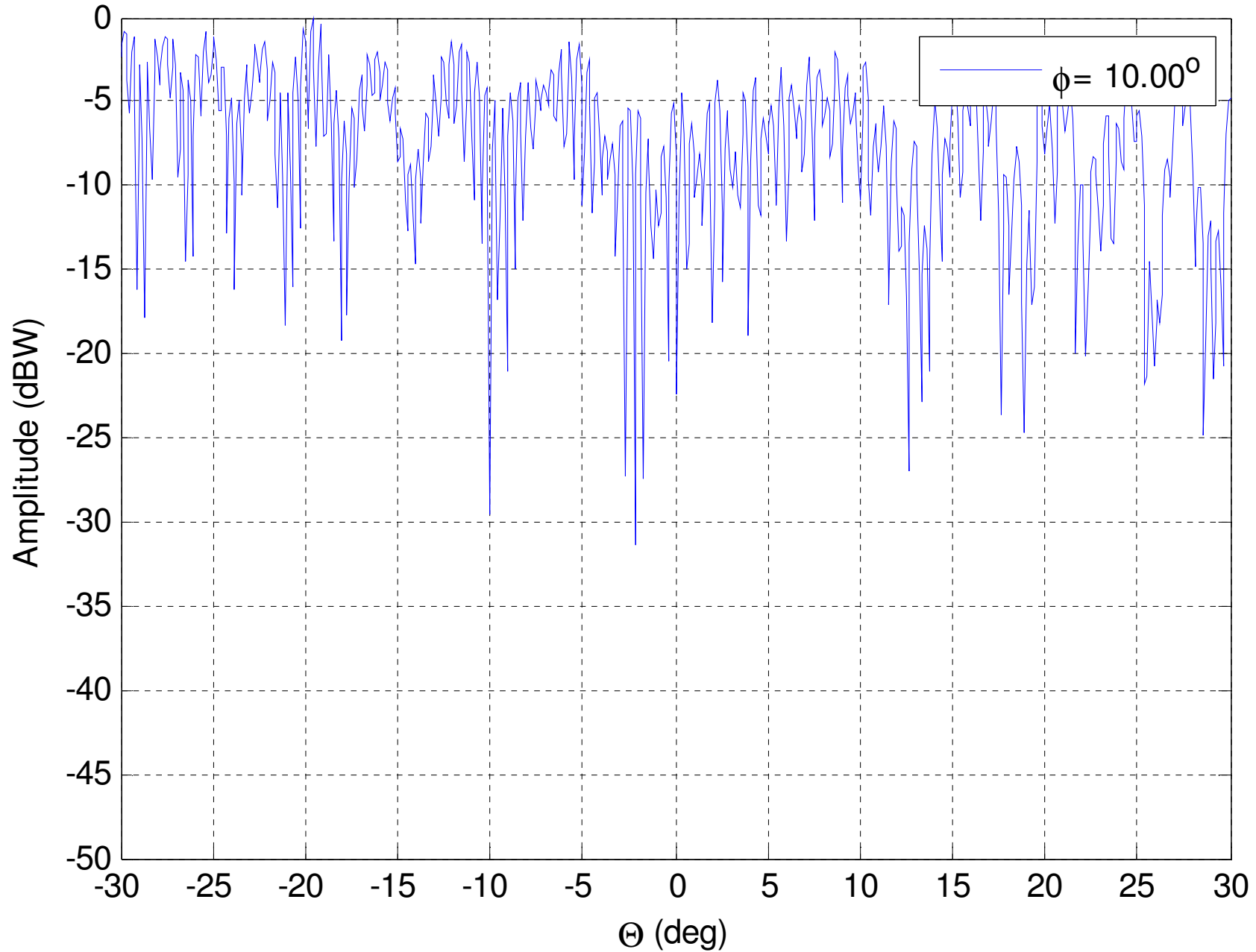
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -1.38 dBW, Date: 15-Dec-2011



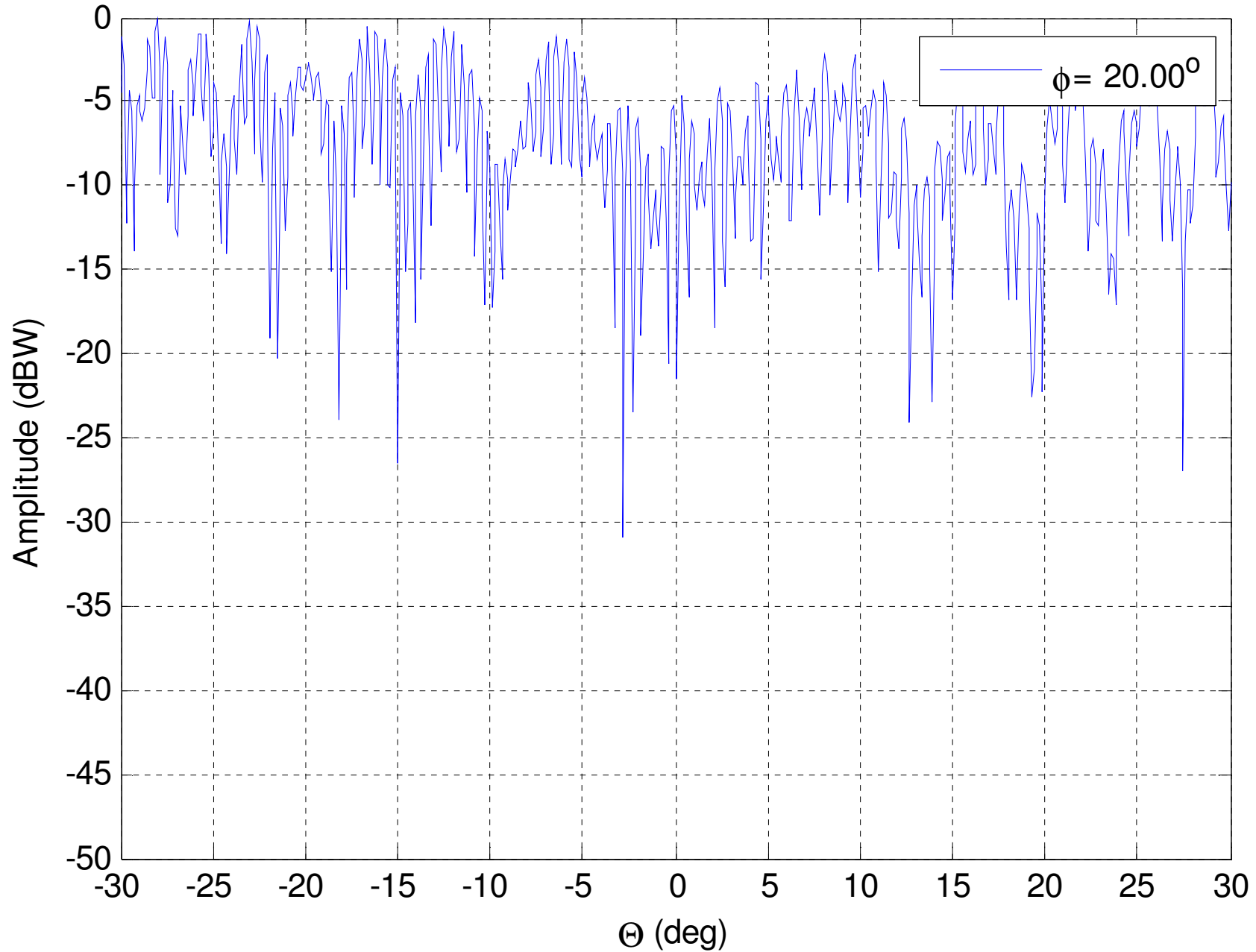
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -1.95 dBW, Date: 15-Dec-2011



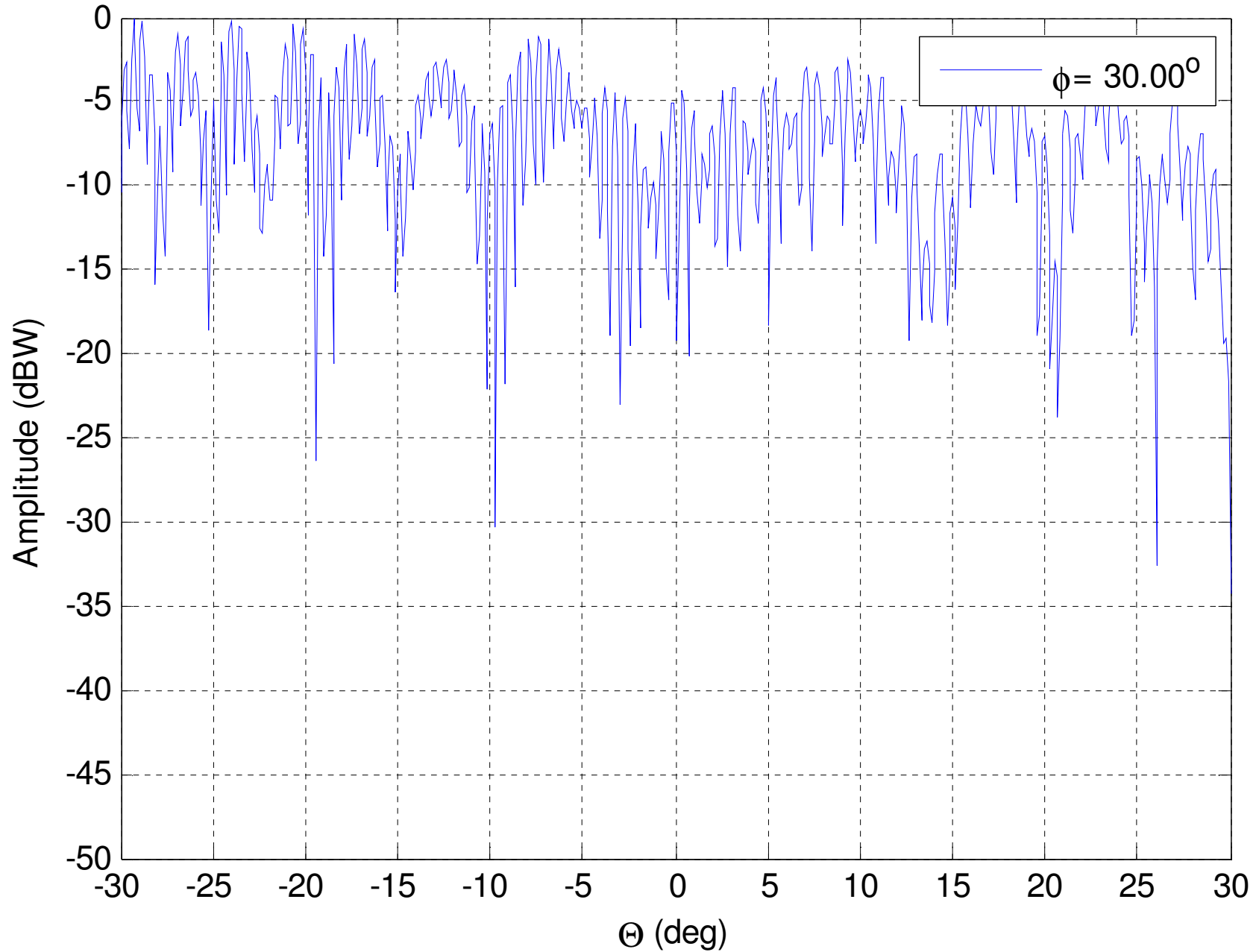
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -1.80 dBW, Date: 15-Dec-2011



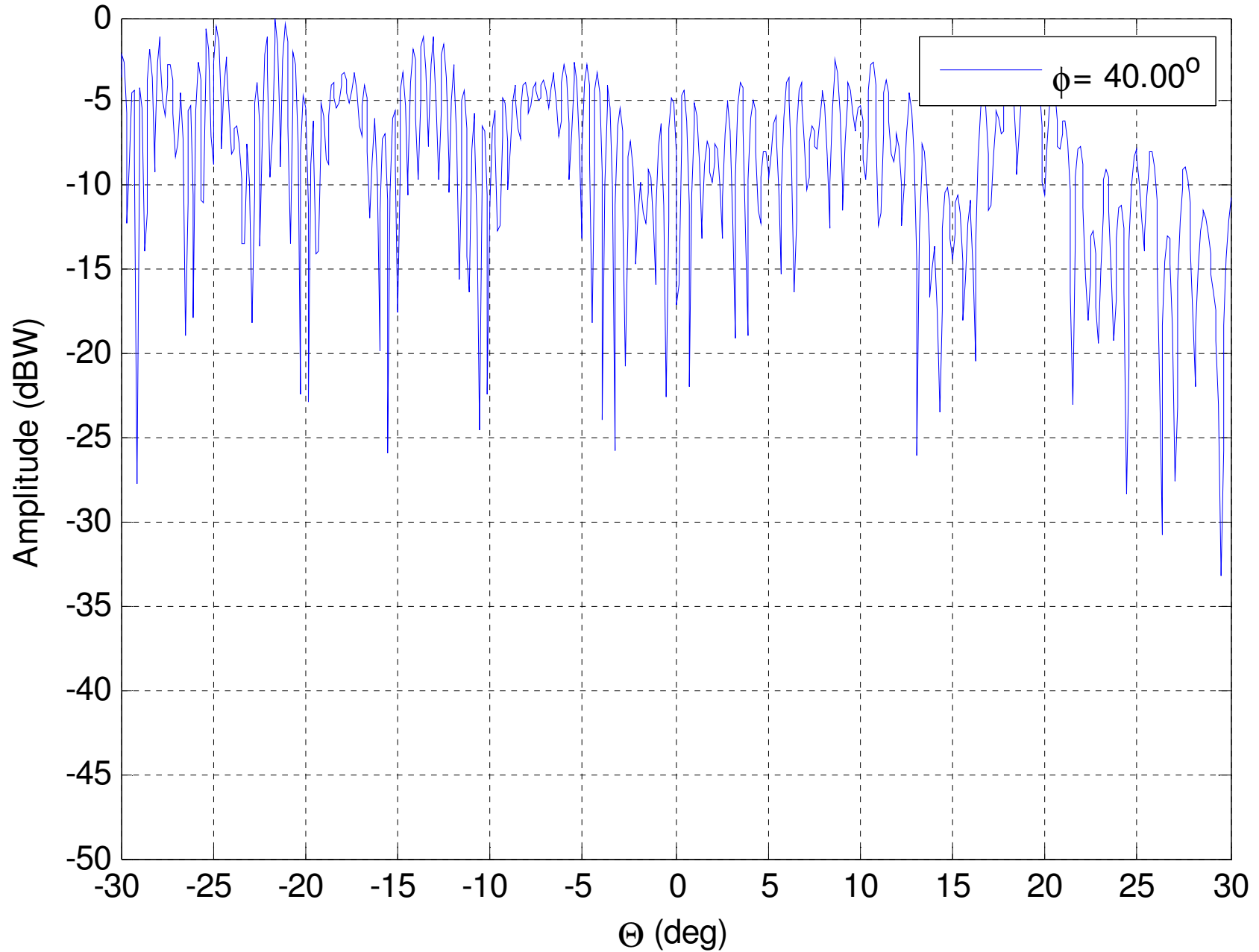
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -2.05 dBW, Date: 15-Dec-2011



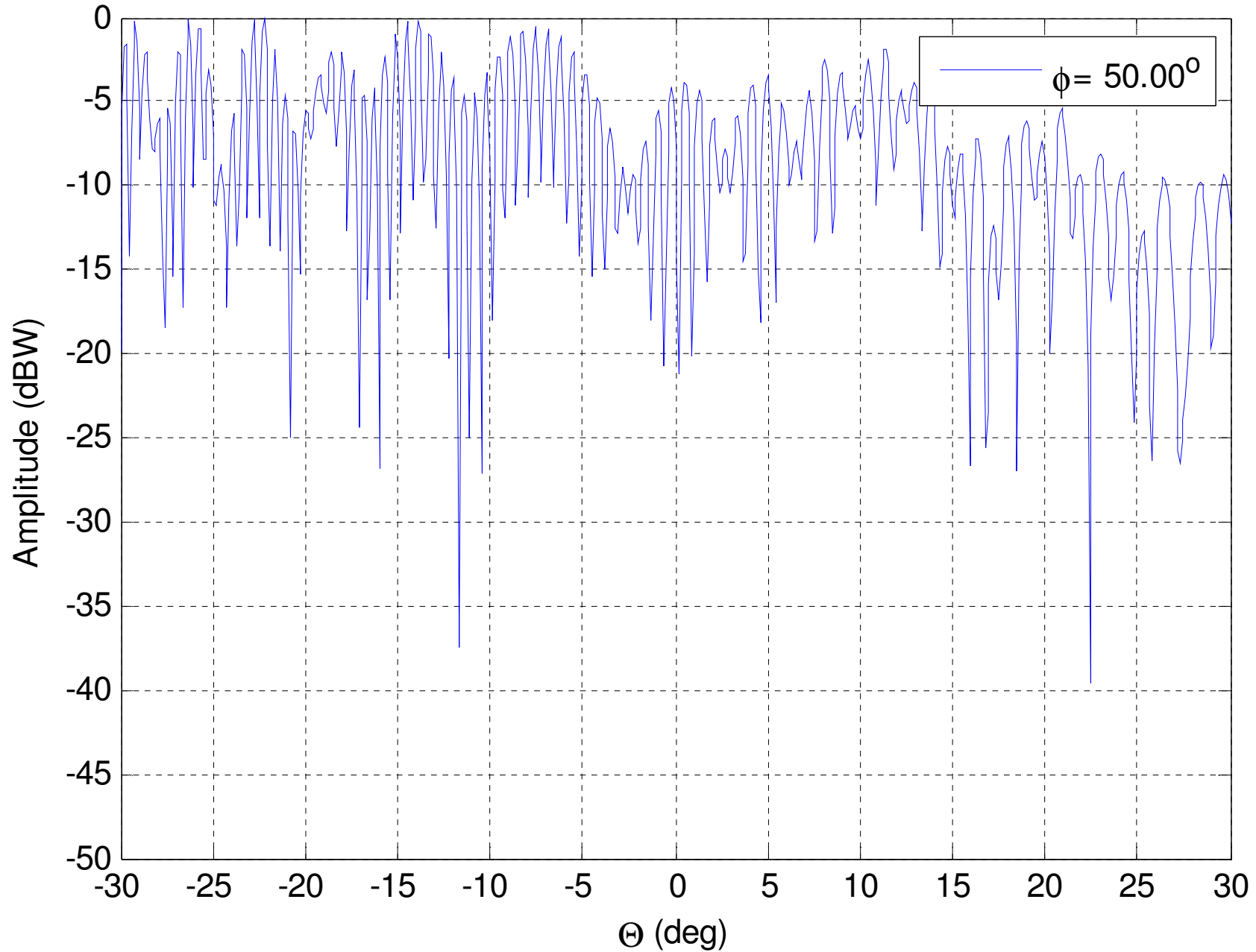
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -2.09 dBW, Date: 15-Dec-2011



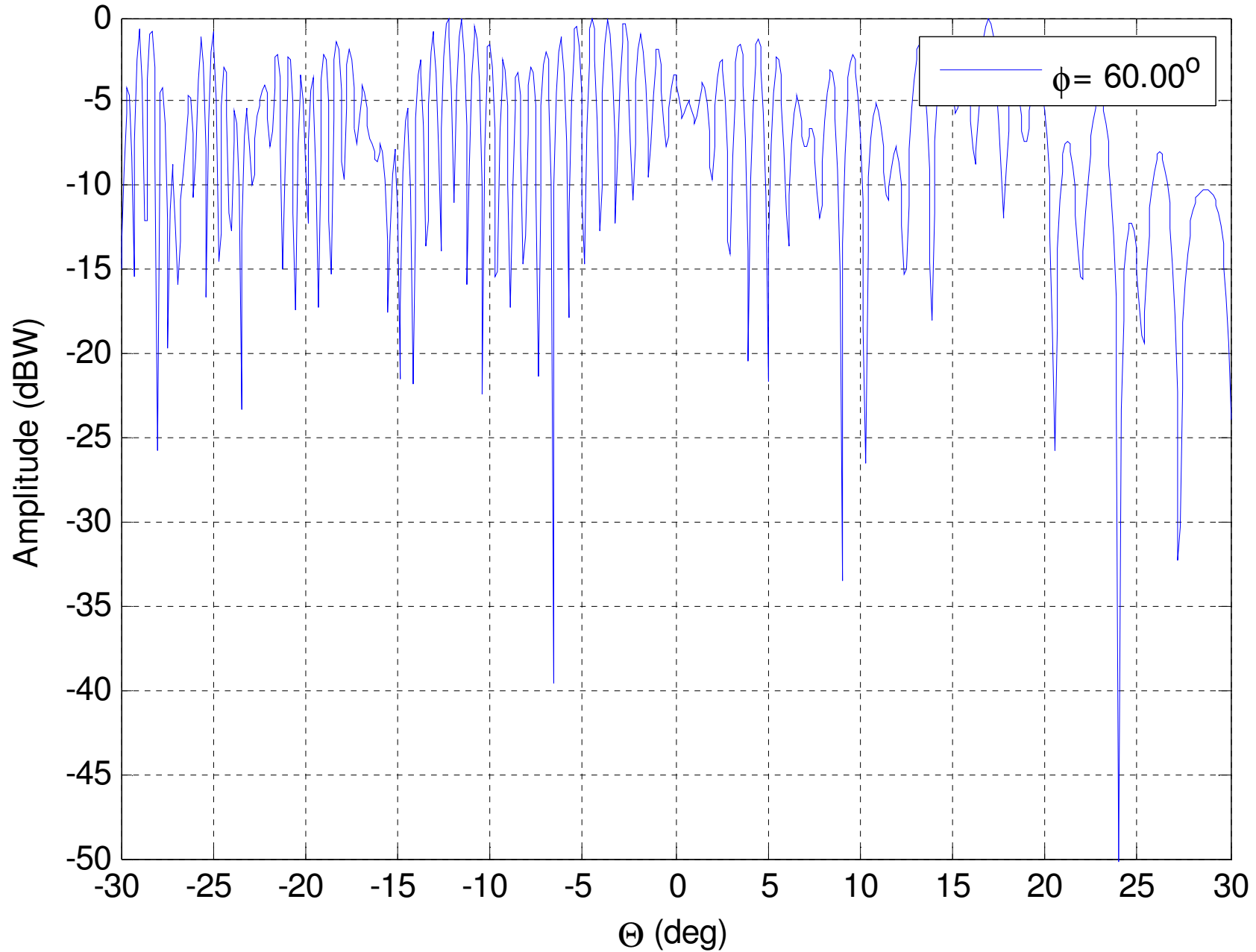
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -2.49 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

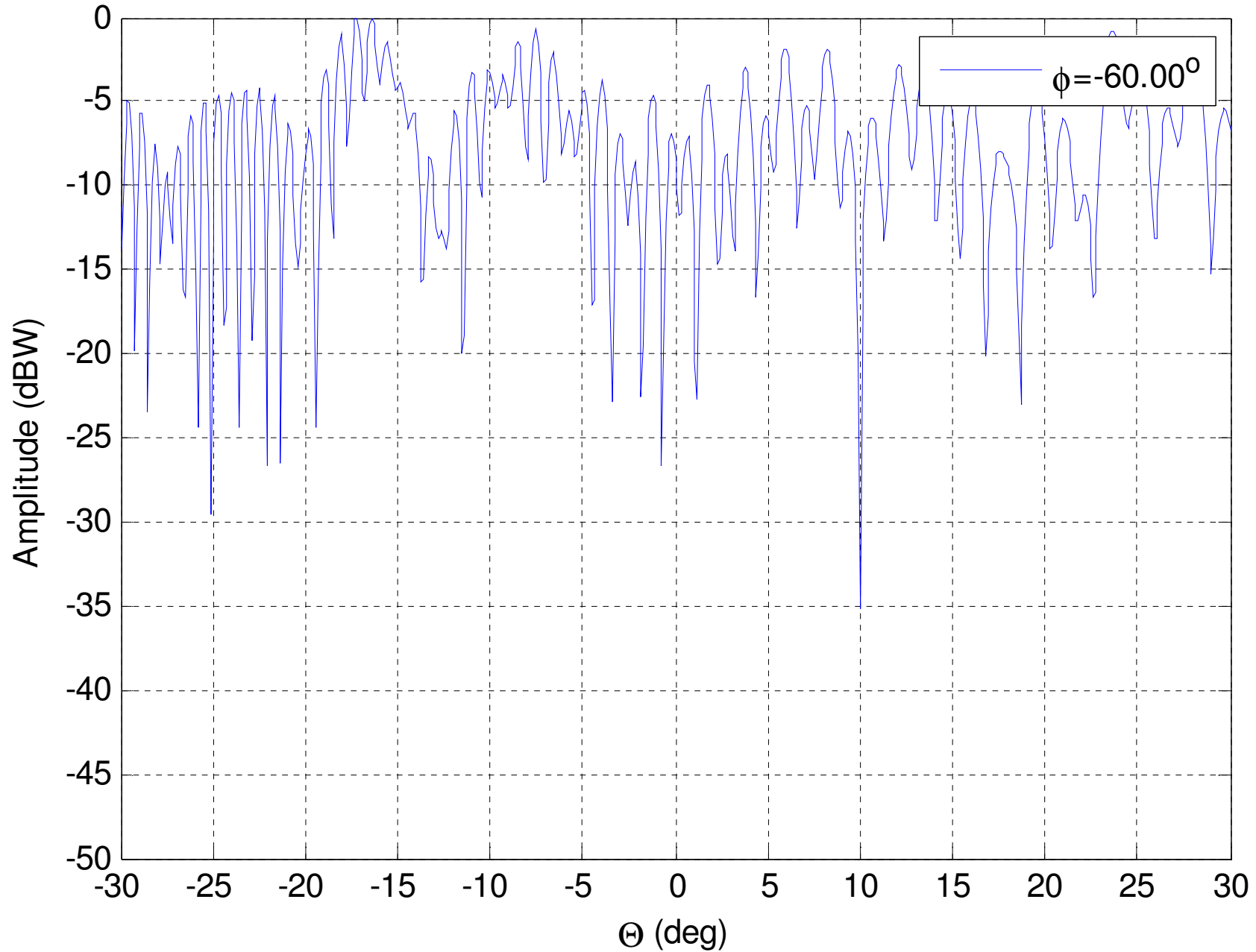
Input file: tx-17.3-lhcp-60.cut, Peak: -3.56 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

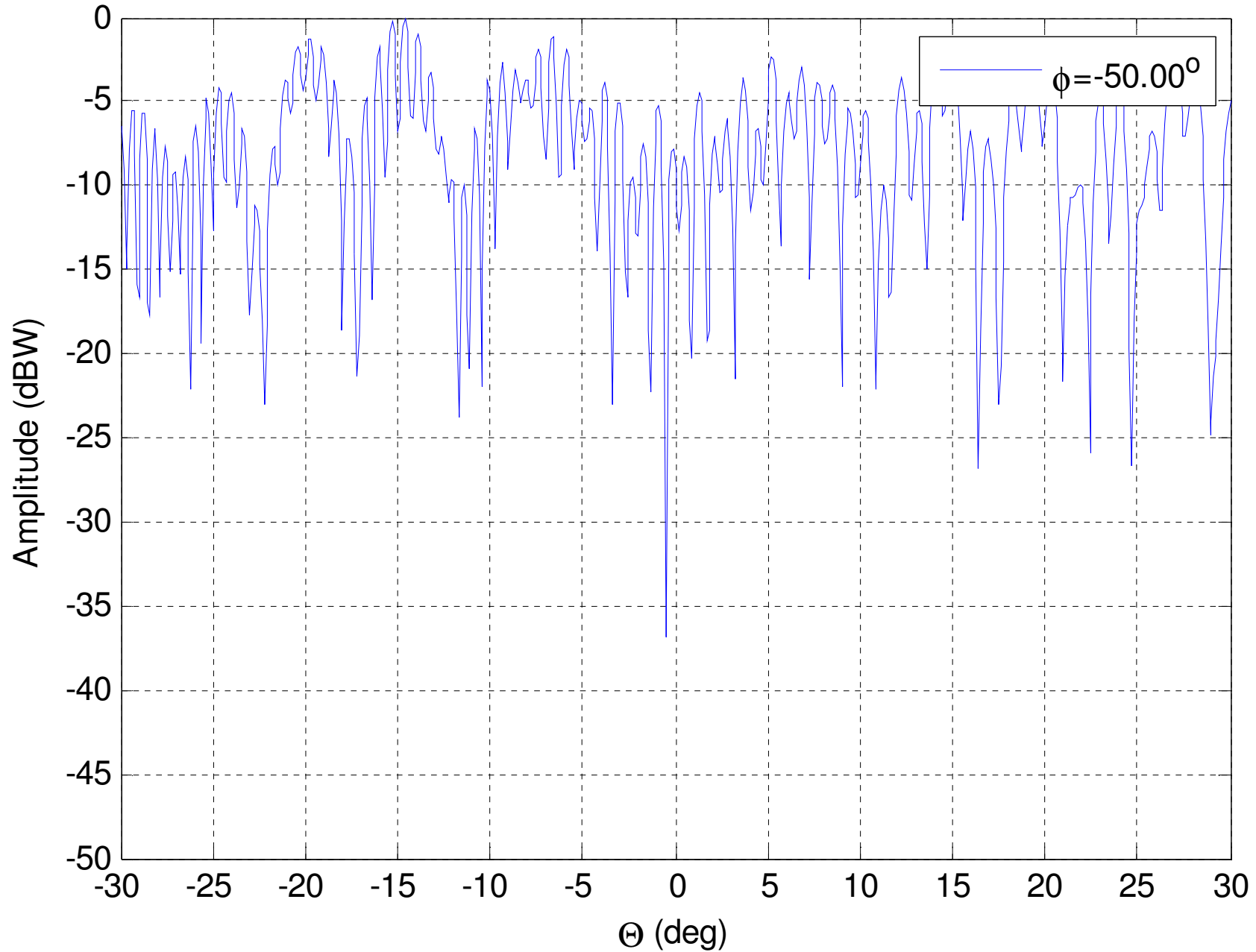
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -3.66 dBW, Date: 15-Dec-2011



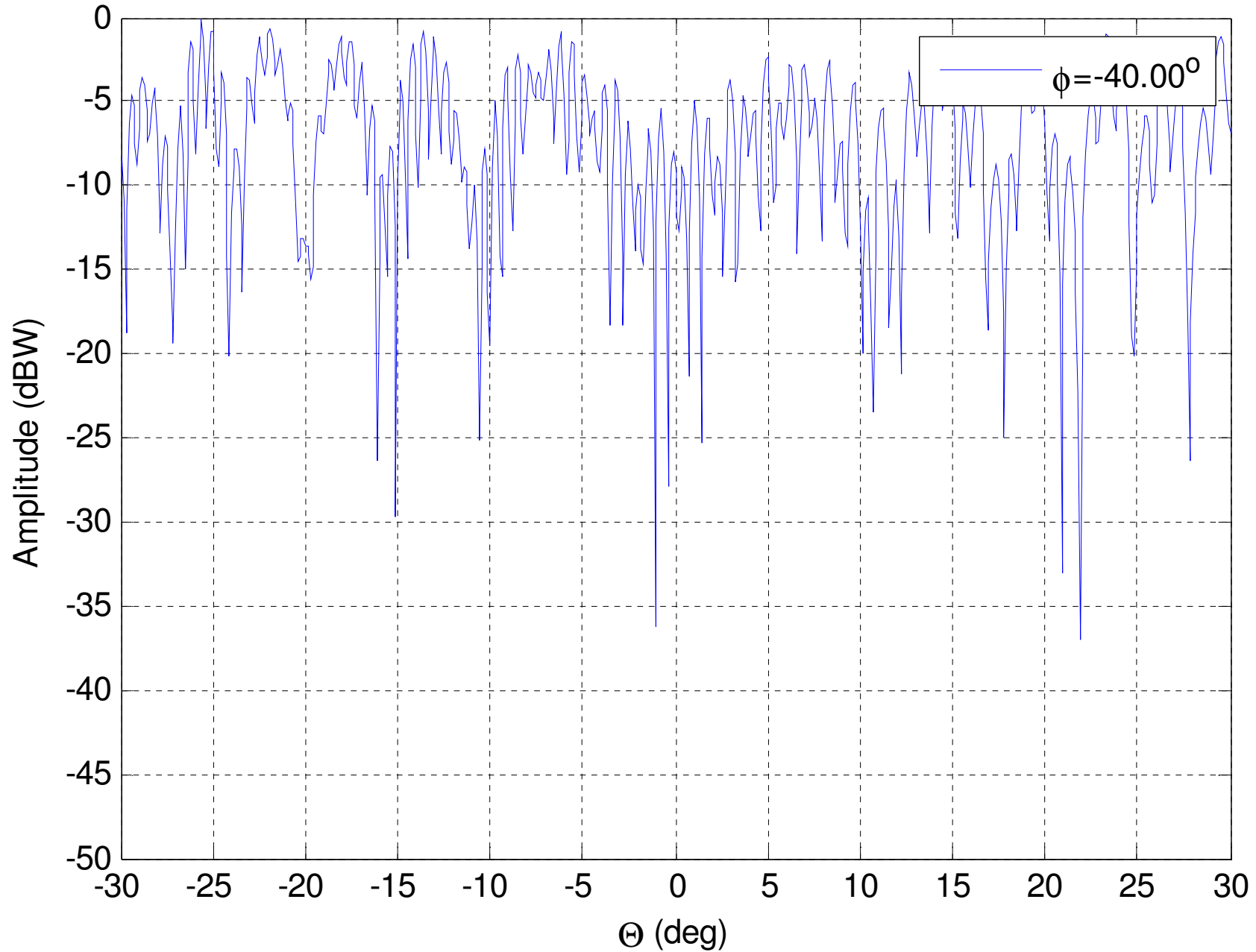
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -3.02 dBW, Date: 15-Dec-2011



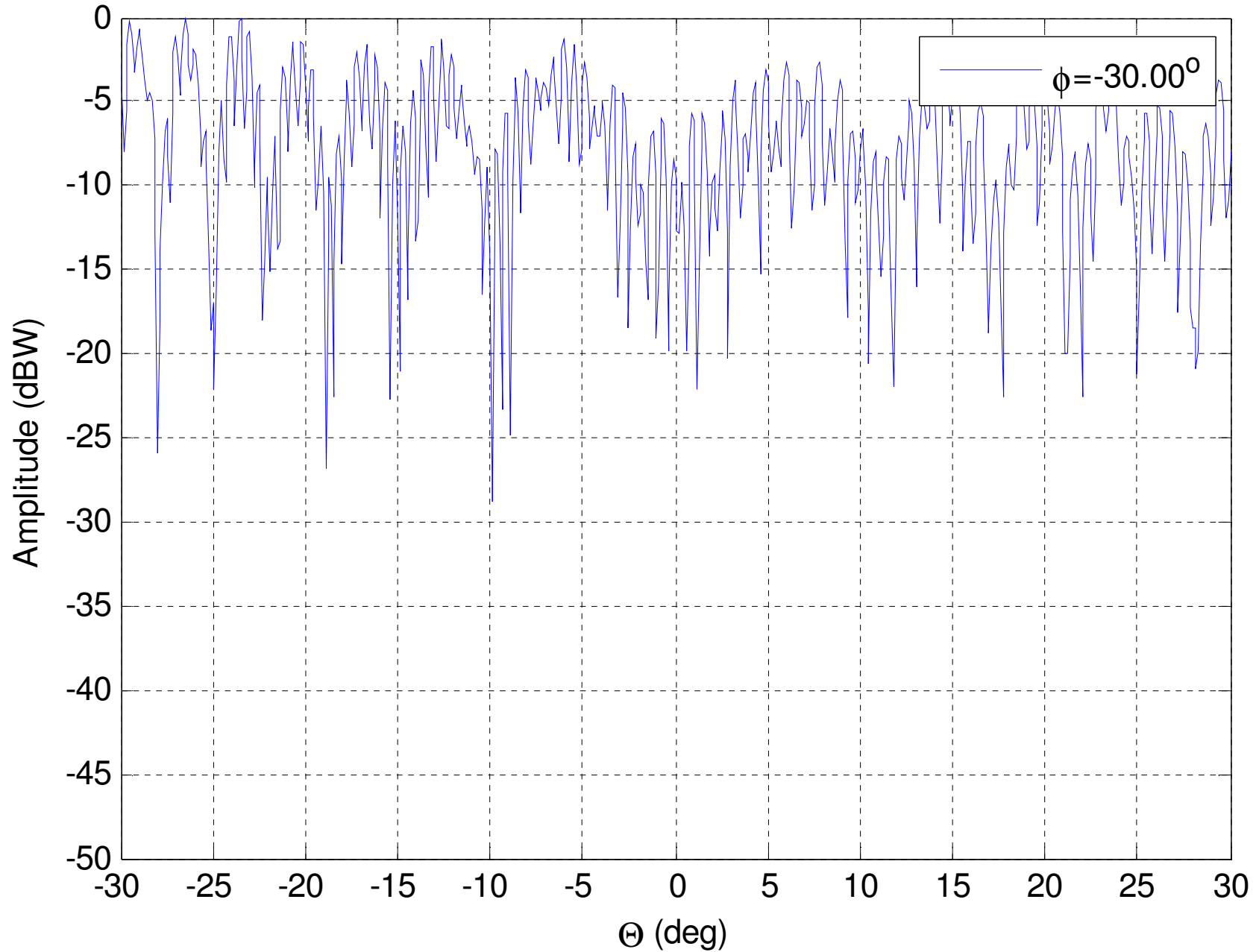
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -2.93 dBW, Date: 15-Dec-2011



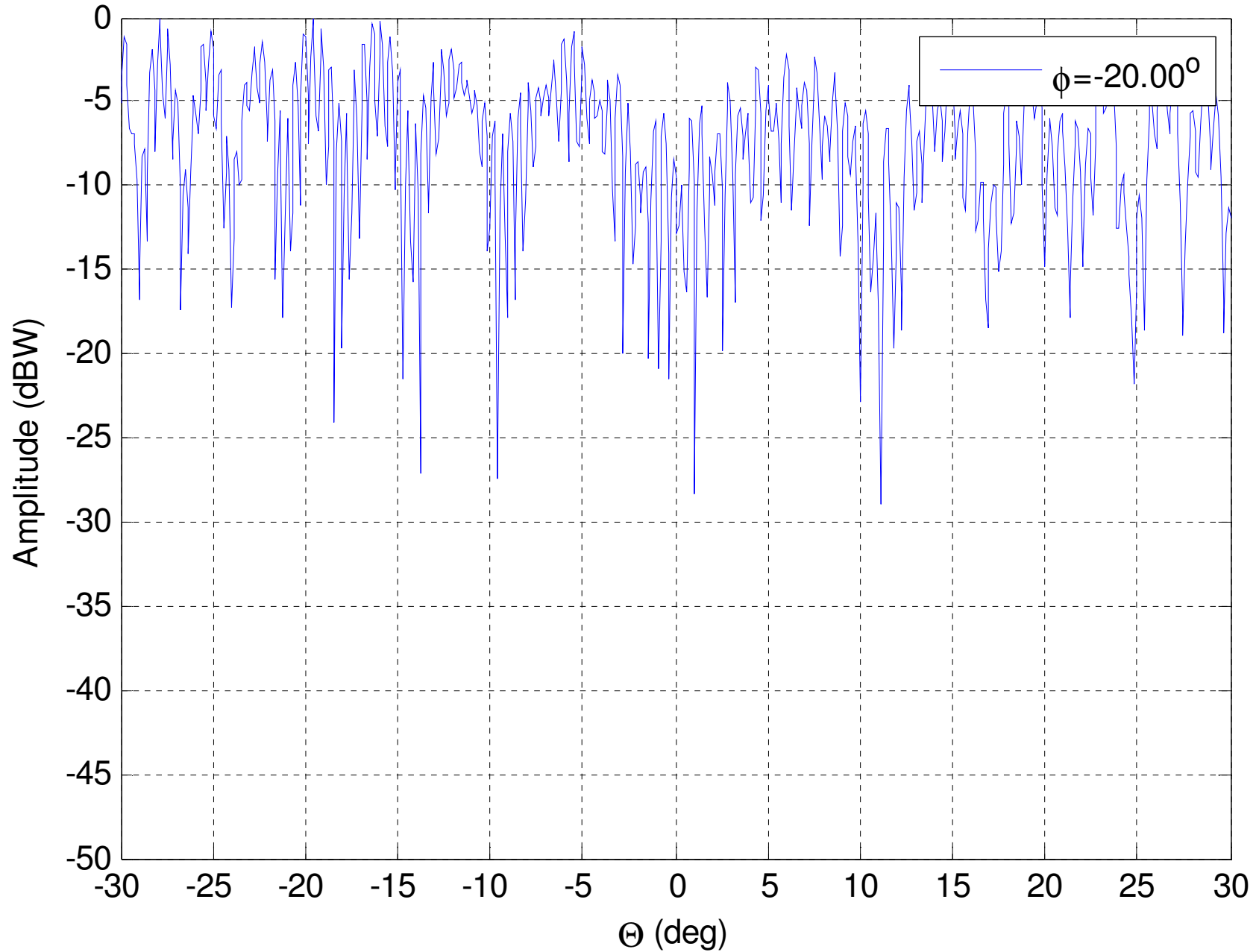
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -2.40 dBW, Date: 15-Dec-2011



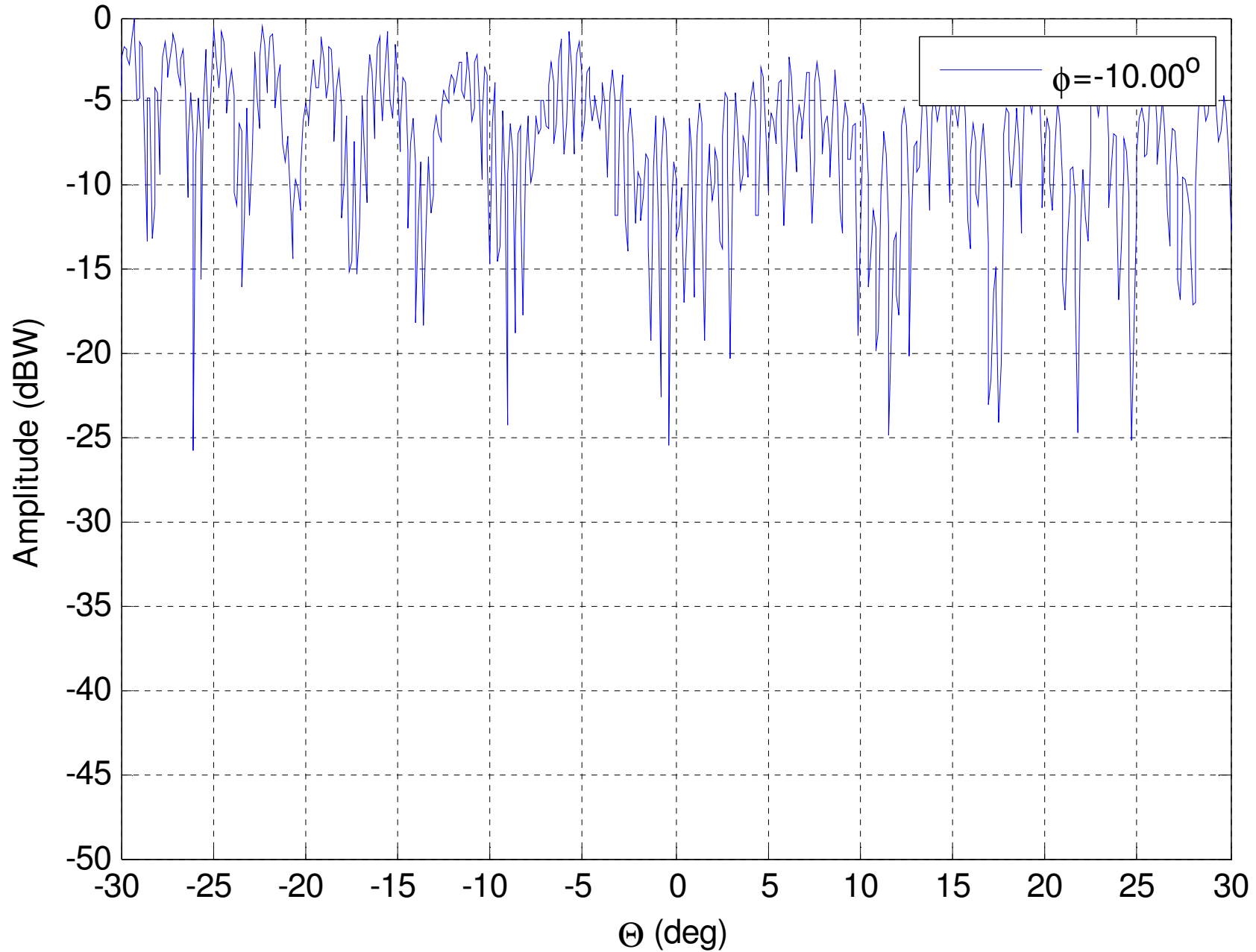
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -2.56 dBW, Date: 15-Dec-2011



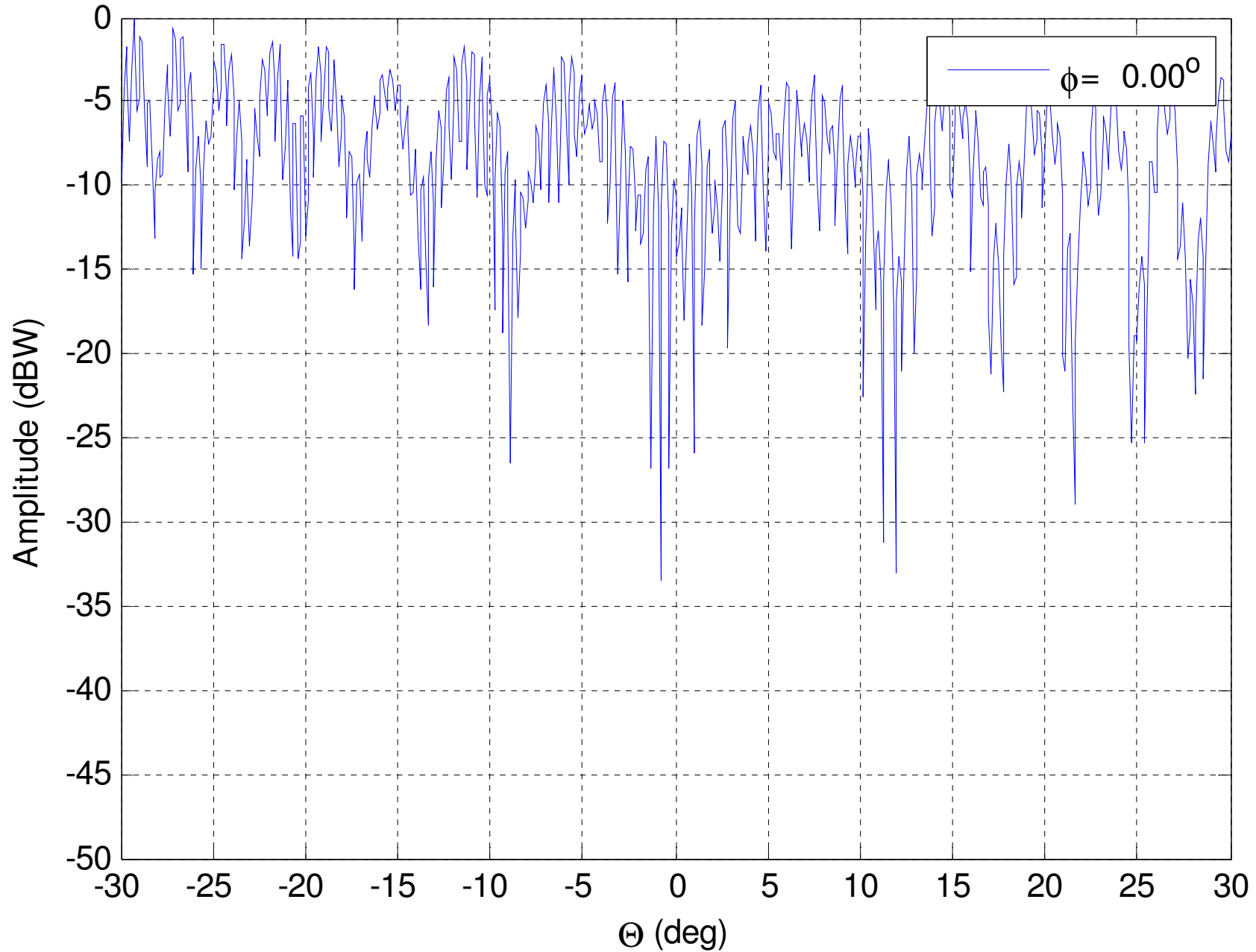
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.48 dBW, Date: 15-Dec-2011



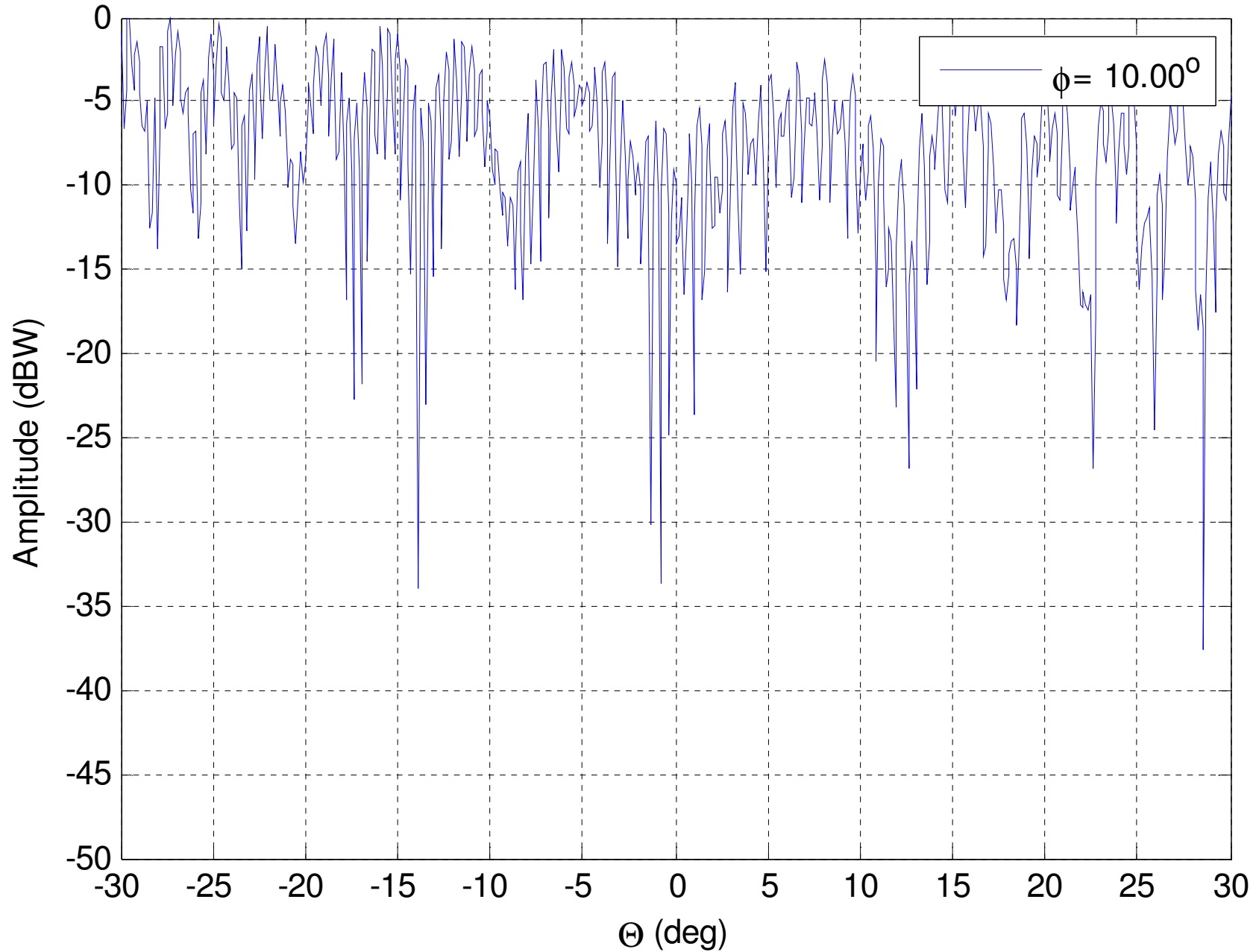
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -1.37 dBW, Date: 15-Dec-2011



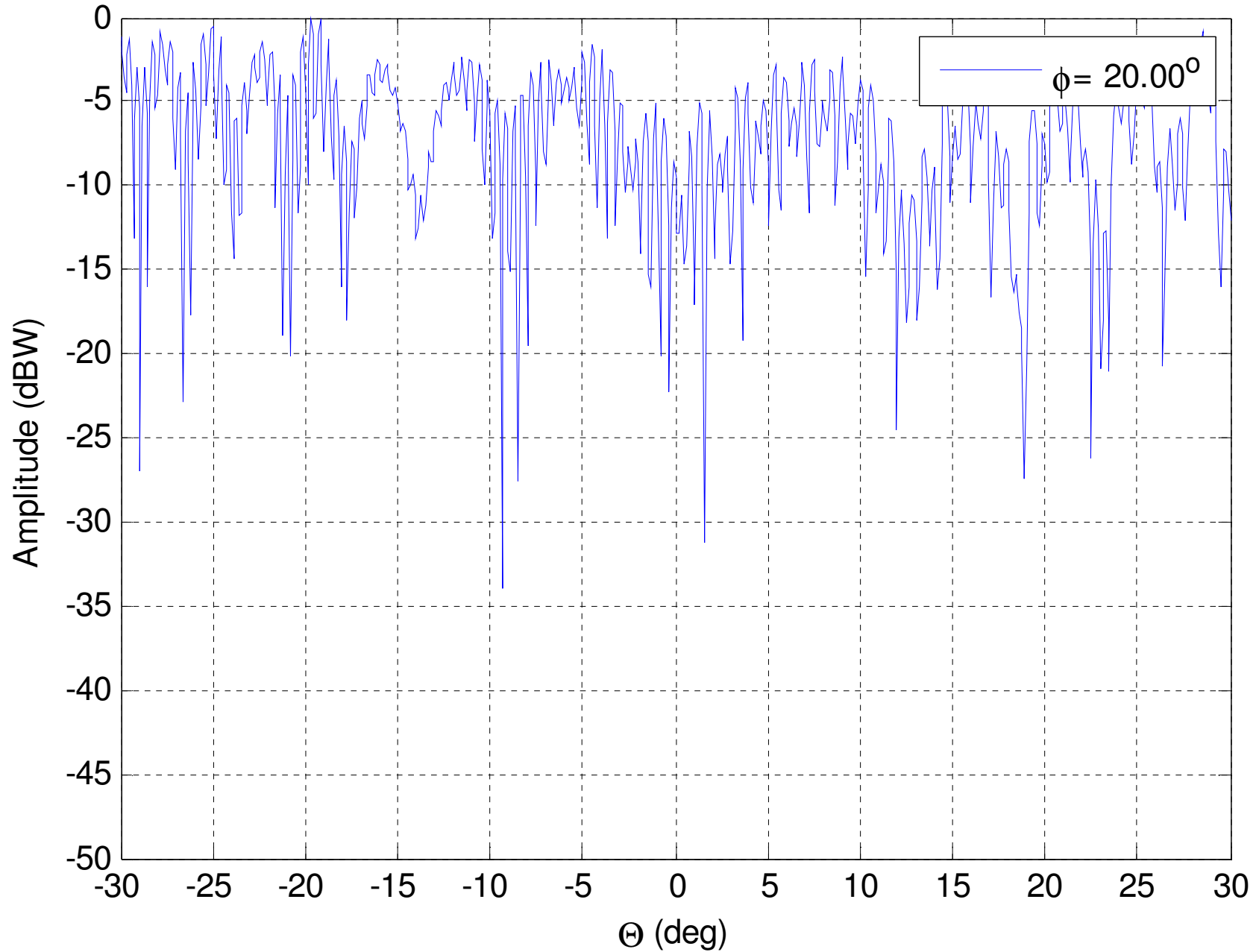
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -2.14 dBW, Date: 15-Dec-2011



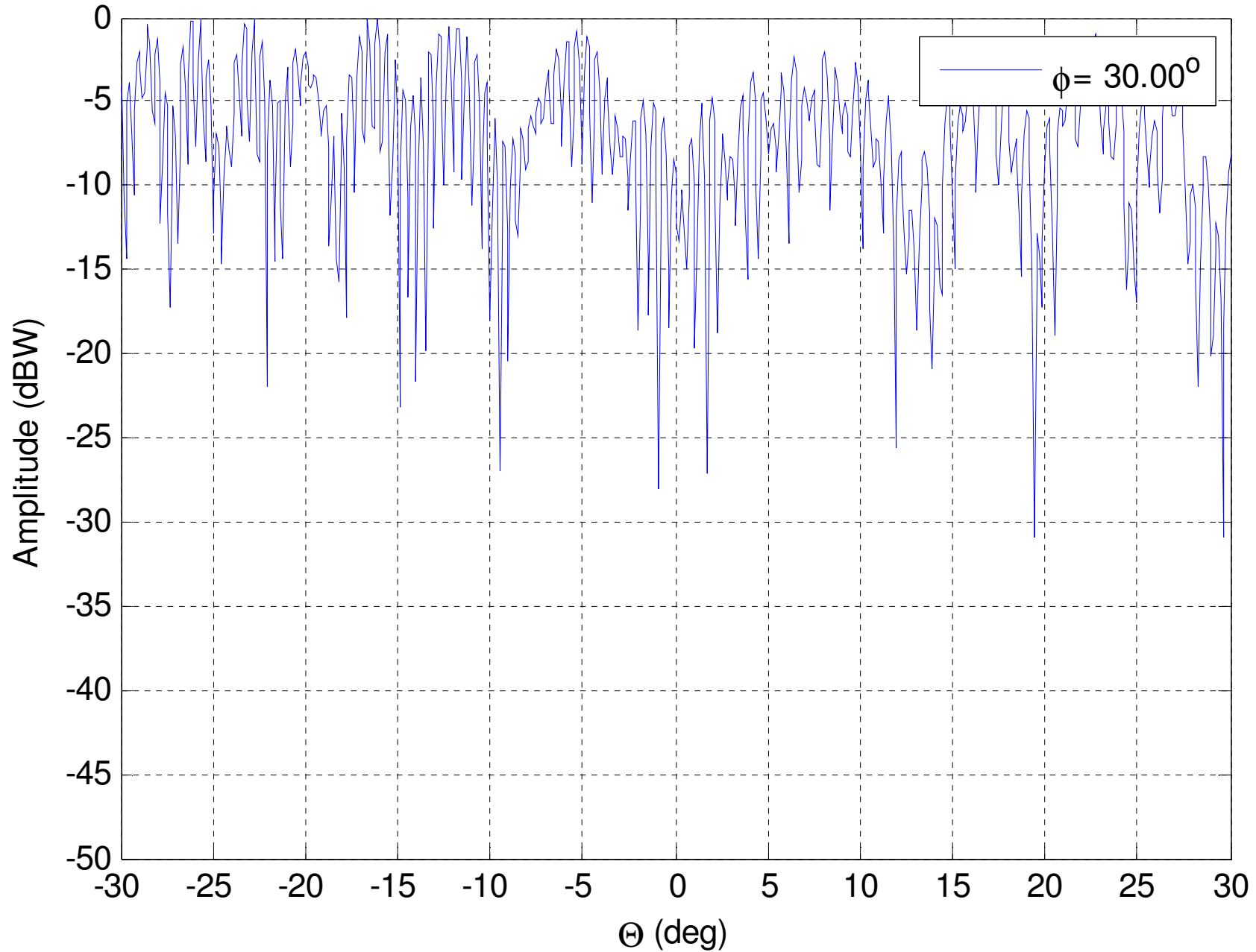
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -2.61 dBW, Date: 15-Dec-2011



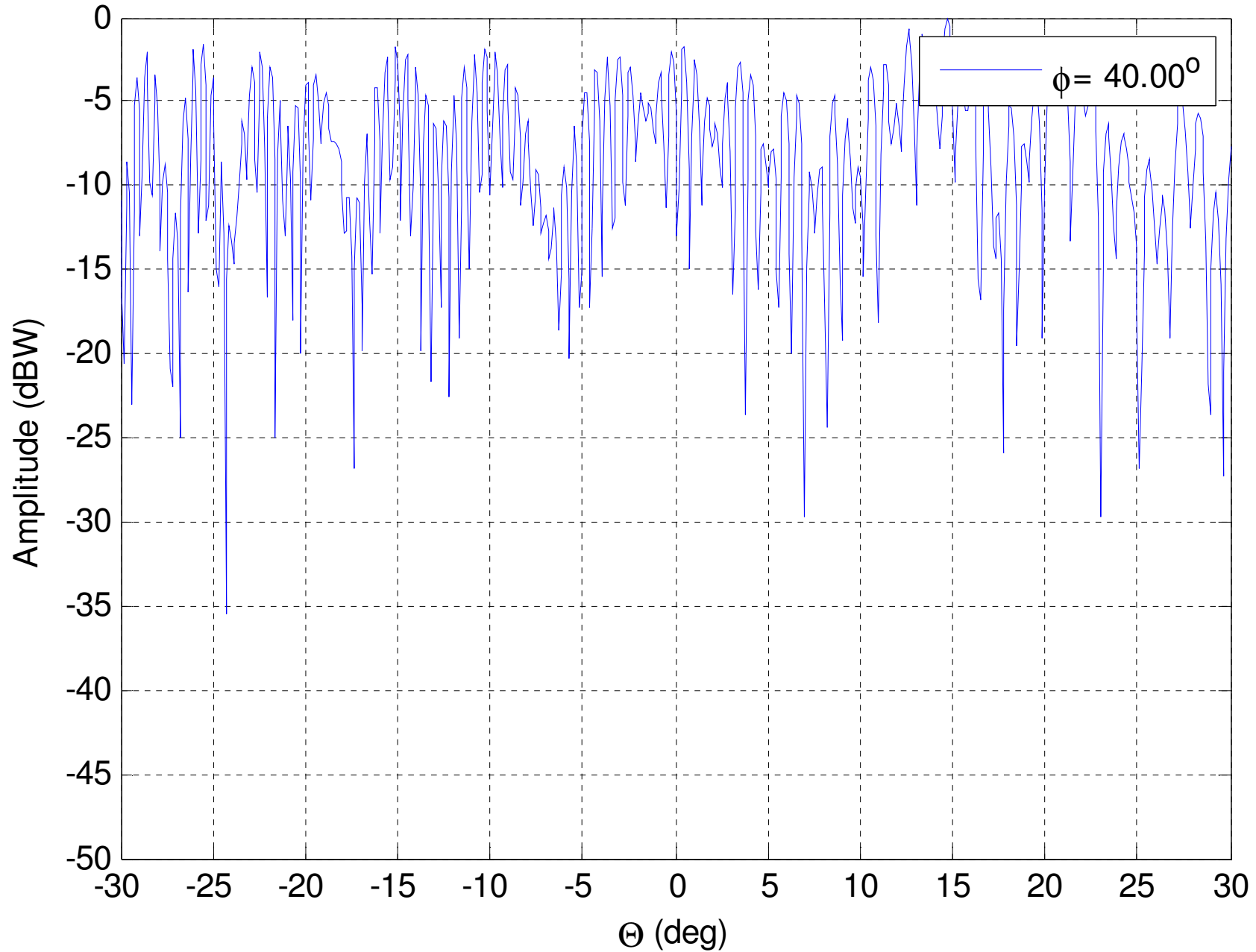
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -2.76 dBW, Date: 15-Dec-2011



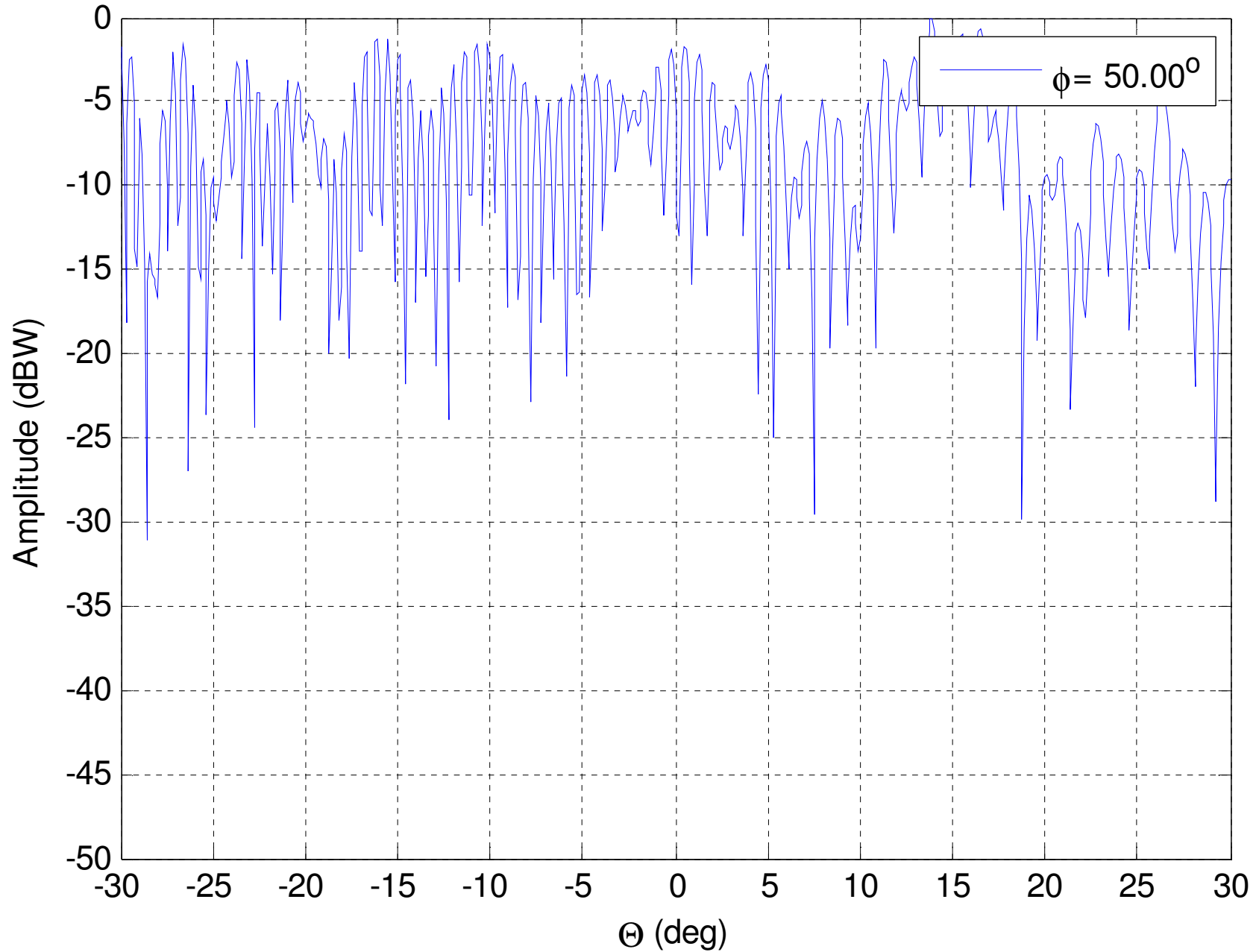
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -2.75 dBW, Date: 15-Dec-2011



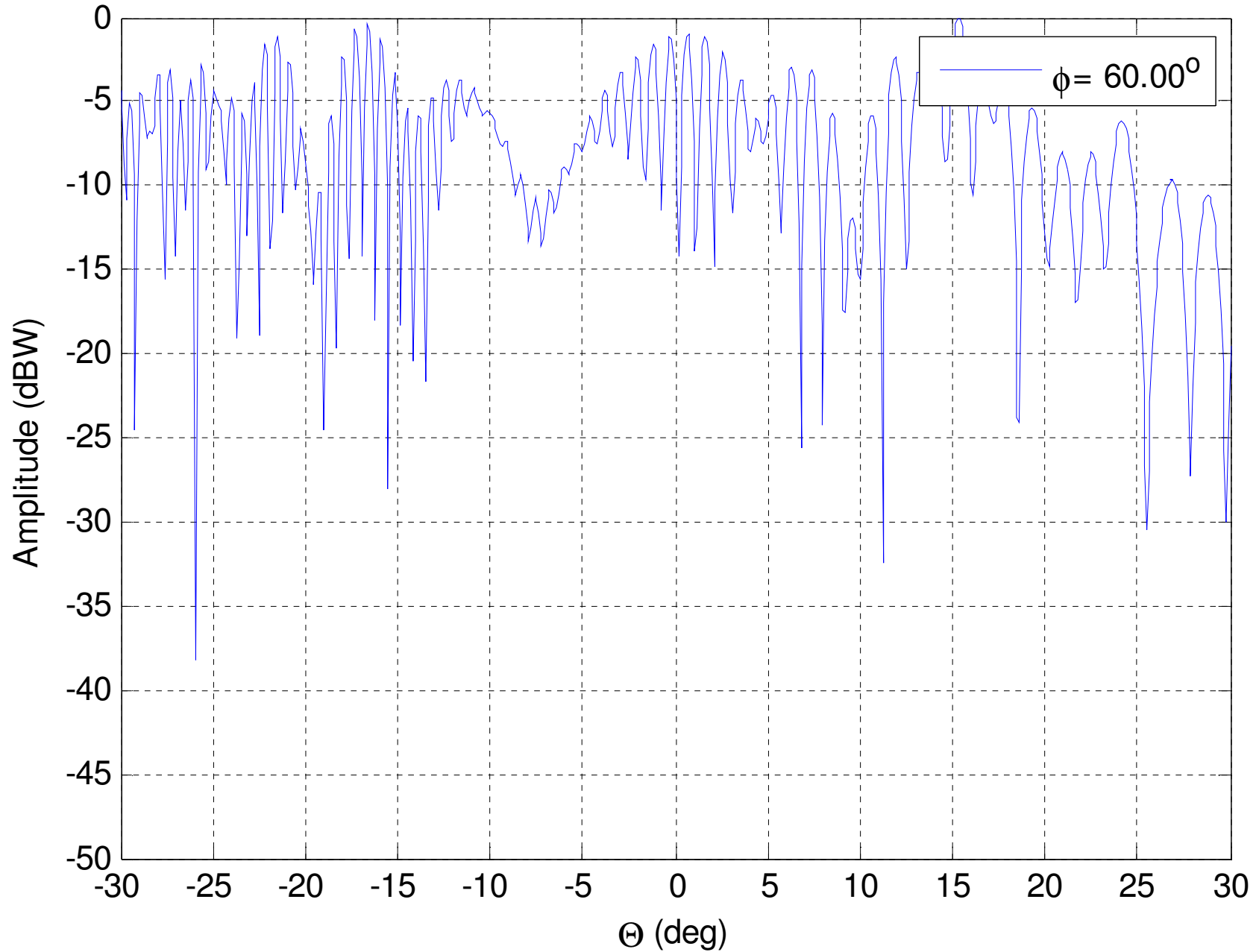
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -2.74 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

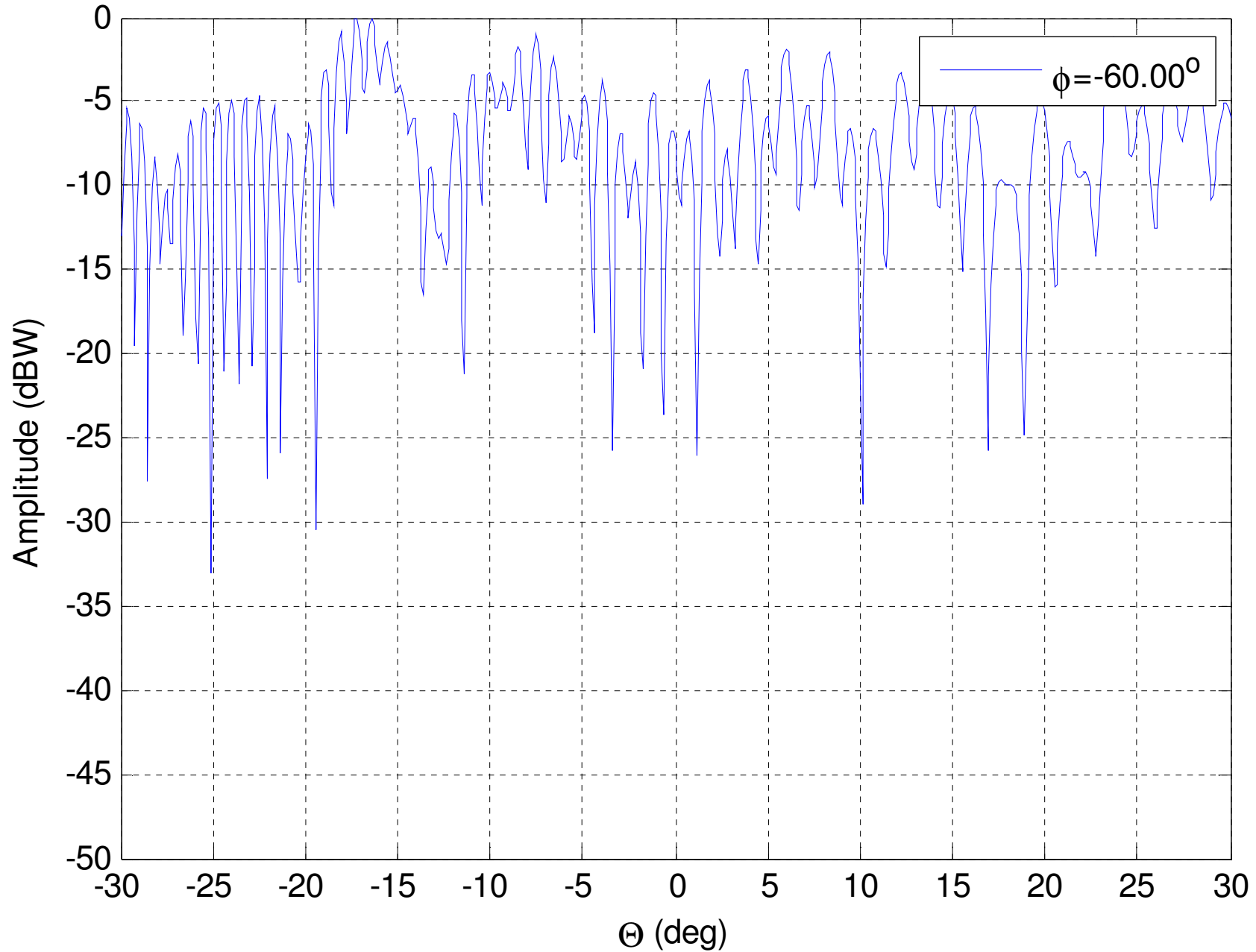
Input file: tx-17.5-rhcp-60.cut, Peak: -3.46 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

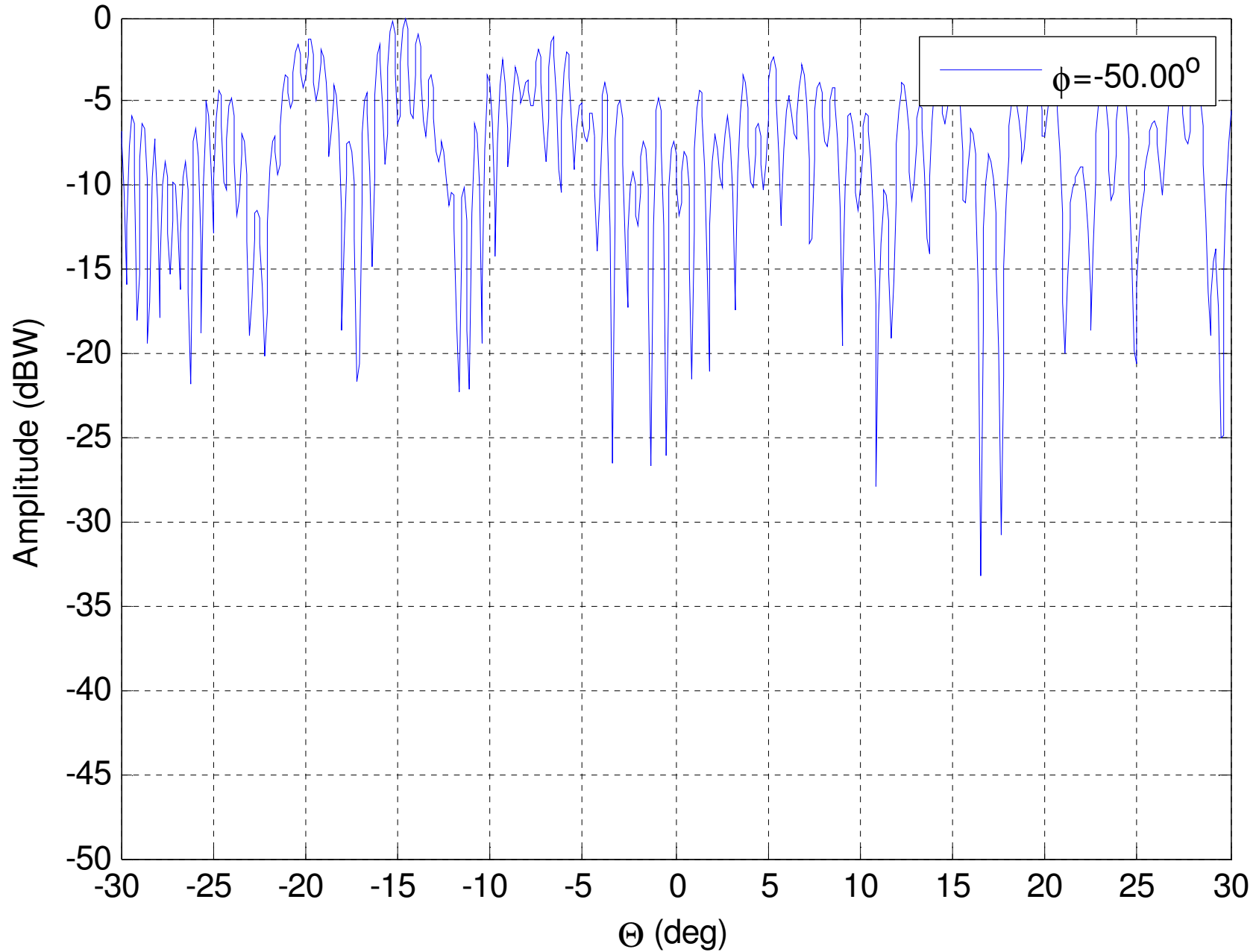
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -3.38 dBW, Date: 15-Dec-2011



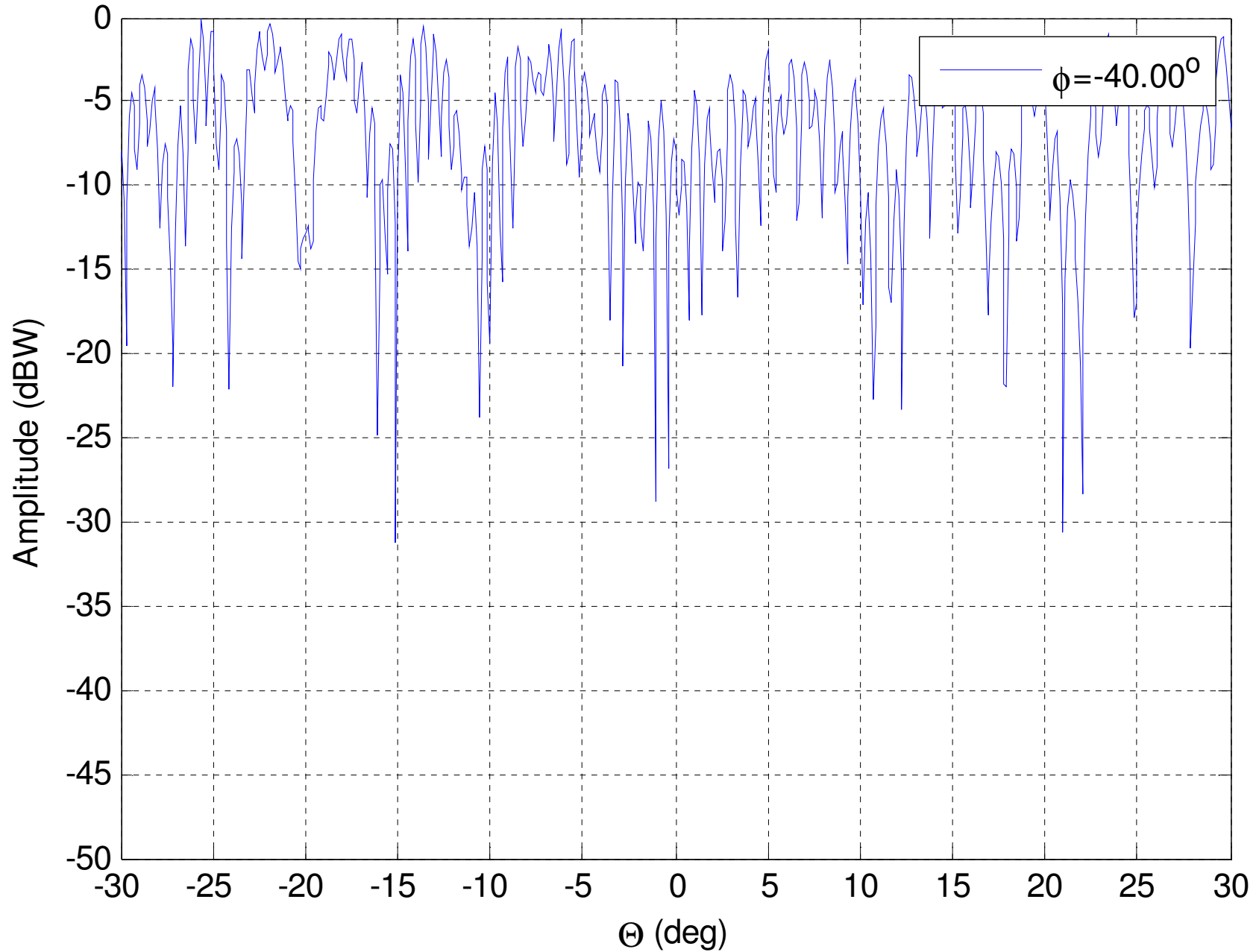
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -2.82 dBW, Date: 15-Dec-2011



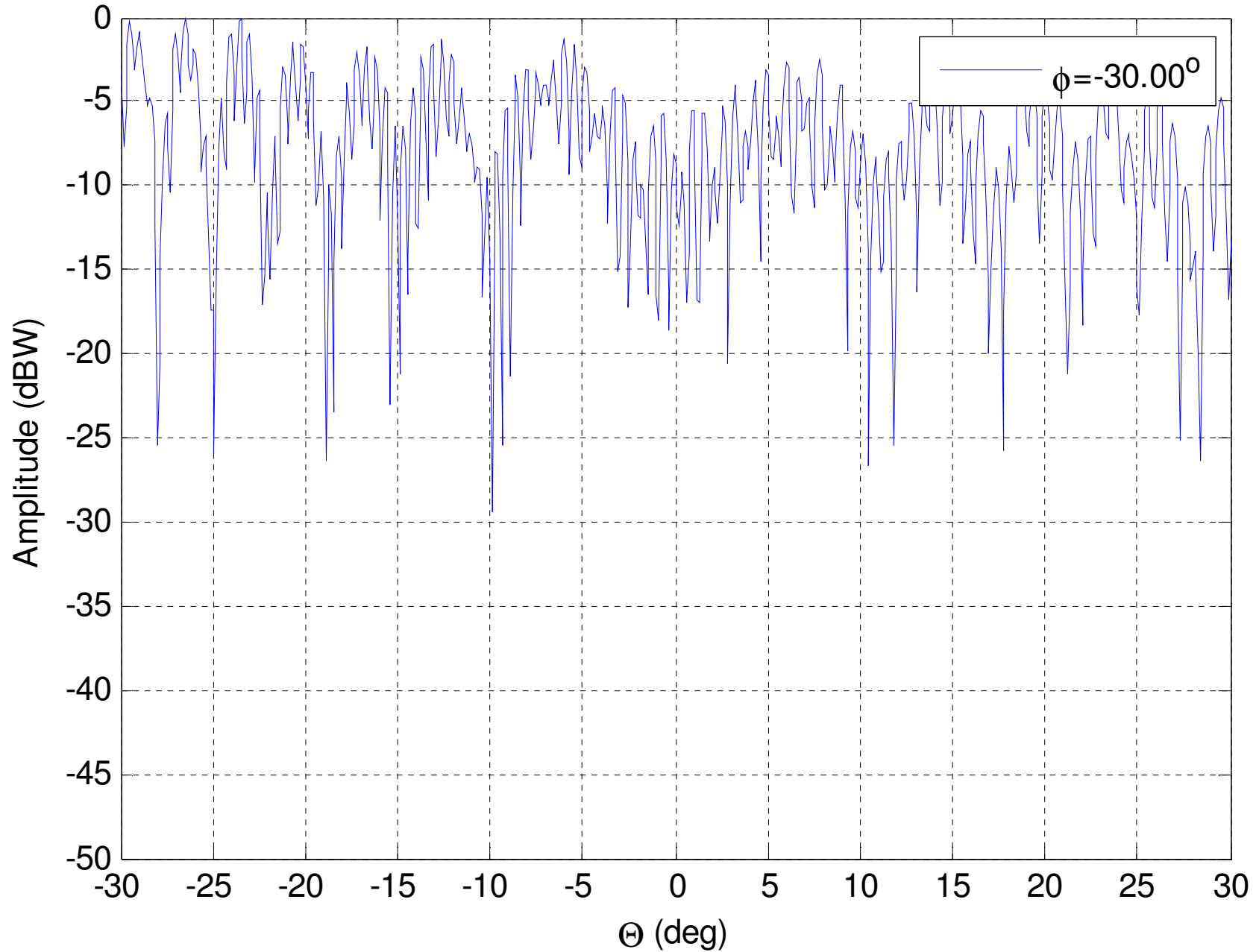
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.96 dBW, Date: 15-Dec-2011



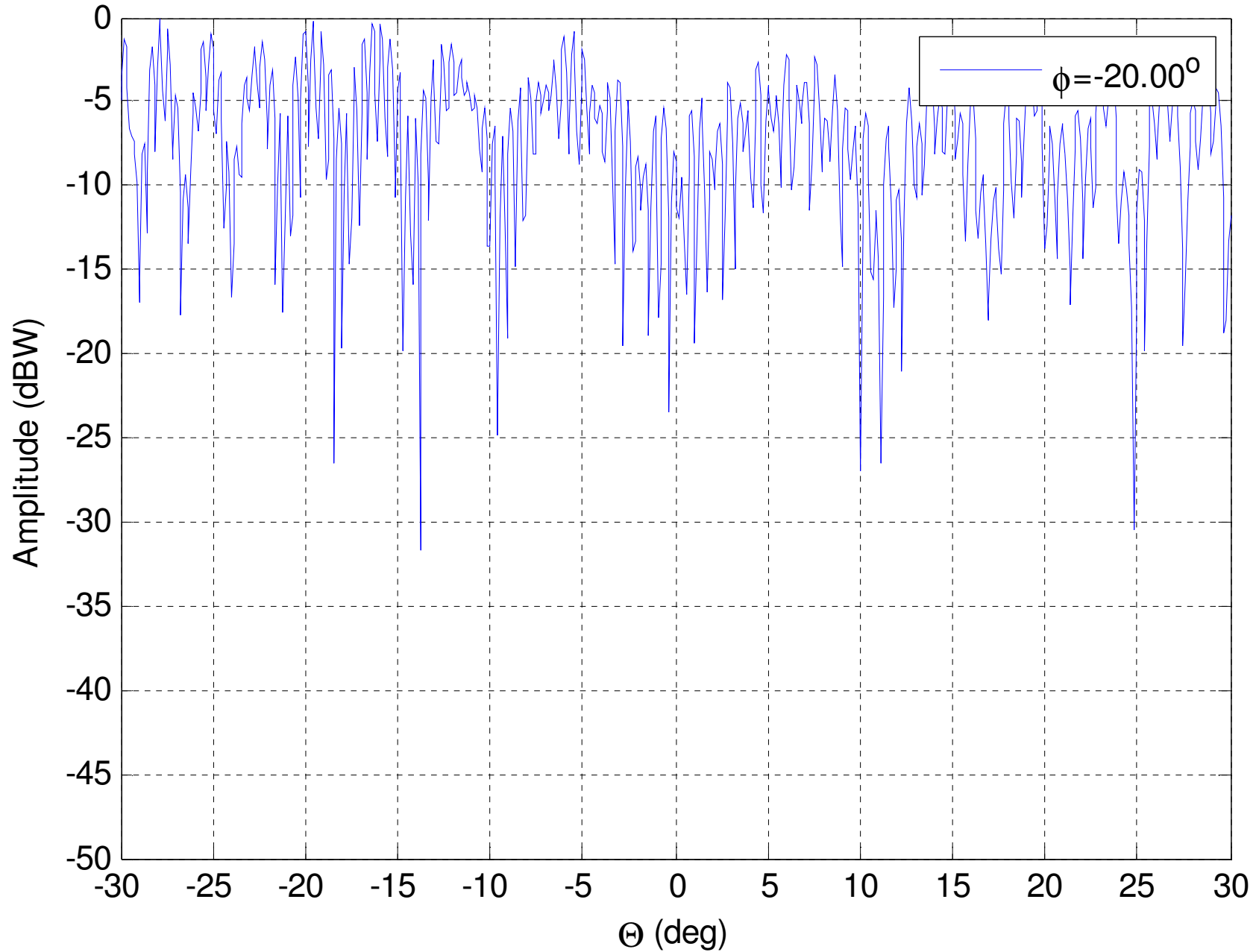
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -2.24 dBW, Date: 15-Dec-2011



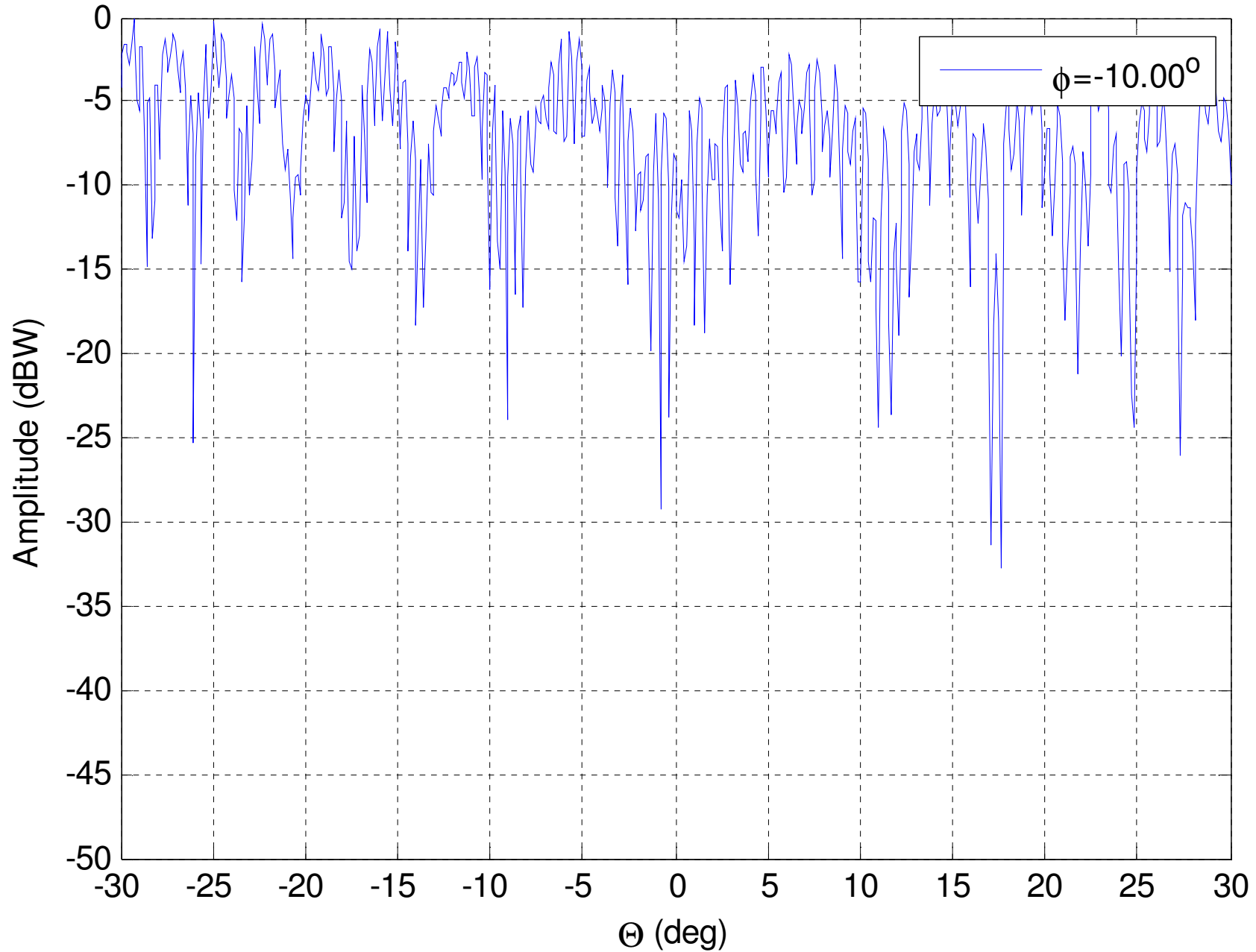
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -2.44 dBW, Date: 15-Dec-2011



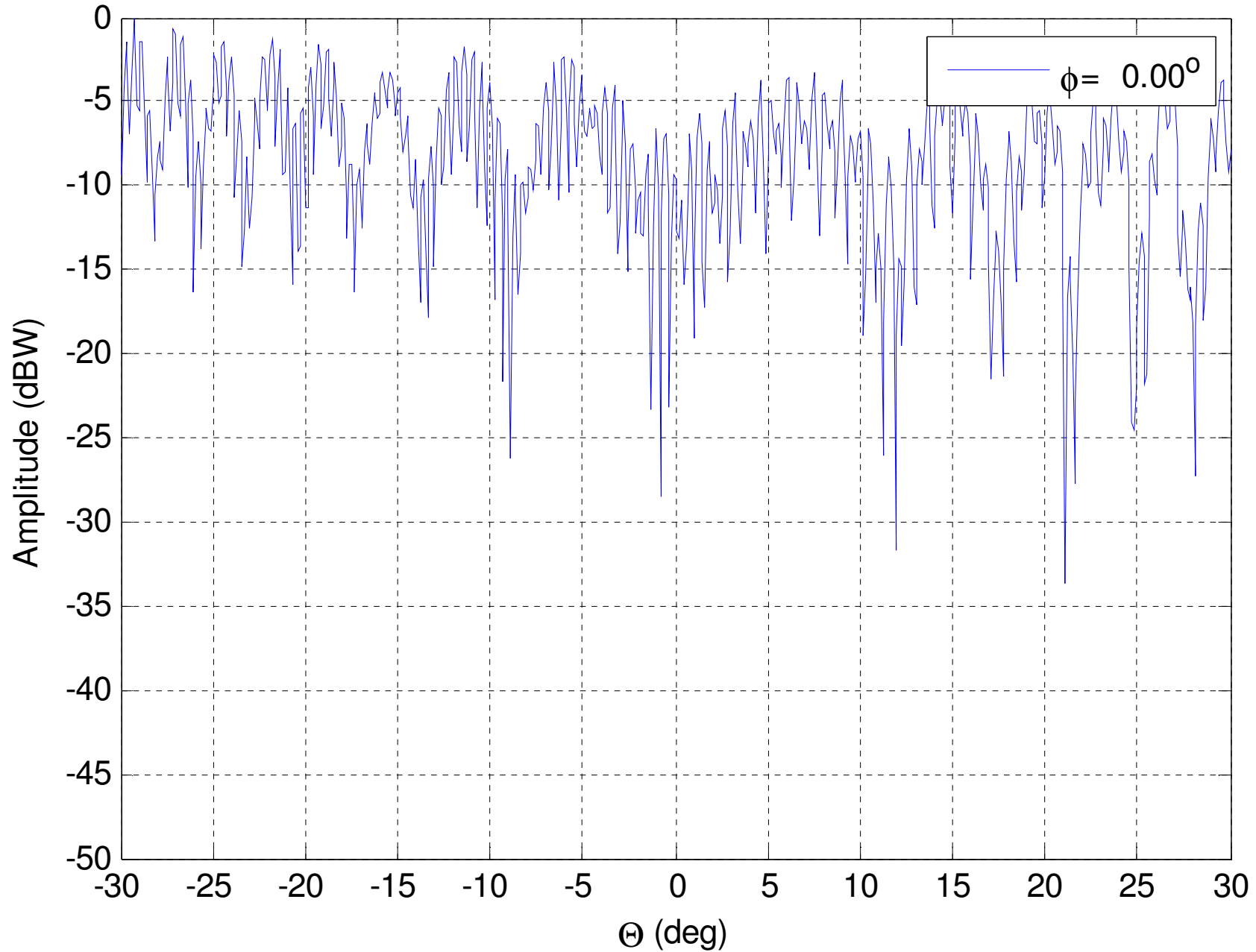
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -2.45 dBW, Date: 15-Dec-2011



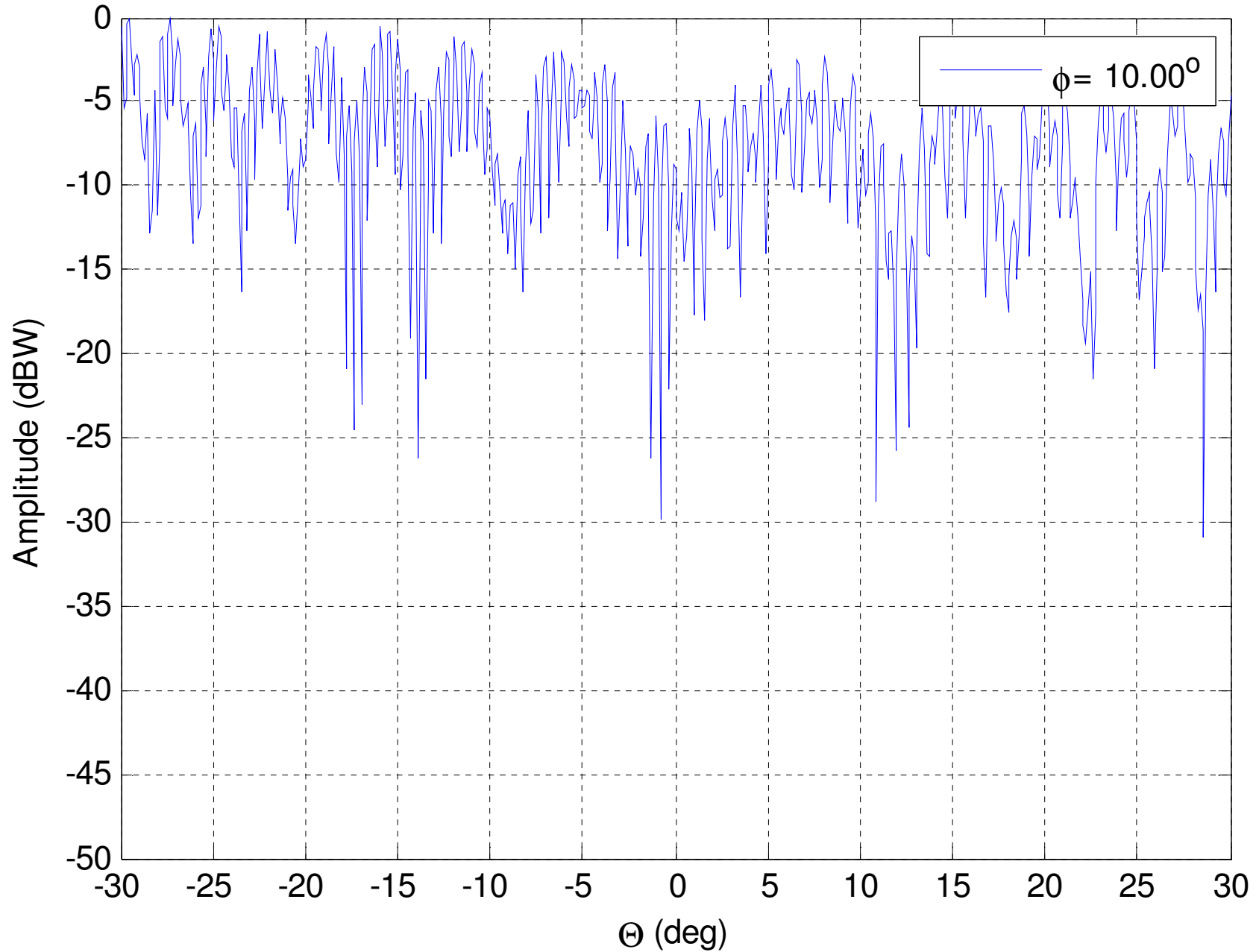
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -1.31 dBW, Date: 15-Dec-2011



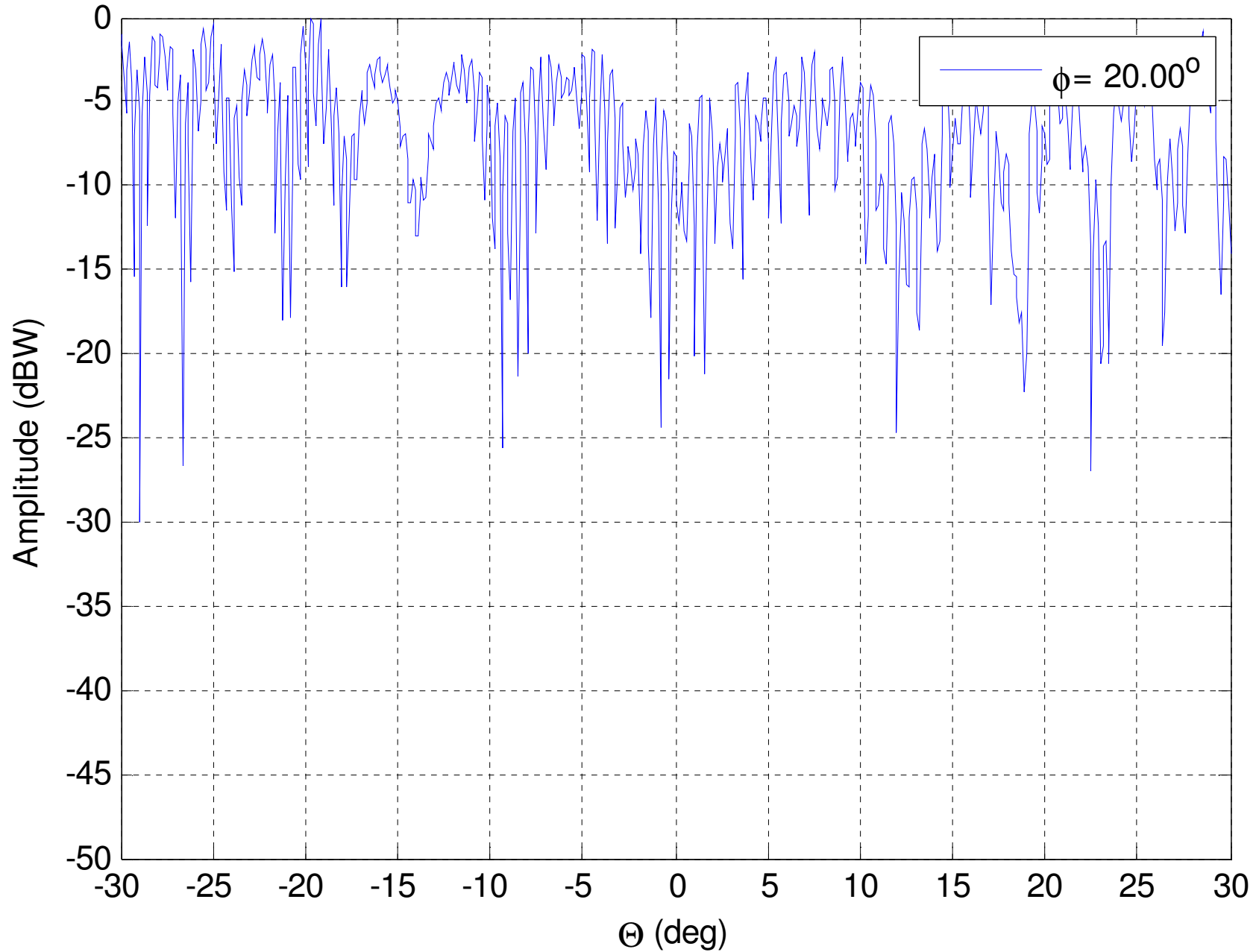
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -1.97 dBW, Date: 15-Dec-2011



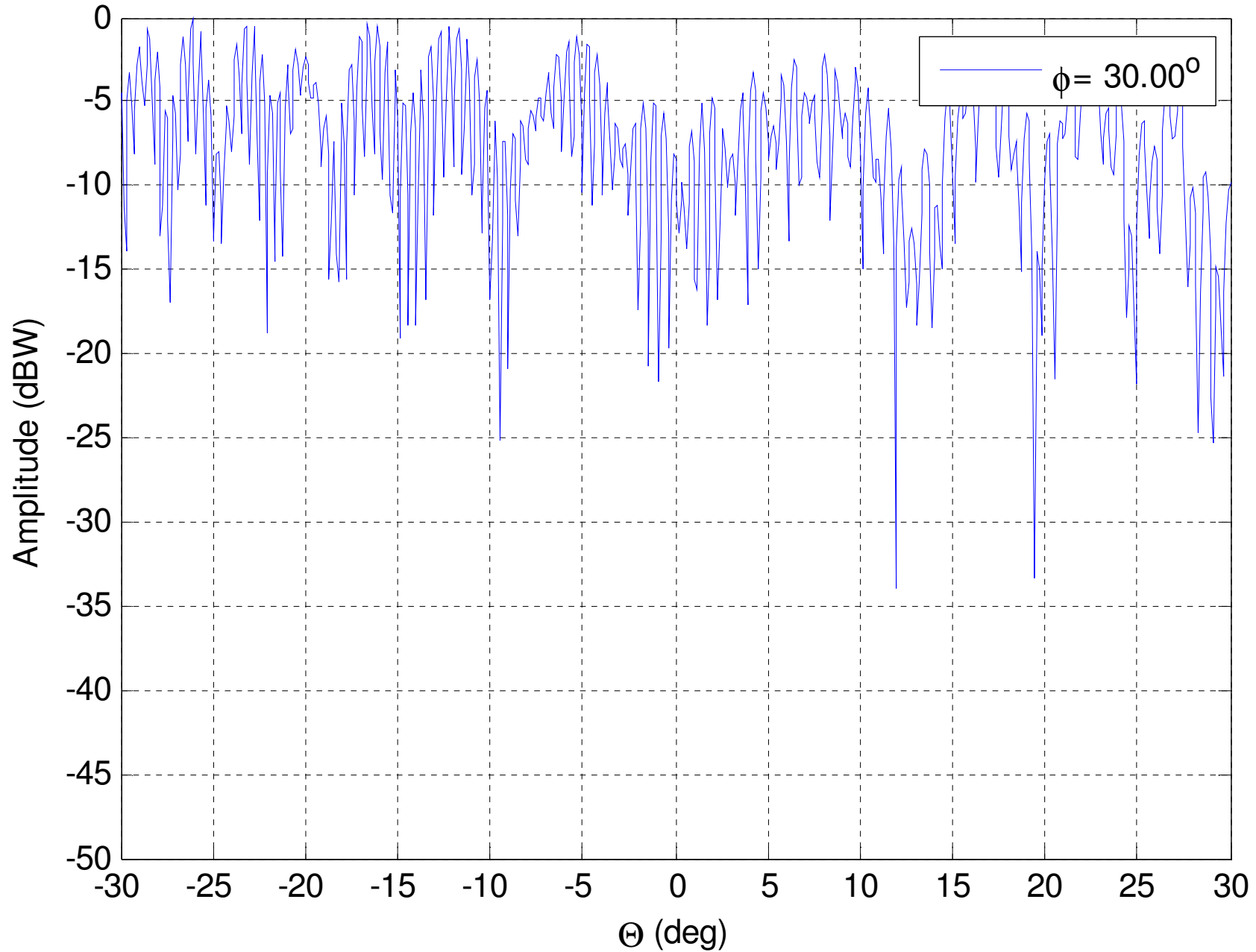
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -2.69 dBW, Date: 15-Dec-2011



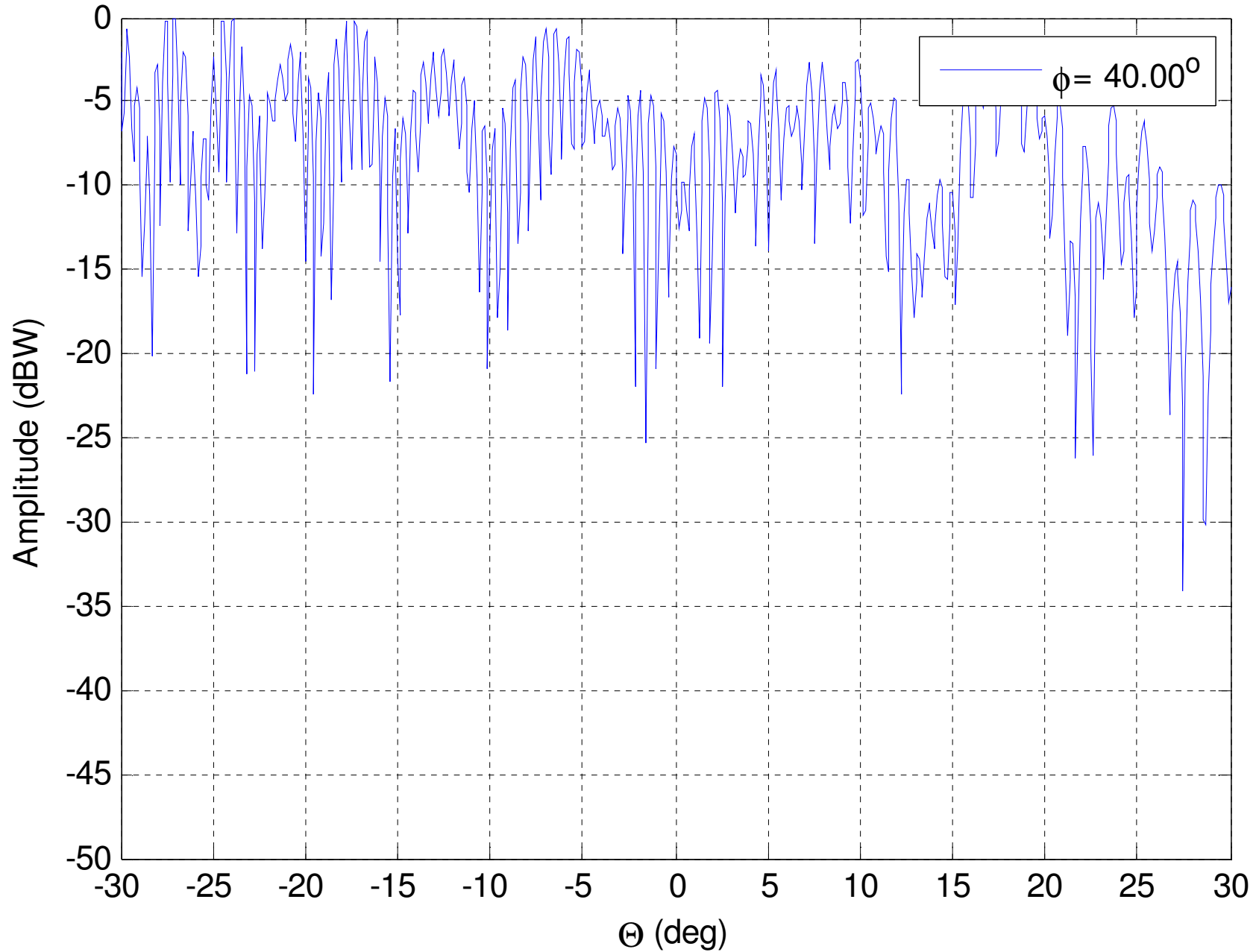
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -2.53 dBW, Date: 15-Dec-2011



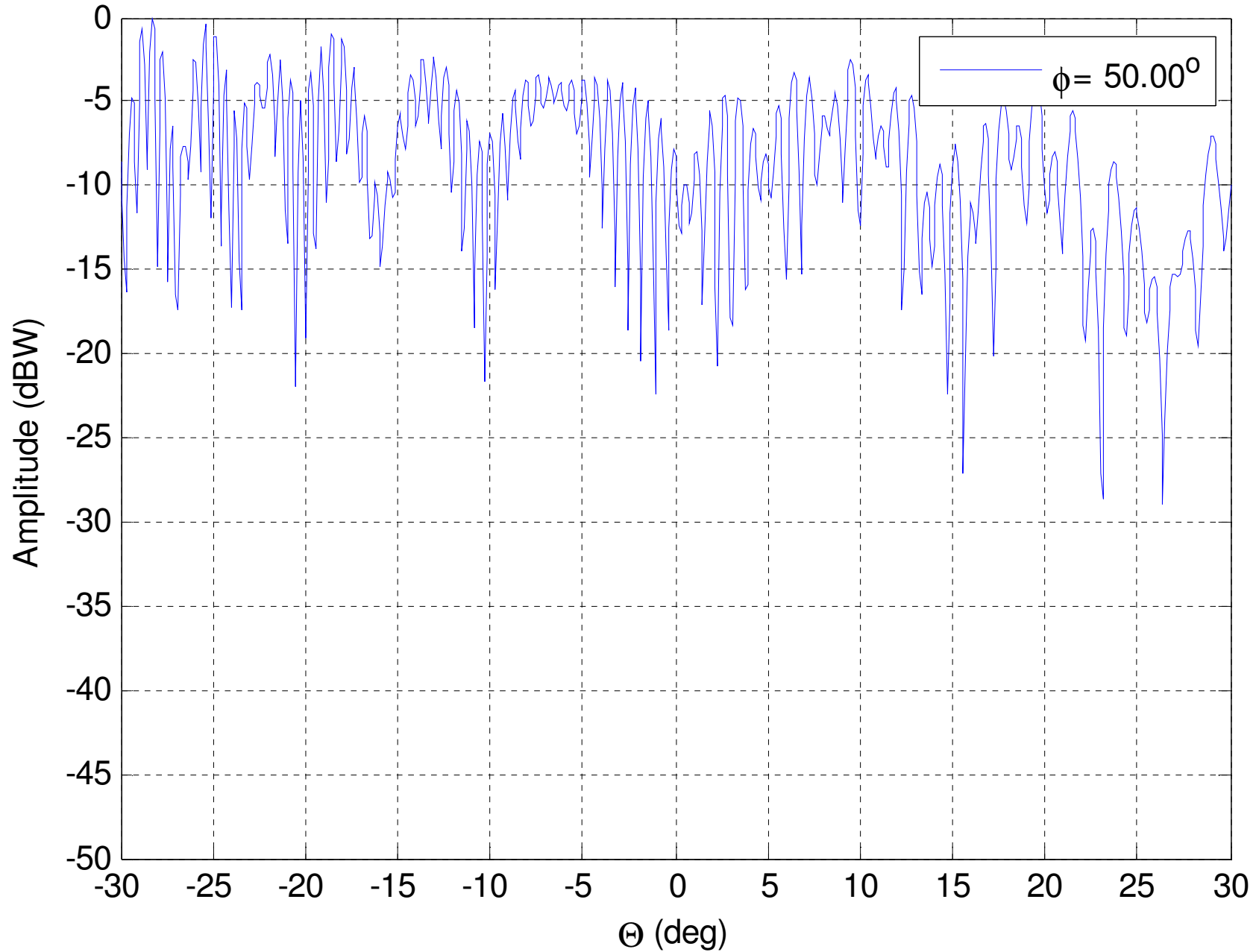
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -2.87 dBW, Date: 15-Dec-2011



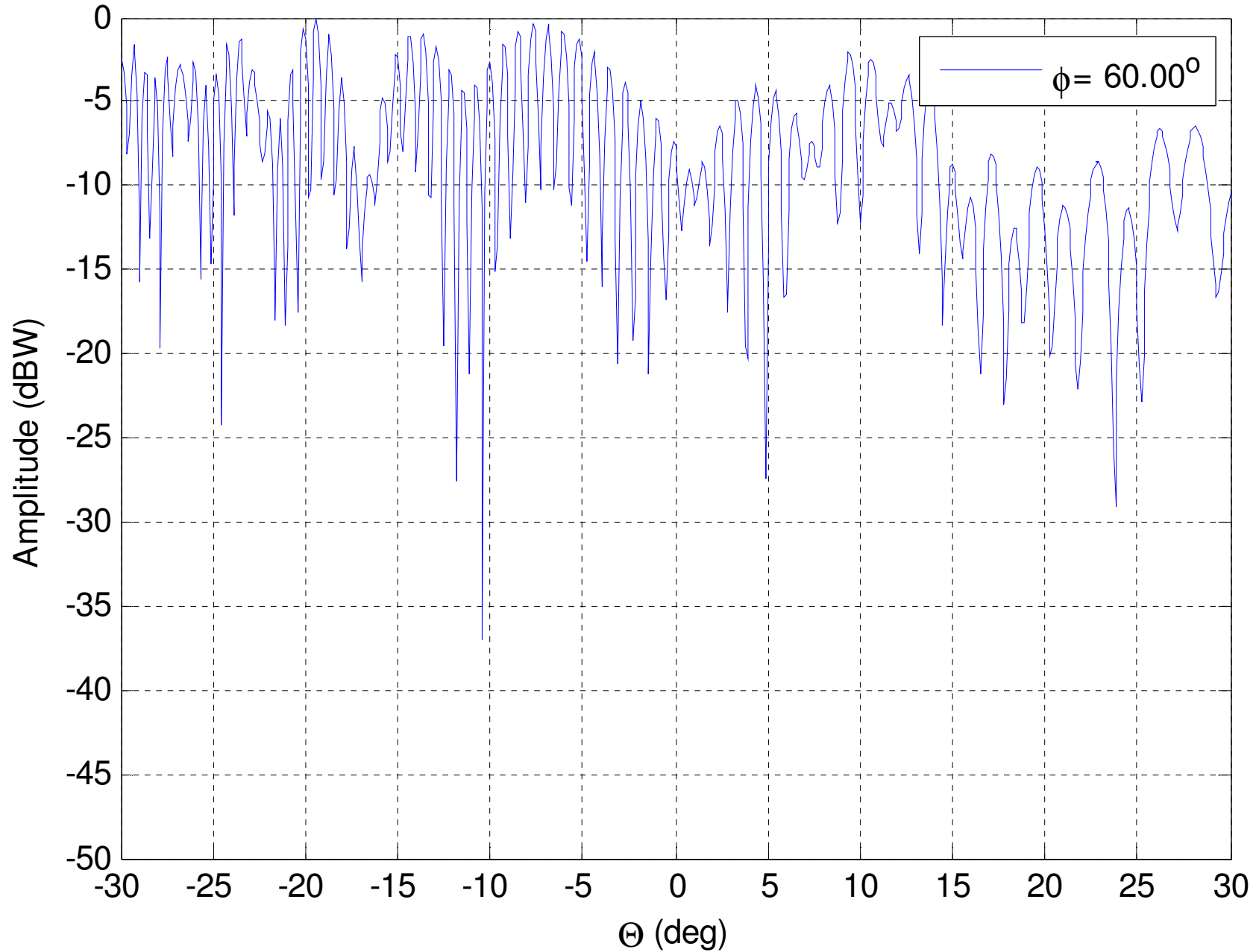
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -2.67 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

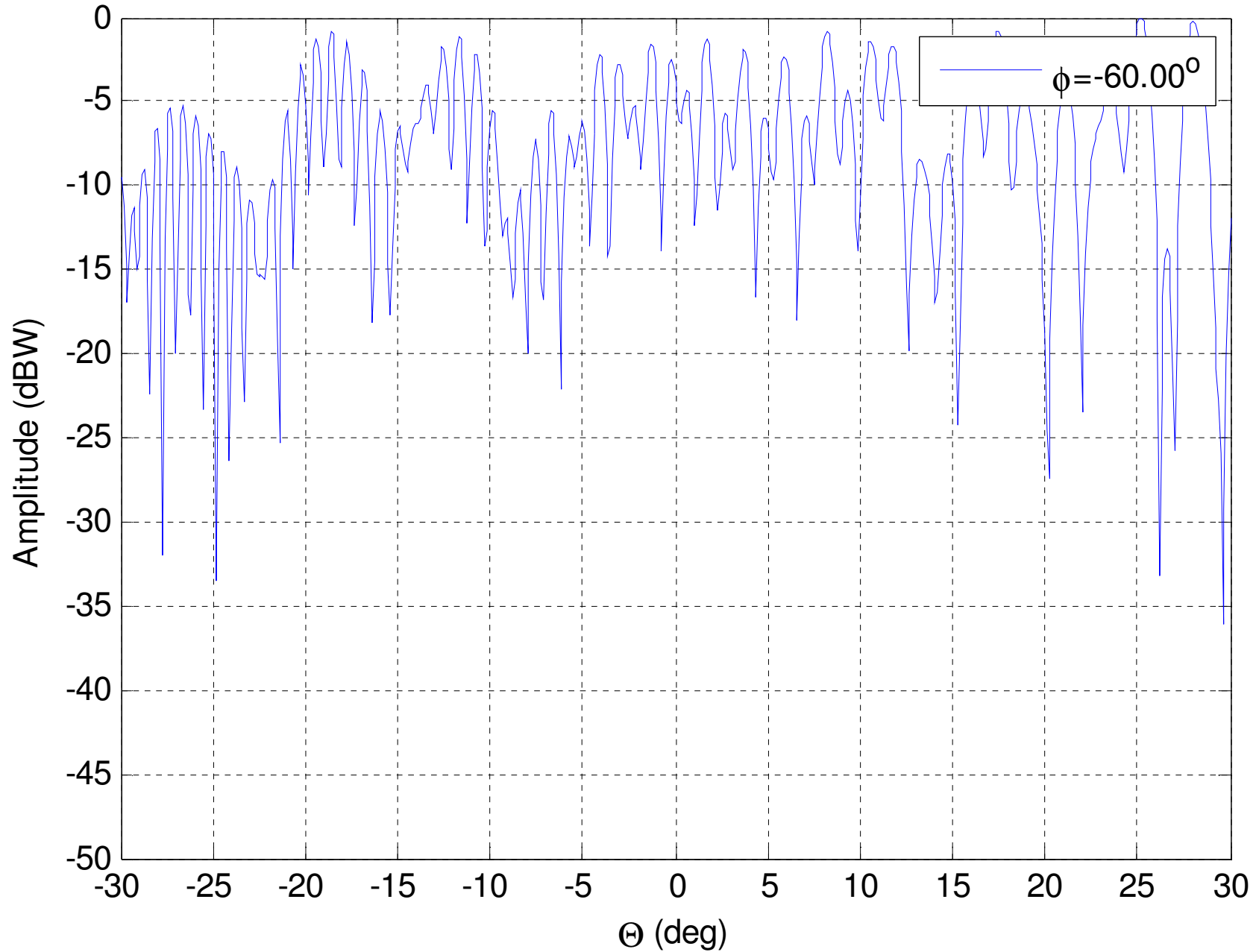
Input file: tx-17.5-lhcp-60.cut, Peak: -3.25 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

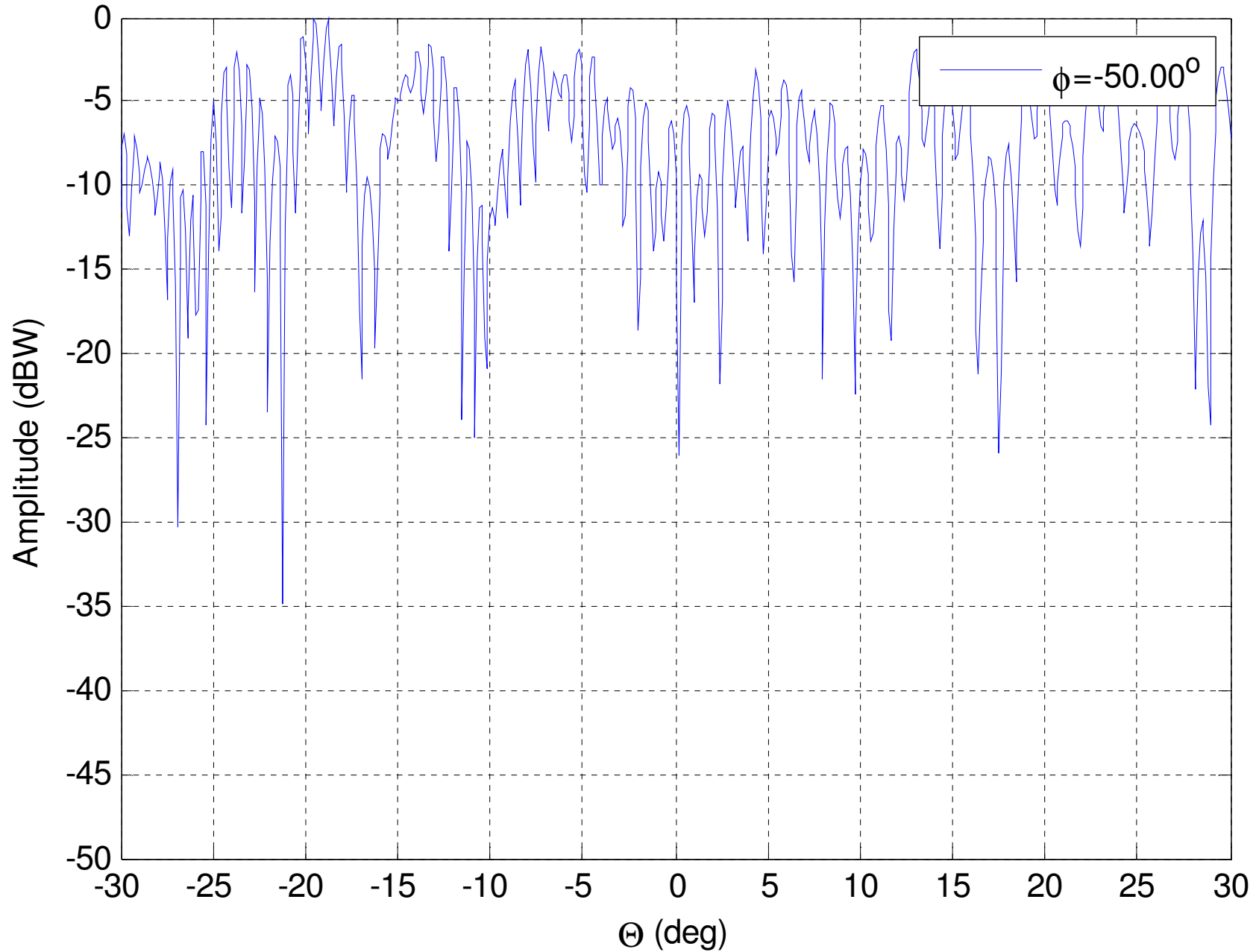
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -3.56 dBW, Date: 15-Dec-2011



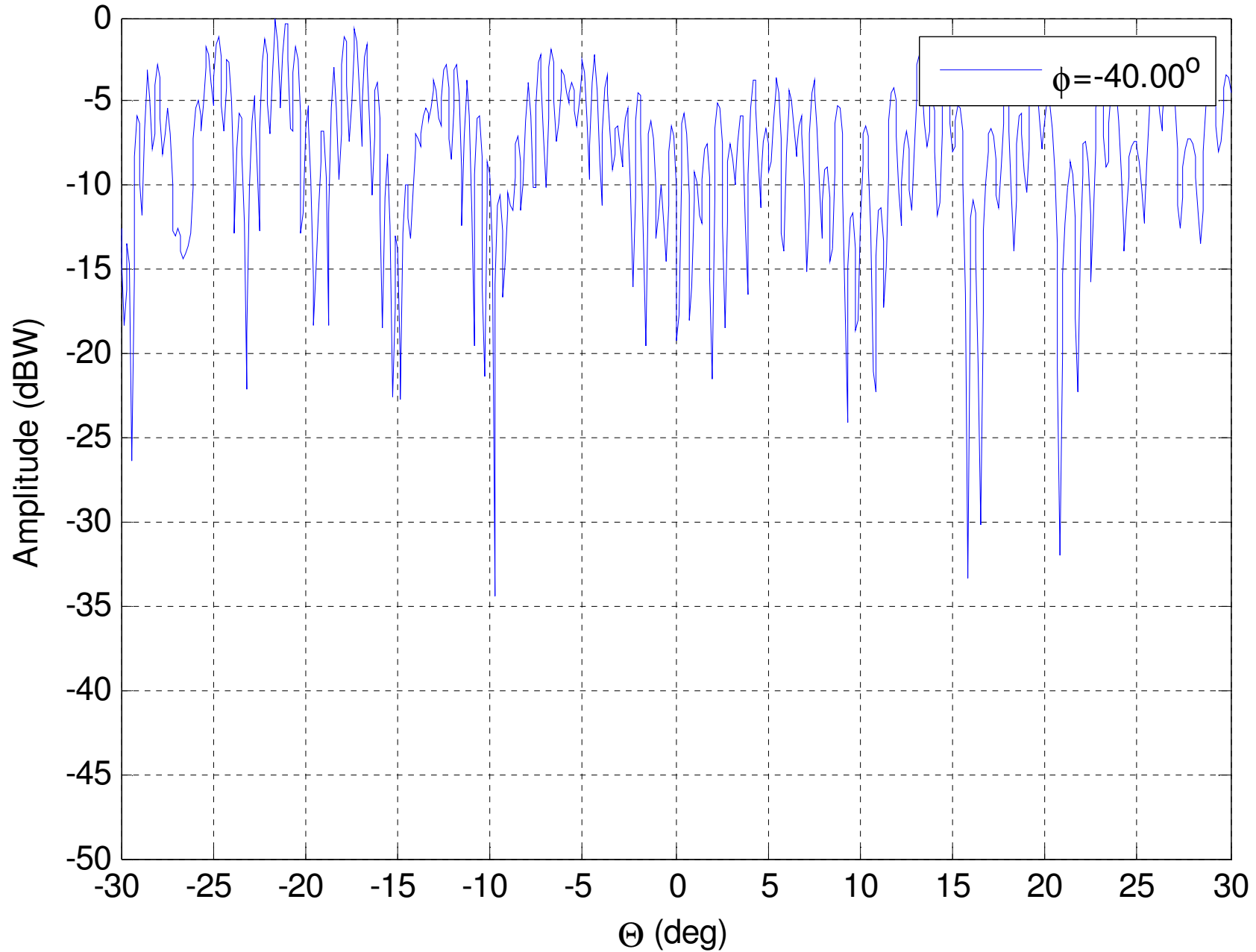
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -3.03 dBW, Date: 15-Dec-2011



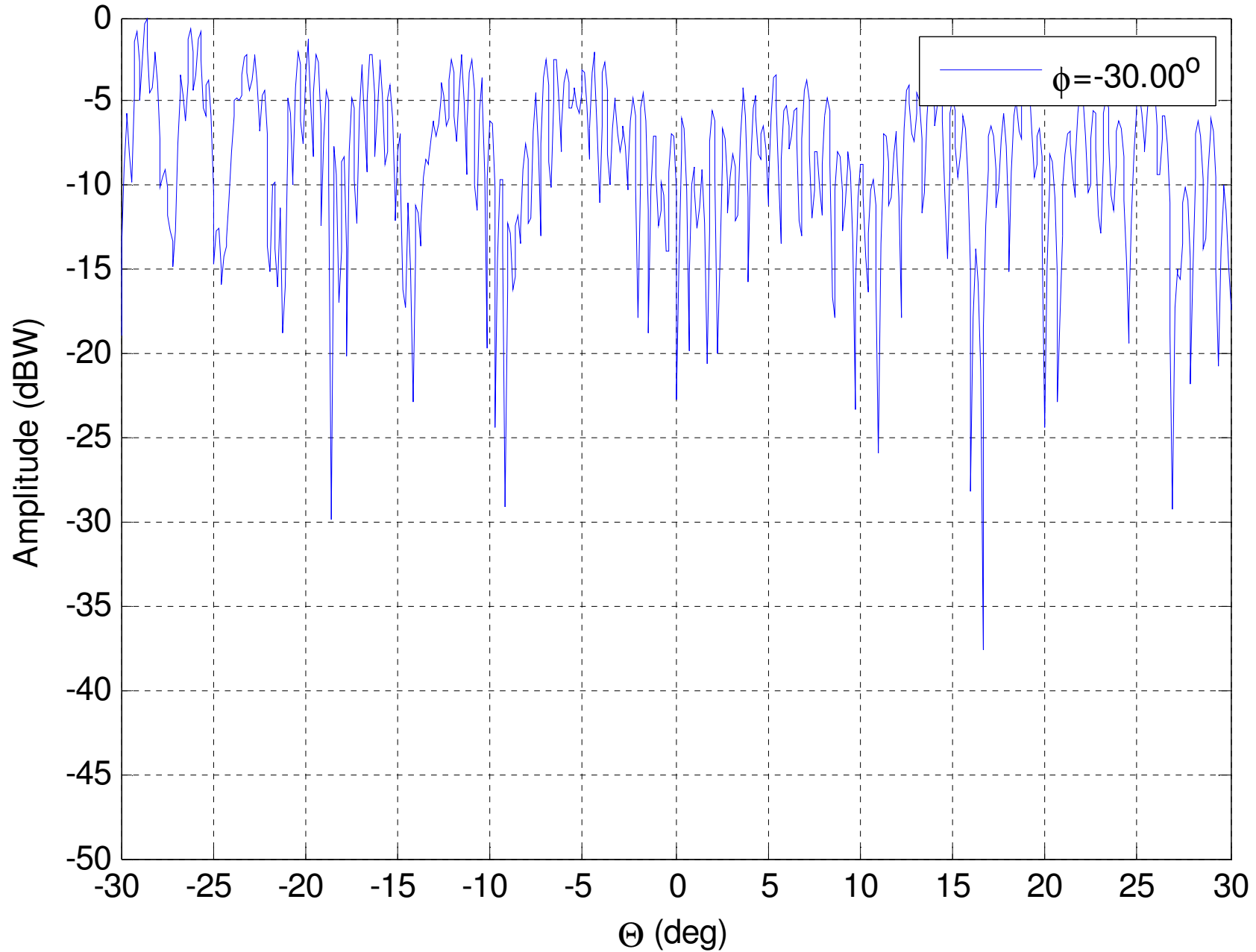
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -2.53 dBW, Date: 15-Dec-2011



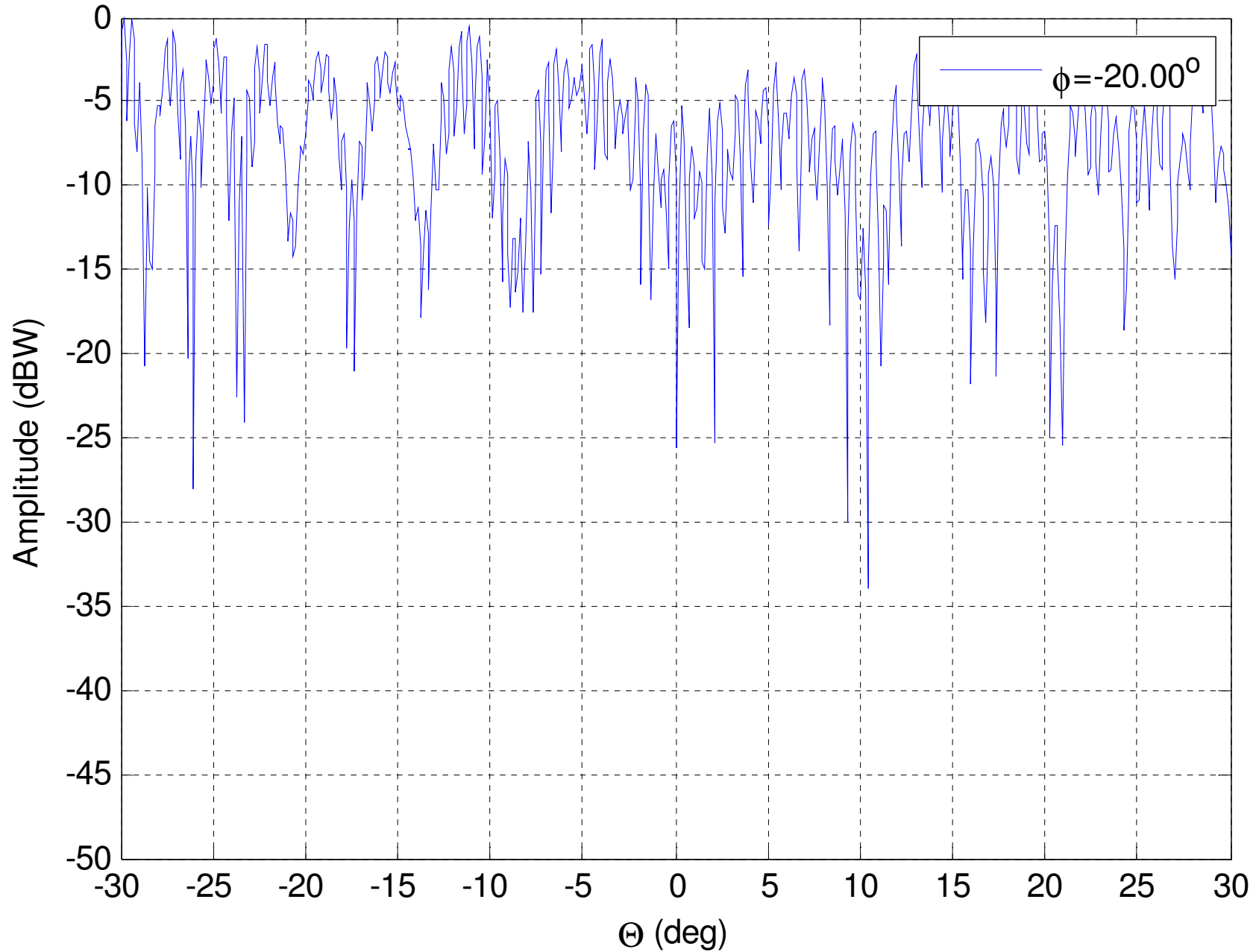
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -2.28 dBW, Date: 15-Dec-2011



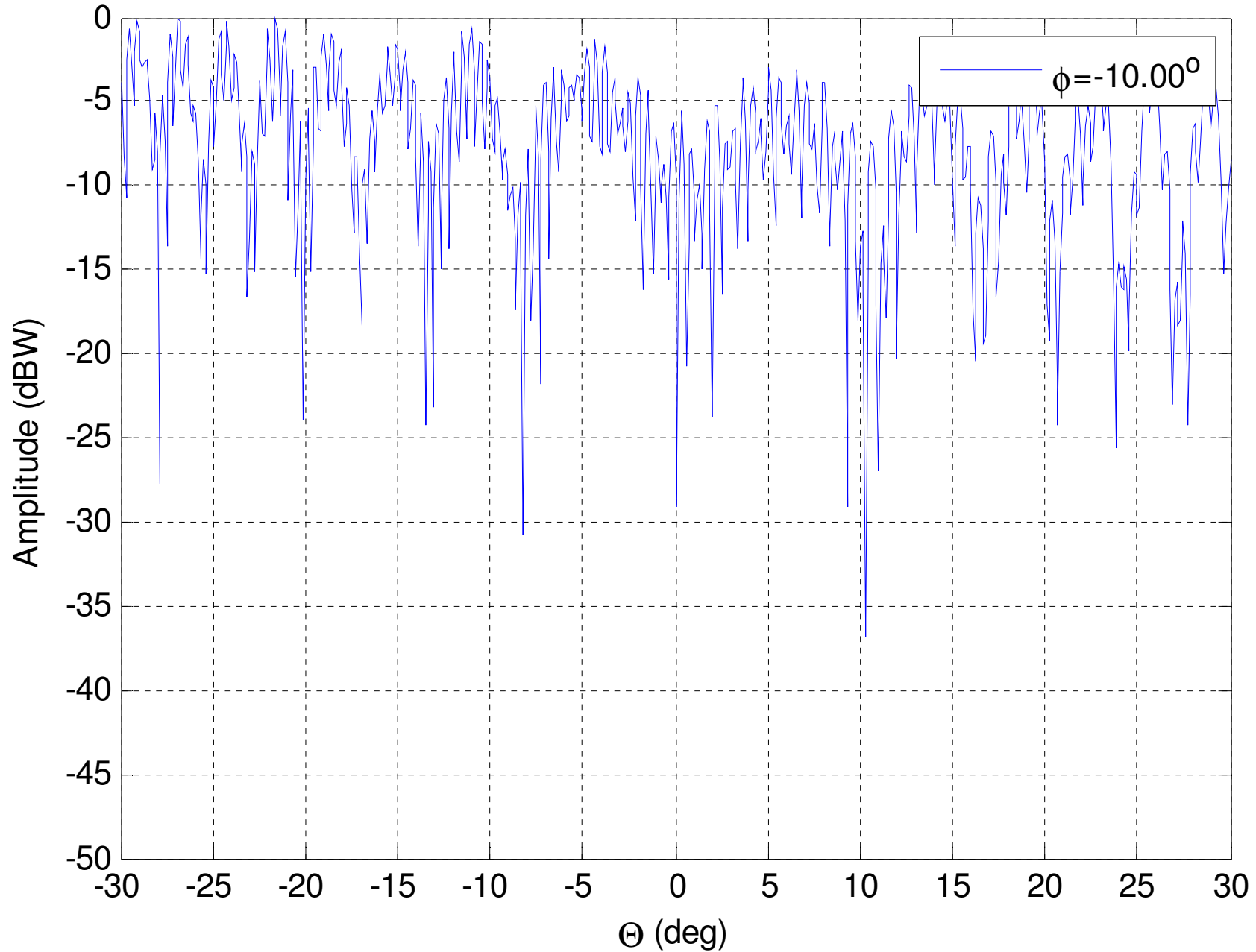
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -2.94 dBW, Date: 15-Dec-2011



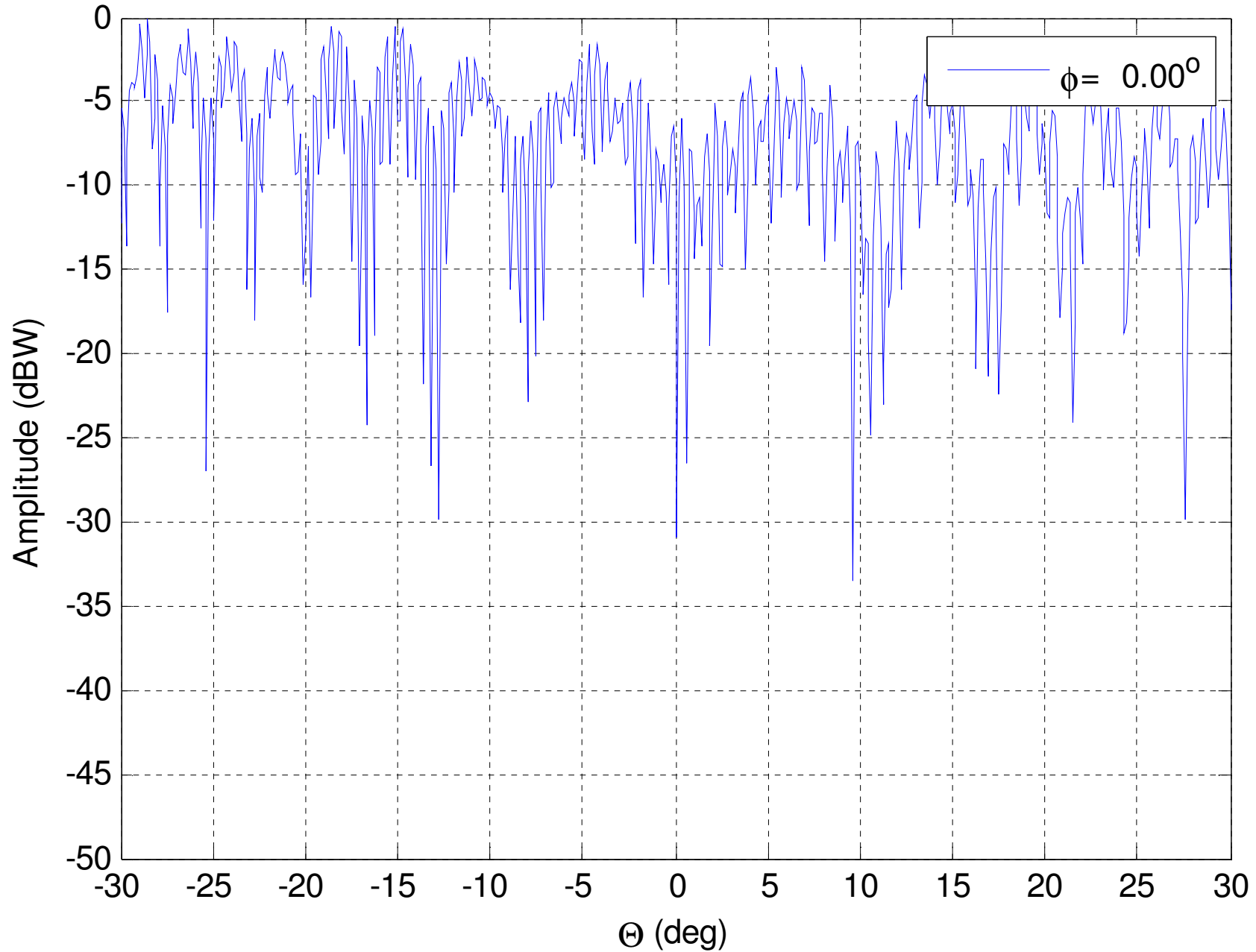
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -2.73 dBW, Date: 15-Dec-2011



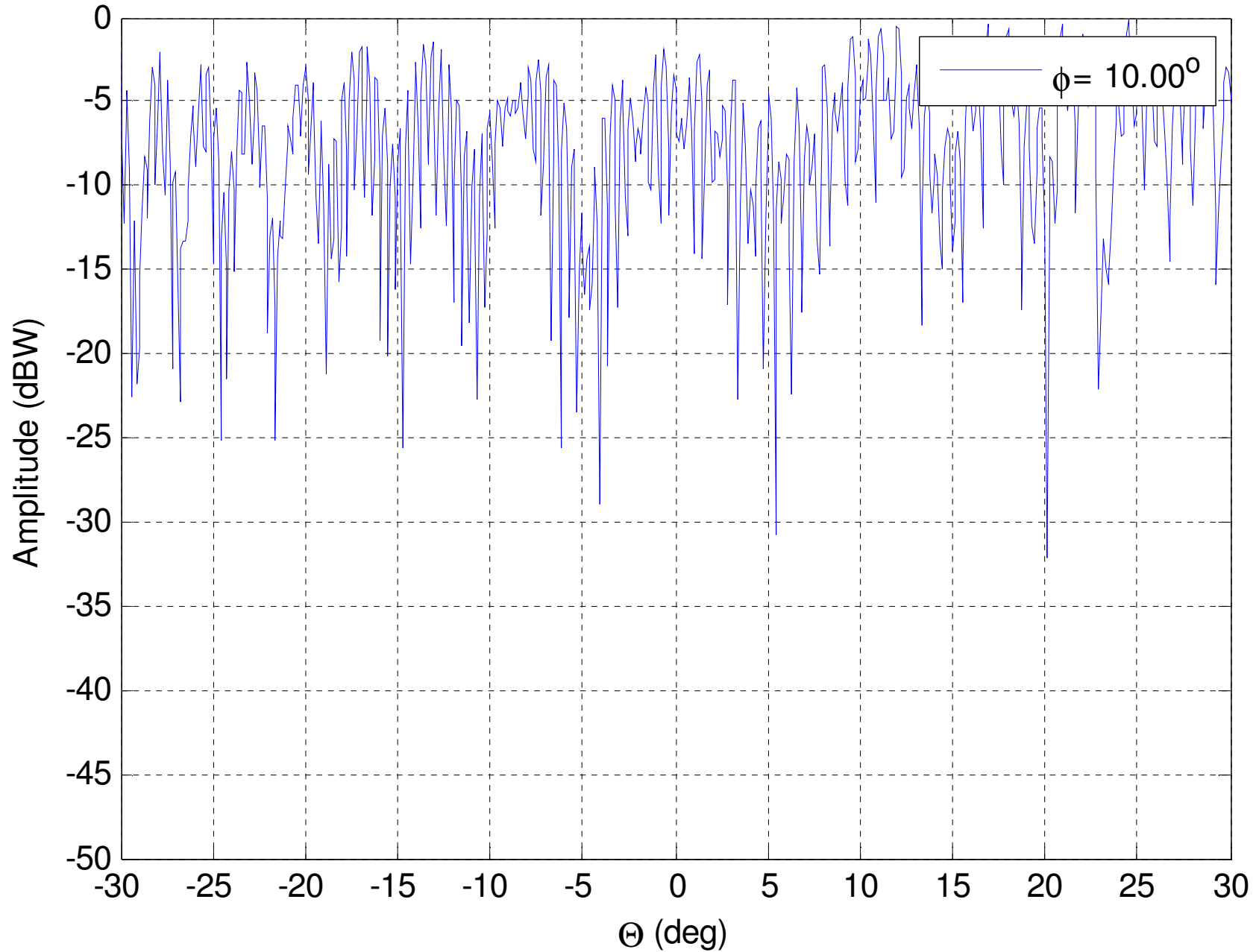
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -2.50 dBW, Date: 15-Dec-2011



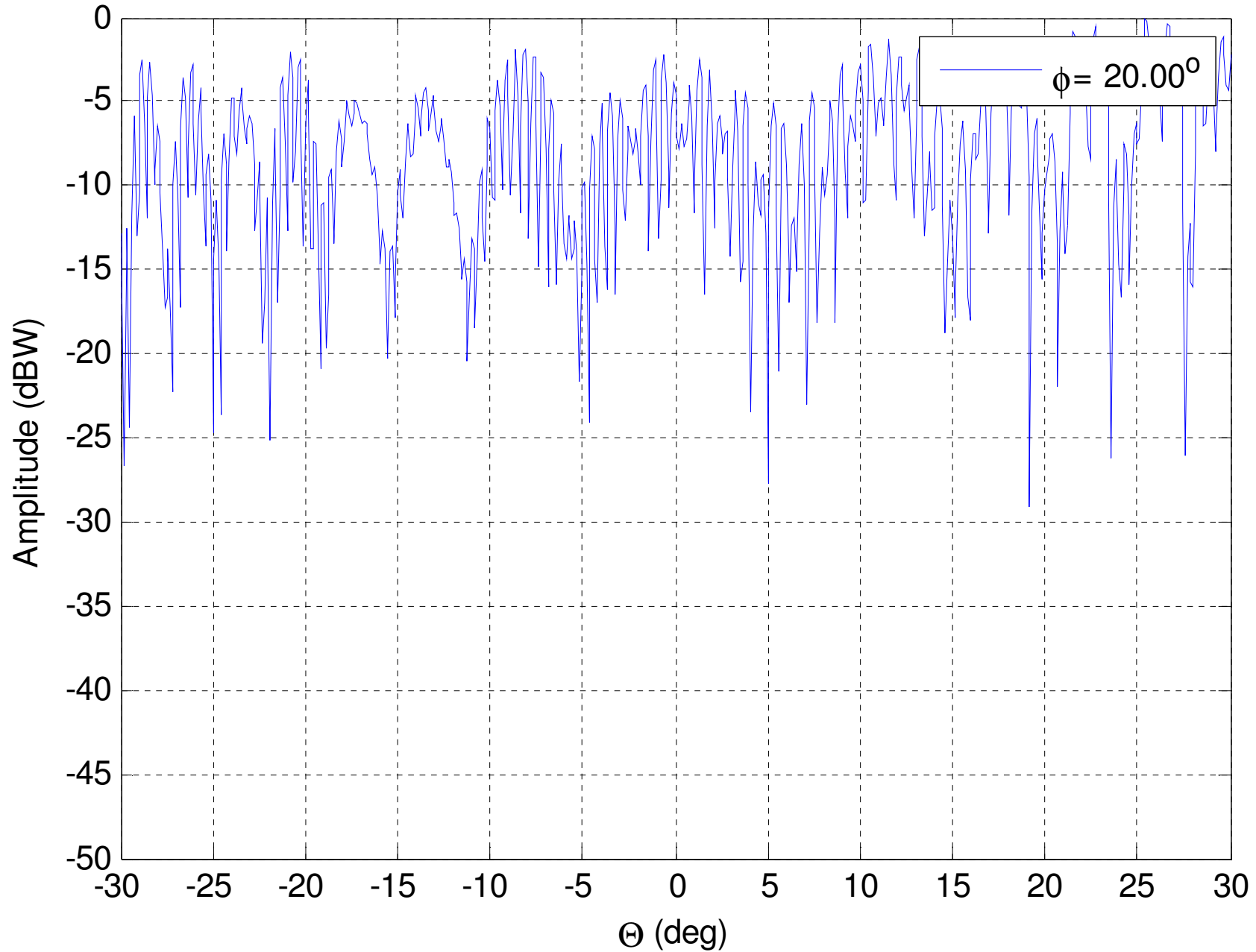
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -3.05 dBW, Date: 15-Dec-2011



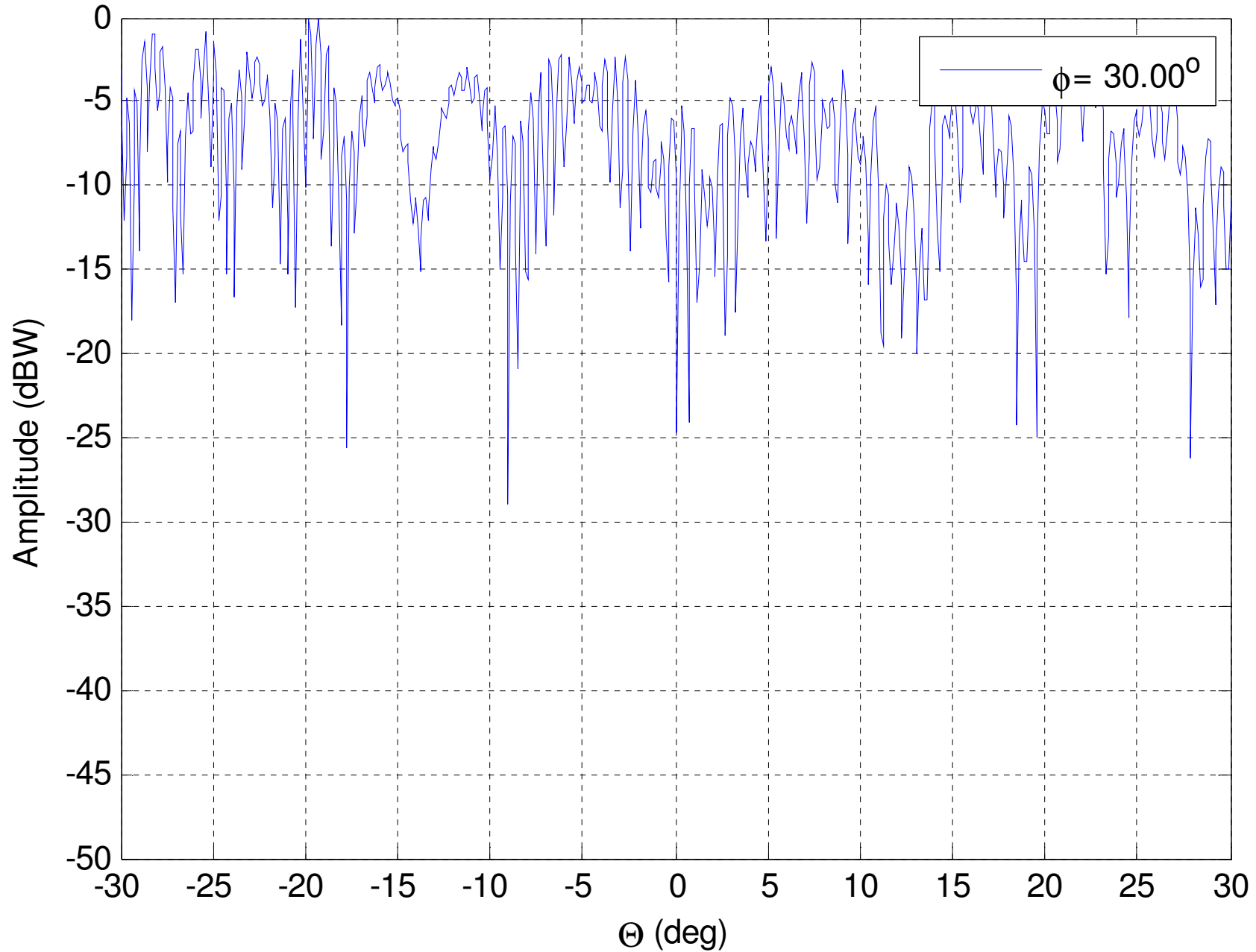
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -2.72 dBW, Date: 15-Dec-2011



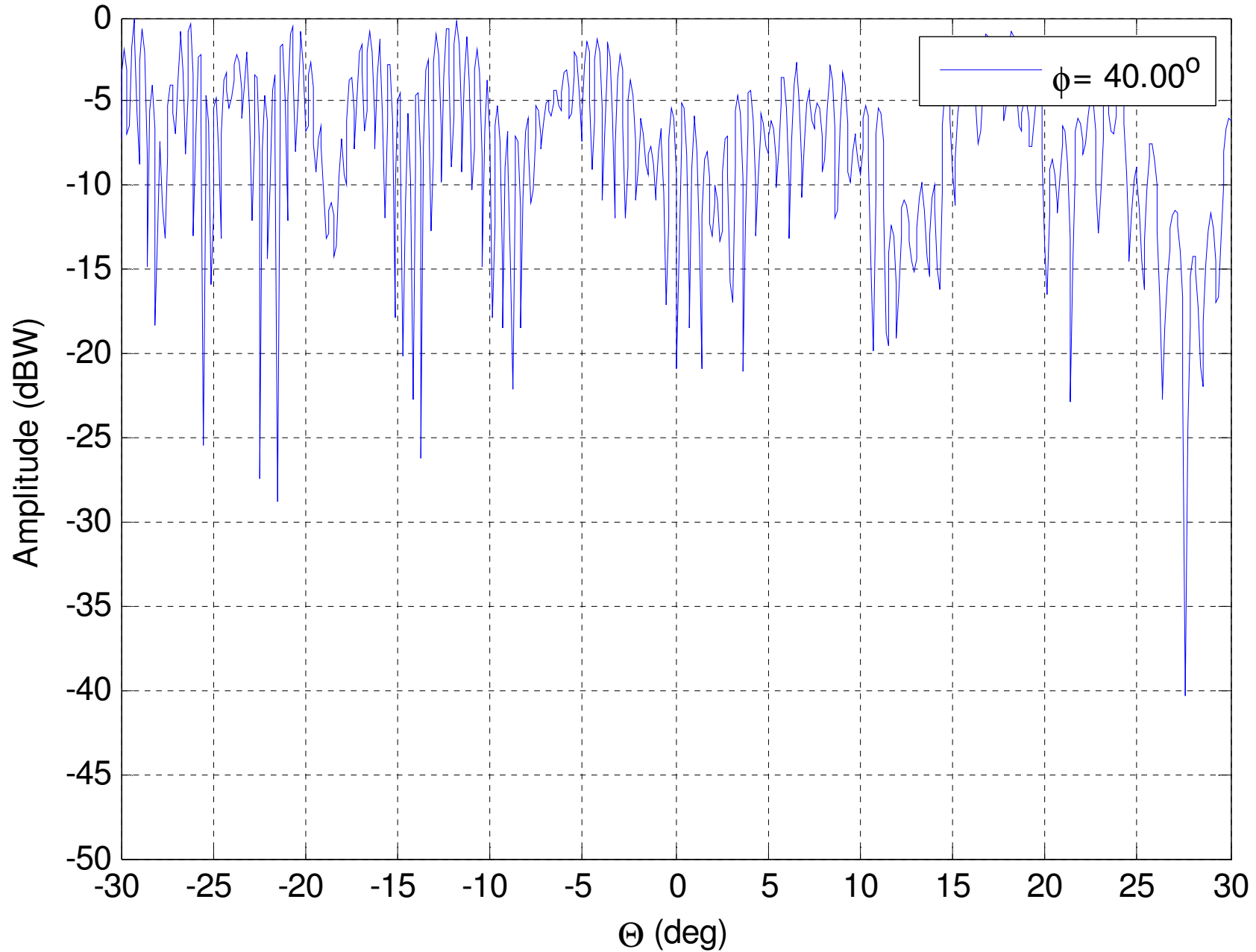
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -2.90 dBW, Date: 15-Dec-2011



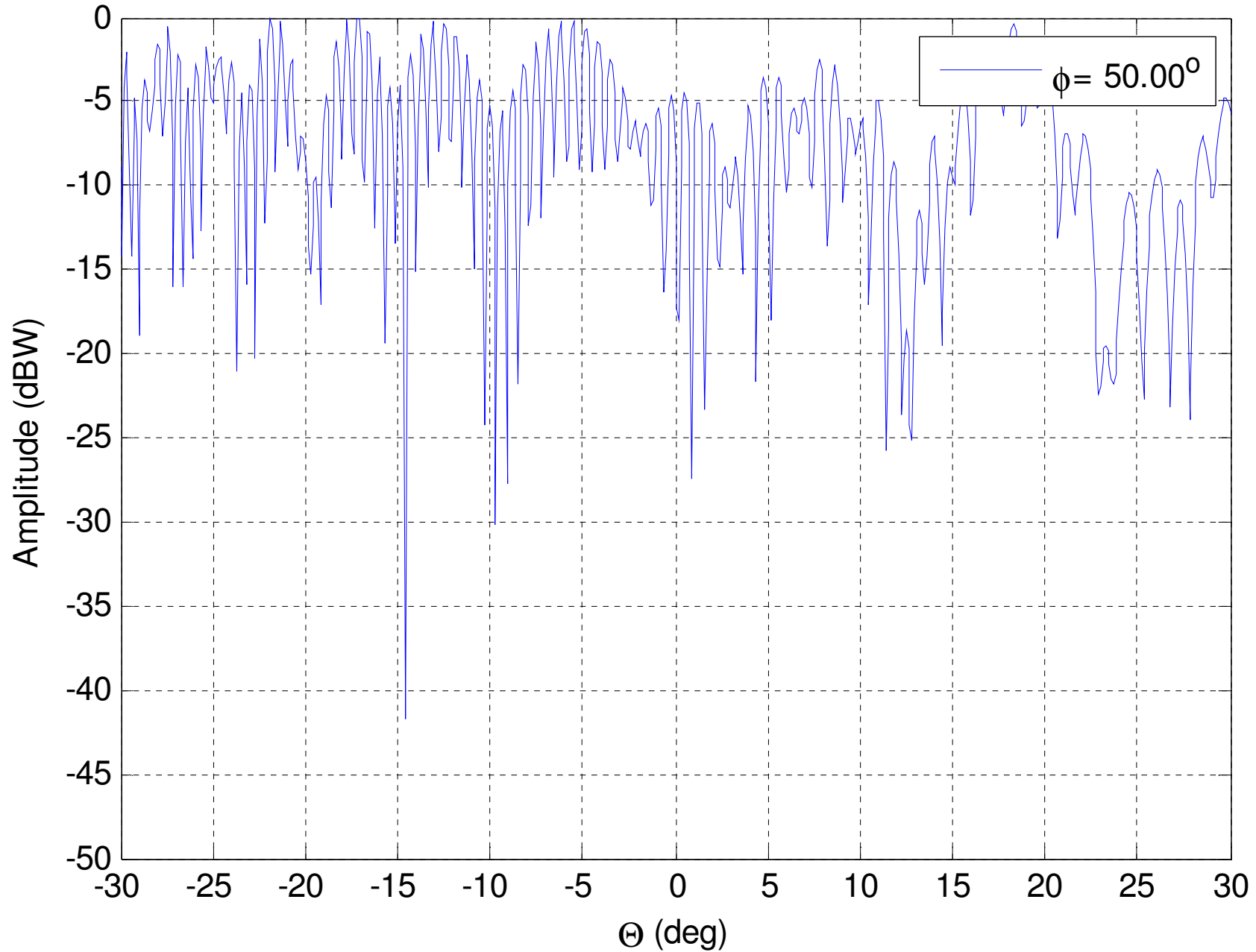
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -3.22 dBW, Date: 15-Dec-2011



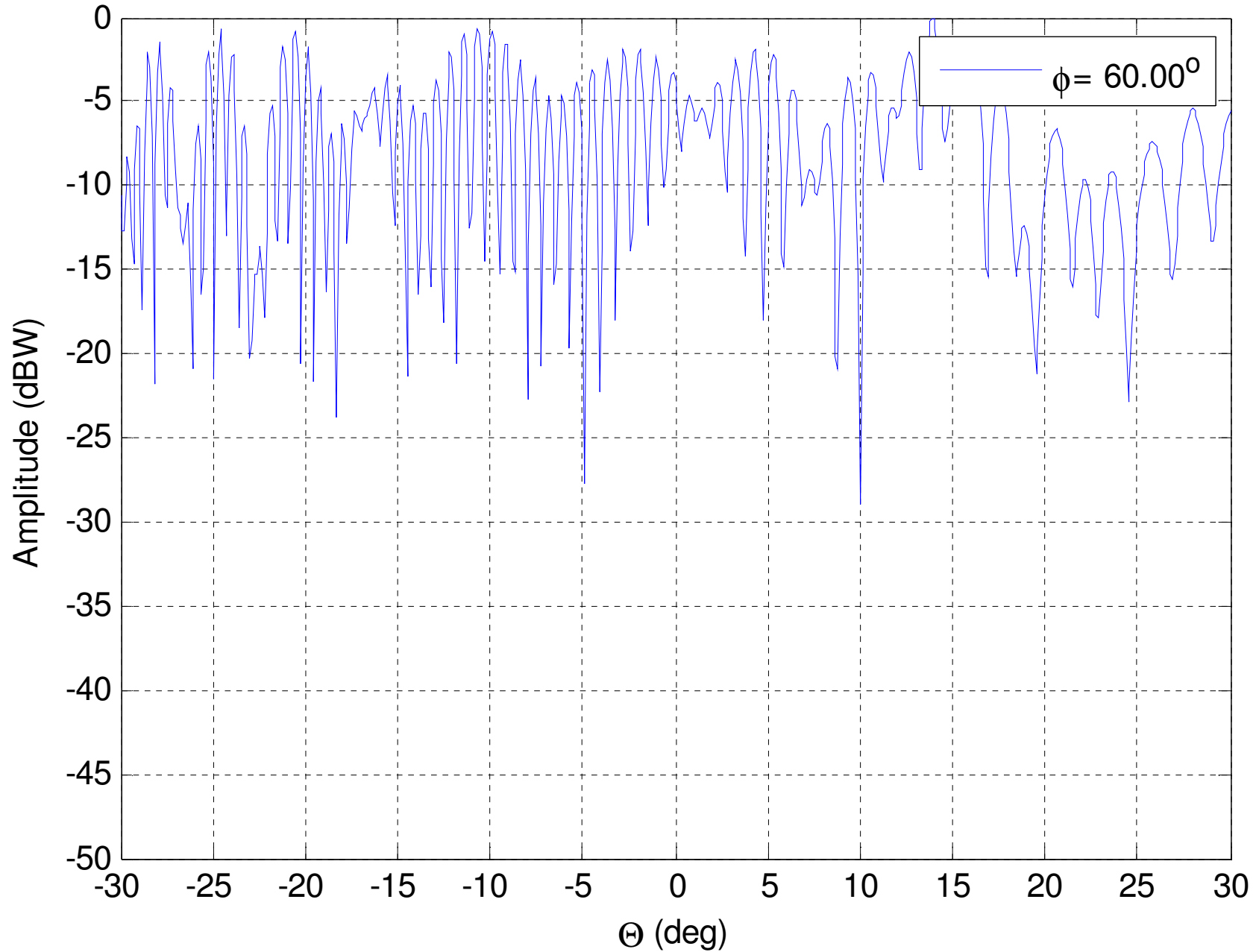
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -3.83 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

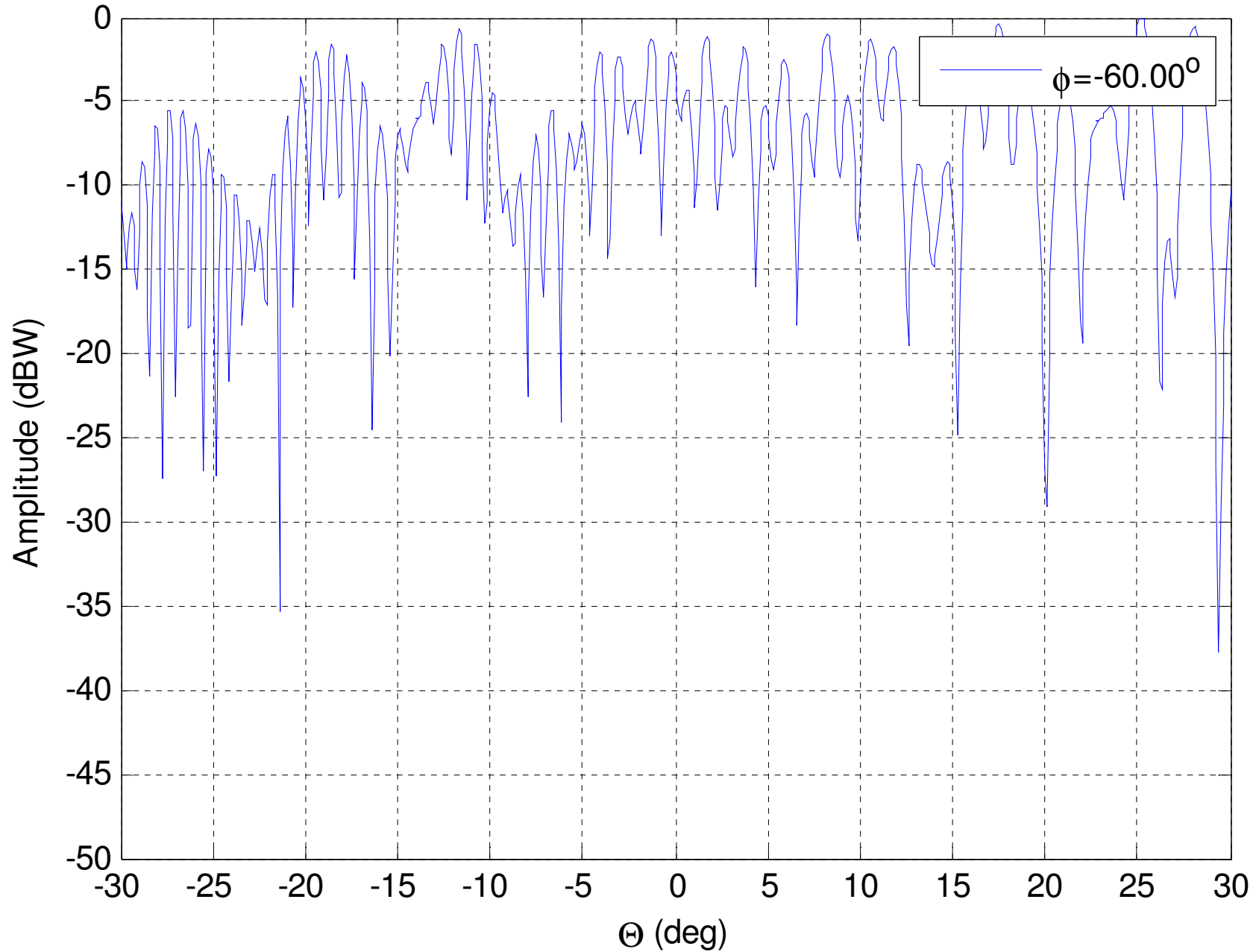
Input file: tx-17.7-rhcp-60.cut, Peak: -3.55 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

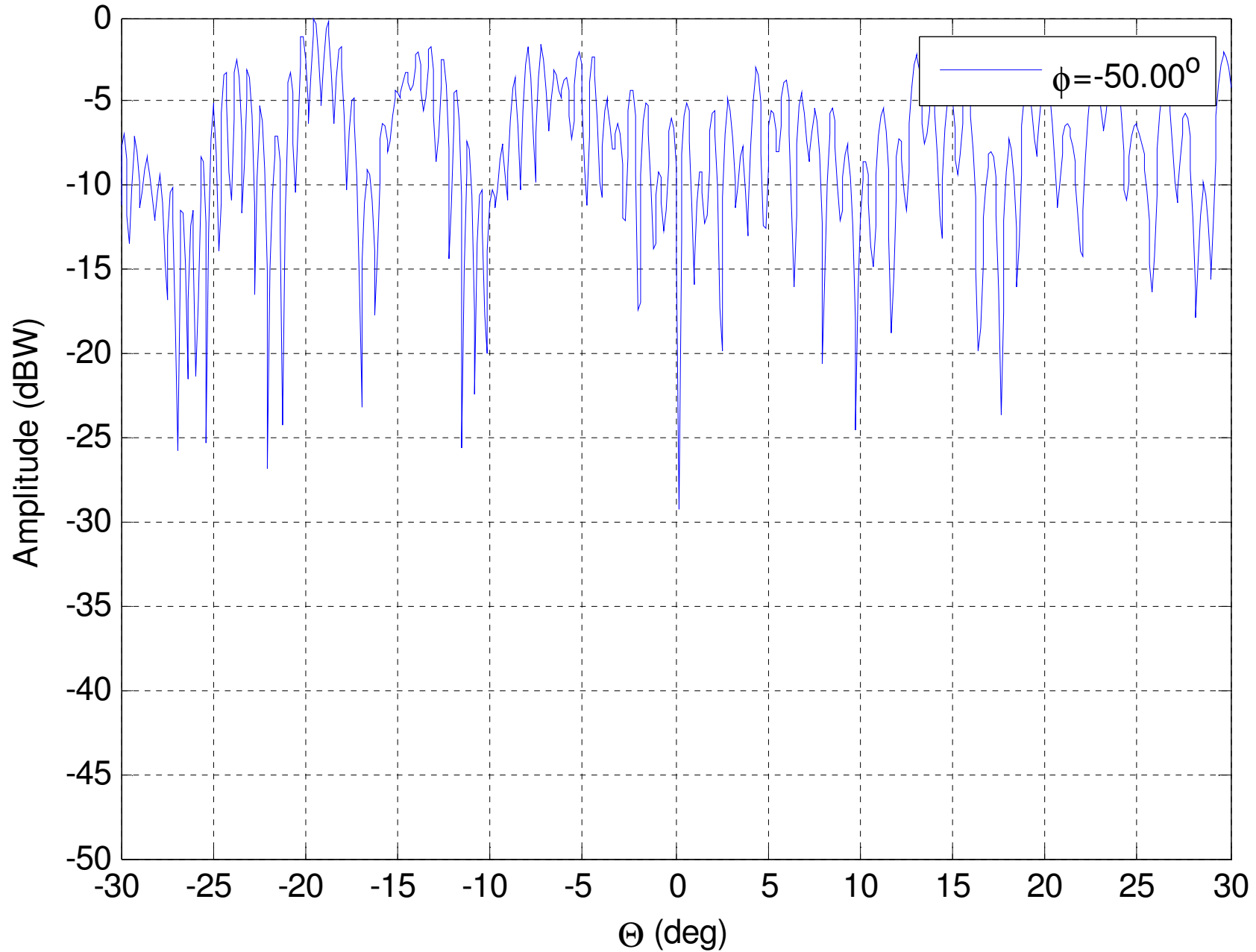
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -3.52 dBW, Date: 15-Dec-2011



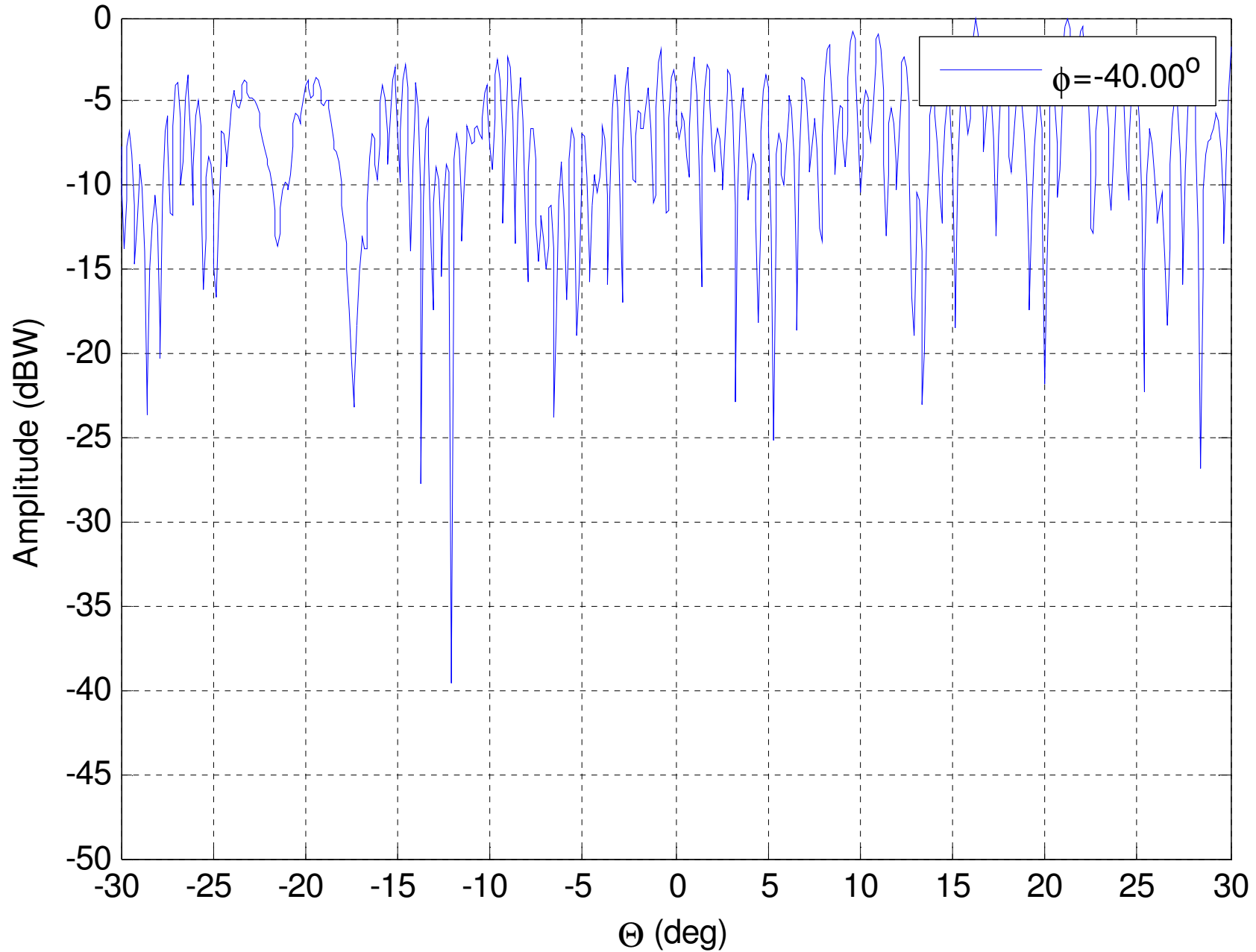
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -2.84 dBW, Date: 15-Dec-2011



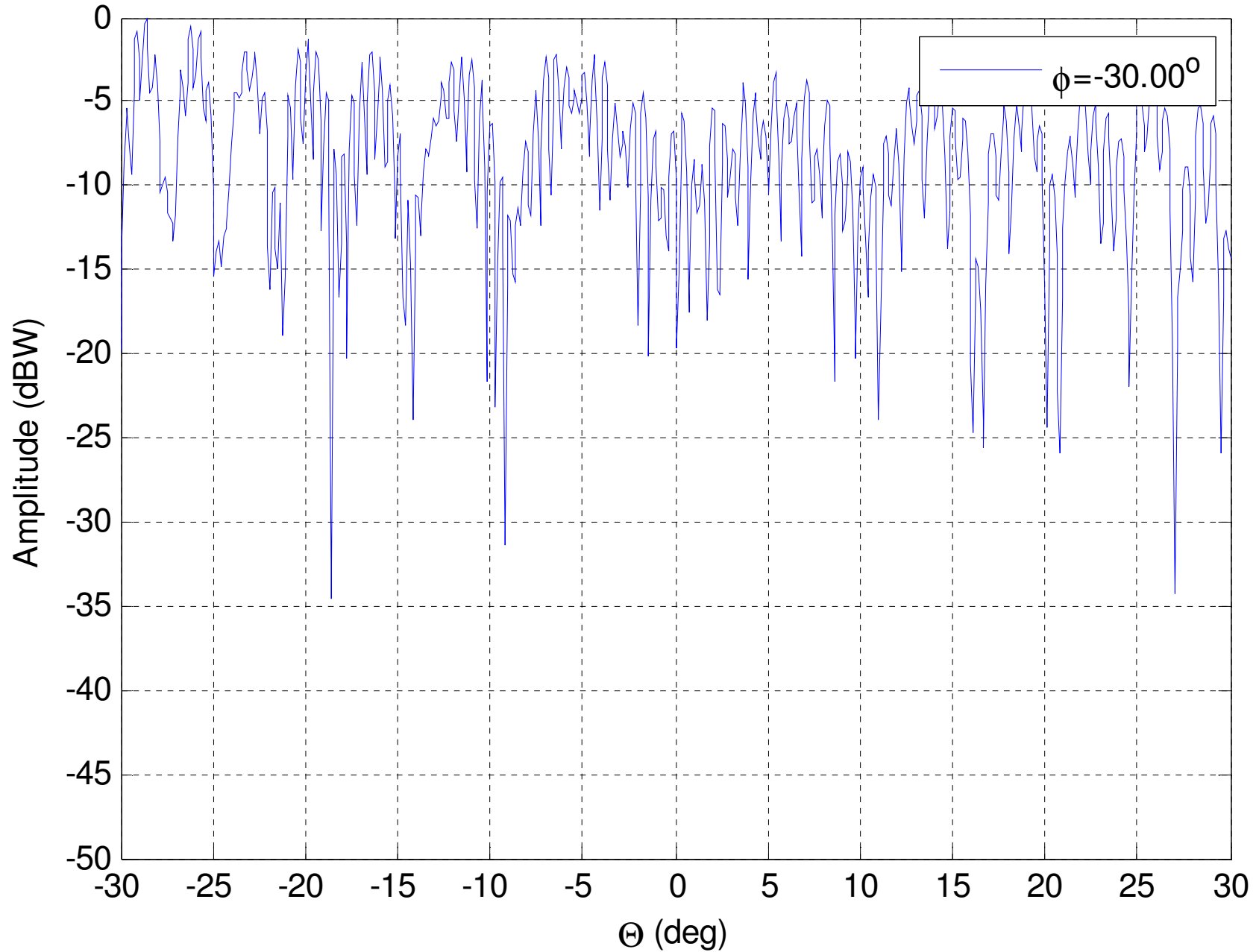
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -2.66 dBW, Date: 15-Dec-2011



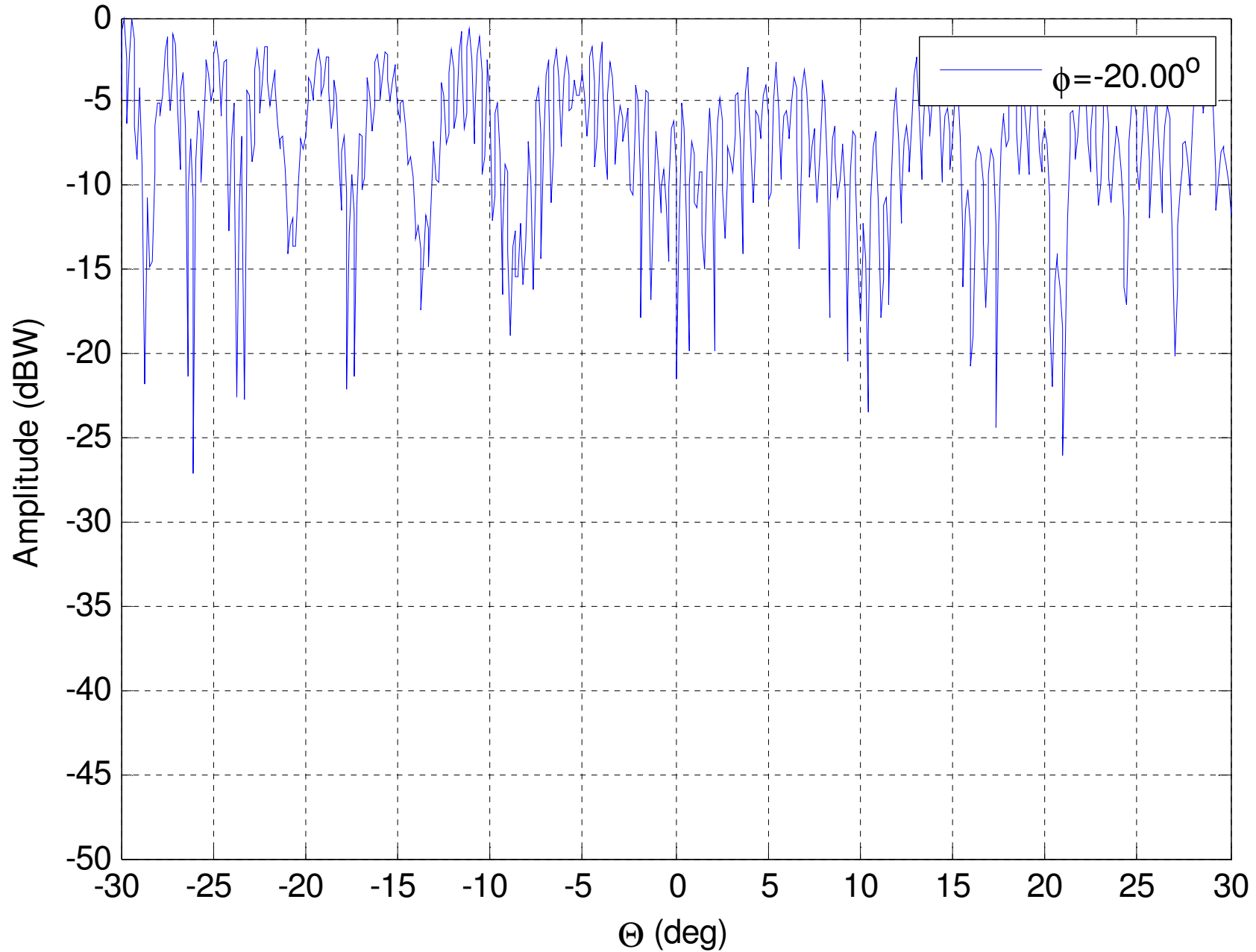
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -2.14 dBW, Date: 15-Dec-2011



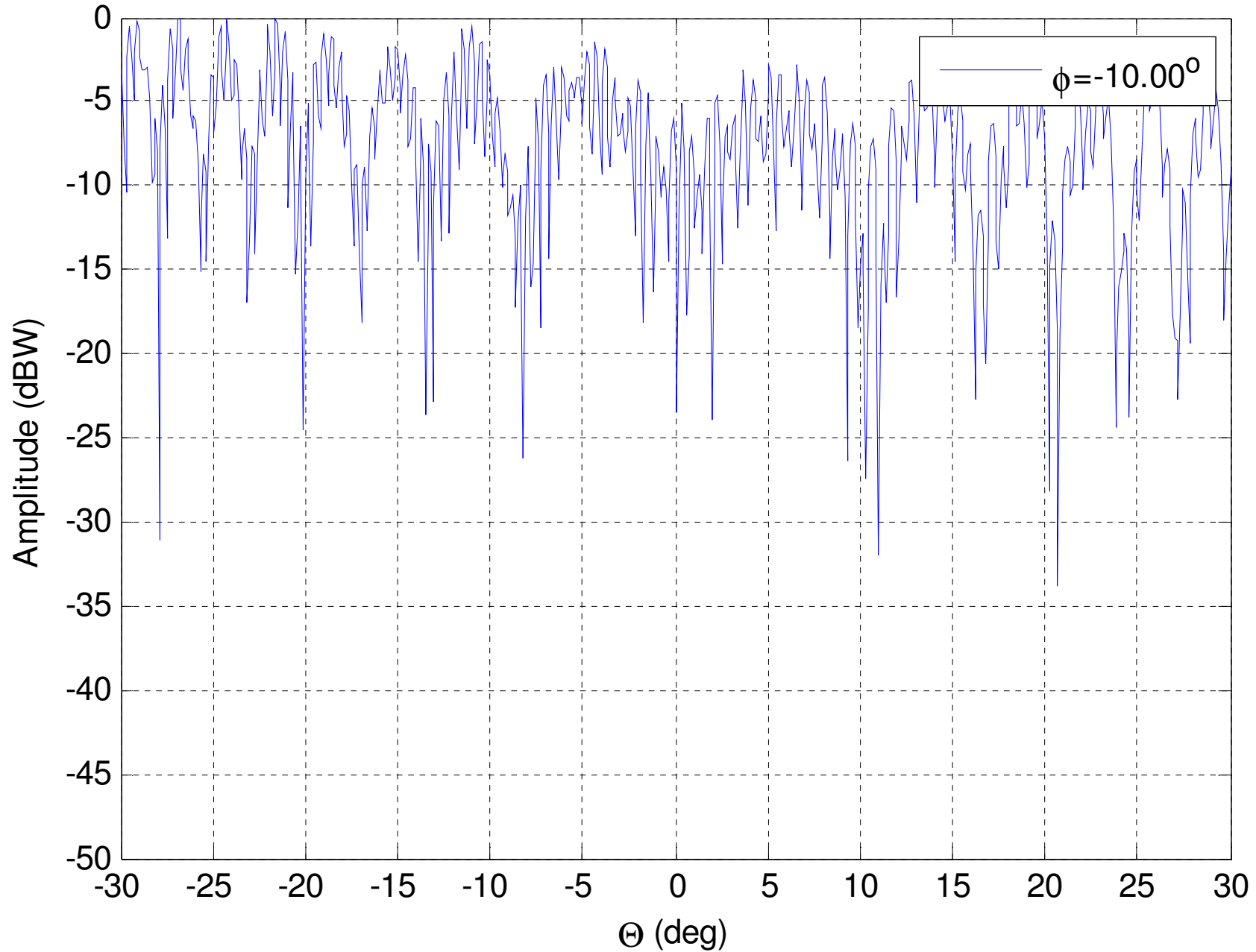
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -2.71 dBW, Date: 15-Dec-2011



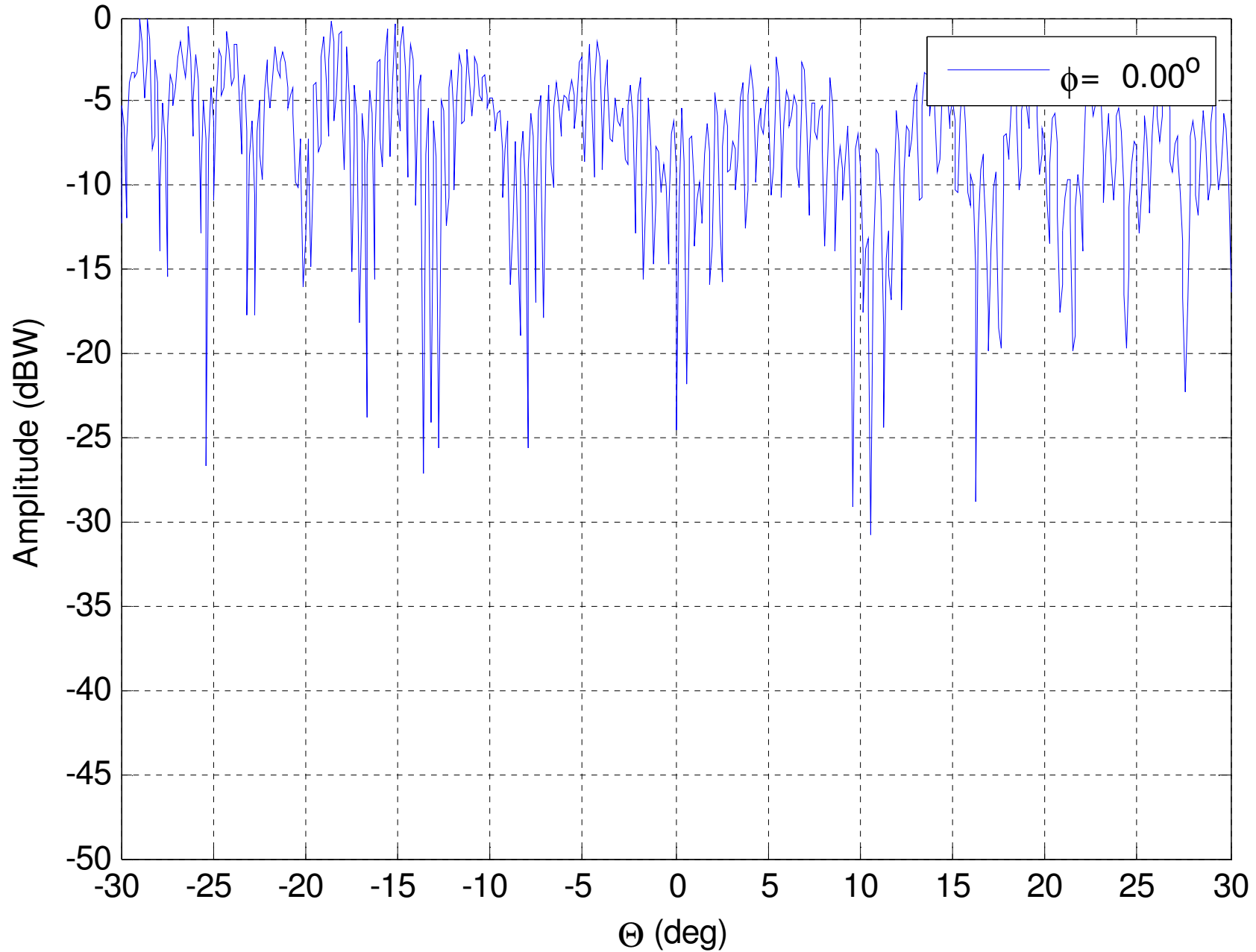
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -2.67 dBW, Date: 15-Dec-2011



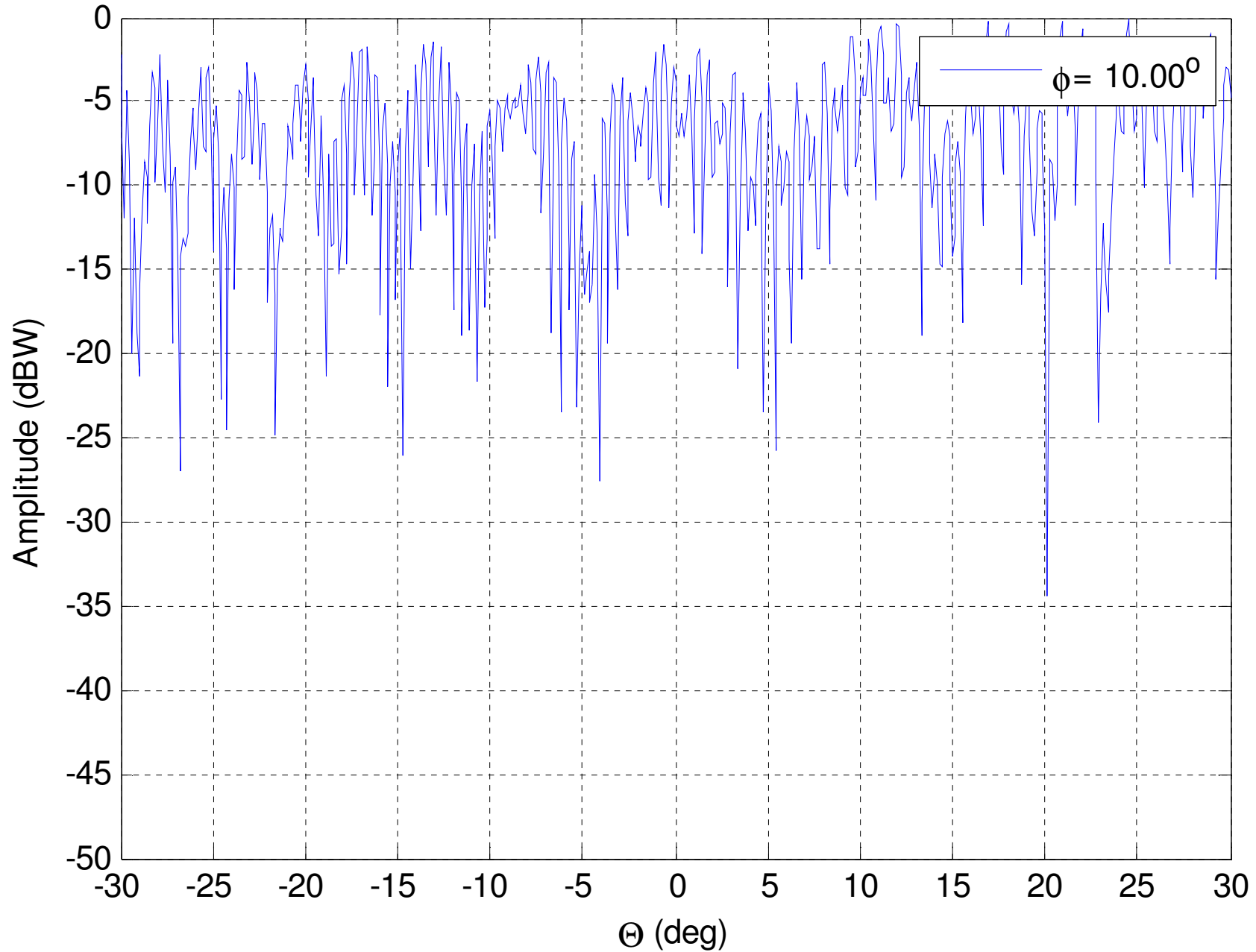
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -2.59 dBW, Date: 15-Dec-2011



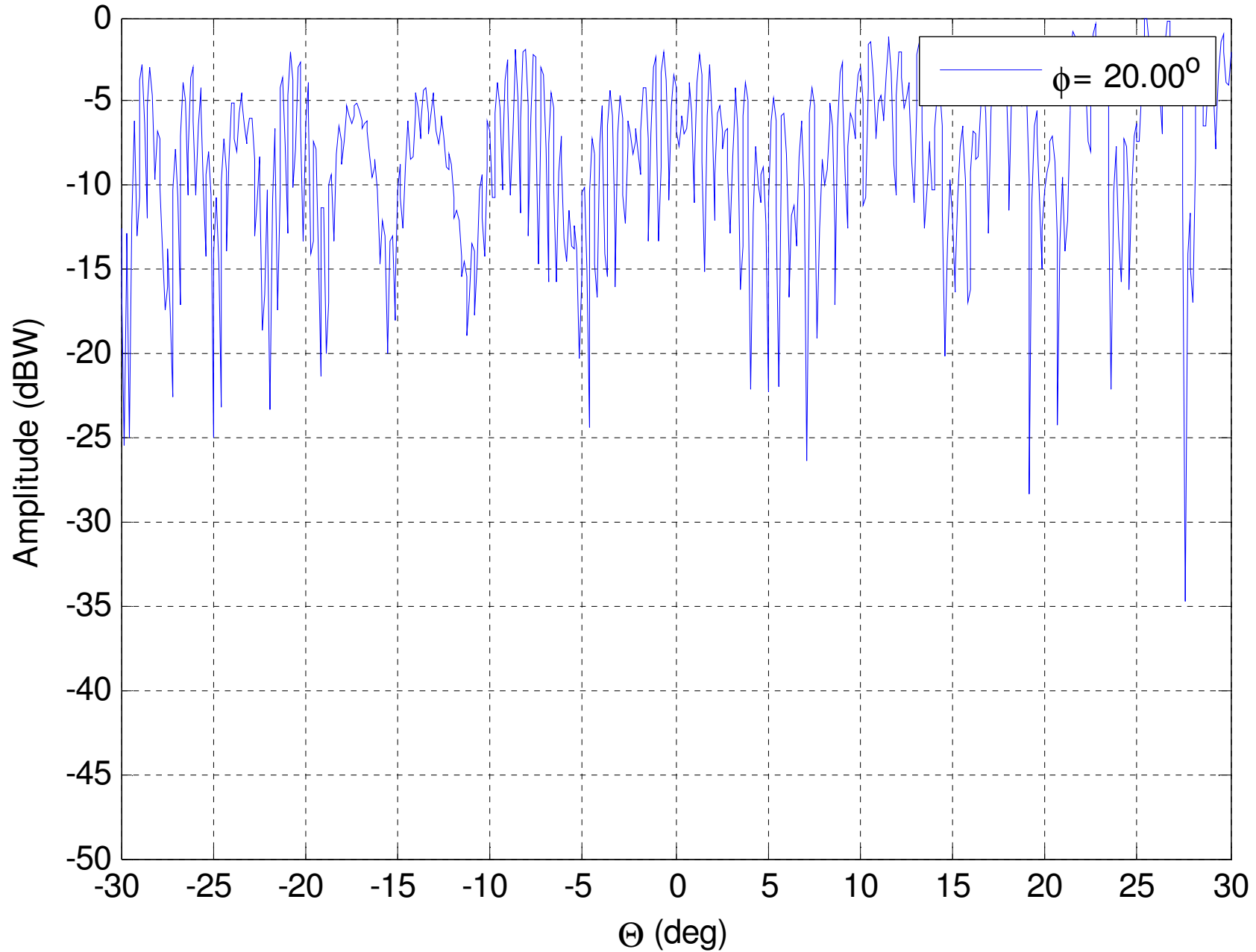
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -3.01 dBW, Date: 15-Dec-2011



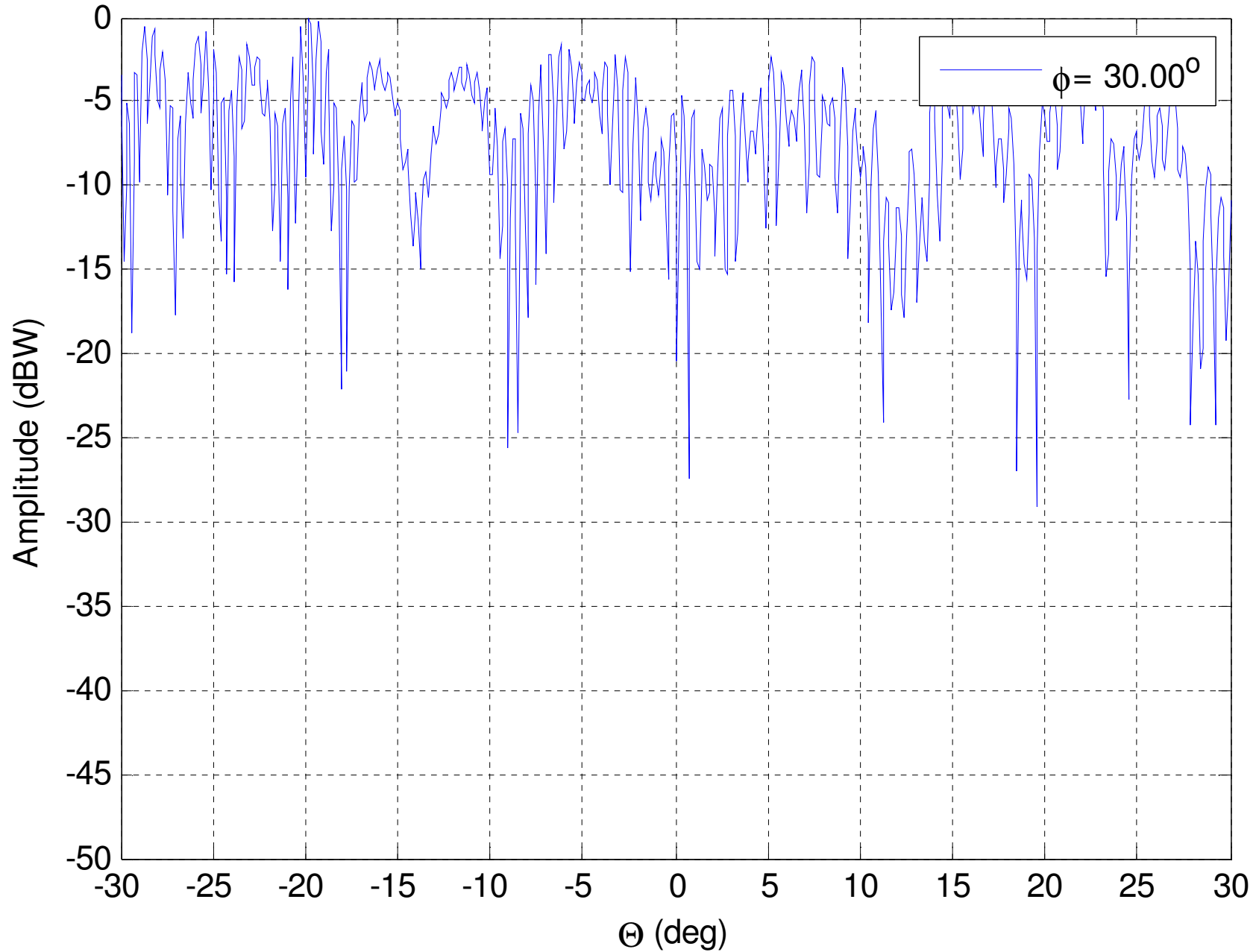
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -2.65 dBW, Date: 15-Dec-2011



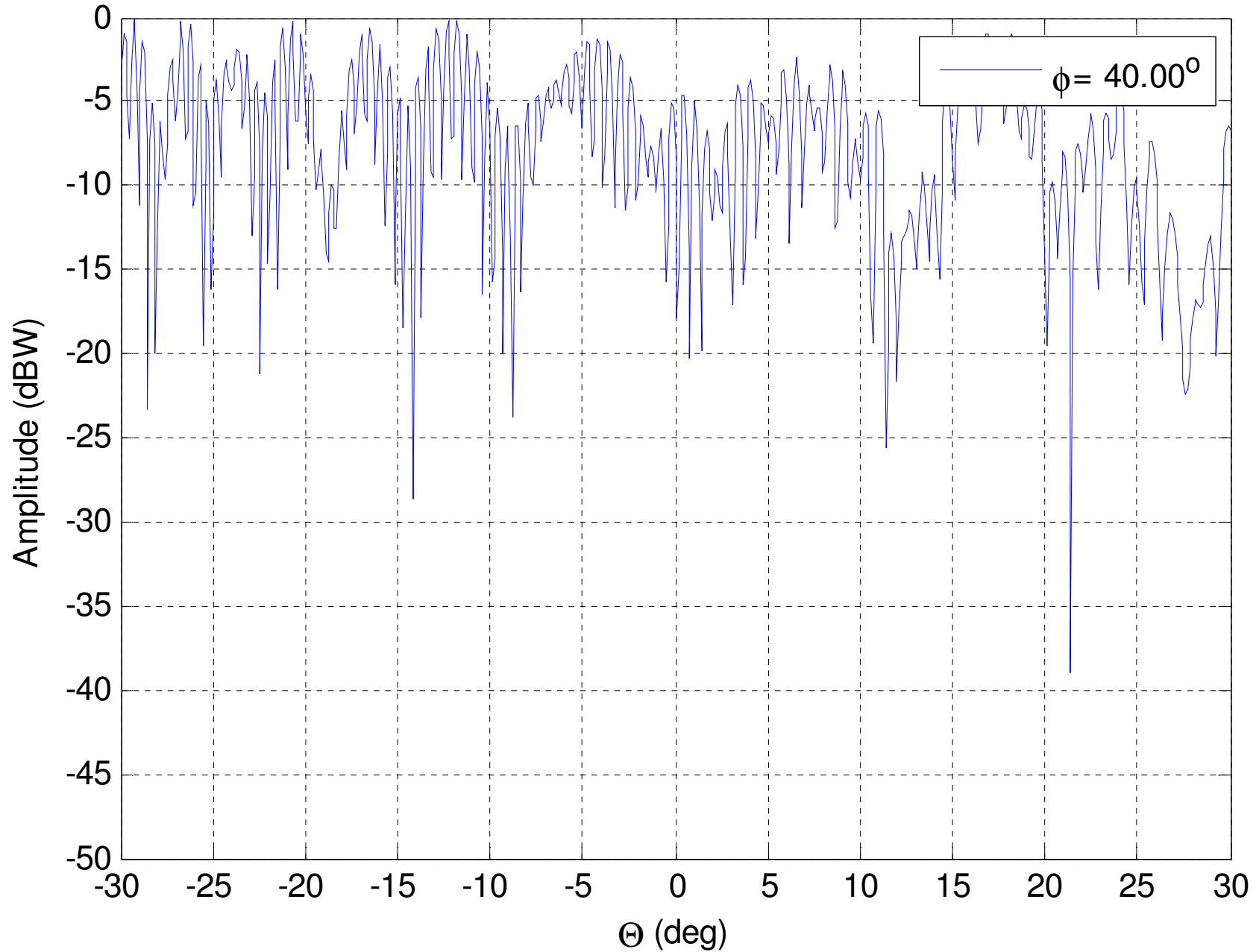
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -3.09 dBW, Date: 15-Dec-2011



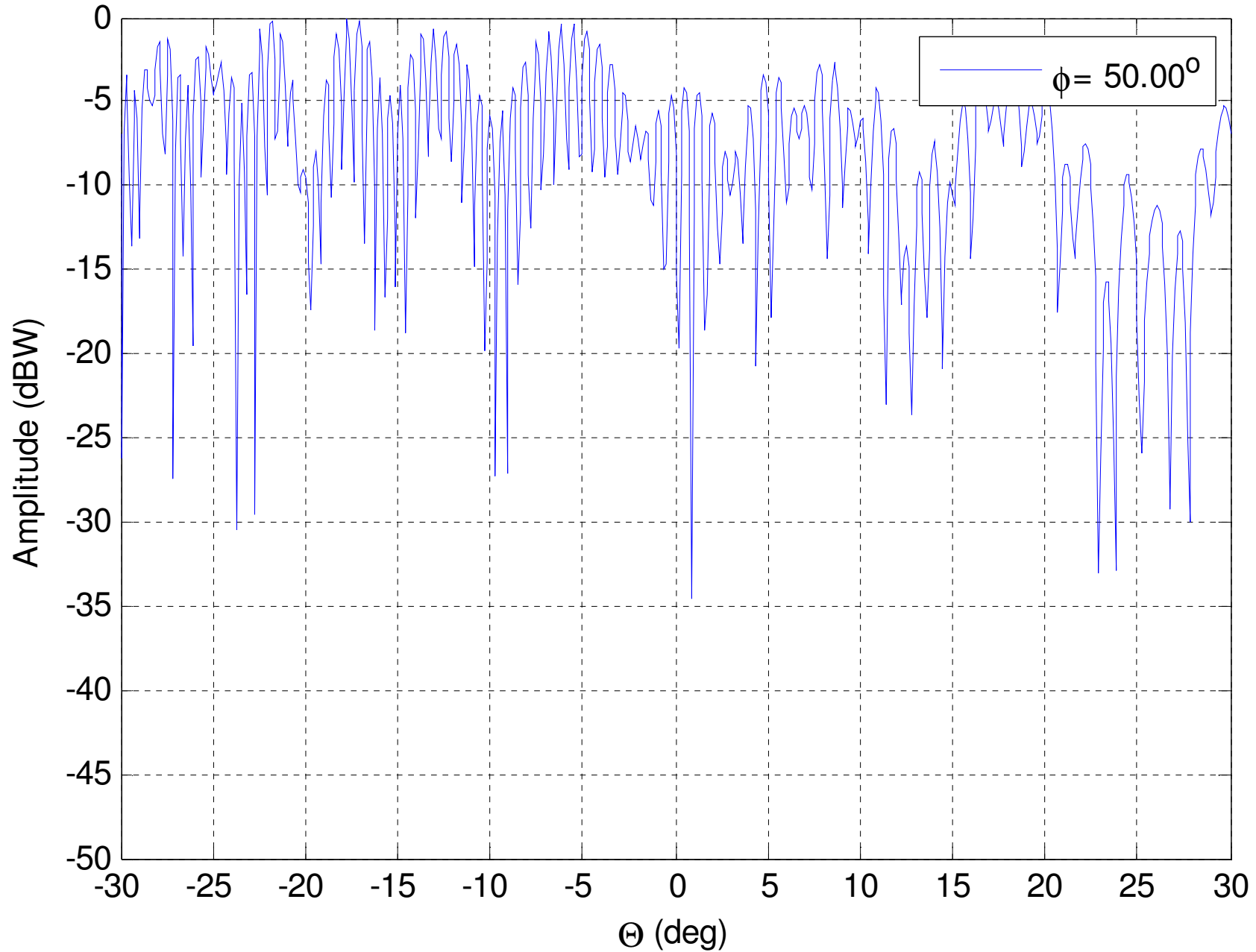
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -3.40 dBW, Date: 15-Dec-2011



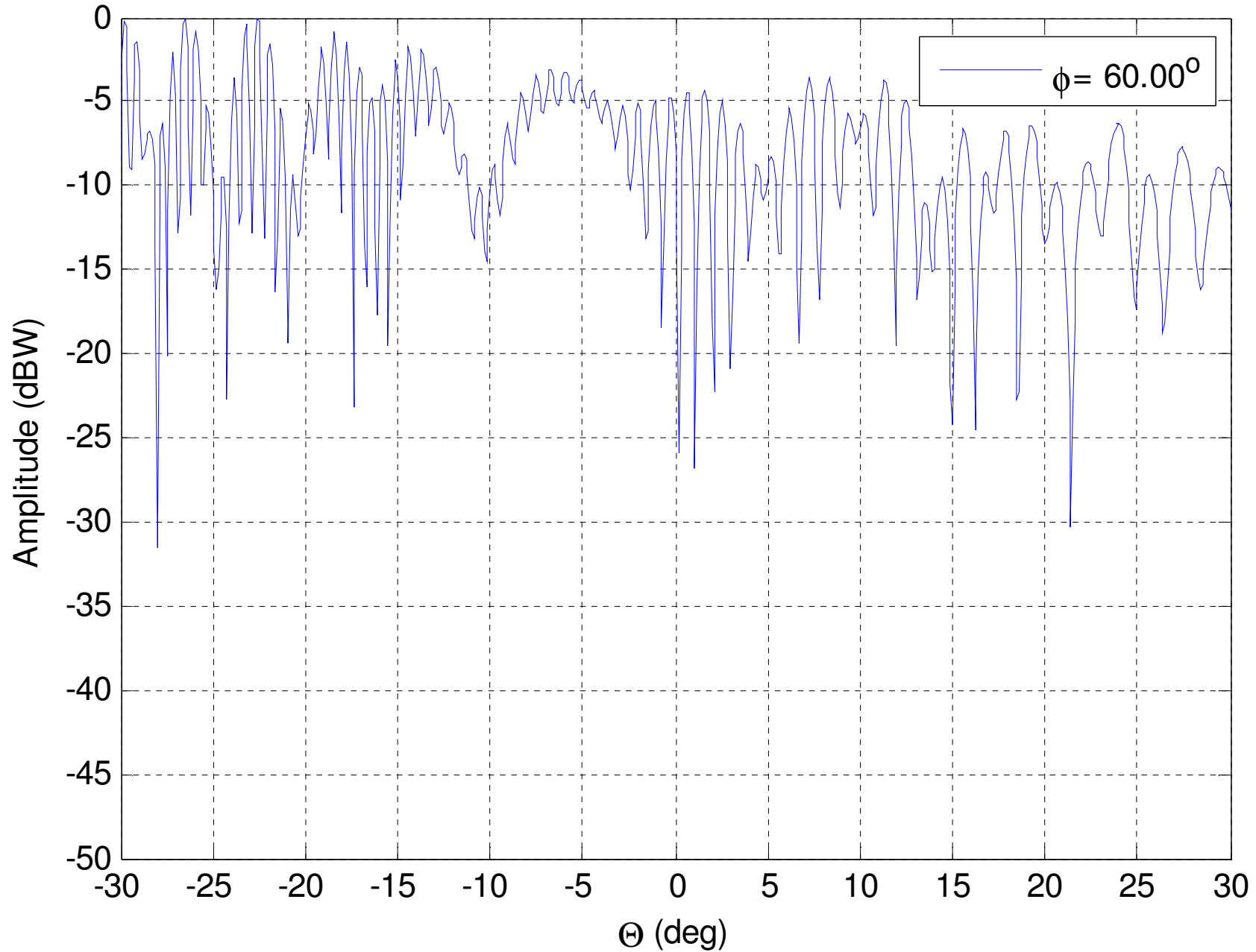
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -3.67 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -3.59 dBW, Date: 15-Dec-2011



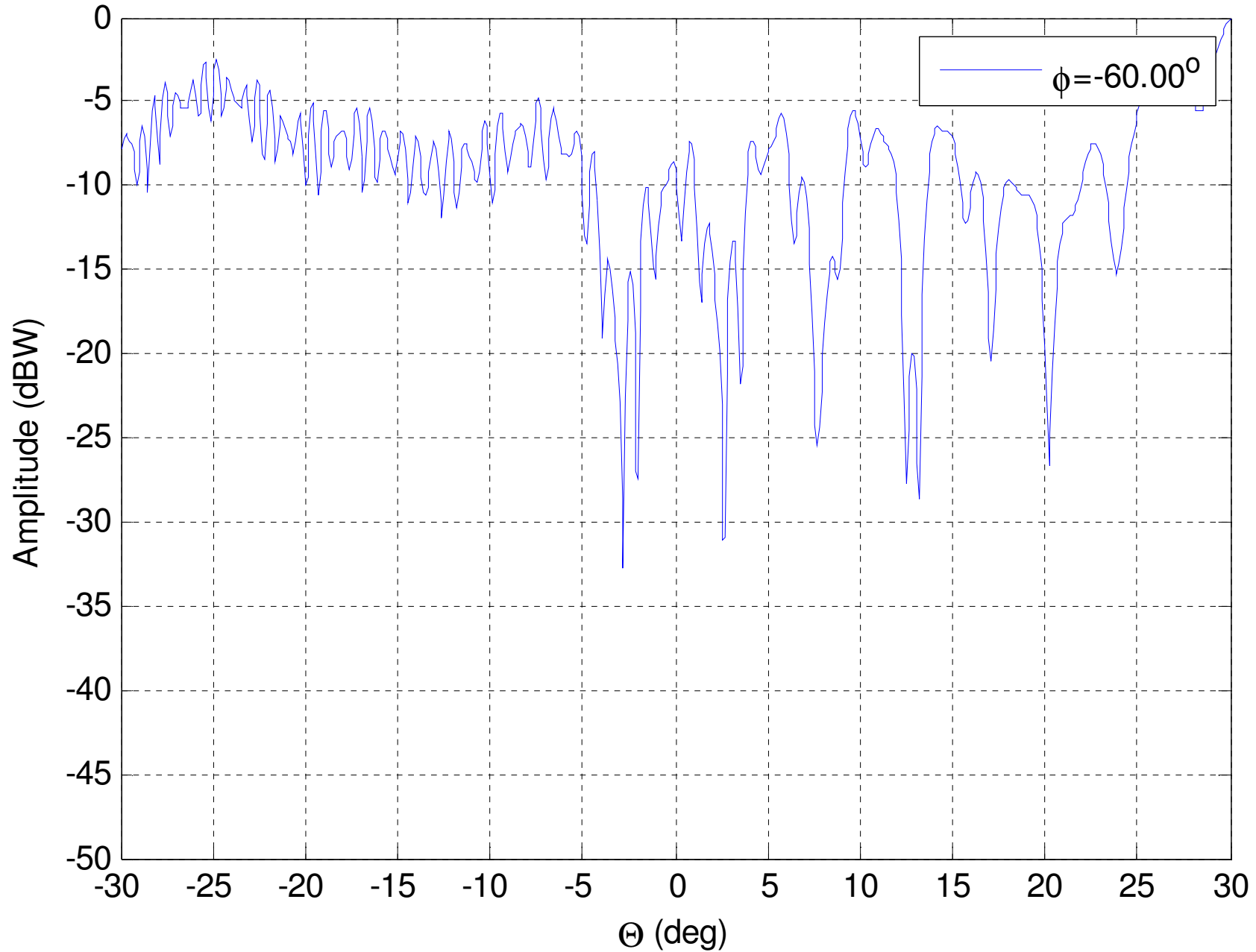
Spot Beam26, +X Axis Plots

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

RHCP at 17.3 GHz

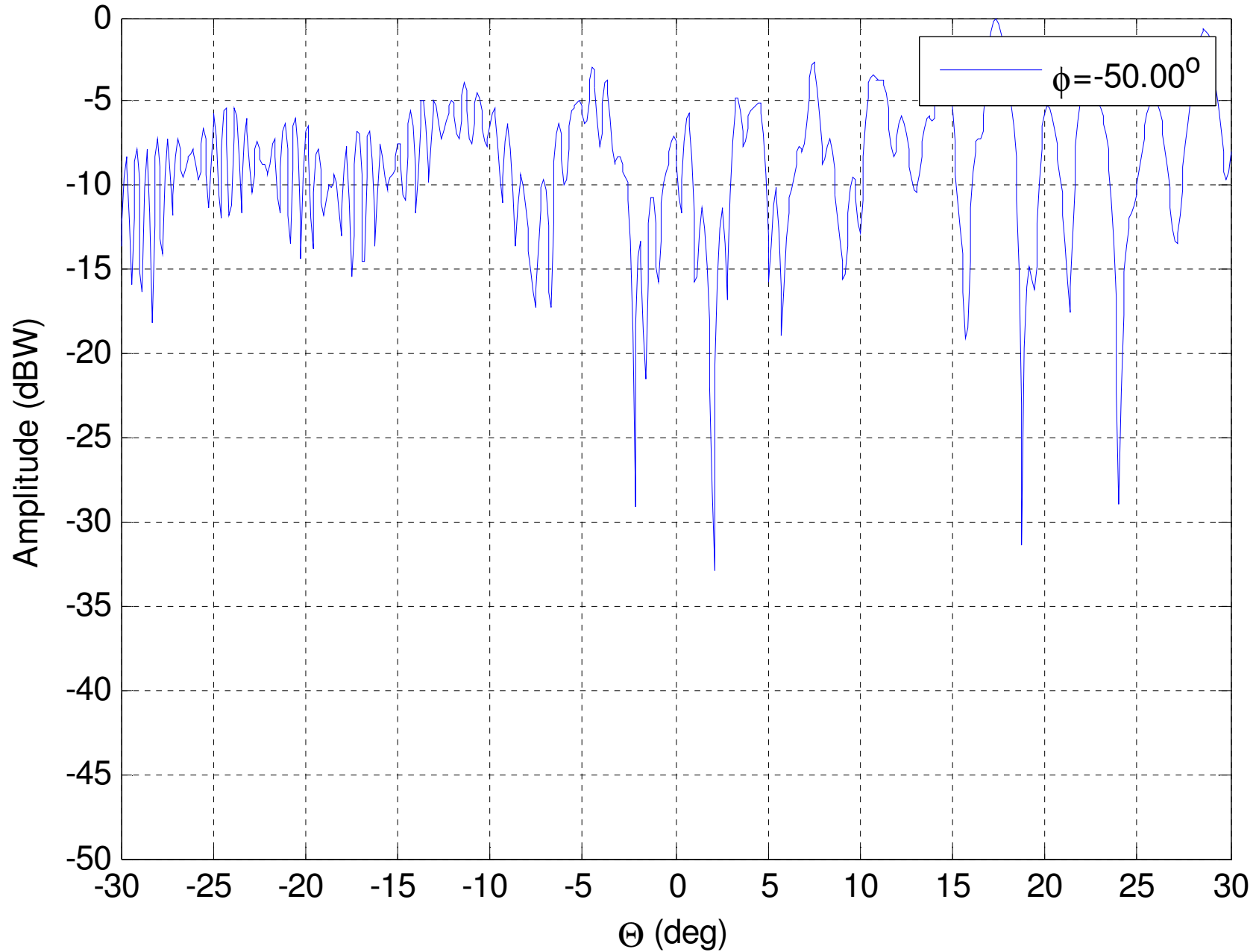
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -3.75 dBW, Date: 15-Dec-2011



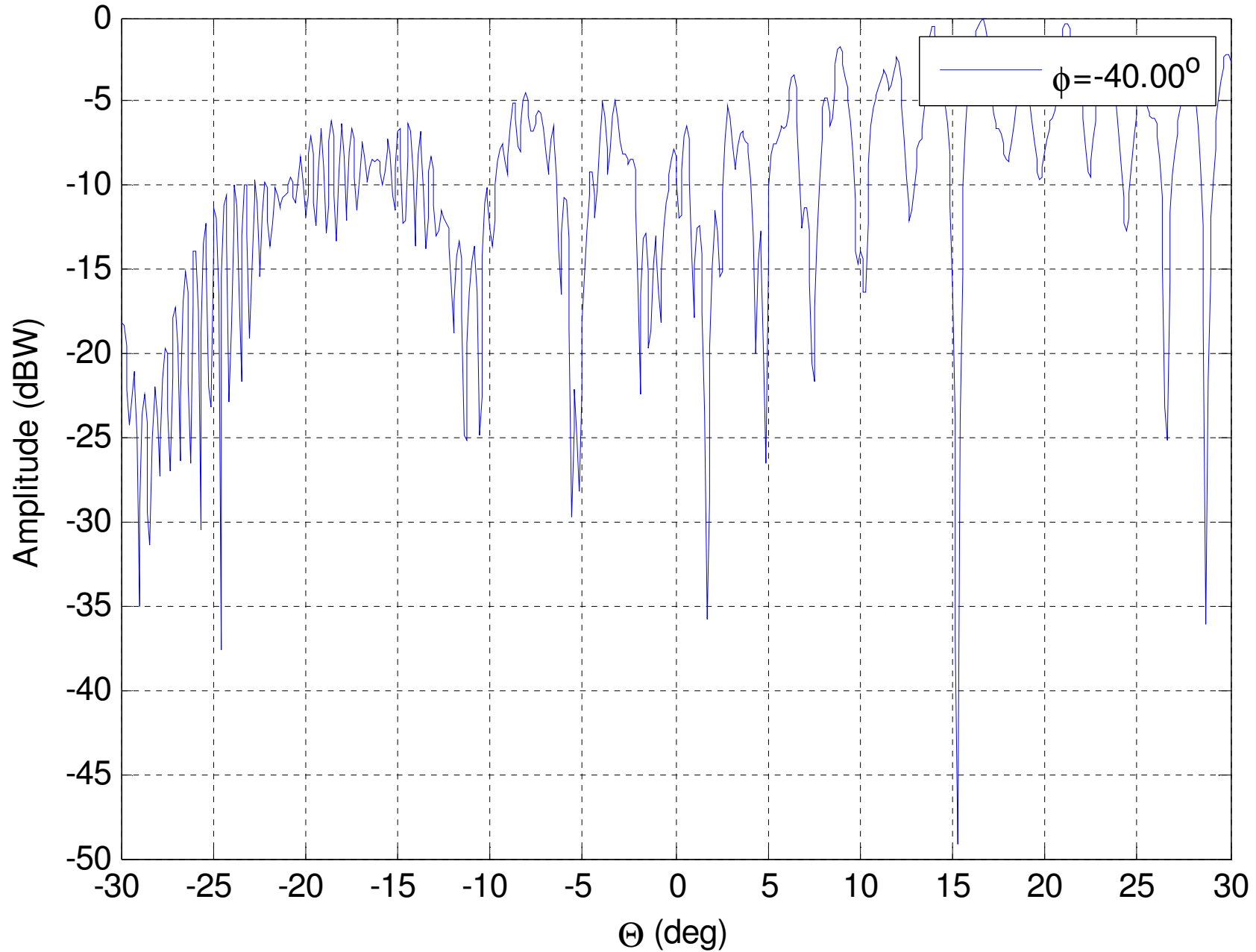
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -5.39 dBW, Date: 15-Dec-2011



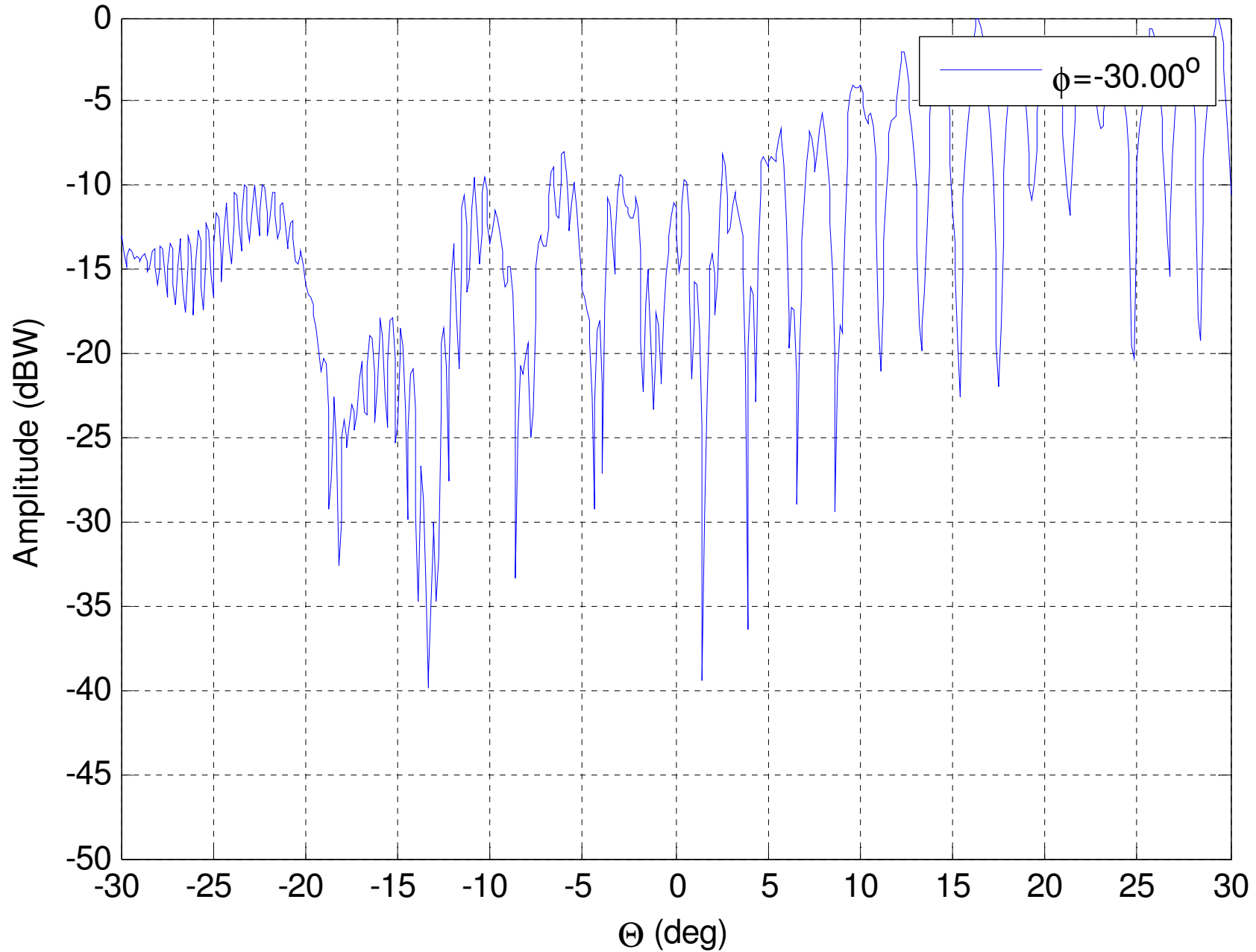
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.55 dBW, Date: 15-Dec-2011



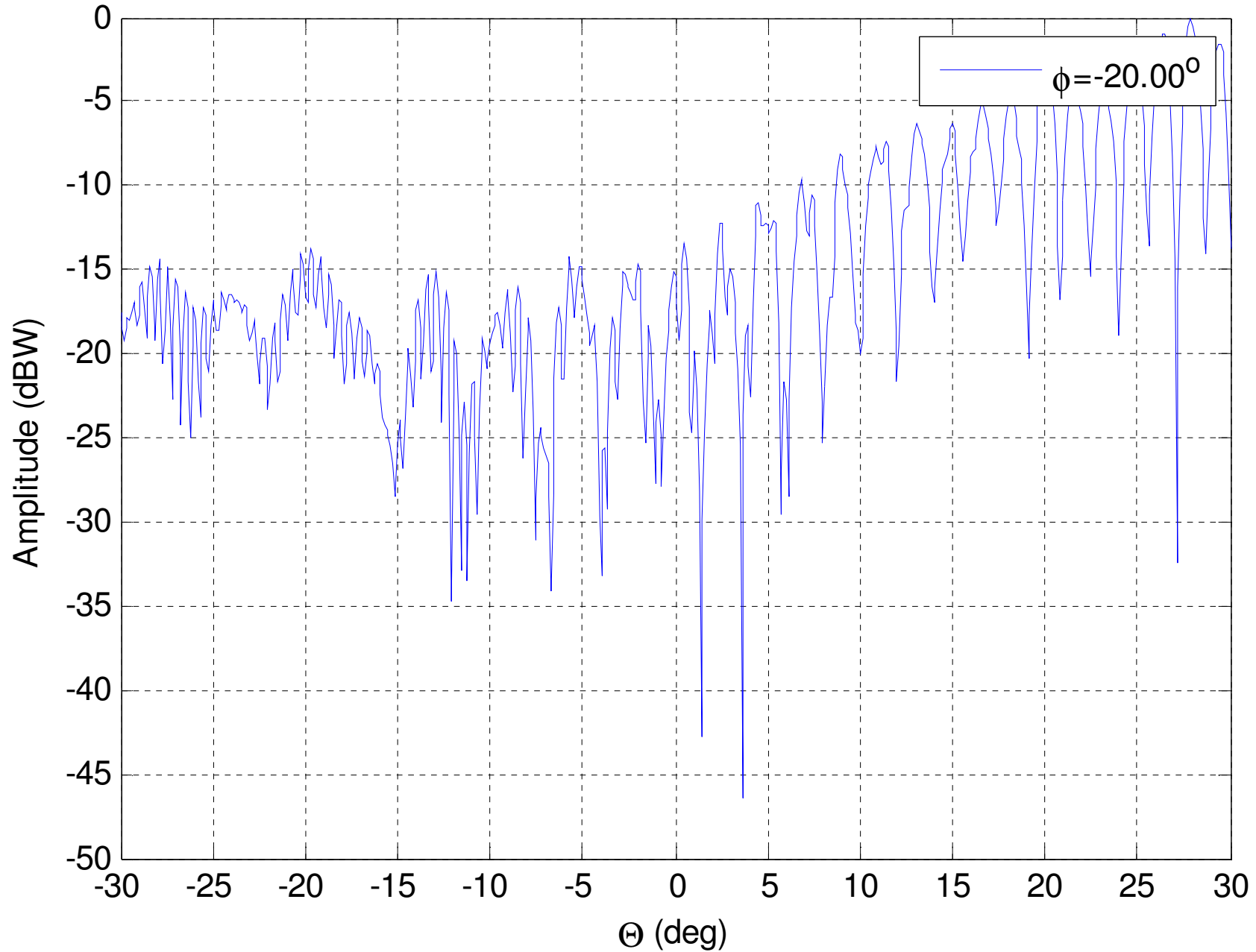
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -1.48 dBW, Date: 15-Dec-2011



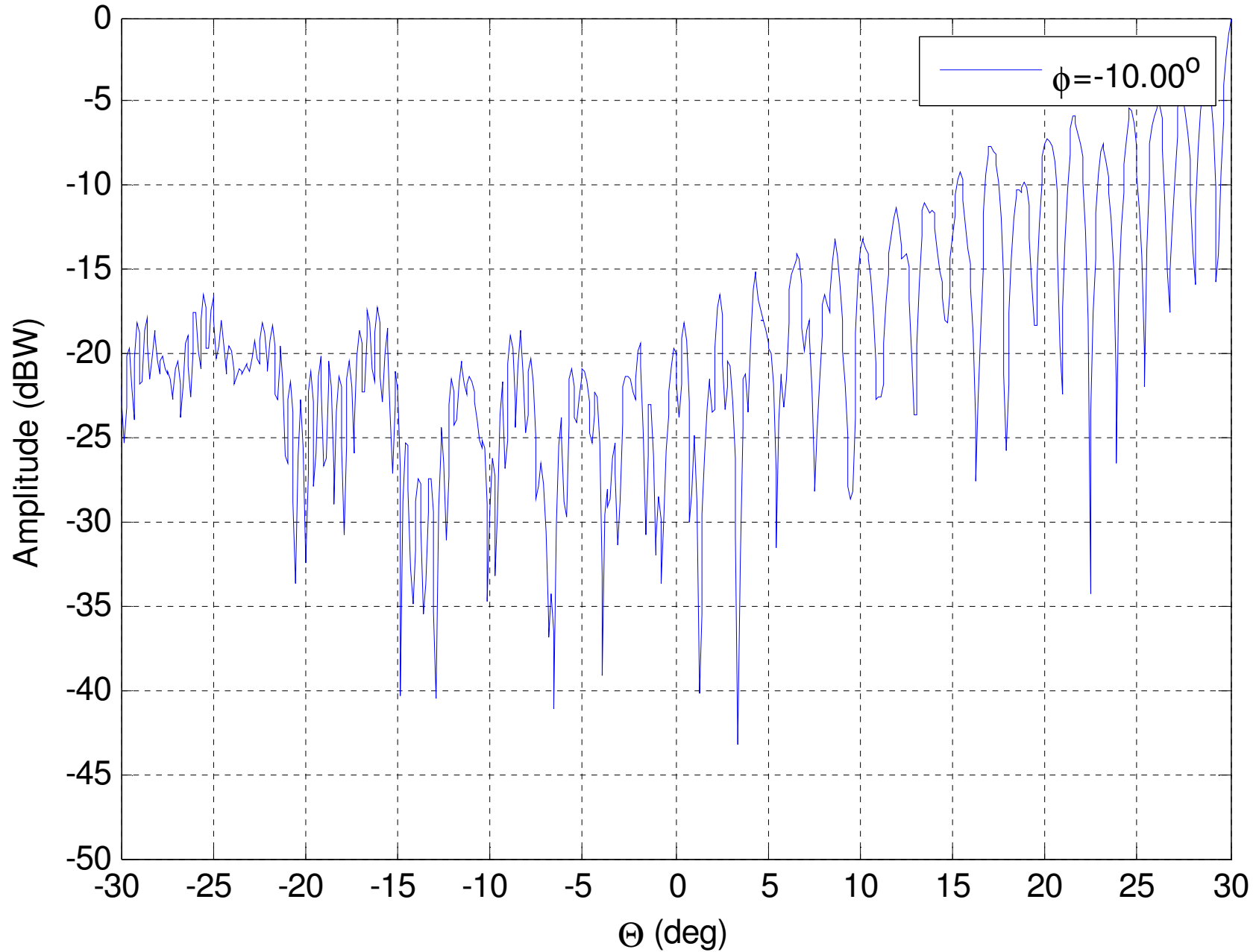
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 2.55 dBW, Date: 15-Dec-2011



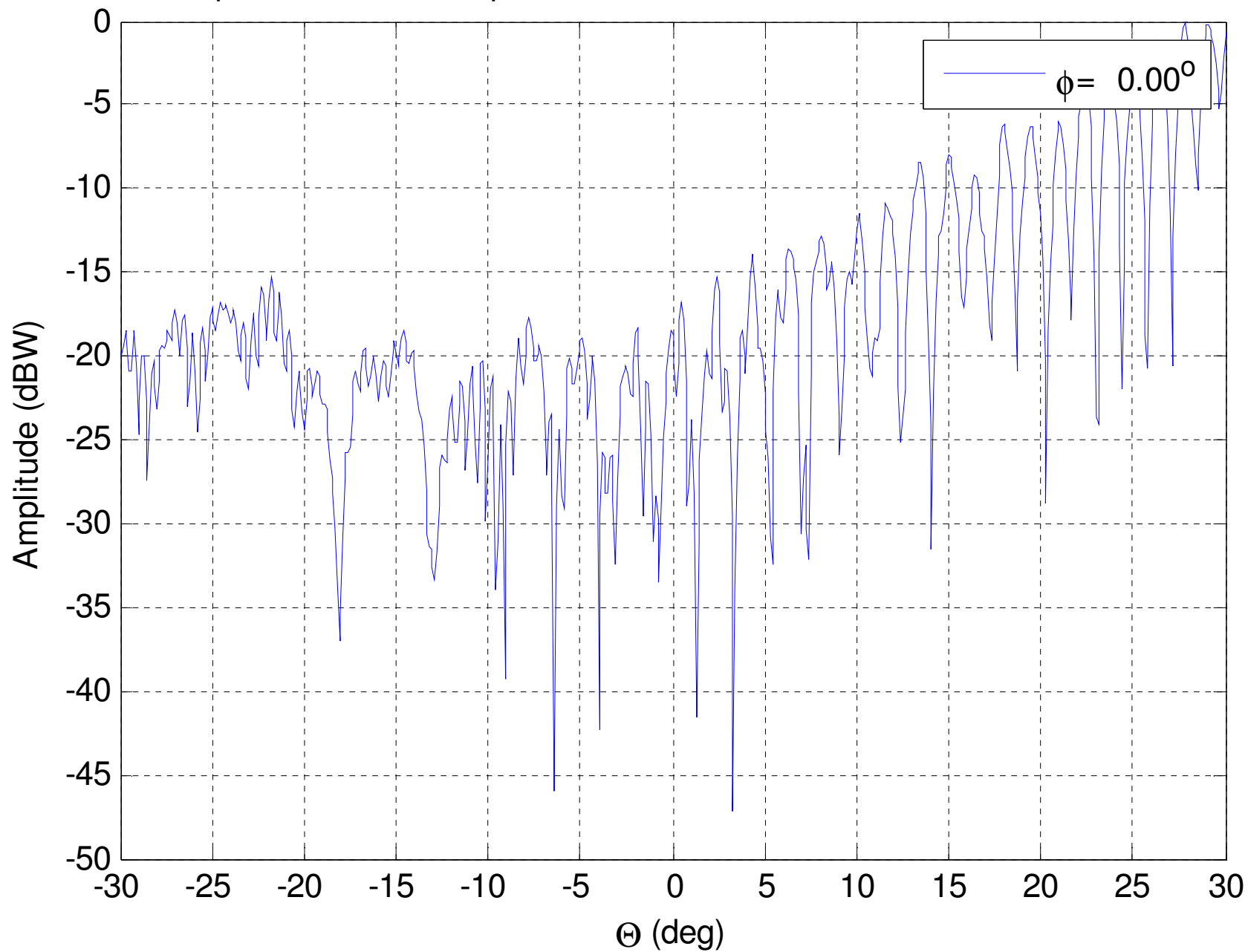
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 7.17 dBW, Date: 15-Dec-2011



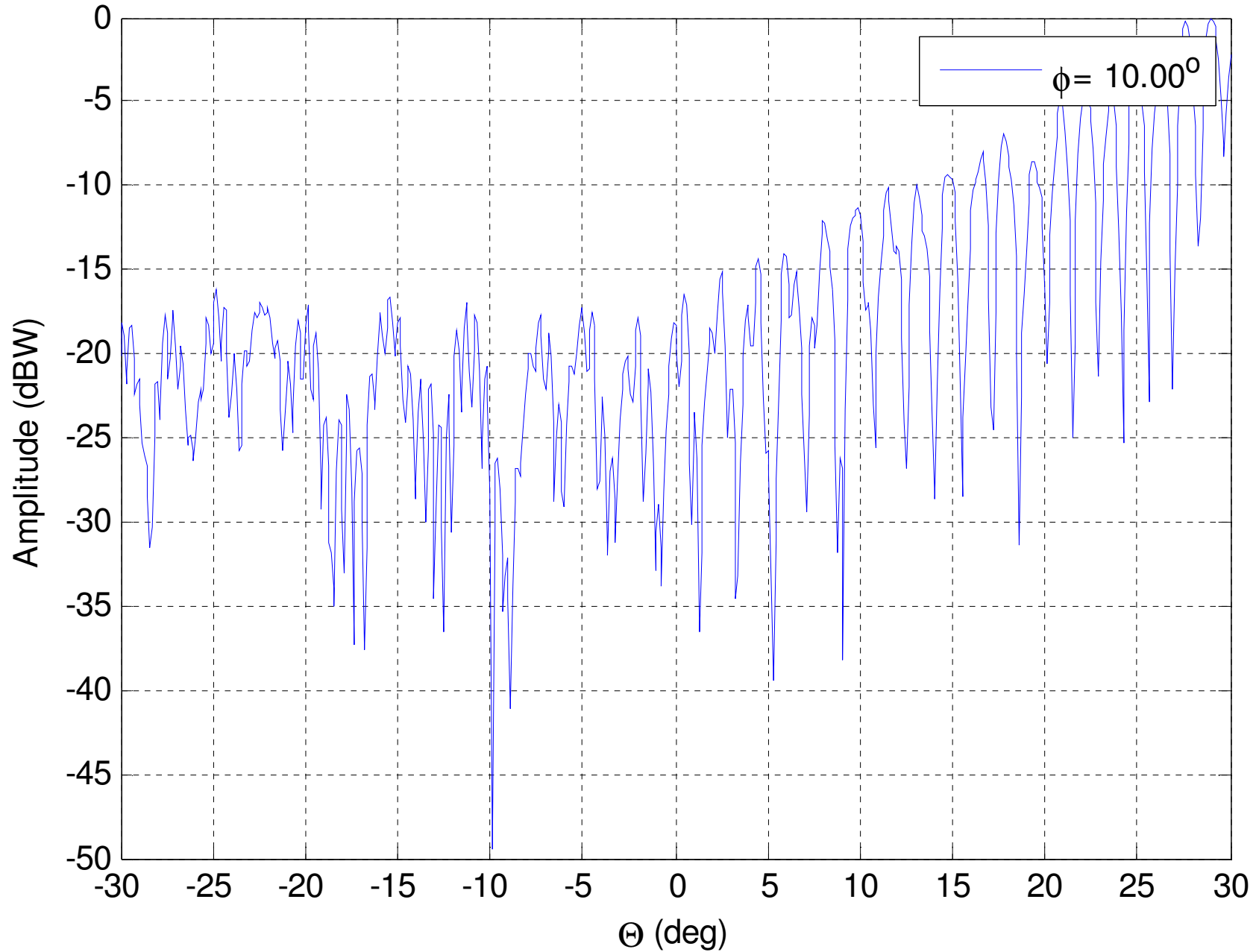
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 5.89 dBW, Date: 15-Dec-2011



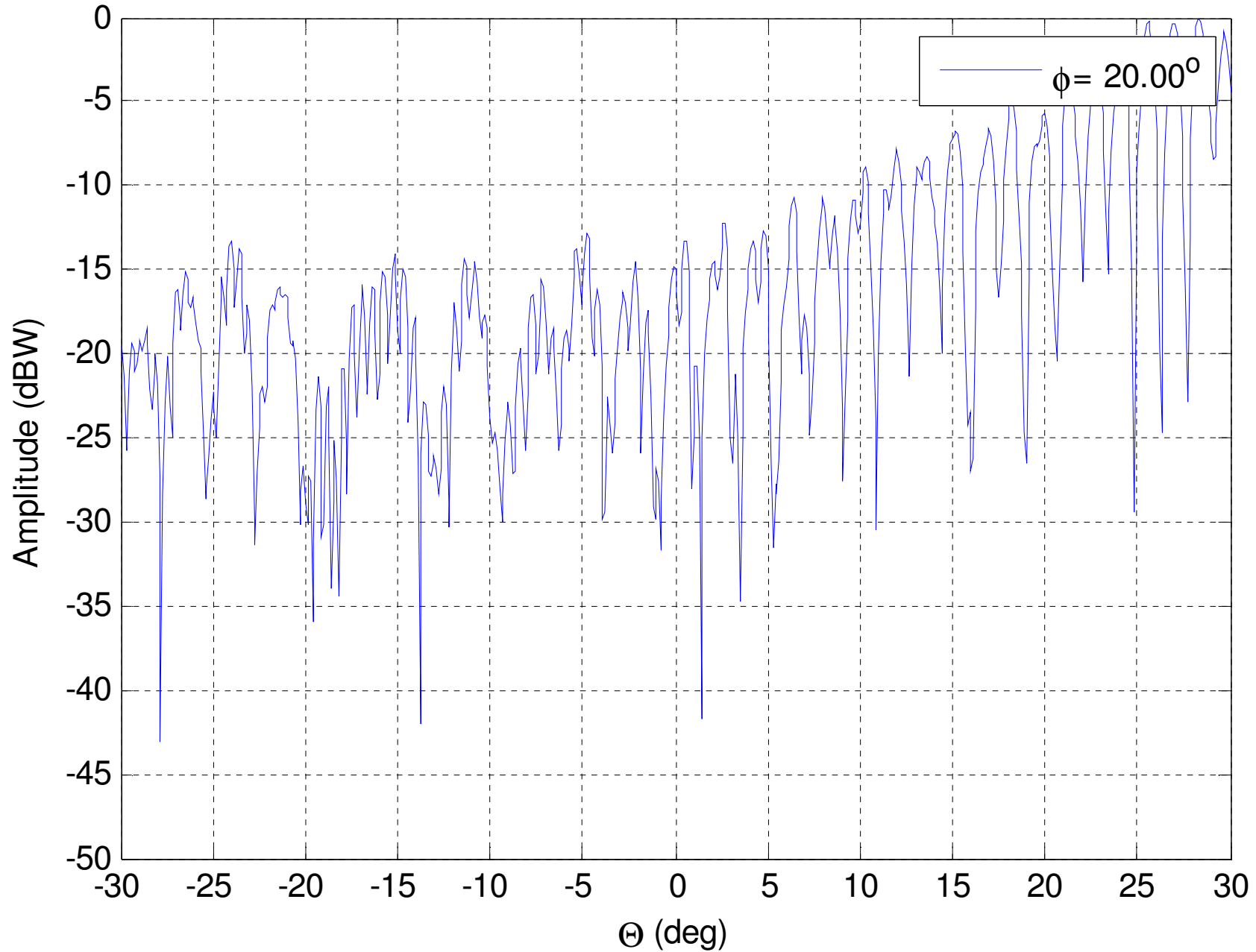
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 5.52 dBW, Date: 15-Dec-2011



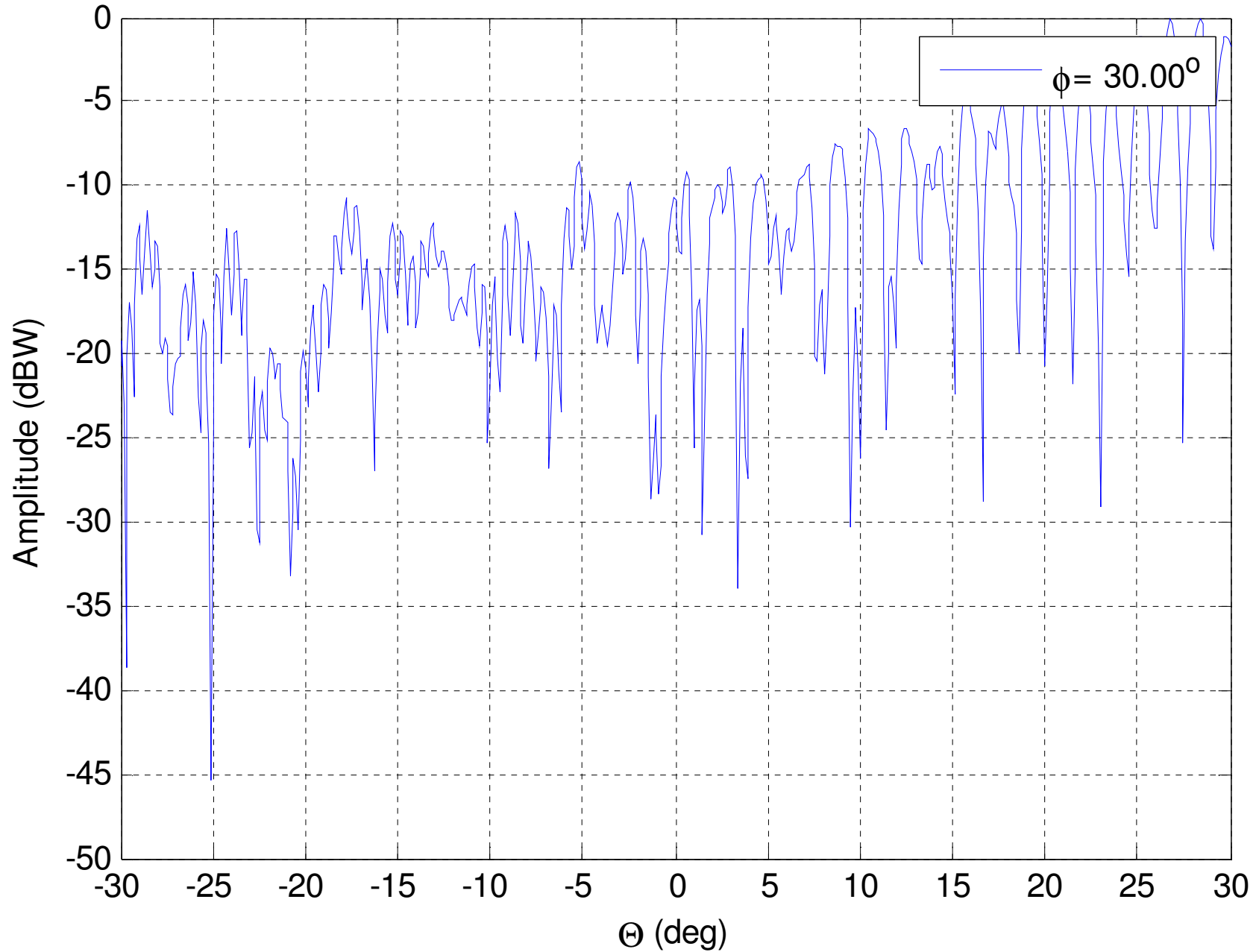
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 2.17 dBW, Date: 15-Dec-2011



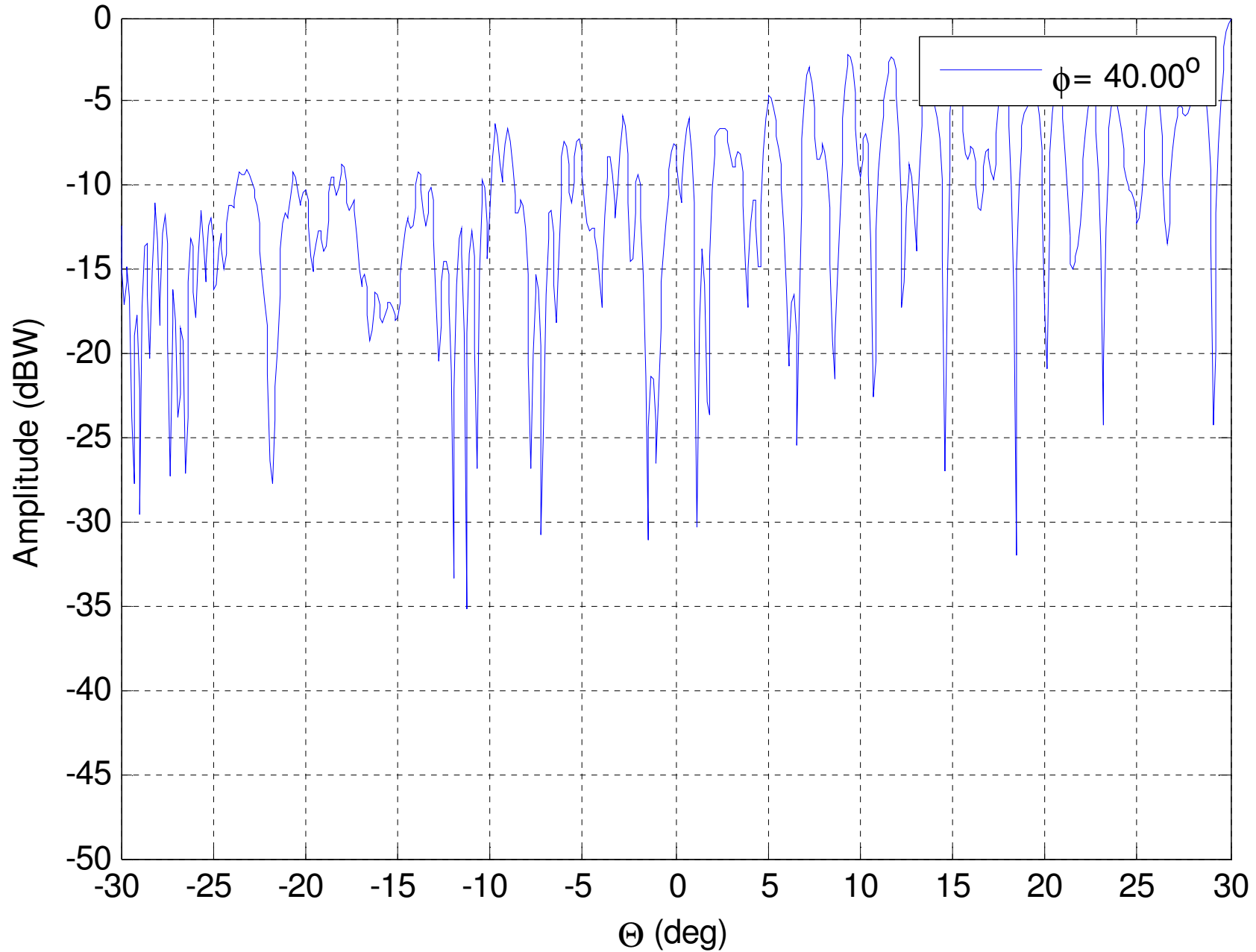
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -1.87 dBW, Date: 15-Dec-2011



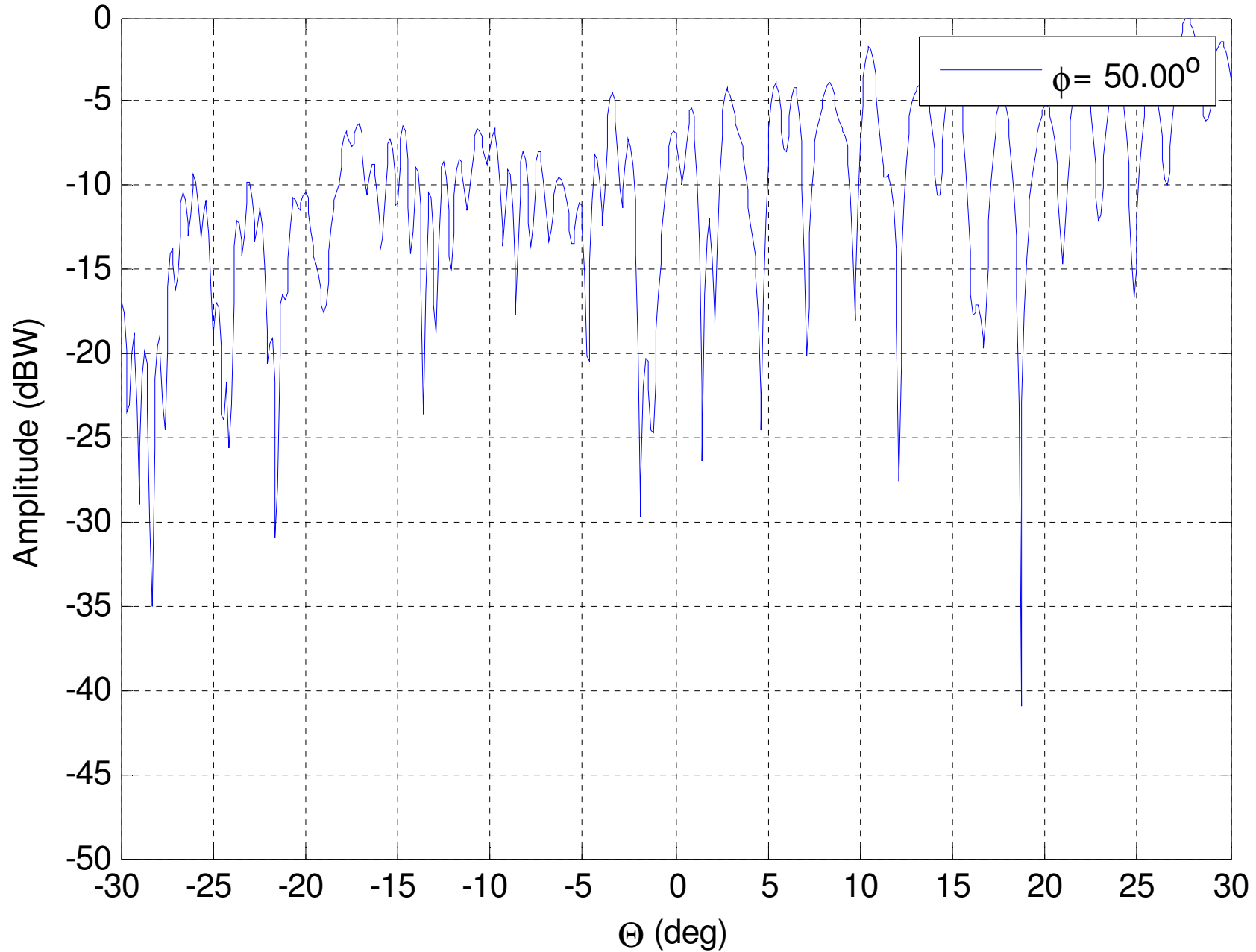
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -5.06 dBW, Date: 15-Dec-2011



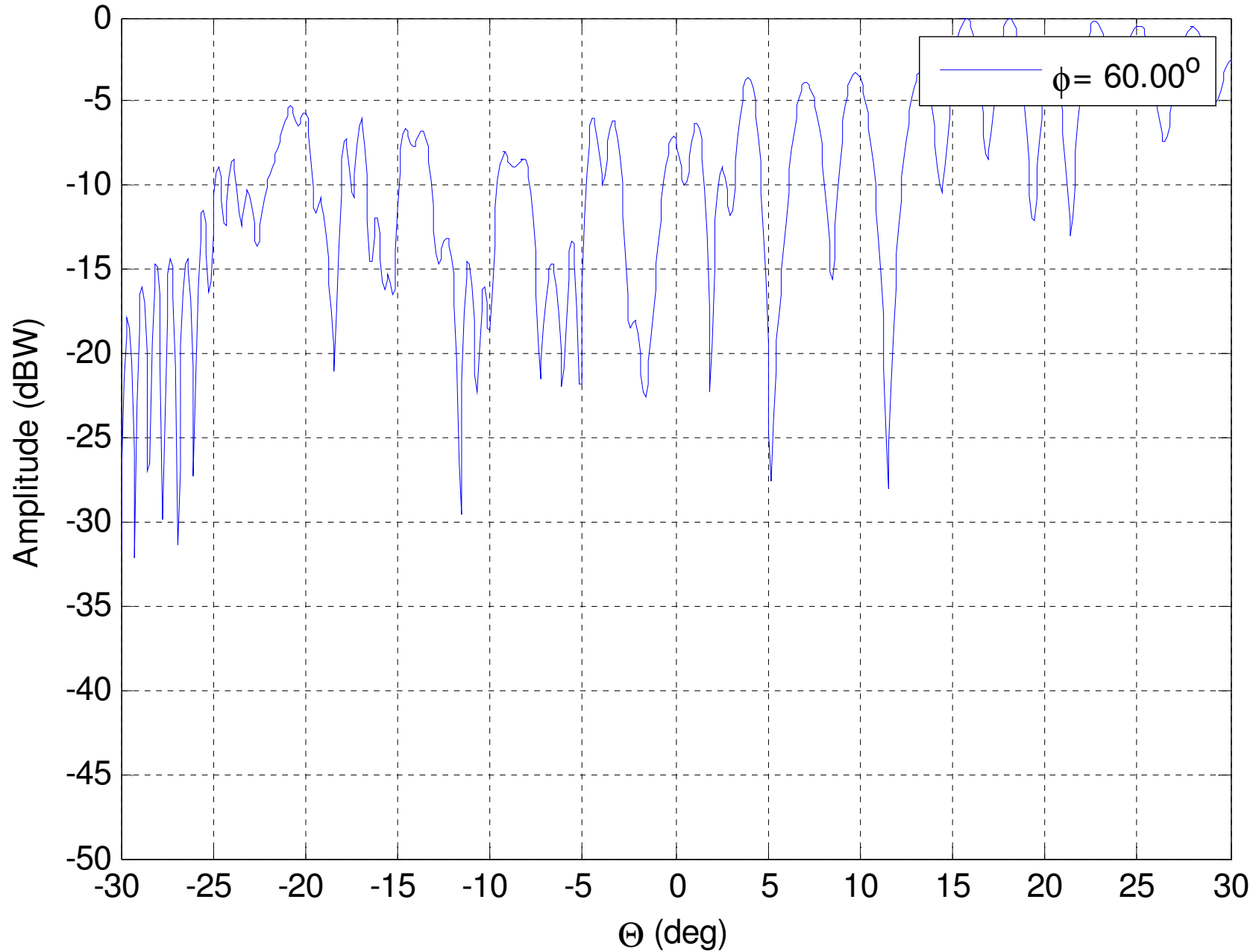
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -5.88 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

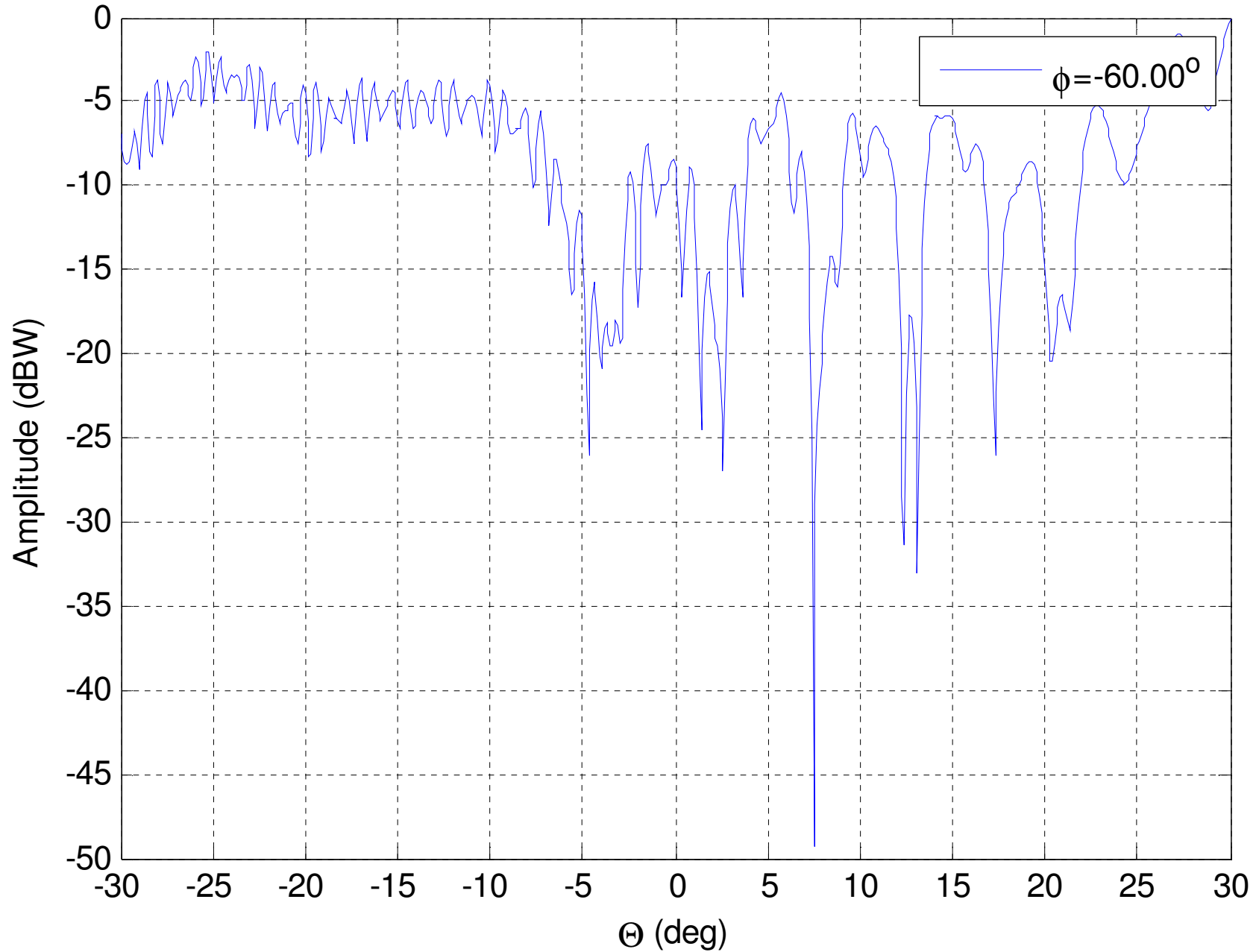
Input file: tx-17.3-rhcp-60.cut, Peak: -5.53 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

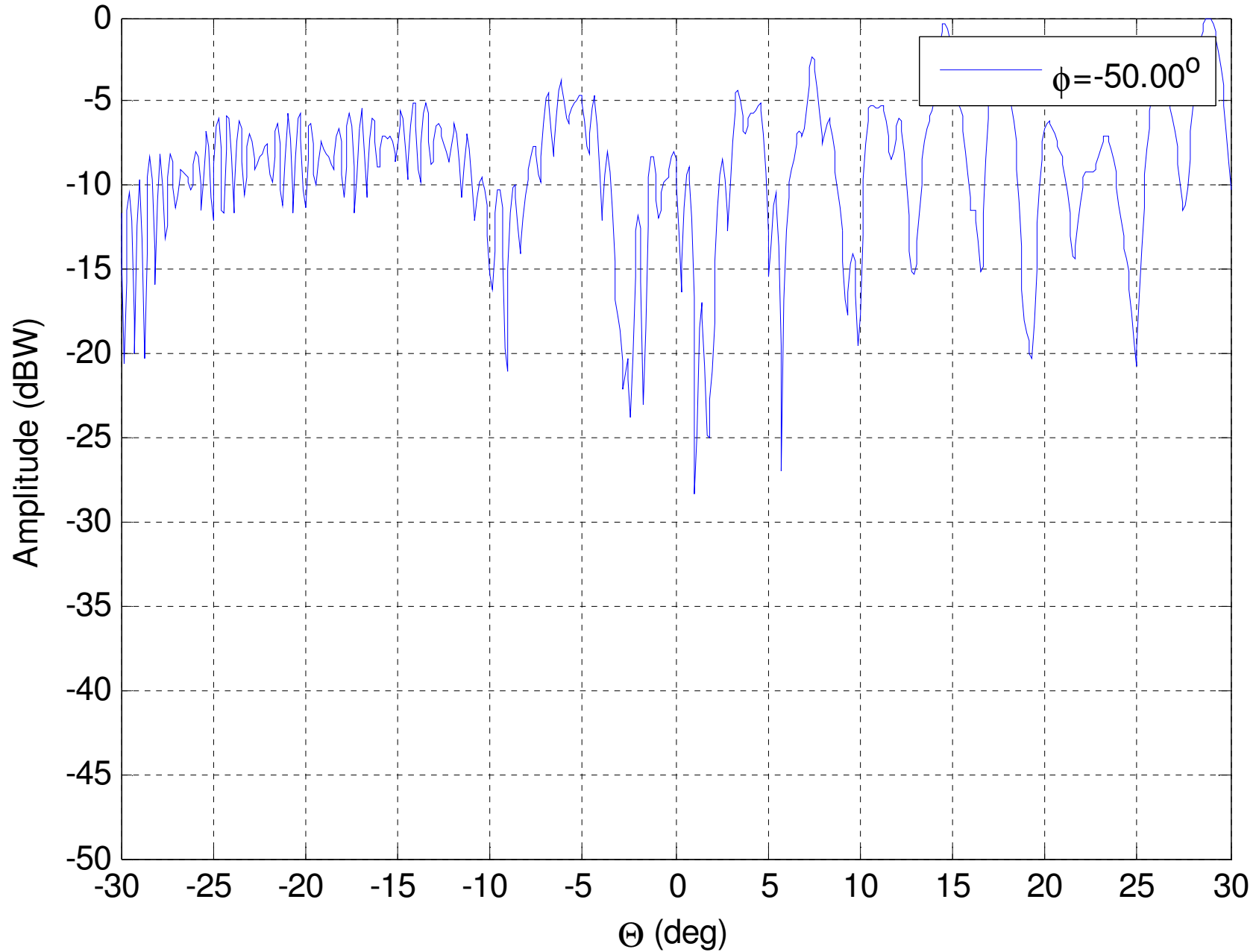
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -4.01 dBW, Date: 15-Dec-2011



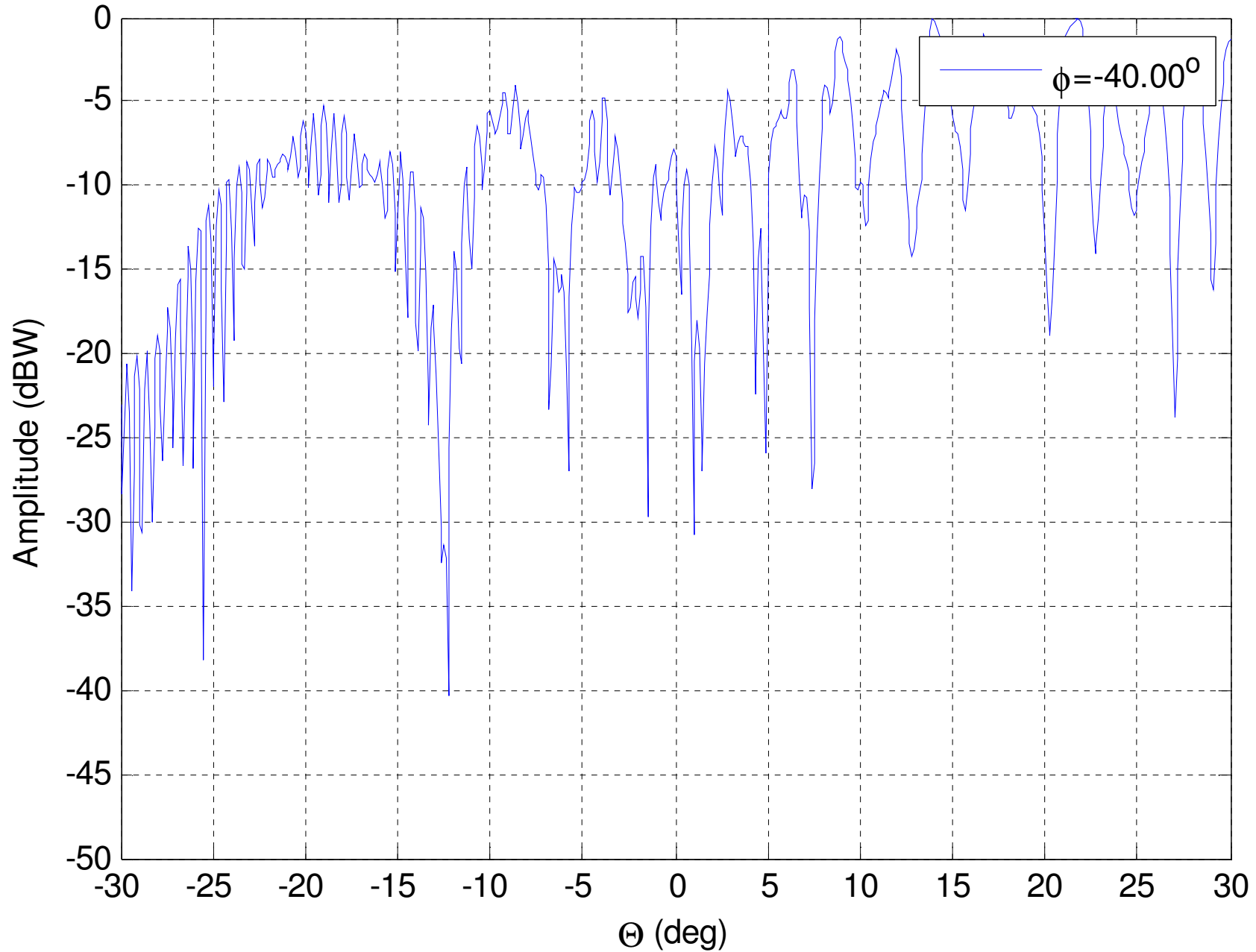
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.52 dBW, Date: 15-Dec-2011



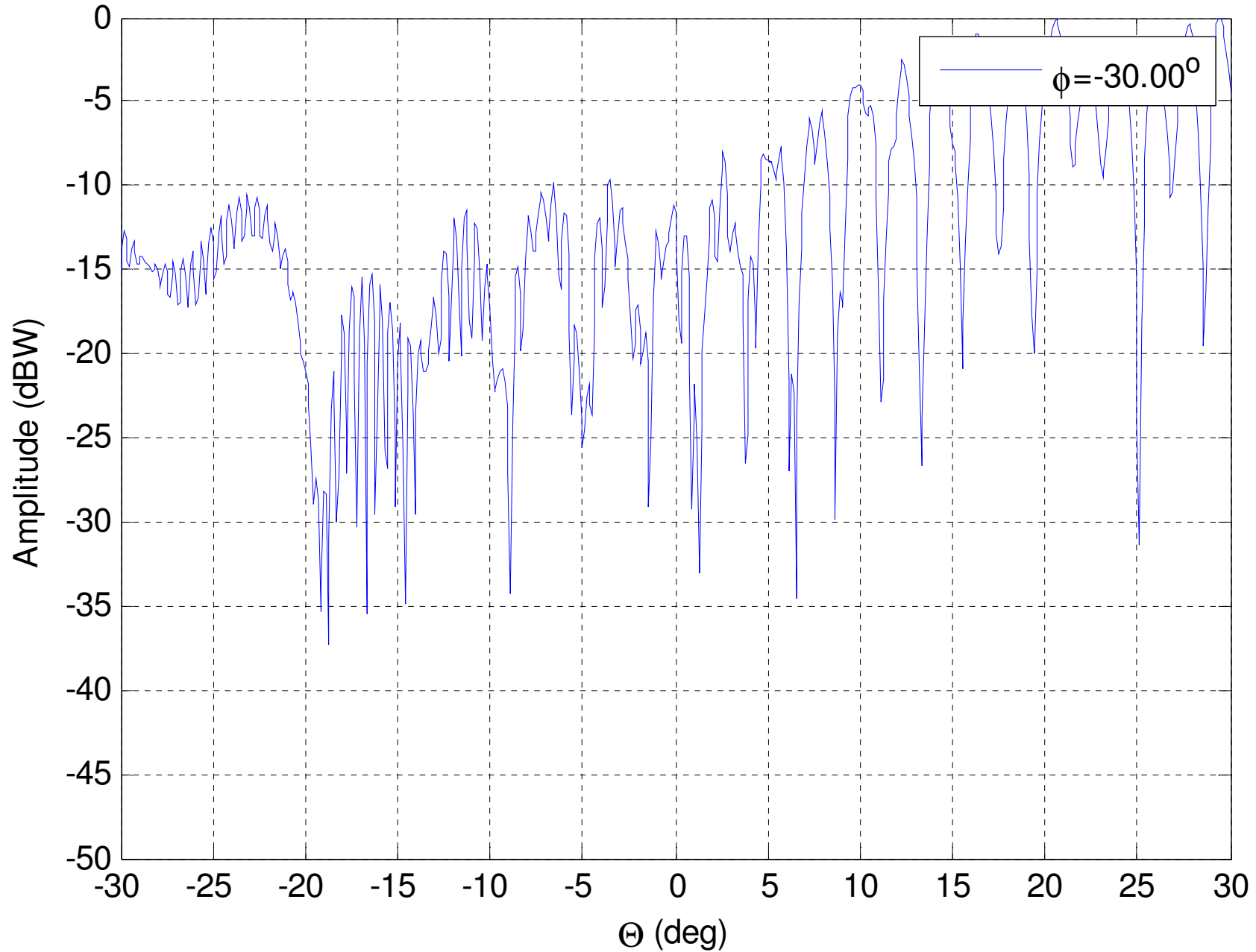
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -4.62 dBW, Date: 15-Dec-2011



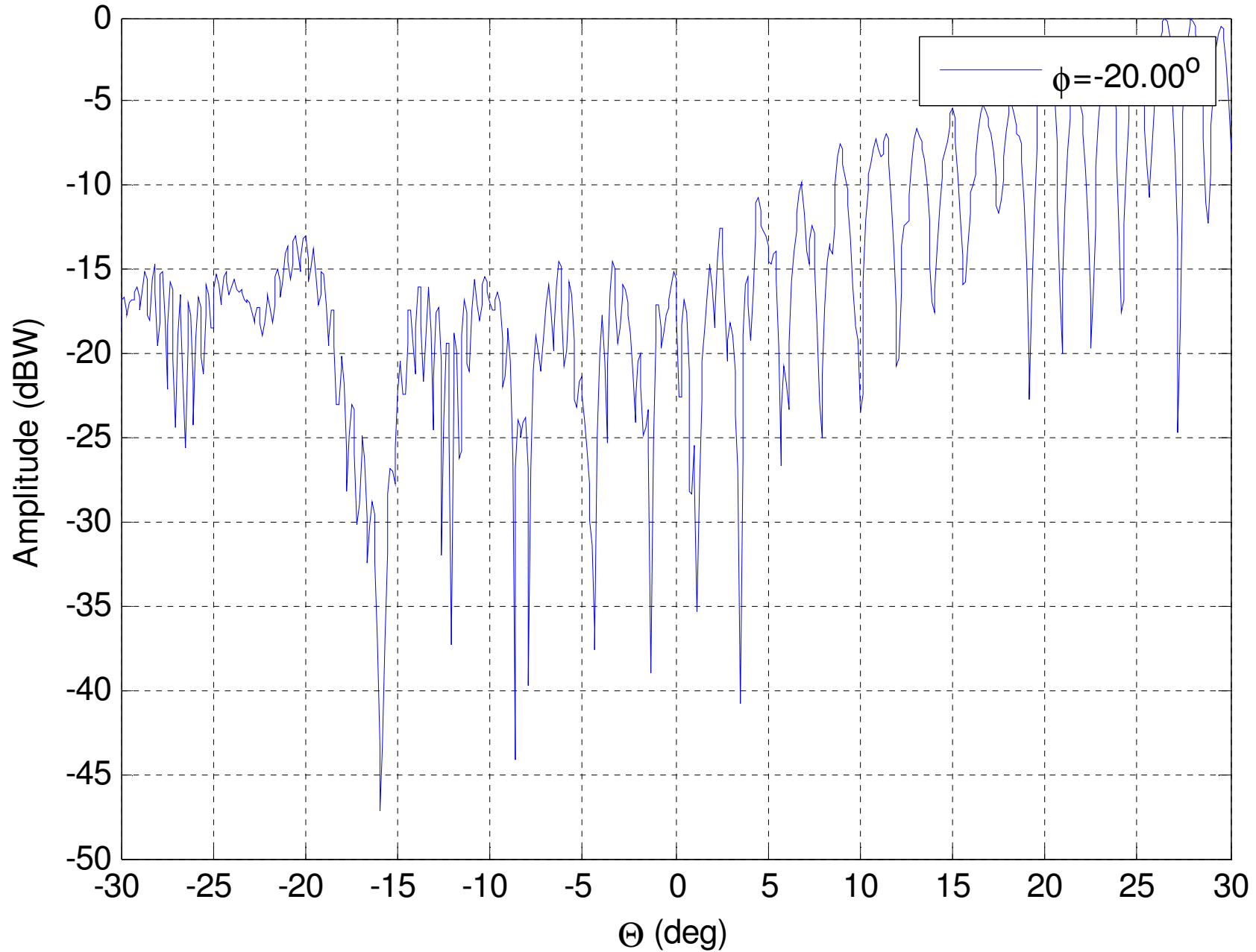
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -1.20 dBW, Date: 15-Dec-2011



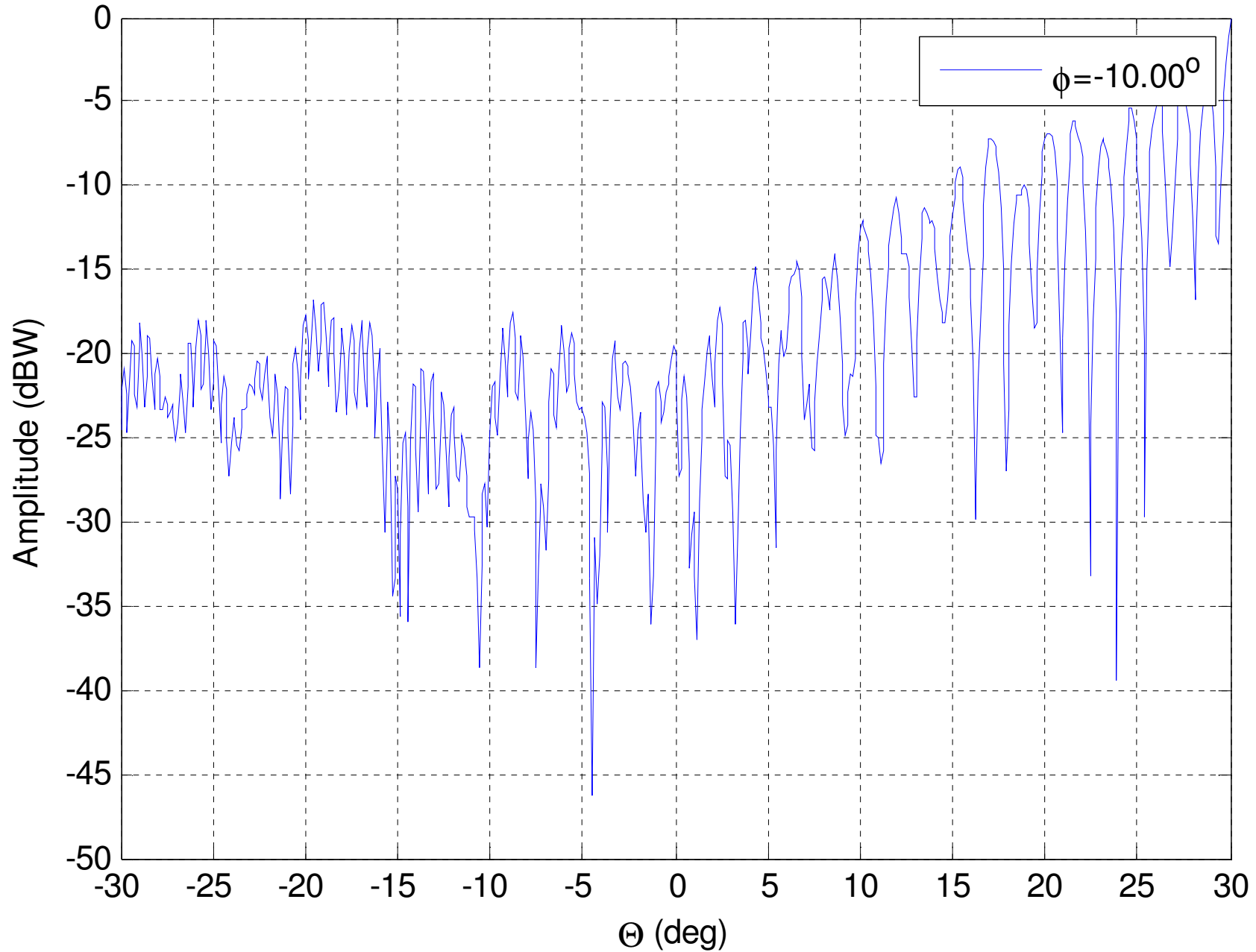
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 2.63 dBW, Date: 15-Dec-2011



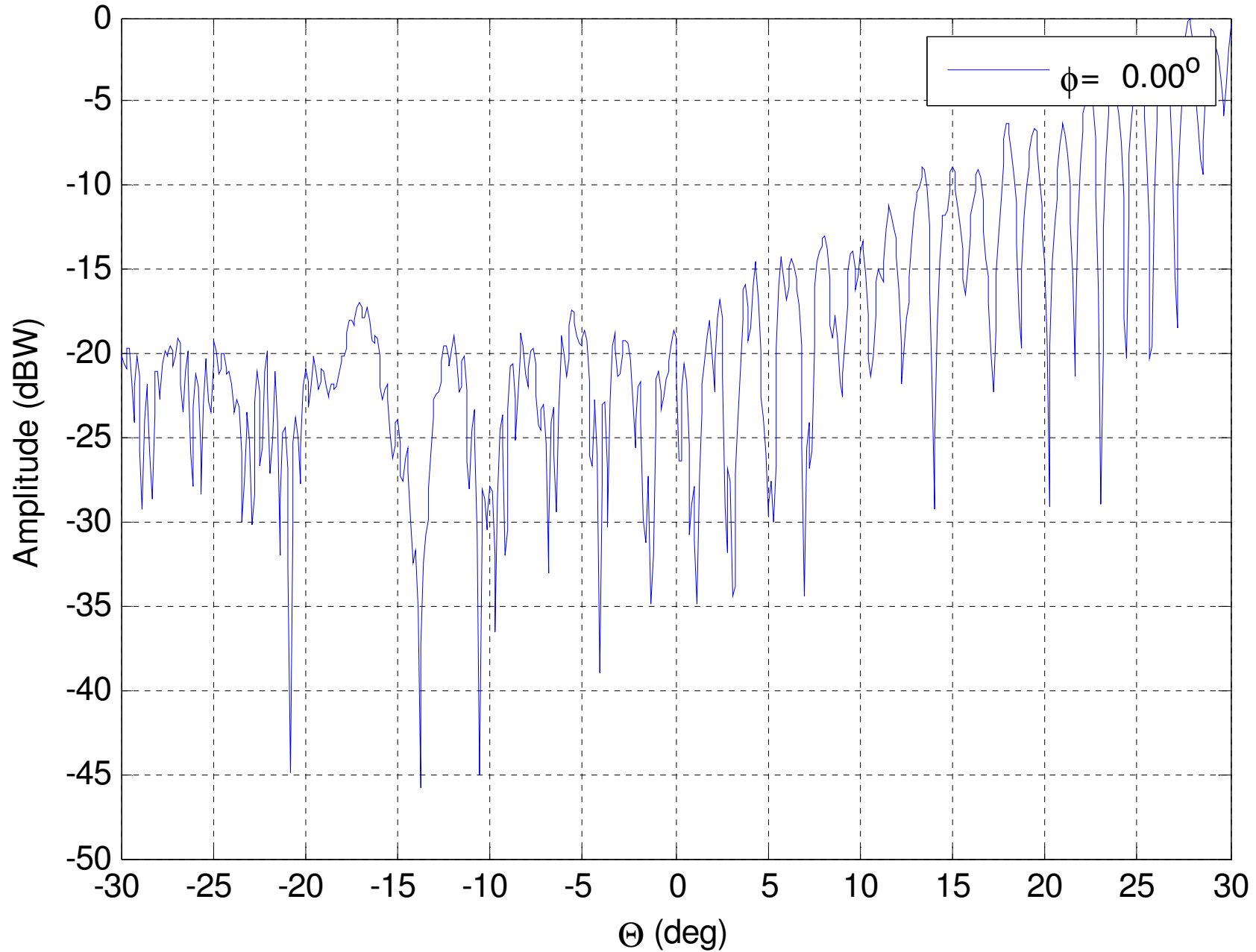
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 7.07 dBW, Date: 15-Dec-2011



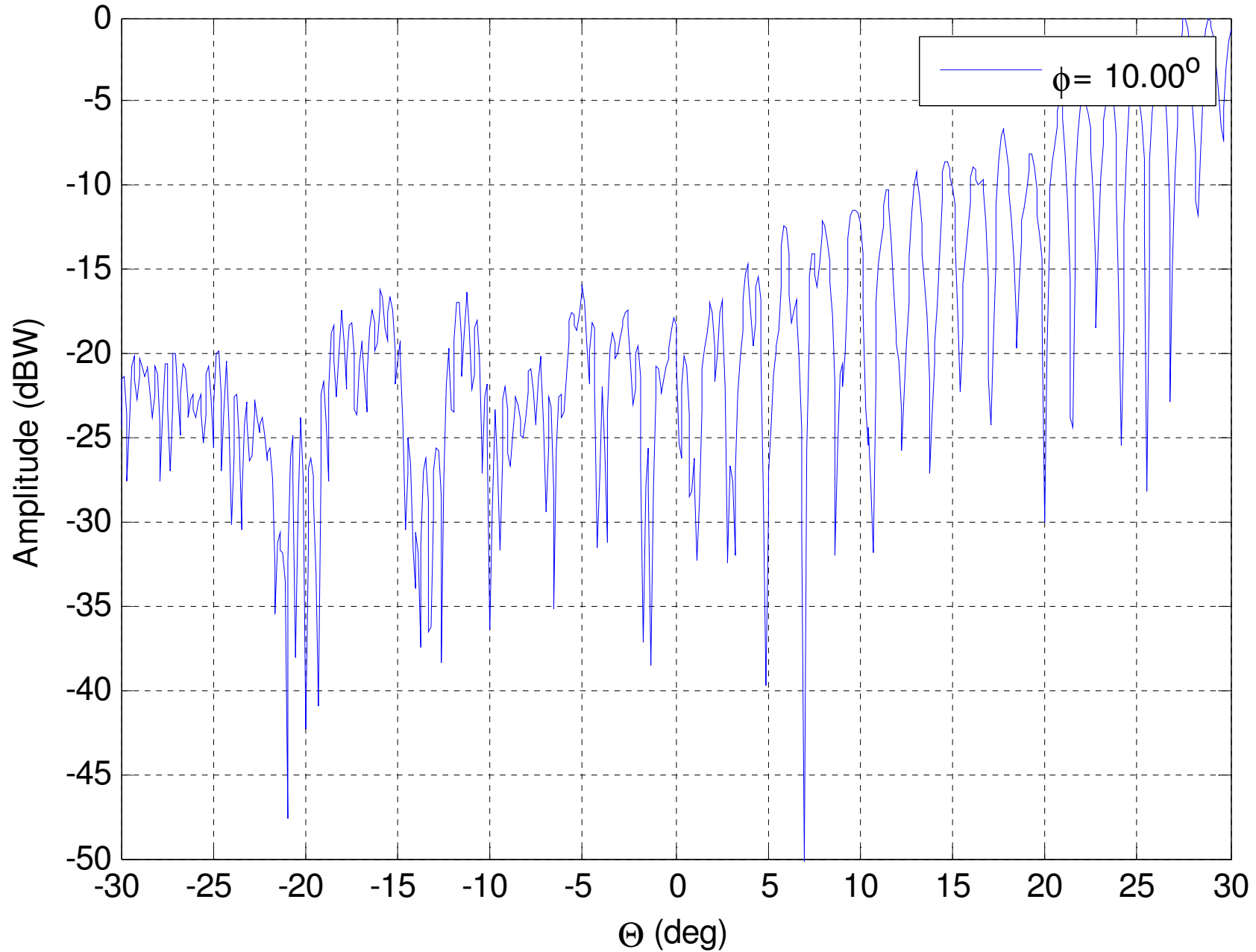
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 6.20 dBW, Date: 15-Dec-2011



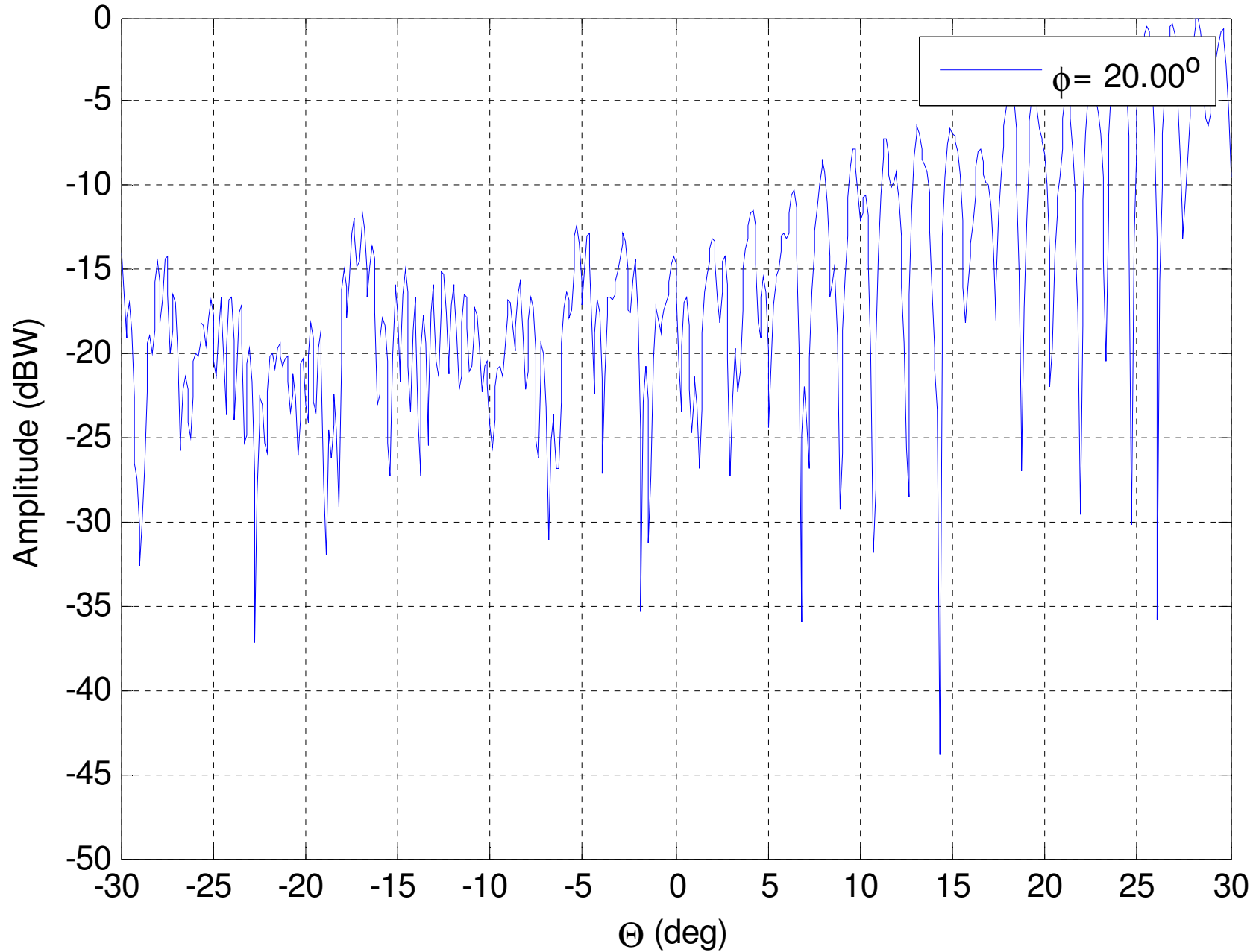
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 5.48 dBW, Date: 15-Dec-2011



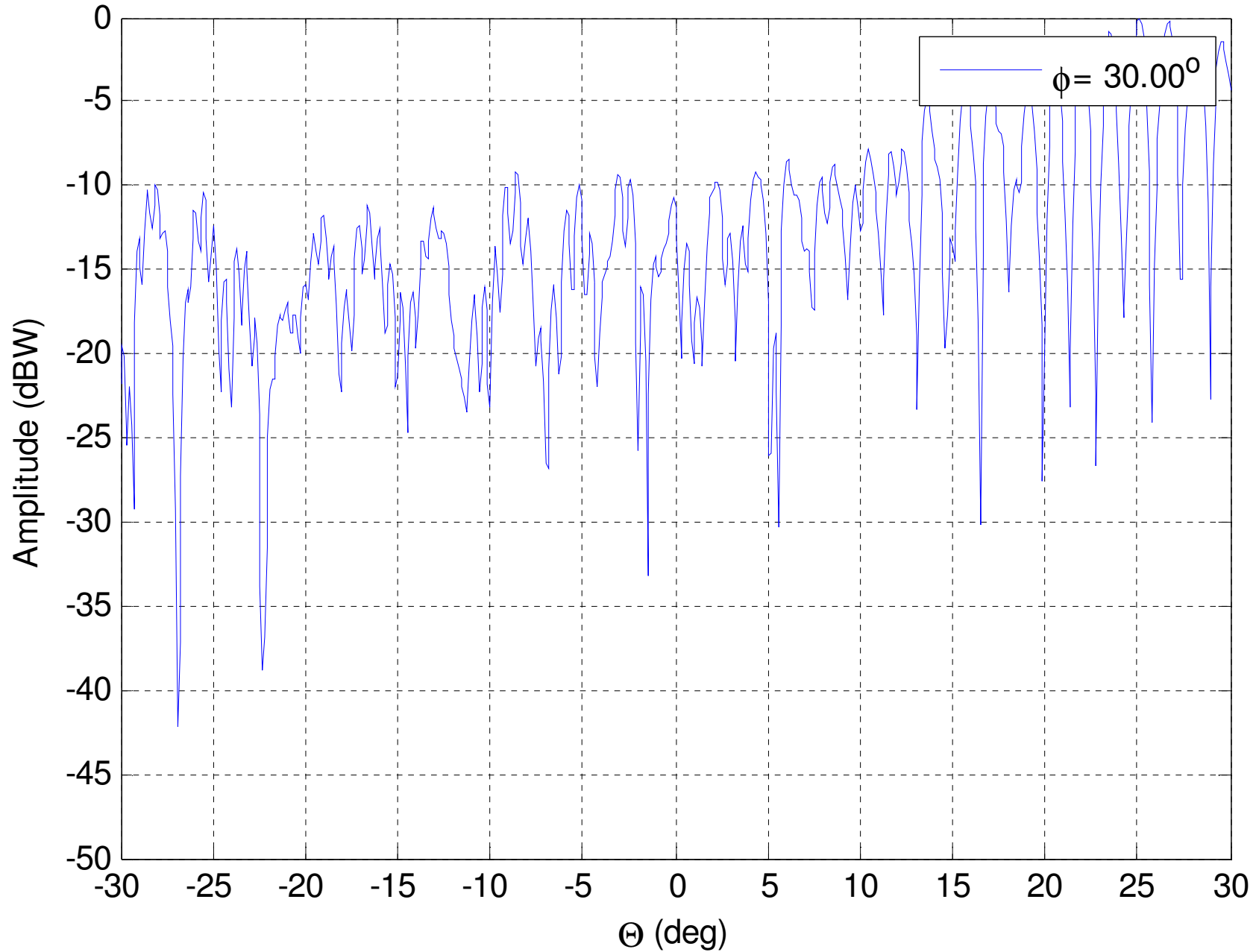
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 1.77 dBW, Date: 15-Dec-2011



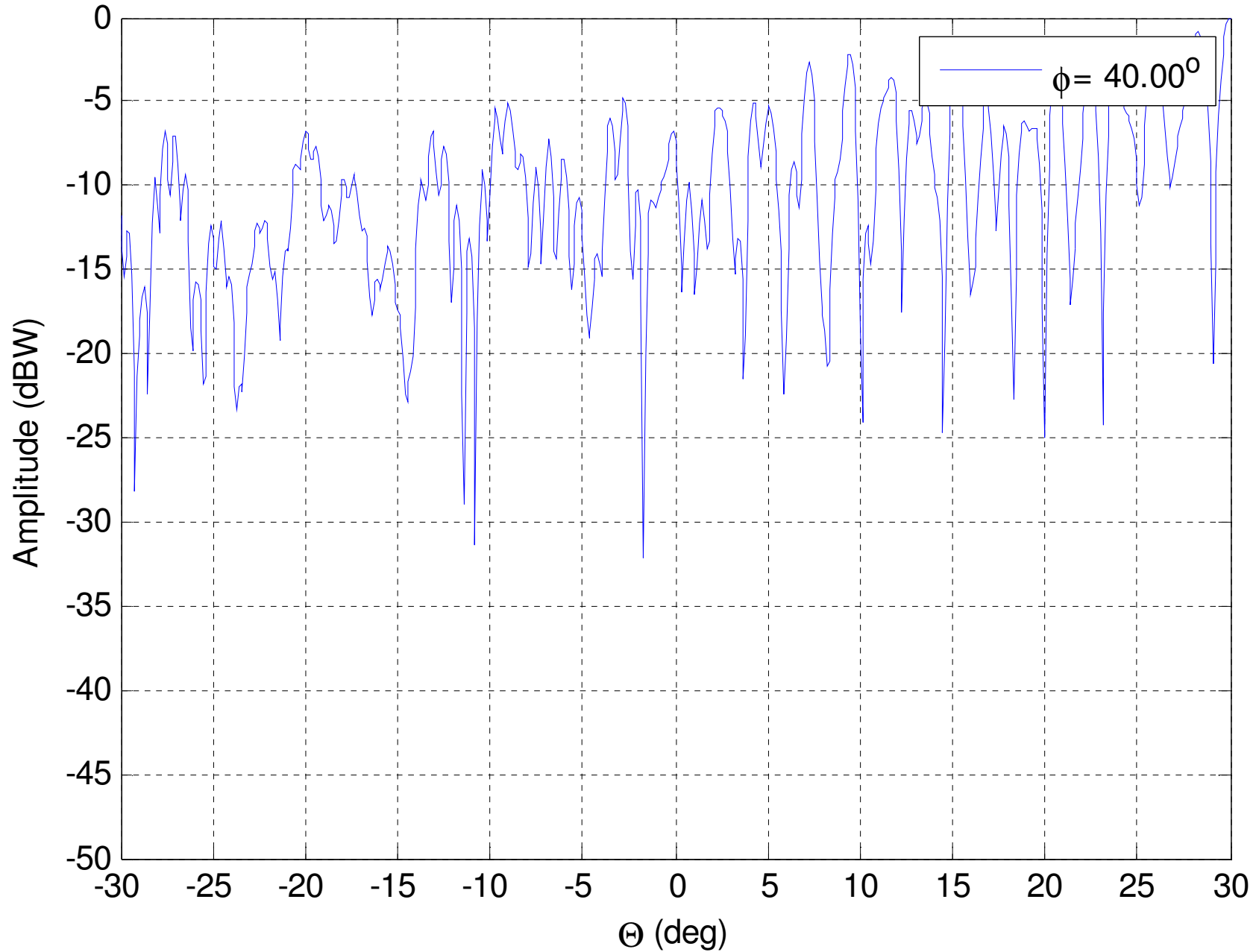
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -1.57 dBW, Date: 15-Dec-2011



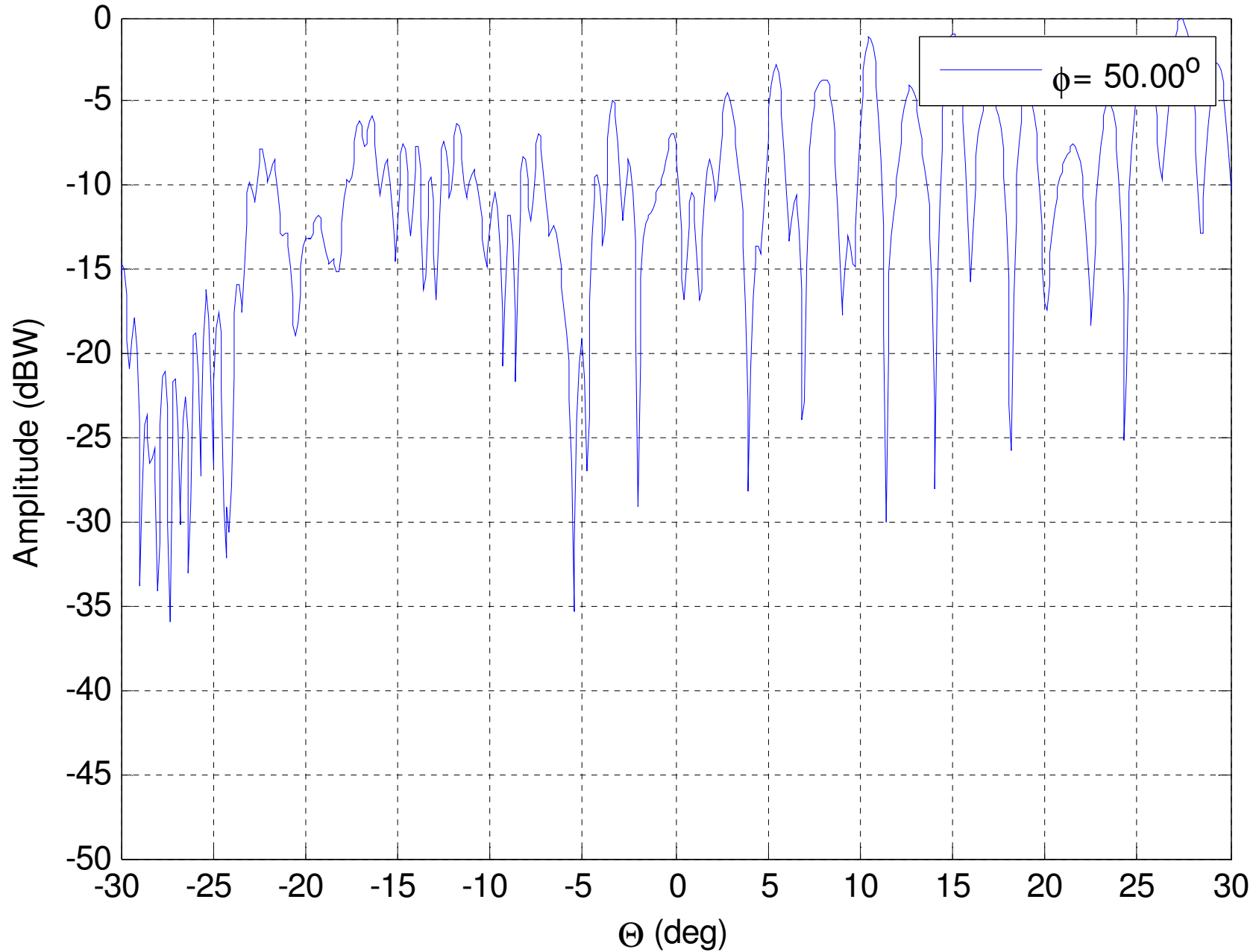
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -5.59 dBW, Date: 15-Dec-2011



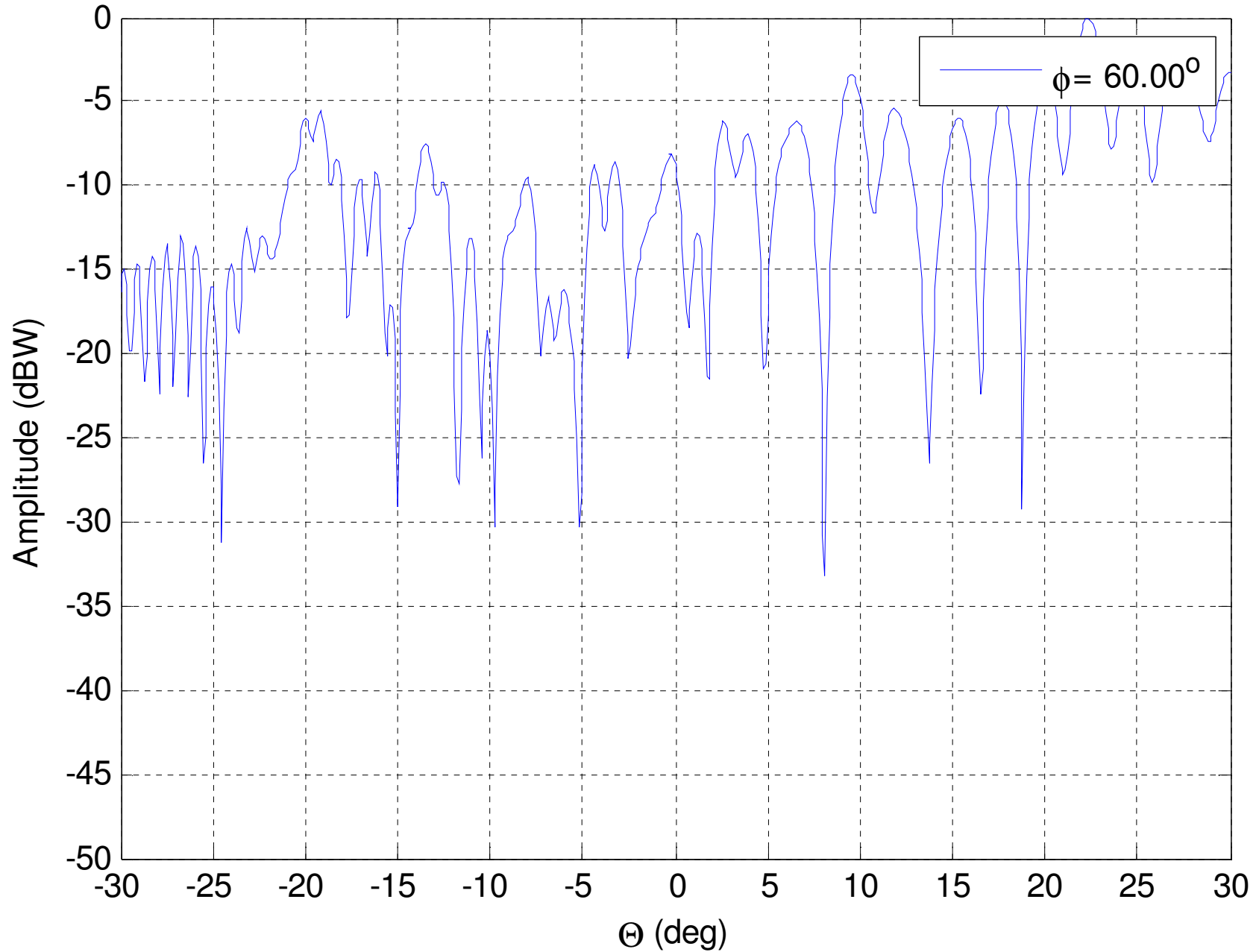
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -5.41 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

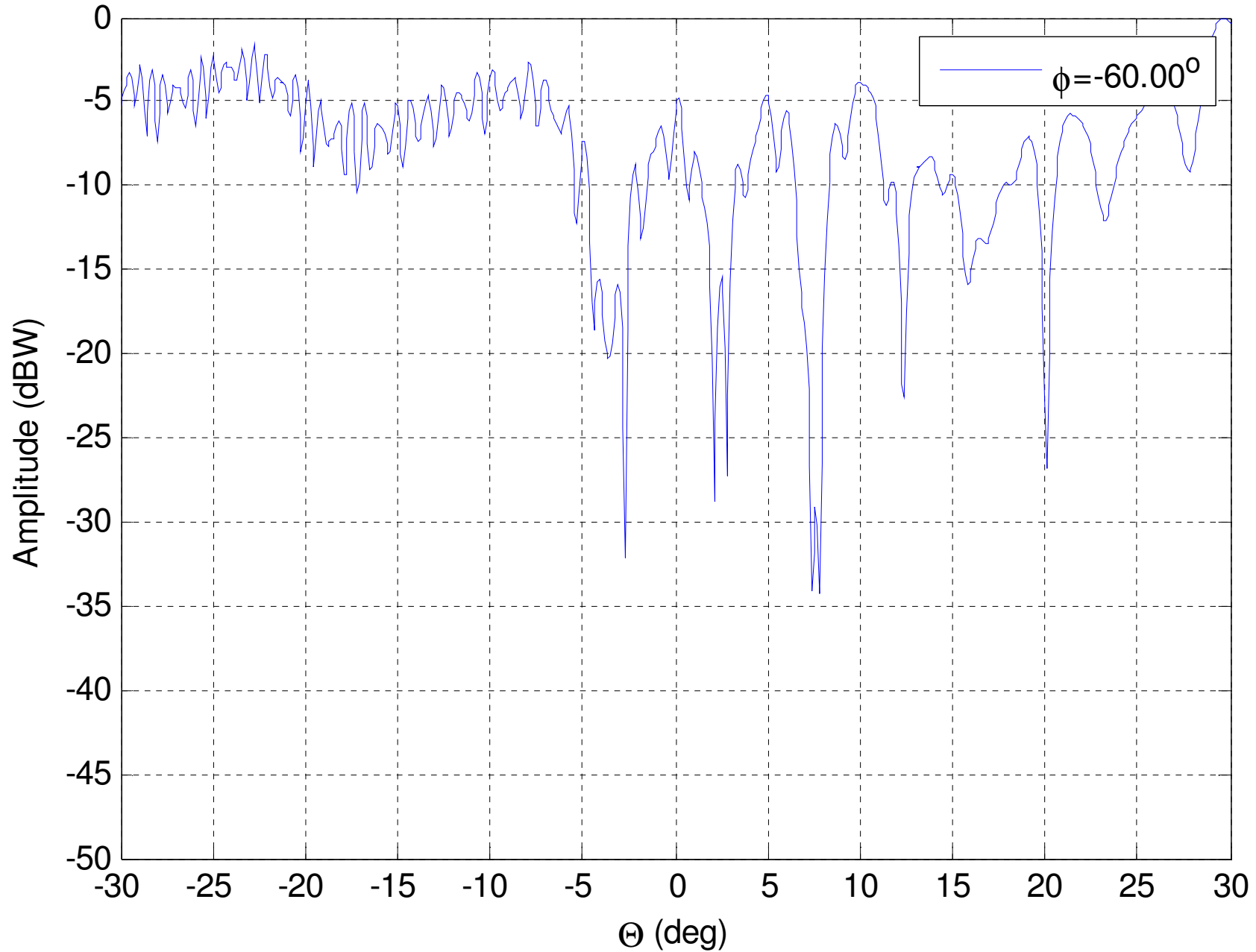
Input file: tx-17.3-lhcp-60.cut, Peak: -4.09 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

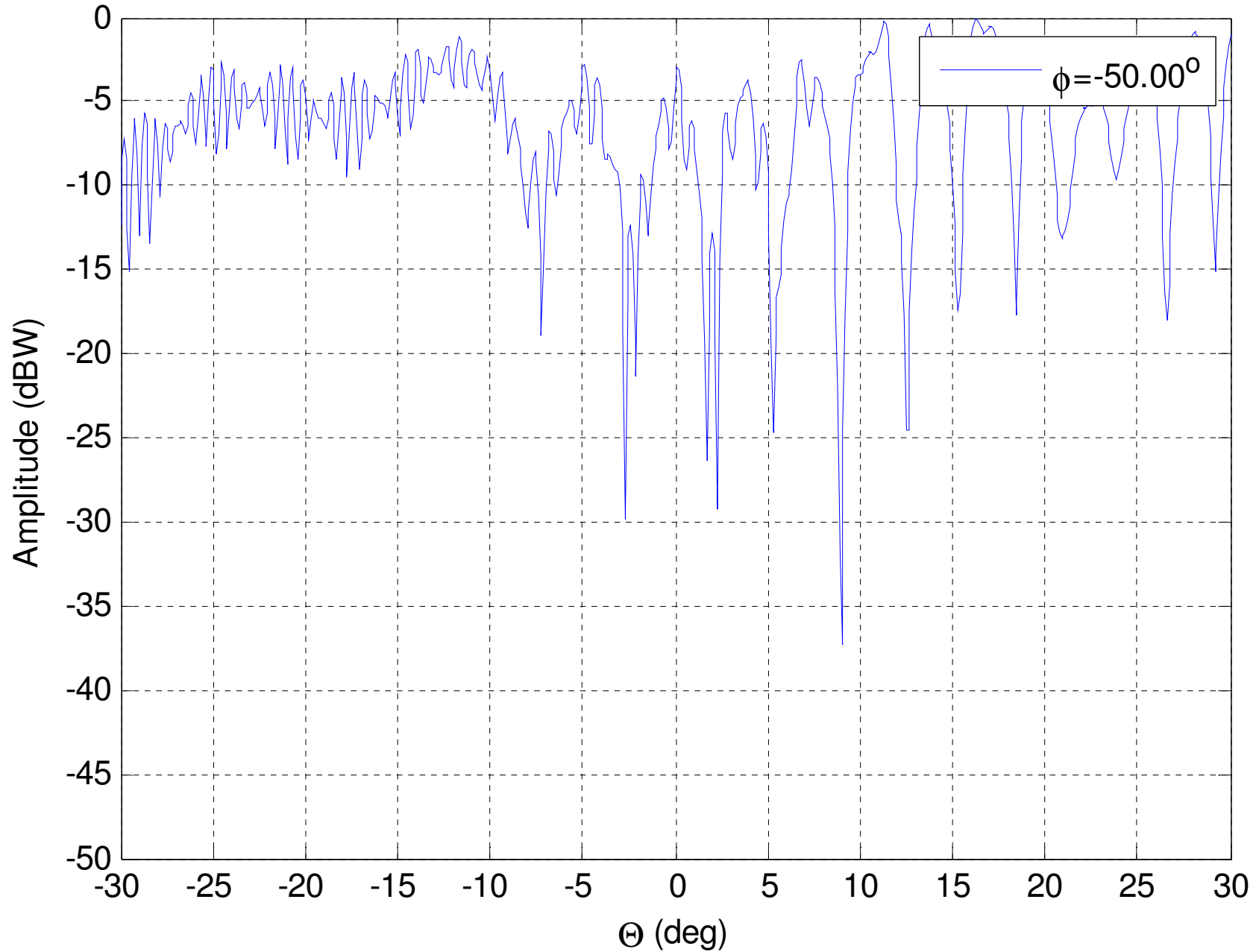
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -4.75 dBW, Date: 15-Dec-2011



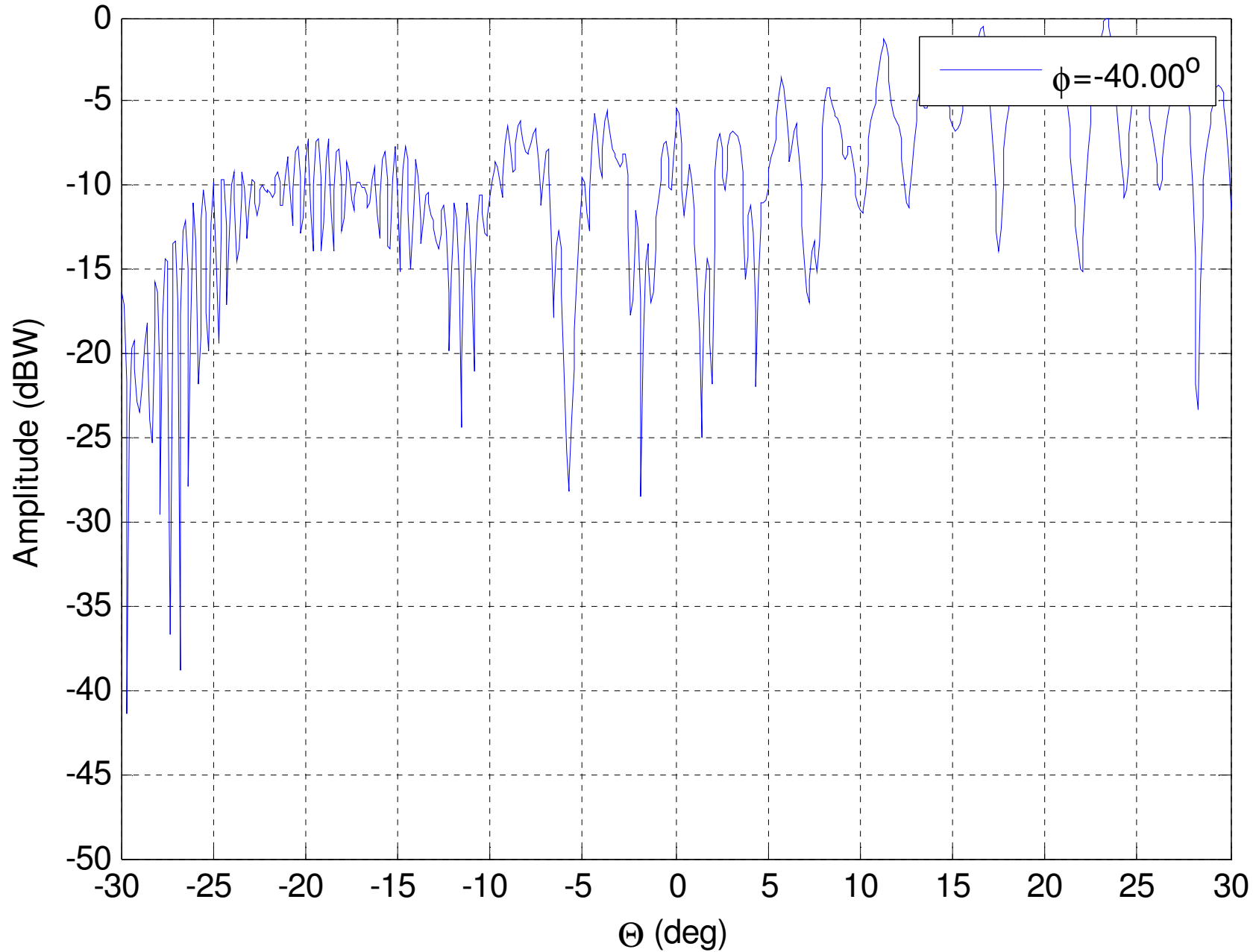
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.63 dBW, Date: 15-Dec-2011



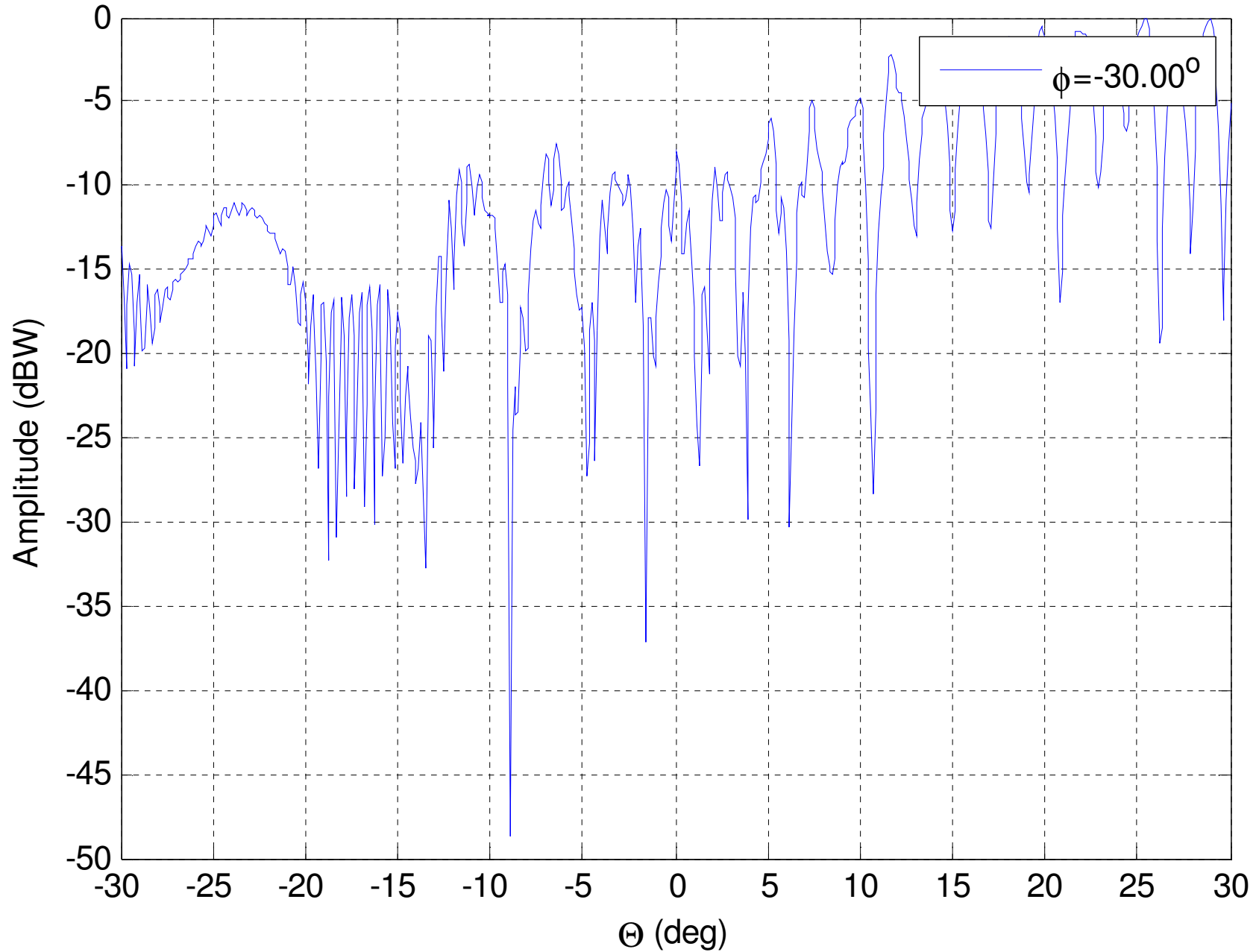
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -4.17 dBW, Date: 15-Dec-2011



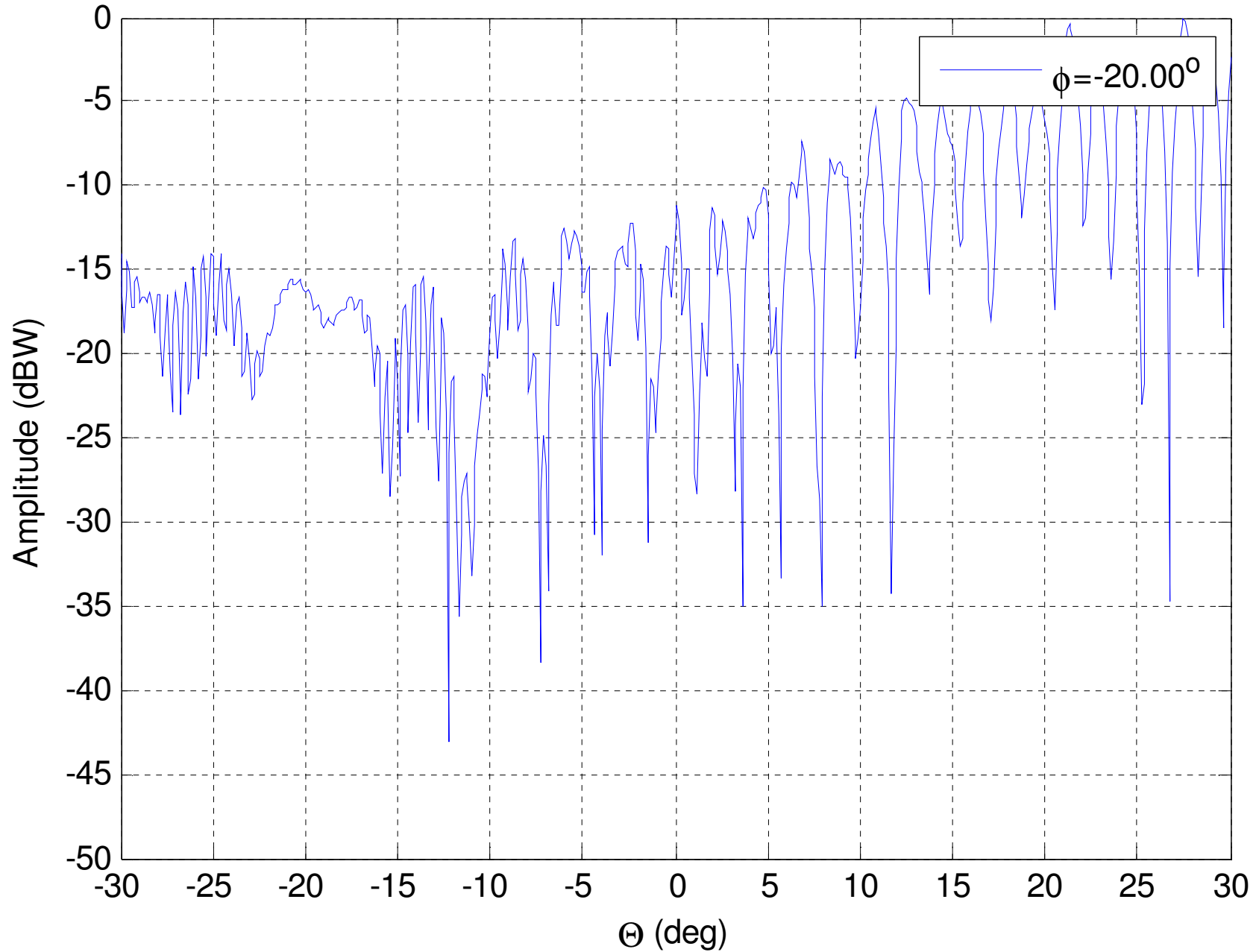
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -1.47 dBW, Date: 15-Dec-2011



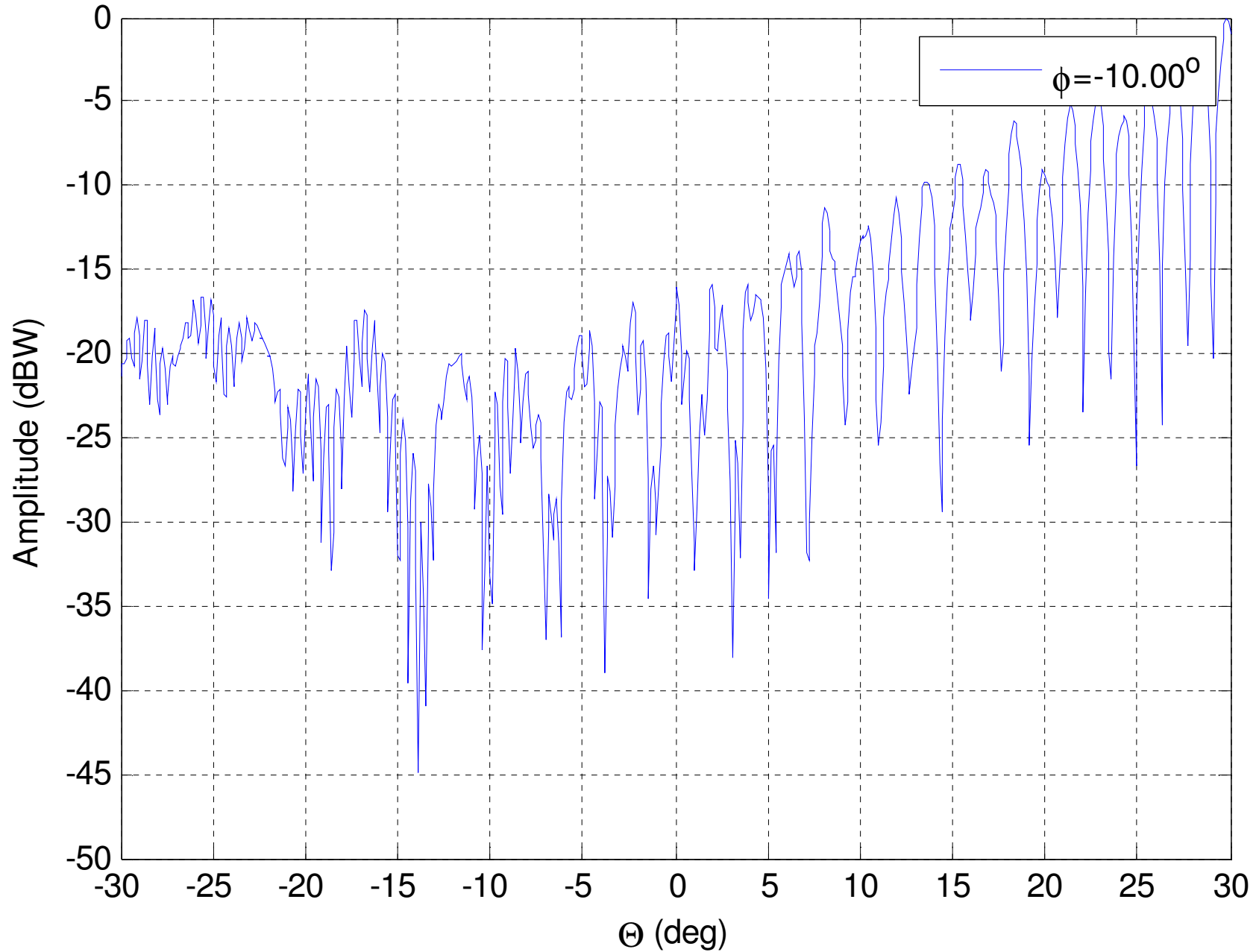
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 1.66 dBW, Date: 15-Dec-2011



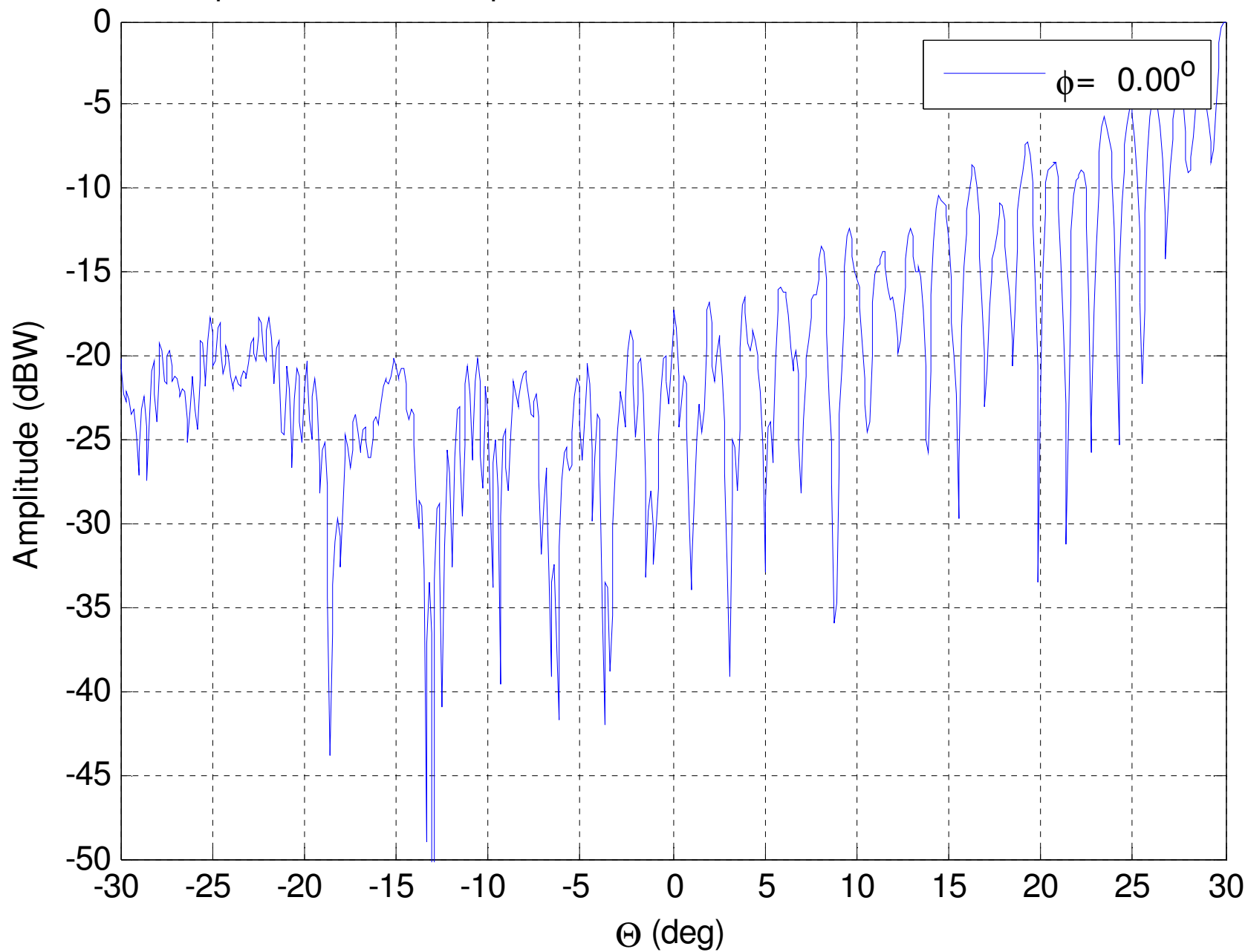
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 6.61 dBW, Date: 15-Dec-2011



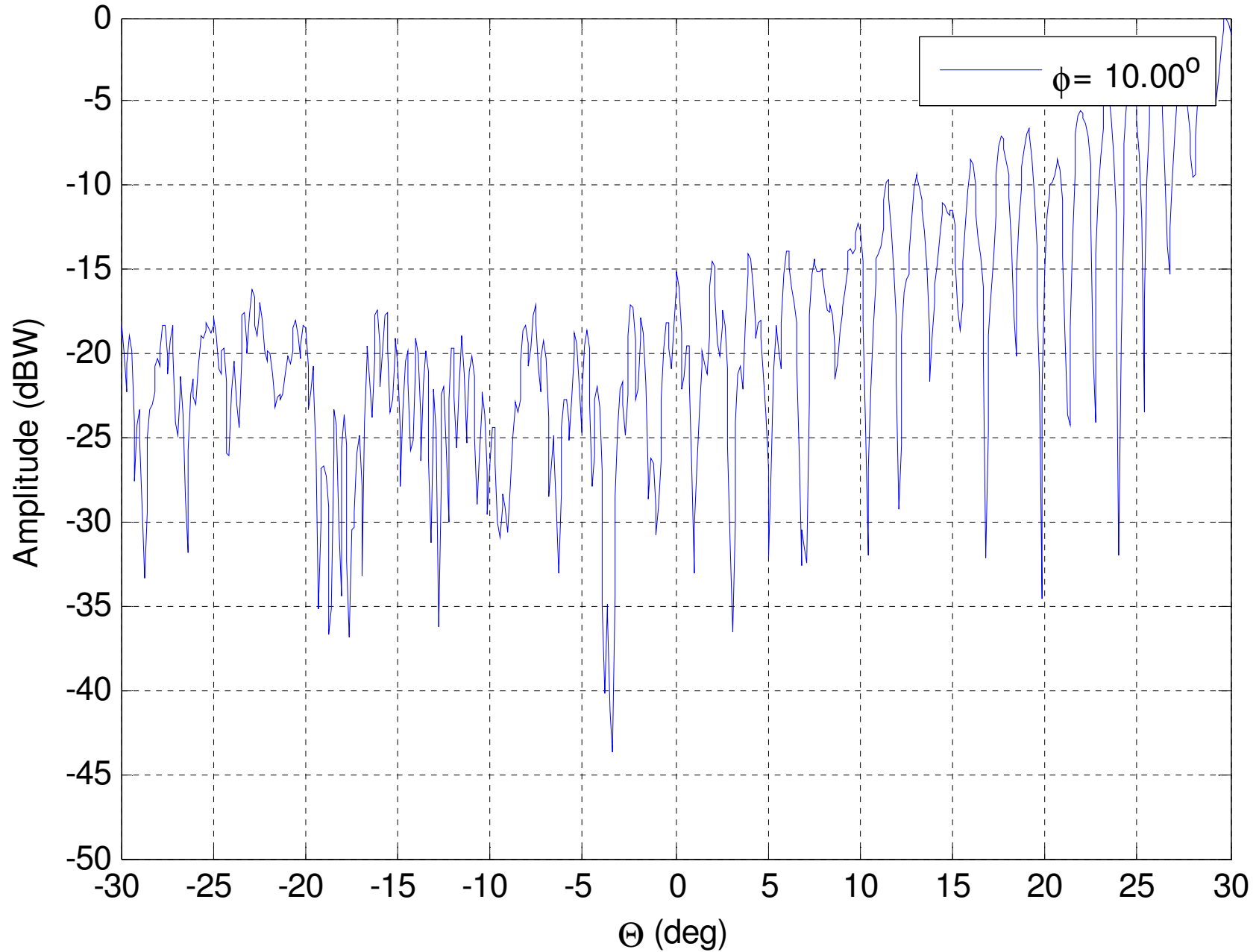
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 7.77 dBW, Date: 15-Dec-2011



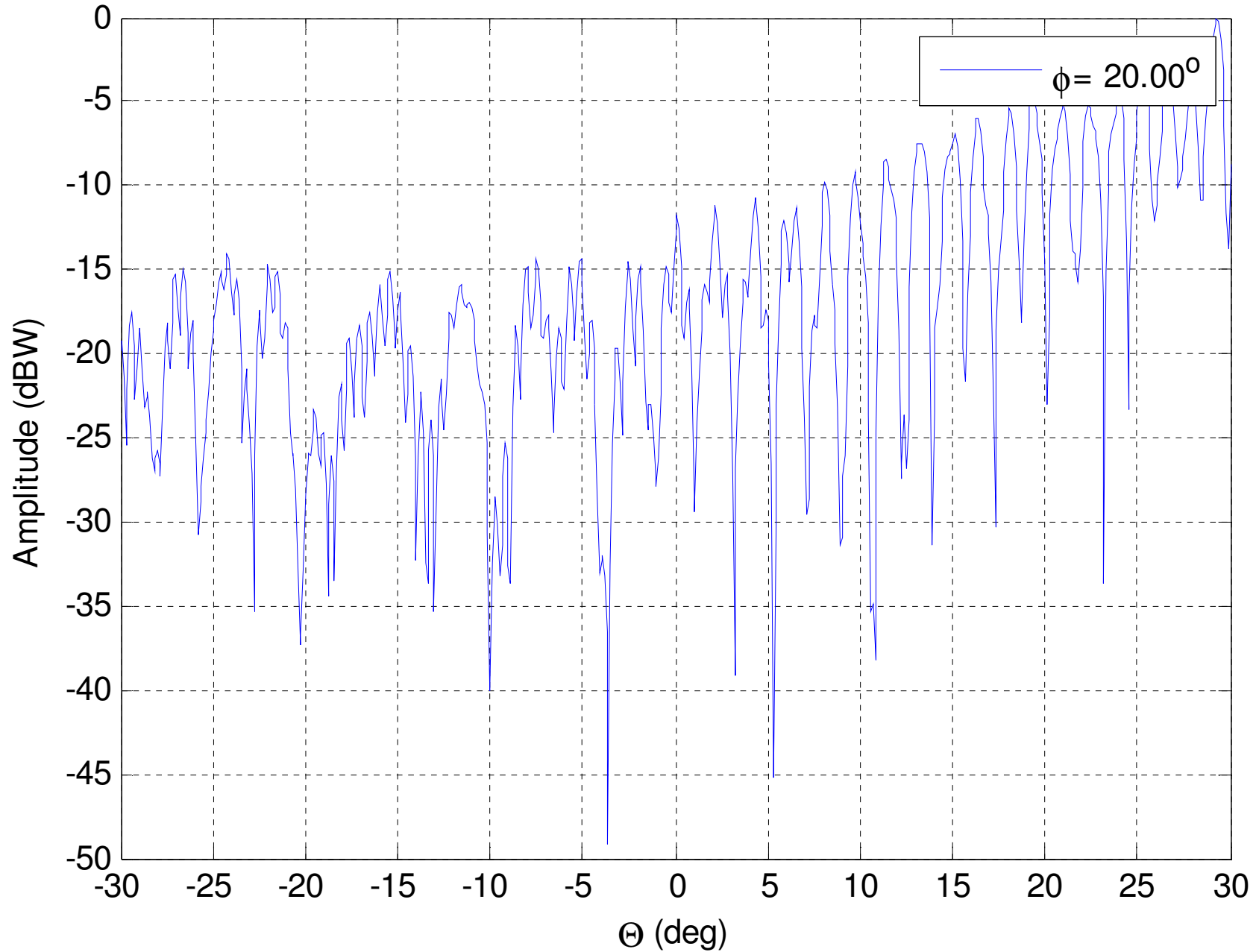
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 5.66 dBW, Date: 15-Dec-2011



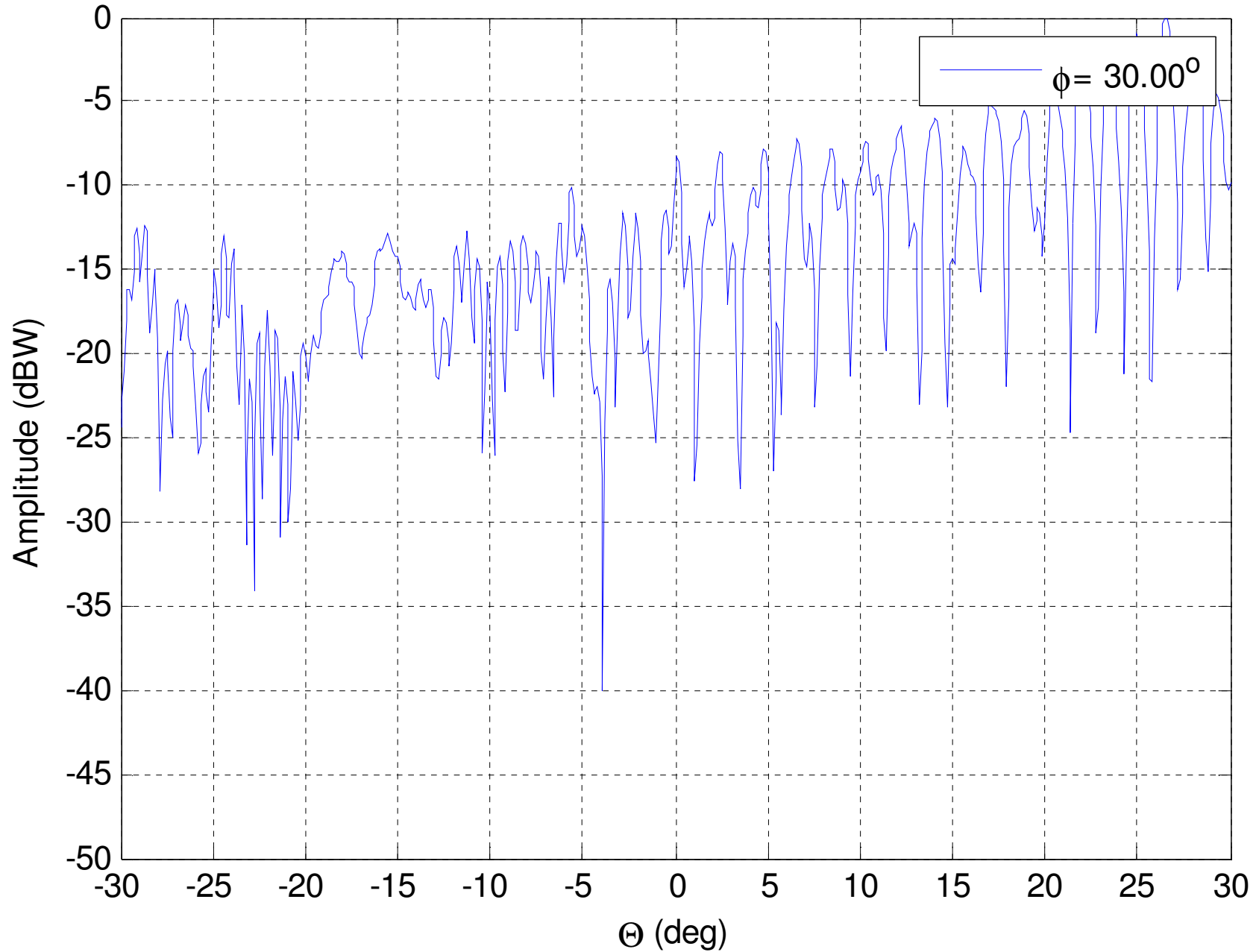
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 2.36 dBW, Date: 15-Dec-2011



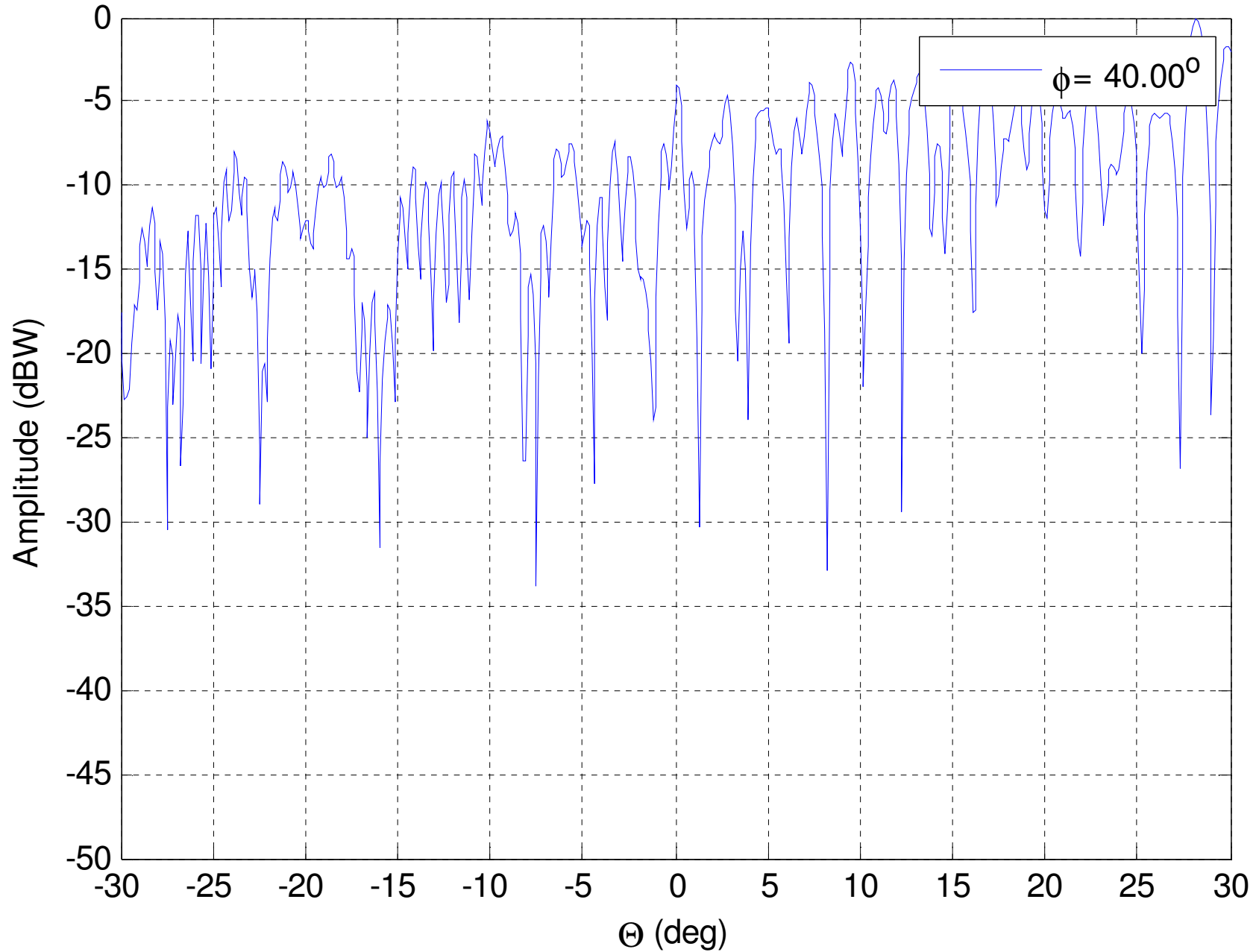
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -1.24 dBW, Date: 15-Dec-2011



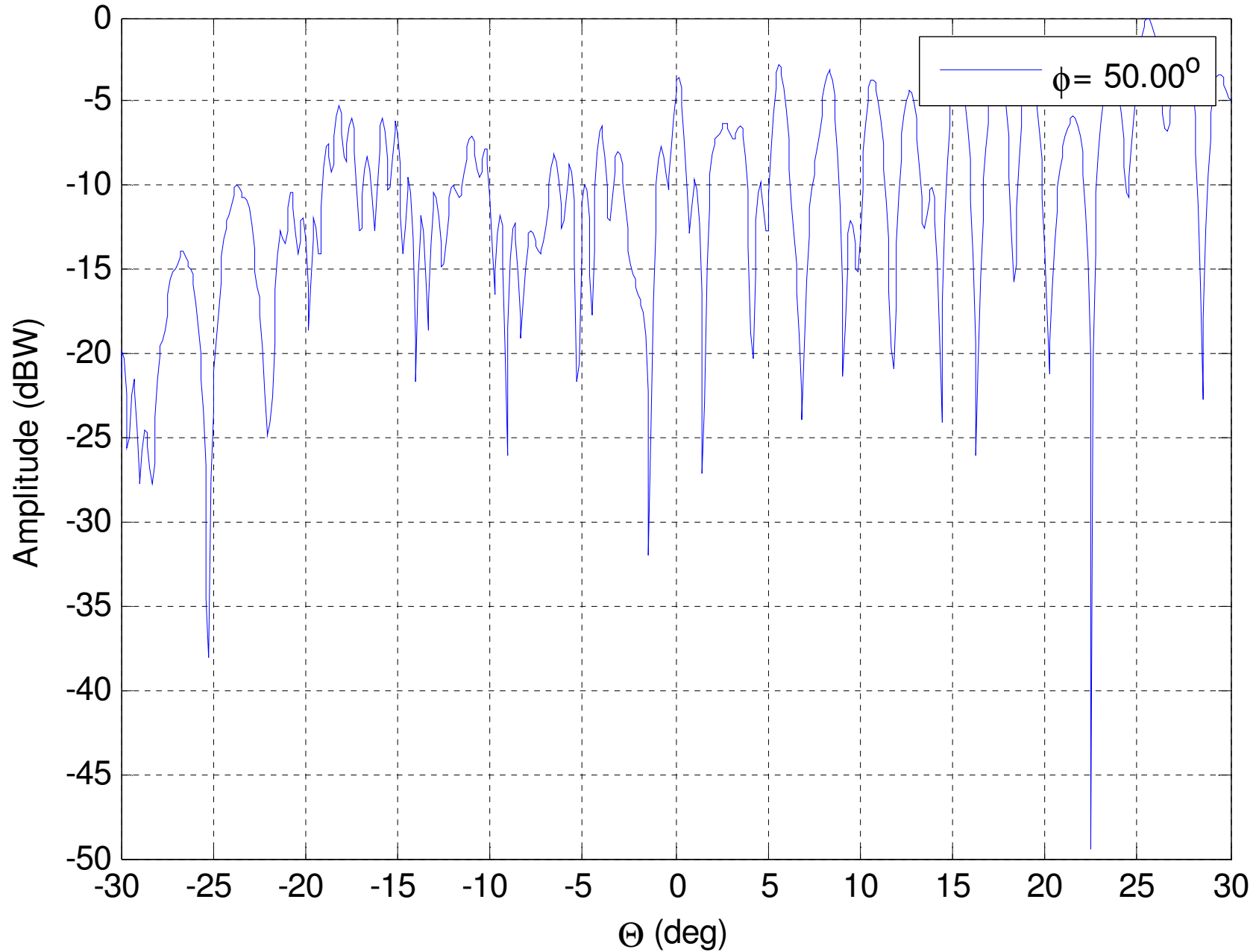
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -5.44 dBW, Date: 15-Dec-2011



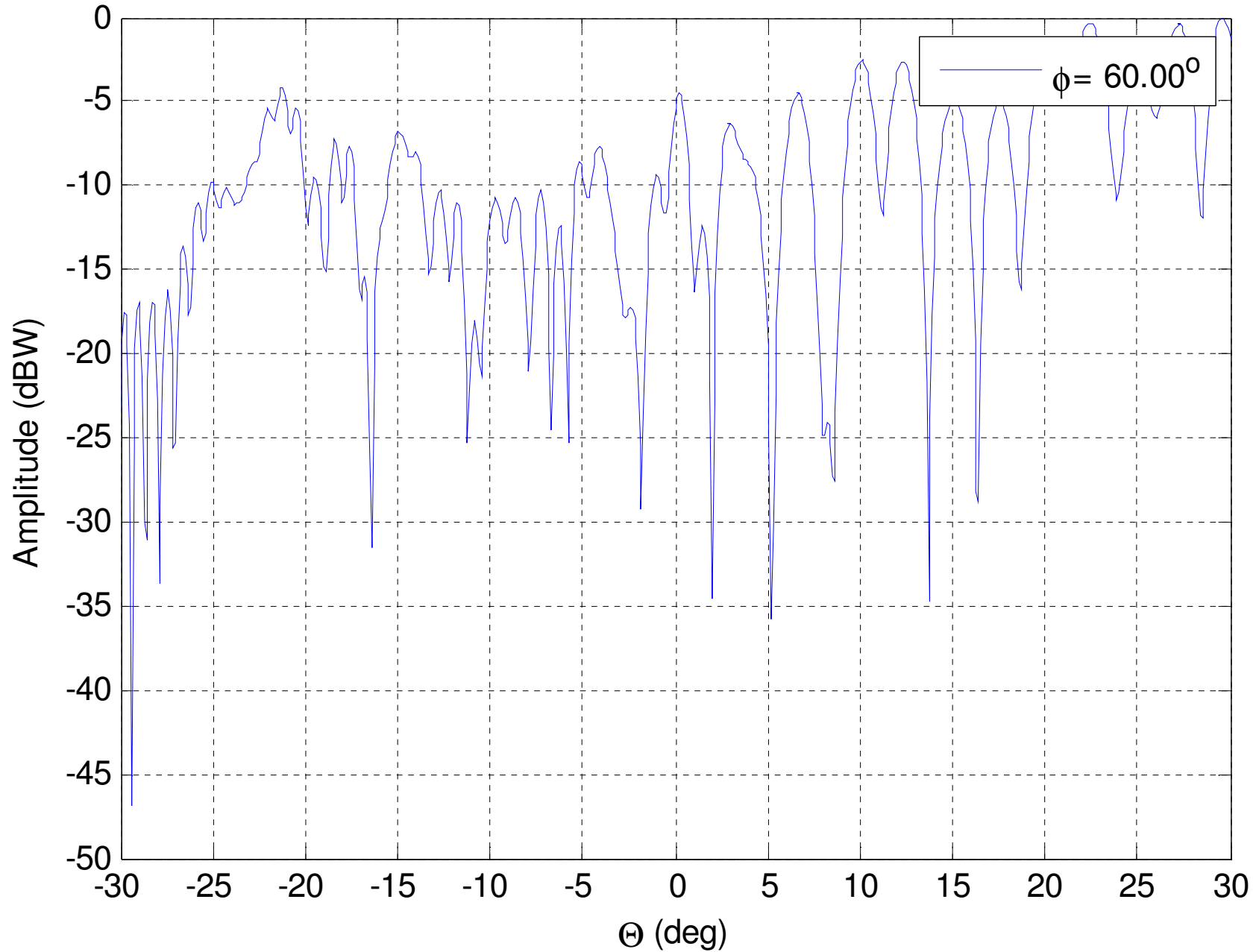
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.88 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

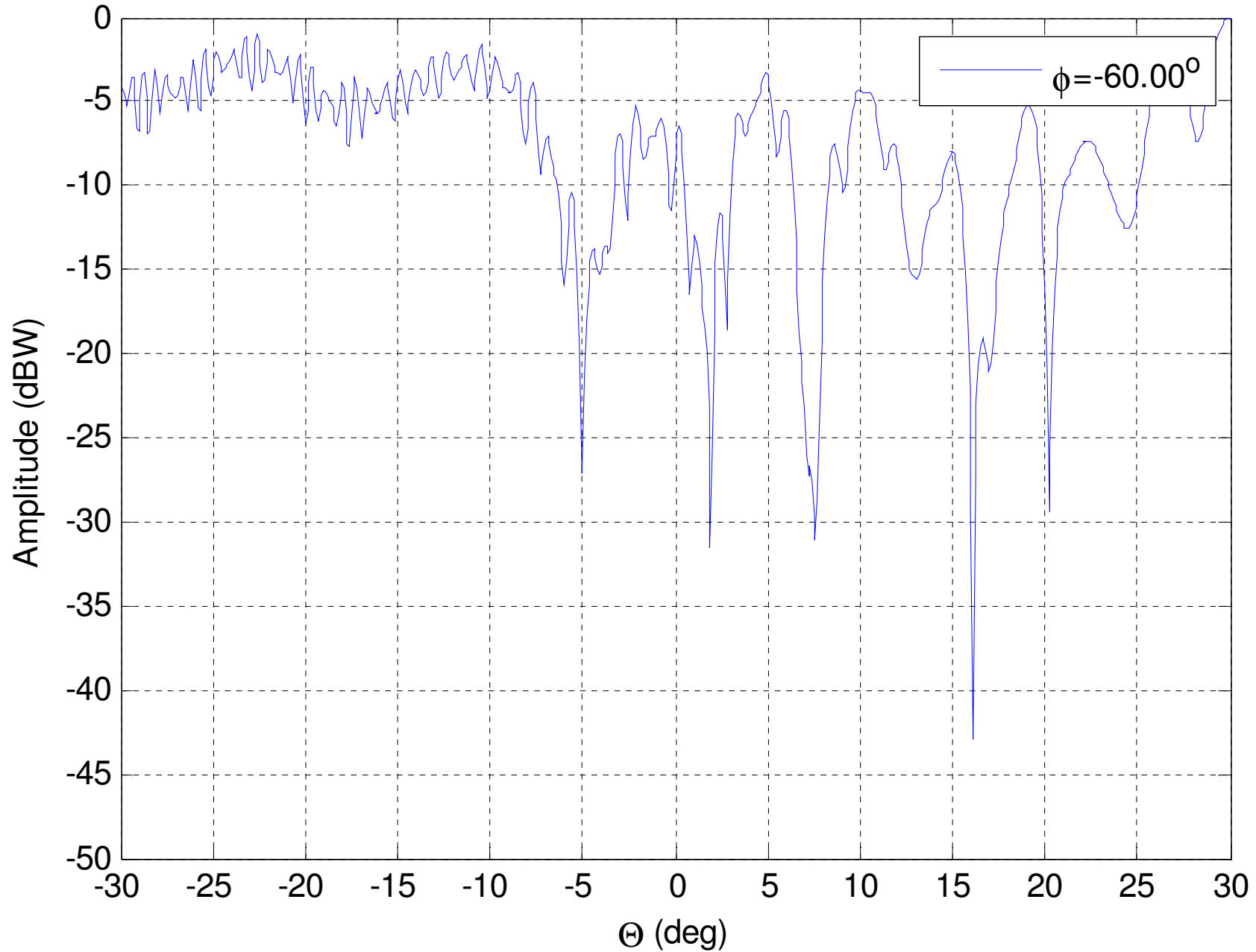
Input file: tx-17.5-rhcp-60.cut, Peak: -4.97 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

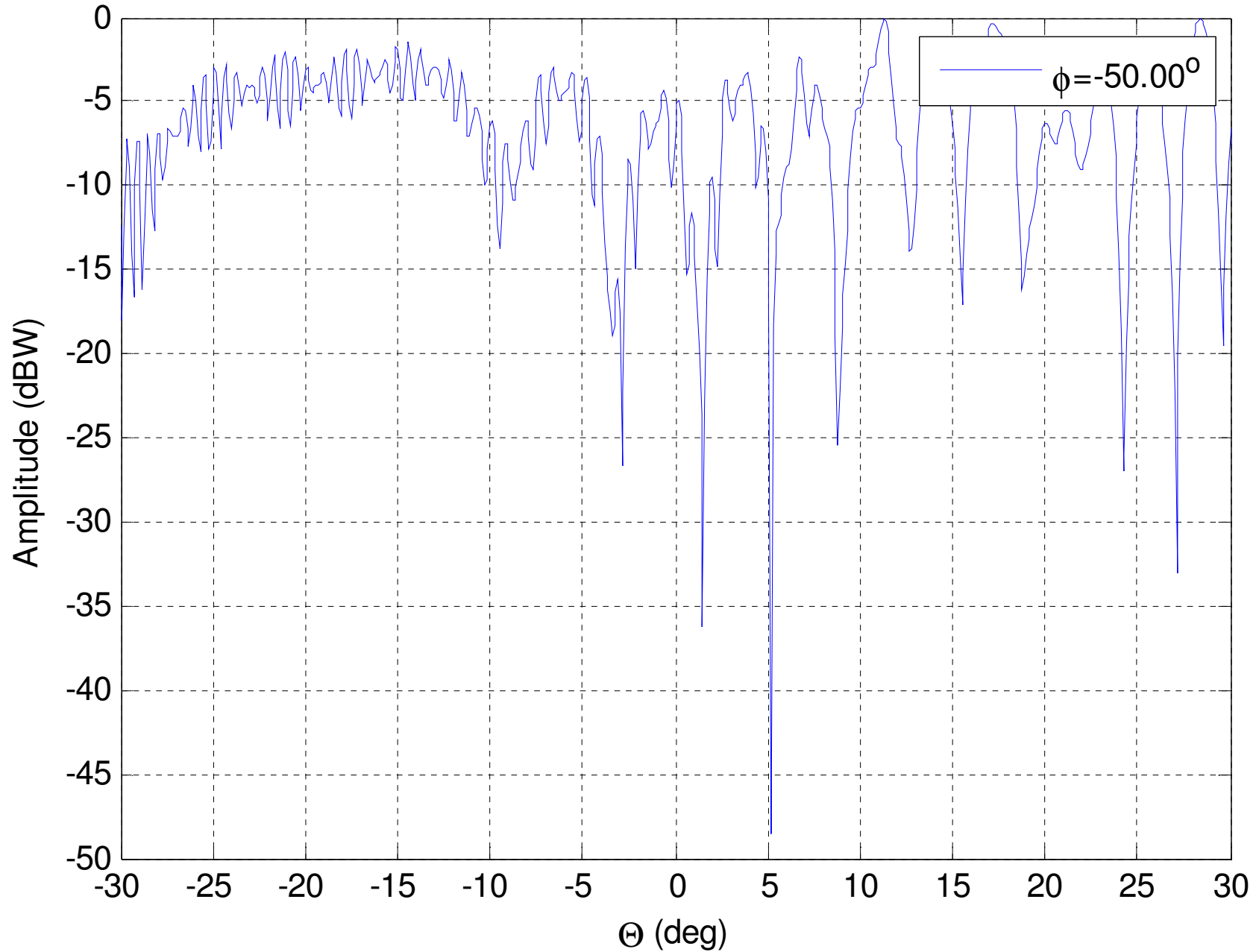
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -4.72 dBW, Date: 15-Dec-2011



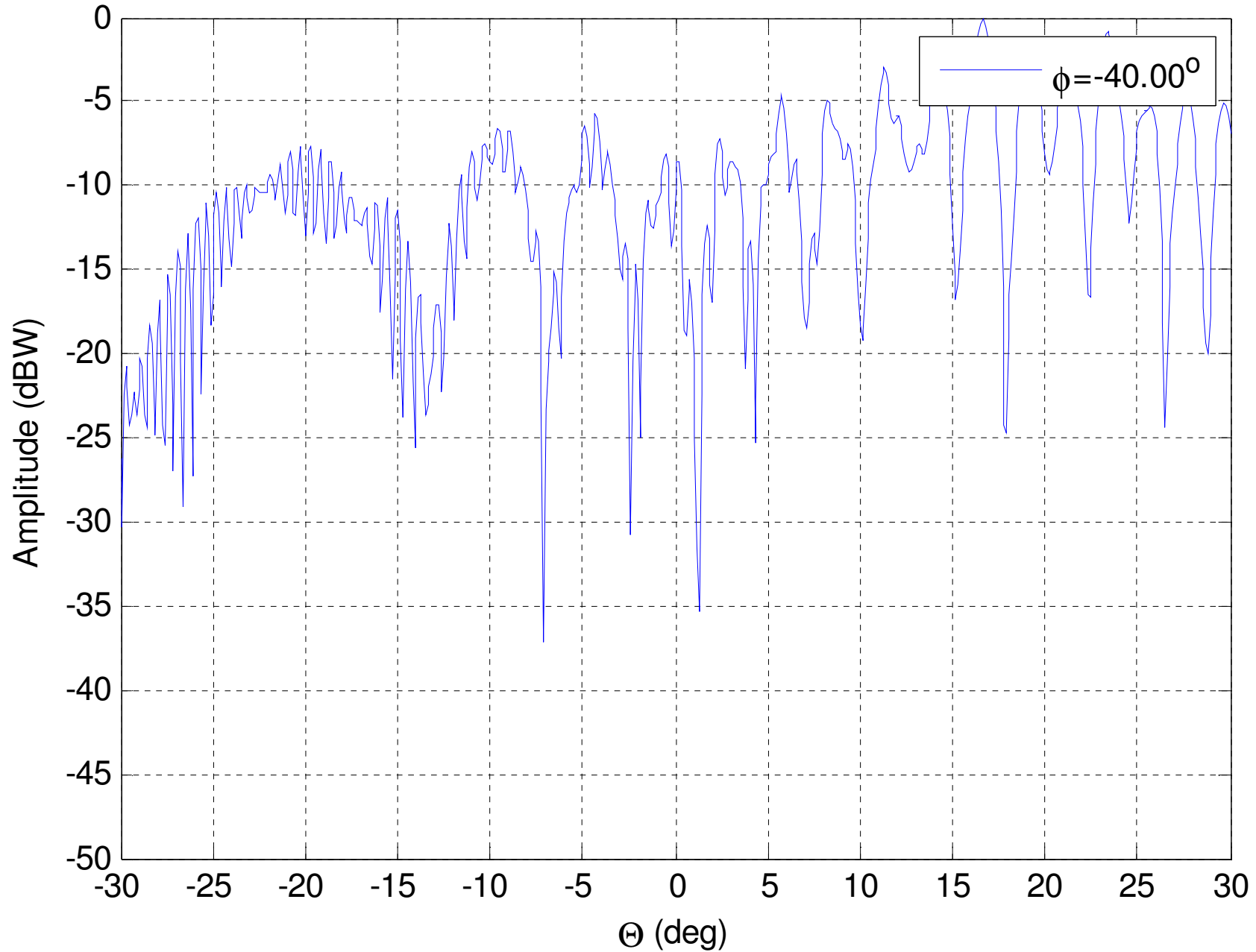
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -6.40 dBW, Date: 15-Dec-2011



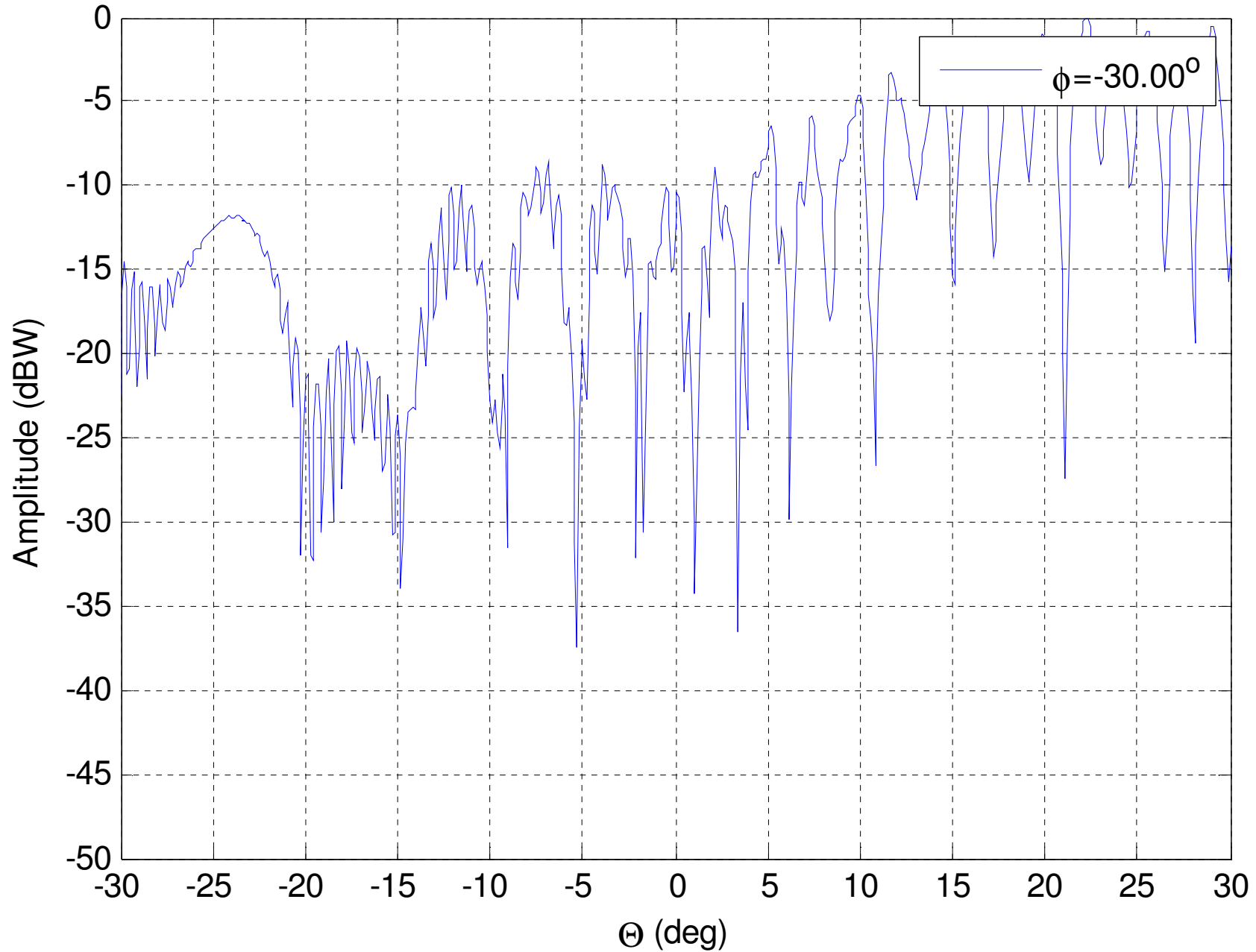
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.80 dBW, Date: 15-Dec-2011



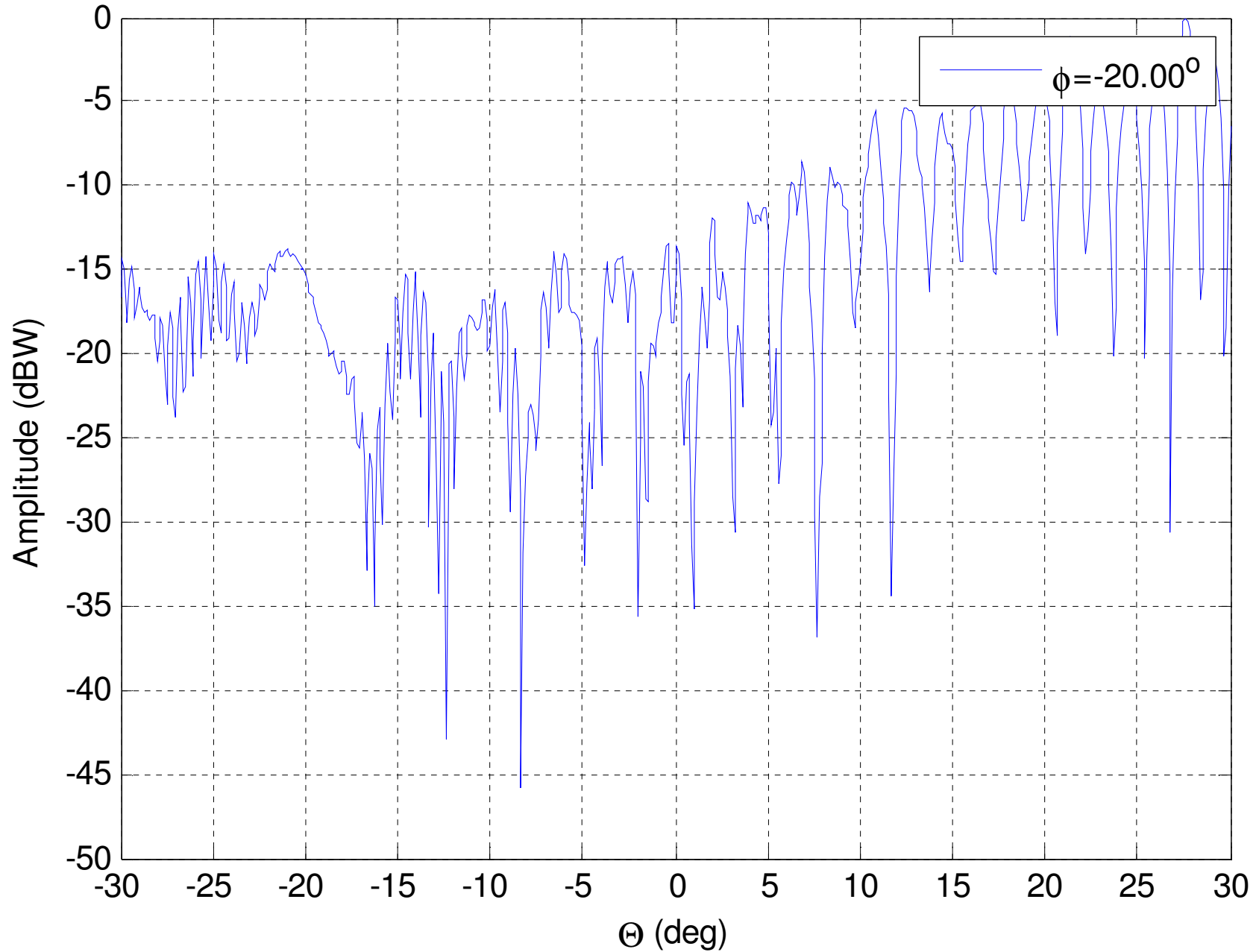
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.98 dBW, Date: 15-Dec-2011



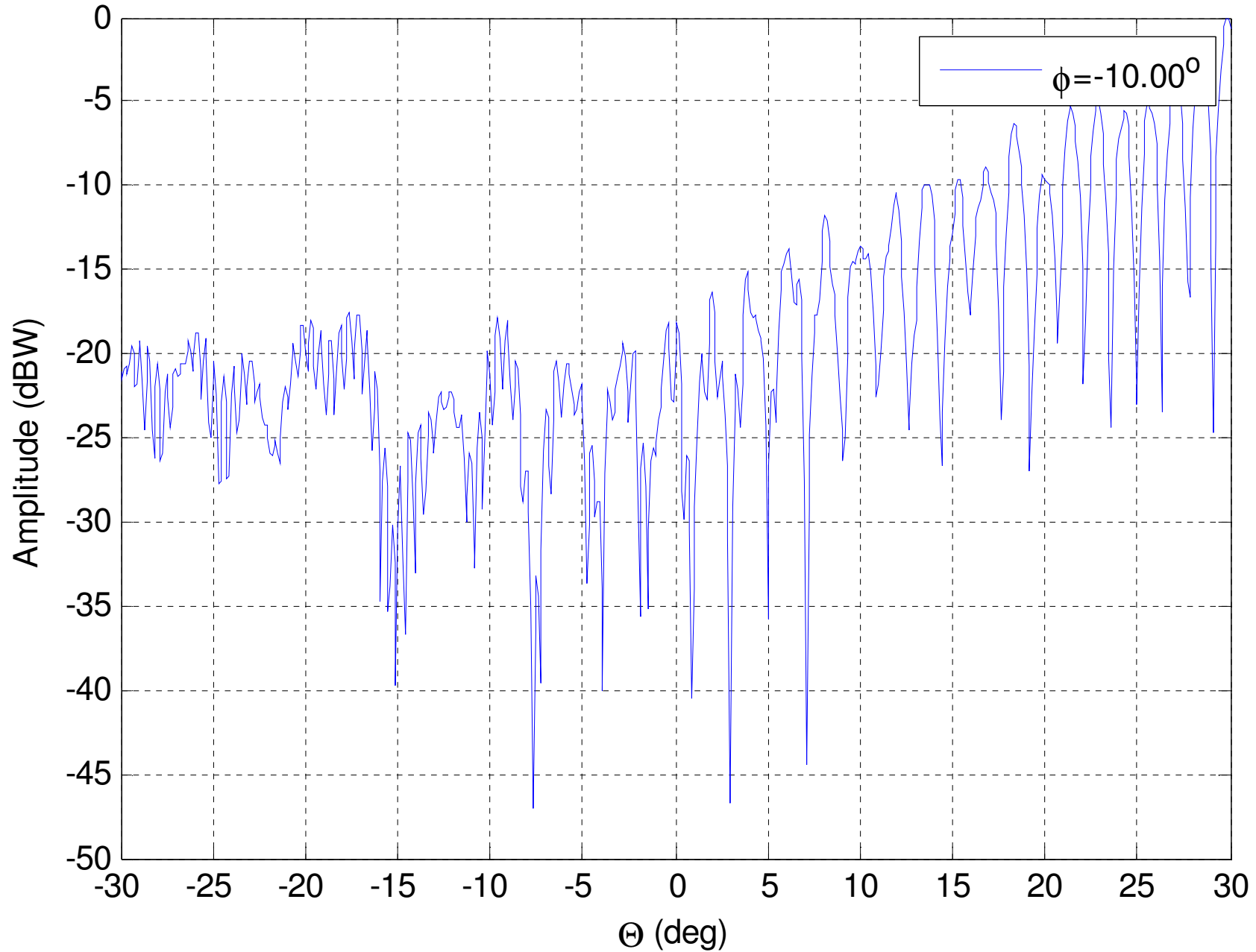
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 2.22 dBW, Date: 15-Dec-2011



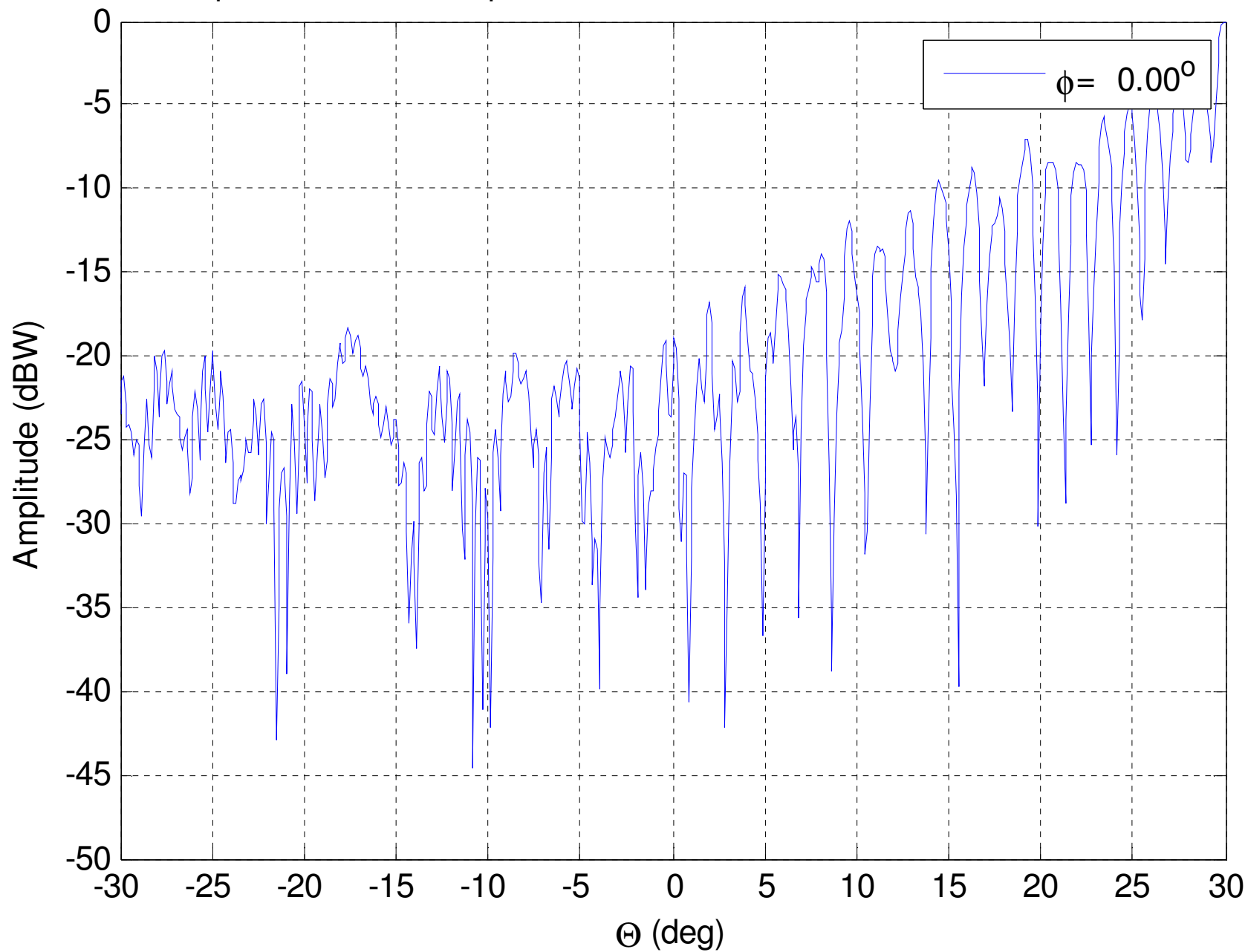
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 6.86 dBW, Date: 15-Dec-2011



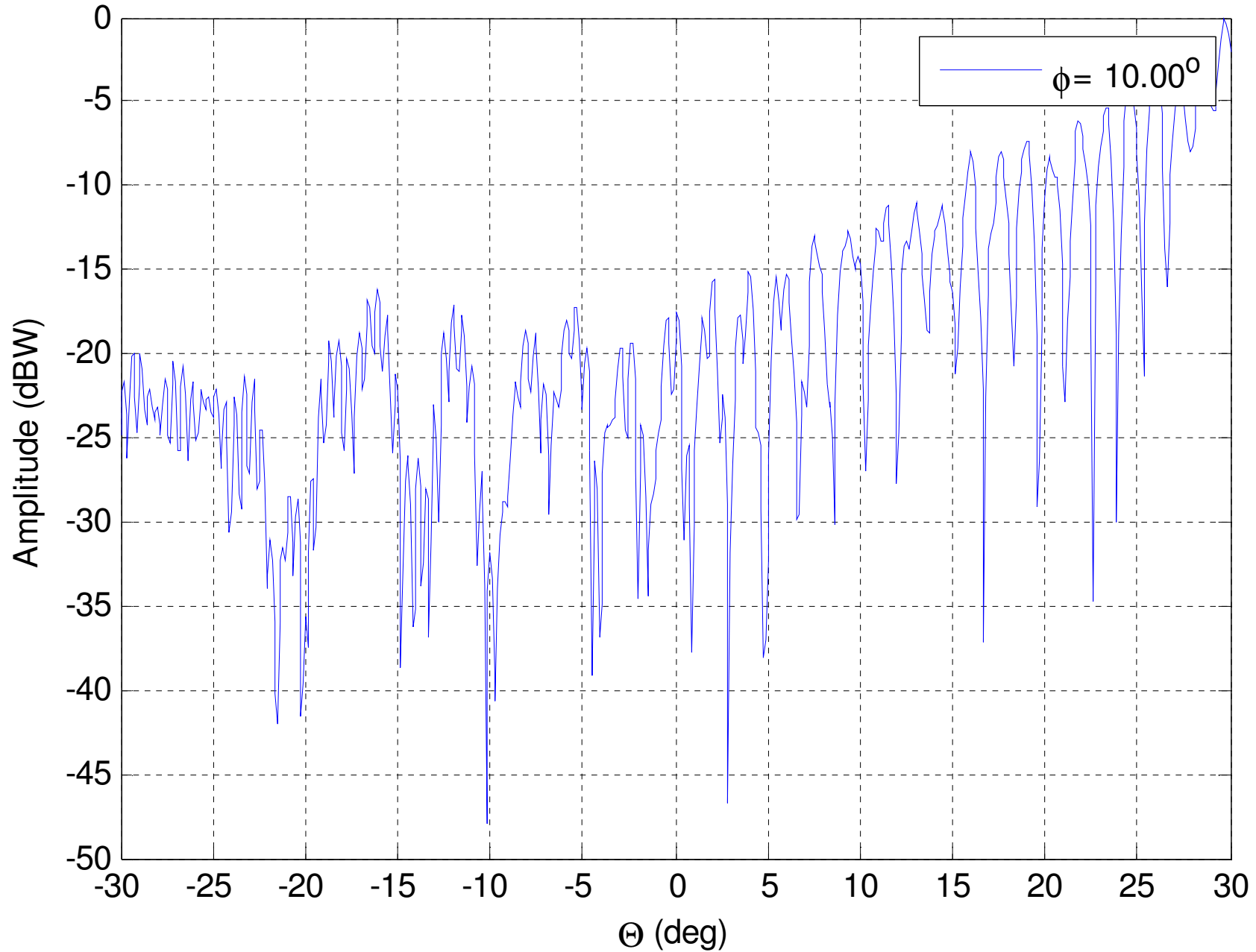
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 7.56 dBW, Date: 15-Dec-2011



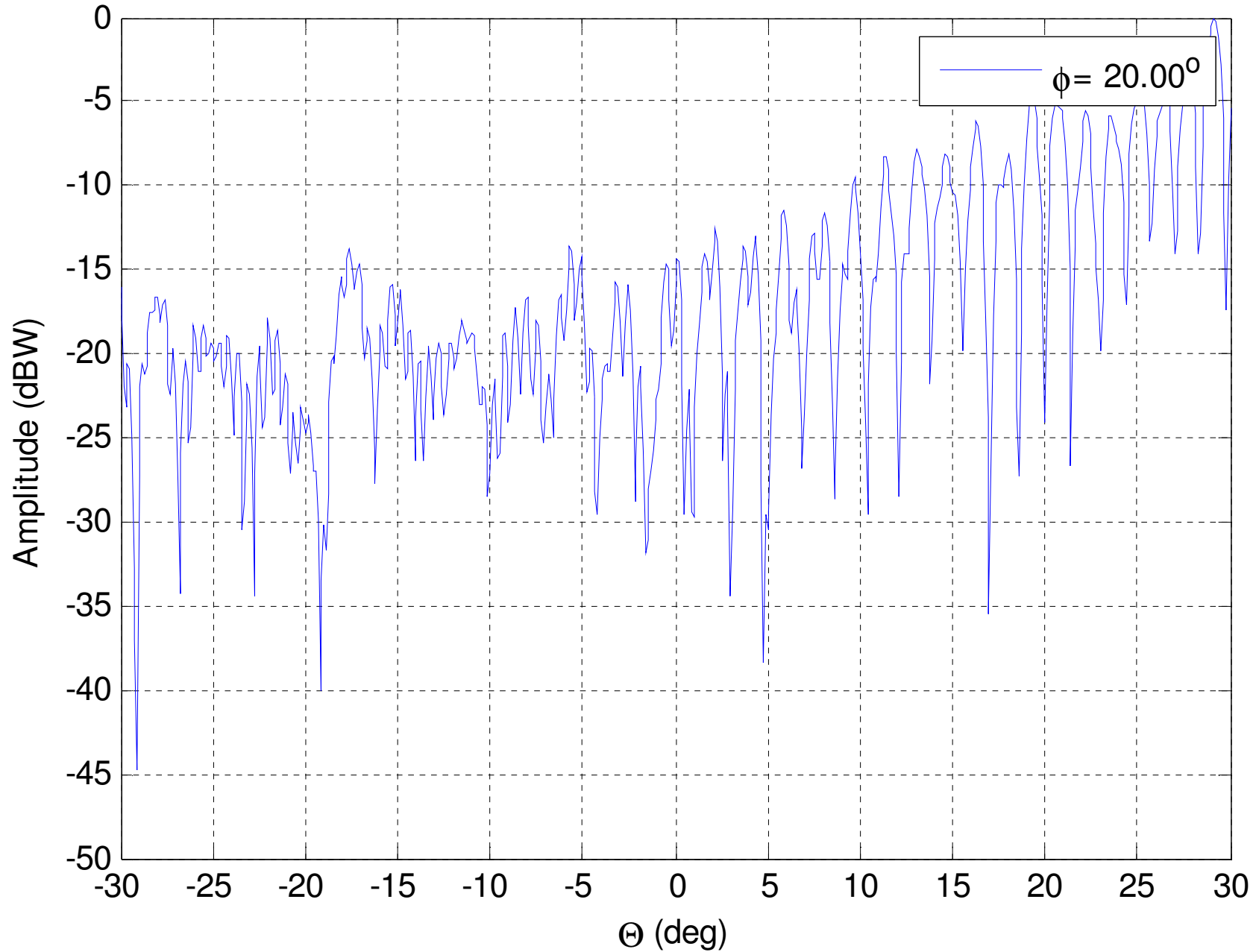
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 6.15 dBW, Date: 15-Dec-2011



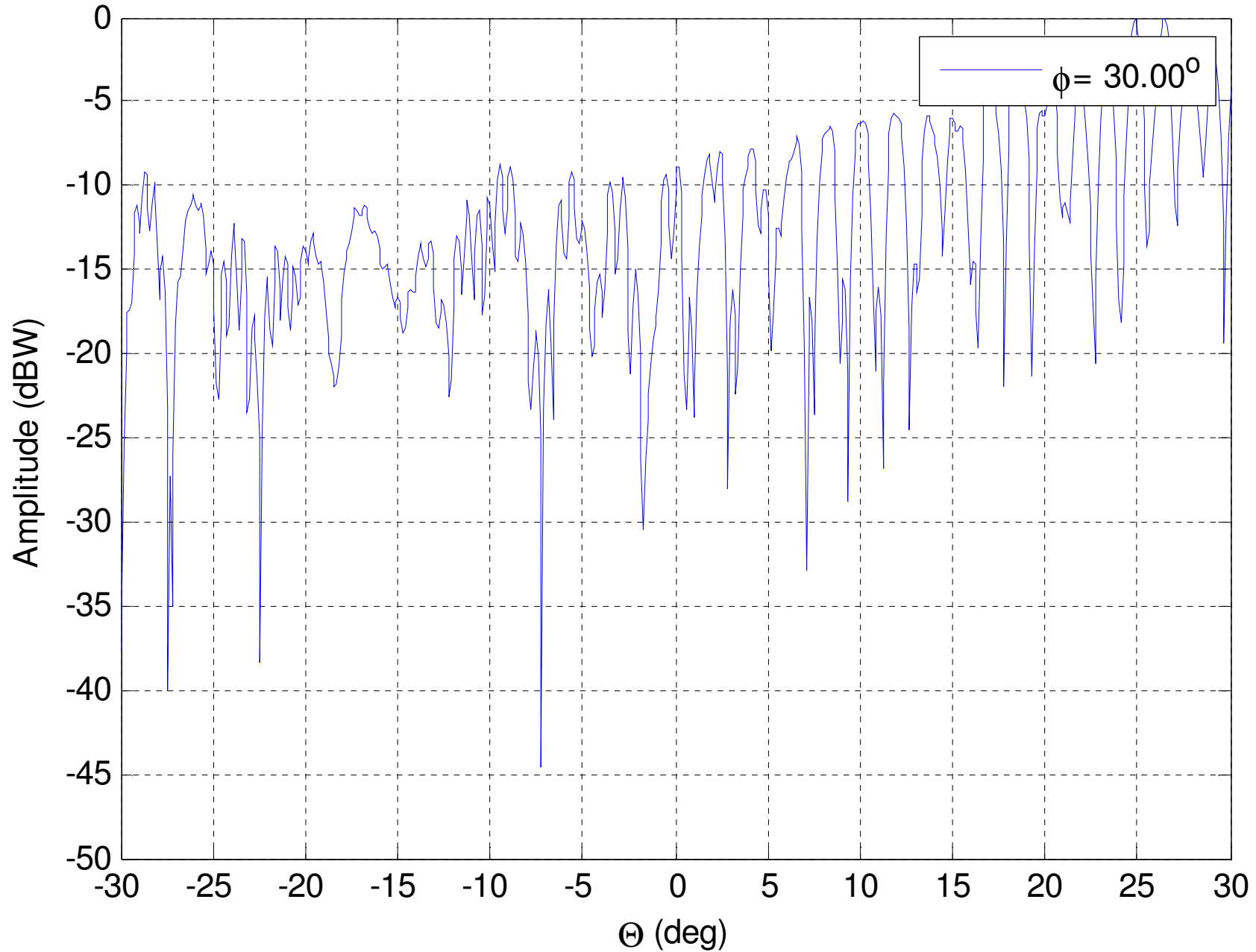
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 2.92 dBW, Date: 15-Dec-2011



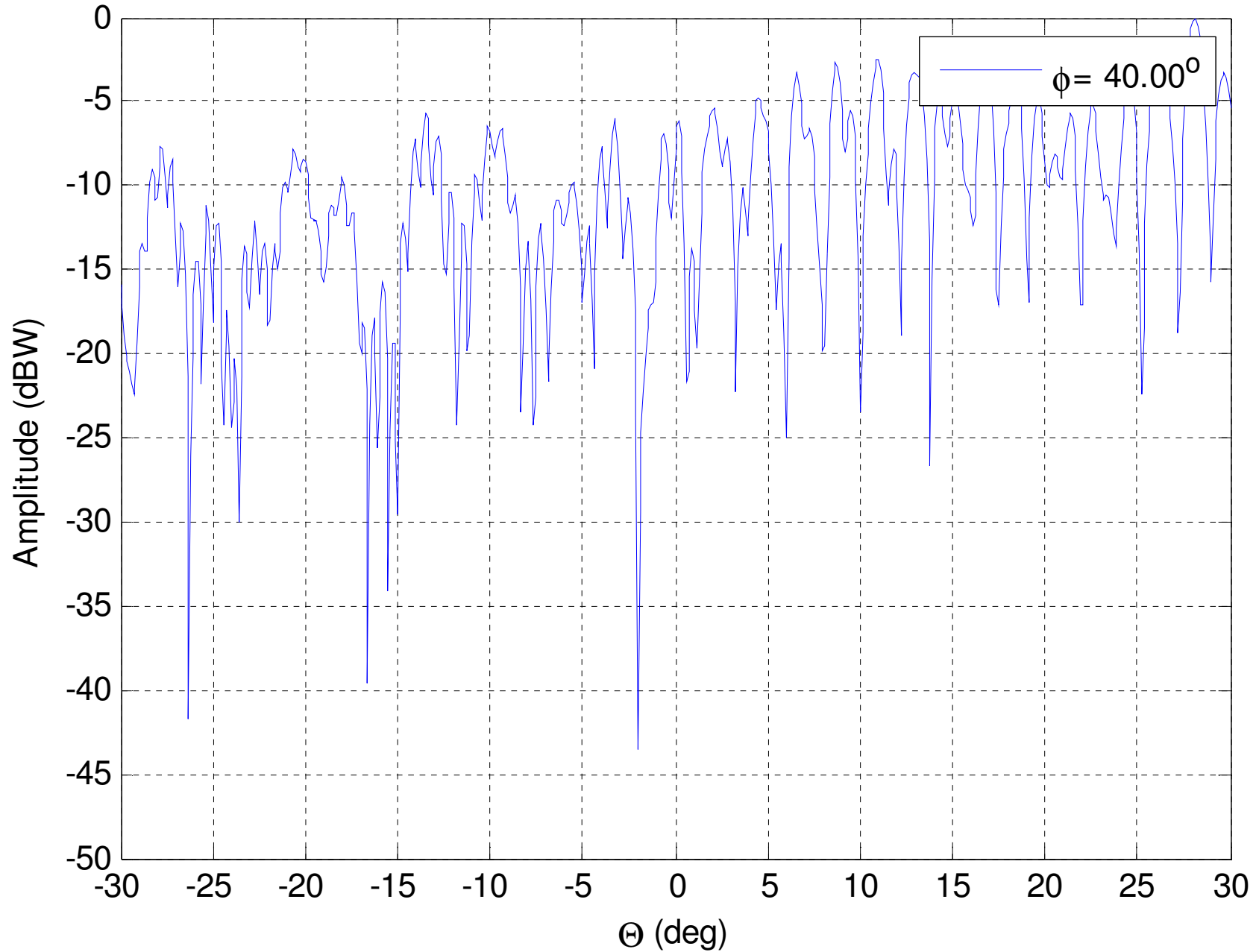
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -2.56 dBW, Date: 15-Dec-2011



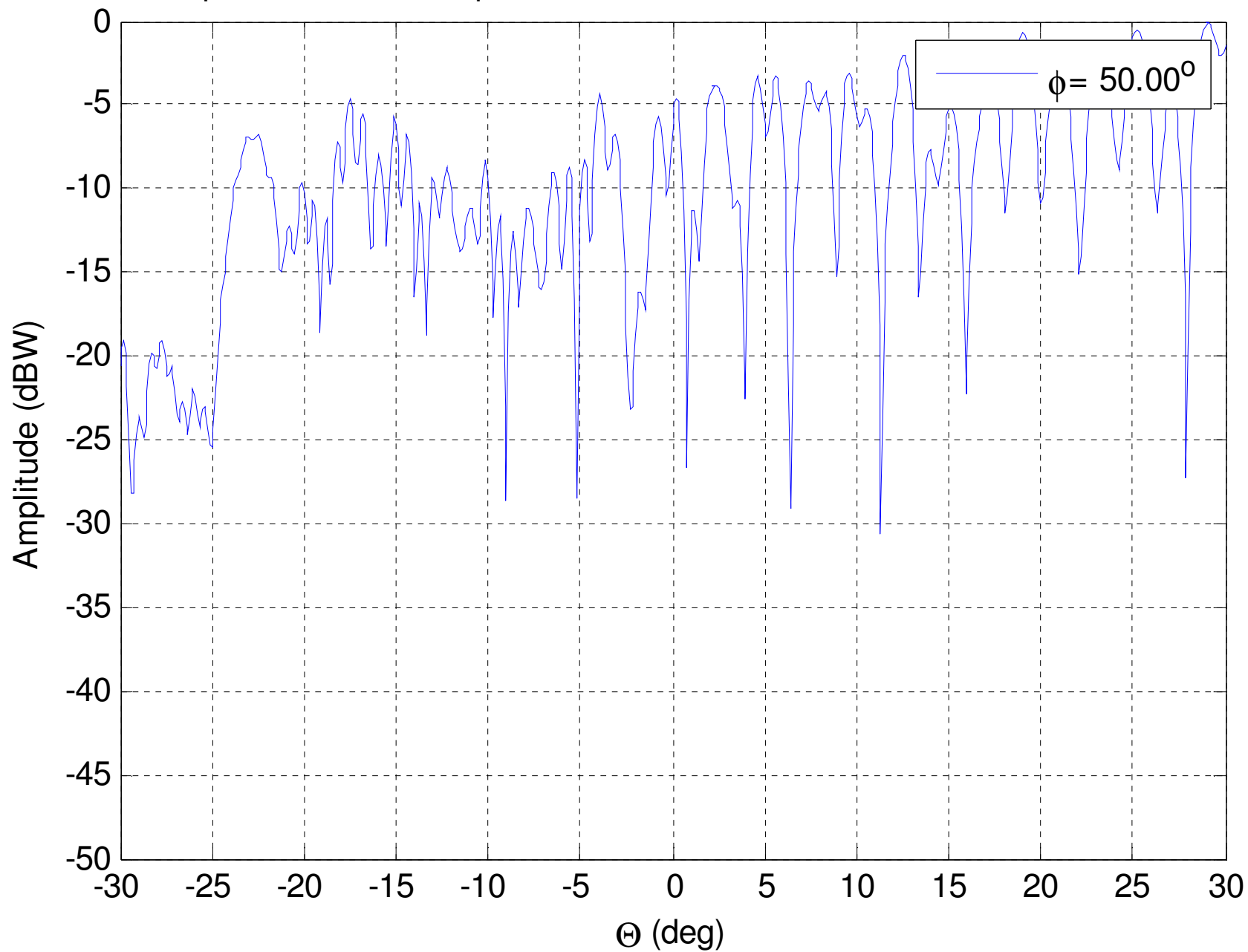
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -5.11 dBW, Date: 15-Dec-2011



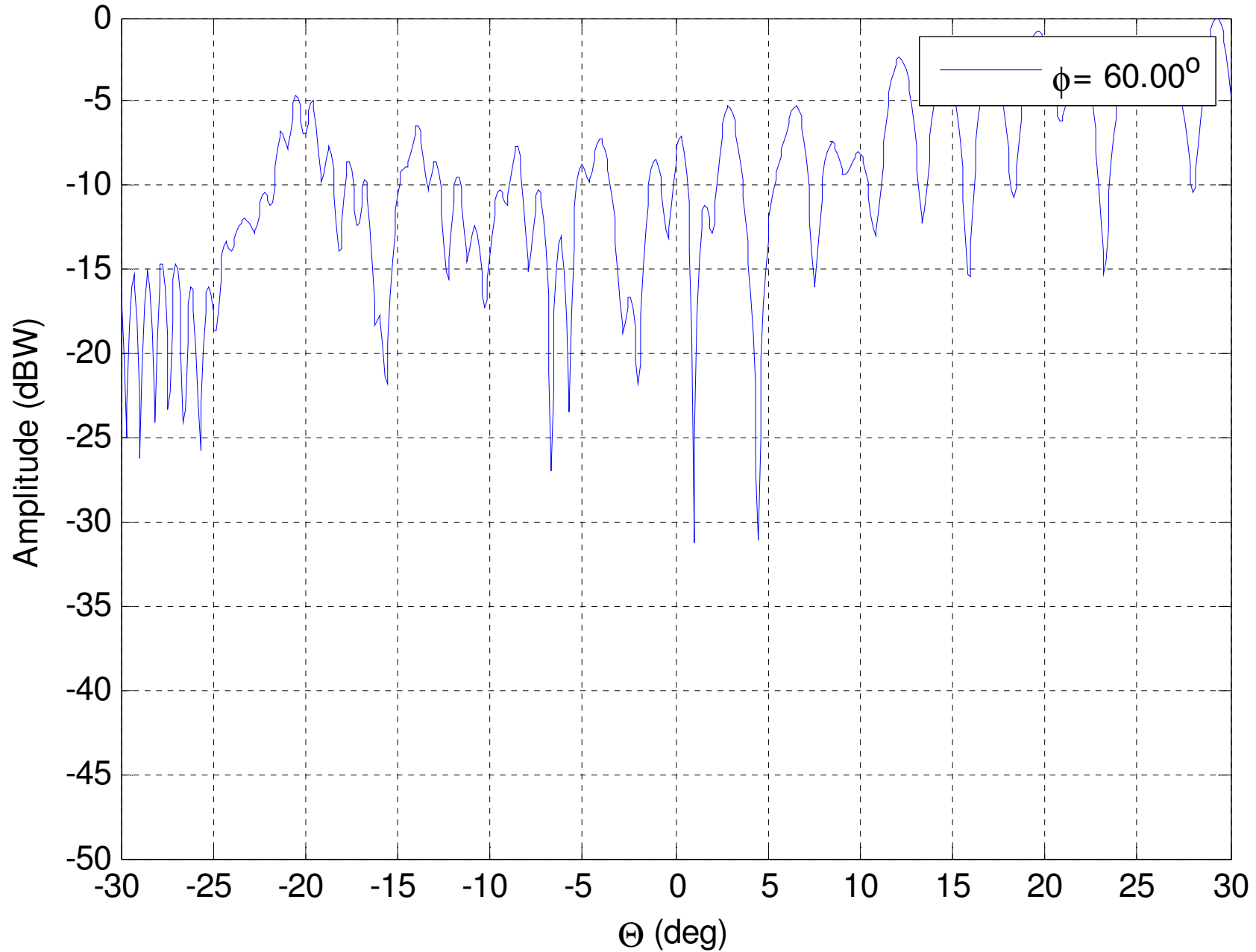
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -6.75 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

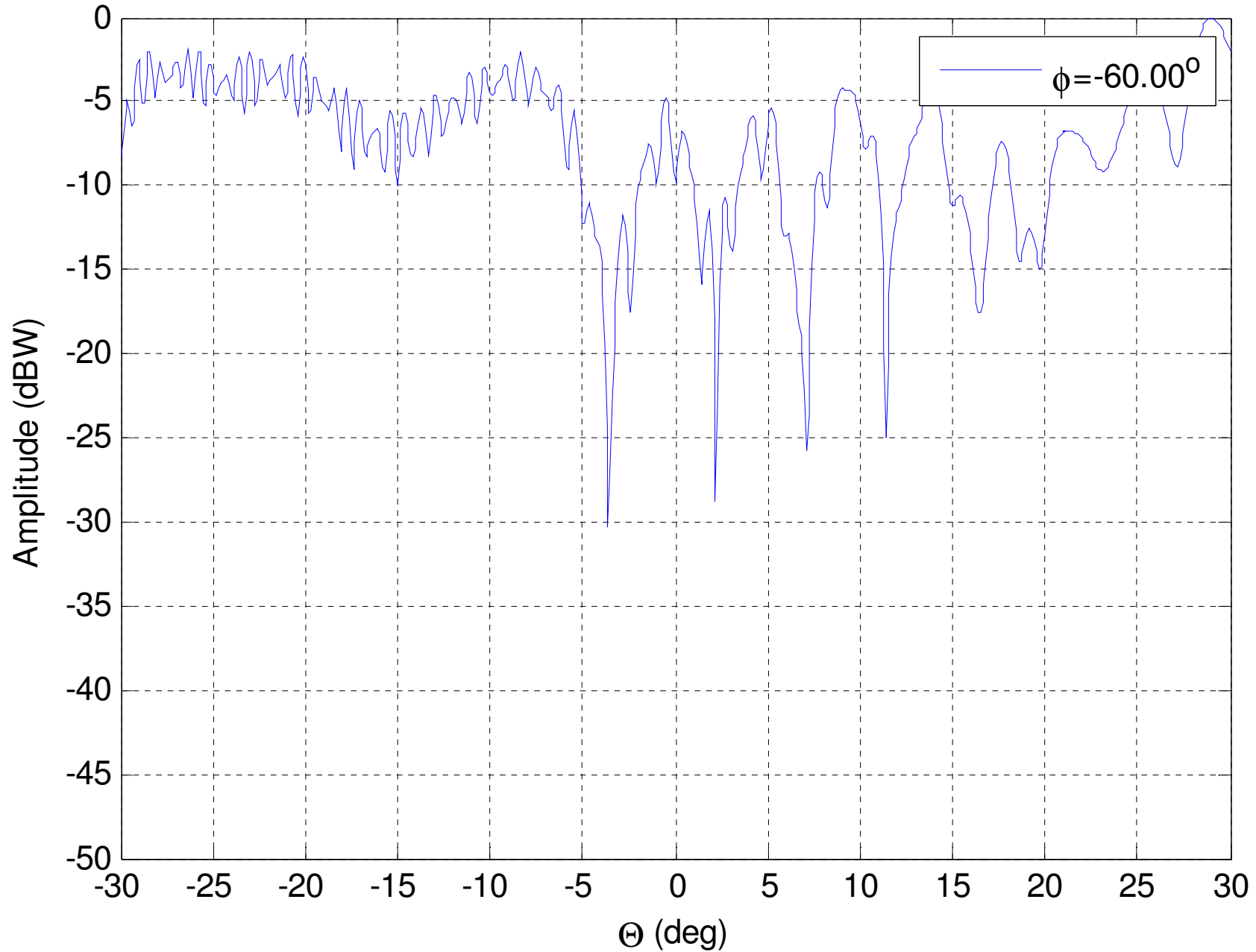
Input file: tx-17.5-lhcp-60.cut, Peak: -4.34 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

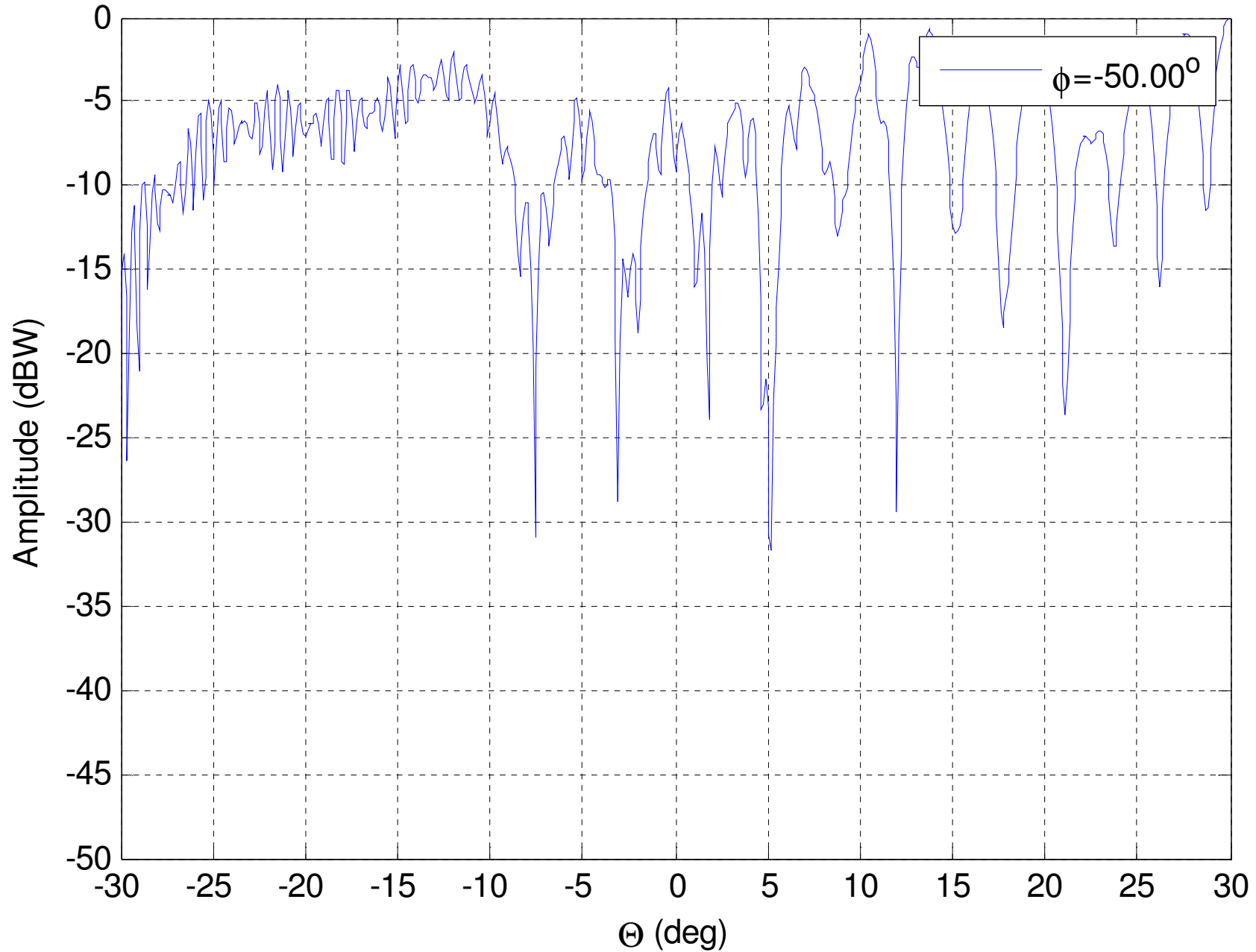
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -4.69 dBW, Date: 15-Dec-2011



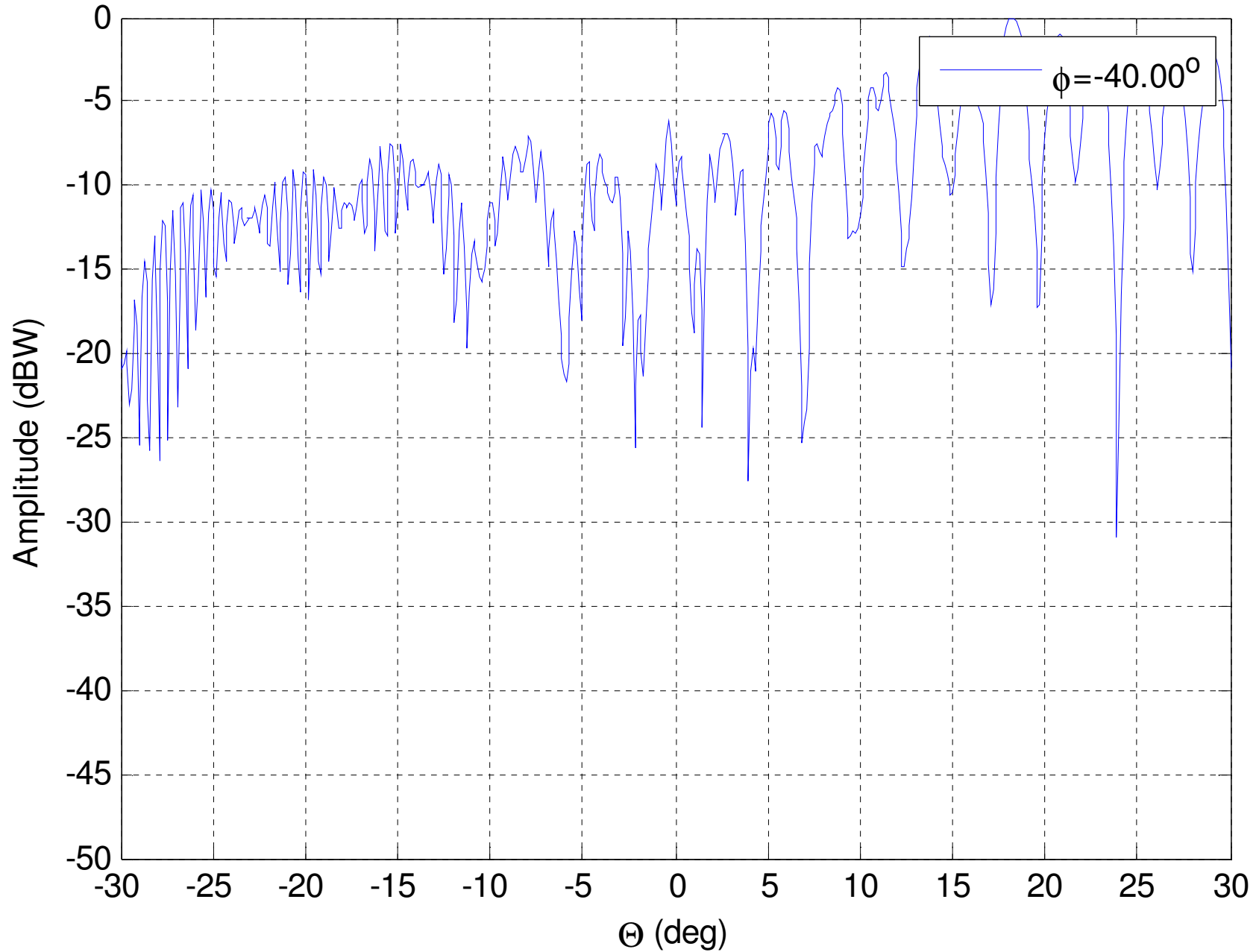
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -5.29 dBW, Date: 15-Dec-2011



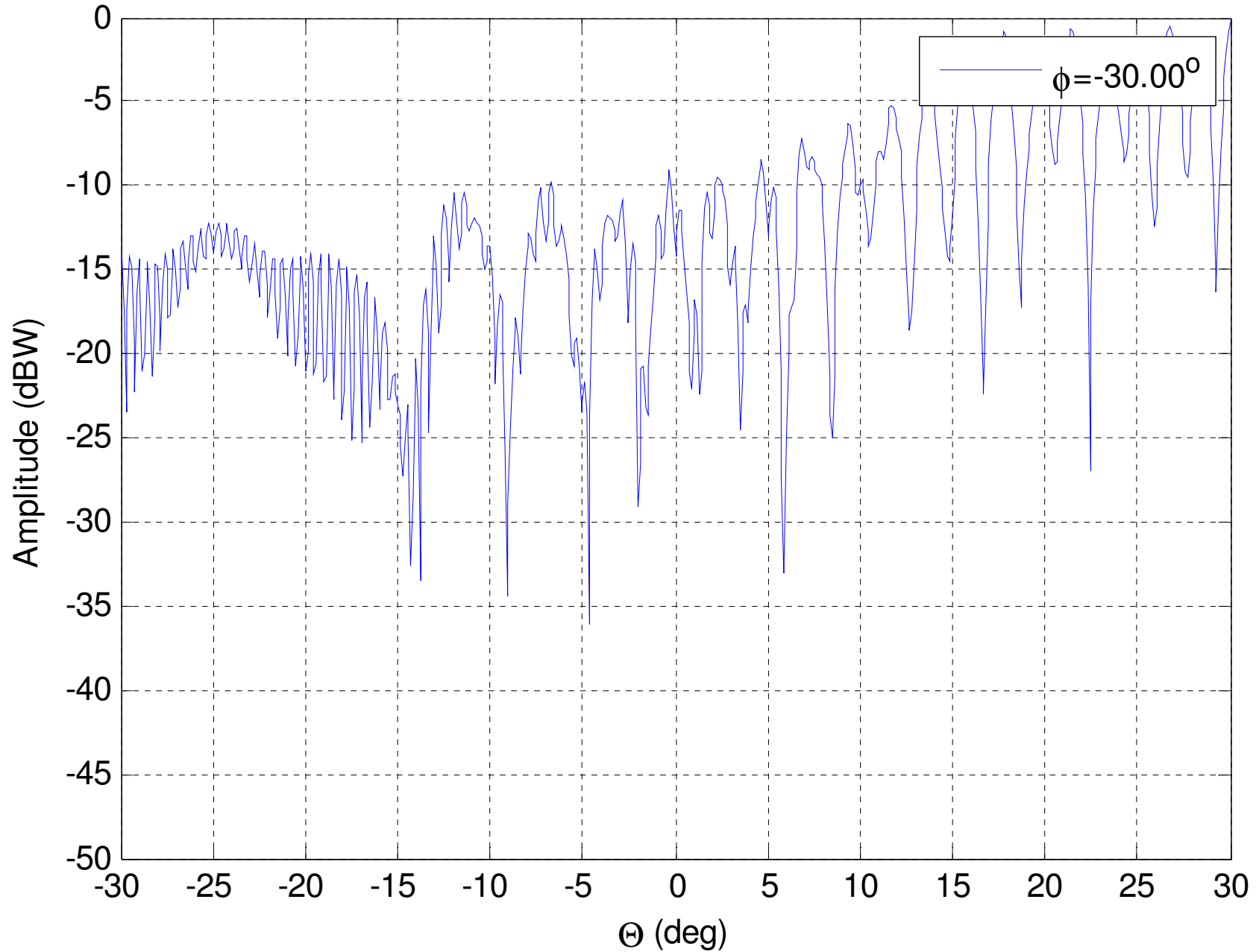
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -3.41 dBW, Date: 15-Dec-2011



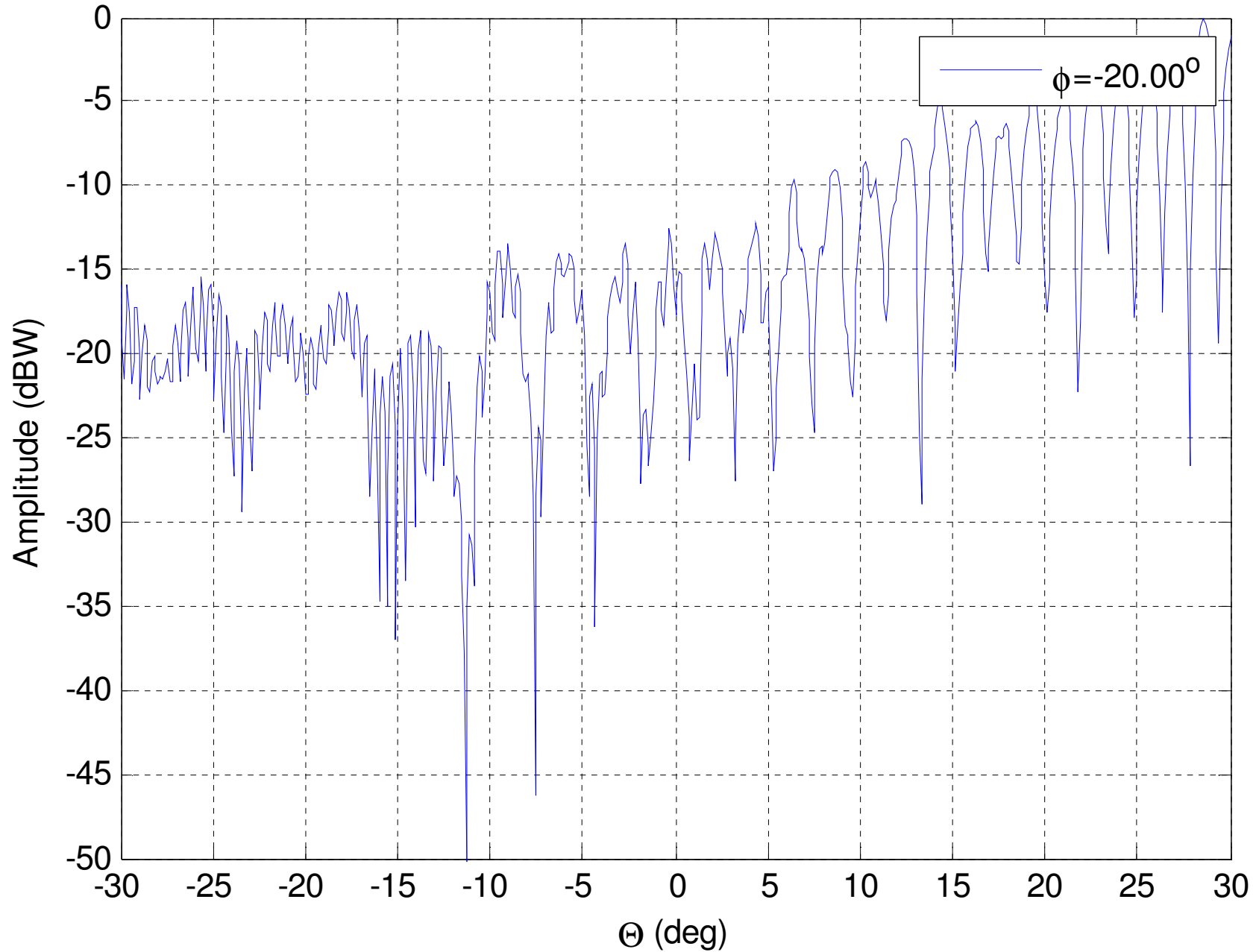
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -0.36 dBW, Date: 15-Dec-2011



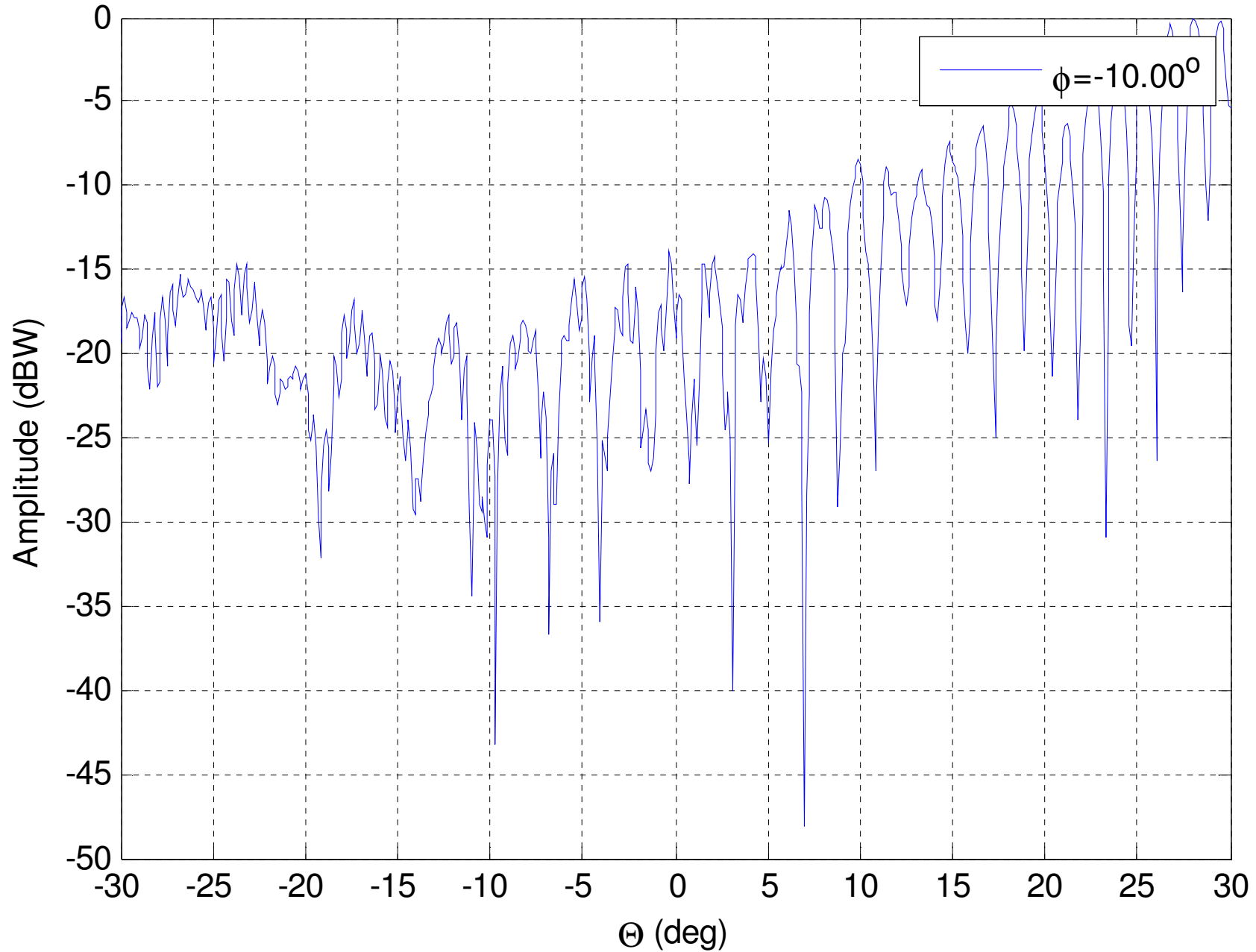
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 3.20 dBW, Date: 15-Dec-2011



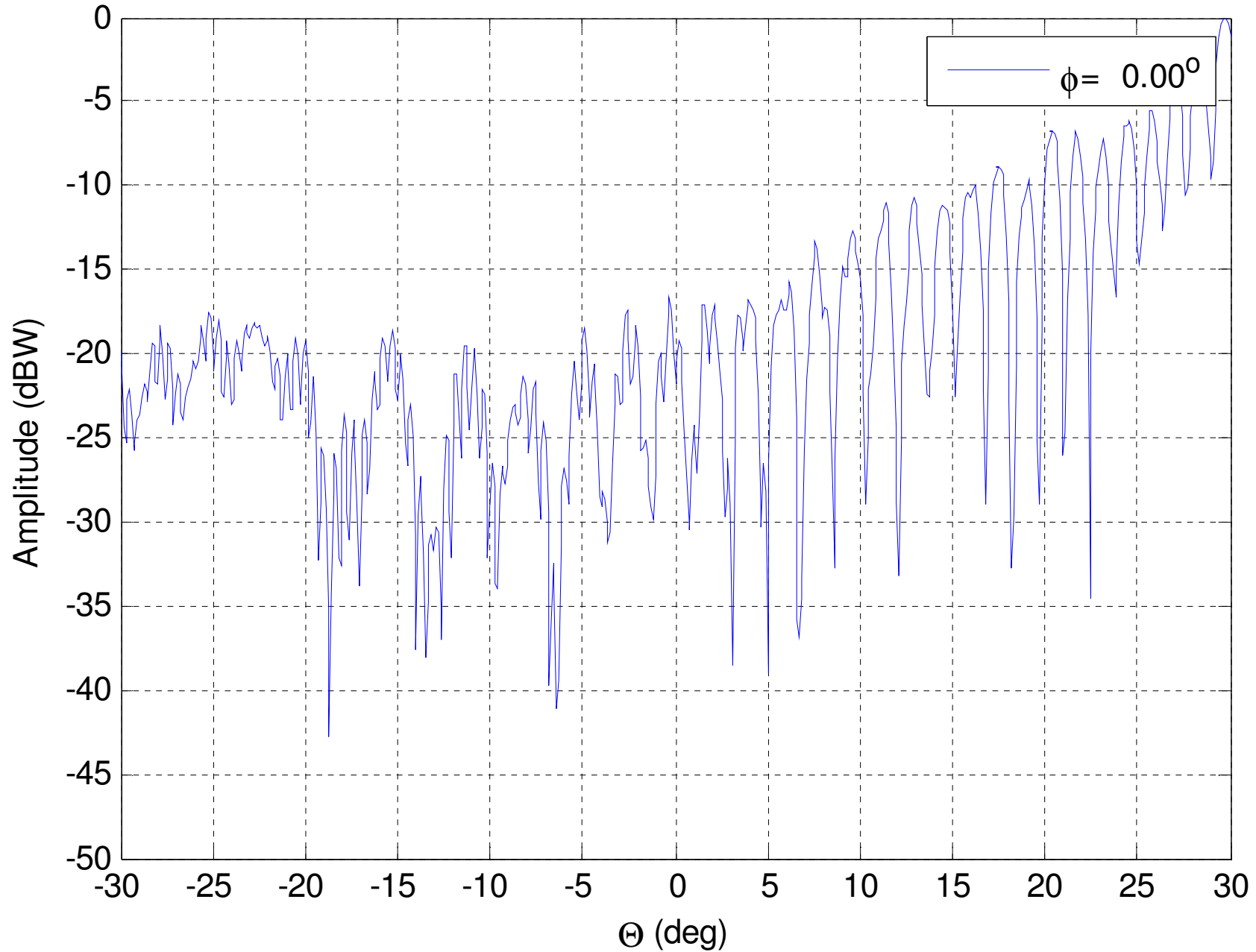
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 4.54 dBW, Date: 15-Dec-2011



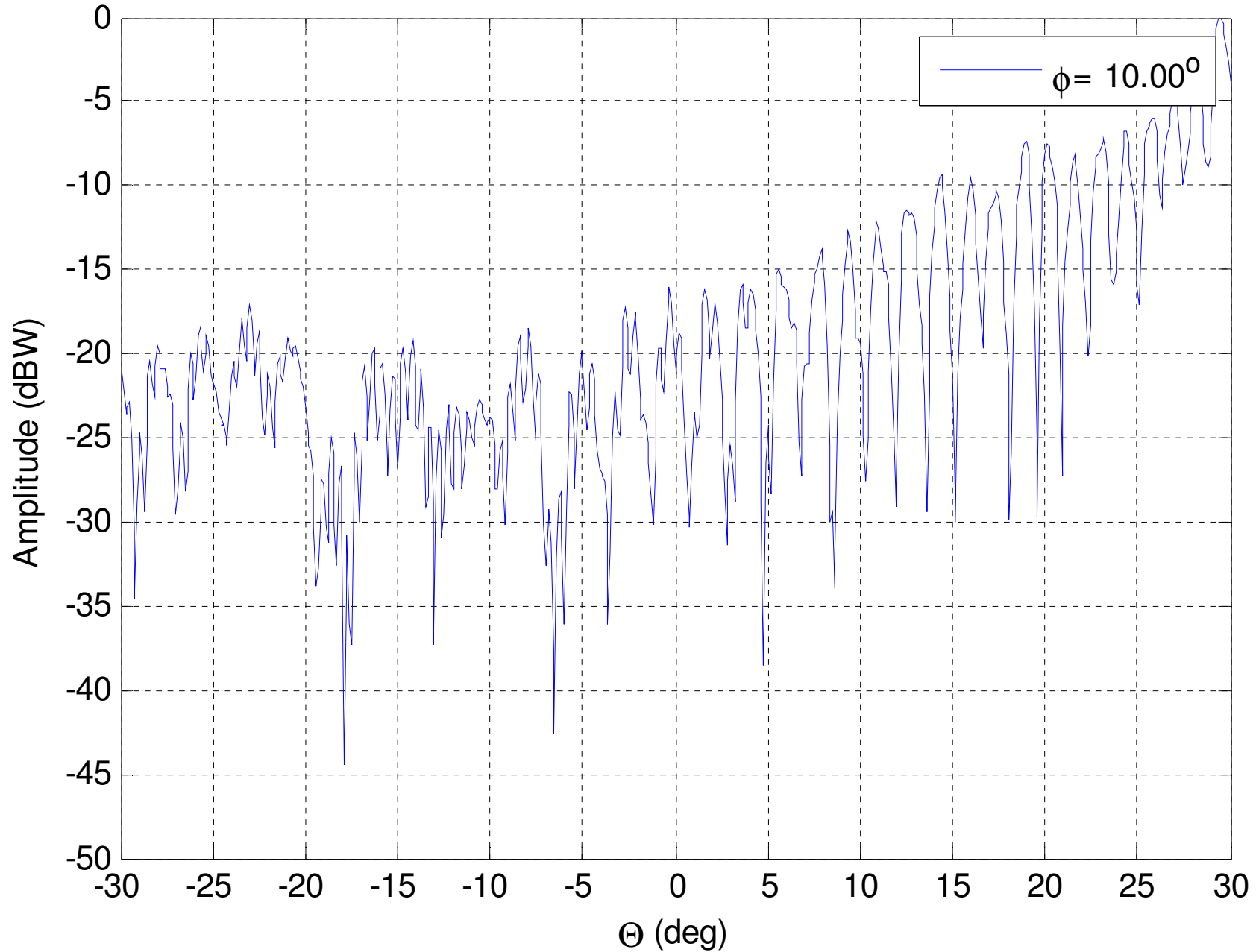
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 7.28 dBW, Date: 15-Dec-2011



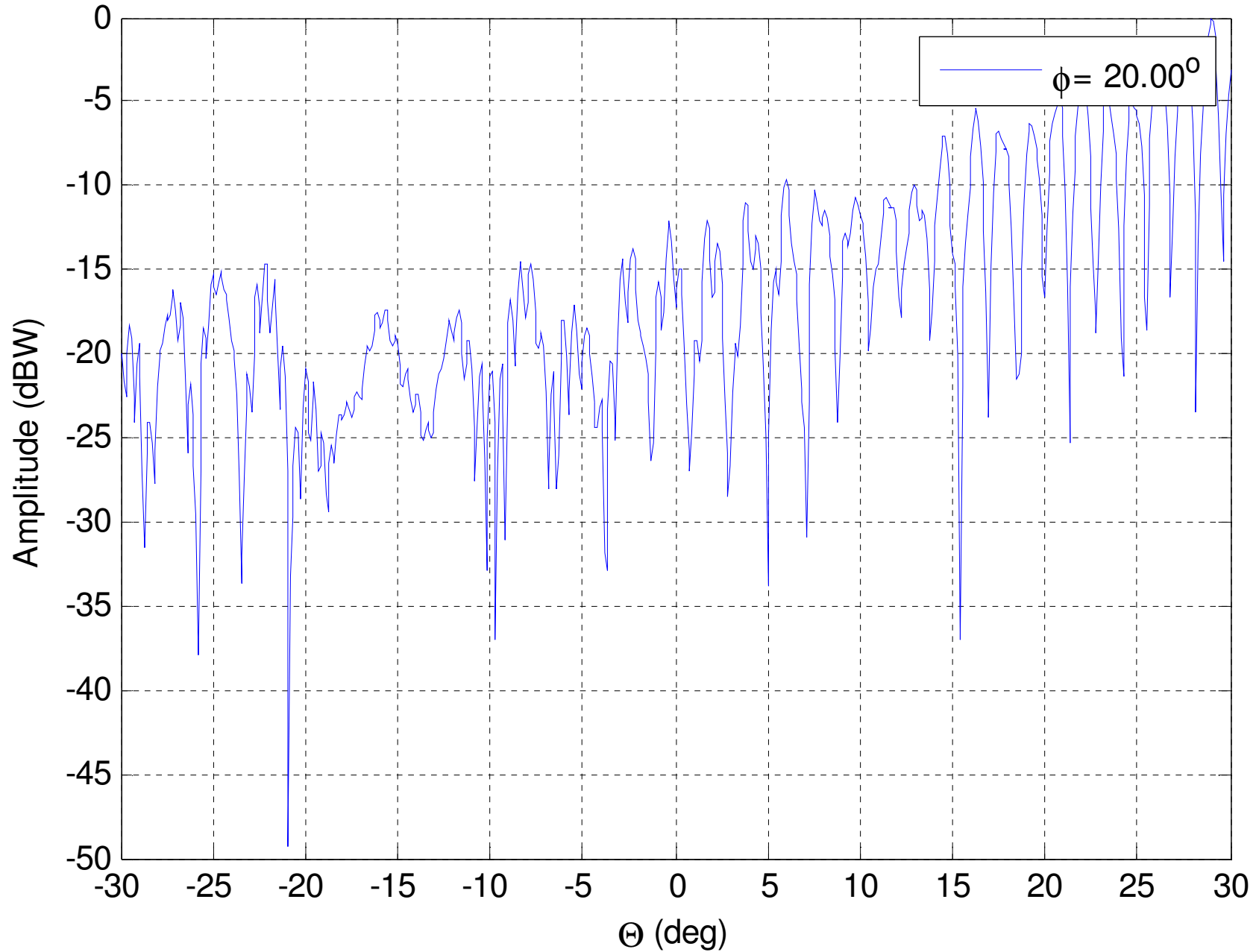
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 6.70 dBW, Date: 15-Dec-2011



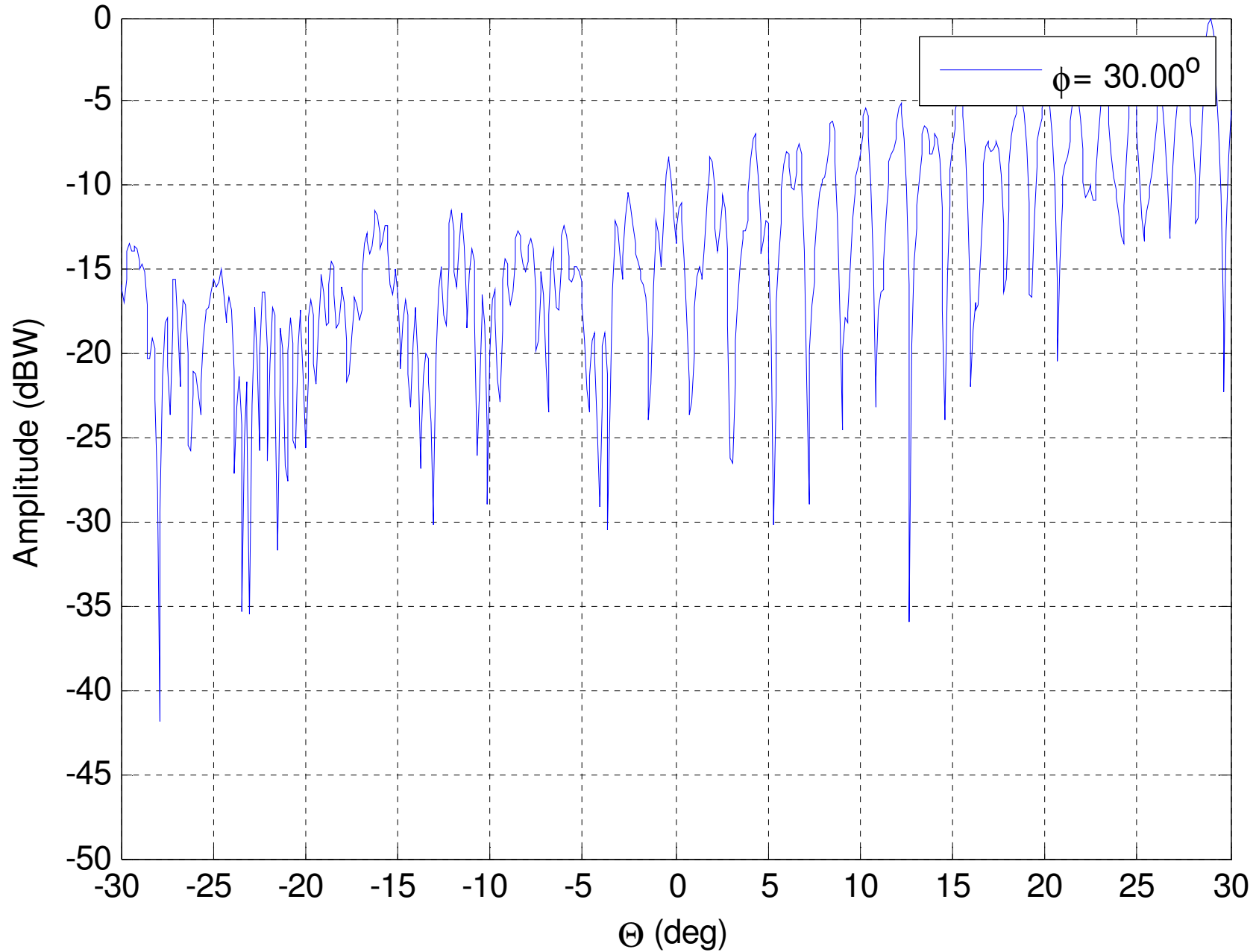
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 2.72 dBW, Date: 15-Dec-2011



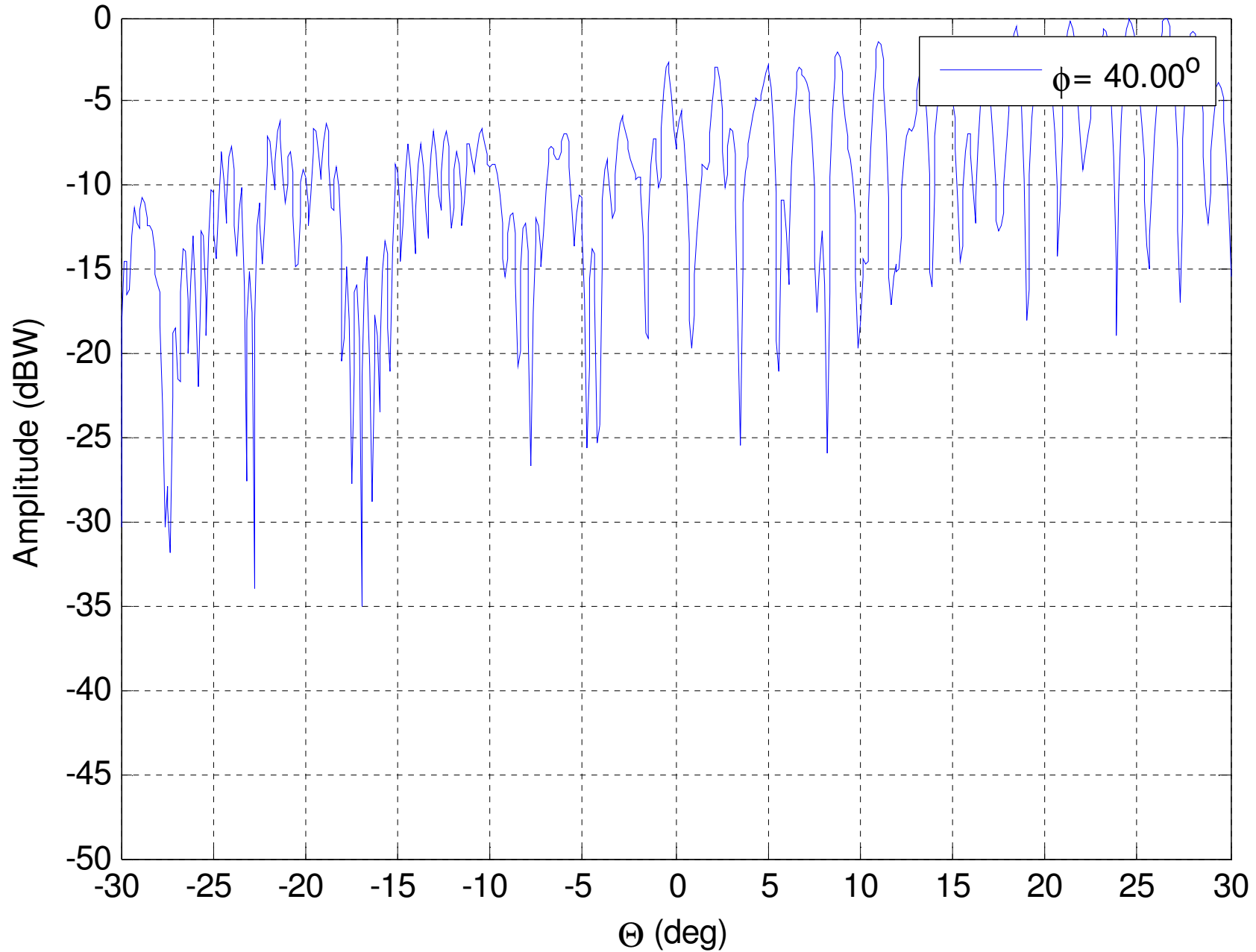
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -1.15 dBW, Date: 15-Dec-2011



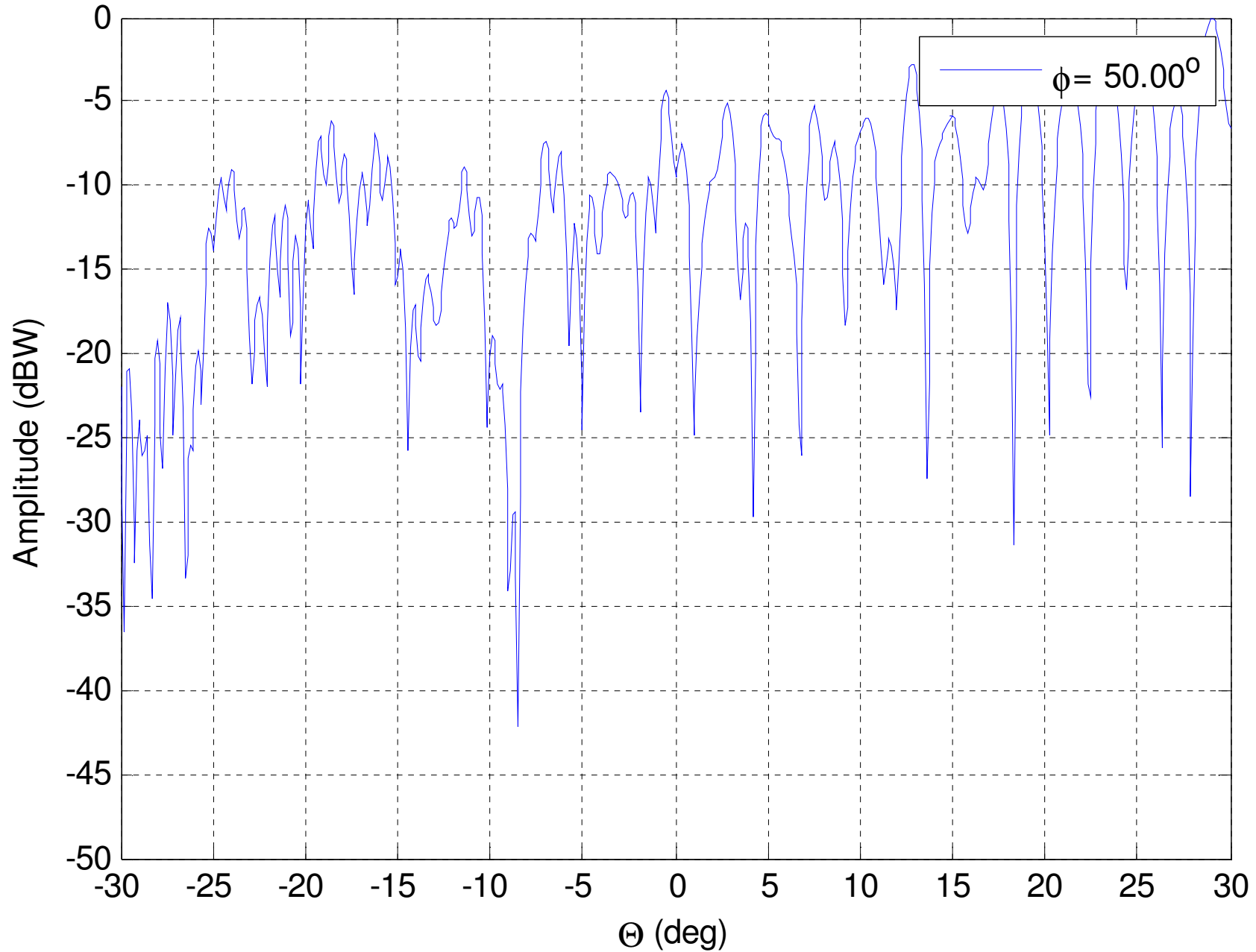
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -6.74 dBW, Date: 15-Dec-2011



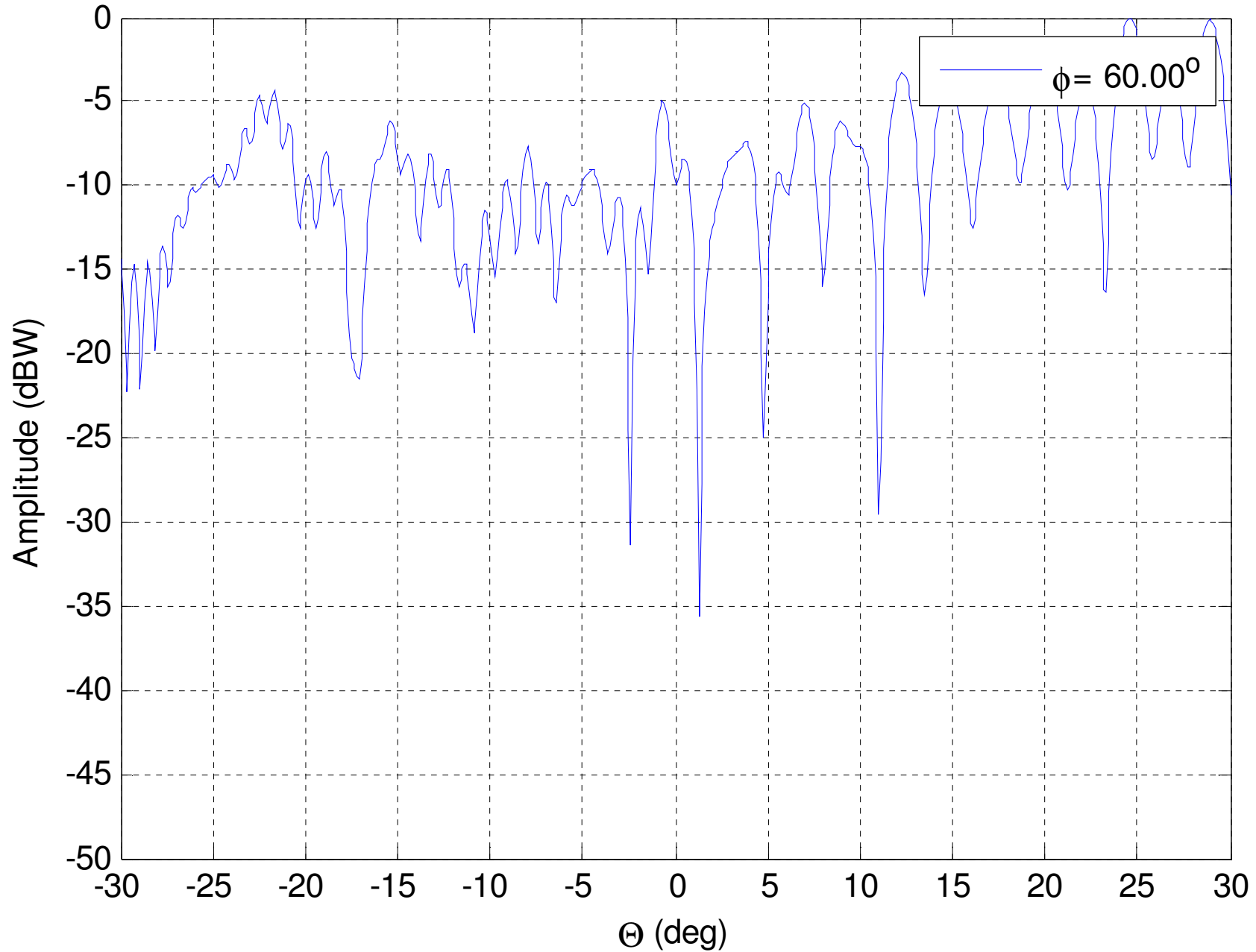
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.03 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

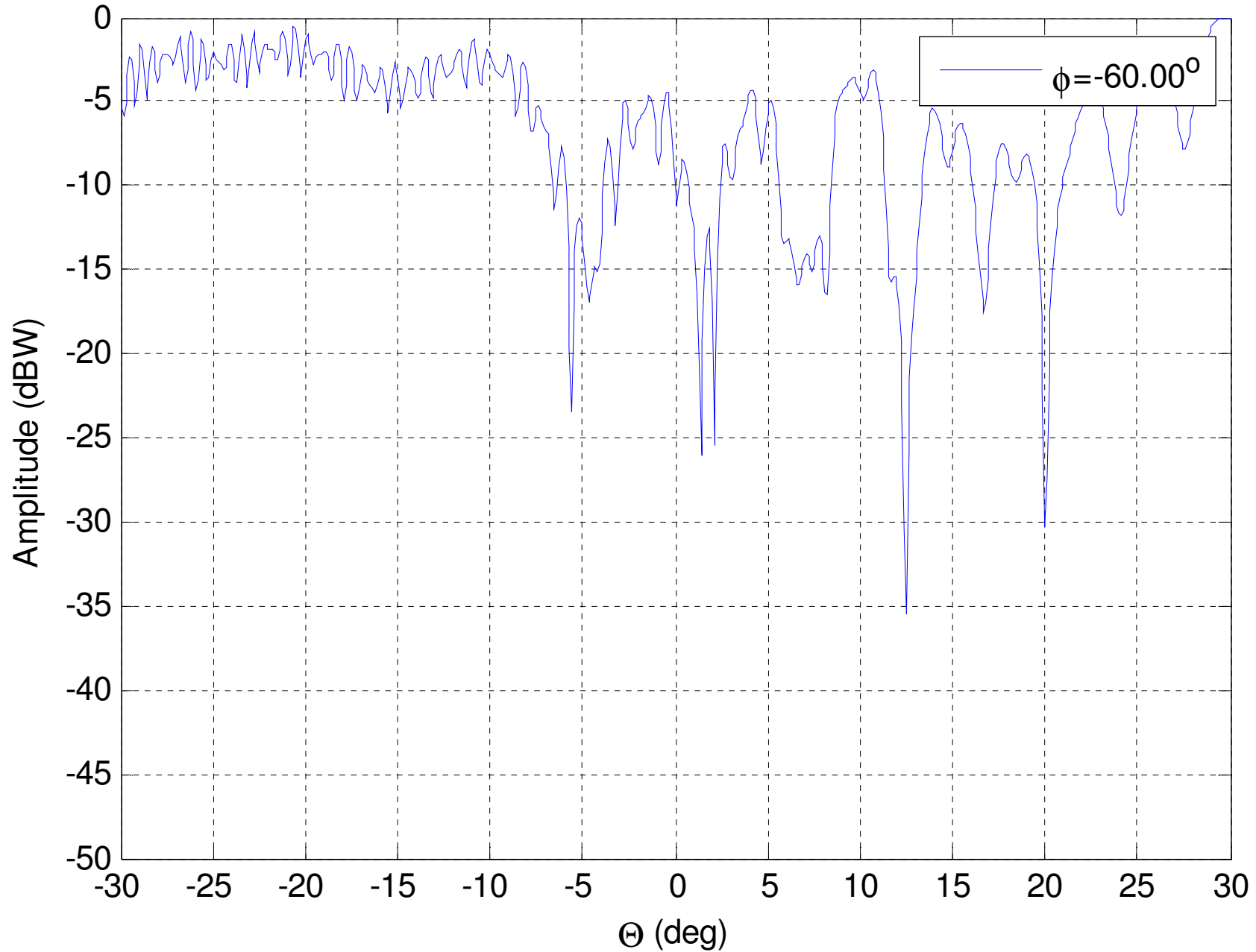
Input file: tx-17.7-rhcp-60.cut, Peak: -4.54 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

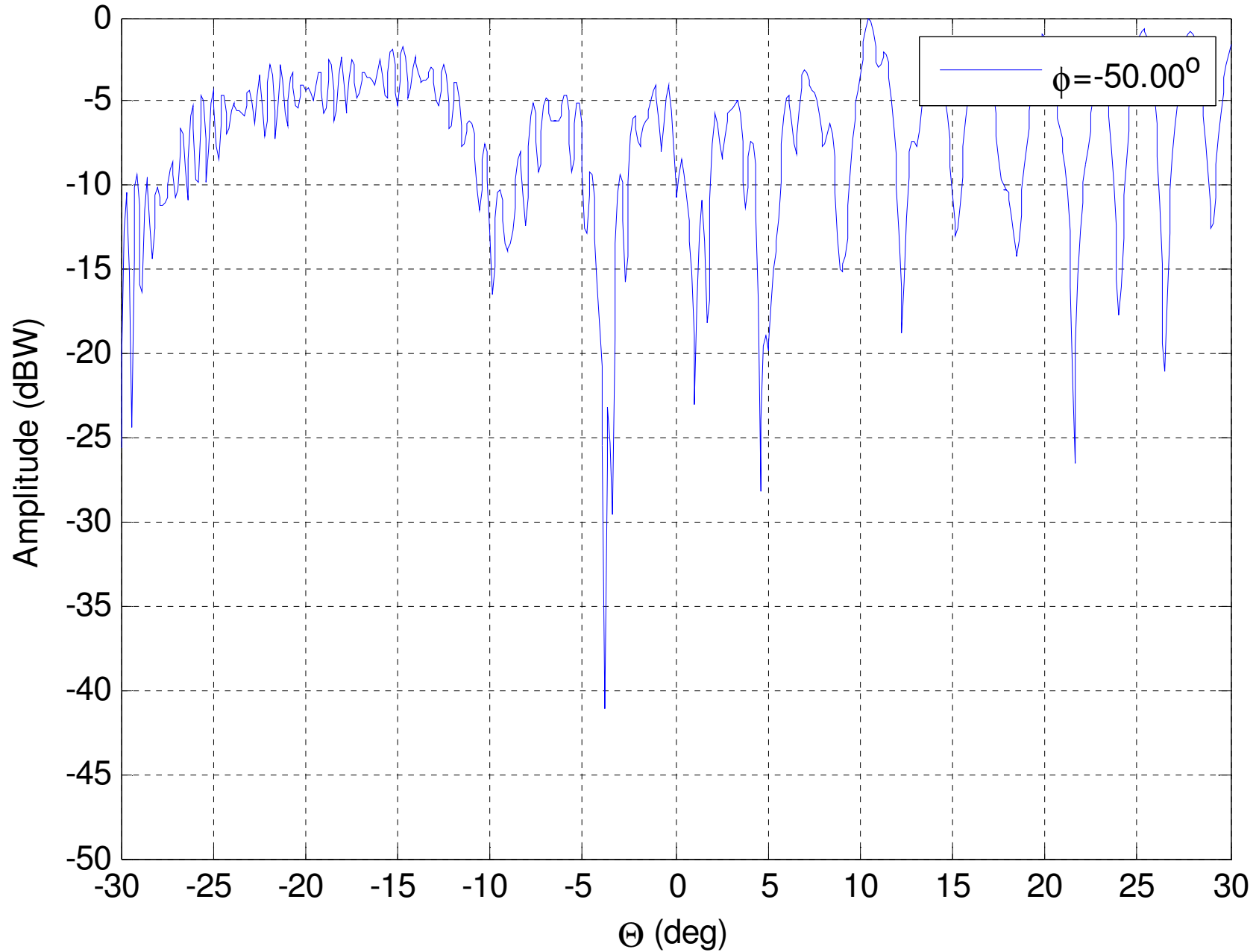
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.49 dBW, Date: 15-Dec-2011



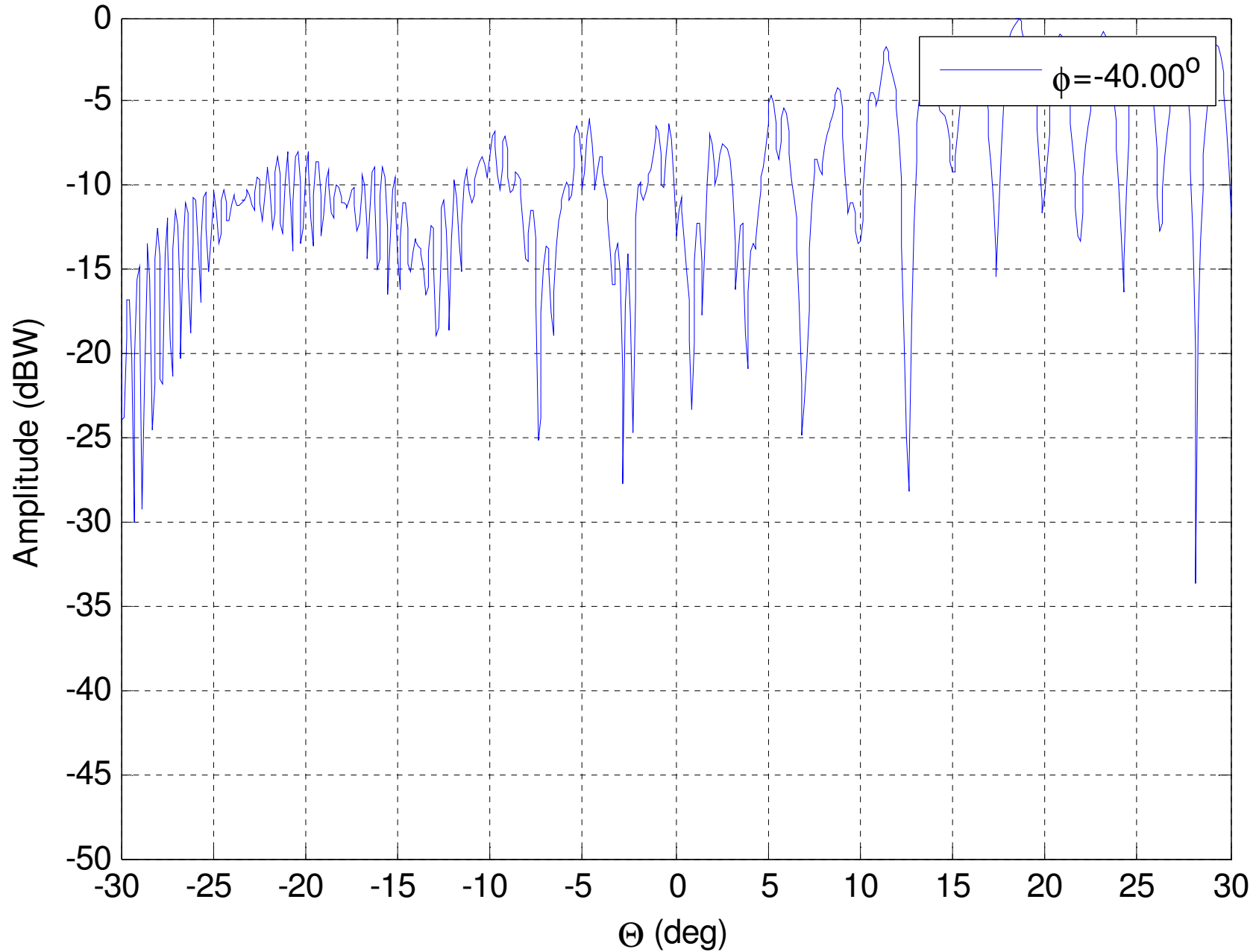
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -5.85 dBW, Date: 15-Dec-2011



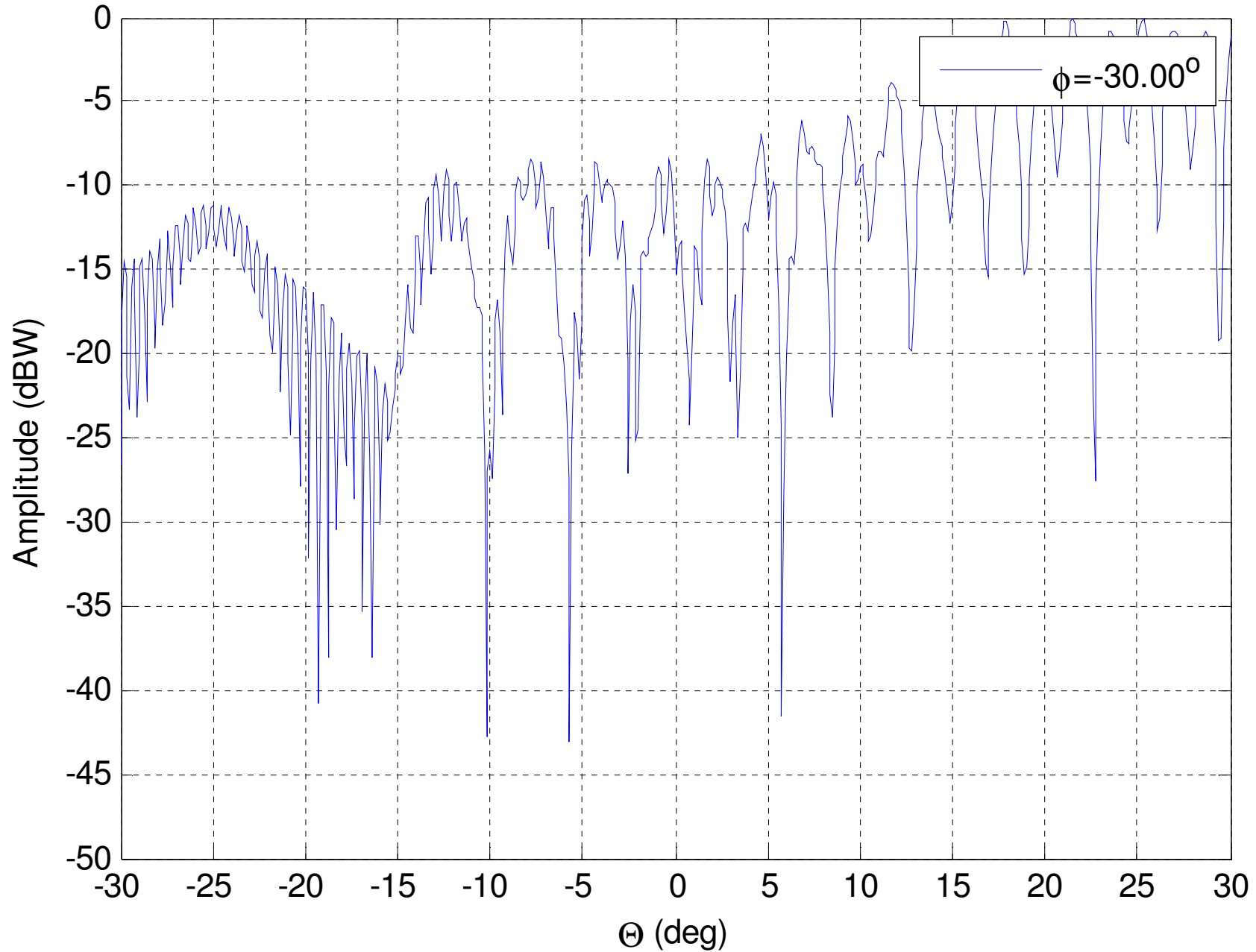
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -3.50 dBW, Date: 15-Dec-2011



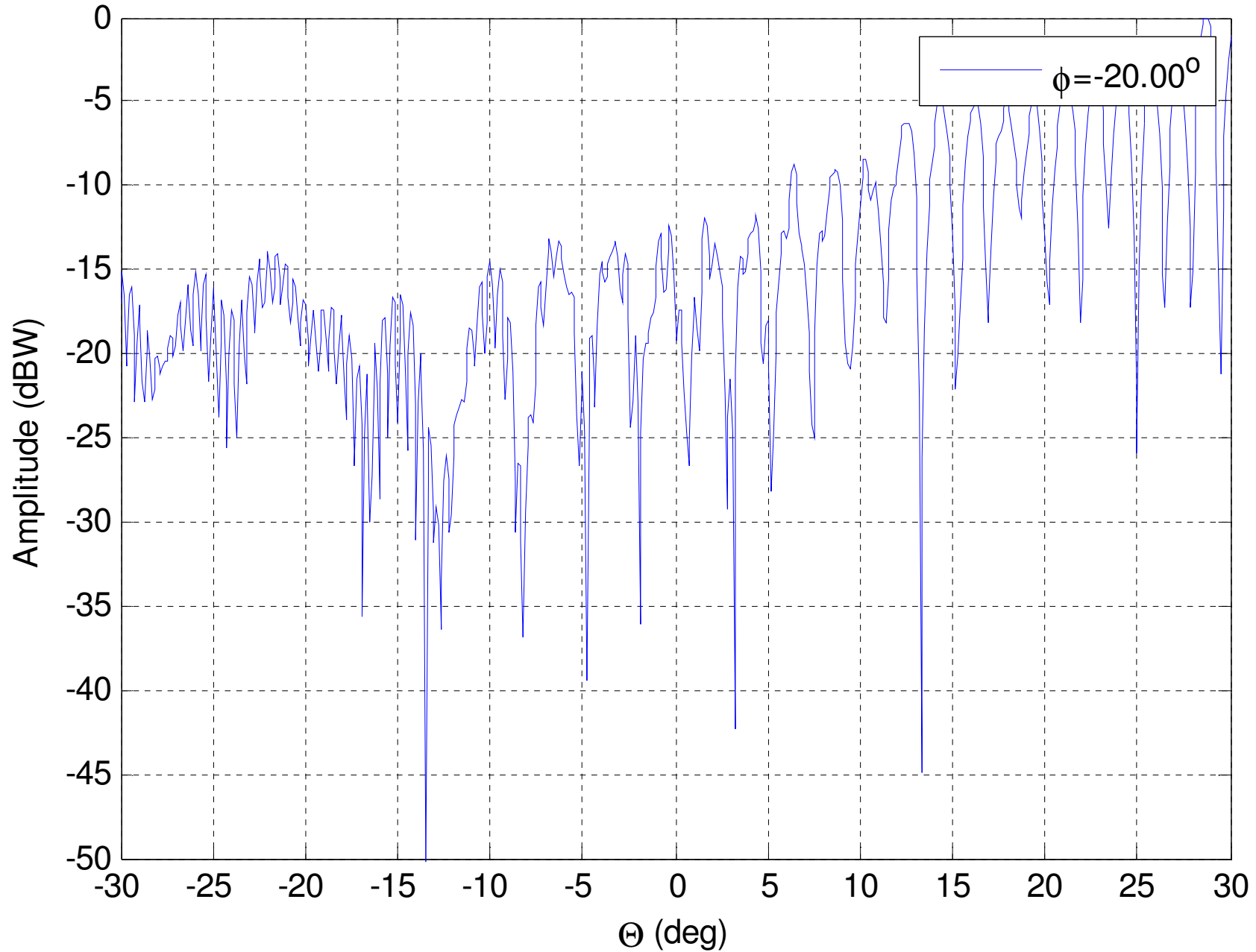
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -1.17 dBW, Date: 15-Dec-2011



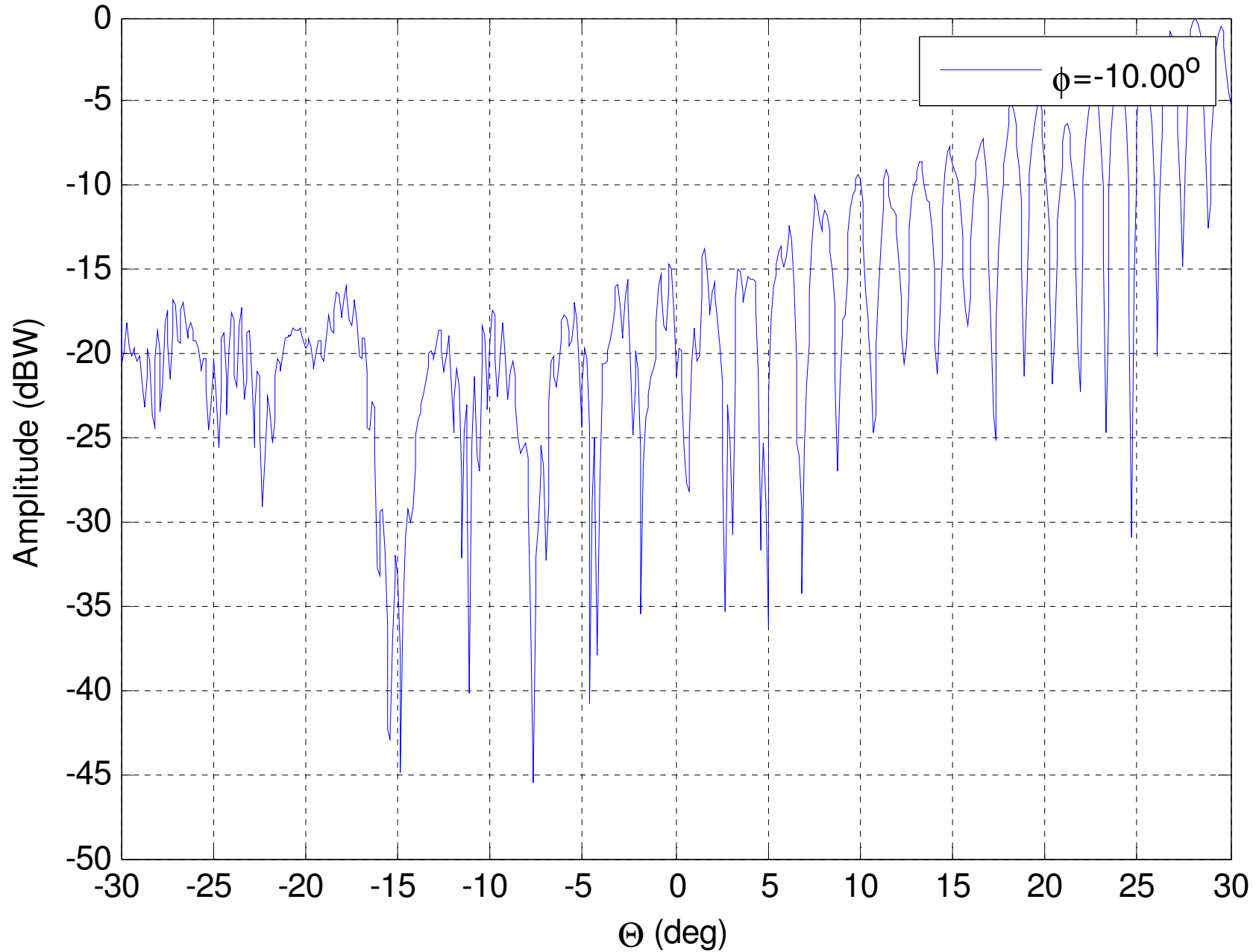
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 2.72 dBW, Date: 15-Dec-2011



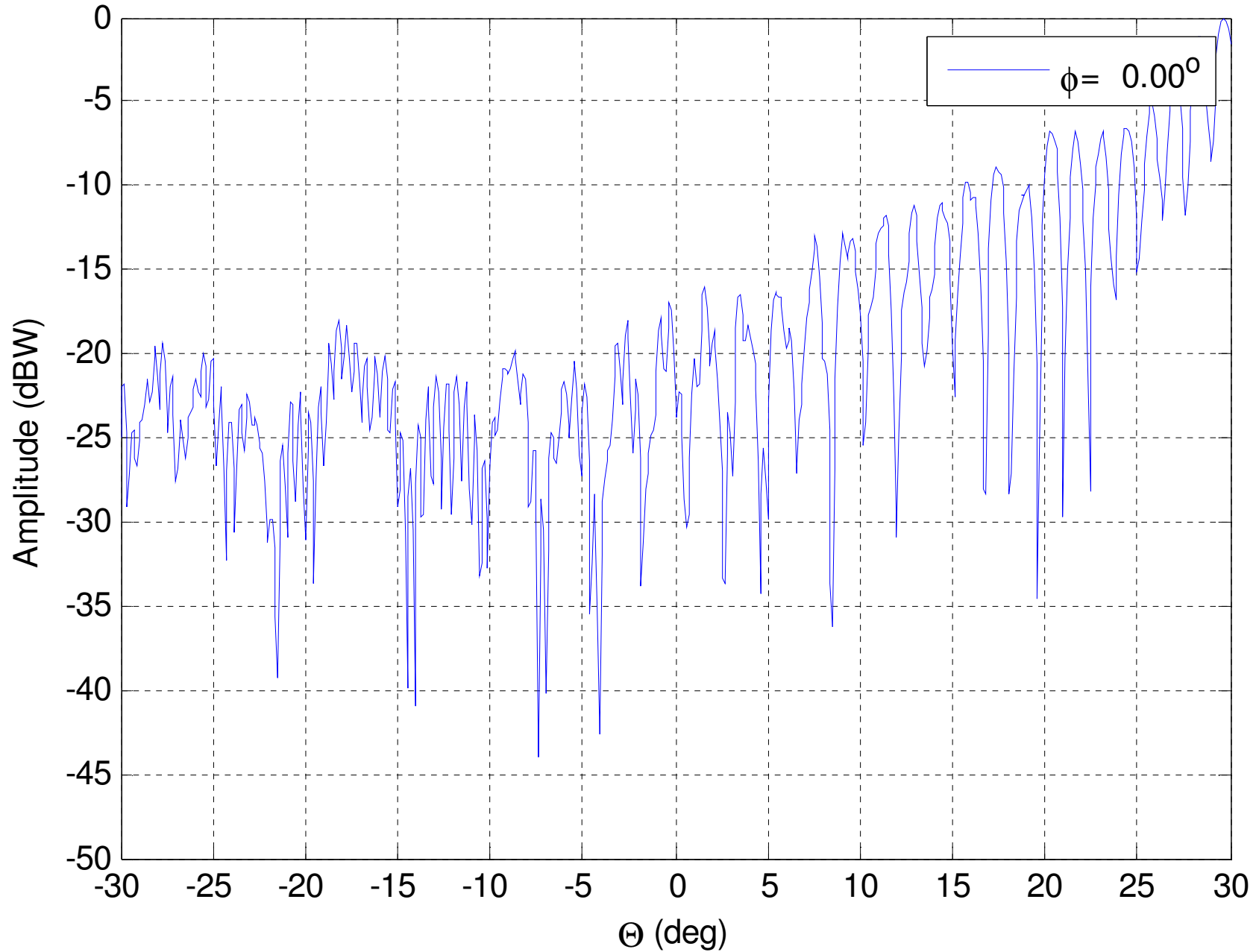
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 4.93 dBW, Date: 15-Dec-2011



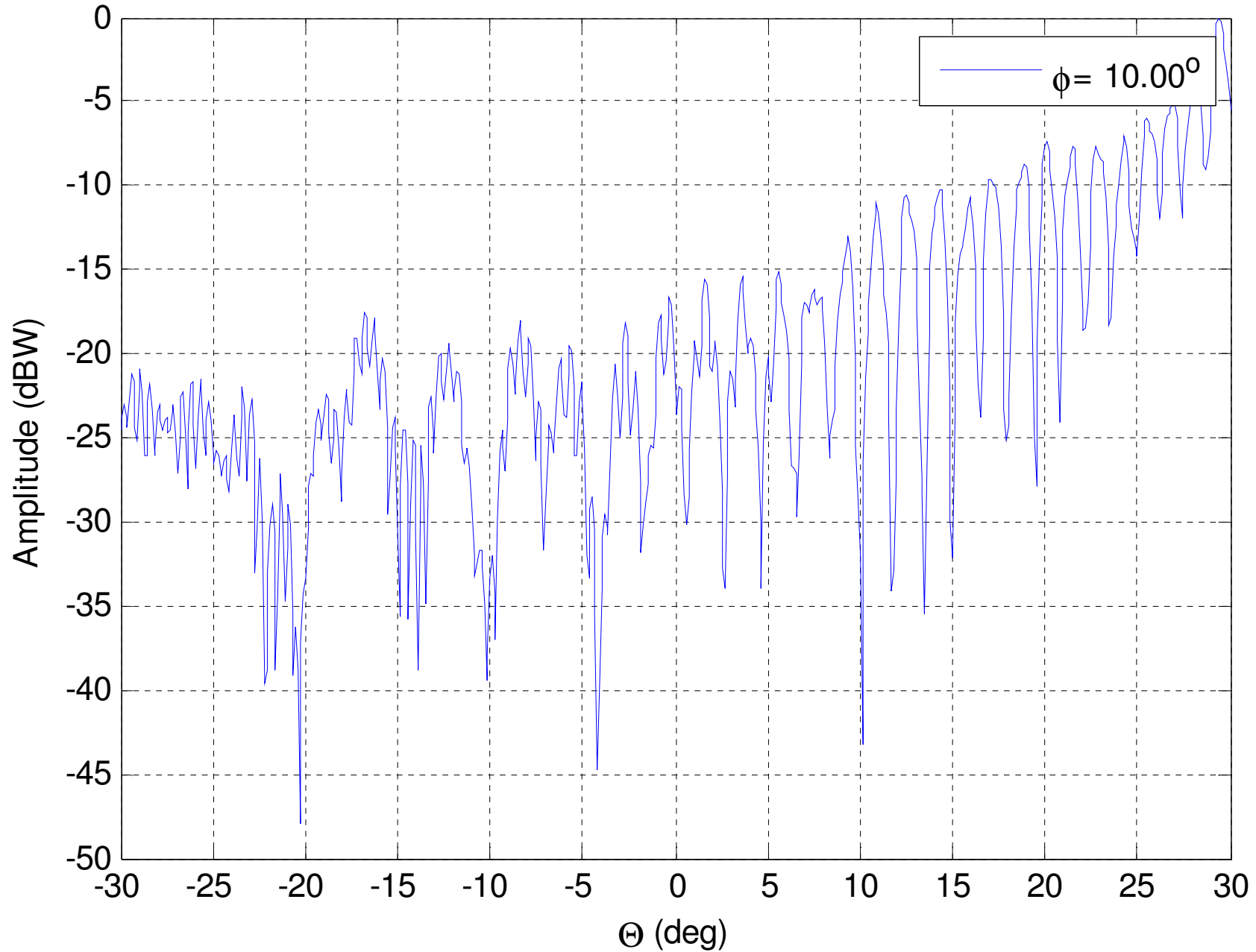
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 7.31 dBW, Date: 15-Dec-2011



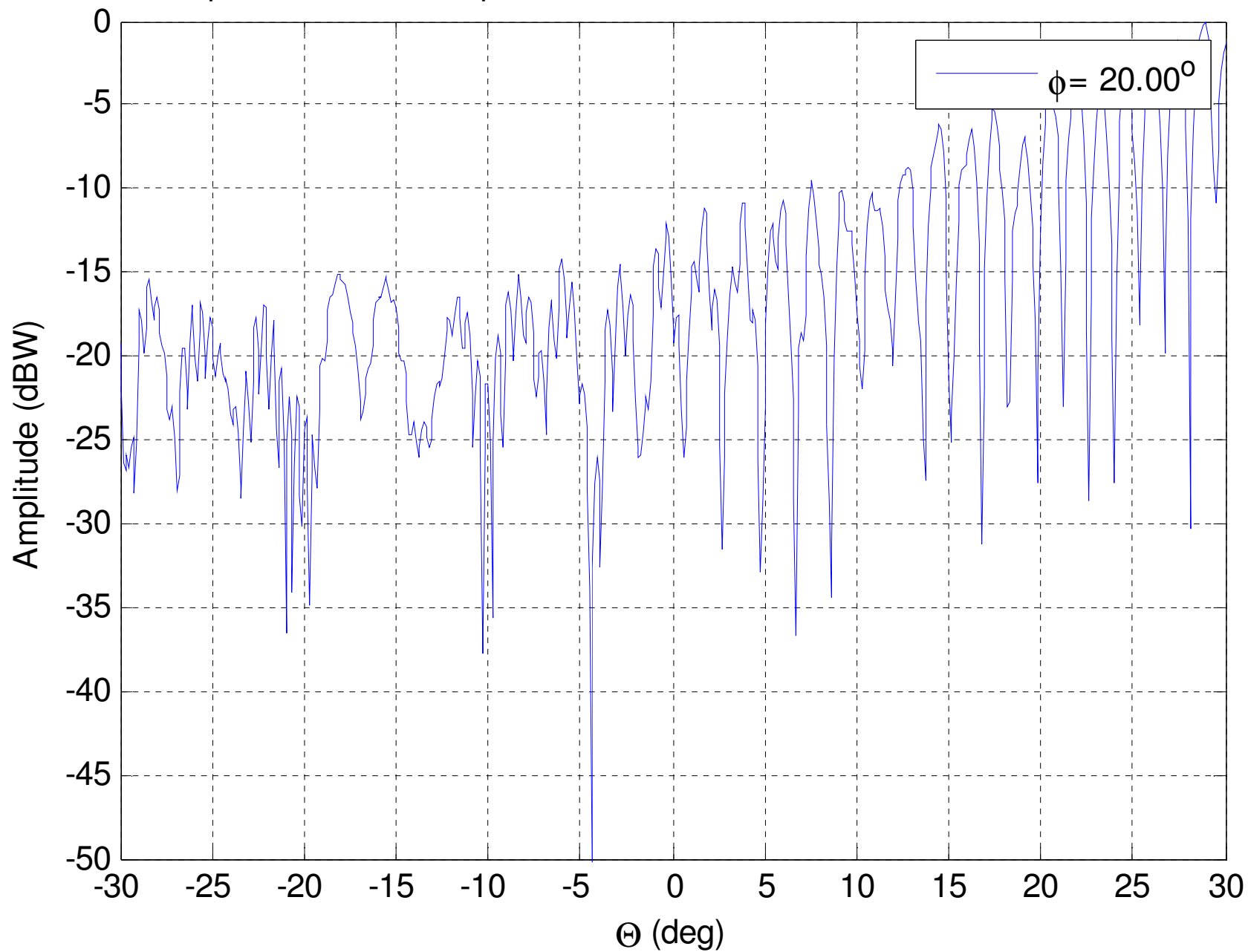
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 6.96 dBW, Date: 15-Dec-2011



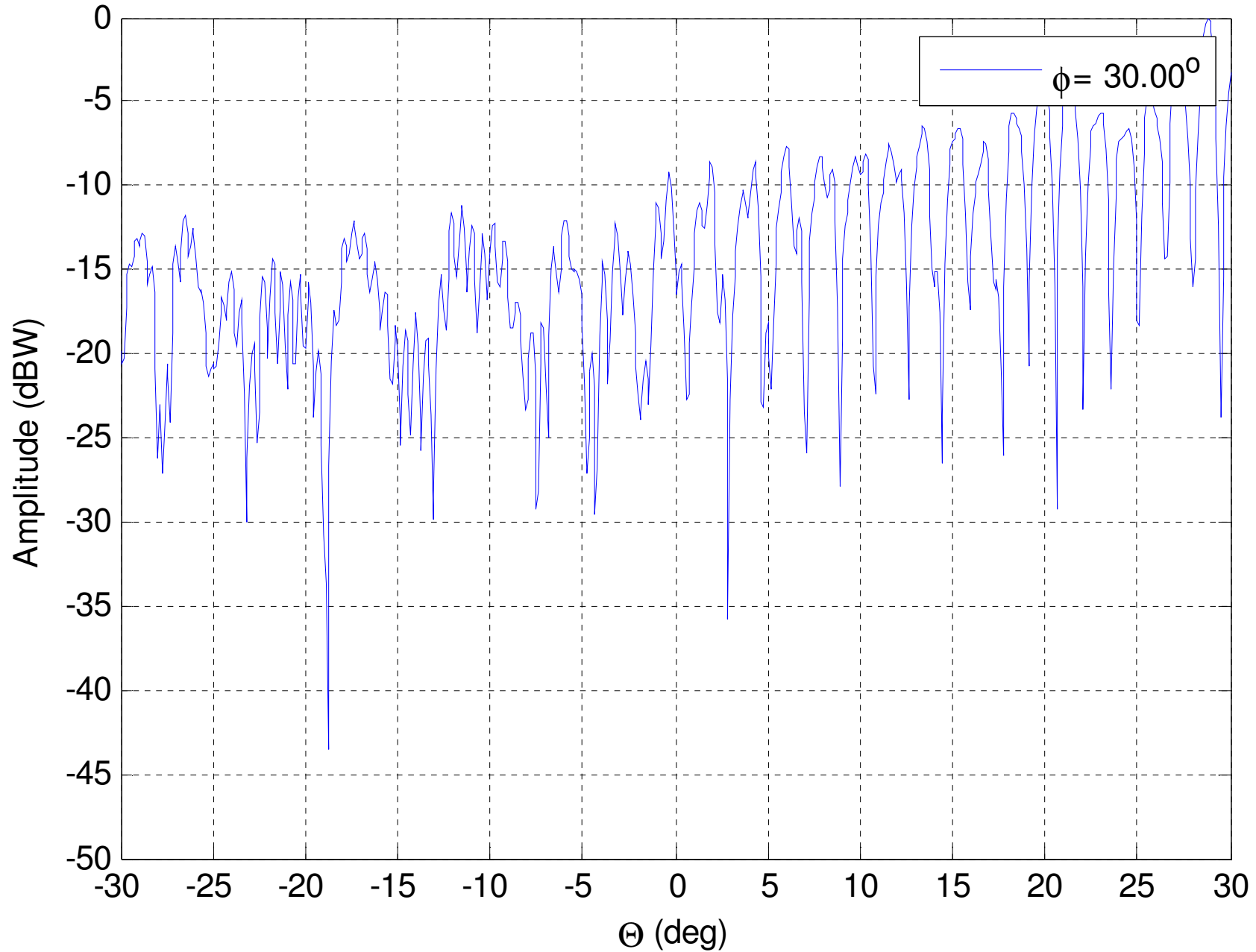
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 2.47 dBW, Date: 15-Dec-2011



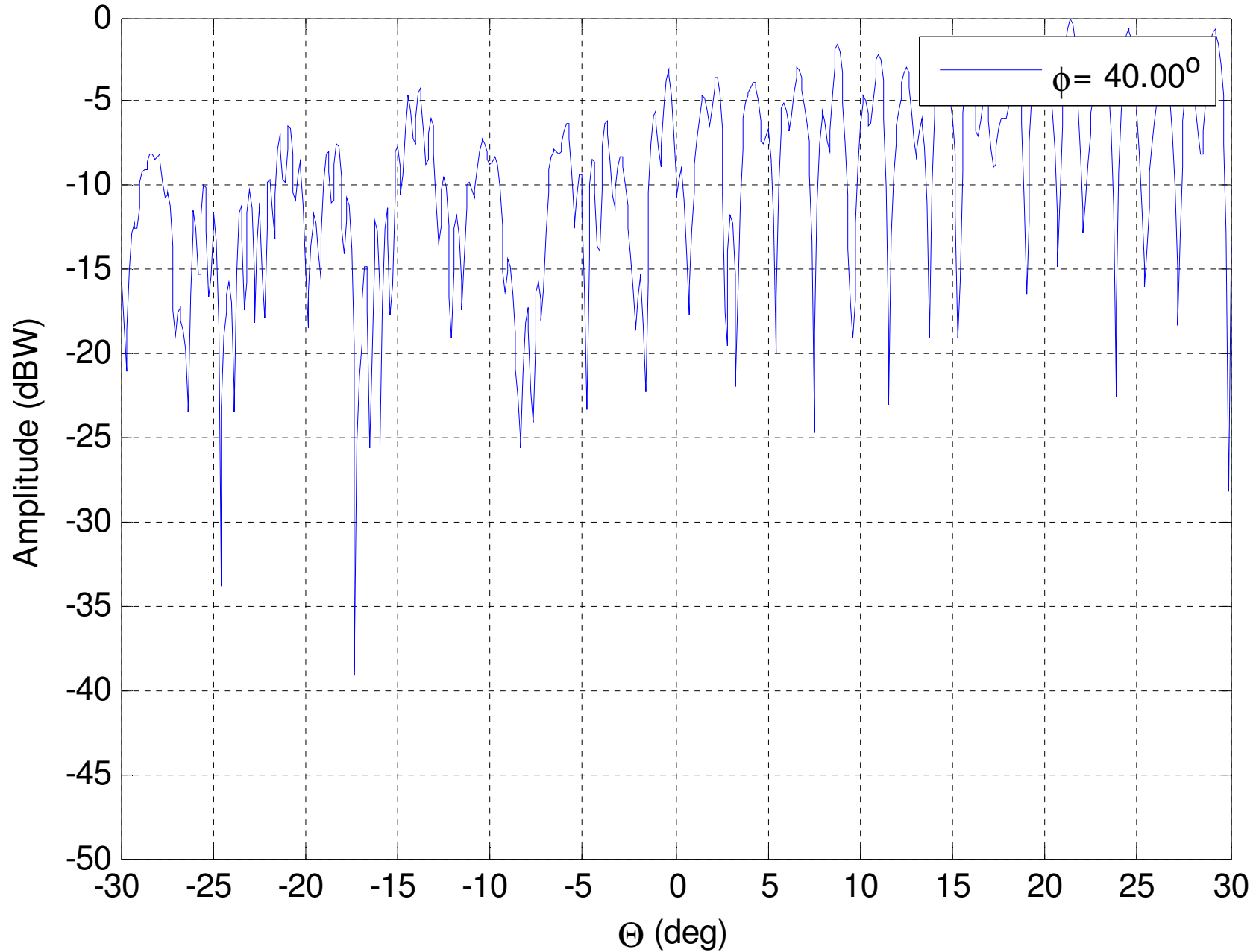
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.49 dBW, Date: 15-Dec-2011



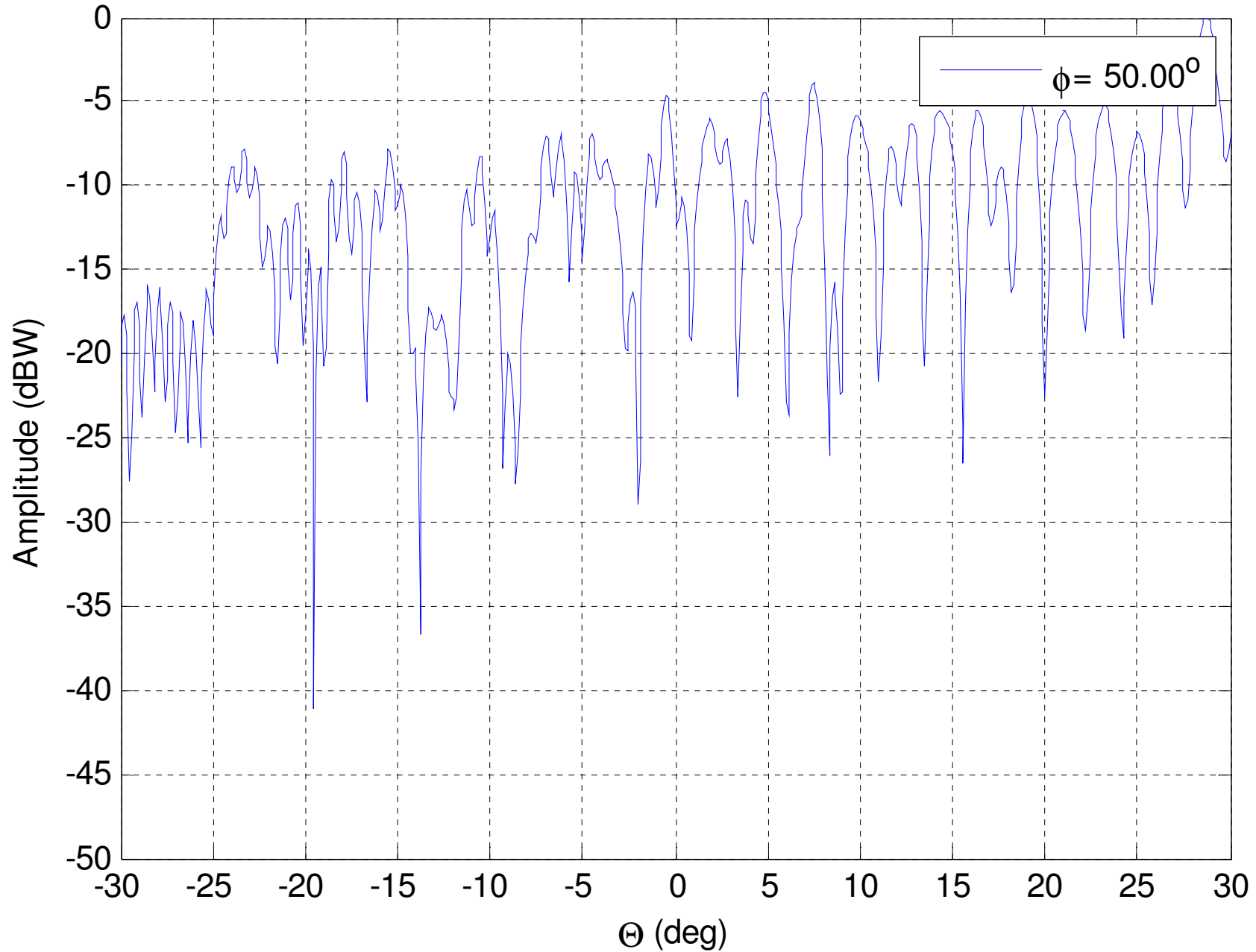
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -6.49 dBW, Date: 15-Dec-2011



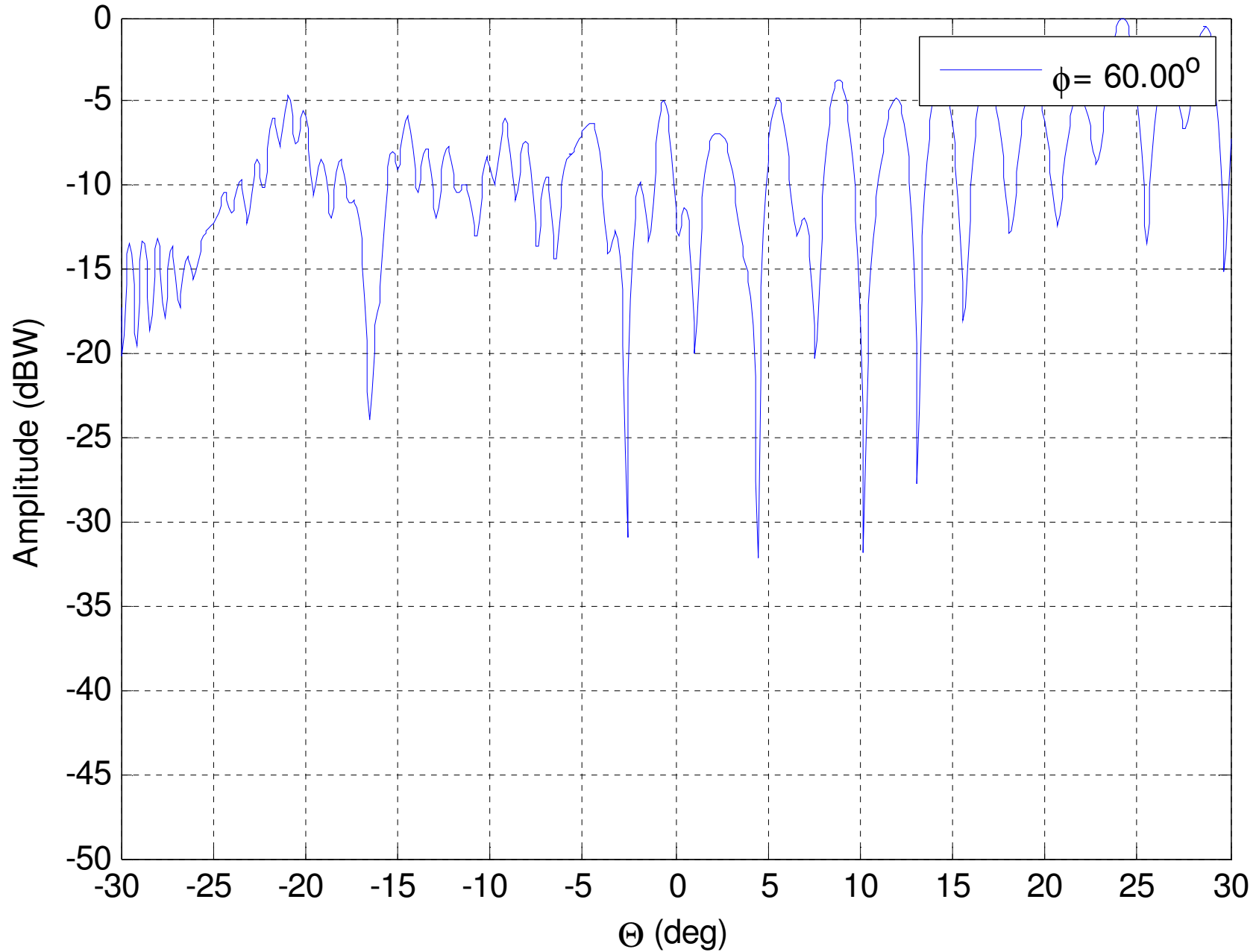
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -4.92 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -4.72 dBW, Date: 15-Dec-2011



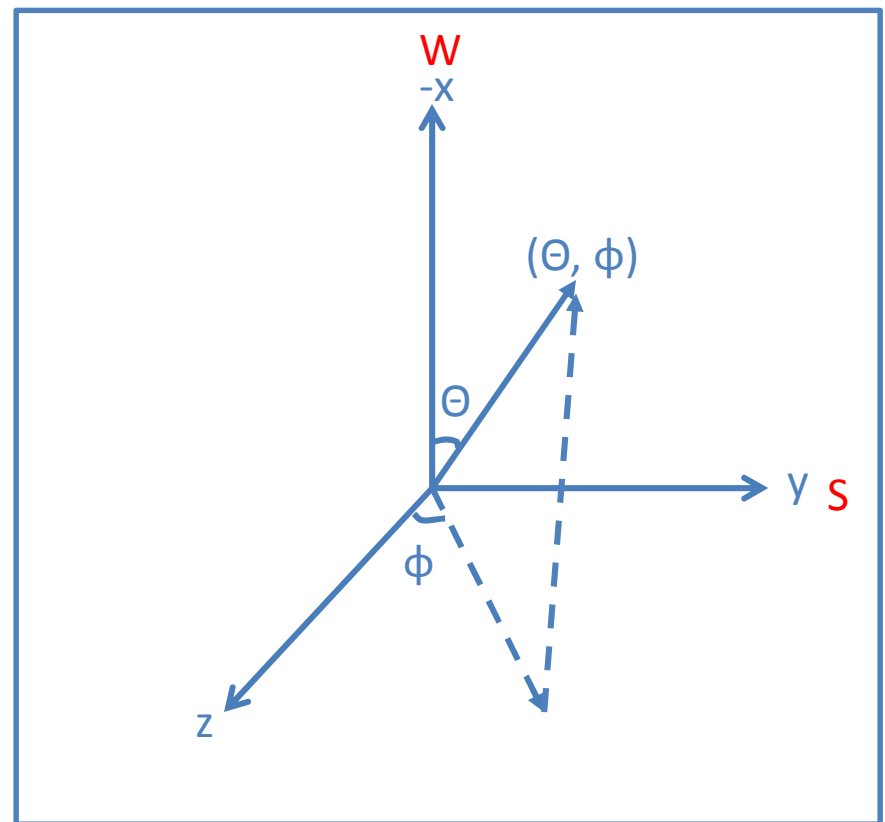
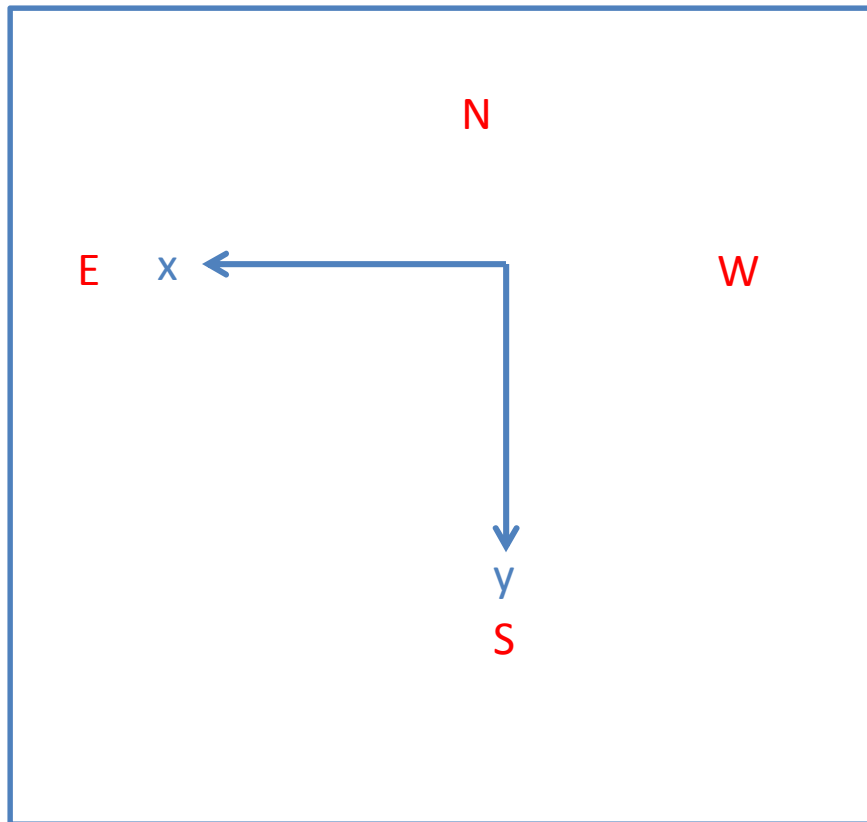
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 27

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



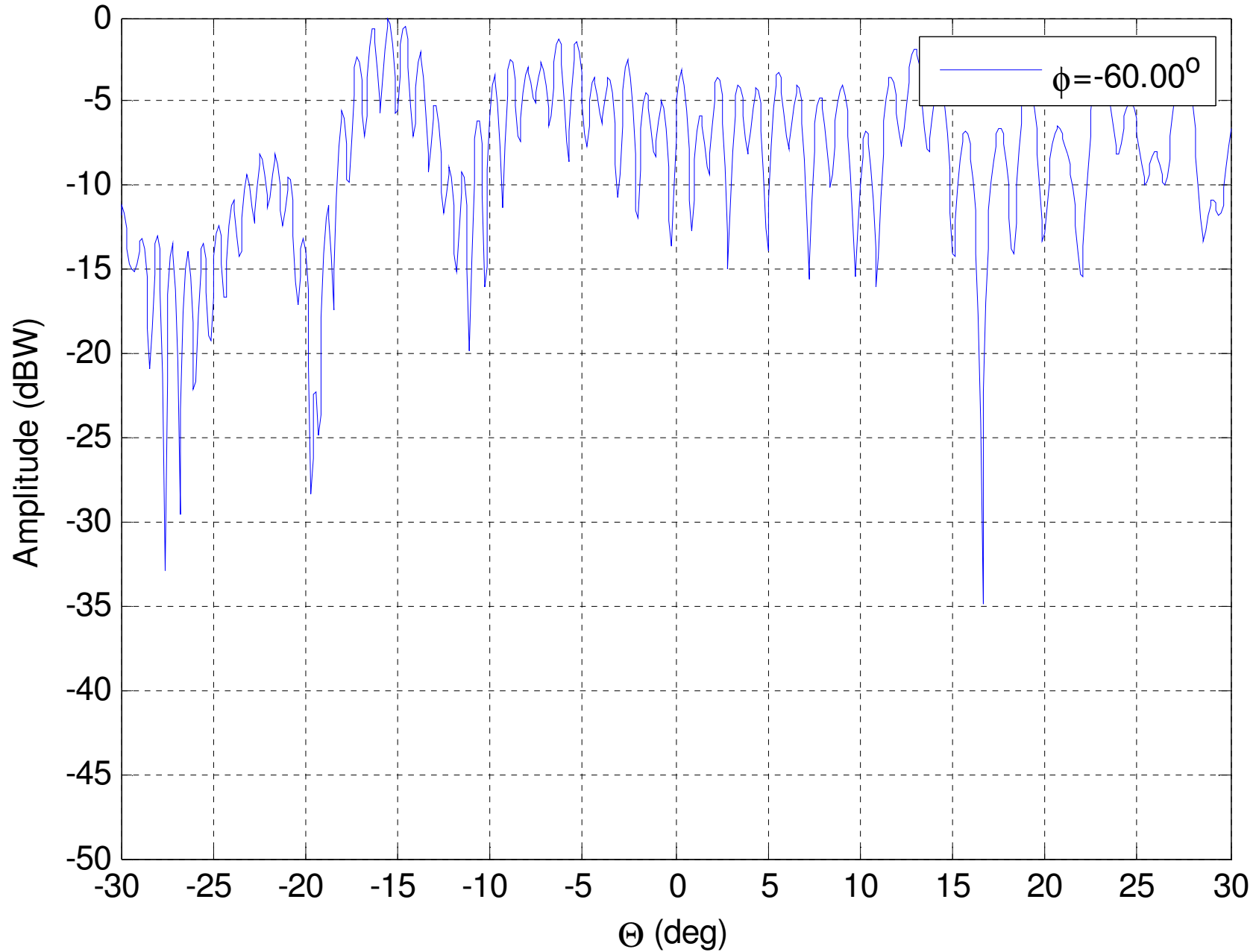
Spot Beam27, -X Axis Plots

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

RHCP at 17.3 GHz

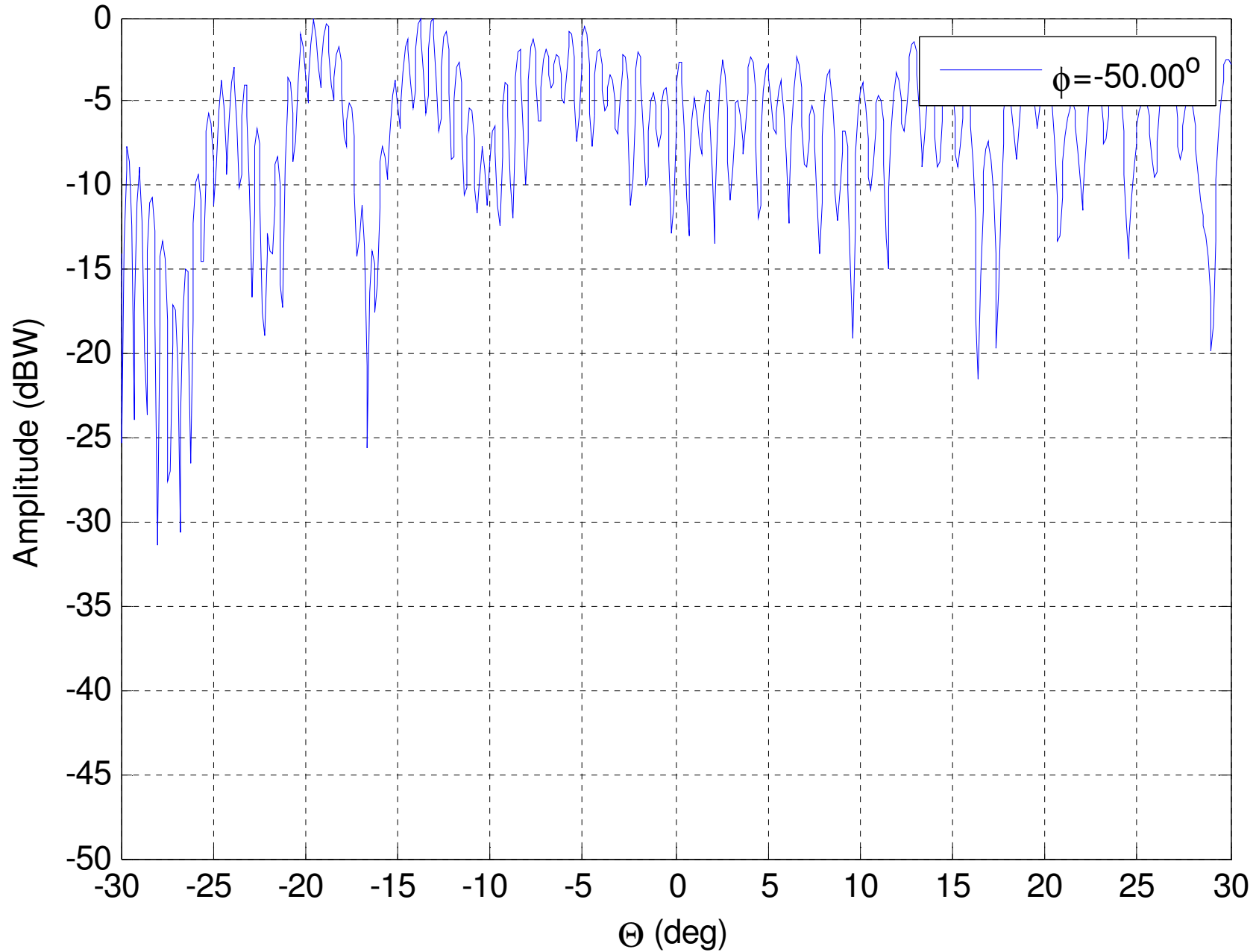
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -0.34 dBW, Date: 15-Dec-2011



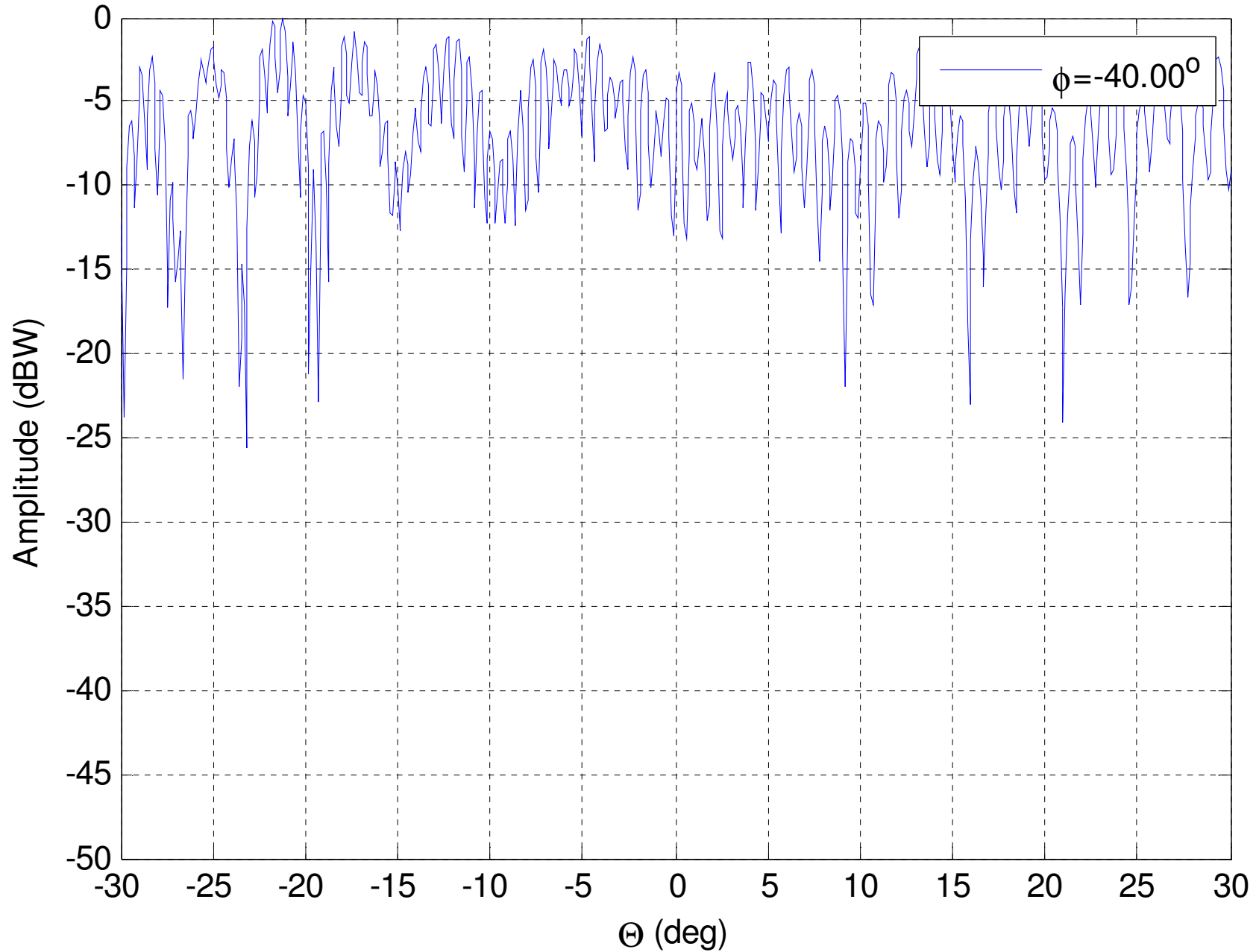
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -0.89 dBW, Date: 15-Dec-2011



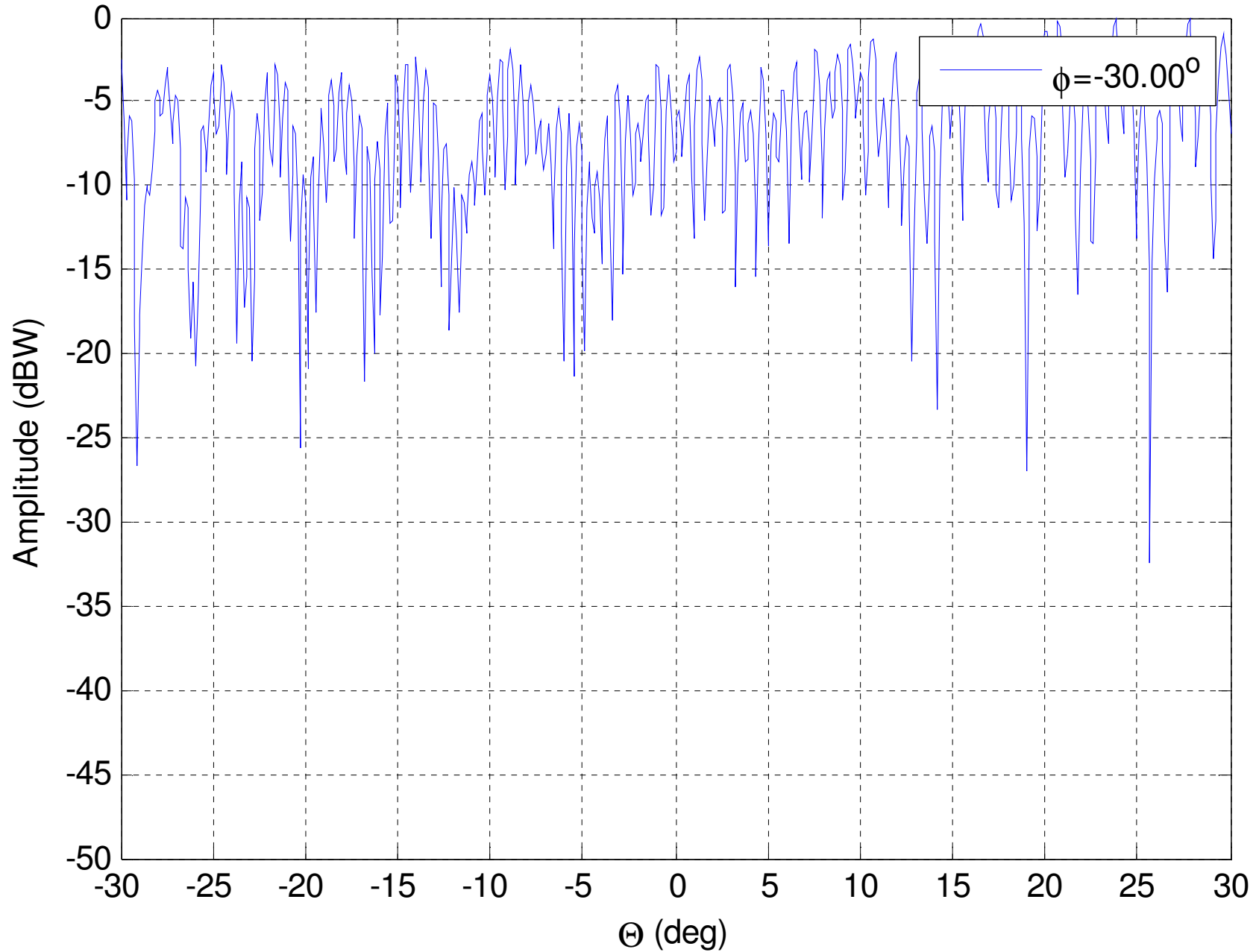
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -0.16 dBW, Date: 15-Dec-2011



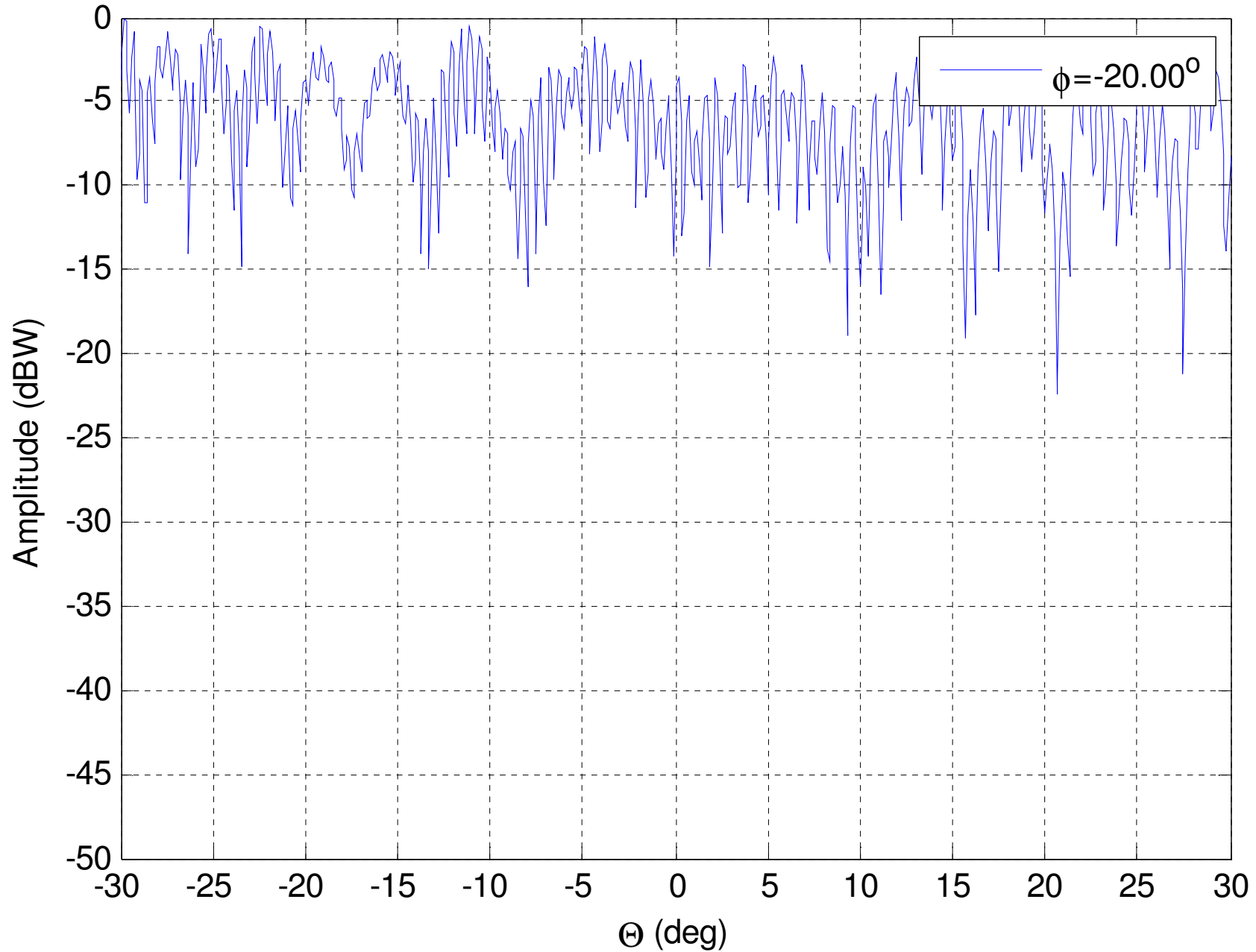
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 0.40 dBW, Date: 15-Dec-2011



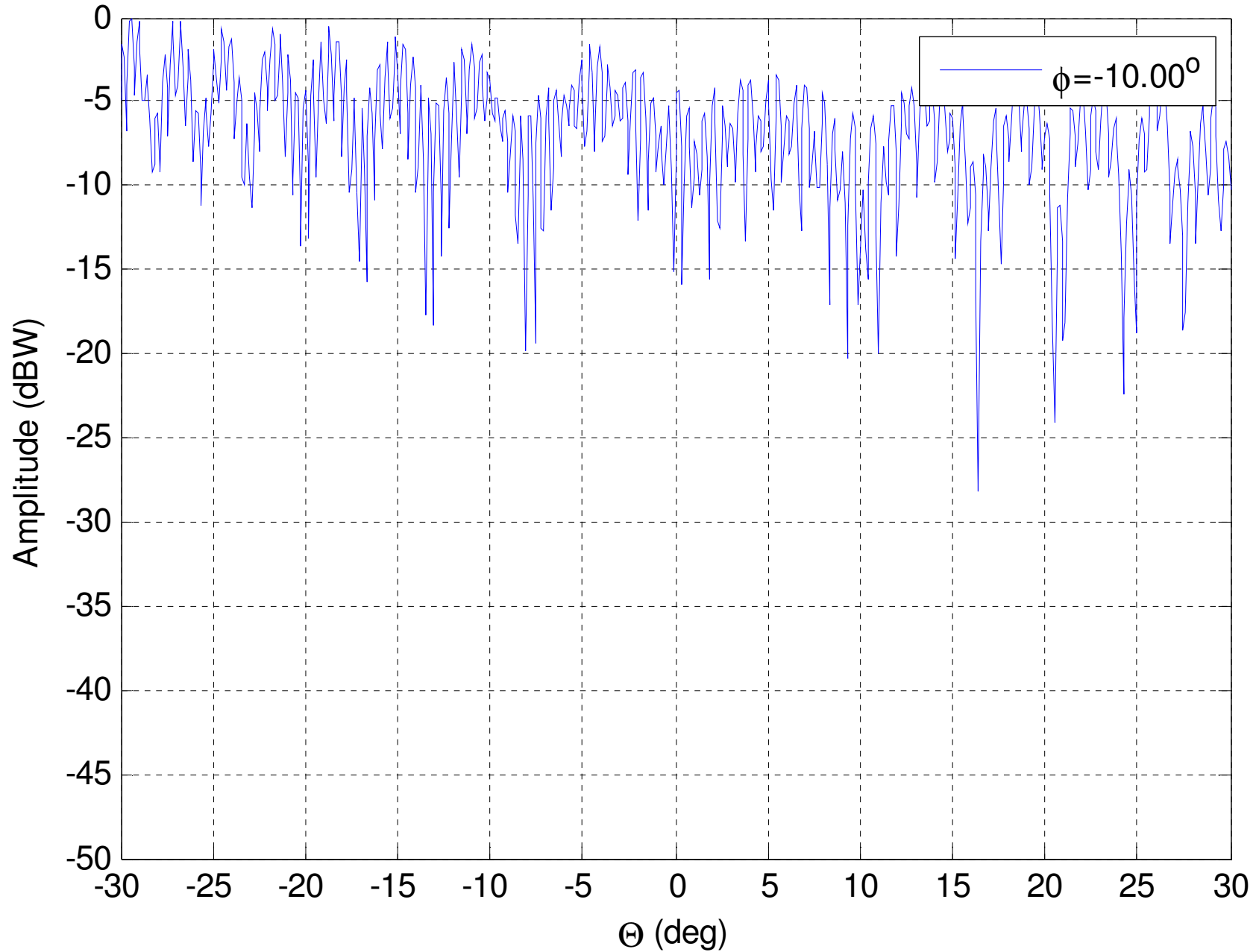
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -0.01 dBW, Date: 15-Dec-2011



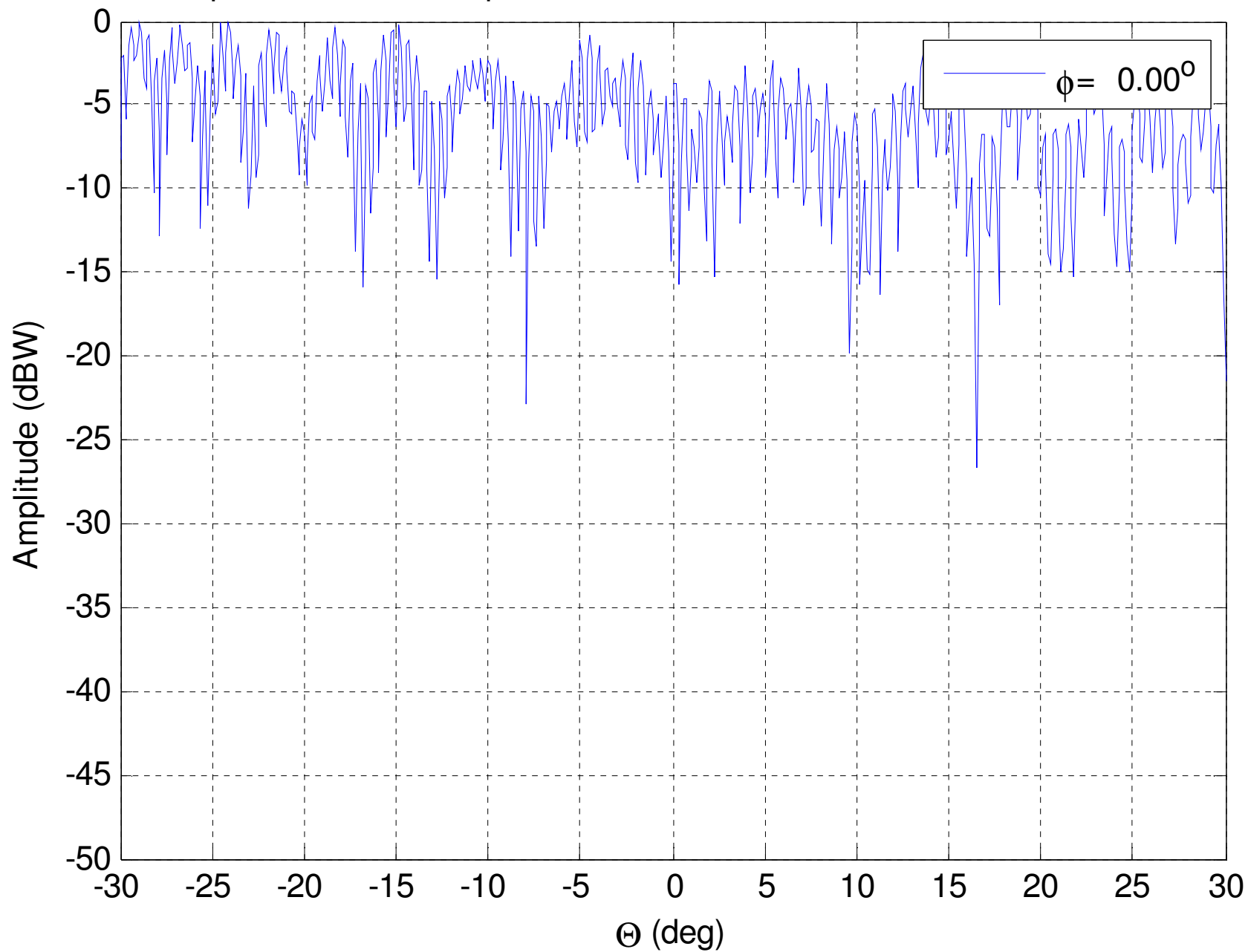
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 0.59 dBW, Date: 15-Dec-2011



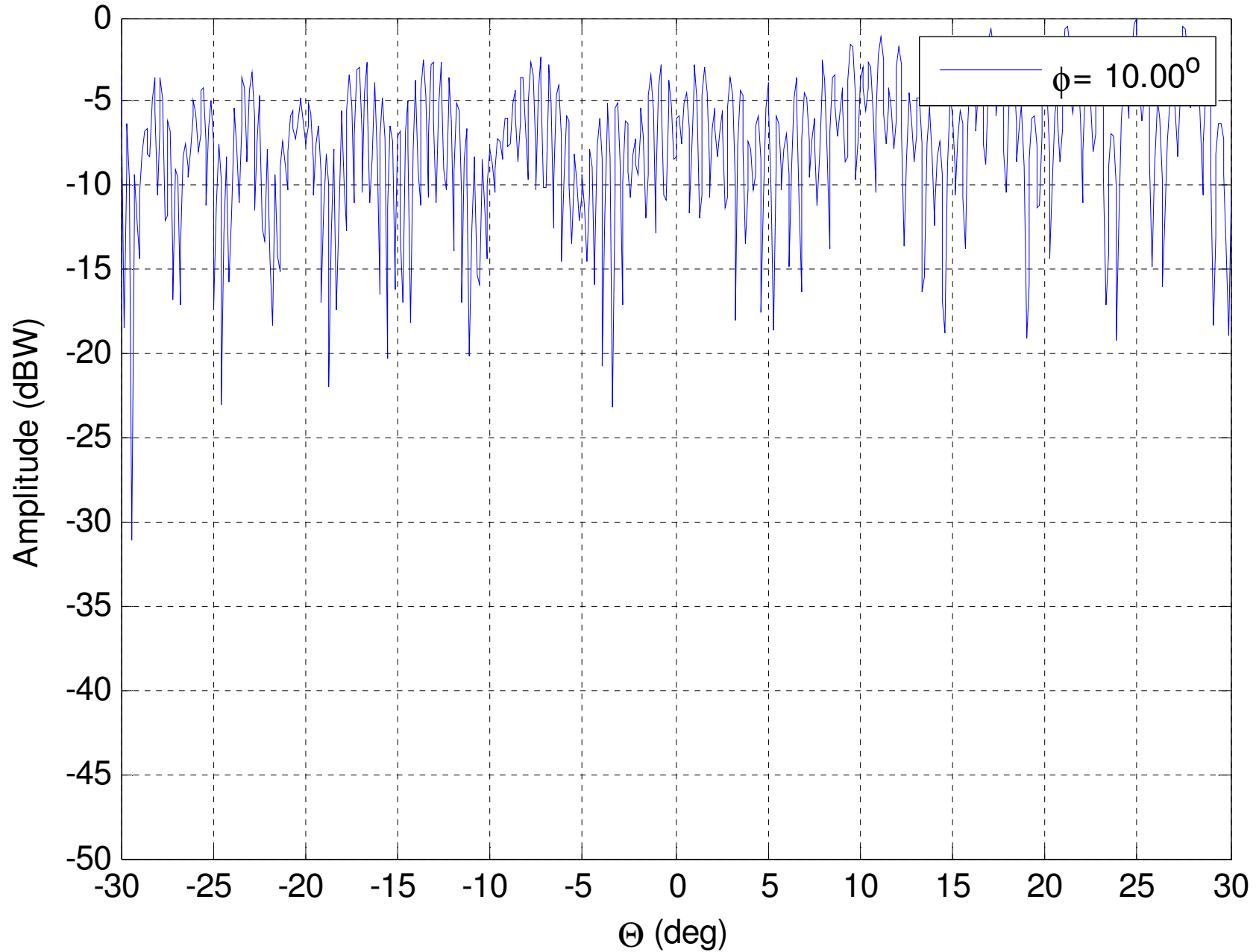
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -0.19 dBW, Date: 15-Dec-2011



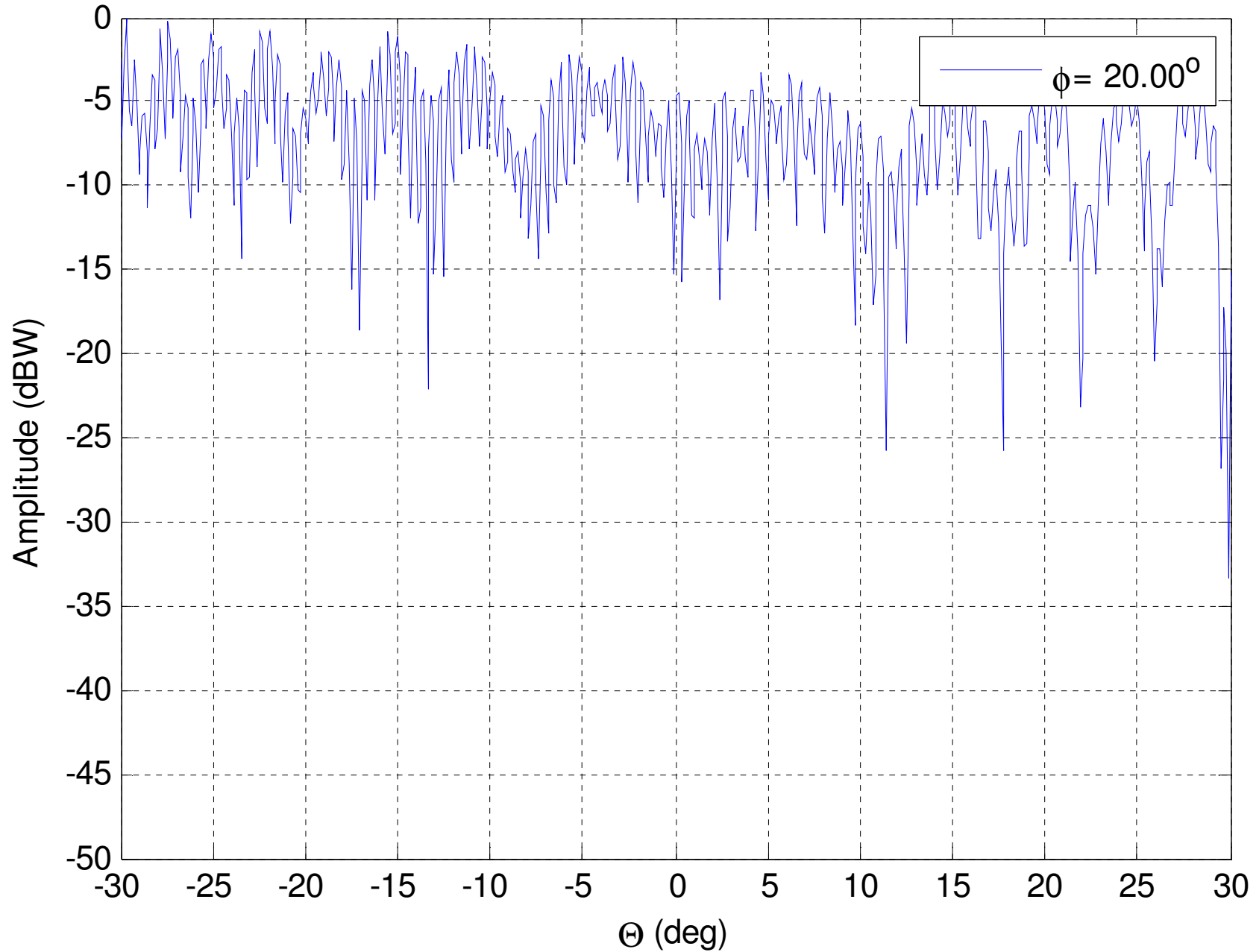
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 0.67 dBW, Date: 15-Dec-2011



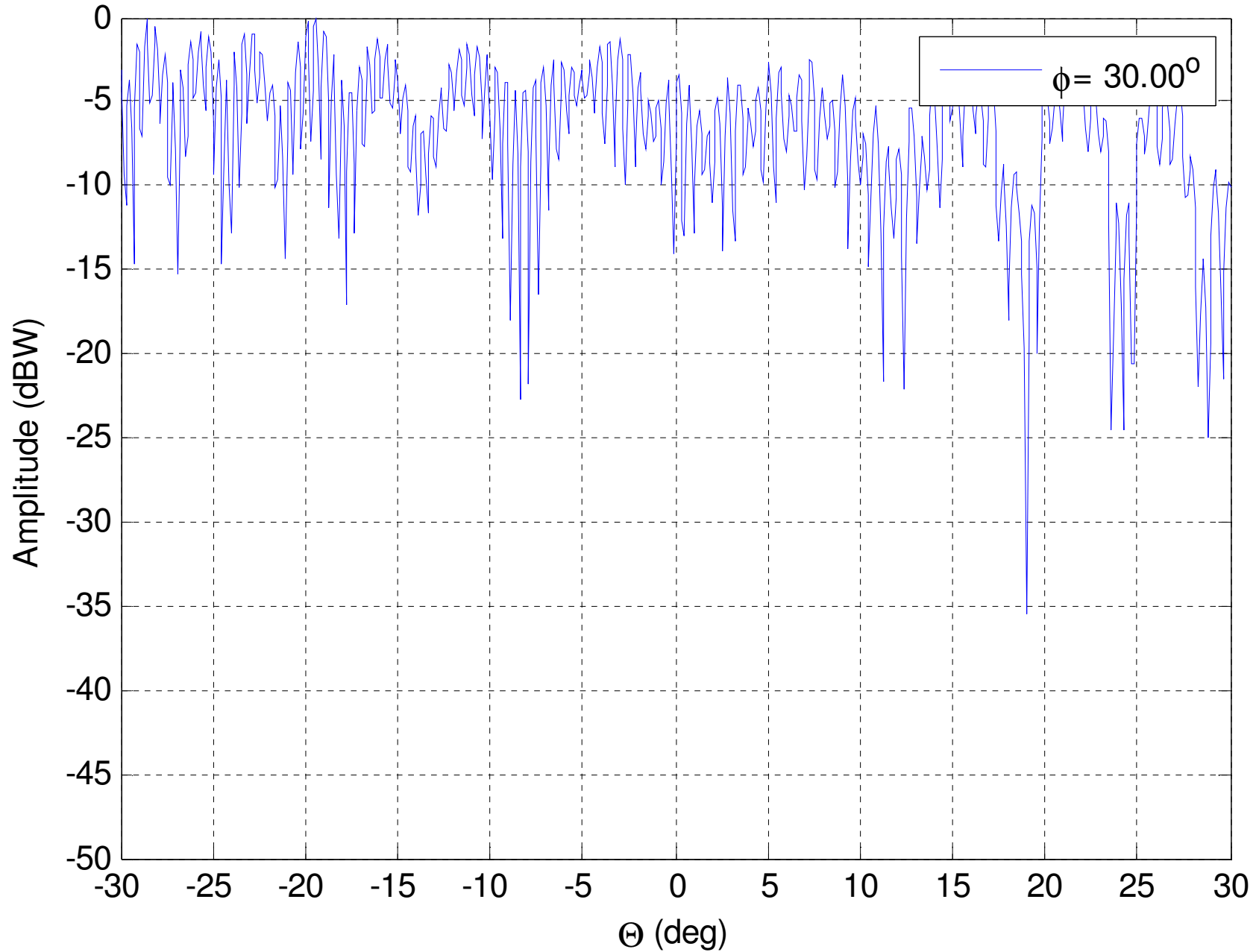
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 0.67 dBW, Date: 15-Dec-2011



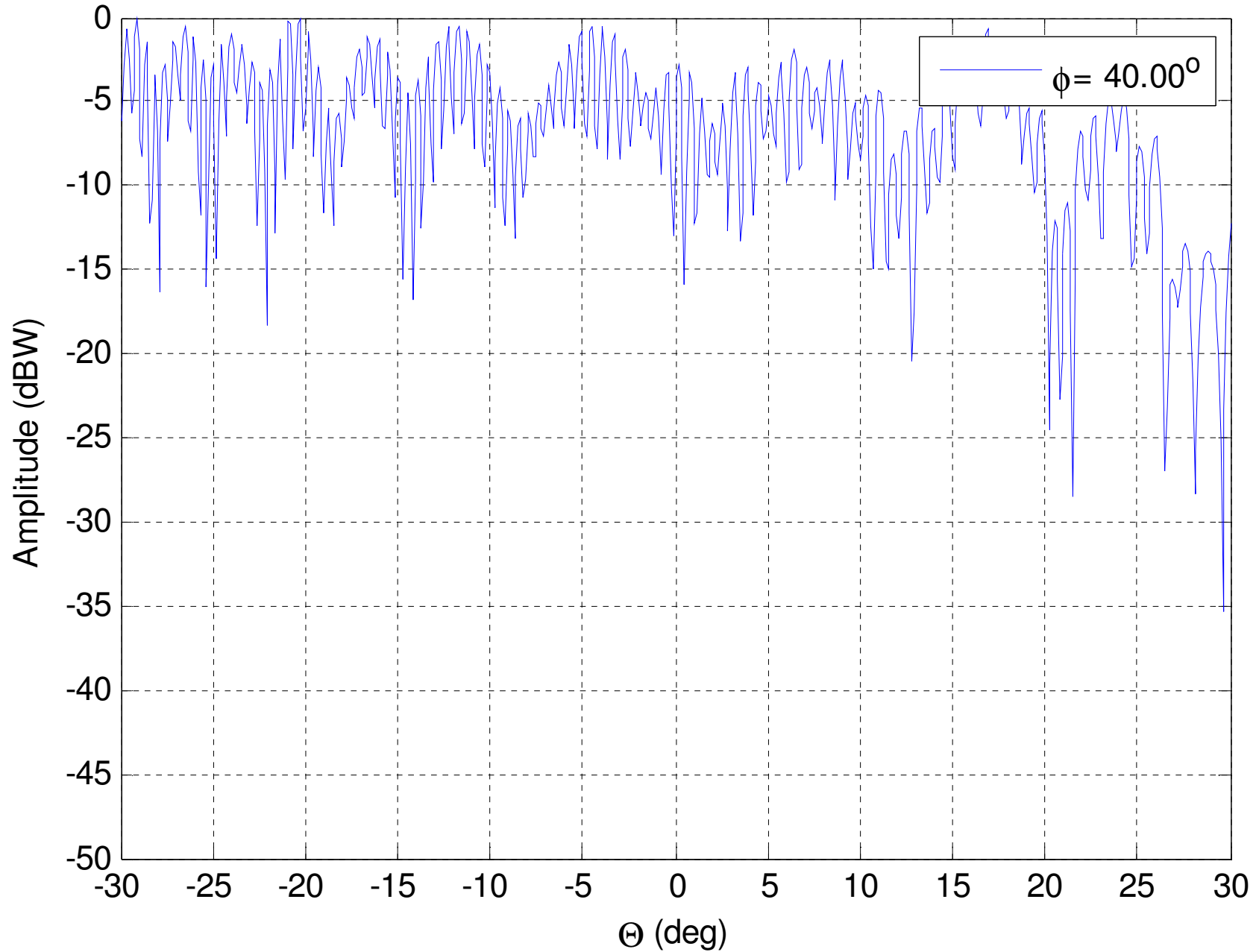
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -0.25 dBW, Date: 15-Dec-2011



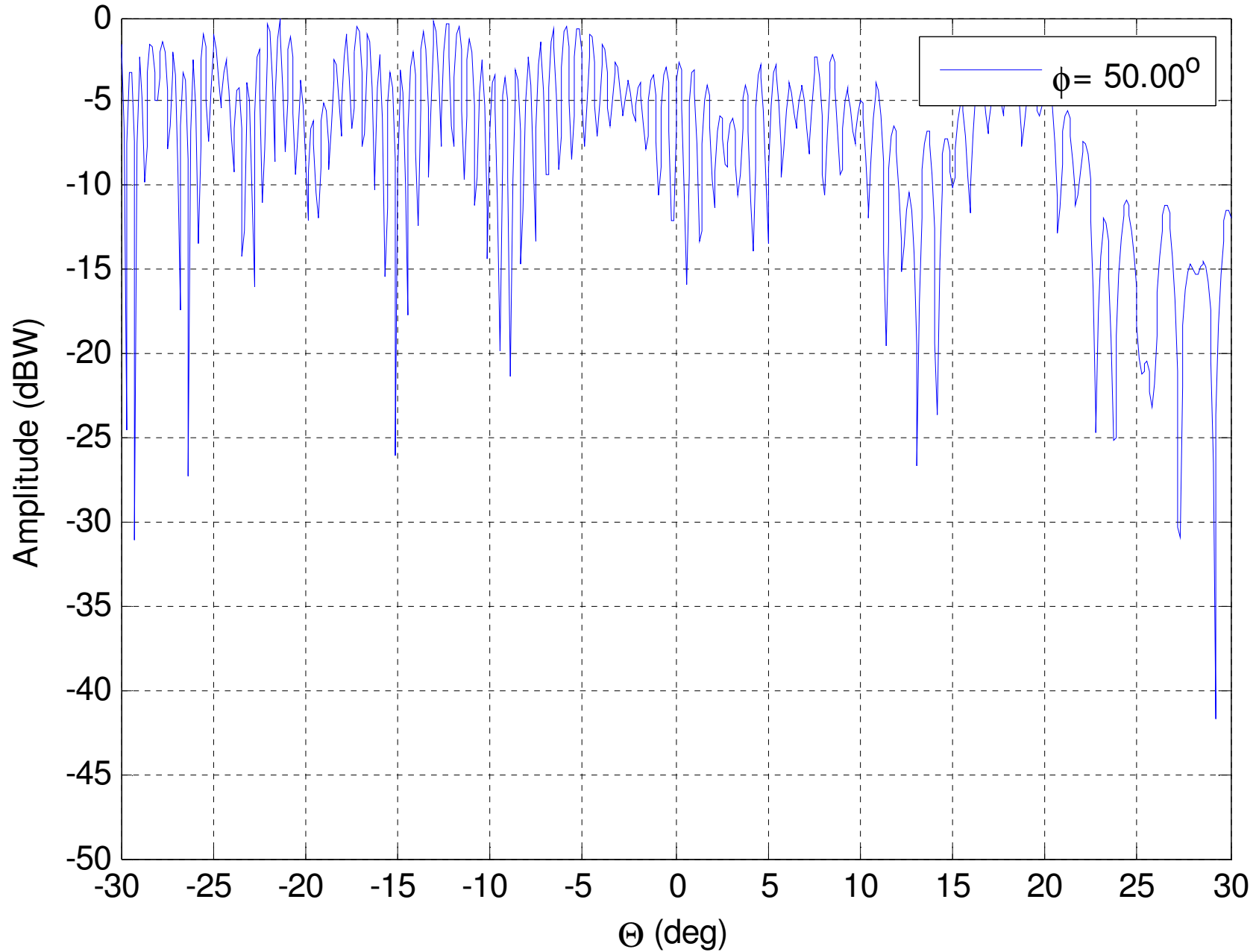
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -0.78 dBW, Date: 15-Dec-2011



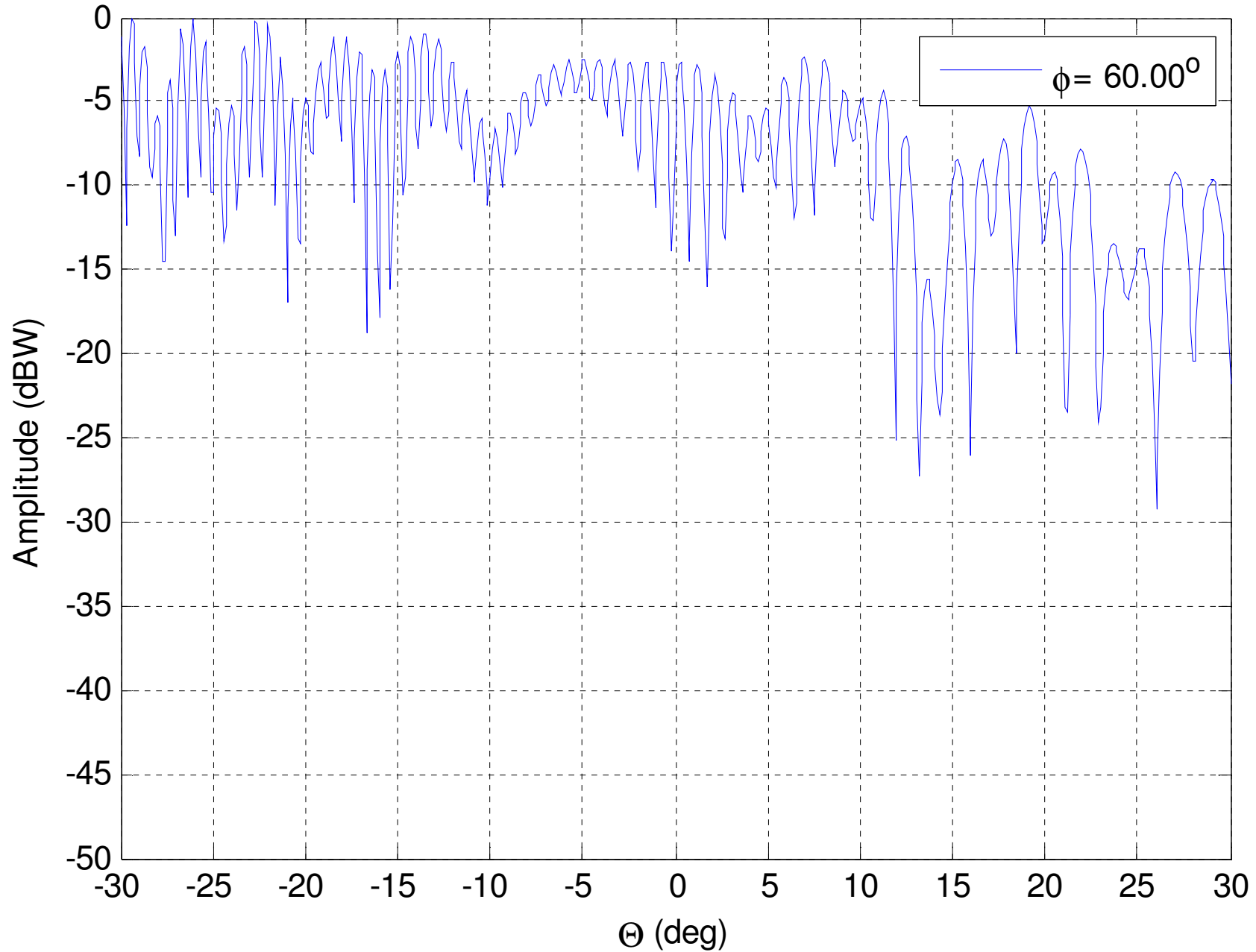
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -0.87 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

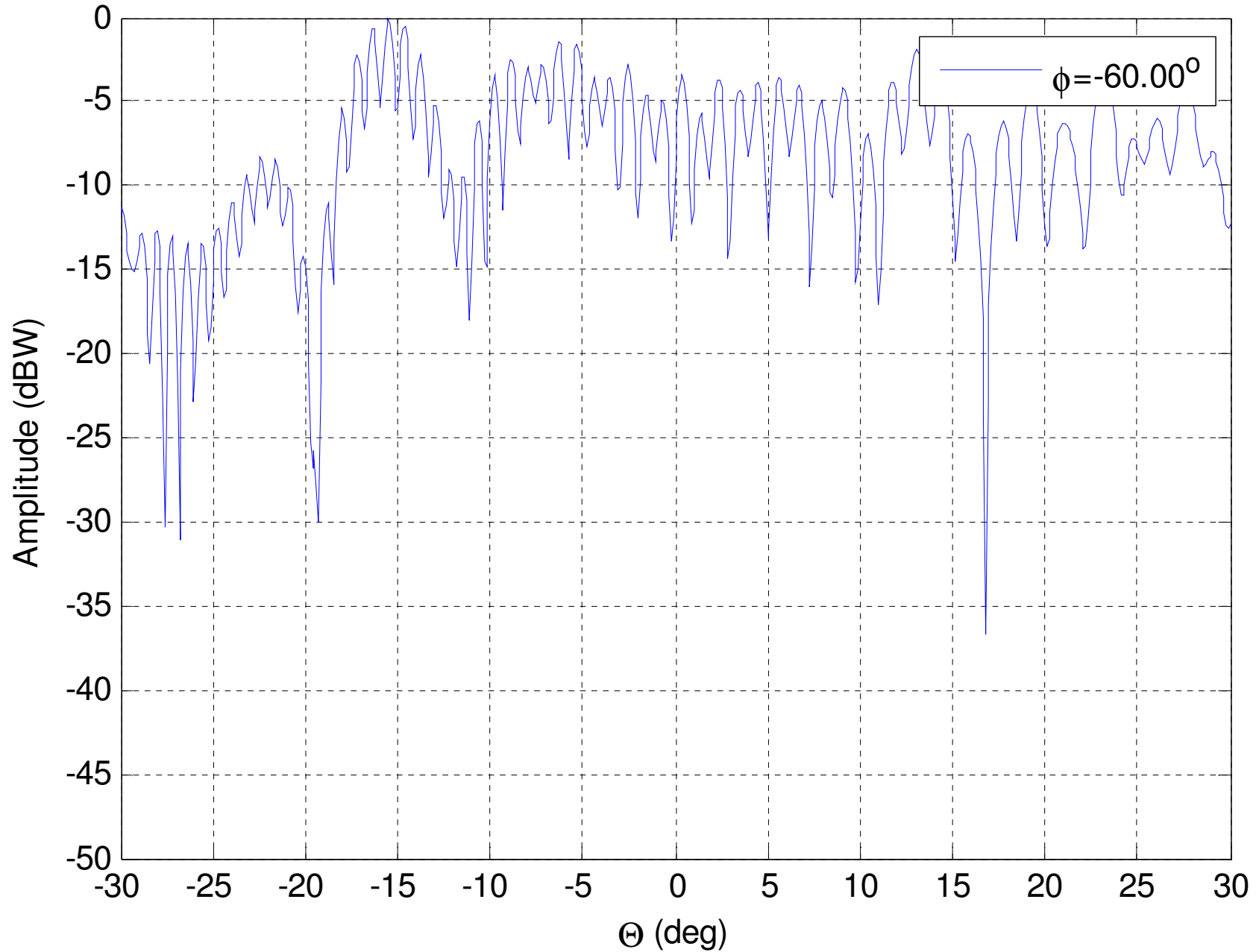
Input file: tx-17.3-rhcp-60.cut, Peak: -1.04 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

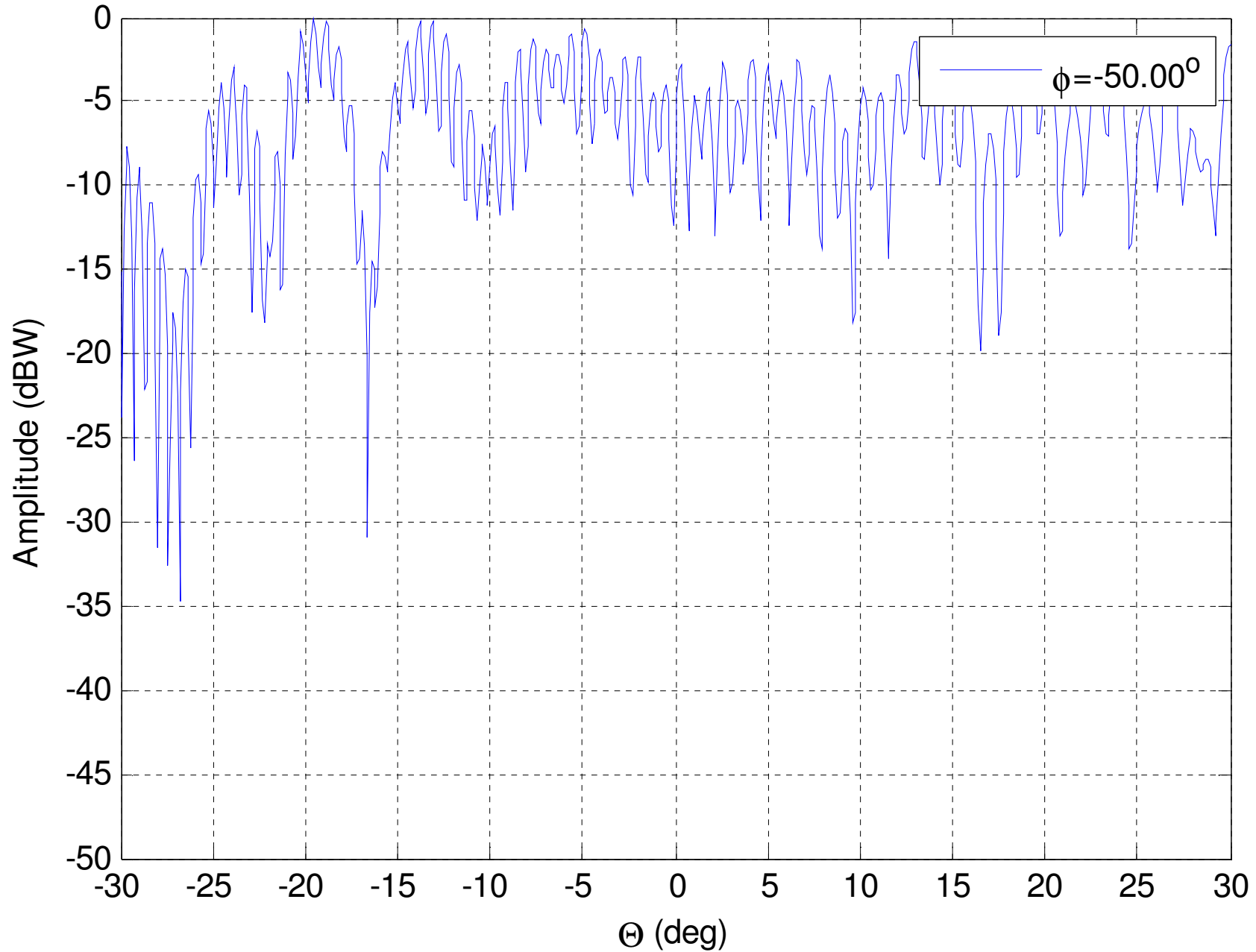
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -0.10 dBW, Date: 15-Dec-2011



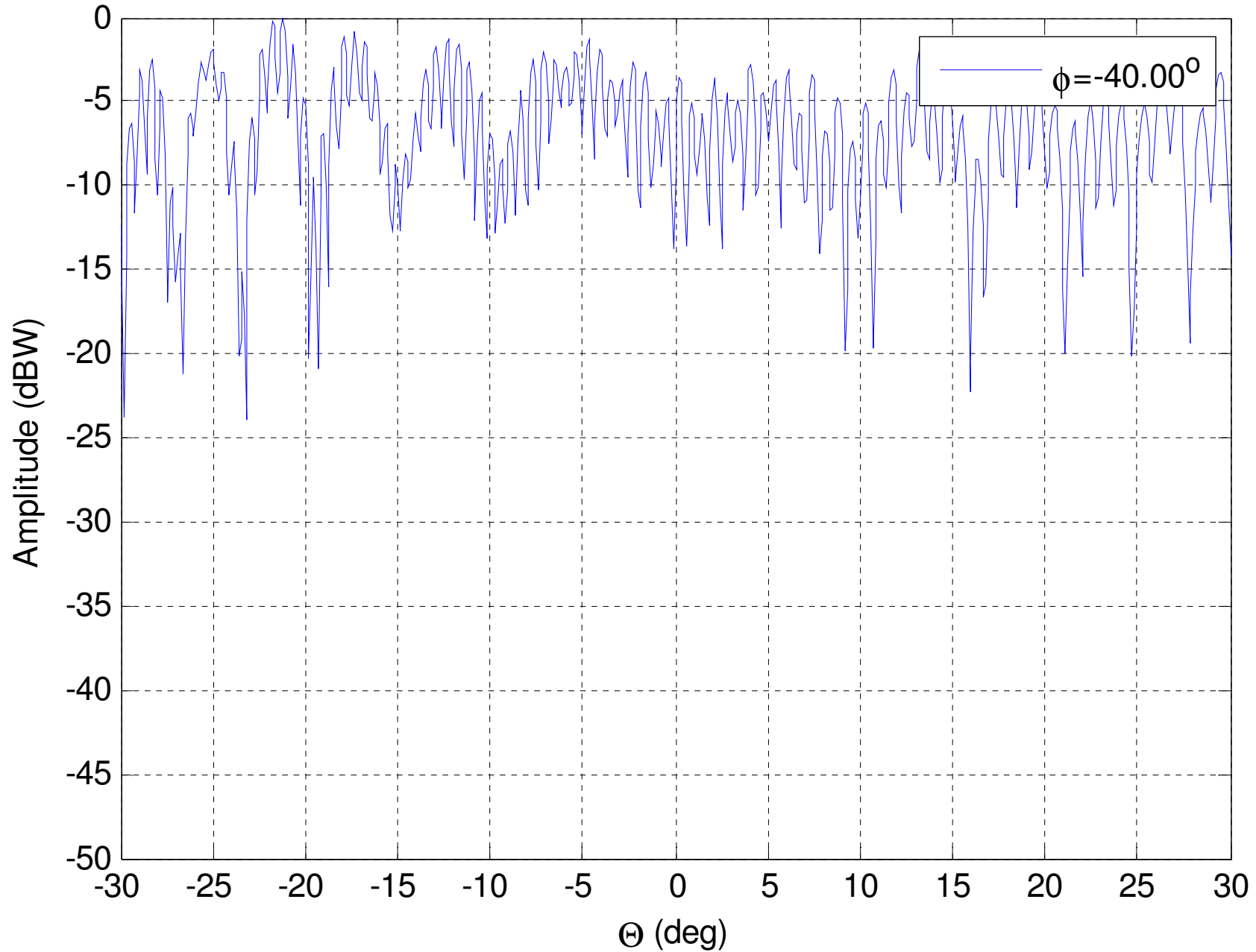
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -0.71 dBW, Date: 15-Dec-2011



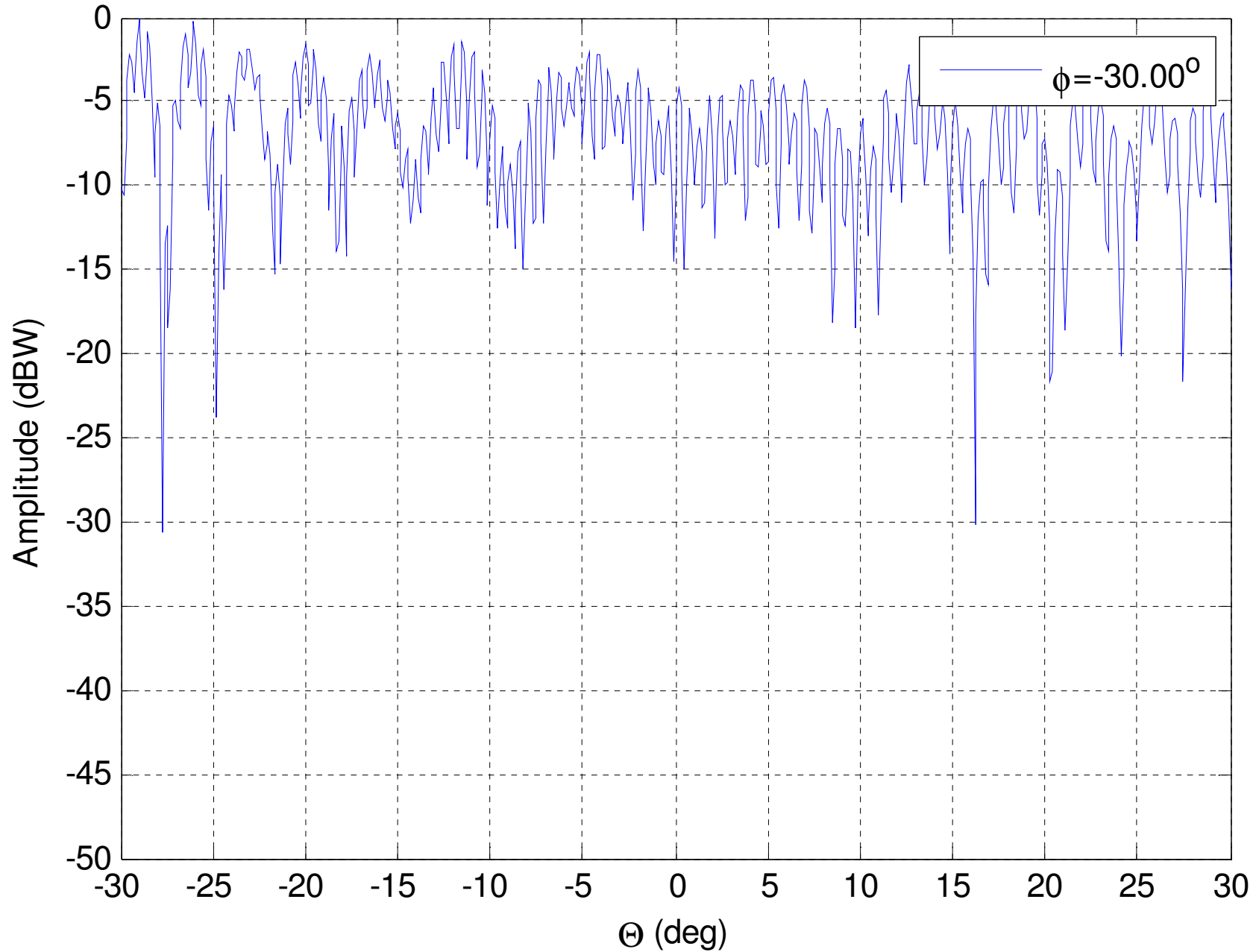
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: 0.05 dBW, Date: 15-Dec-2011



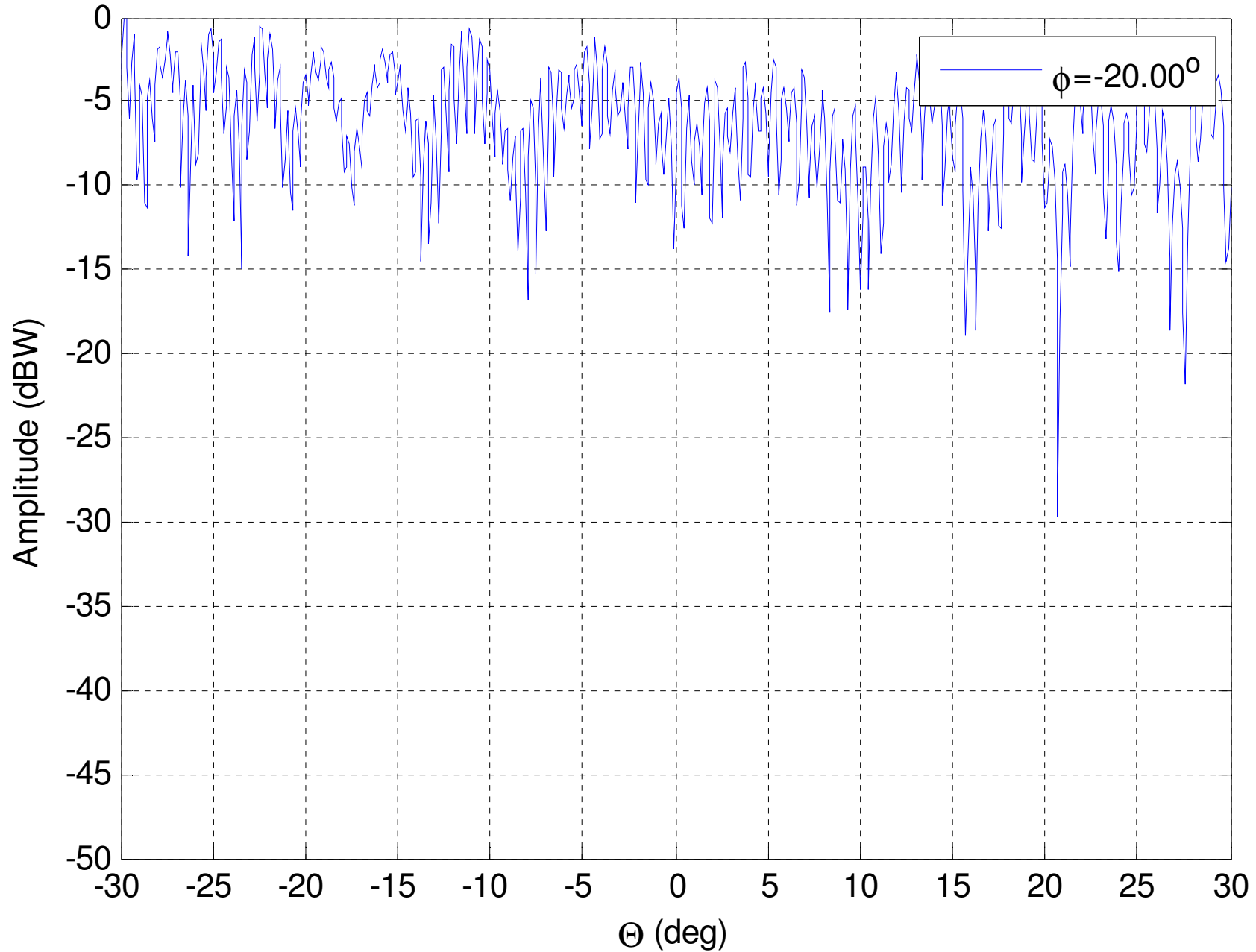
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 0.67 dBW, Date: 15-Dec-2011



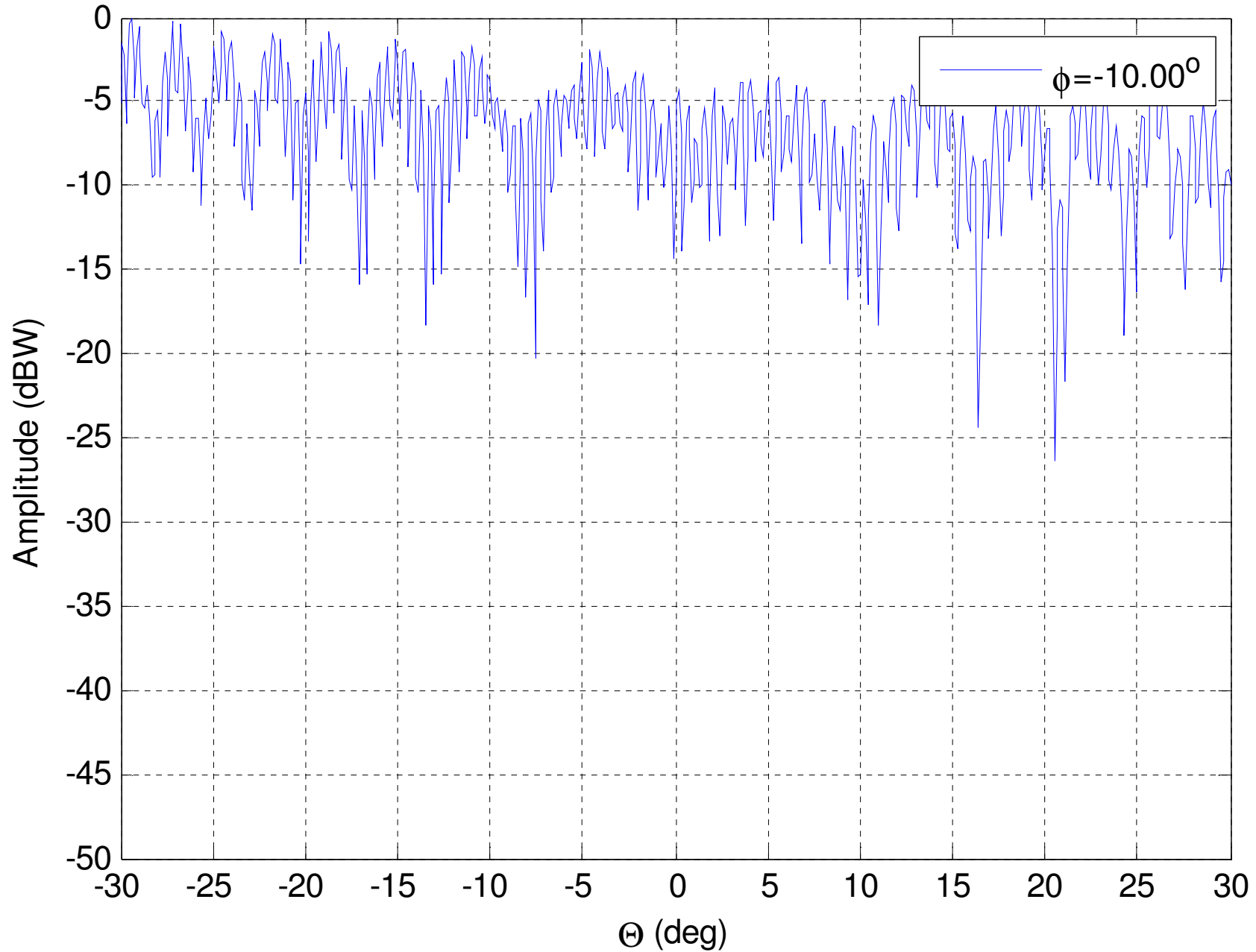
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 0.03 dBW, Date: 15-Dec-2011



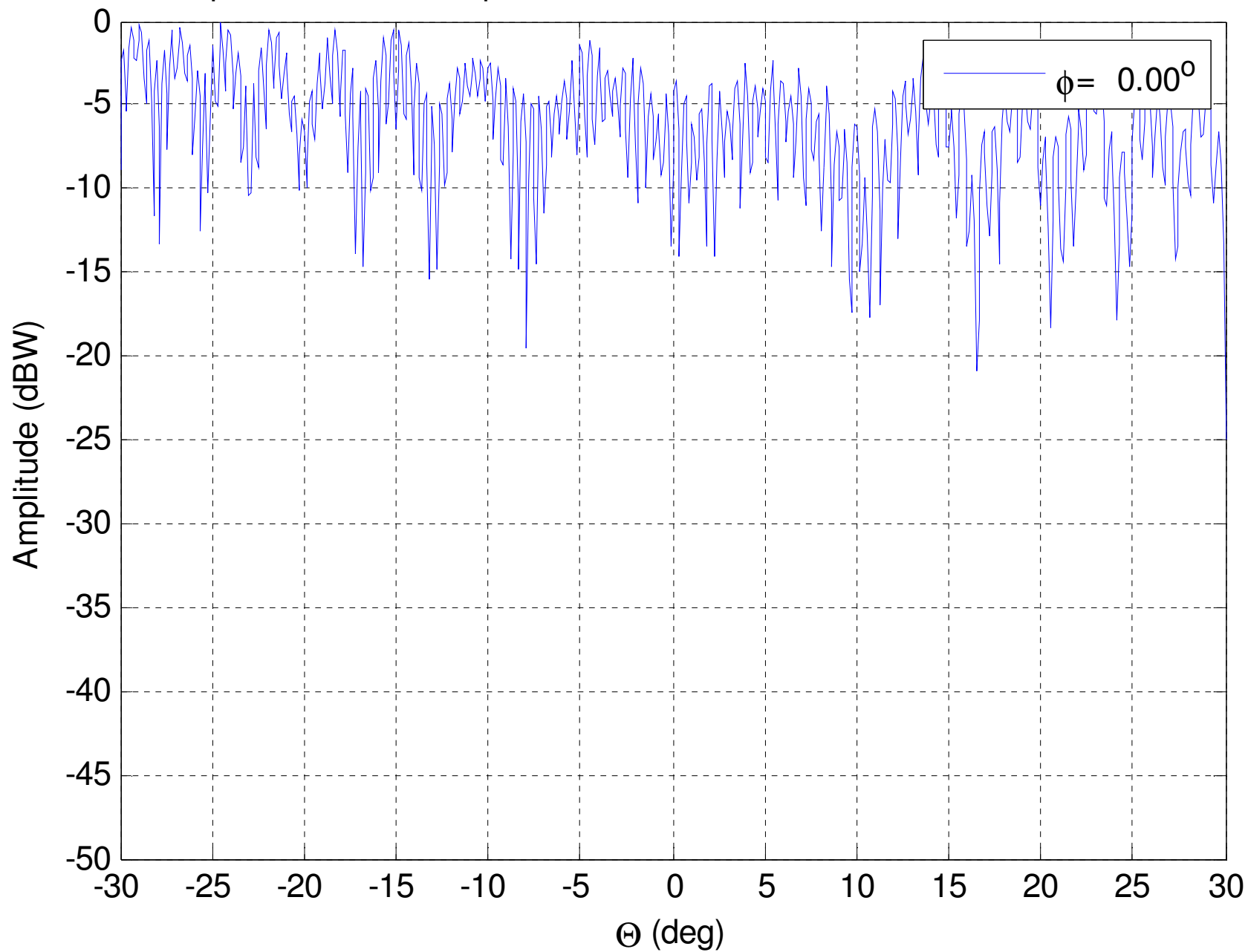
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 0.78 dBW, Date: 15-Dec-2011



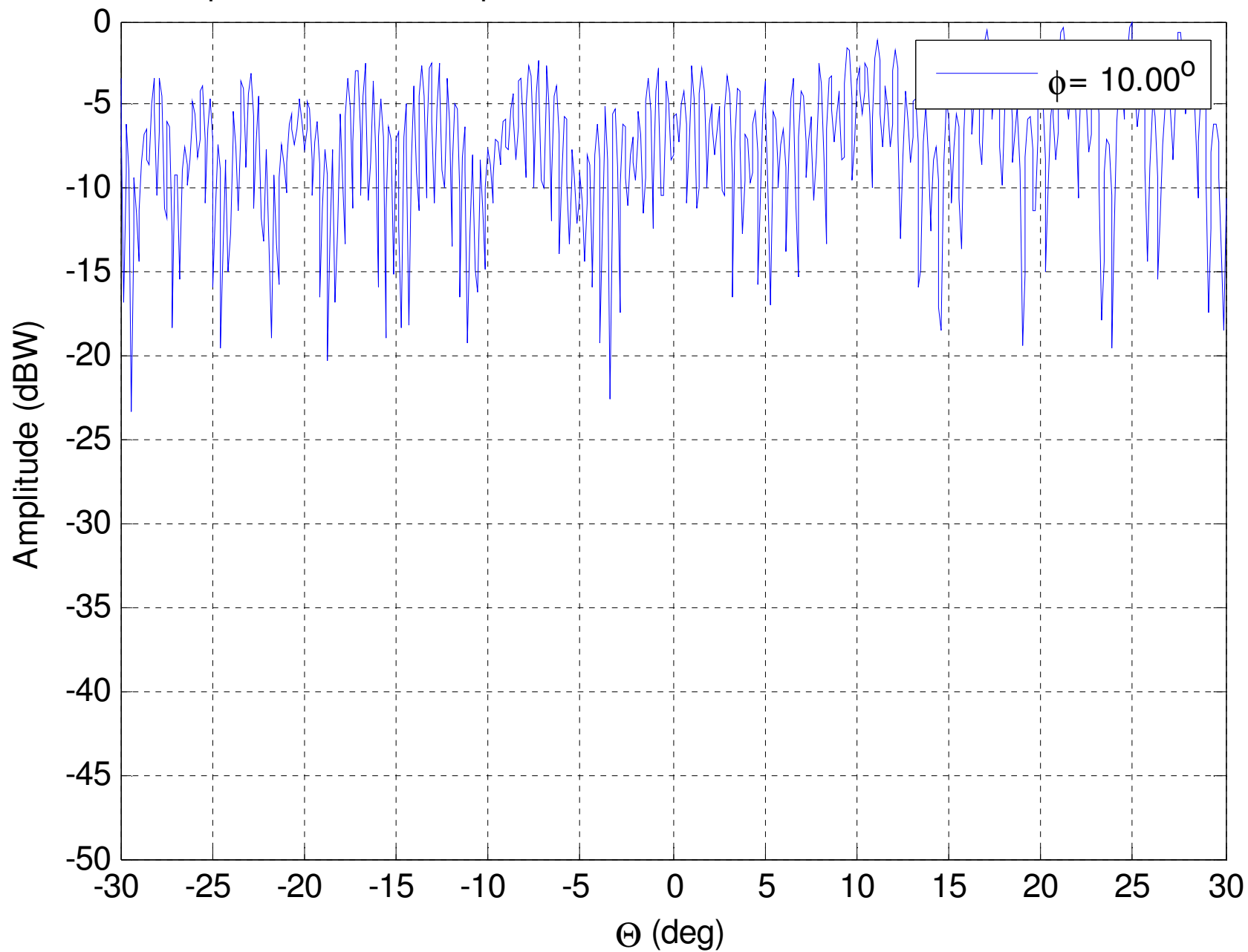
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -0.01 dBW, Date: 15-Dec-2011



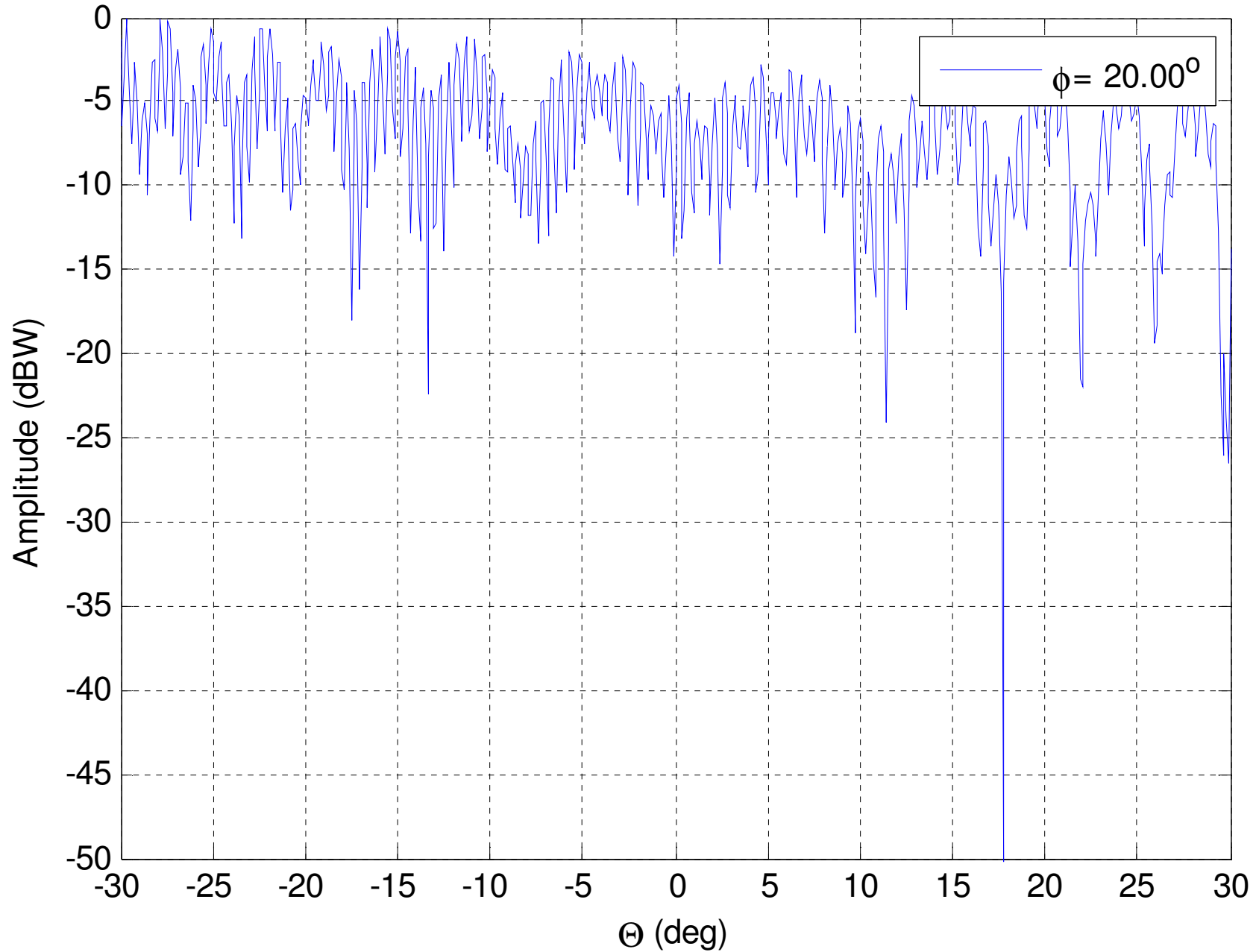
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 0.65 dBW, Date: 15-Dec-2011



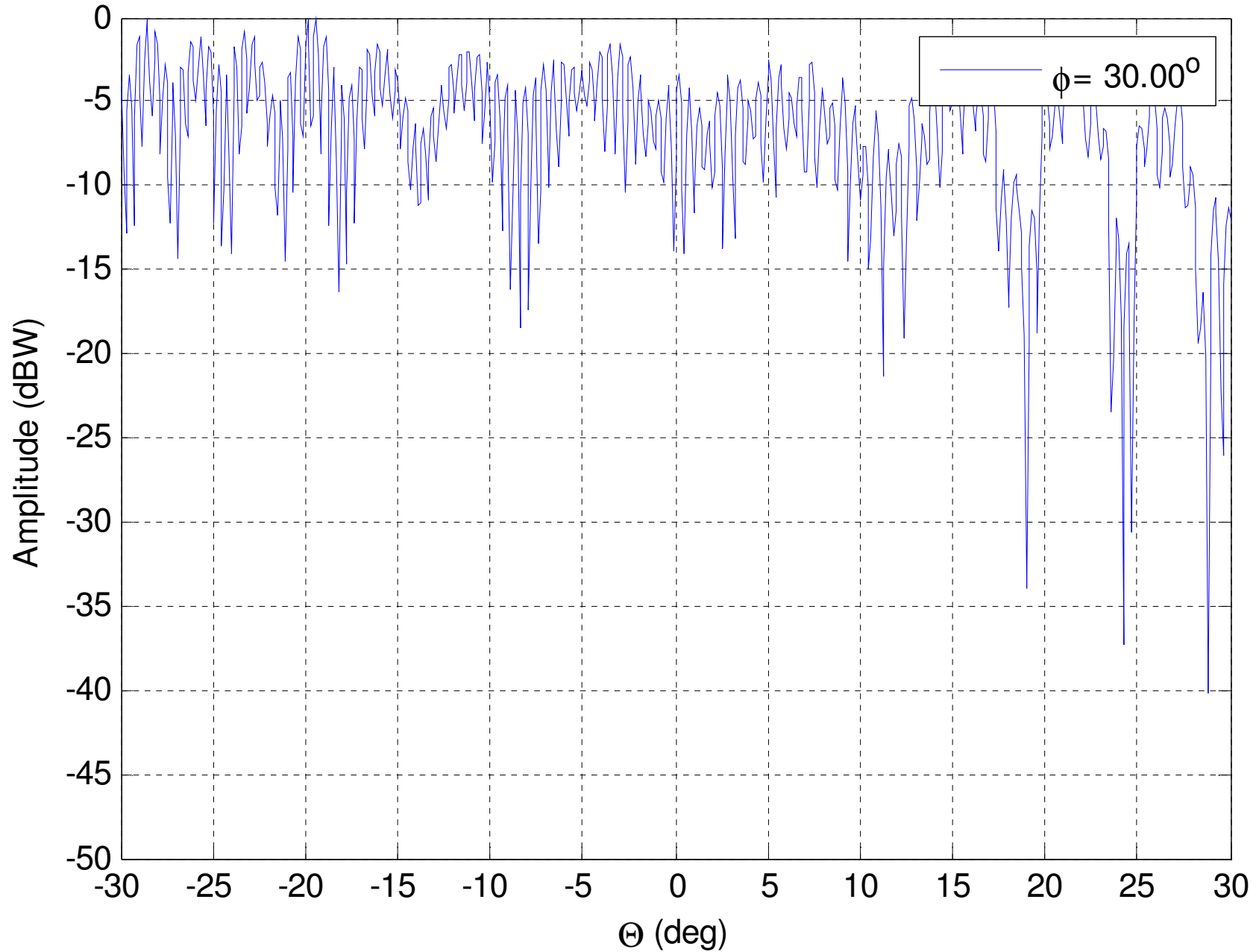
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 0.40 dBW, Date: 15-Dec-2011



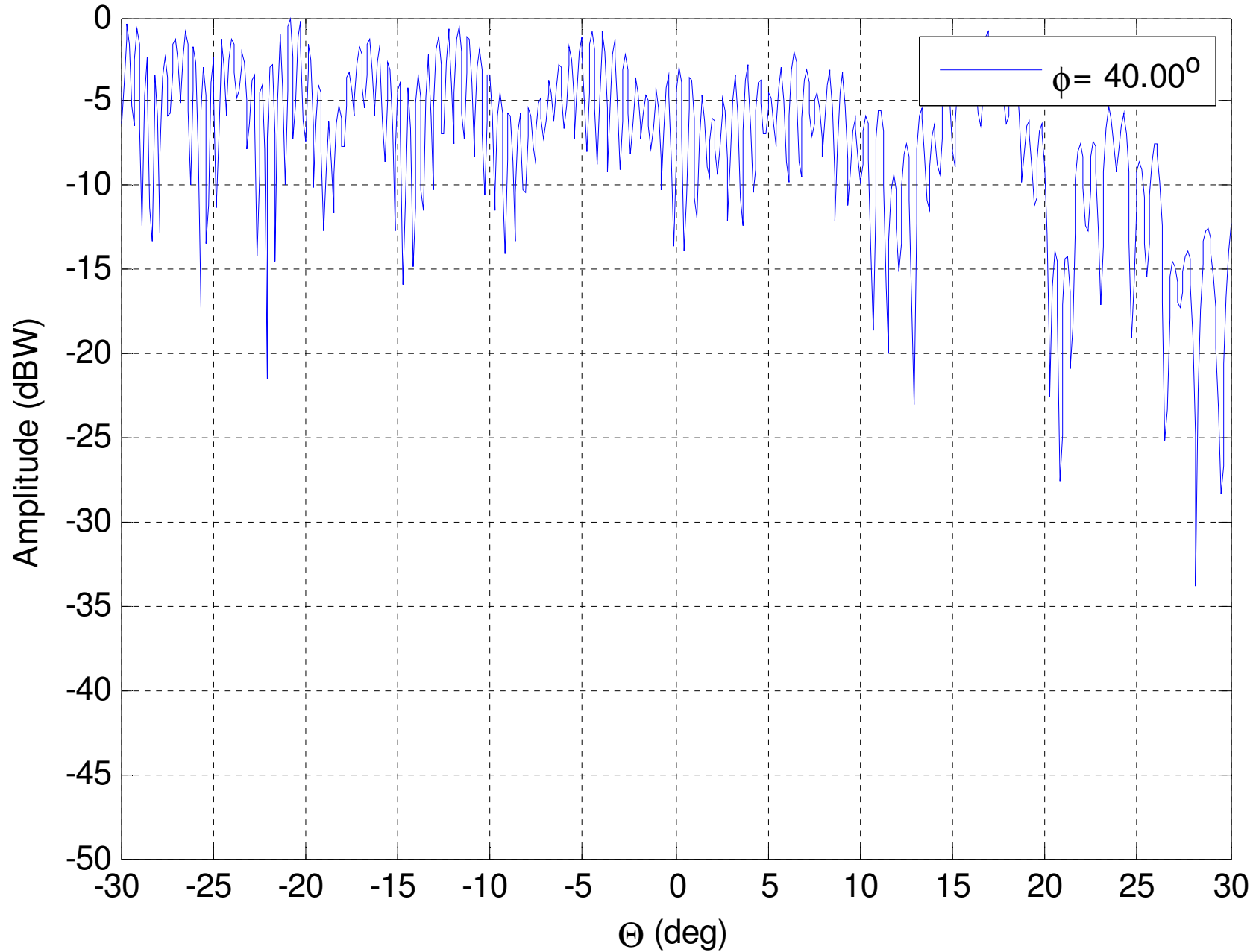
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -0.10 dBW, Date: 15-Dec-2011



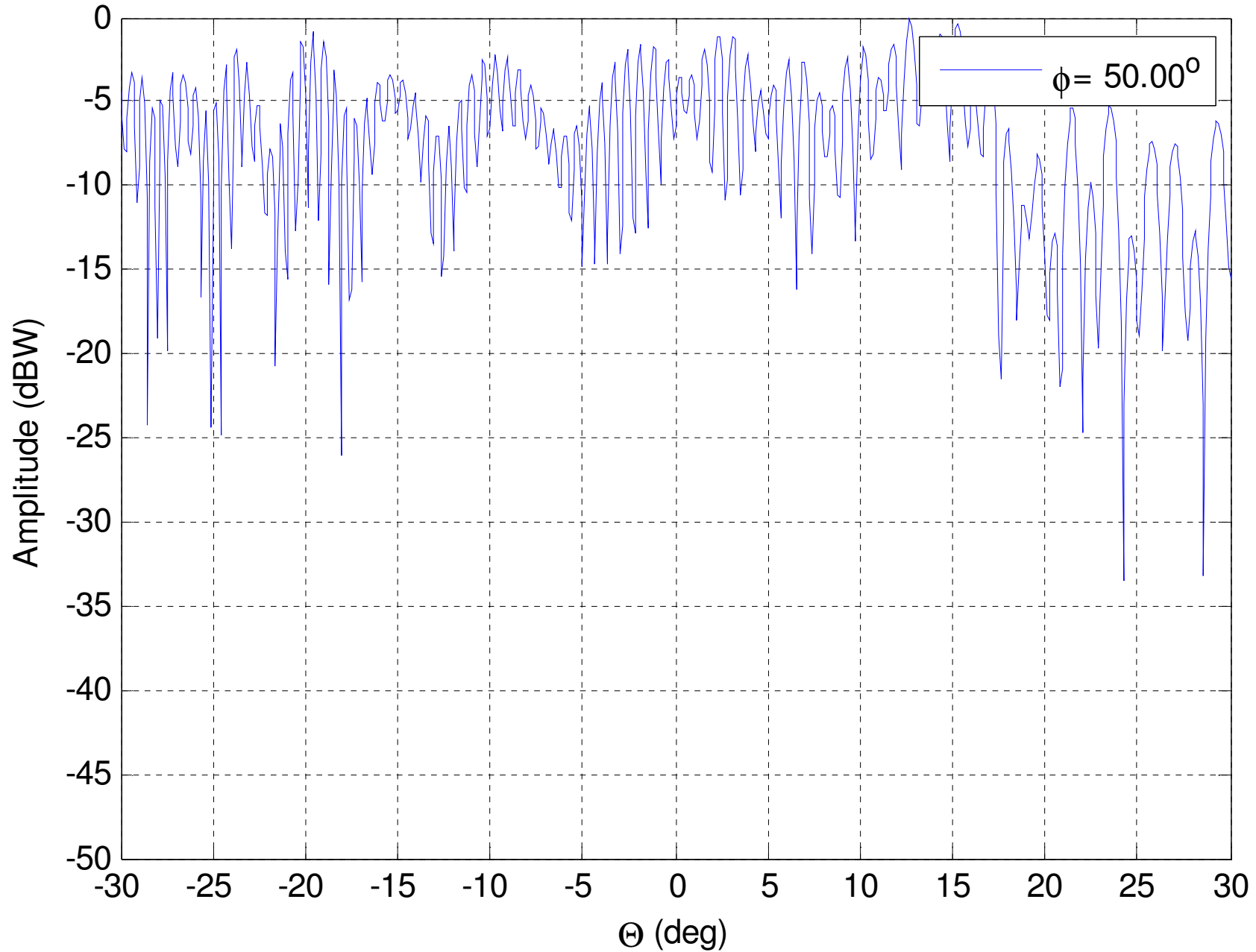
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -0.52 dBW, Date: 15-Dec-2011



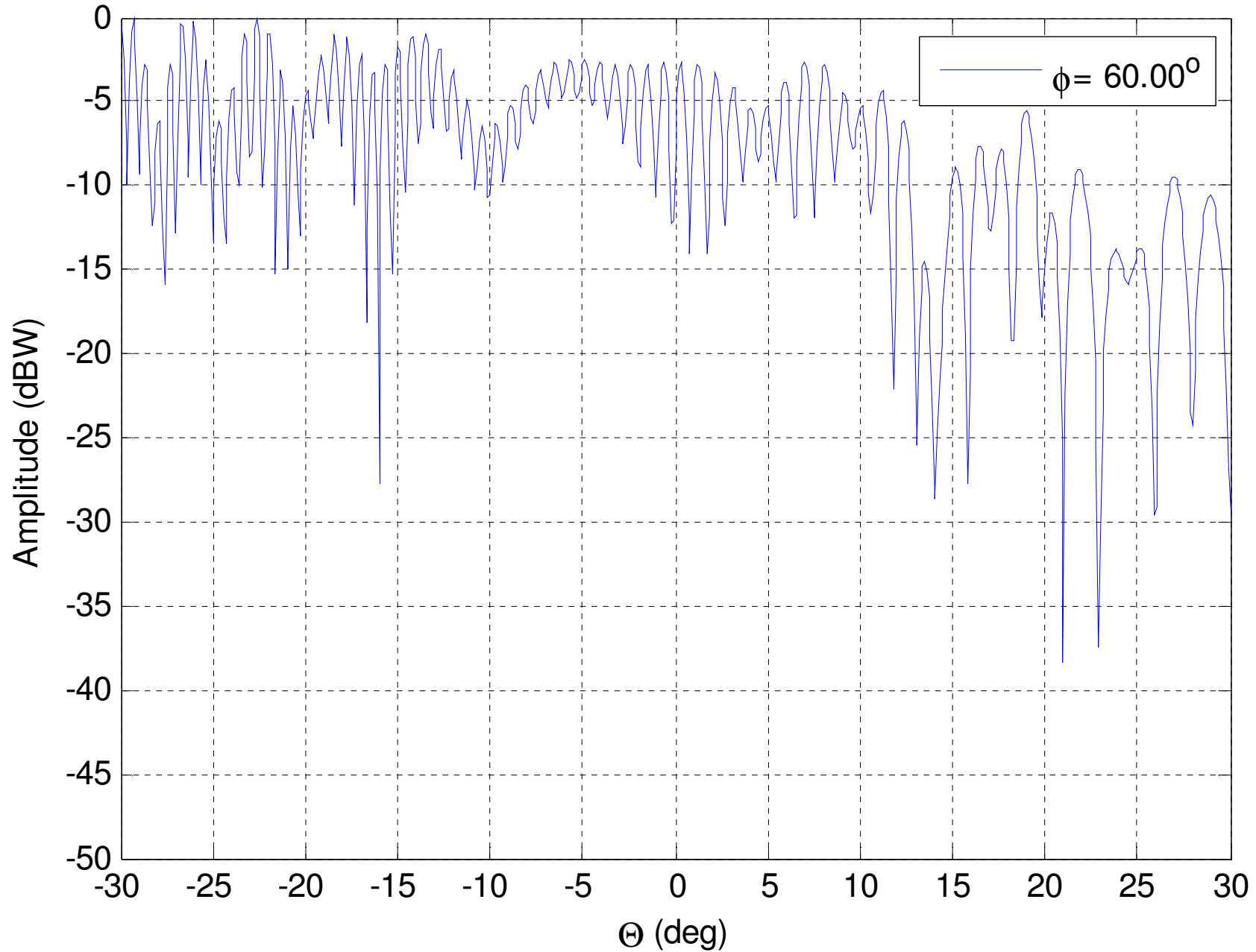
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -0.94 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

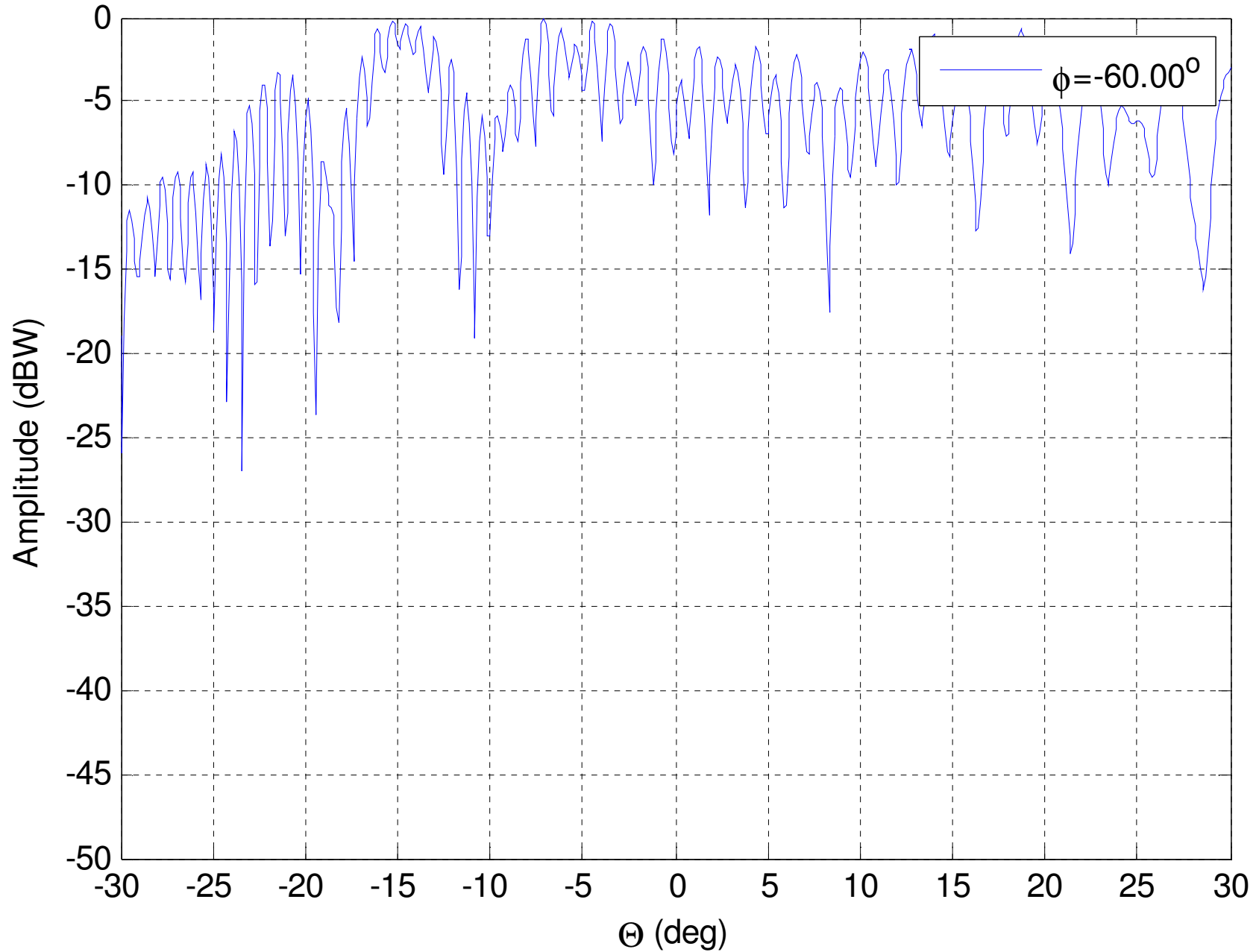
Input file: tx-17.3-lhcp-60.cut, Peak: -0.95 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

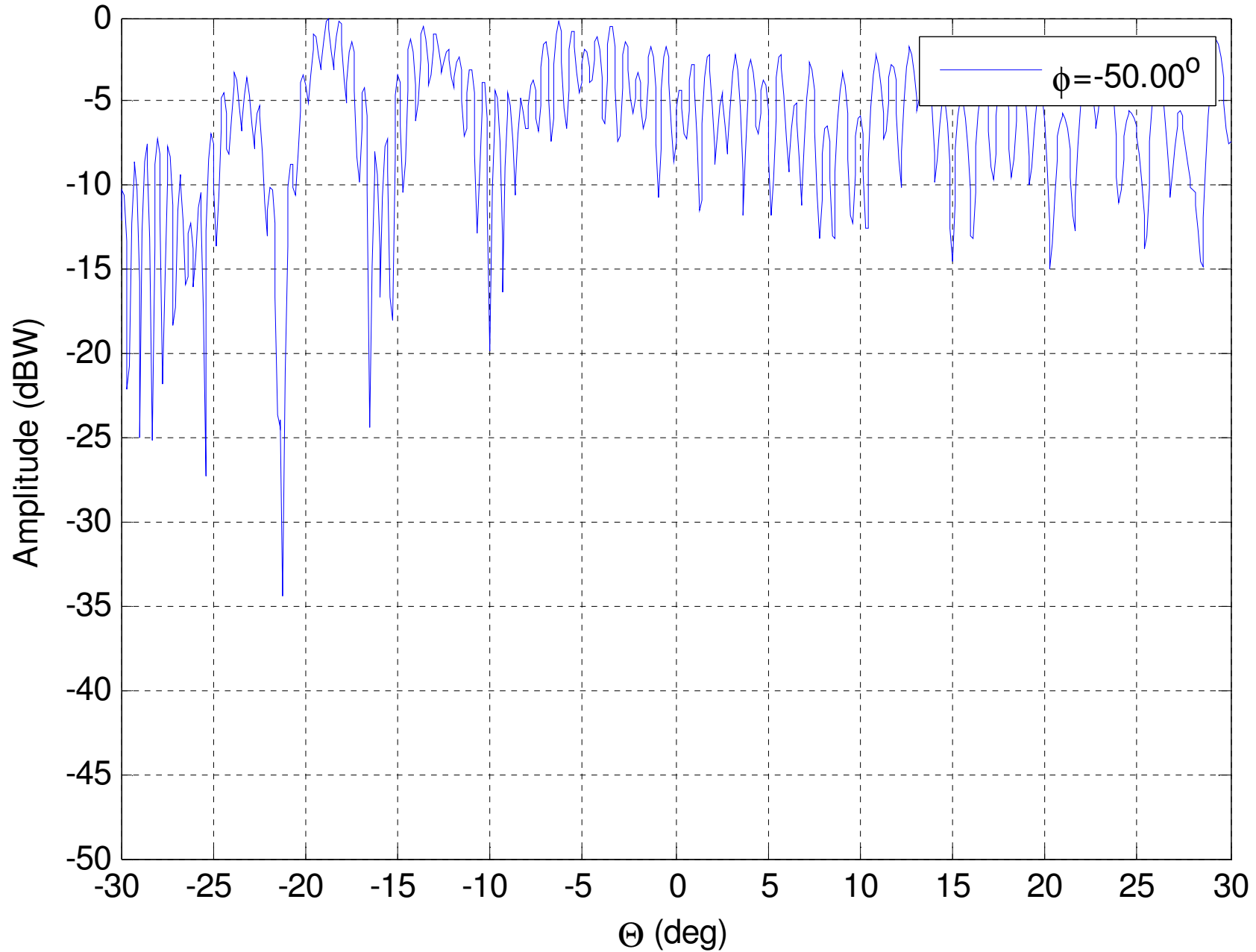
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -1.96 dBW, Date: 15-Dec-2011



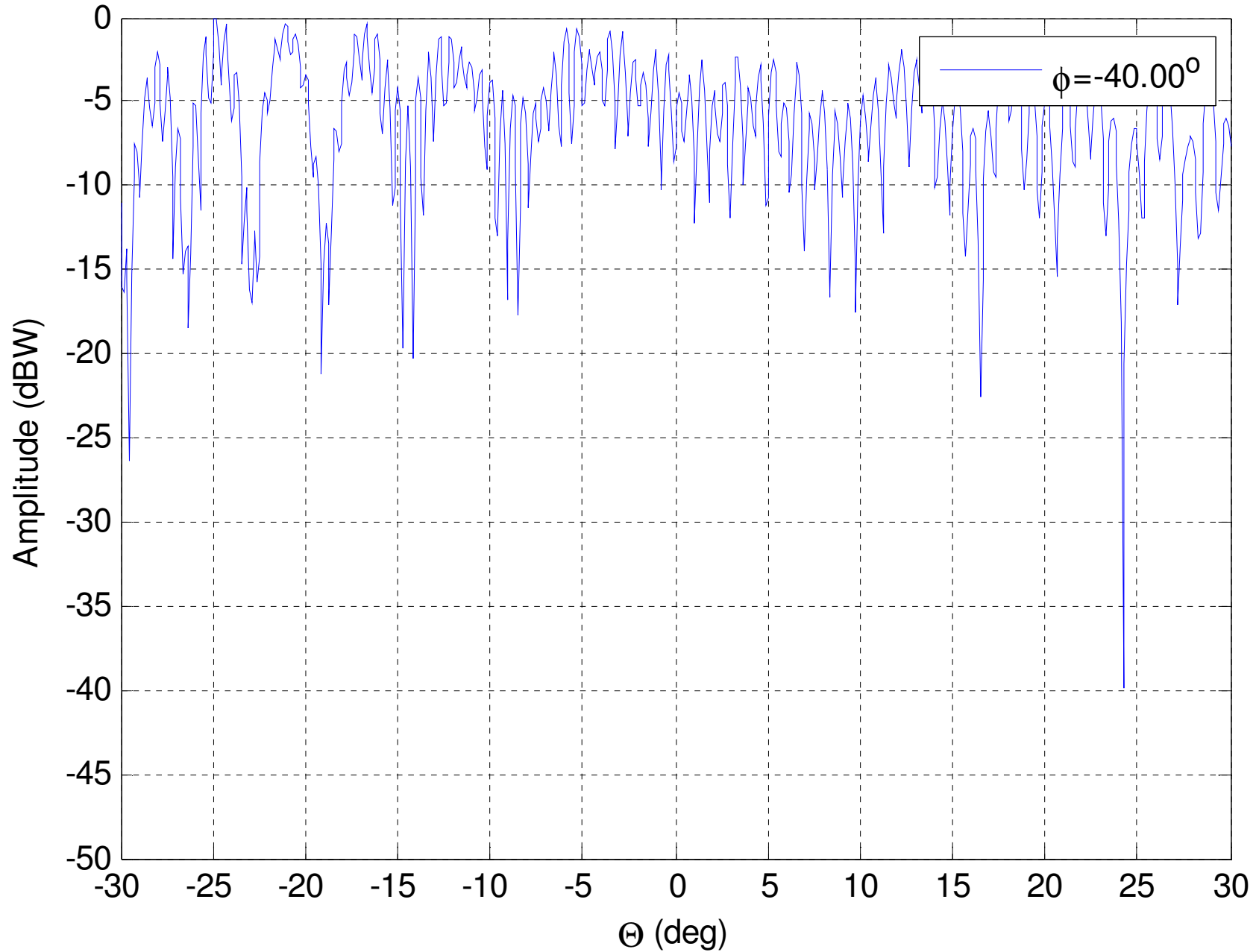
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -1.50 dBW, Date: 15-Dec-2011



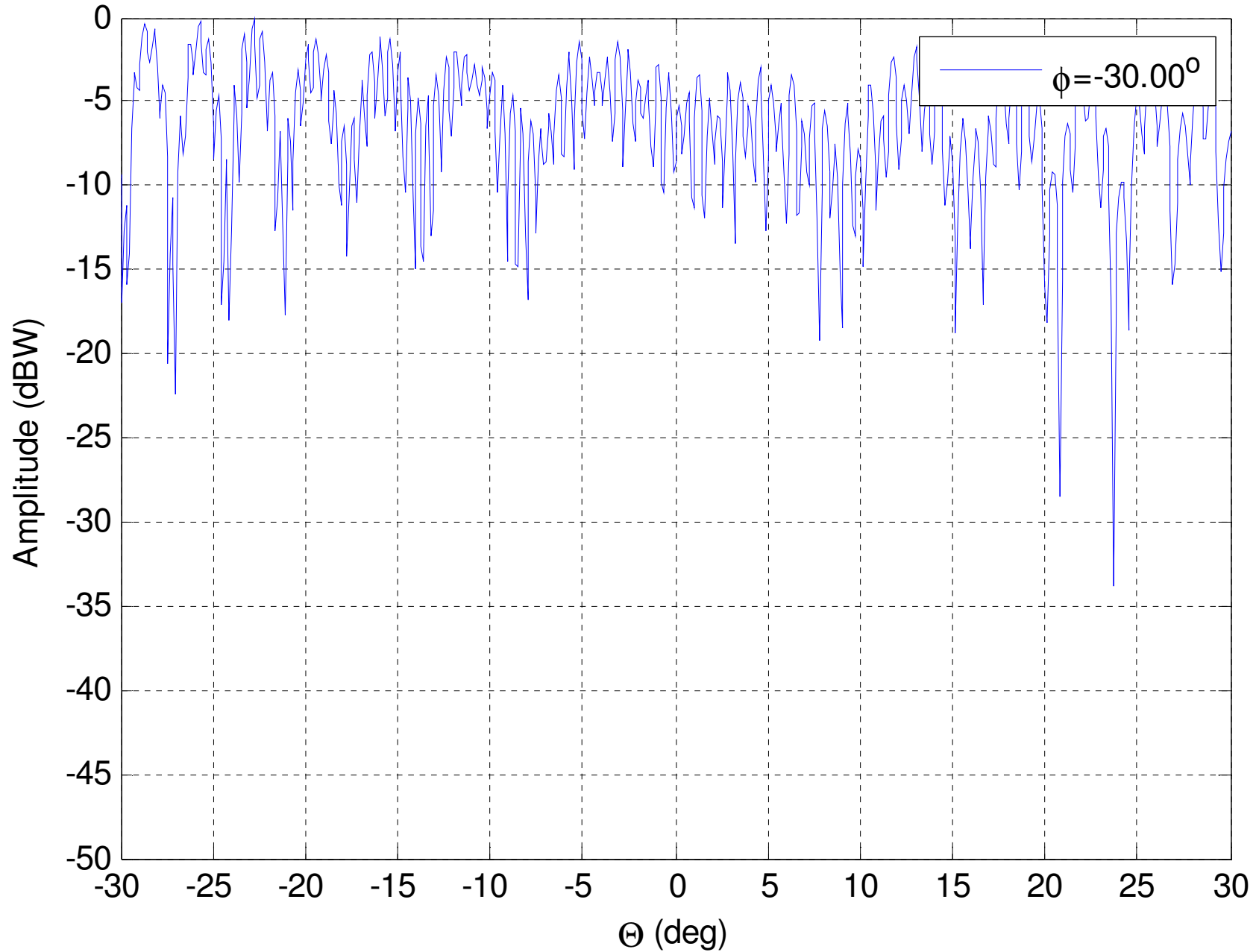
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -1.16 dBW, Date: 15-Dec-2011



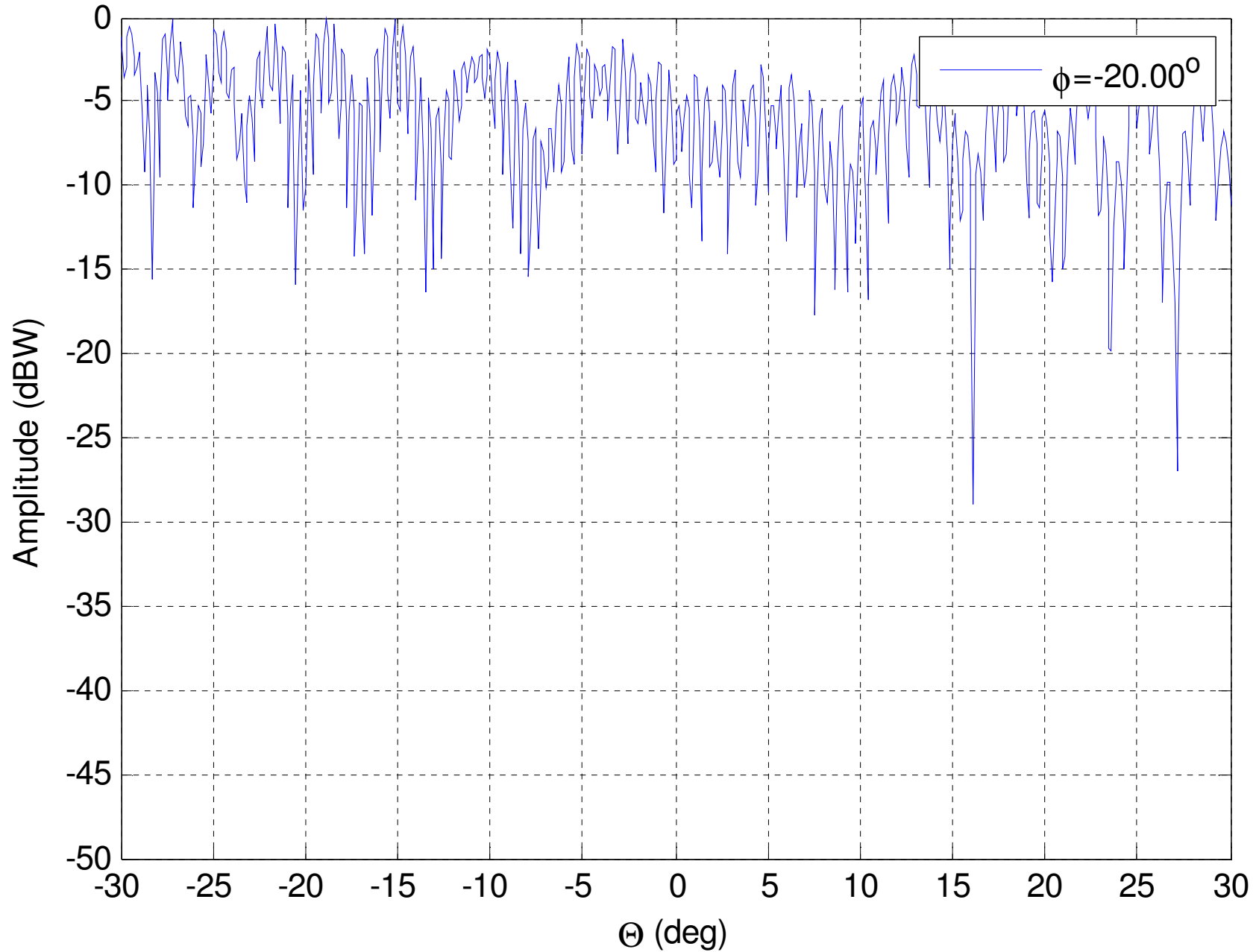
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -0.31 dBW, Date: 15-Dec-2011



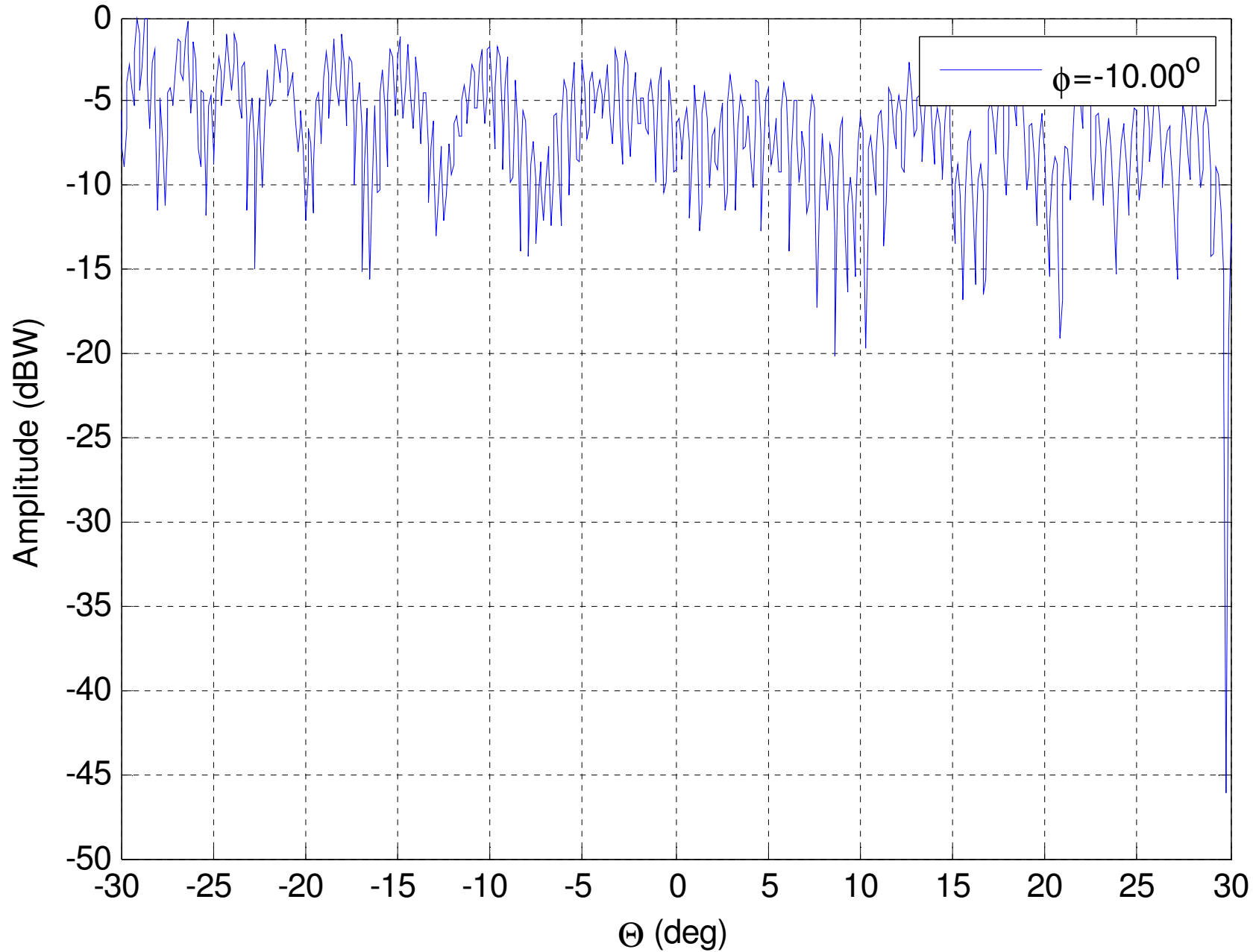
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -0.41 dBW, Date: 15-Dec-2011



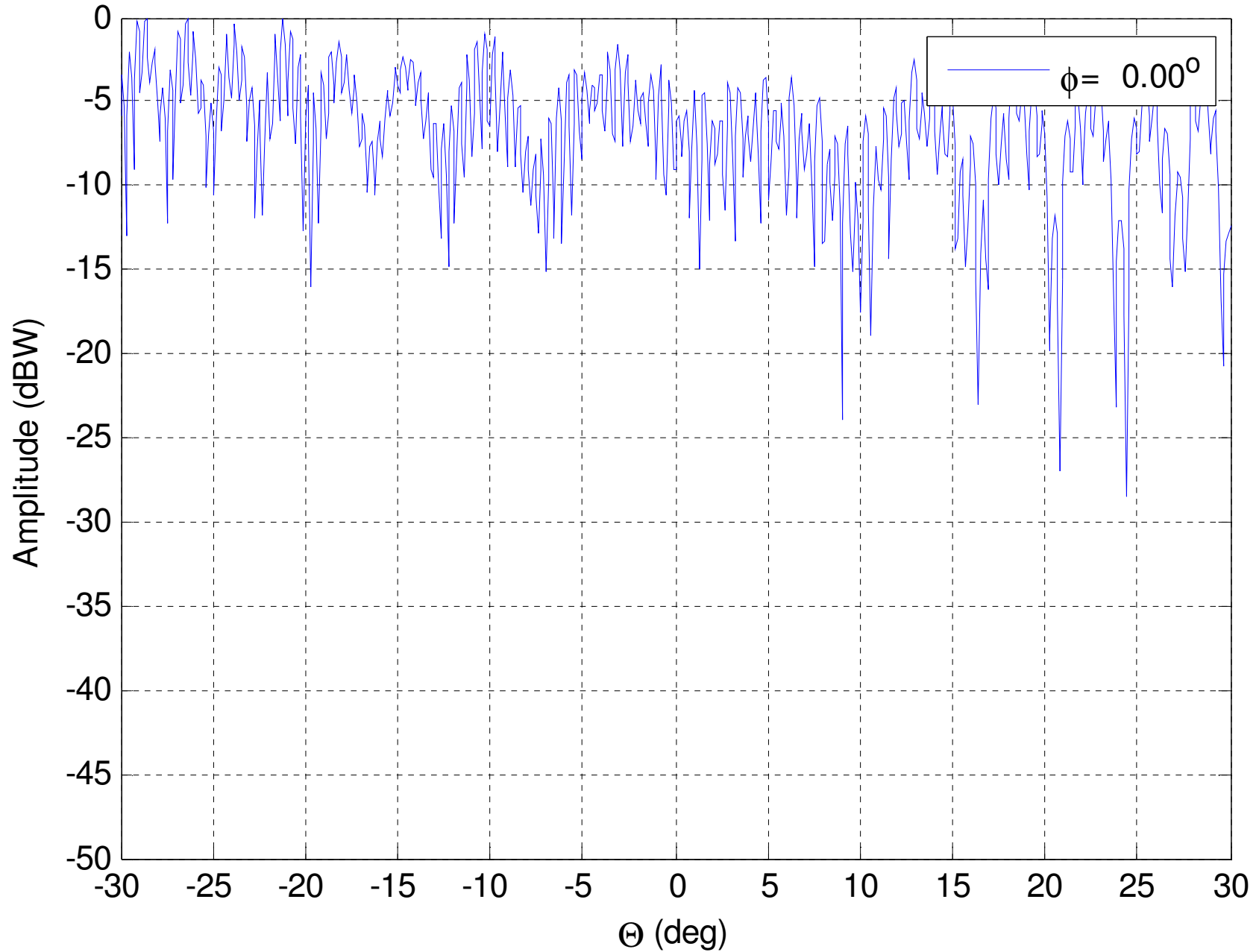
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 0.22 dBW, Date: 15-Dec-2011



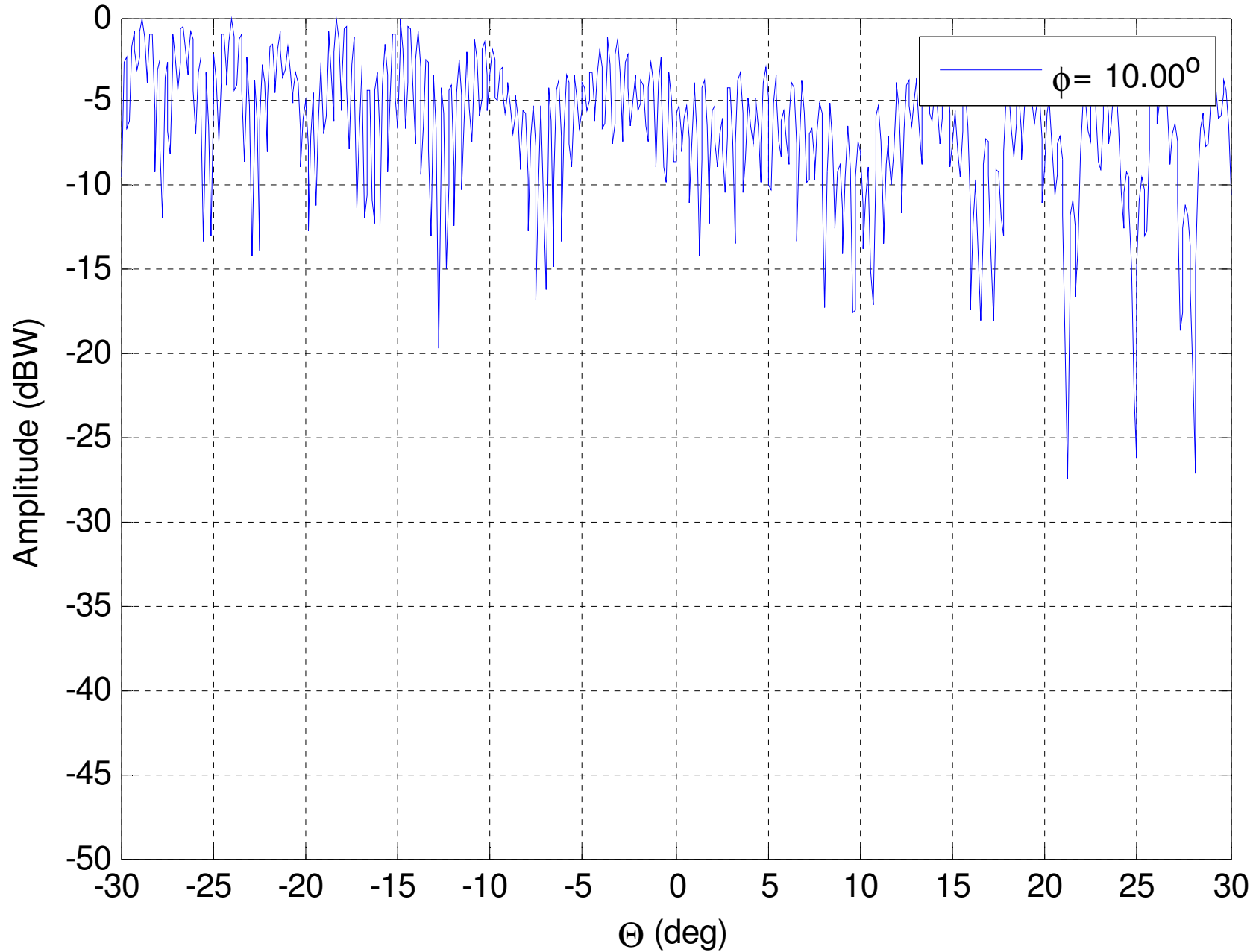
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 0.17 dBW, Date: 15-Dec-2011



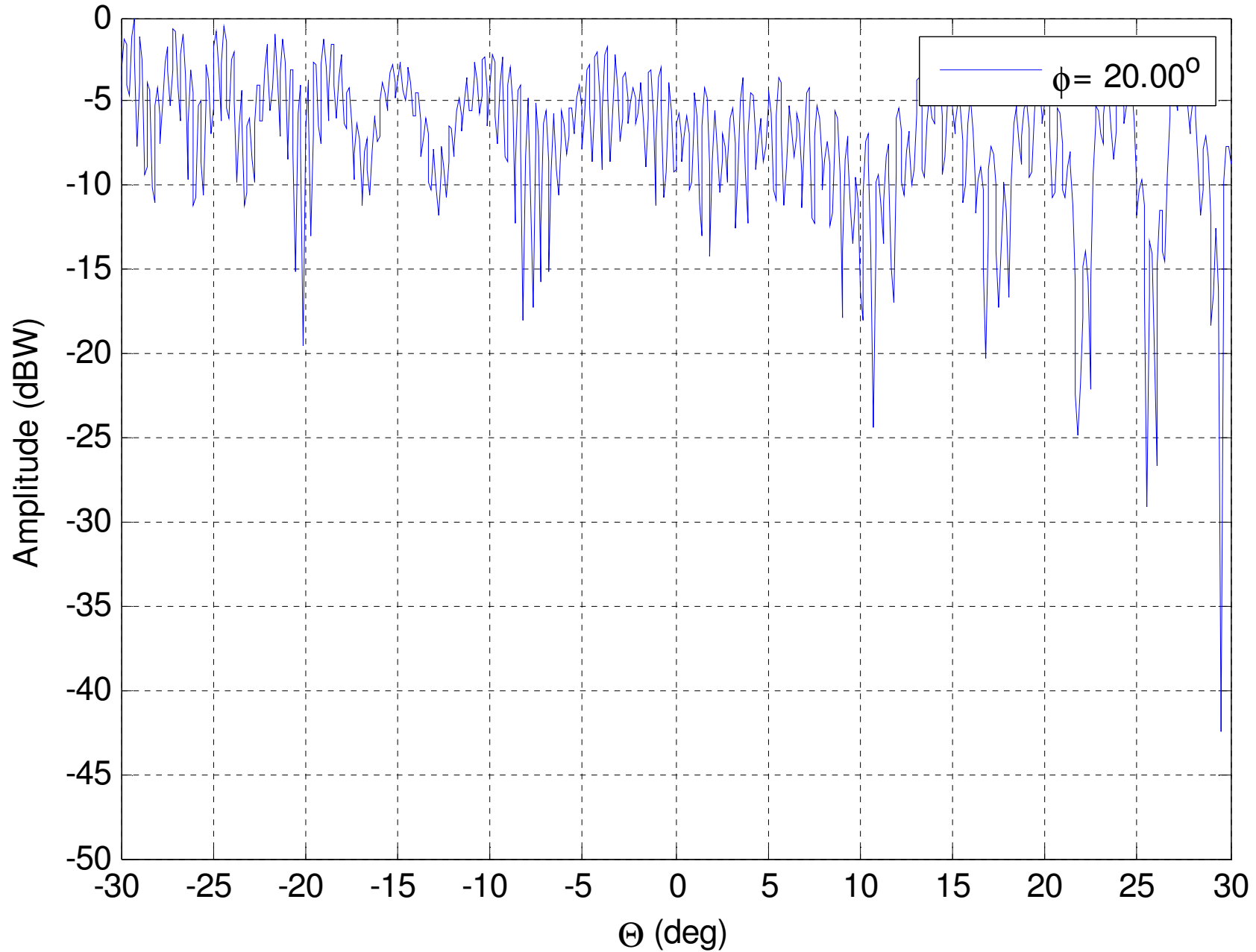
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -0.33 dBW, Date: 15-Dec-2011



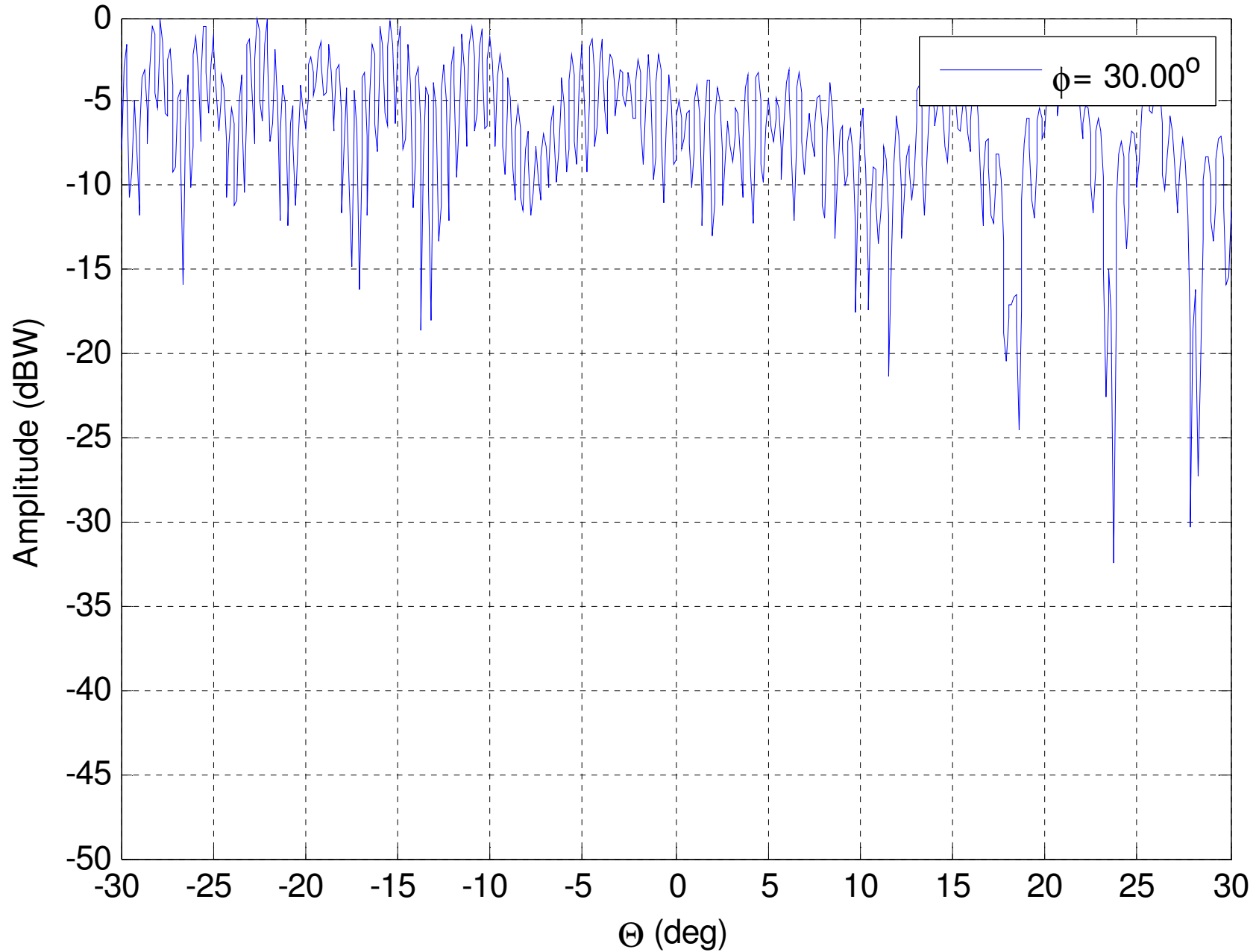
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 0.20 dBW, Date: 15-Dec-2011



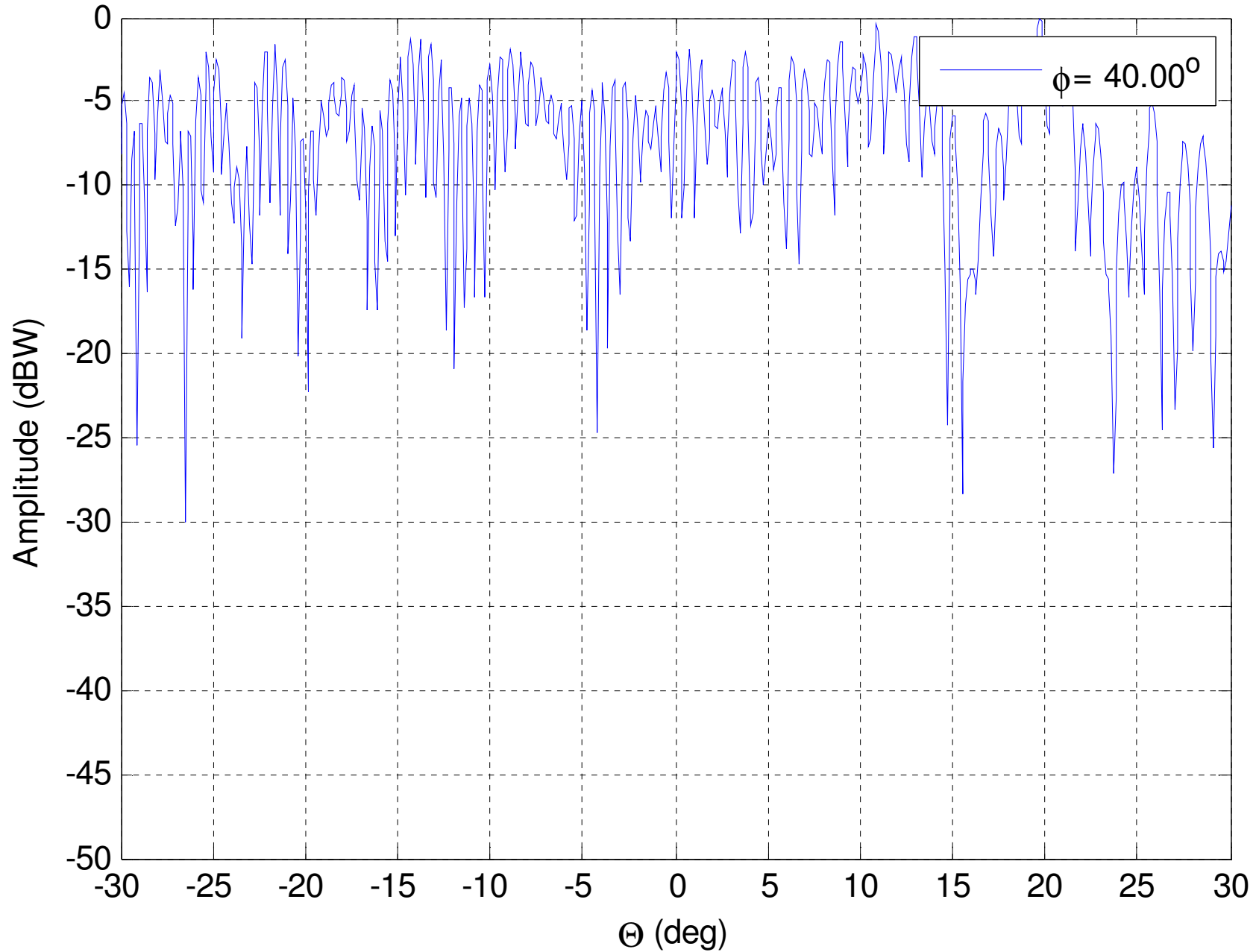
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.45 dBW, Date: 15-Dec-2011



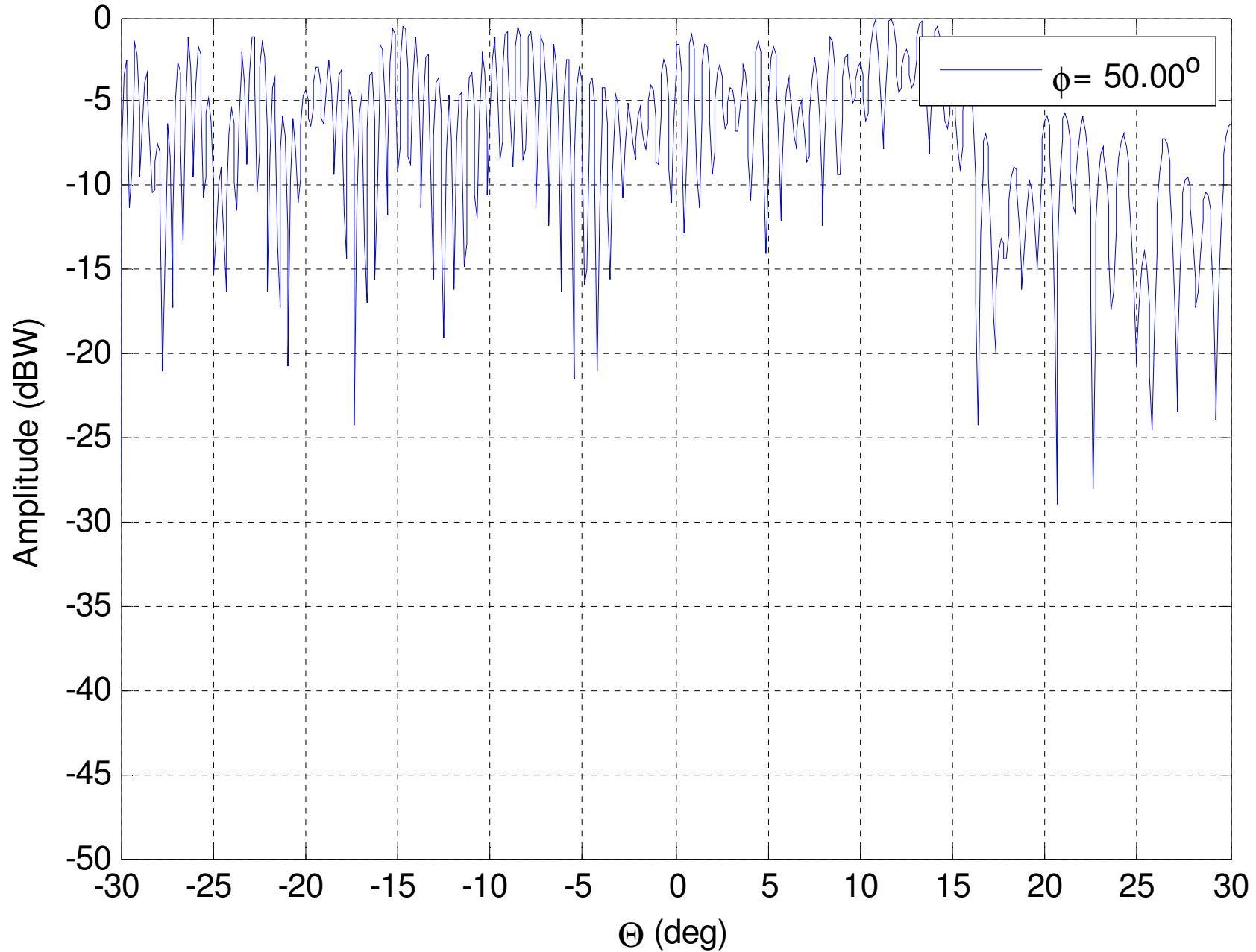
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -0.98 dBW, Date: 15-Dec-2011



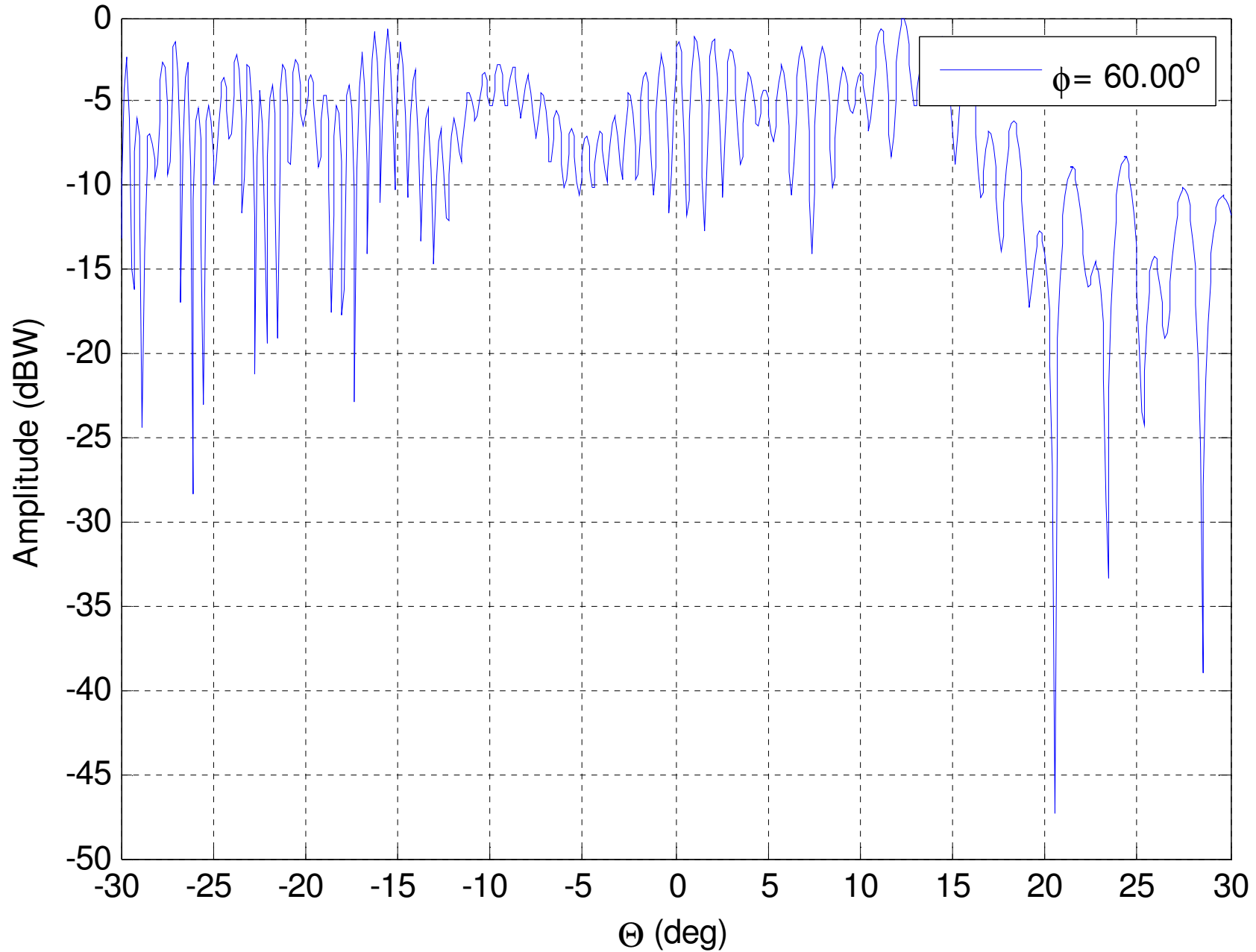
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -1.61 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

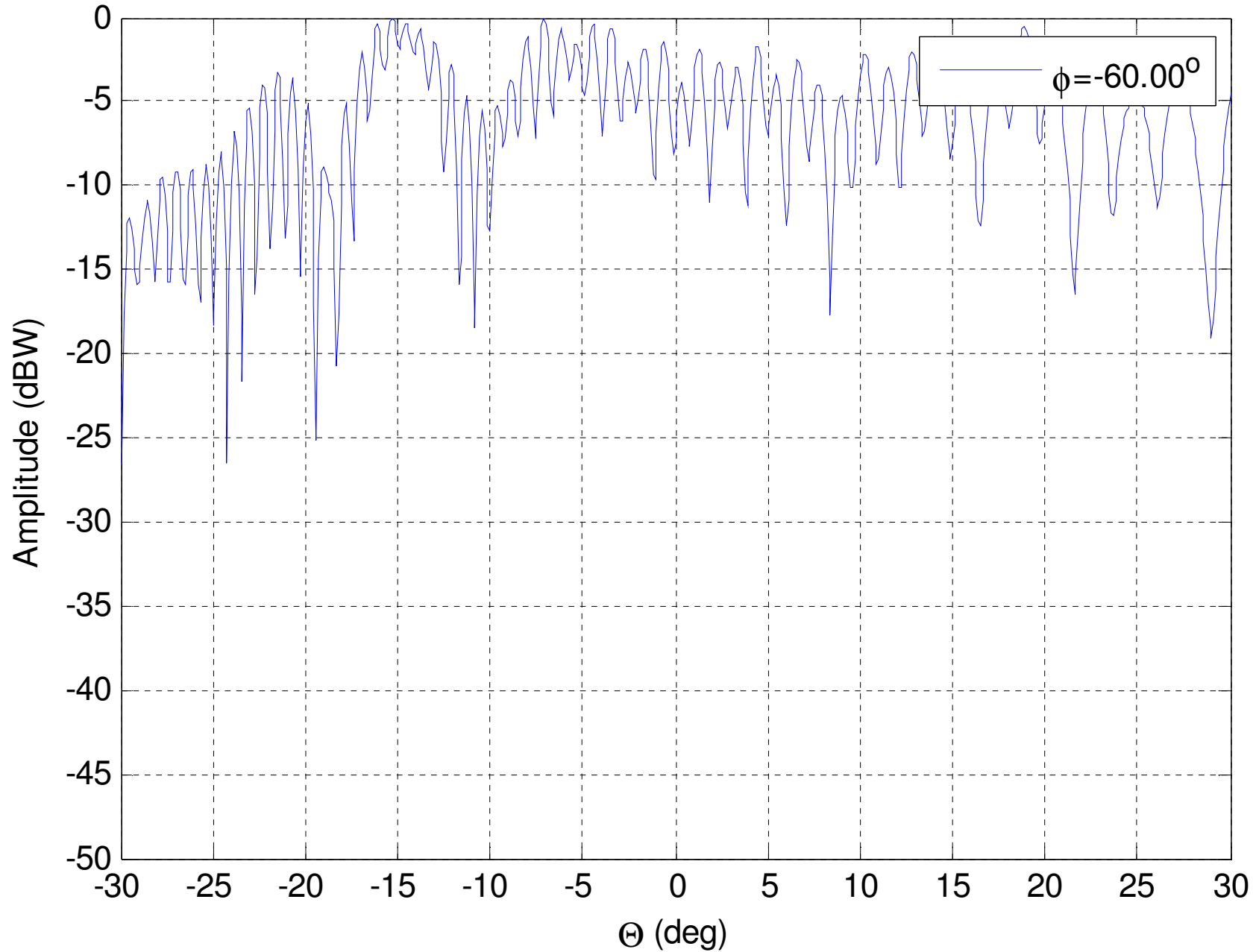
Input file: tx-17.5-rhcp-60.cut, Peak: -1.59 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

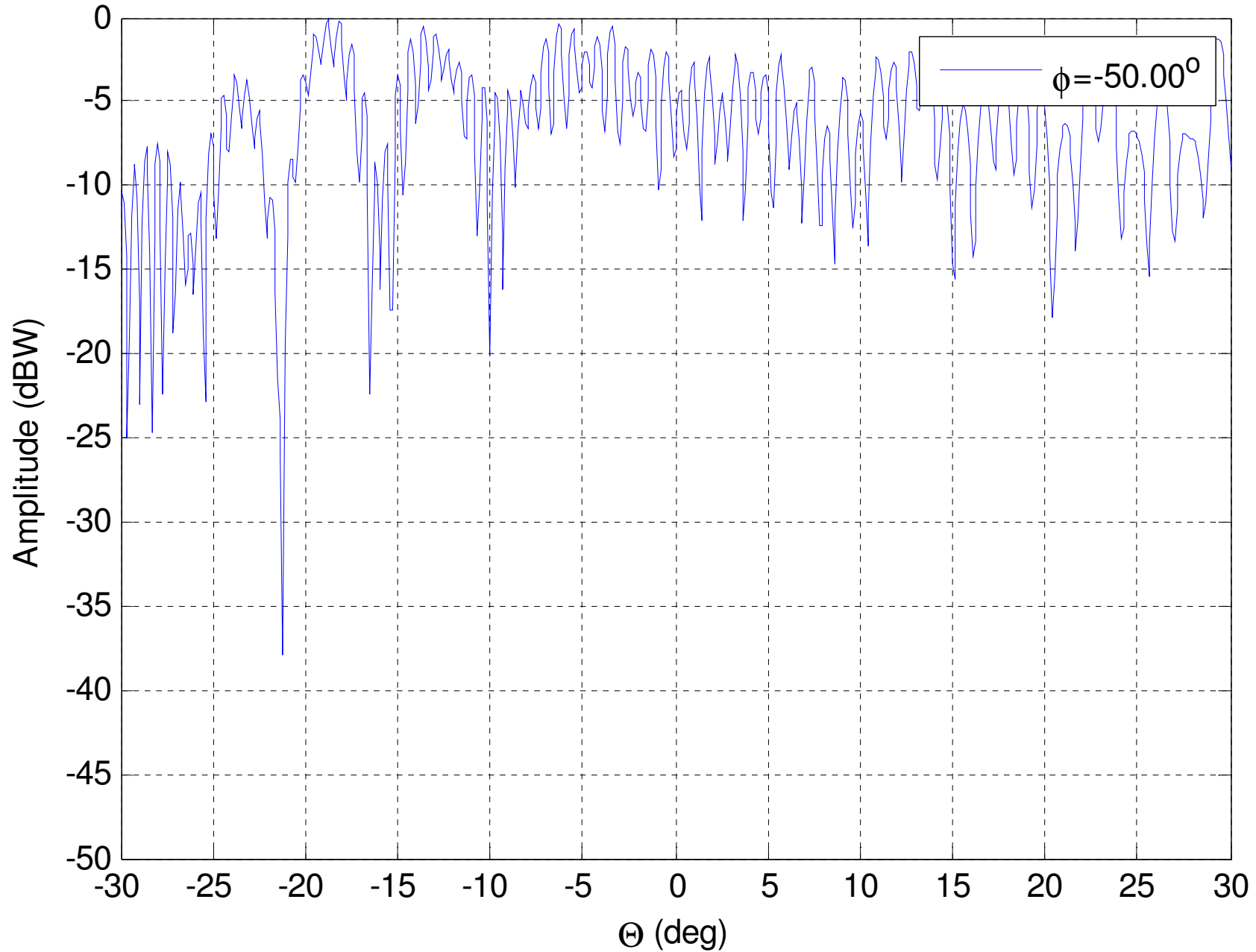
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -1.75 dBW, Date: 15-Dec-2011



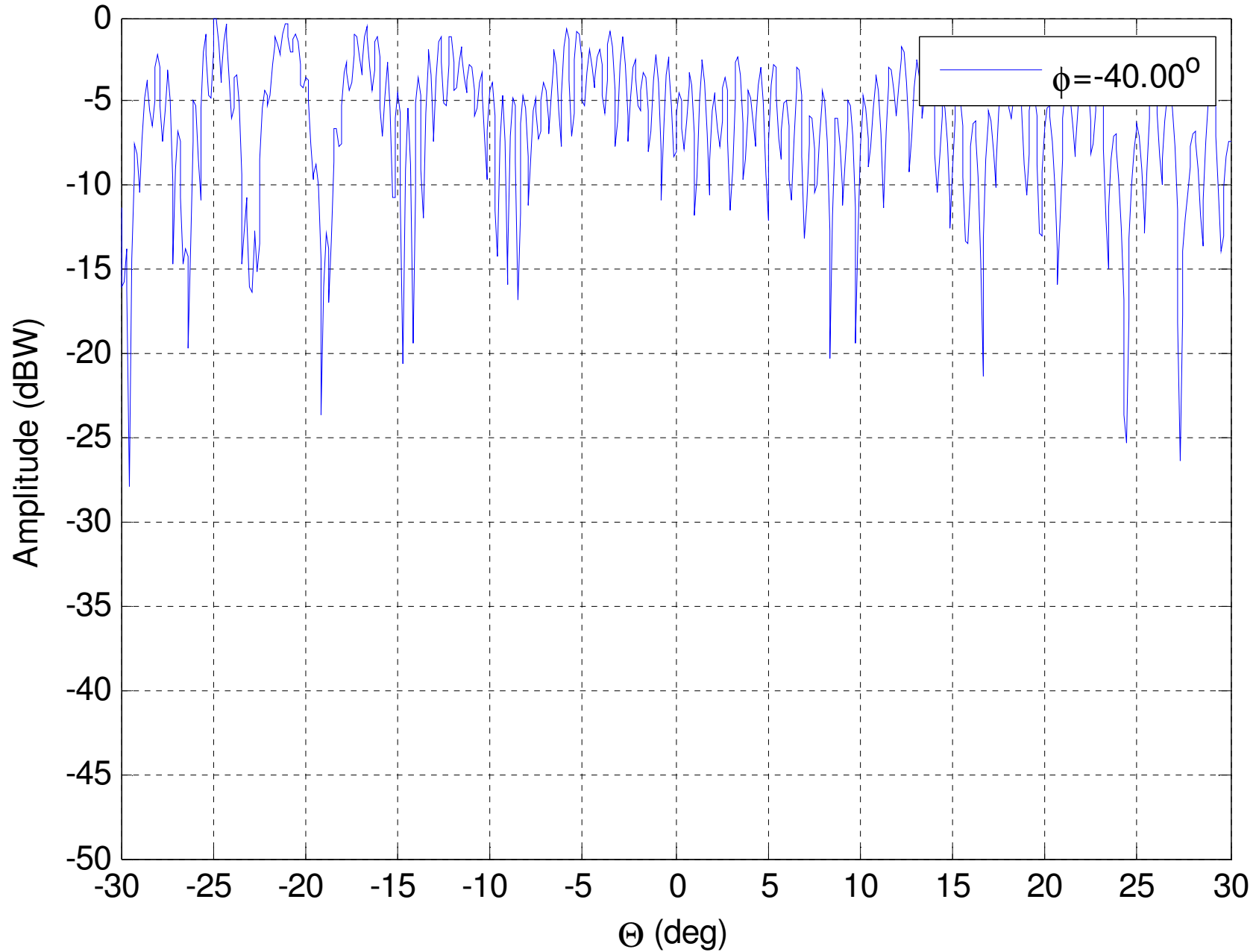
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -1.33 dBW, Date: 15-Dec-2011



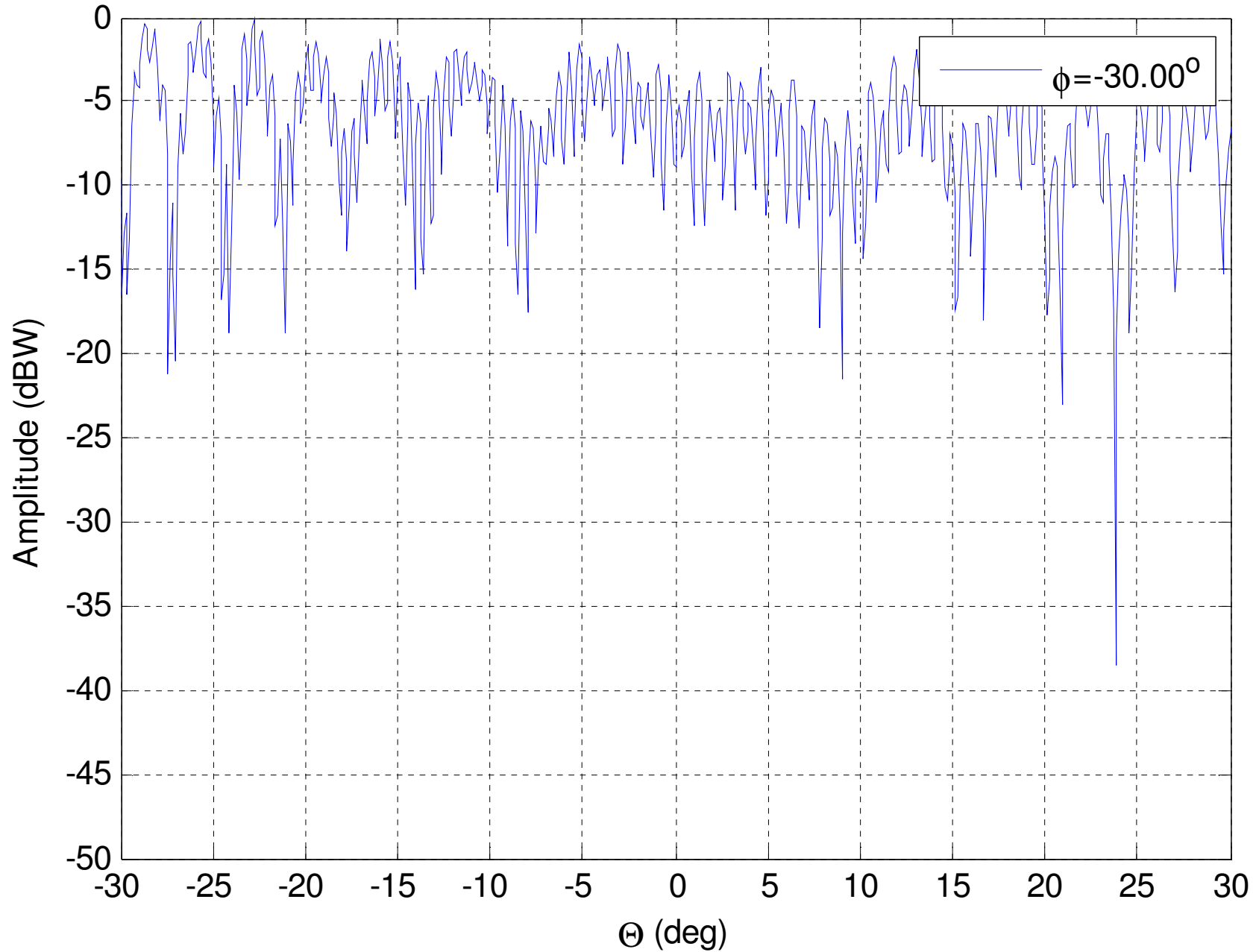
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -1.06 dBW, Date: 15-Dec-2011



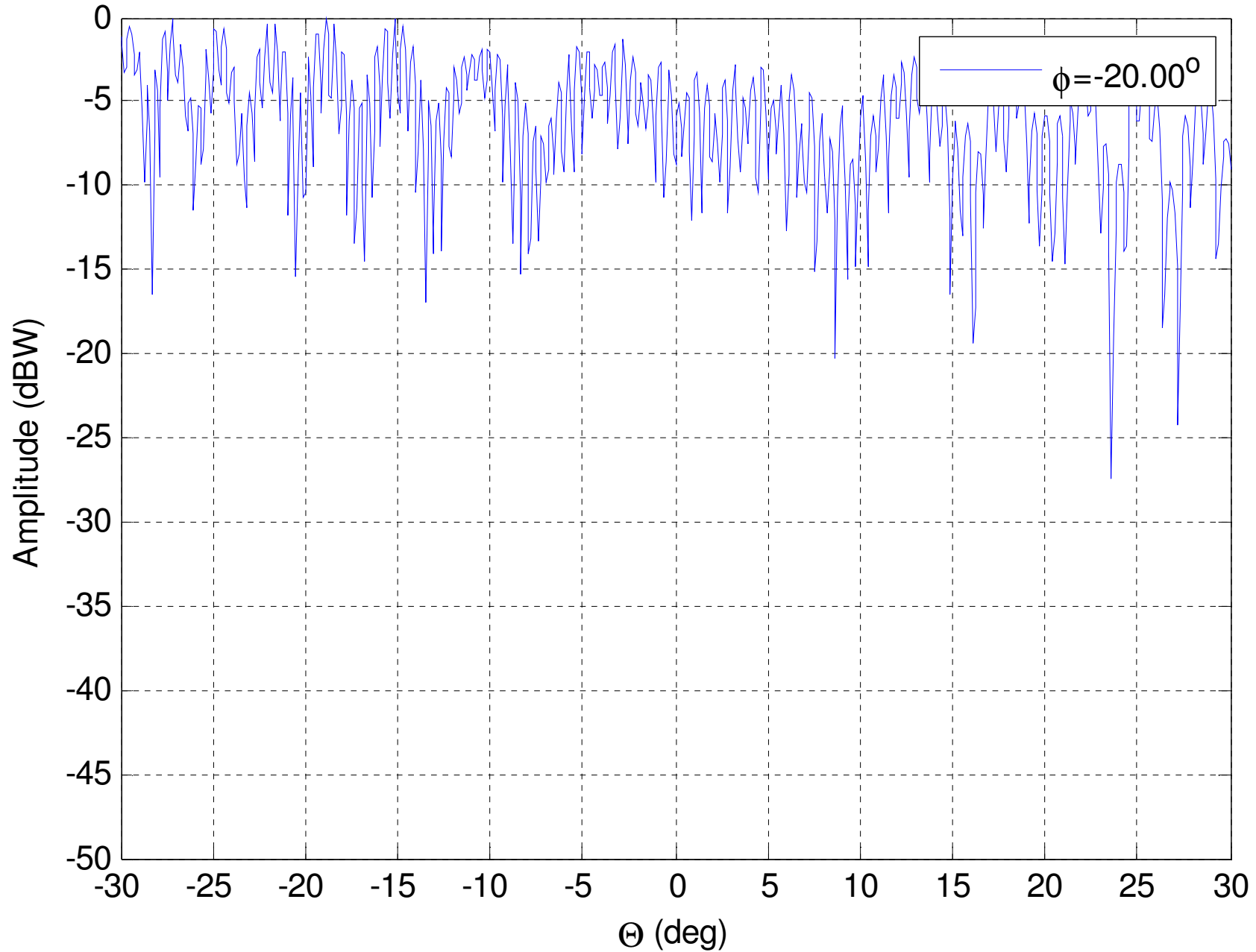
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.19 dBW, Date: 15-Dec-2011



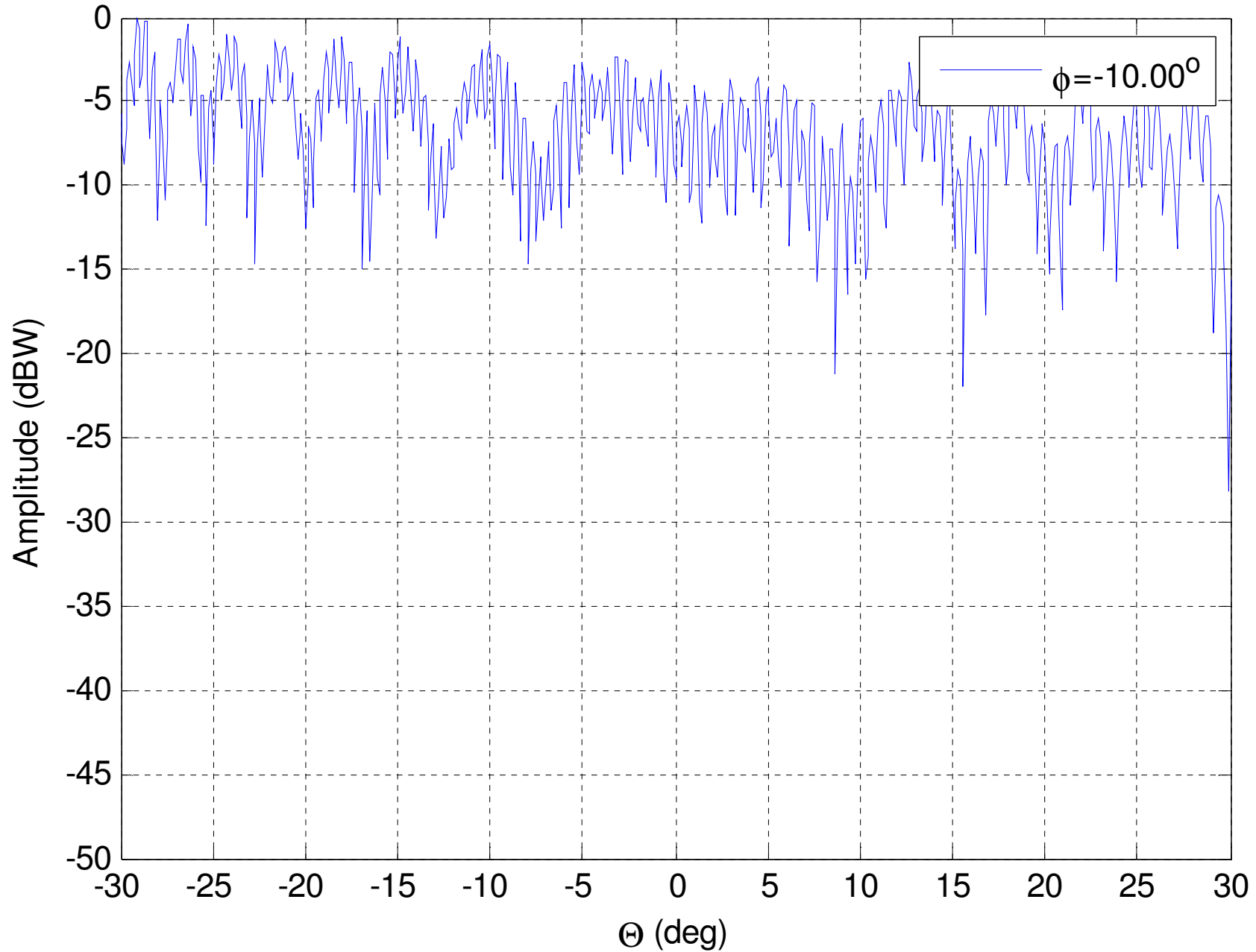
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -0.41 dBW, Date: 15-Dec-2011



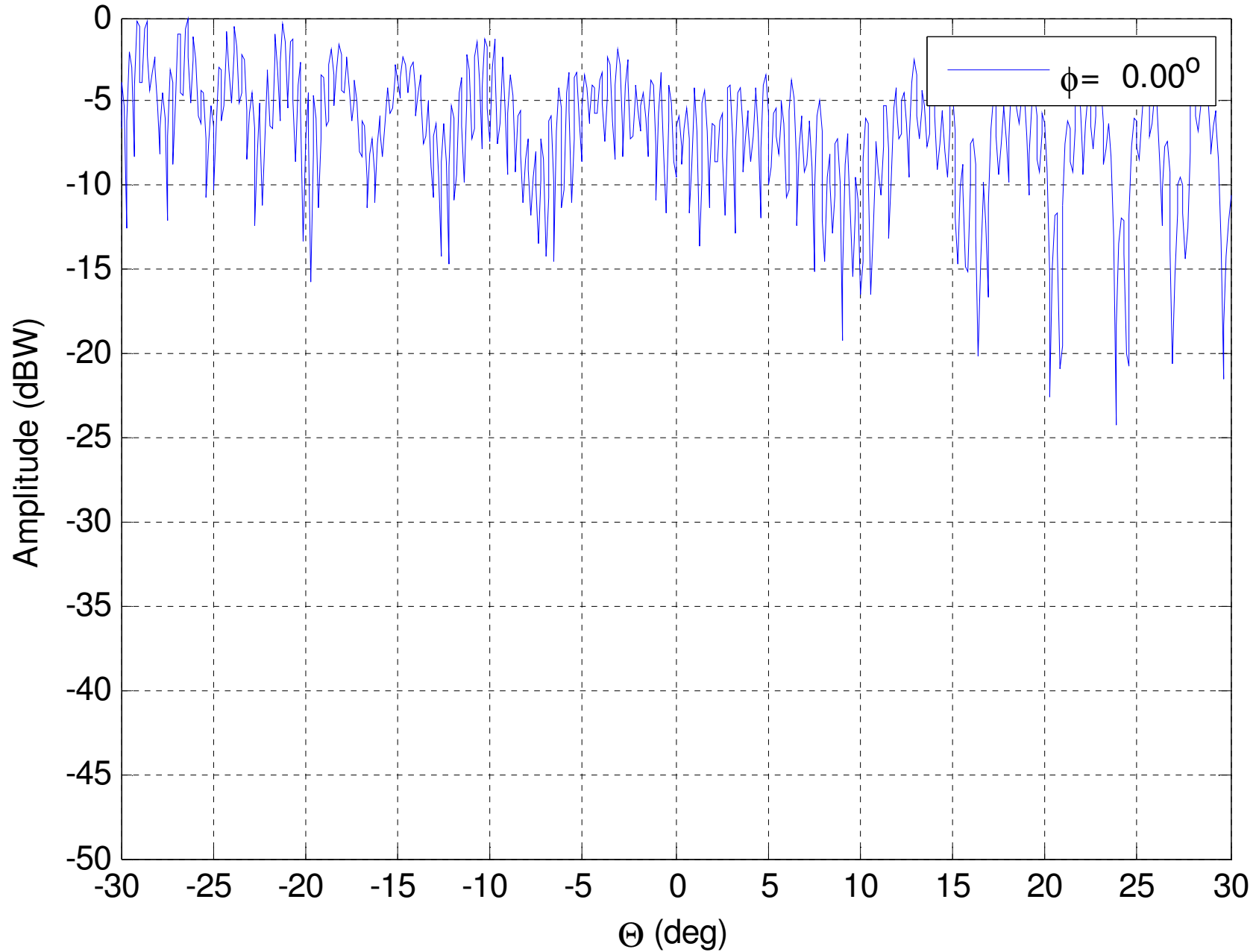
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 0.36 dBW, Date: 15-Dec-2011



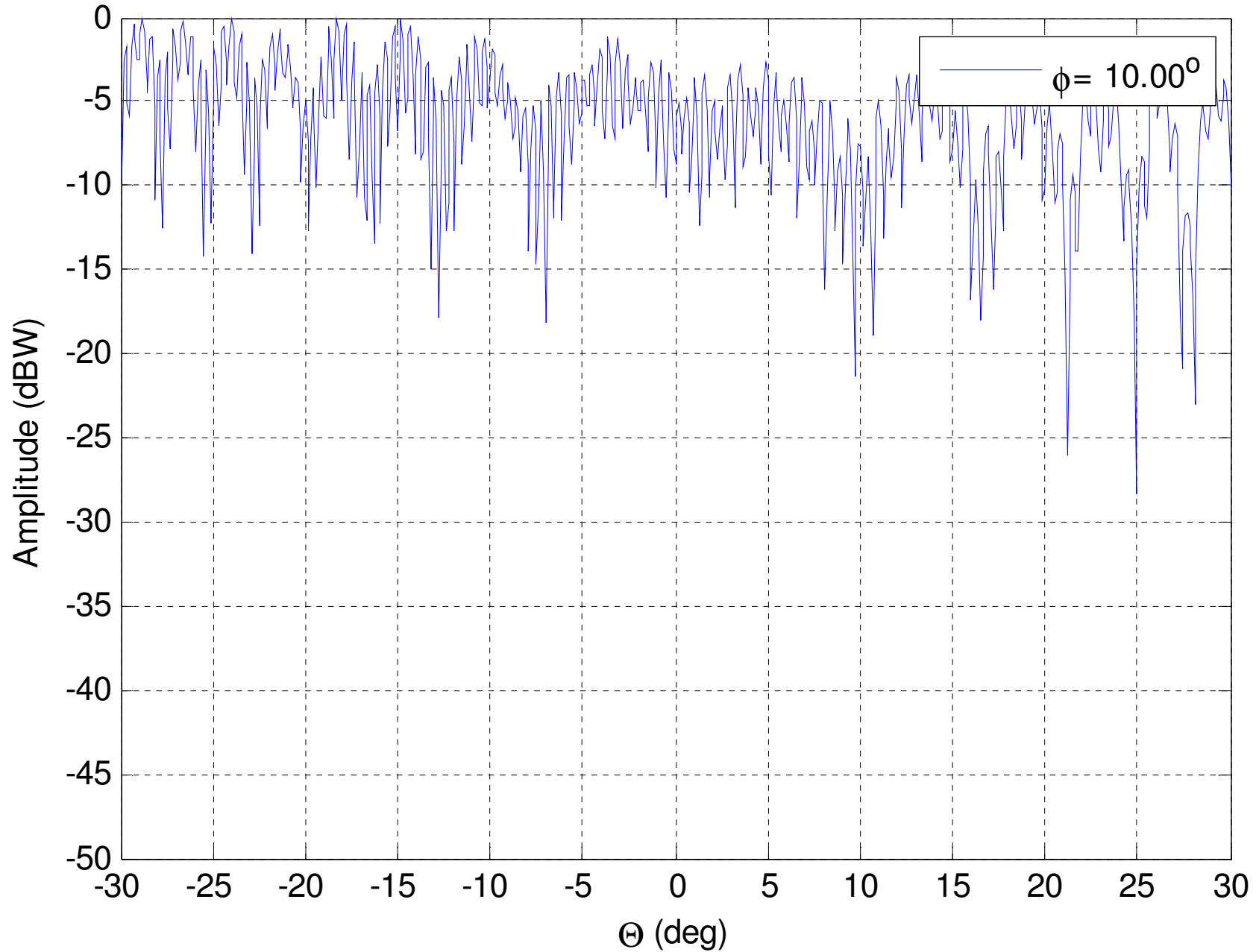
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 0.36 dBW, Date: 15-Dec-2011



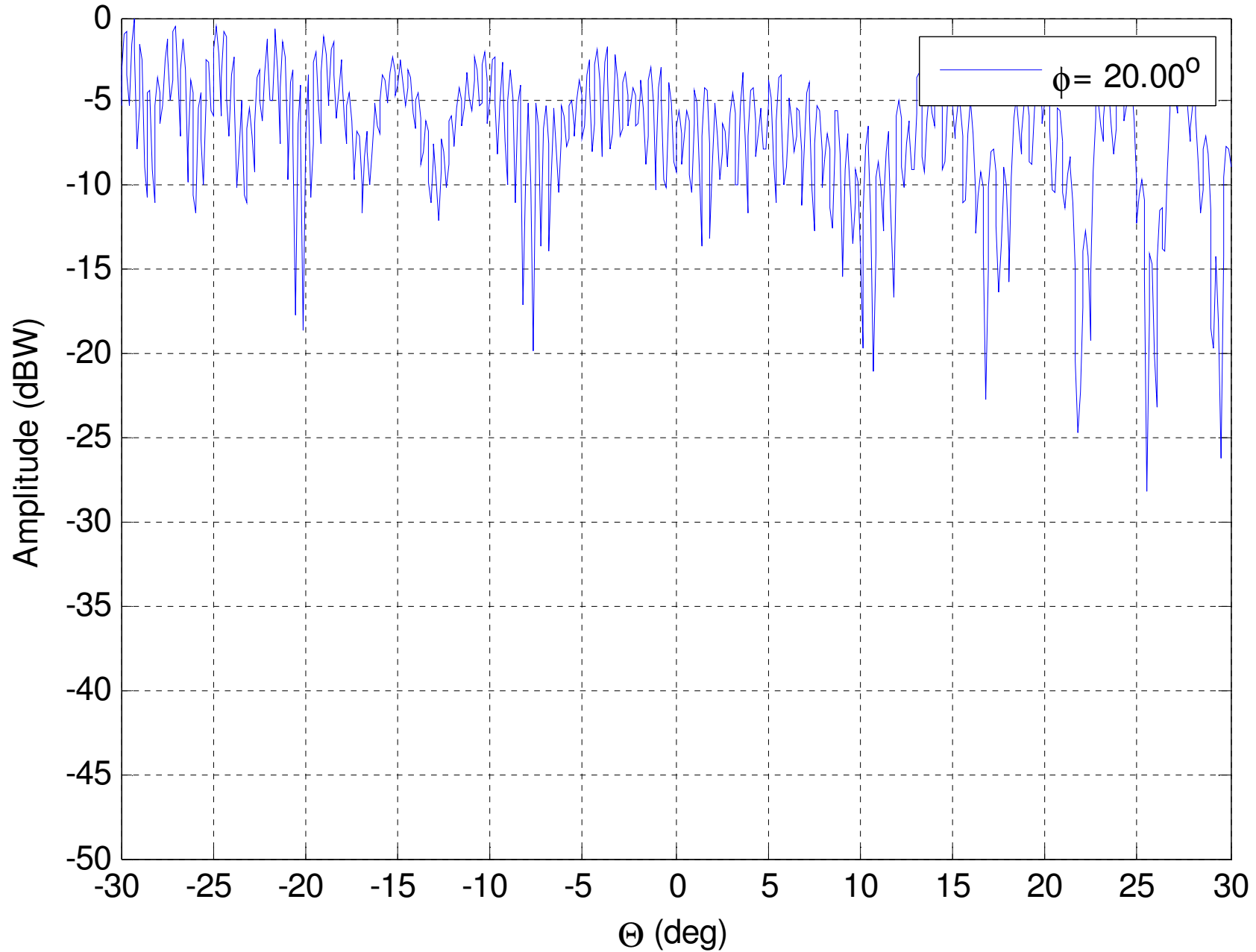
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -0.38 dBW, Date: 15-Dec-2011



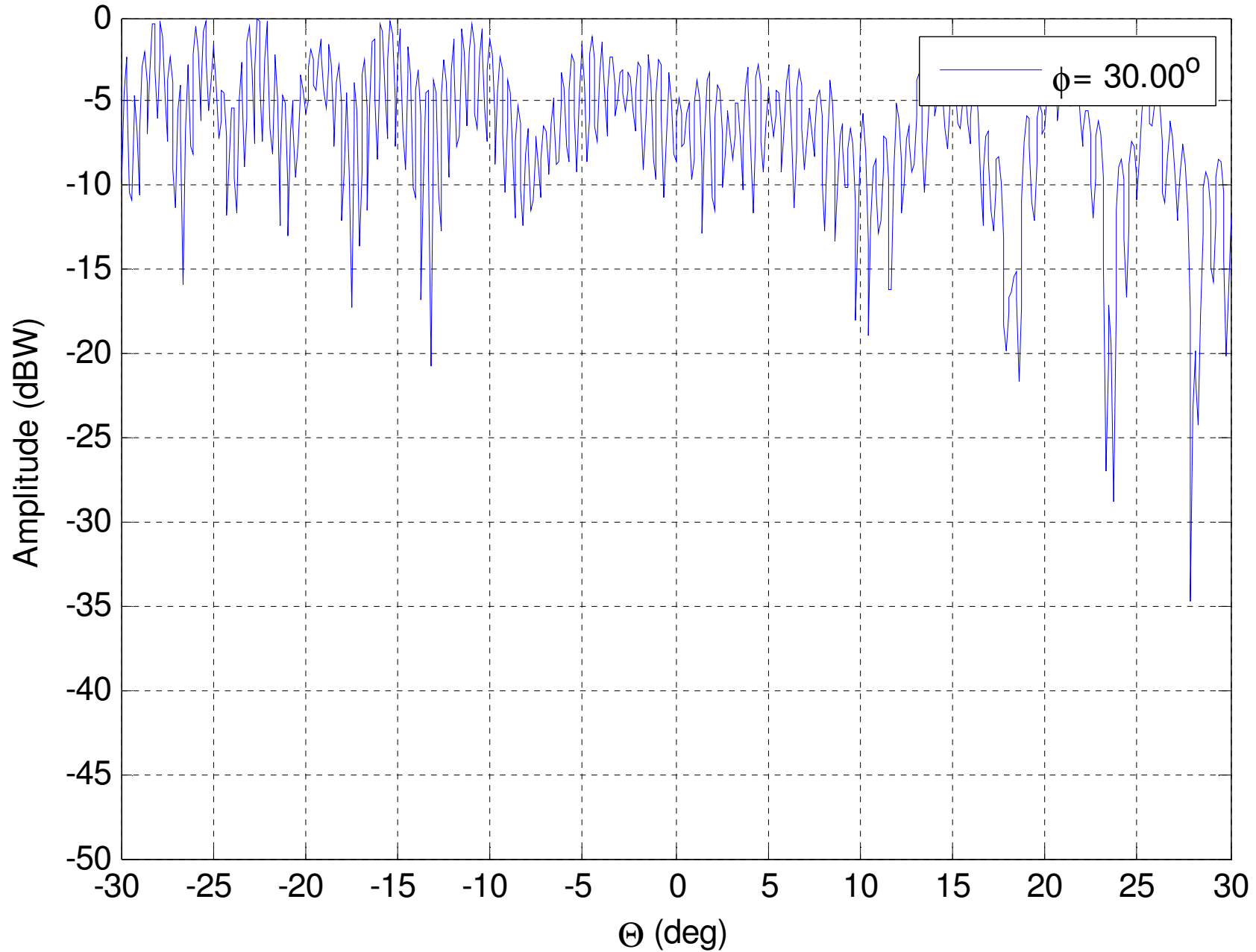
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 0.17 dBW, Date: 15-Dec-2011



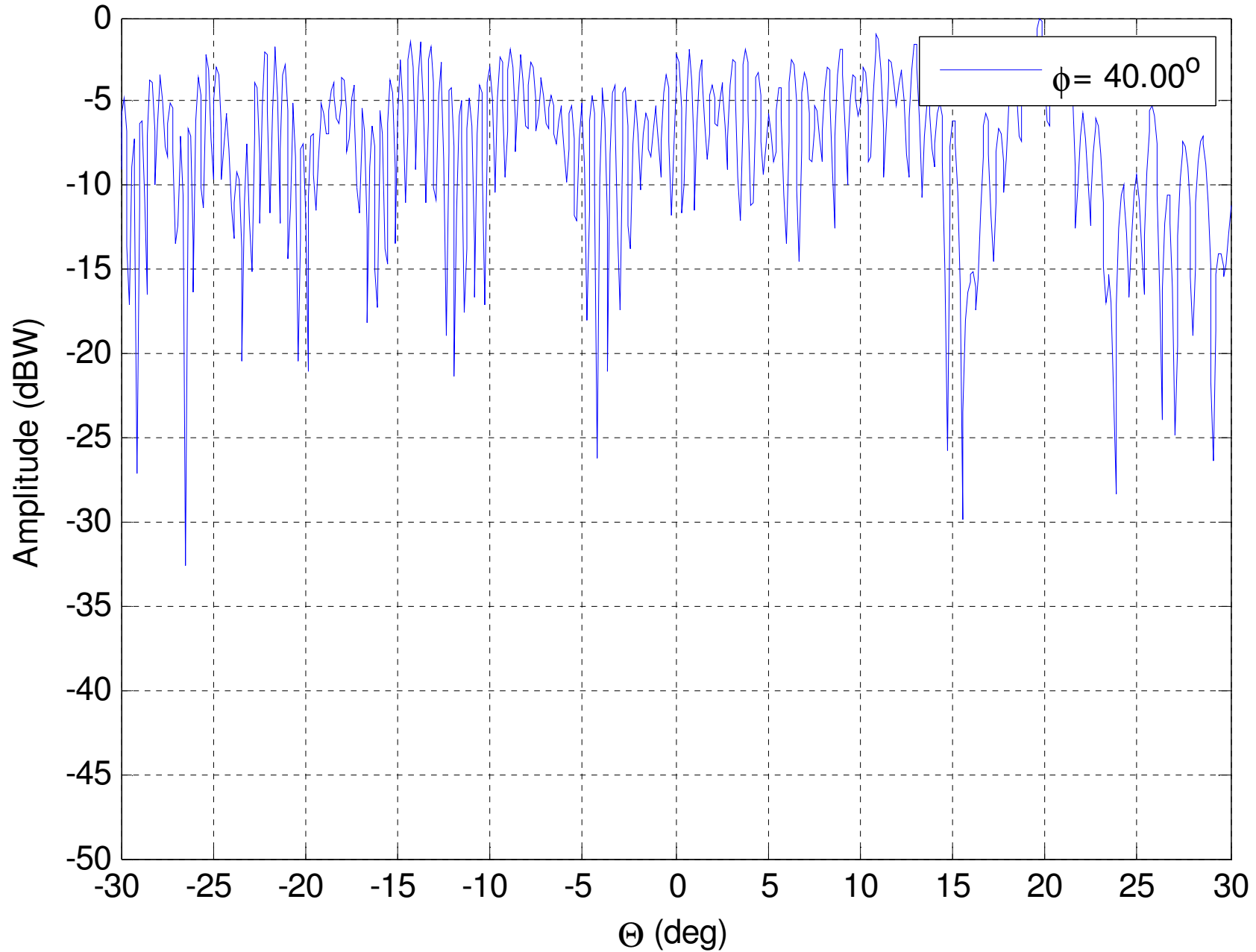
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.48 dBW, Date: 15-Dec-2011



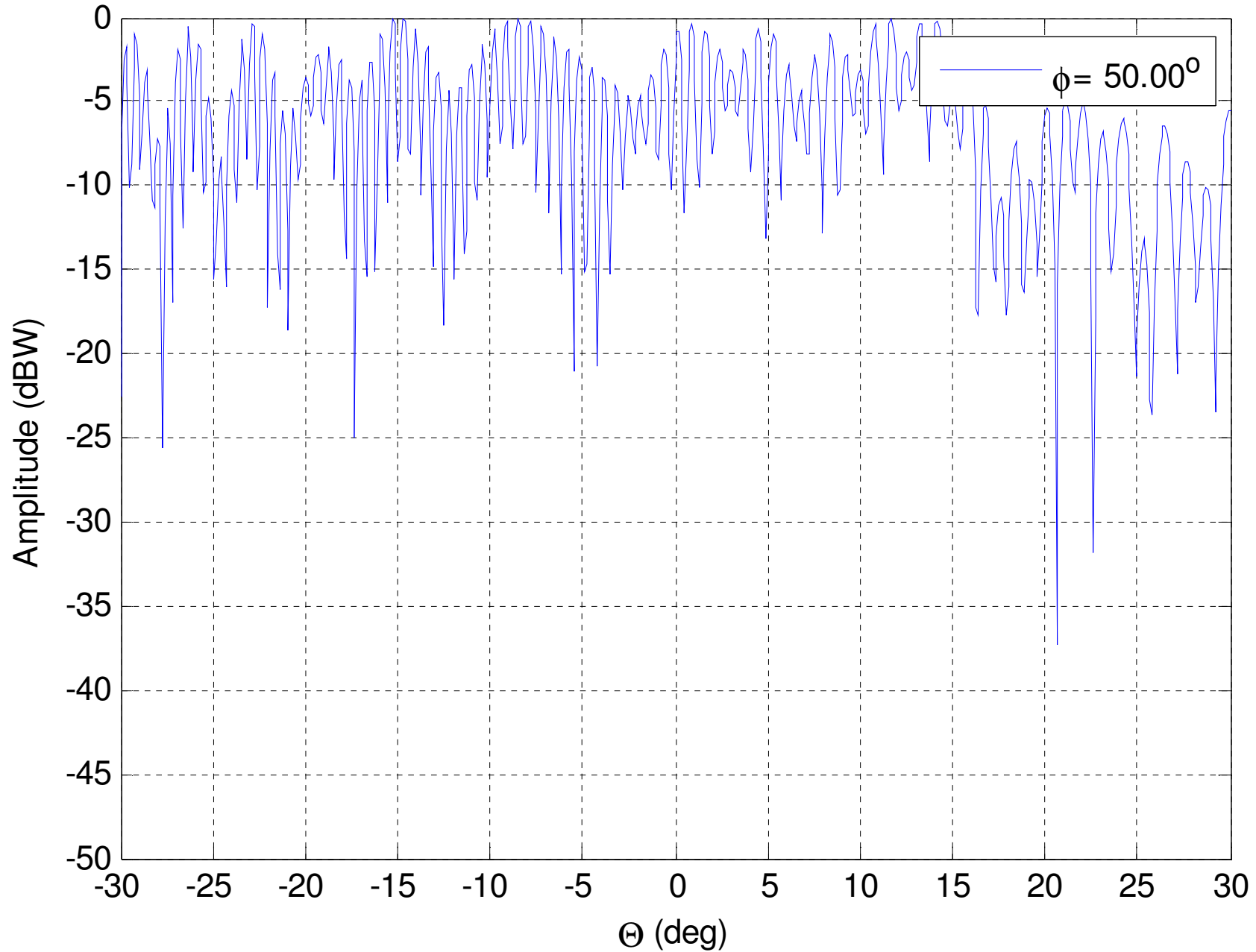
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -0.76 dBW, Date: 15-Dec-2011



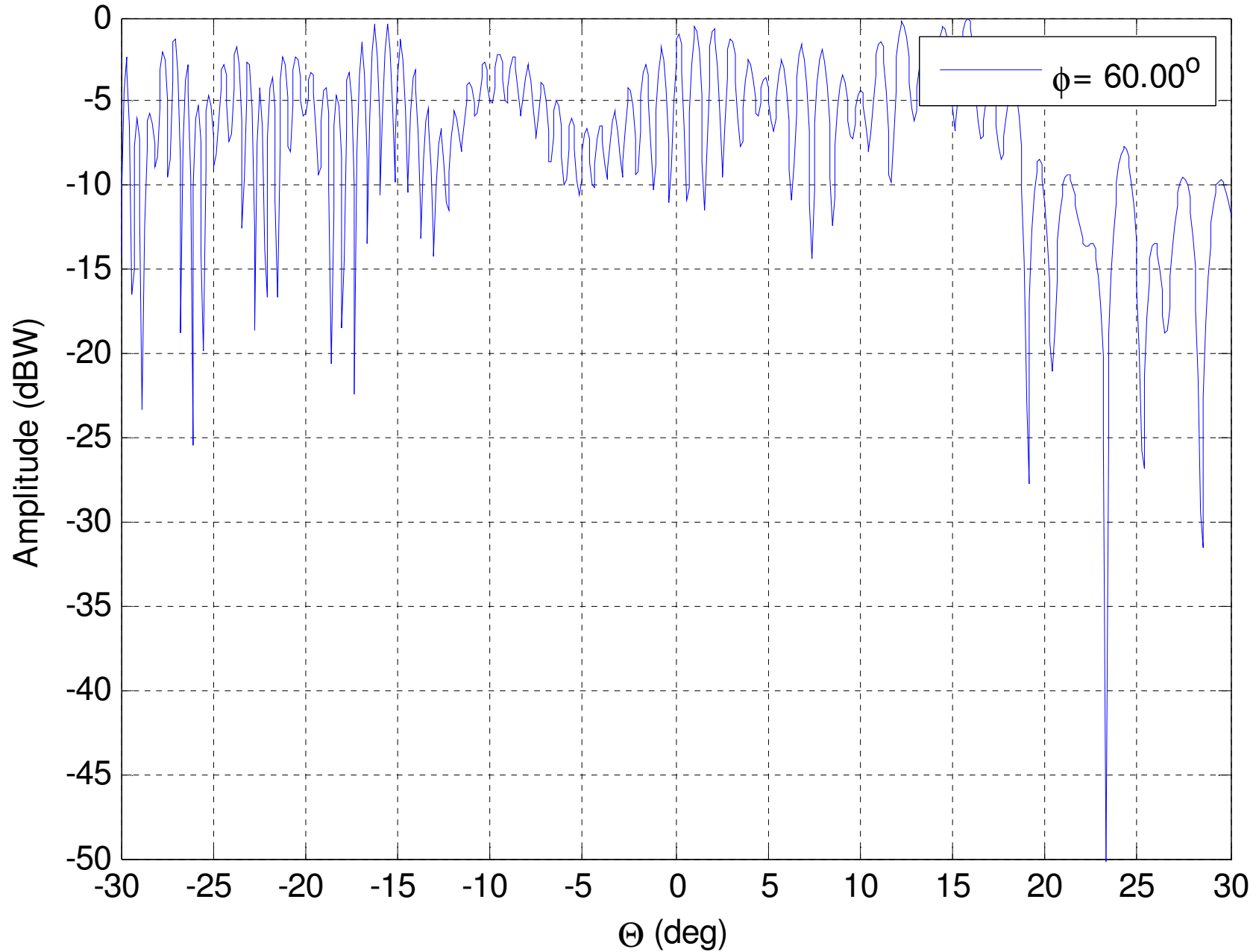
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -2.15 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

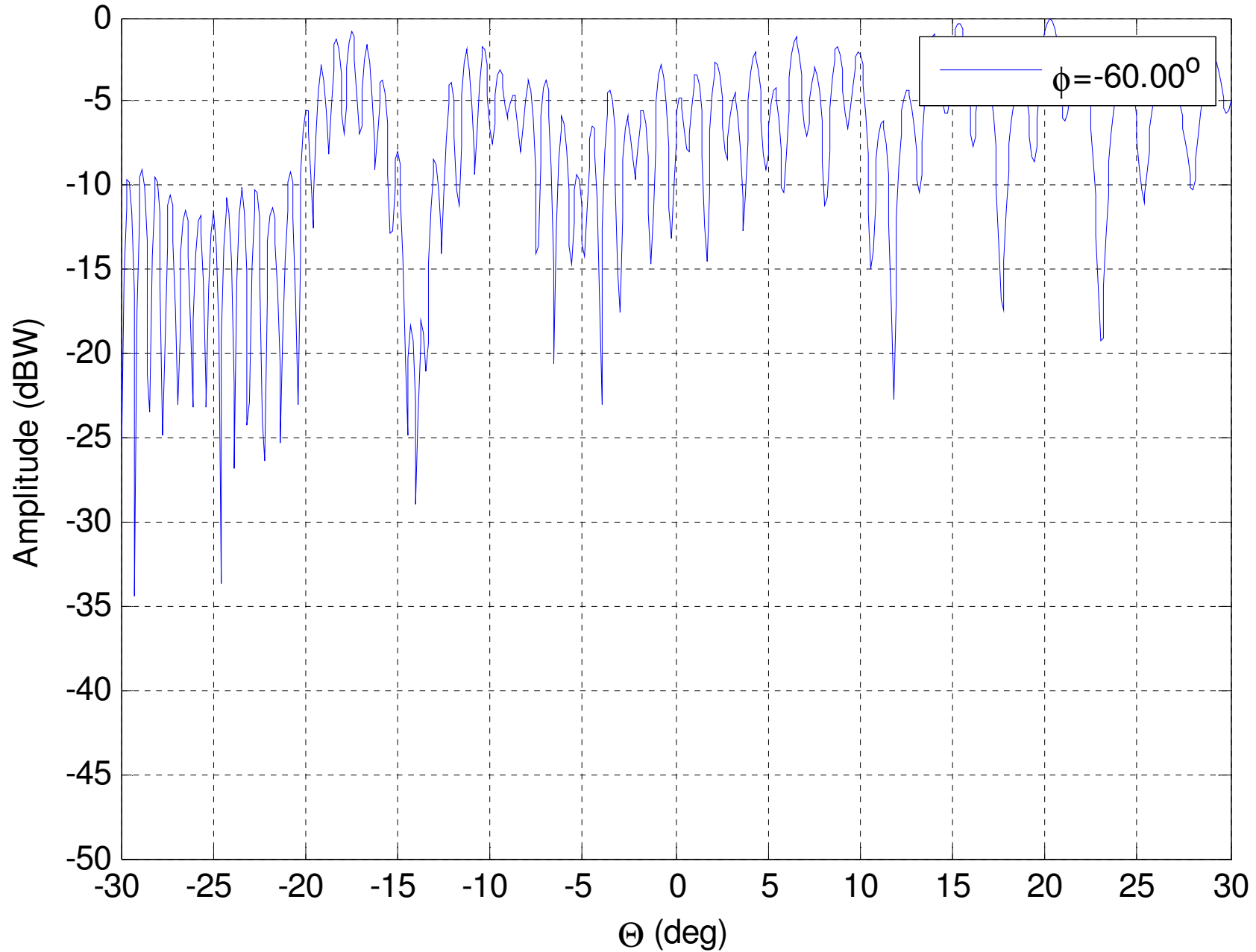
Input file: tx-17.5-lhcp-60.cut, Peak: -1.92 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

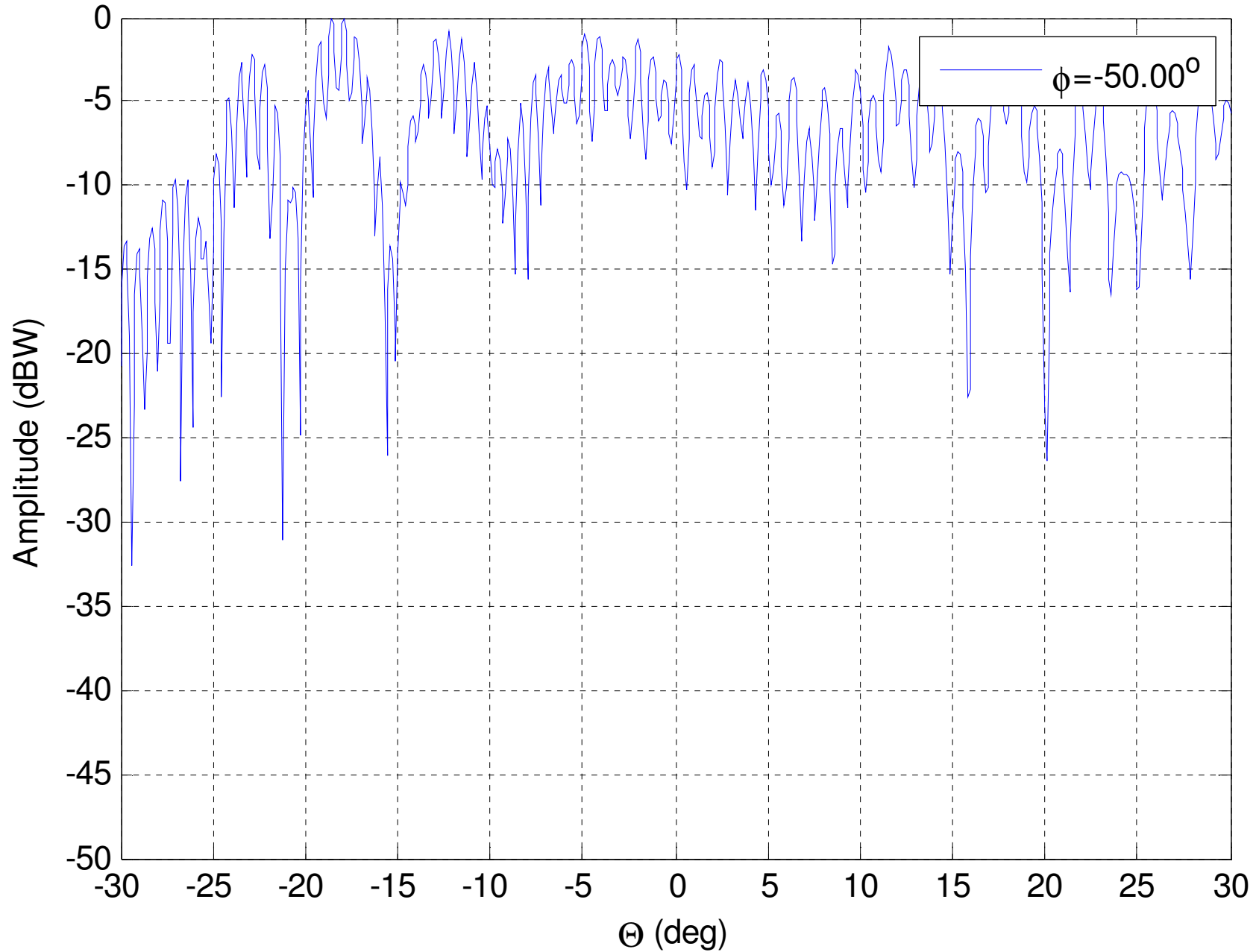
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -1.35 dBW, Date: 15-Dec-2011



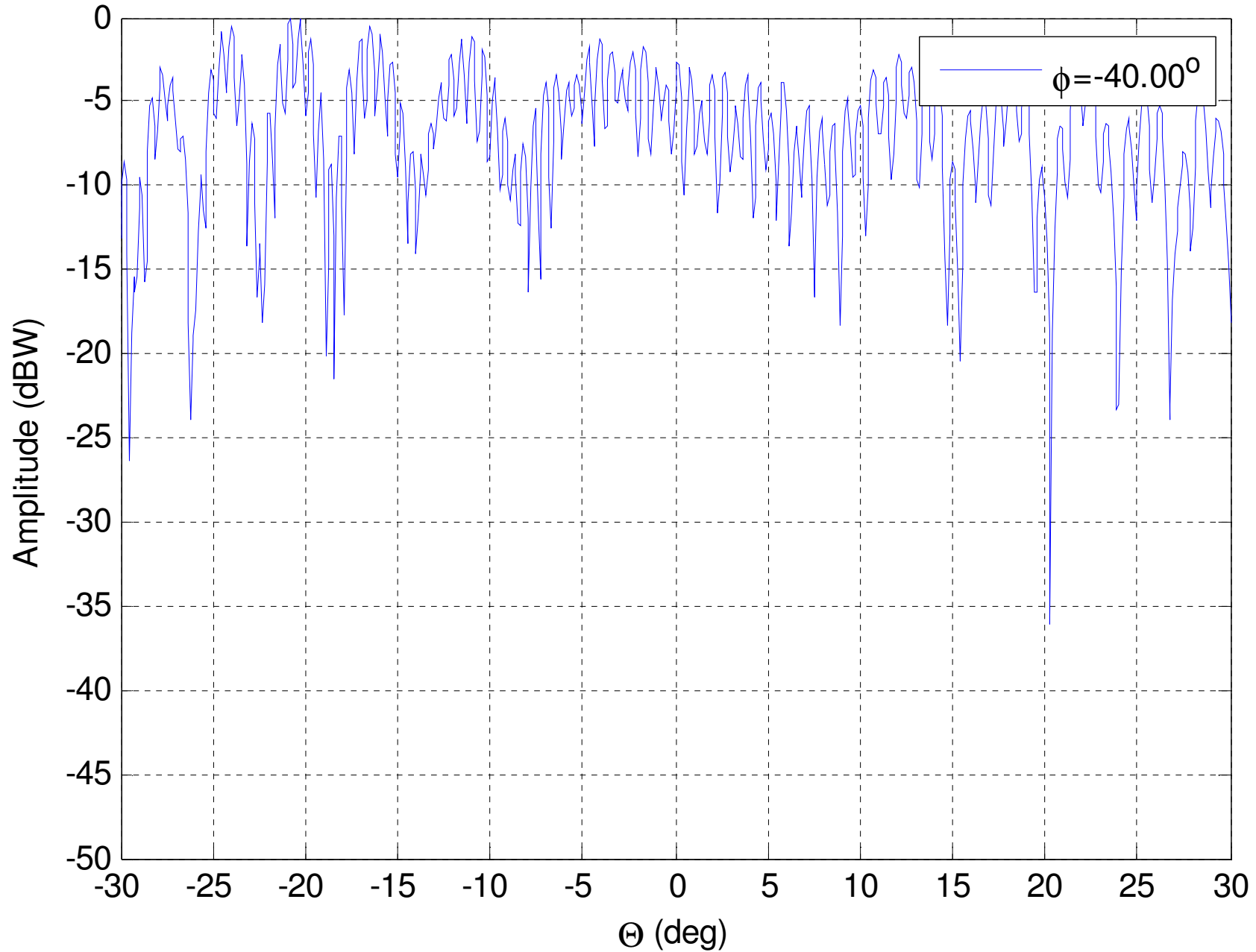
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -1.09 dBW, Date: 15-Dec-2011



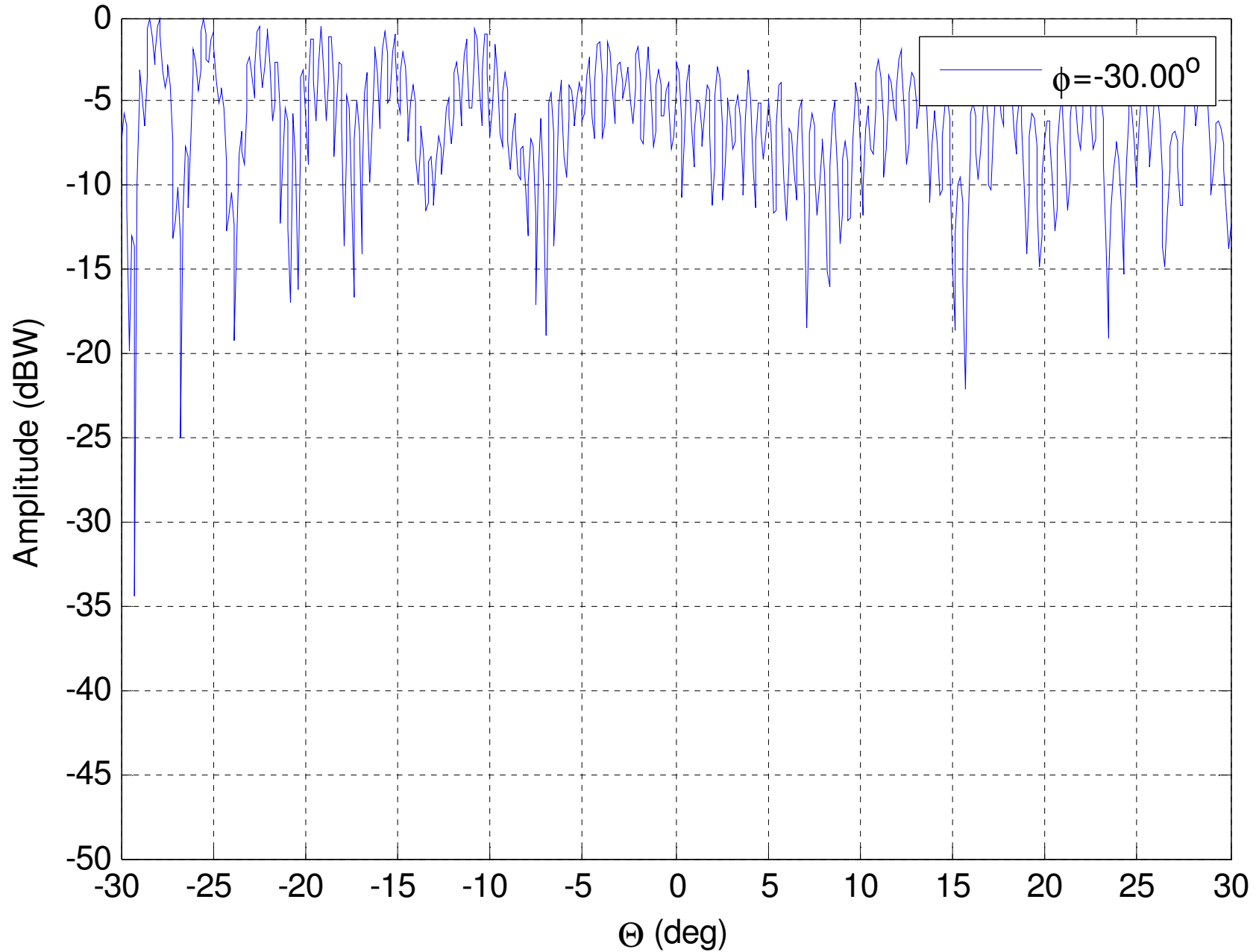
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -0.72 dBW, Date: 15-Dec-2011



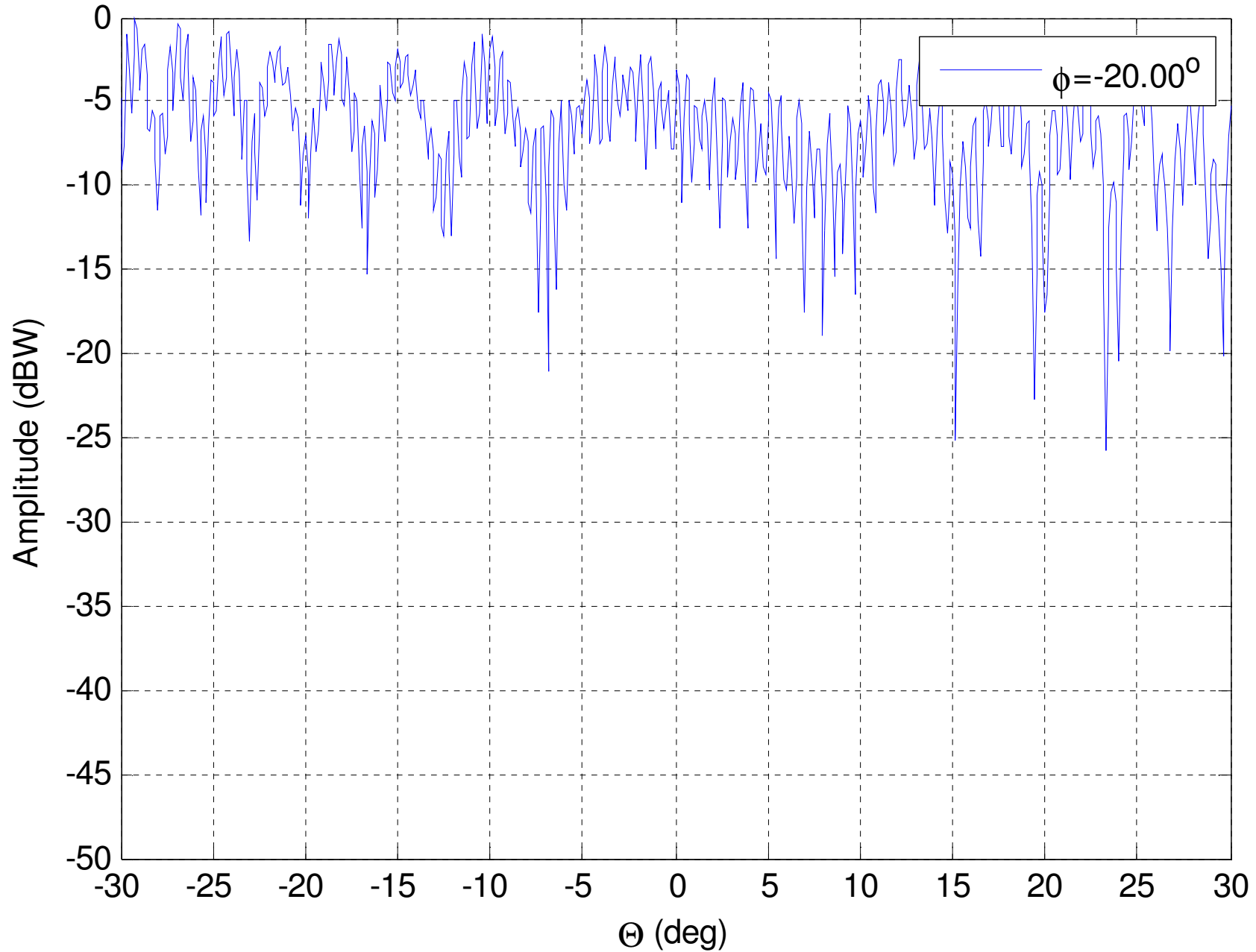
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -0.78 dBW, Date: 15-Dec-2011



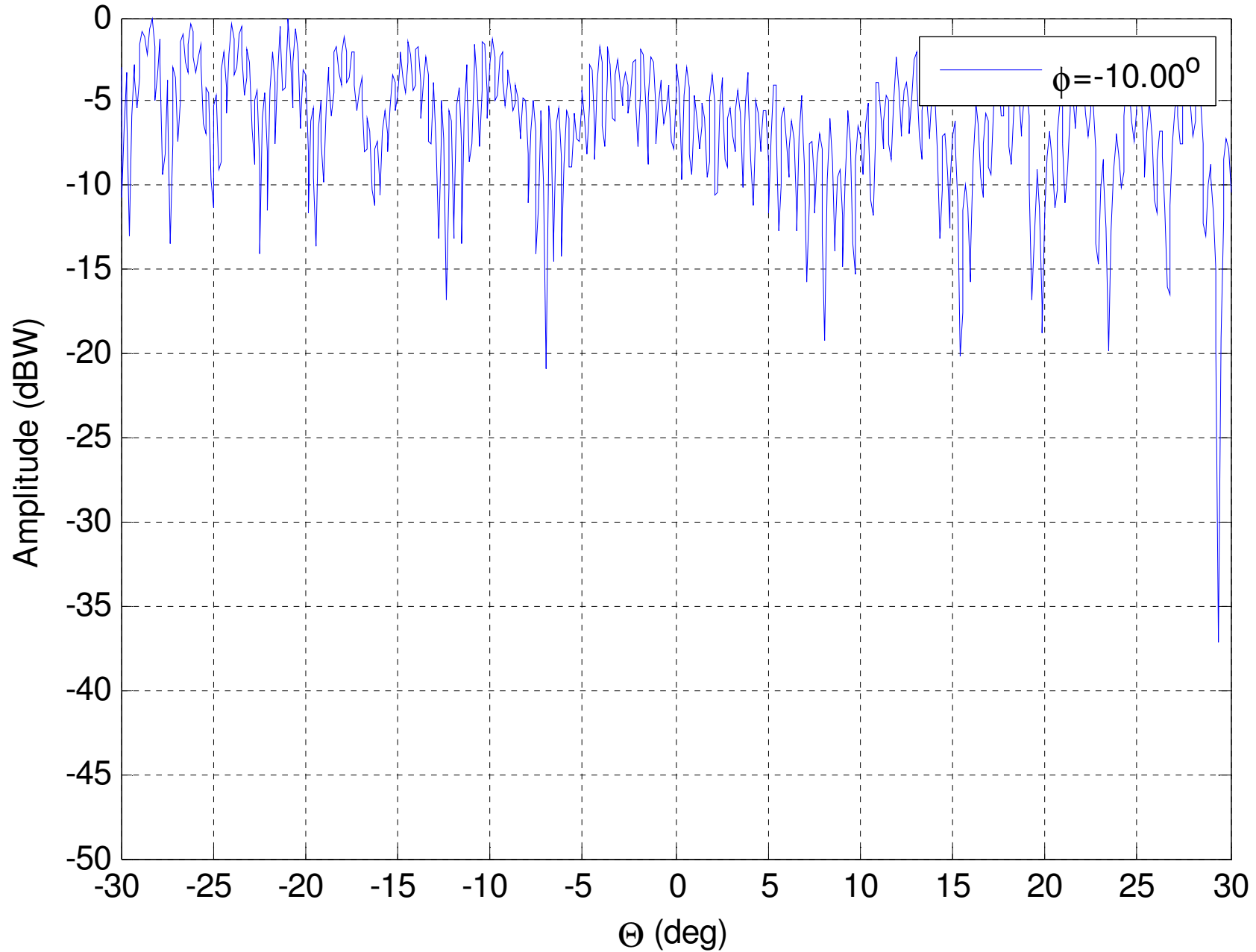
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -0.29 dBW, Date: 15-Dec-2011



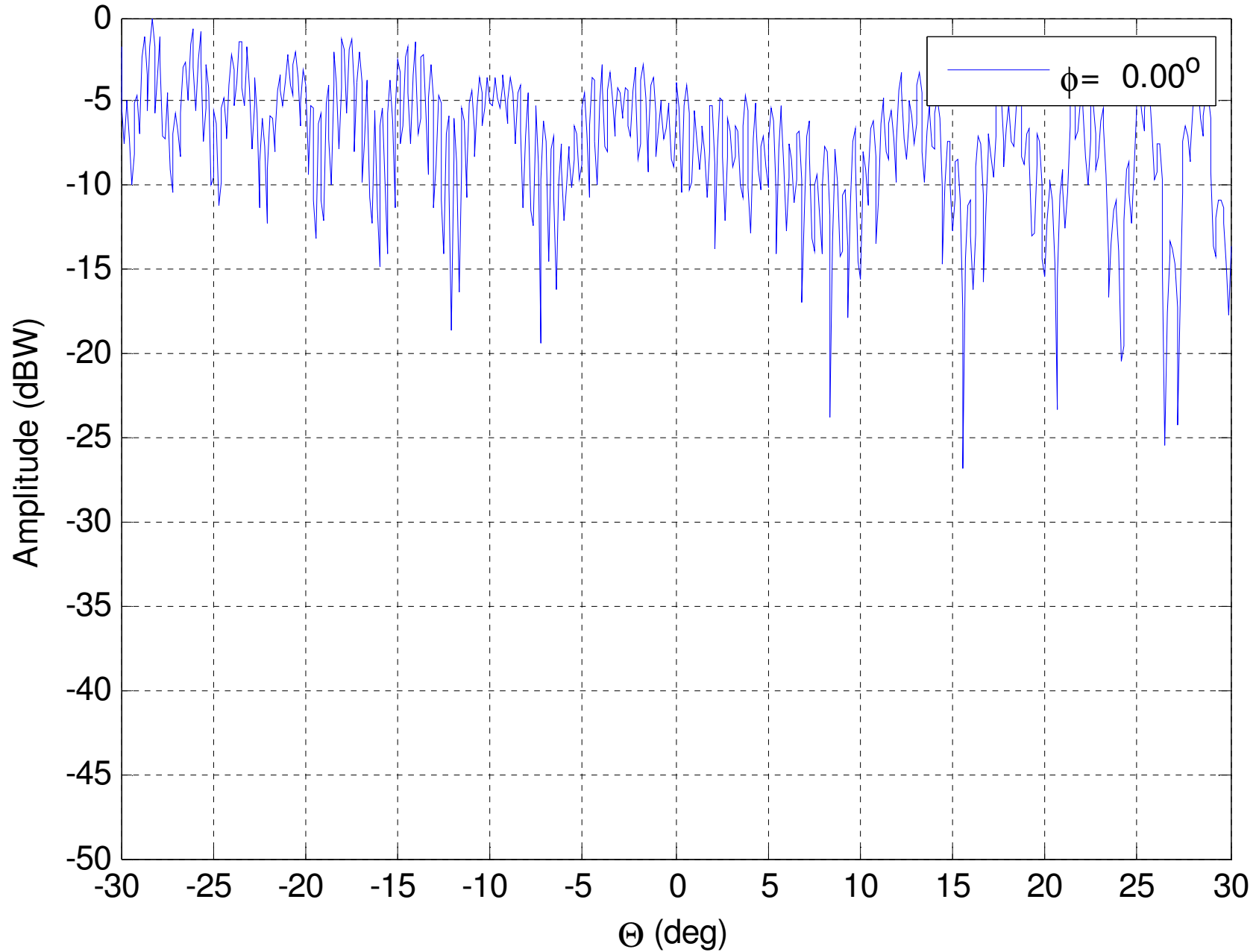
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -0.52 dBW, Date: 15-Dec-2011



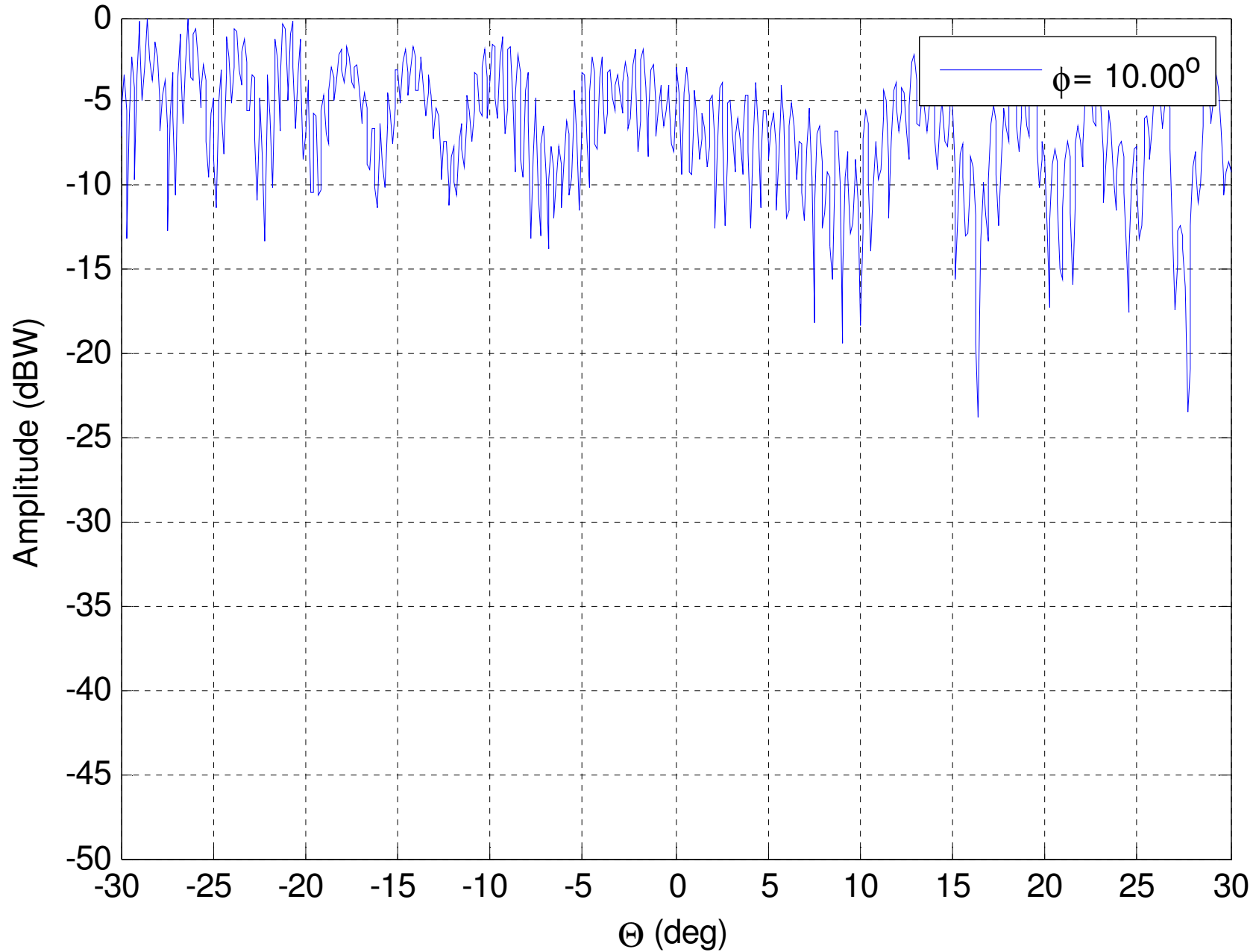
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 0.57 dBW, Date: 15-Dec-2011



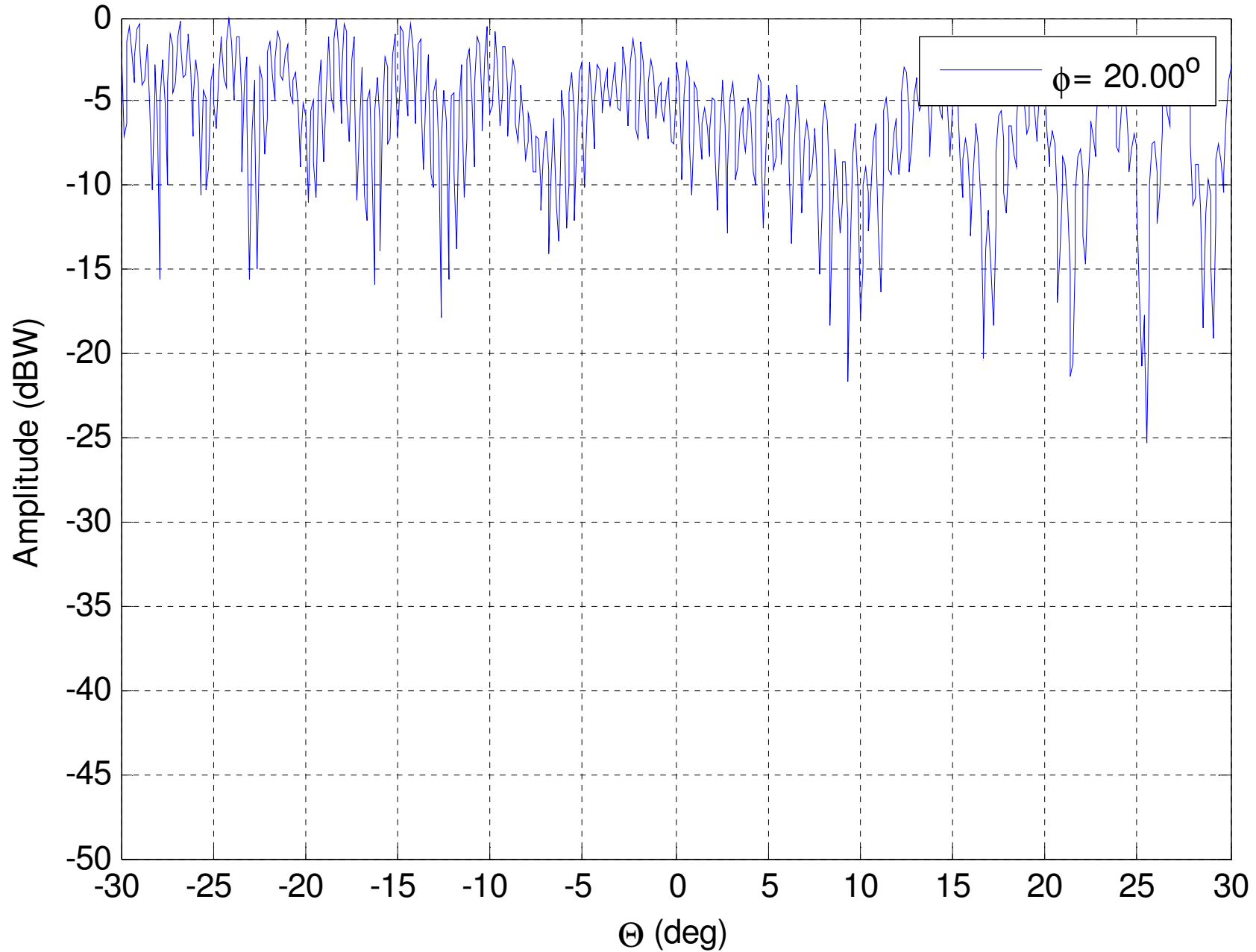
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -0.37 dBW, Date: 15-Dec-2011



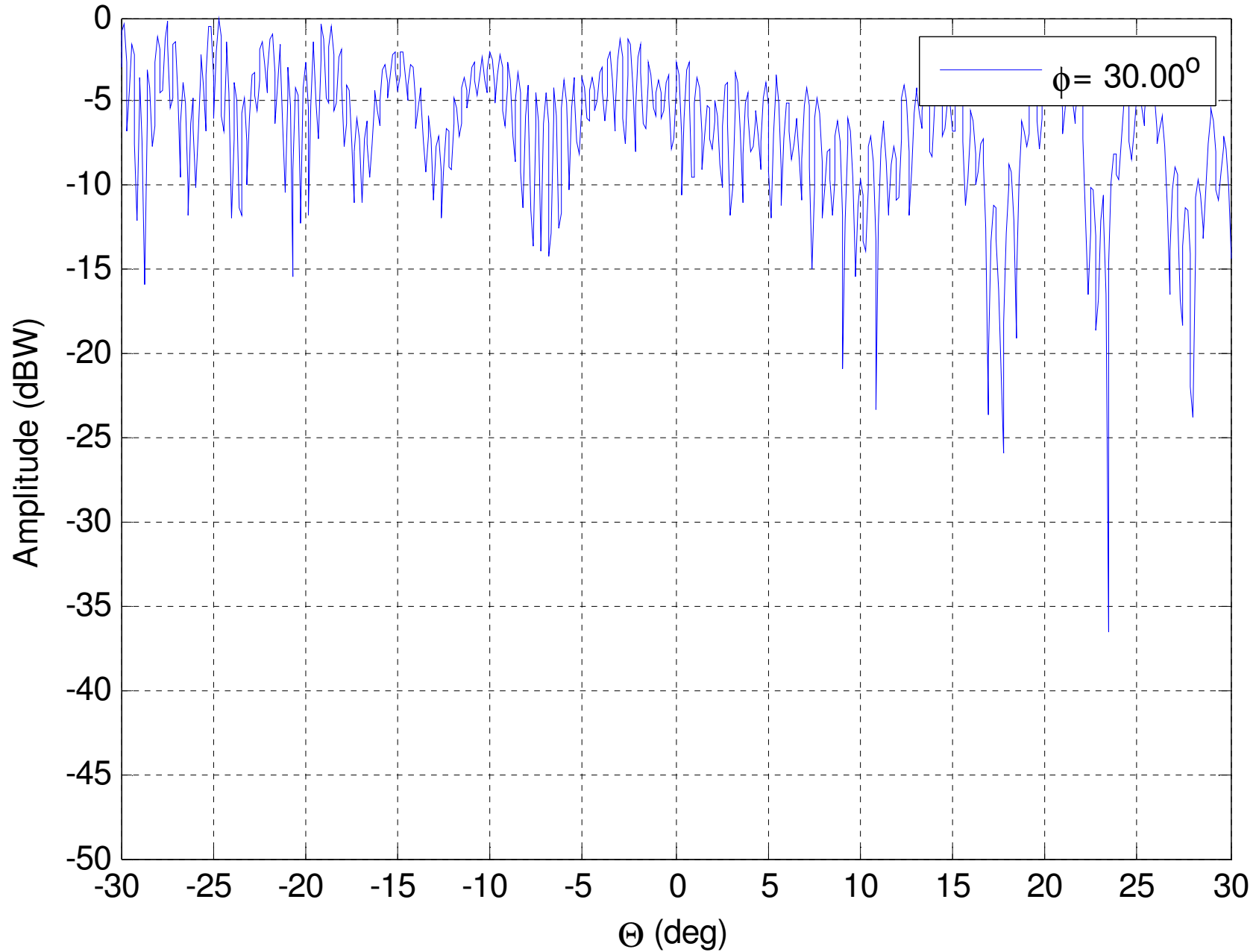
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -0.76 dBW, Date: 15-Dec-2011



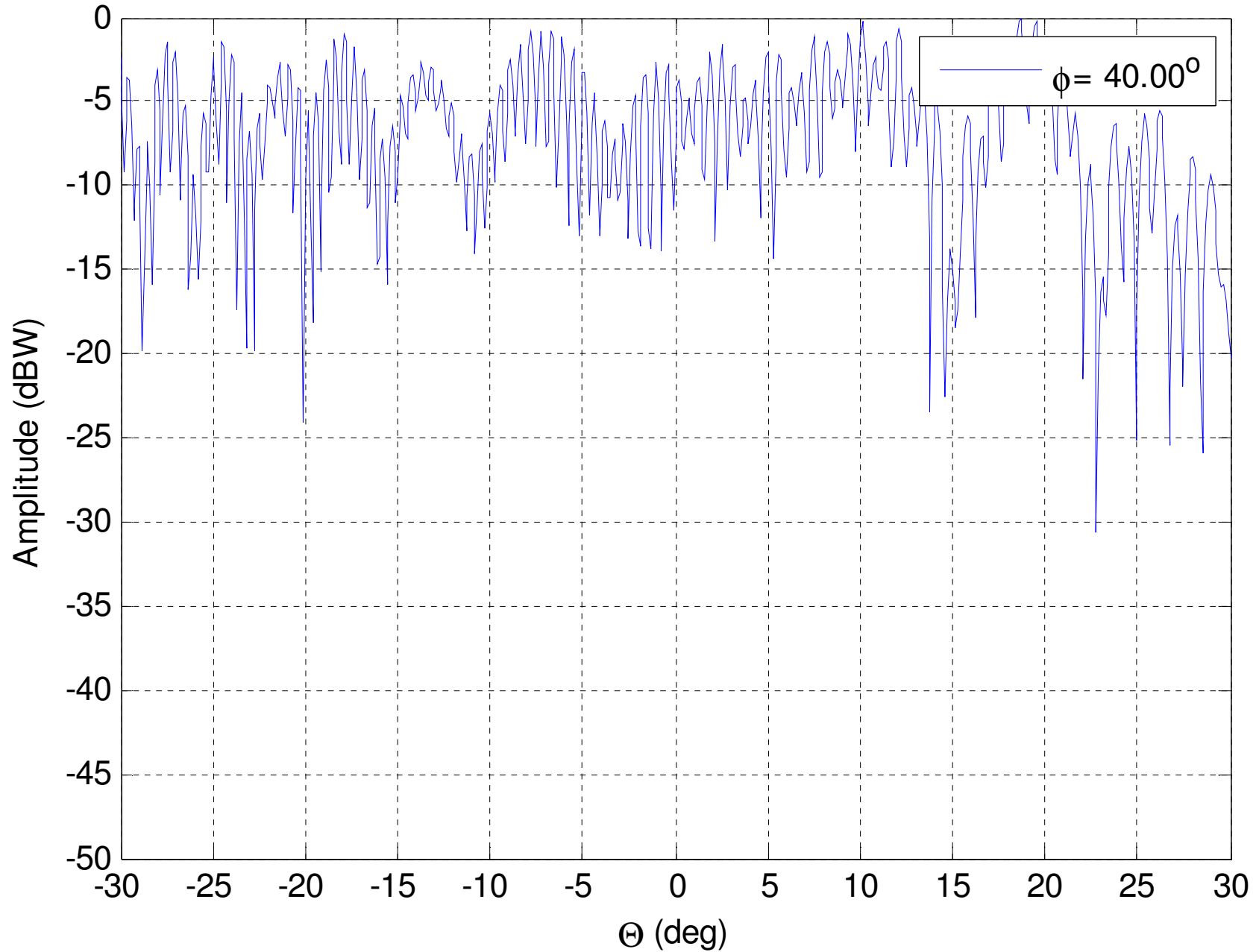
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.83 dBW, Date: 15-Dec-2011



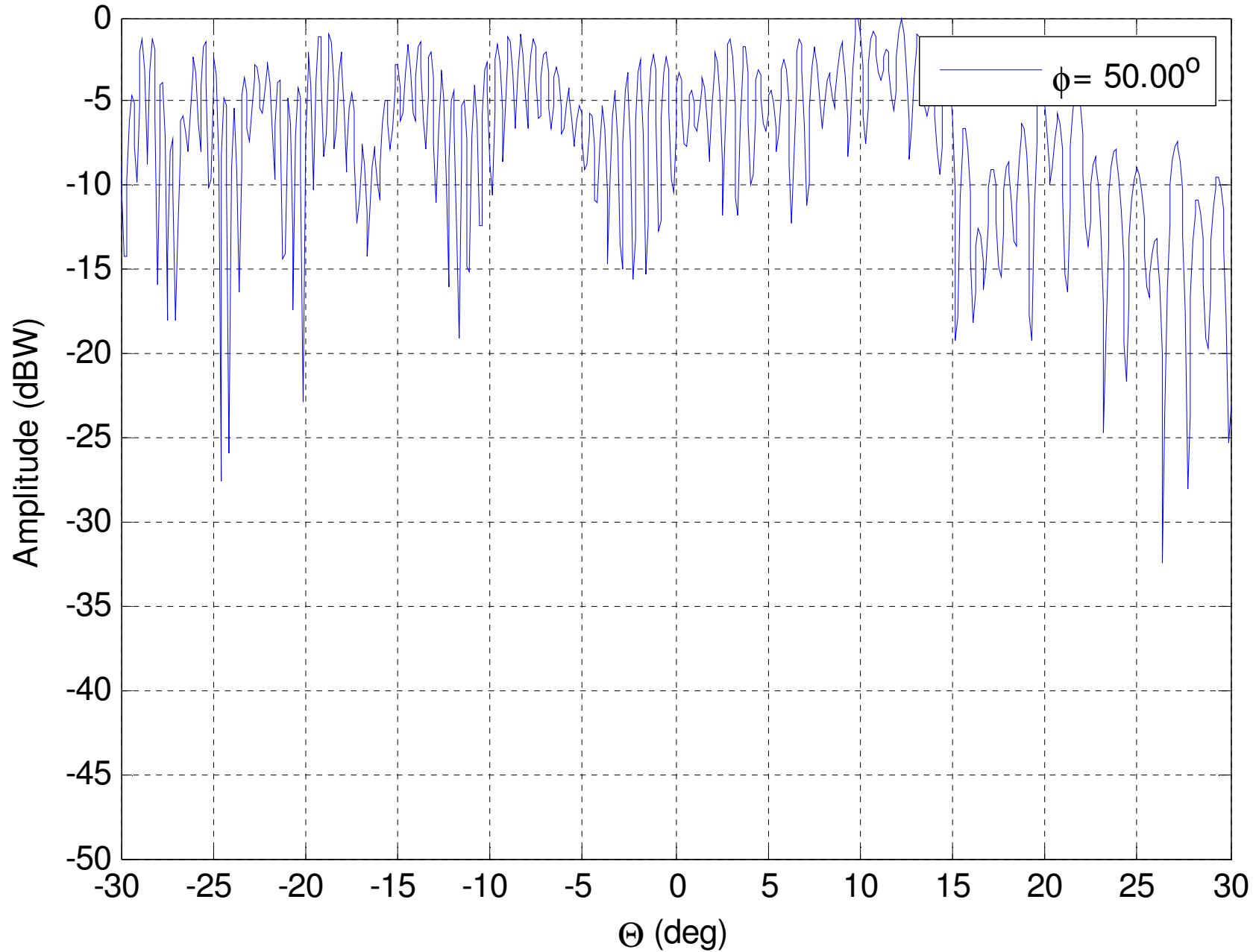
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -1.79 dBW, Date: 15-Dec-2011



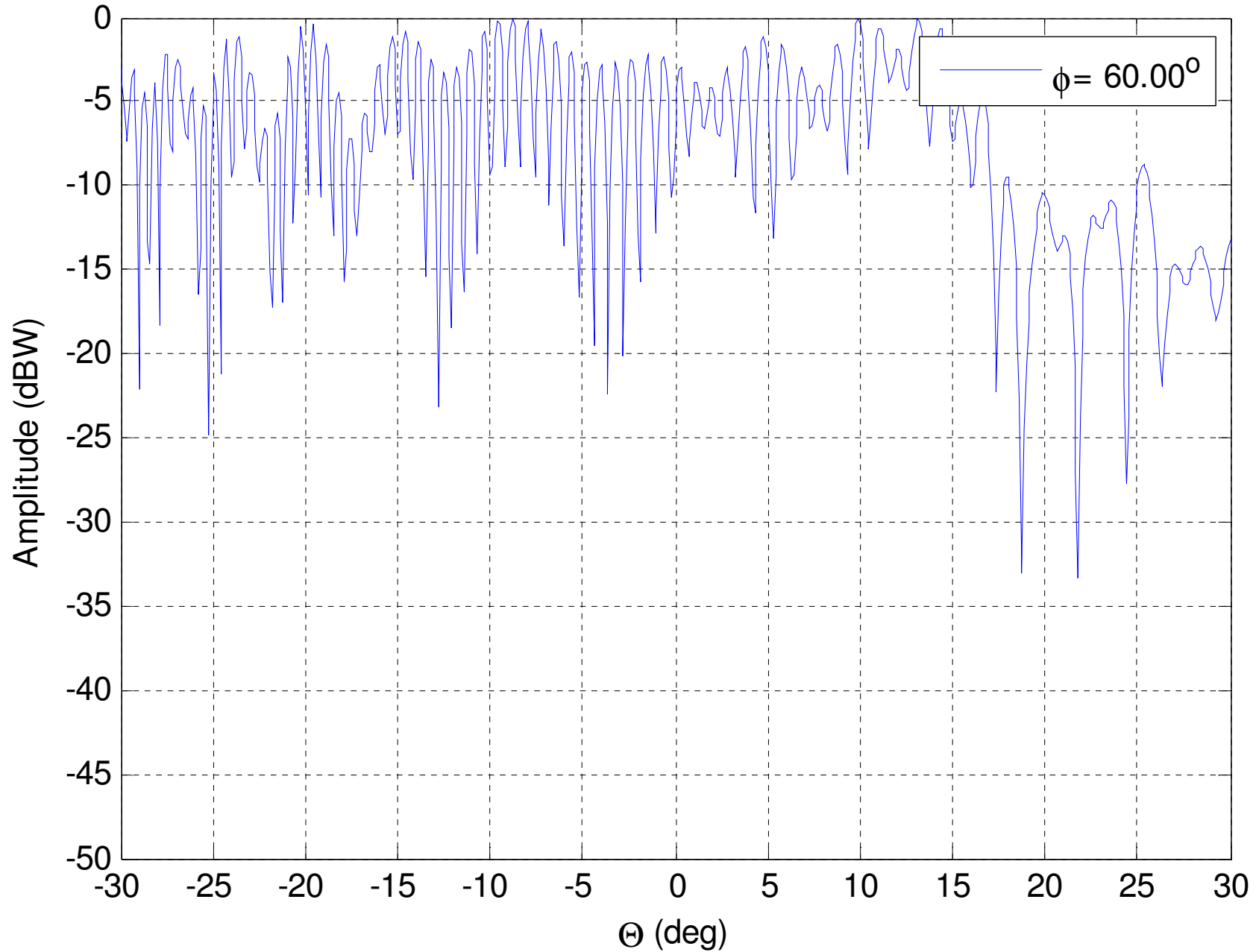
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -2.19 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

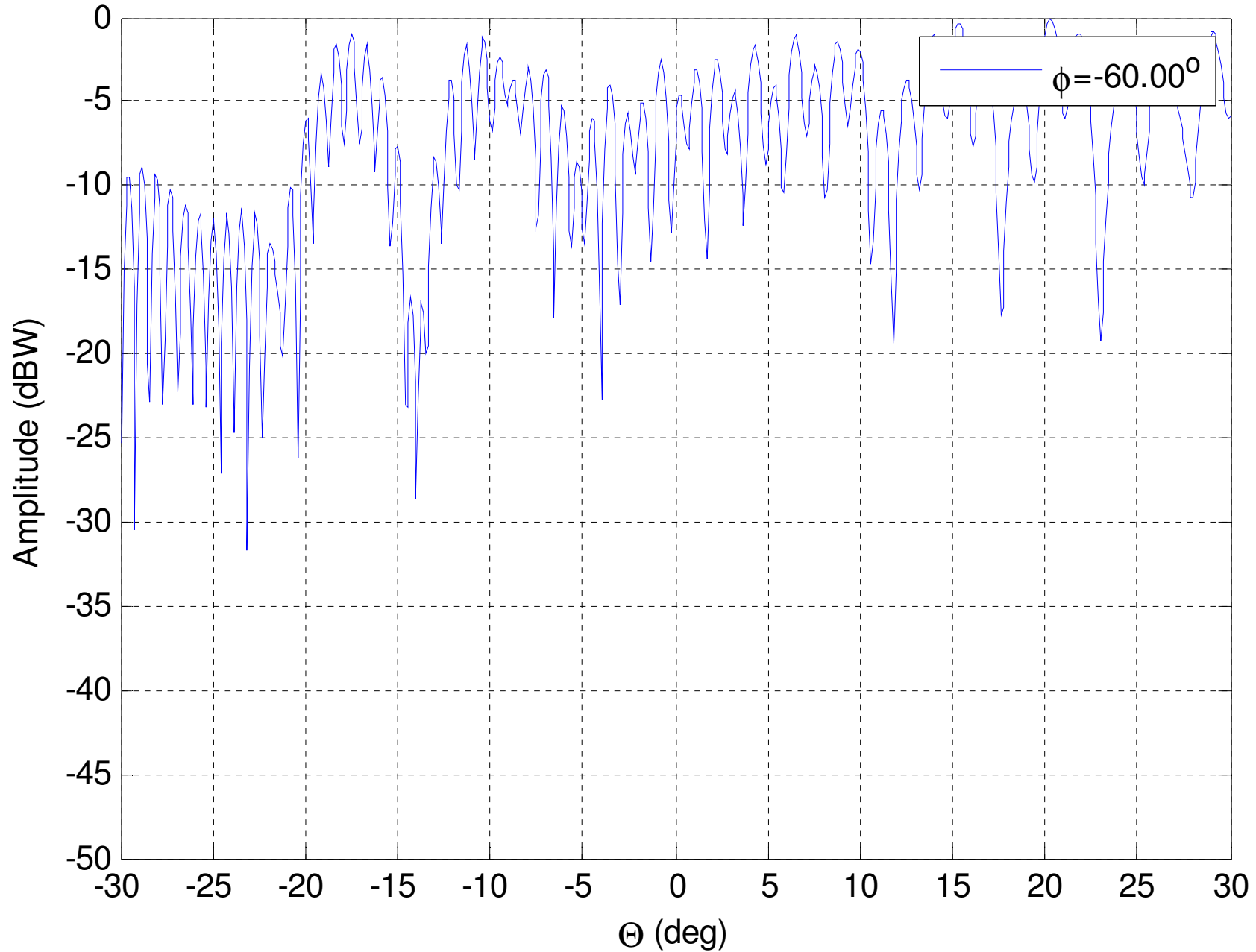
Input file: tx-17.7-rhcp-60.cut, Peak: -2.37 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

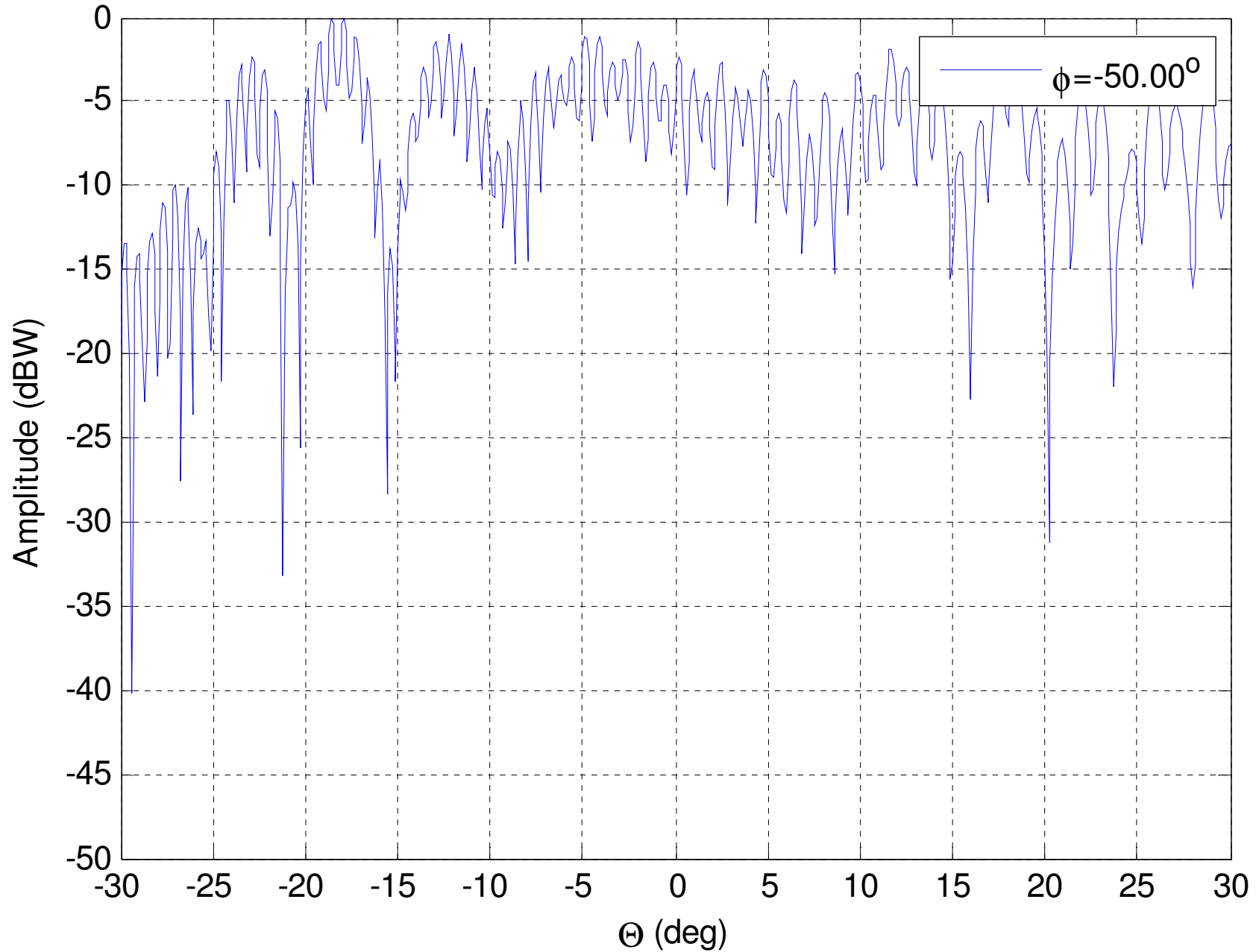
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -1.57 dBW, Date: 15-Dec-2011



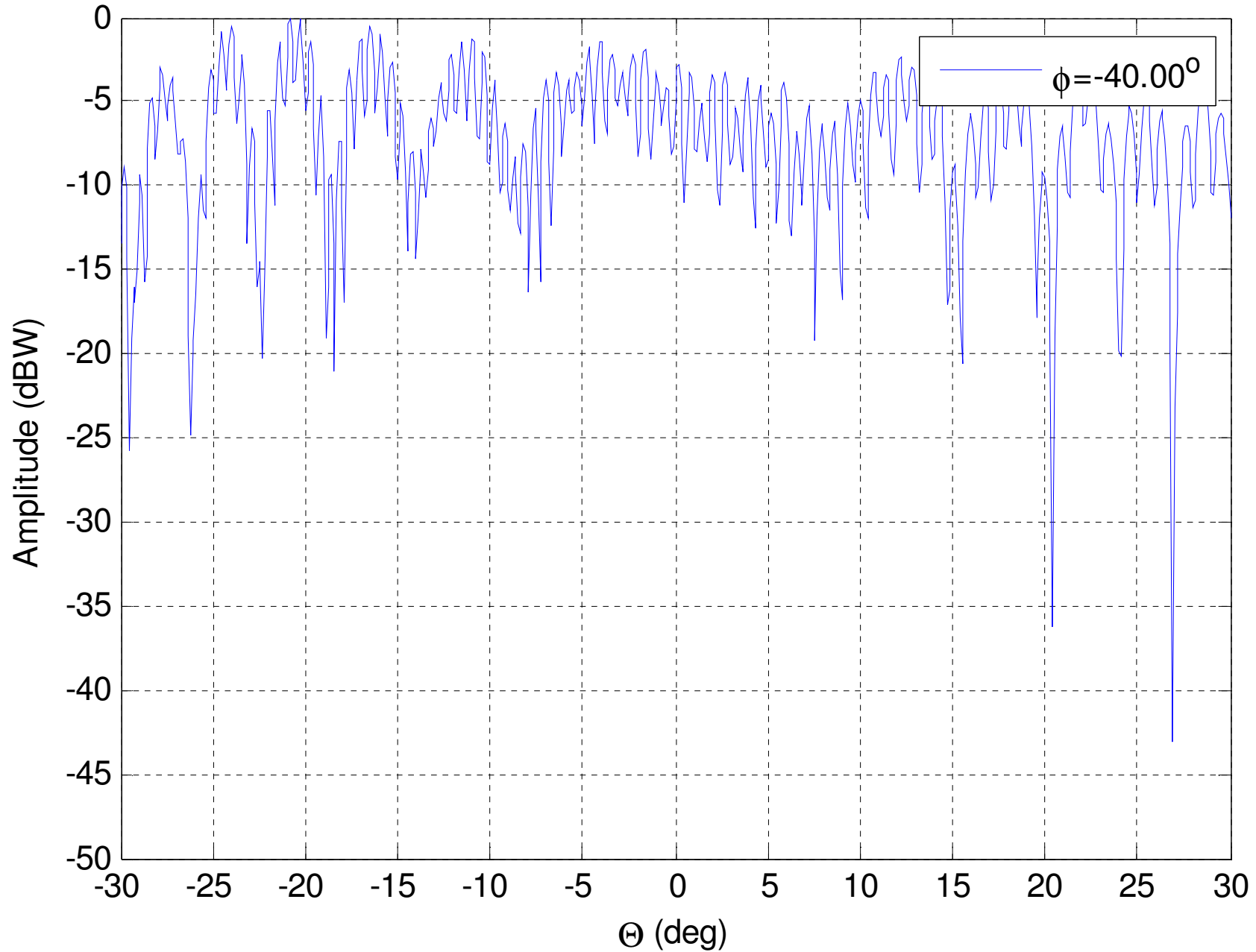
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -0.92 dBW, Date: 15-Dec-2011



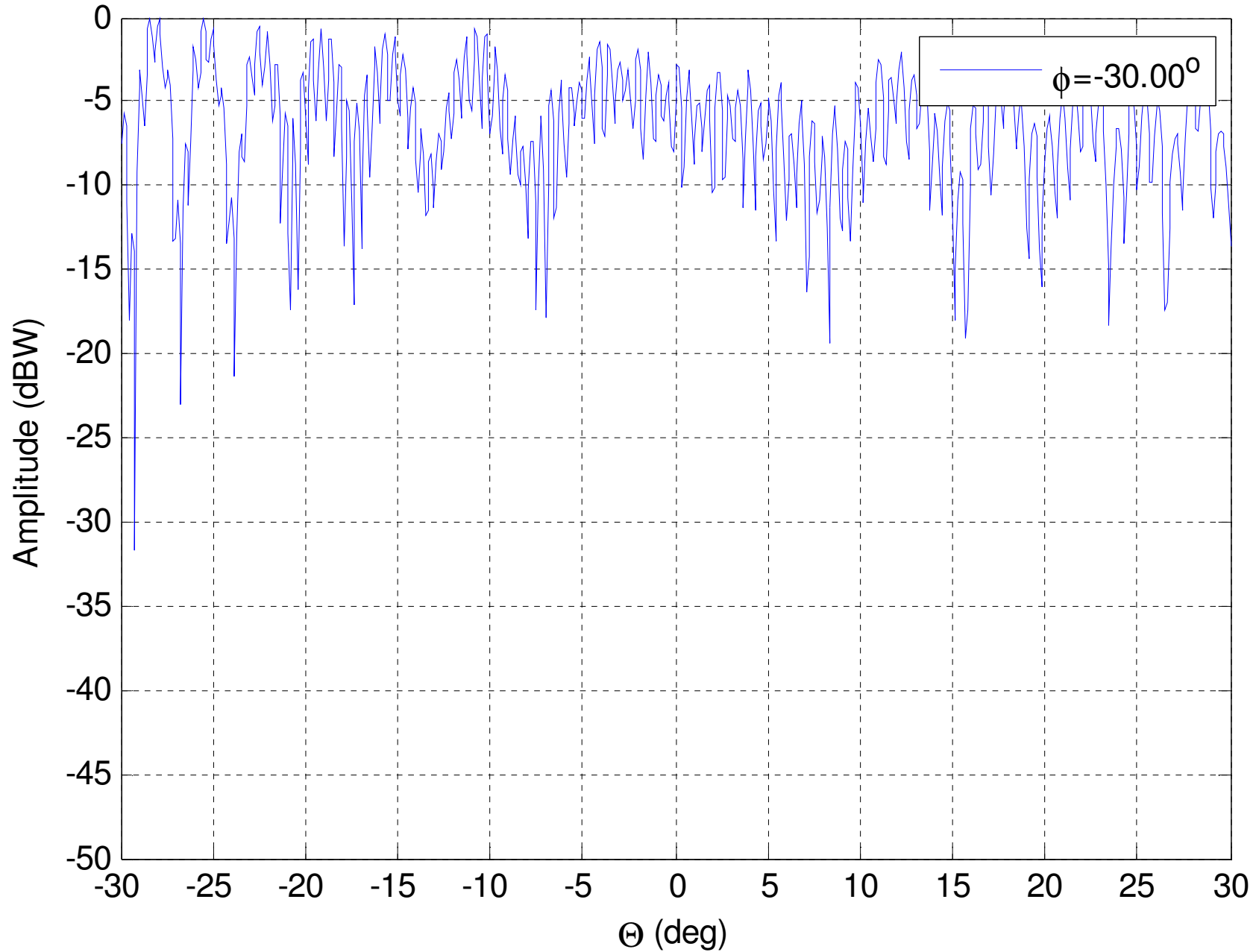
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -0.63 dBW, Date: 15-Dec-2011



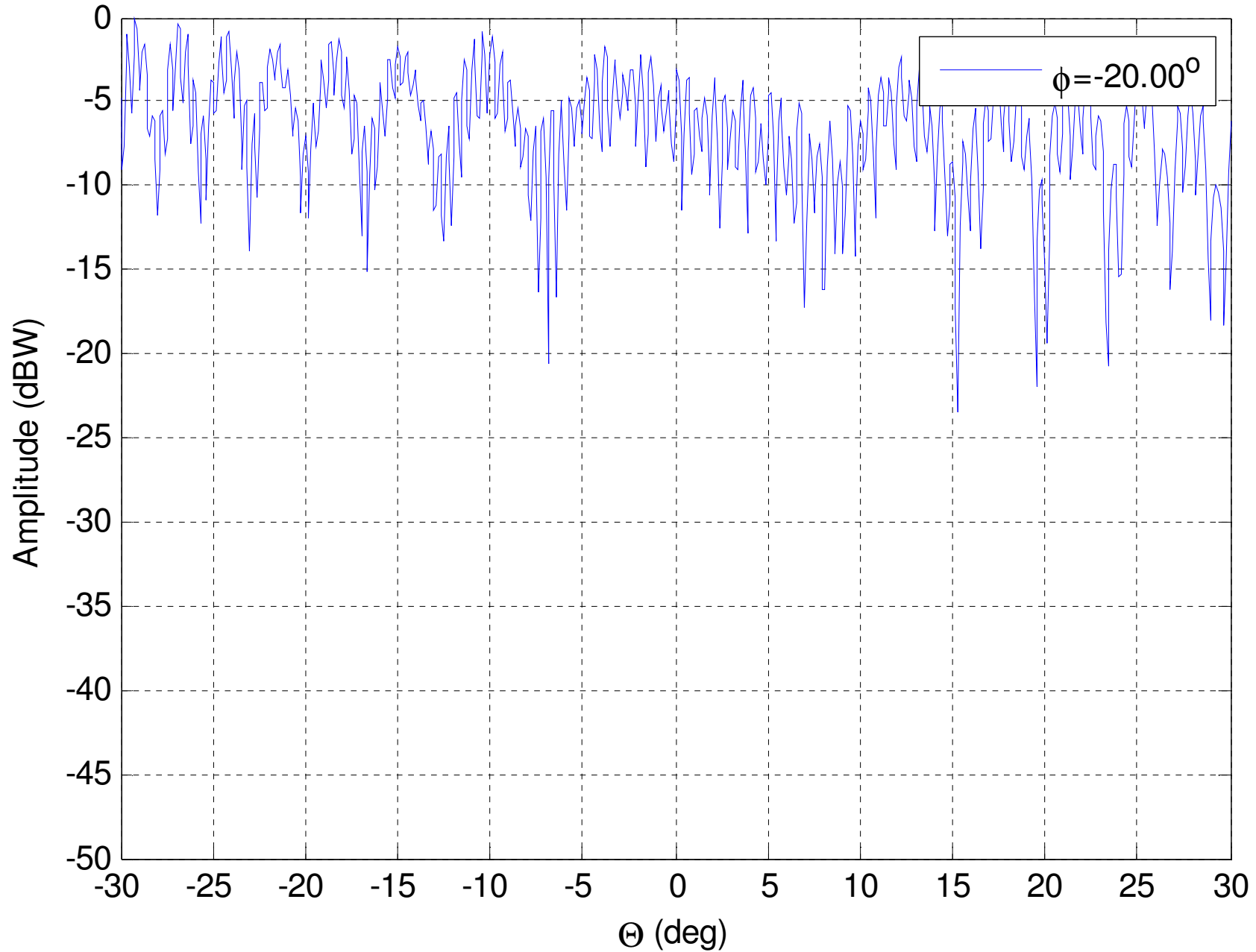
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -0.67 dBW, Date: 15-Dec-2011



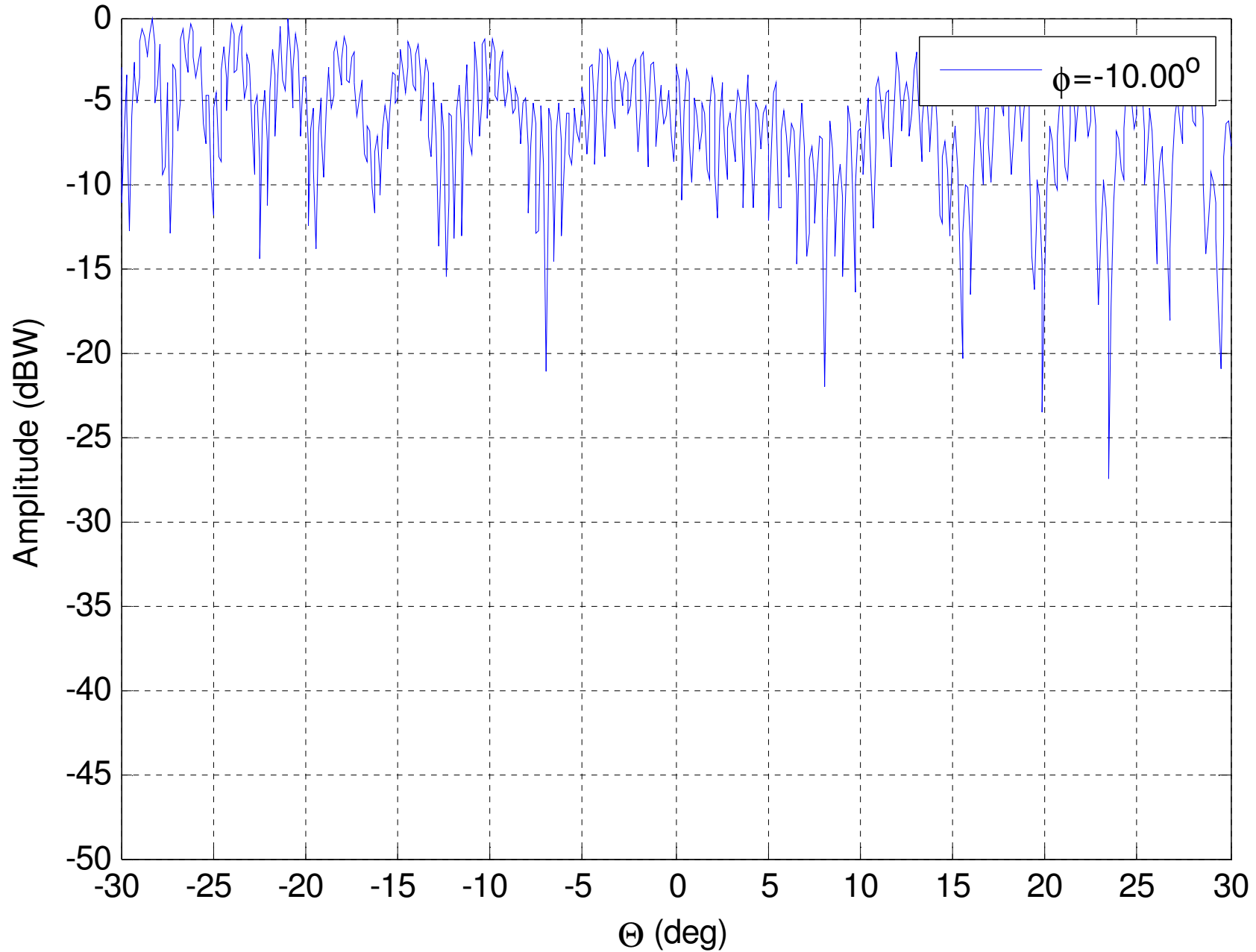
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -0.26 dBW, Date: 15-Dec-2011



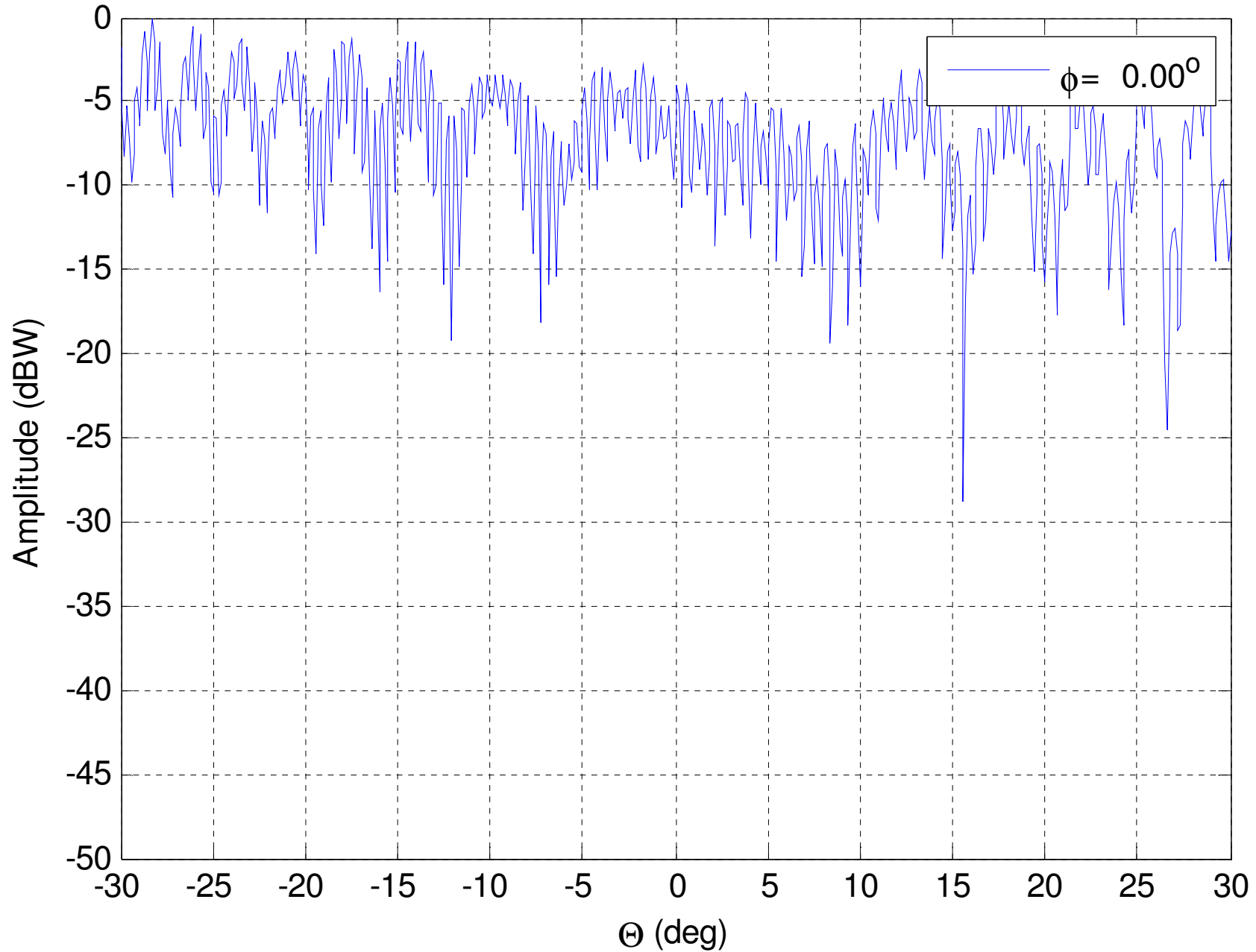
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -0.41 dBW, Date: 15-Dec-2011



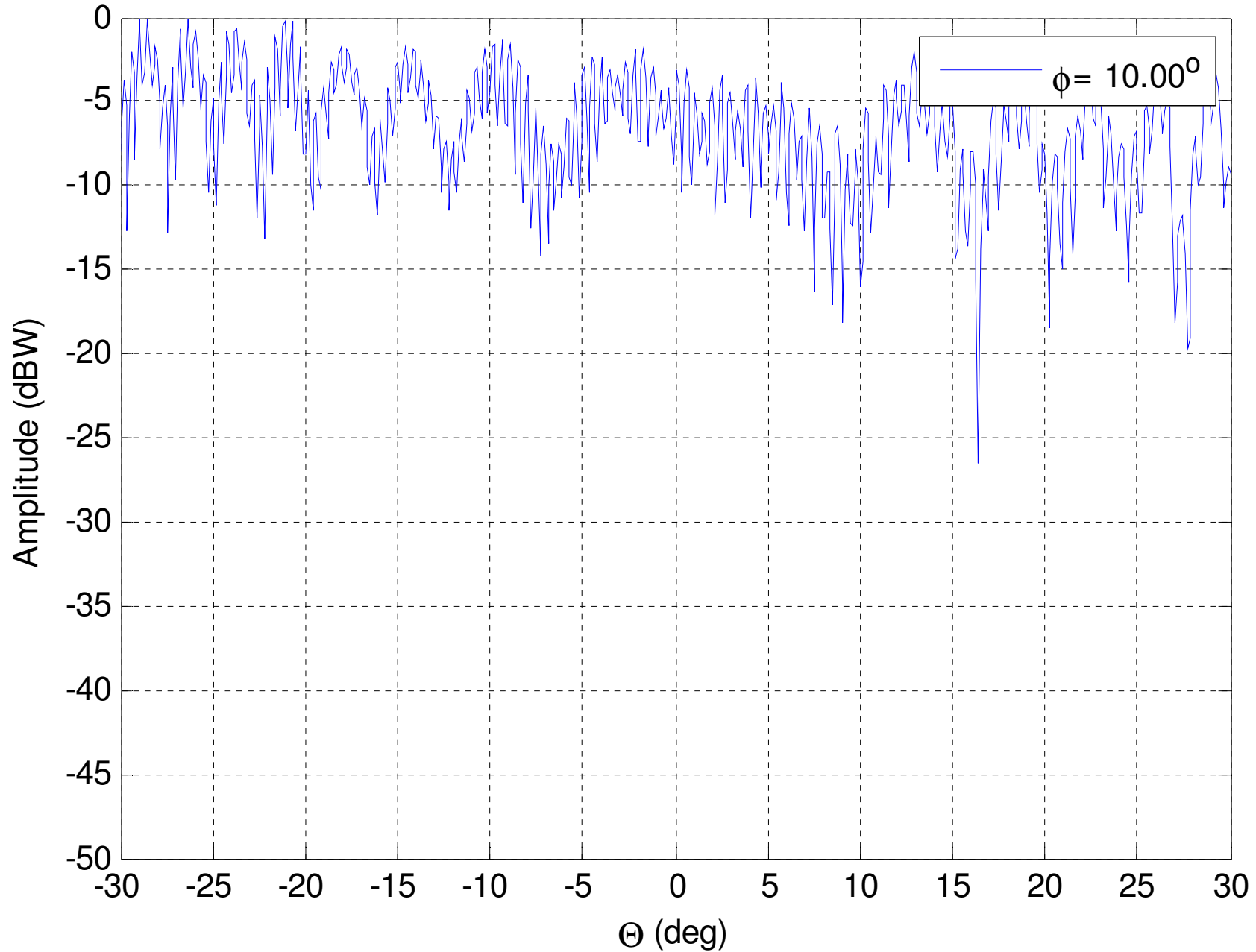
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 0.56 dBW, Date: 15-Dec-2011



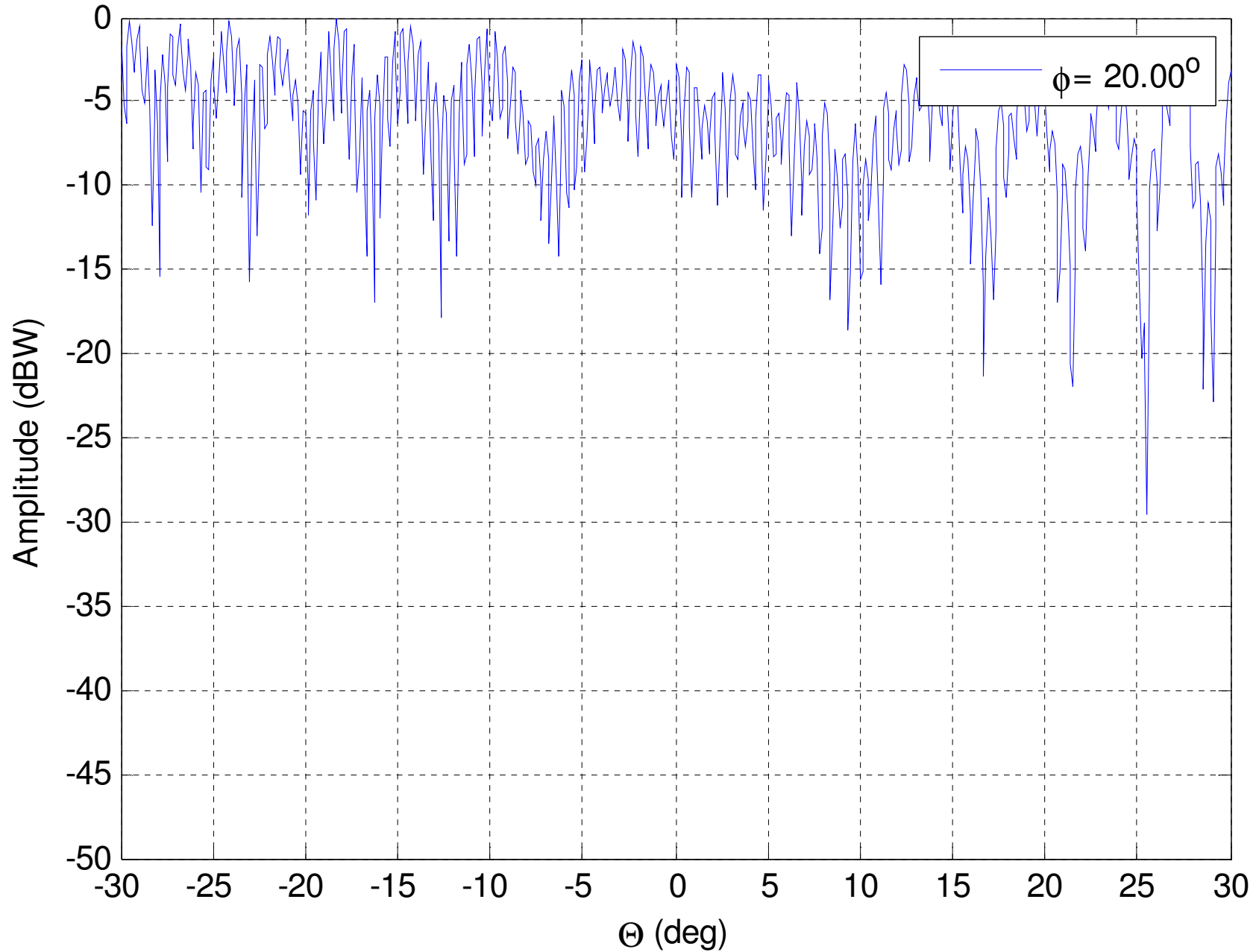
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -0.33 dBW, Date: 15-Dec-2011



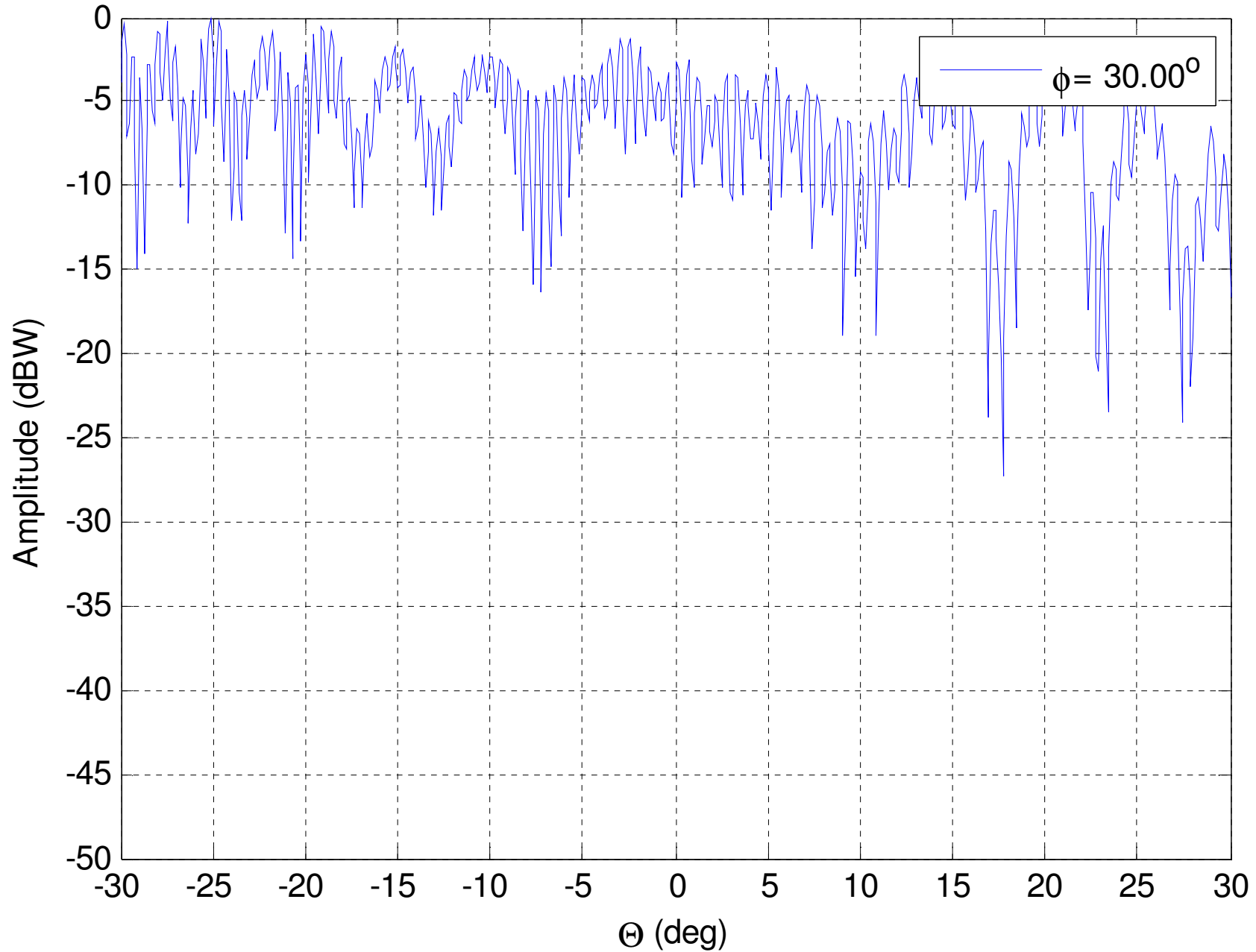
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -0.65 dBW, Date: 15-Dec-2011



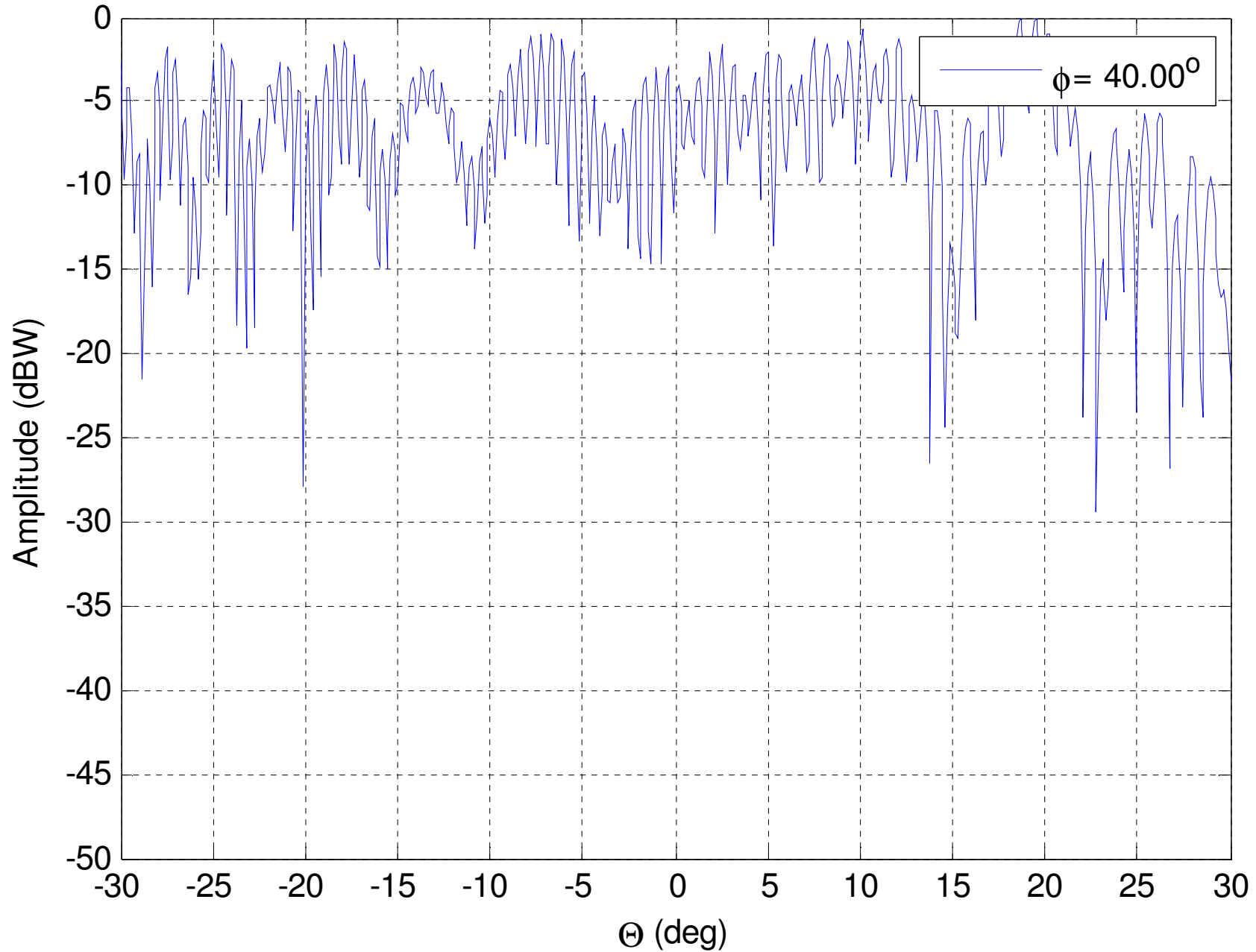
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.83 dBW, Date: 15-Dec-2011



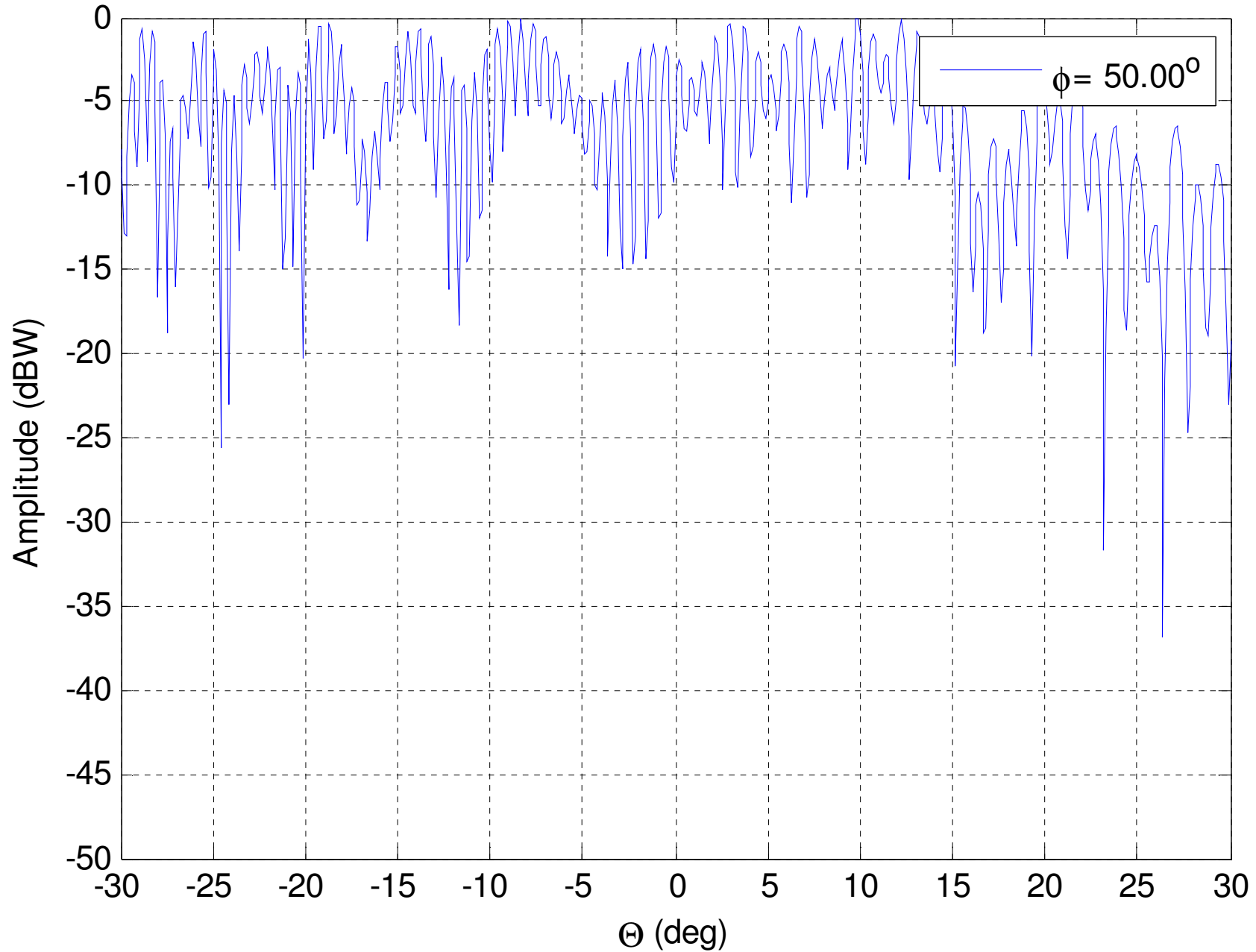
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -1.53 dBW, Date: 15-Dec-2011



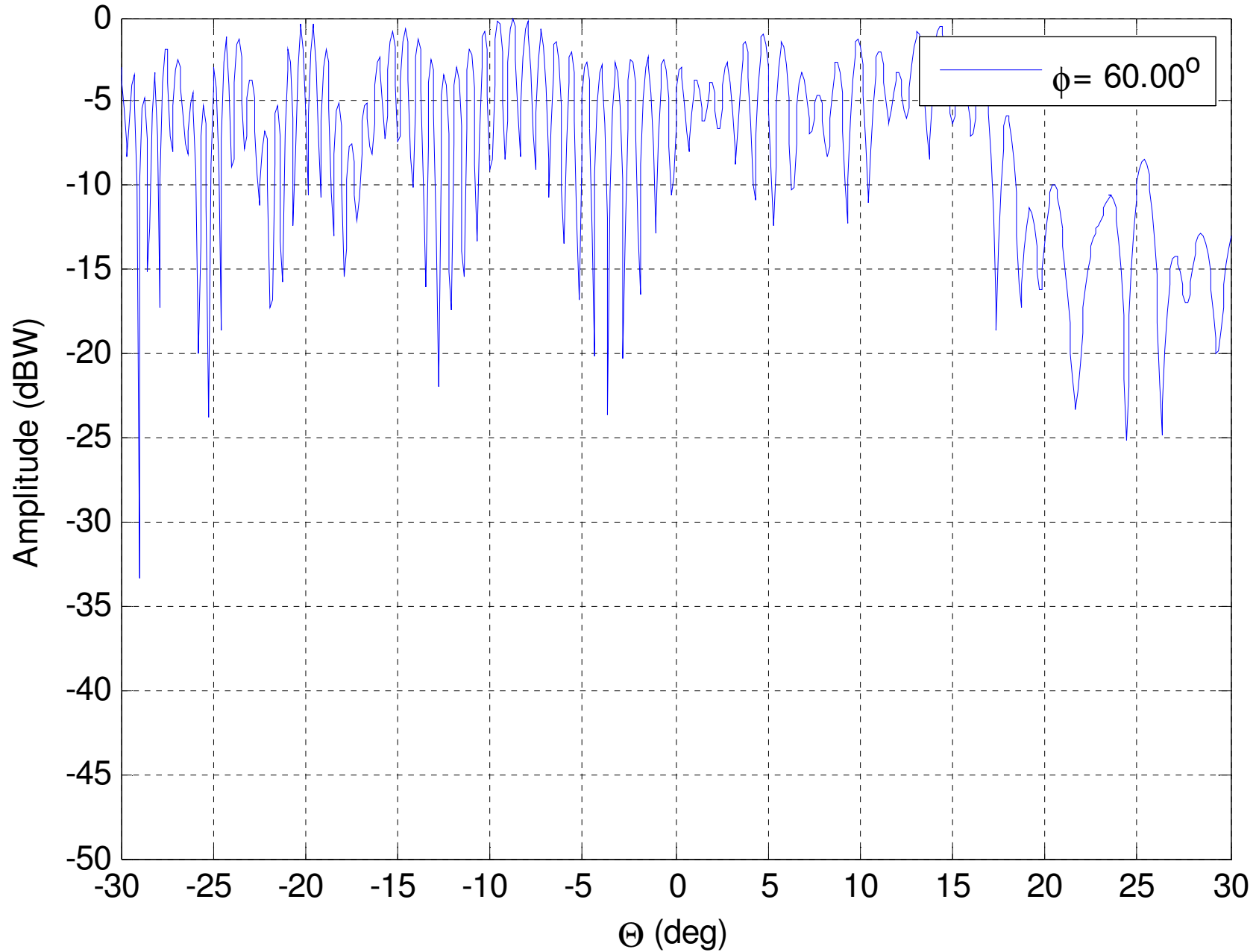
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -2.88 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -2.37 dBW, Date: 15-Dec-2011



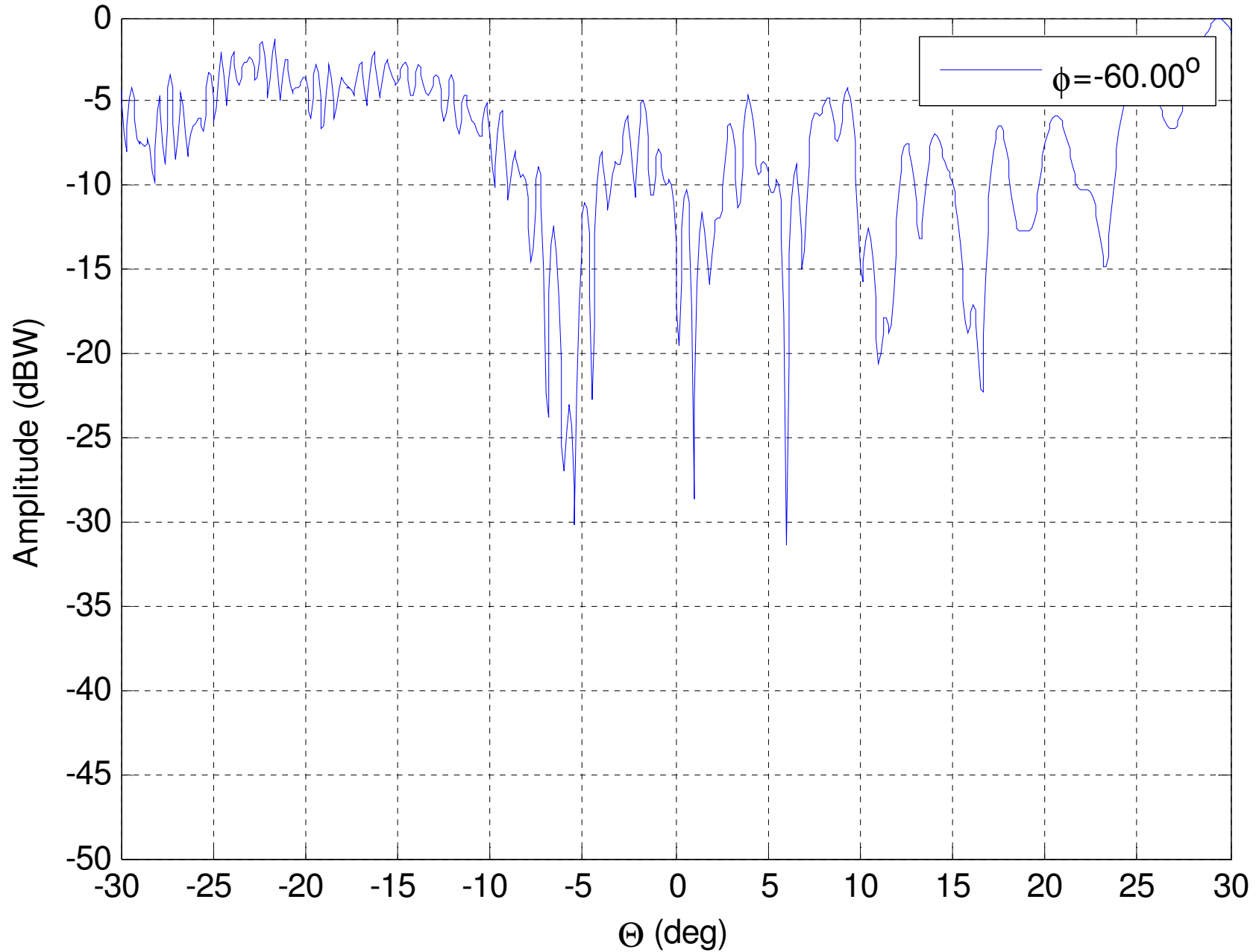
Spot Beam27, +X Axis Plots

- 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

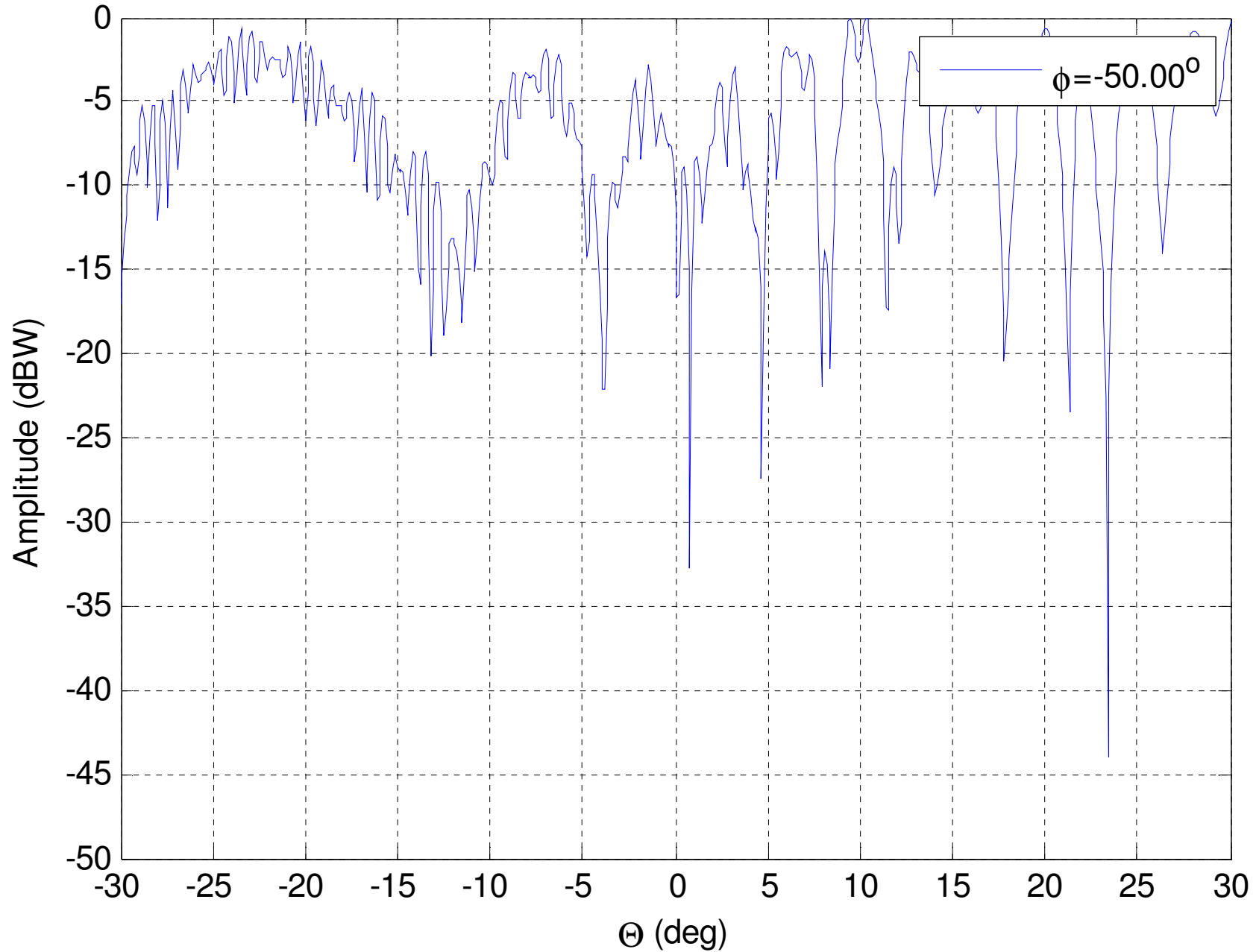
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -4.21 dBW, Date: 15-Dec-2011



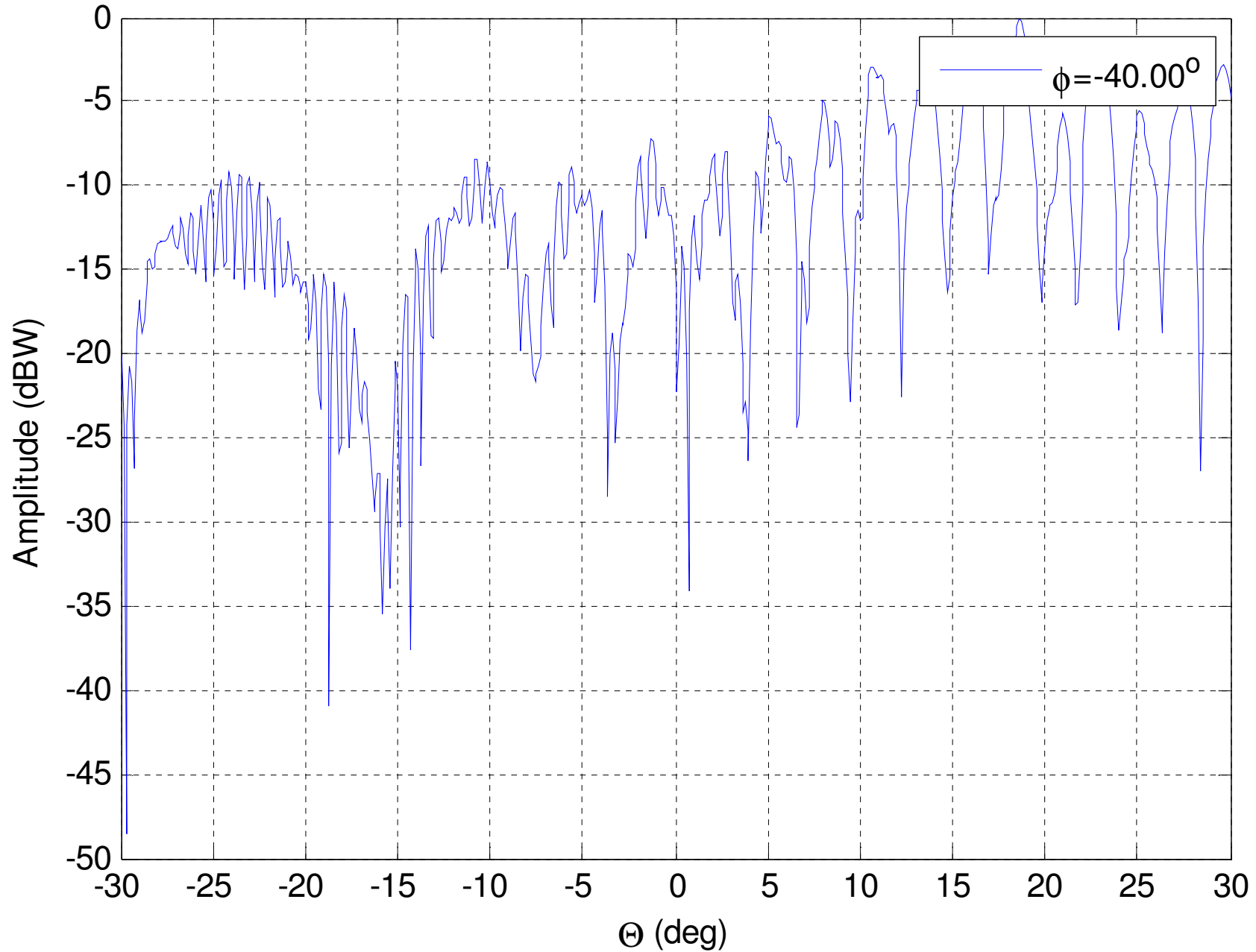
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.05 dBW, Date: 15-Dec-2011



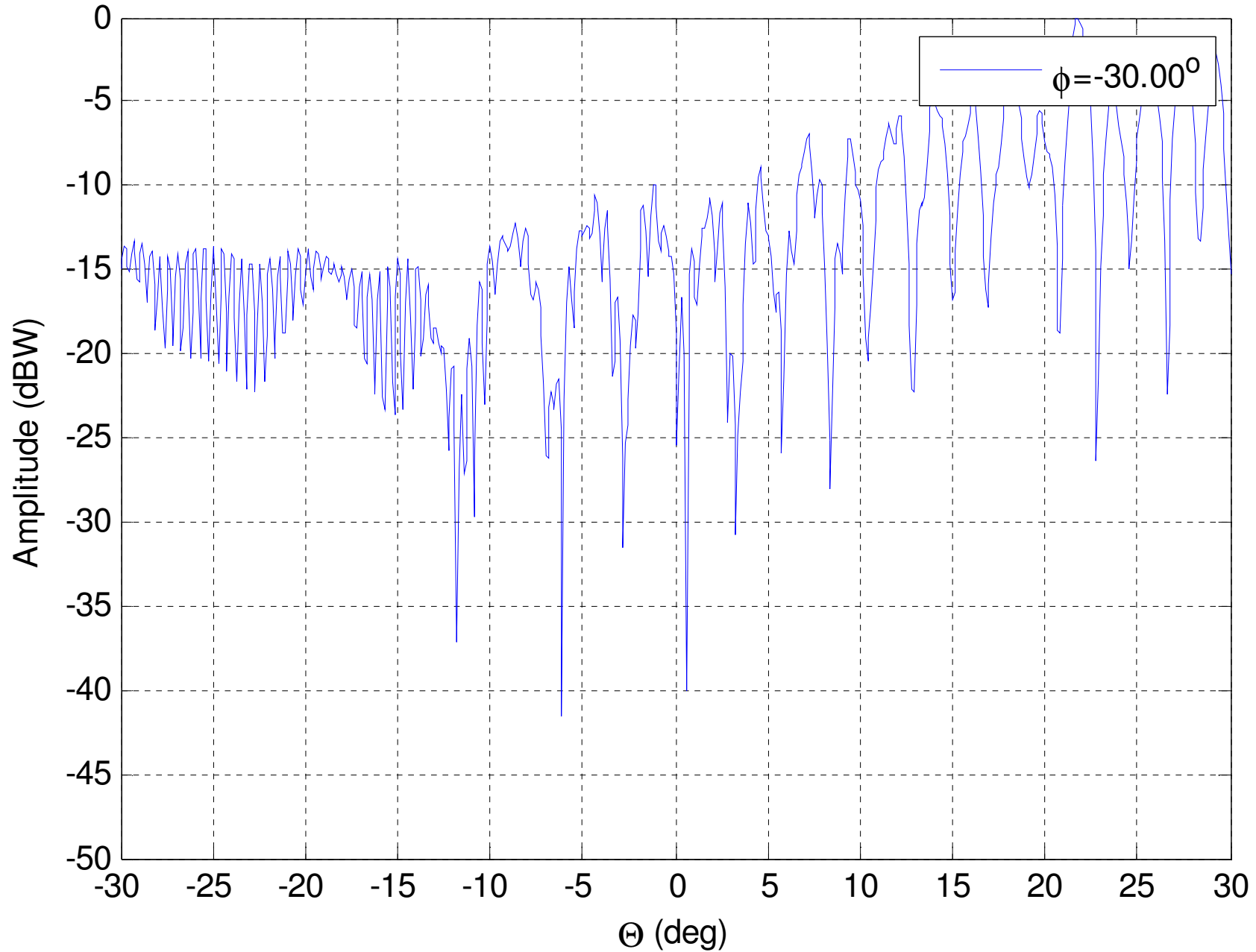
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -1.48 dBW, Date: 15-Dec-2011



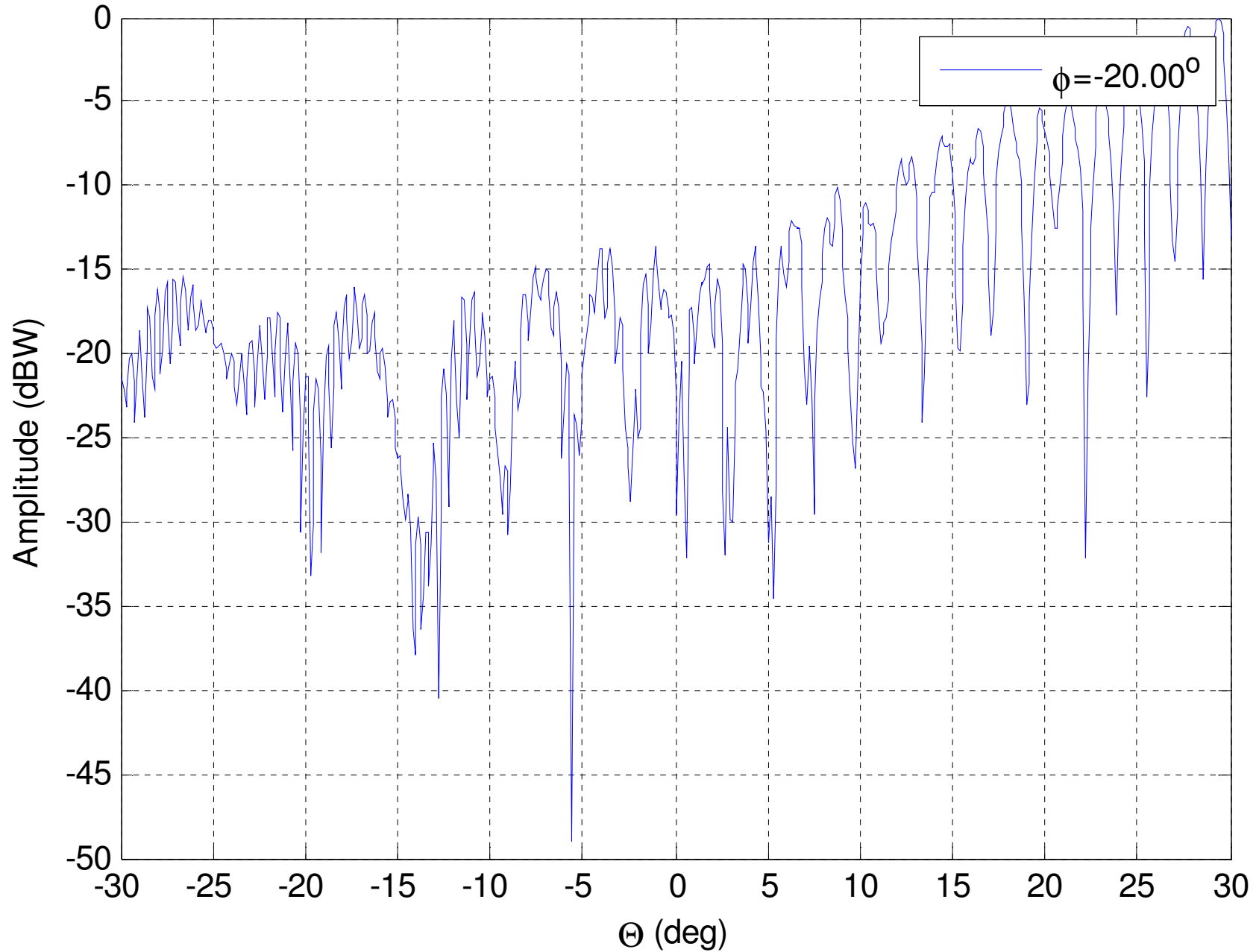
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 1.09 dBW, Date: 15-Dec-2011



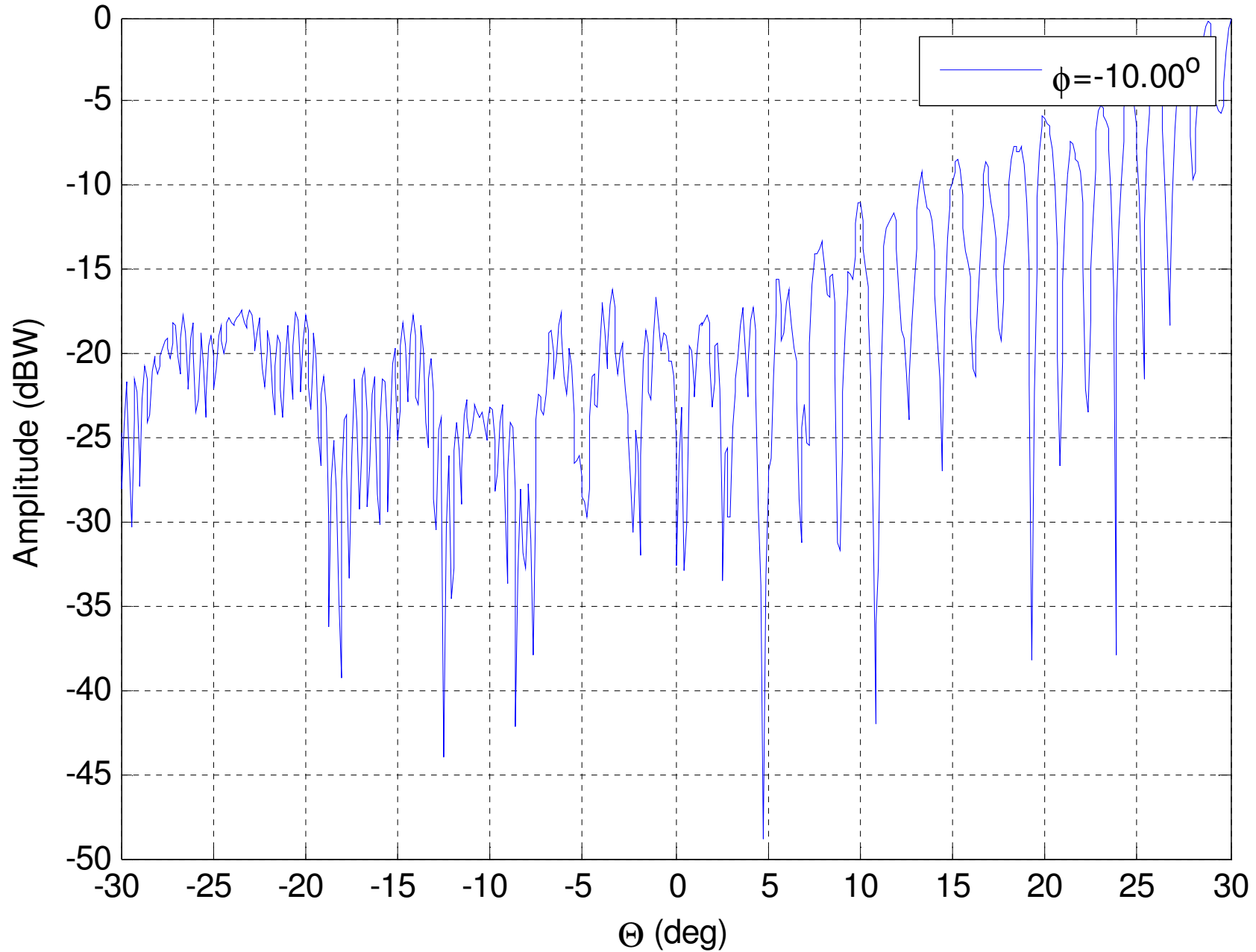
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 4.85 dBW, Date: 15-Dec-2011



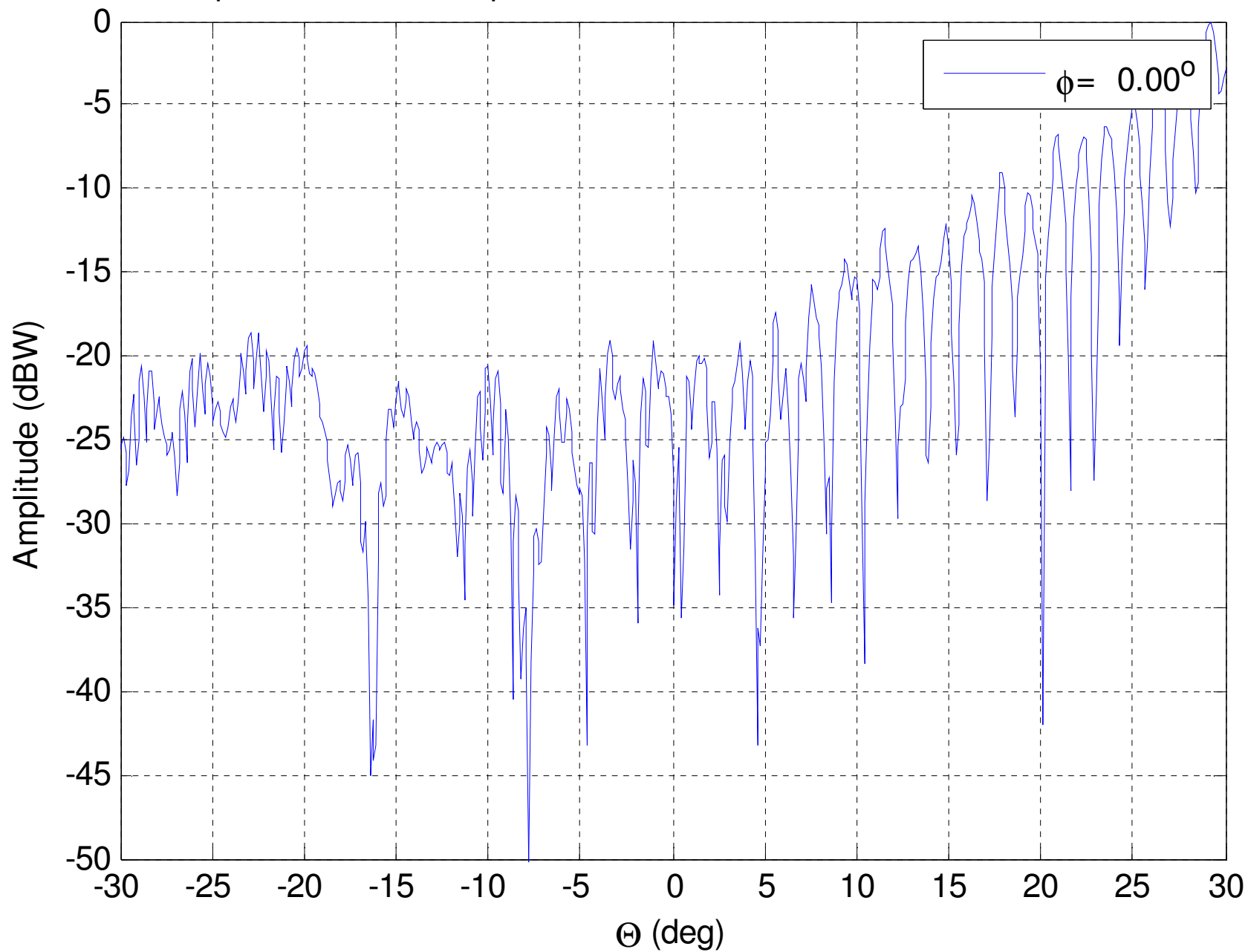
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 7.60 dBW, Date: 15-Dec-2011



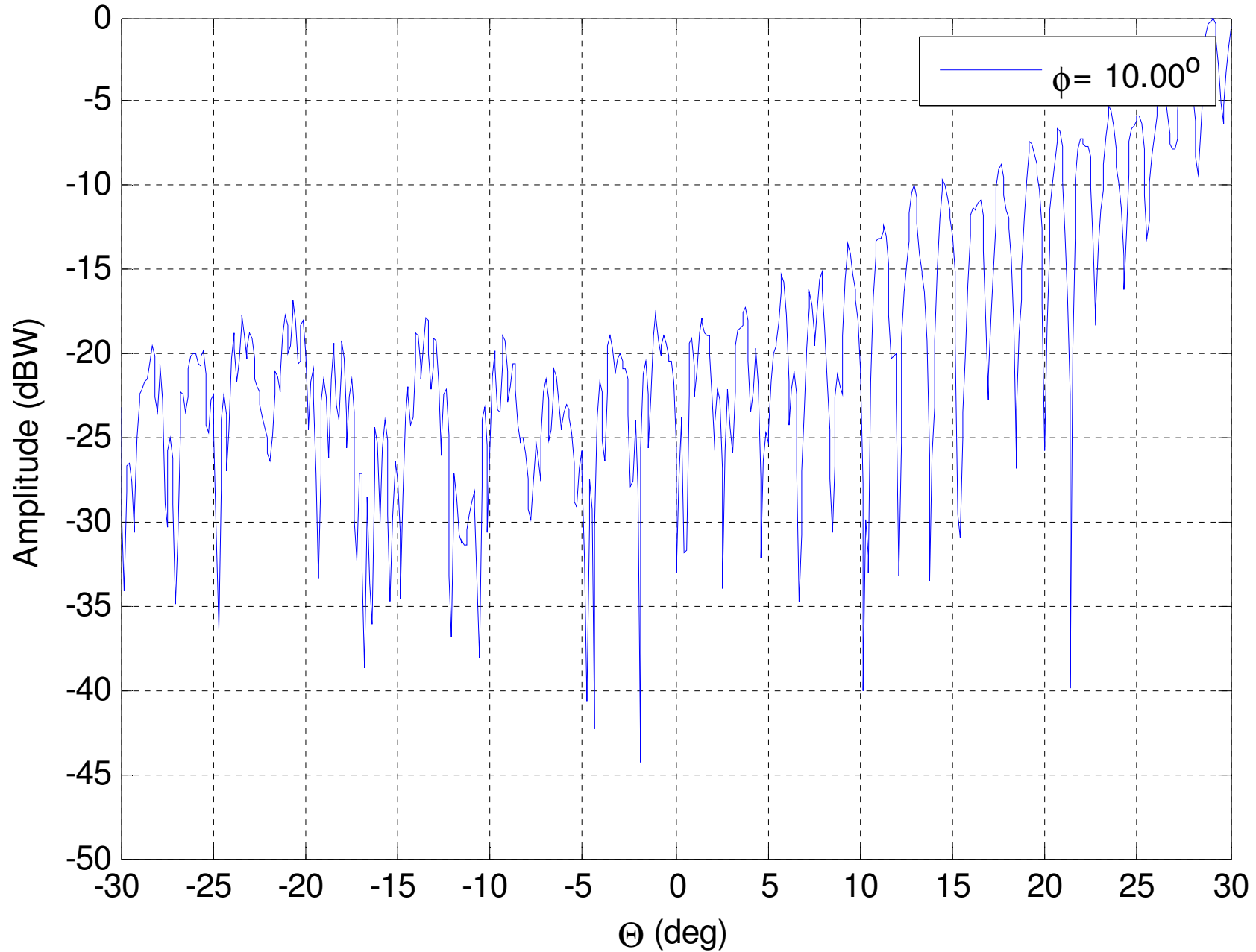
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 9.75 dBW, Date: 15-Dec-2011



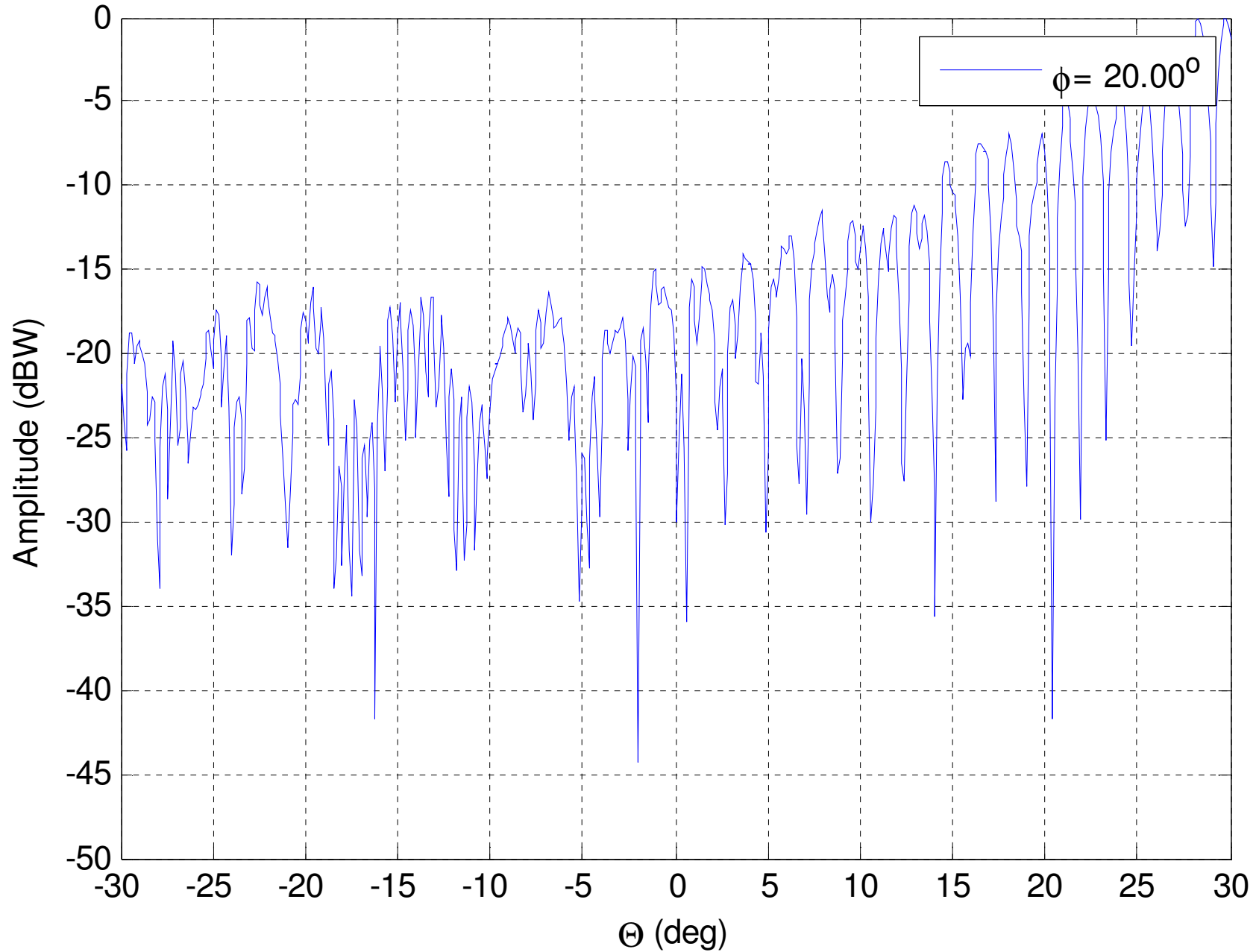
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 7.92 dBW, Date: 15-Dec-2011



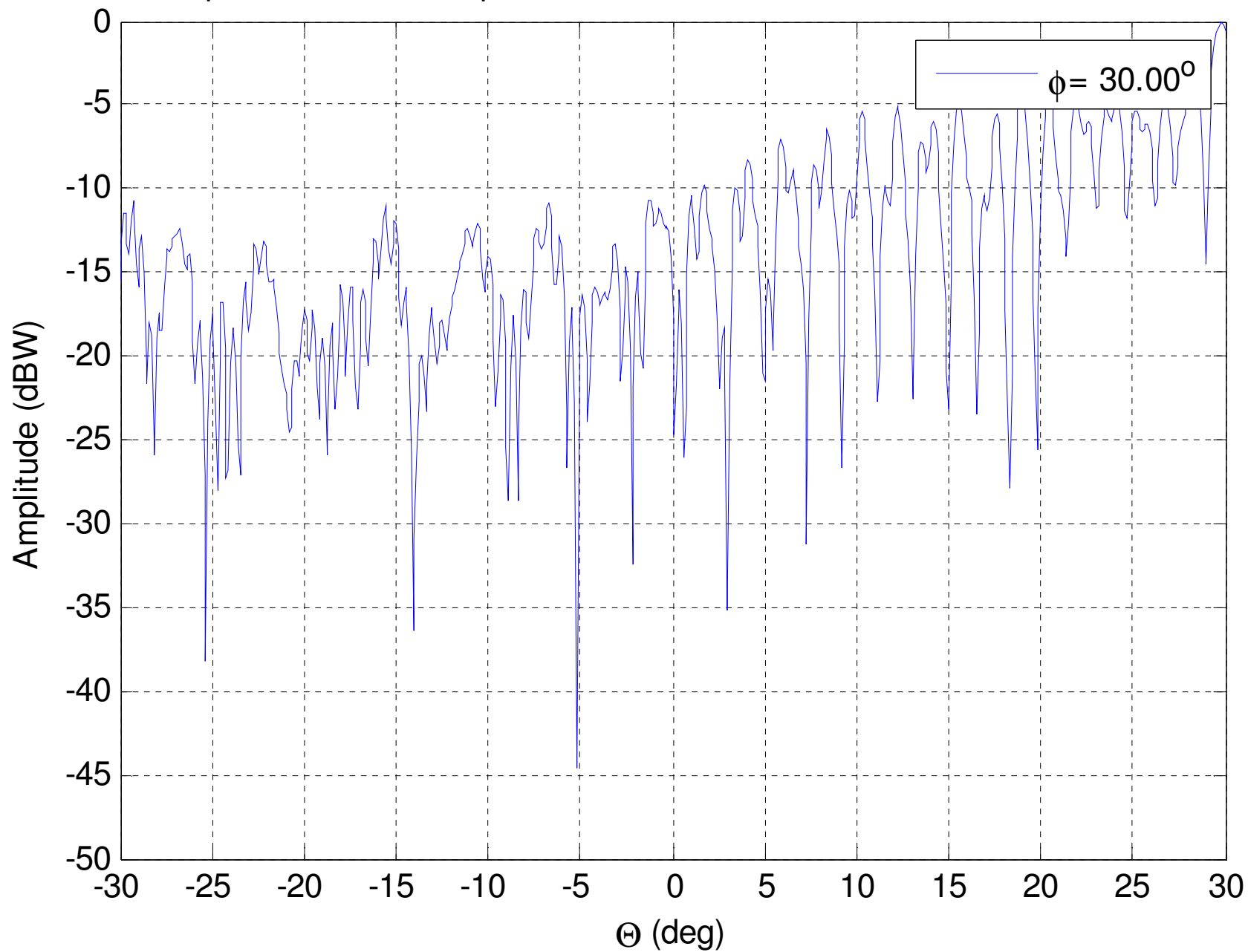
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 4.95 dBW, Date: 15-Dec-2011



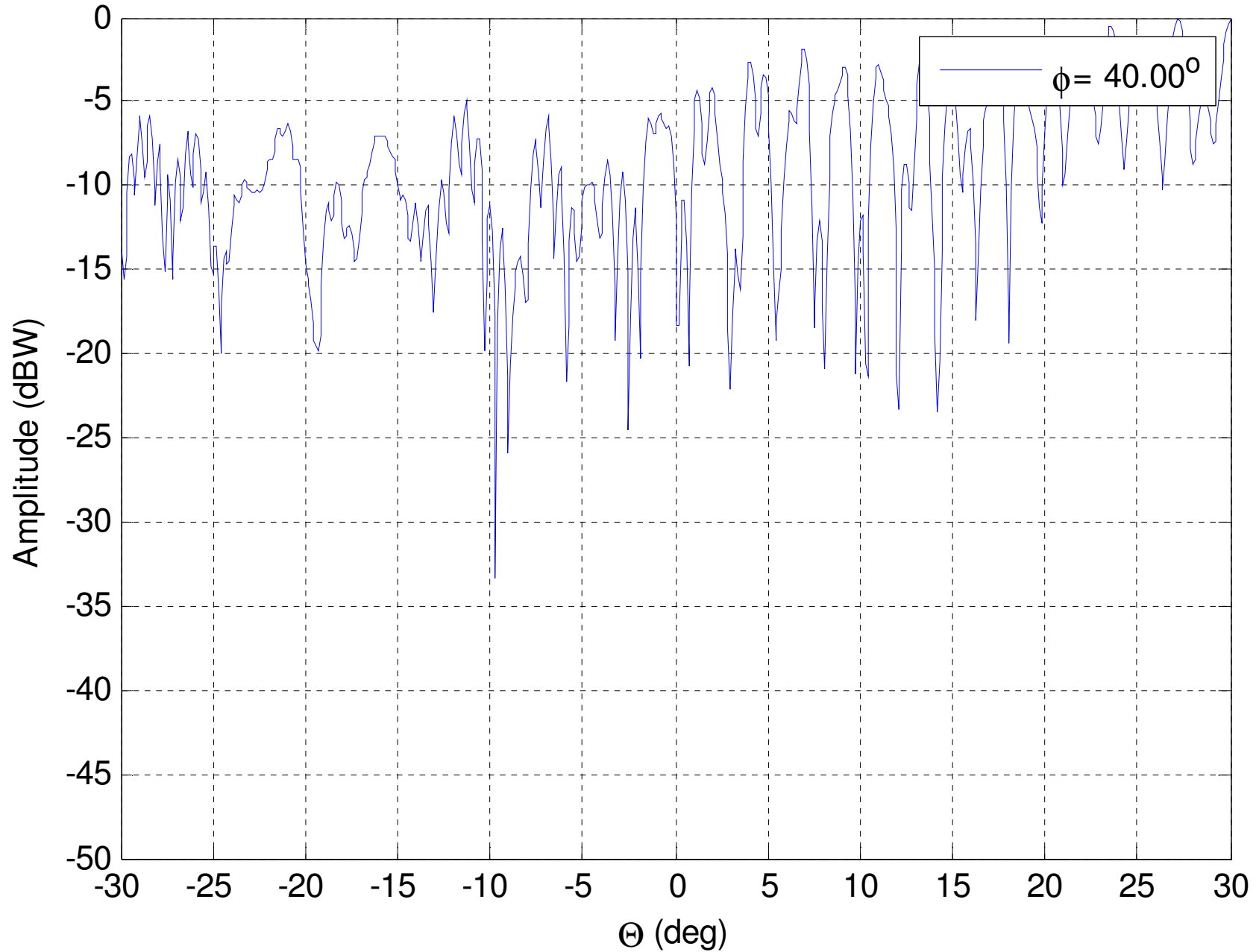
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: 0.08 dBW, Date: 15-Dec-2011



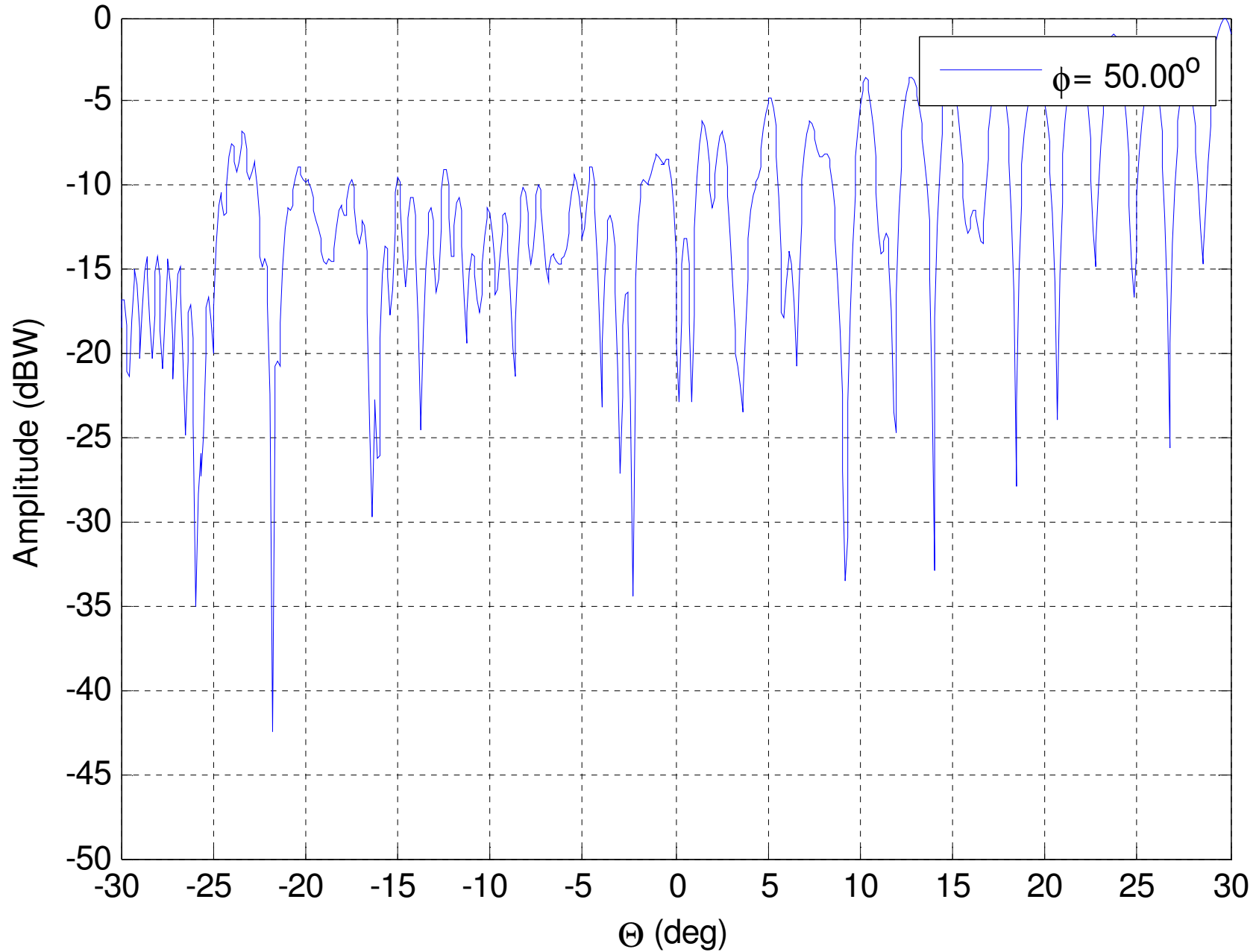
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -5.53 dBW, Date: 15-Dec-2011



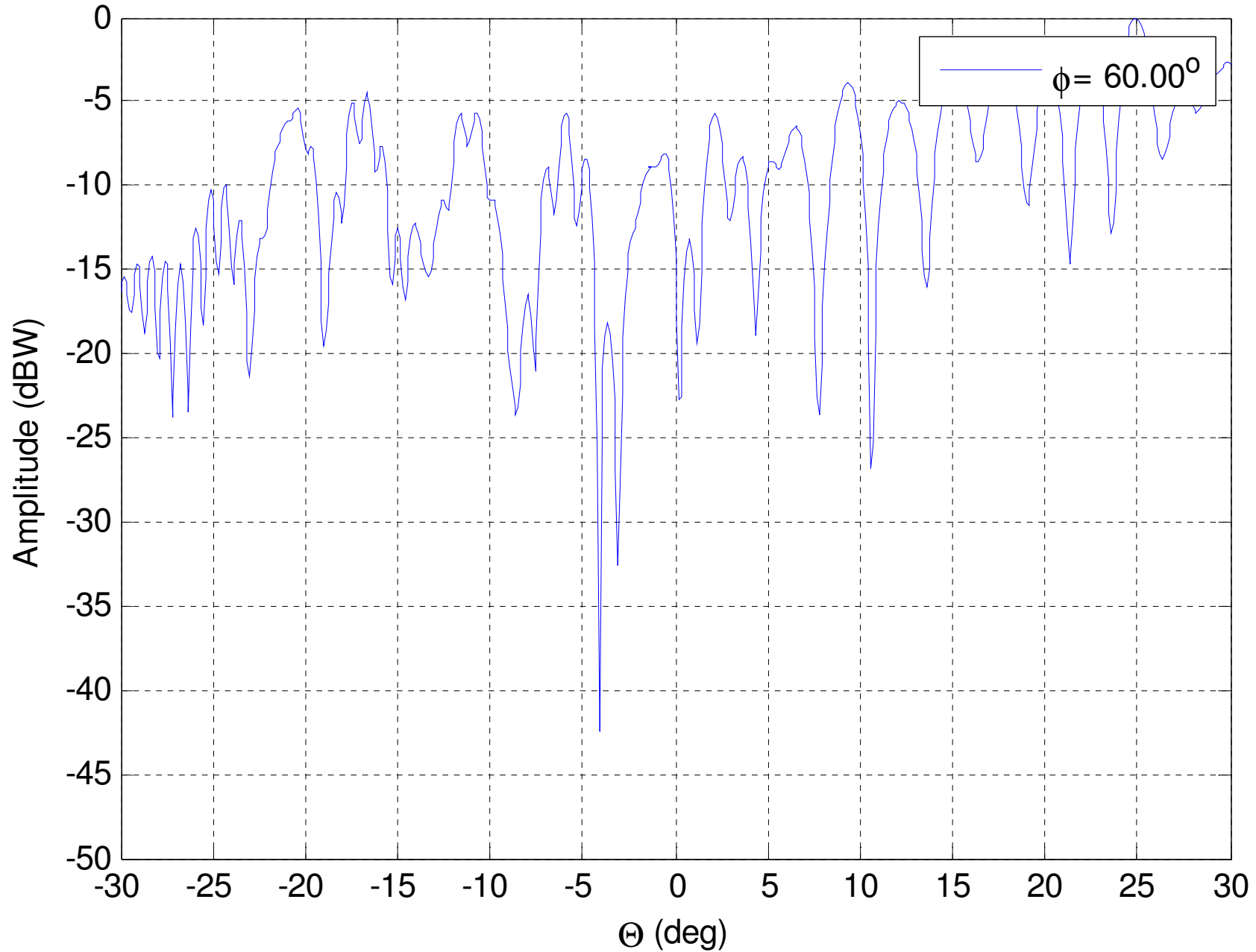
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -3.29 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

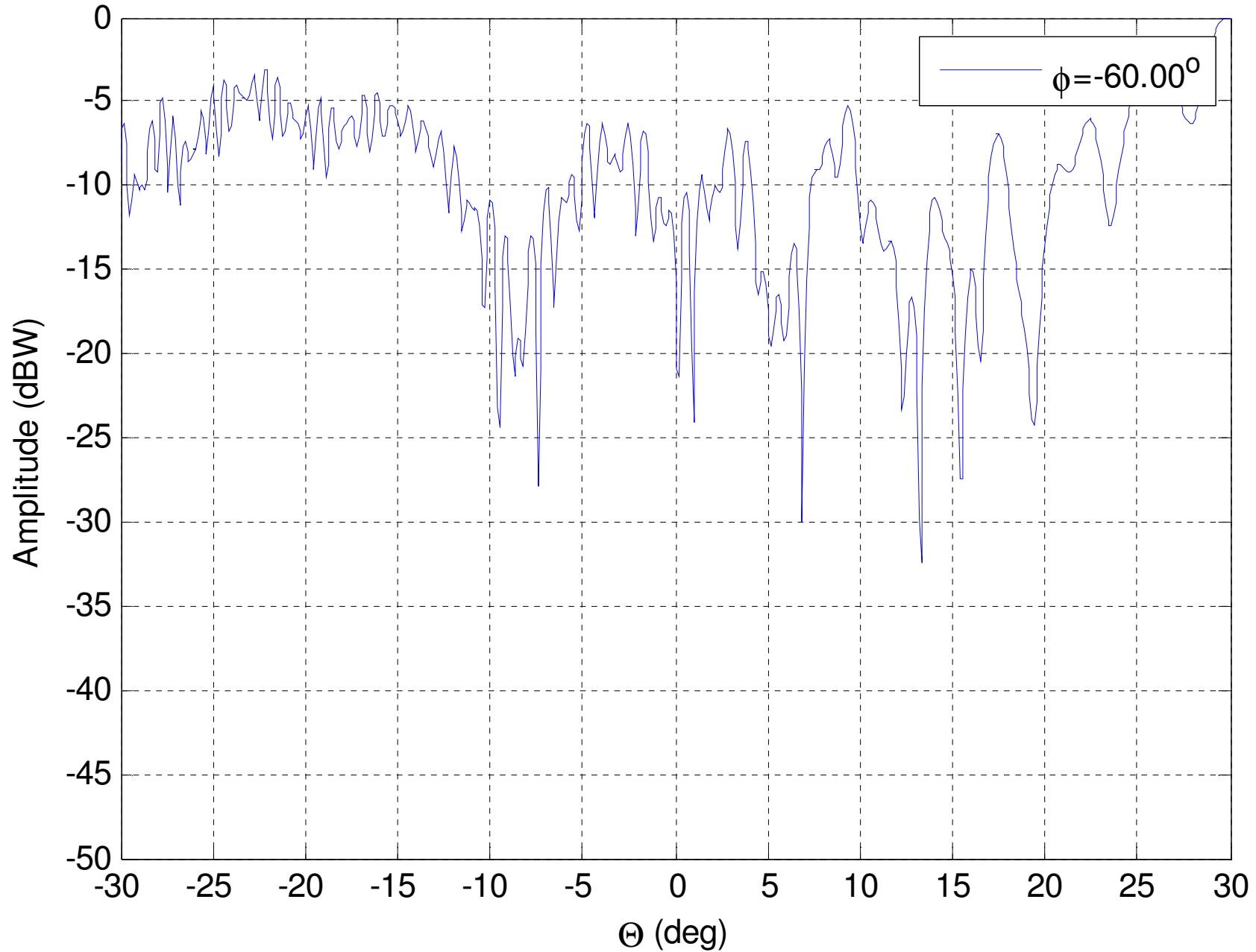
Input file: tx-17.3-rhcp-60.cut, Peak: -3.32 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

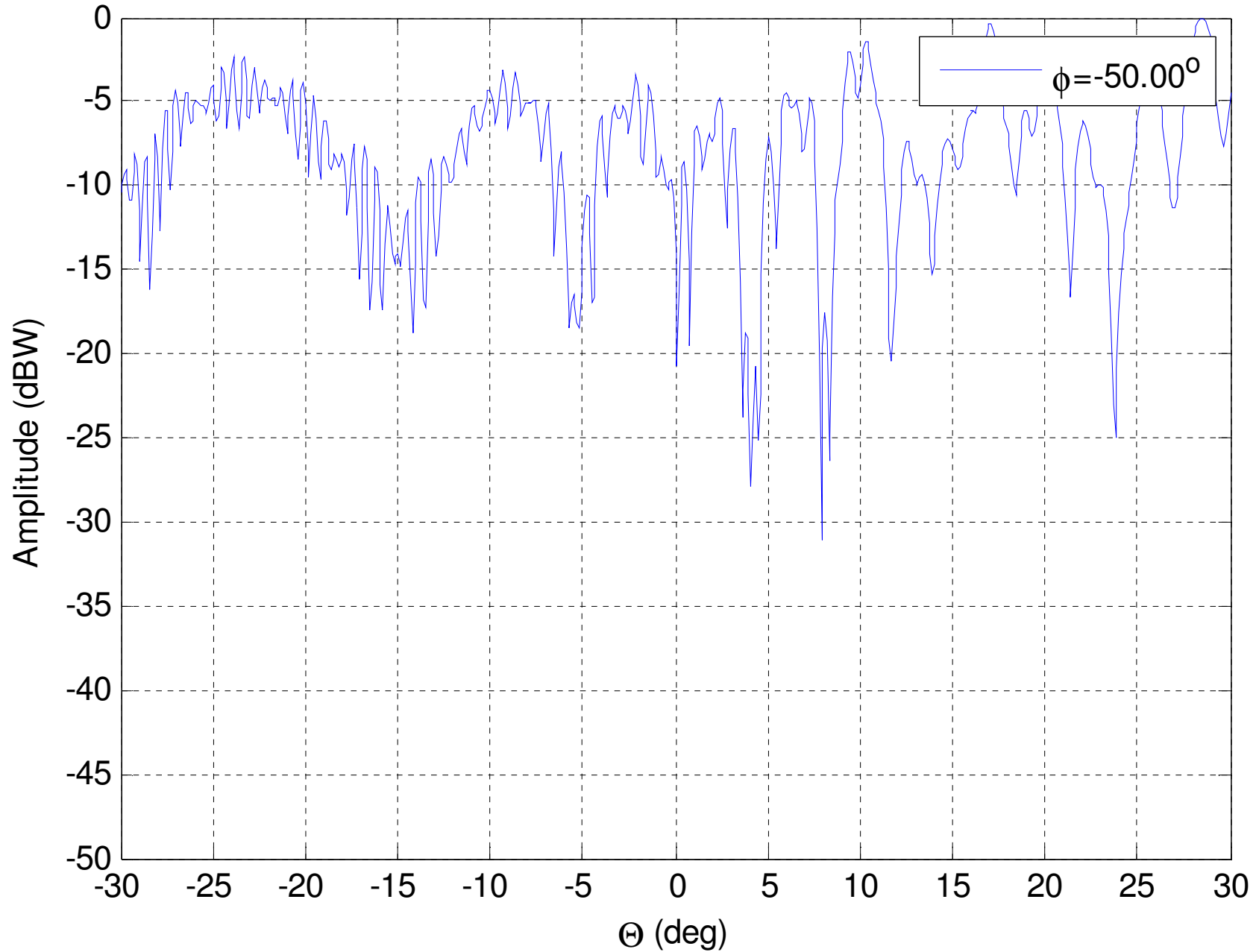
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -3.26 dBW, Date: 15-Dec-2011



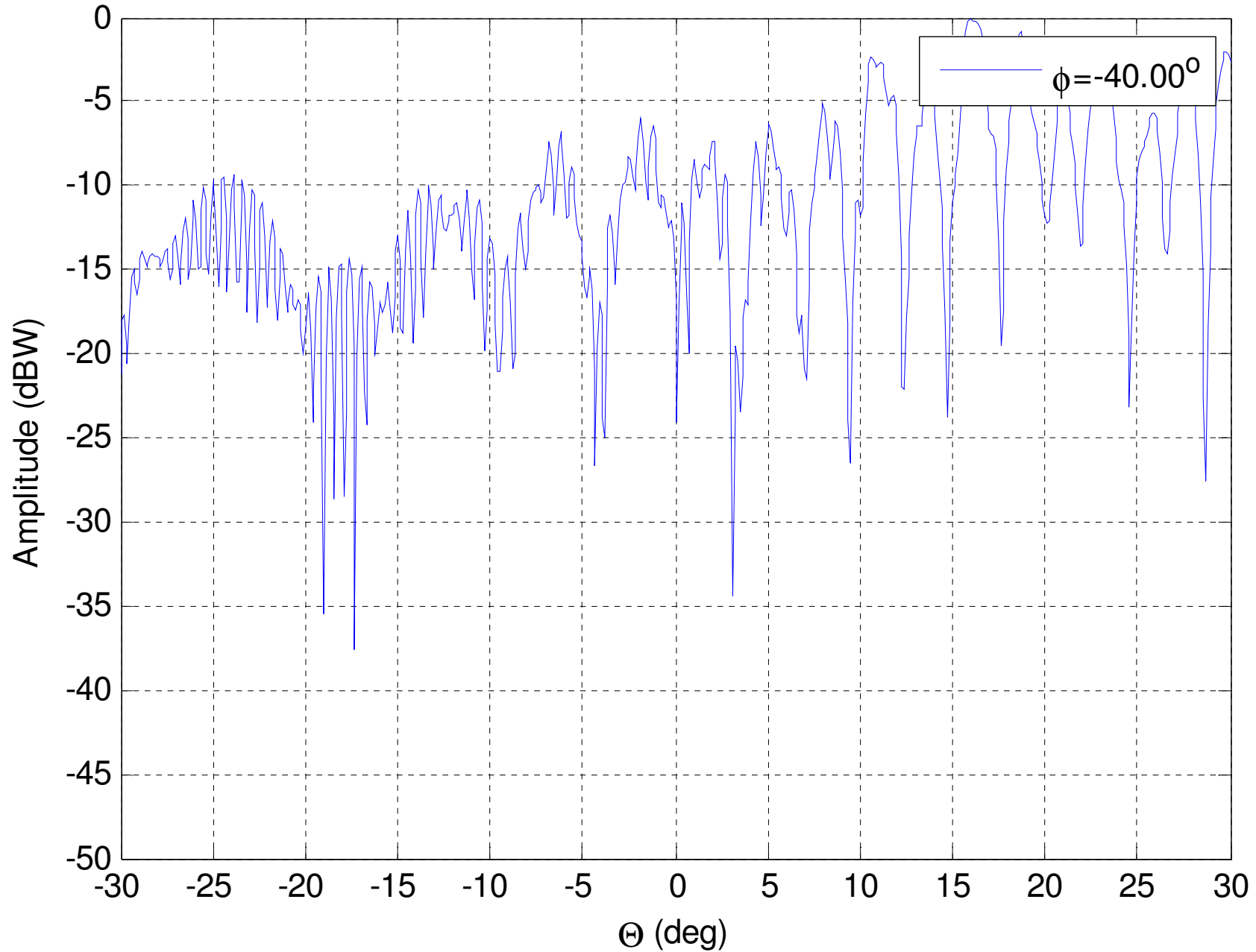
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.87 dBW, Date: 15-Dec-2011



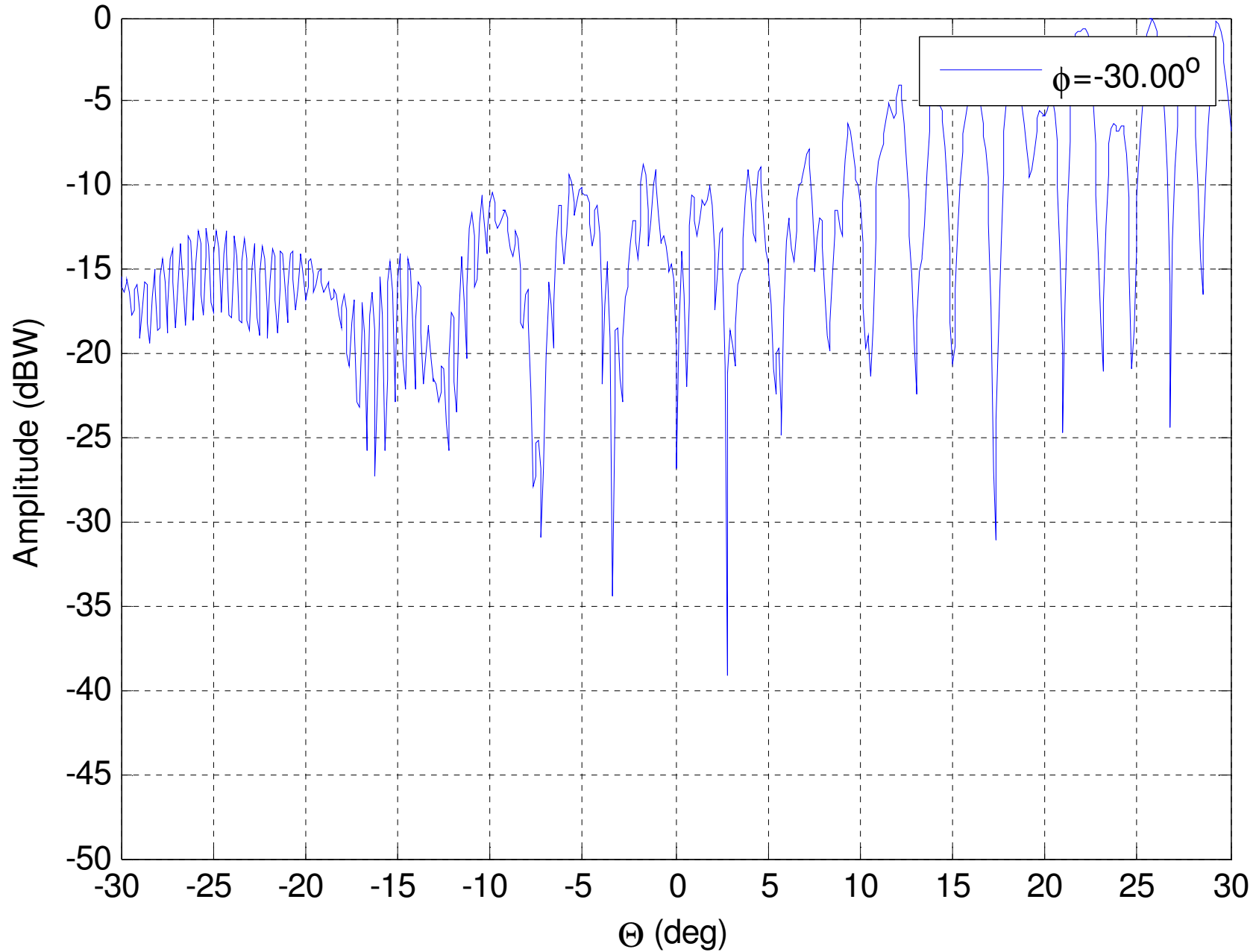
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -2.09 dBW, Date: 15-Dec-2011



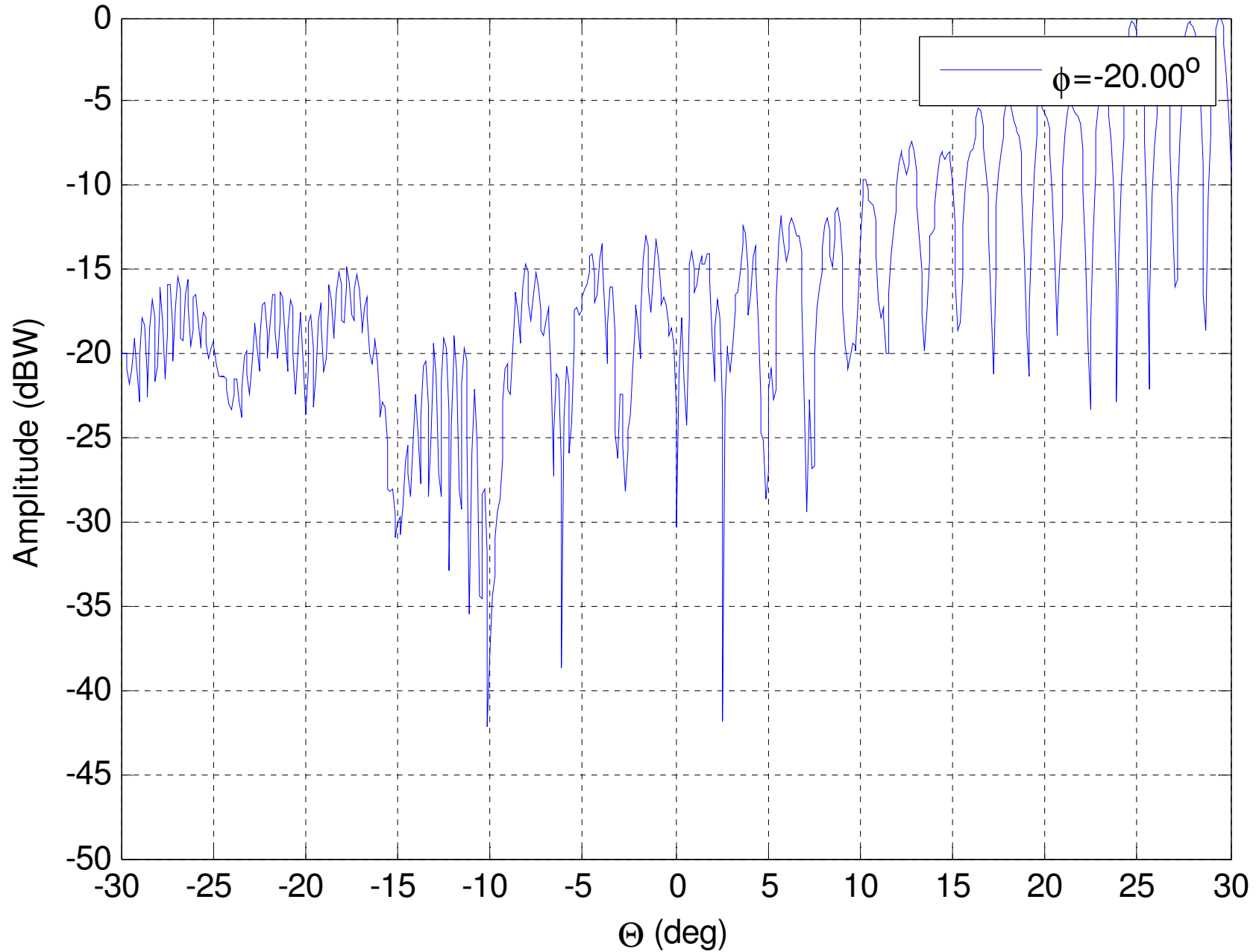
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 0.71 dBW, Date: 15-Dec-2011



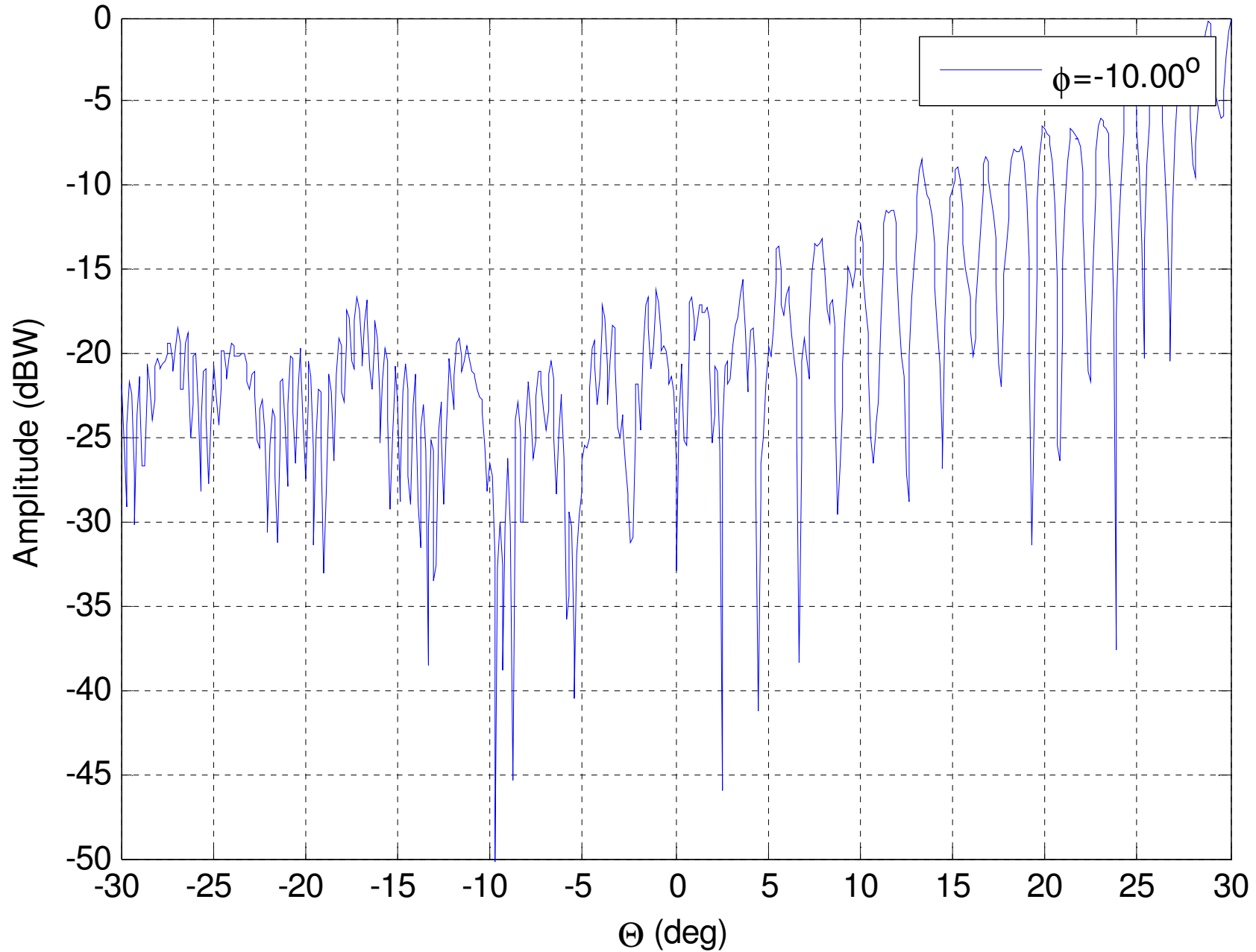
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 4.62 dBW, Date: 15-Dec-2011



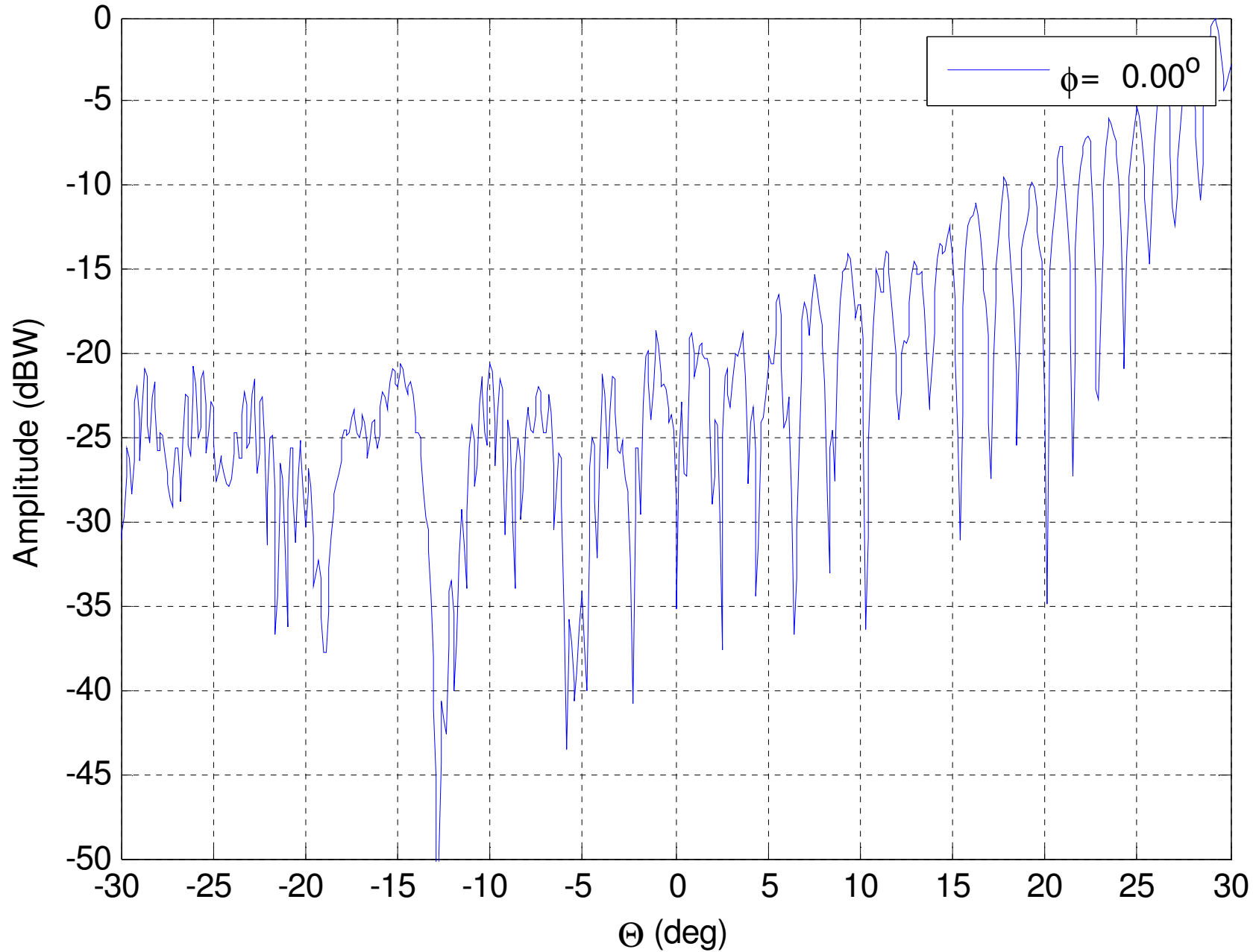
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 7.66 dBW, Date: 15-Dec-2011



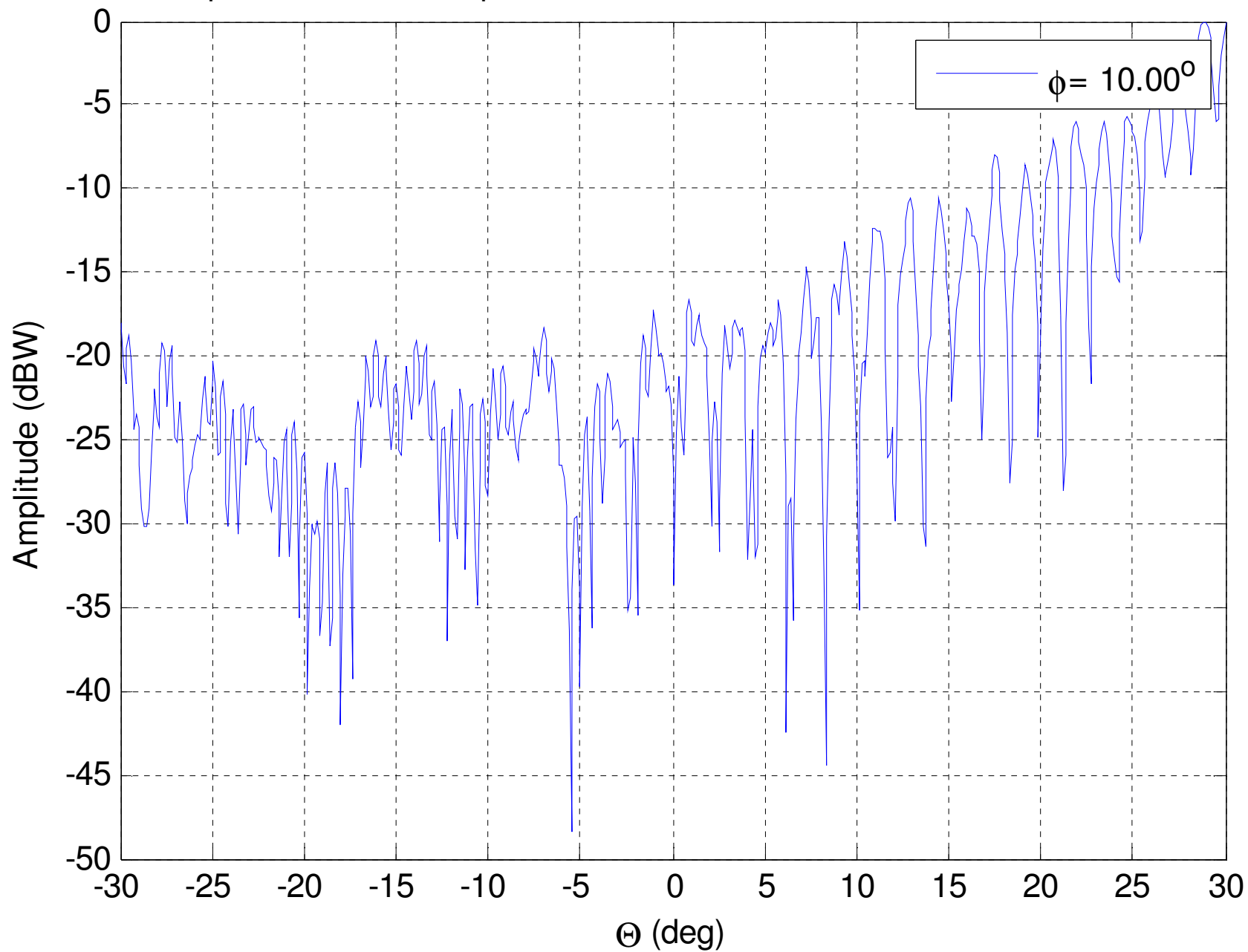
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 10.06 dBW, Date: 15-Dec-2011



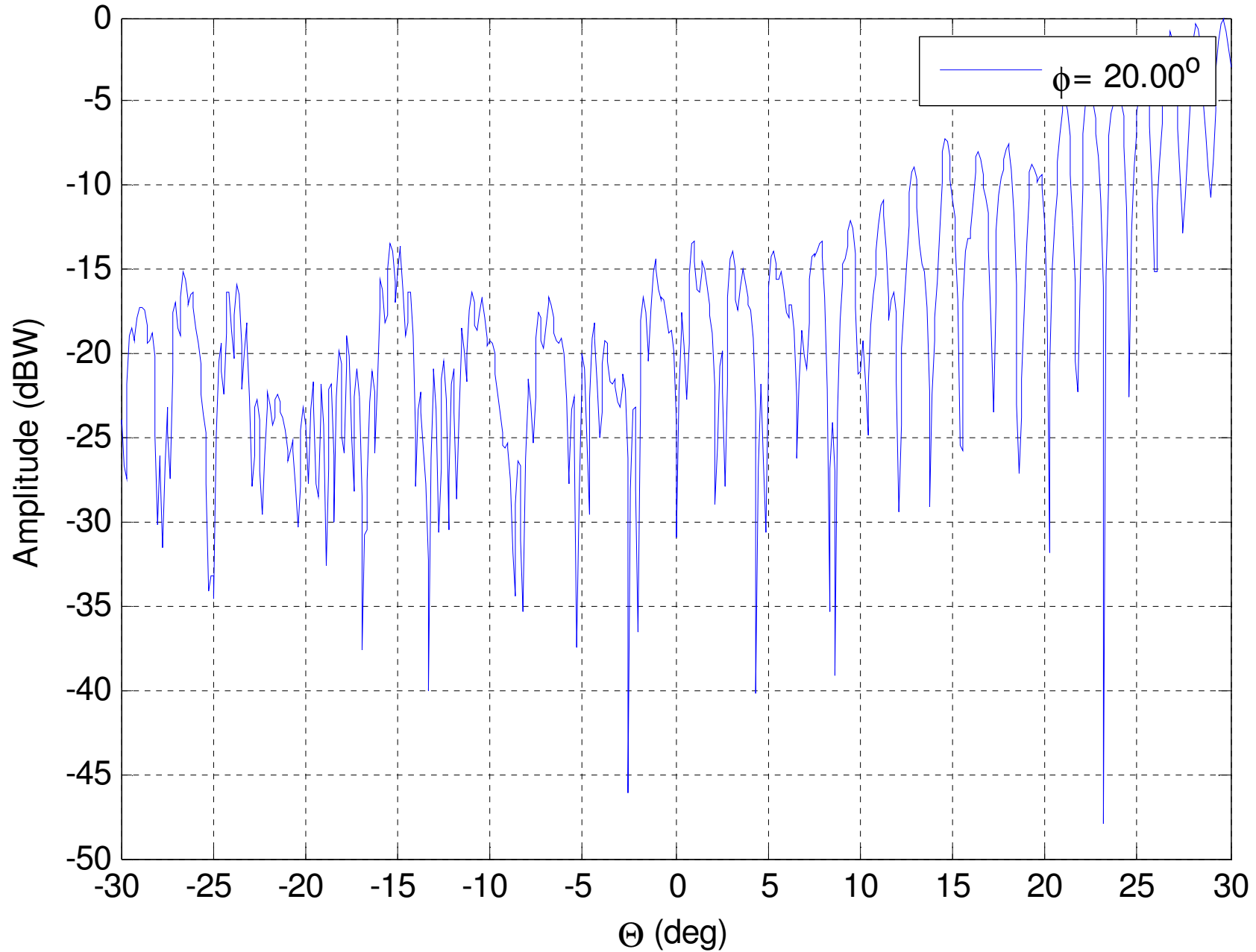
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 8.33 dBW, Date: 15-Dec-2011



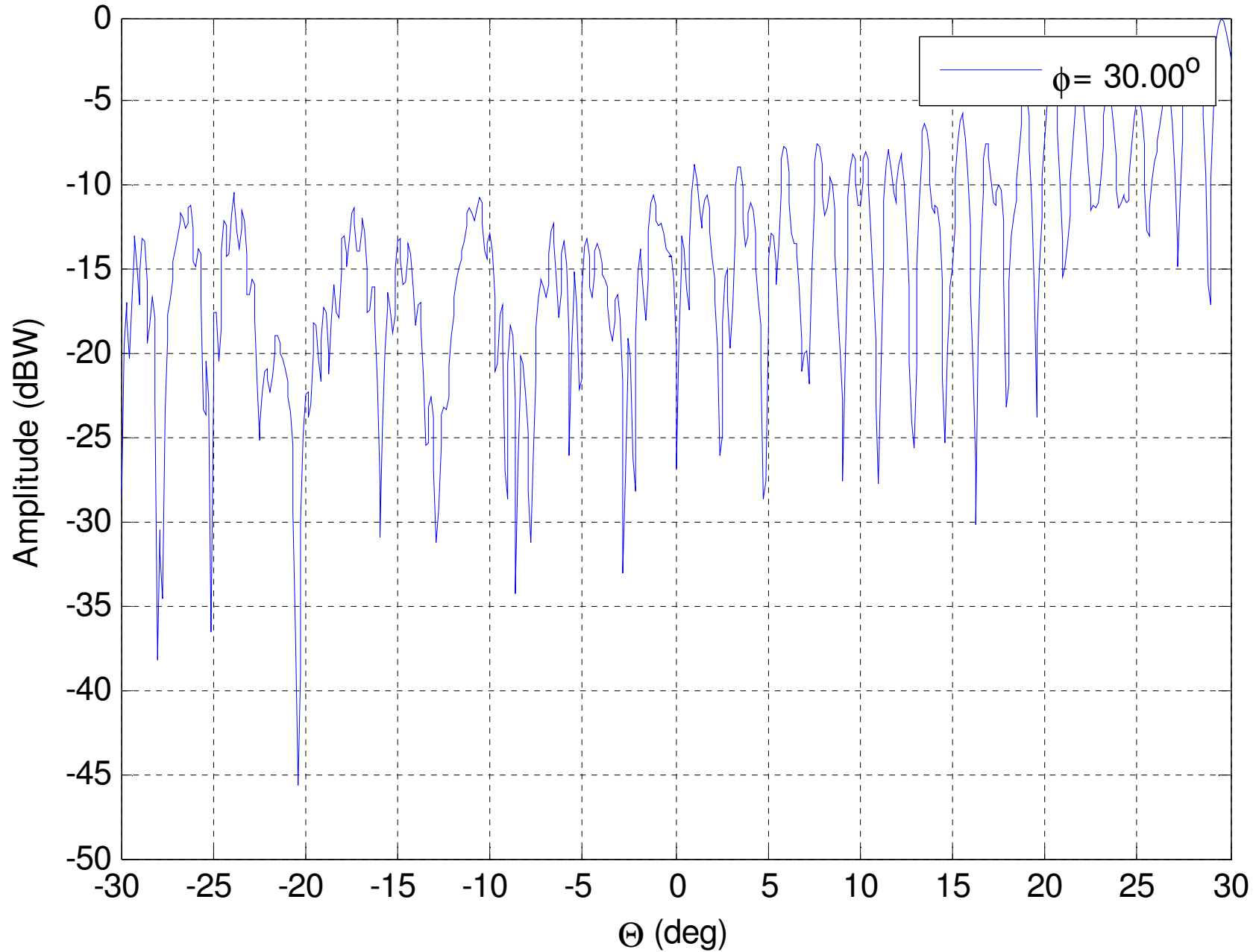
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 5.19 dBW, Date: 15-Dec-2011



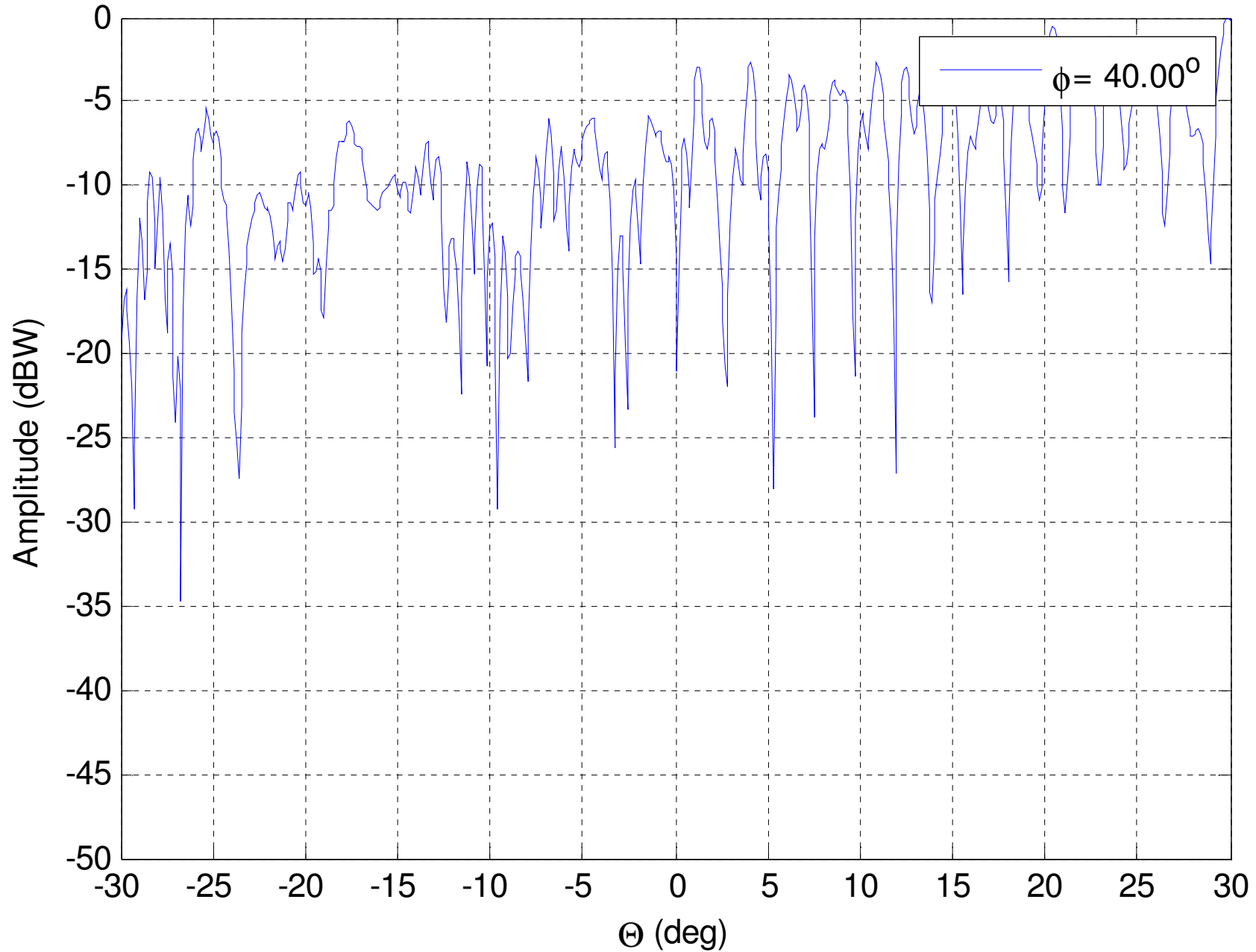
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: 0.85 dBW, Date: 15-Dec-2011



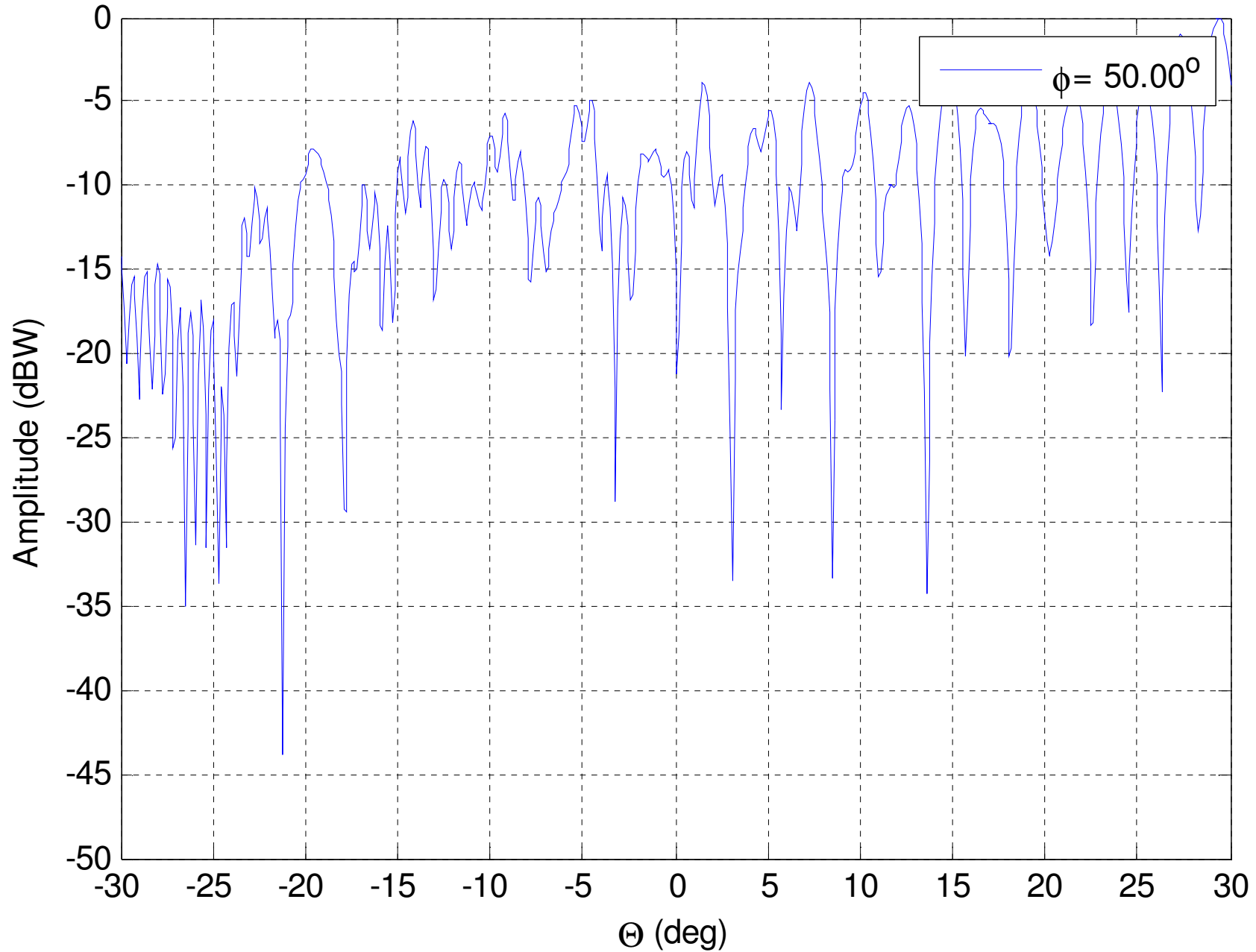
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -4.70 dBW, Date: 15-Dec-2011



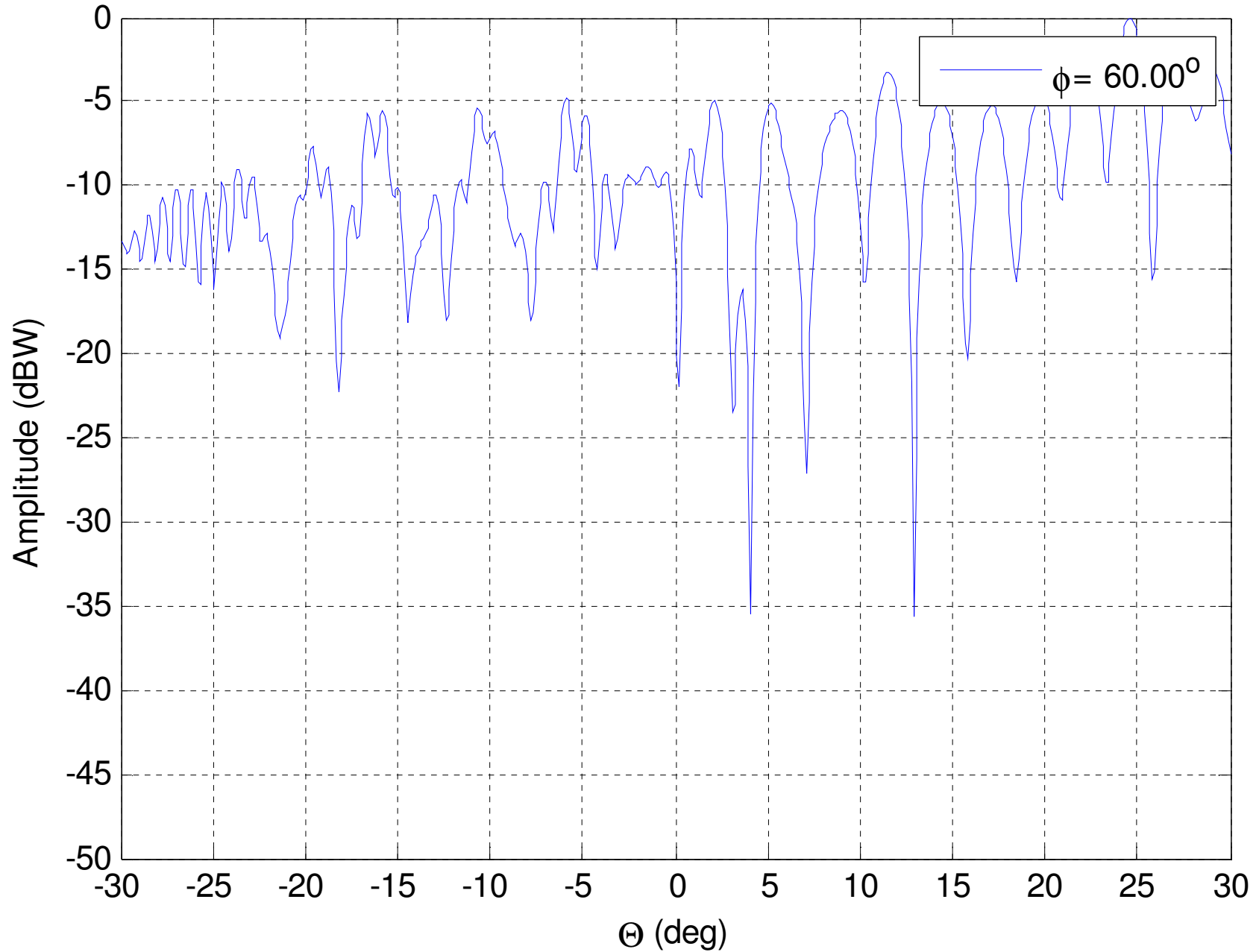
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -3.68 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

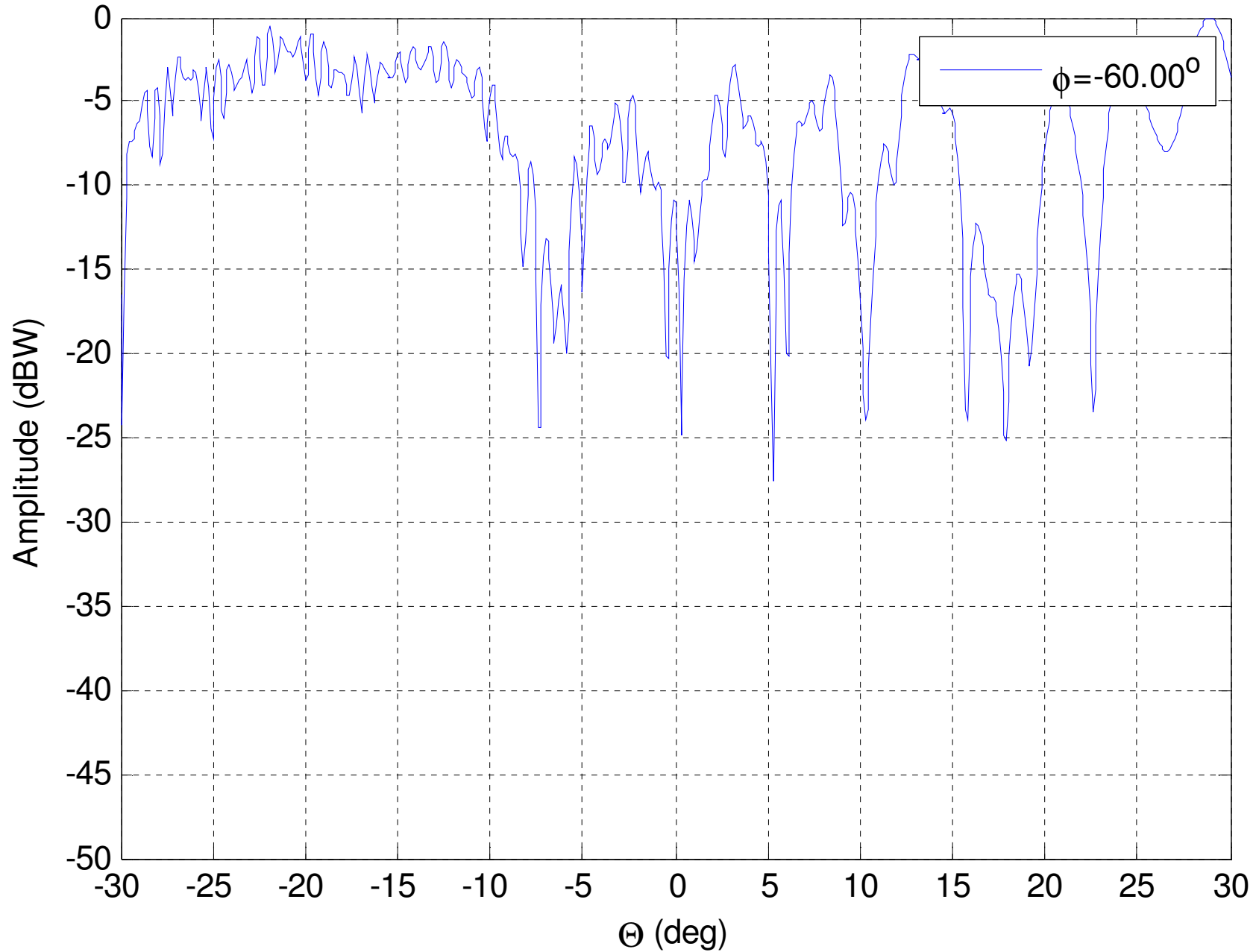
Input file: tx-17.3-lhcp-60.cut, Peak: -3.26 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

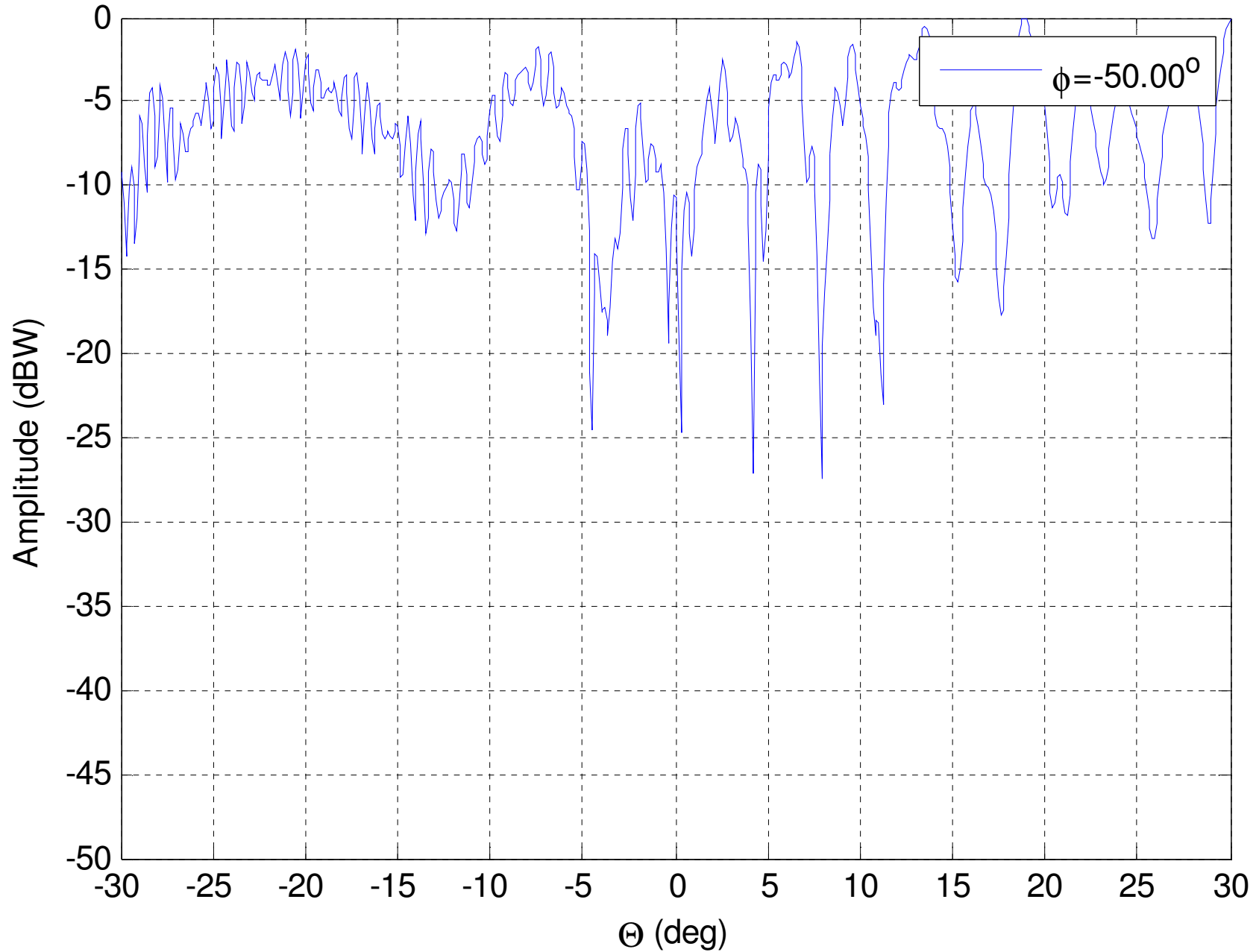
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -5.17 dBW, Date: 15-Dec-2011



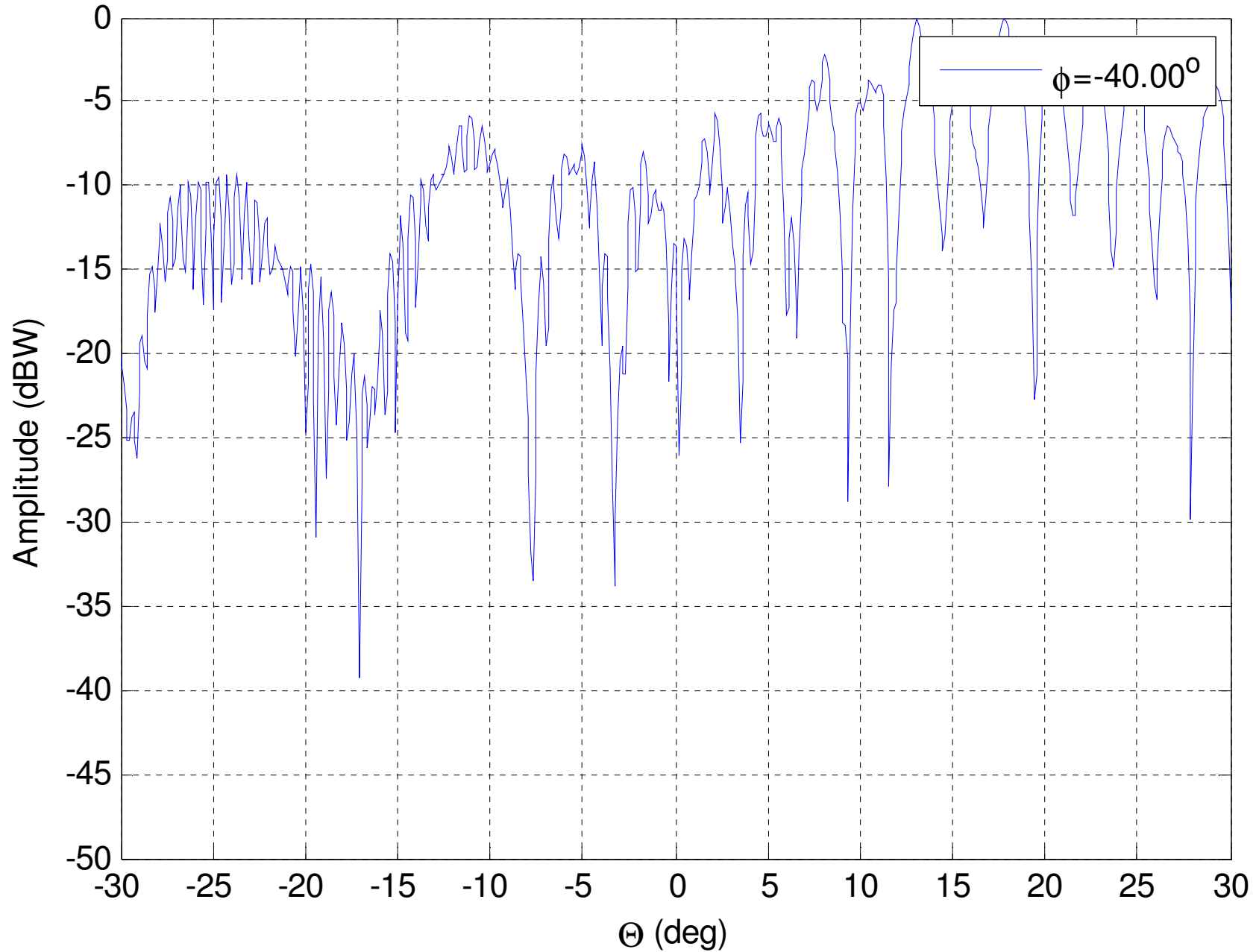
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -5.43 dBW, Date: 15-Dec-2011



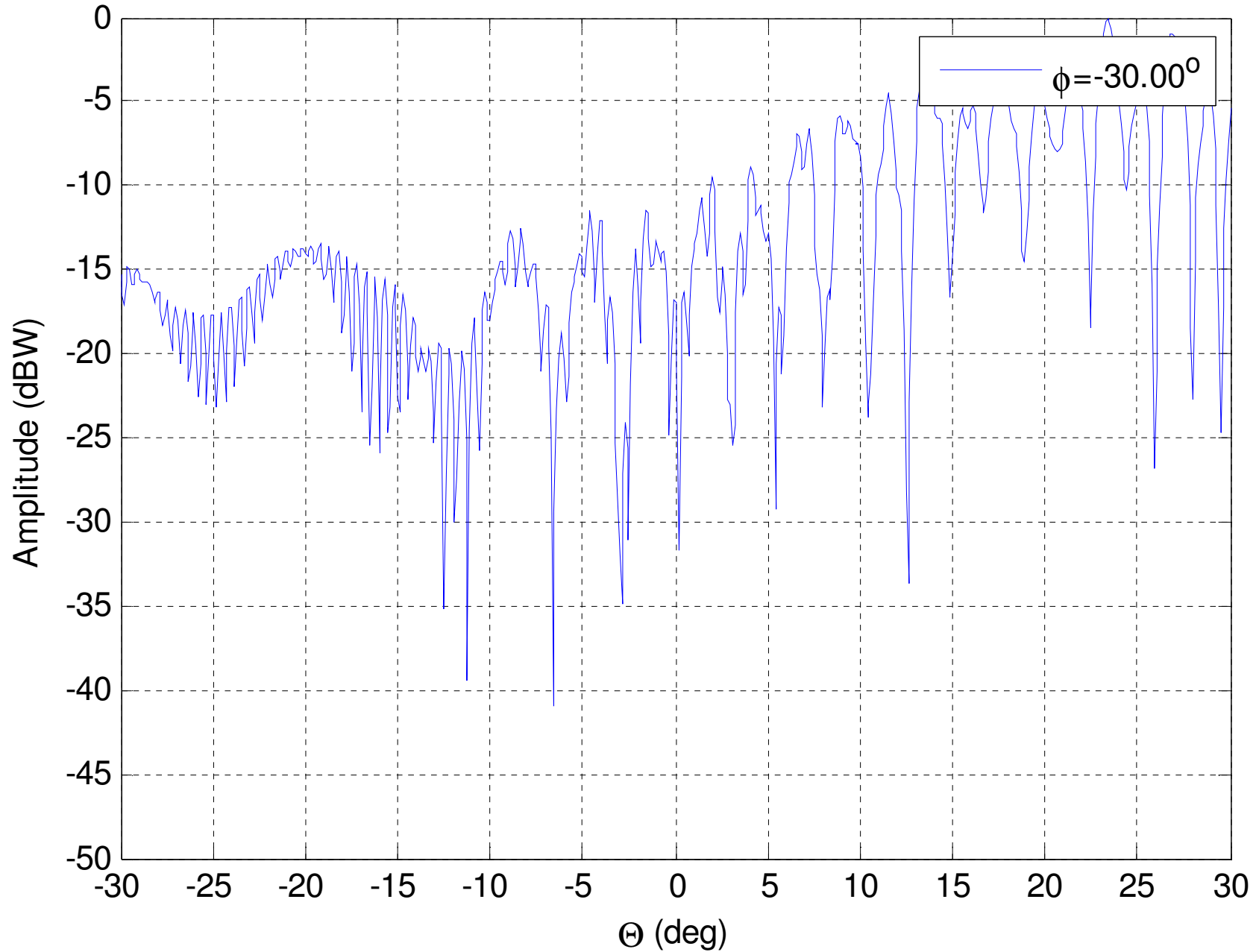
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -2.54 dBW, Date: 15-Dec-2011



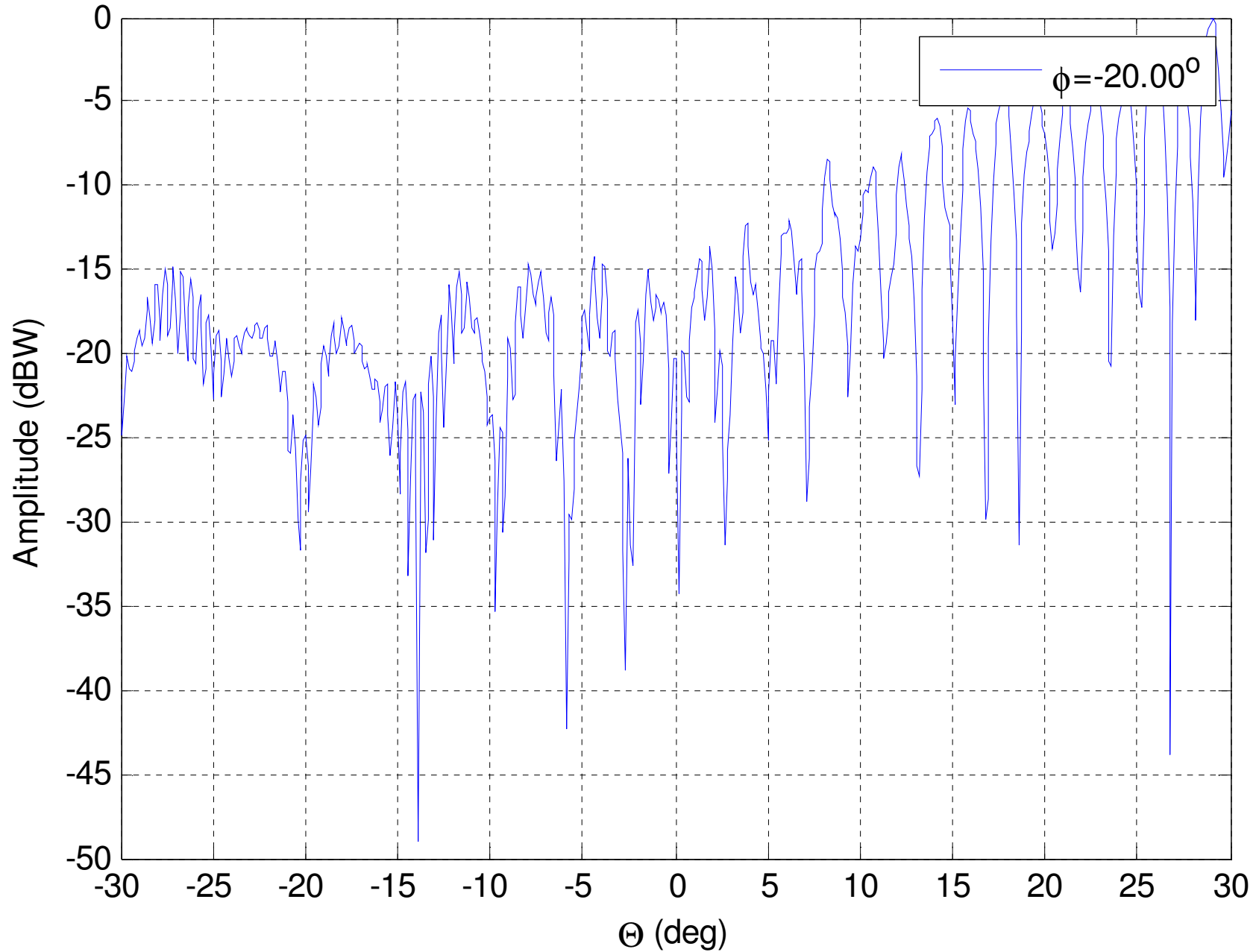
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 0.76 dBW, Date: 15-Dec-2011



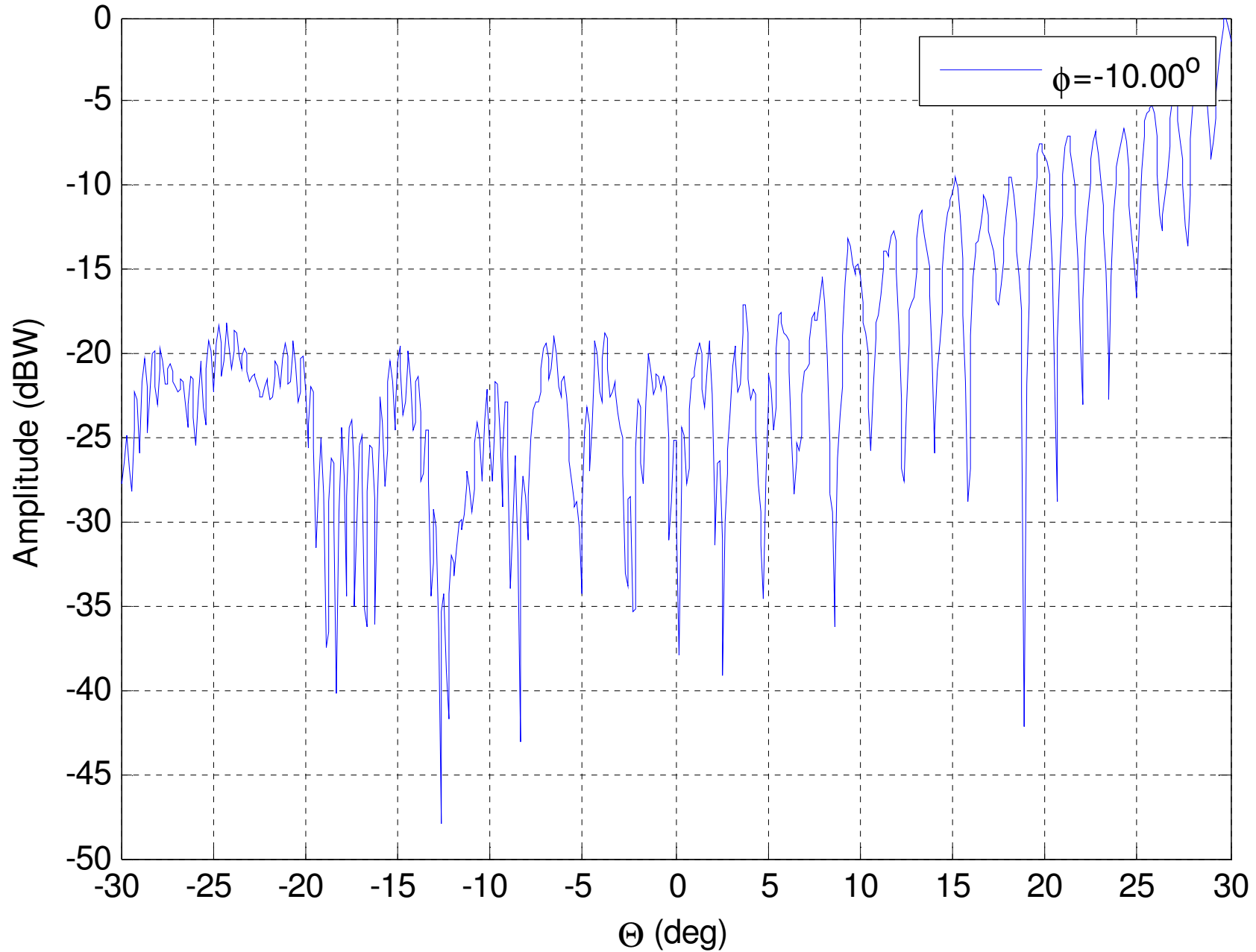
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 4.19 dBW, Date: 15-Dec-2011



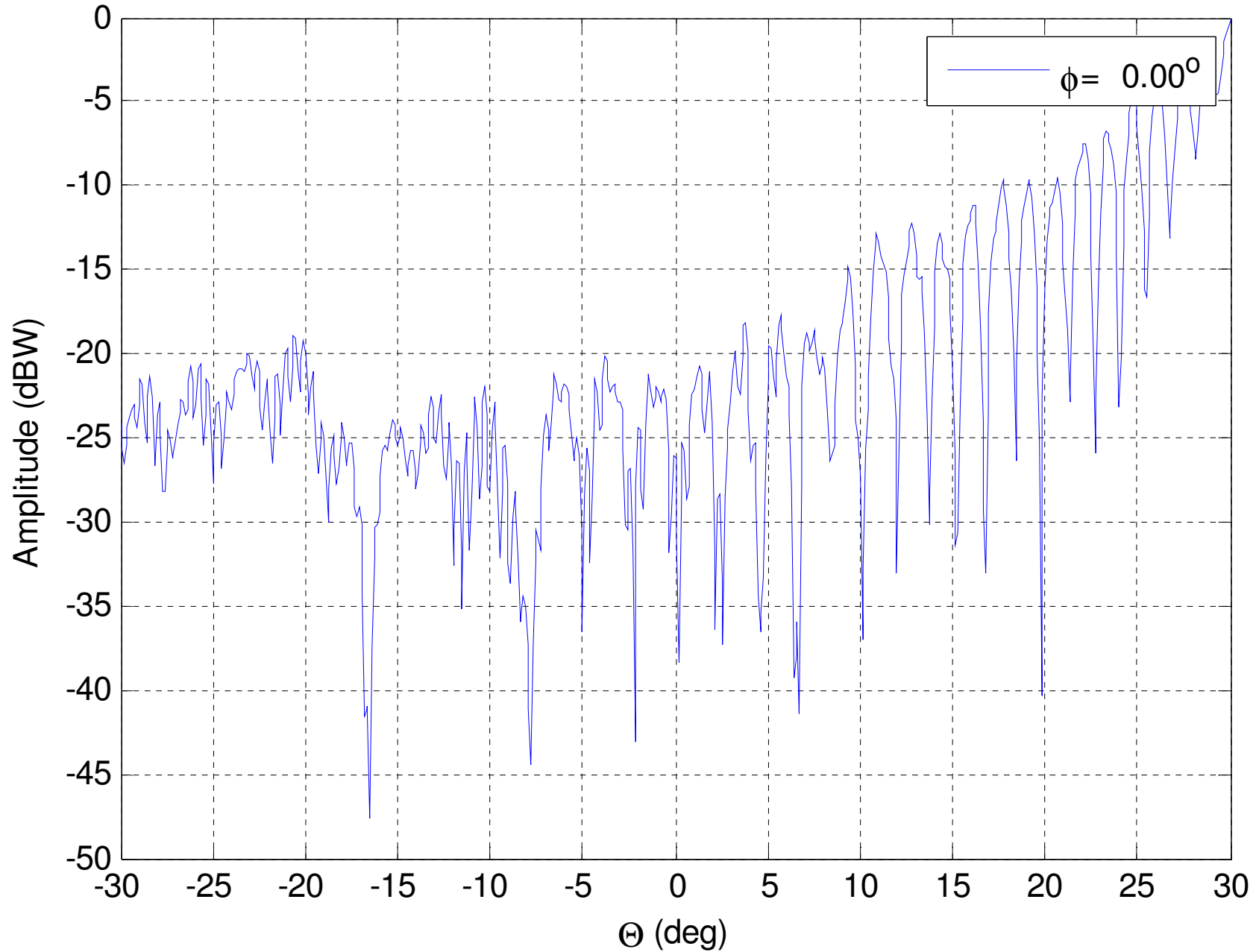
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 9.05 dBW, Date: 15-Dec-2011



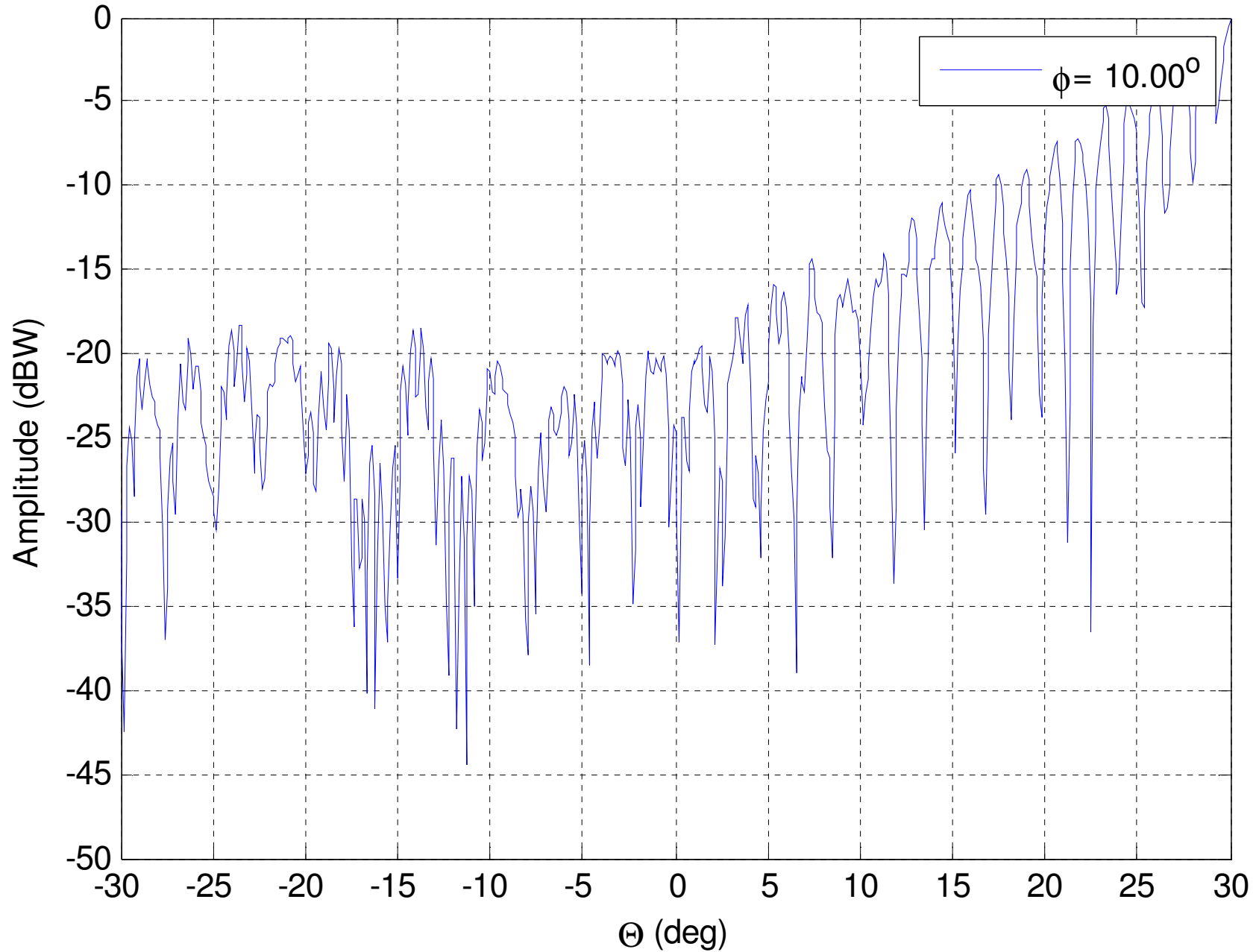
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 10.07 dBW, Date: 15-Dec-2011



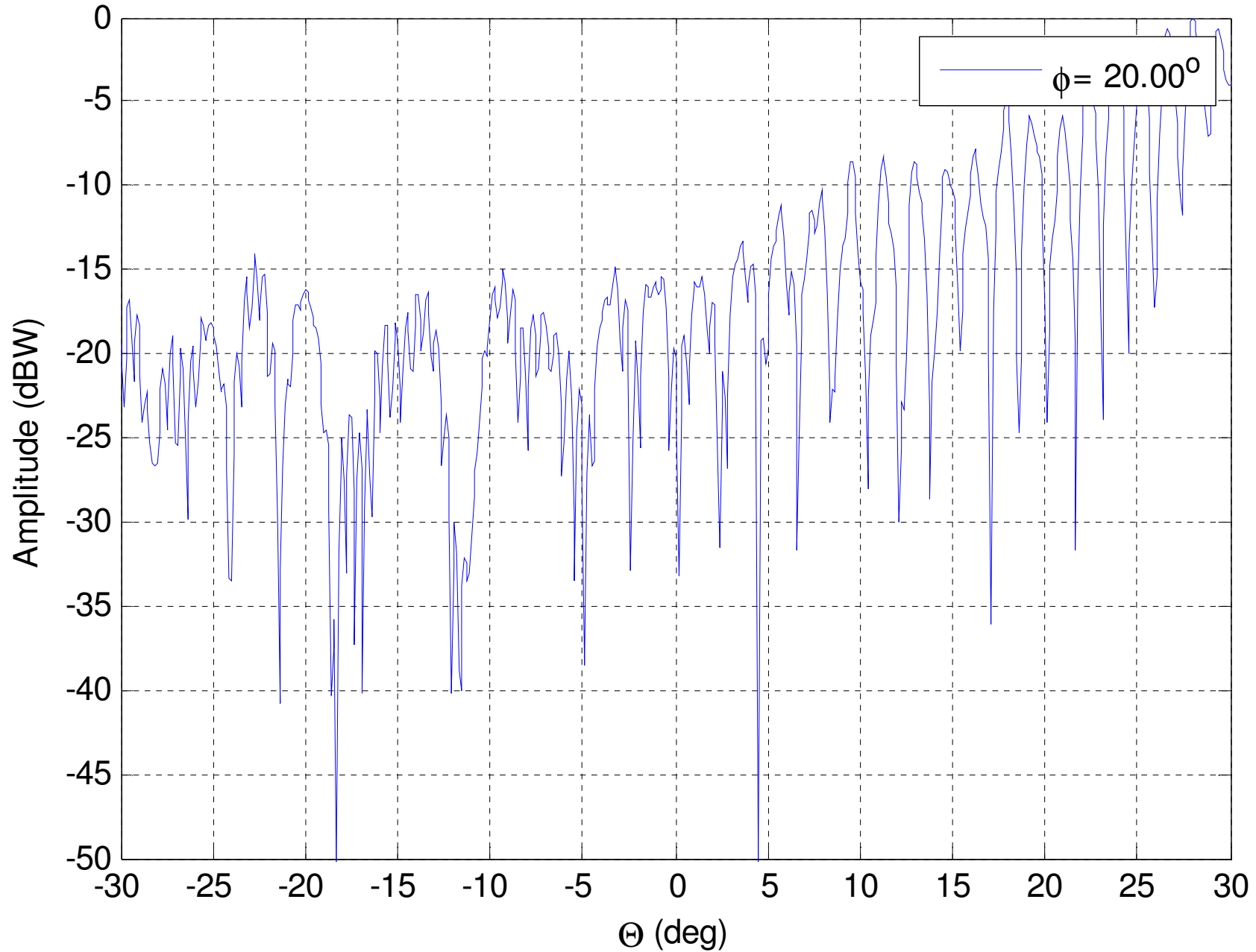
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 8.52 dBW, Date: 15-Dec-2011



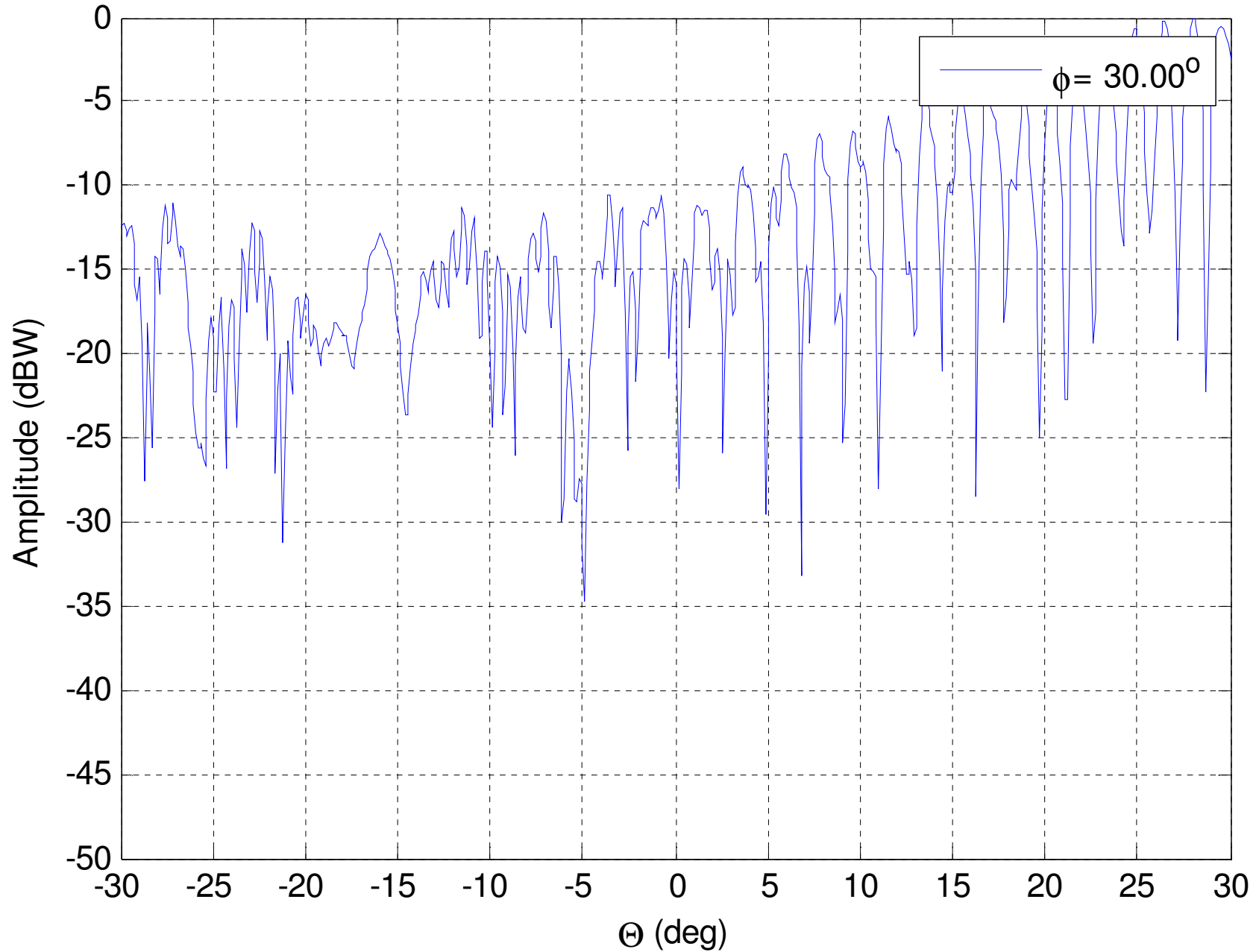
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 4.10 dBW, Date: 15-Dec-2011



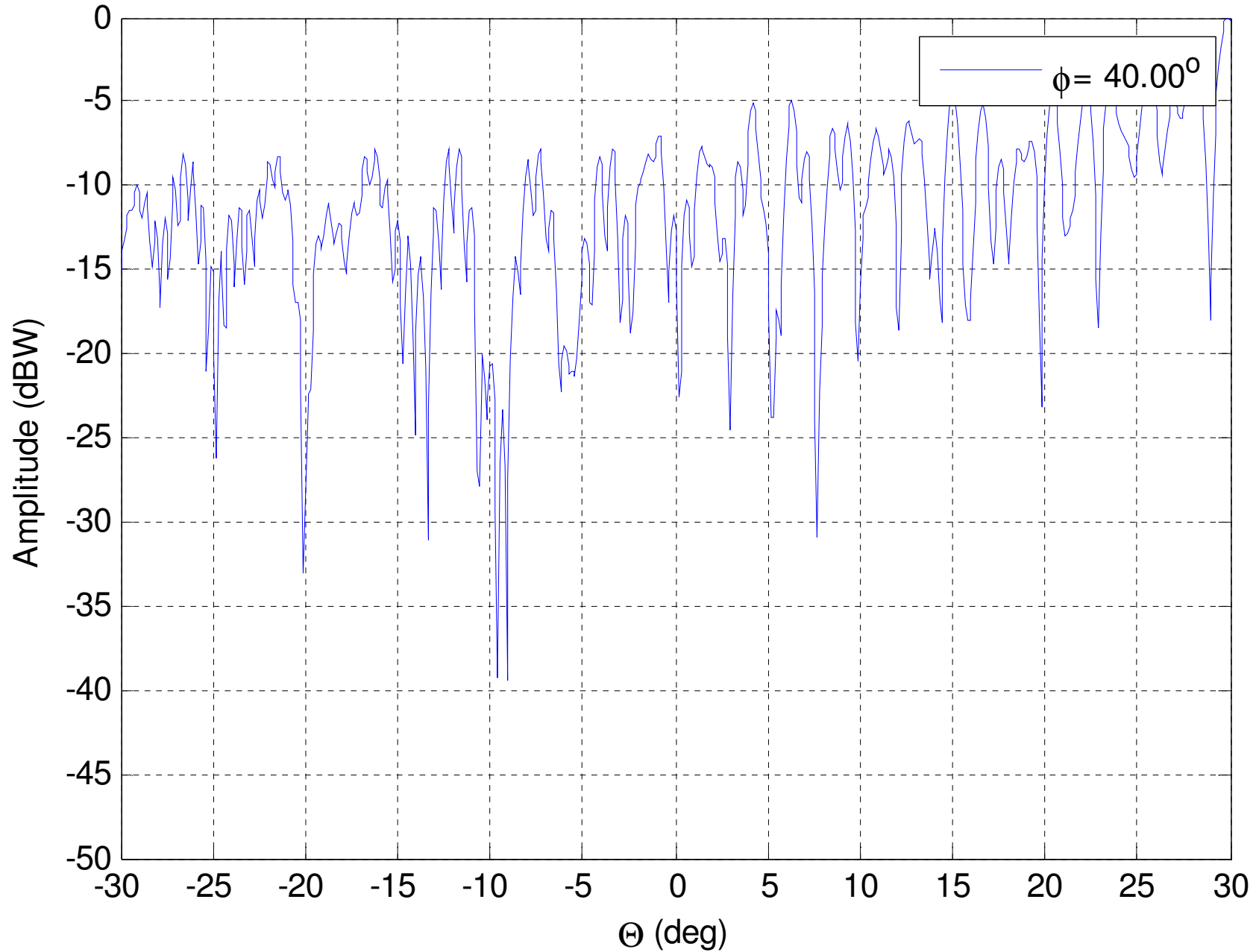
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.31 dBW, Date: 15-Dec-2011



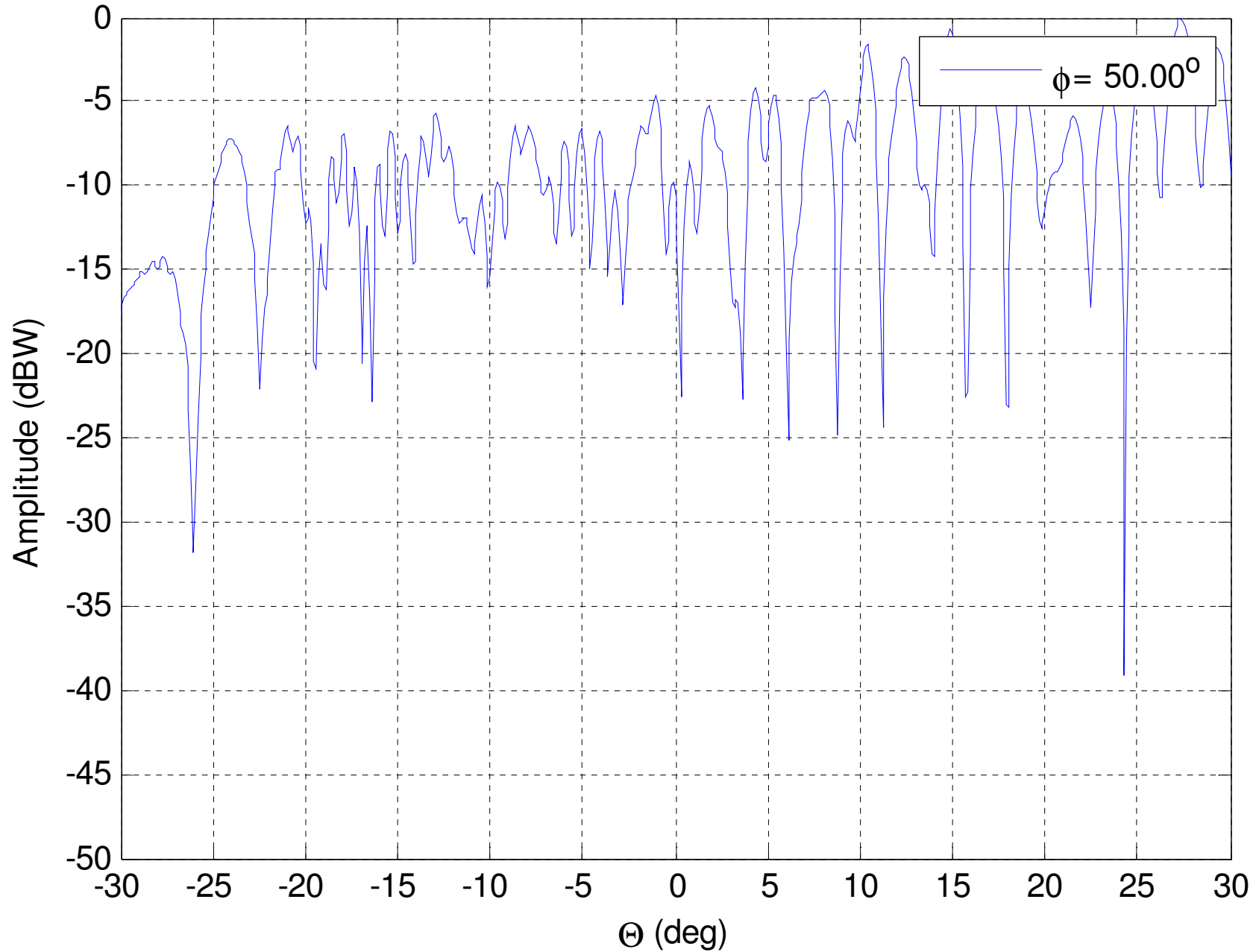
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -3.50 dBW, Date: 15-Dec-2011



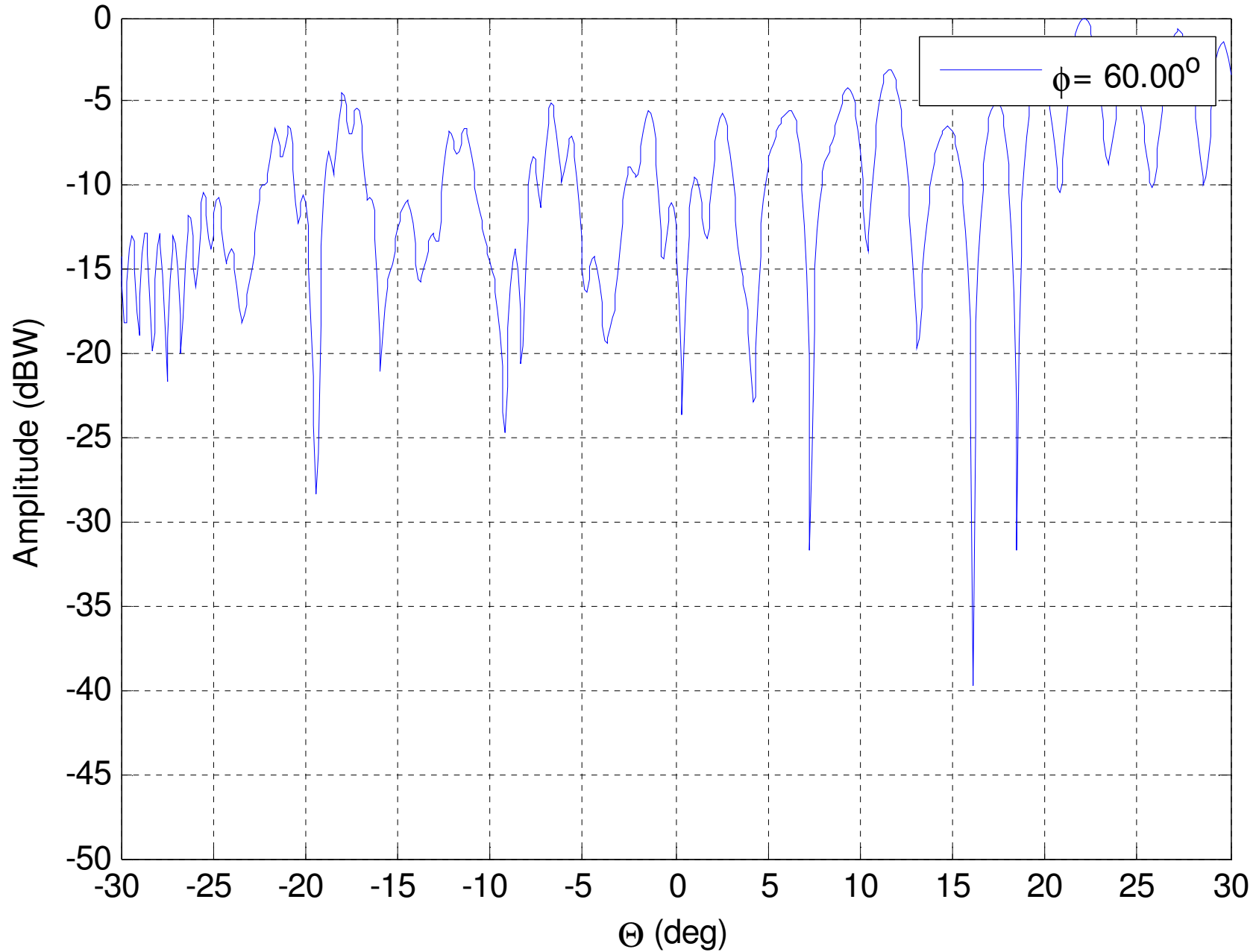
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.37 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

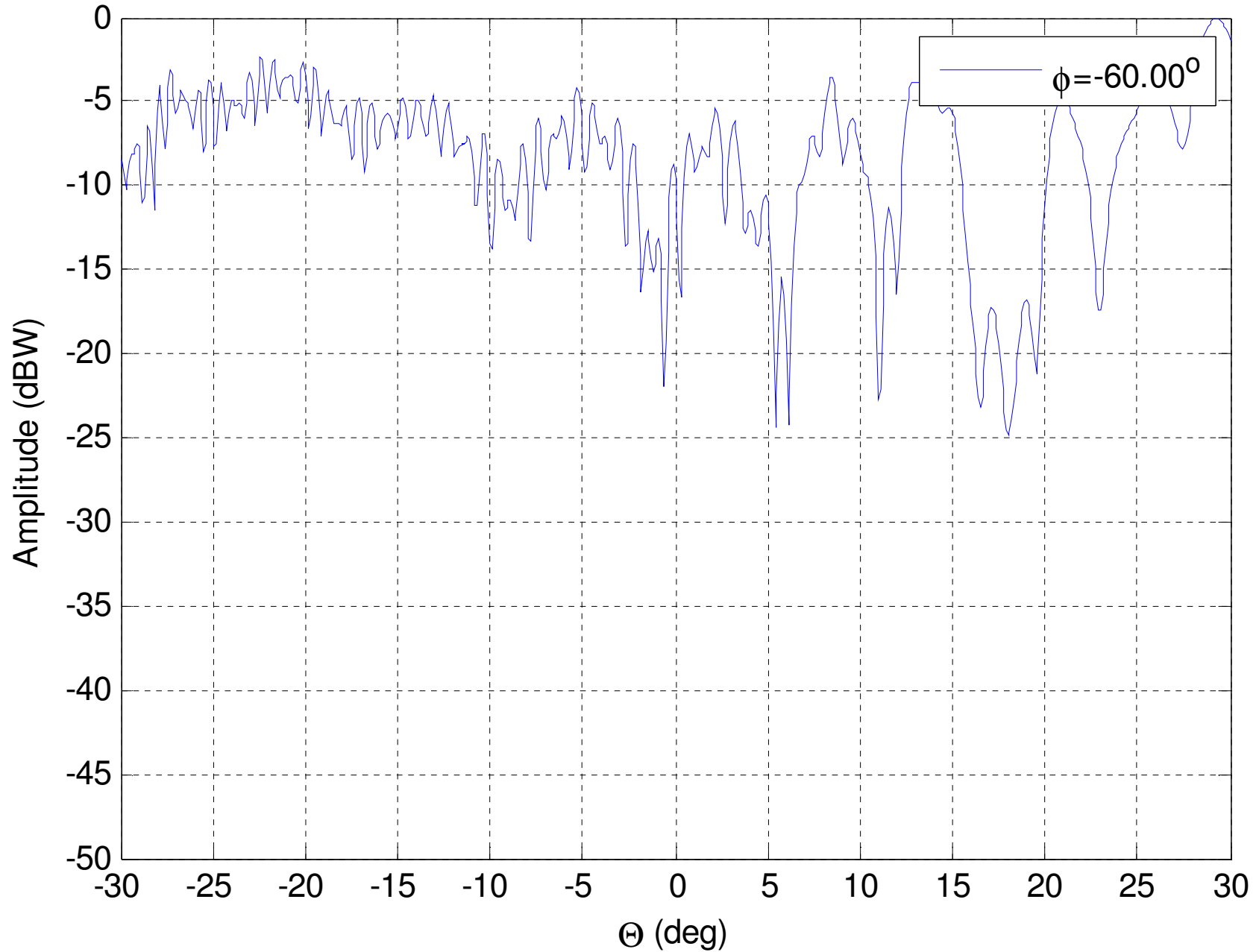
Input file: tx-17.5-rhcp-60.cut, Peak: -3.80 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

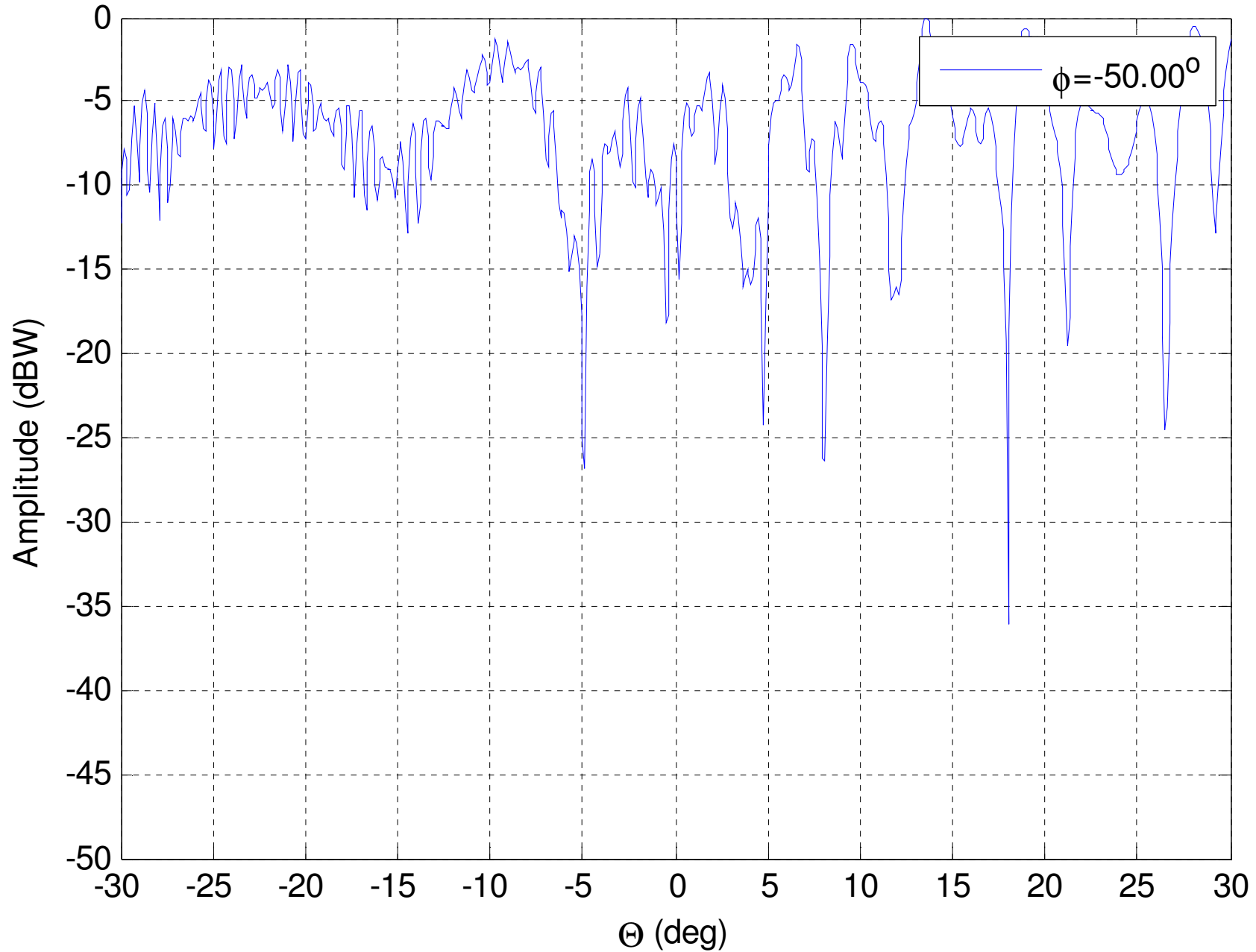
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -4.43 dBW, Date: 15-Dec-2011



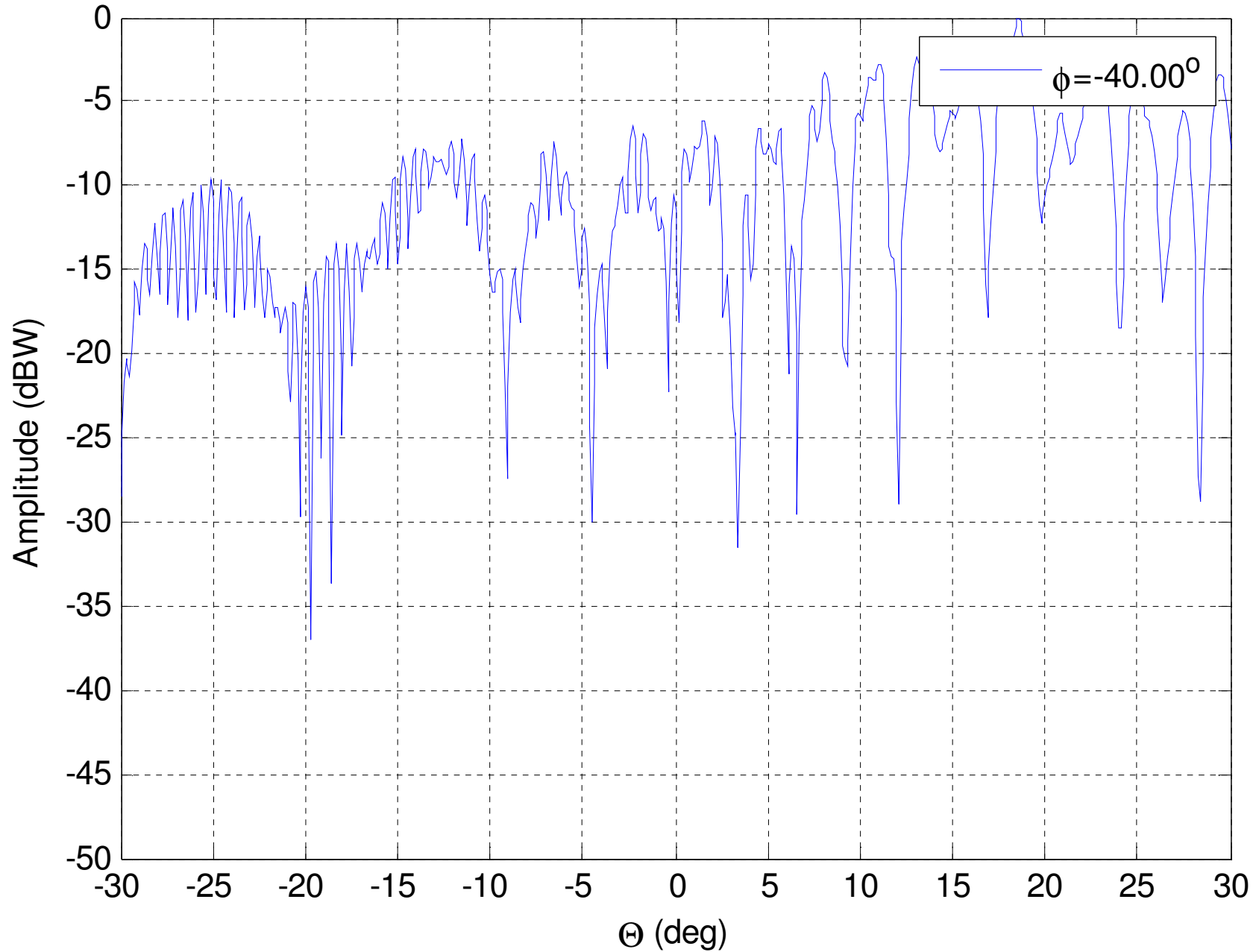
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -5.63 dBW, Date: 15-Dec-2011



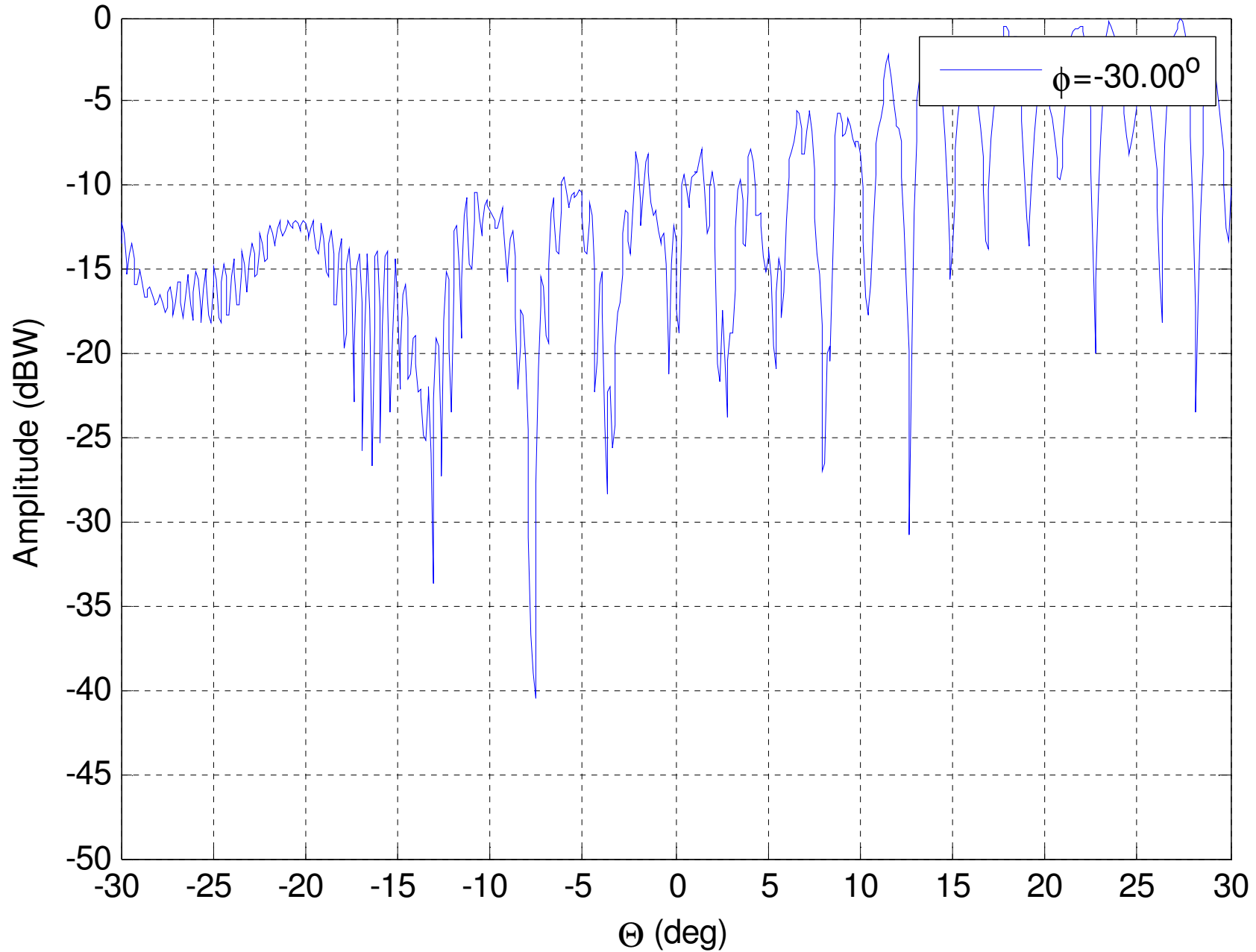
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.57 dBW, Date: 15-Dec-2011



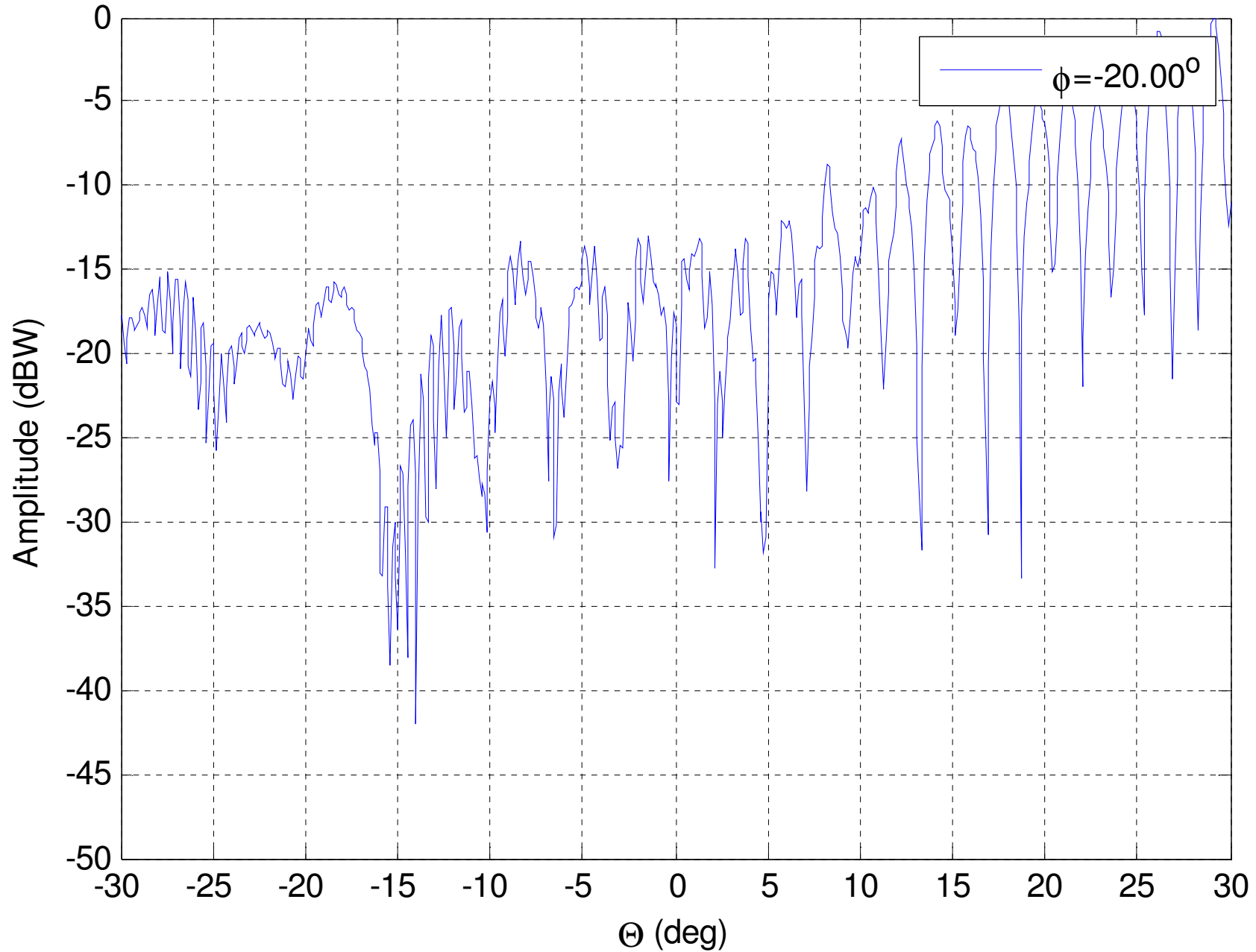
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.80 dBW, Date: 15-Dec-2011



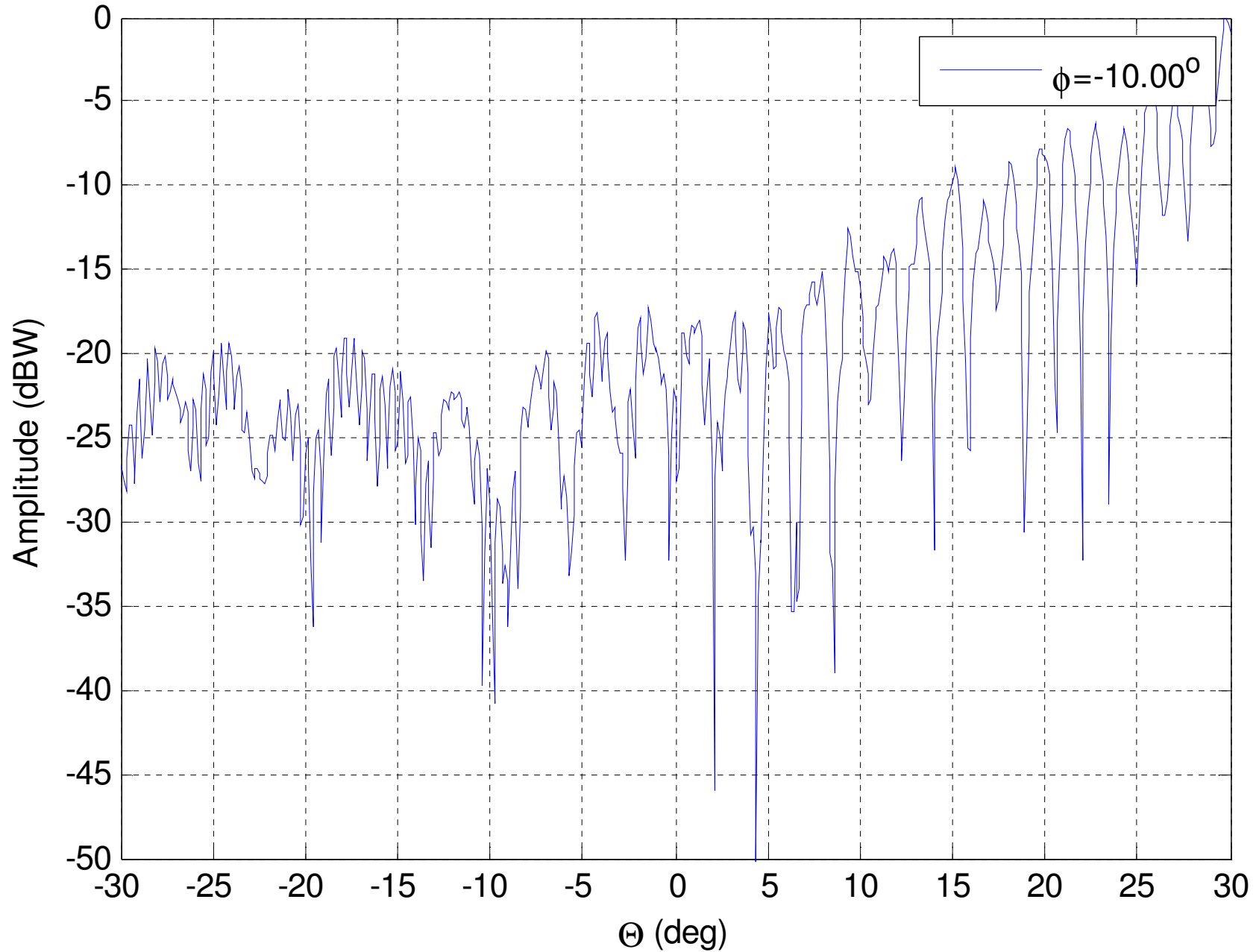
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 4.31 dBW, Date: 15-Dec-2011



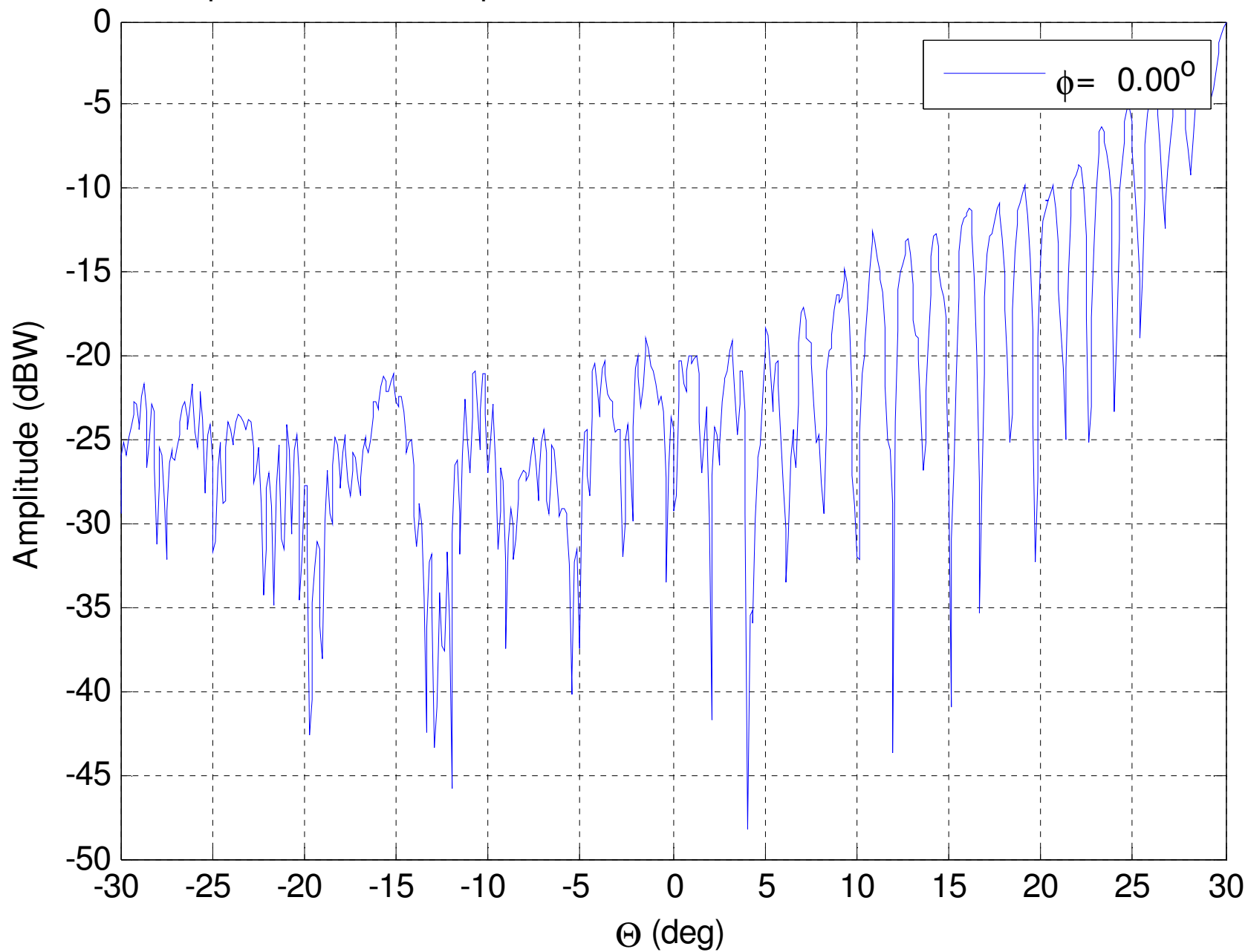
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 8.81 dBW, Date: 15-Dec-2011



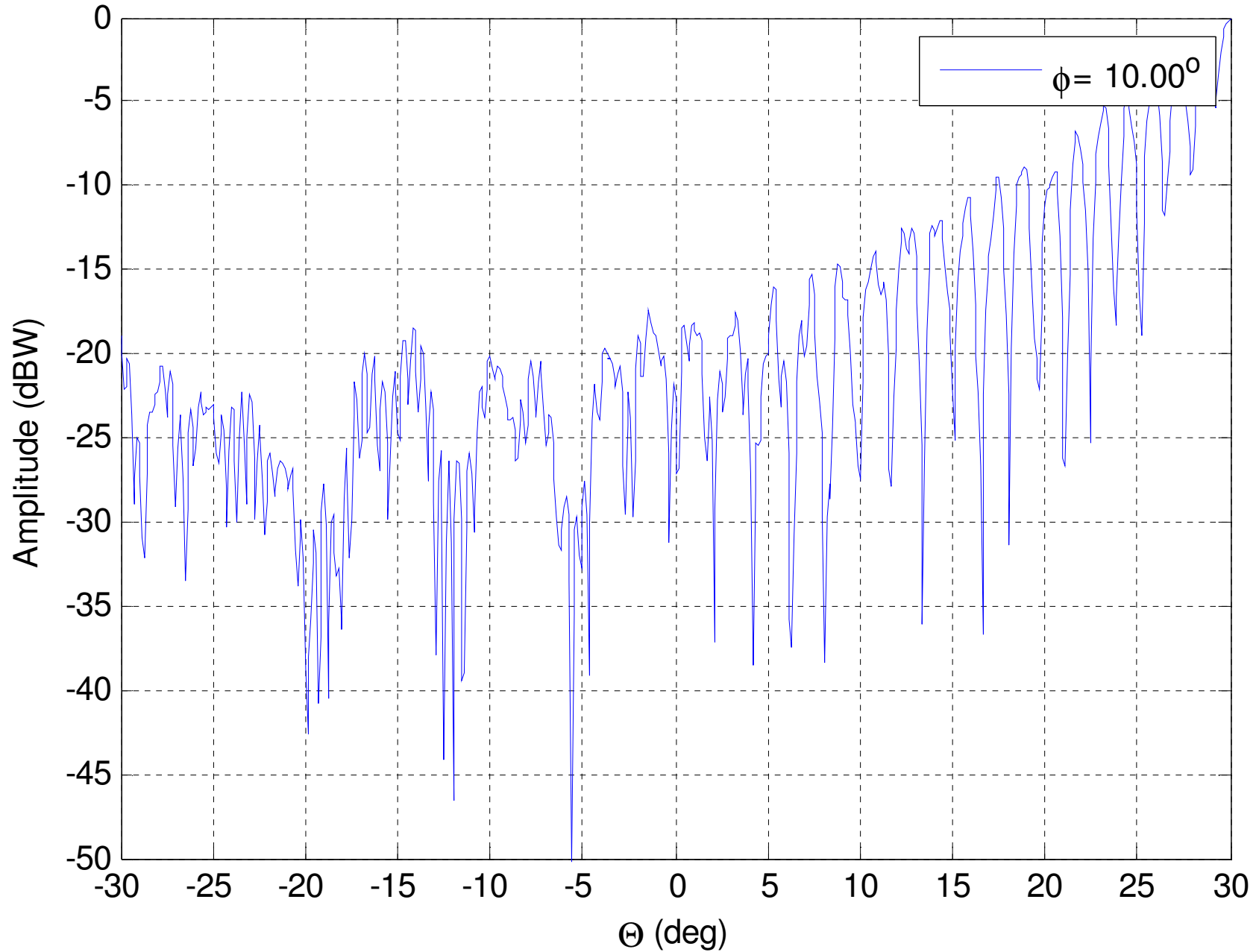
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 10.40 dBW, Date: 15-Dec-2011



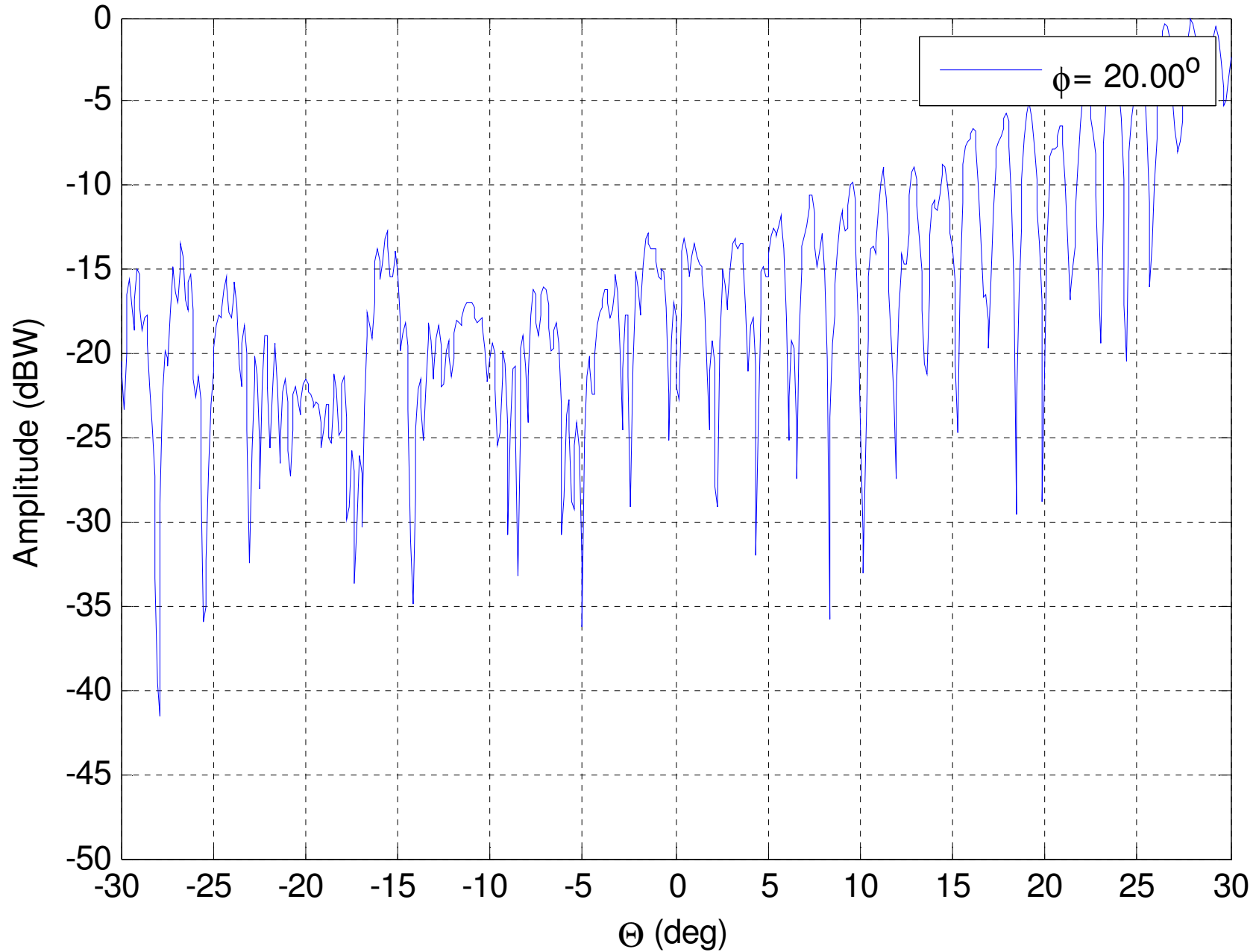
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 8.63 dBW, Date: 15-Dec-2011



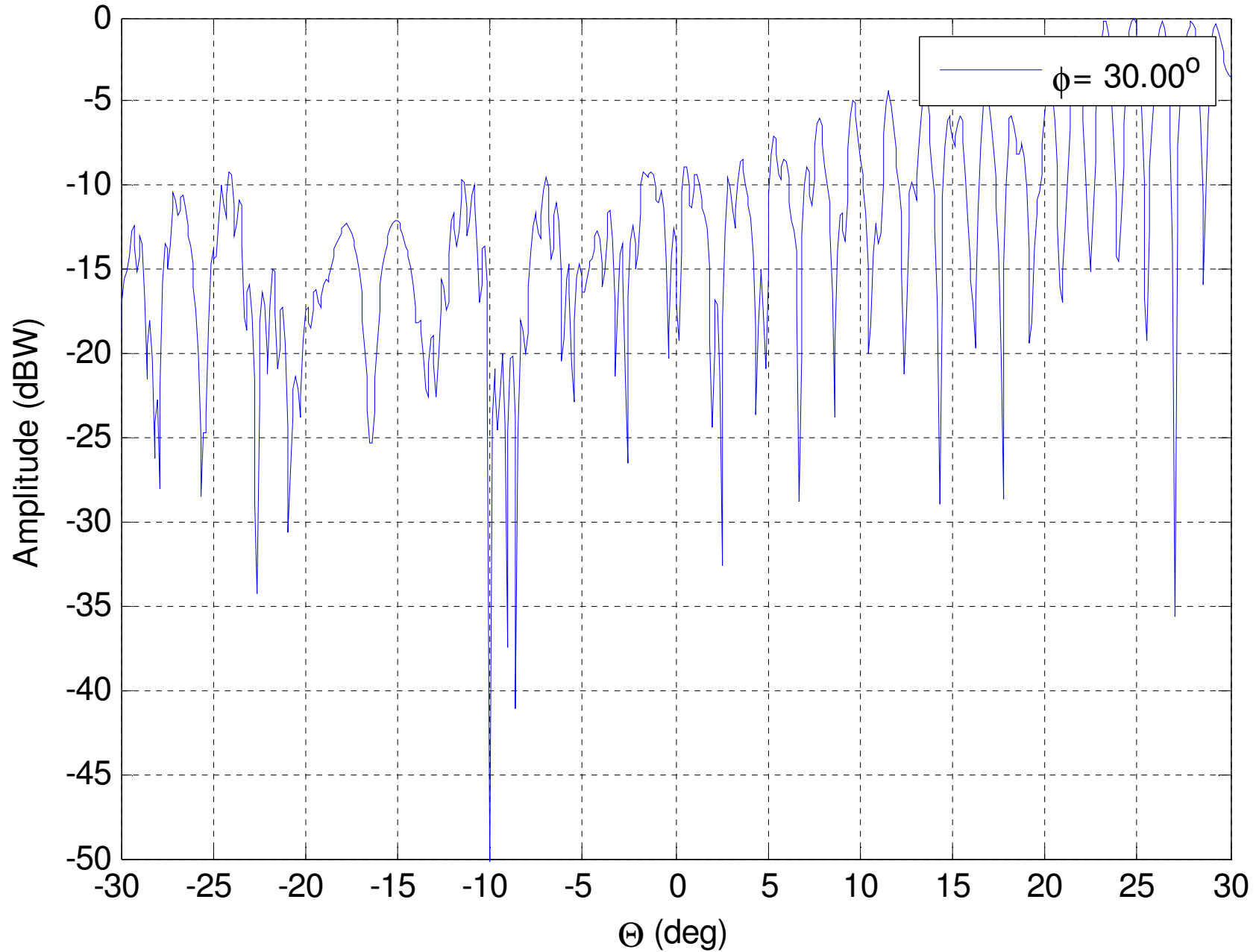
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 3.80 dBW, Date: 15-Dec-2011



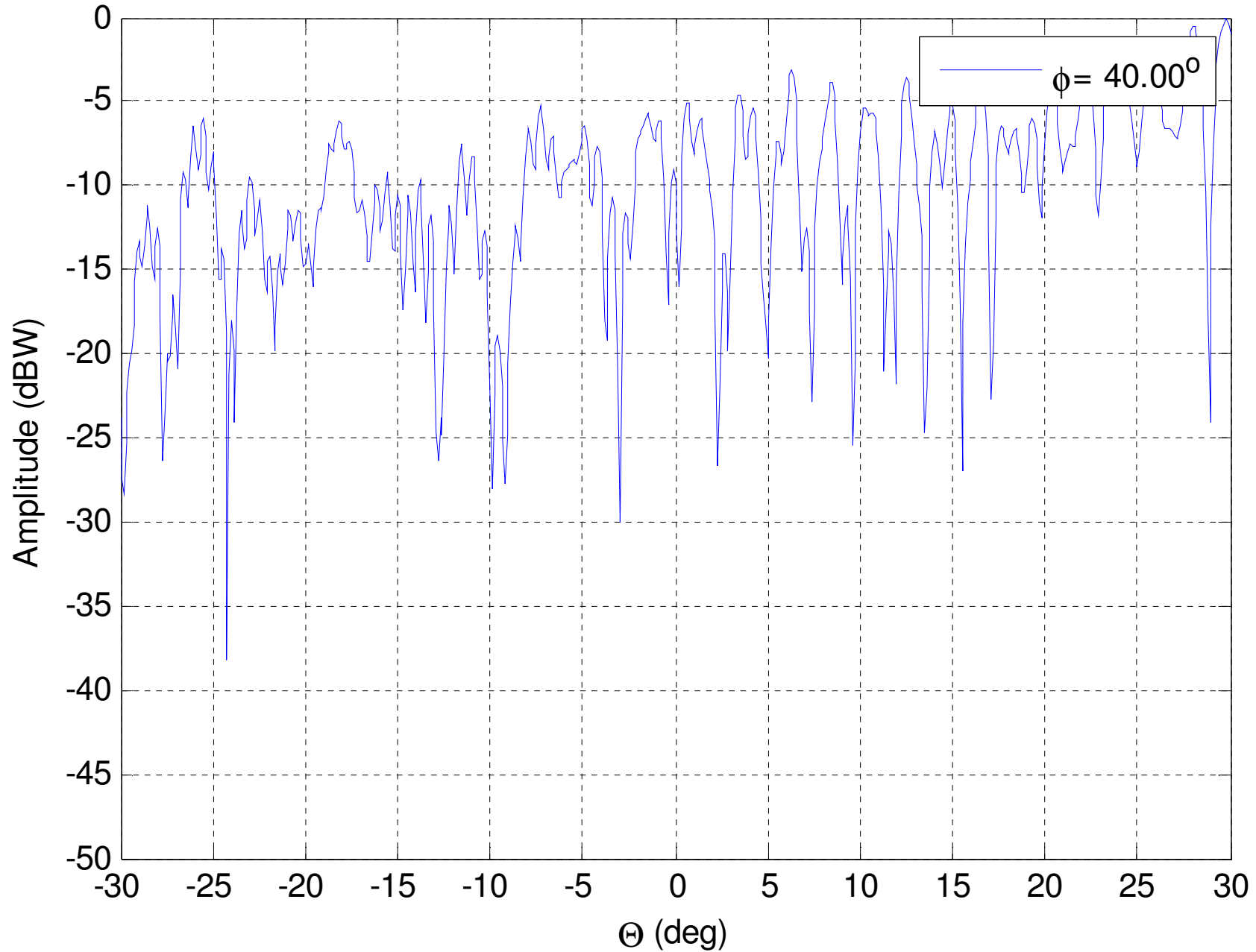
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.54 dBW, Date: 15-Dec-2011



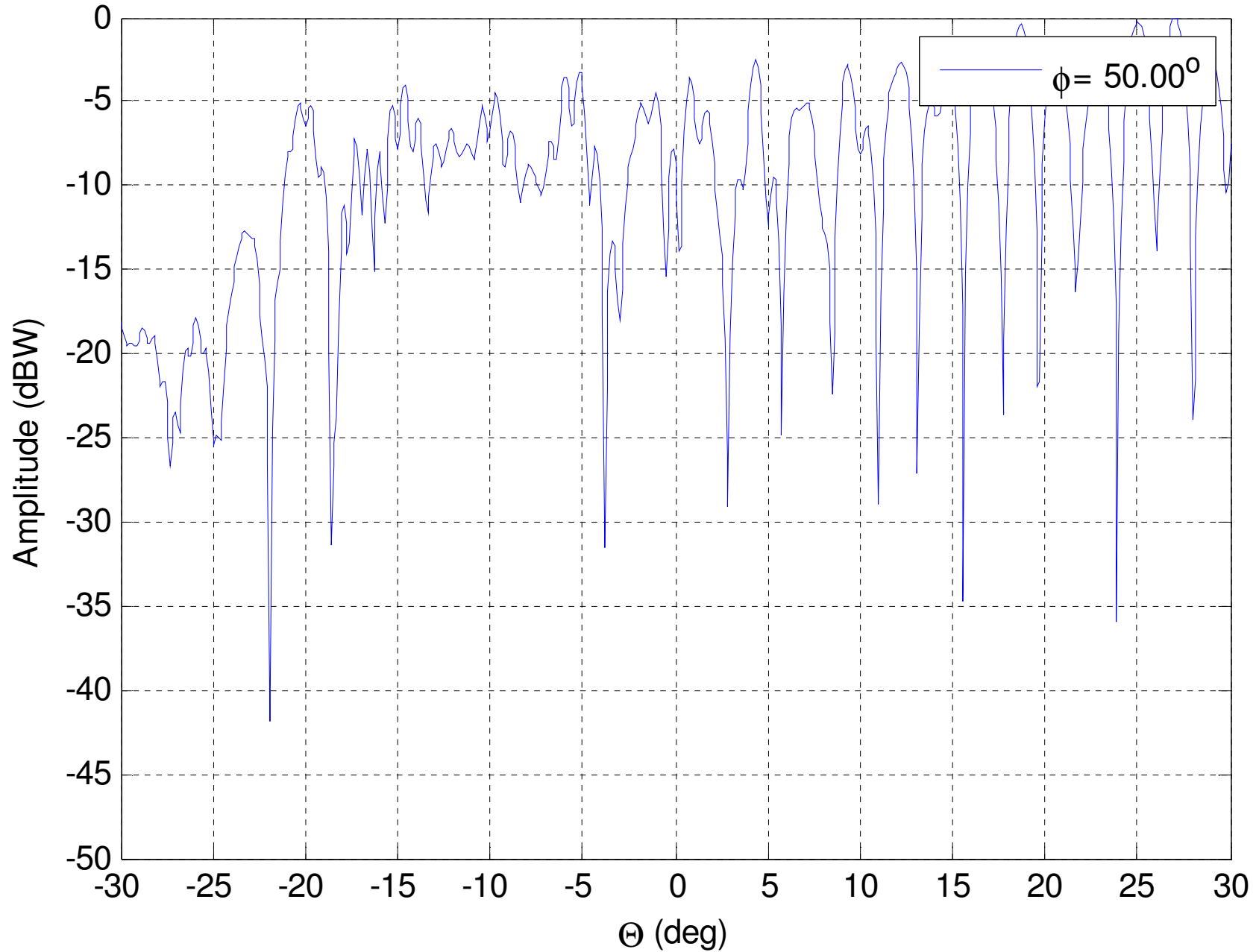
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -4.13 dBW, Date: 15-Dec-2011



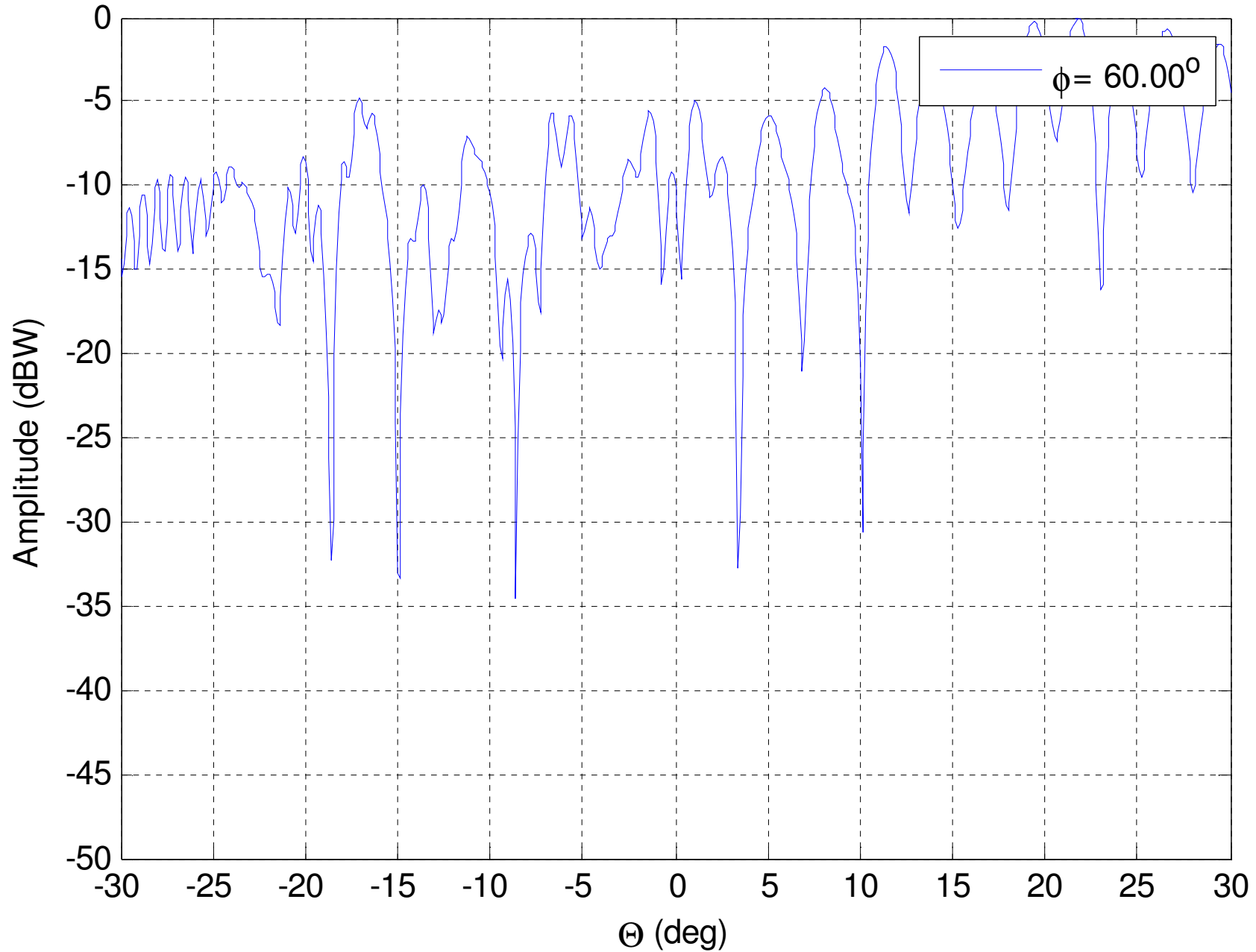
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -5.38 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

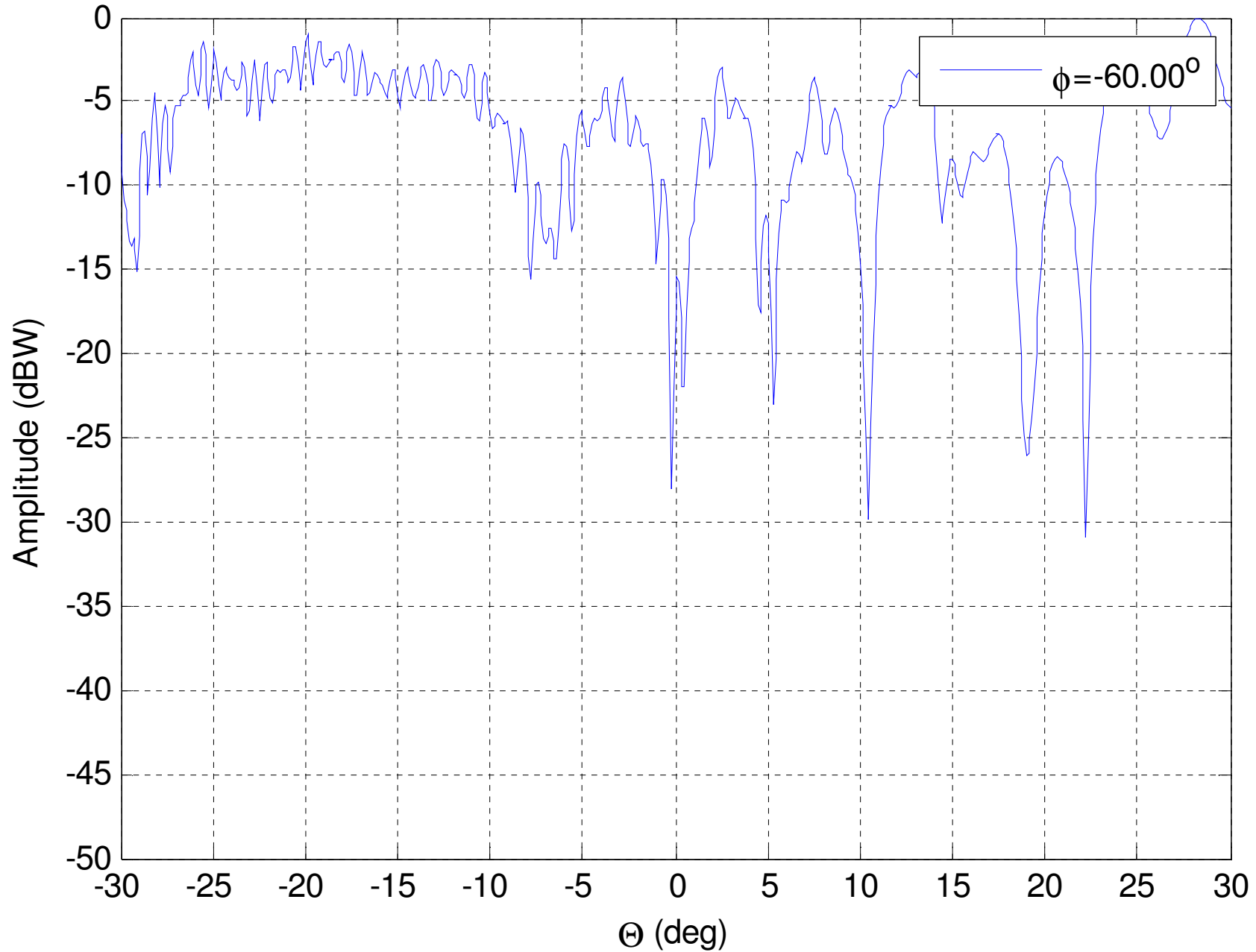
Input file: tx-17.5-lhcp-60.cut, Peak: -3.97 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

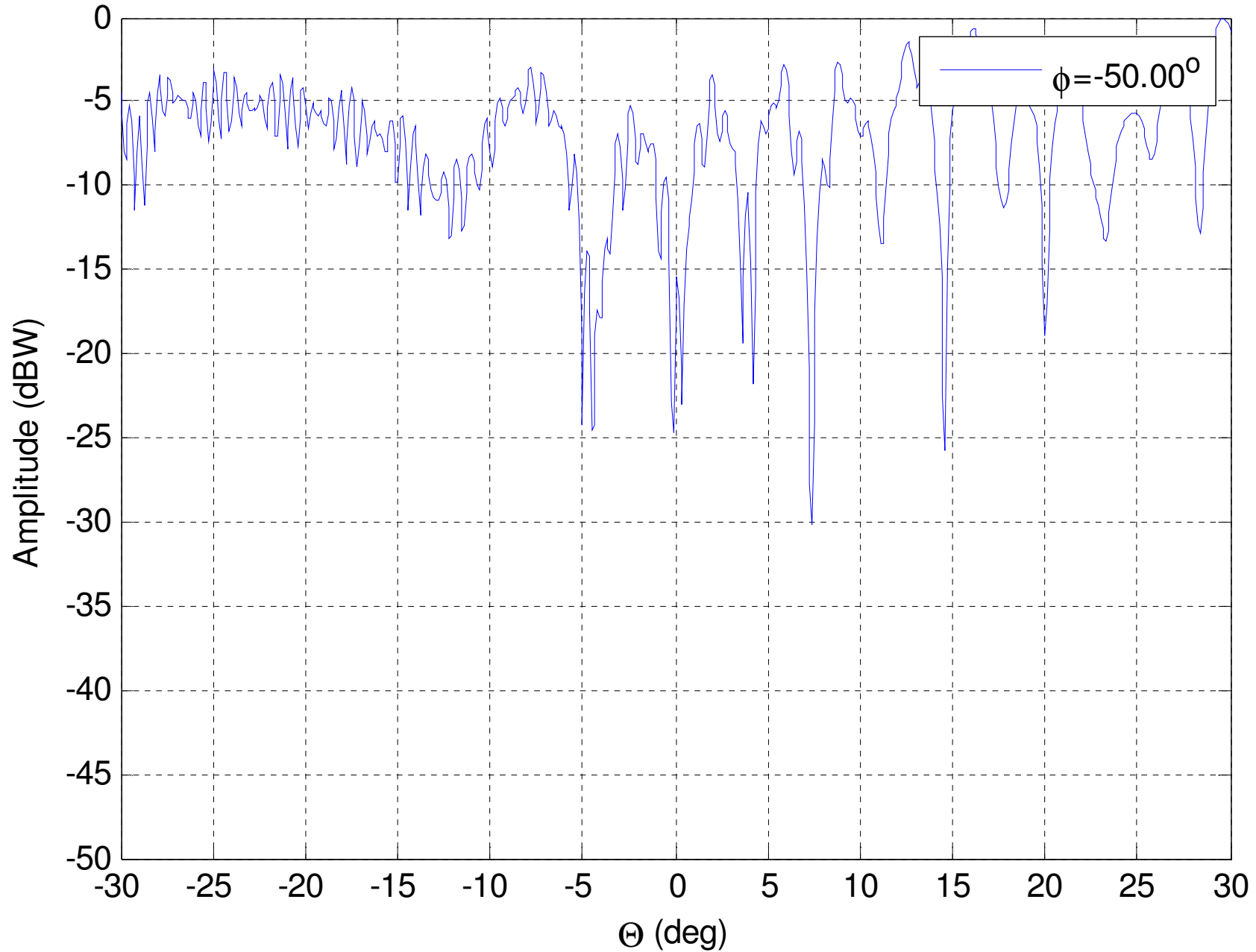
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.02 dBW, Date: 15-Dec-2011



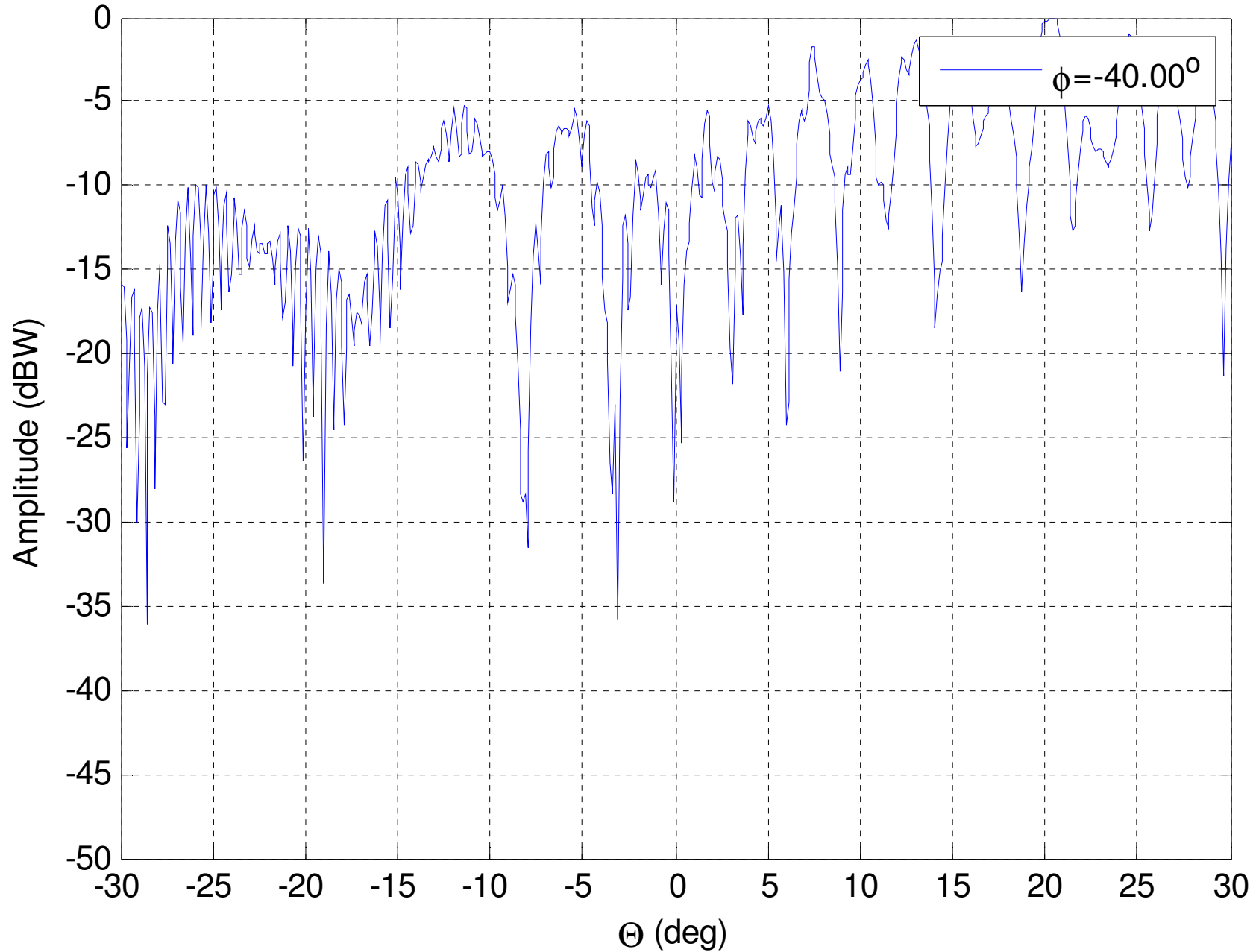
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -4.93 dBW, Date: 15-Dec-2011



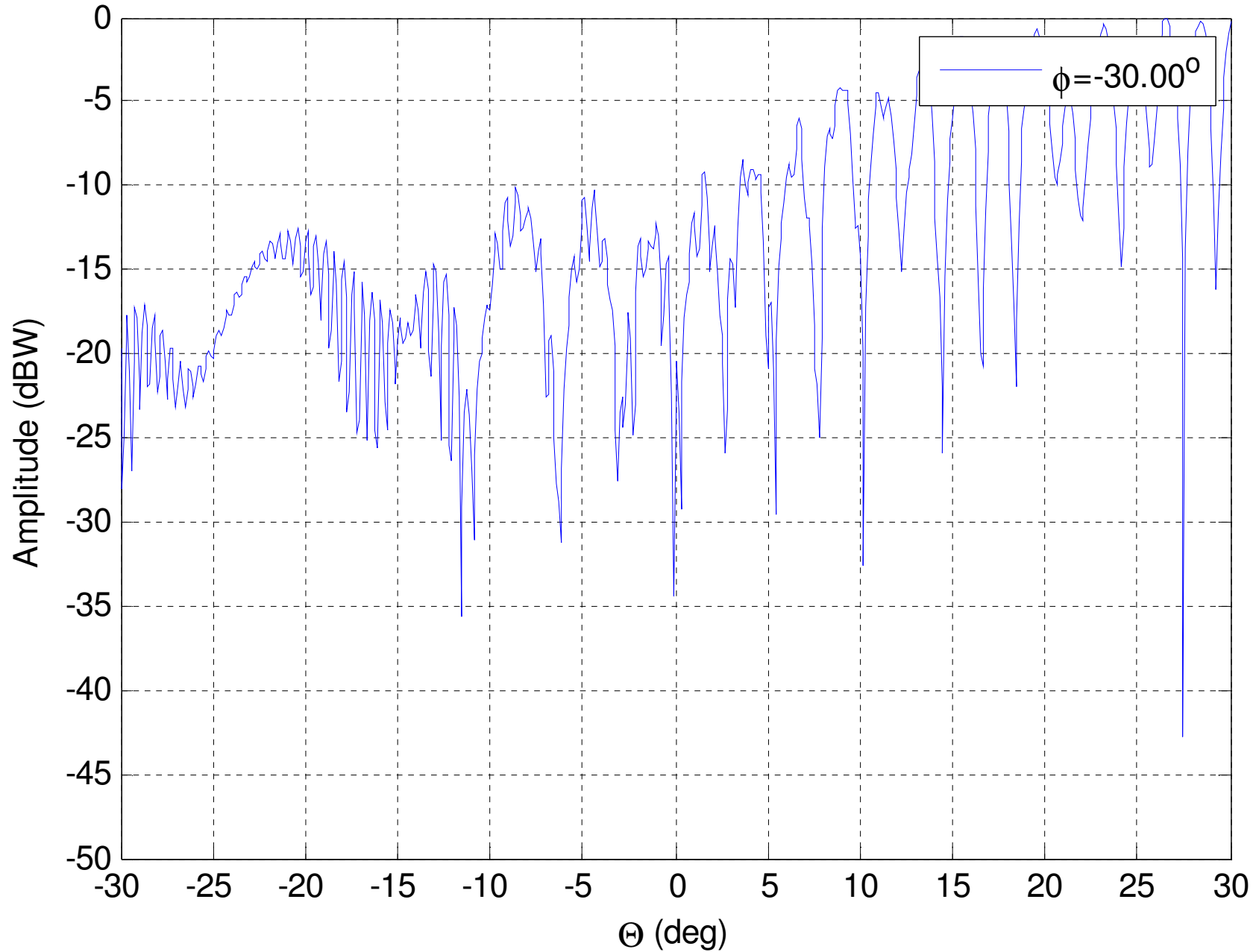
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -3.24 dBW, Date: 15-Dec-2011



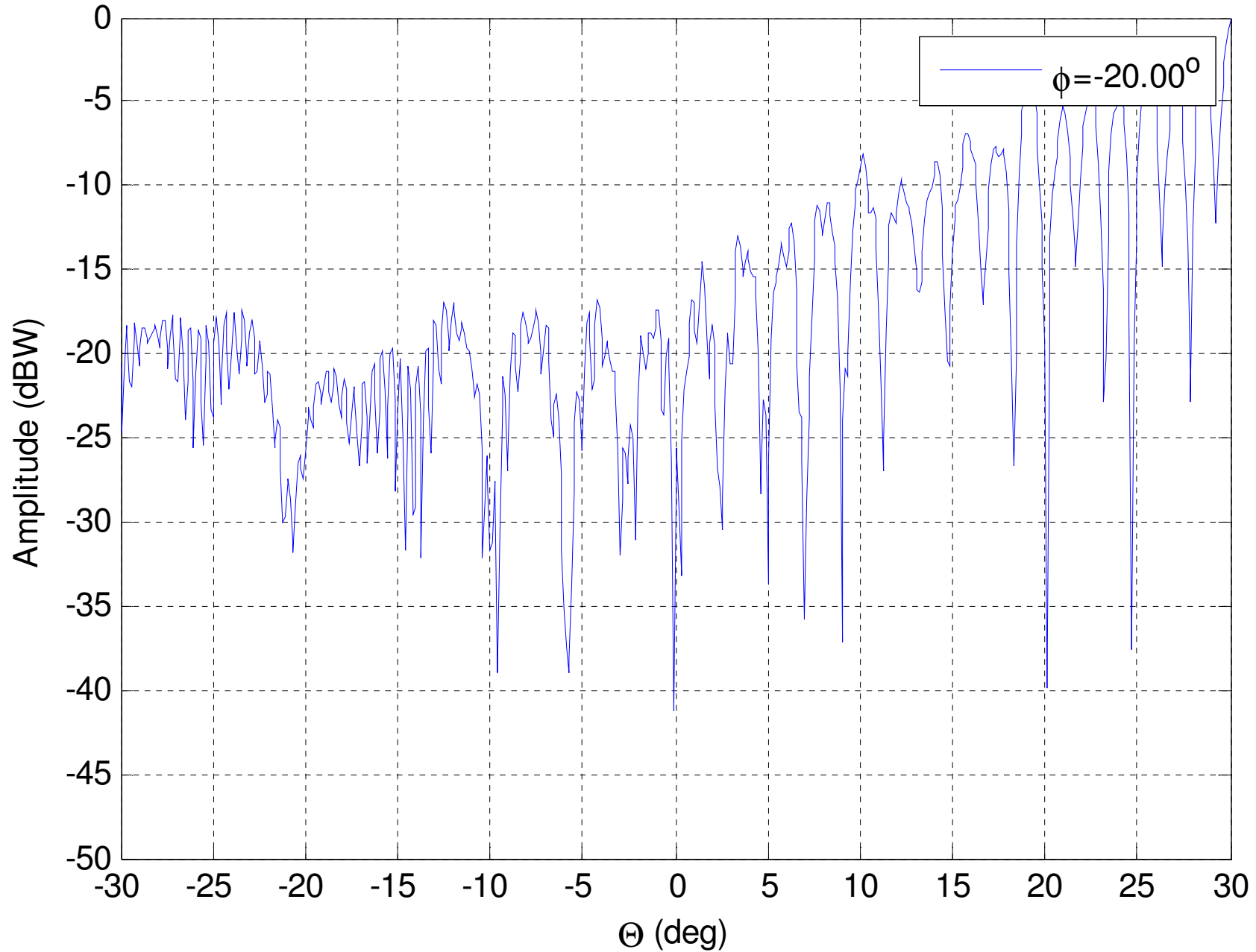
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 0.06 dBW, Date: 15-Dec-2011



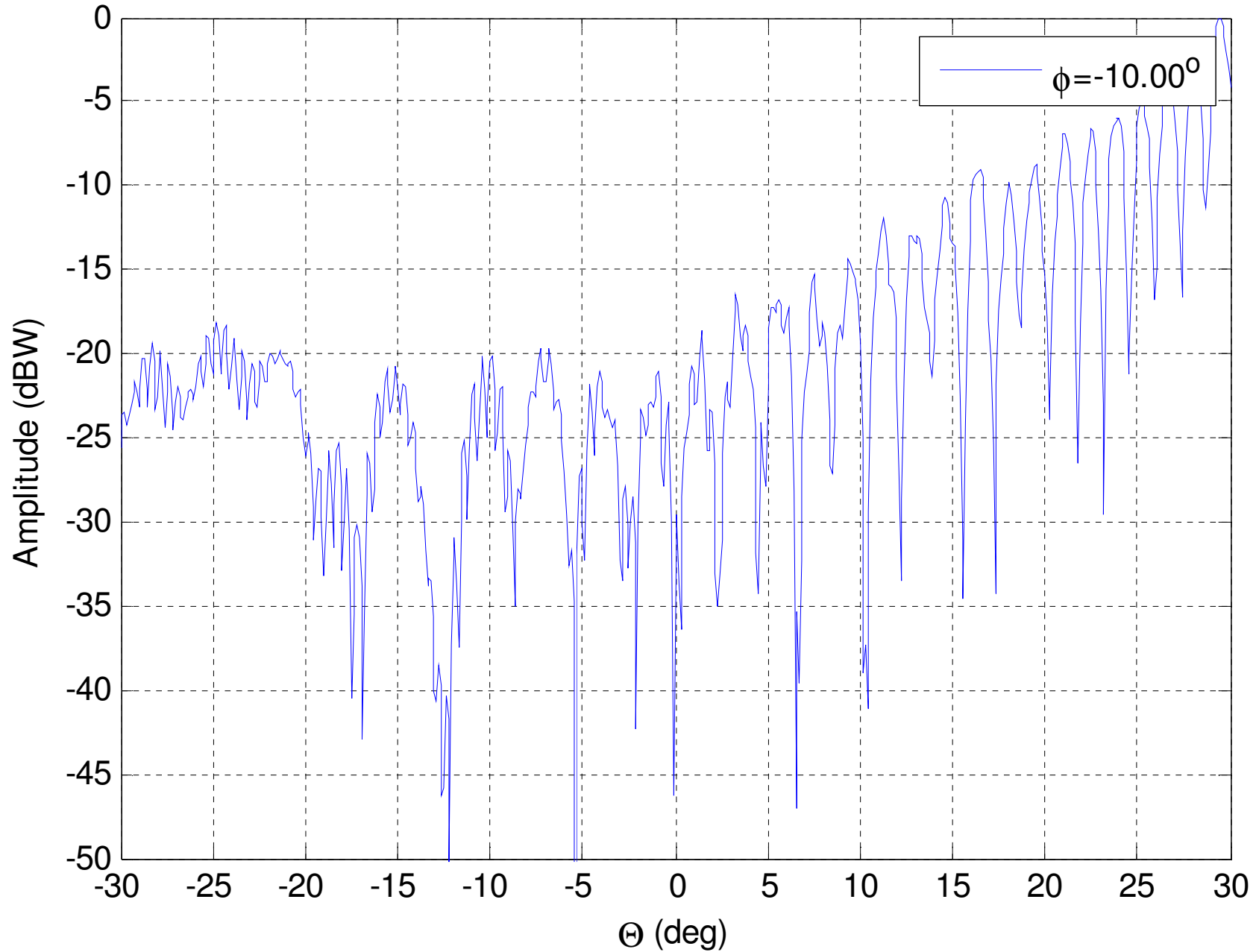
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 5.06 dBW, Date: 15-Dec-2011



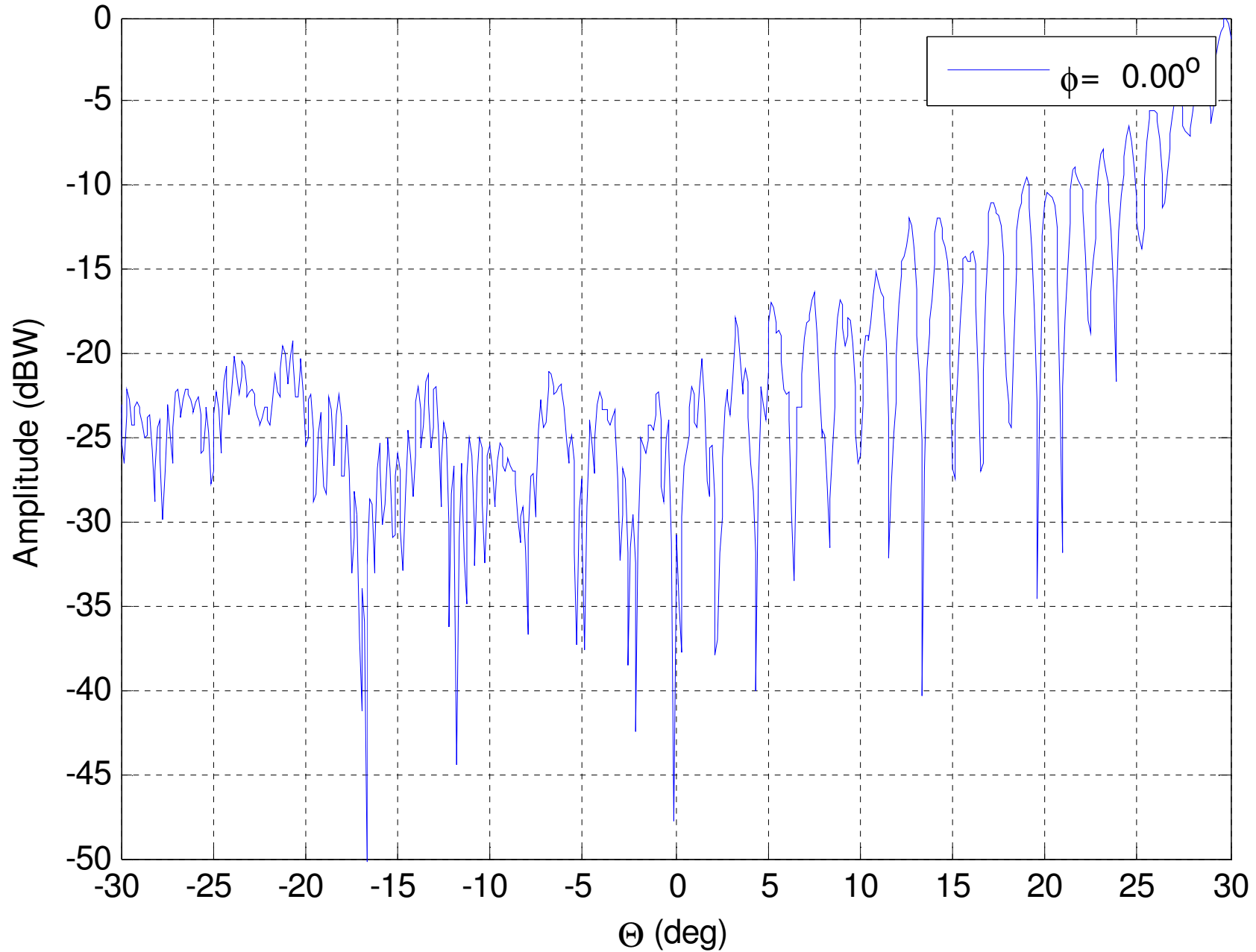
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 8.99 dBW, Date: 15-Dec-2011



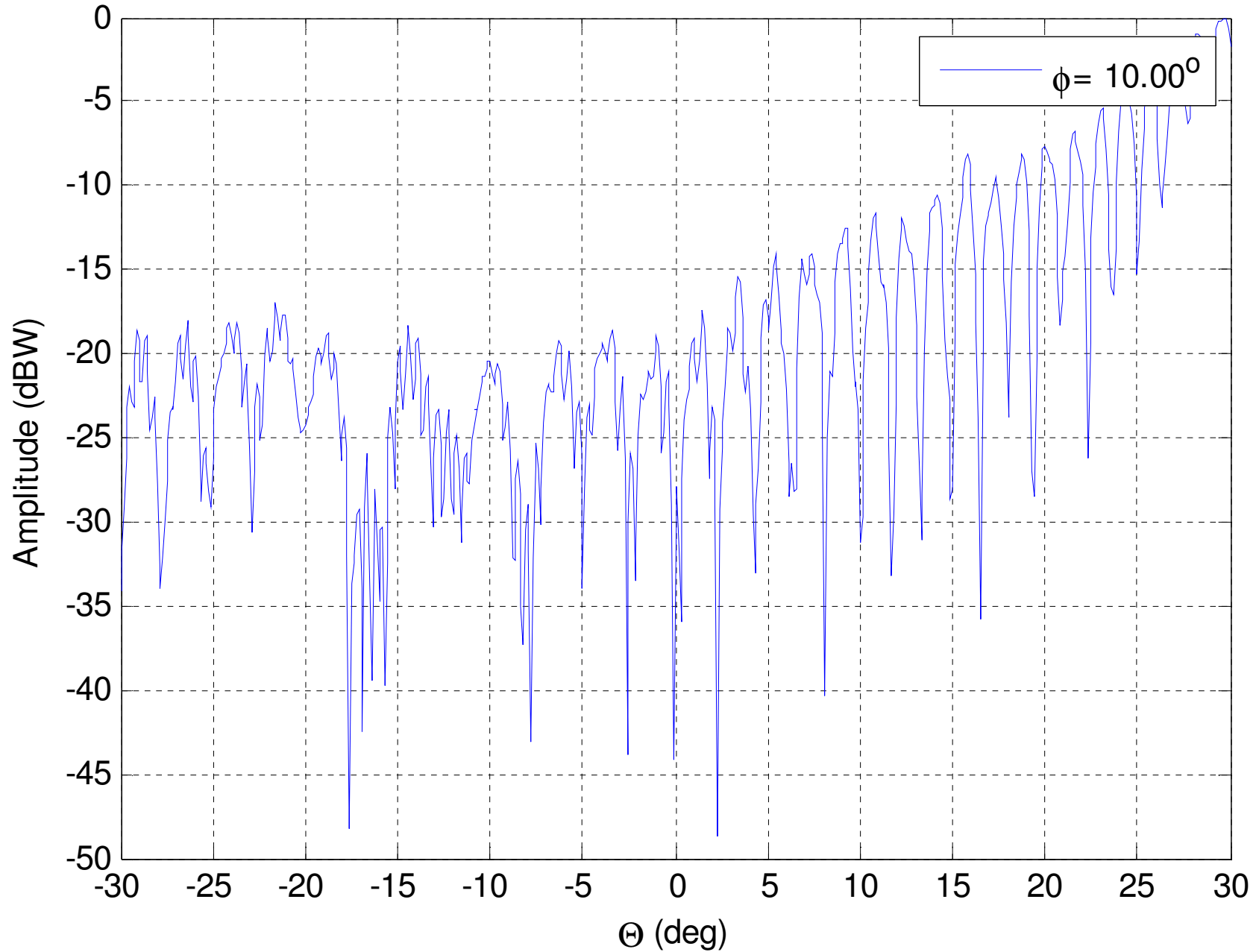
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 10.28 dBW, Date: 15-Dec-2011



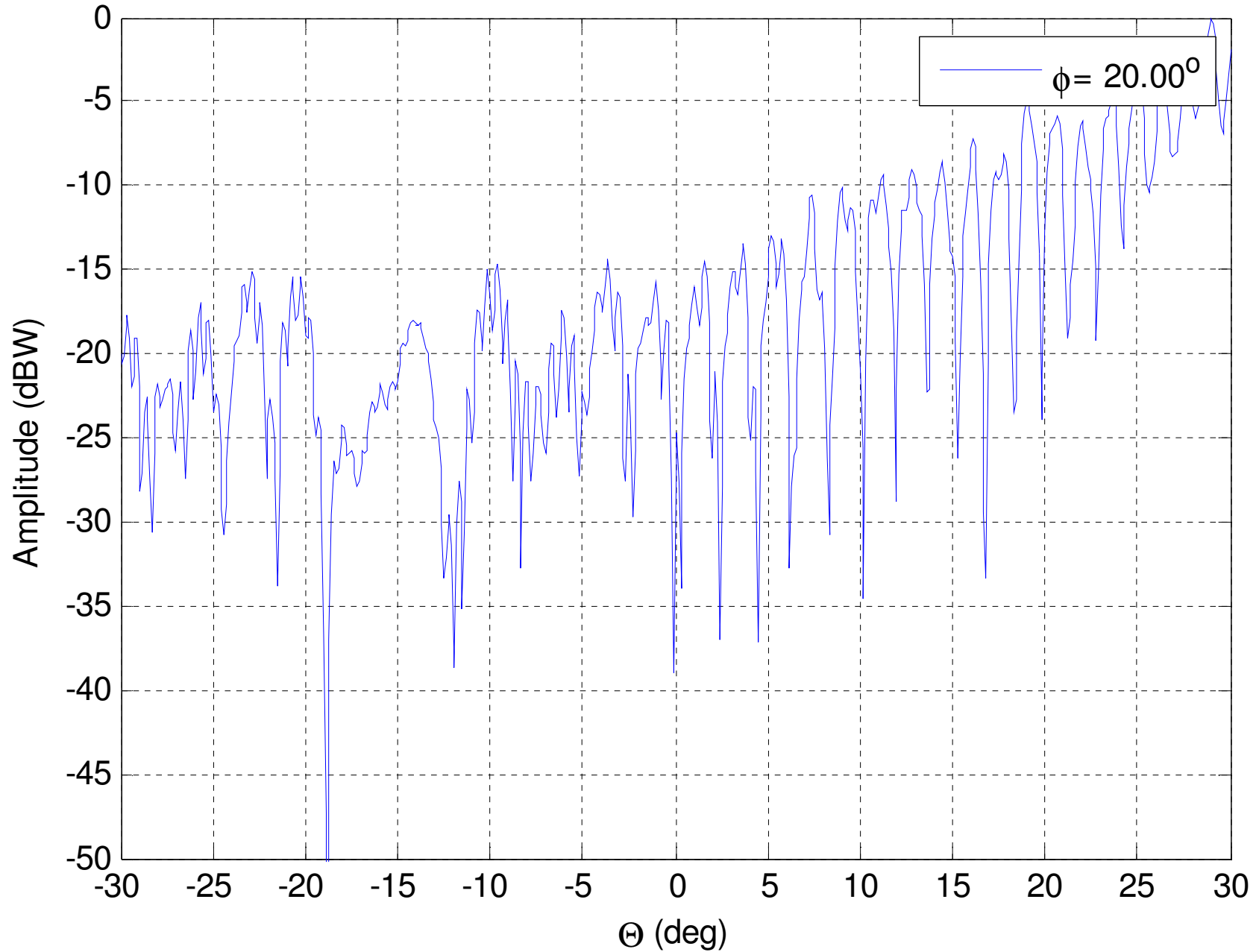
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 7.39 dBW, Date: 15-Dec-2011



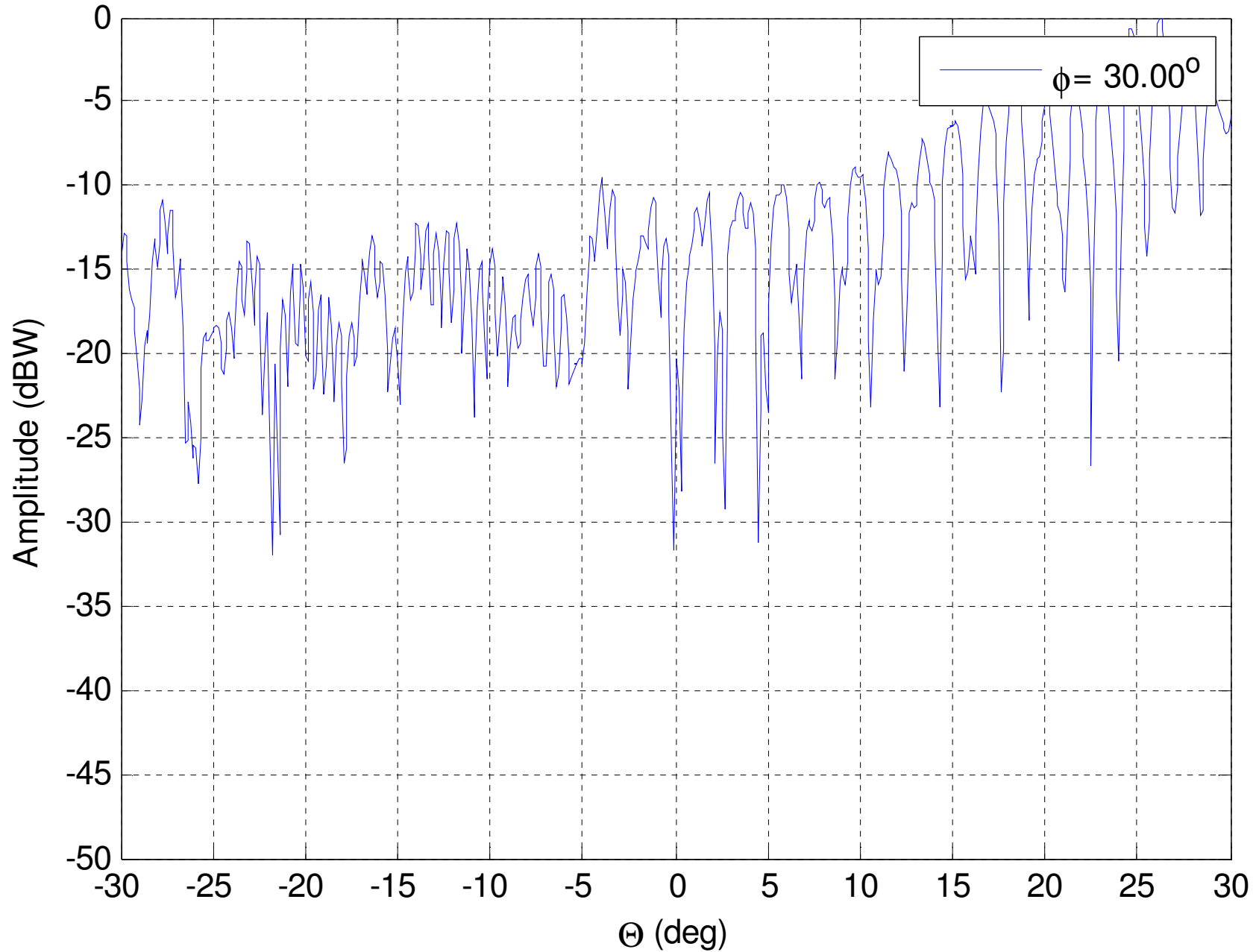
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 4.34 dBW, Date: 15-Dec-2011



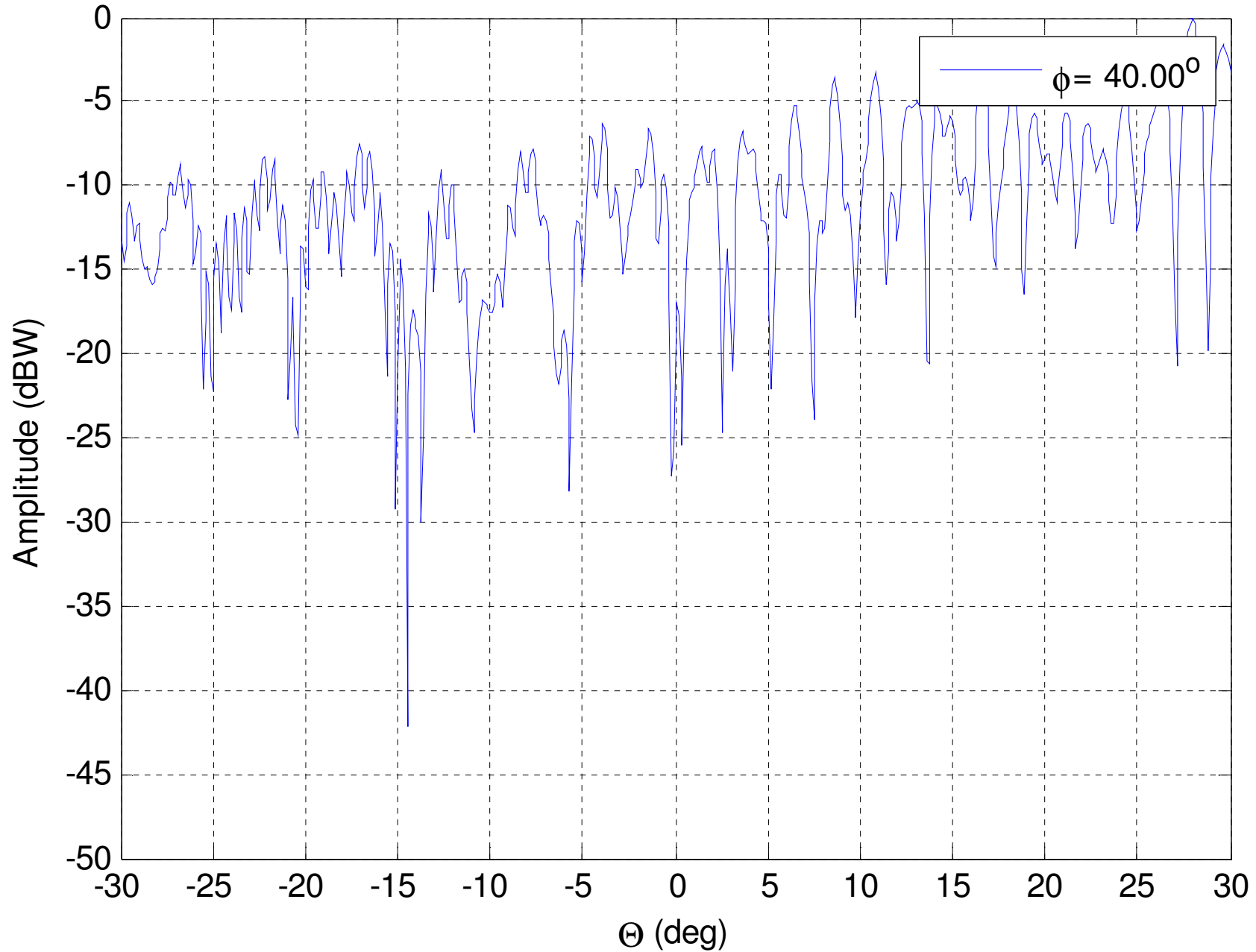
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.12 dBW, Date: 15-Dec-2011



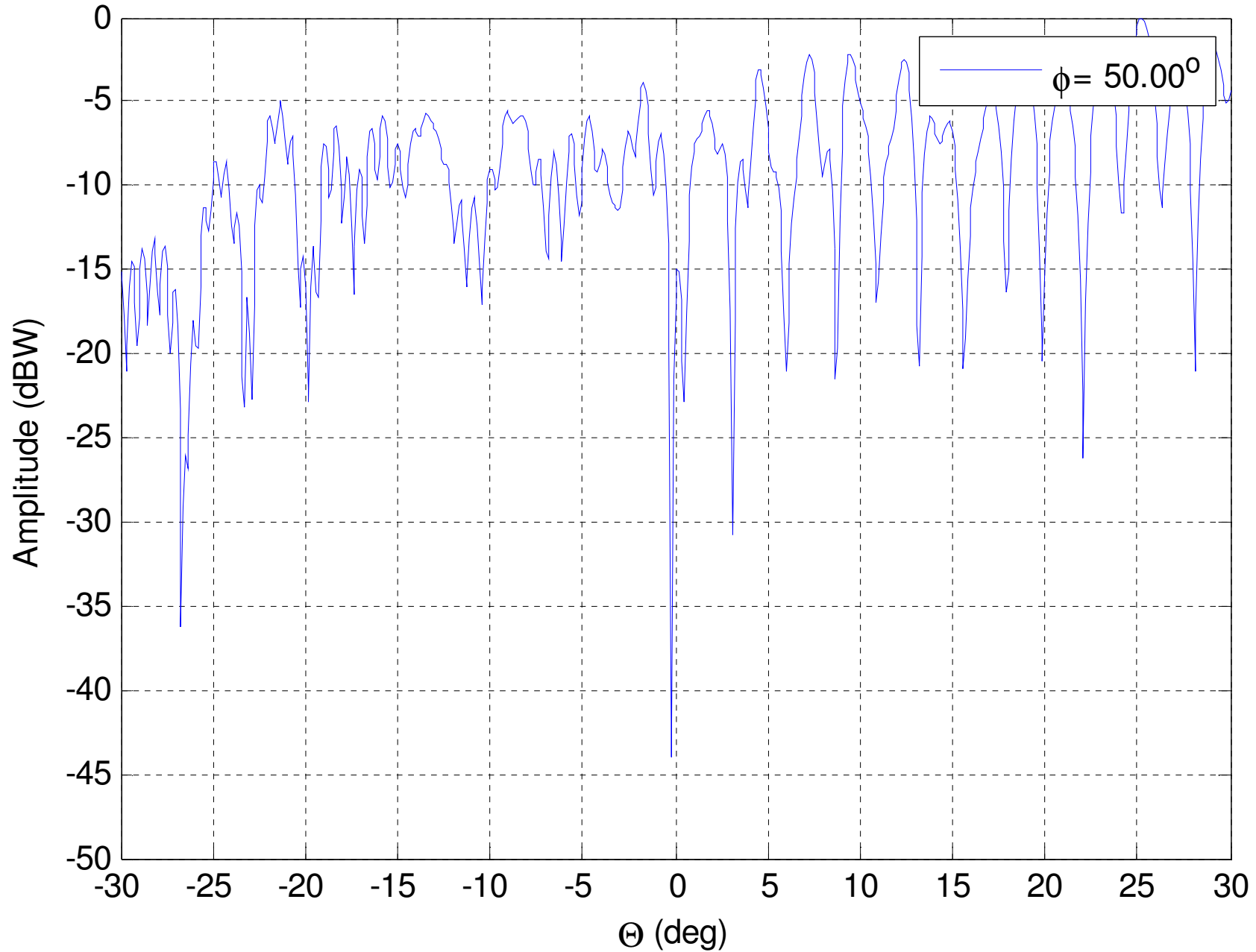
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -3.52 dBW, Date: 15-Dec-2011



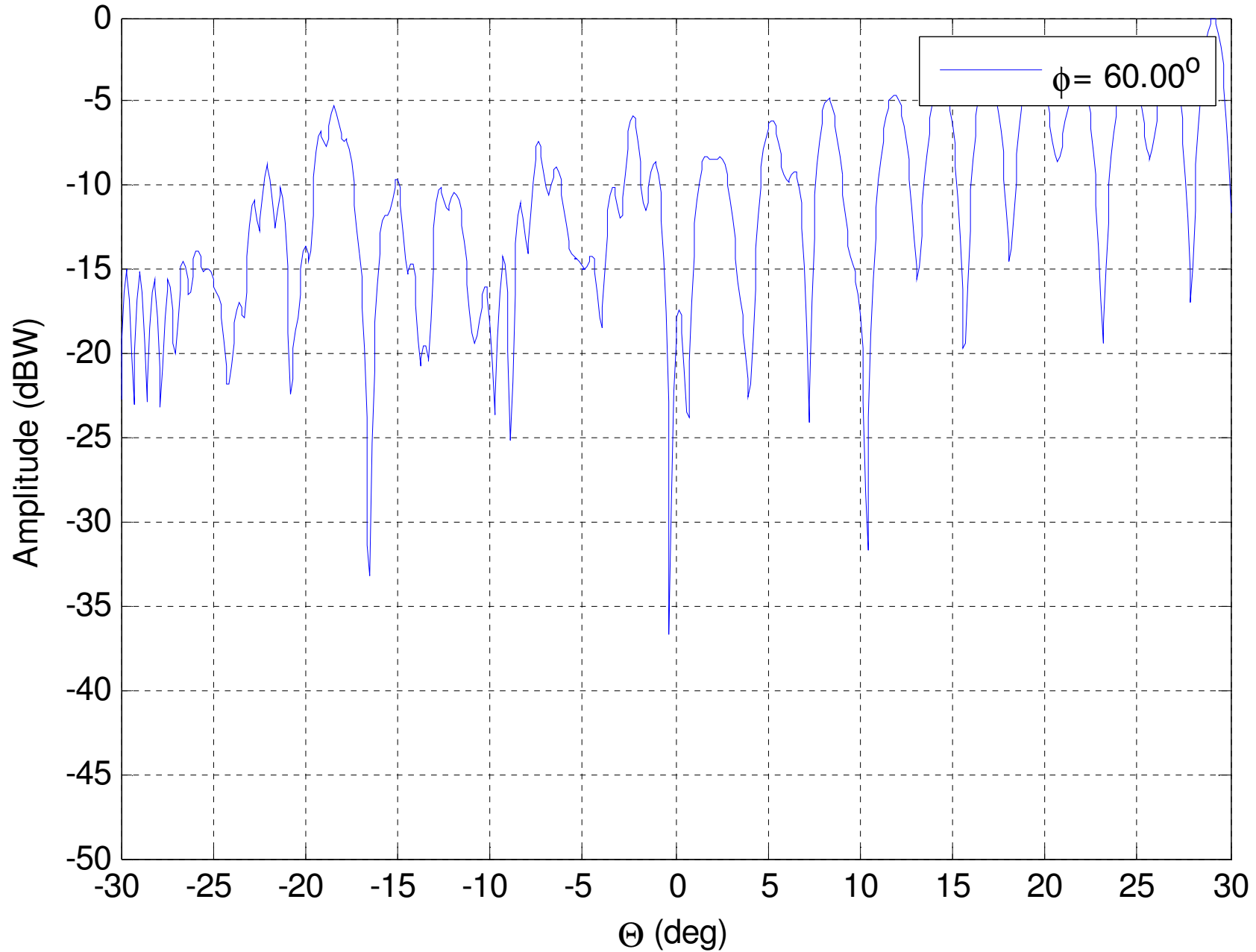
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -5.52 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

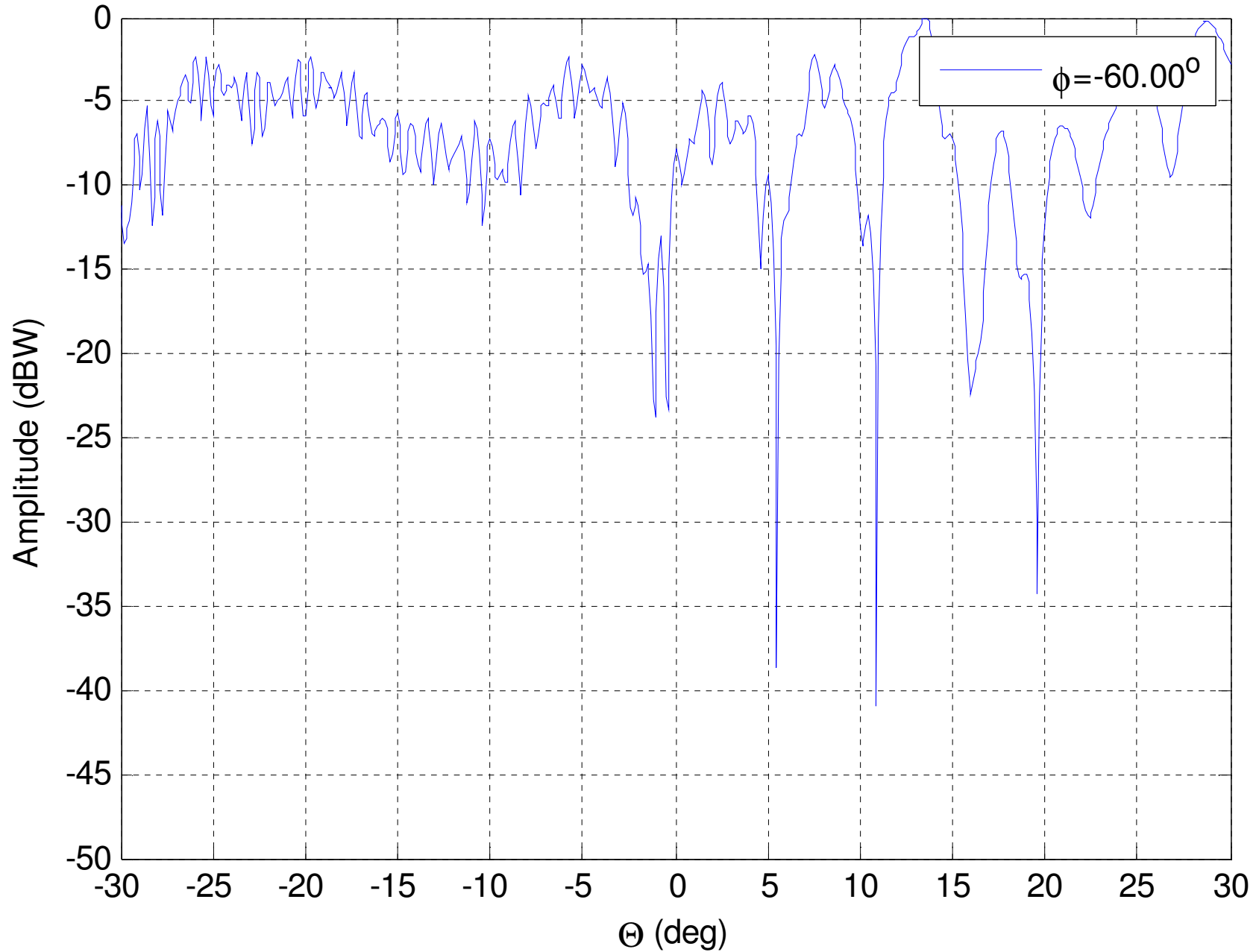
Input file: tx-17.7-rhcp-60.cut, Peak: -2.92 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

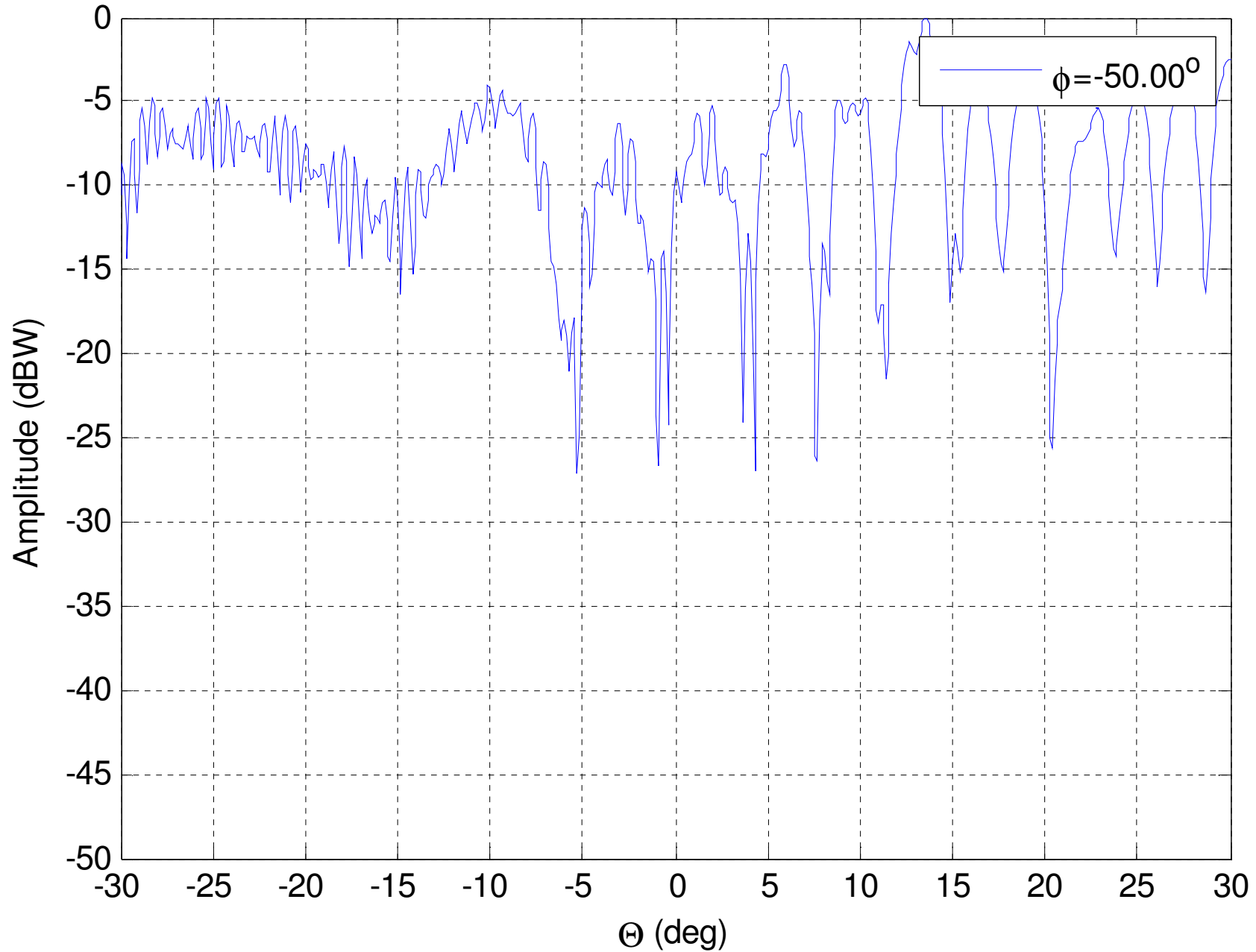
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.02 dBW, Date: 15-Dec-2011



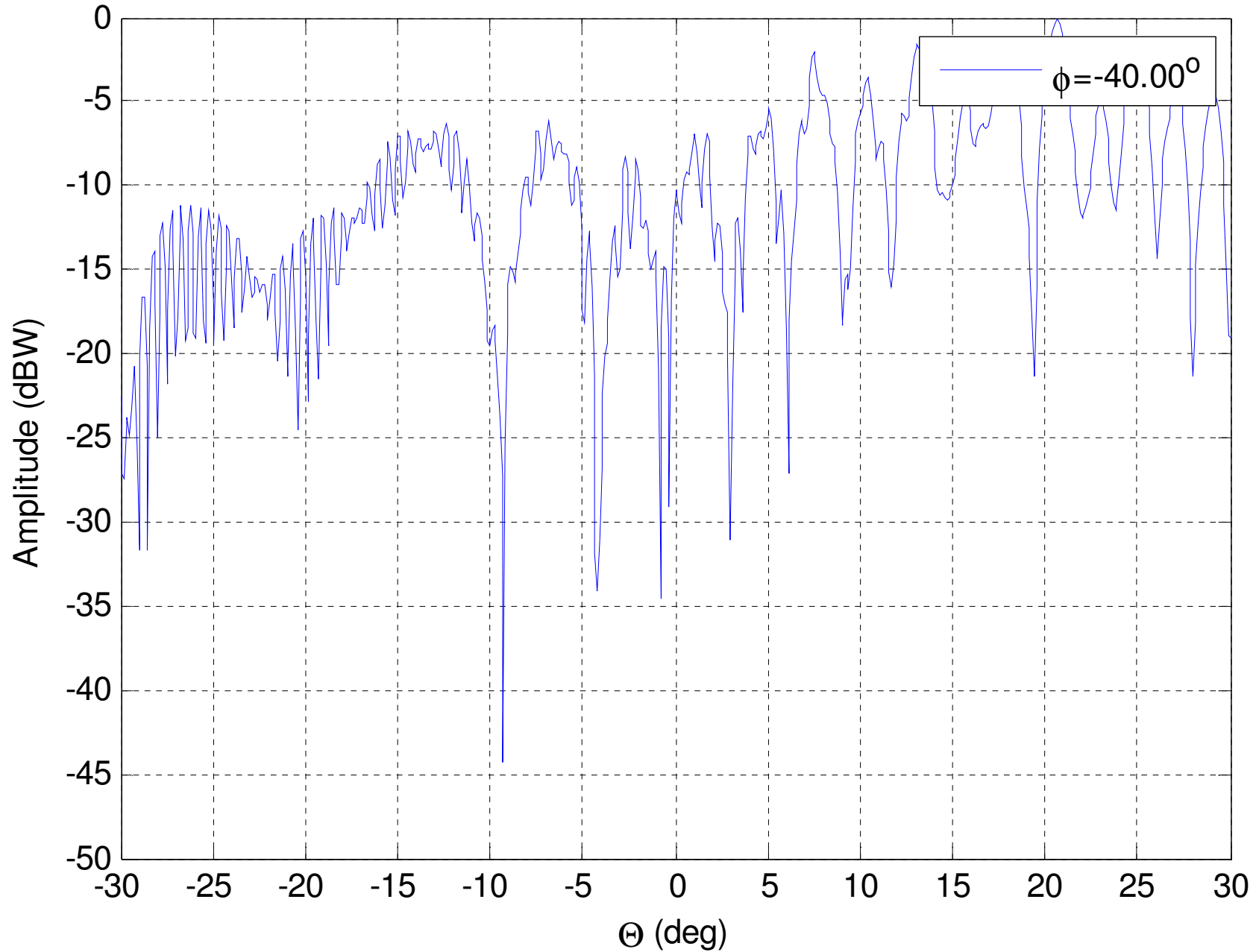
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -3.72 dBW, Date: 15-Dec-2011



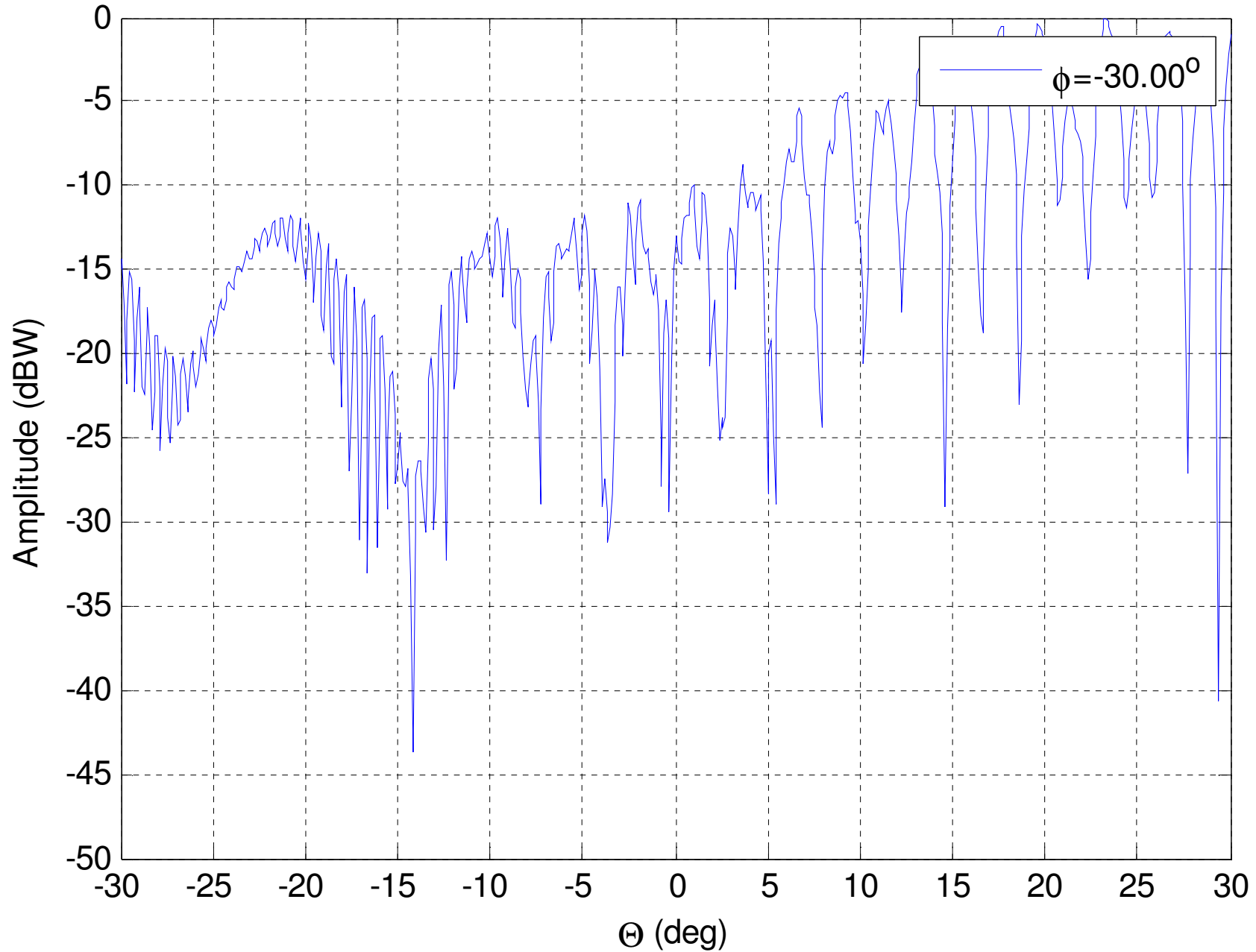
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -2.62 dBW, Date: 15-Dec-2011



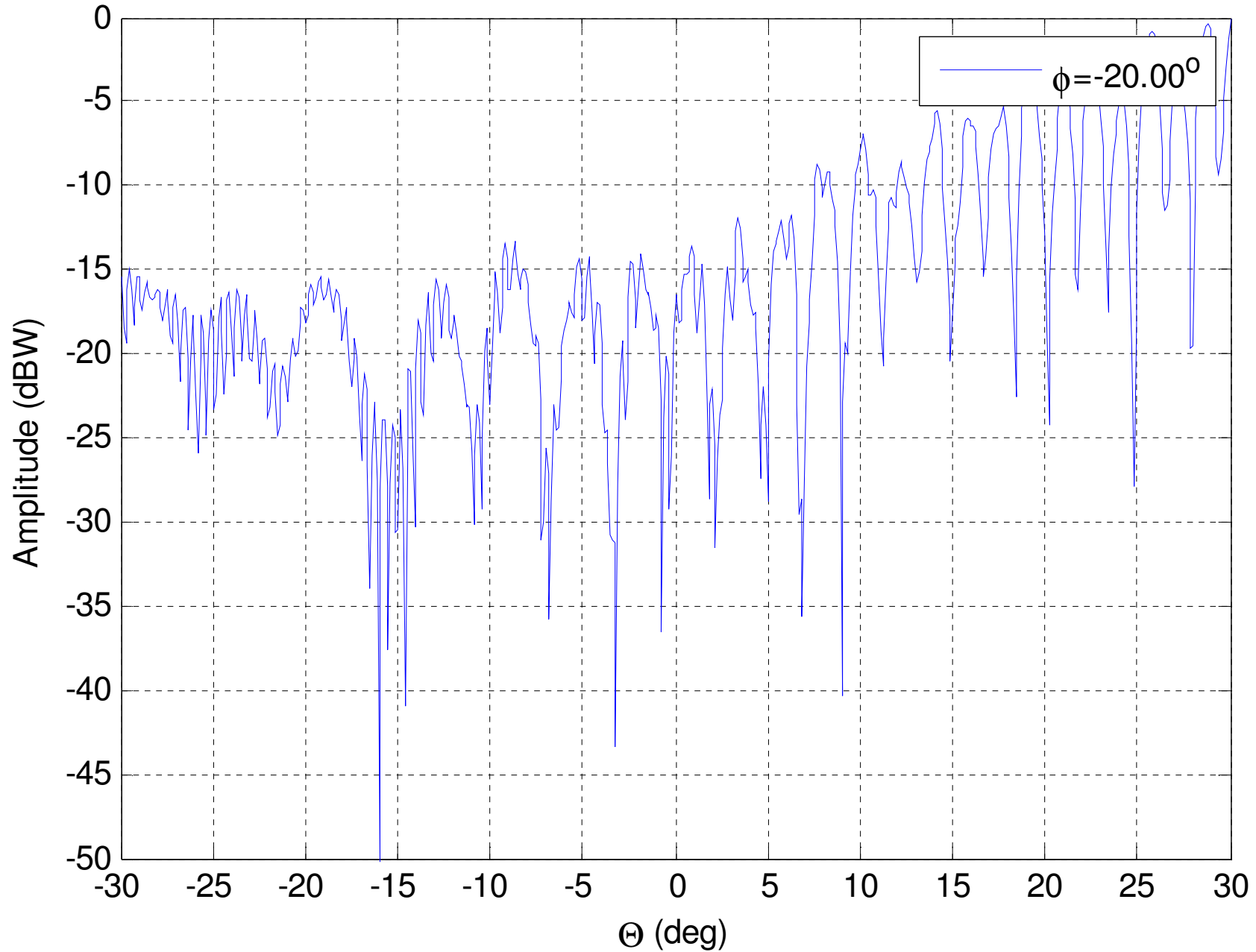
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: 0.06 dBW, Date: 15-Dec-2011



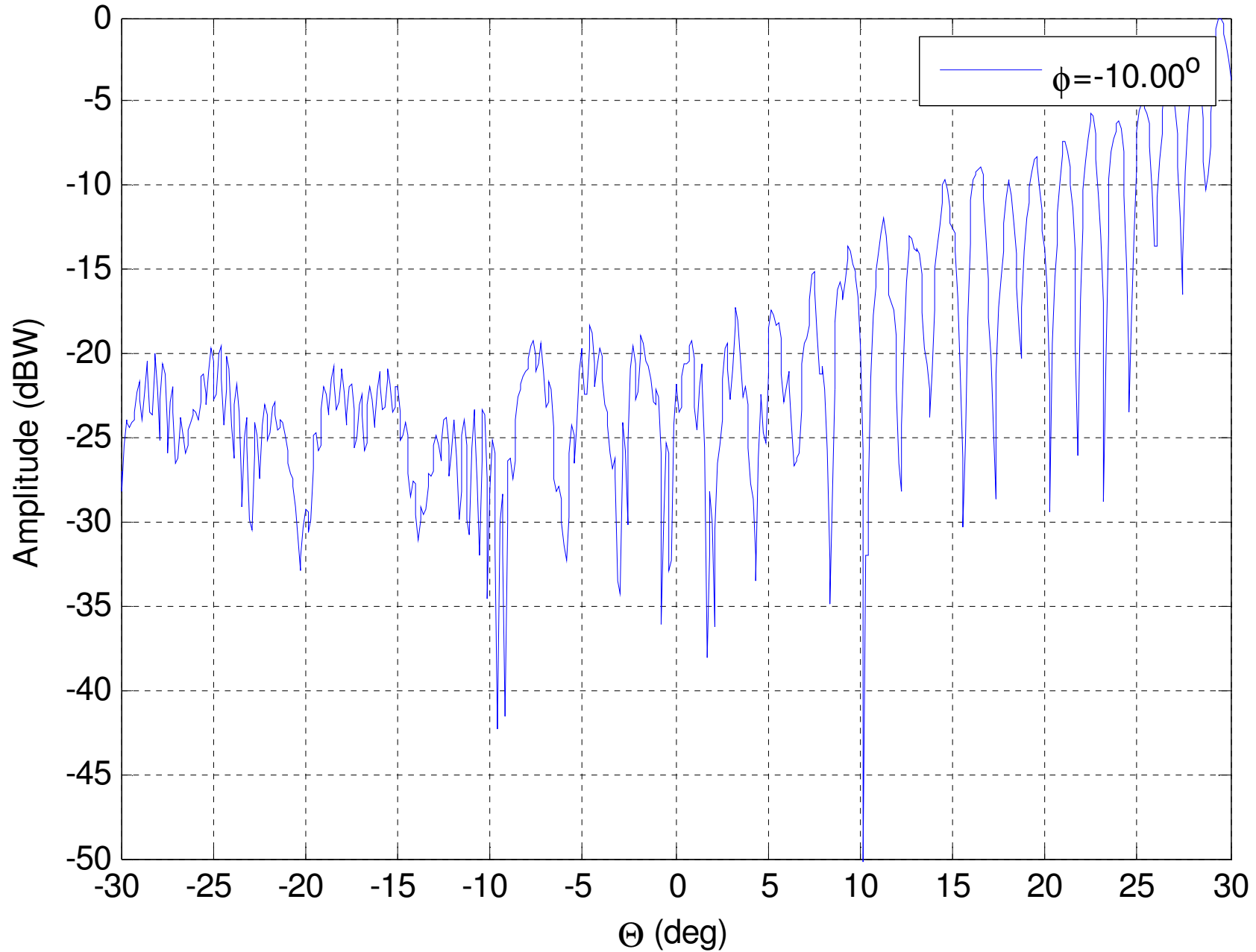
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 3.56 dBW, Date: 15-Dec-2011



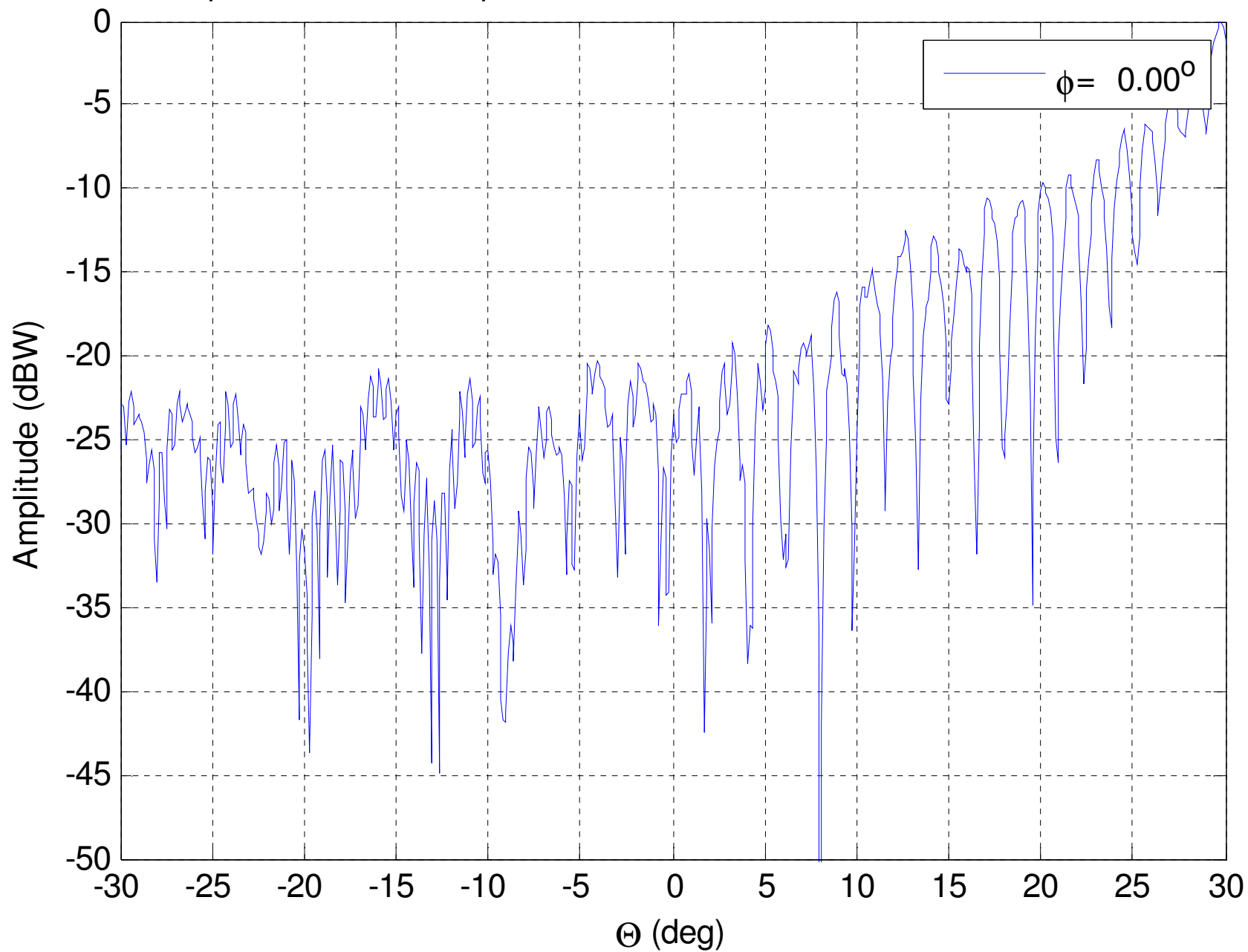
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 8.86 dBW, Date: 15-Dec-2011



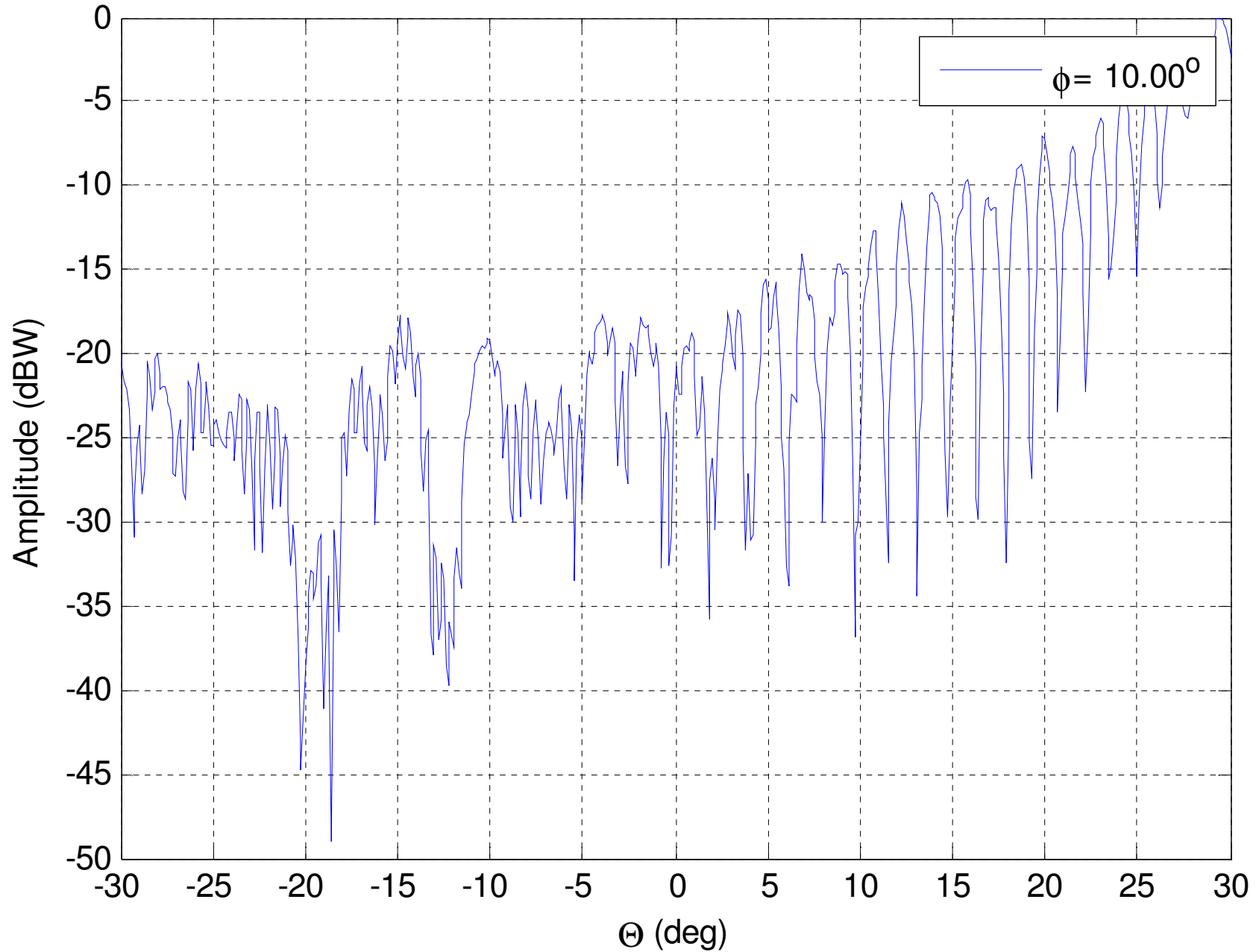
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 10.54 dBW, Date: 15-Dec-2011



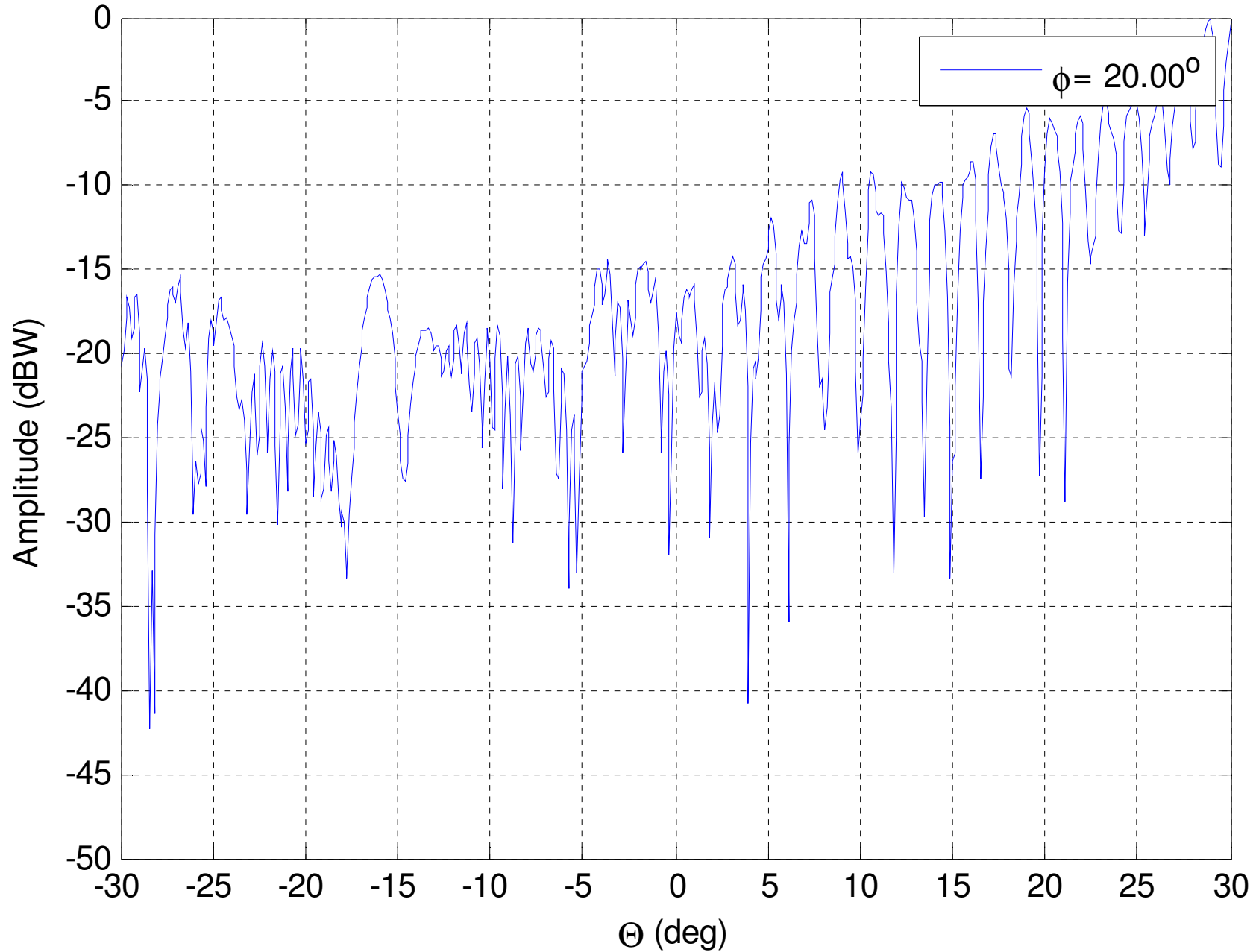
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 7.87 dBW, Date: 15-Dec-2011



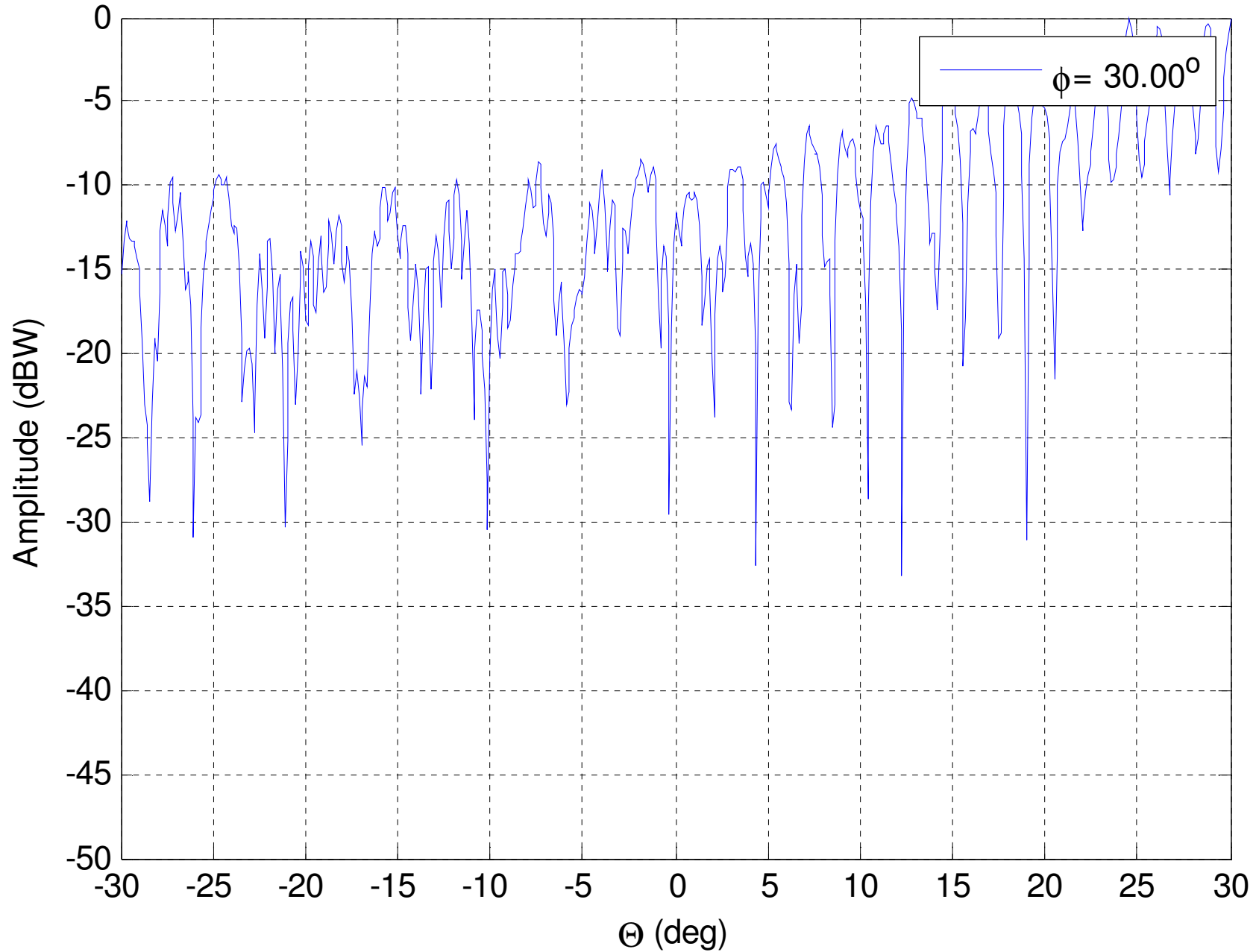
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 4.62 dBW, Date: 15-Dec-2011



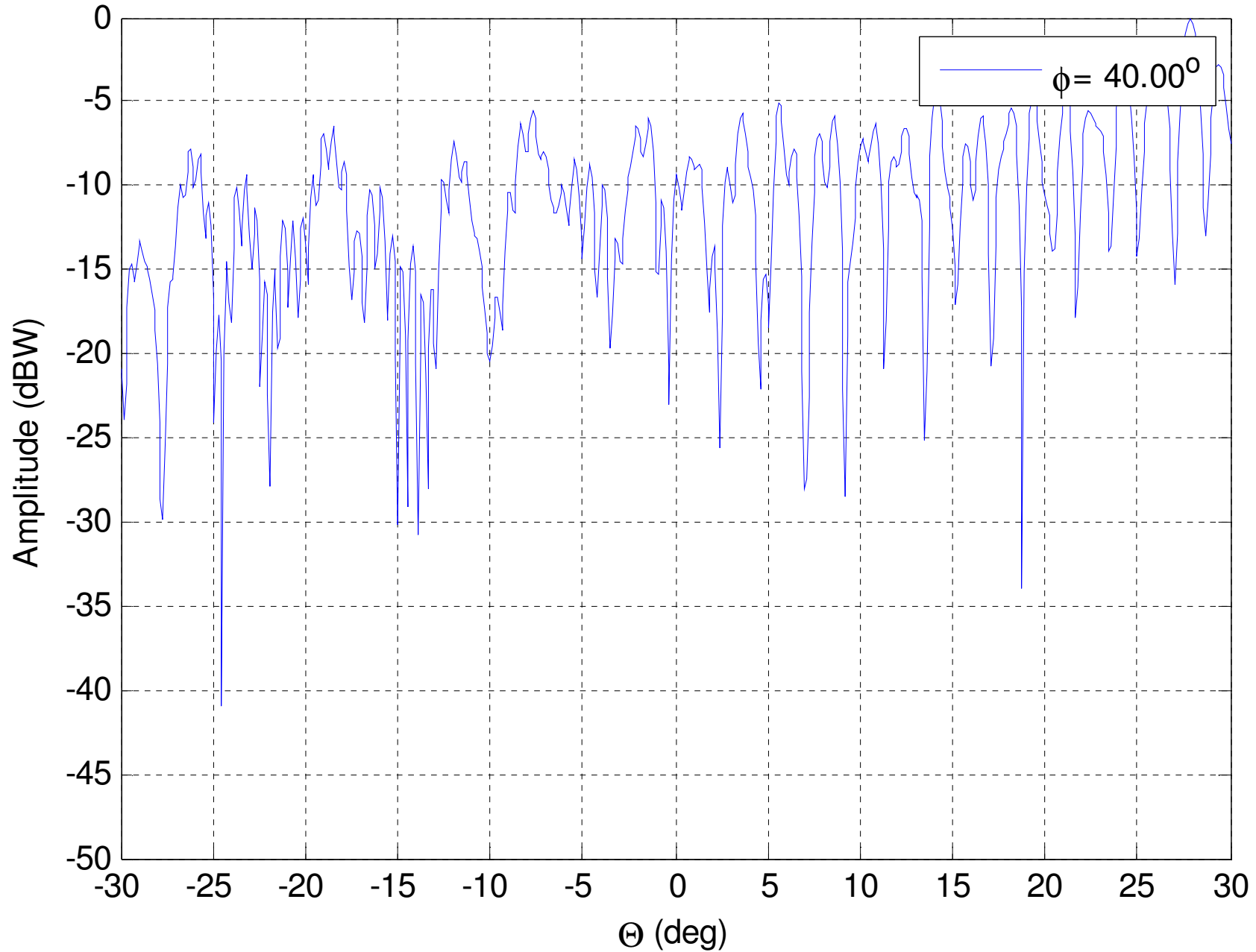
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -1.29 dBW, Date: 15-Dec-2011



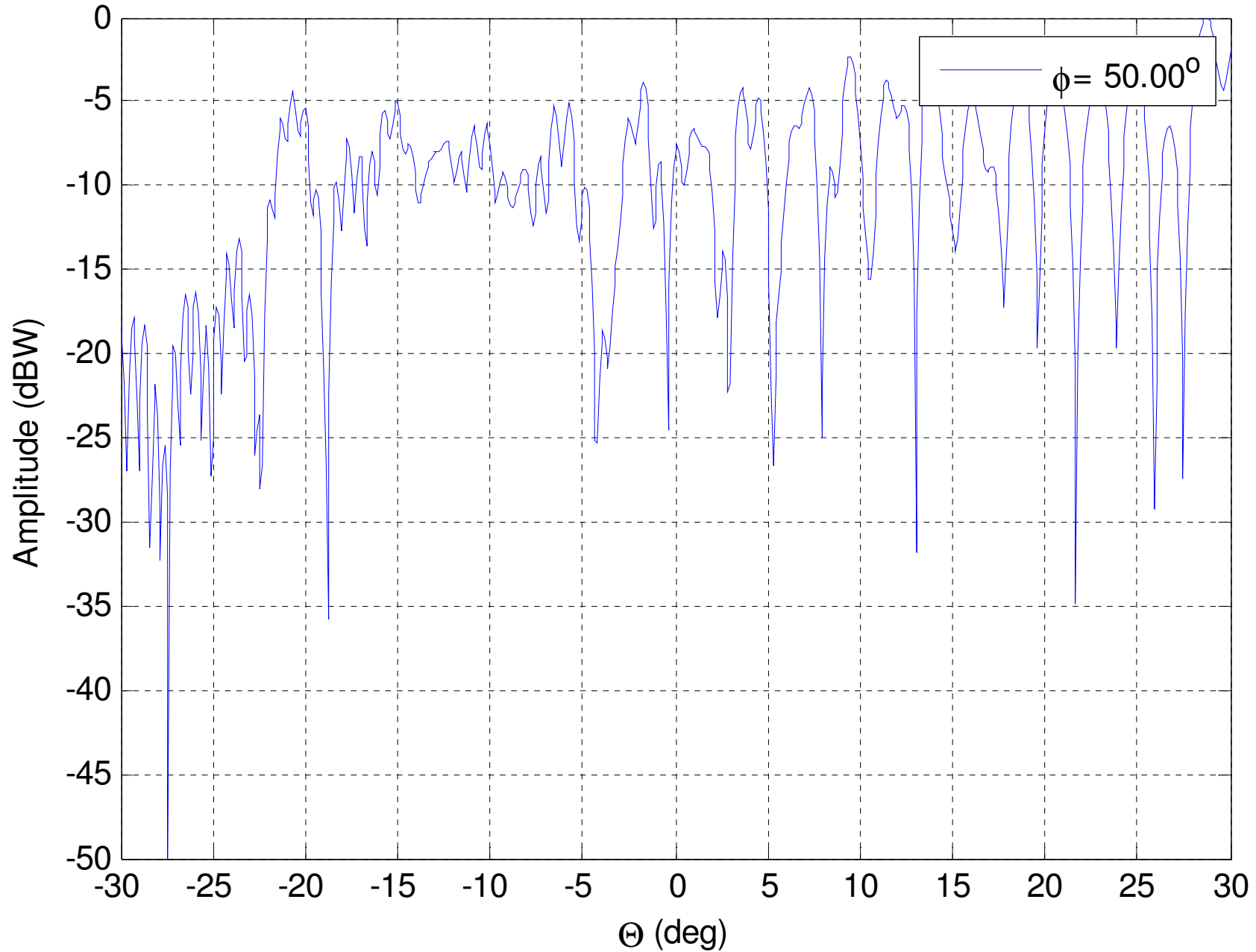
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -3.46 dBW, Date: 15-Dec-2011



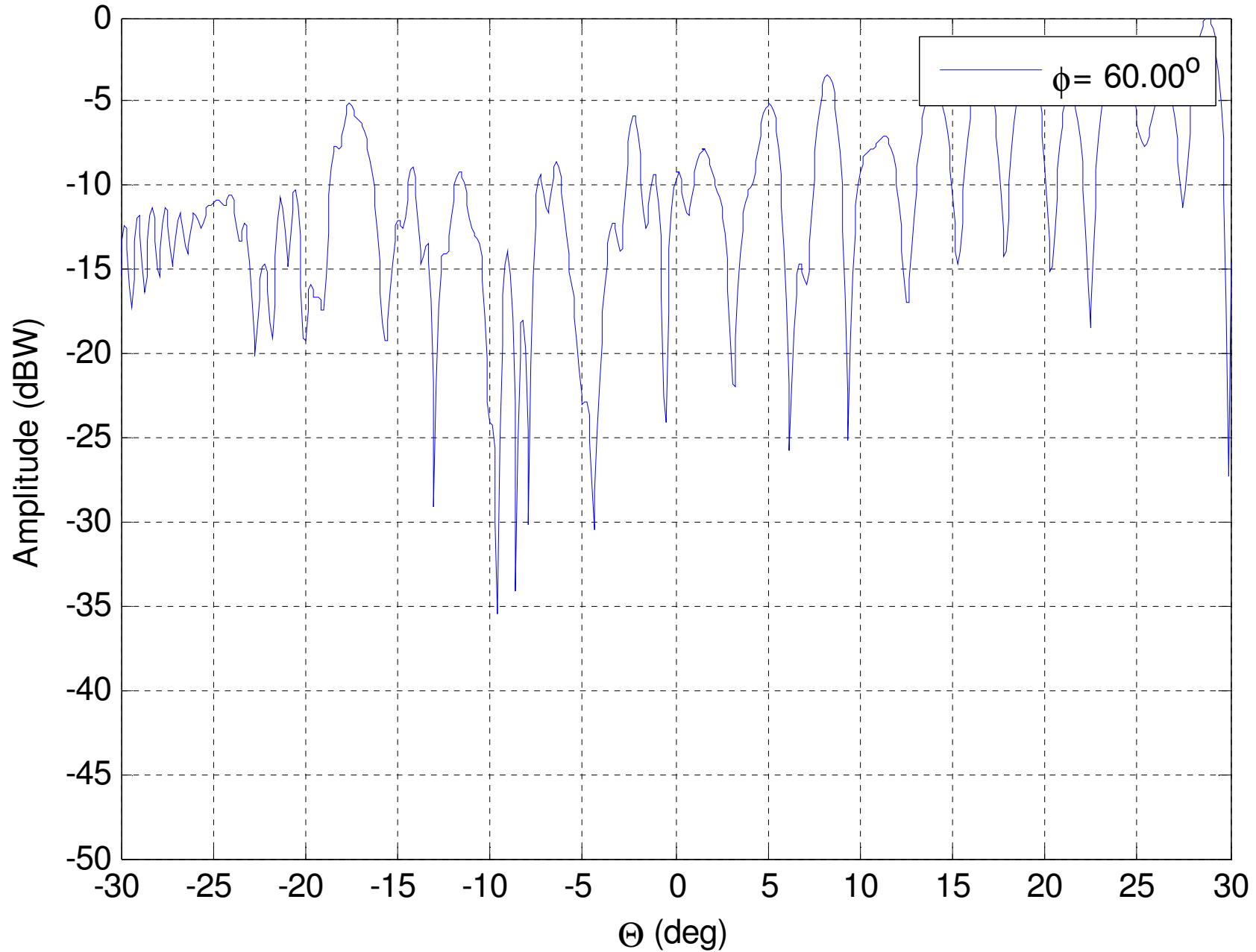
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -5.10 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -3.47 dBW, Date: 15-Dec-2011



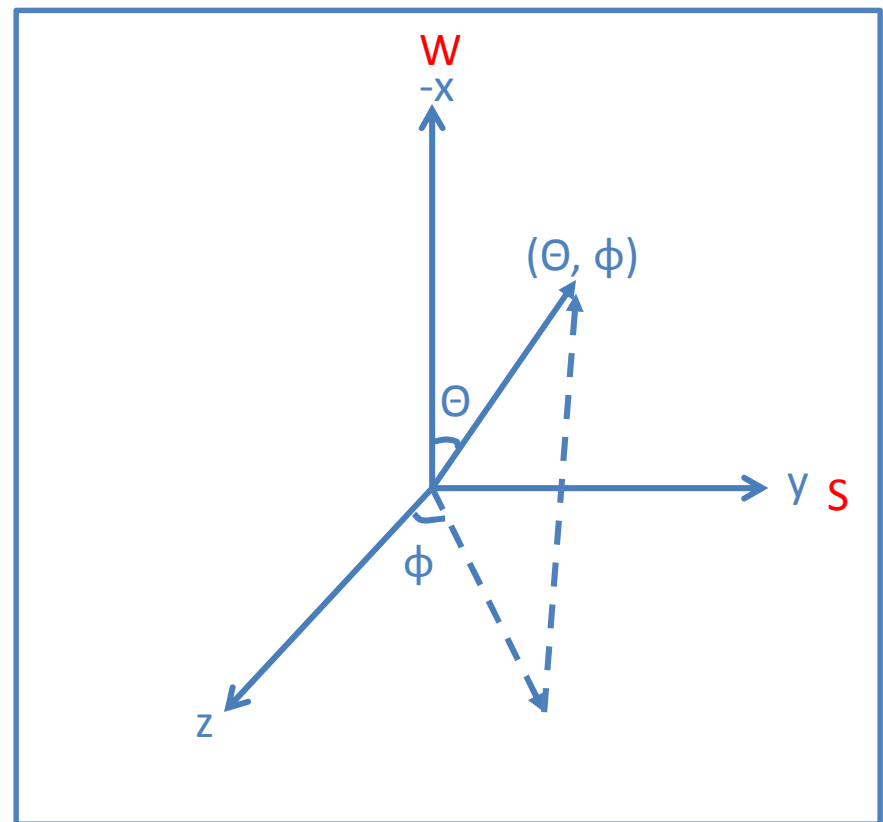
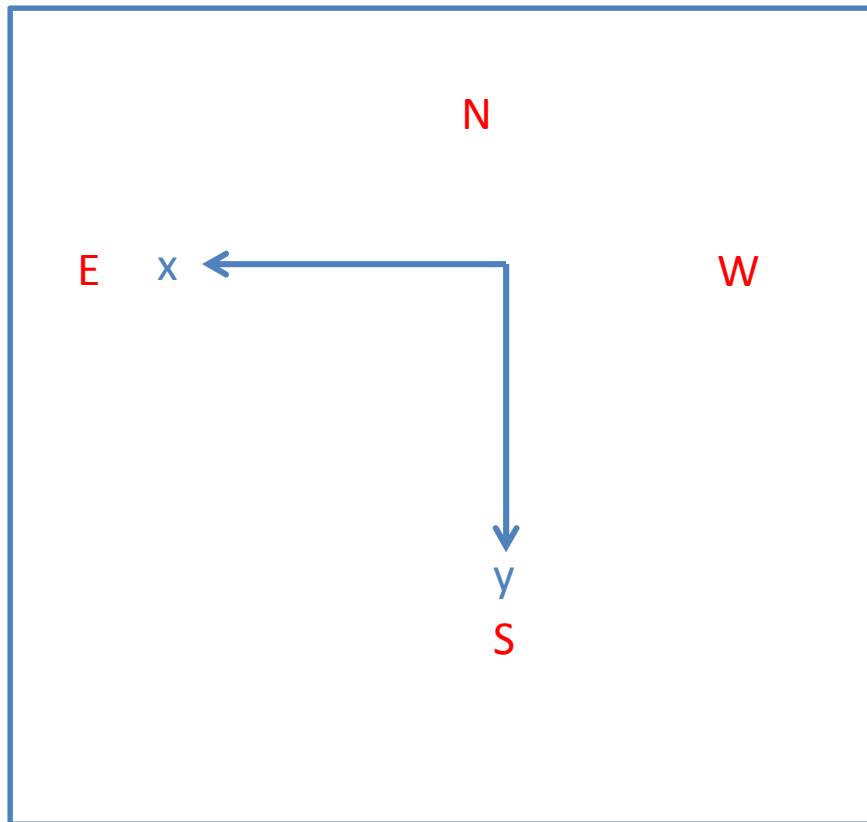
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 28

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



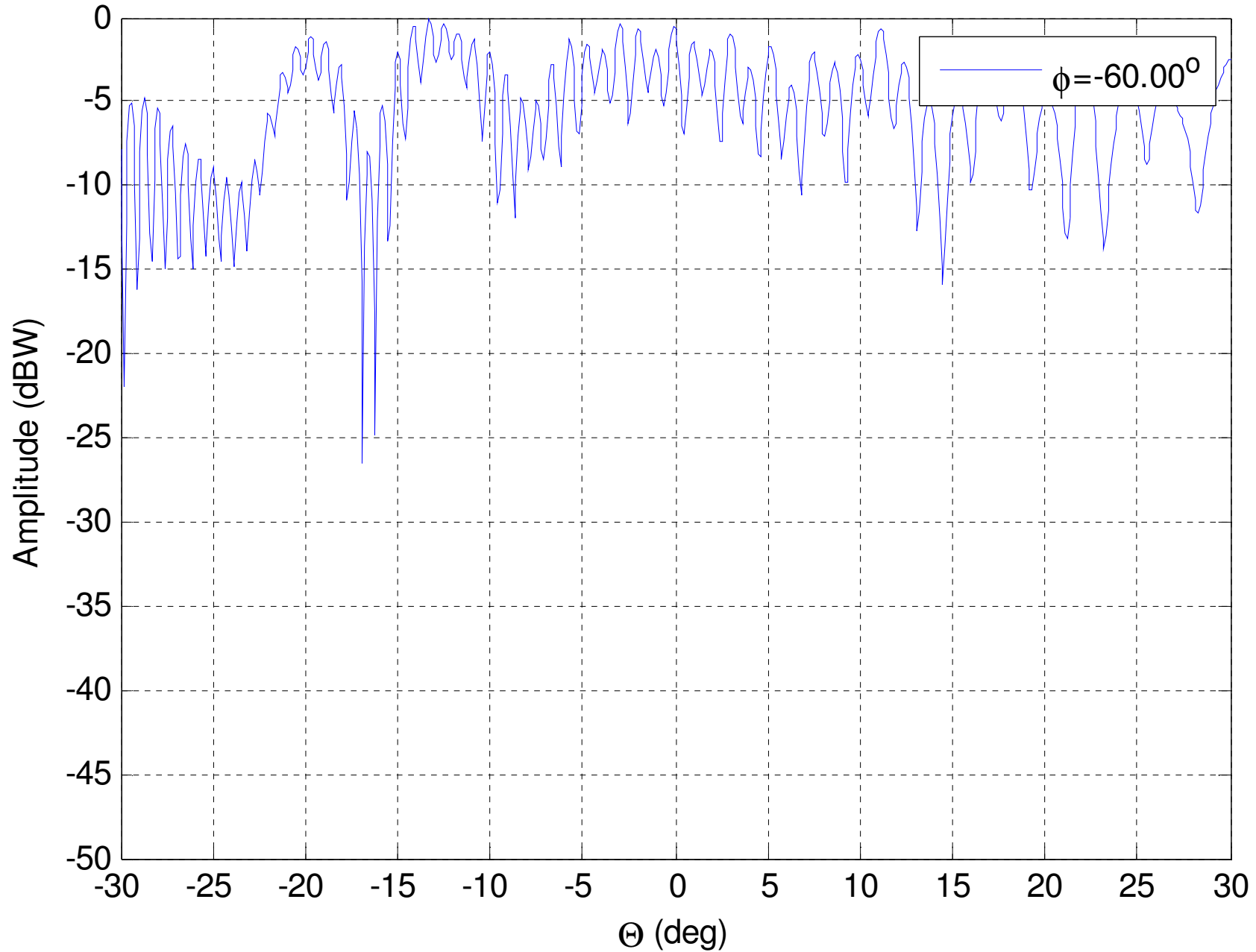
Spot Beam28, -X Axis Plots

- 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

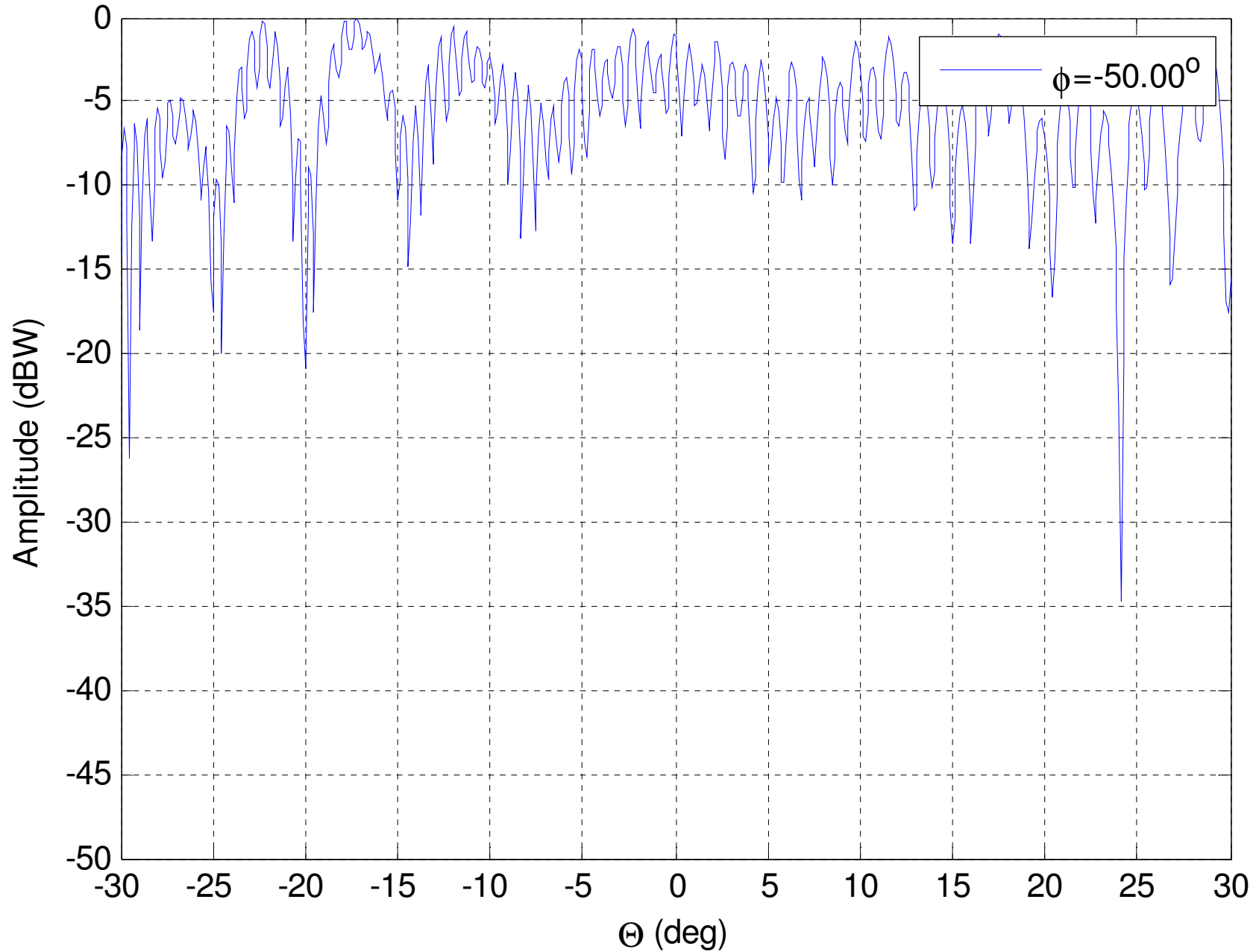
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -1.81 dBW, Date: 15-Dec-2011



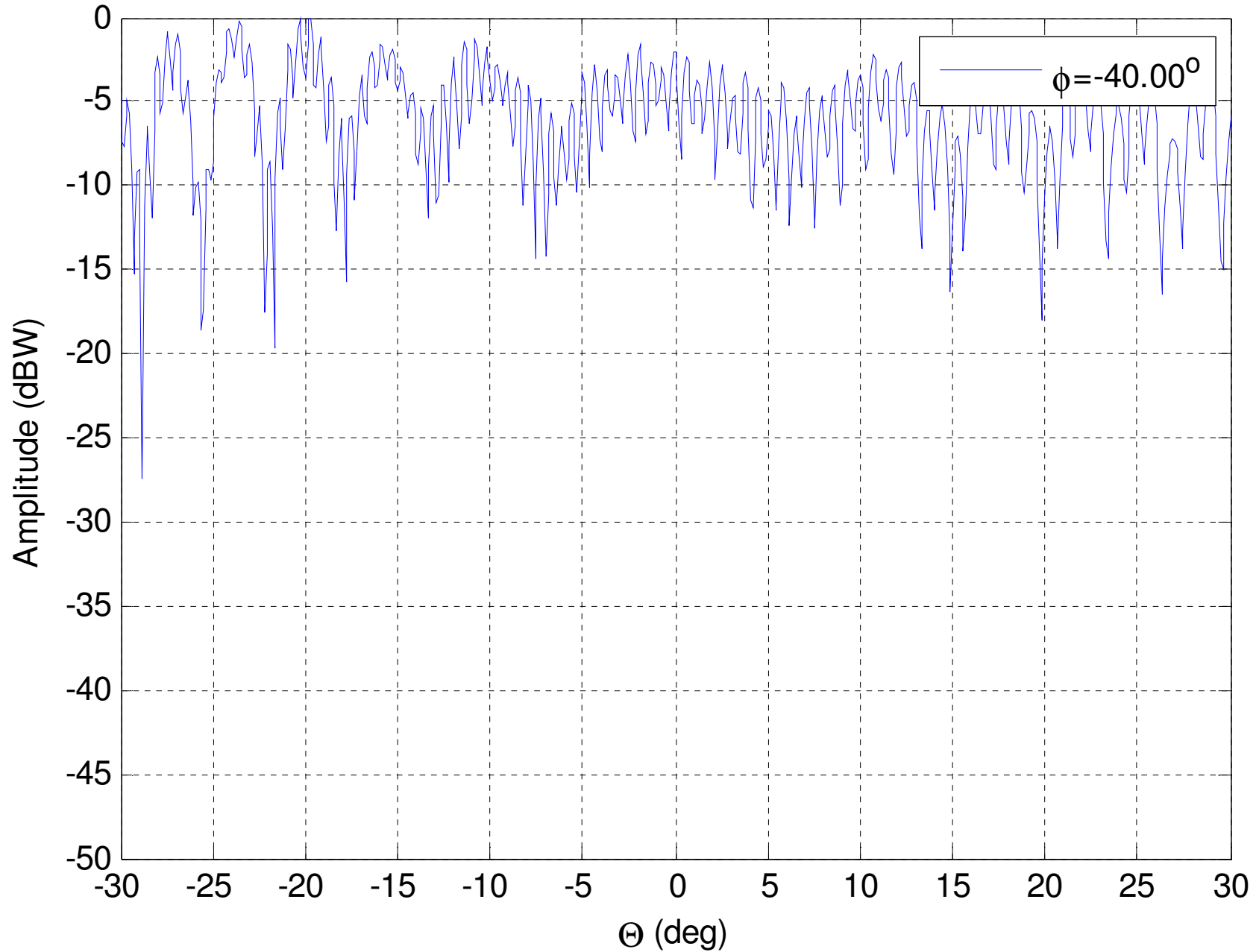
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -1.37 dBW, Date: 15-Dec-2011



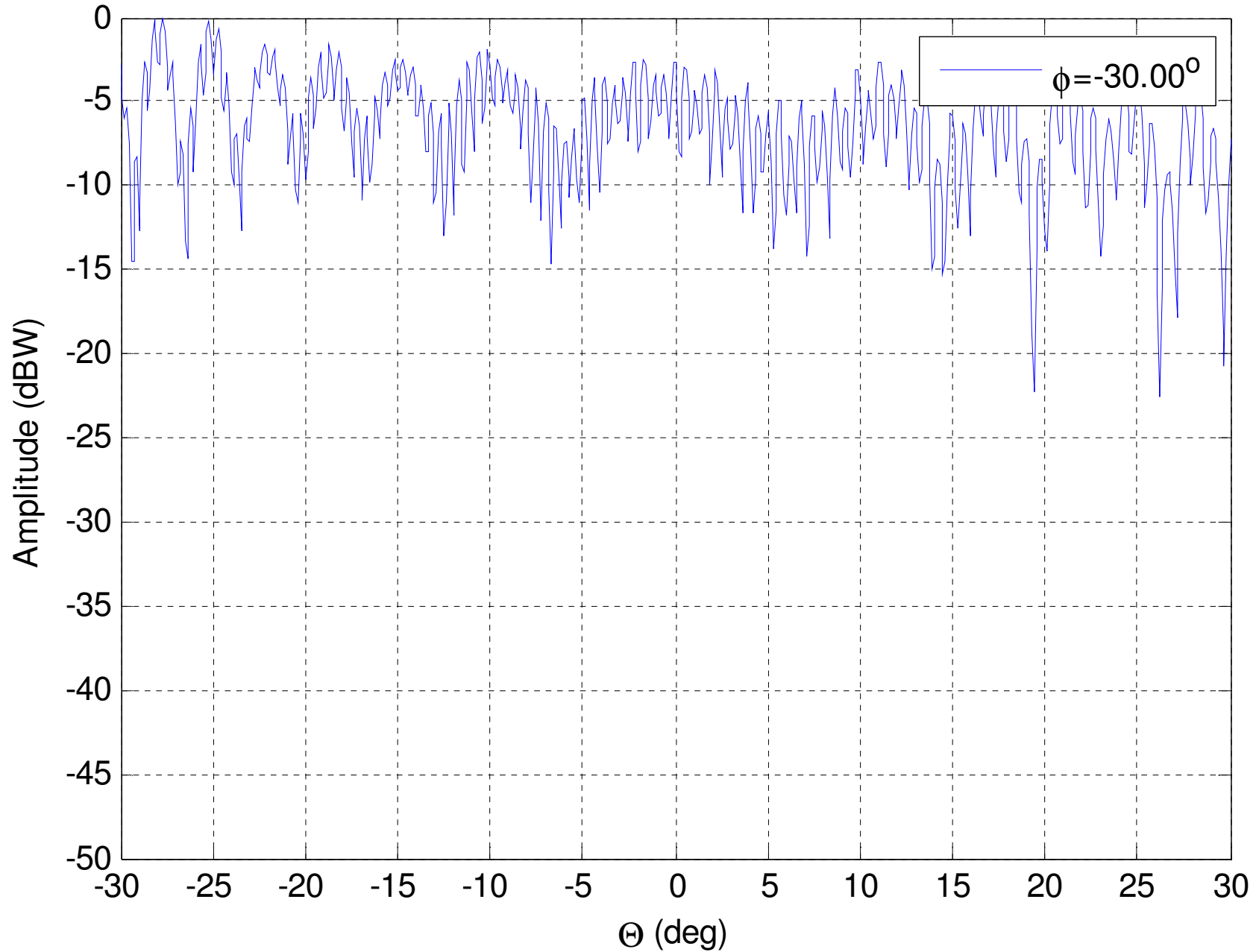
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -0.50 dBW, Date: 15-Dec-2011



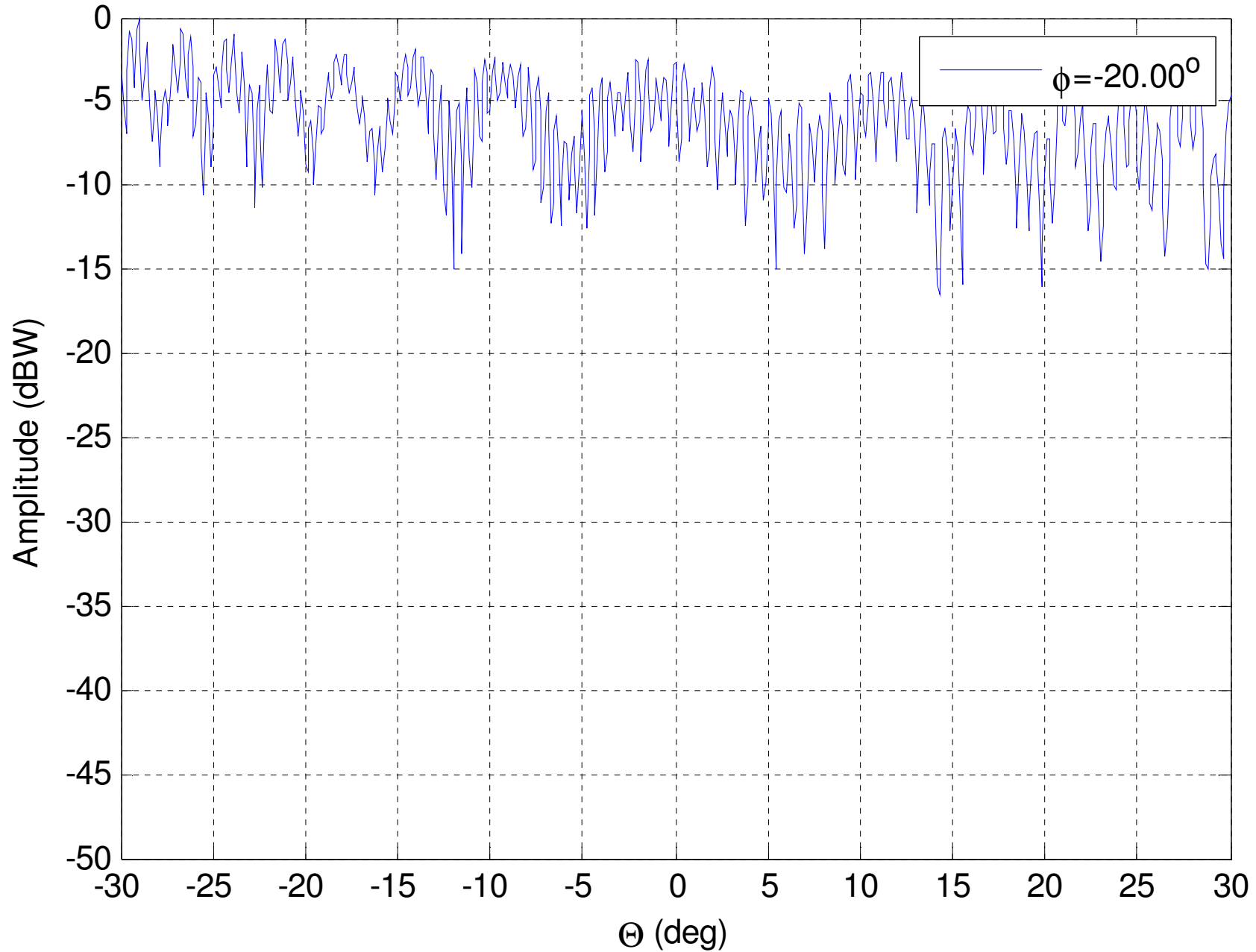
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: 0.14 dBW, Date: 15-Dec-2011



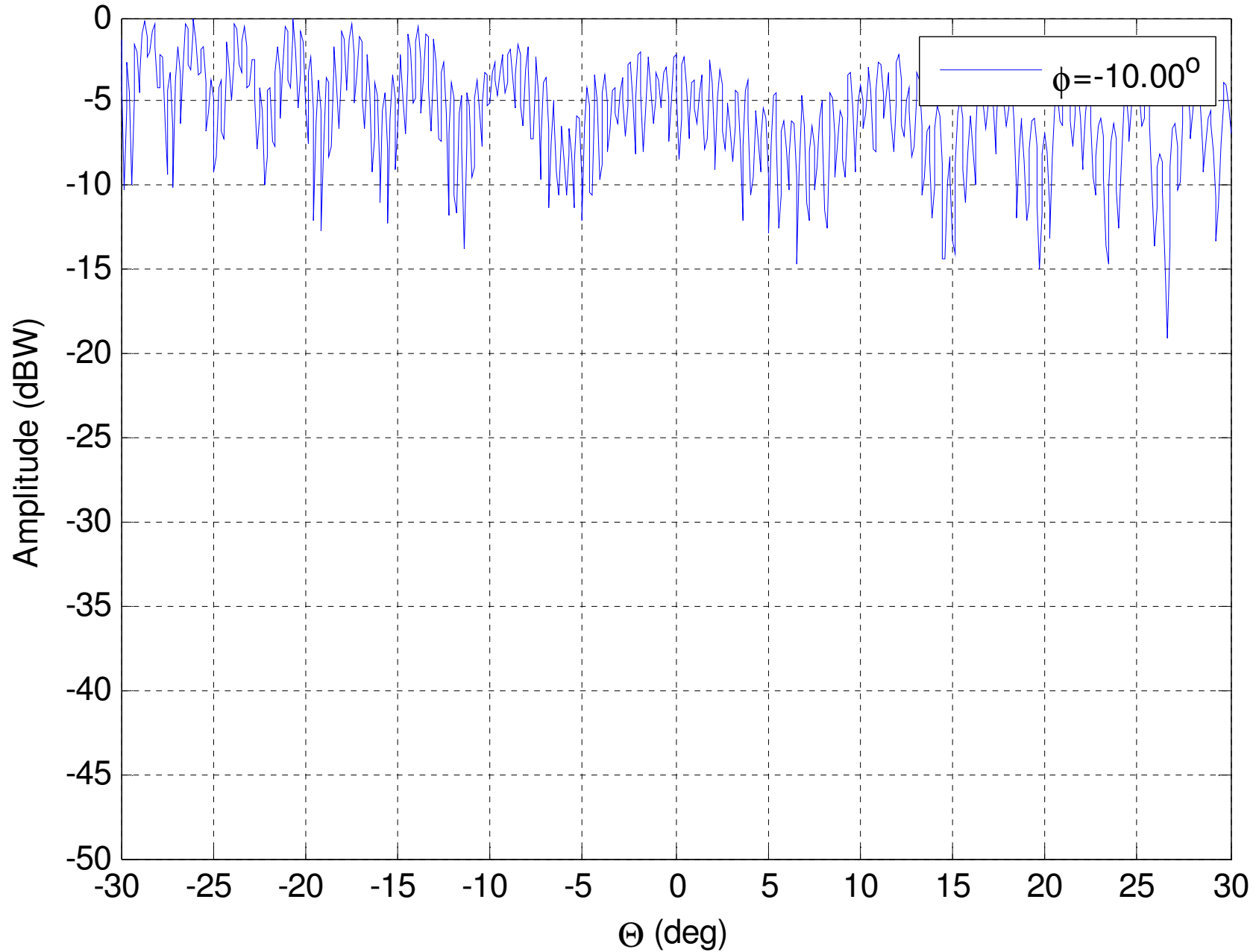
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 0.15 dBW, Date: 15-Dec-2011



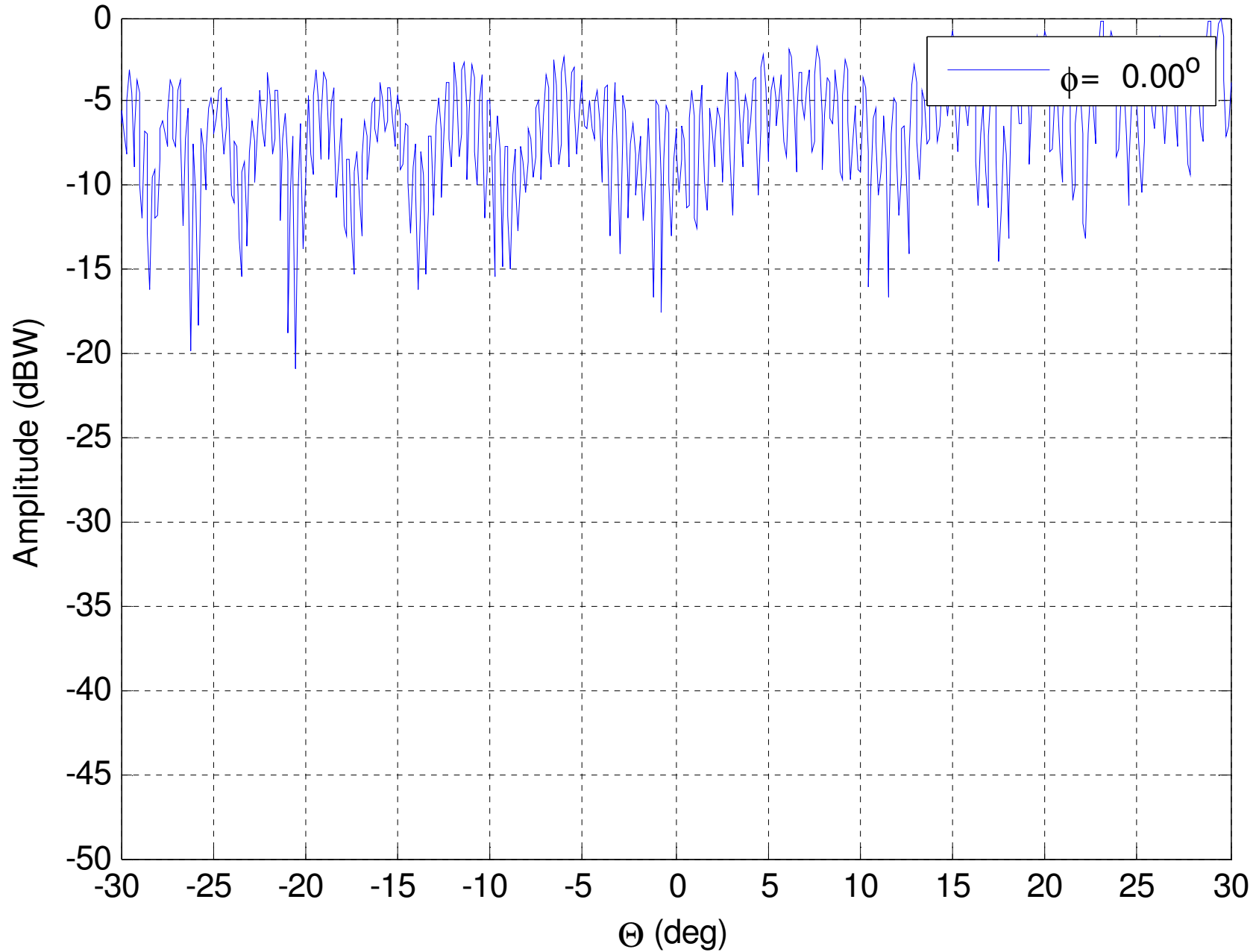
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -0.35 dBW, Date: 15-Dec-2011



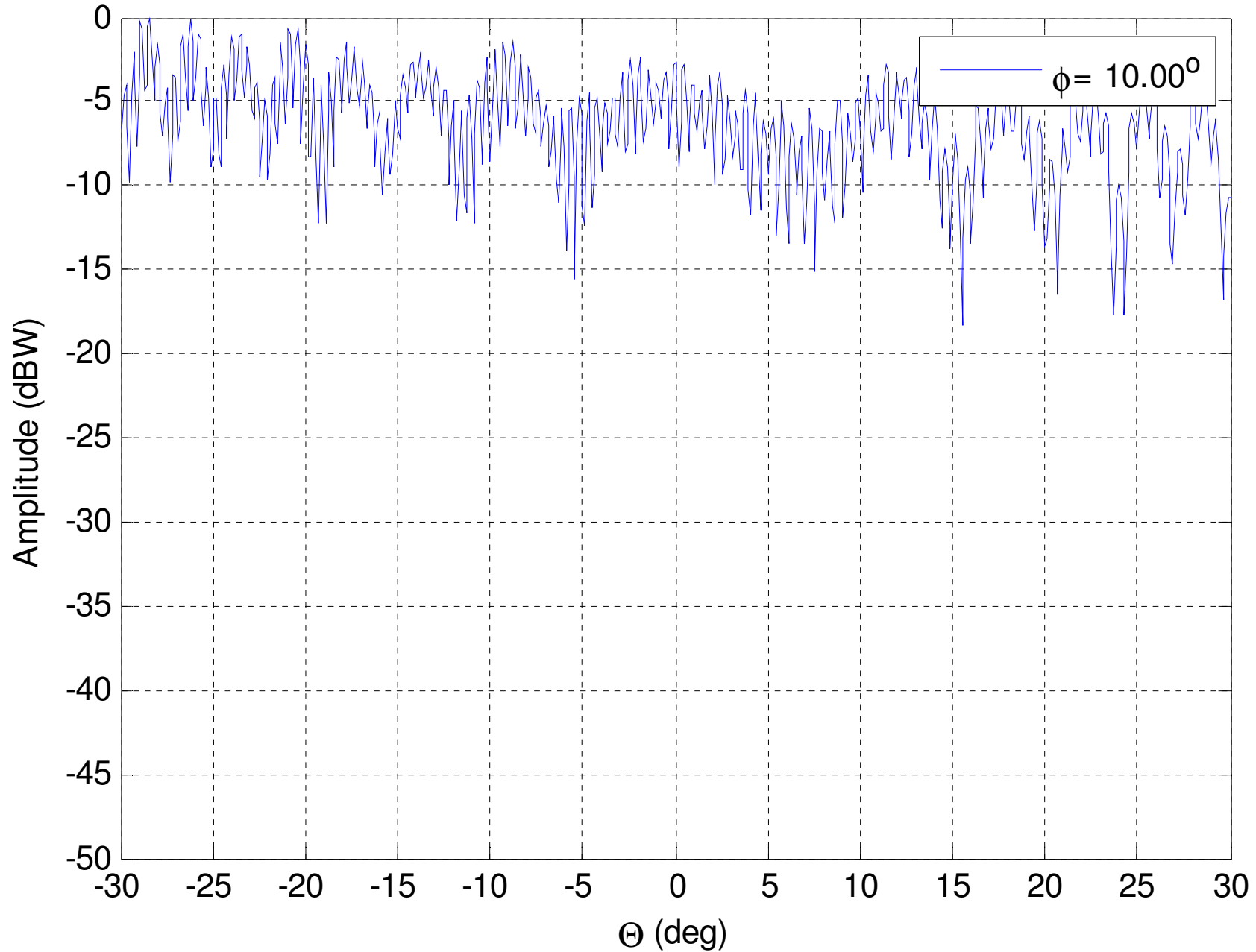
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 0.20 dBW, Date: 15-Dec-2011



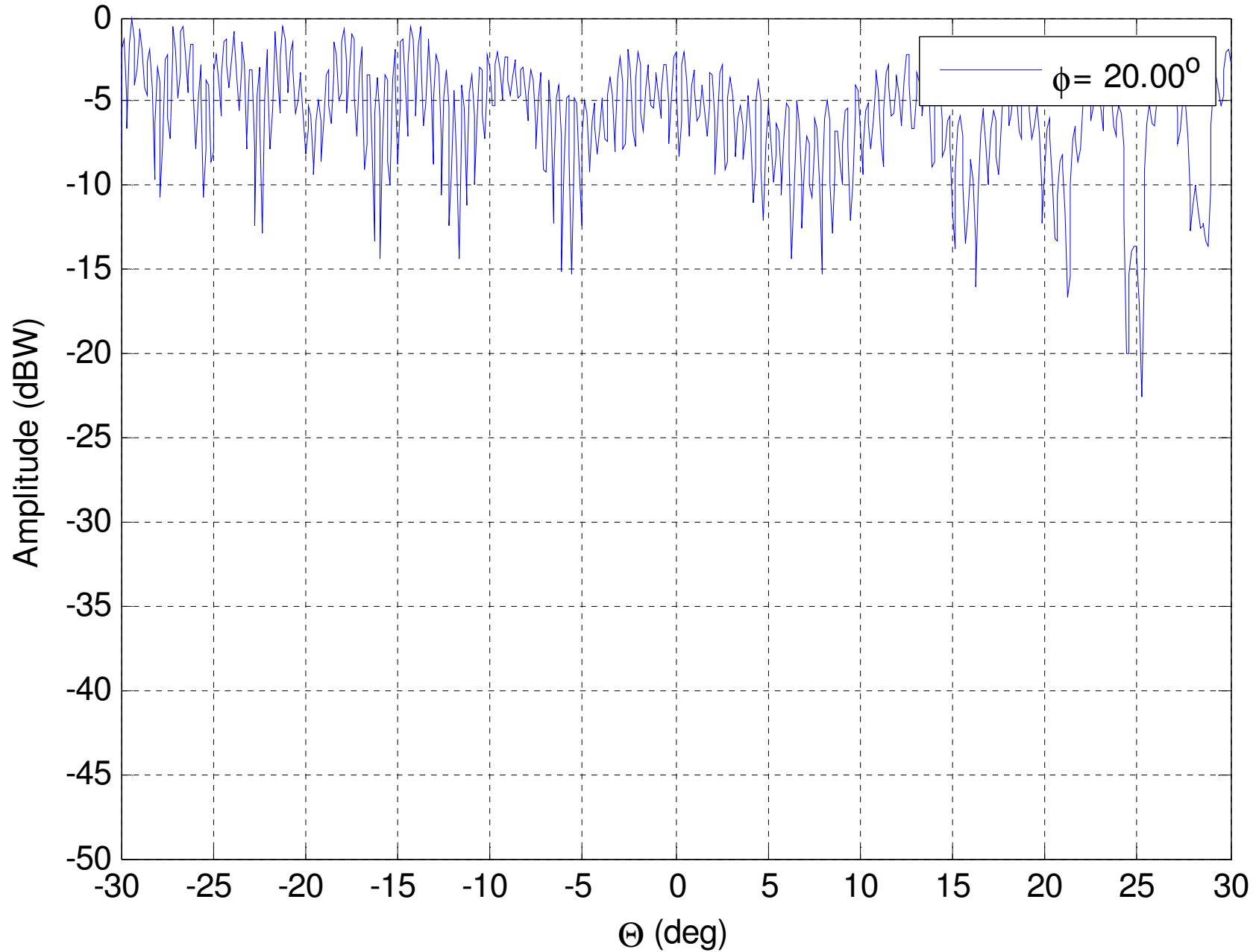
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 0.10 dBW, Date: 15-Dec-2011



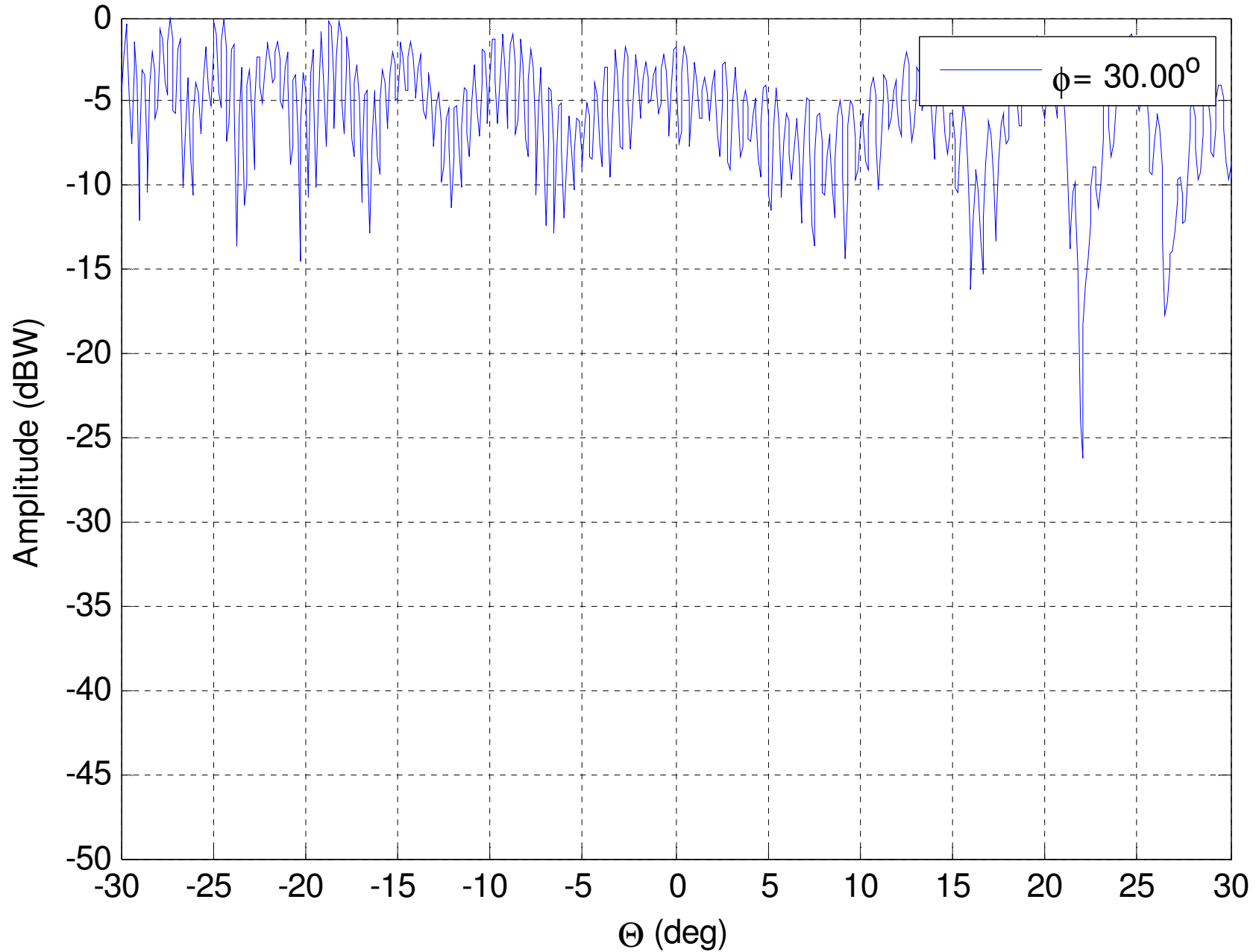
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -0.42 dBW, Date: 15-Dec-2011



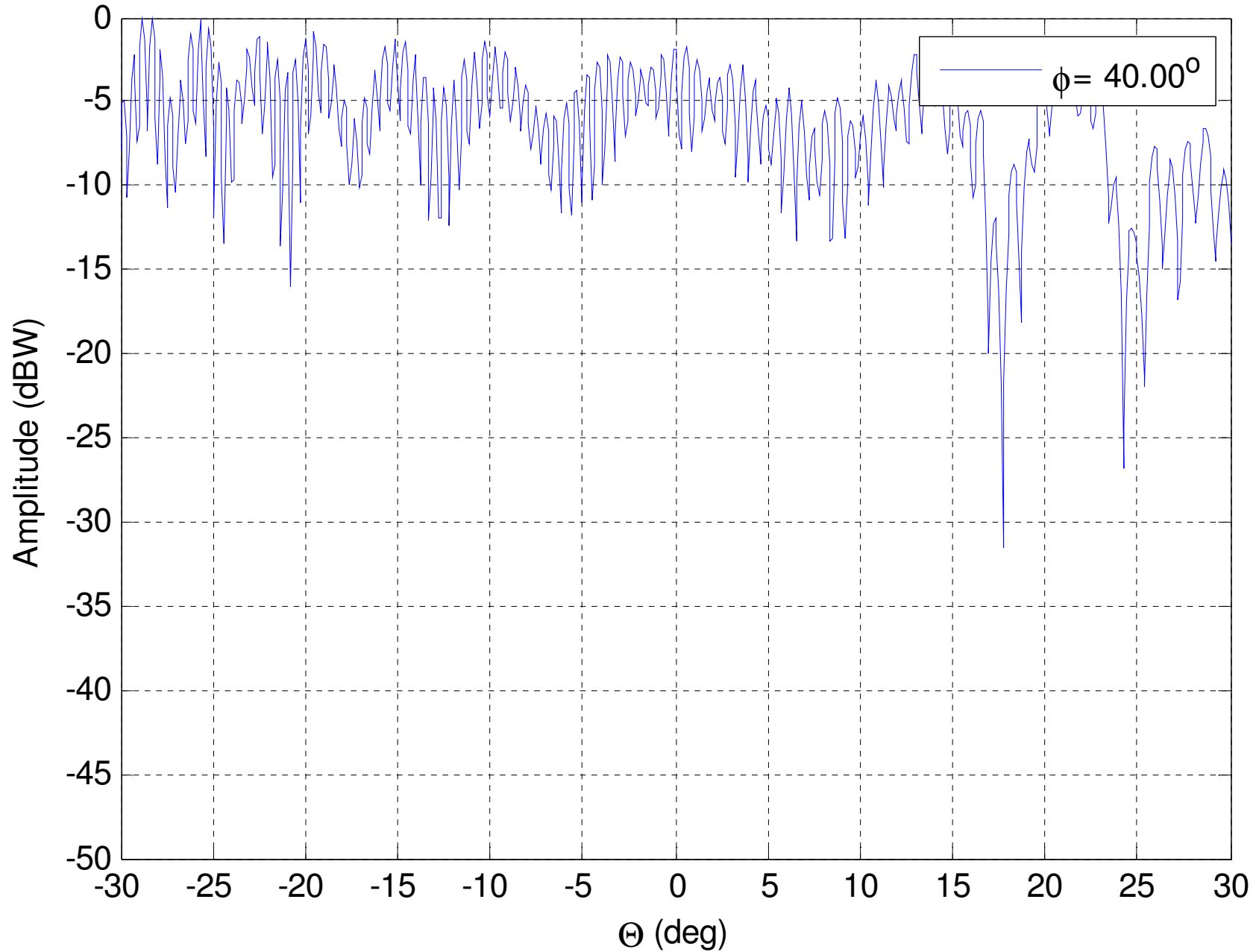
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -0.71 dBW, Date: 15-Dec-2011



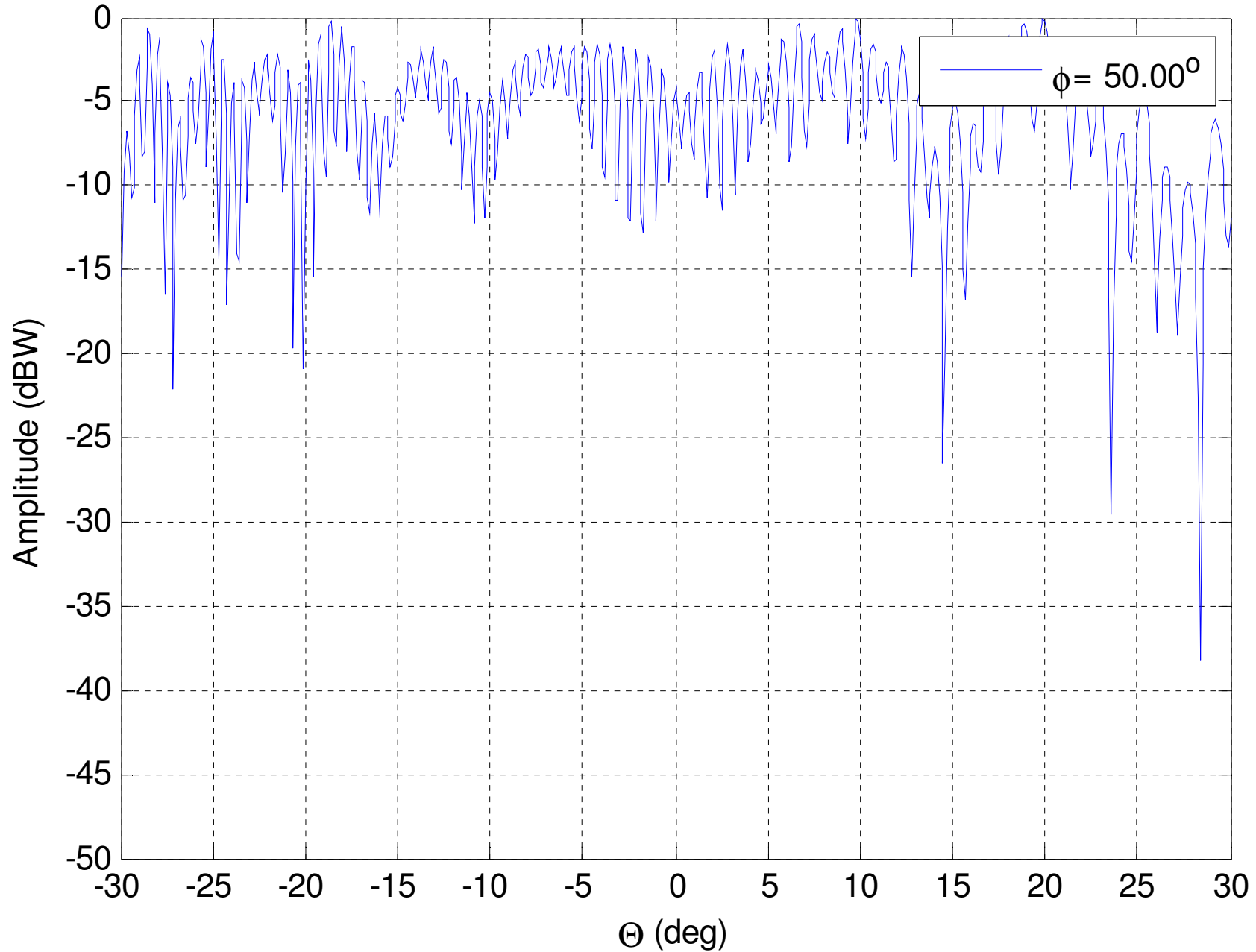
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -0.63 dBW, Date: 15-Dec-2011



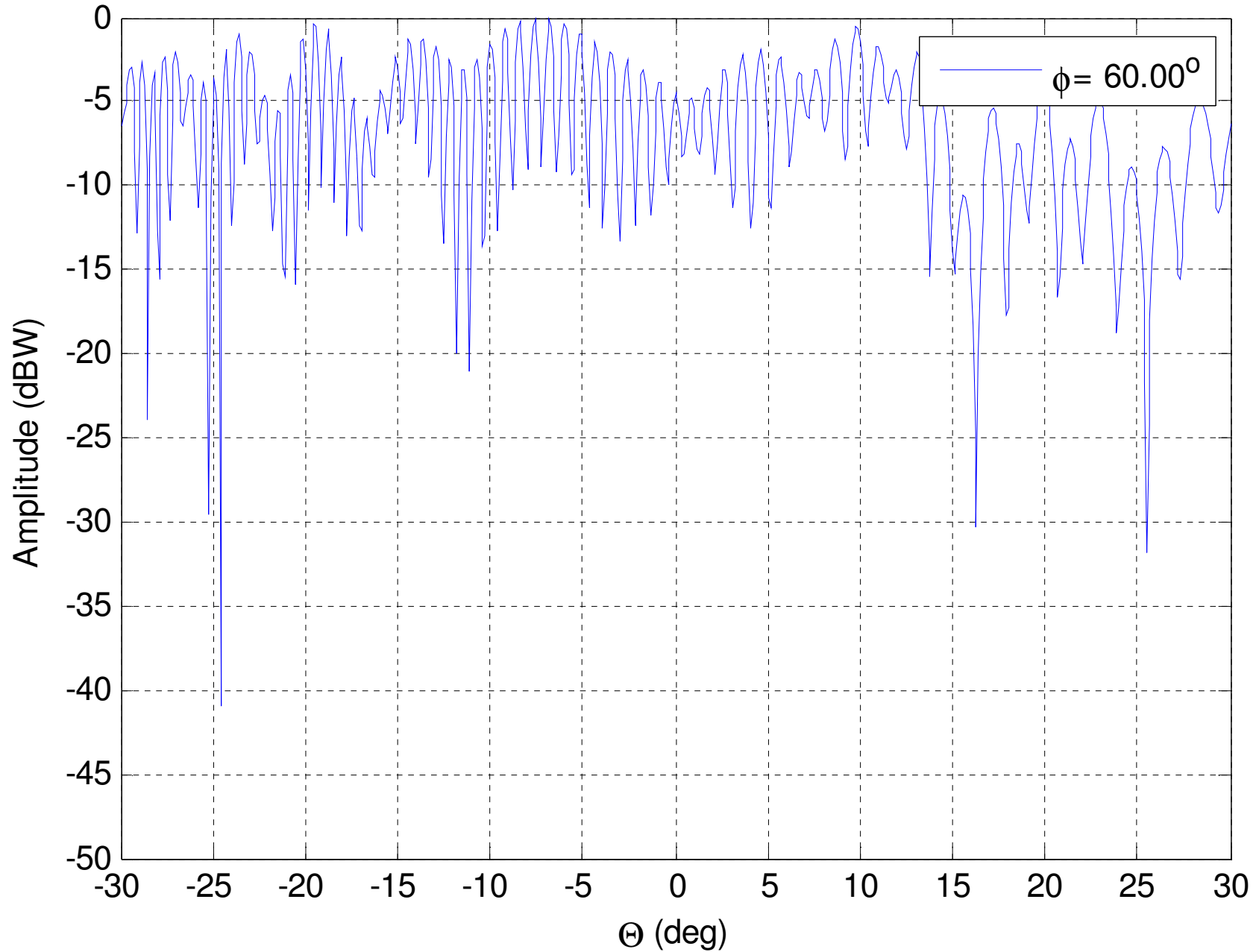
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -2.31 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

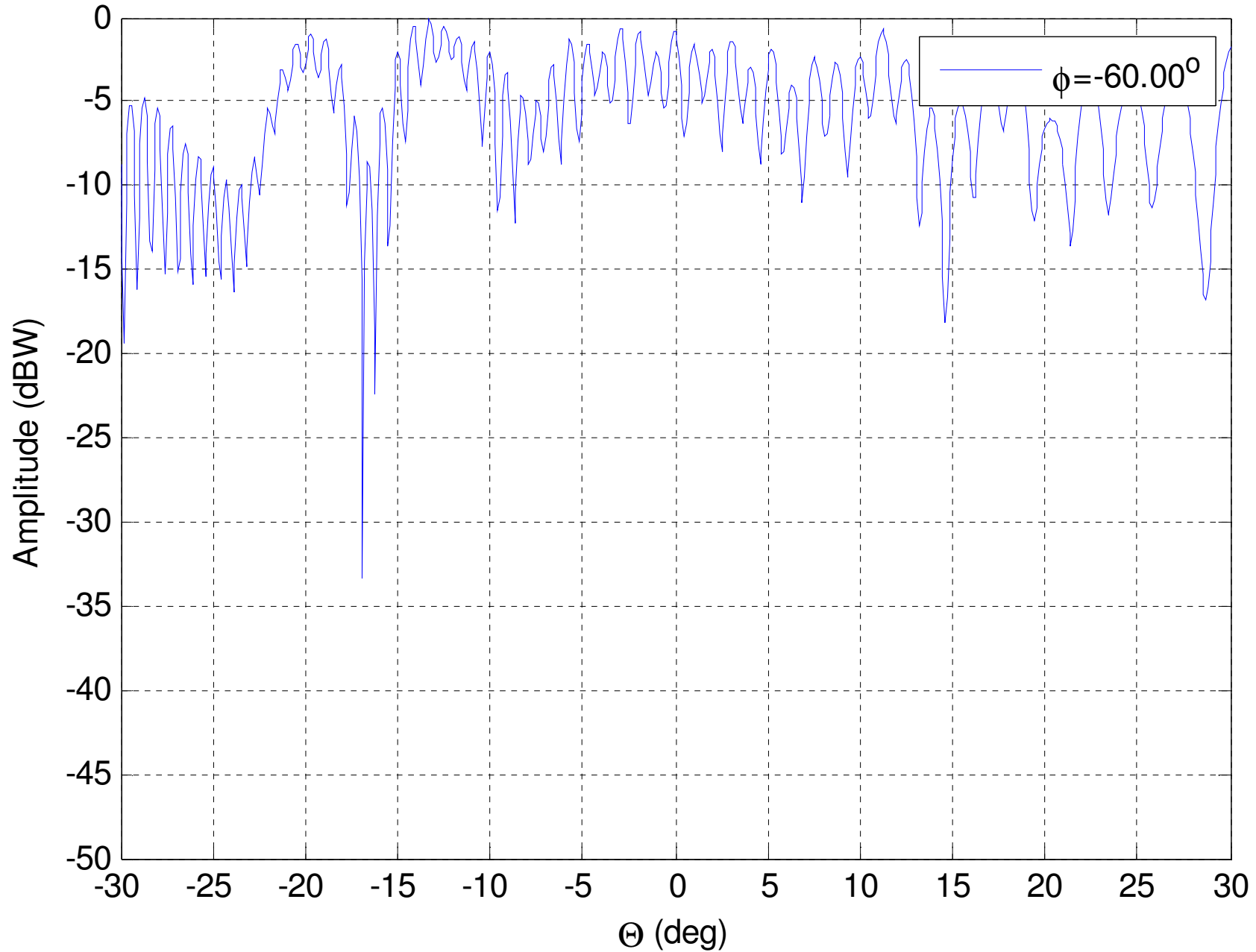
Input file: tx-17.3-rhcp-60.cut, Peak: -1.99 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

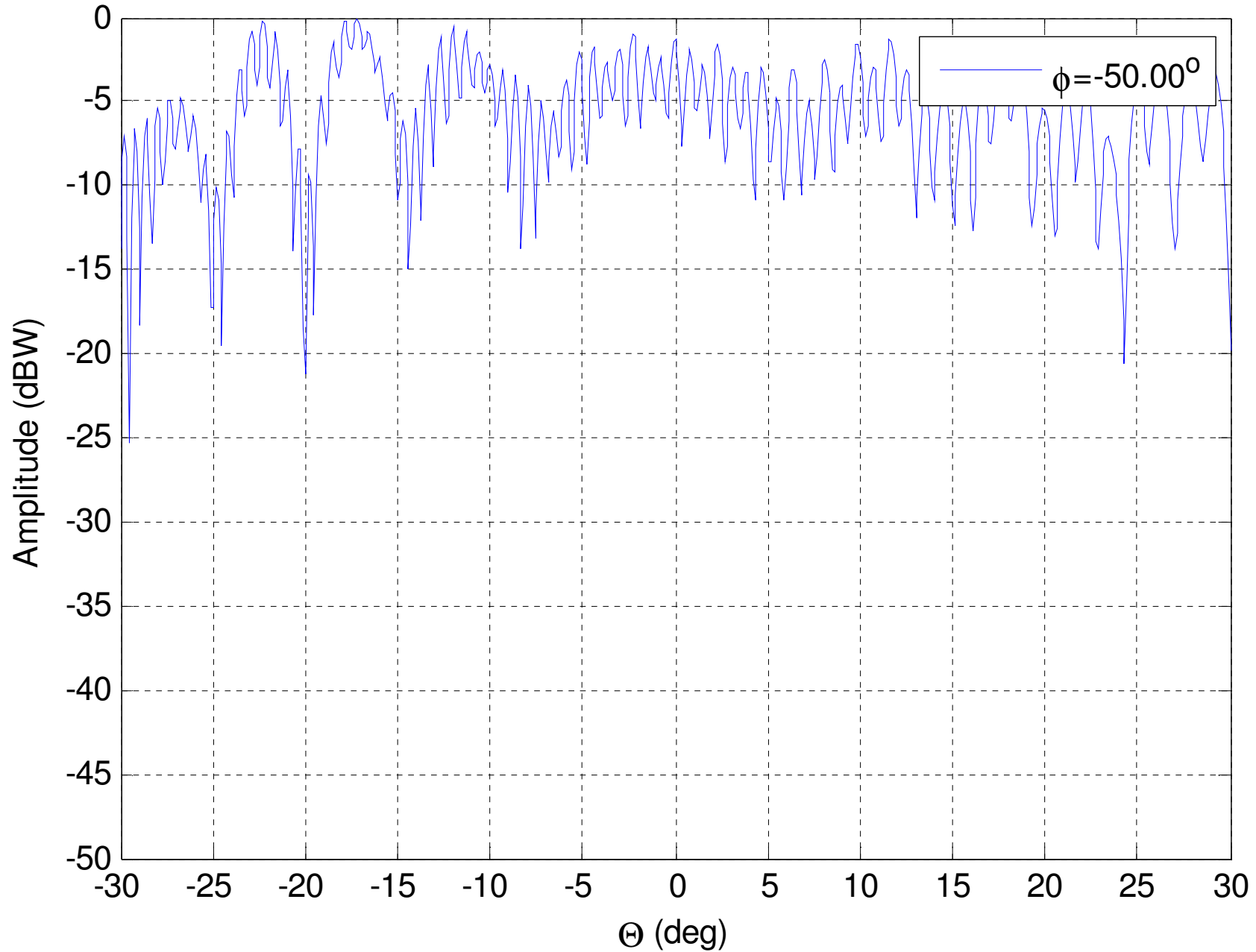
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -1.69 dBW, Date: 15-Dec-2011



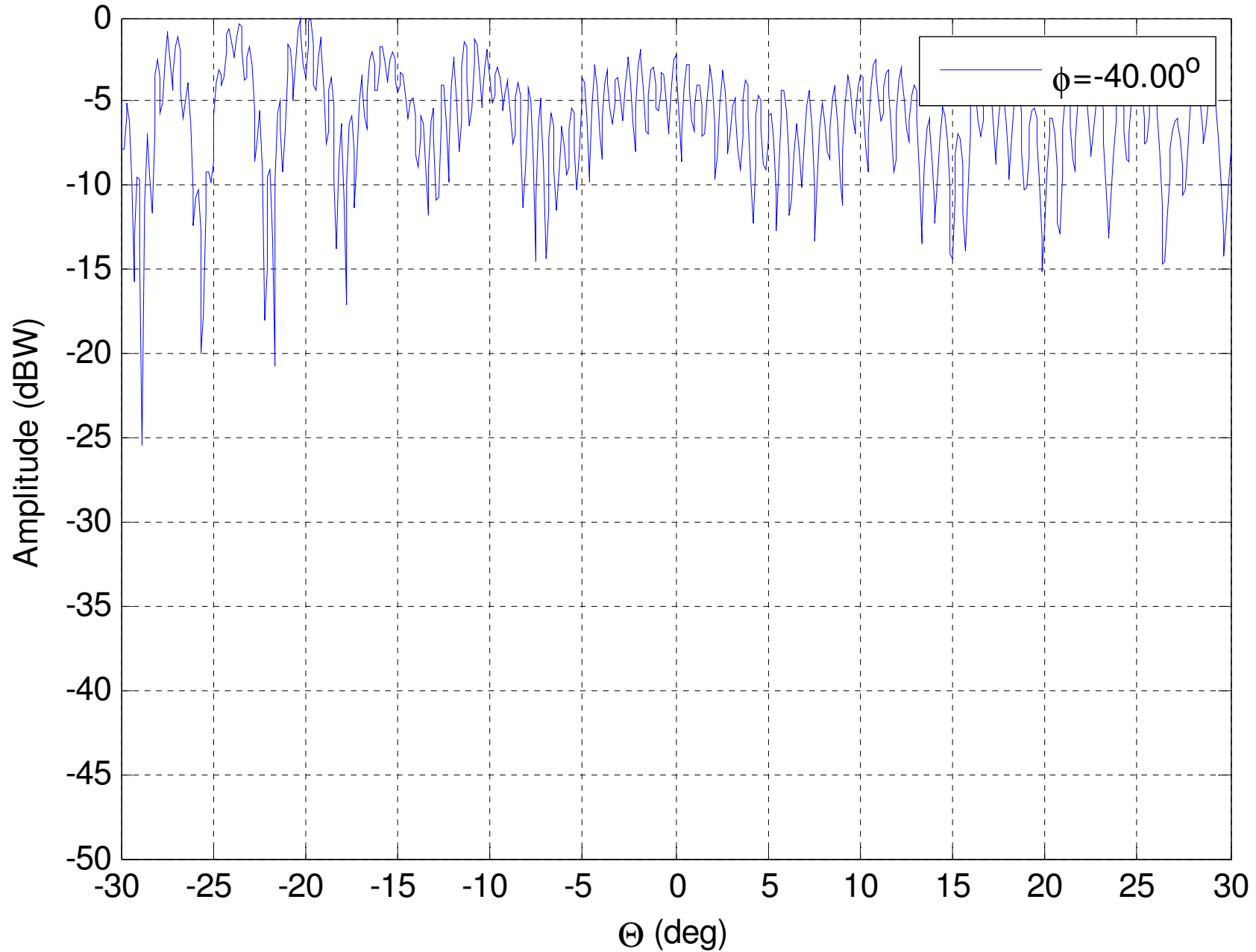
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -1.19 dBW, Date: 15-Dec-2011



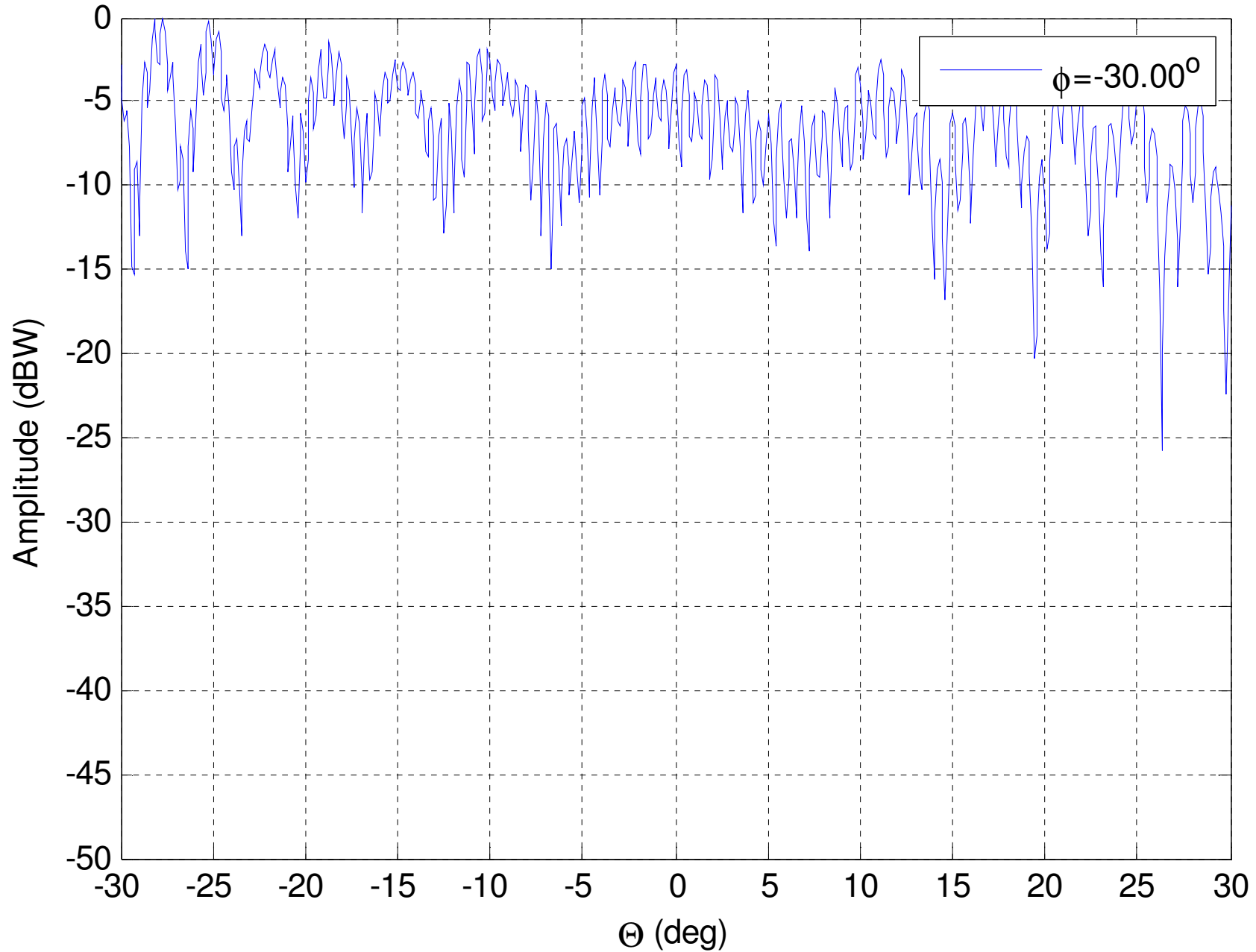
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -0.30 dBW, Date: 15-Dec-2011



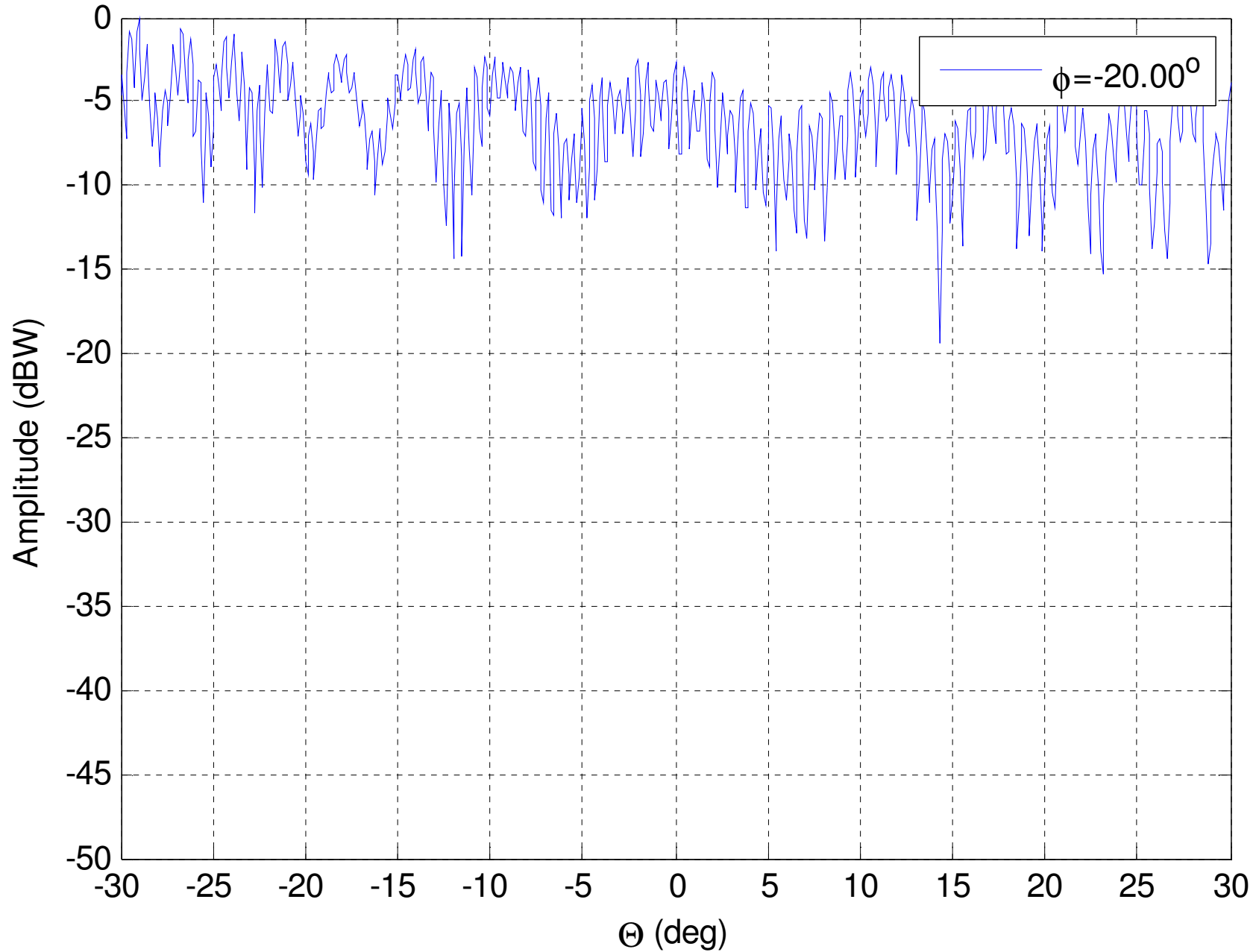
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: 0.24 dBW, Date: 15-Dec-2011



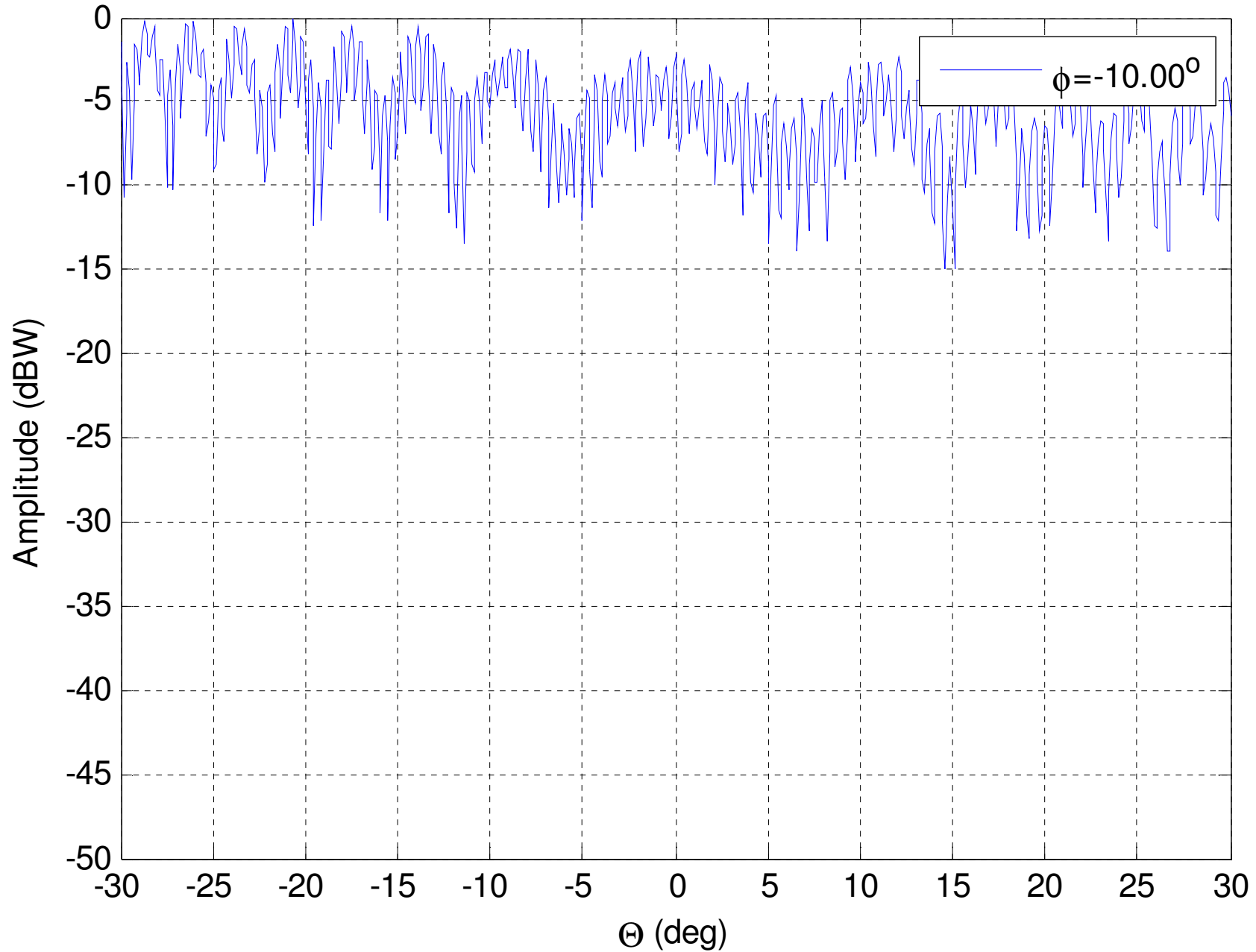
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 0.22 dBW, Date: 15-Dec-2011



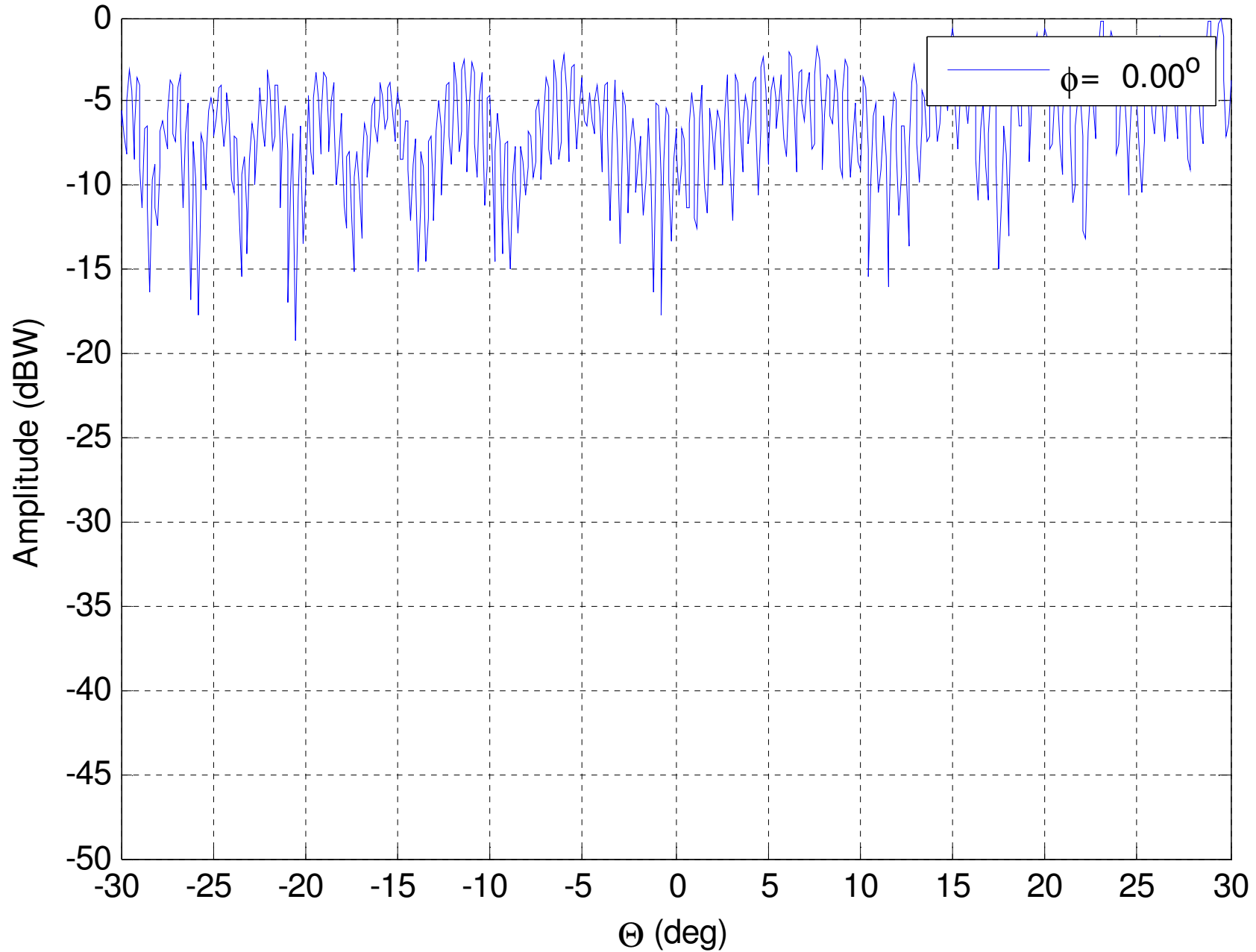
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -0.28 dBW, Date: 15-Dec-2011



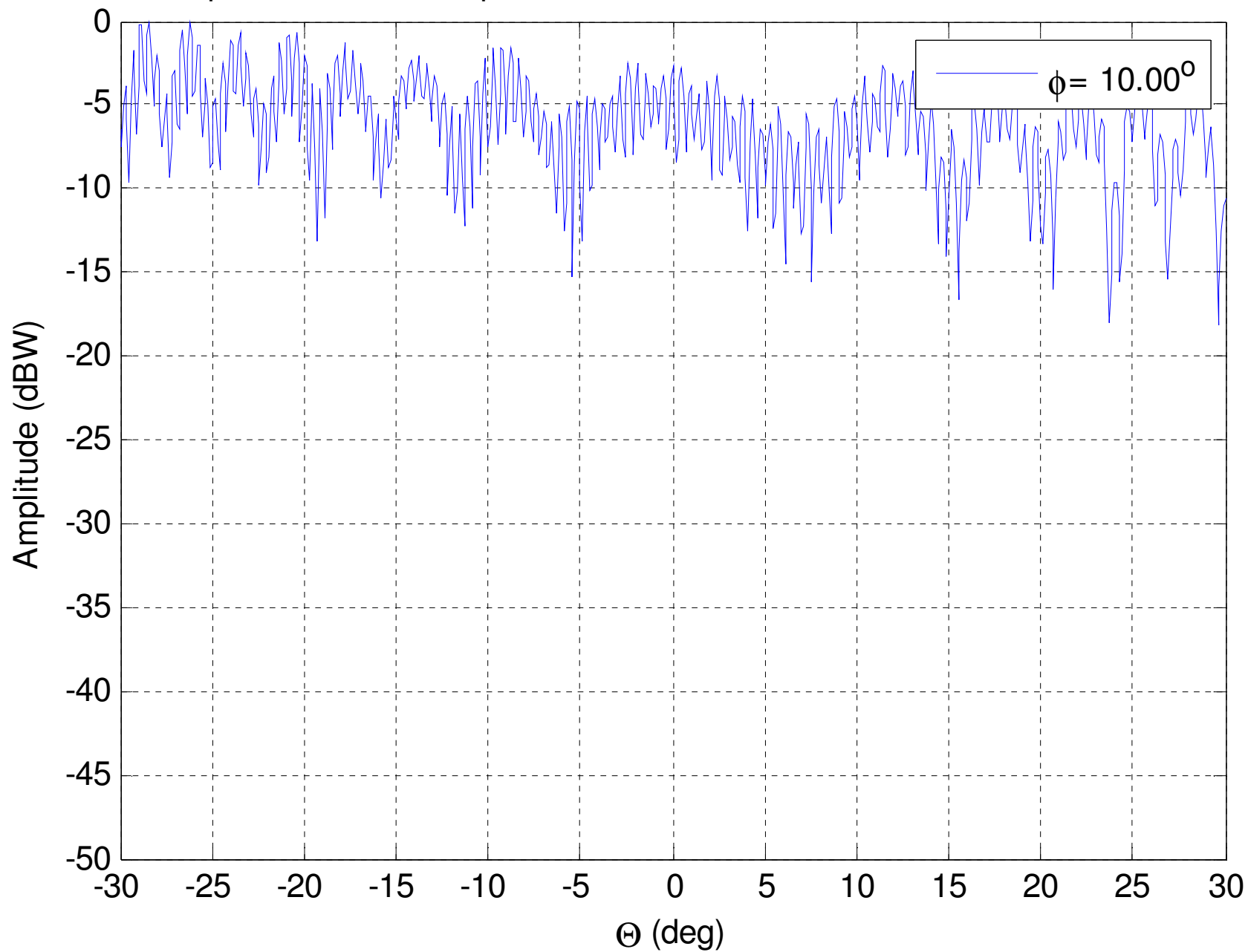
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 0.14 dBW, Date: 15-Dec-2011



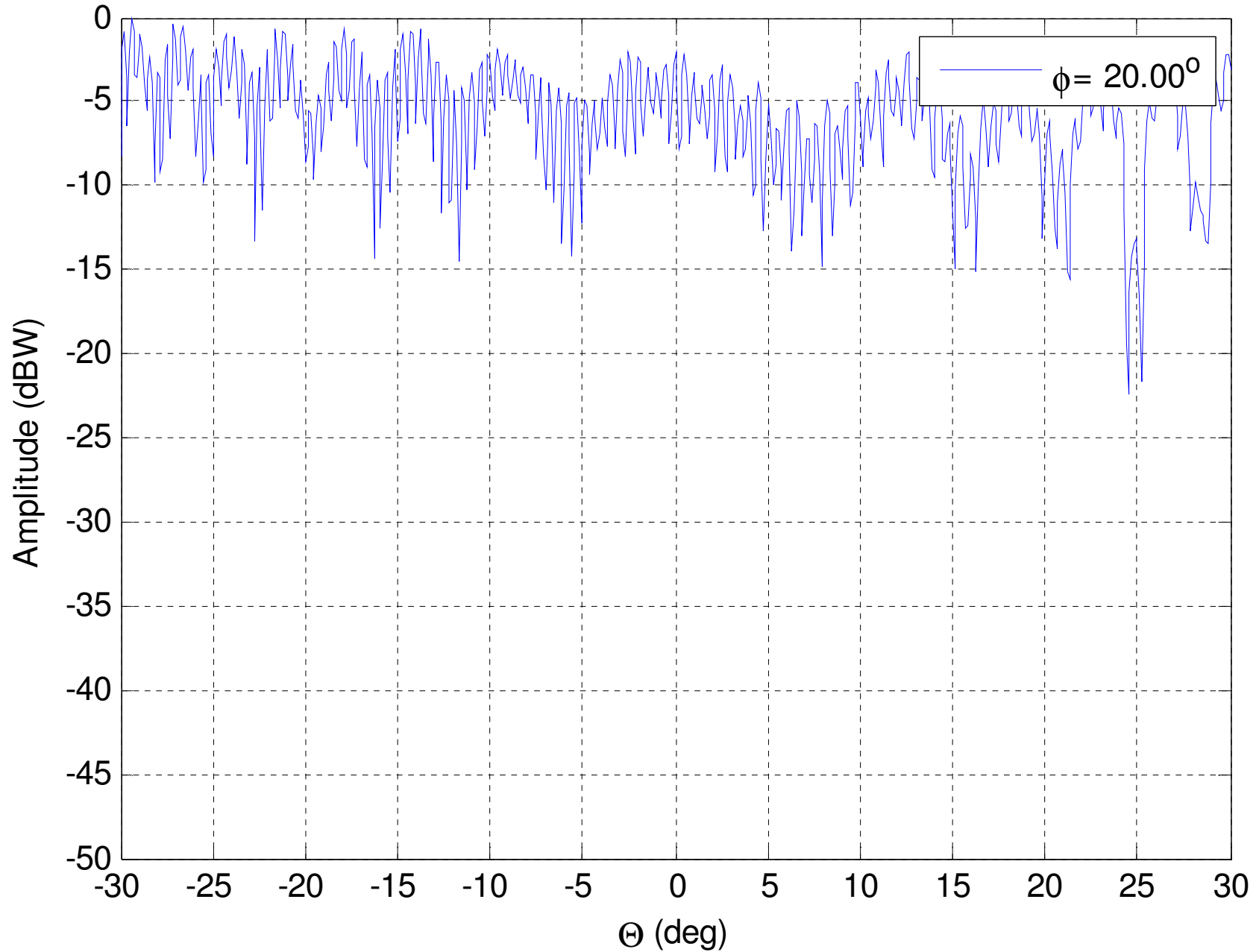
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 0.10 dBW, Date: 15-Dec-2011



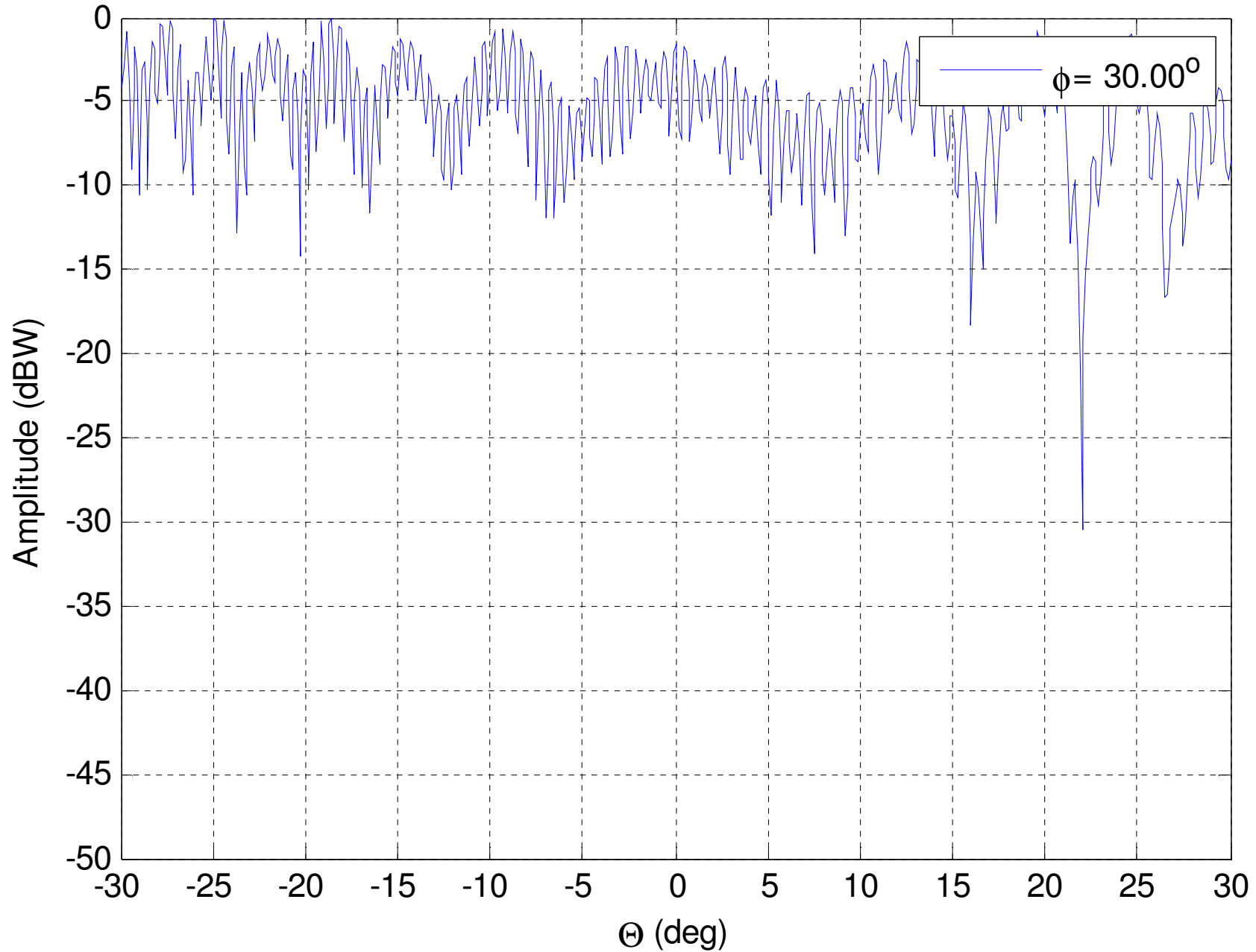
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -0.37 dBW, Date: 15-Dec-2011



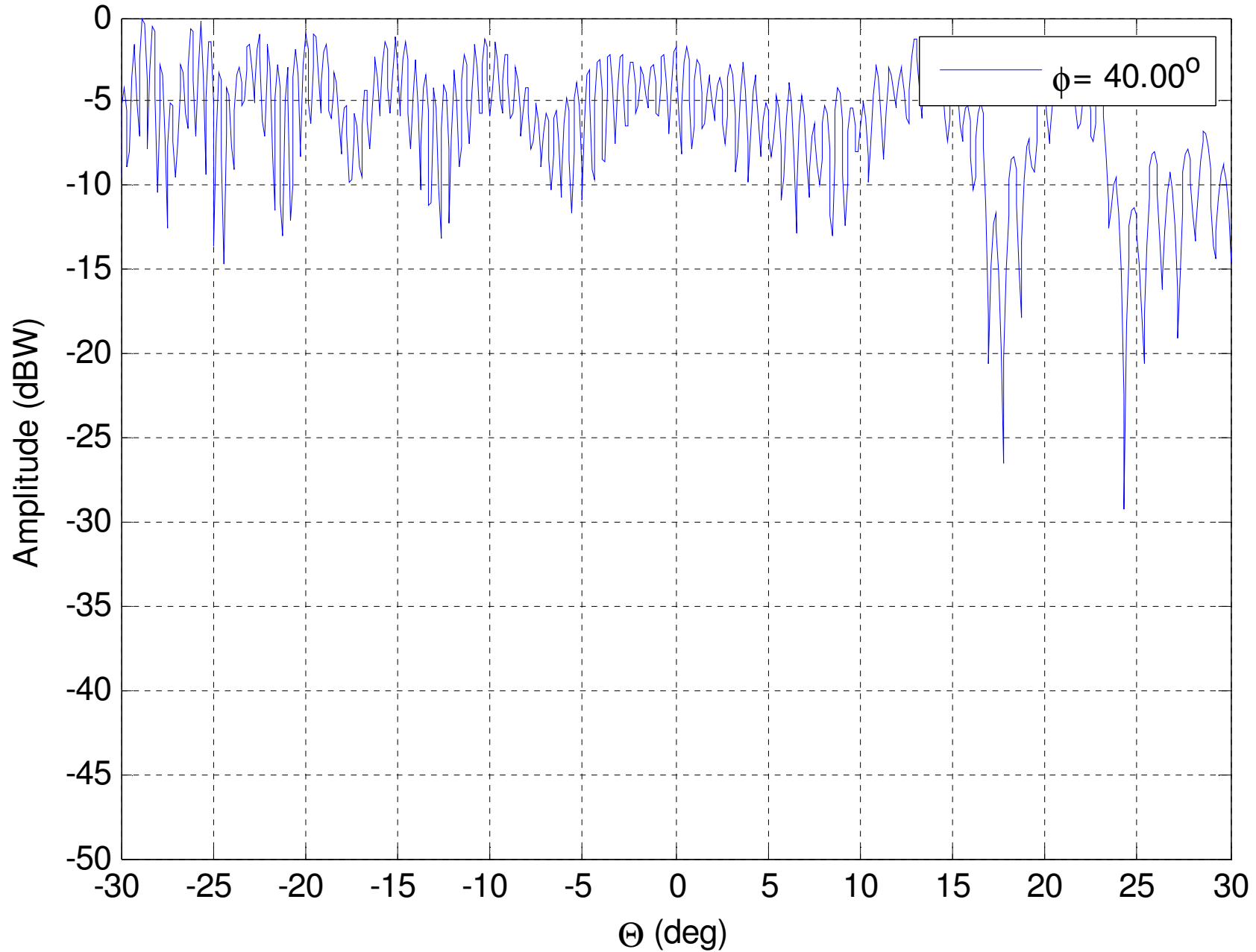
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -0.96 dBW, Date: 15-Dec-2011



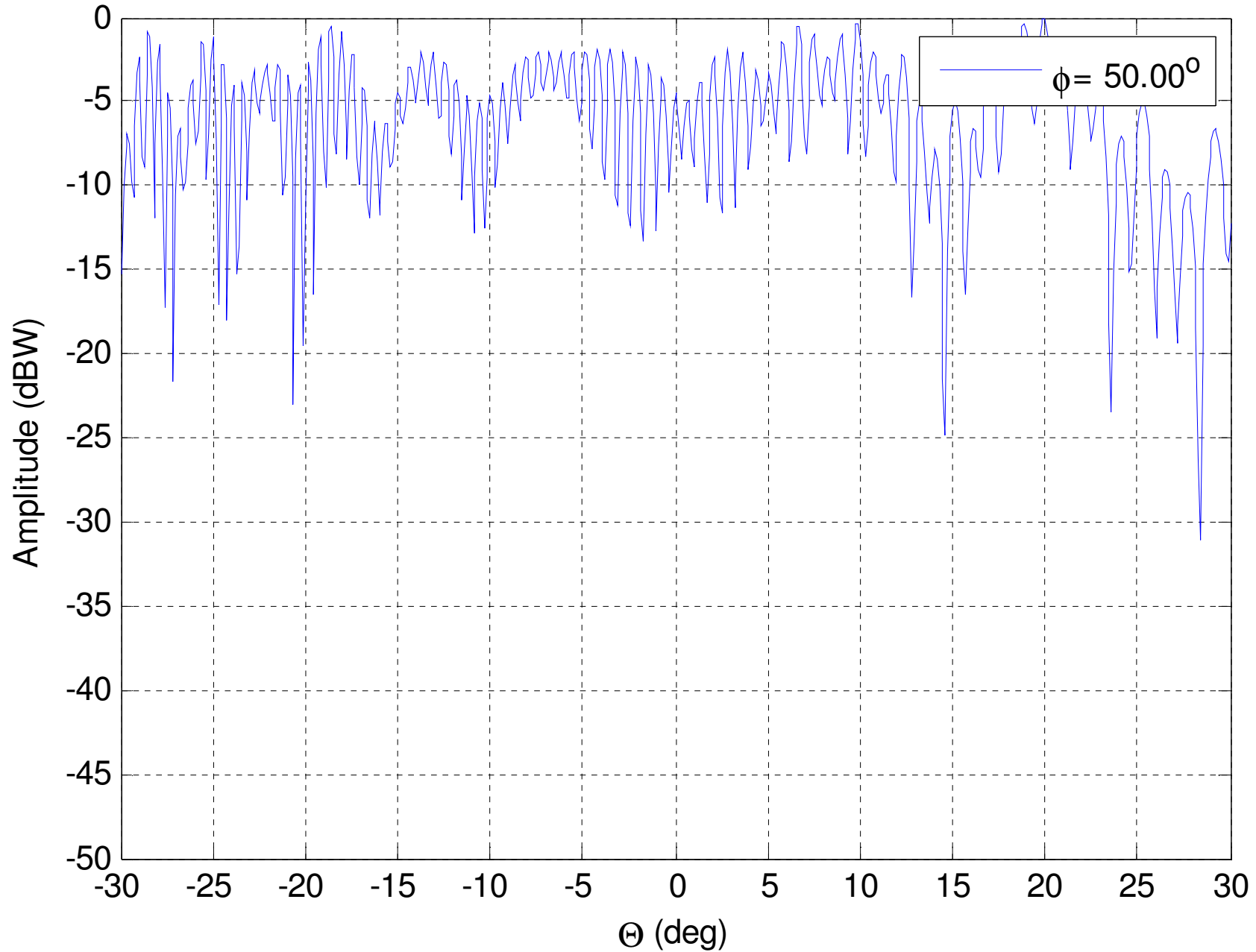
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -0.77 dBW, Date: 15-Dec-2011



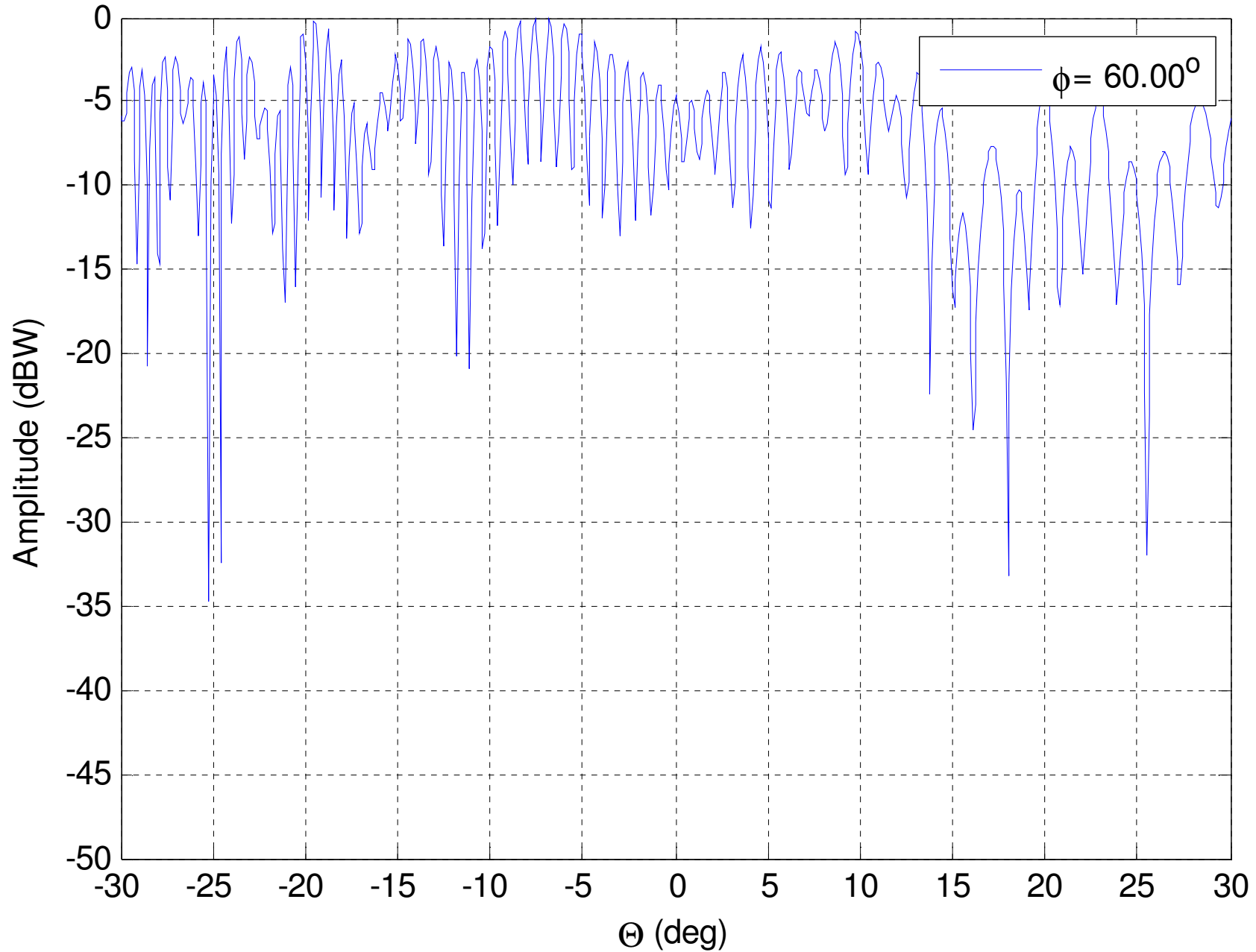
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -1.99 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

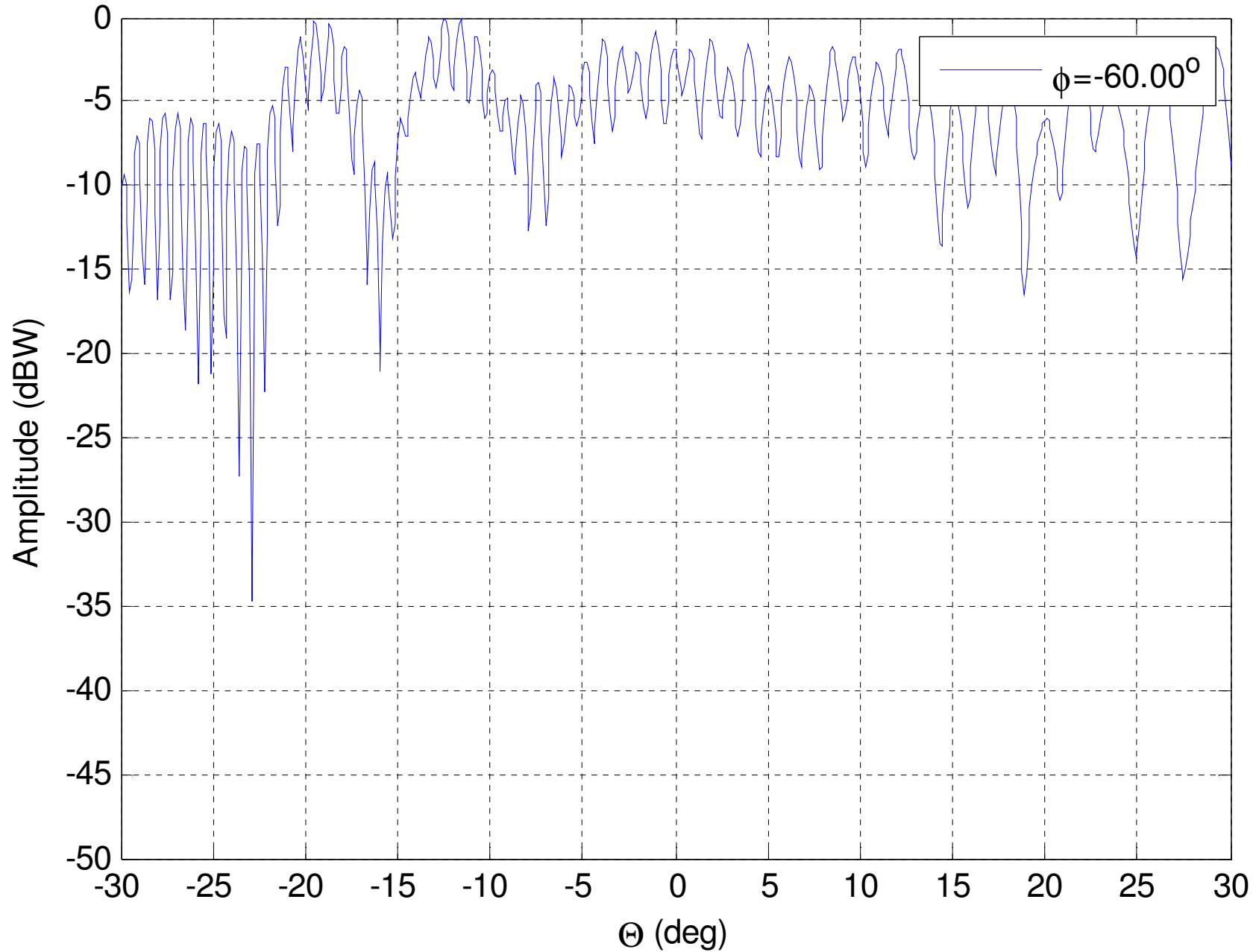
Input file: tx-17.3-lhcp-60.cut, Peak: -1.94 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

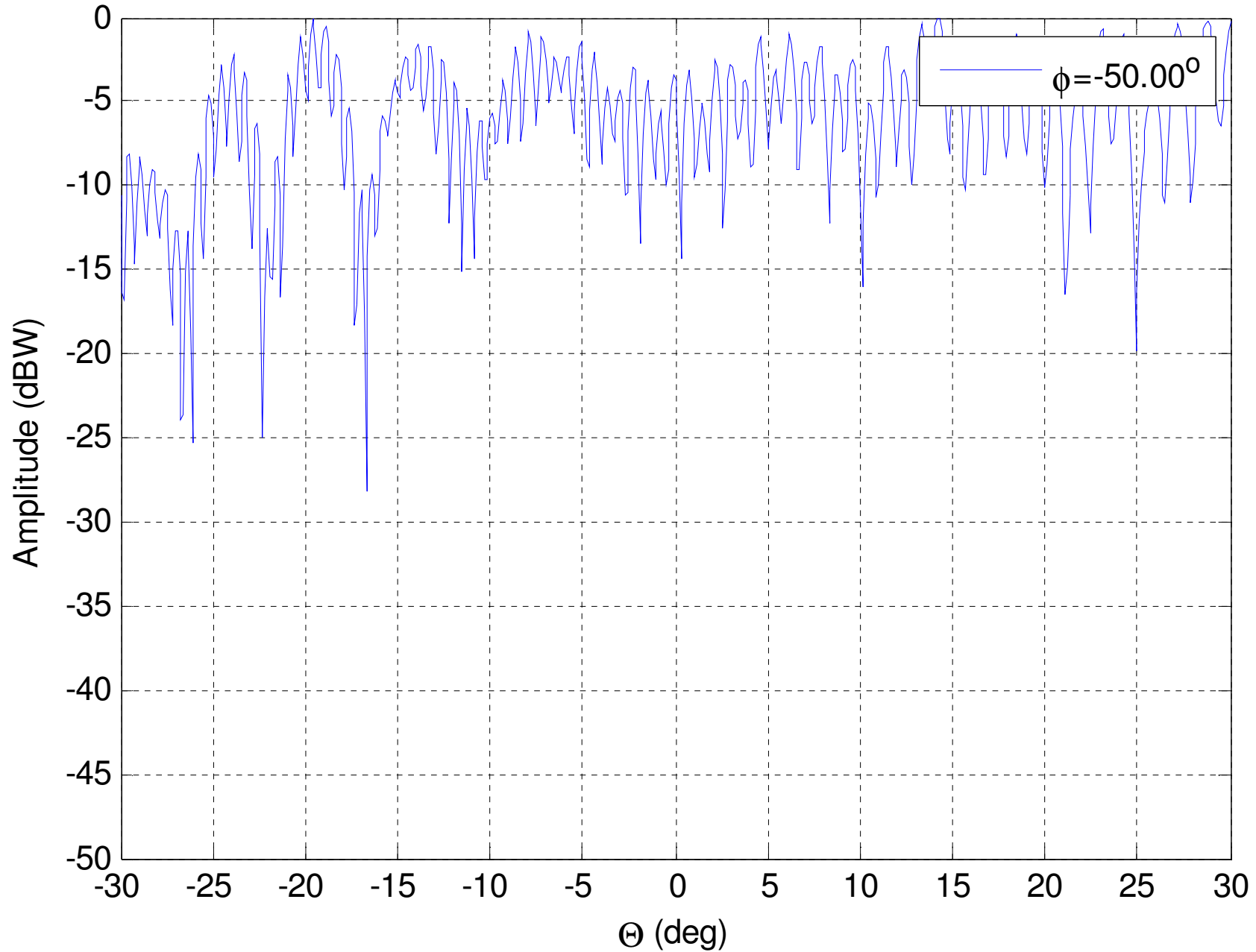
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -1.52 dBW, Date: 15-Dec-2011



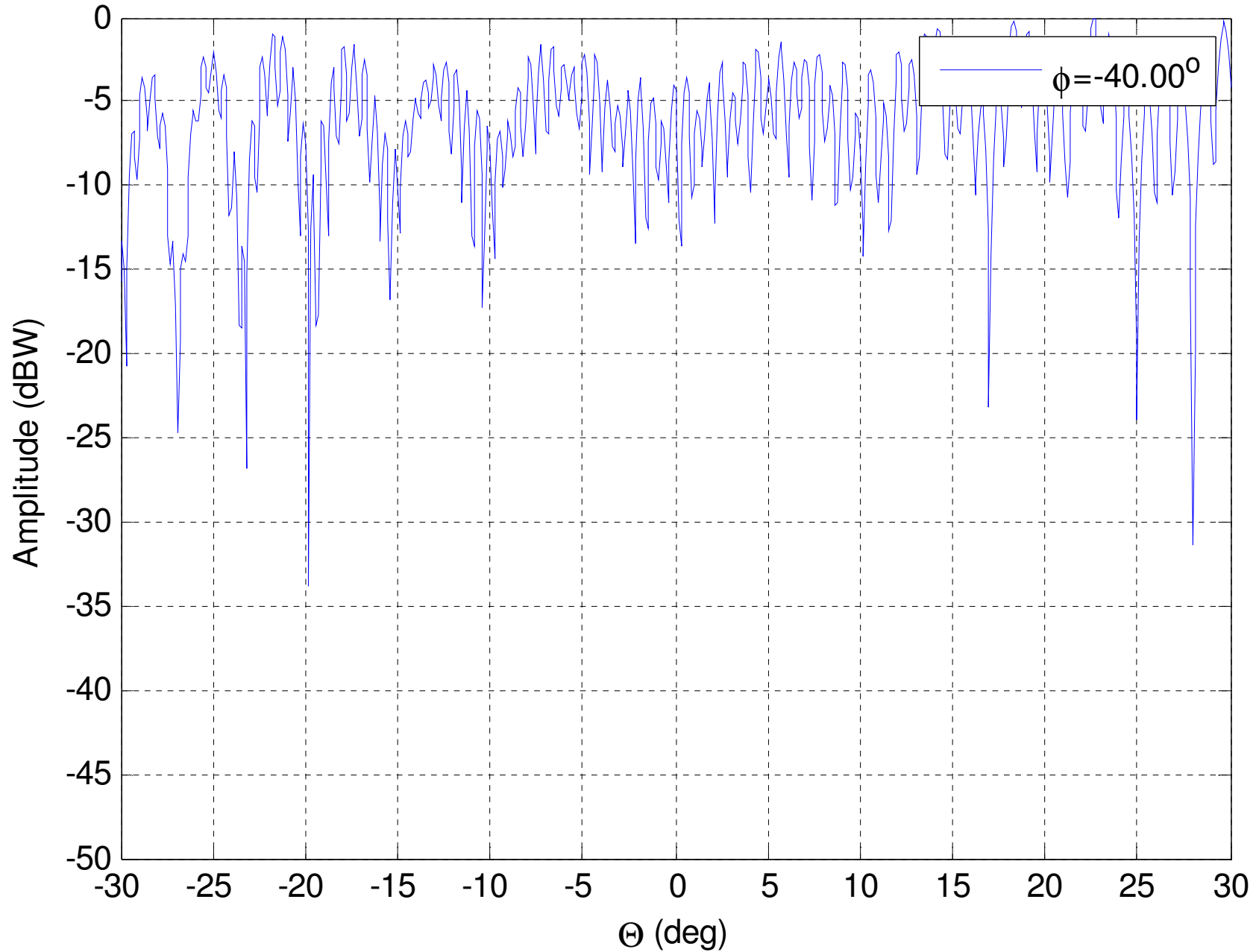
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -1.59 dBW, Date: 15-Dec-2011



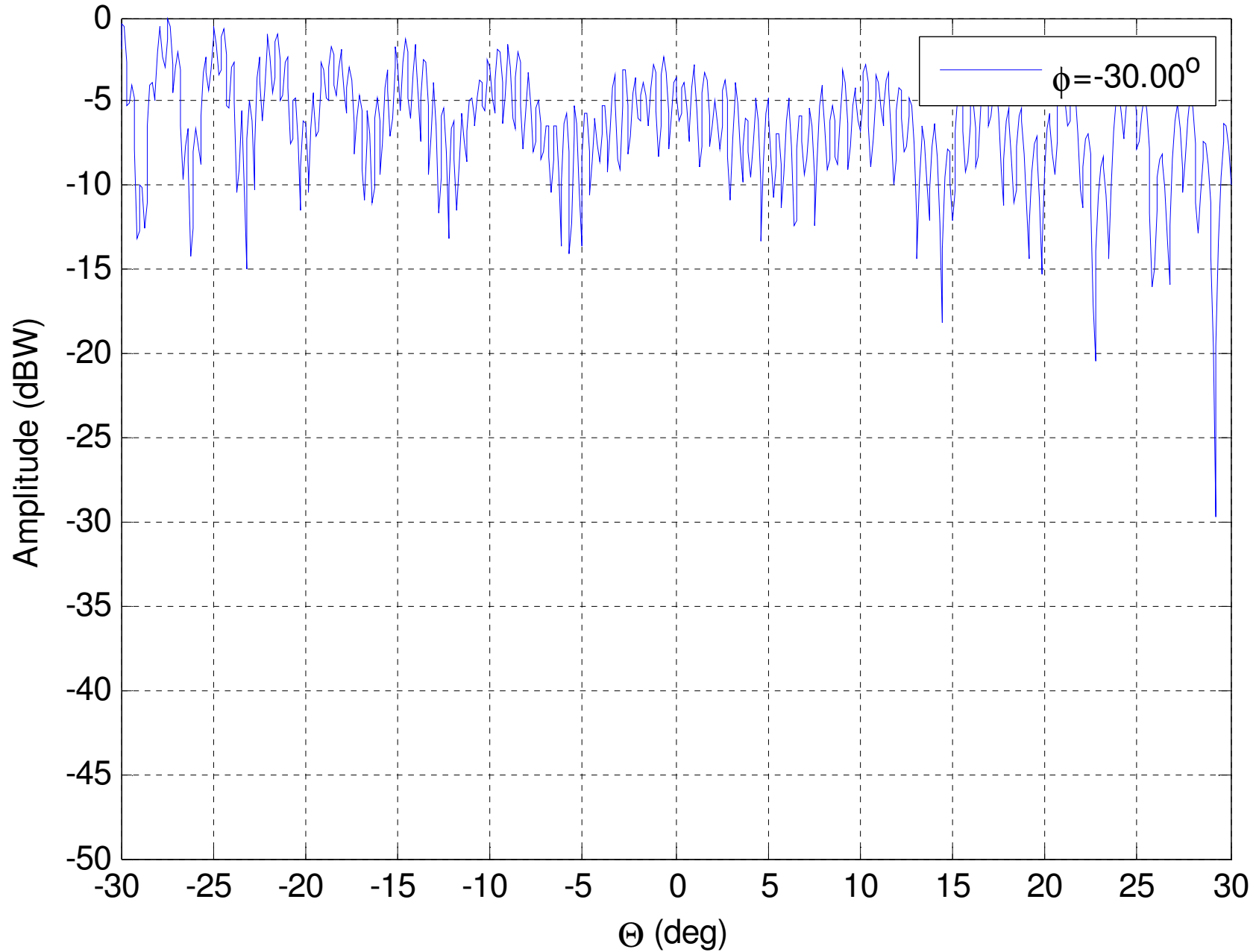
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -0.93 dBW, Date: 15-Dec-2011



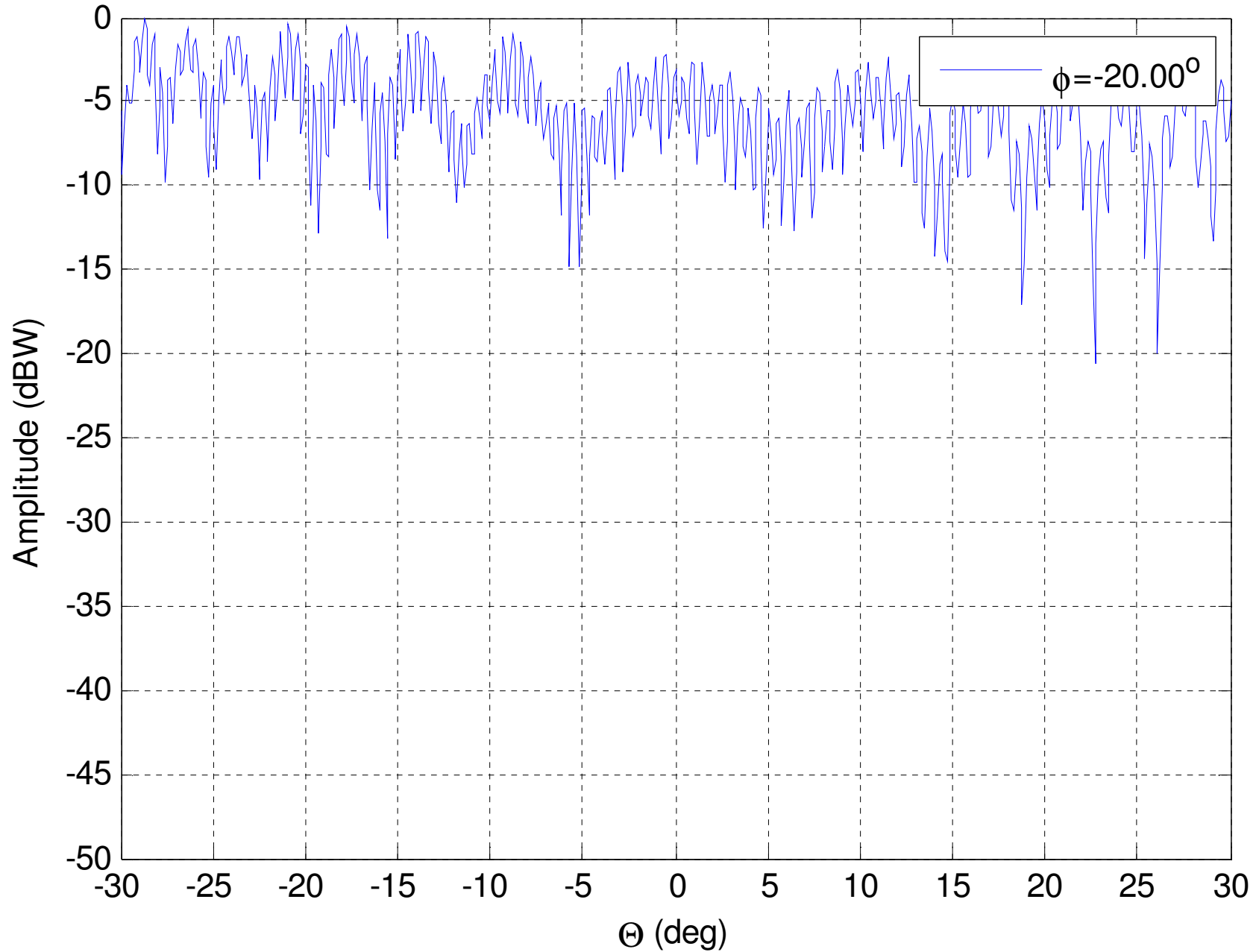
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: 0.03 dBW, Date: 15-Dec-2011



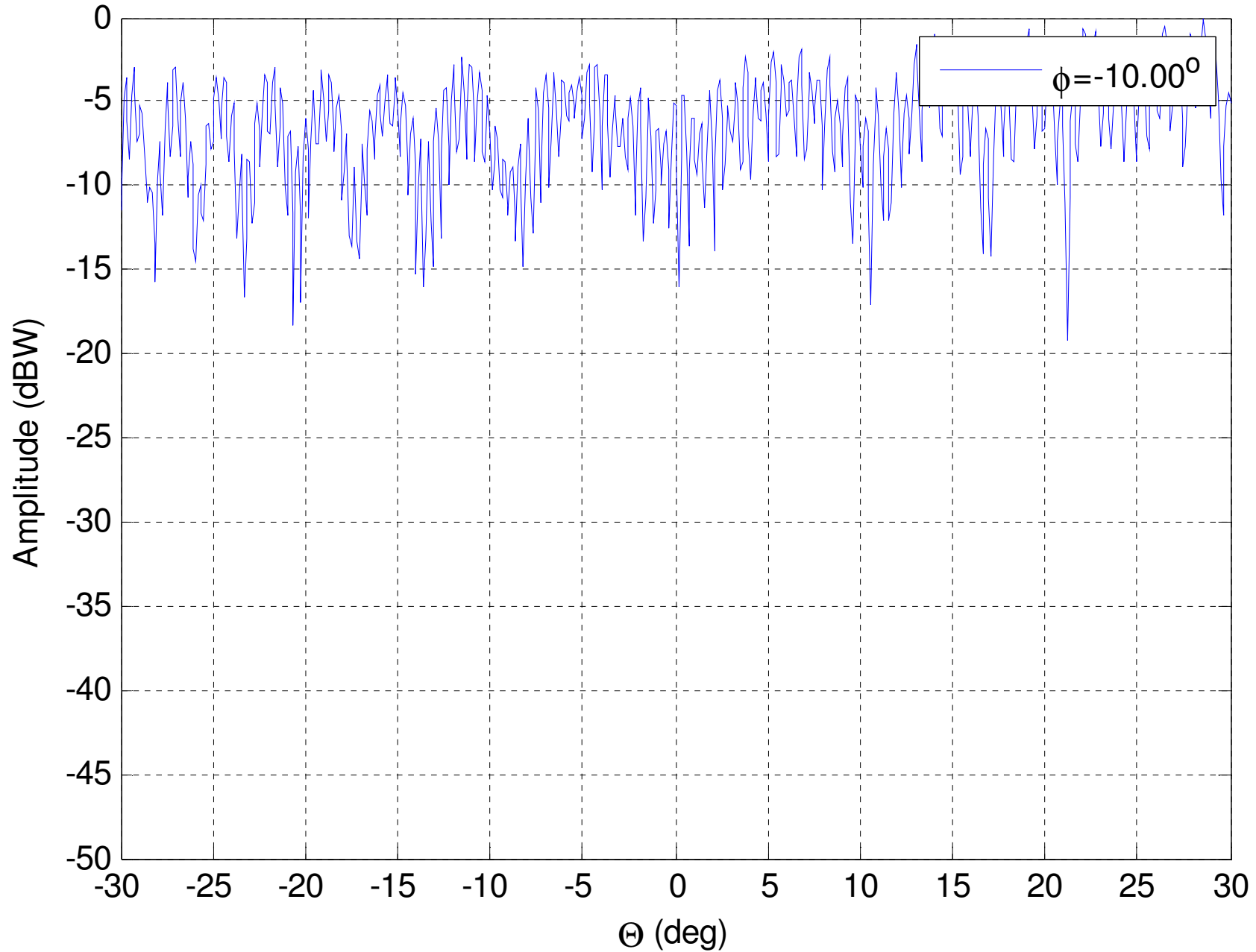
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -0.37 dBW, Date: 15-Dec-2011



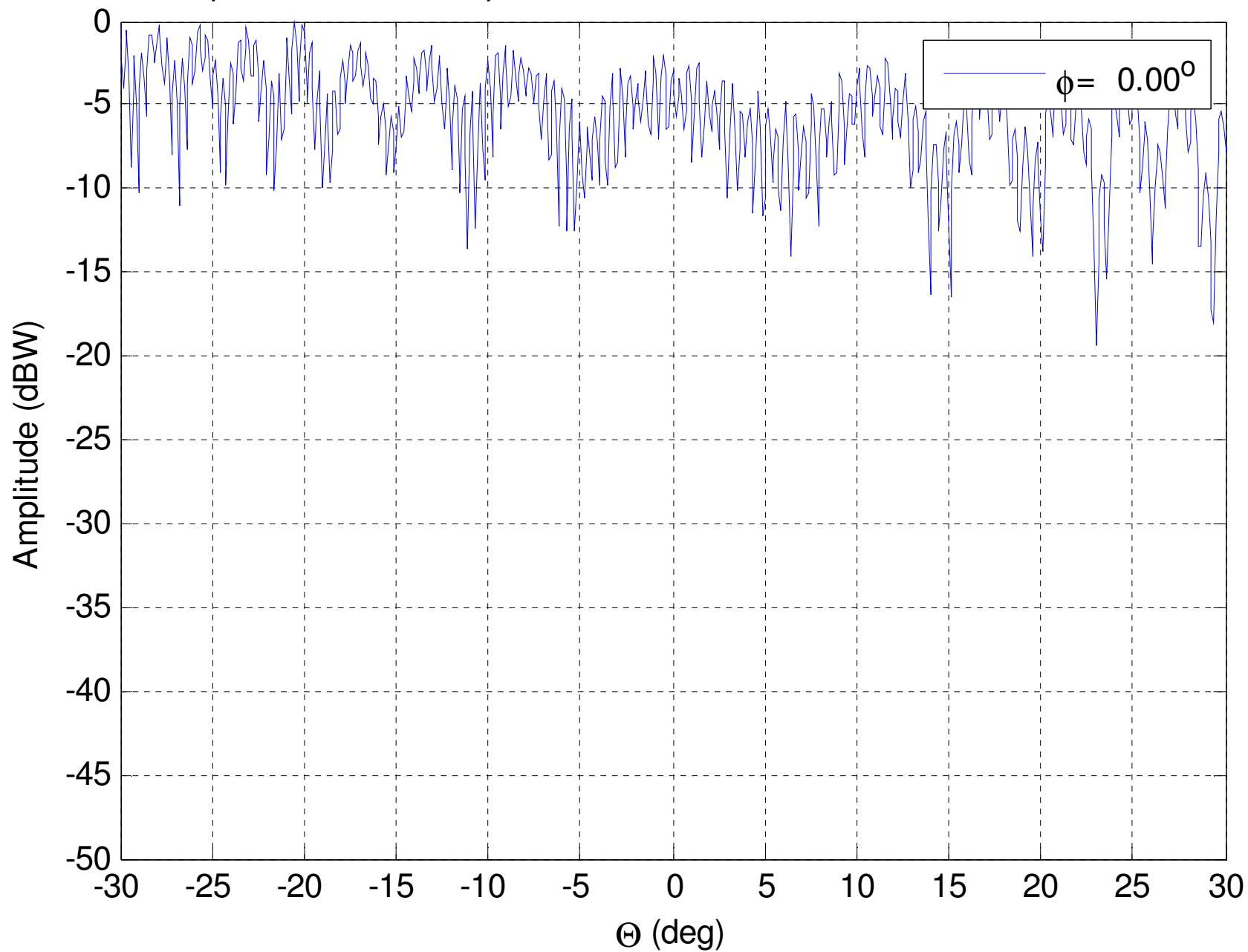
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -0.04 dBW, Date: 15-Dec-2011



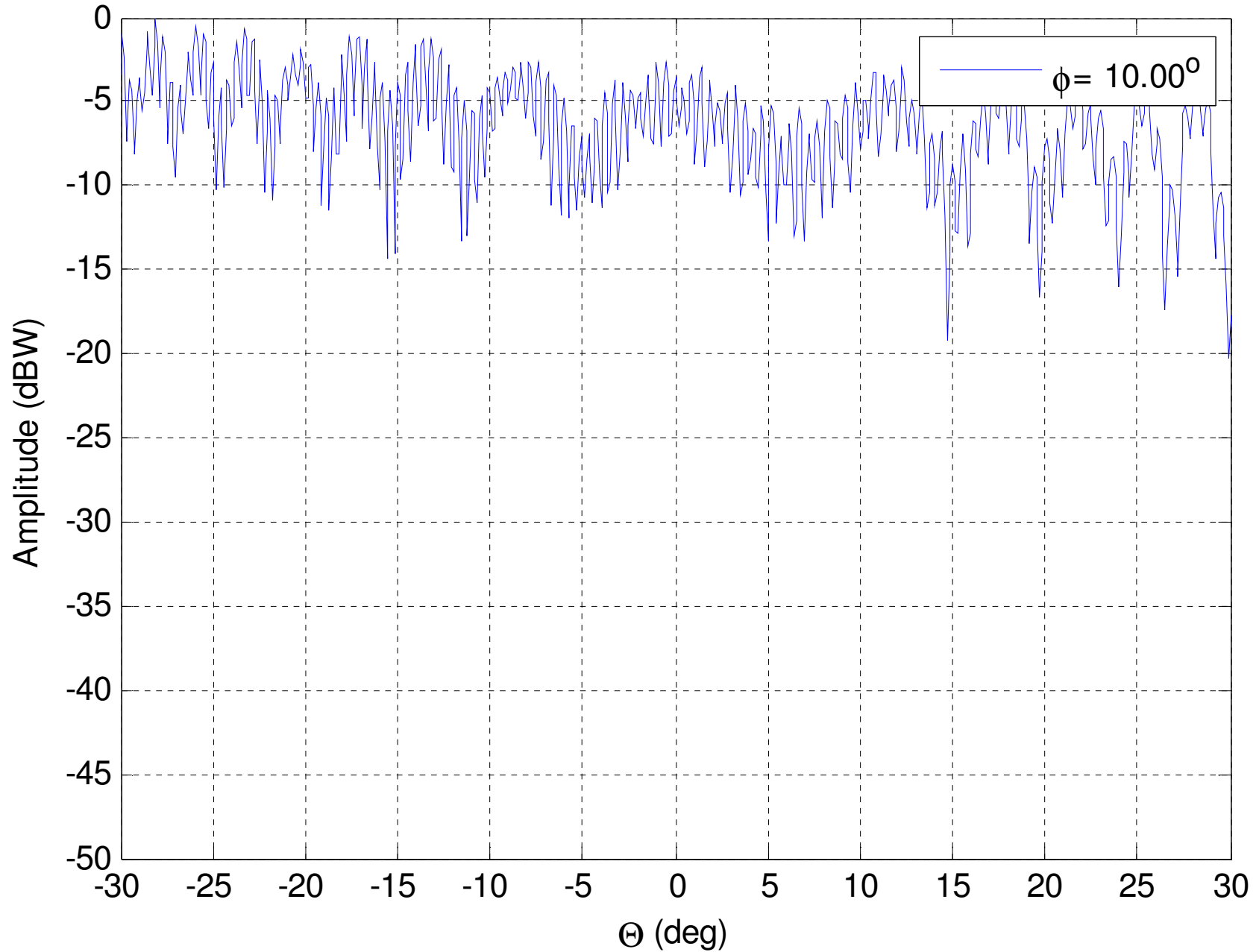
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -0.49 dBW, Date: 15-Dec-2011



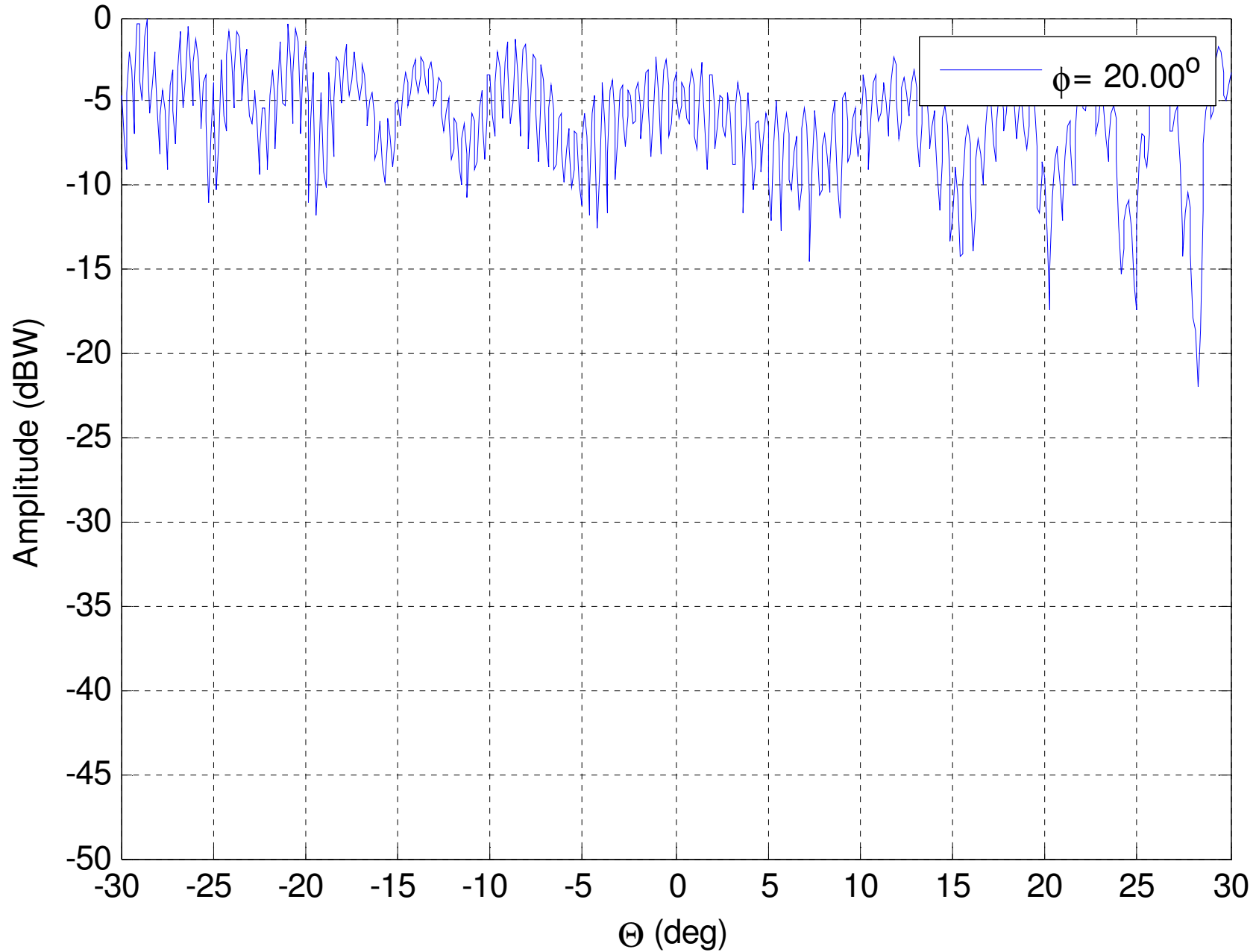
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 0.18 dBW, Date: 15-Dec-2011



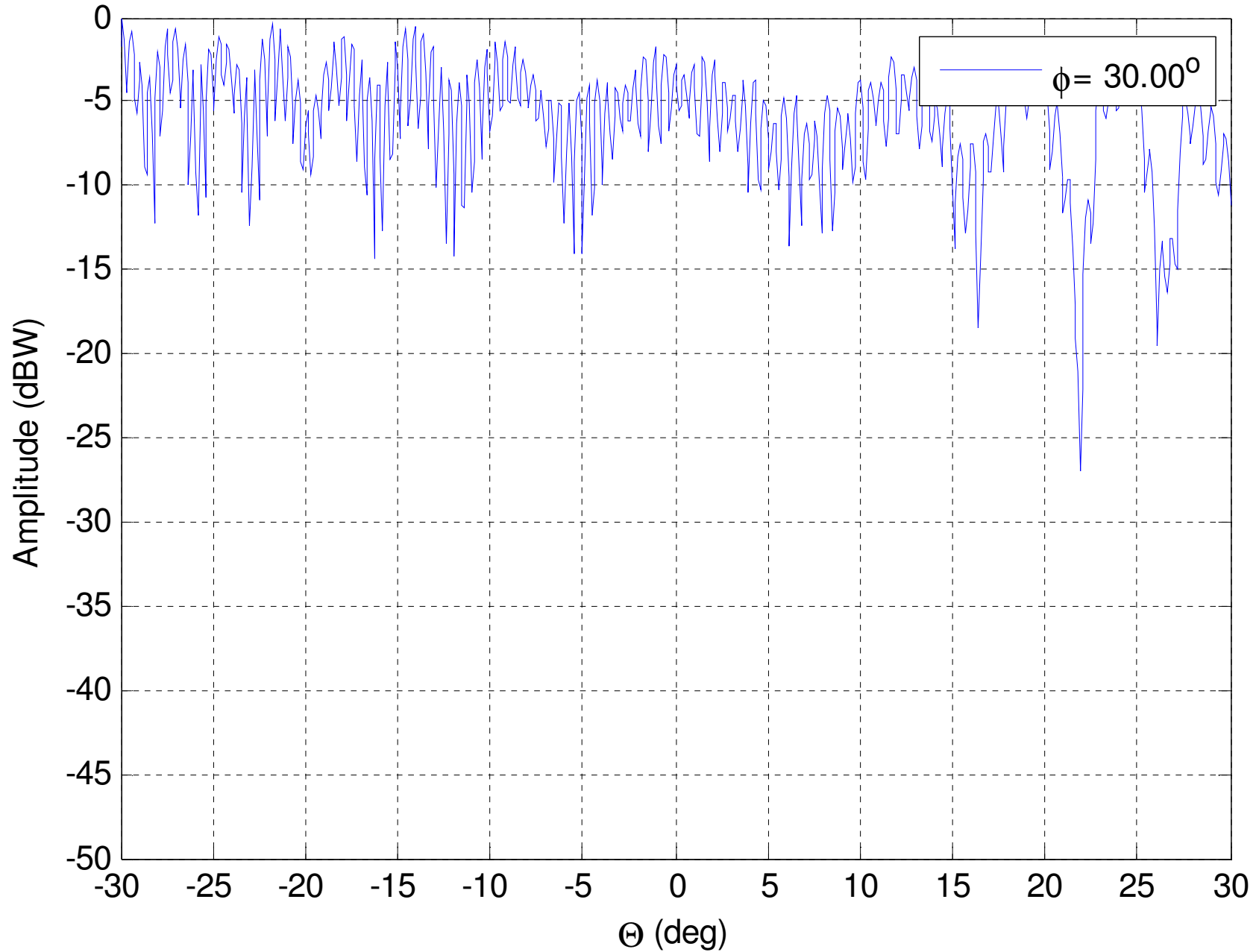
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -0.17 dBW, Date: 15-Dec-2011



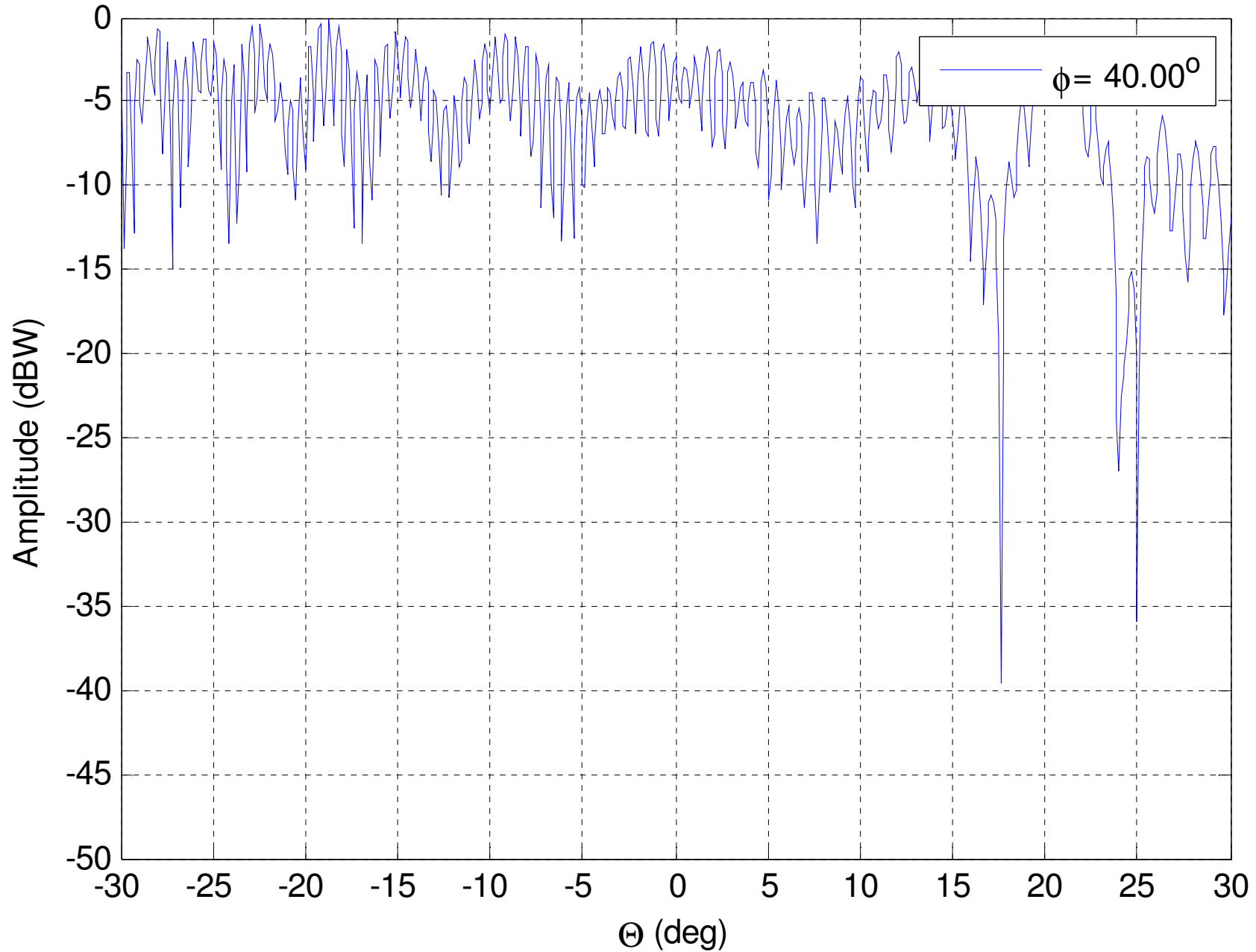
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.59 dBW, Date: 15-Dec-2011



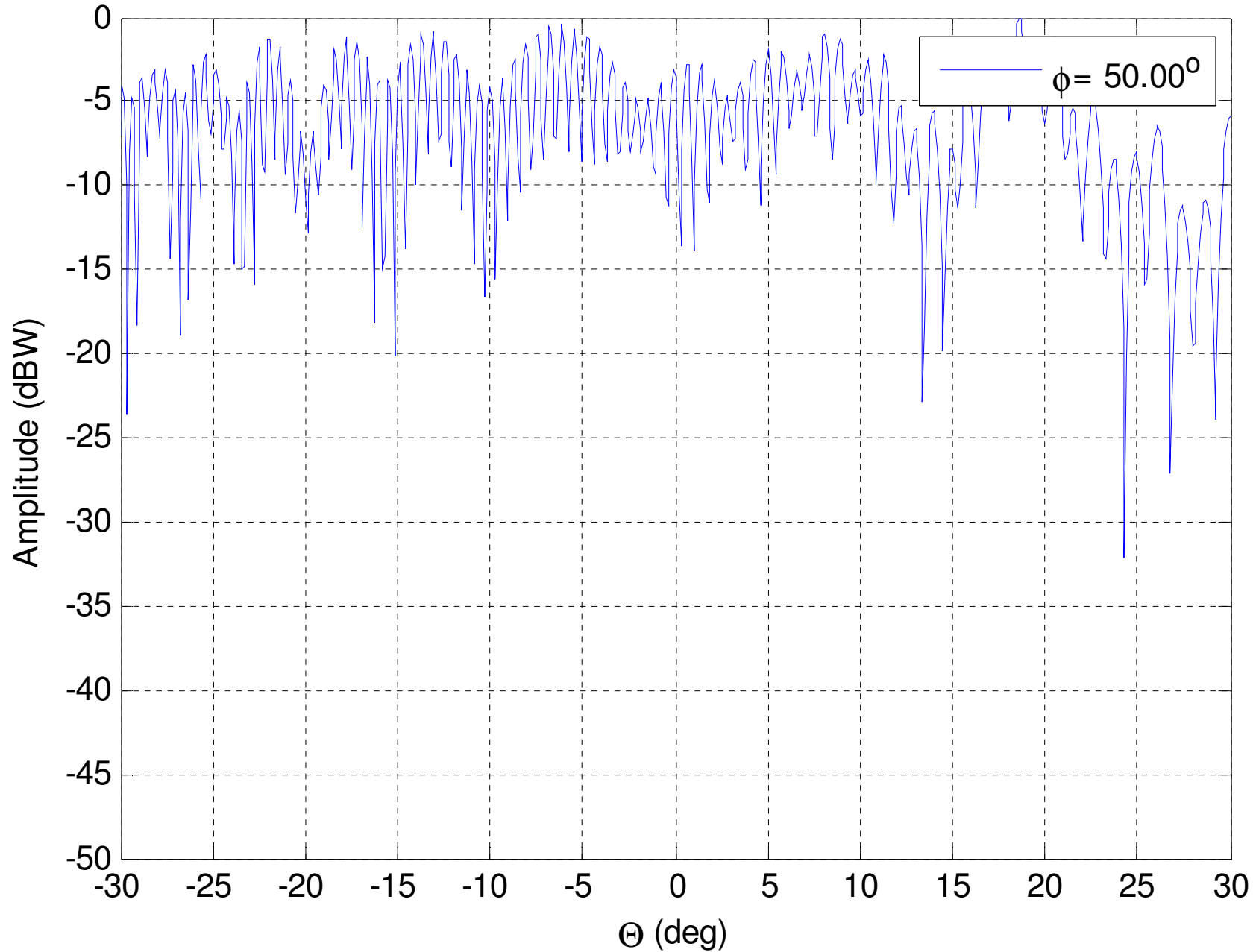
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -1.13 dBW, Date: 15-Dec-2011



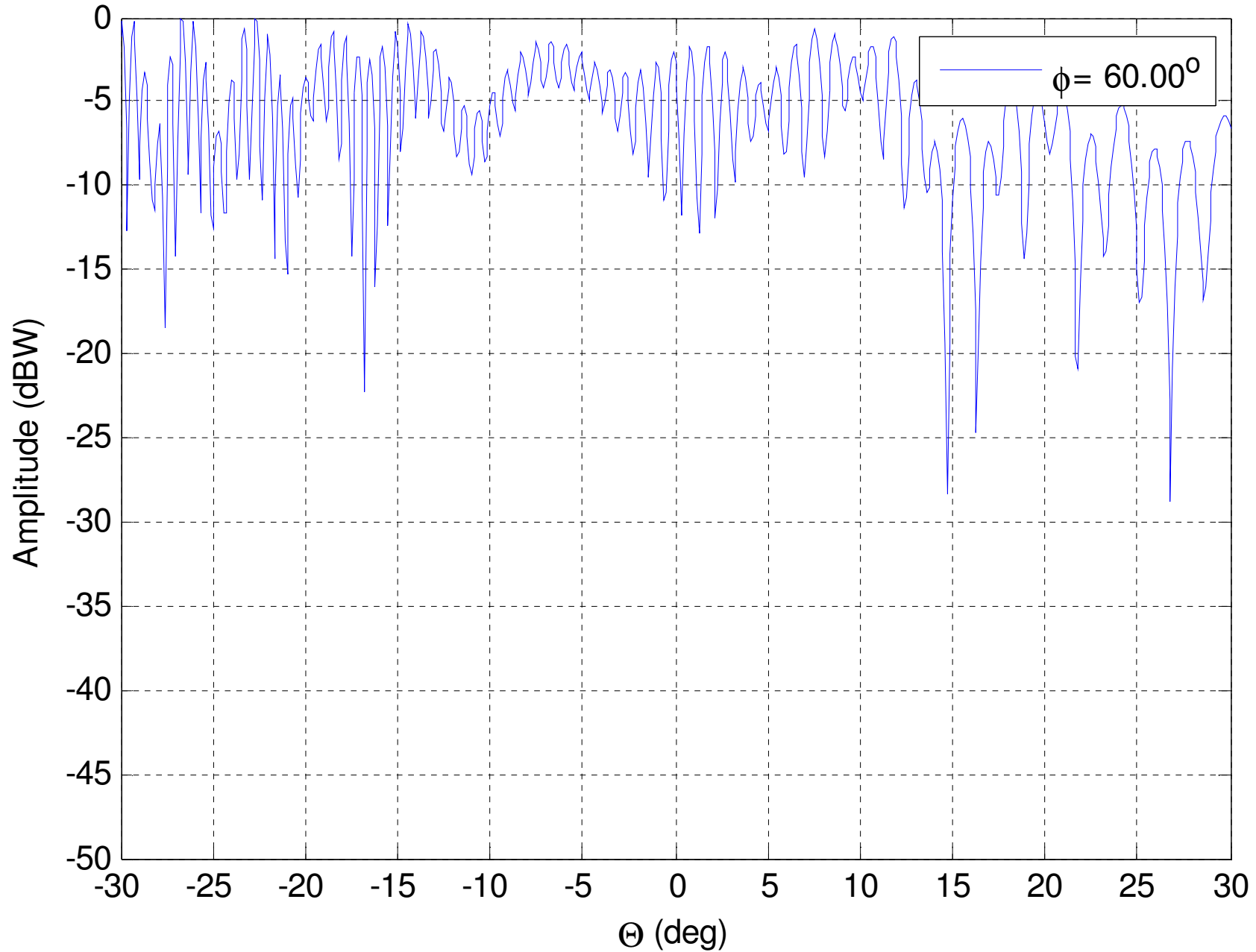
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -1.72 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

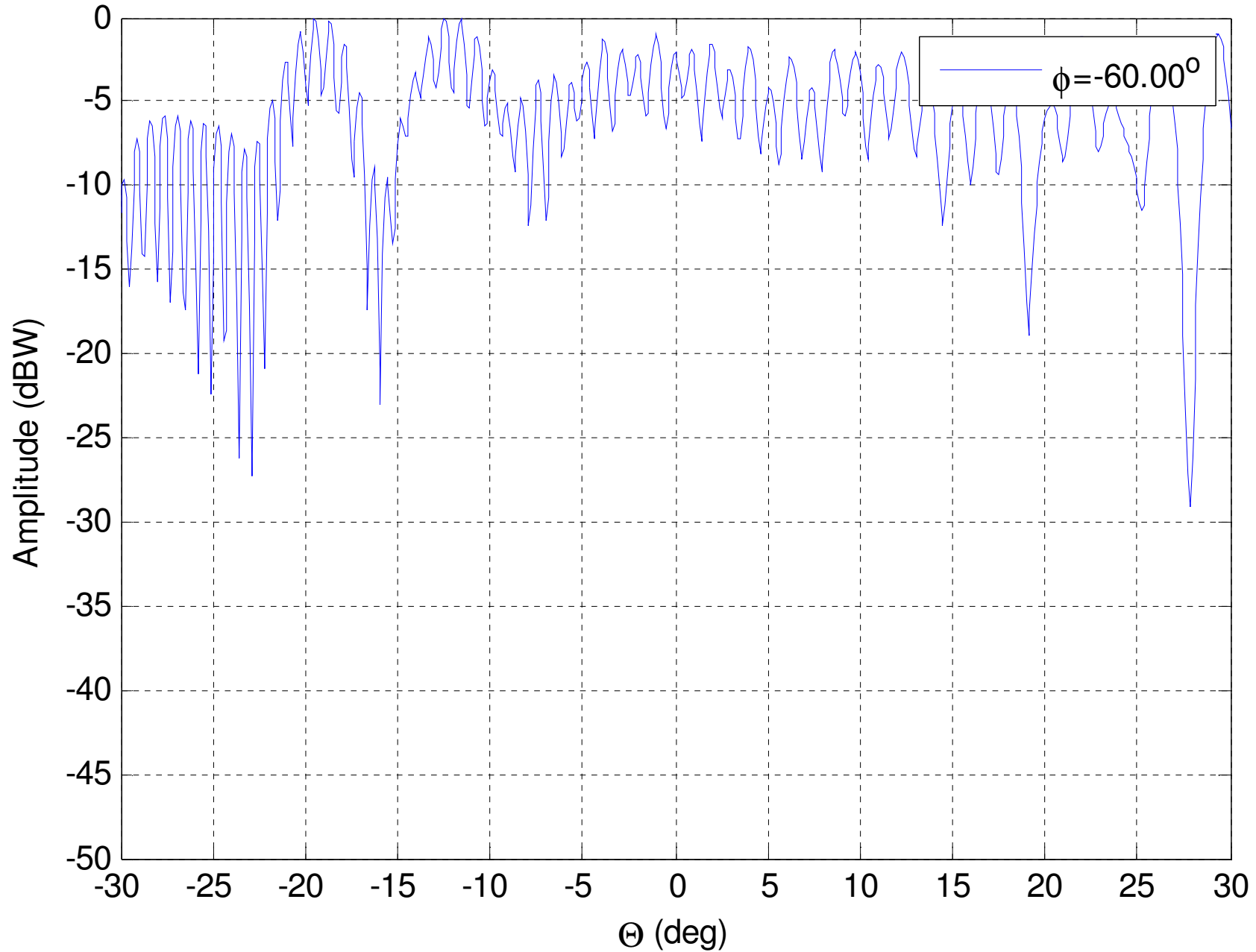
Input file: tx-17.5-rhcp-60.cut, Peak: -2.66 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

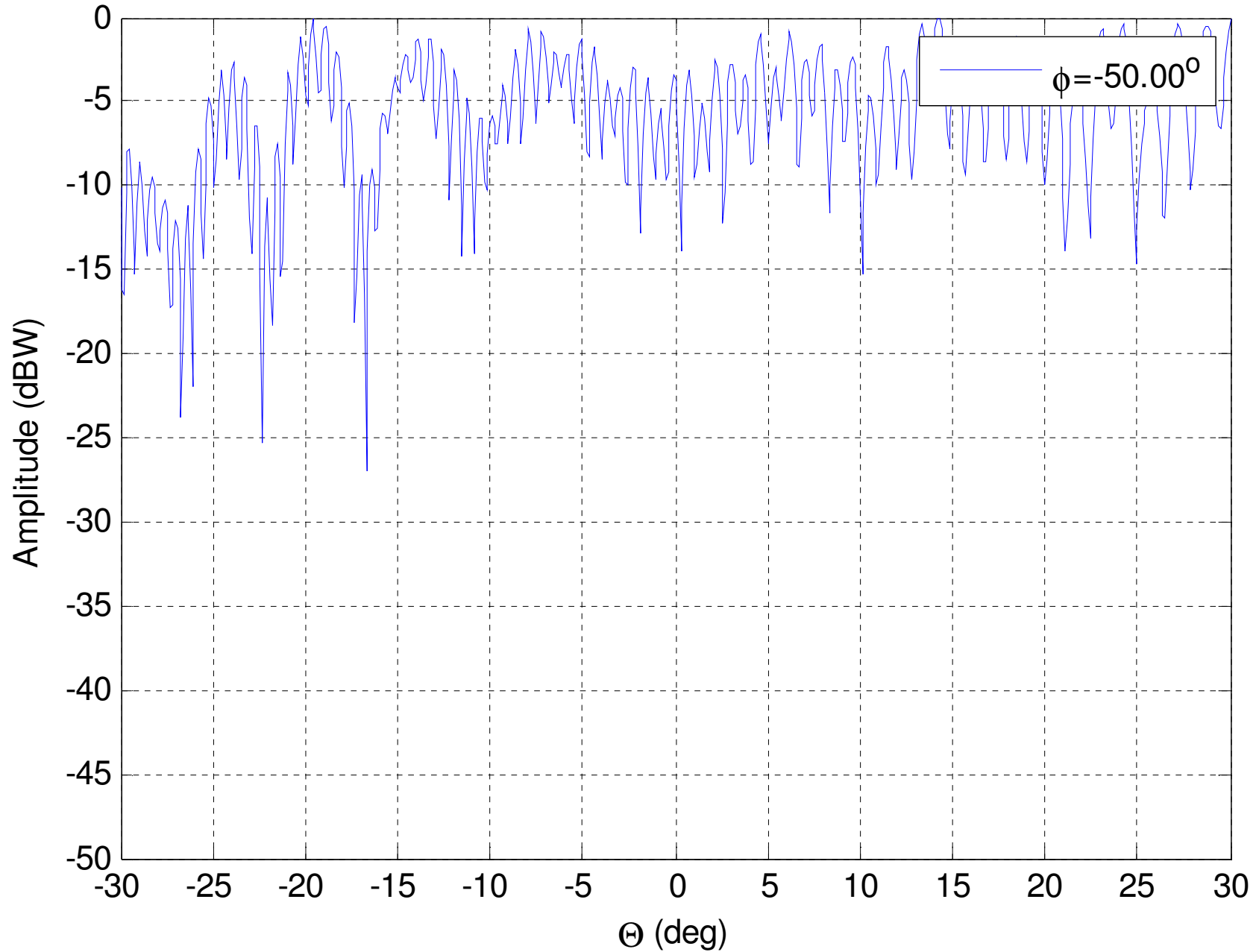
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -1.47 dBW, Date: 15-Dec-2011



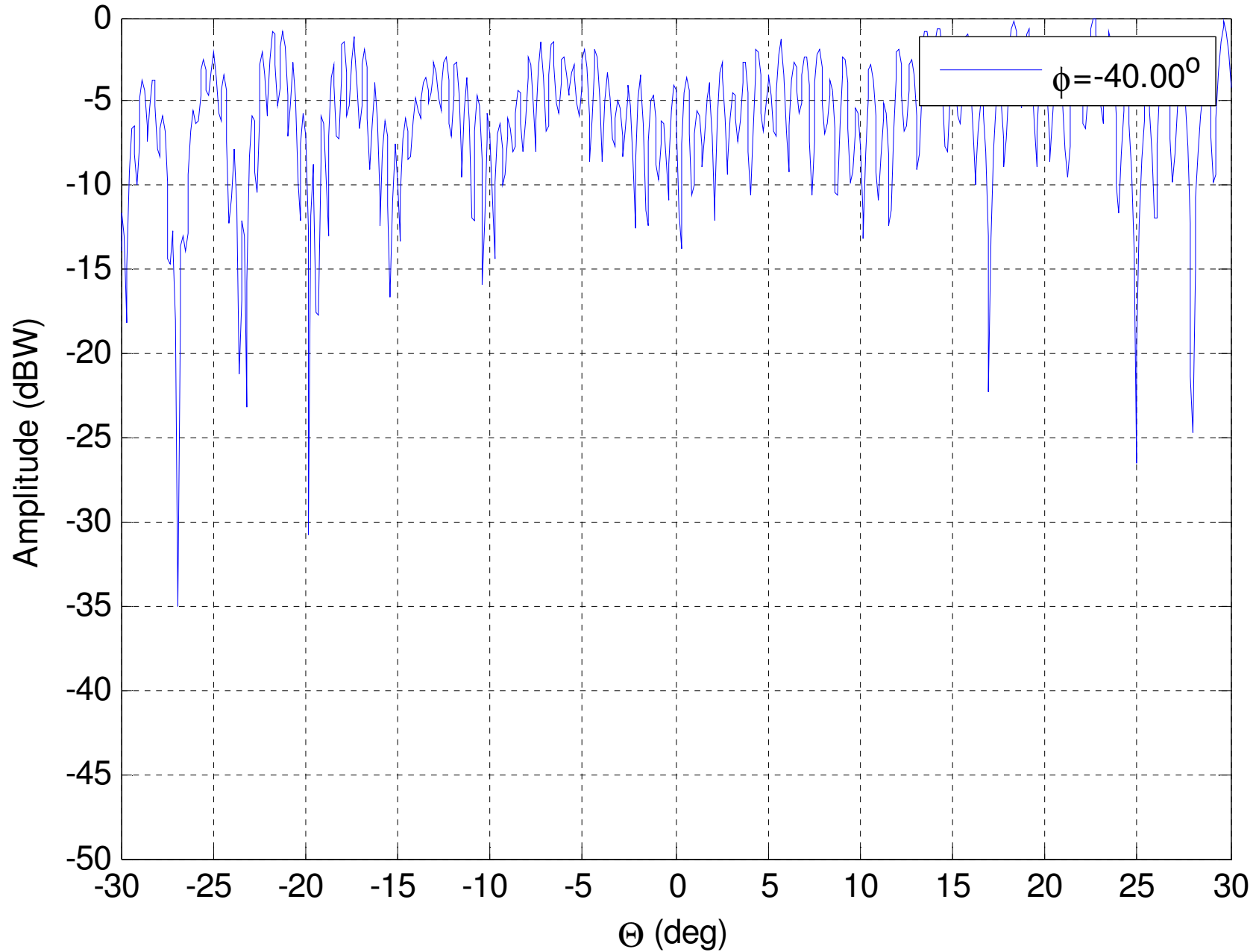
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -1.74 dBW, Date: 15-Dec-2011



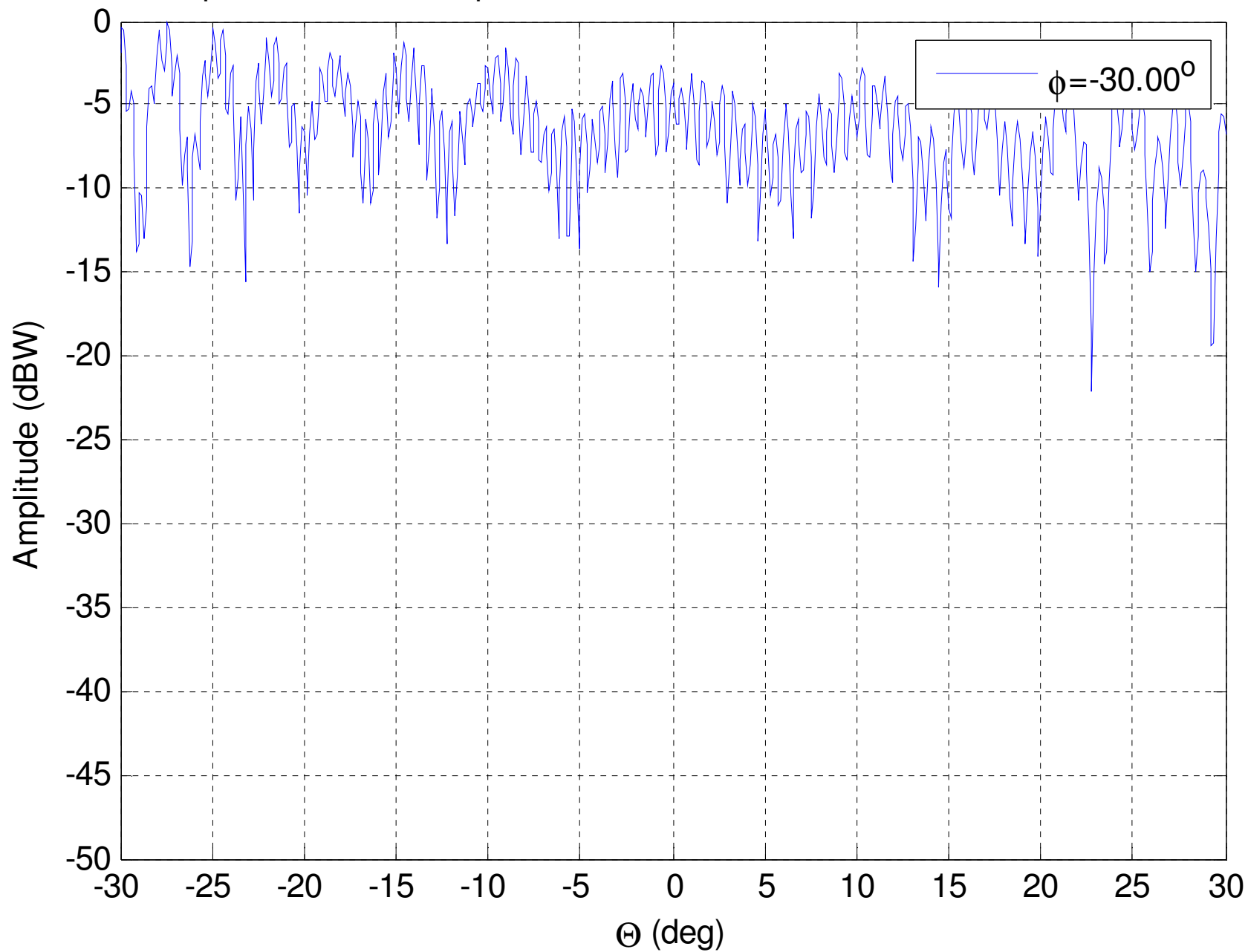
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -1.13 dBW, Date: 15-Dec-2011



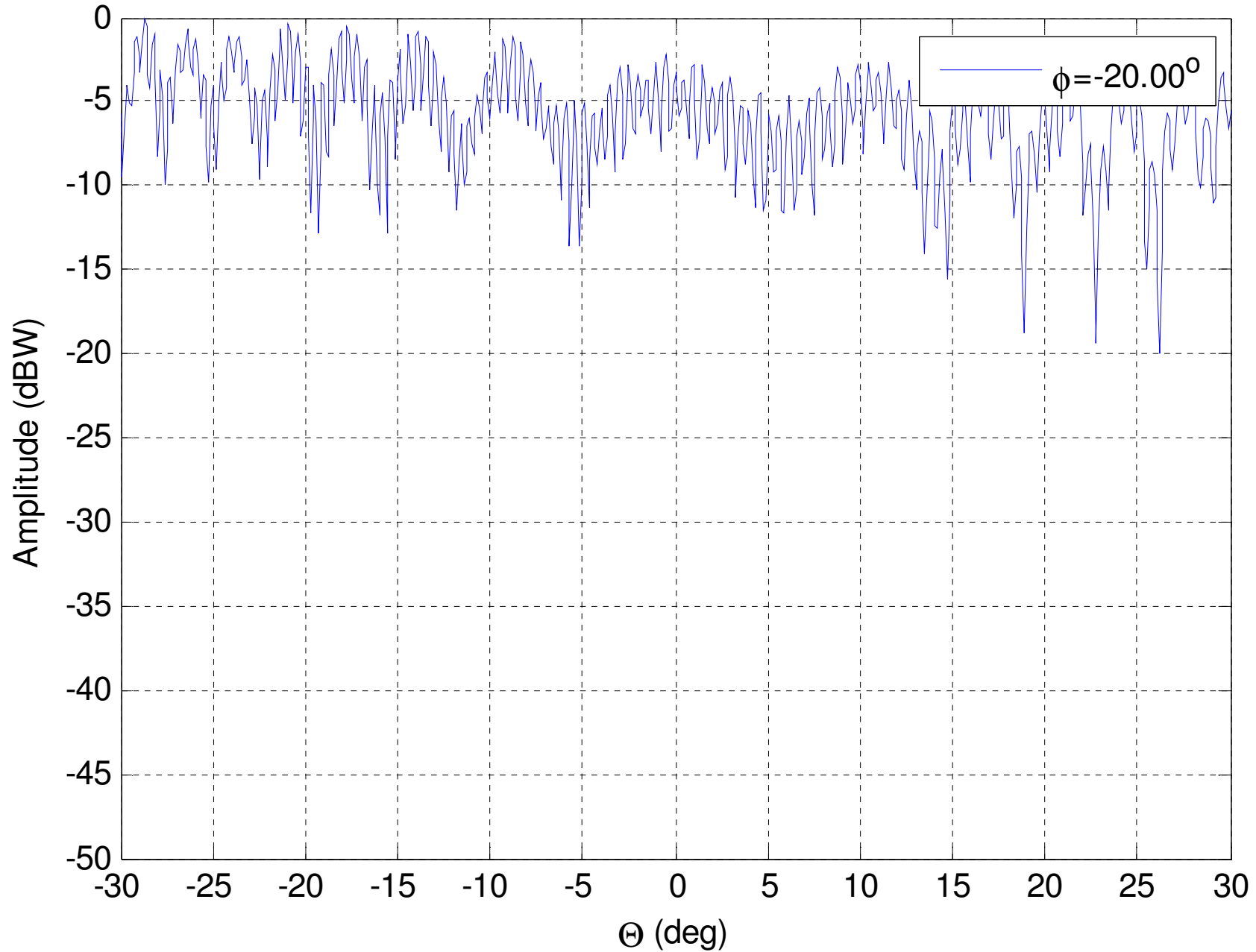
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: 0.13 dBW, Date: 15-Dec-2011



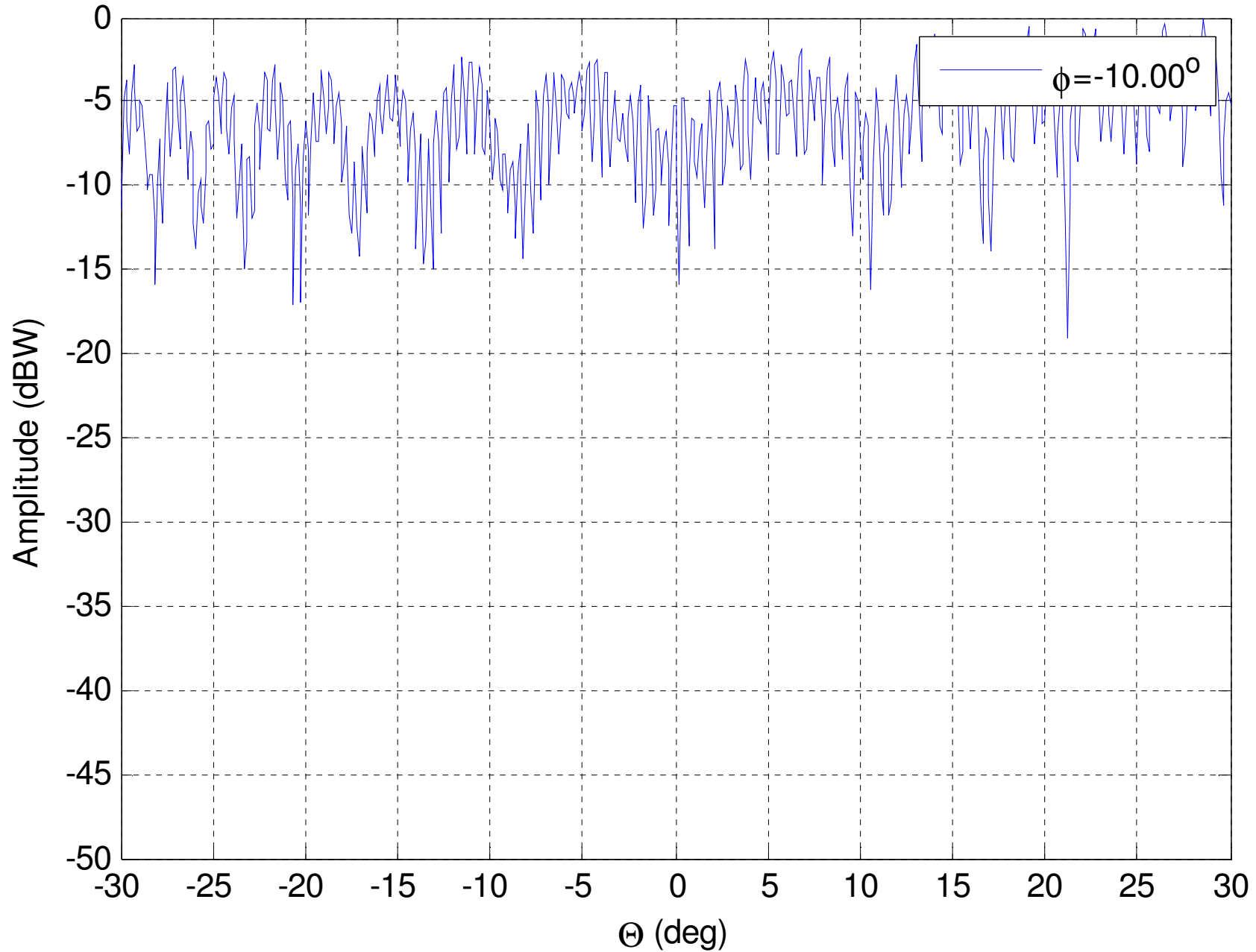
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -0.32 dBW, Date: 15-Dec-2011



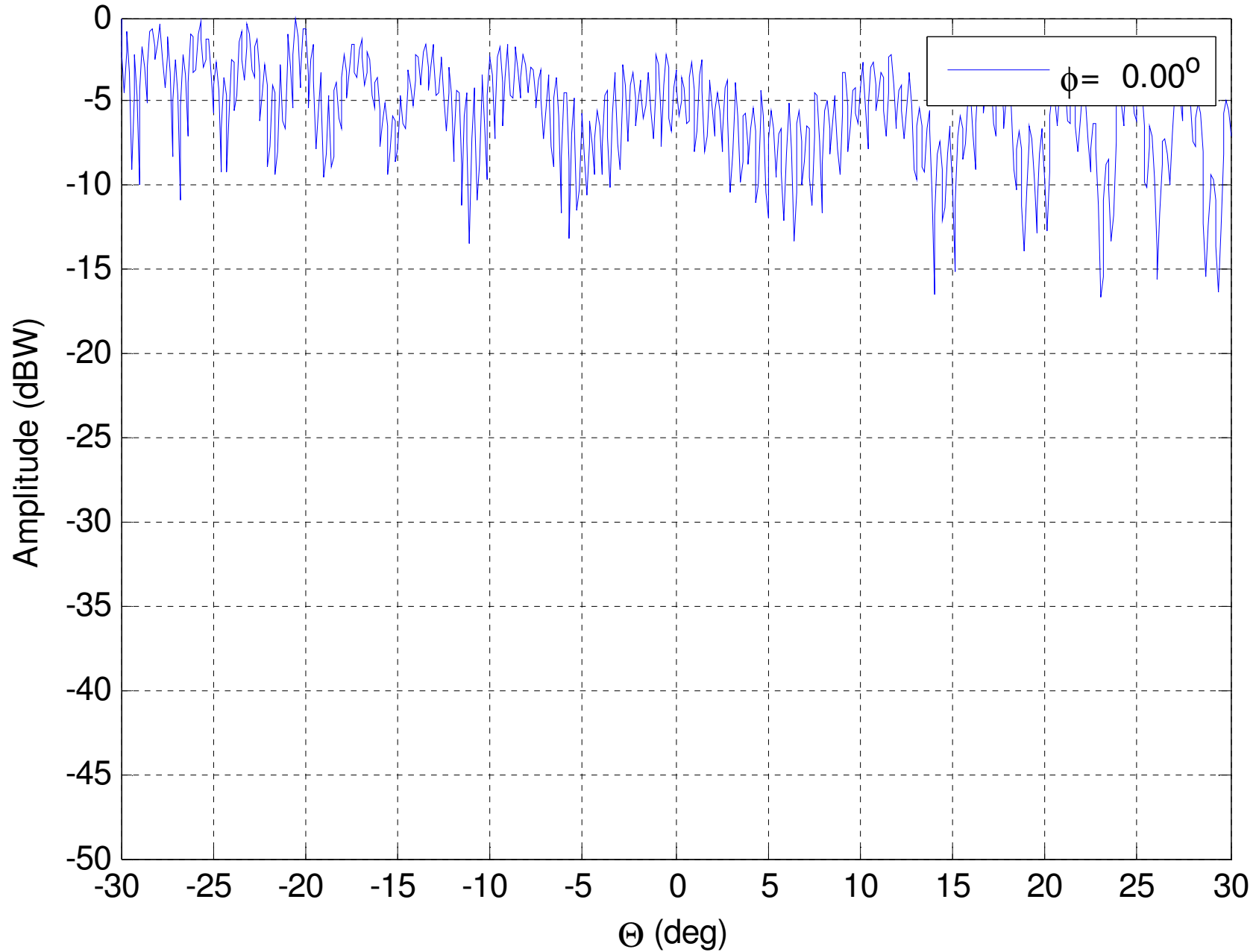
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -0.11 dBW, Date: 15-Dec-2011



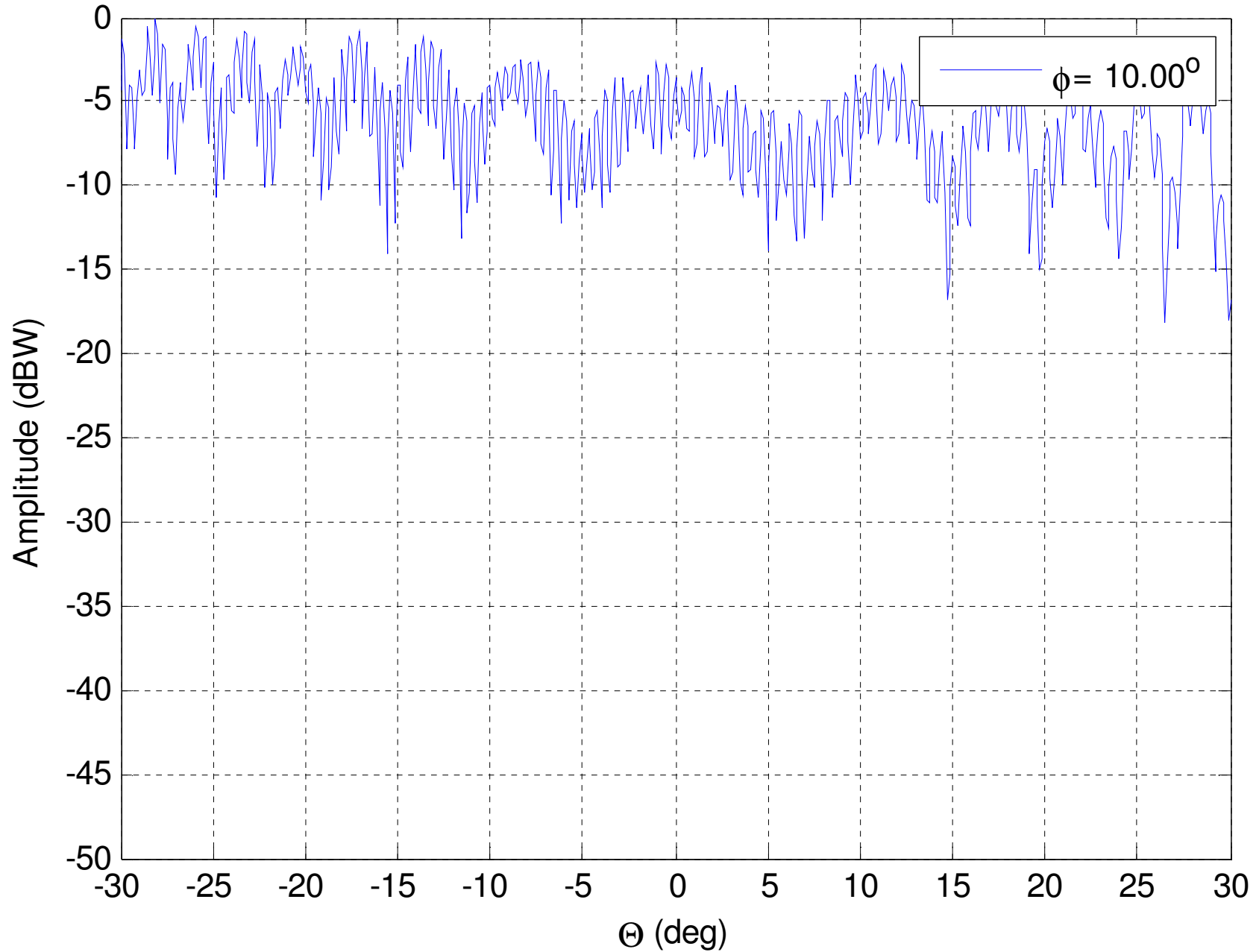
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -0.43 dBW, Date: 15-Dec-2011



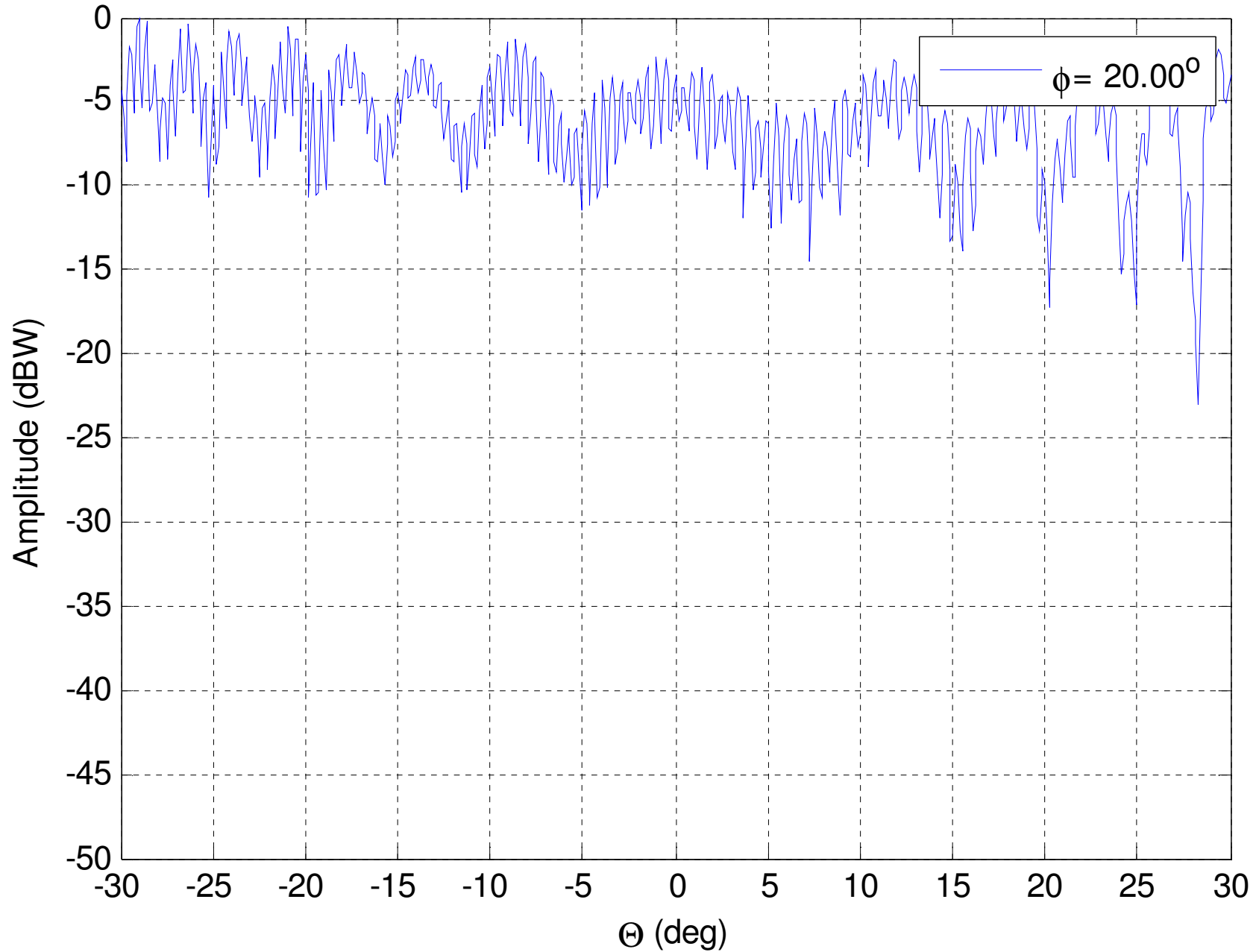
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 0.07 dBW, Date: 15-Dec-2011



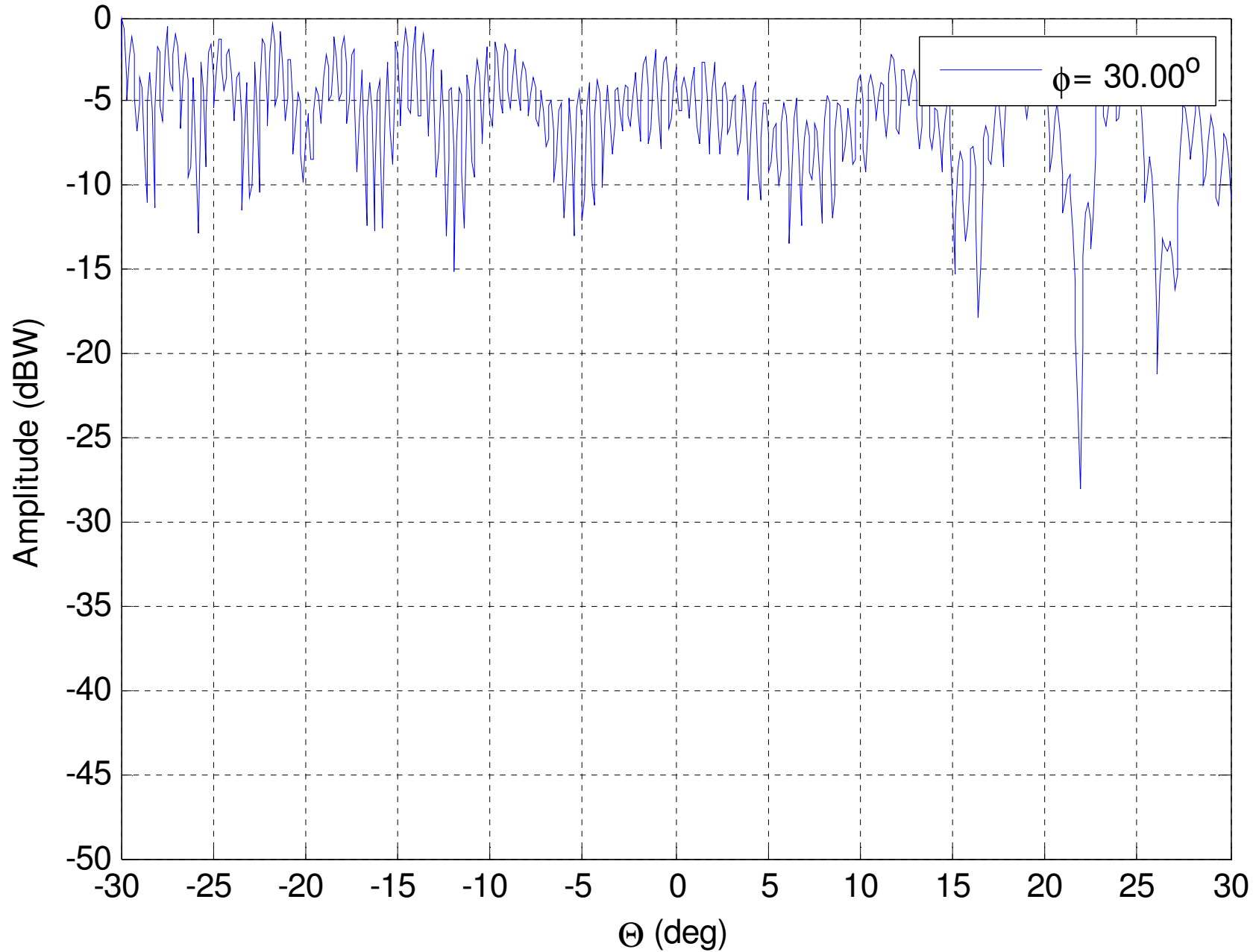
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -0.15 dBW, Date: 15-Dec-2011



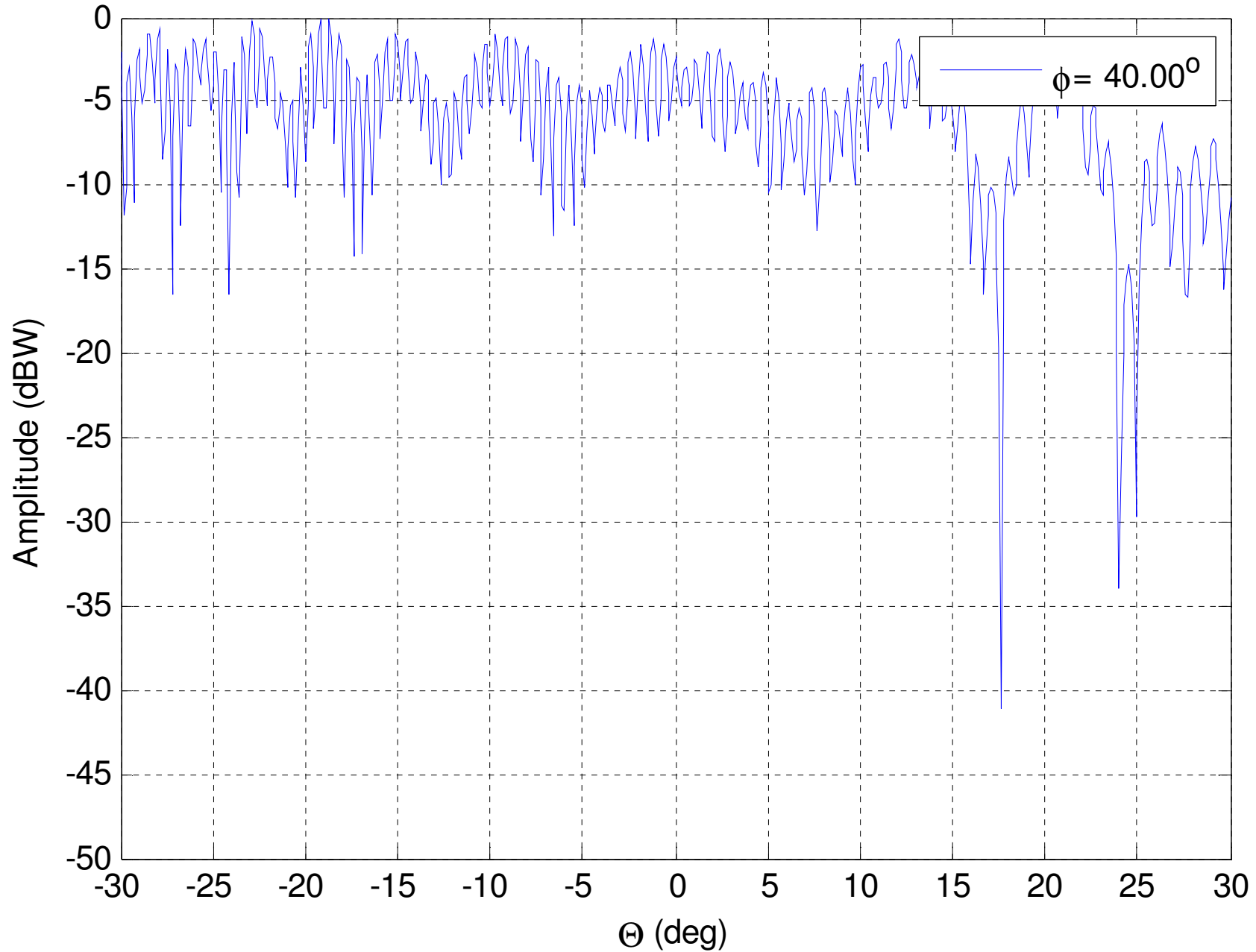
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -0.55 dBW, Date: 15-Dec-2011



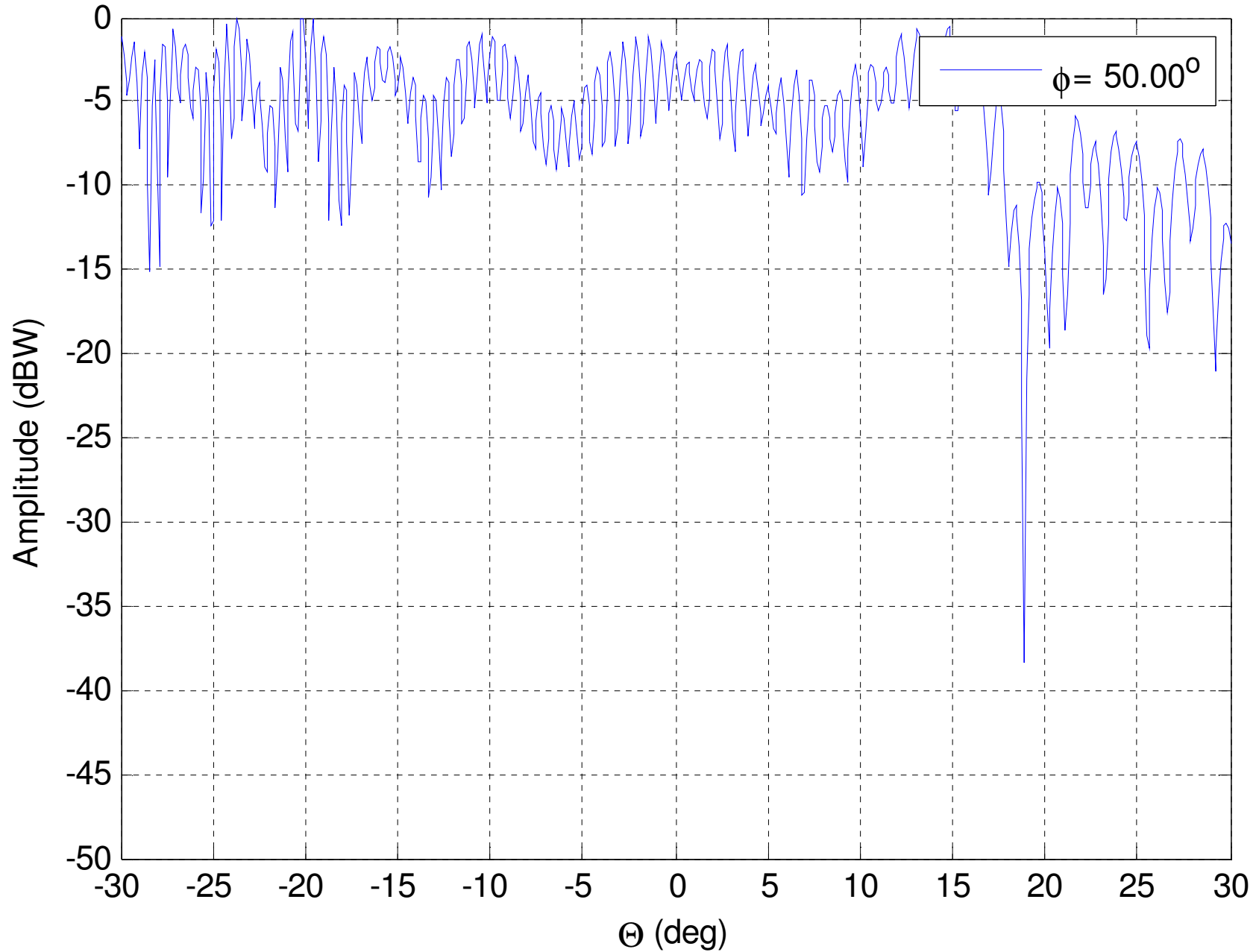
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -1.19 dBW, Date: 15-Dec-2011



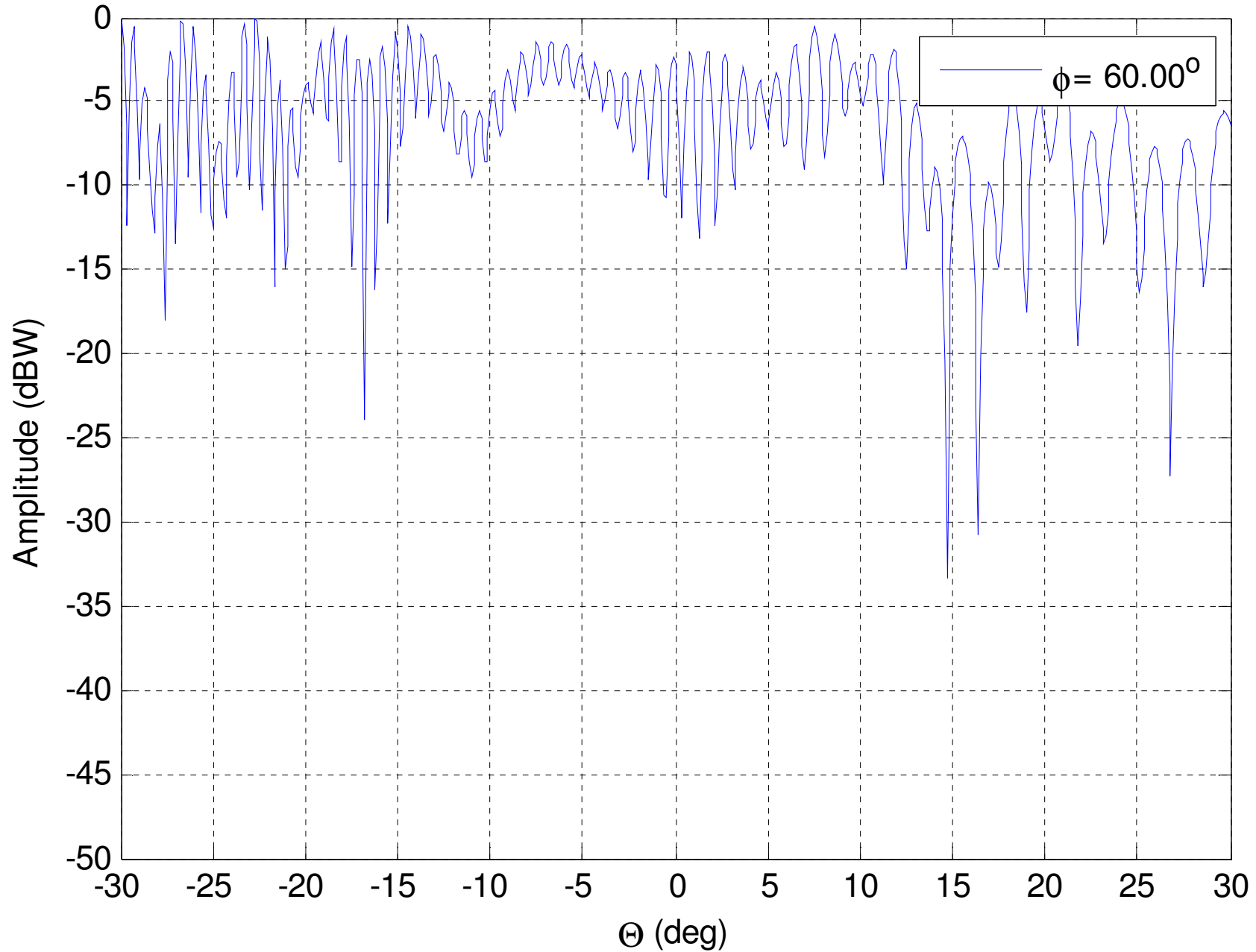
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -1.47 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

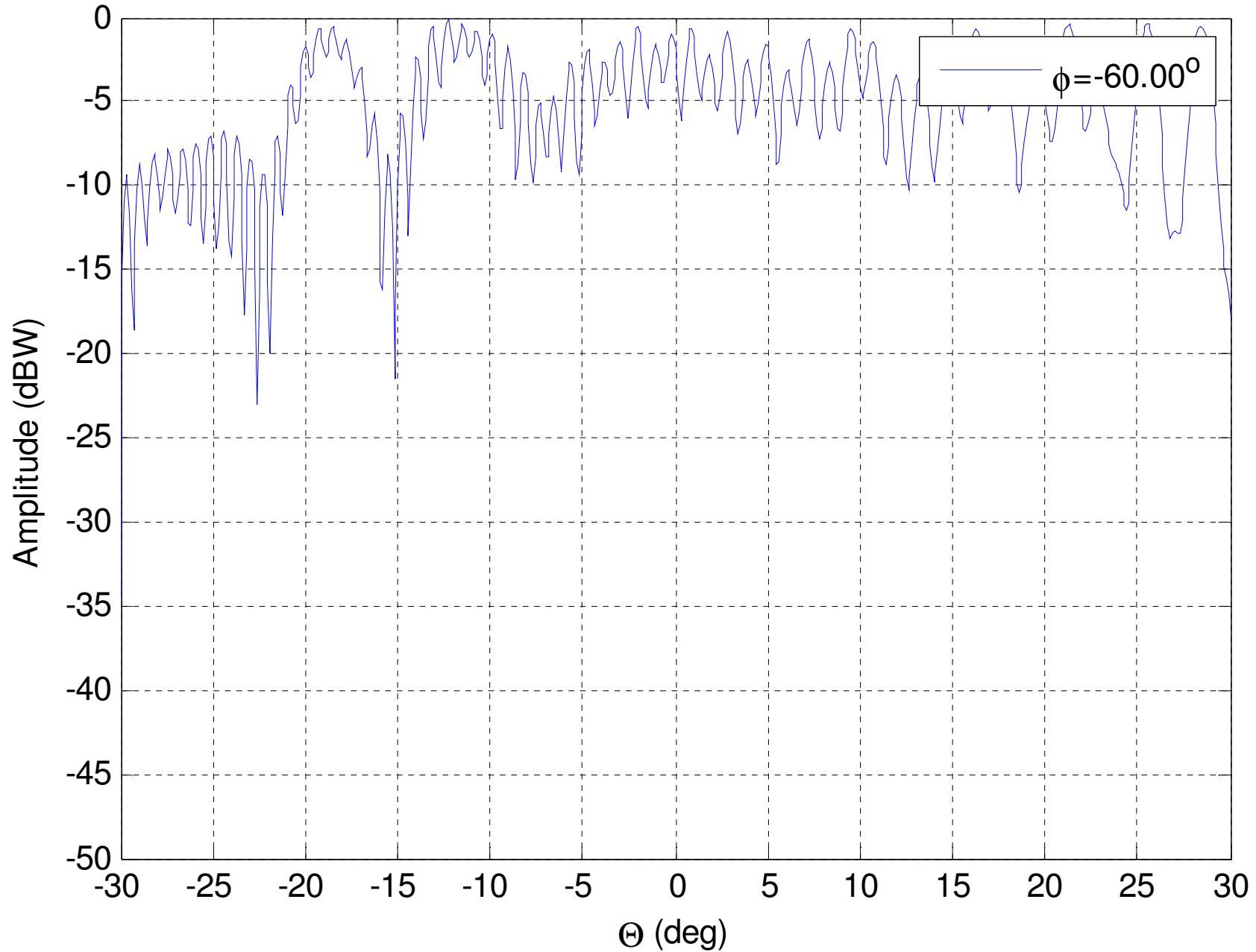
Input file: tx-17.5-lhcp-60.cut, Peak: -2.57 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

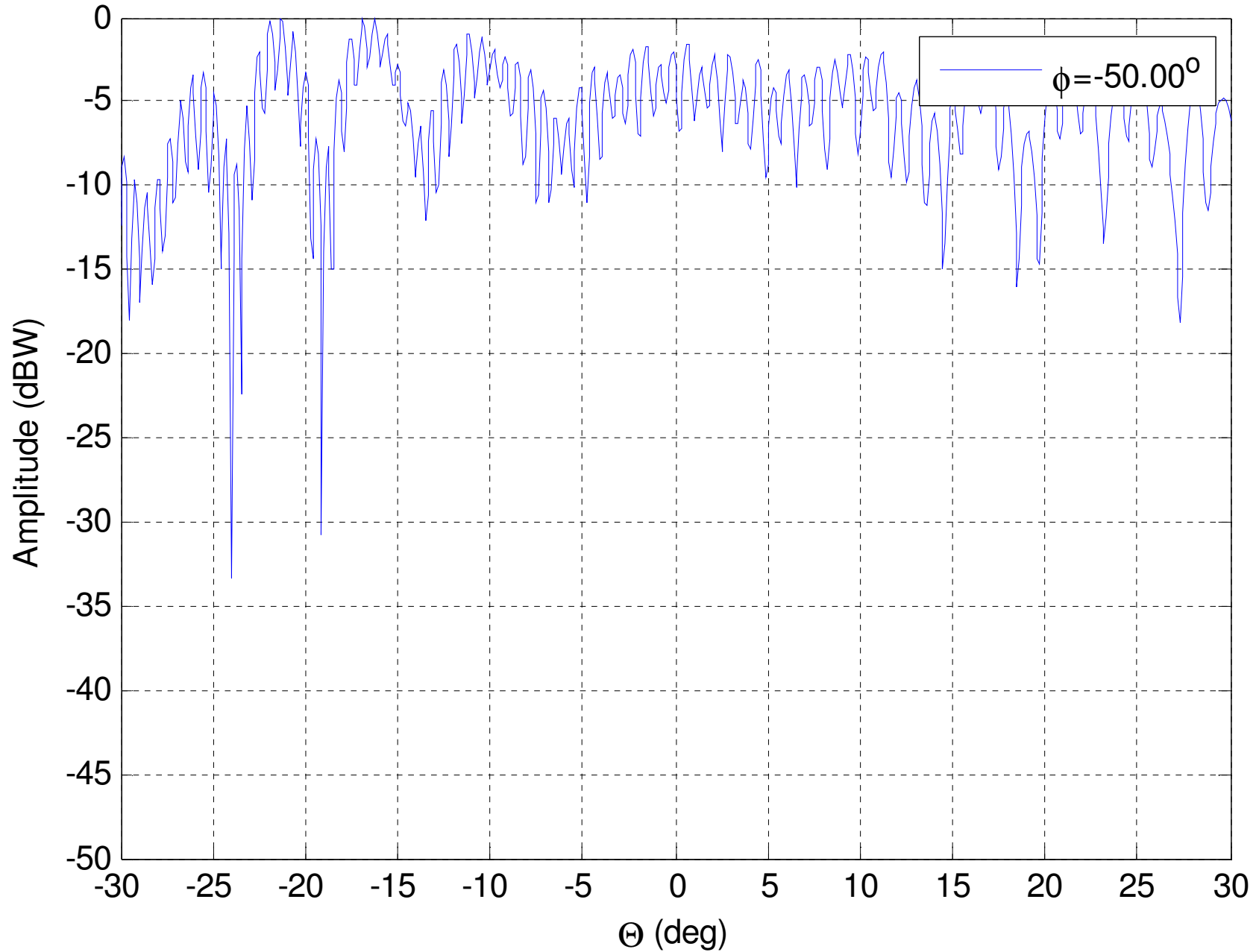
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -2.35 dBW, Date: 15-Dec-2011



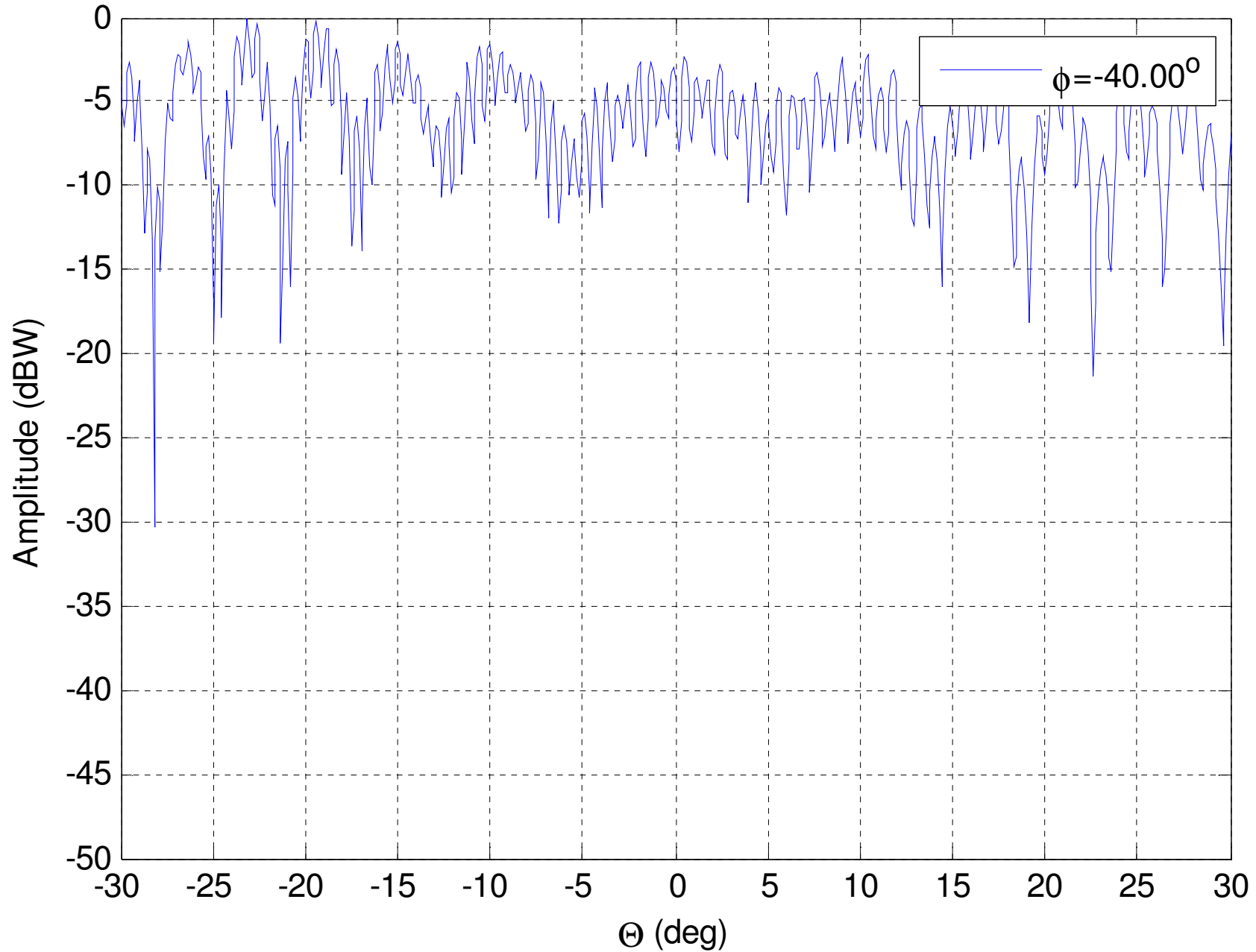
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -1.39 dBW, Date: 15-Dec-2011



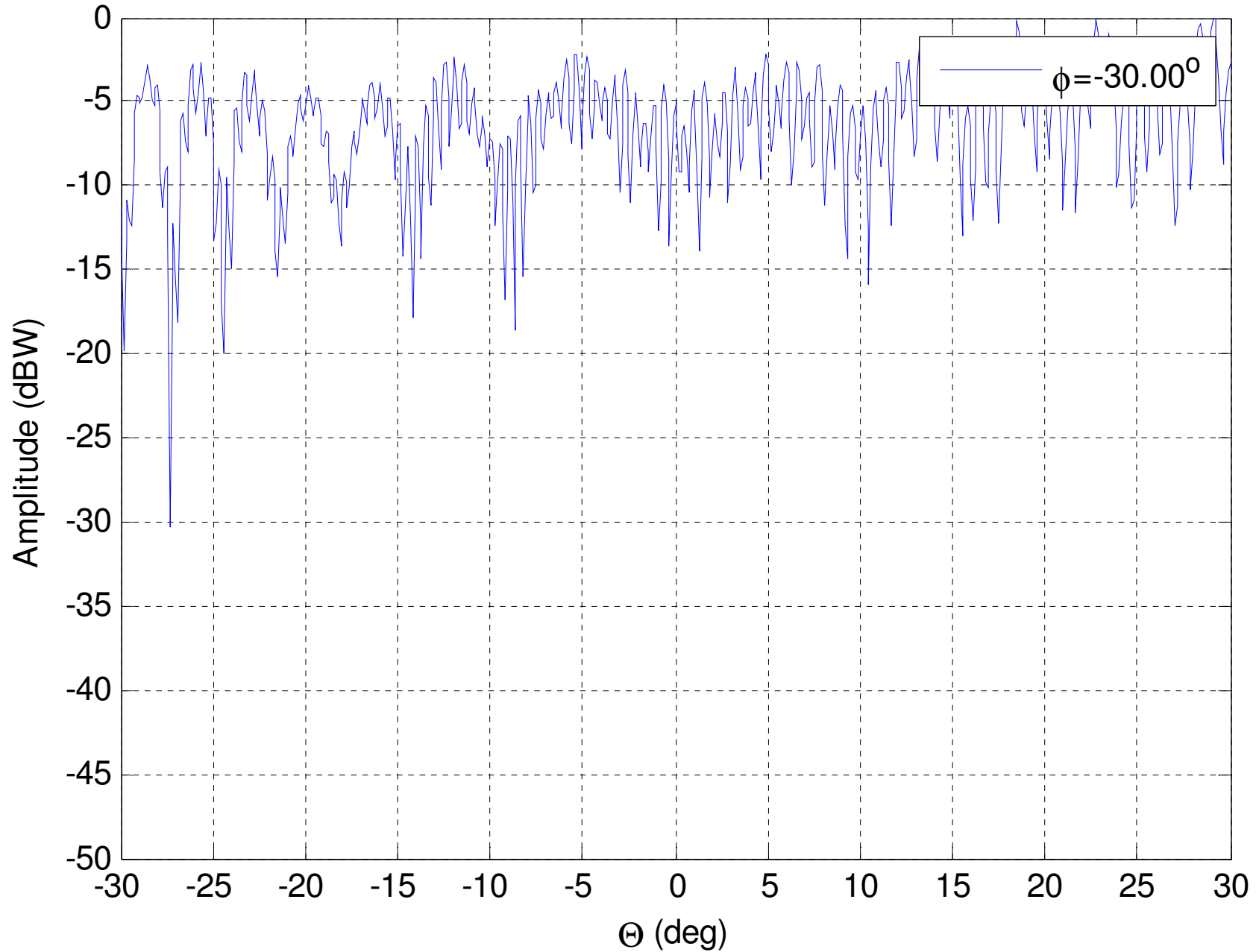
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -0.48 dBW, Date: 15-Dec-2011



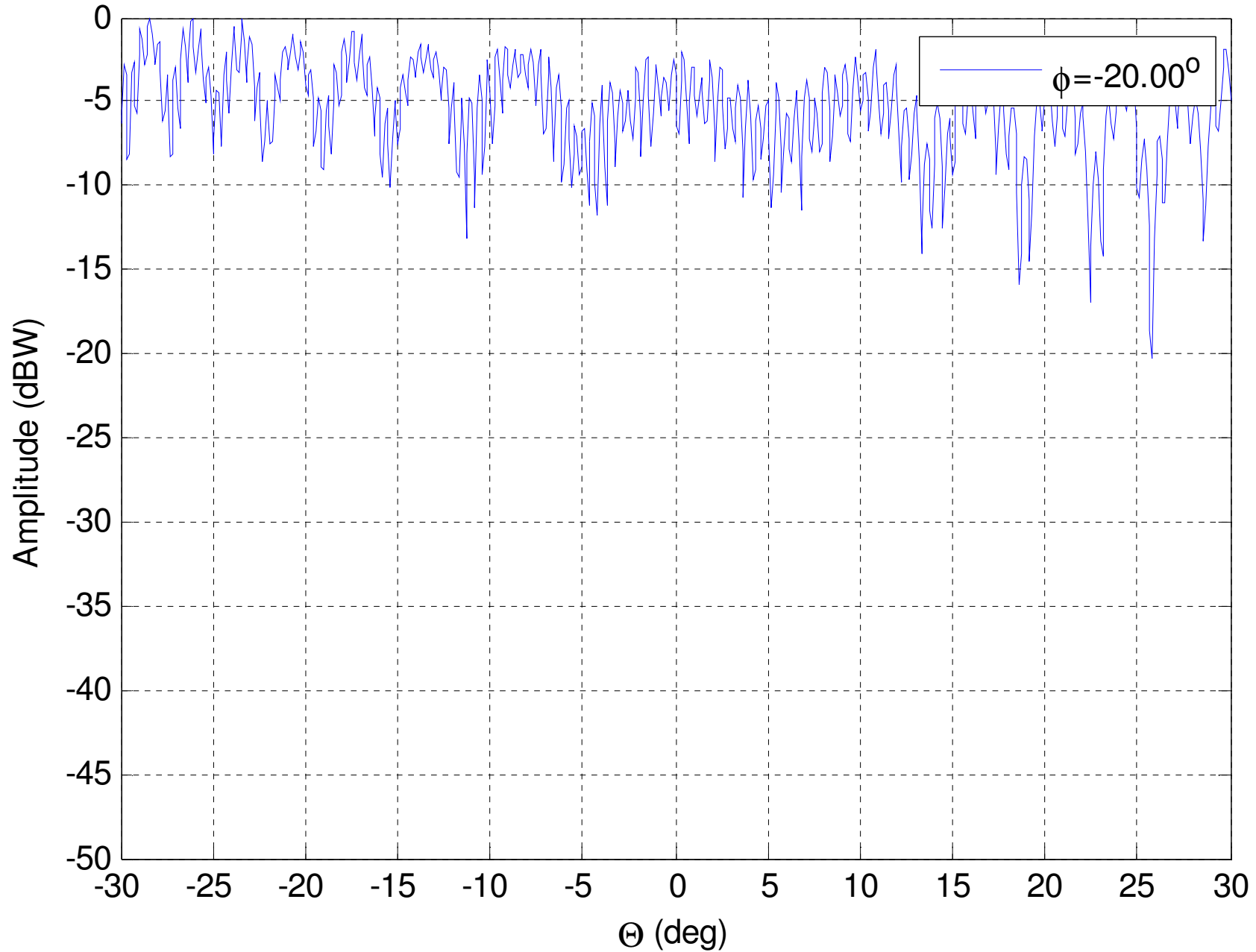
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -0.42 dBW, Date: 15-Dec-2011



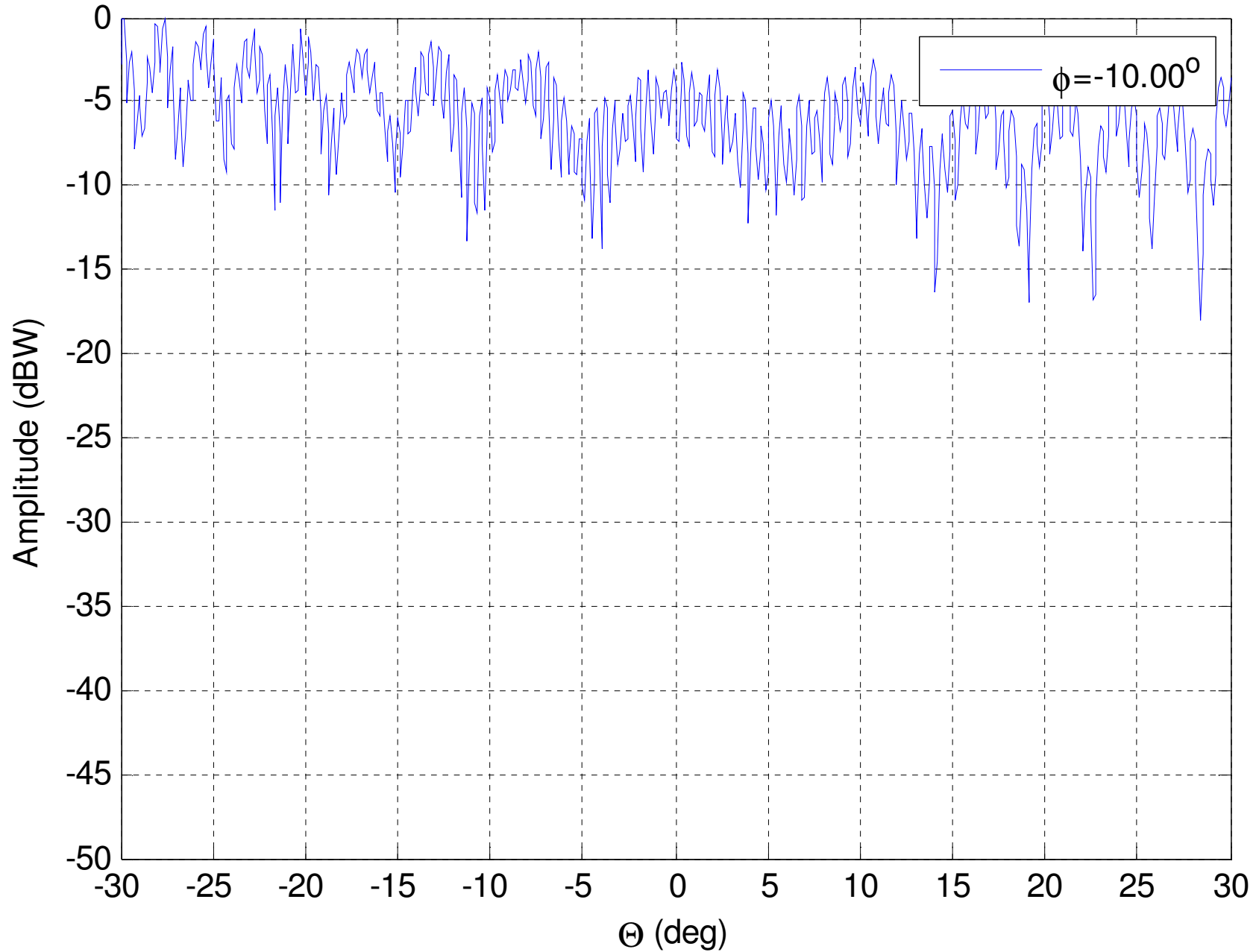
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -0.84 dBW, Date: 15-Dec-2011



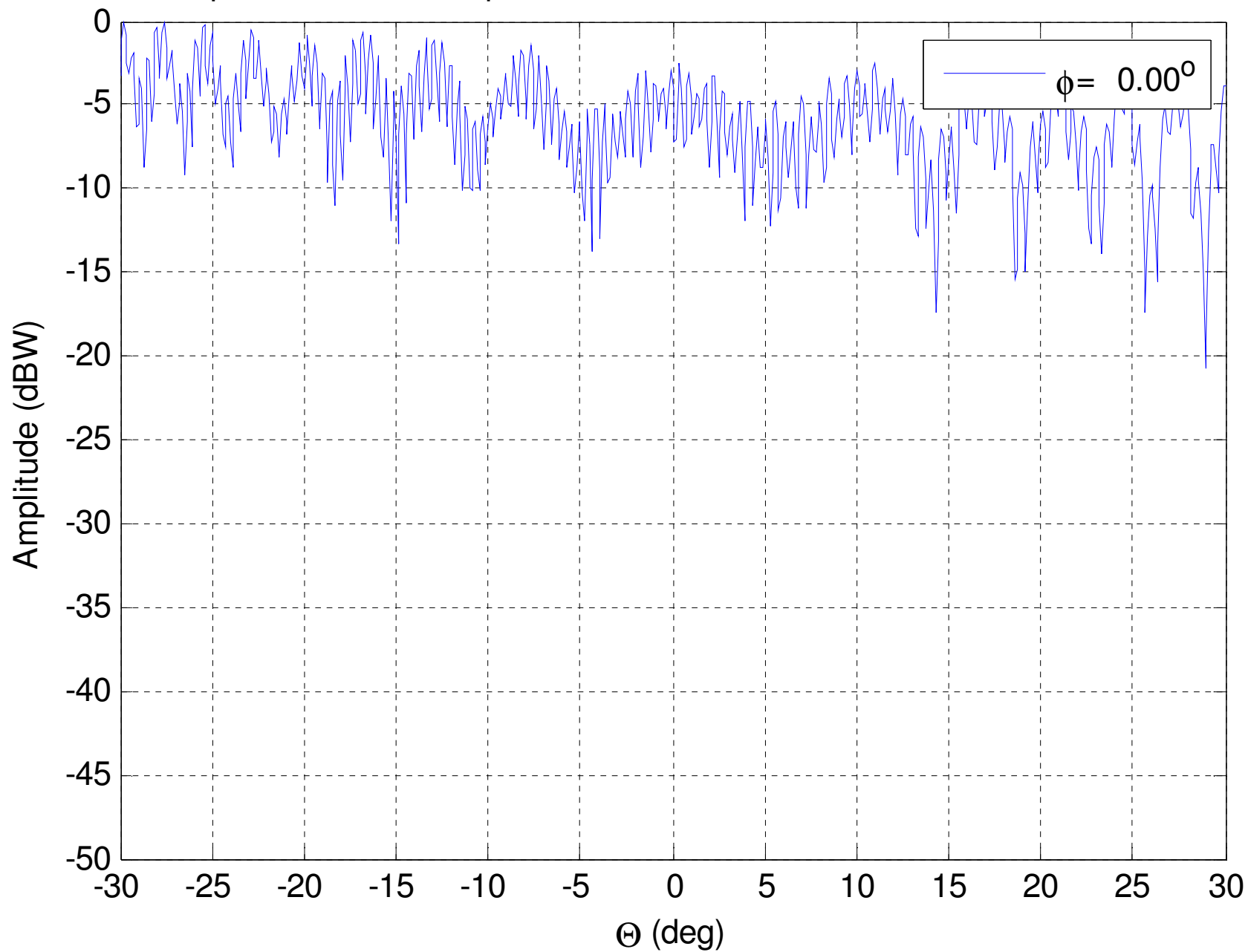
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -0.15 dBW, Date: 15-Dec-2011



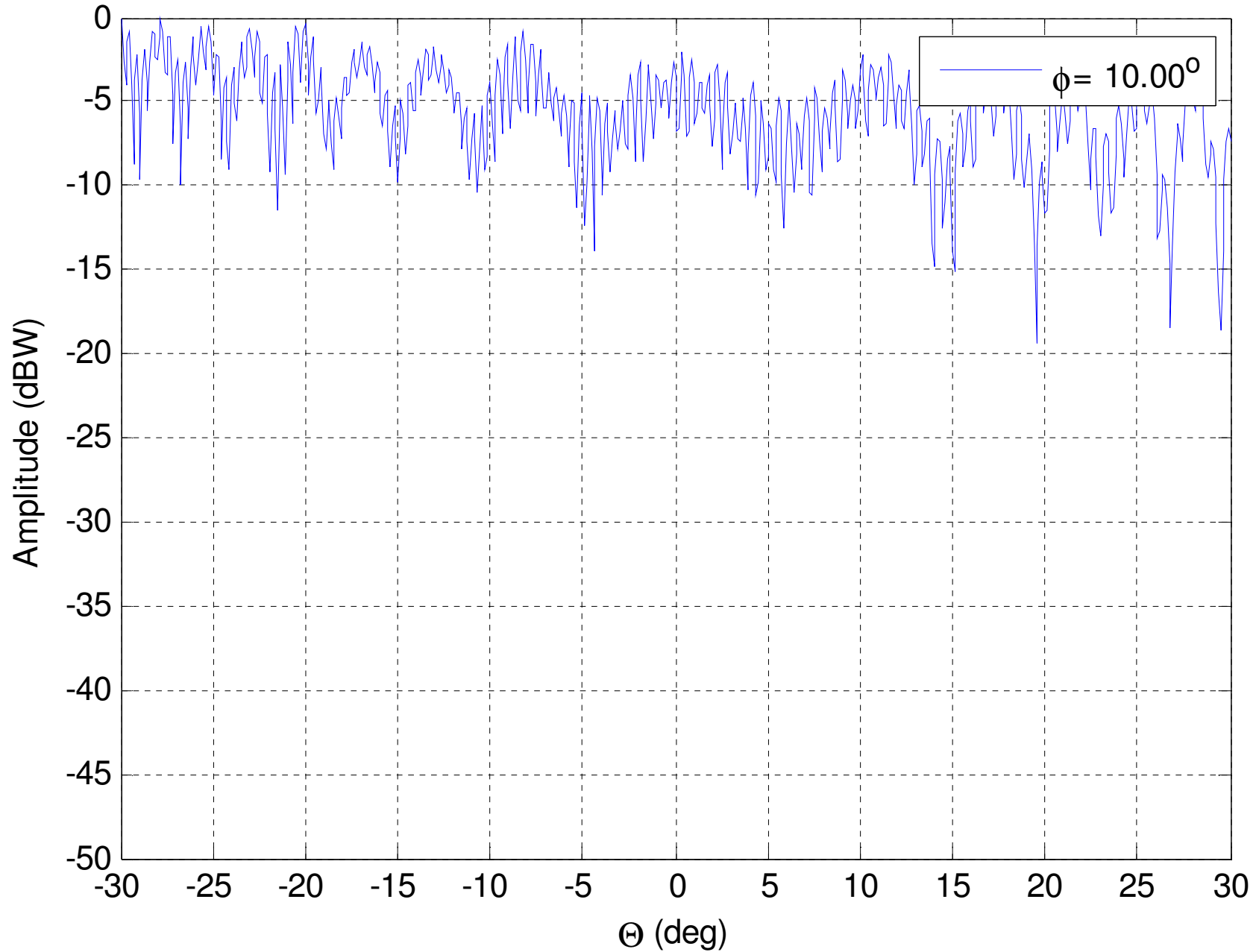
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -0.27 dBW, Date: 15-Dec-2011



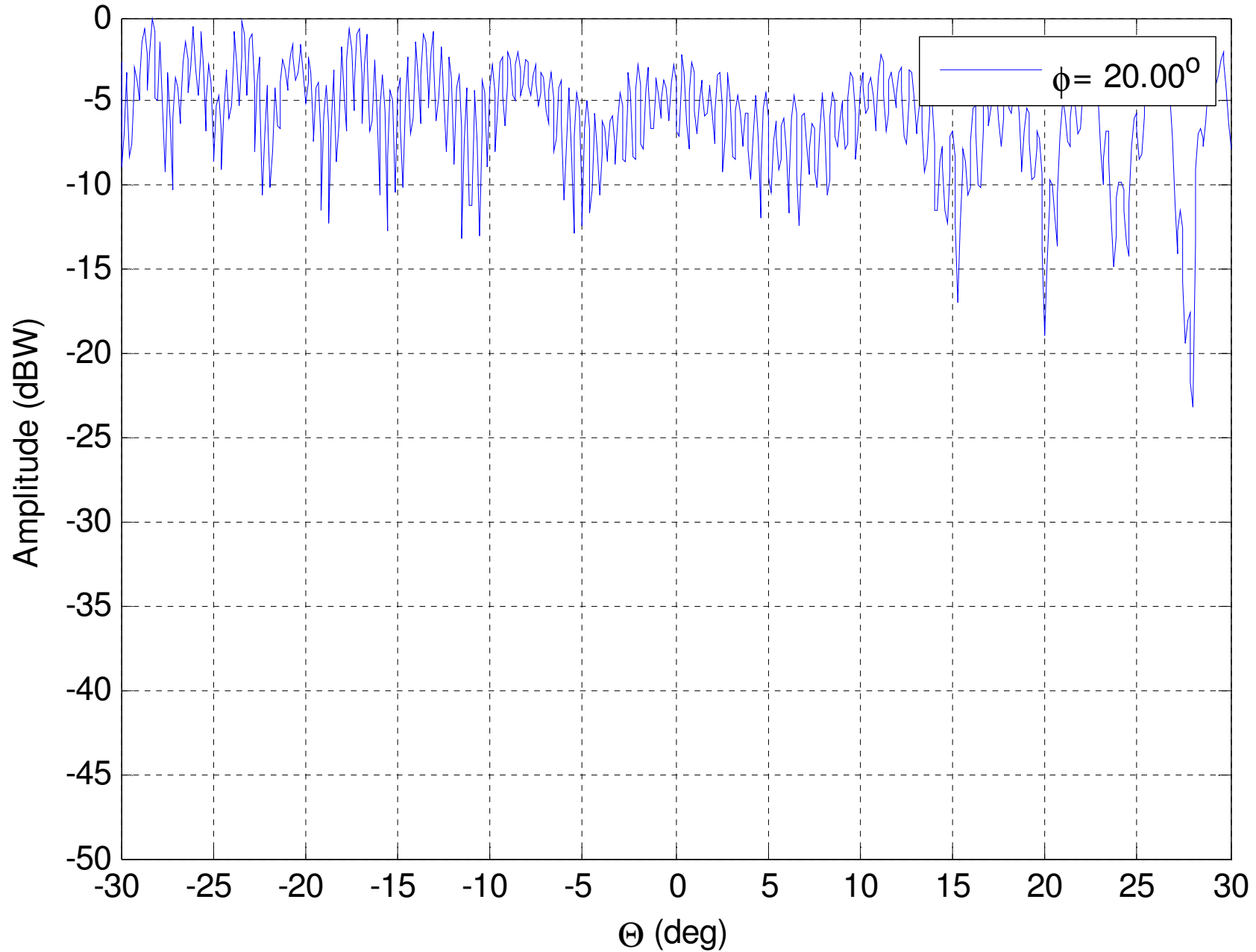
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -0.68 dBW, Date: 15-Dec-2011



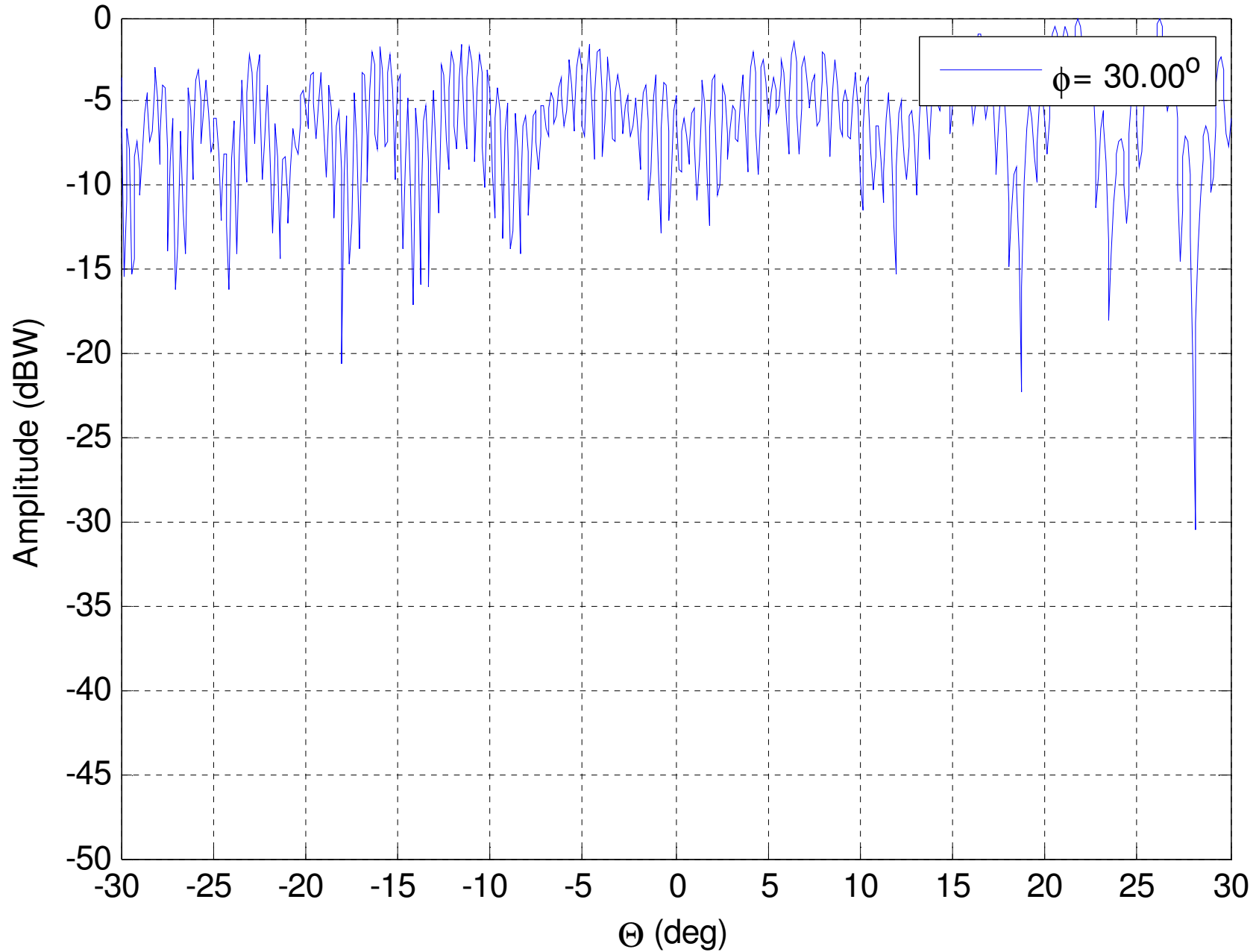
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -0.49 dBW, Date: 15-Dec-2011



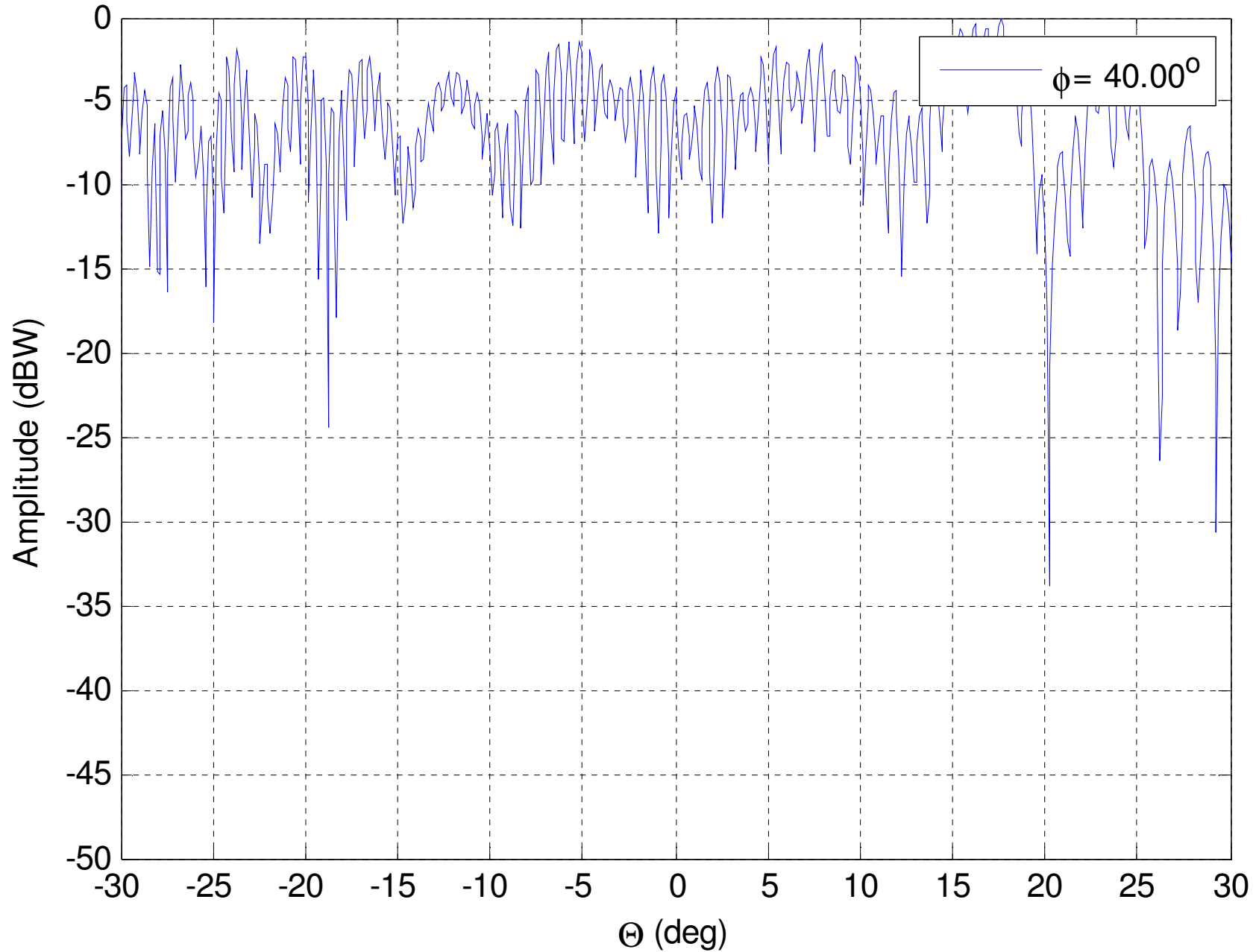
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.86 dBW, Date: 15-Dec-2011



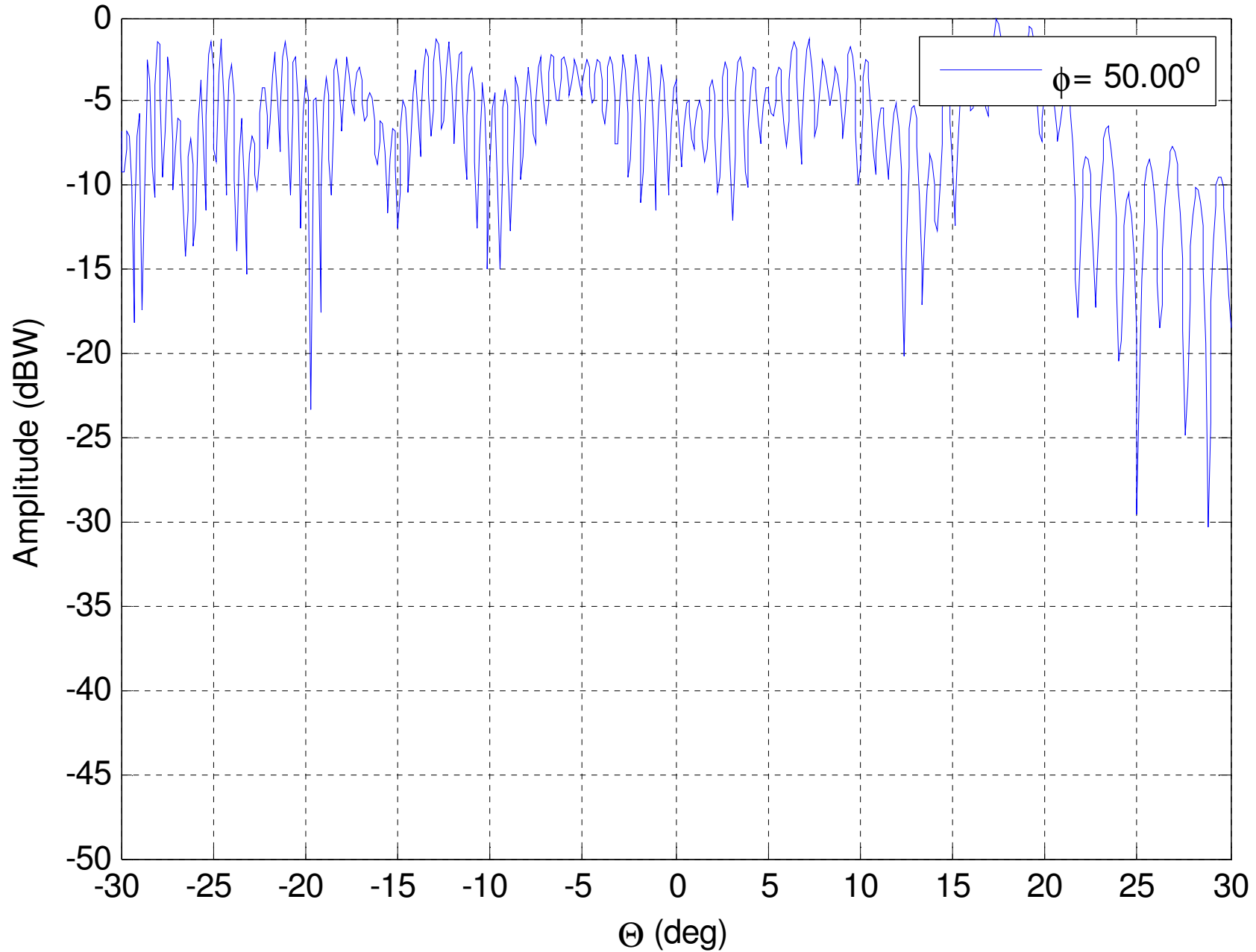
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -1.17 dBW, Date: 15-Dec-2011



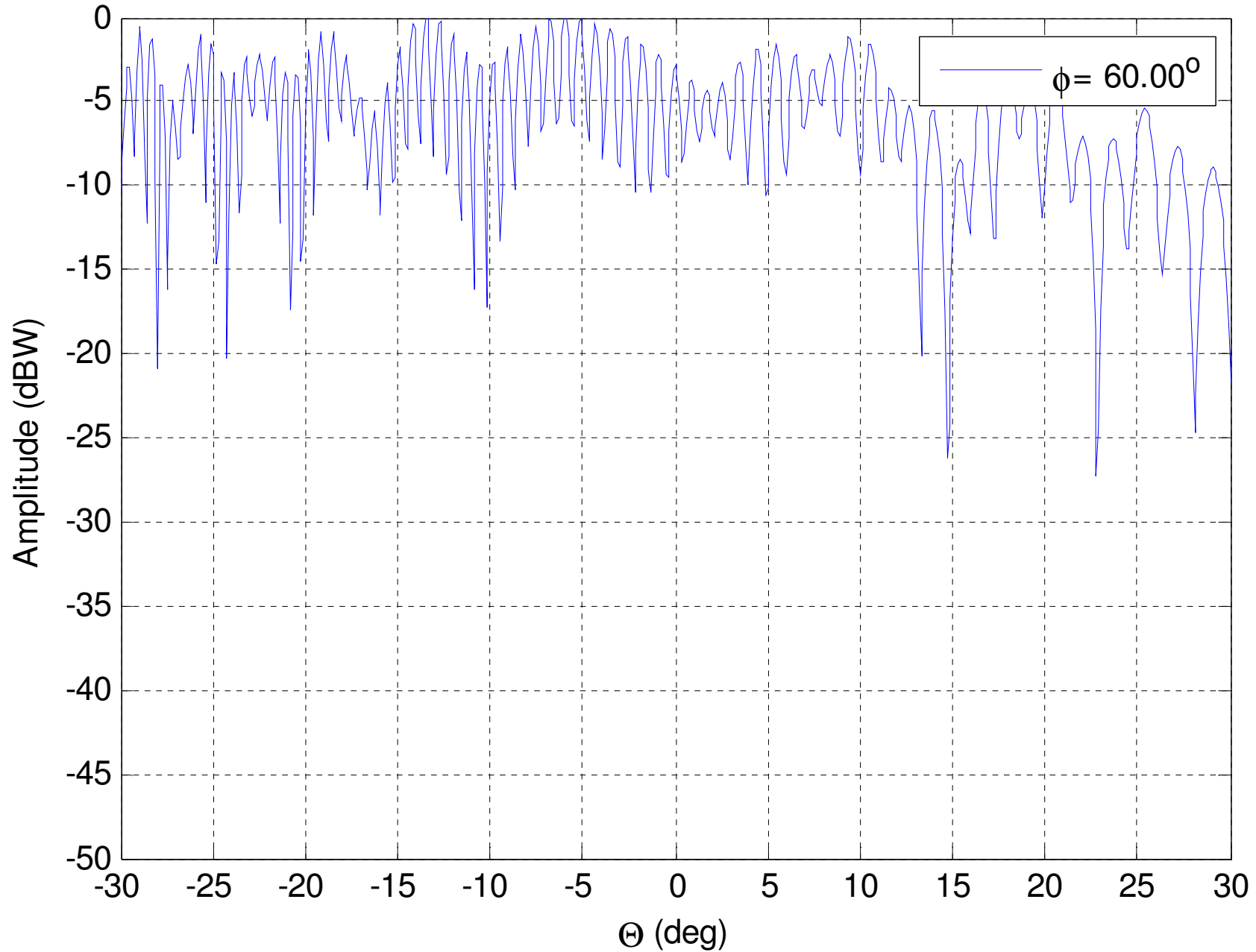
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -1.79 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

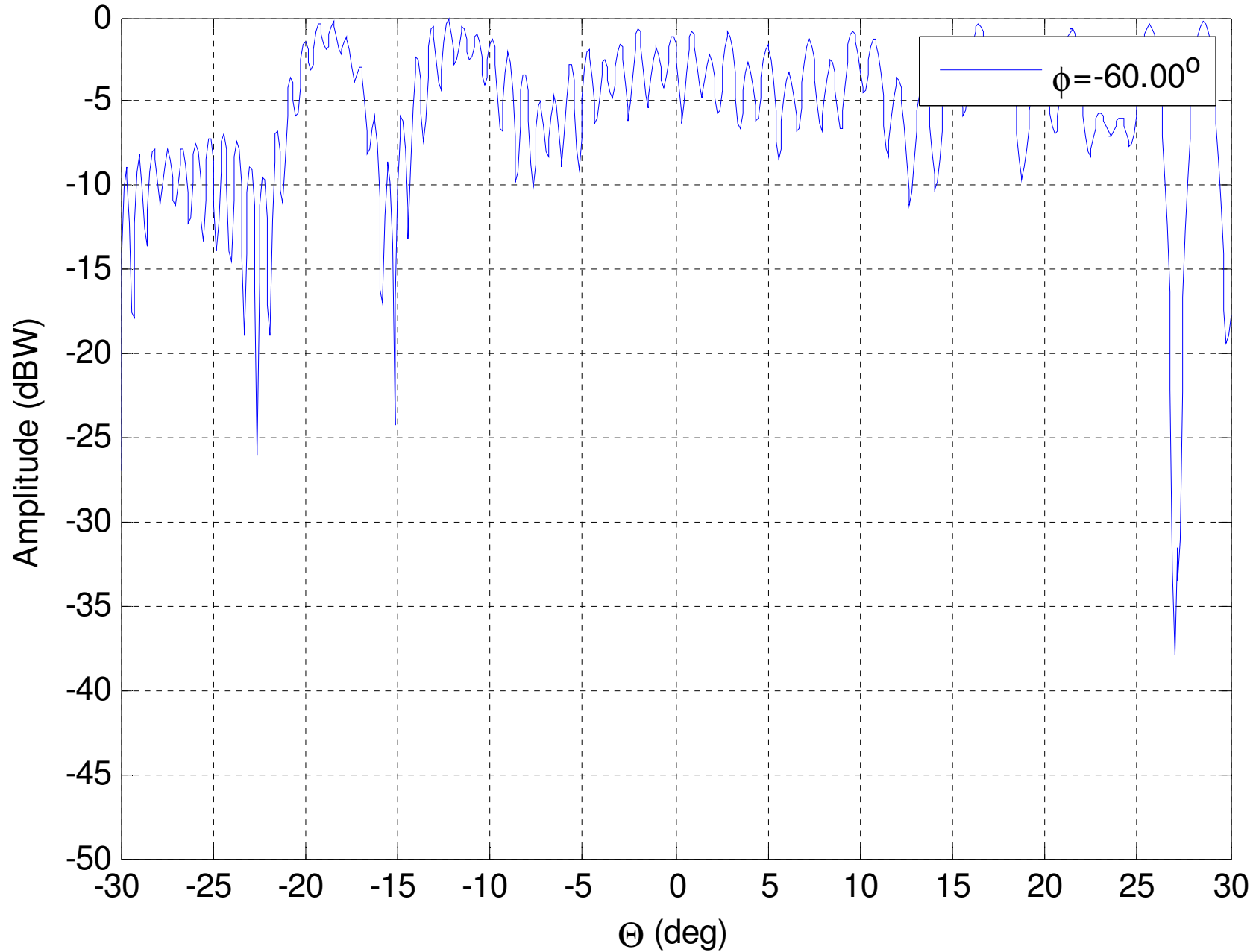
Input file: tx-17.7-rhcp-60.cut, Peak: -2.61 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

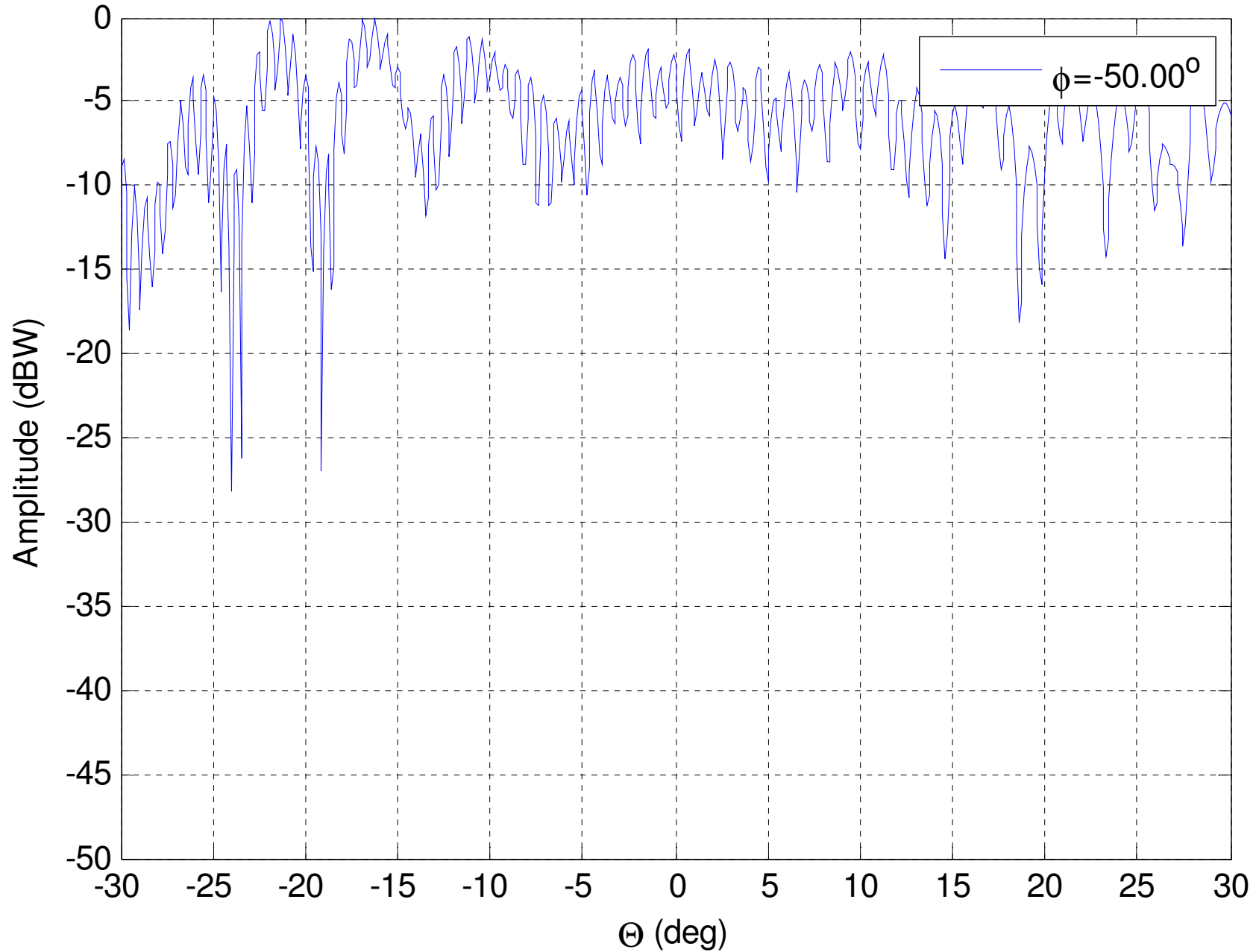
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -2.33 dBW, Date: 15-Dec-2011



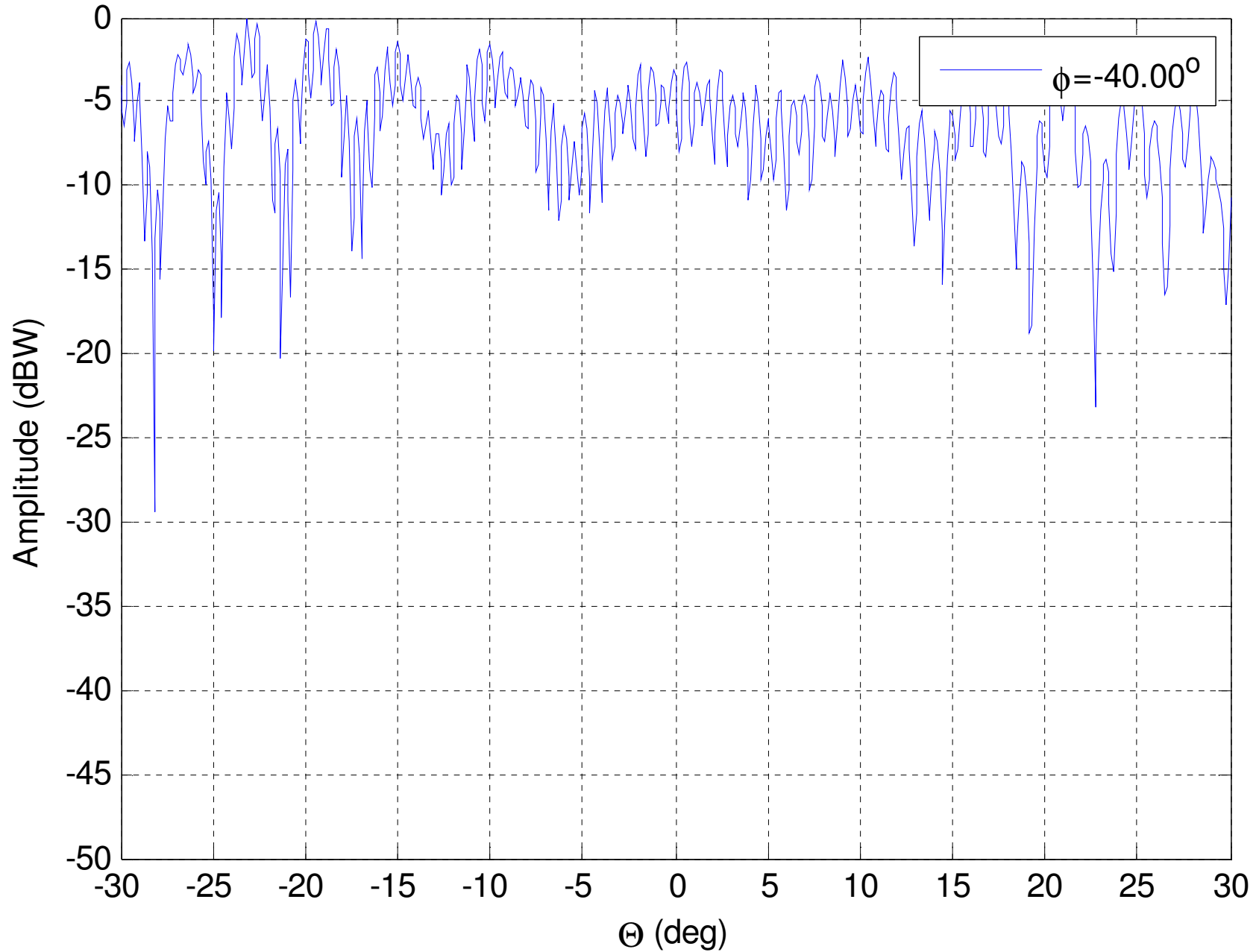
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -1.15 dBW, Date: 15-Dec-2011



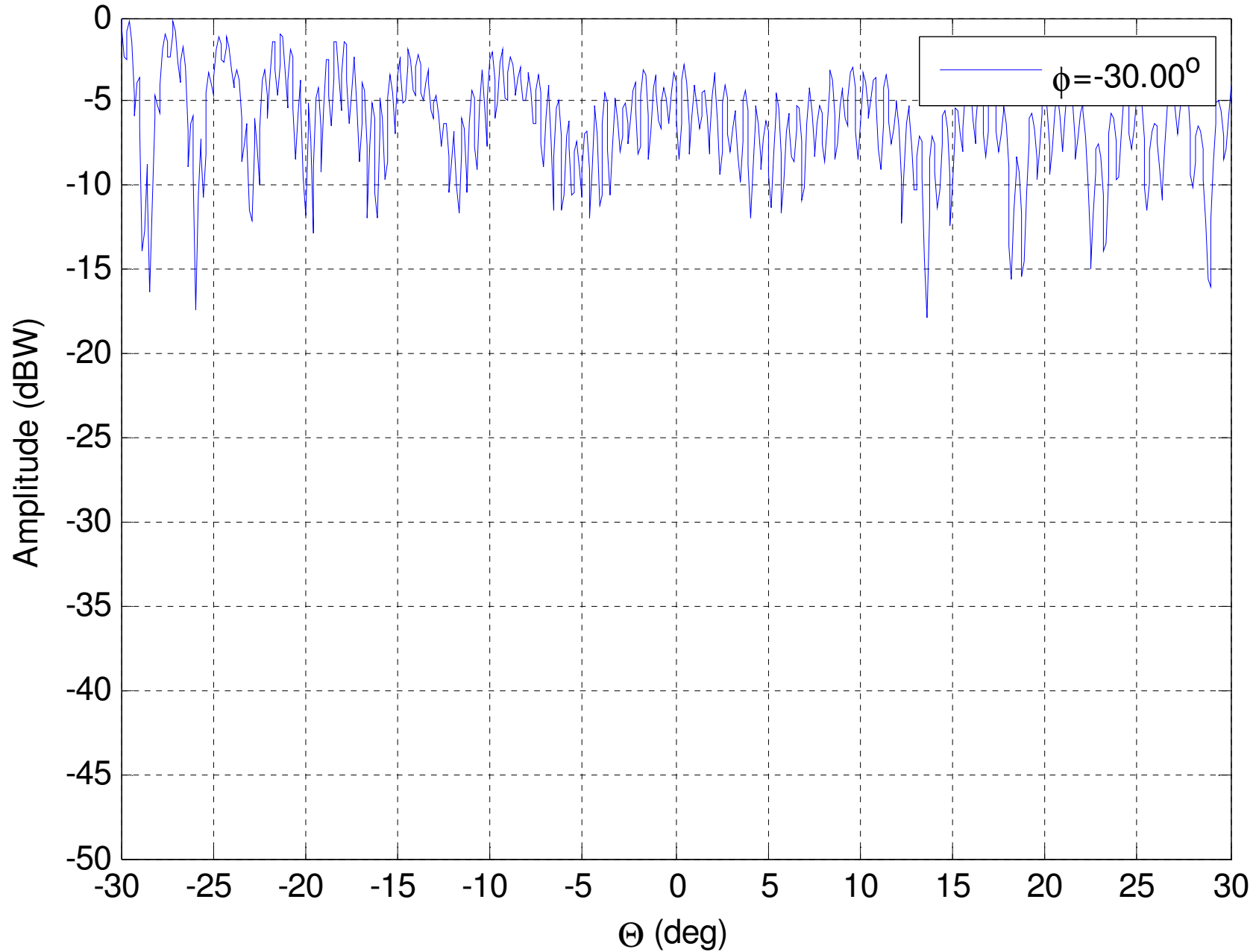
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -0.31 dBW, Date: 15-Dec-2011



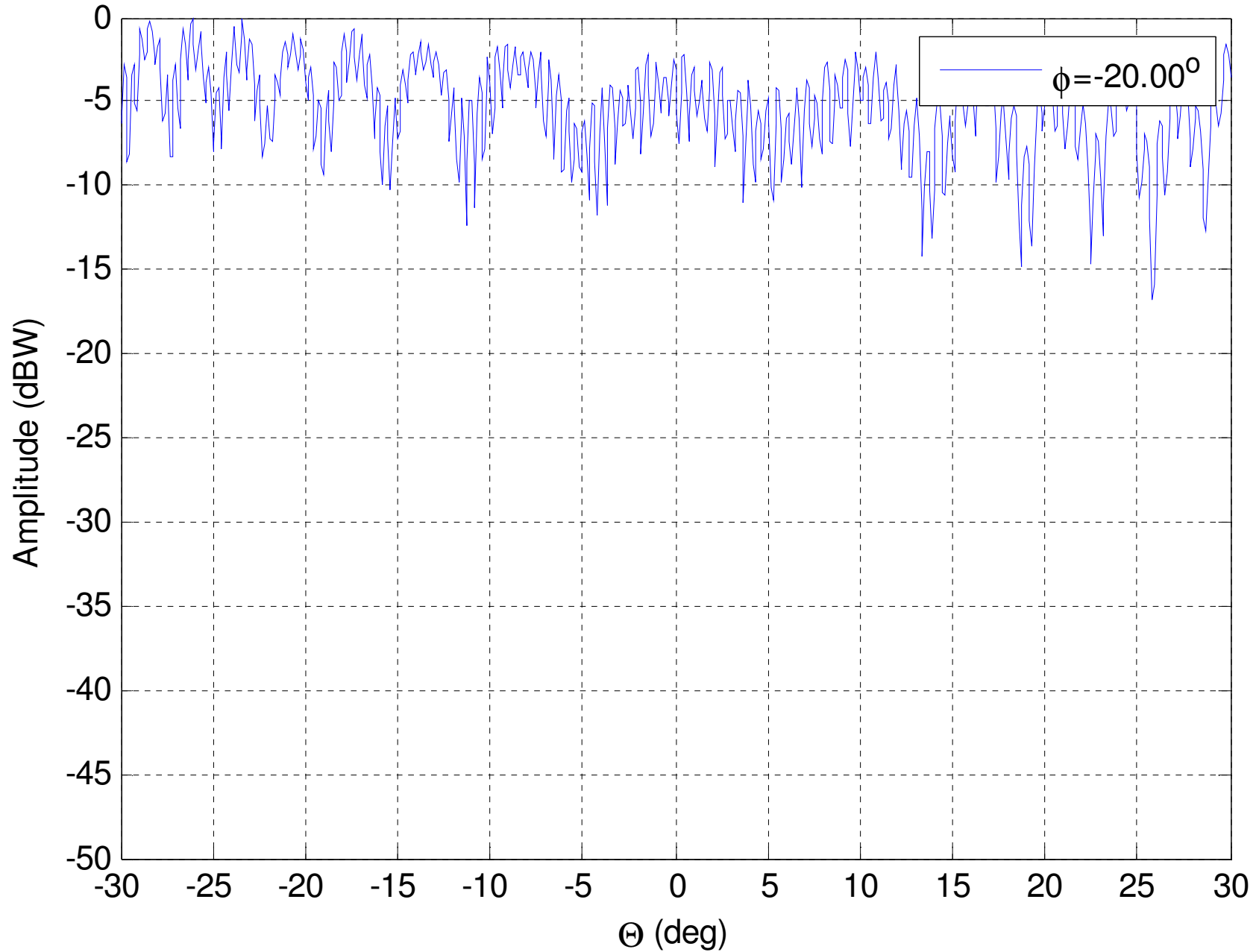
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -0.05 dBW, Date: 15-Dec-2011



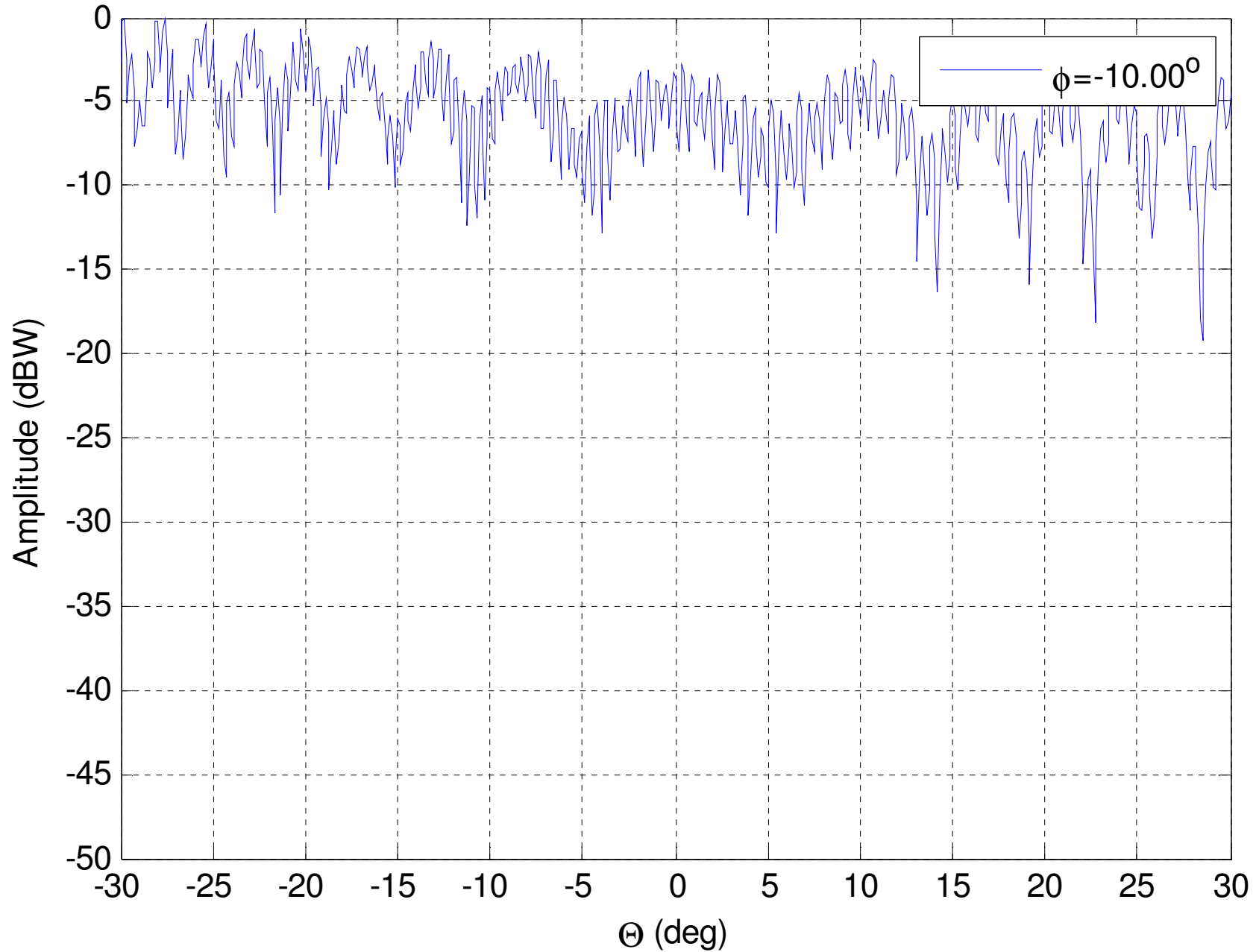
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -0.87 dBW, Date: 15-Dec-2011



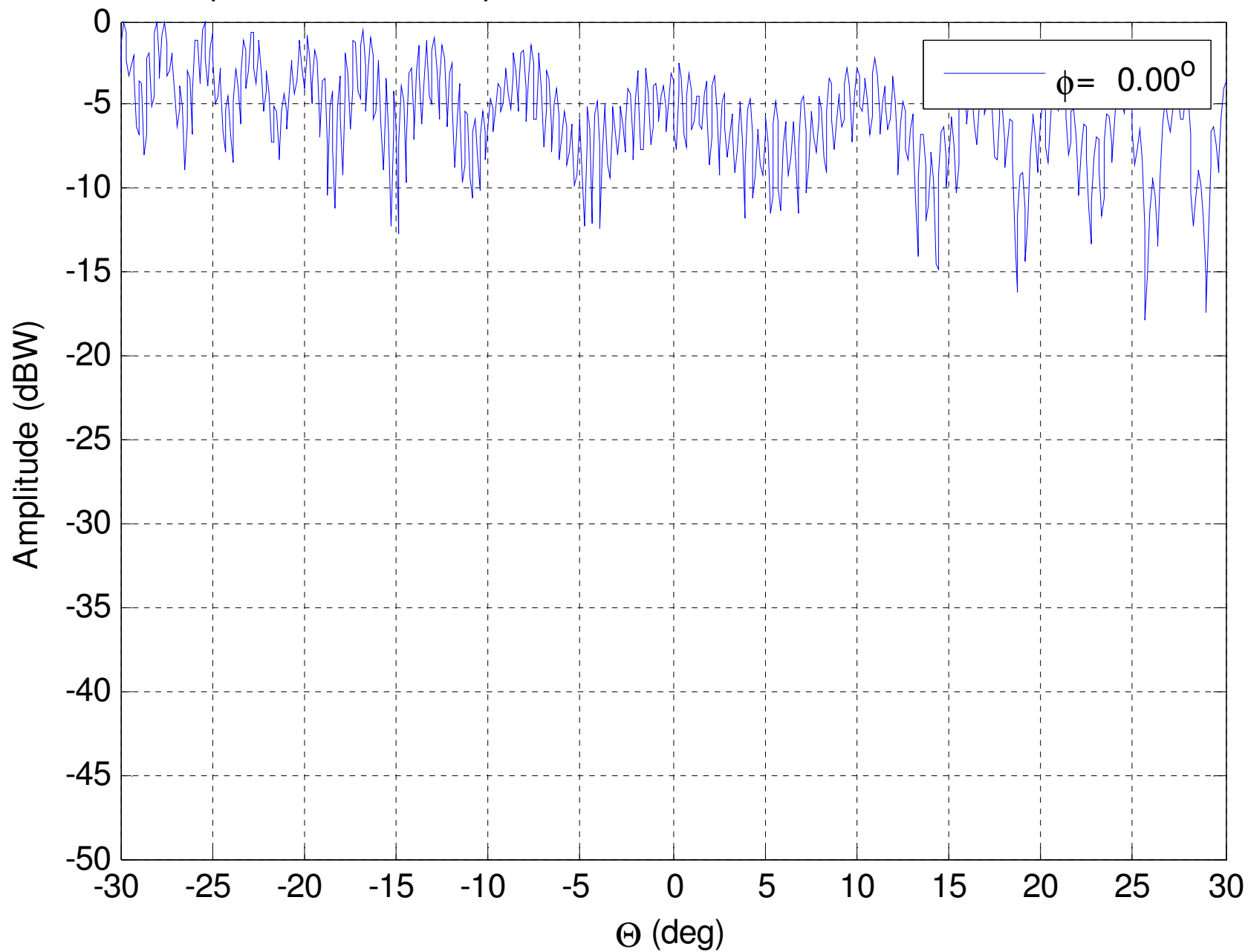
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -0.21 dBW, Date: 15-Dec-2011



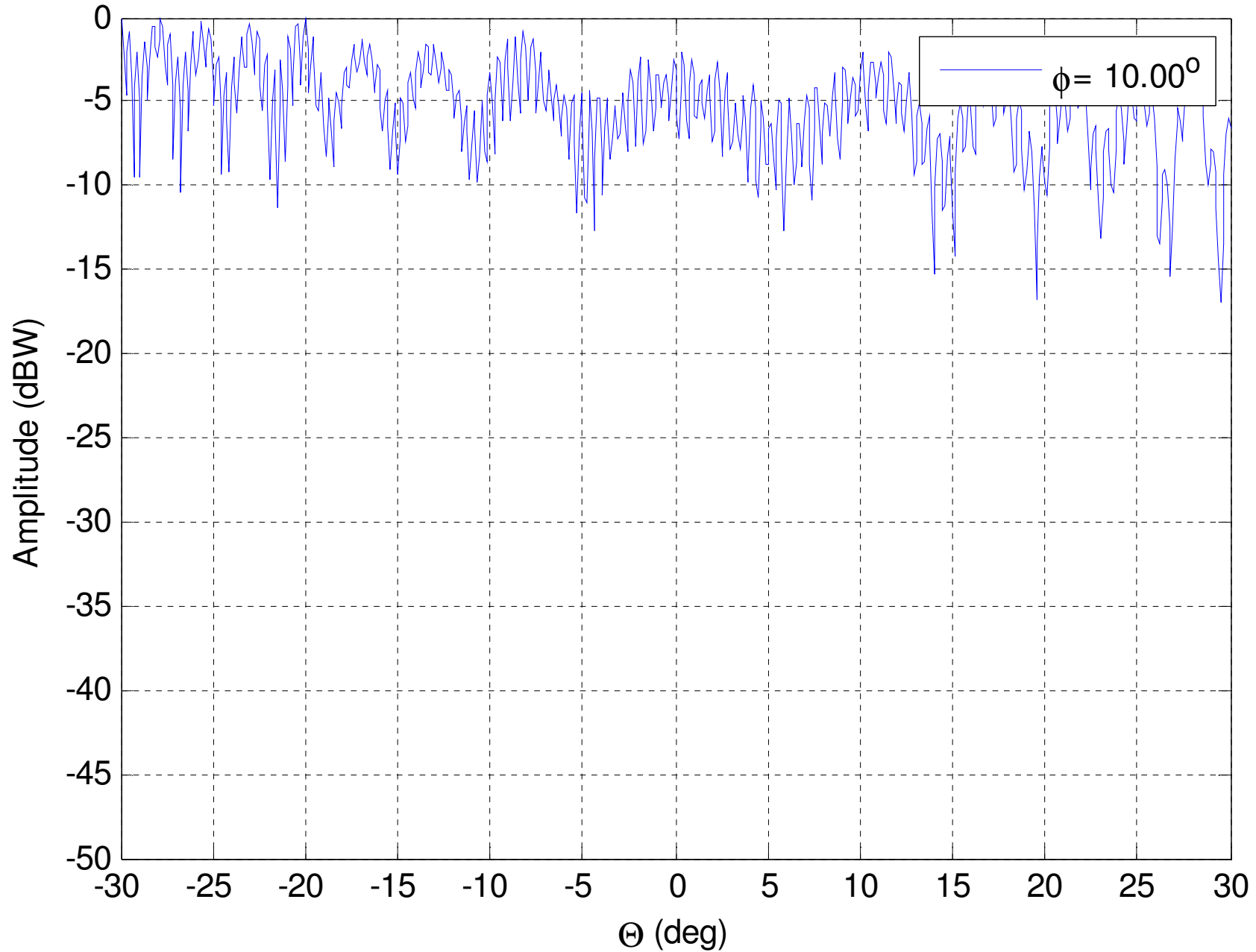
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -0.34 dBW, Date: 15-Dec-2011



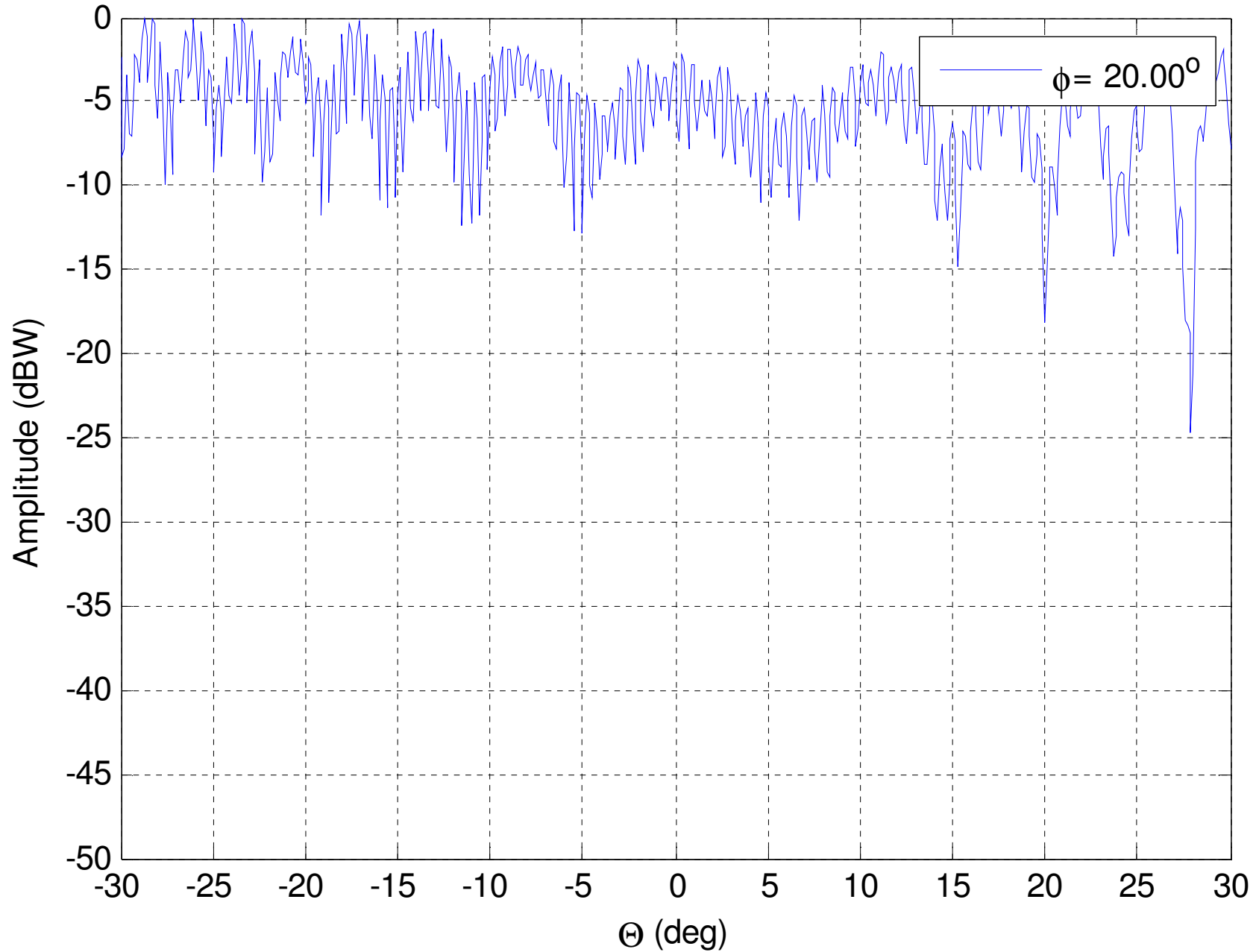
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -0.85 dBW, Date: 15-Dec-2011



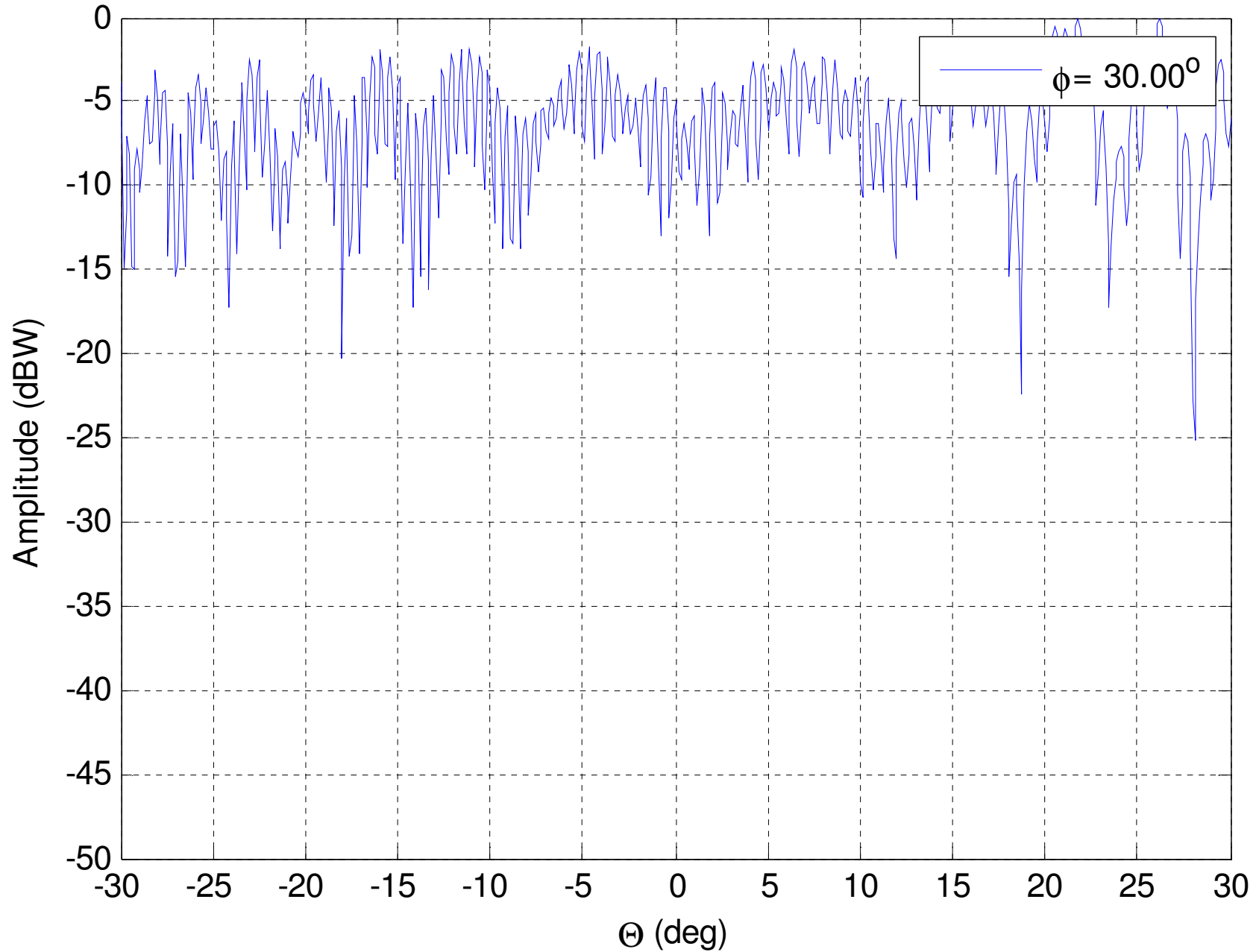
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -0.78 dBW, Date: 15-Dec-2011



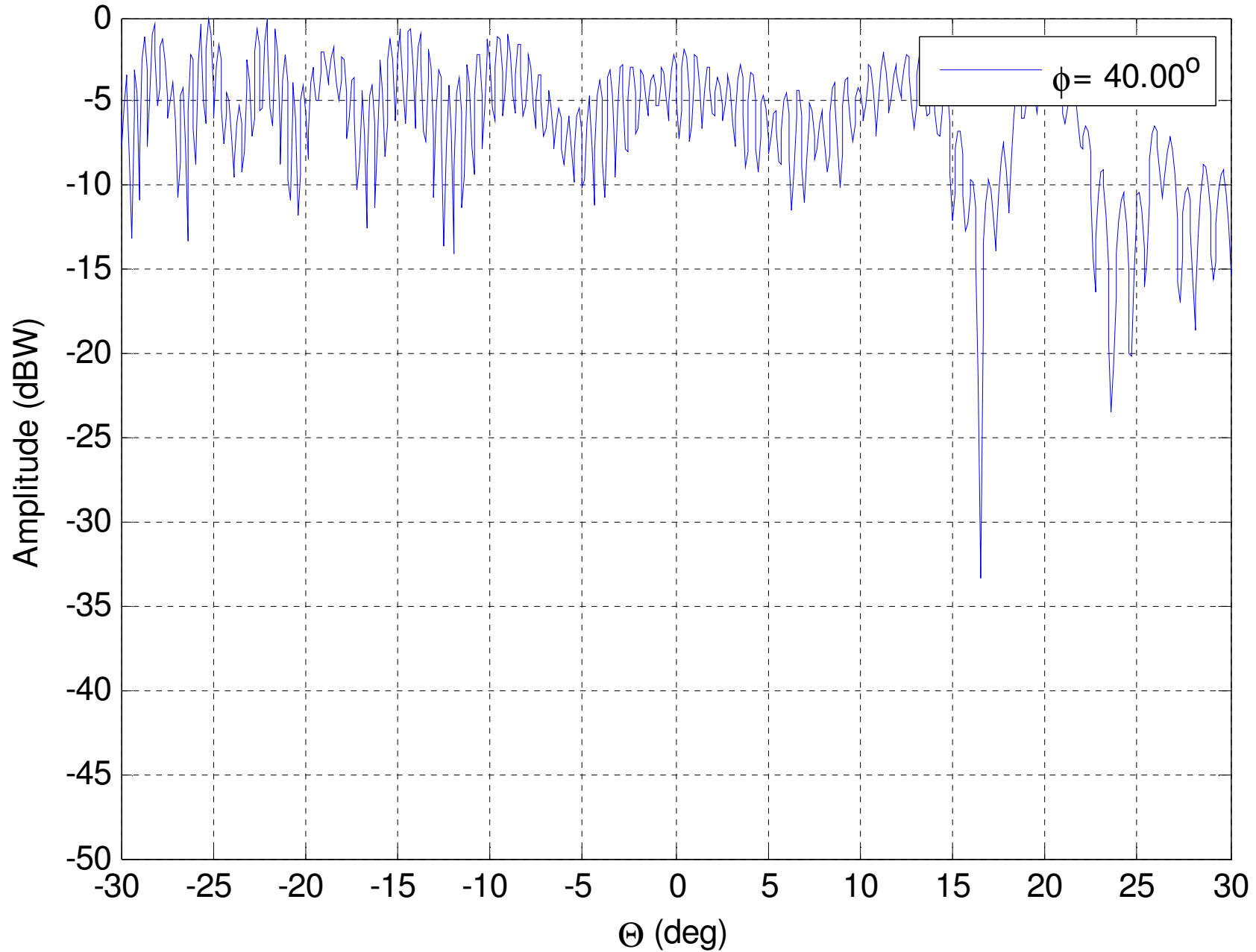
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.63 dBW, Date: 15-Dec-2011



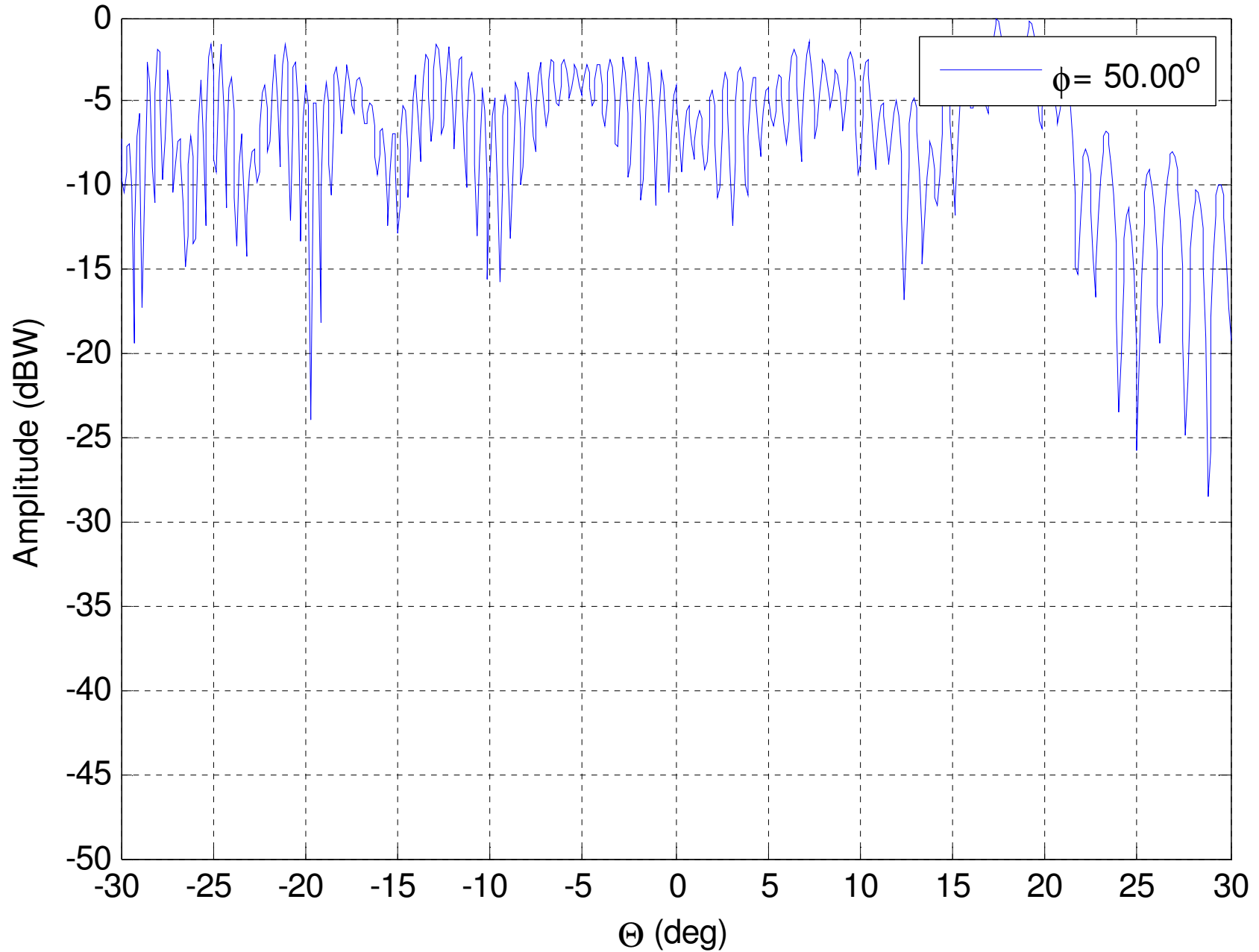
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -1.03 dBW, Date: 15-Dec-2011



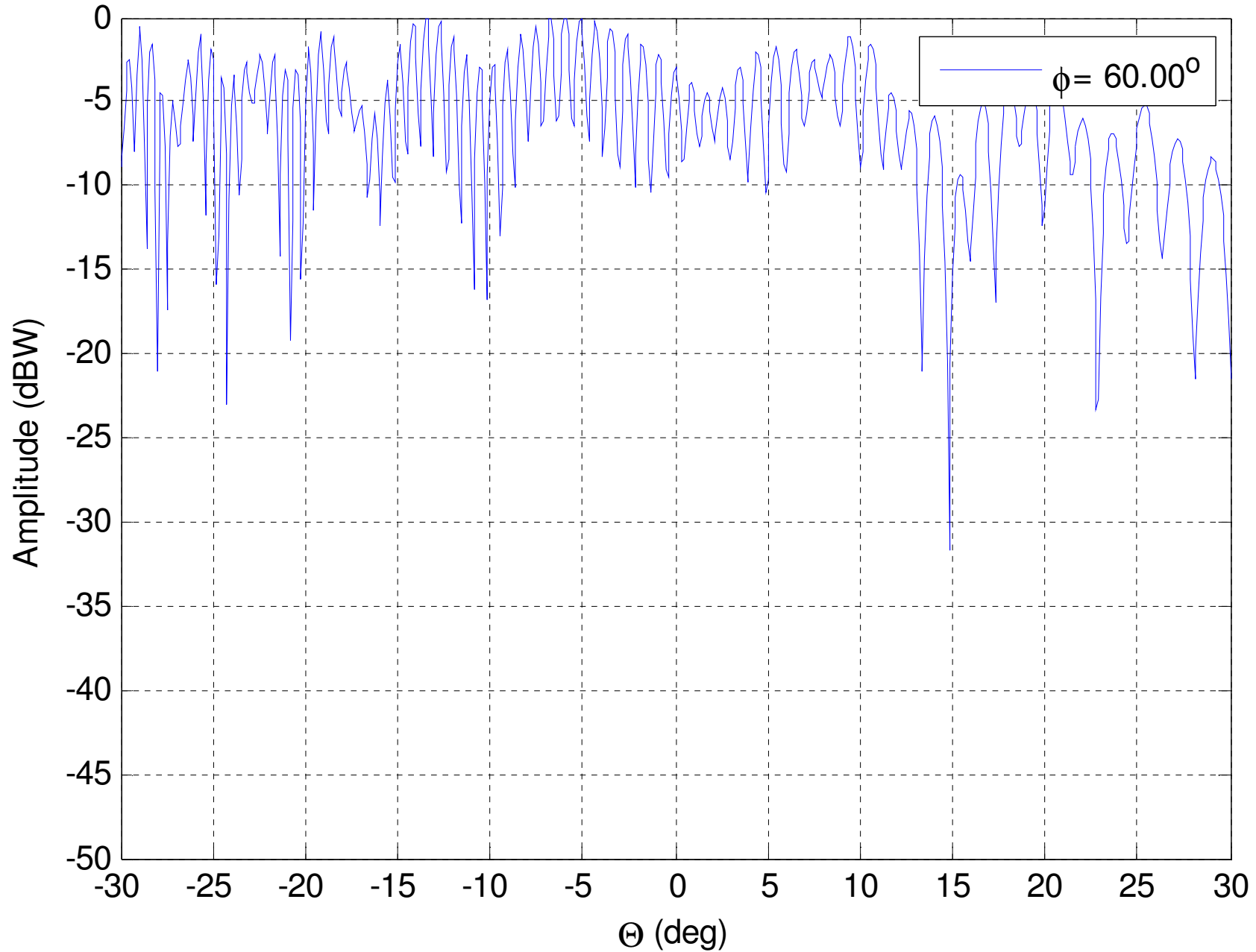
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -1.42 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -2.58 dBW, Date: 15-Dec-2011



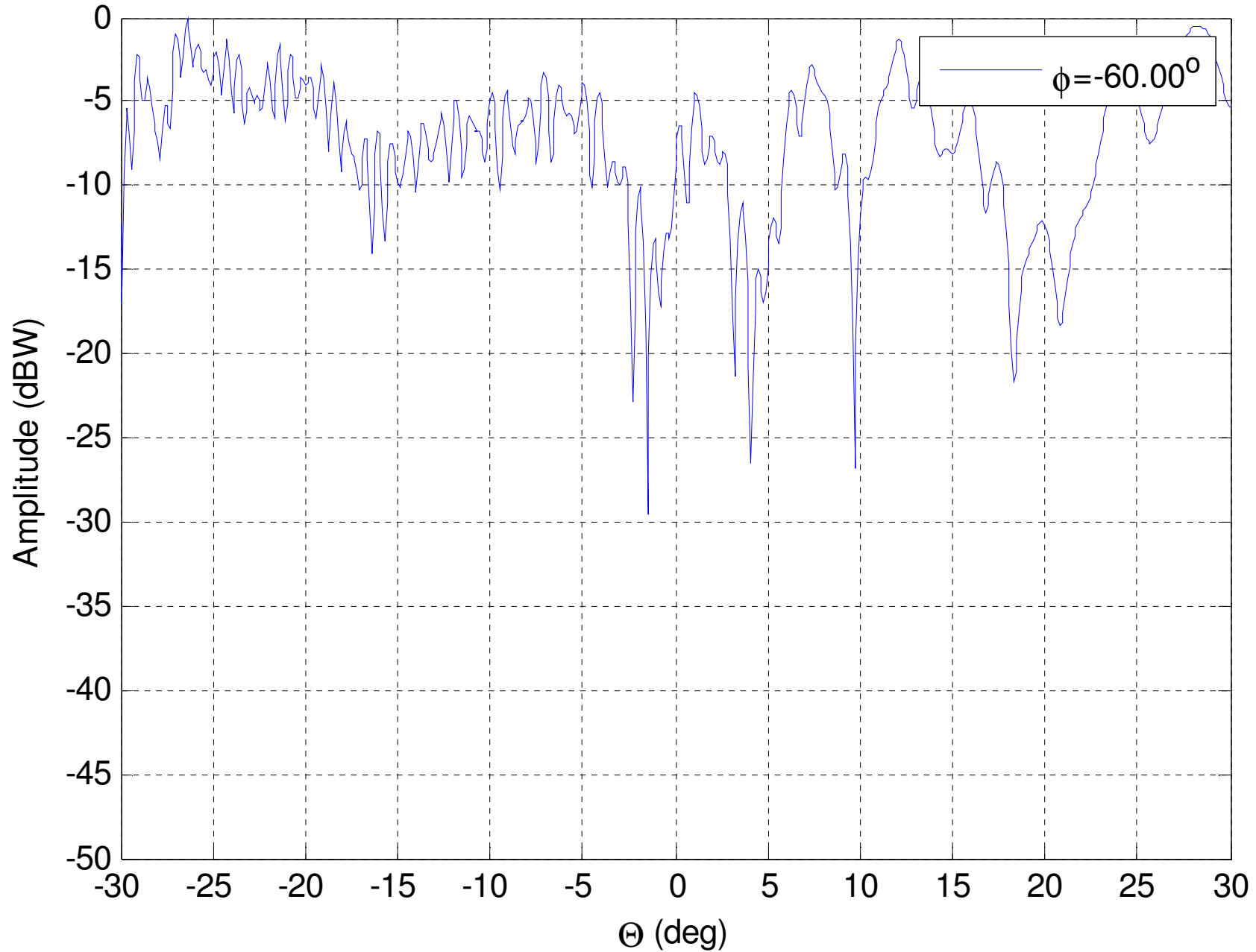
Spot Beam28, +X Axis Plots

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

RHCP at 17.3 GHz

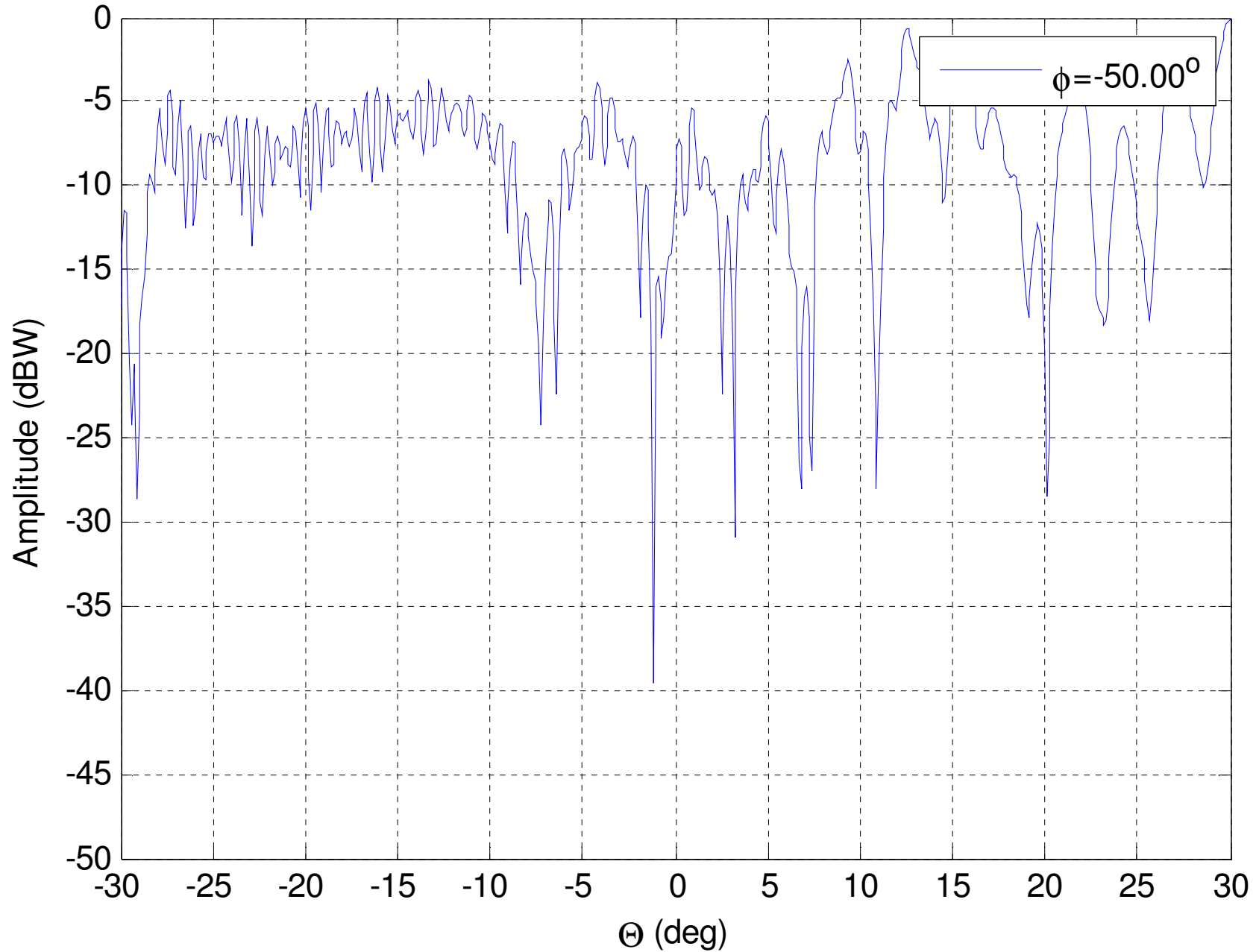
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -5.57 dBW, Date: 15-Dec-2011



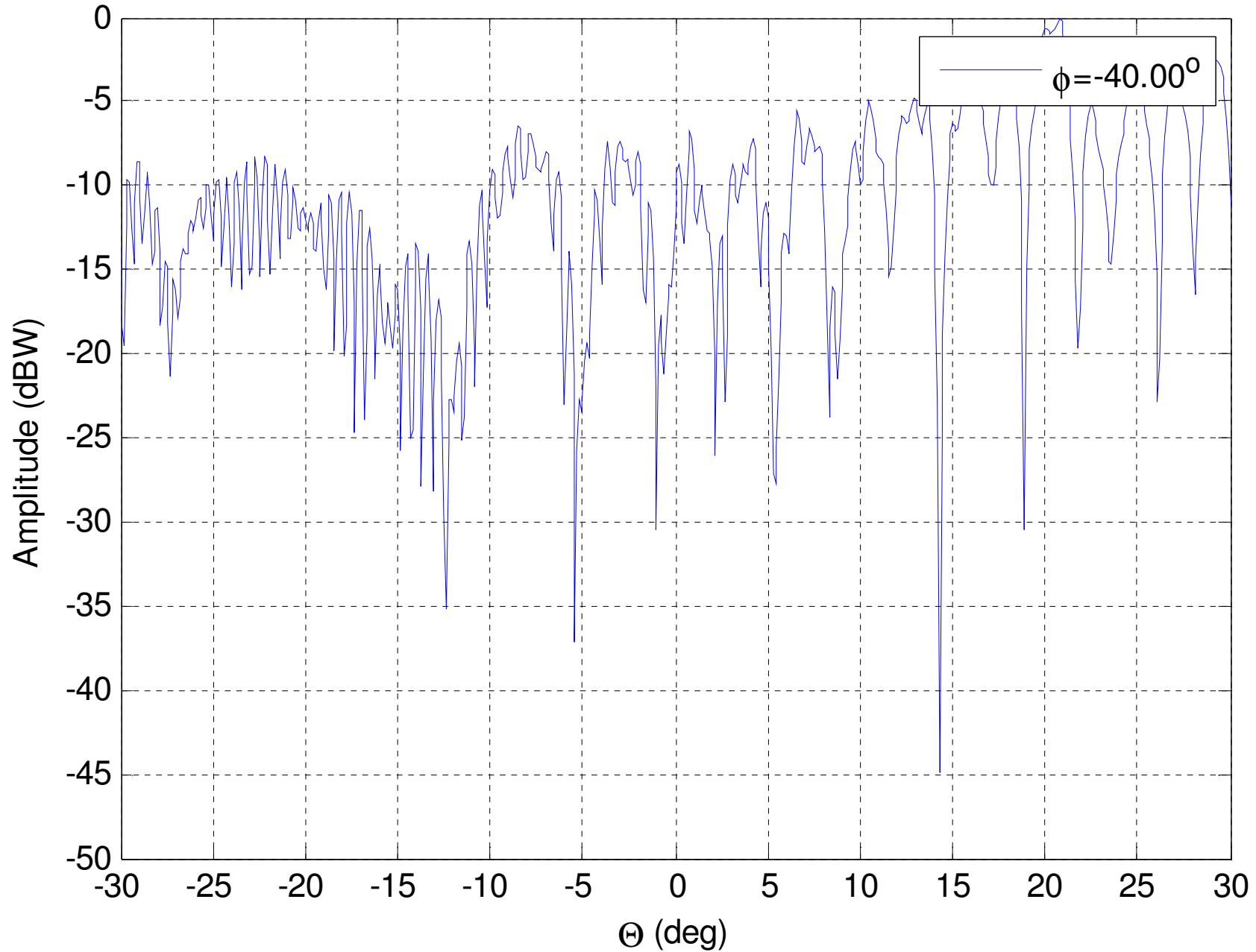
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -4.69 dBW, Date: 15-Dec-2011



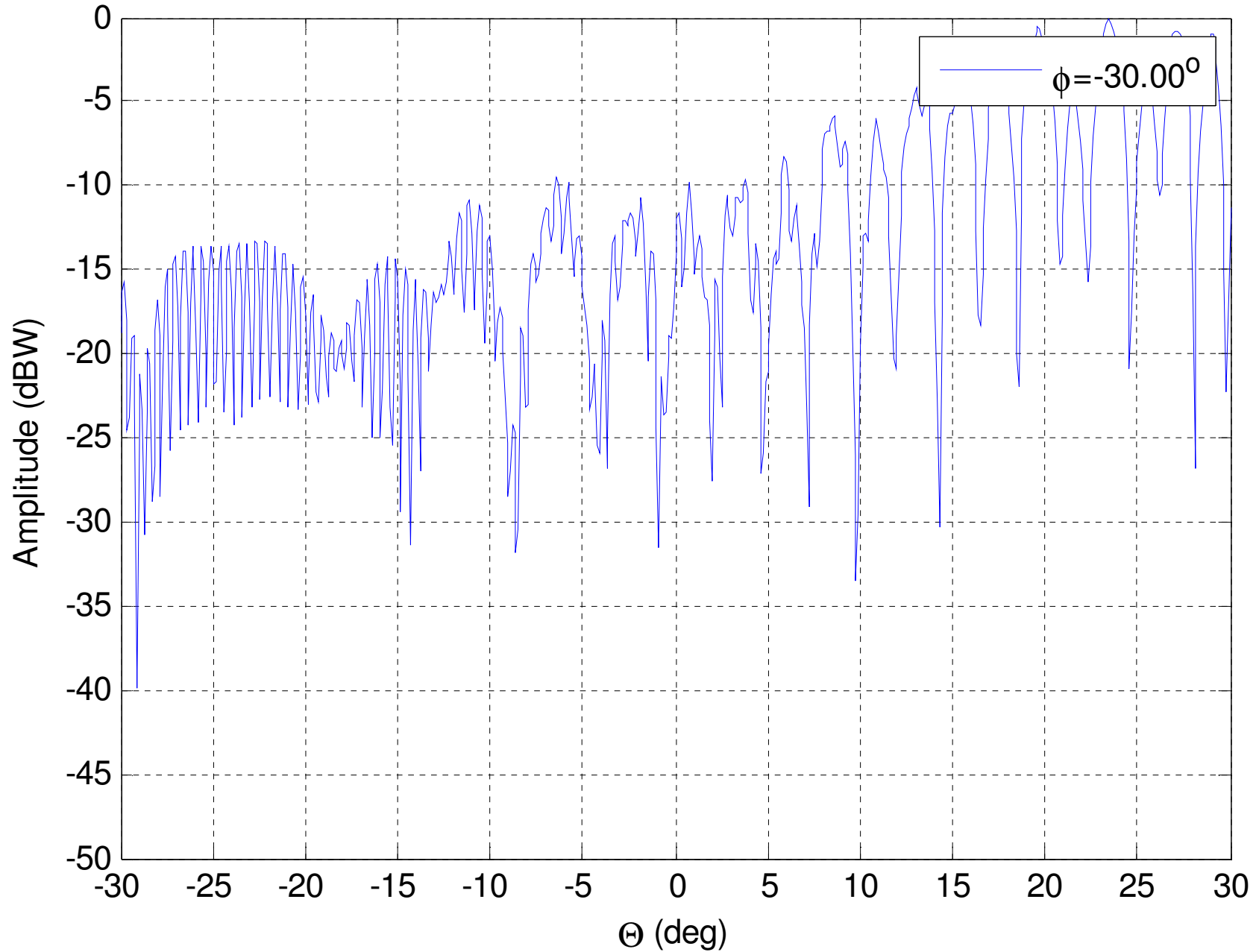
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -3.18 dBW, Date: 15-Dec-2011



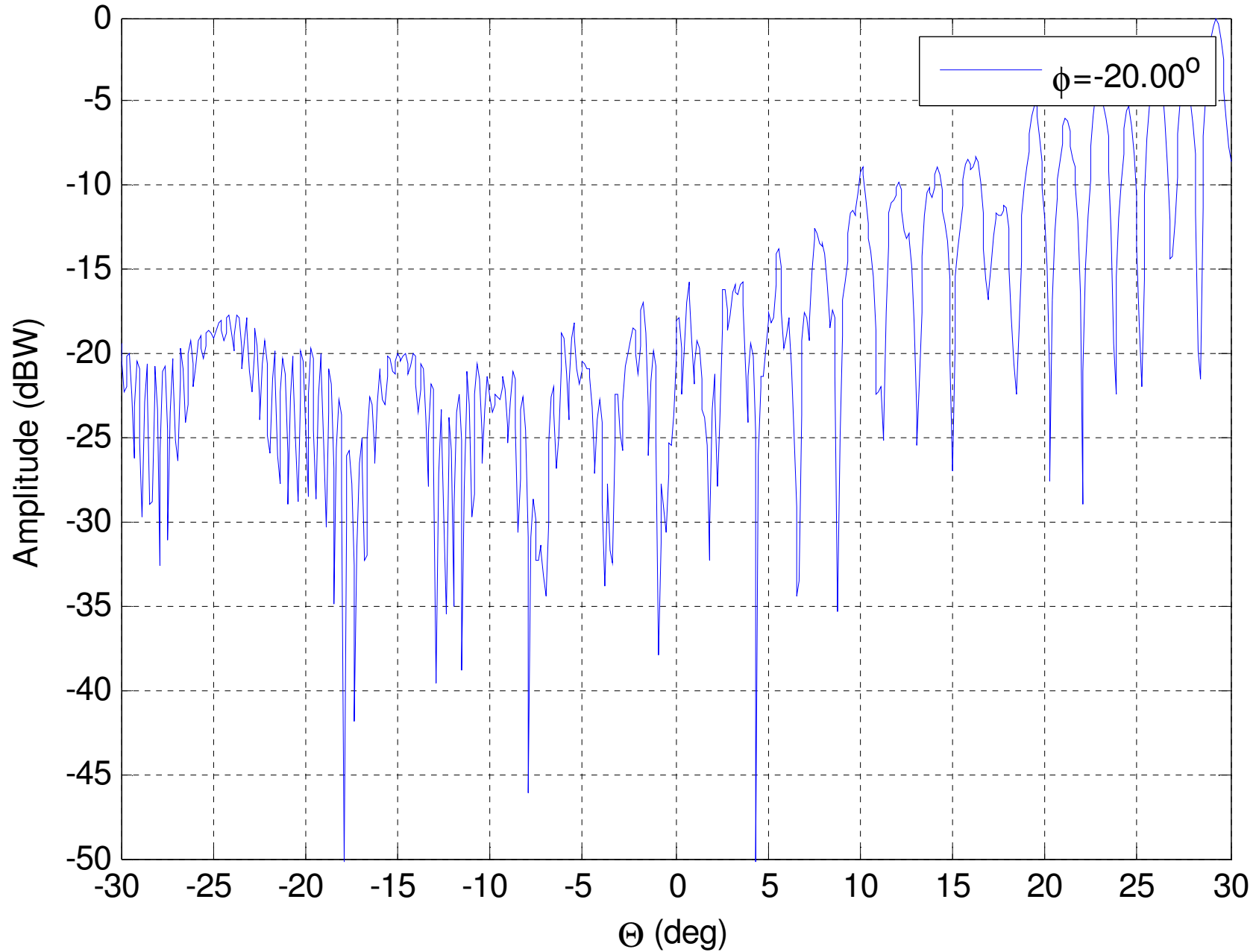
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -0.30 dBW, Date: 15-Dec-2011



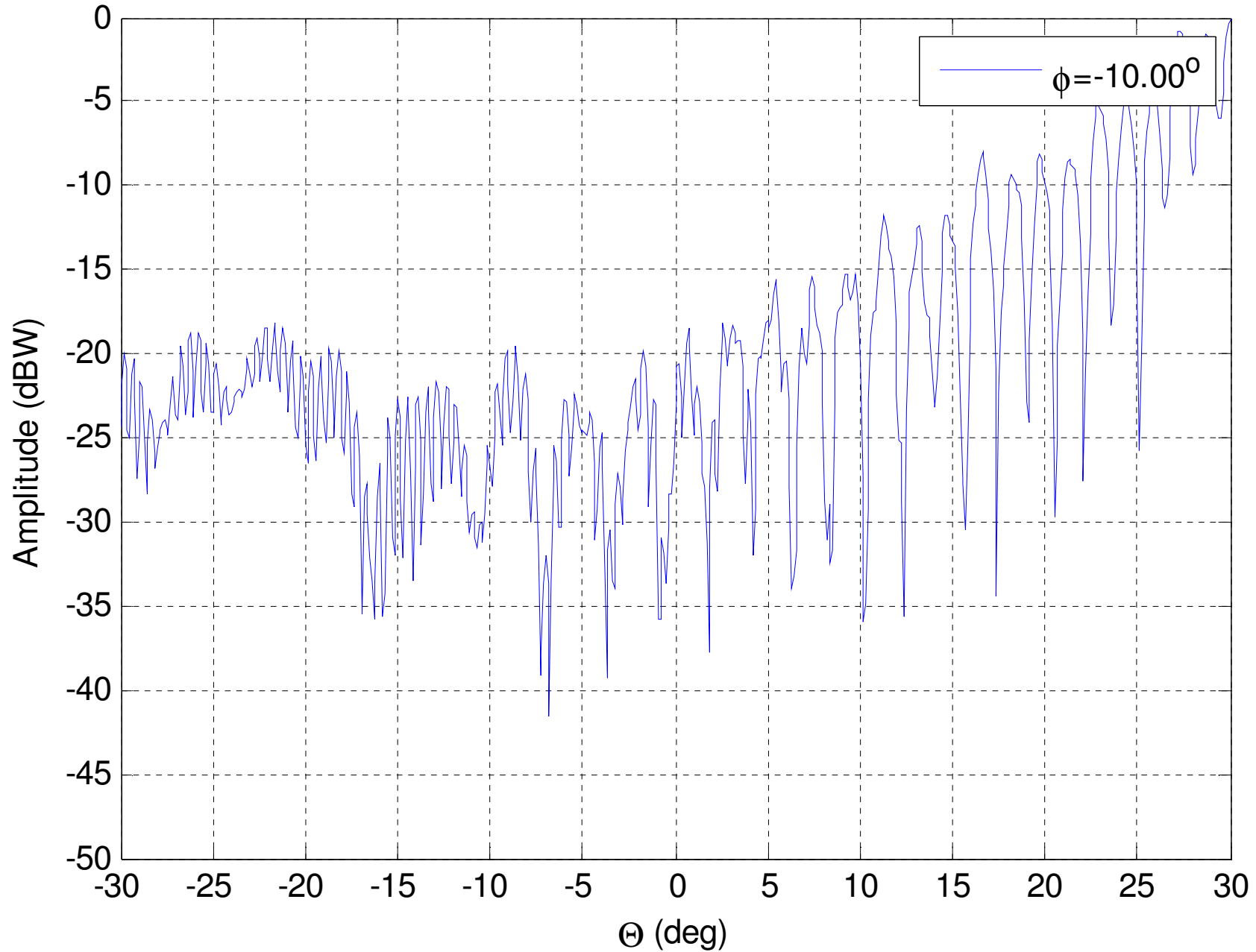
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 5.85 dBW, Date: 15-Dec-2011



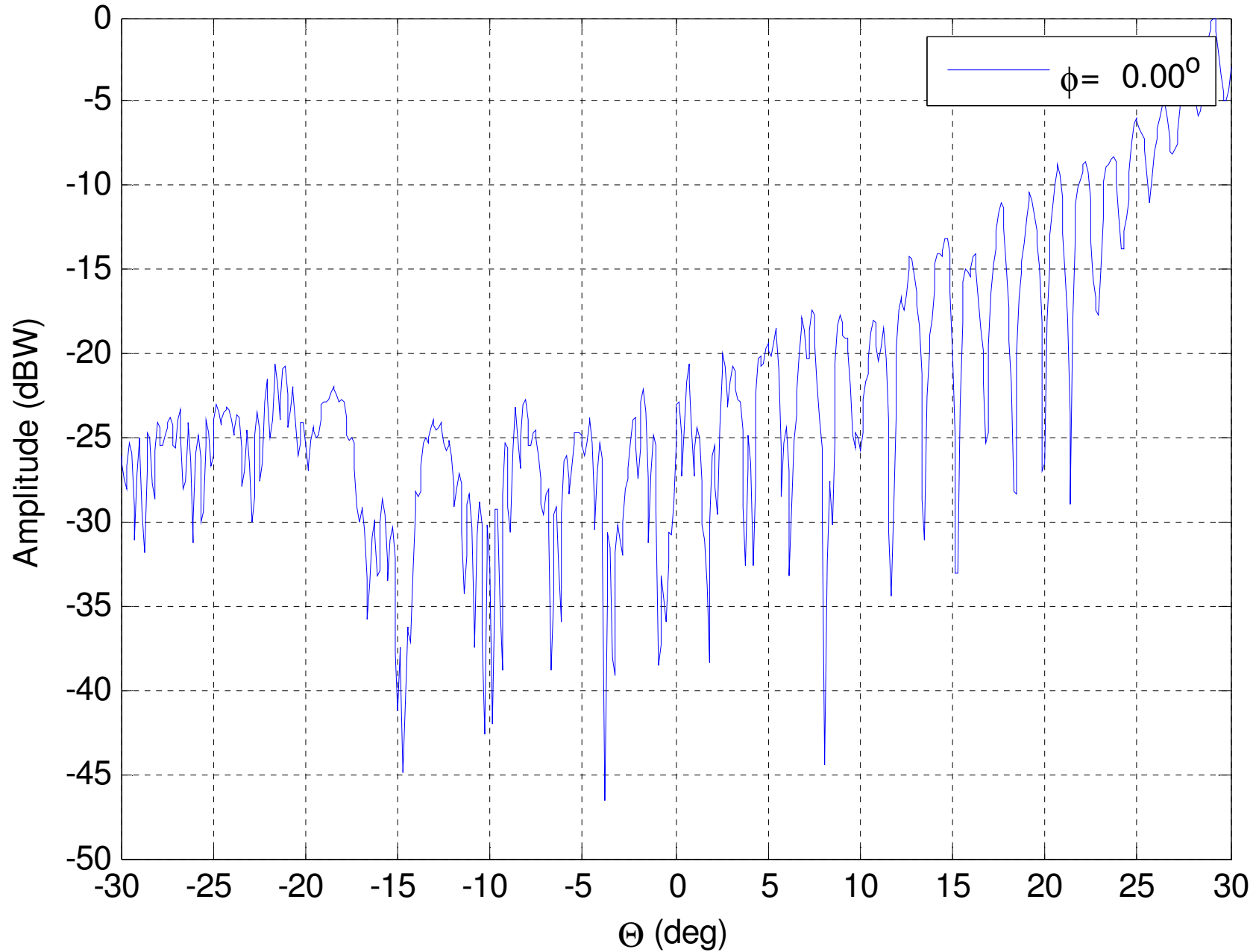
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 8.60 dBW, Date: 15-Dec-2011



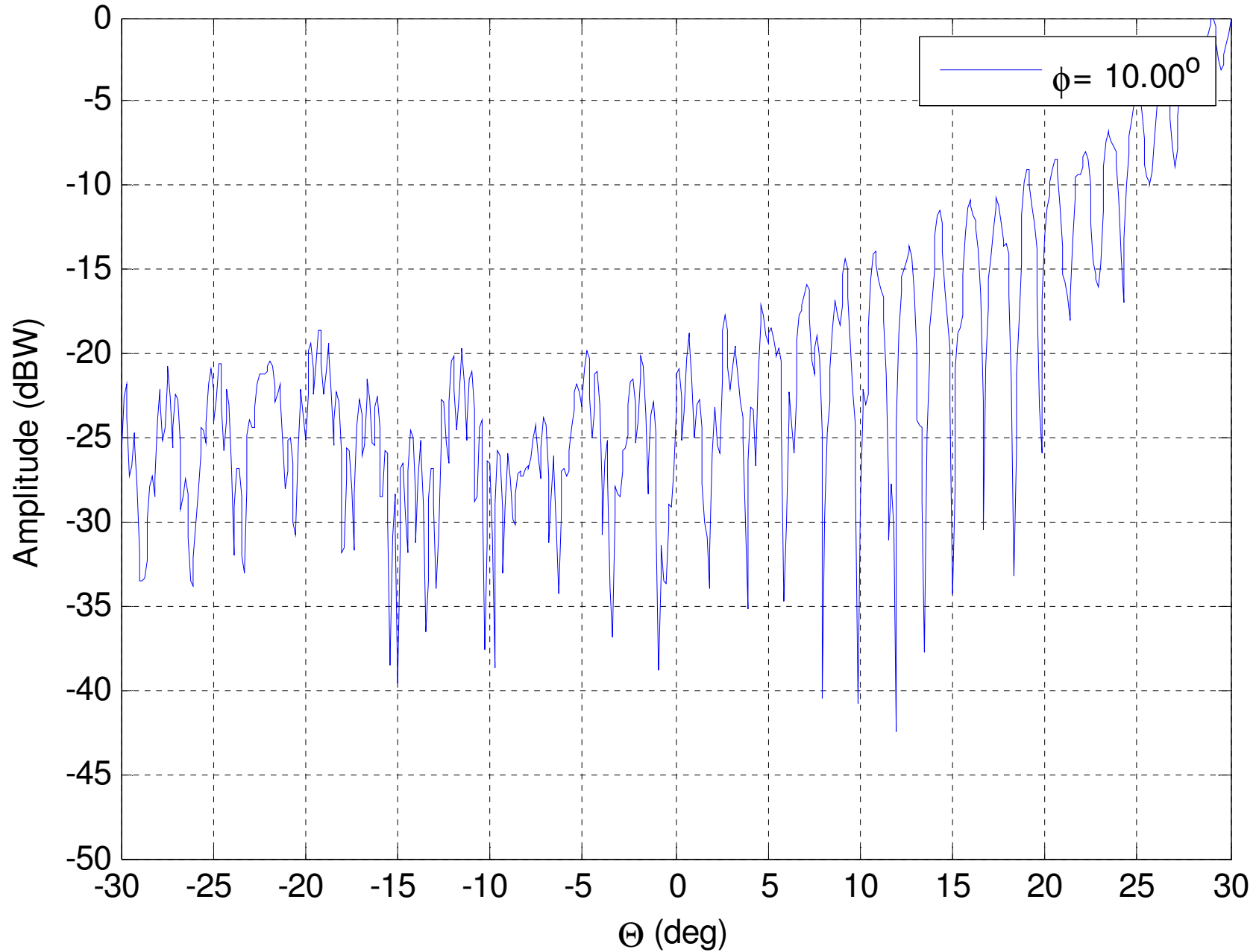
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 10.90 dBW, Date: 15-Dec-2011



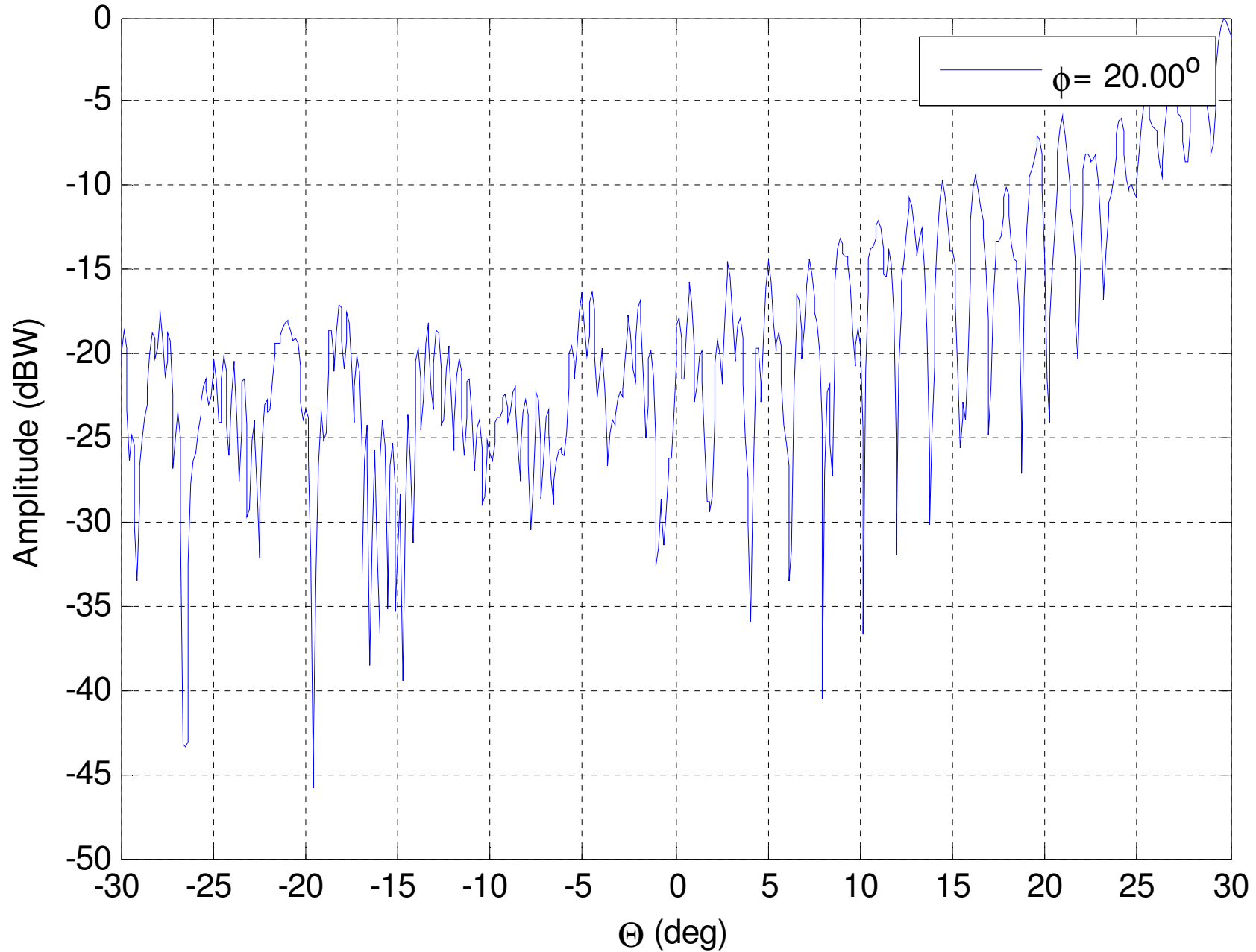
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 9.04 dBW, Date: 15-Dec-2011



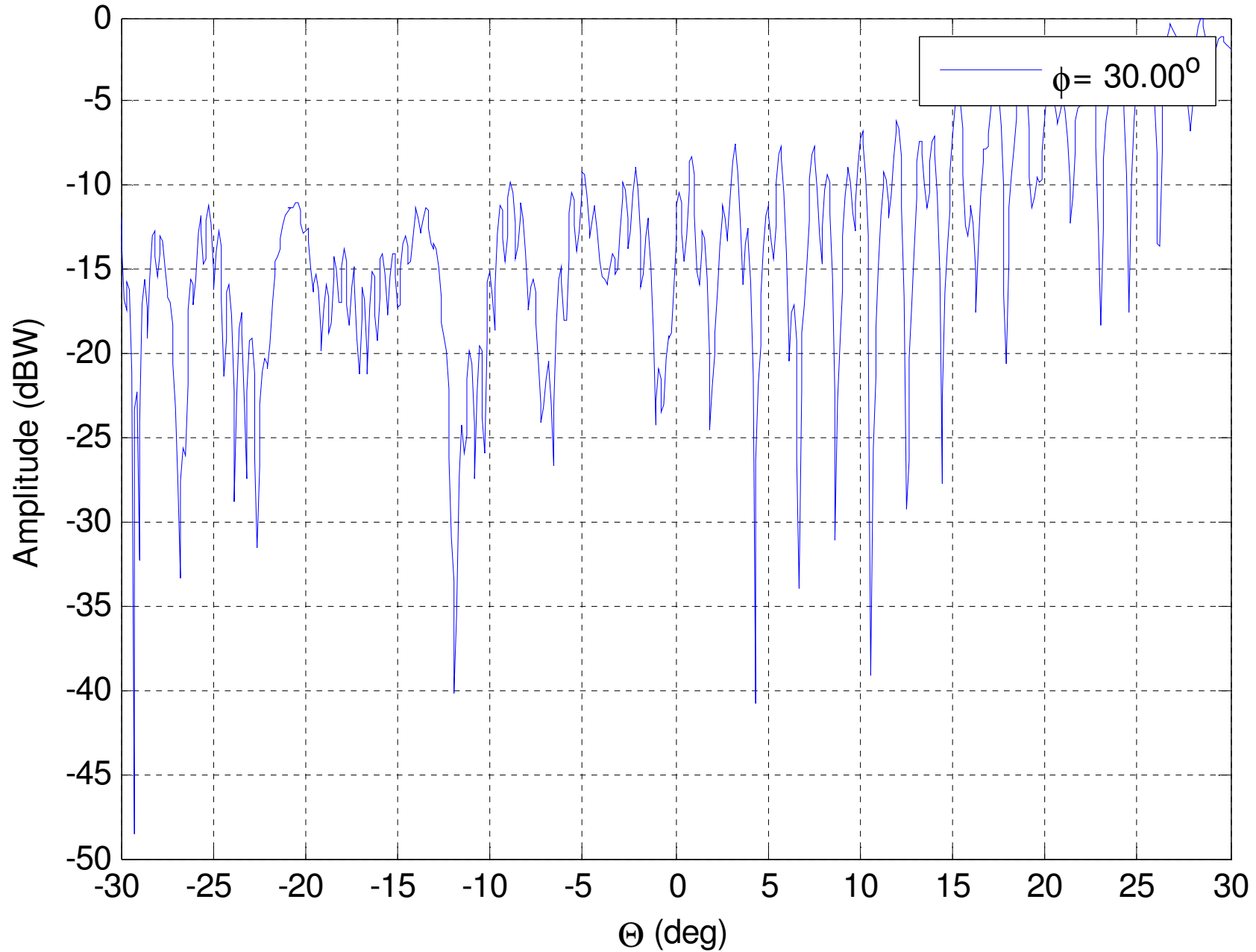
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 6.15 dBW, Date: 15-Dec-2011



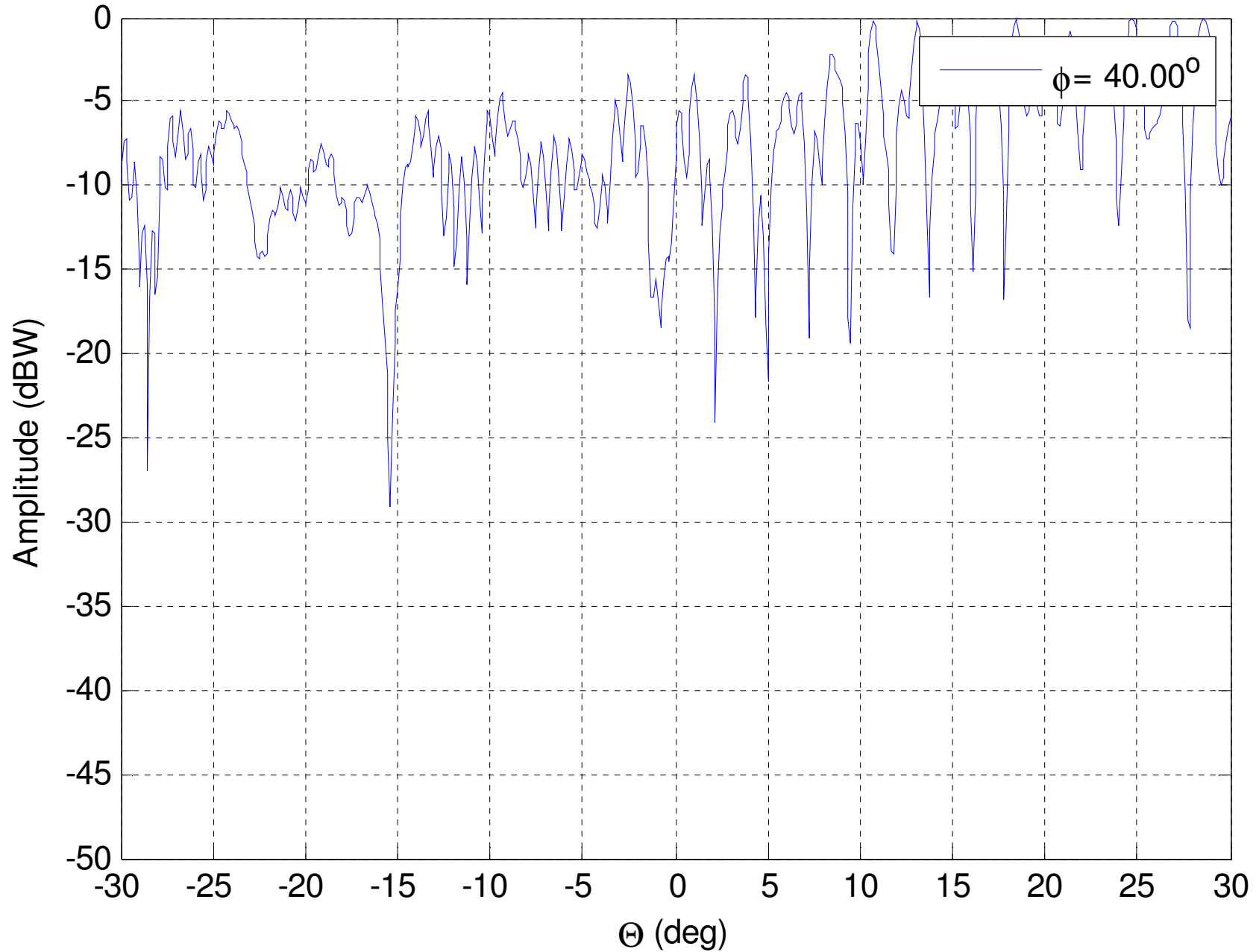
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -1.23 dBW, Date: 15-Dec-2011



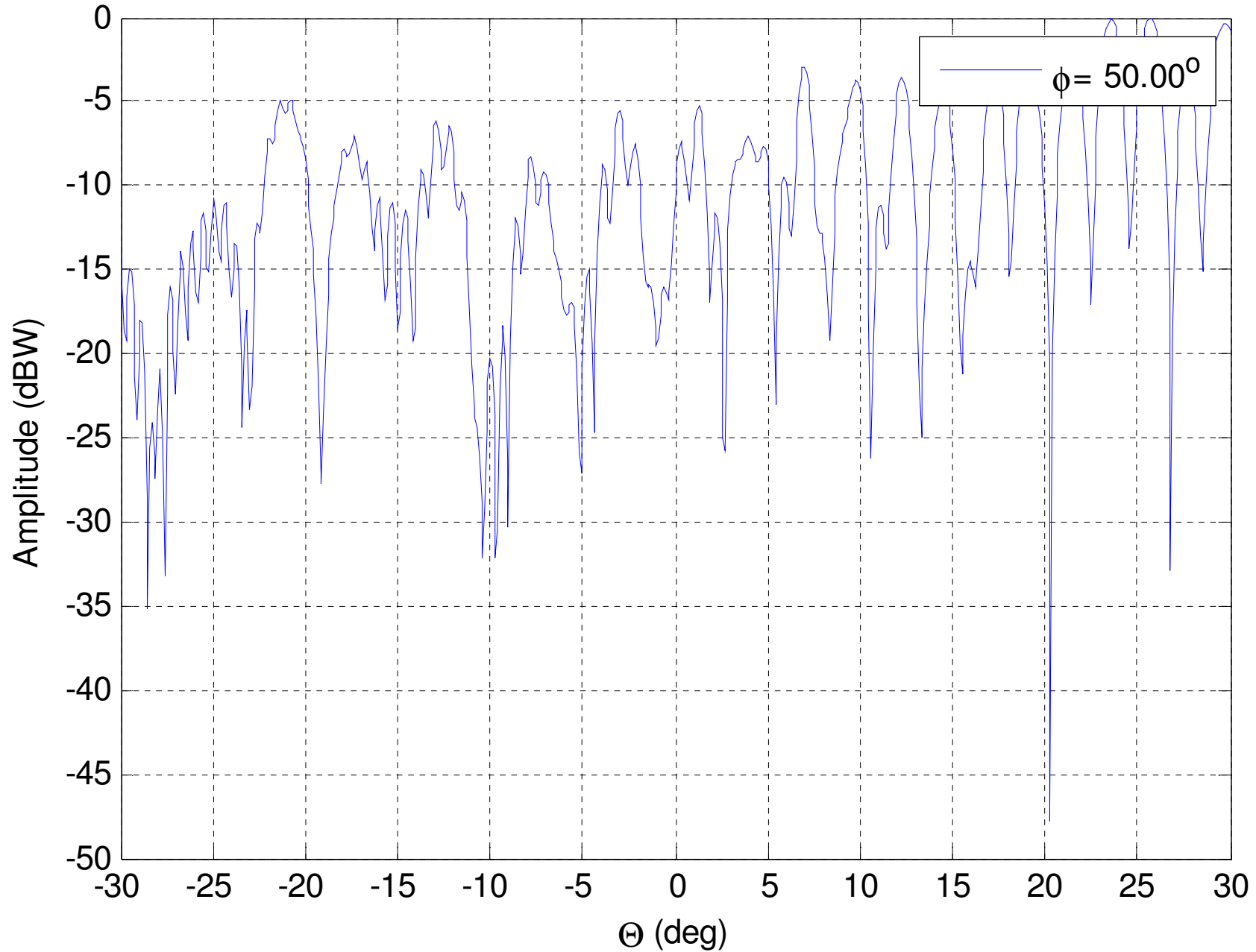
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -6.08 dBW, Date: 15-Dec-2011



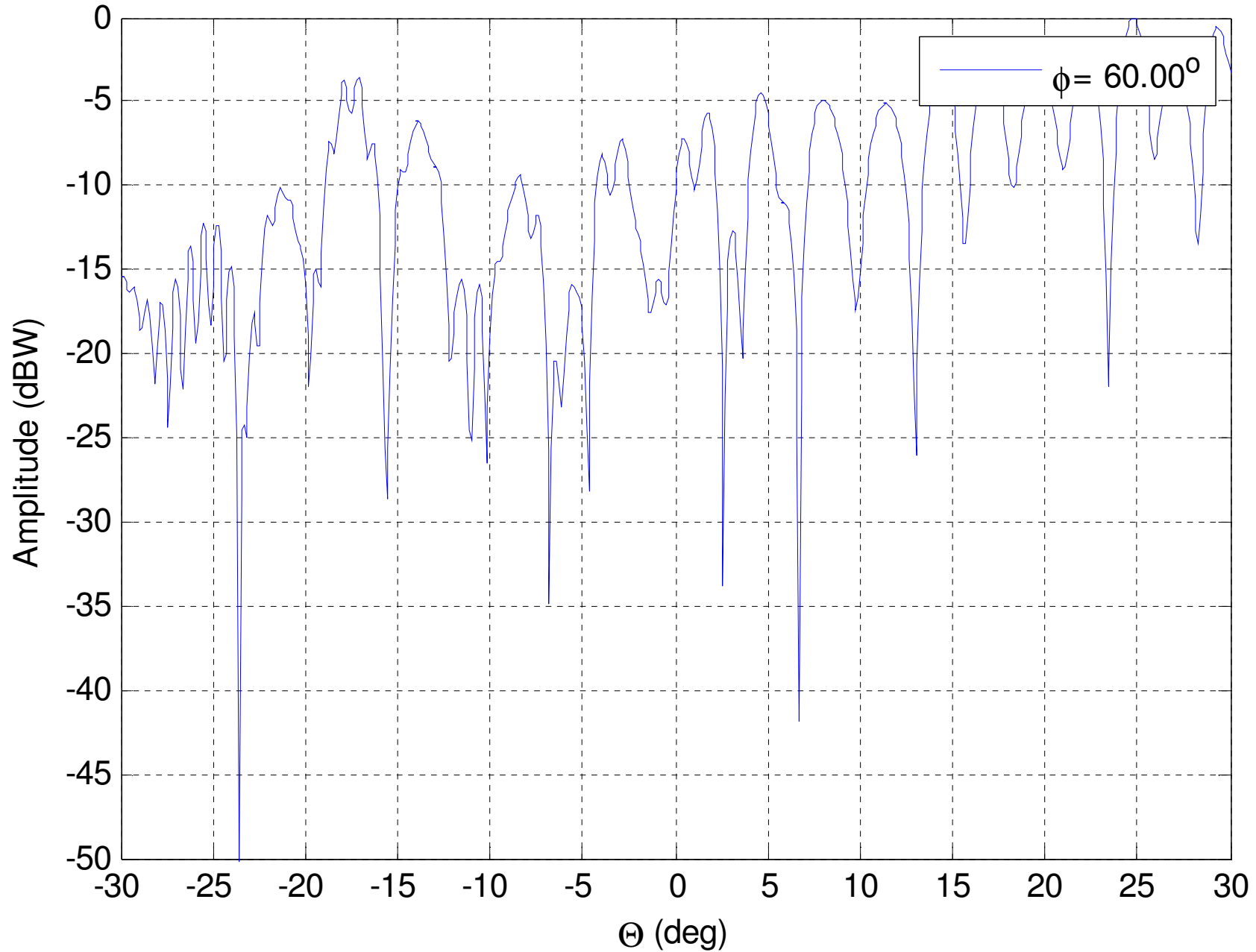
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -4.10 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

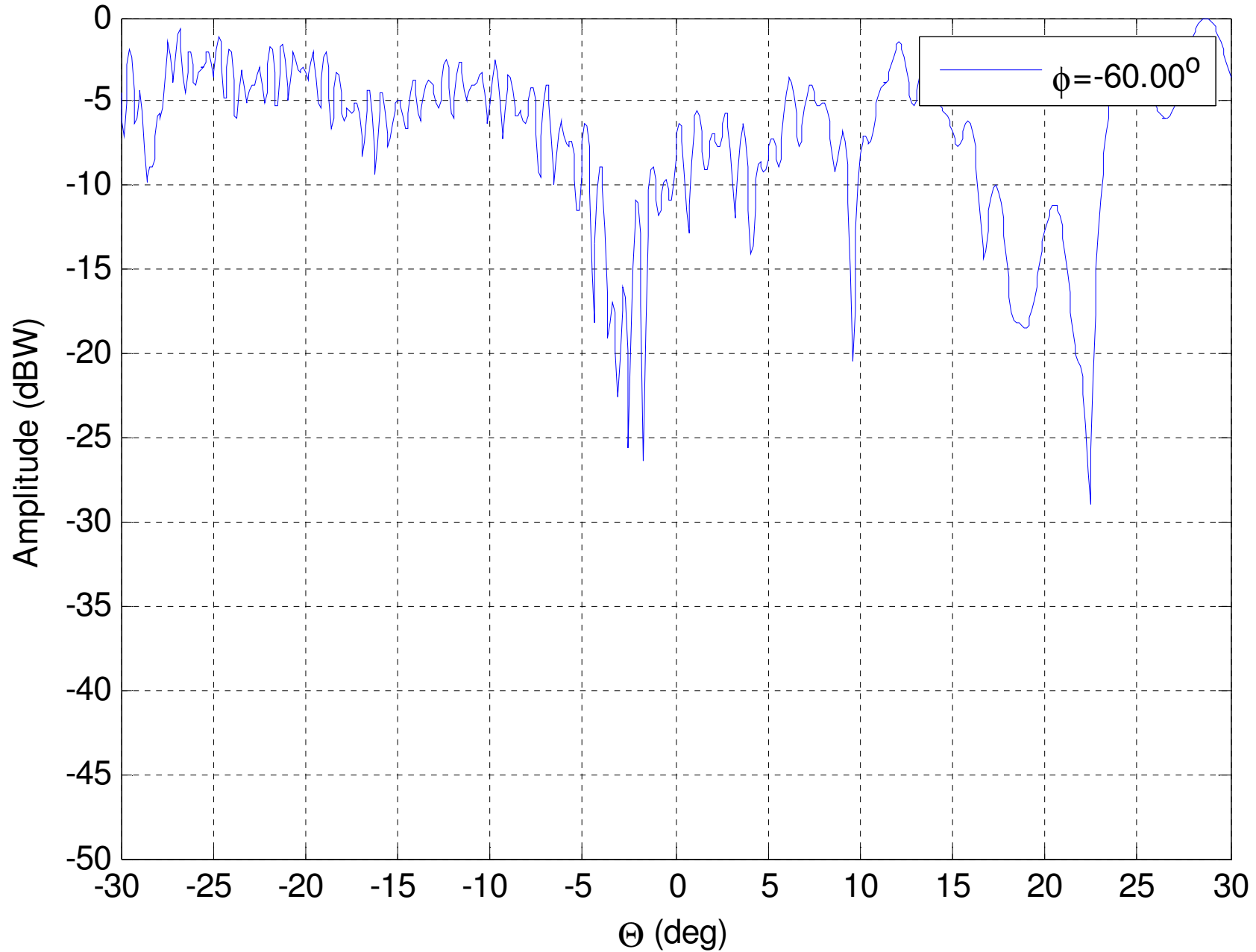
Input file: tx-17.3-rhcp-60.cut, Peak: -4.10 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

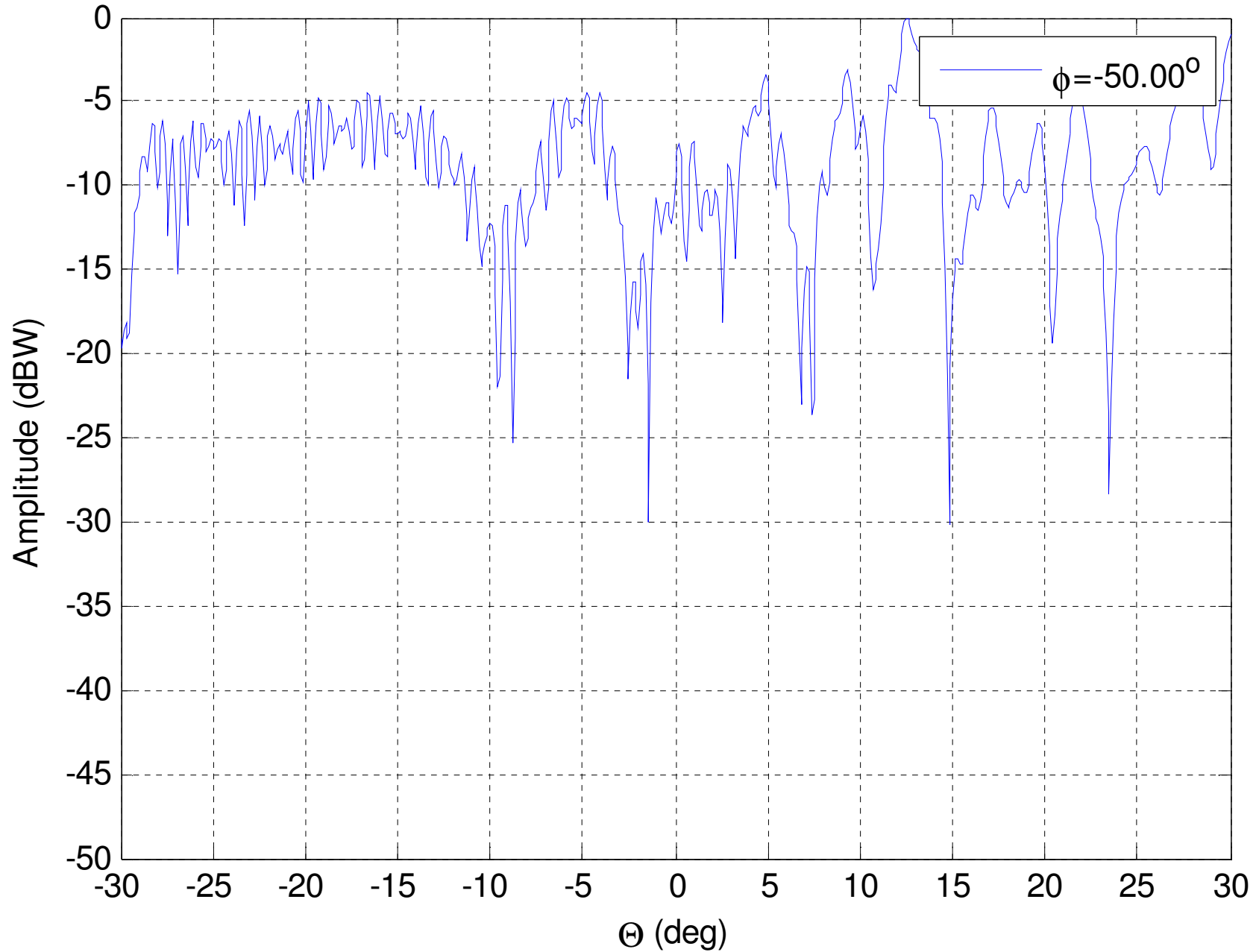
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -5.25 dBW, Date: 15-Dec-2011



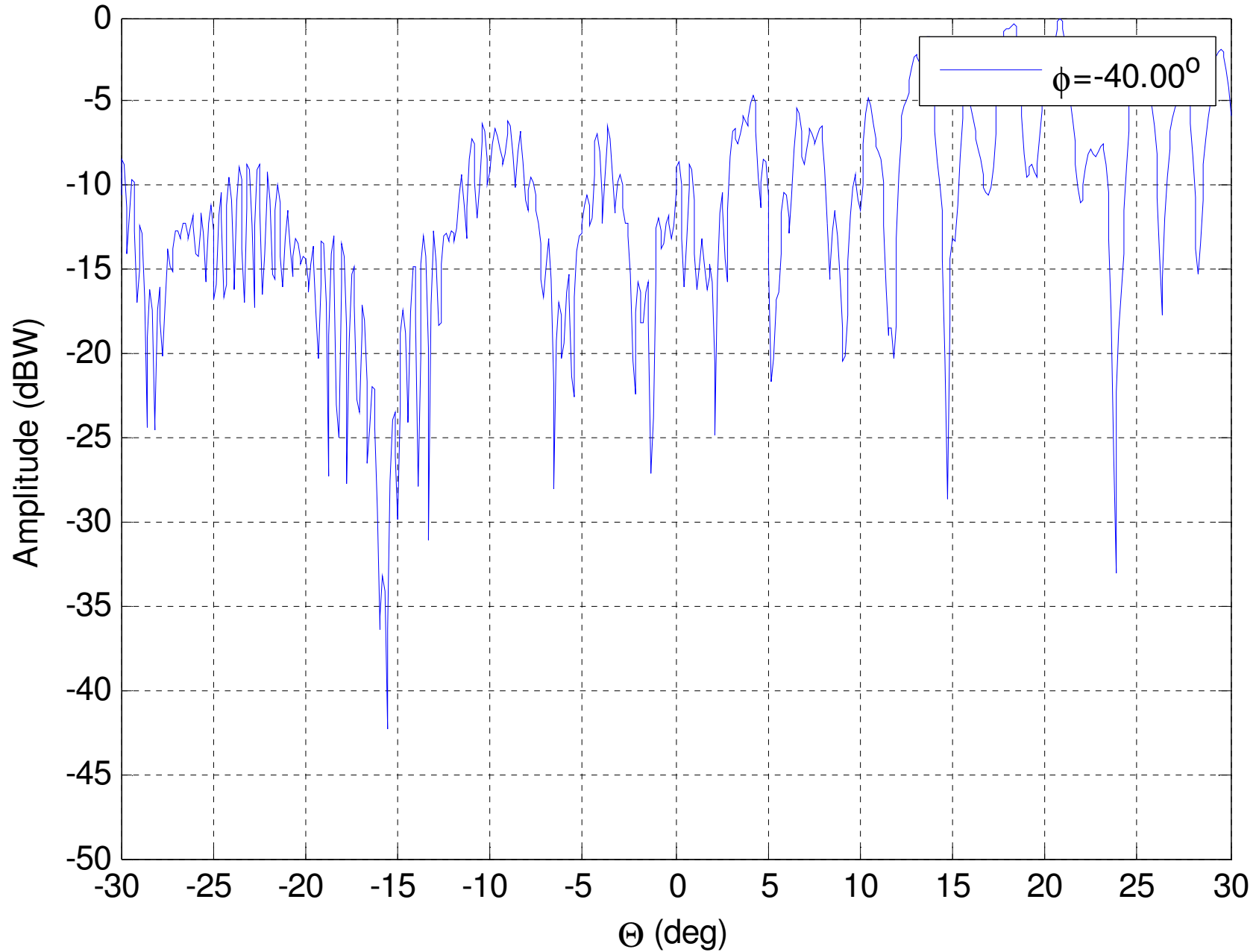
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -4.06 dBW, Date: 15-Dec-2011



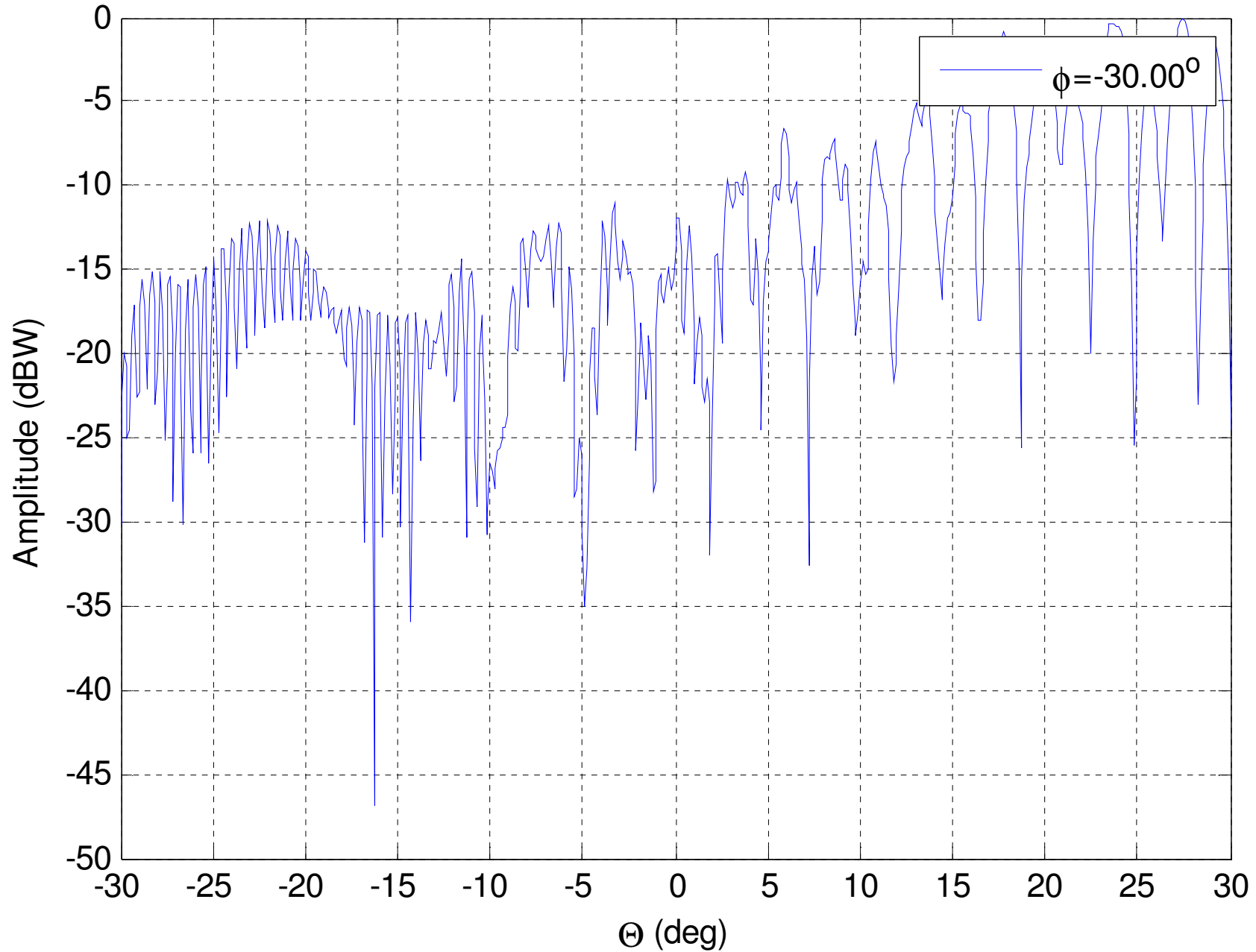
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -3.16 dBW, Date: 15-Dec-2011



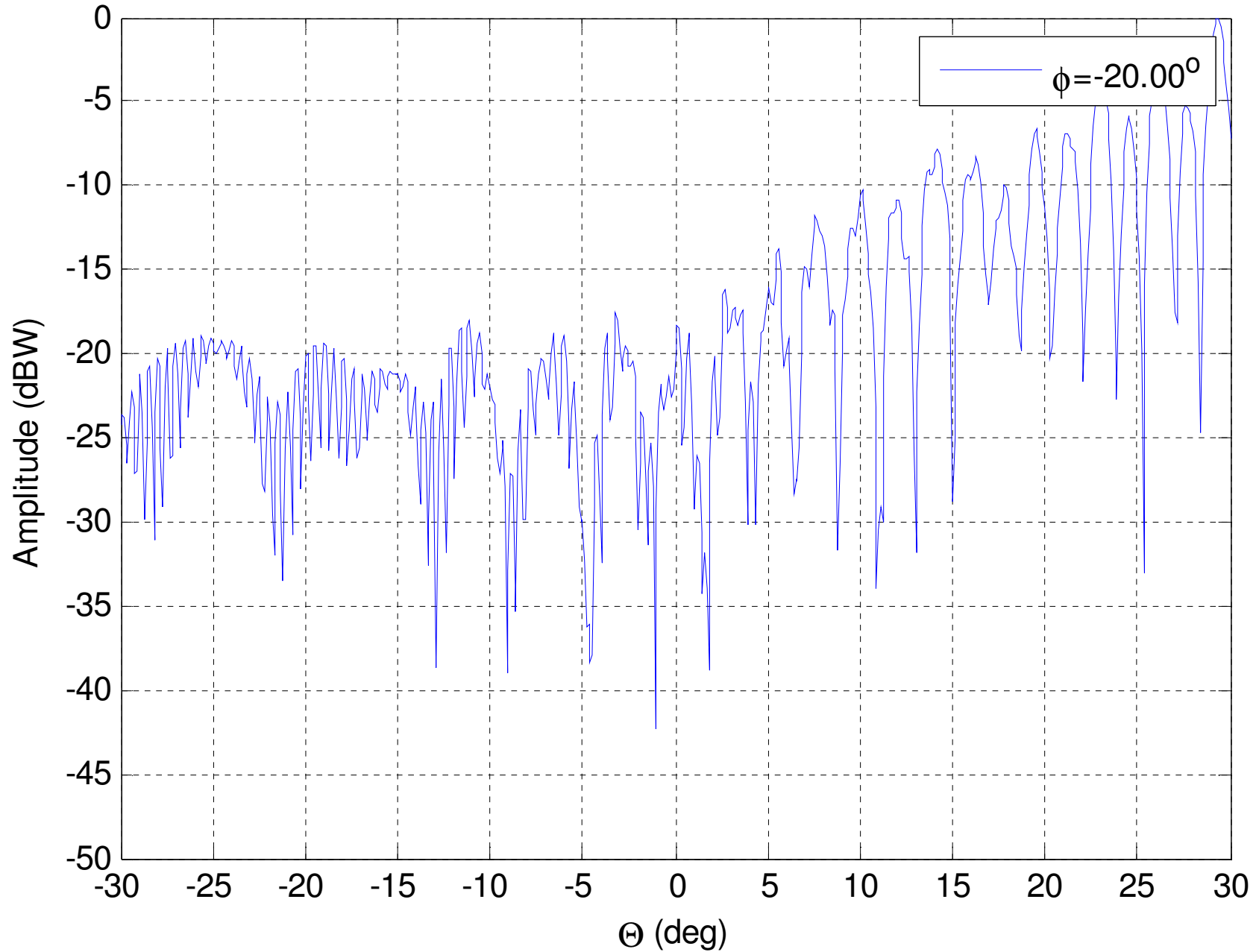
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -0.06 dBW, Date: 15-Dec-2011



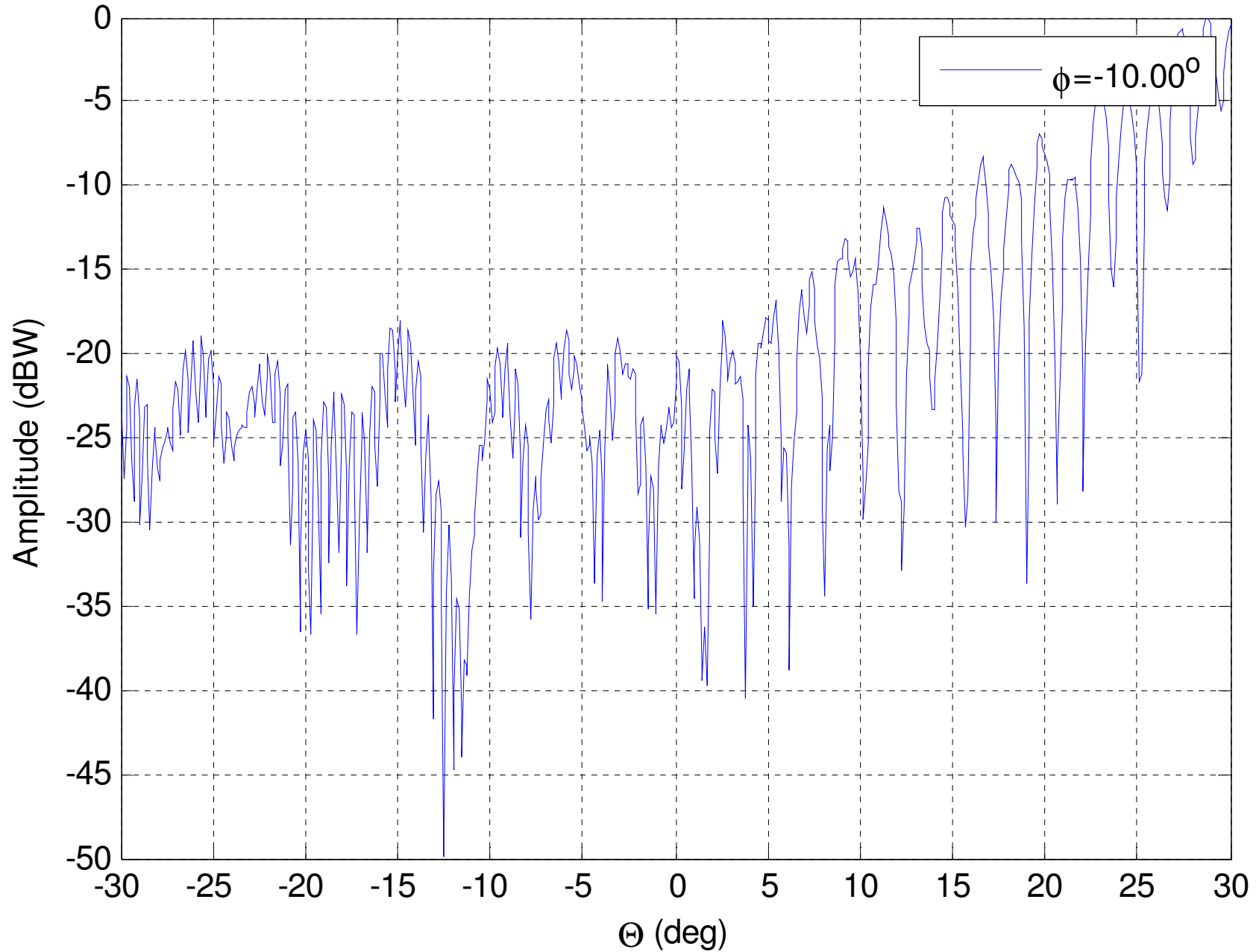
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 6.33 dBW, Date: 15-Dec-2011



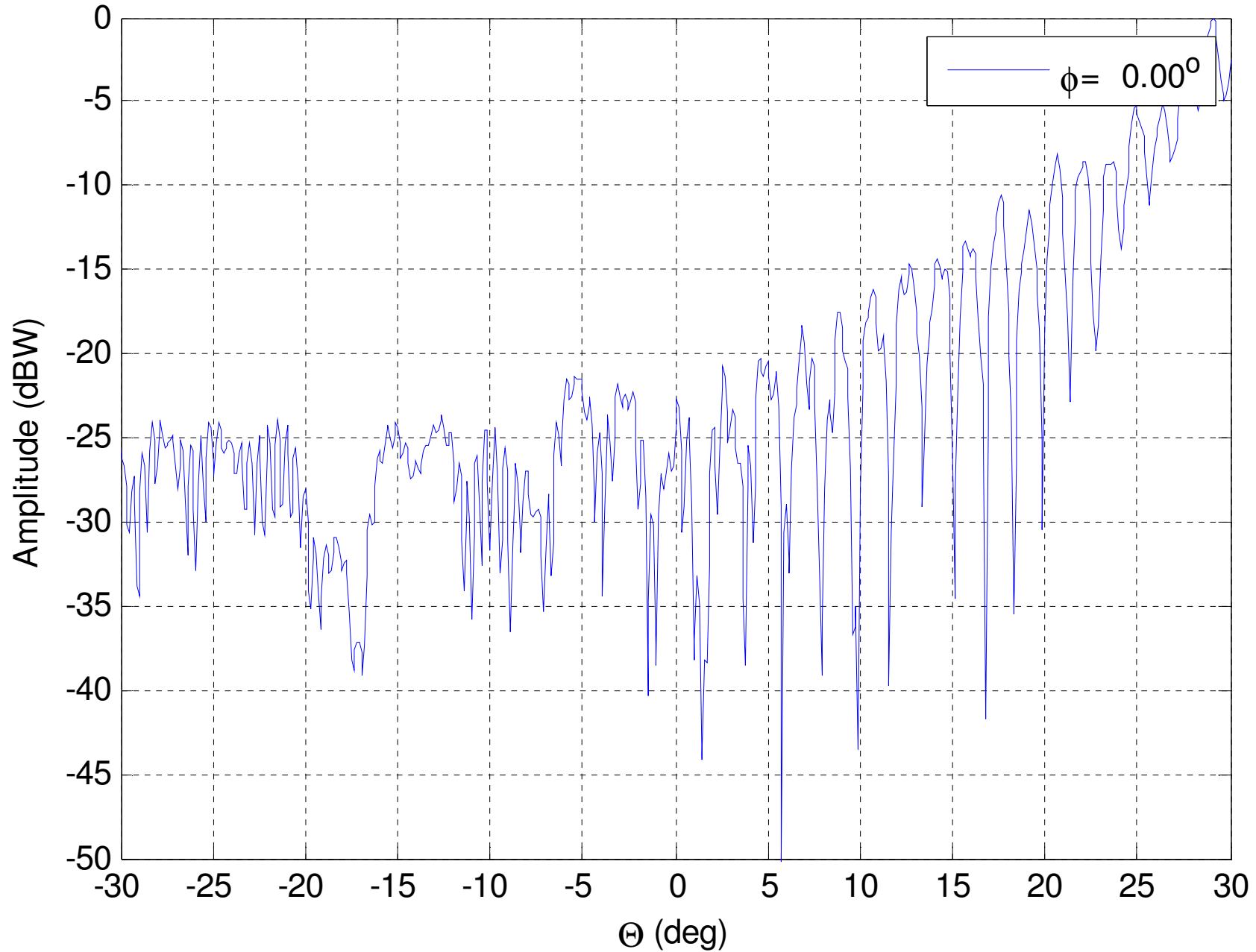
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 8.22 dBW, Date: 15-Dec-2011



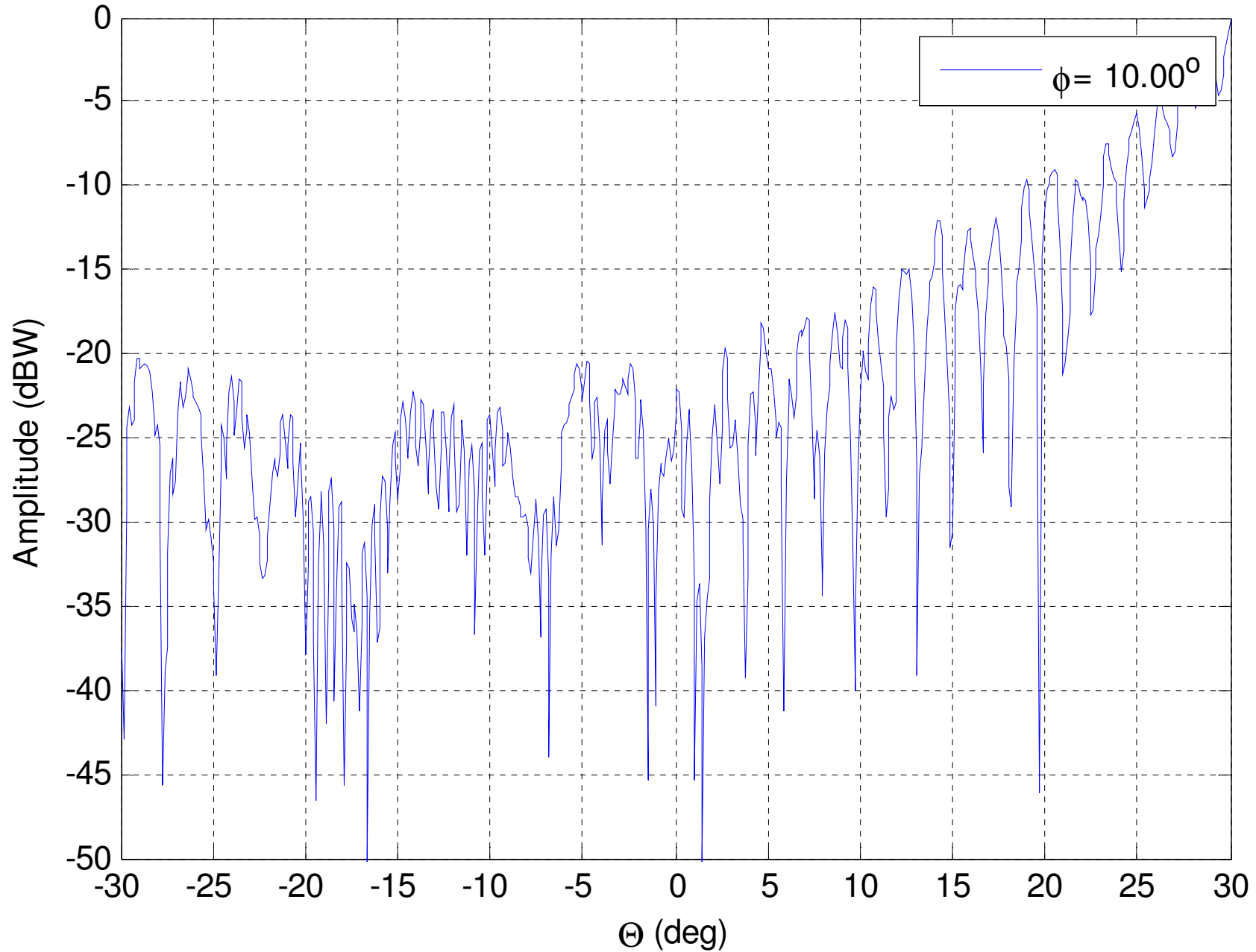
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 10.84 dBW, Date: 15-Dec-2011



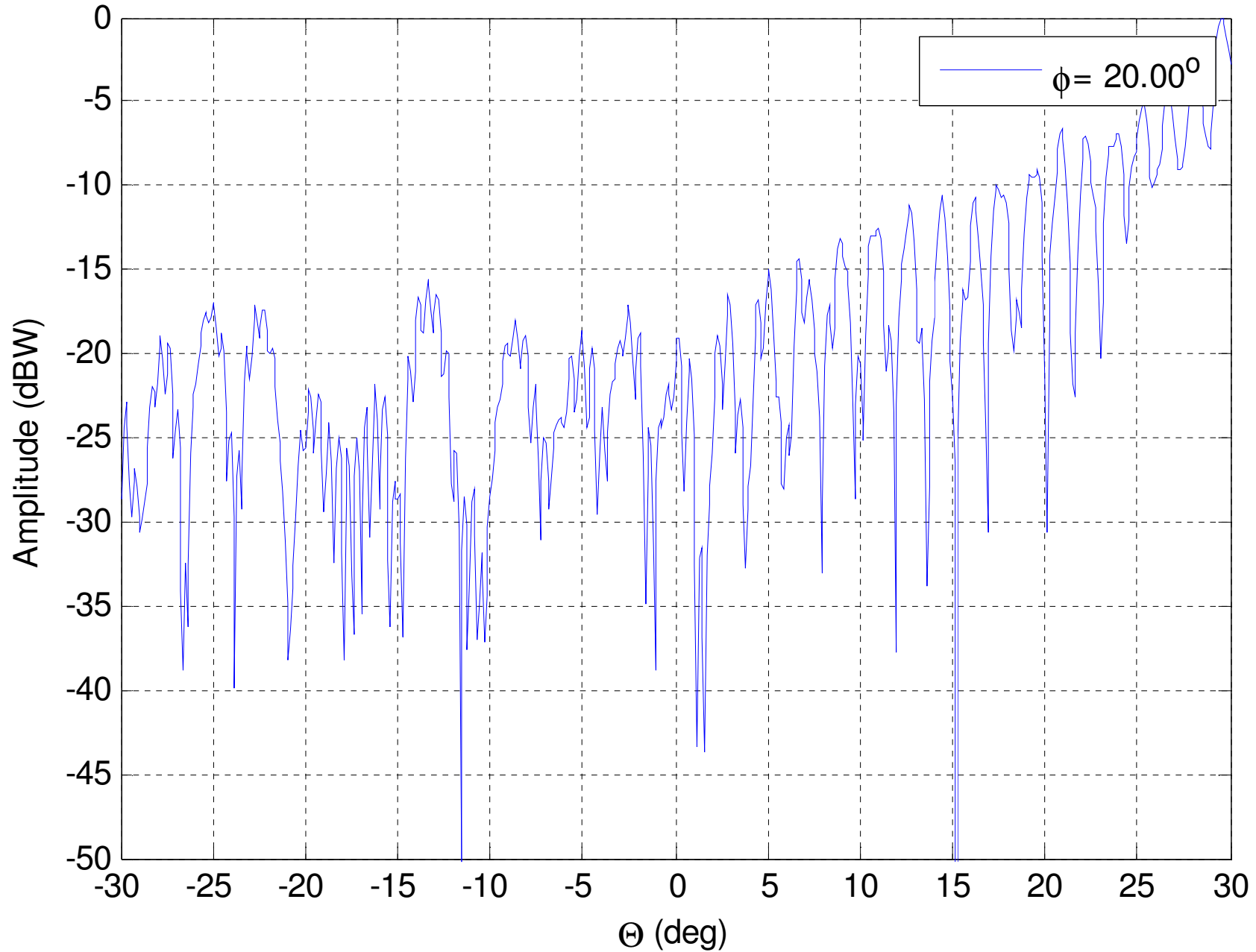
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 10.05 dBW, Date: 15-Dec-2011



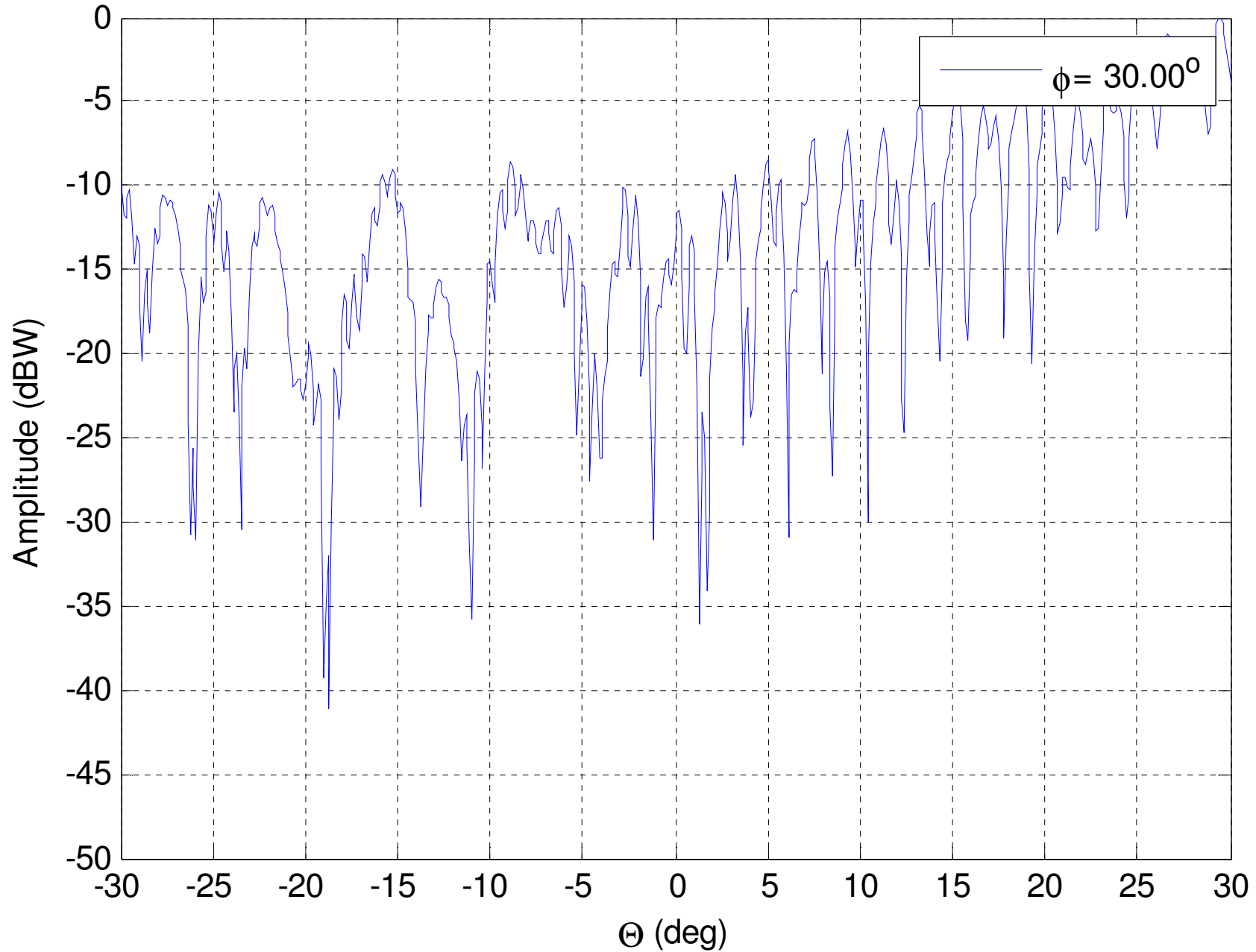
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 6.96 dBW, Date: 15-Dec-2011



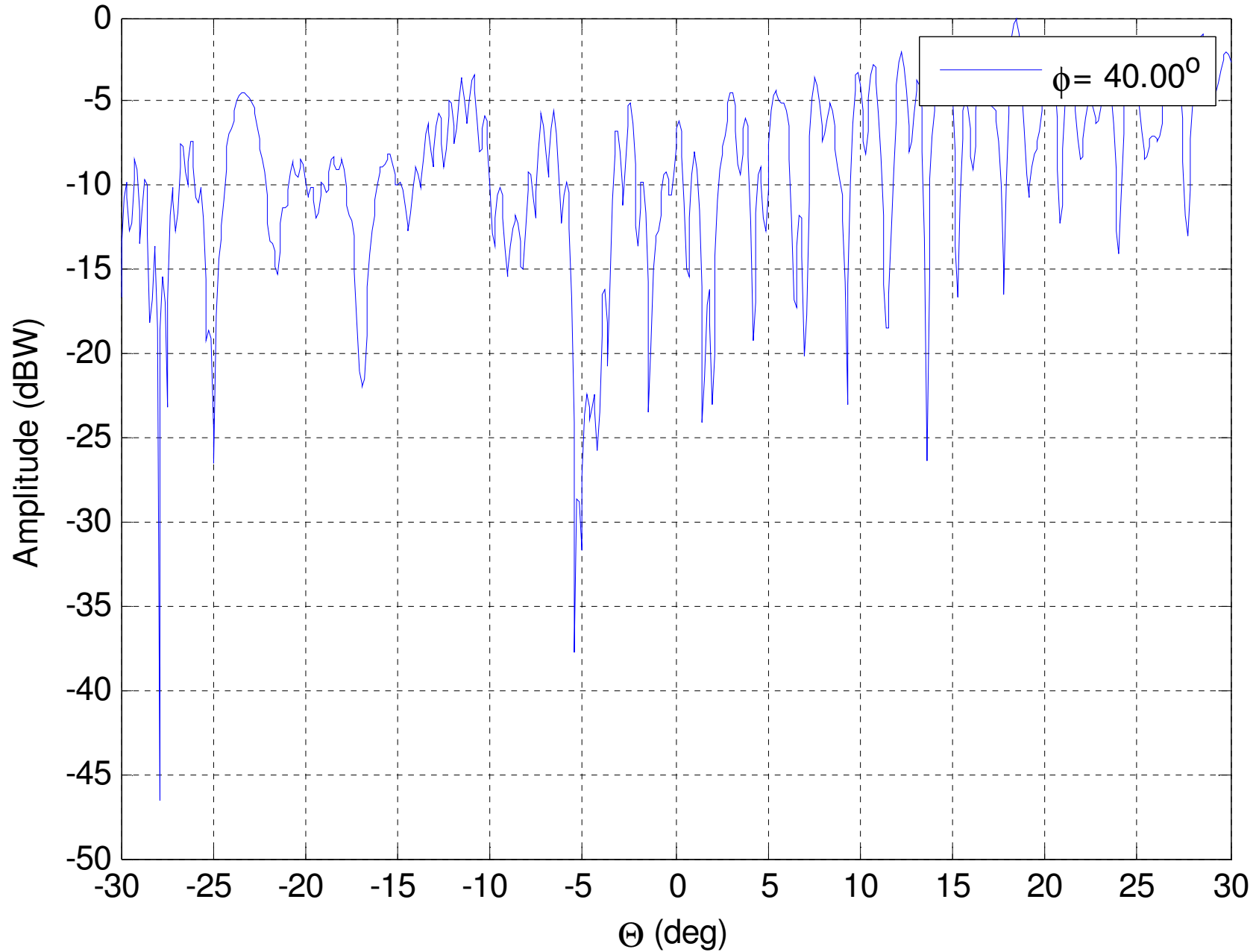
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -0.57 dBW, Date: 15-Dec-2011



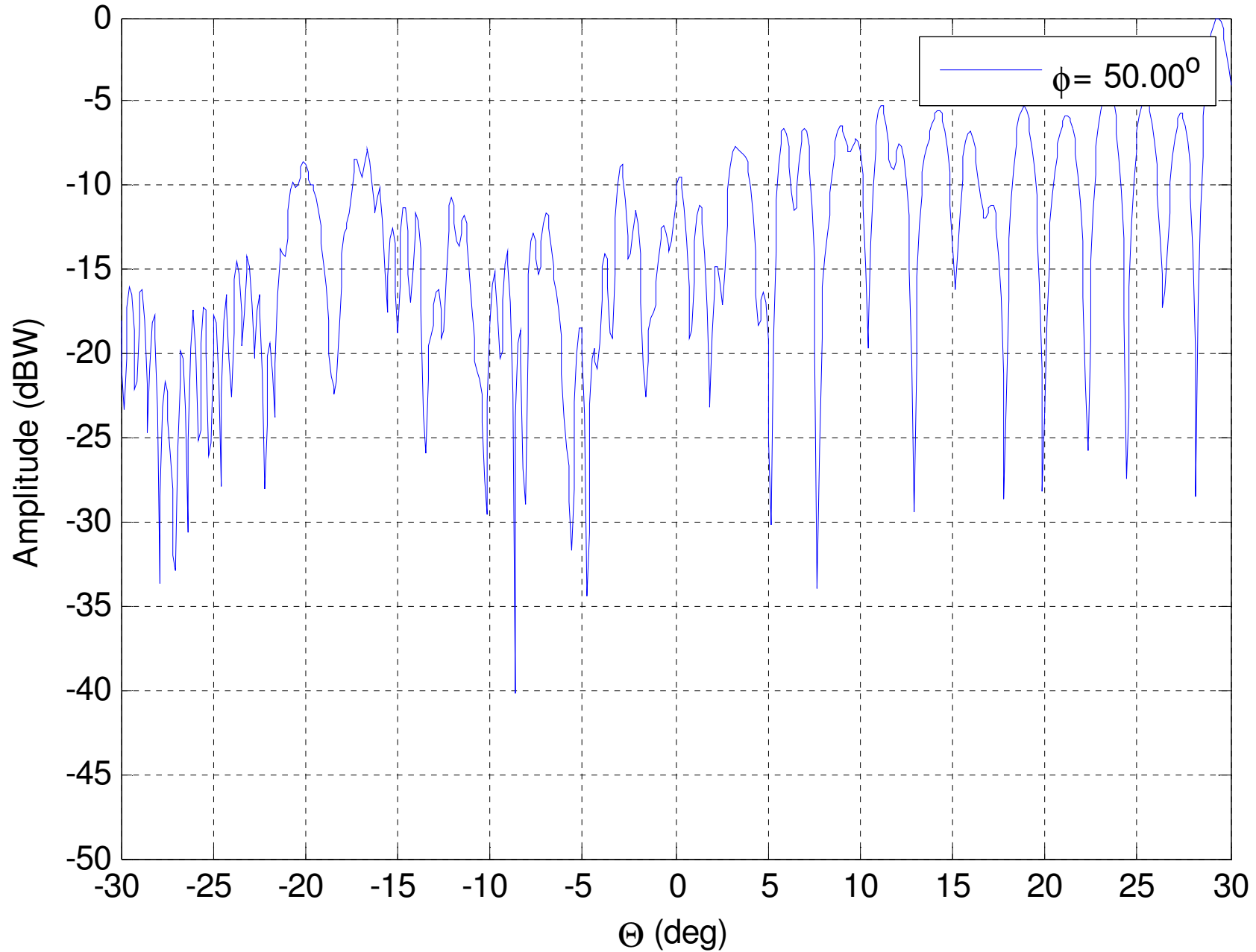
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -5.76 dBW, Date: 15-Dec-2011



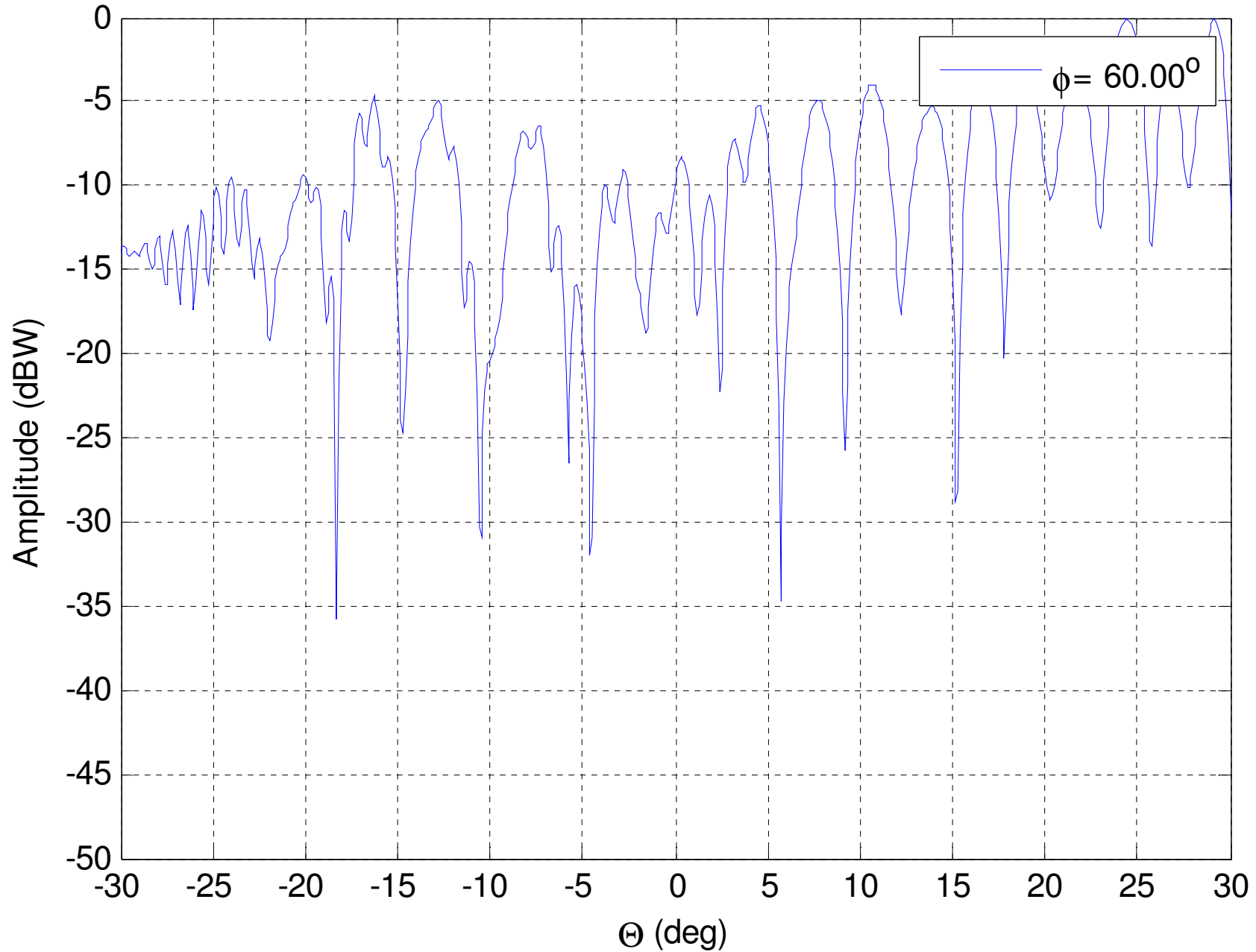
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -2.62 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

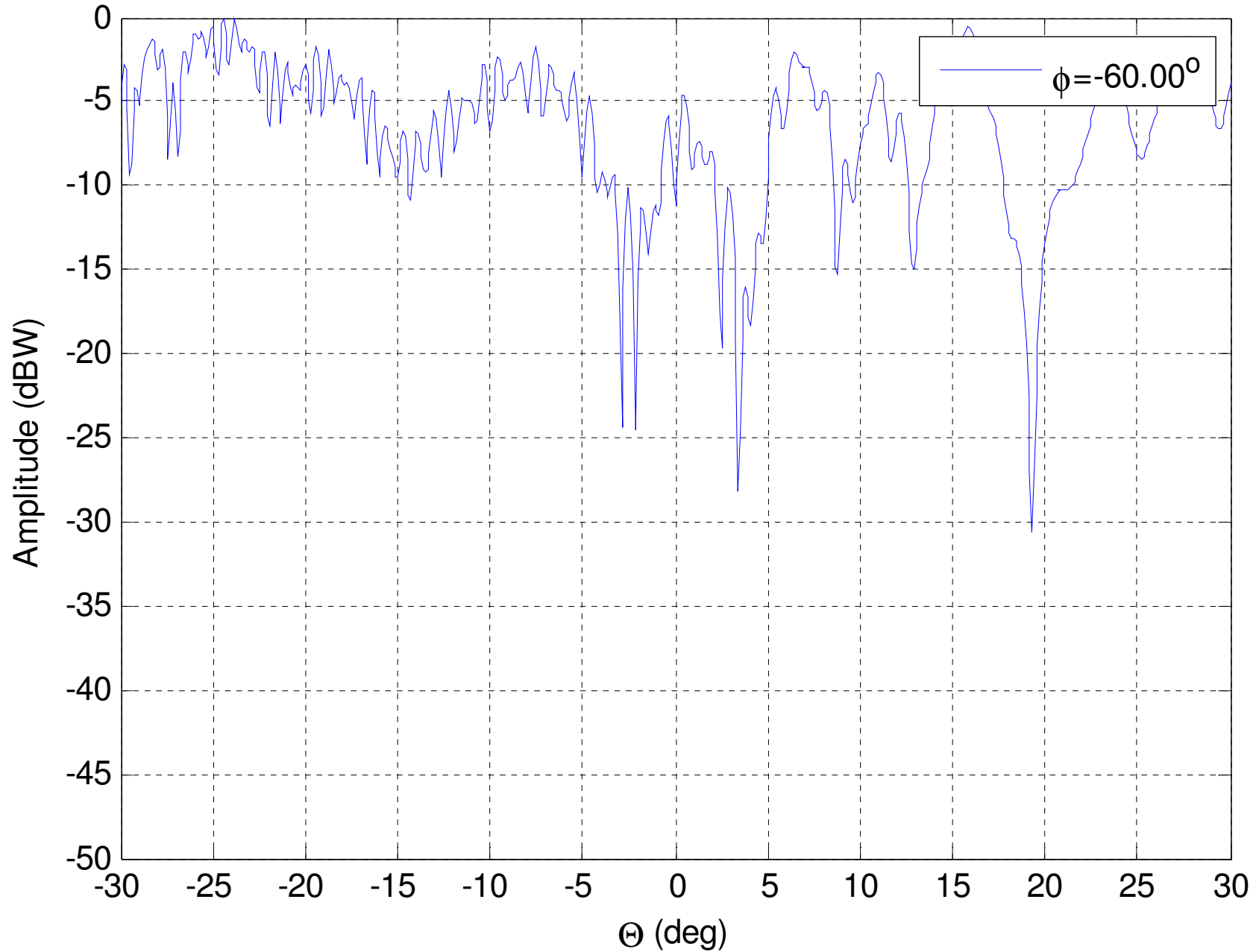
Input file: tx-17.3-lhcp-60.cut, Peak: -3.81 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

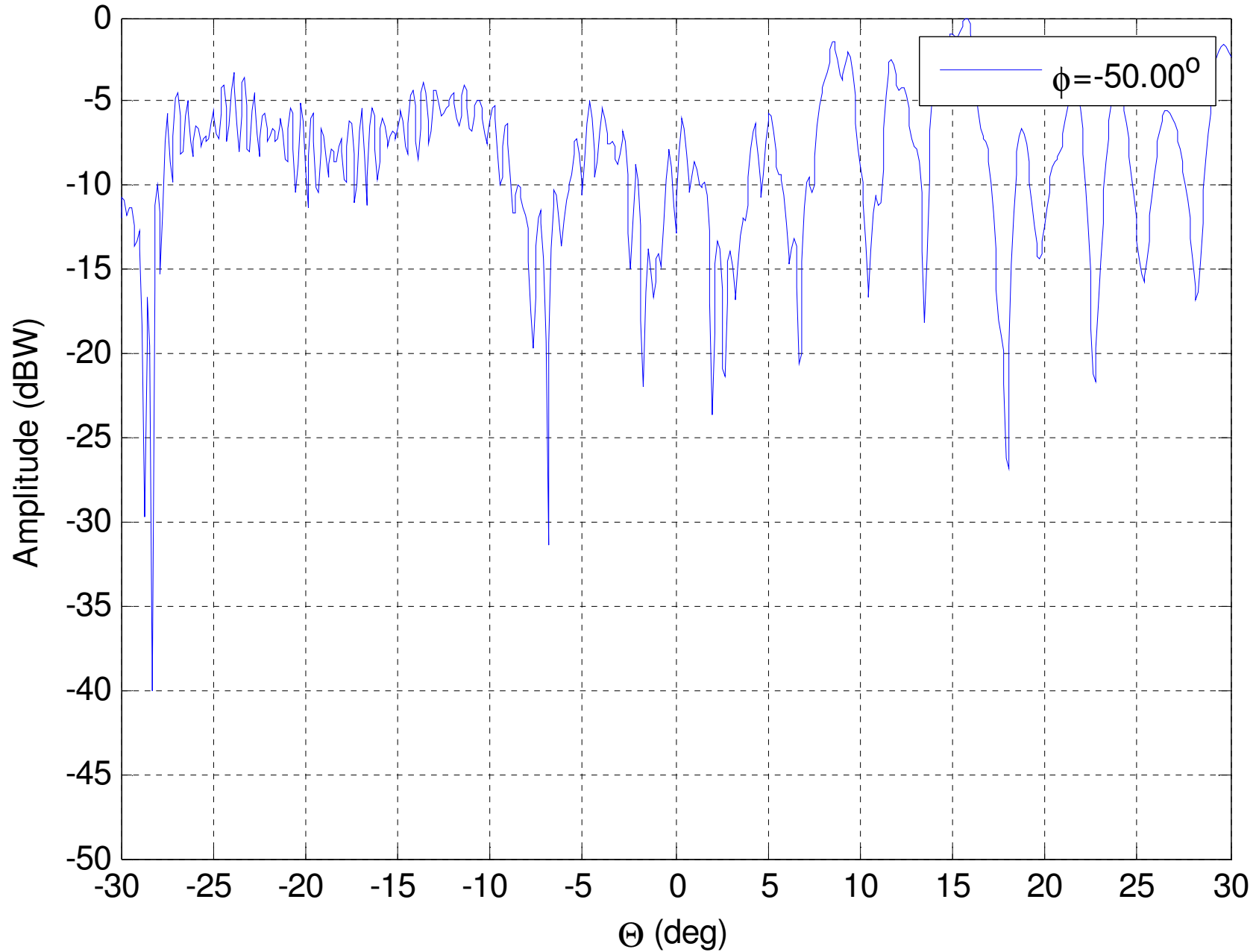
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -6.25 dBW, Date: 15-Dec-2011



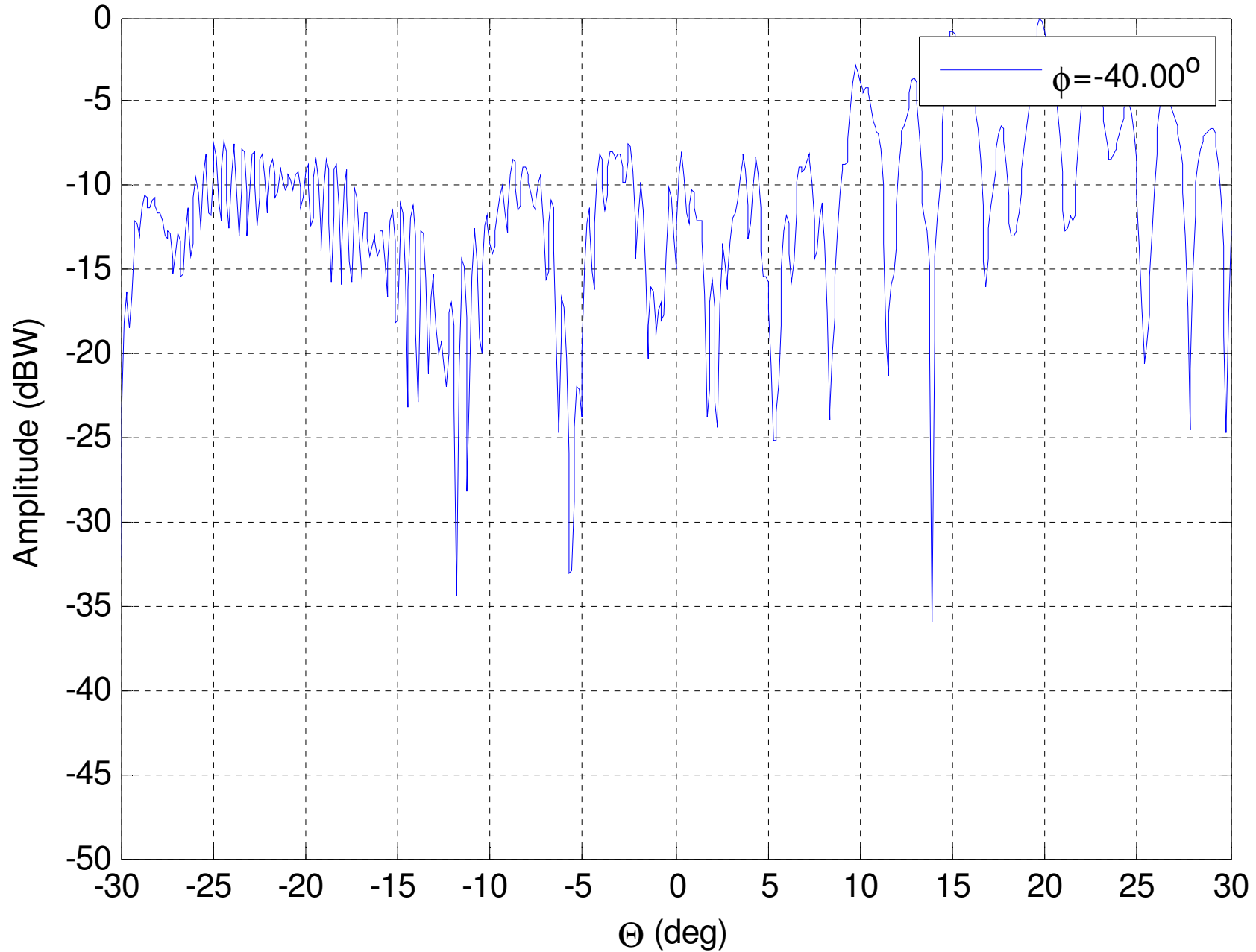
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -4.62 dBW, Date: 15-Dec-2011



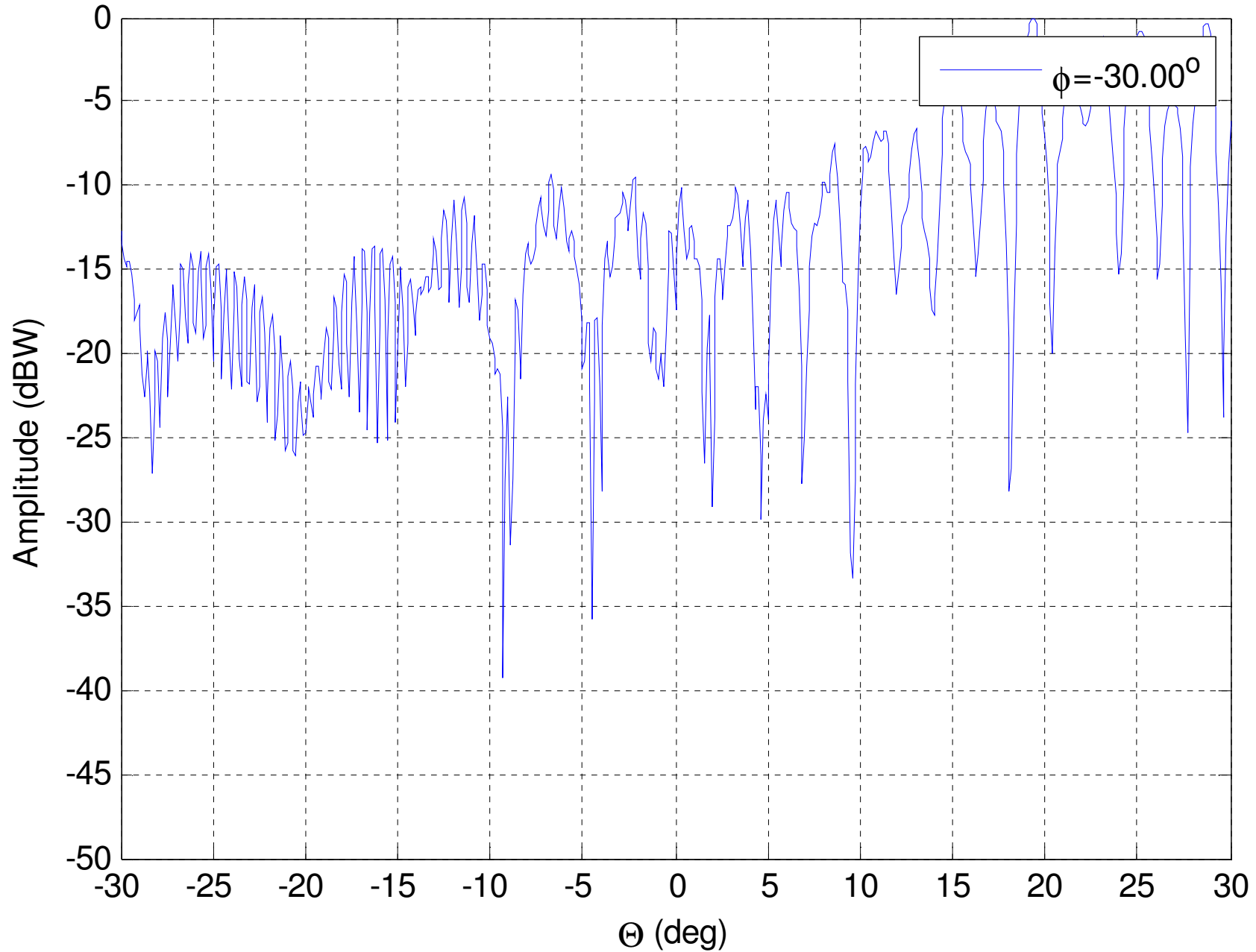
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -2.51 dBW, Date: 15-Dec-2011



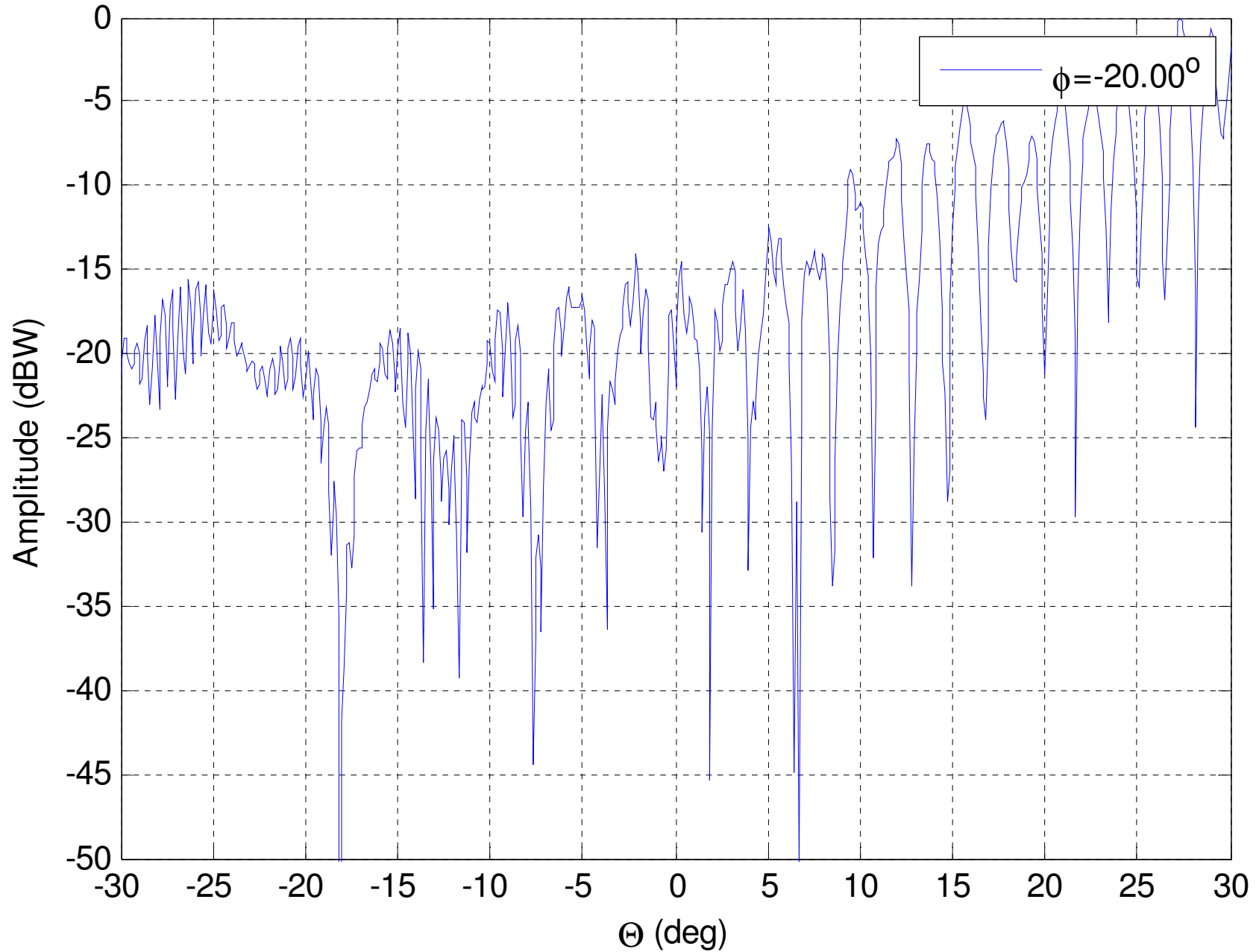
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -0.17 dBW, Date: 15-Dec-2011



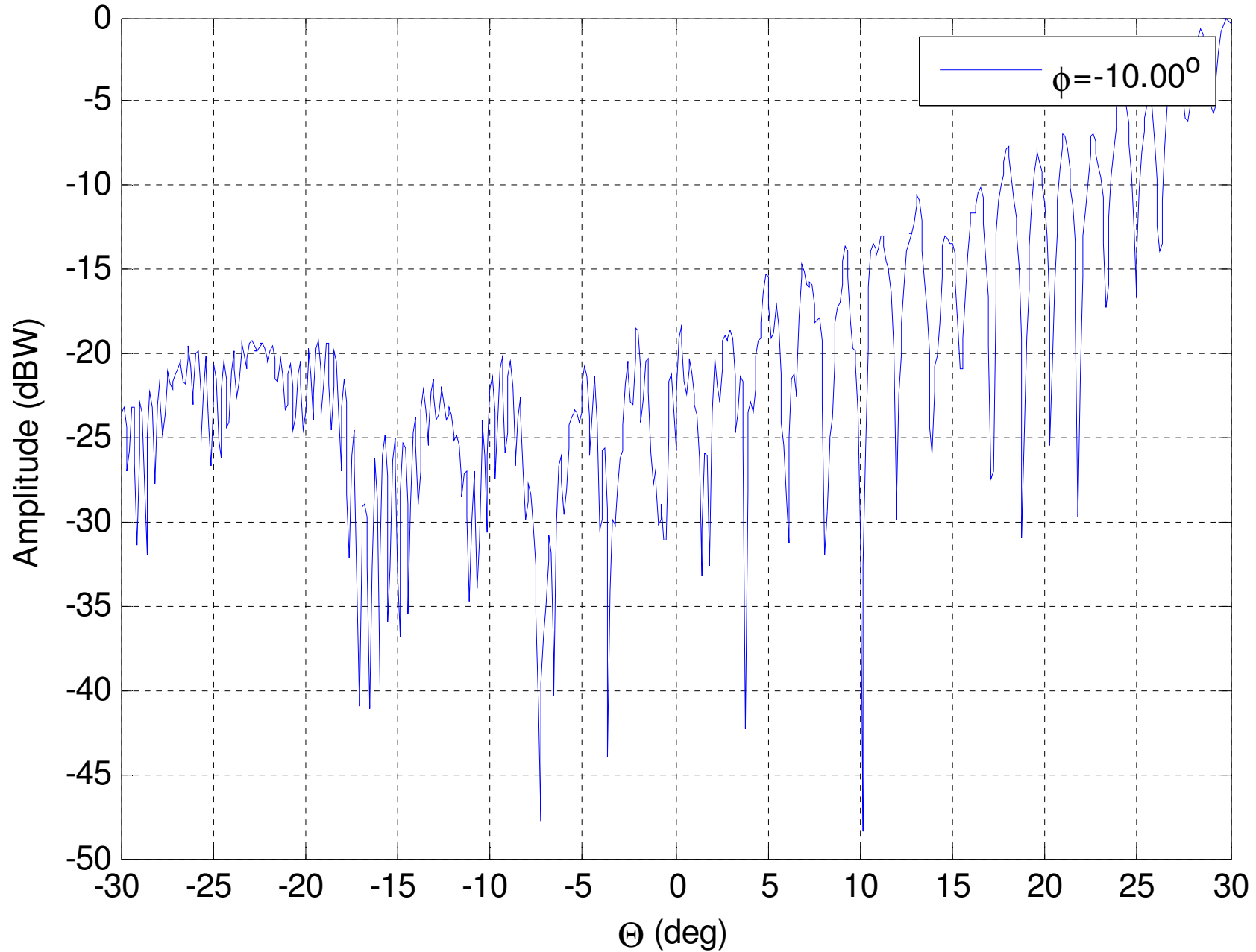
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 4.39 dBW, Date: 15-Dec-2011



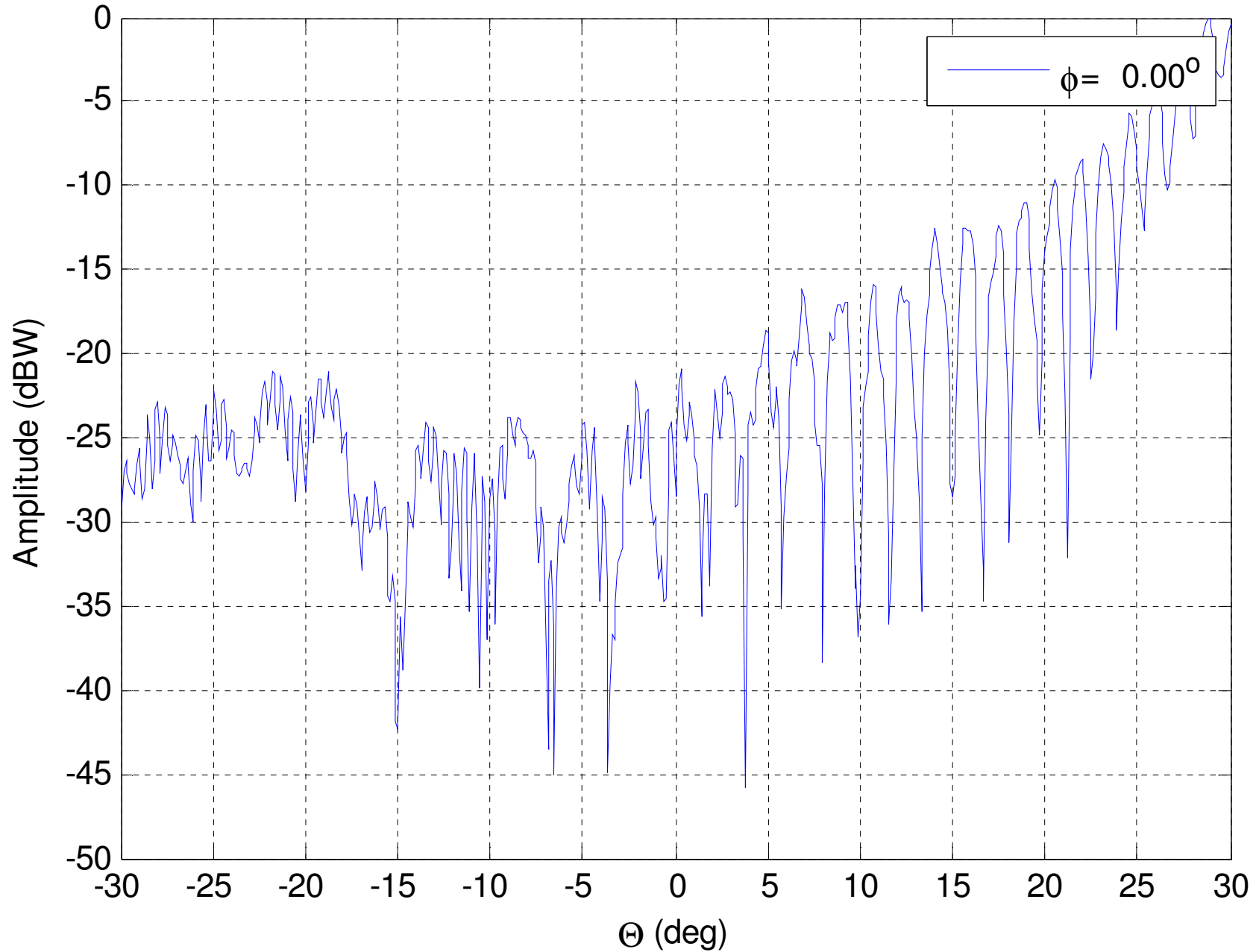
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 8.20 dBW, Date: 15-Dec-2011



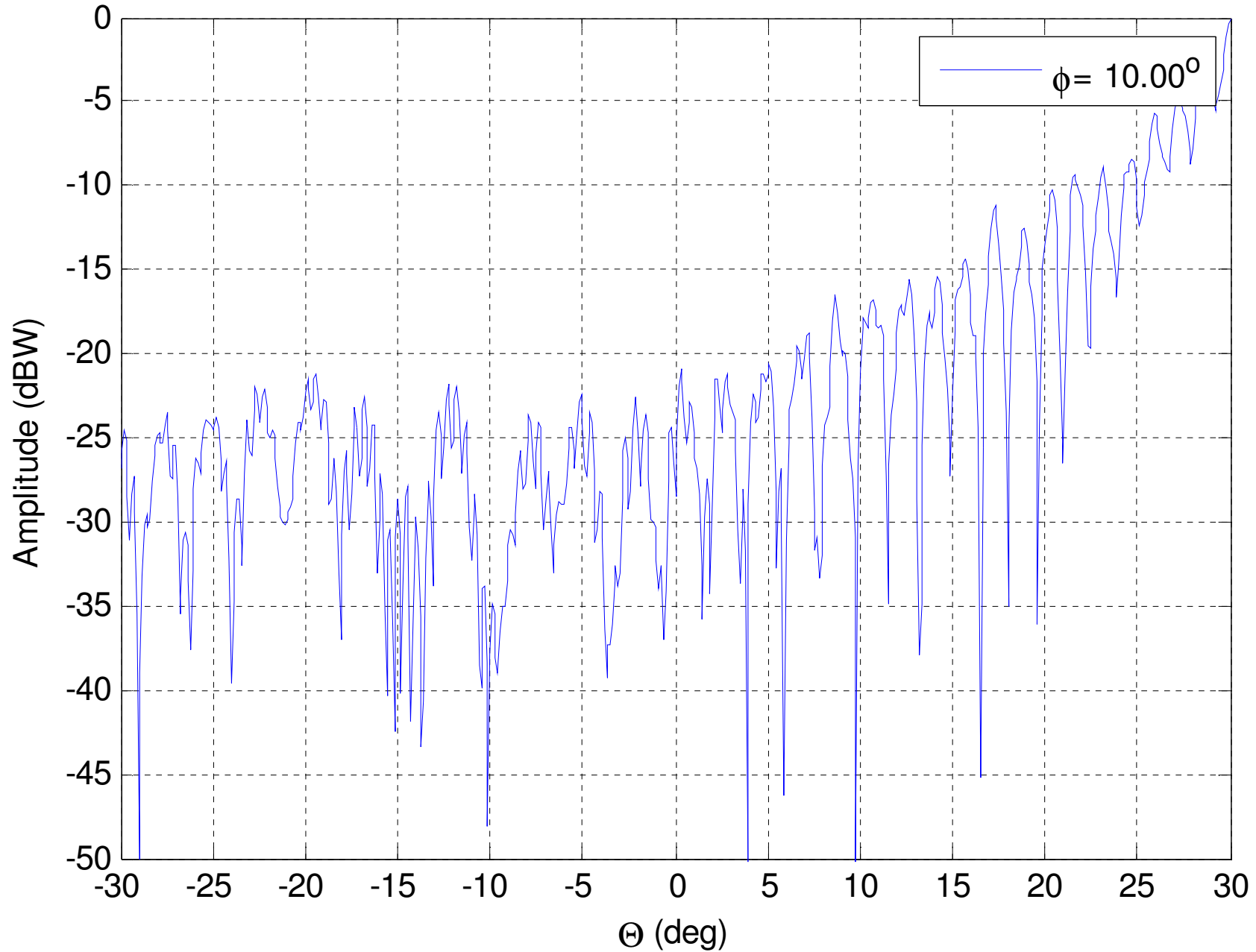
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 10.95 dBW, Date: 15-Dec-2011



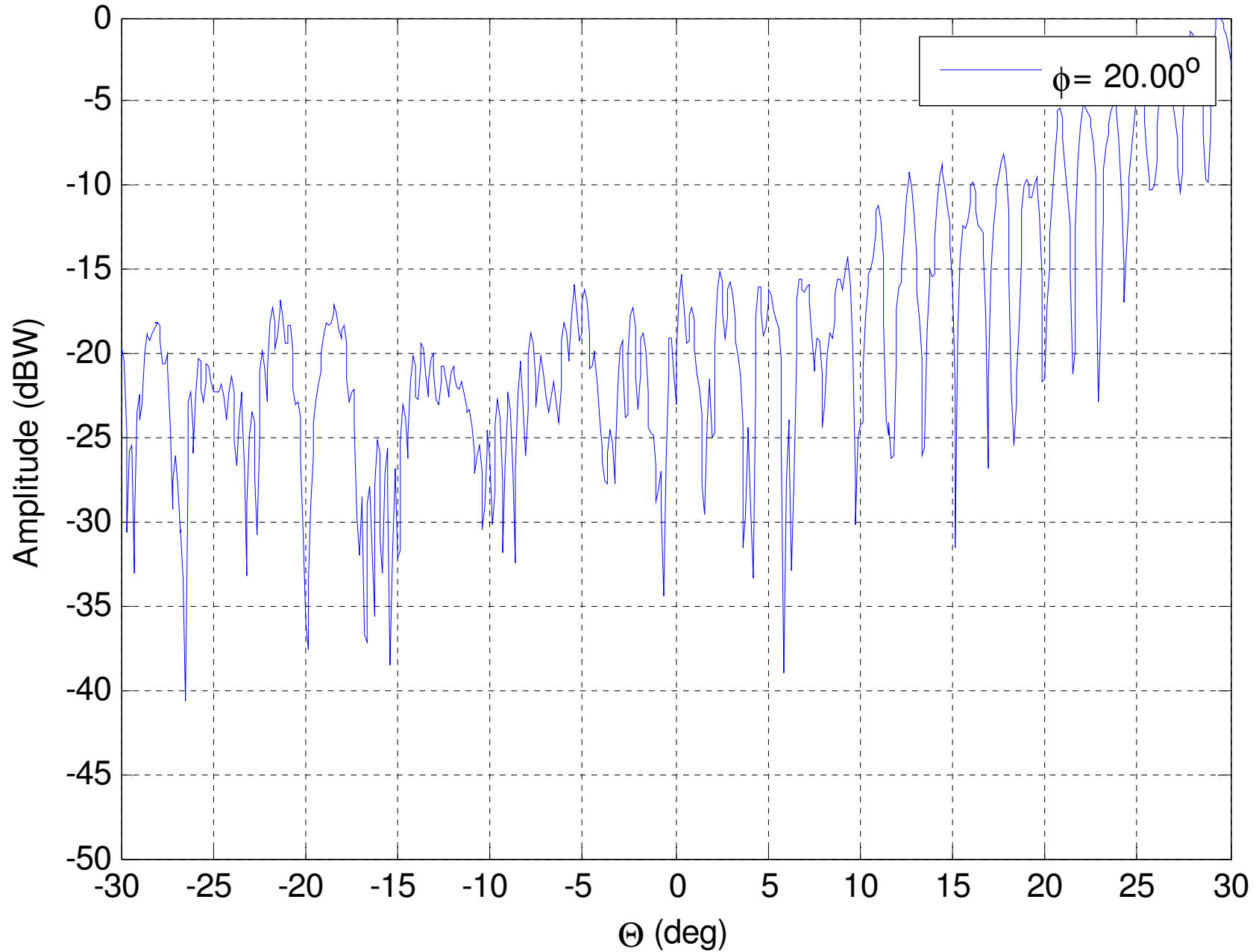
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 11.06 dBW, Date: 15-Dec-2011



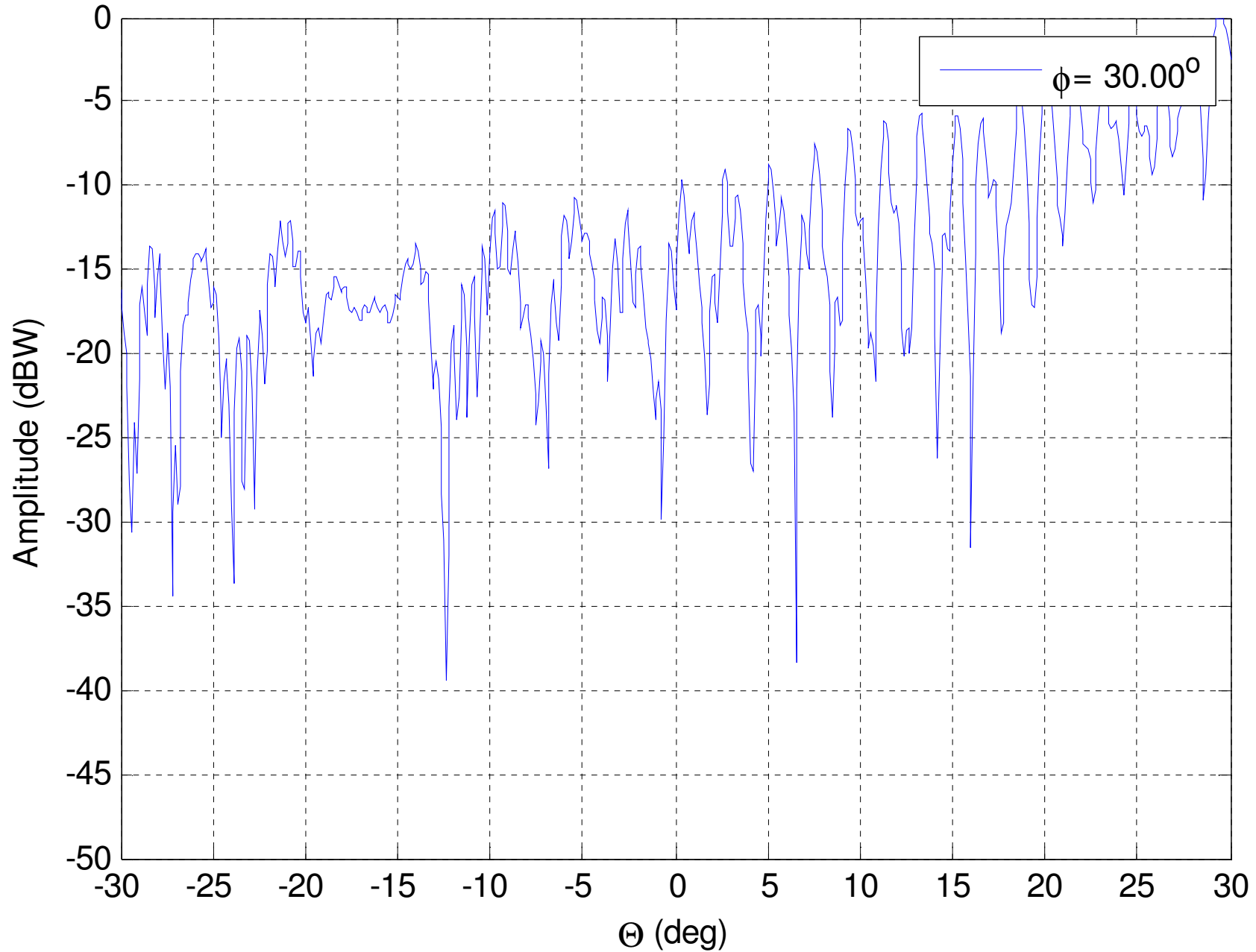
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 5.51 dBW, Date: 15-Dec-2011



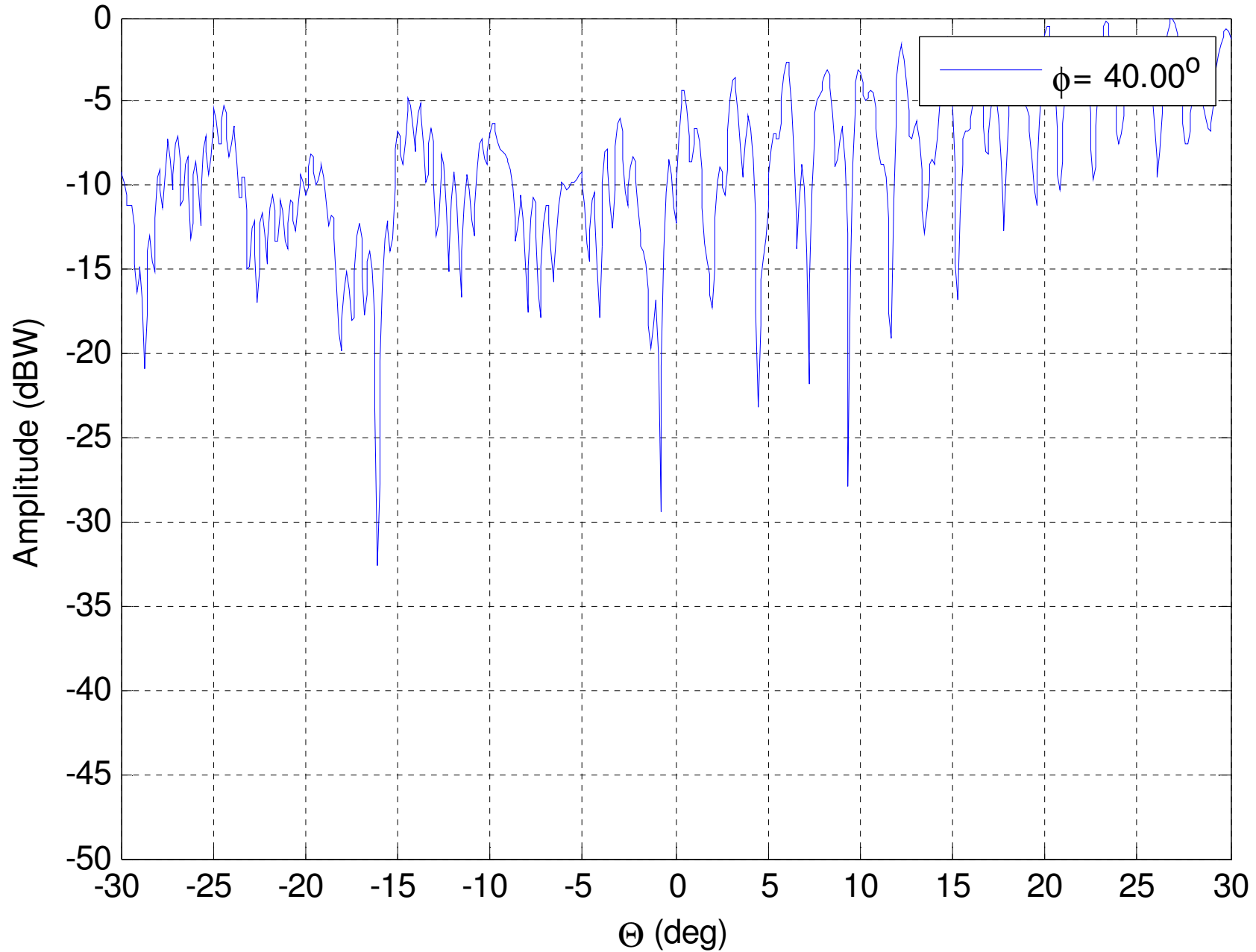
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -0.05 dBW, Date: 15-Dec-2011



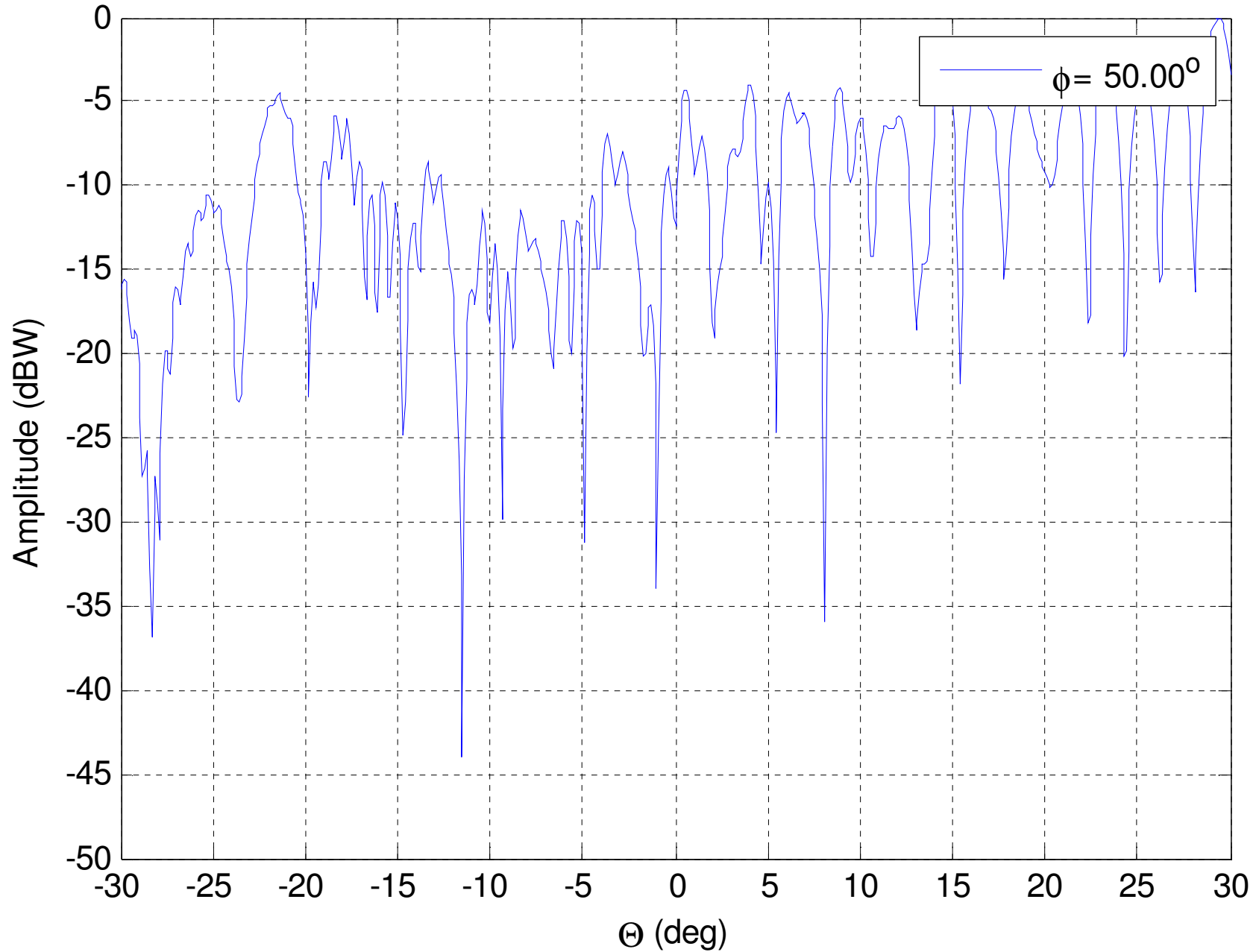
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -5.28 dBW, Date: 15-Dec-2011



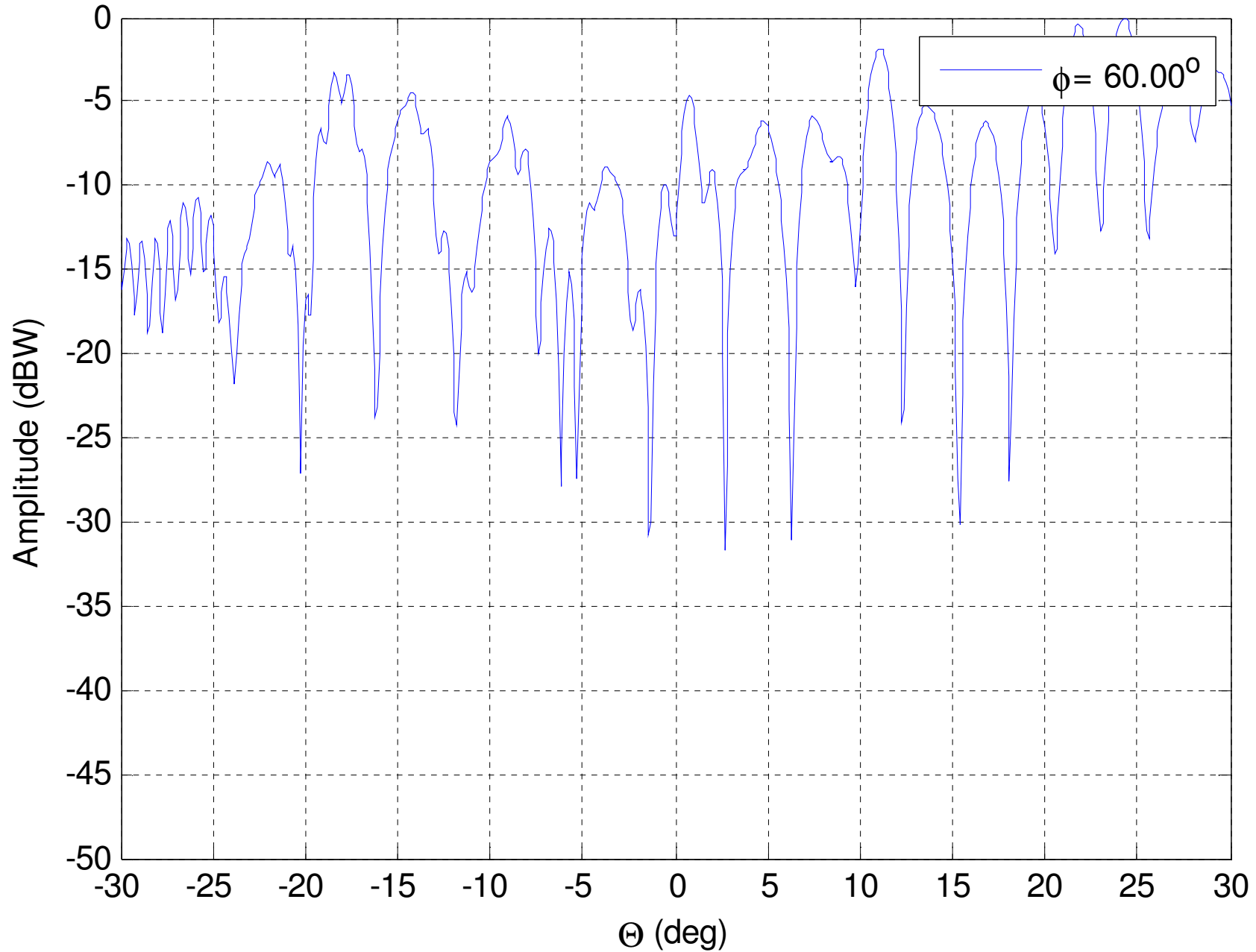
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.06 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

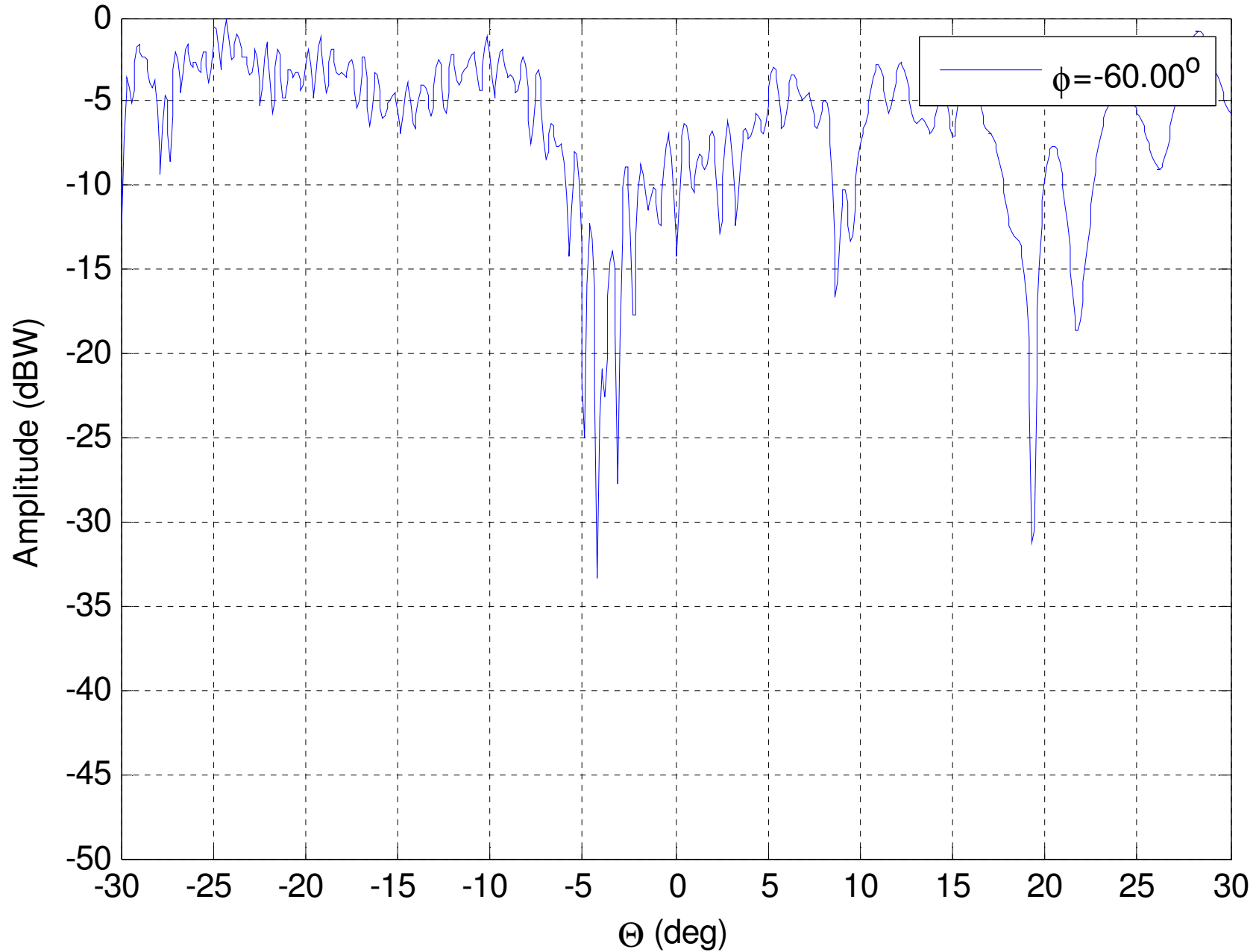
Input file: tx-17.5-rhcp-60.cut, Peak: -4.51 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

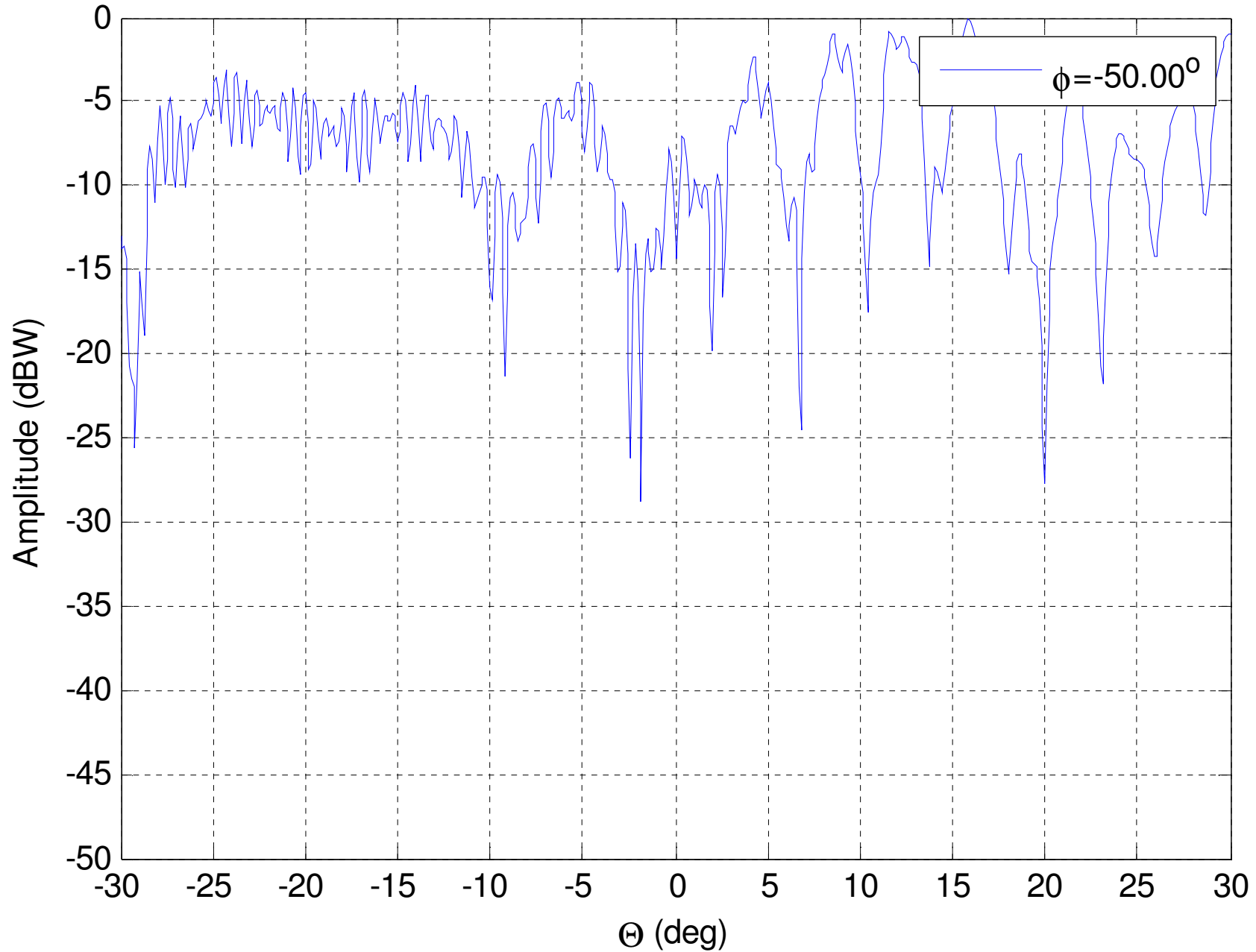
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -5.57 dBW, Date: 15-Dec-2011



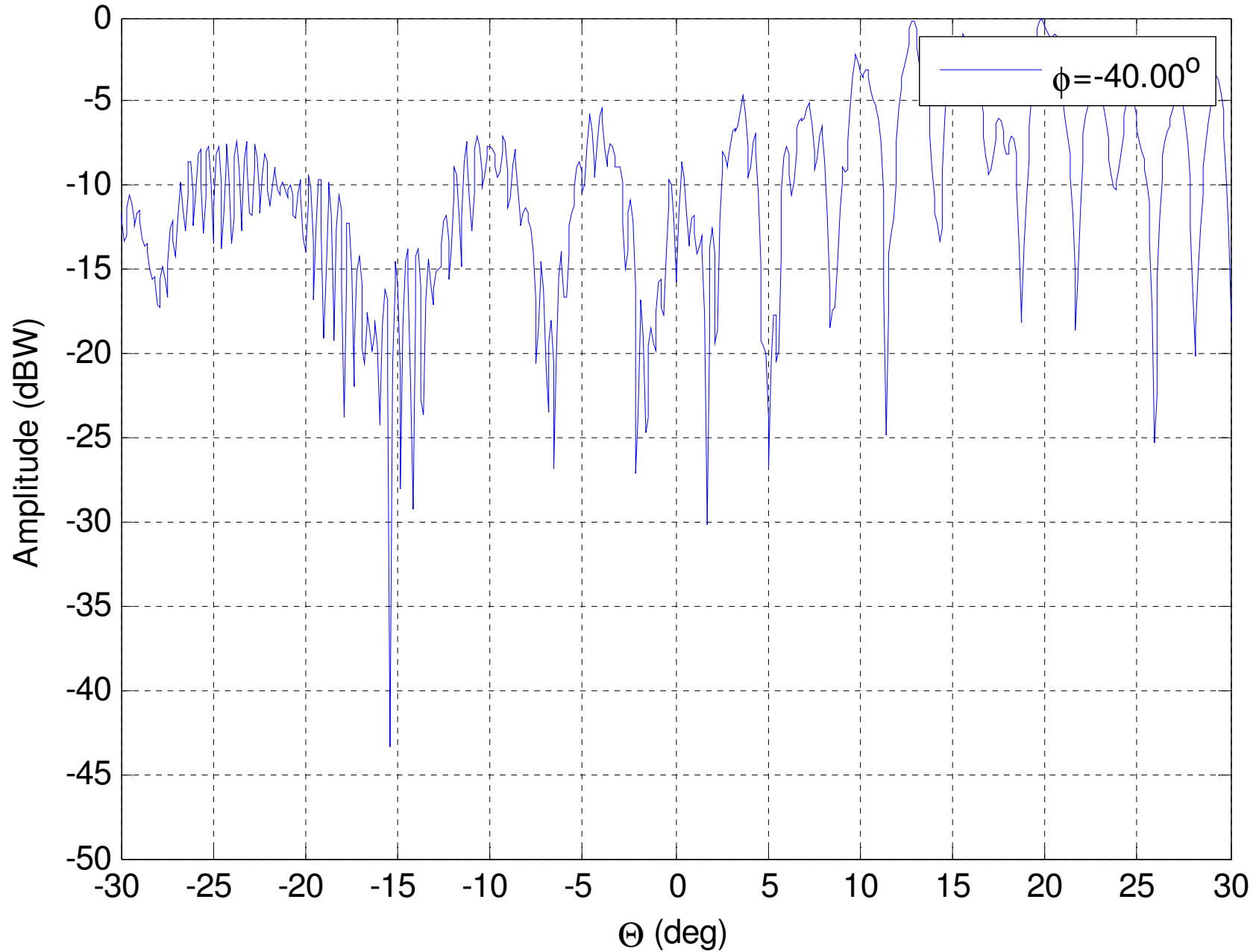
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -4.89 dBW, Date: 15-Dec-2011



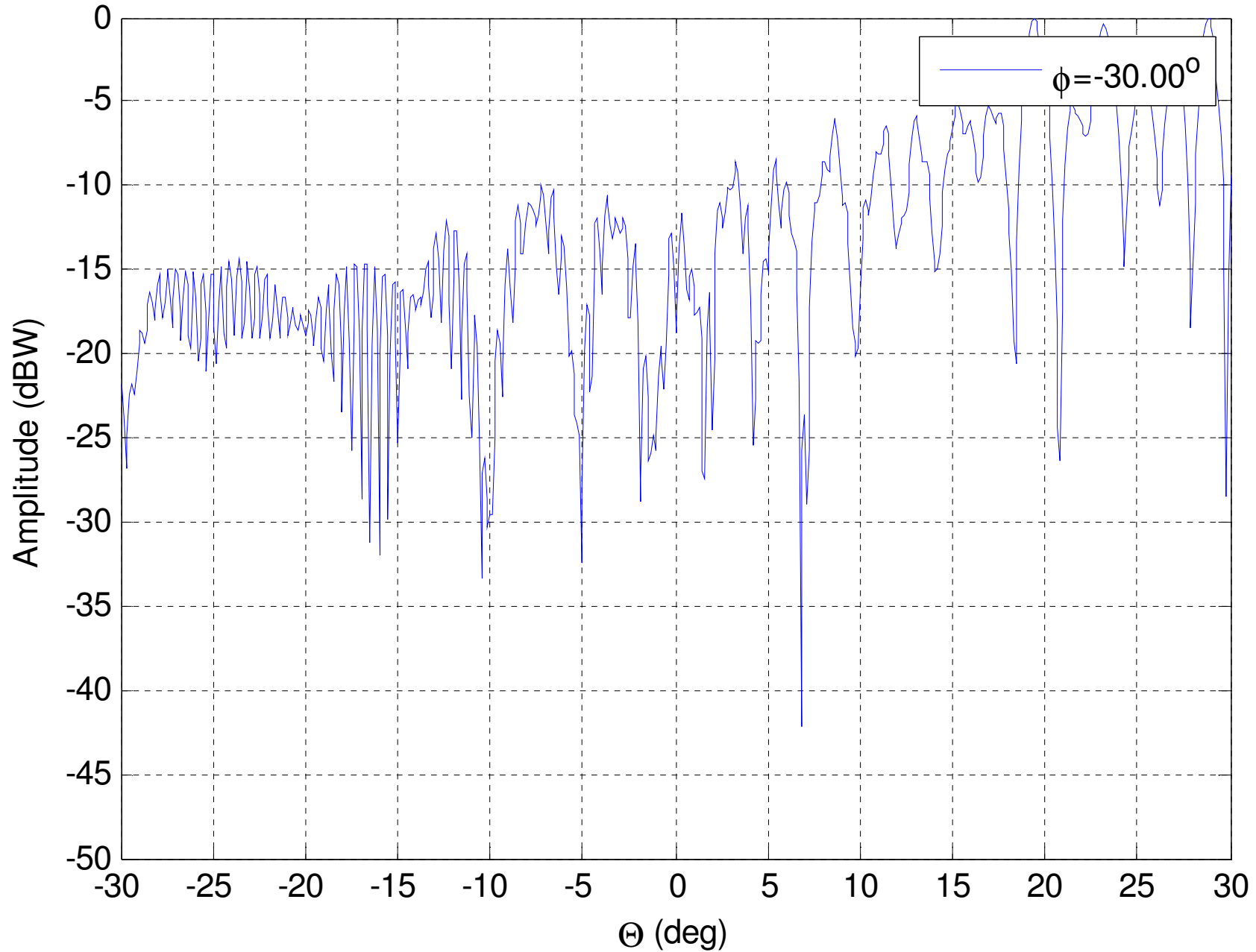
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -3.29 dBW, Date: 15-Dec-2011



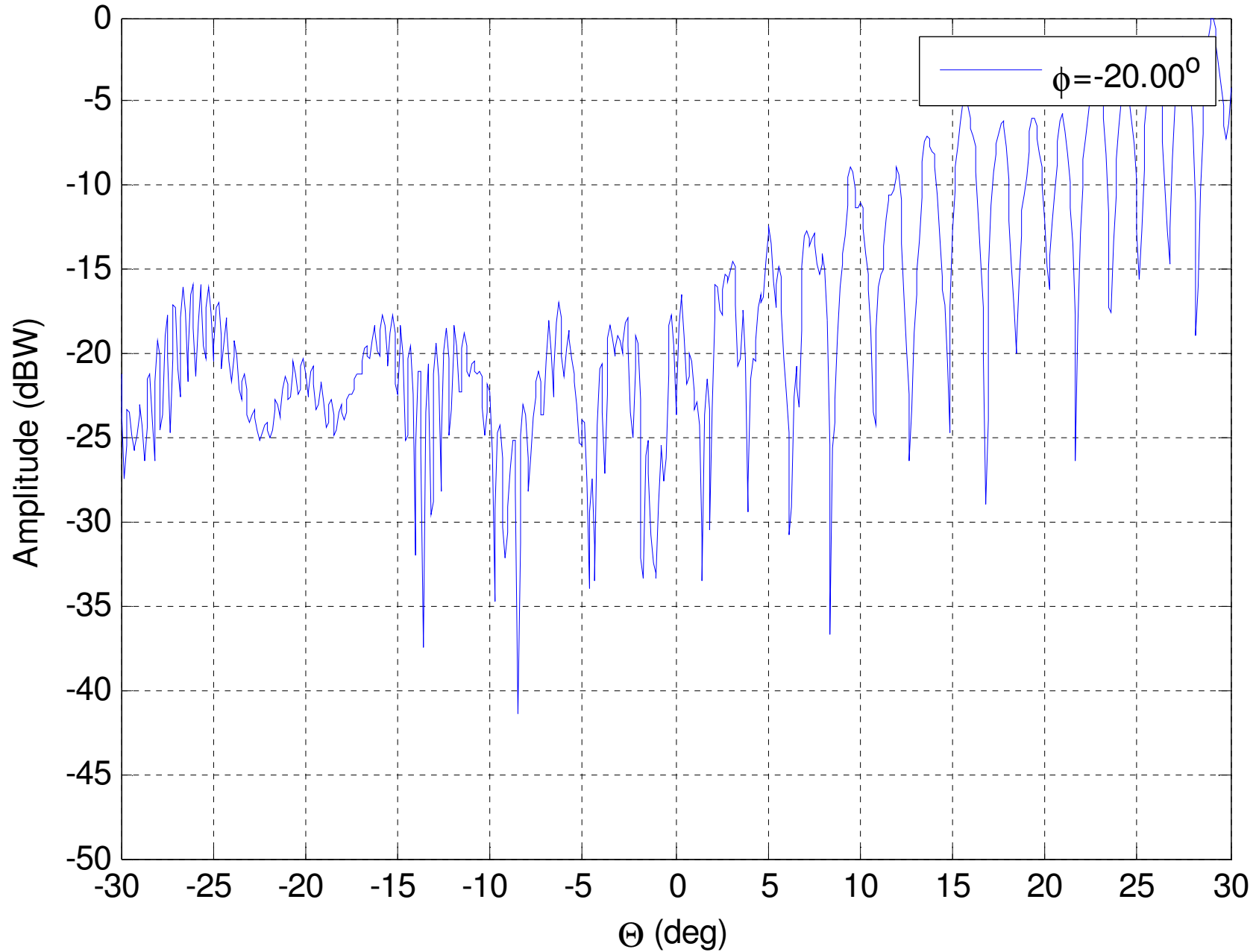
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.29 dBW, Date: 15-Dec-2011



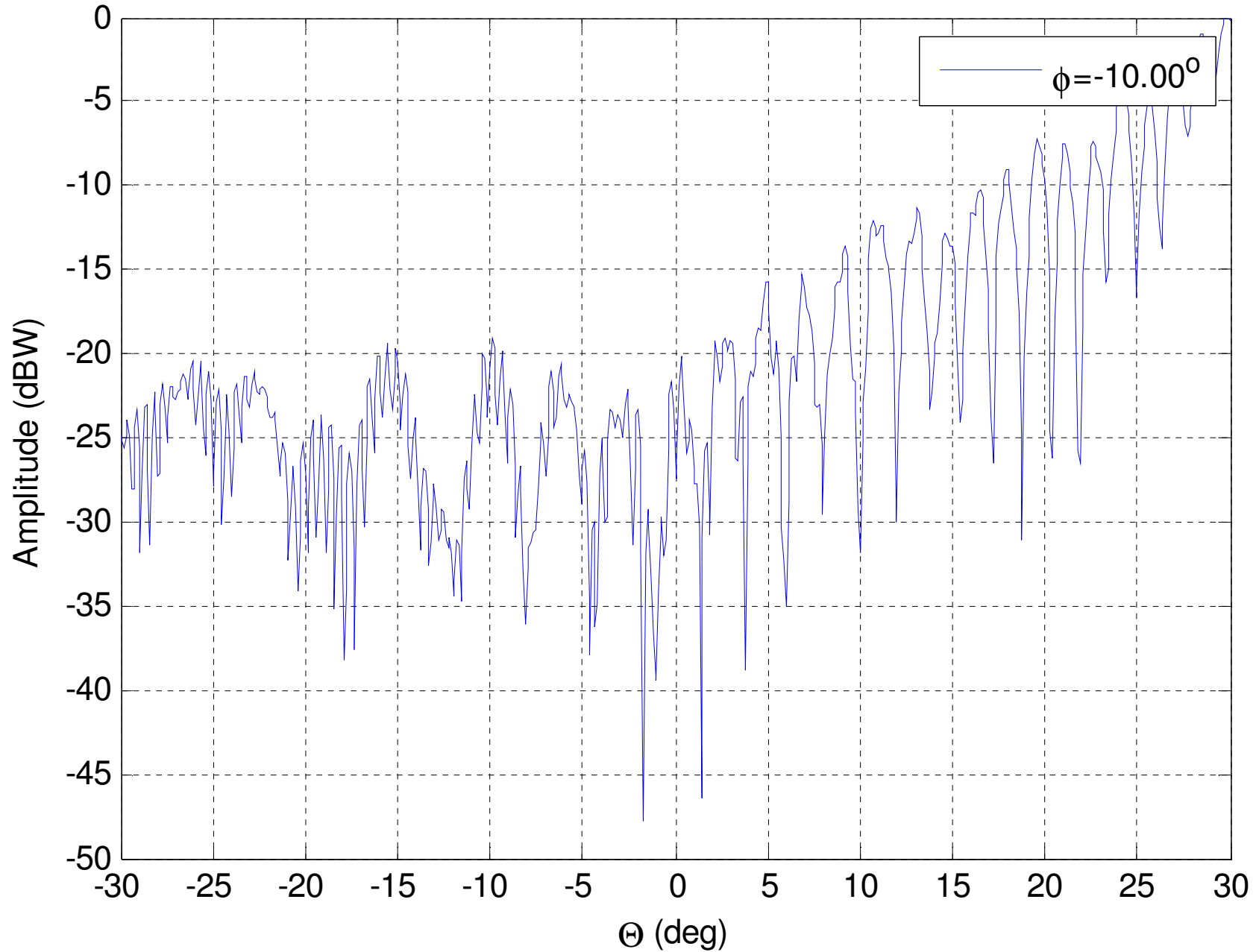
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 4.63 dBW, Date: 15-Dec-2011



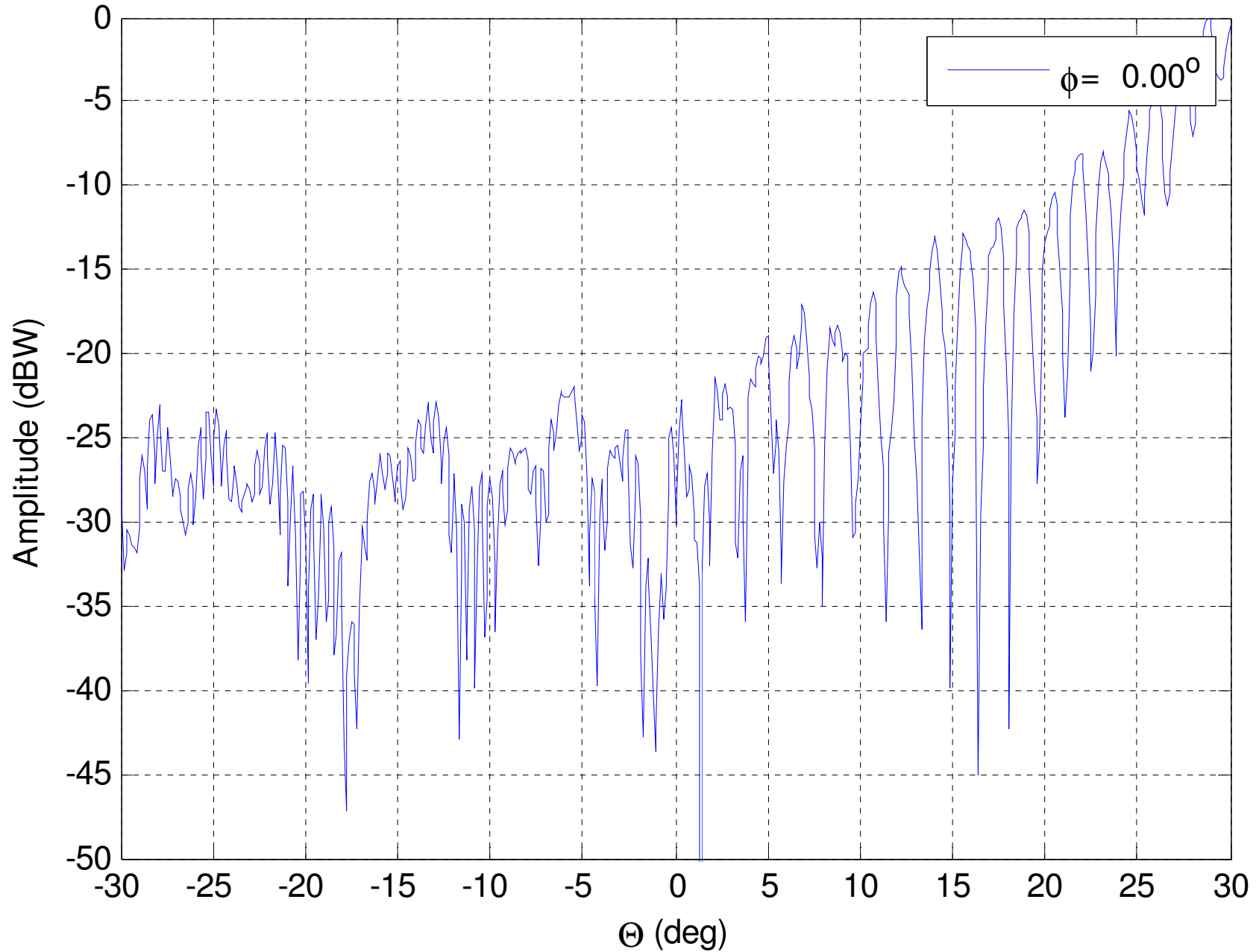
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 8.46 dBW, Date: 15-Dec-2011



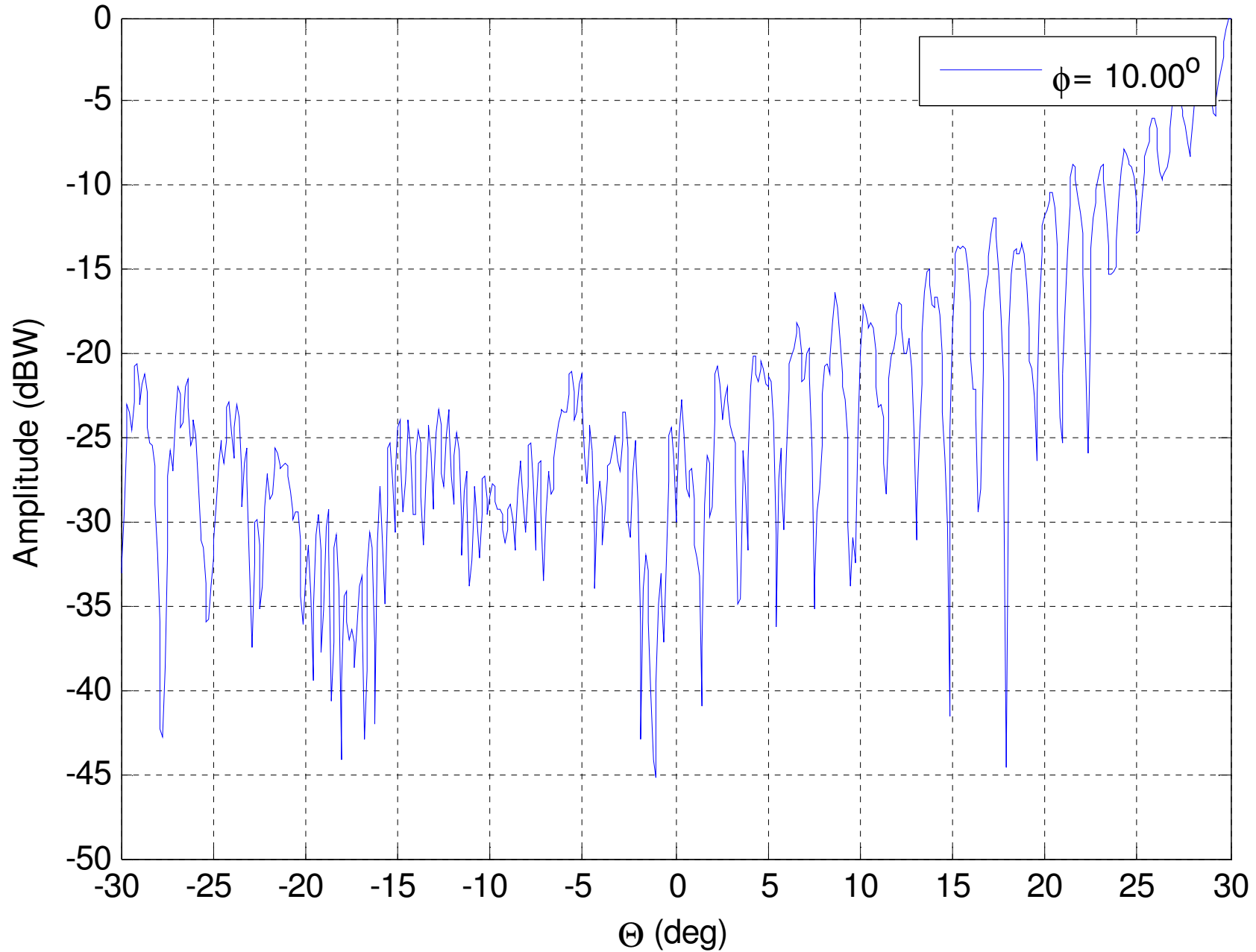
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 11.11 dBW, Date: 15-Dec-2011



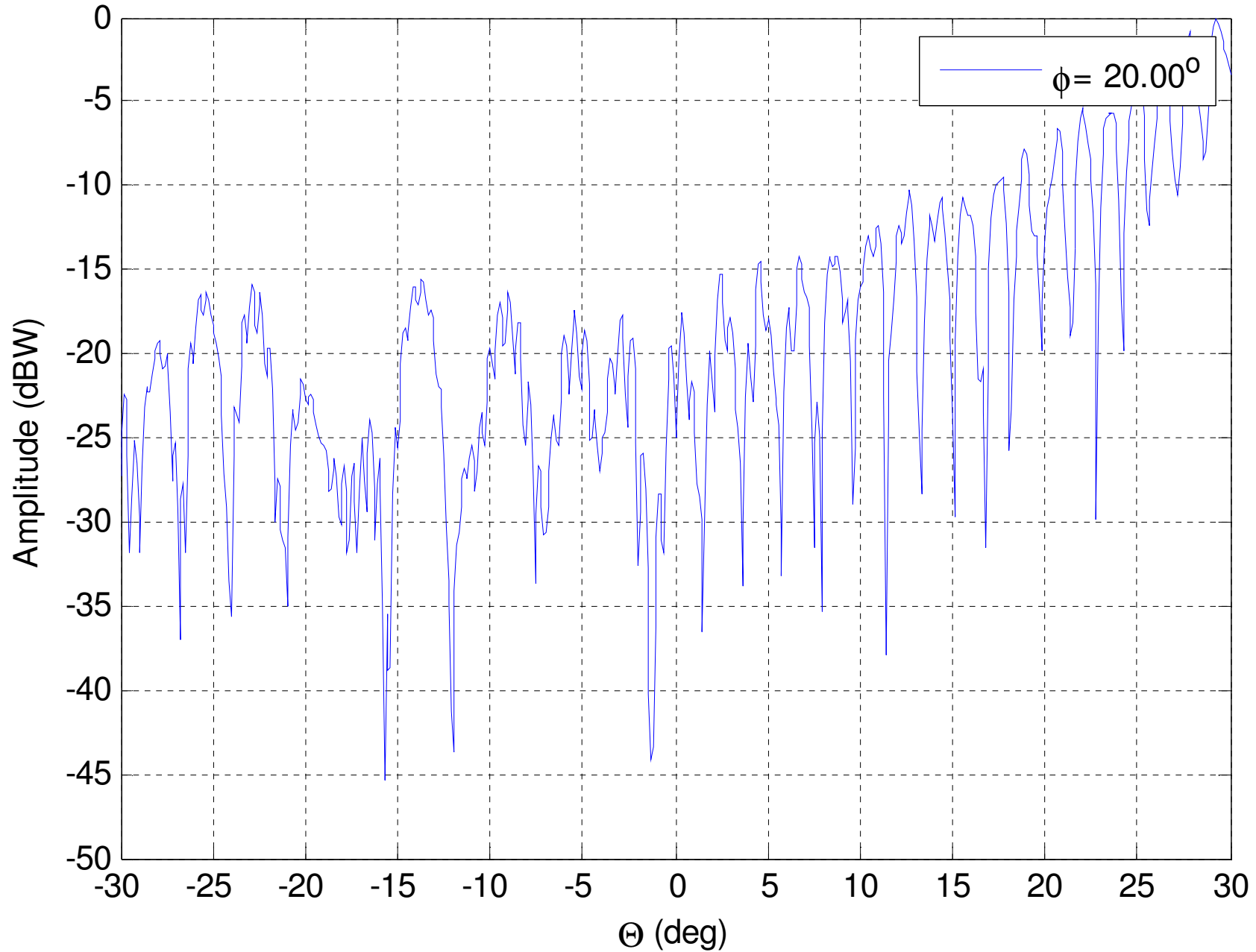
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 11.07 dBW, Date: 15-Dec-2011



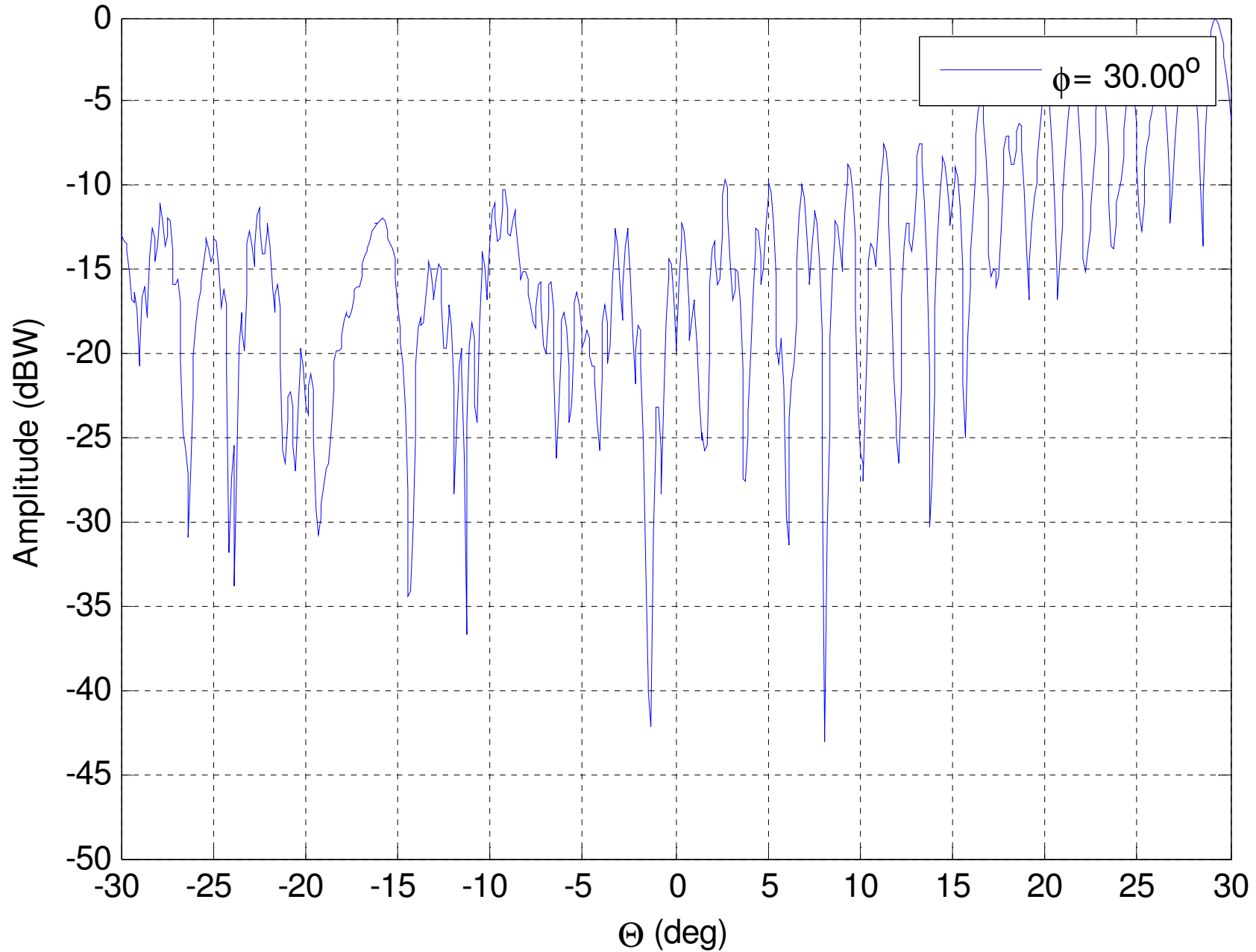
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 6.01 dBW, Date: 15-Dec-2011



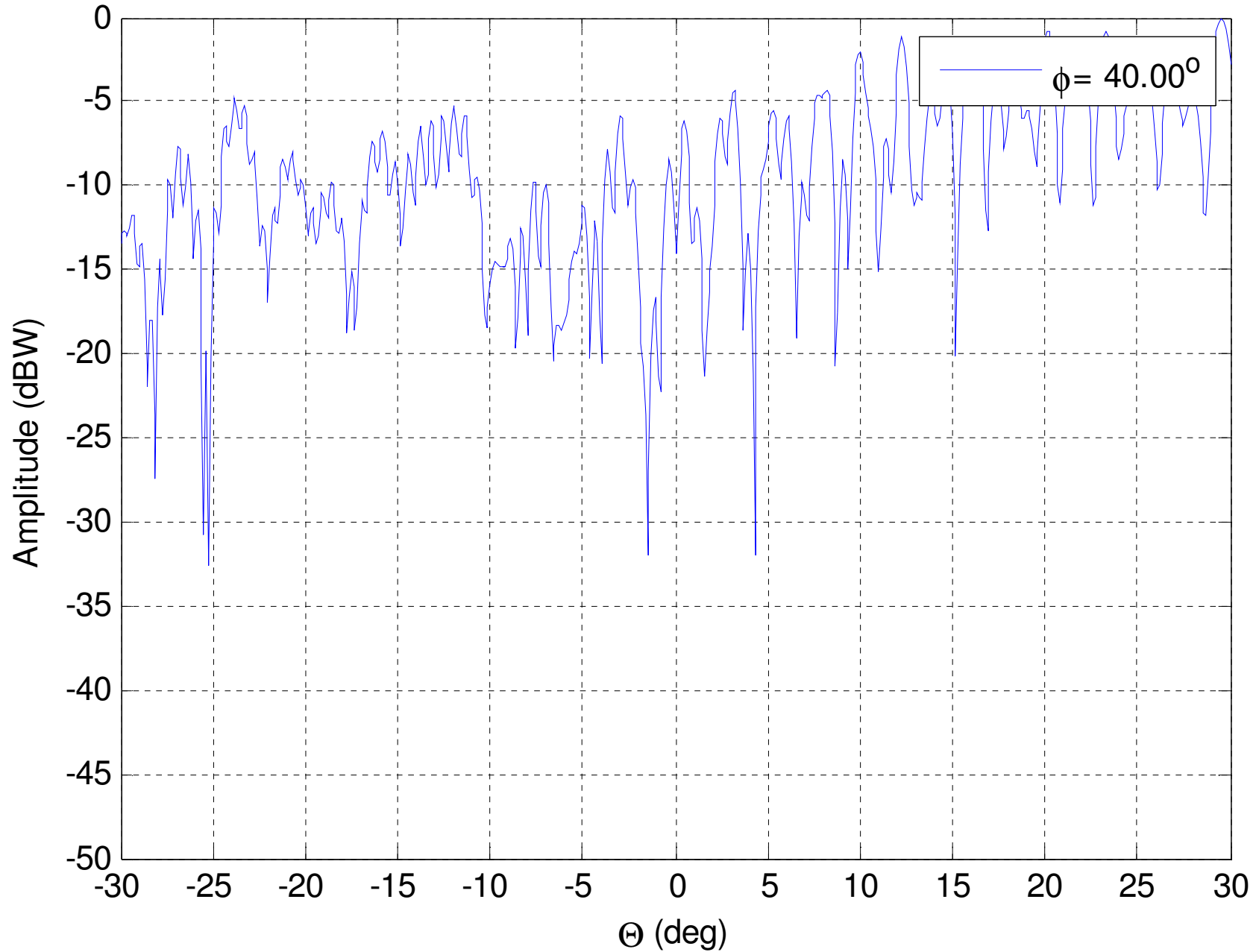
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: 0.86 dBW, Date: 15-Dec-2011



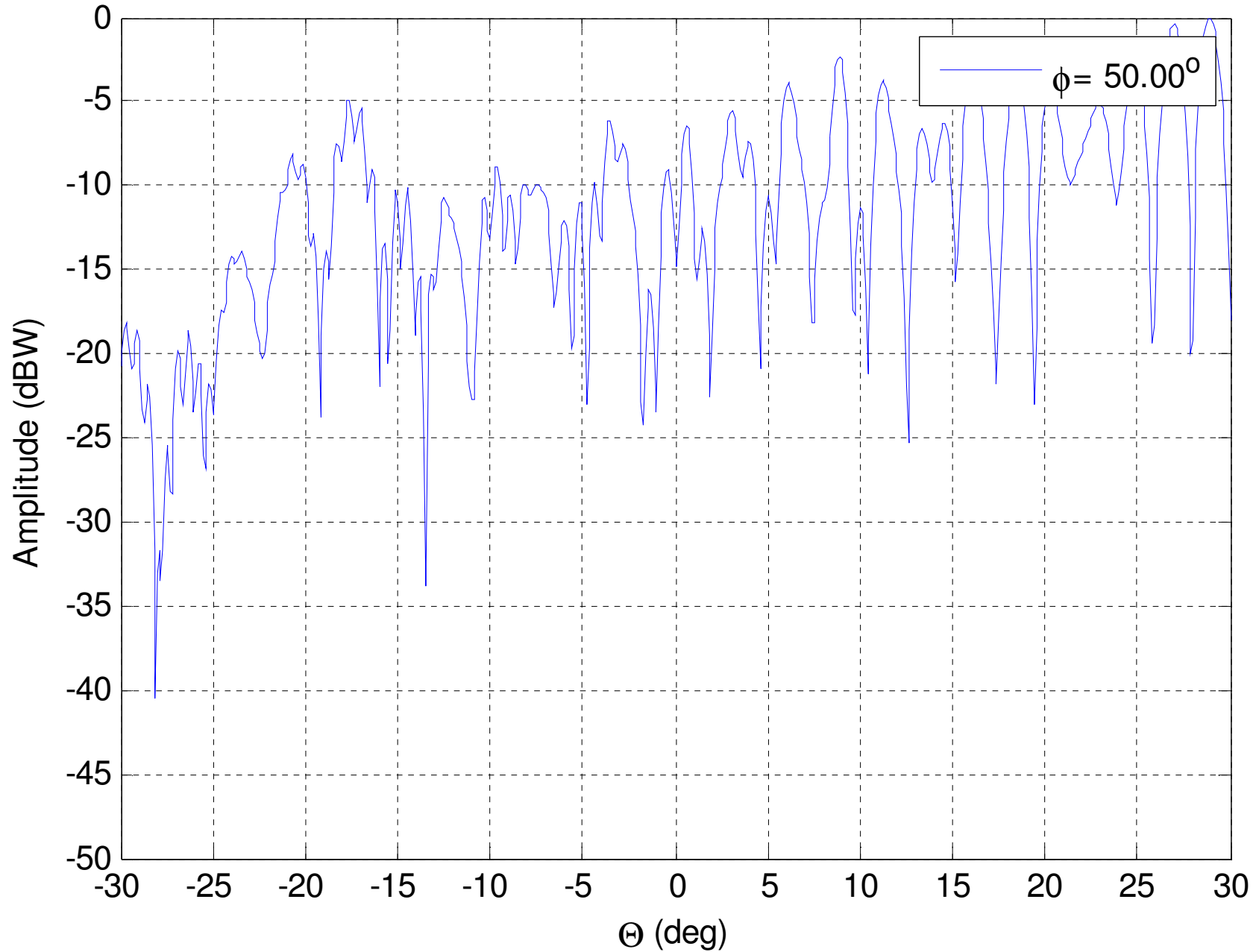
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -5.06 dBW, Date: 15-Dec-2011



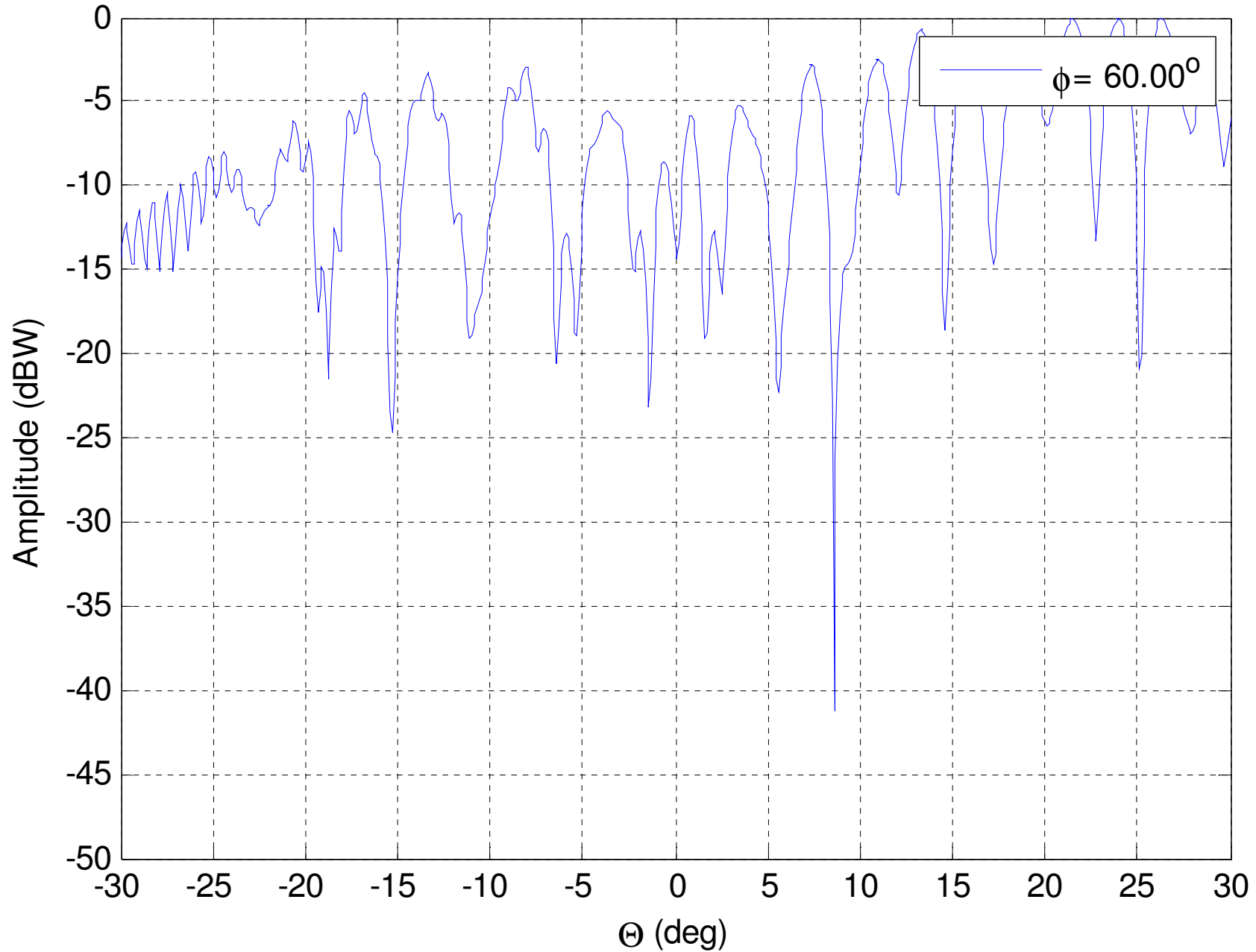
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -4.62 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

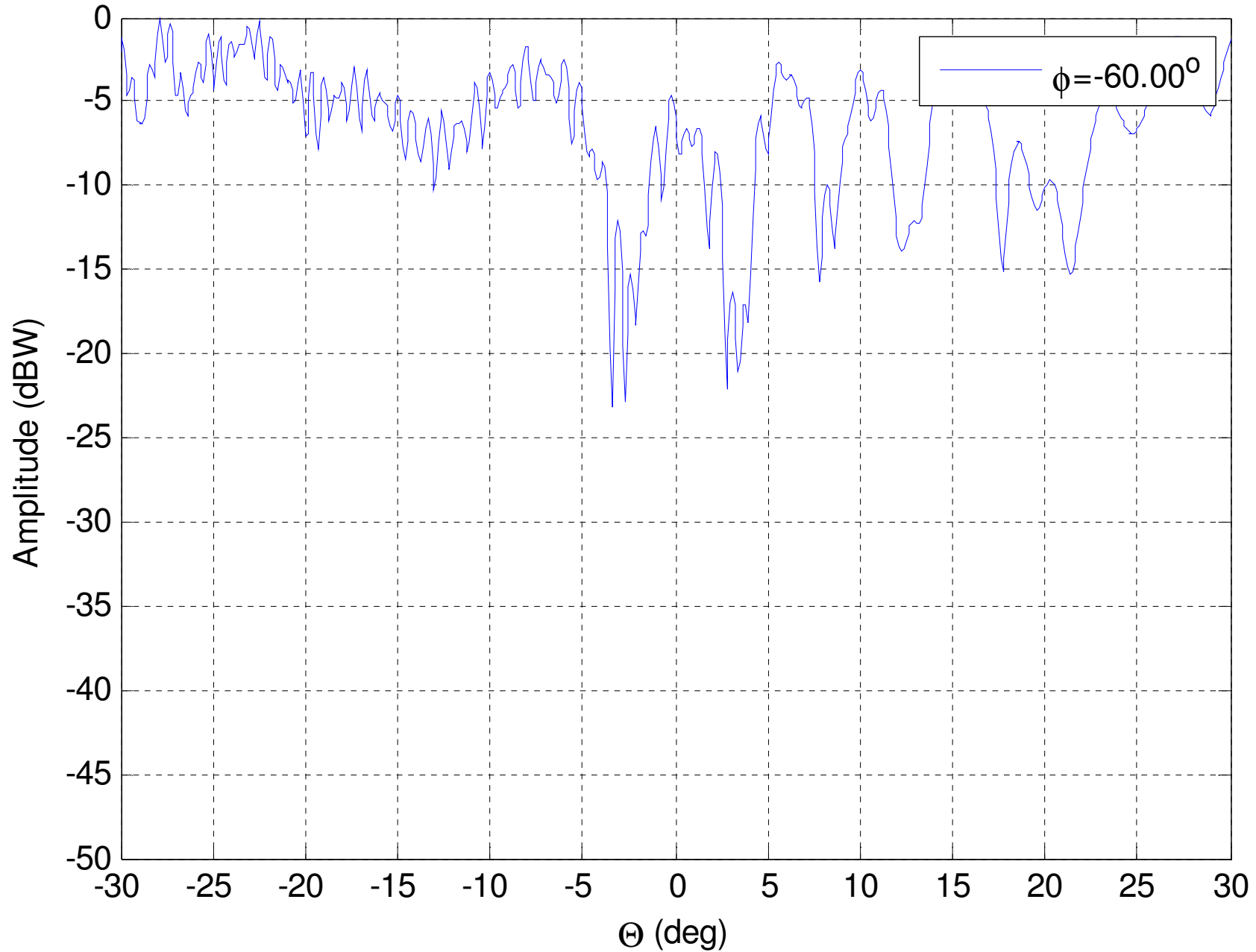
Input file: tx-17.5-lhcp-60.cut, Peak: -5.10 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

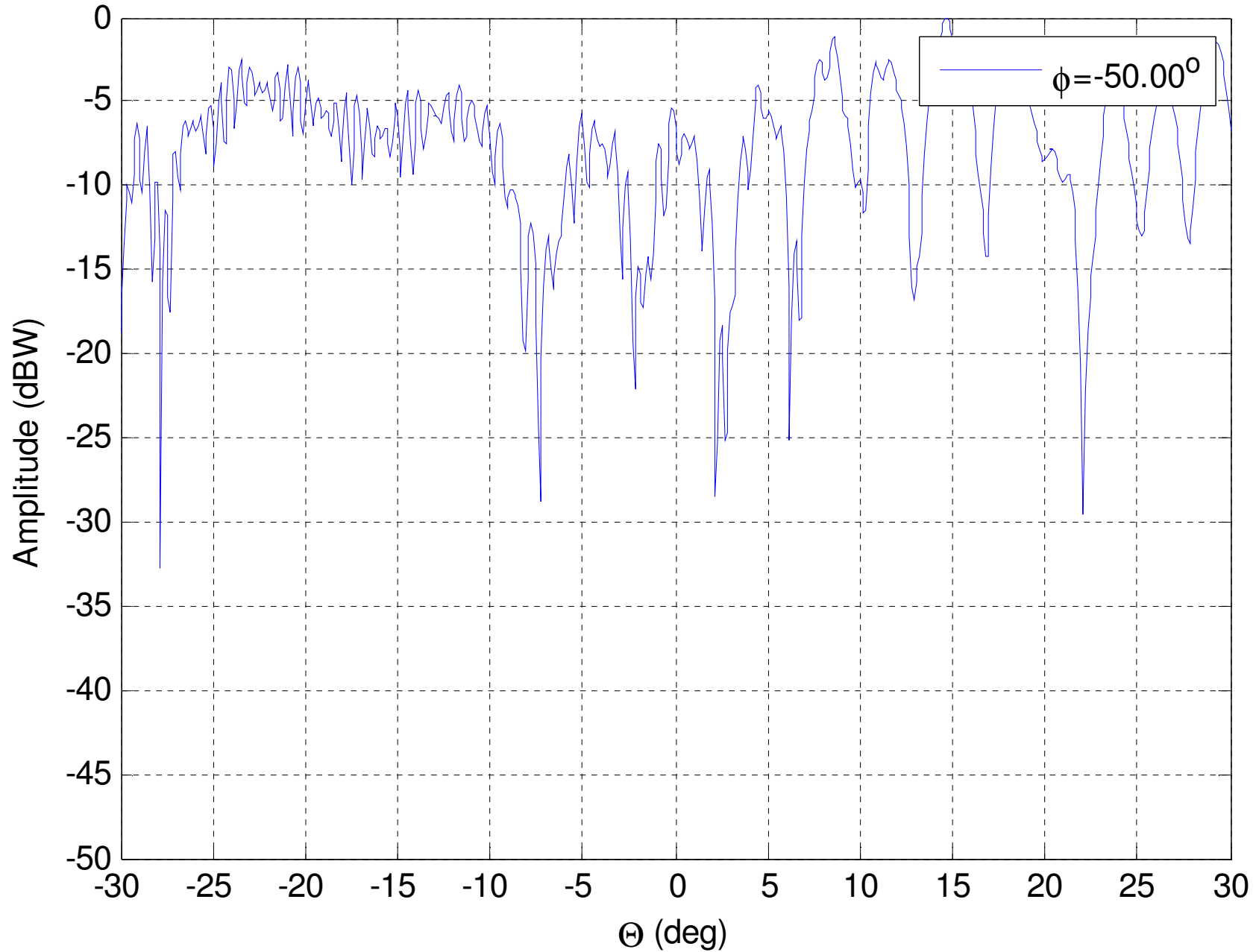
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -5.73 dBW, Date: 15-Dec-2011



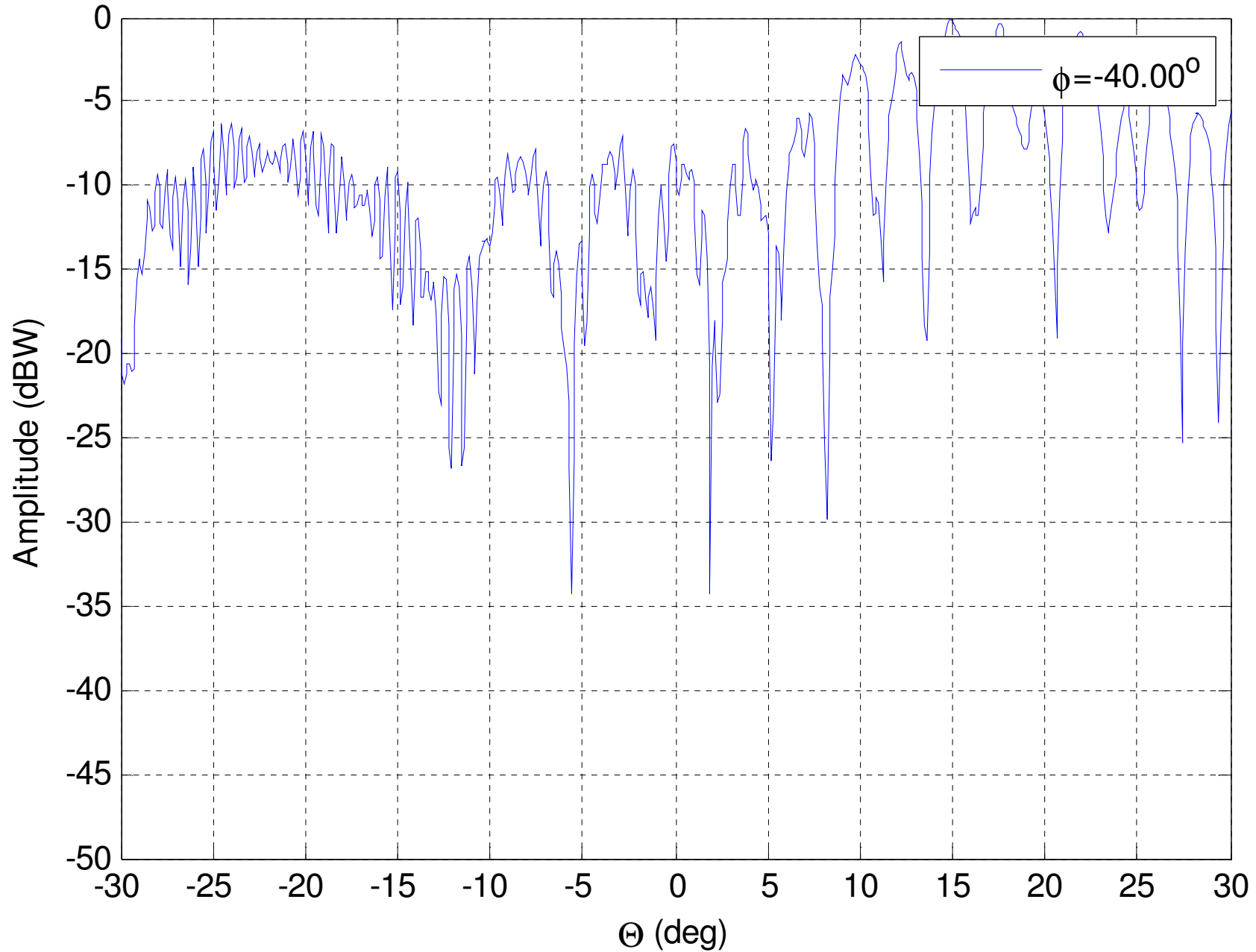
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -5.15 dBW, Date: 15-Dec-2011



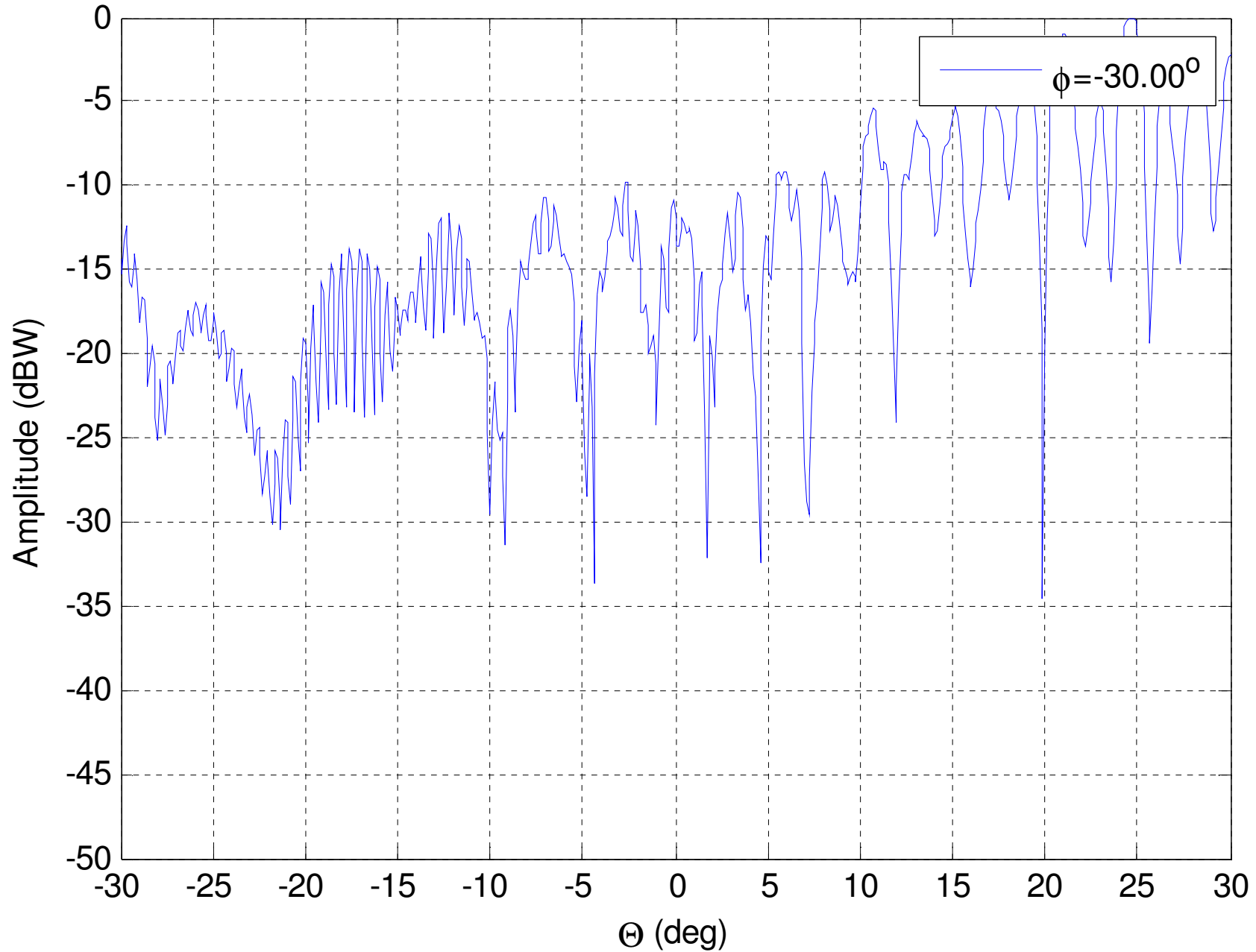
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -3.20 dBW, Date: 15-Dec-2011



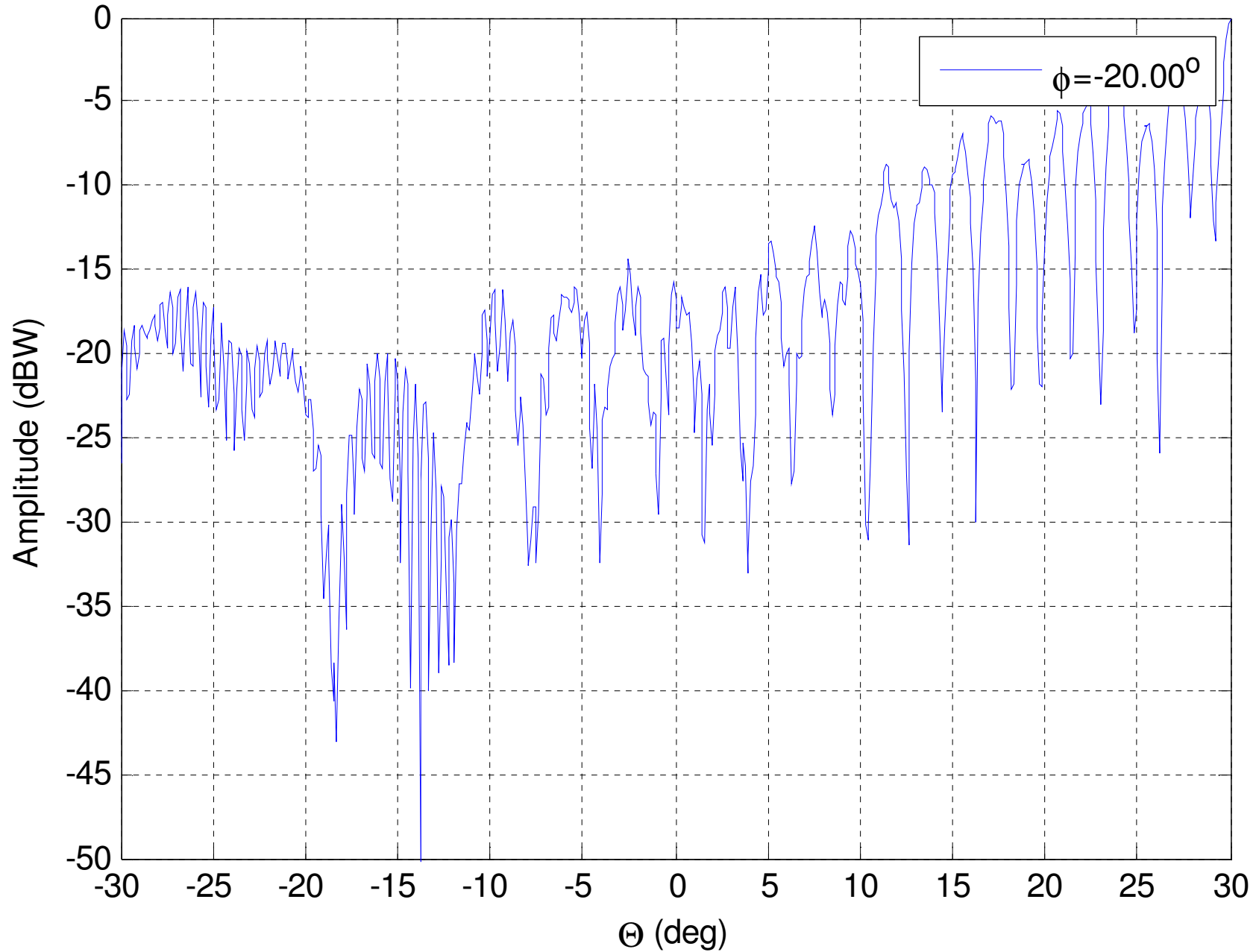
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: 0.16 dBW, Date: 15-Dec-2011



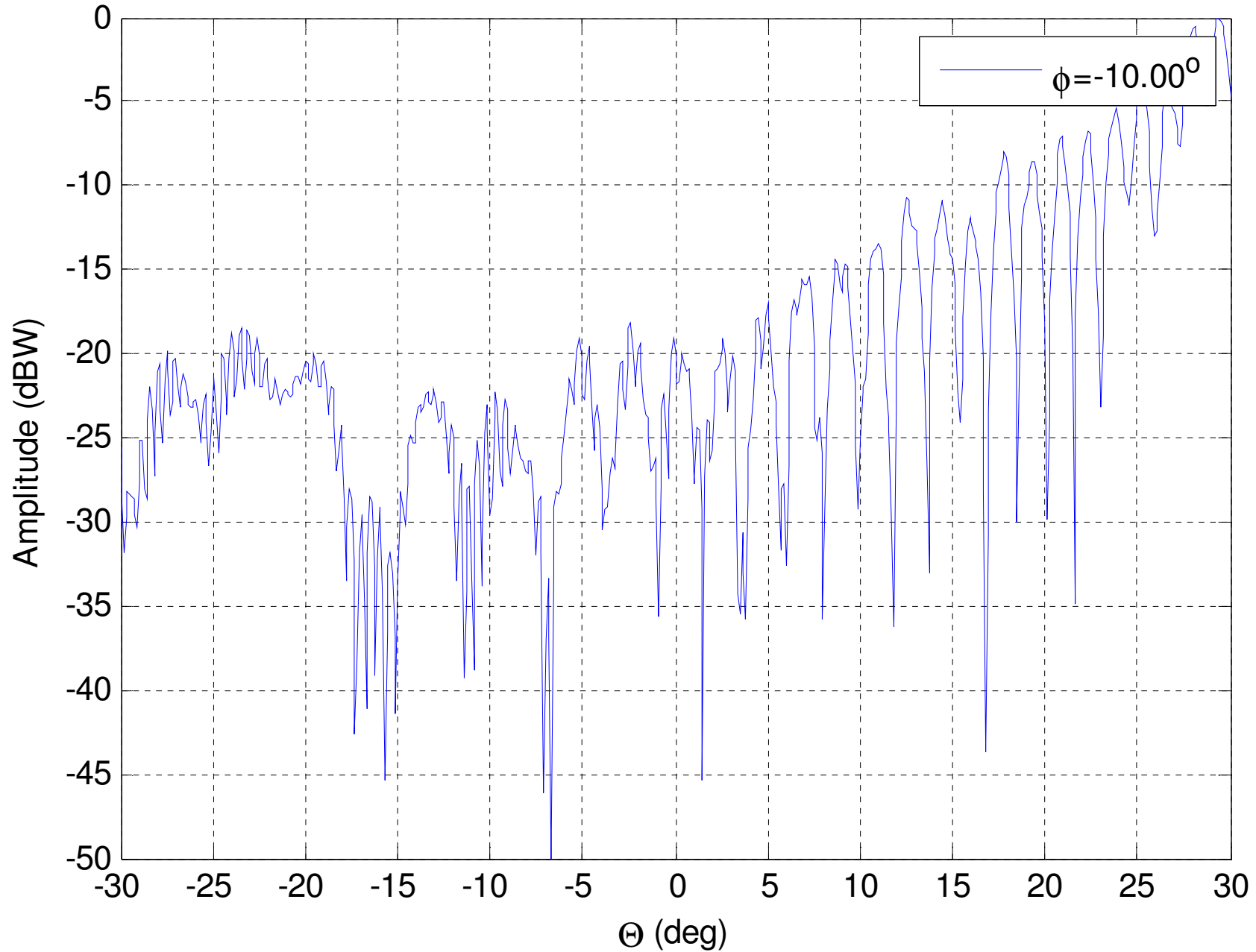
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 5.07 dBW, Date: 15-Dec-2011



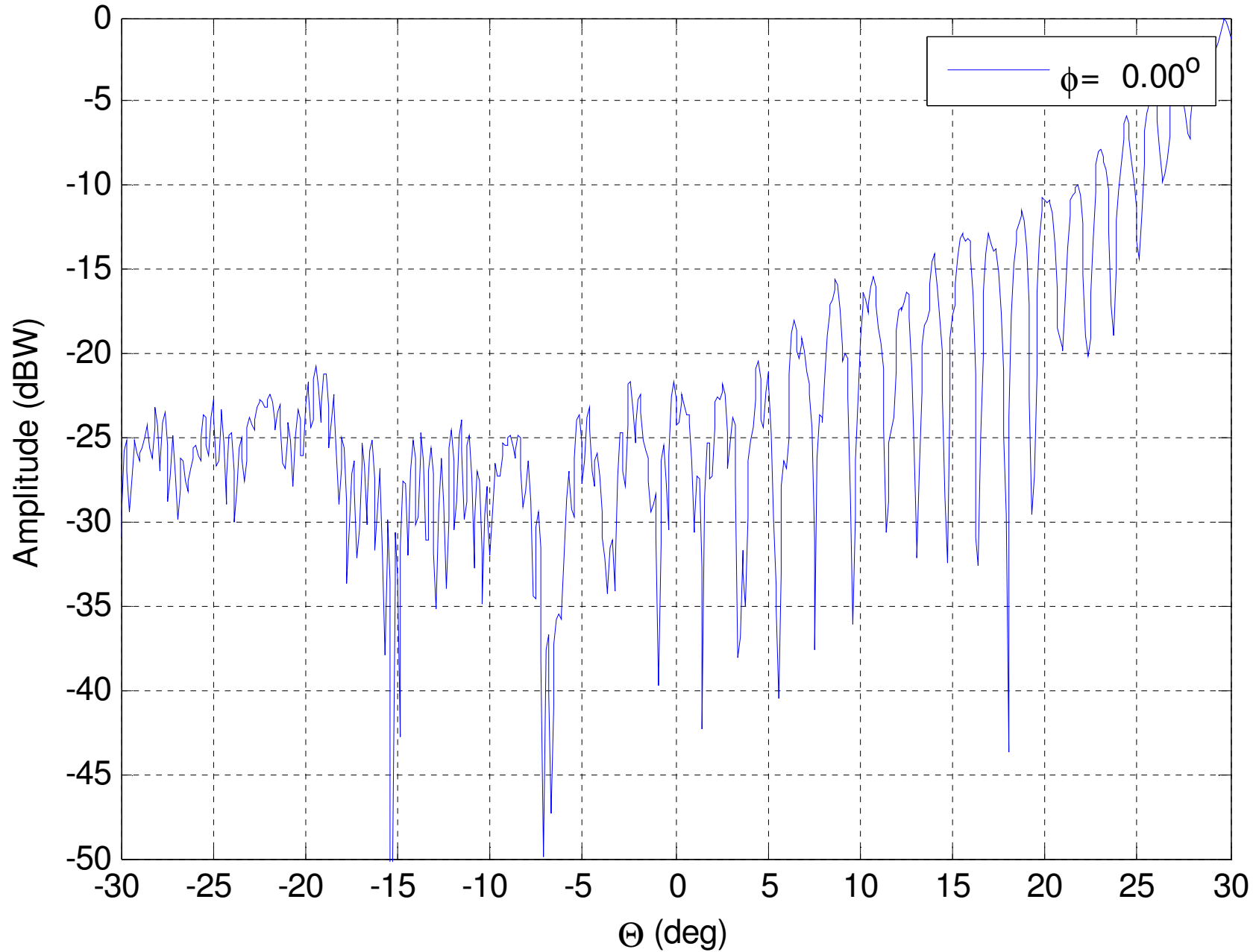
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 8.35 dBW, Date: 15-Dec-2011



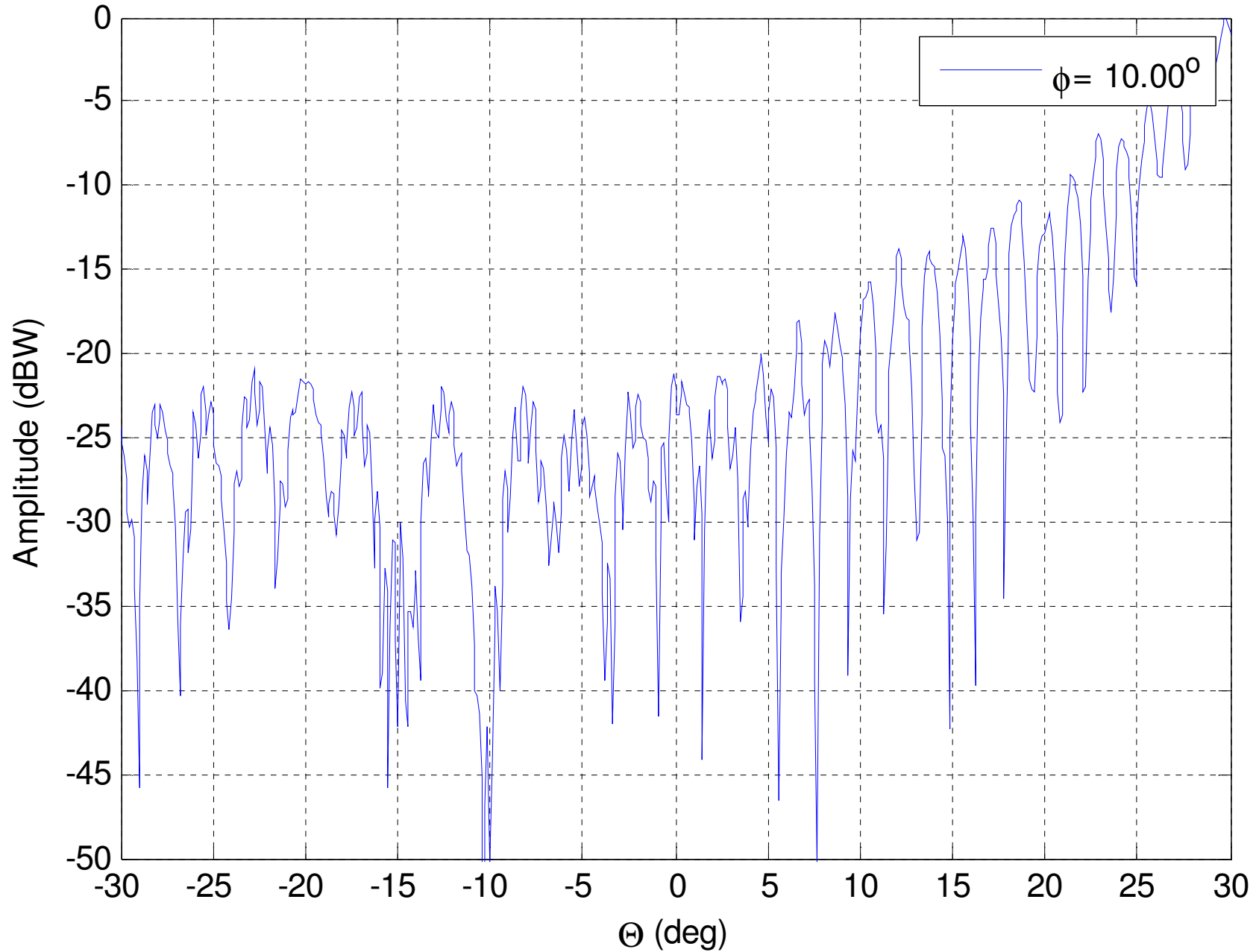
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 10.93 dBW, Date: 15-Dec-2011



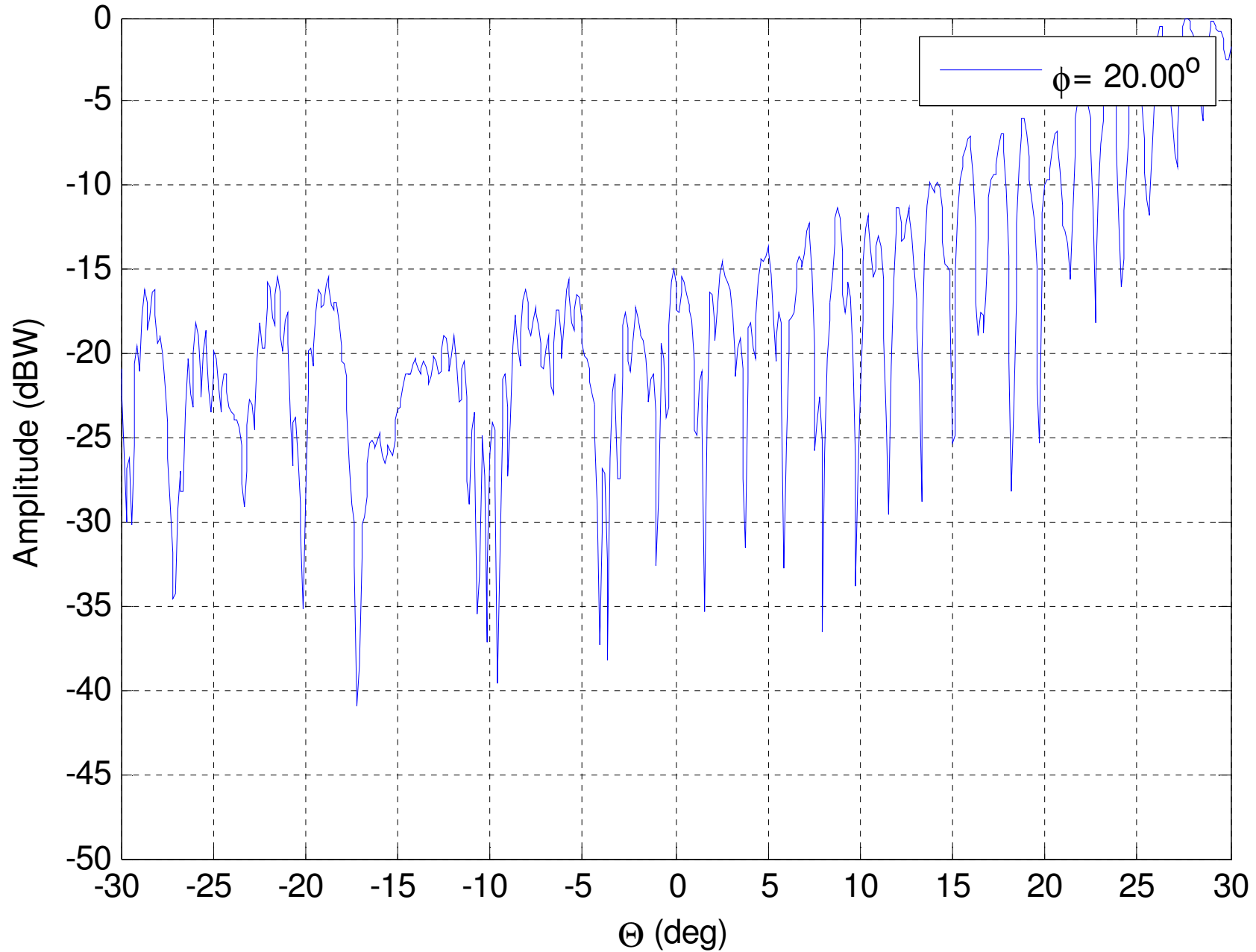
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 10.34 dBW, Date: 15-Dec-2011



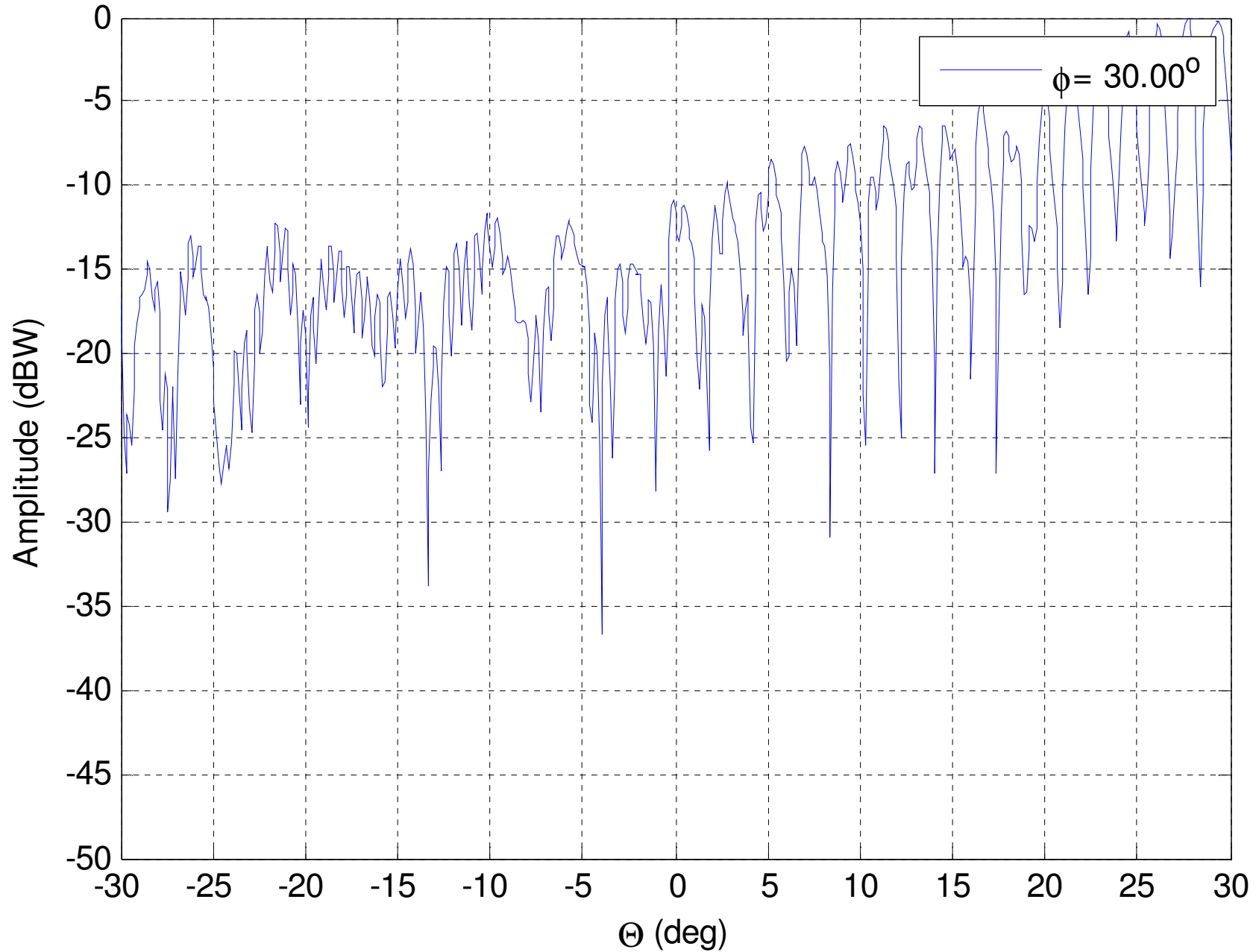
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 4.14 dBW, Date: 15-Dec-2011



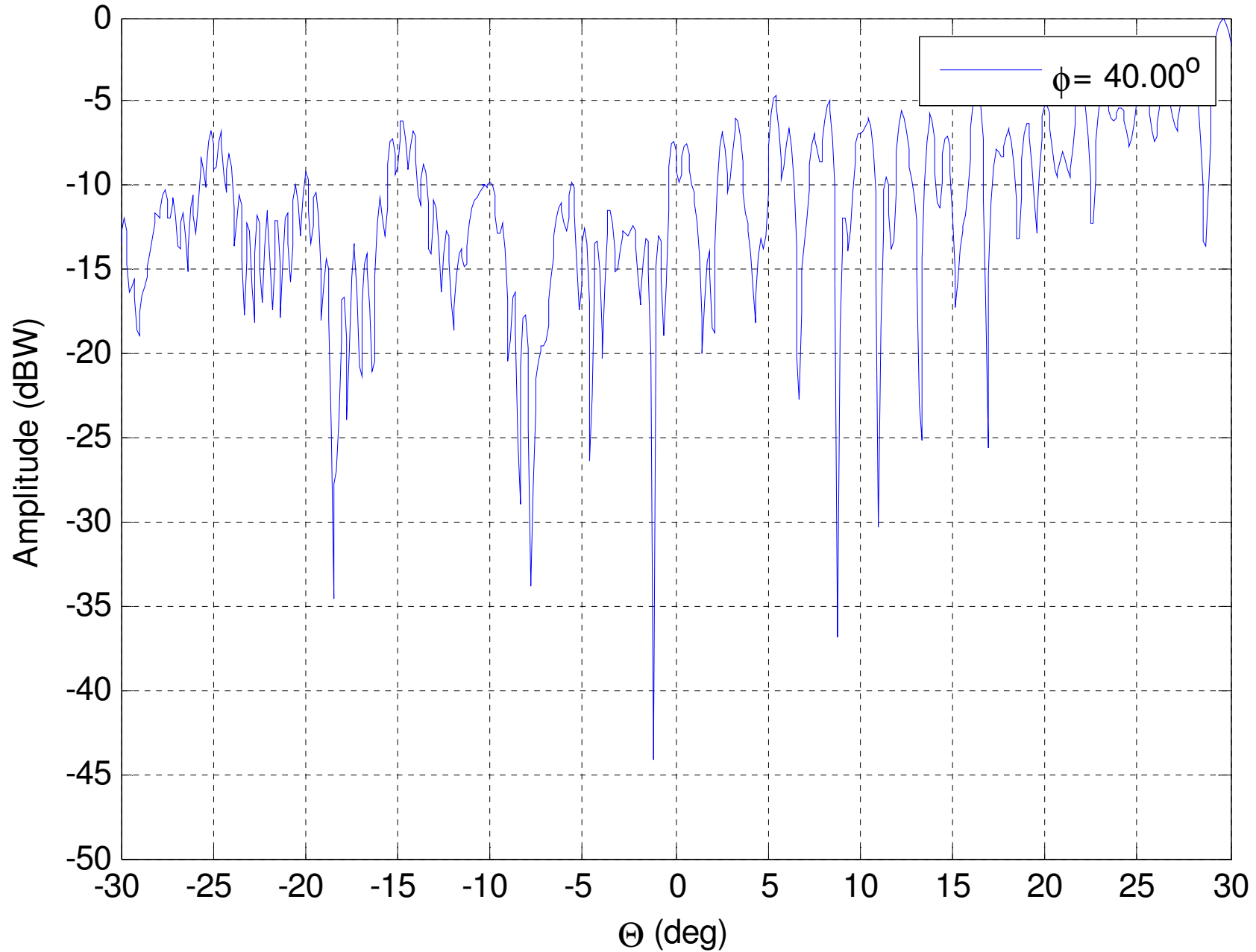
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.15 dBW, Date: 15-Dec-2011



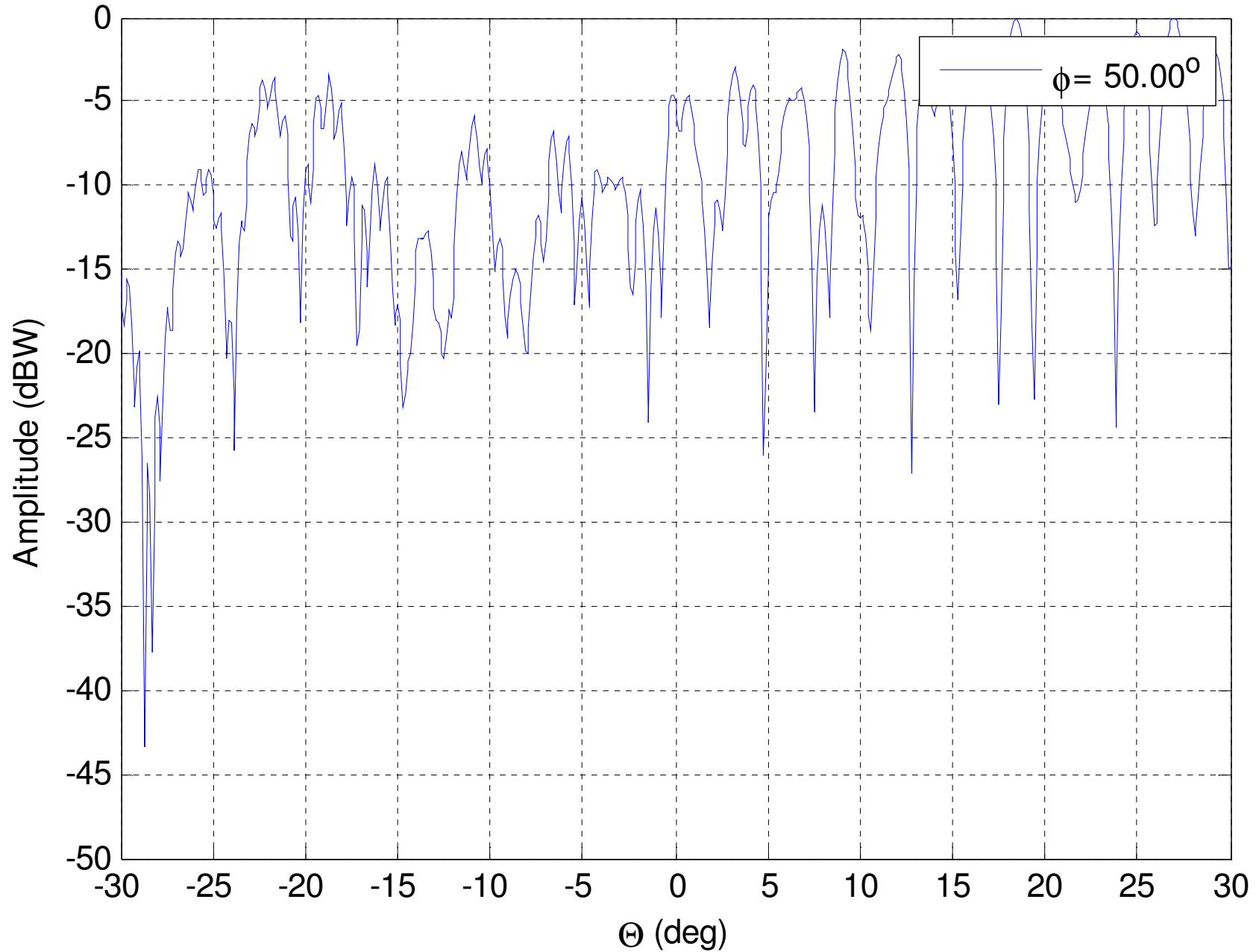
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -3.68 dBW, Date: 15-Dec-2011



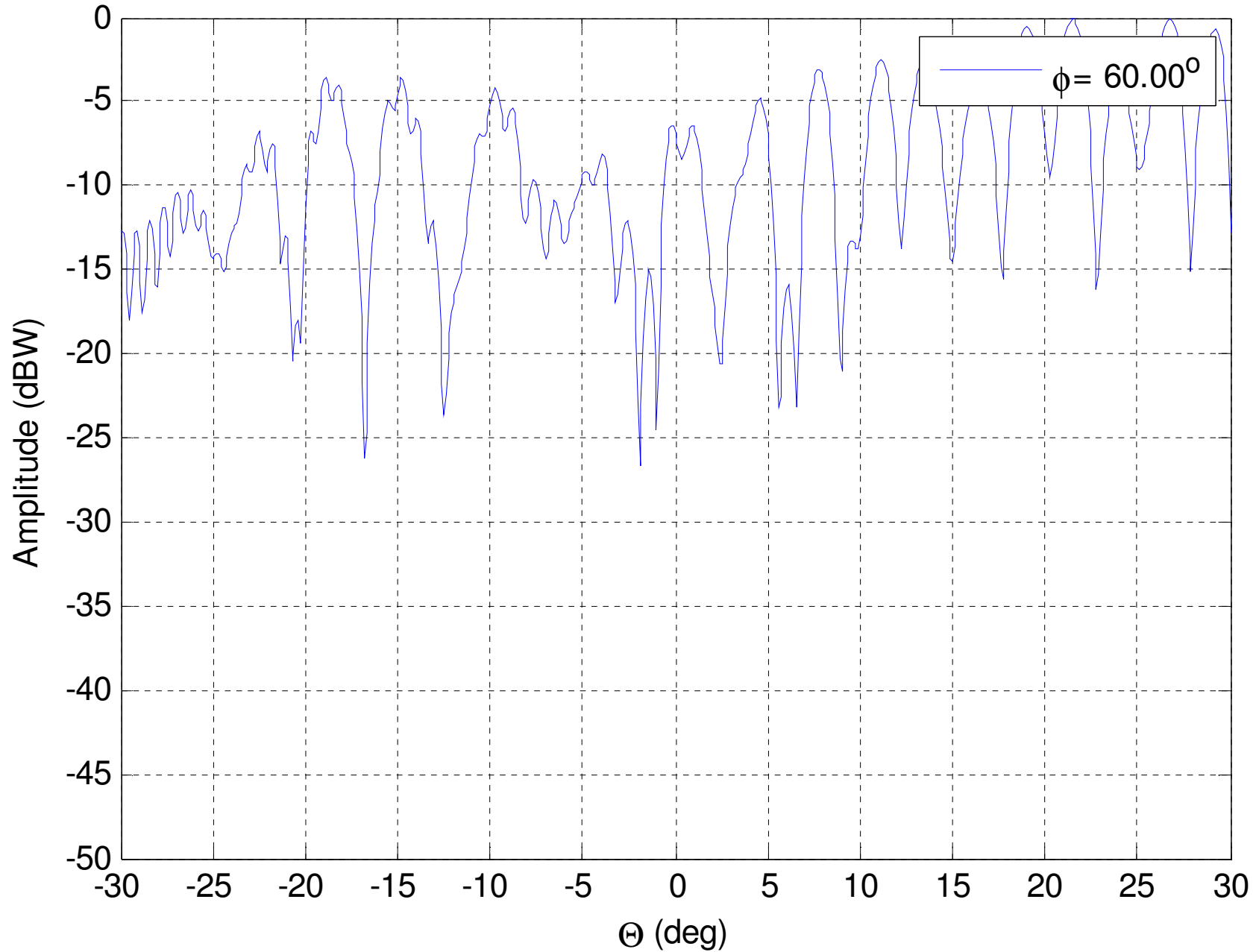
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -6.60 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

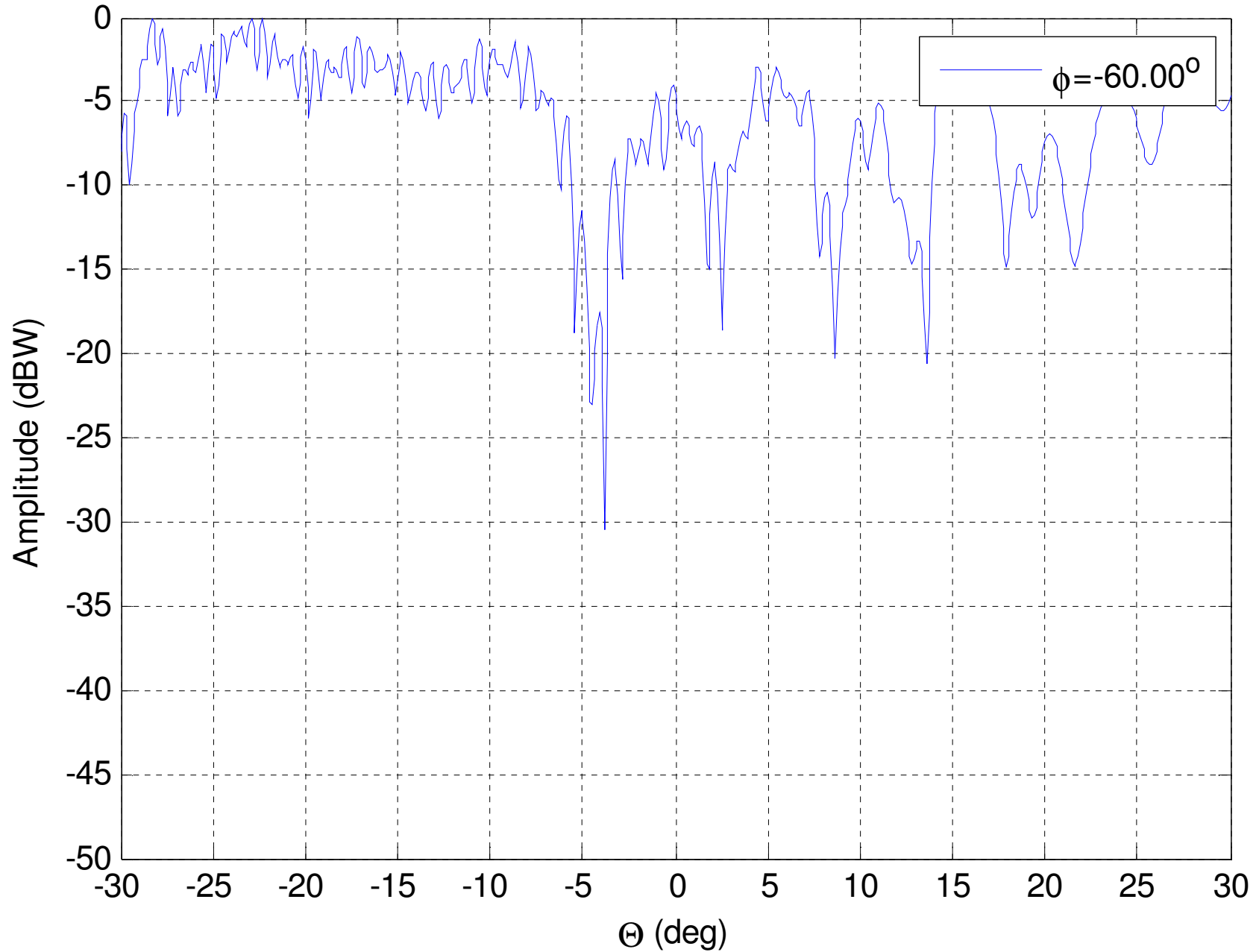
Input file: tx-17.7-rhcp-60.cut, Peak: -4.83 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

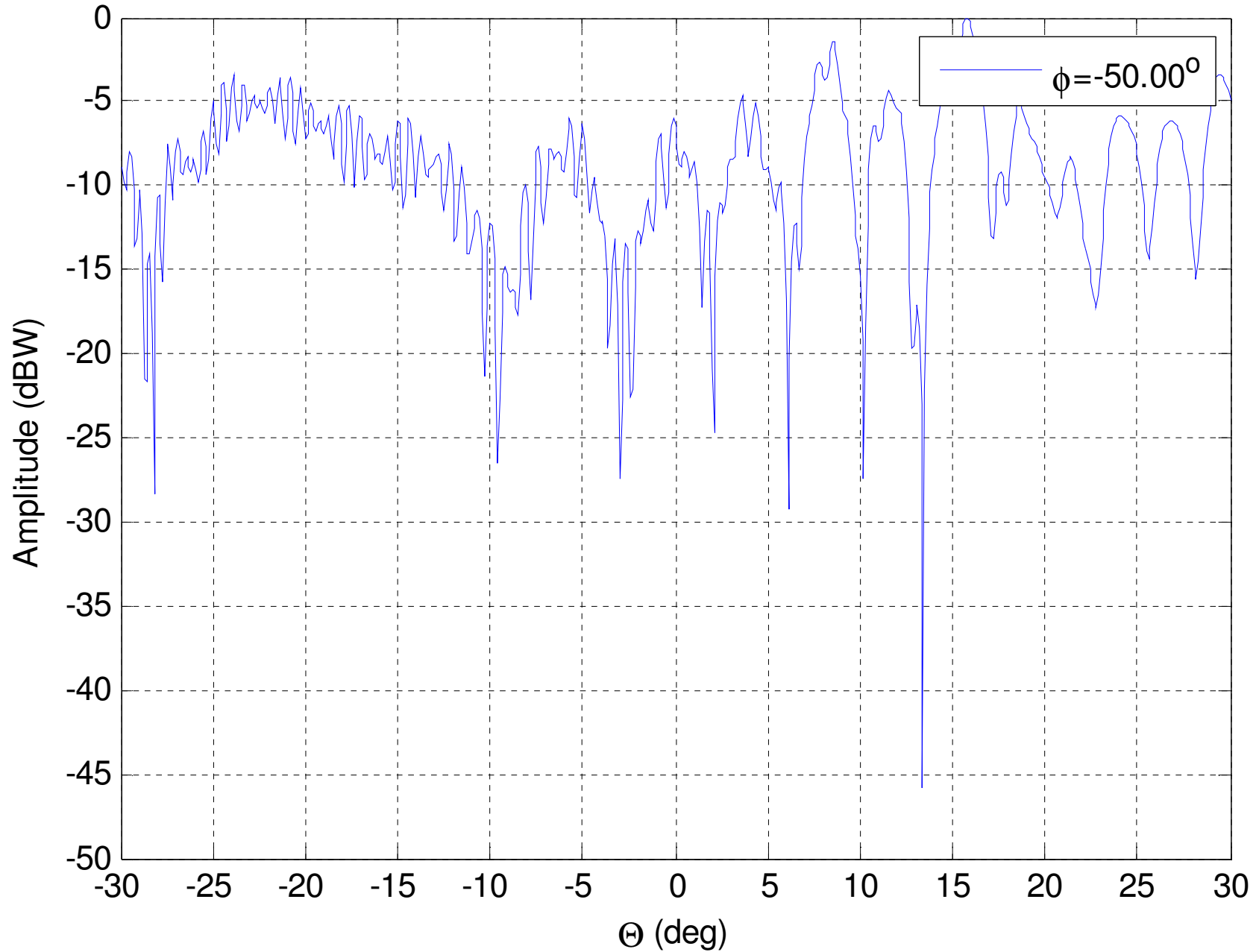
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -5.85 dBW, Date: 15-Dec-2011



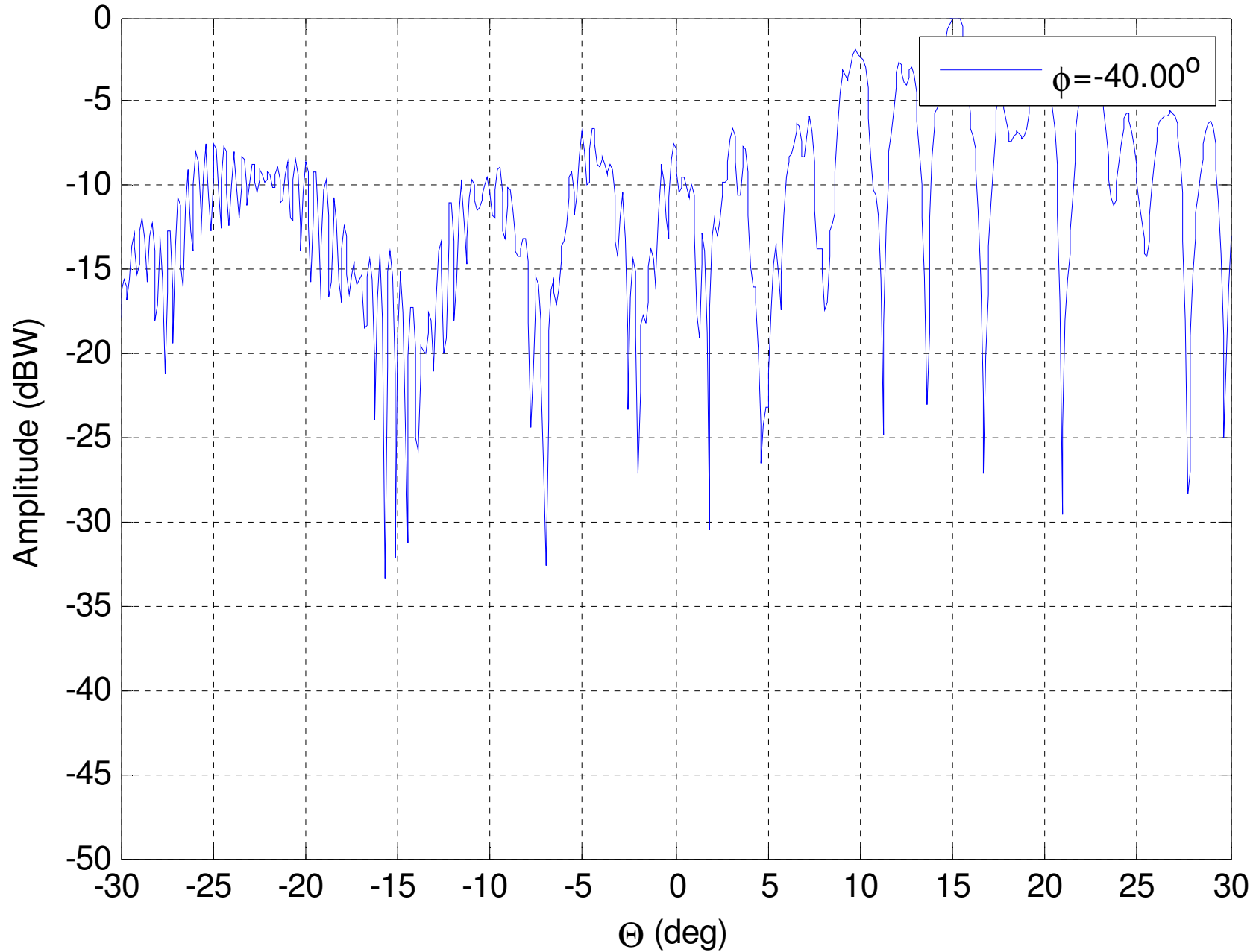
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -3.95 dBW, Date: 15-Dec-2011



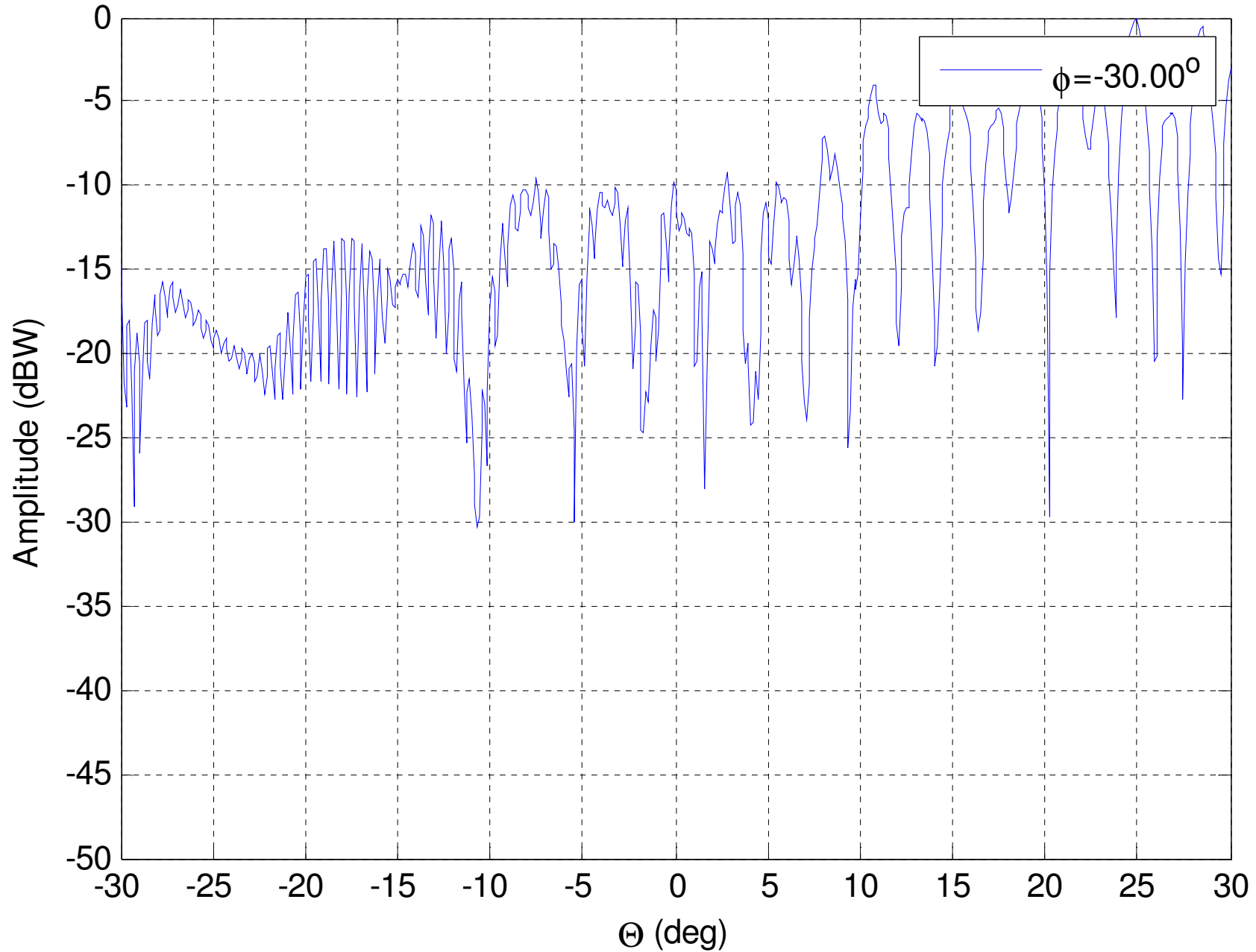
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -2.53 dBW, Date: 15-Dec-2011



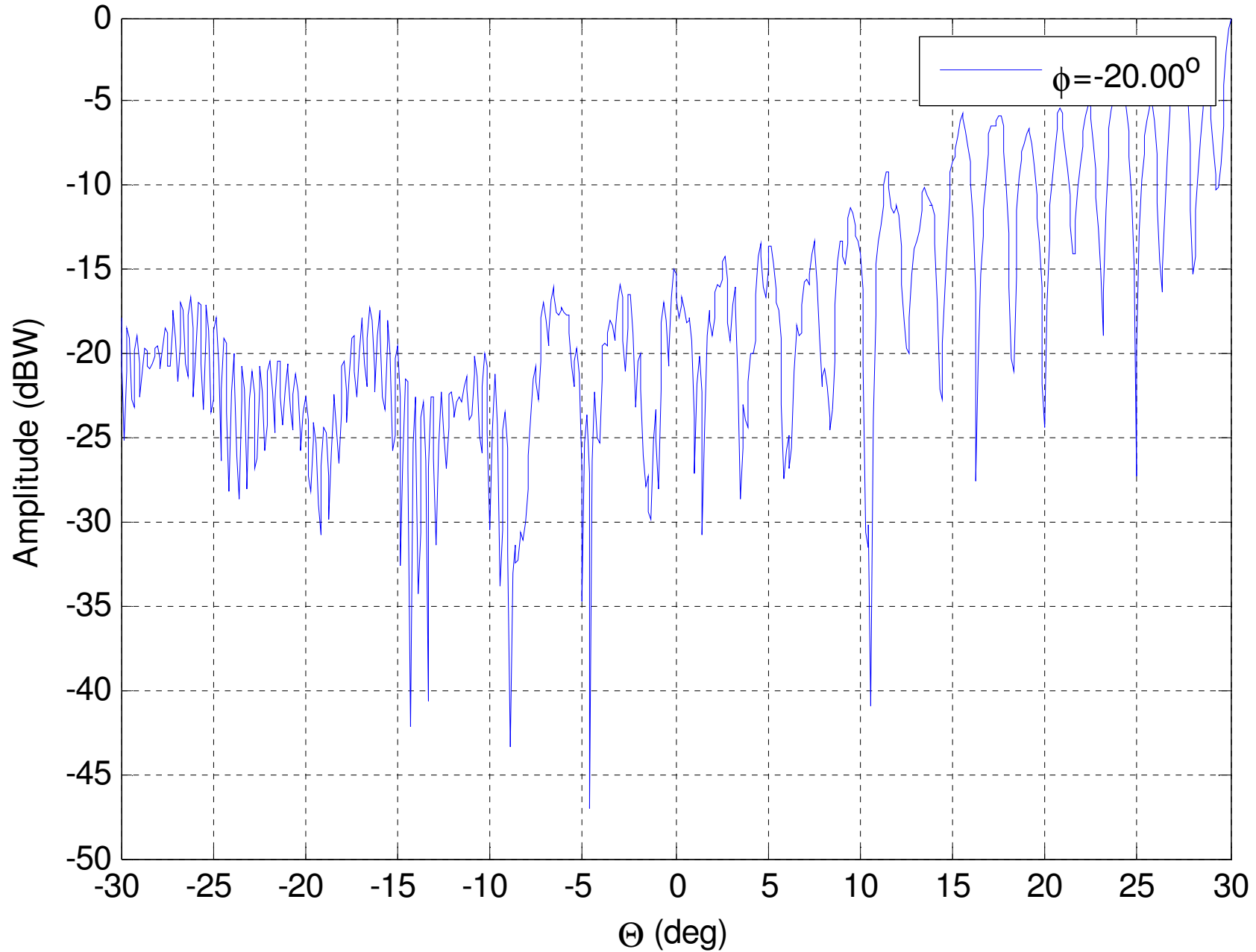
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -0.22 dBW, Date: 15-Dec-2011



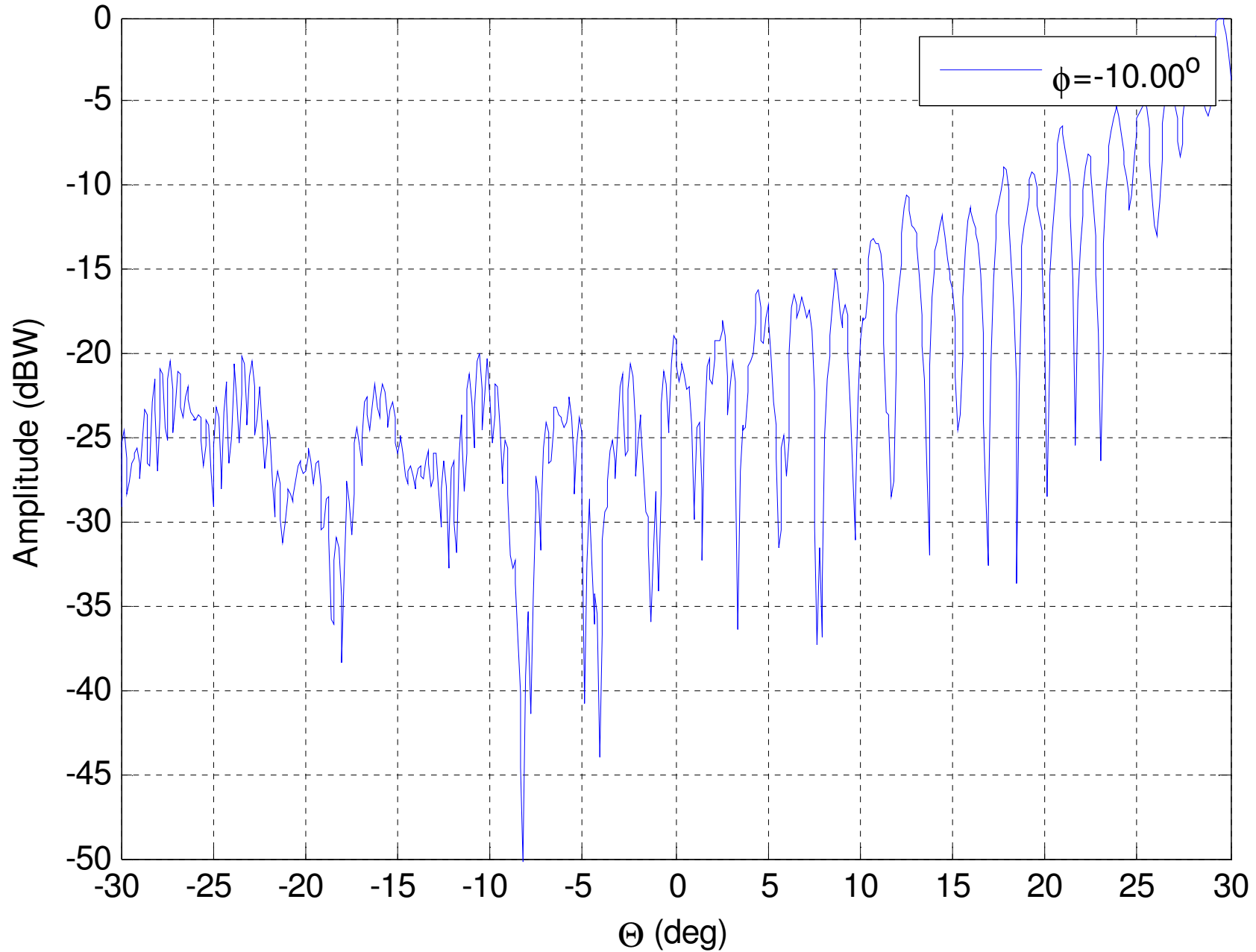
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 4.91 dBW, Date: 15-Dec-2011



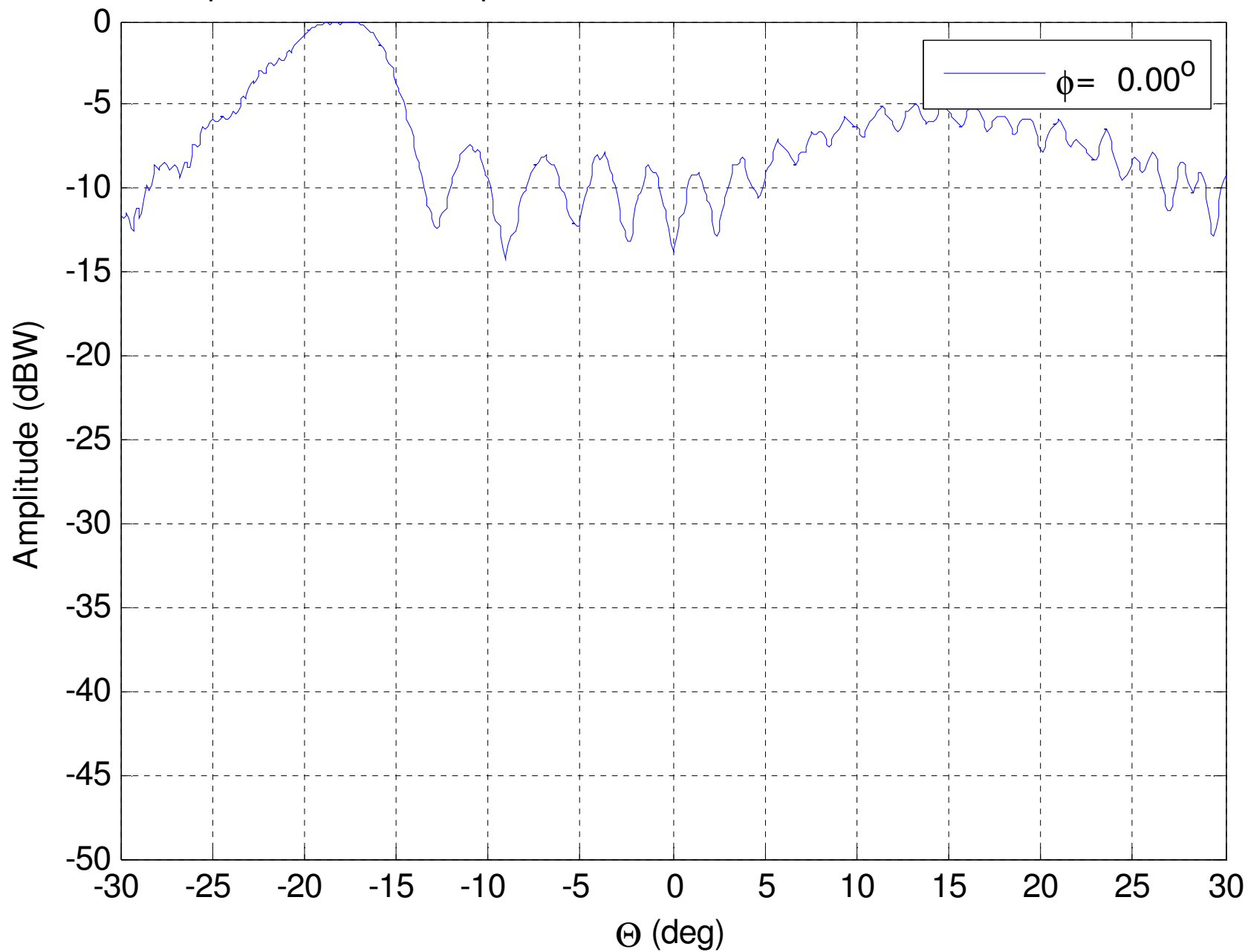
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 8.74 dBW, Date: 15-Dec-2011



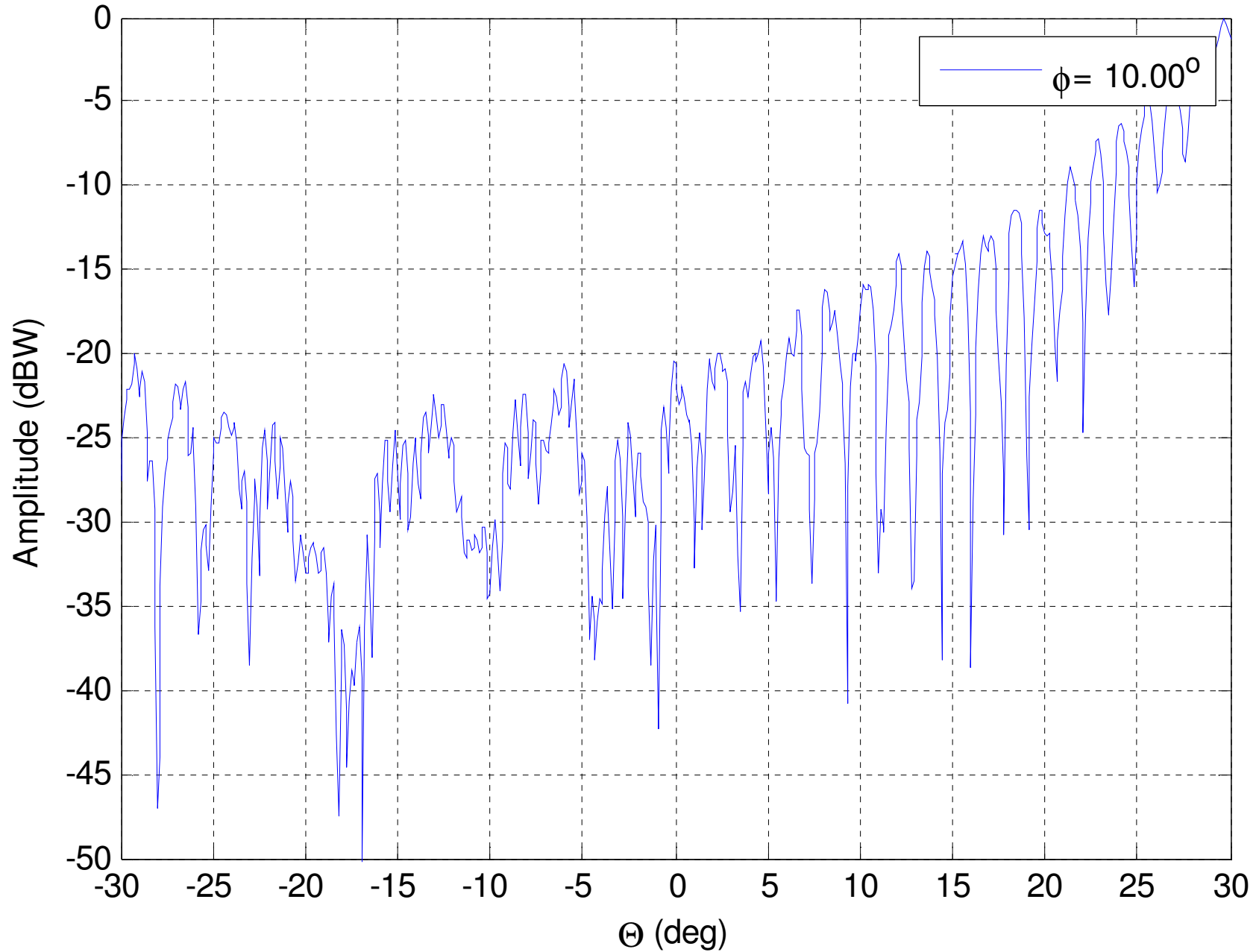
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 10.78 dBW, Date: 15-Dec-2011



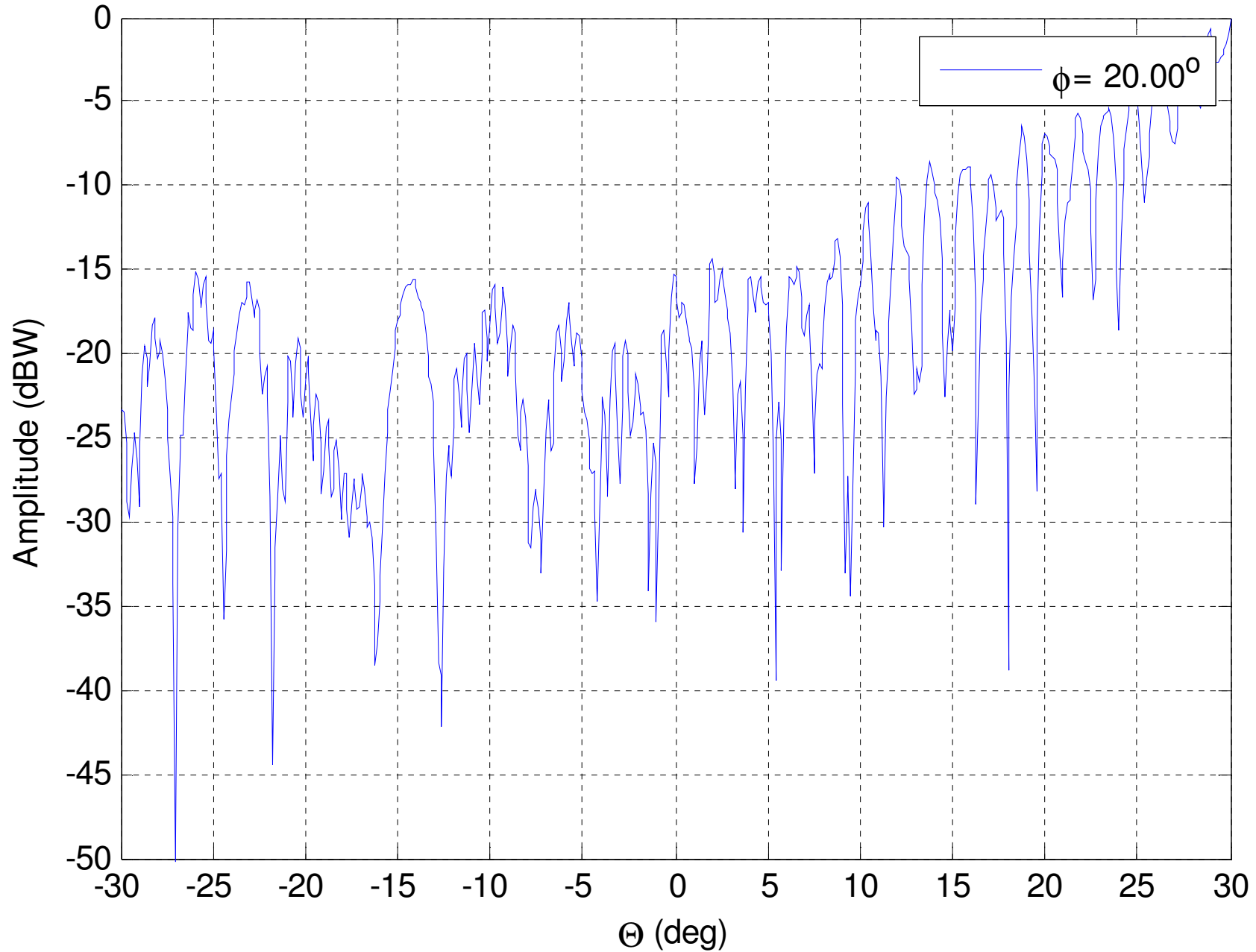
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 10.19 dBW, Date: 15-Dec-2011



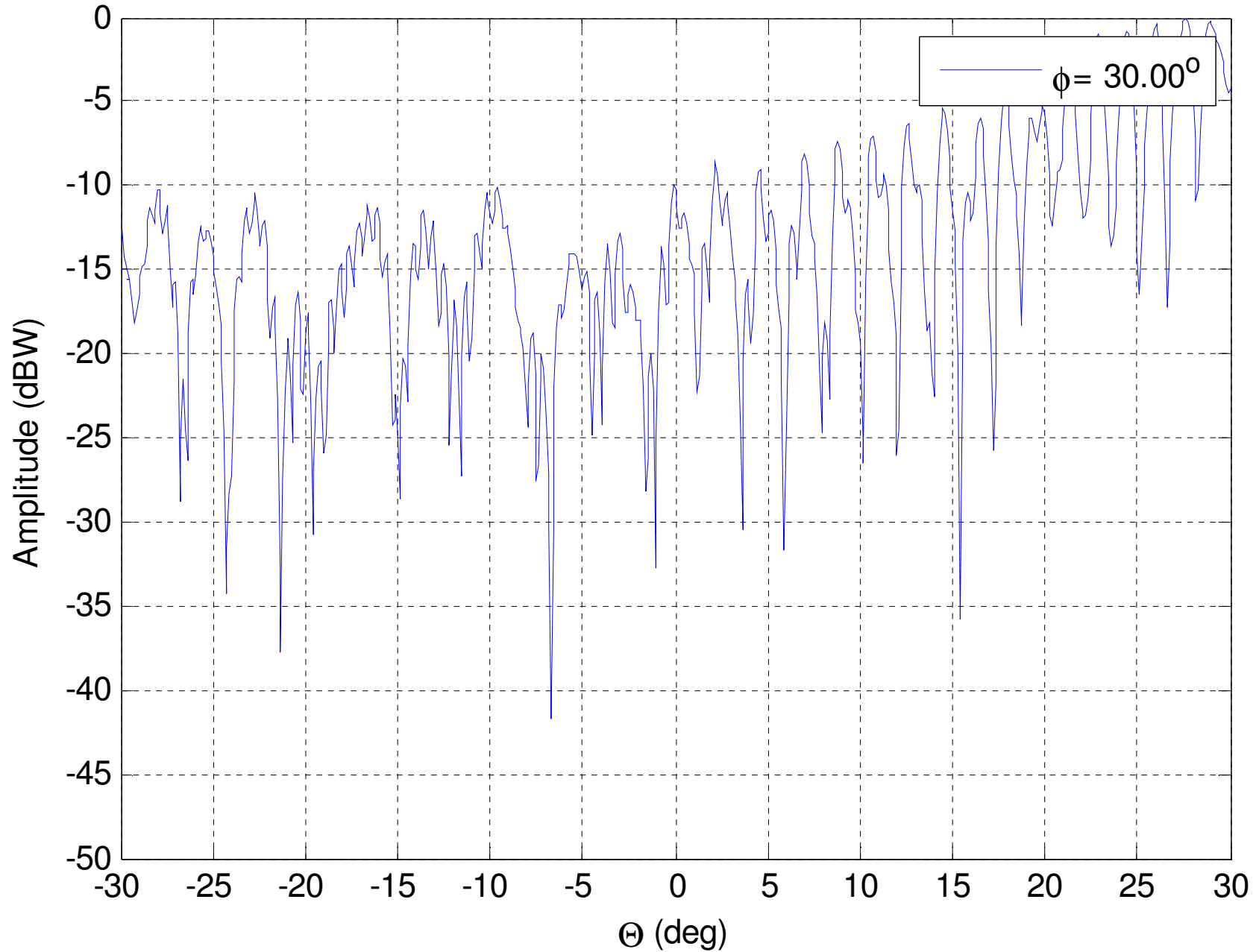
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 5.05 dBW, Date: 15-Dec-2011



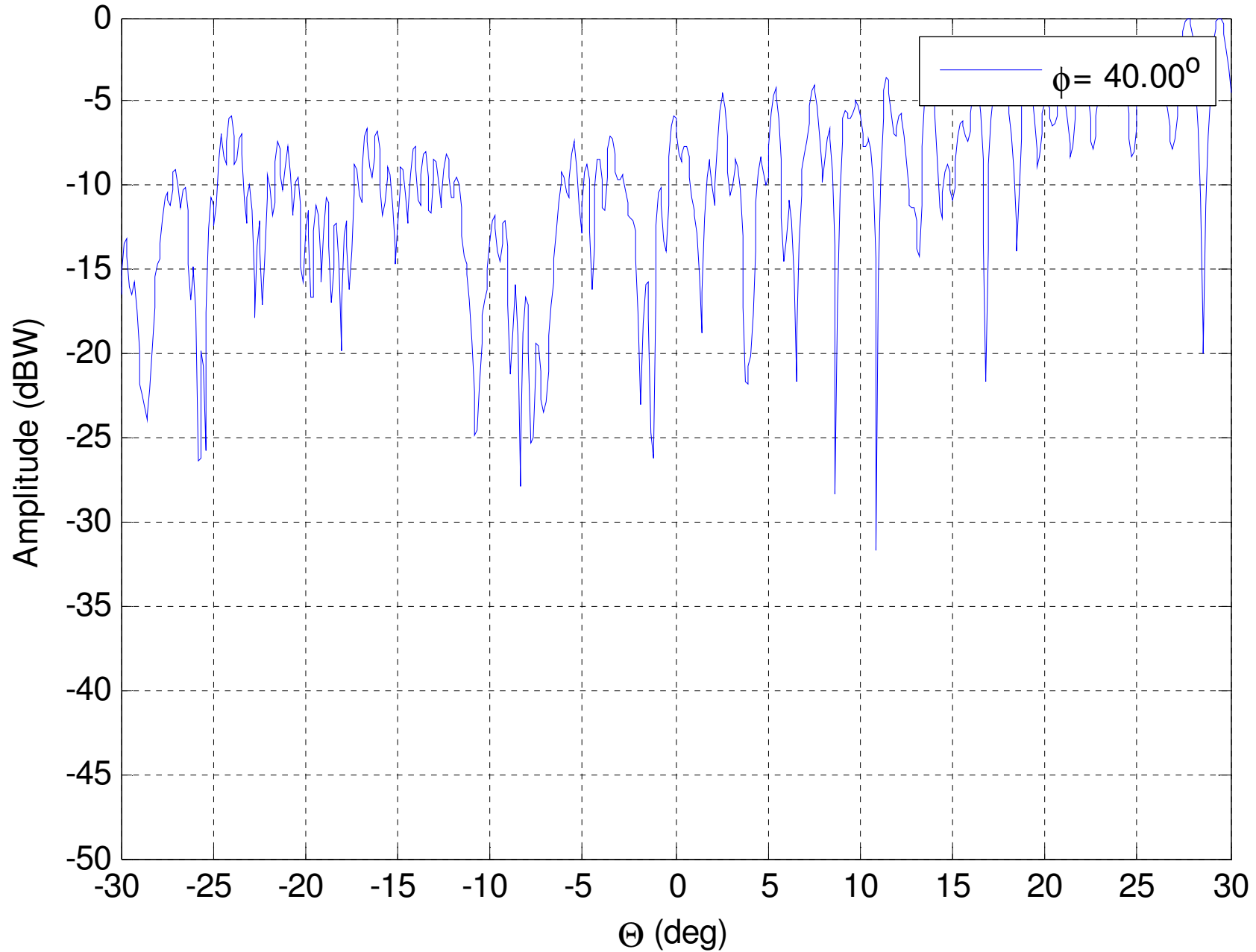
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.22 dBW, Date: 15-Dec-2011



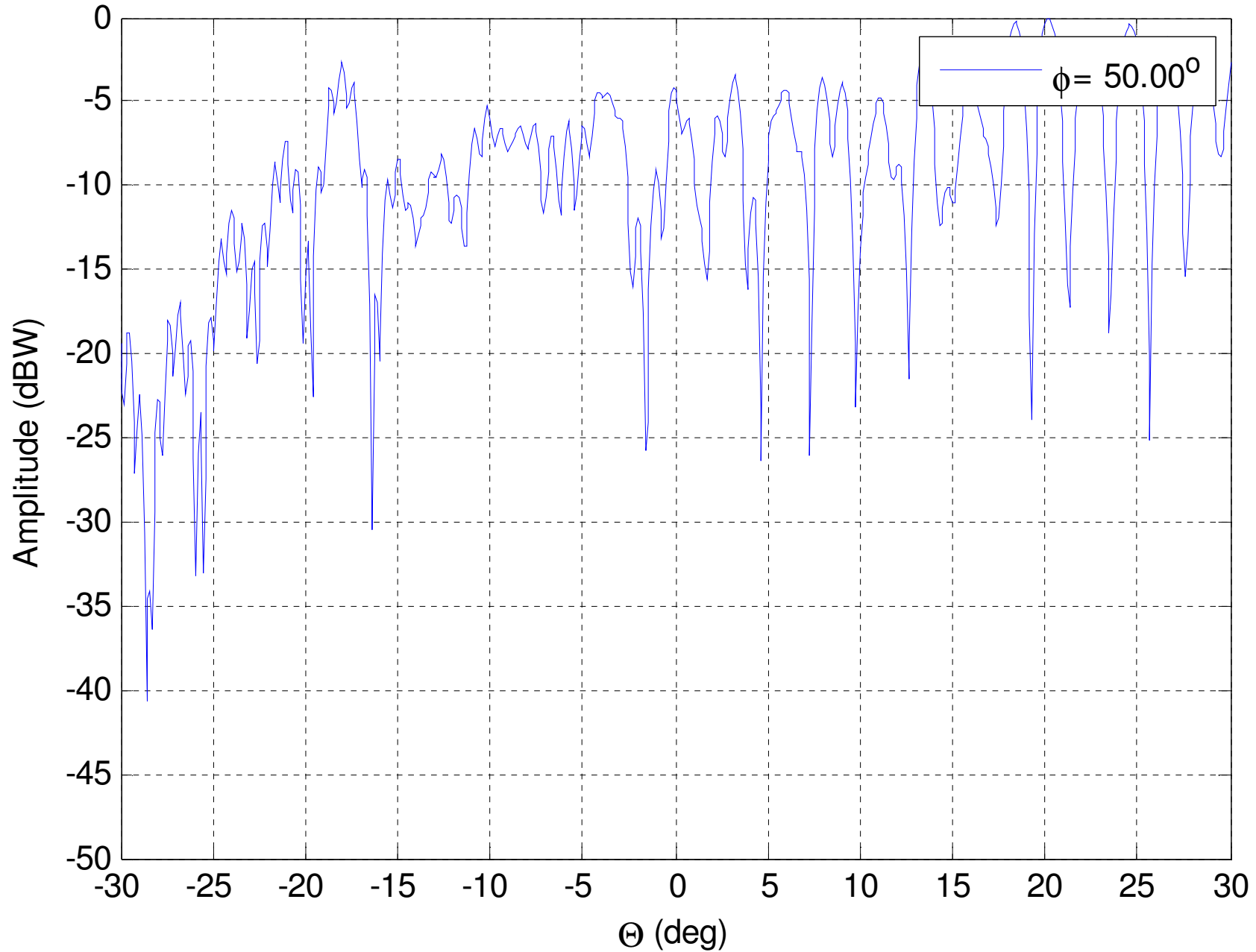
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -4.38 dBW, Date: 15-Dec-2011



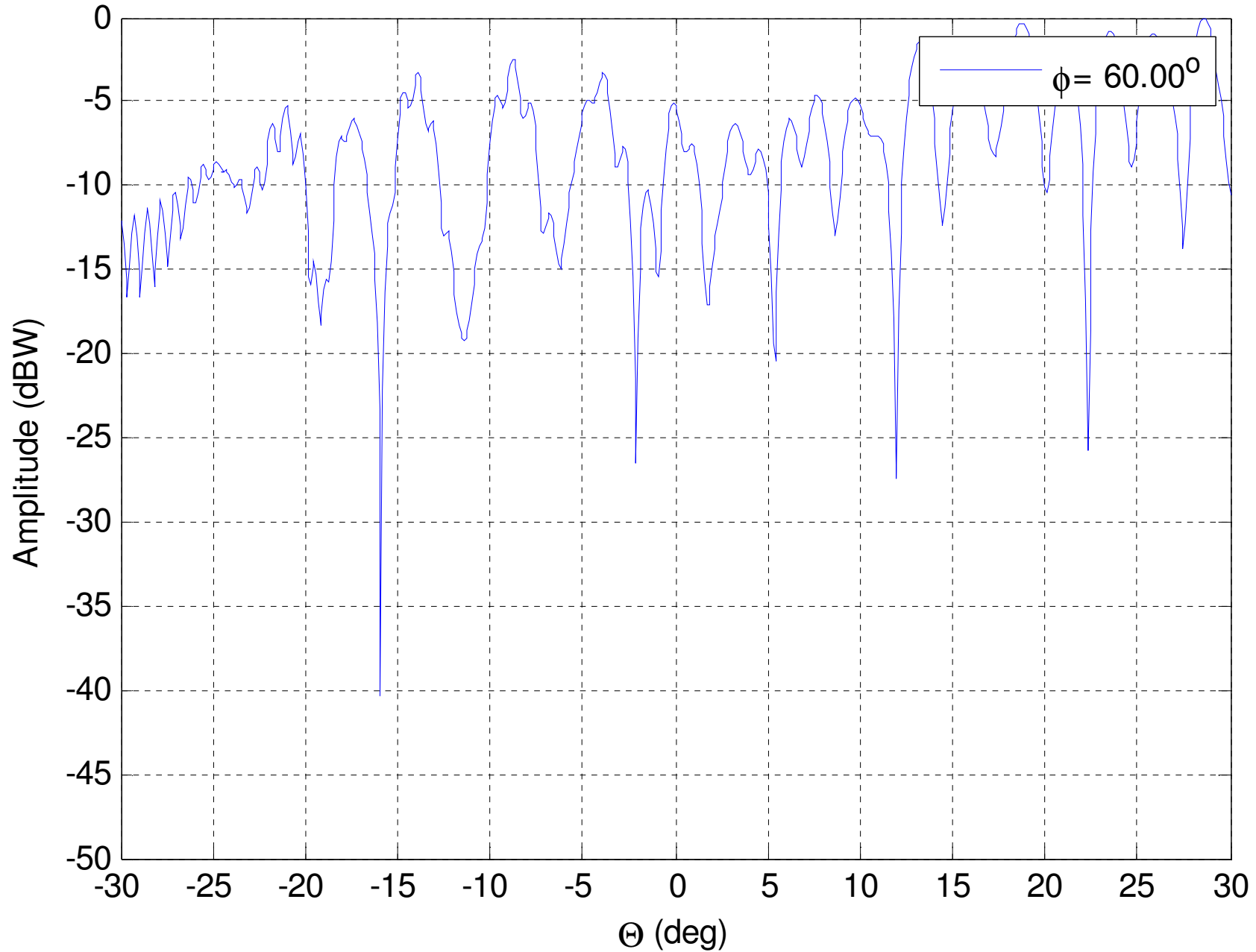
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -6.11 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -5.23 dBW, Date: 15-Dec-2011



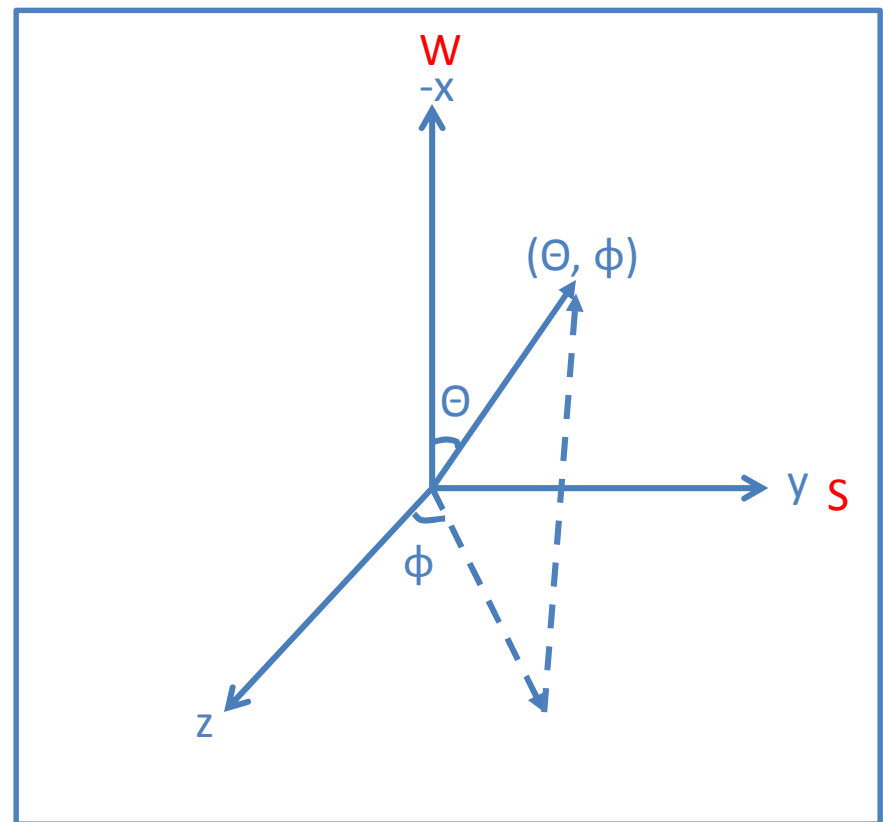
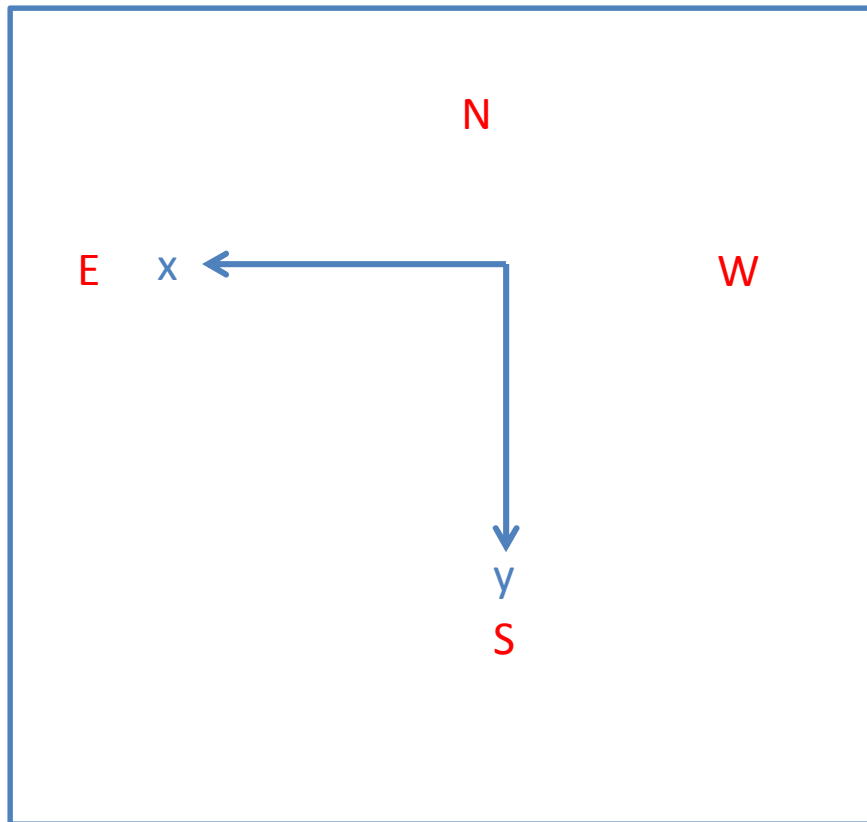
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 29

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



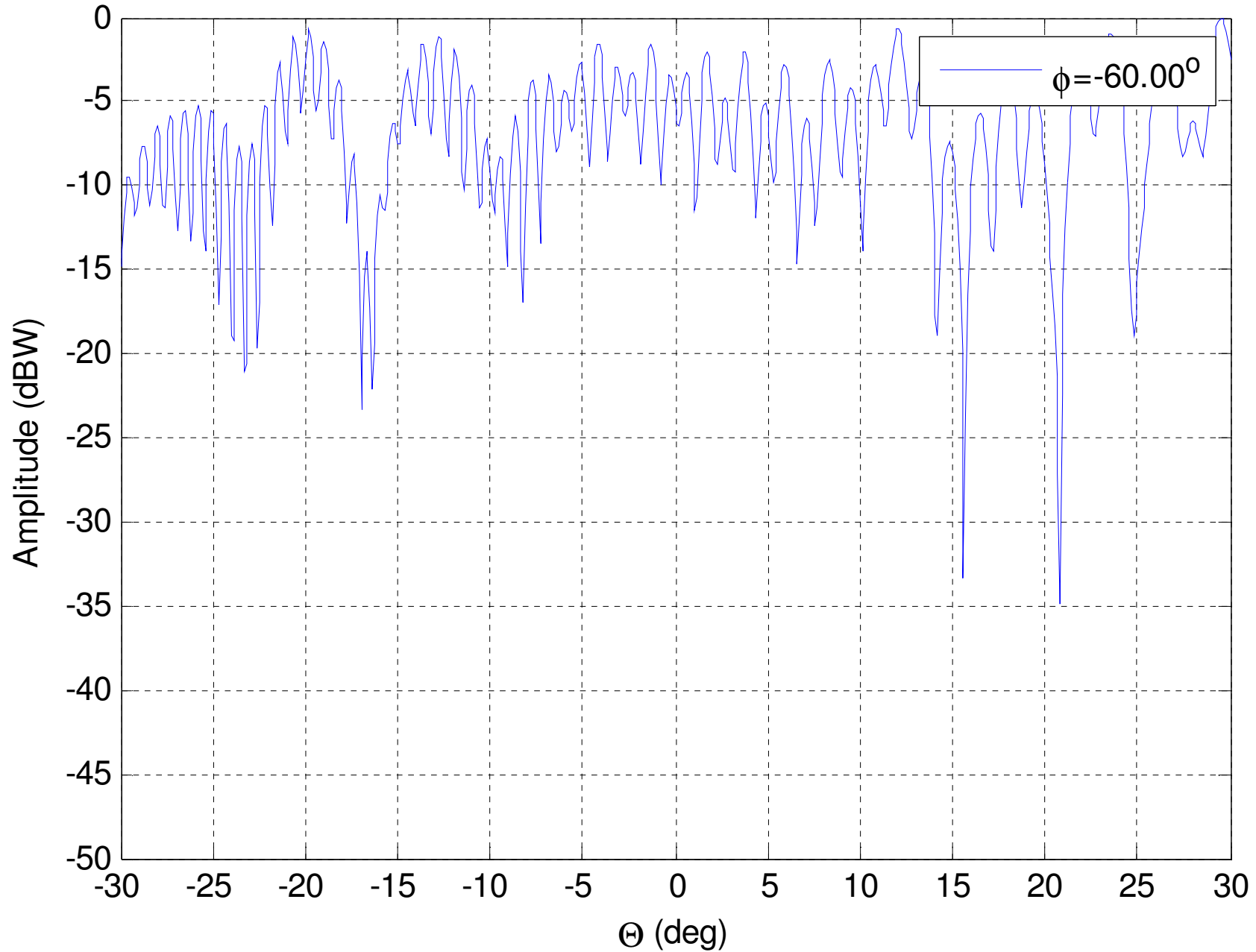
Spot Beam29, -X Axis Plots

- 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

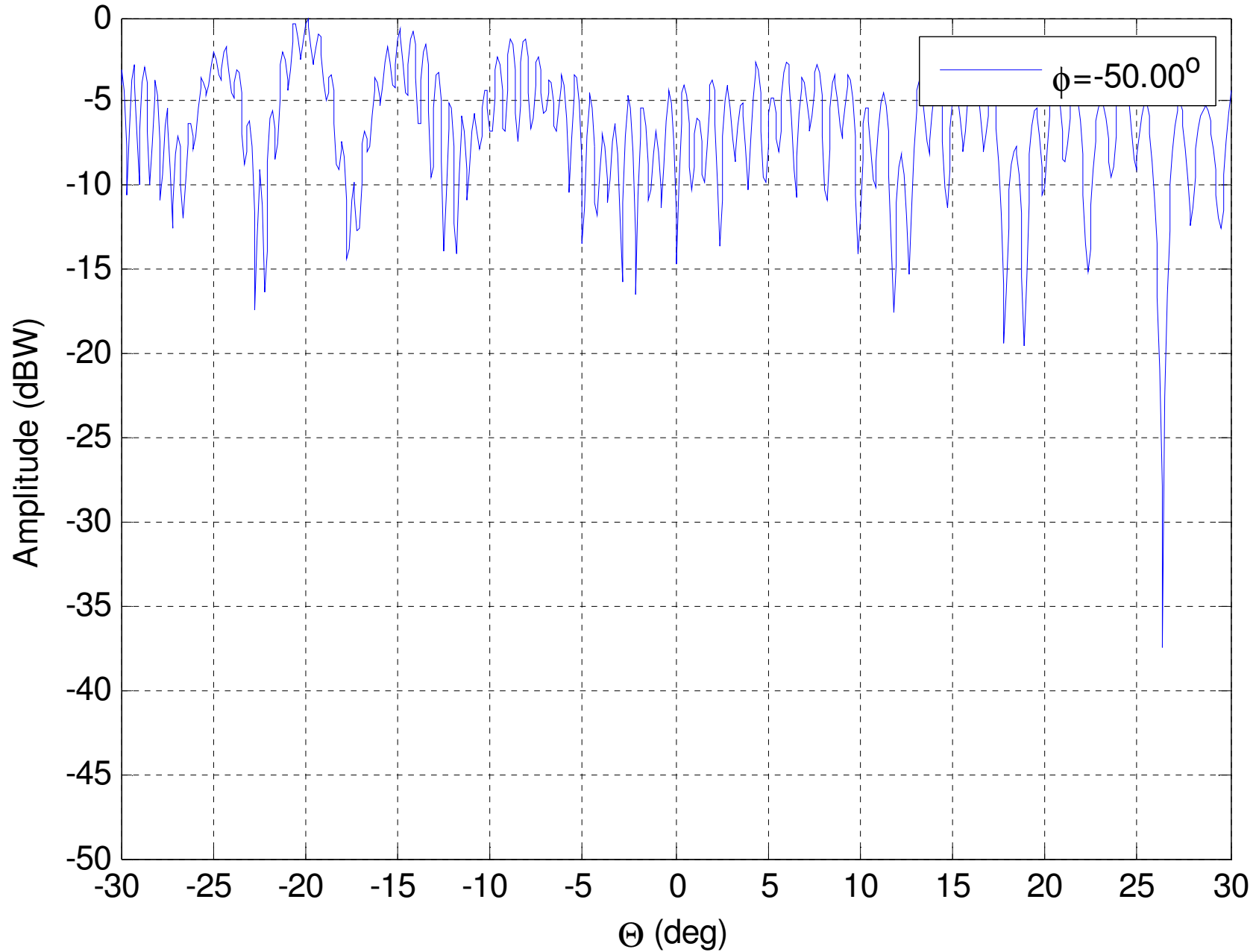
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -2.91 dBW, Date: 15-Dec-2011



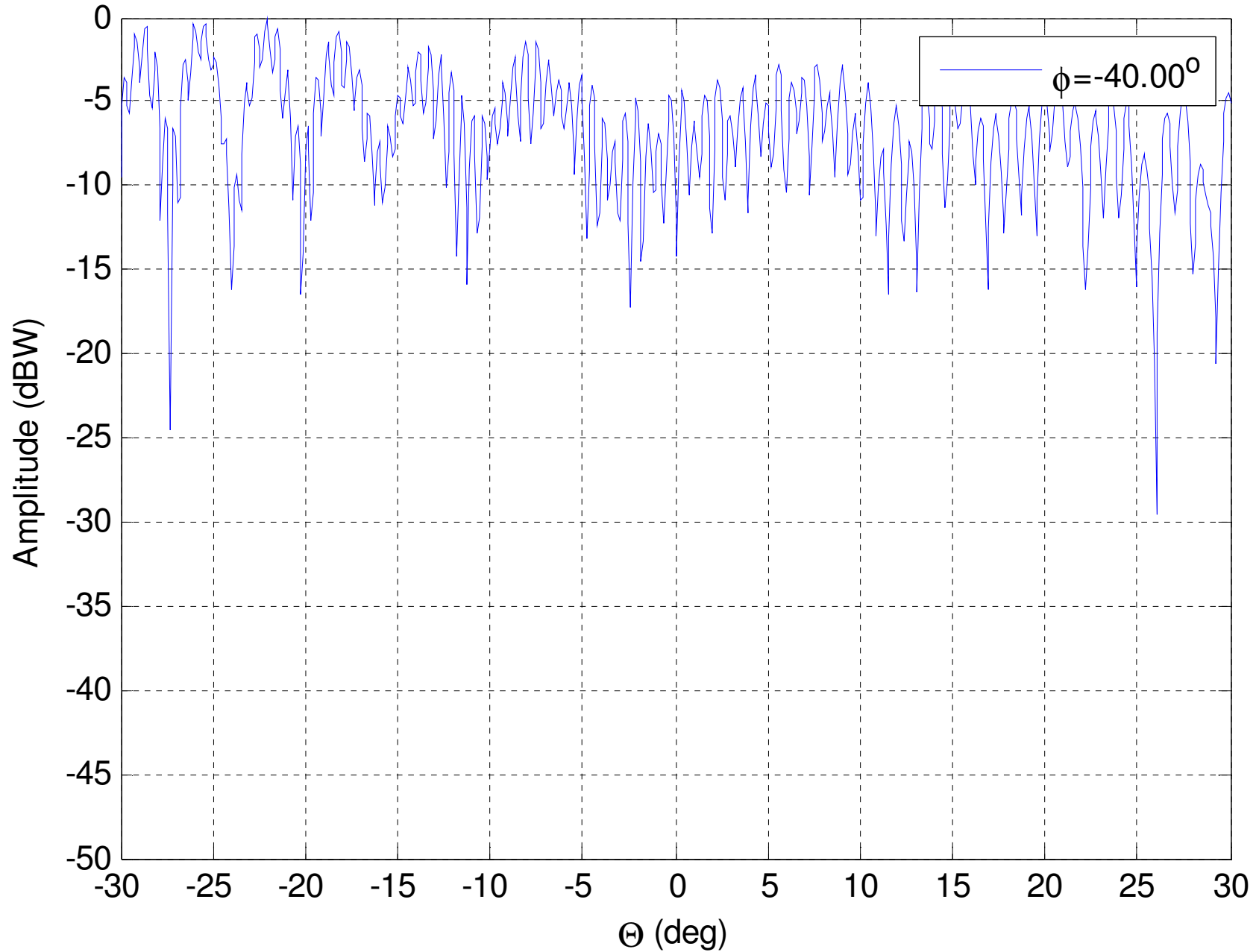
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -2.82 dBW, Date: 15-Dec-2011



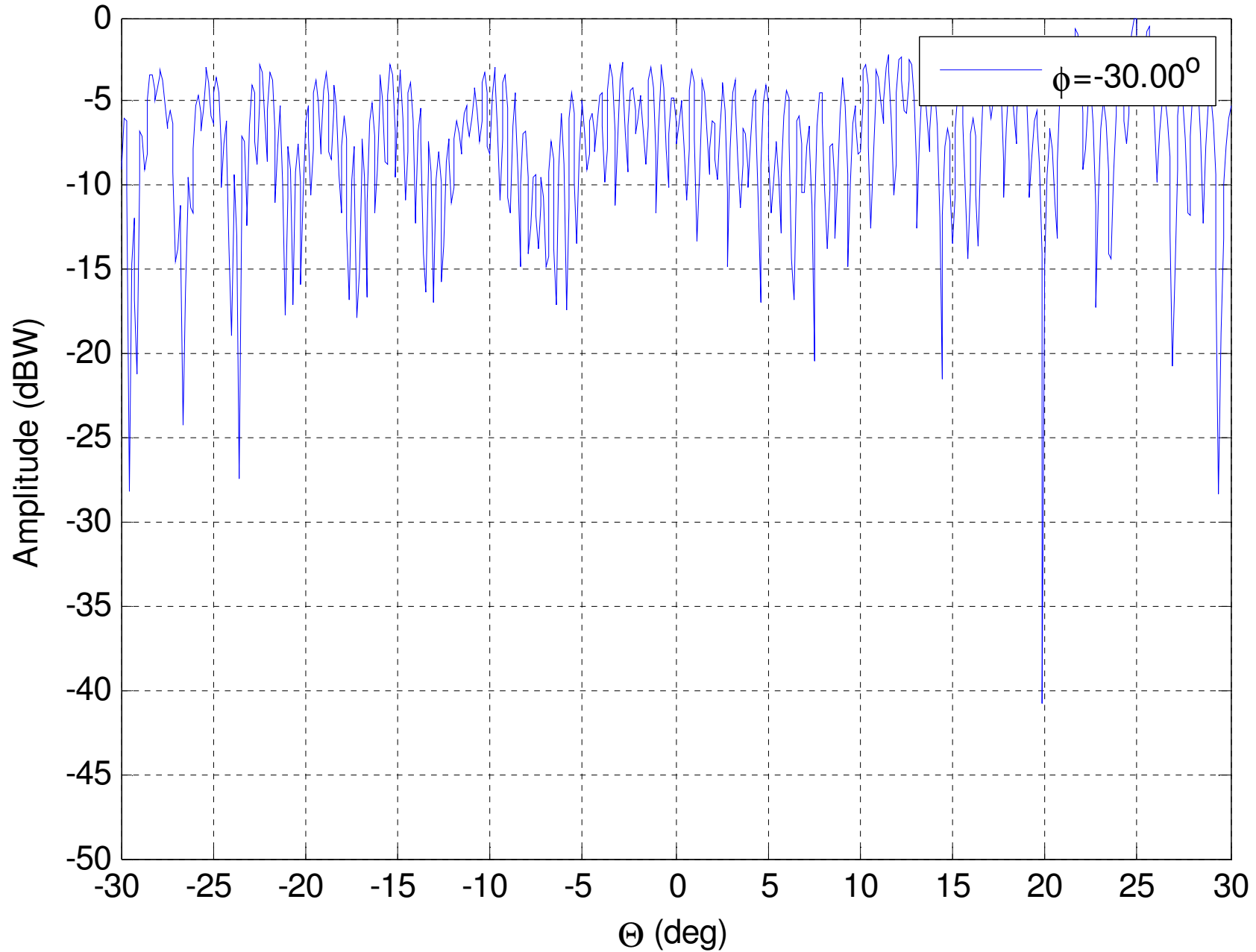
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -2.46 dBW, Date: 15-Dec-2011



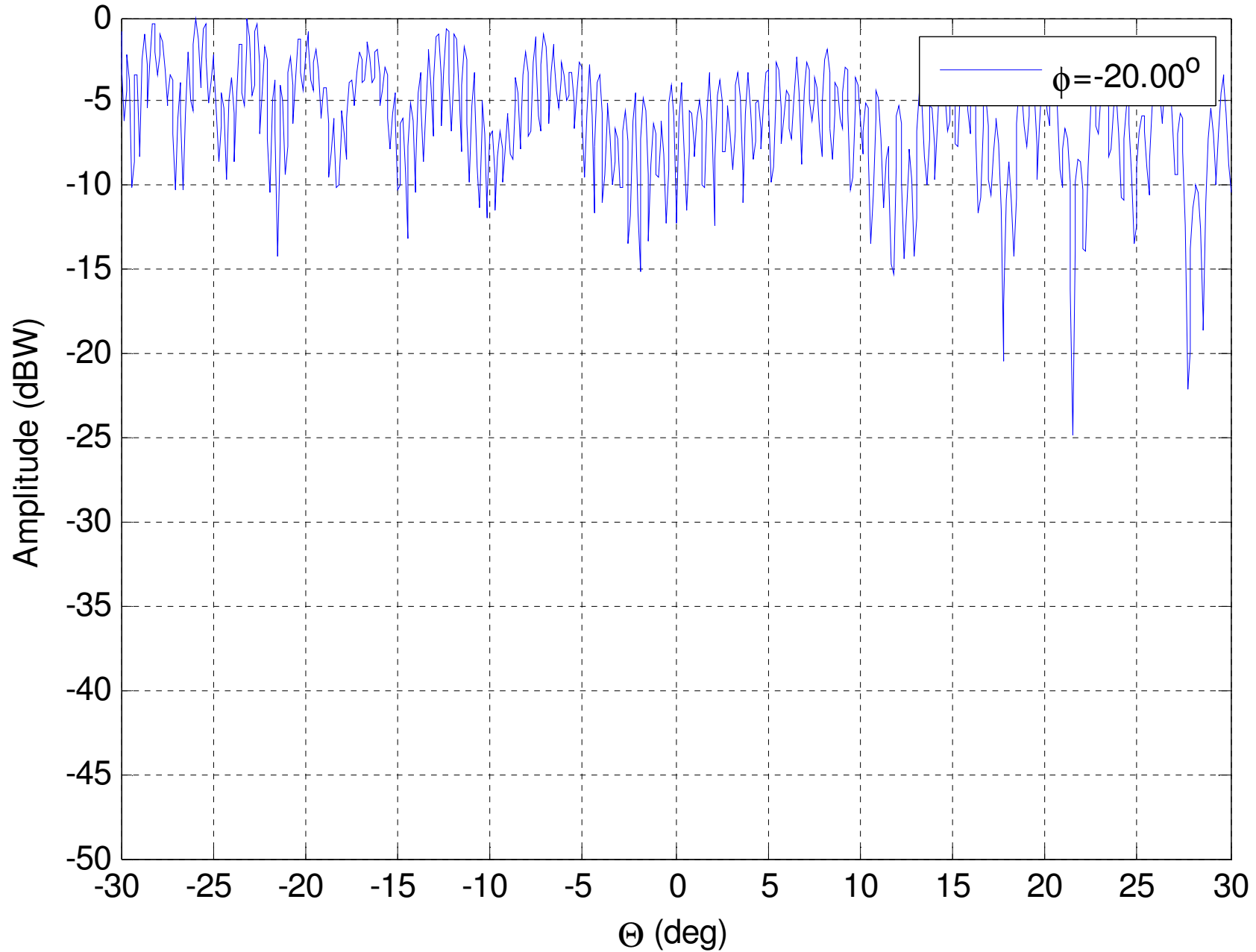
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -1.93 dBW, Date: 15-Dec-2011



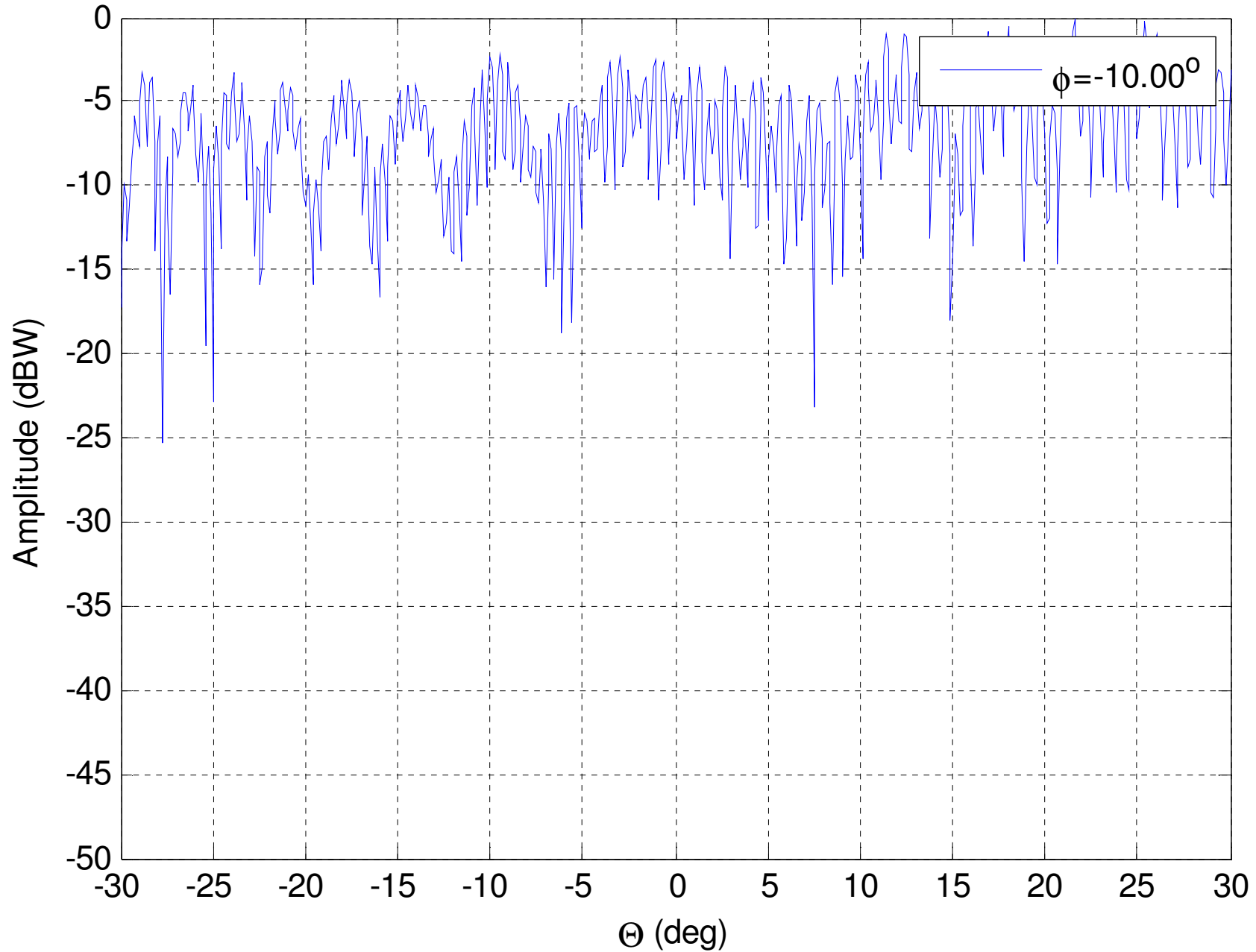
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -2.88 dBW, Date: 15-Dec-2011



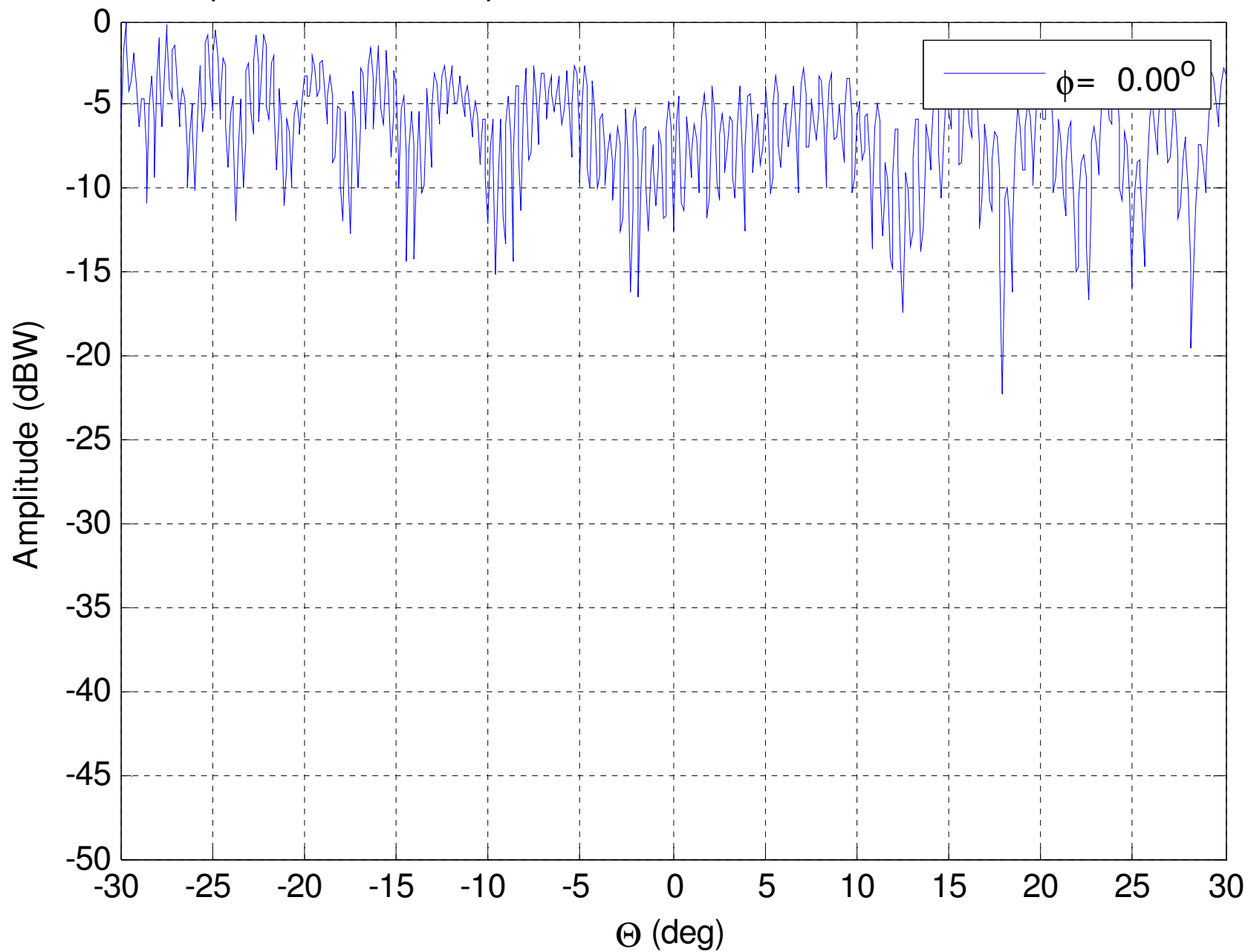
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -2.25 dBW, Date: 15-Dec-2011



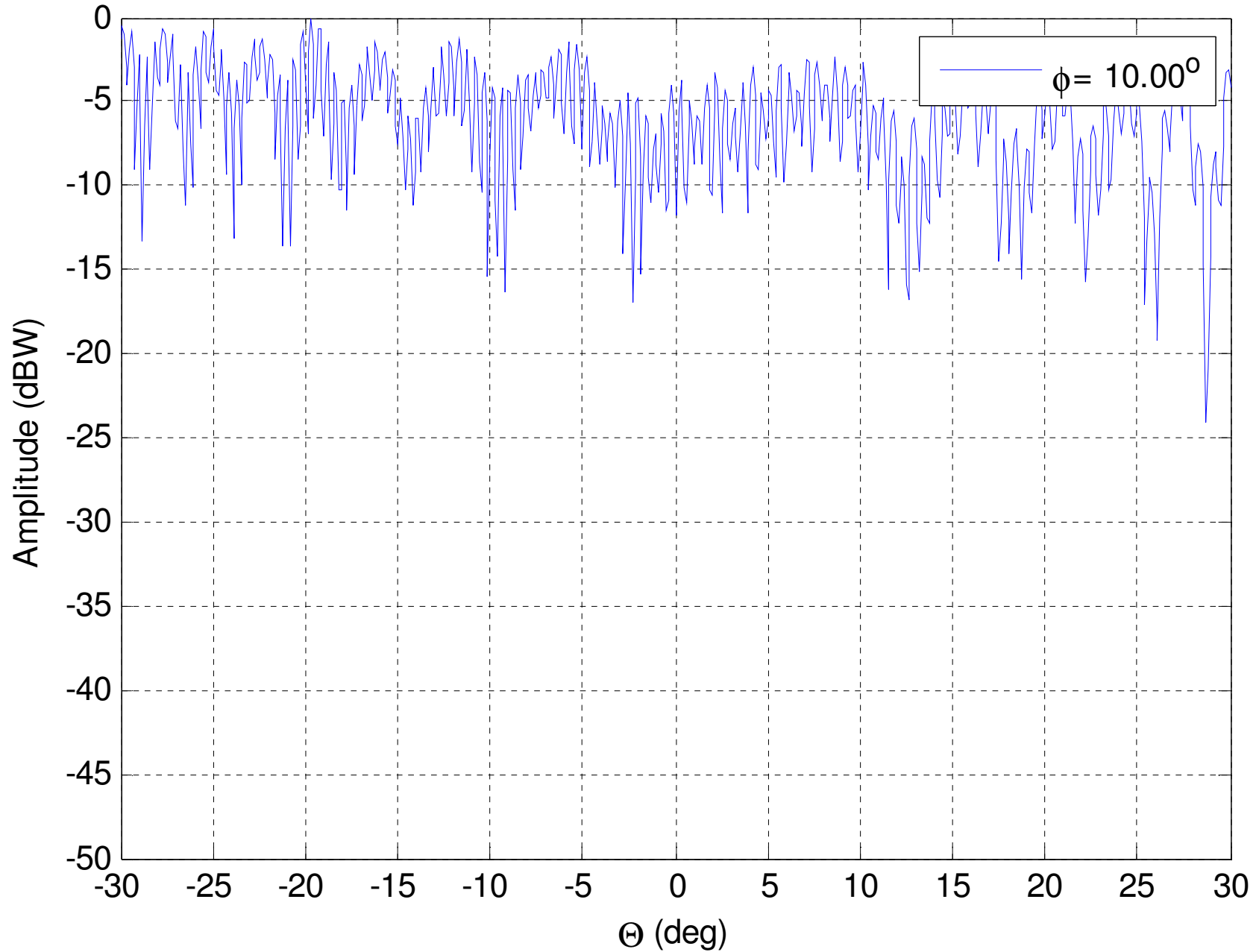
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -2.10 dBW, Date: 15-Dec-2011



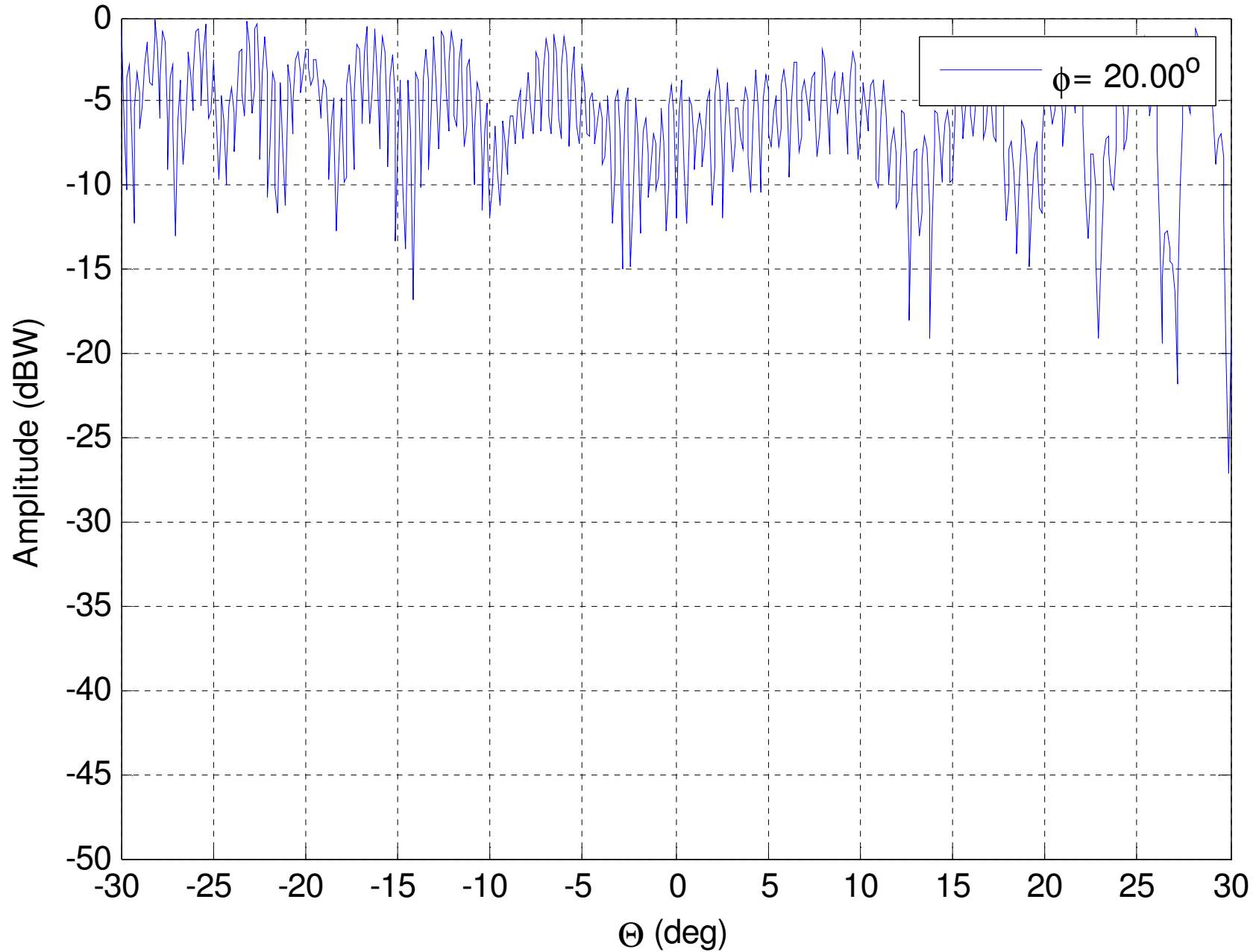
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -2.76 dBW, Date: 15-Dec-2011



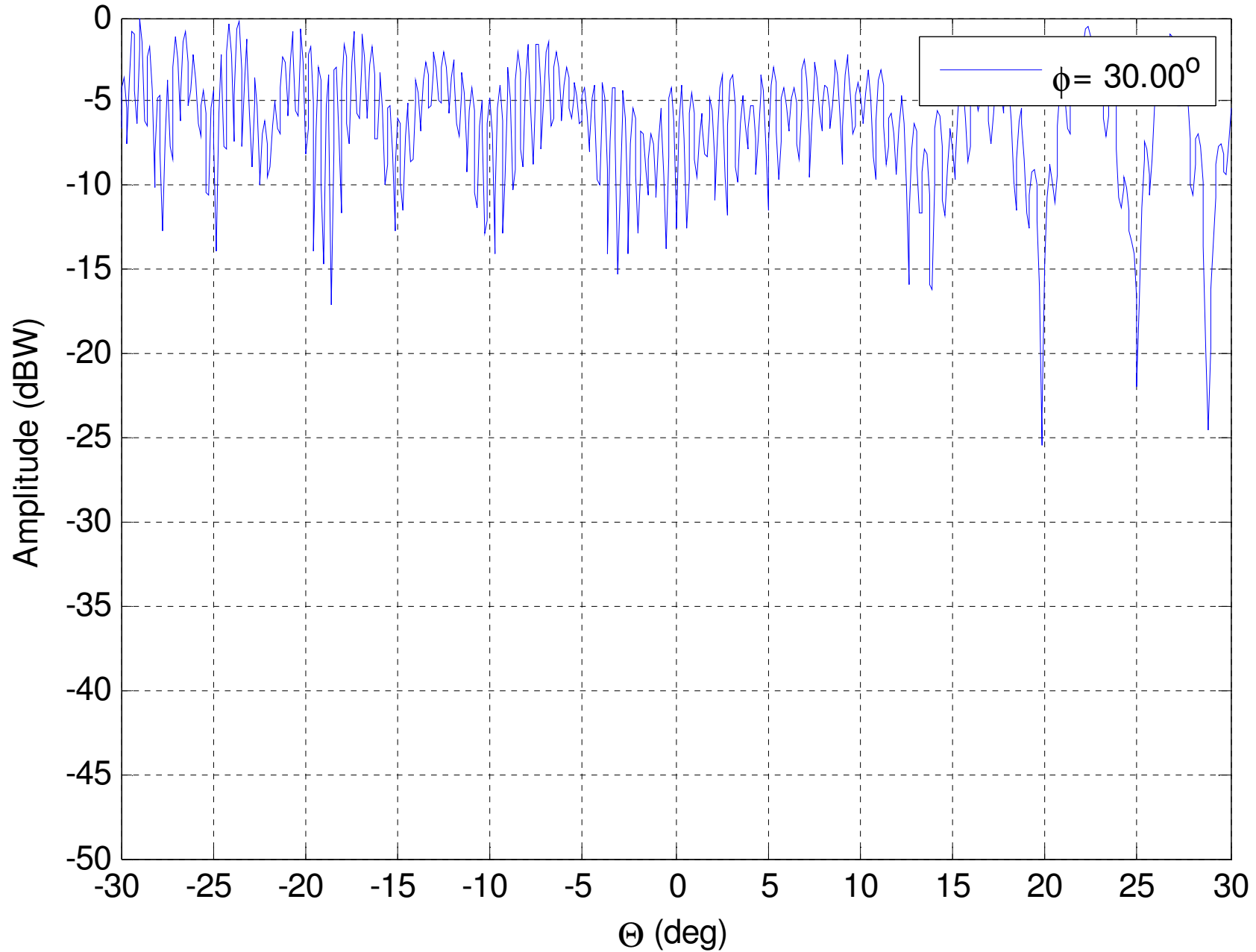
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -2.84 dBW, Date: 15-Dec-2011



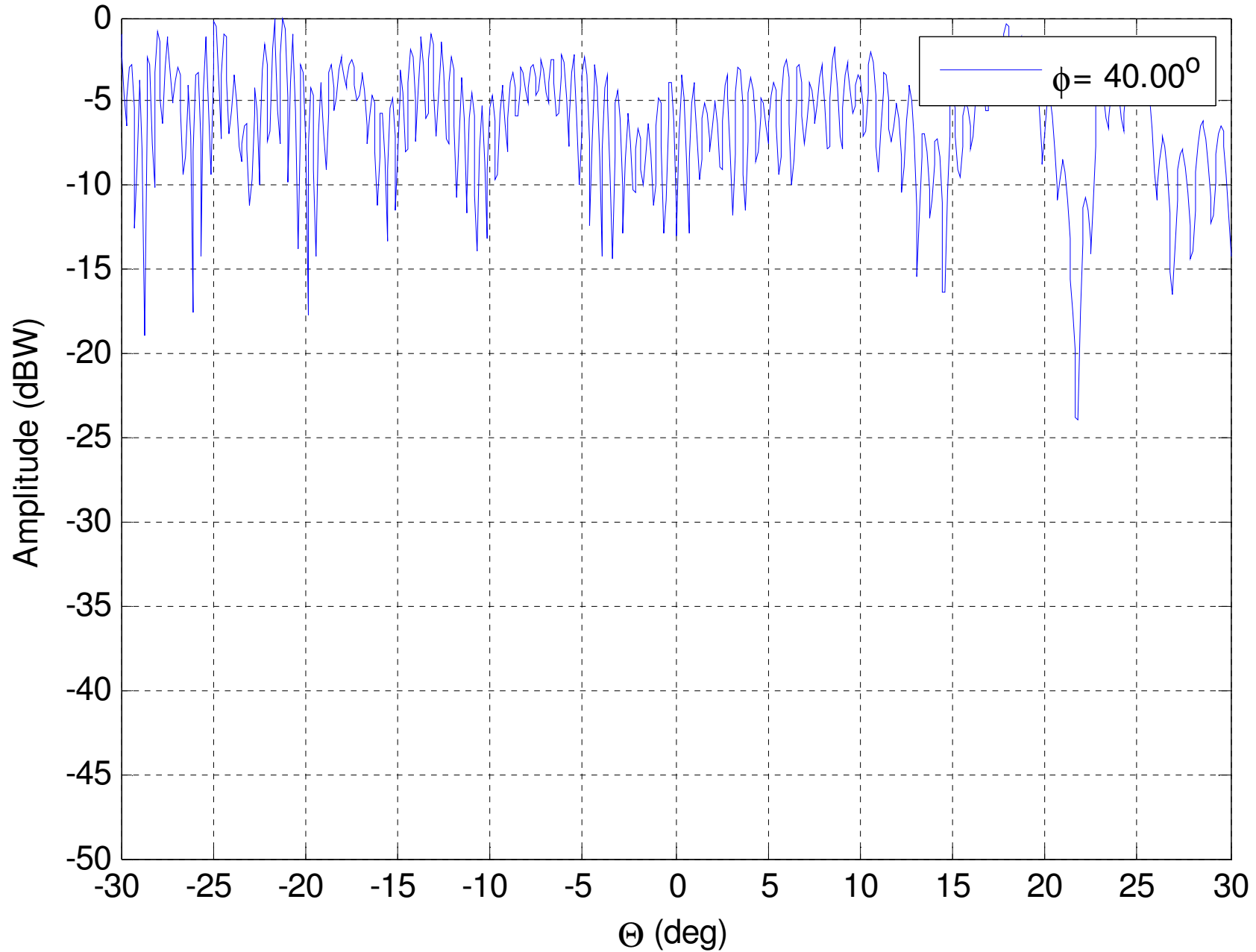
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -2.72 dBW, Date: 15-Dec-2011



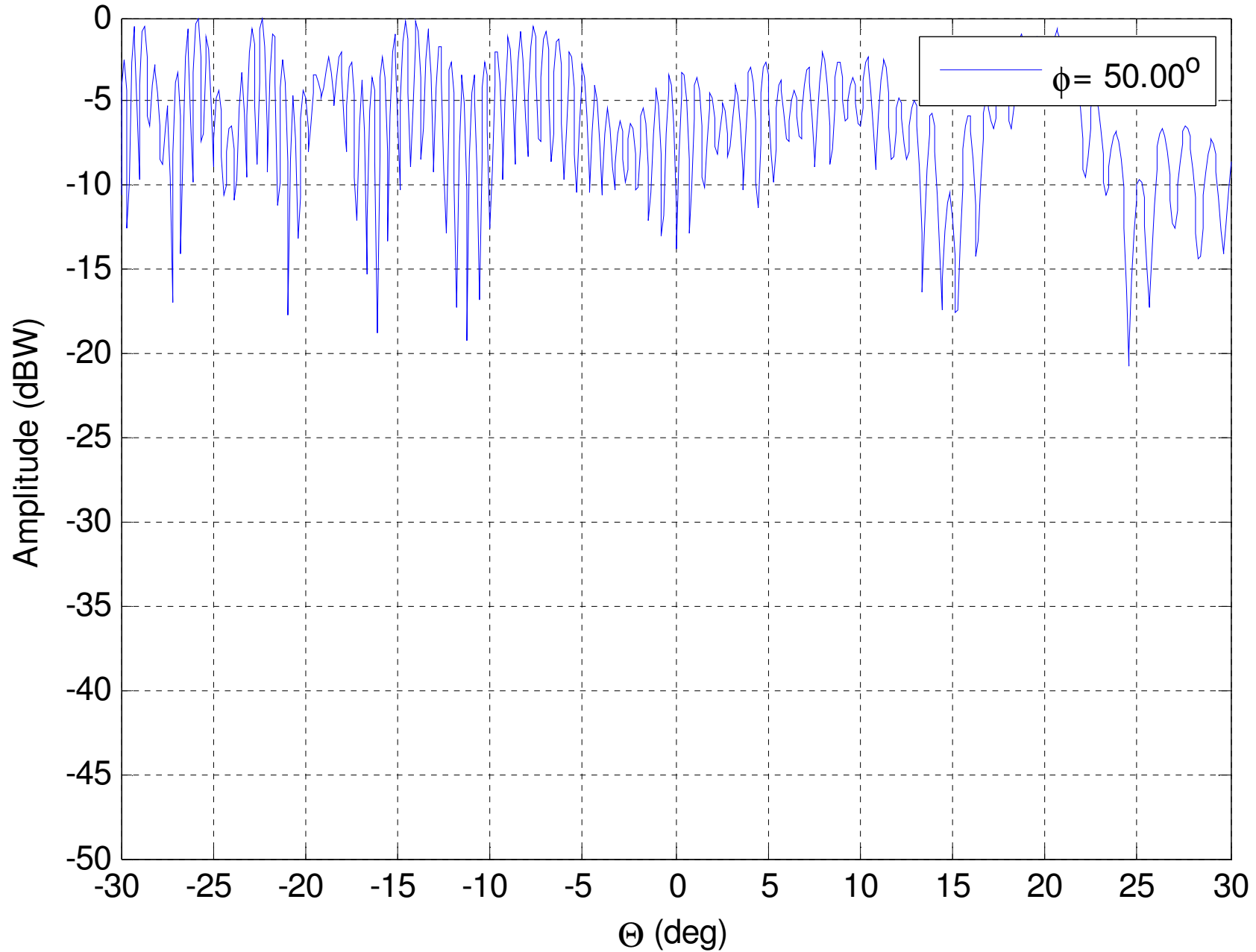
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -3.12 dBW, Date: 15-Dec-2011



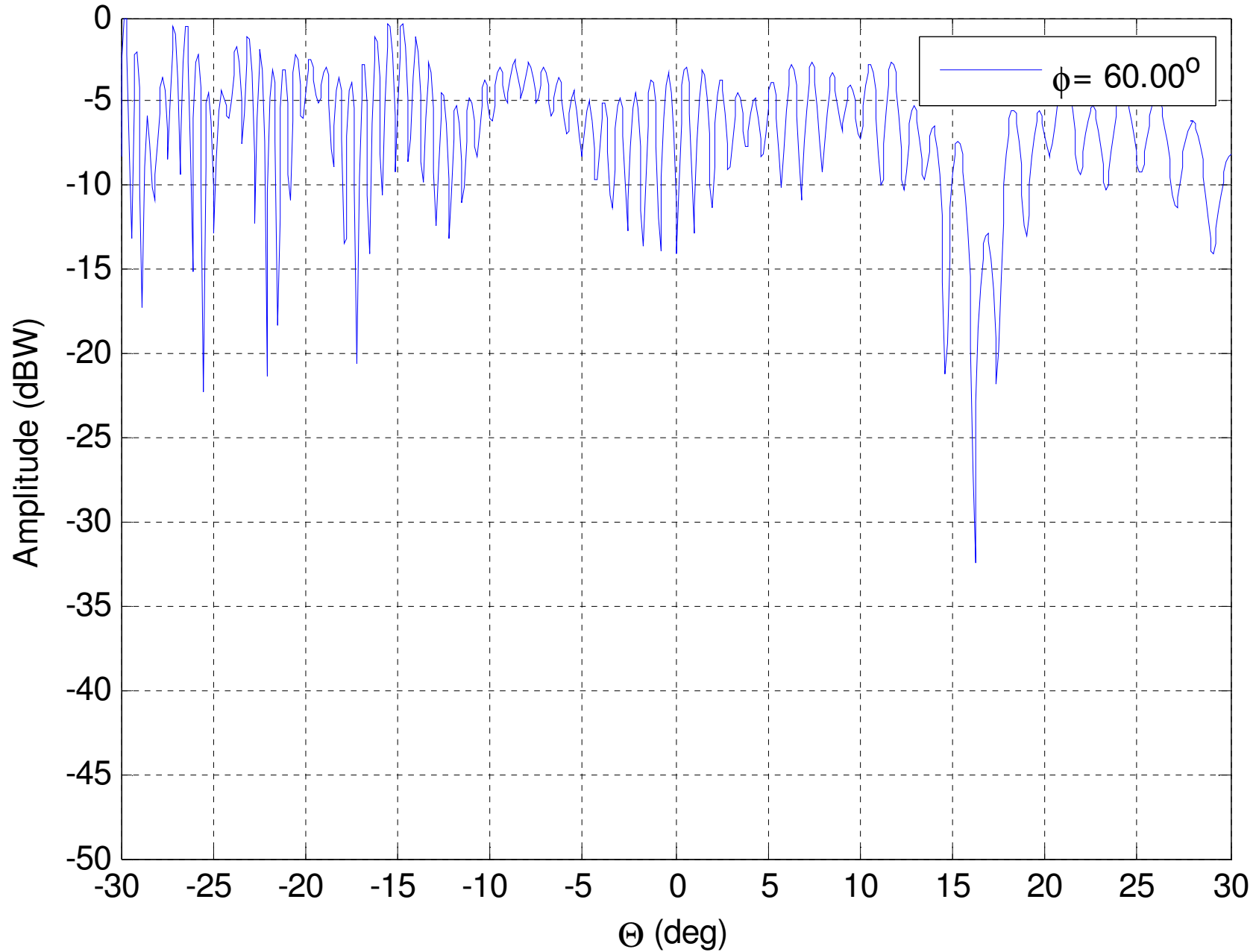
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -3.31 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

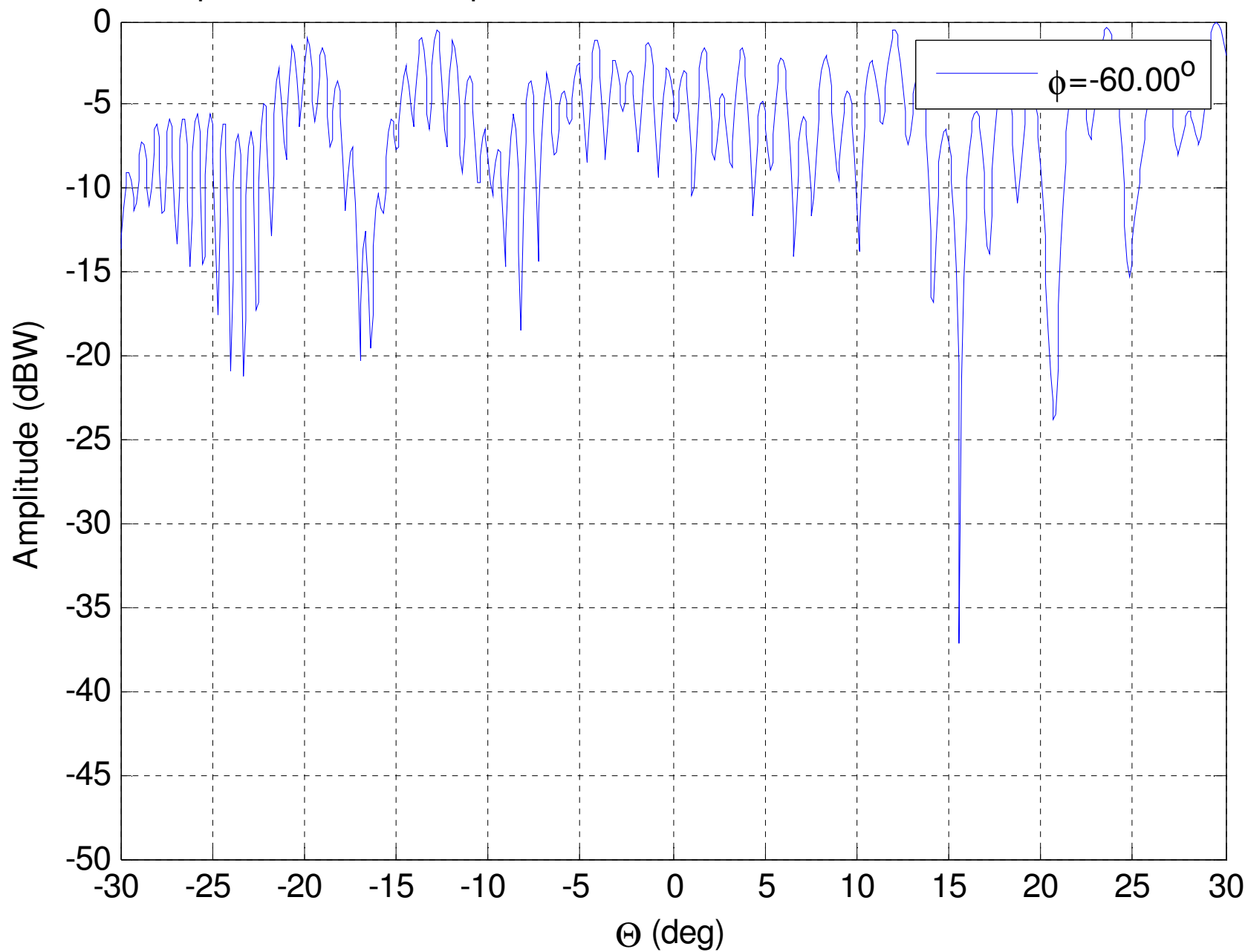
Input file: tx-17.3-rhcp-60.cut, Peak: -3.52 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

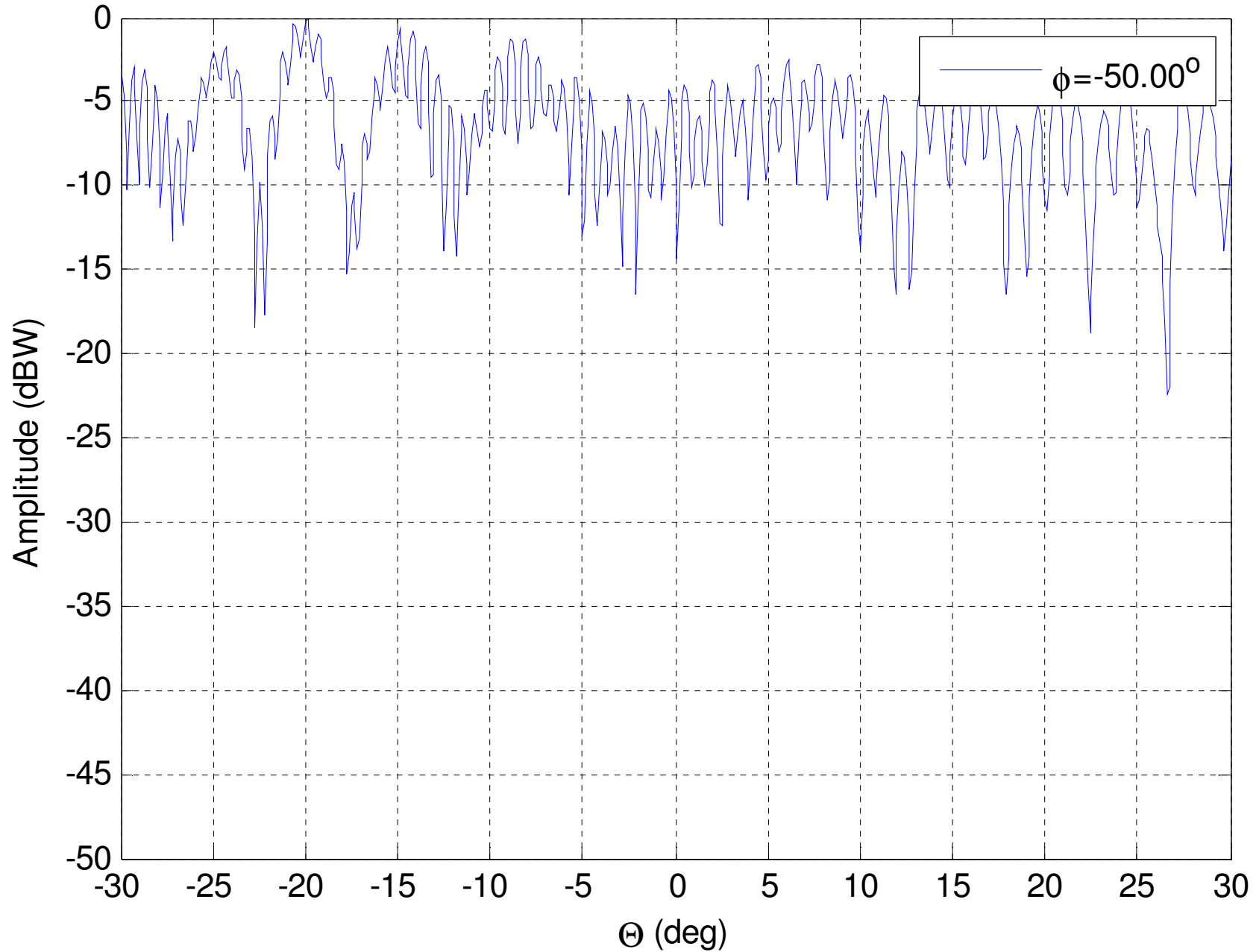
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -3.19 dBW, Date: 15-Dec-2011



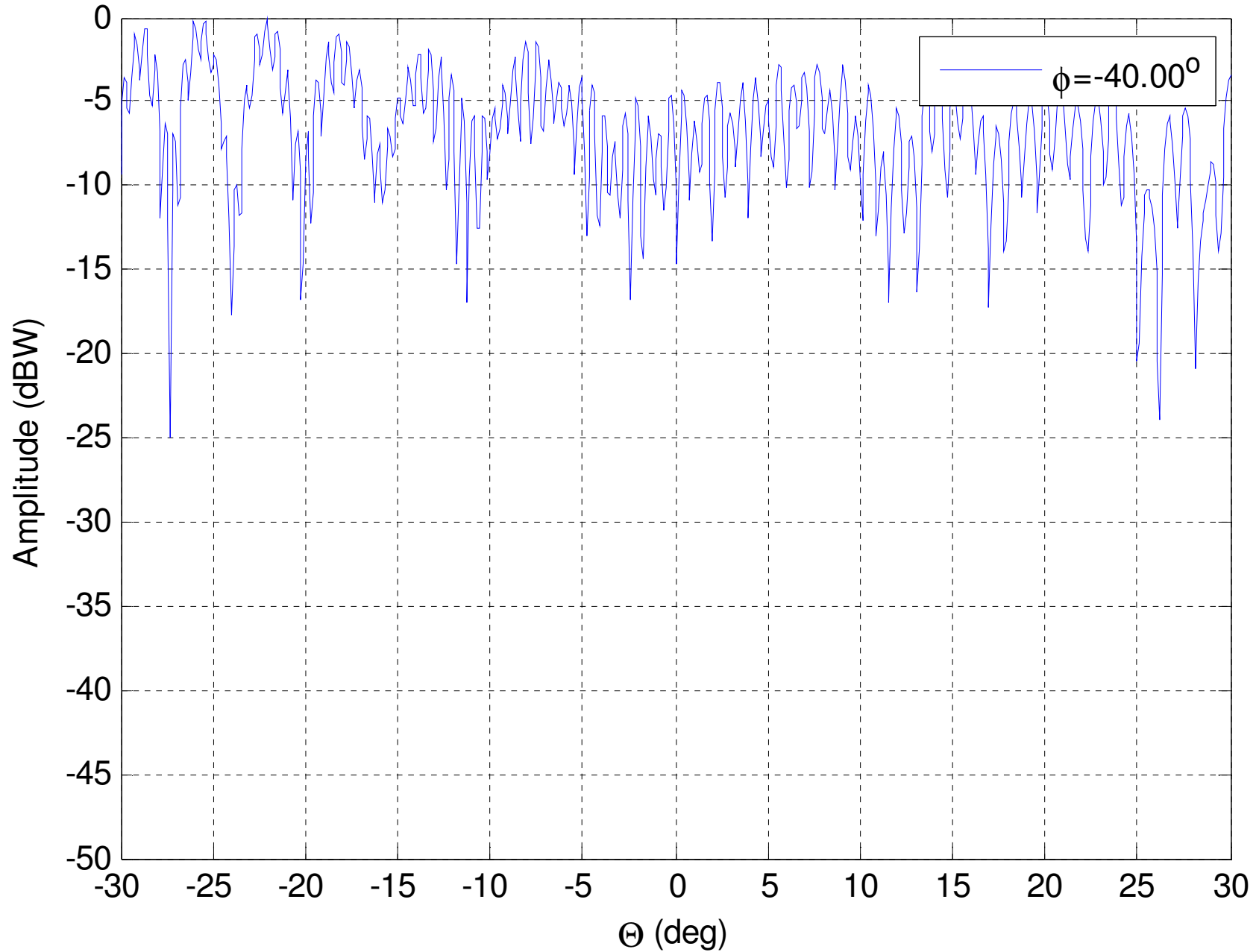
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -2.68 dBW, Date: 15-Dec-2011



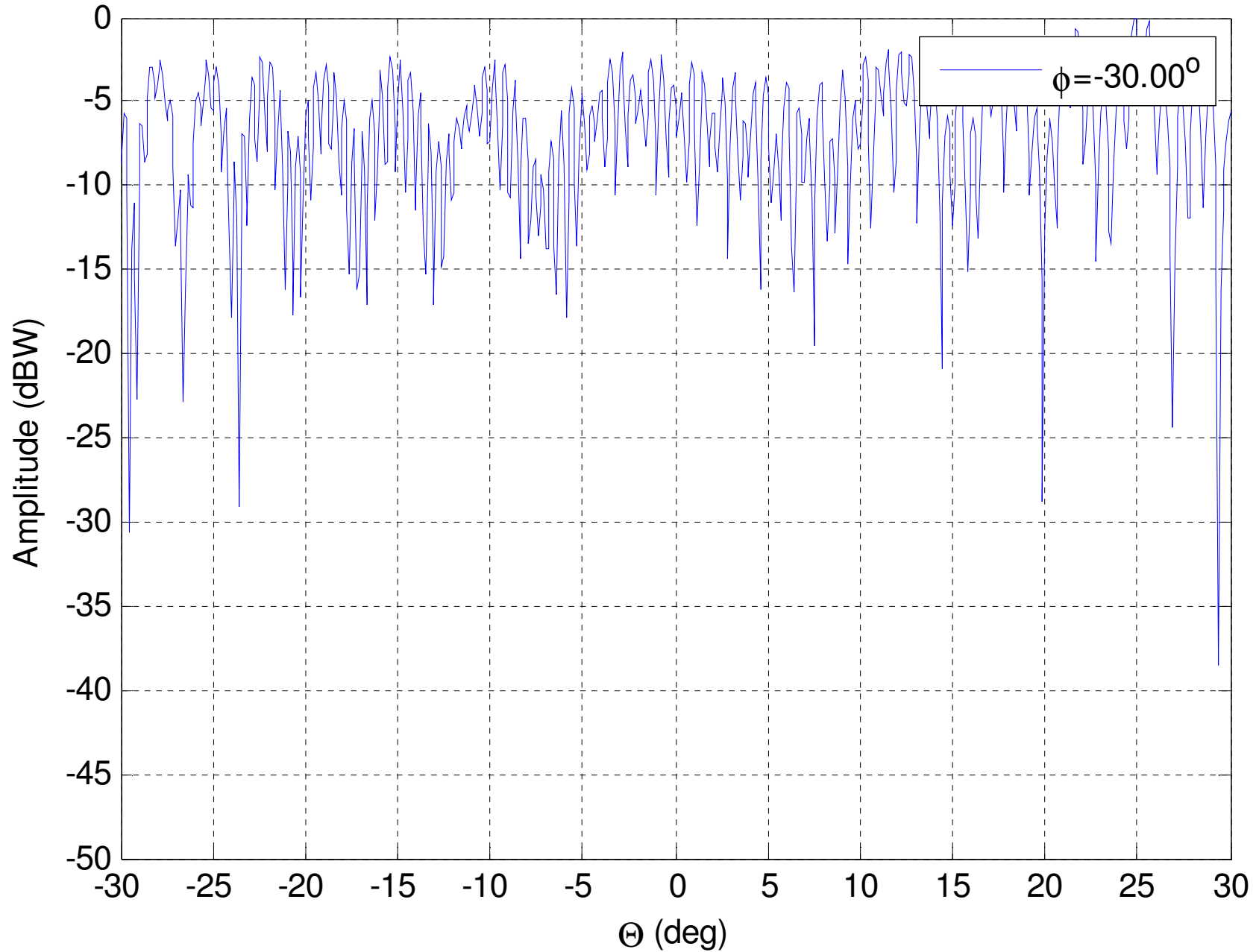
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -2.37 dBW, Date: 15-Dec-2011



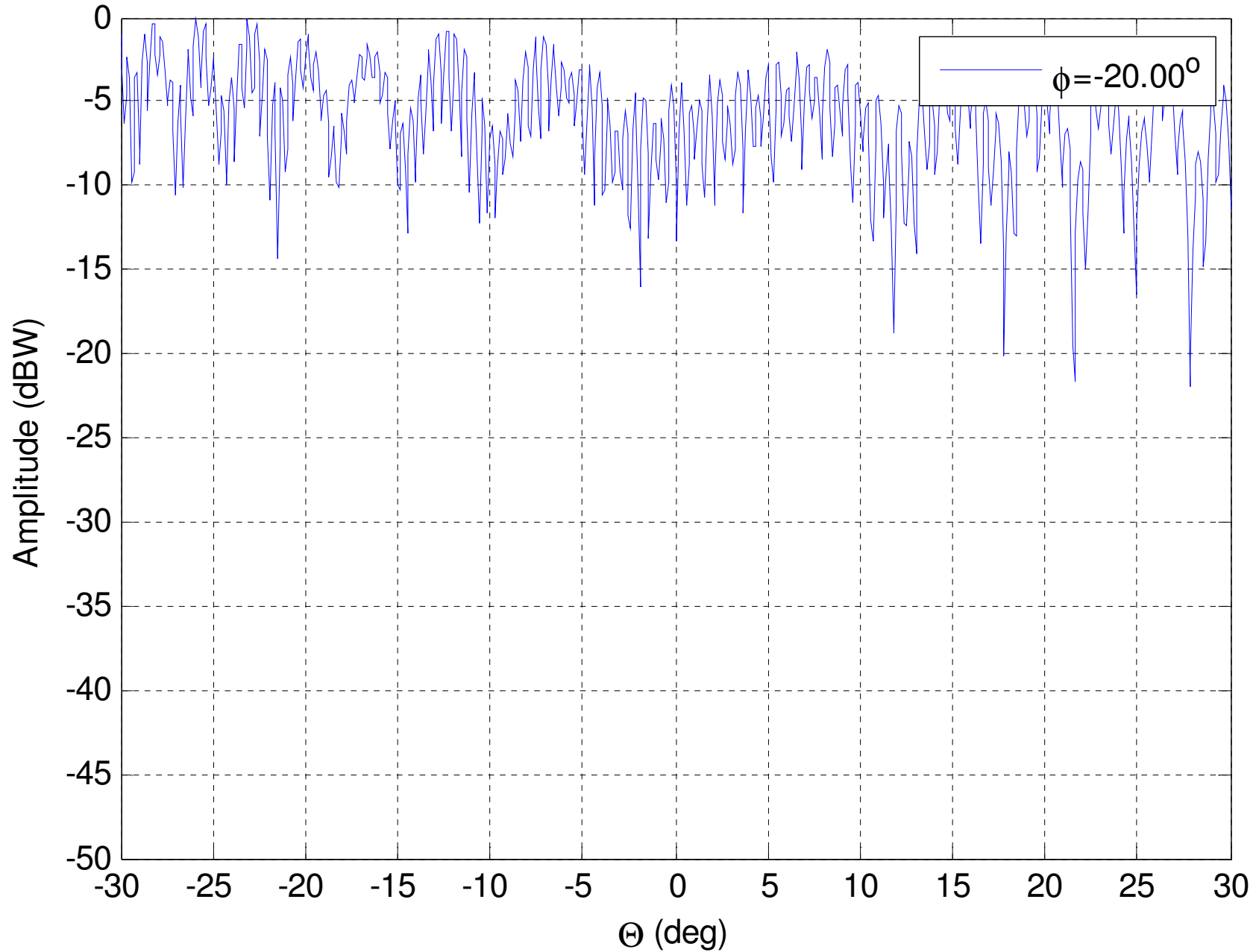
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -2.27 dBW, Date: 15-Dec-2011



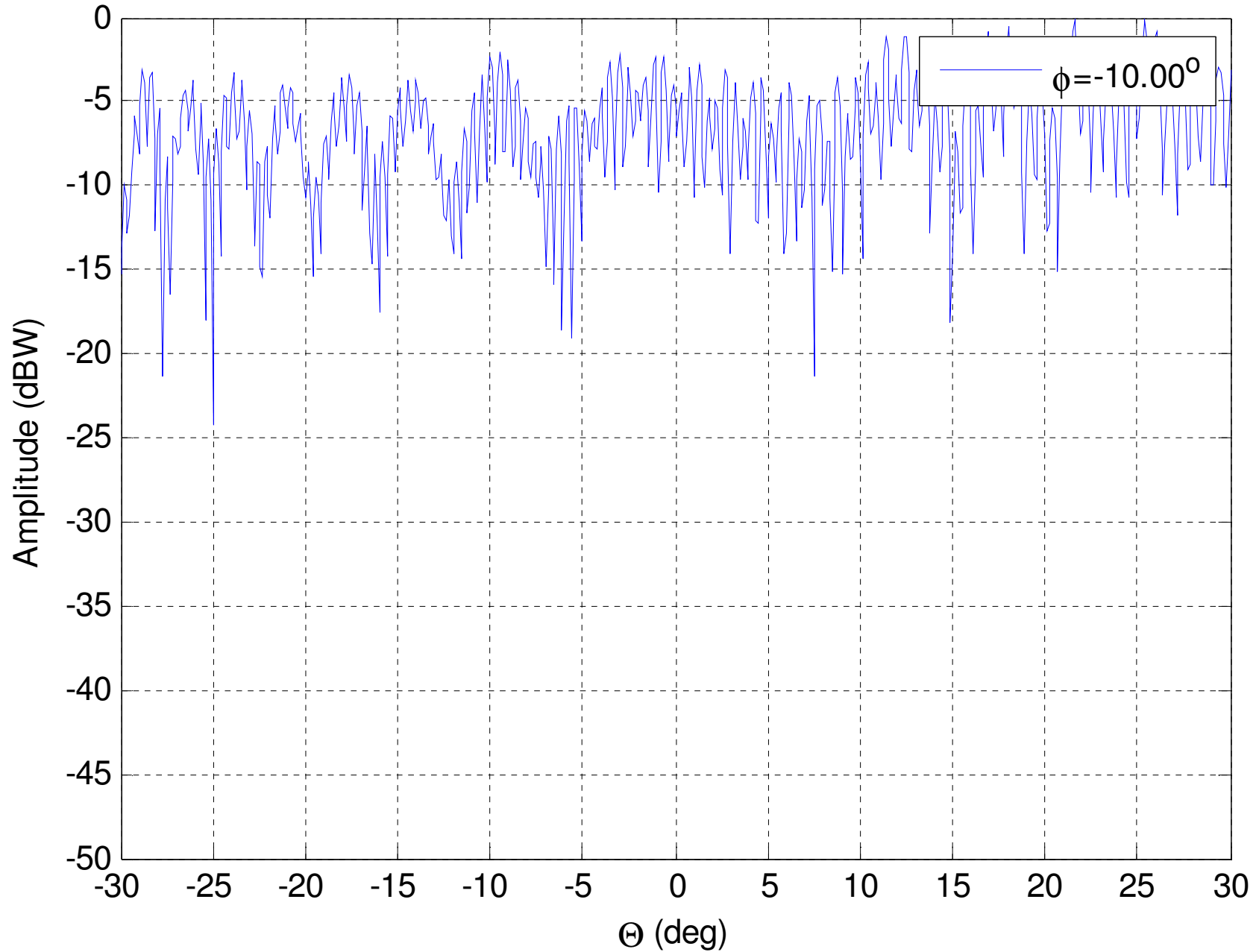
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.84 dBW, Date: 15-Dec-2011



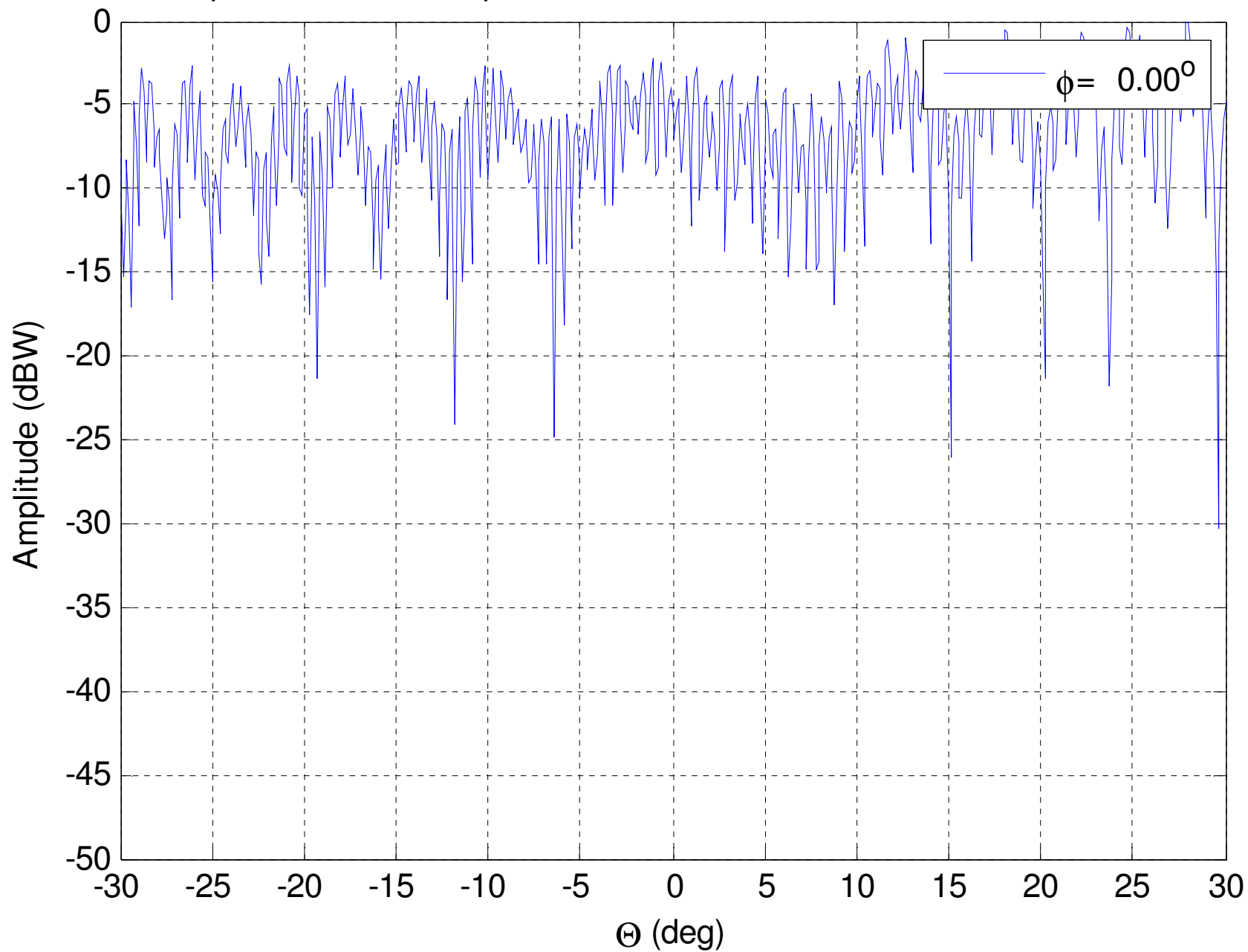
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -2.26 dBW, Date: 15-Dec-2011



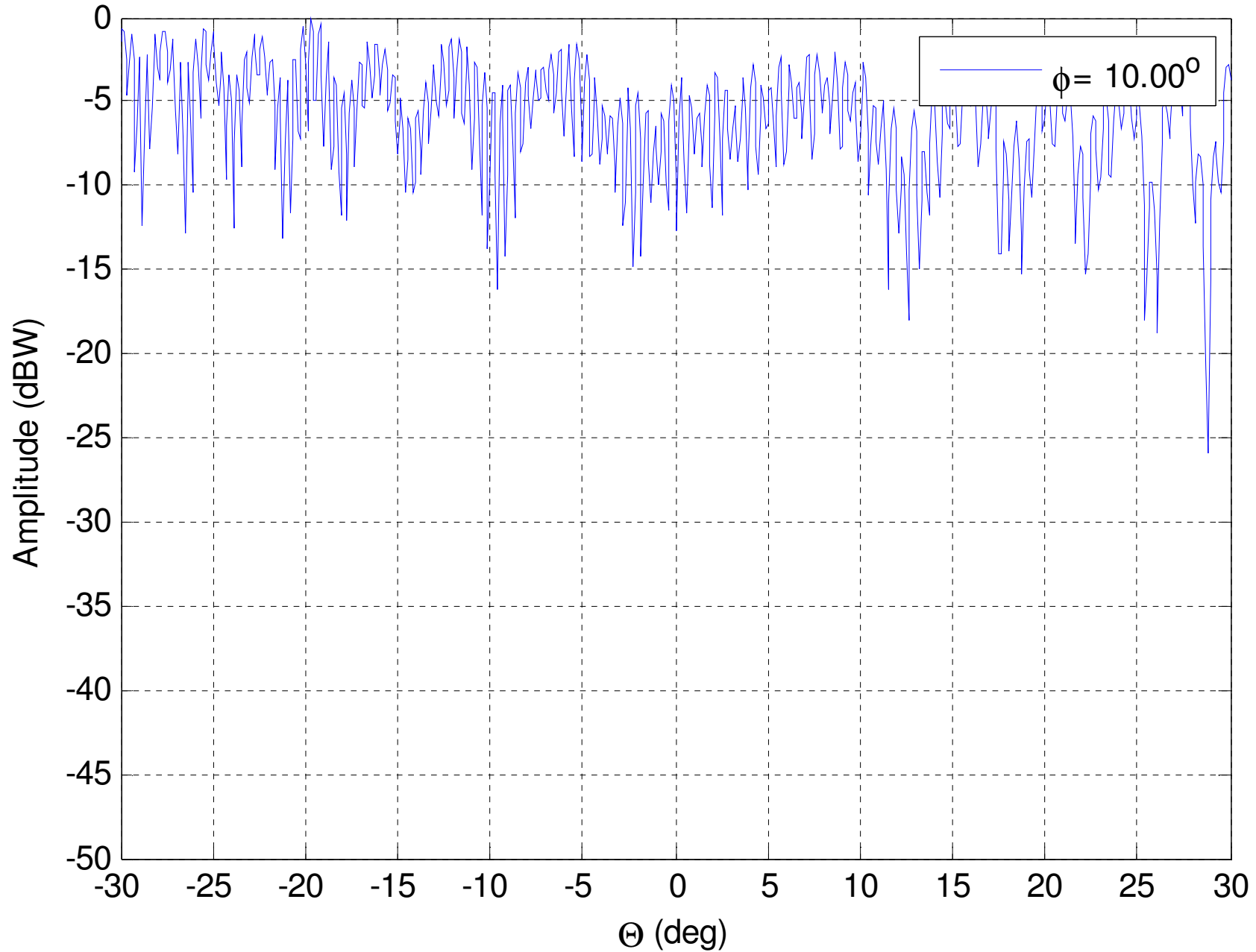
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -2.23 dBW, Date: 15-Dec-2011



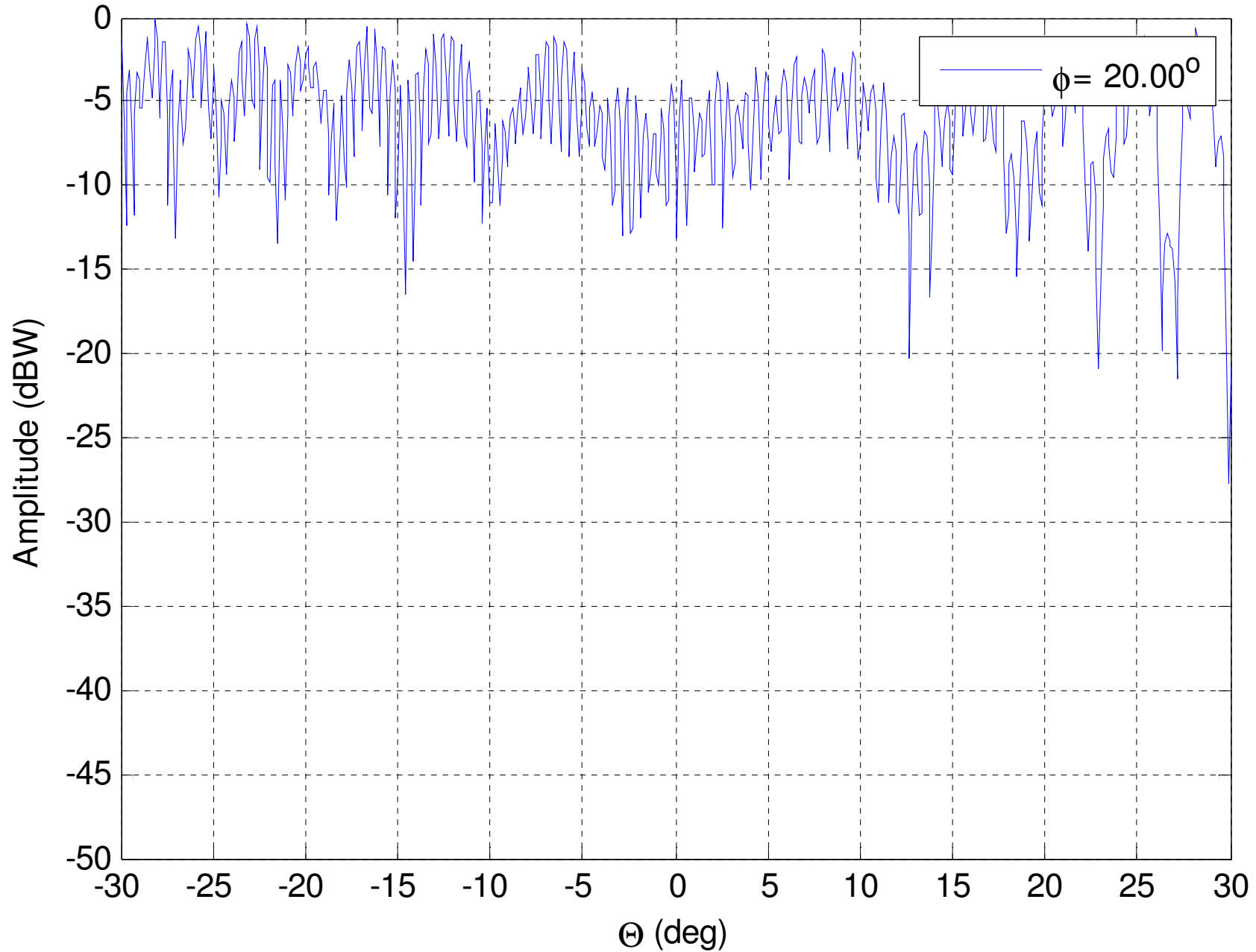
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -2.86 dBW, Date: 15-Dec-2011



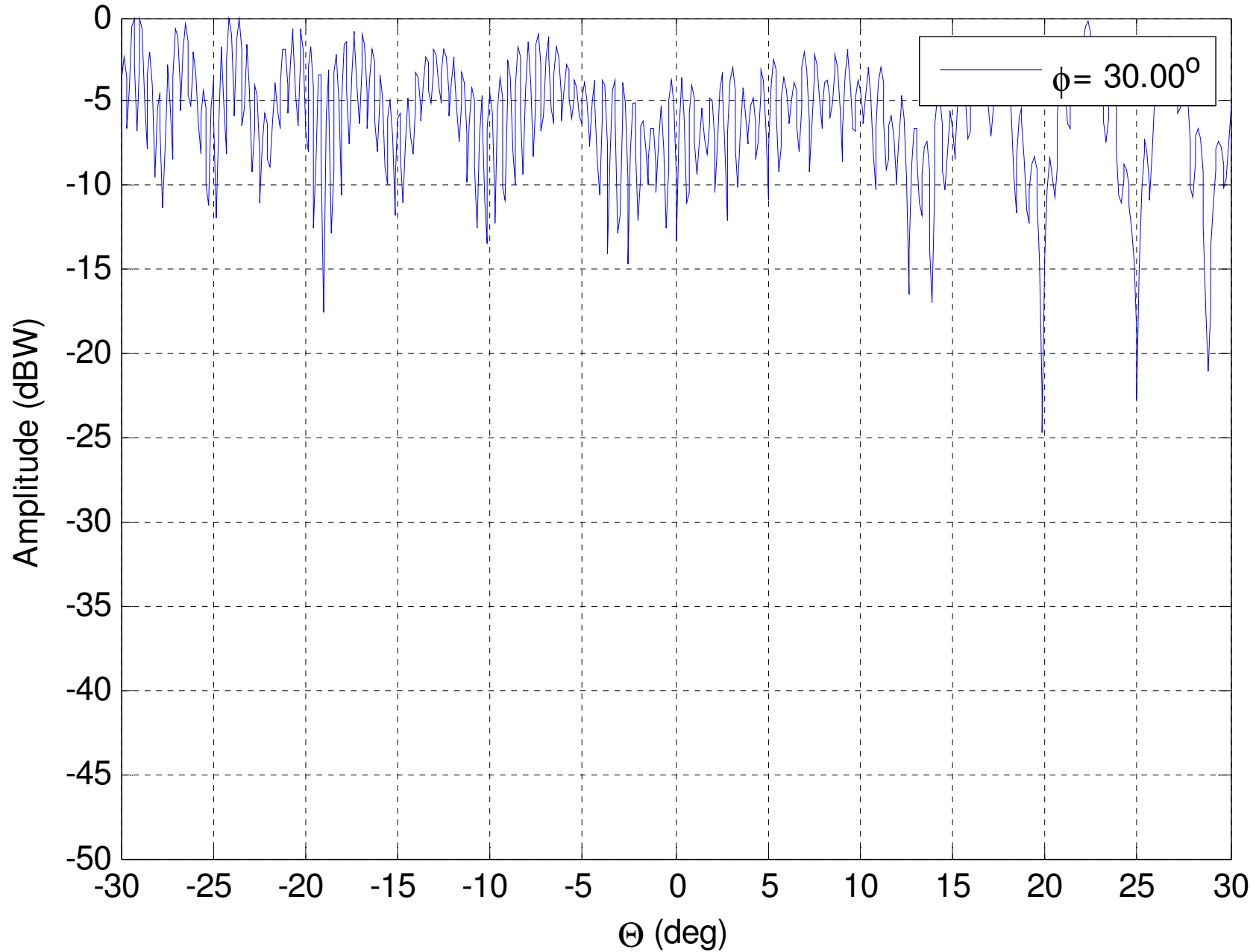
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -2.77 dBW, Date: 15-Dec-2011



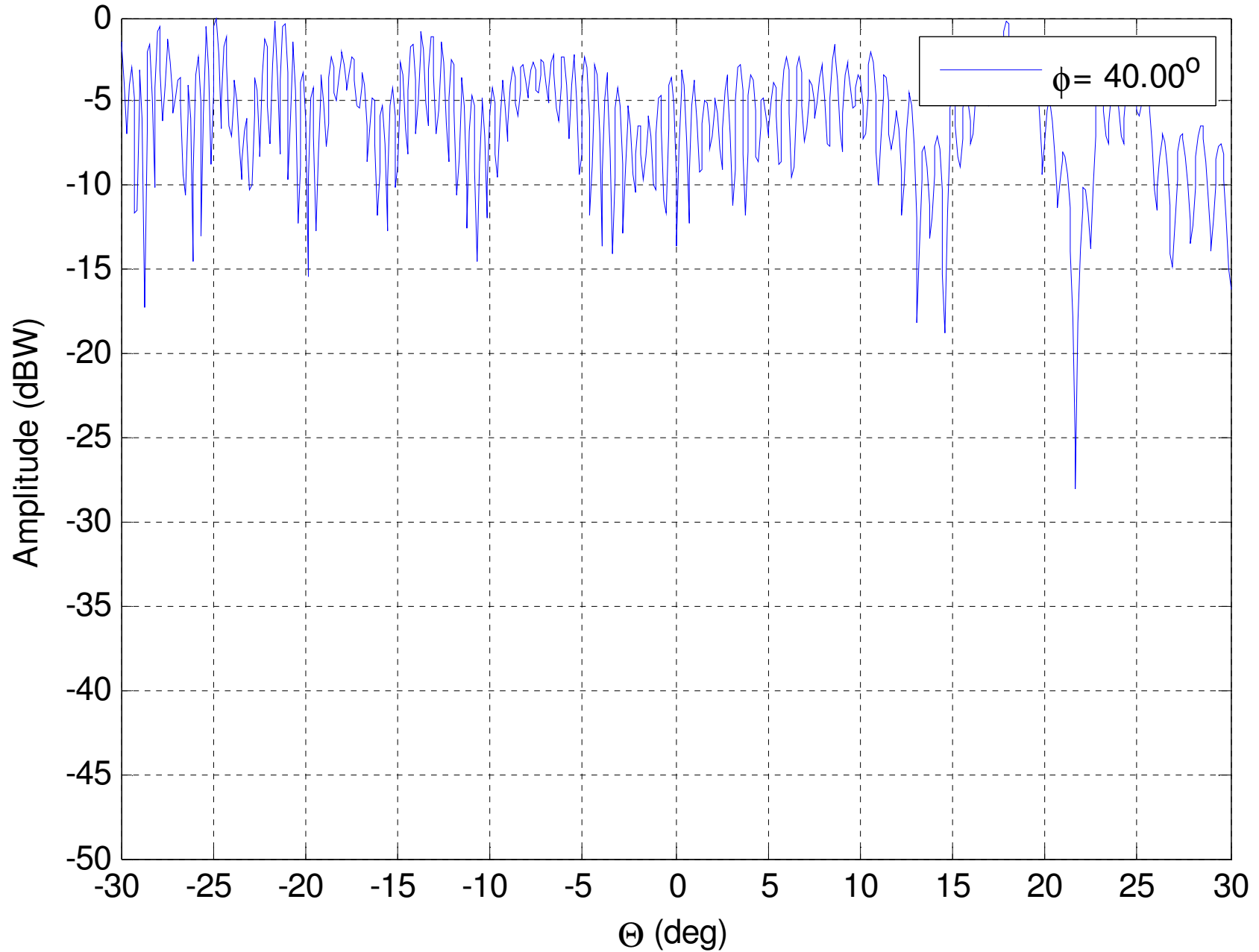
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -3.02 dBW, Date: 15-Dec-2011



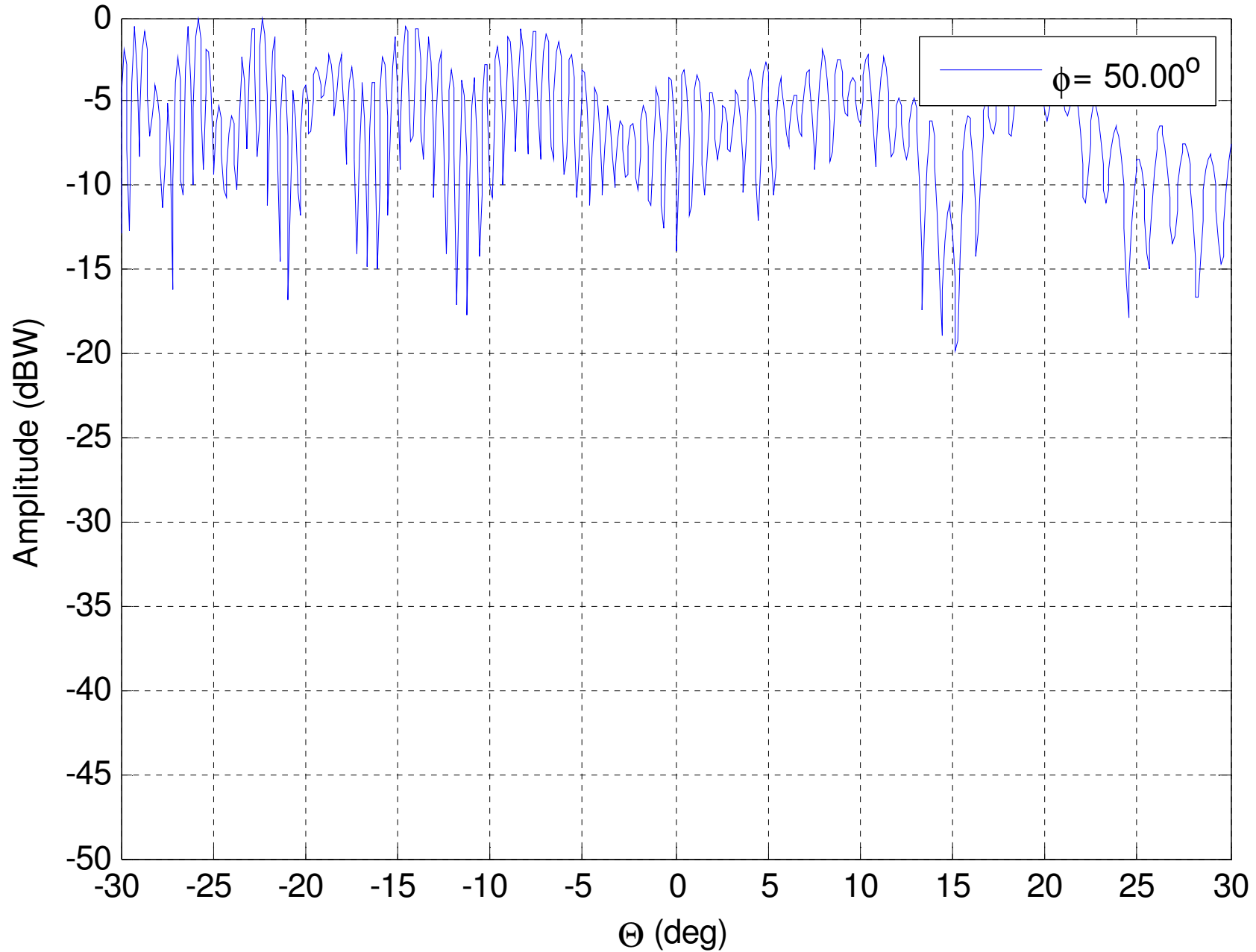
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -3.24 dBW, Date: 15-Dec-2011



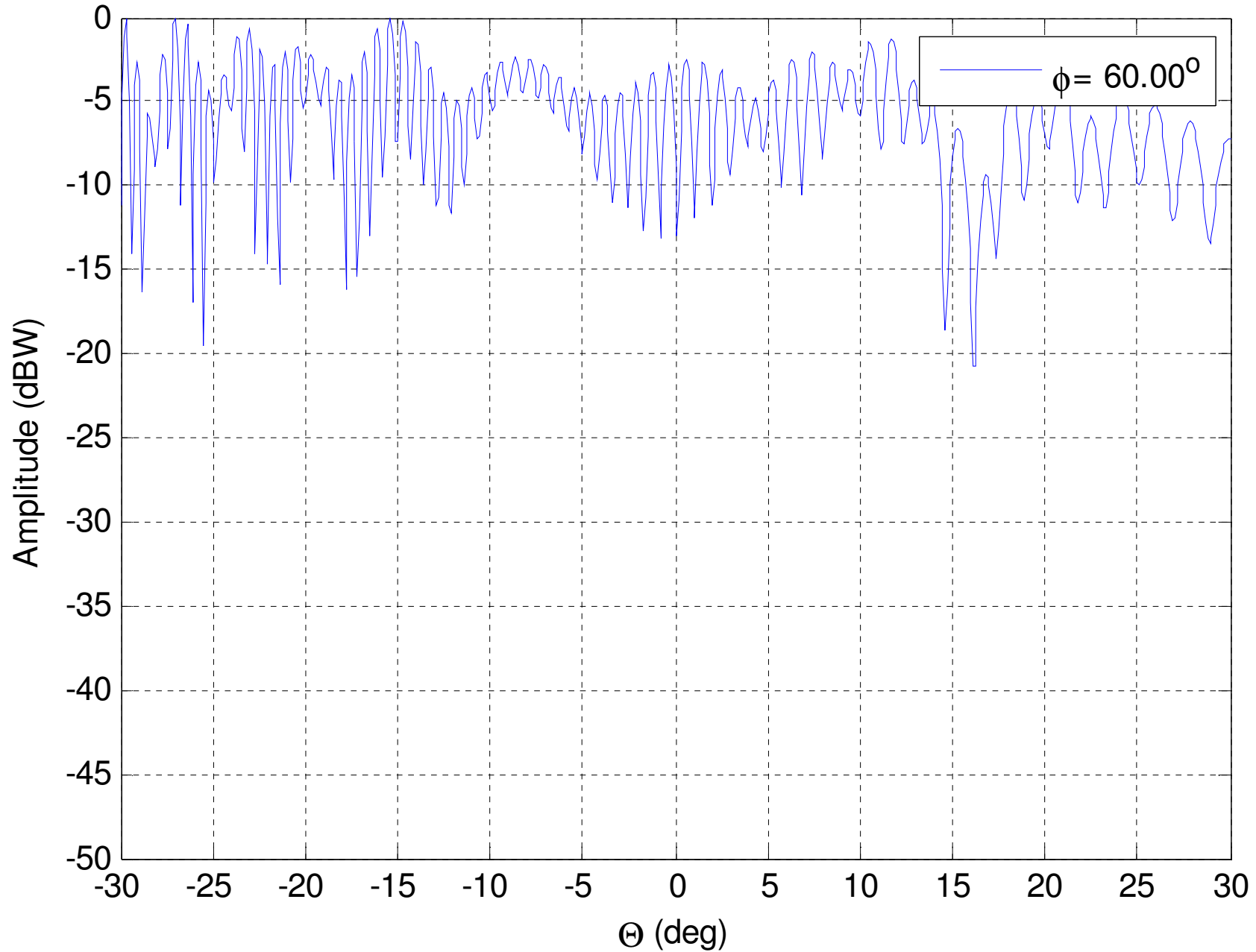
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -3.23 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

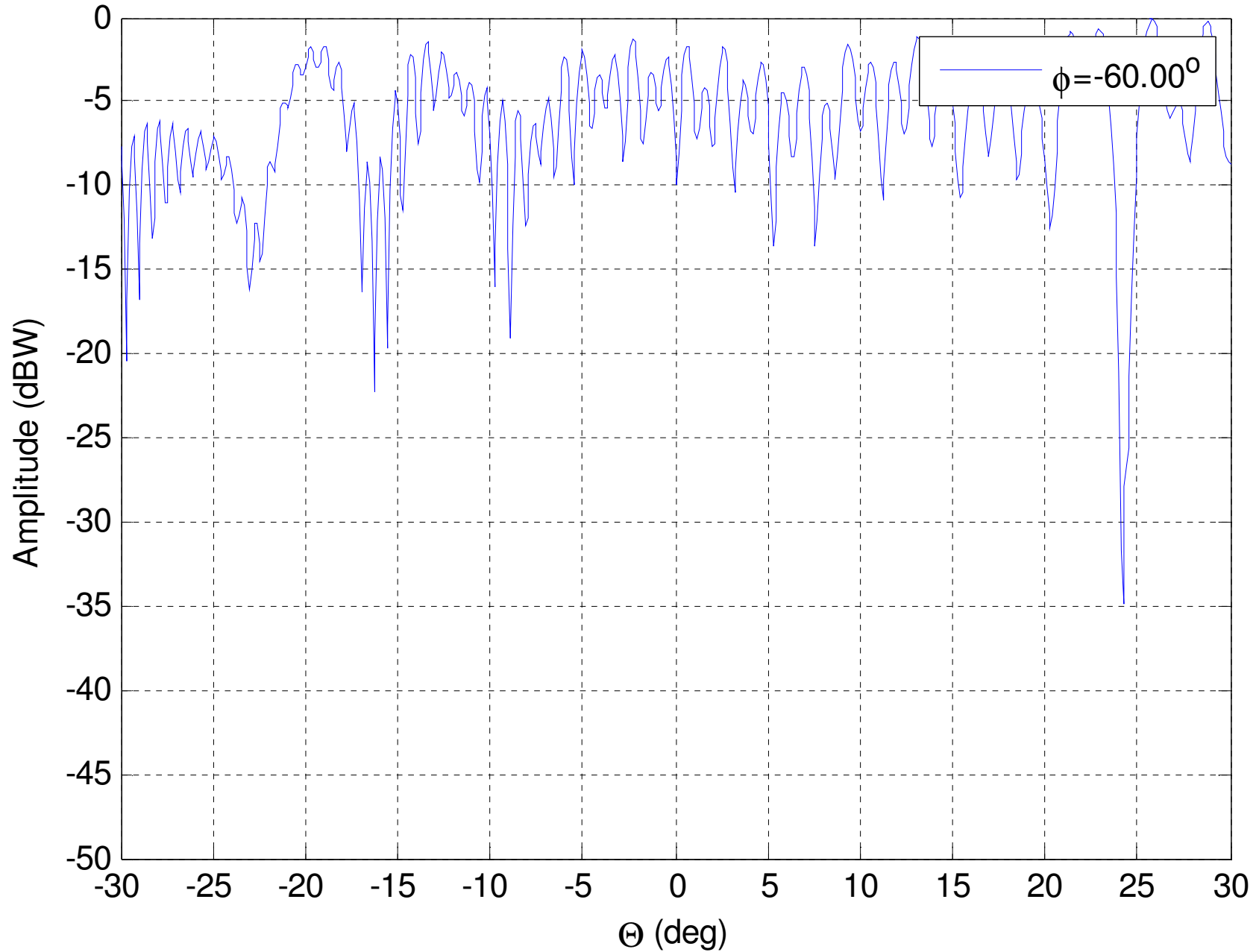
Input file: tx-17.3-lhcp-60.cut, Peak: -3.83 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

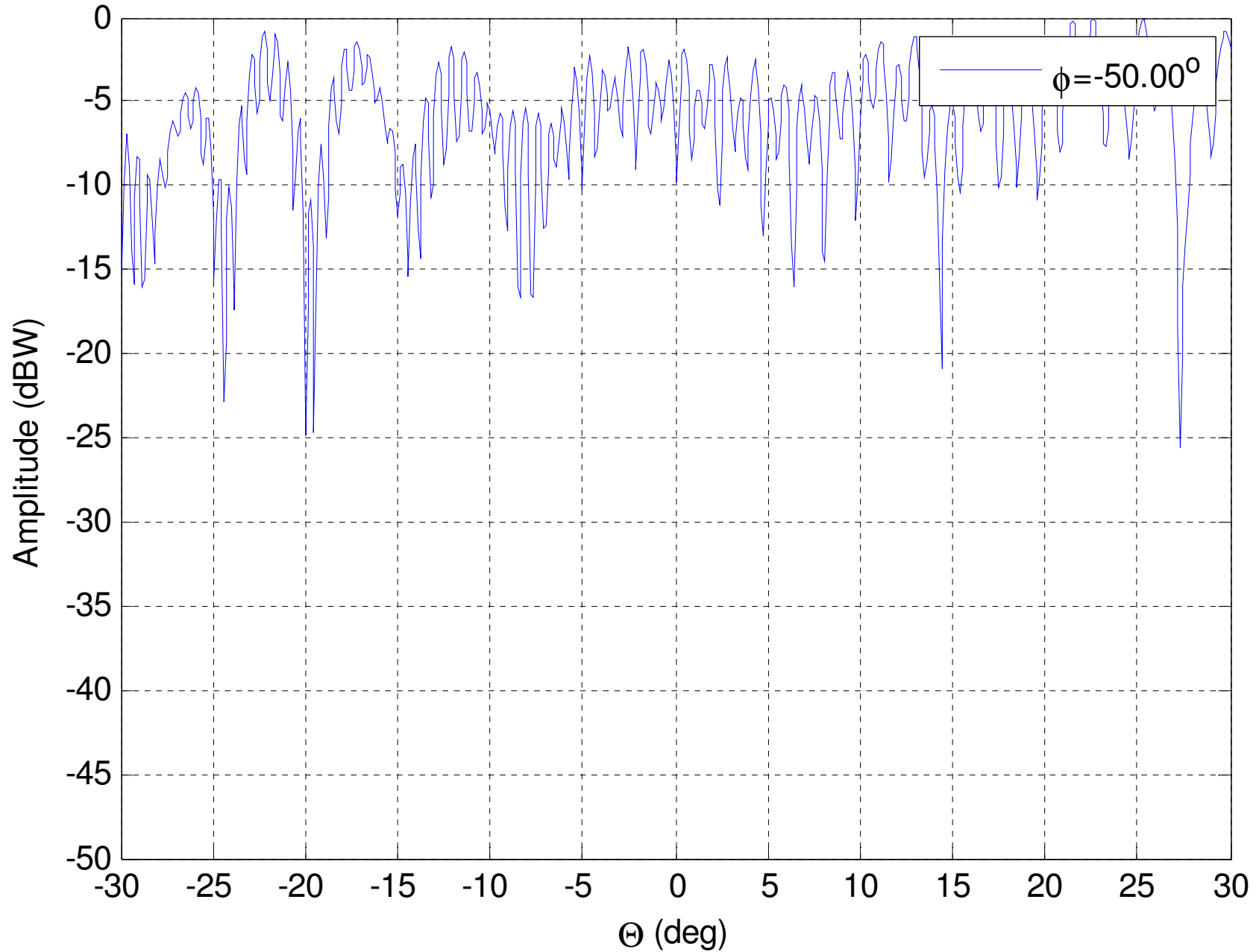
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -3.21 dBW, Date: 15-Dec-2011



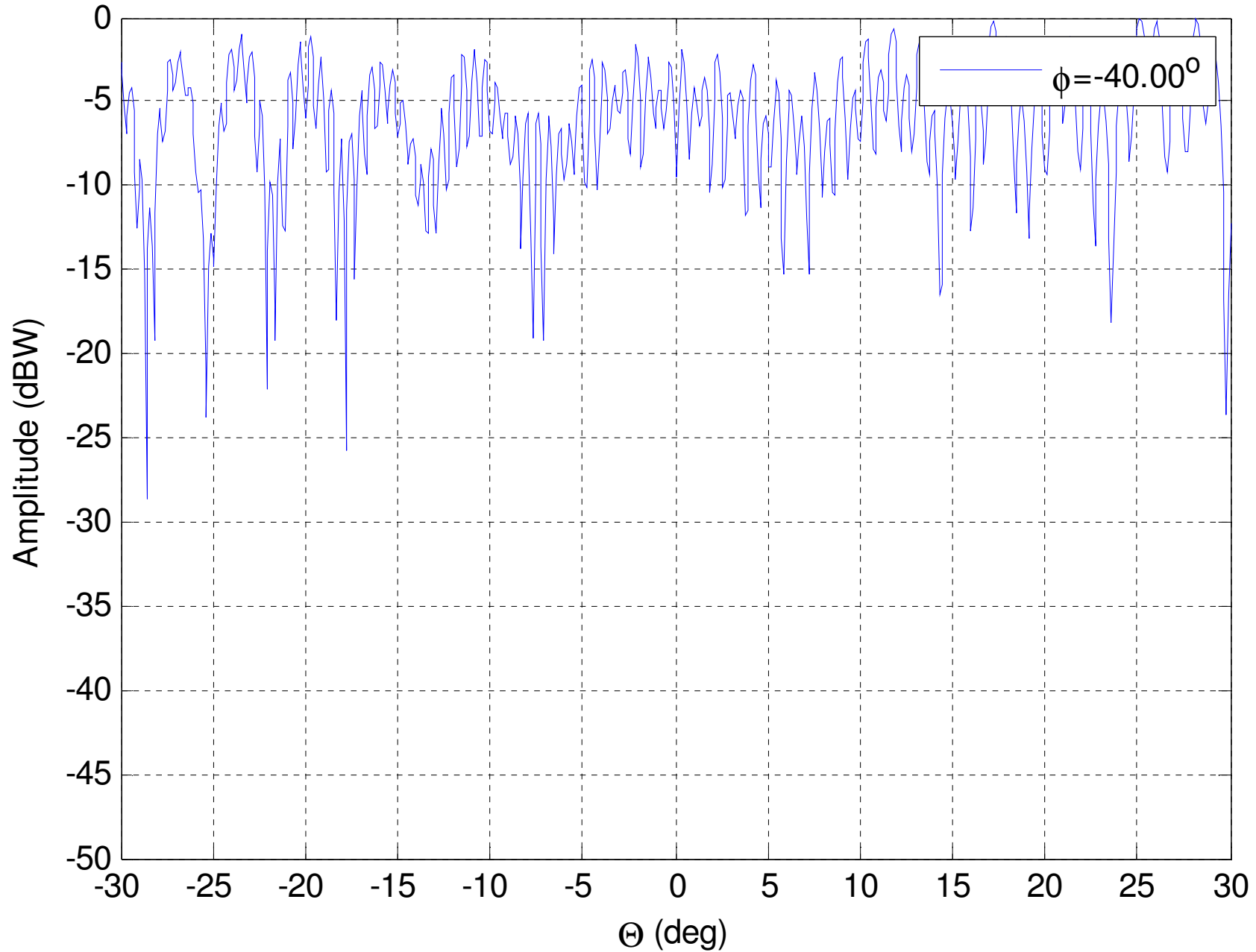
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -2.94 dBW, Date: 15-Dec-2011



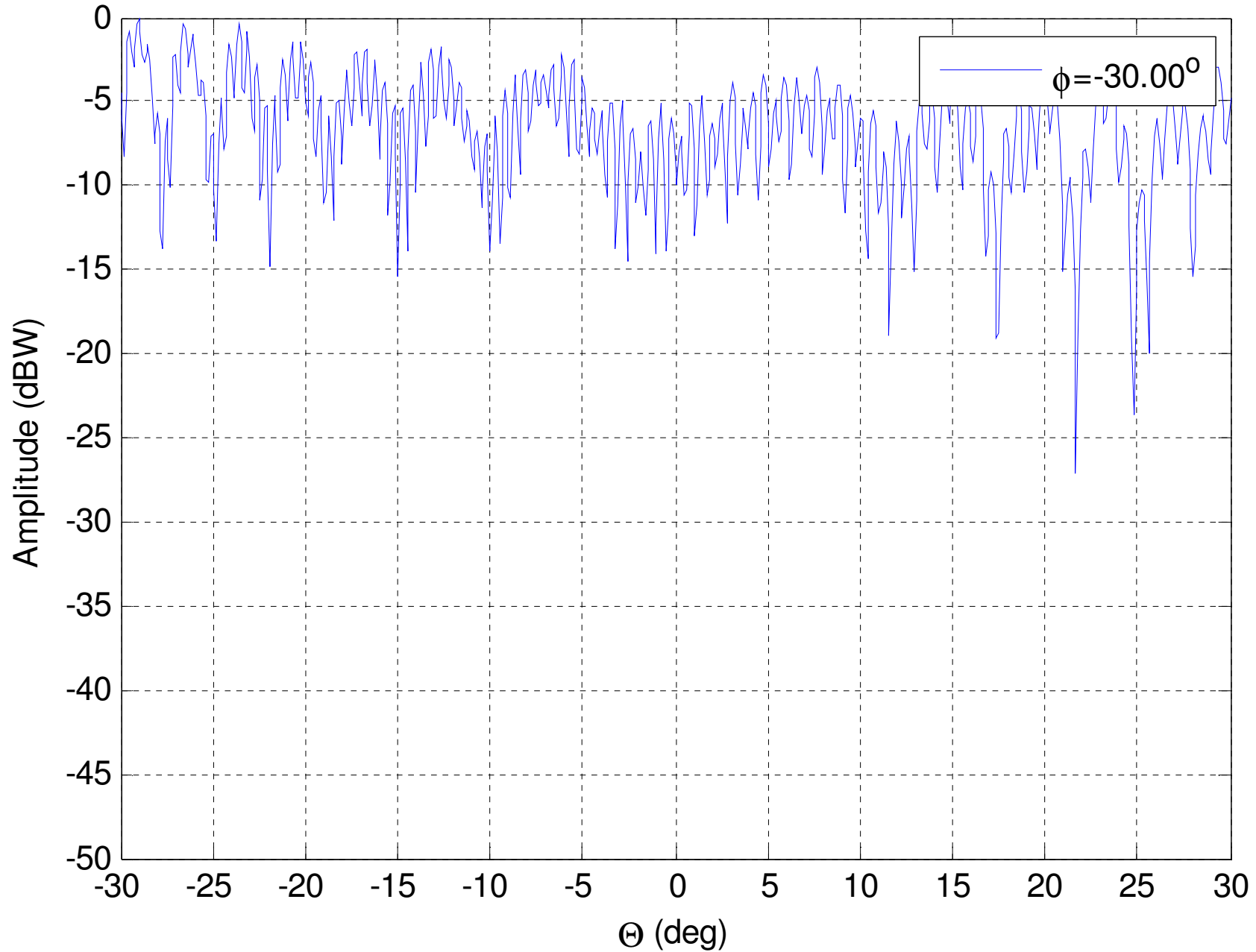
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -2.75 dBW, Date: 15-Dec-2011



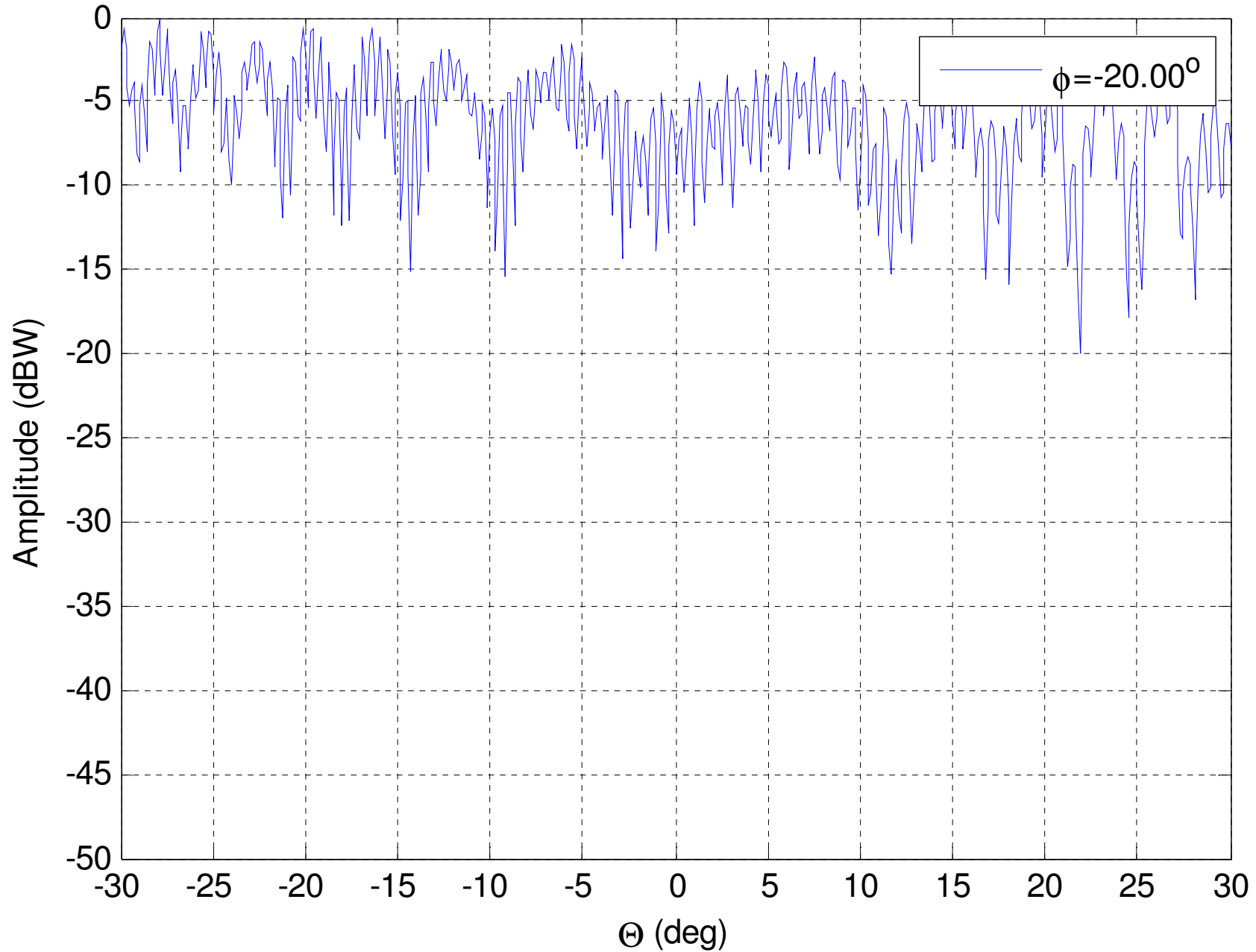
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -1.97 dBW, Date: 15-Dec-2011



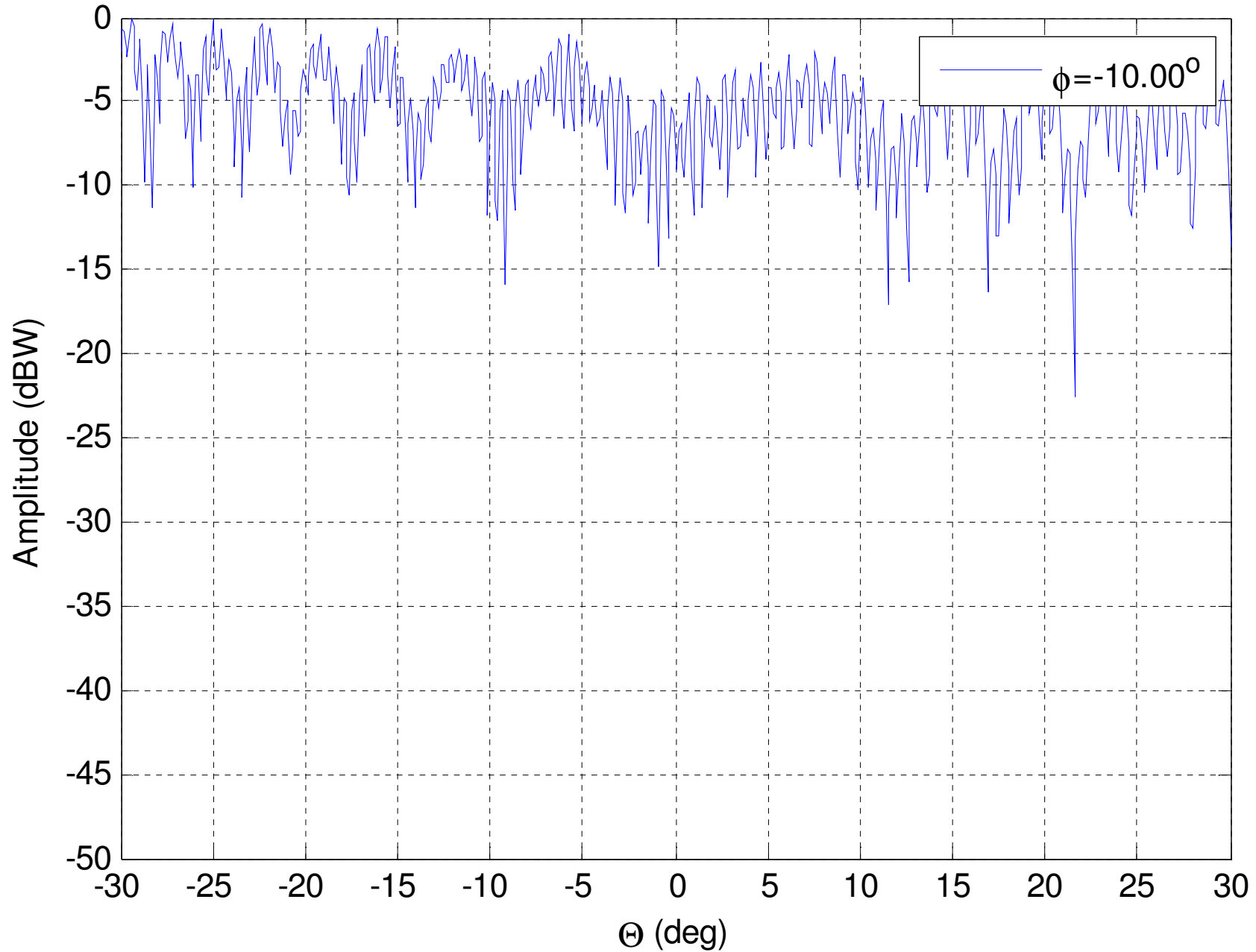
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -2.47 dBW, Date: 15-Dec-2011



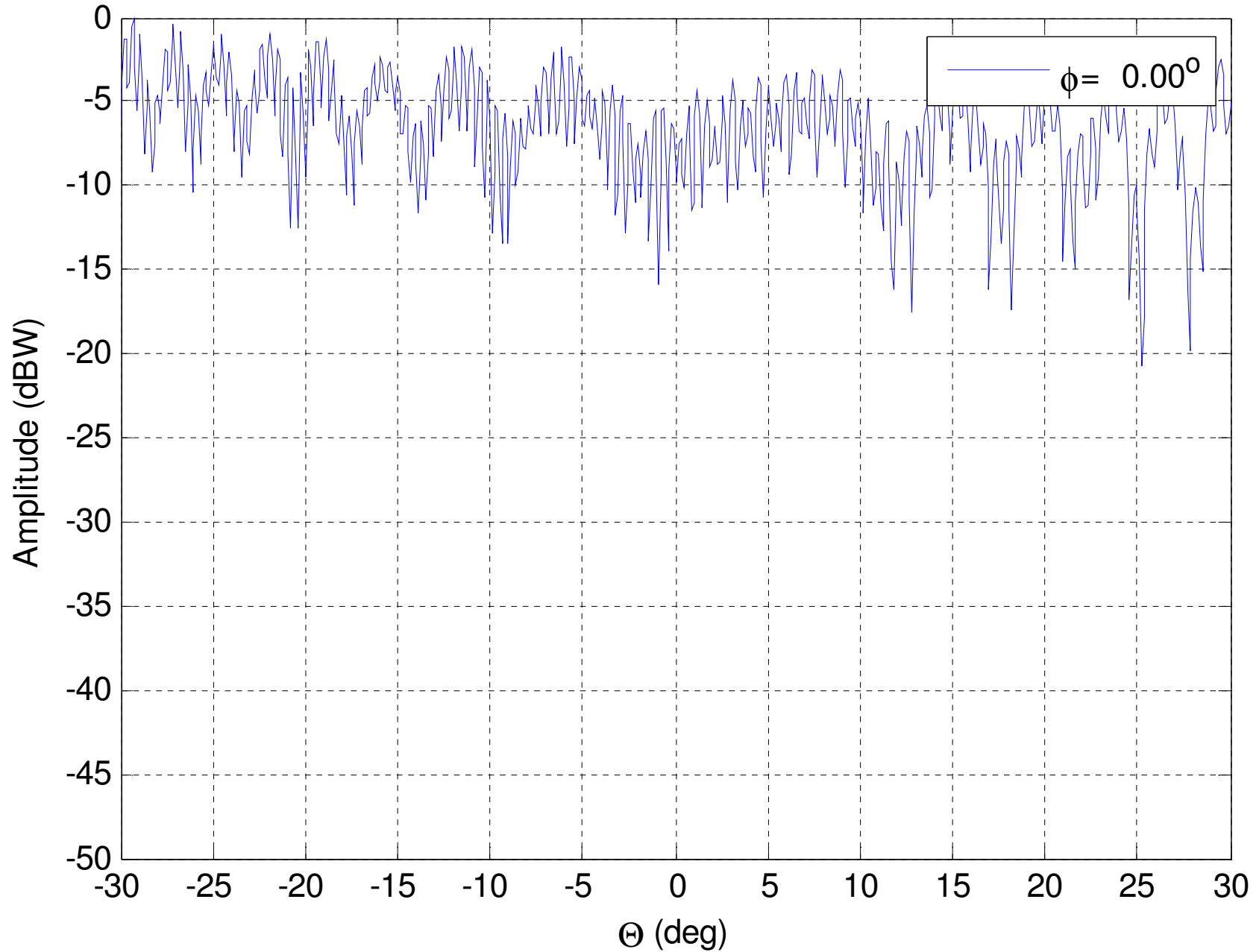
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.86 dBW, Date: 15-Dec-2011



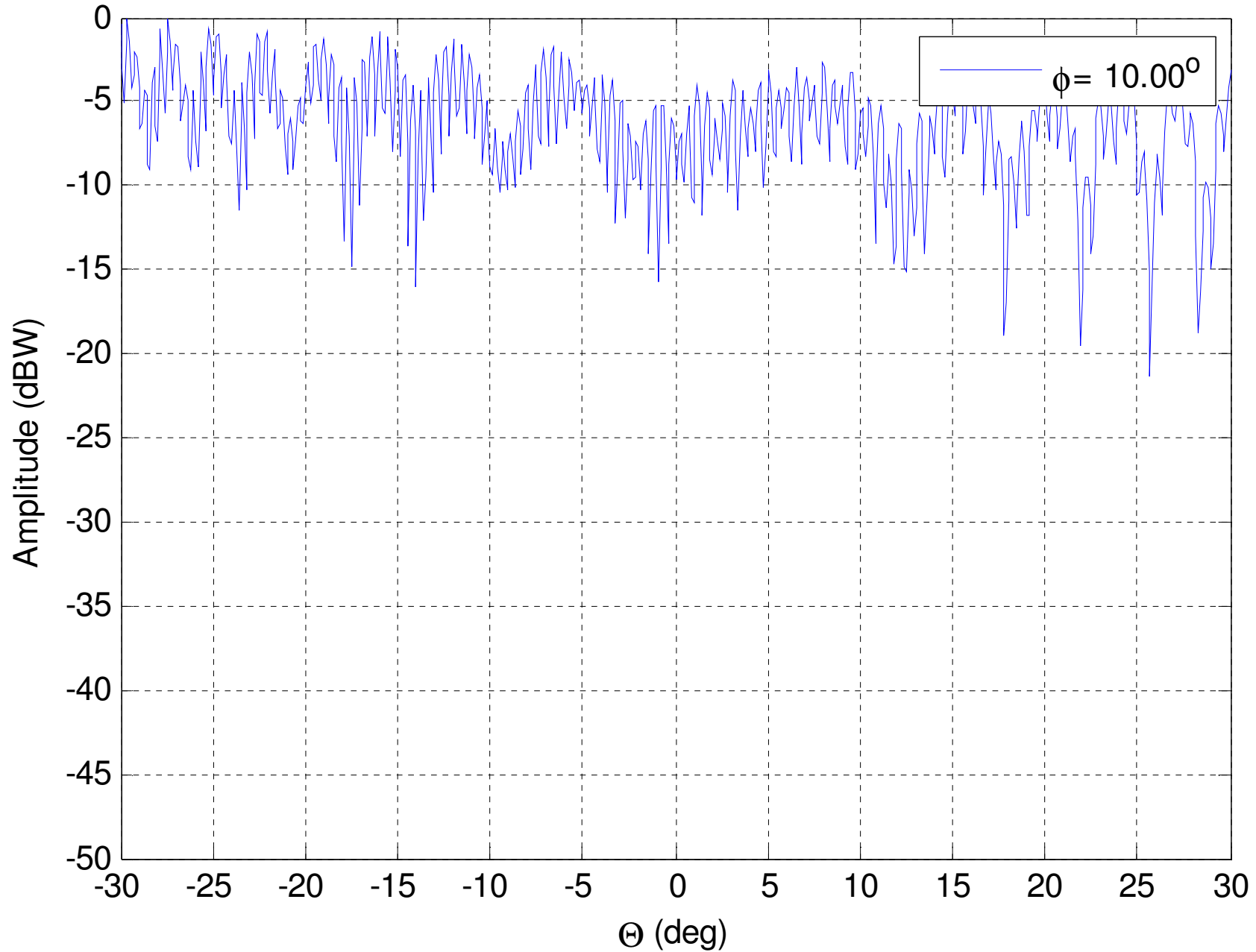
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -2.02 dBW, Date: 15-Dec-2011



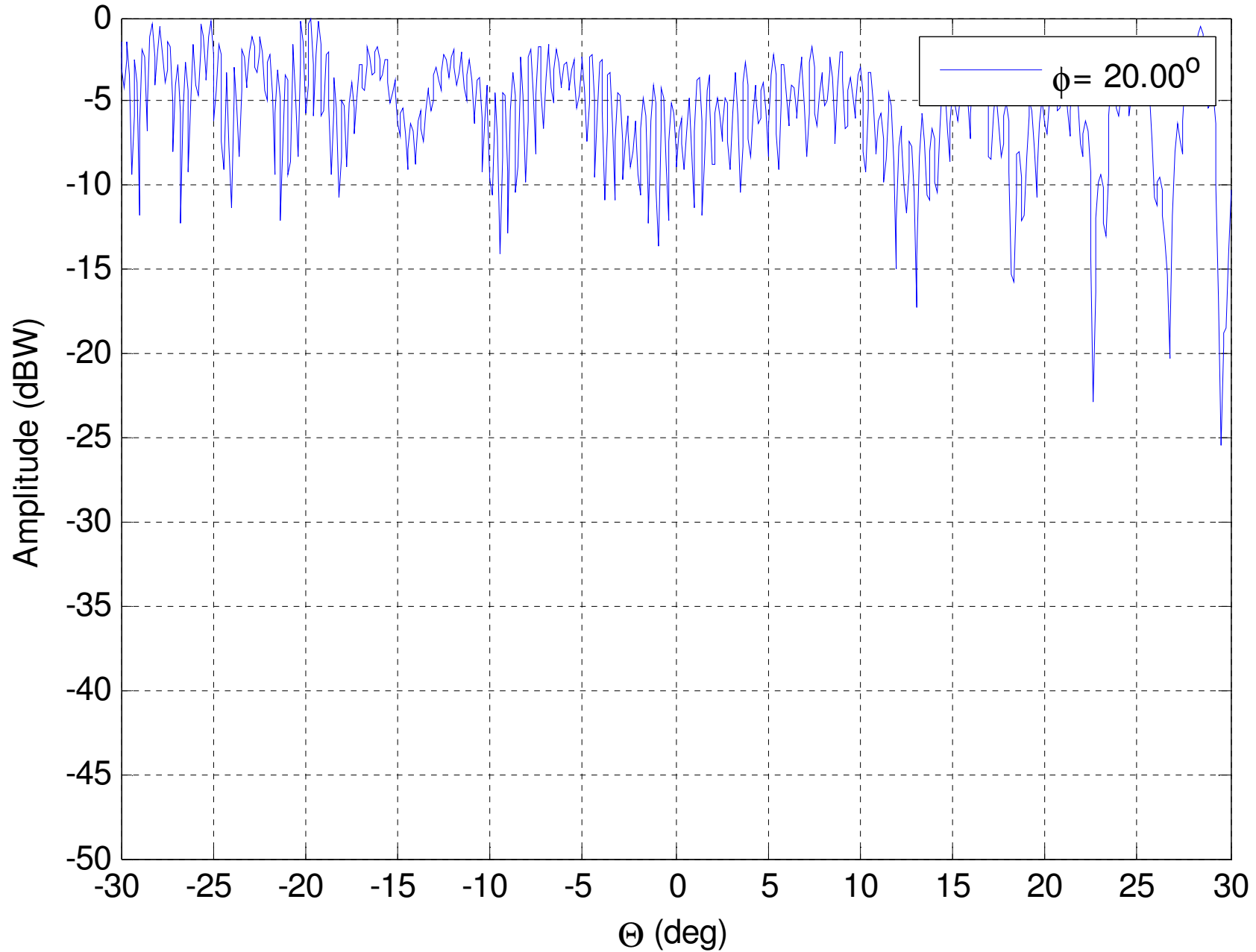
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -2.28 dBW, Date: 15-Dec-2011



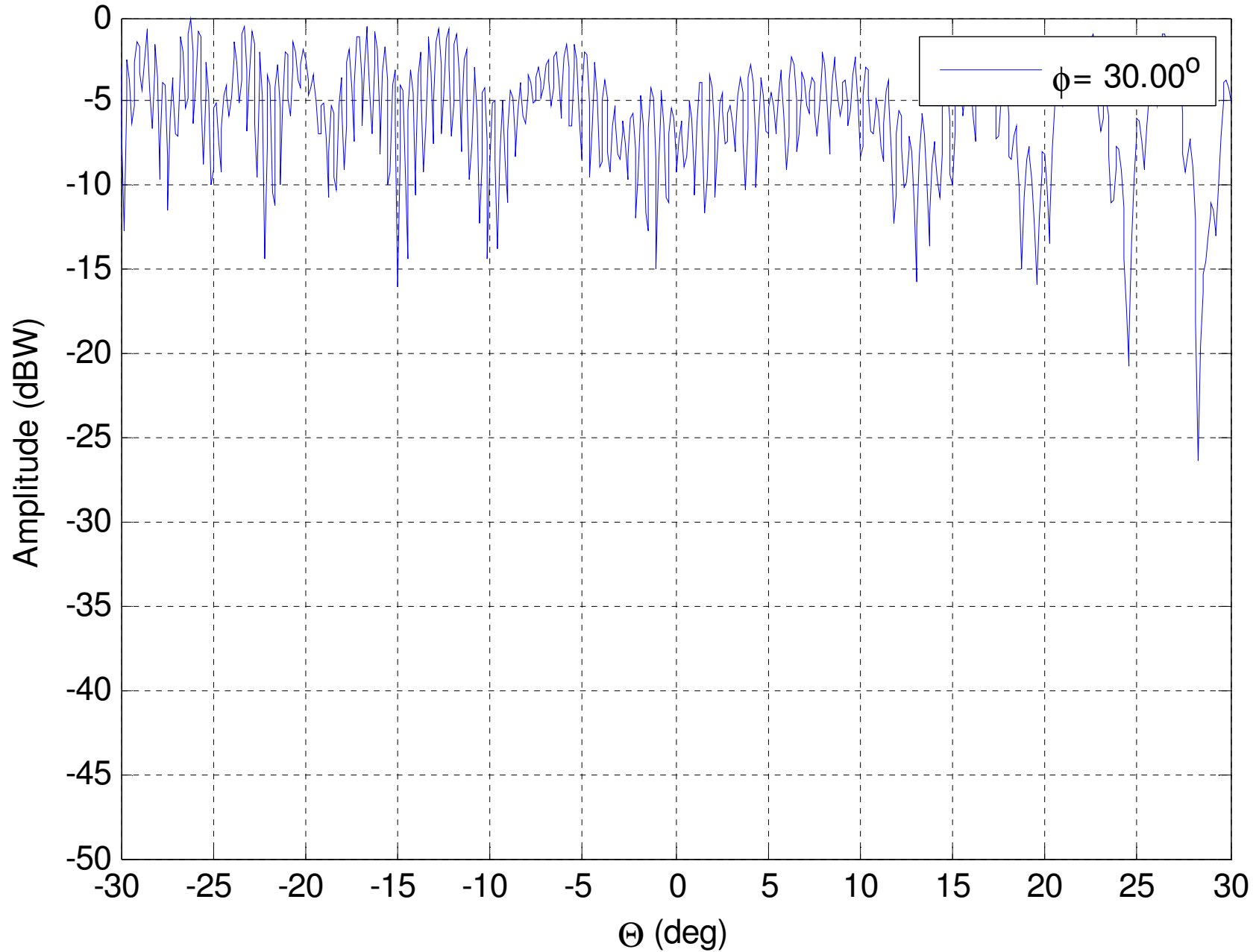
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -3.13 dBW, Date: 15-Dec-2011



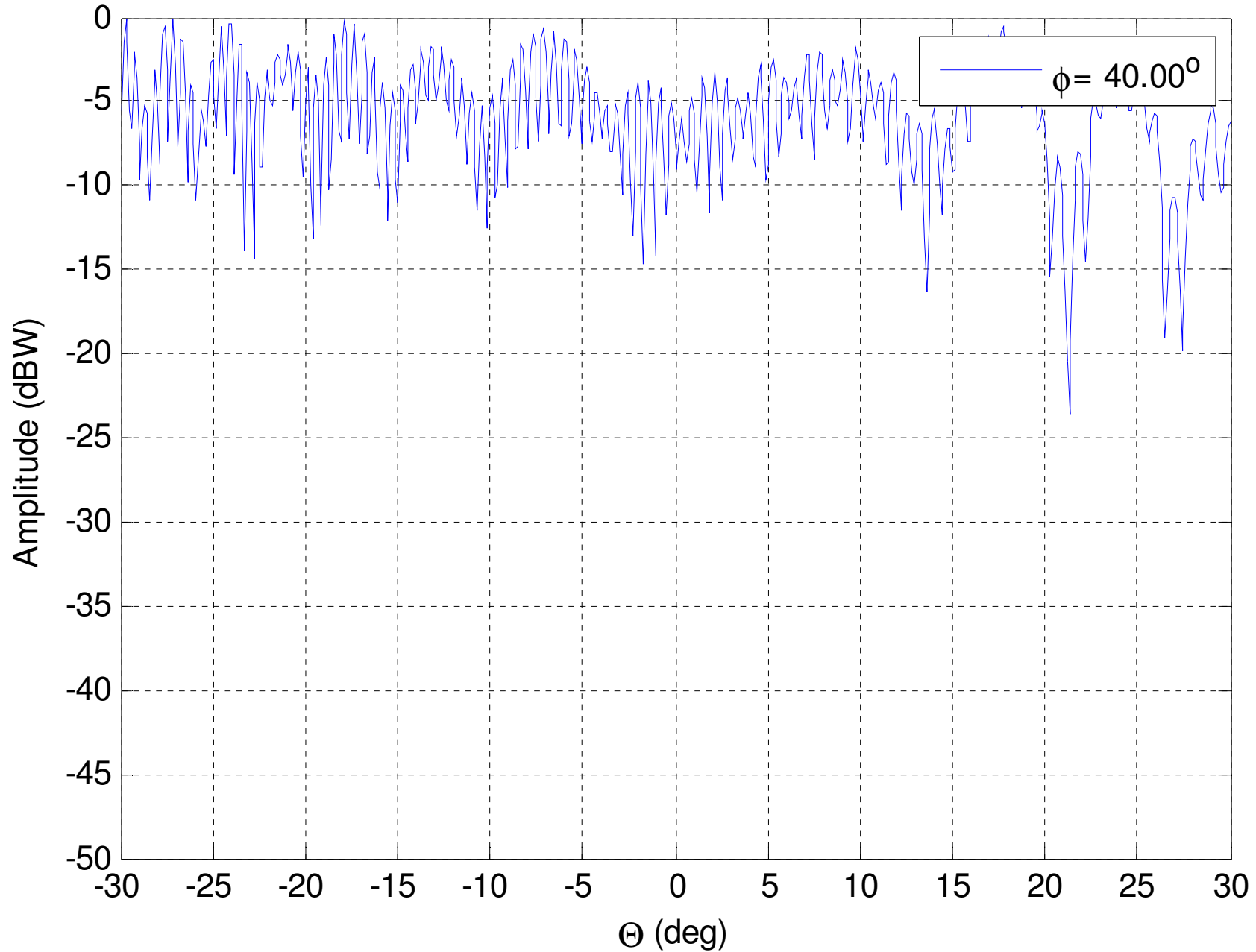
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -2.91 dBW, Date: 15-Dec-2011



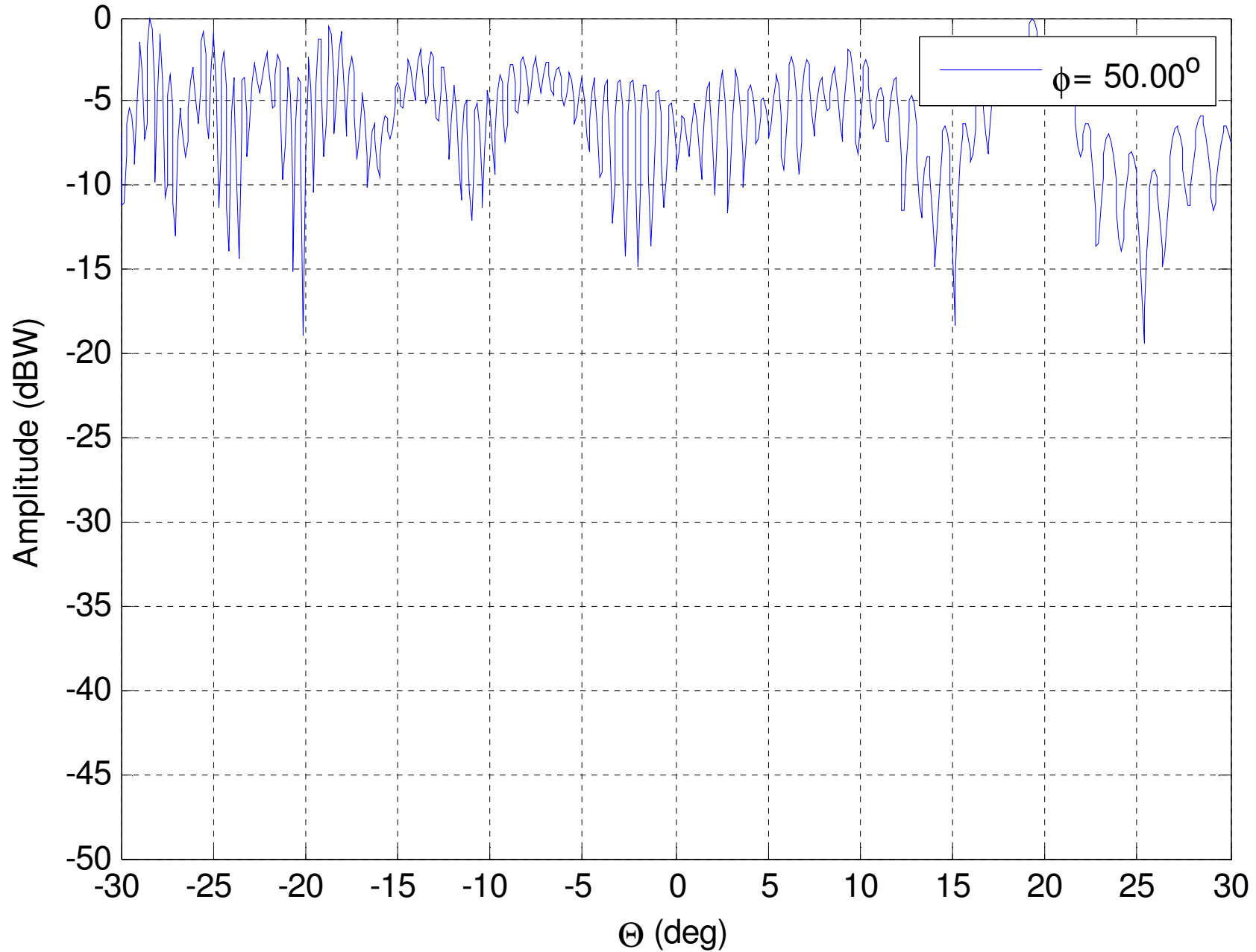
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -3.22 dBW, Date: 15-Dec-2011



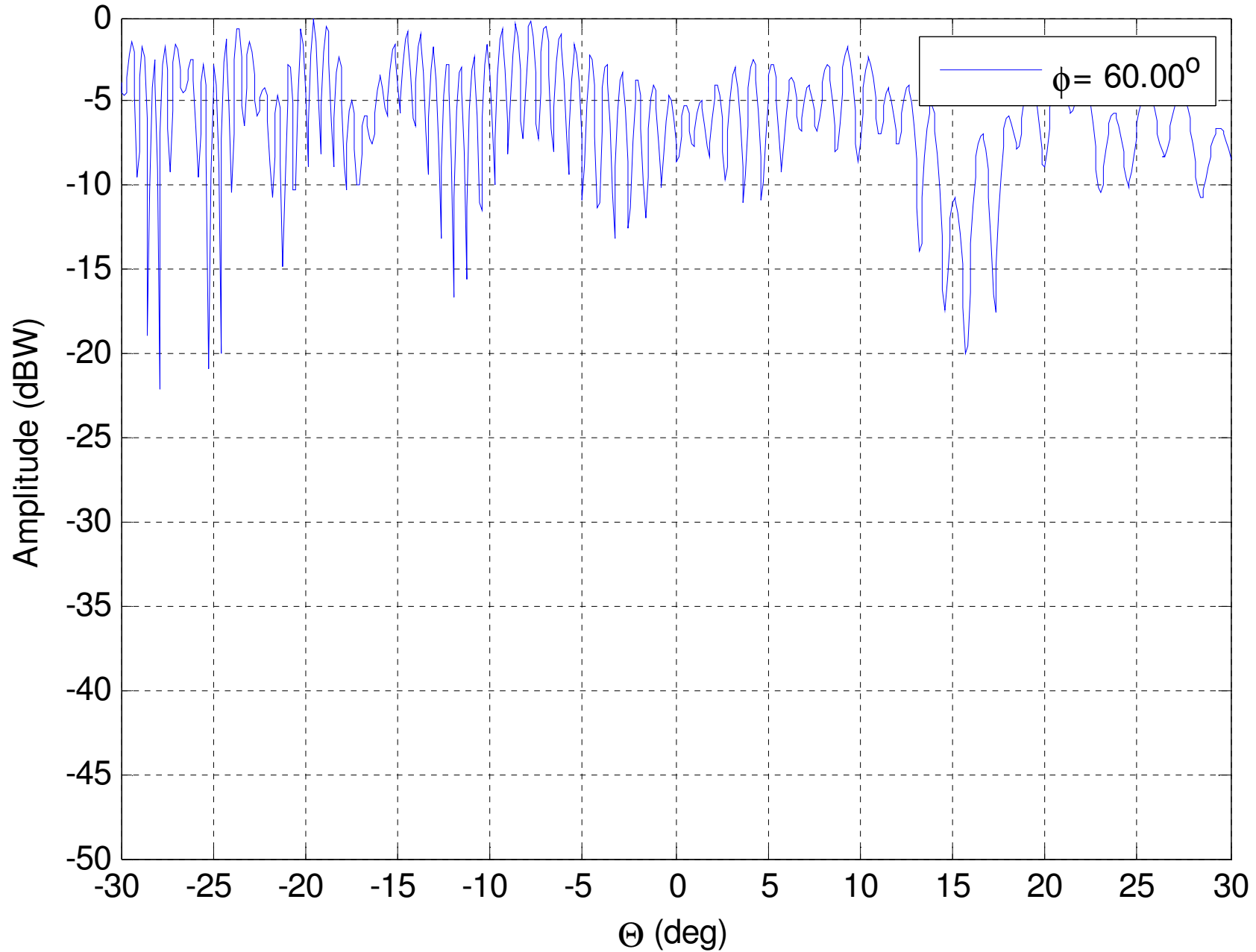
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -3.28 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

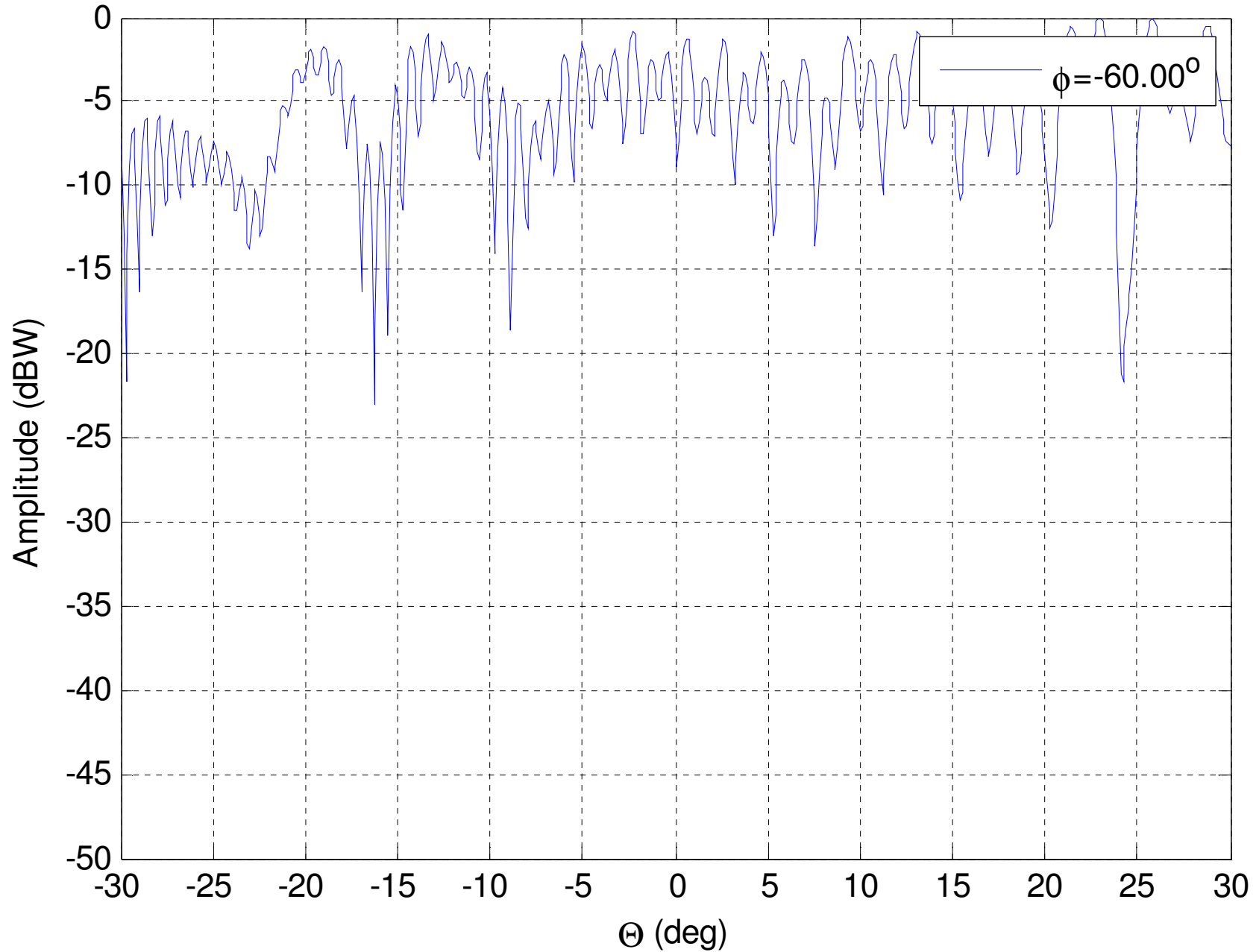
Input file: tx-17.5-rhcp-60.cut, Peak: -3.84 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

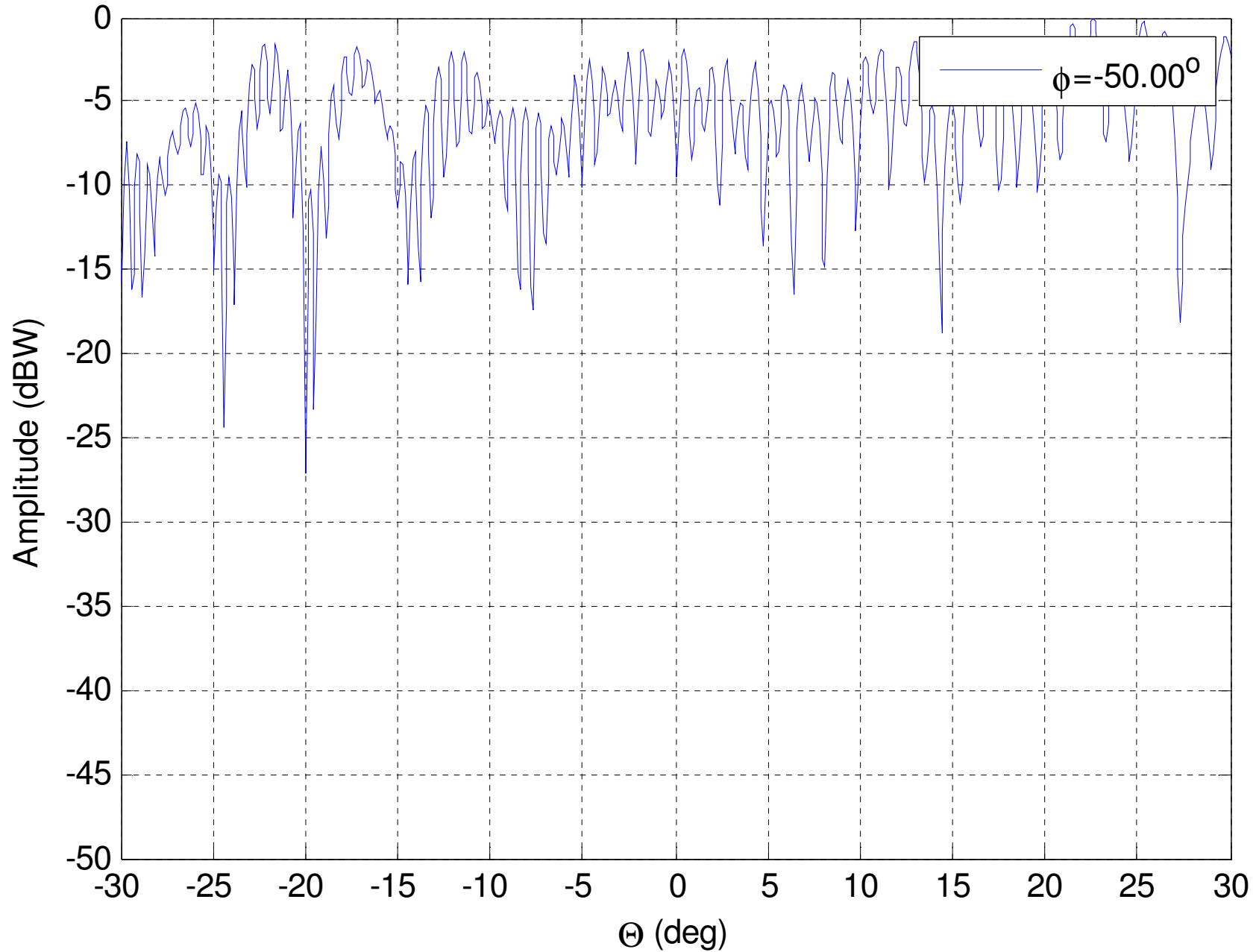
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -3.51 dBW, Date: 15-Dec-2011



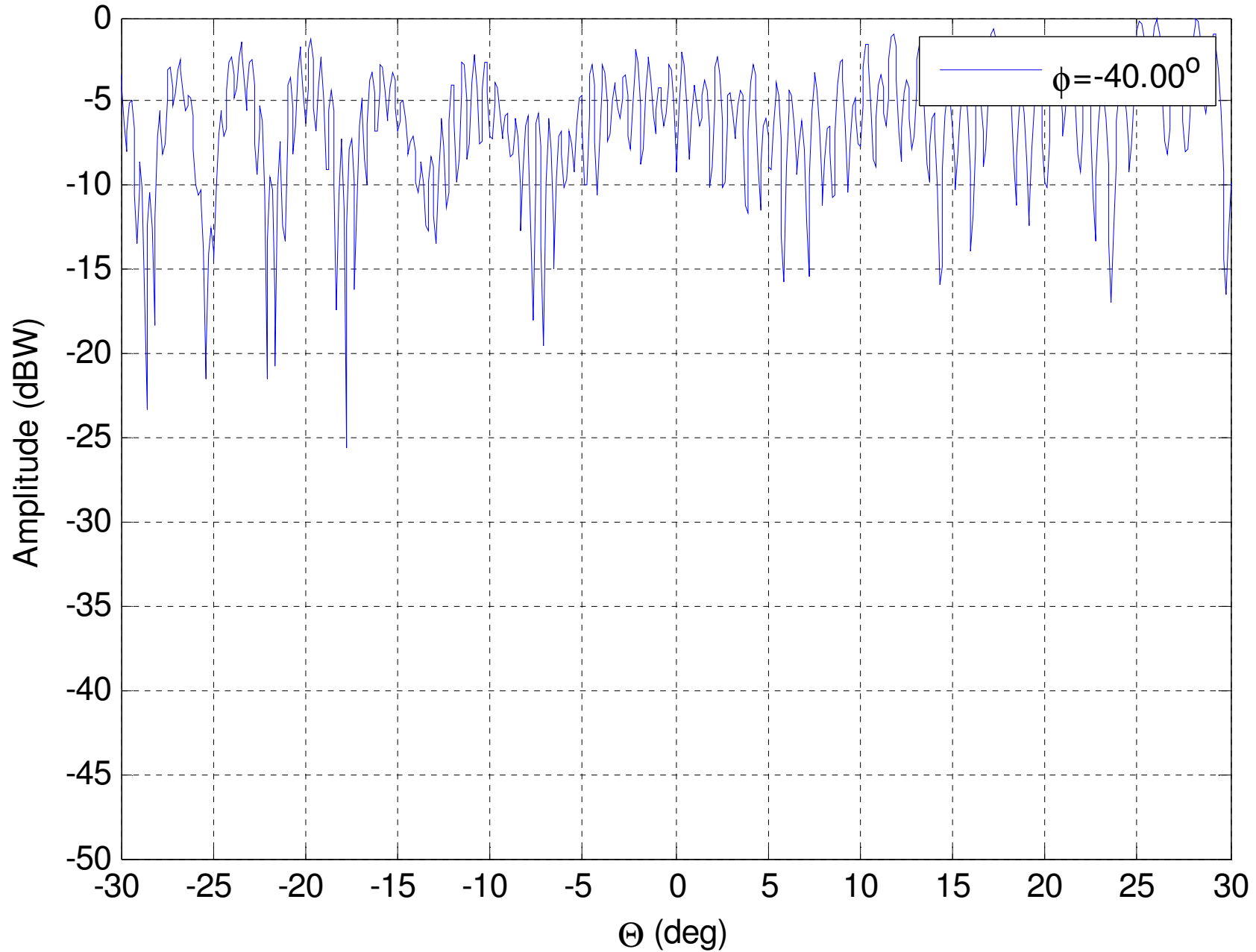
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -2.66 dBW, Date: 15-Dec-2011



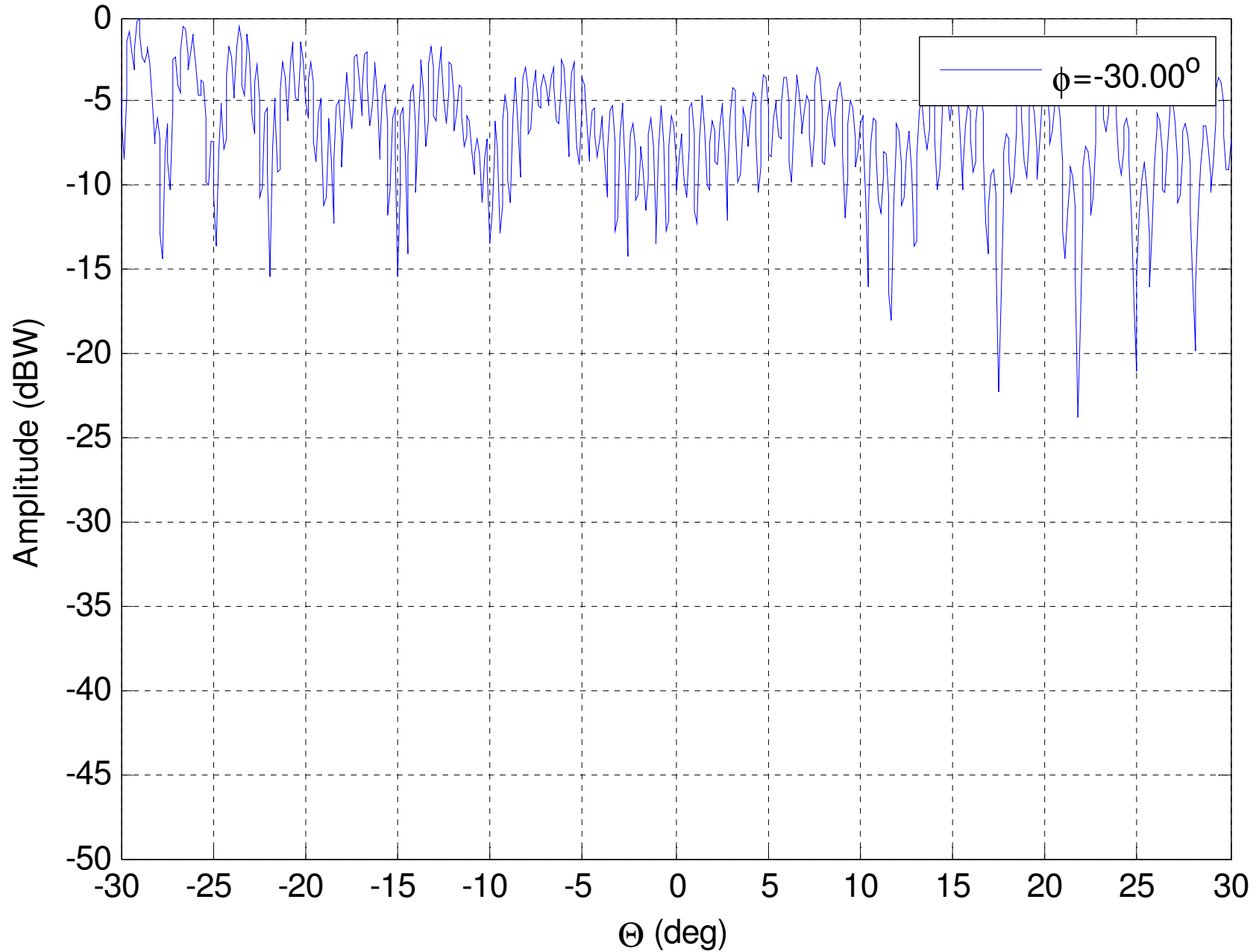
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -2.48 dBW, Date: 15-Dec-2011



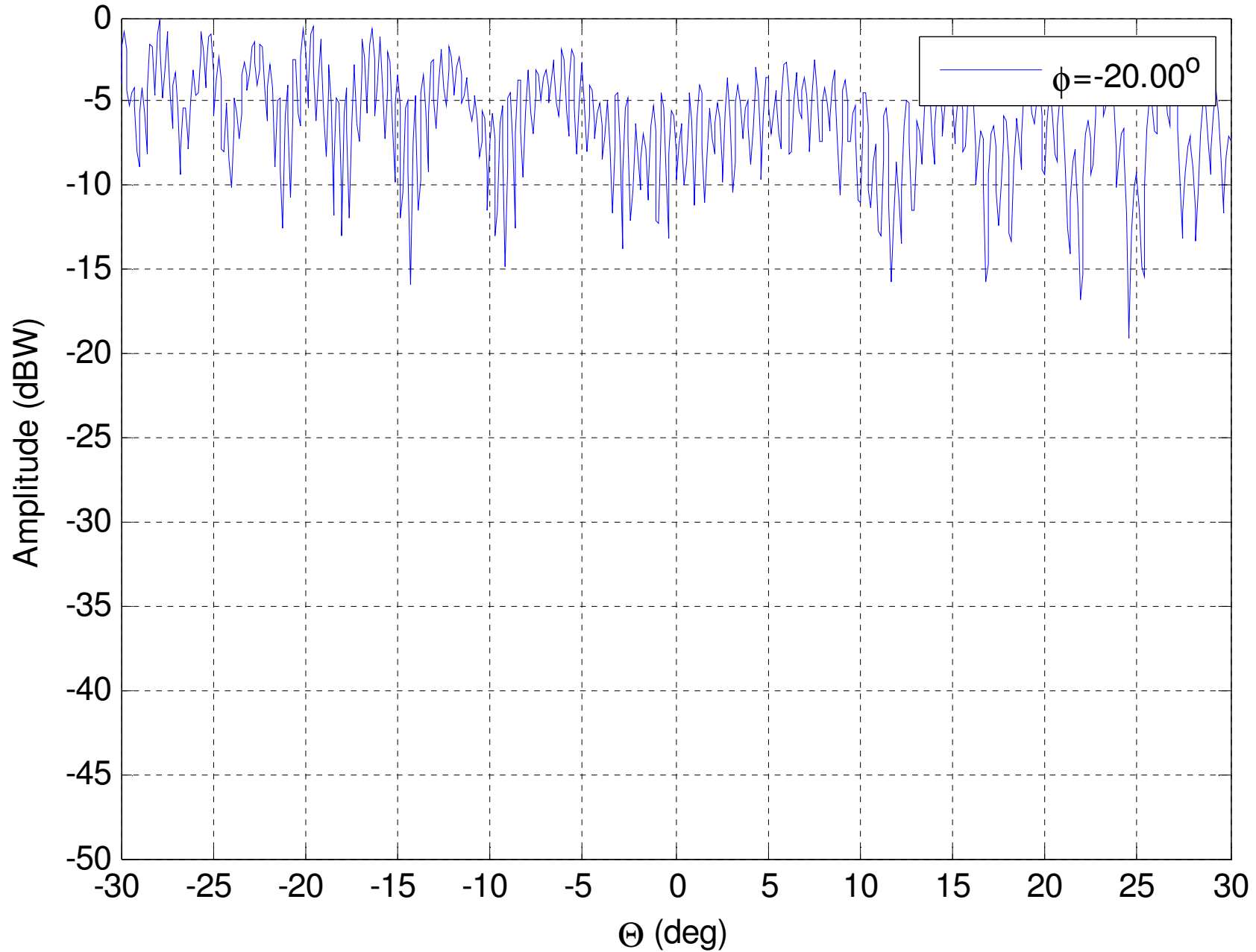
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -1.85 dBW, Date: 15-Dec-2011



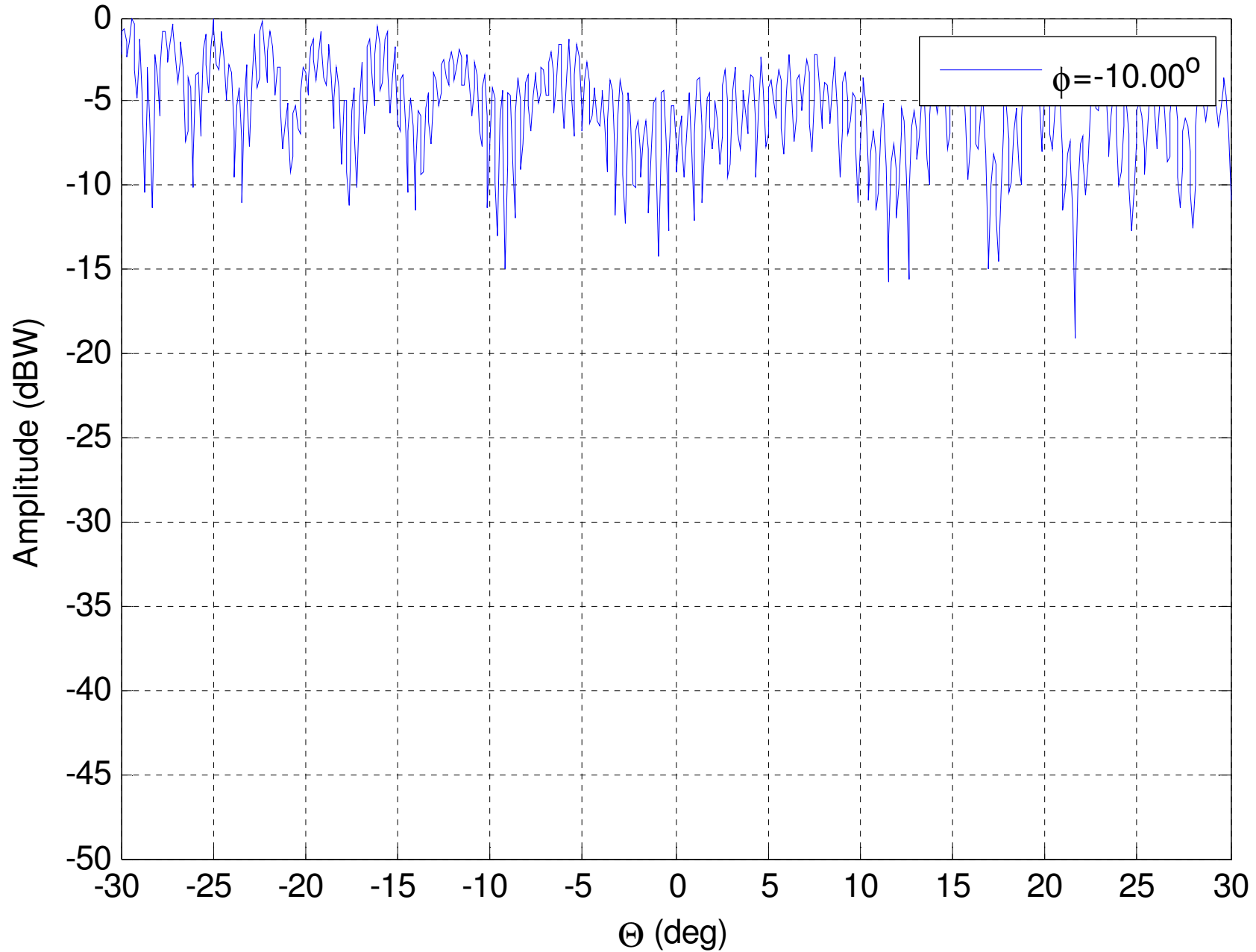
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -2.38 dBW, Date: 15-Dec-2011



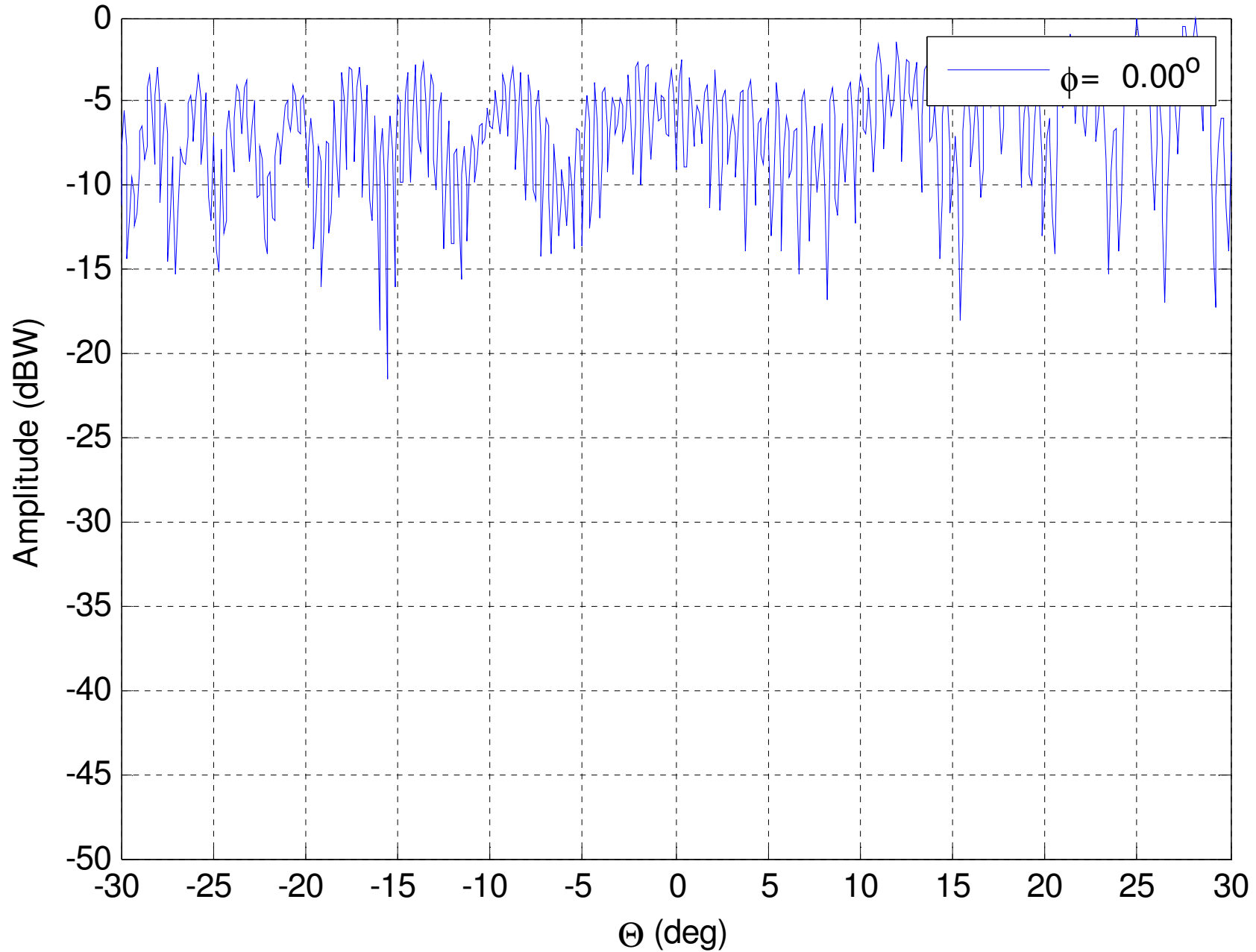
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -2.87 dBW, Date: 15-Dec-2011



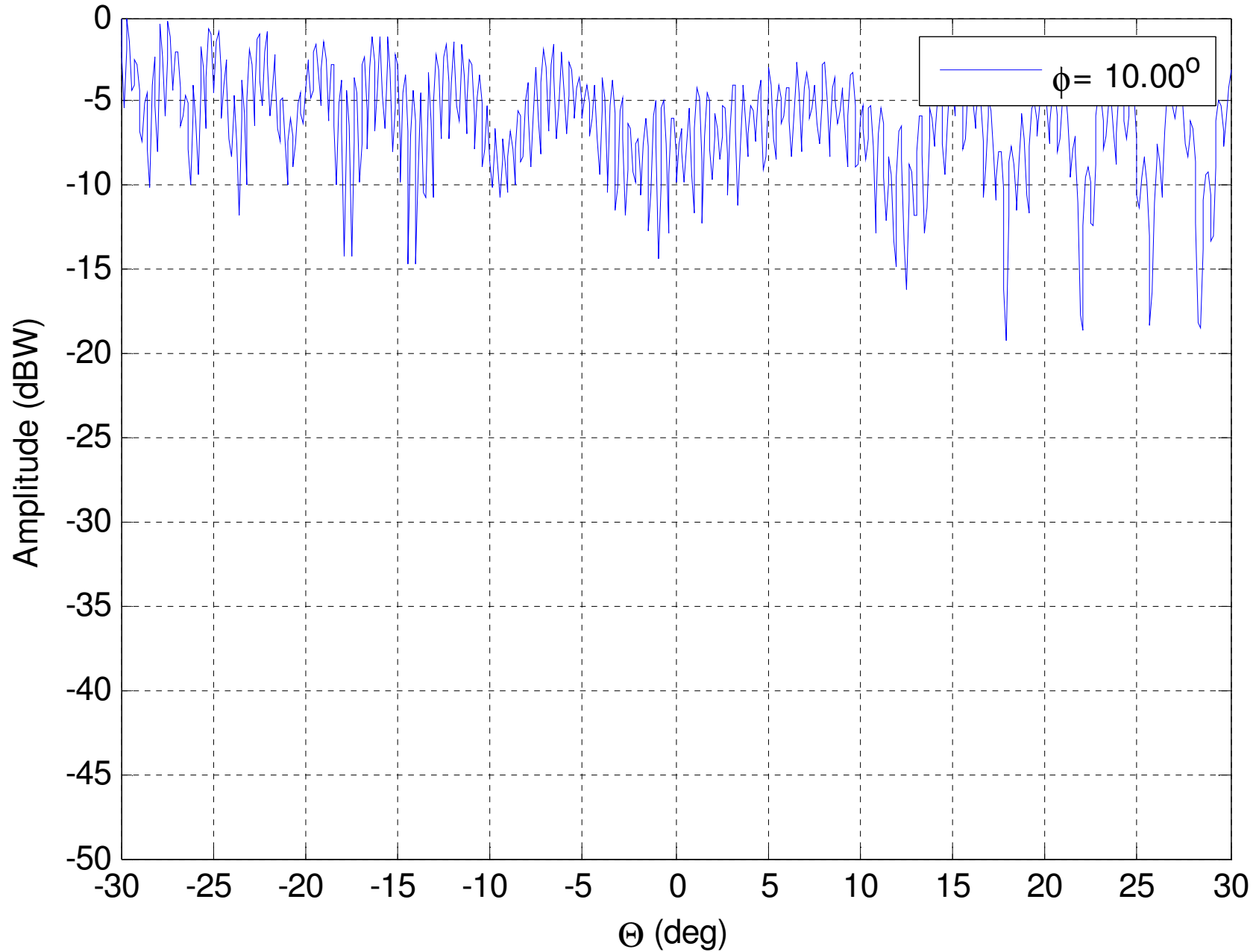
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -2.00 dBW, Date: 15-Dec-2011



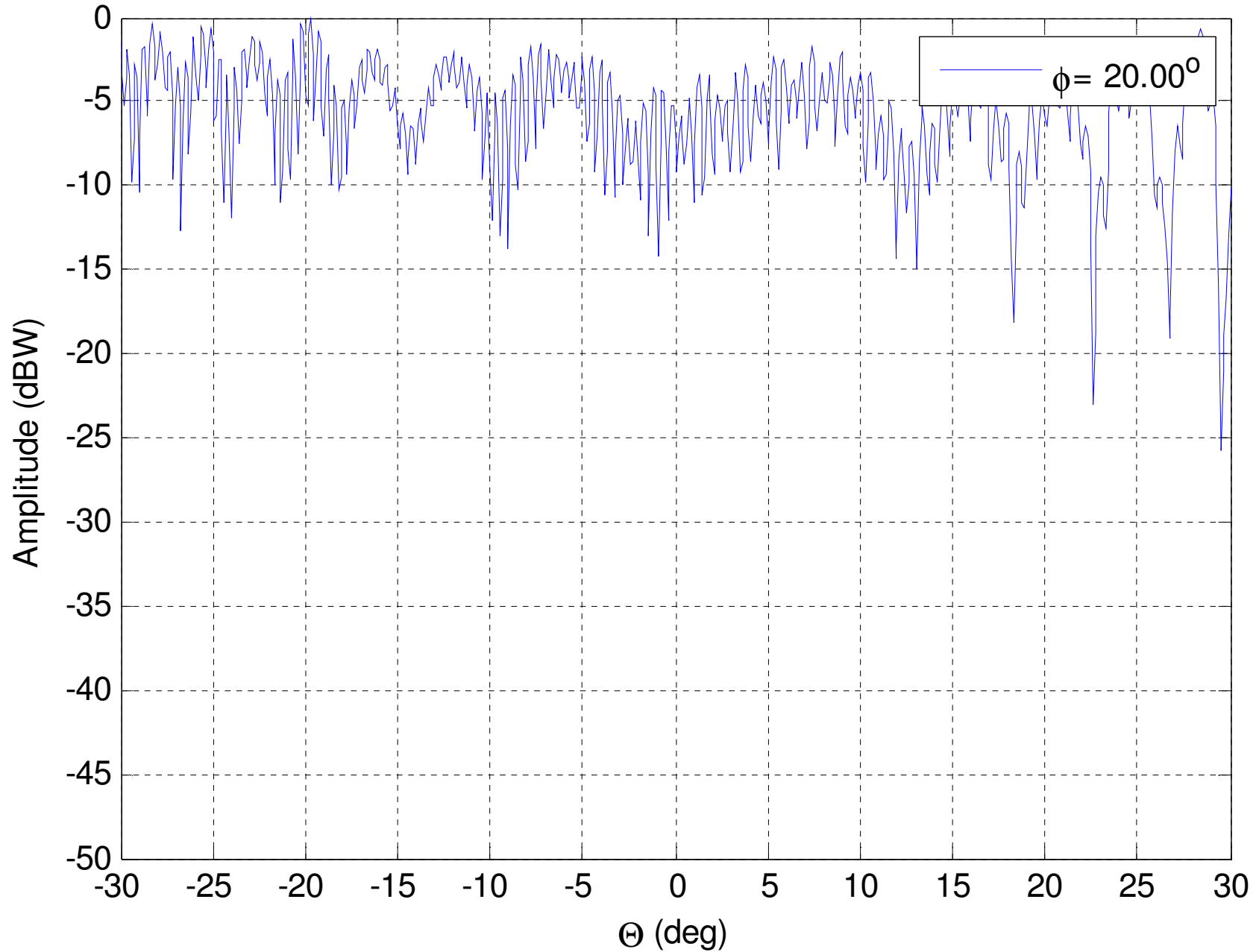
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -2.21 dBW, Date: 15-Dec-2011



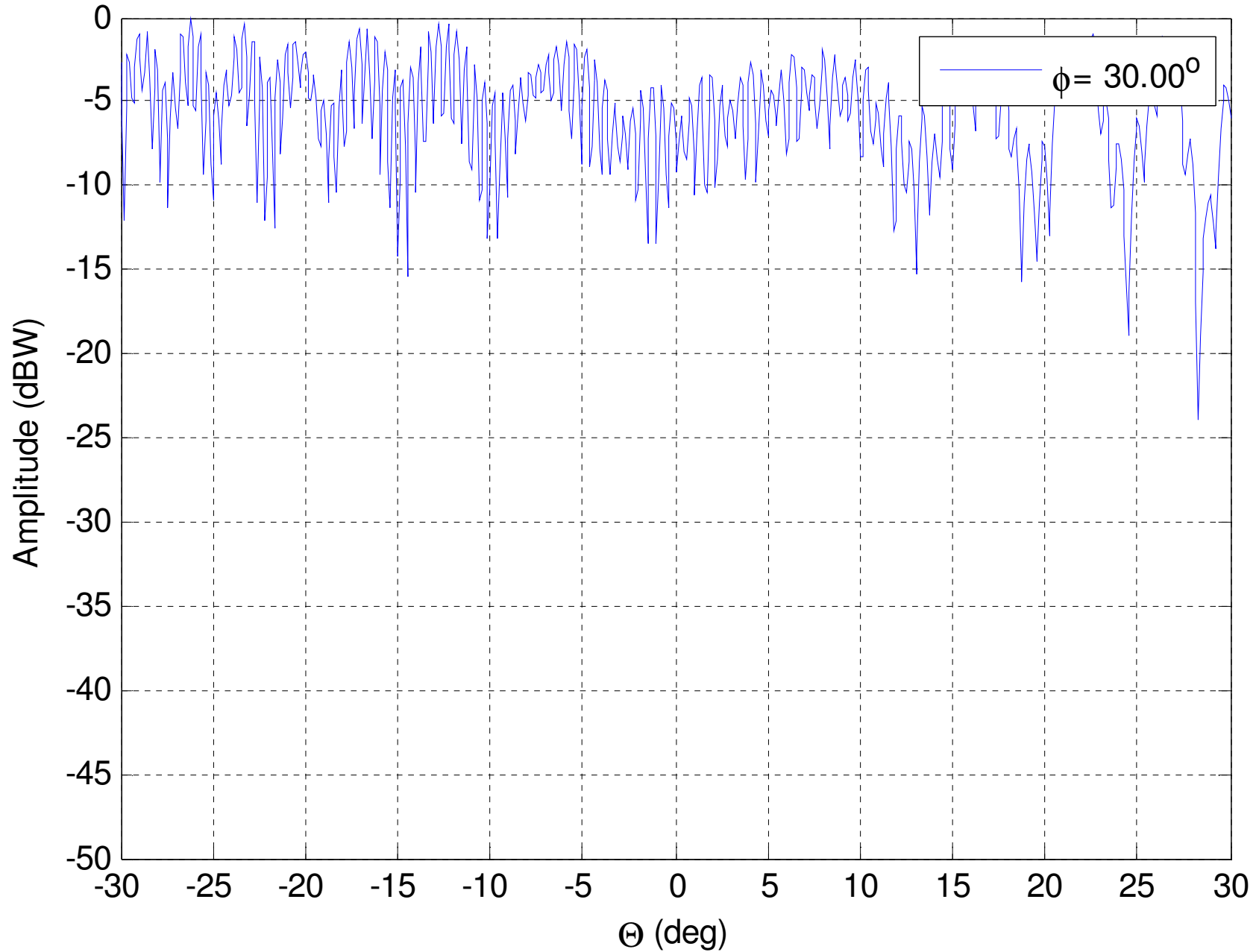
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -2.96 dBW, Date: 15-Dec-2011



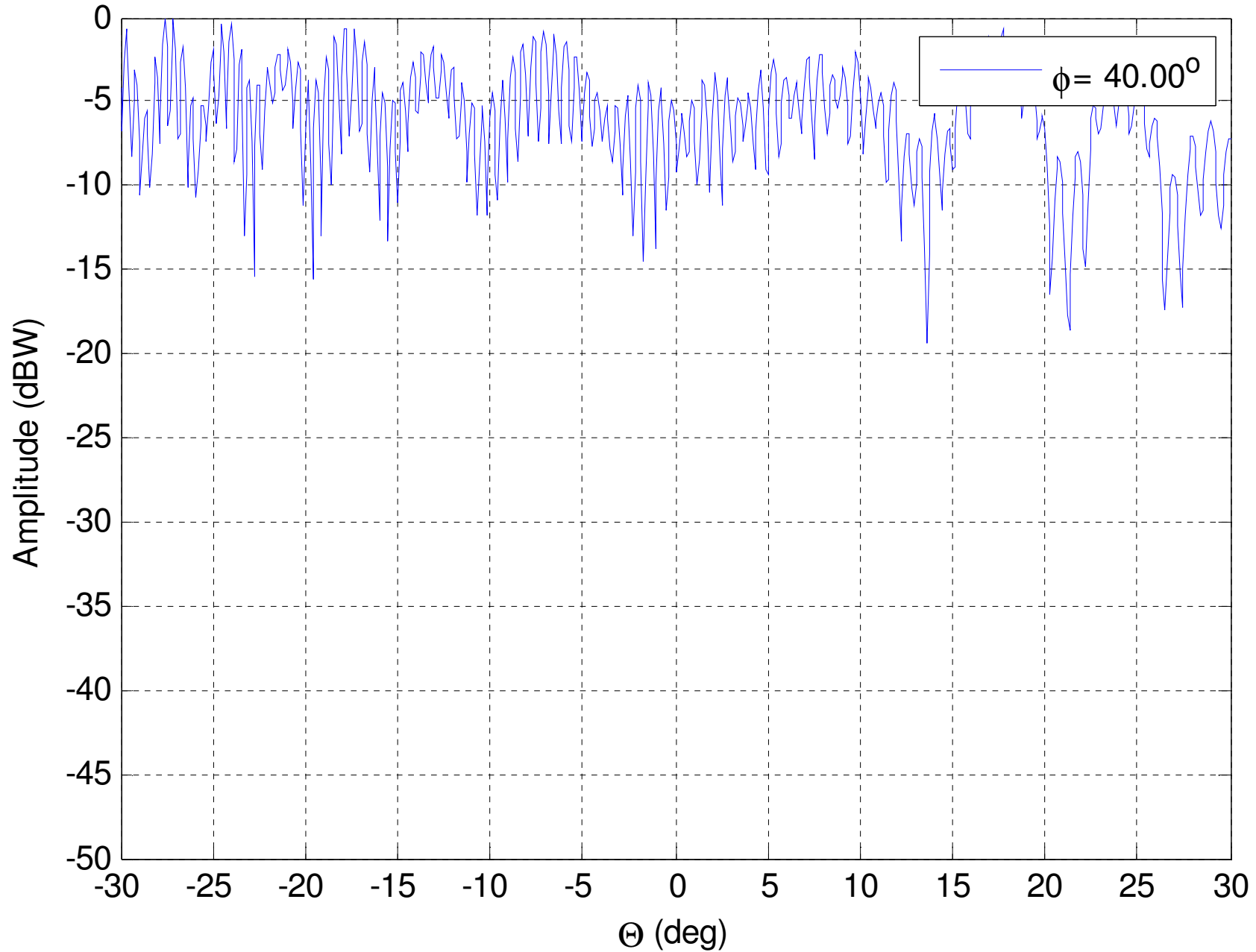
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -3.04 dBW, Date: 15-Dec-2011



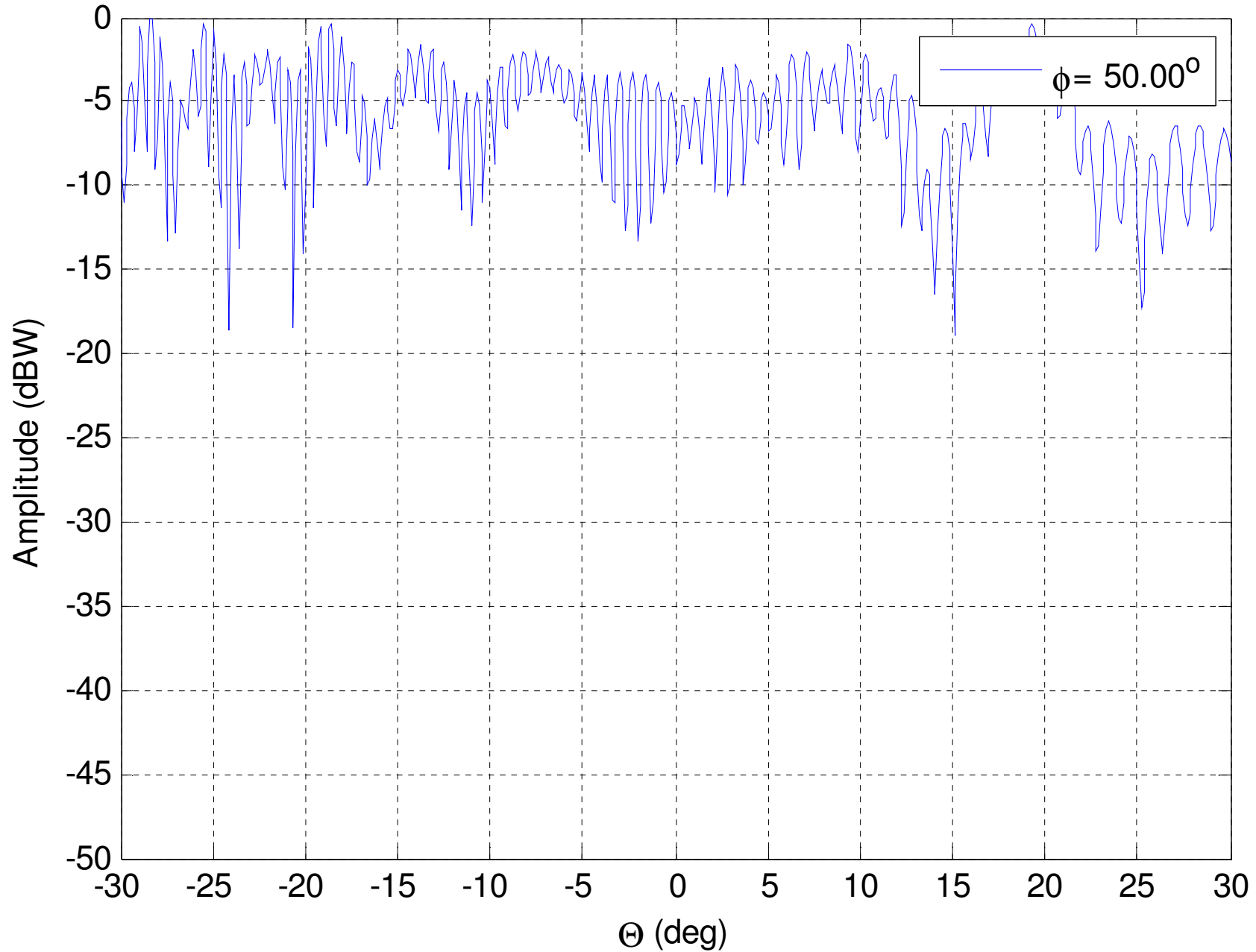
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -3.05 dBW, Date: 15-Dec-2011



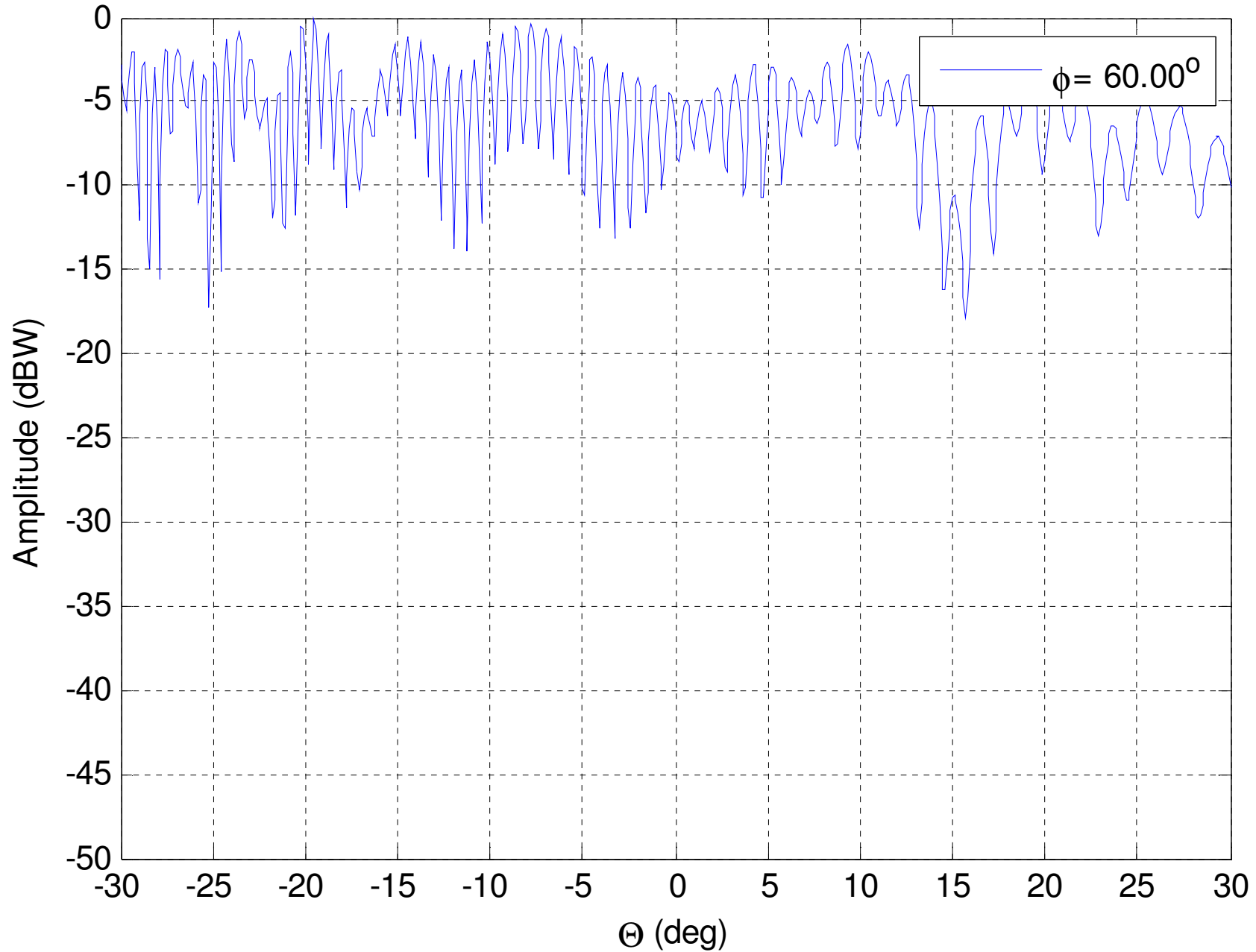
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -3.52 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

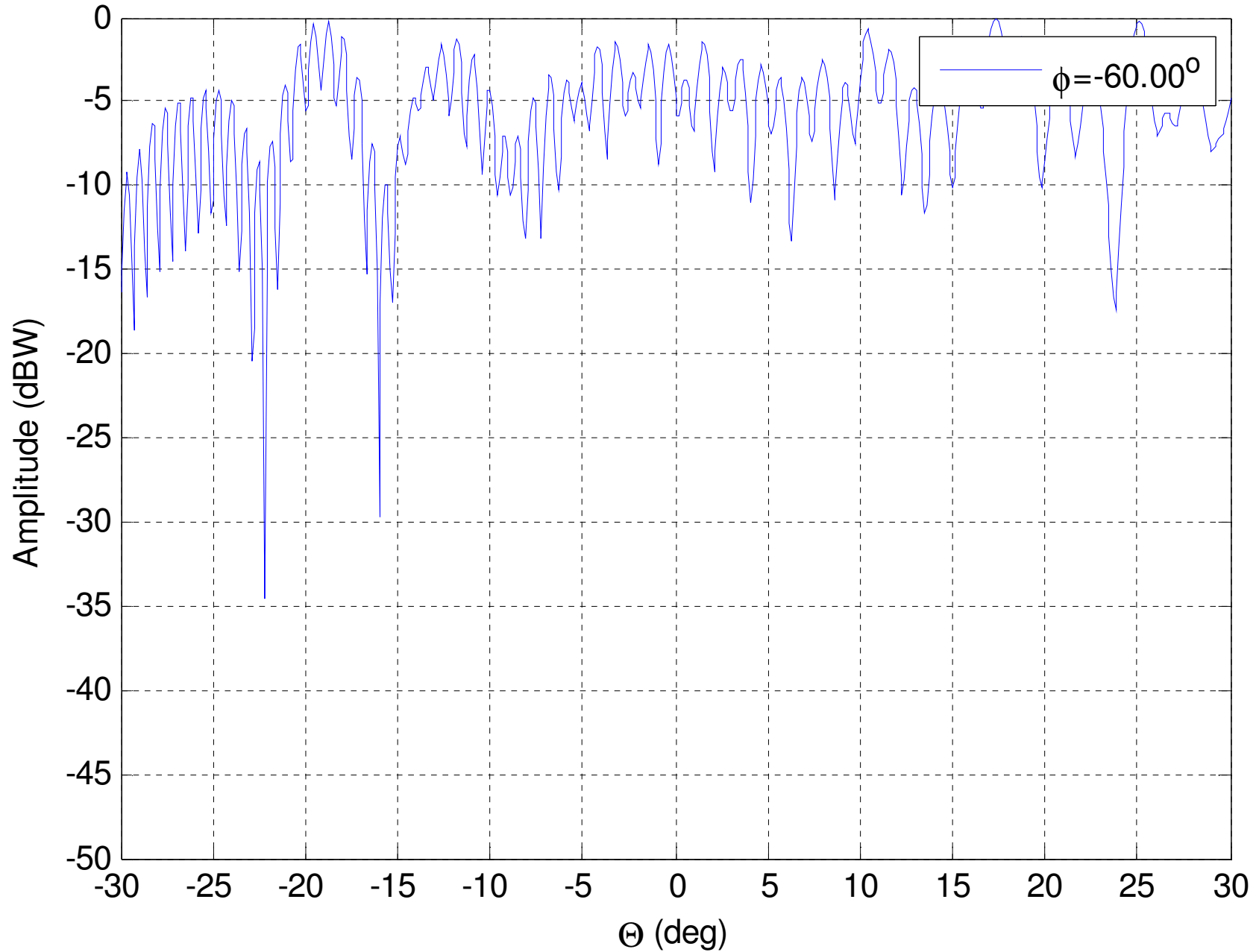
Input file: tx-17.5-lhcp-60.cut, Peak: -3.67 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

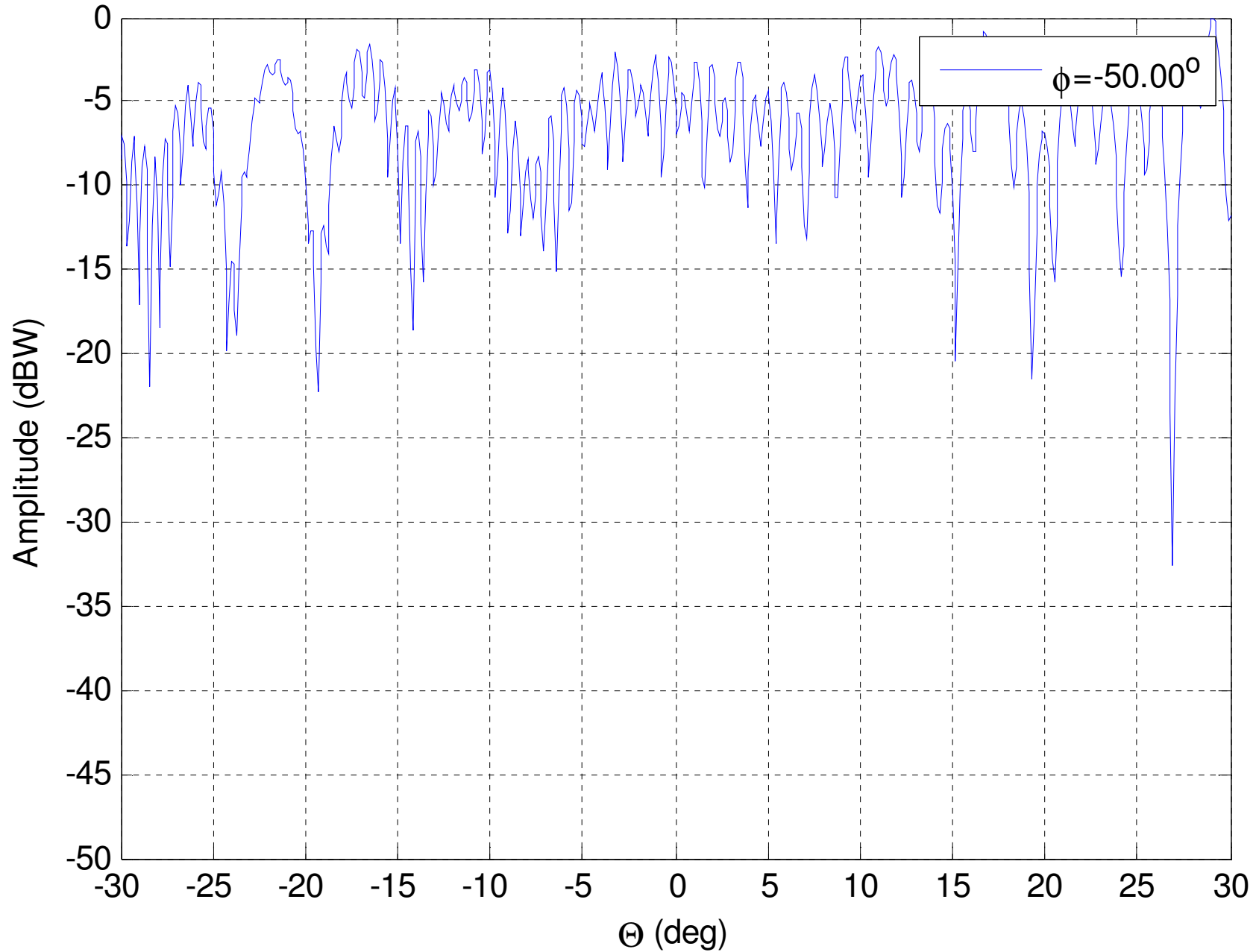
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -3.35 dBW, Date: 15-Dec-2011



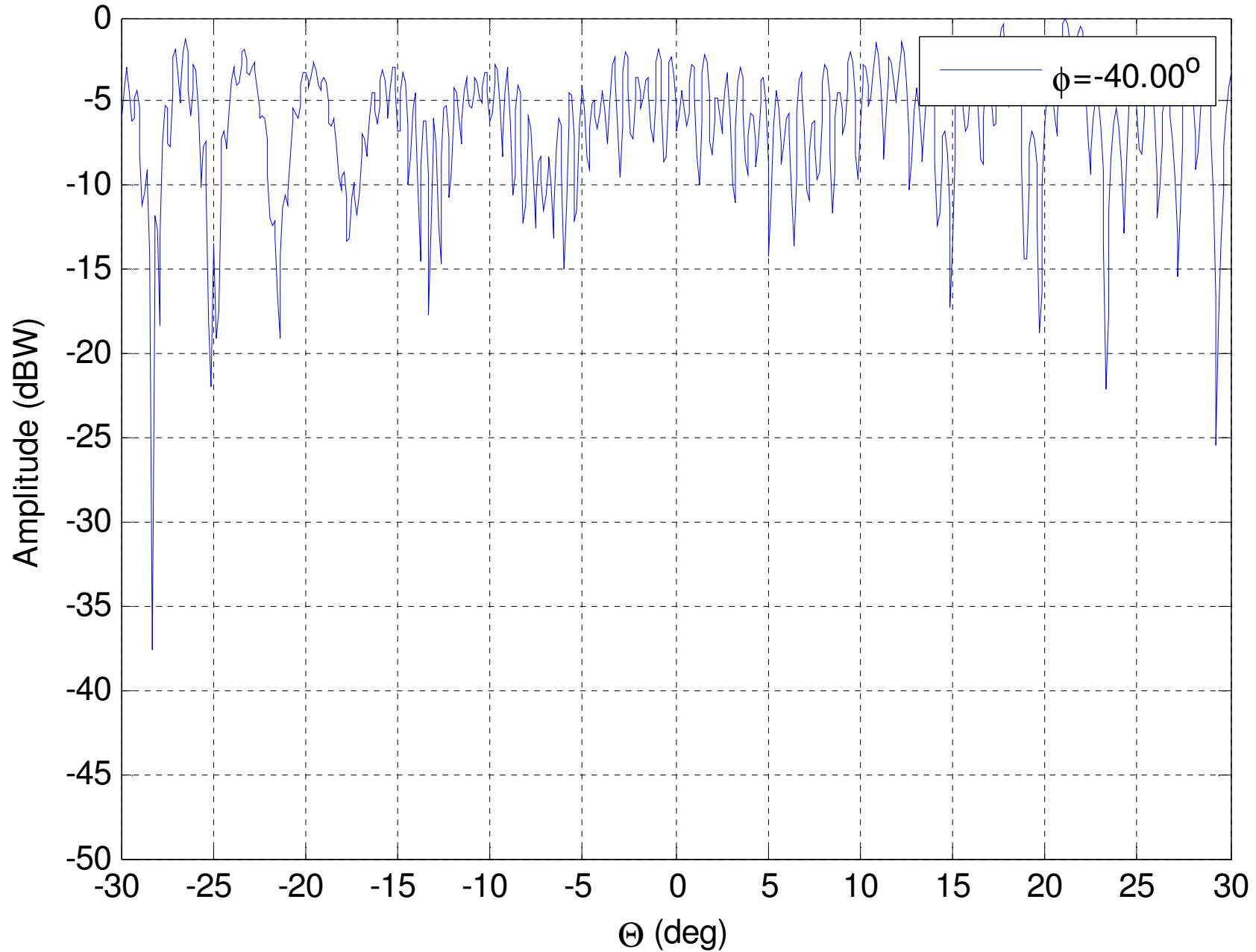
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -2.53 dBW, Date: 15-Dec-2011



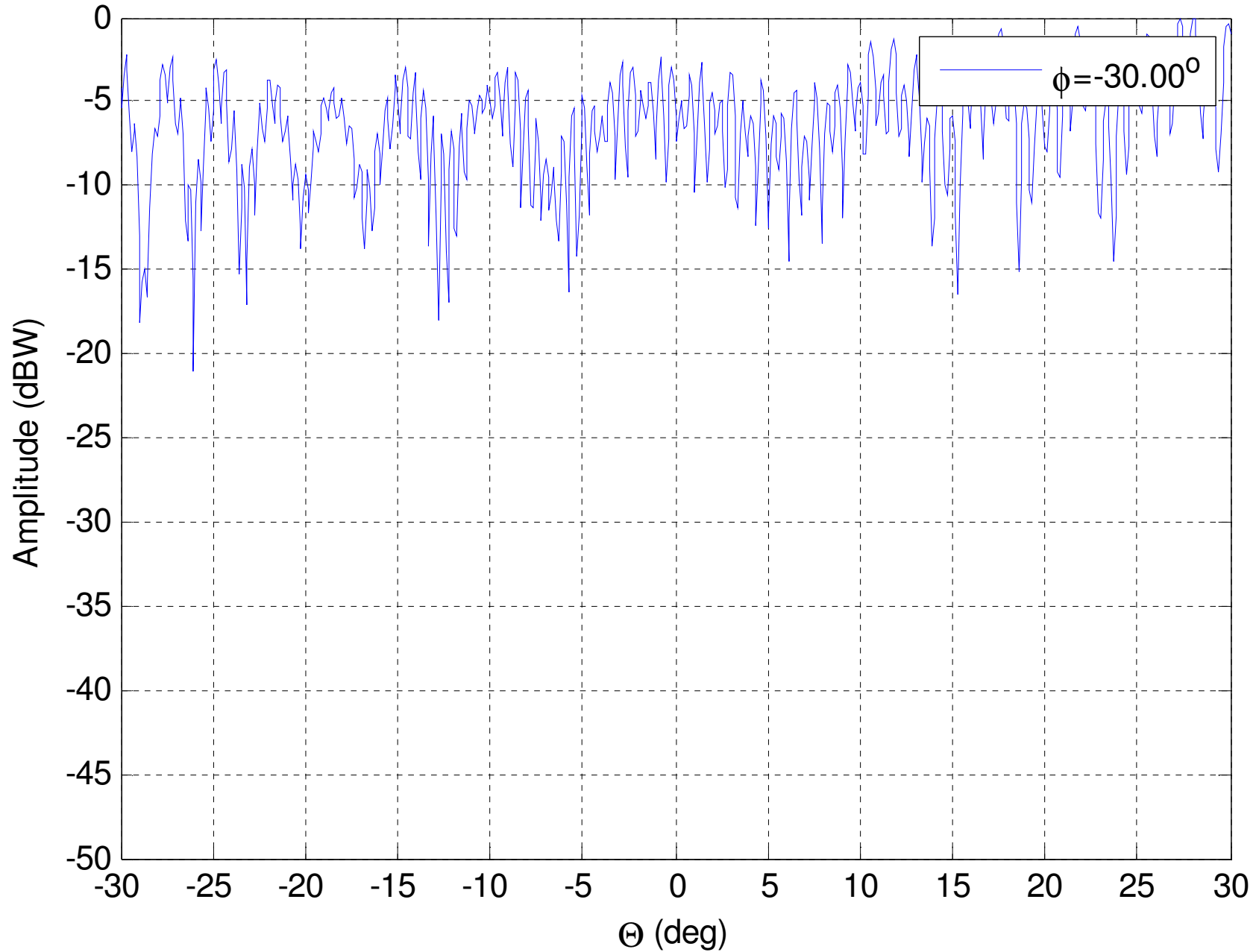
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -2.70 dBW, Date: 15-Dec-2011



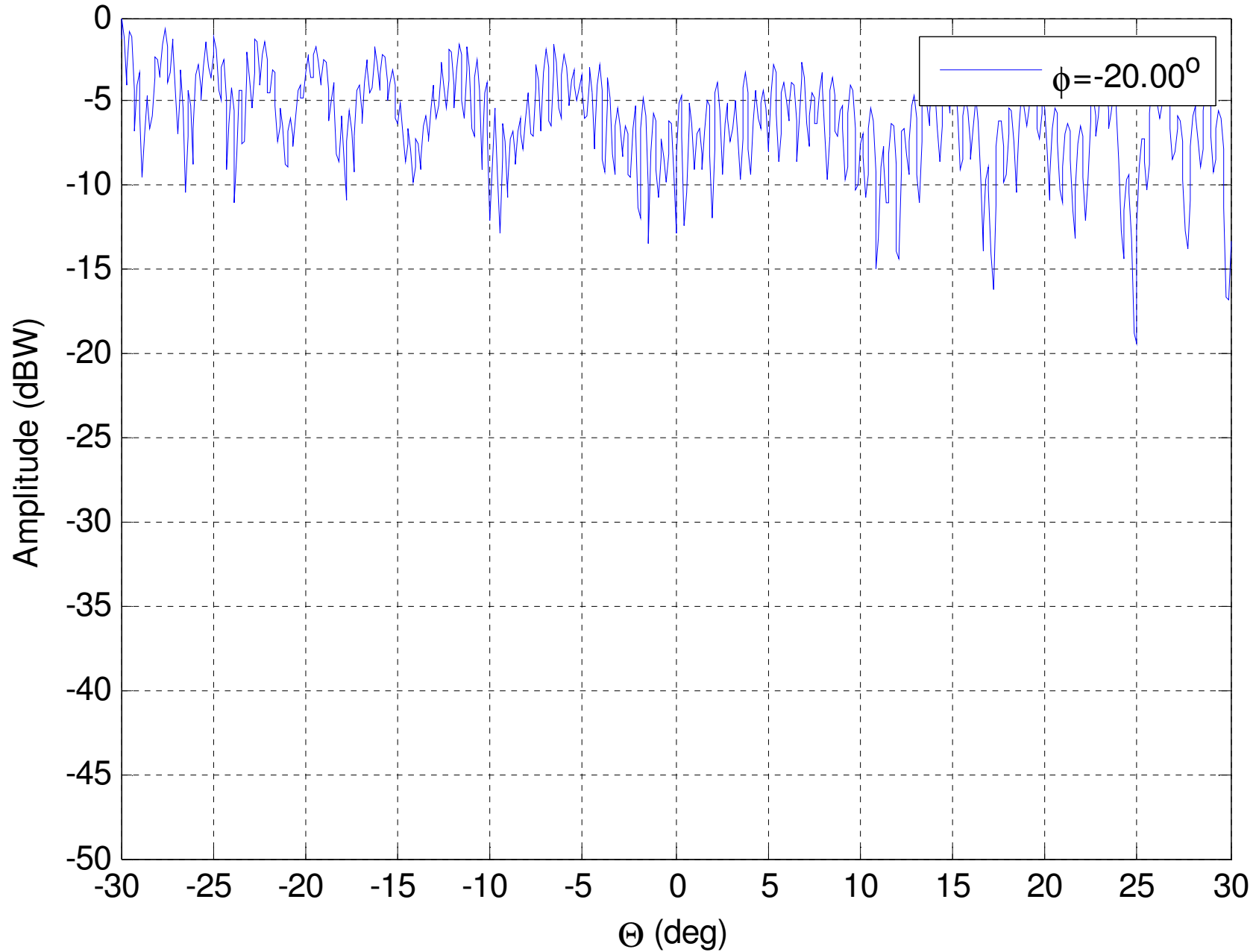
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -2.13 dBW, Date: 15-Dec-2011



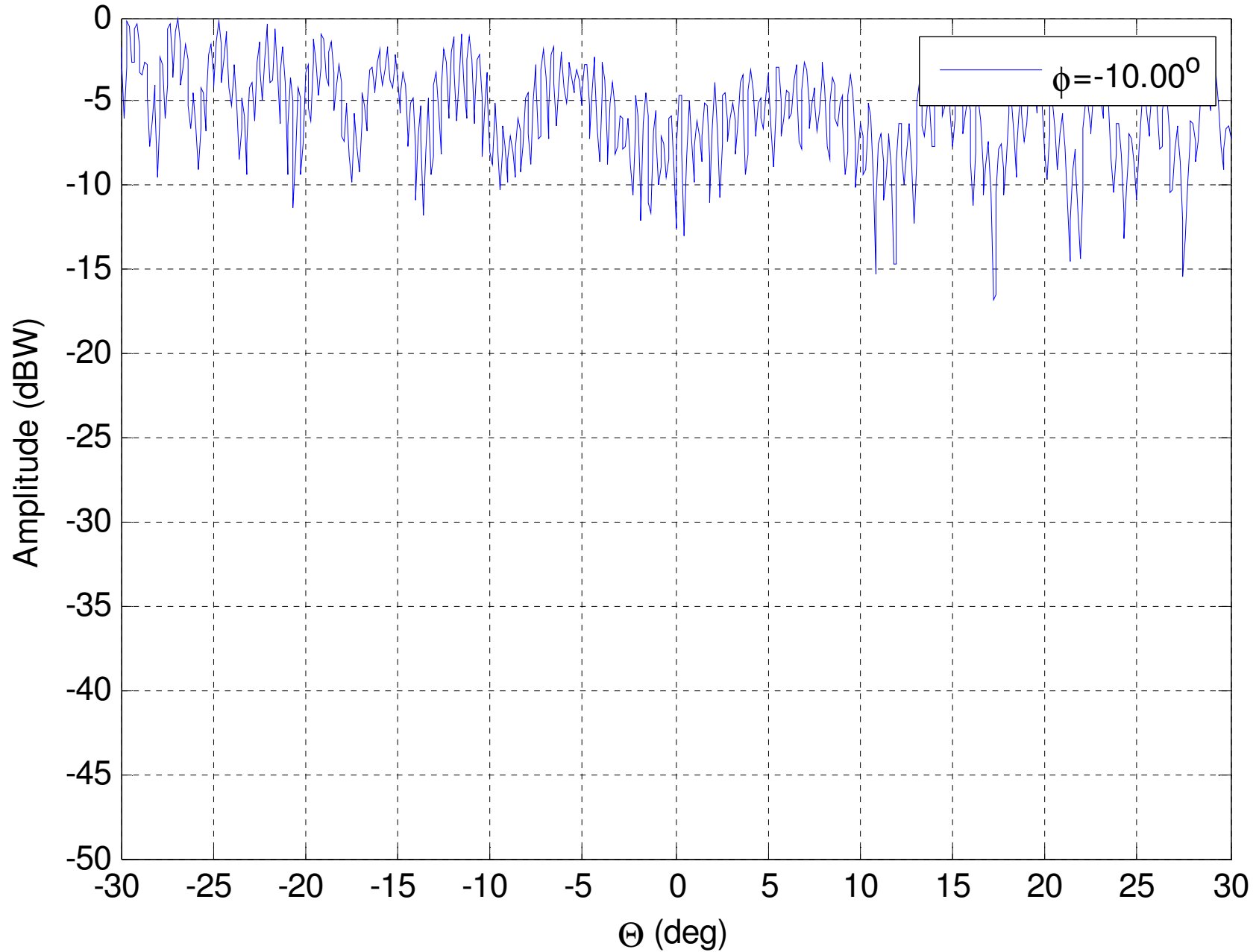
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -2.24 dBW, Date: 15-Dec-2011



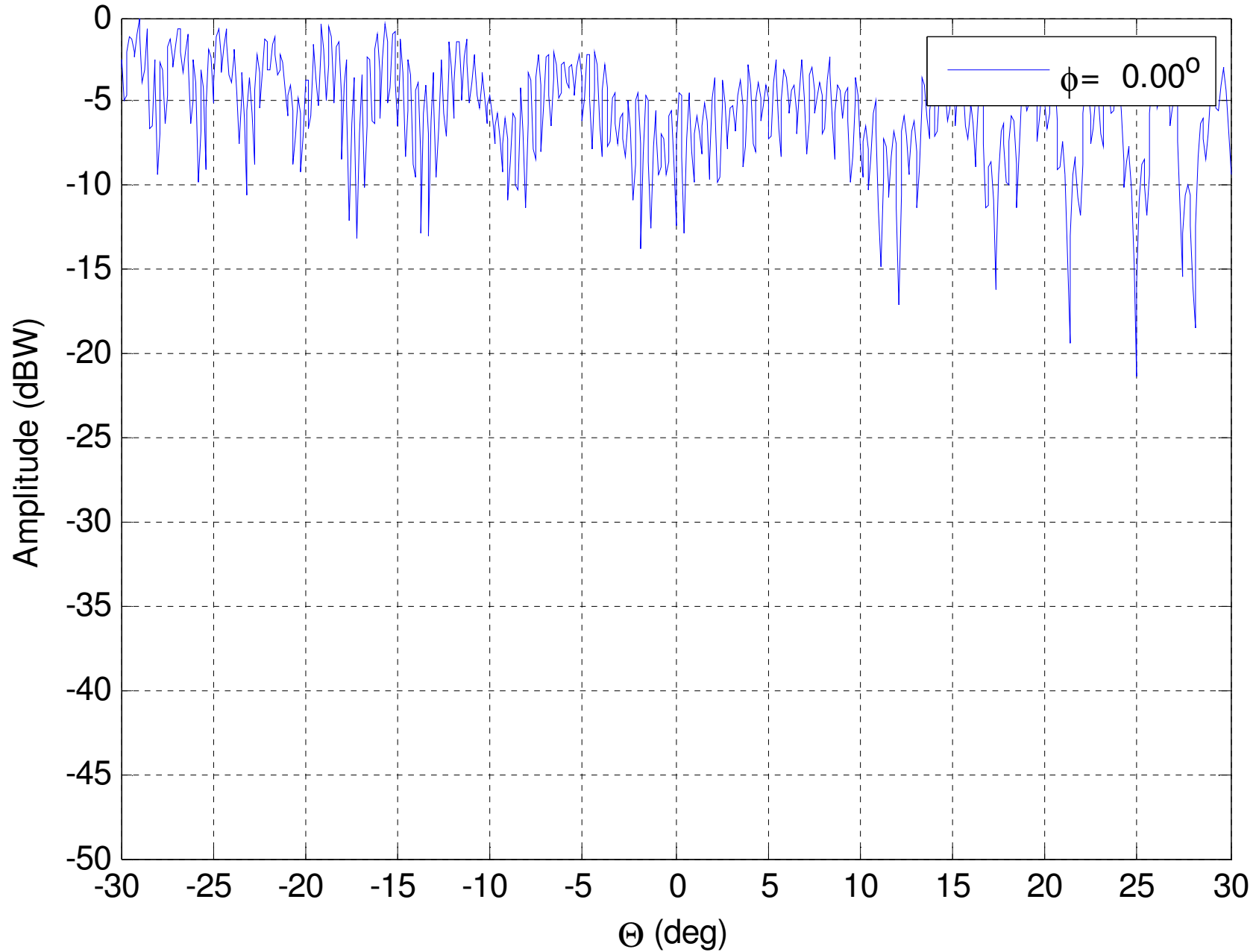
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -2.48 dBW, Date: 15-Dec-2011



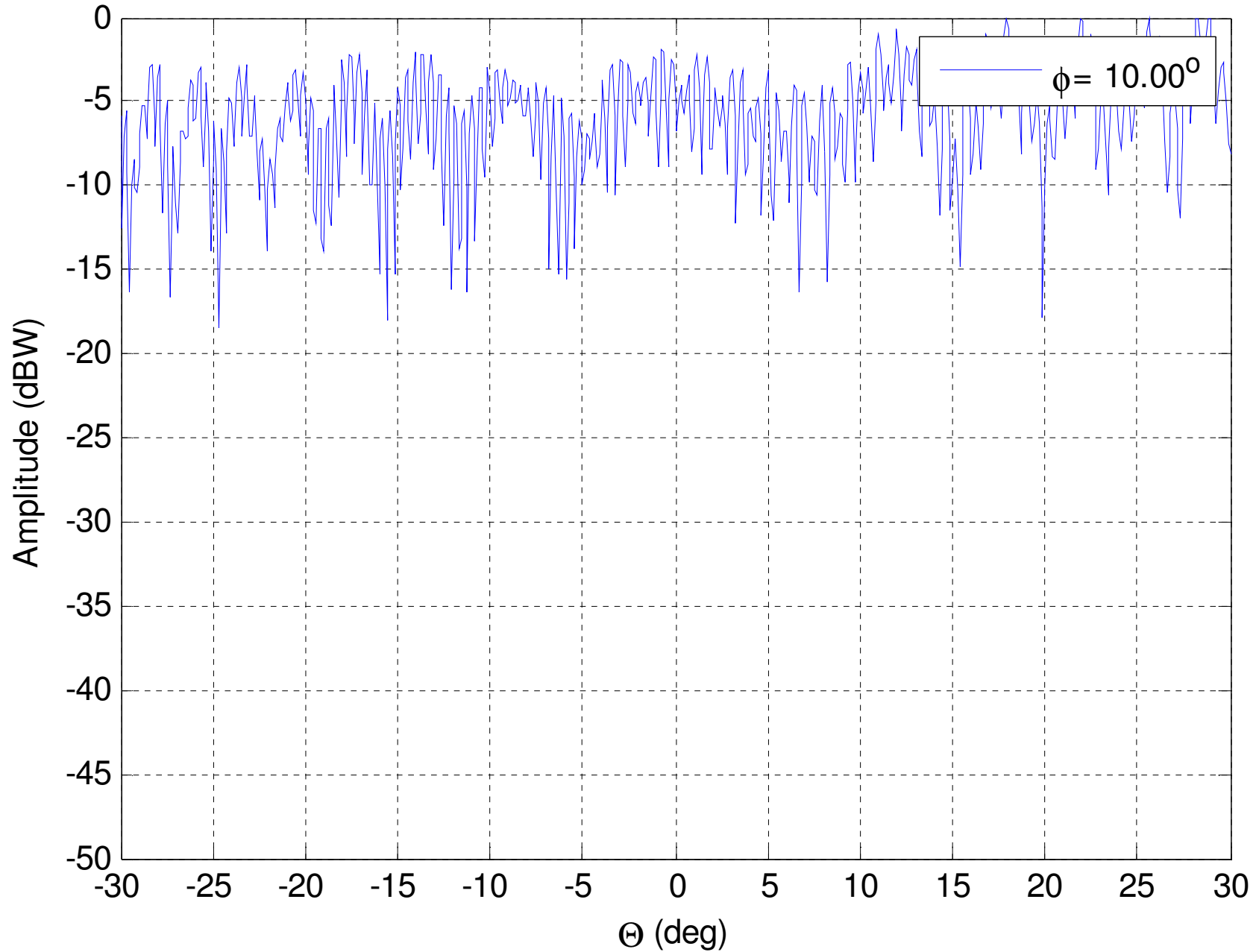
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -2.66 dBW, Date: 15-Dec-2011



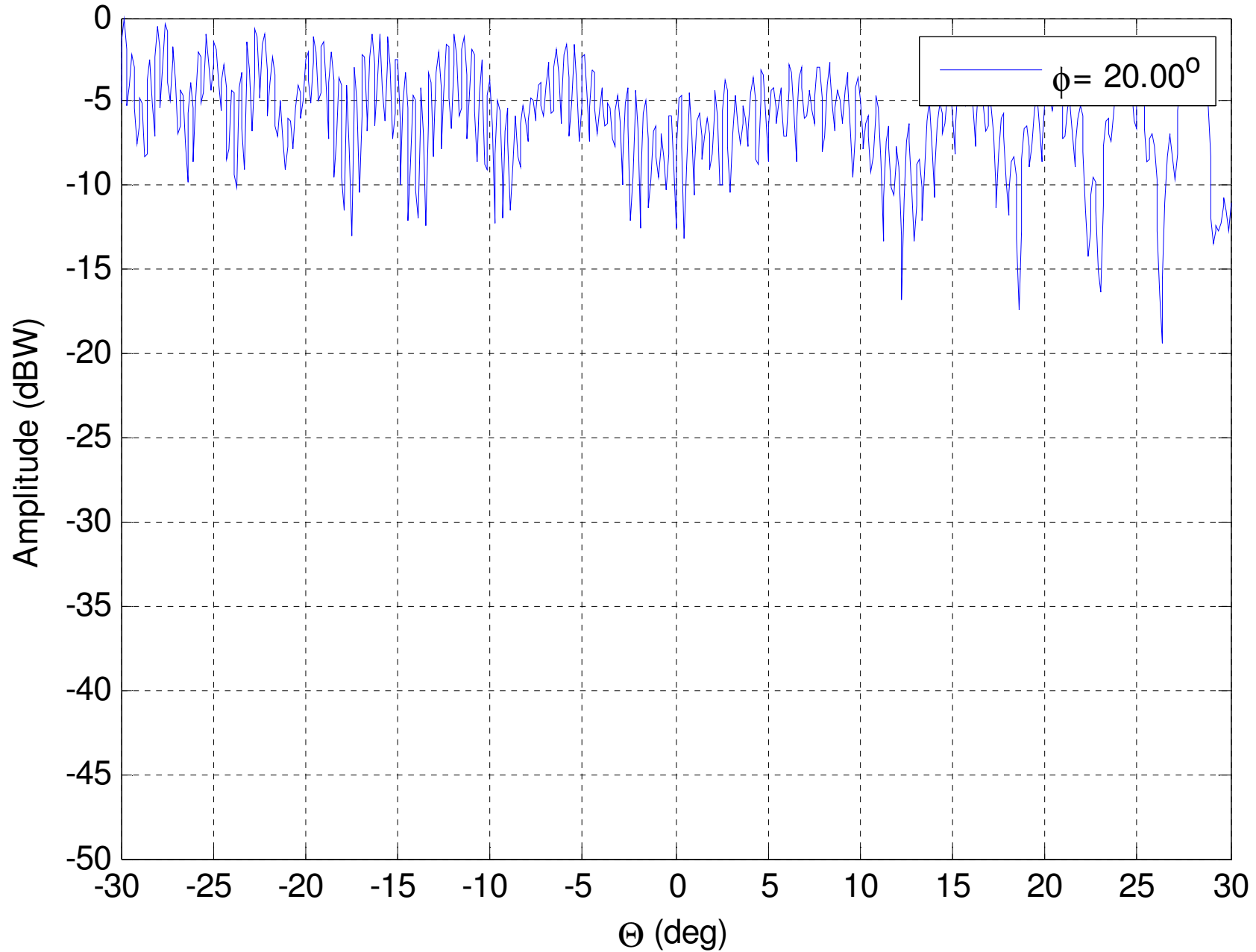
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -2.80 dBW, Date: 15-Dec-2011



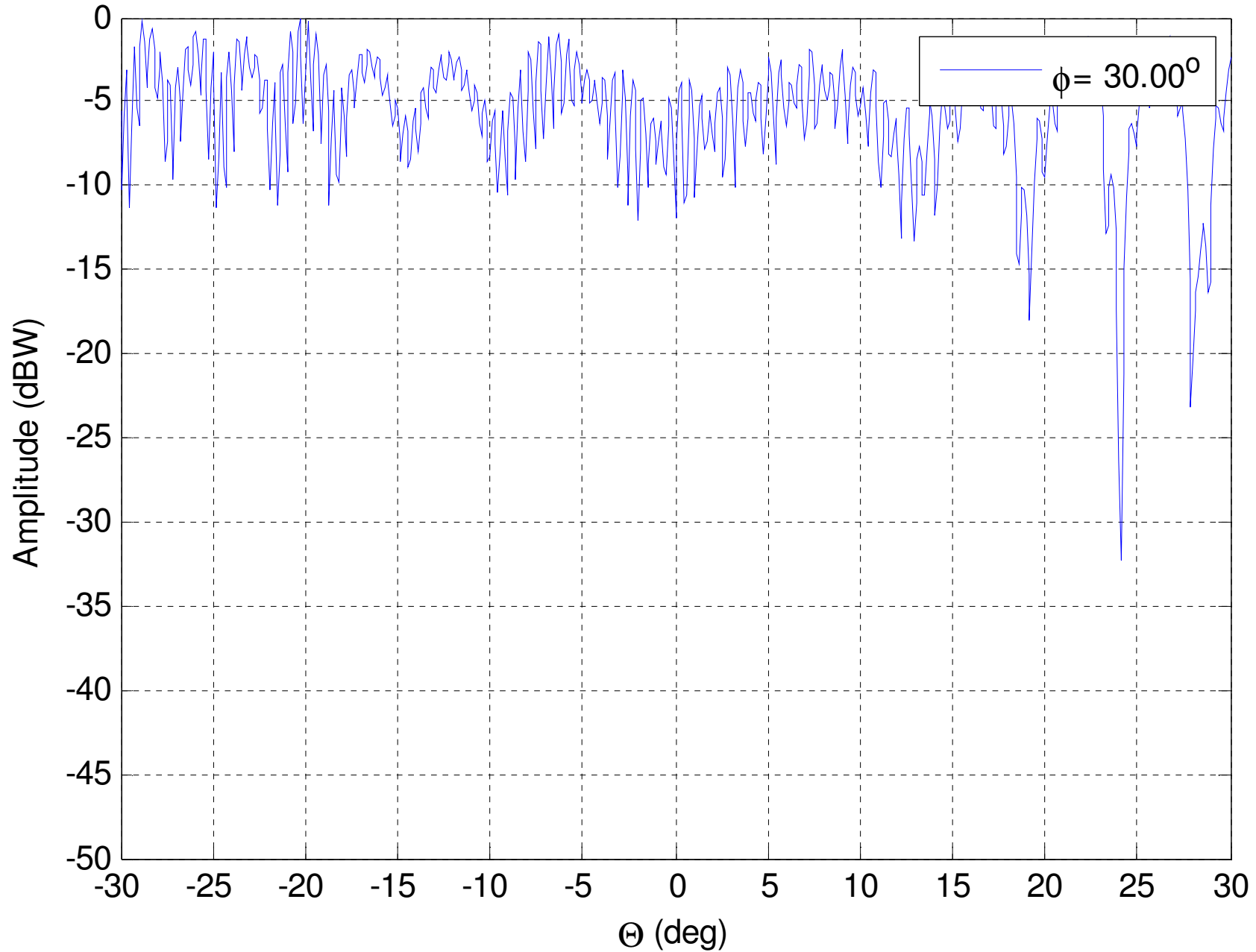
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -2.43 dBW, Date: 15-Dec-2011



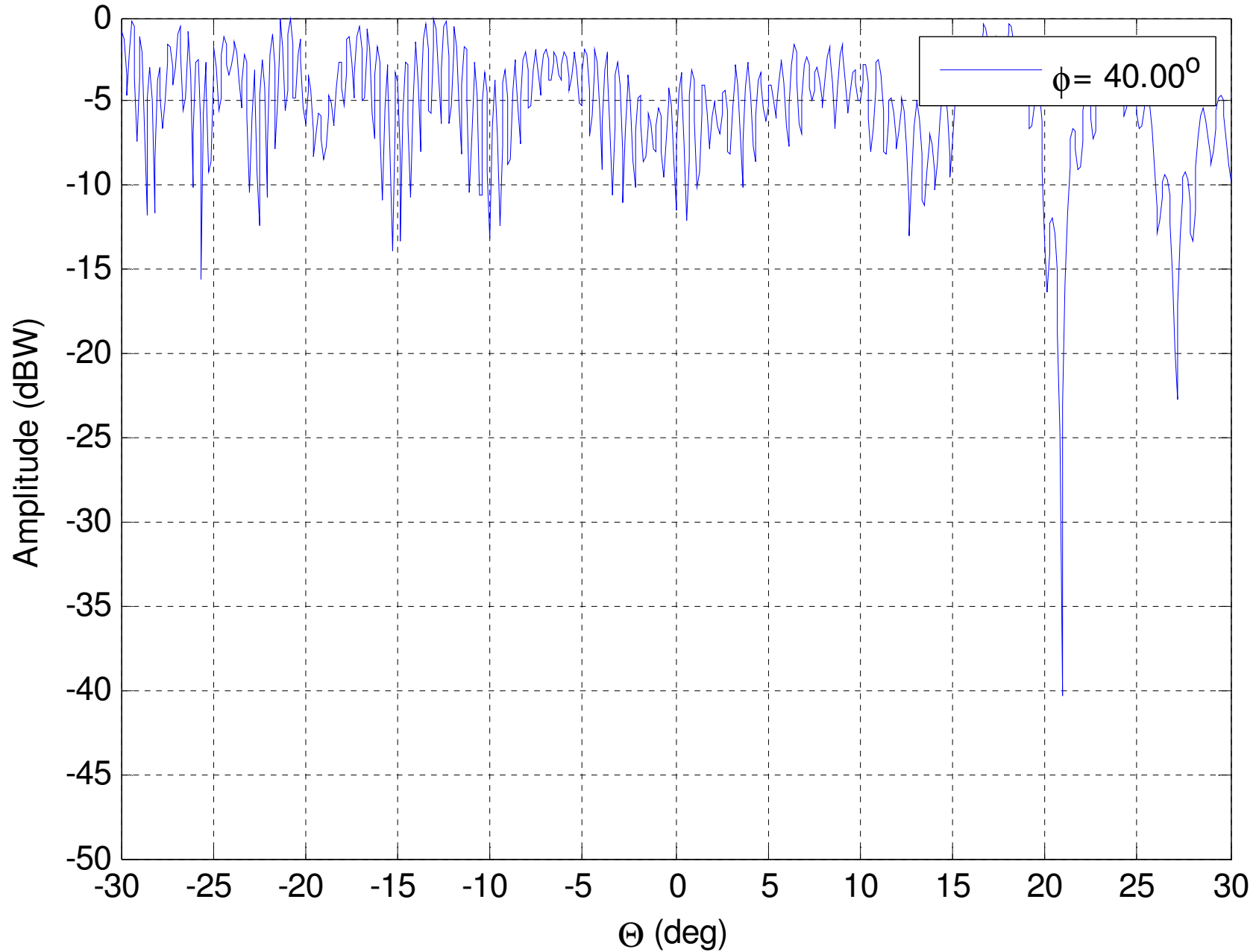
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -3.12 dBW, Date: 15-Dec-2011



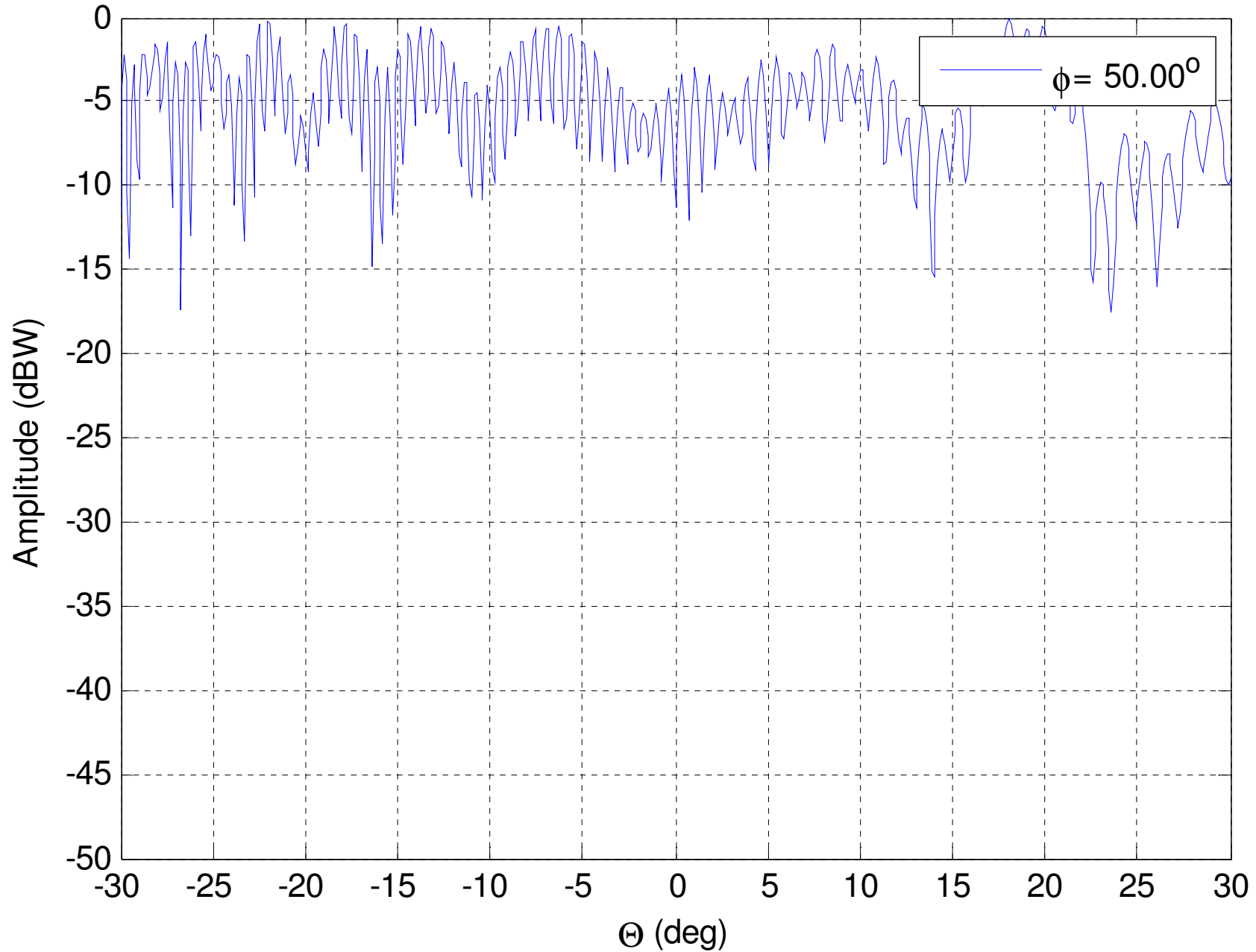
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -3.60 dBW, Date: 15-Dec-2011



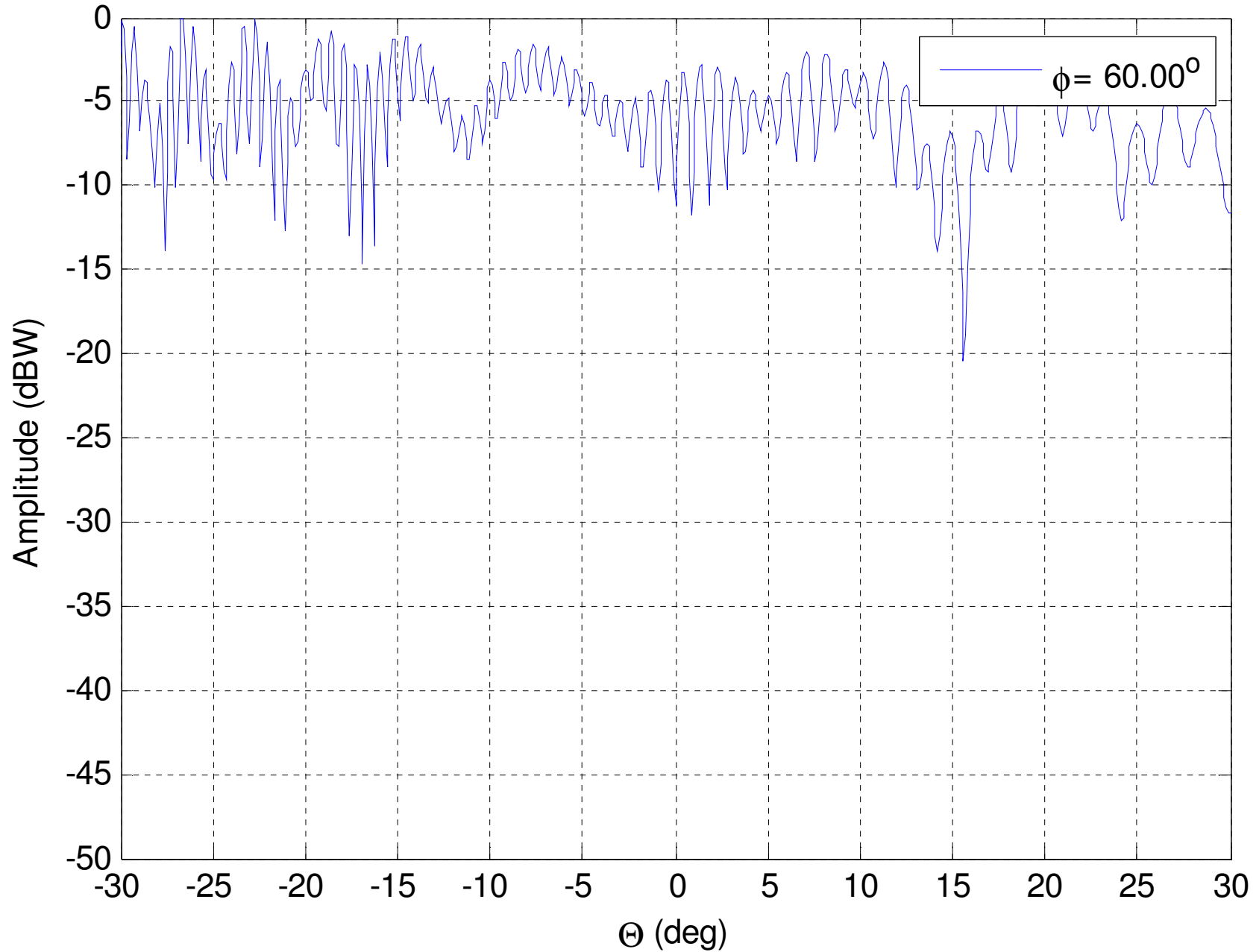
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -3.65 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

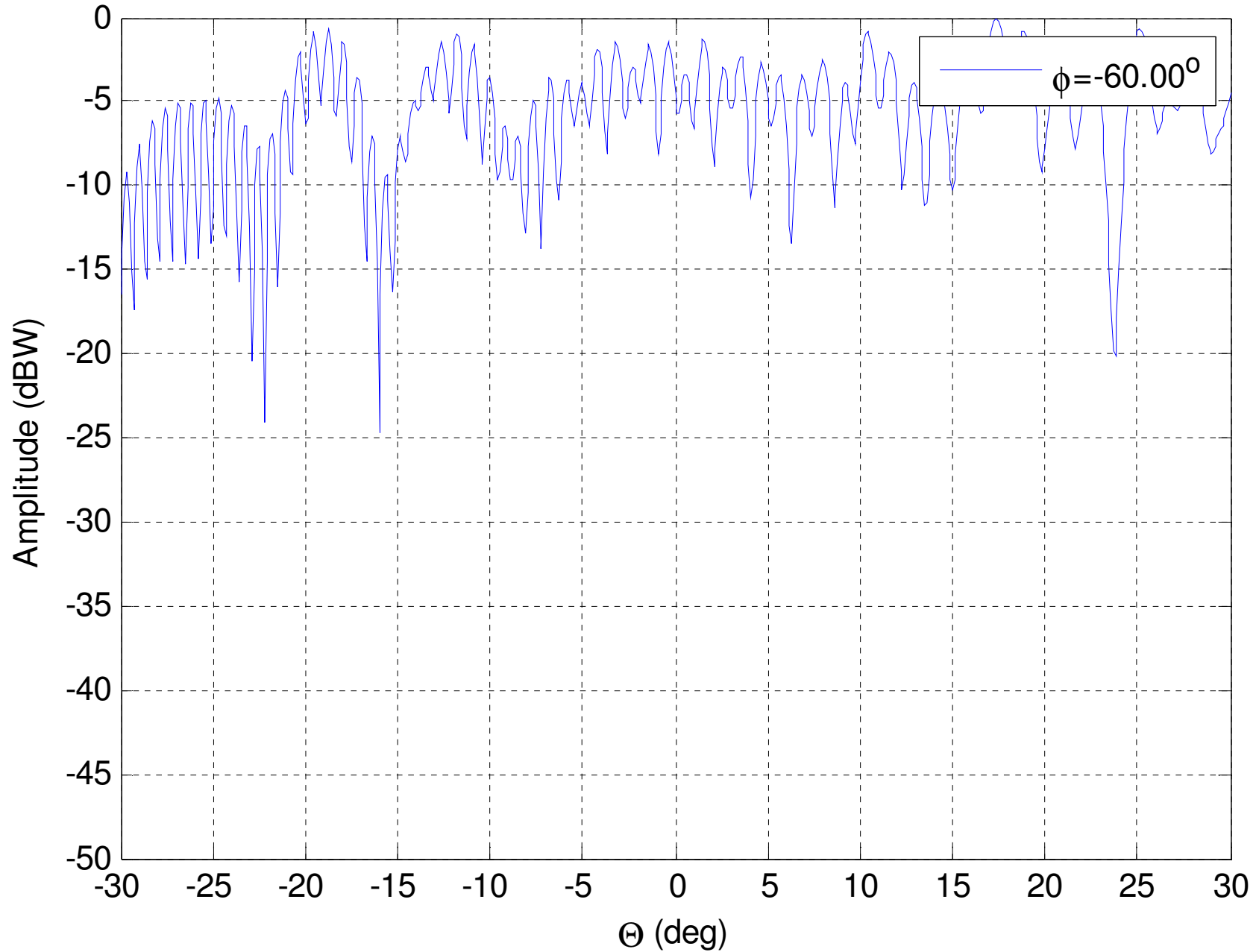
Input file: tx-17.7-rhcp-60.cut, Peak: -3.86 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

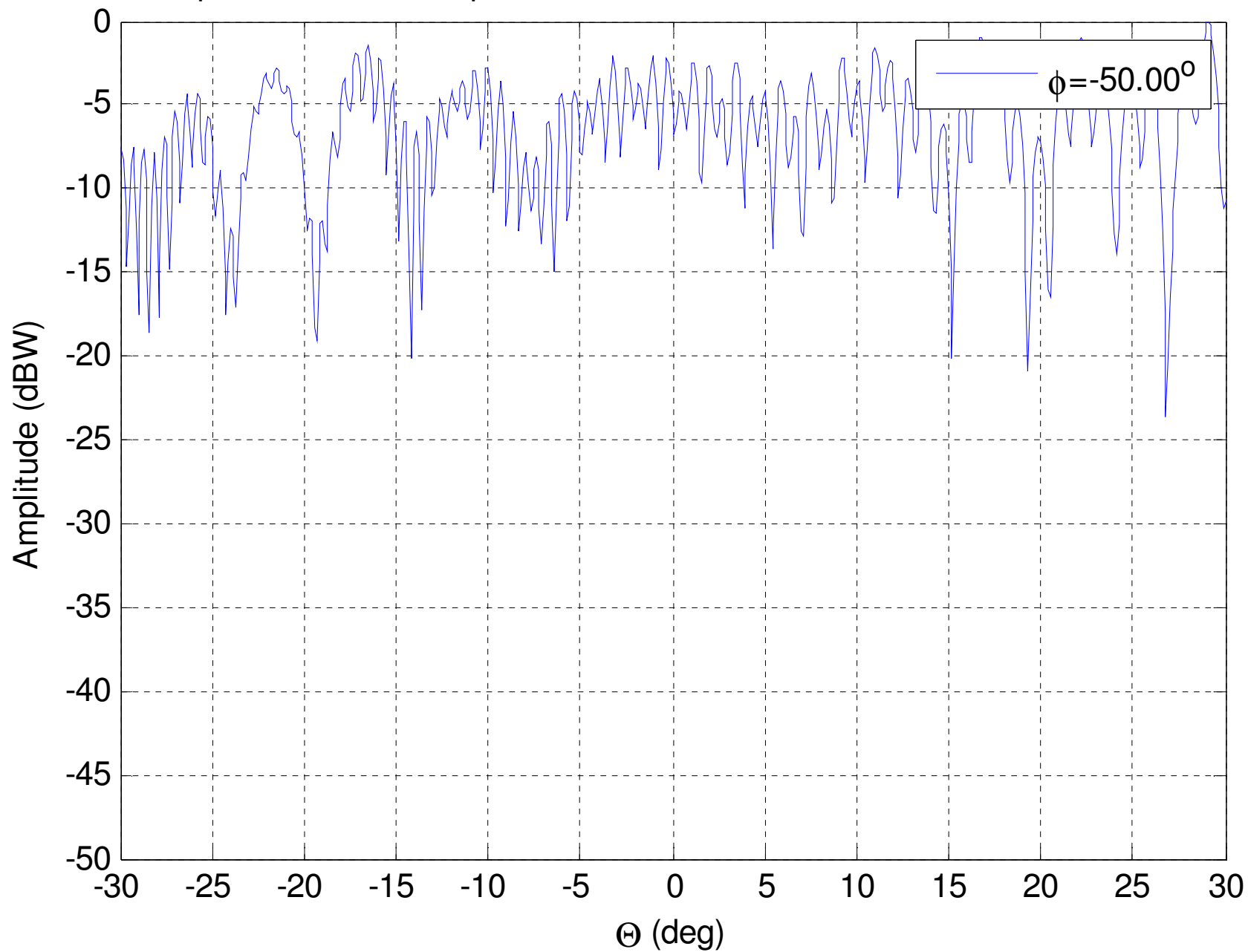
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -3.30 dBW, Date: 15-Dec-2011



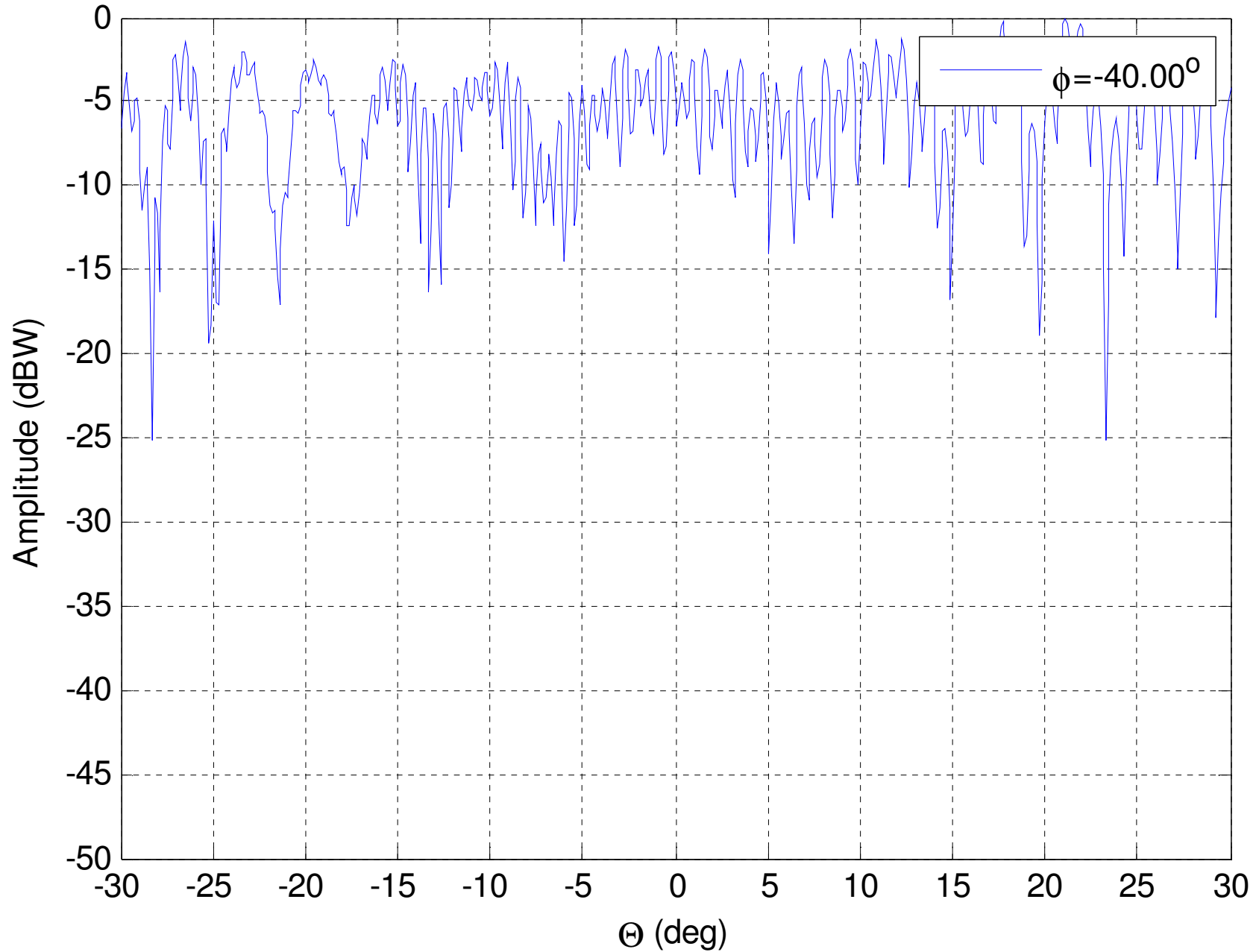
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -2.55 dBW, Date: 15-Dec-2011



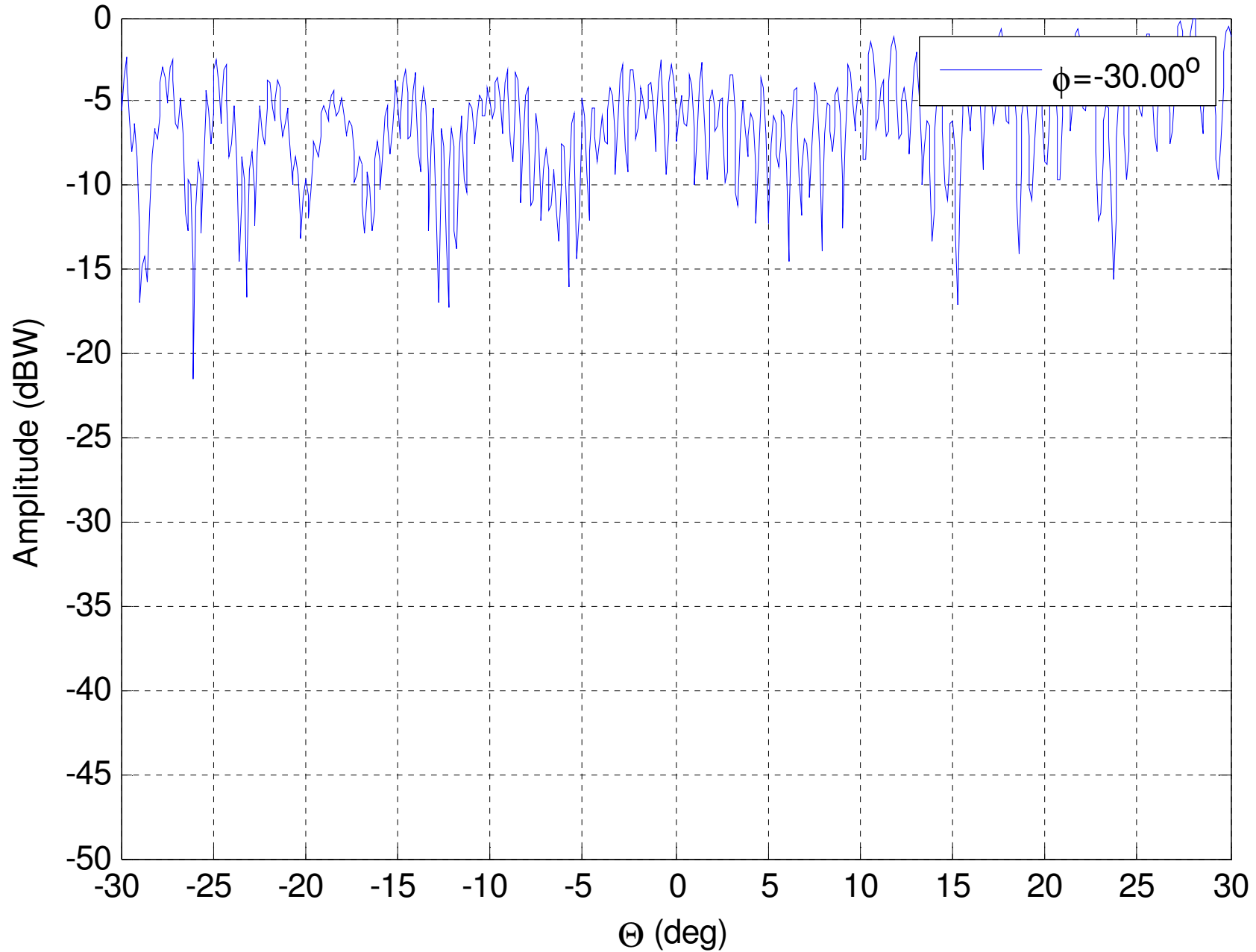
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -2.81 dBW, Date: 15-Dec-2011



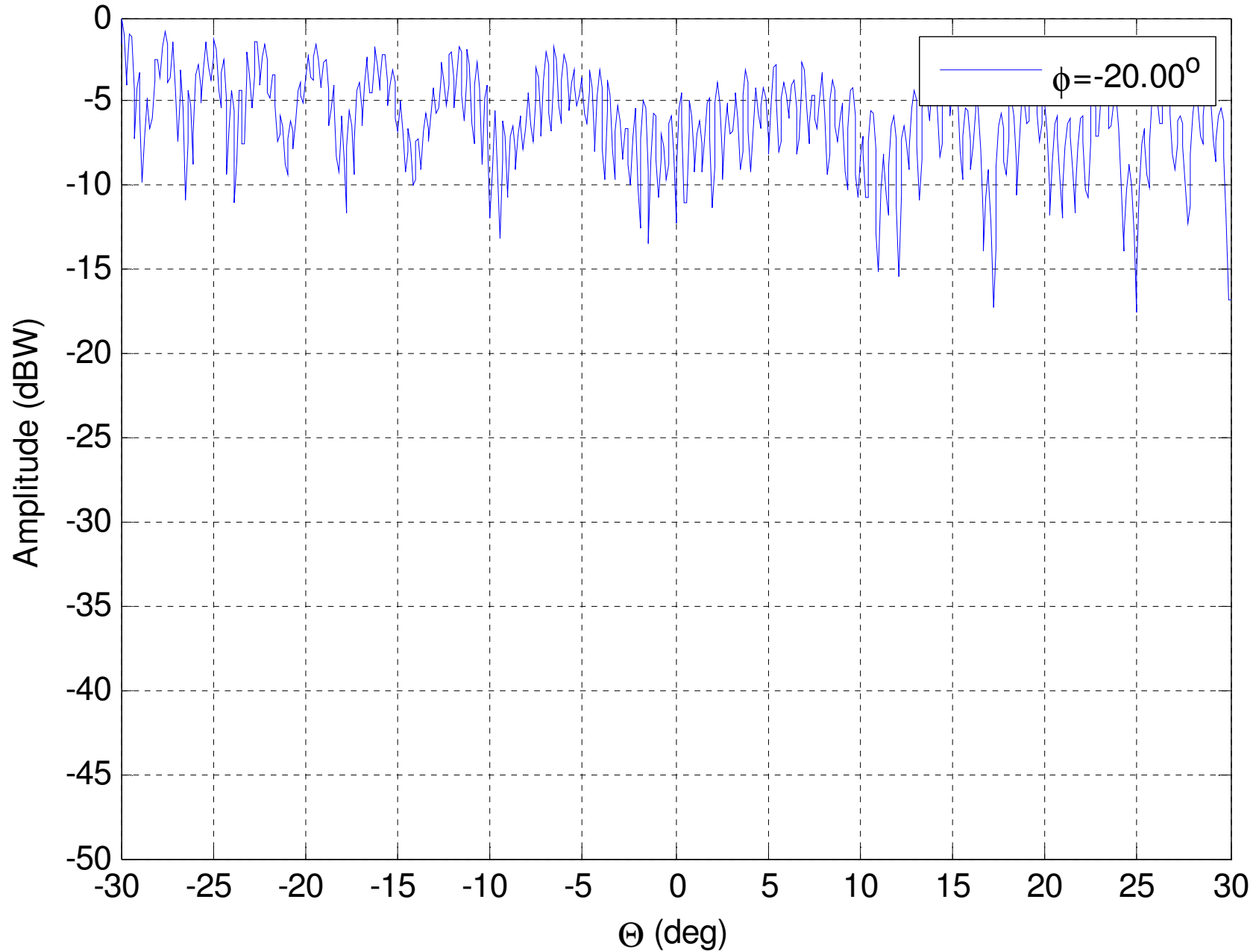
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -2.02 dBW, Date: 15-Dec-2011



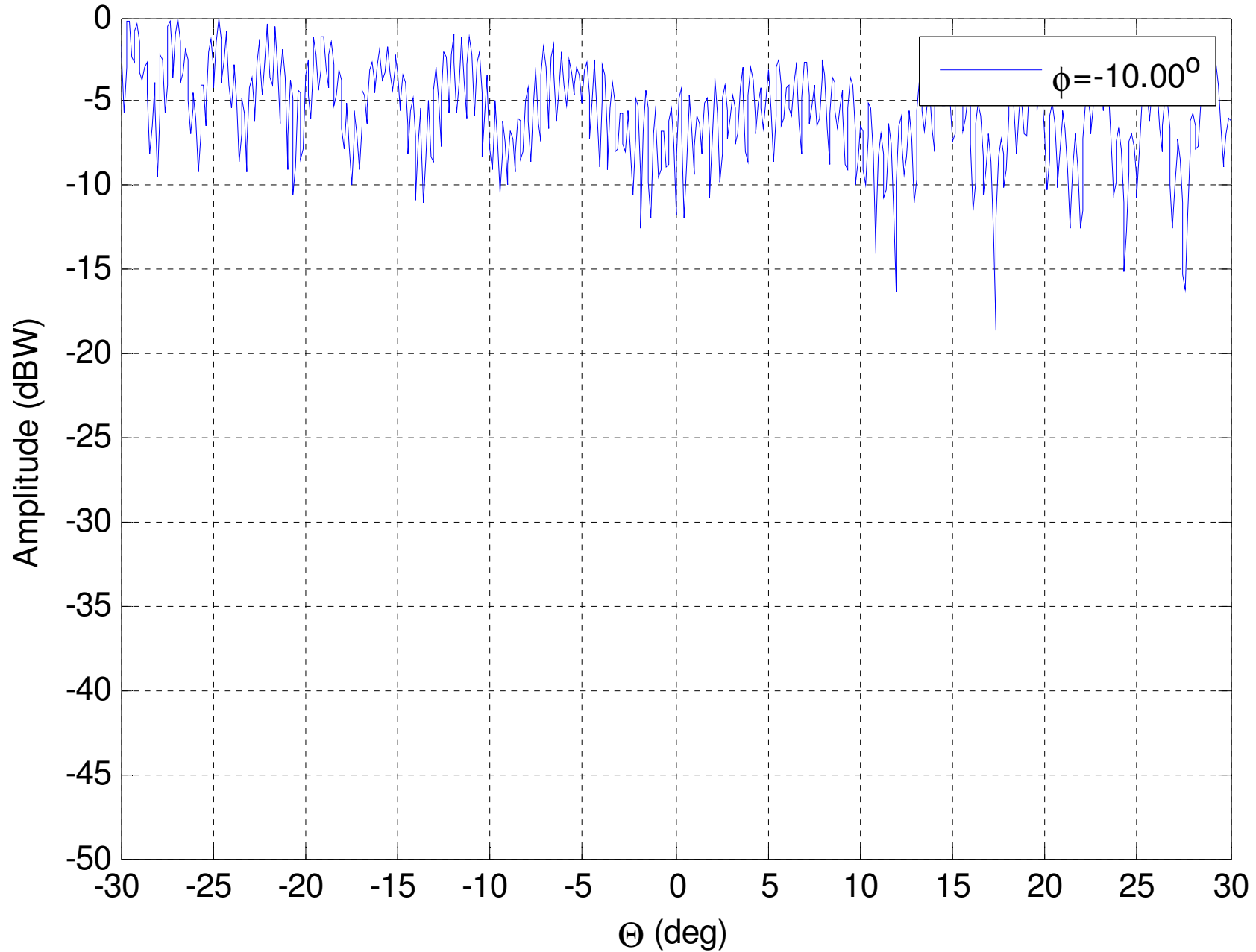
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -2.15 dBW, Date: 15-Dec-2011



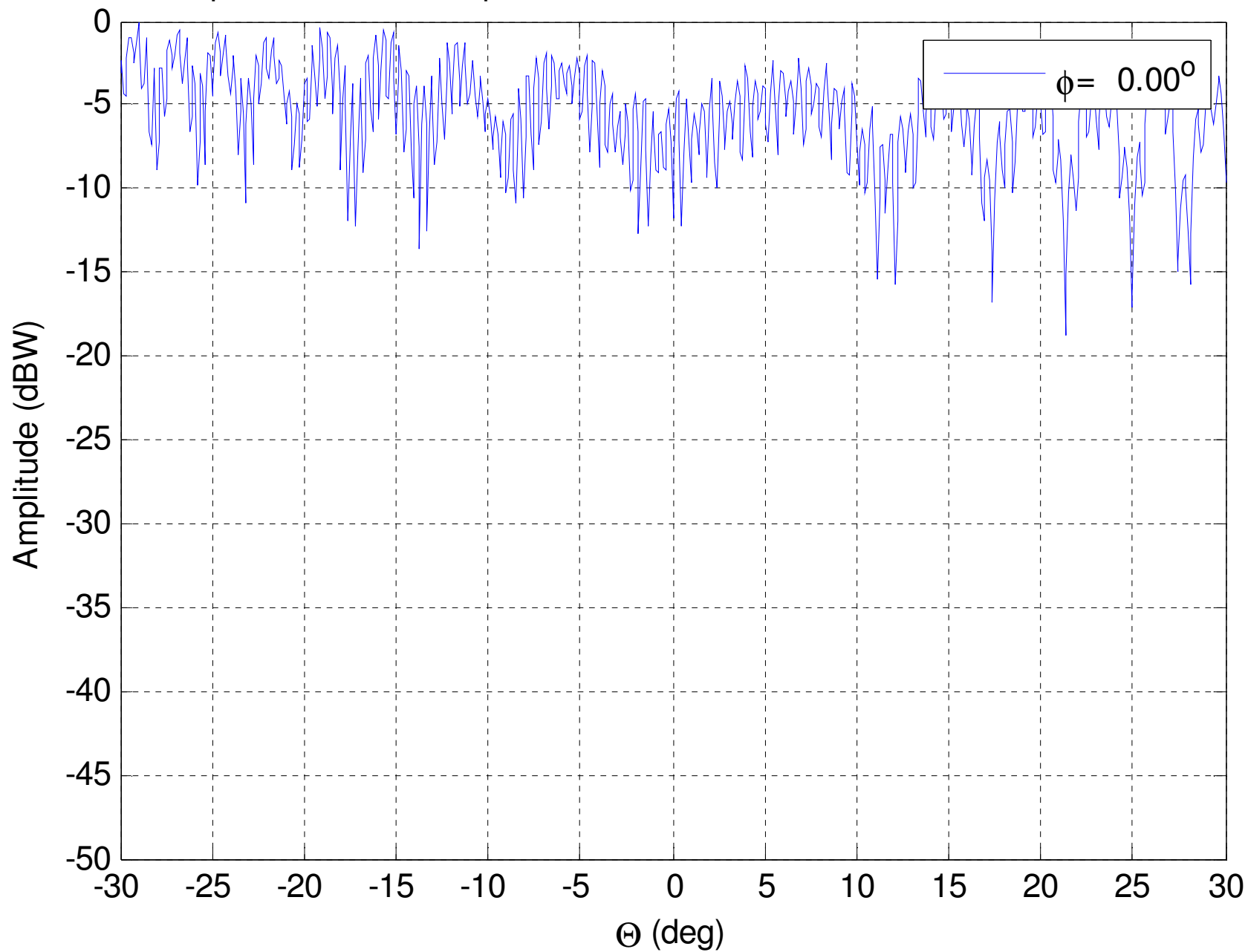
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -2.56 dBW, Date: 15-Dec-2011



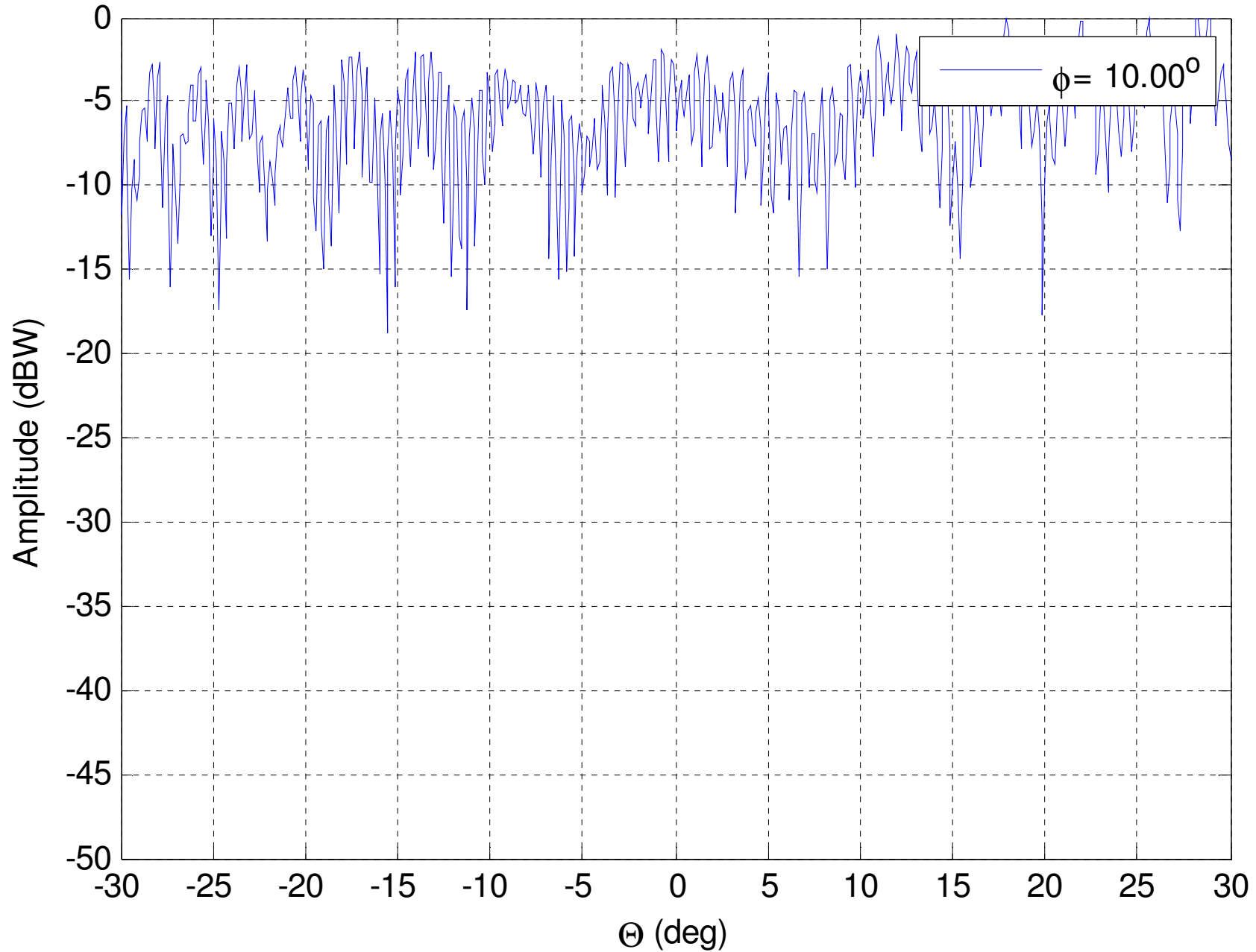
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -2.65 dBW, Date: 15-Dec-2011



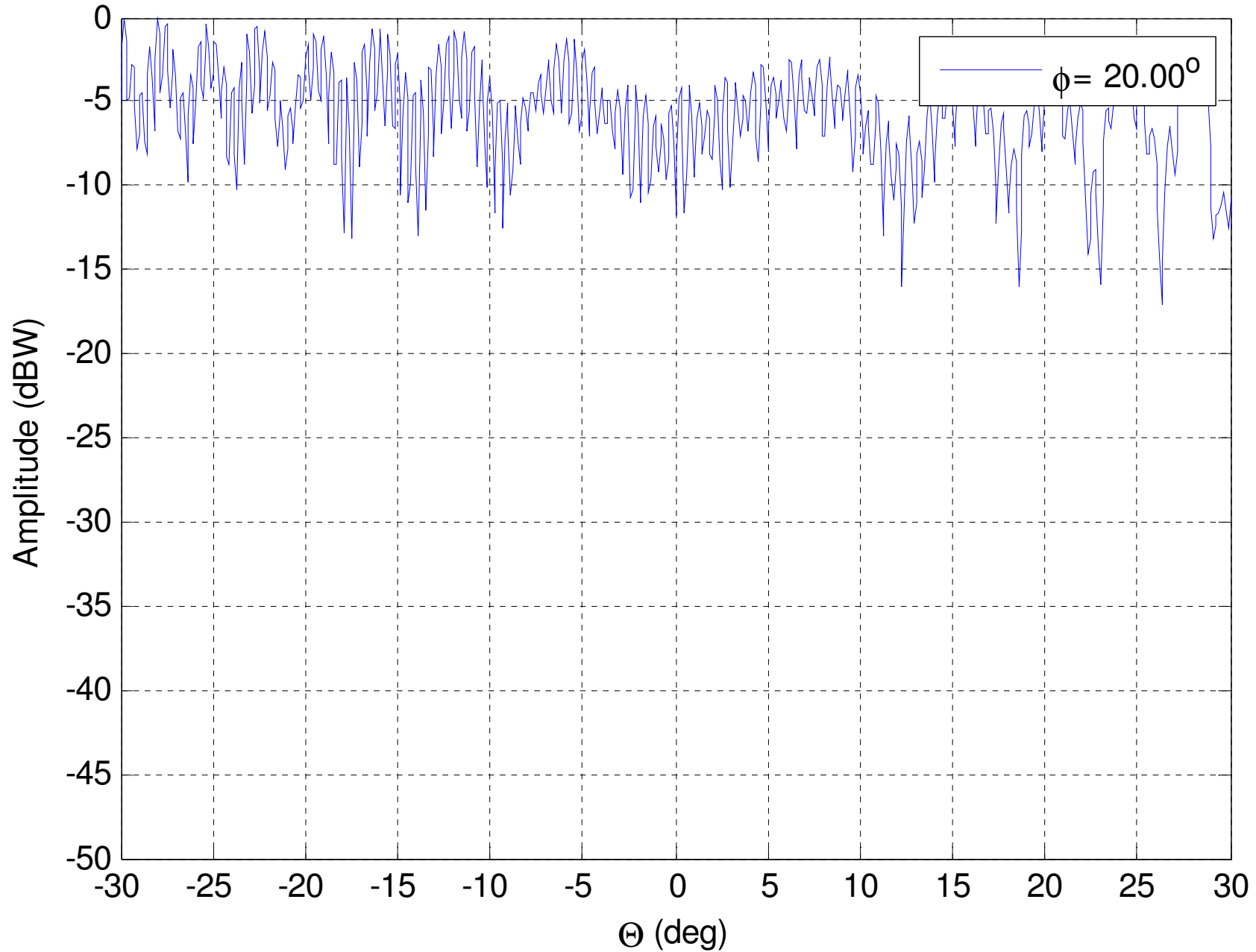
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -2.64 dBW, Date: 15-Dec-2011



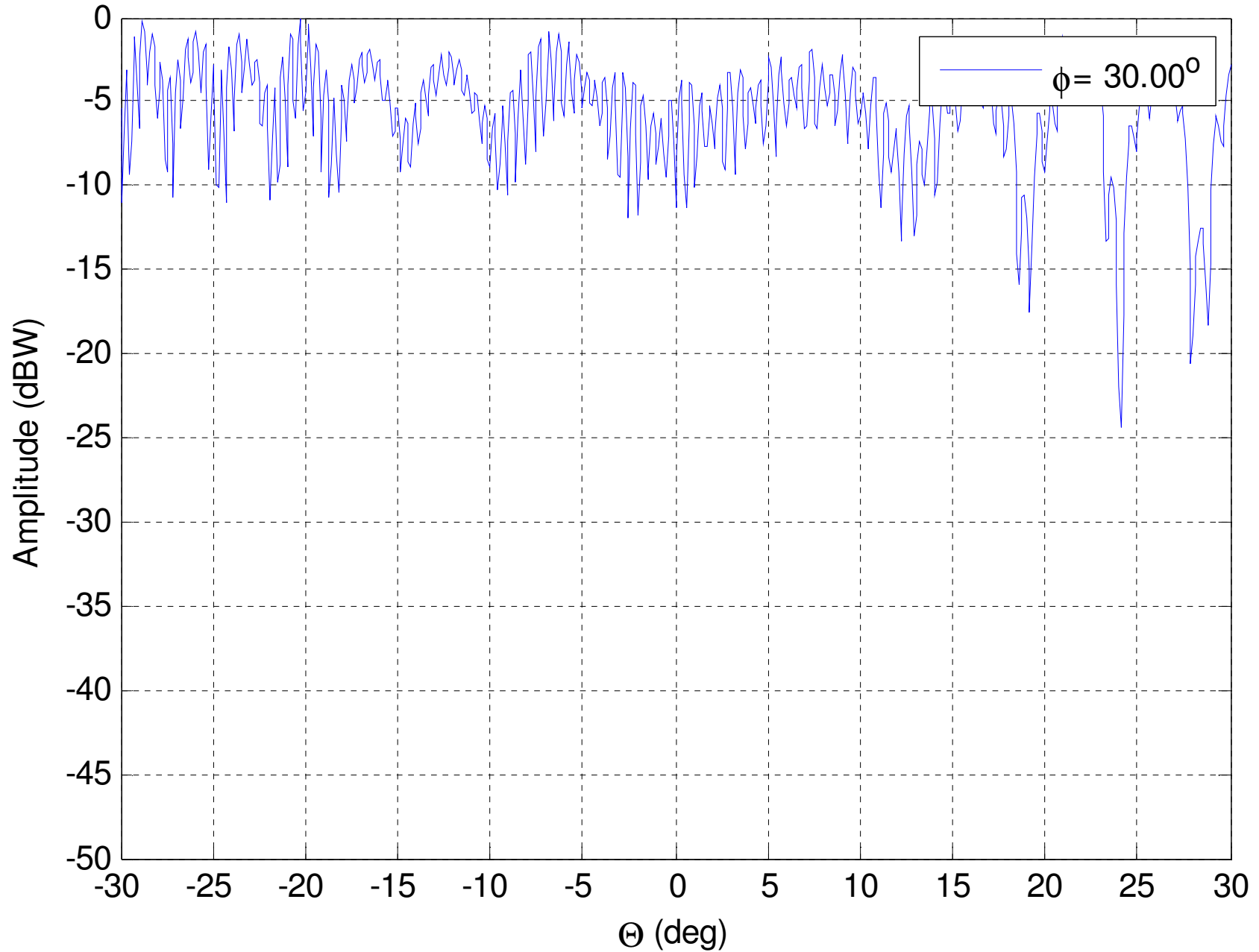
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -2.65 dBW, Date: 15-Dec-2011



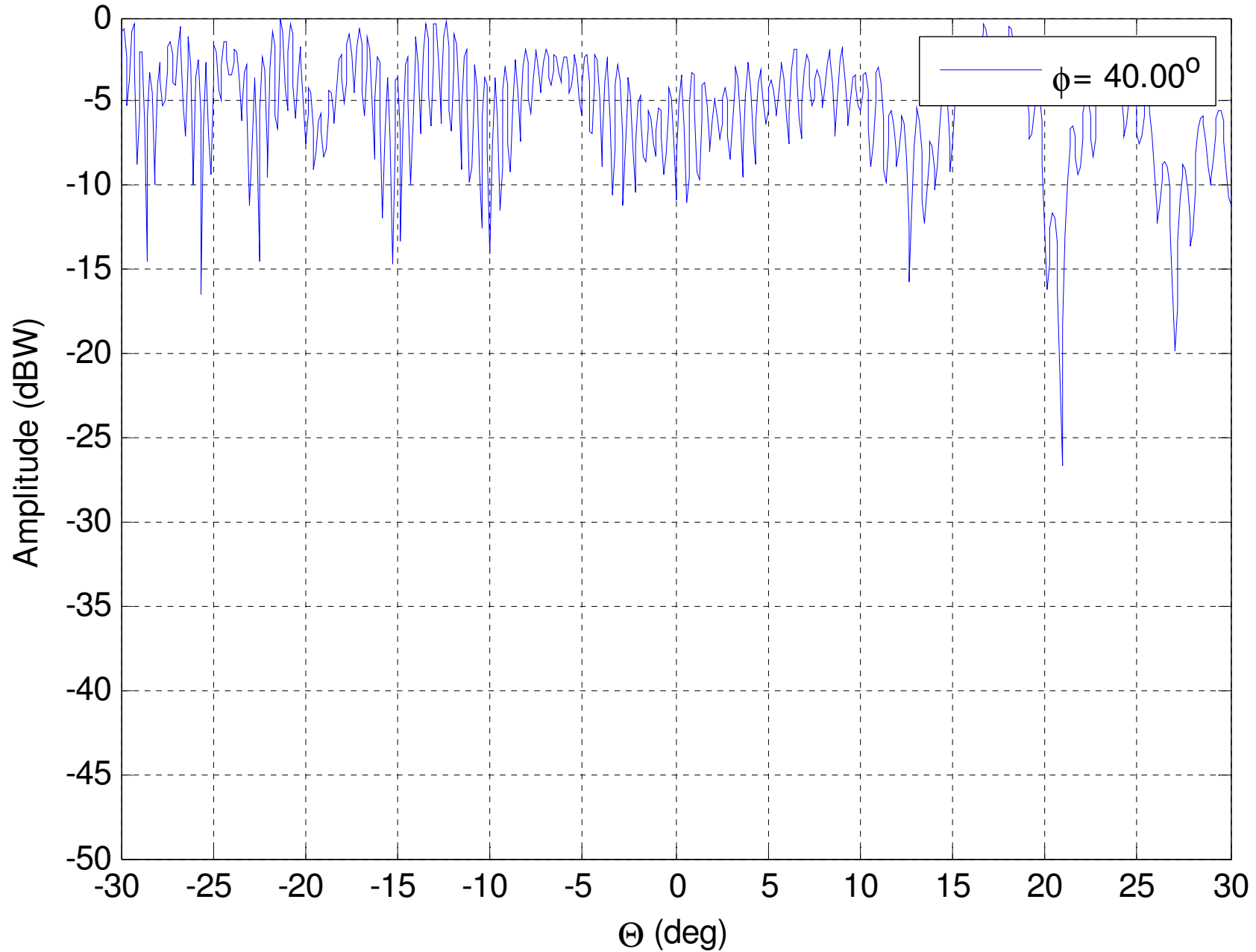
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -3.03 dBW, Date: 15-Dec-2011



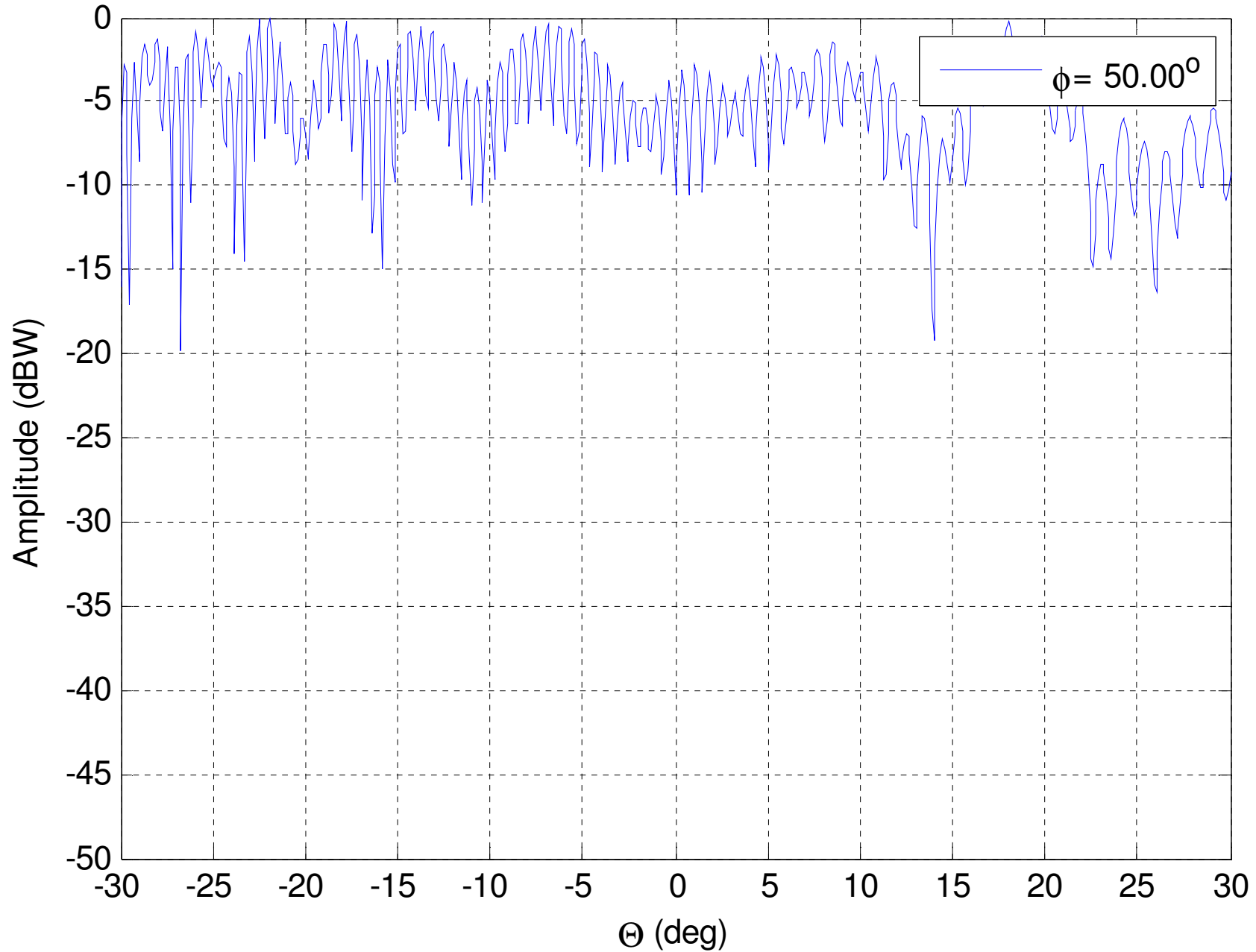
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -3.45 dBW, Date: 15-Dec-2011



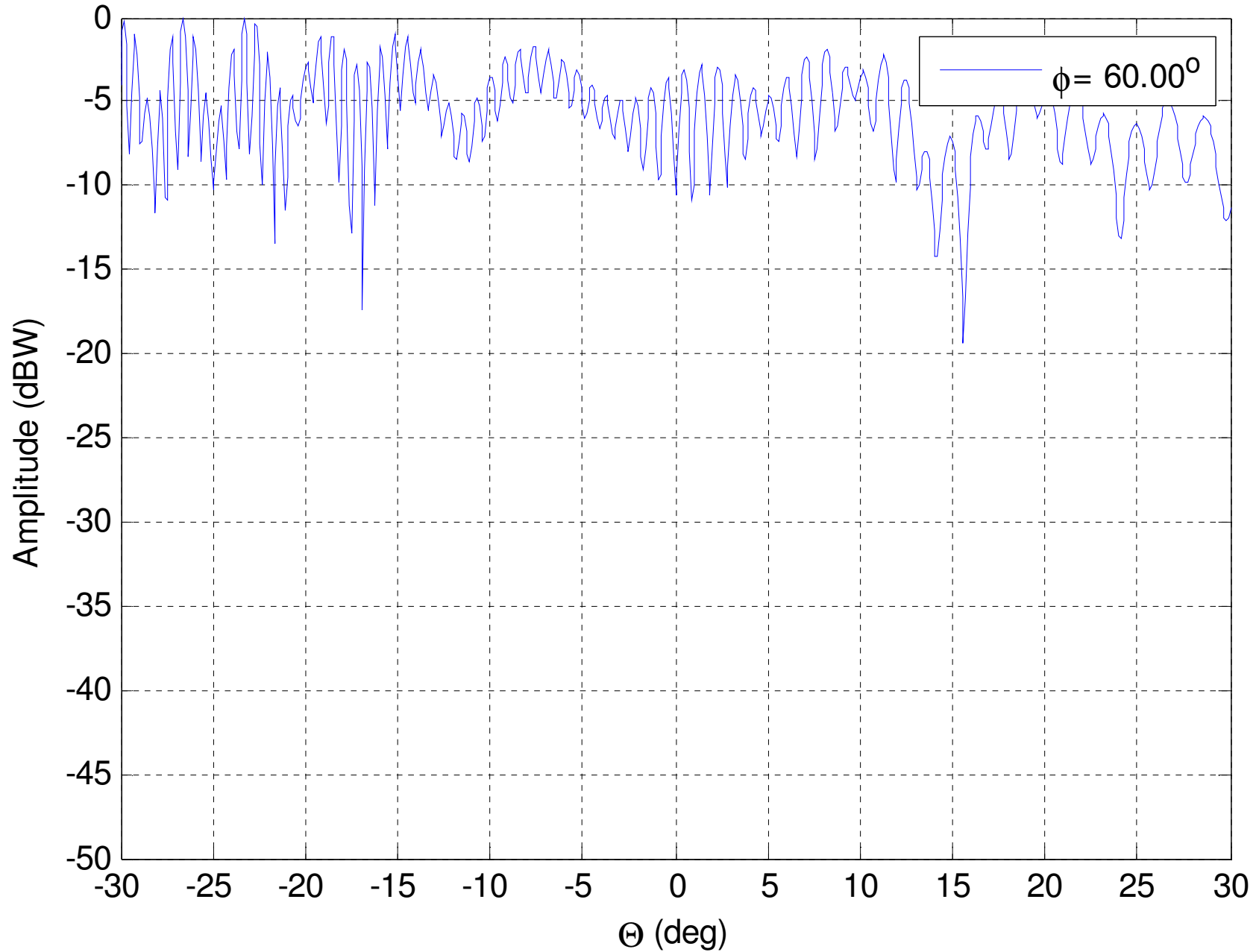
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -3.76 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -3.78 dBW, Date: 15-Dec-2011



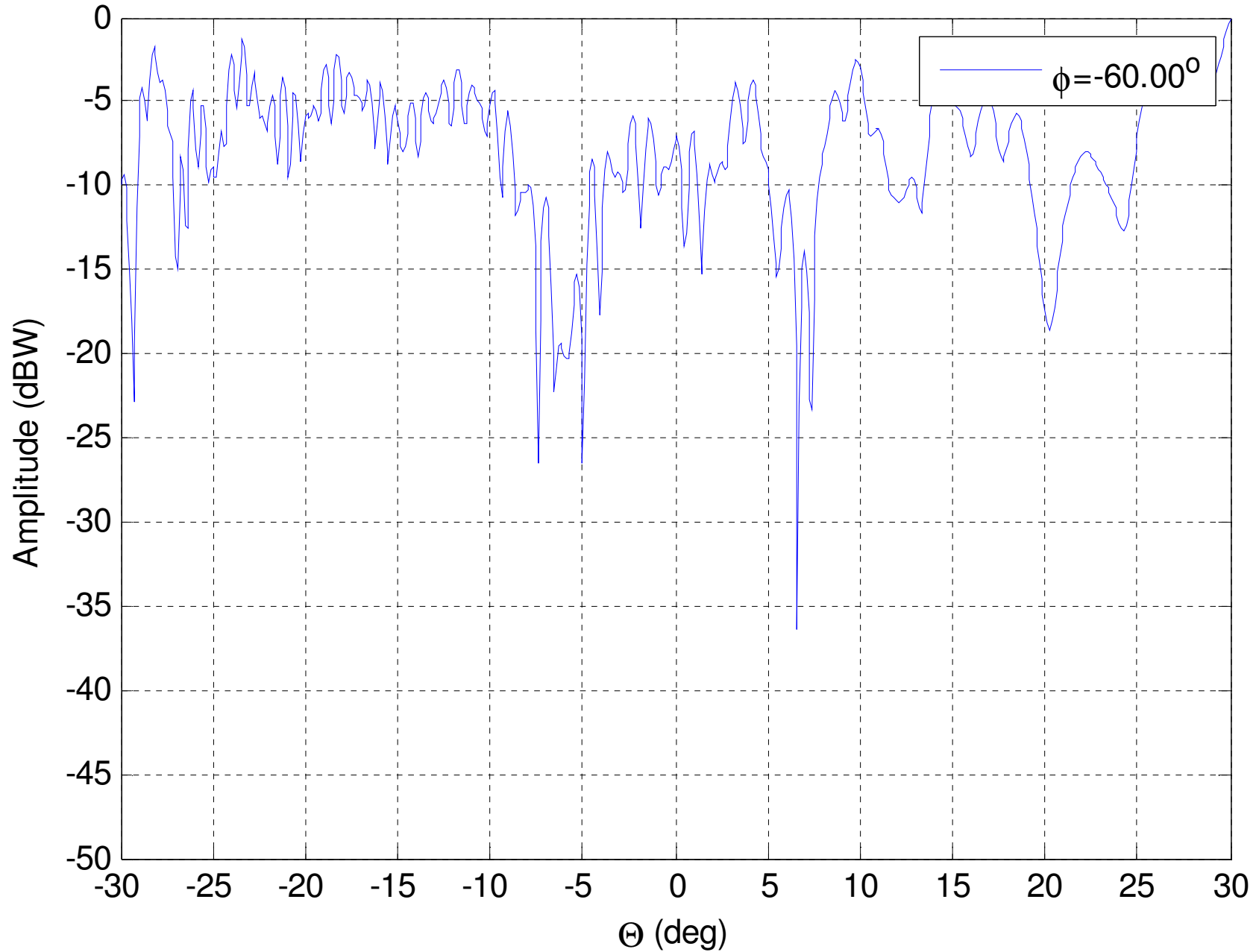
Spot Beam29, +X Axis Plots

- 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

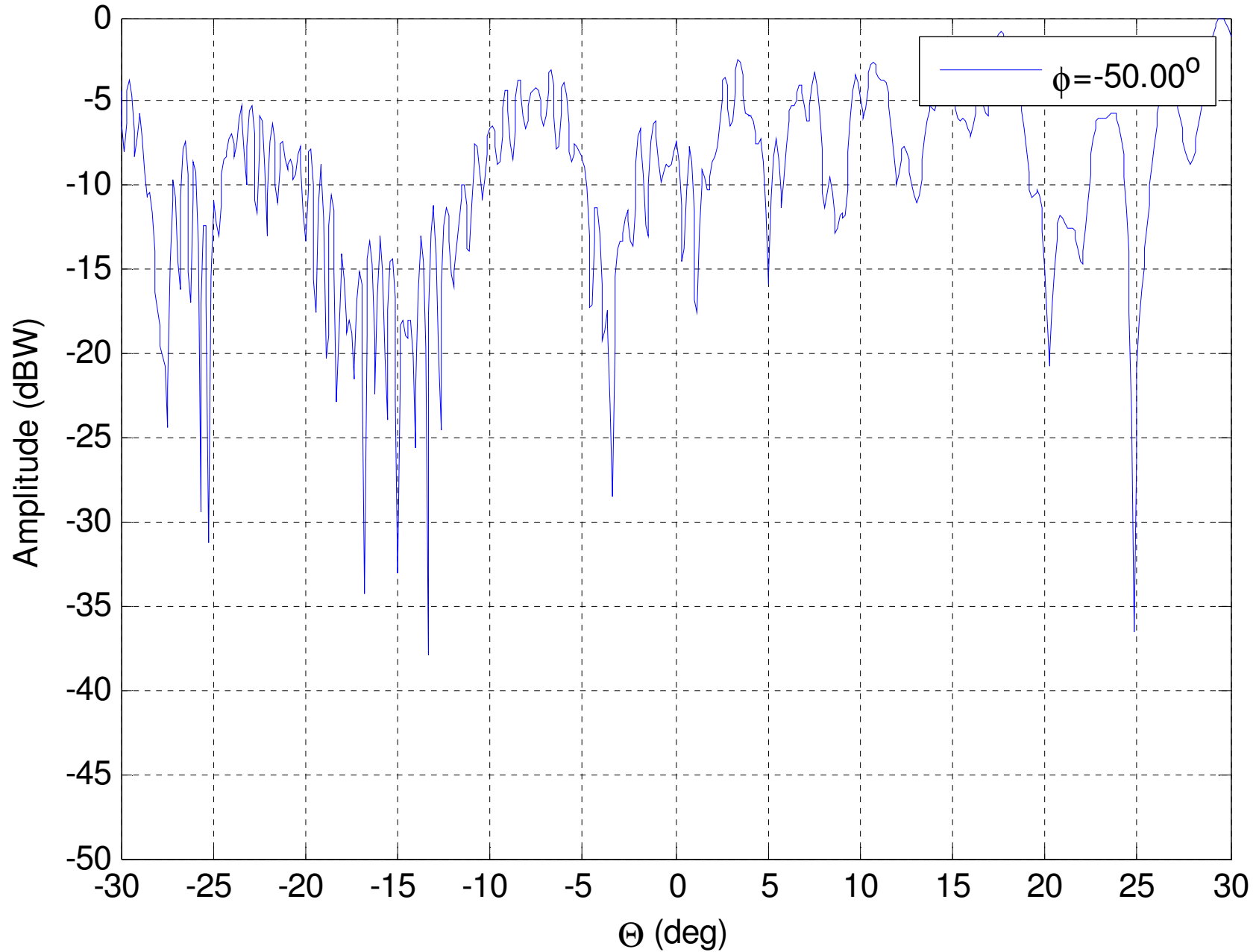
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -6.88 dBW, Date: 15-Dec-2011



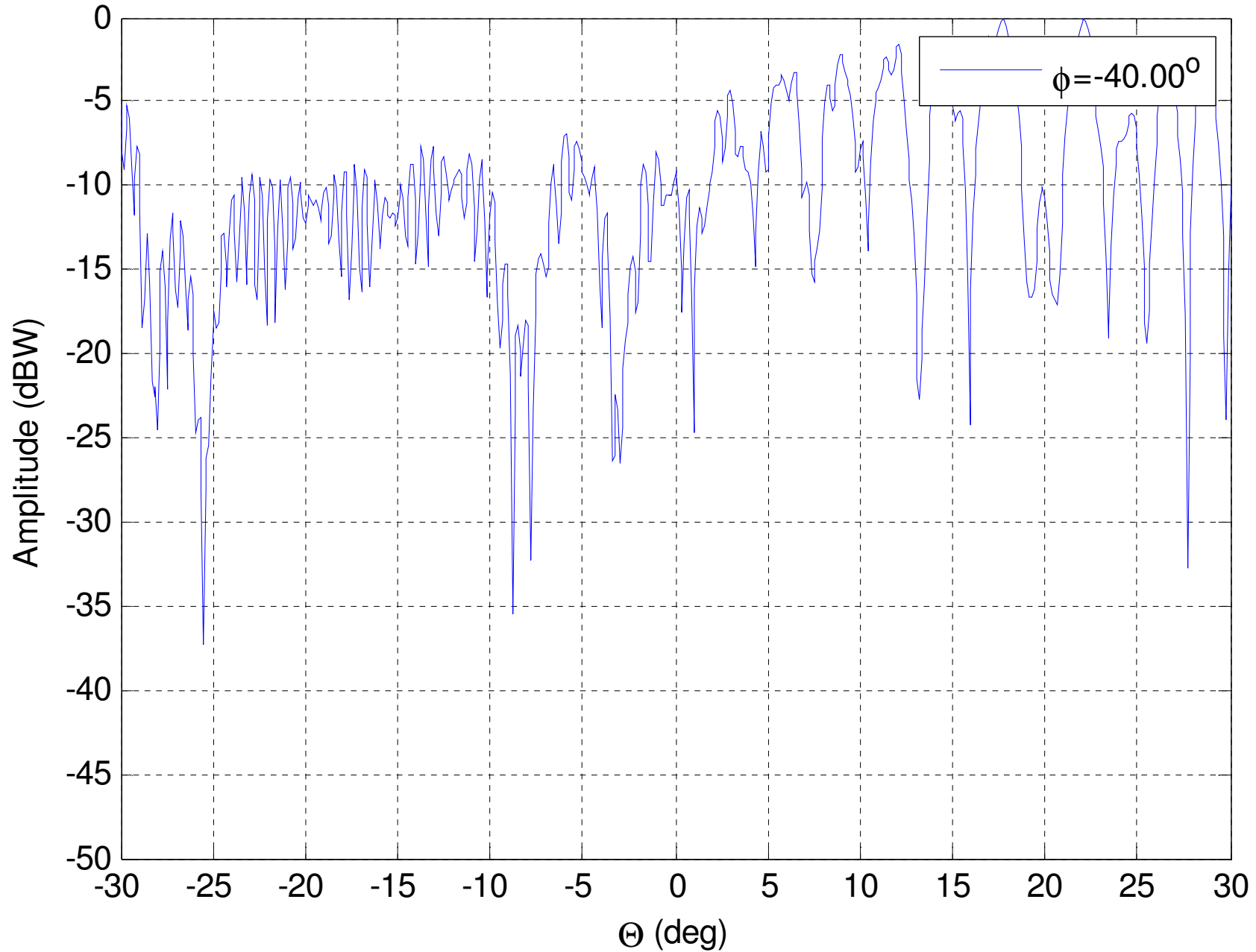
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.76 dBW, Date: 15-Dec-2011



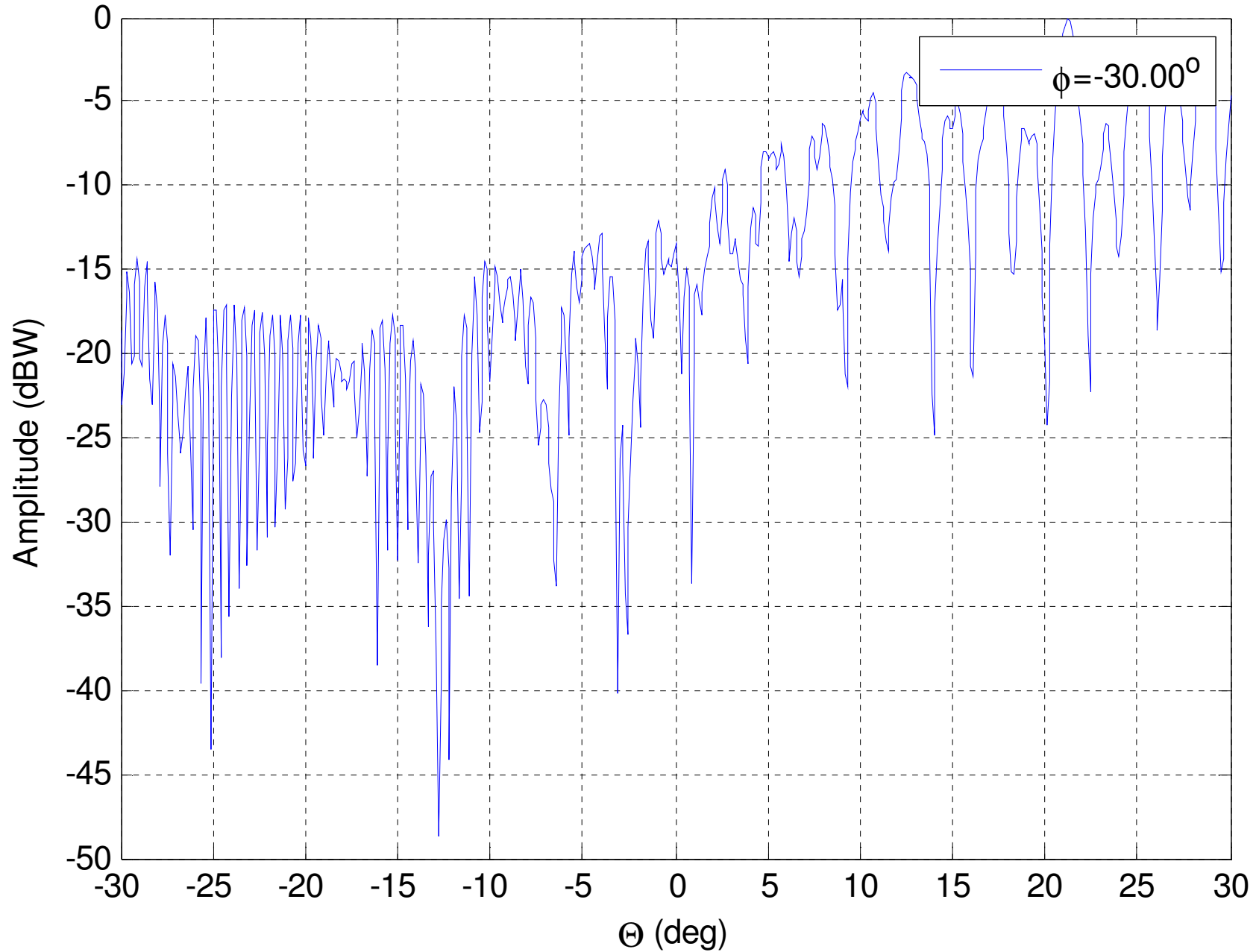
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -4.88 dBW, Date: 15-Dec-2011



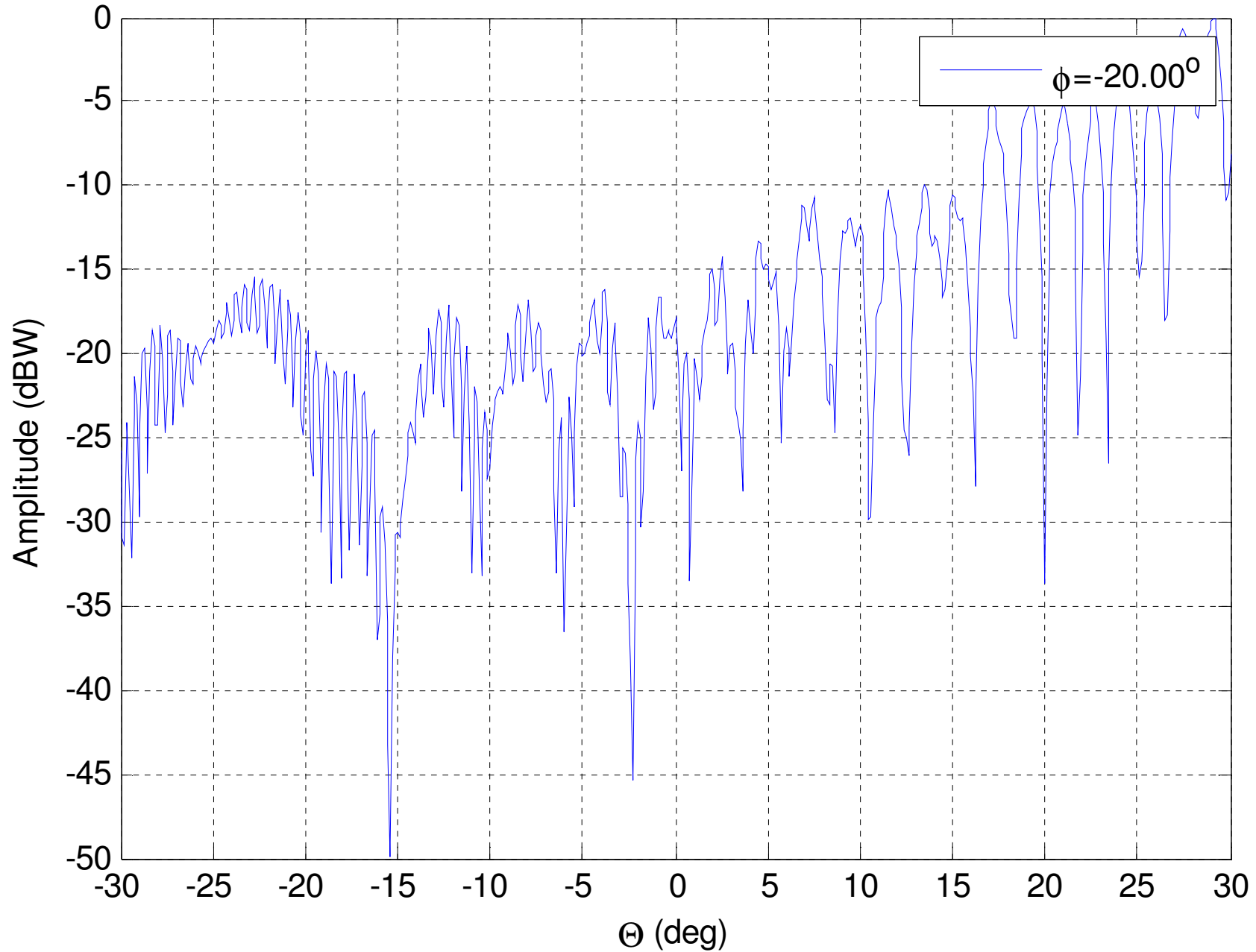
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -0.63 dBW, Date: 15-Dec-2011



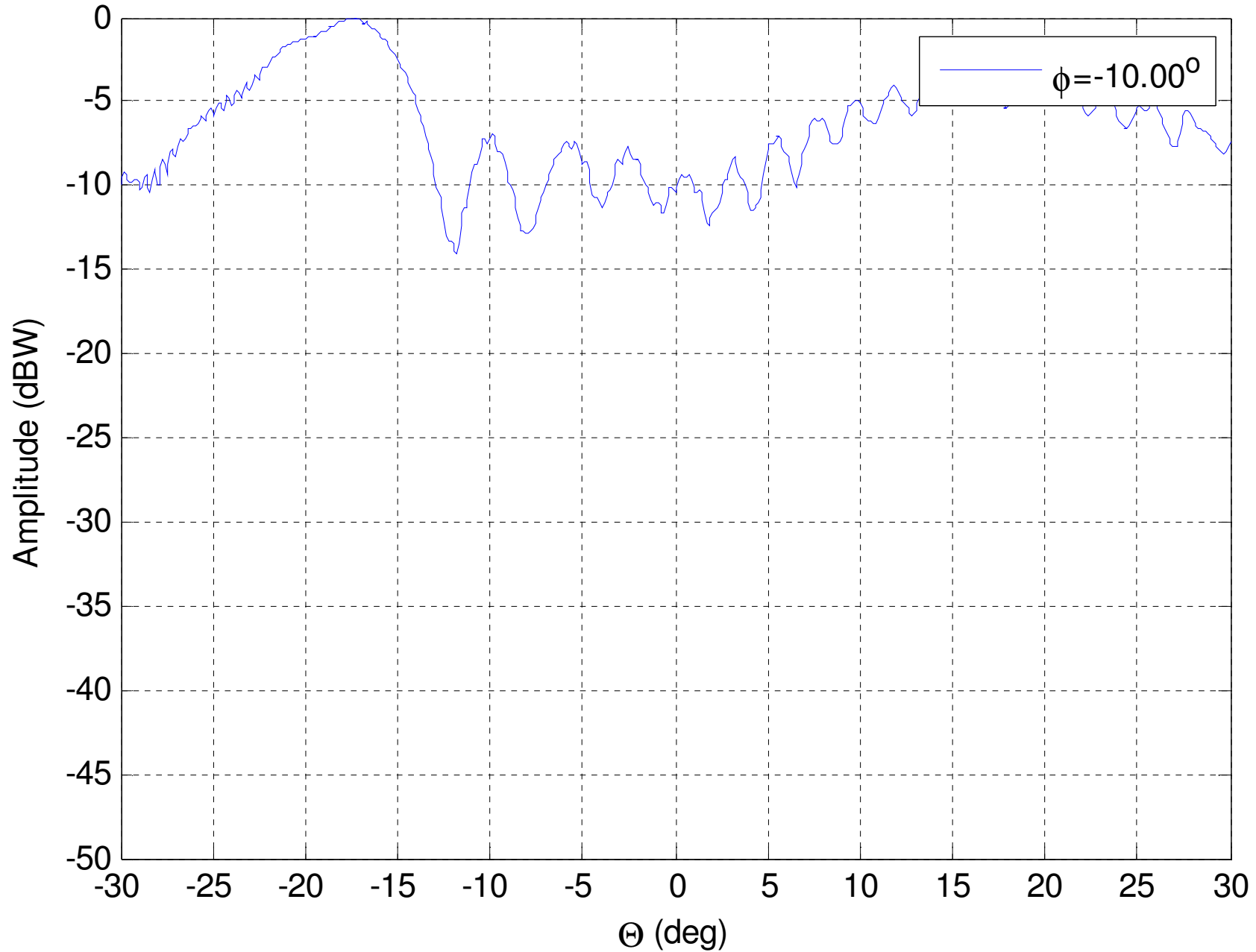
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: 3.72 dBW, Date: 15-Dec-2011



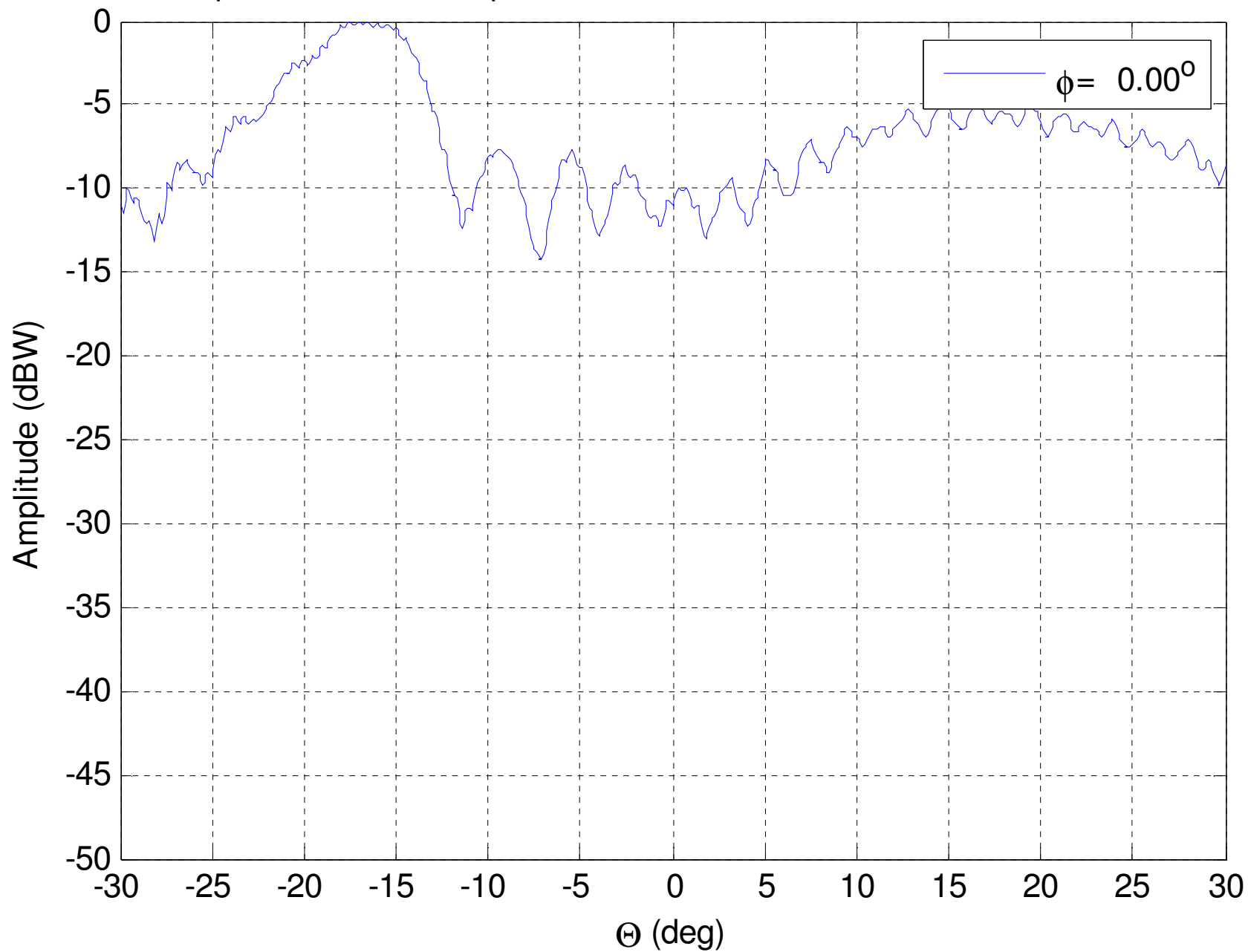
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: 8.41 dBW, Date: 15-Dec-2011



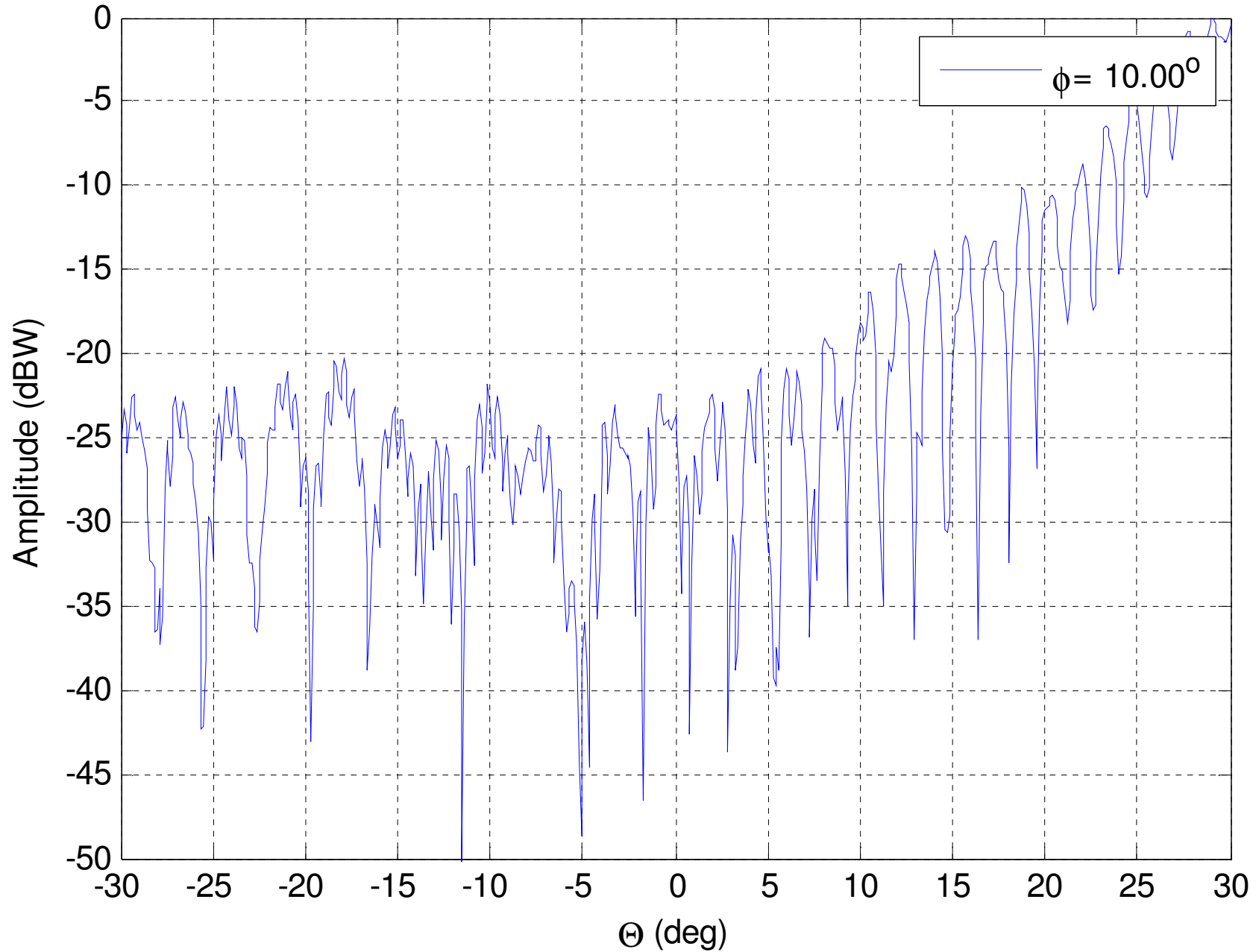
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: 9.01 dBW, Date: 15-Dec-2011



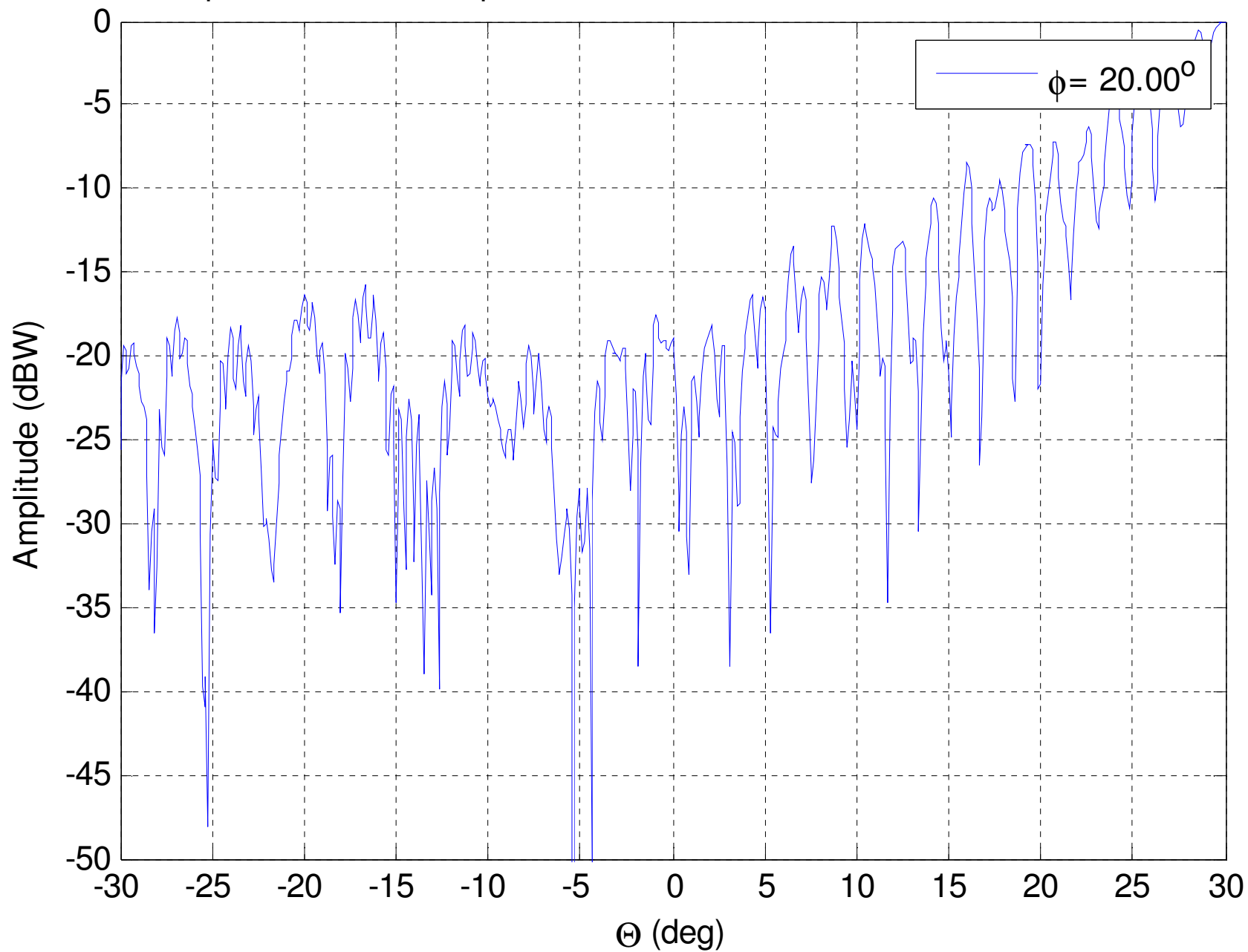
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: 9.58 dBW, Date: 15-Dec-2011



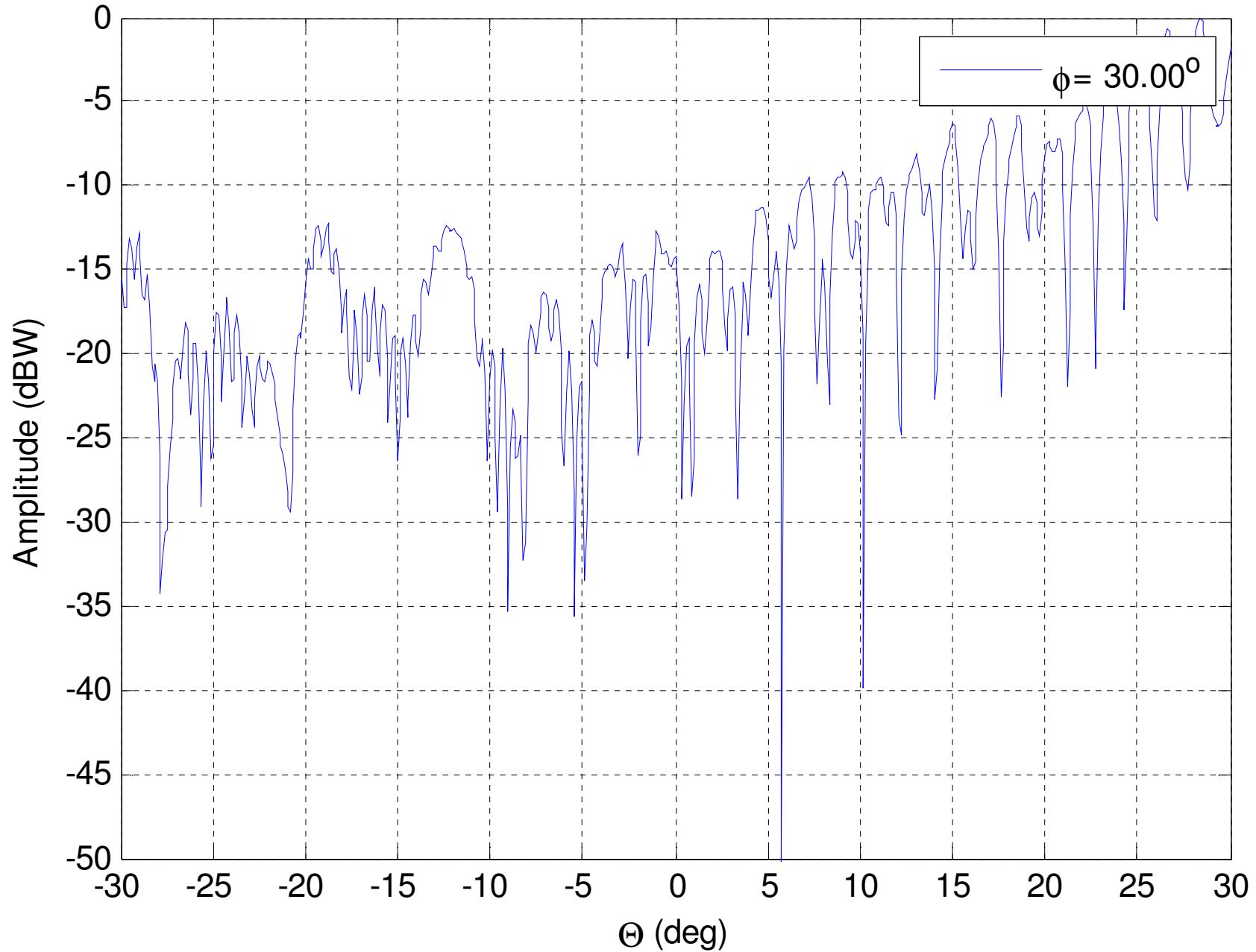
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: 4.84 dBW, Date: 15-Dec-2011



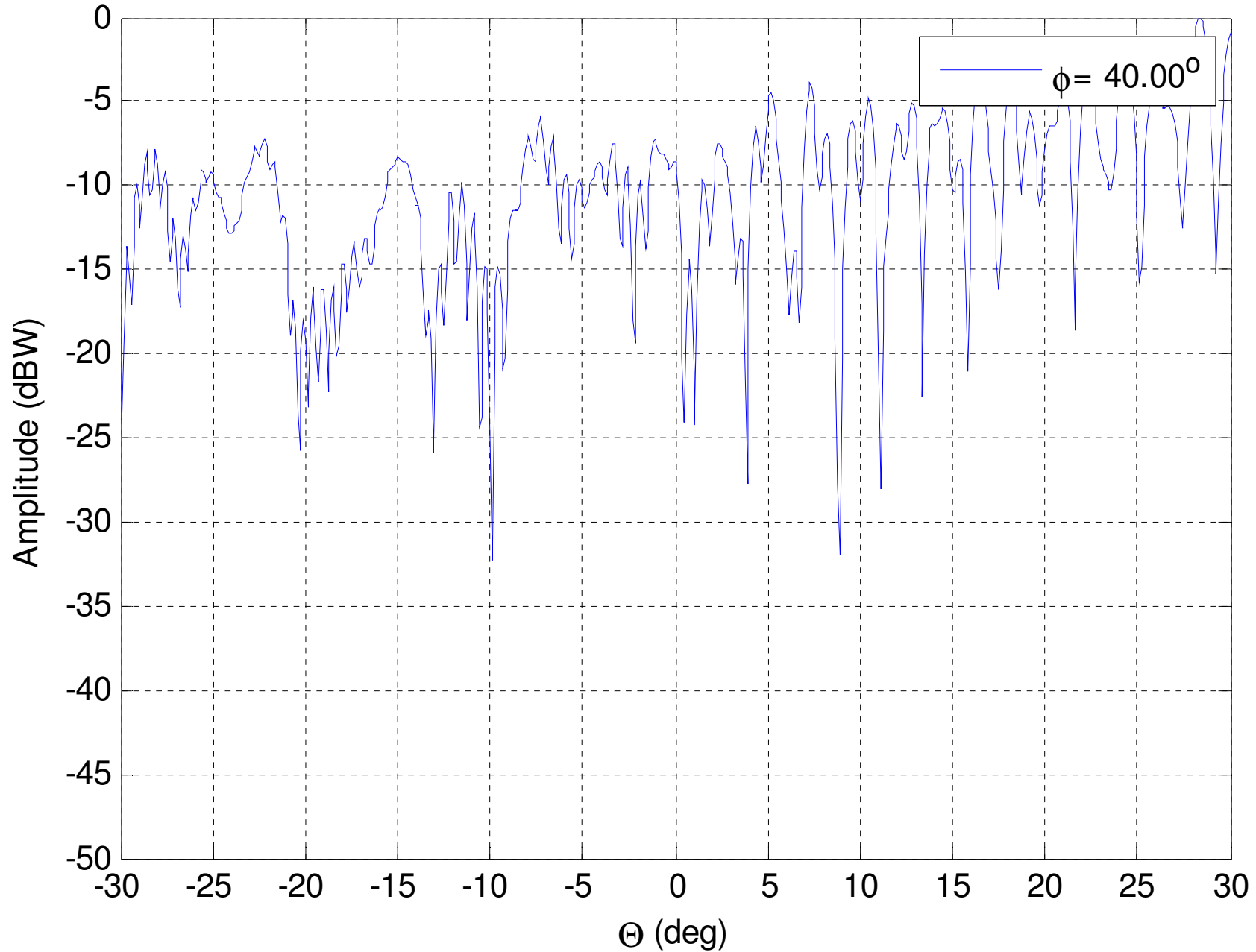
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: 0.04 dBW, Date: 15-Dec-2011



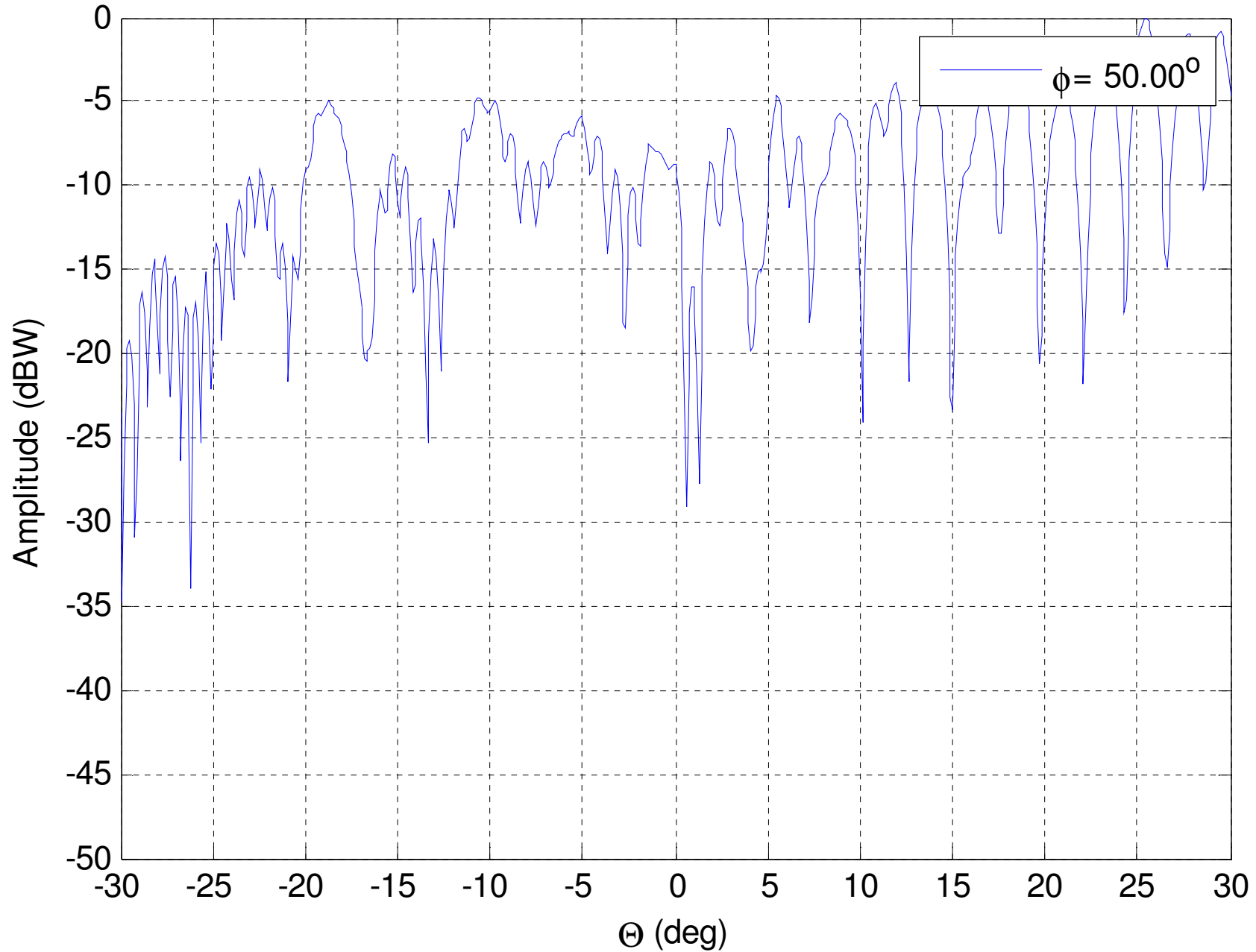
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -5.54 dBW, Date: 15-Dec-2011



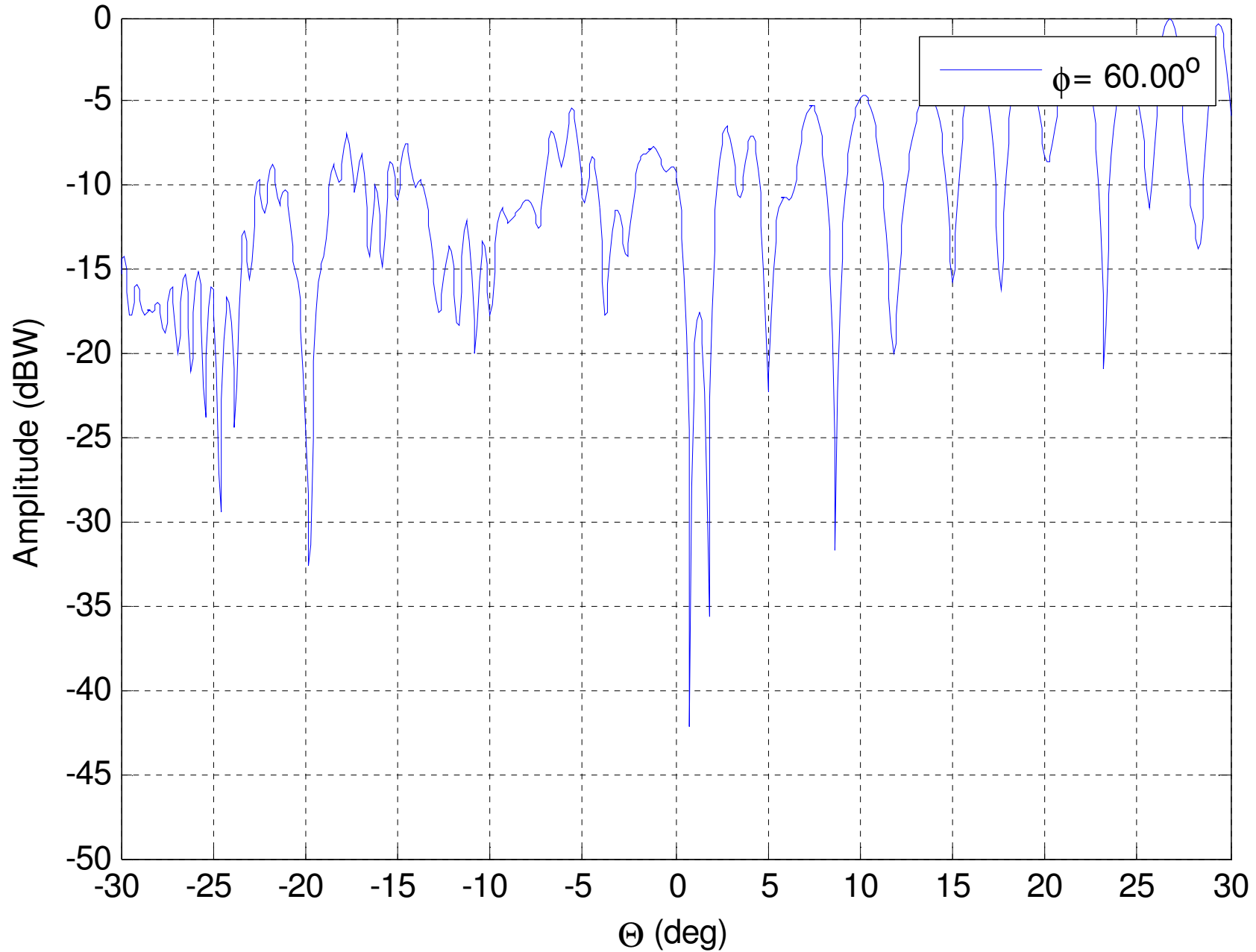
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -5.30 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

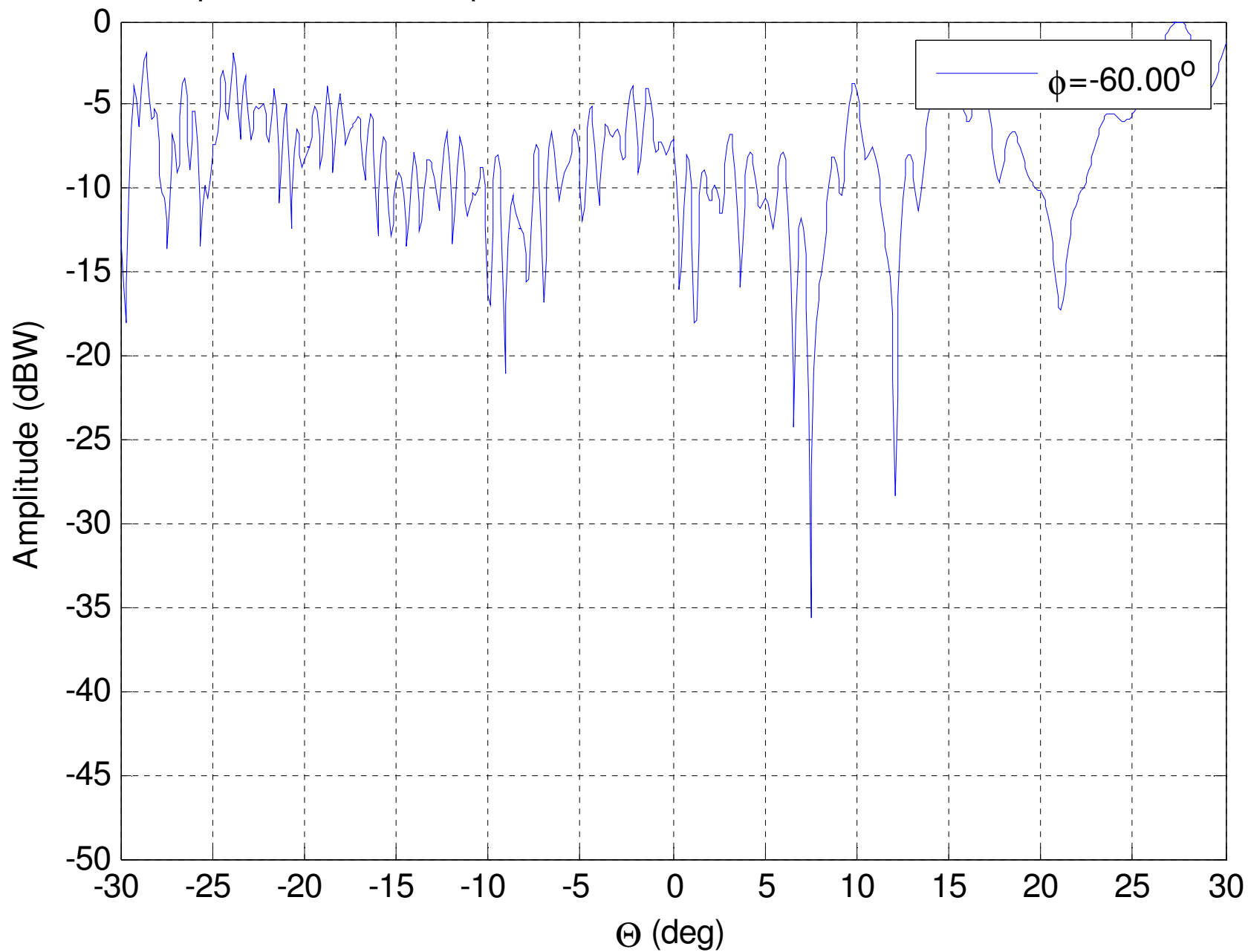
Input file: tx-17.3-rhcp-60.cut, Peak: -4.94 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

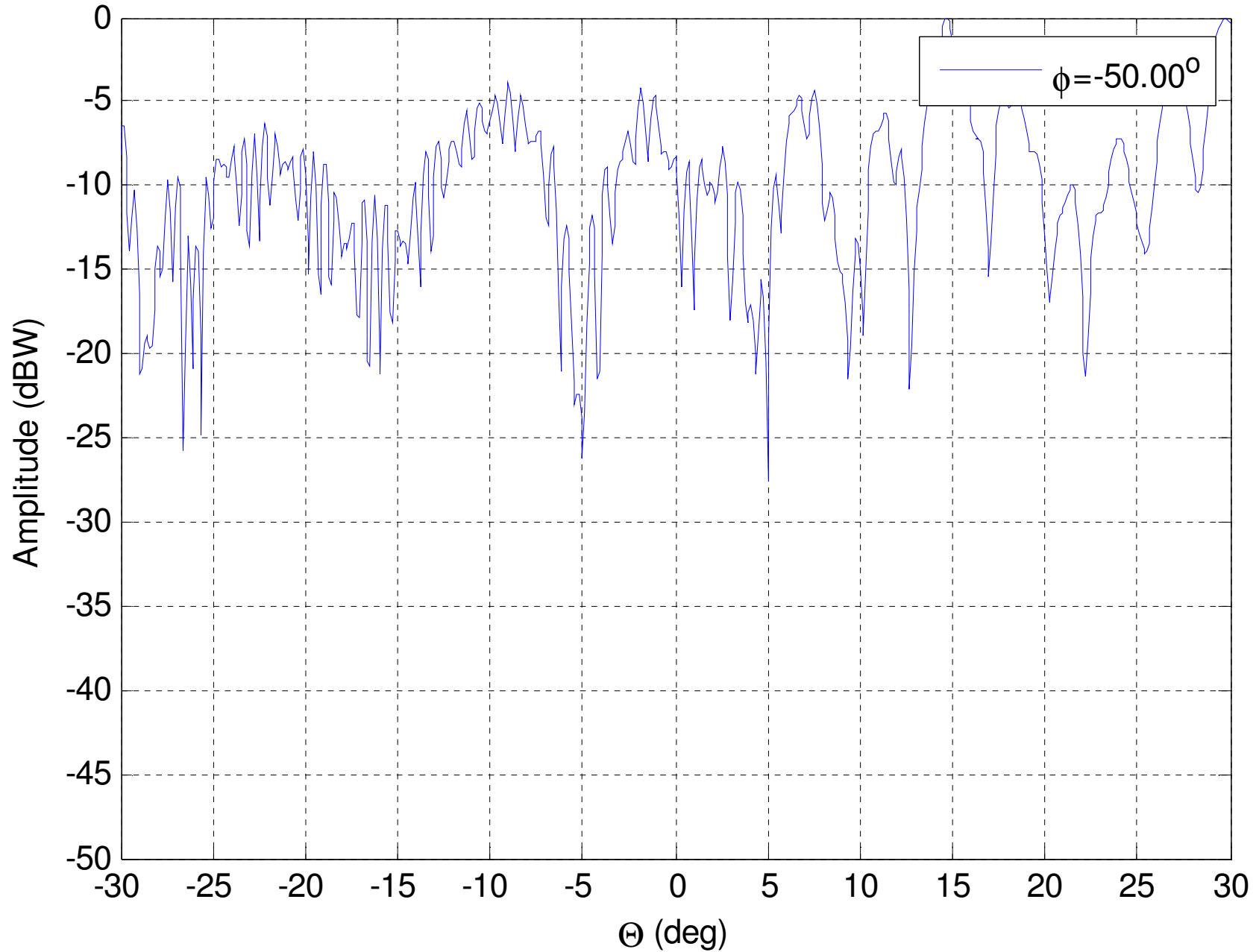
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -7.11 dBW, Date: 15-Dec-2011



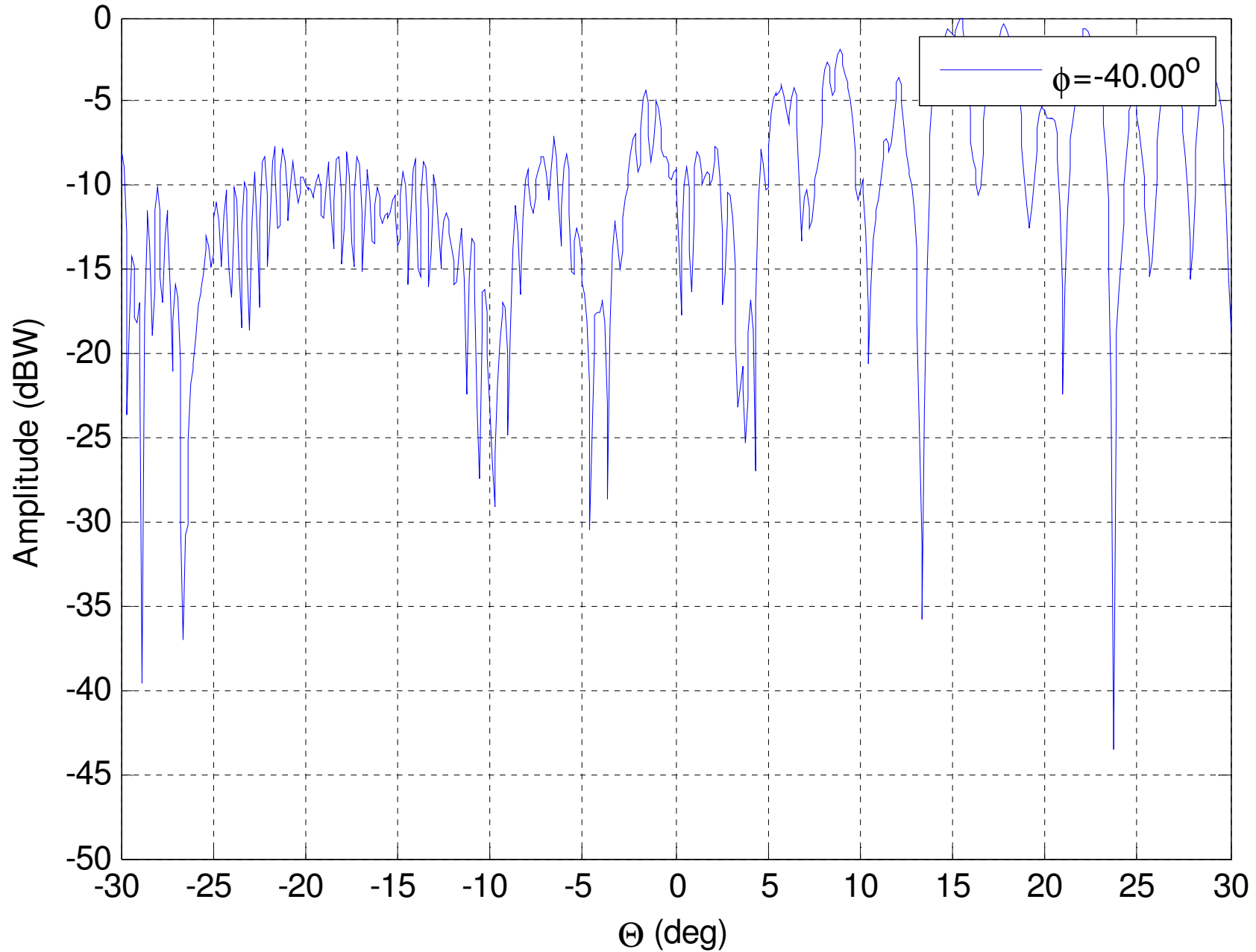
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -5.93 dBW, Date: 15-Dec-2011



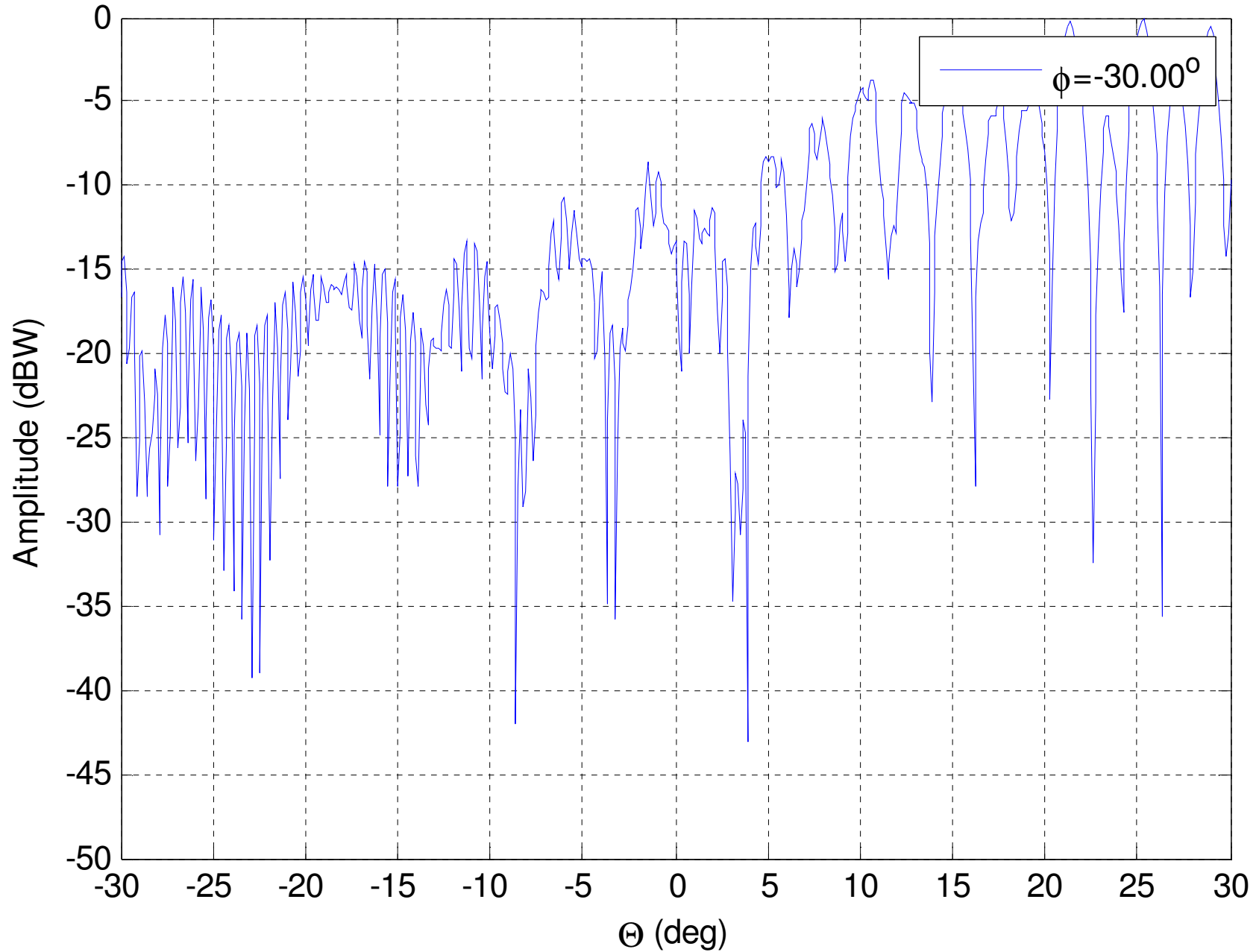
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -5.25 dBW, Date: 15-Dec-2011



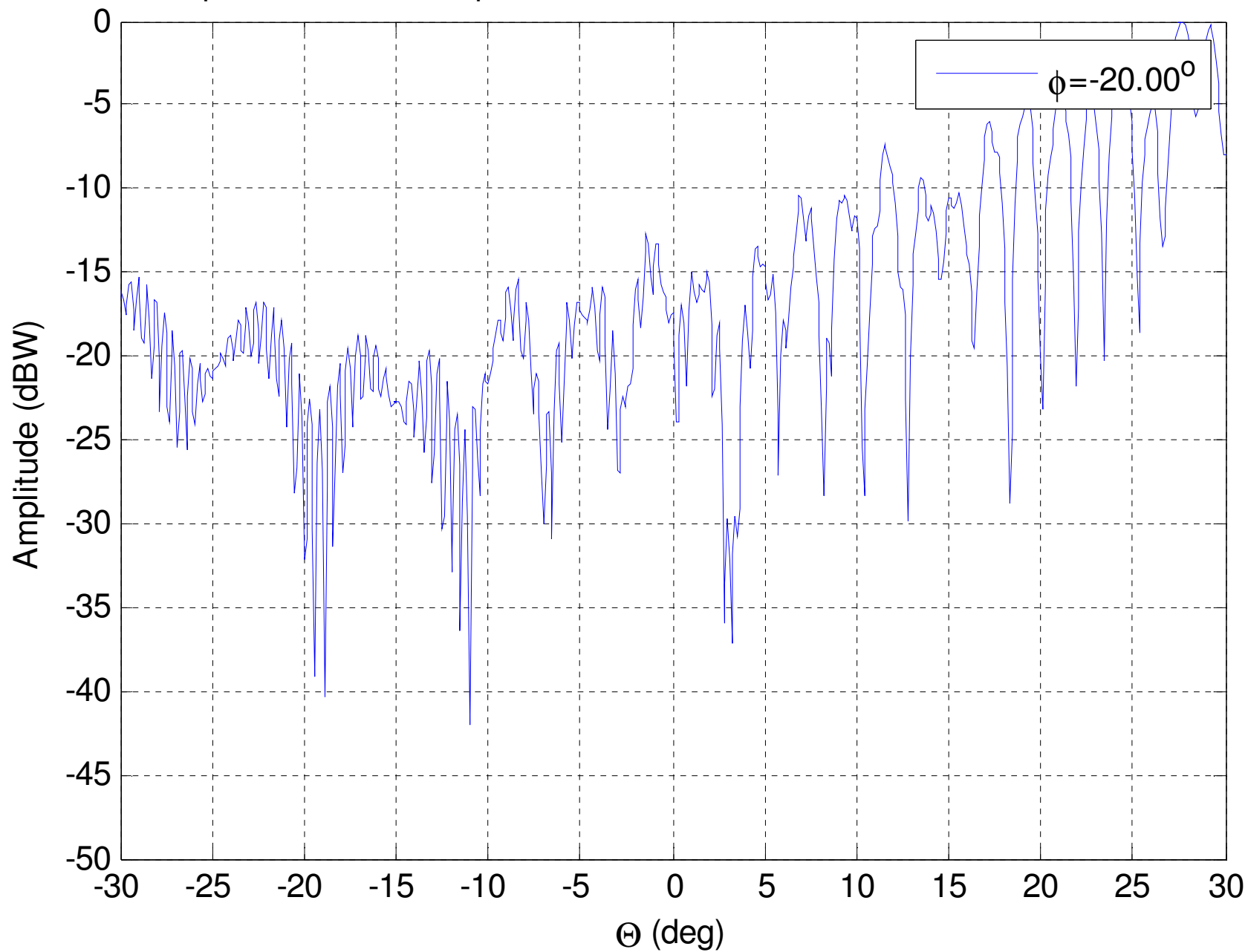
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -0.87 dBW, Date: 15-Dec-2011



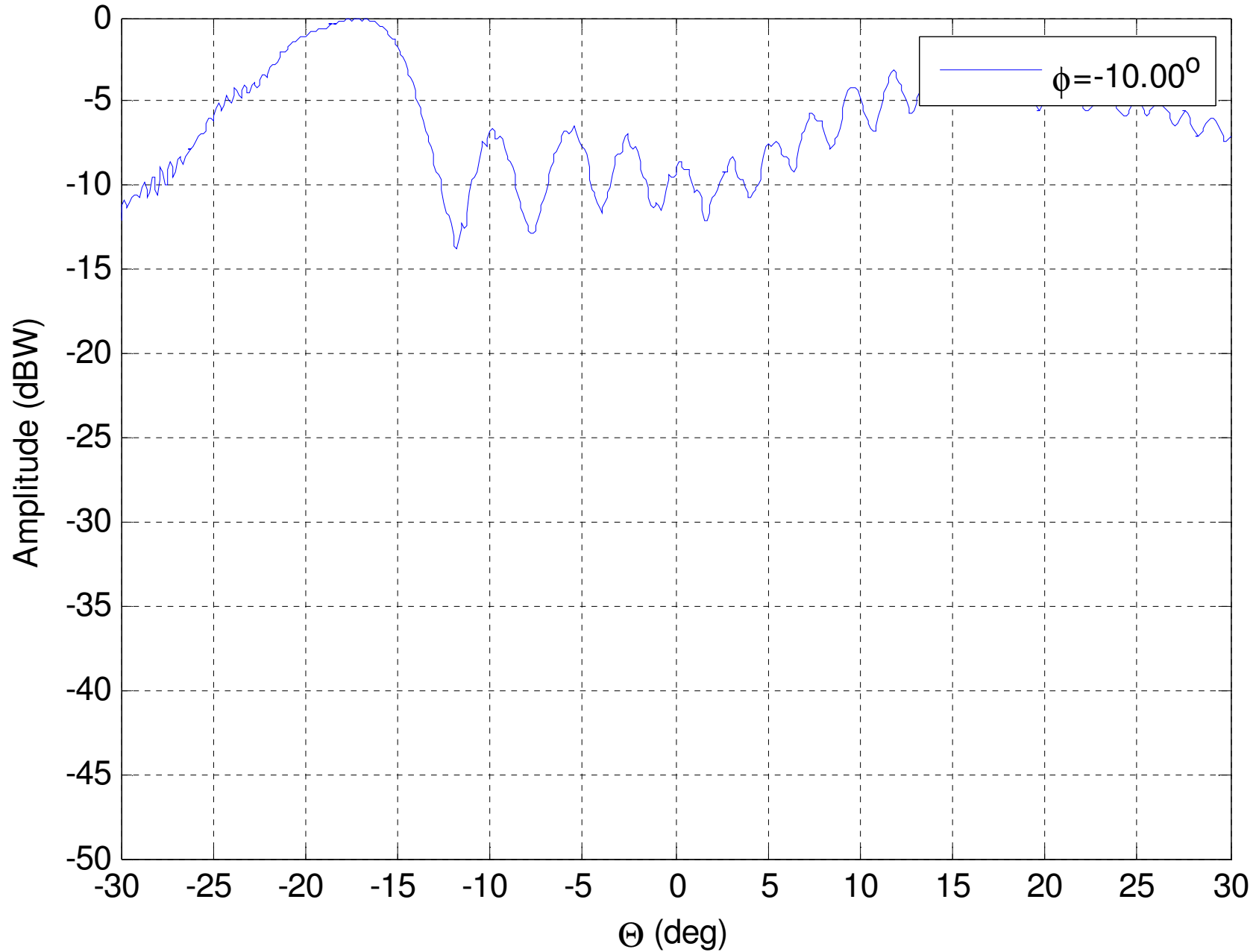
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: 3.15 dBW, Date: 15-Dec-2011



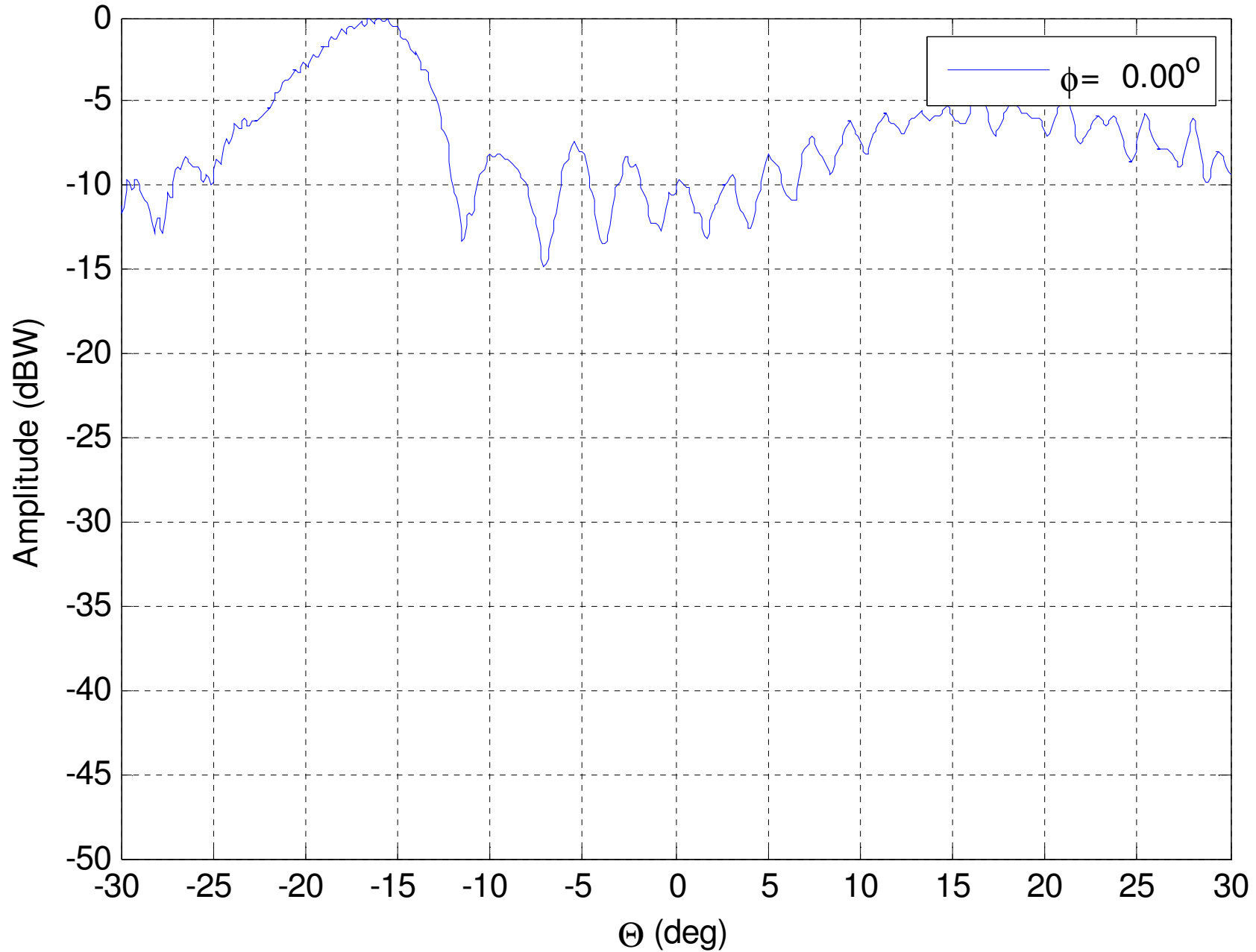
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: 8.04 dBW, Date: 15-Dec-2011



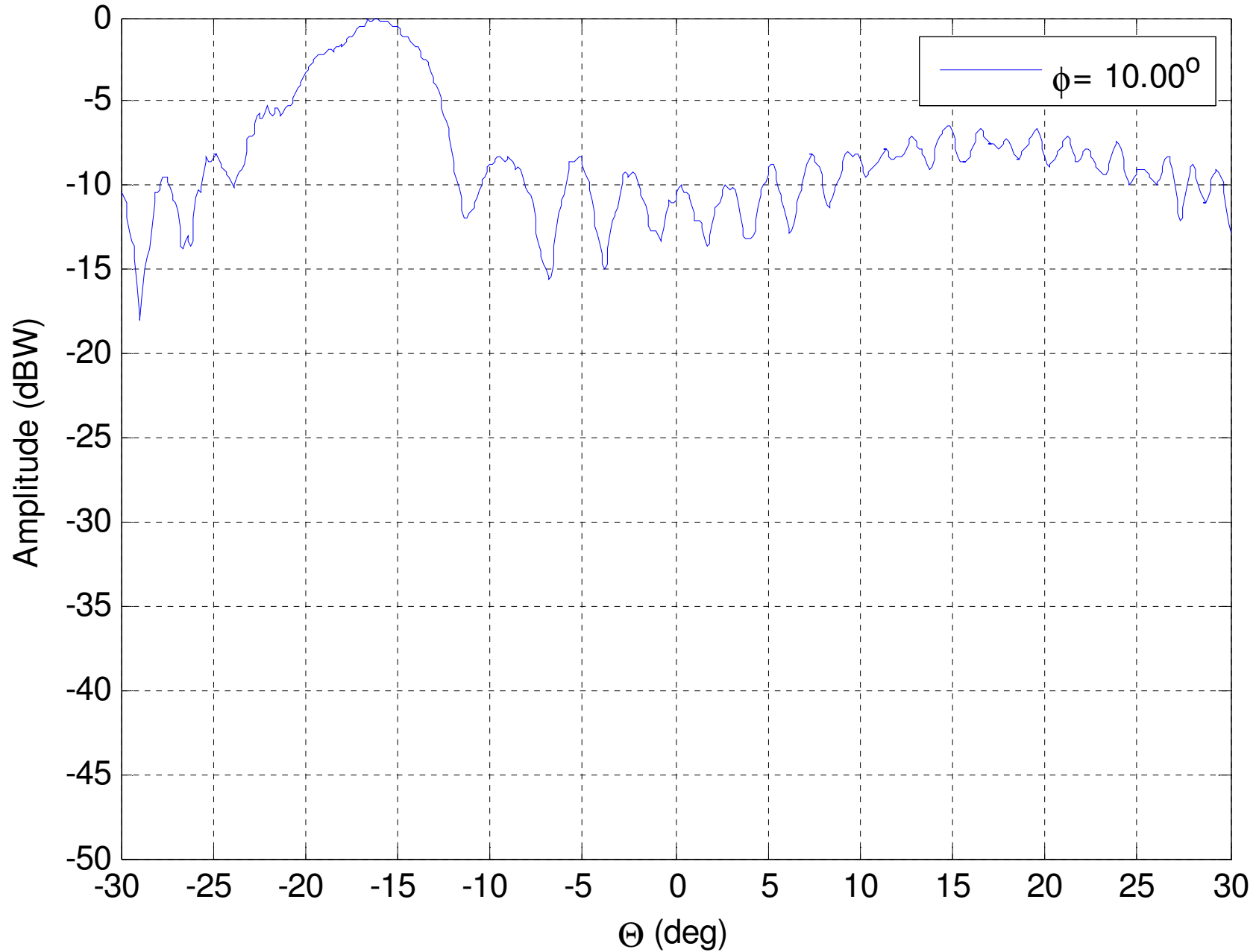
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: 9.06 dBW, Date: 15-Dec-2011



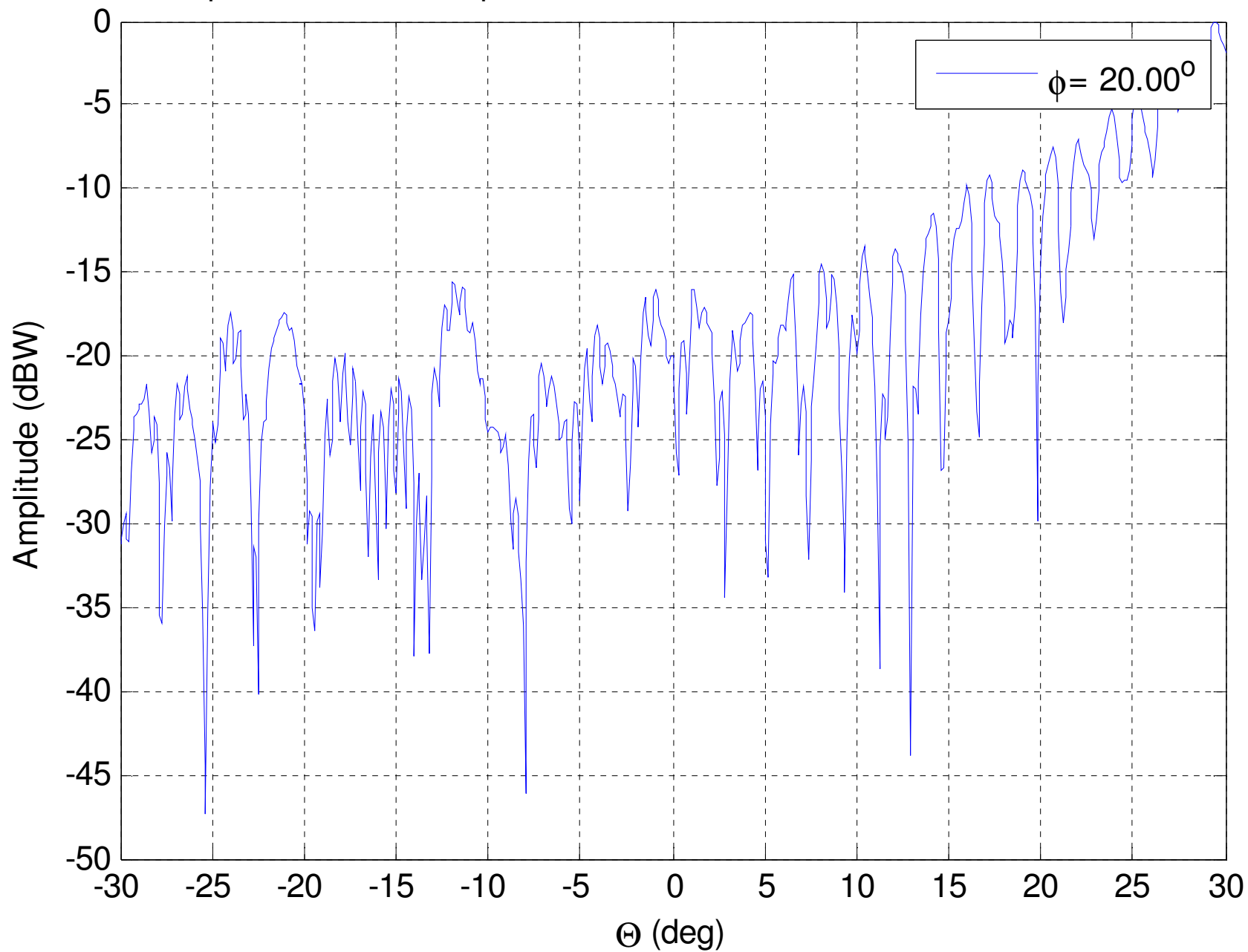
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: 9.47 dBW, Date: 15-Dec-2011



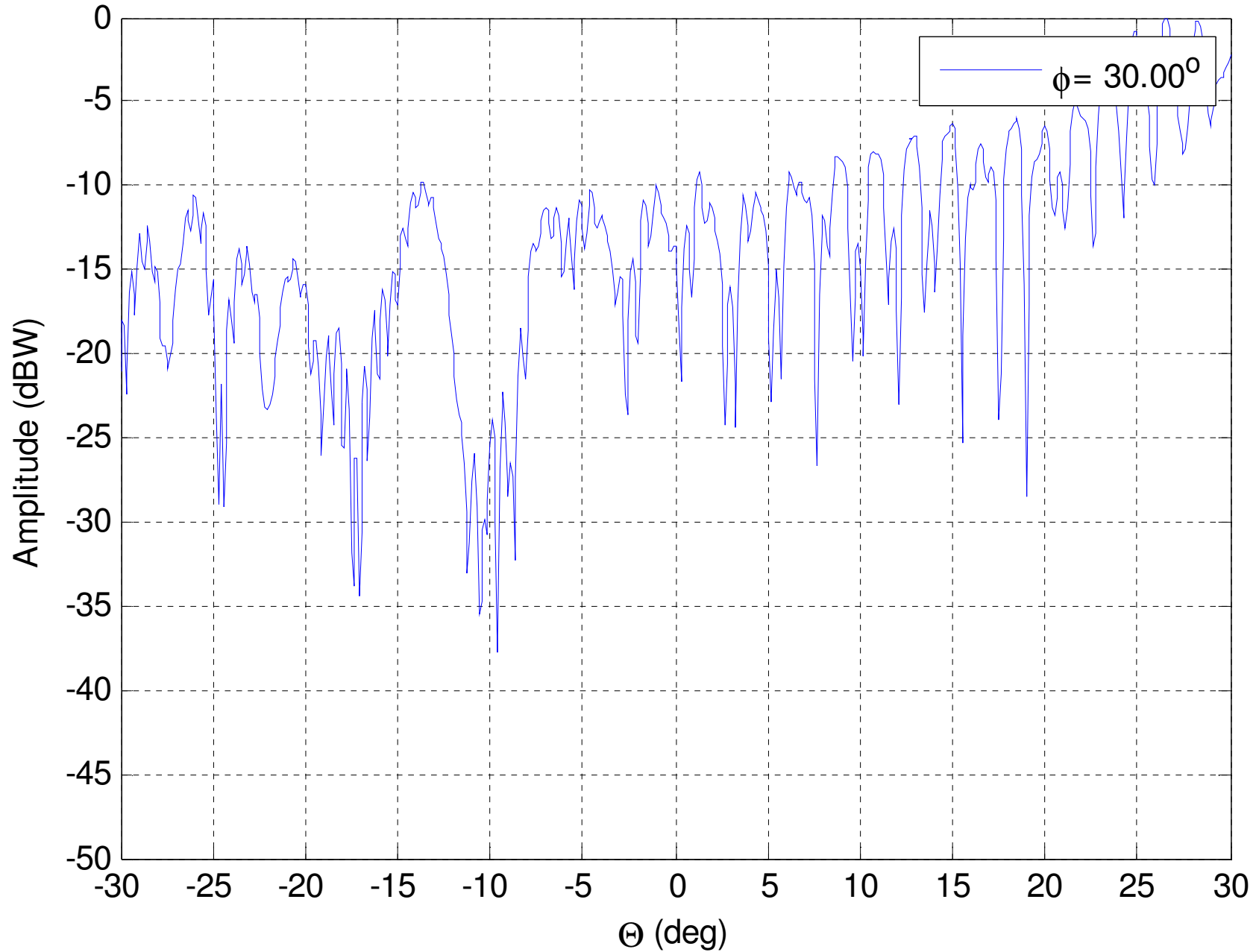
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: 5.73 dBW, Date: 15-Dec-2011



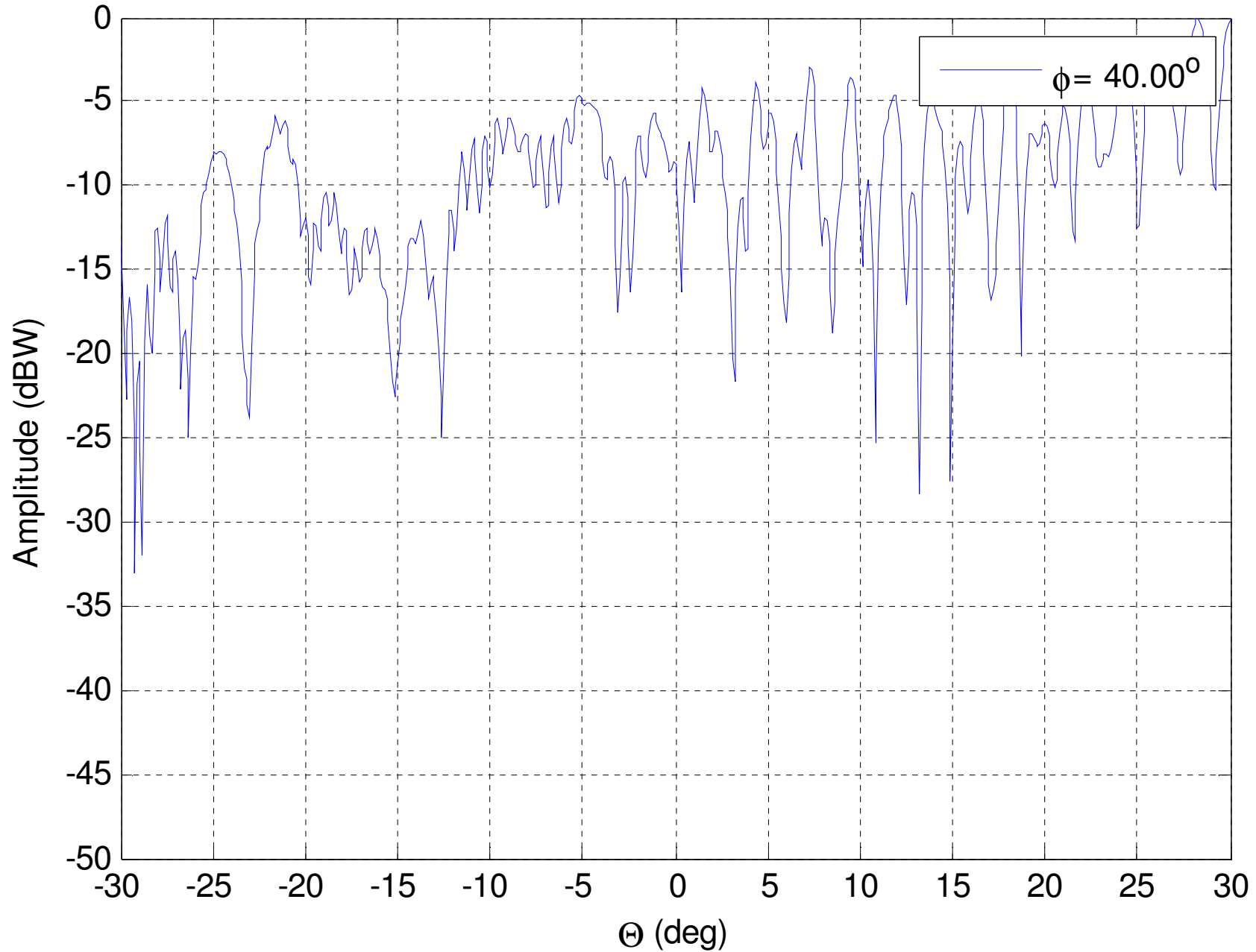
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -0.62 dBW, Date: 15-Dec-2011



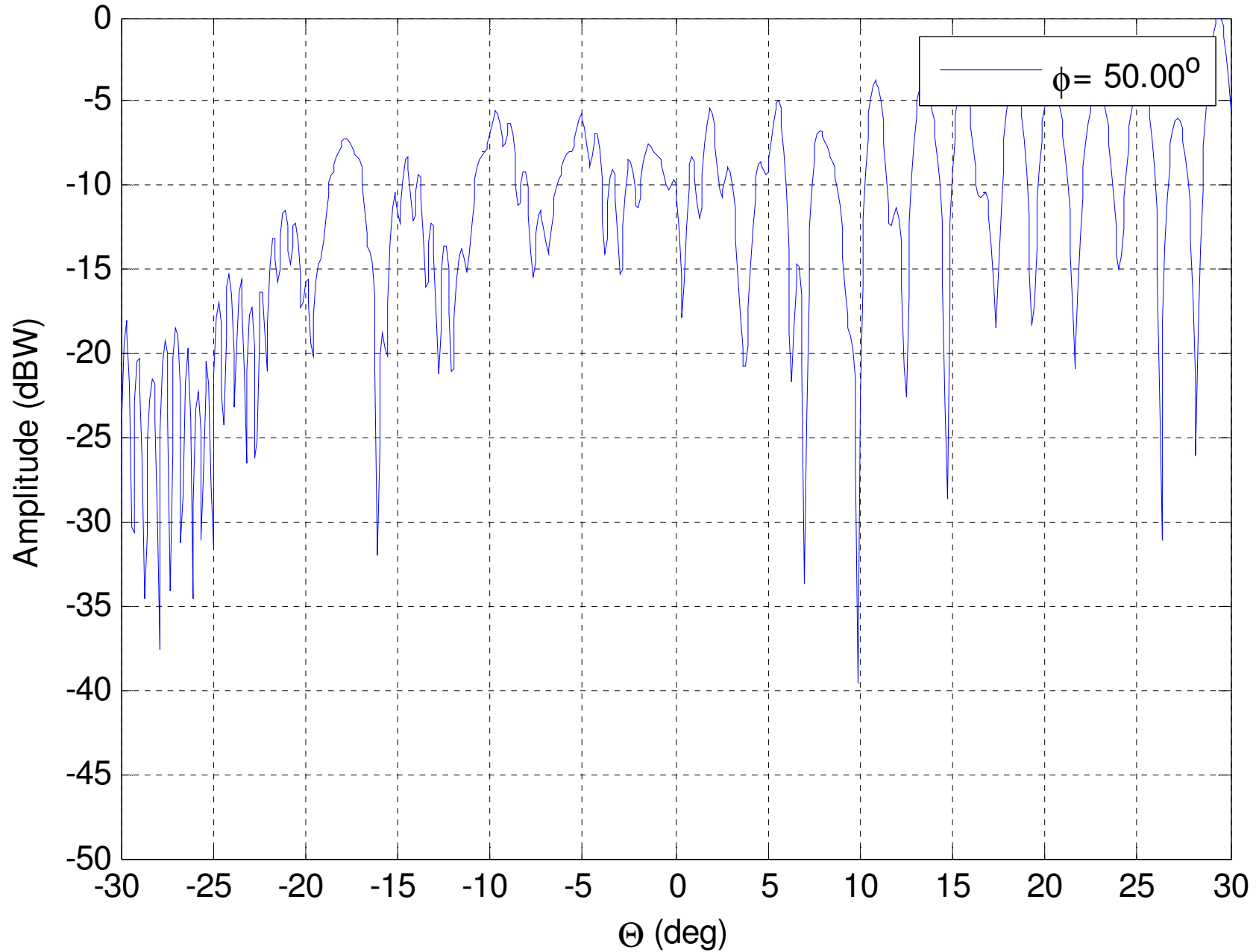
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -5.45 dBW, Date: 15-Dec-2011



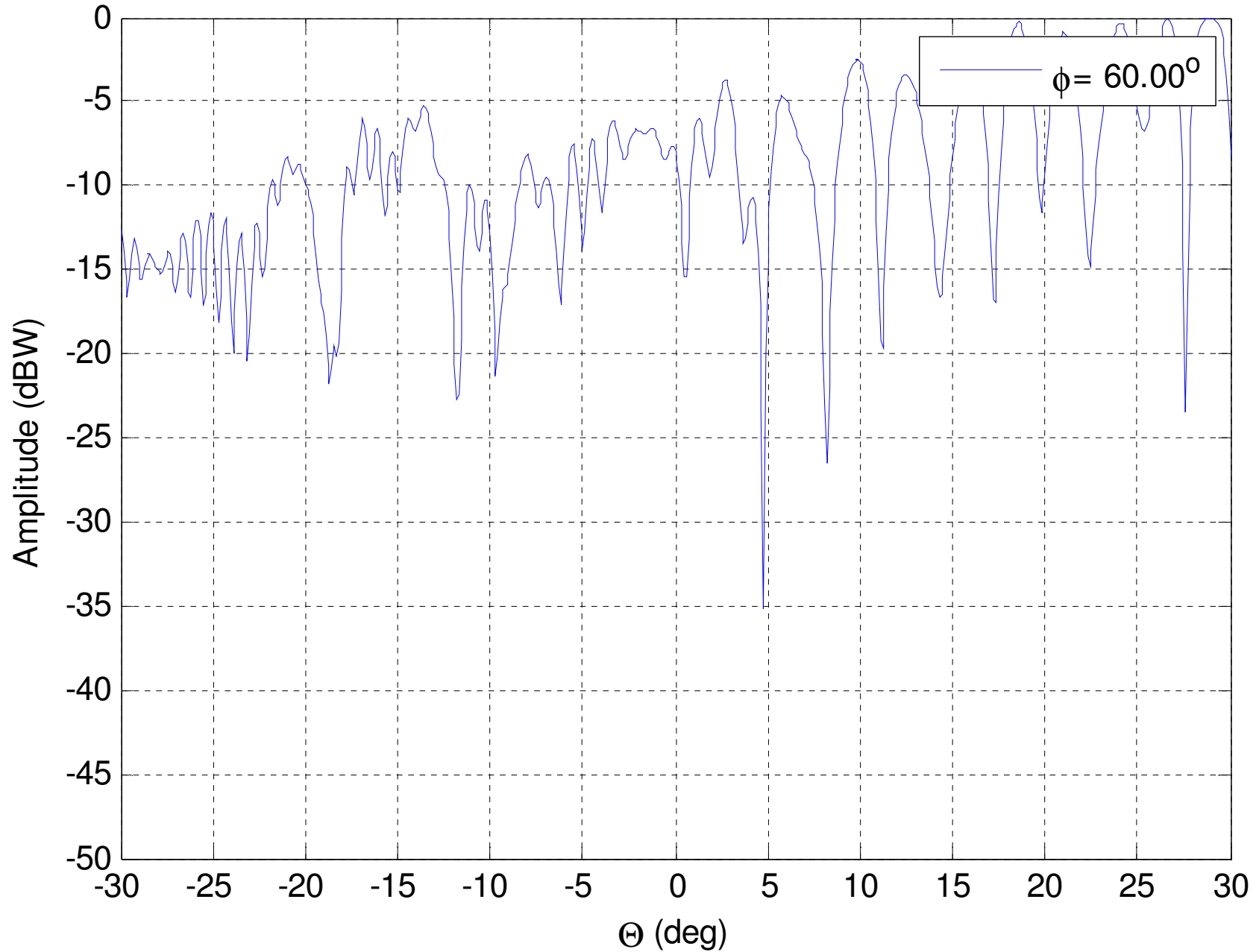
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -4.34 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

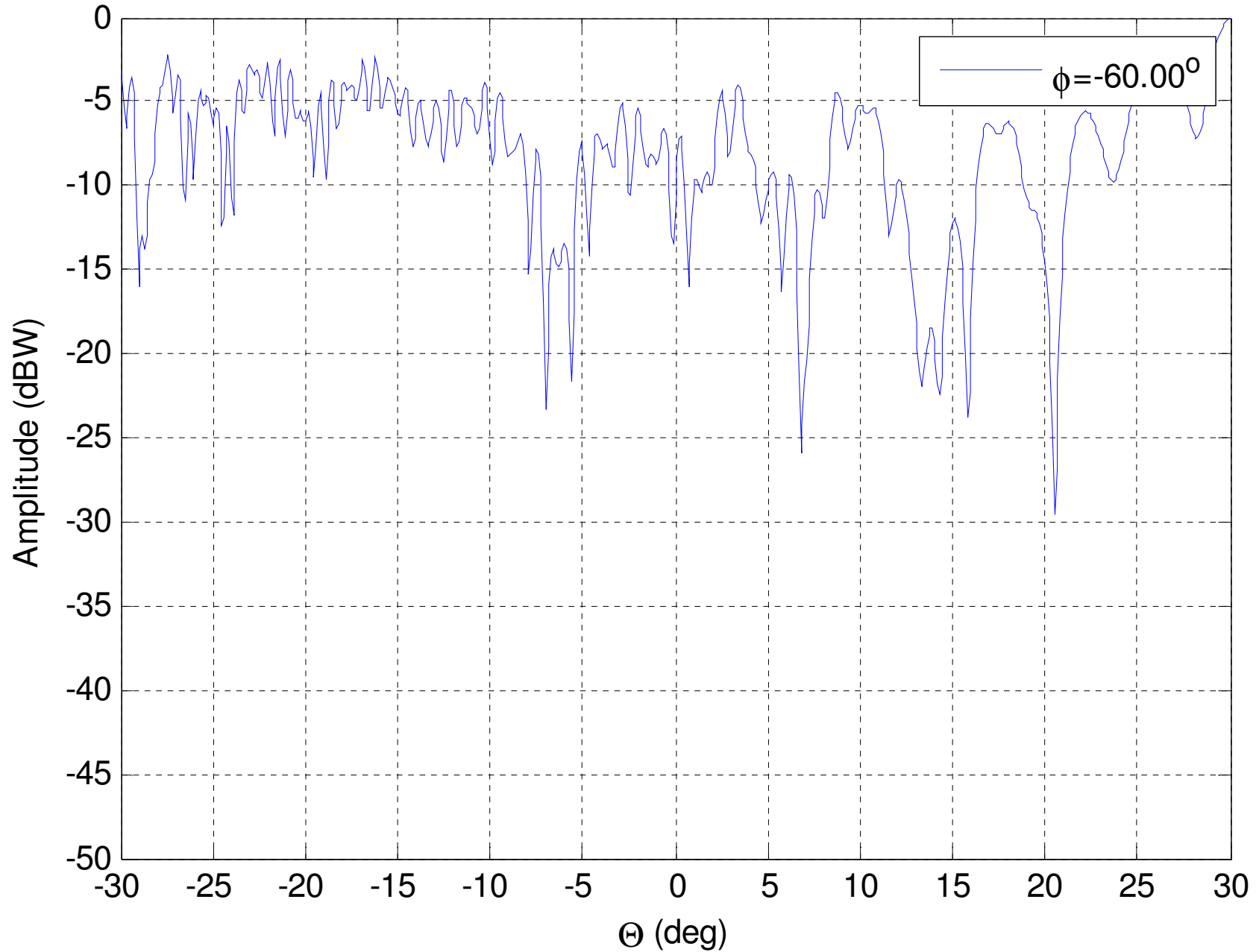
Input file: tx-17.3-lhcp-60.cut, Peak: -6.29 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

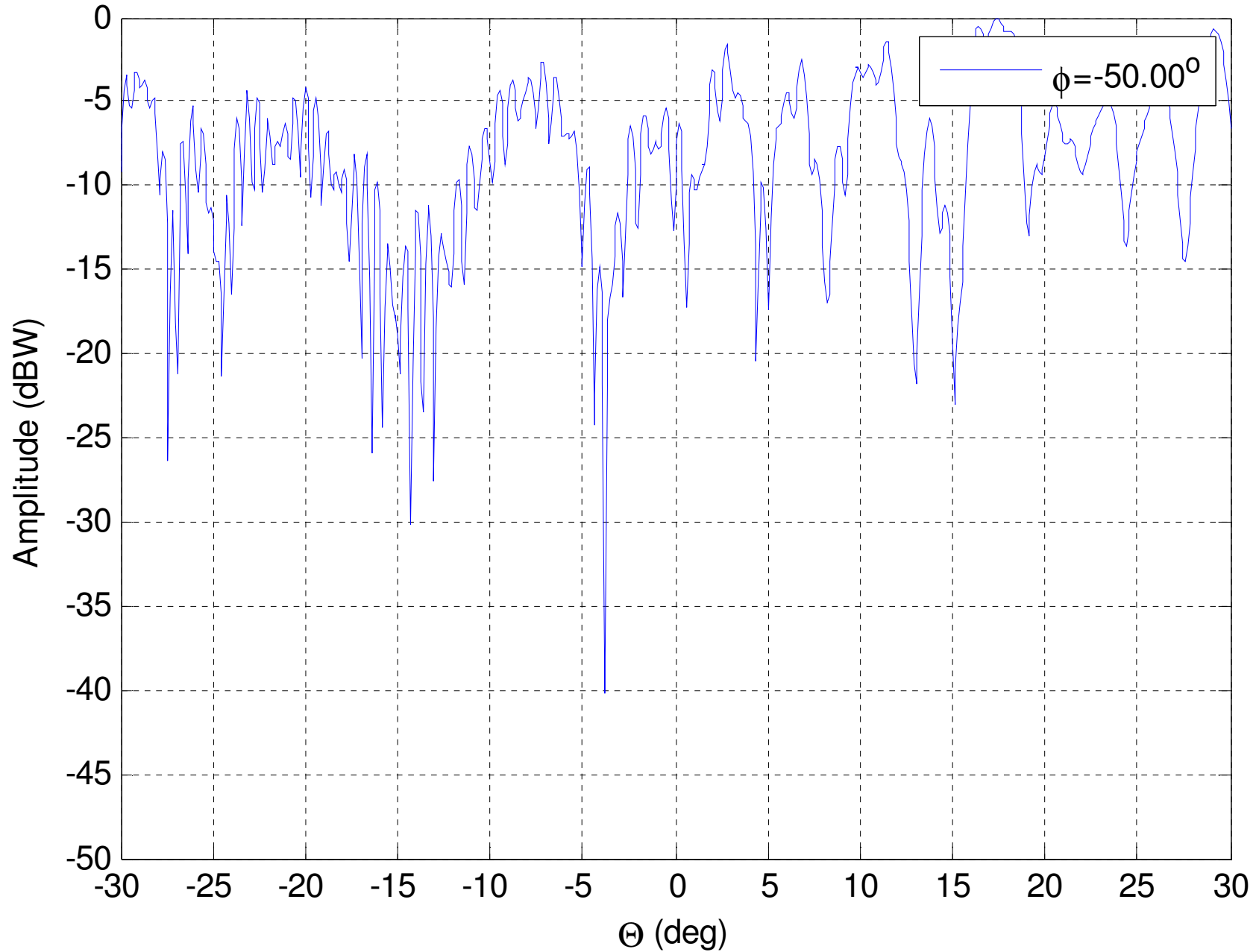
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -7.19 dBW, Date: 15-Dec-2011



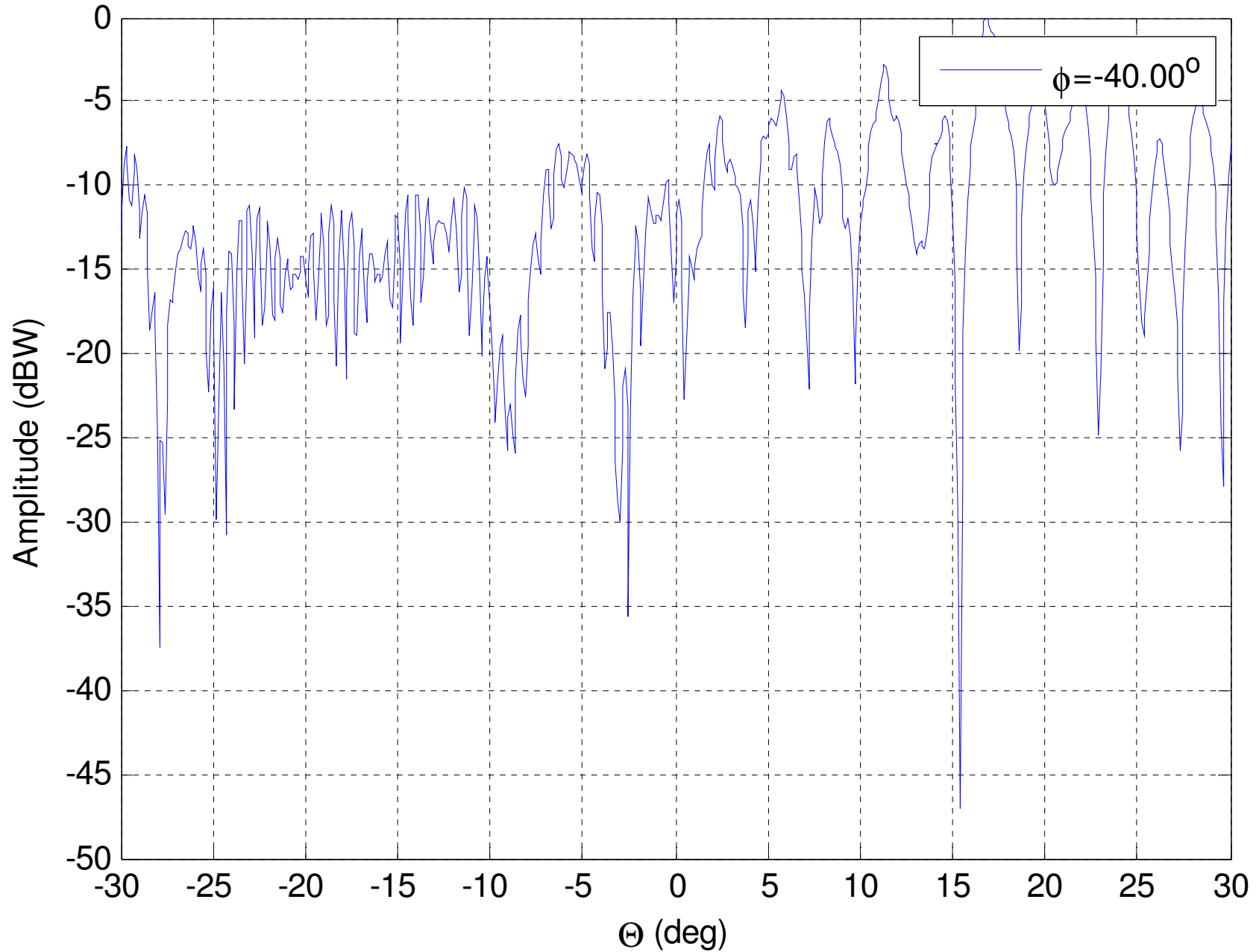
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.05 dBW, Date: 15-Dec-2011



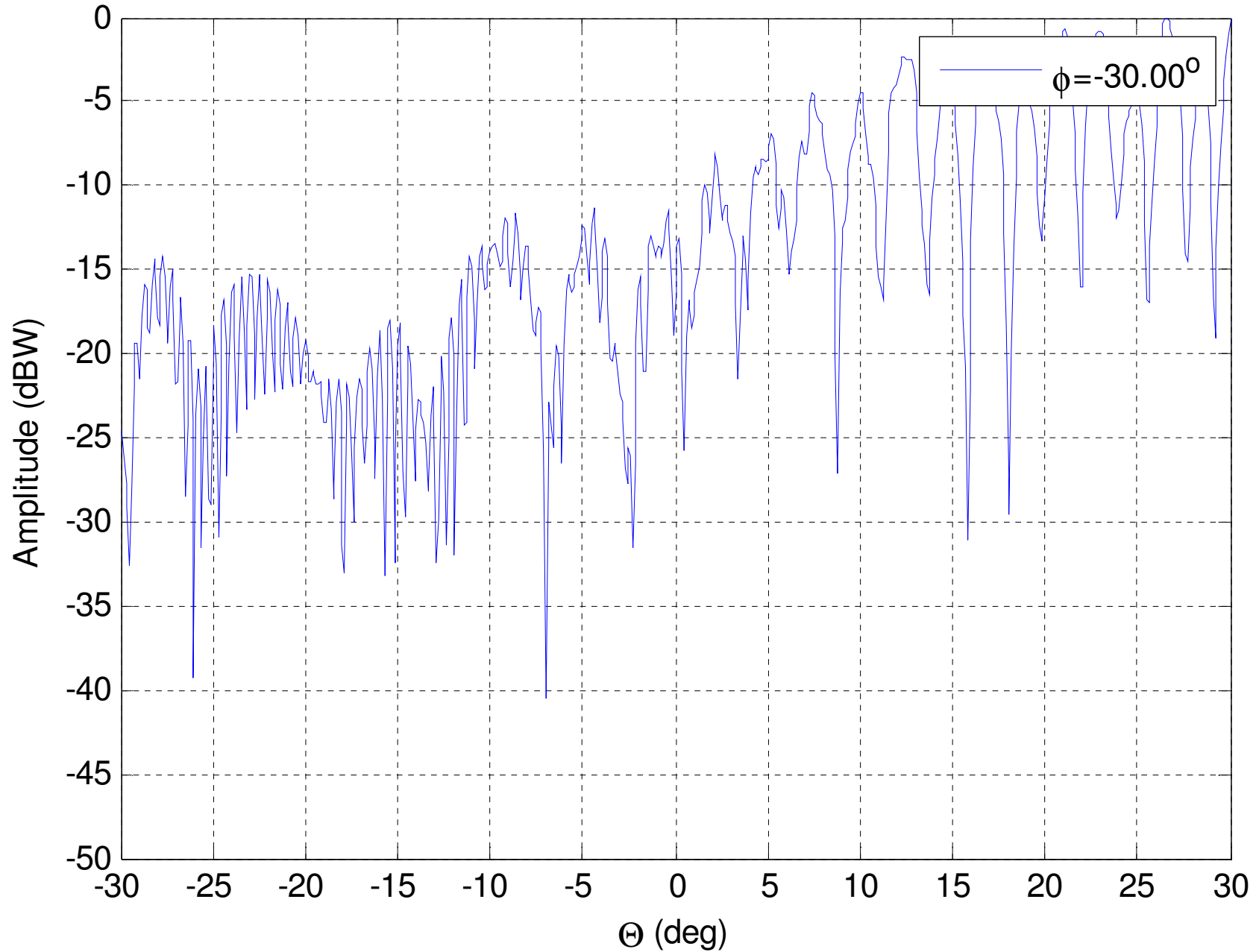
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -3.69 dBW, Date: 15-Dec-2011



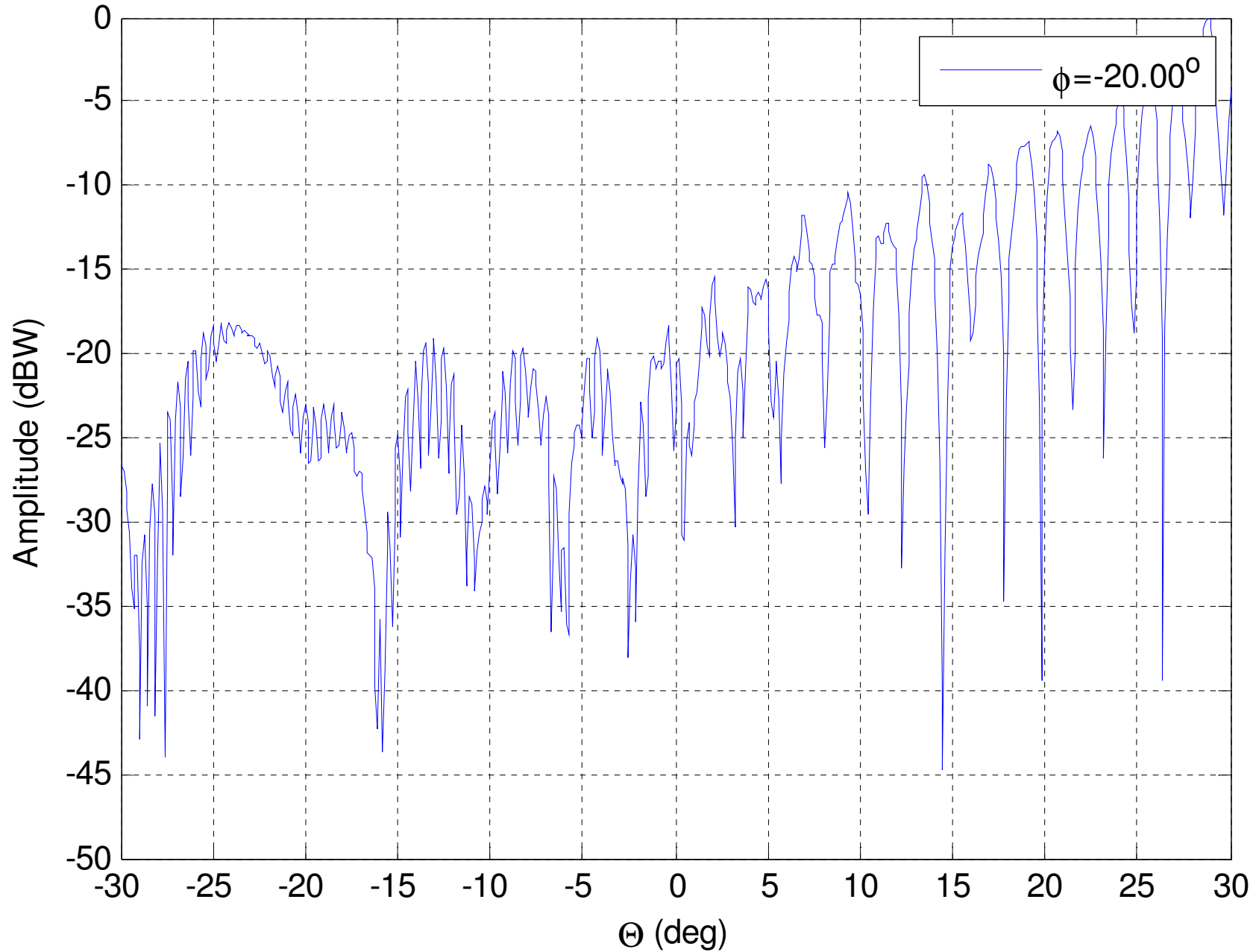
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -1.58 dBW, Date: 15-Dec-2011



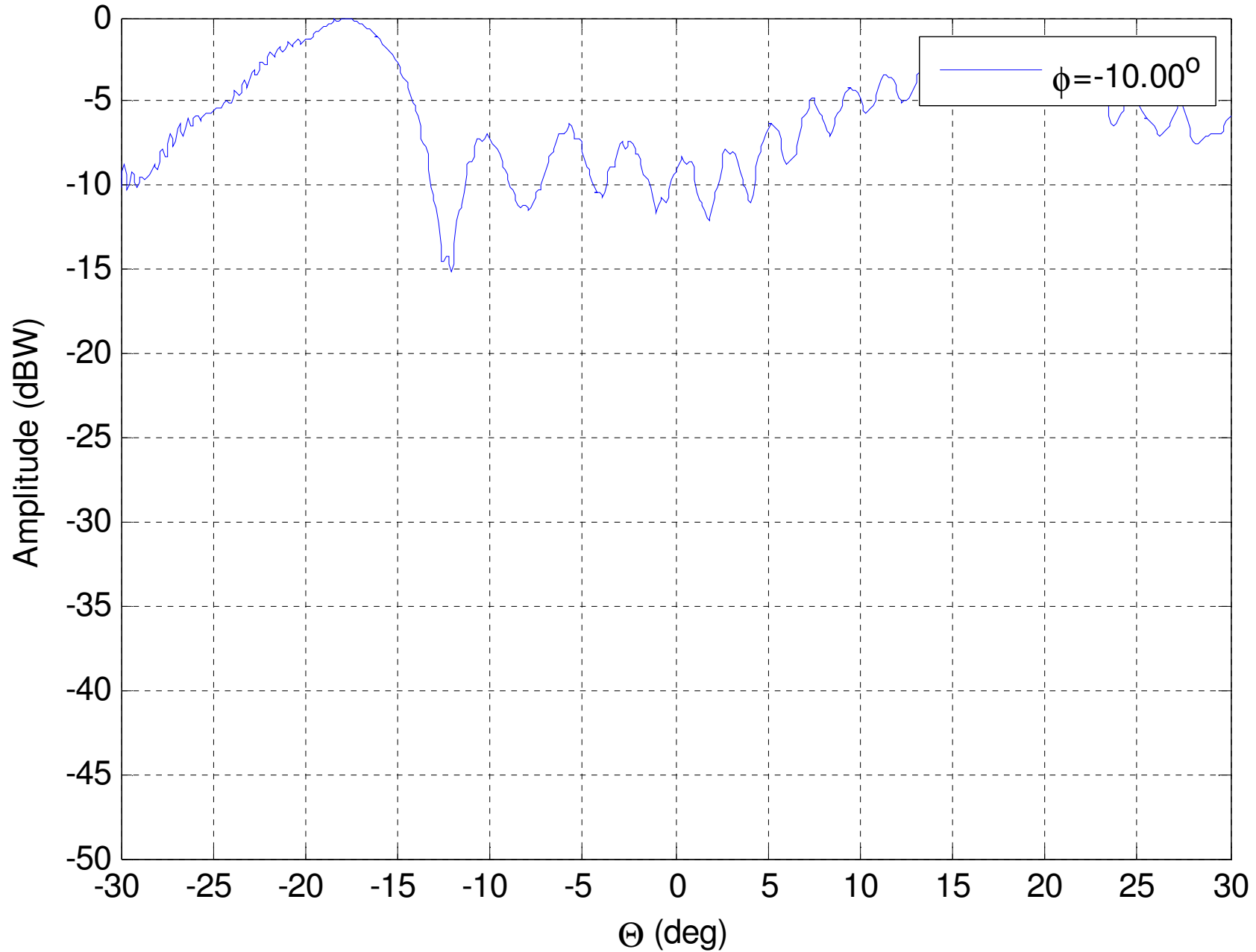
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: 5.40 dBW, Date: 15-Dec-2011



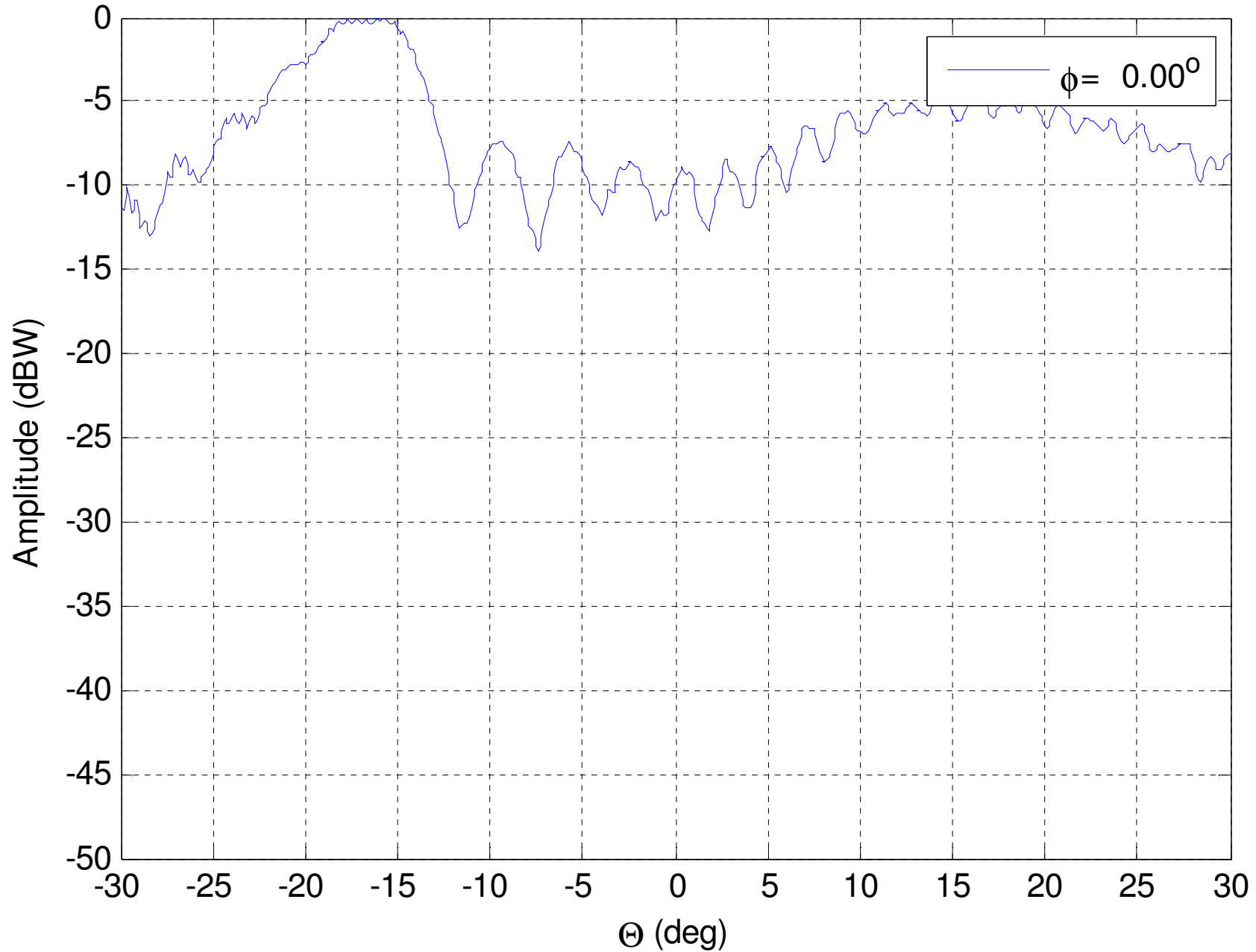
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: 8.02 dBW, Date: 15-Dec-2011



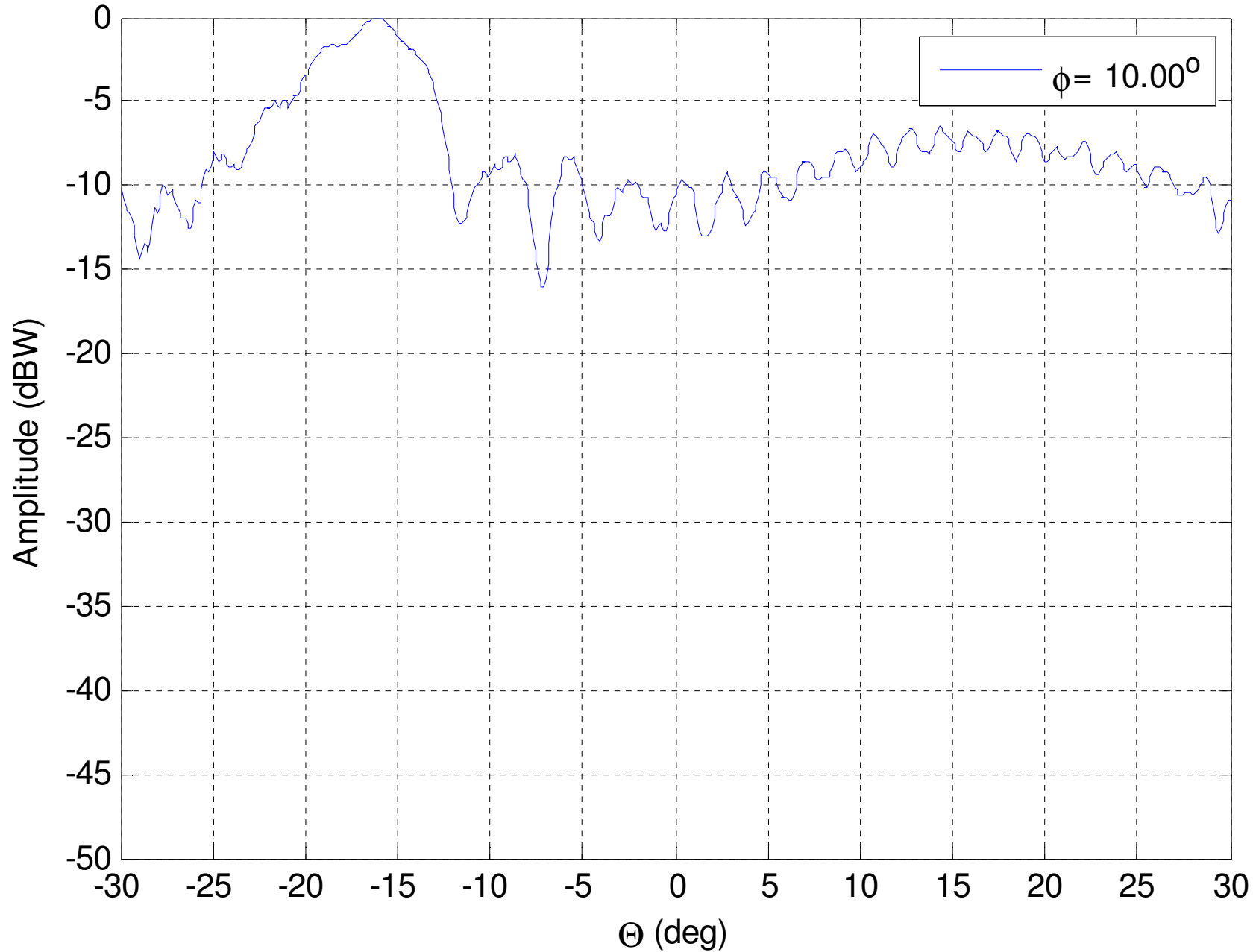
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: 8.67 dBW, Date: 15-Dec-2011



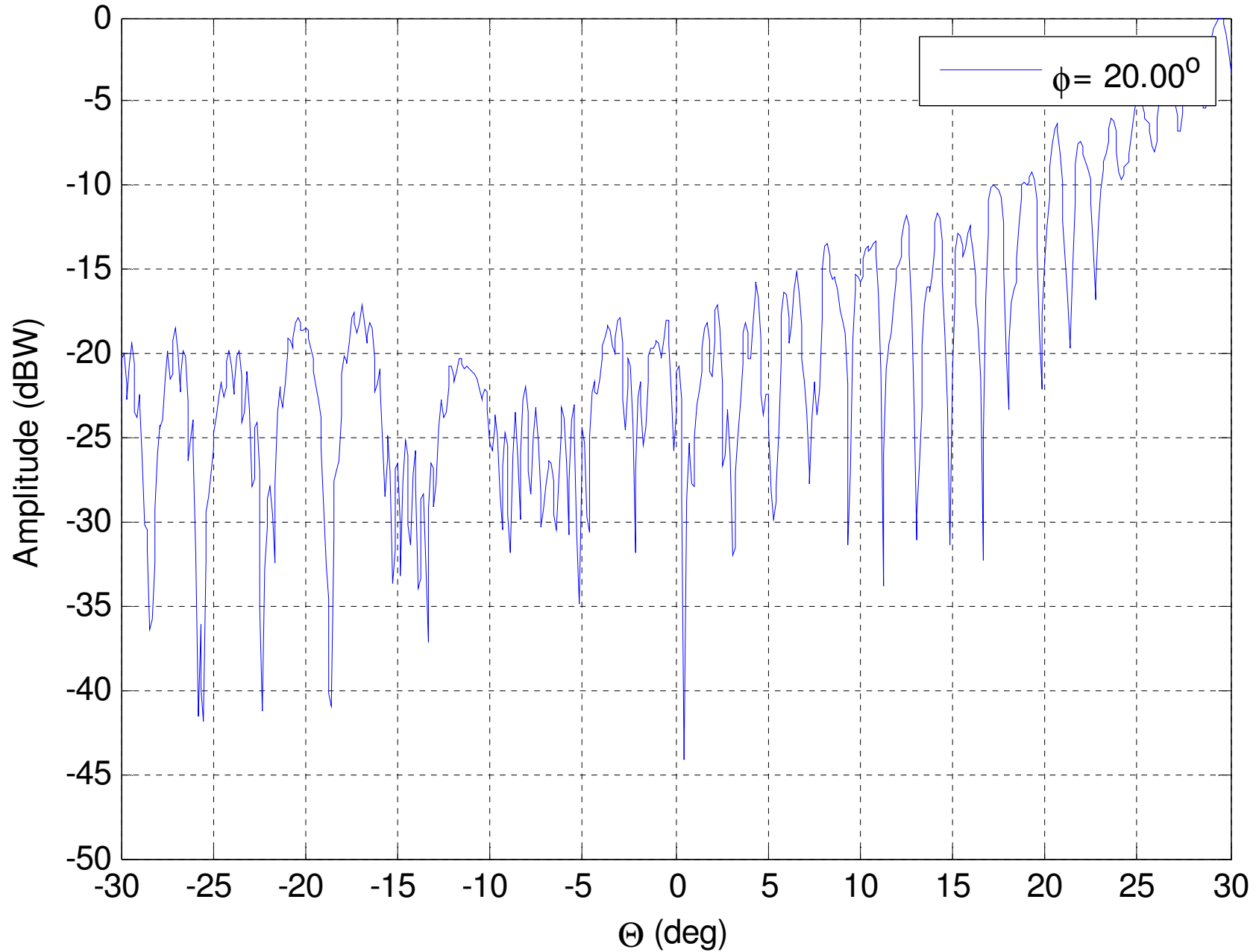
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: 9.37 dBW, Date: 15-Dec-2011



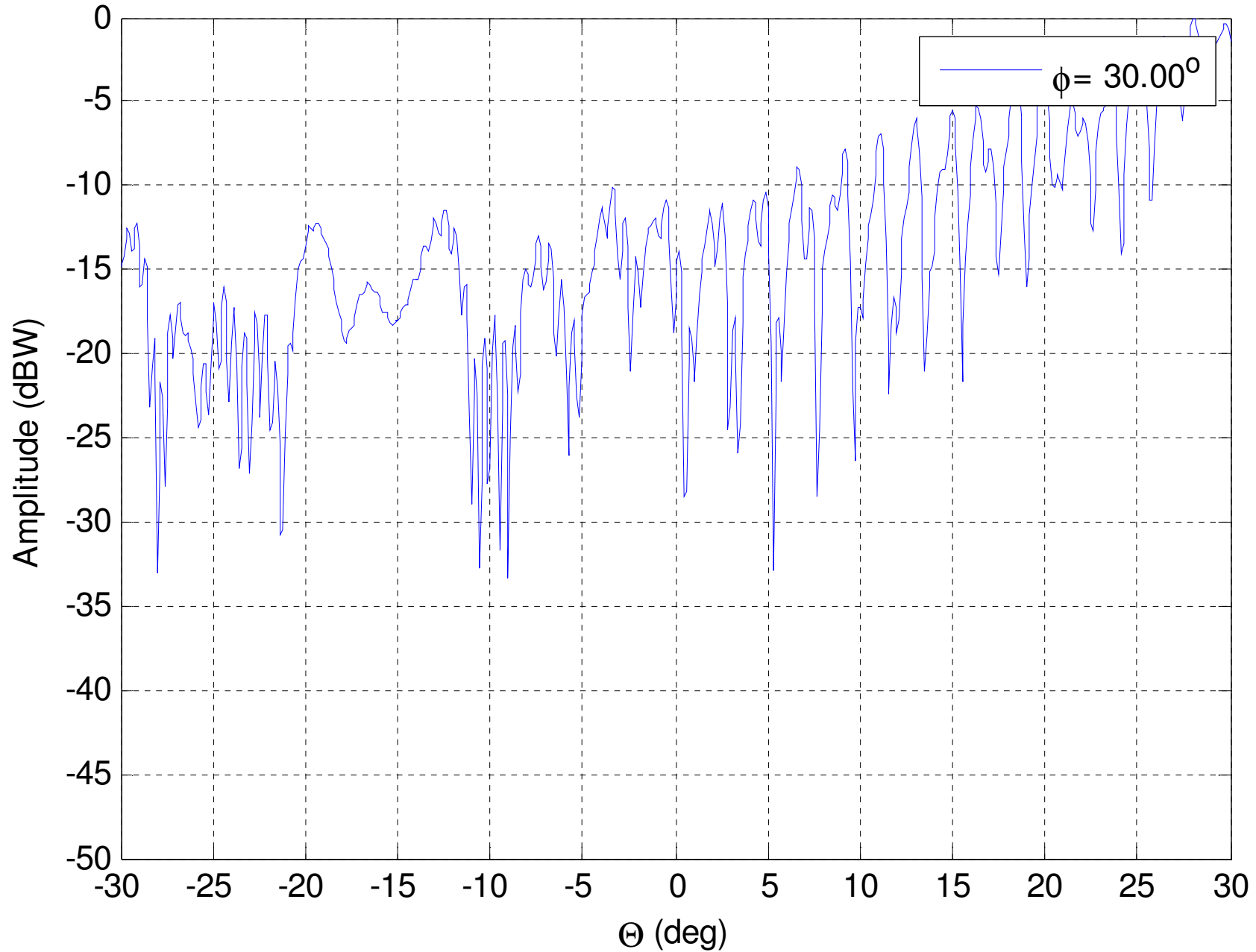
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: 5.57 dBW, Date: 15-Dec-2011



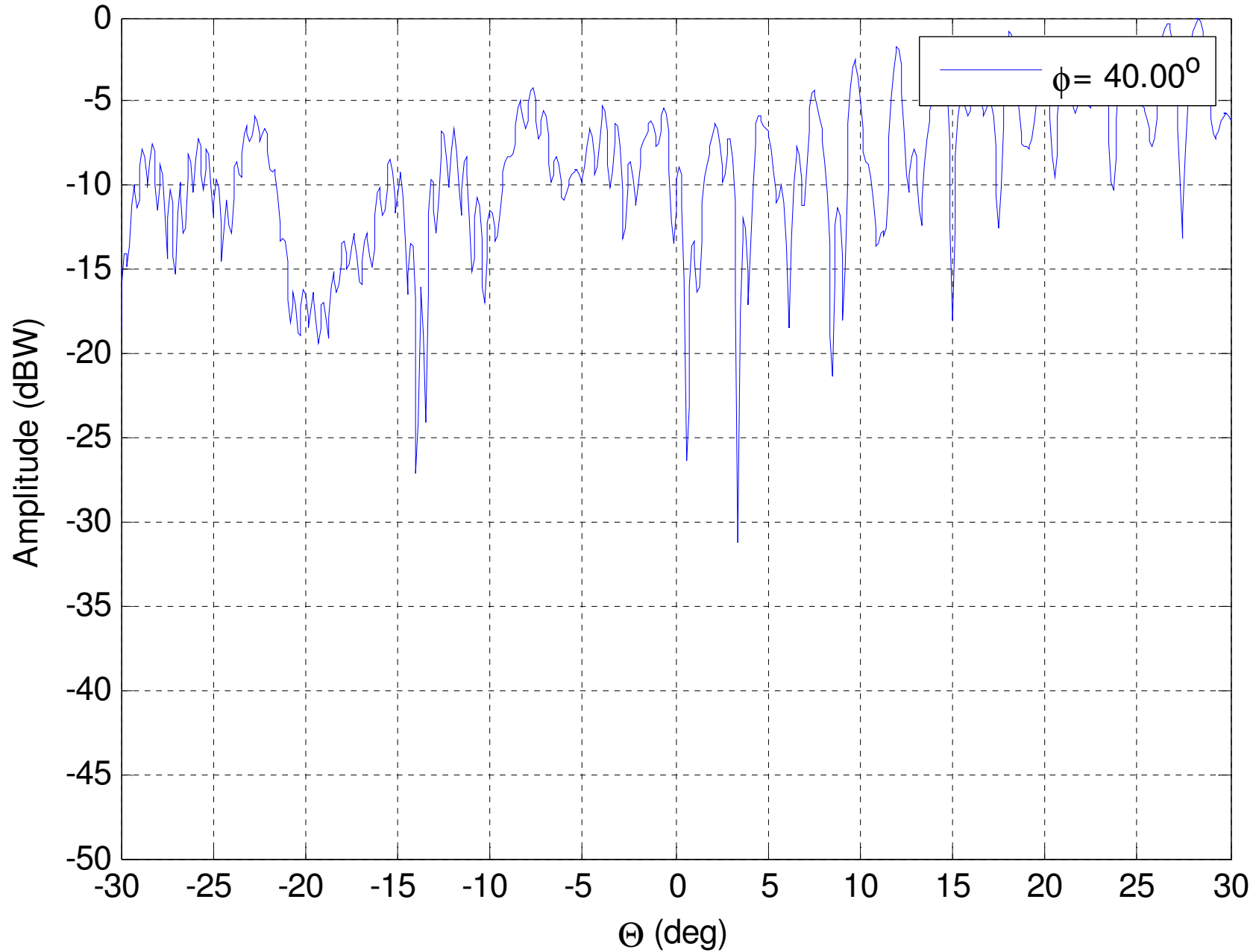
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -1.25 dBW, Date: 15-Dec-2011



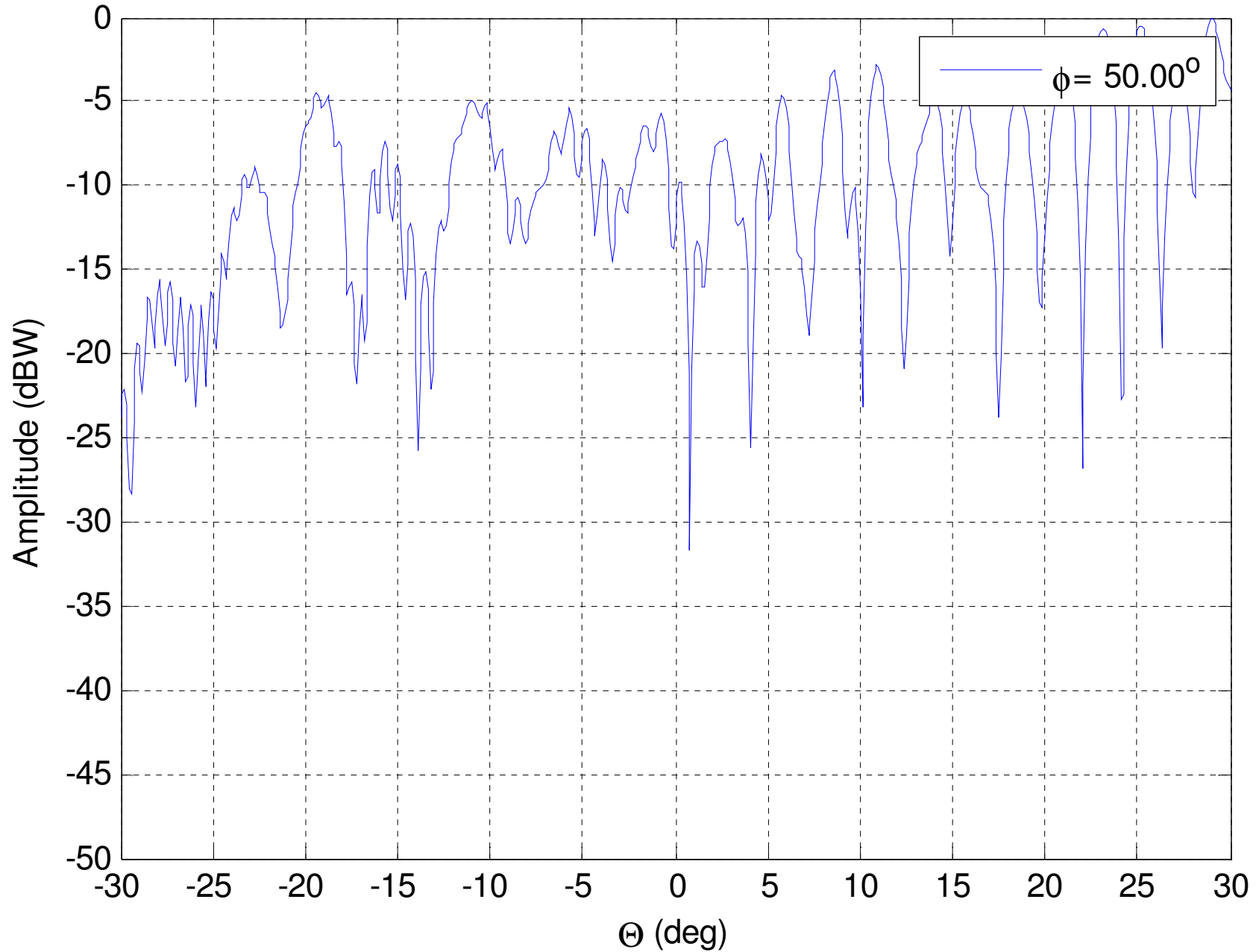
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -6.43 dBW, Date: 15-Dec-2011



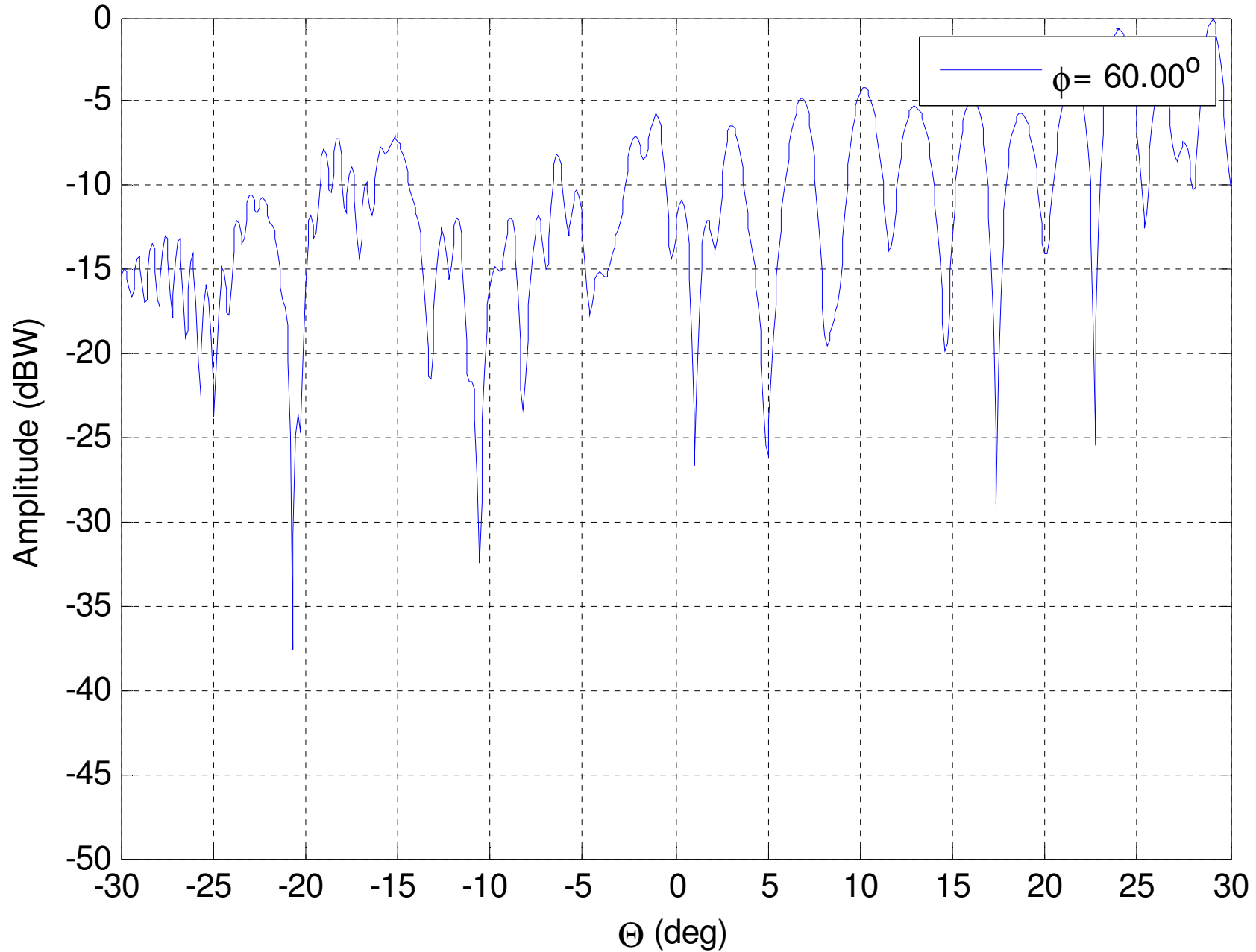
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -5.72 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

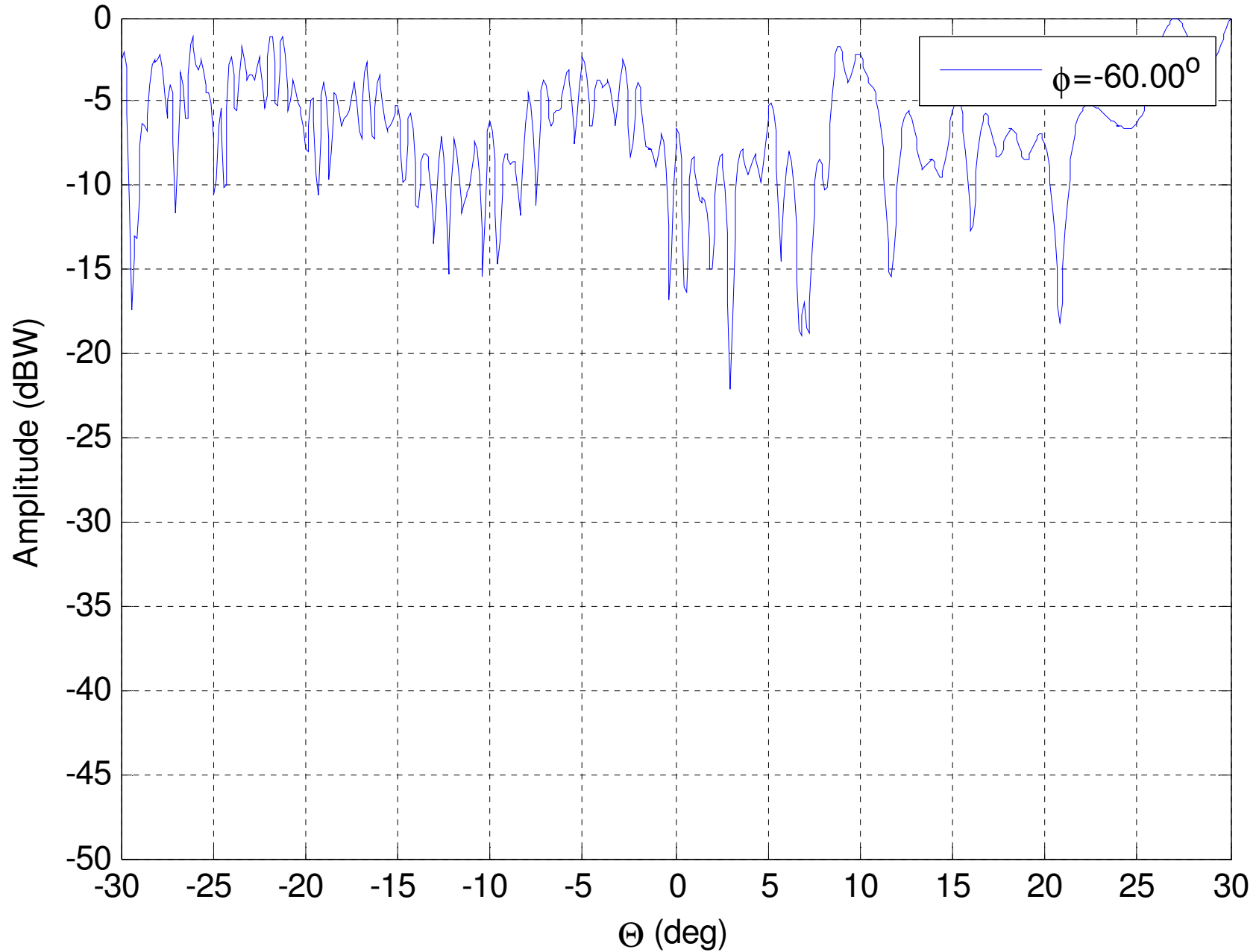
Input file: tx-17.5-rhcp-60.cut, Peak: -5.03 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

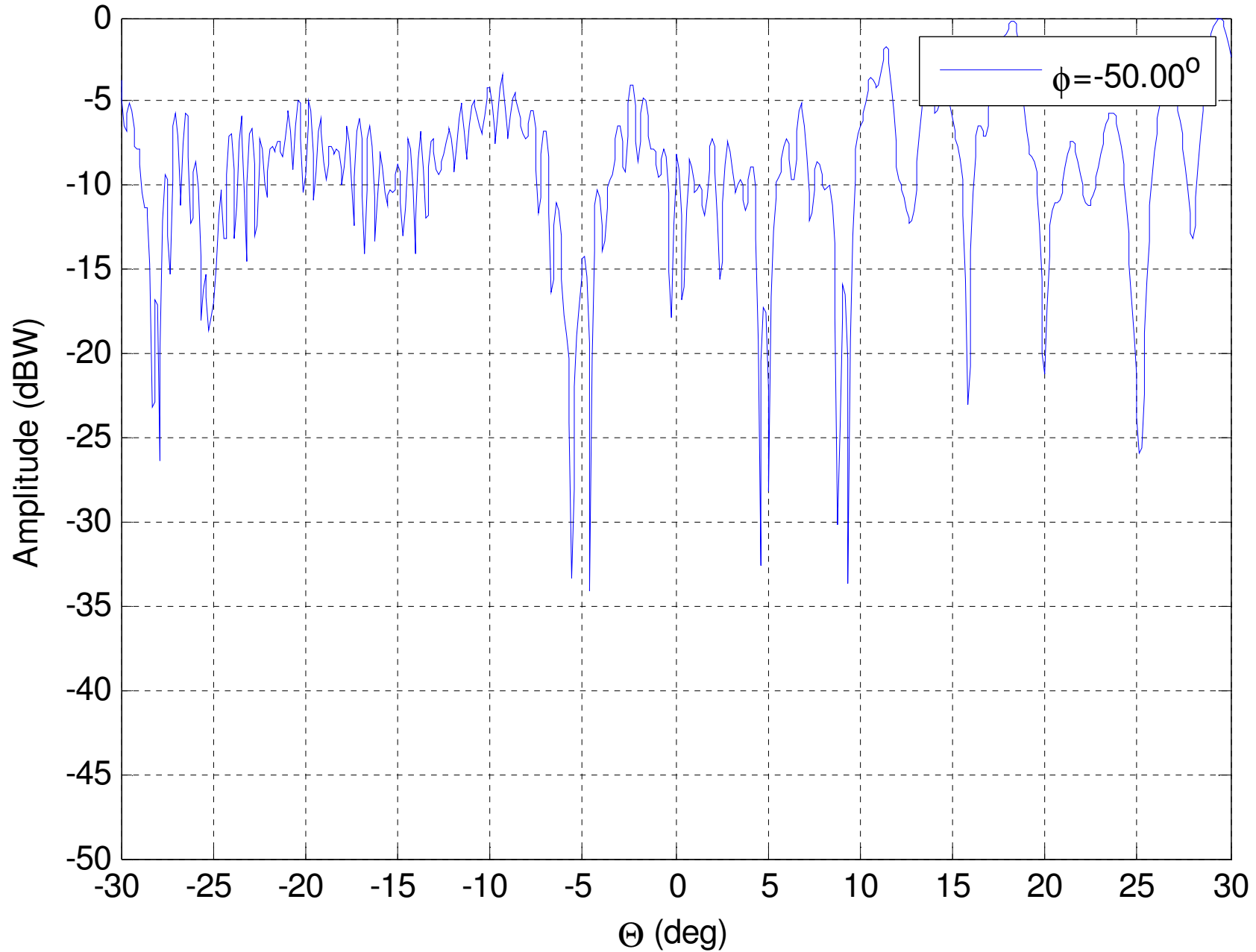
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.85 dBW, Date: 15-Dec-2011



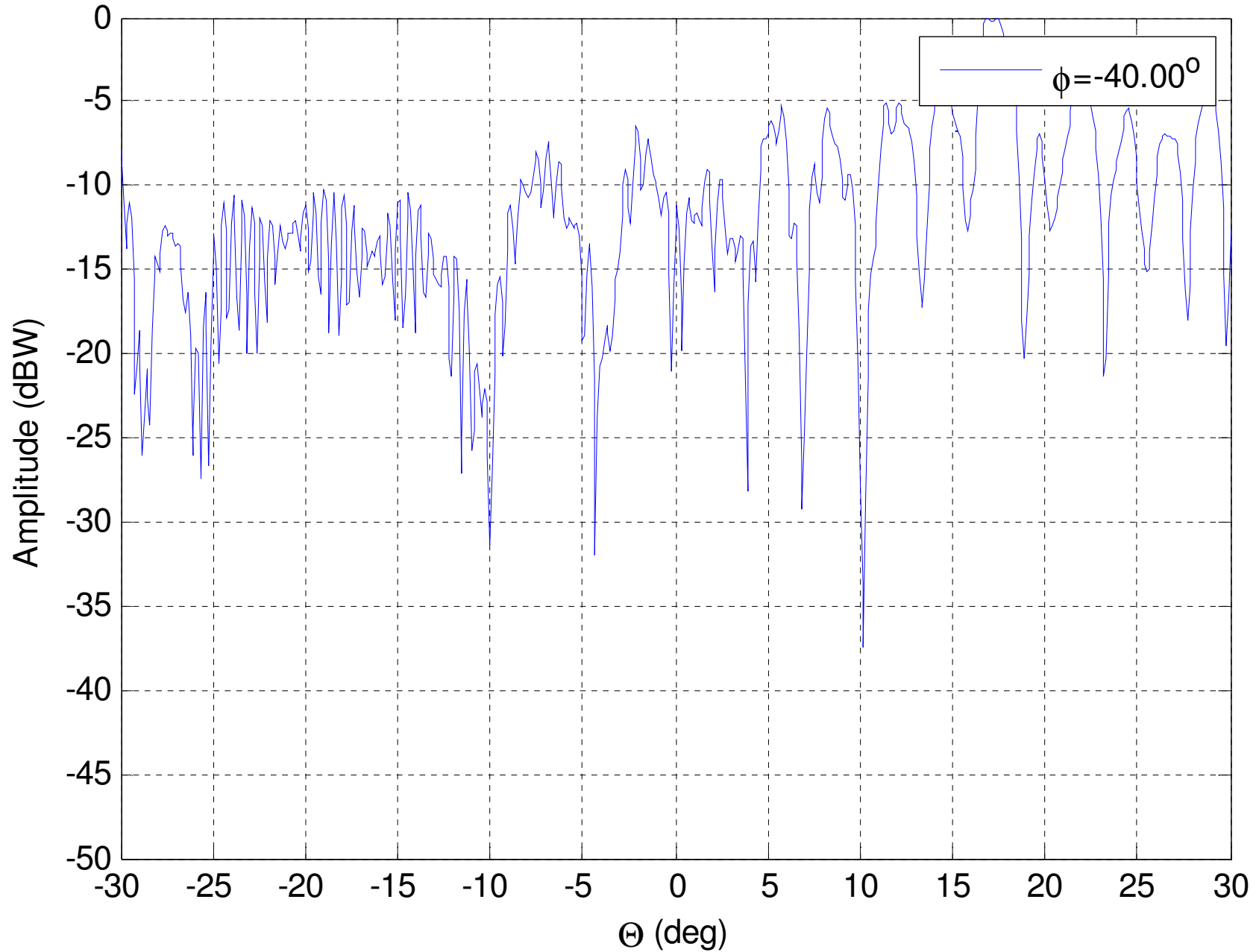
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.21 dBW, Date: 15-Dec-2011



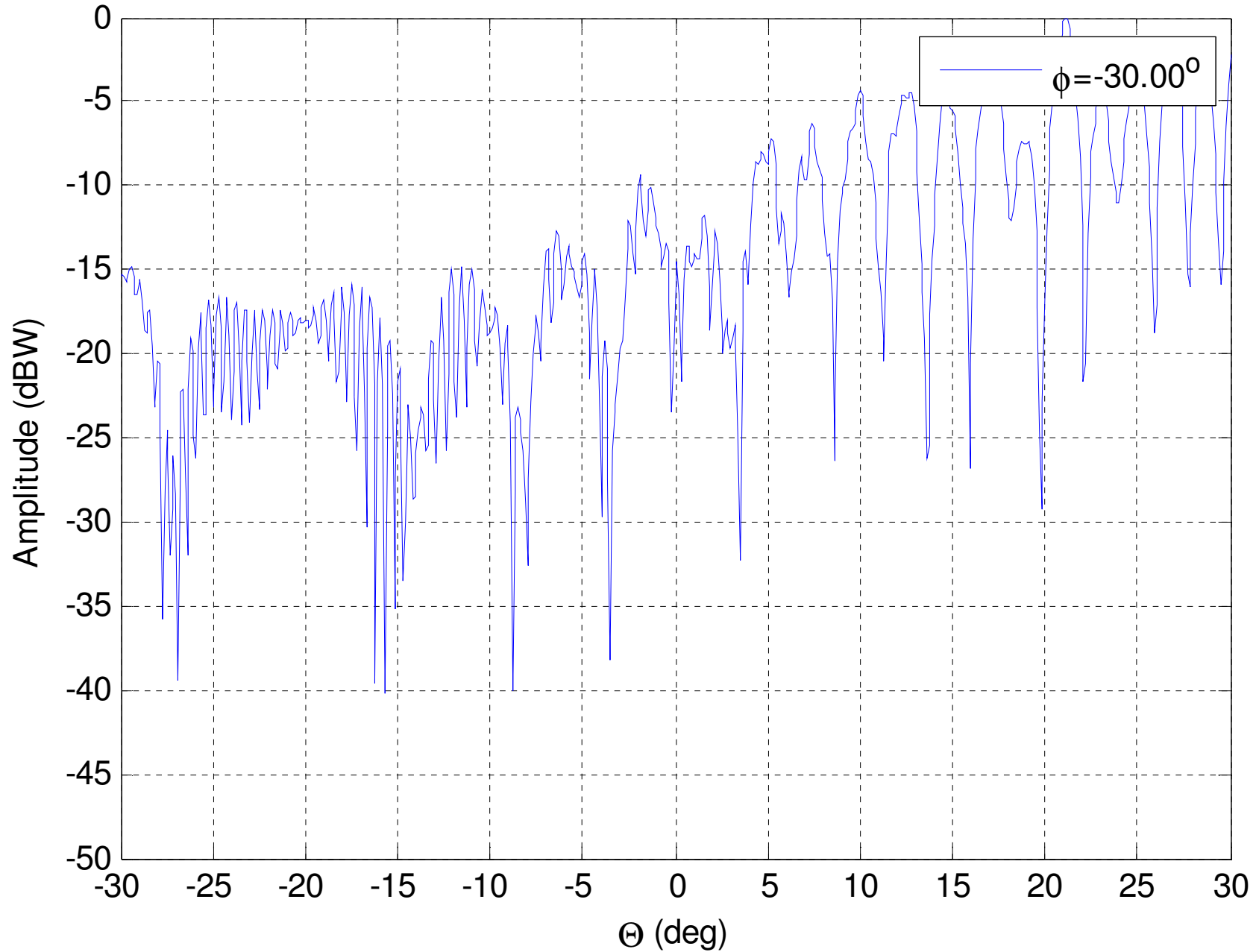
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -4.22 dBW, Date: 15-Dec-2011



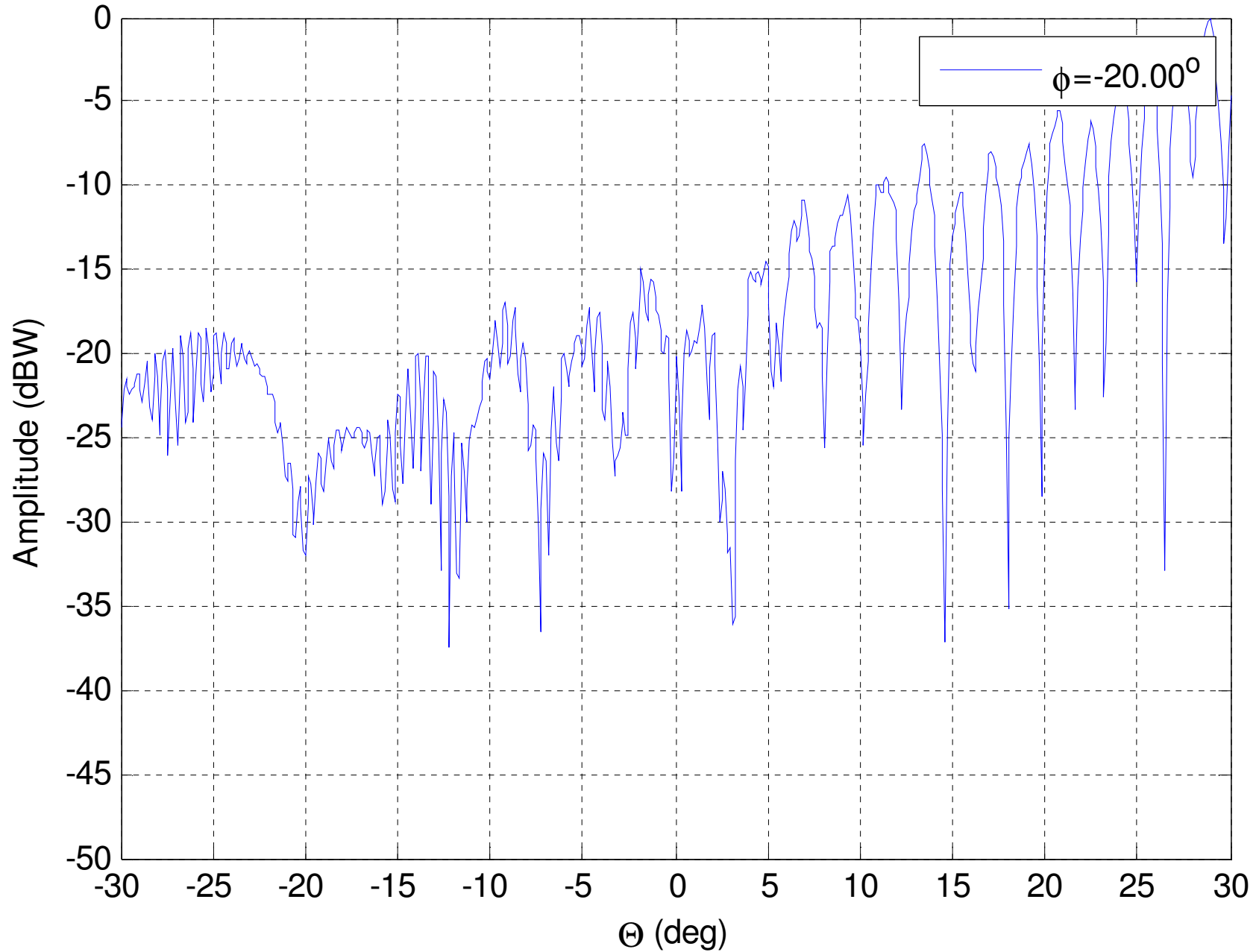
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -0.92 dBW, Date: 15-Dec-2011



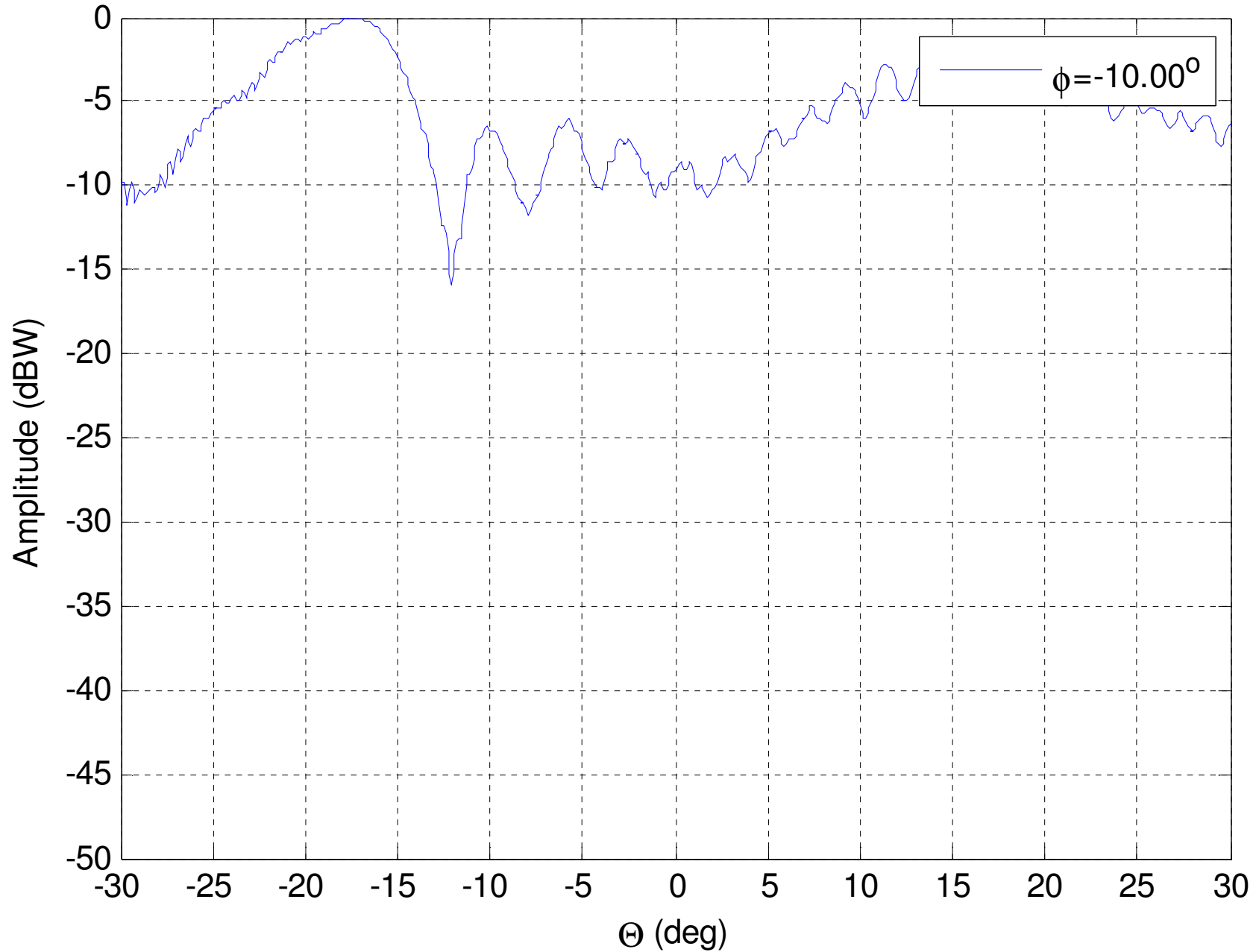
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: 4.78 dBW, Date: 15-Dec-2011



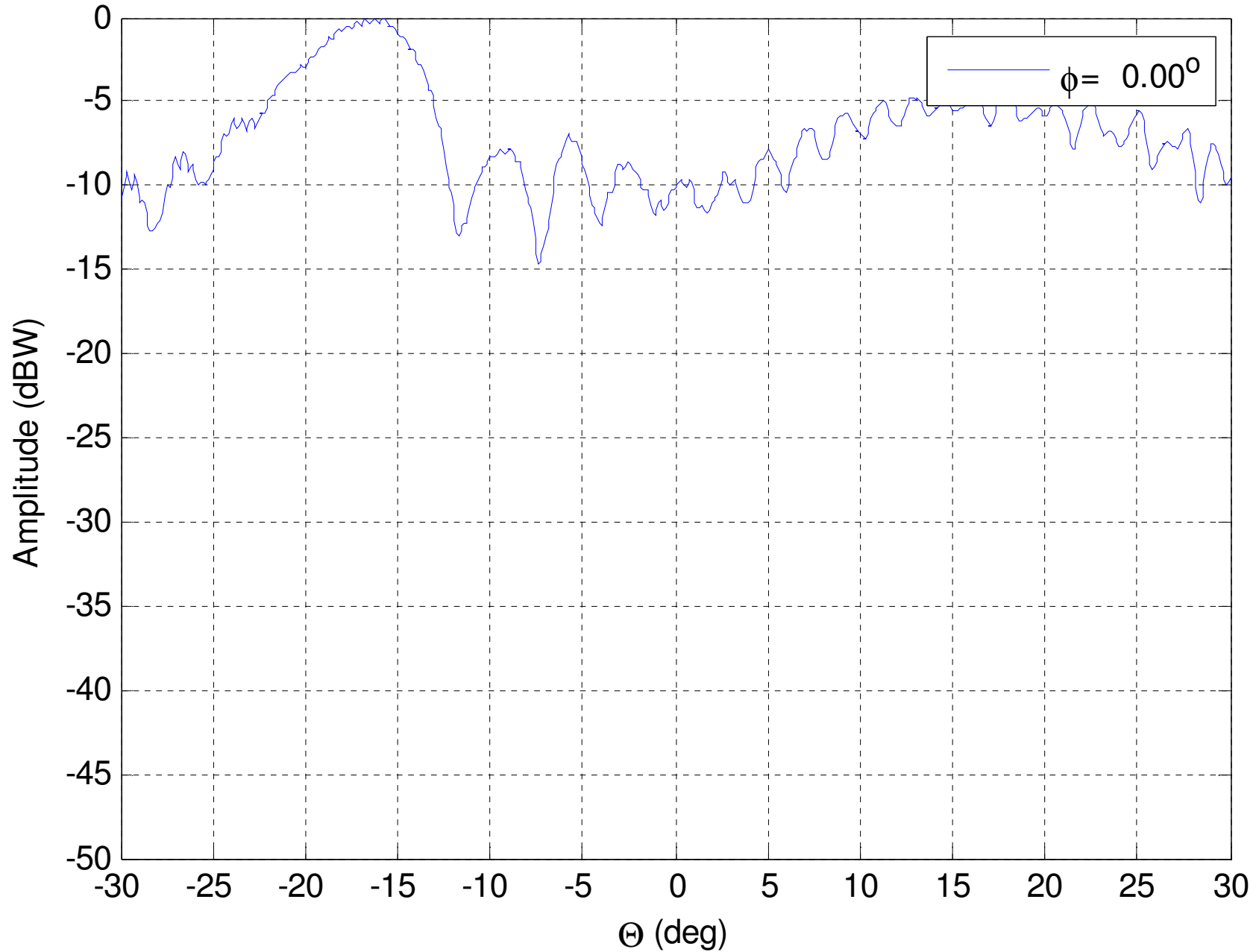
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: 7.71 dBW, Date: 15-Dec-2011



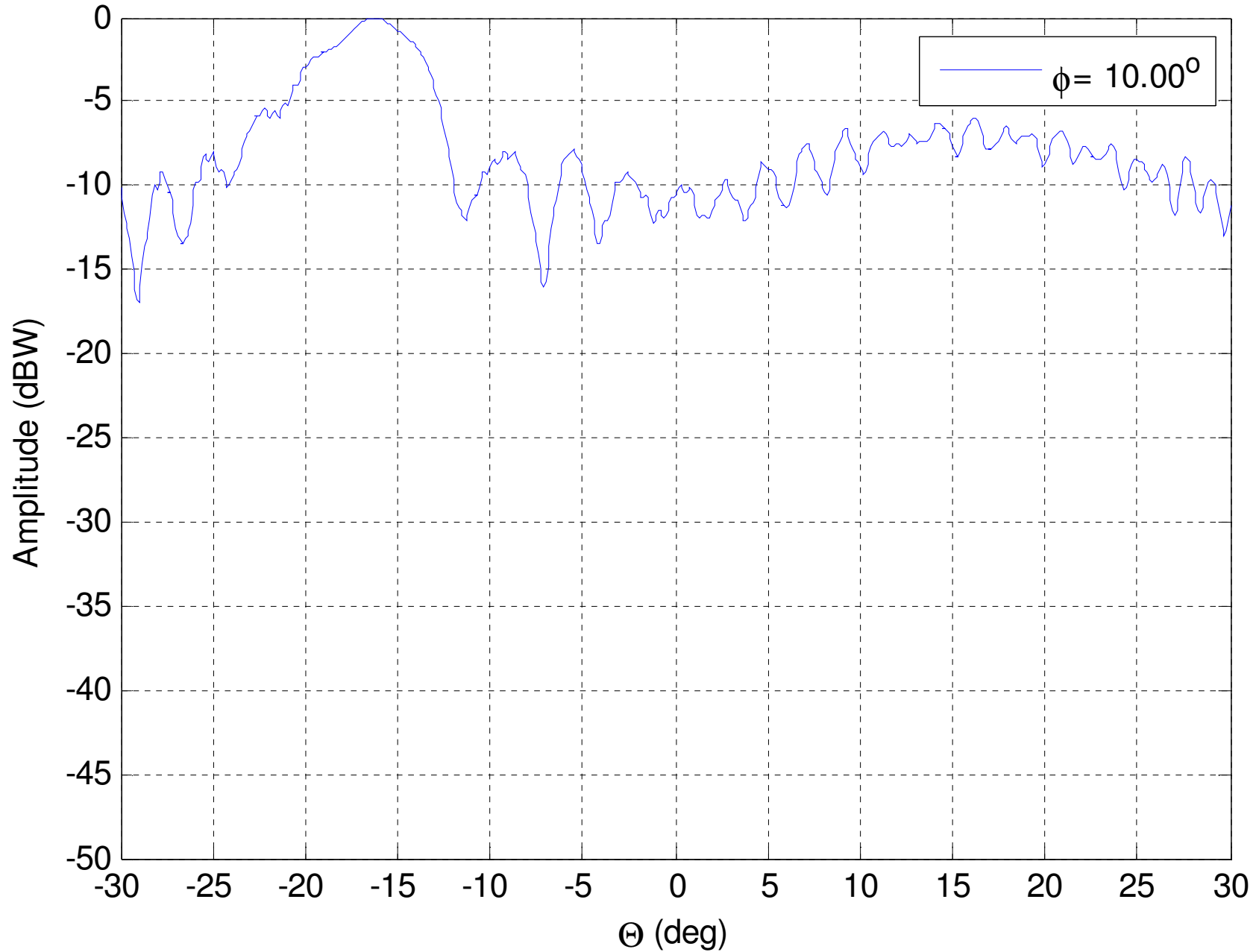
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: 8.72 dBW, Date: 15-Dec-2011



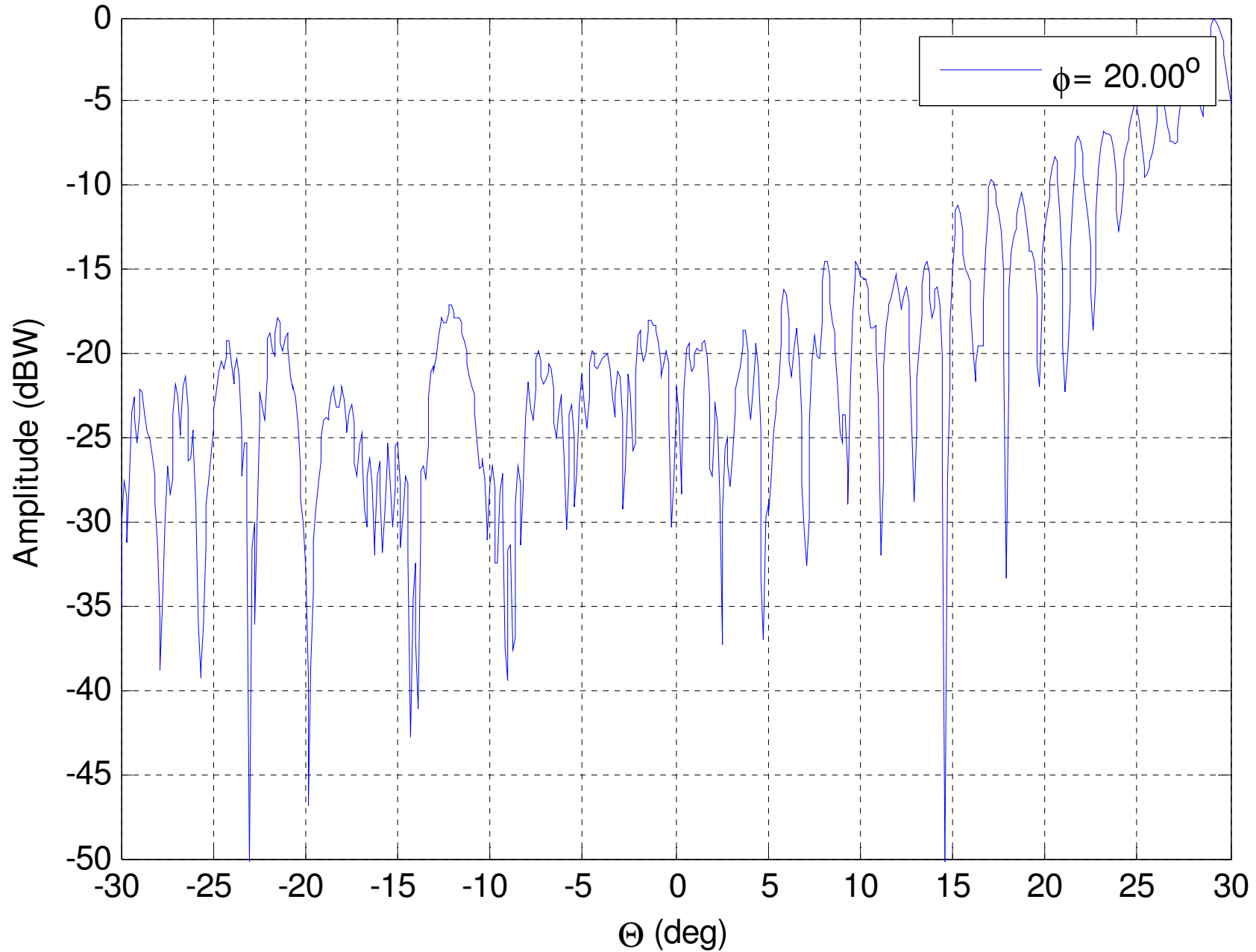
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: 9.12 dBW, Date: 15-Dec-2011



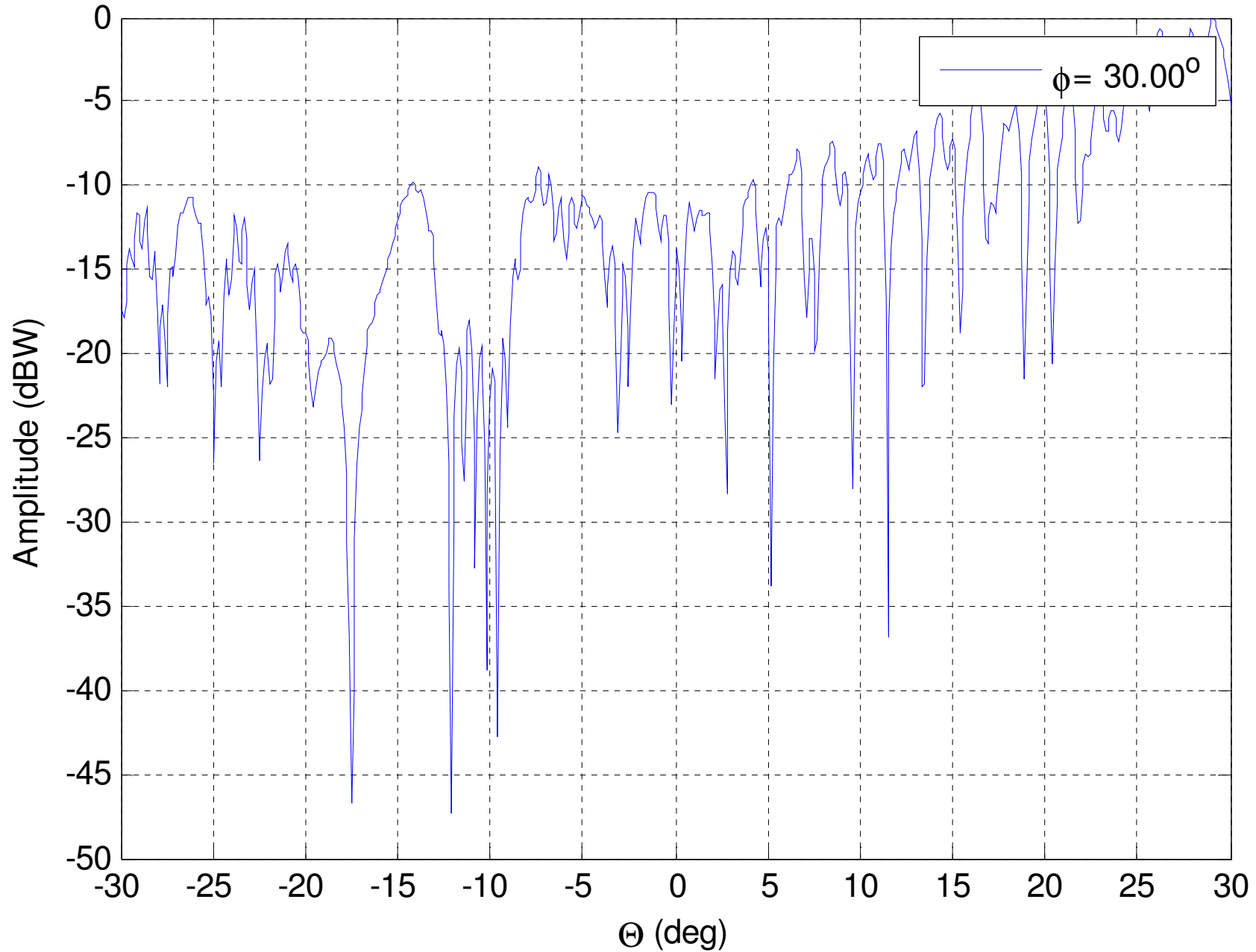
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: 6.58 dBW, Date: 15-Dec-2011



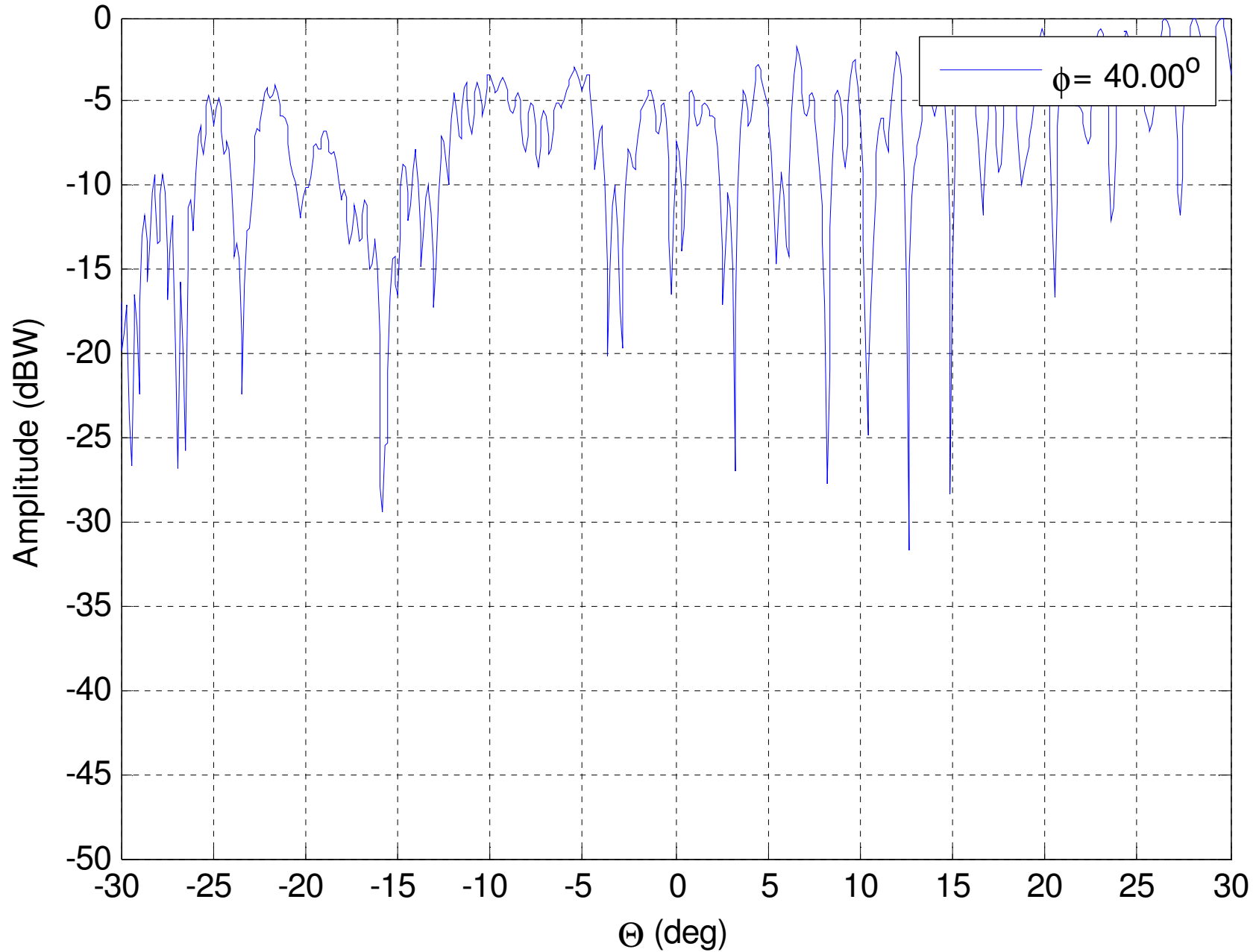
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -1.57 dBW, Date: 15-Dec-2011



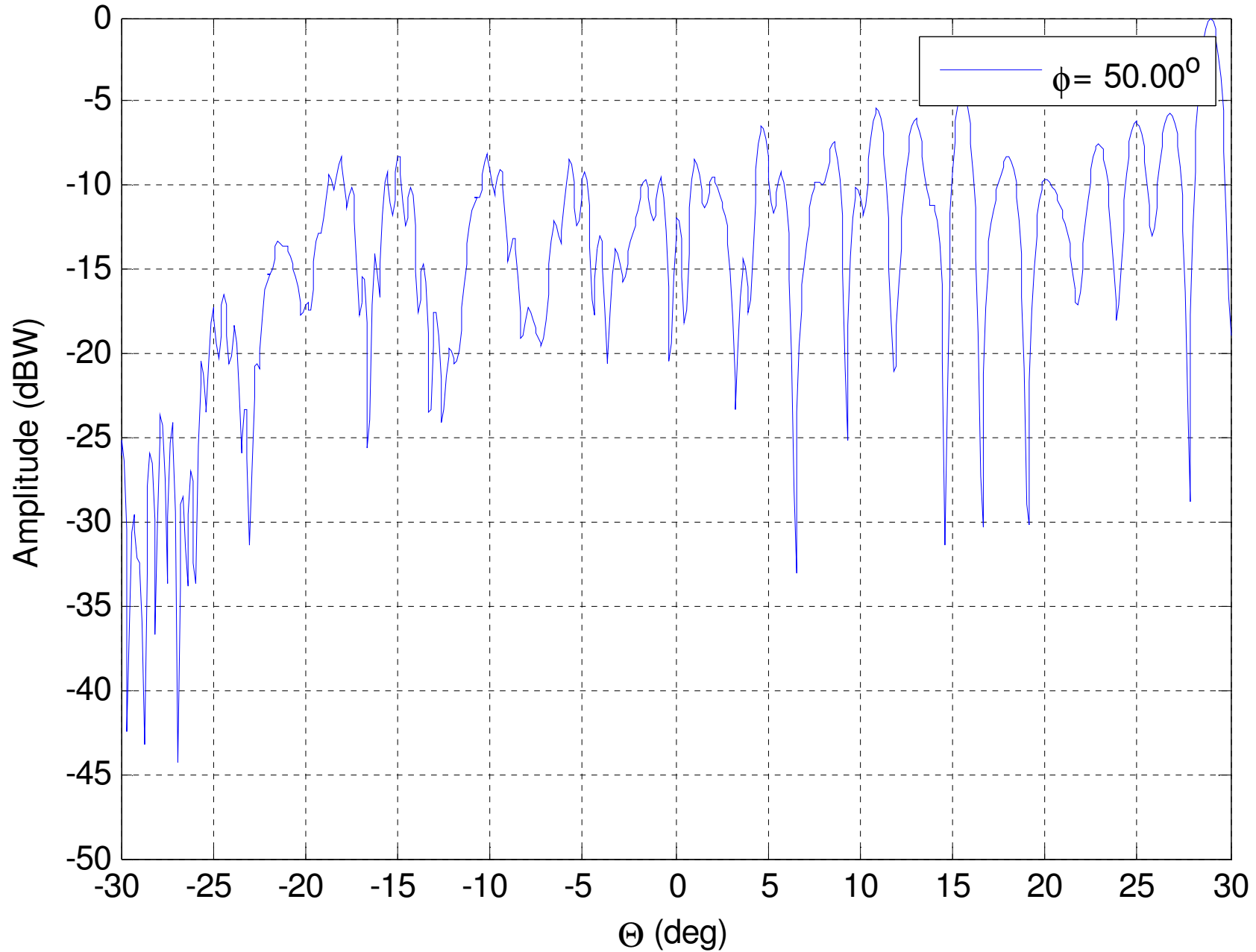
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -7.92 dBW, Date: 15-Dec-2011



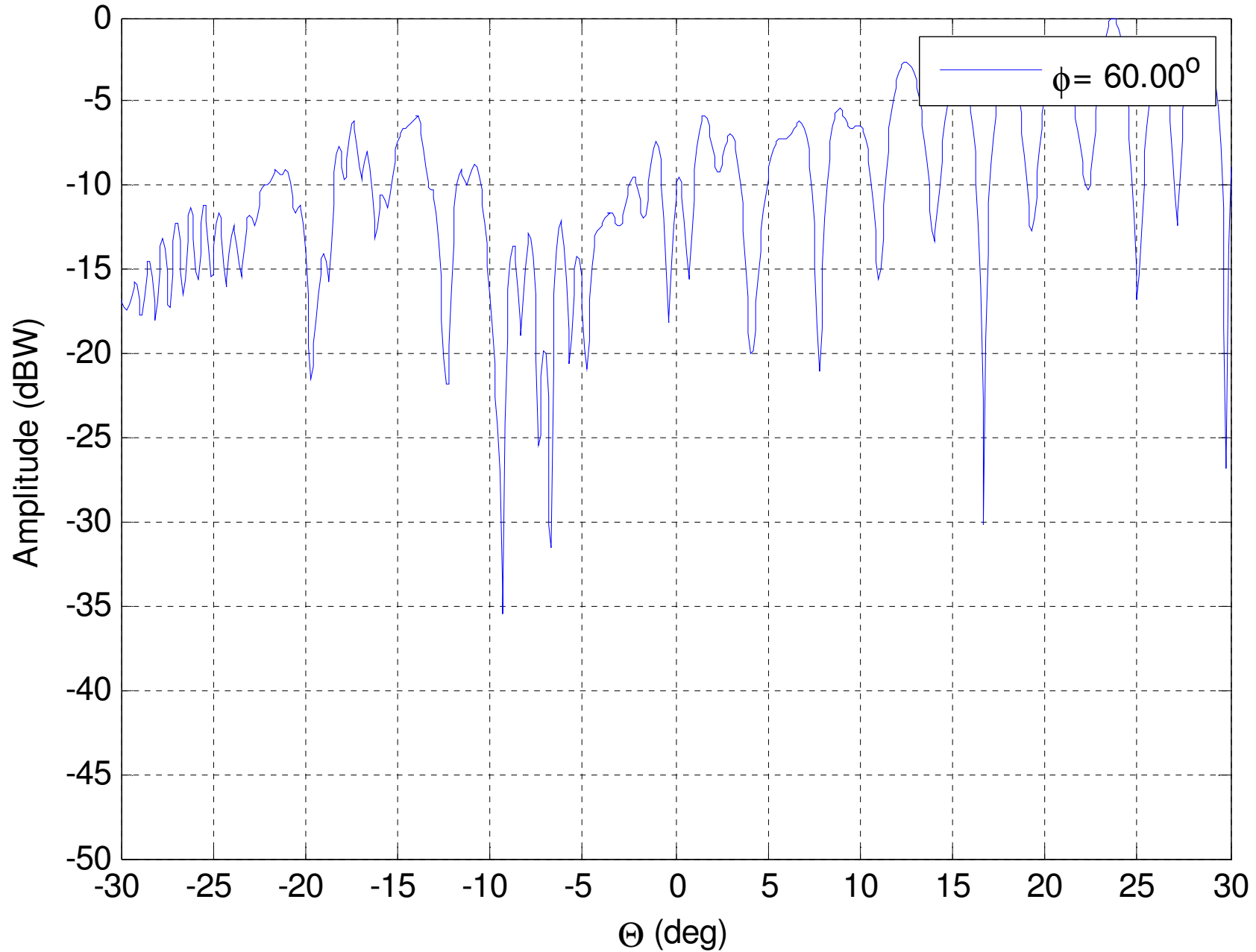
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -3.42 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

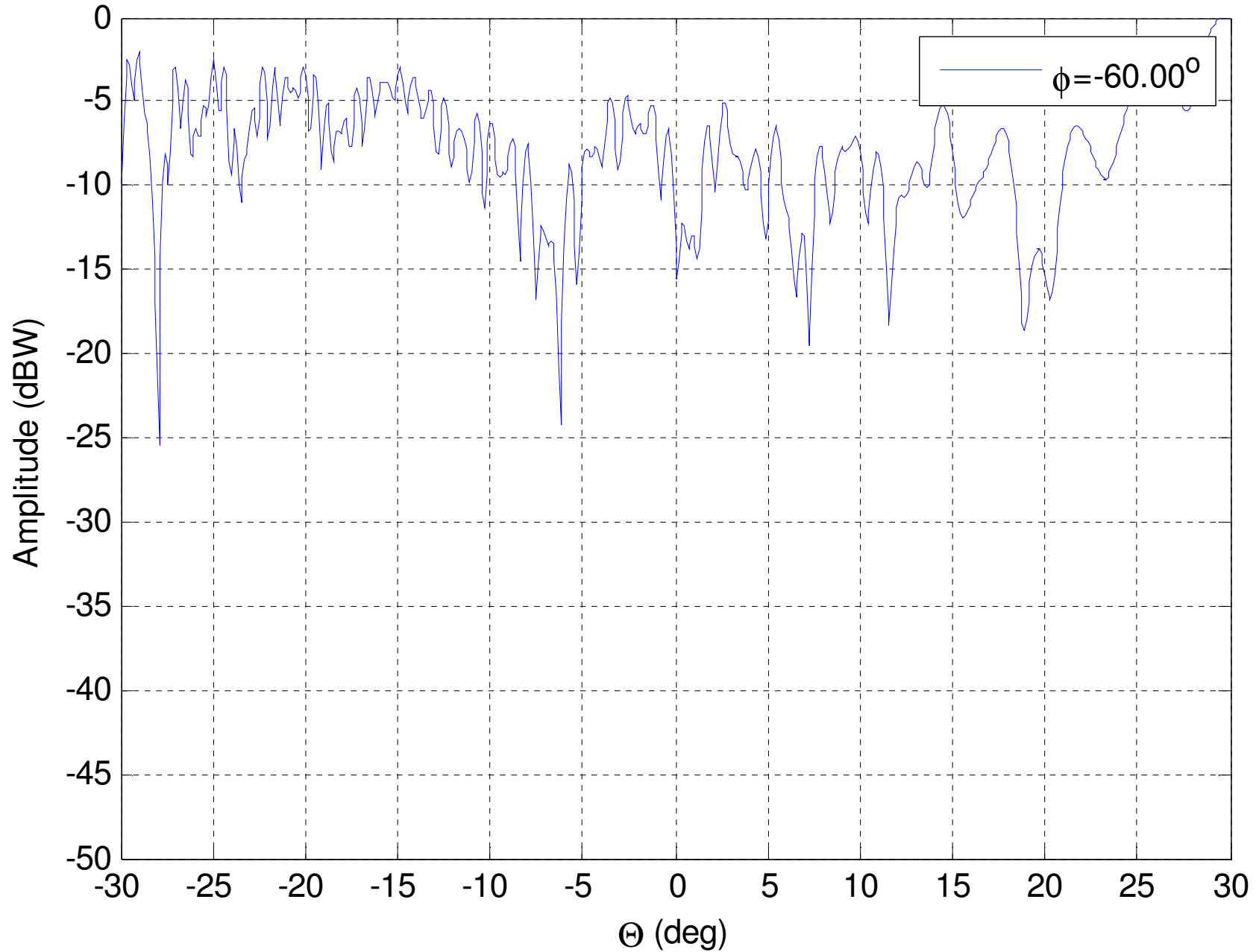
Input file: tx-17.5-lhcp-60.cut, Peak: -5.68 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

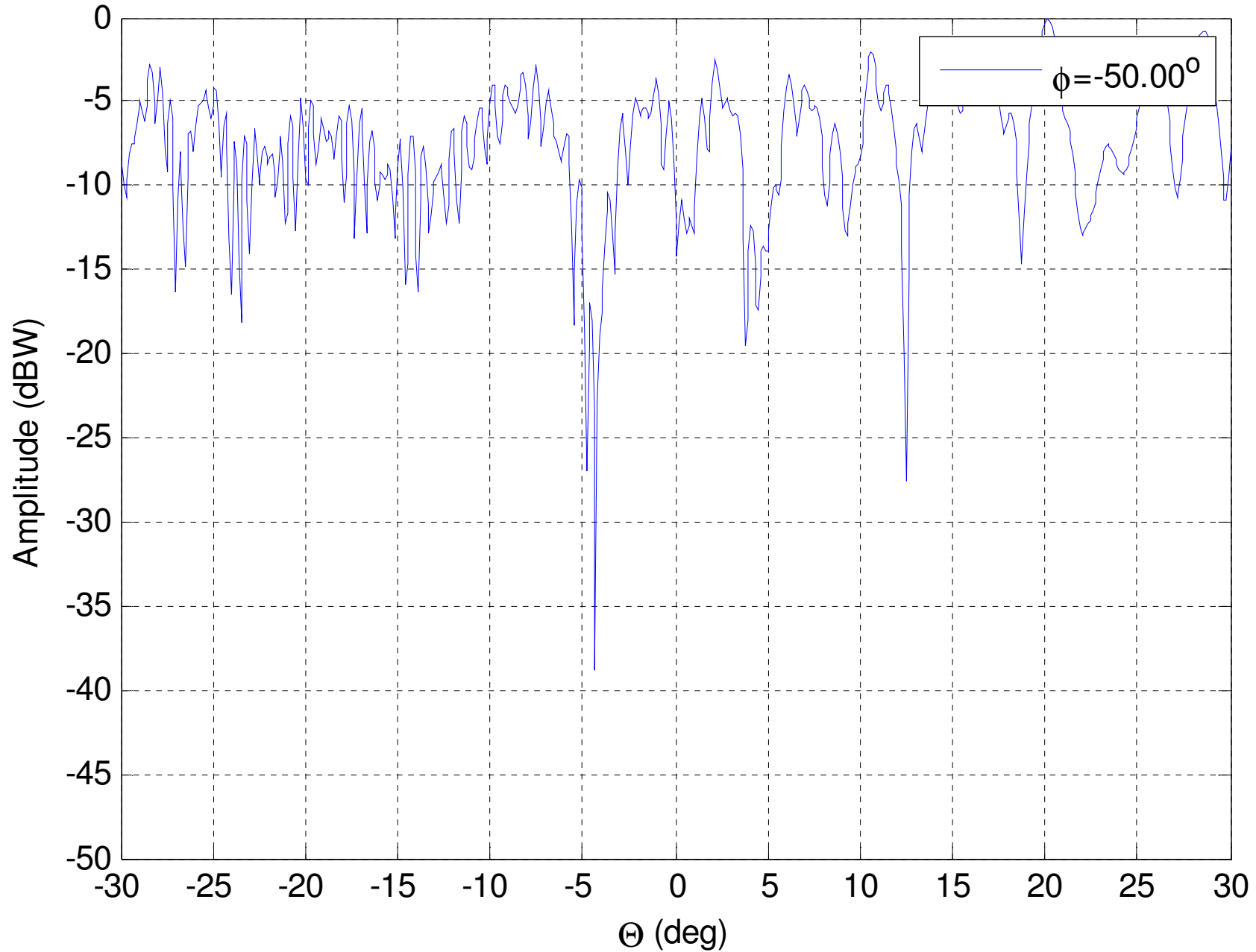
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -6.99 dBW, Date: 15-Dec-2011



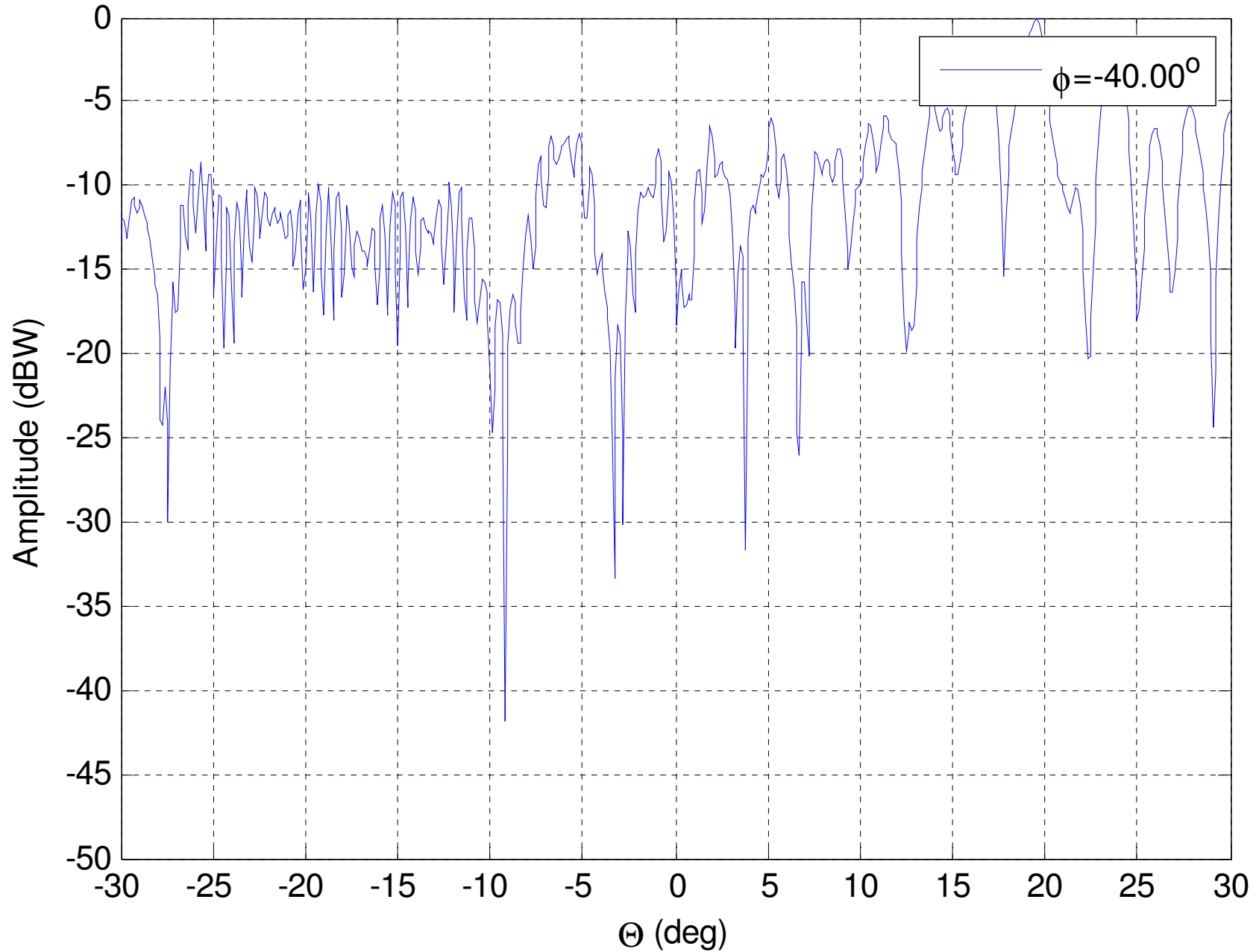
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.53 dBW, Date: 15-Dec-2011



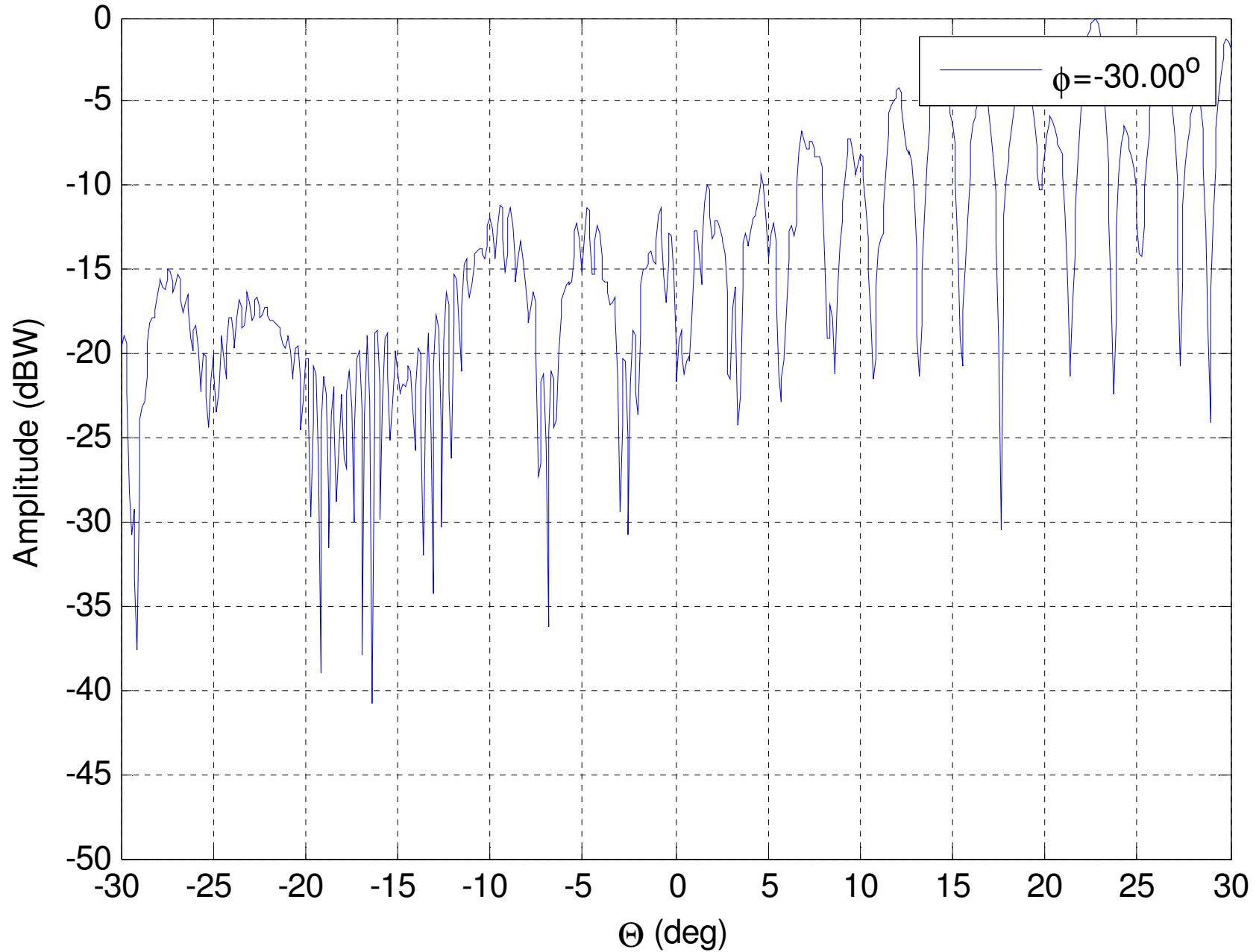
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -4.32 dBW, Date: 15-Dec-2011



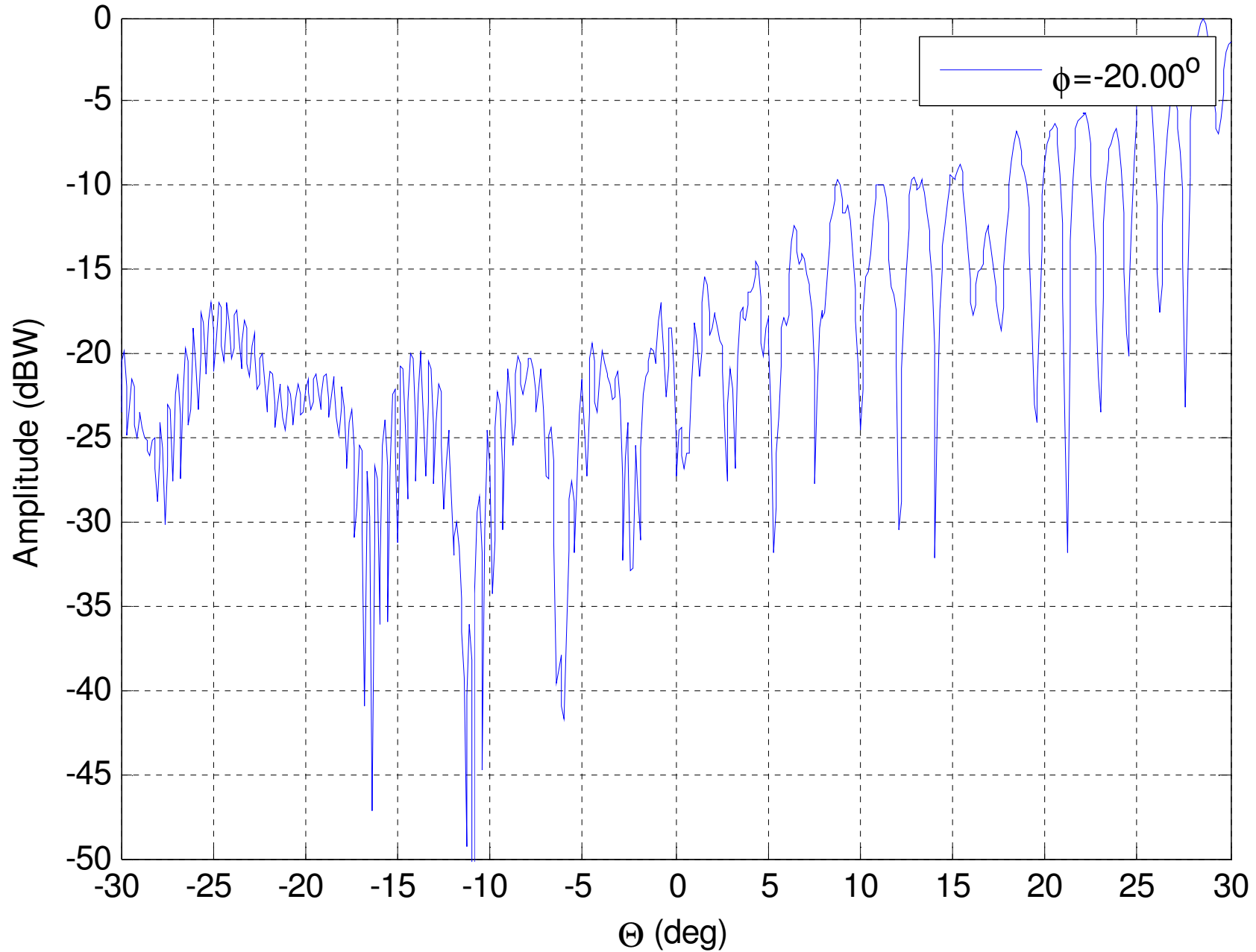
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -0.82 dBW, Date: 15-Dec-2011



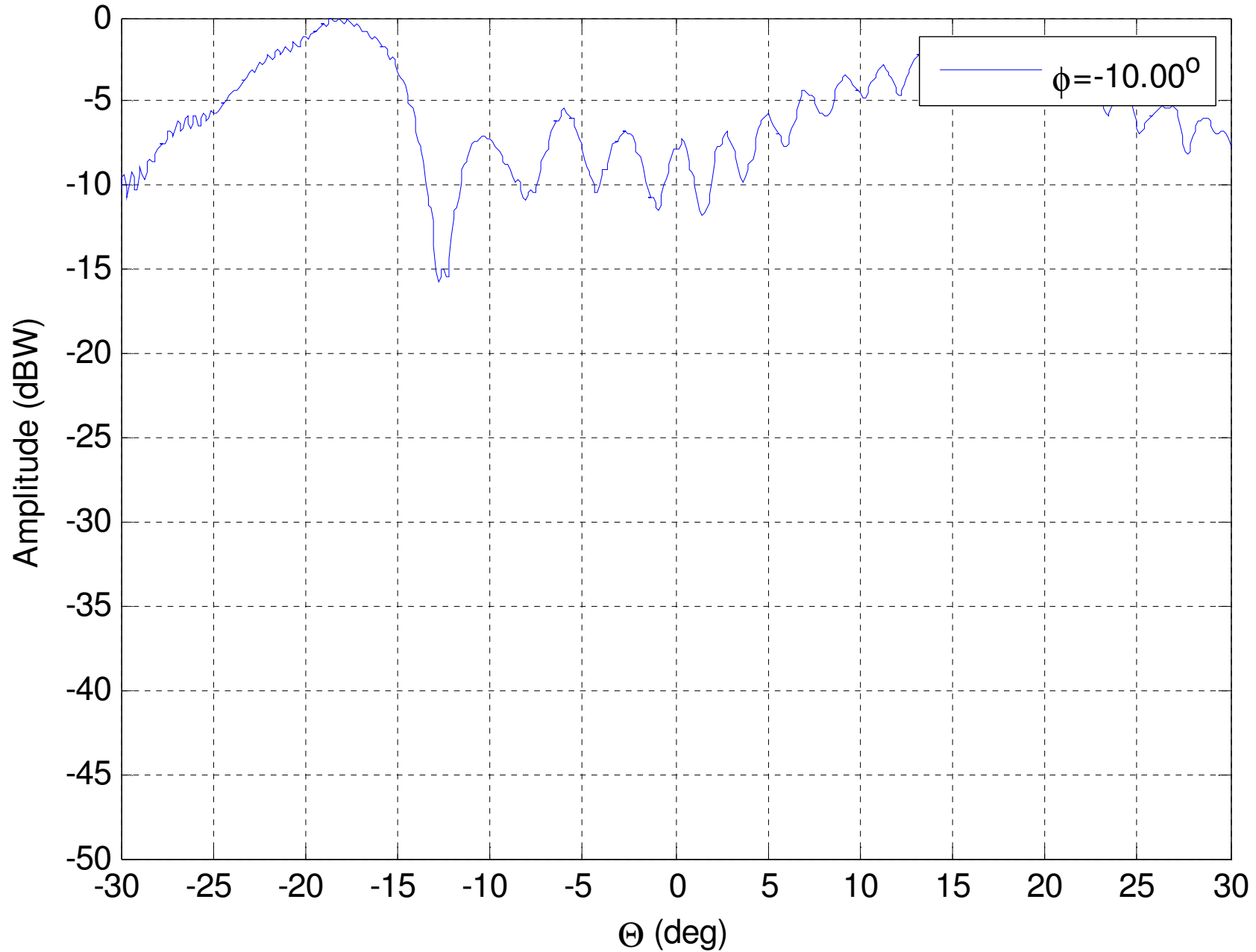
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: 4.76 dBW, Date: 15-Dec-2011



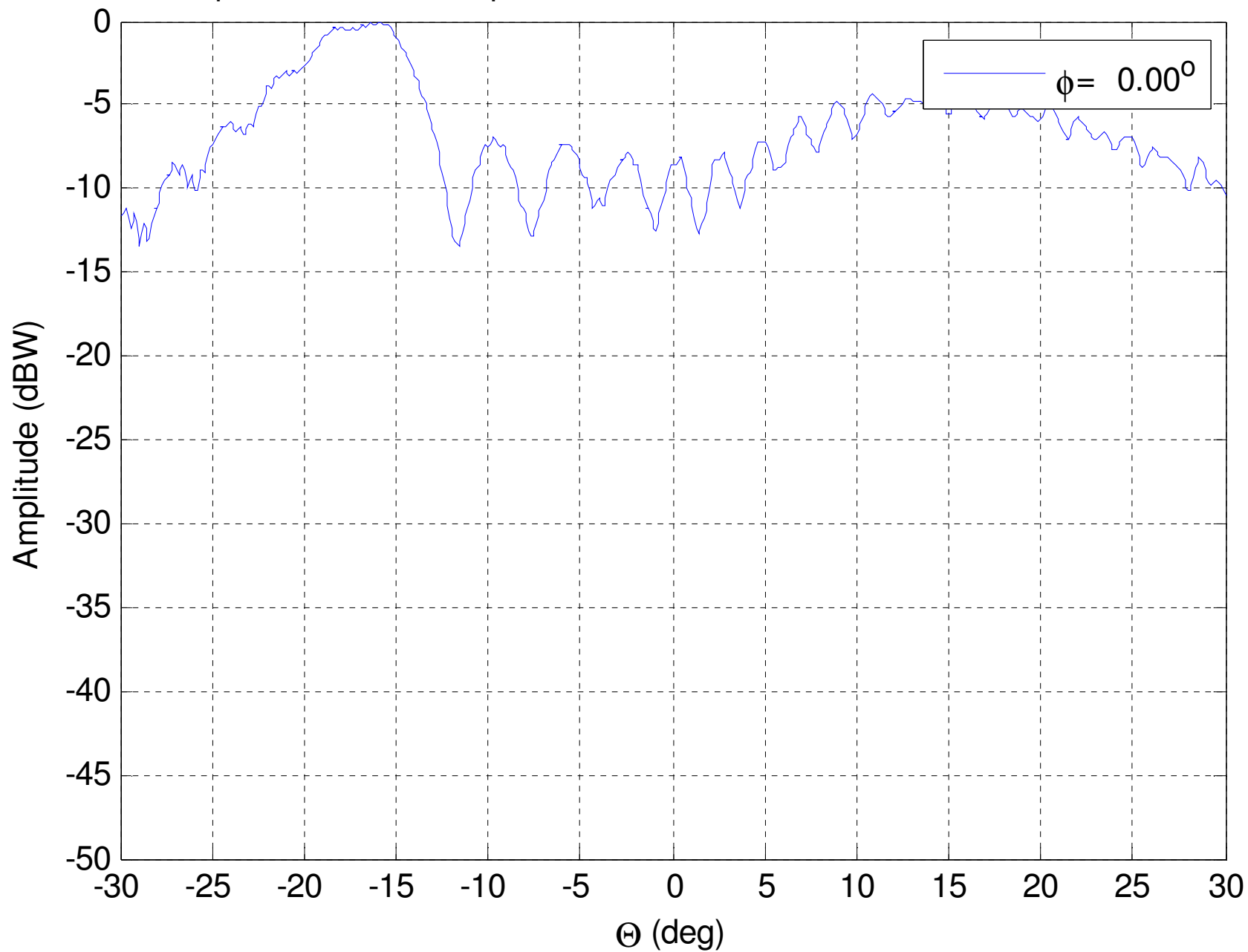
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: 7.65 dBW, Date: 15-Dec-2011



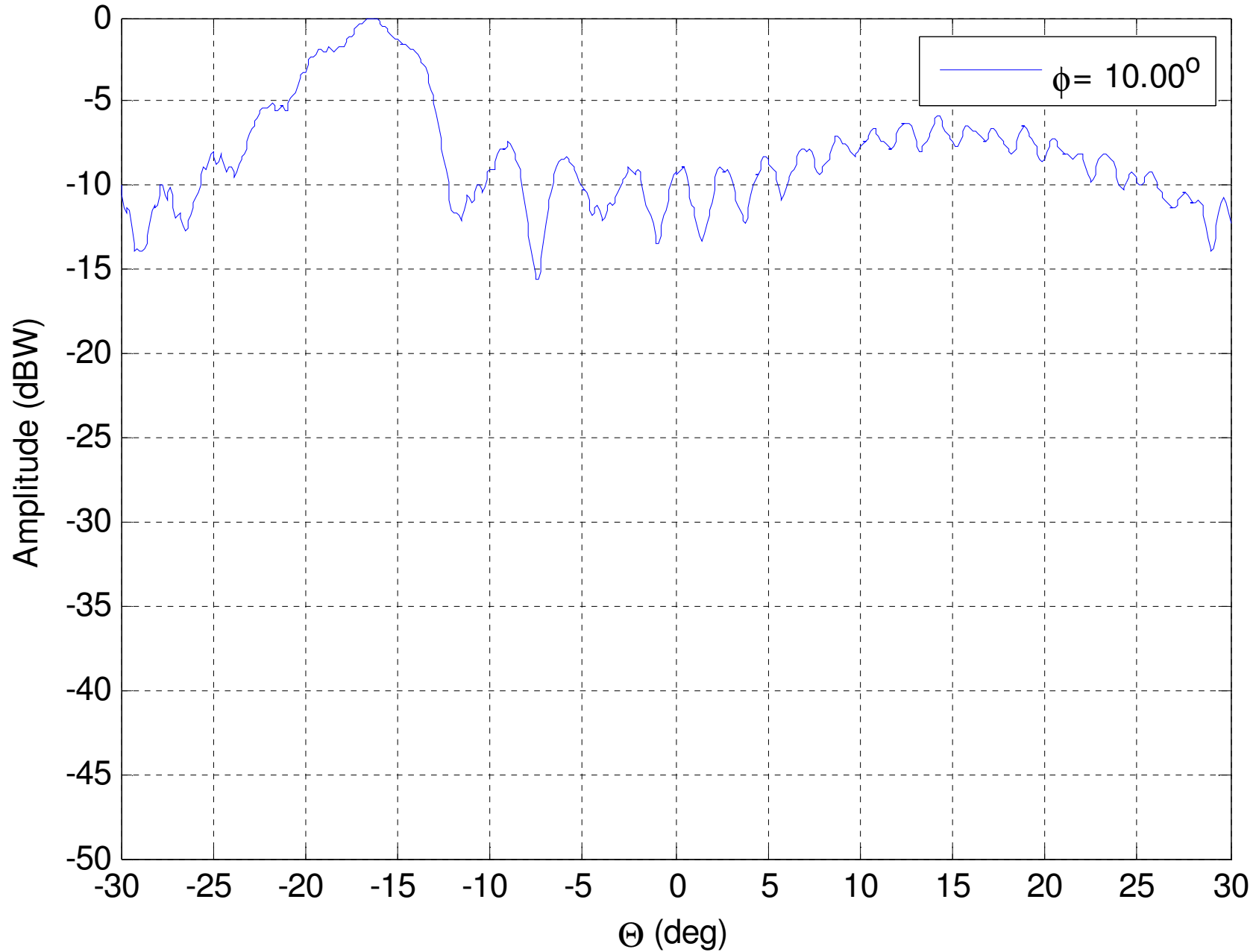
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: 8.43 dBW, Date: 15-Dec-2011



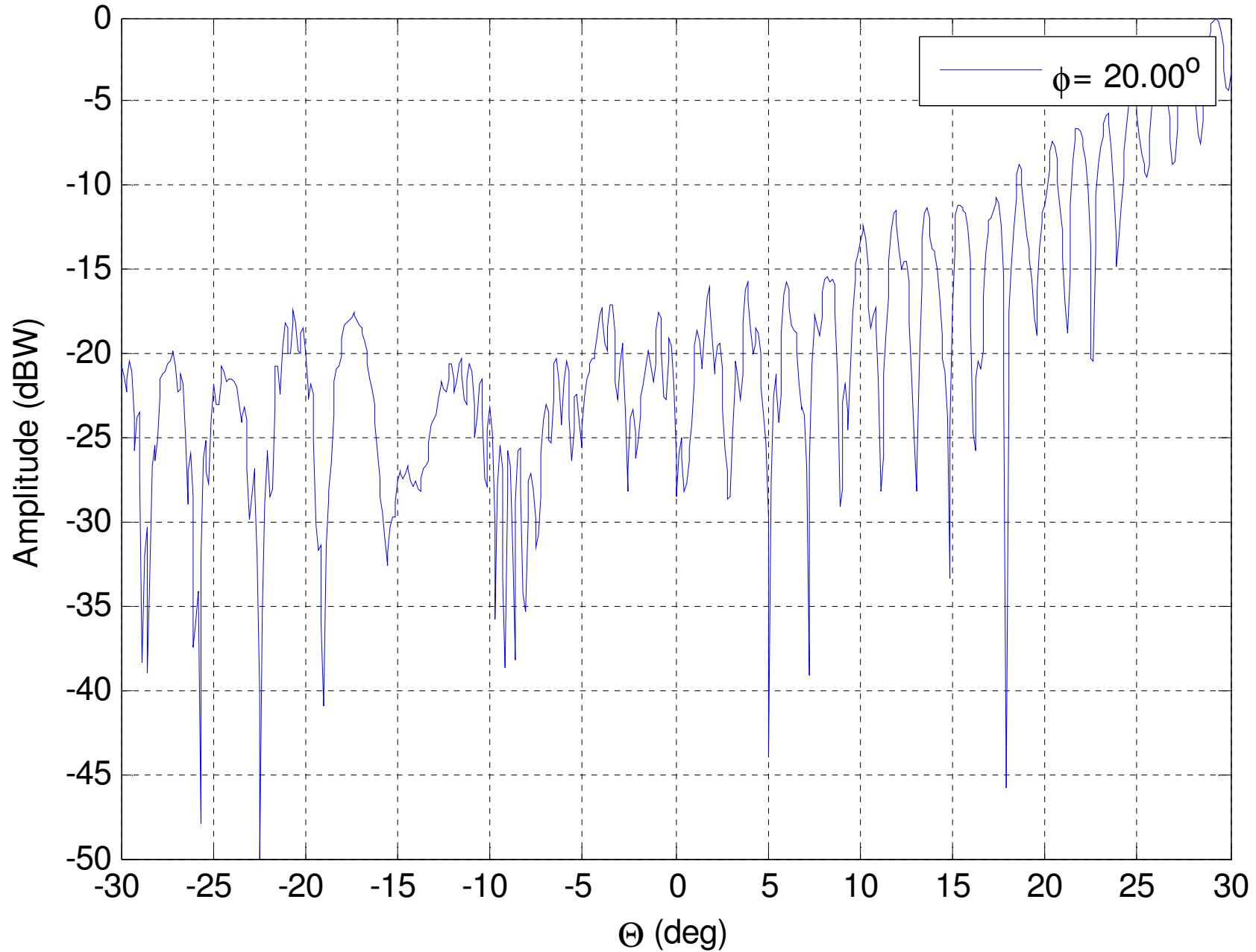
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: 9.12 dBW, Date: 15-Dec-2011



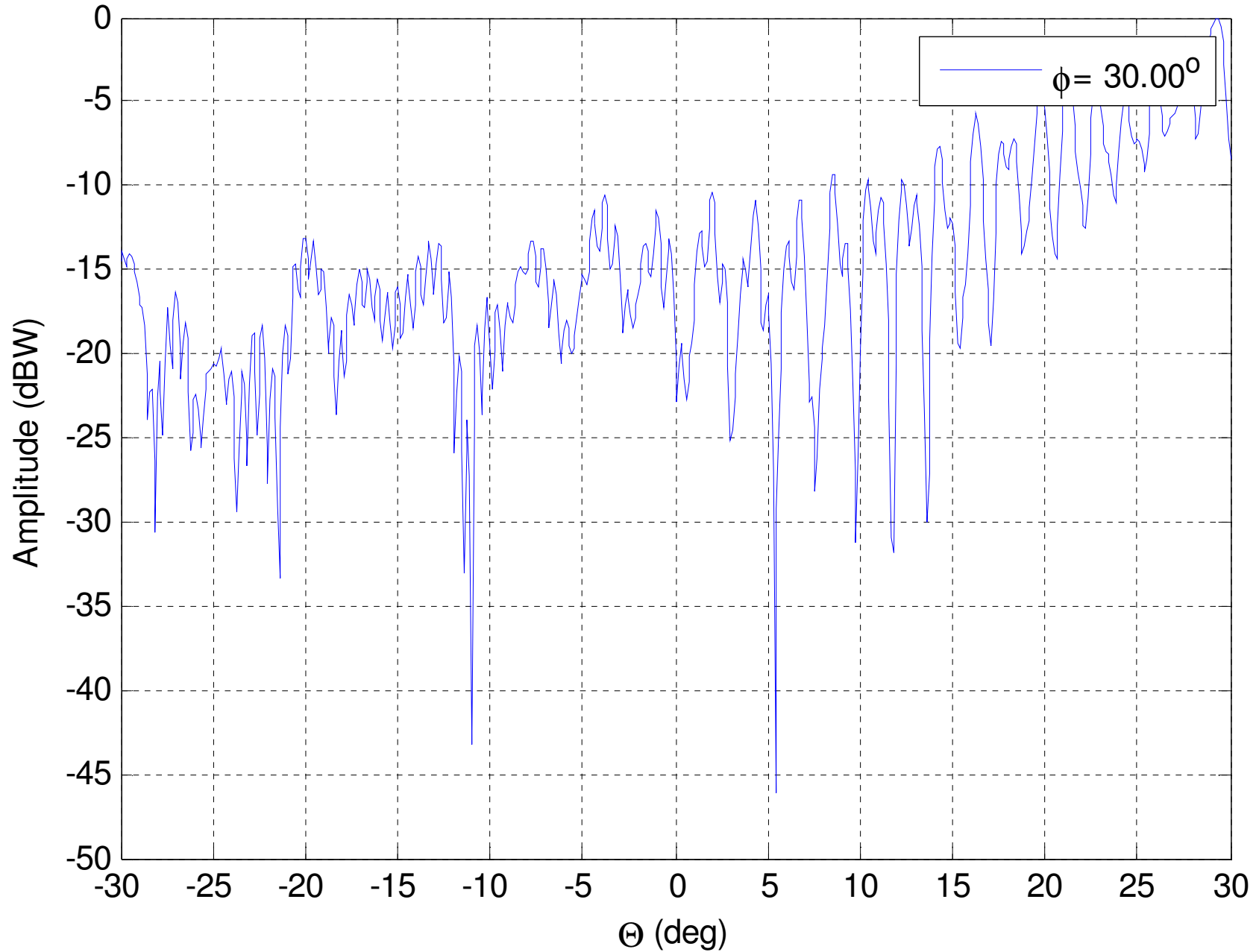
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: 5.57 dBW, Date: 15-Dec-2011



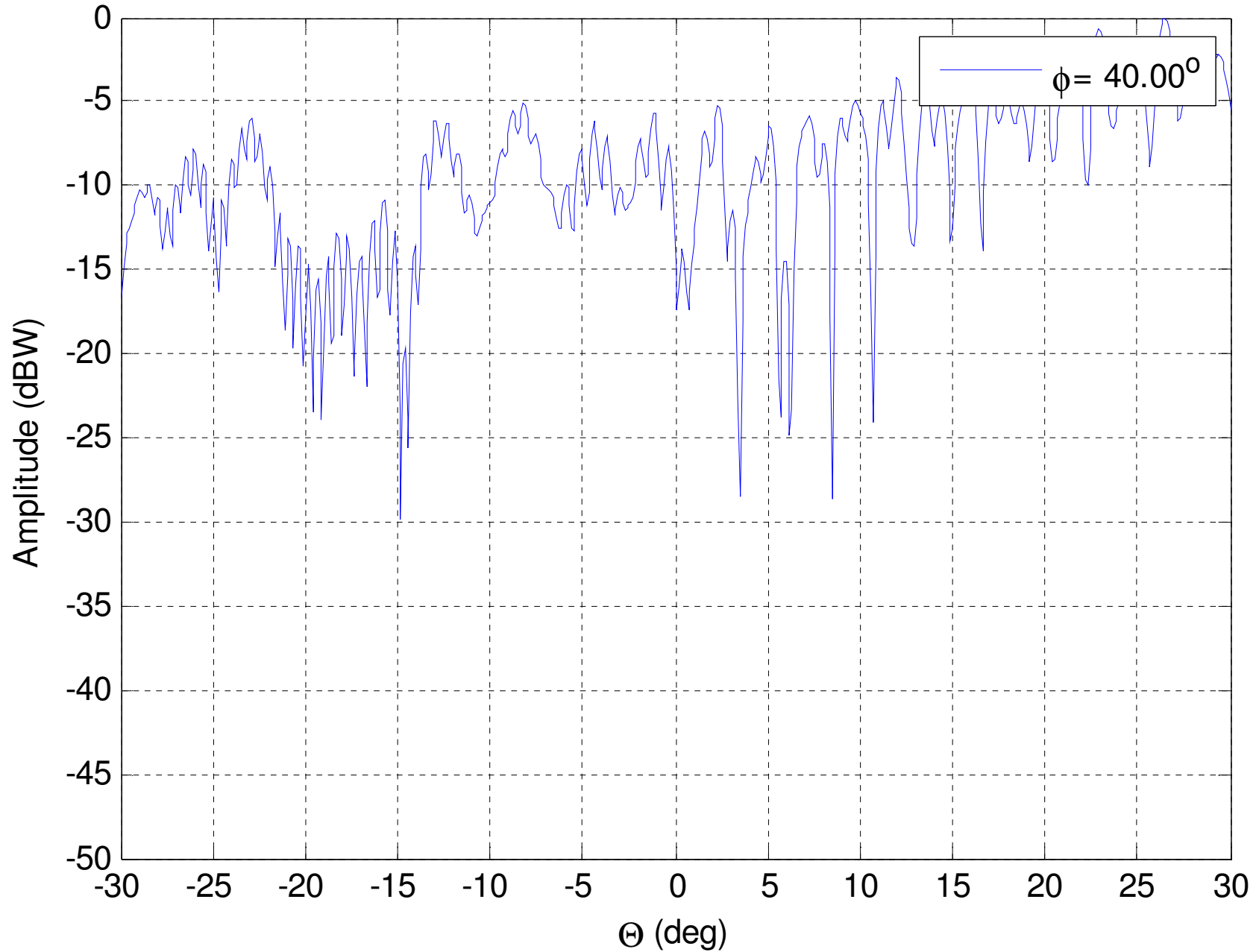
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -0.19 dBW, Date: 15-Dec-2011



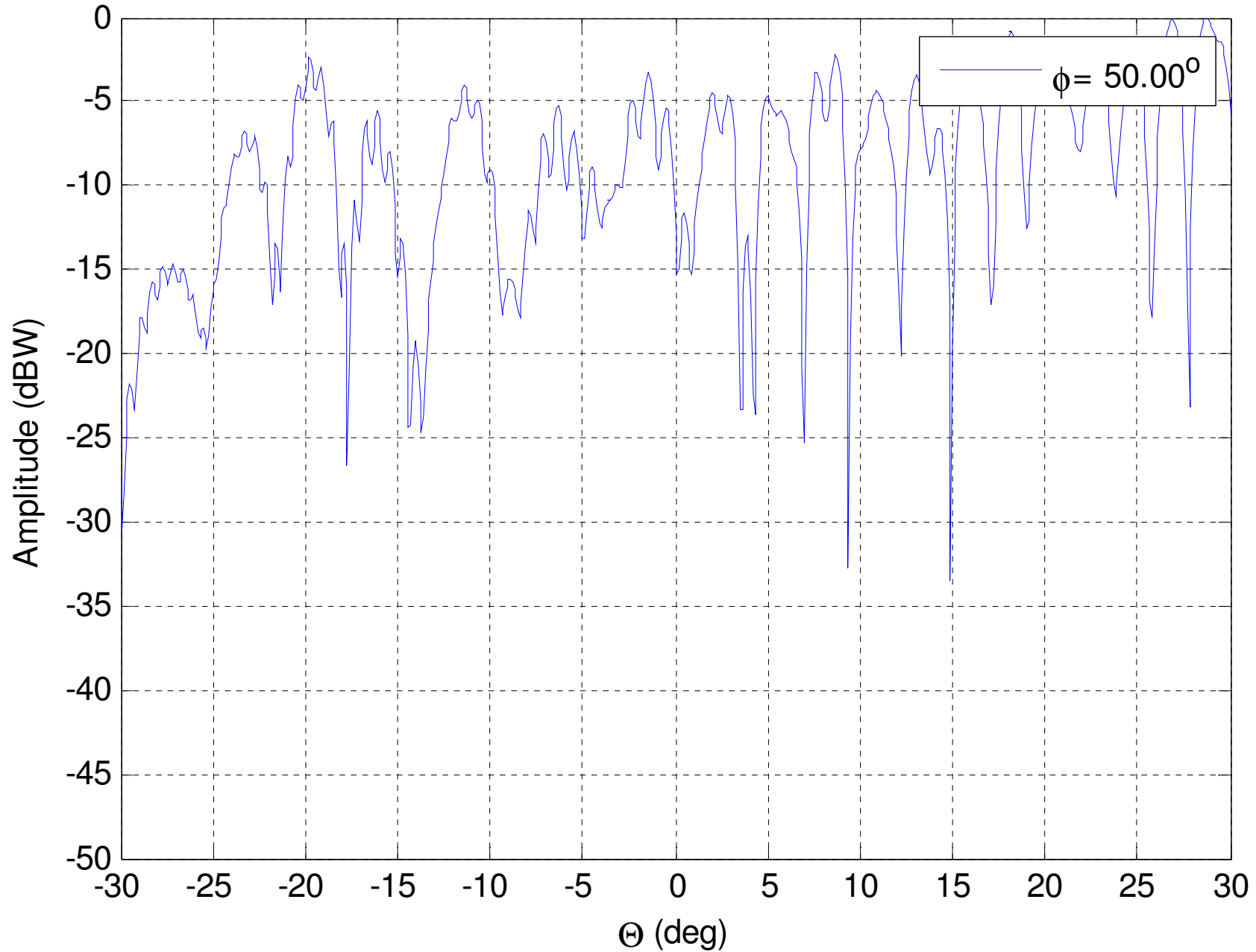
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -5.73 dBW, Date: 15-Dec-2011



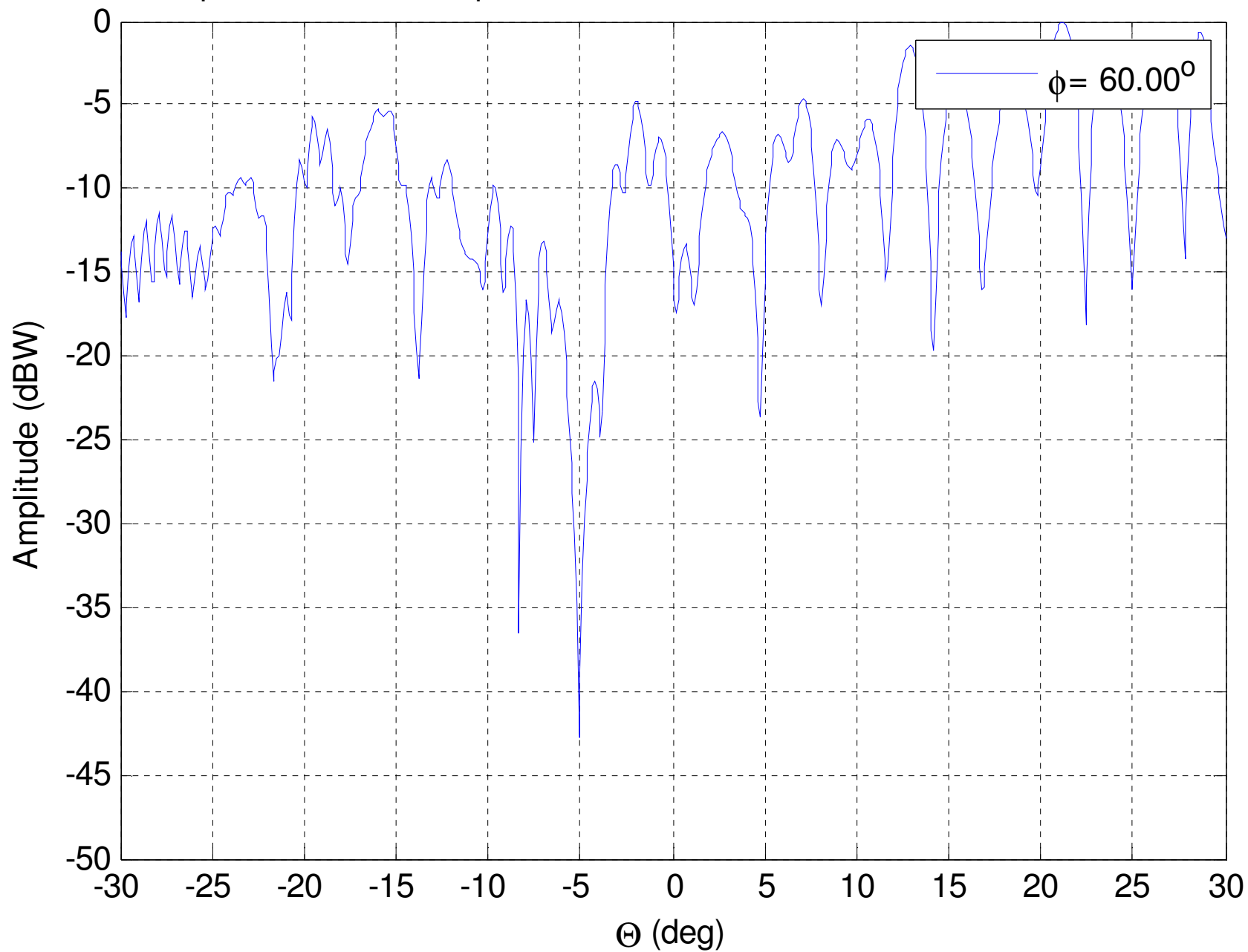
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -7.77 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

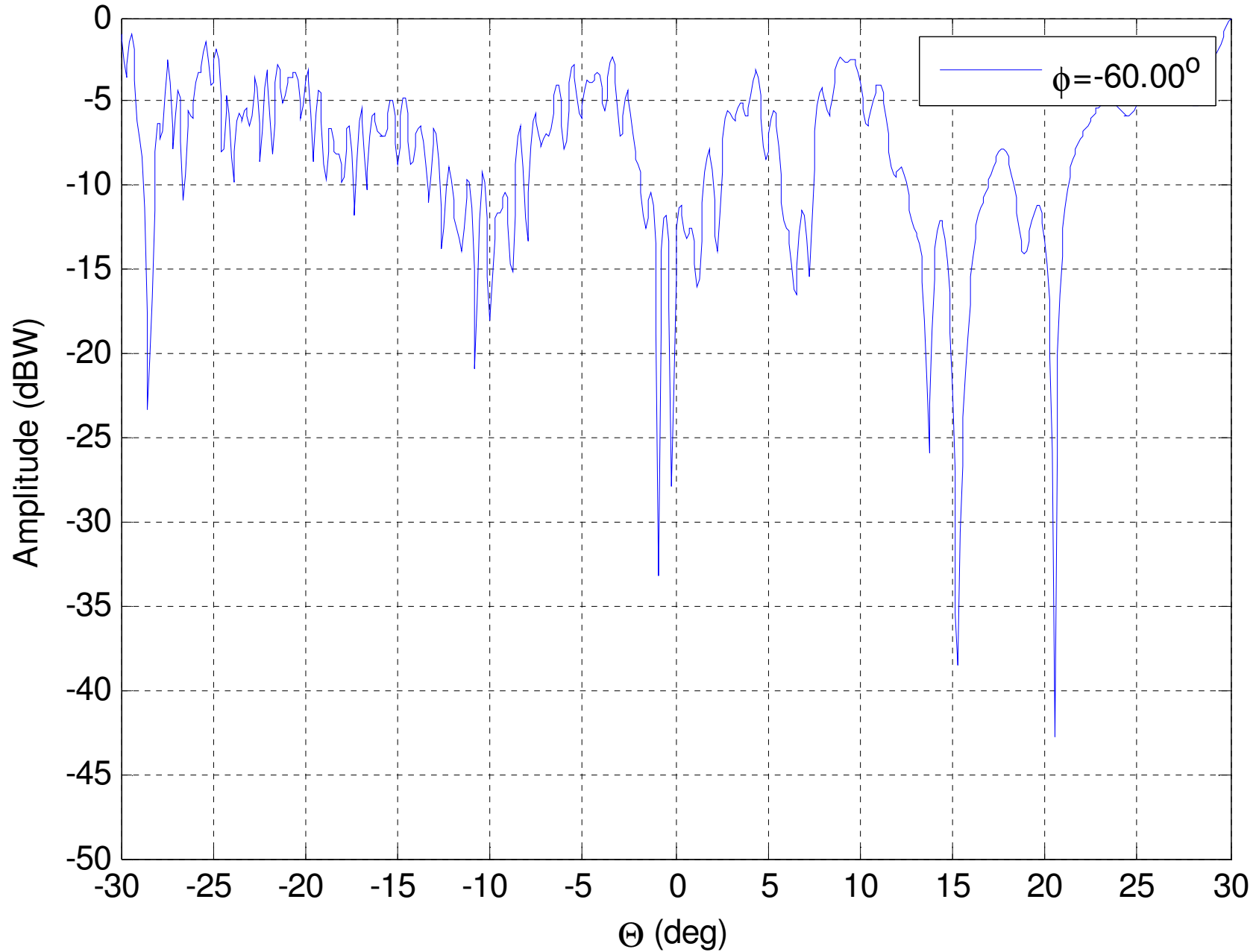
Input file: tx-17.7-rhcp-60.cut, Peak: -6.03 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

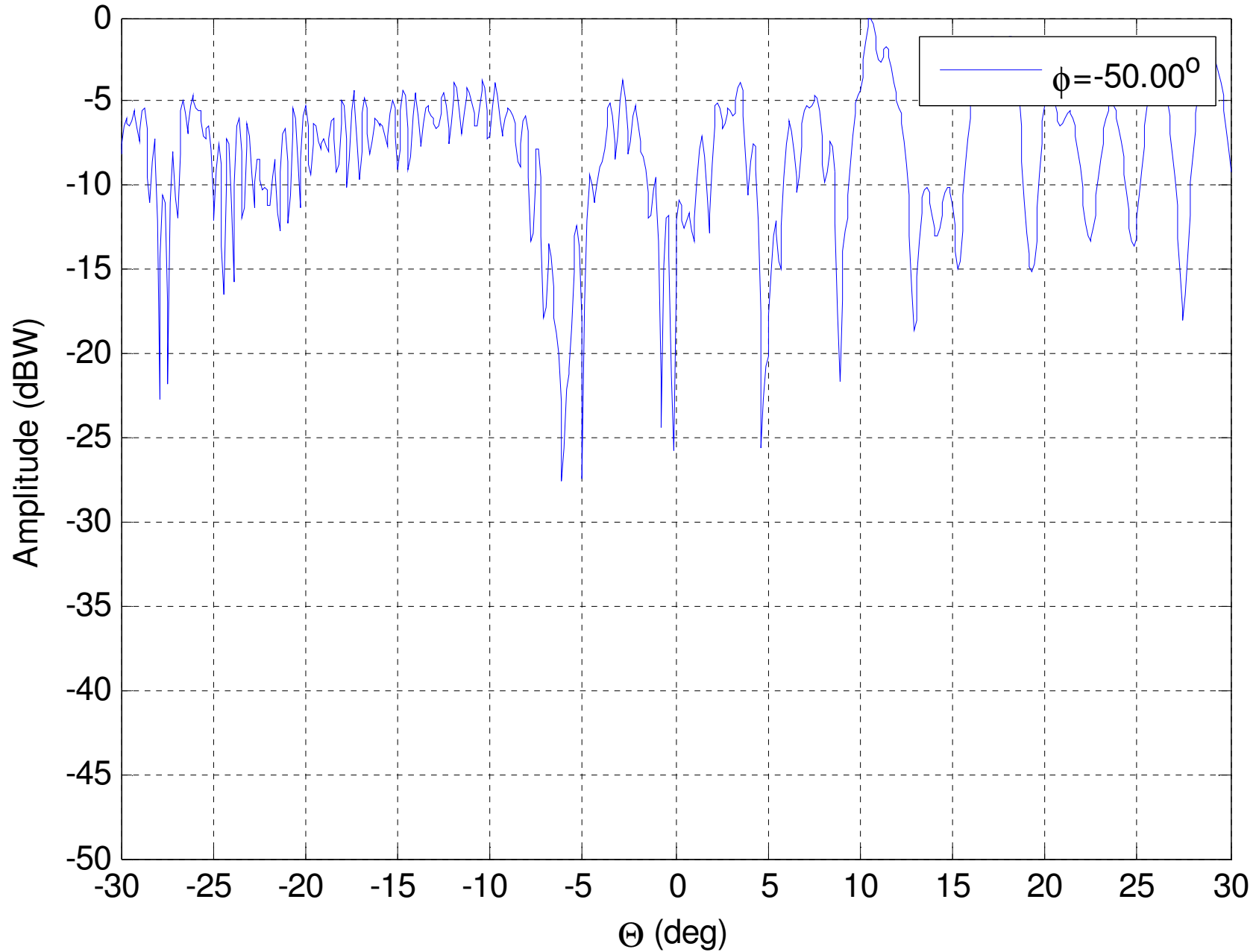
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -7.85 dBW, Date: 15-Dec-2011



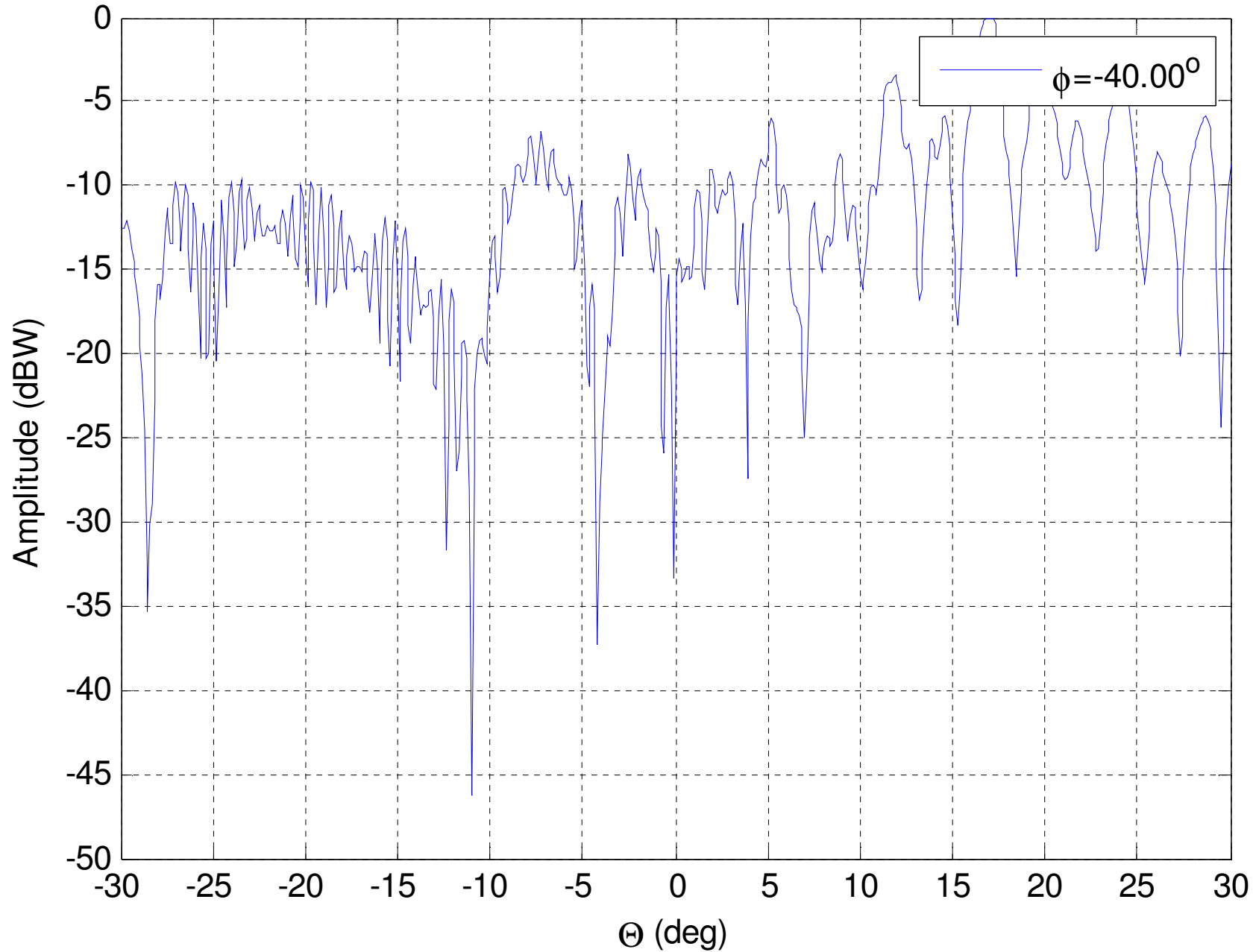
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -7.76 dBW, Date: 15-Dec-2011



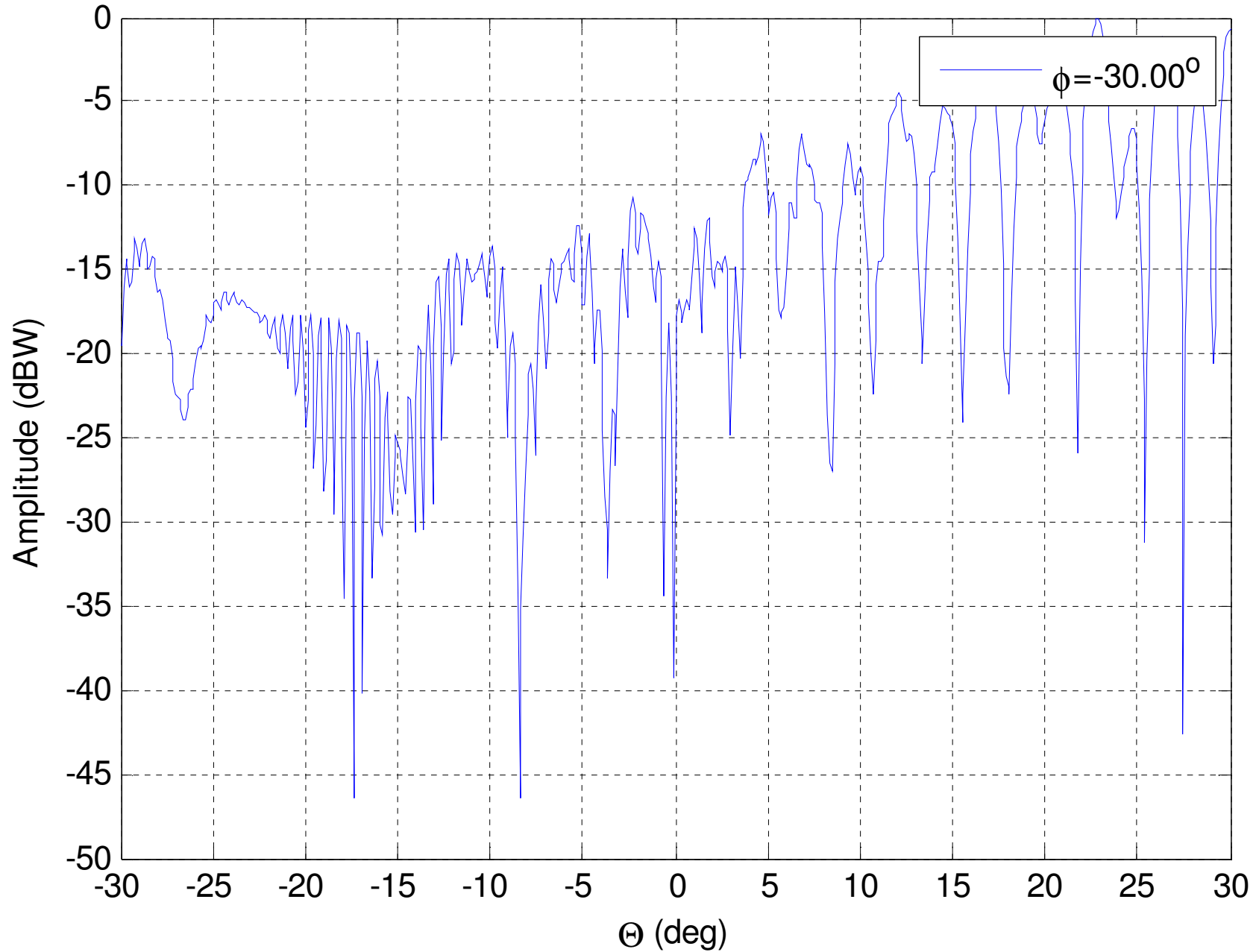
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -4.03 dBW, Date: 15-Dec-2011



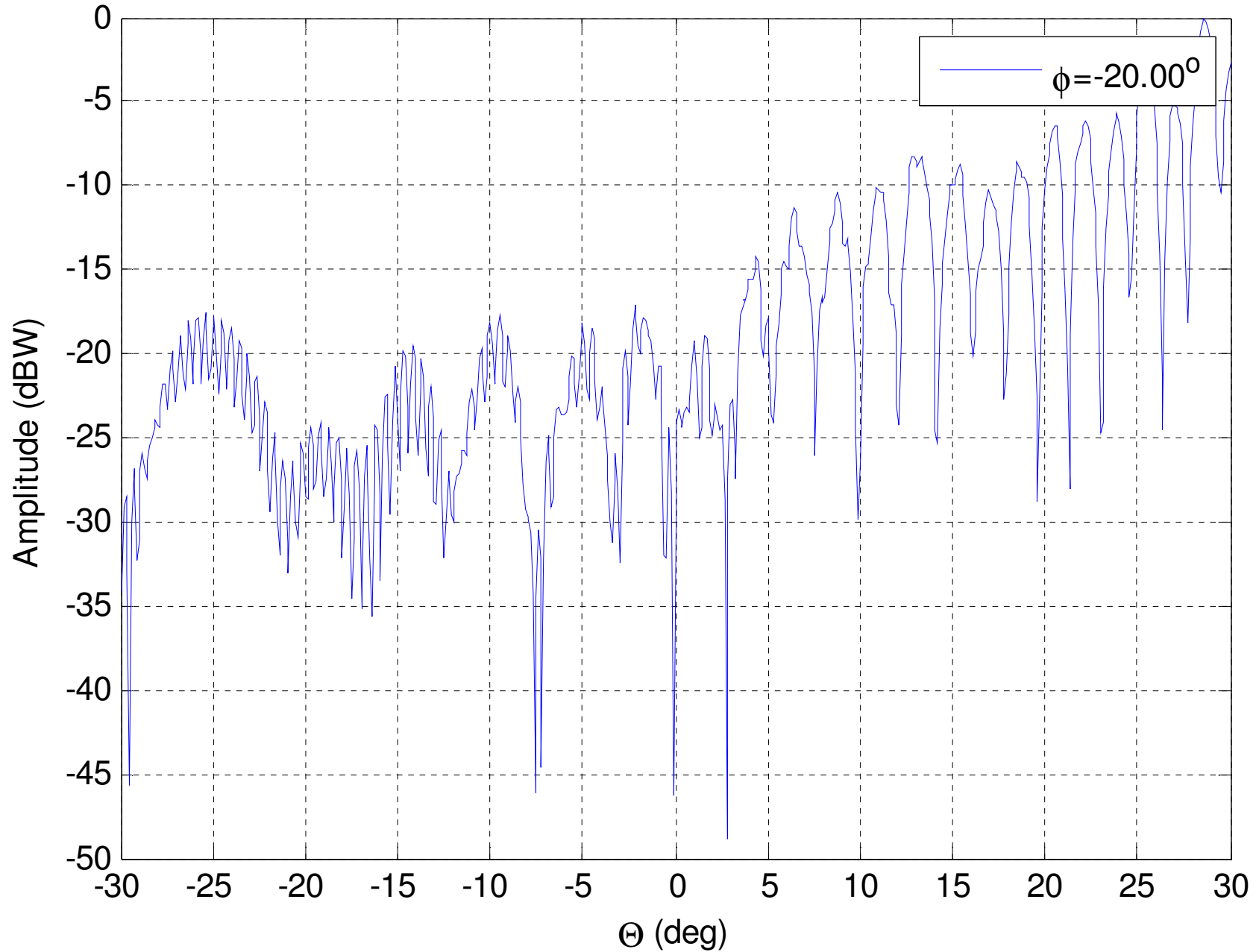
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -1.42 dBW, Date: 15-Dec-2011



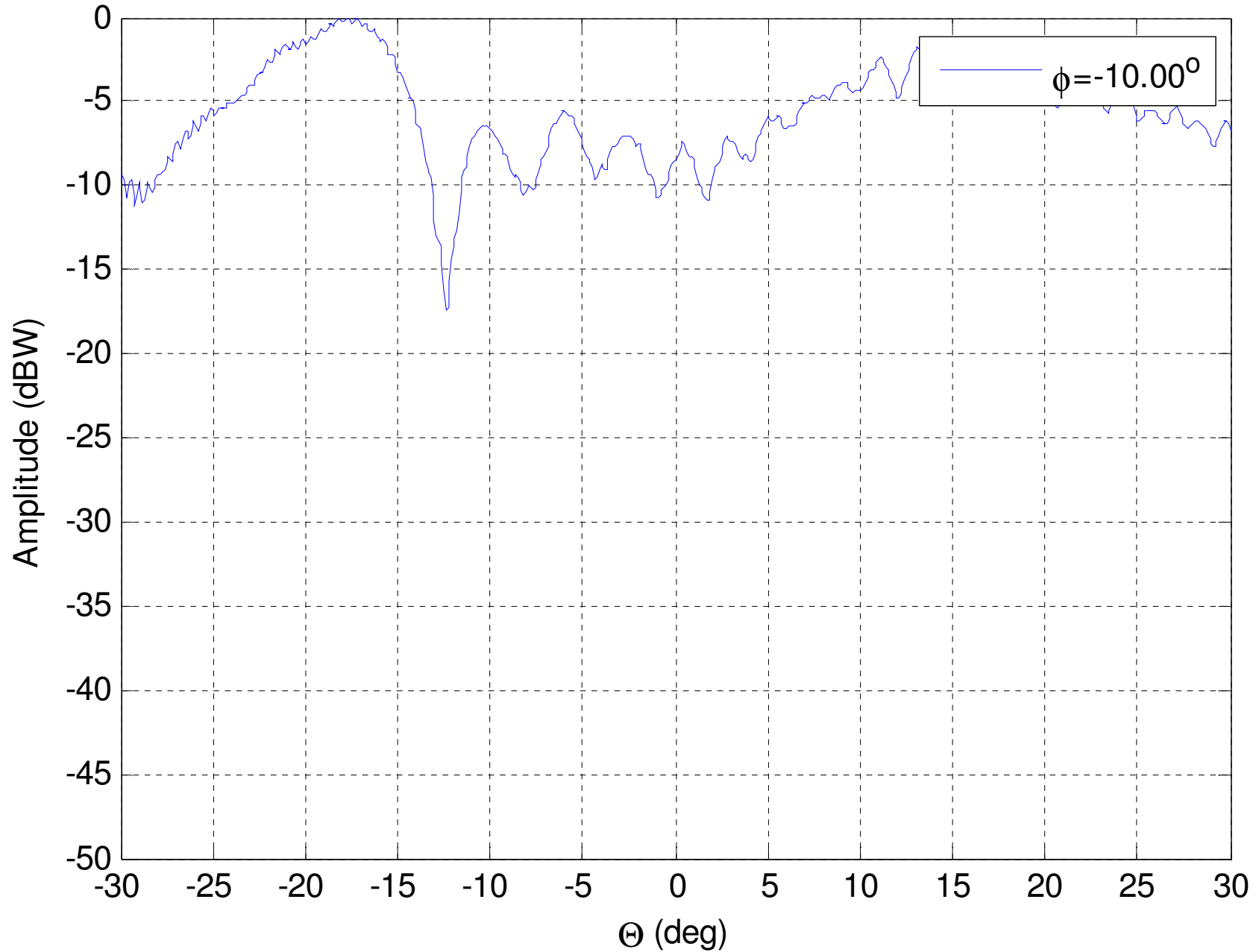
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: 5.13 dBW, Date: 15-Dec-2011



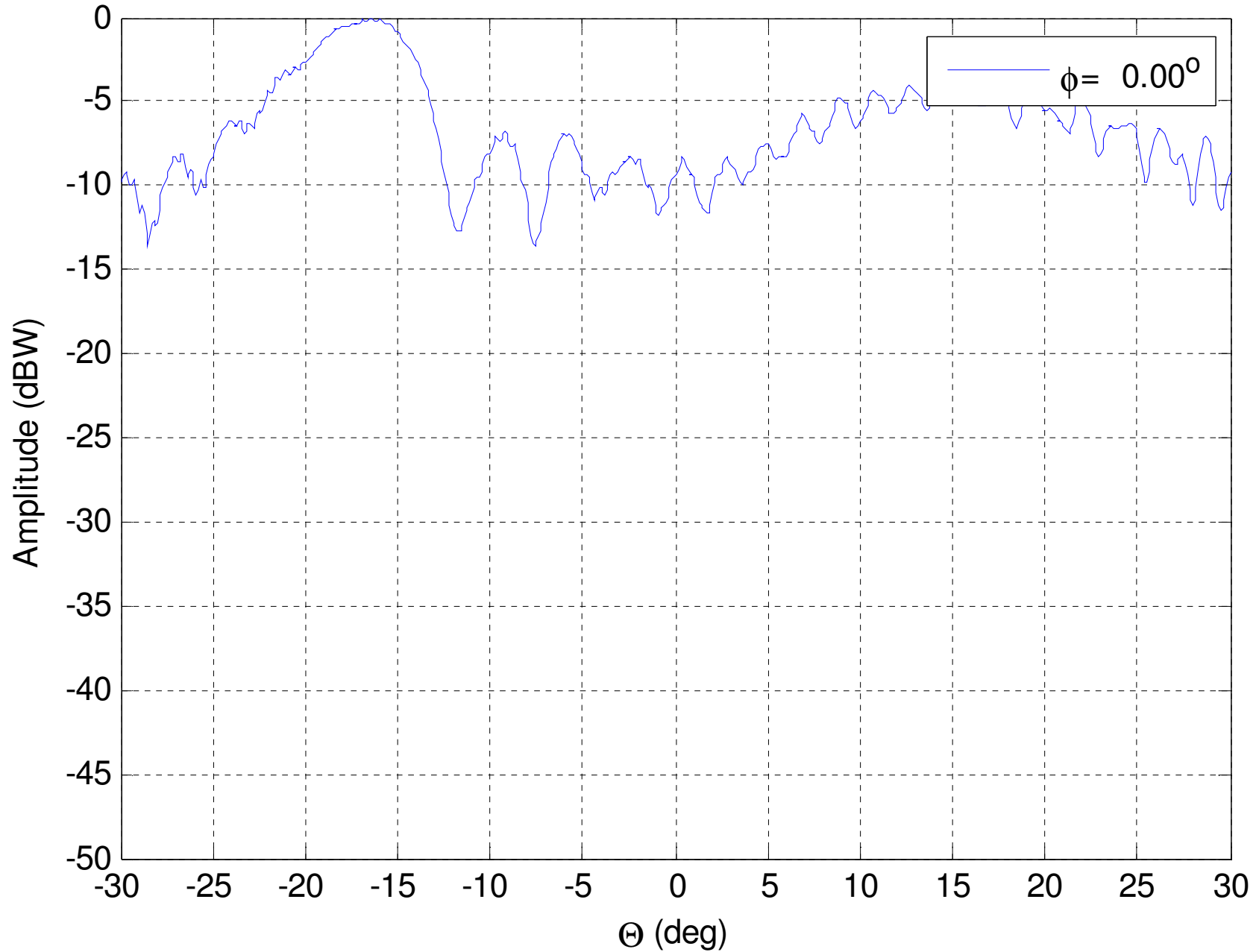
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: 7.41 dBW, Date: 15-Dec-2011



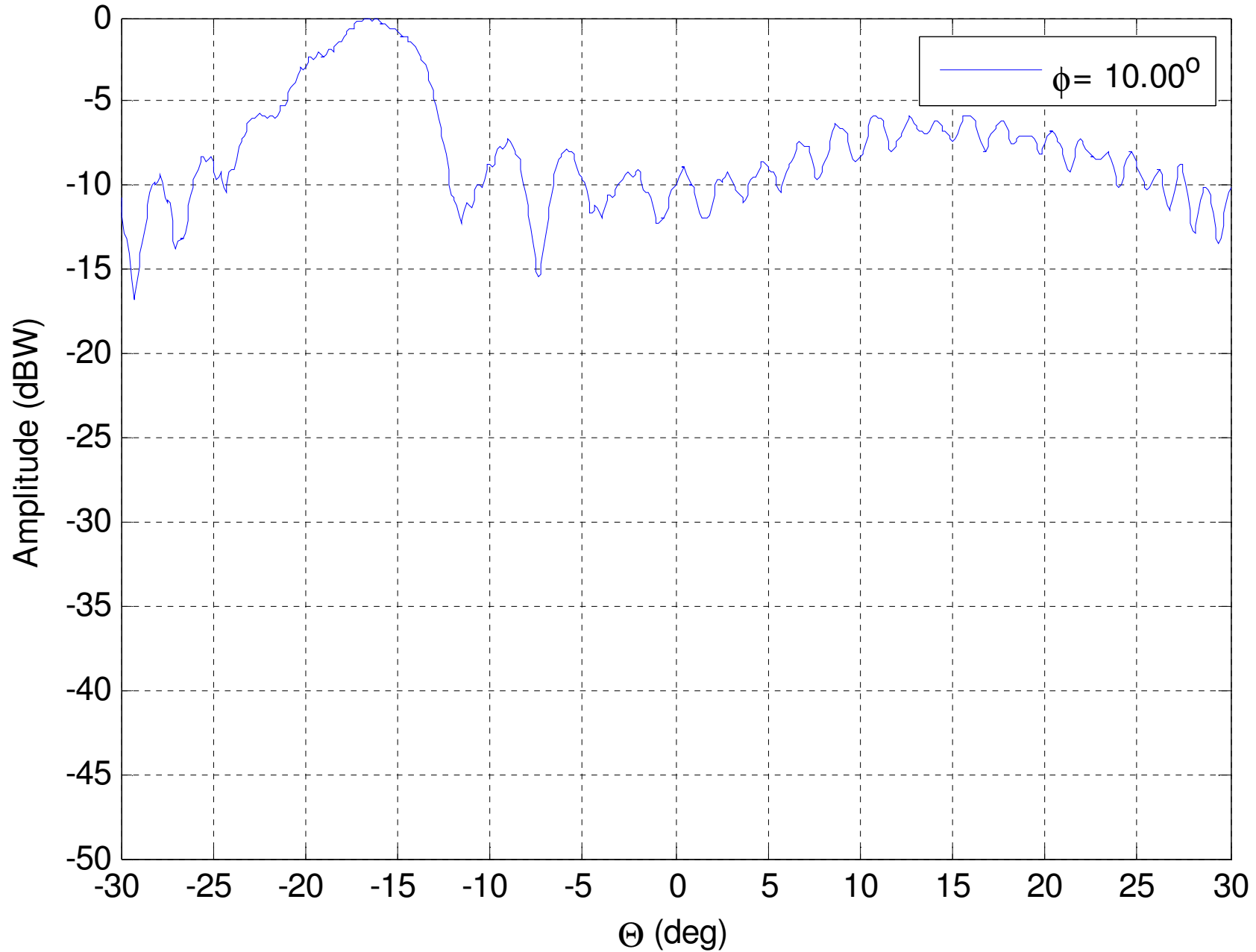
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: 8.30 dBW, Date: 15-Dec-2011



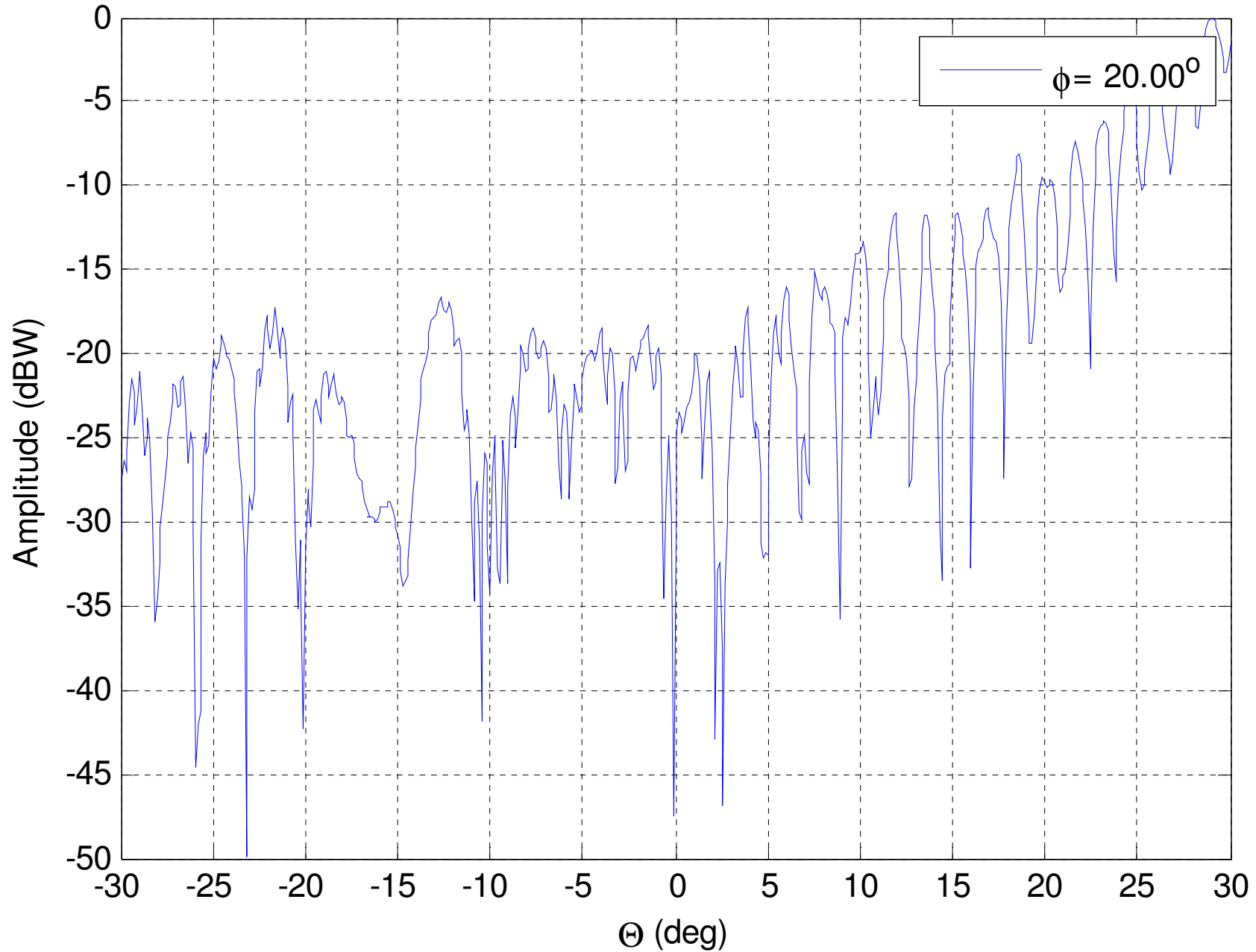
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: 8.85 dBW, Date: 15-Dec-2011



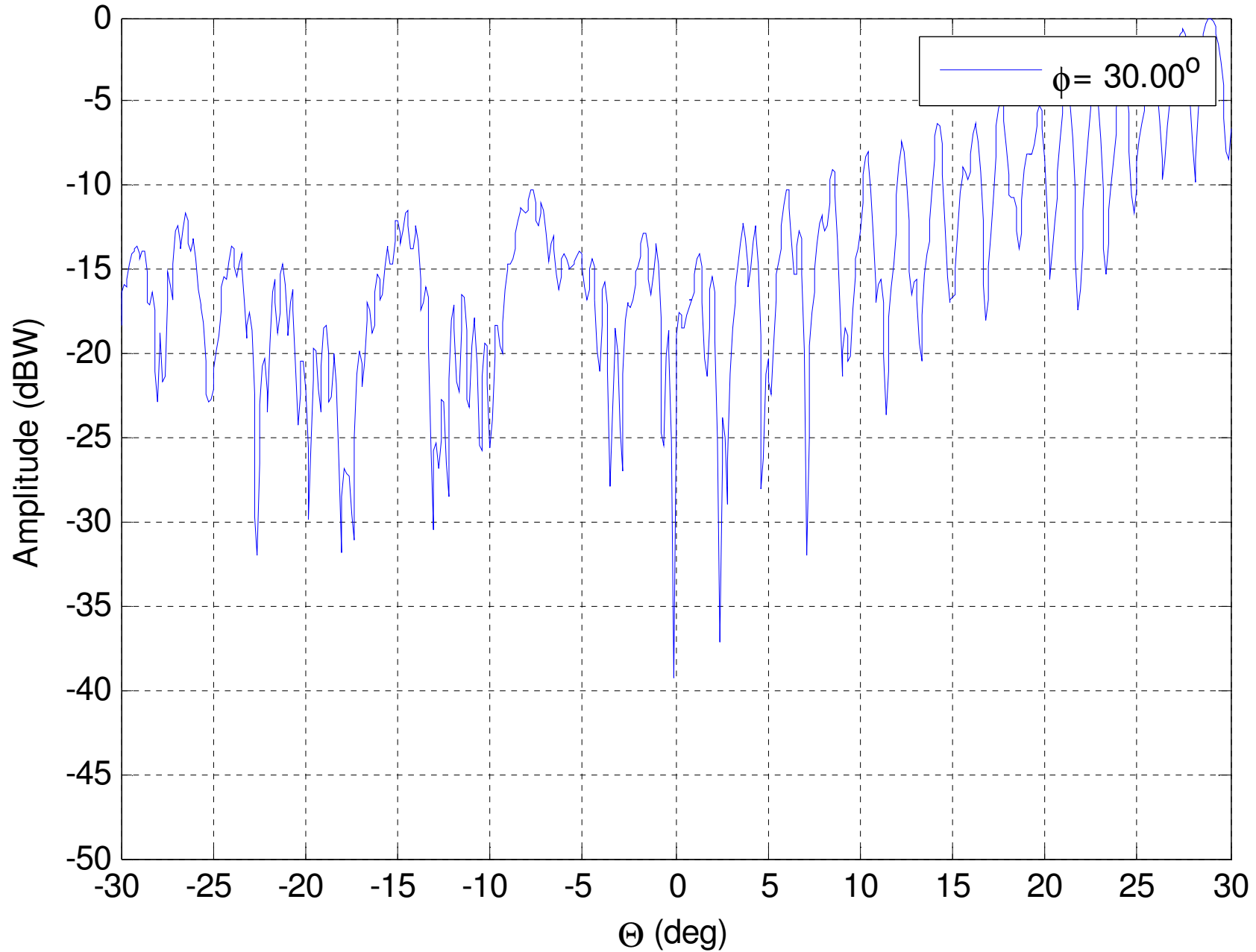
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: 5.86 dBW, Date: 15-Dec-2011



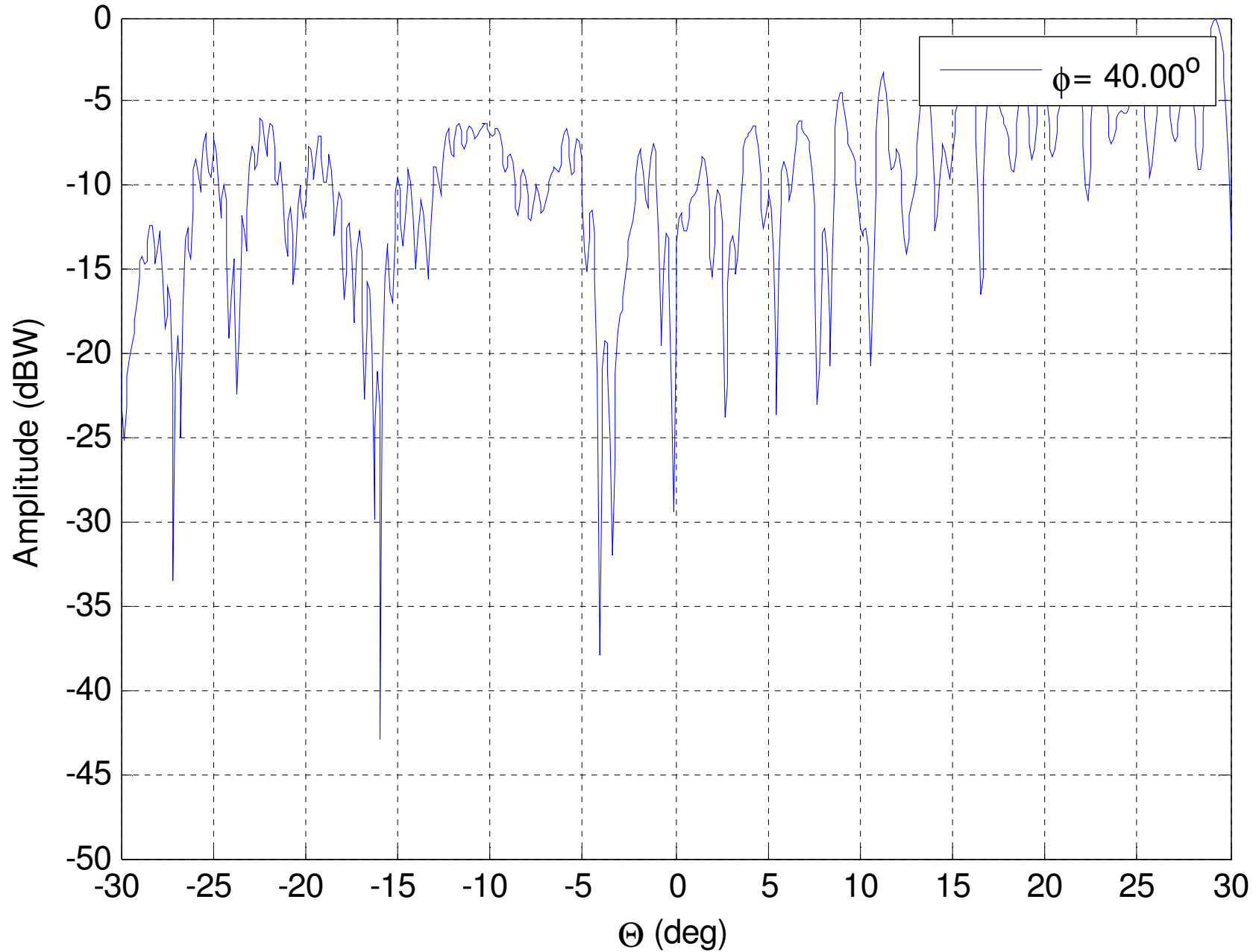
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -0.02 dBW, Date: 15-Dec-2011



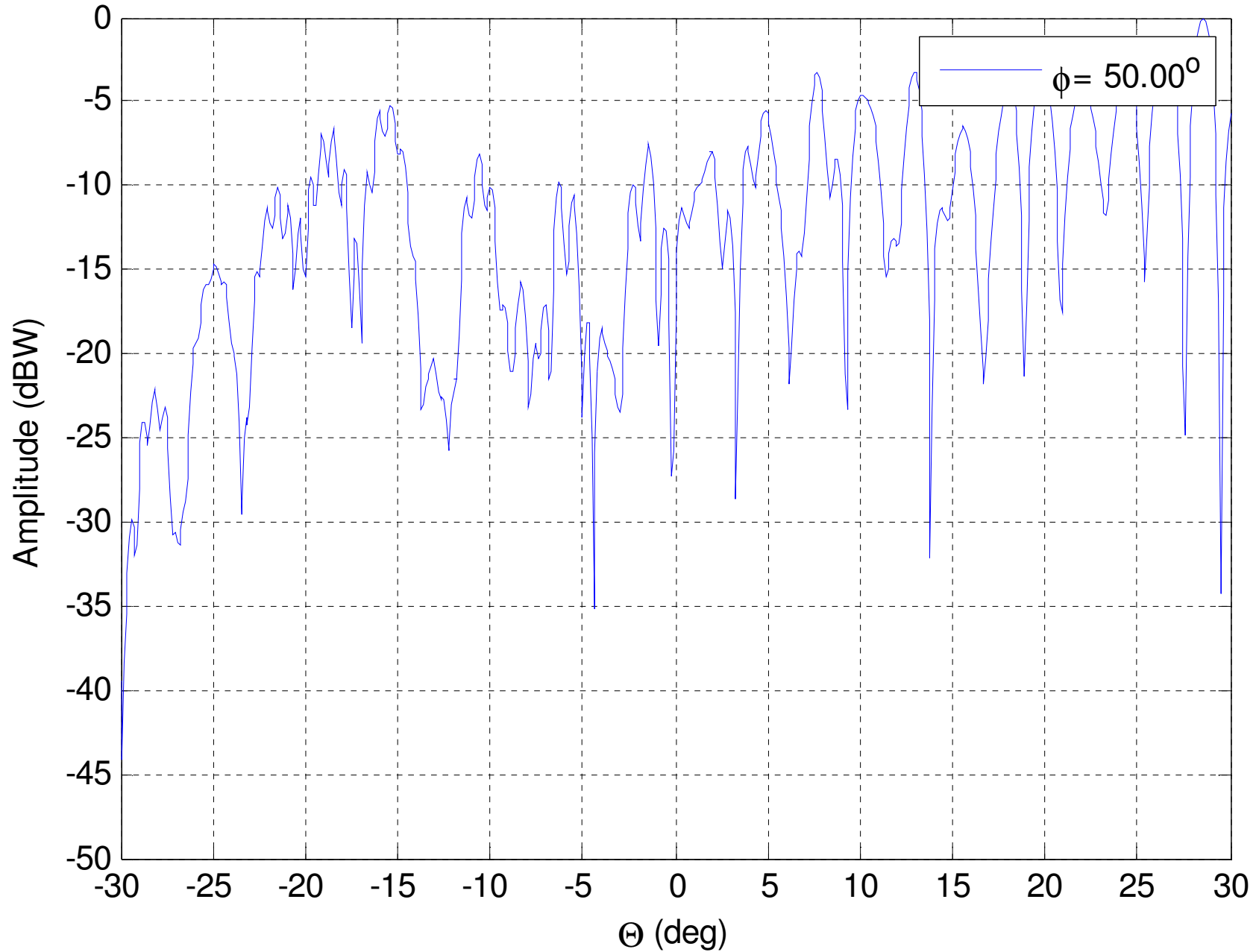
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -5.75 dBW, Date: 15-Dec-2011



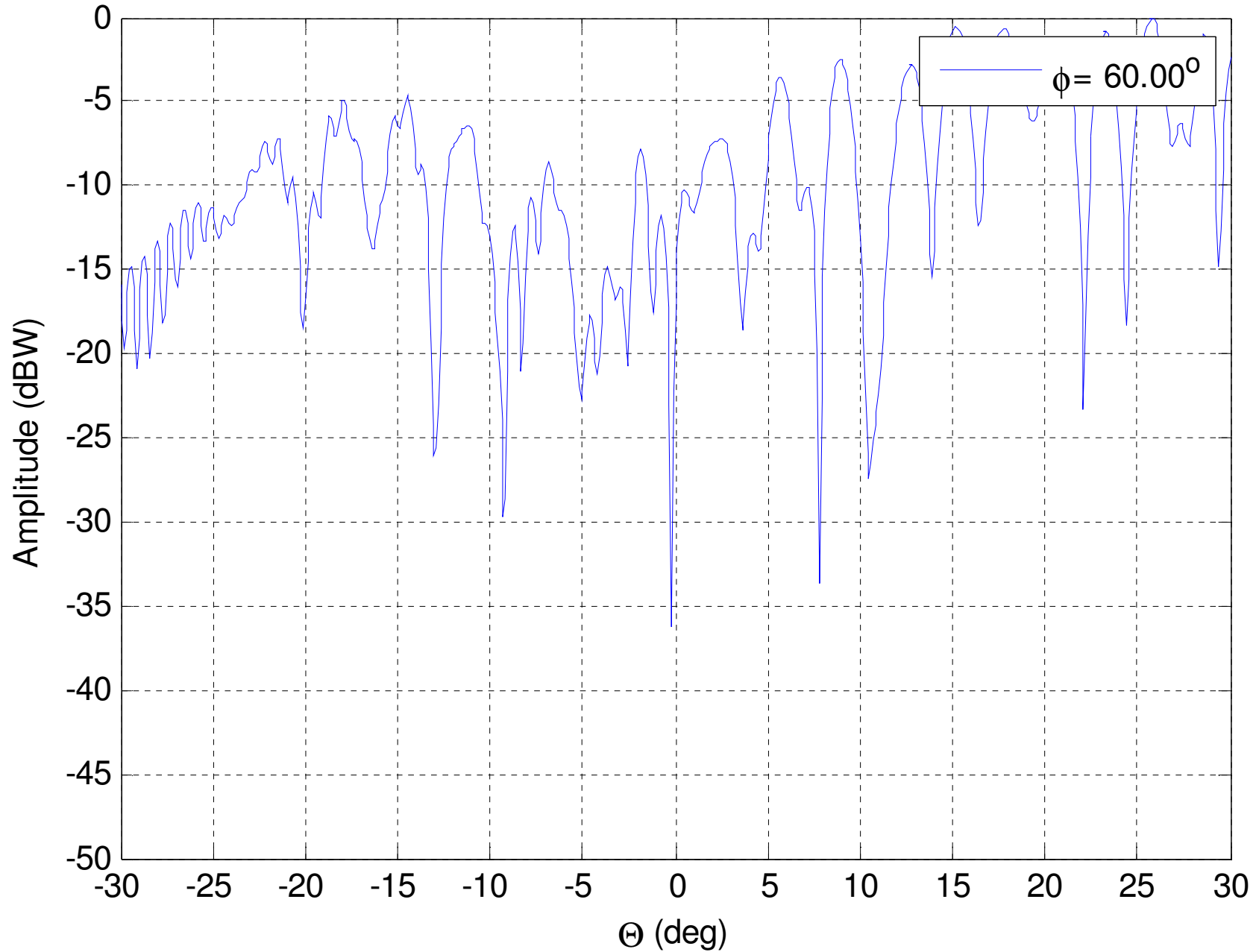
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -5.83 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -6.41 dBW, Date: 15-Dec-2011



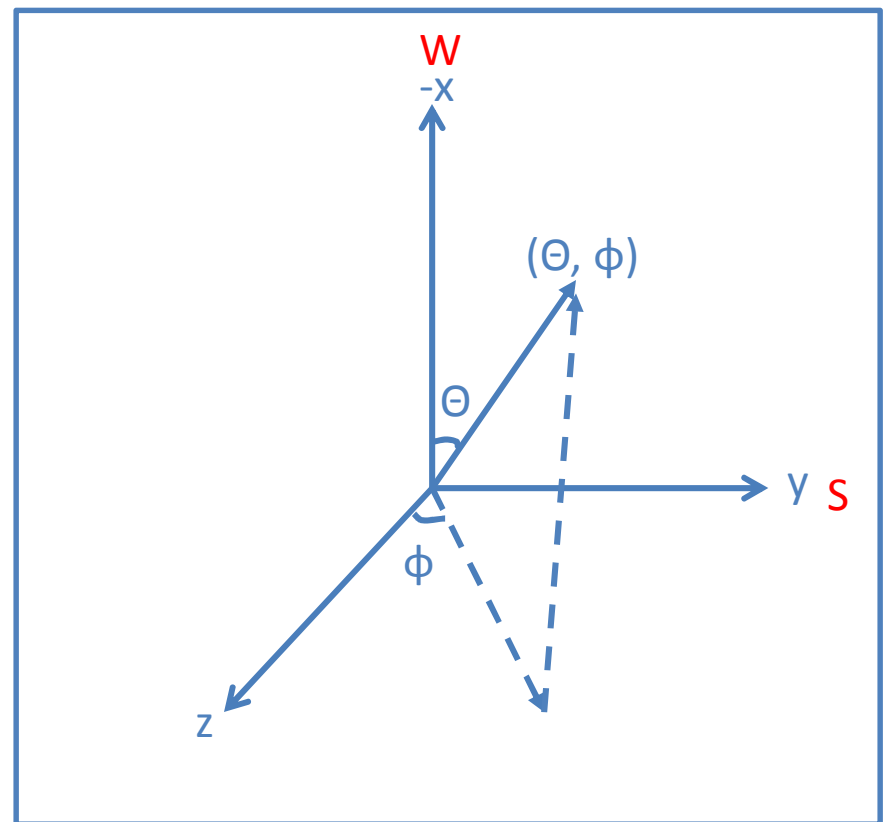
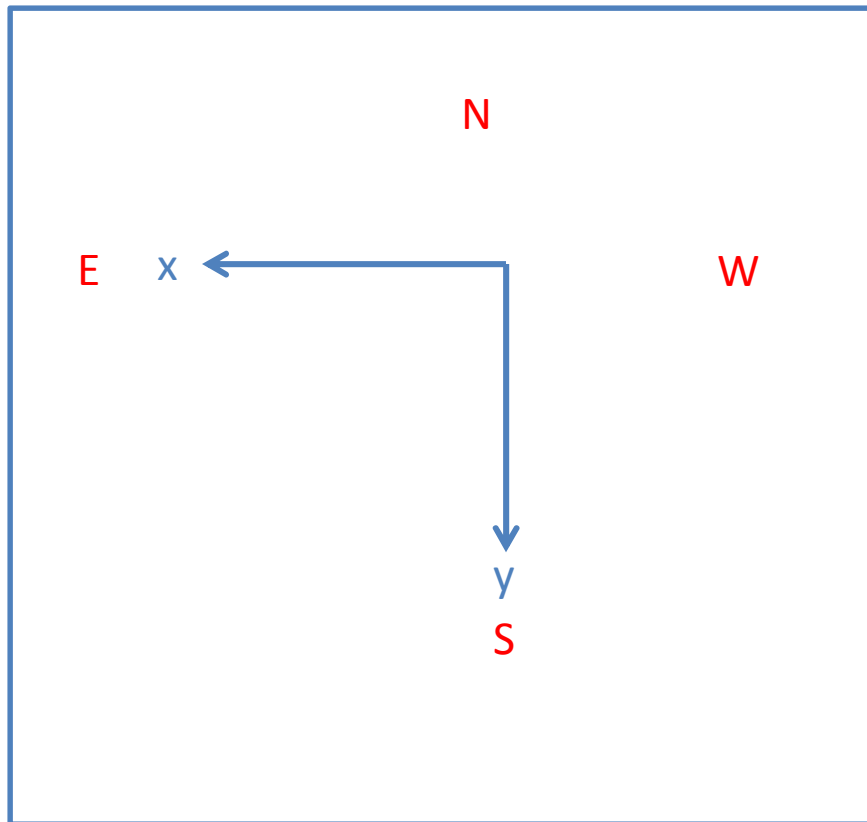
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 30

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



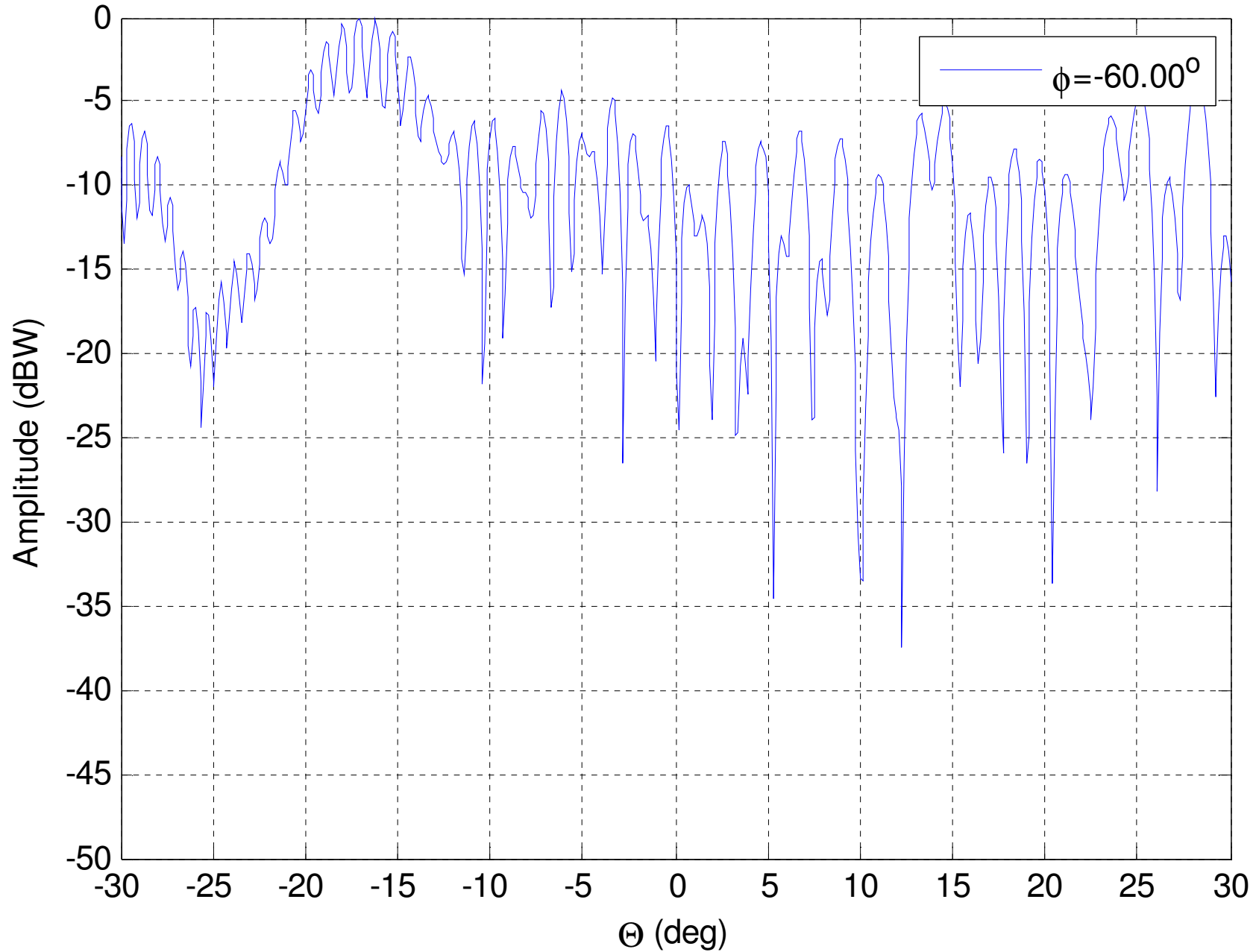
Spot Beam30, -X Axis Plots

- 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

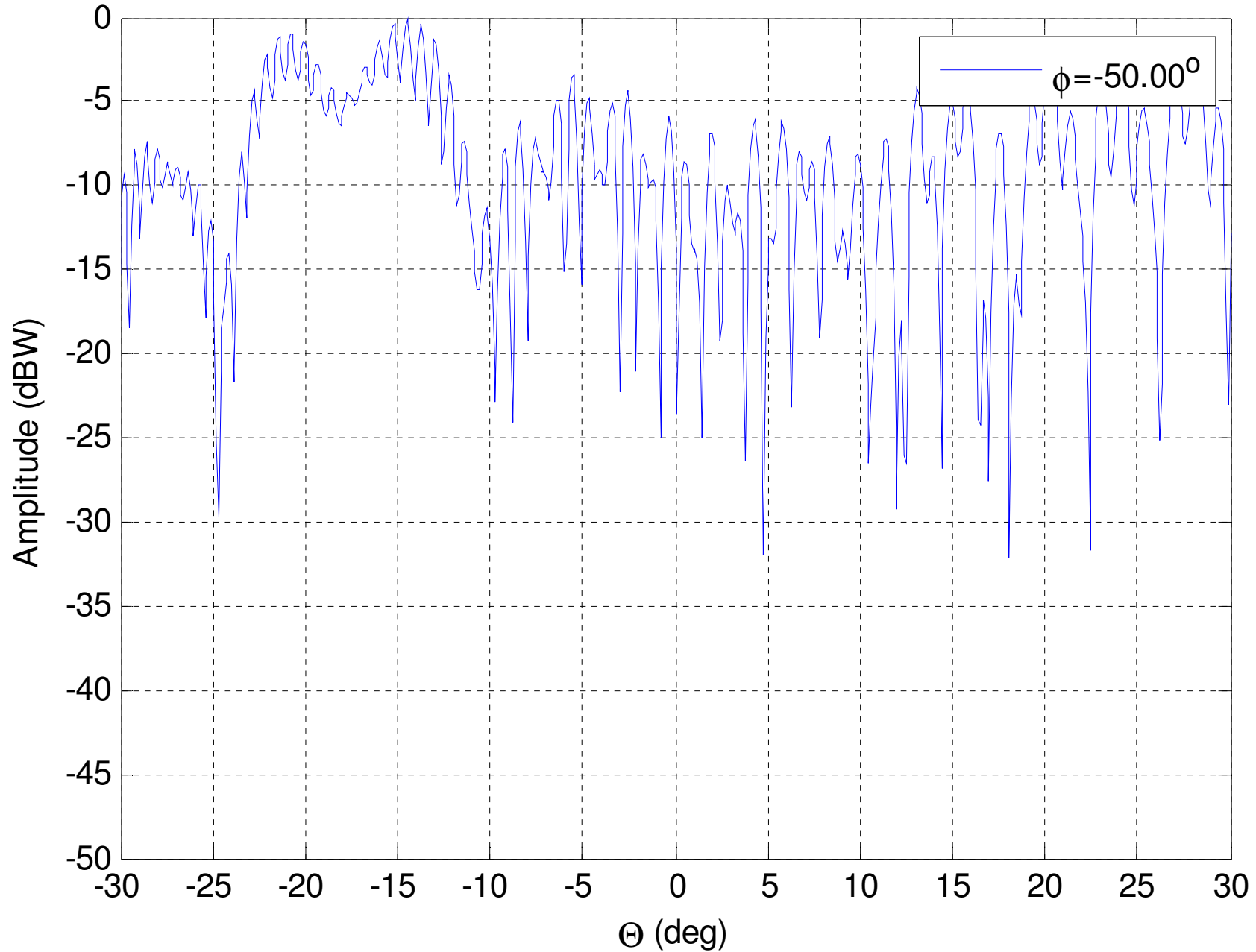
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -6.10 dBW, Date: 15-Dec-2011



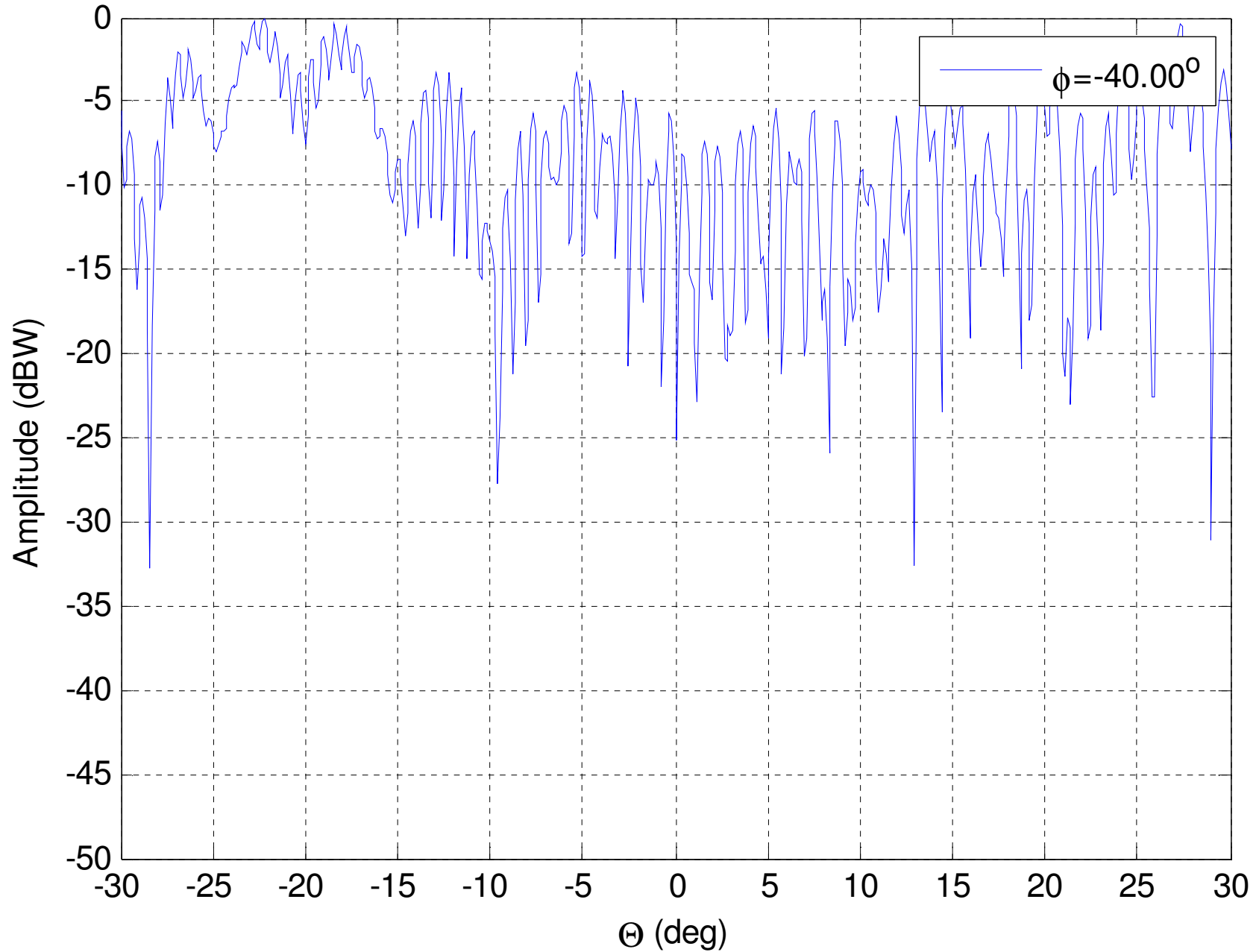
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -6.75 dBW, Date: 15-Dec-2011



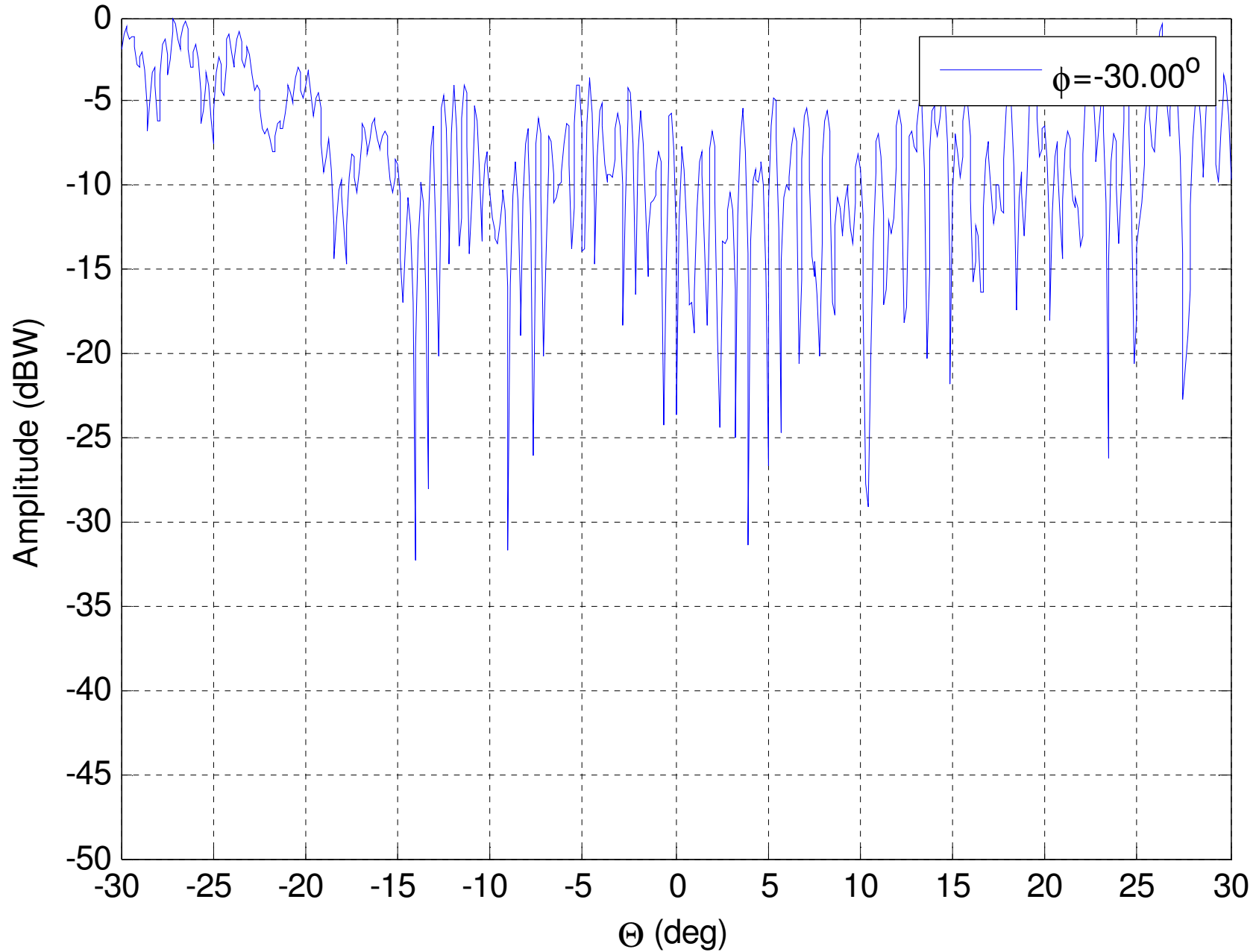
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -6.85 dBW, Date: 15-Dec-2011



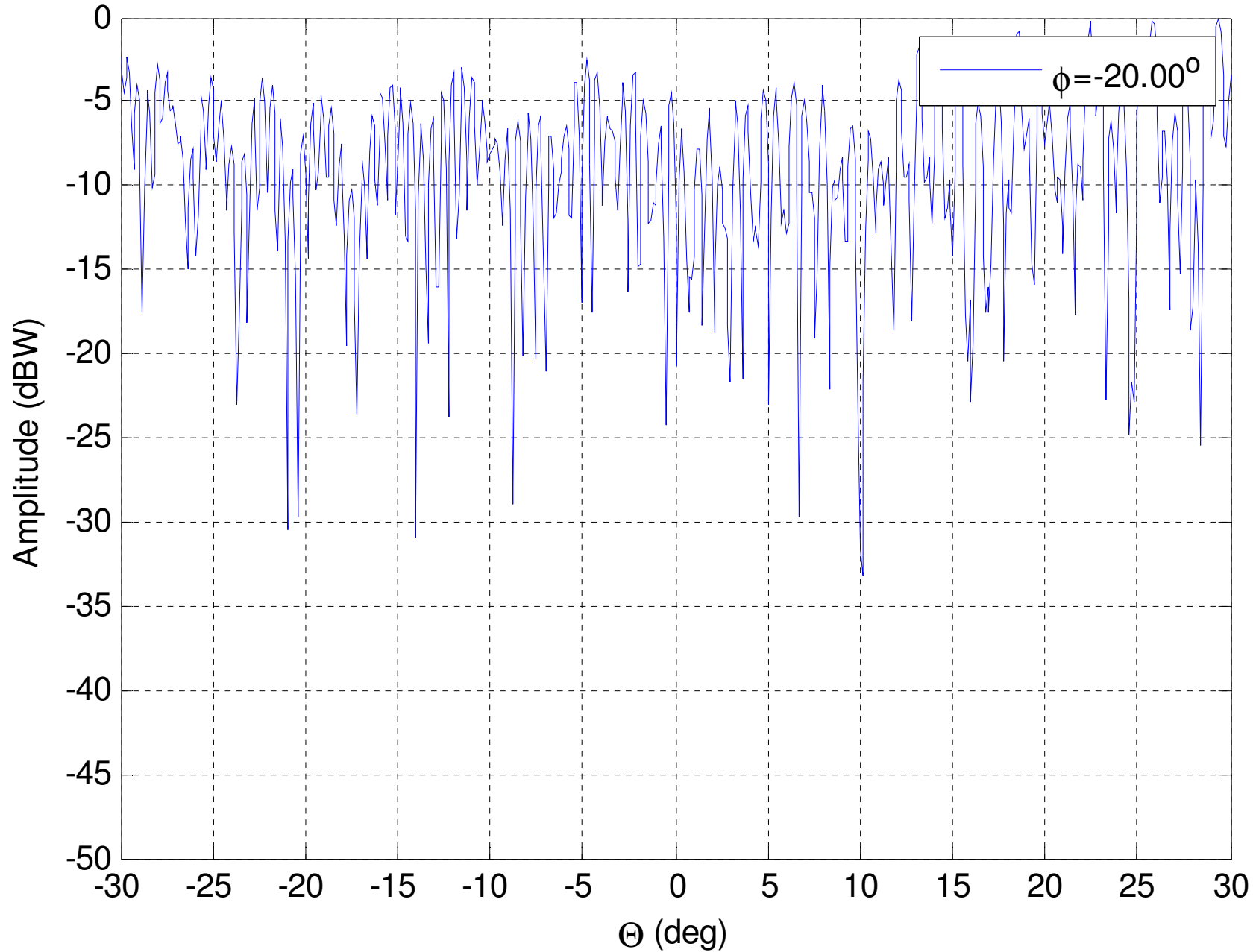
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.95 dBW, Date: 15-Dec-2011



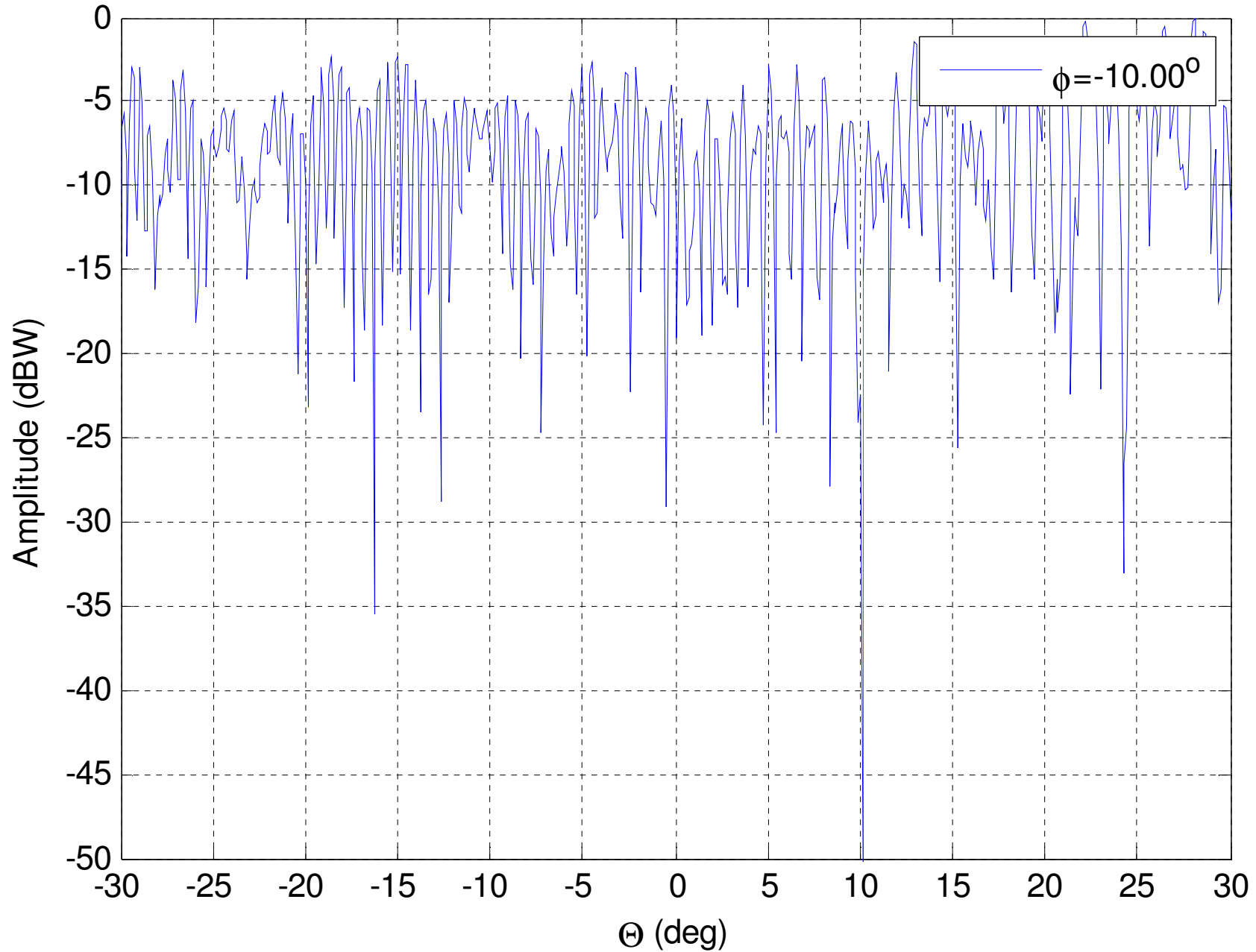
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -8.03 dBW, Date: 15-Dec-2011



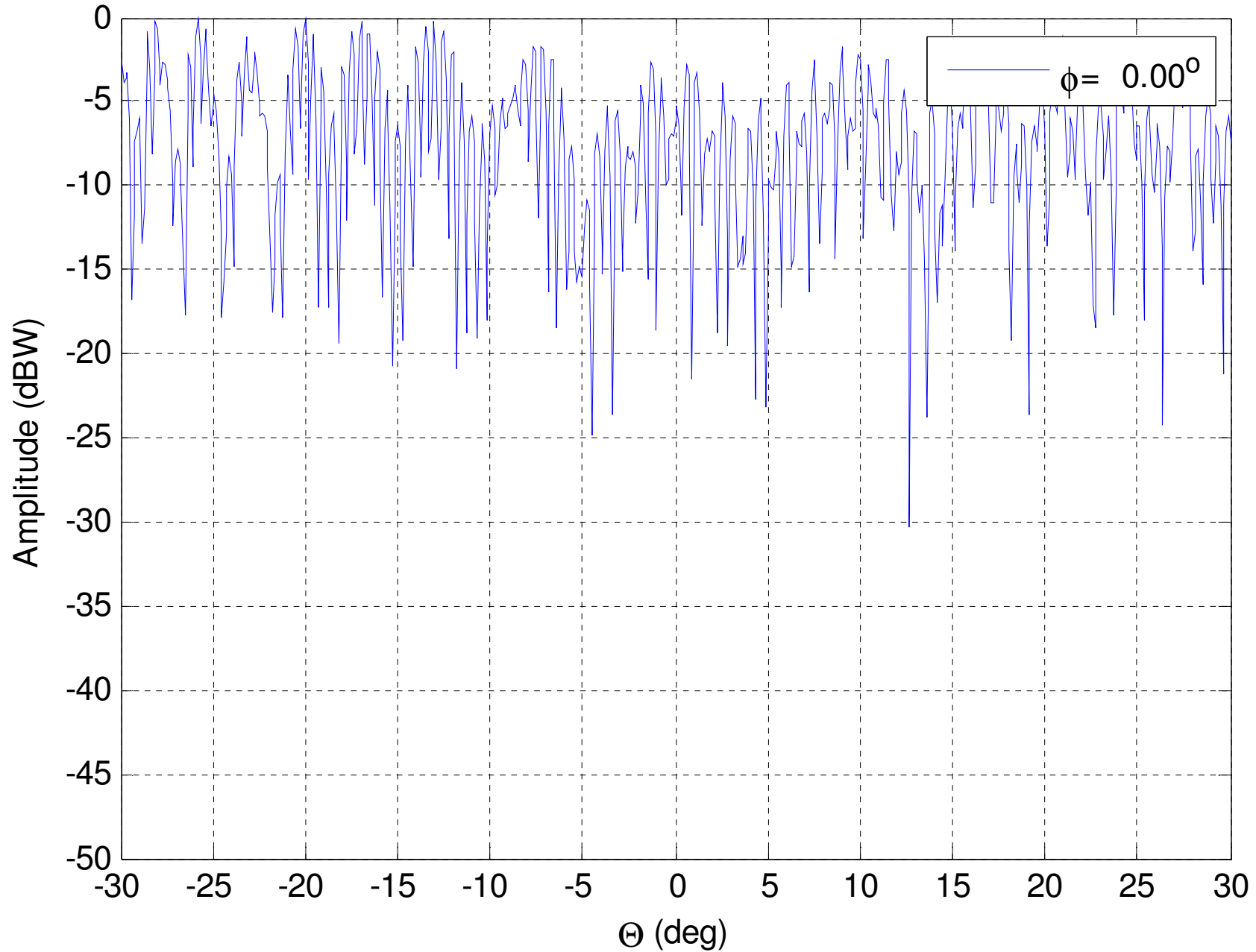
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -8.38 dBW, Date: 15-Dec-2011



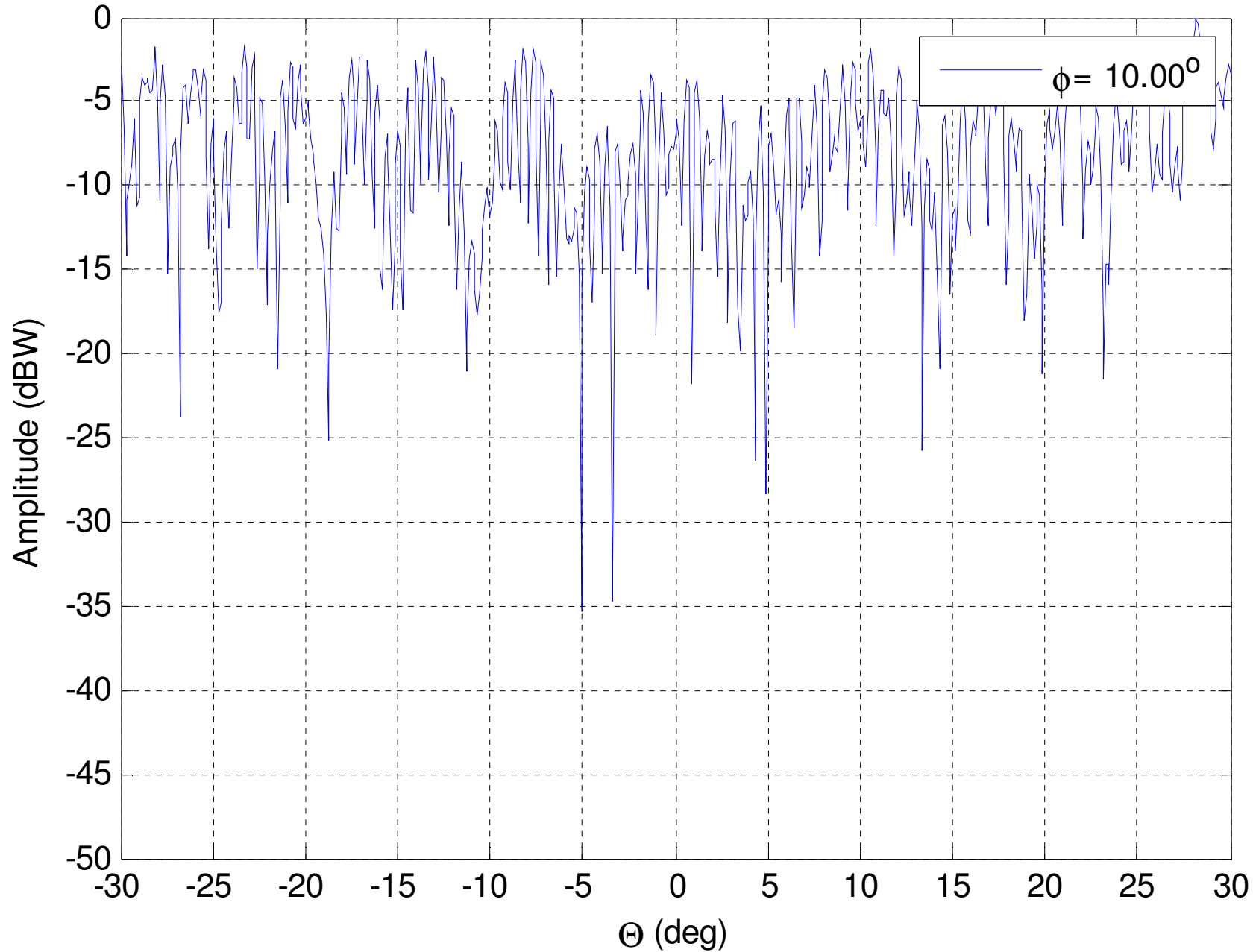
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -9.61 dBW, Date: 15-Dec-2011



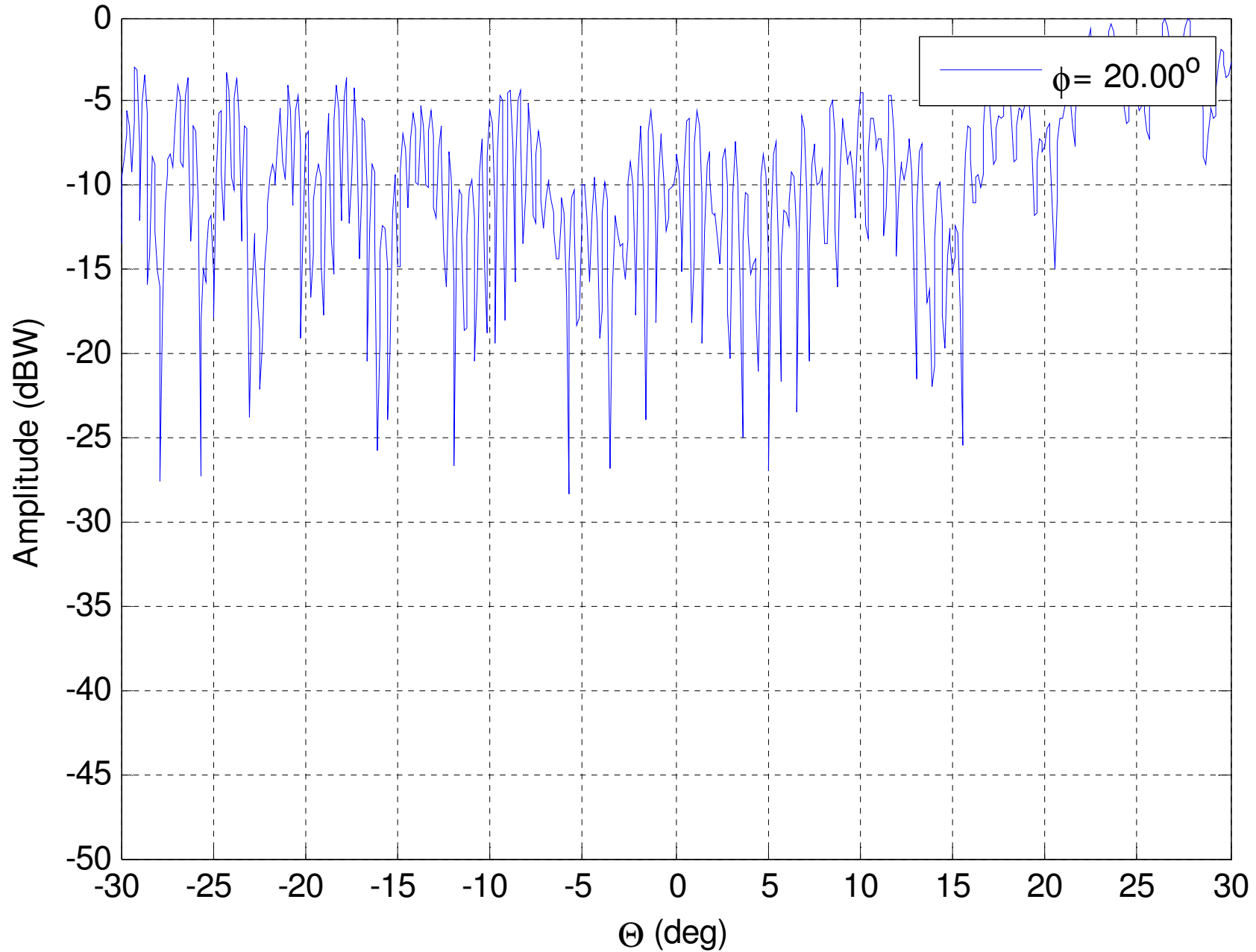
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -8.89 dBW, Date: 15-Dec-2011



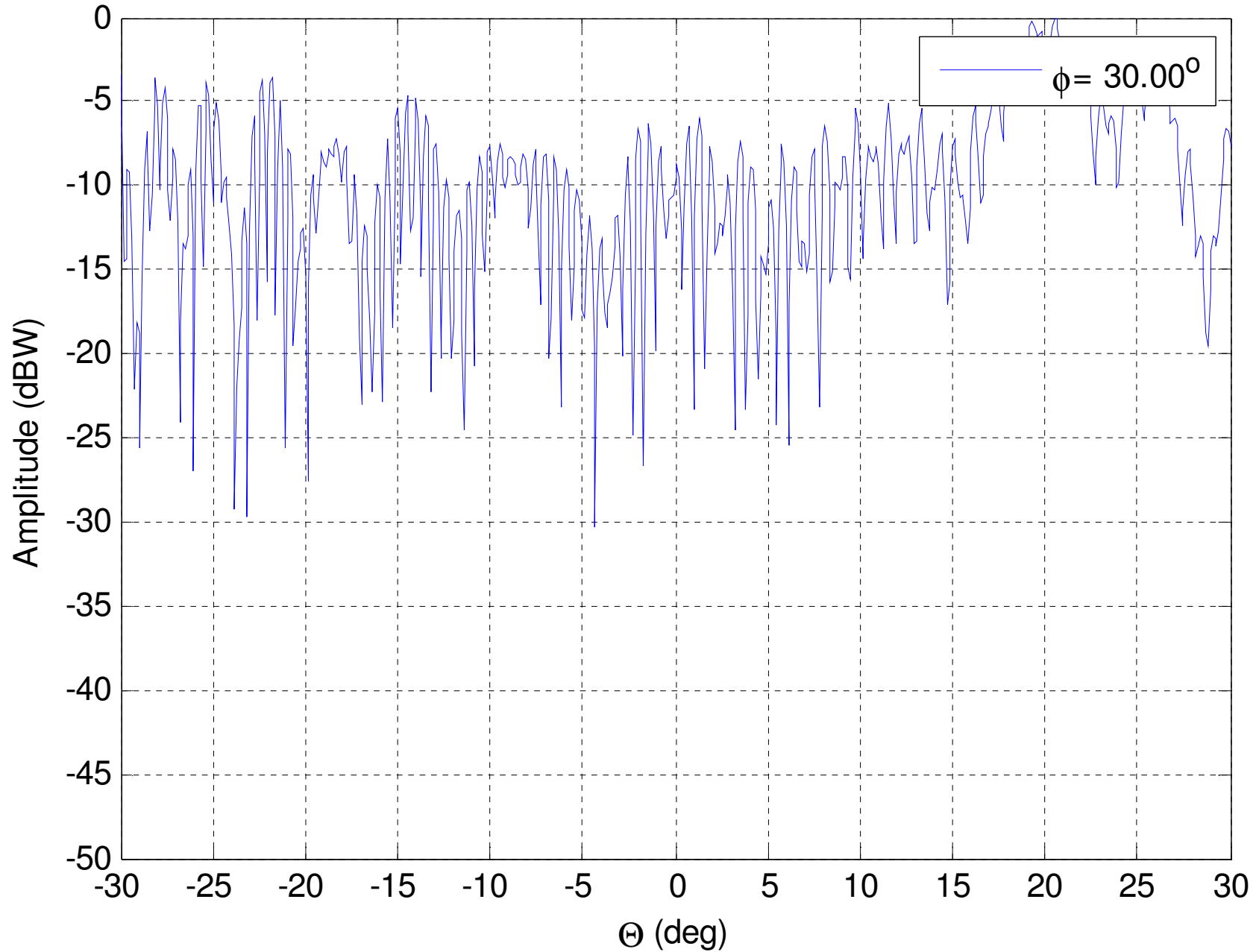
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -6.73 dBW, Date: 15-Dec-2011



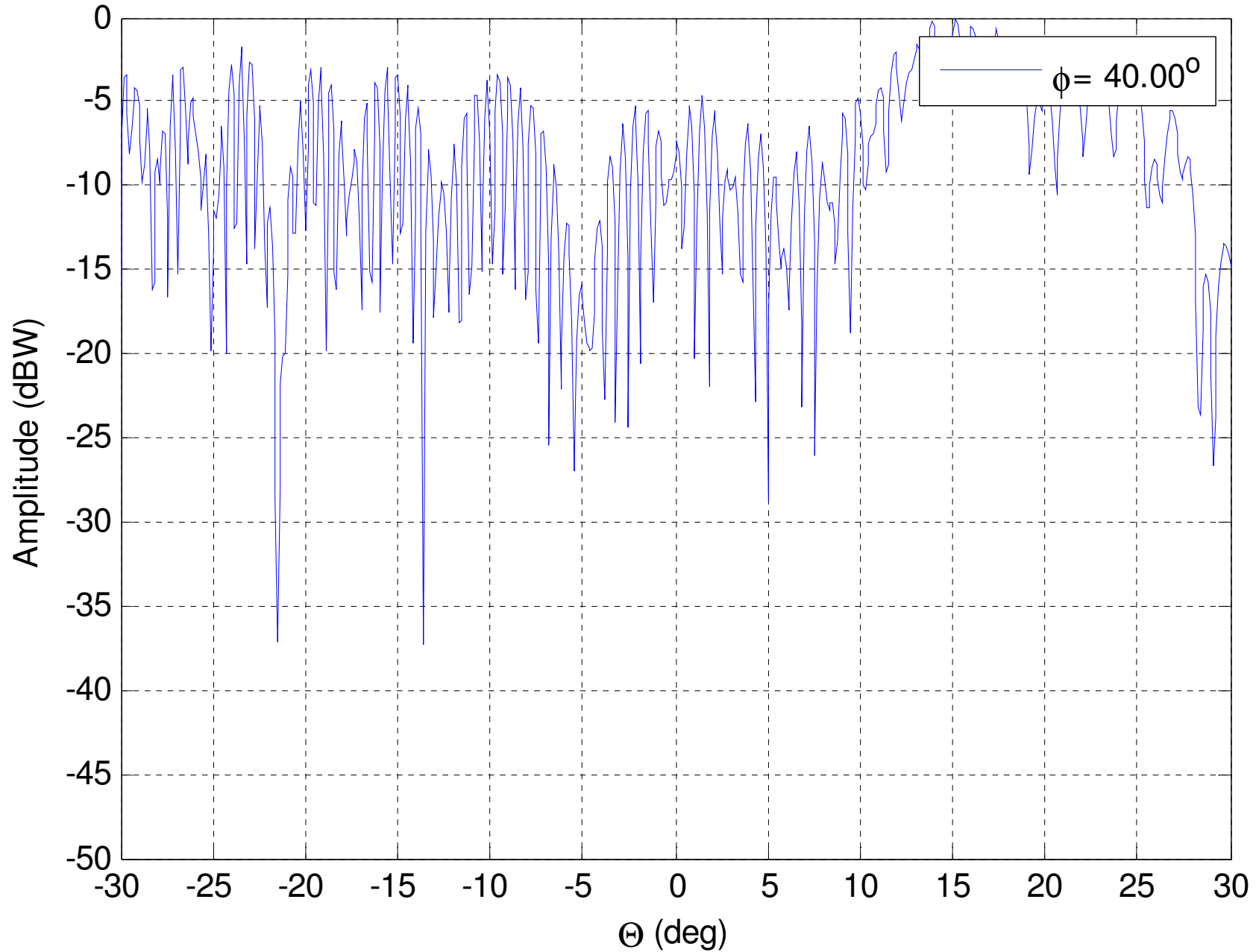
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -6.19 dBW, Date: 15-Dec-2011



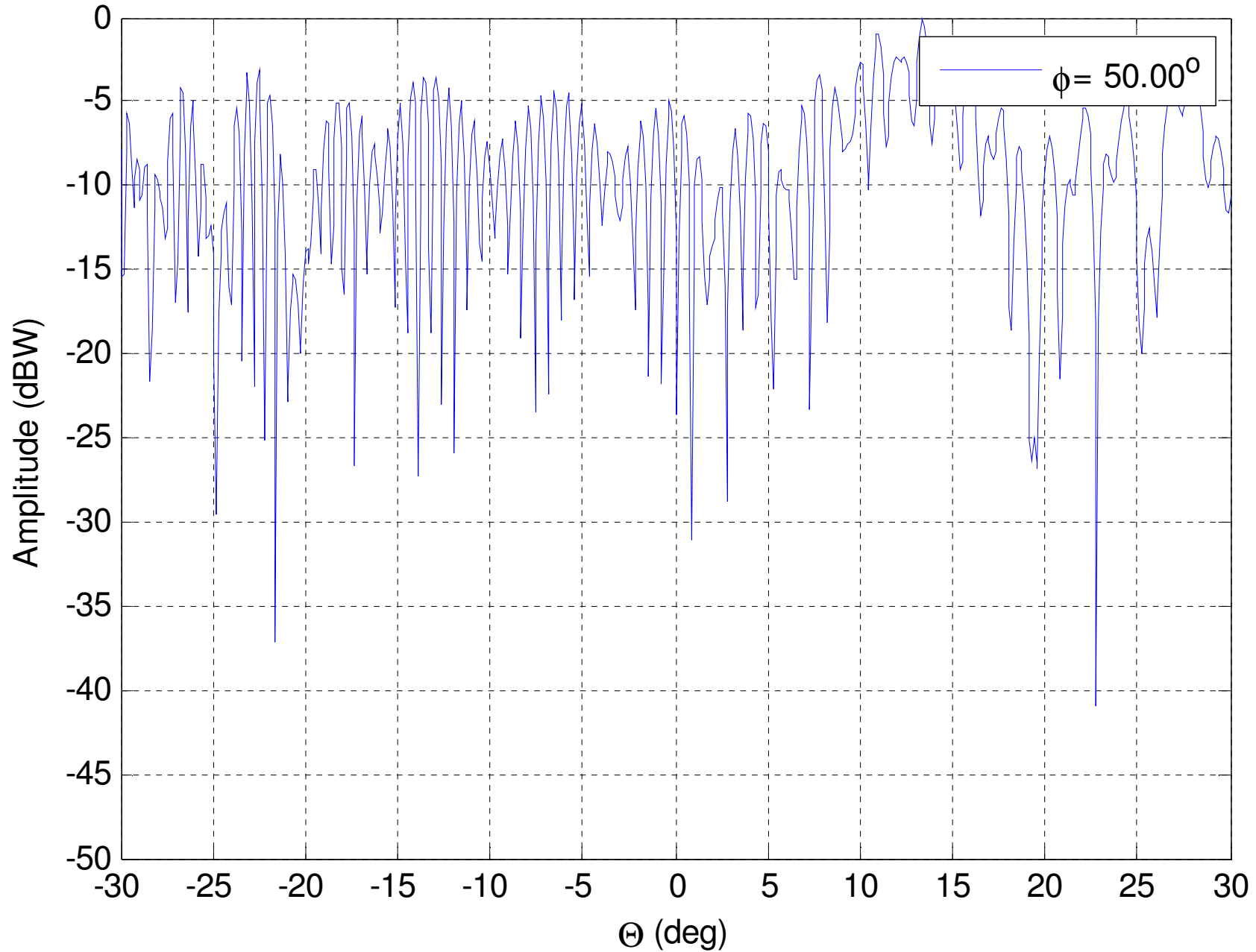
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -7.54 dBW, Date: 15-Dec-2011



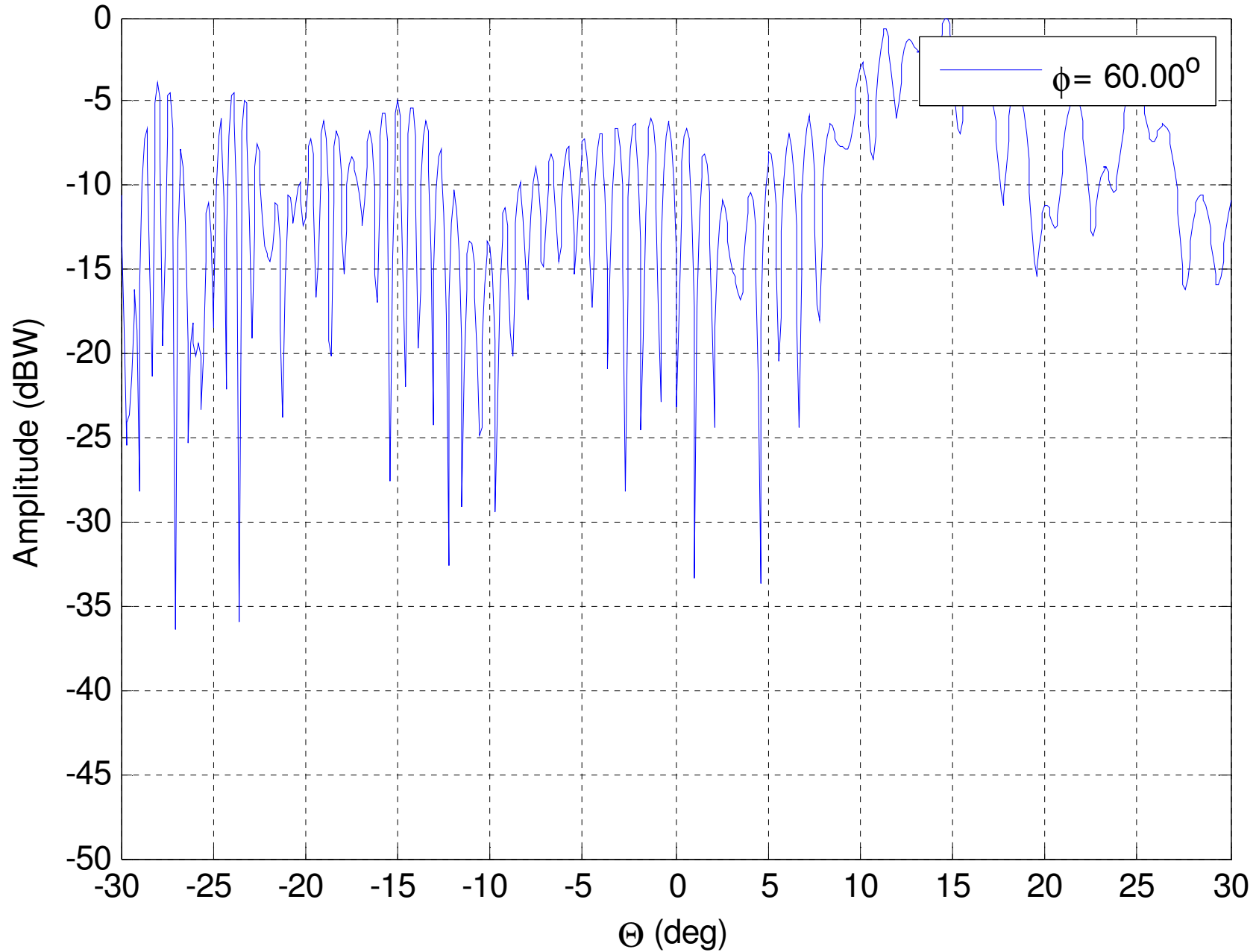
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -7.51 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

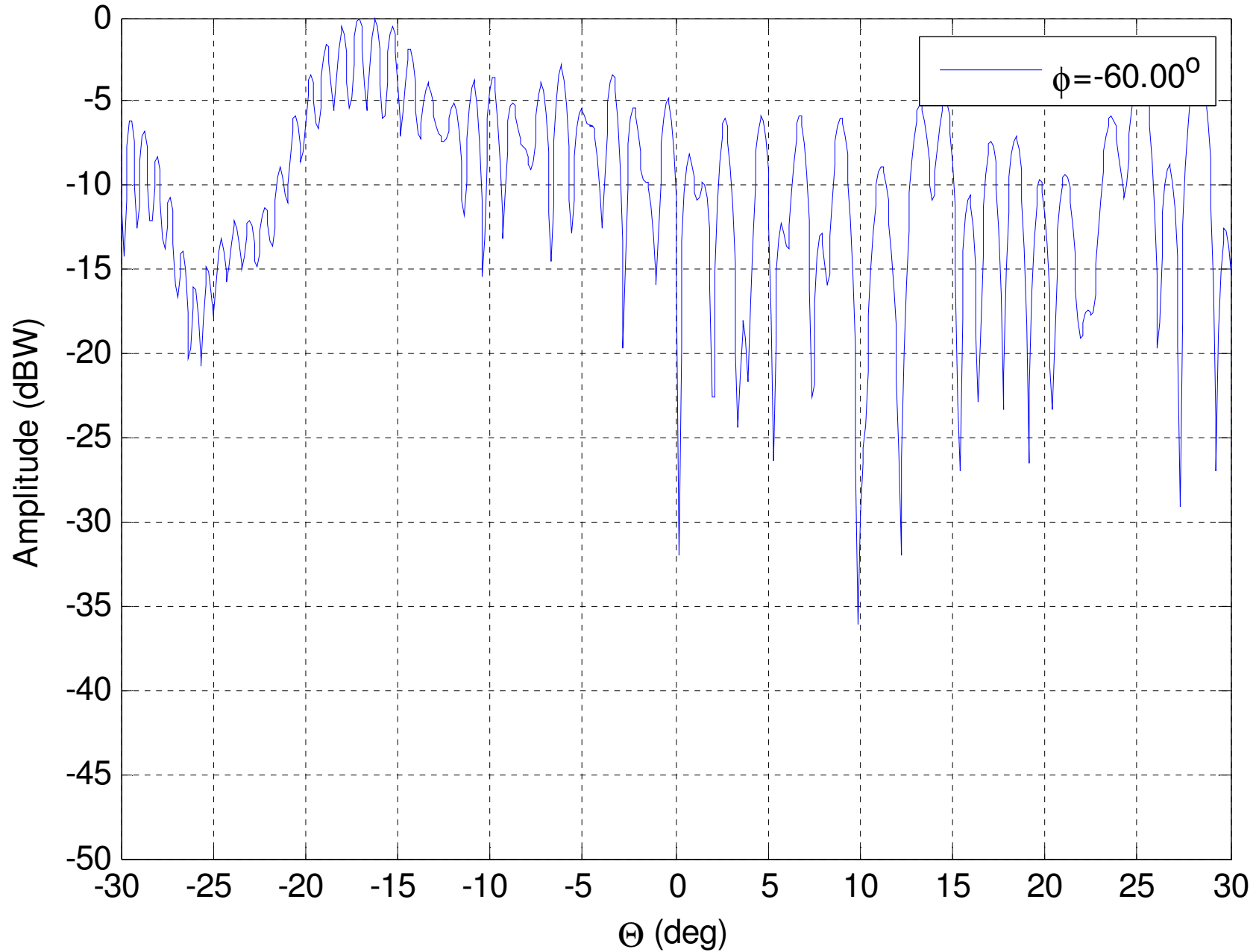
Input file: tx-17.3-rhcp-60.cut, Peak: -6.42 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

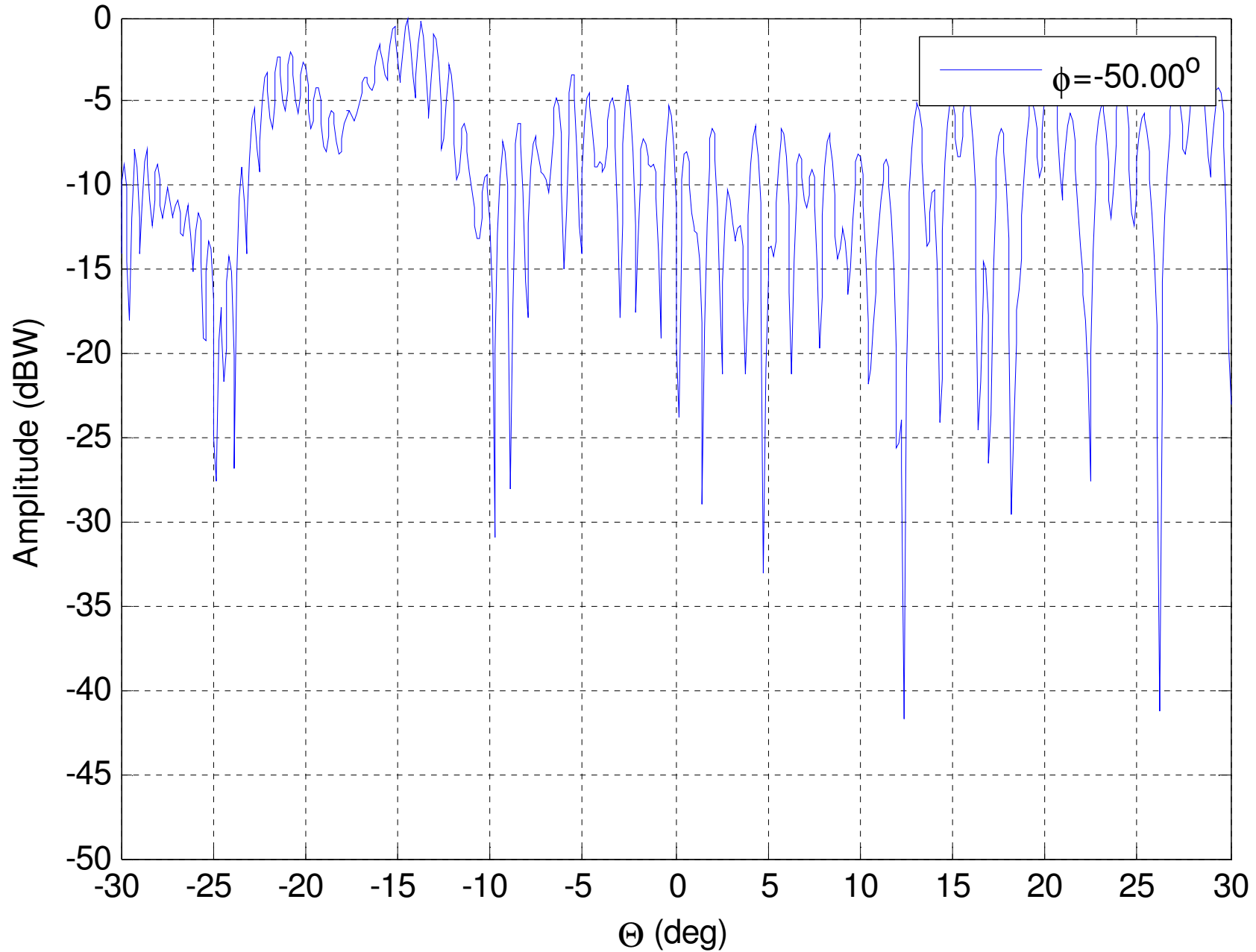
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -7.11 dBW, Date: 15-Dec-2011



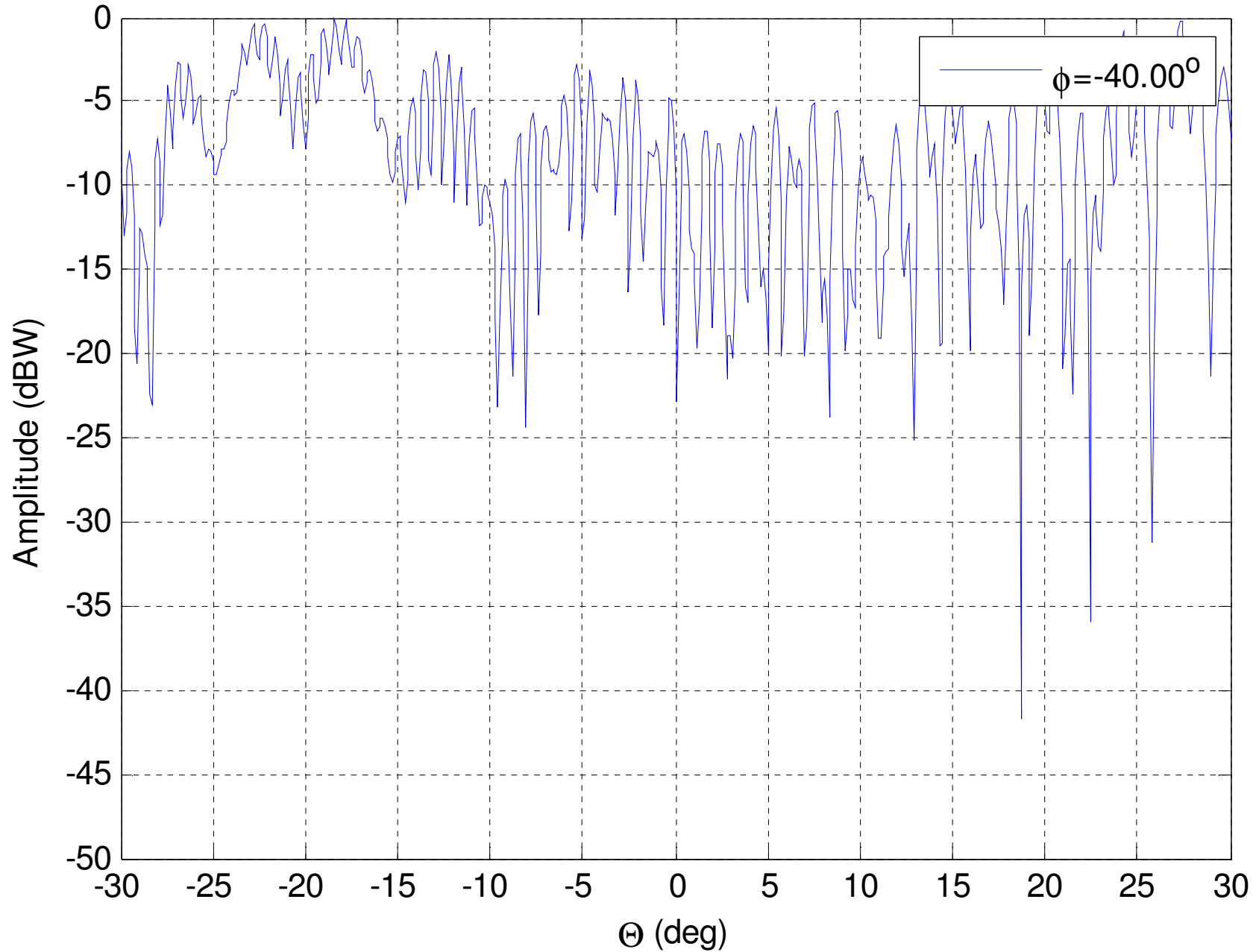
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -6.61 dBW, Date: 15-Dec-2011



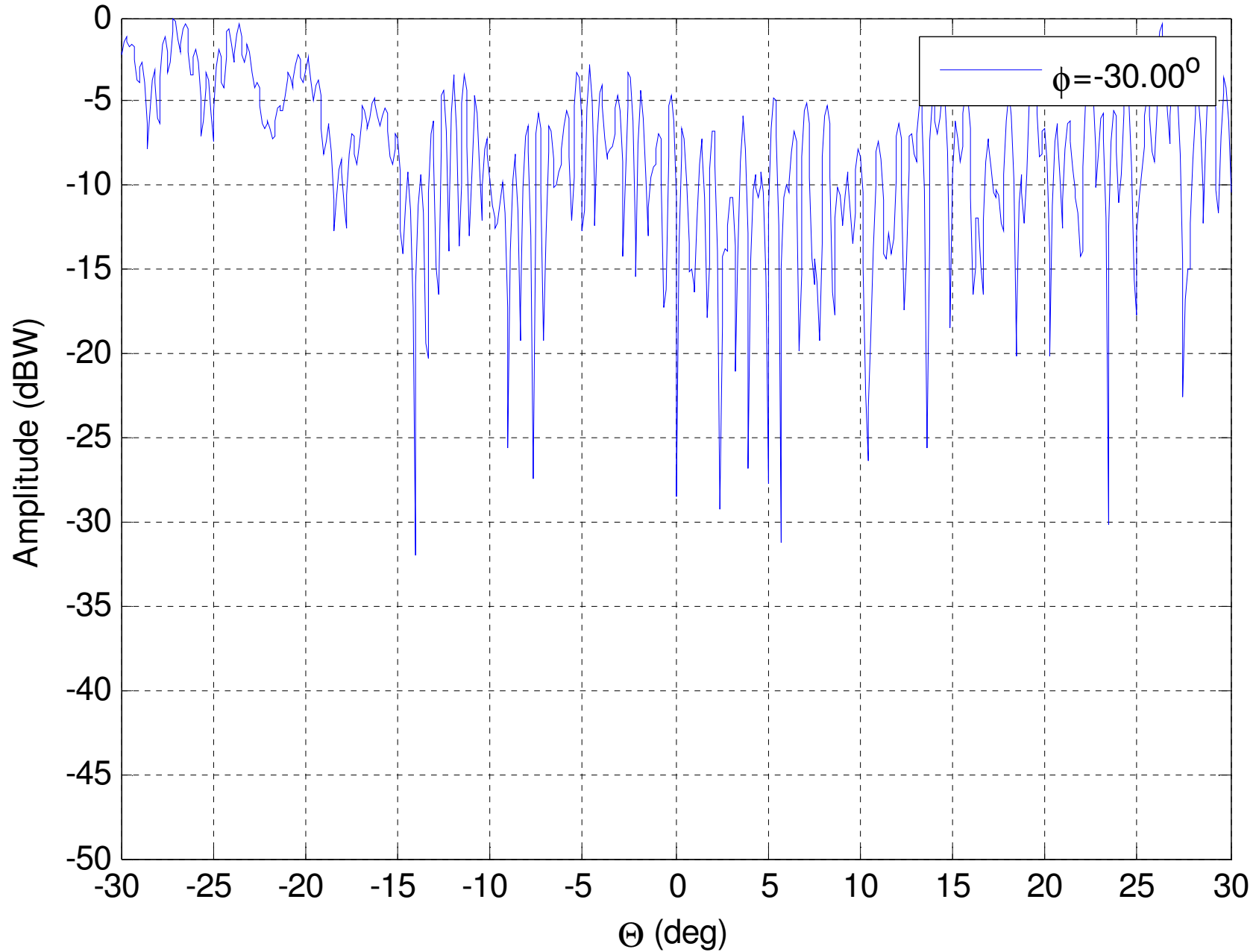
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -7.19 dBW, Date: 15-Dec-2011



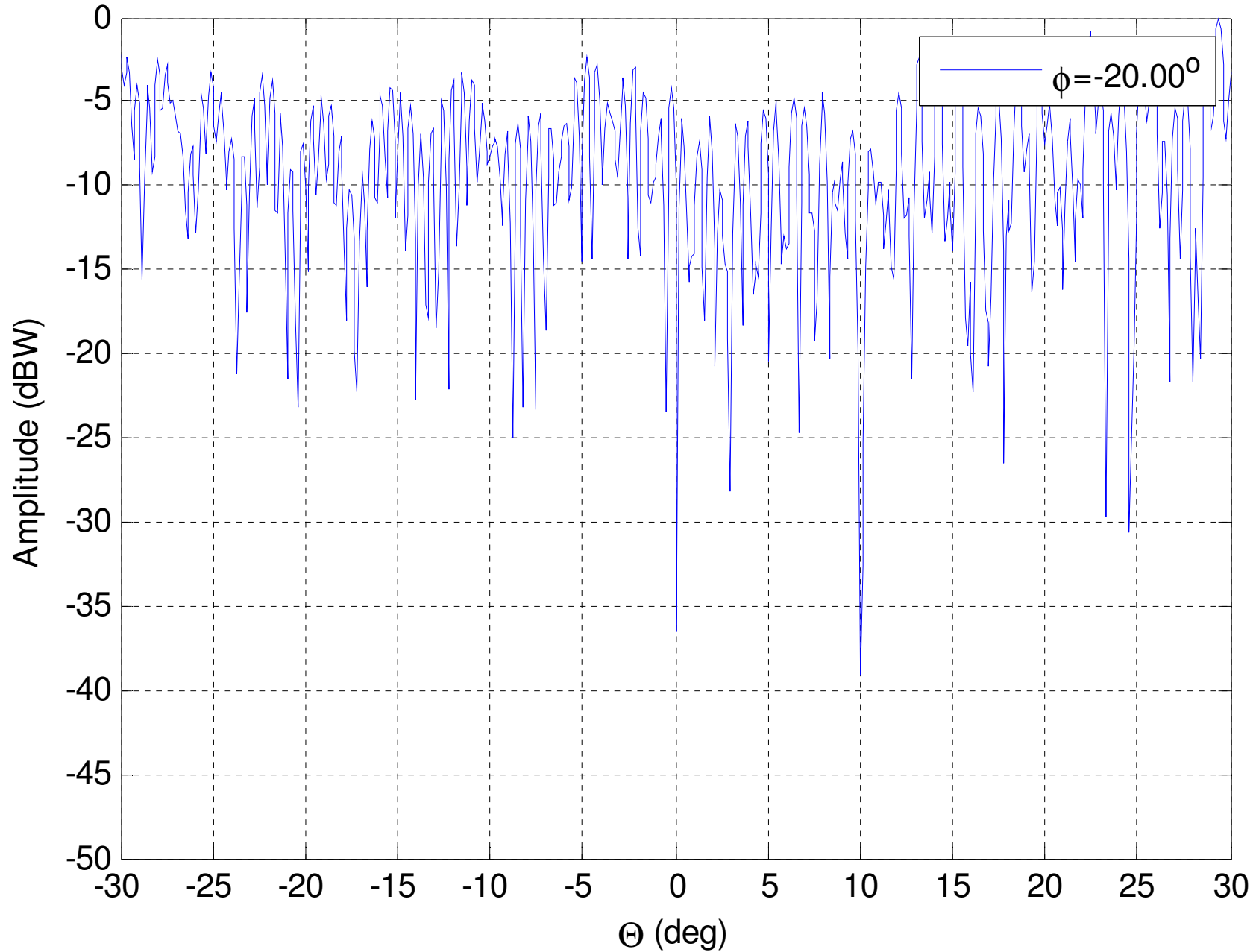
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -7.24 dBW, Date: 15-Dec-2011



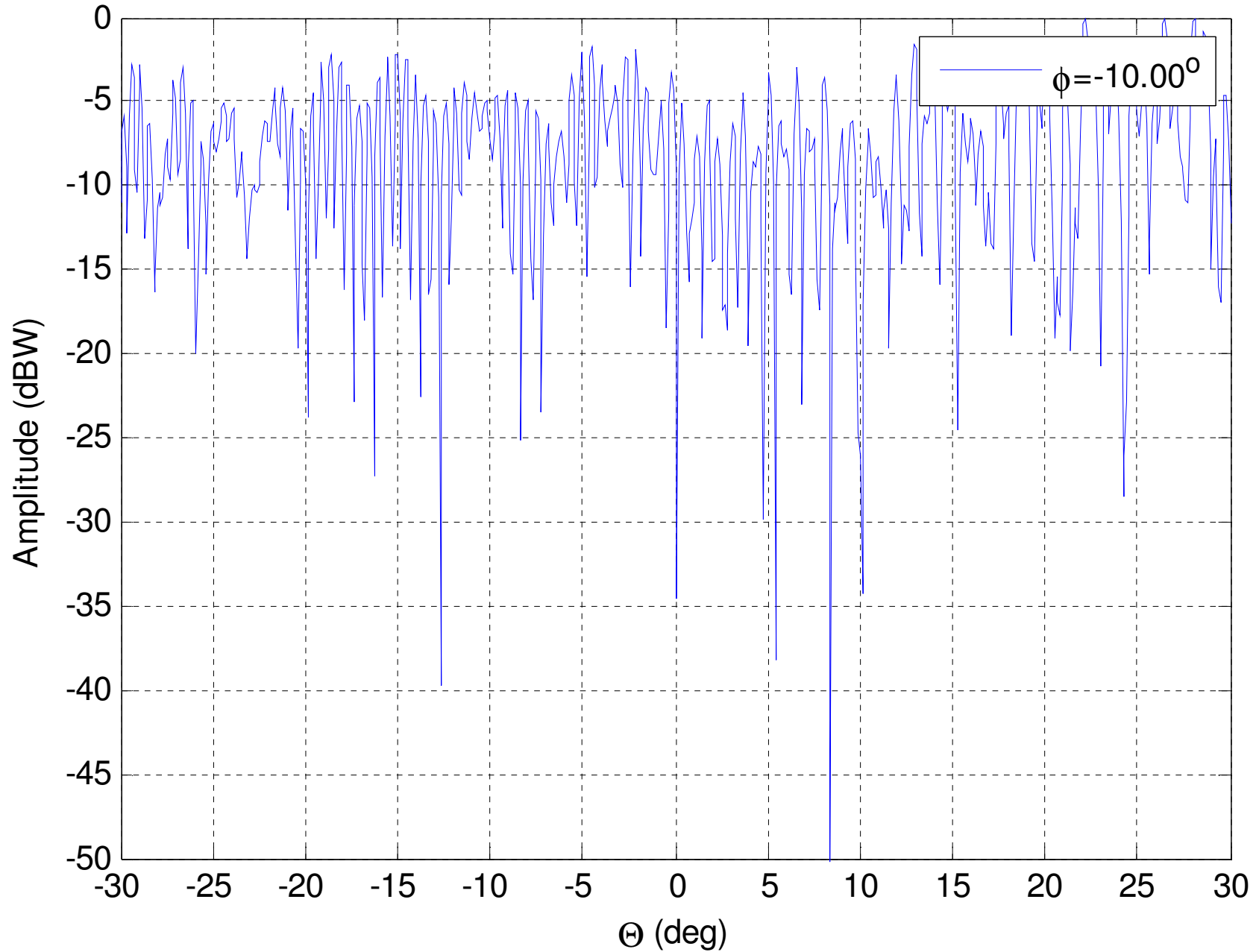
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -7.69 dBW, Date: 15-Dec-2011



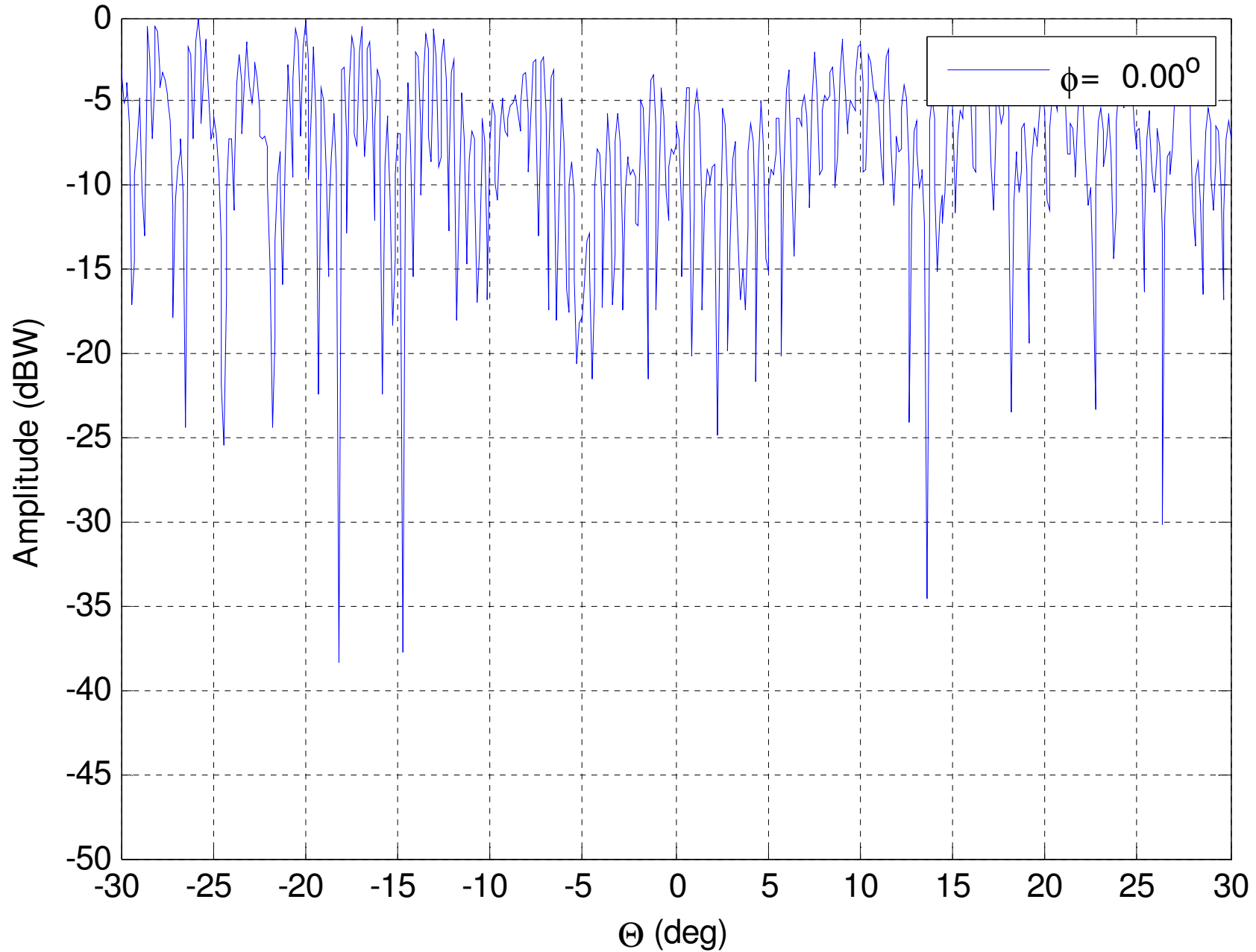
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -8.66 dBW, Date: 15-Dec-2011



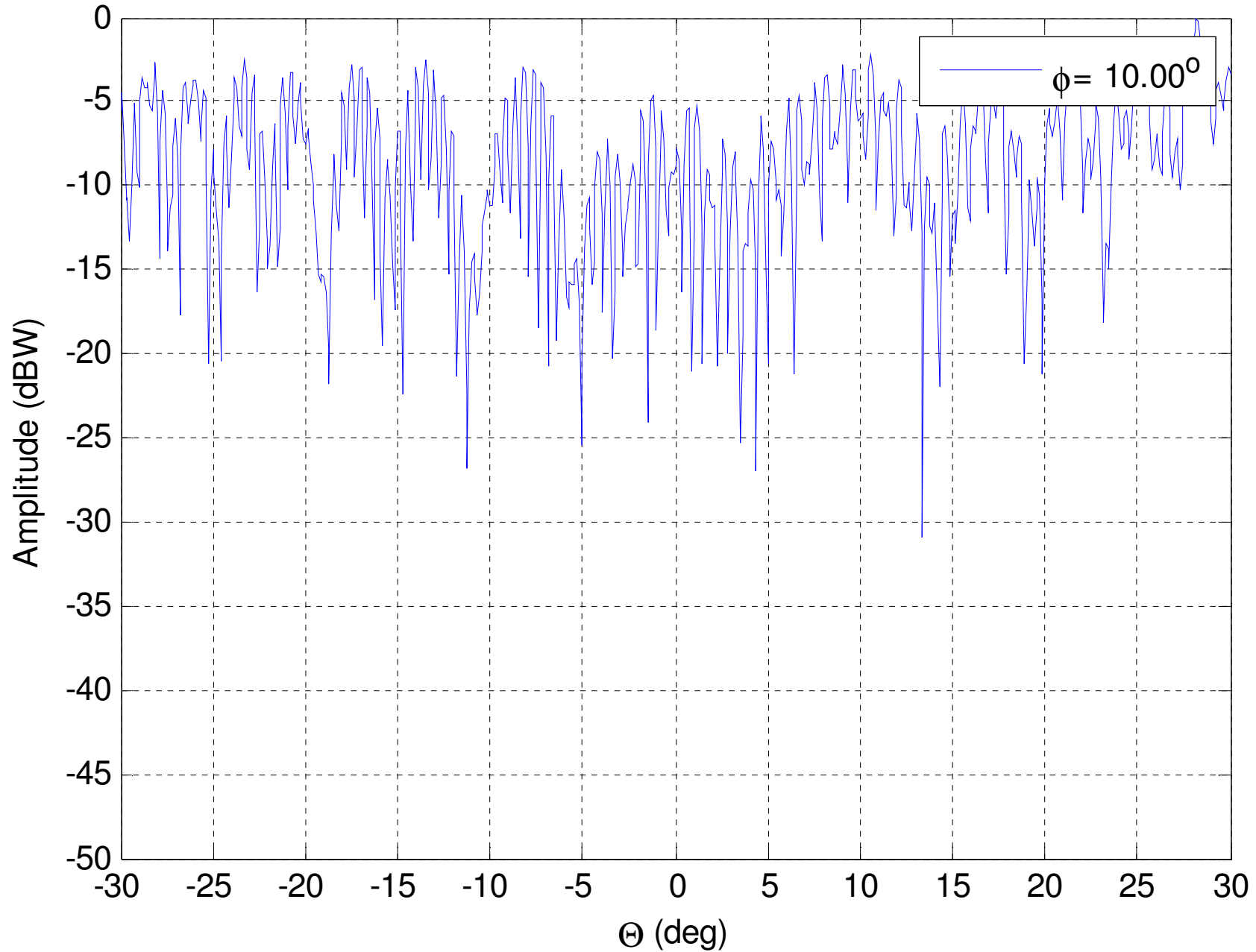
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -9.56 dBW, Date: 15-Dec-2011



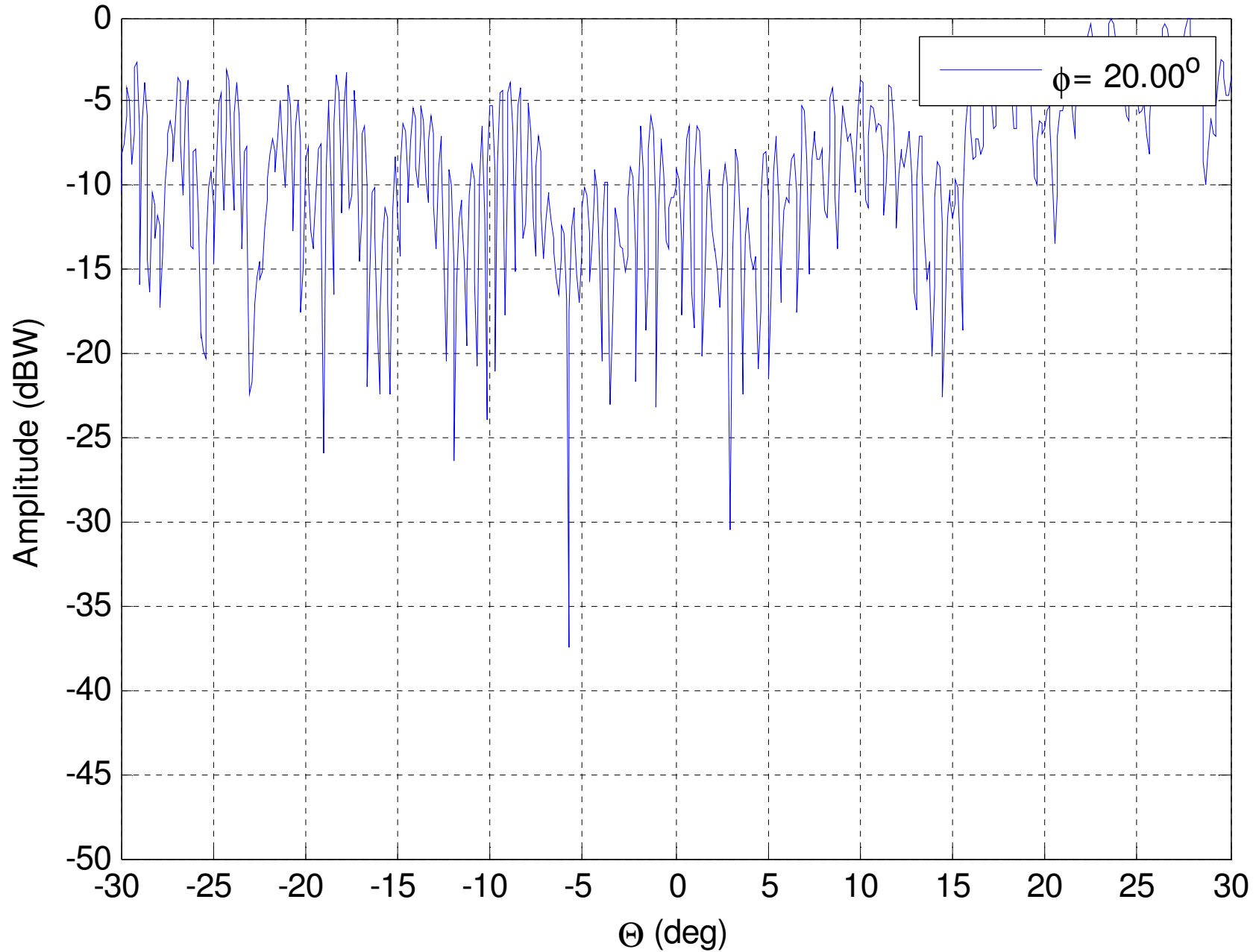
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -8.38 dBW, Date: 15-Dec-2011



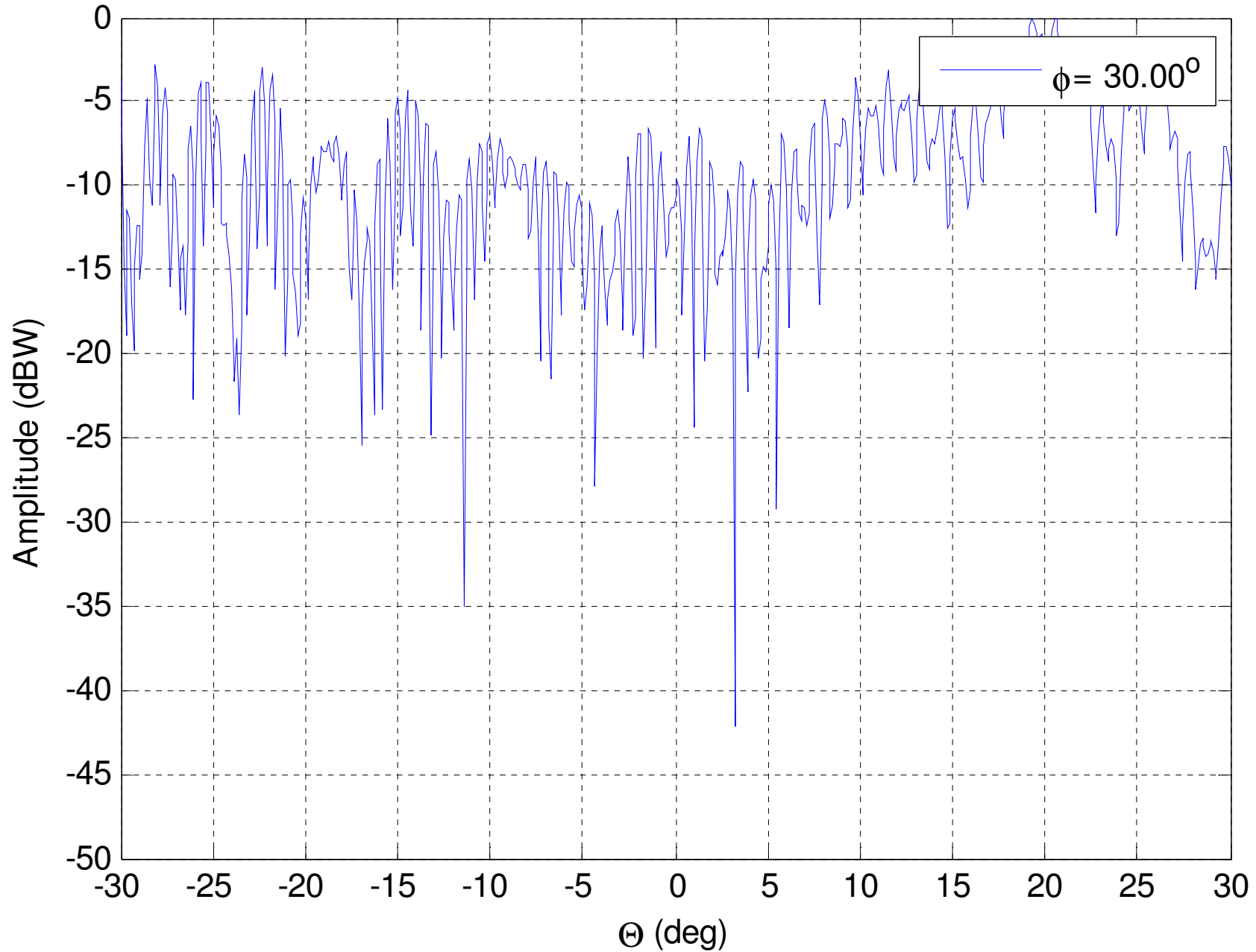
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.11 dBW, Date: 15-Dec-2011



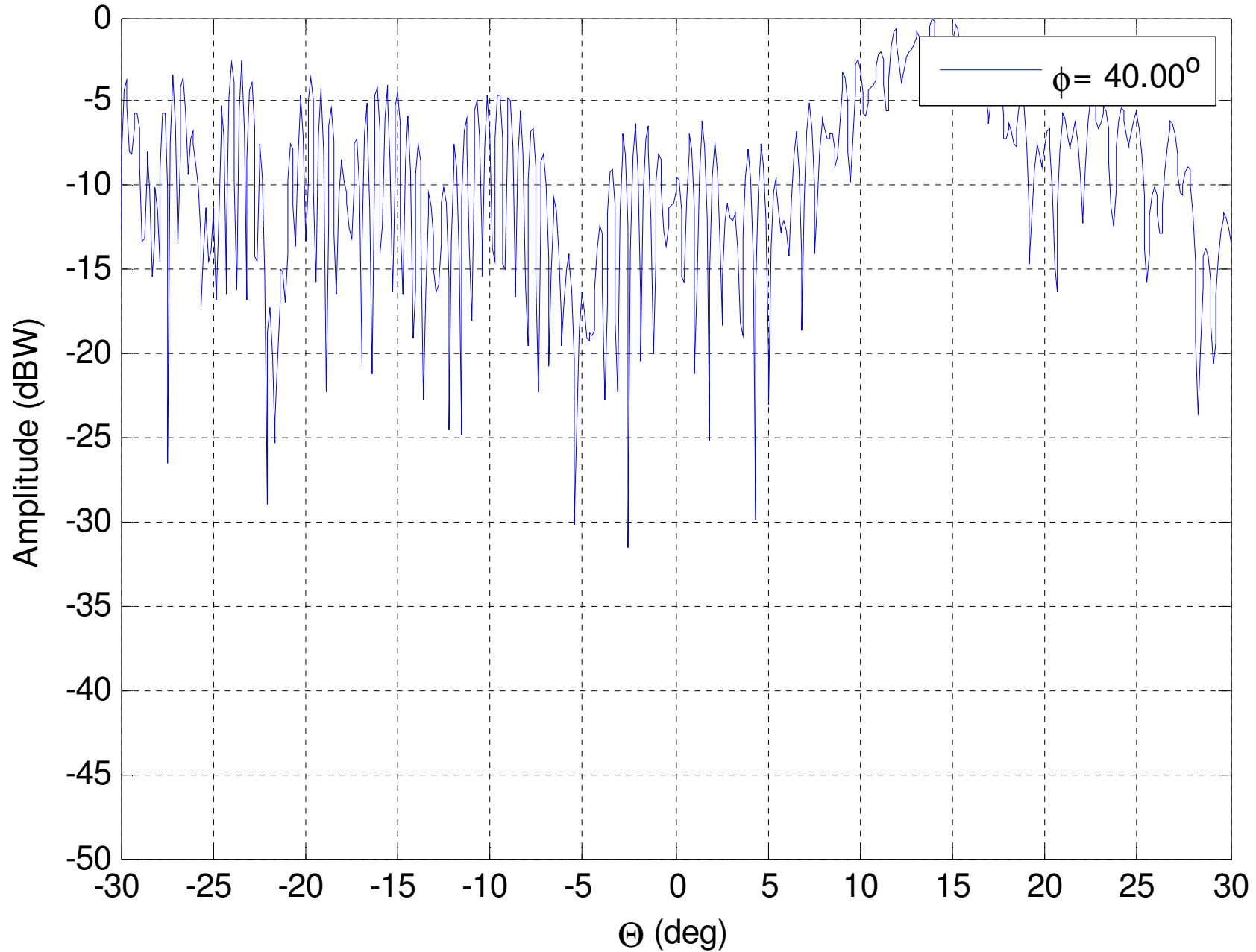
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -6.61 dBW, Date: 15-Dec-2011



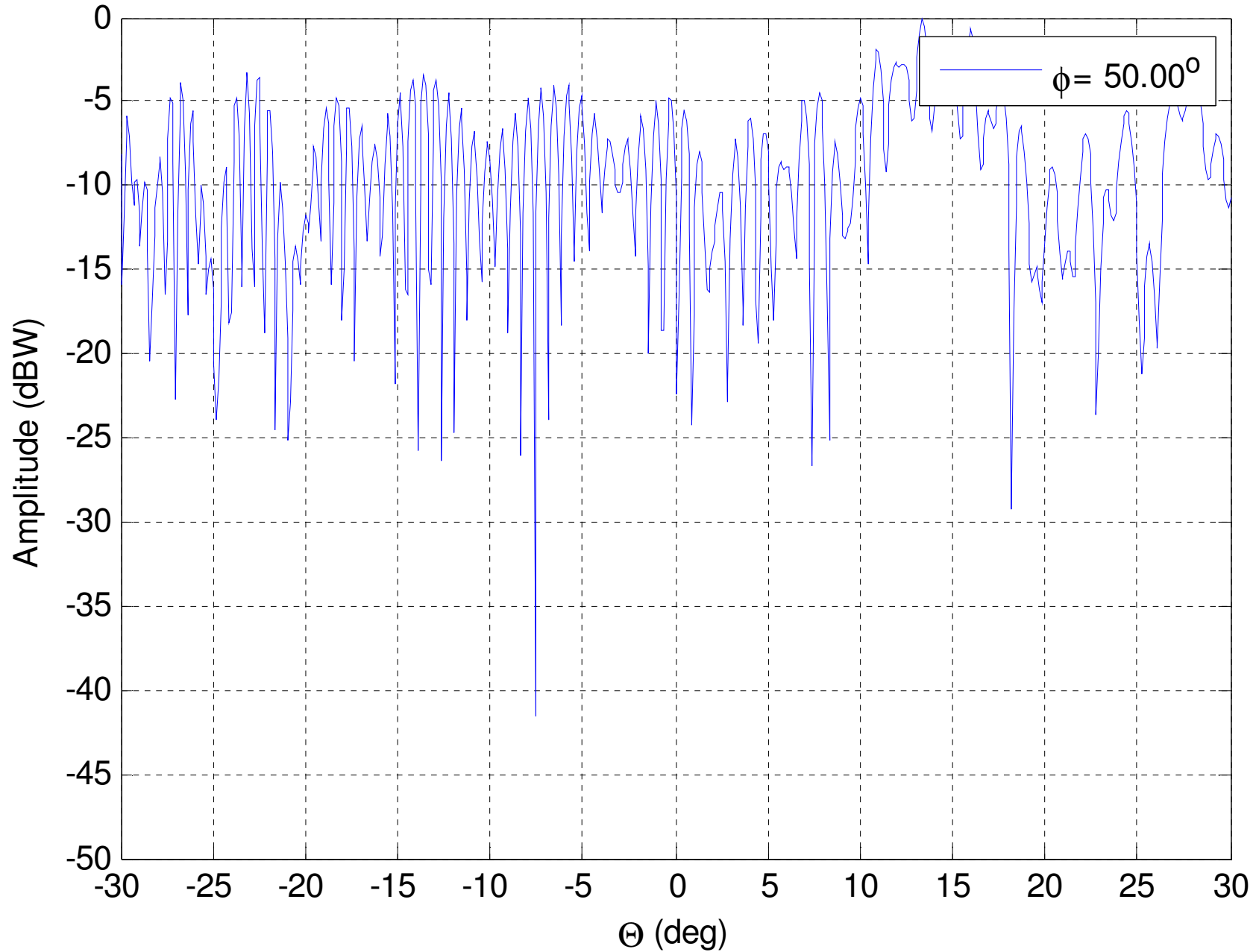
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -6.90 dBW, Date: 15-Dec-2011



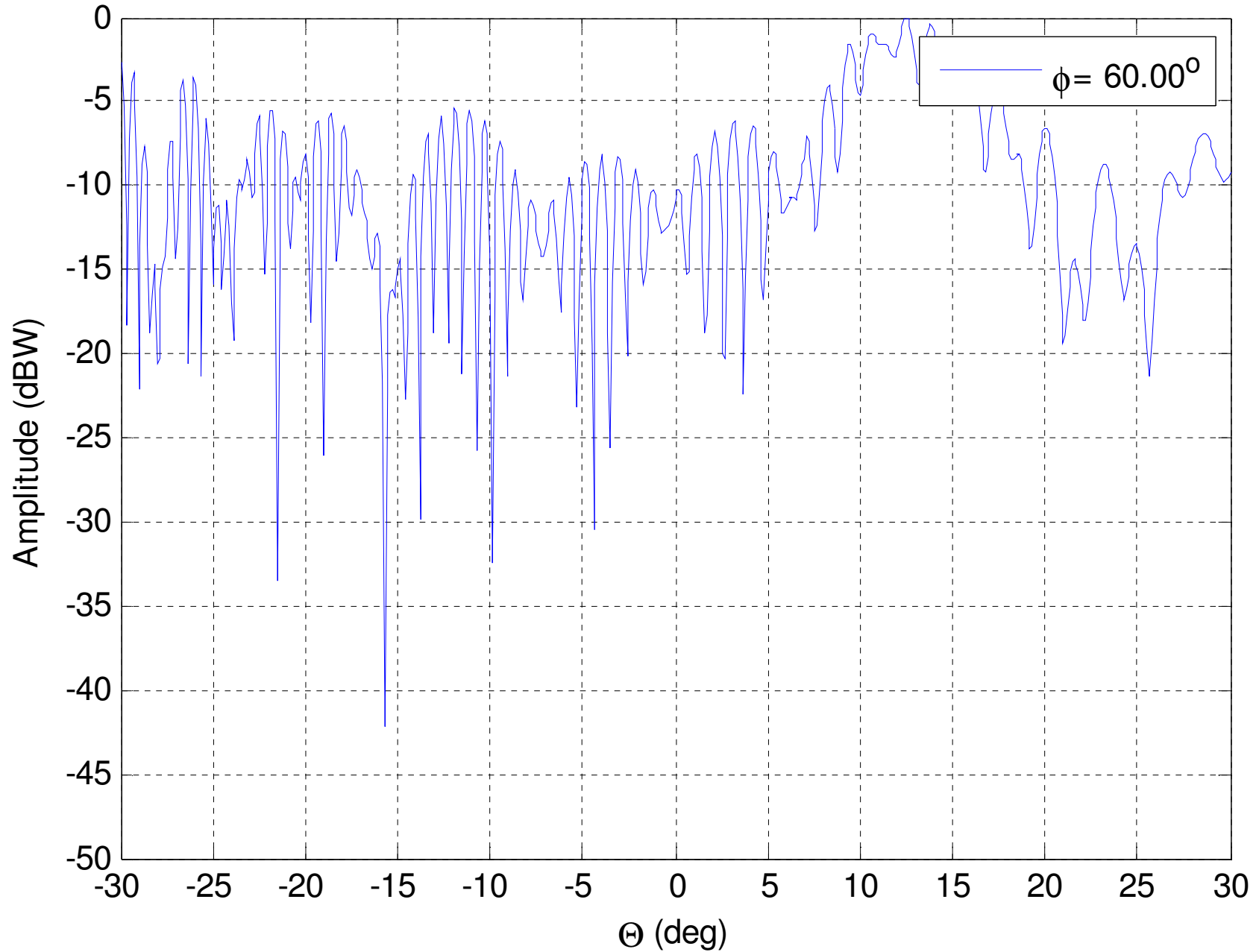
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -7.12 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

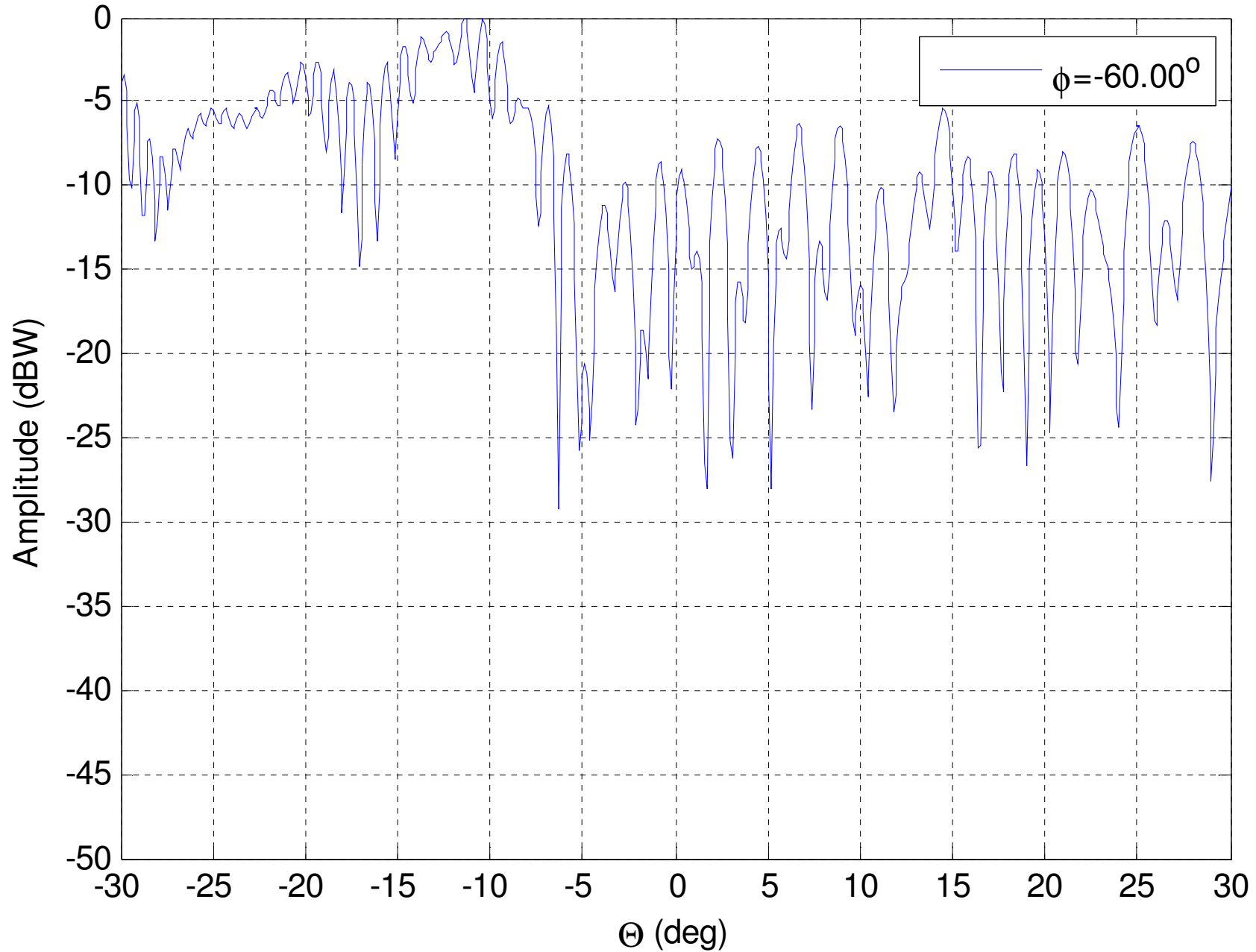
Input file: tx-17.3-lhcp-60.cut, Peak: -6.34 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

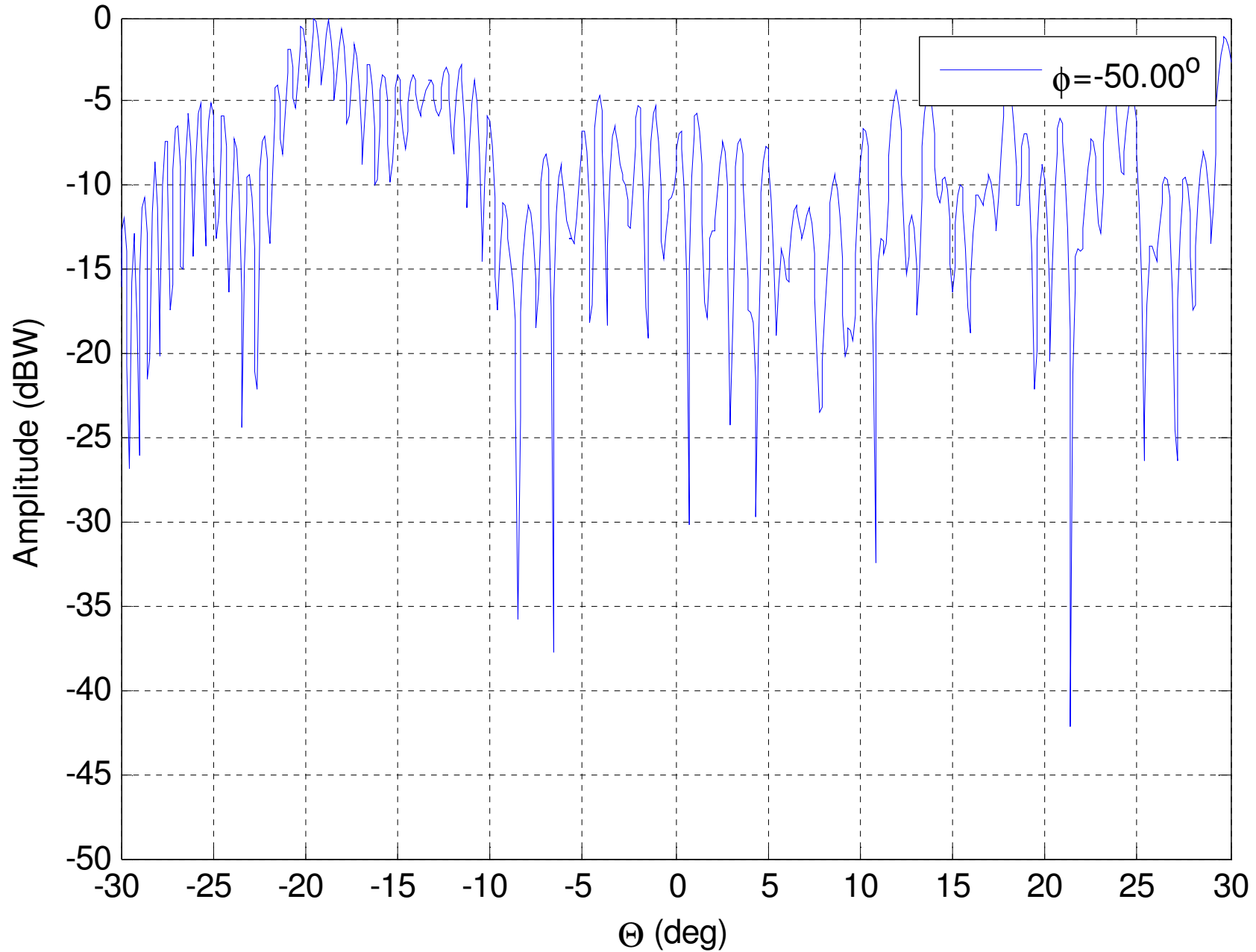
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -8.05 dBW, Date: 15-Dec-2011



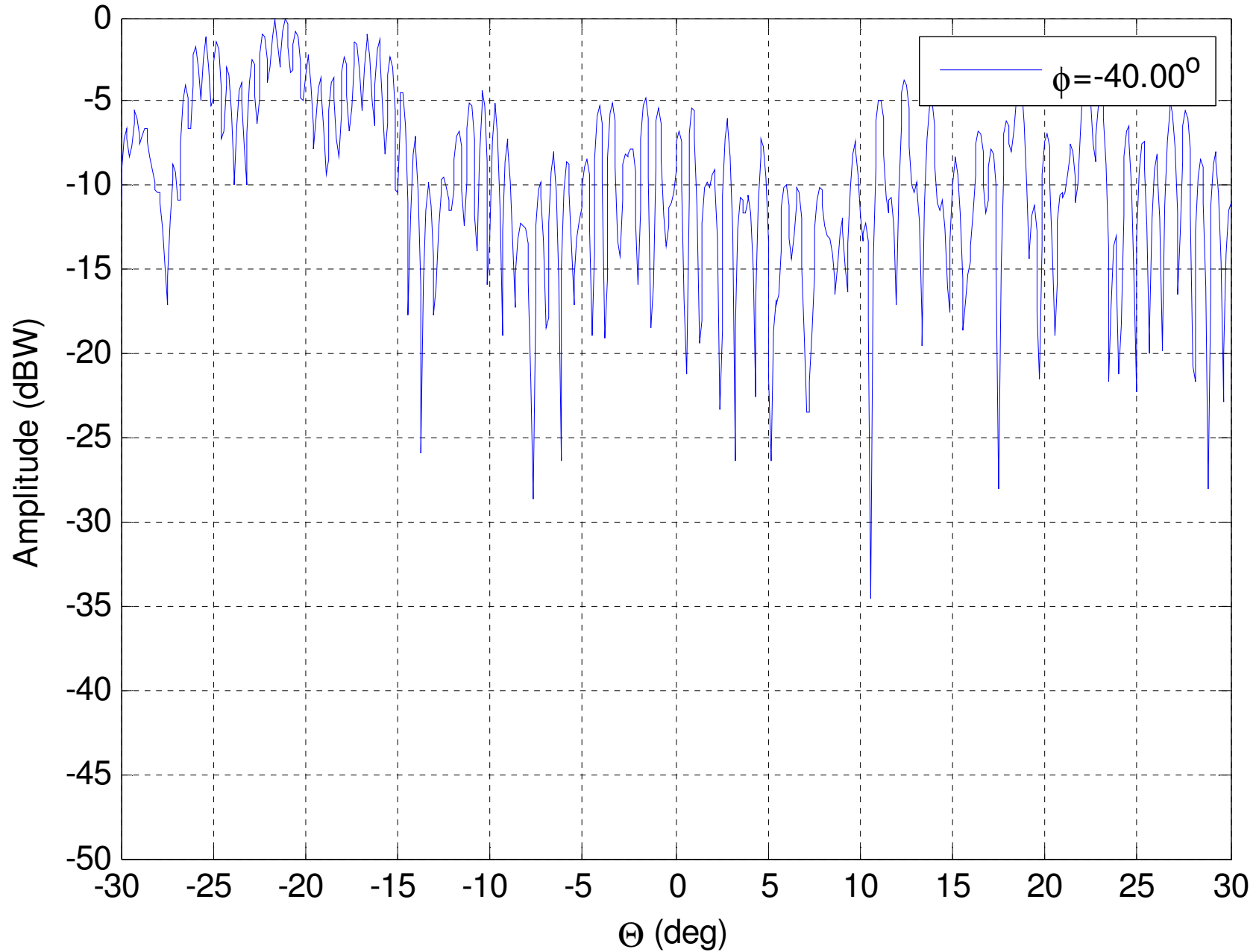
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -6.76 dBW, Date: 15-Dec-2011



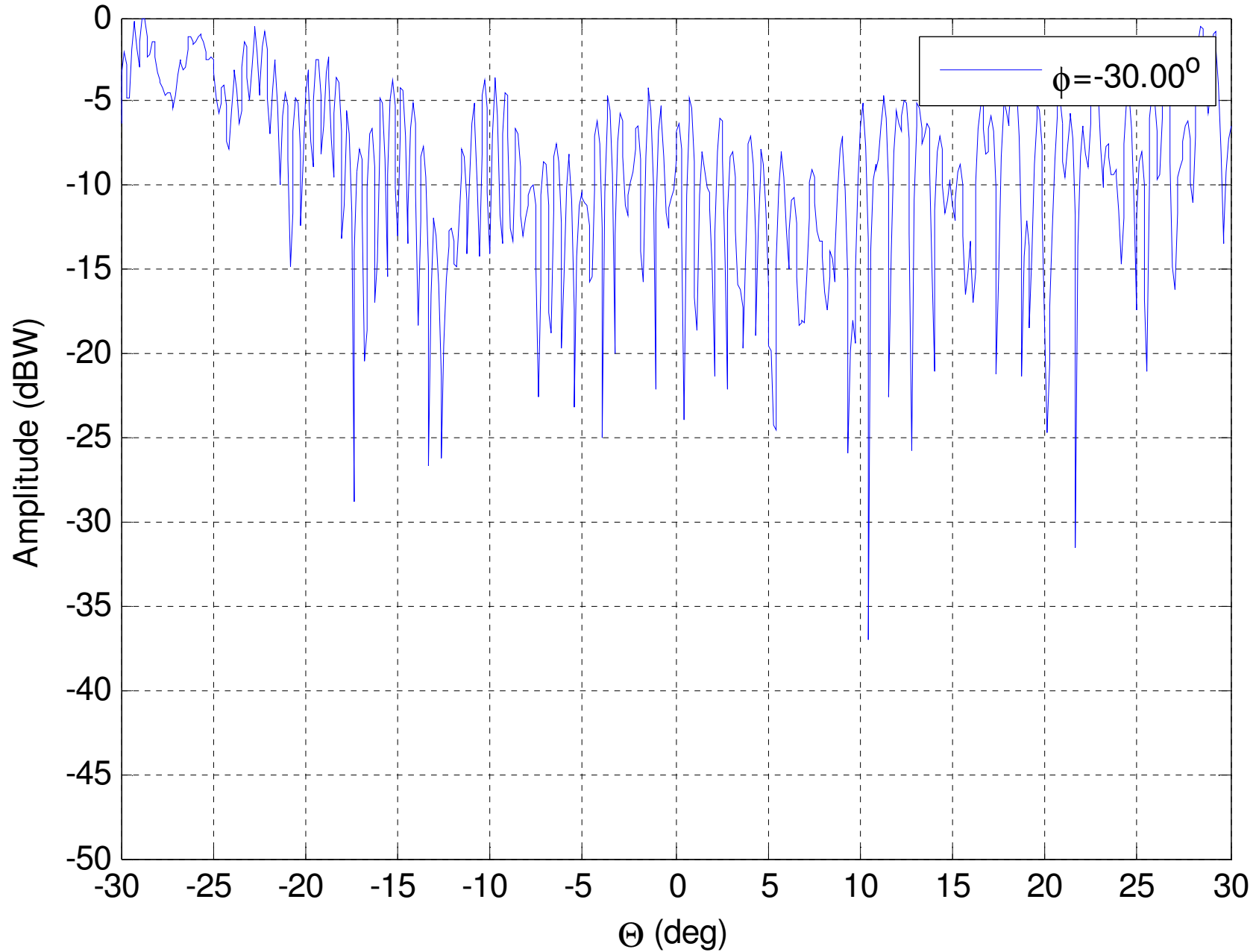
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -6.90 dBW, Date: 15-Dec-2011



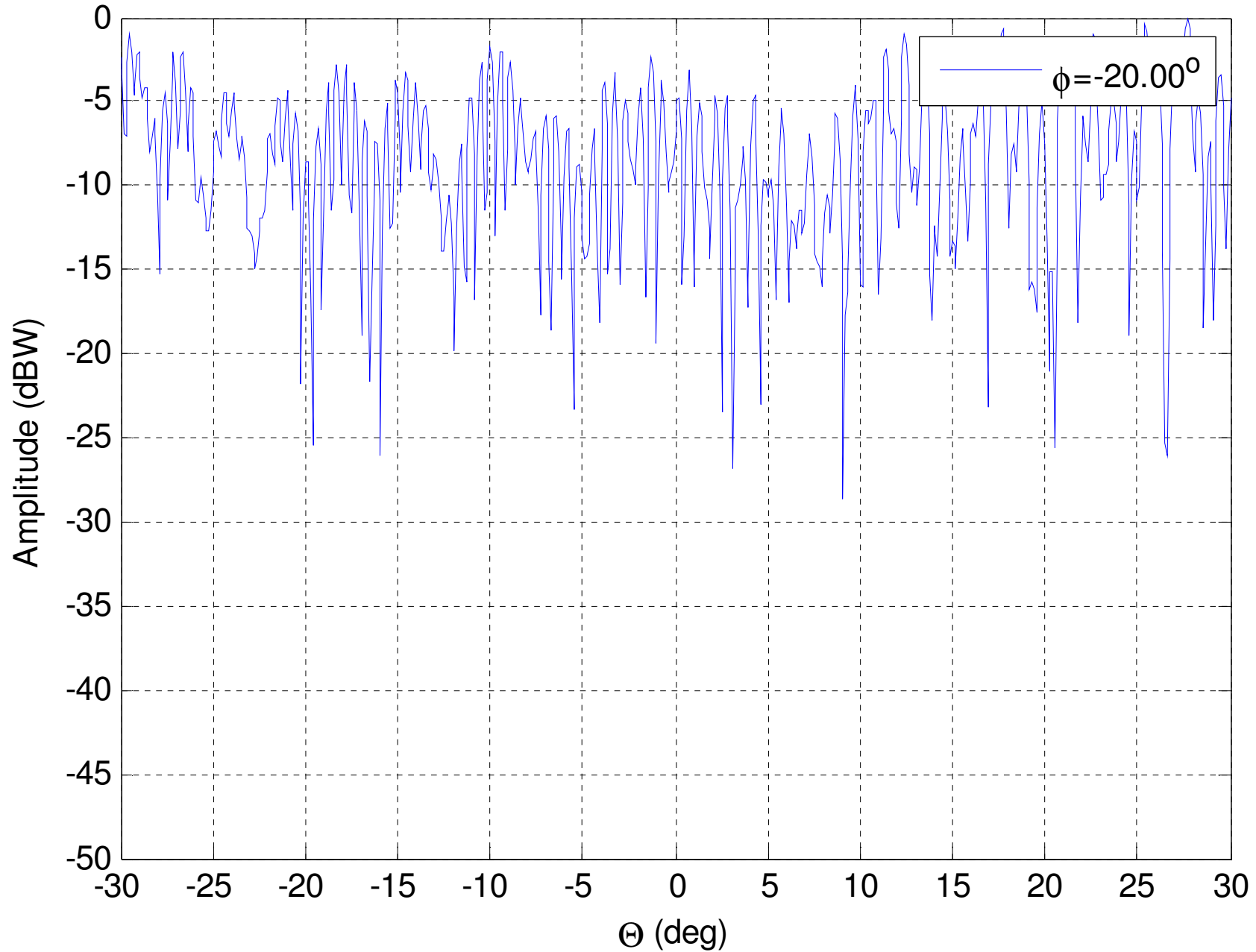
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.39 dBW, Date: 15-Dec-2011



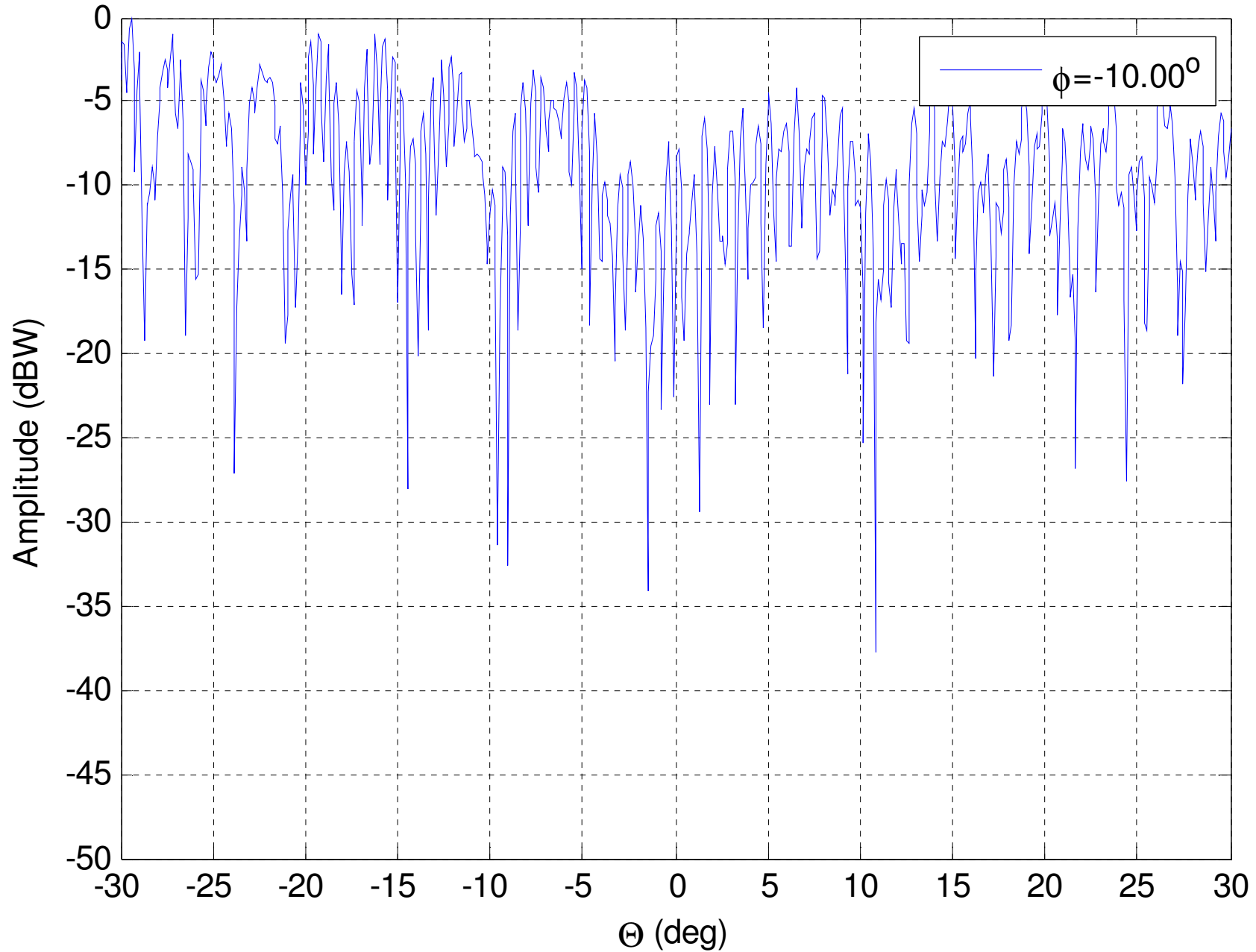
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -9.18 dBW, Date: 15-Dec-2011



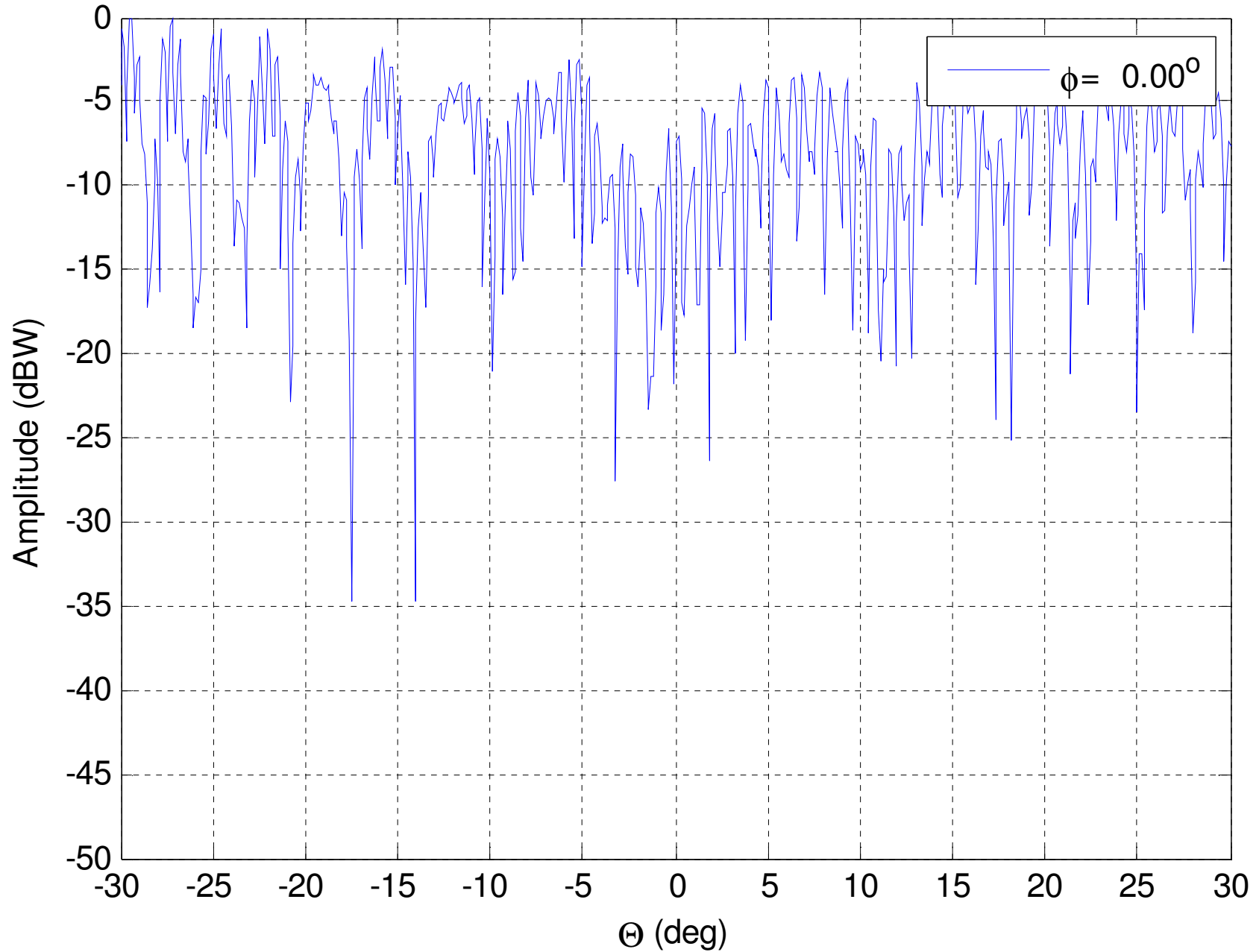
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -8.64 dBW, Date: 15-Dec-2011



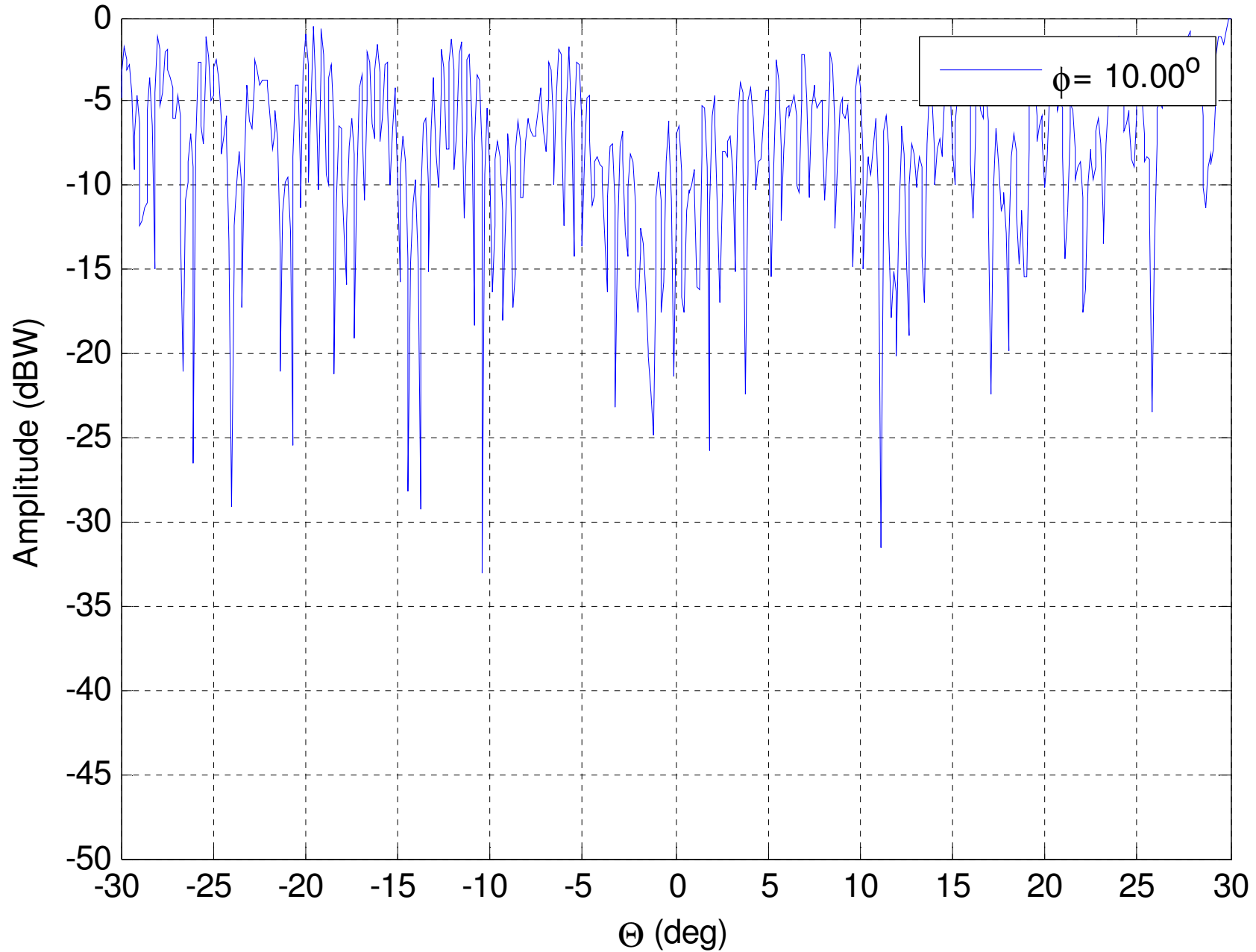
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -9.51 dBW, Date: 15-Dec-2011



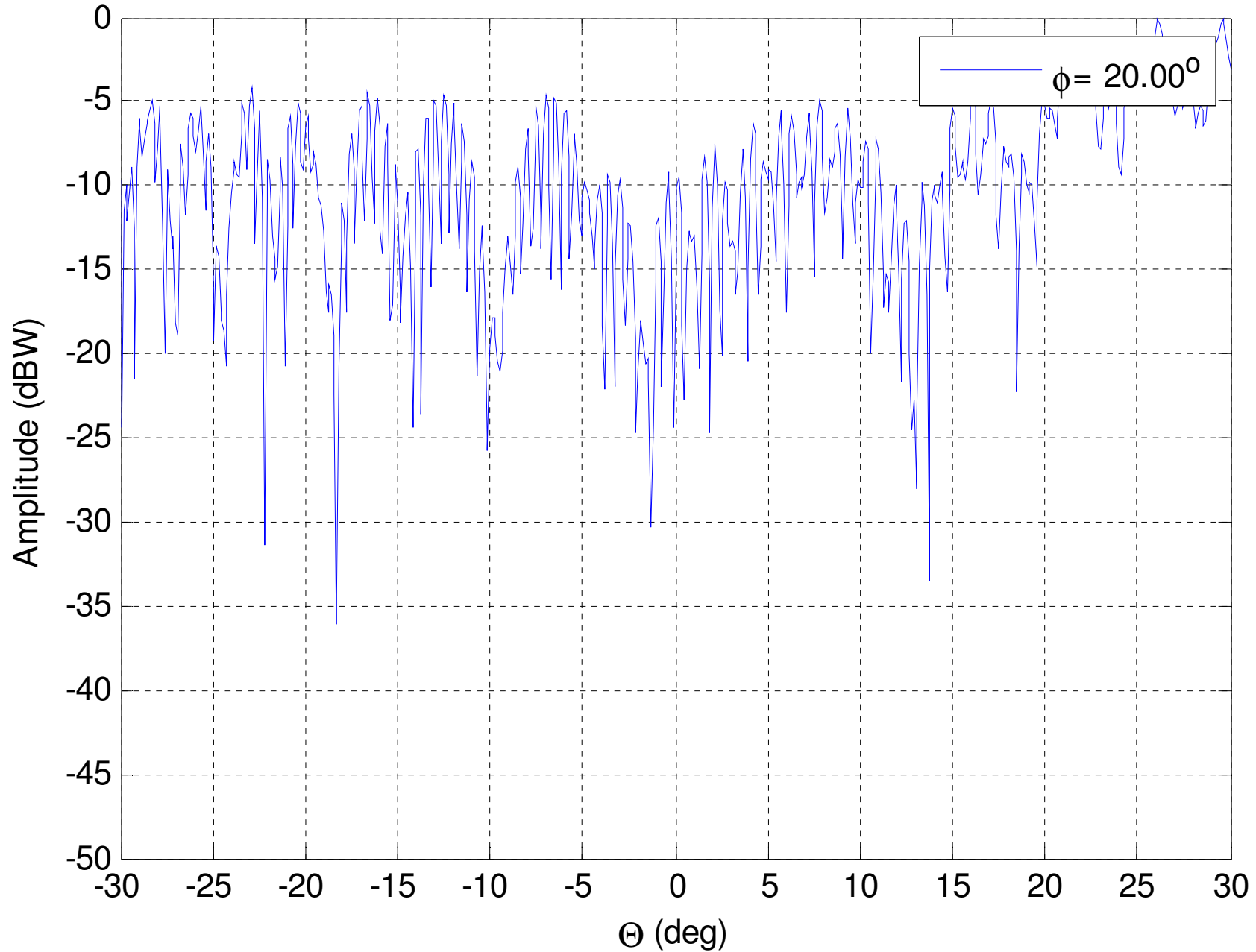
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -9.91 dBW, Date: 15-Dec-2011



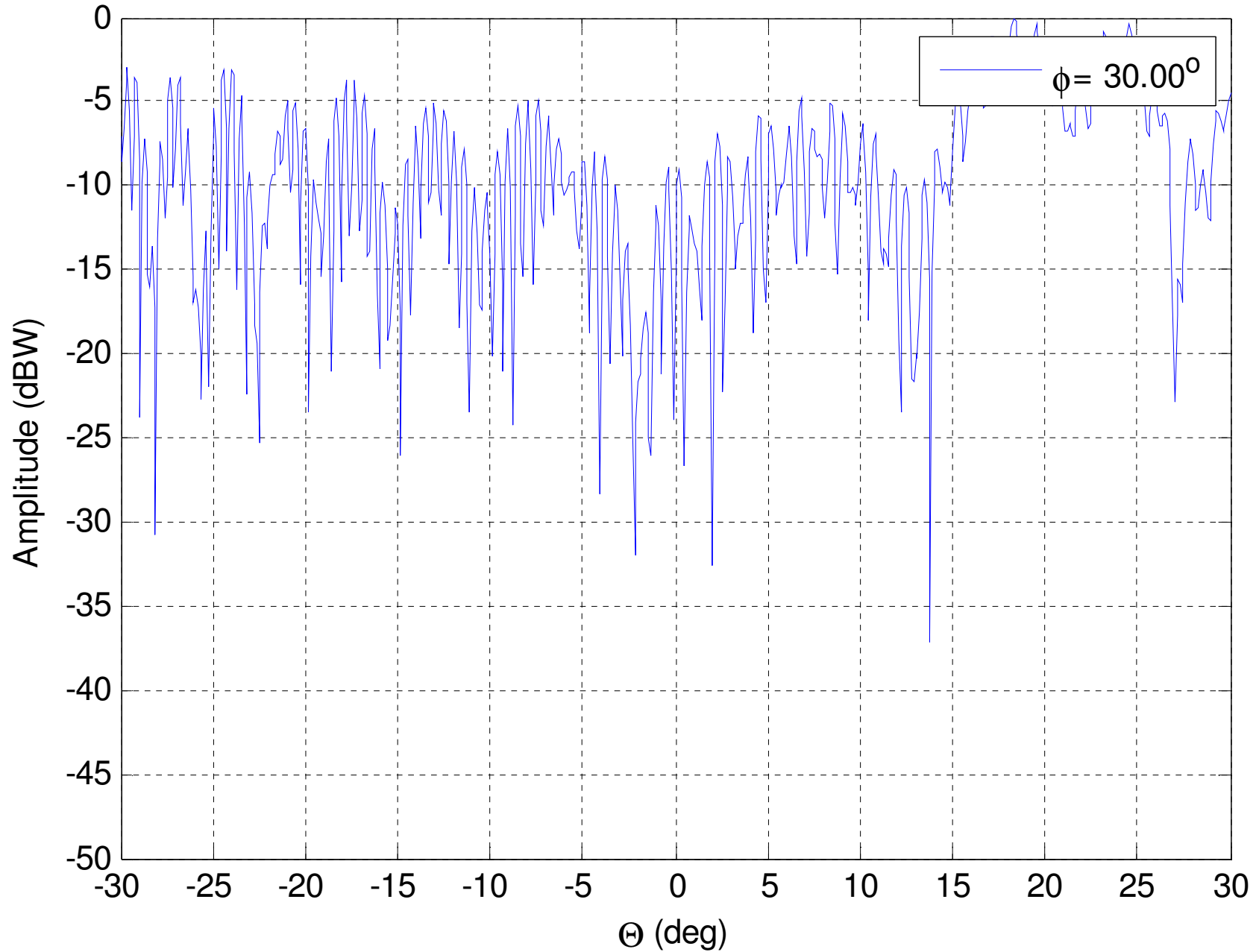
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -6.85 dBW, Date: 15-Dec-2011



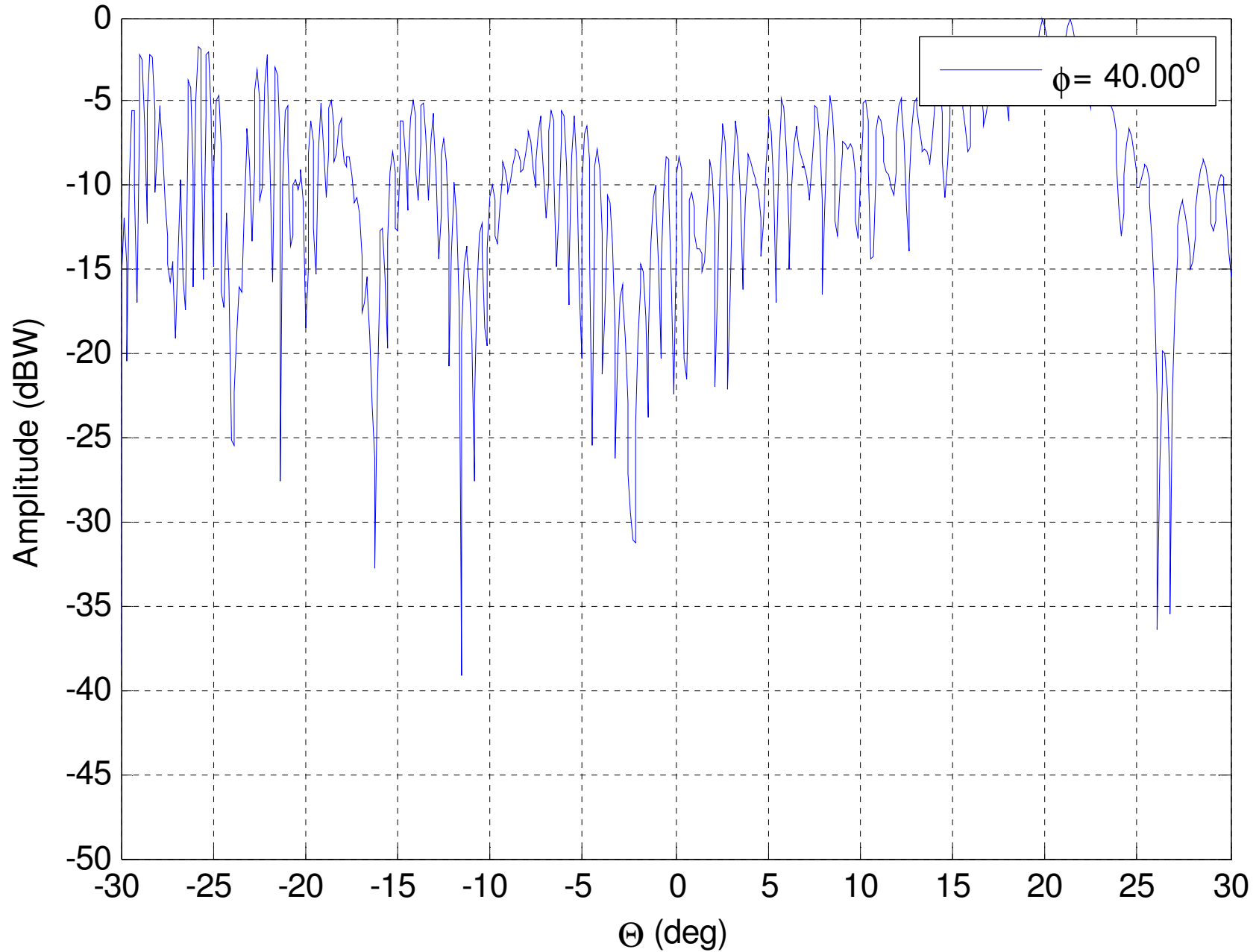
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -7.09 dBW, Date: 15-Dec-2011



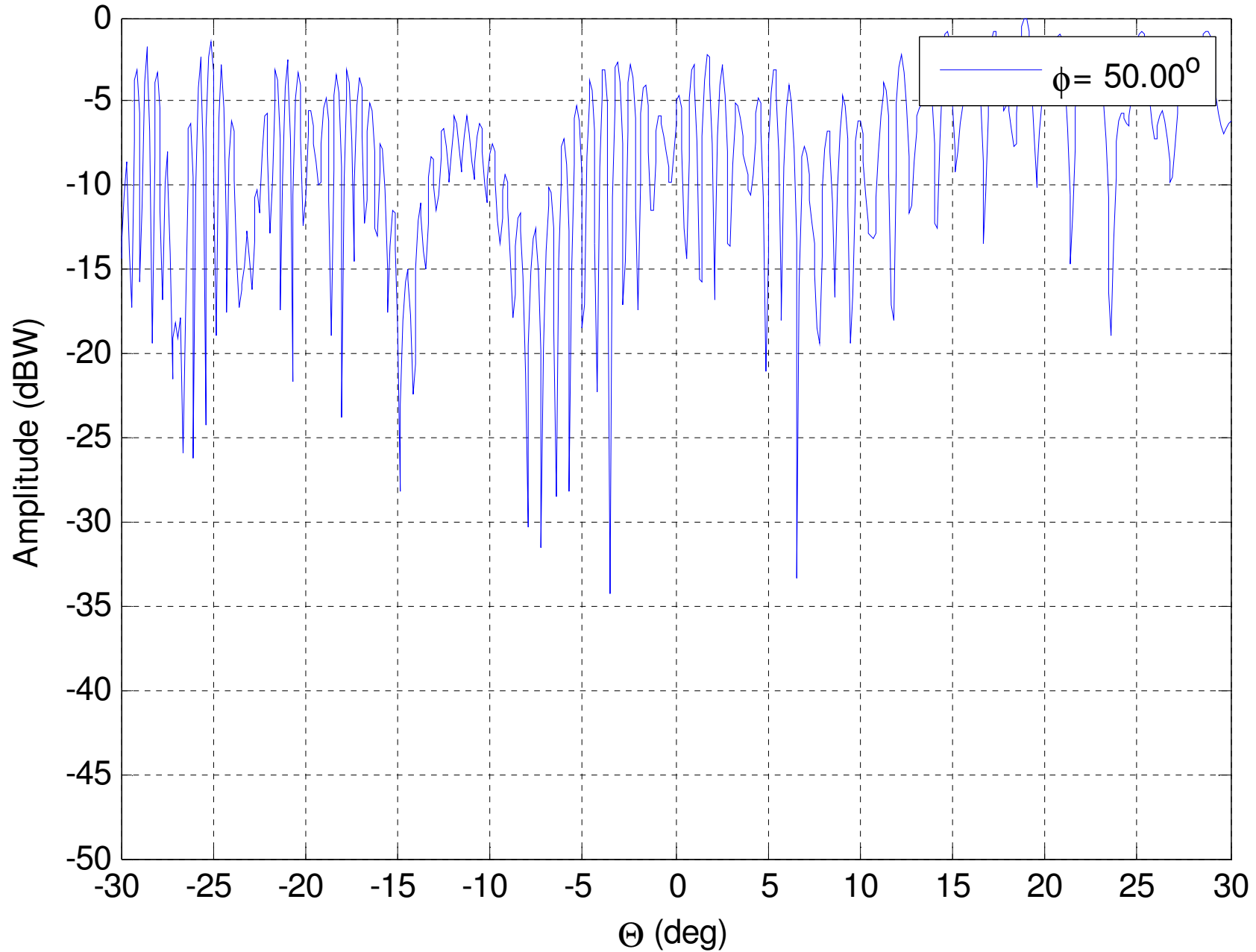
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -7.84 dBW, Date: 15-Dec-2011



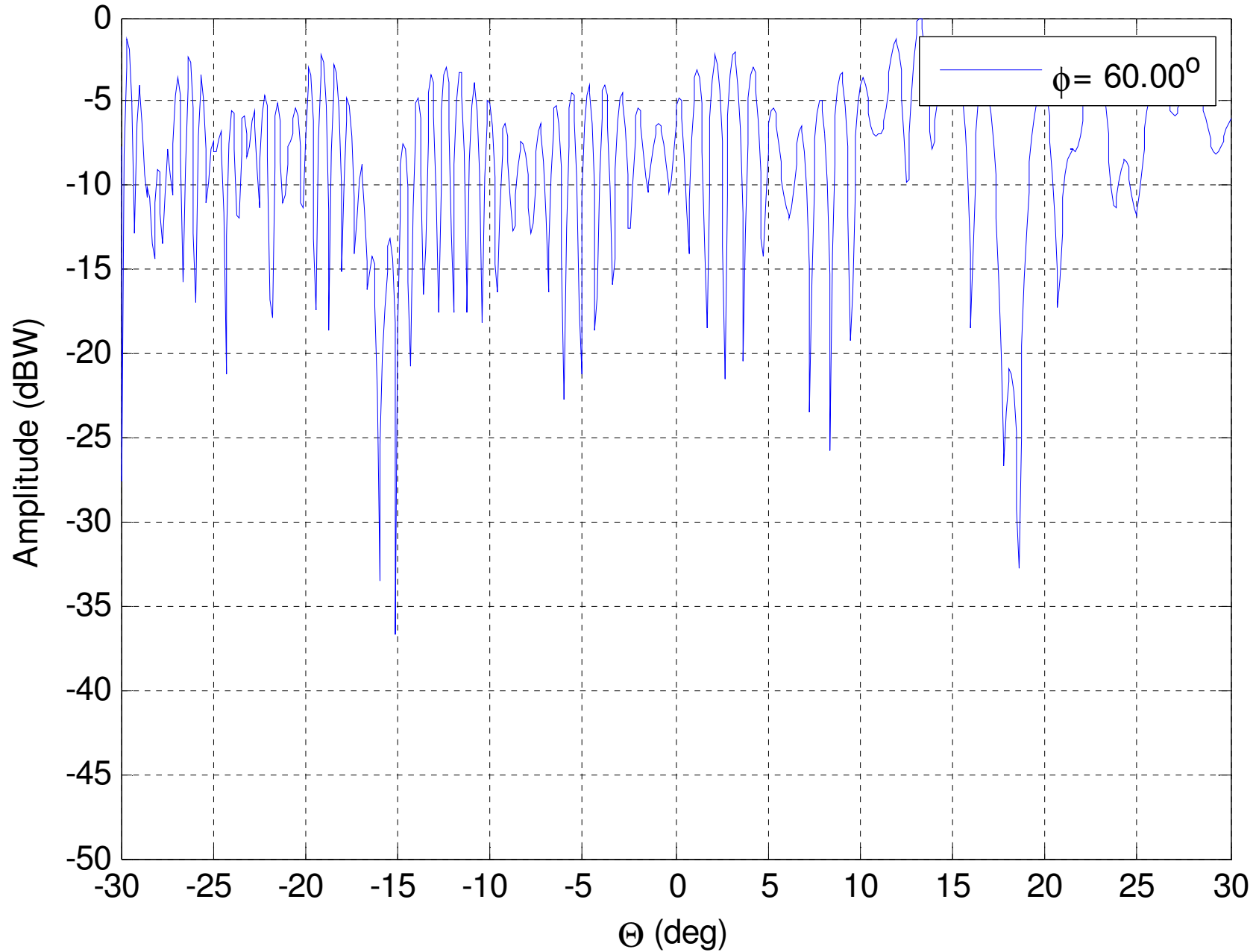
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -9.62 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

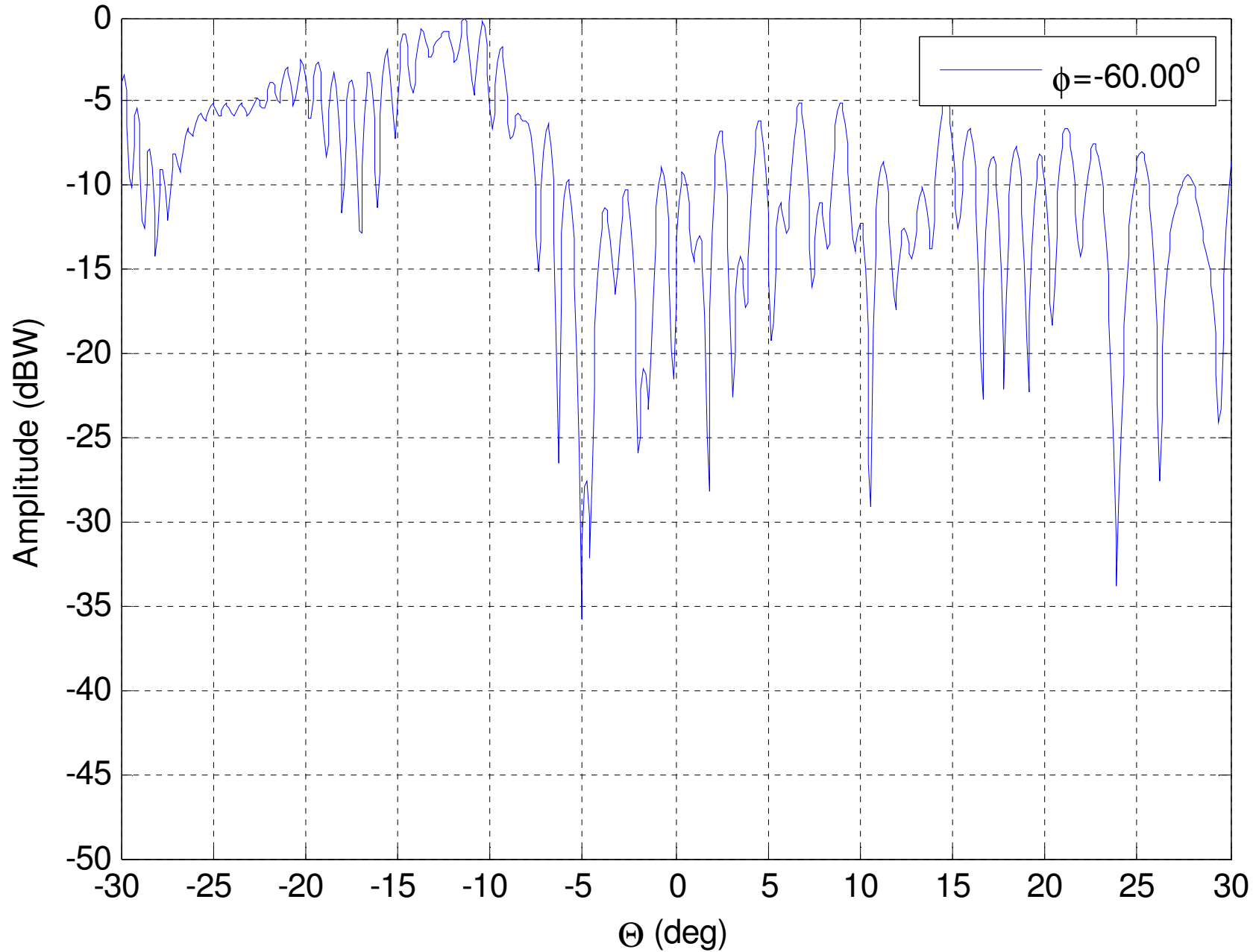
Input file: tx-17.5-rhcp-60.cut, Peak: -9.55 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

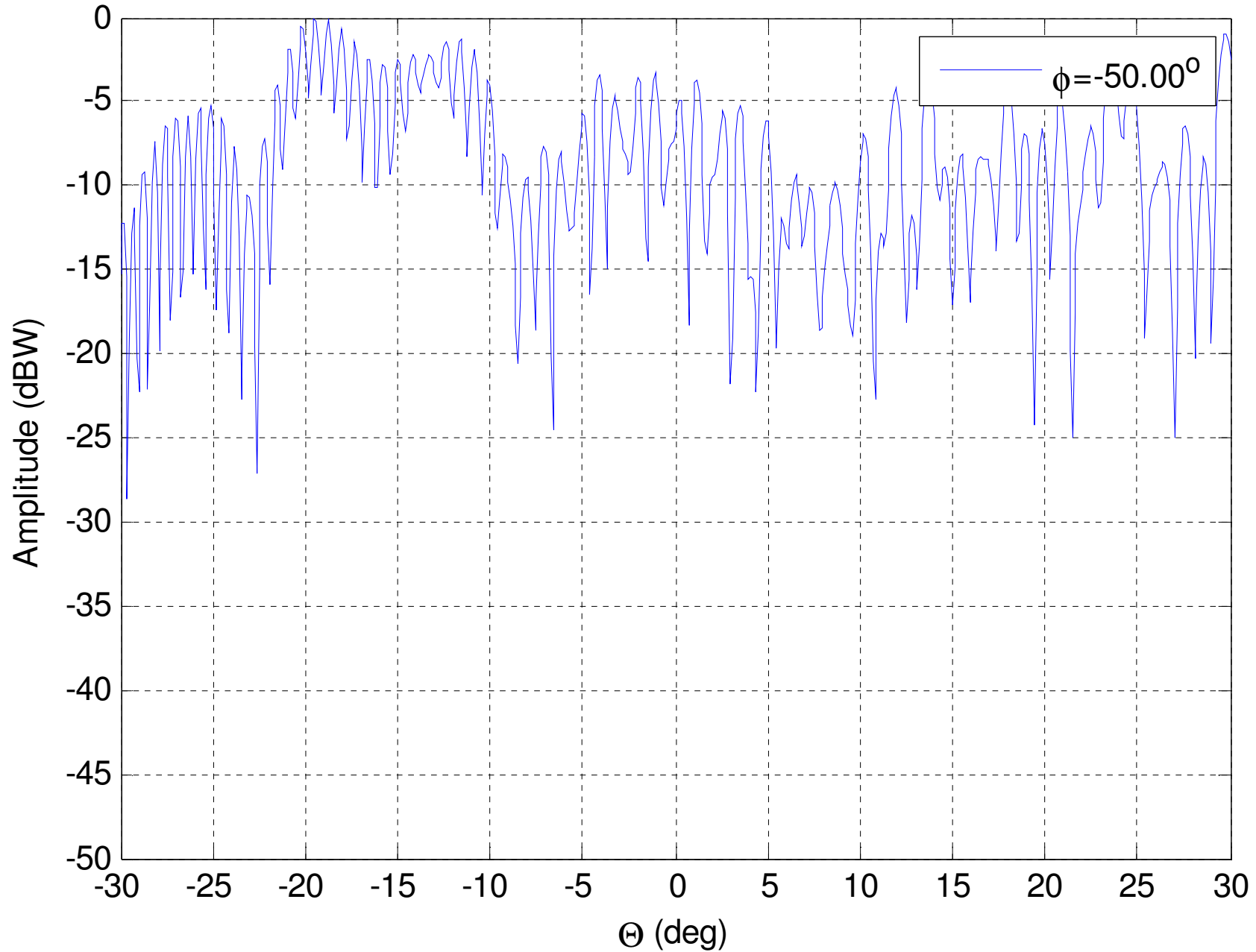
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -8.08 dBW, Date: 15-Dec-2011



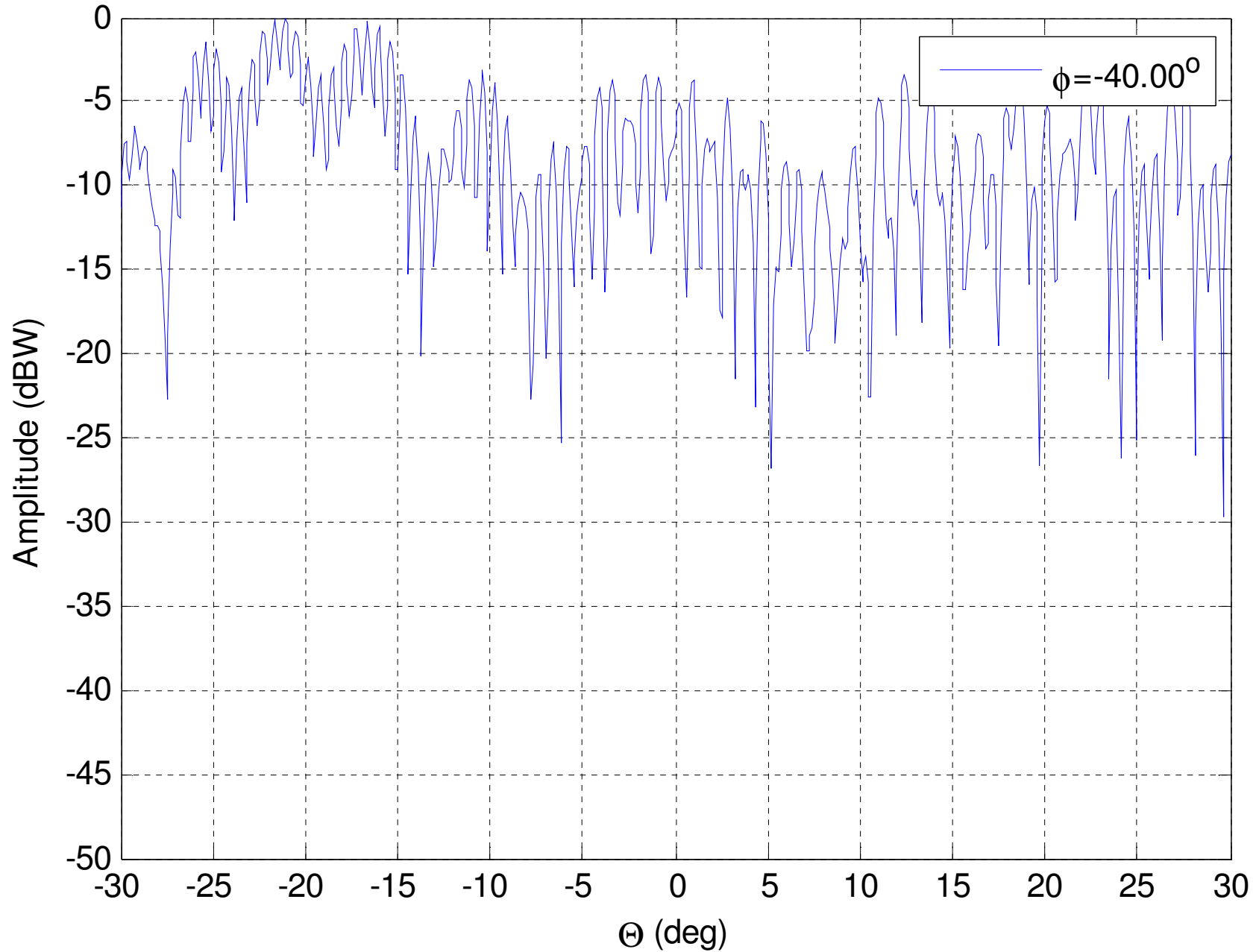
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -7.55 dBW, Date: 15-Dec-2011



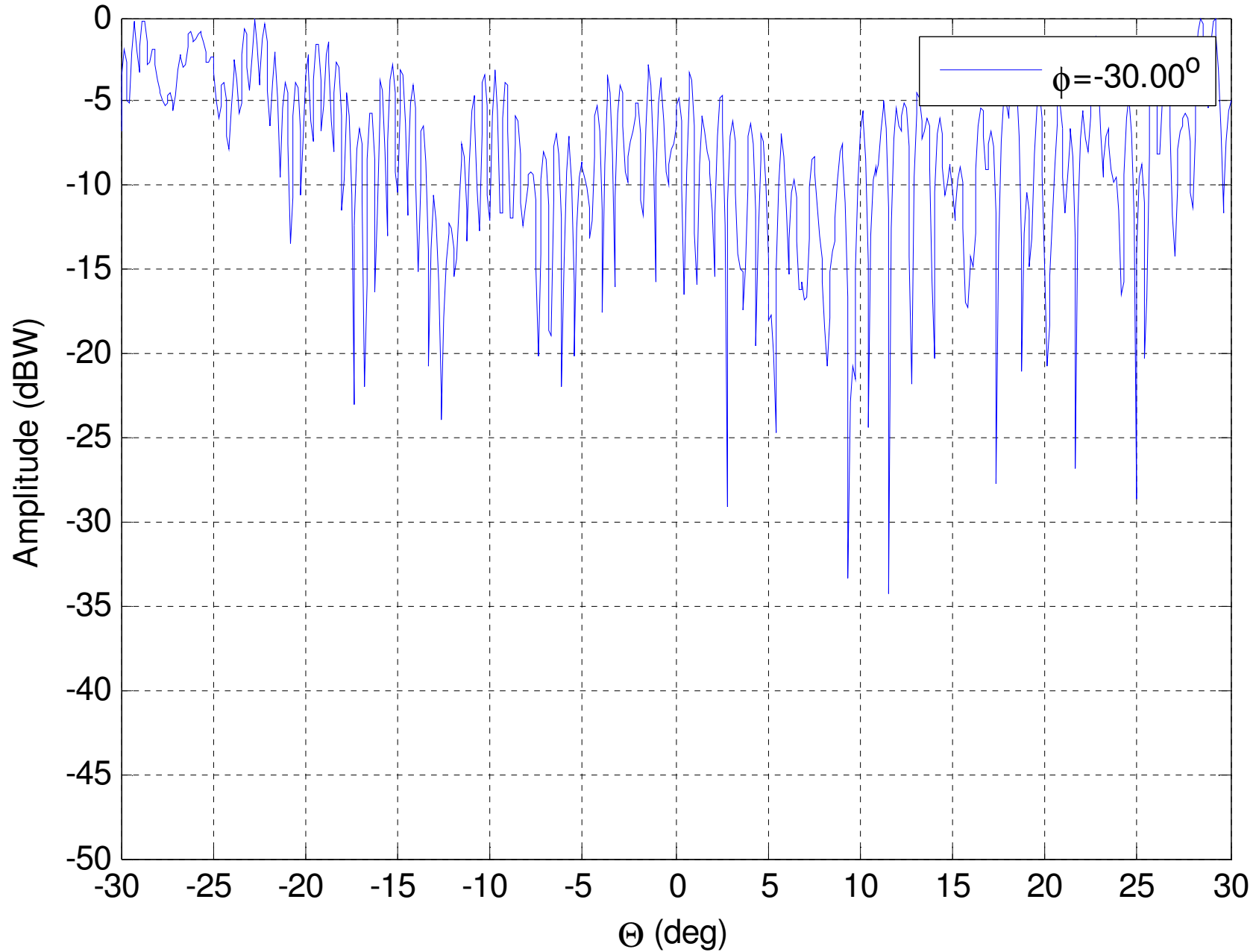
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -7.42 dBW, Date: 15-Dec-2011



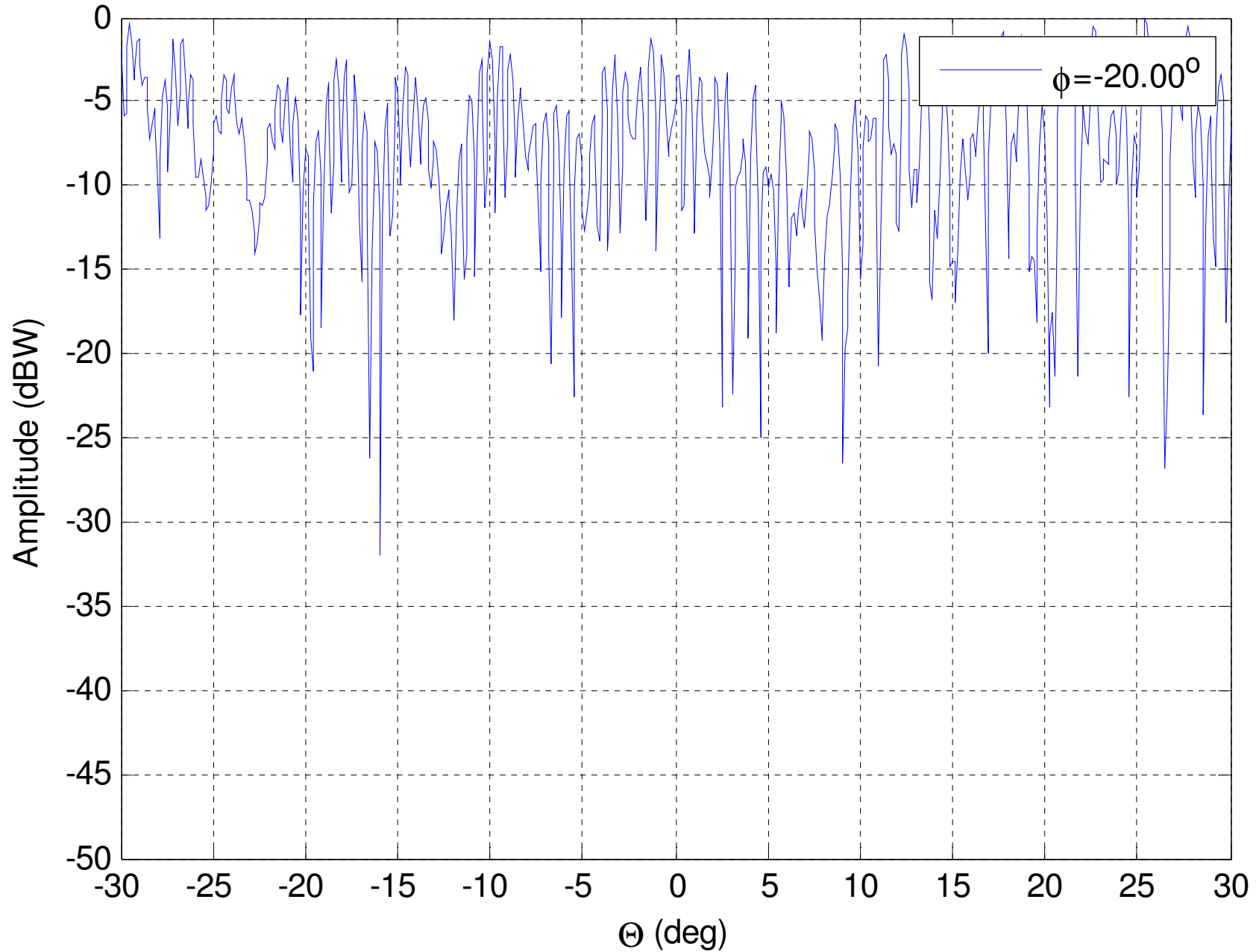
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.78 dBW, Date: 15-Dec-2011



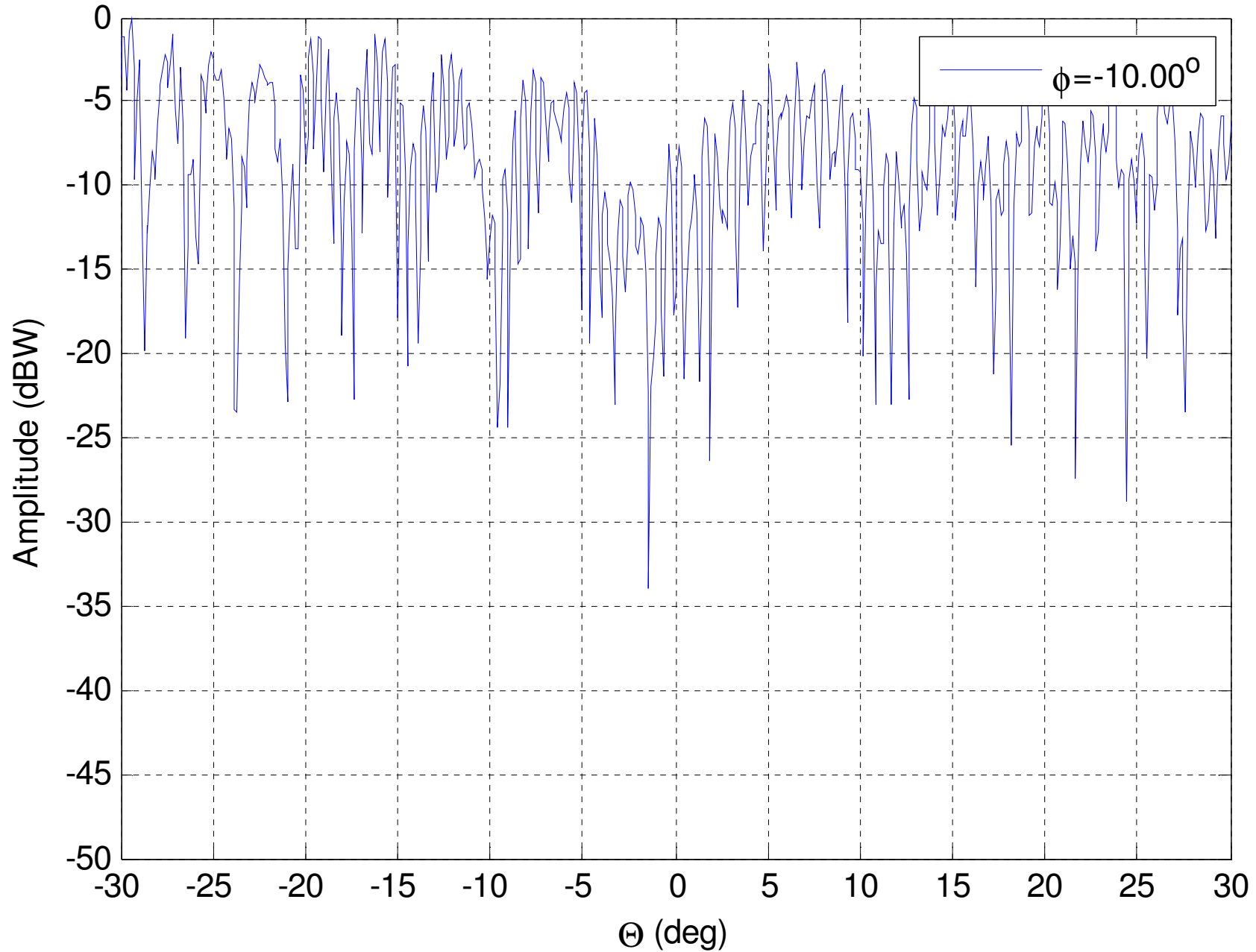
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -9.30 dBW, Date: 15-Dec-2011



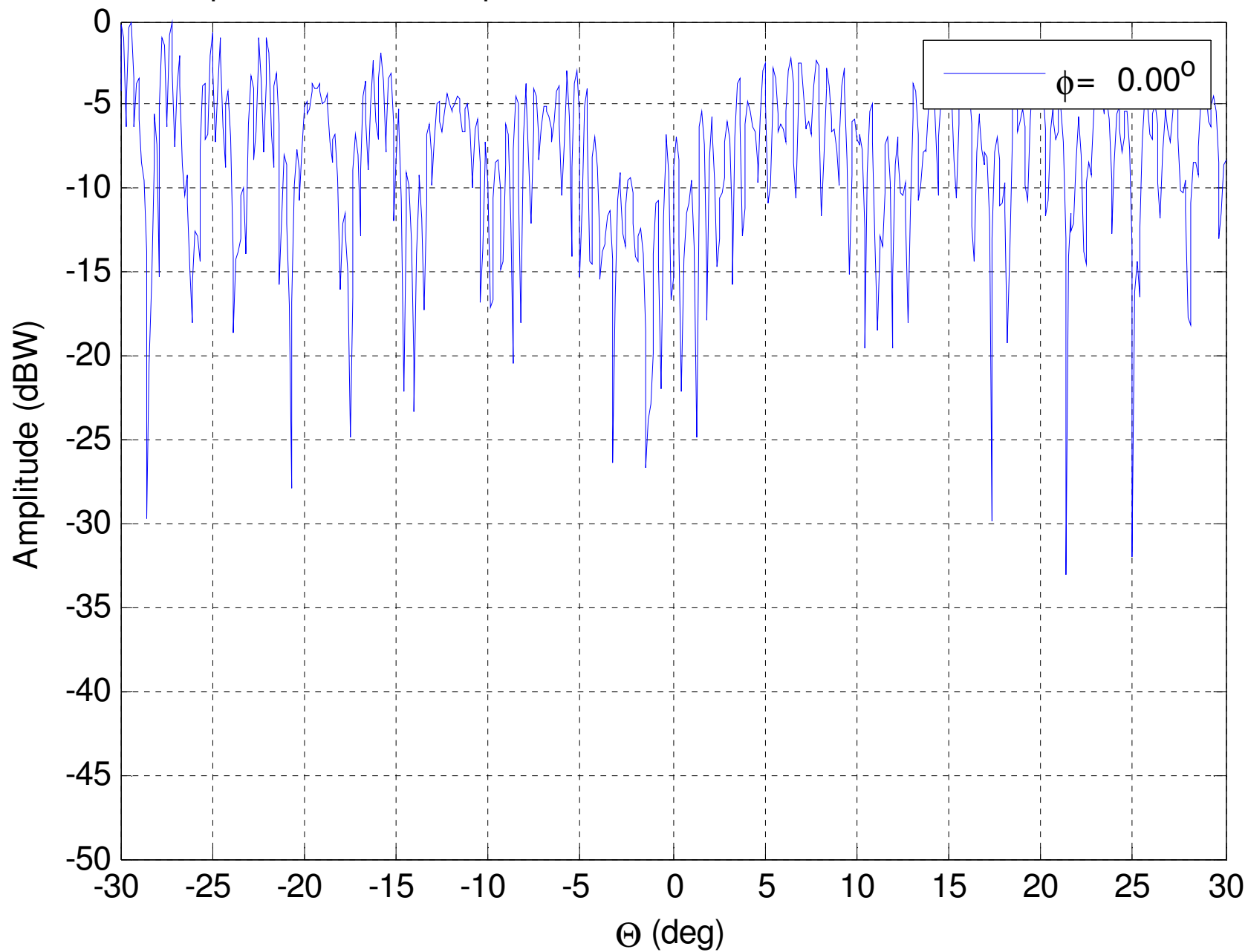
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -8.79 dBW, Date: 15-Dec-2011



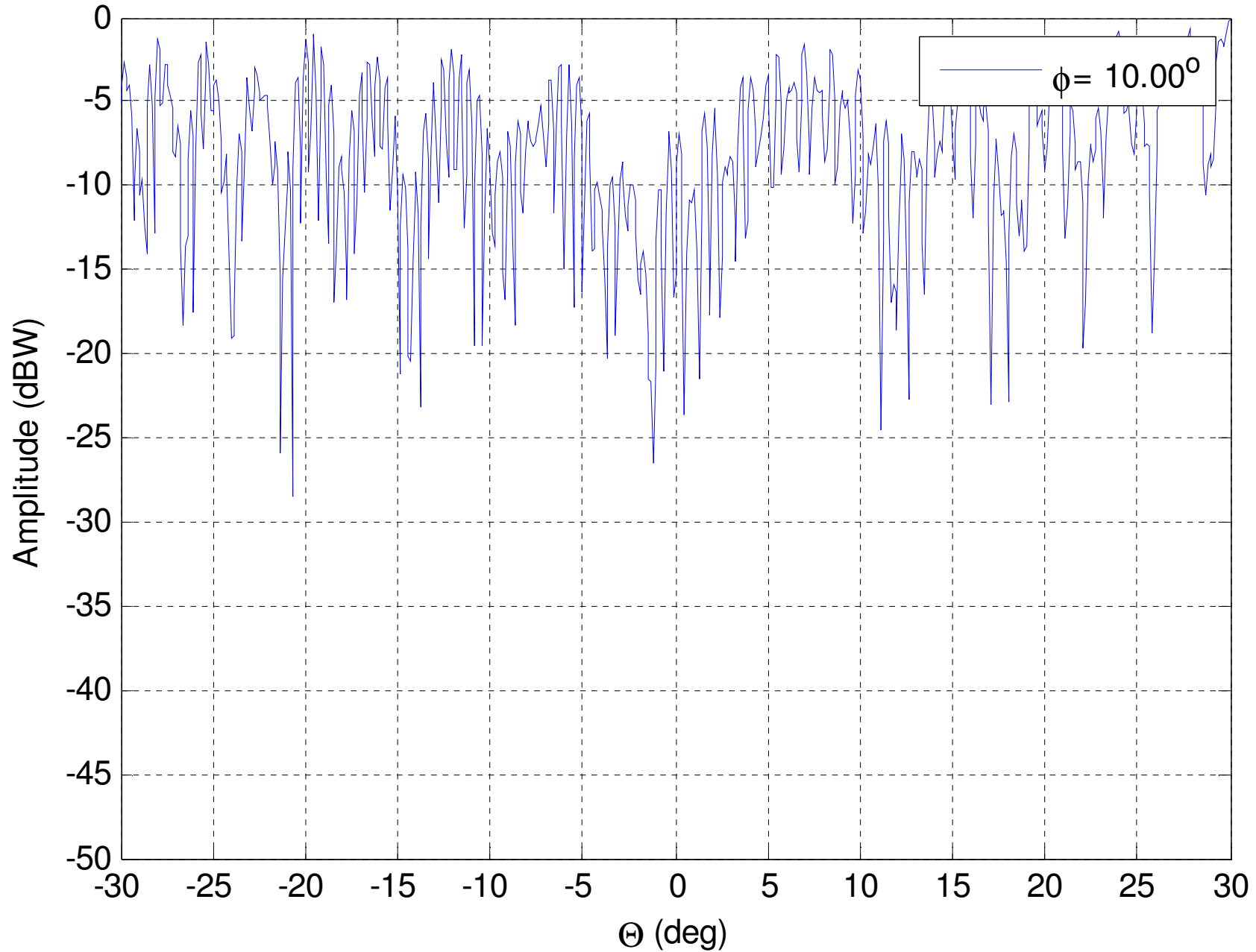
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -9.52 dBW, Date: 15-Dec-2011



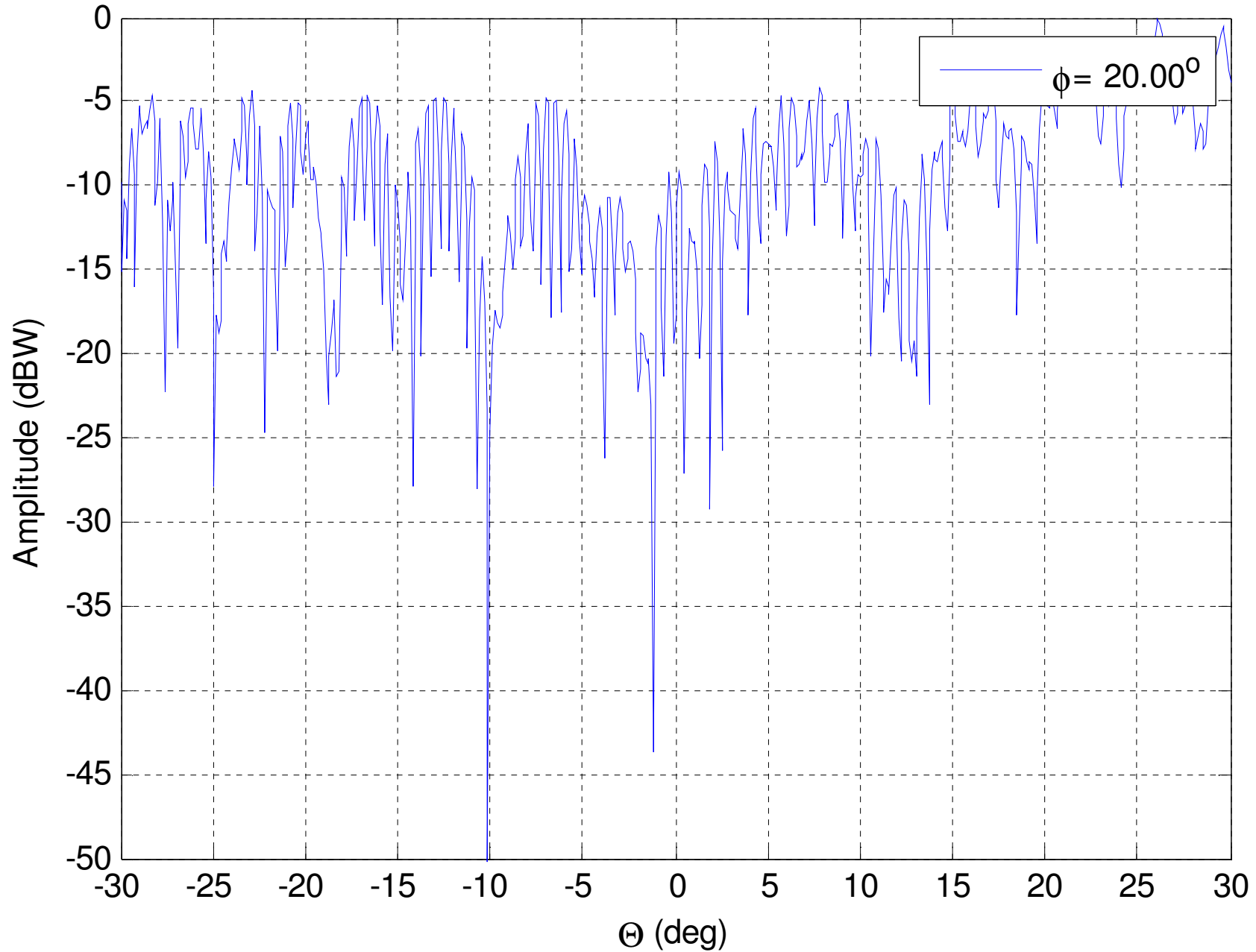
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -9.49 dBW, Date: 15-Dec-2011



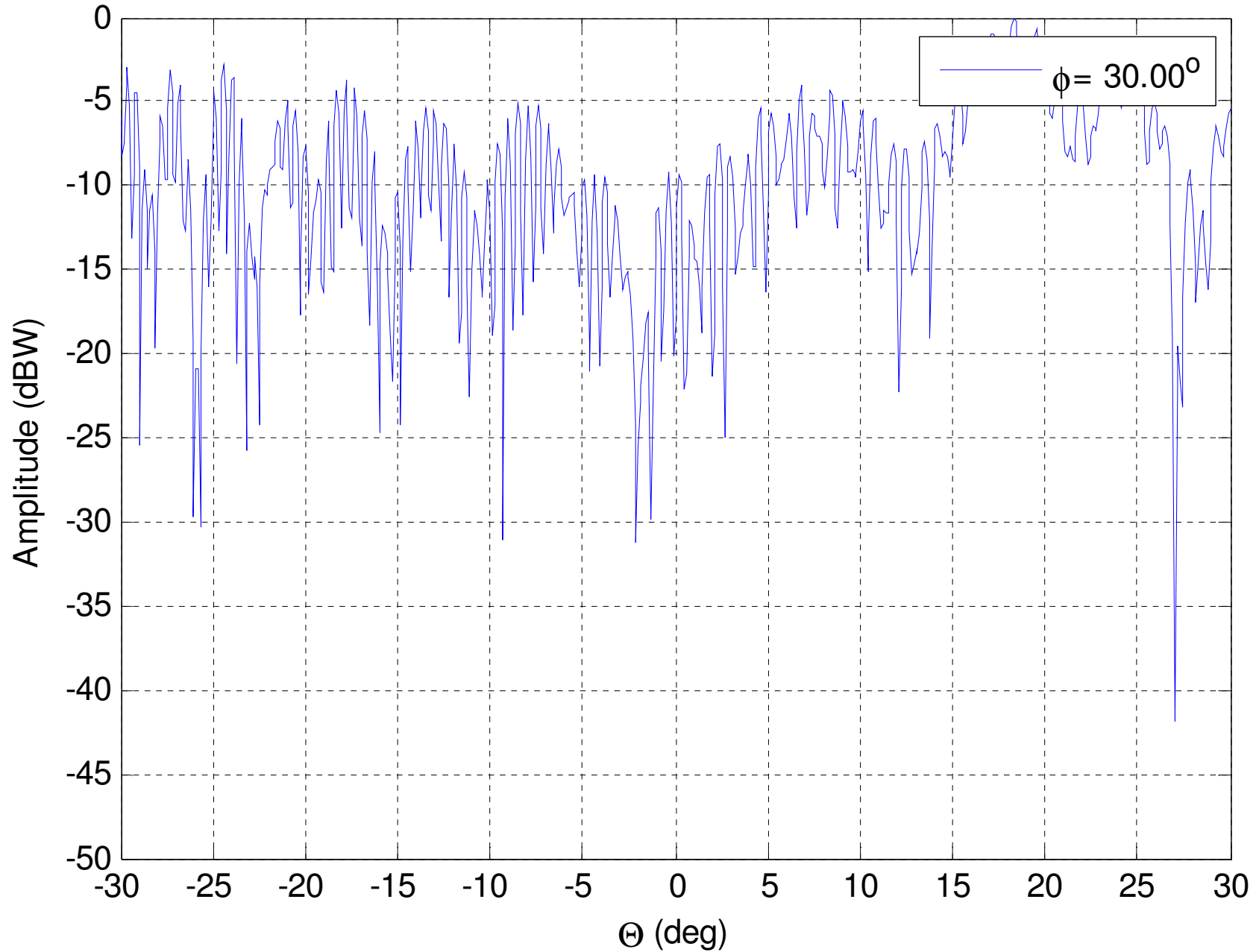
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.12 dBW, Date: 15-Dec-2011



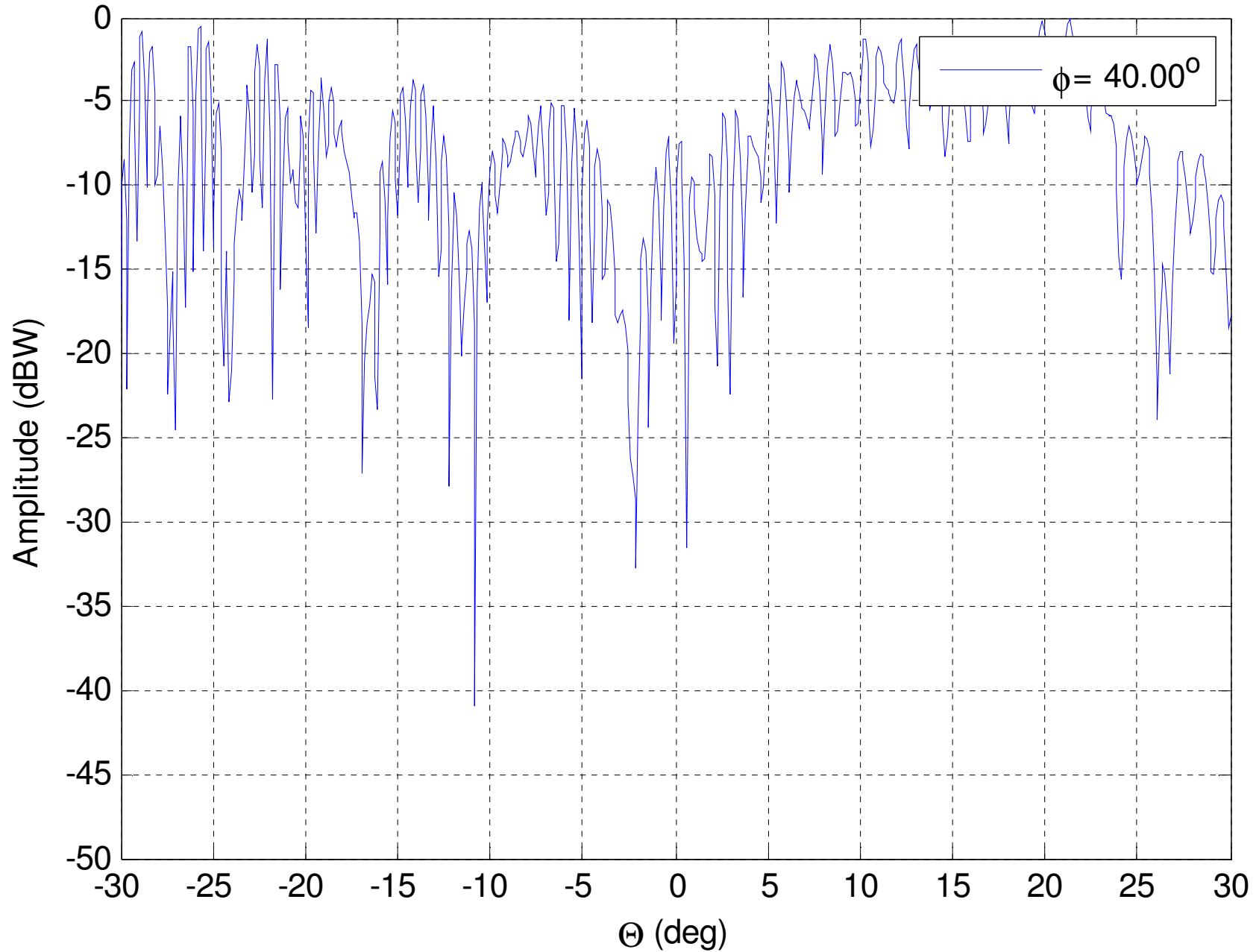
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -7.09 dBW, Date: 15-Dec-2011



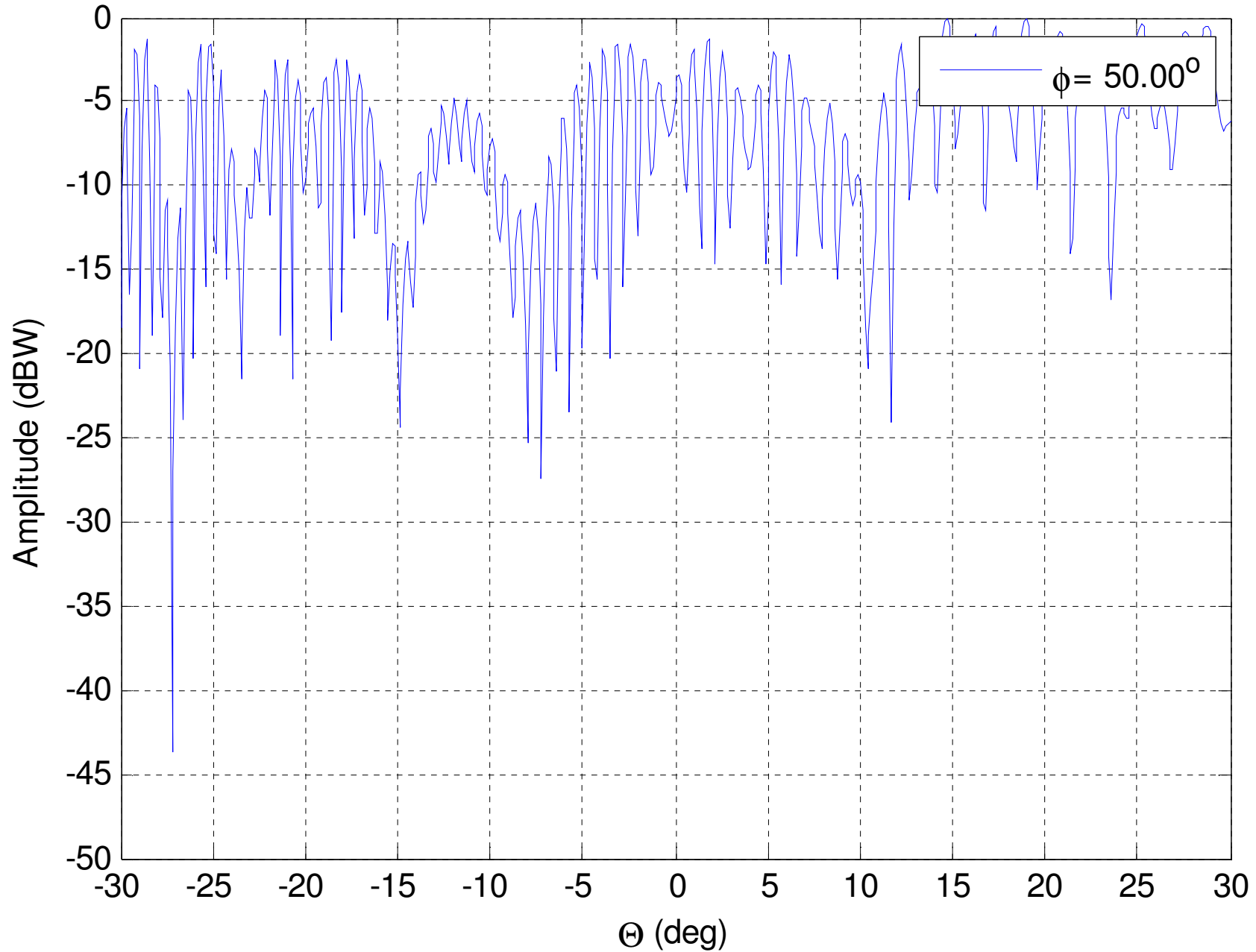
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -9.03 dBW, Date: 15-Dec-2011



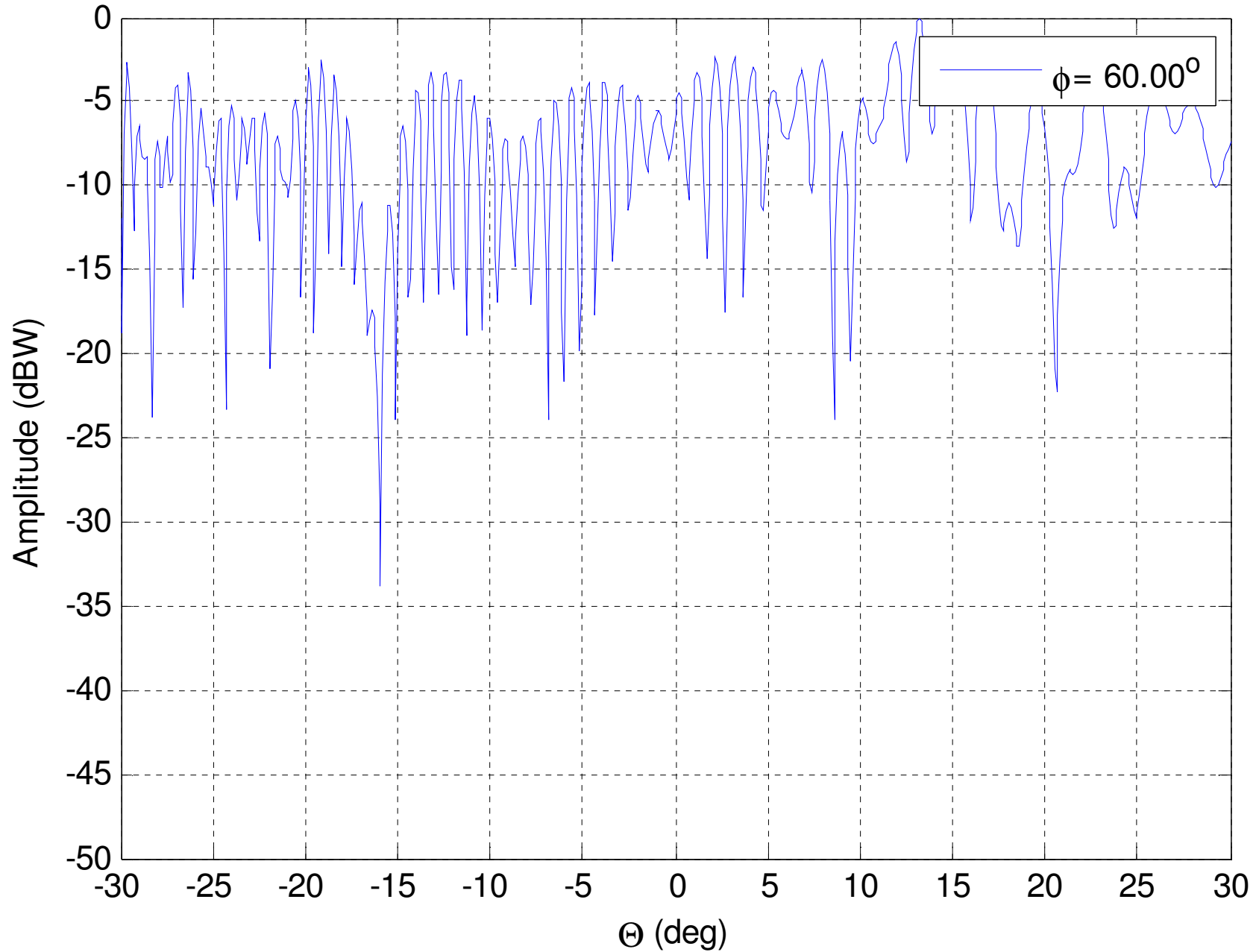
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -9.66 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

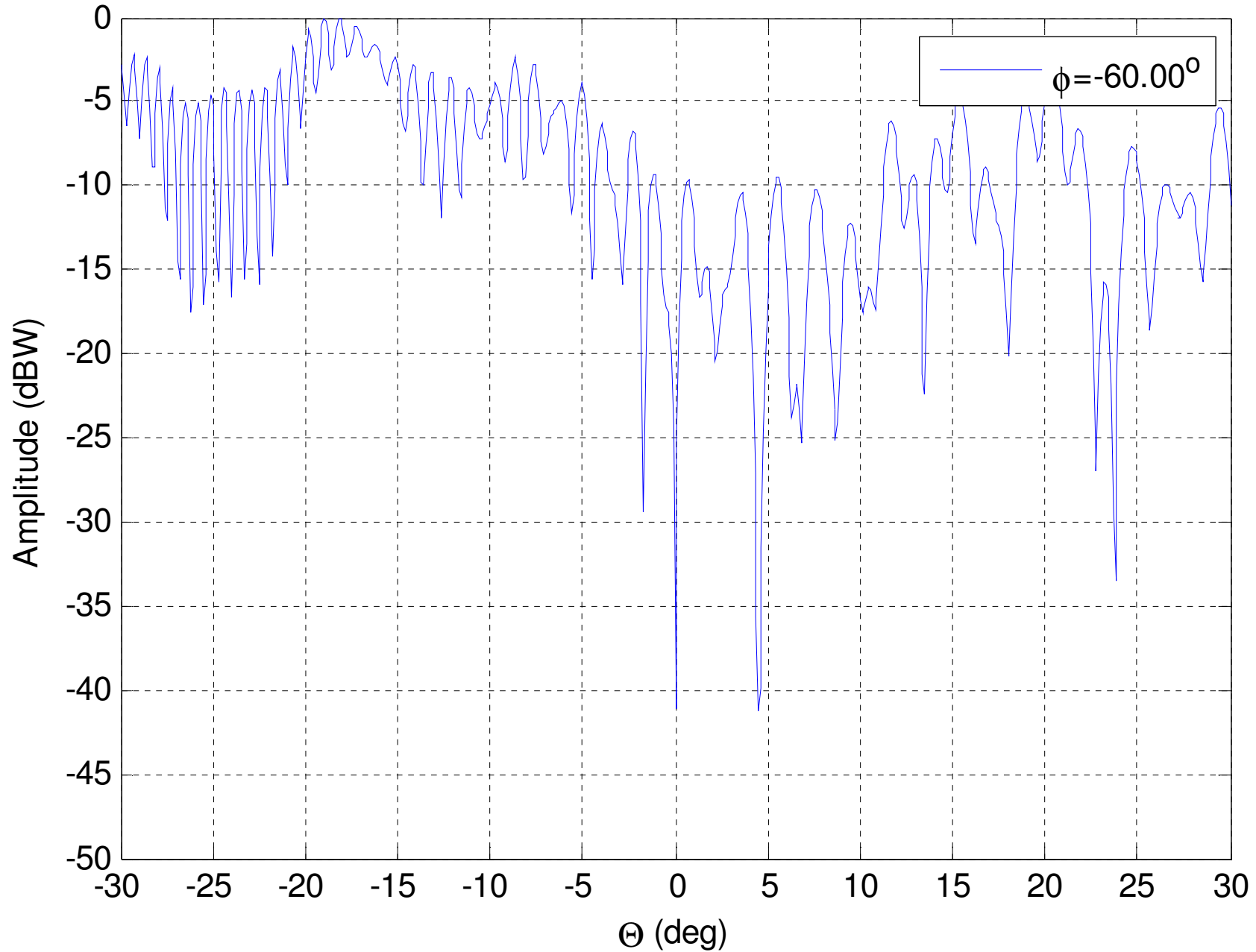
Input file: tx-17.5-lhcp-60.cut, Peak: -8.59 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

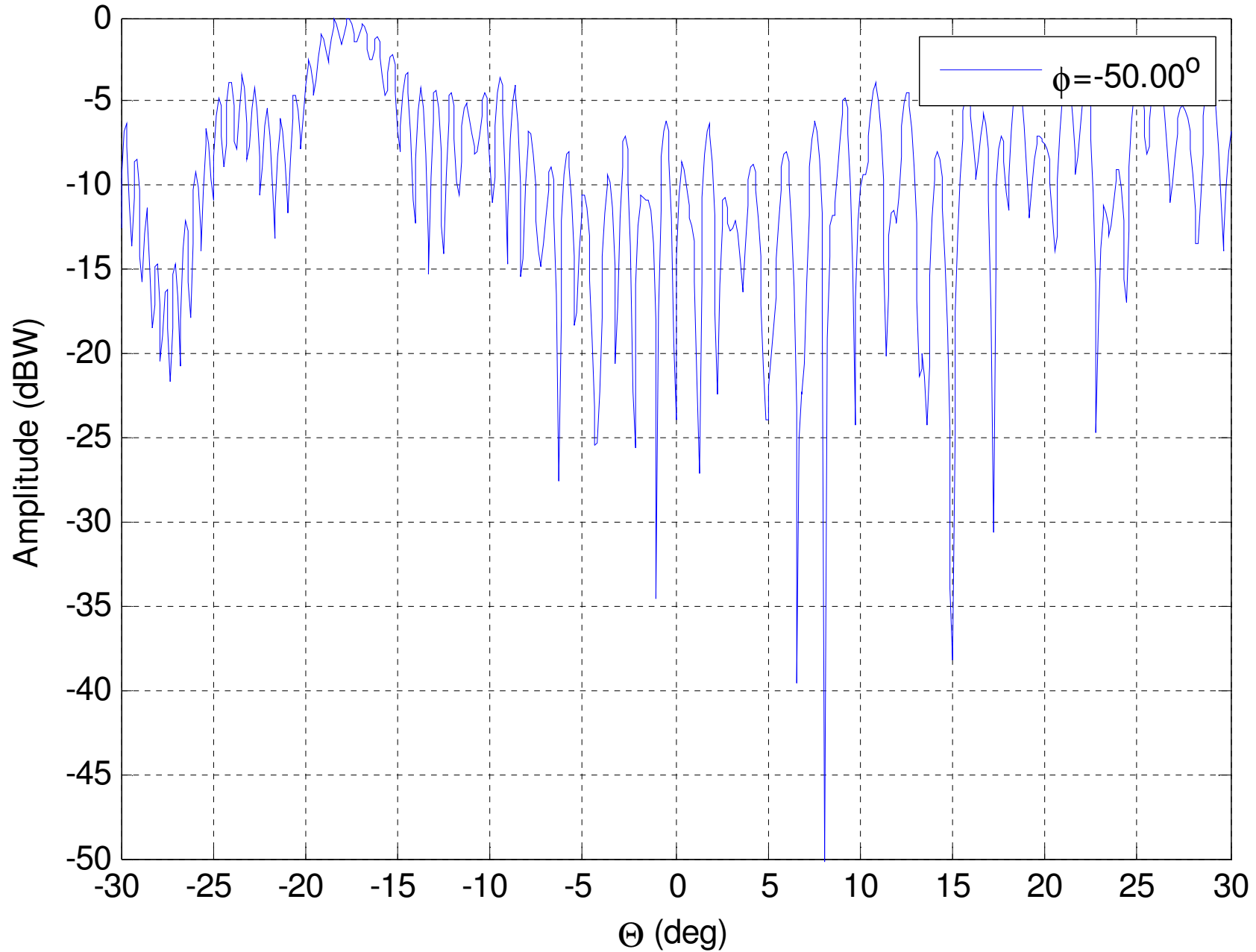
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -8.70 dBW, Date: 15-Dec-2011



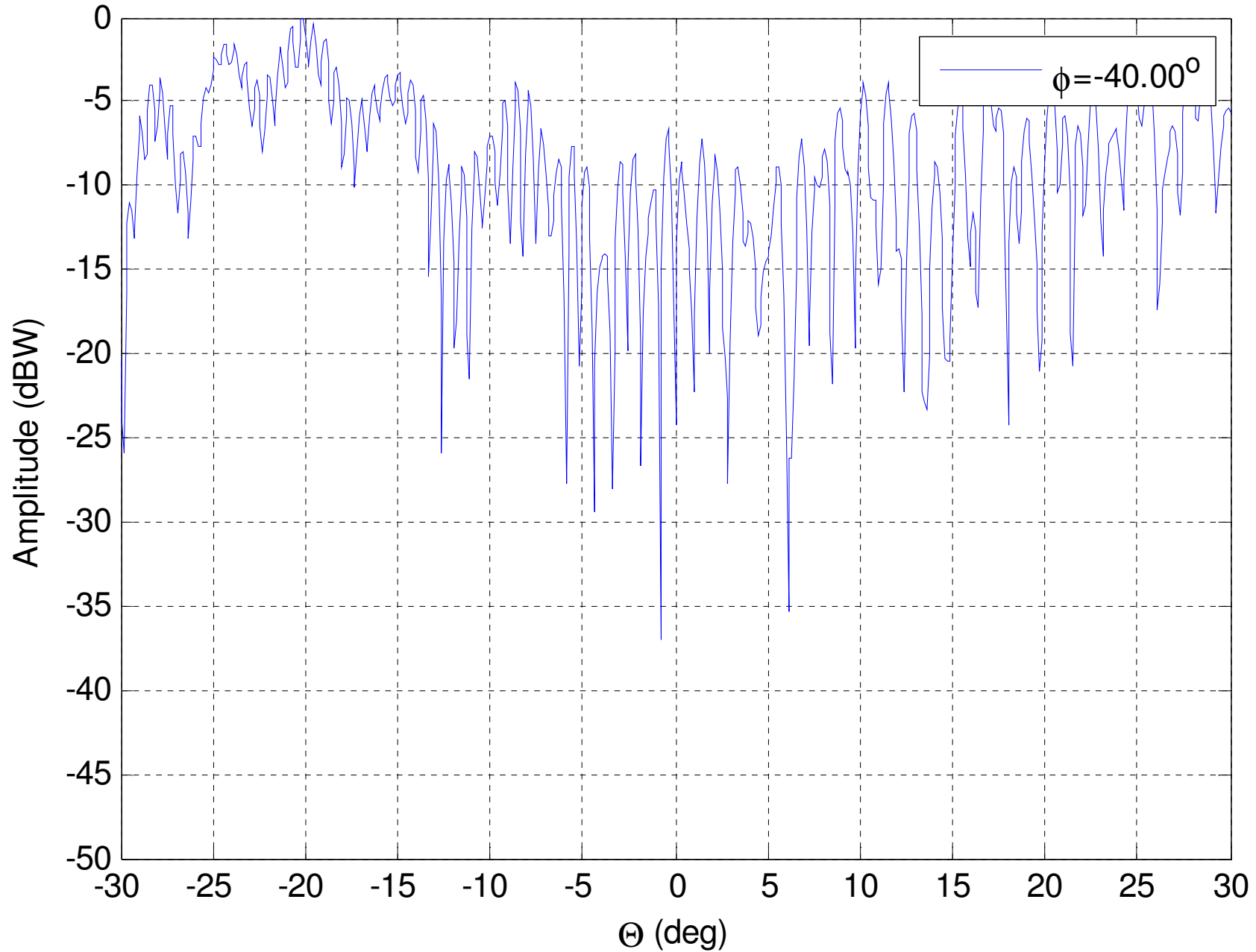
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.05 dBW, Date: 15-Dec-2011



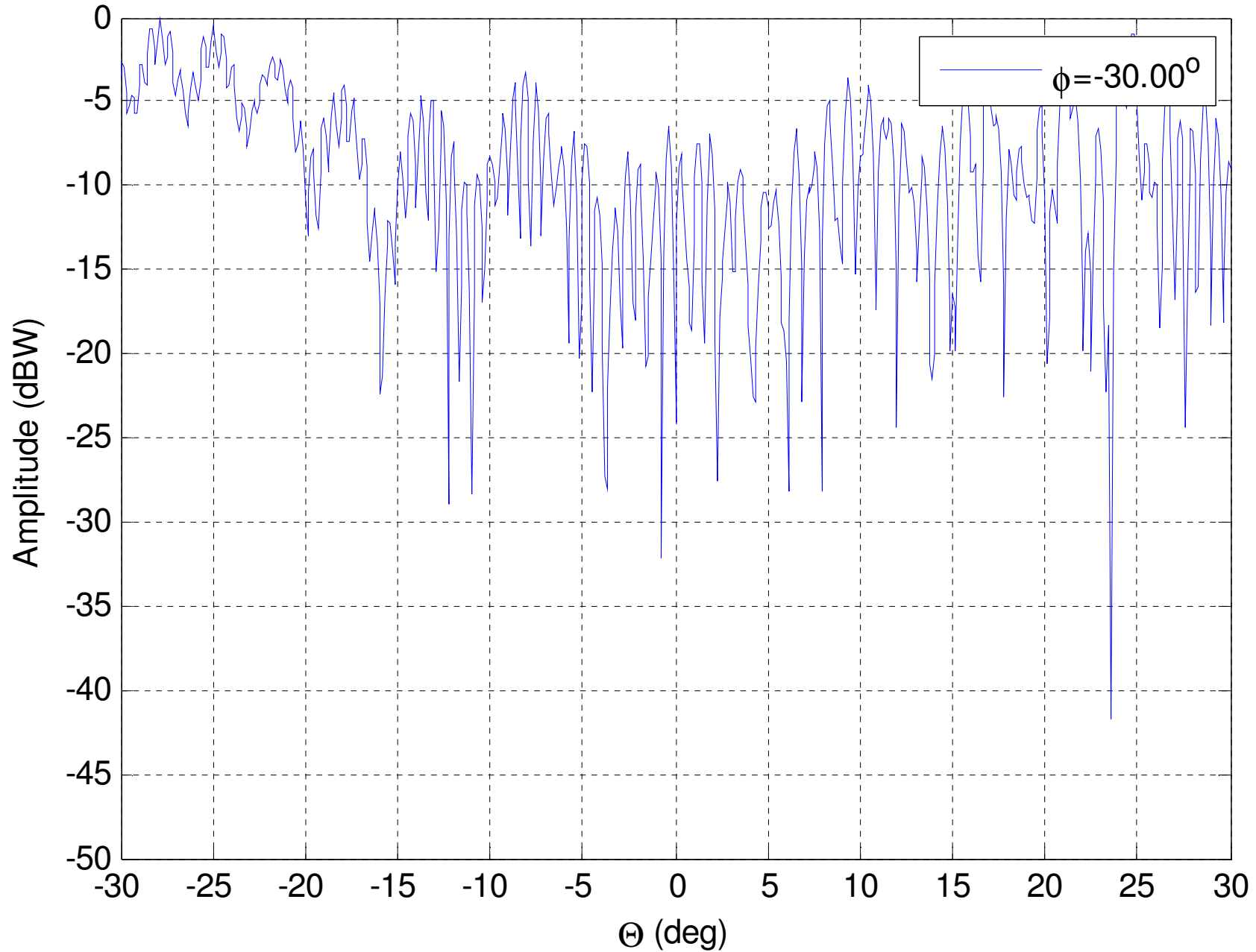
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.70 dBW, Date: 15-Dec-2011



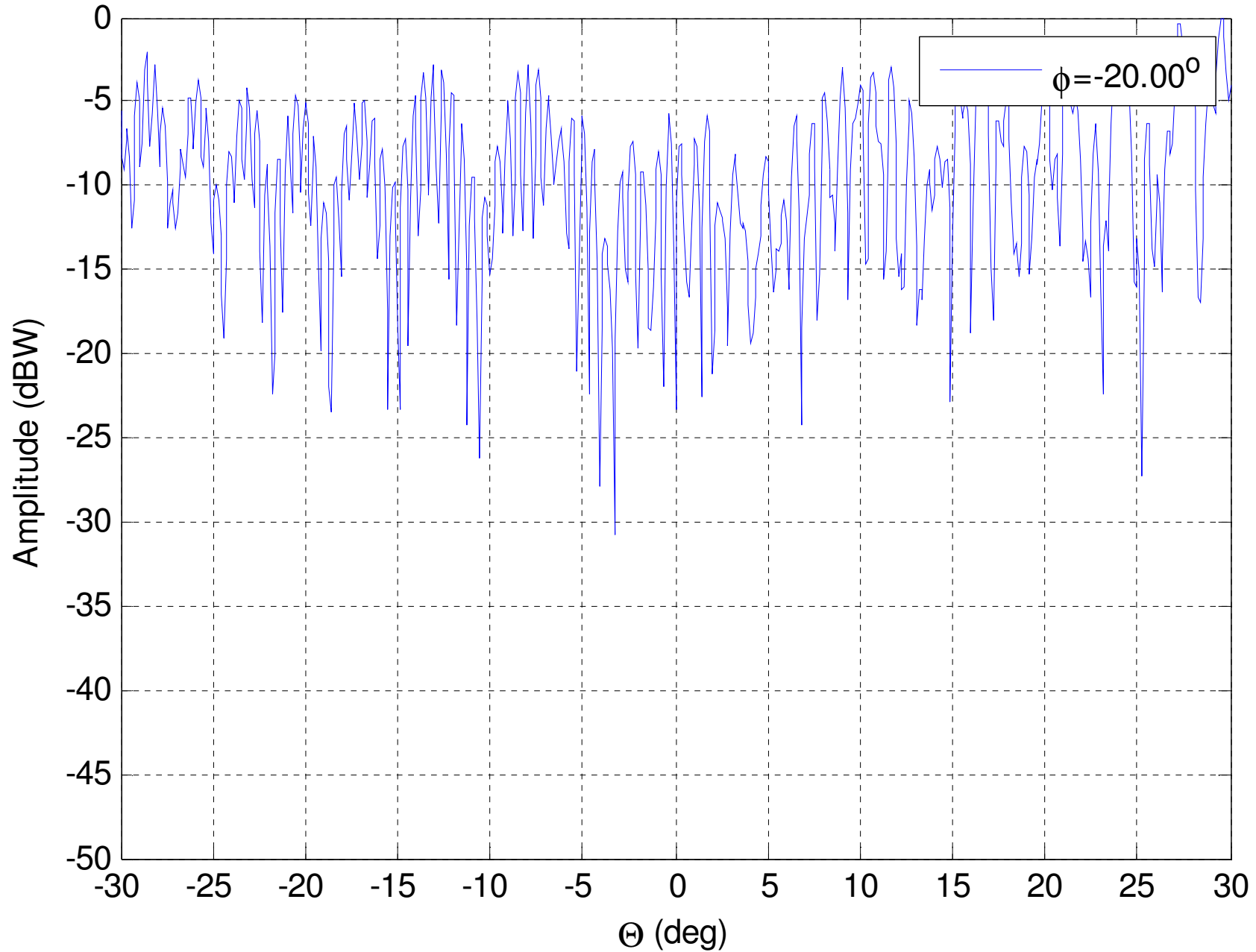
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.96 dBW, Date: 15-Dec-2011



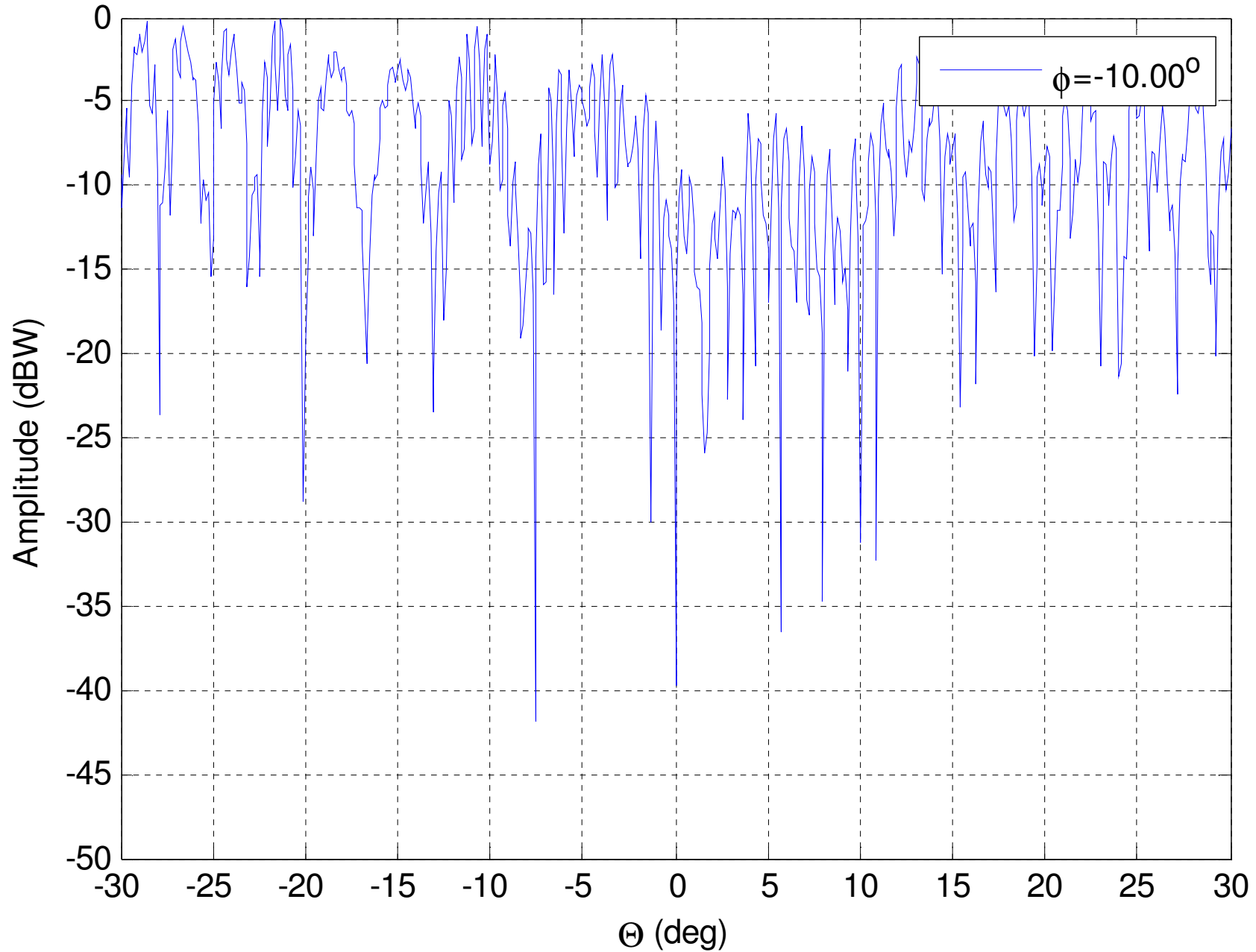
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -8.66 dBW, Date: 15-Dec-2011



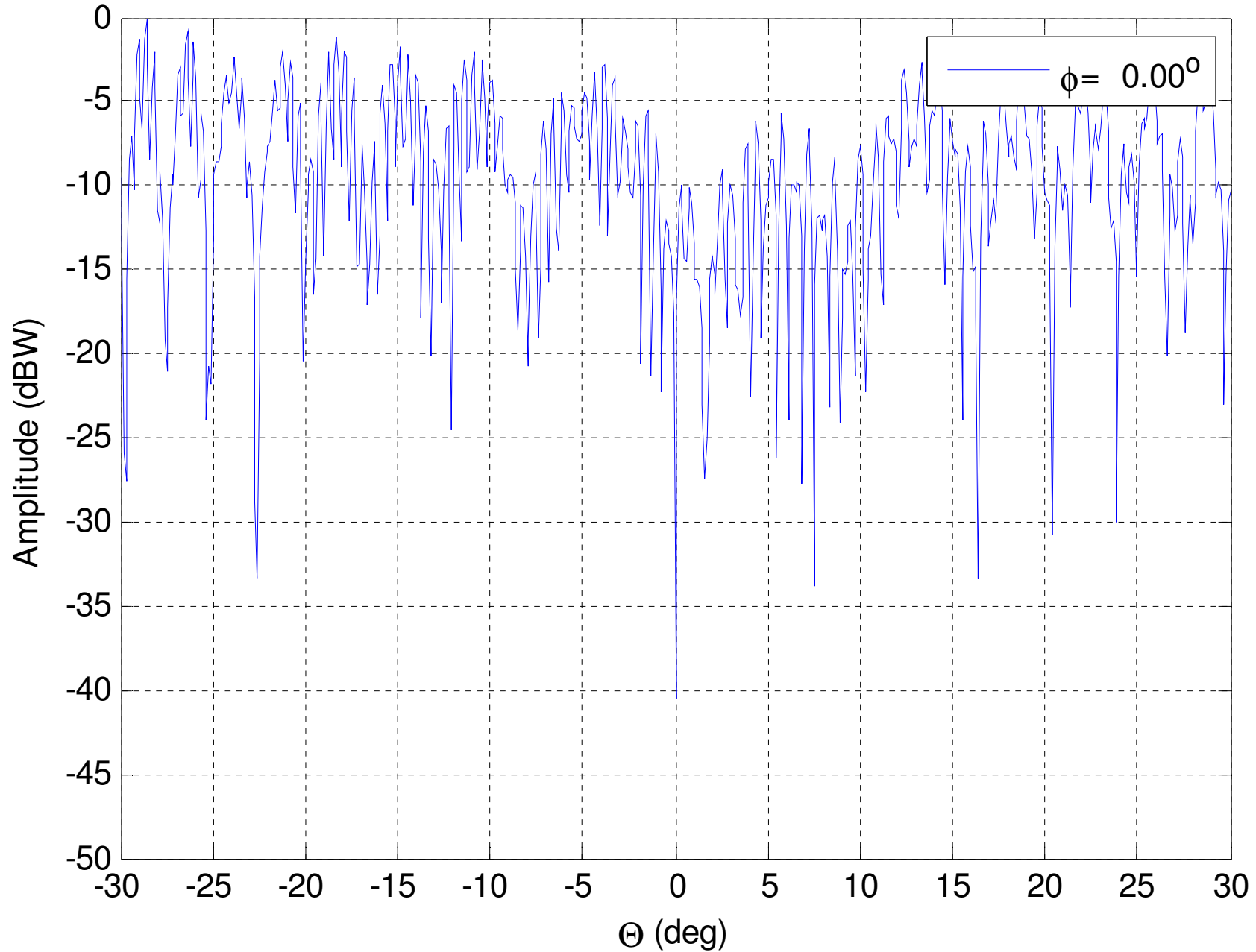
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -10.06 dBW, Date: 15-Dec-2011



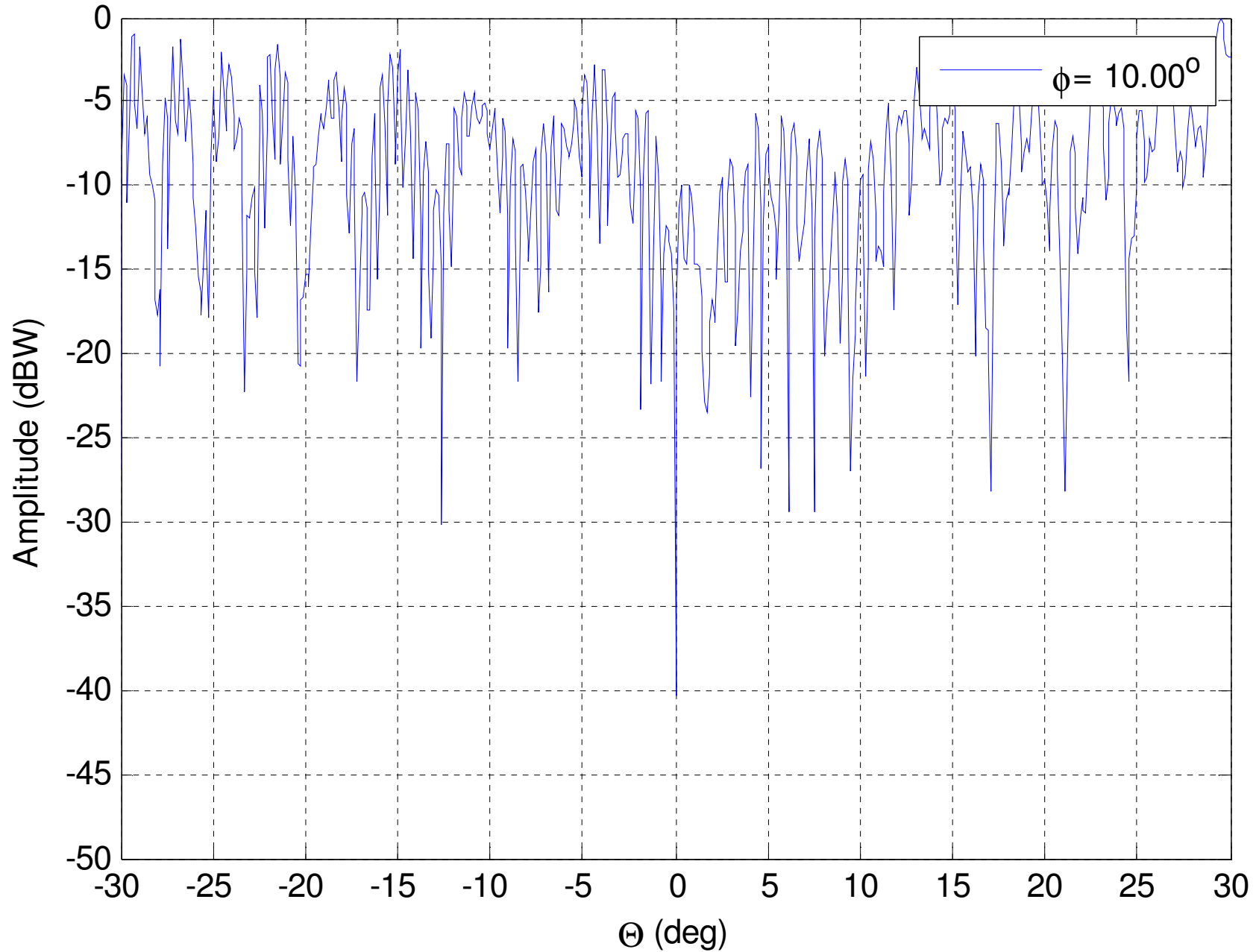
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -9.30 dBW, Date: 15-Dec-2011



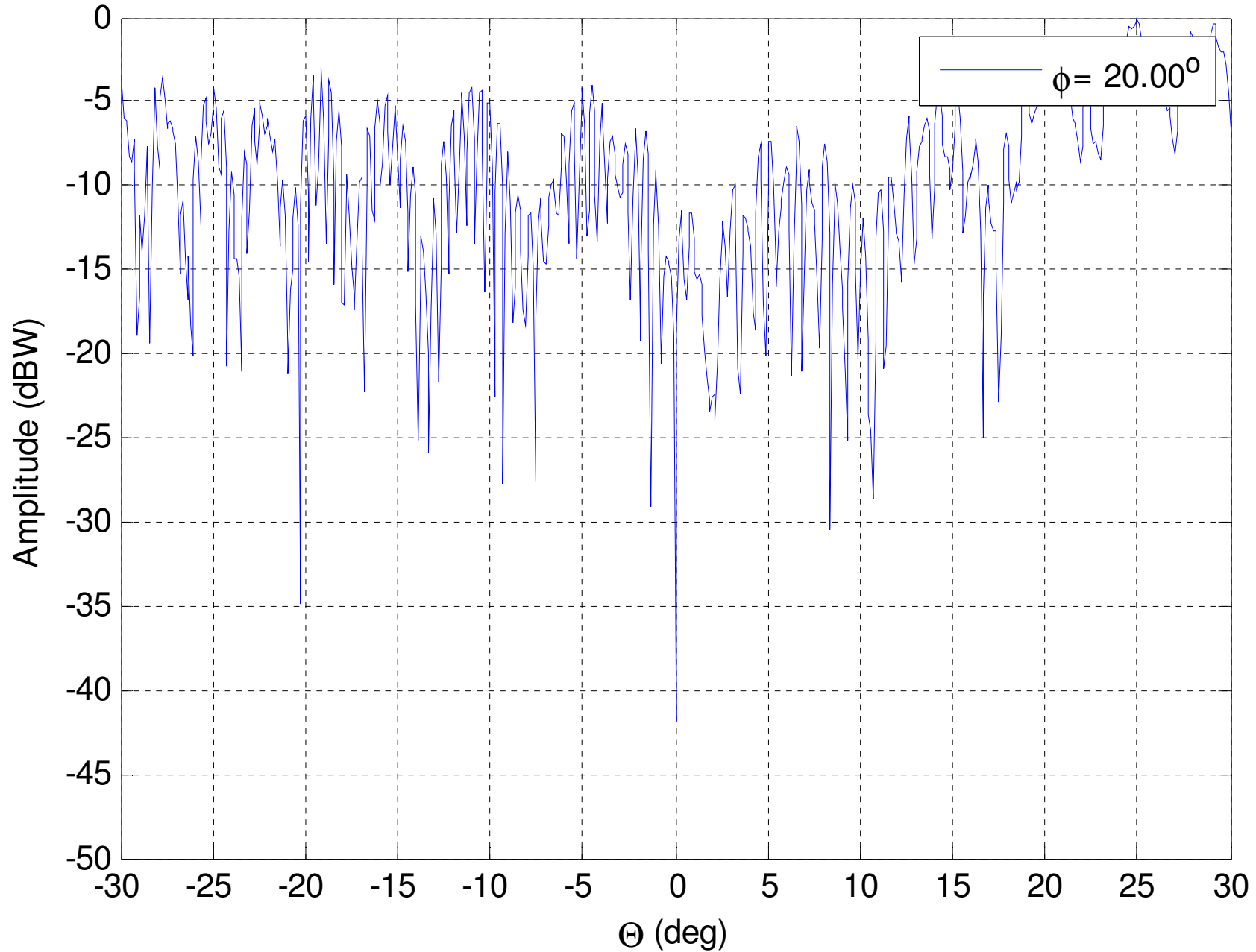
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -9.37 dBW, Date: 15-Dec-2011



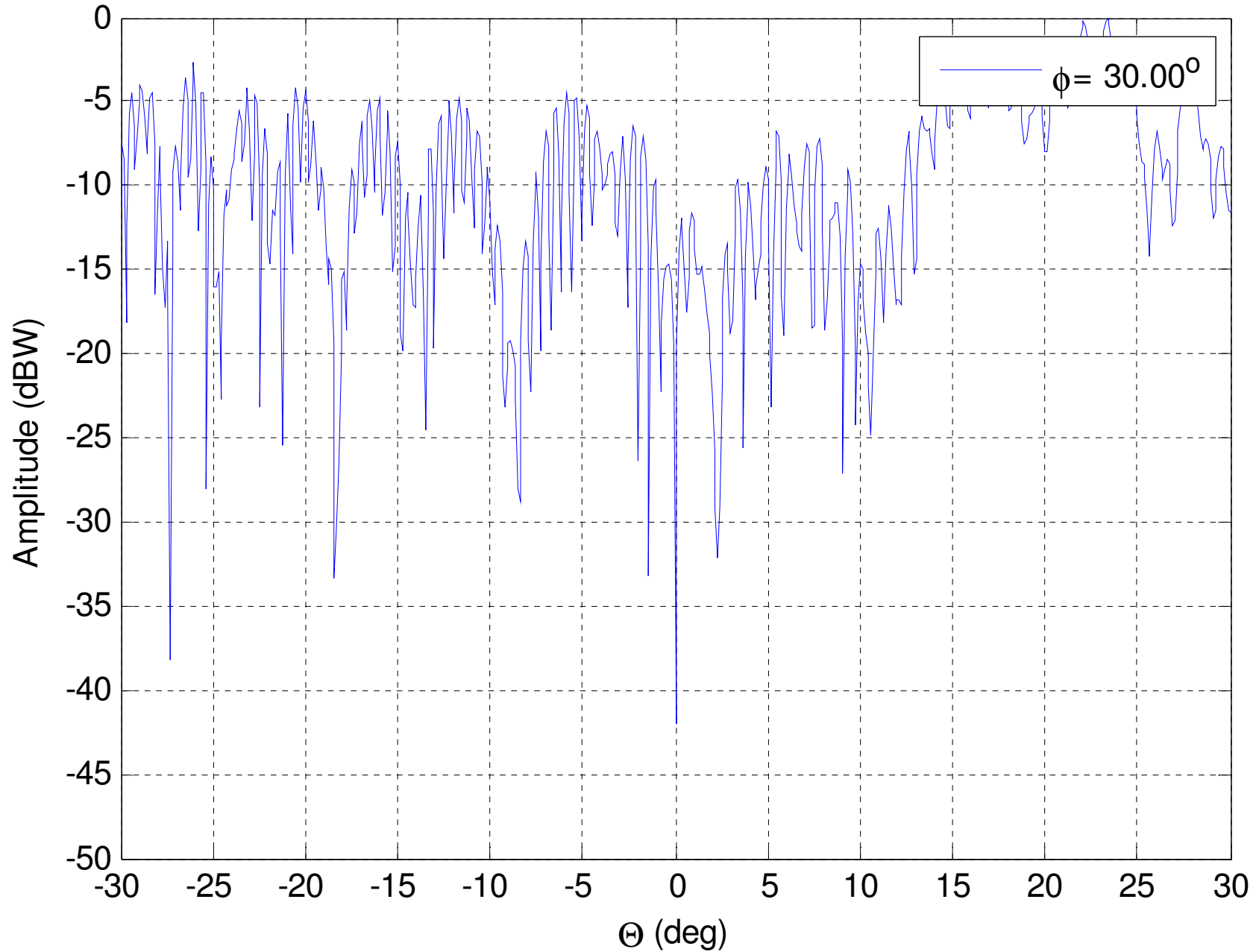
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -7.90 dBW, Date: 15-Dec-2011



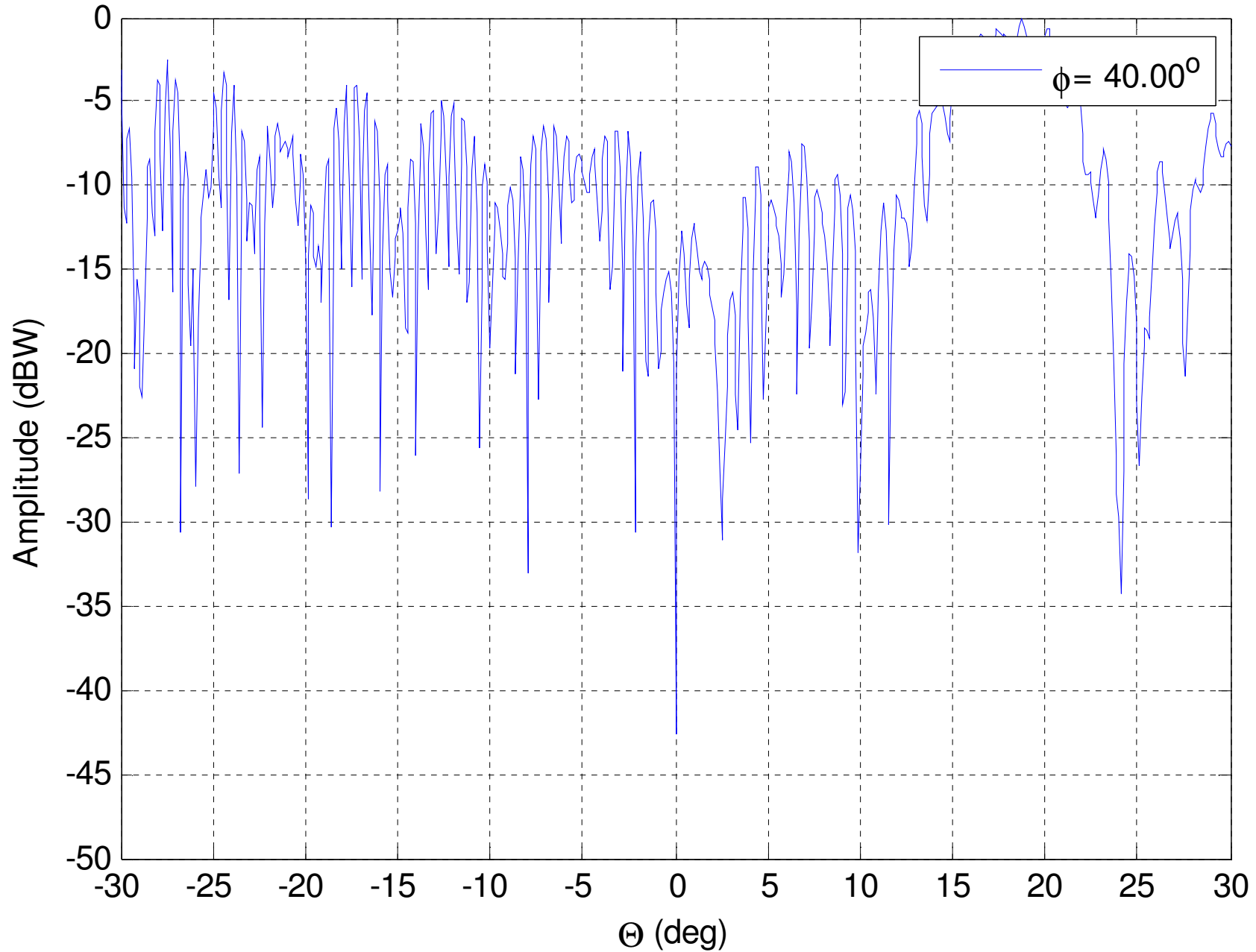
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -7.72 dBW, Date: 15-Dec-2011



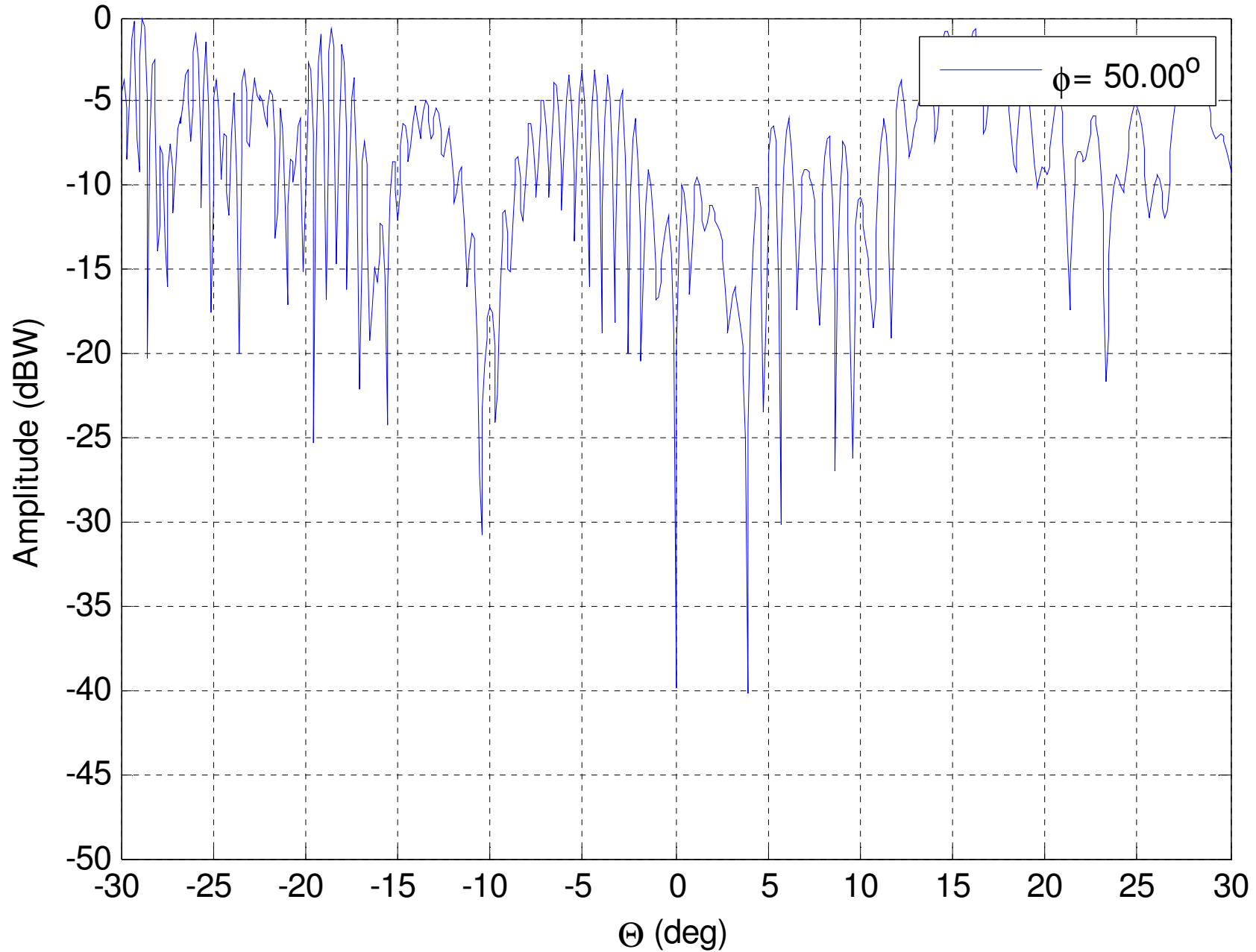
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -7.17 dBW, Date: 15-Dec-2011



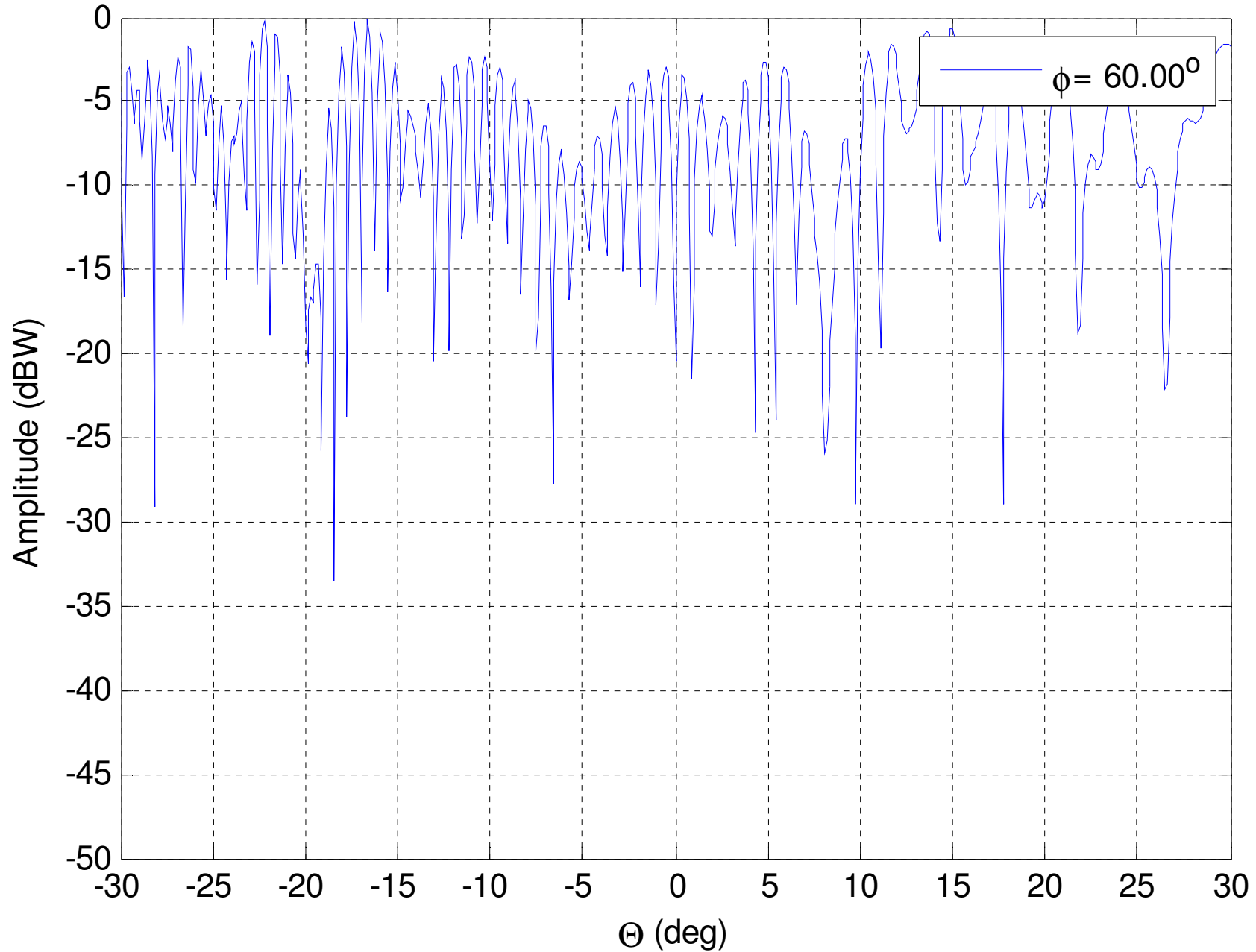
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -9.97 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

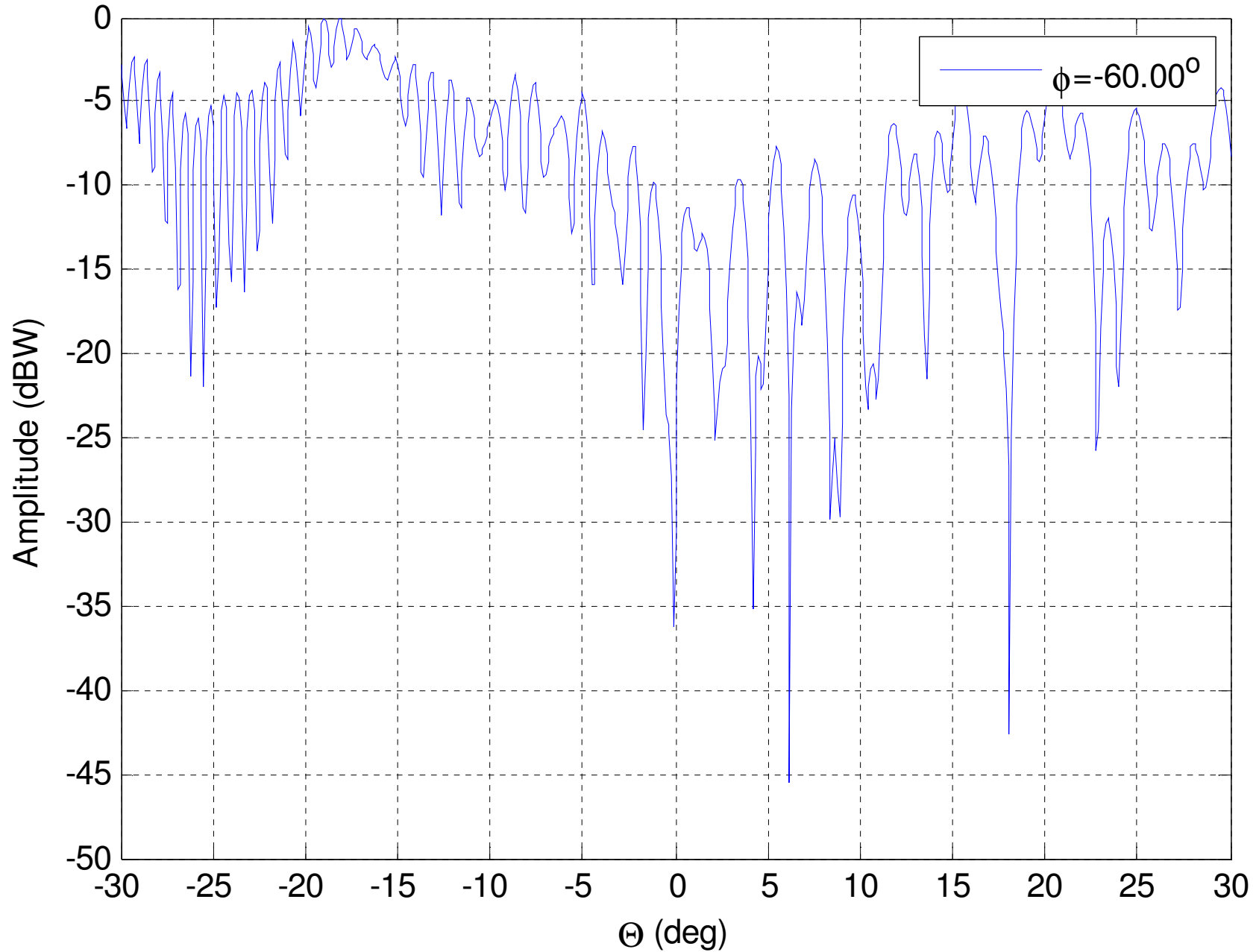
Input file: tx-17.7-rhcp-60.cut, Peak: -11.52 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

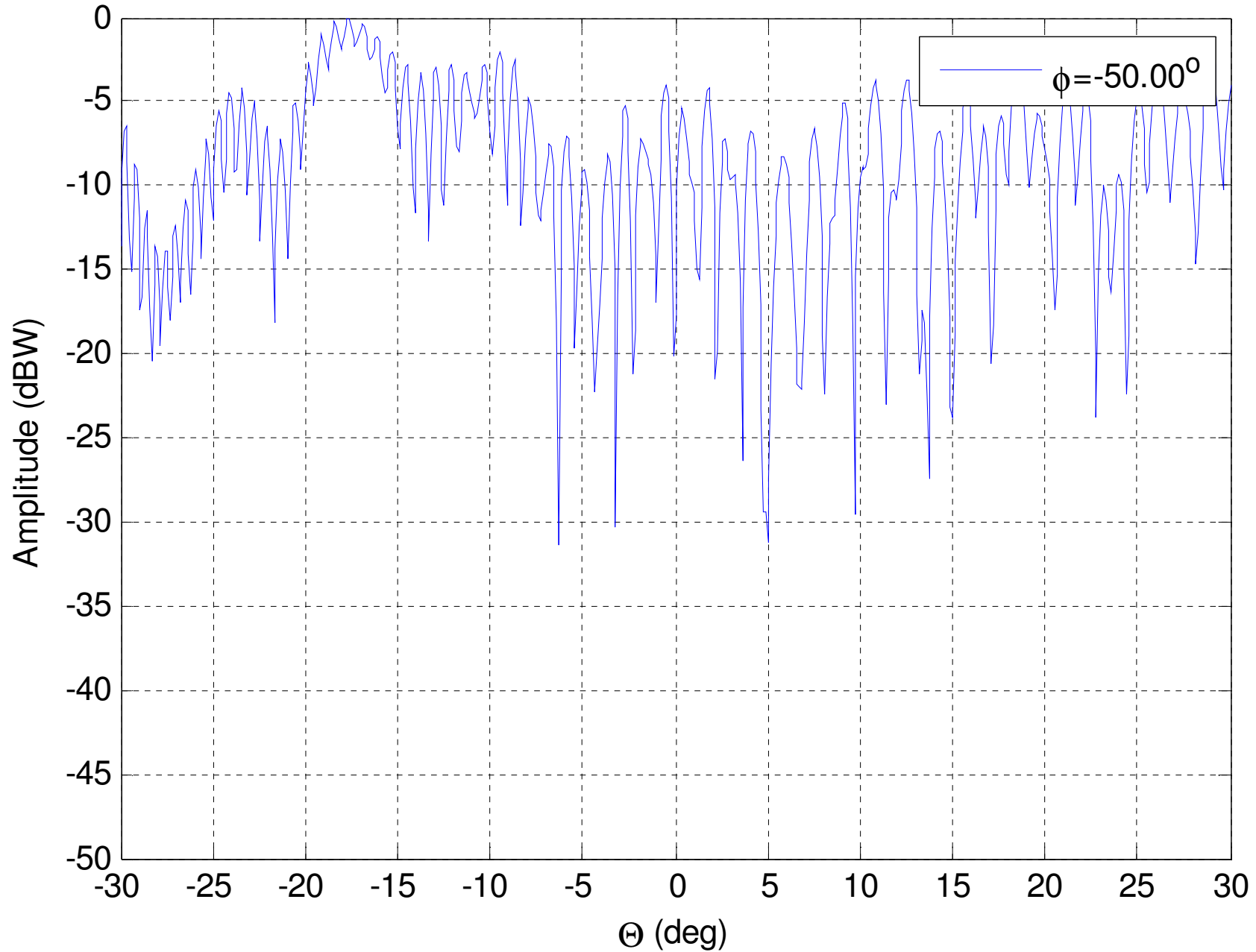
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -8.46 dBW, Date: 15-Dec-2011



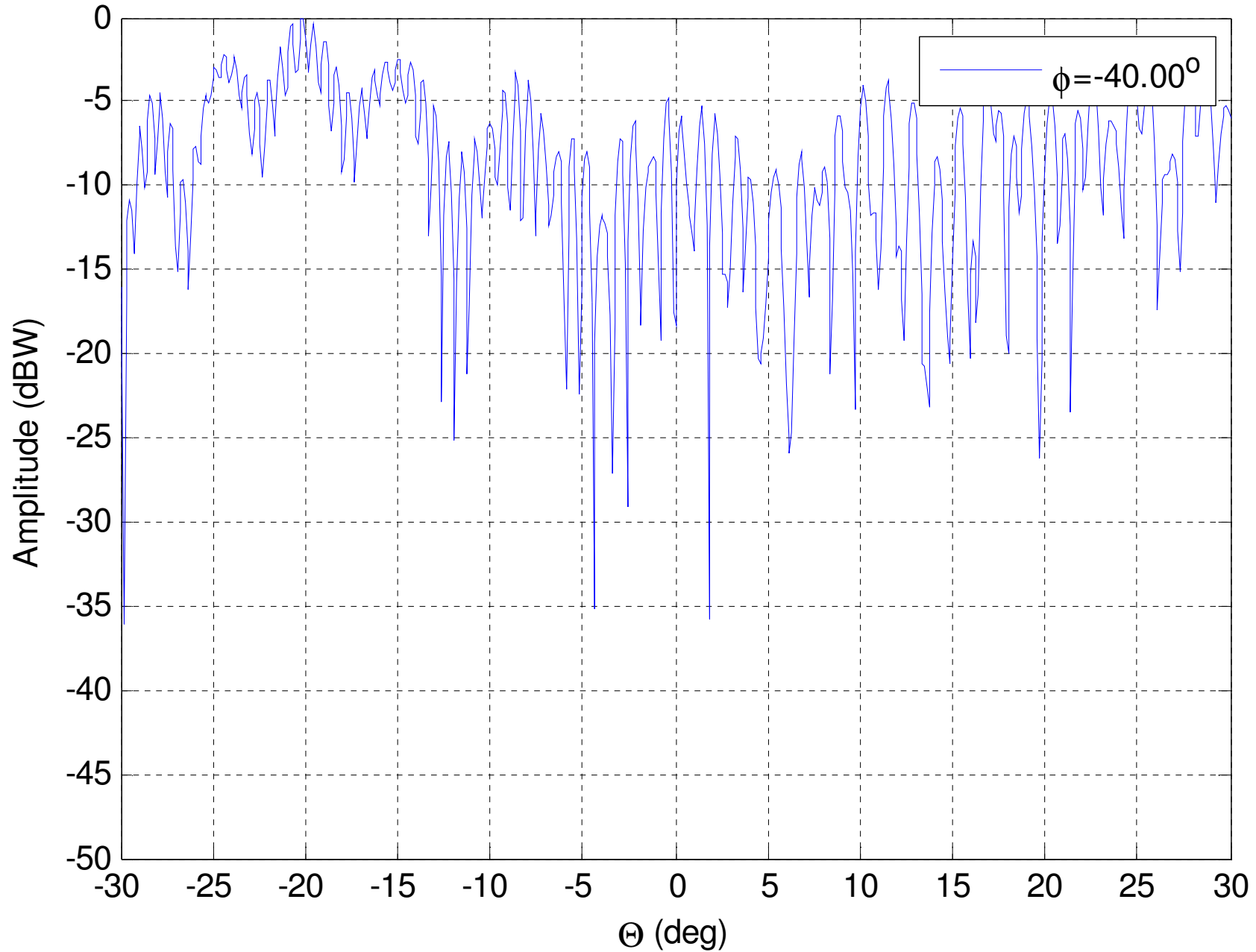
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -8.64 dBW, Date: 15-Dec-2011



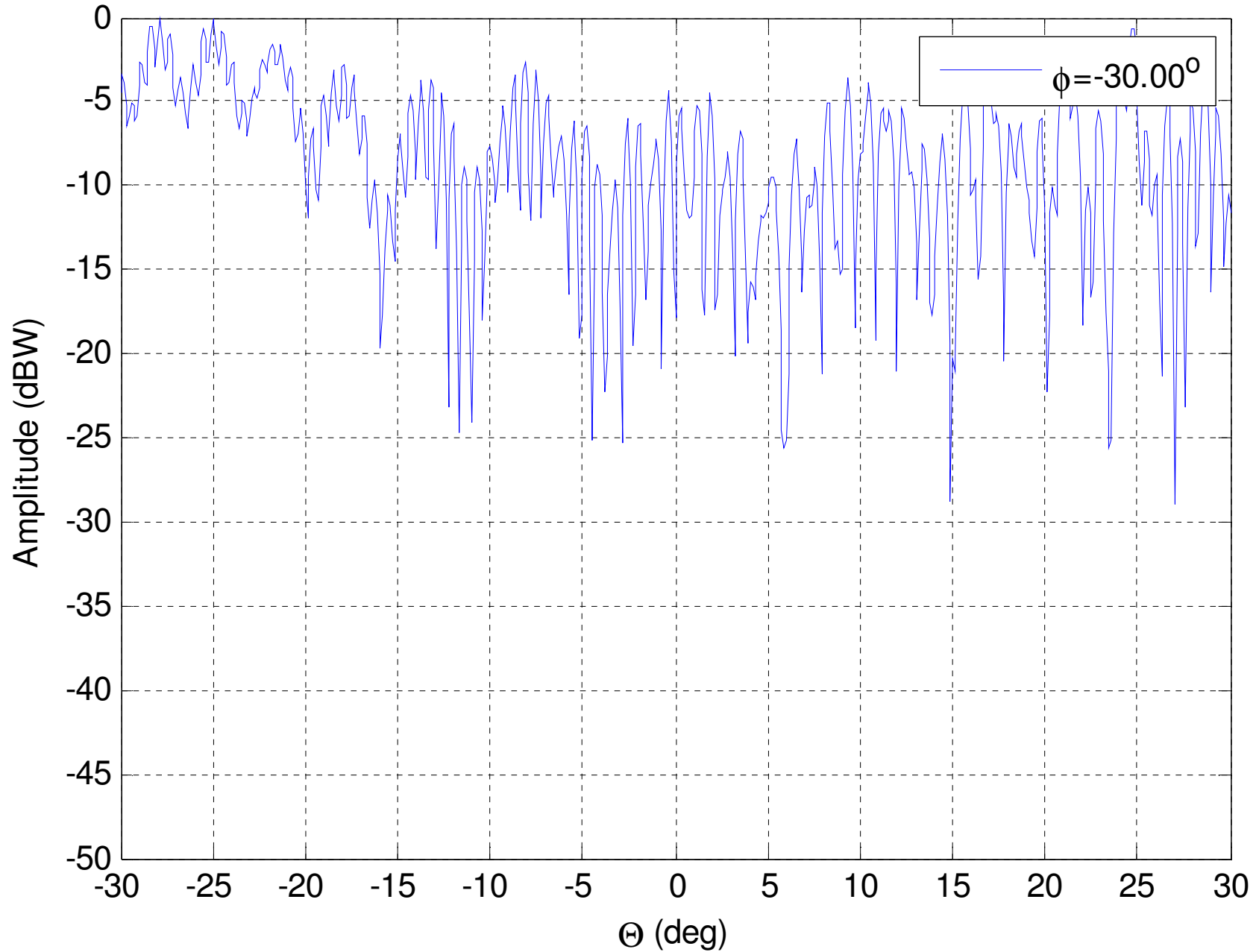
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -7.95 dBW, Date: 15-Dec-2011



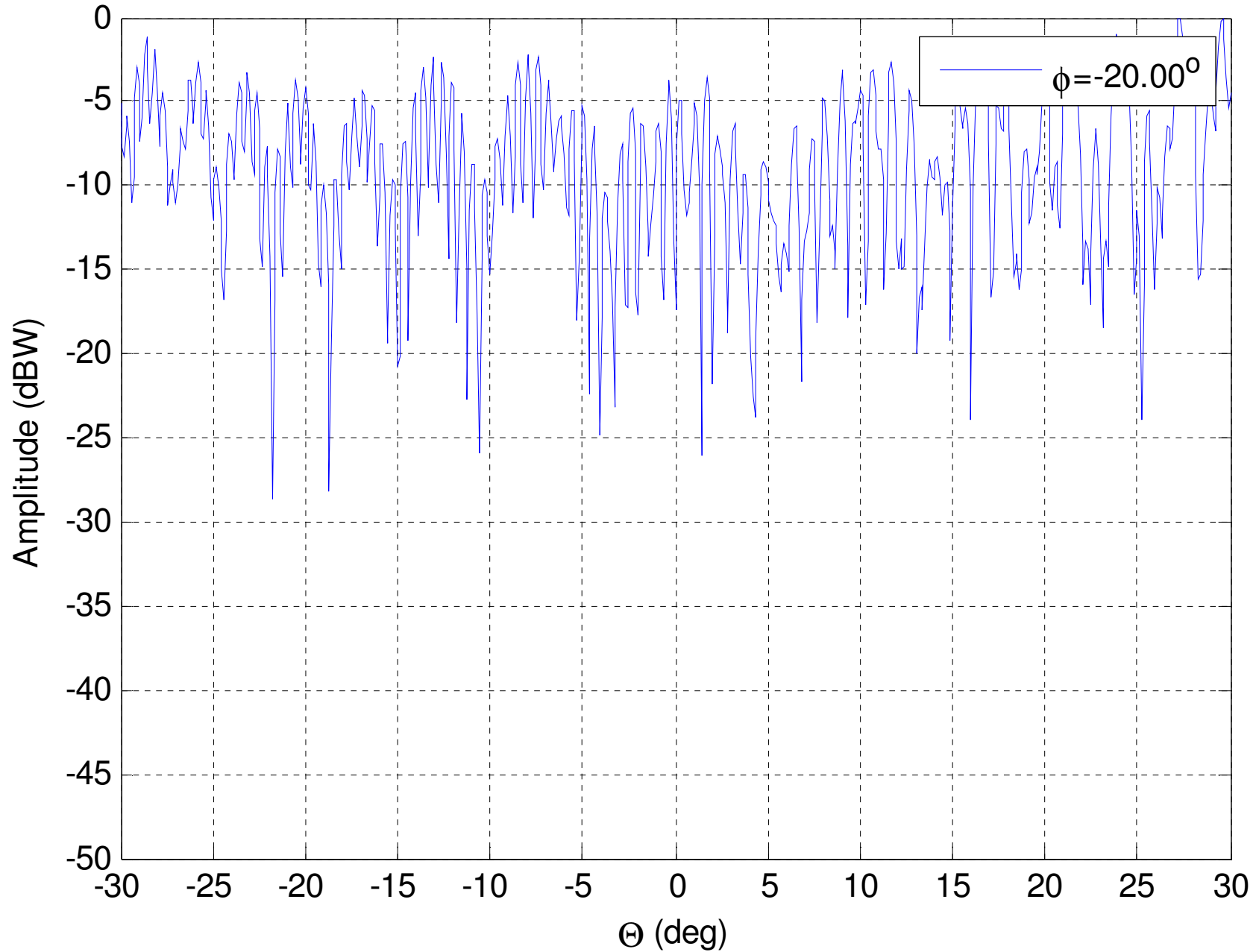
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -8.42 dBW, Date: 15-Dec-2011



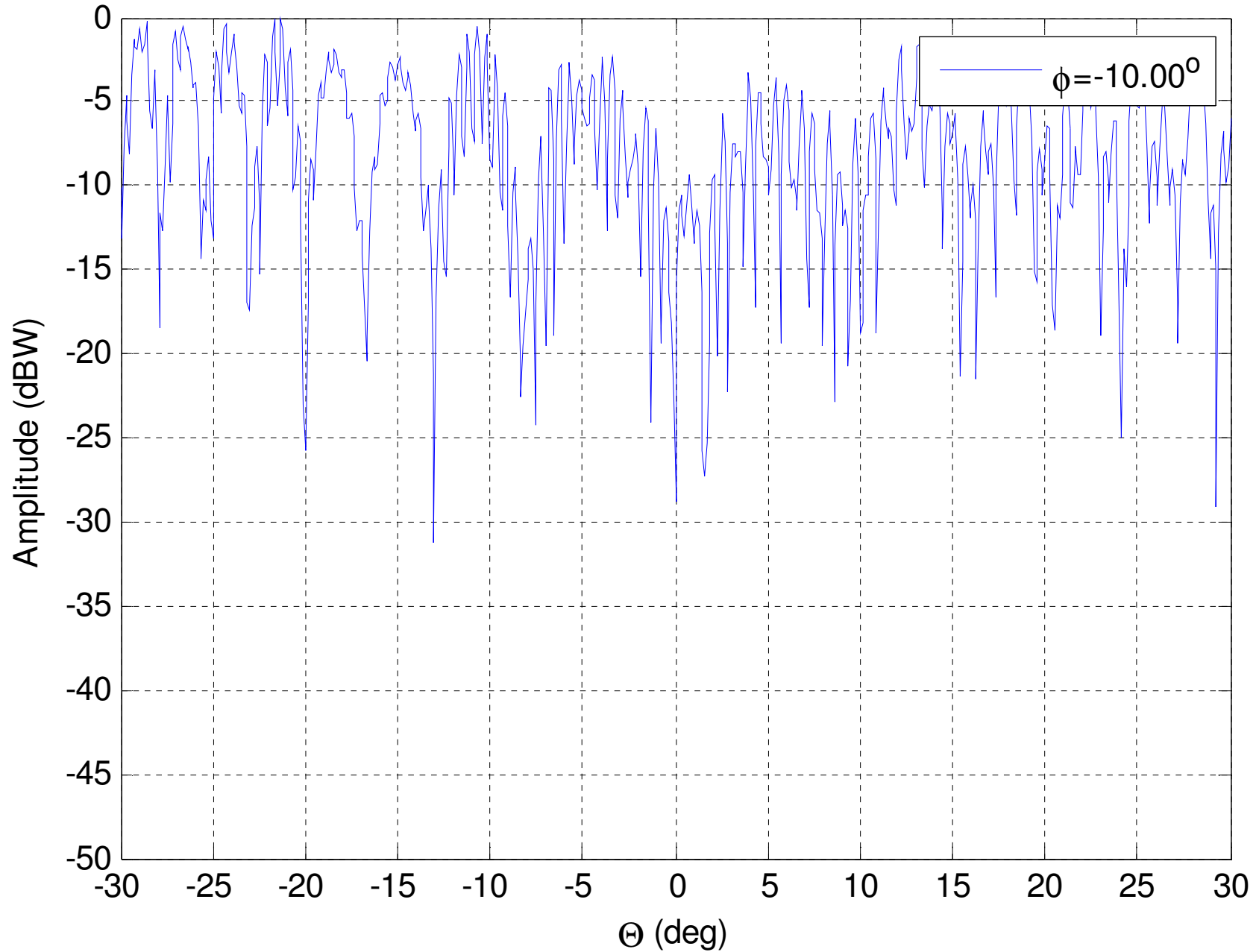
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -8.96 dBW, Date: 15-Dec-2011



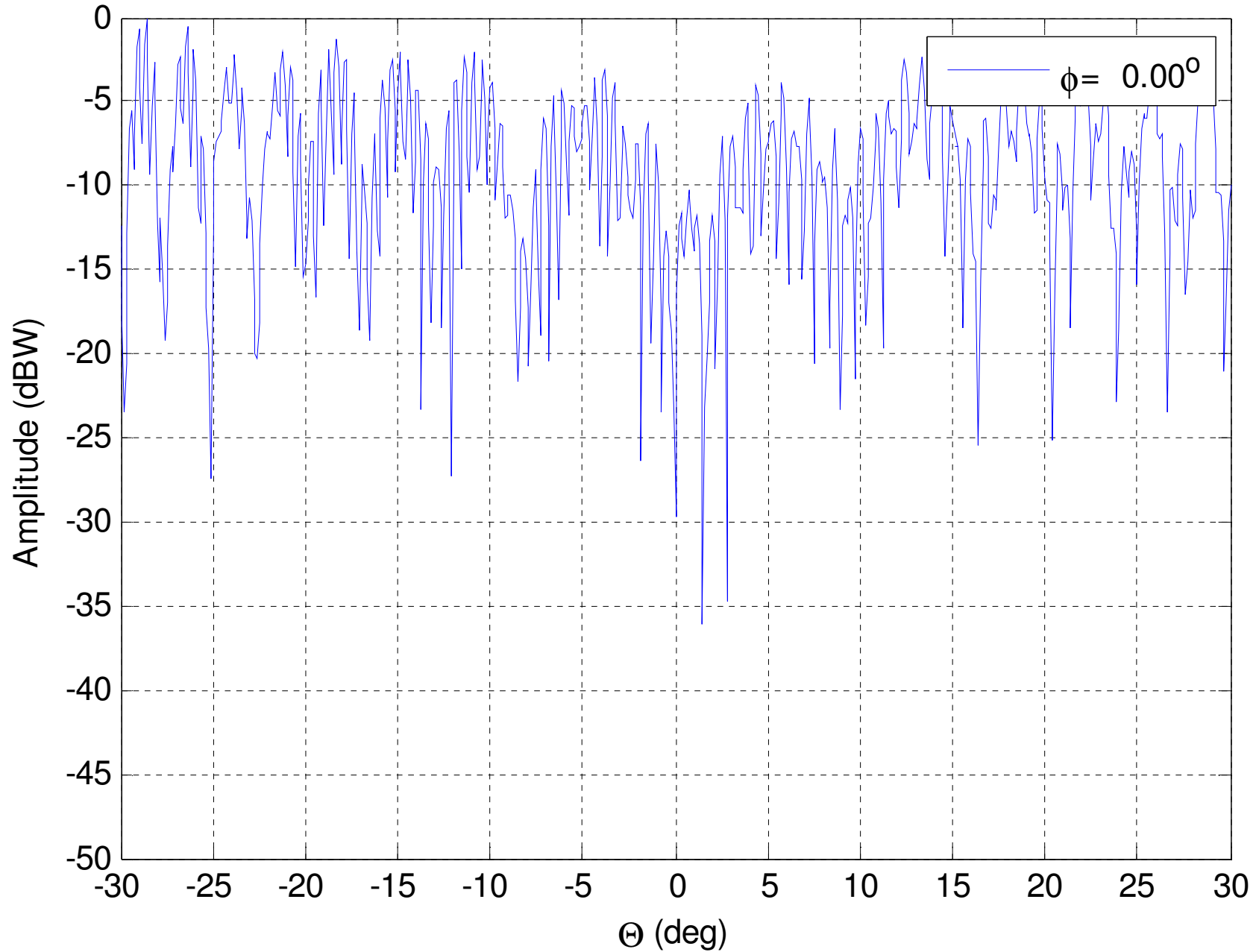
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -10.32 dBW, Date: 15-Dec-2011



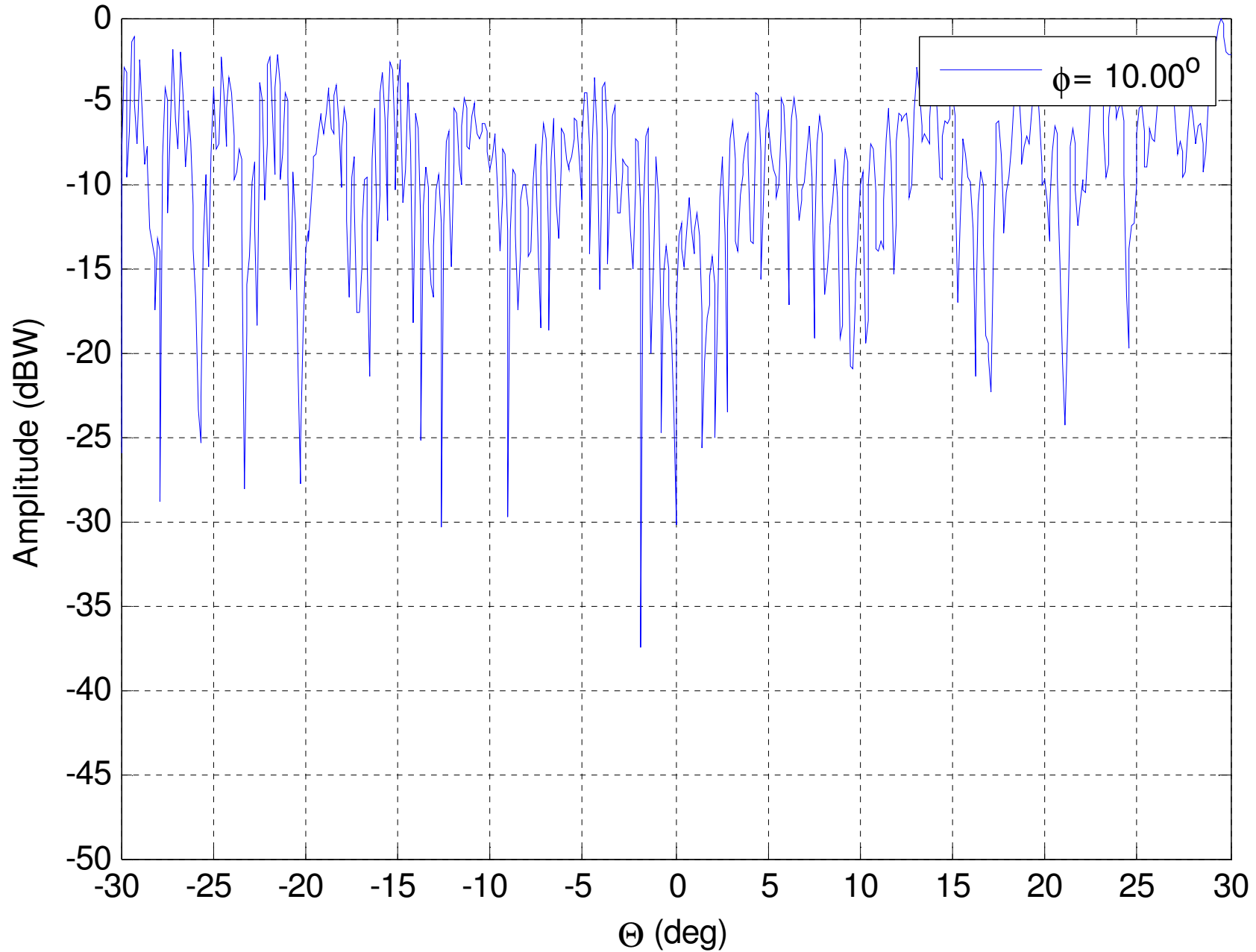
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -9.38 dBW, Date: 15-Dec-2011



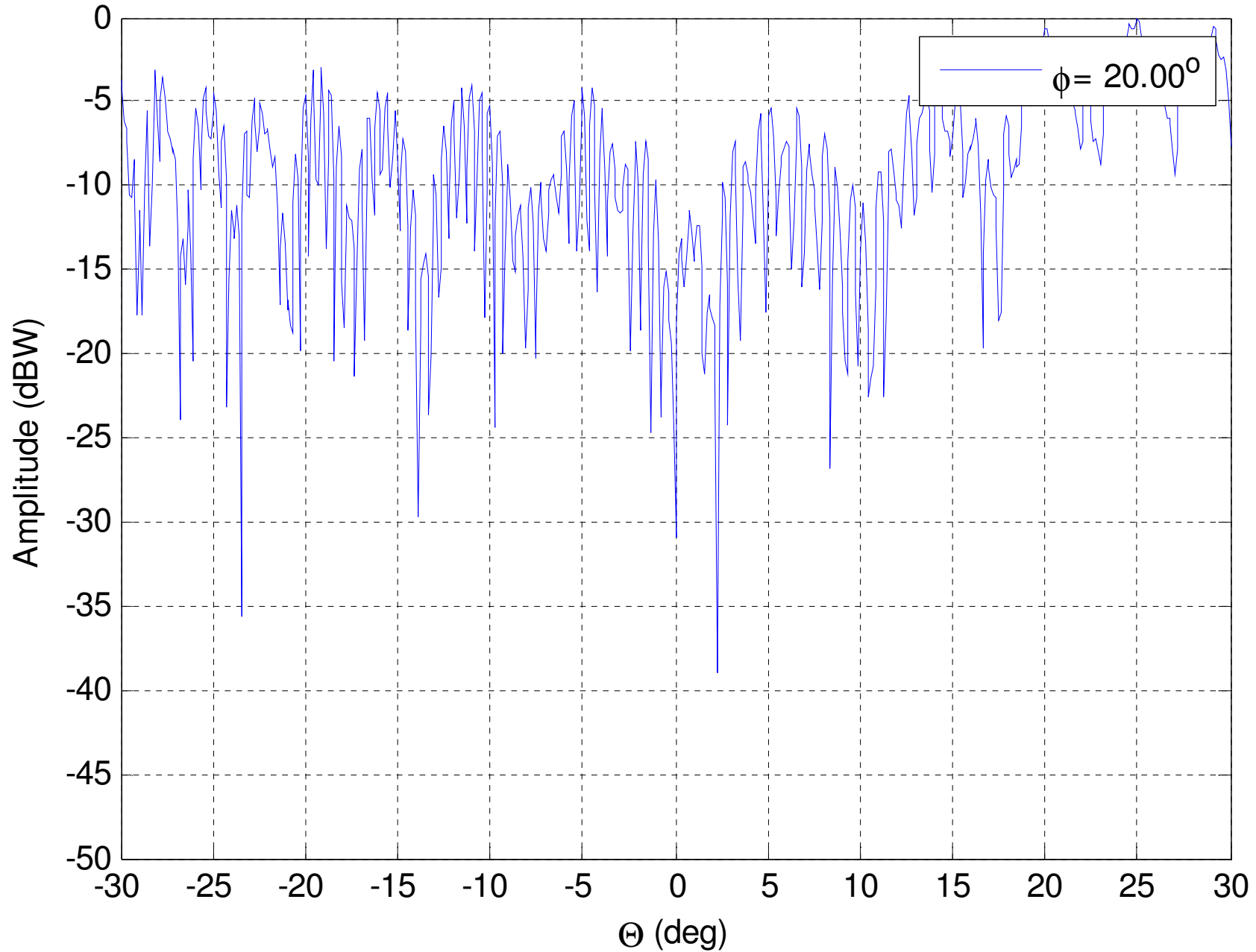
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.97 dBW, Date: 15-Dec-2011



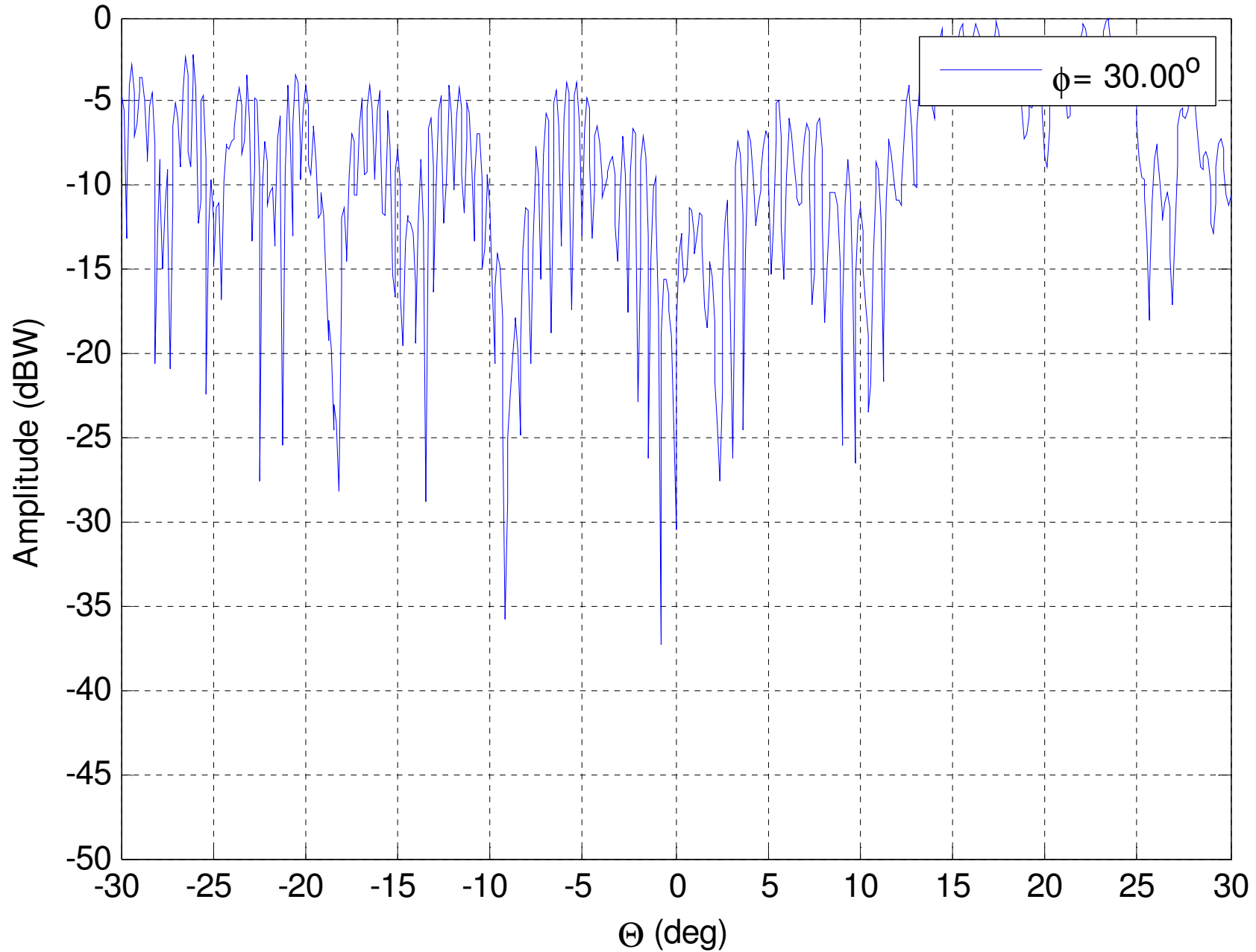
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -8.15 dBW, Date: 15-Dec-2011



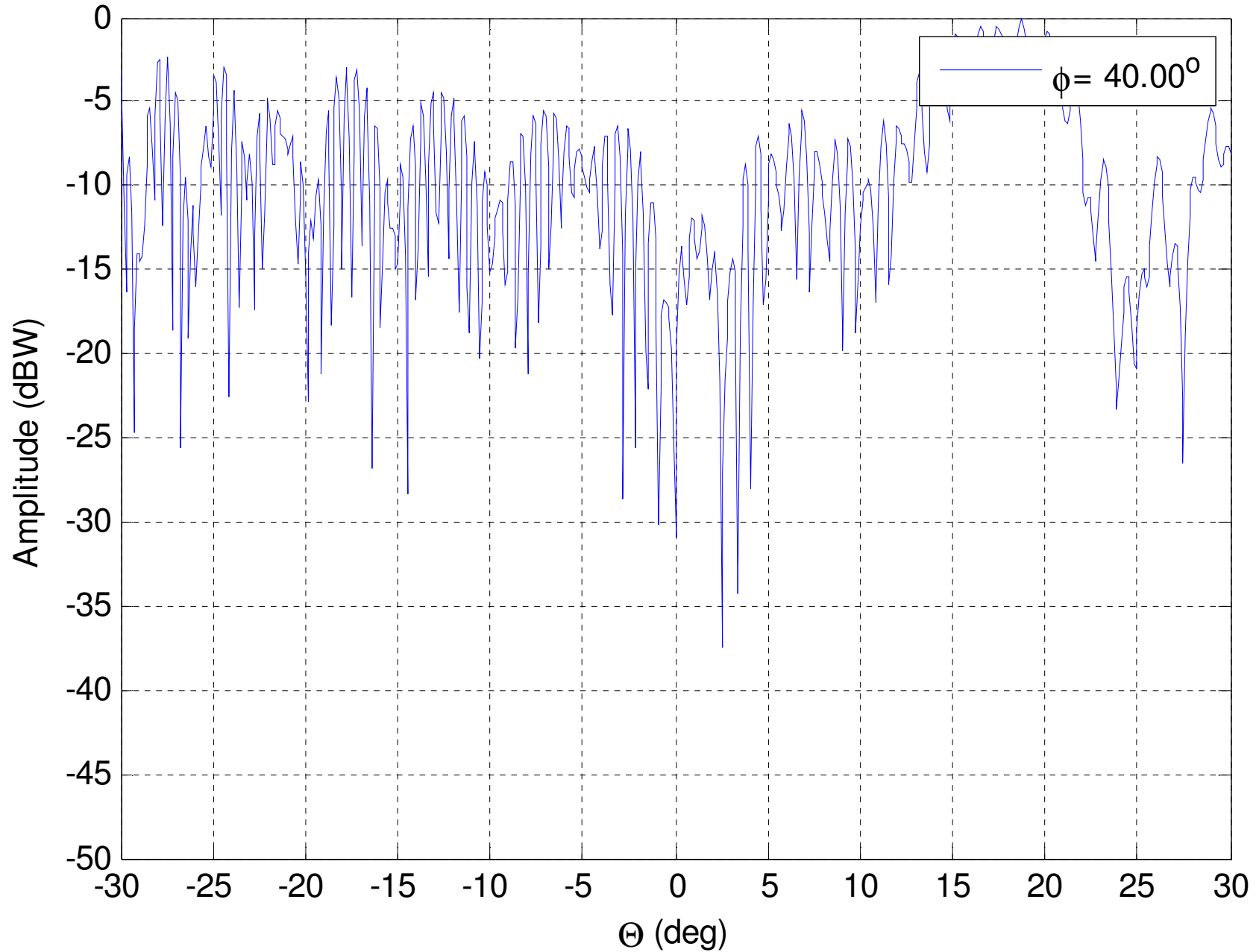
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -8.58 dBW, Date: 15-Dec-2011



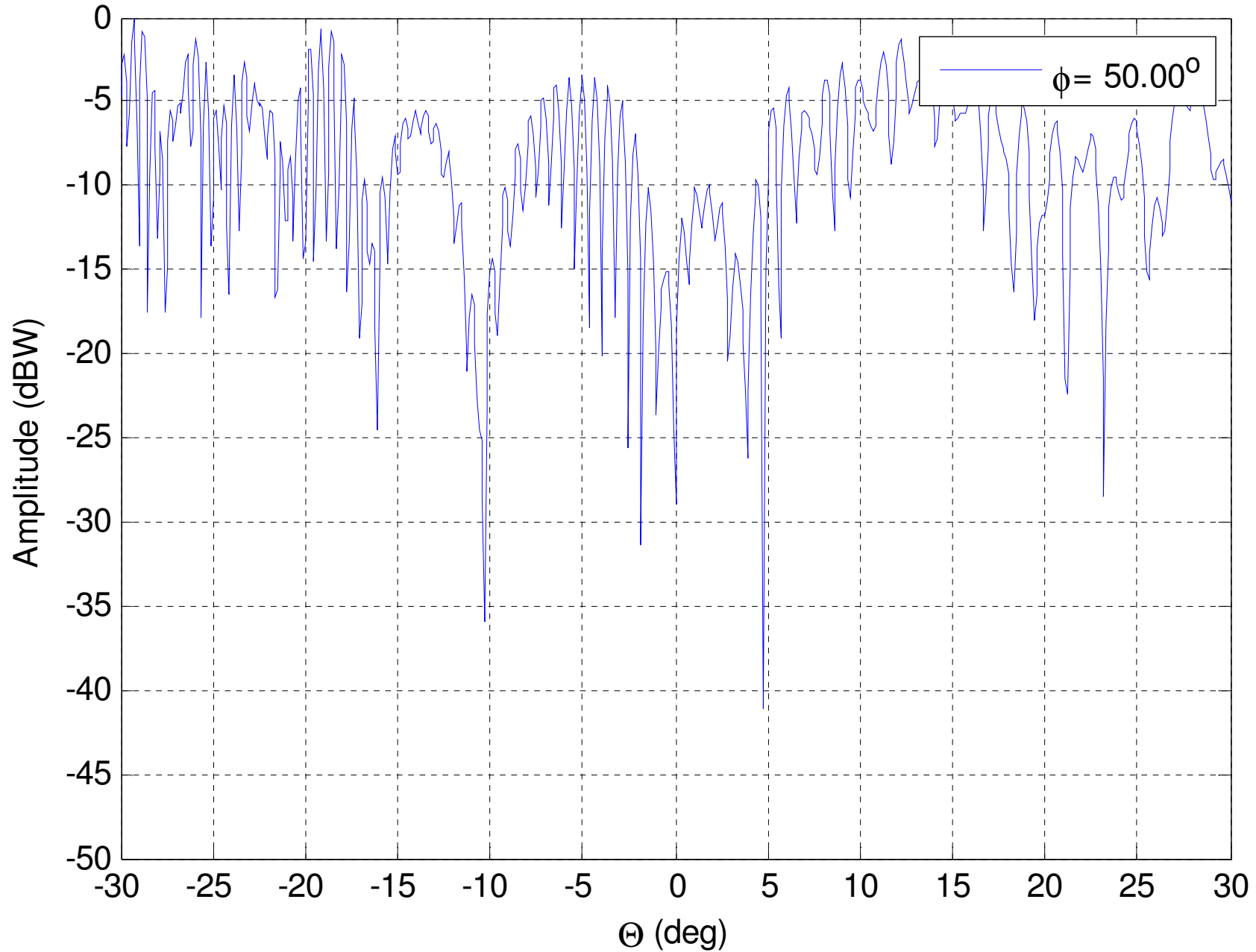
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -8.13 dBW, Date: 15-Dec-2011



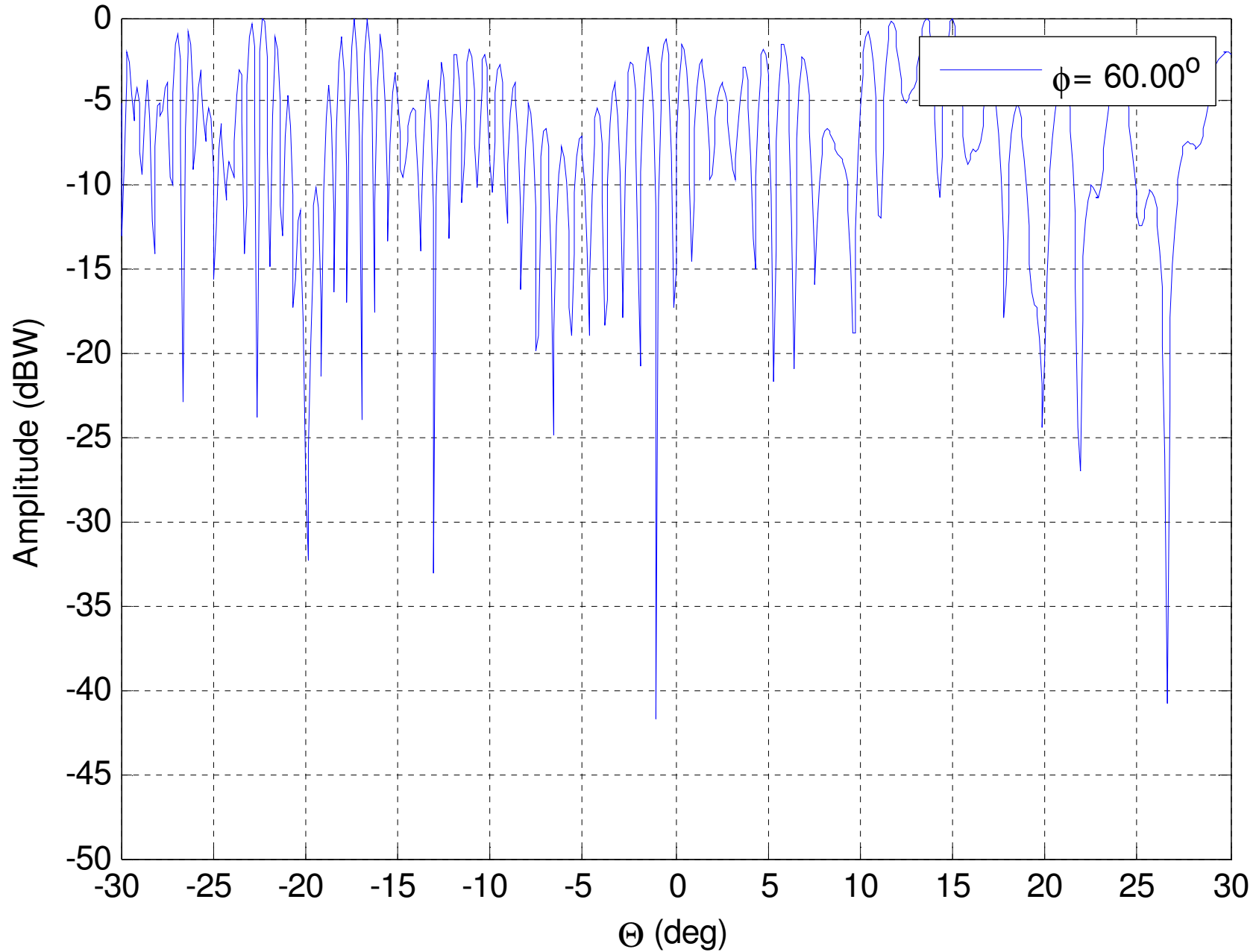
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -10.08 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -11.36 dBW, Date: 15-Dec-2011



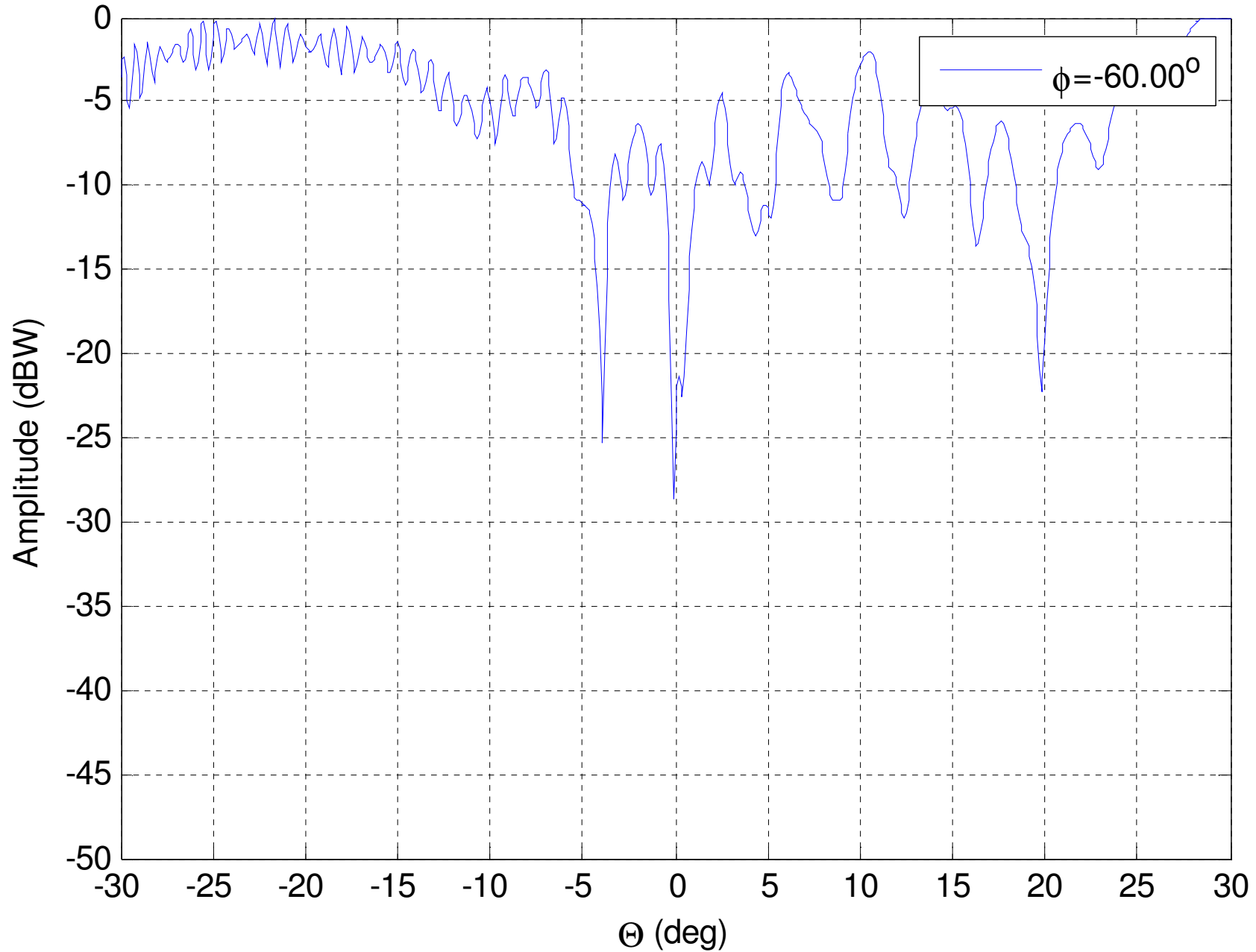
Spot Beam30, +X Axis Plots

- 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

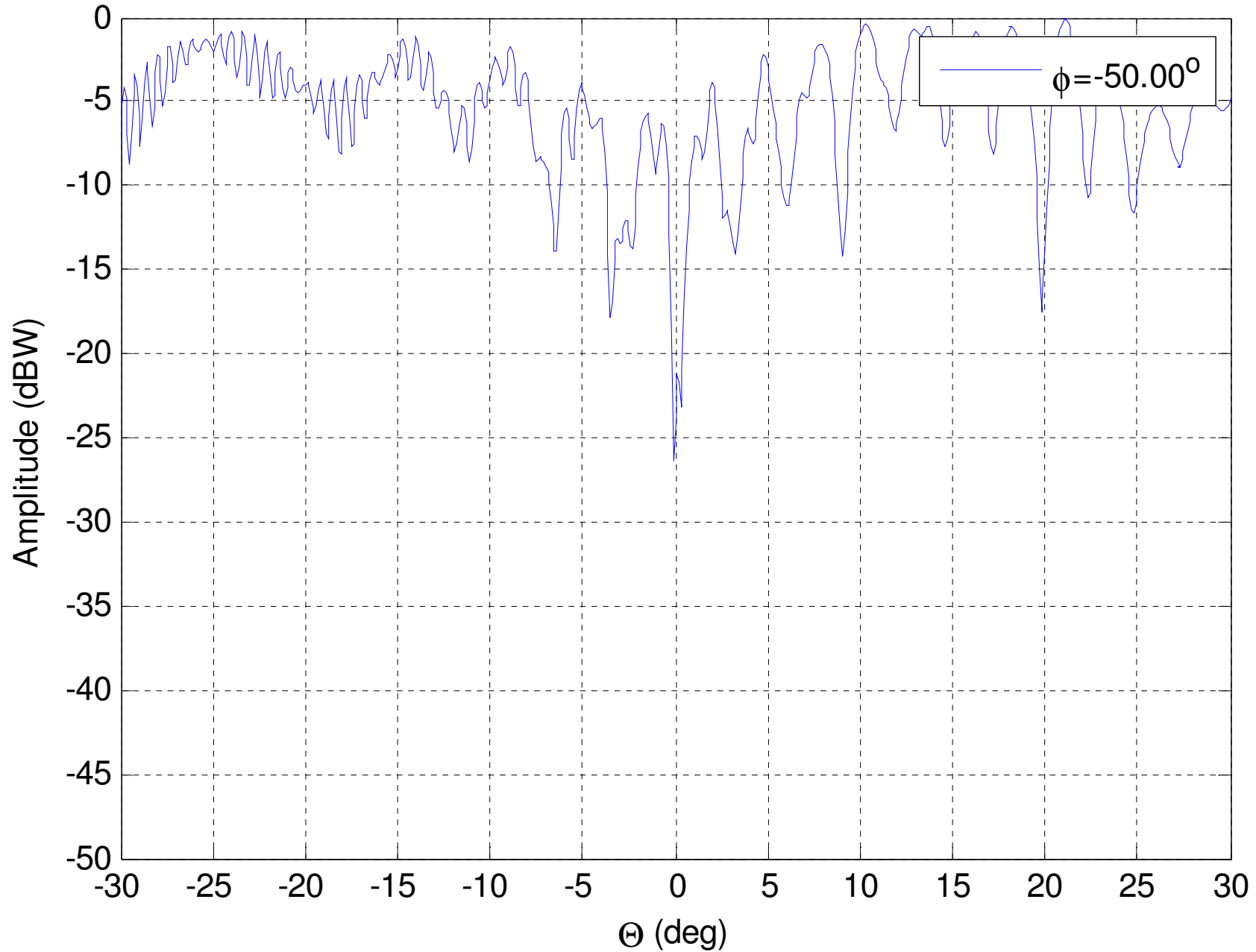
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.66 dBW, Date: 15-Dec-2011



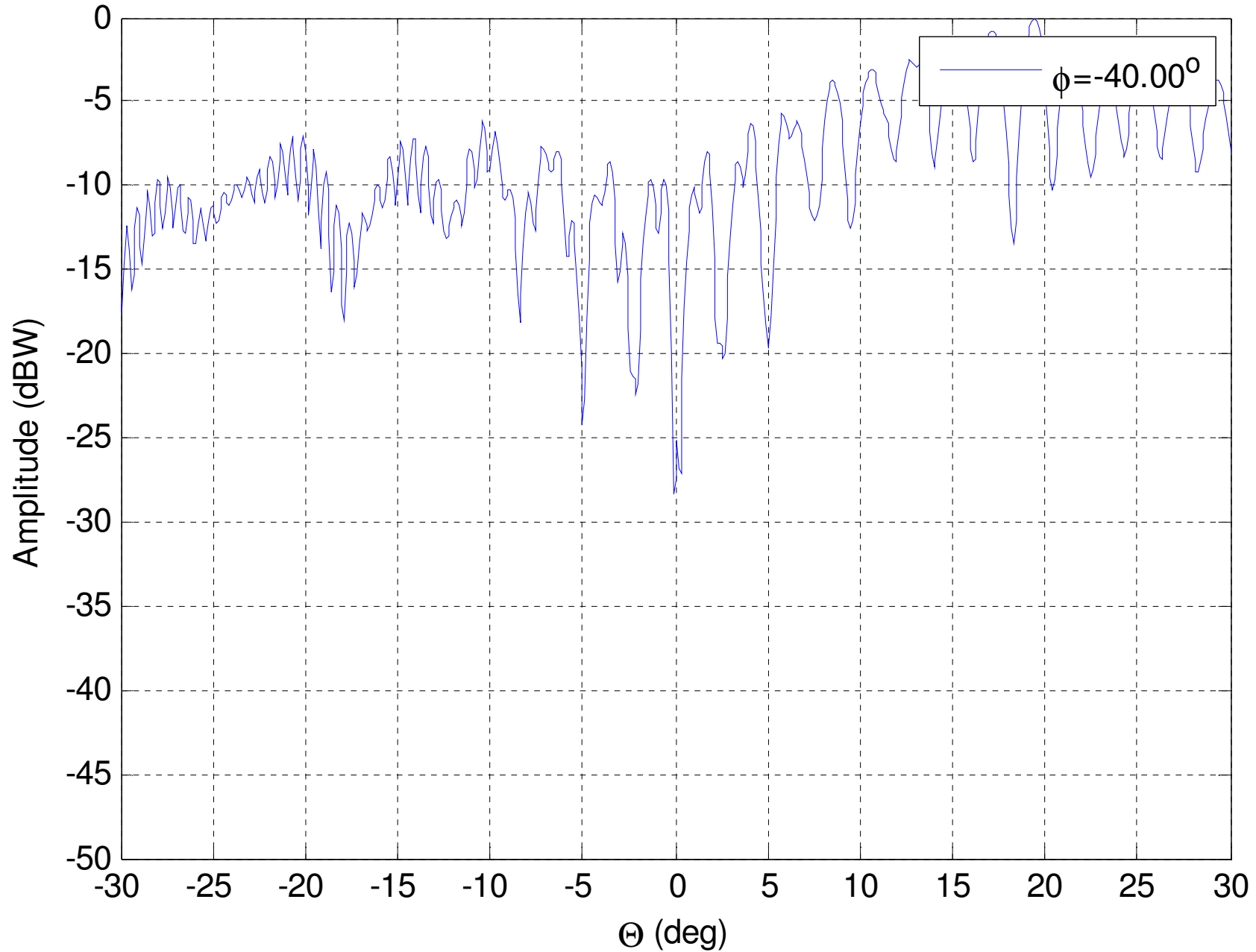
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -10.47 dBW, Date: 15-Dec-2011



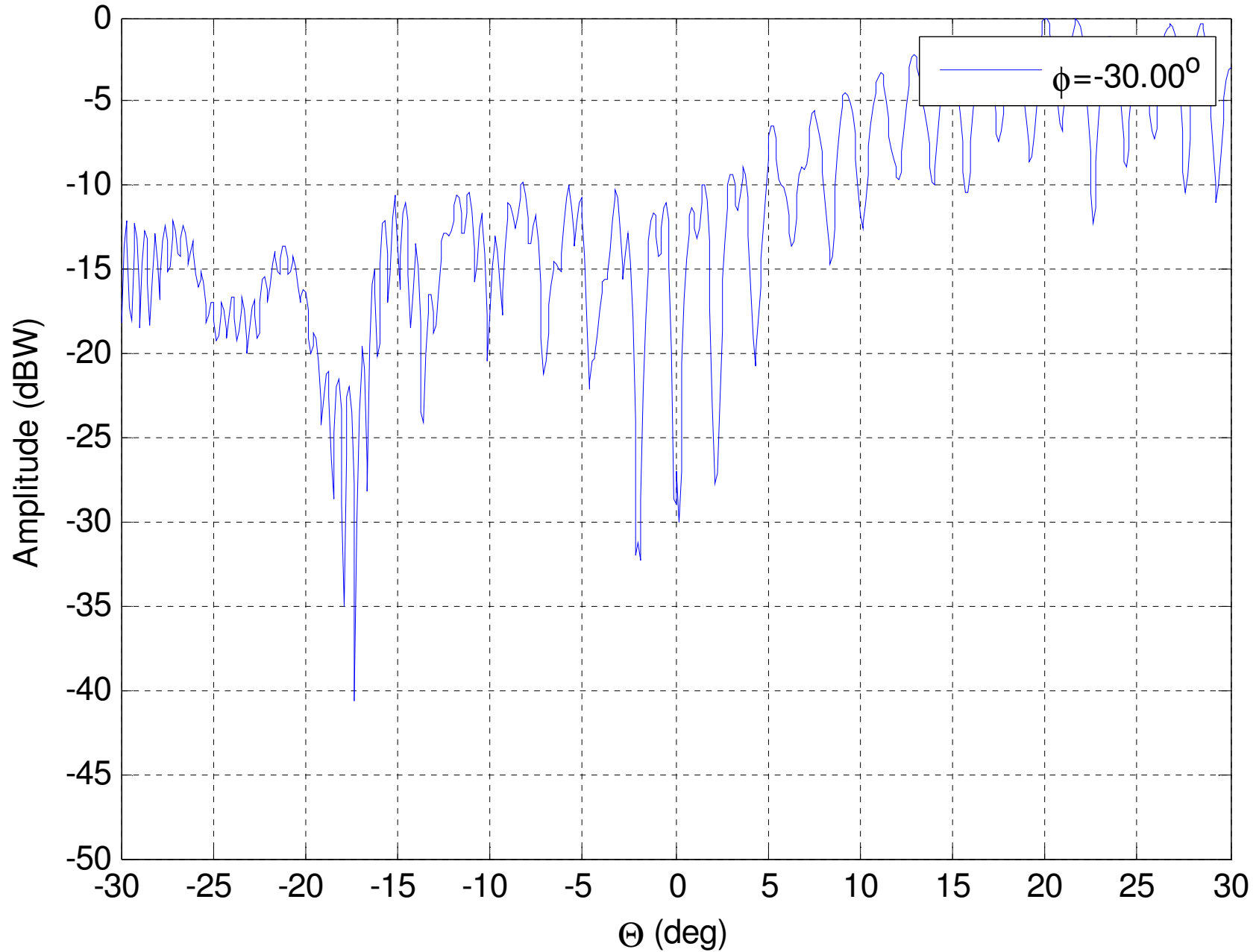
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -6.87 dBW, Date: 15-Dec-2011



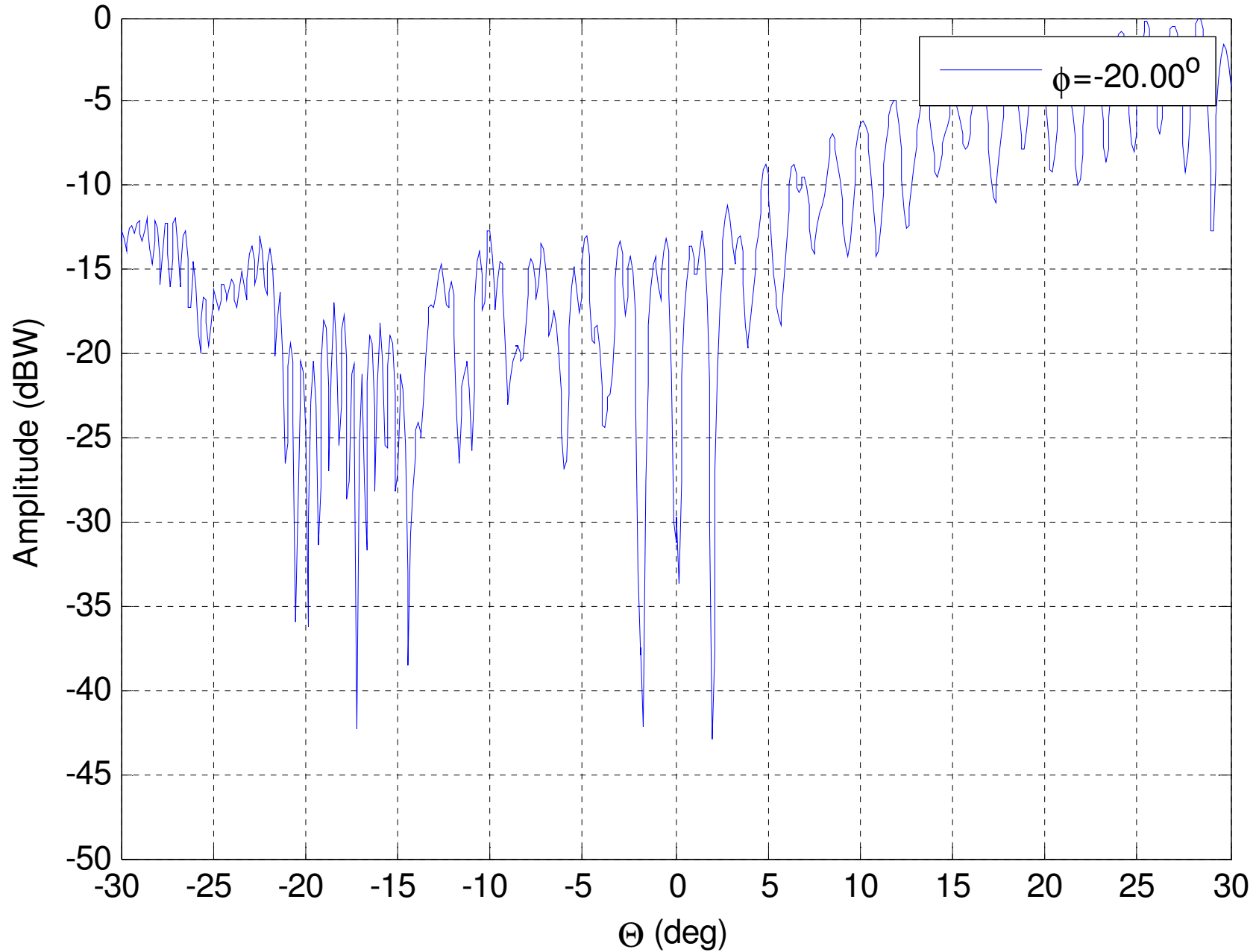
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -5.33 dBW, Date: 15-Dec-2011



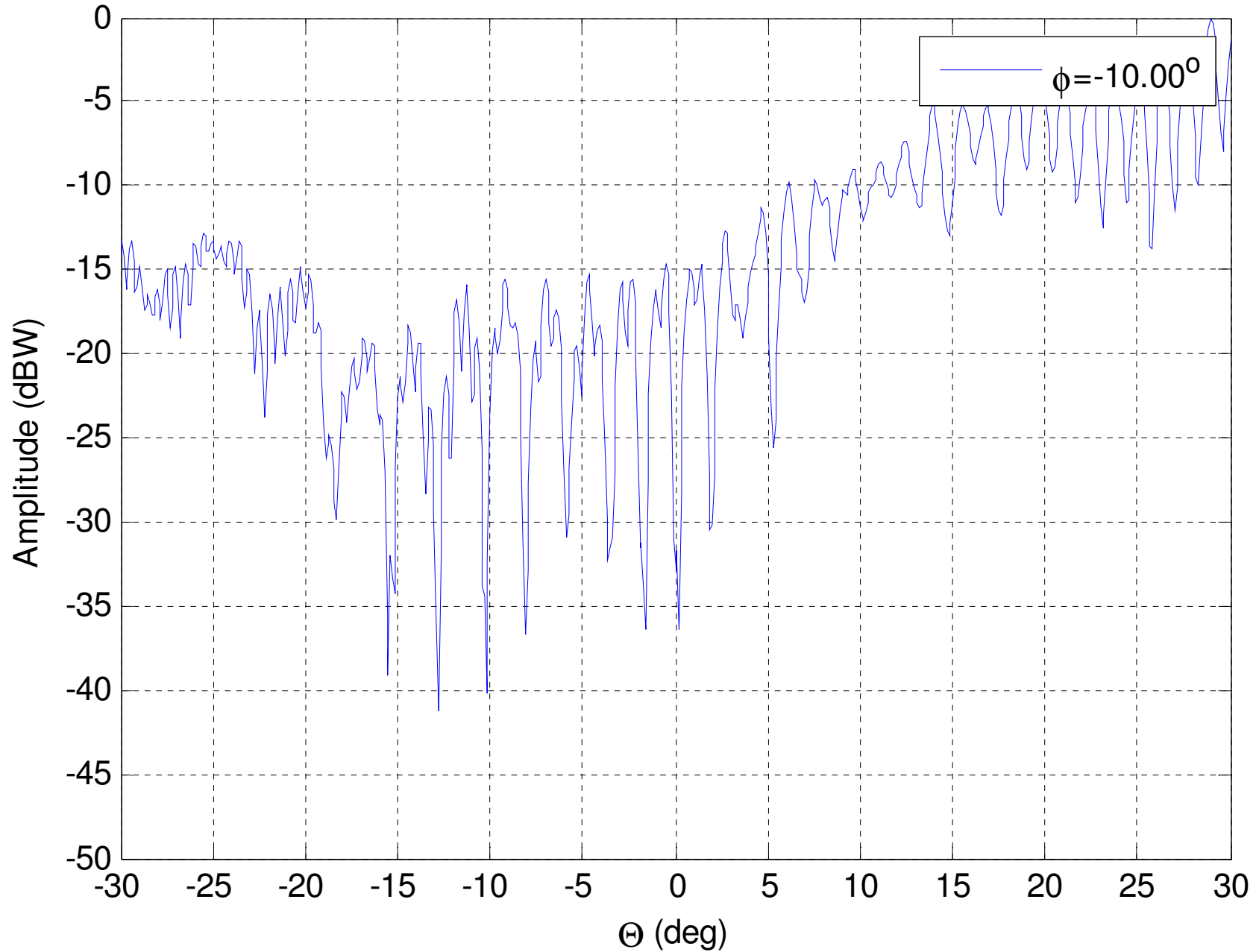
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -3.00 dBW, Date: 15-Dec-2011



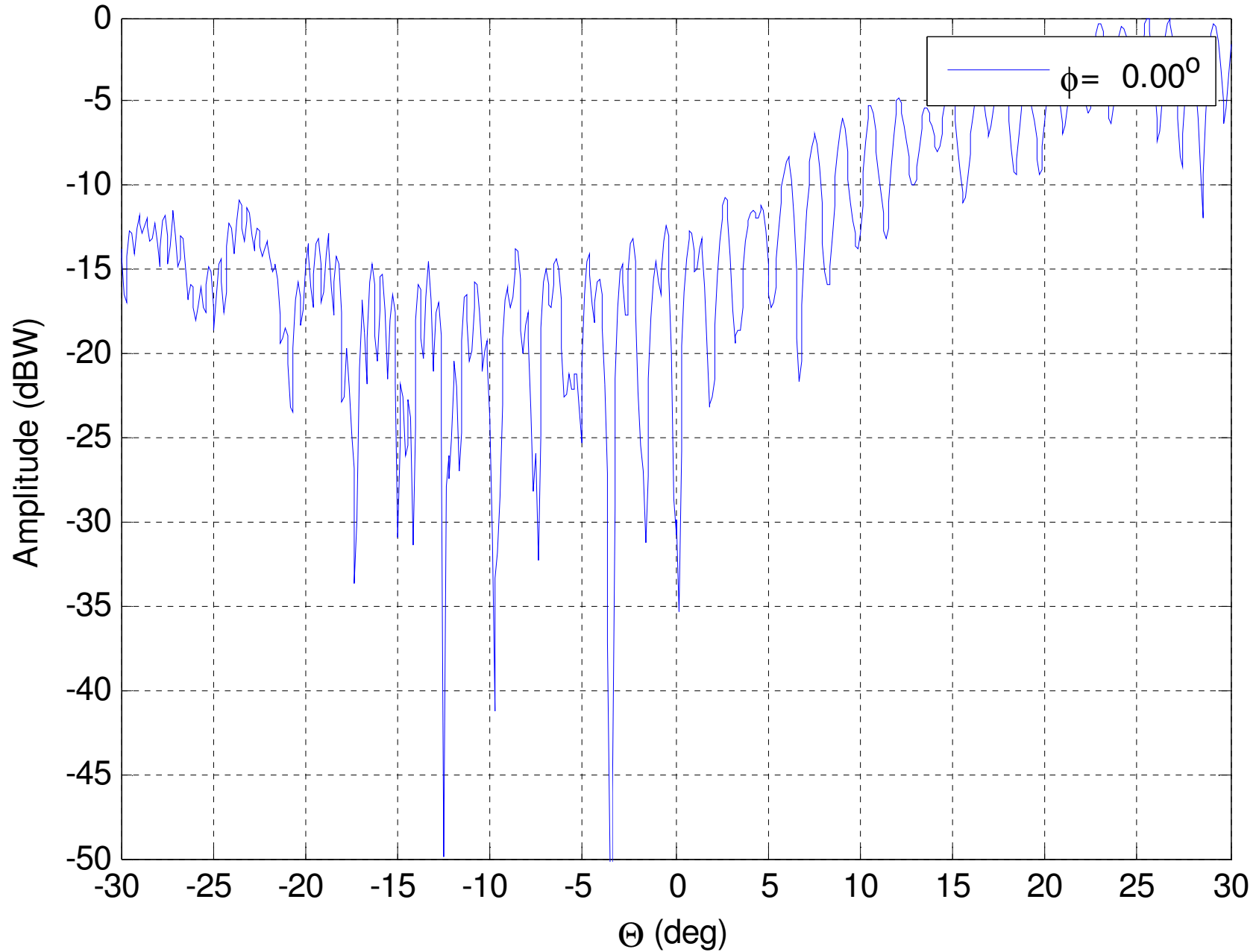
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -1.40 dBW, Date: 15-Dec-2011



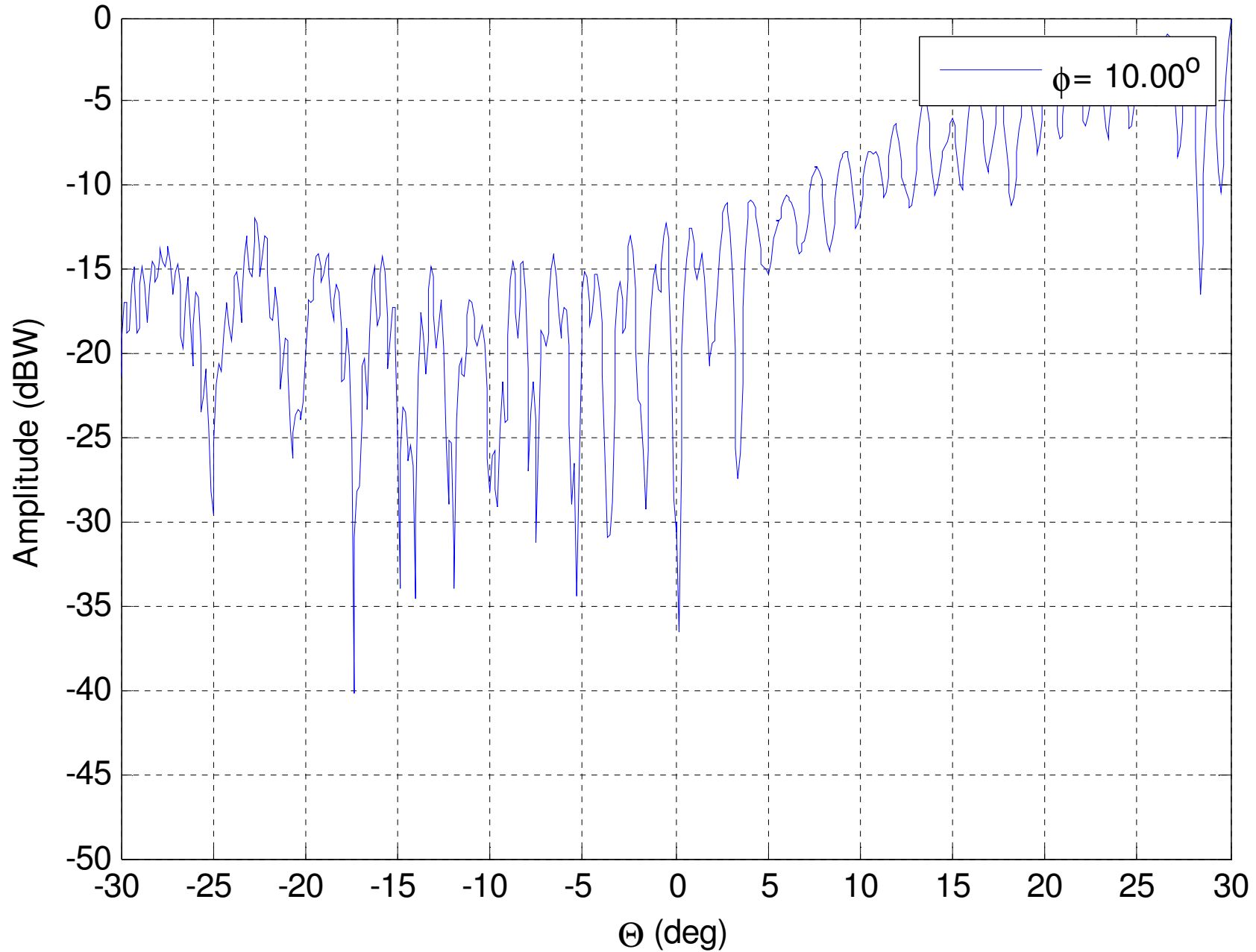
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -3.55 dBW, Date: 15-Dec-2011



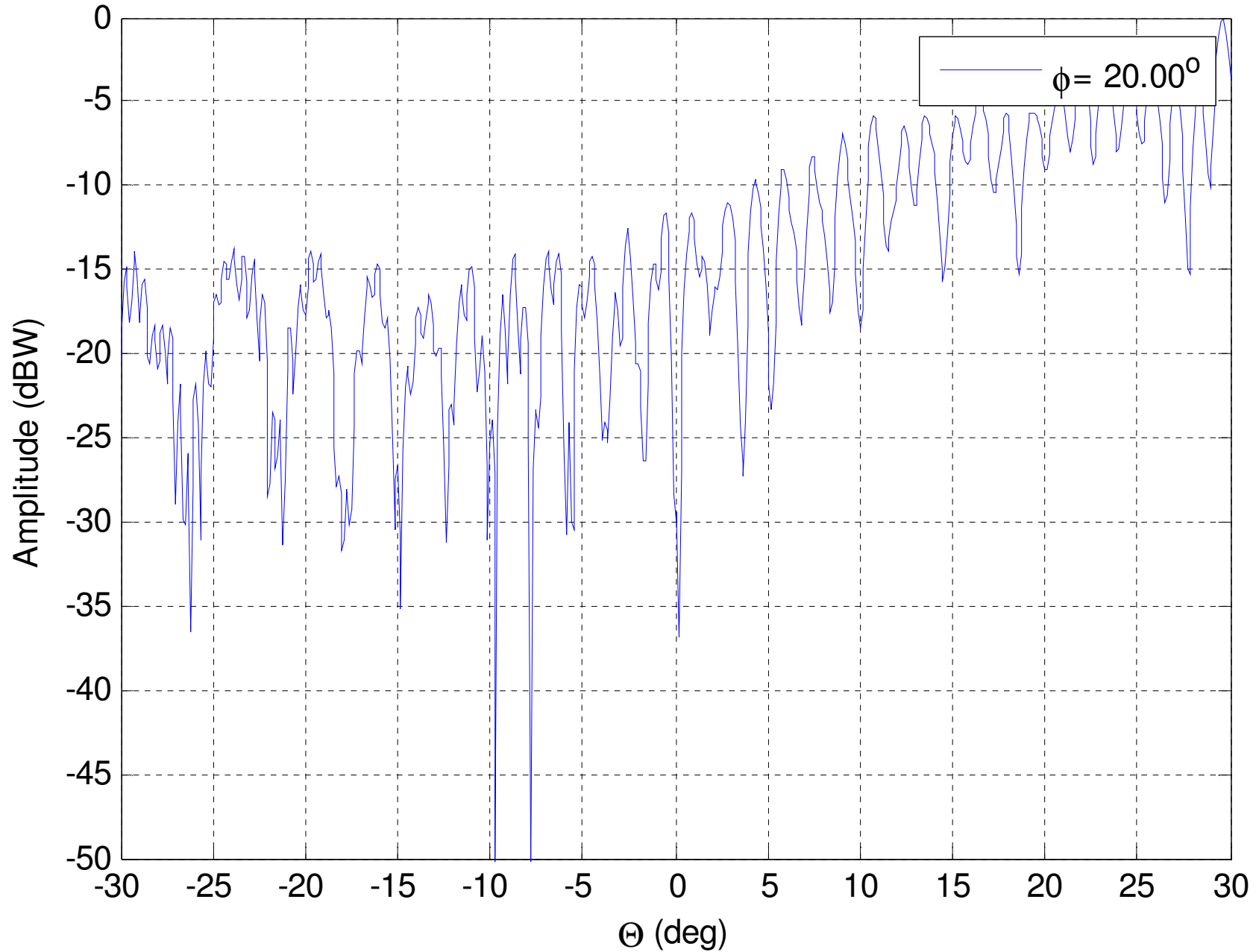
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -3.61 dBW, Date: 15-Dec-2011



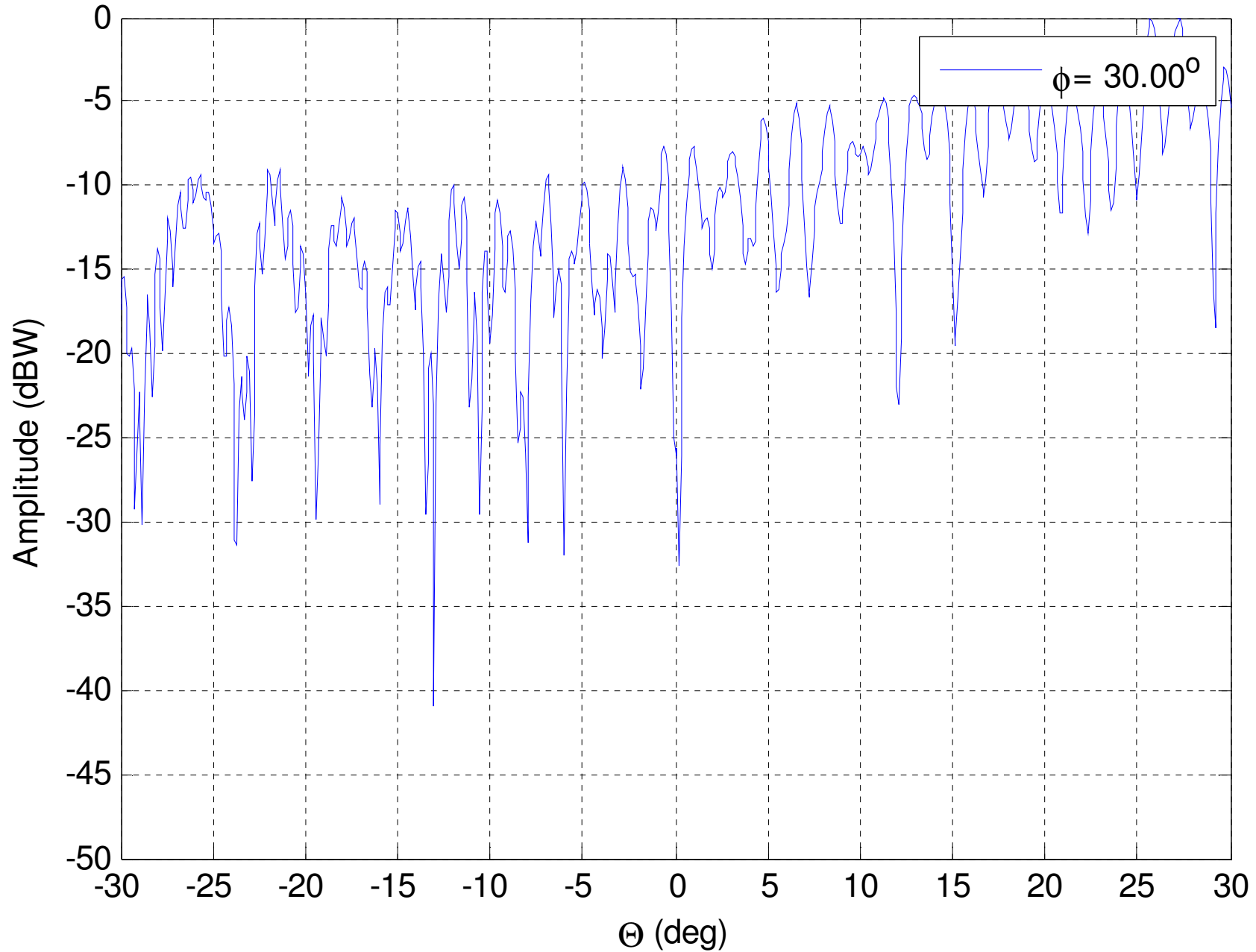
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -4.27 dBW, Date: 15-Dec-2011



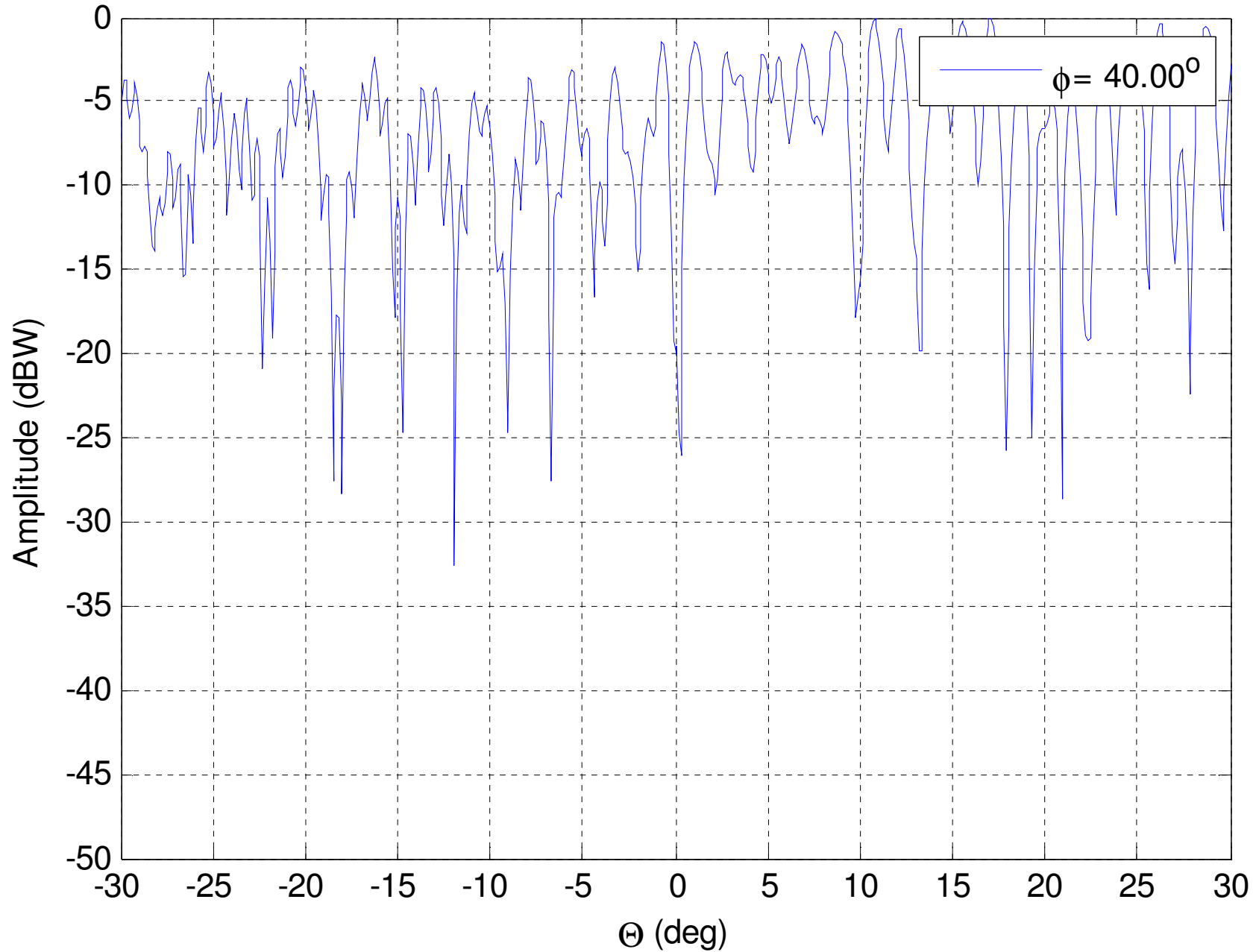
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -8.13 dBW, Date: 15-Dec-2011



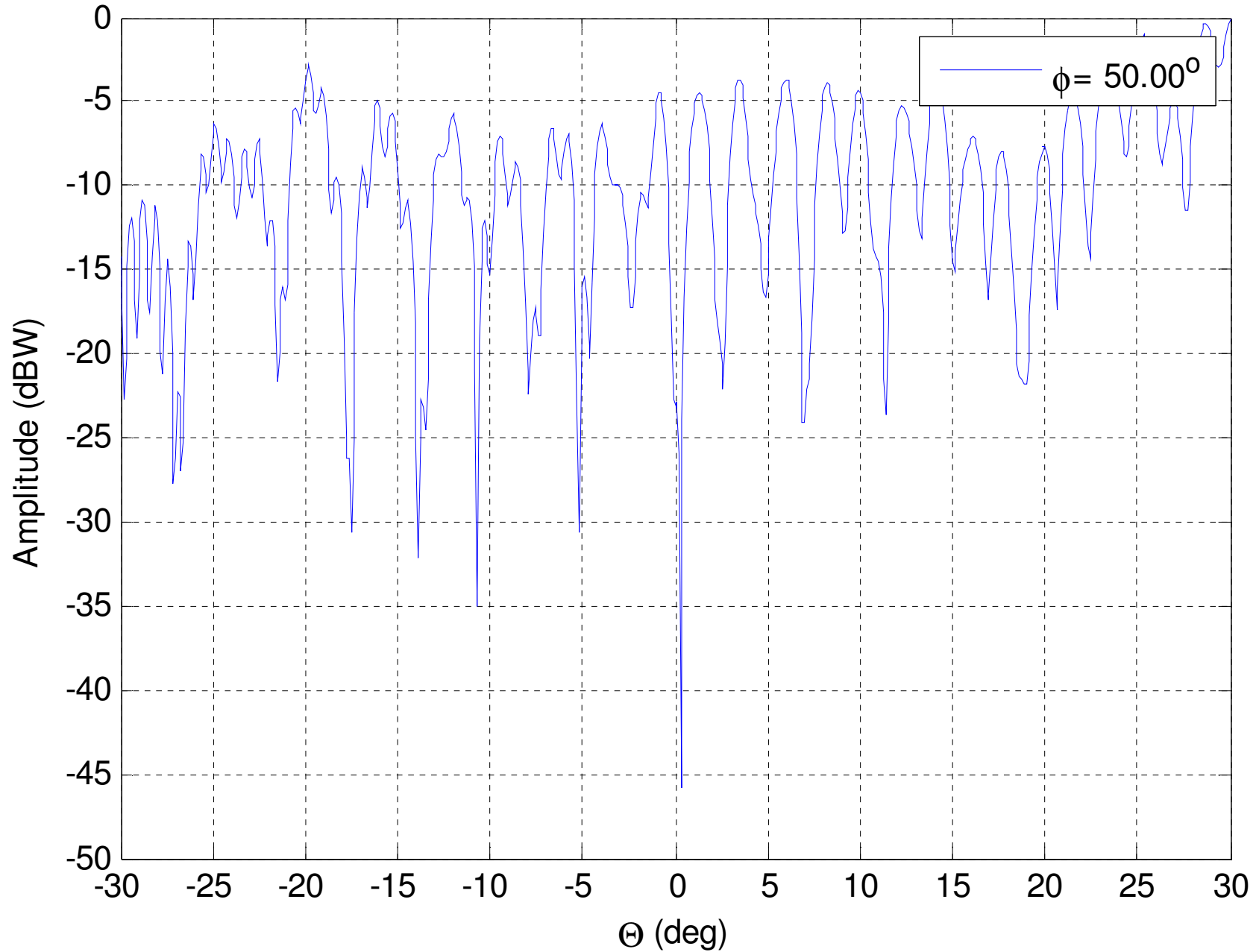
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -14.29 dBW, Date: 15-Dec-2011



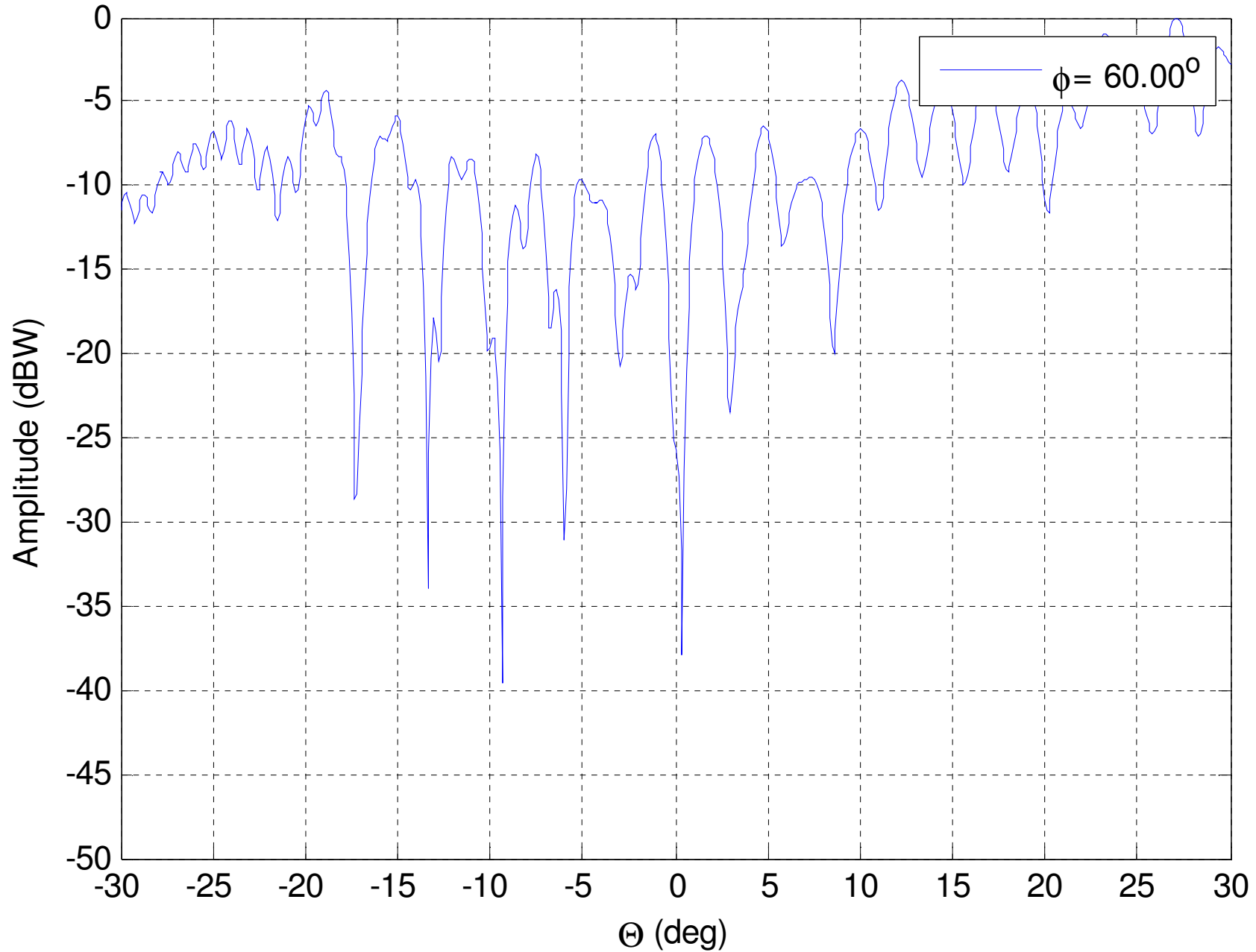
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -11.13 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

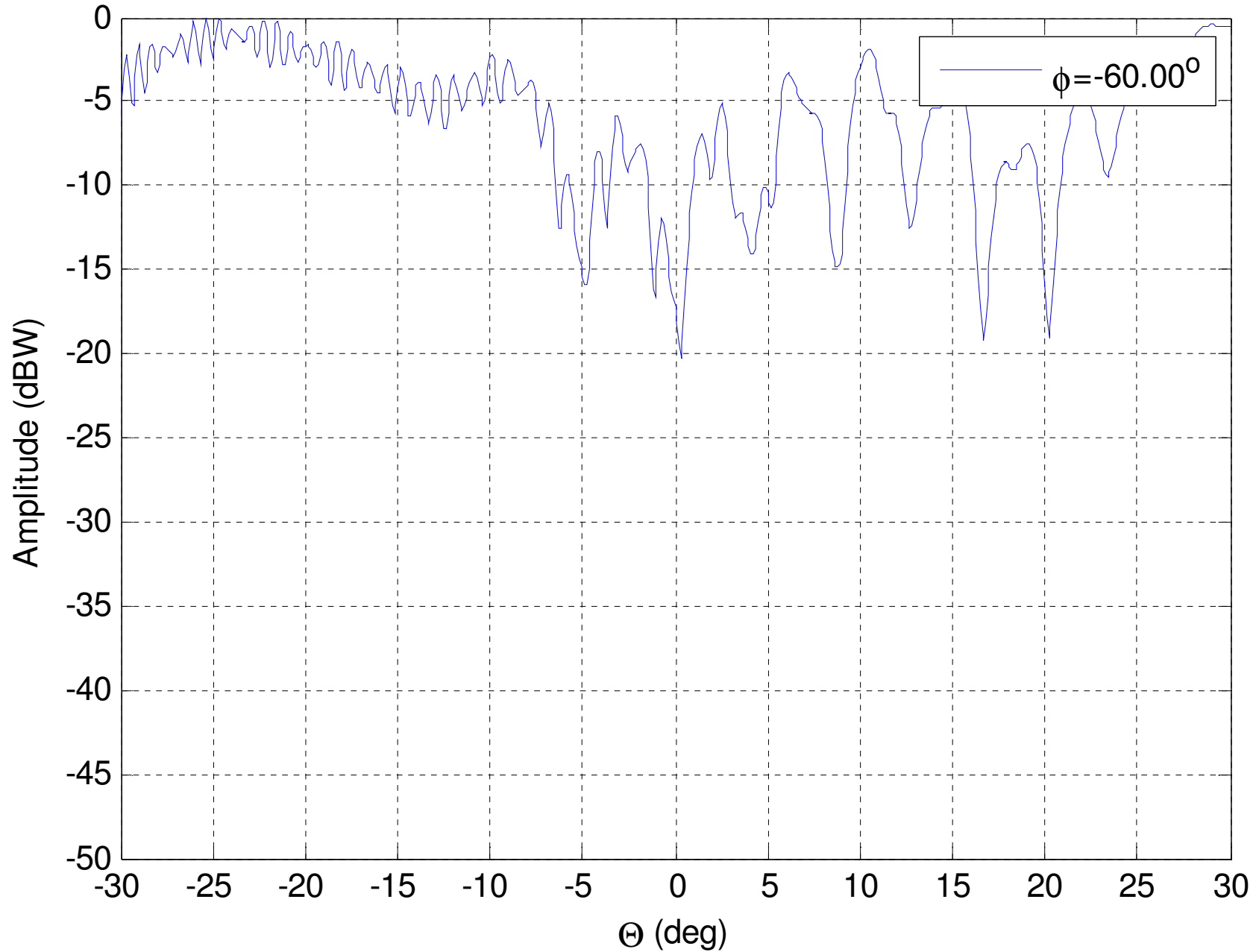
Input file: tx-17.3-rhcp-60.cut, Peak: -8.56 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

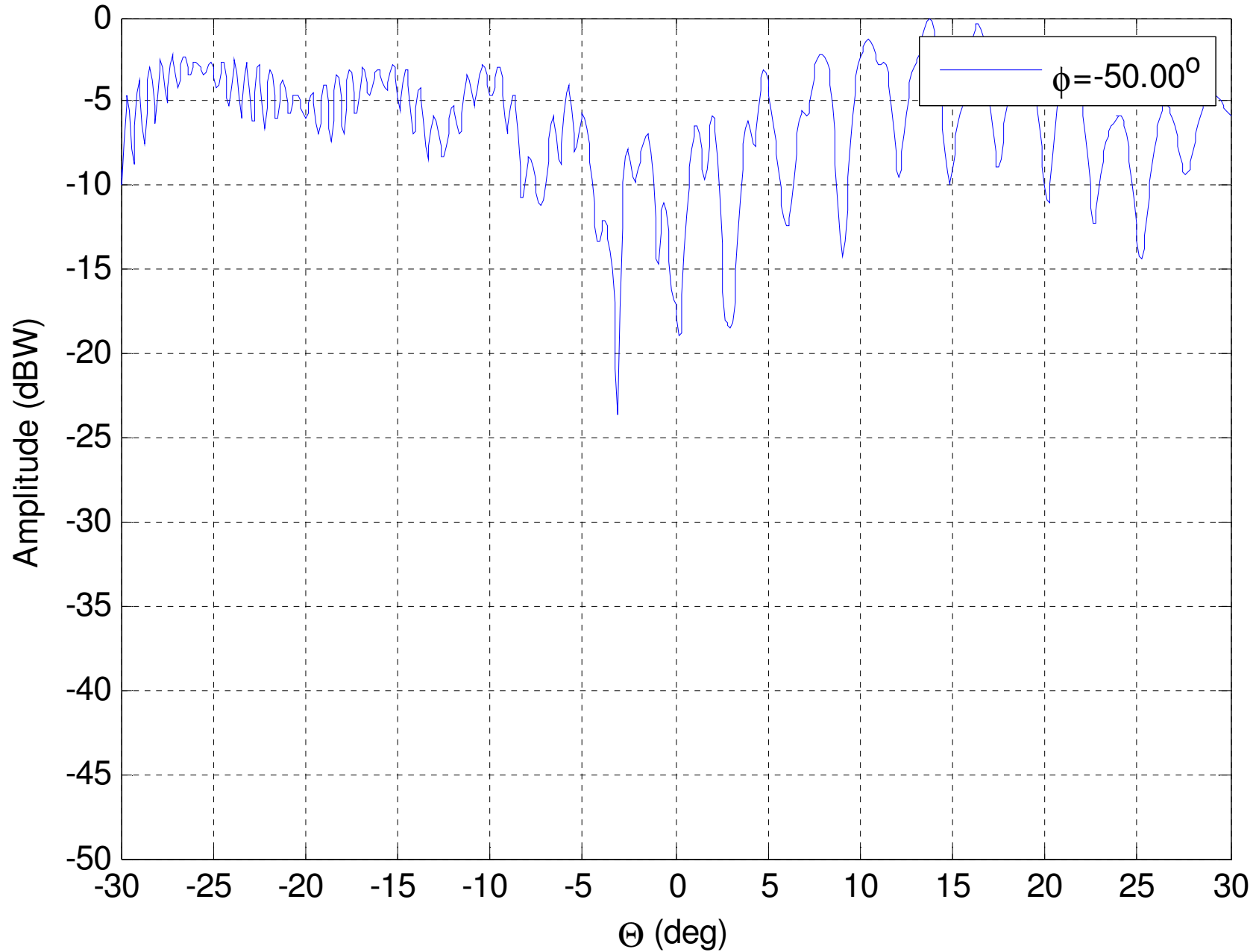
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.49 dBW, Date: 15-Dec-2011



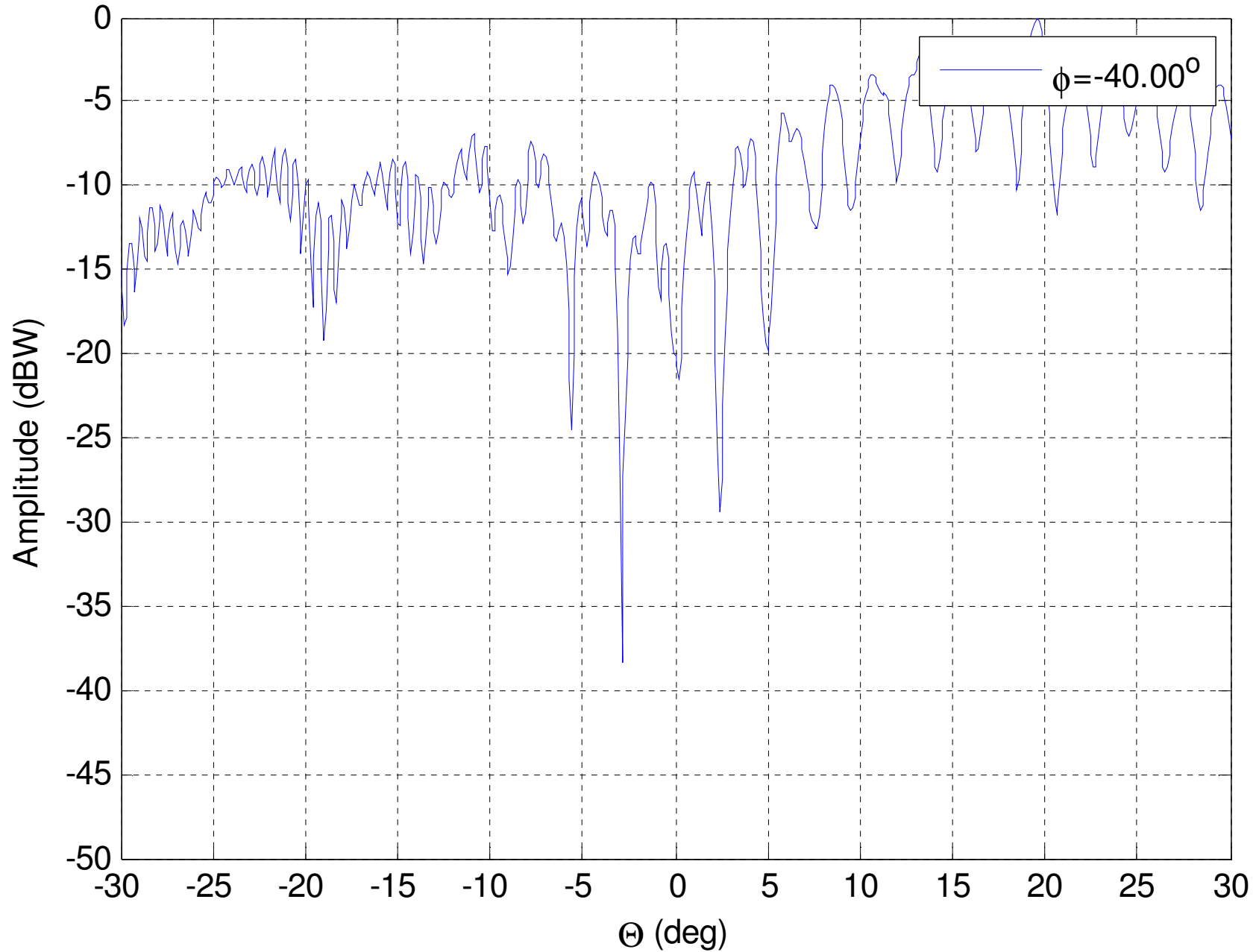
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -9.59 dBW, Date: 15-Dec-2011



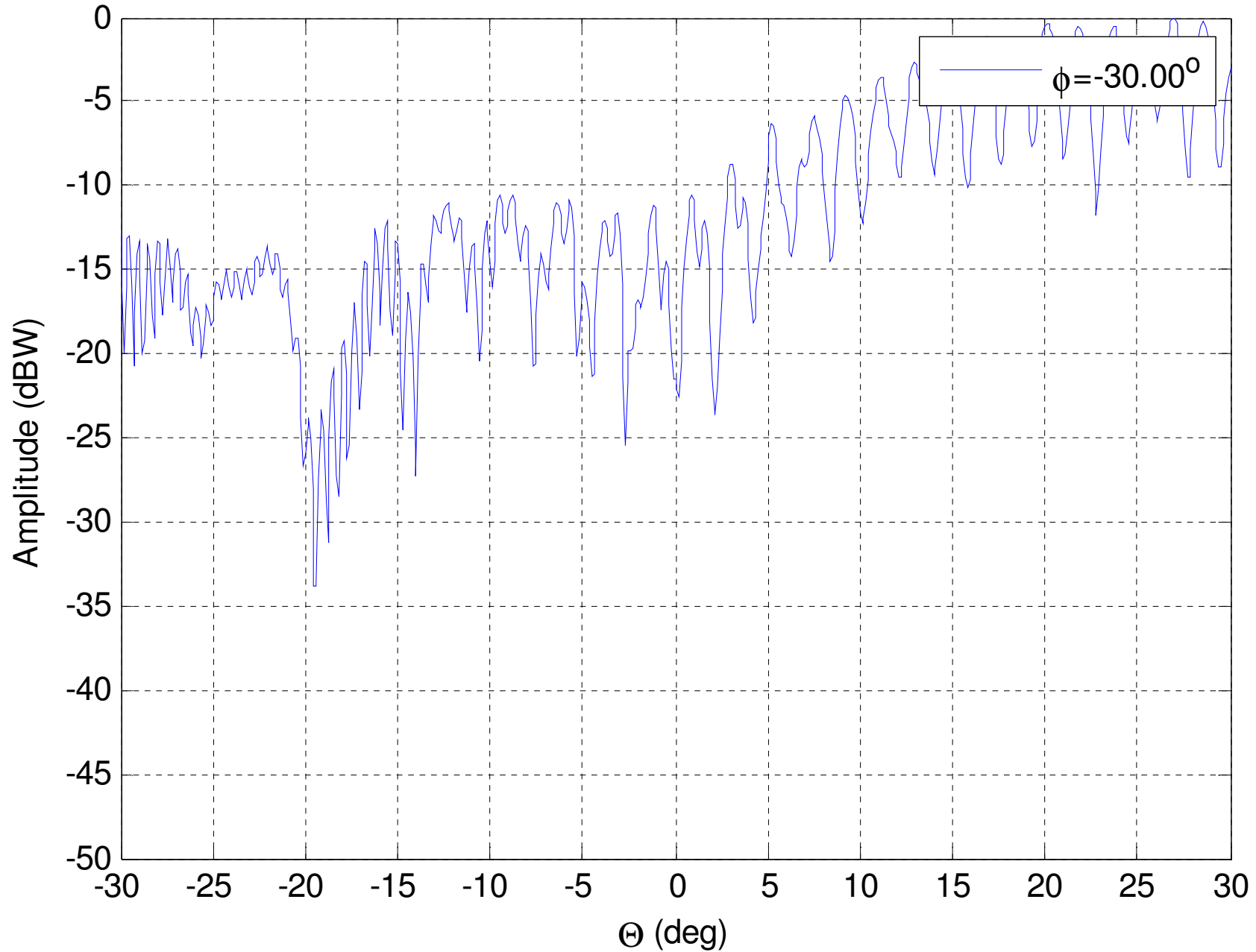
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -6.63 dBW, Date: 15-Dec-2011



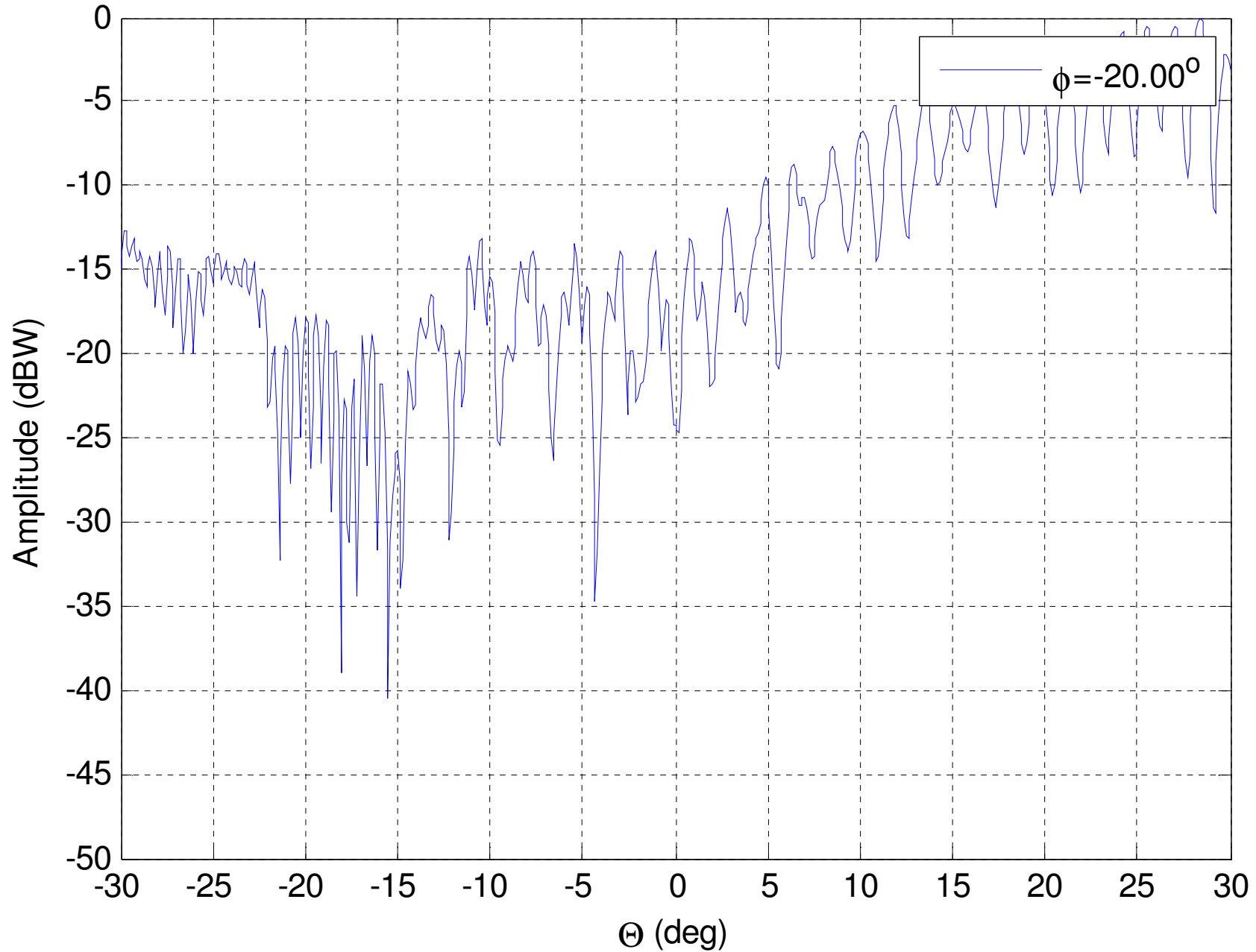
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -5.17 dBW, Date: 15-Dec-2011



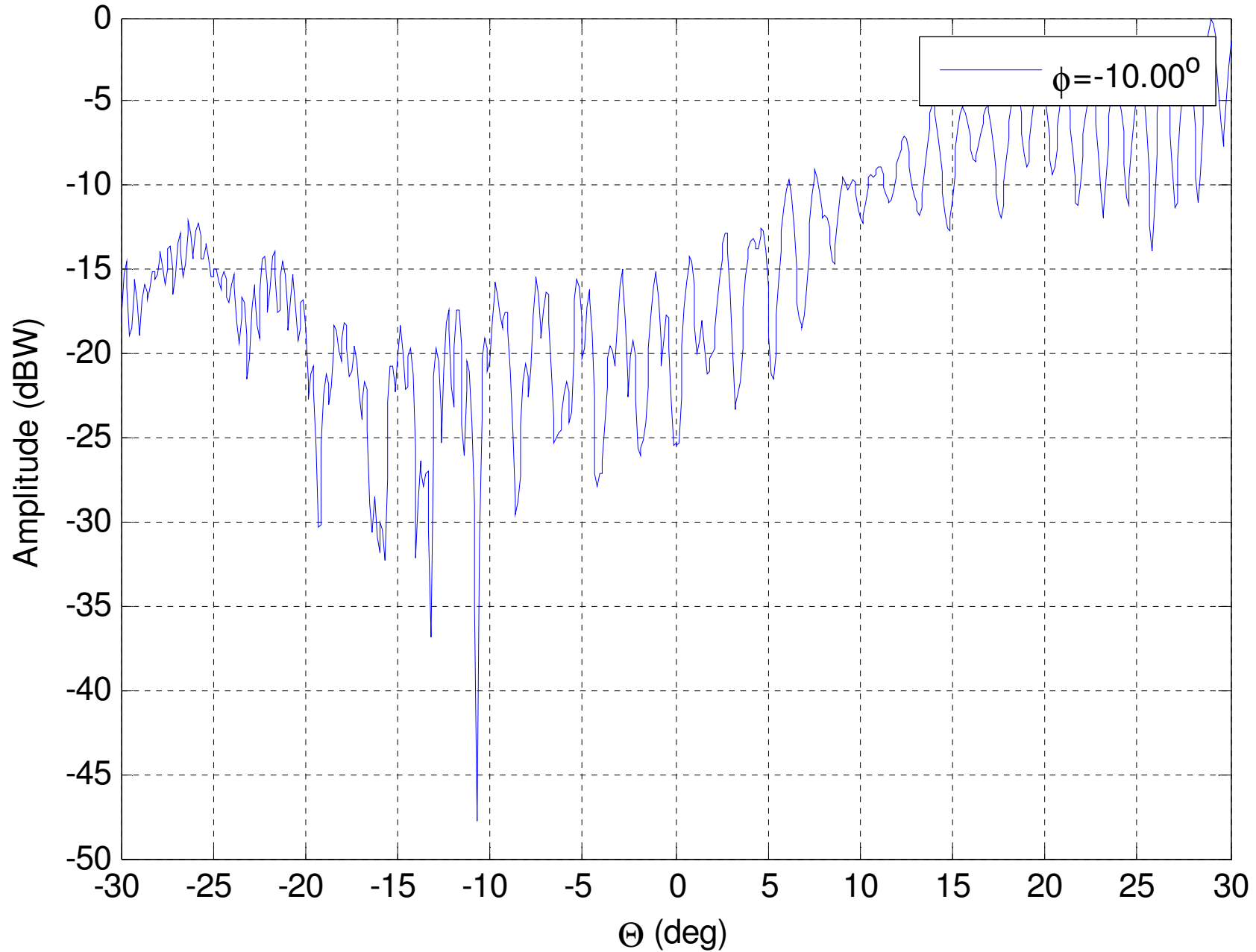
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -2.55 dBW, Date: 15-Dec-2011



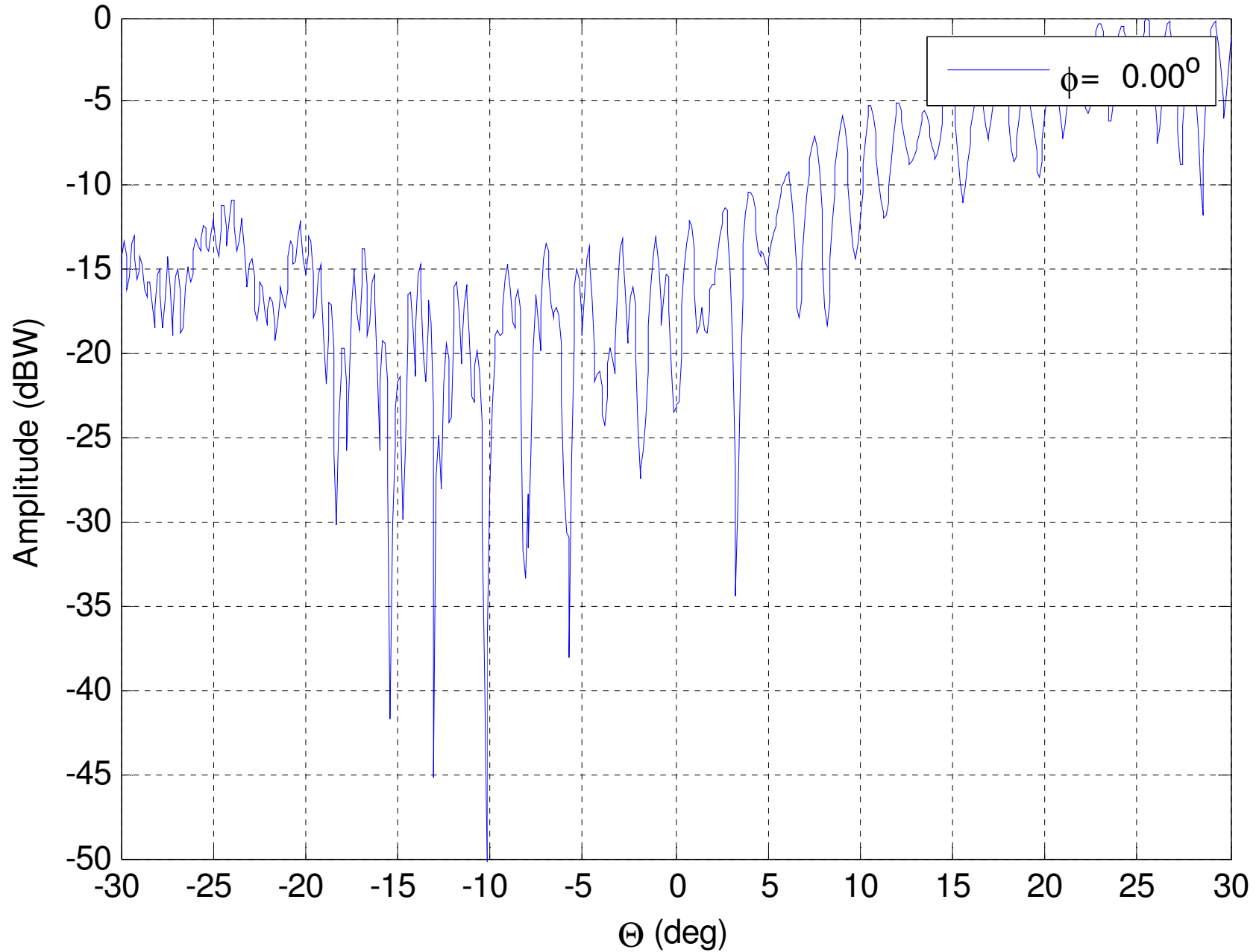
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -1.43 dBW, Date: 15-Dec-2011



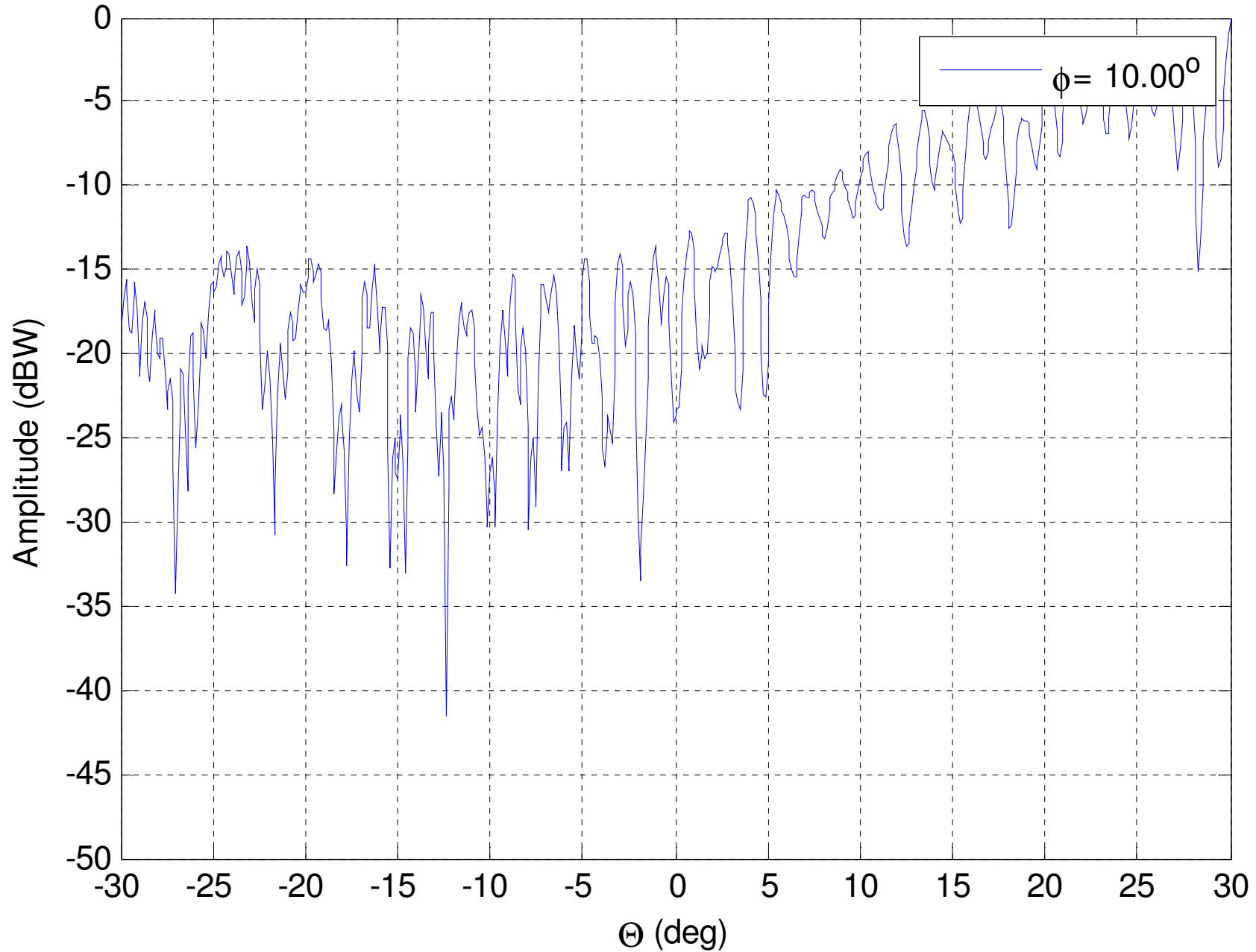
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -3.61 dBW, Date: 15-Dec-2011



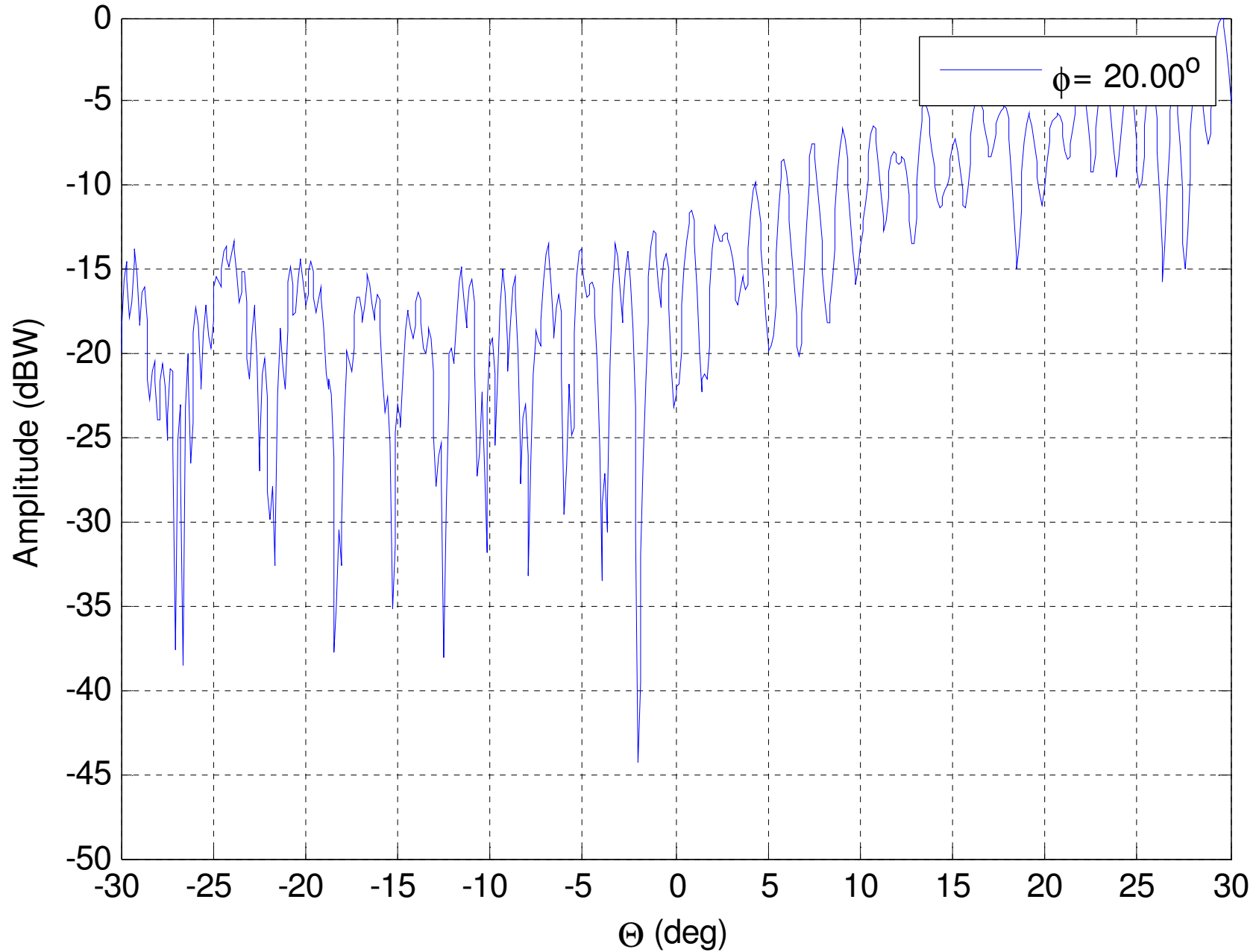
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -3.09 dBW, Date: 15-Dec-2011



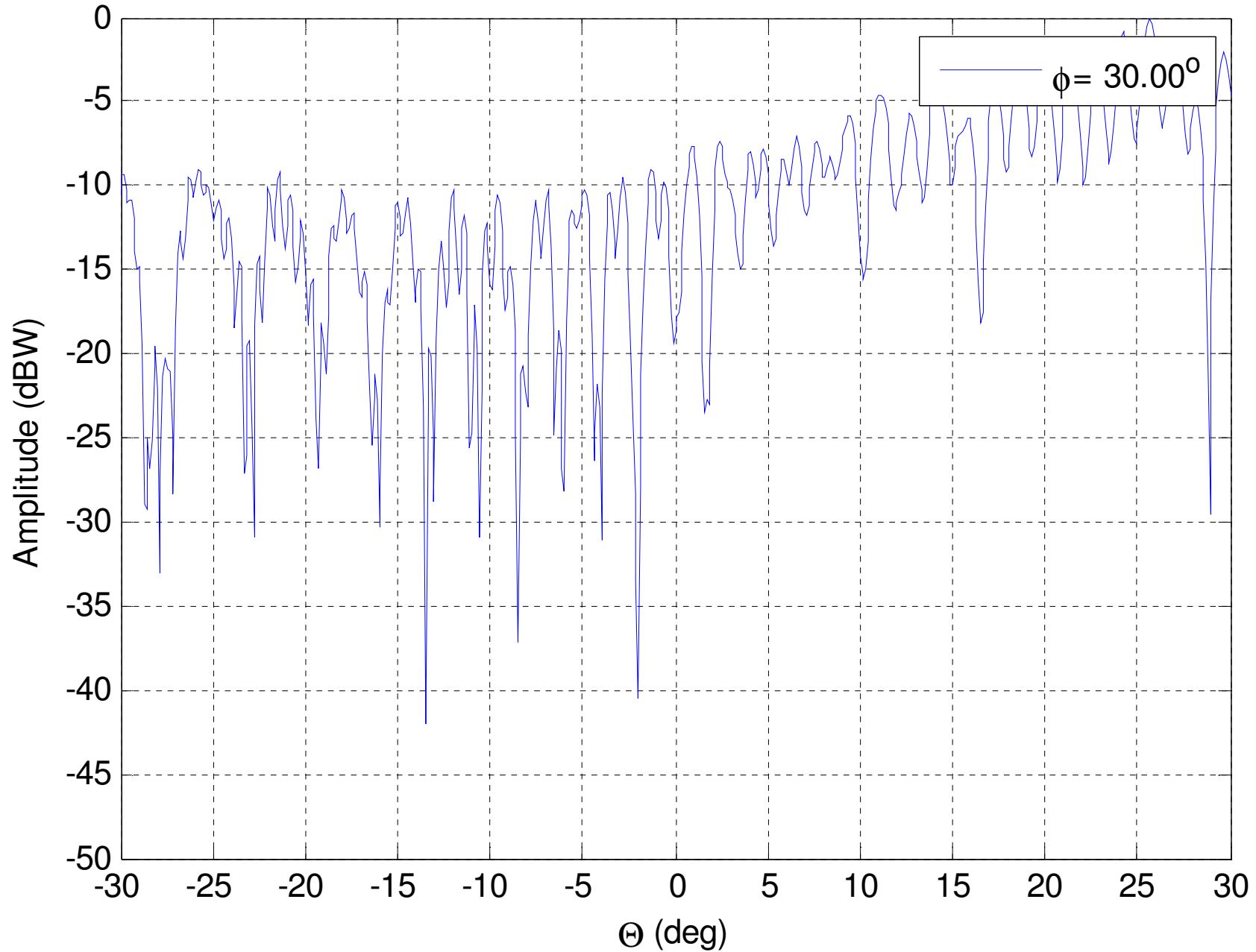
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -4.28 dBW, Date: 15-Dec-2011



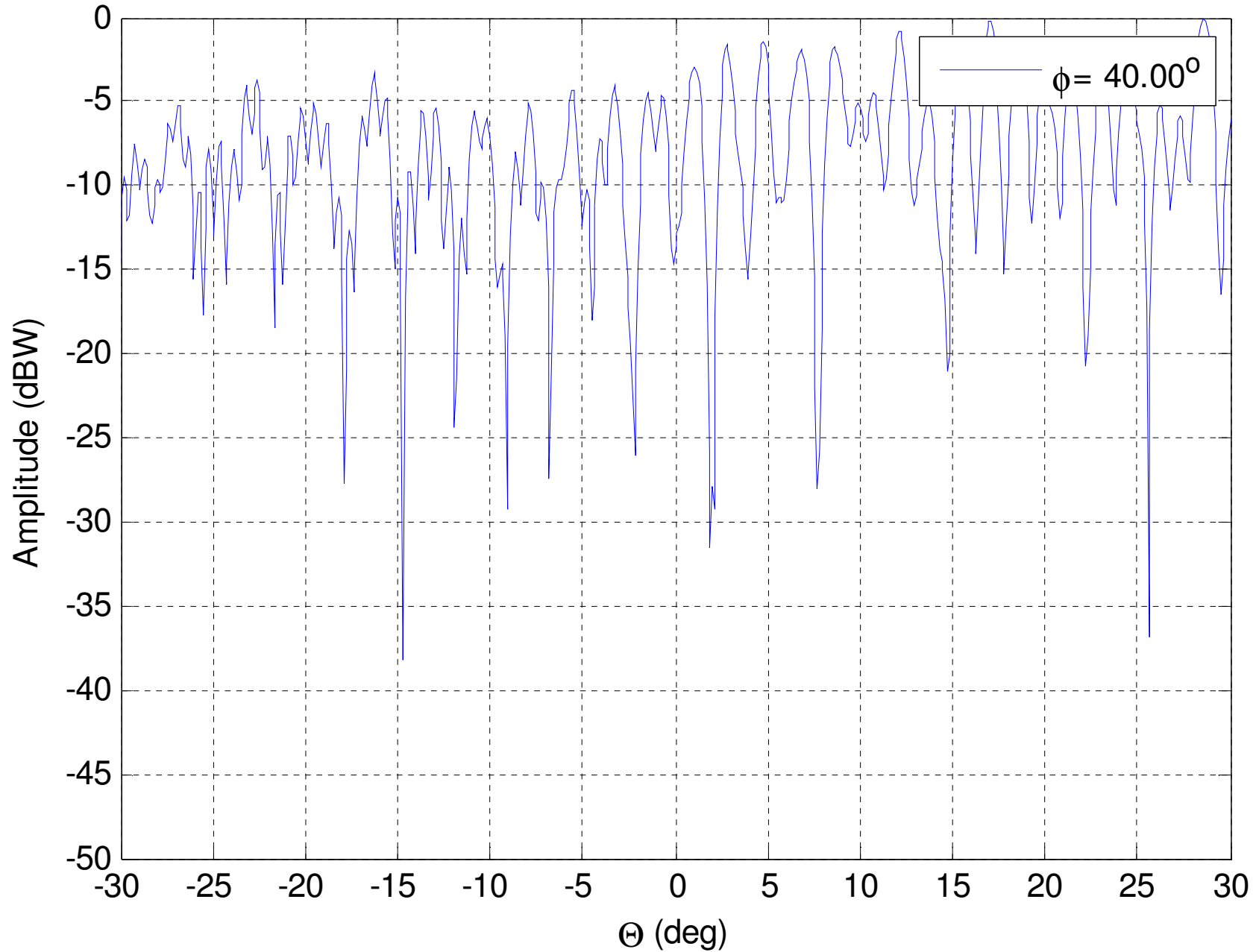
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -8.20 dBW, Date: 15-Dec-2011



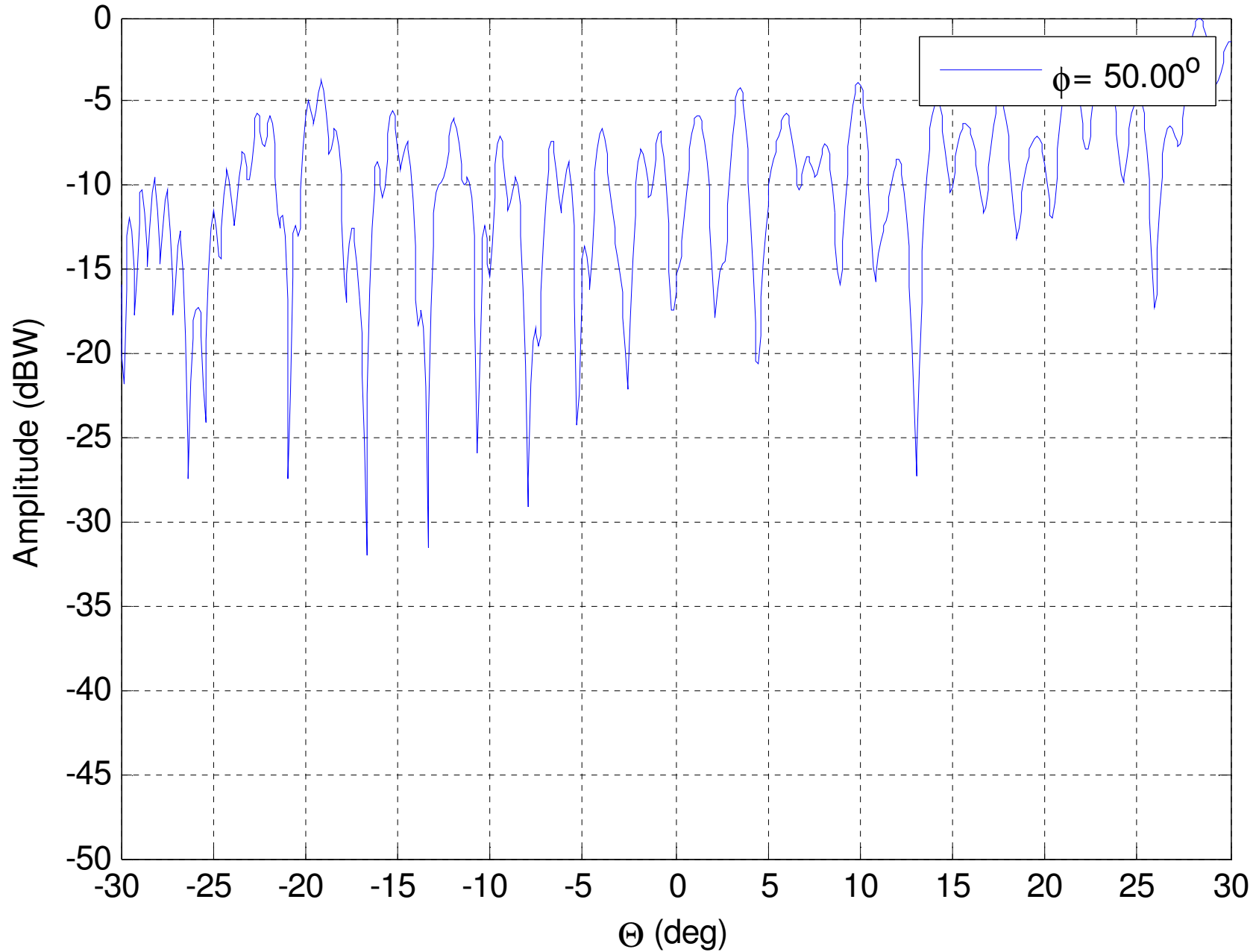
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -13.10 dBW, Date: 15-Dec-2011



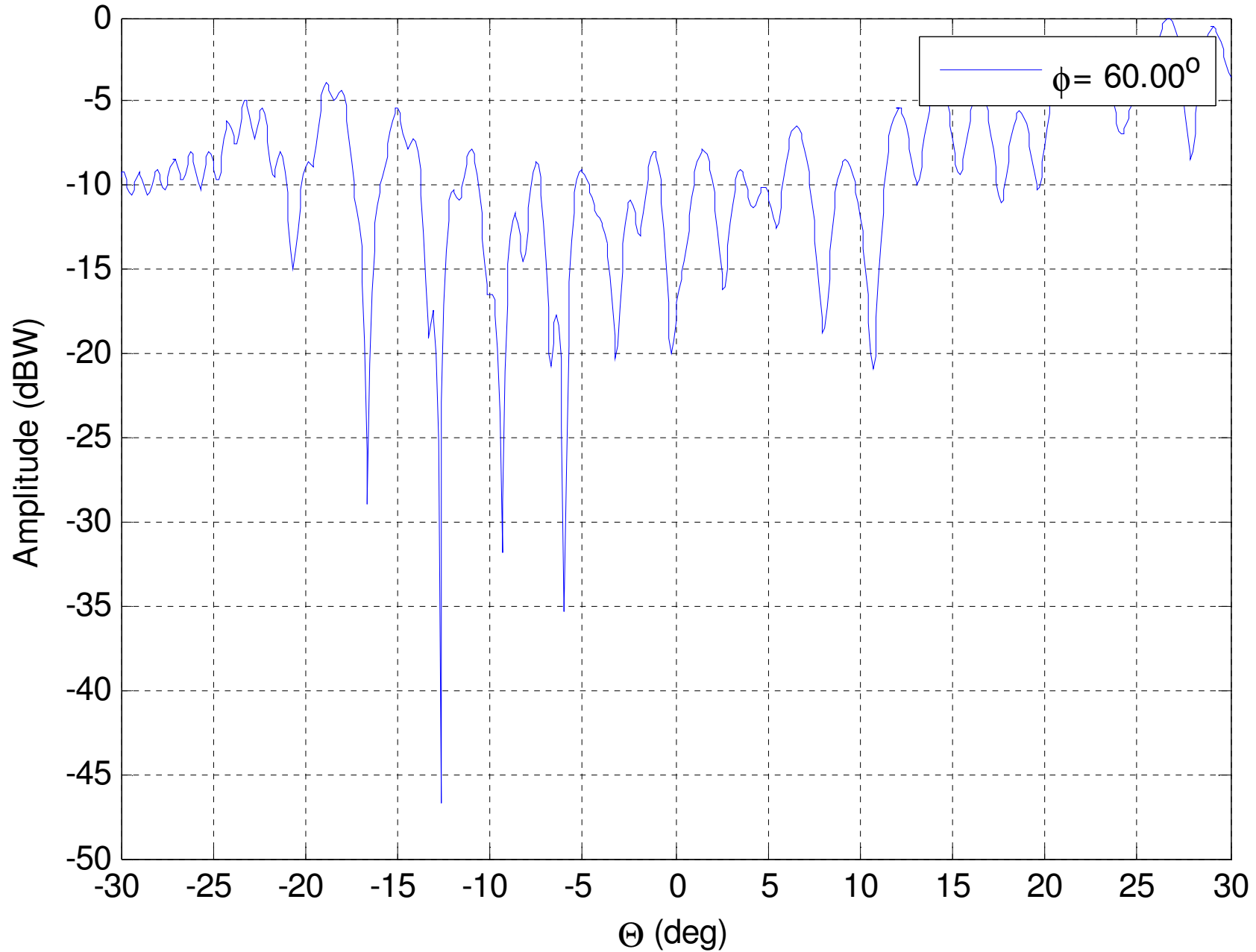
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -10.48 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

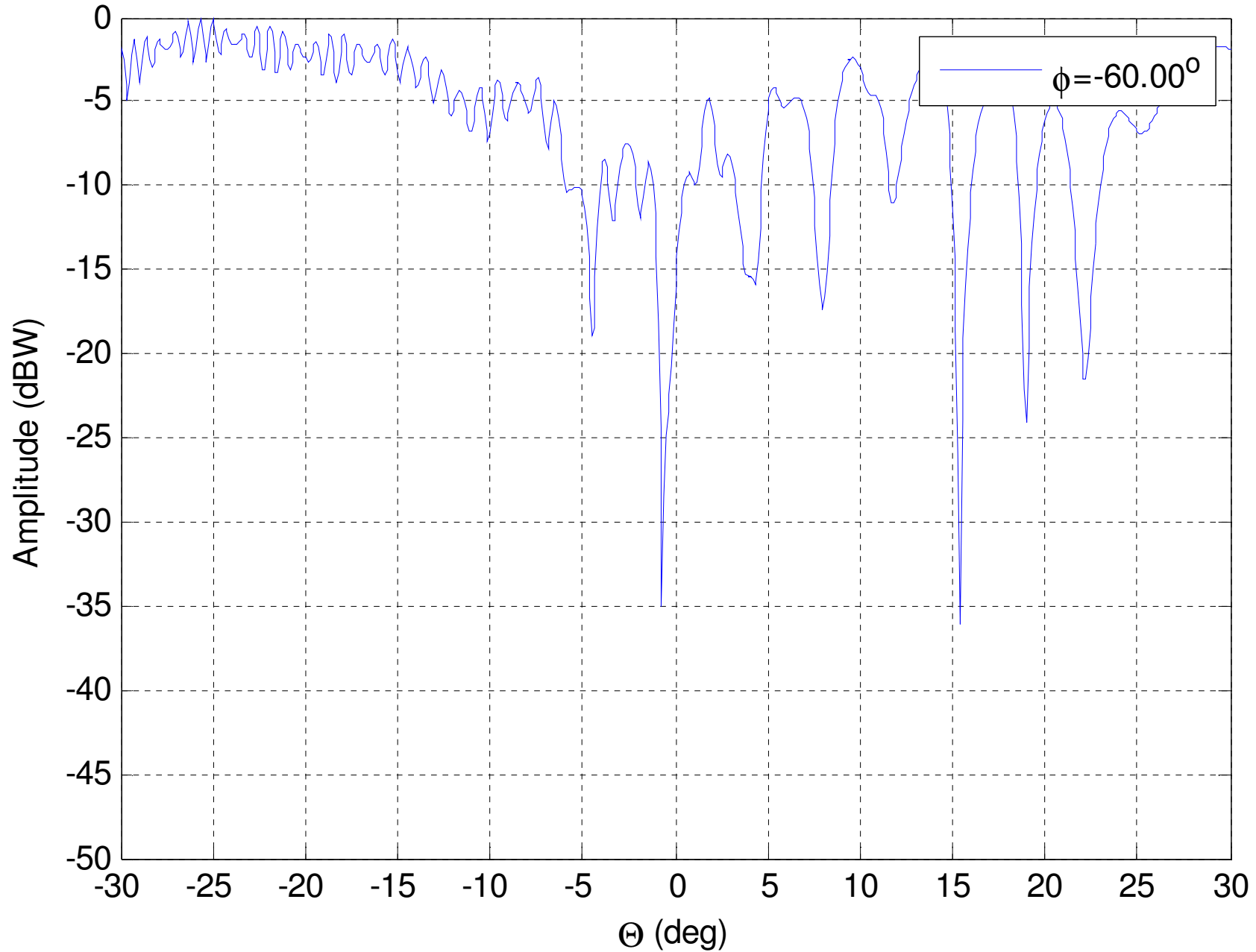
Input file: tx-17.3-lhcp-60.cut, Peak: -8.78 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

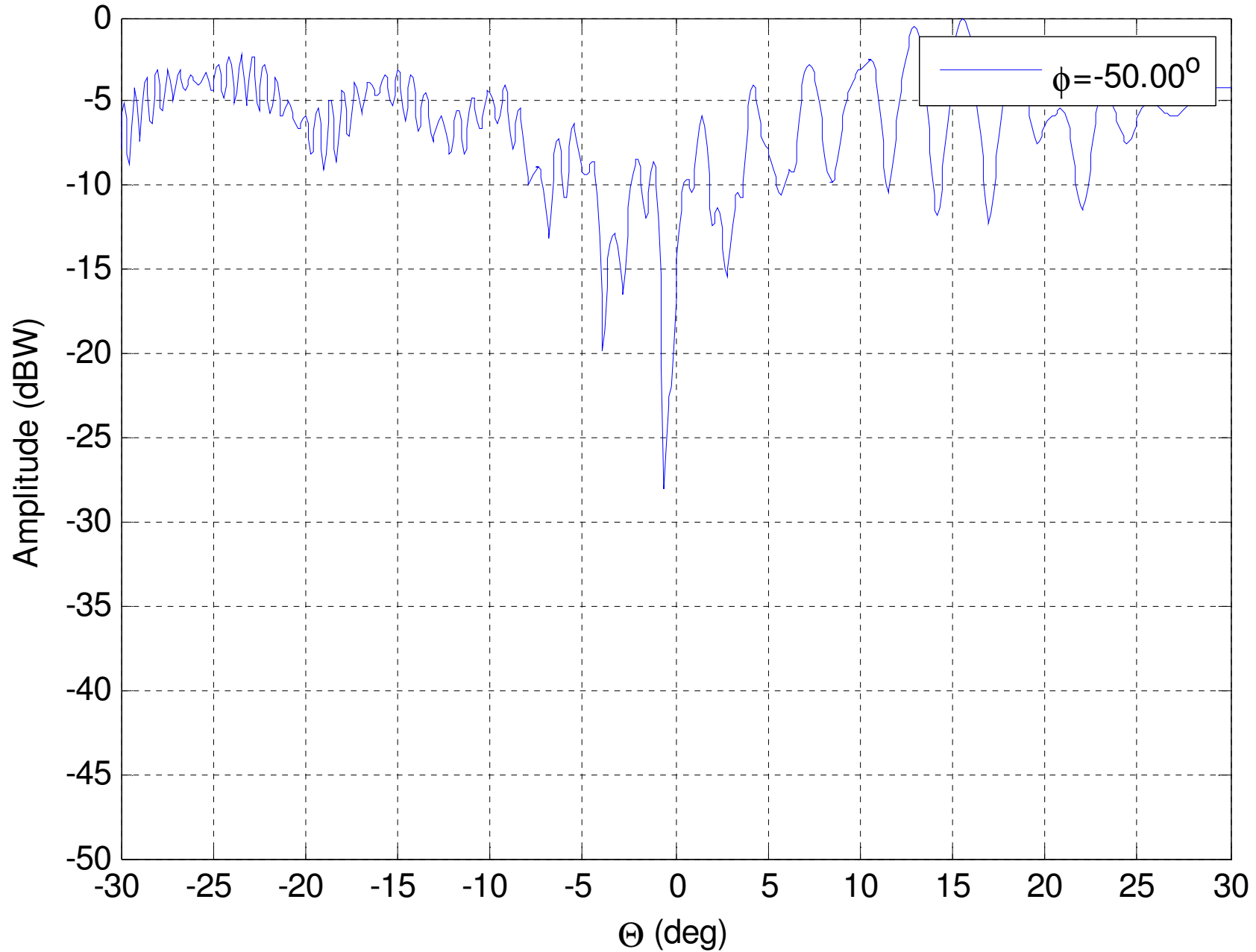
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -9.59 dBW, Date: 15-Dec-2011



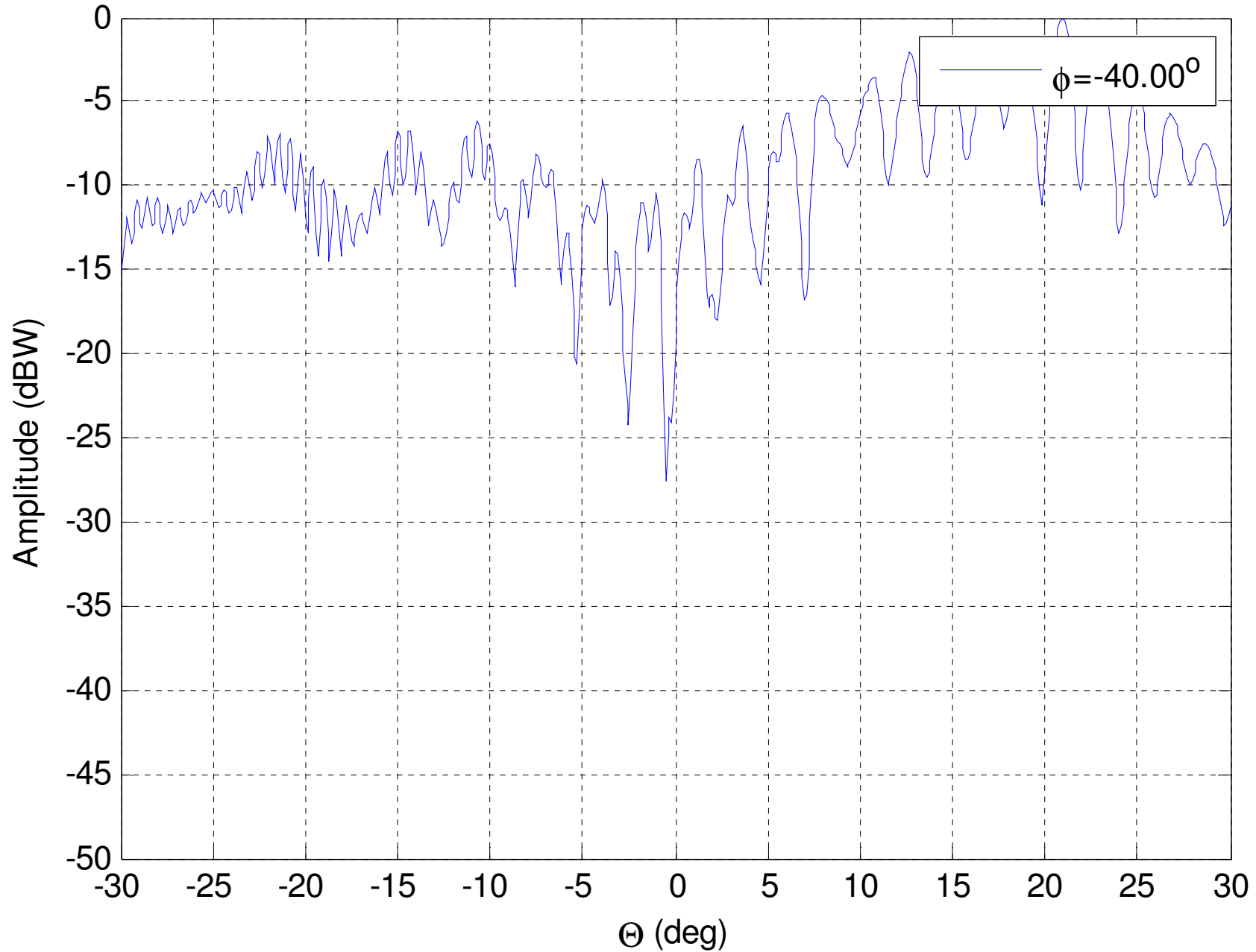
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -8.85 dBW, Date: 15-Dec-2011



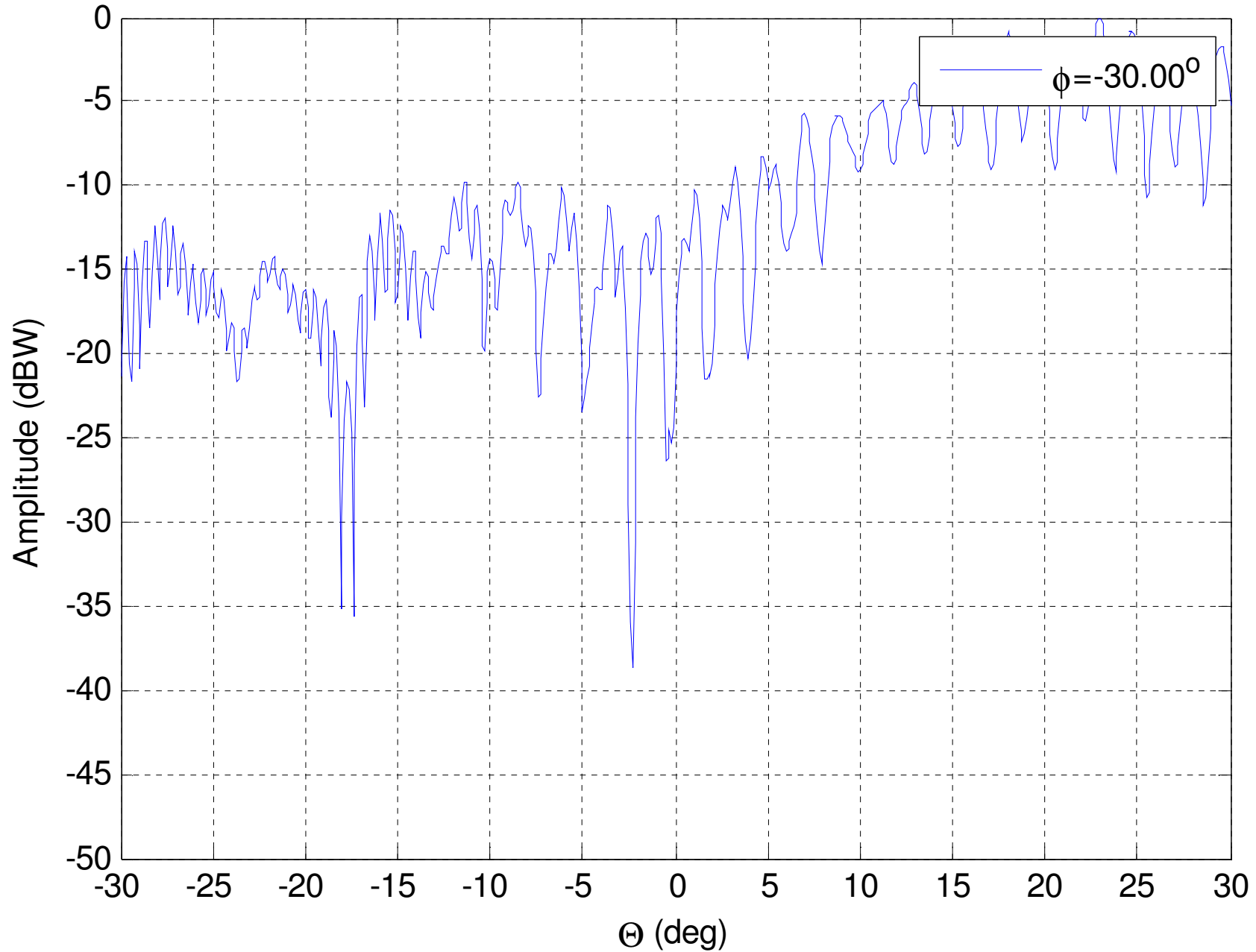
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -6.56 dBW, Date: 15-Dec-2011



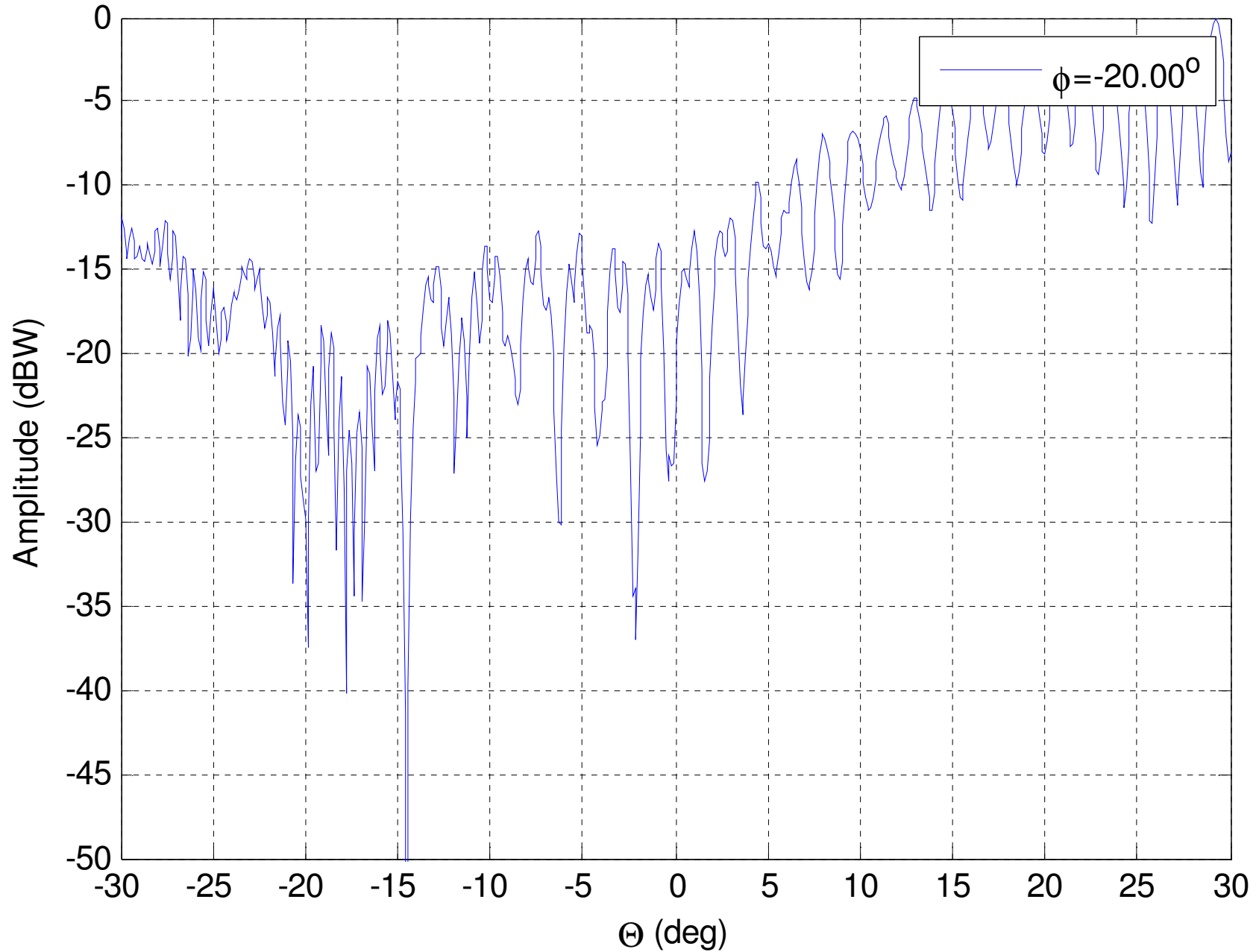
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -4.97 dBW, Date: 15-Dec-2011



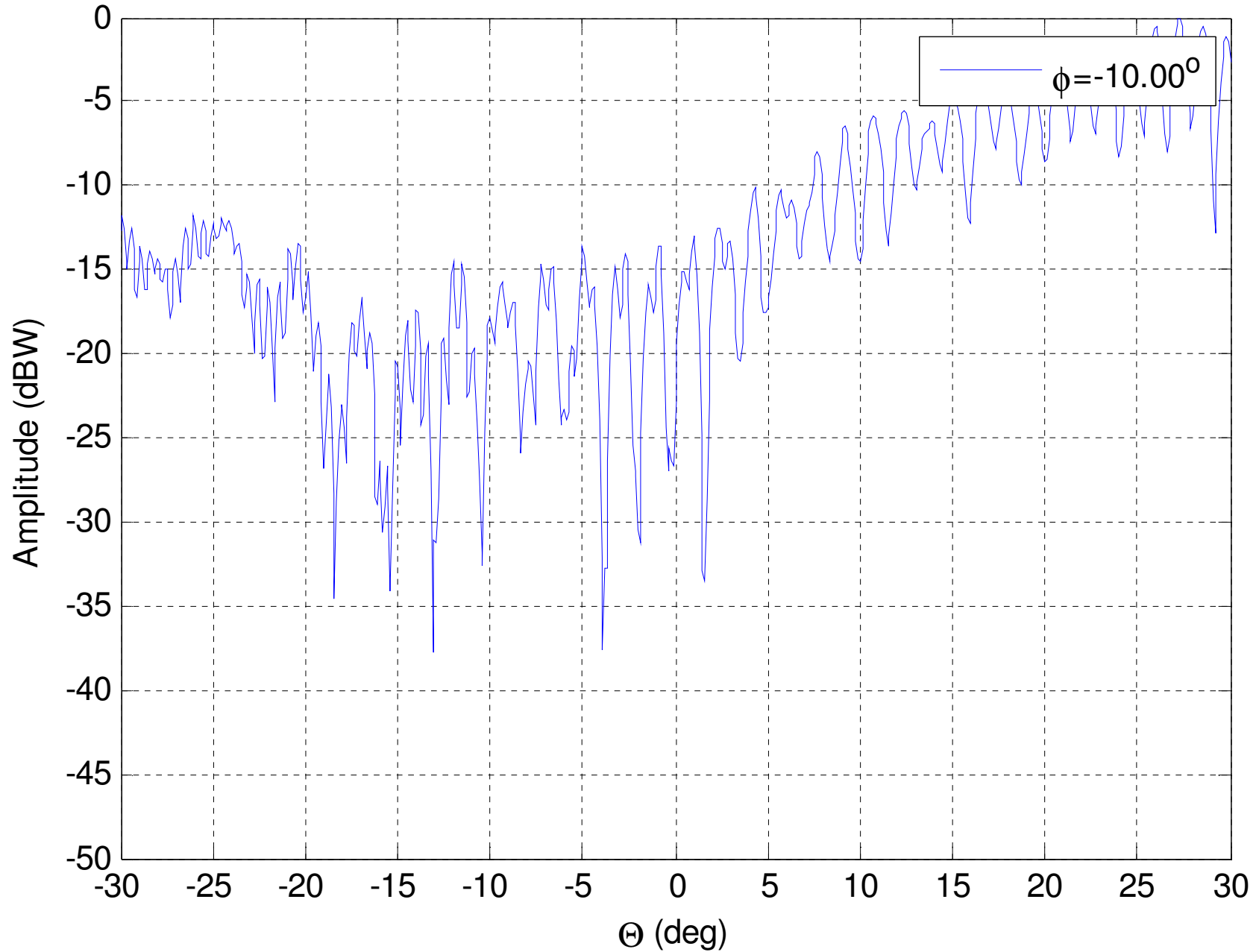
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -2.96 dBW, Date: 15-Dec-2011



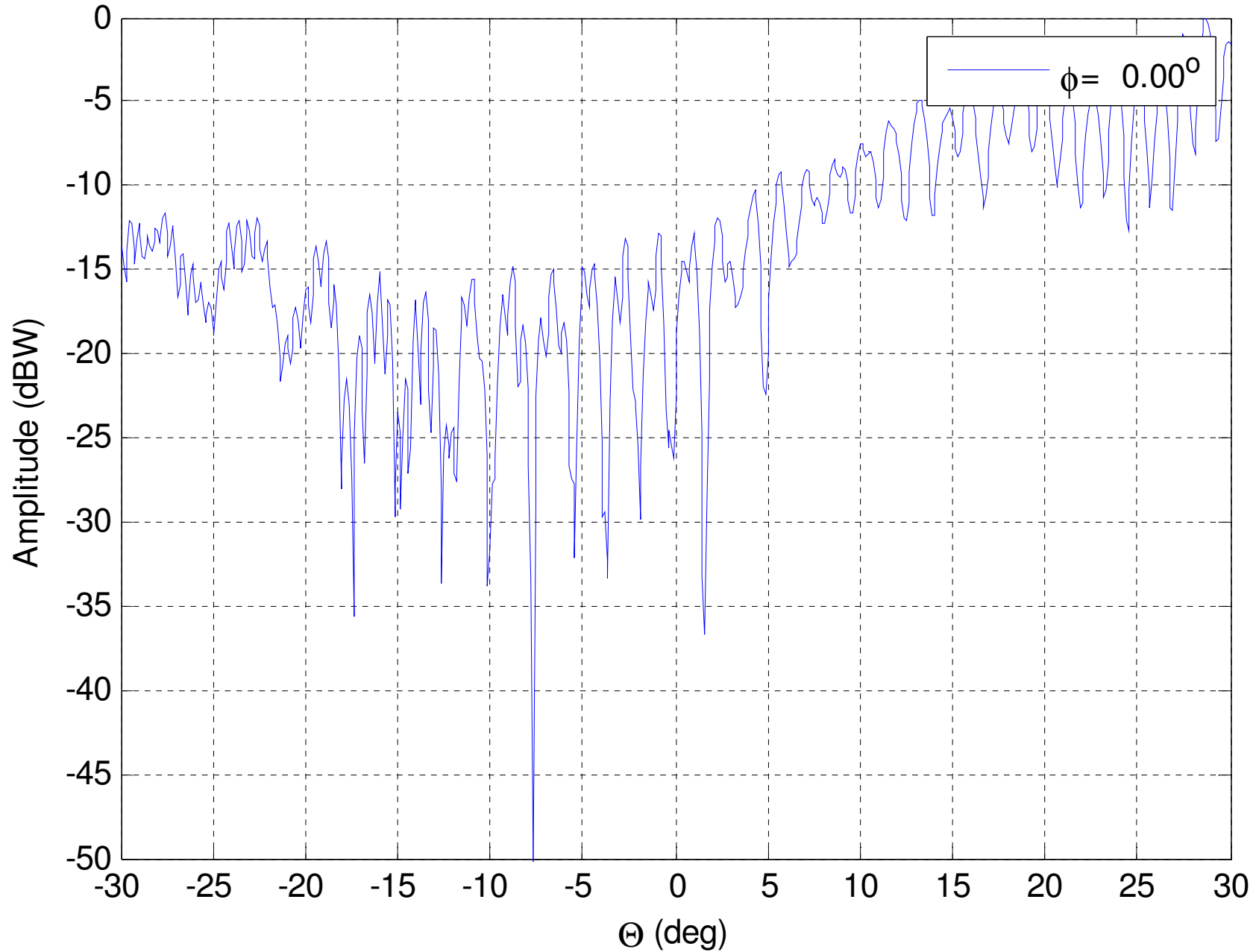
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -2.79 dBW, Date: 15-Dec-2011



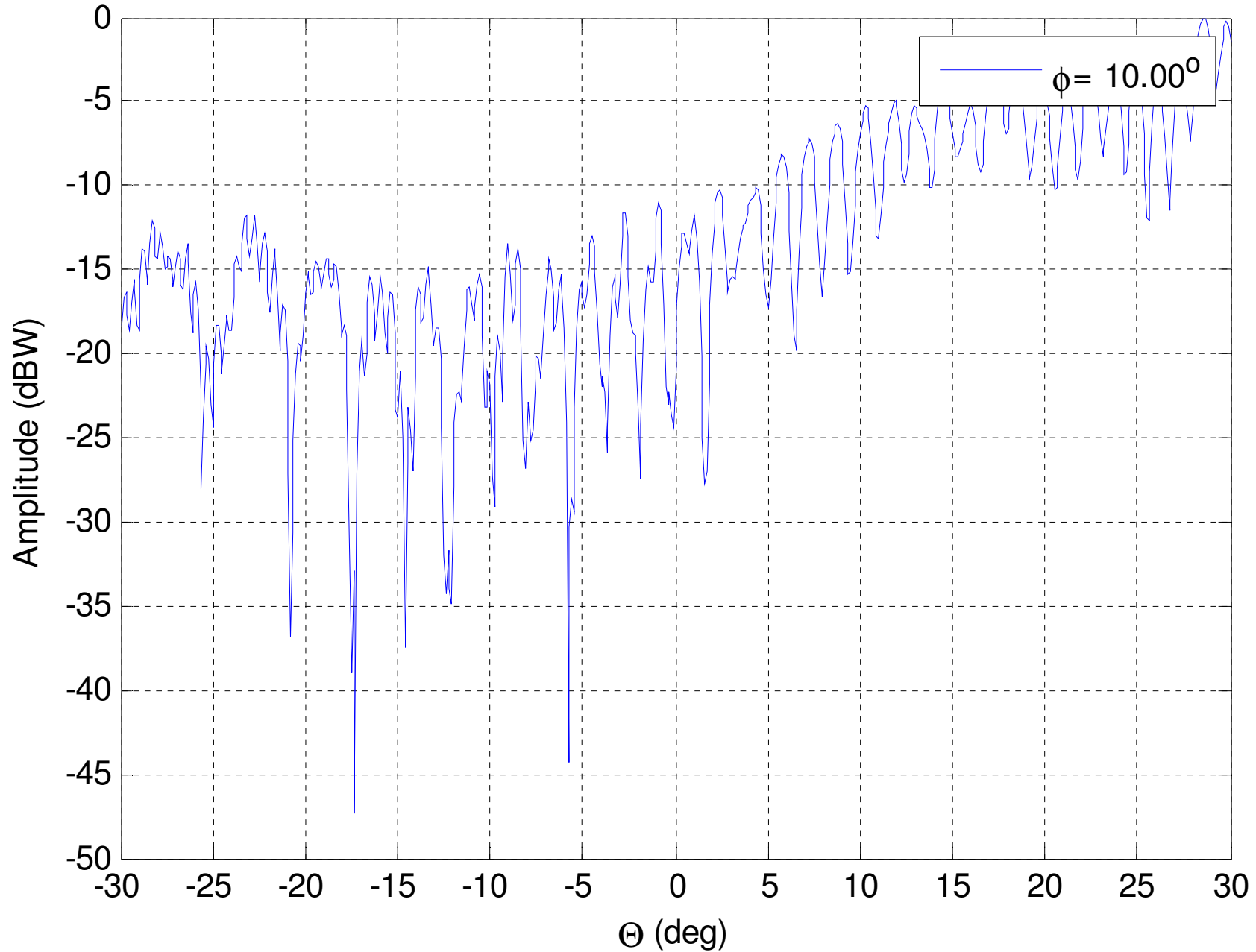
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -3.29 dBW, Date: 15-Dec-2011



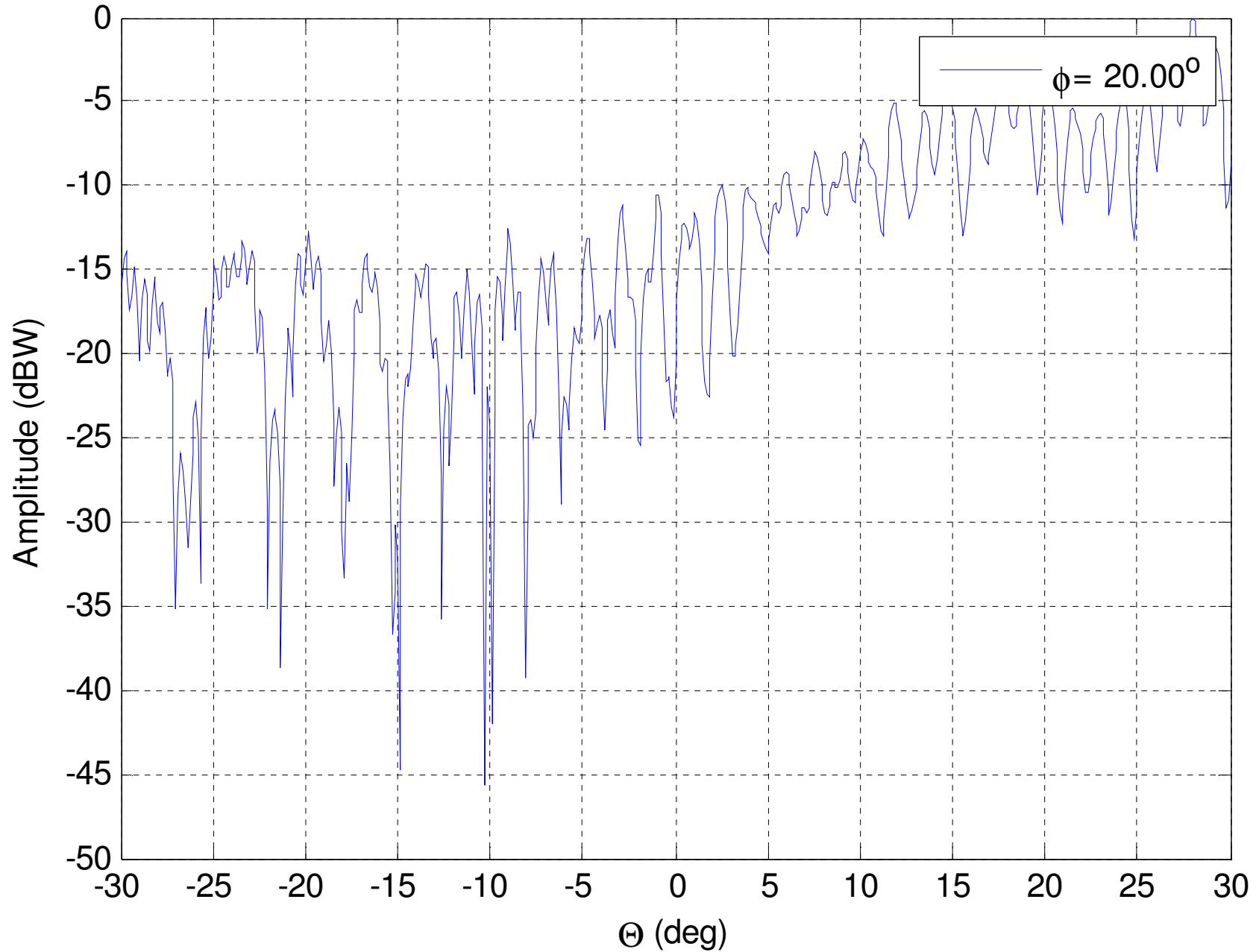
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -4.90 dBW, Date: 15-Dec-2011



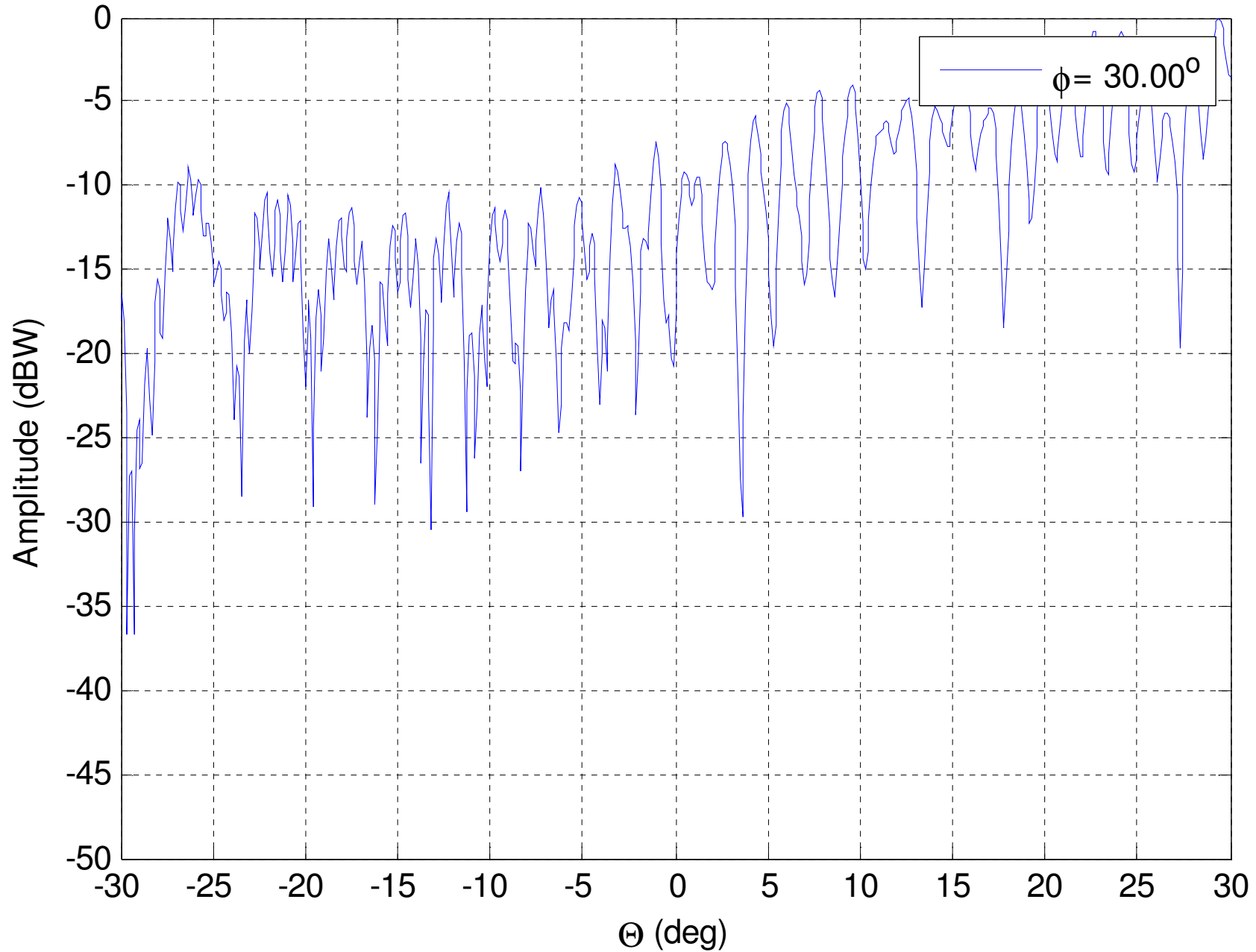
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -5.38 dBW, Date: 15-Dec-2011



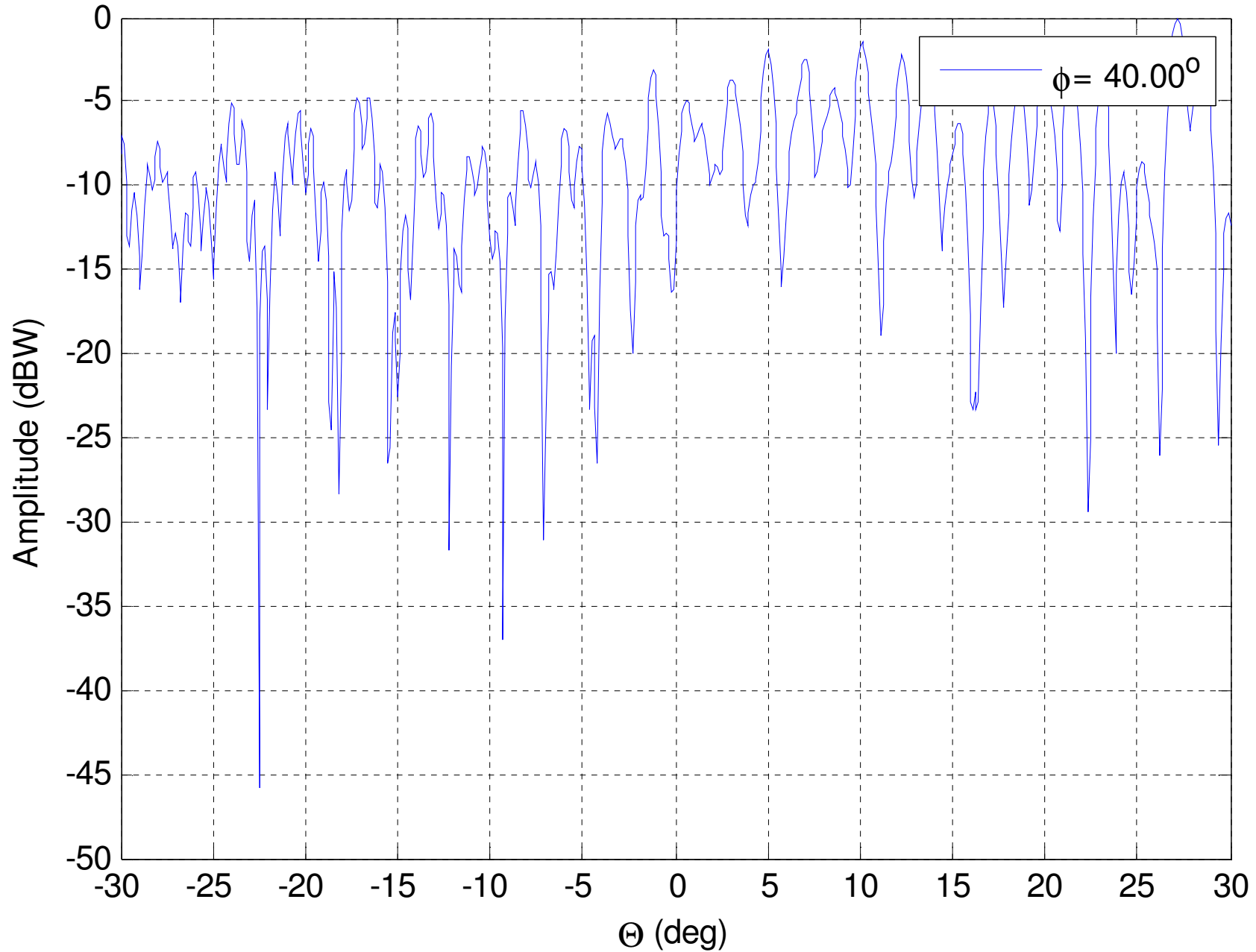
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -8.29 dBW, Date: 15-Dec-2011



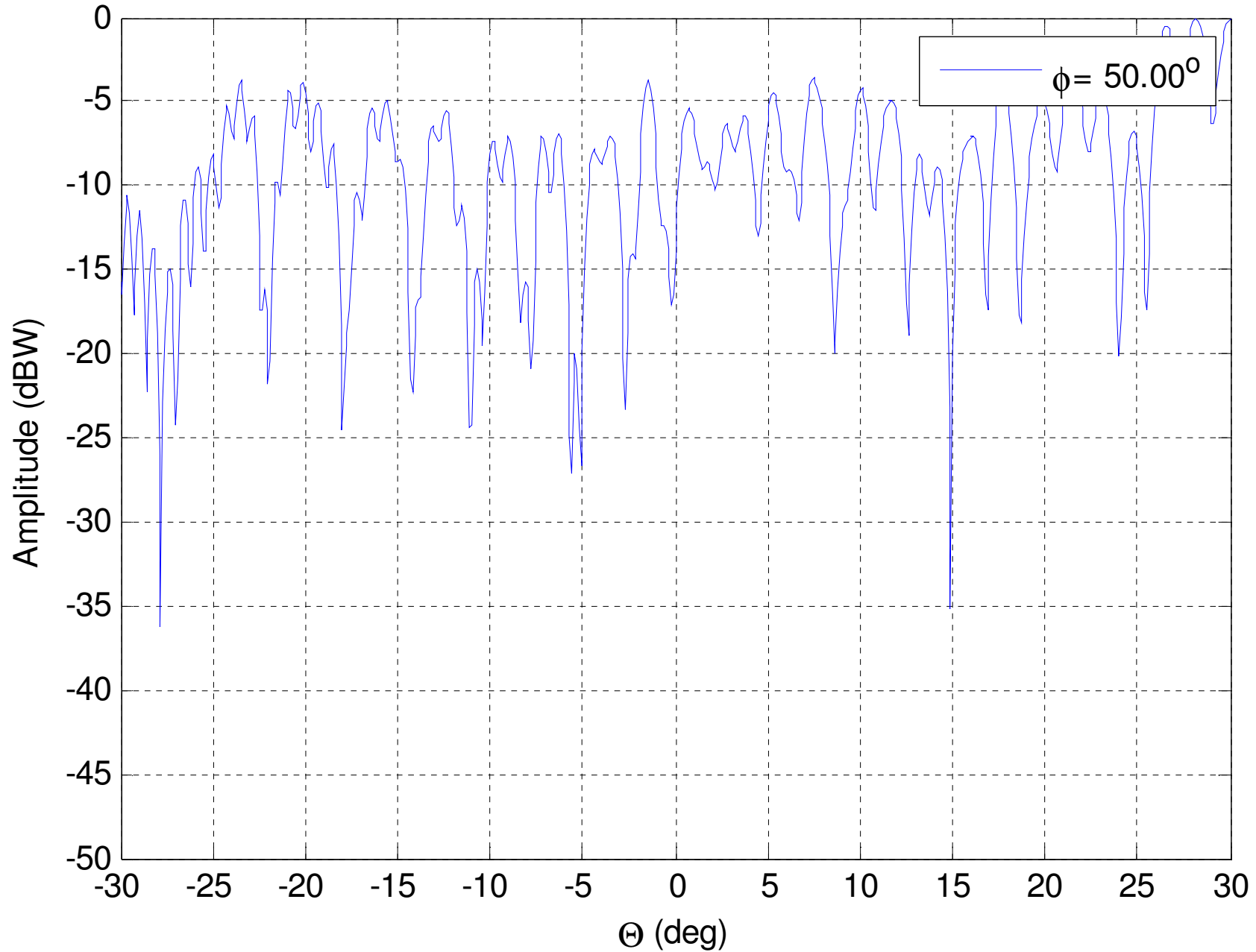
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -12.41 dBW, Date: 15-Dec-2011



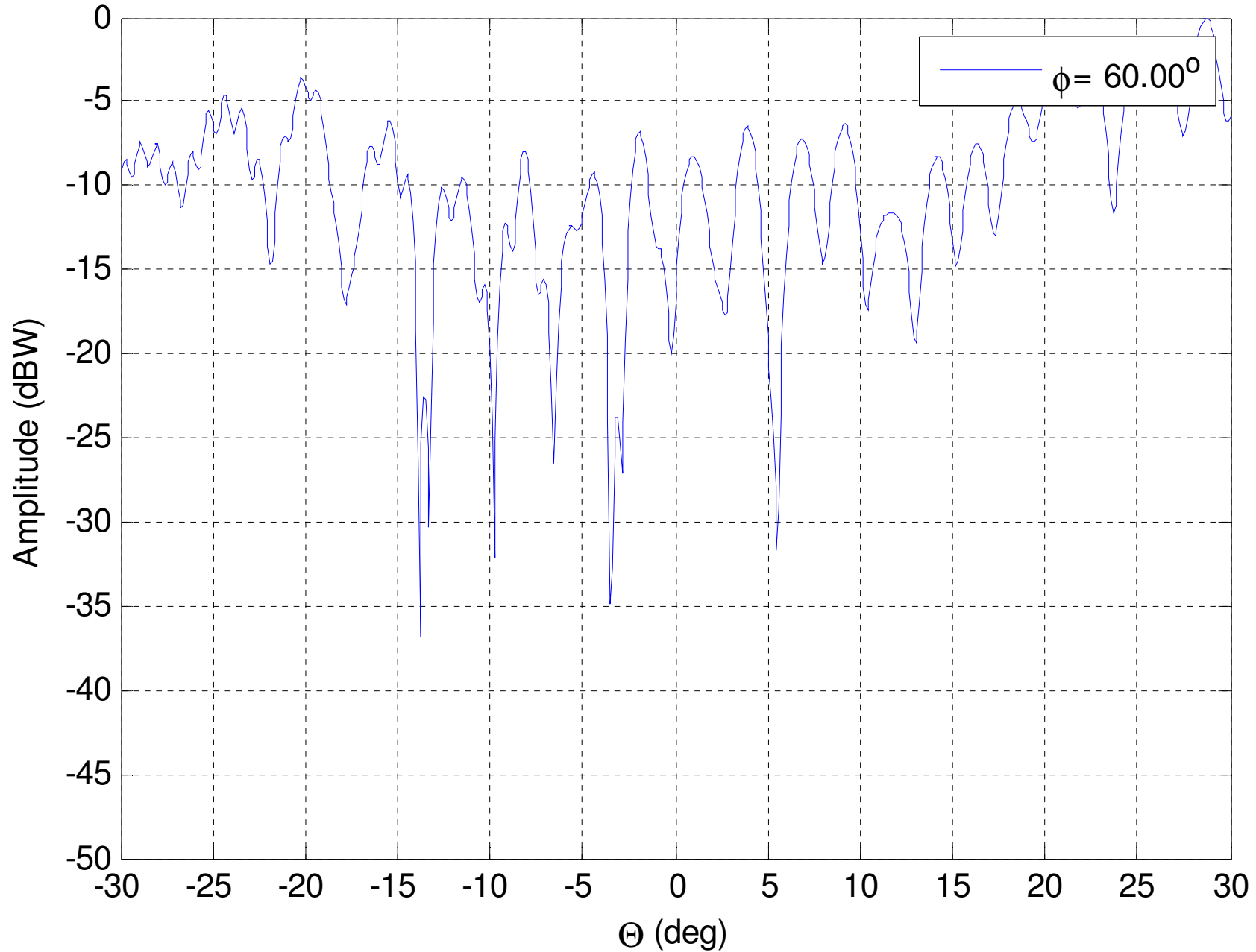
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.80 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

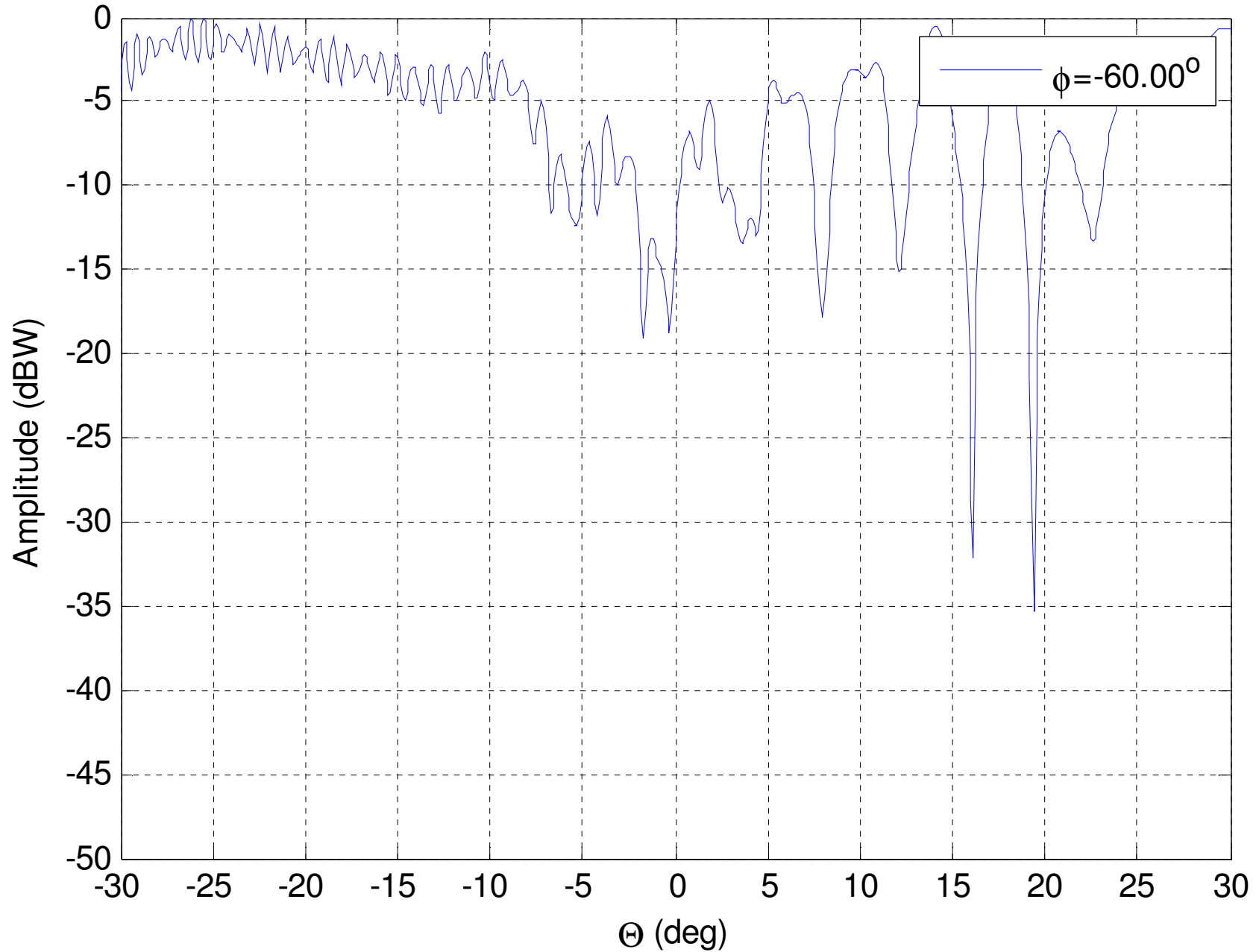
Input file: tx-17.5-rhcp-60.cut, Peak: -8.84 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

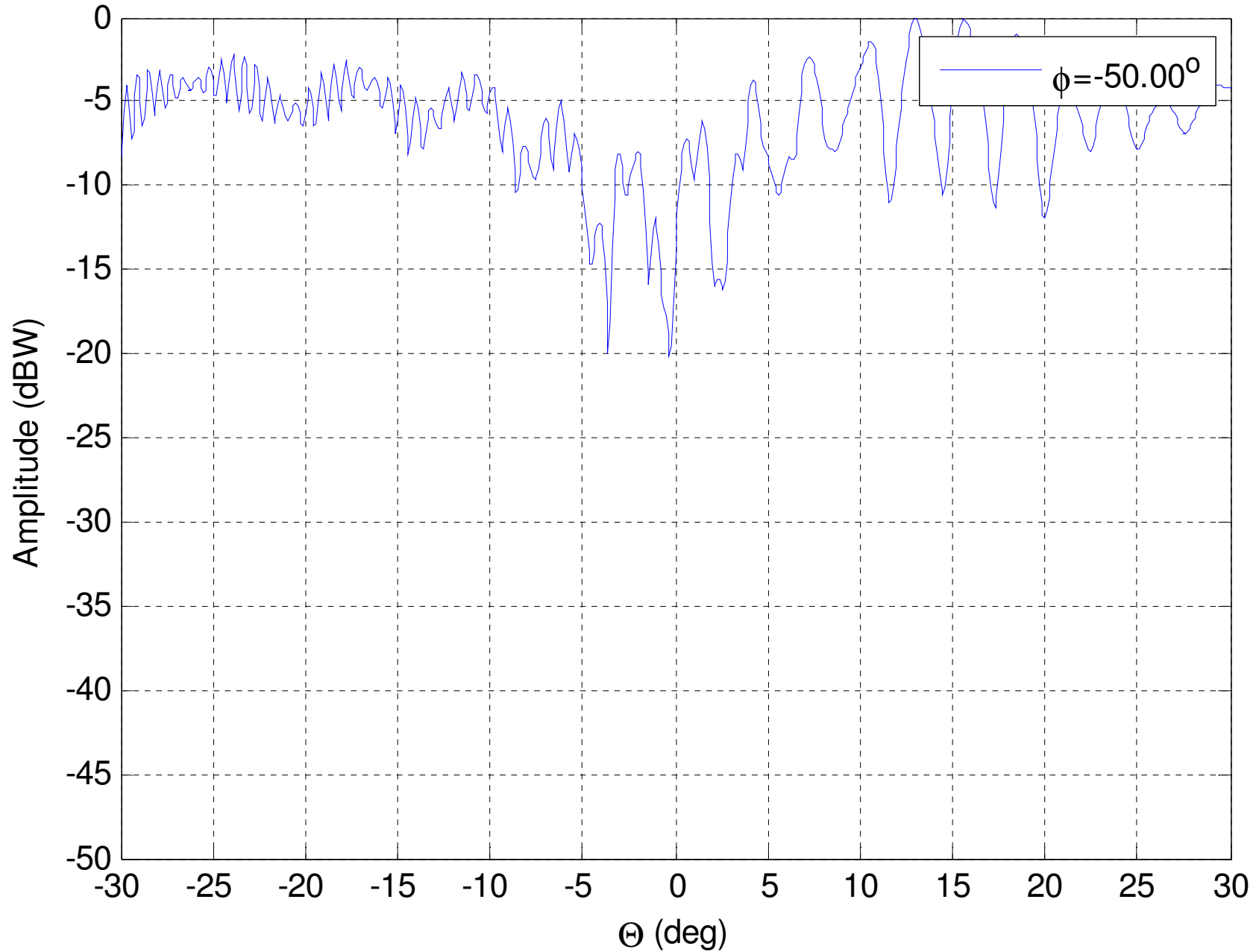
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -9.87 dBW, Date: 15-Dec-2011



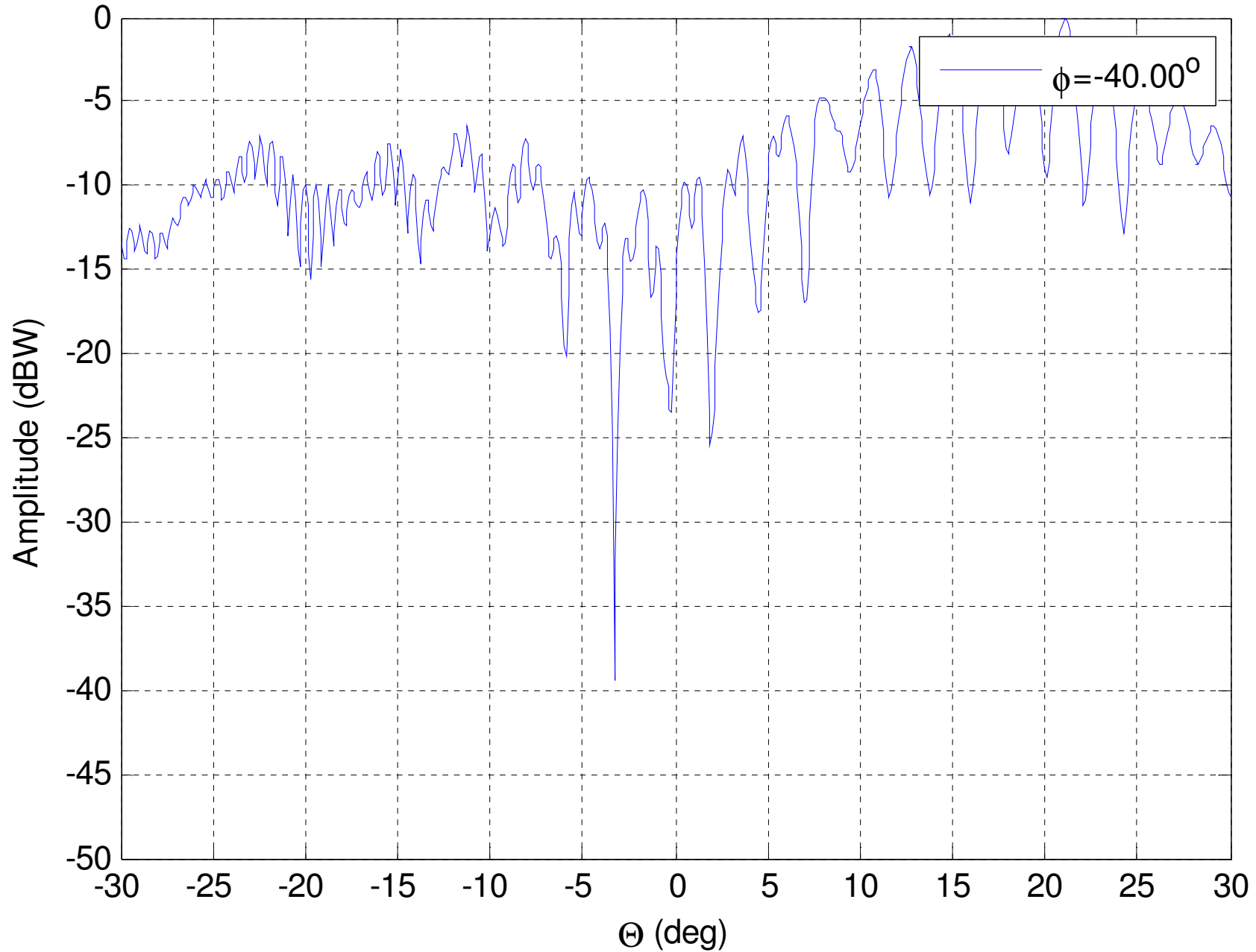
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -9.25 dBW, Date: 15-Dec-2011



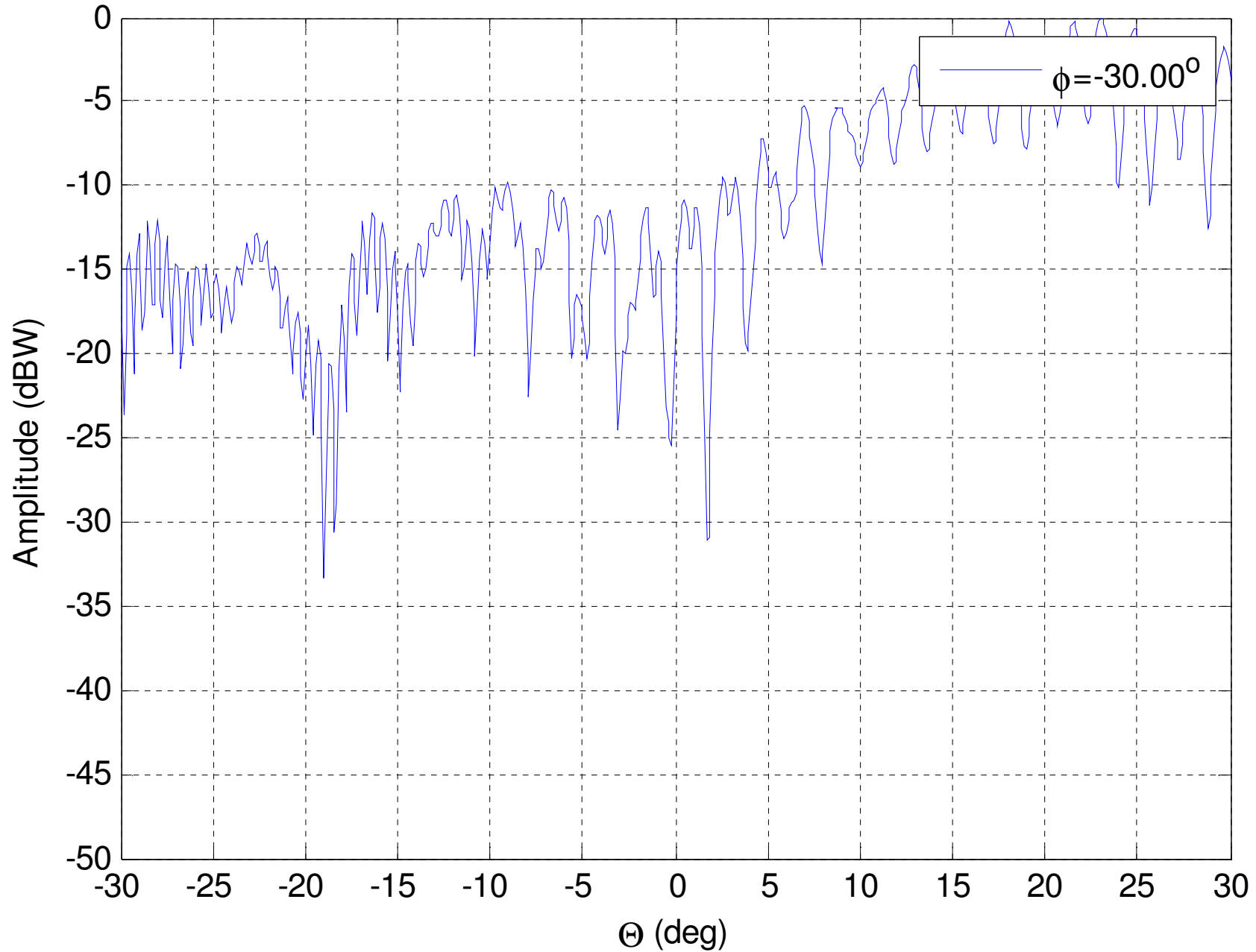
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -6.57 dBW, Date: 15-Dec-2011



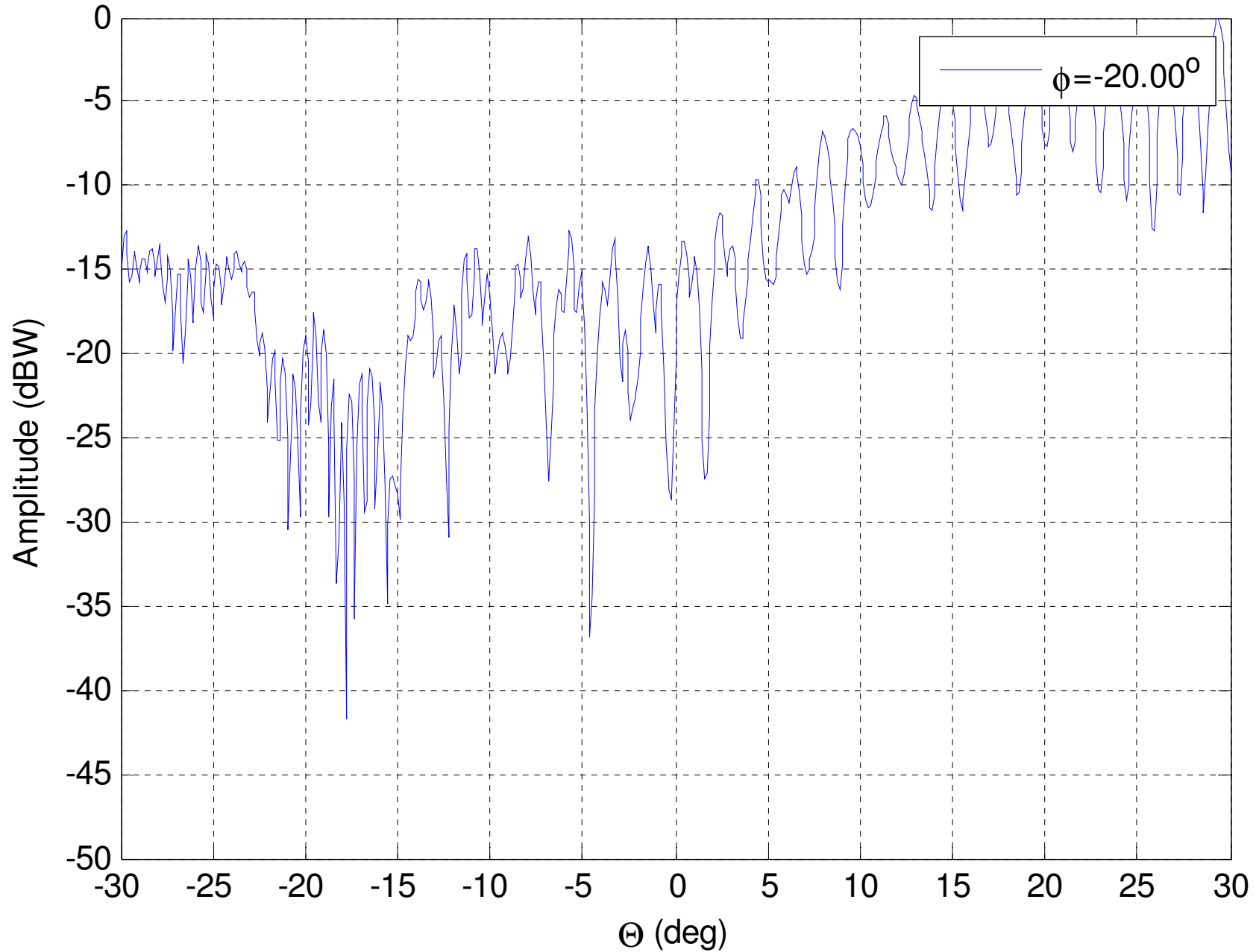
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -5.44 dBW, Date: 15-Dec-2011



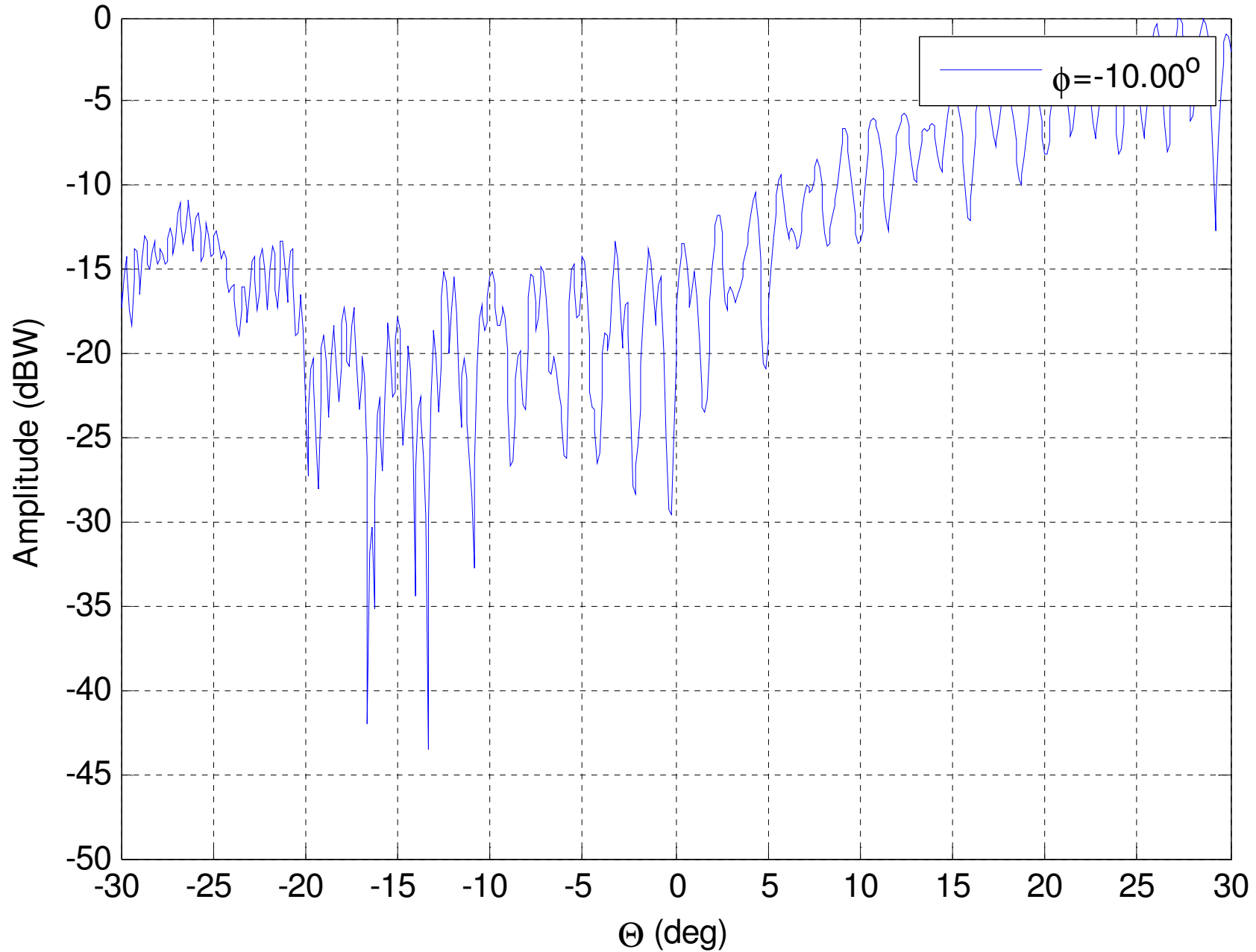
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -3.06 dBW, Date: 15-Dec-2011



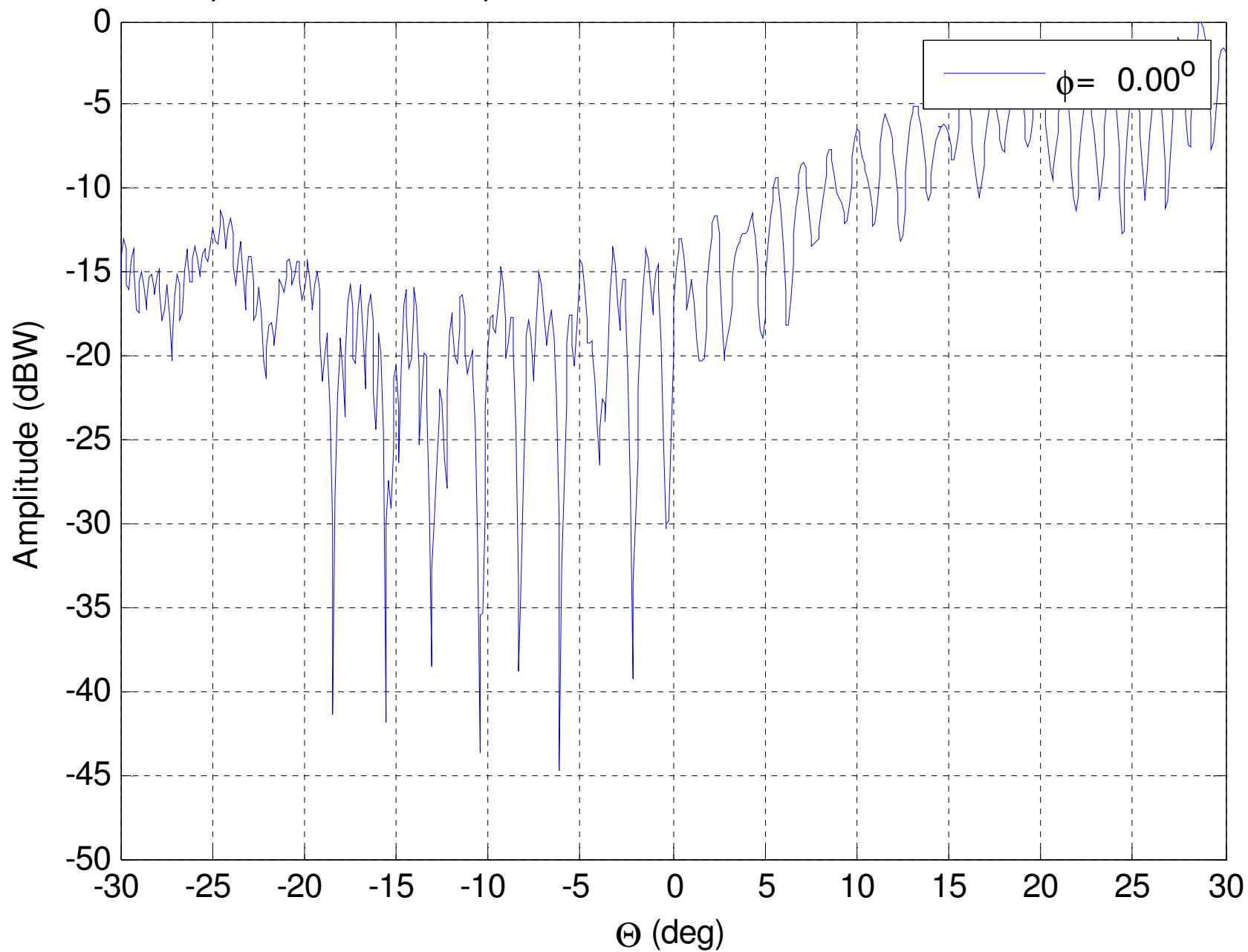
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -2.90 dBW, Date: 15-Dec-2011



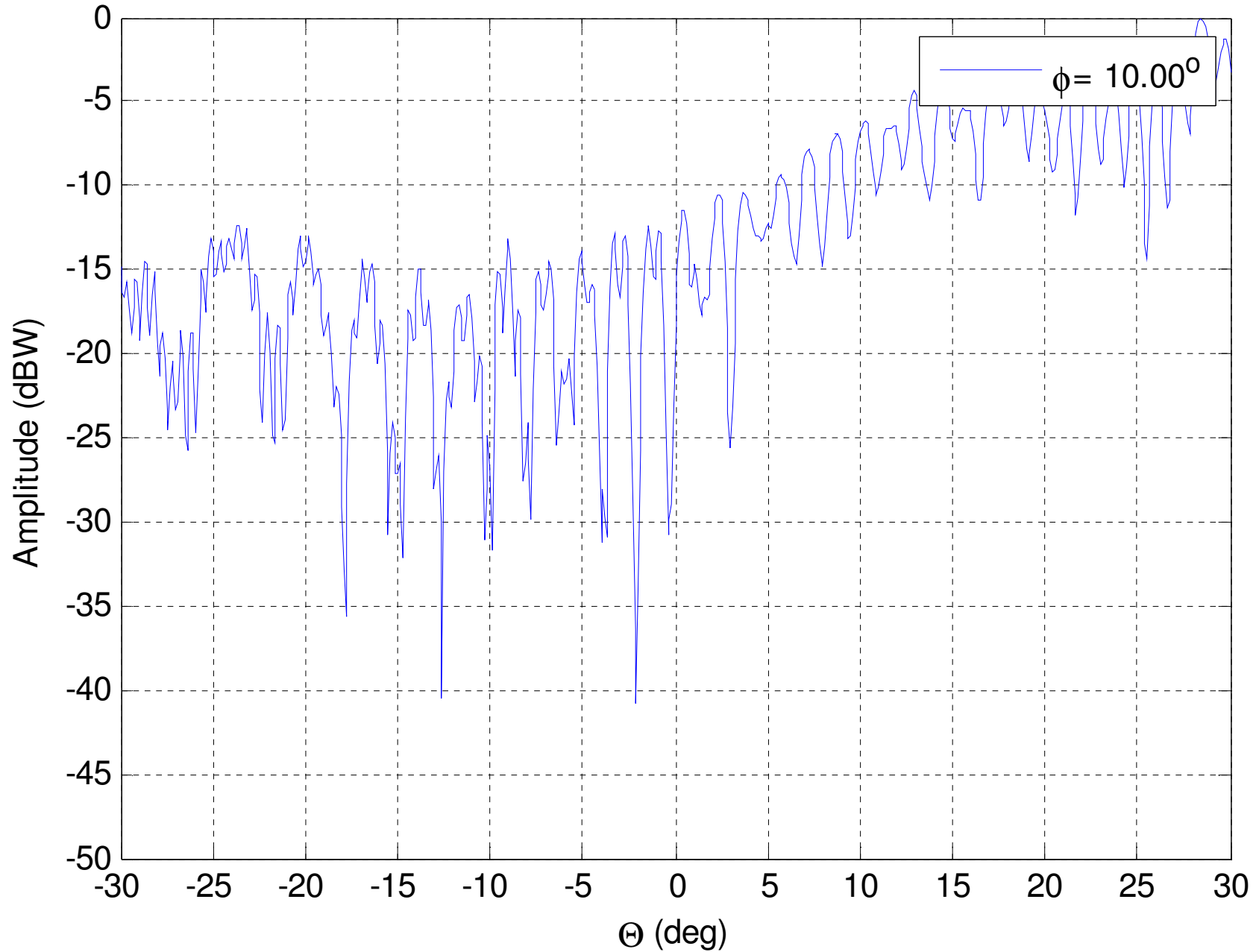
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -3.33 dBW, Date: 15-Dec-2011



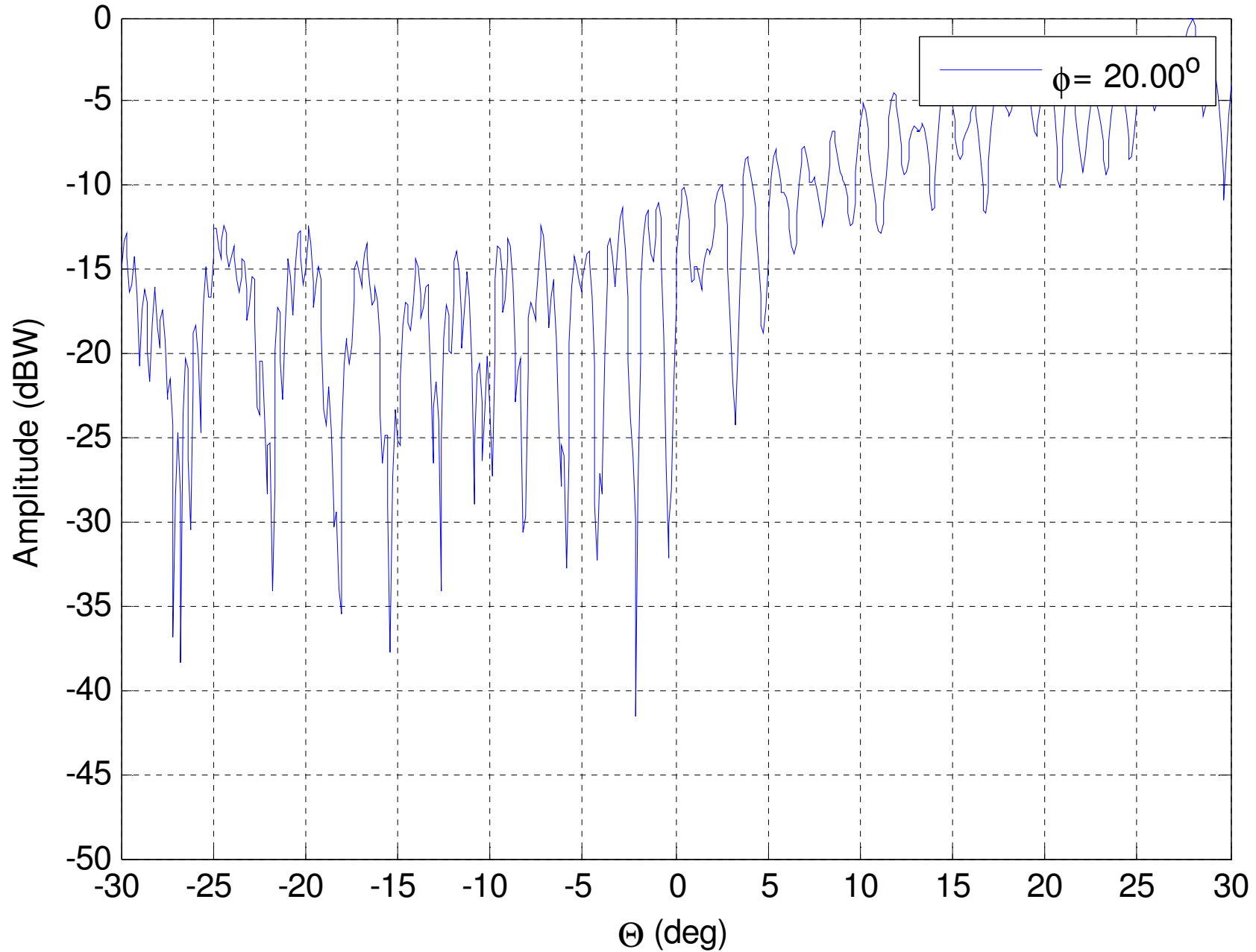
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -4.86 dBW, Date: 15-Dec-2011



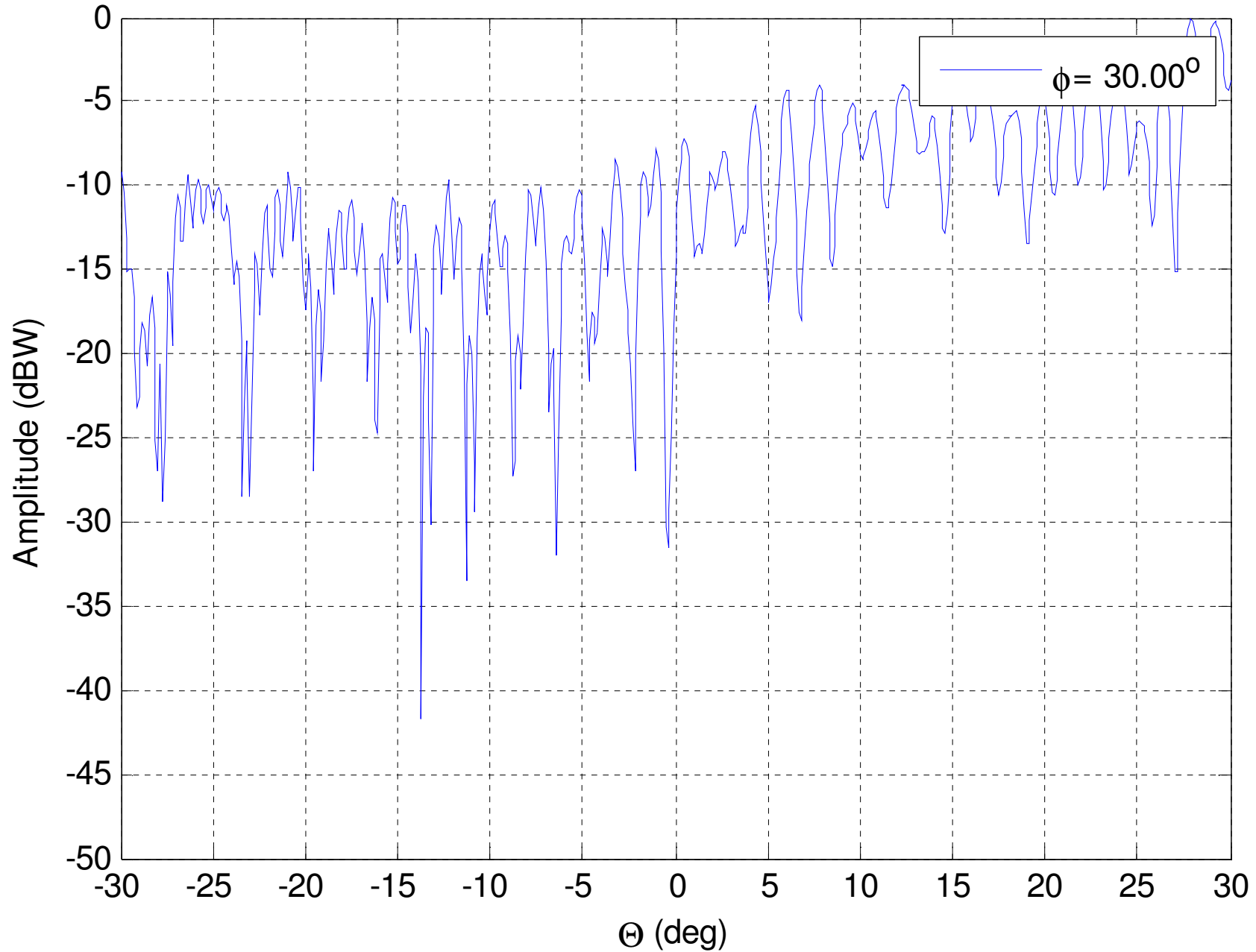
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -6.06 dBW, Date: 15-Dec-2011



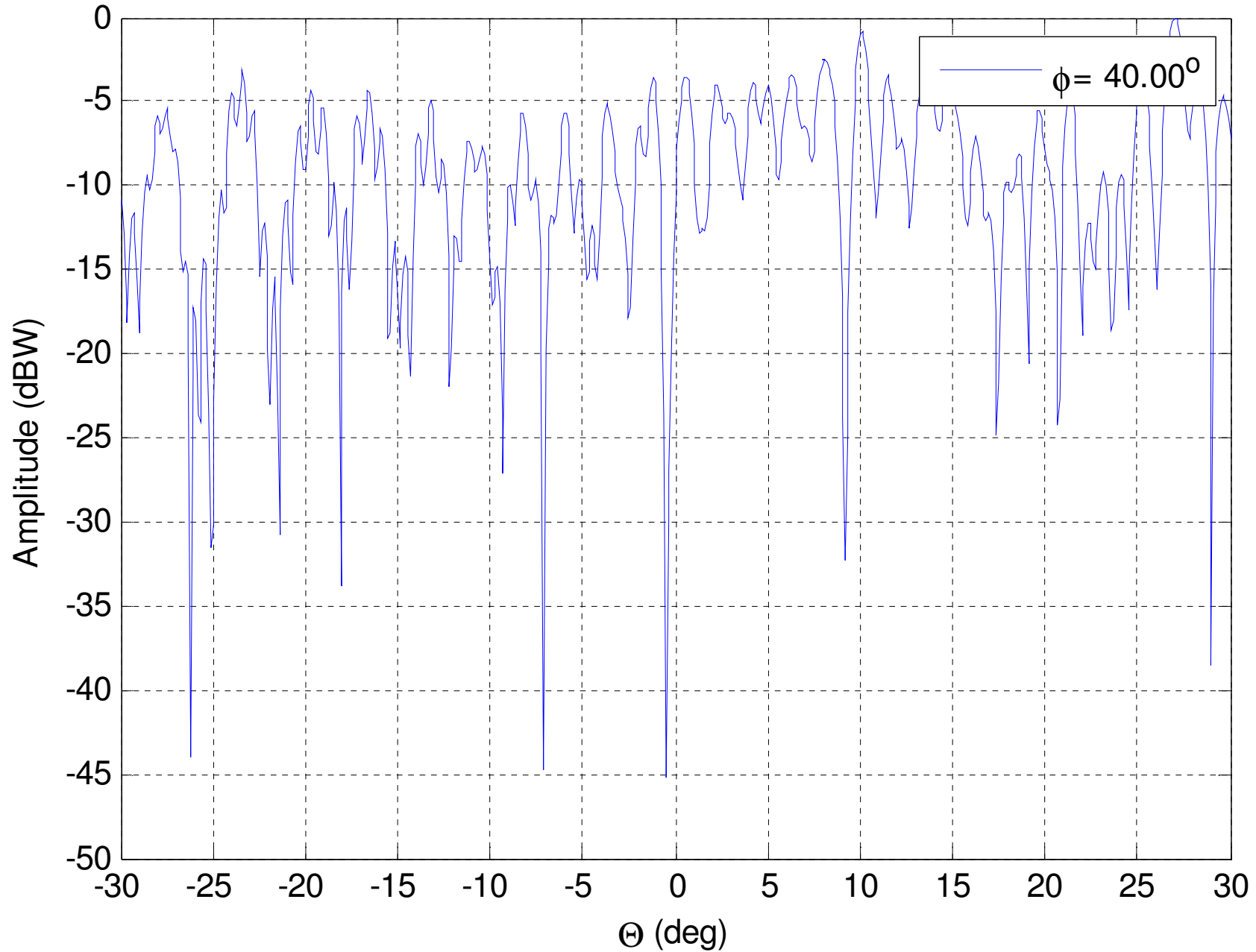
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -8.94 dBW, Date: 15-Dec-2011



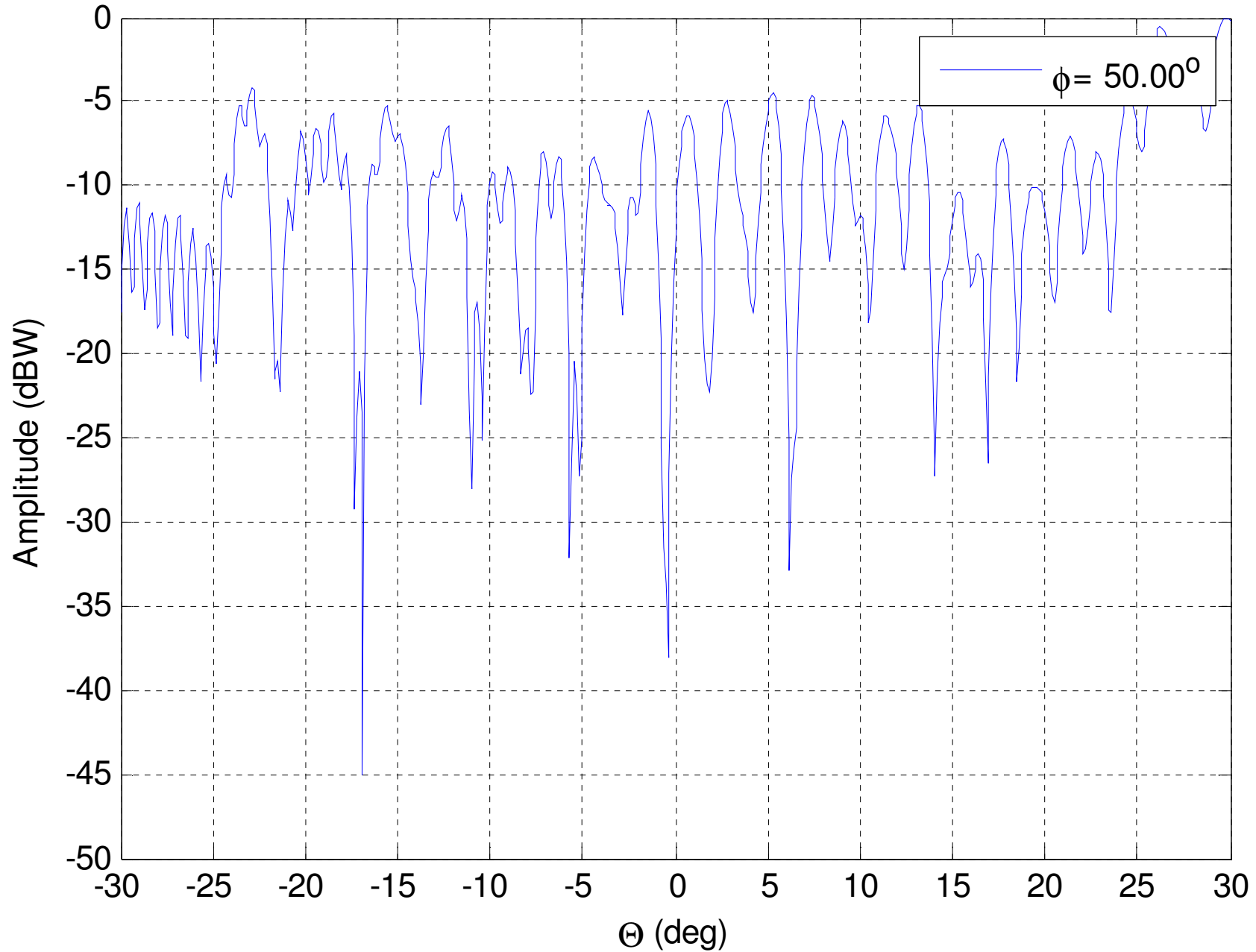
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -12.73 dBW, Date: 15-Dec-2011



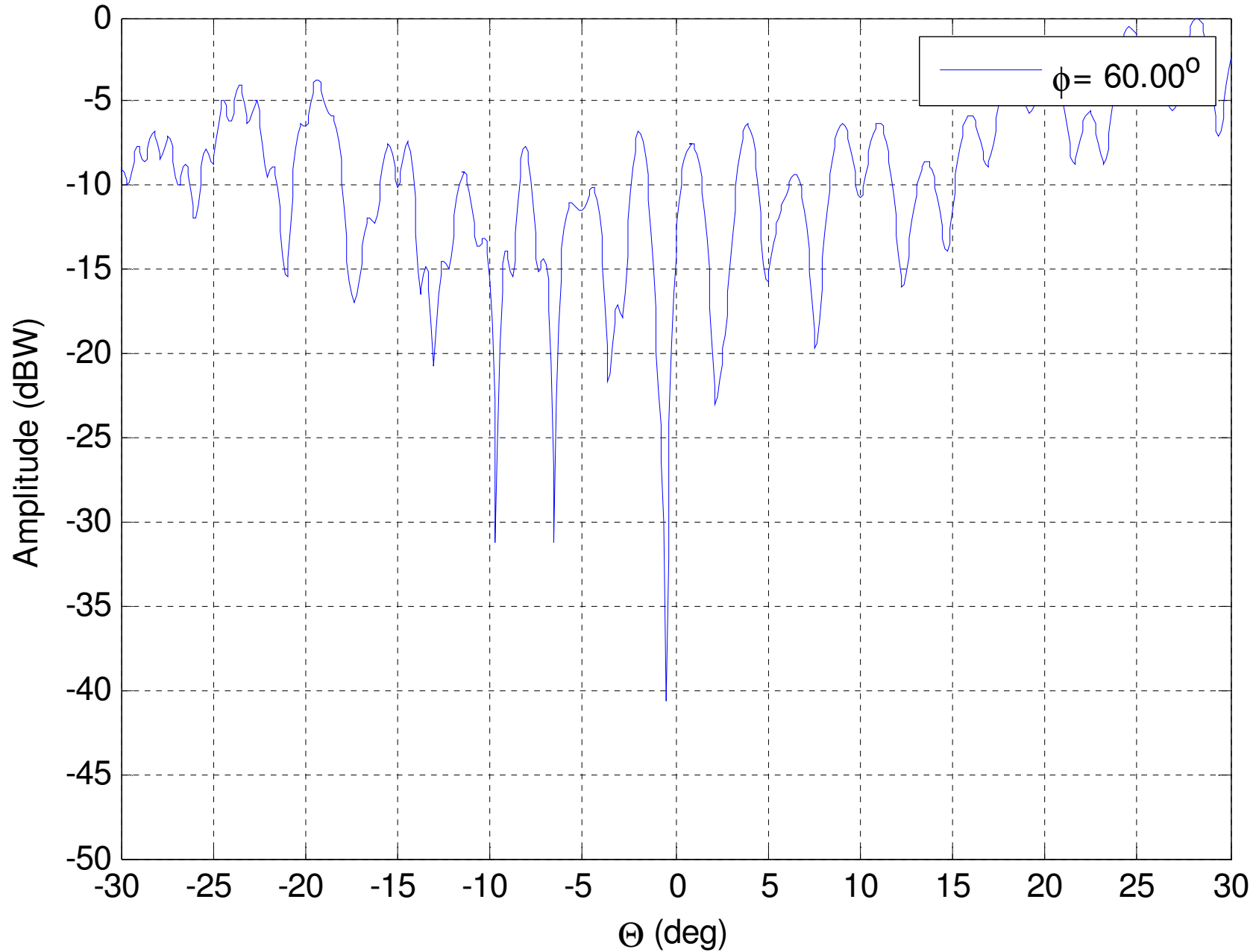
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -10.52 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

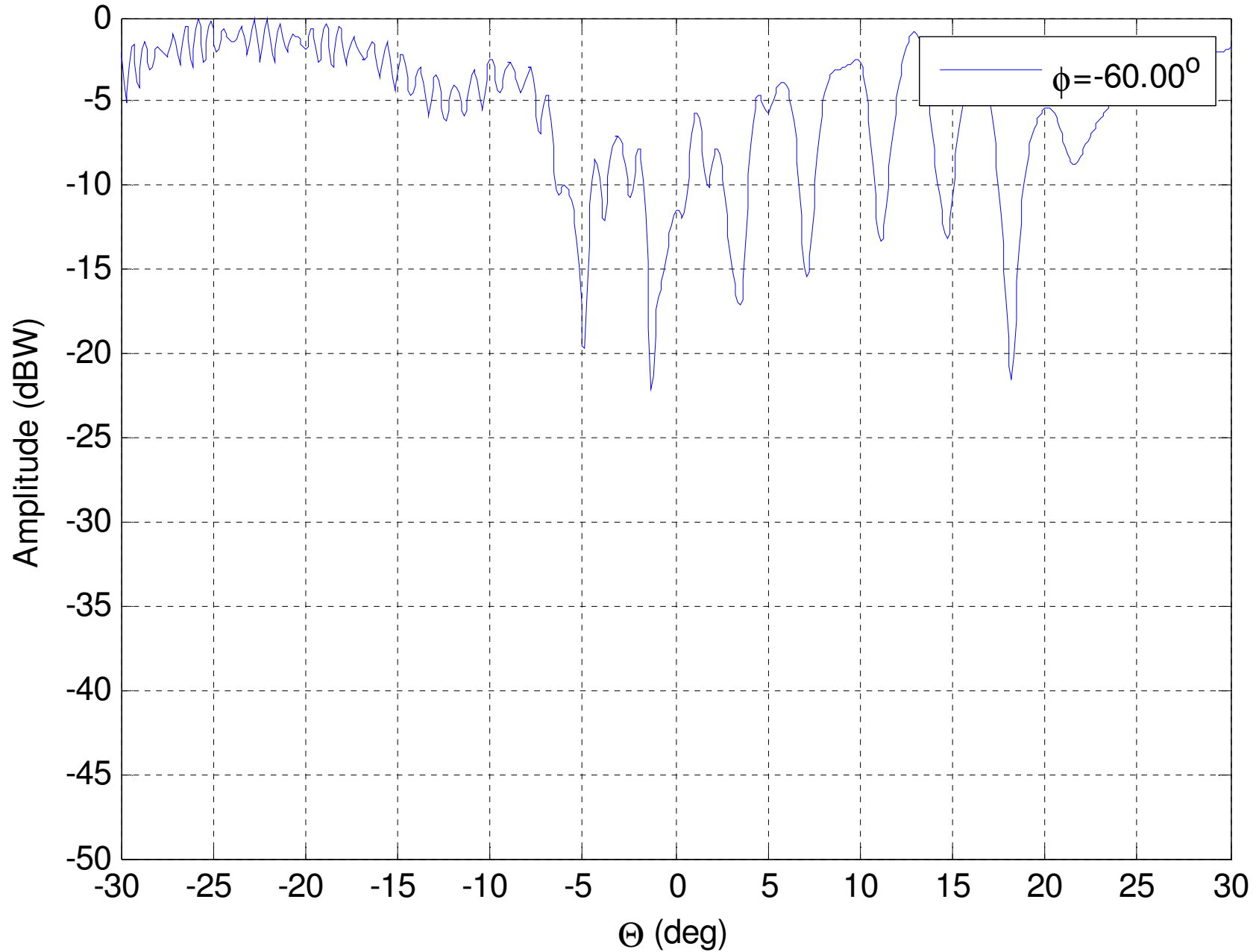
Input file: tx-17.5-lhcp-60.cut, Peak: -8.99 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

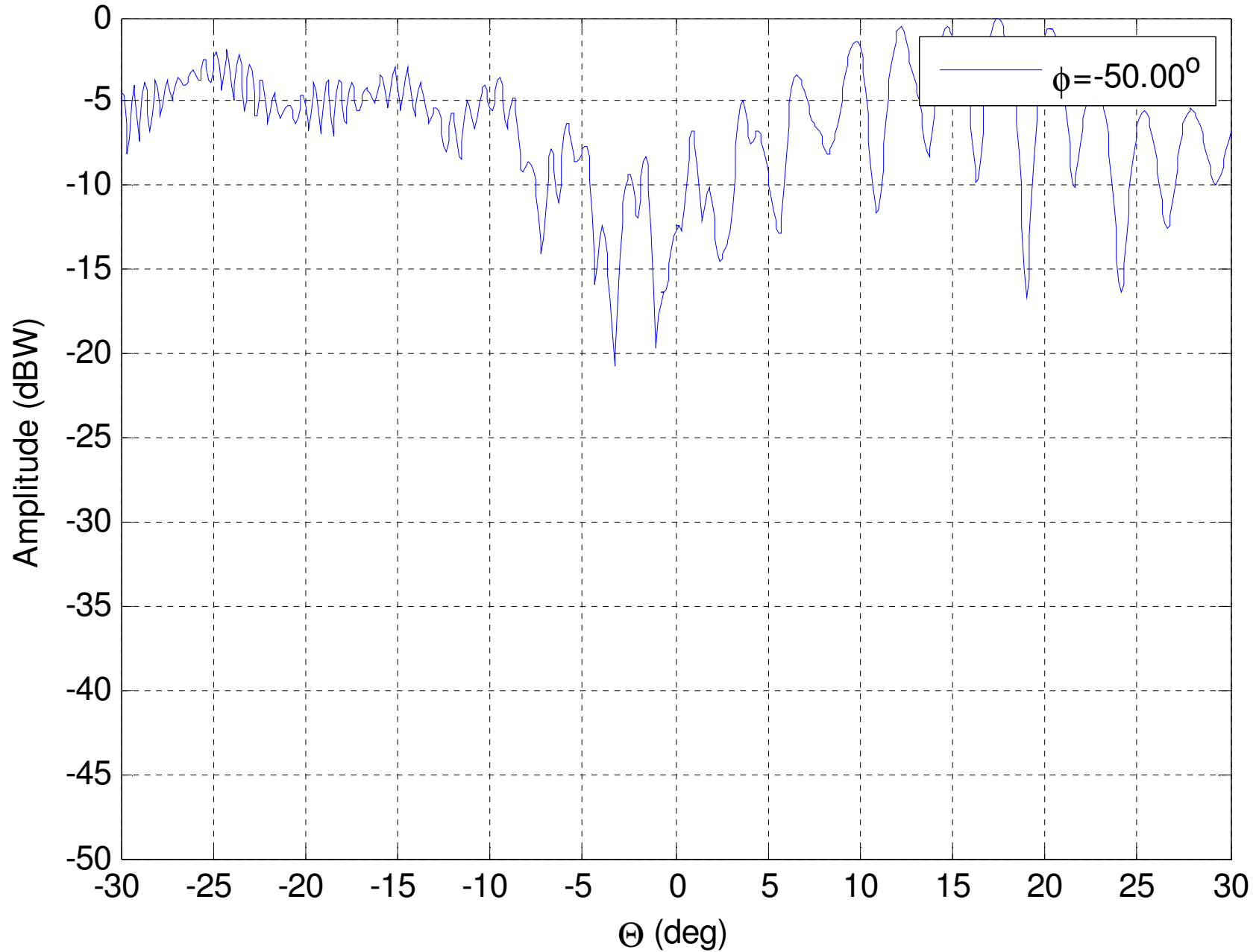
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -9.95 dBW, Date: 15-Dec-2011



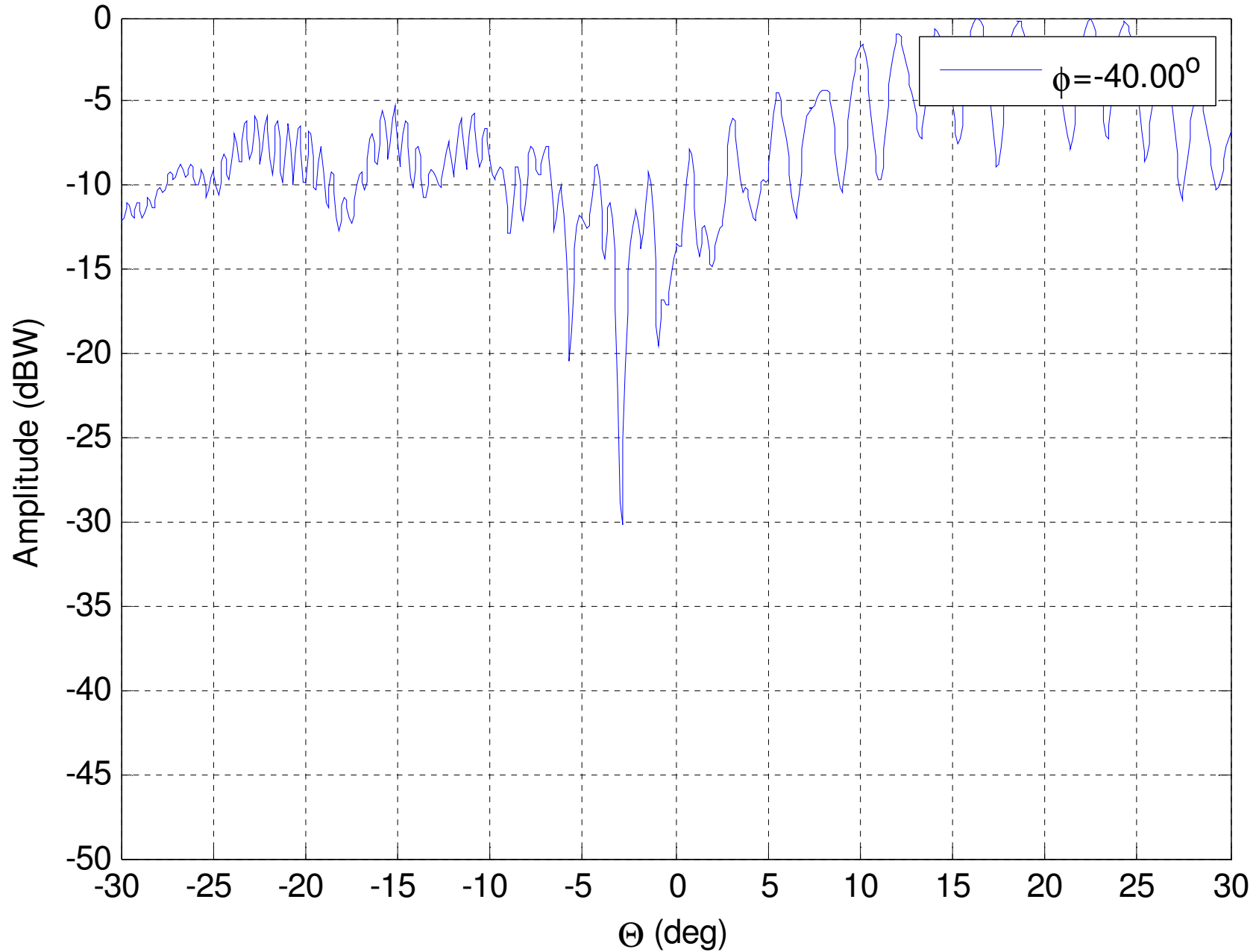
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -8.94 dBW, Date: 15-Dec-2011



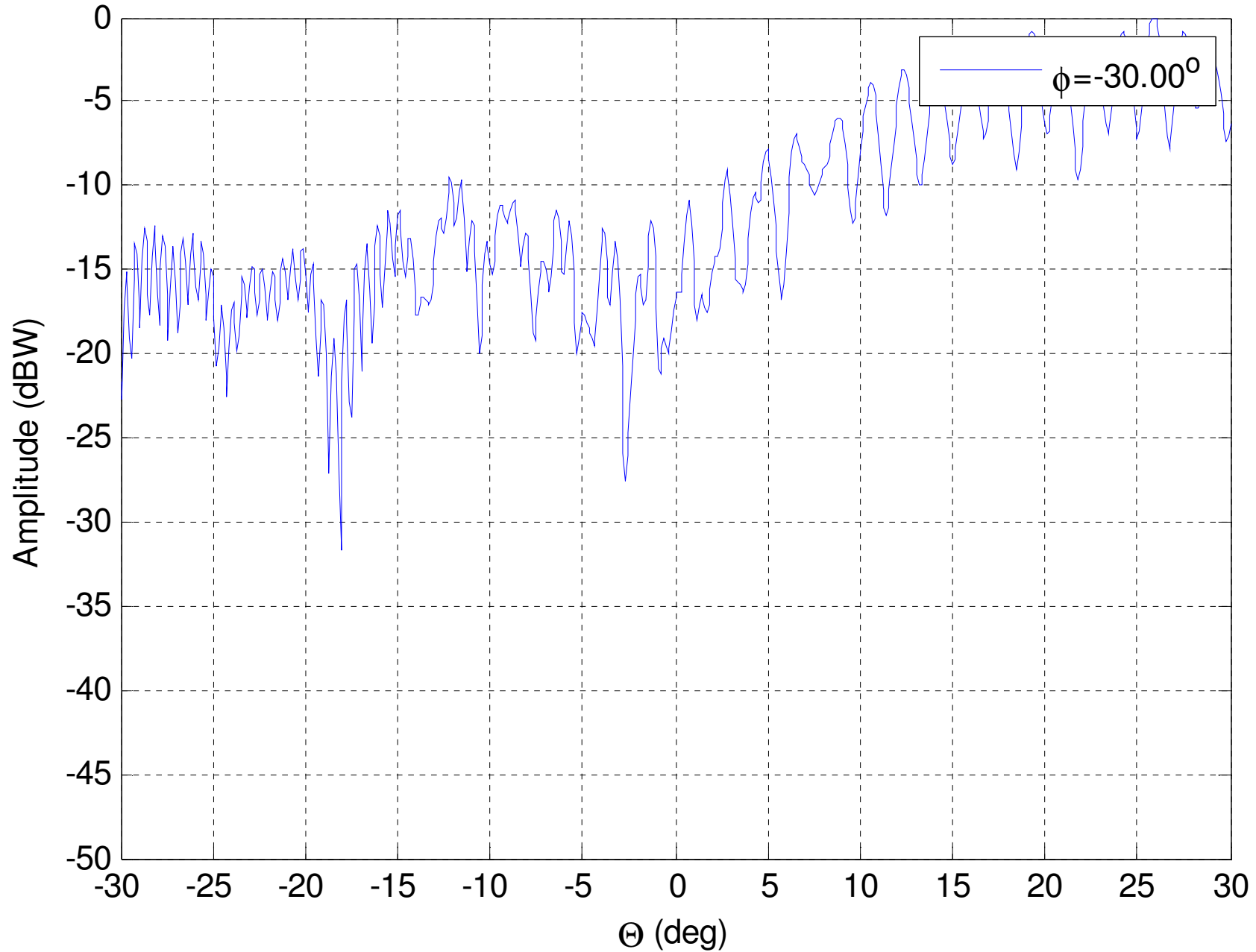
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -7.78 dBW, Date: 15-Dec-2011



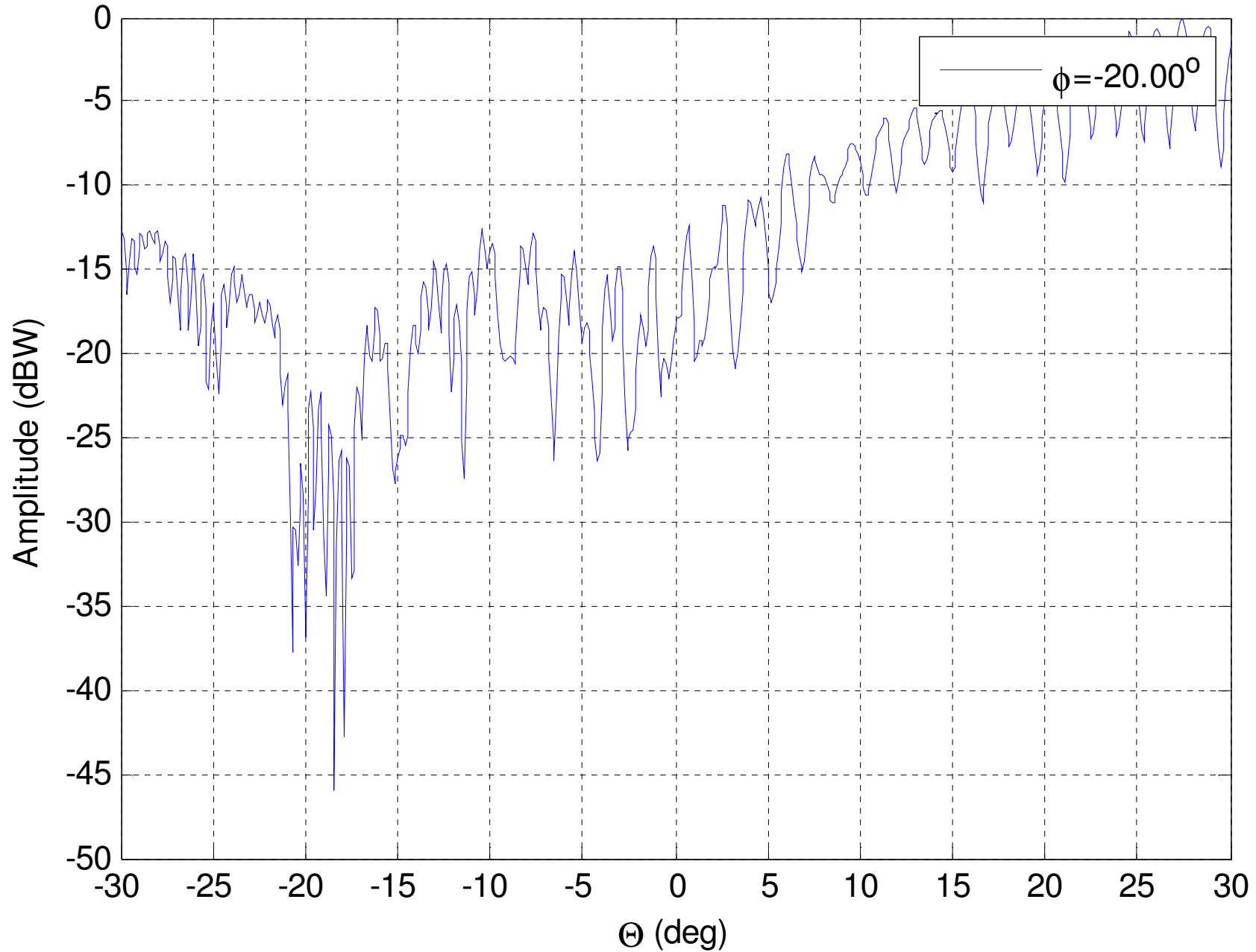
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -4.89 dBW, Date: 15-Dec-2011



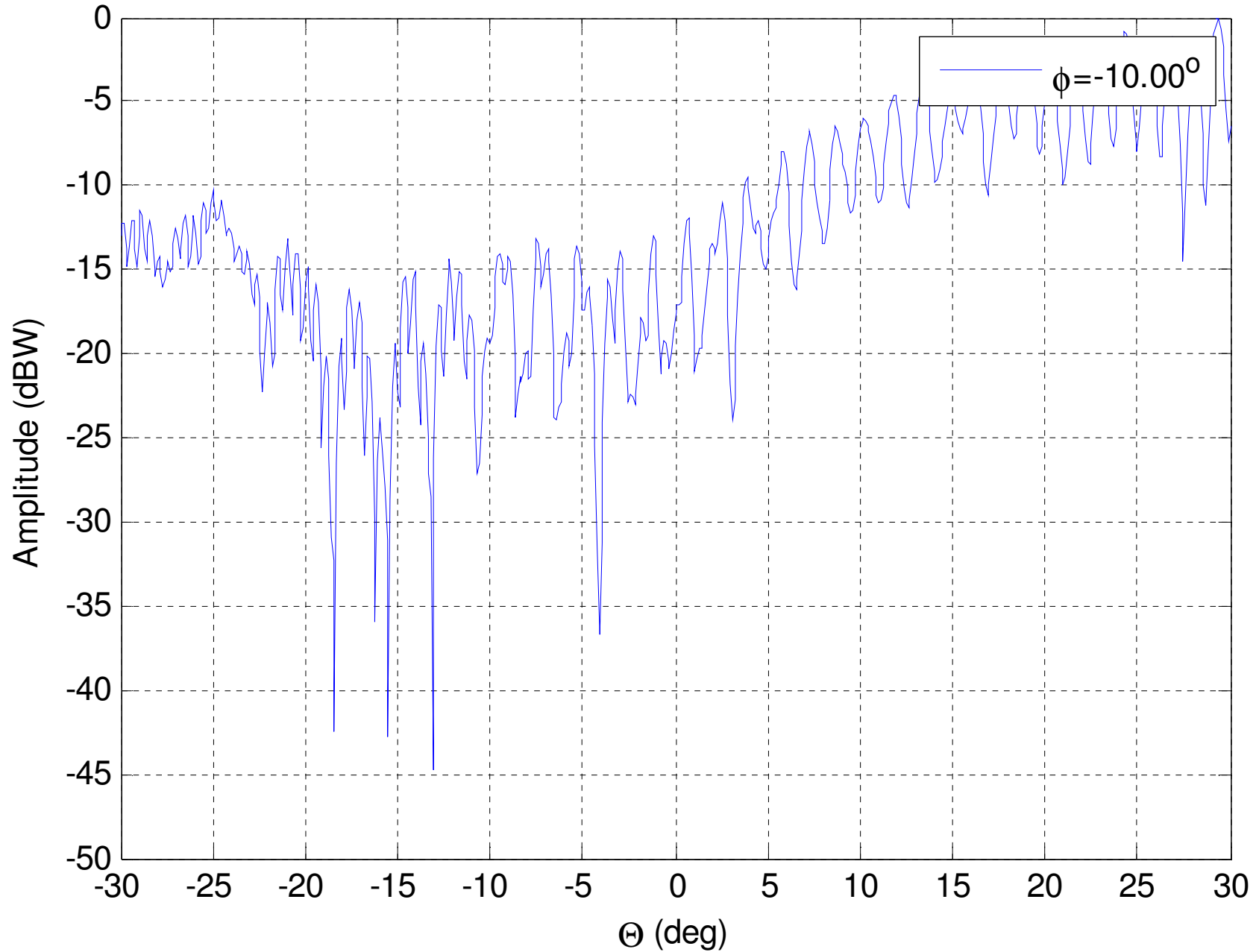
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -3.29 dBW, Date: 15-Dec-2011



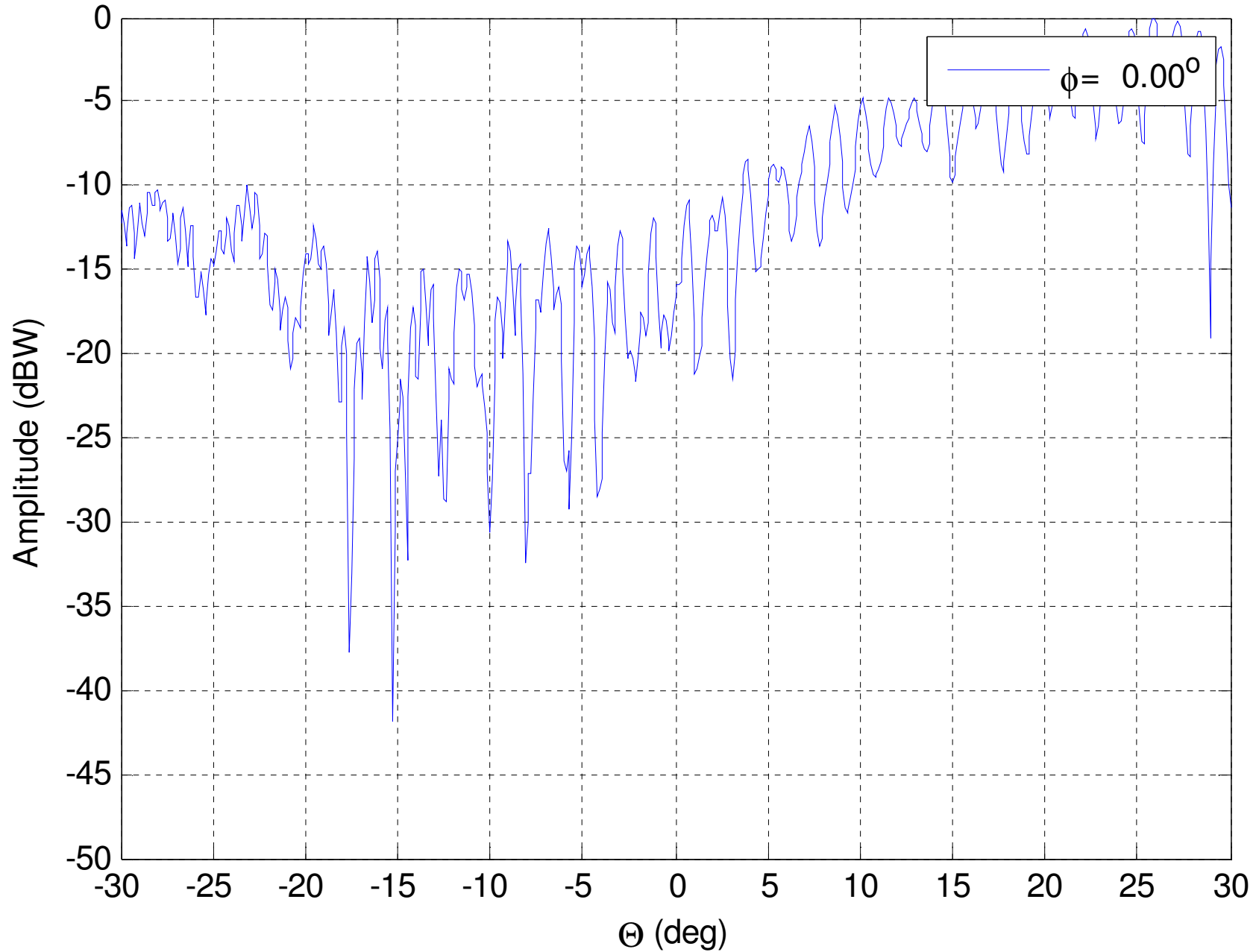
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -3.96 dBW, Date: 15-Dec-2011



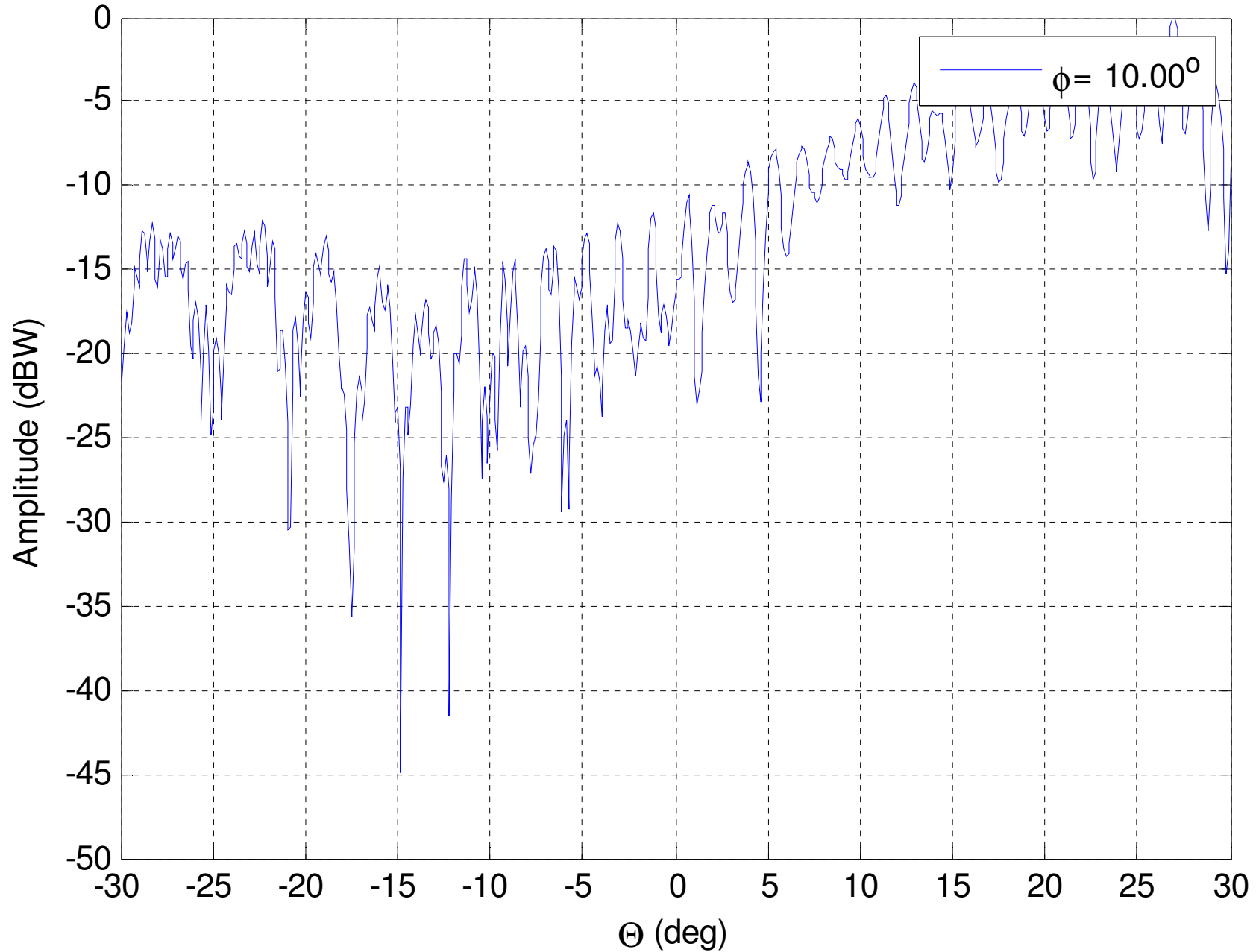
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -5.06 dBW, Date: 15-Dec-2011



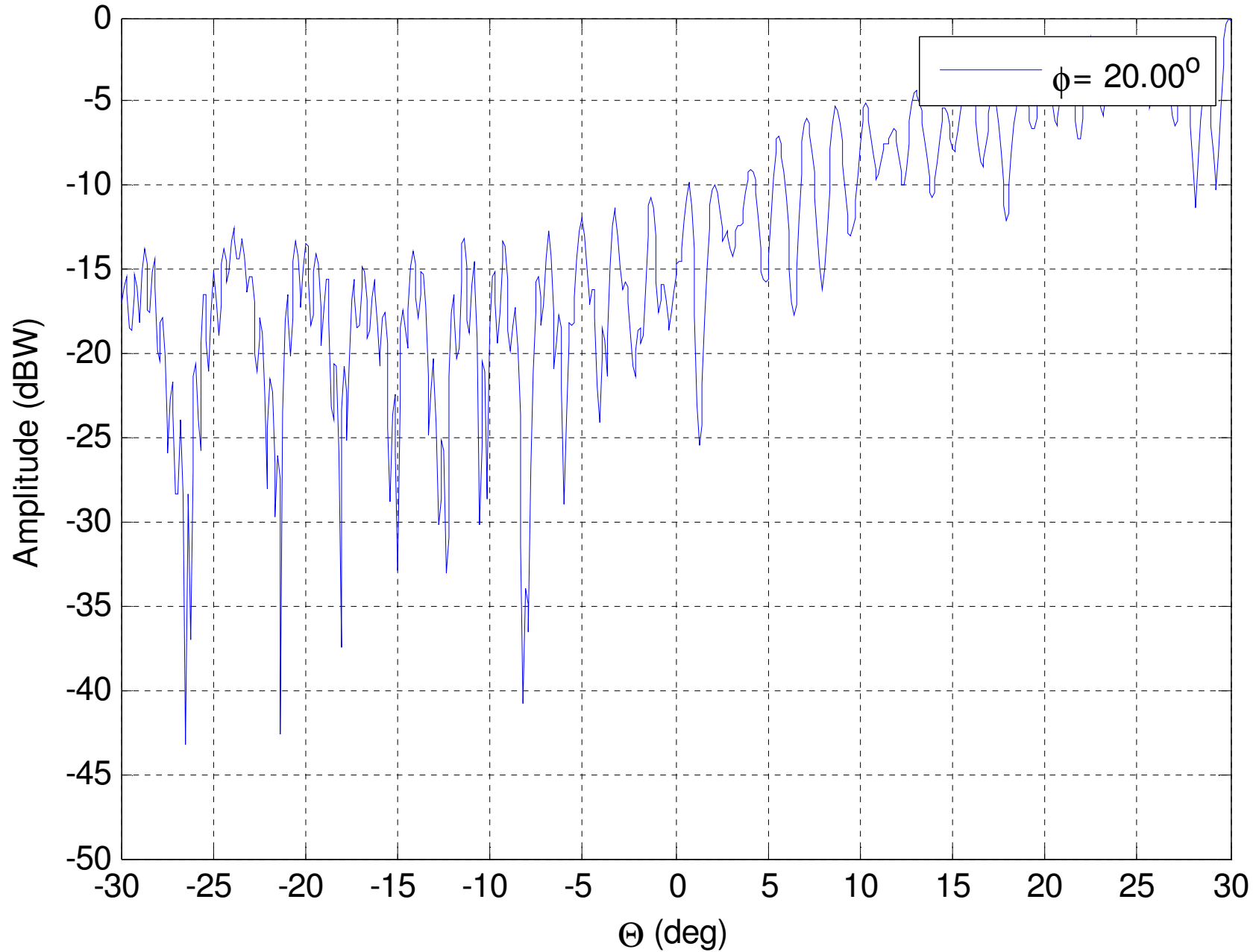
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -5.36 dBW, Date: 15-Dec-2011



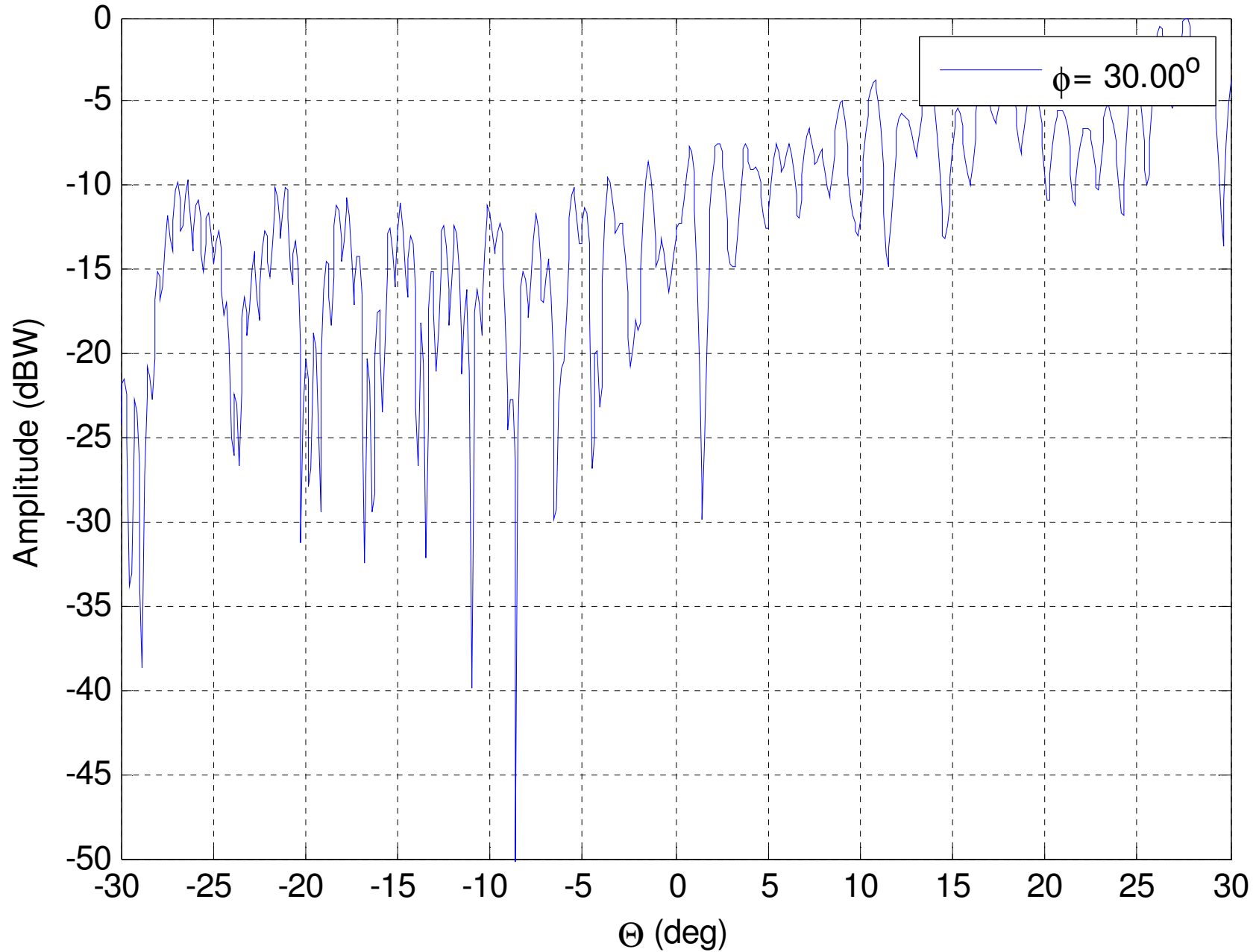
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -6.27 dBW, Date: 15-Dec-2011



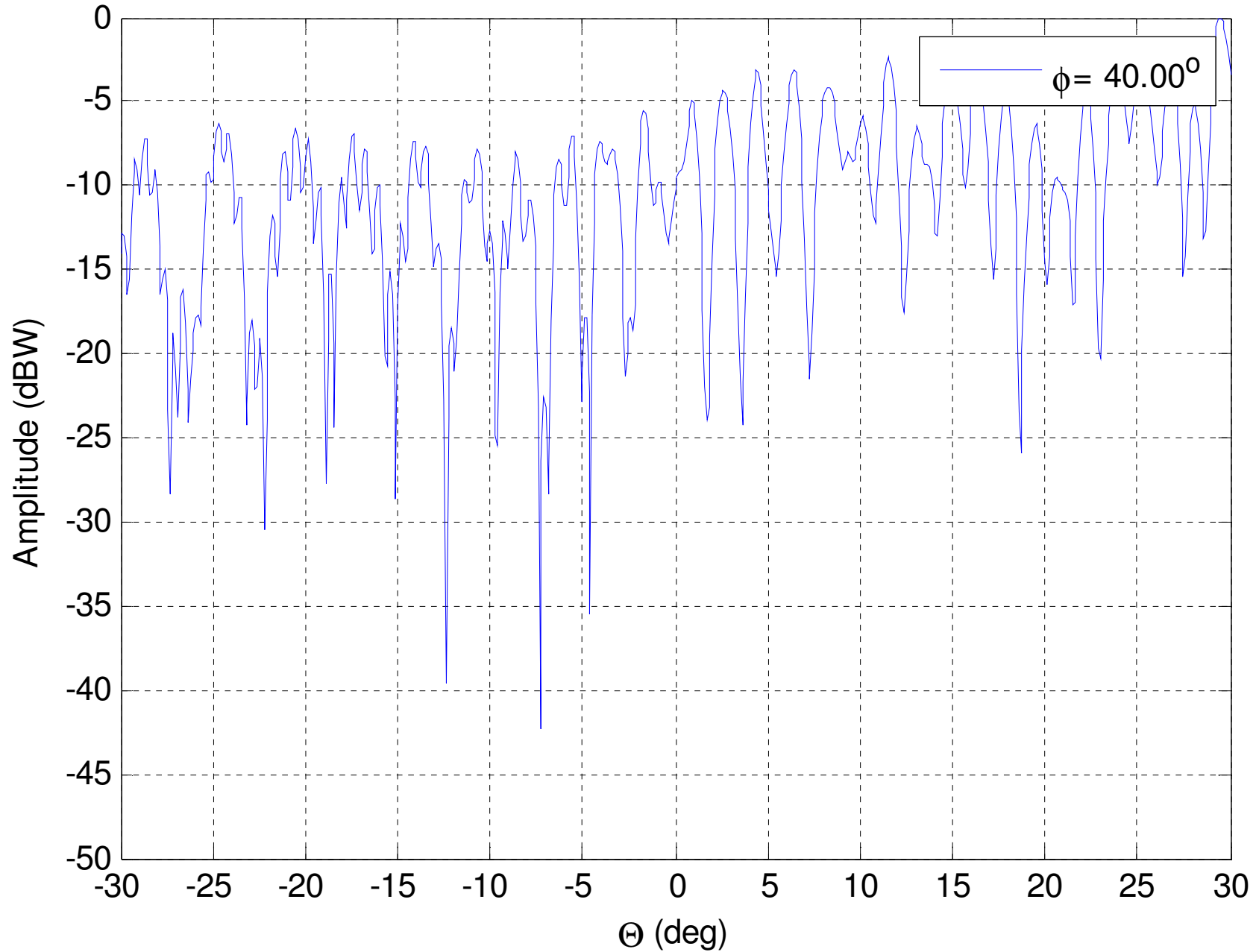
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -8.43 dBW, Date: 15-Dec-2011



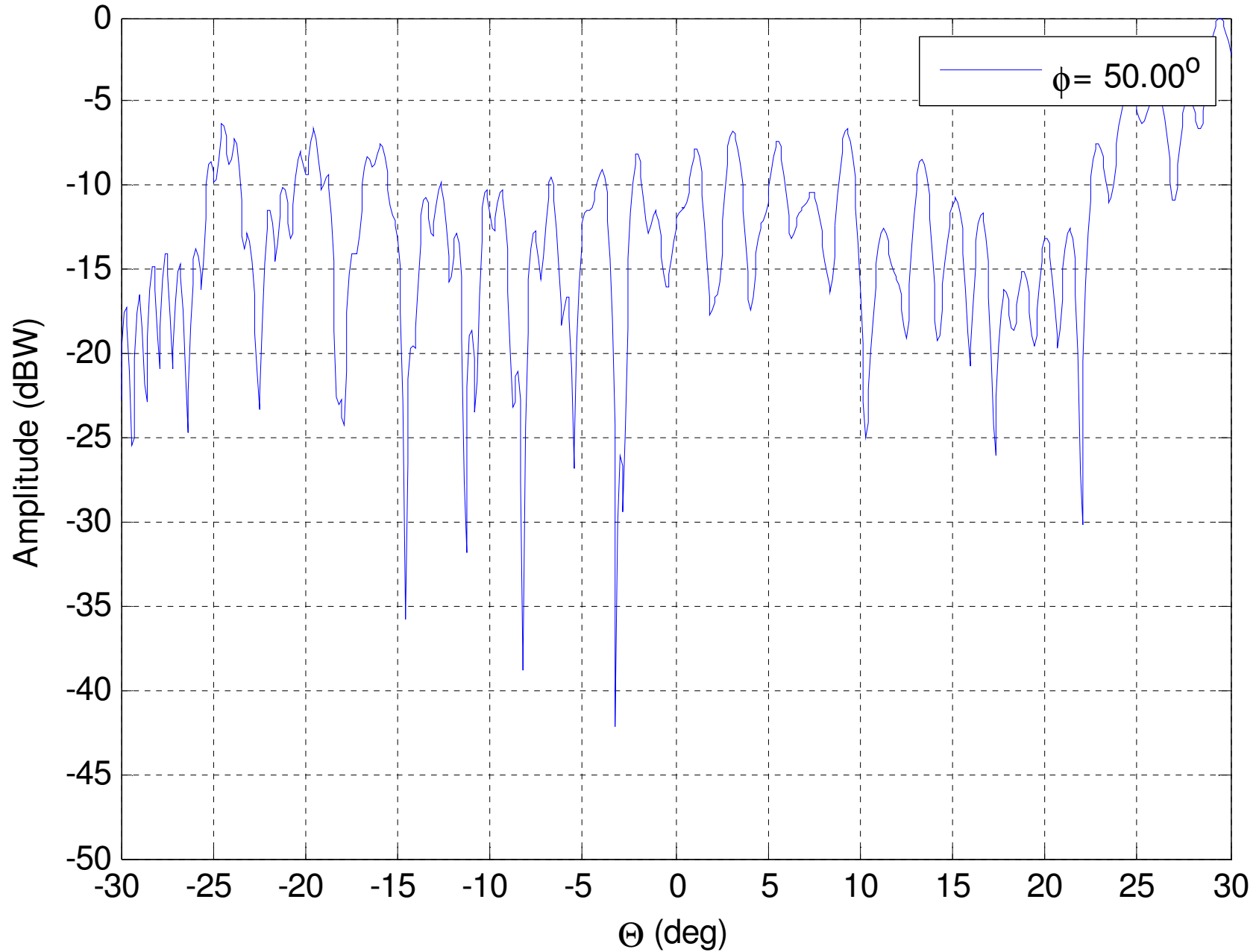
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.44 dBW, Date: 15-Dec-2011



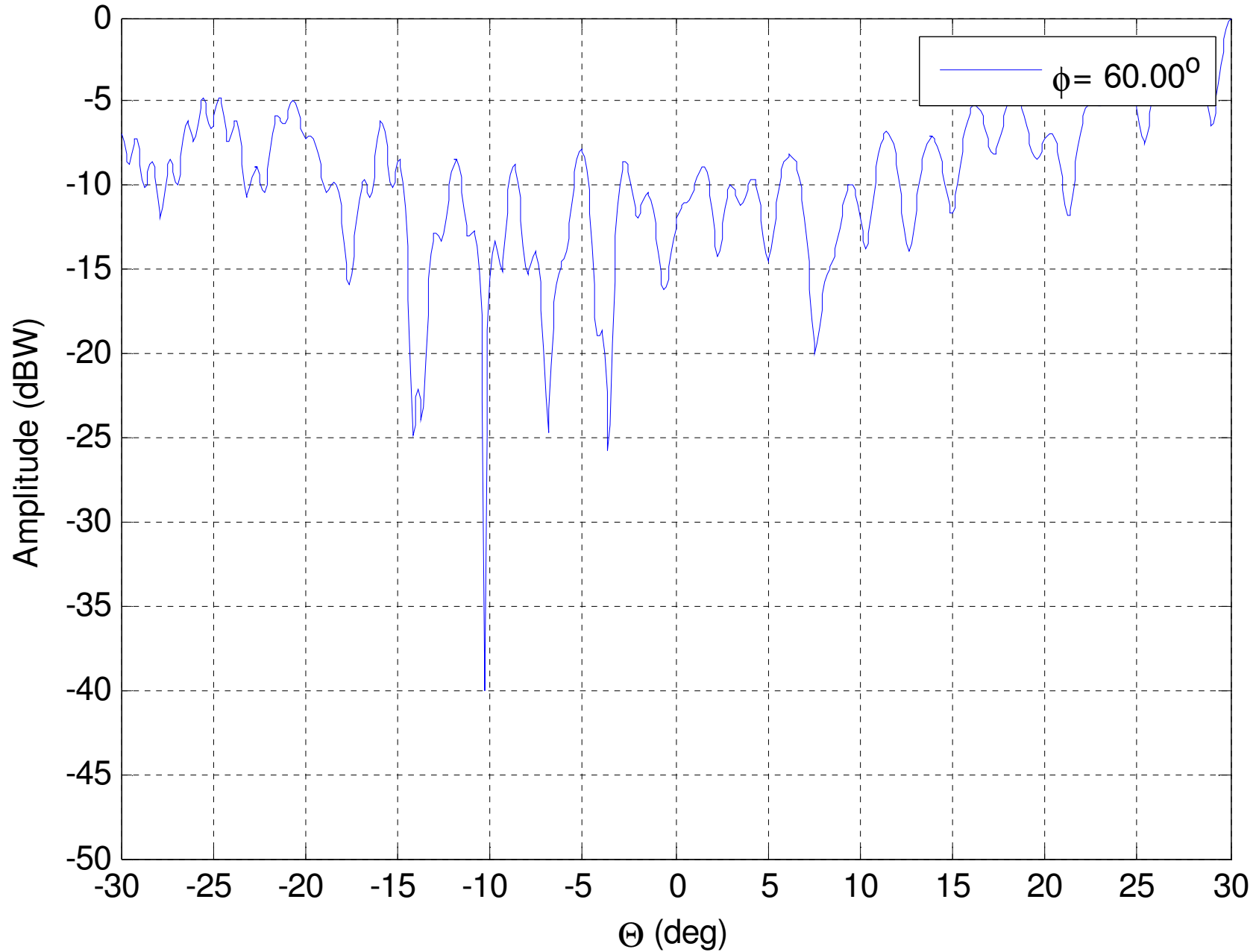
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -8.96 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

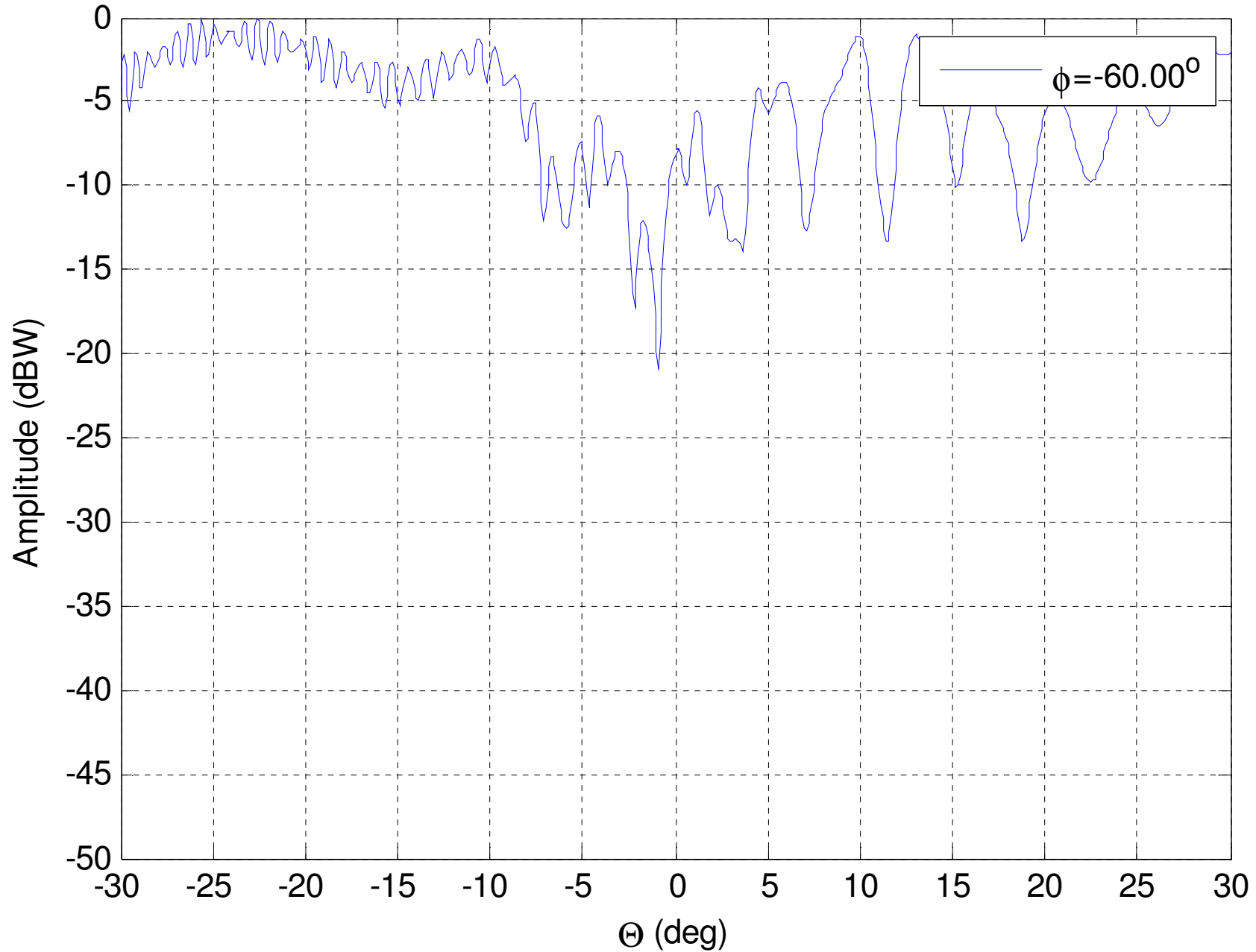
Input file: tx-17.7-rhcp-60.cut, Peak: -8.98 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

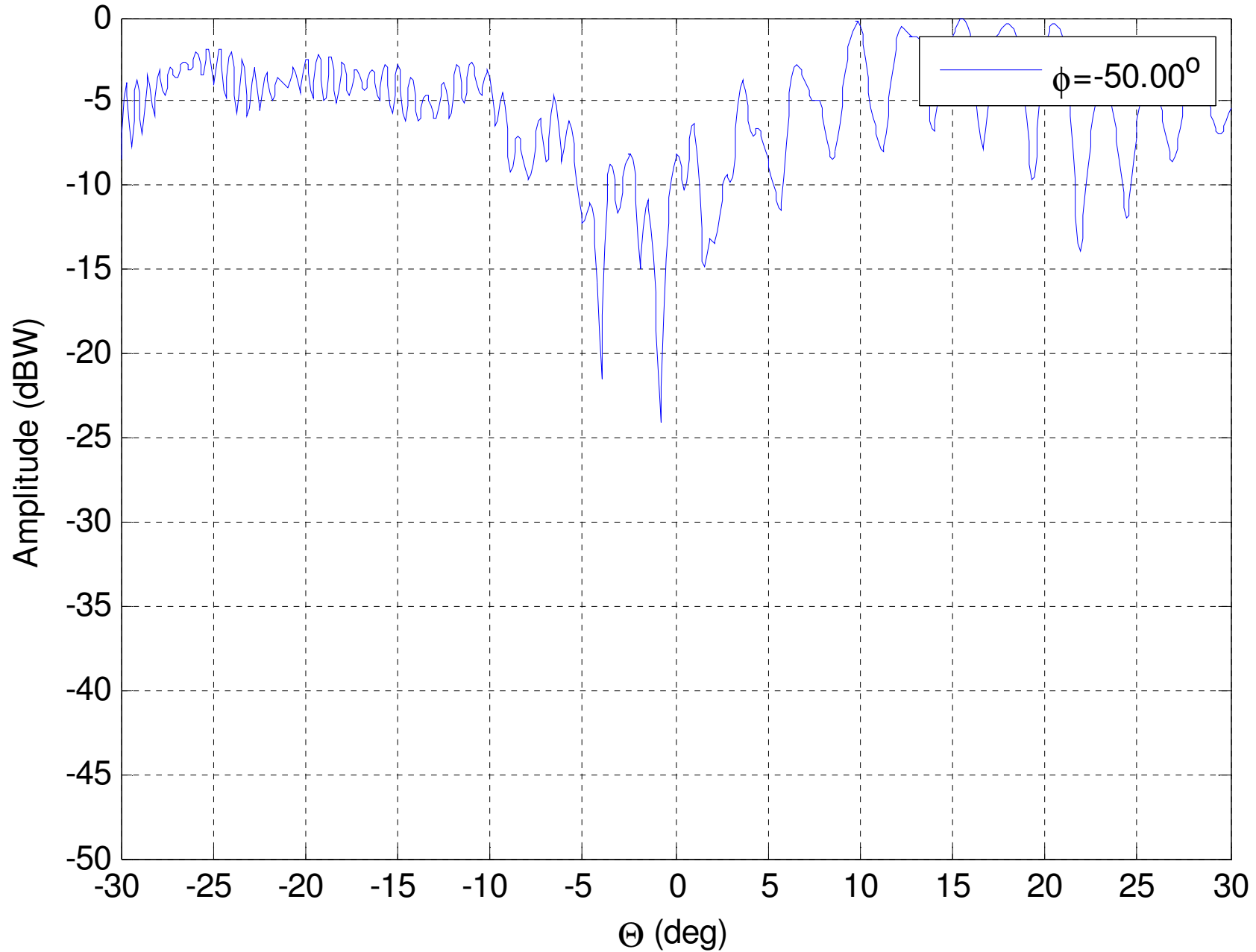
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -10.12 dBW, Date: 15-Dec-2011



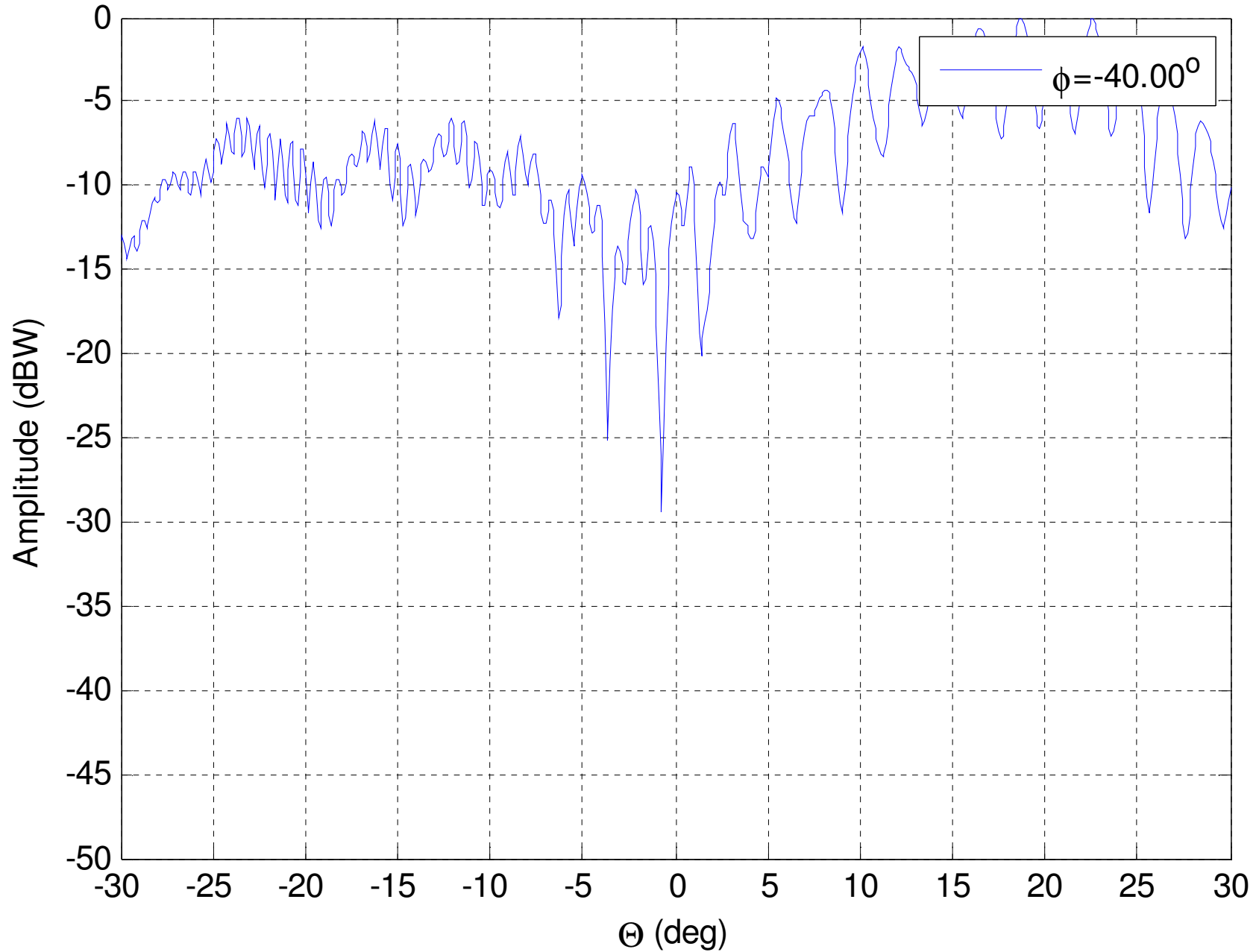
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -9.80 dBW, Date: 15-Dec-2011



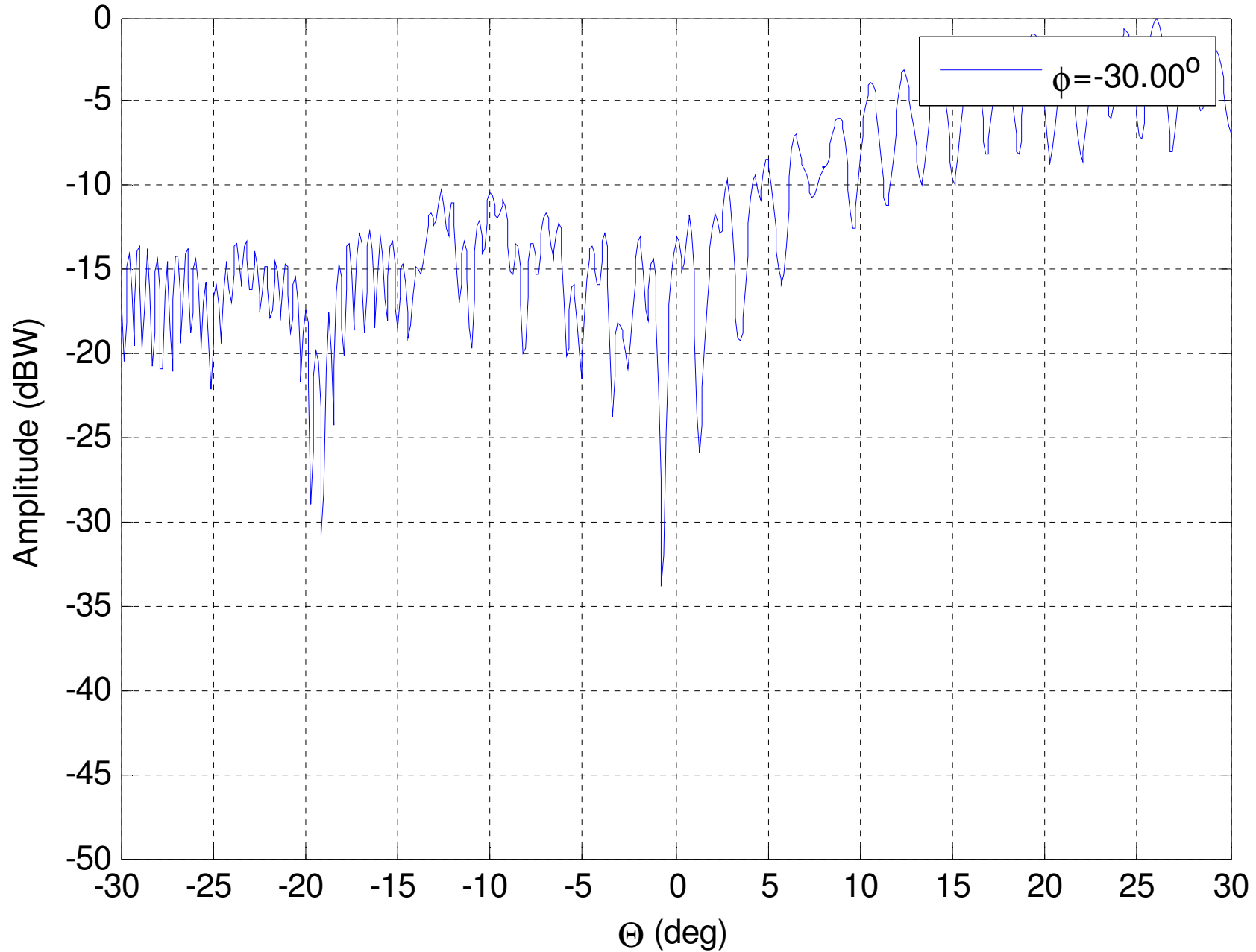
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -7.55 dBW, Date: 15-Dec-2011



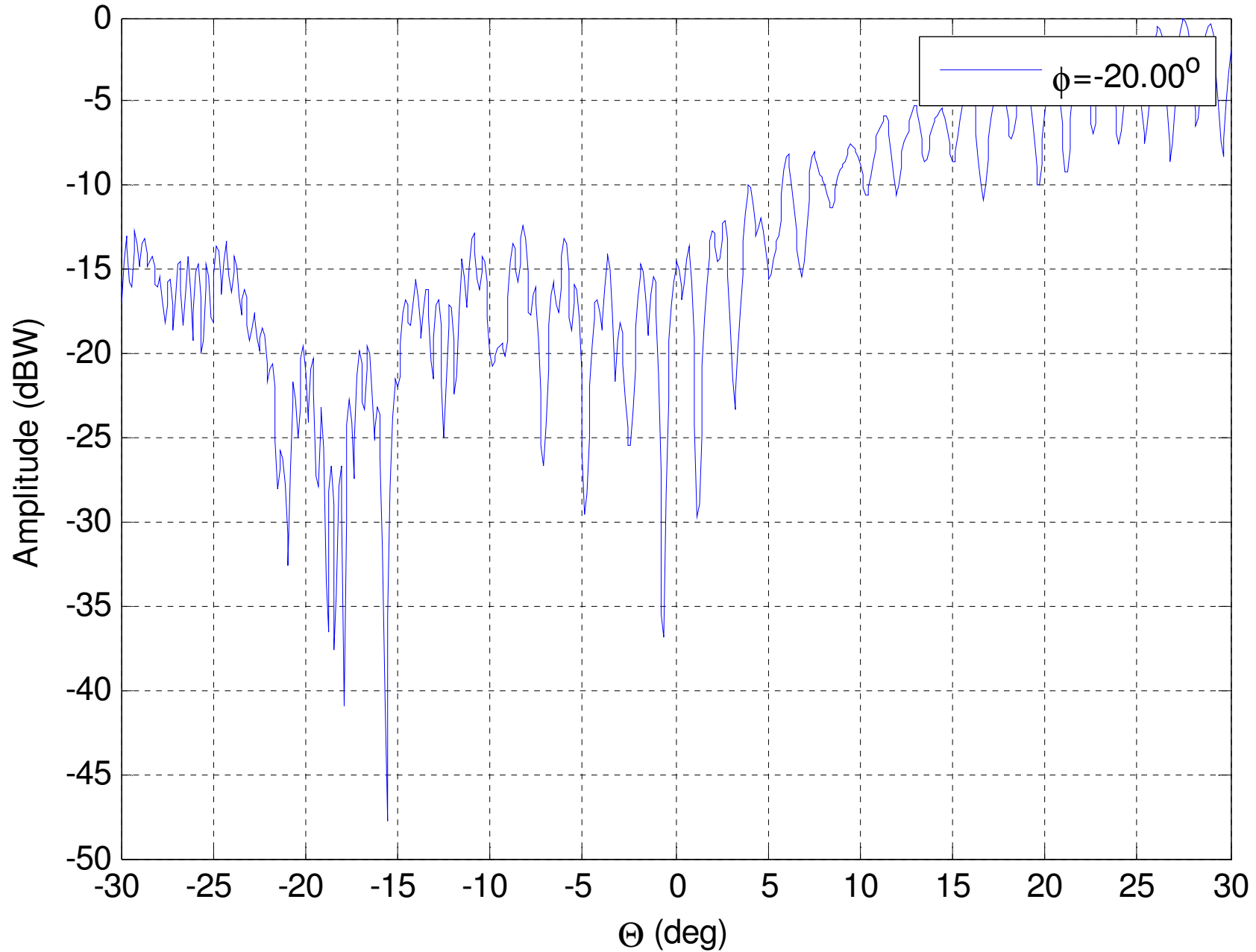
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -4.87 dBW, Date: 15-Dec-2011



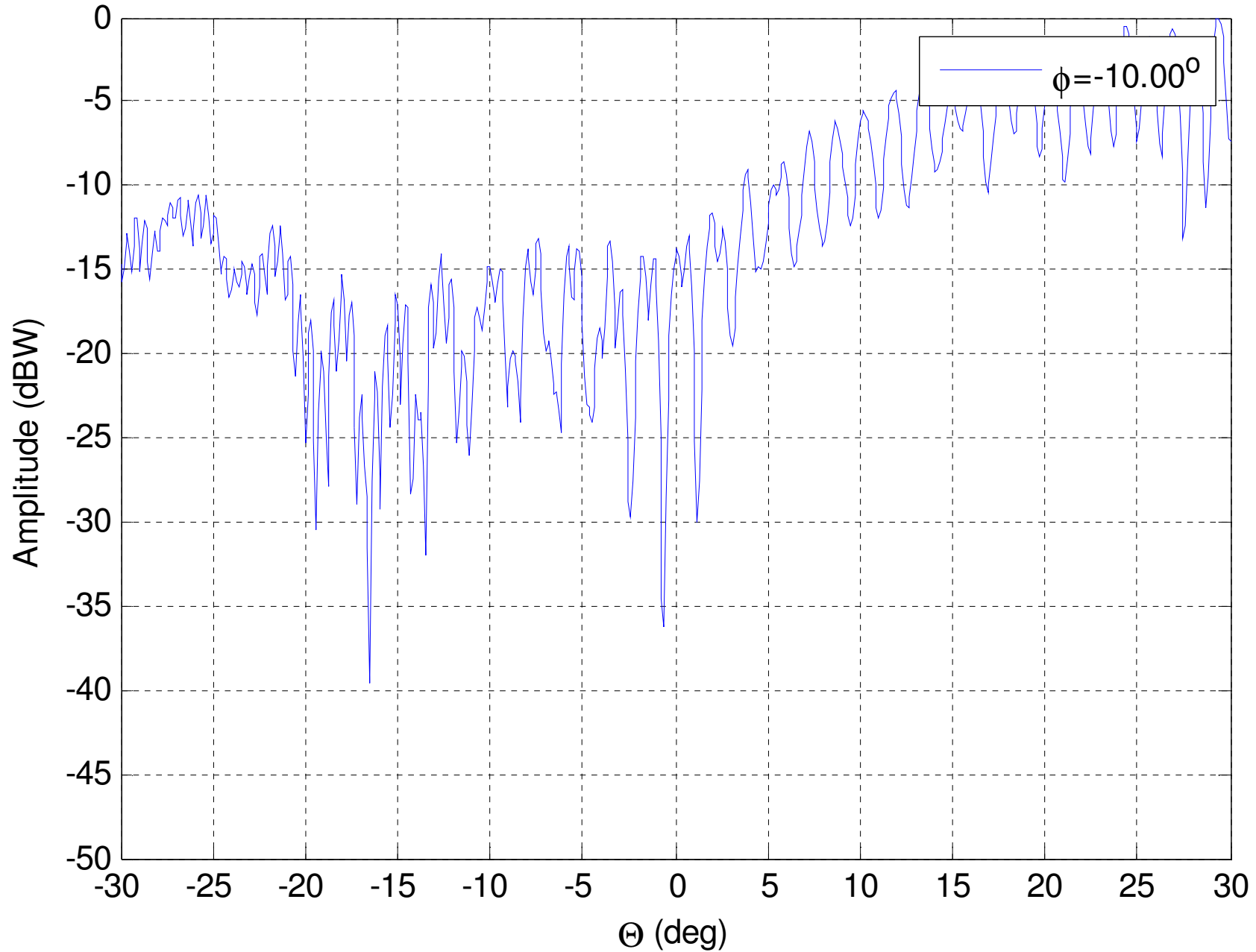
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -3.36 dBW, Date: 15-Dec-2011



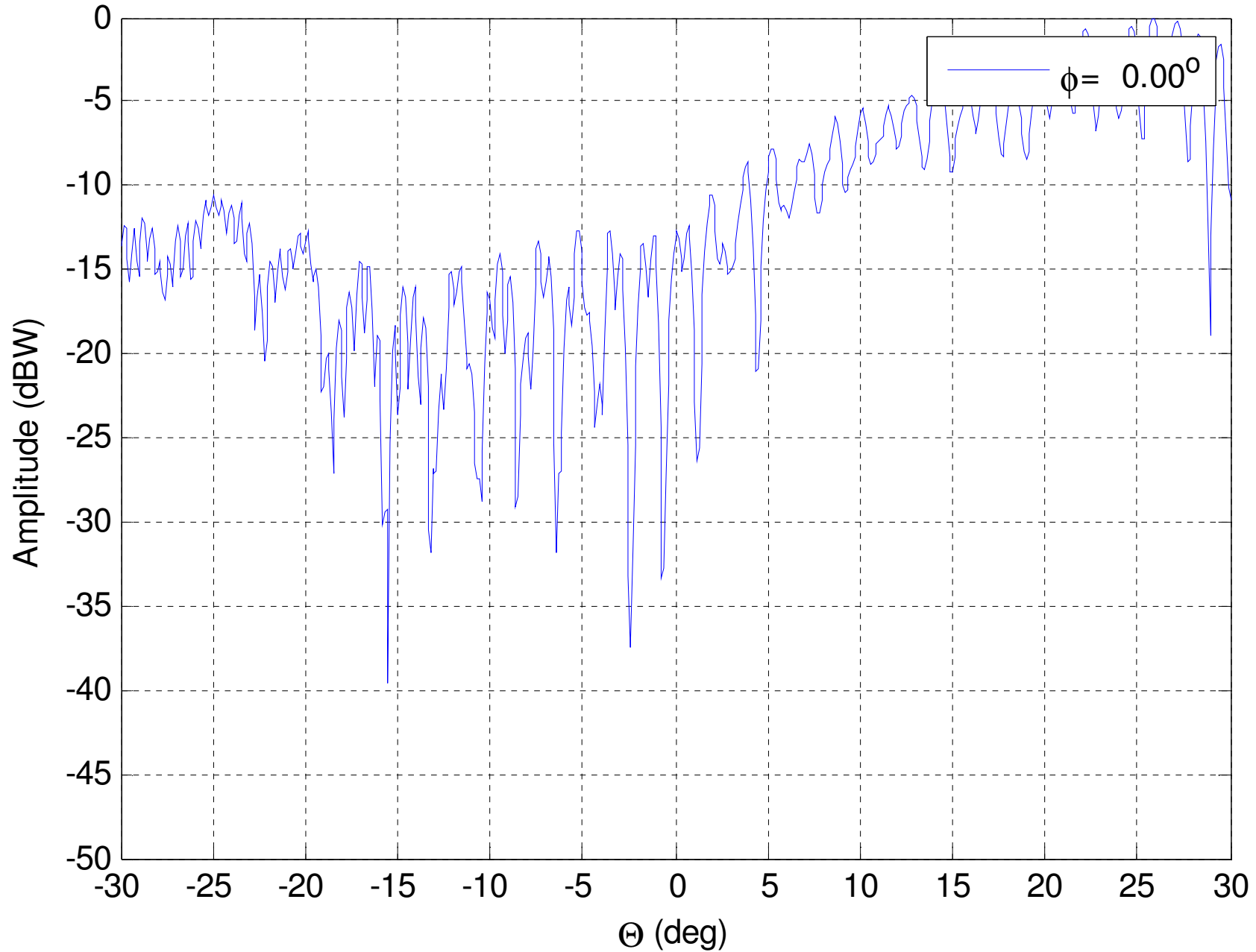
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -4.10 dBW, Date: 15-Dec-2011



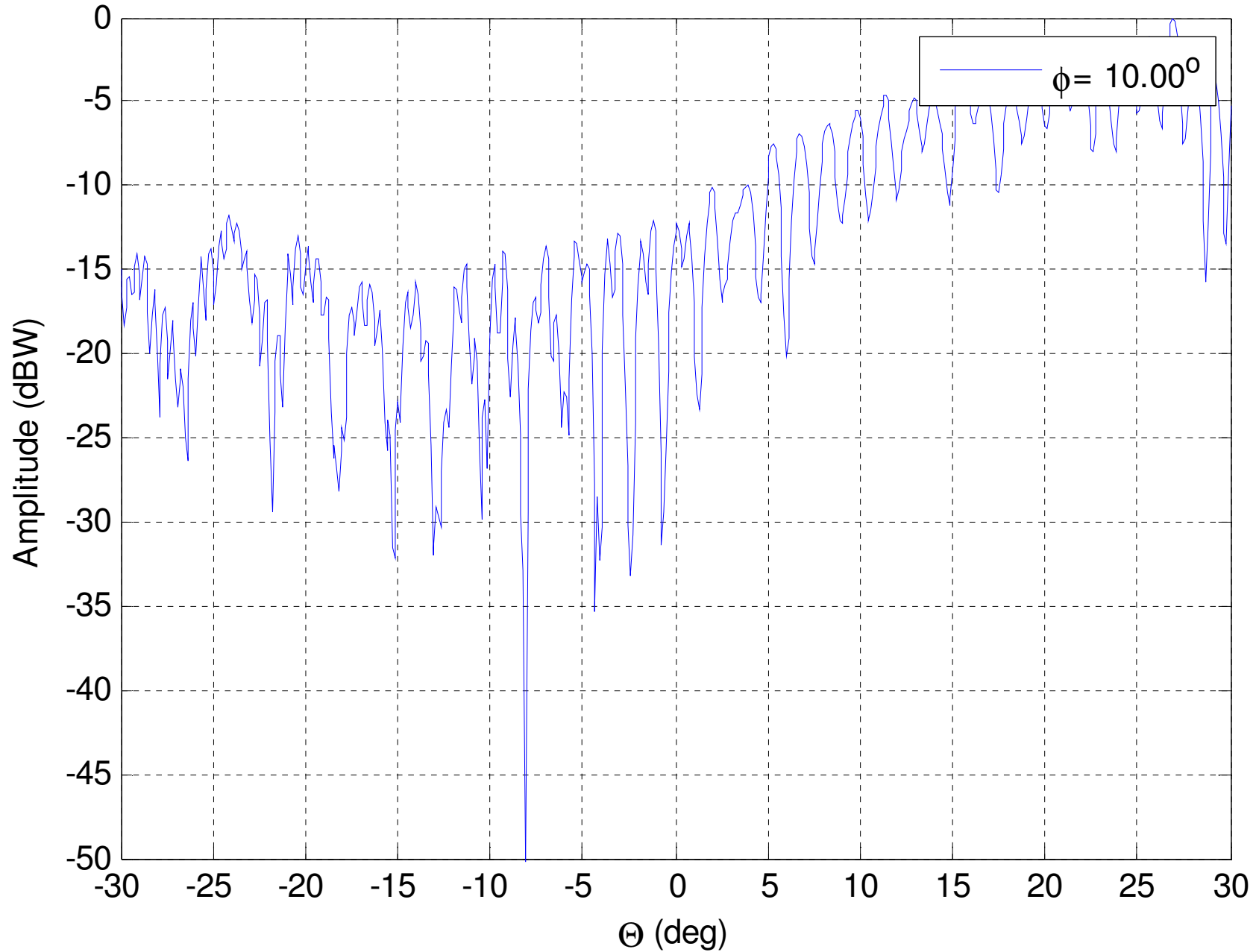
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -5.10 dBW, Date: 15-Dec-2011



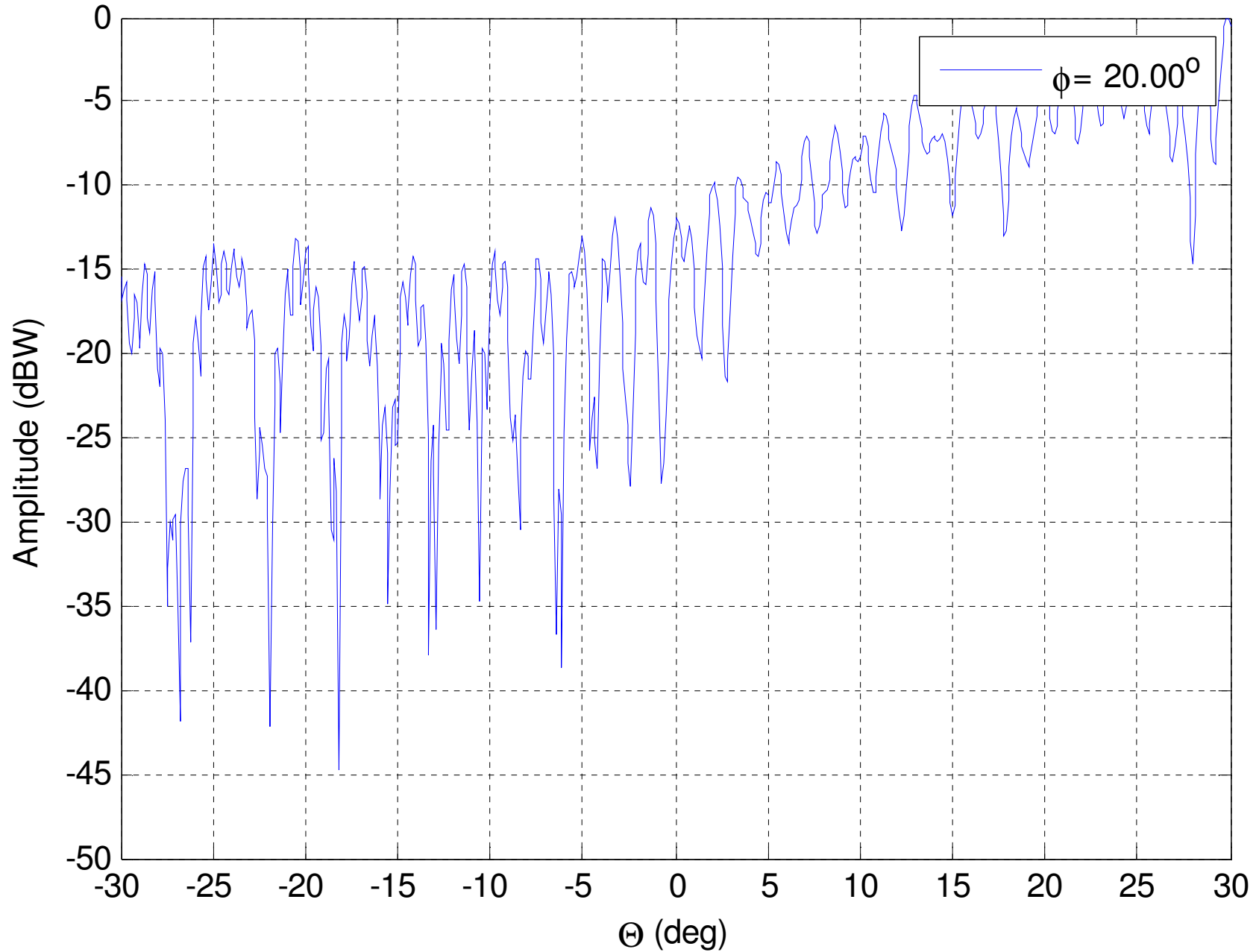
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -5.50 dBW, Date: 15-Dec-2011



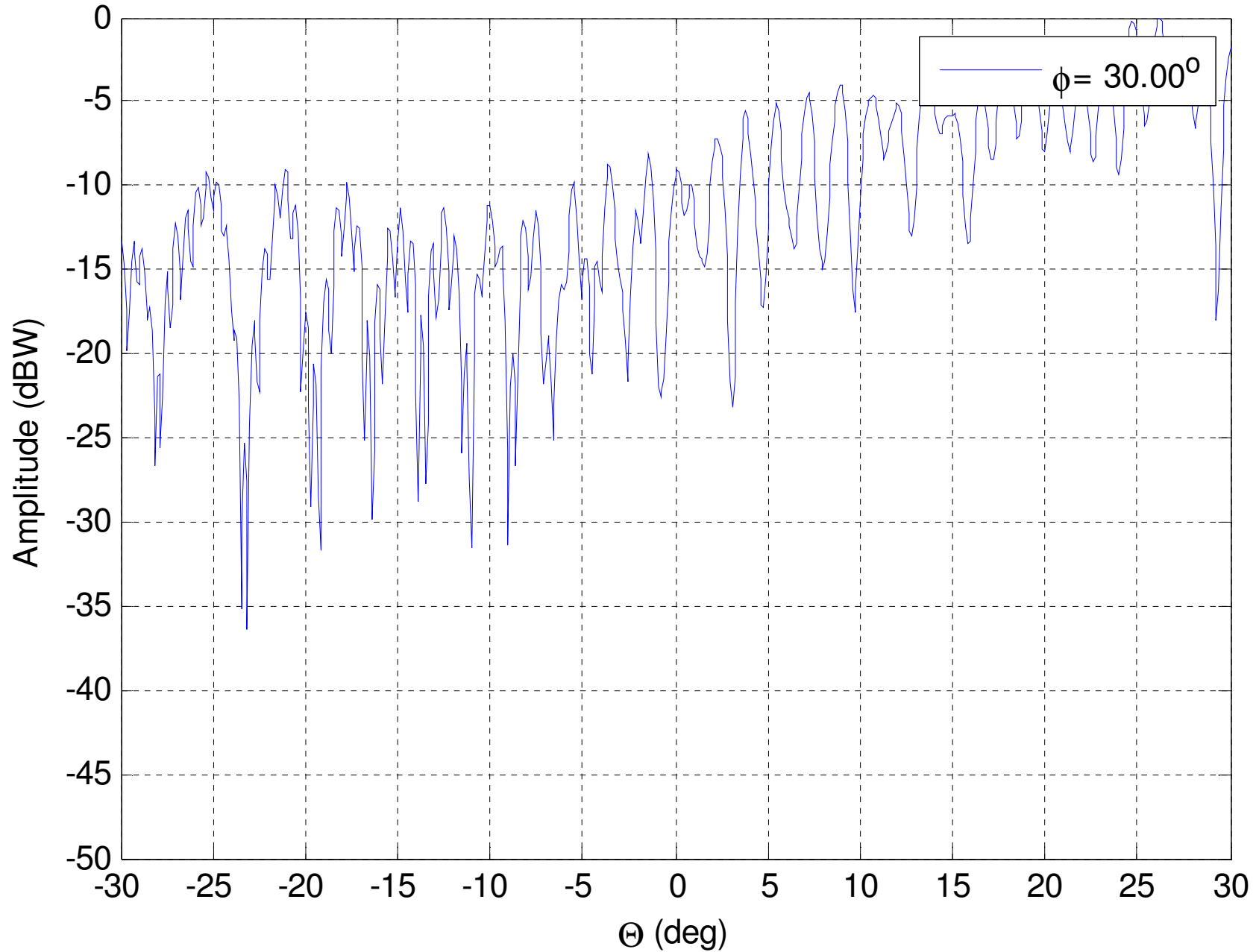
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -5.89 dBW, Date: 15-Dec-2011



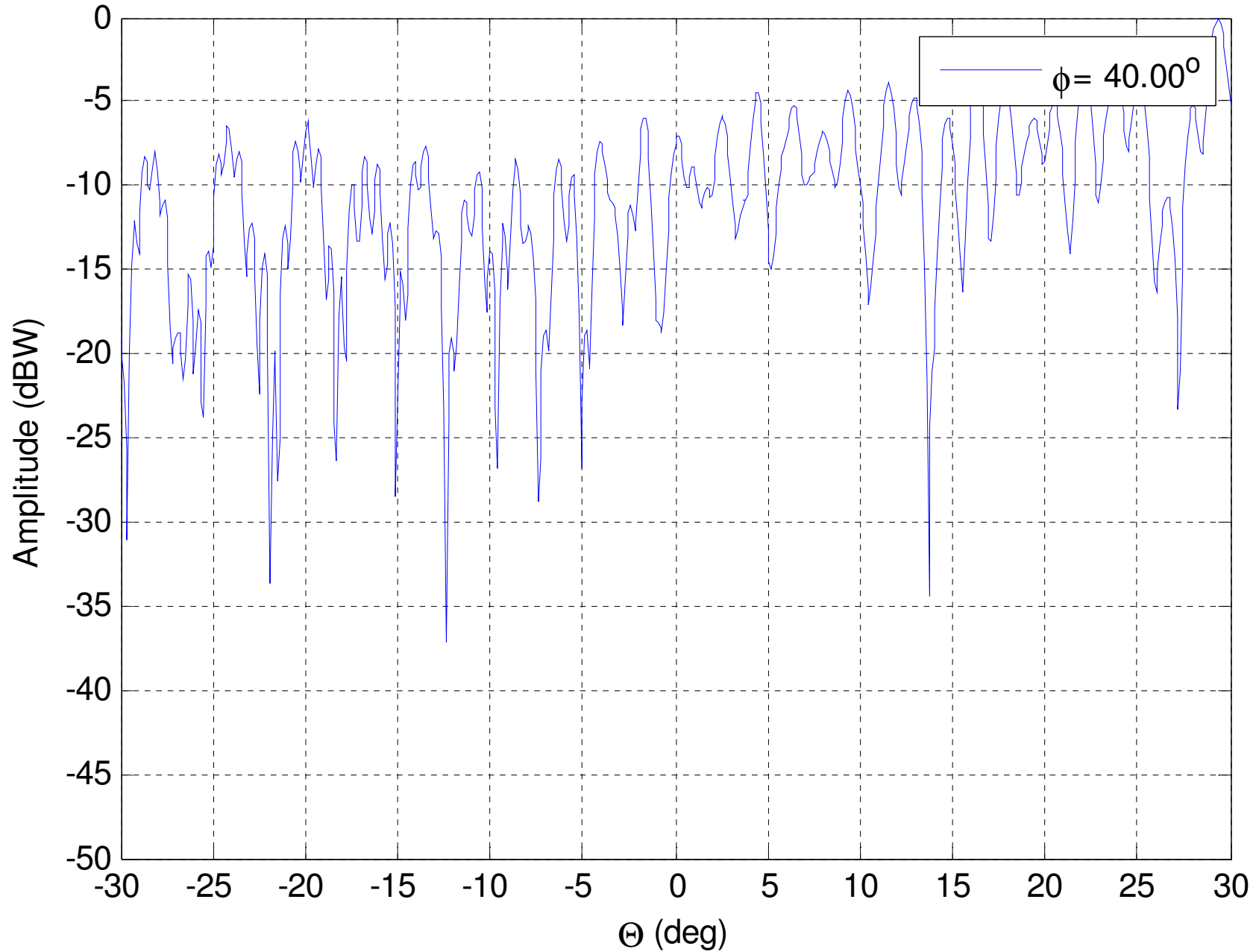
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -8.79 dBW, Date: 15-Dec-2011



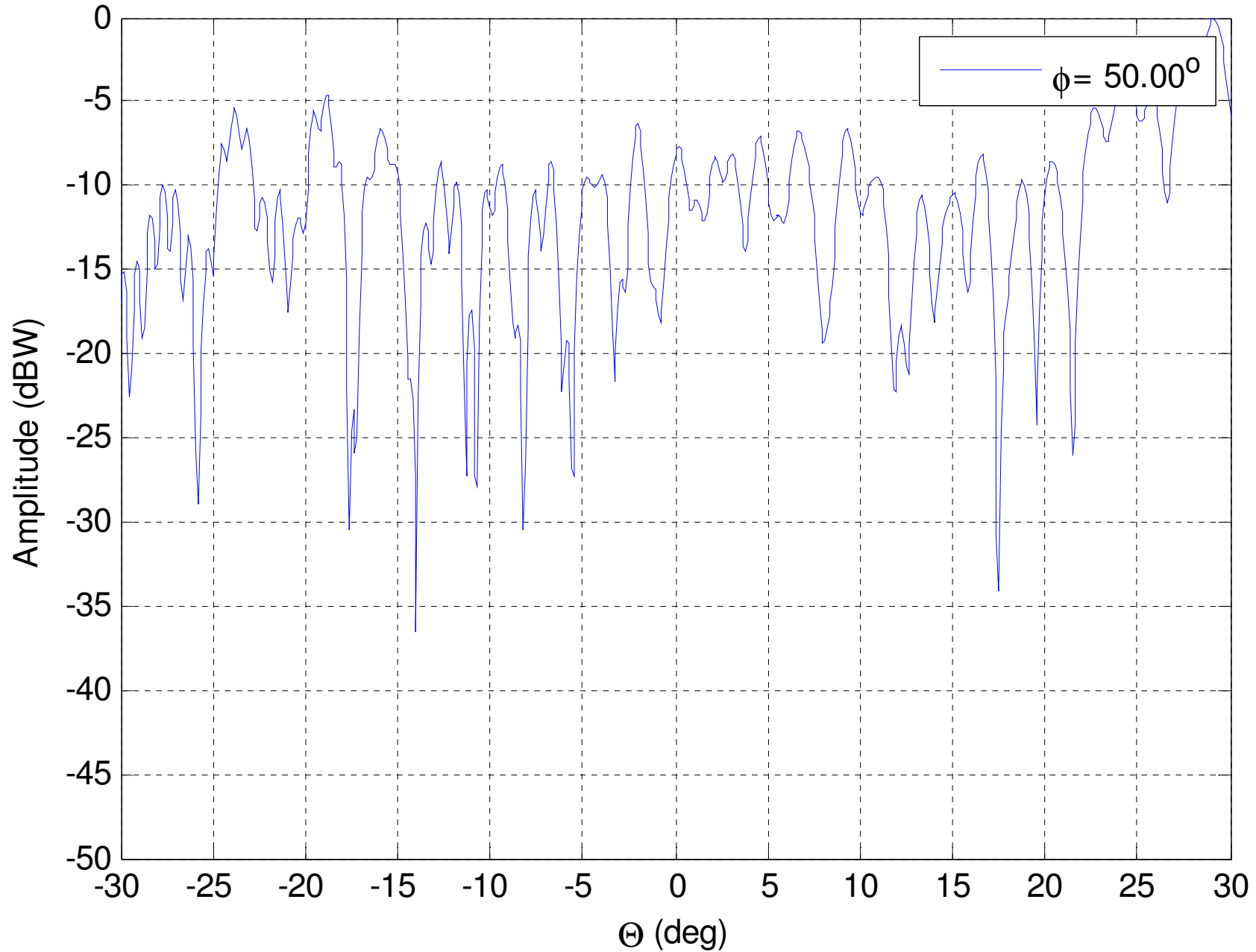
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -10.67 dBW, Date: 15-Dec-2011



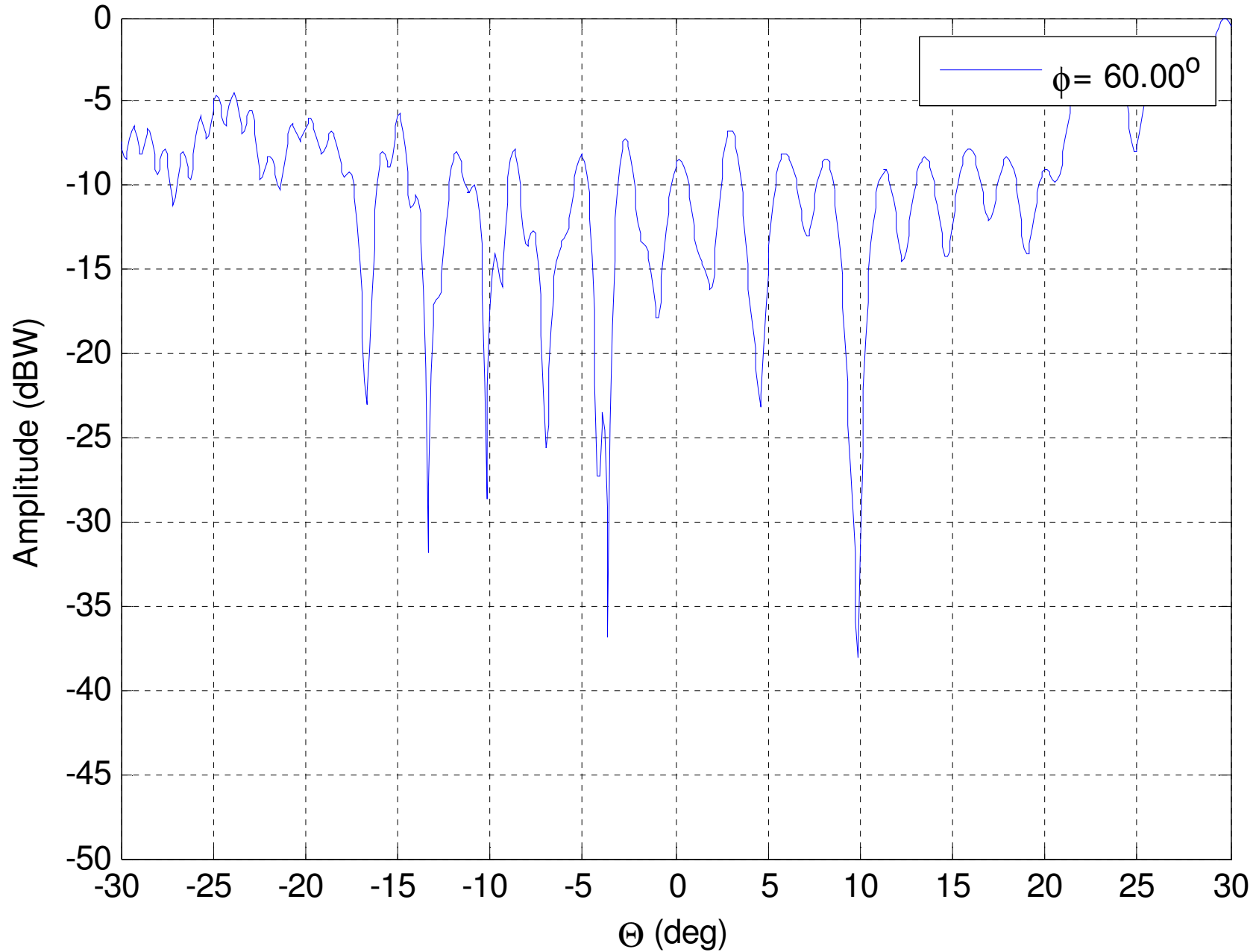
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -10.01 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -9.25 dBW, Date: 15-Dec-2011



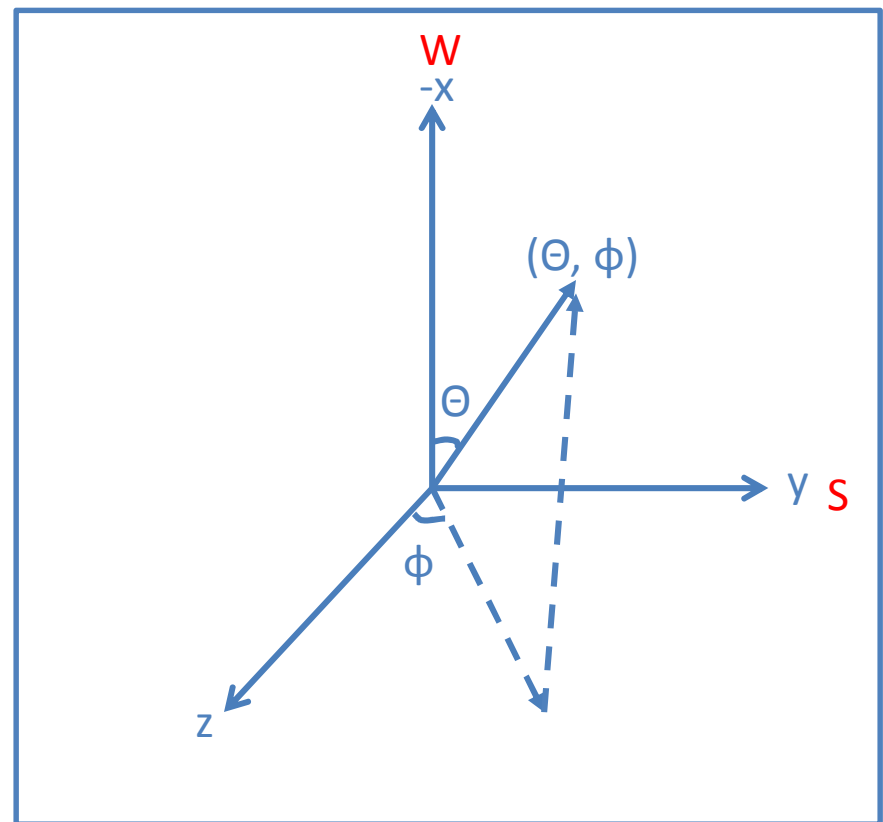
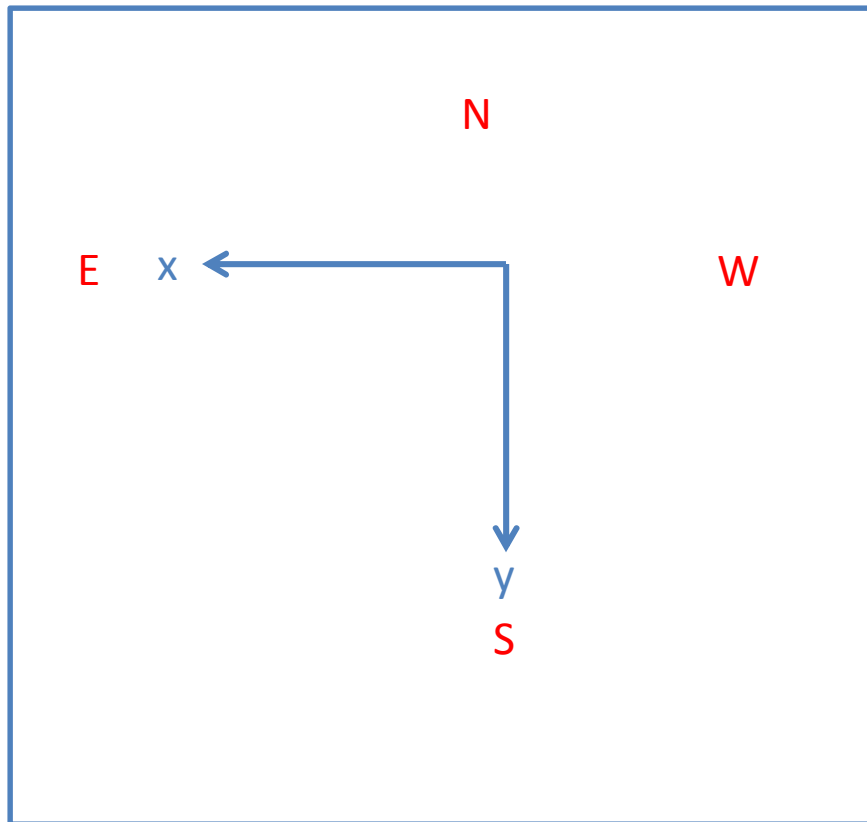
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 31

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



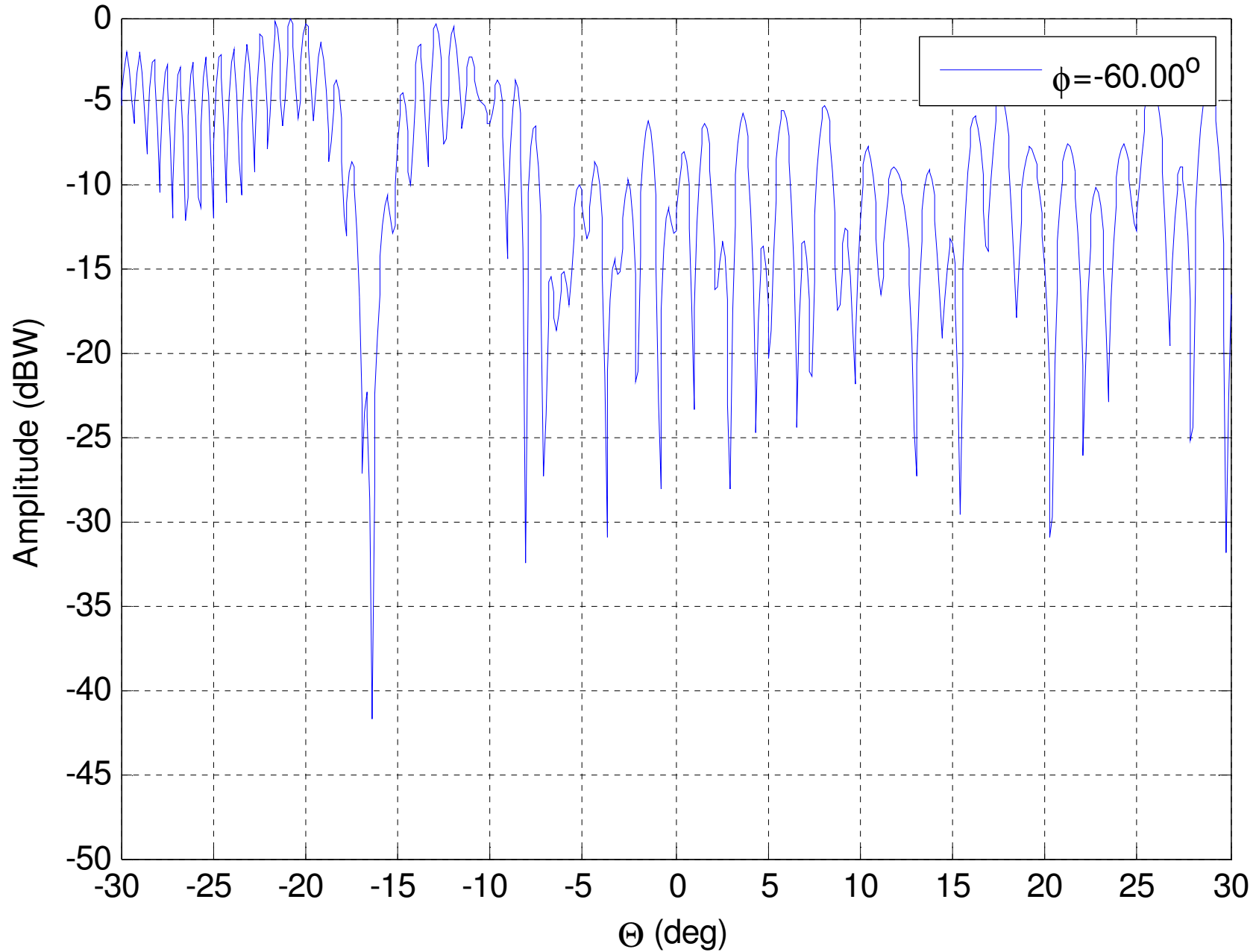
Spot Beam31, -X Axis Plots

- 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

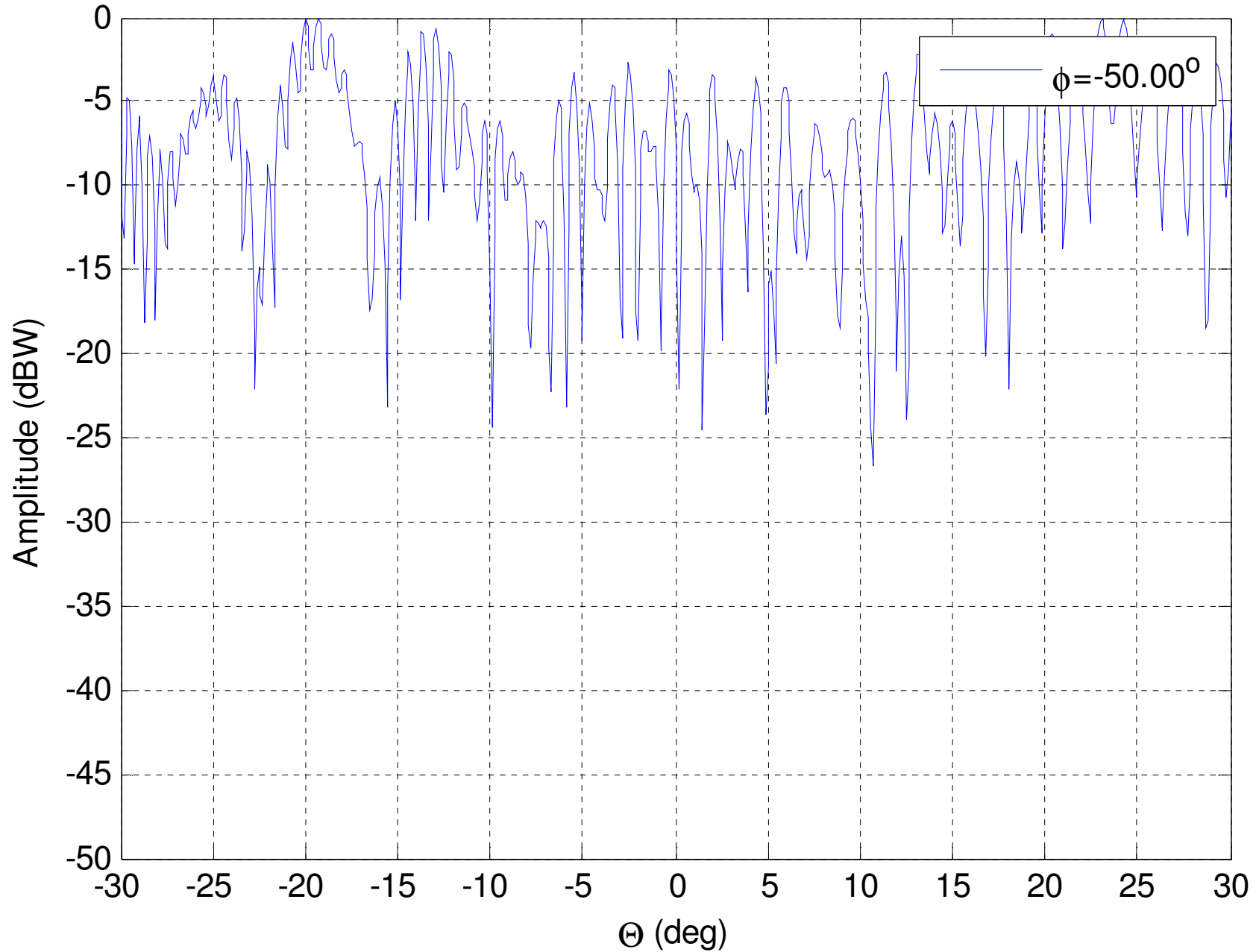
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.63 dBW, Date: 15-Dec-2011



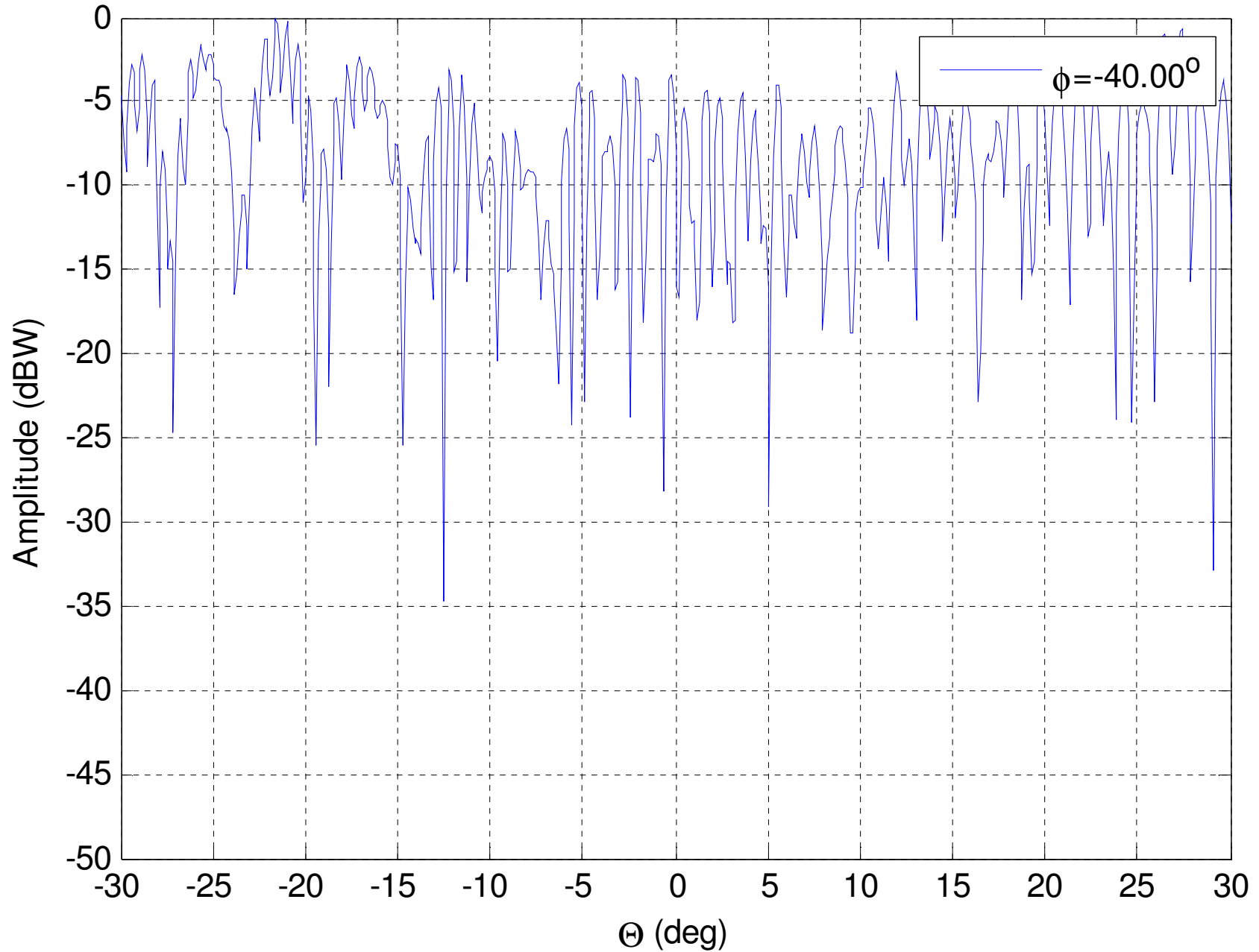
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -10.49 dBW, Date: 15-Dec-2011



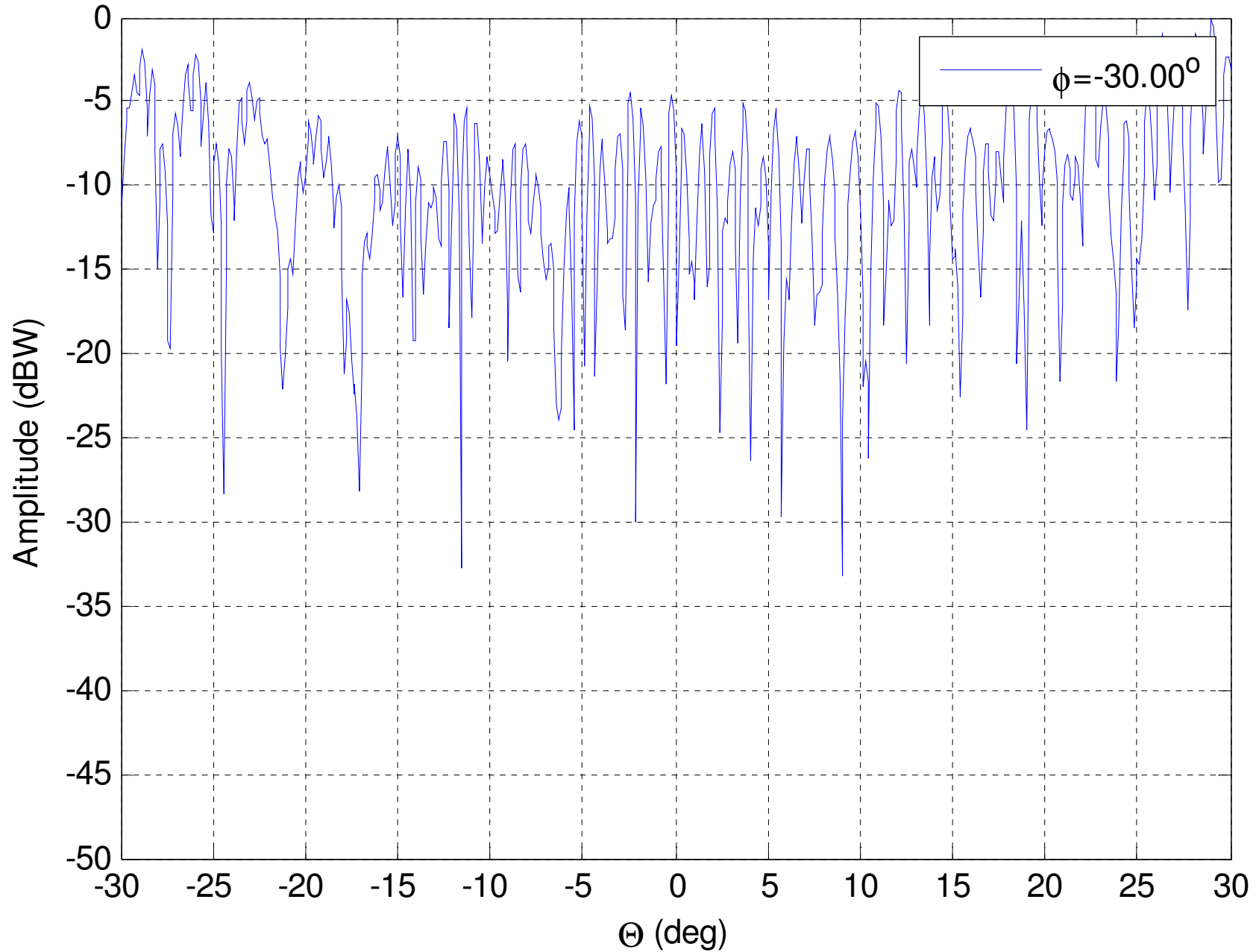
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.30 dBW, Date: 15-Dec-2011



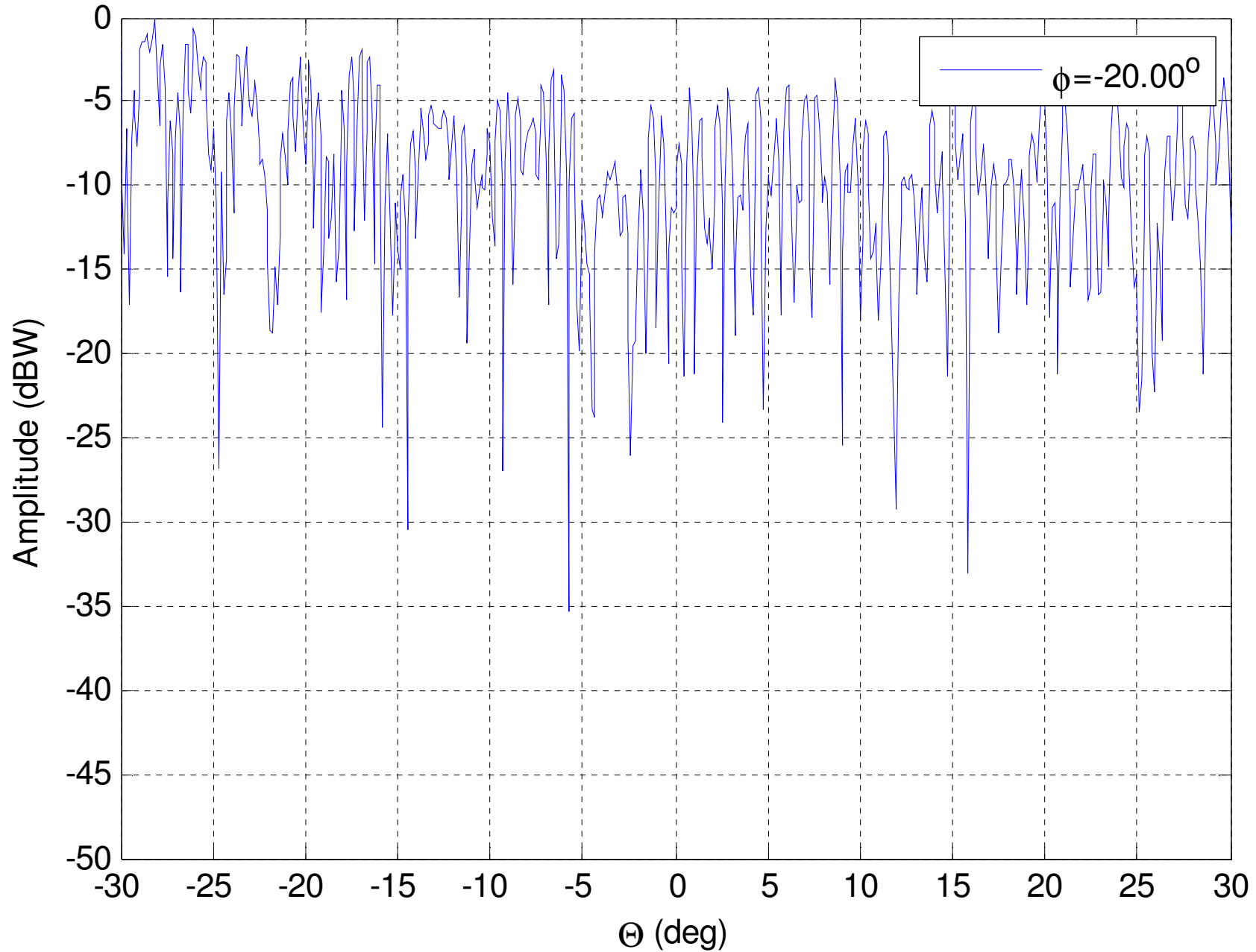
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -8.96 dBW, Date: 15-Dec-2011



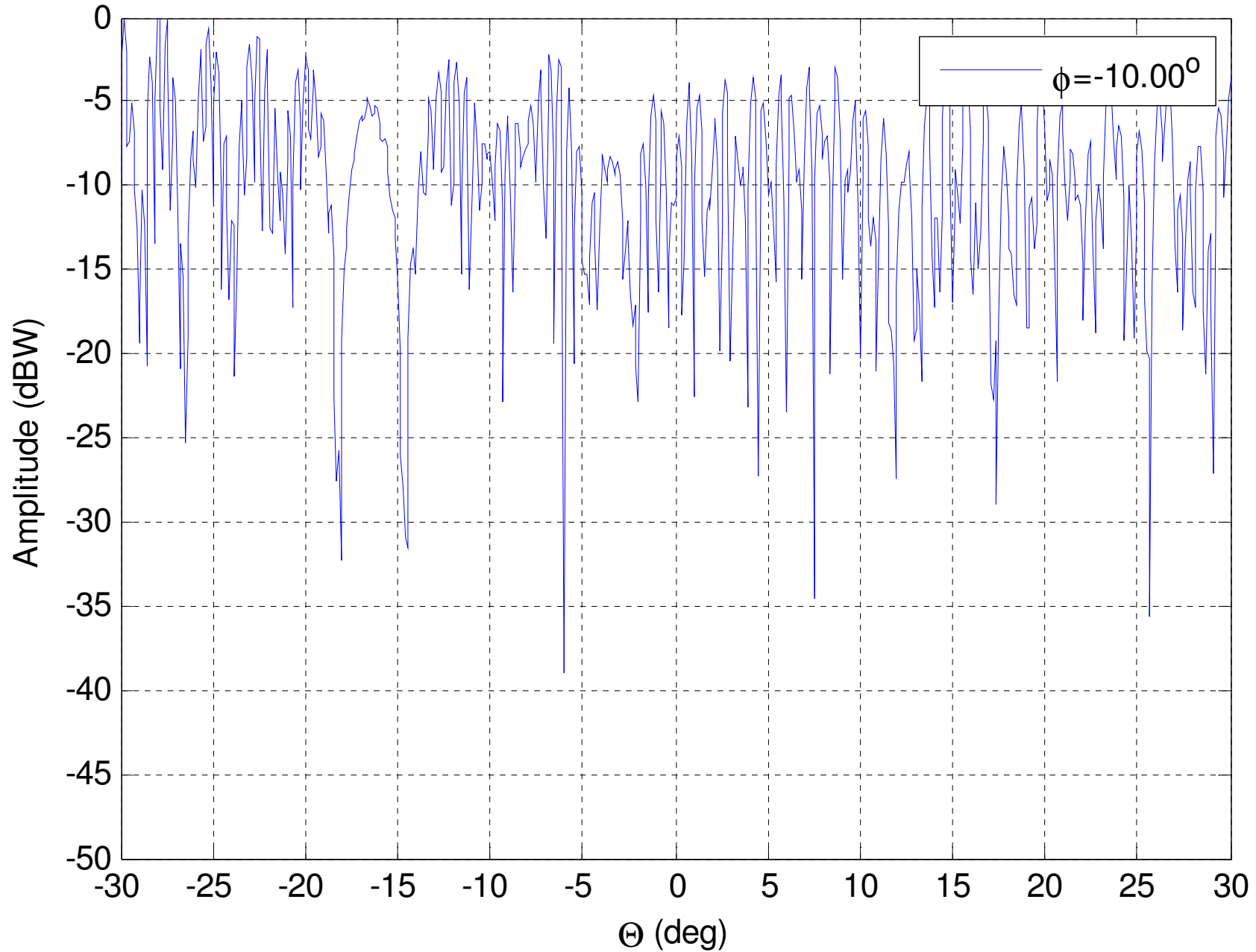
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -11.01 dBW, Date: 15-Dec-2011



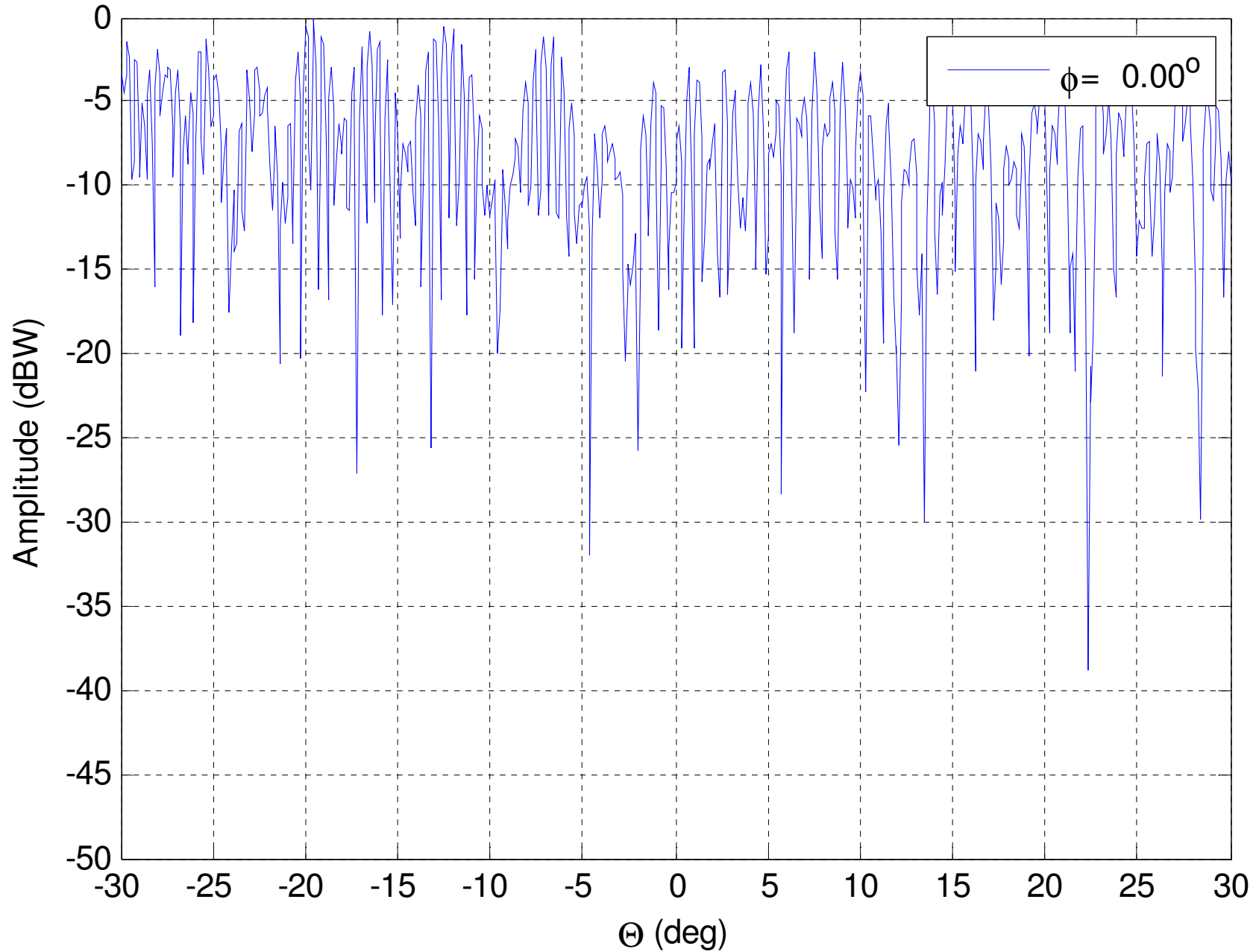
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -11.59 dBW, Date: 15-Dec-2011



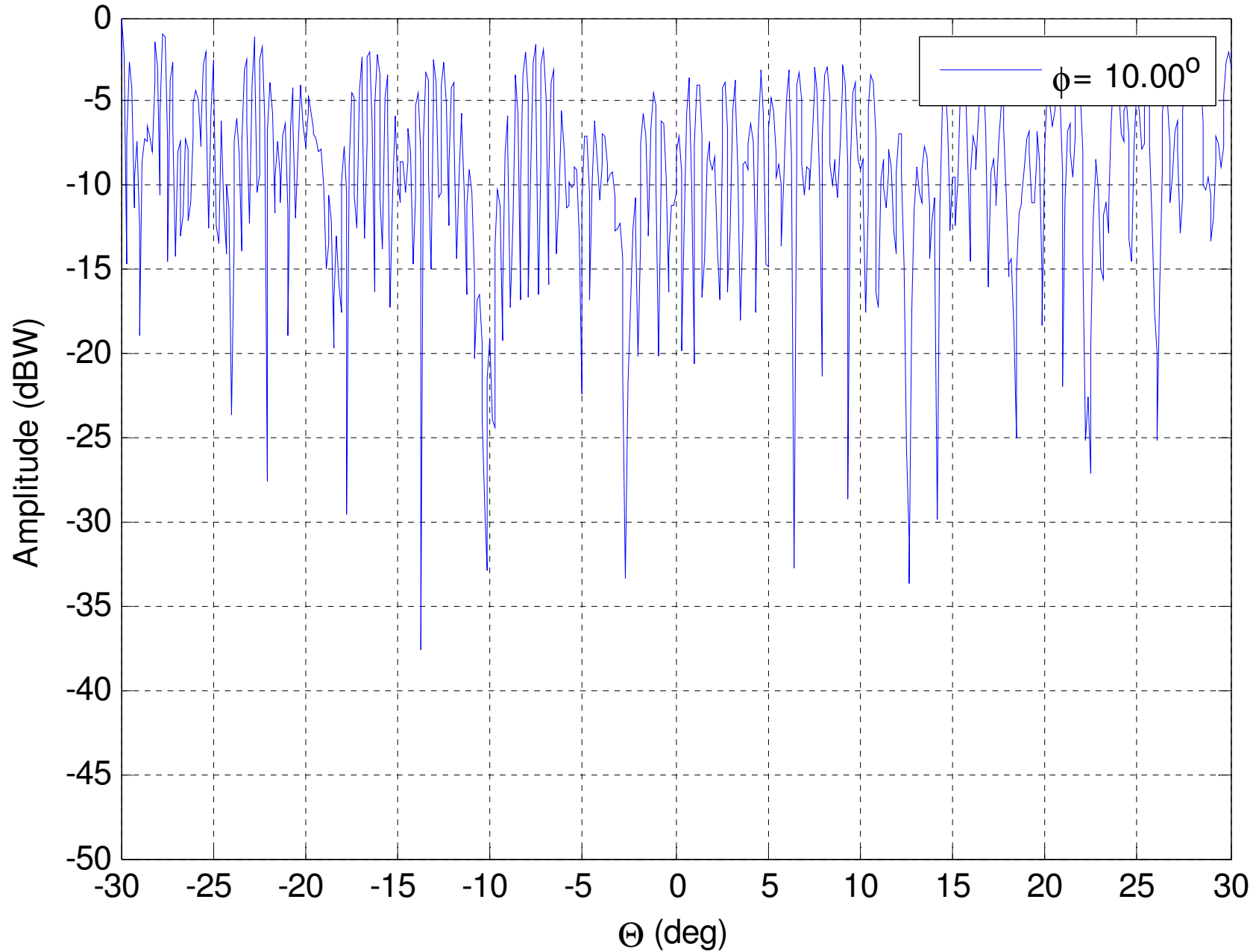
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -12.41 dBW, Date: 15-Dec-2011



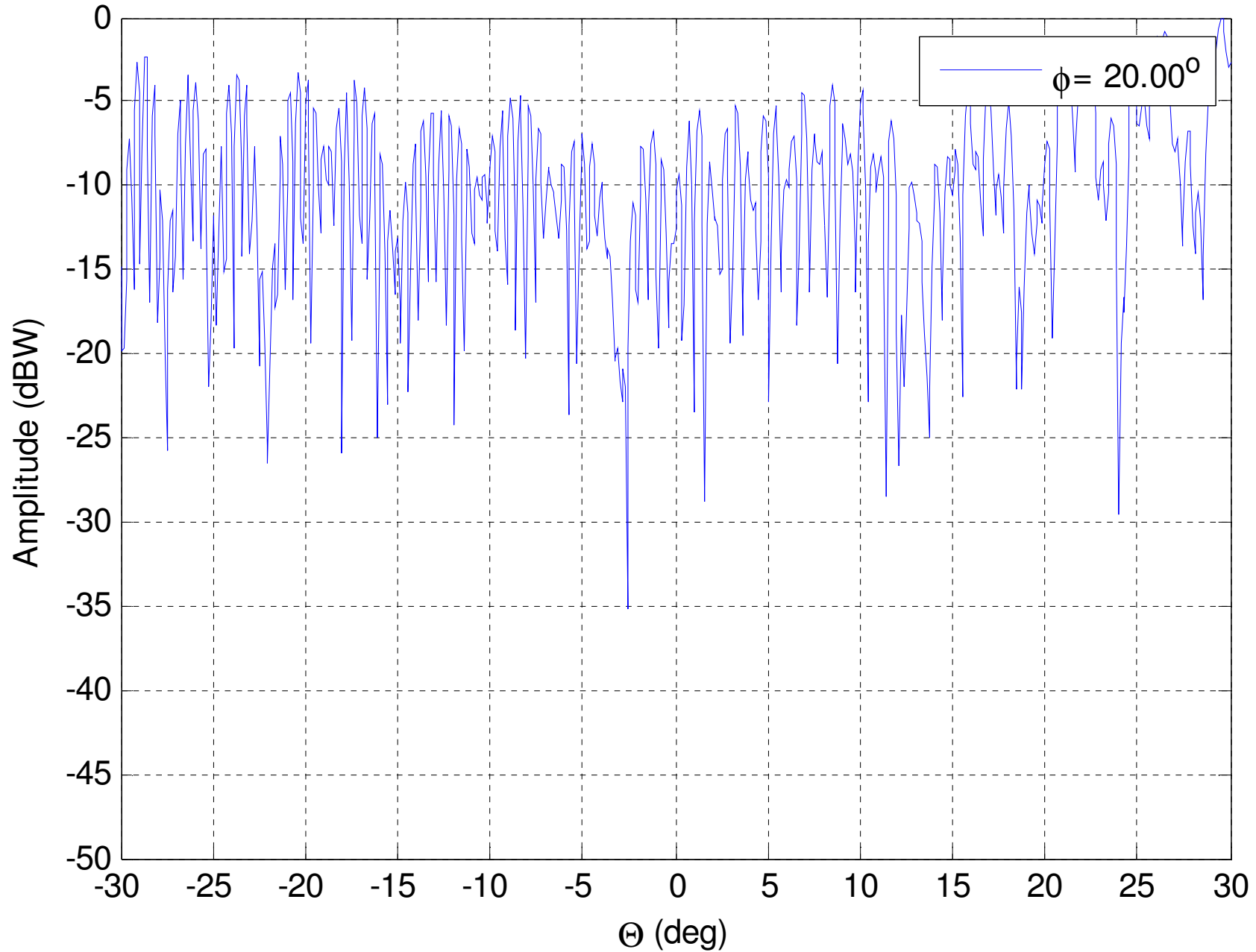
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -11.84 dBW, Date: 15-Dec-2011



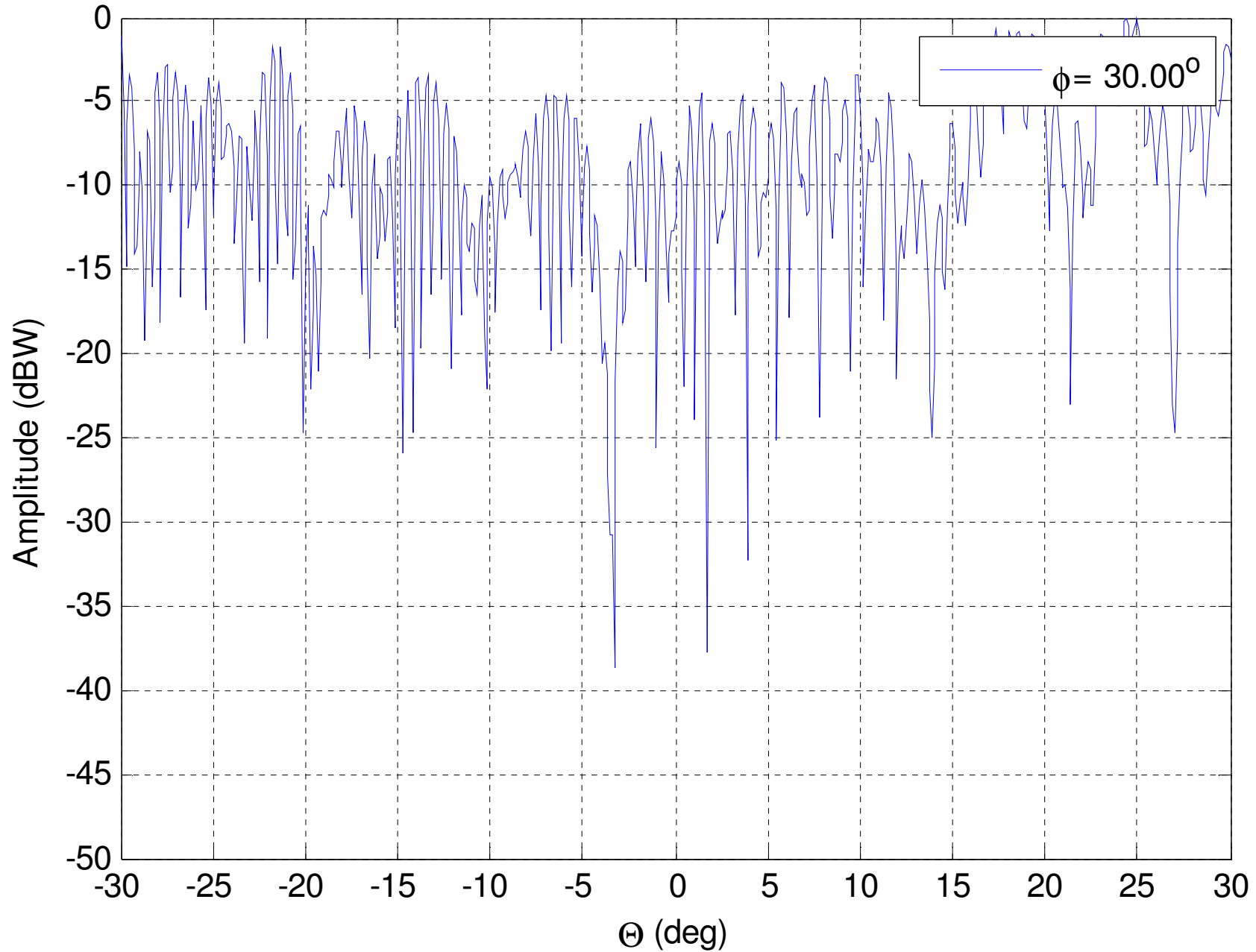
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -9.68 dBW, Date: 15-Dec-2011



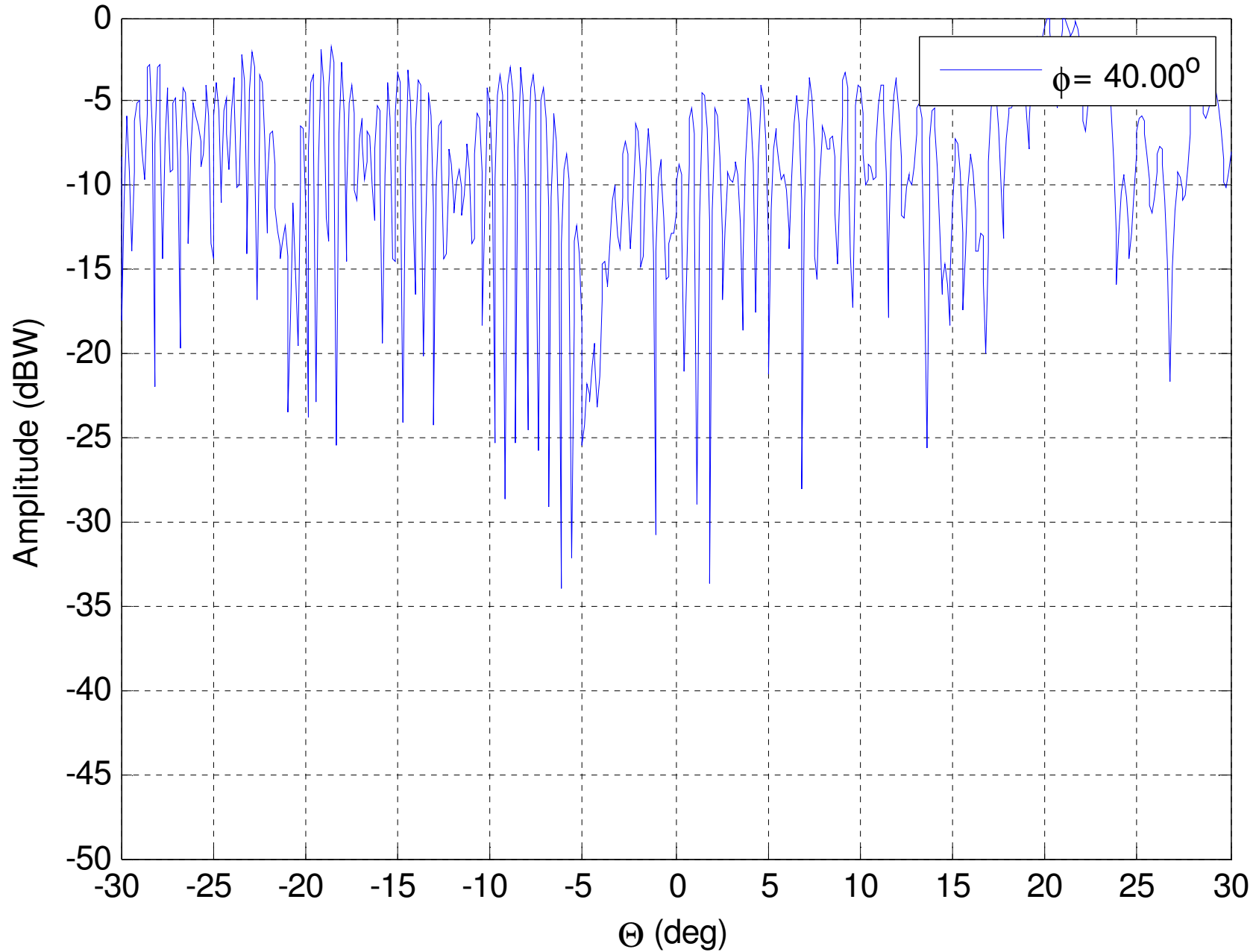
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.53 dBW, Date: 15-Dec-2011



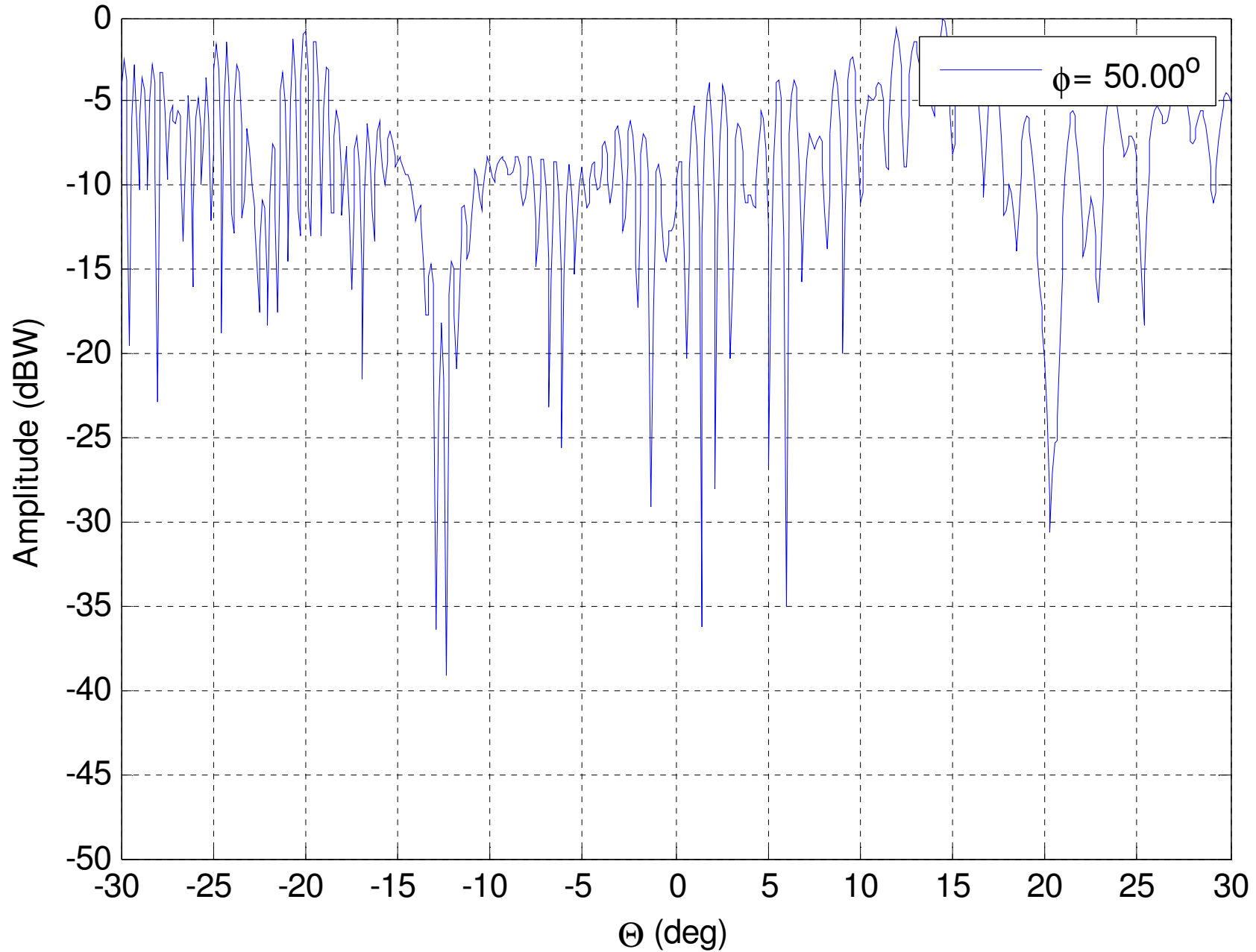
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -10.57 dBW, Date: 15-Dec-2011



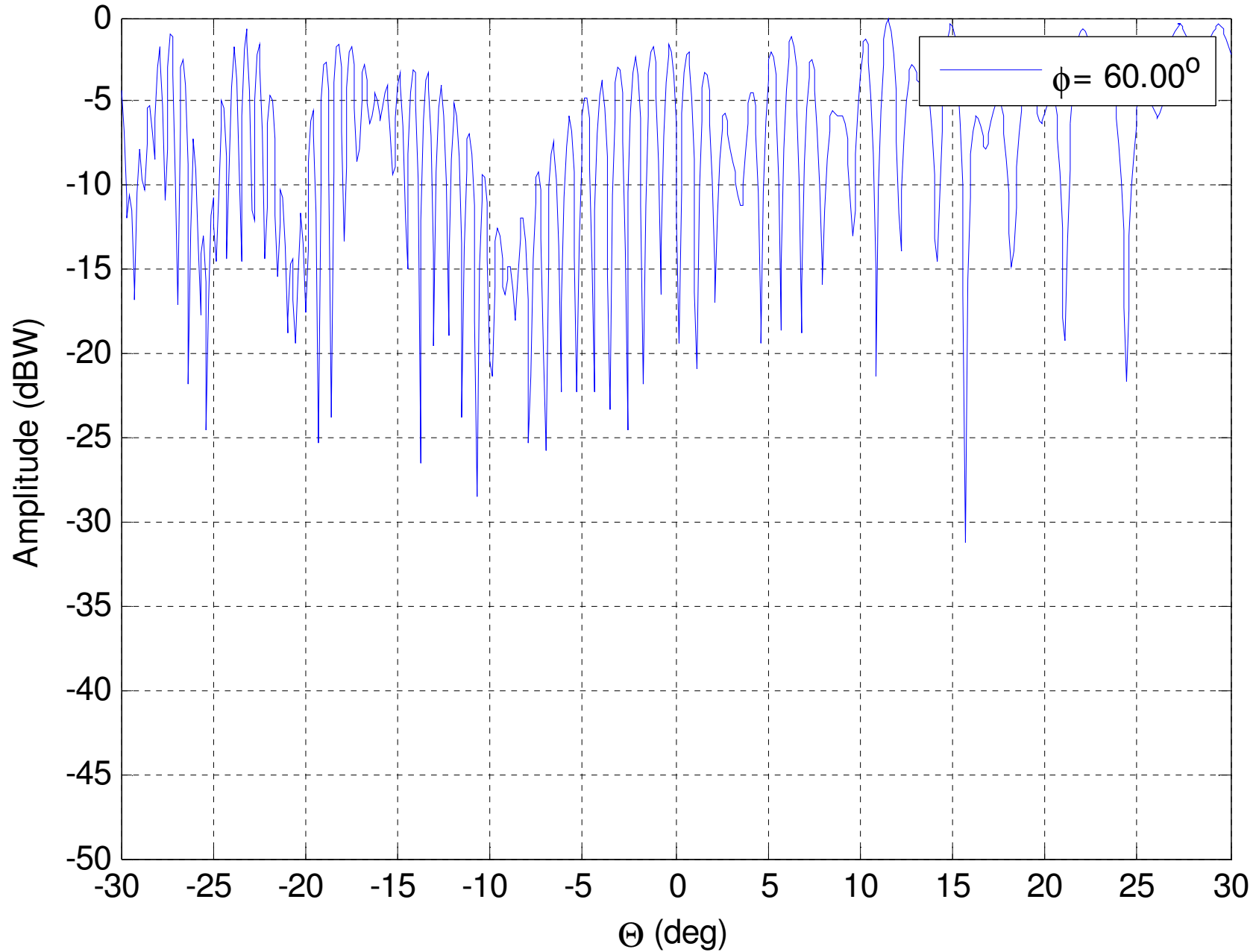
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -11.08 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

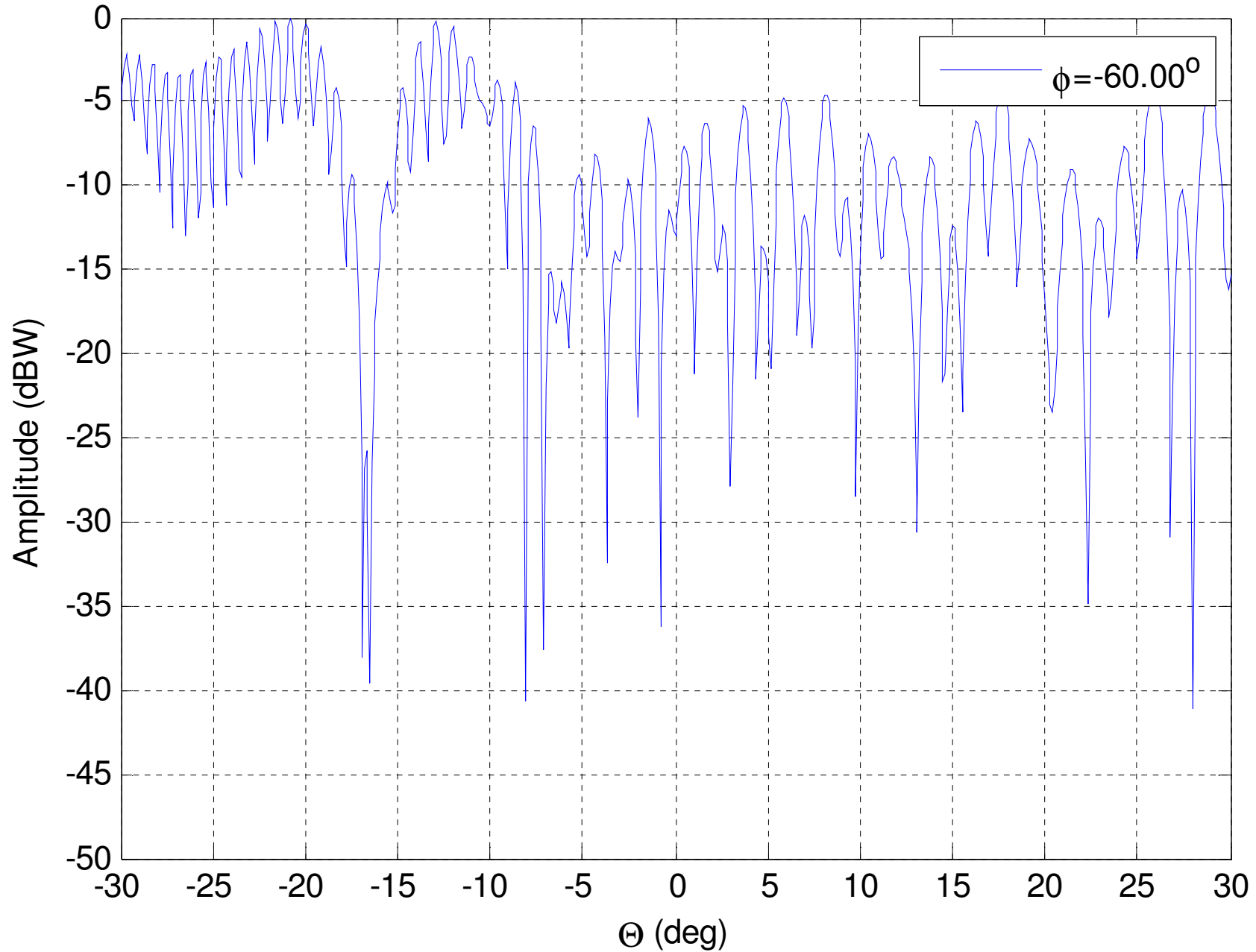
Input file: tx-17.3-rhcp-60.cut, Peak: -11.94 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

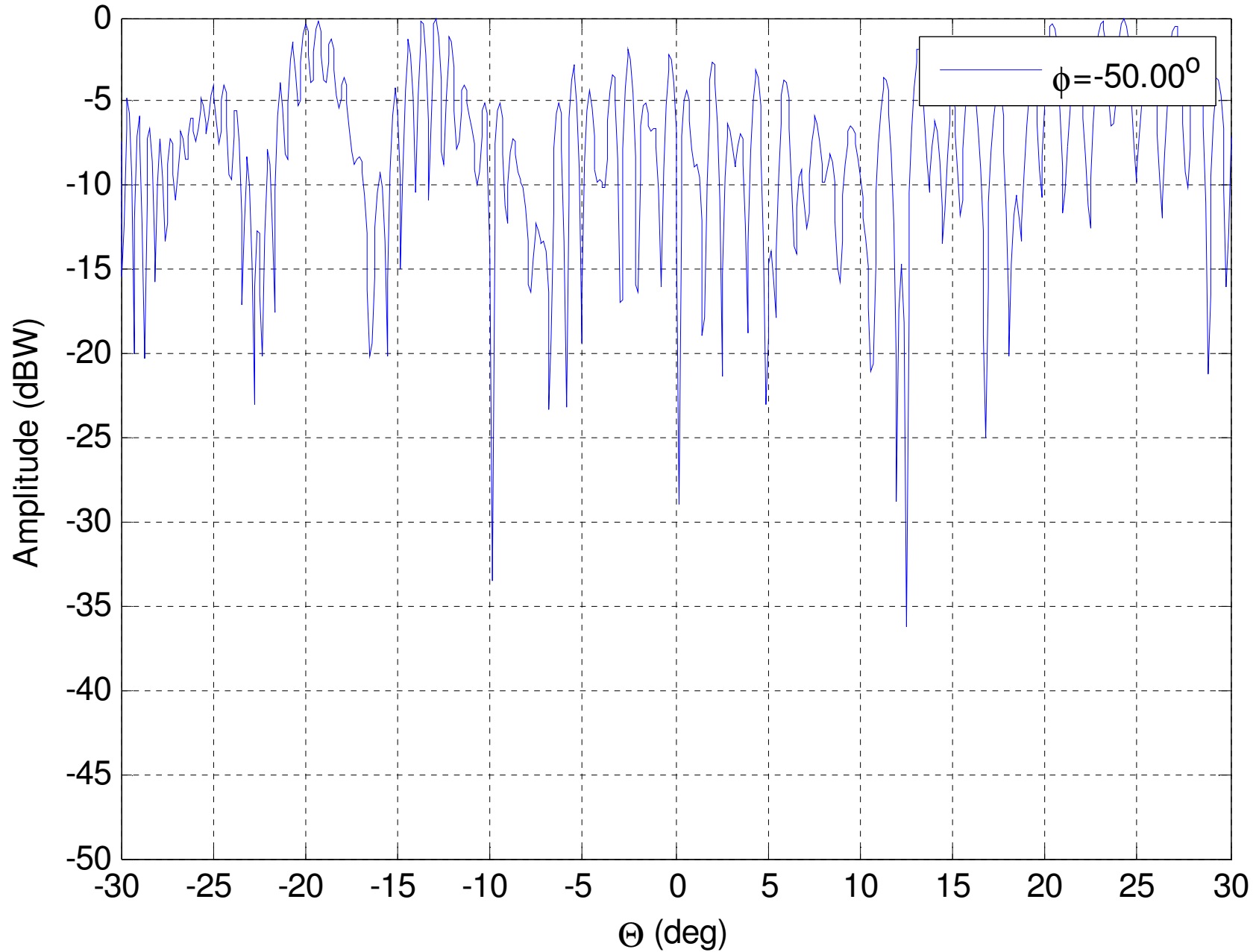
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.61 dBW, Date: 15-Dec-2011



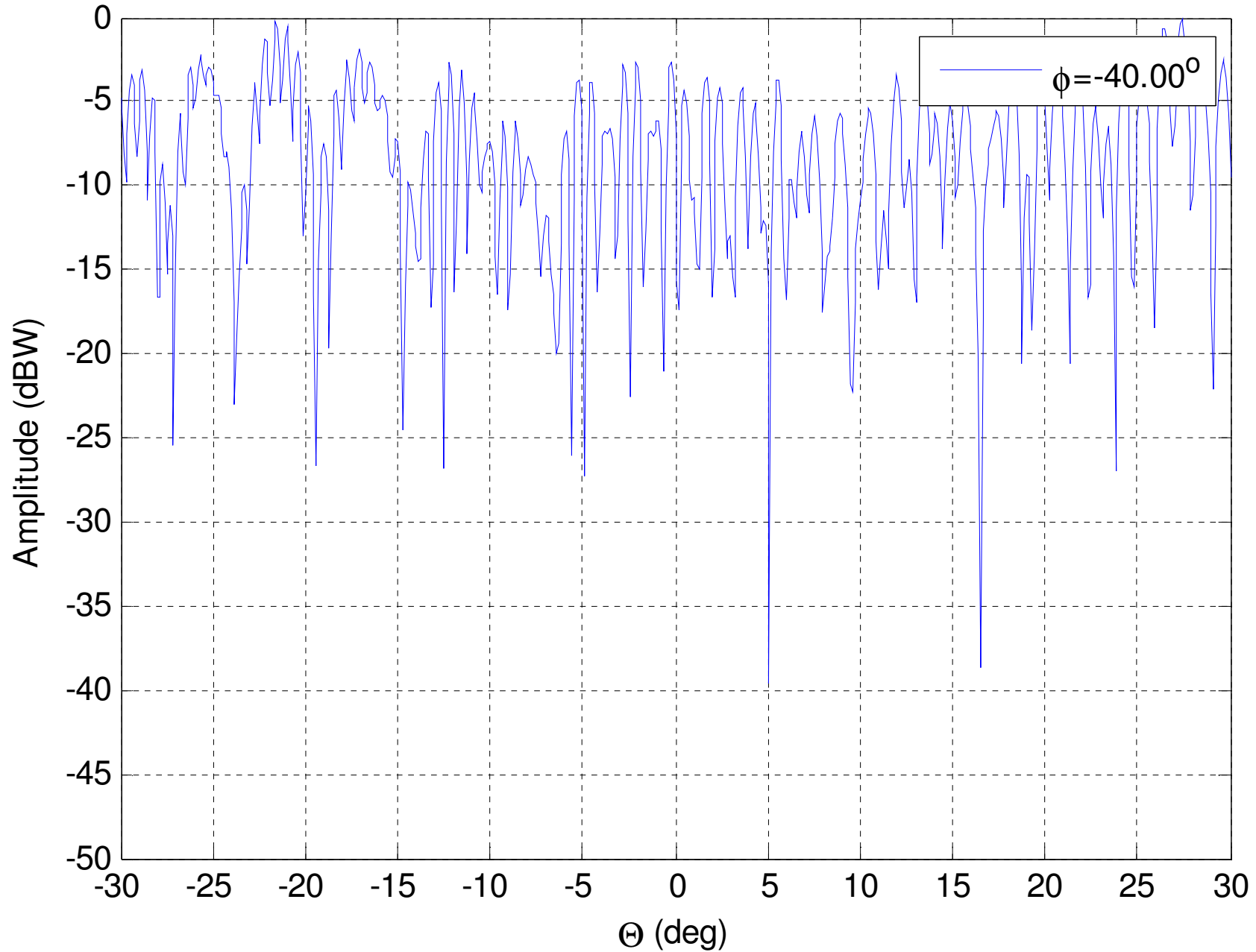
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -10.68 dBW, Date: 15-Dec-2011



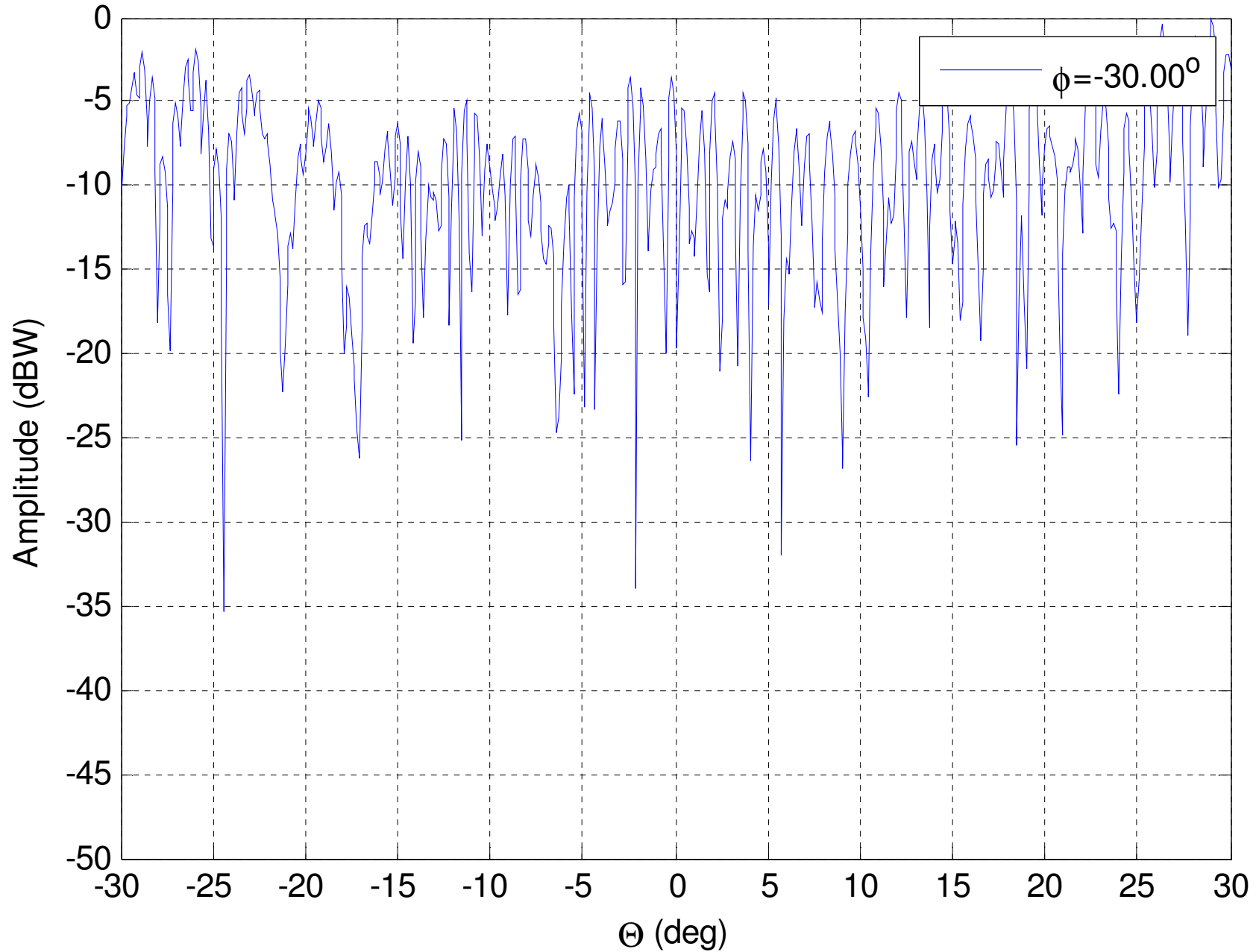
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.30 dBW, Date: 15-Dec-2011



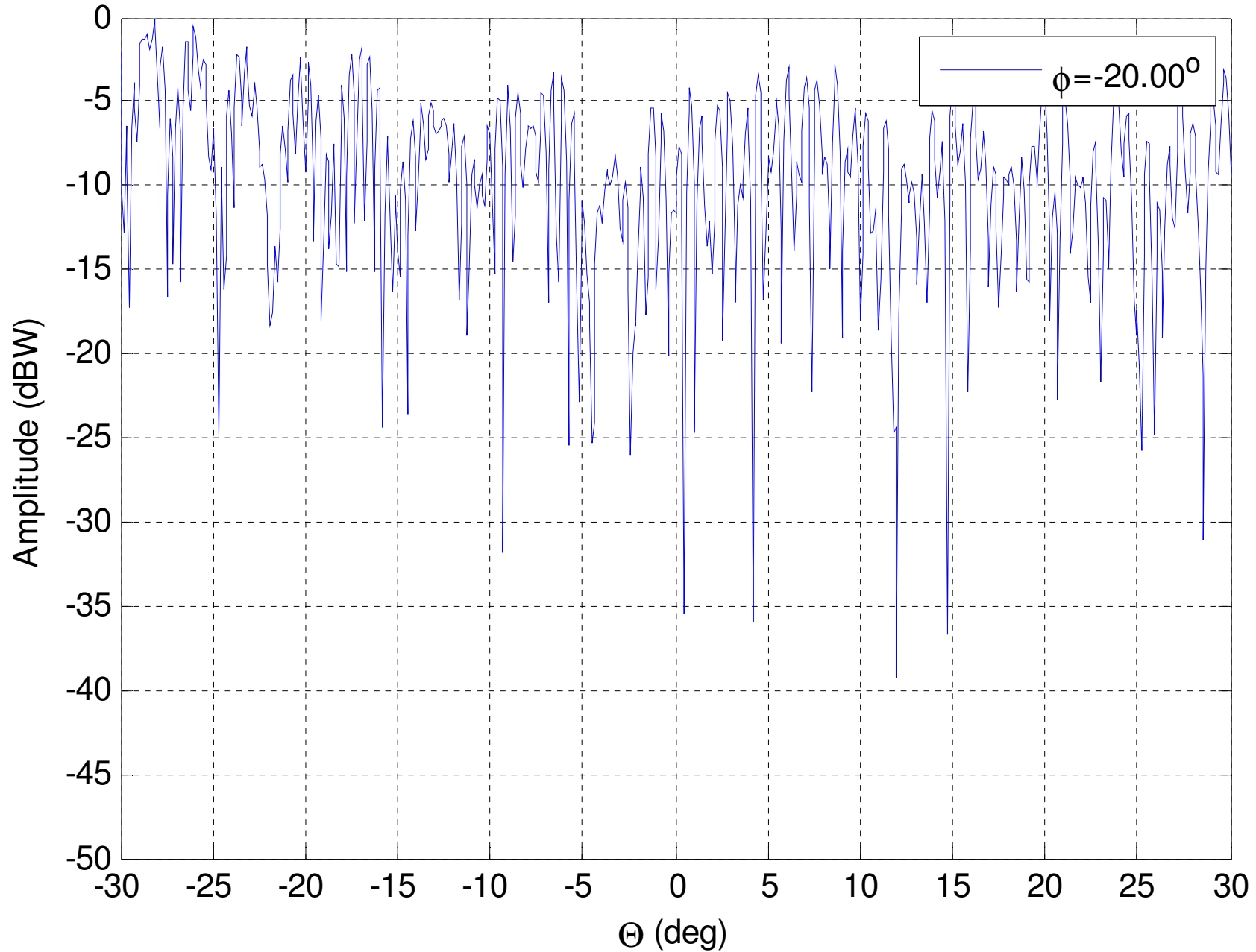
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -9.22 dBW, Date: 15-Dec-2011



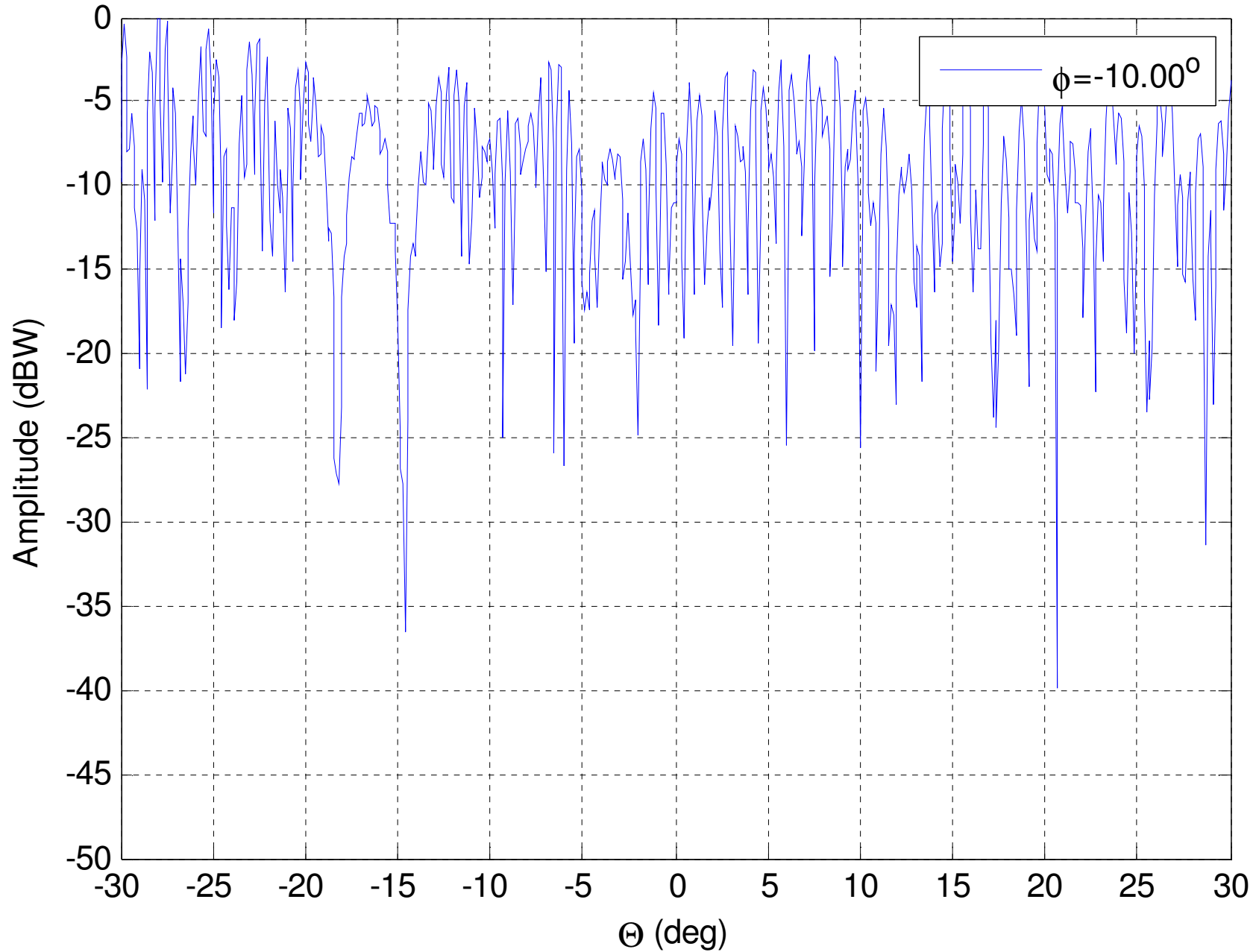
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -10.97 dBW, Date: 15-Dec-2011



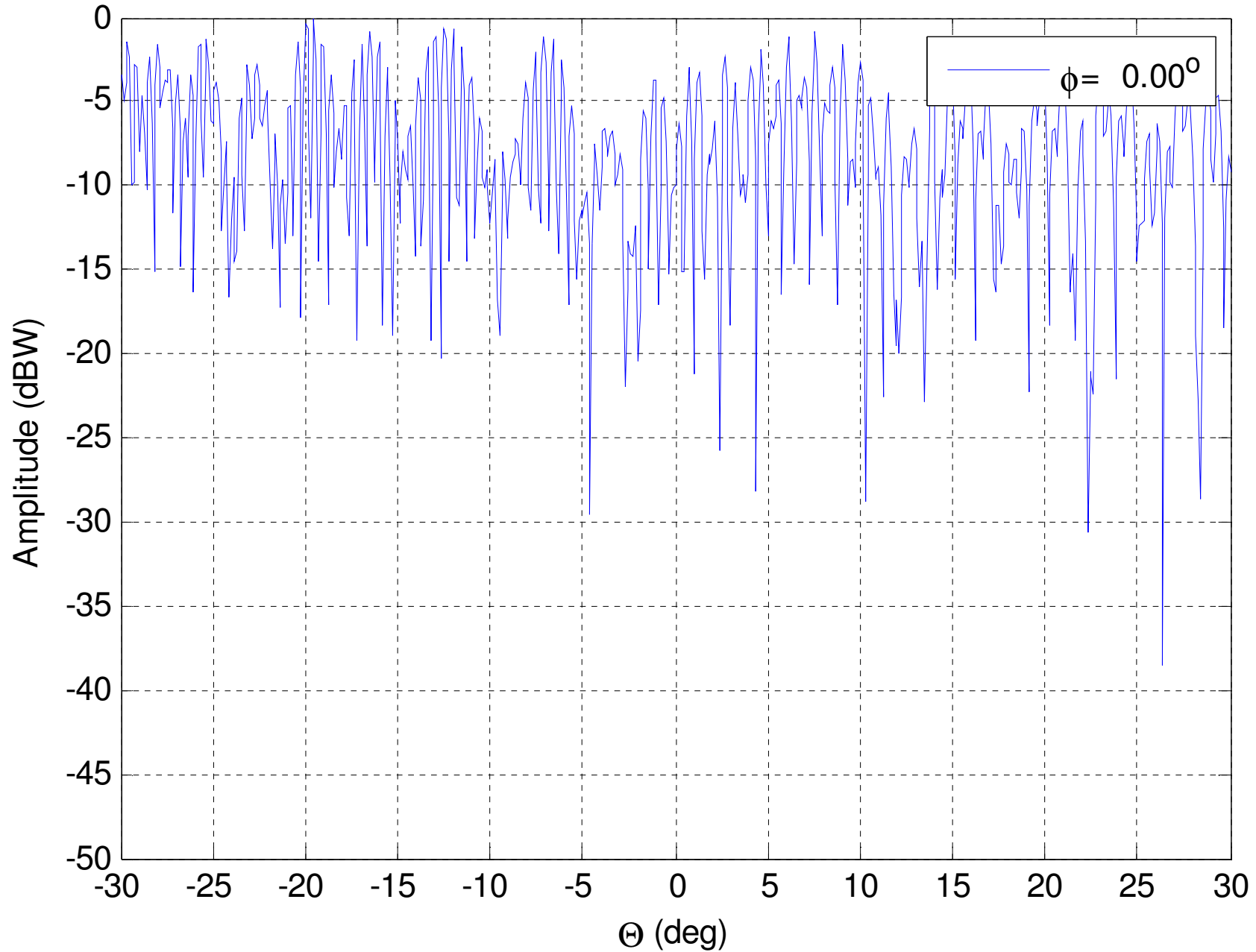
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -11.54 dBW, Date: 15-Dec-2011



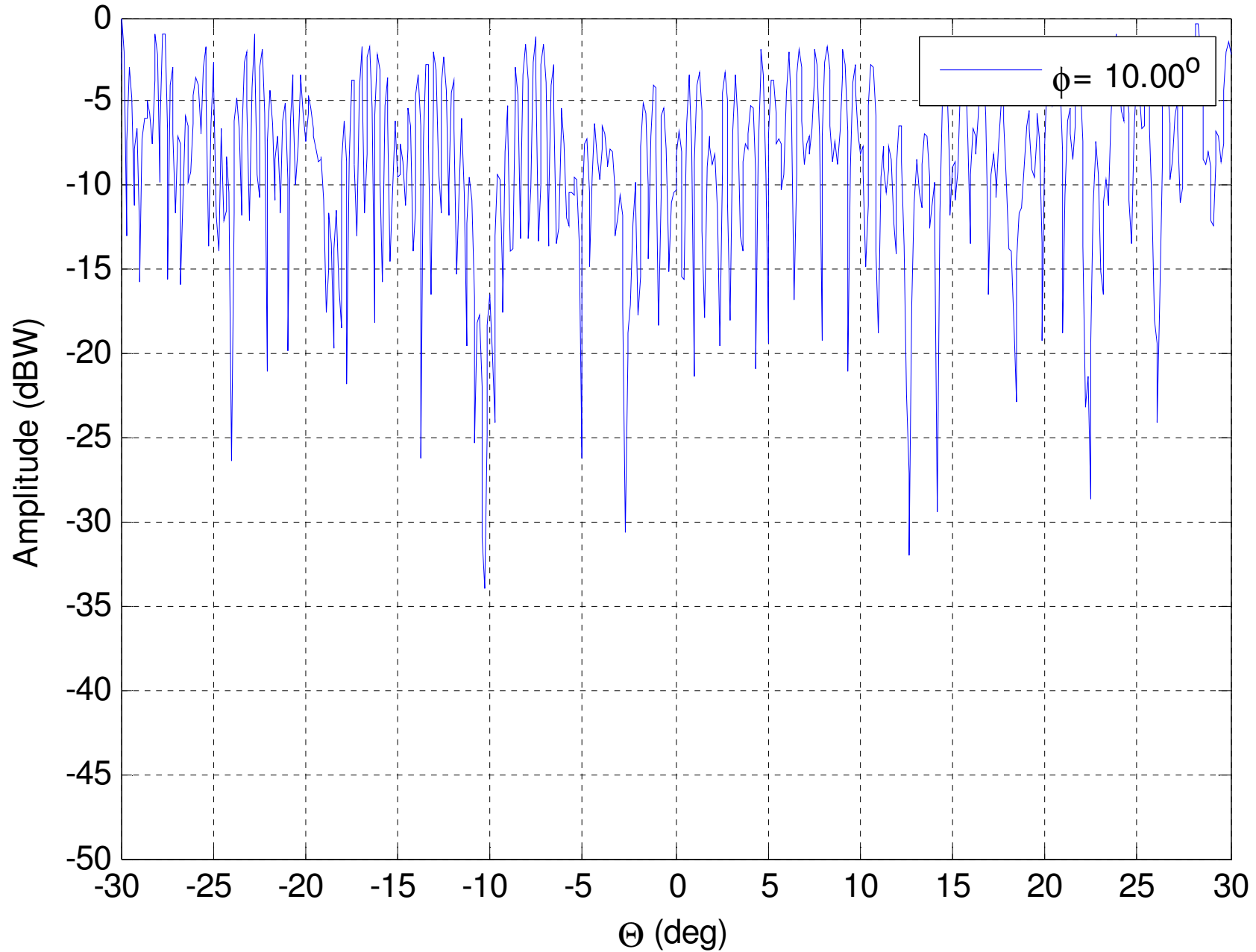
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -12.53 dBW, Date: 15-Dec-2011



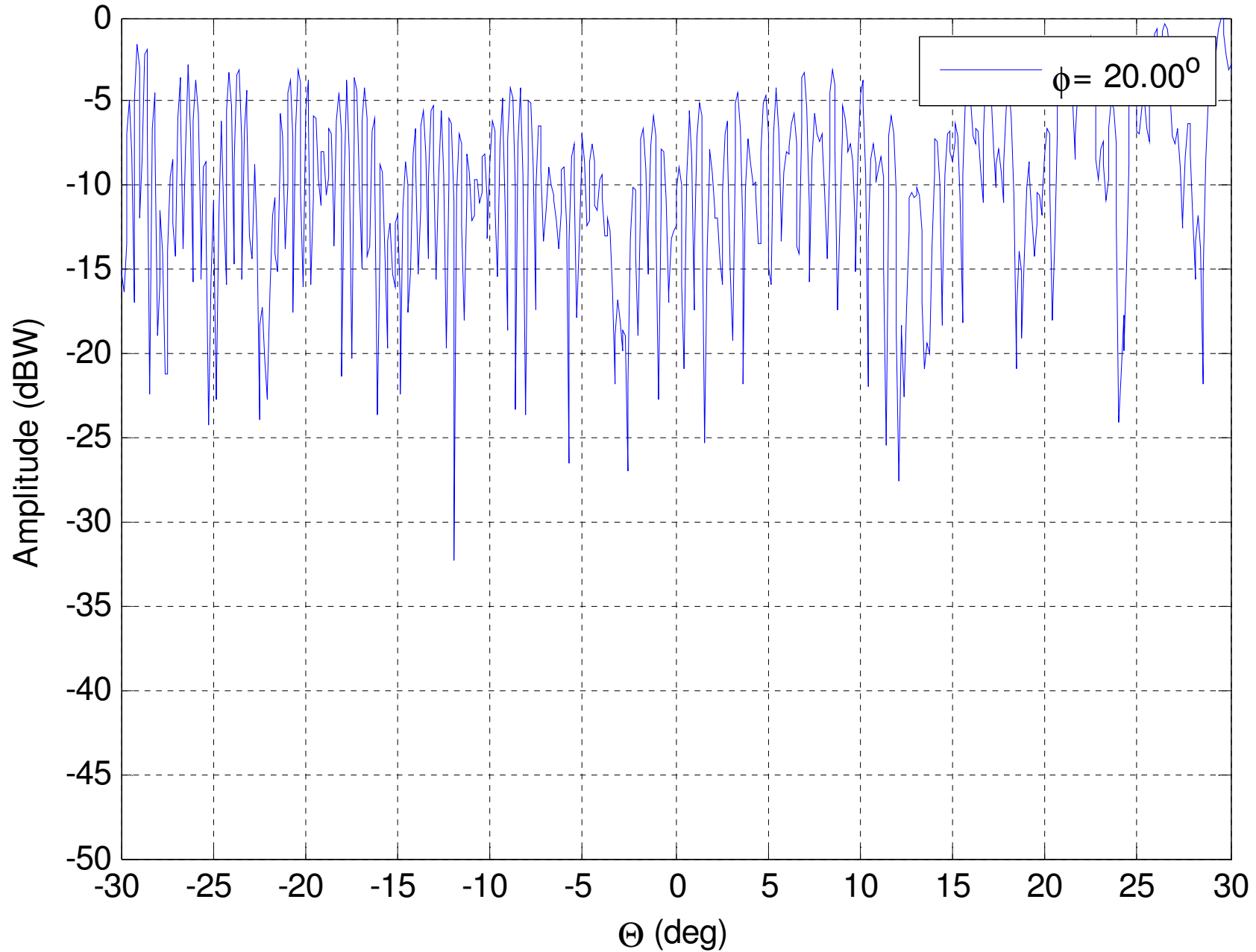
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -12.25 dBW, Date: 15-Dec-2011



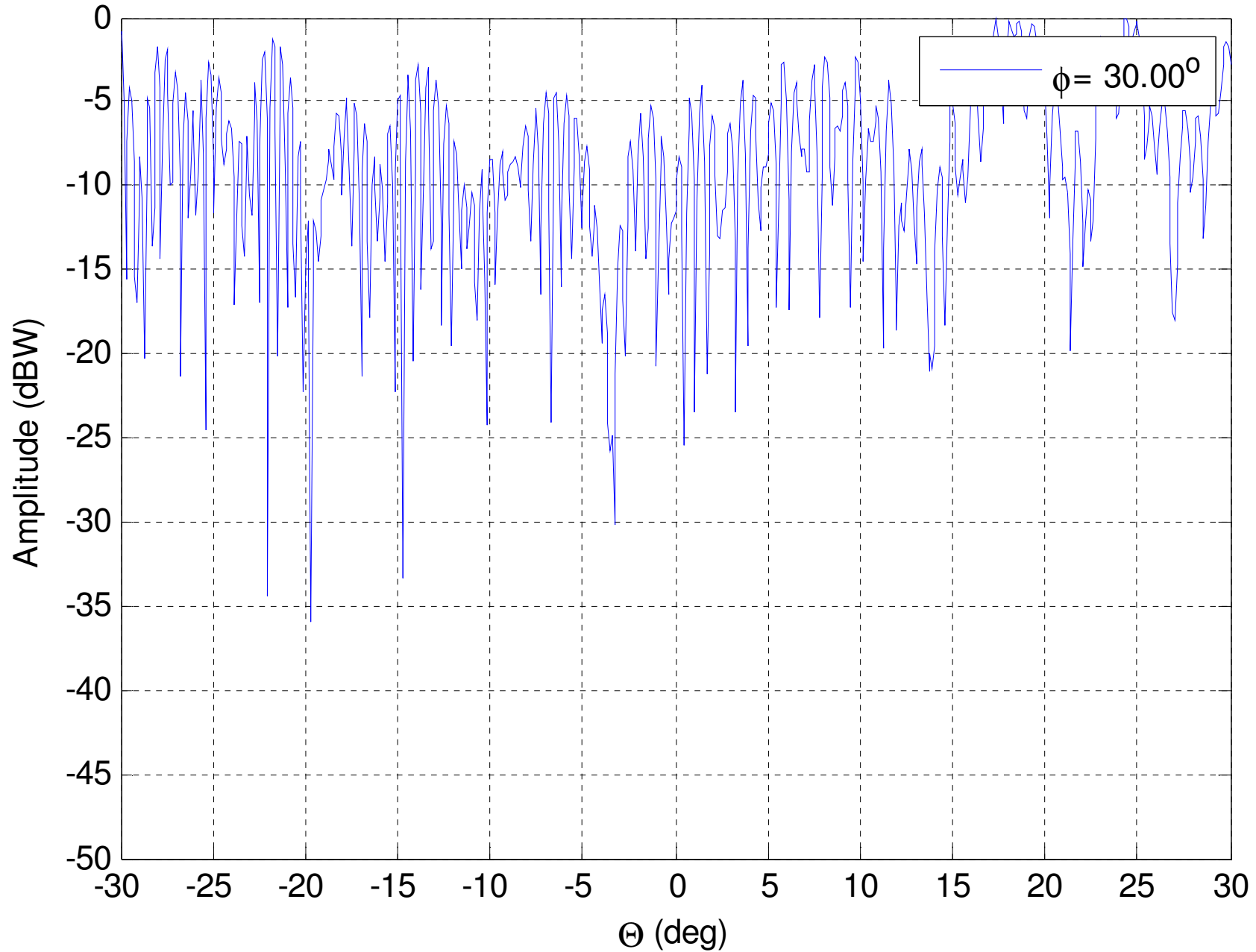
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -10.18 dBW, Date: 15-Dec-2011



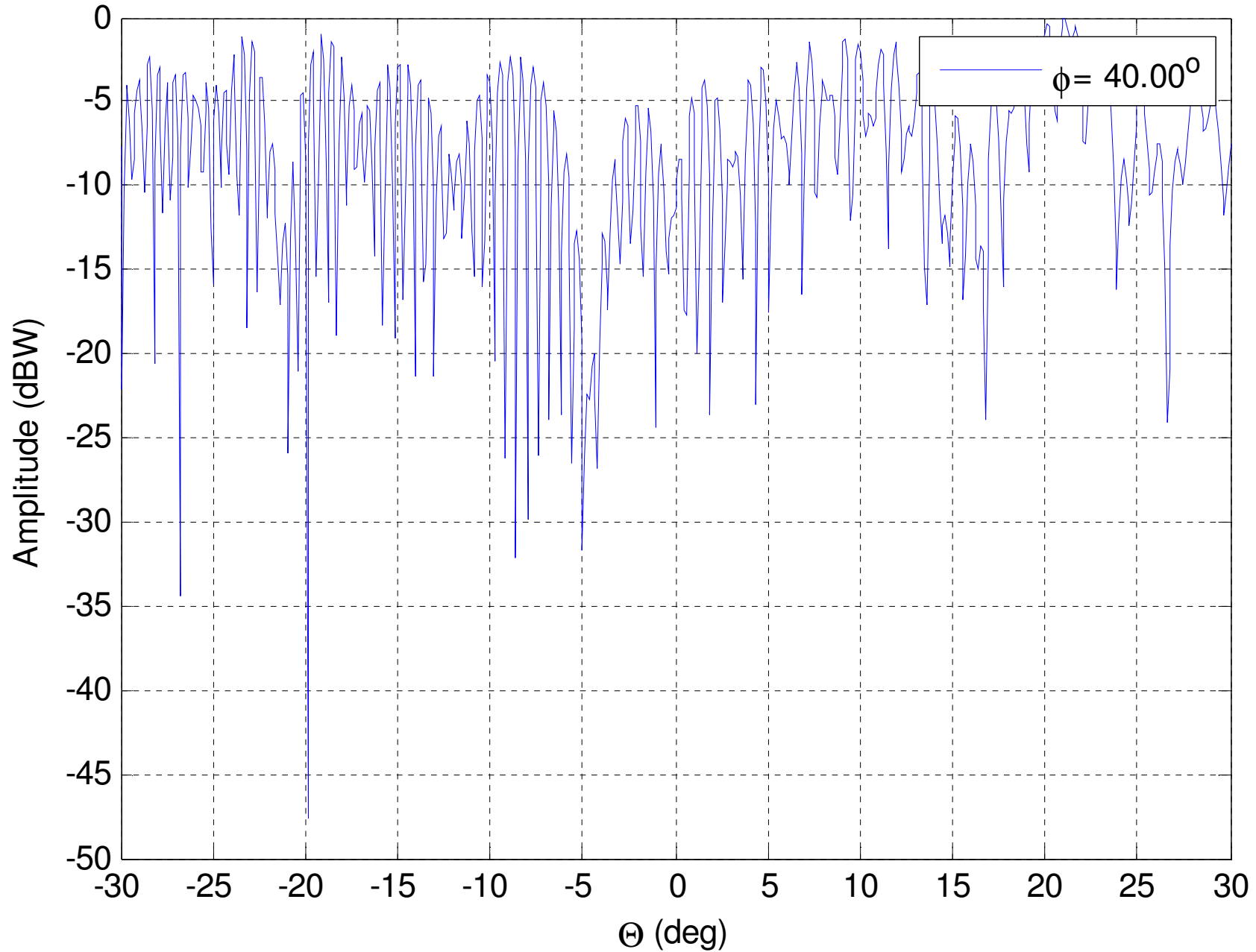
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -11.02 dBW, Date: 15-Dec-2011



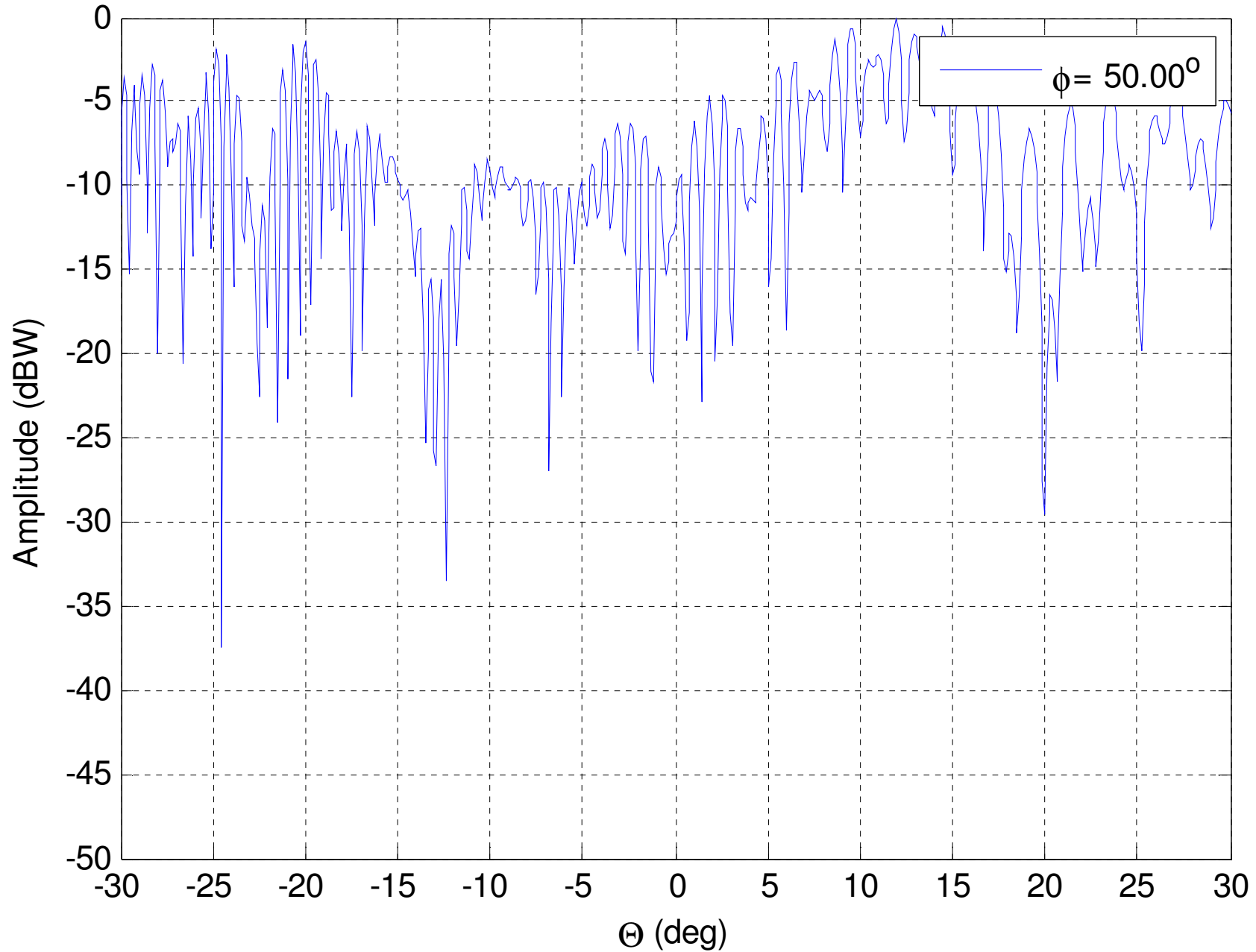
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.29 dBW, Date: 15-Dec-2011



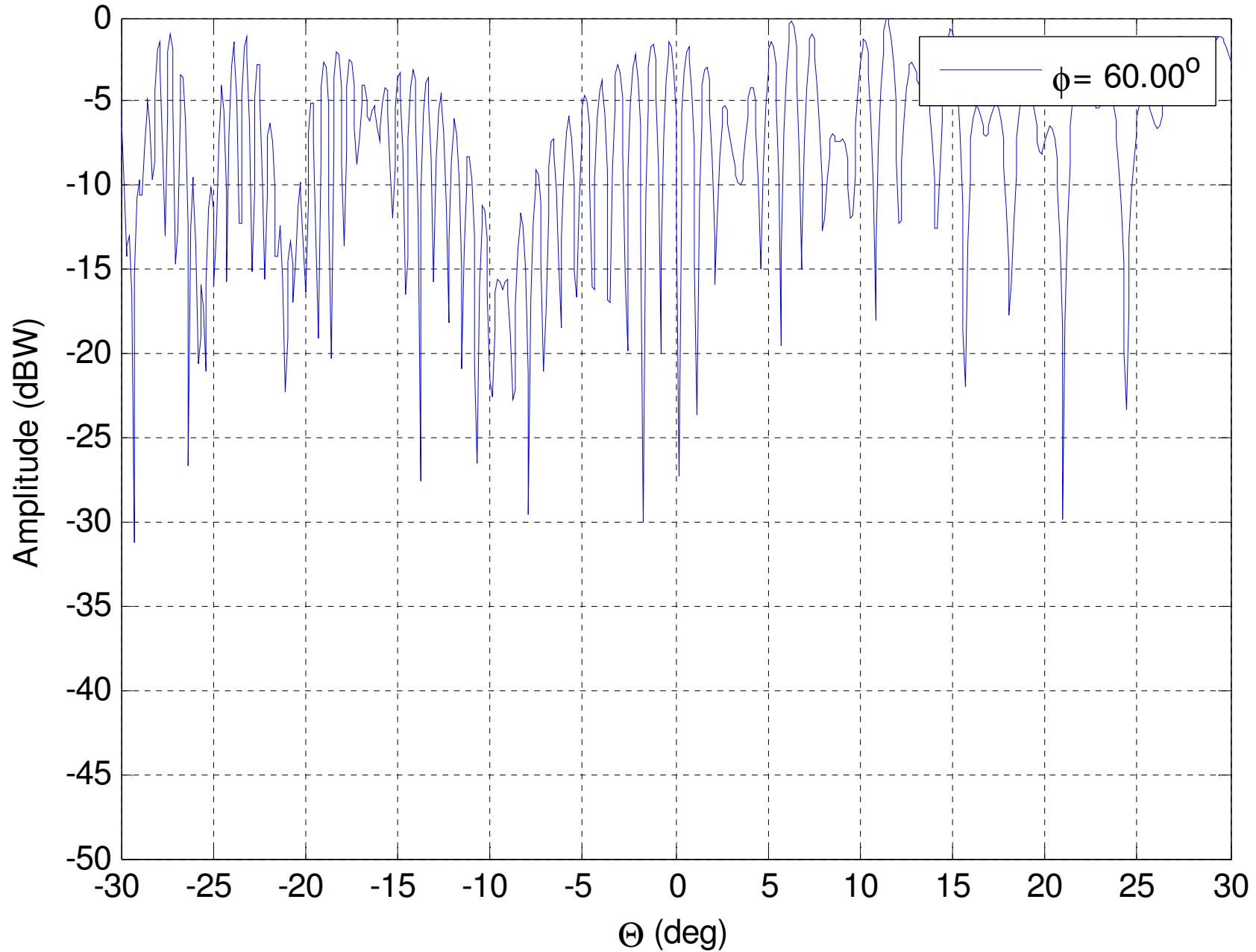
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -10.48 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

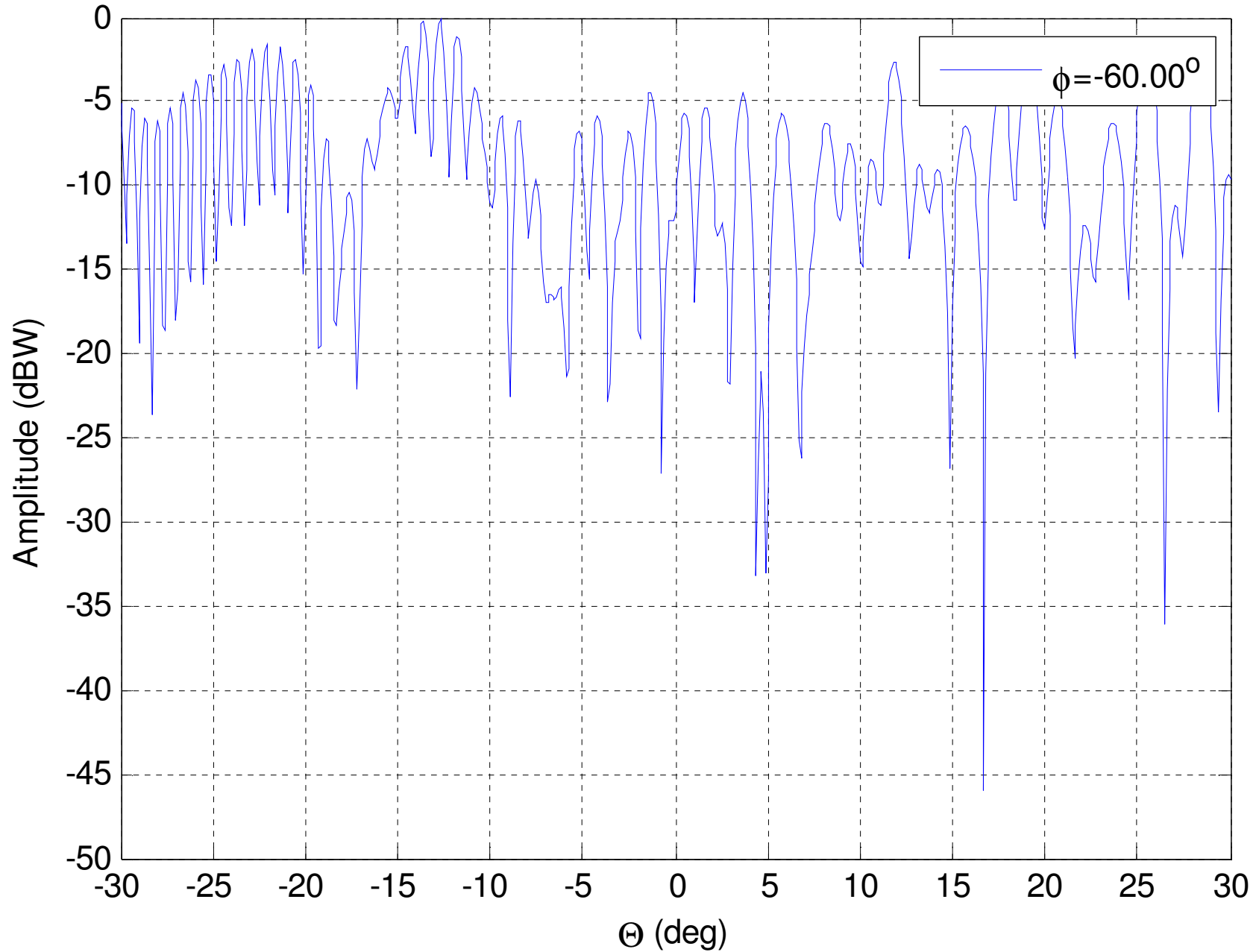
Input file: tx-17.3-lhcp-60.cut, Peak: -11.35 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

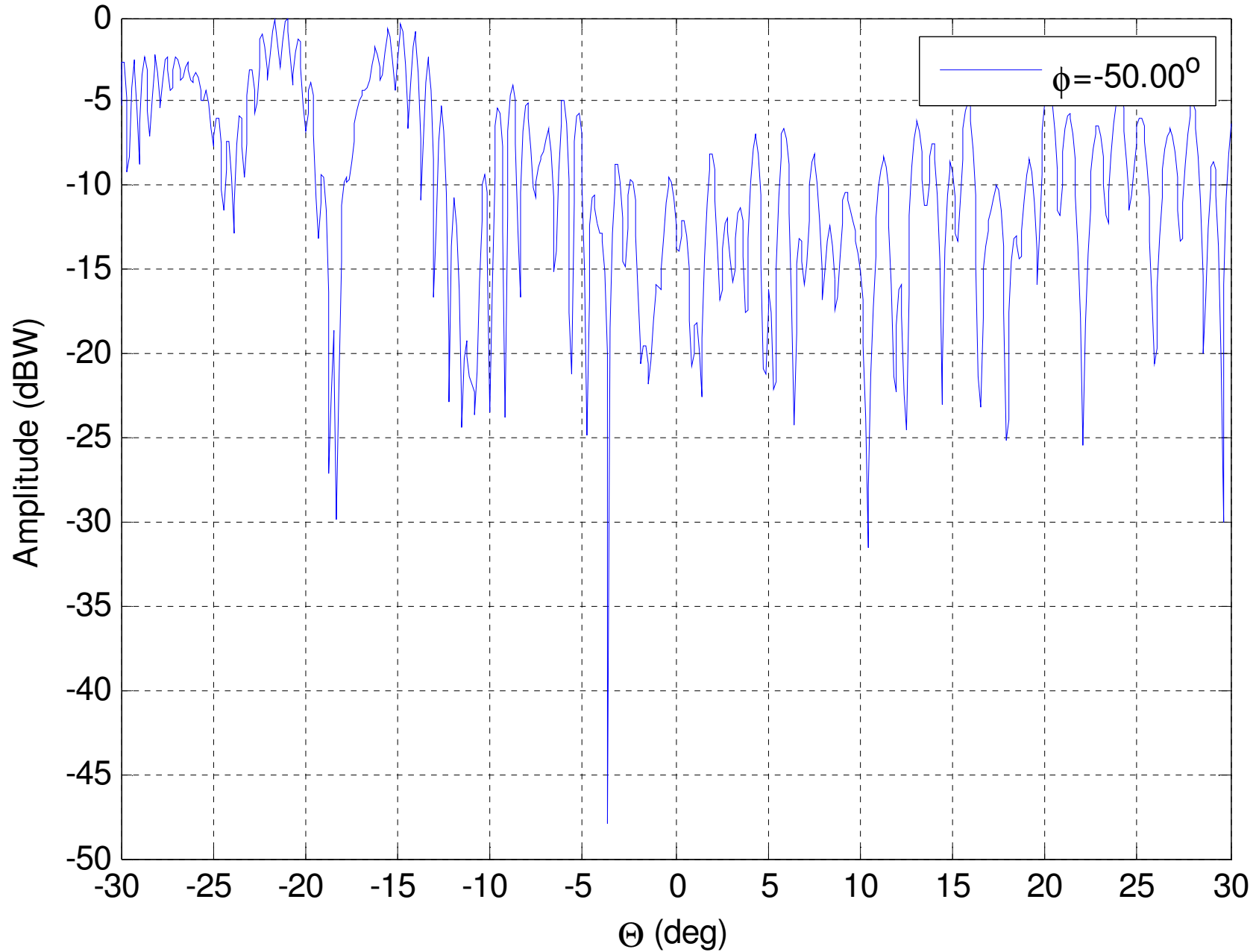
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -10.49 dBW, Date: 15-Dec-2011



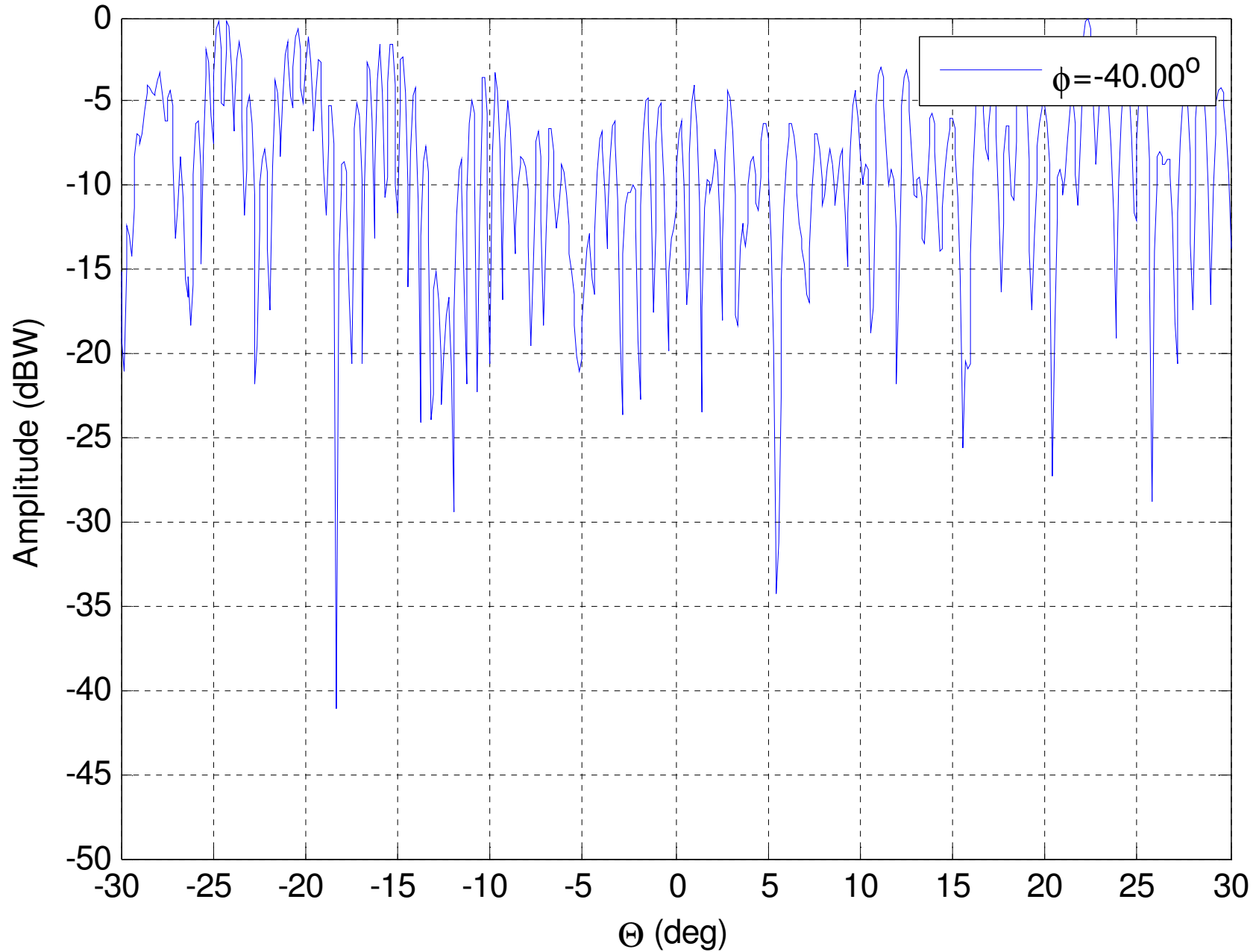
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -9.88 dBW, Date: 15-Dec-2011



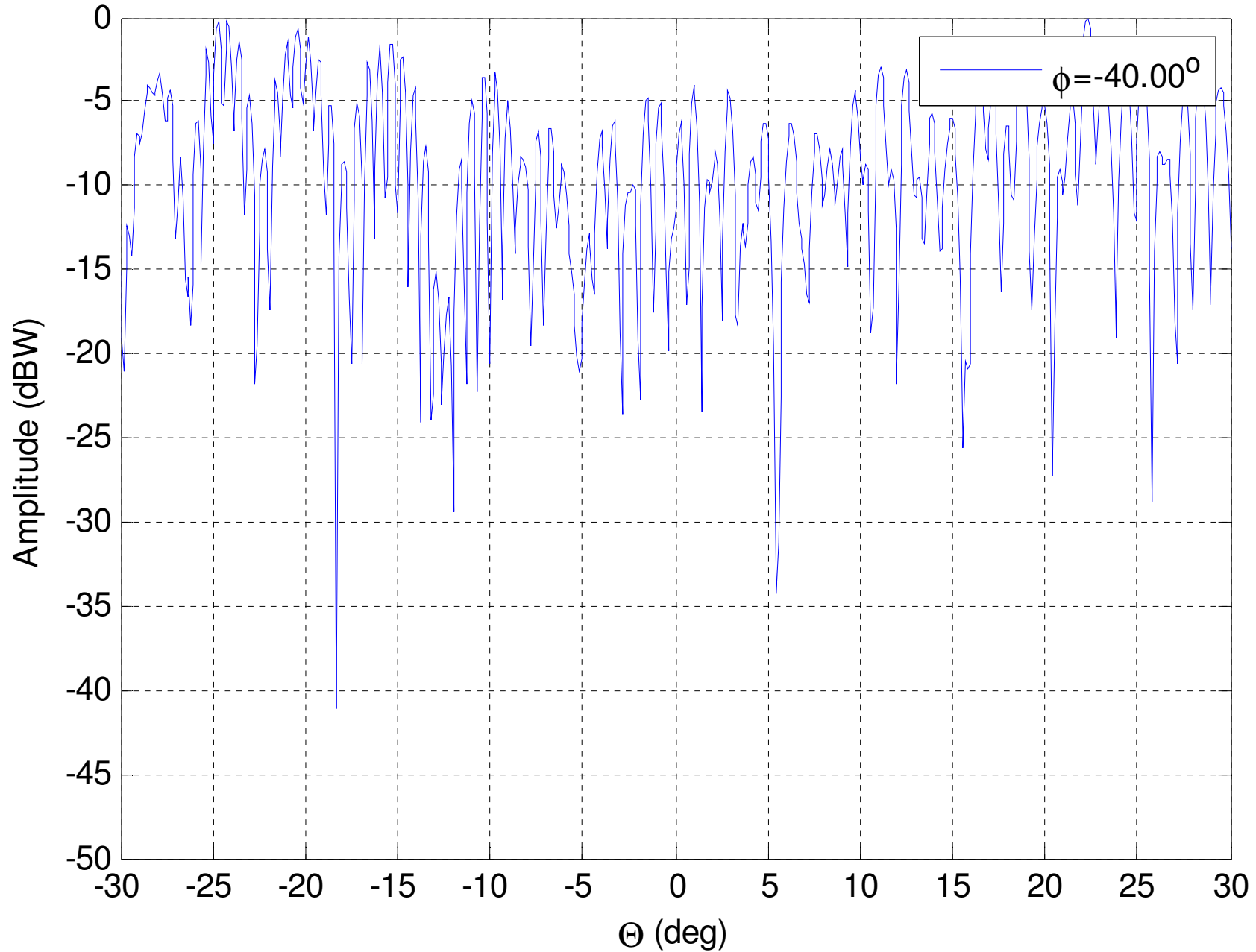
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.61 dBW, Date: 15-Dec-2011



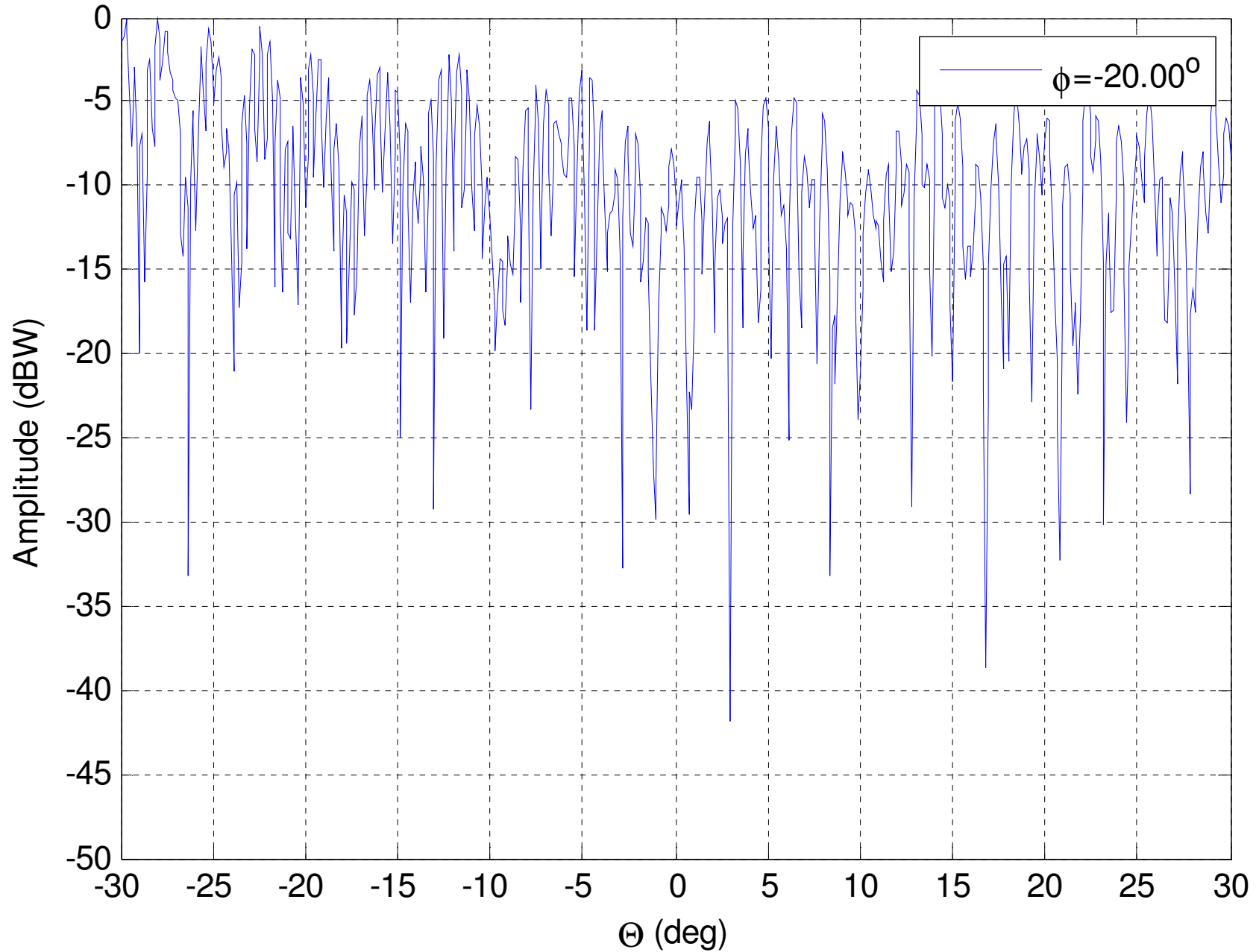
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.61 dBW, Date: 15-Dec-2011



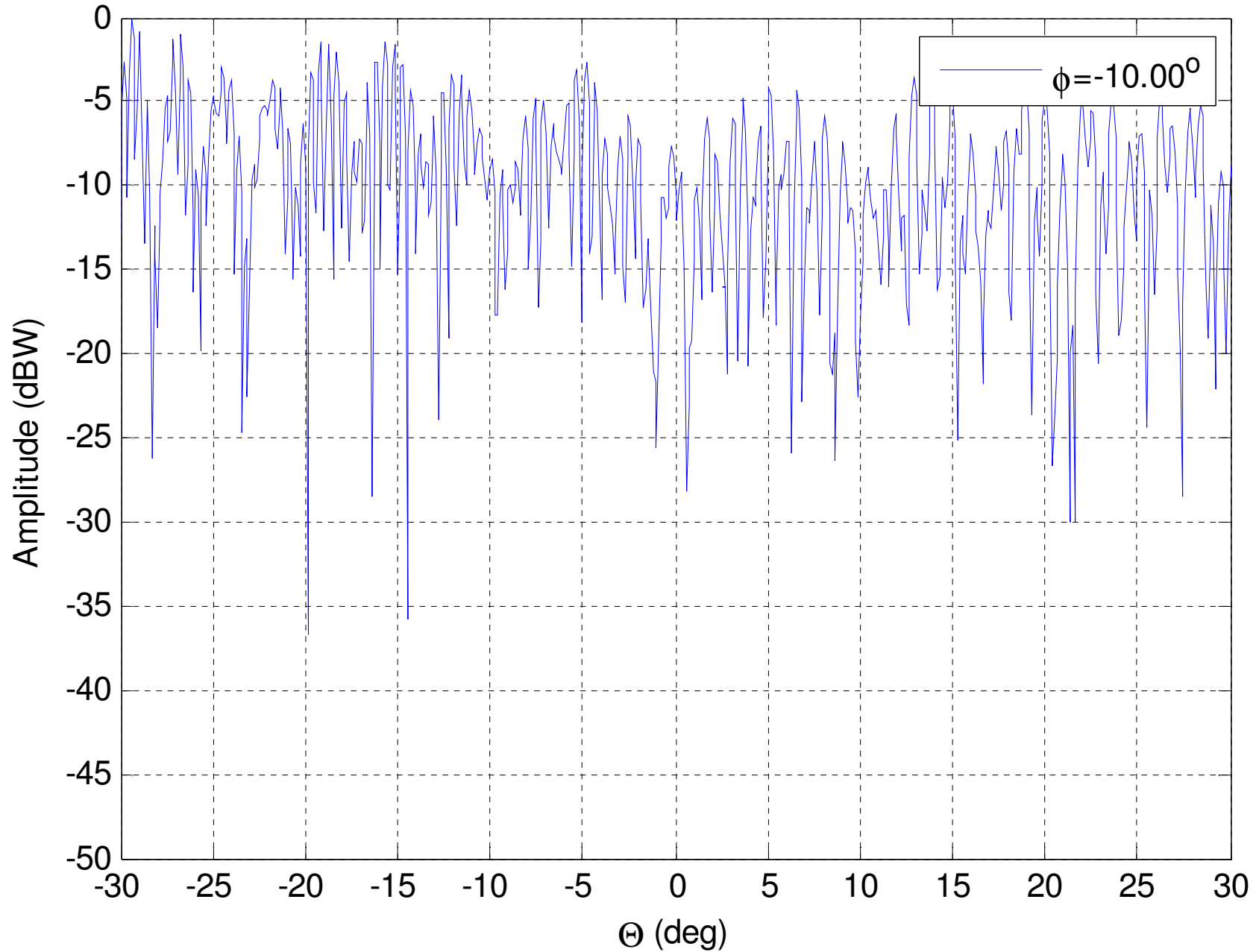
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -11.30 dBW, Date: 15-Dec-2011



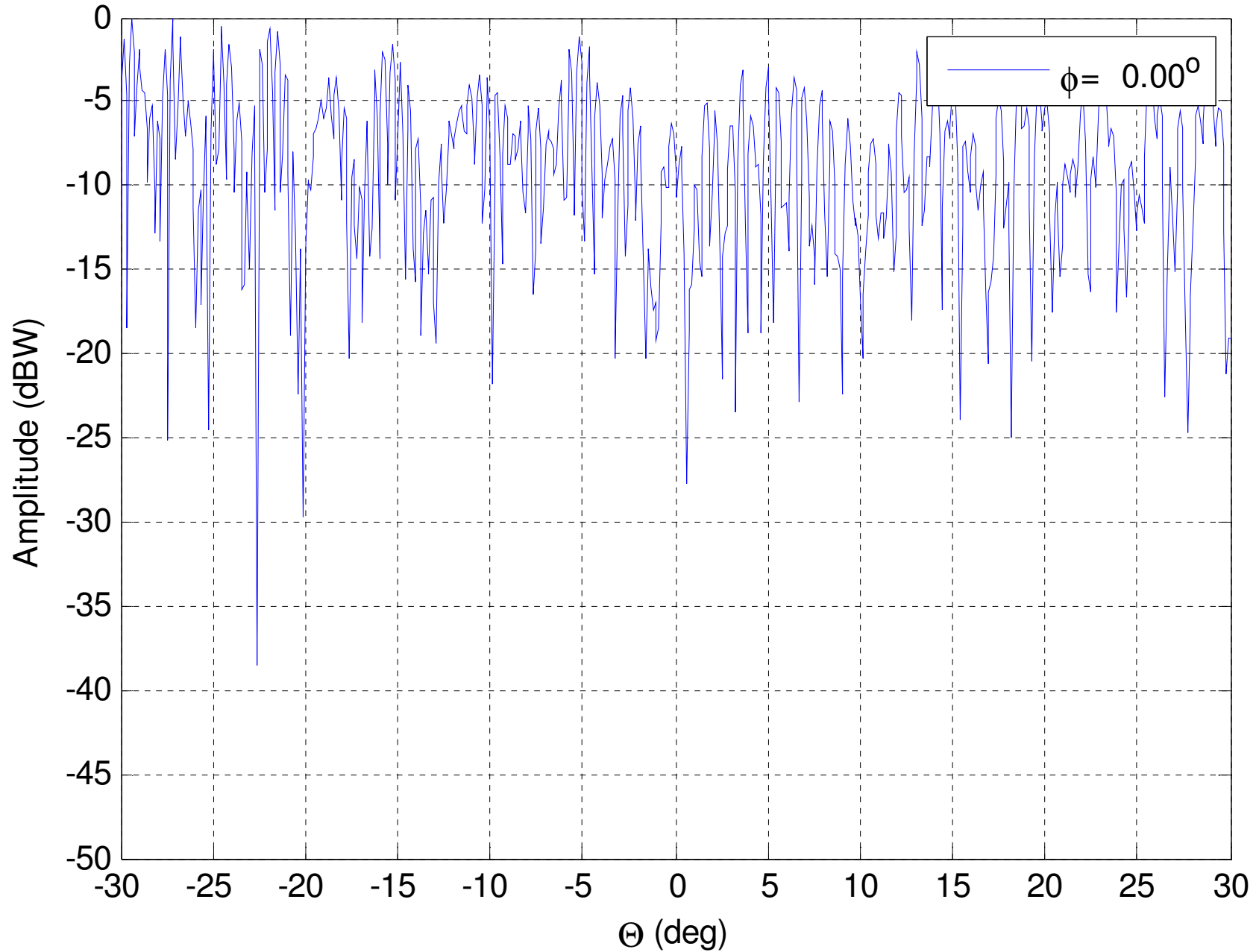
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -11.52 dBW, Date: 15-Dec-2011



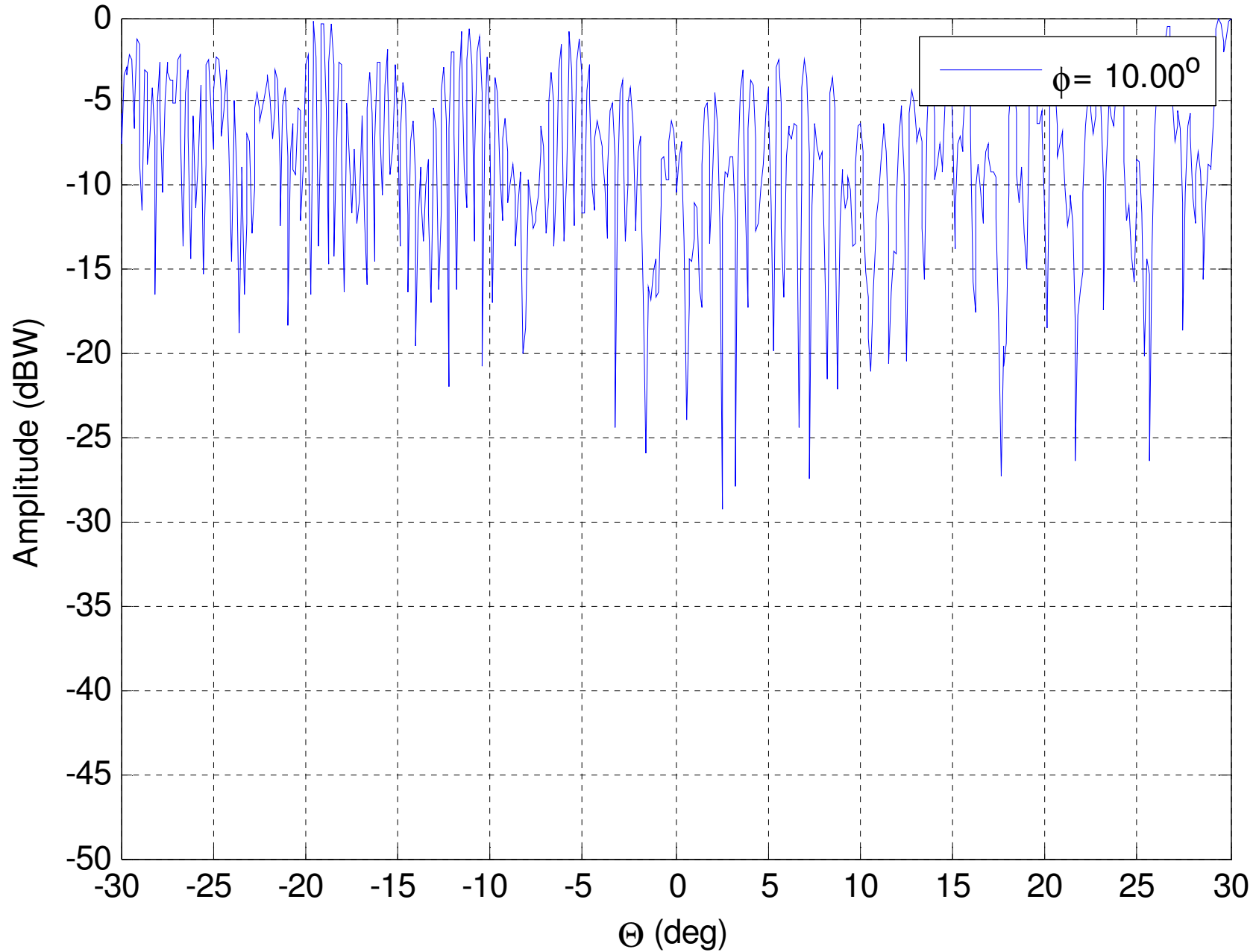
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -12.85 dBW, Date: 15-Dec-2011



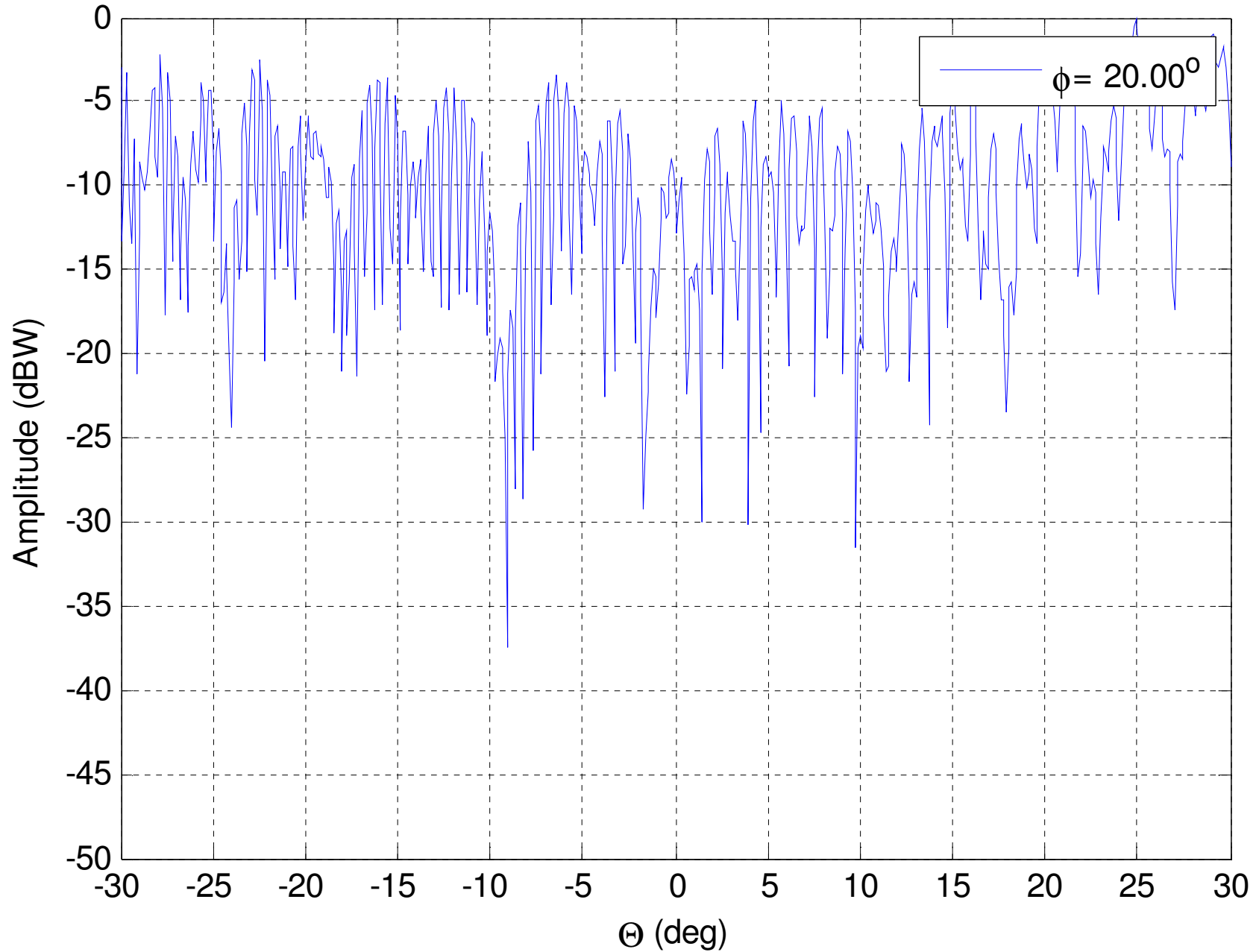
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -13.07 dBW, Date: 15-Dec-2011



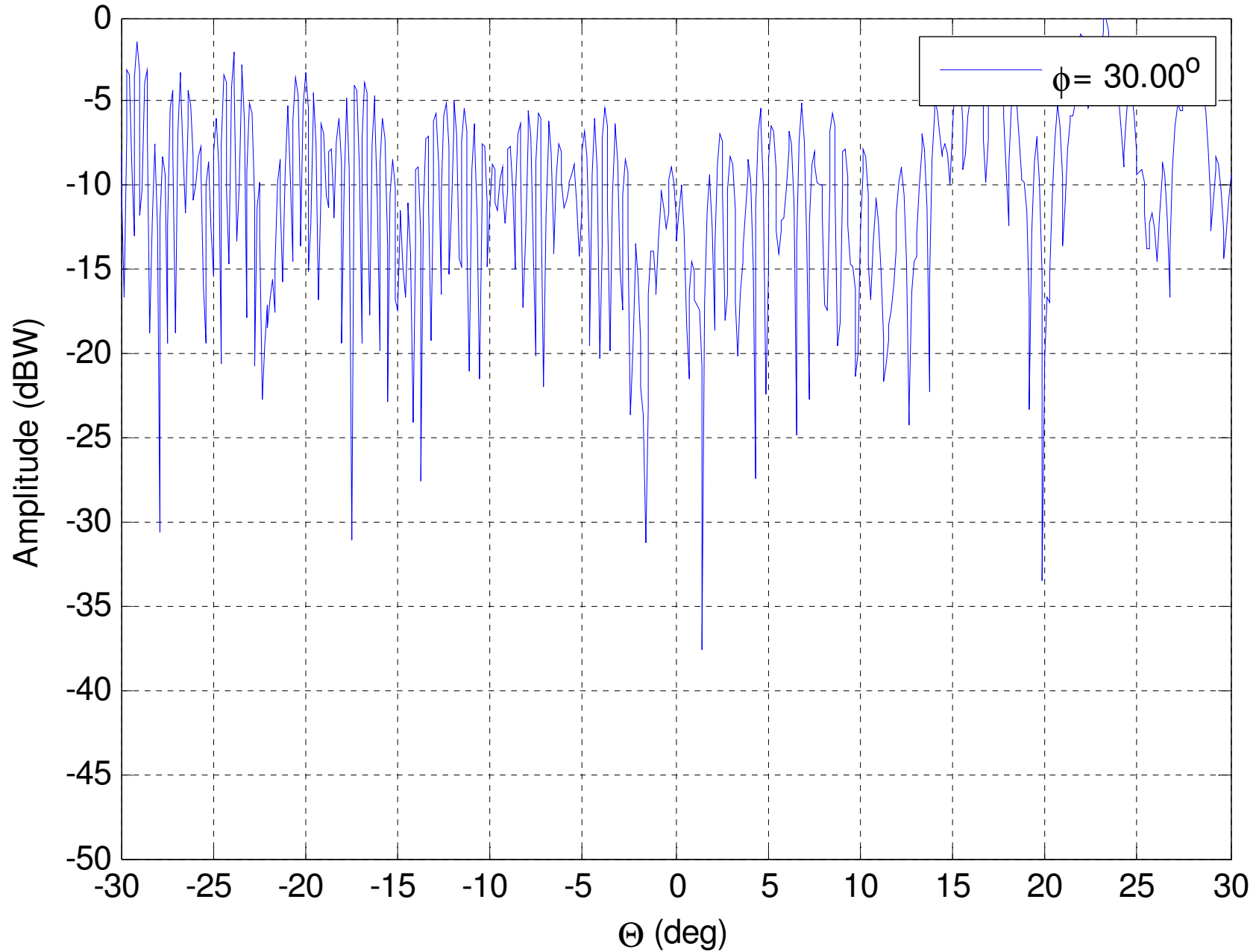
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -10.72 dBW, Date: 15-Dec-2011



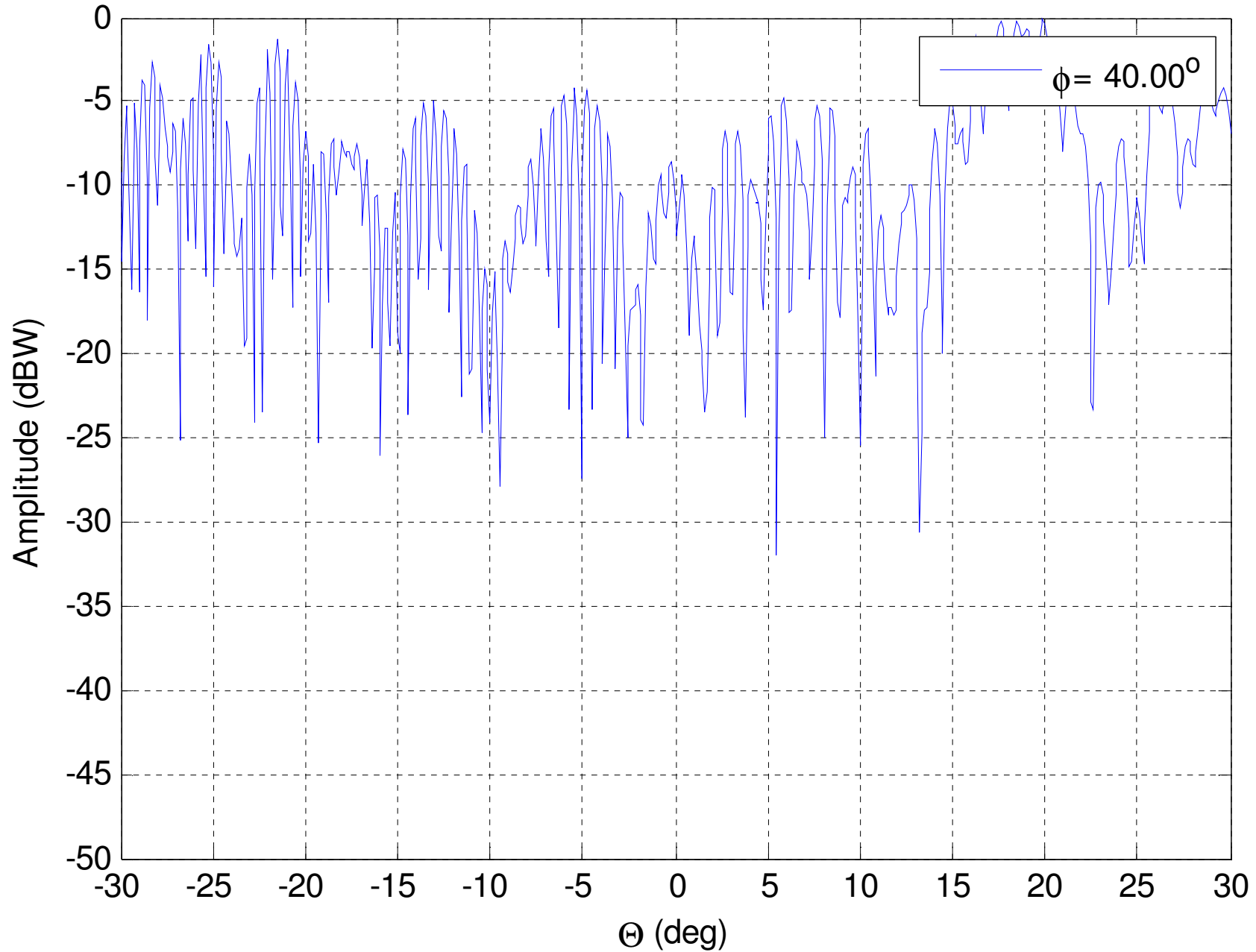
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.19 dBW, Date: 15-Dec-2011



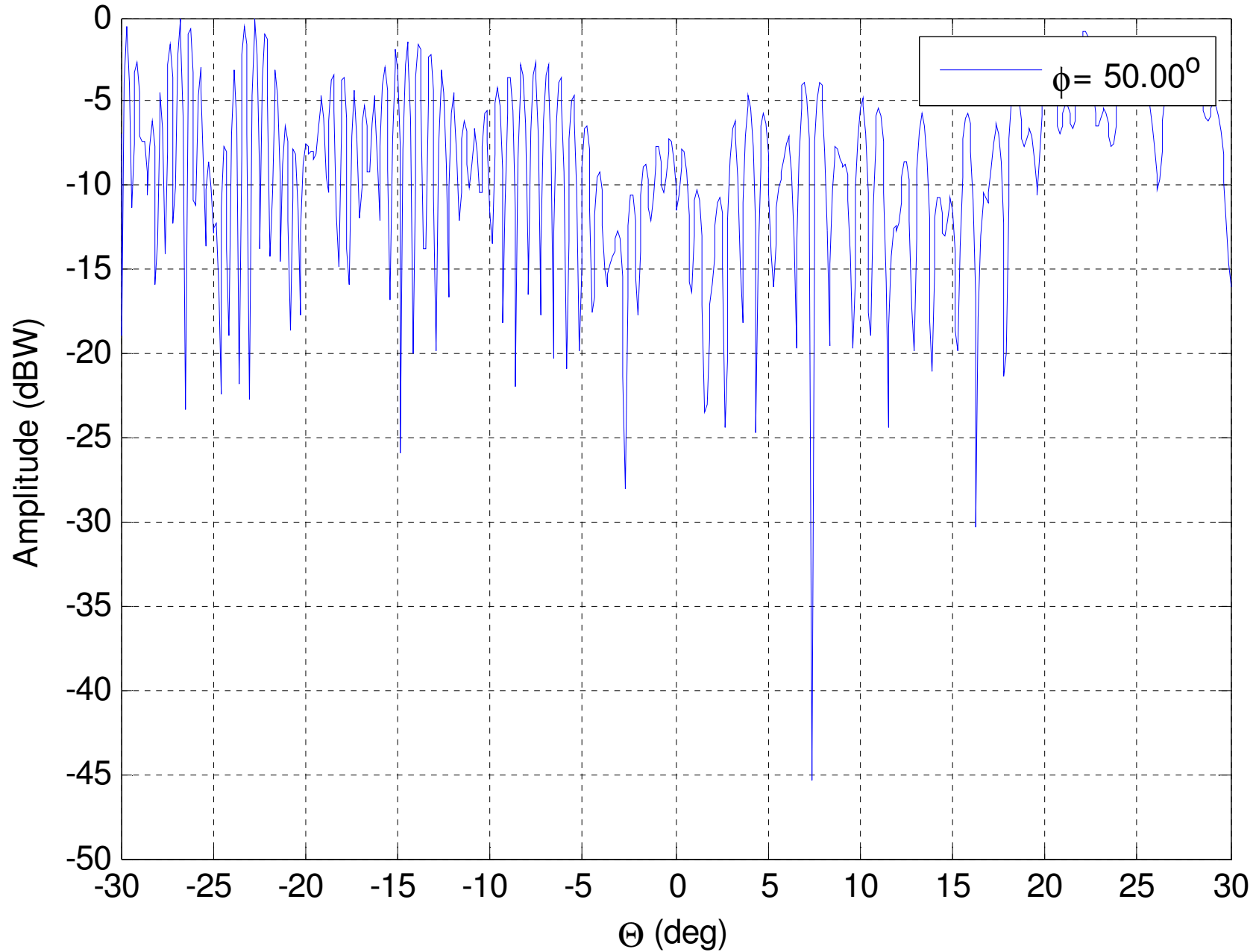
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -10.55 dBW, Date: 15-Dec-2011



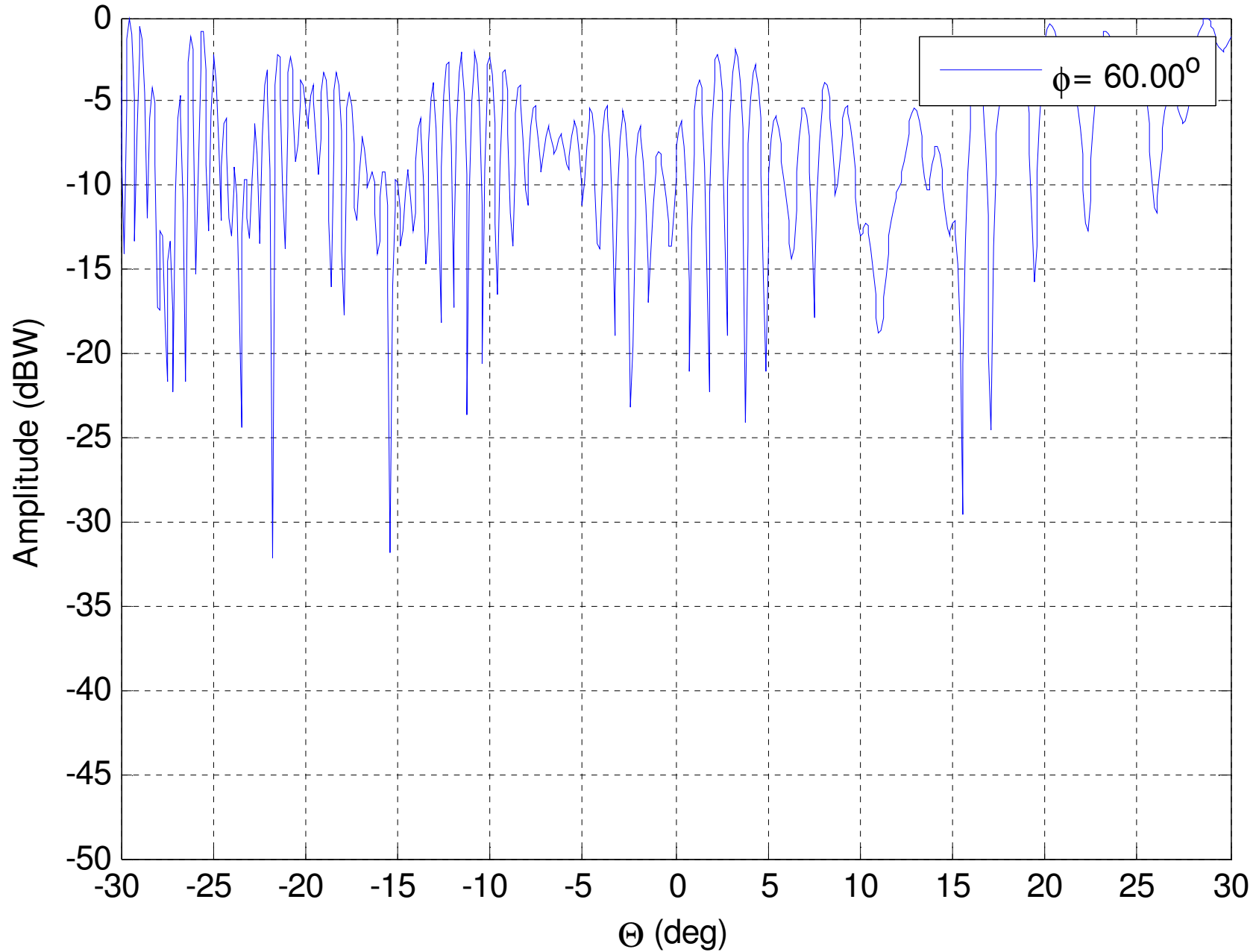
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.96 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

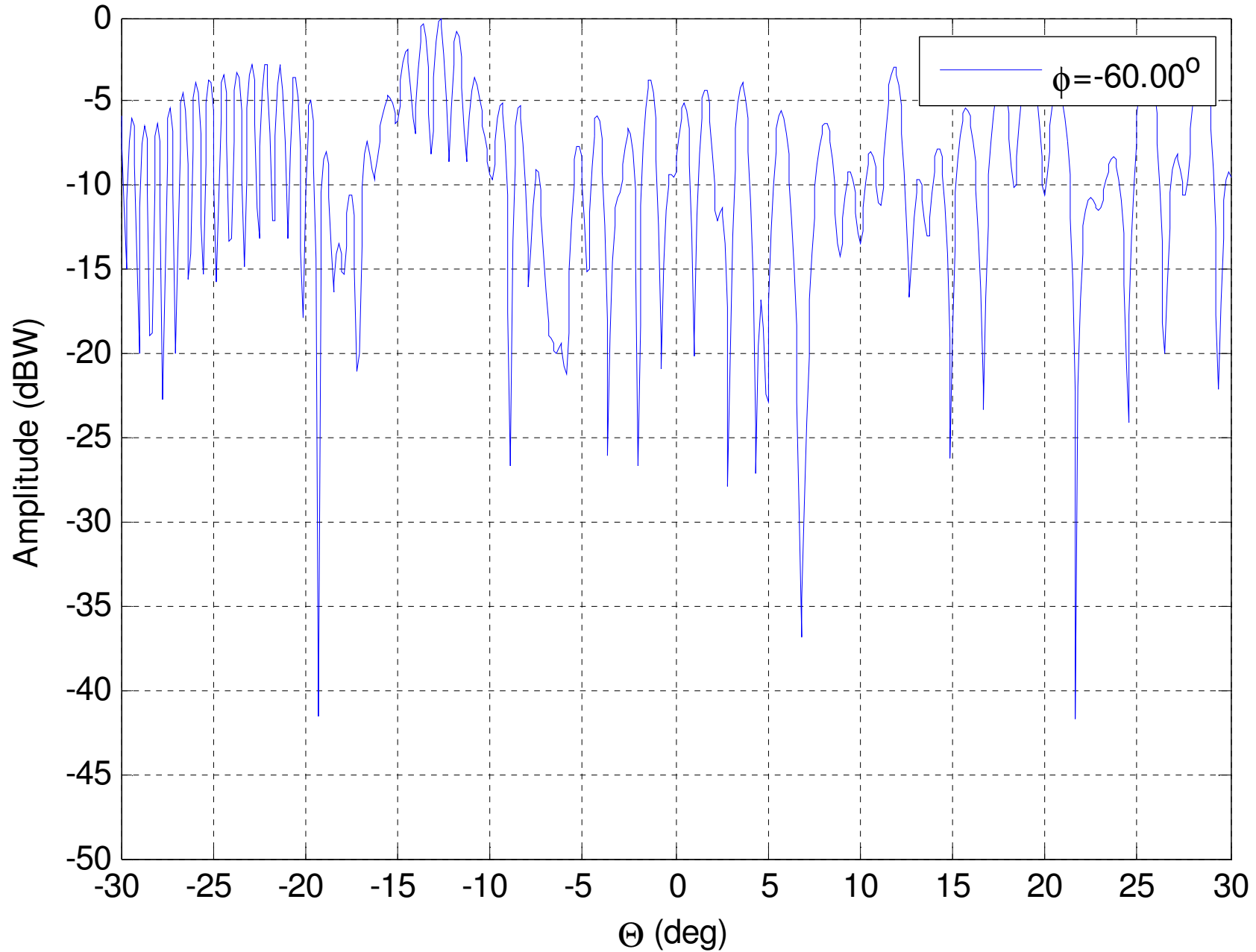
Input file: tx-17.5-rhcp-60.cut, Peak: -12.39 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

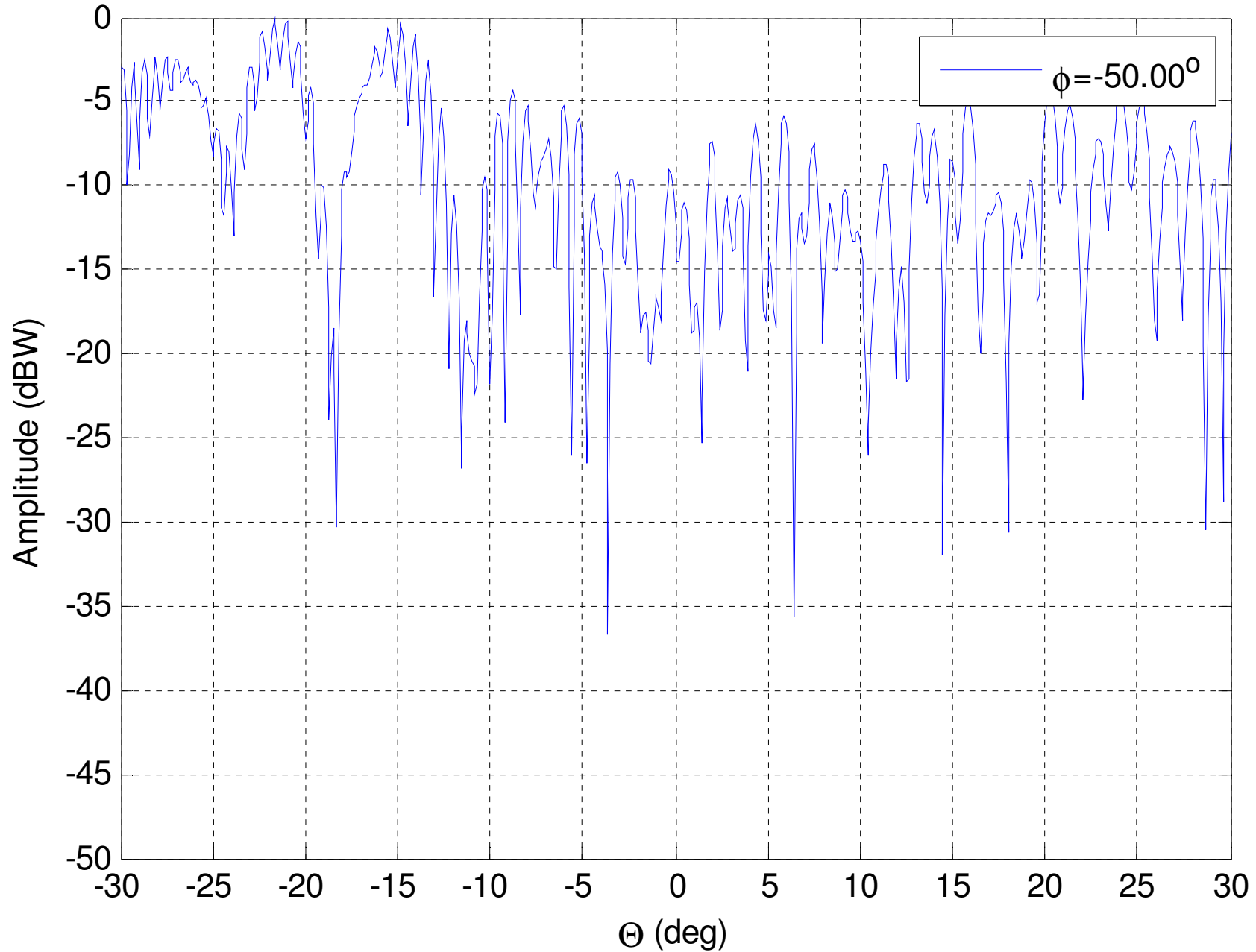
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -10.25 dBW, Date: 15-Dec-2011



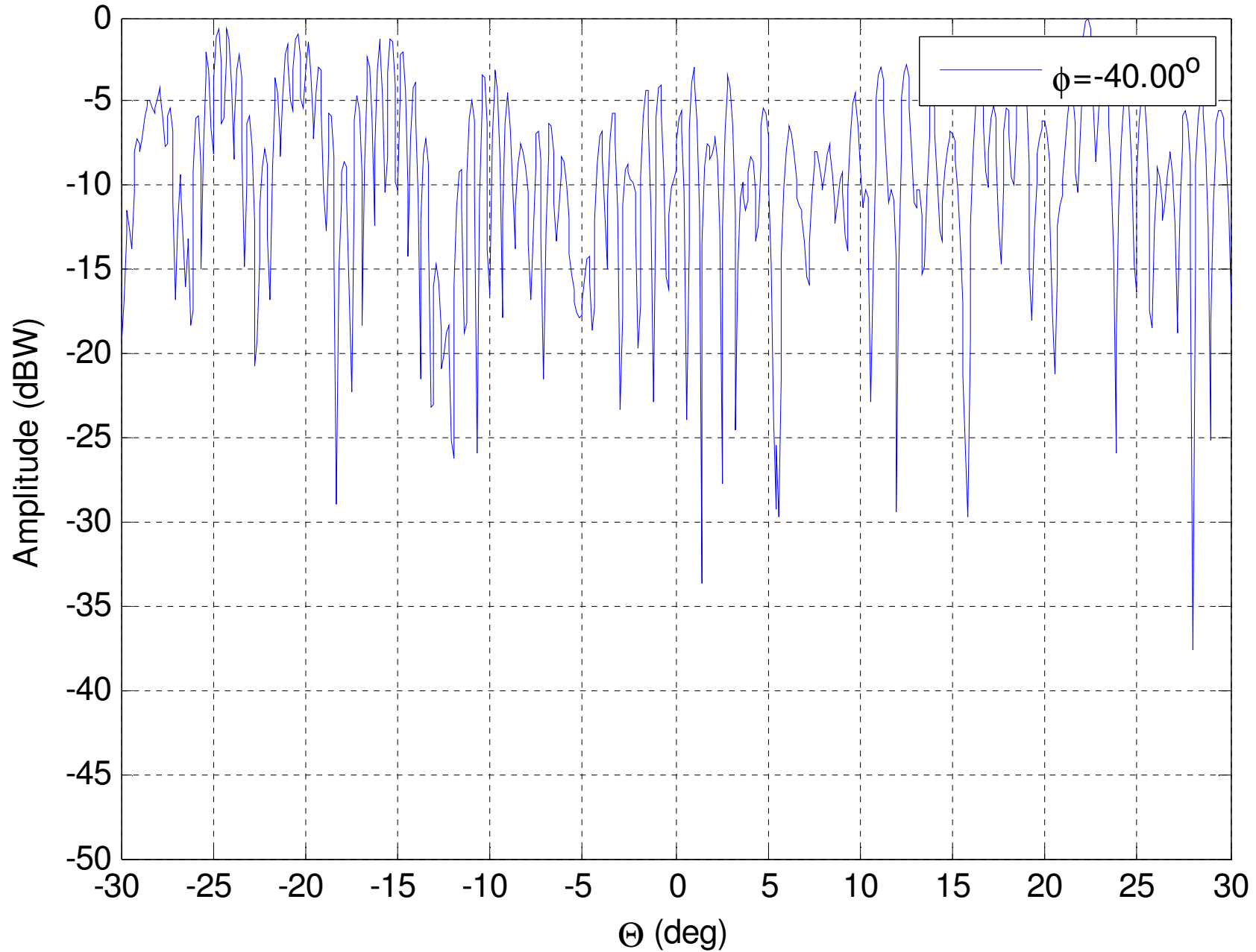
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -9.74 dBW, Date: 15-Dec-2011



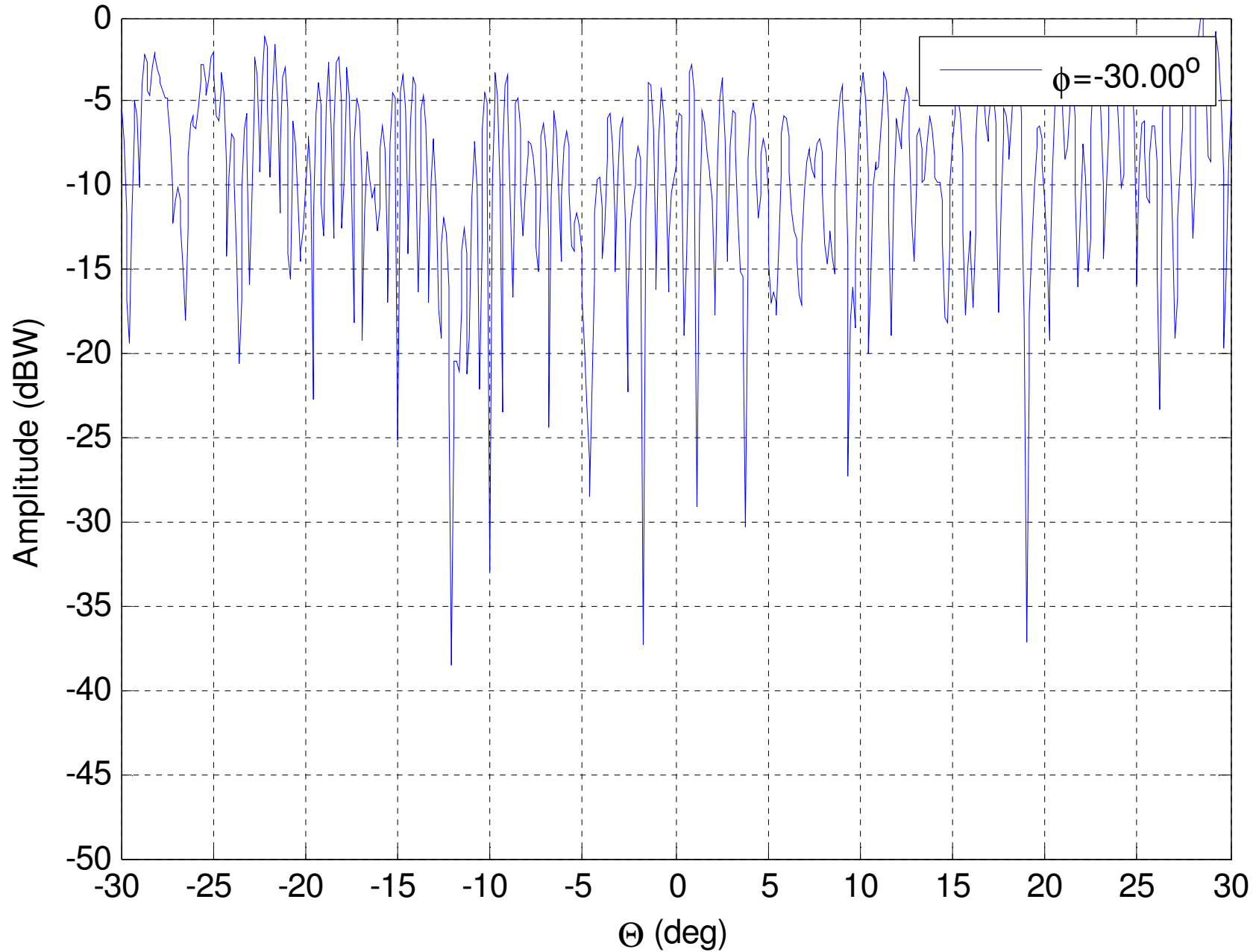
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.51 dBW, Date: 15-Dec-2011



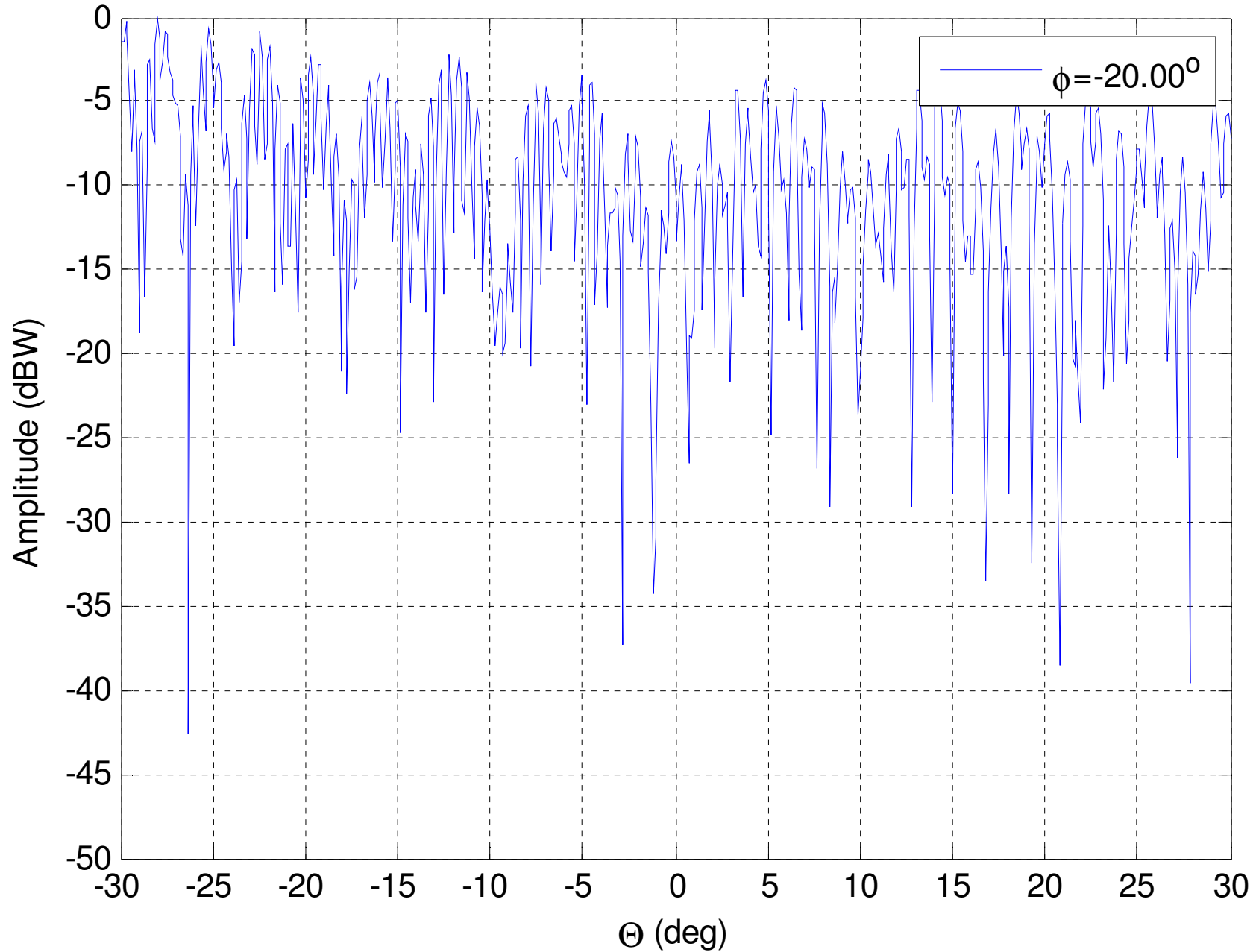
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.68 dBW, Date: 15-Dec-2011



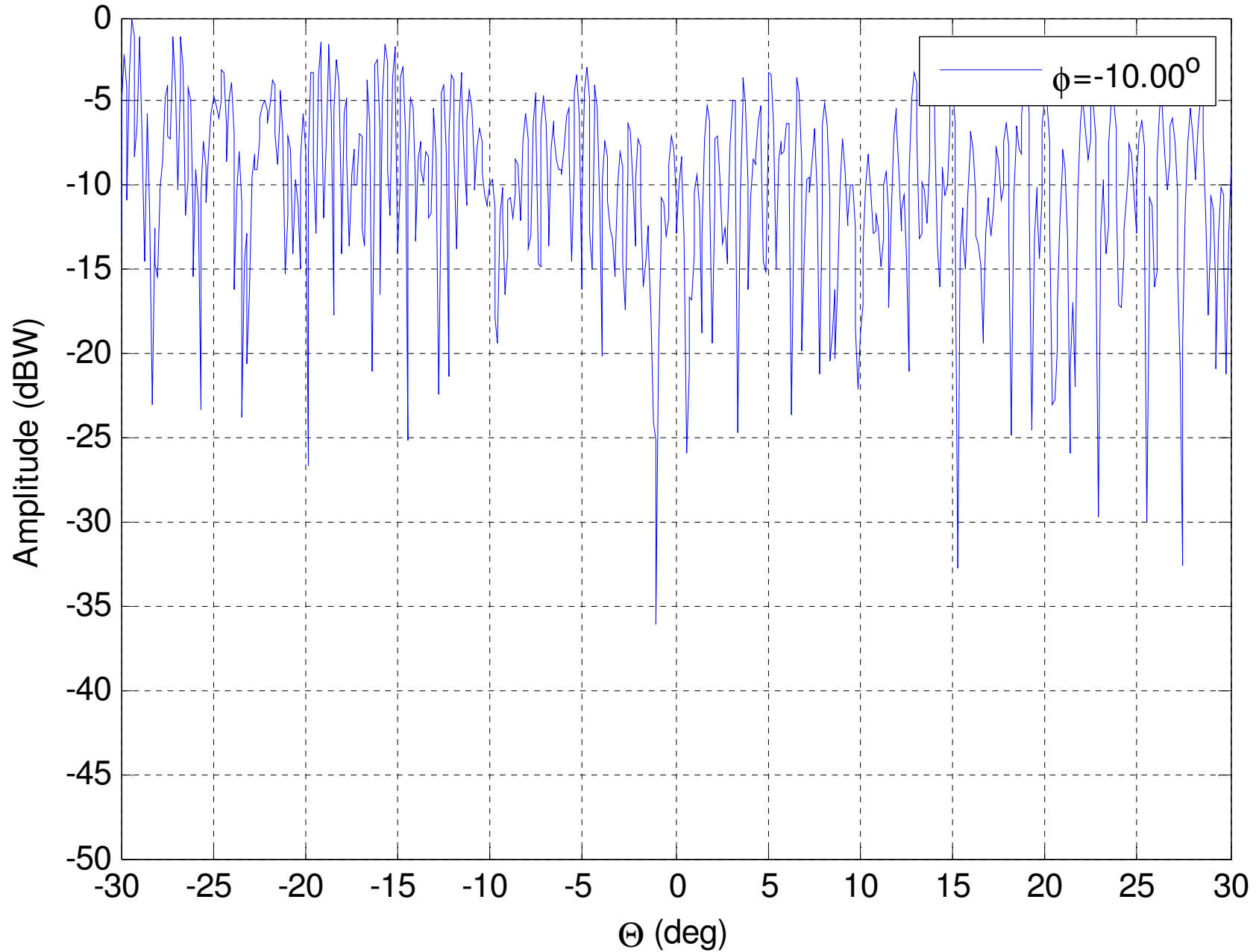
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -11.15 dBW, Date: 15-Dec-2011



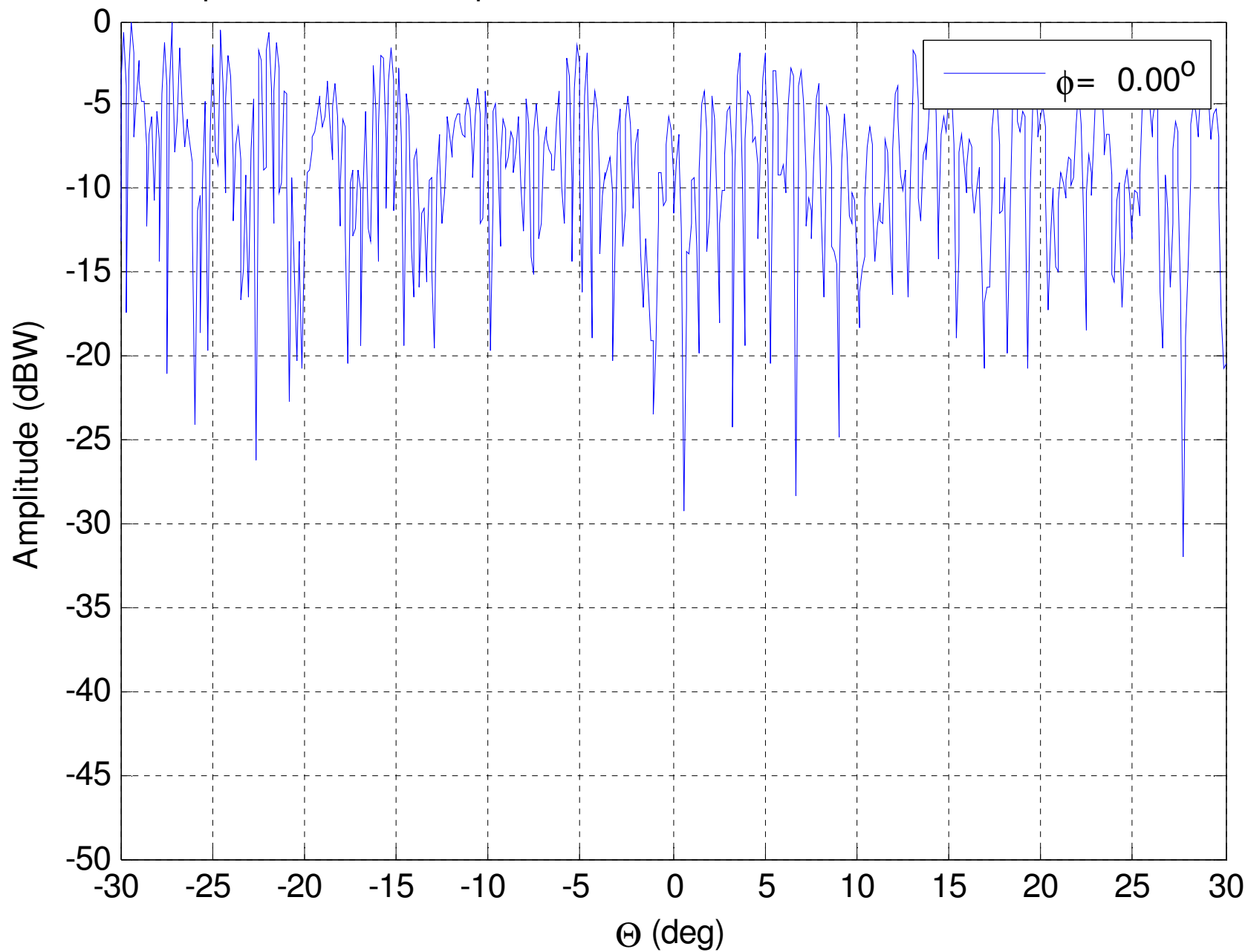
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -11.43 dBW, Date: 15-Dec-2011



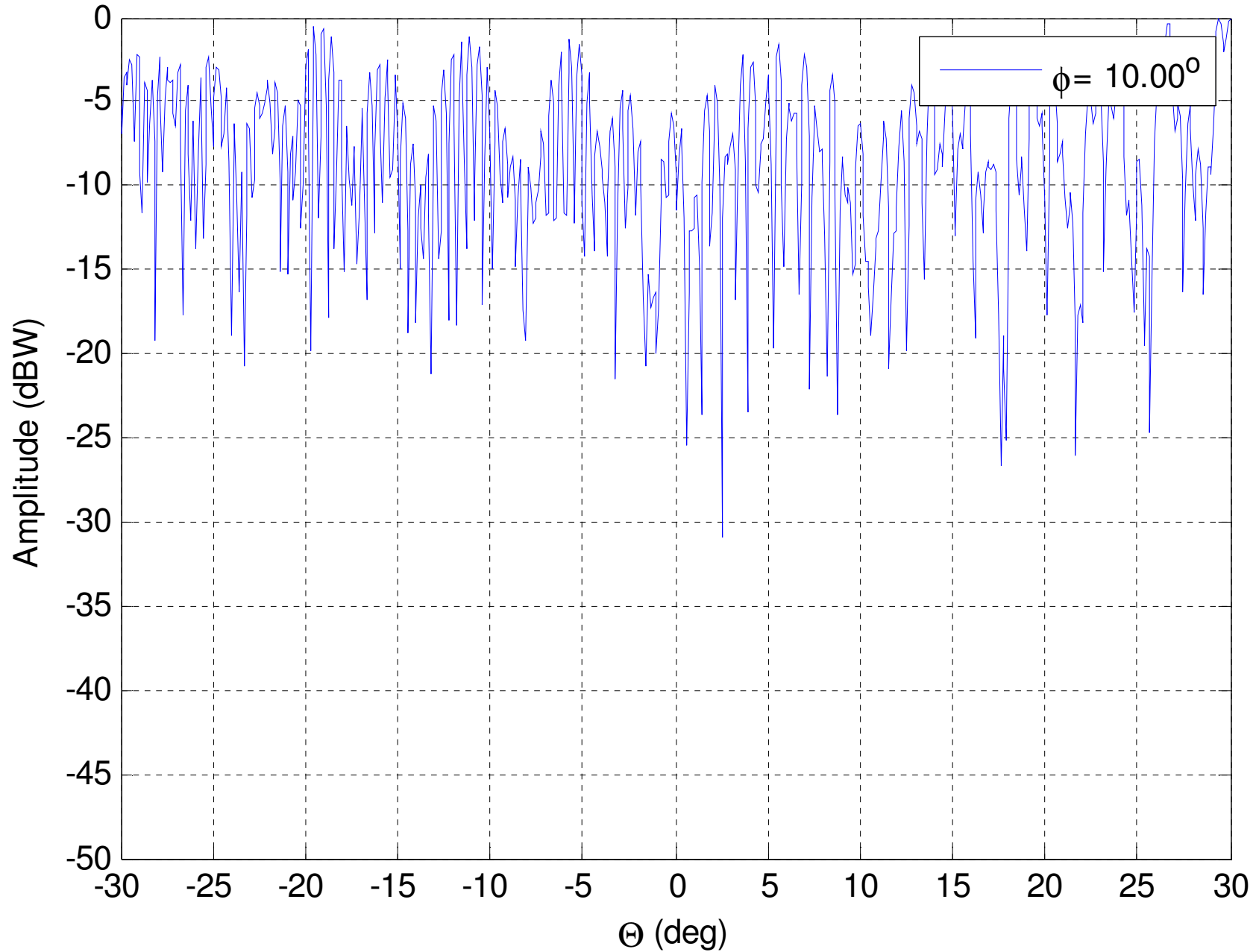
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -12.81 dBW, Date: 15-Dec-2011



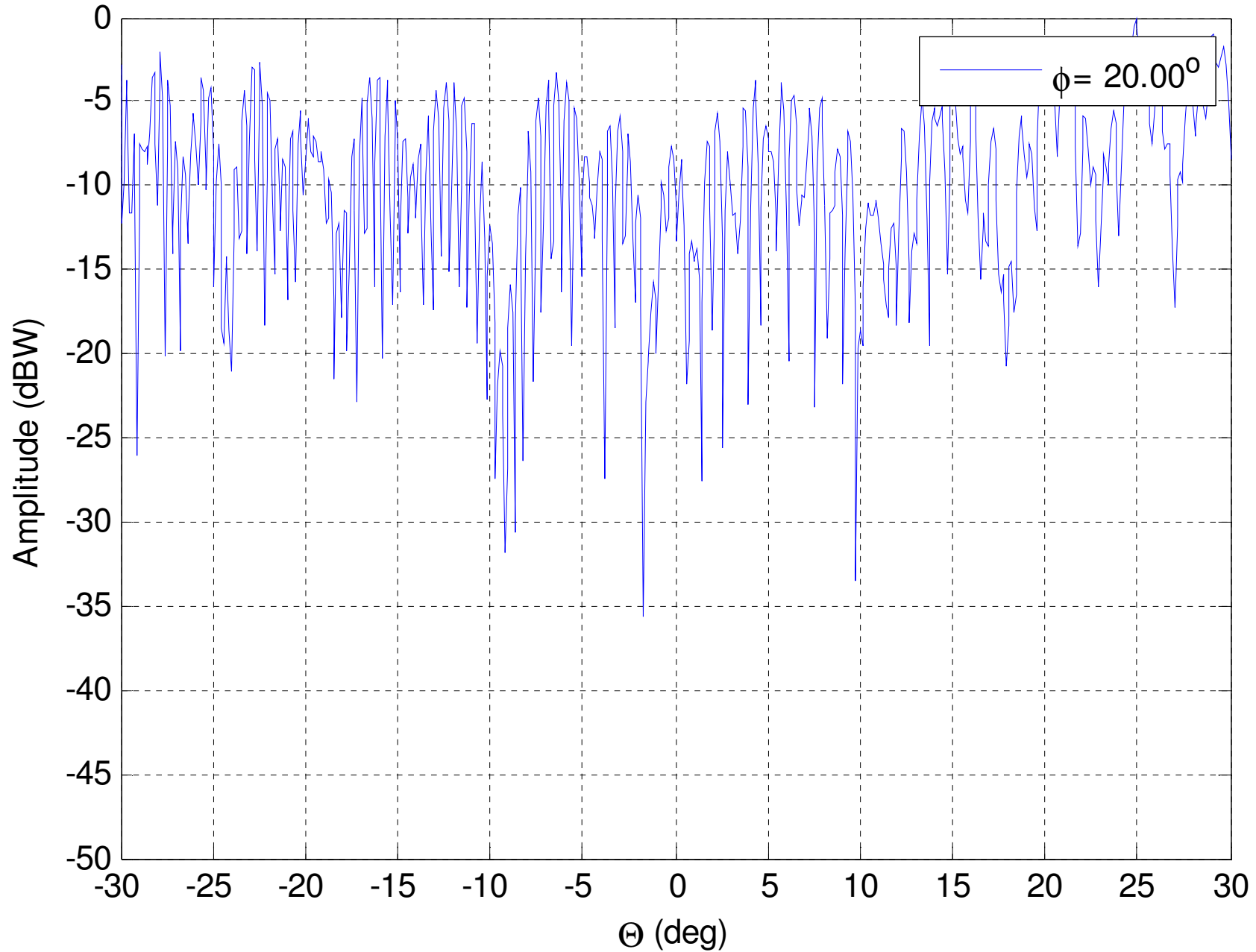
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -12.78 dBW, Date: 15-Dec-2011



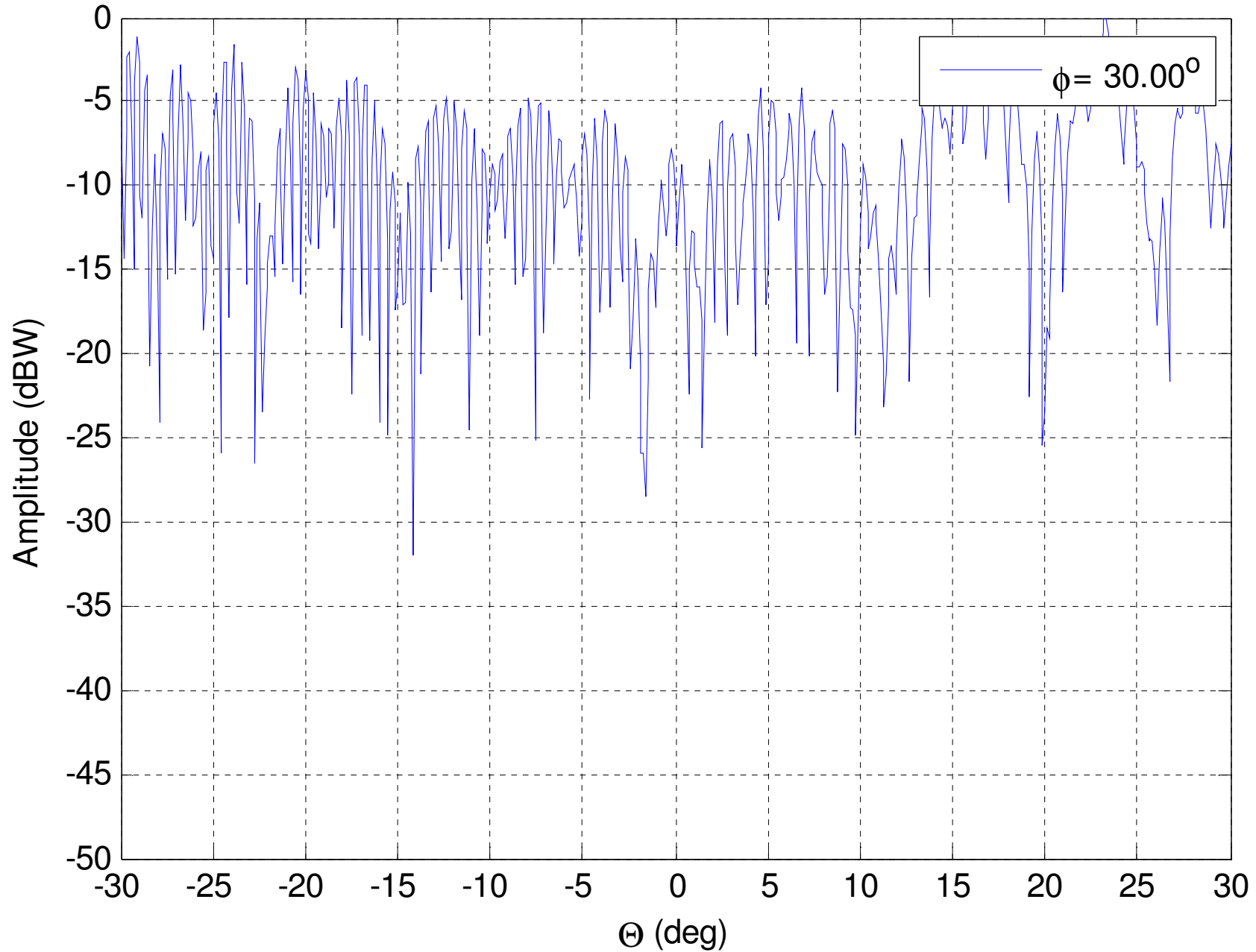
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -10.86 dBW, Date: 15-Dec-2011



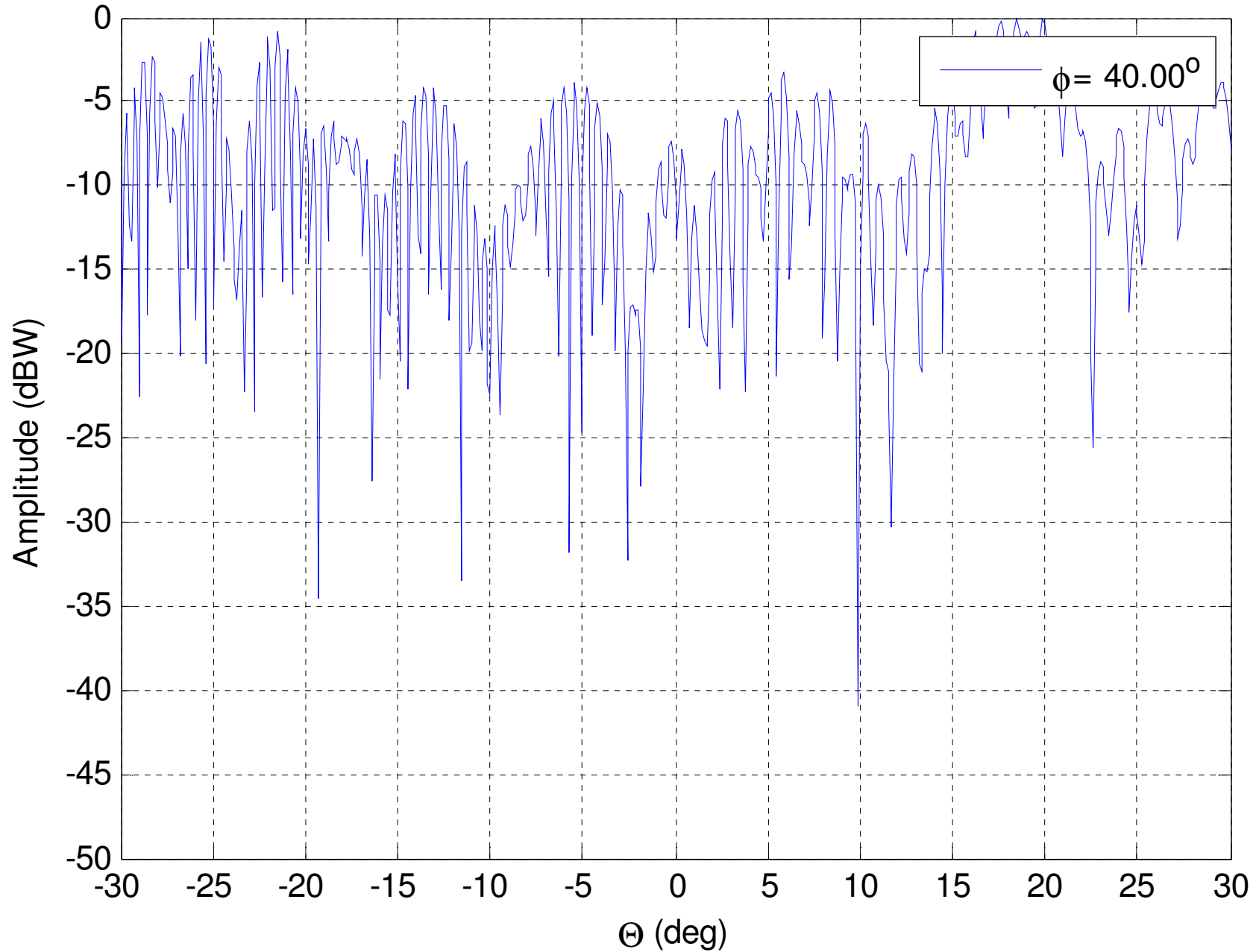
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.62 dBW, Date: 15-Dec-2011



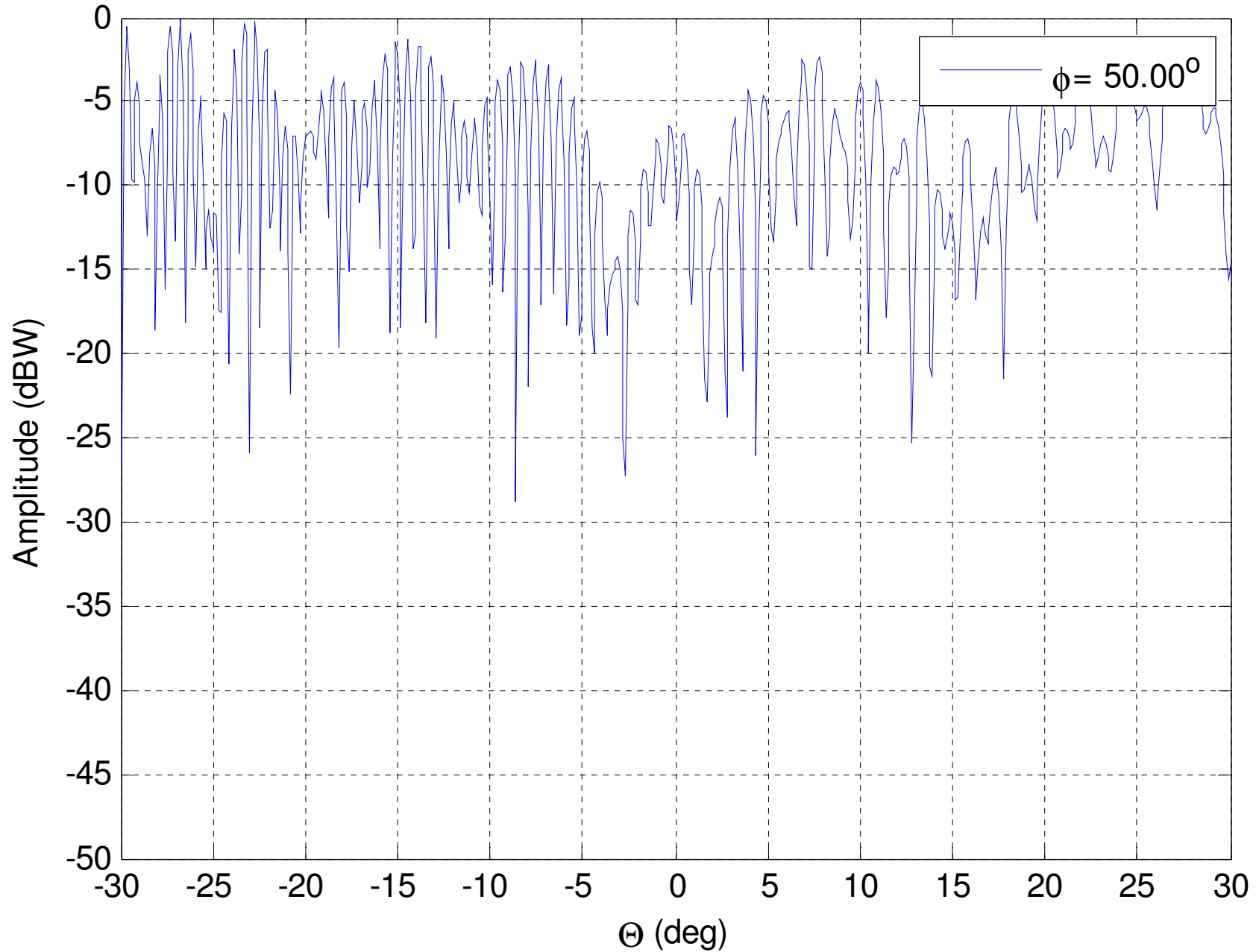
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -11.14 dBW, Date: 15-Dec-2011



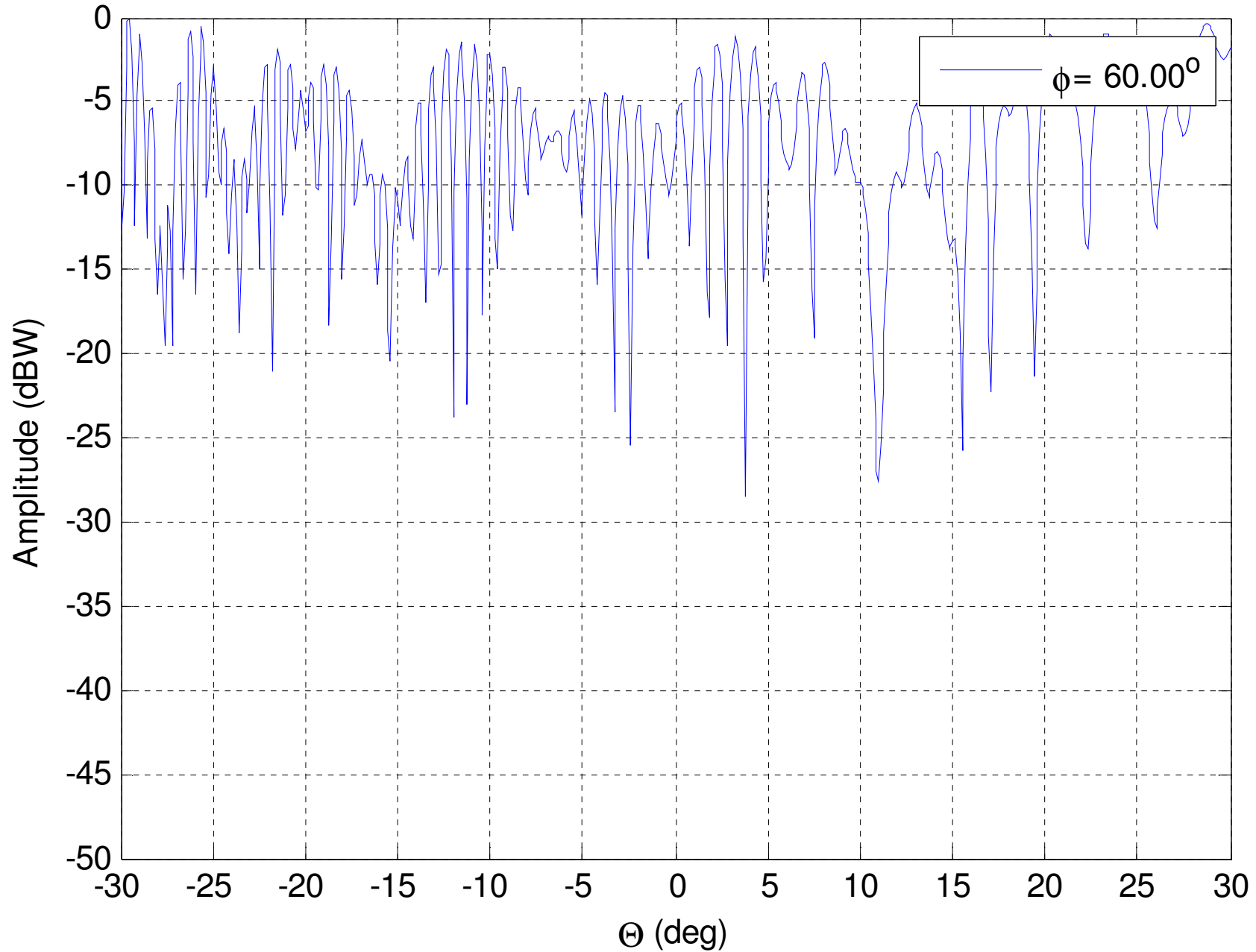
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.00 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

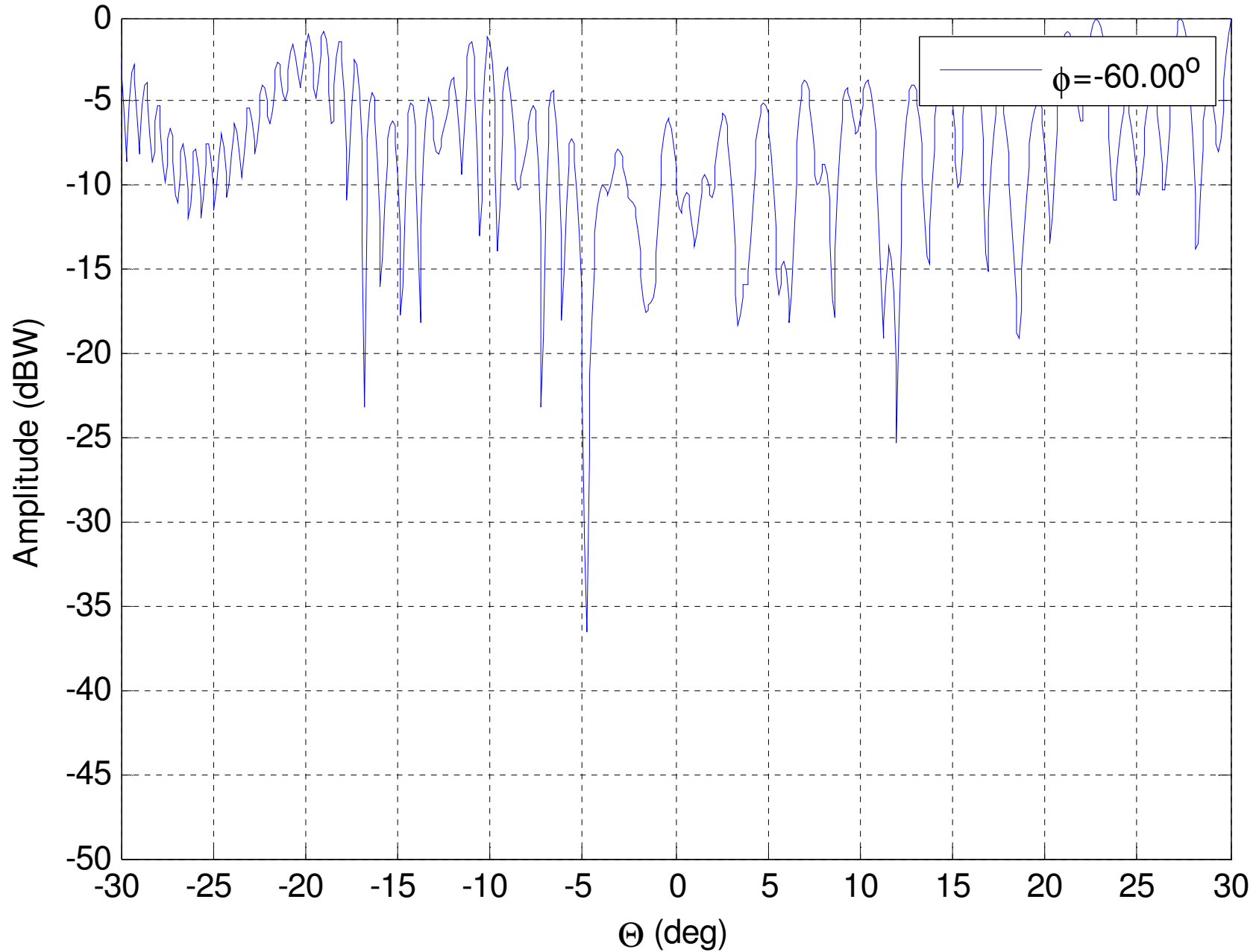
Input file: tx-17.5-lhcp-60.cut, Peak: -12.34 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

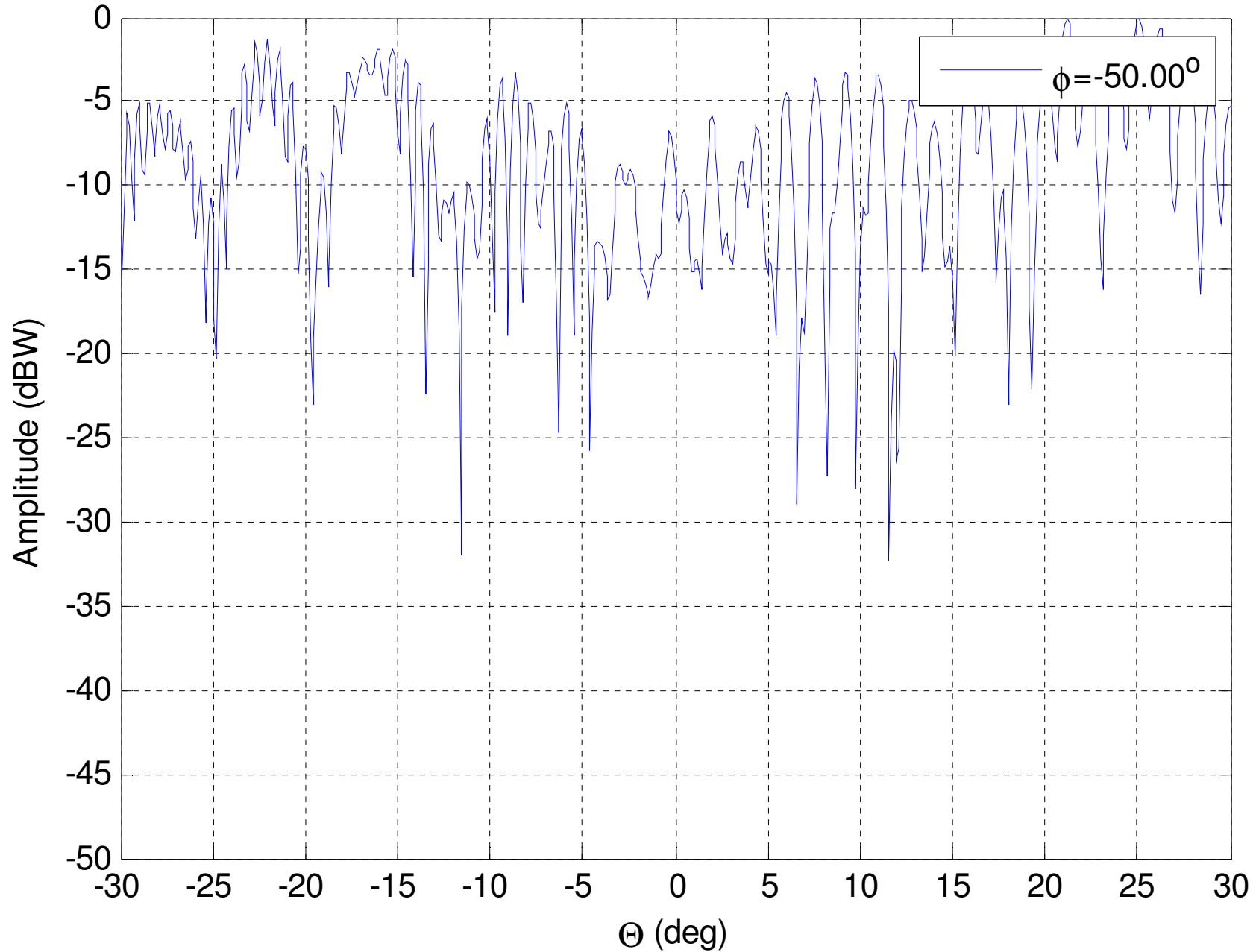
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -12.07 dBW, Date: 15-Dec-2011



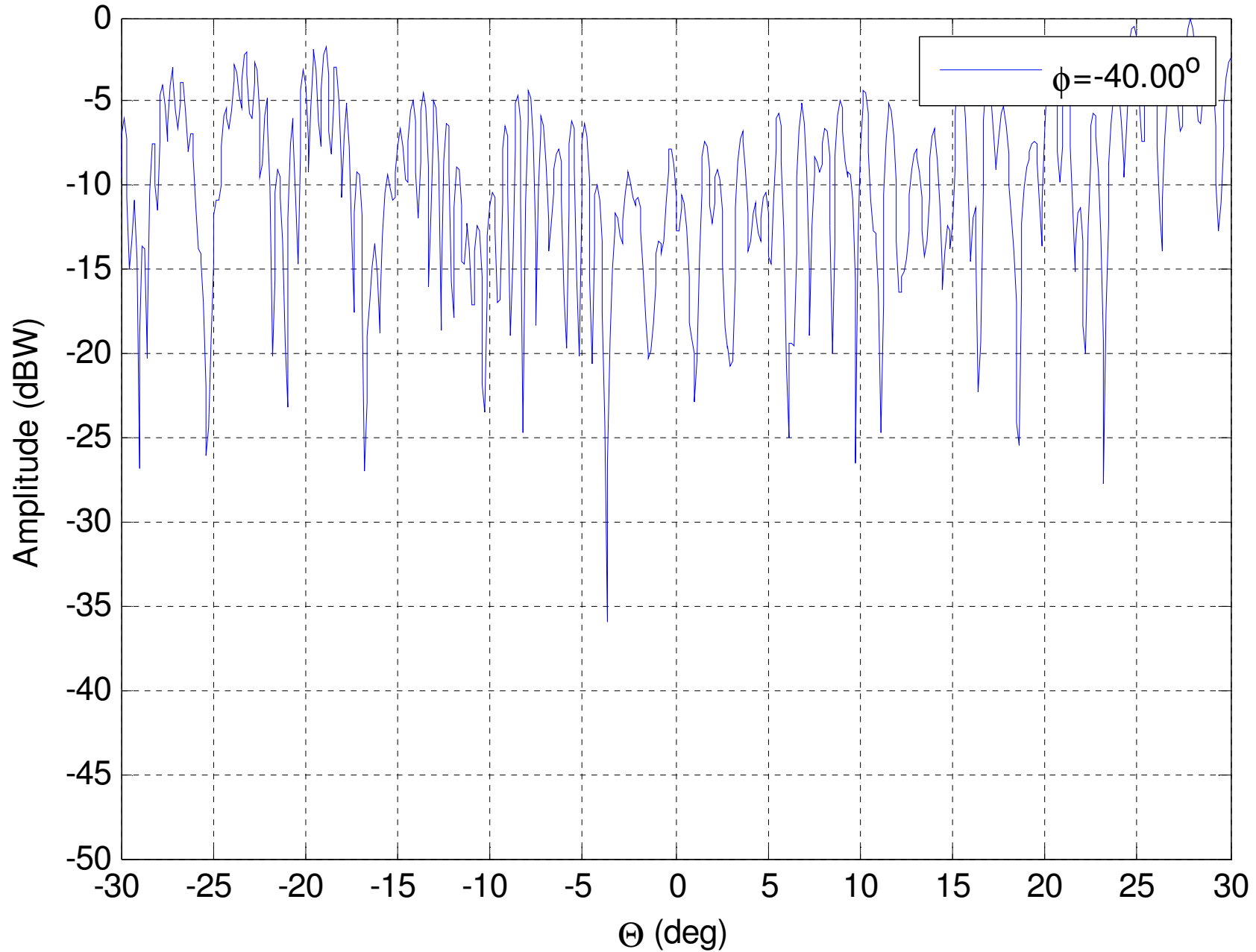
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -11.18 dBW, Date: 15-Dec-2011



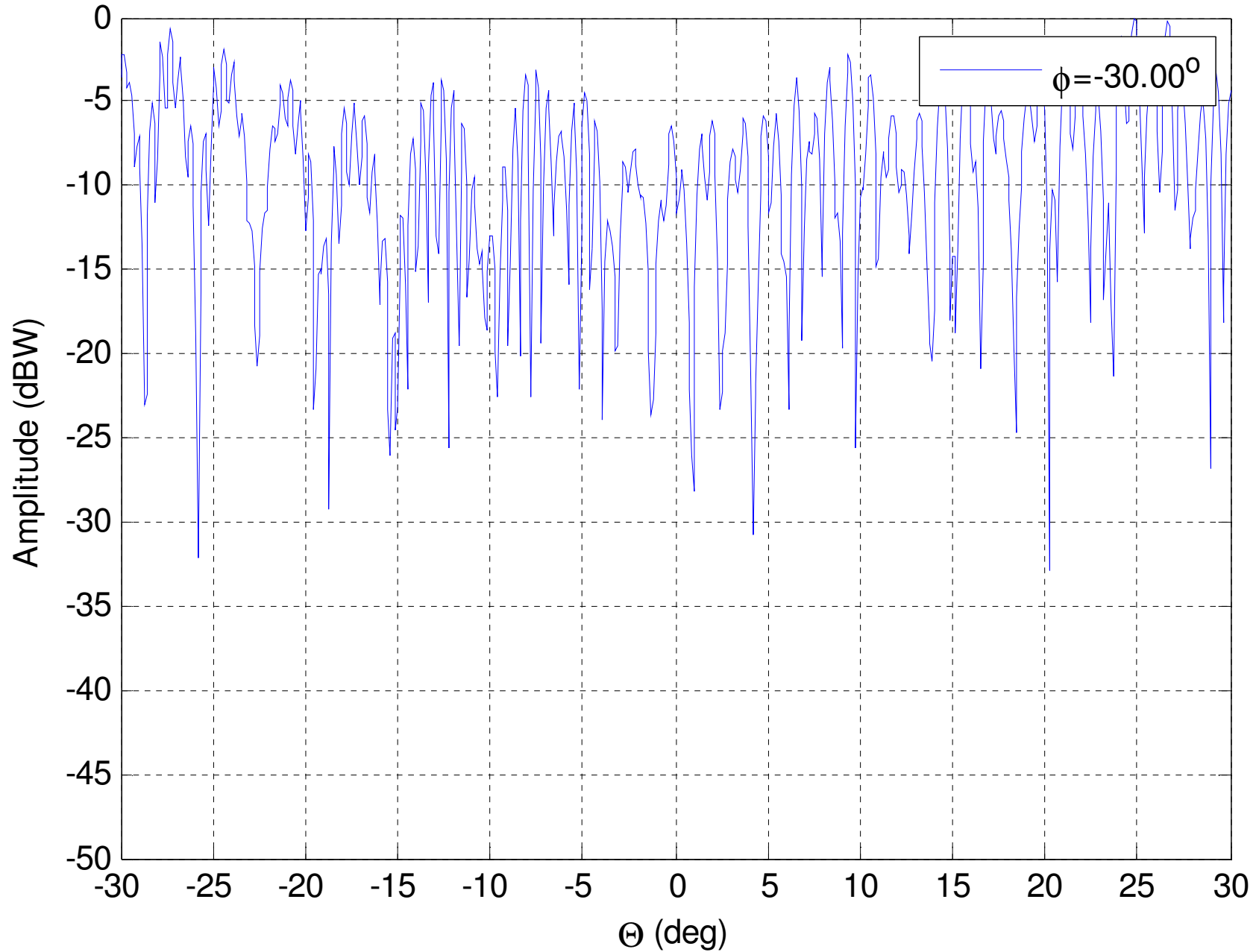
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -10.22 dBW, Date: 15-Dec-2011



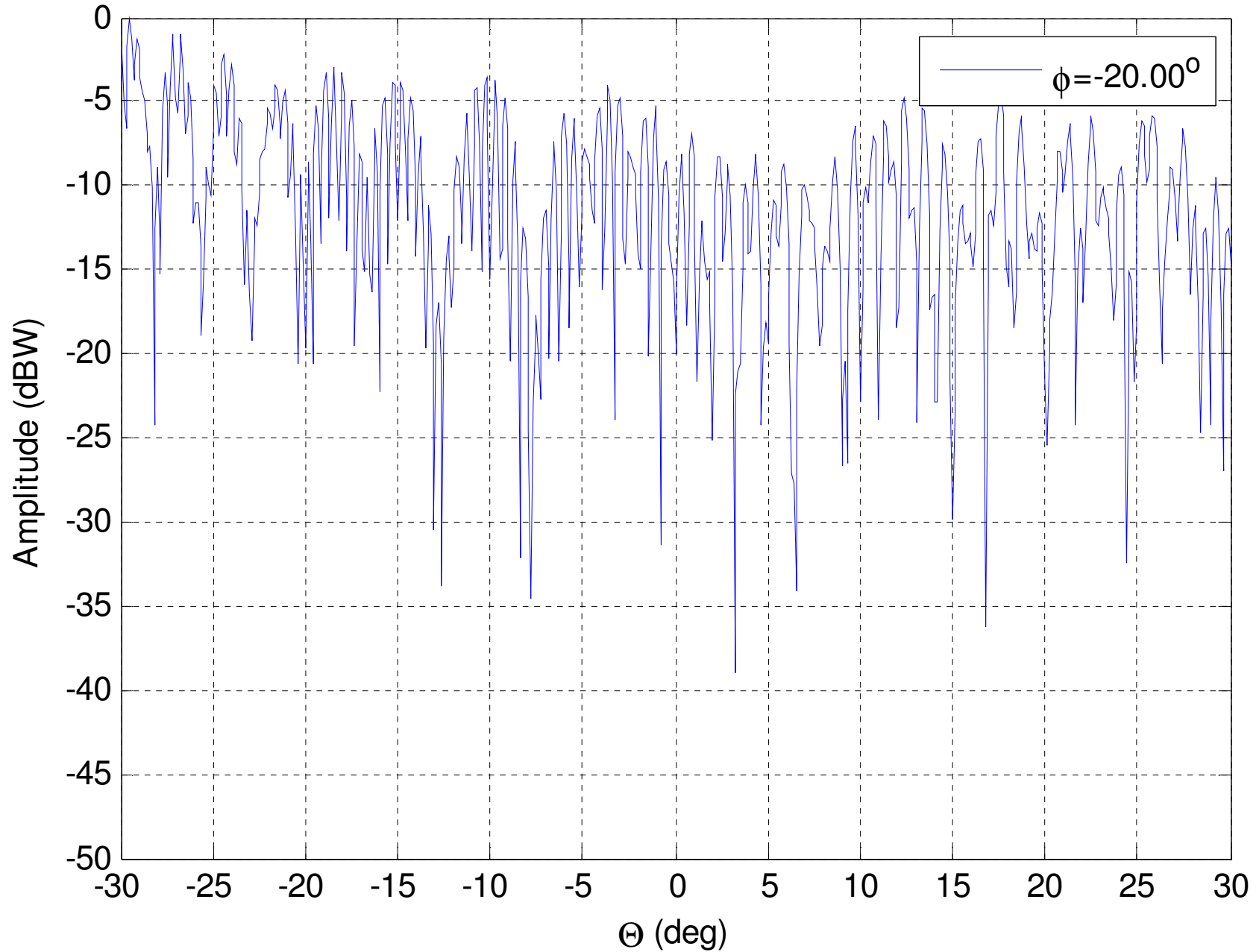
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -11.48 dBW, Date: 15-Dec-2011



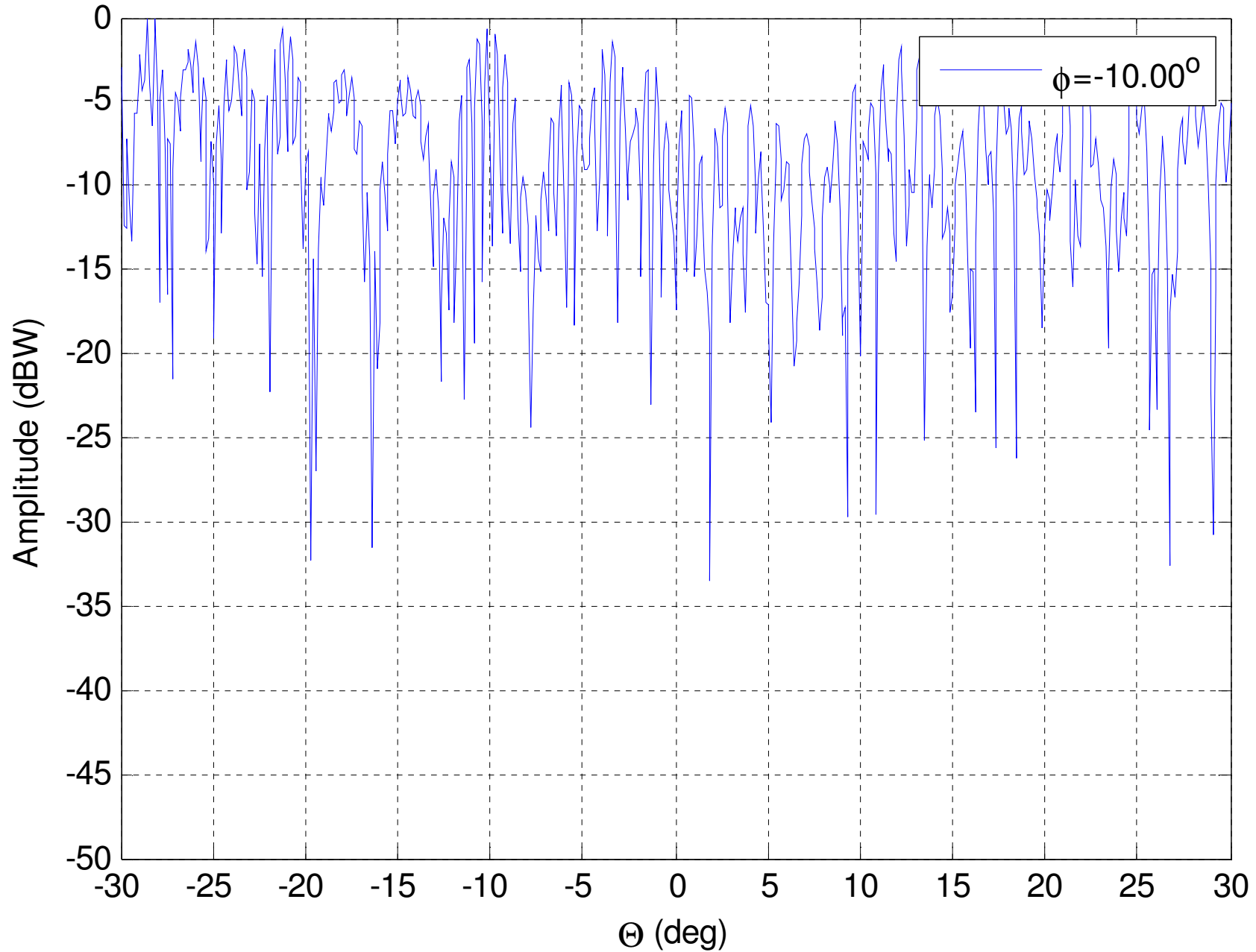
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -10.77 dBW, Date: 15-Dec-2011



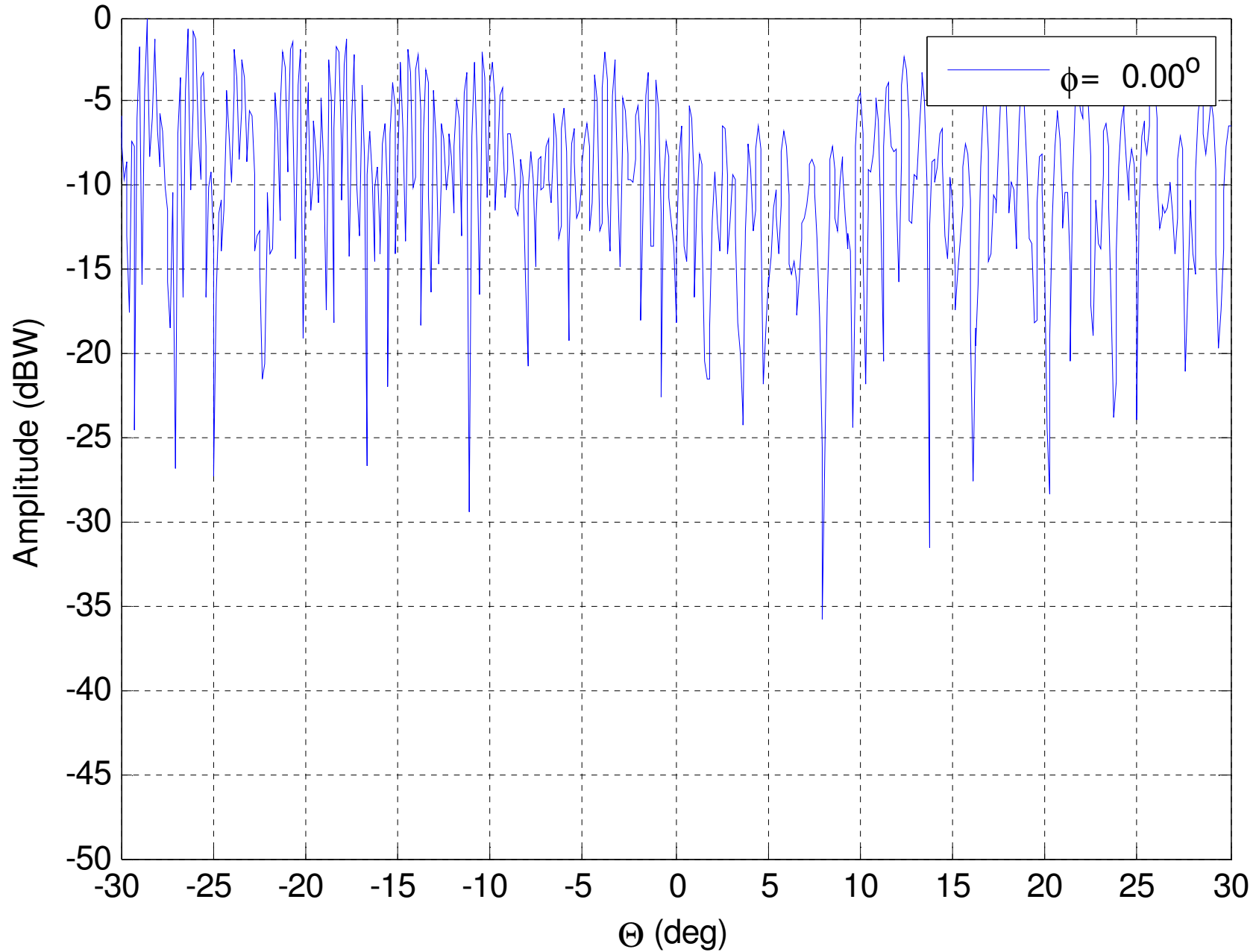
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -13.31 dBW, Date: 15-Dec-2011



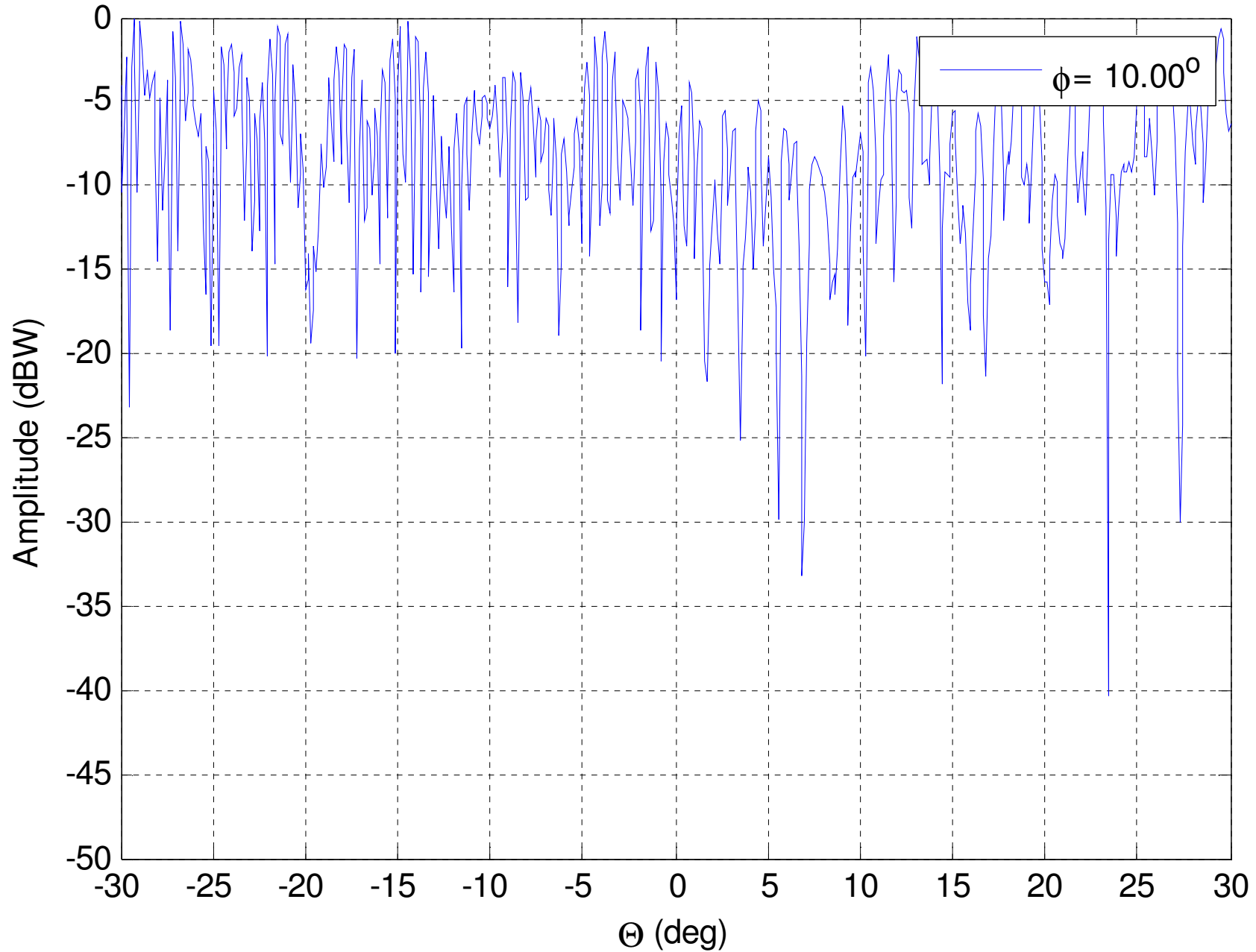
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -12.56 dBW, Date: 15-Dec-2011



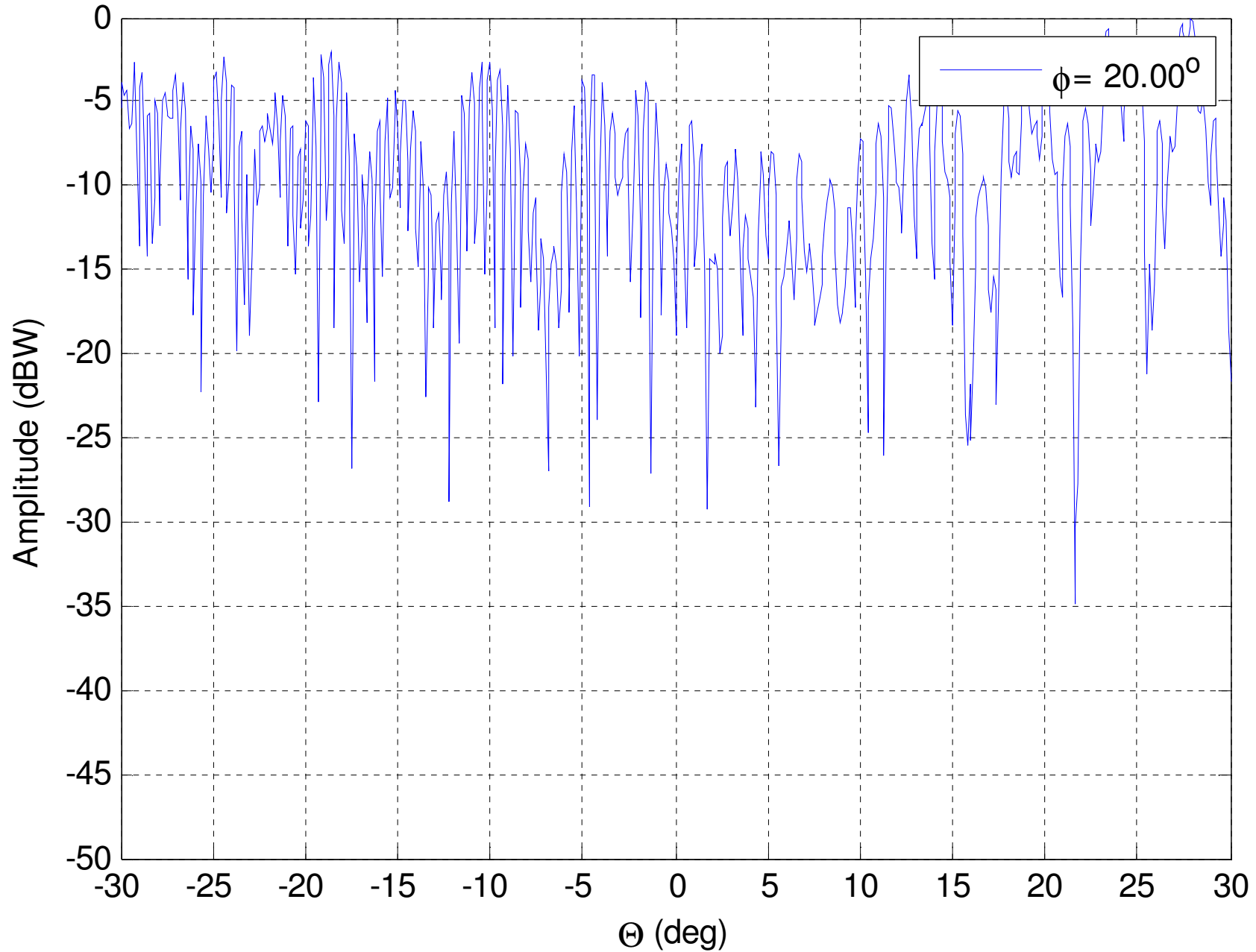
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -13.91 dBW, Date: 15-Dec-2011



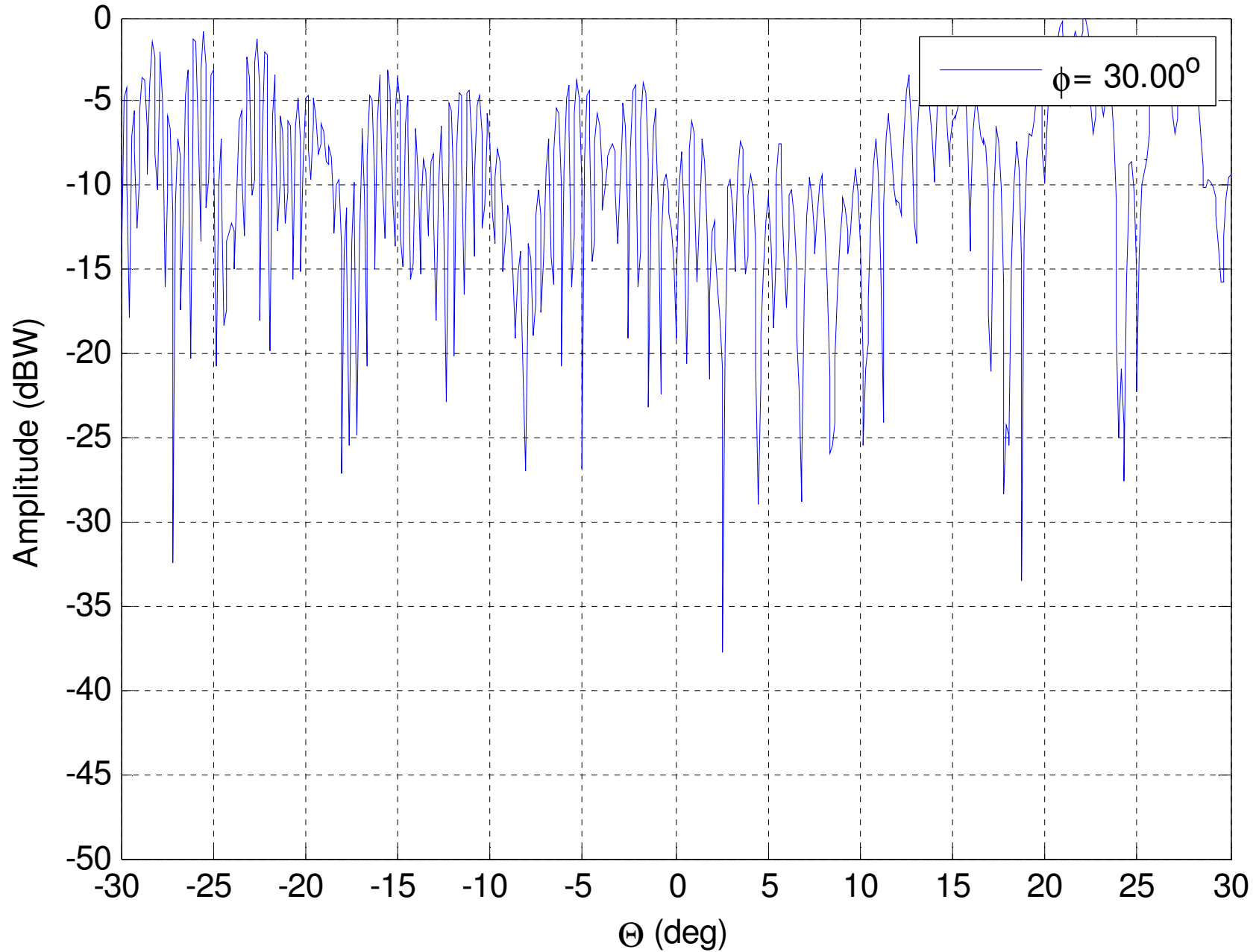
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -11.79 dBW, Date: 15-Dec-2011



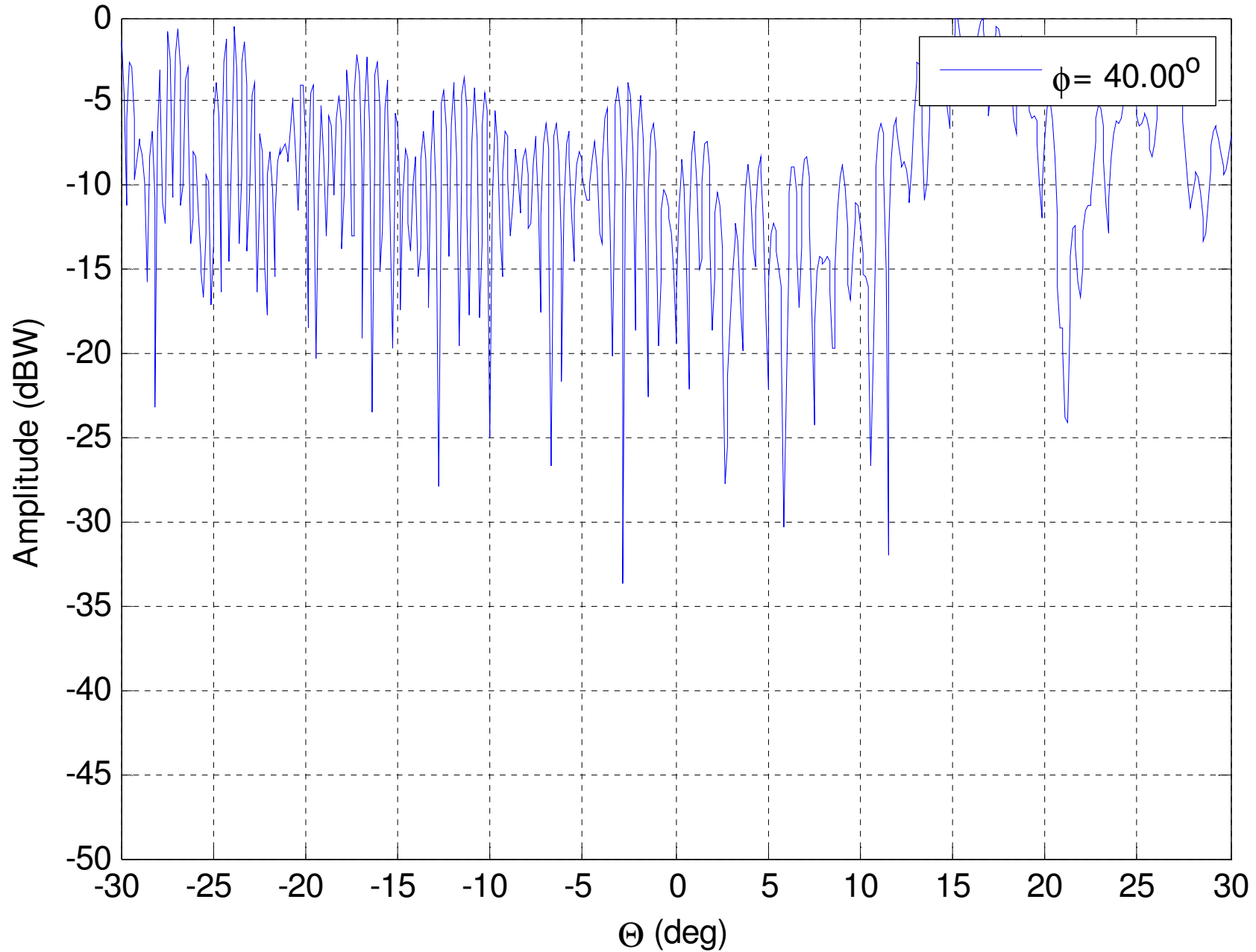
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -11.76 dBW, Date: 15-Dec-2011



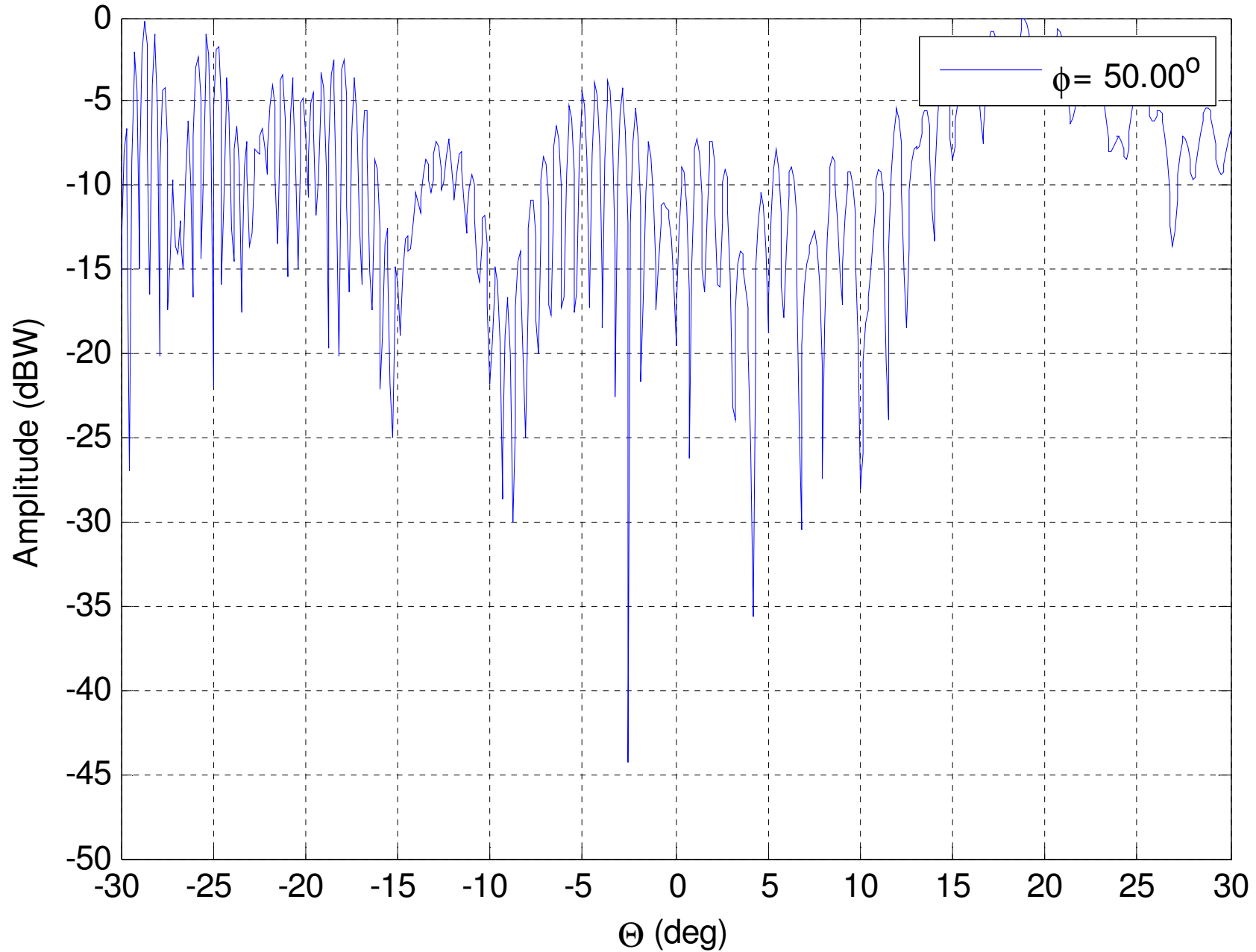
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.38 dBW, Date: 15-Dec-2011



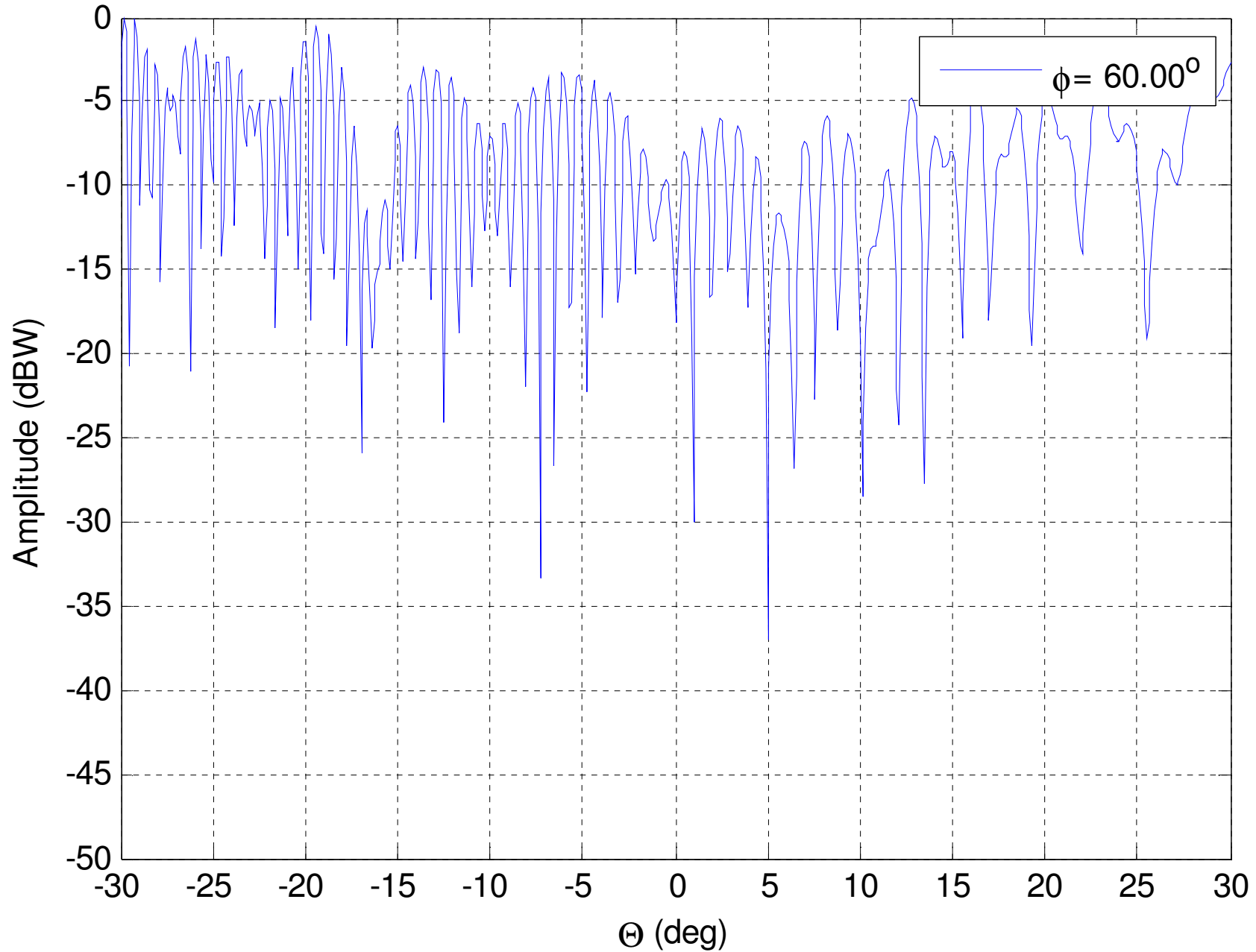
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.24 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

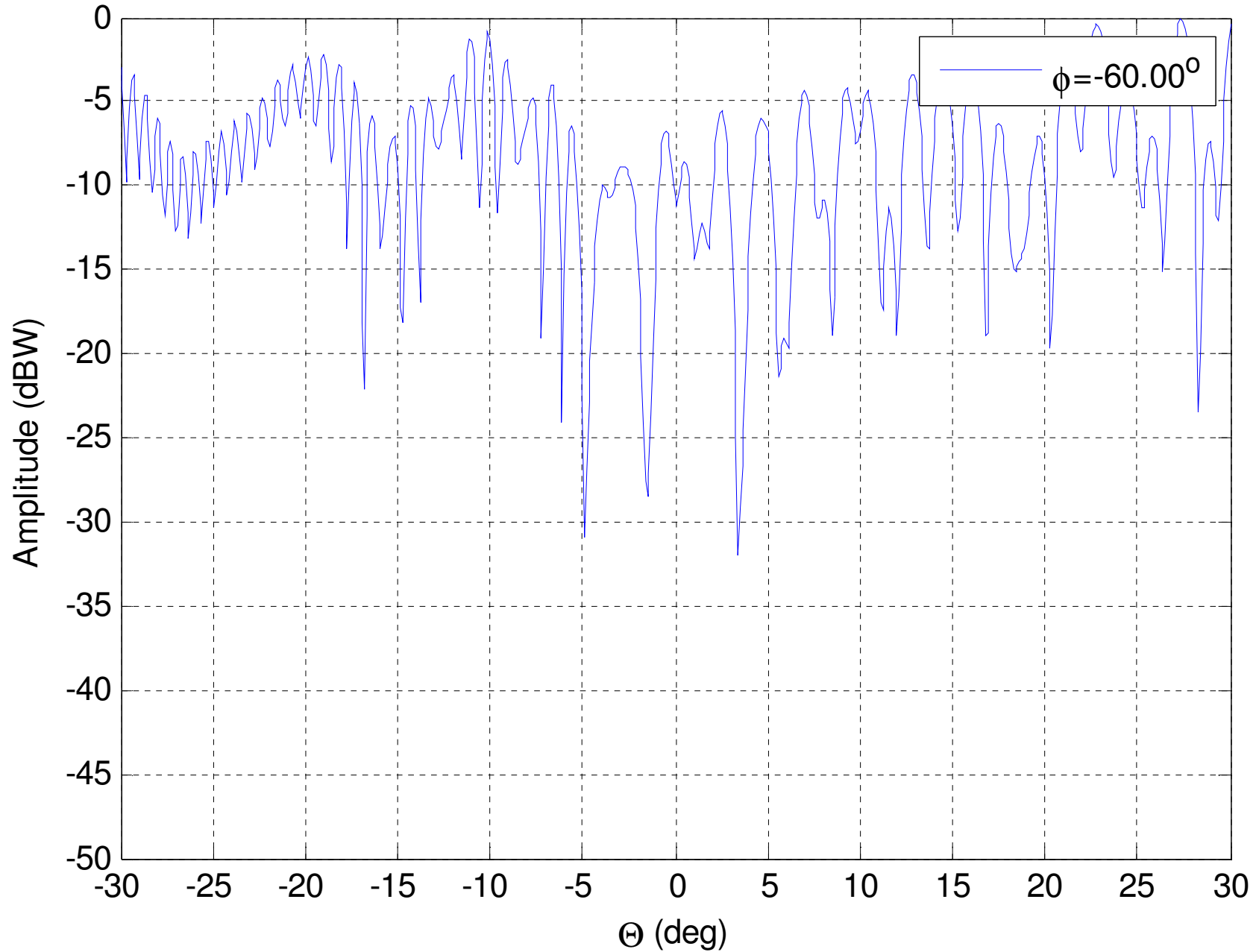
Input file: tx-17.7-rhcp-60.cut, Peak: -12.59 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

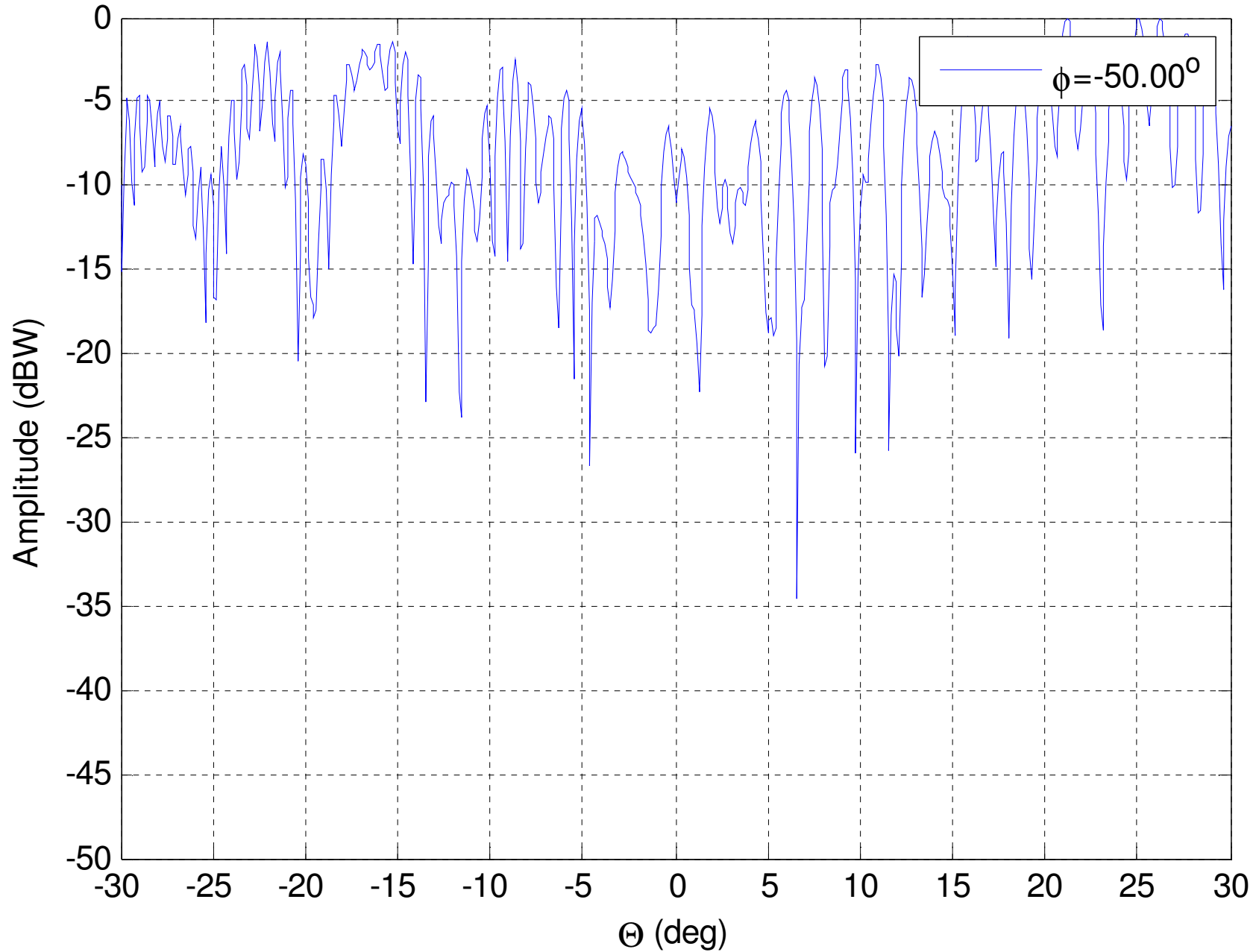
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.62 dBW, Date: 15-Dec-2011



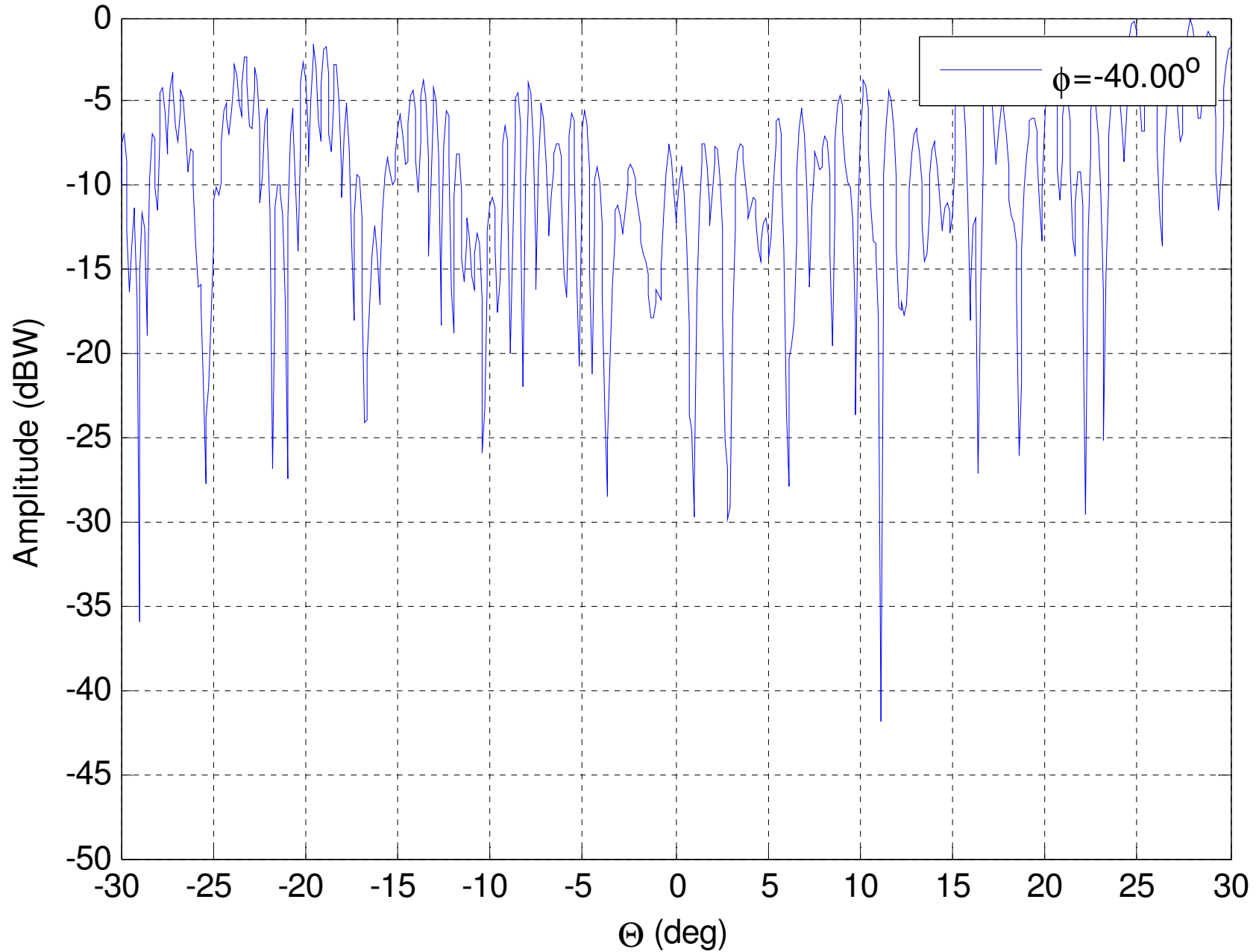
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -11.66 dBW, Date: 15-Dec-2011



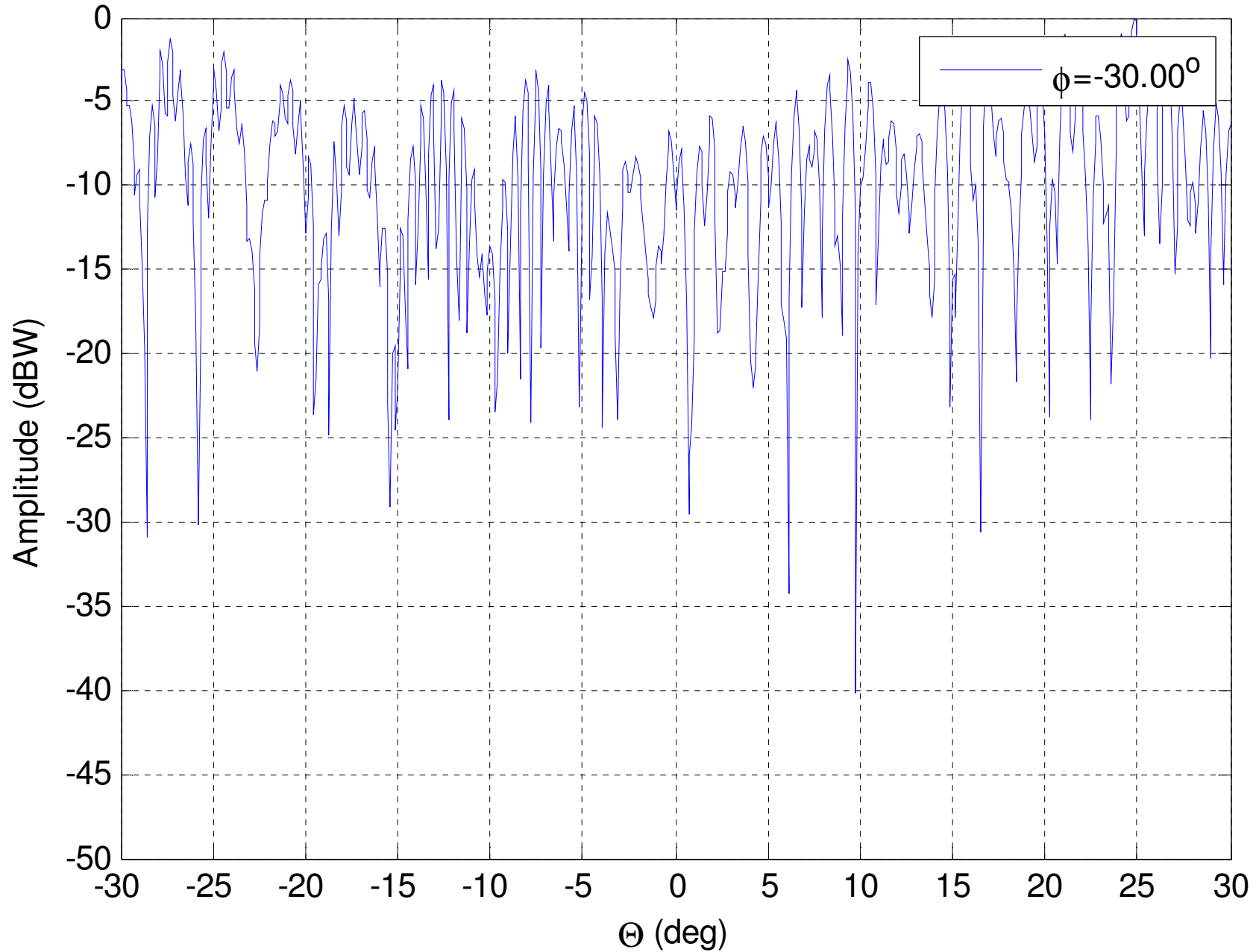
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.42 dBW, Date: 15-Dec-2011



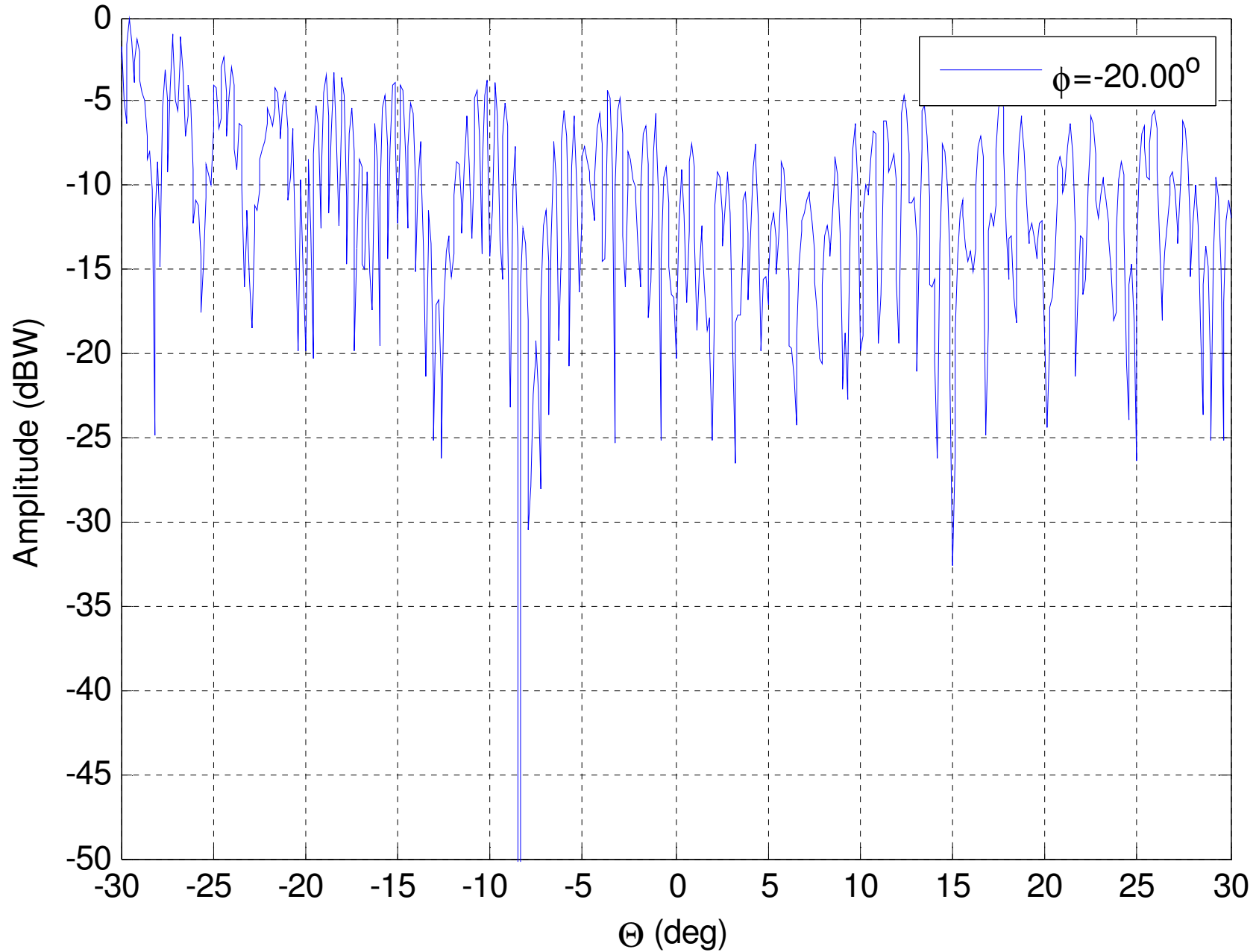
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -11.15 dBW, Date: 15-Dec-2011



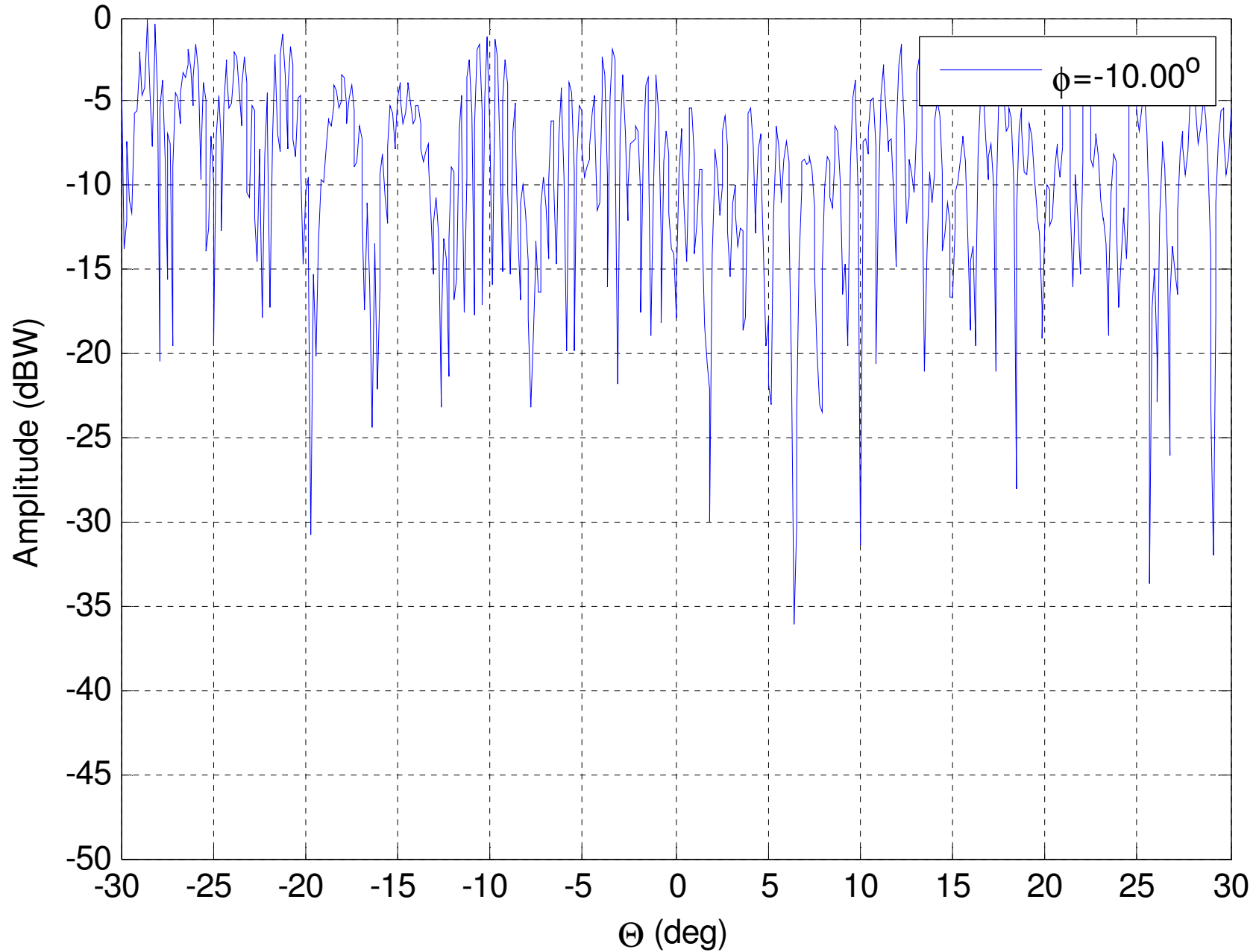
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -10.66 dBW, Date: 15-Dec-2011



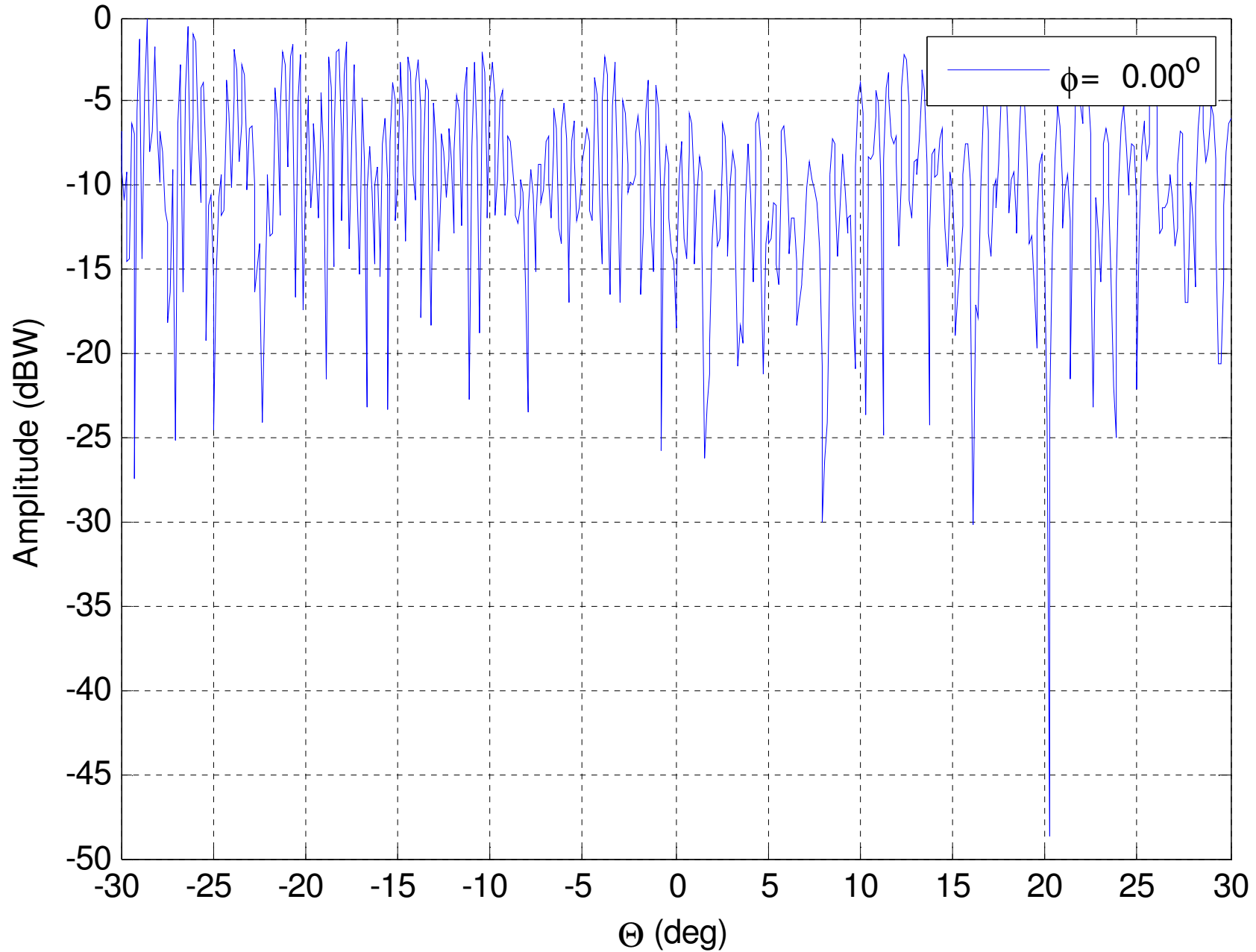
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -13.07 dBW, Date: 15-Dec-2011



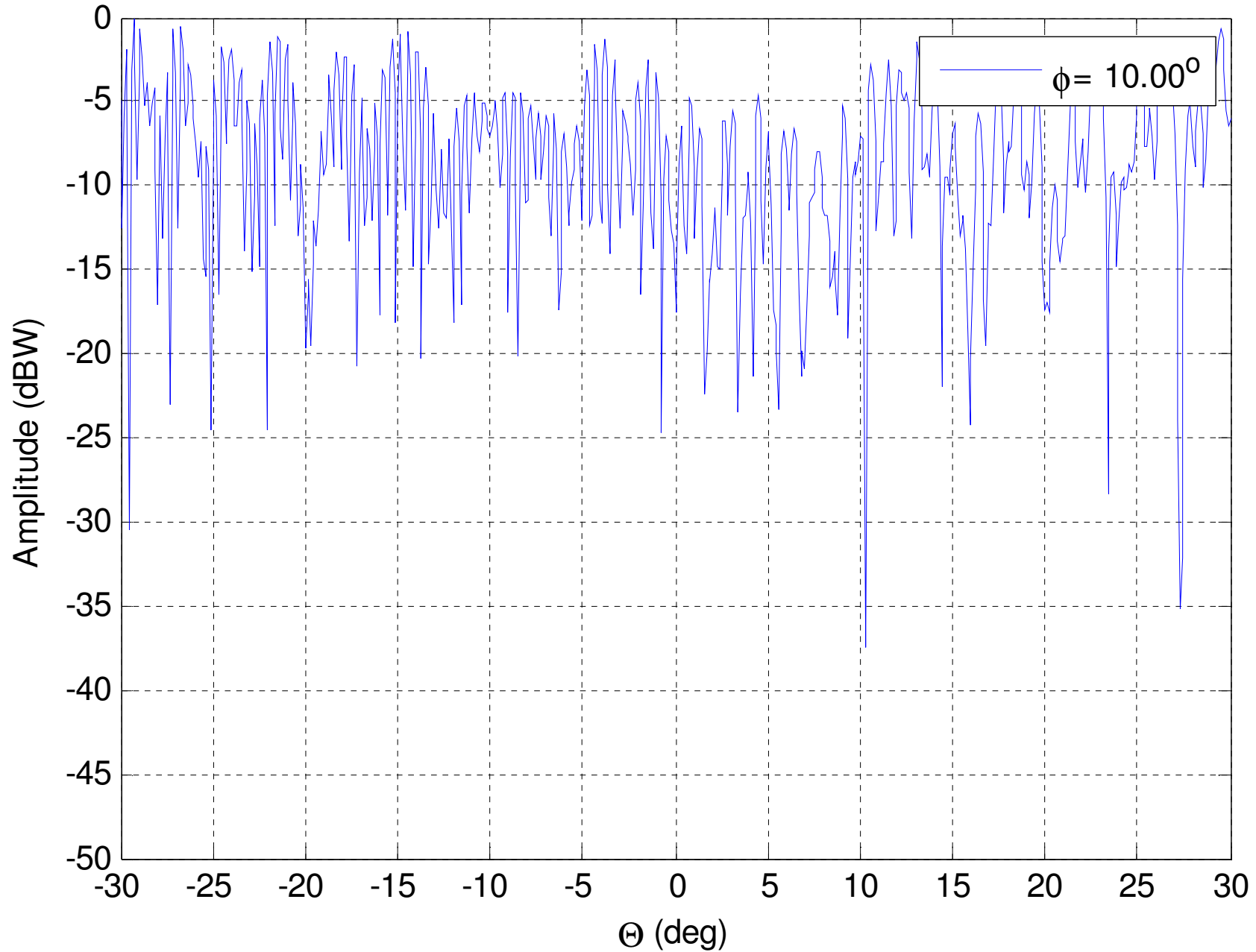
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -12.50 dBW, Date: 15-Dec-2011



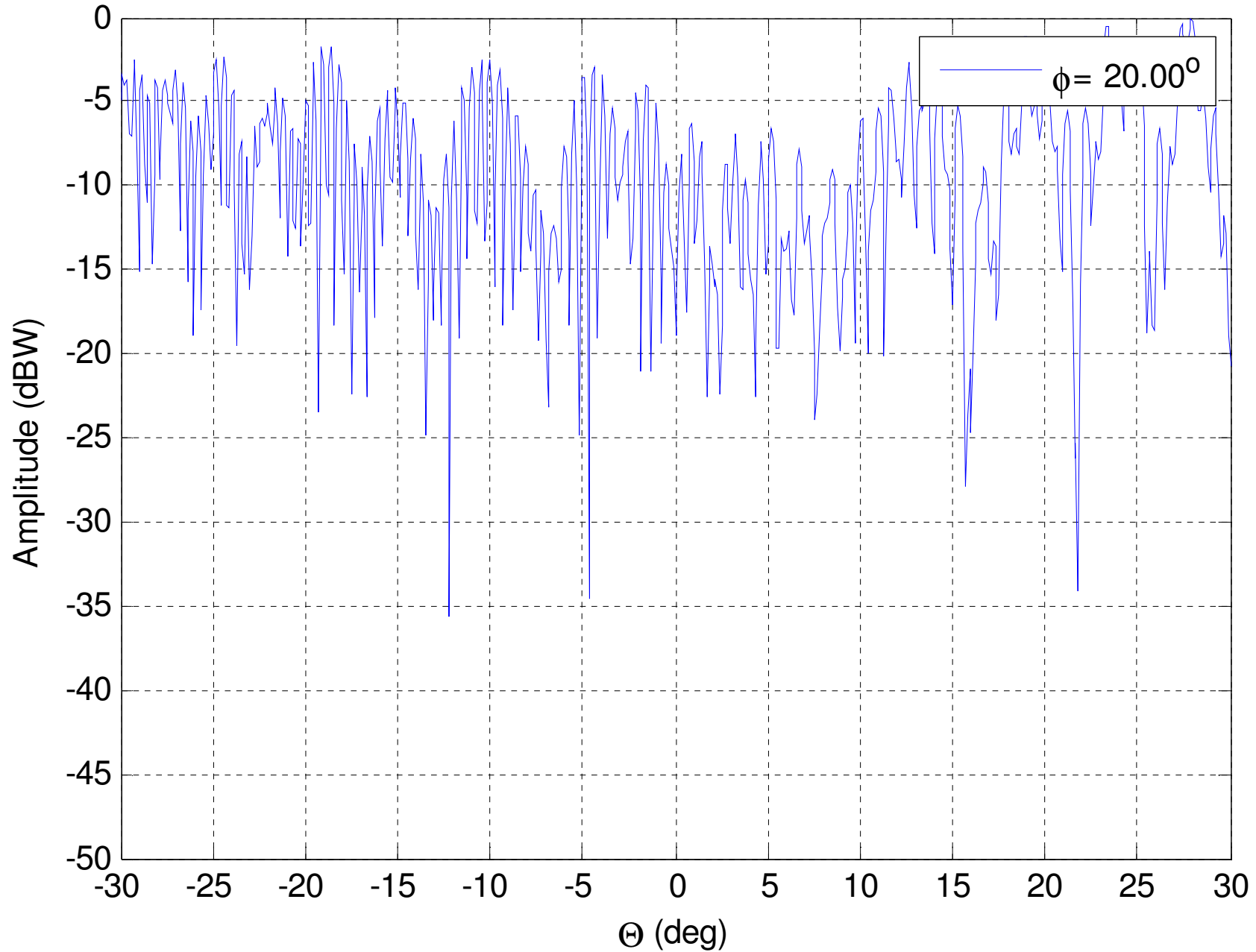
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -13.52 dBW, Date: 15-Dec-2011



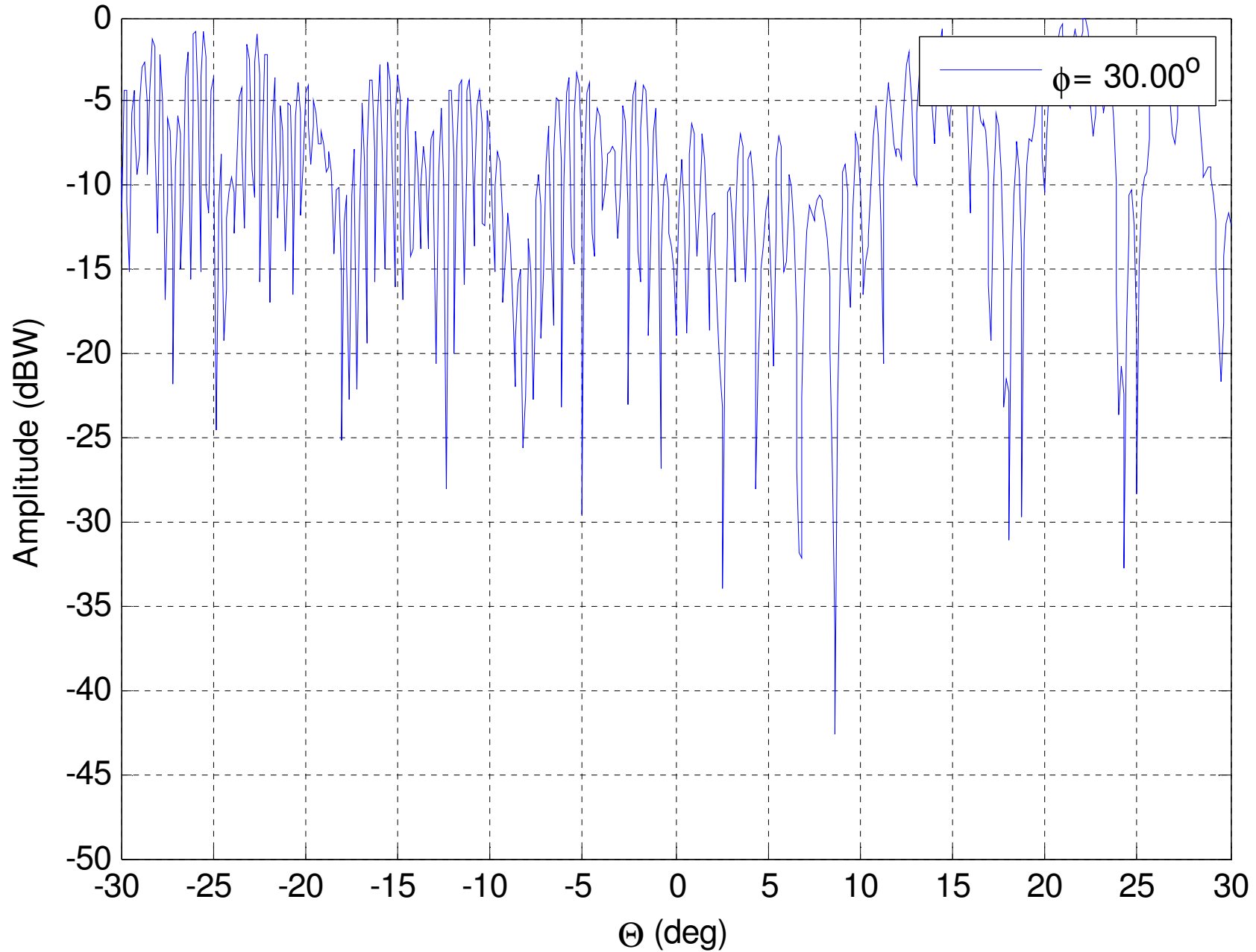
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -12.15 dBW, Date: 15-Dec-2011



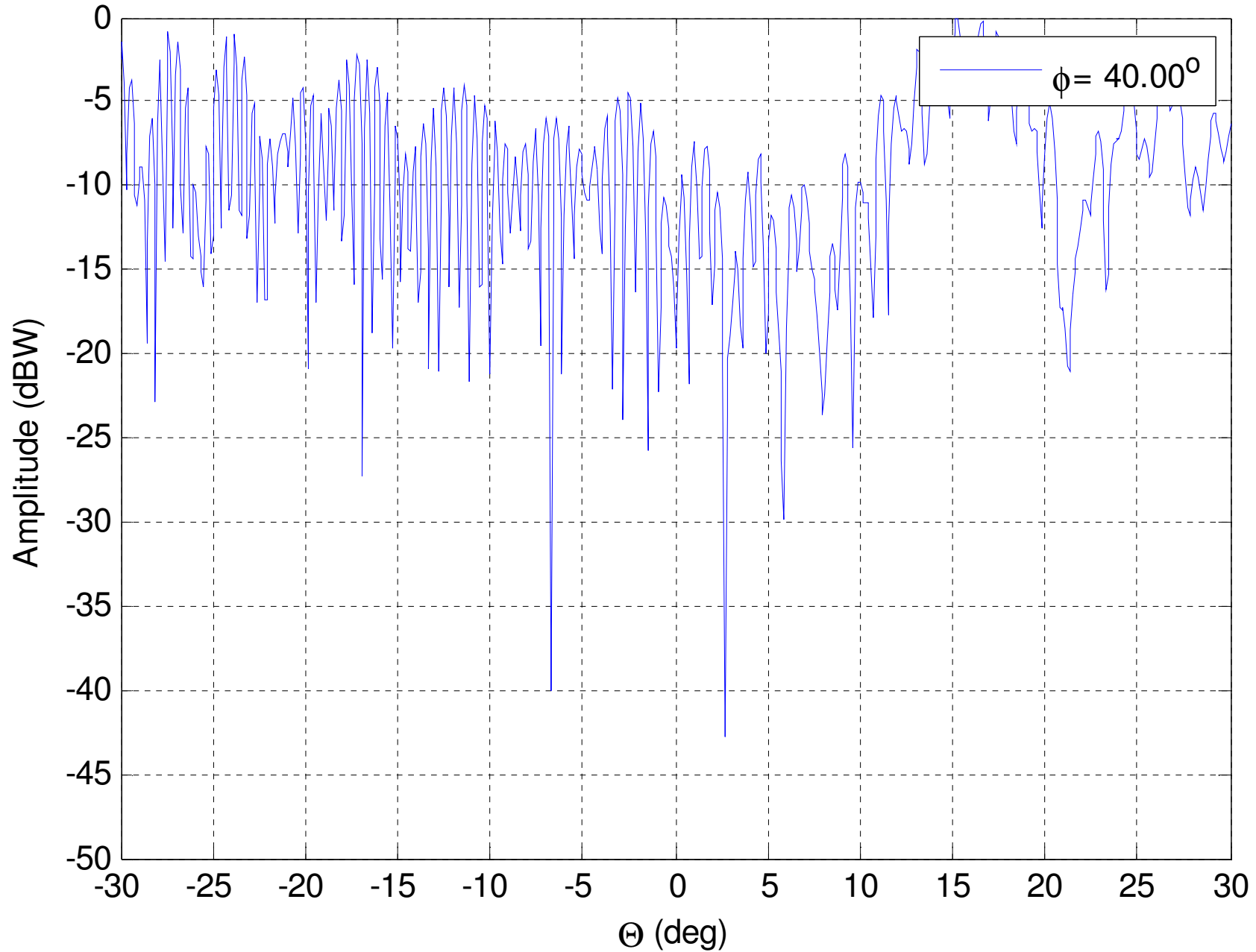
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -12.11 dBW, Date: 15-Dec-2011



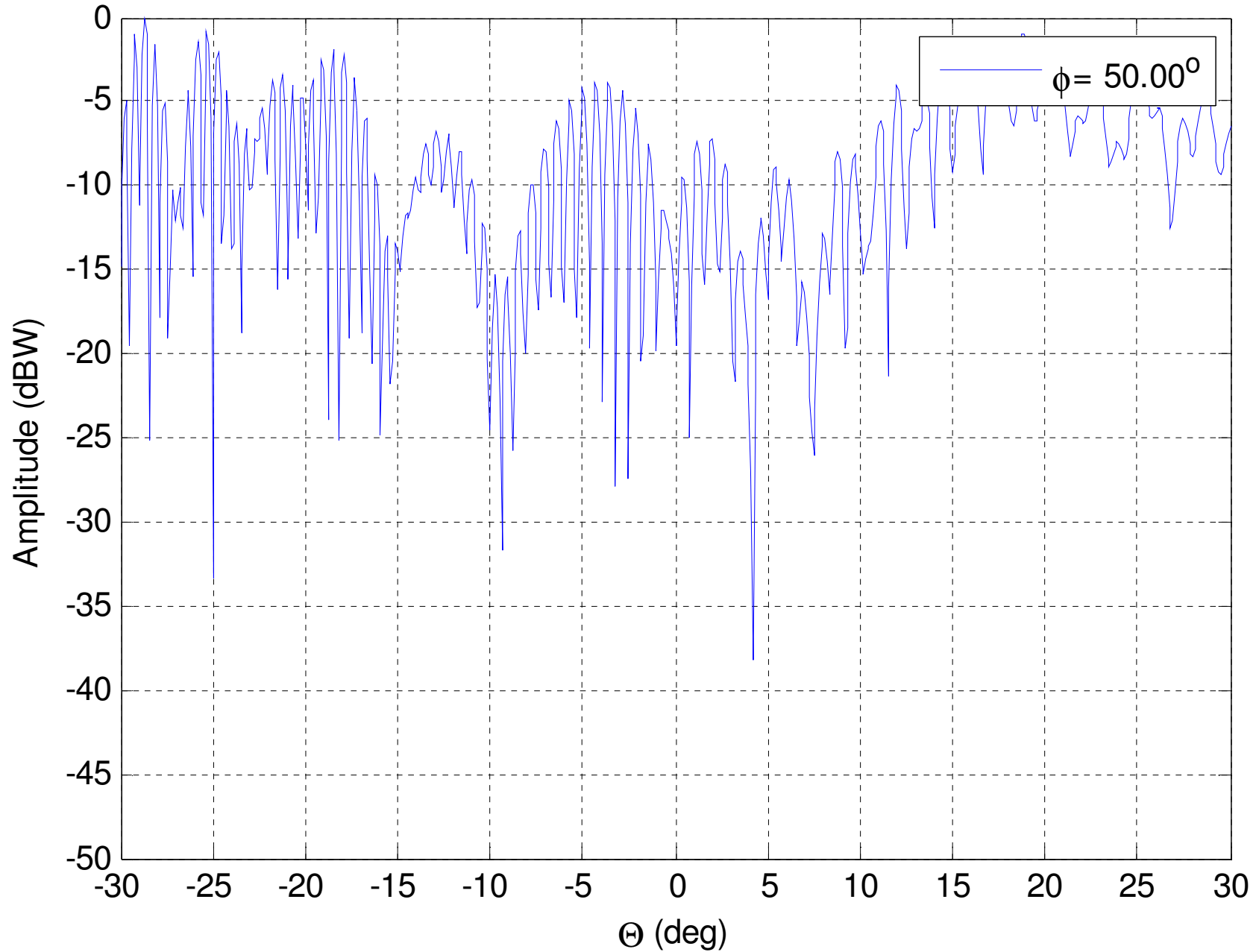
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -11.26 dBW, Date: 15-Dec-2011



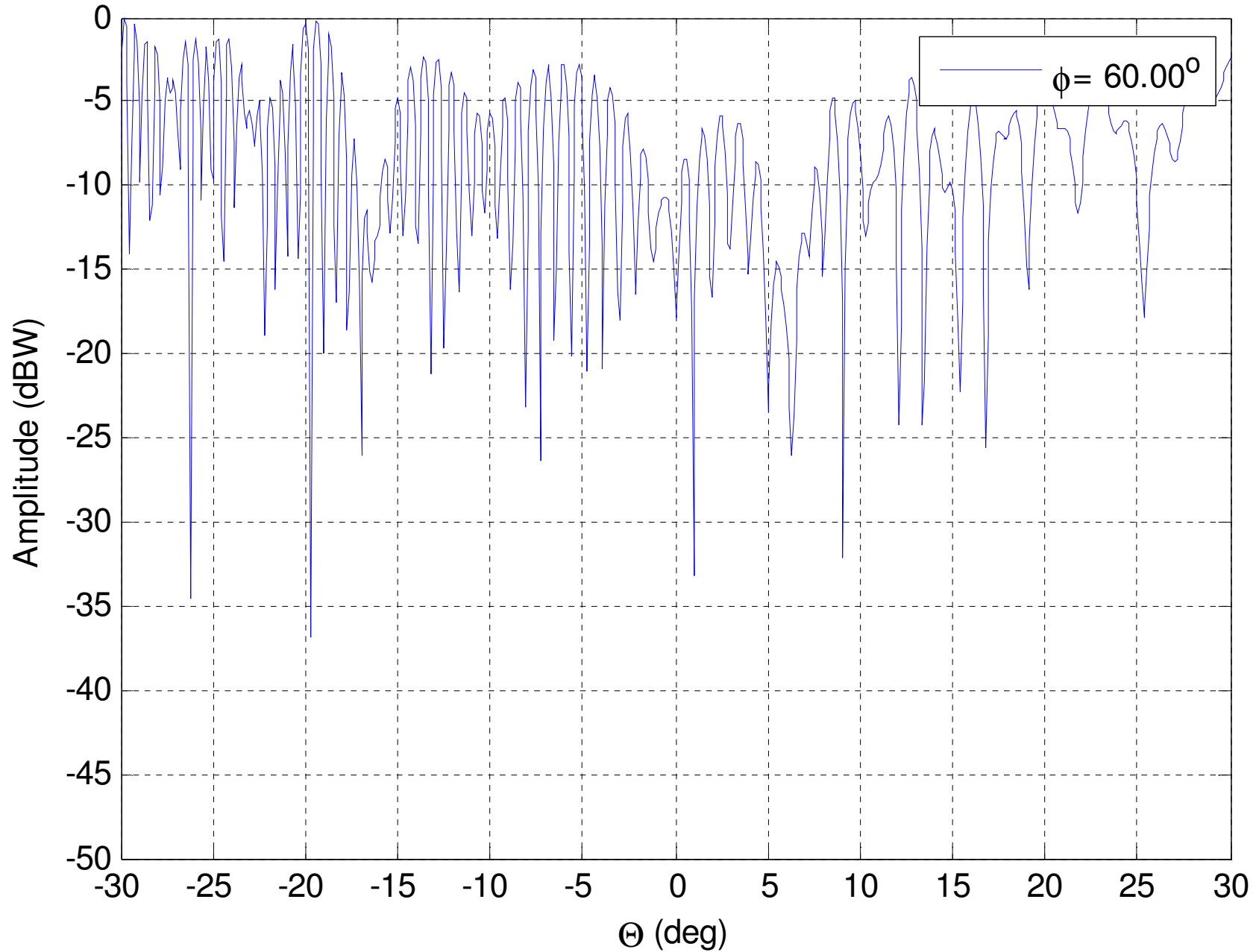
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -11.53 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -13.13 dBW, Date: 15-Dec-2011



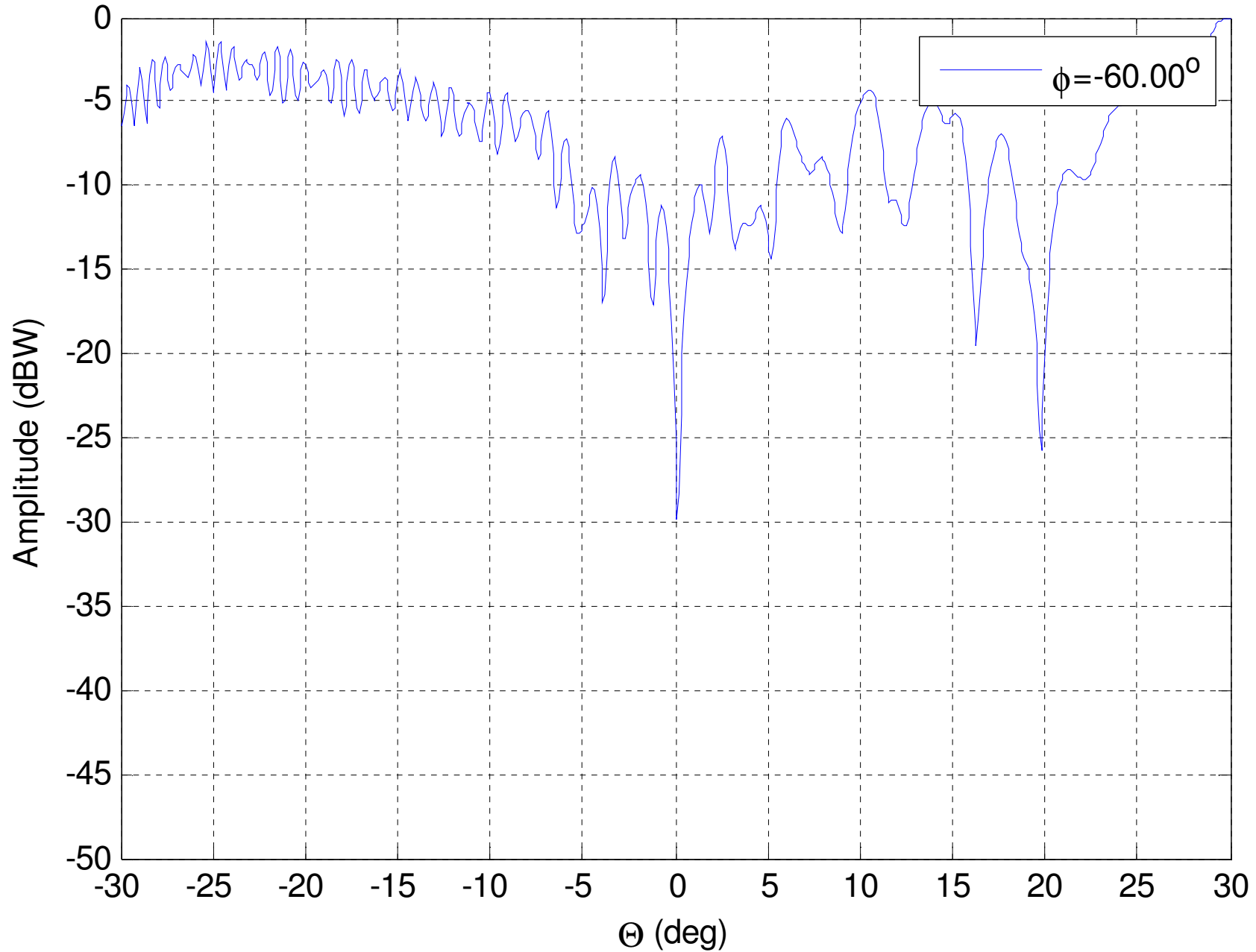
Spot Beam31, +X Axis Plots

- 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

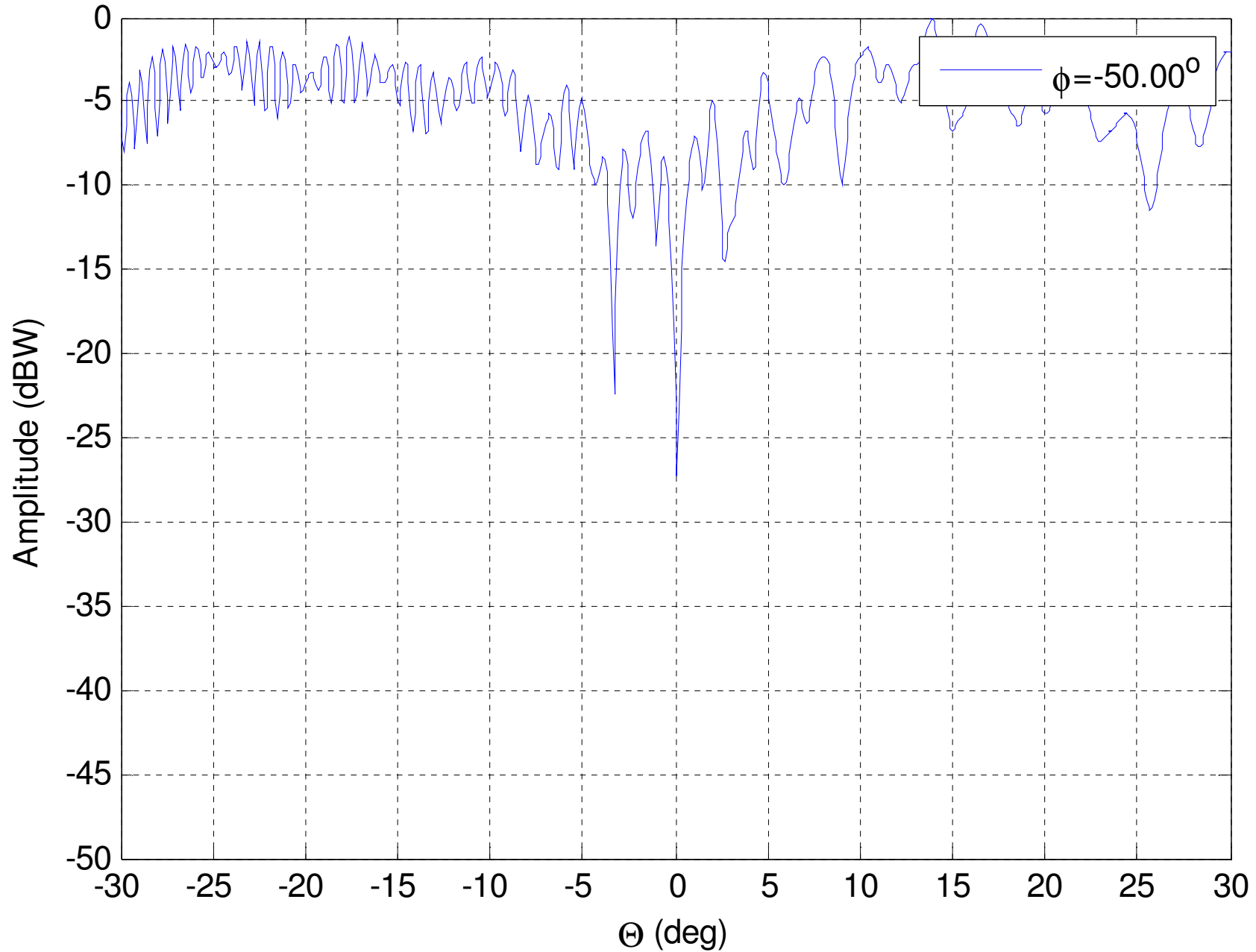
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.77 dBW, Date: 15-Dec-2011



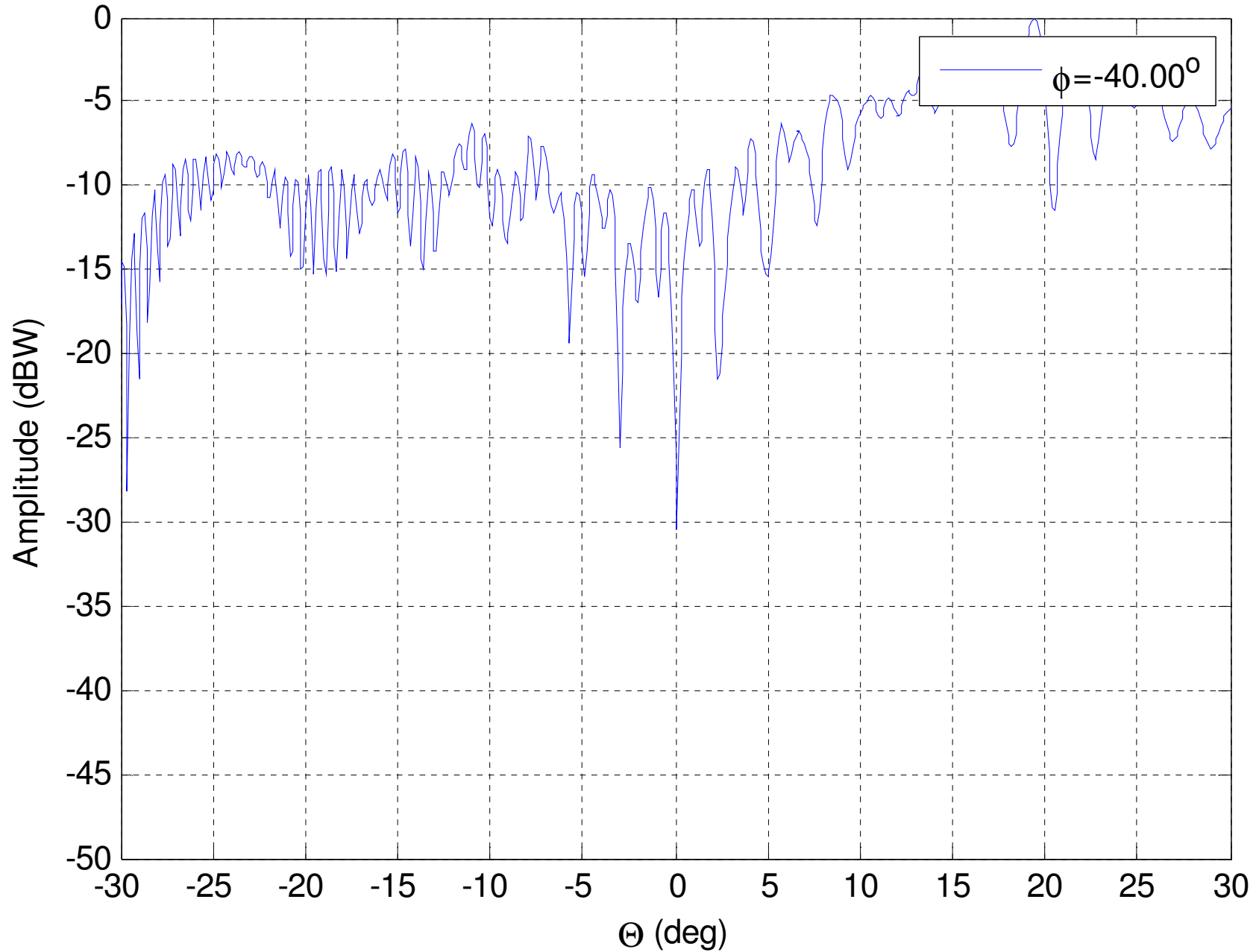
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -12.20 dBW, Date: 15-Dec-2011



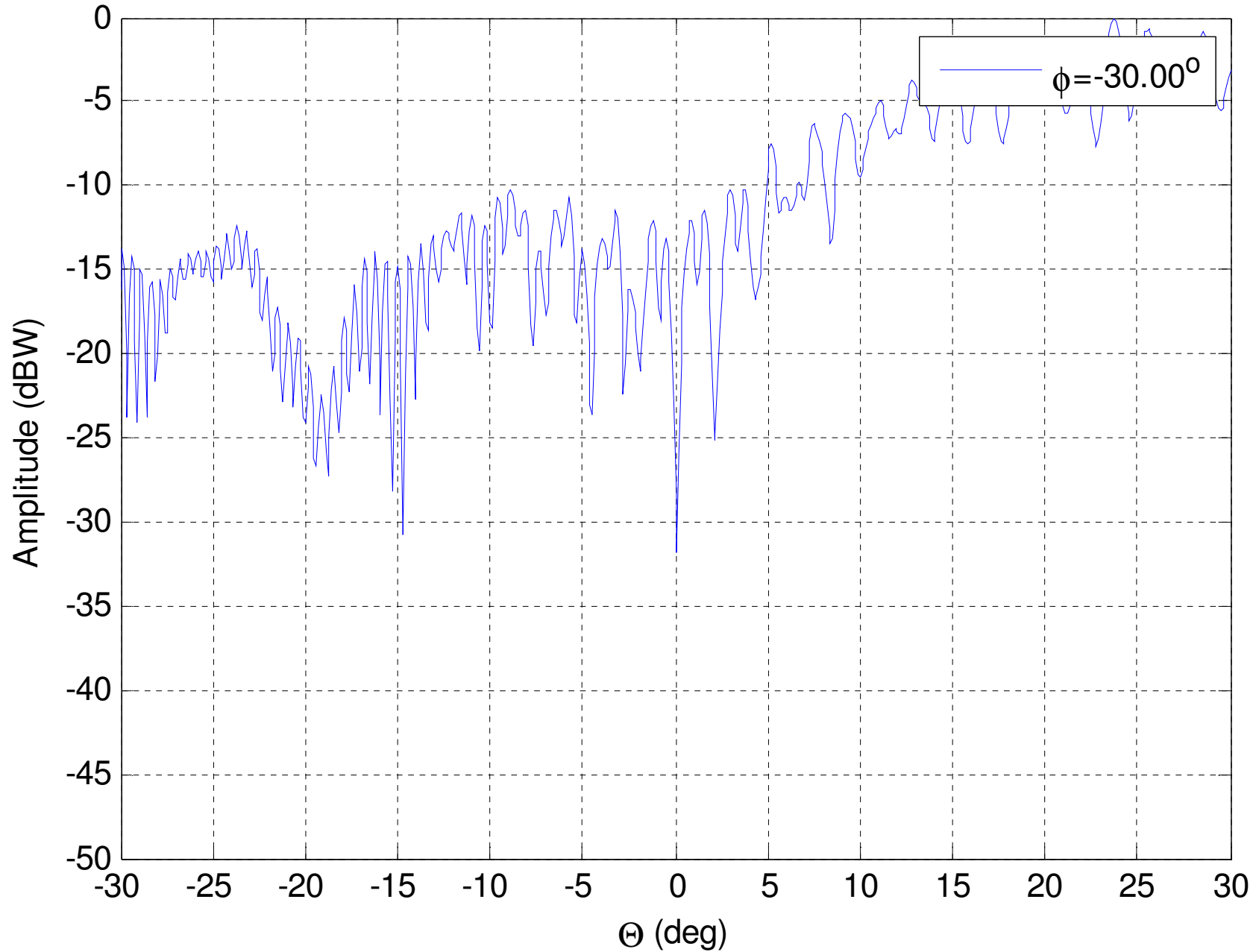
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -8.75 dBW, Date: 15-Dec-2011



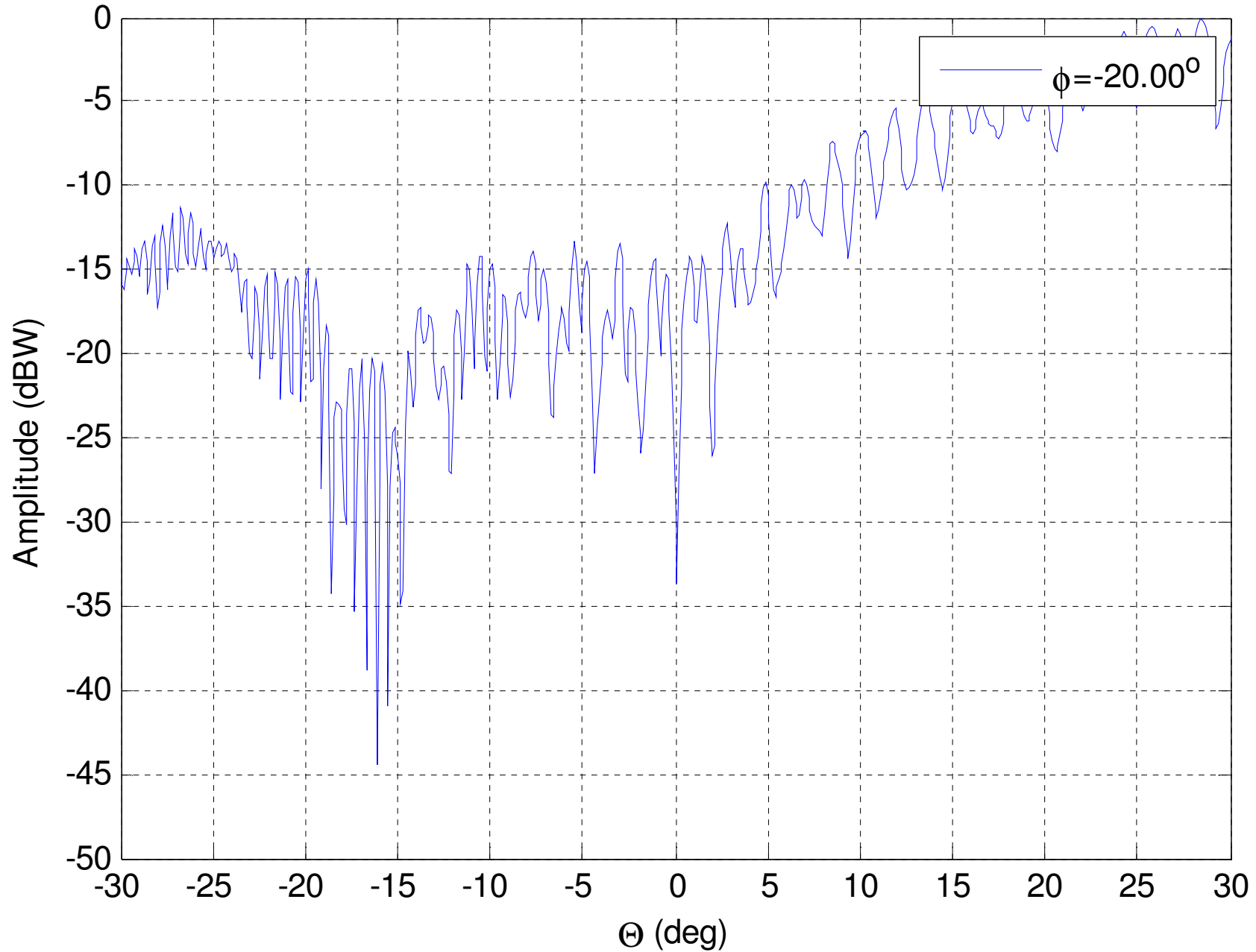
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -6.80 dBW, Date: 15-Dec-2011



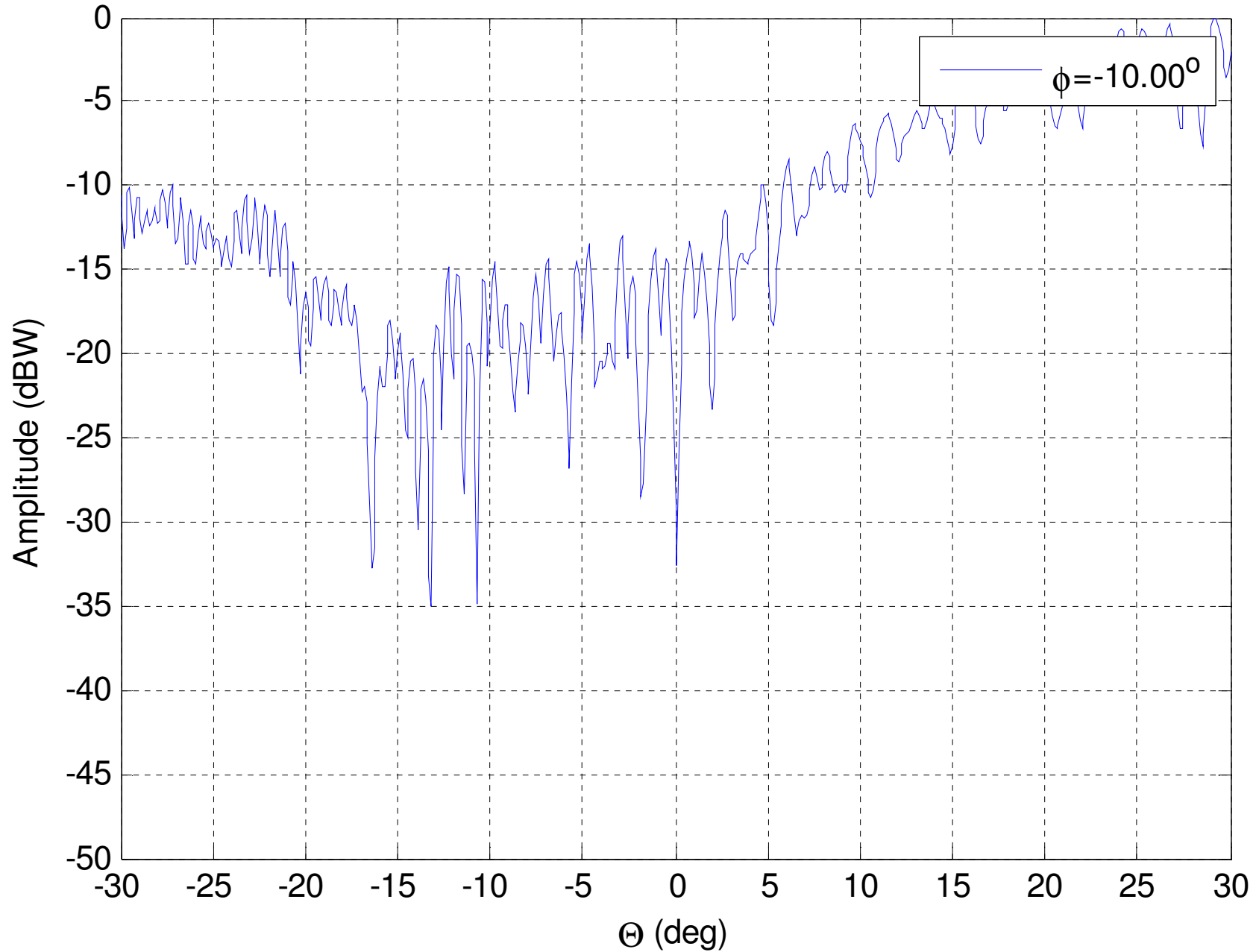
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -4.60 dBW, Date: 15-Dec-2011



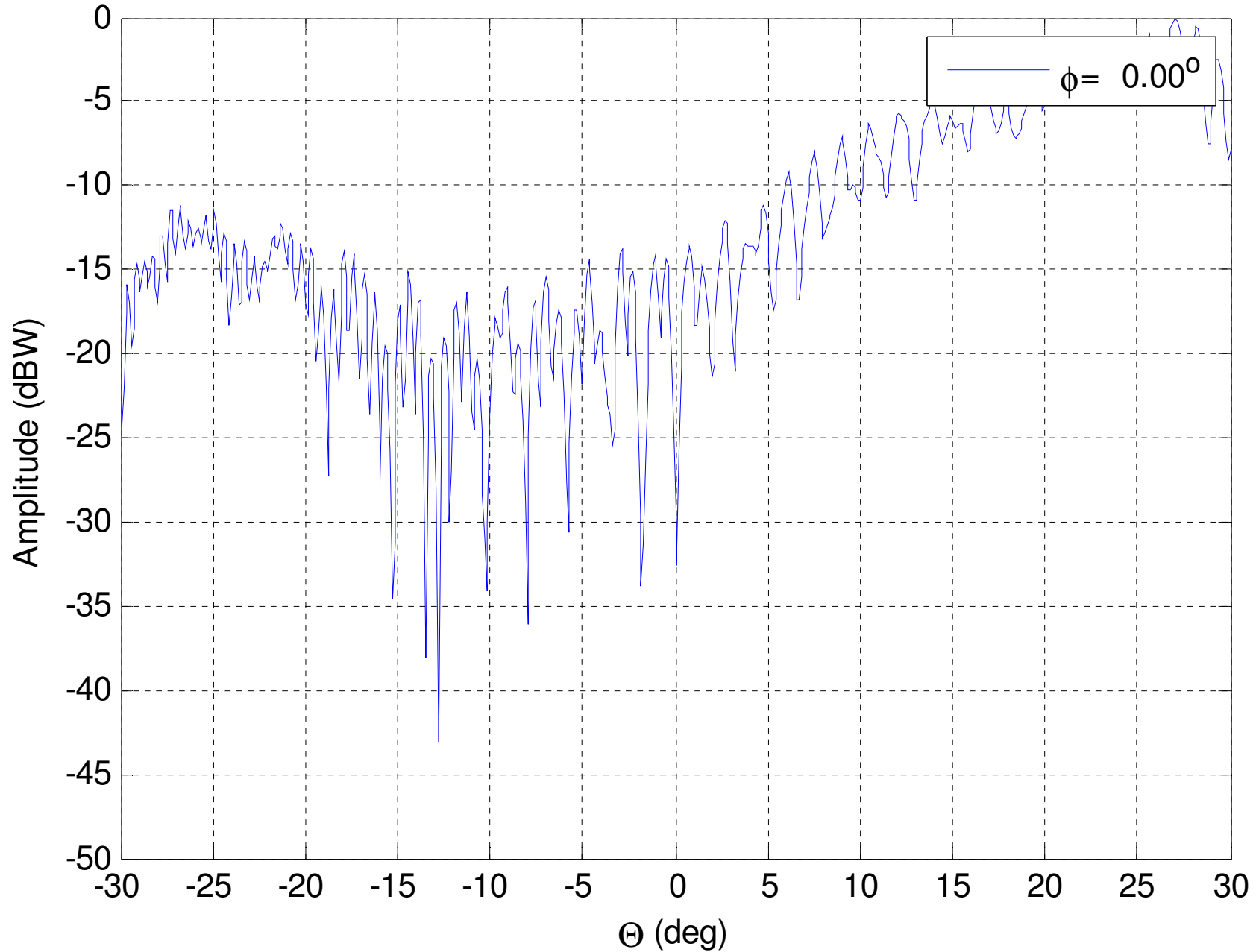
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -5.35 dBW, Date: 15-Dec-2011



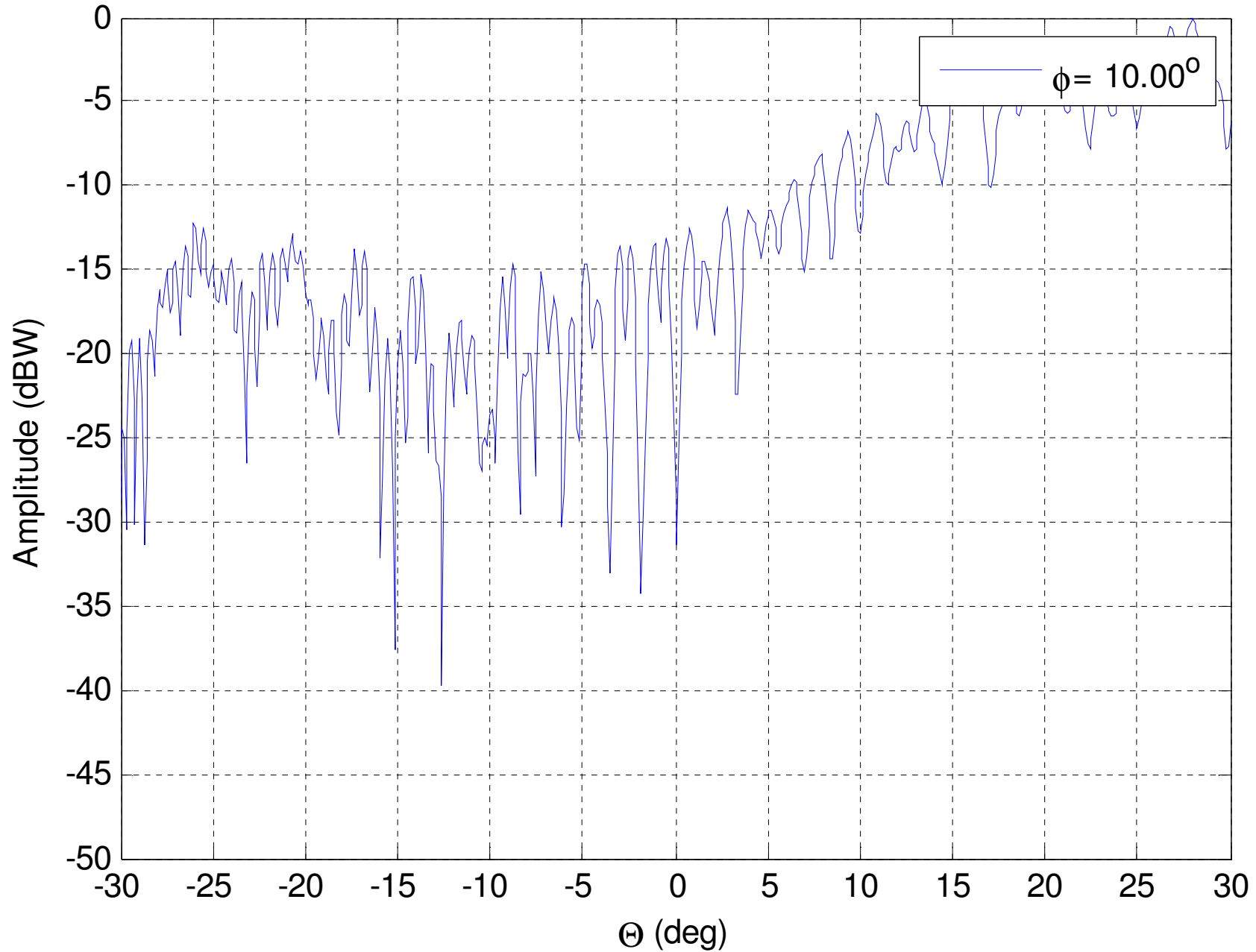
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -5.13 dBW, Date: 15-Dec-2011



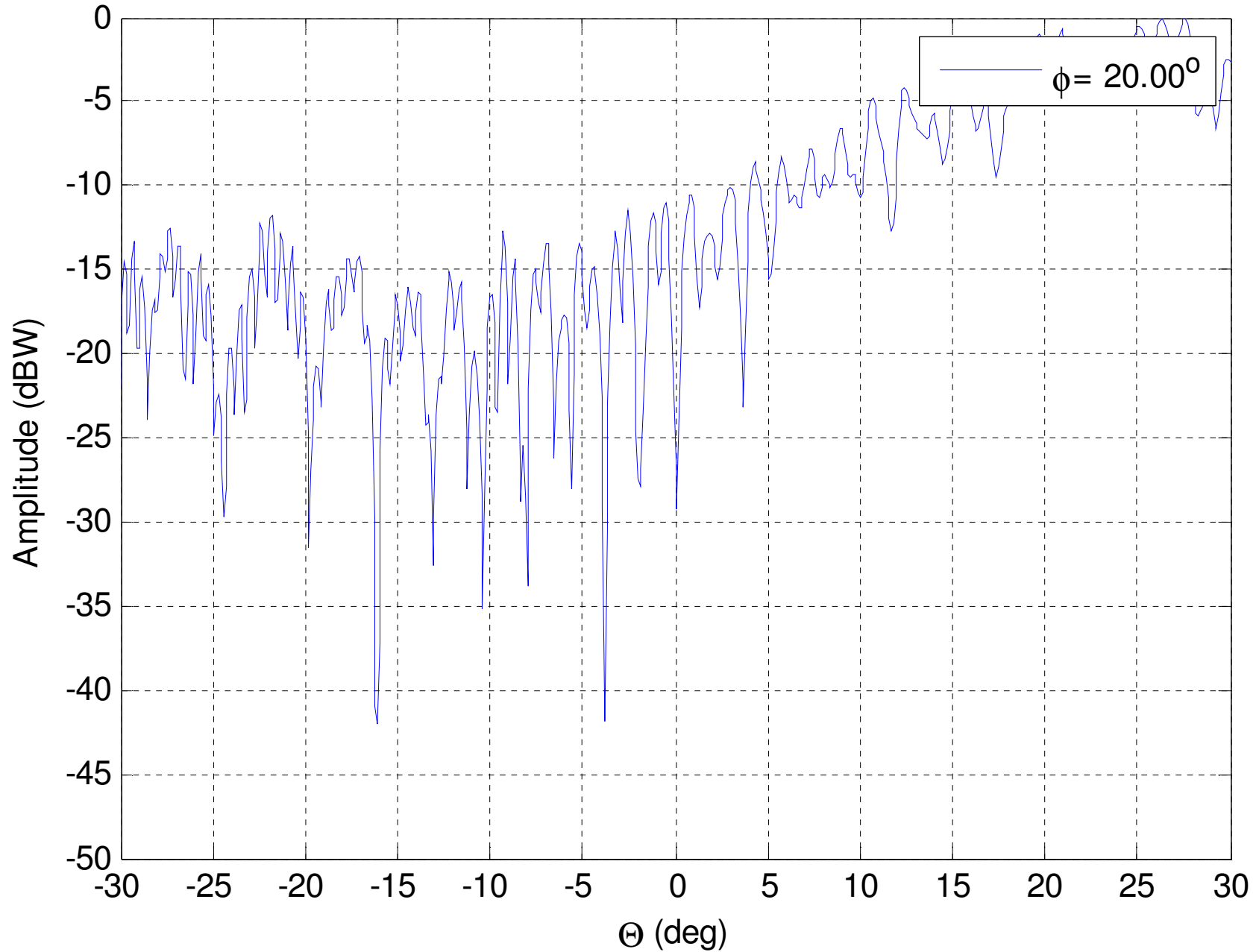
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -6.13 dBW, Date: 15-Dec-2011



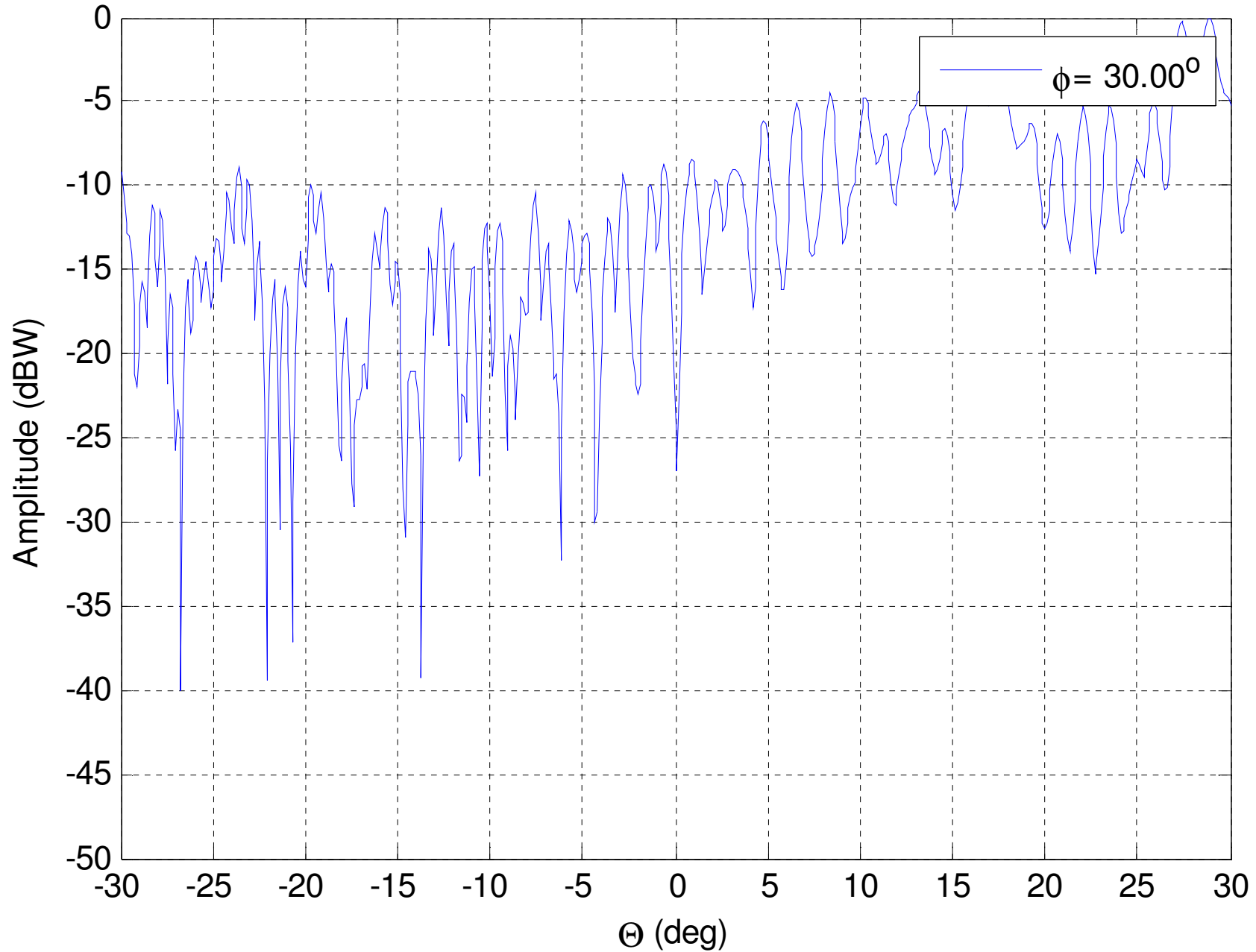
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -8.17 dBW, Date: 15-Dec-2011



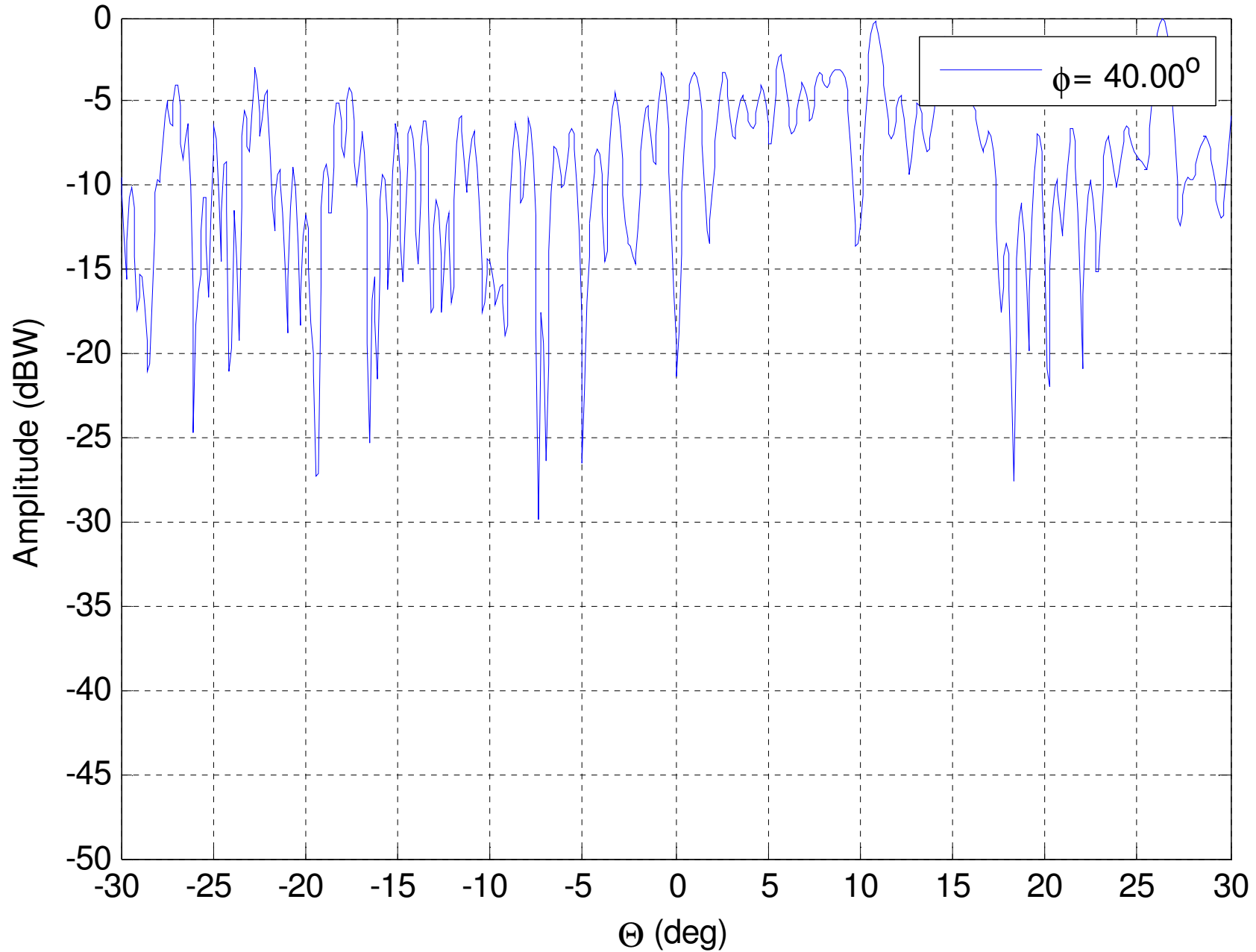
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.23 dBW, Date: 15-Dec-2011



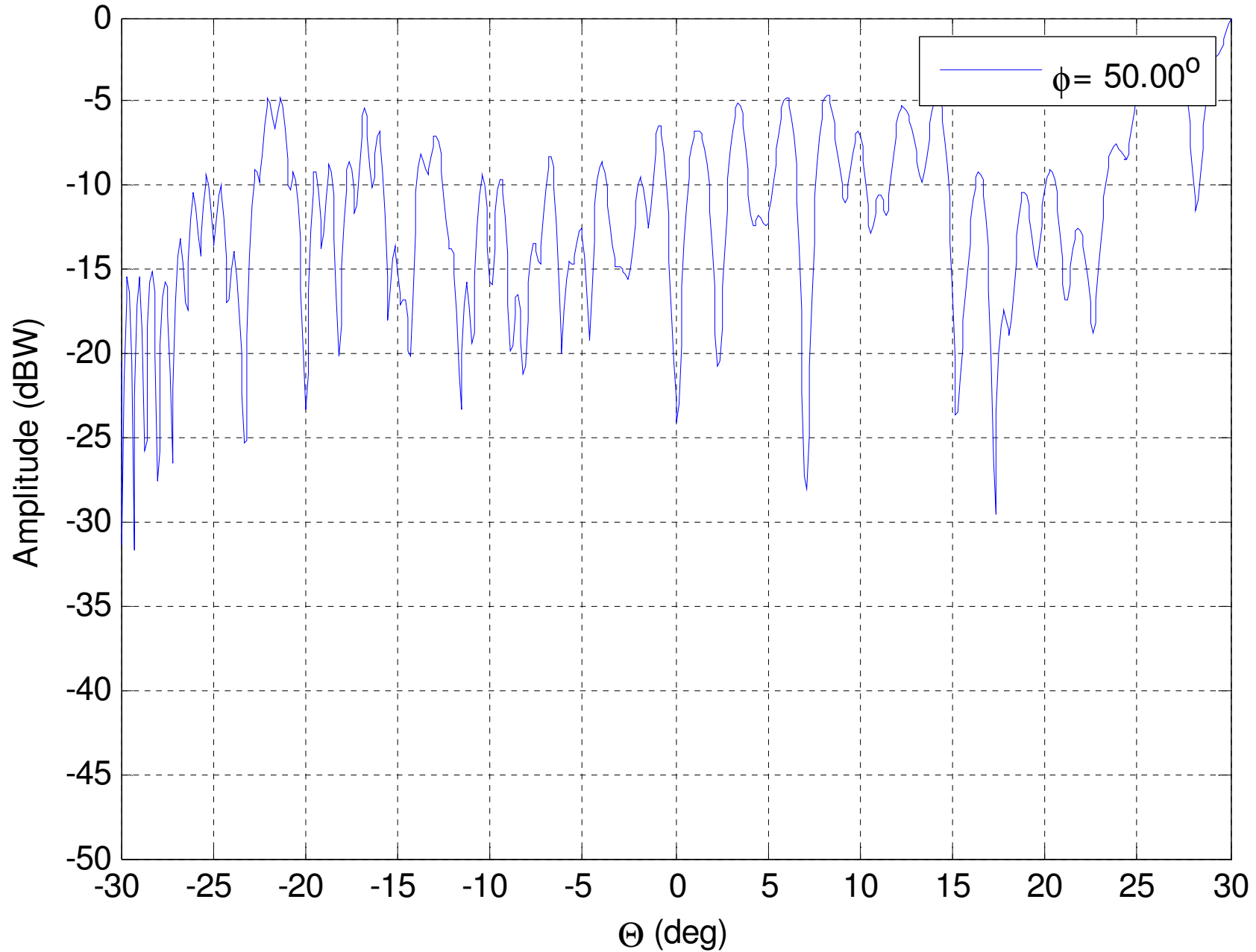
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -15.49 dBW, Date: 15-Dec-2011



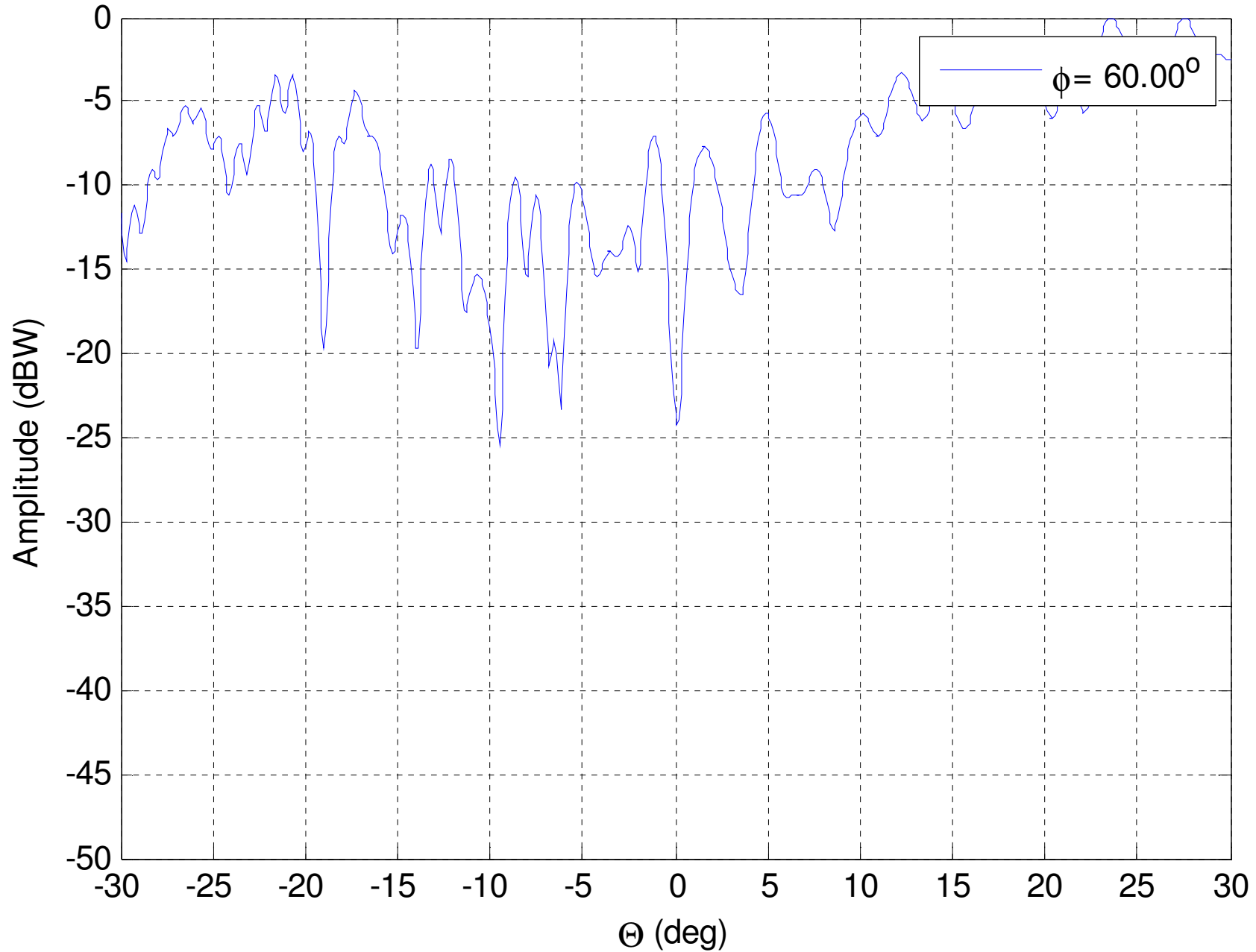
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -12.20 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

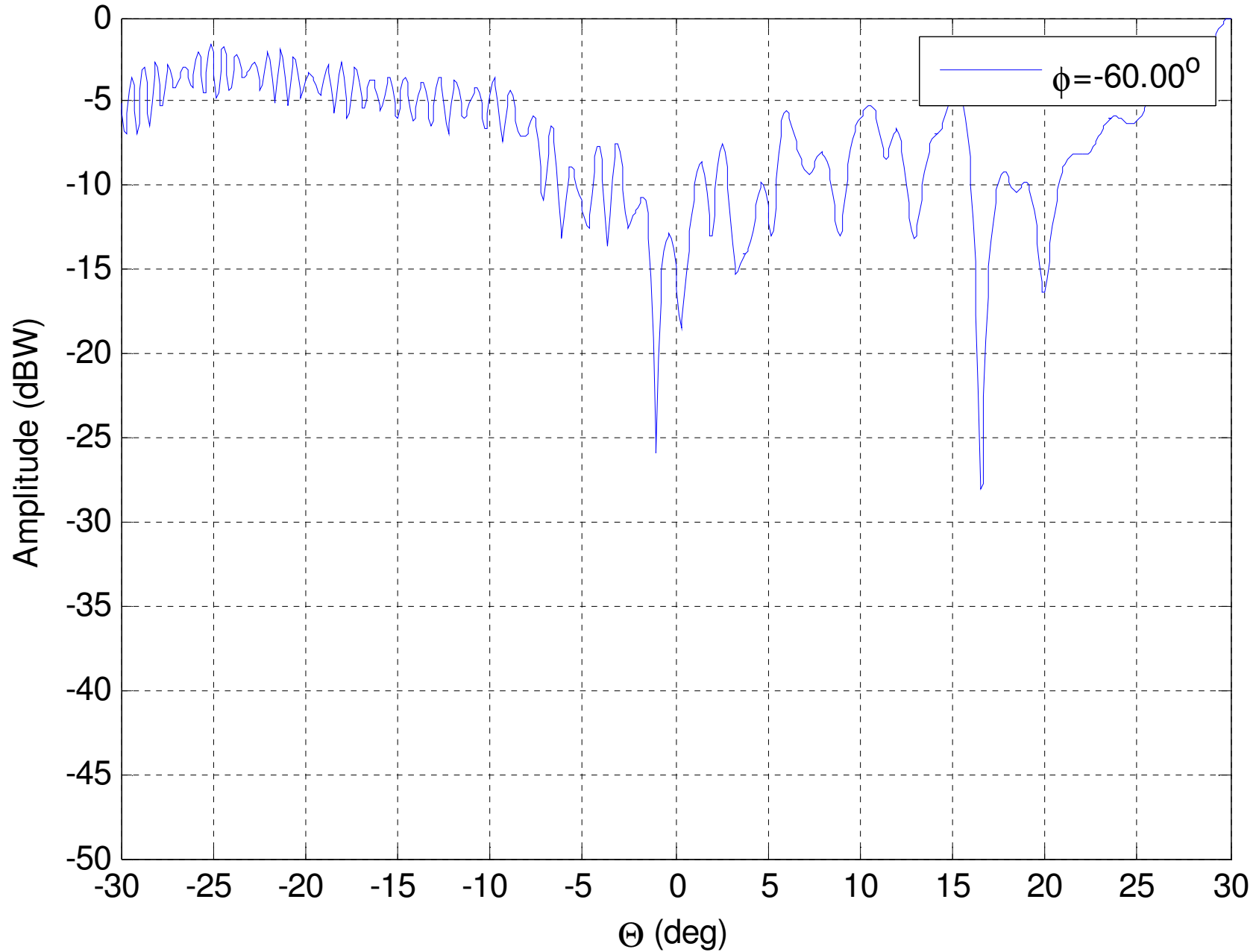
Input file: tx-17.3-rhcp-60.cut, Peak: -11.29 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

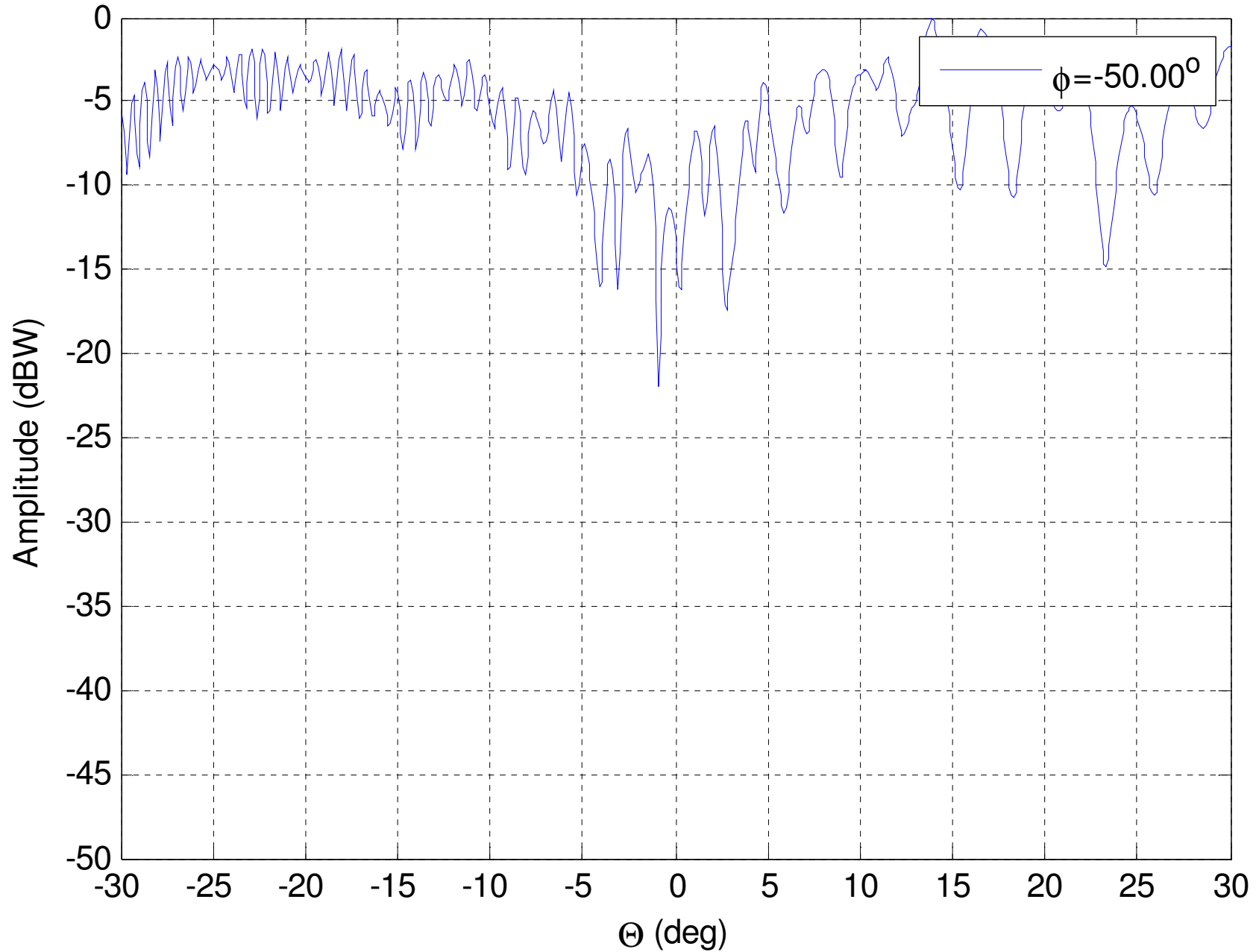
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.90 dBW, Date: 15-Dec-2011



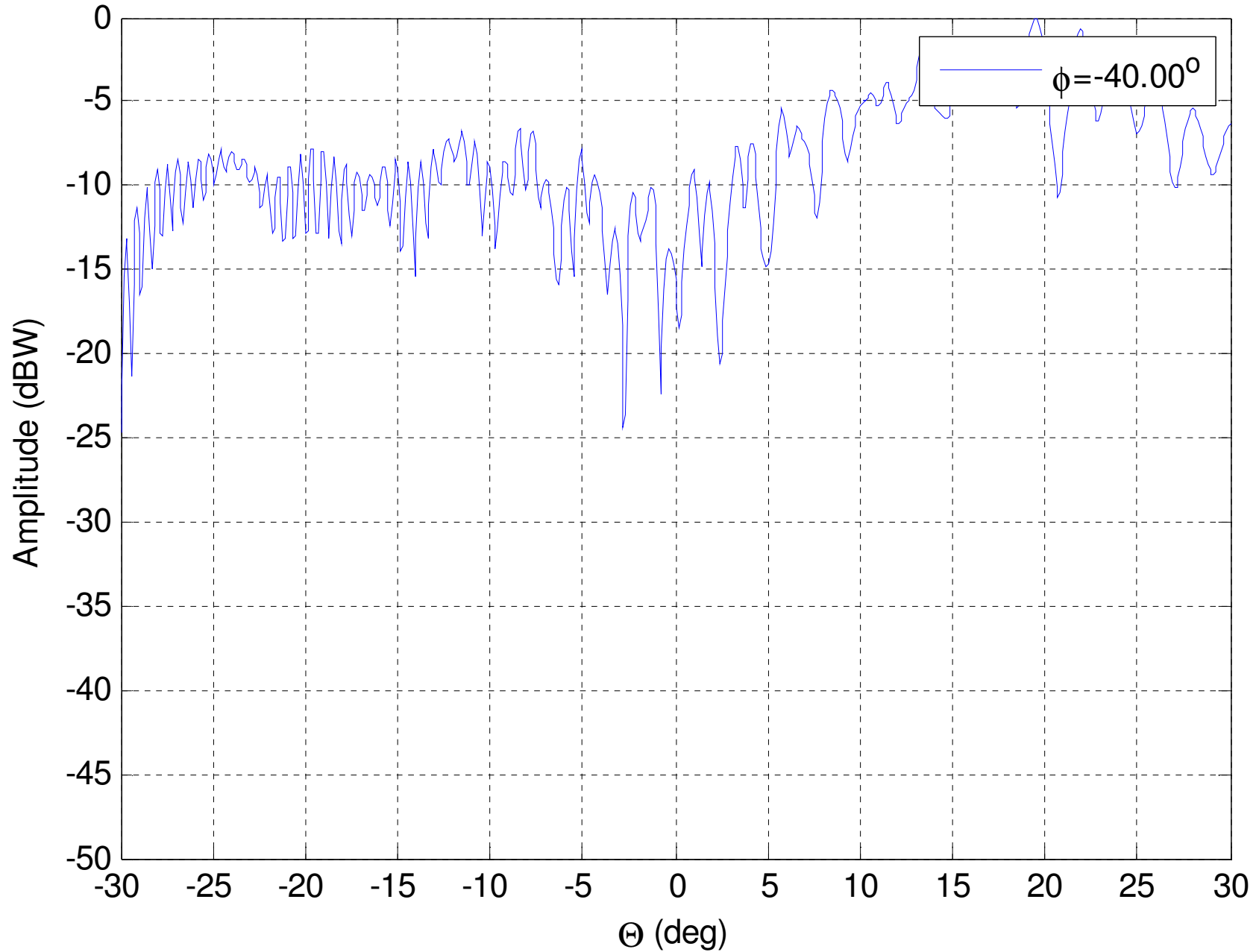
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -11.59 dBW, Date: 15-Dec-2011



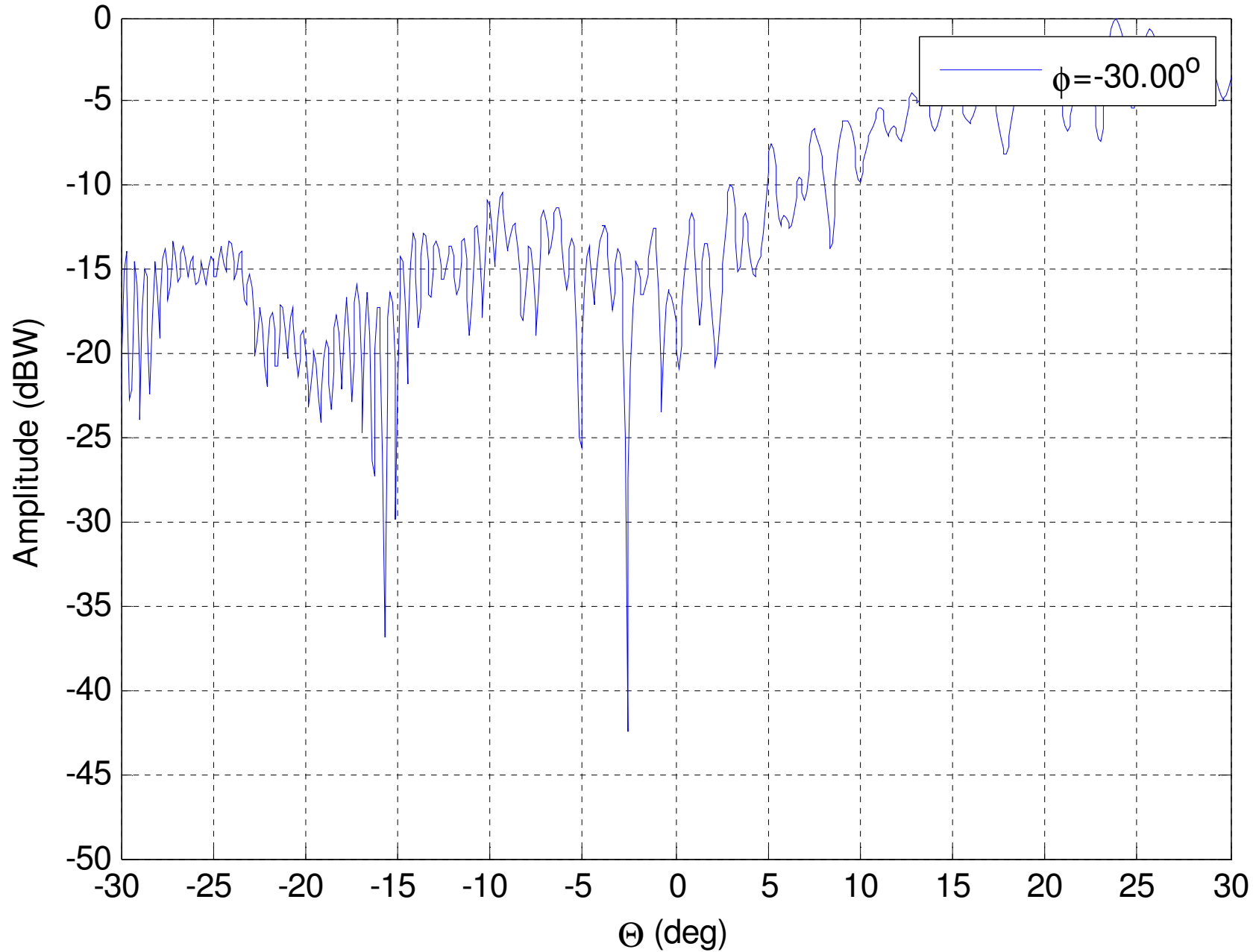
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -9.10 dBW, Date: 15-Dec-2011



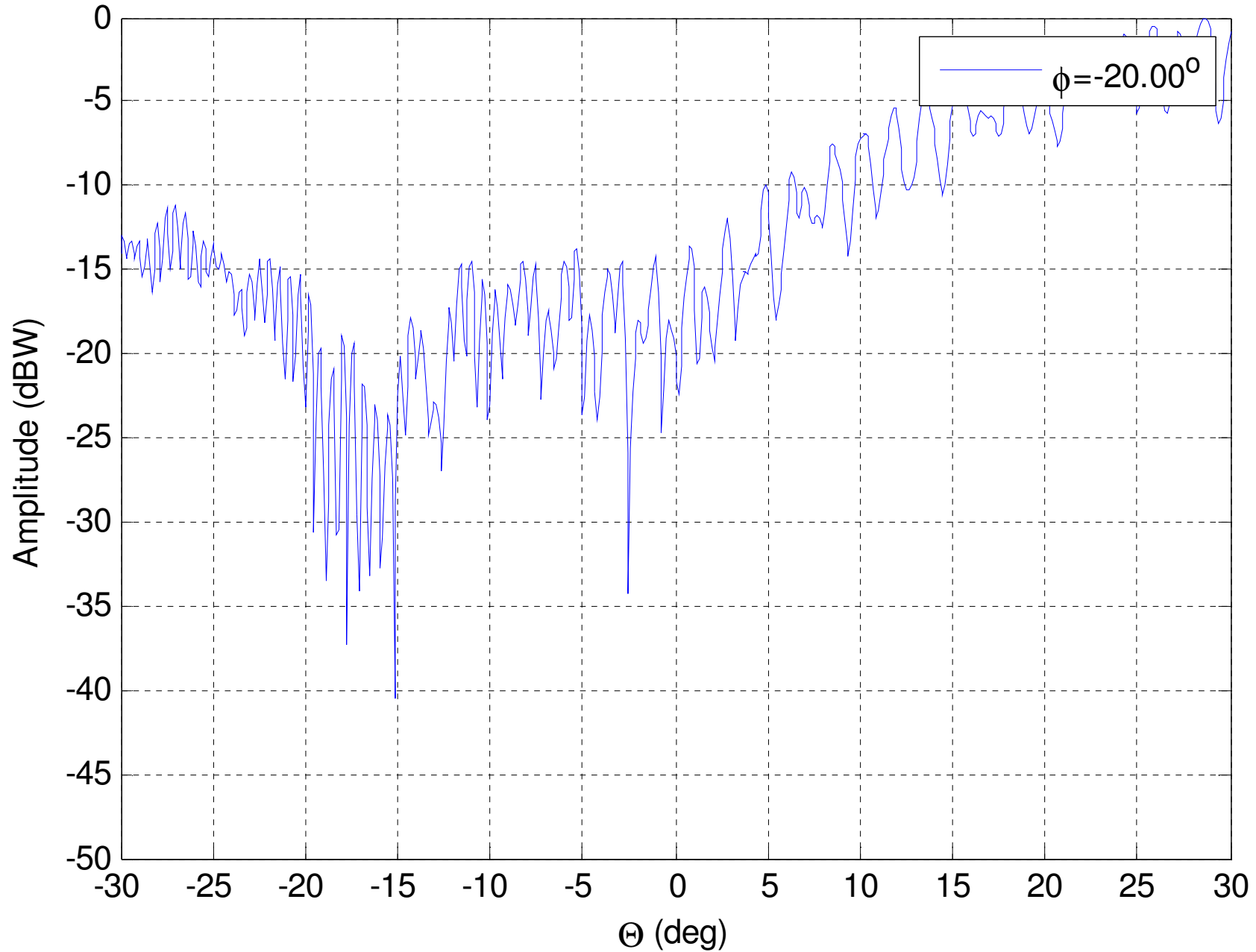
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -6.50 dBW, Date: 15-Dec-2011



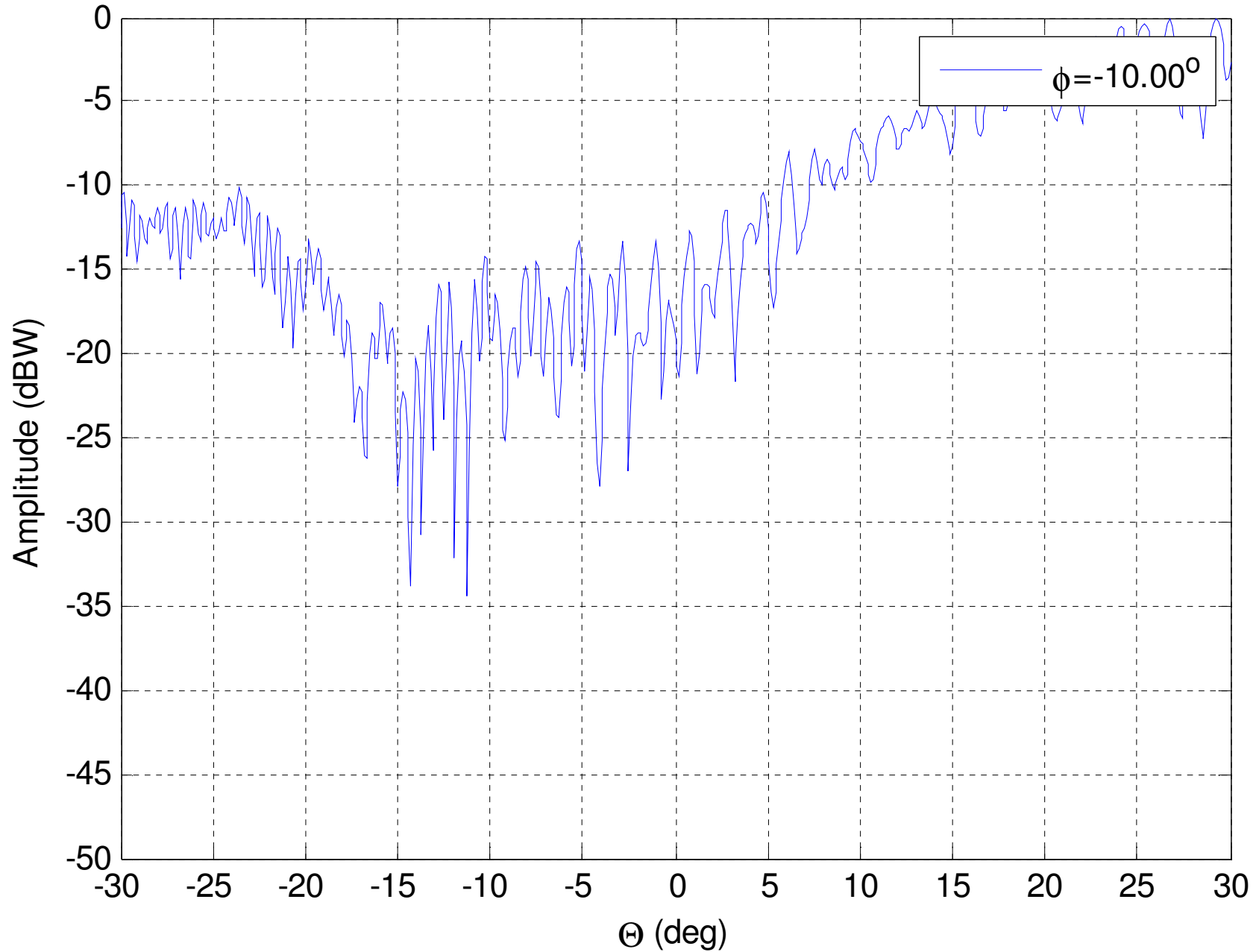
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -4.62 dBW, Date: 15-Dec-2011



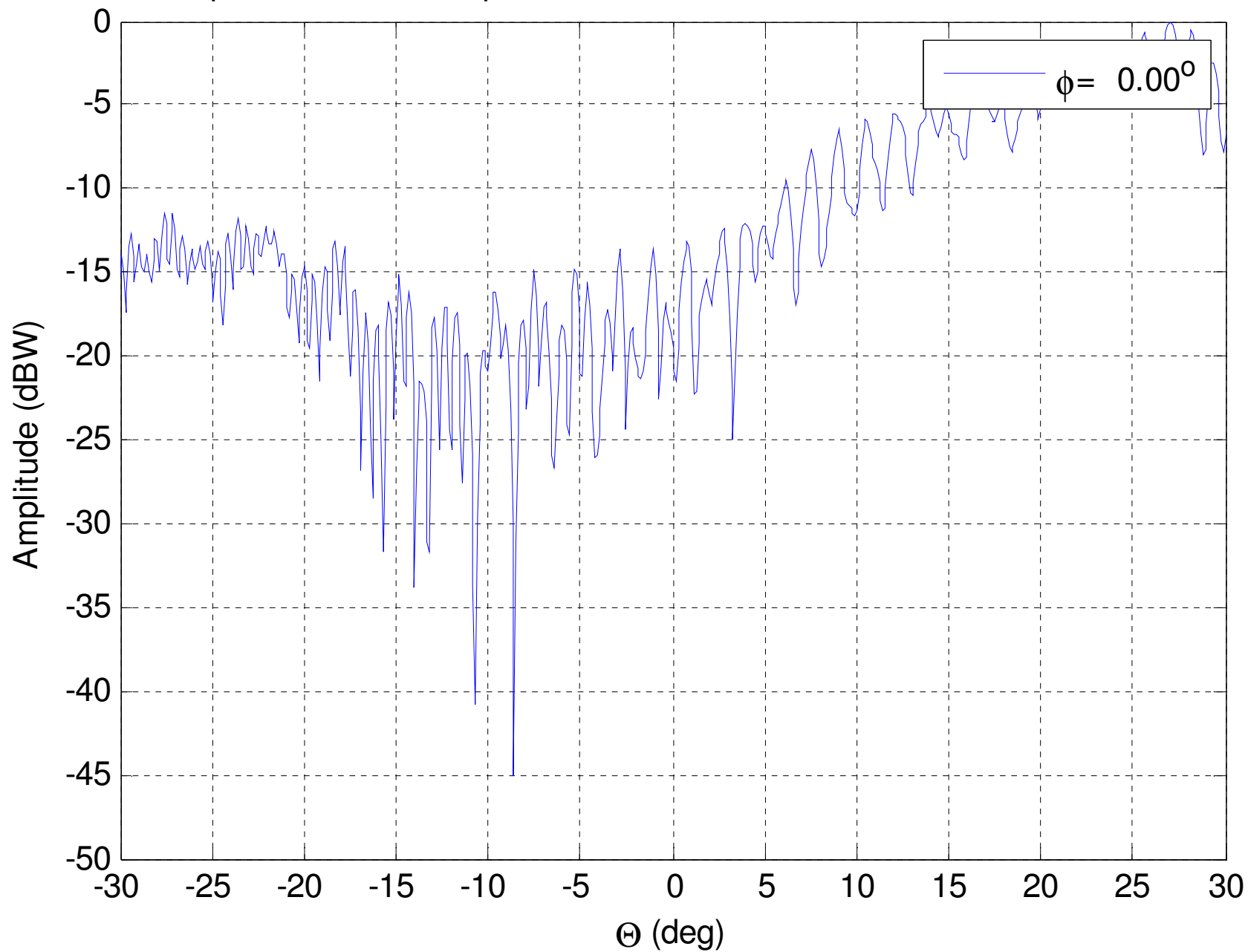
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -5.53 dBW, Date: 15-Dec-2011



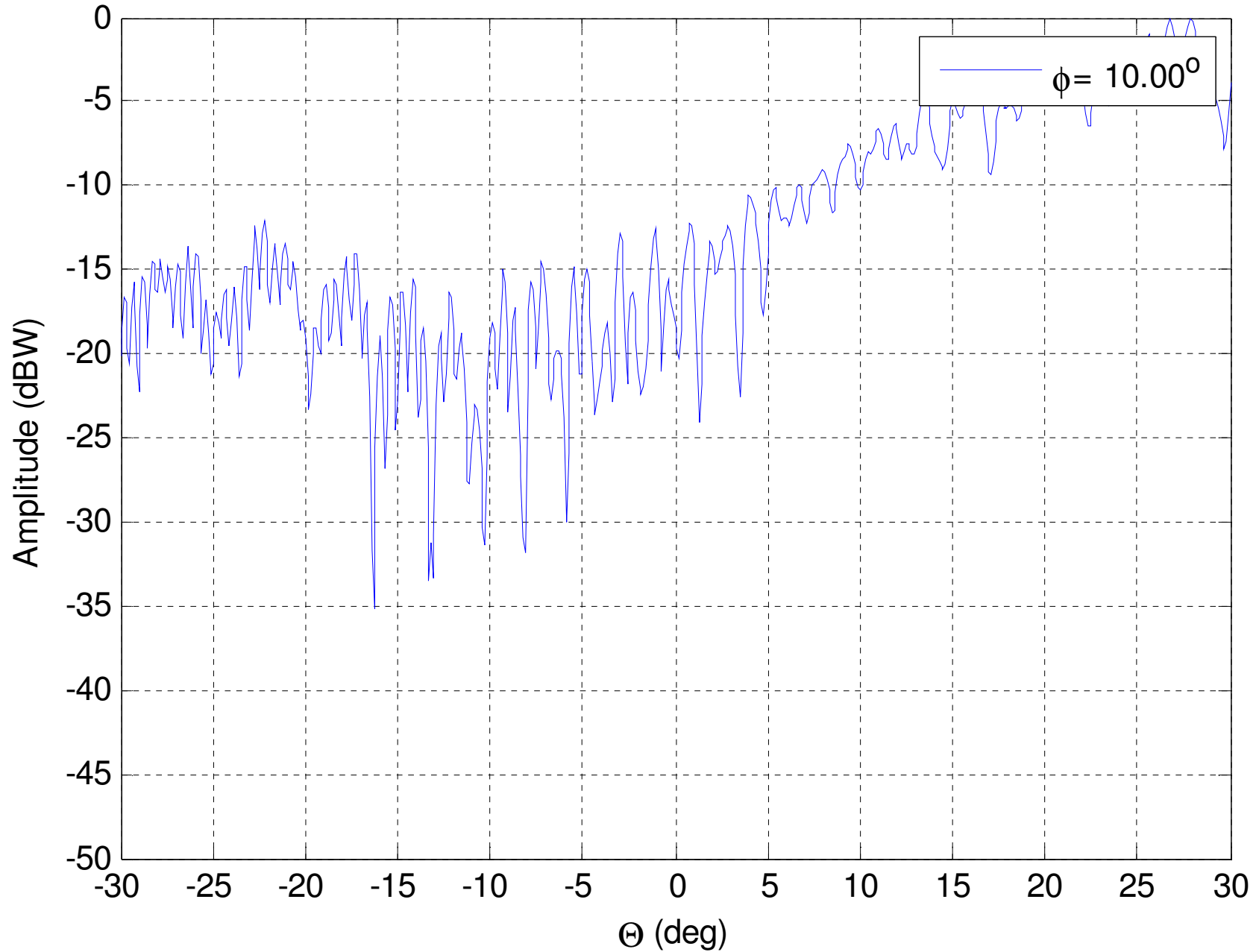
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.25 dBW, Date: 15-Dec-2011



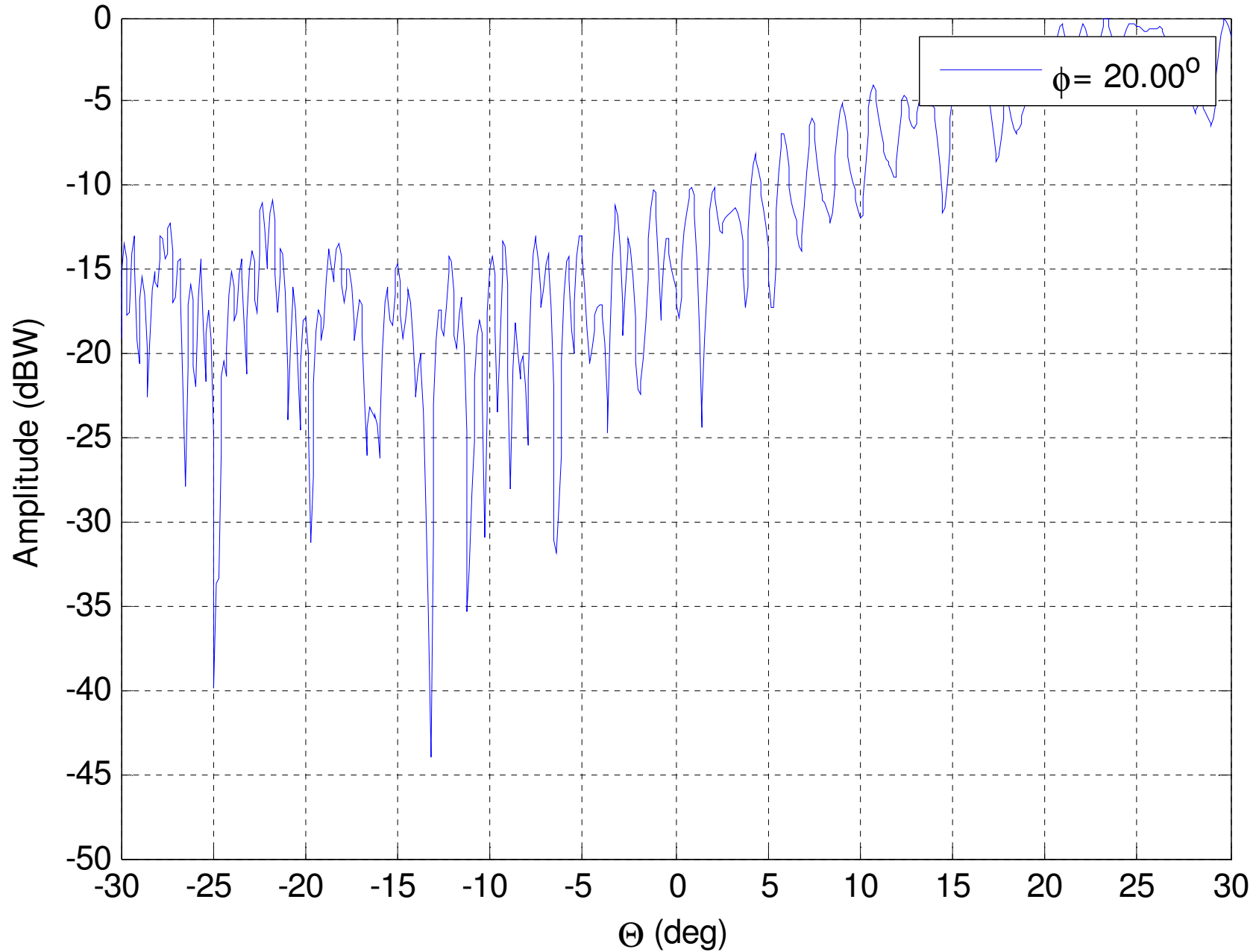
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -6.26 dBW, Date: 15-Dec-2011



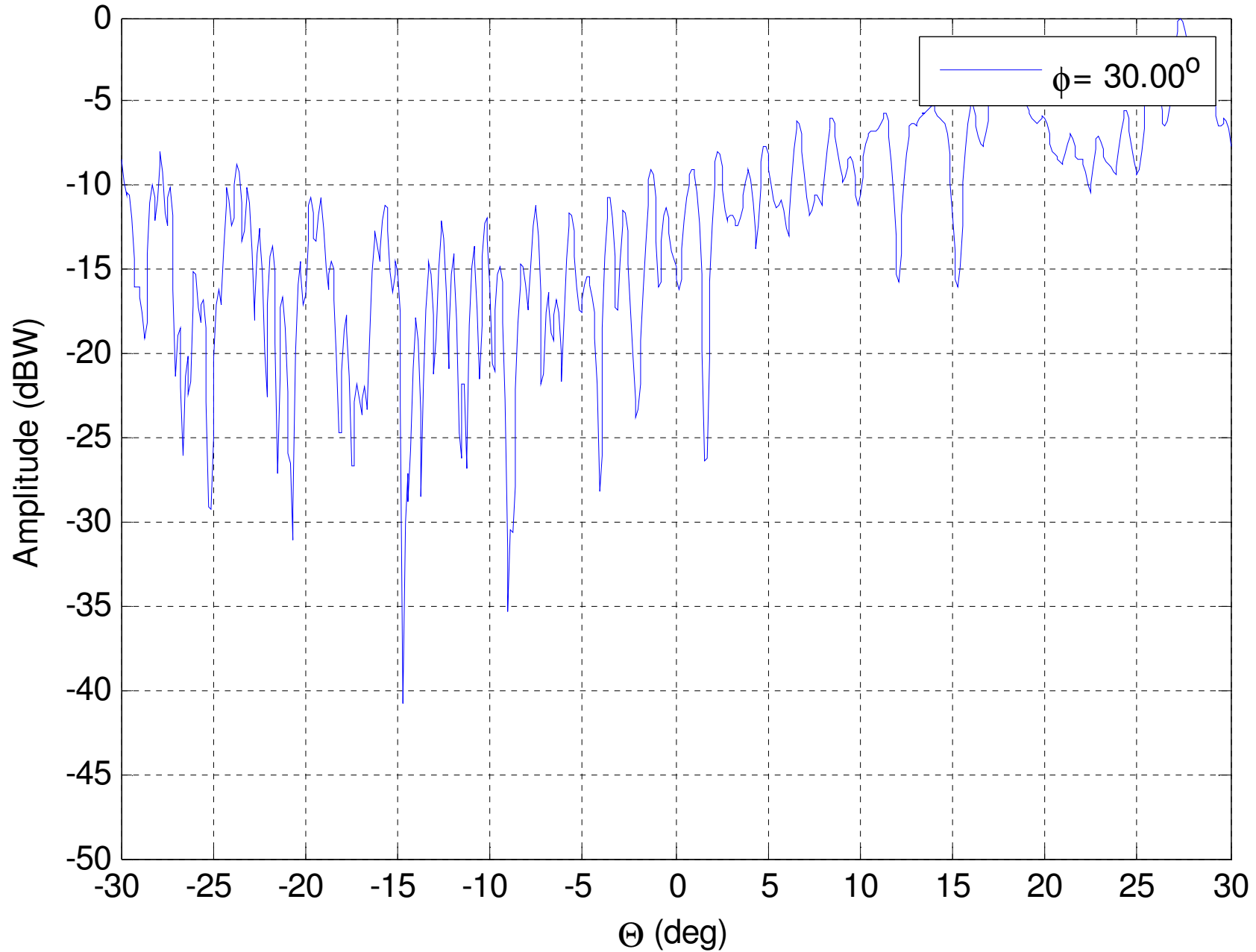
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -8.57 dBW, Date: 15-Dec-2011



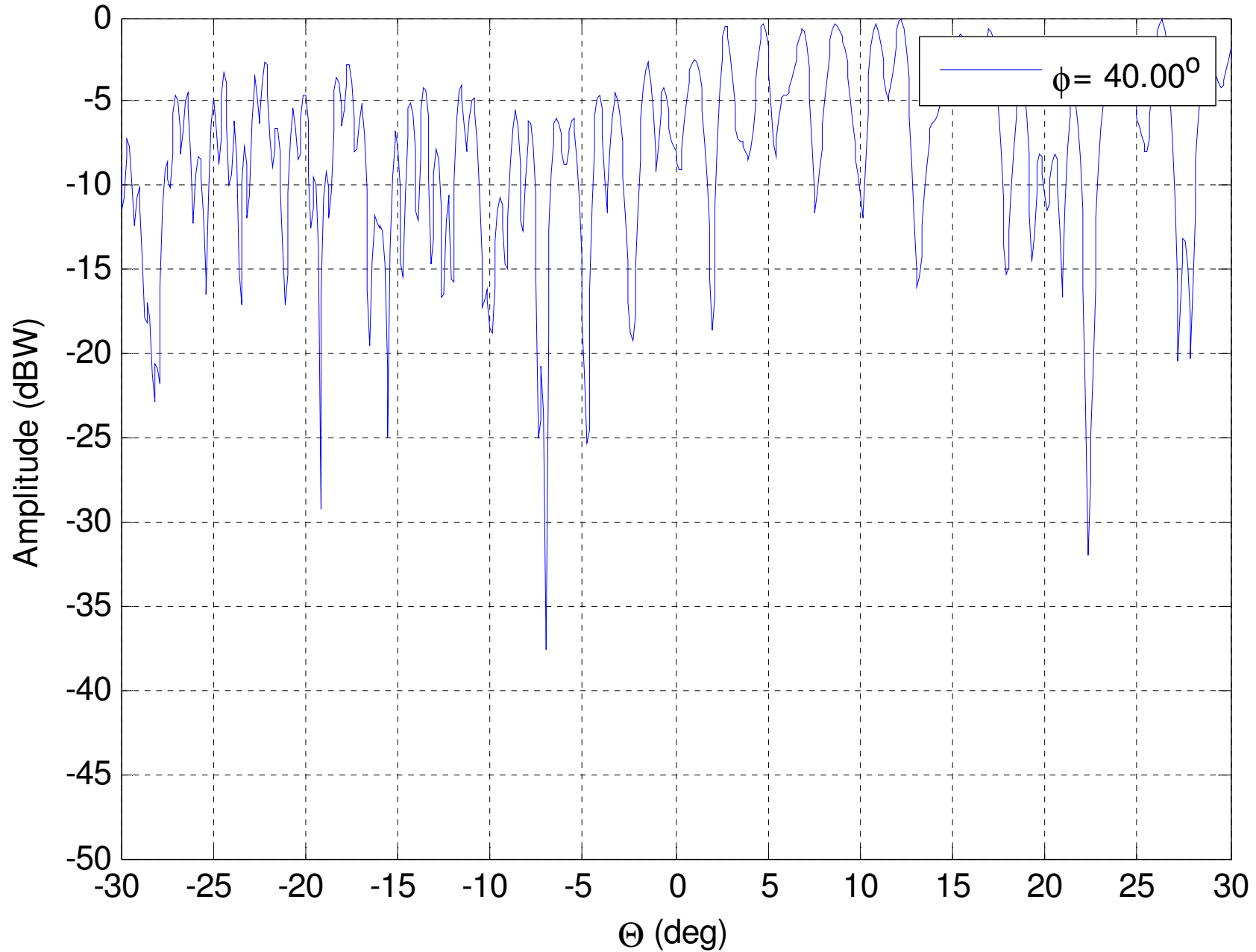
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -9.93 dBW, Date: 15-Dec-2011



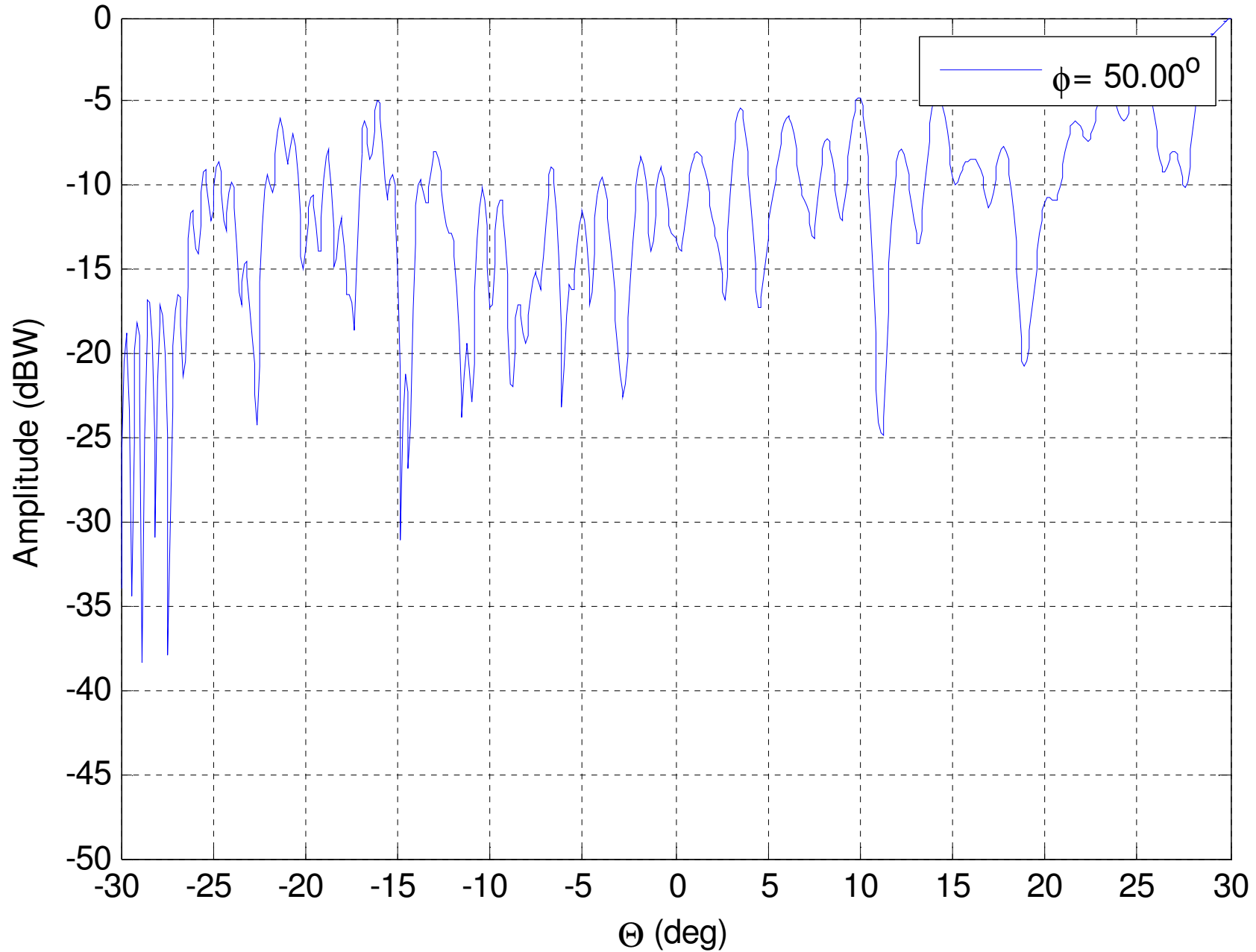
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -16.71 dBW, Date: 15-Dec-2011



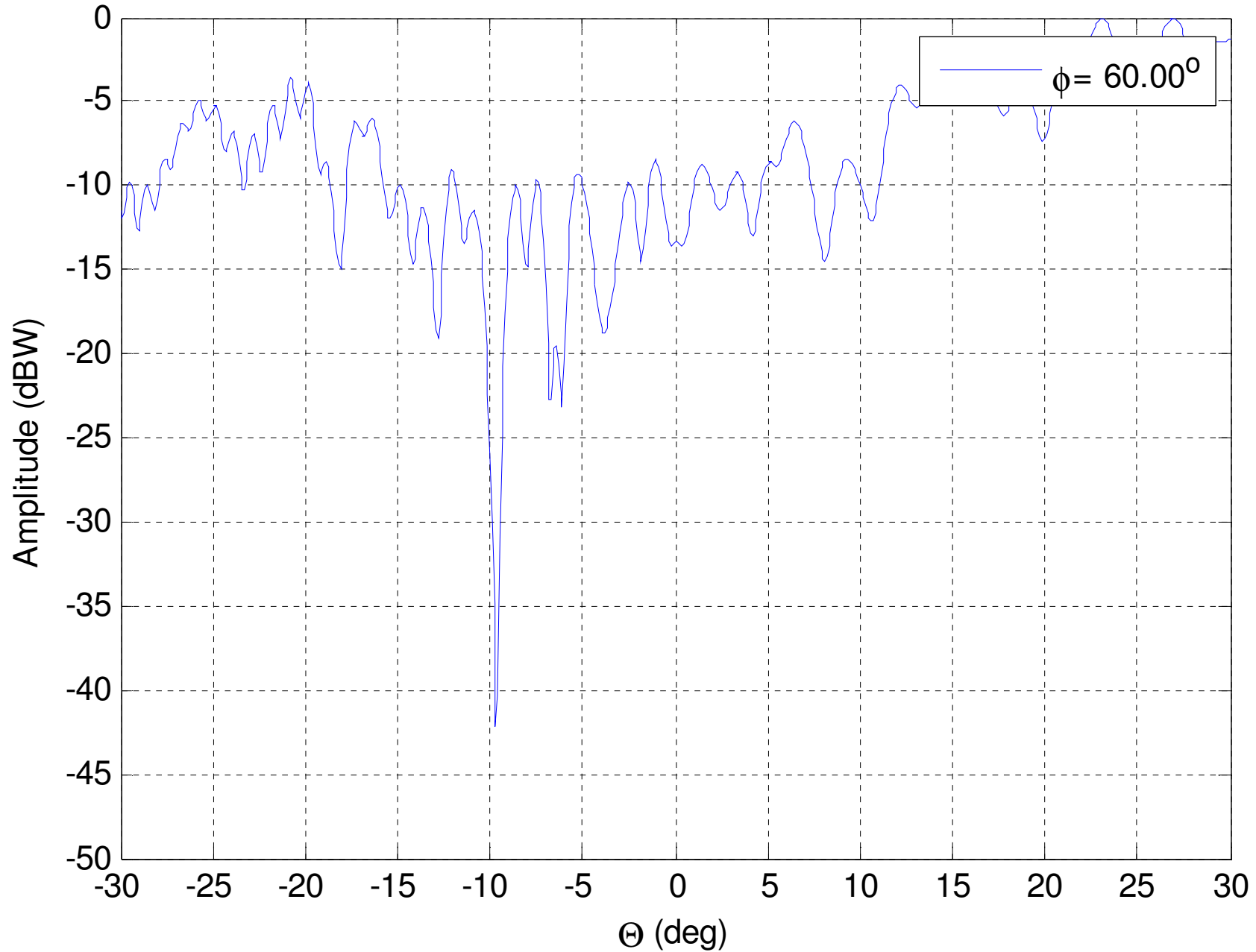
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -11.61 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

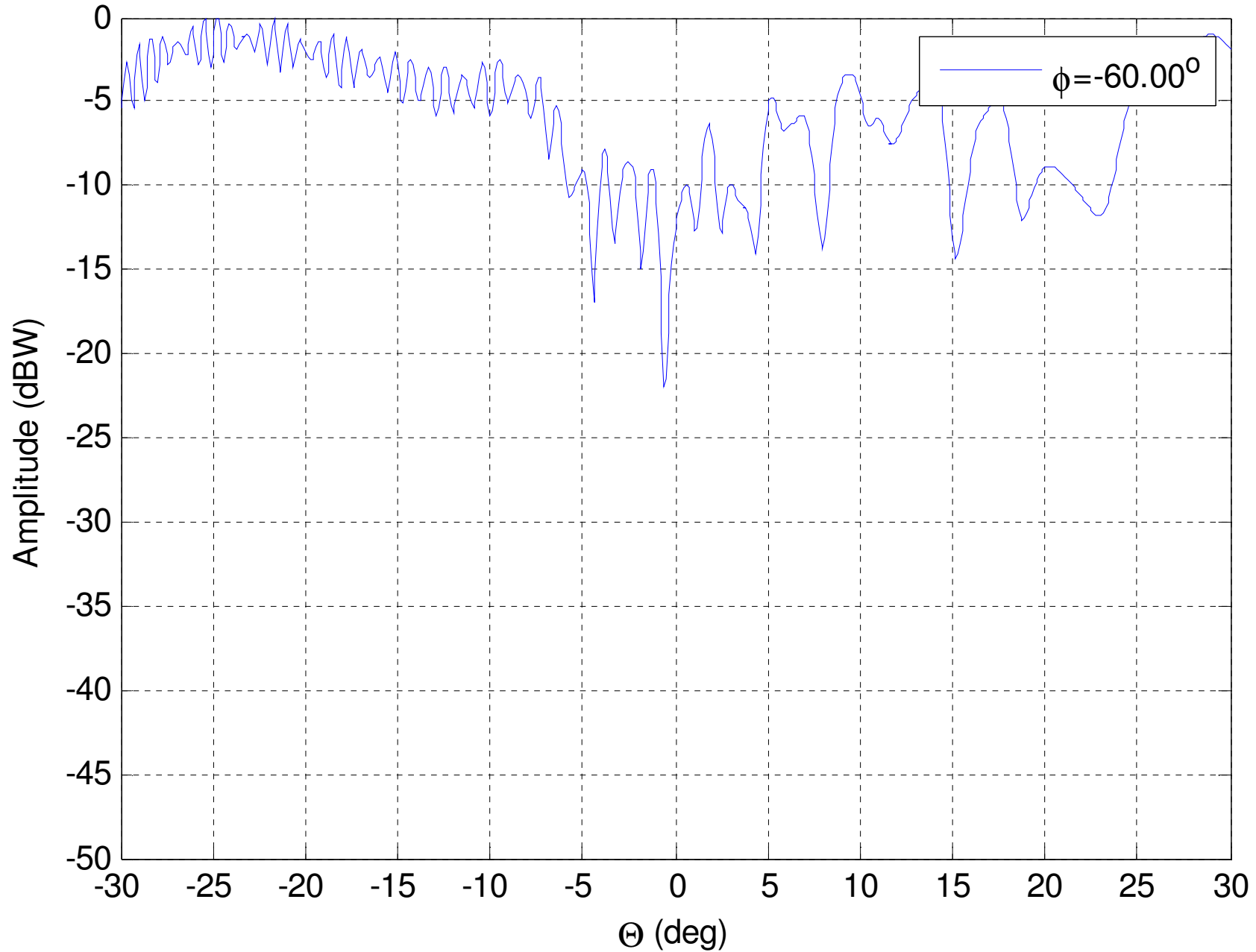
Input file: tx-17.3-lhcp-60.cut, Peak: -11.35 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

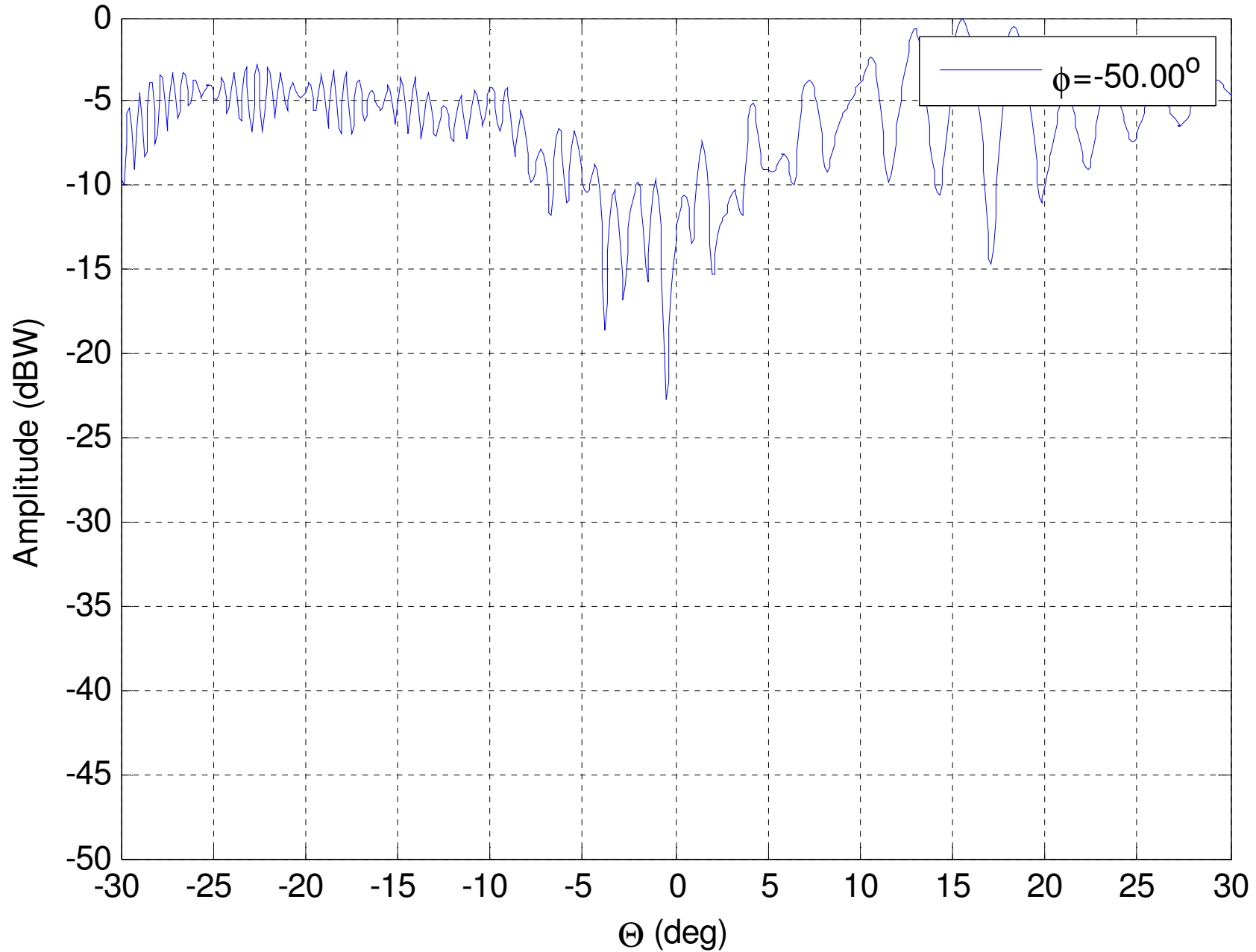
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.24 dBW, Date: 15-Dec-2011



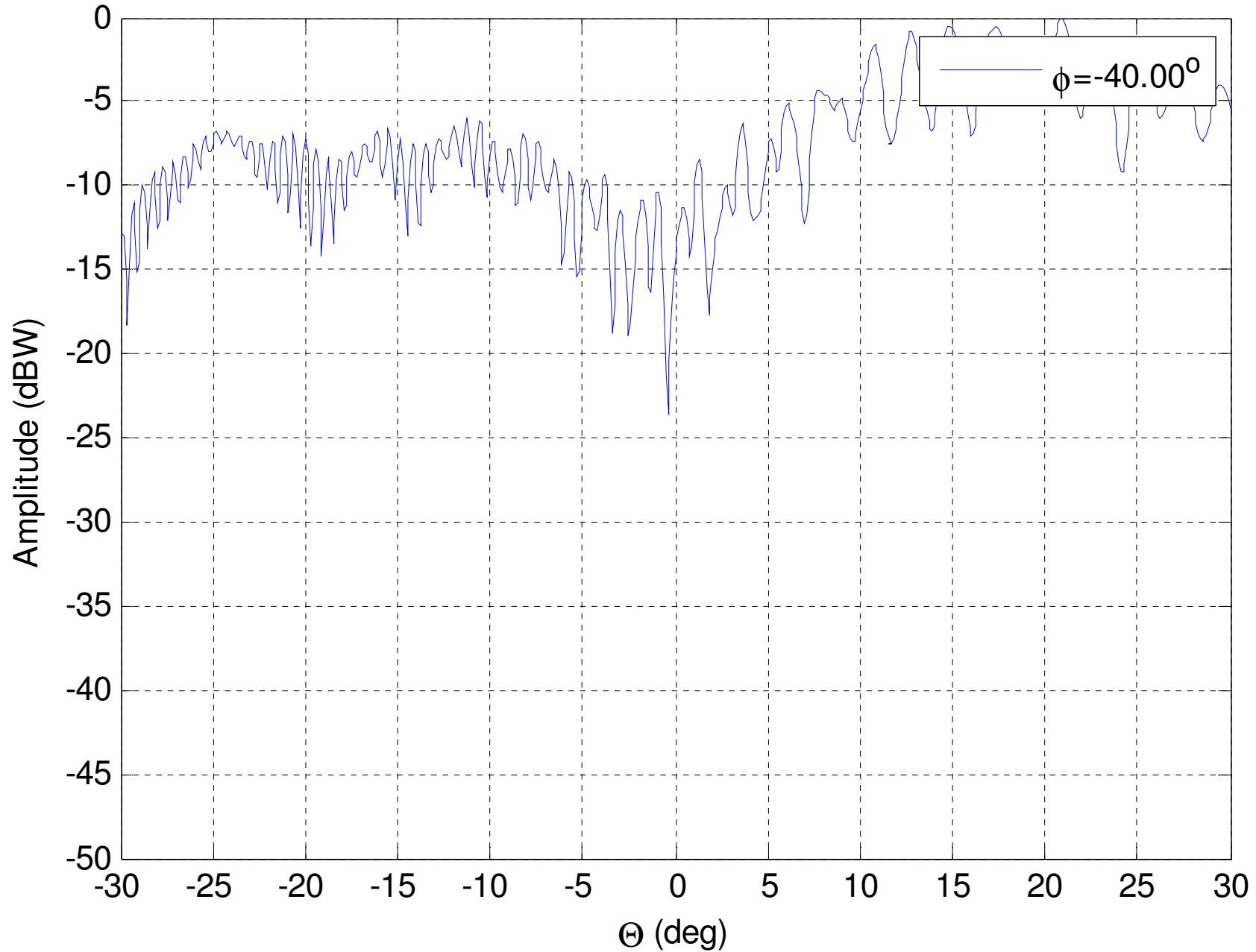
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.50 dBW, Date: 15-Dec-2011



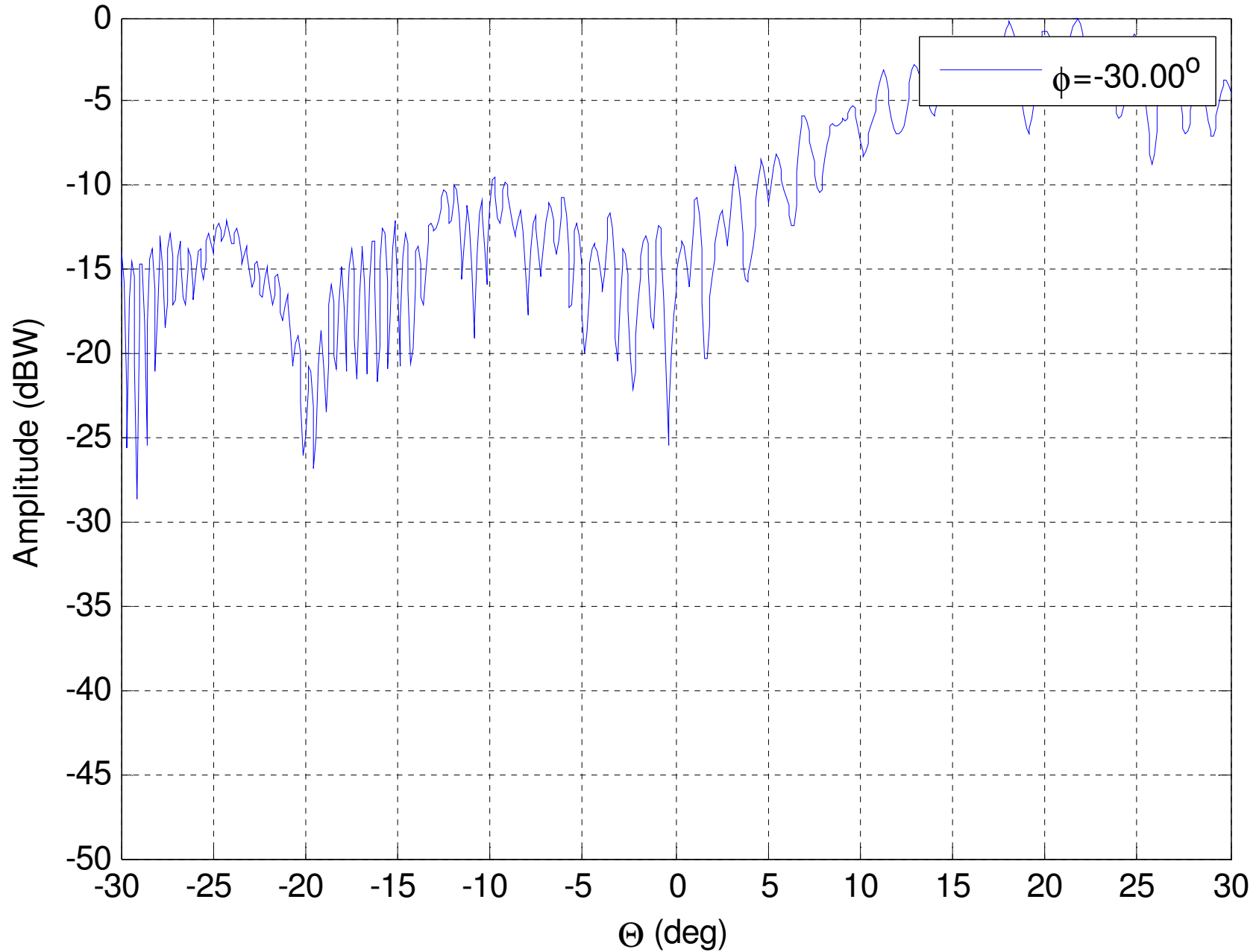
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.69 dBW, Date: 15-Dec-2011



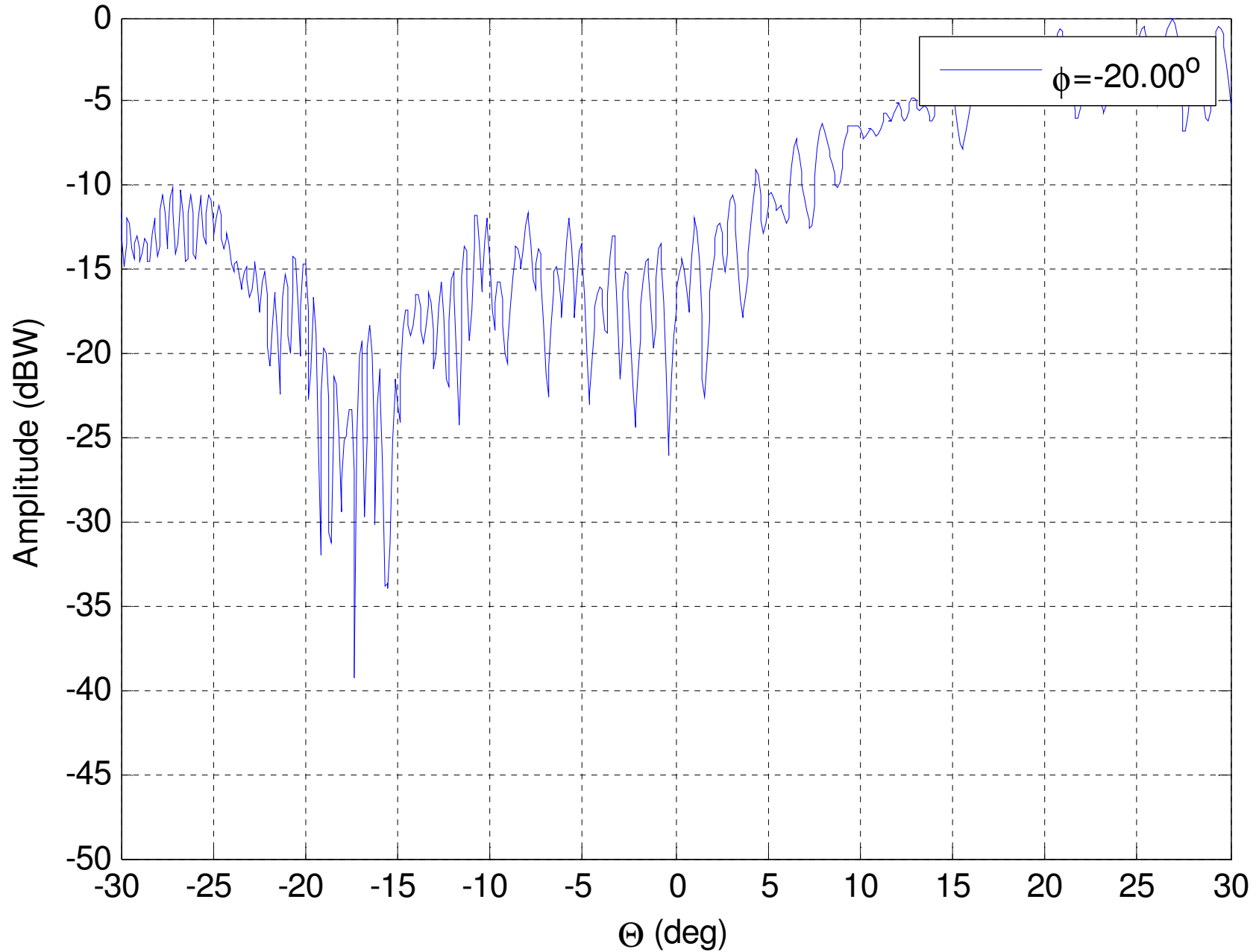
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -7.65 dBW, Date: 15-Dec-2011



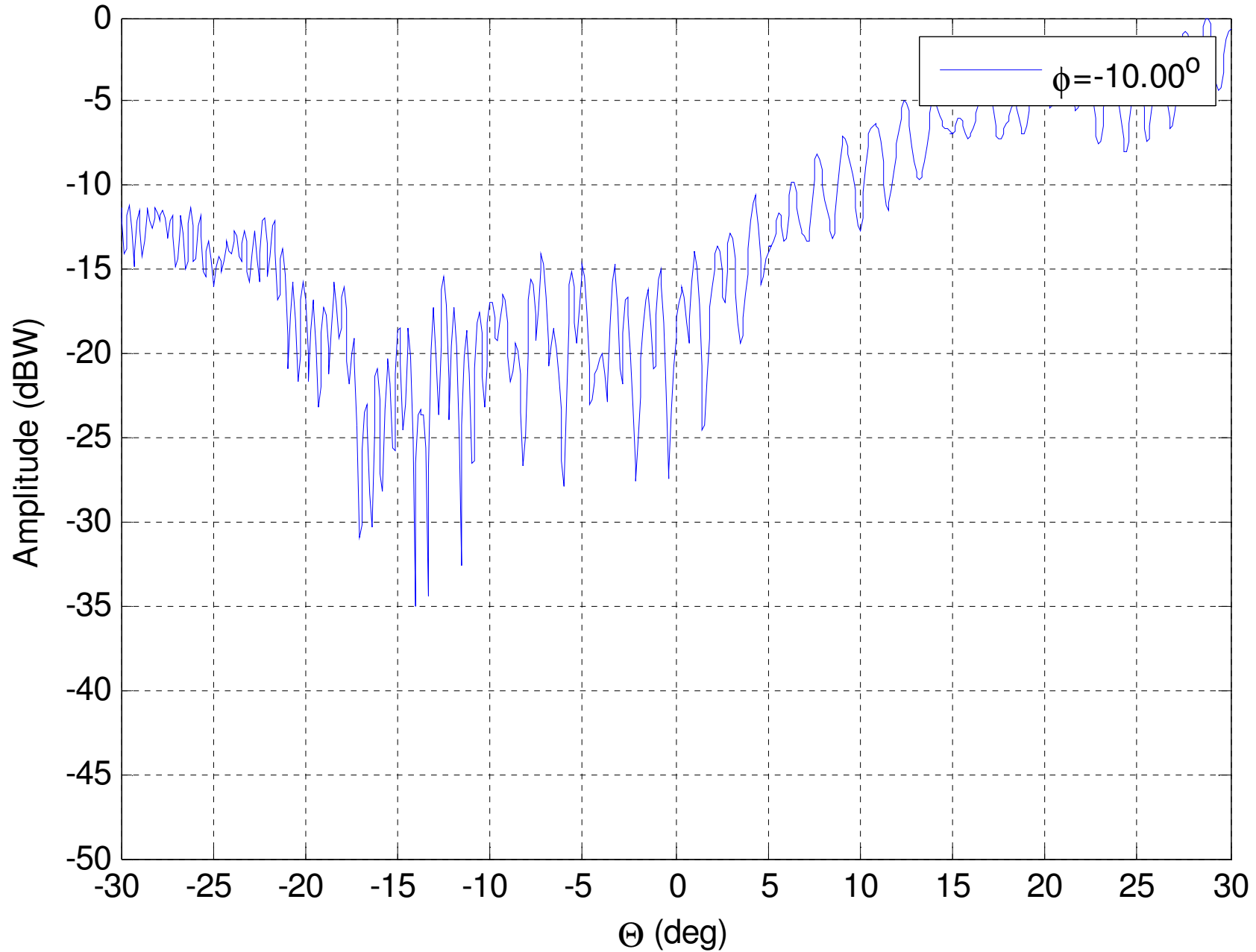
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -6.46 dBW, Date: 15-Dec-2011



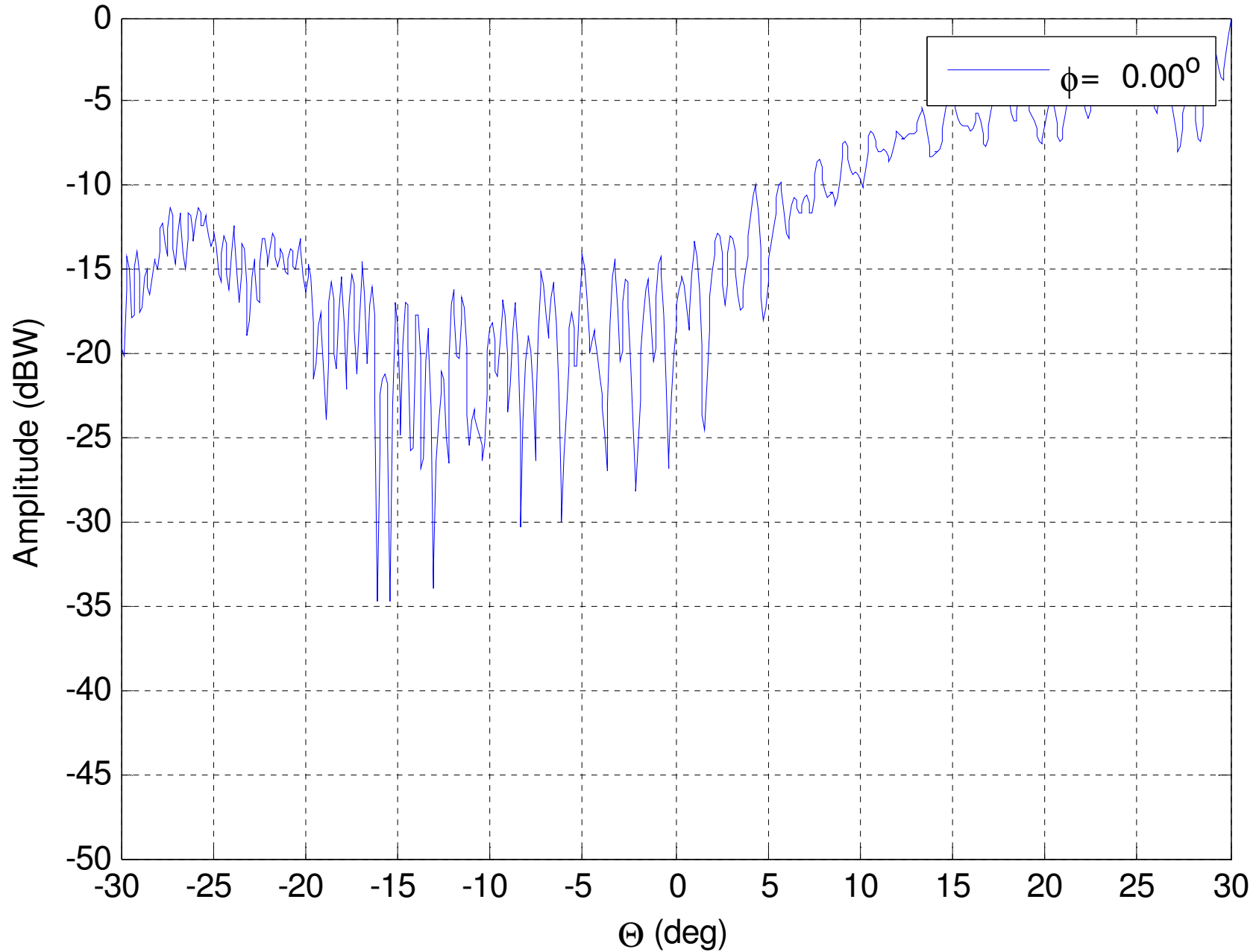
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -4.75 dBW, Date: 15-Dec-2011



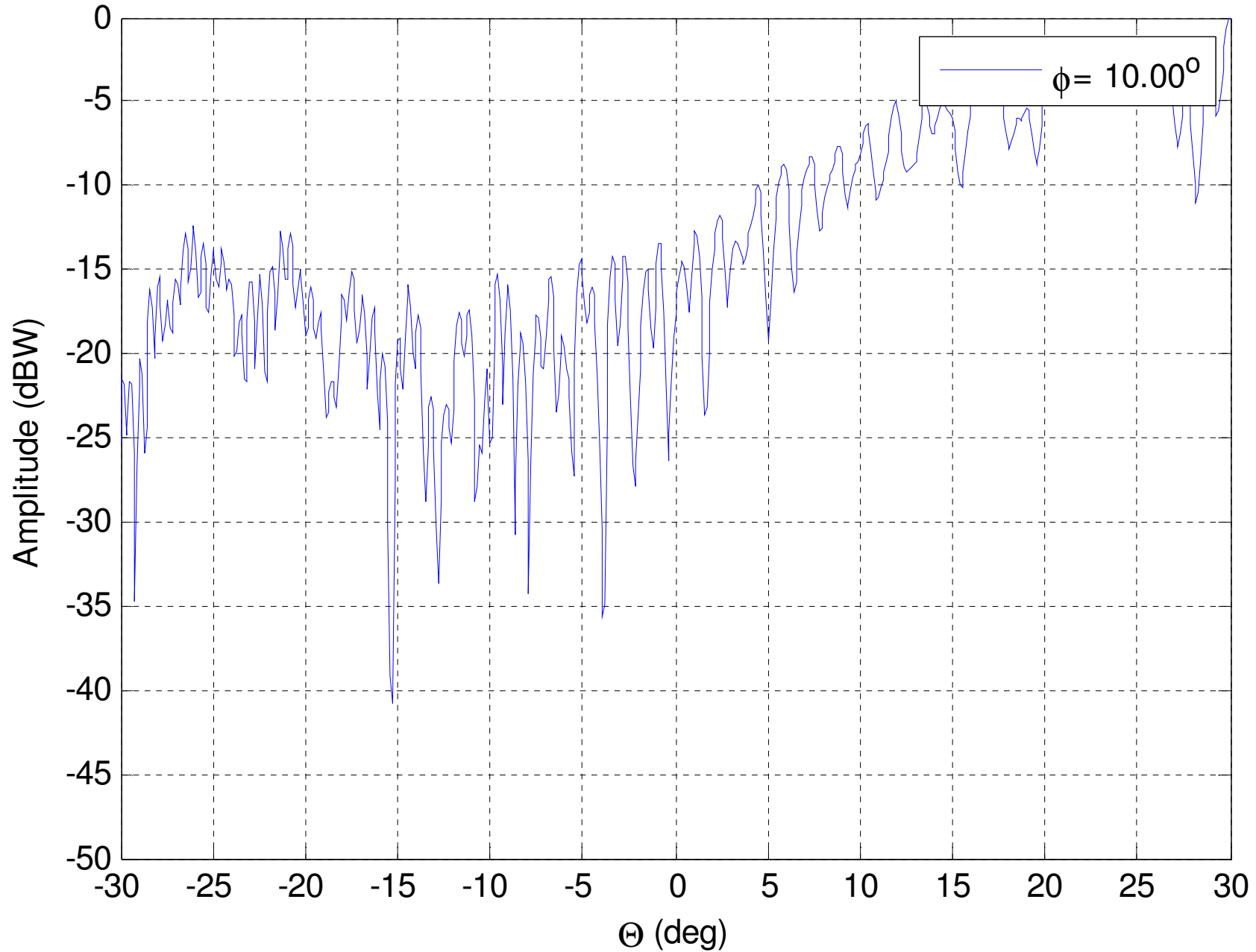
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -5.43 dBW, Date: 15-Dec-2011



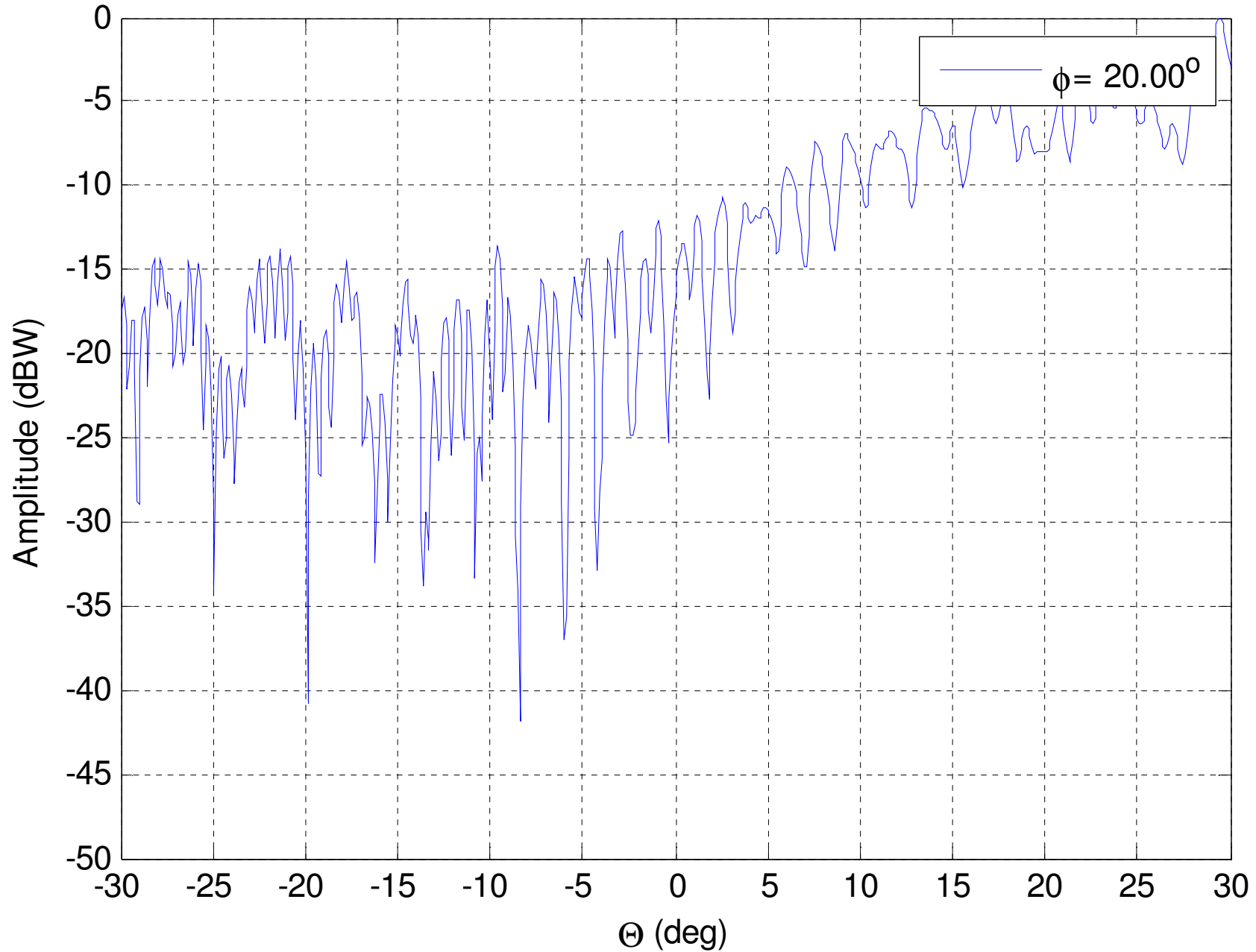
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -6.30 dBW, Date: 15-Dec-2011



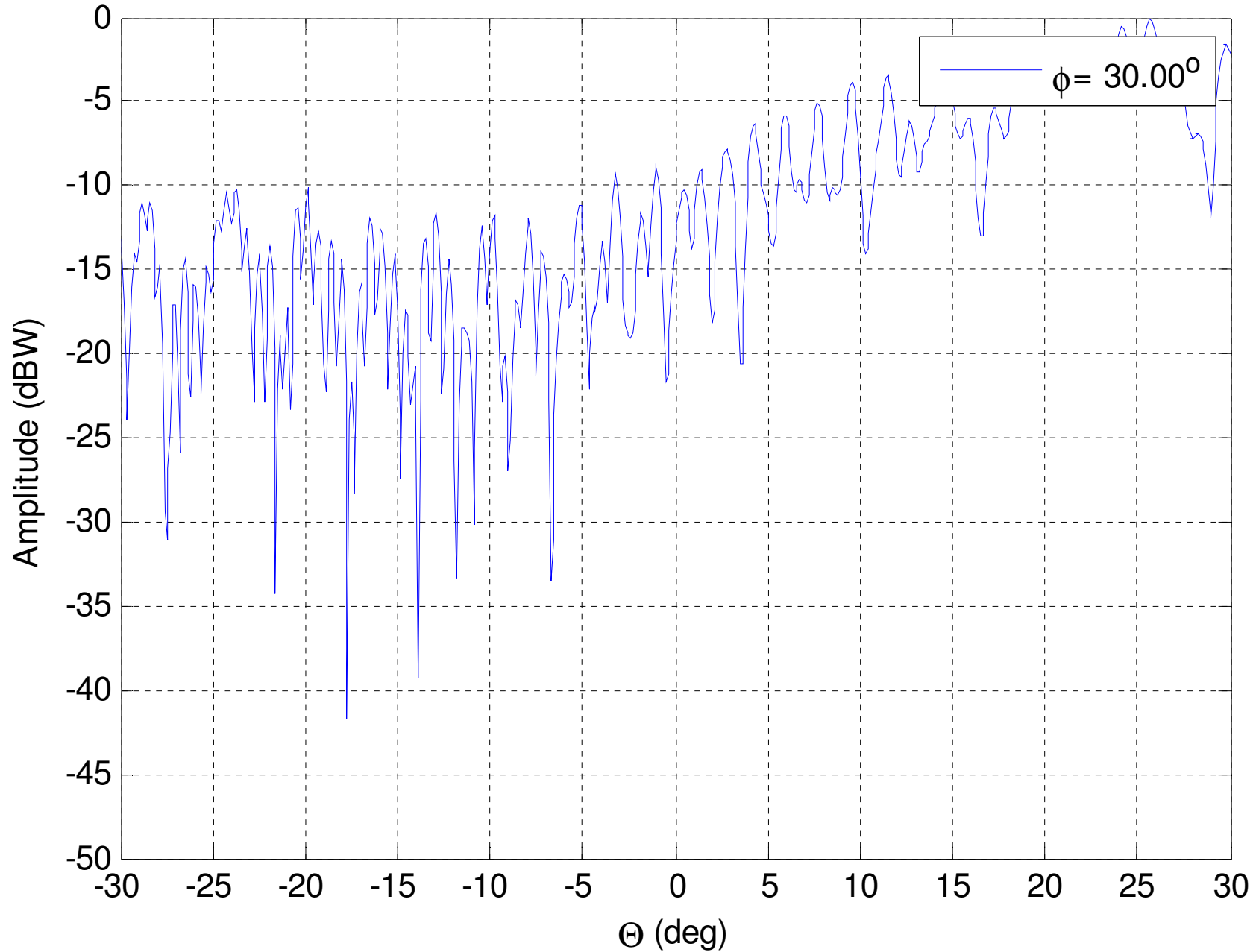
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -7.33 dBW, Date: 15-Dec-2011



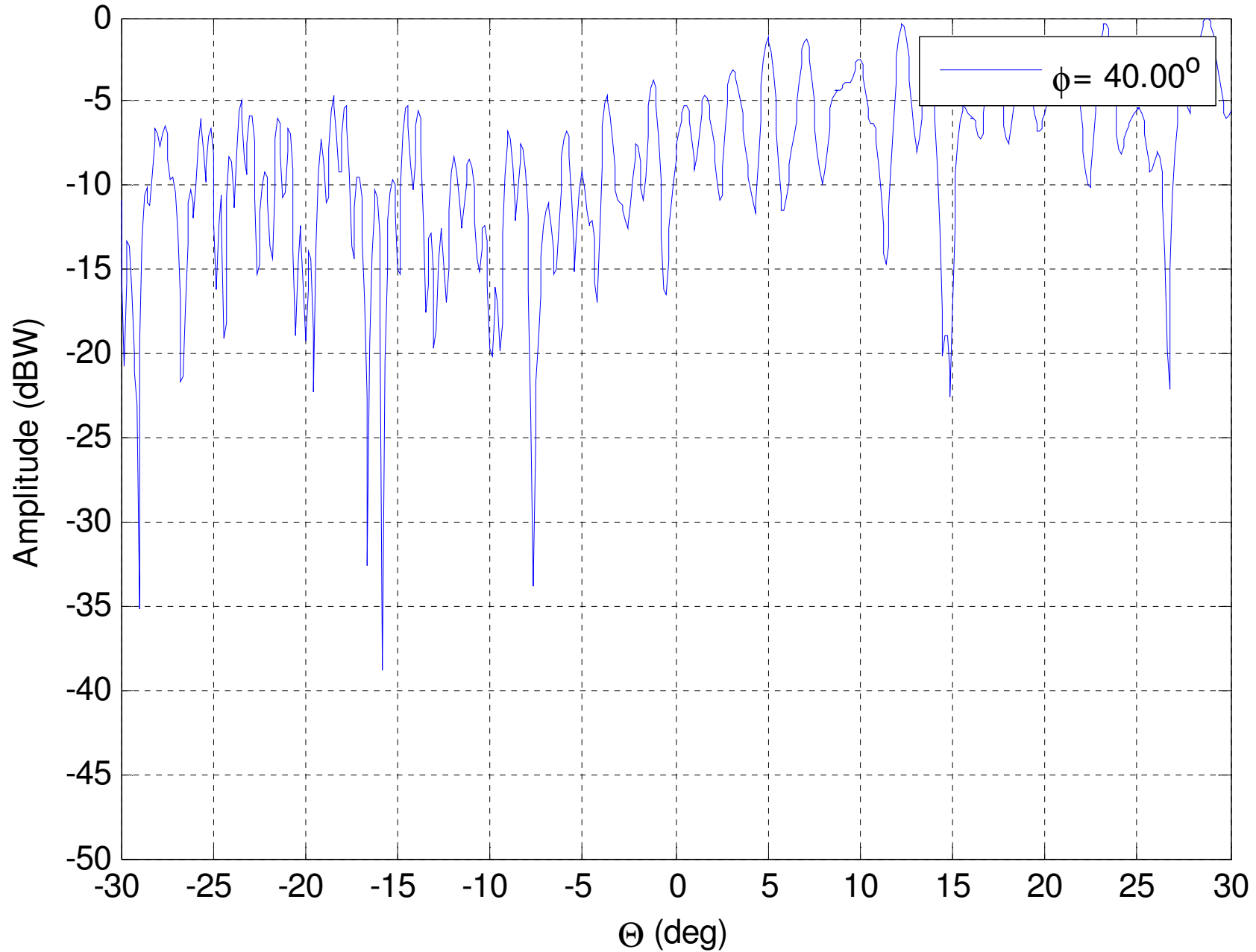
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -10.46 dBW, Date: 15-Dec-2011



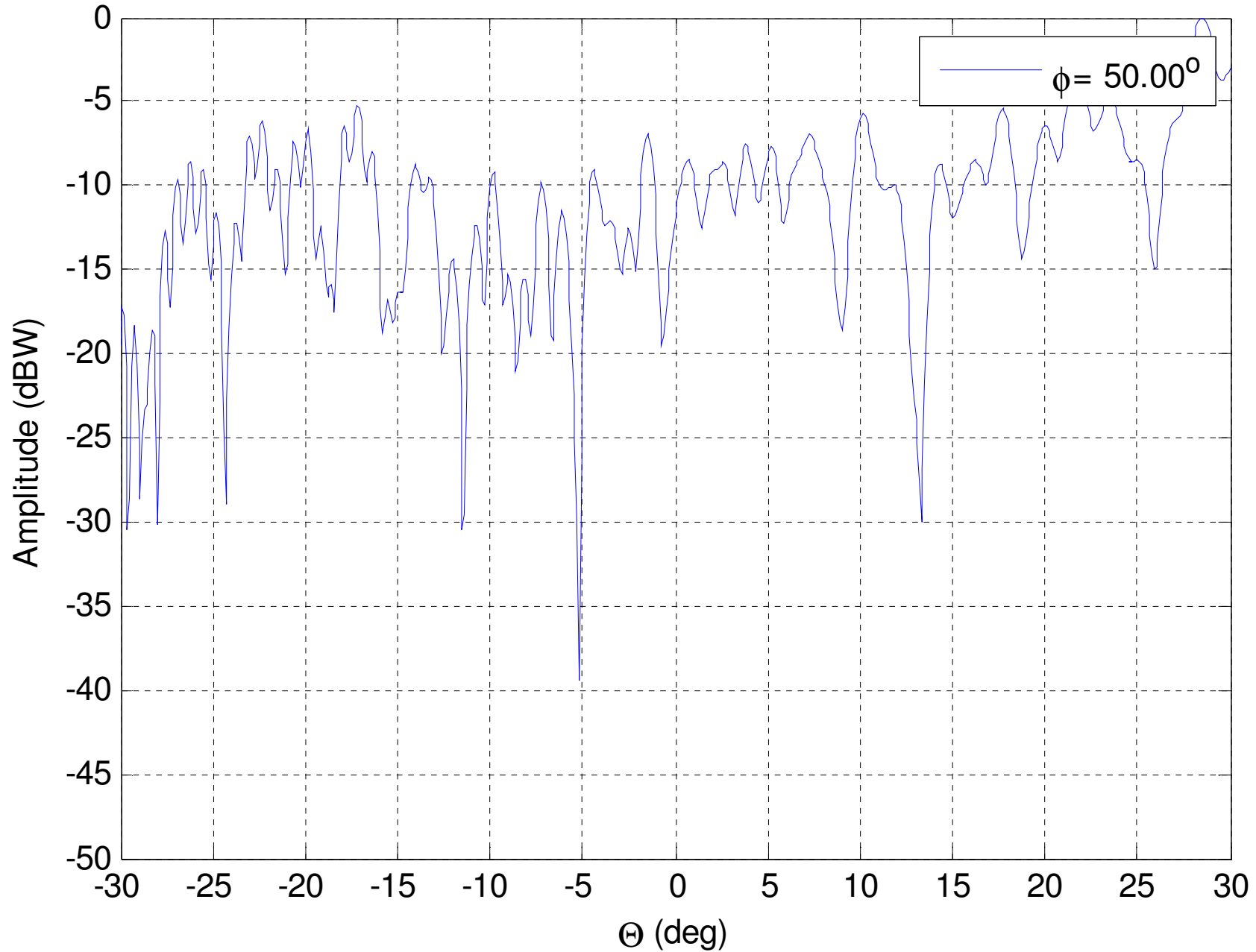
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -15.35 dBW, Date: 15-Dec-2011



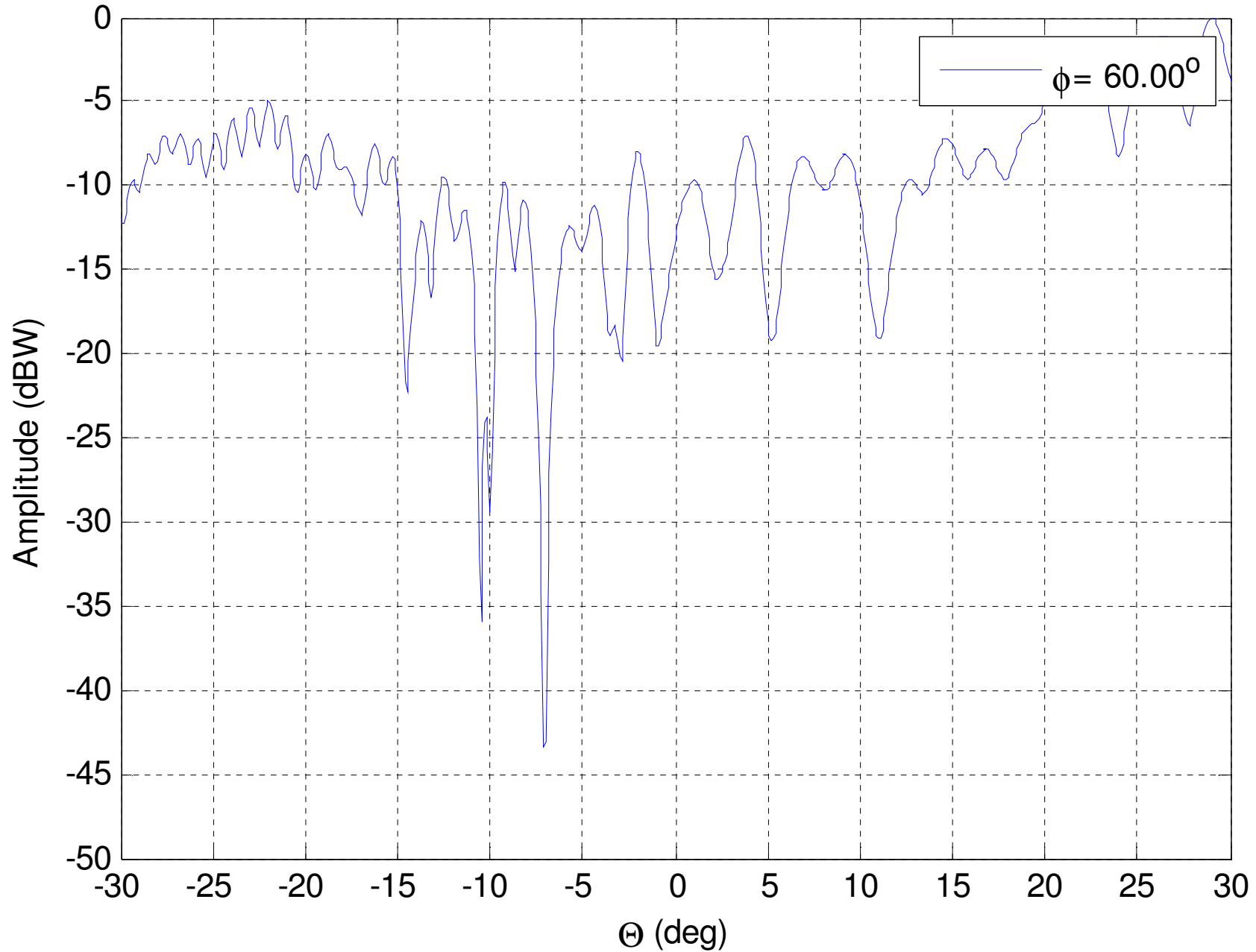
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.98 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

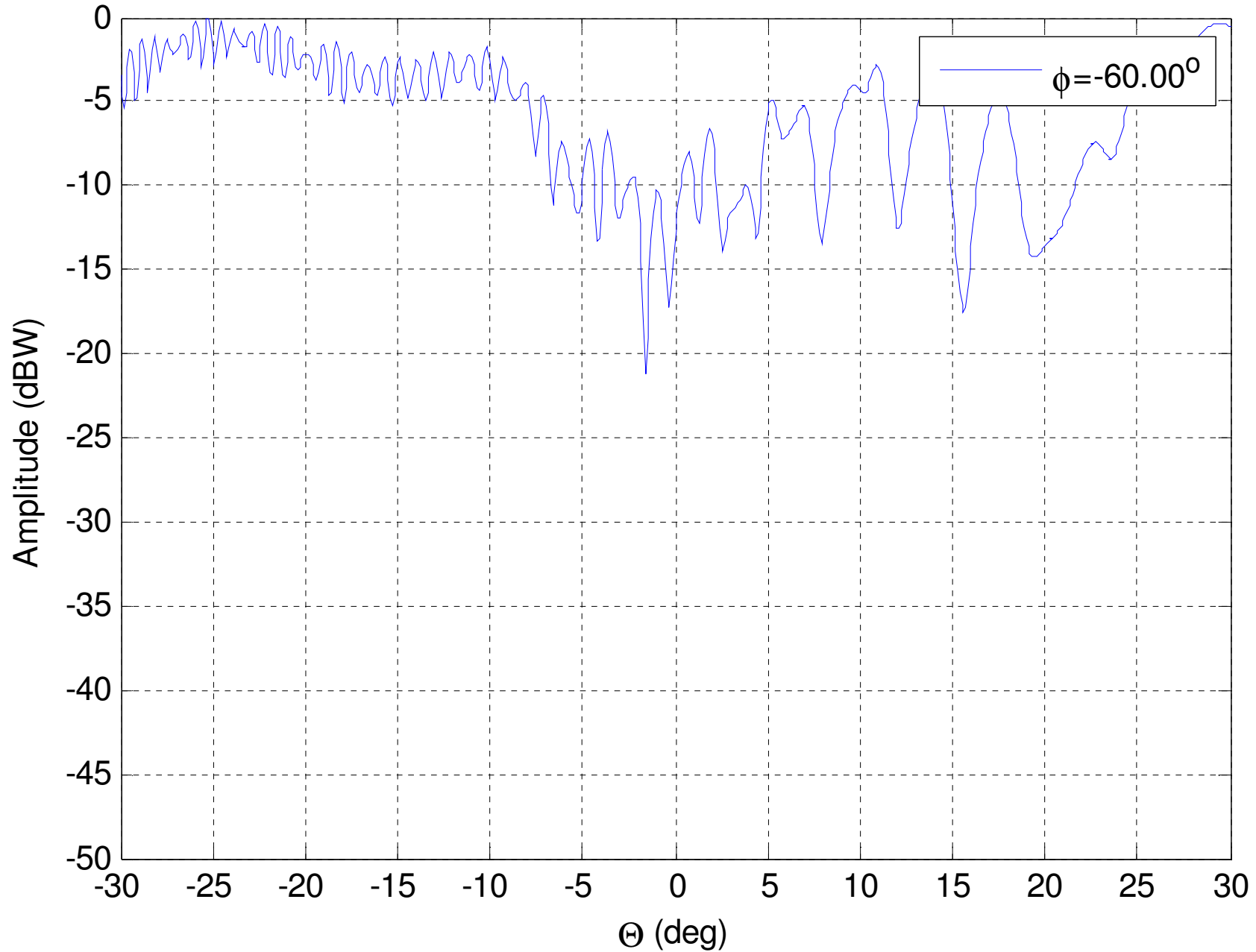
Input file: tx-17.5-rhcp-60.cut, Peak: -10.63 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

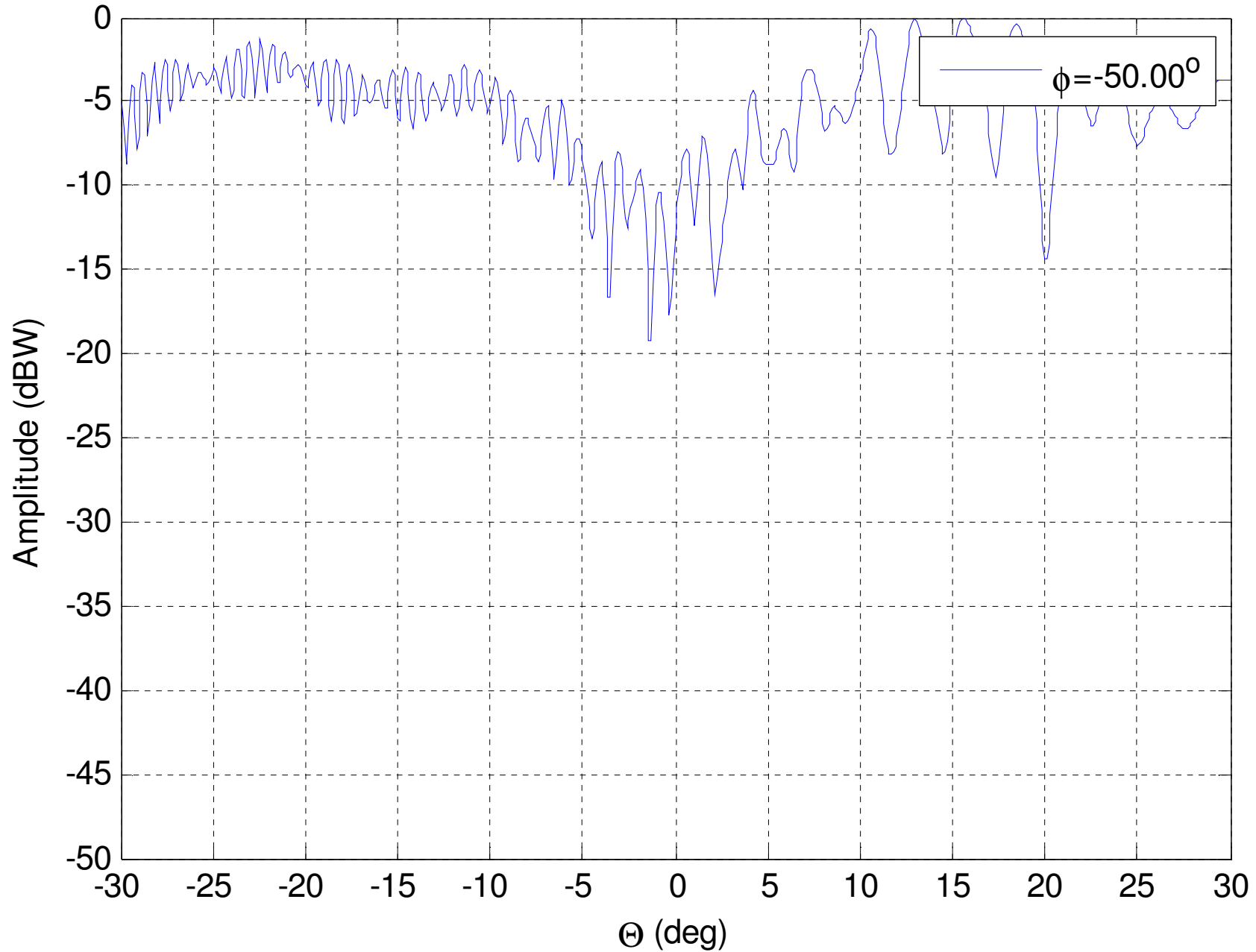
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -11.34 dBW, Date: 15-Dec-2011



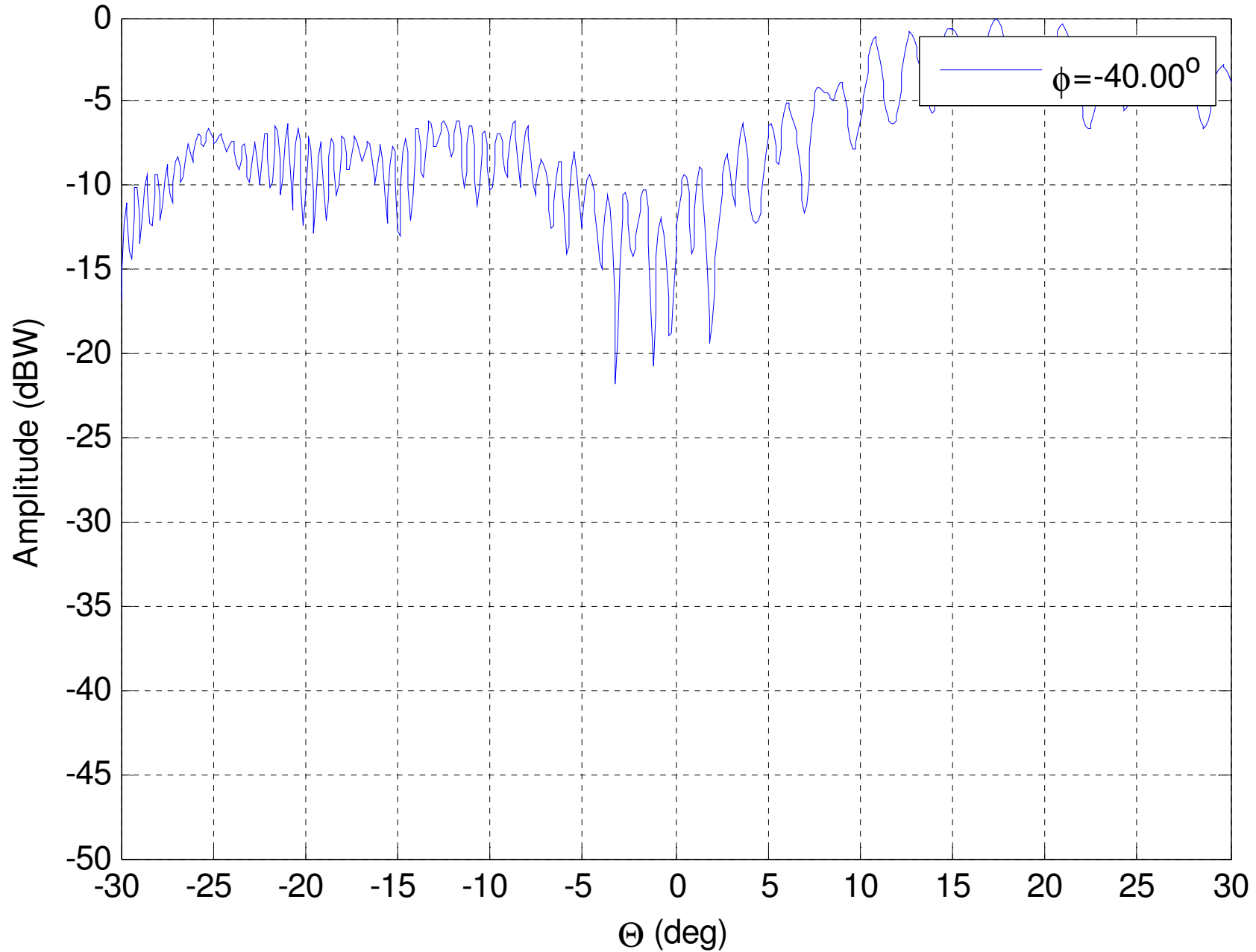
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -11.43 dBW, Date: 15-Dec-2011



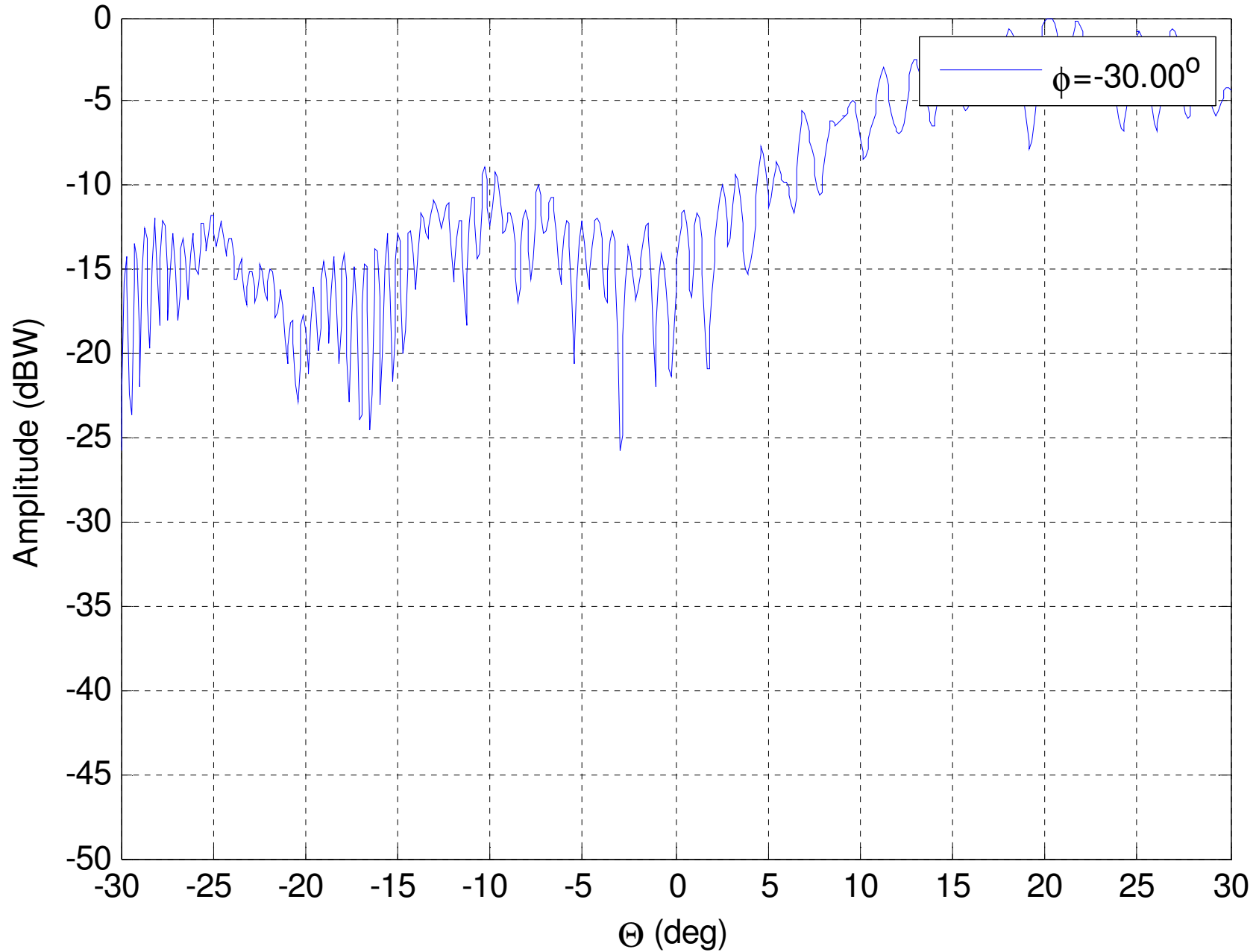
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.06 dBW, Date: 15-Dec-2011



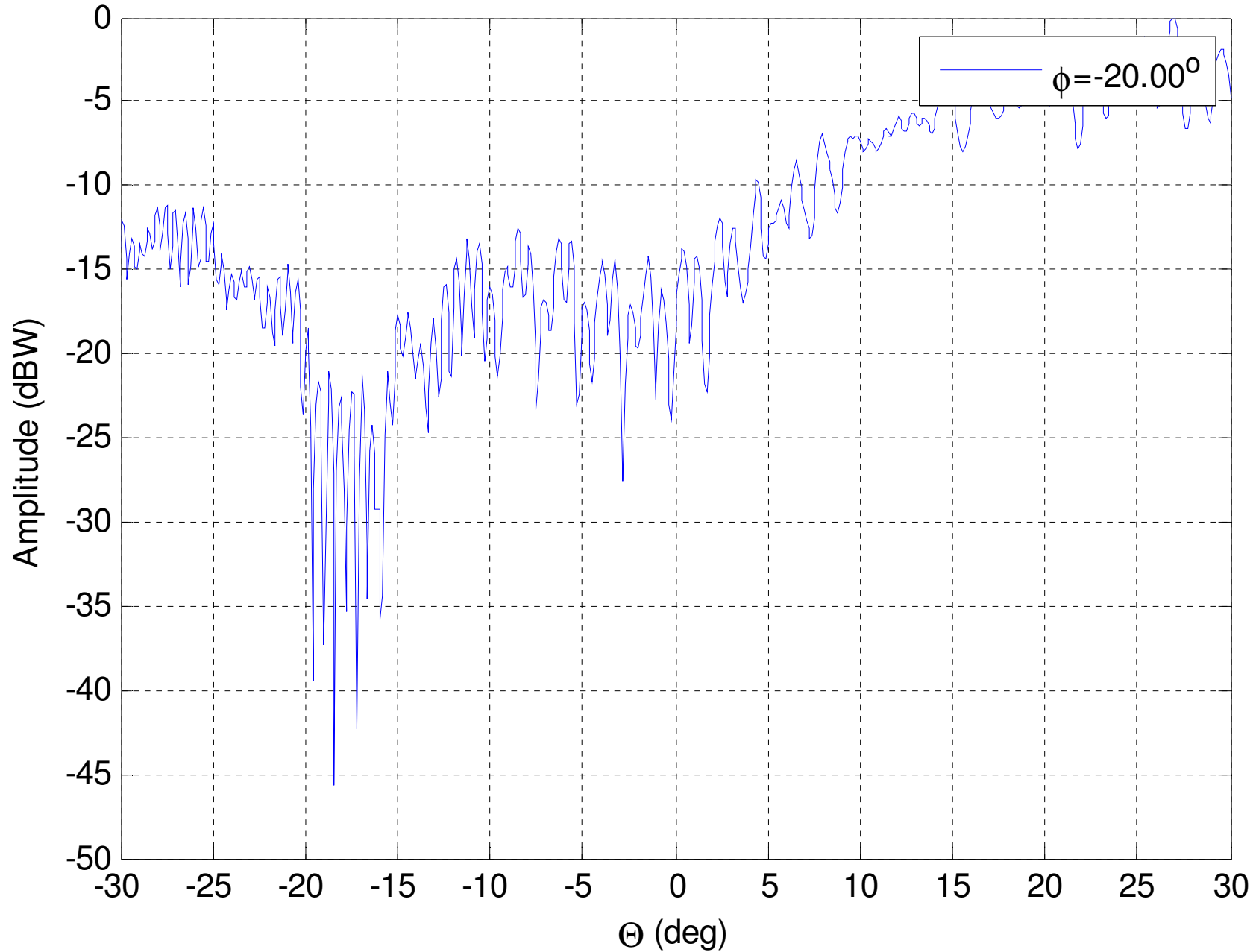
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -7.82 dBW, Date: 15-Dec-2011



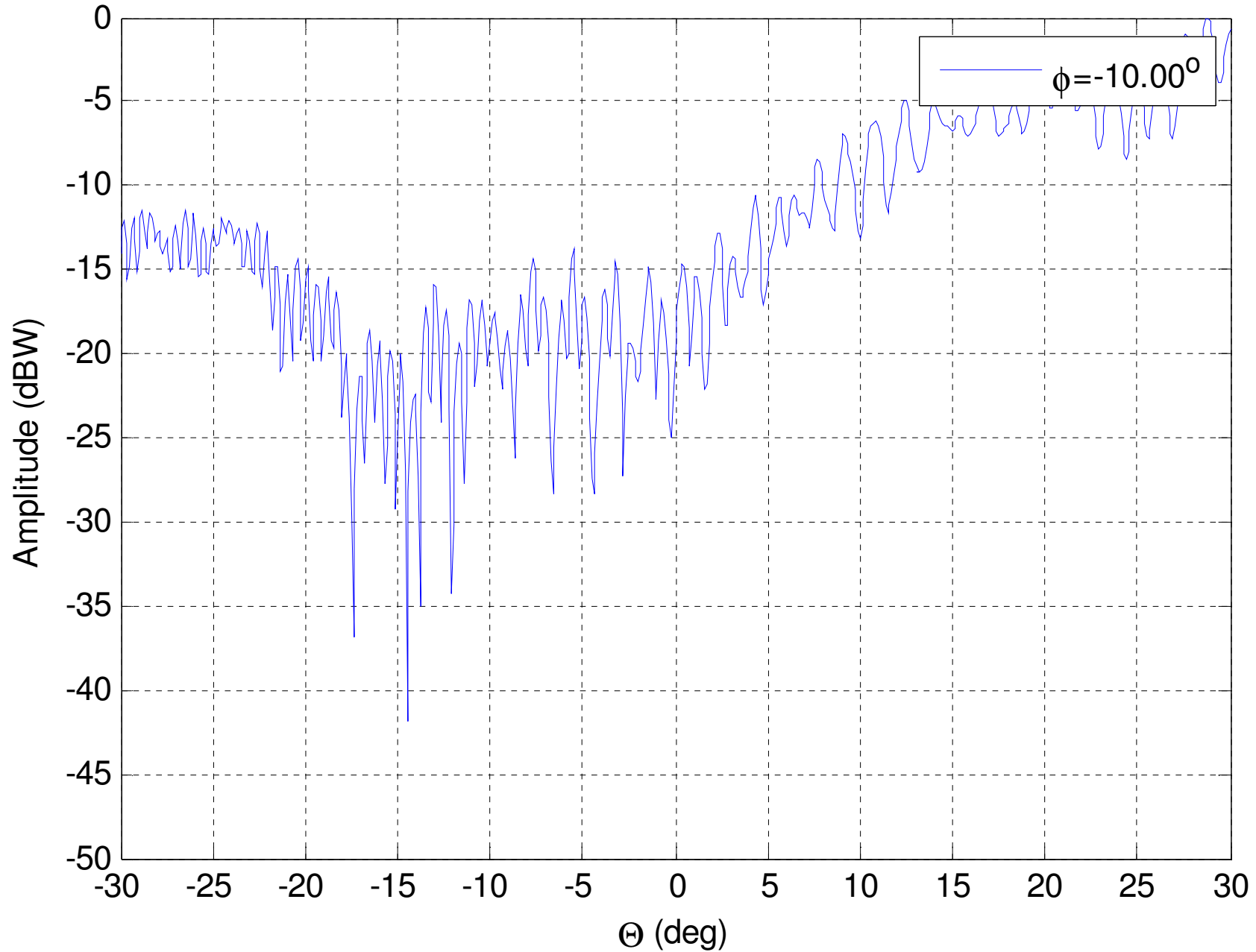
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -5.65 dBW, Date: 15-Dec-2011



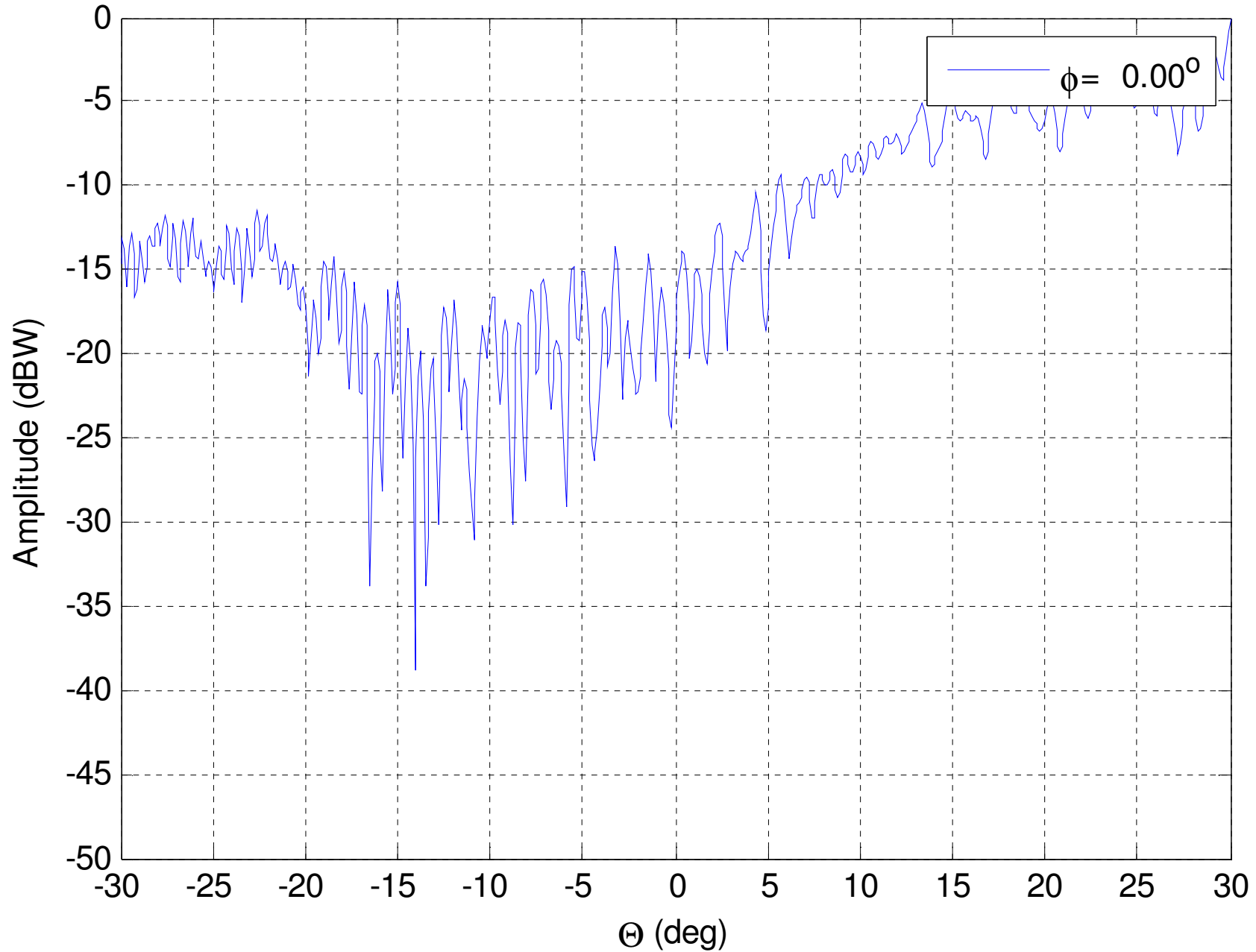
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -4.78 dBW, Date: 15-Dec-2011



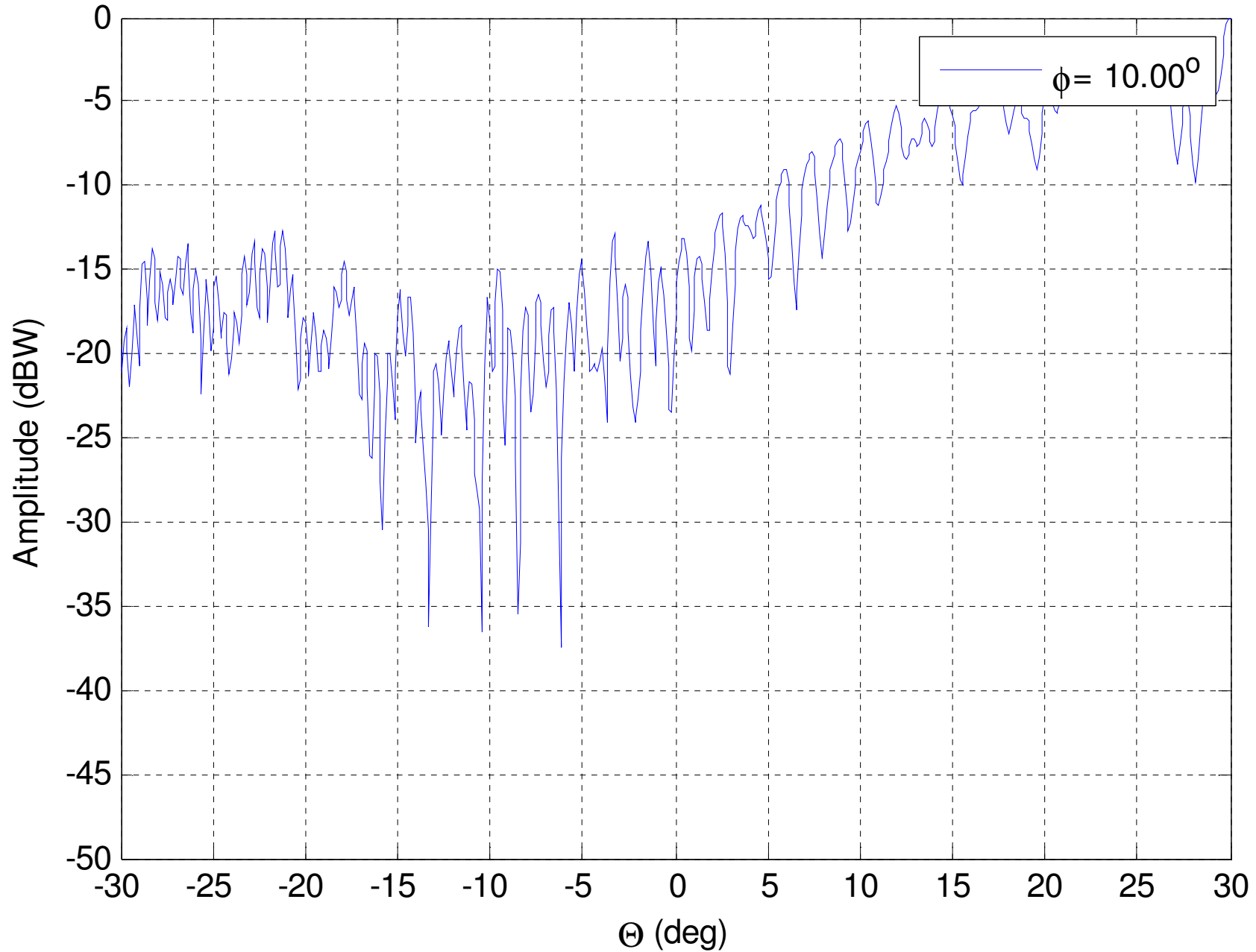
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -5.48 dBW, Date: 15-Dec-2011



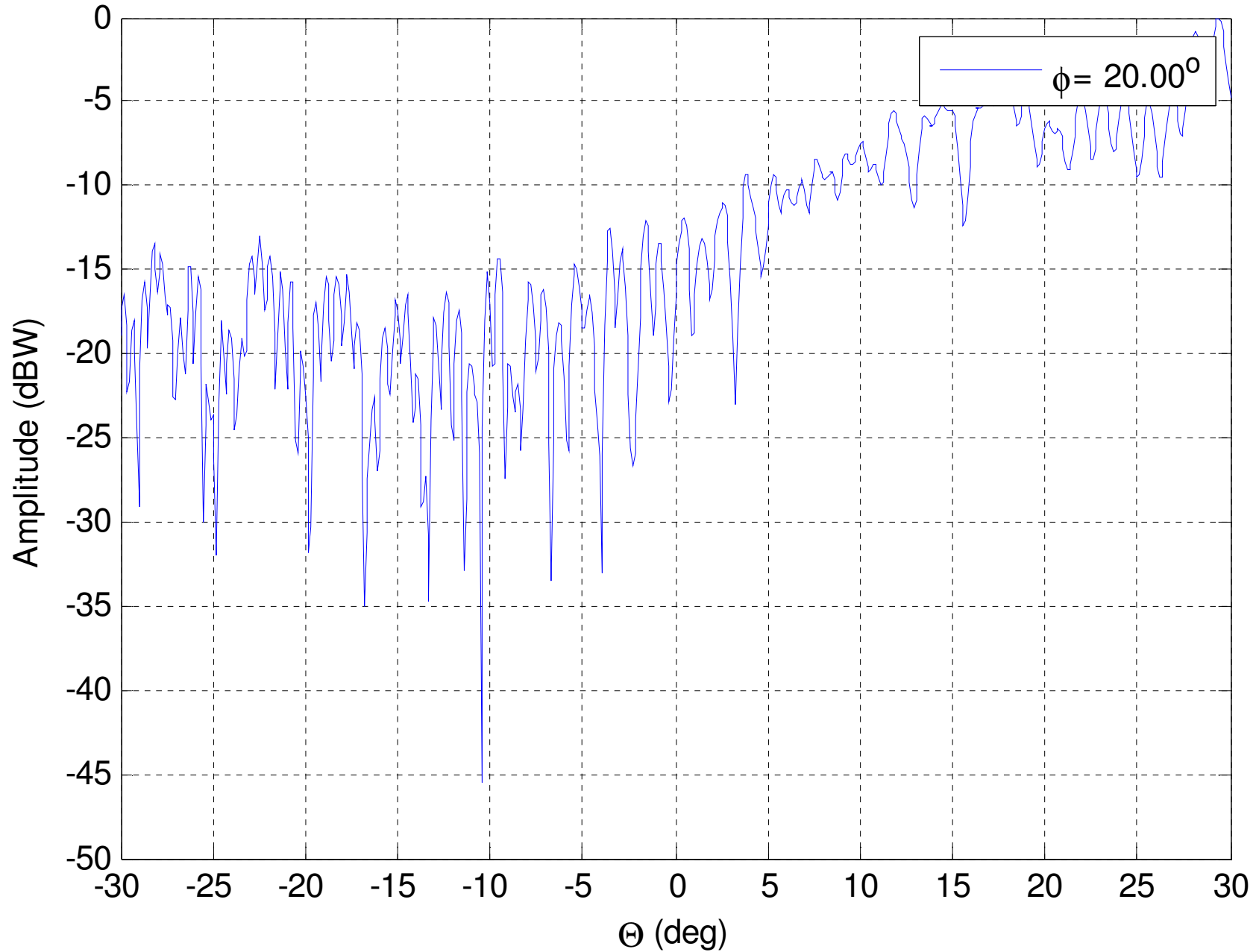
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -6.36 dBW, Date: 15-Dec-2011



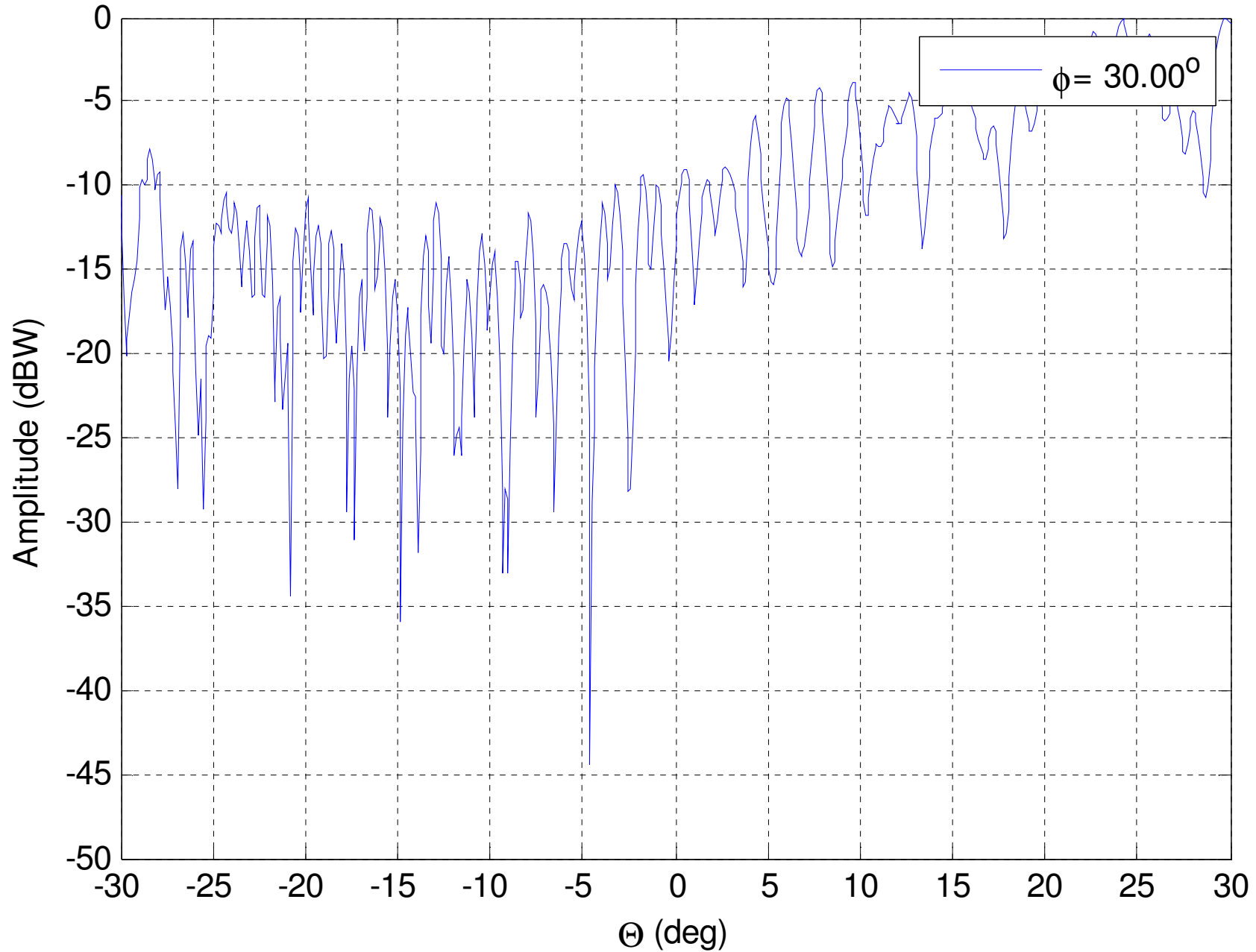
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -7.54 dBW, Date: 15-Dec-2011



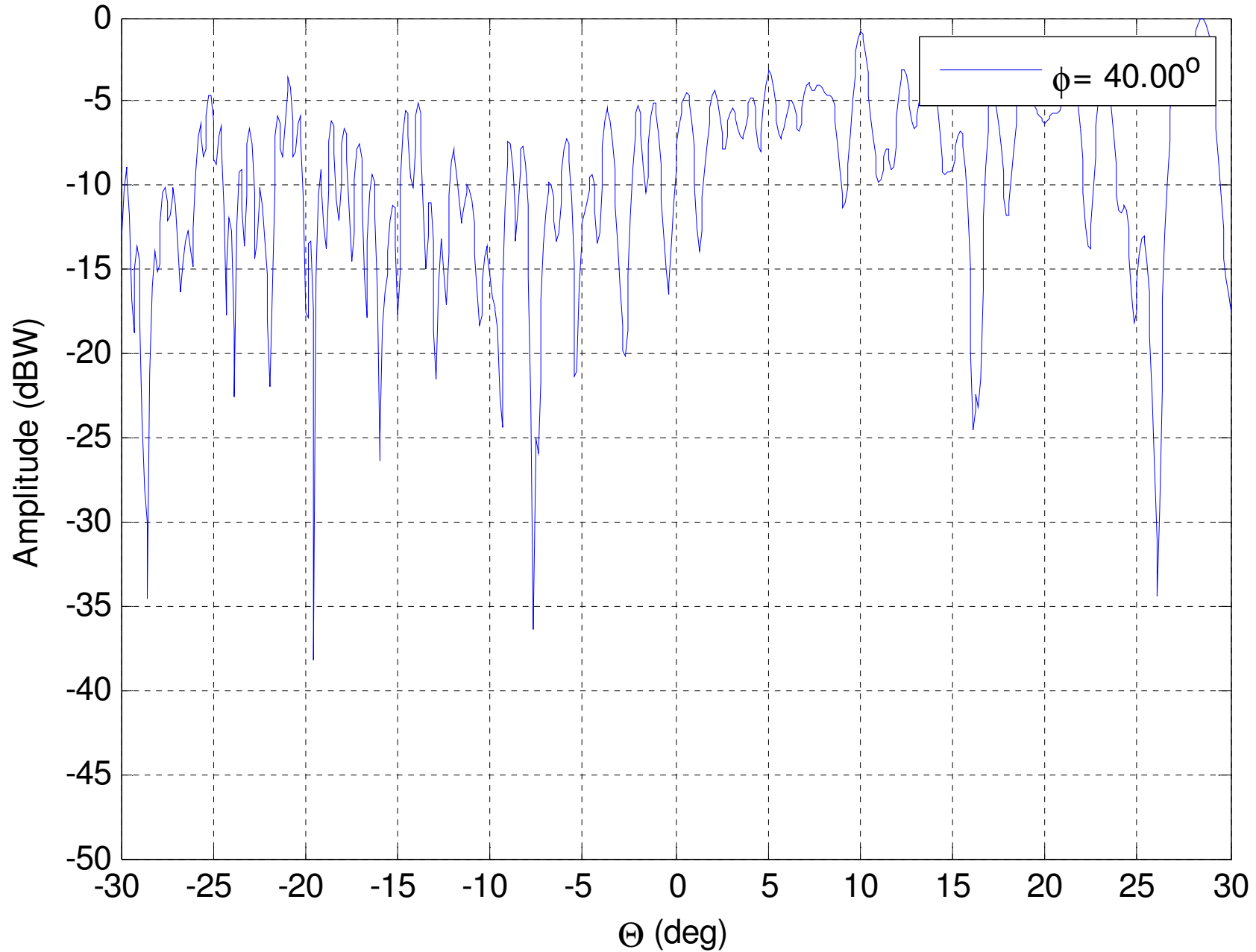
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -10.57 dBW, Date: 15-Dec-2011



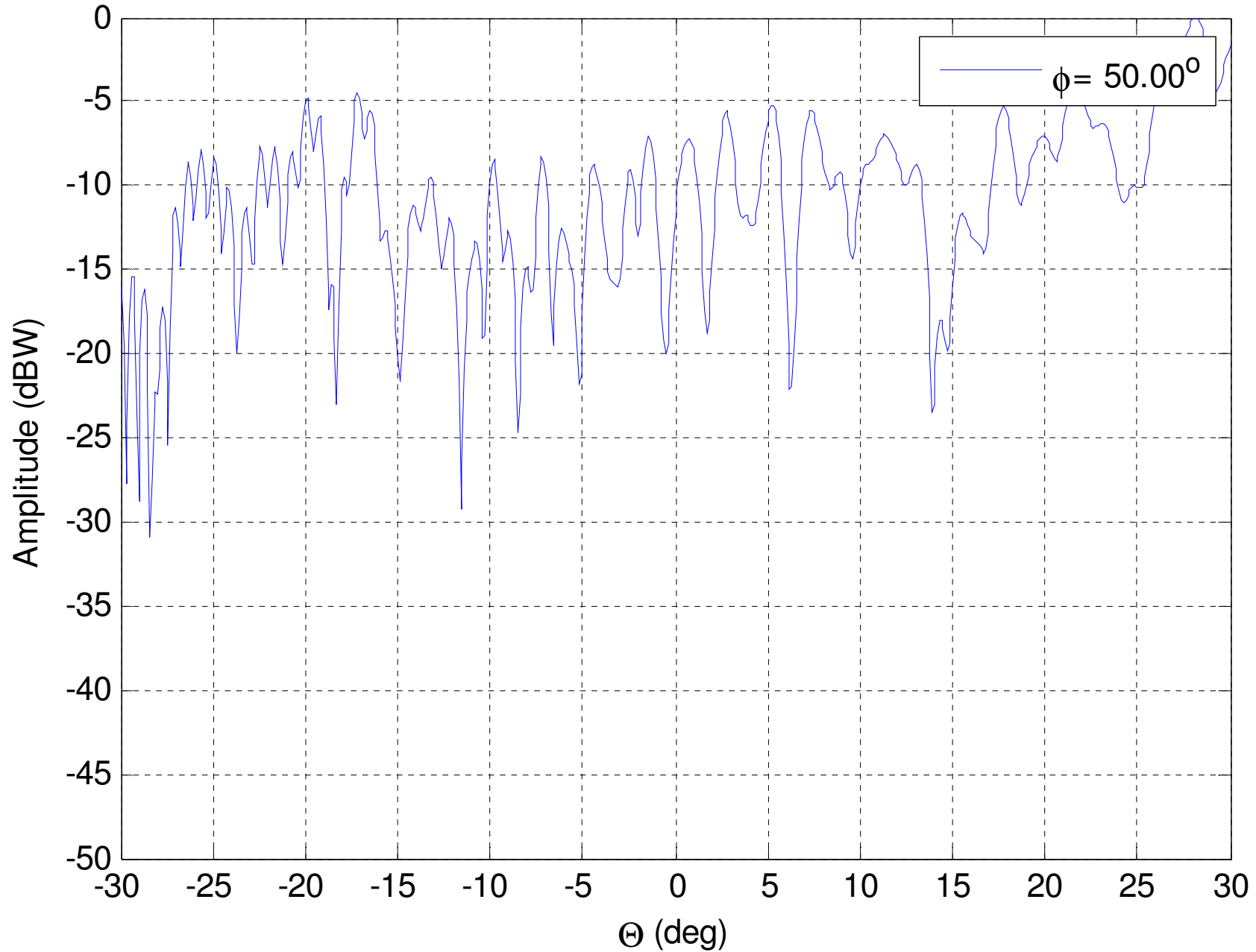
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -15.04 dBW, Date: 15-Dec-2011



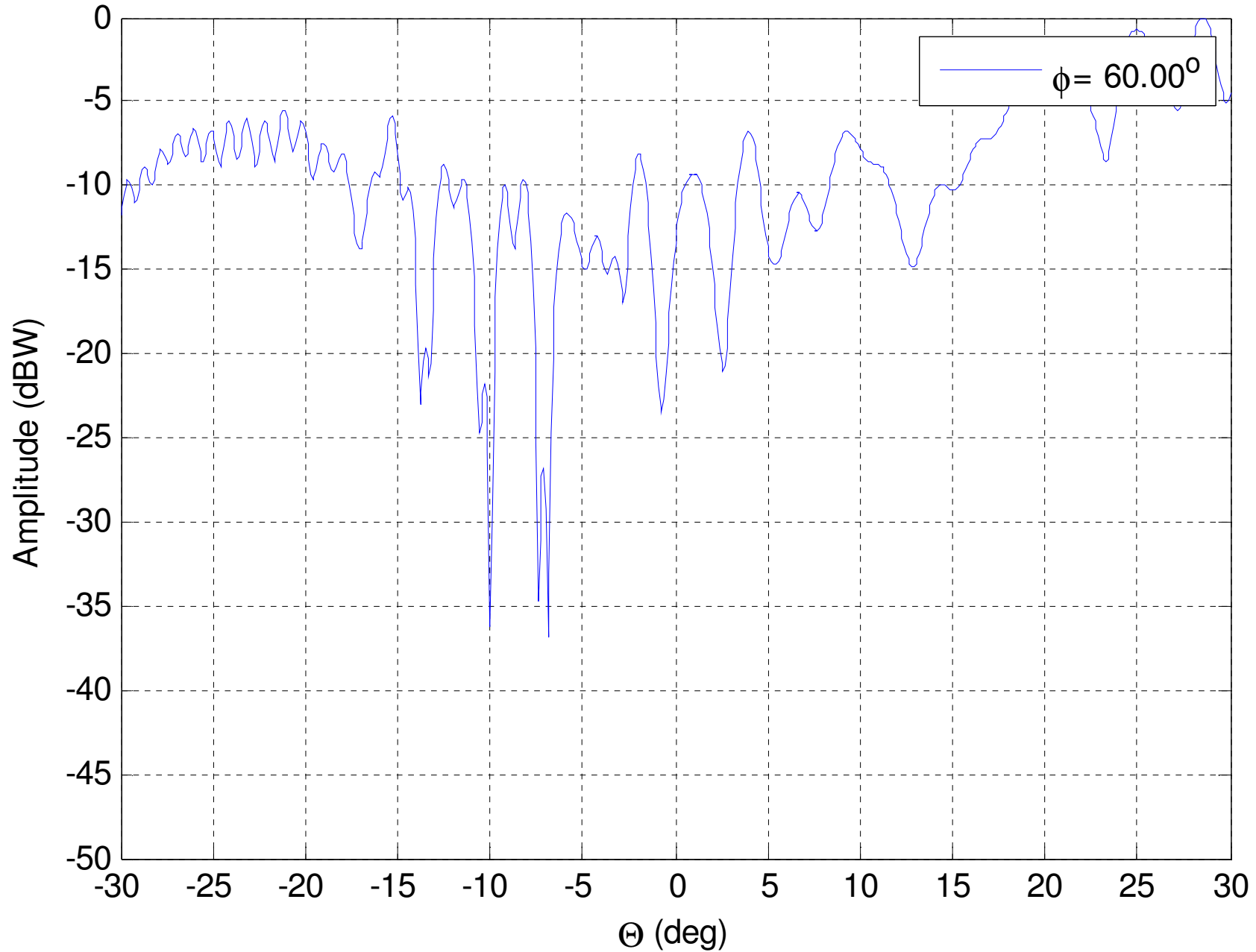
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.44 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

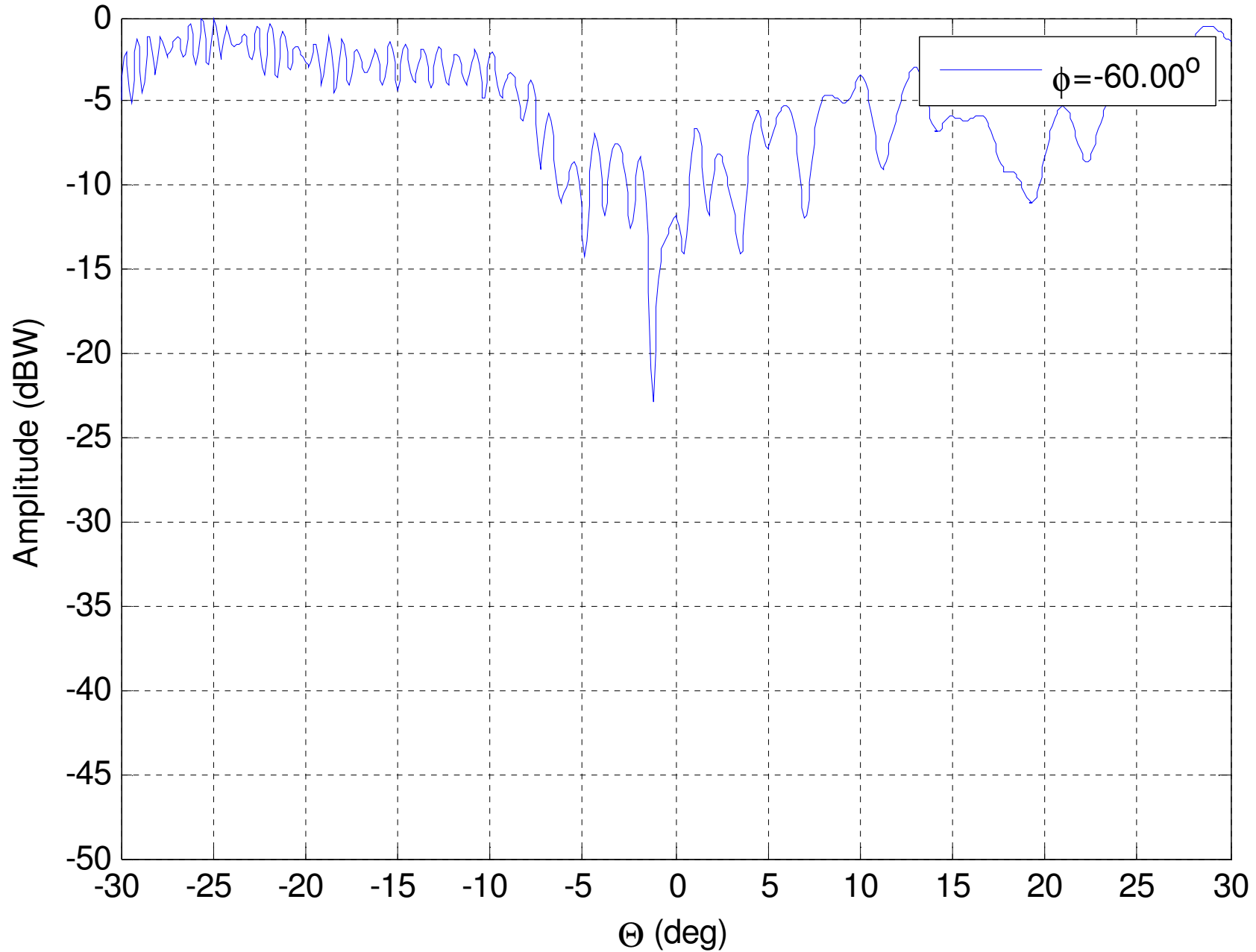
Input file: tx-17.5-lhcp-60.cut, Peak: -10.64 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

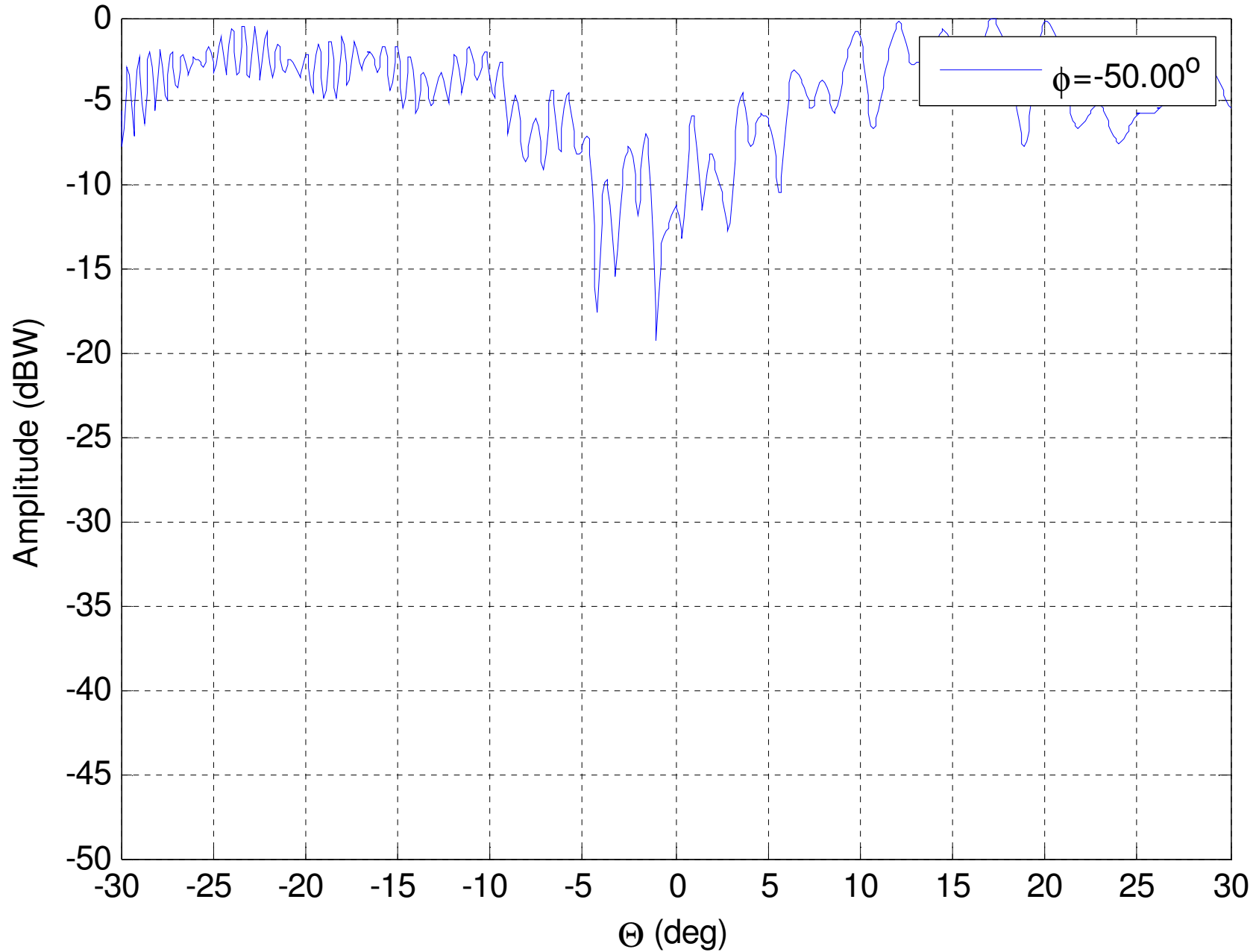
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.62 dBW, Date: 15-Dec-2011



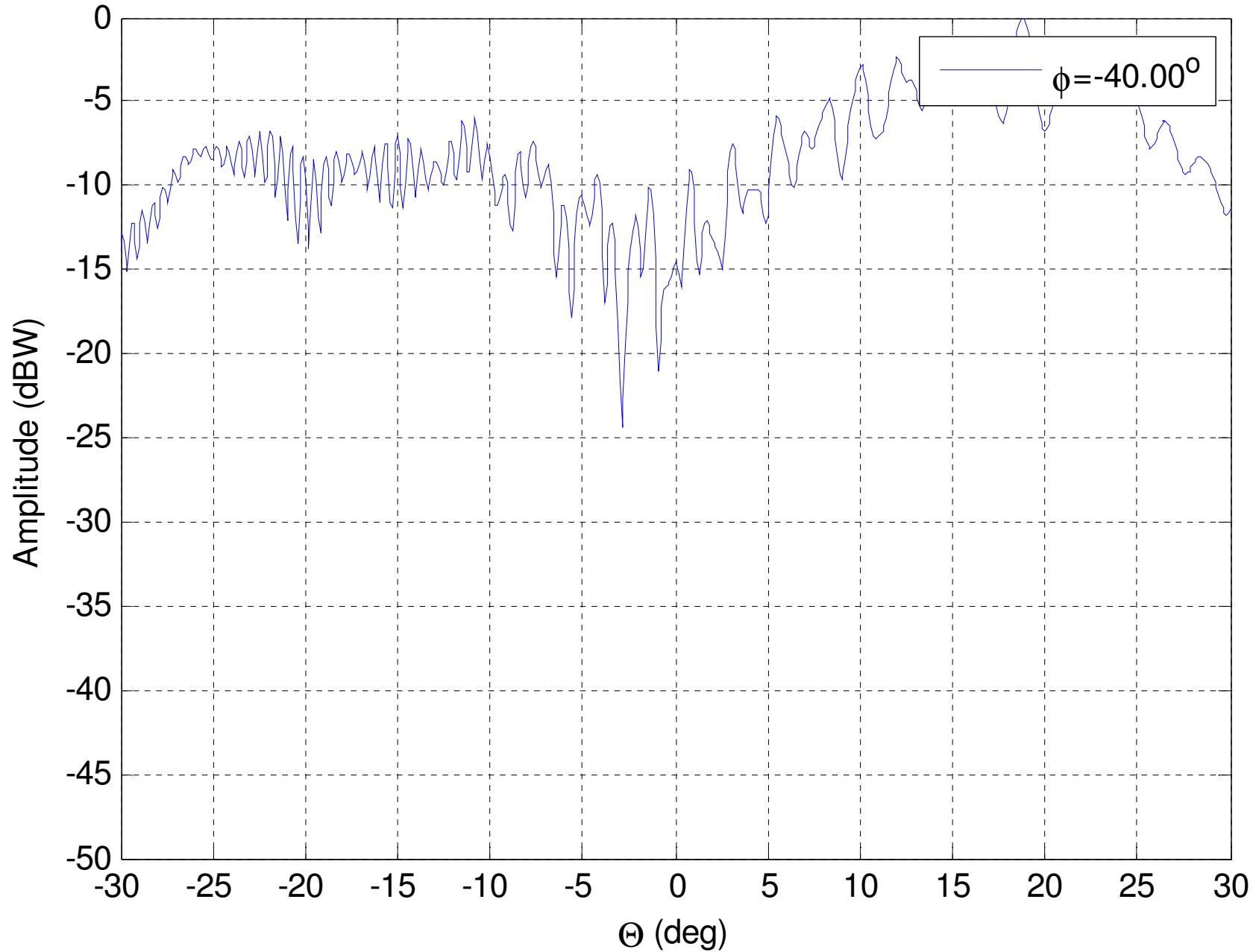
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.25 dBW, Date: 15-Dec-2011



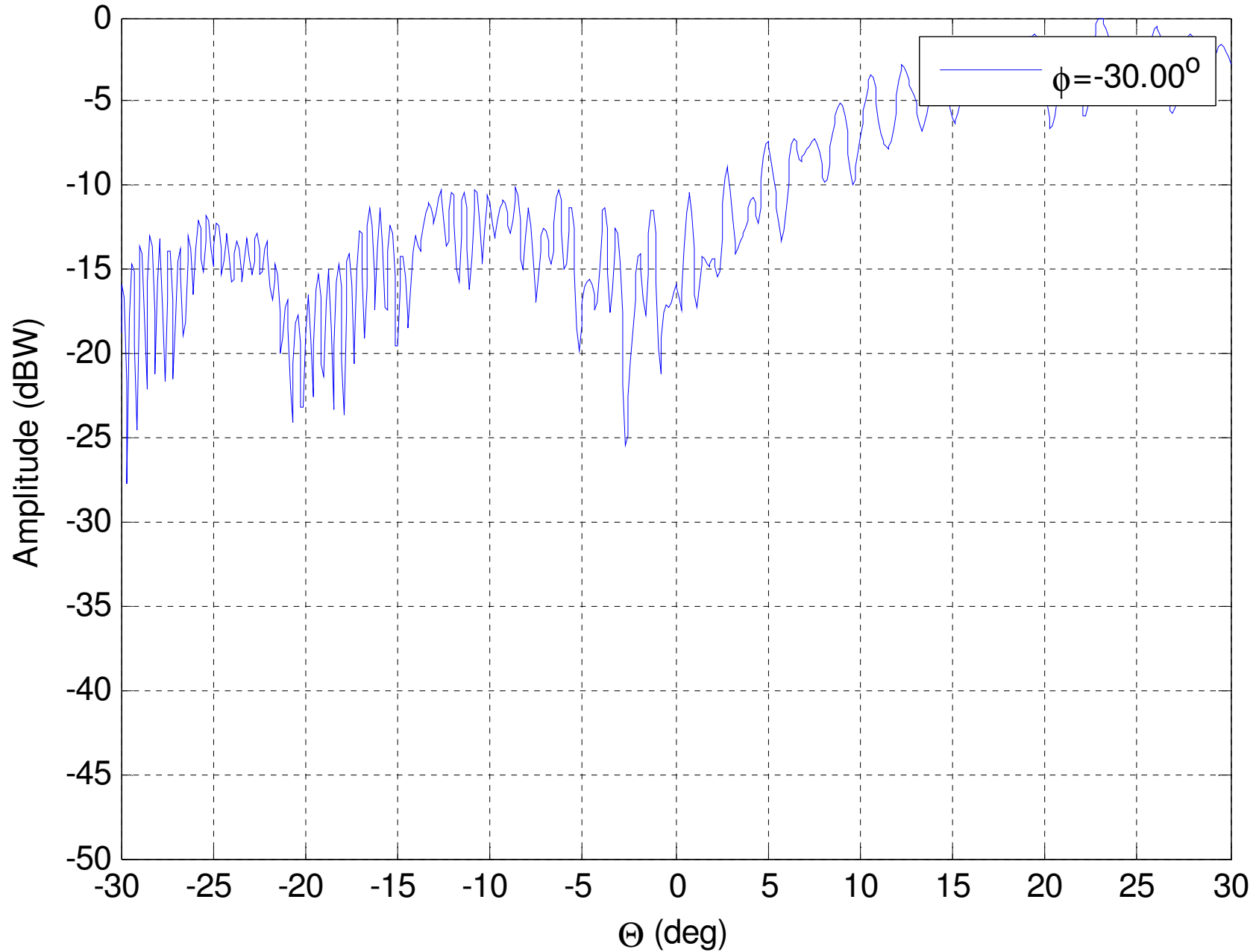
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -8.93 dBW, Date: 15-Dec-2011



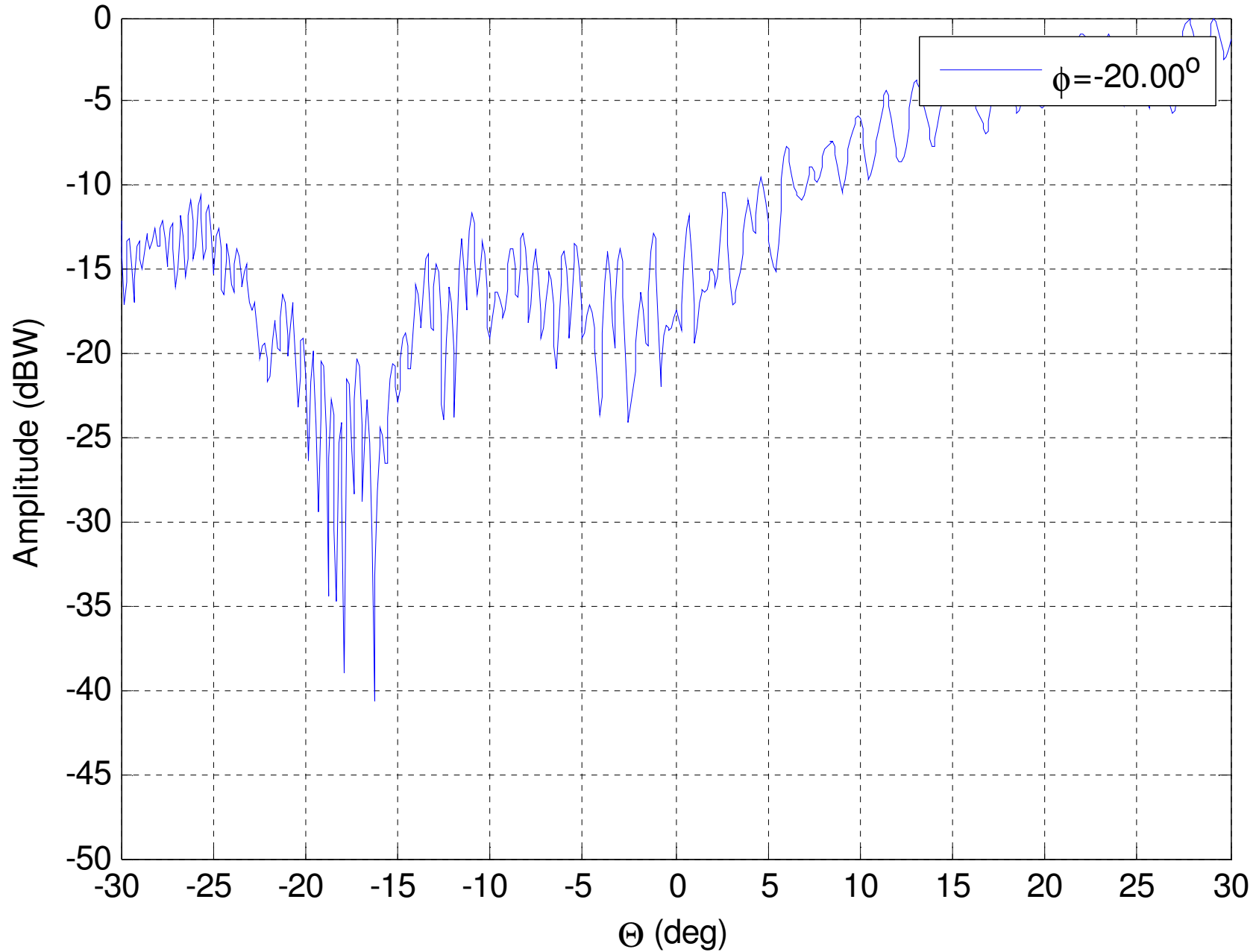
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.53 dBW, Date: 15-Dec-2011



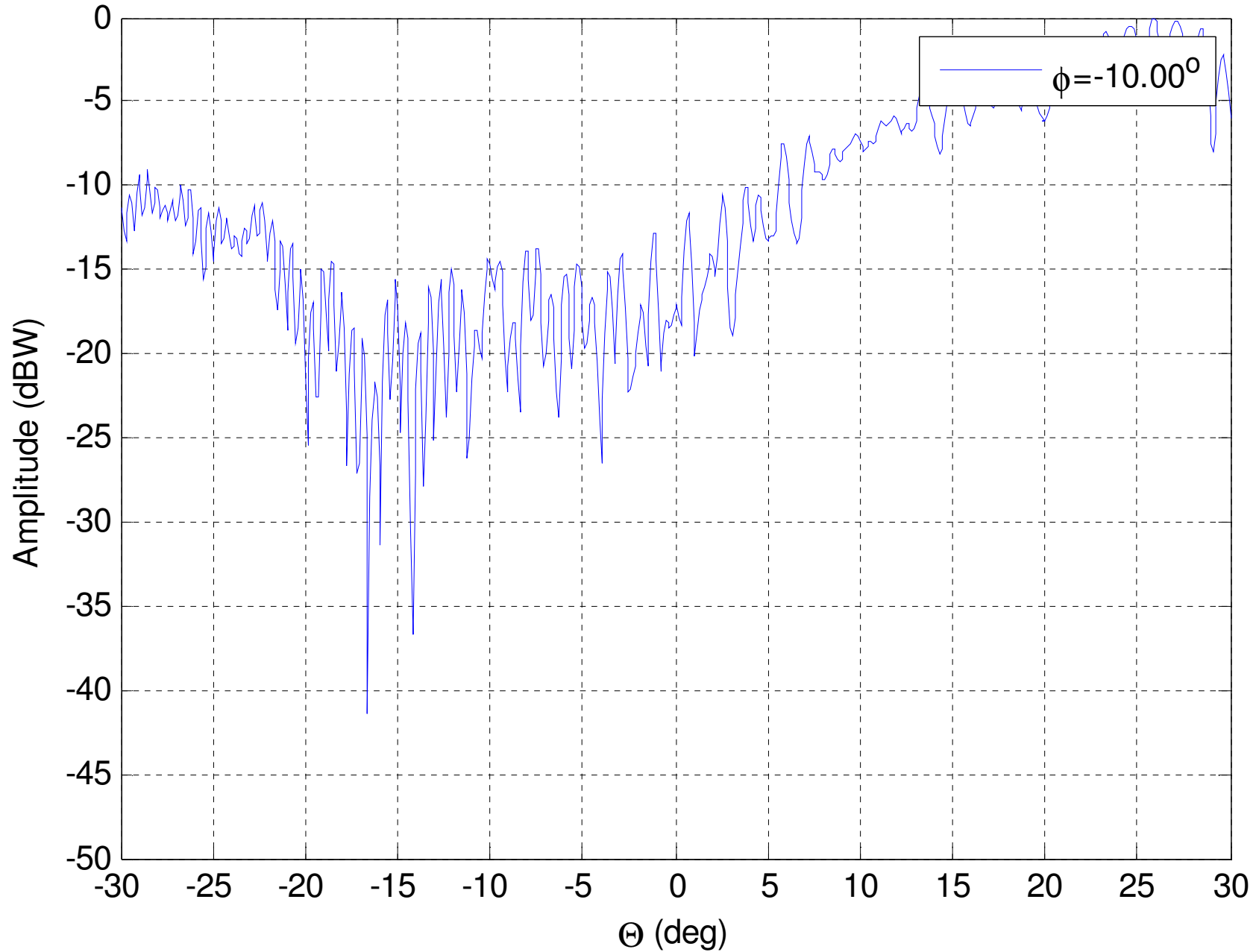
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -6.13 dBW, Date: 15-Dec-2011



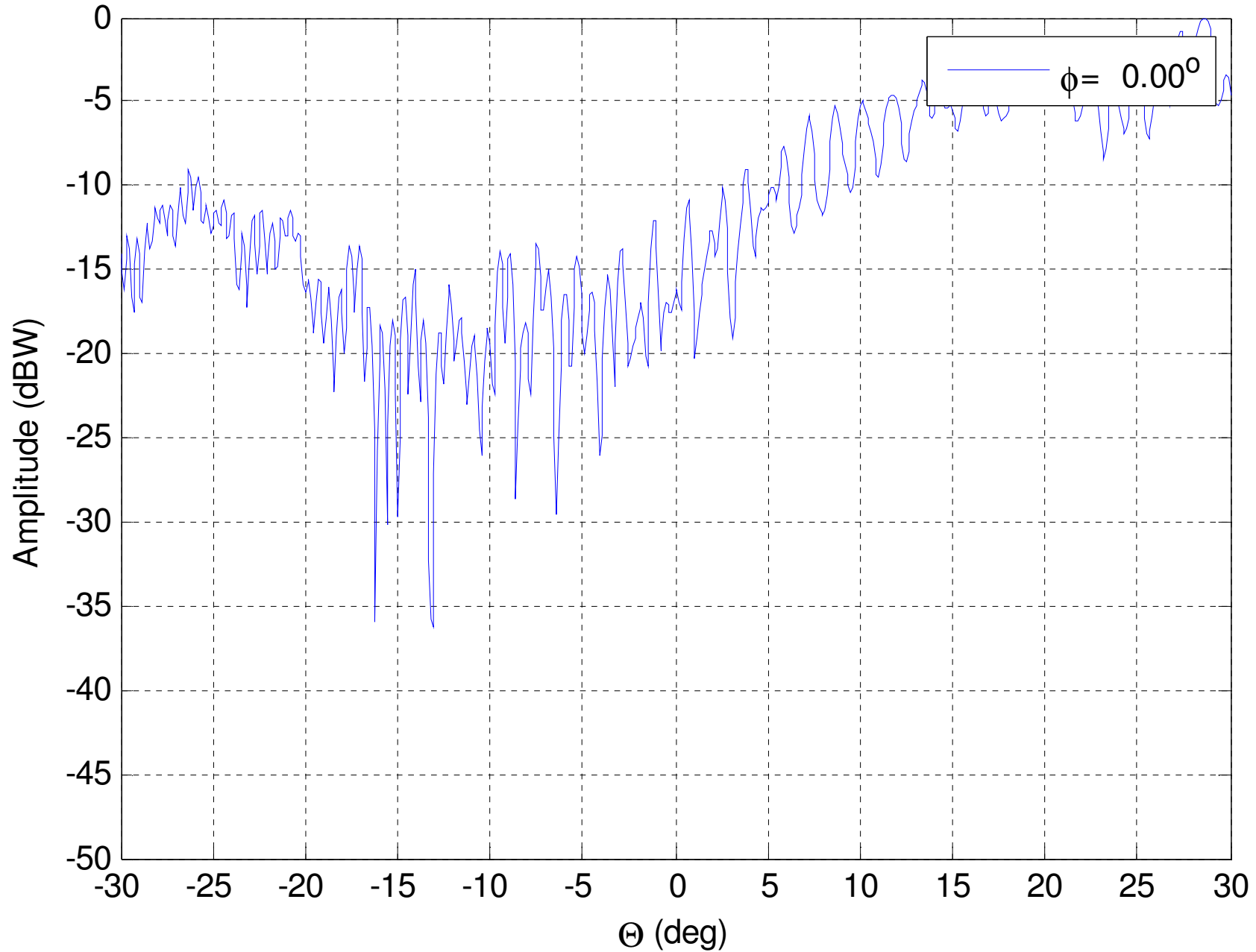
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -6.26 dBW, Date: 15-Dec-2011



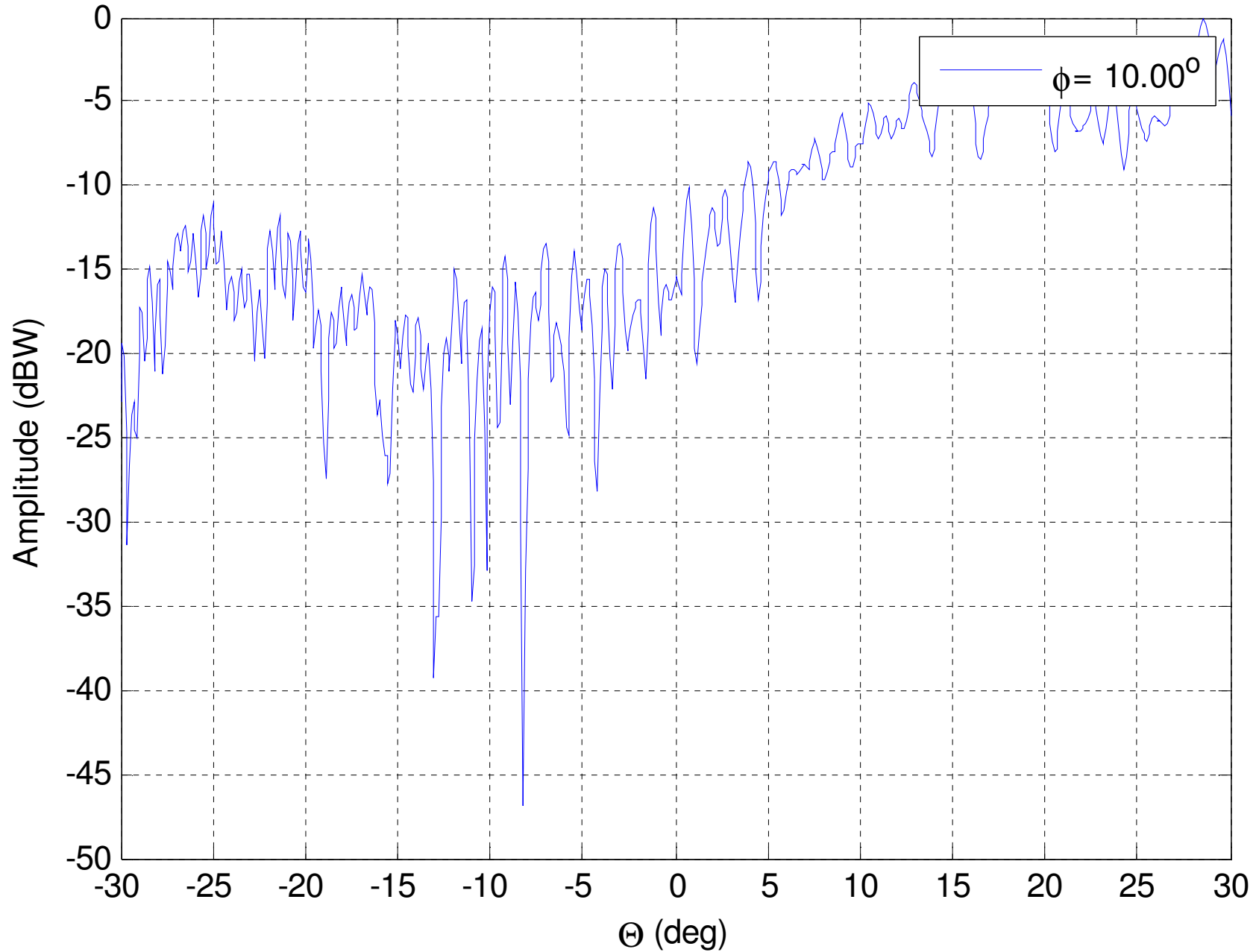
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -7.11 dBW, Date: 15-Dec-2011



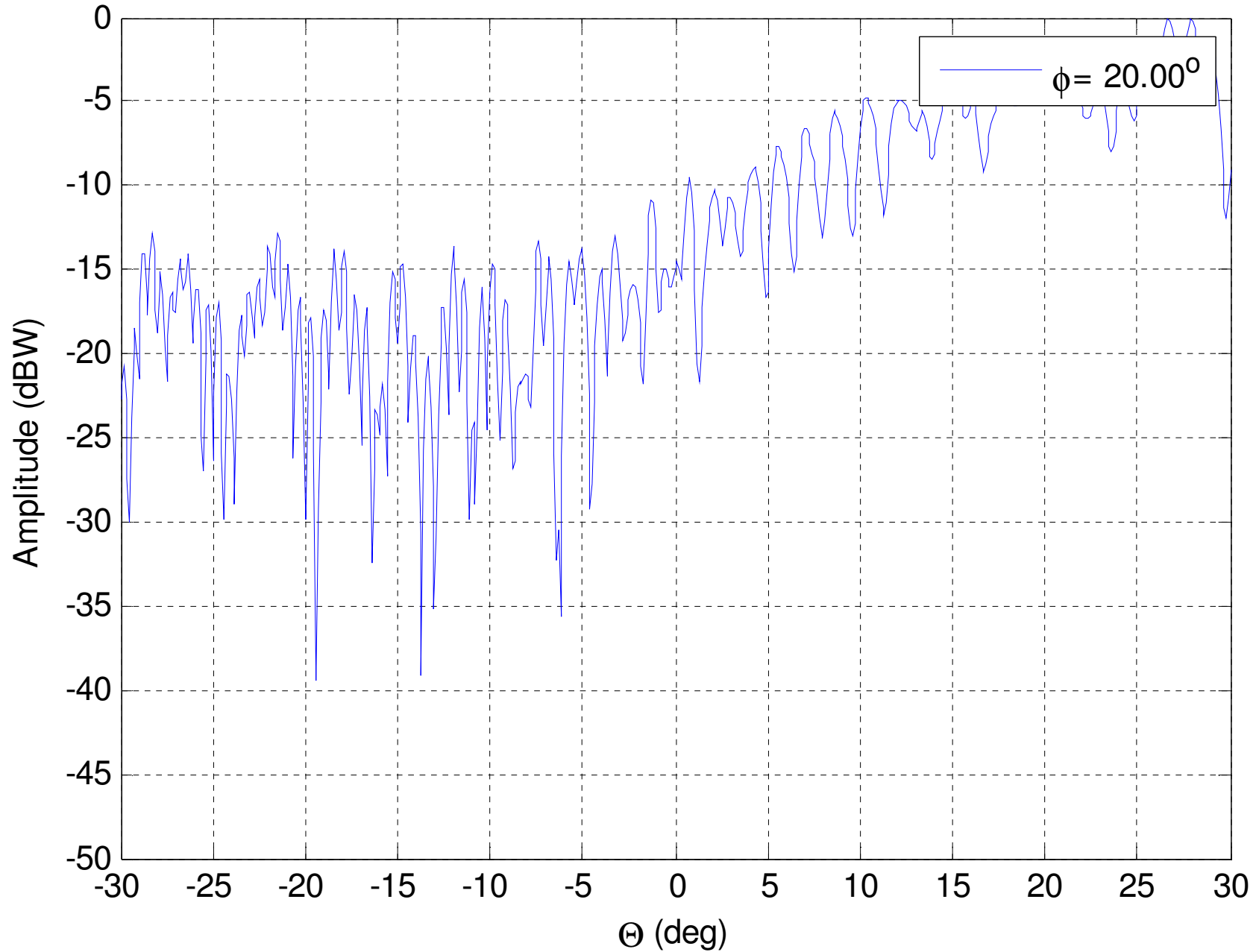
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.87 dBW, Date: 15-Dec-2011



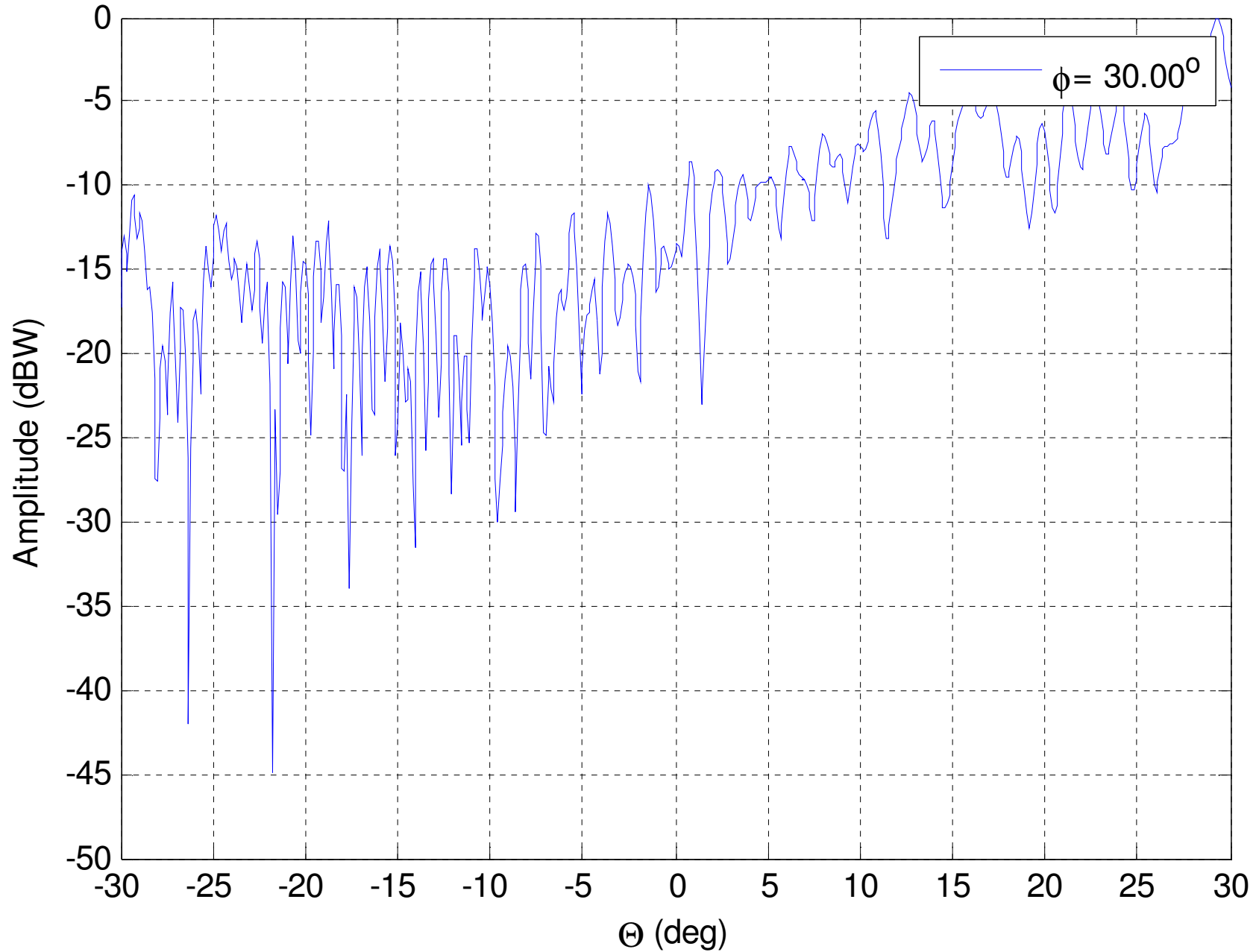
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.66 dBW, Date: 15-Dec-2011



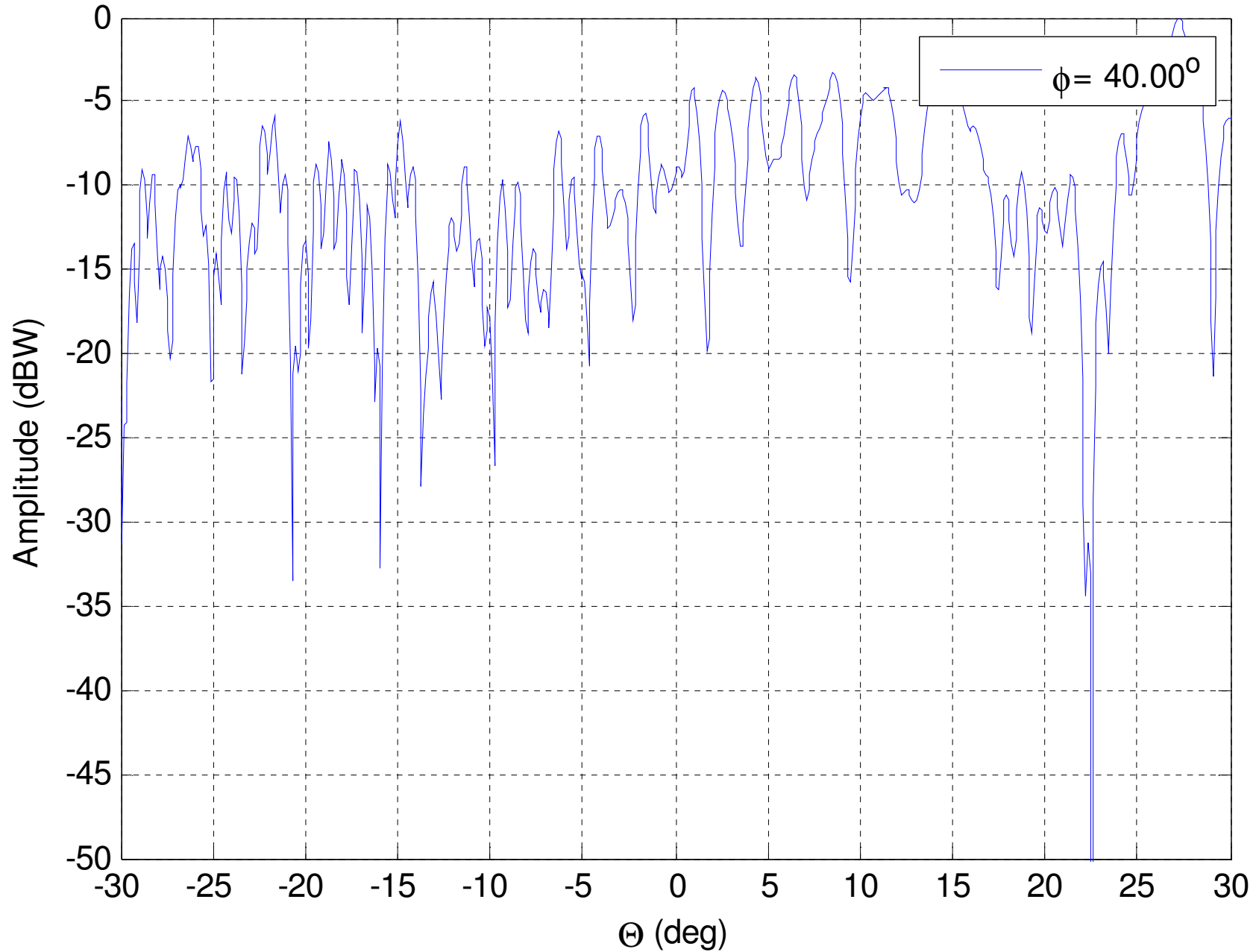
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -9.70 dBW, Date: 15-Dec-2011



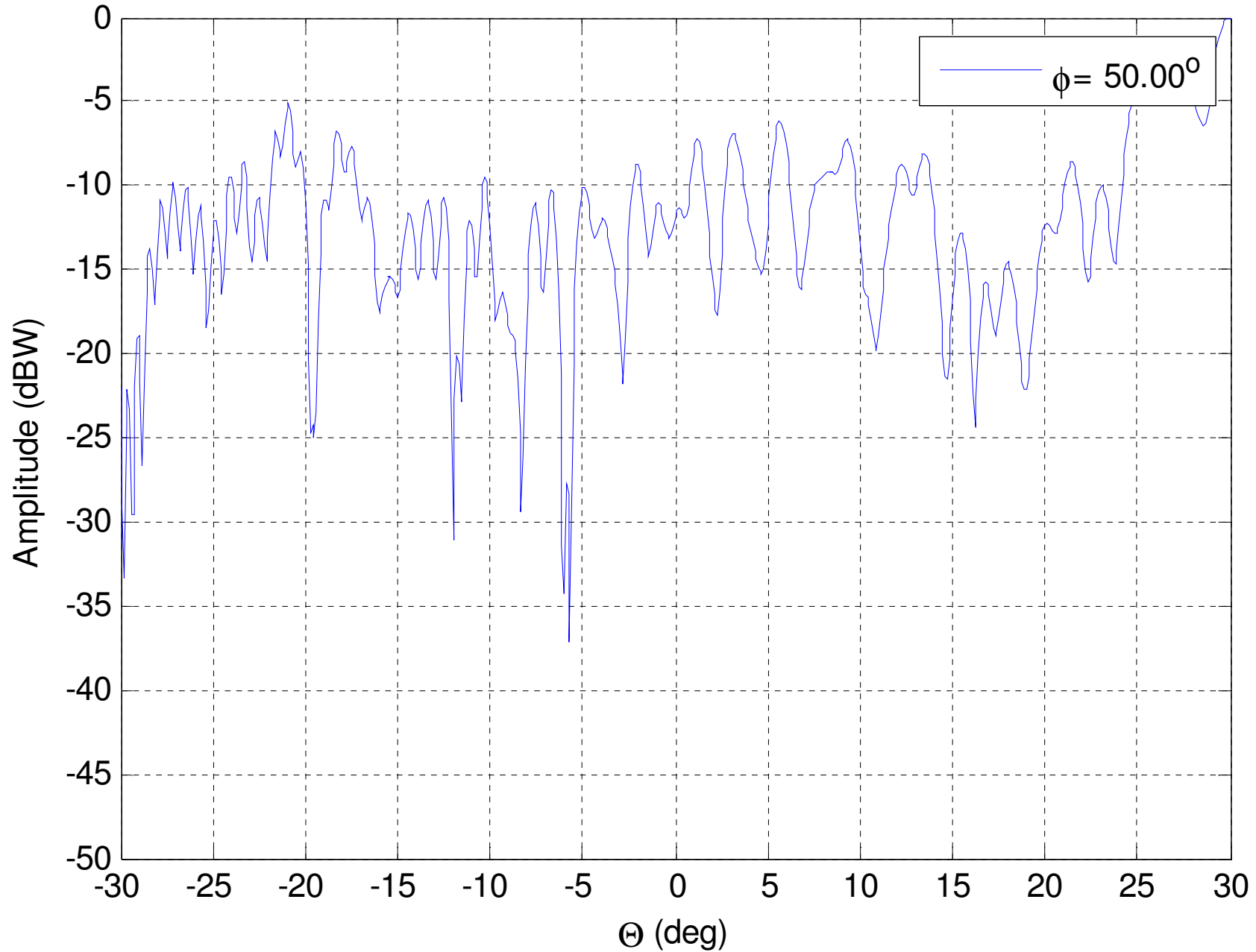
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -14.24 dBW, Date: 15-Dec-2011



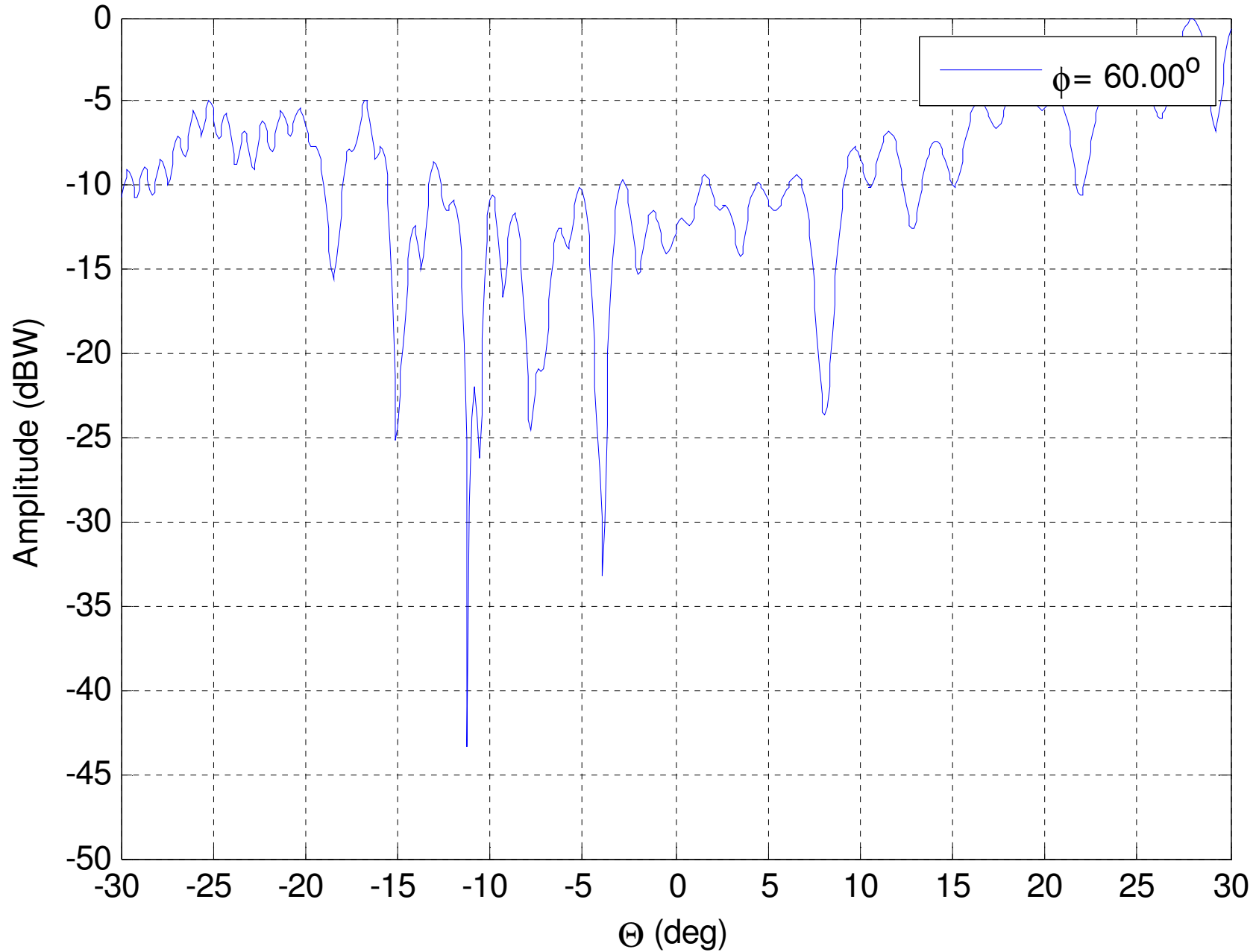
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -11.61 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

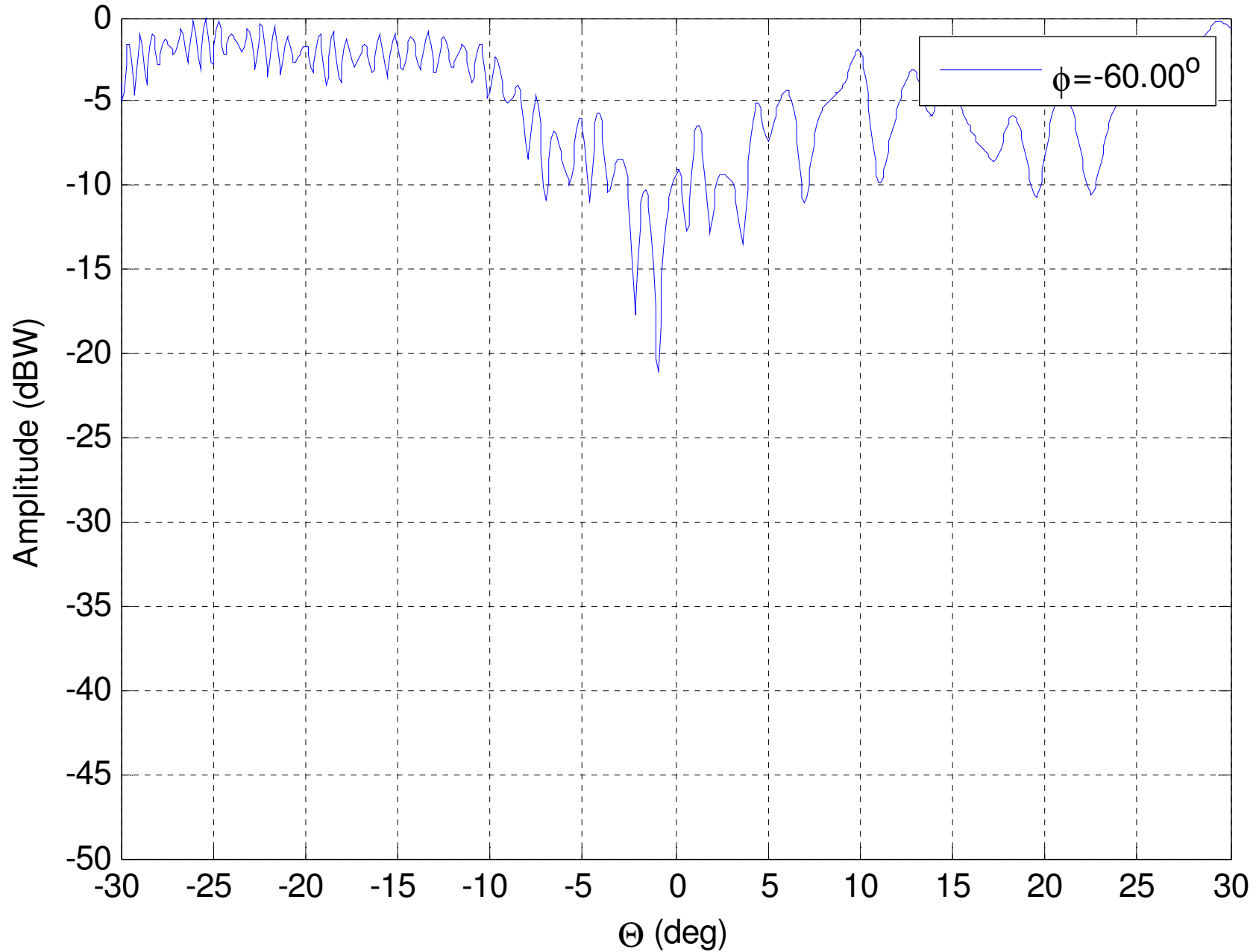
Input file: tx-17.7-rhcp-60.cut, Peak: -10.66 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

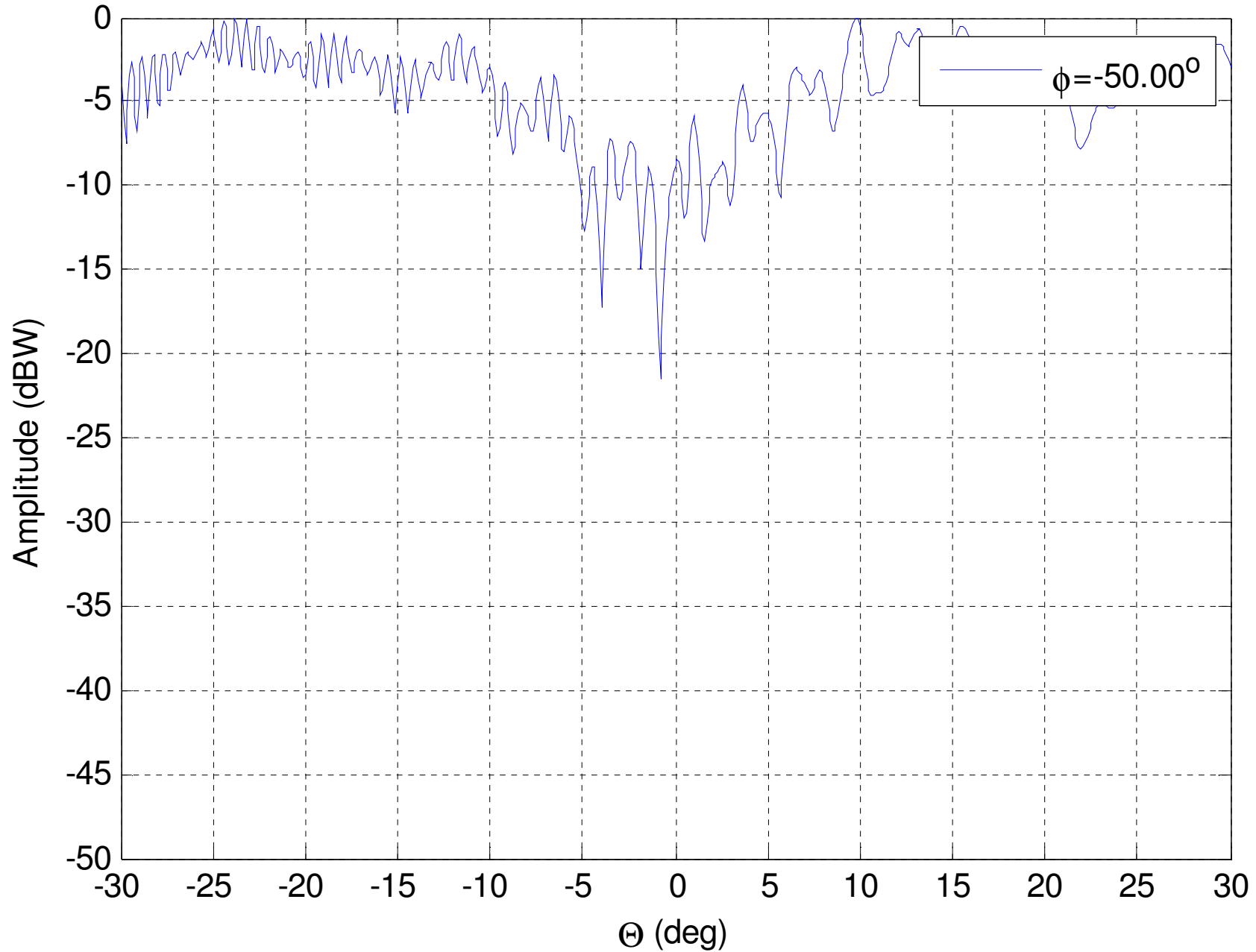
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.91 dBW, Date: 15-Dec-2011



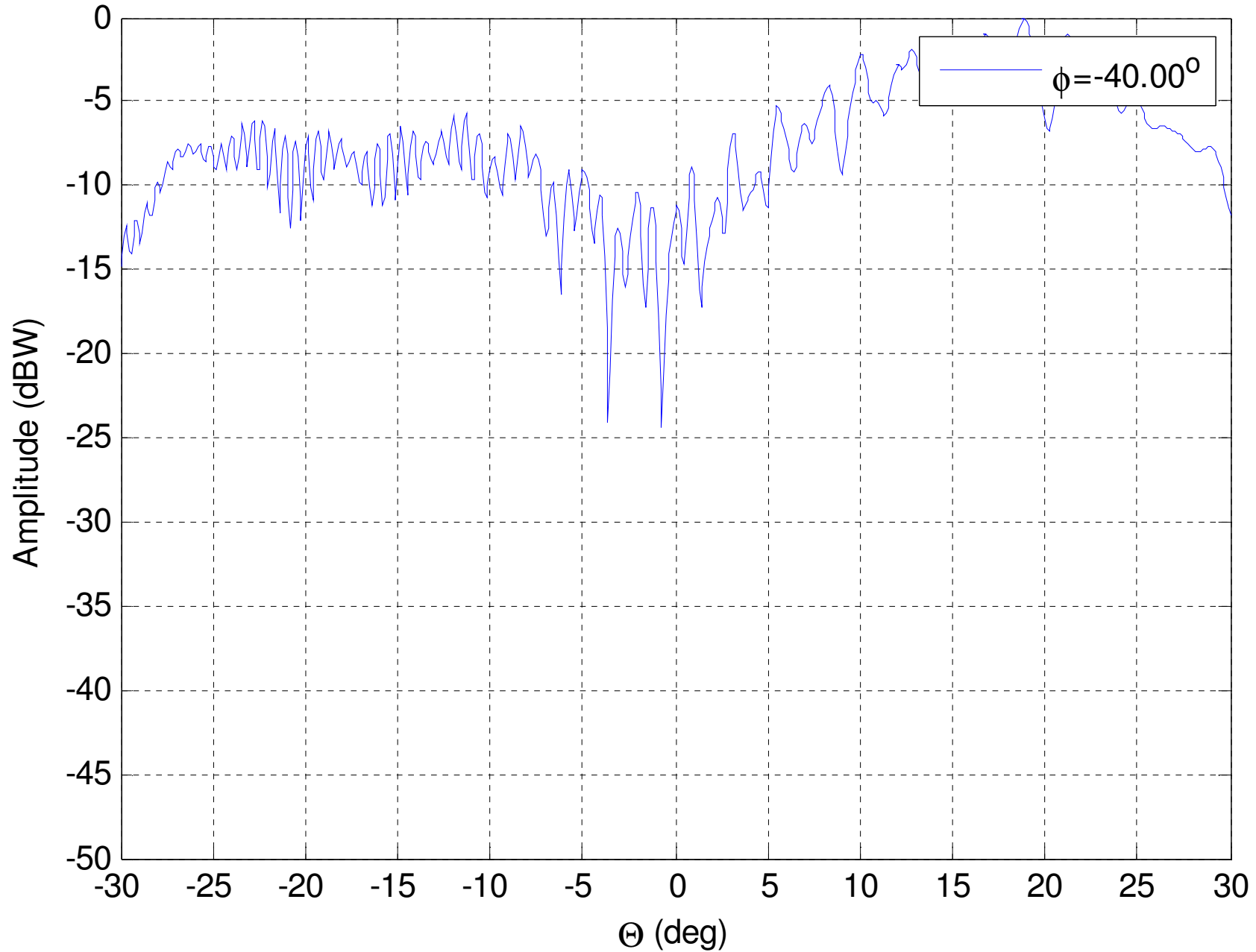
Normalized pattern cuts - farfield

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



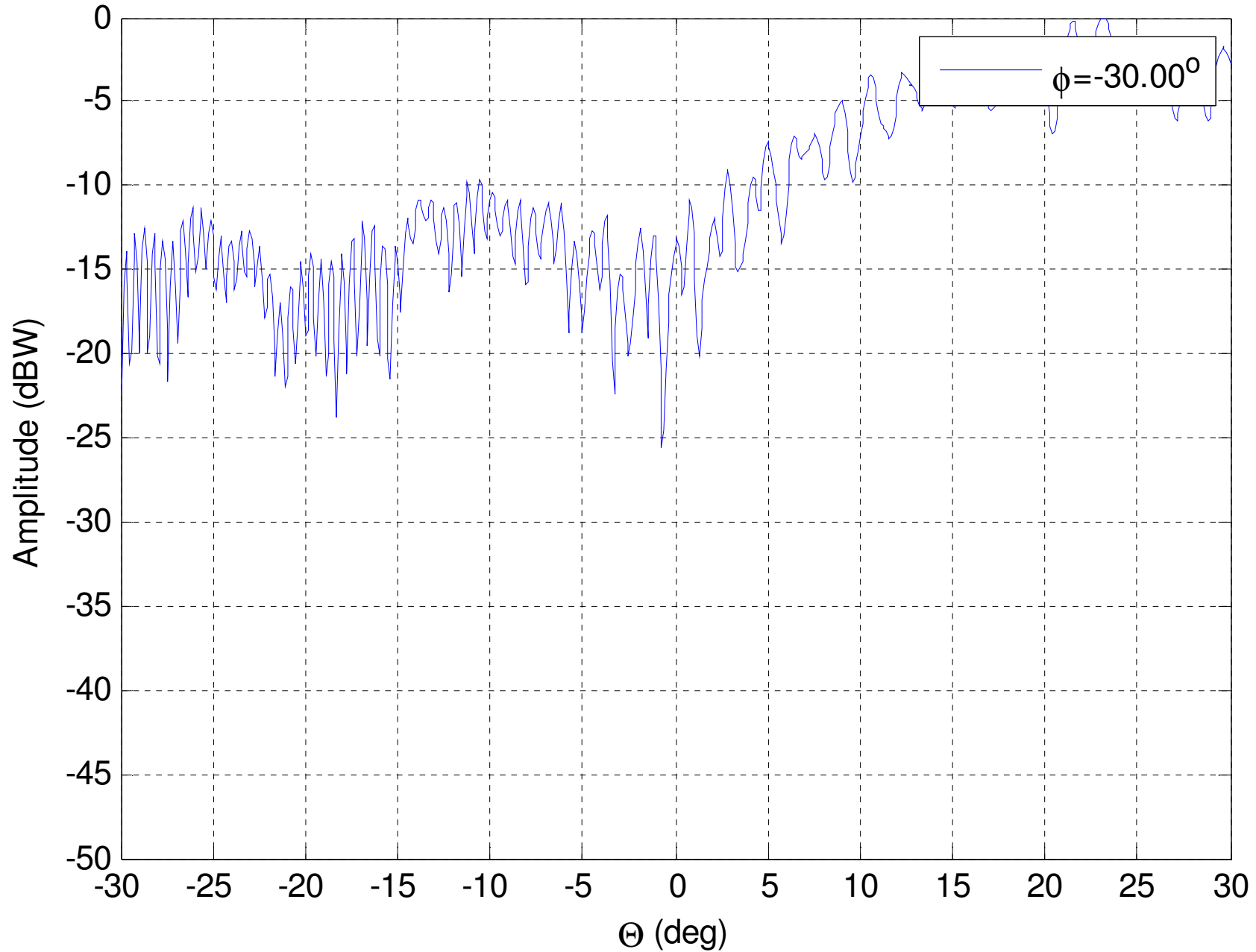
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -9.57 dBW, Date: 15-Dec-2011



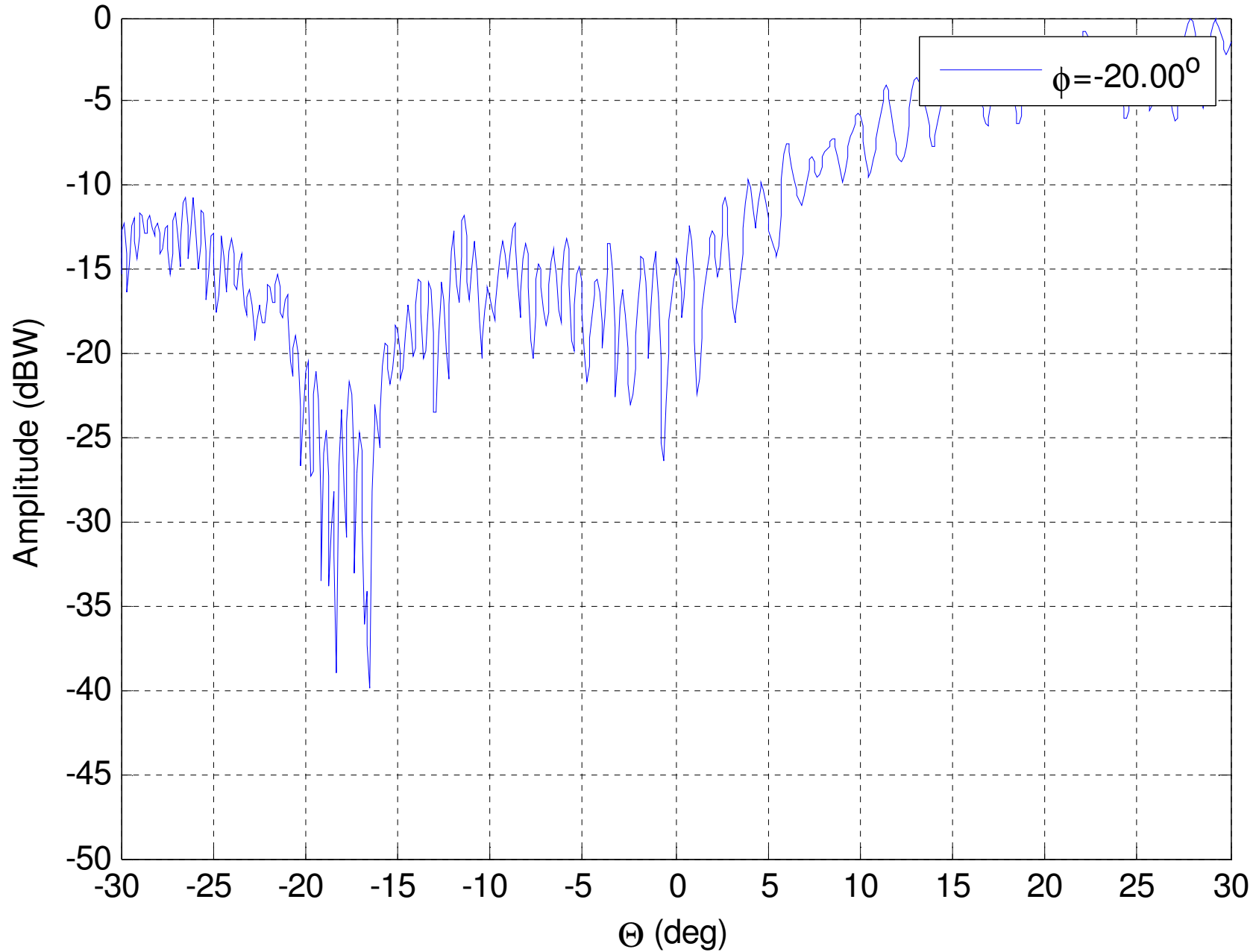
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -7.65 dBW, Date: 15-Dec-2011



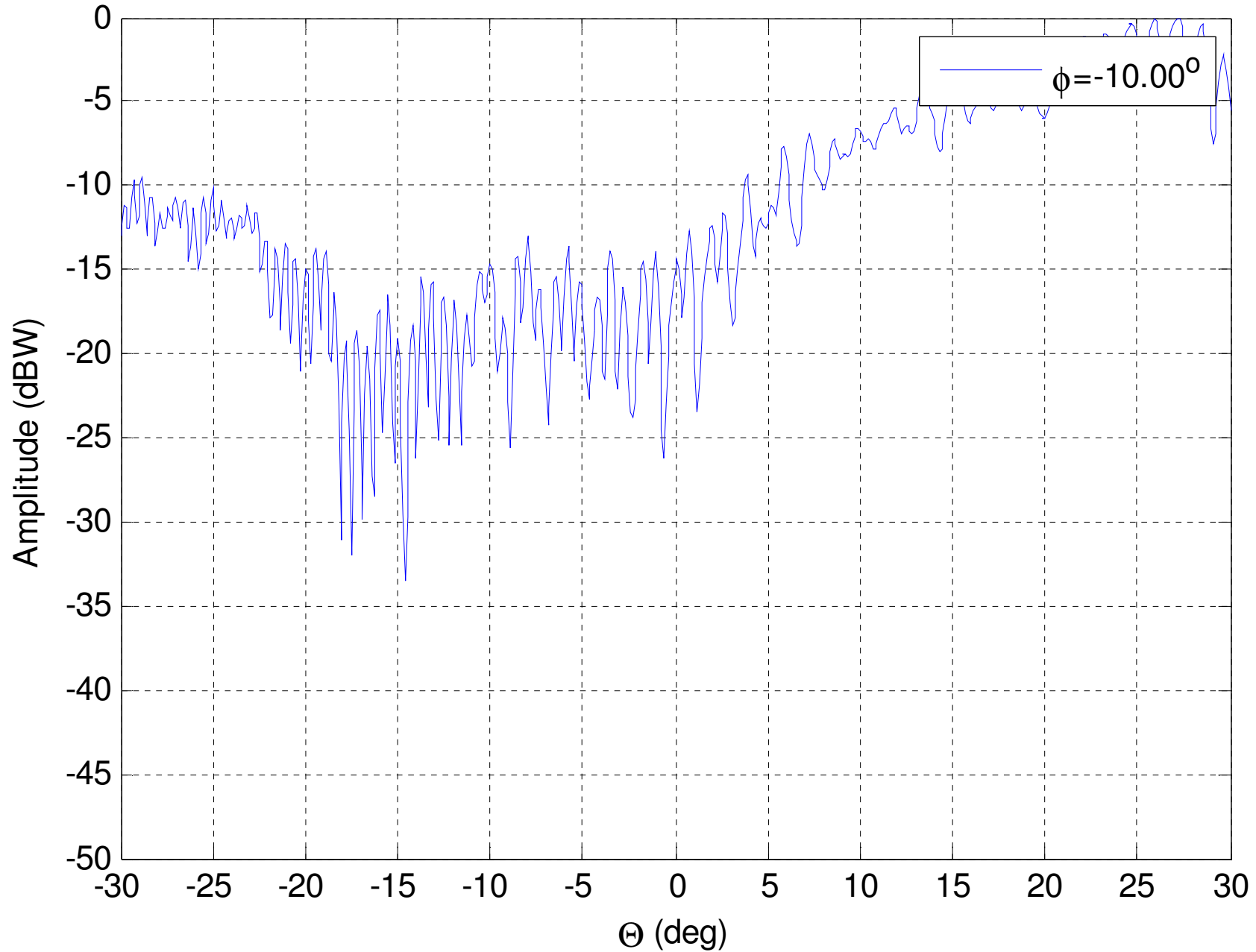
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -6.36 dBW, Date: 15-Dec-2011



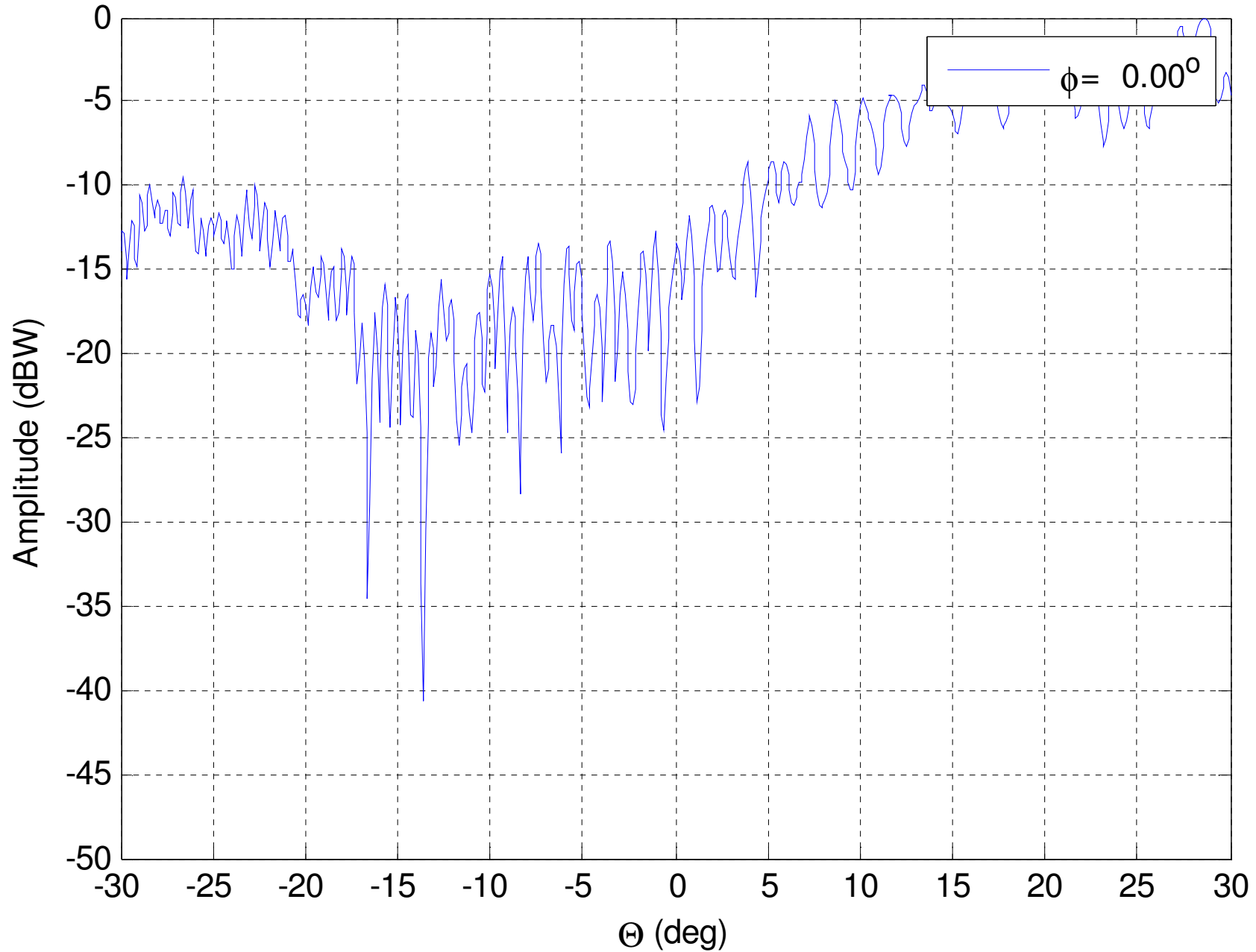
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -6.29 dBW, Date: 15-Dec-2011



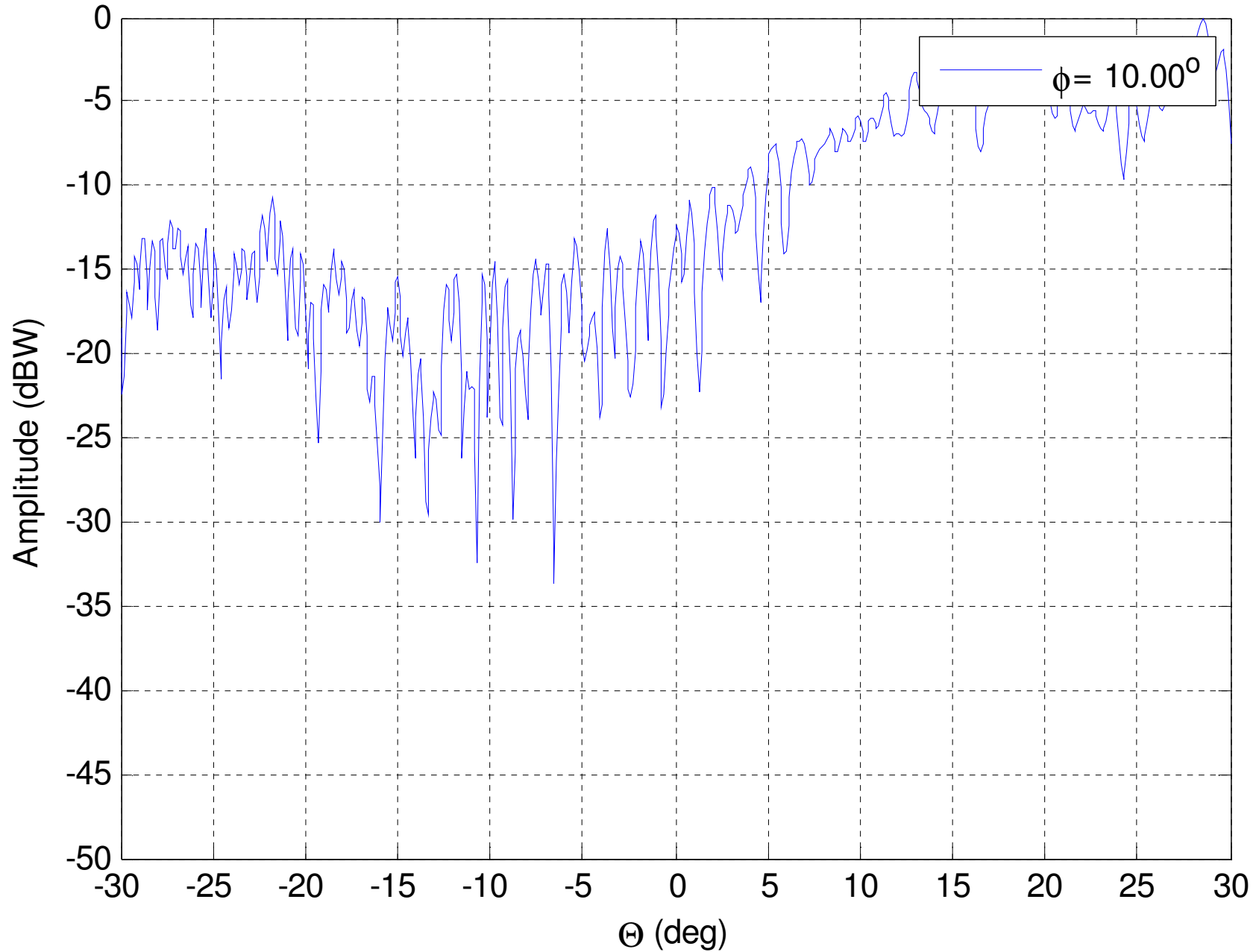
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -7.30 dBW, Date: 15-Dec-2011



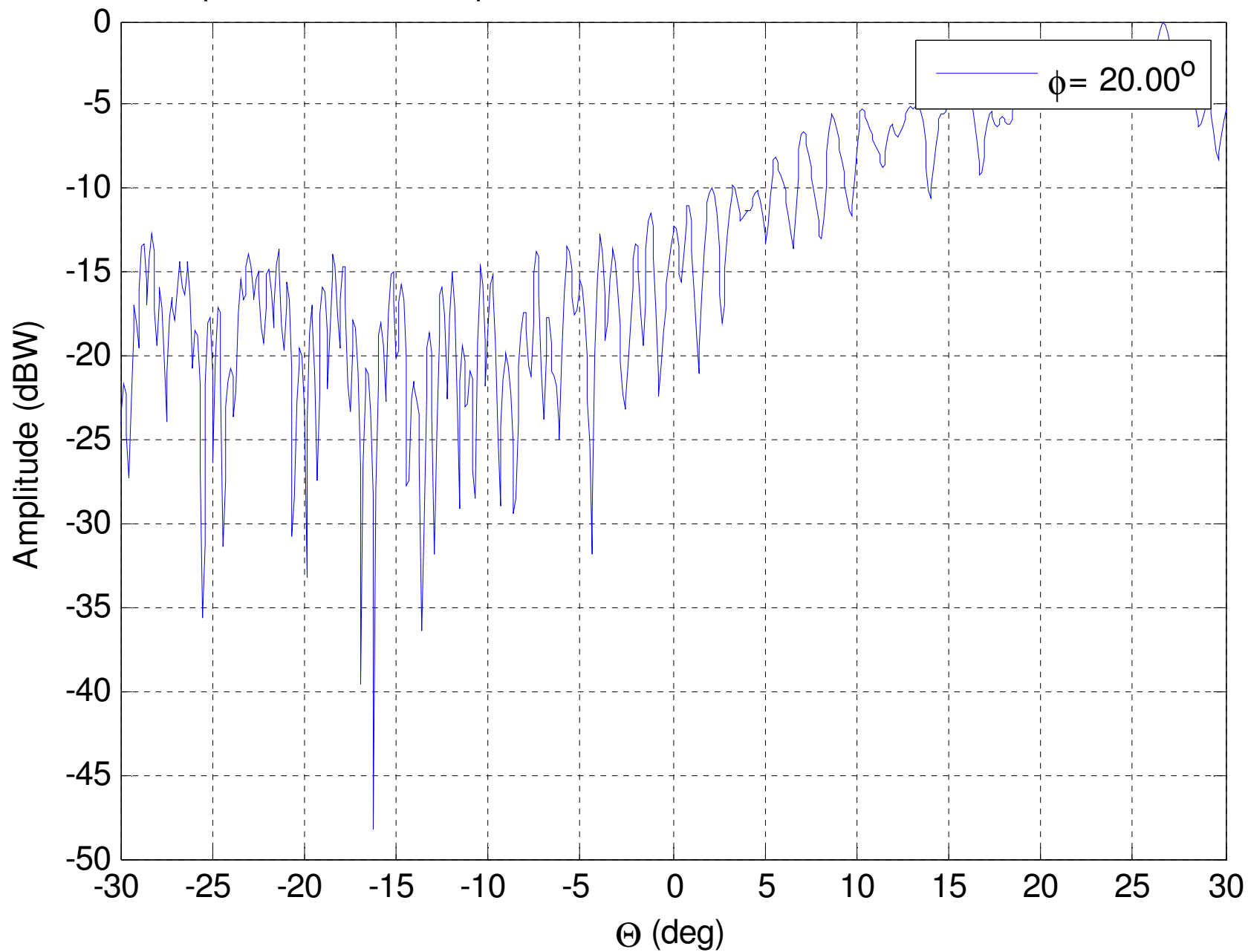
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -8.24 dBW, Date: 15-Dec-2011



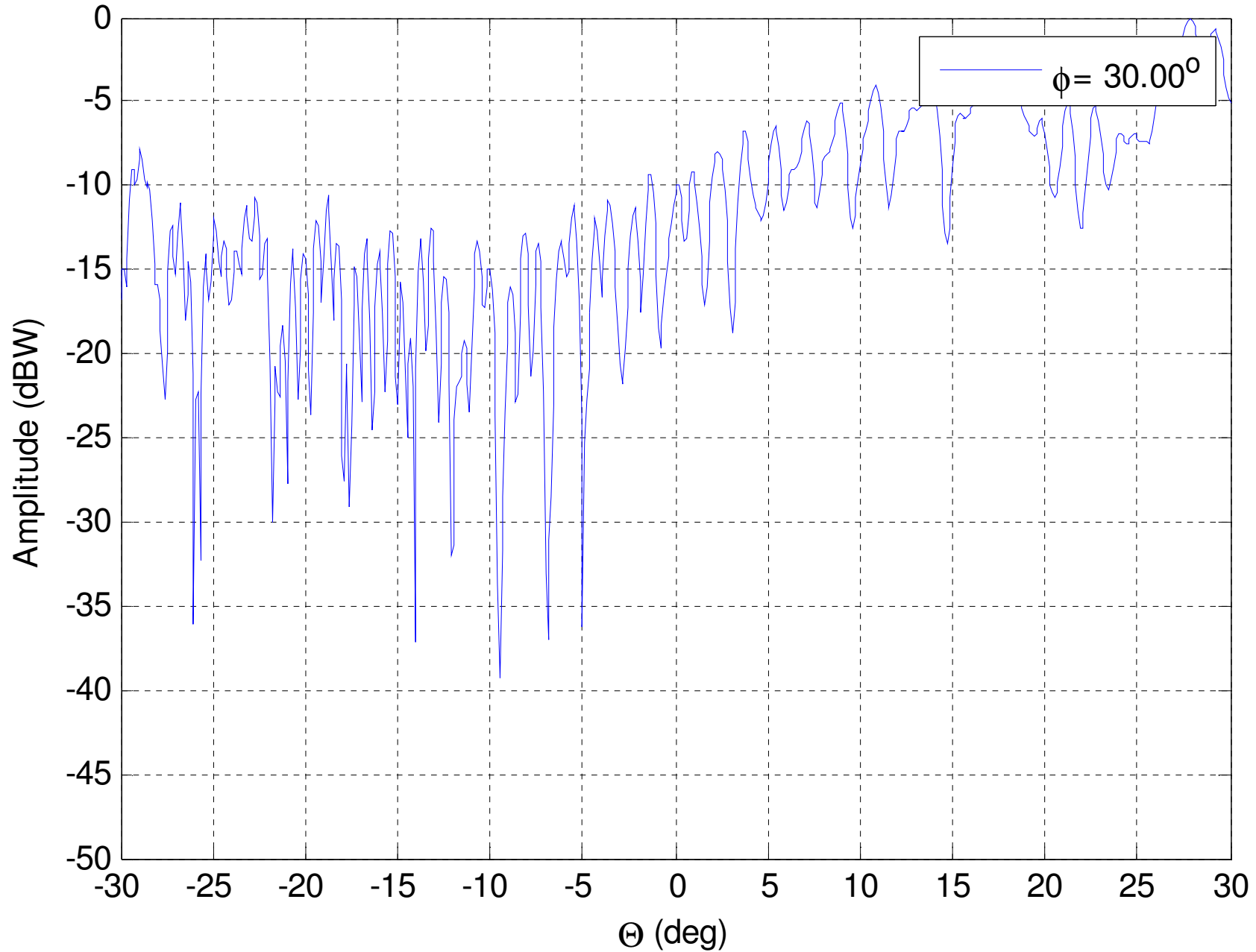
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -8.50 dBW, Date: 15-Dec-2011



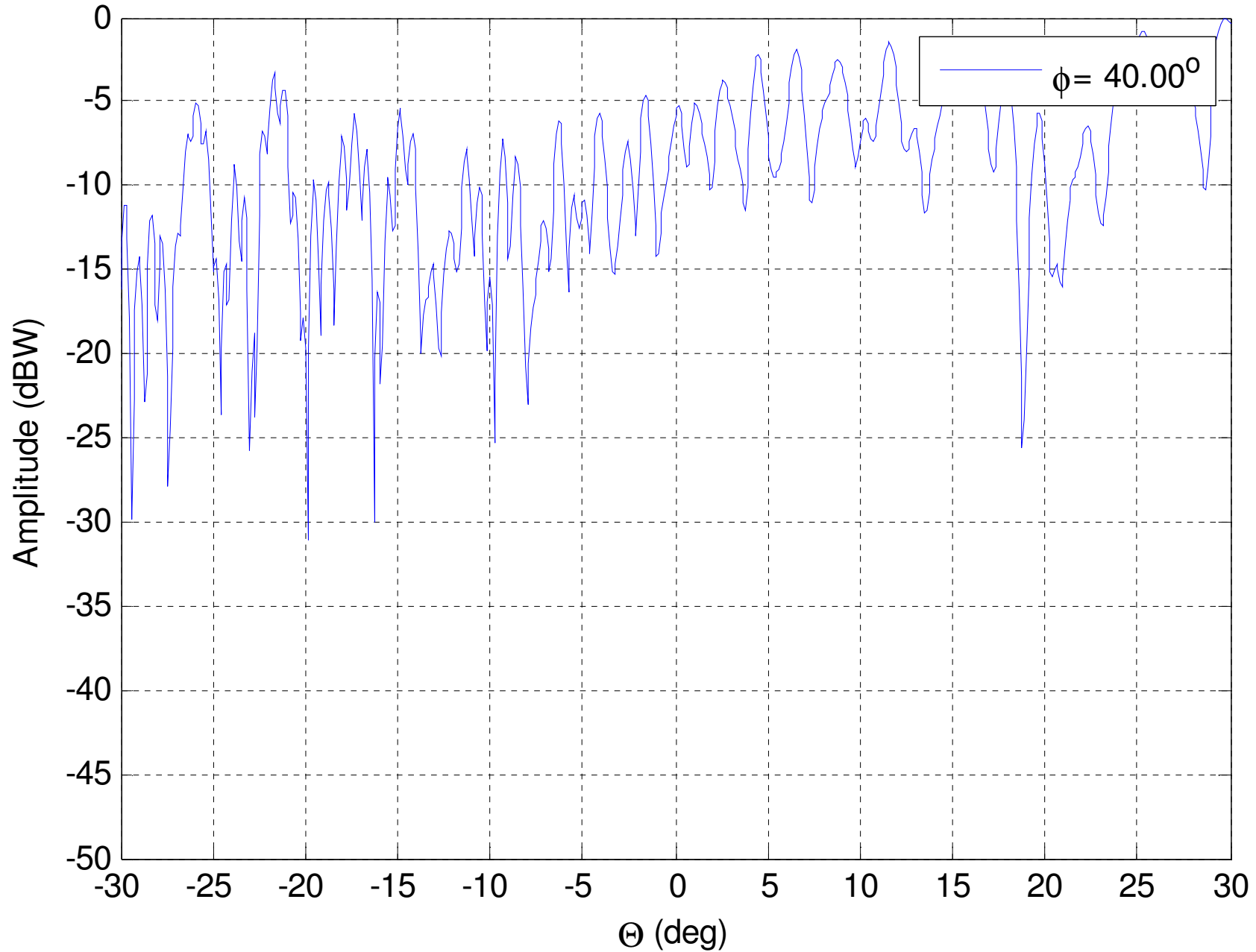
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -10.71 dBW, Date: 15-Dec-2011



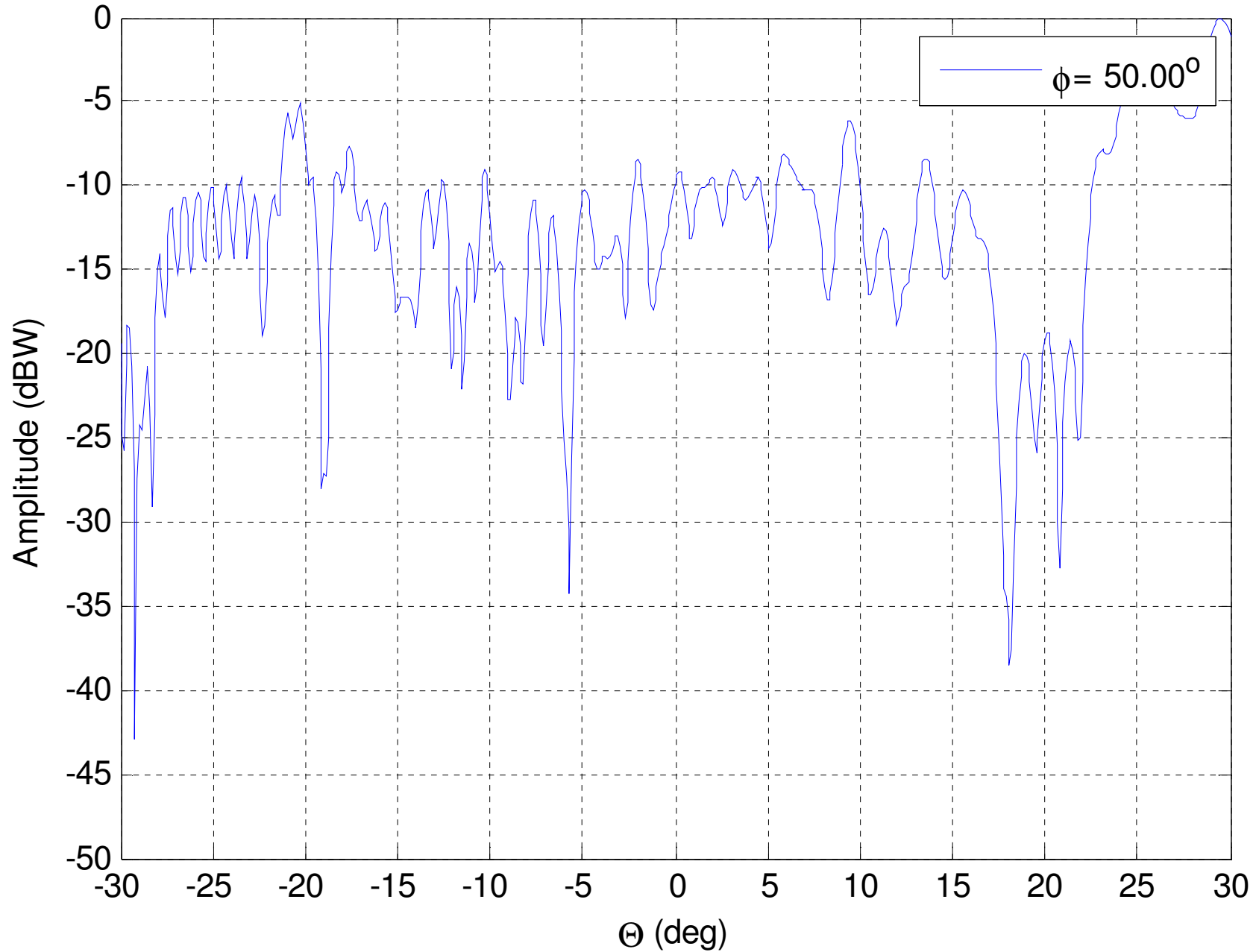
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -15.31 dBW, Date: 15-Dec-2011



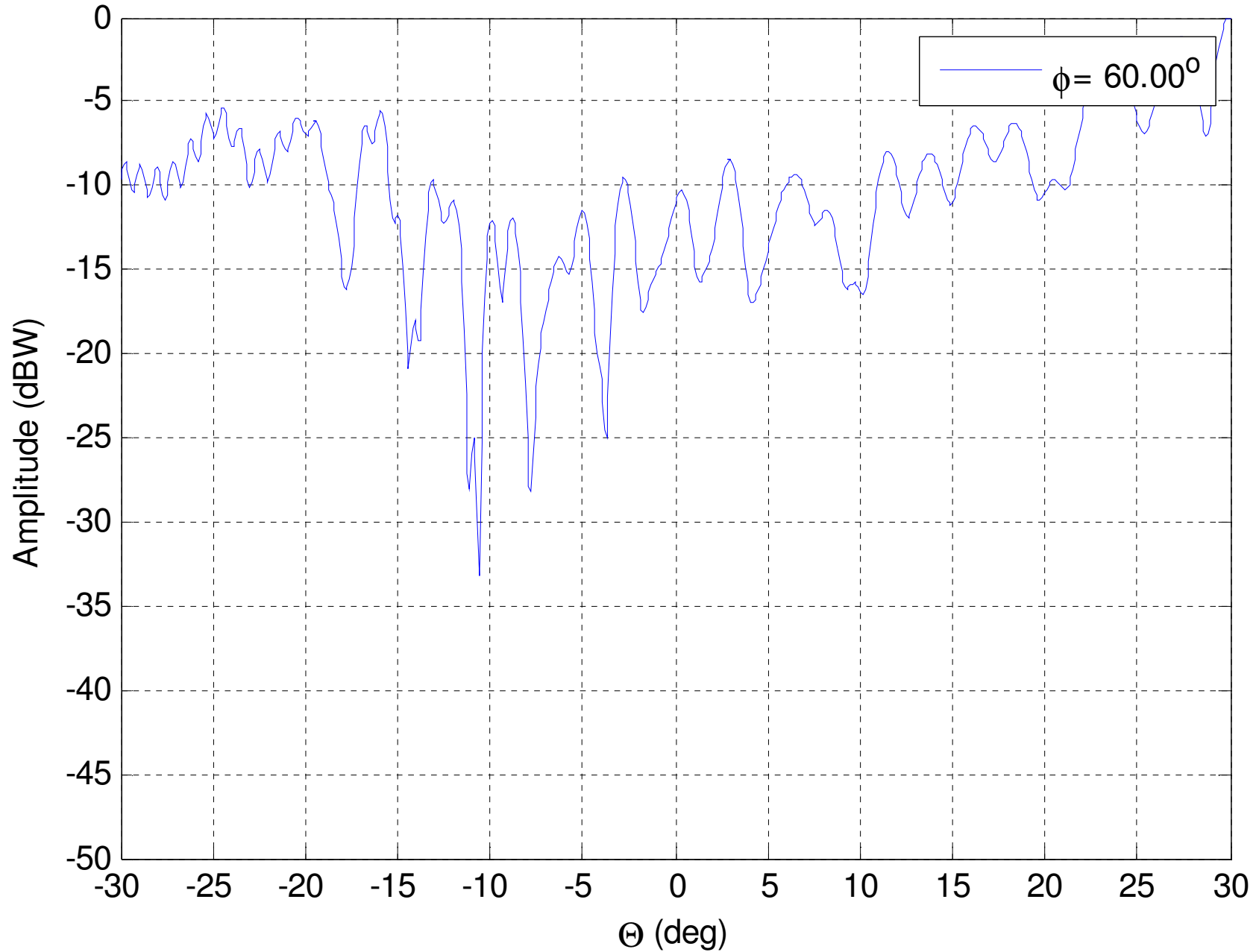
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -11.36 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.11 dBW, Date: 15-Dec-2011



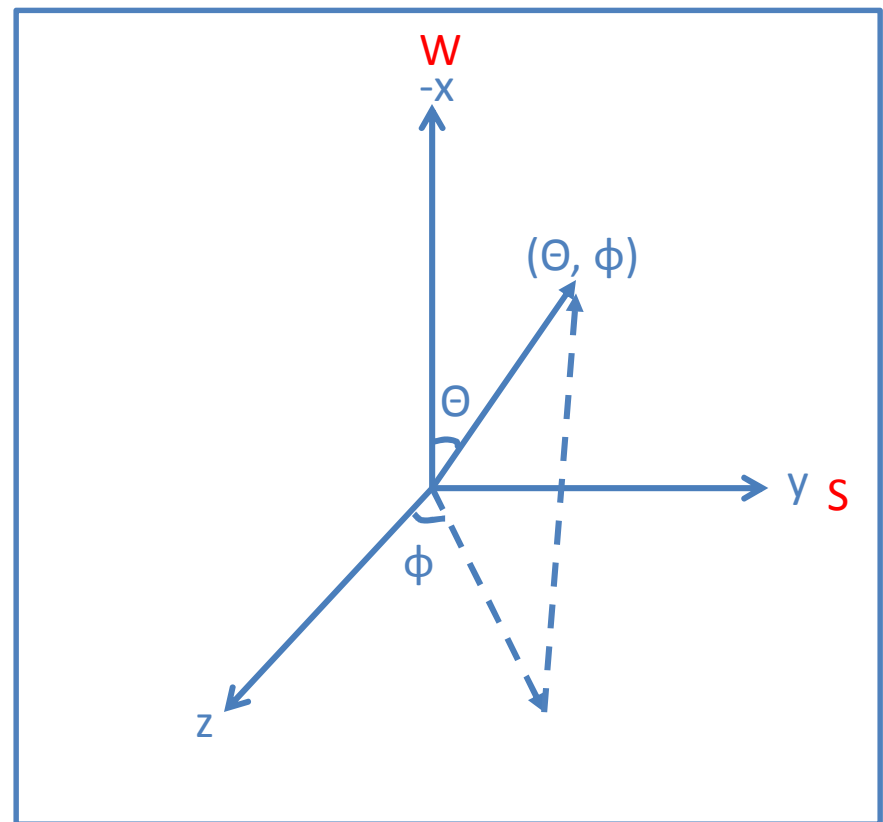
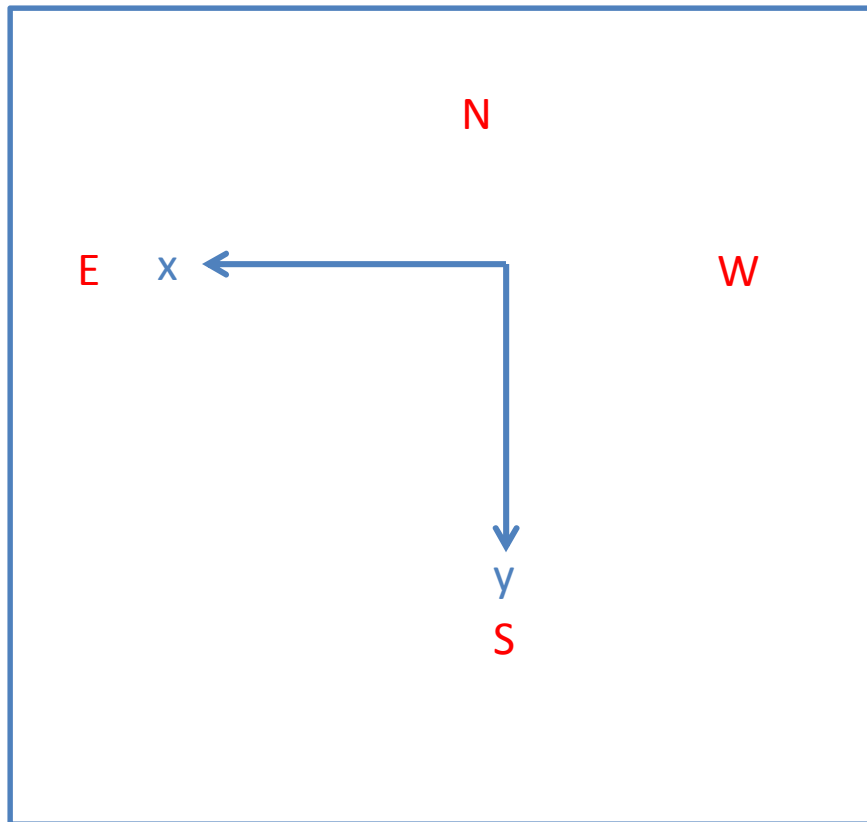
Updated: June 13, 2012

119 West Adjacent Satellite Off Axis Antenna Performance Spot Beam 32

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



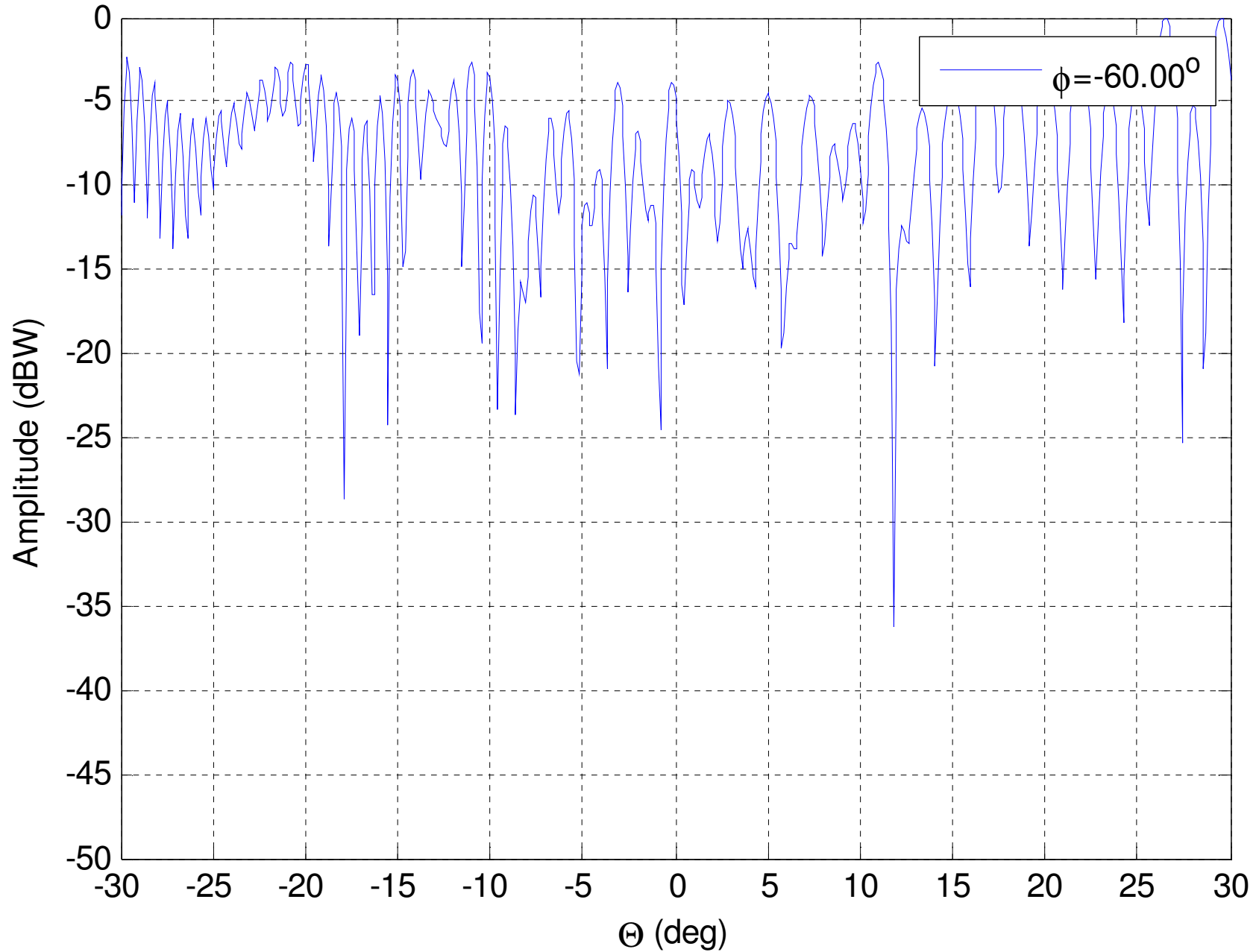
Spot Beam32, -X Axis Plots

- 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

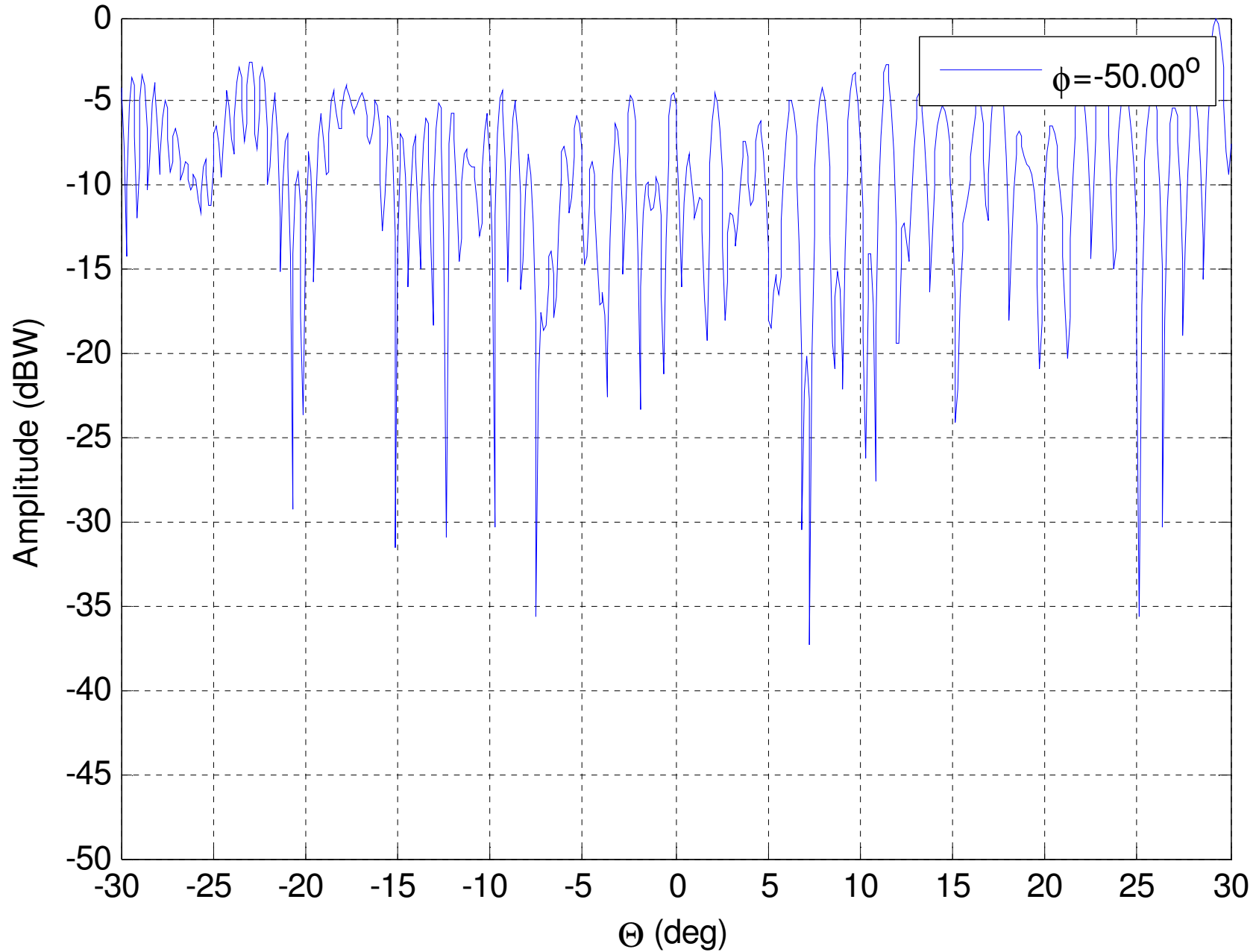
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -10.38 dBW, Date: 15-Dec-2011



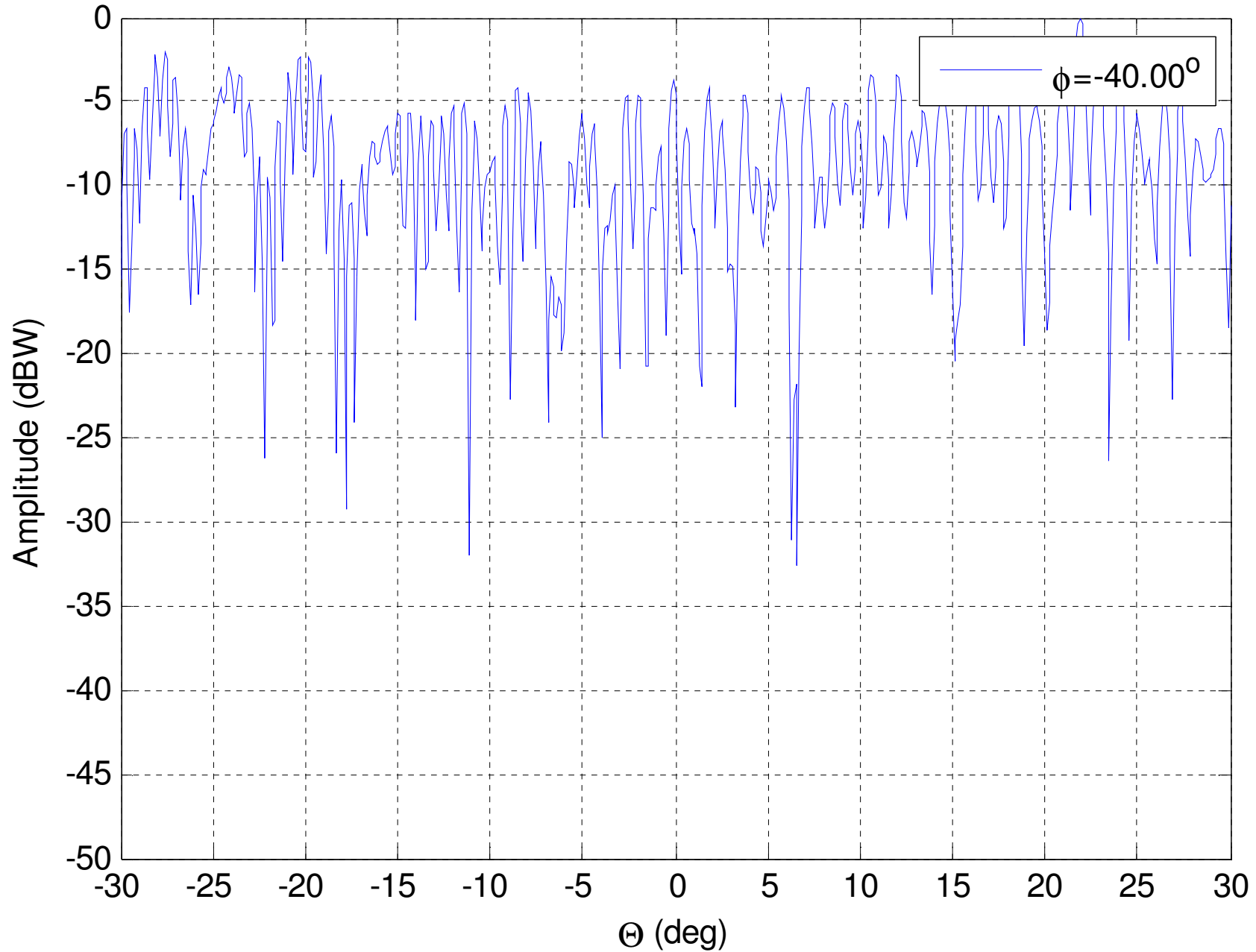
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -9.83 dBW, Date: 15-Dec-2011



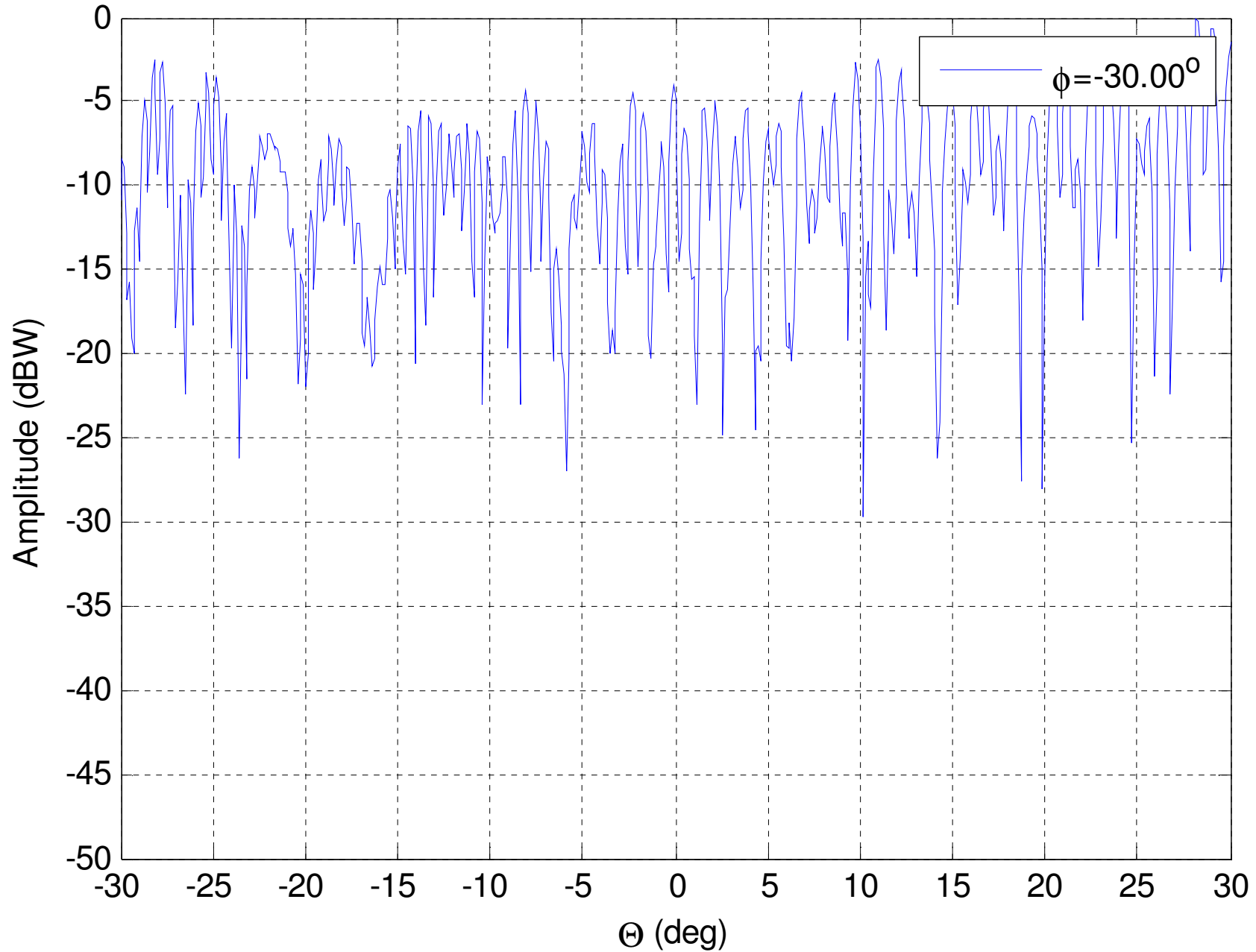
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.55 dBW, Date: 15-Dec-2011



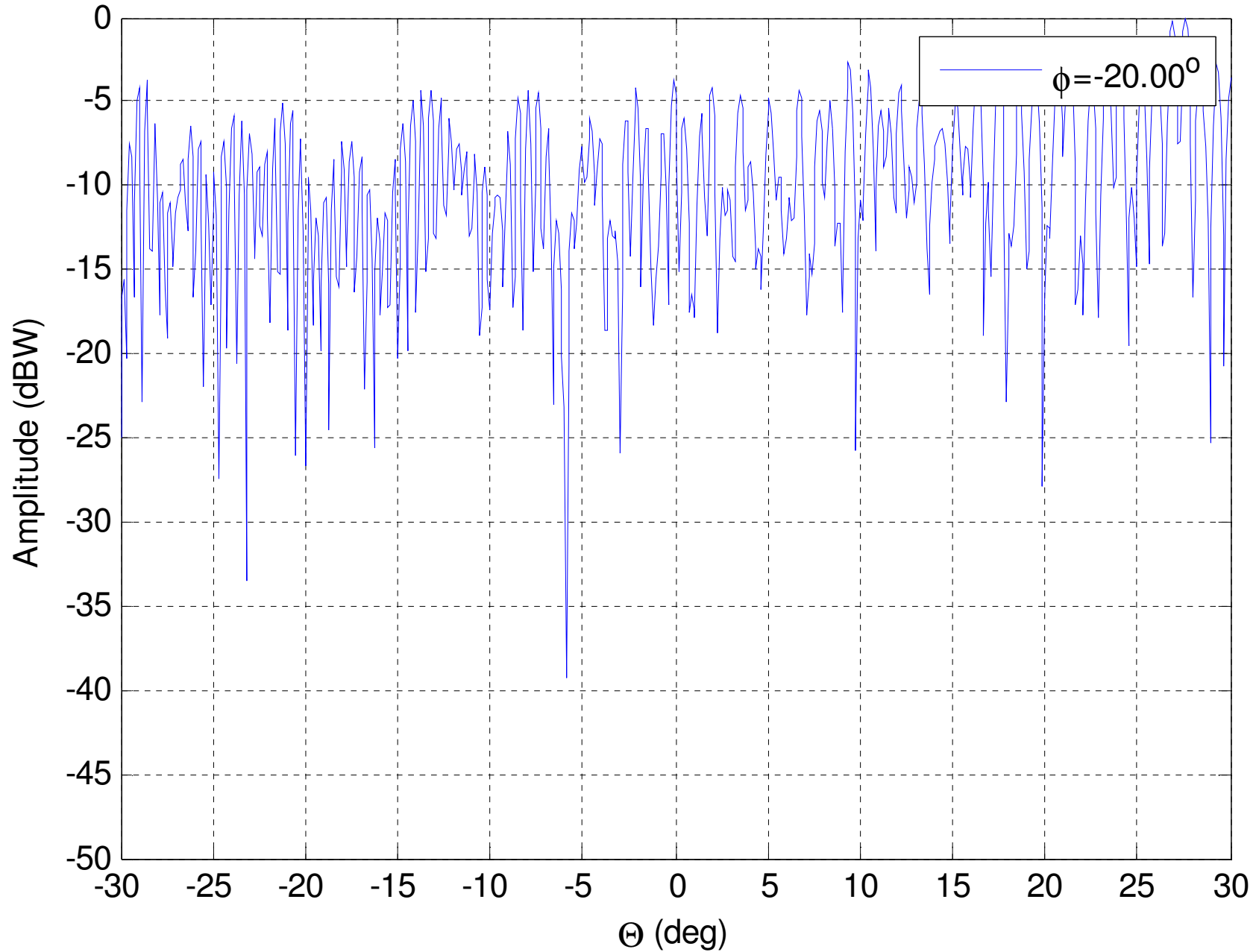
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -10.20 dBW, Date: 15-Dec-2011



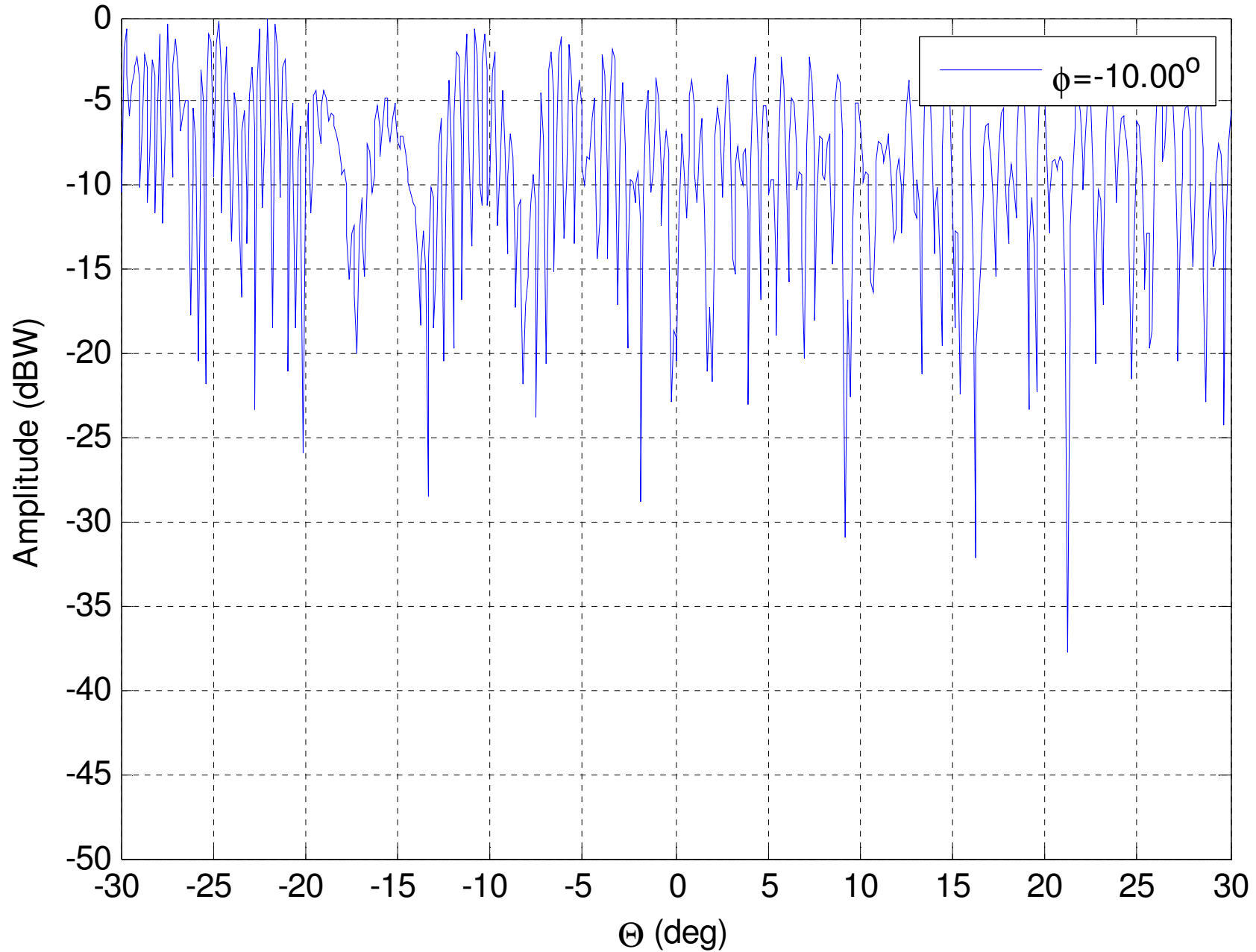
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -10.46 dBW, Date: 15-Dec-2011



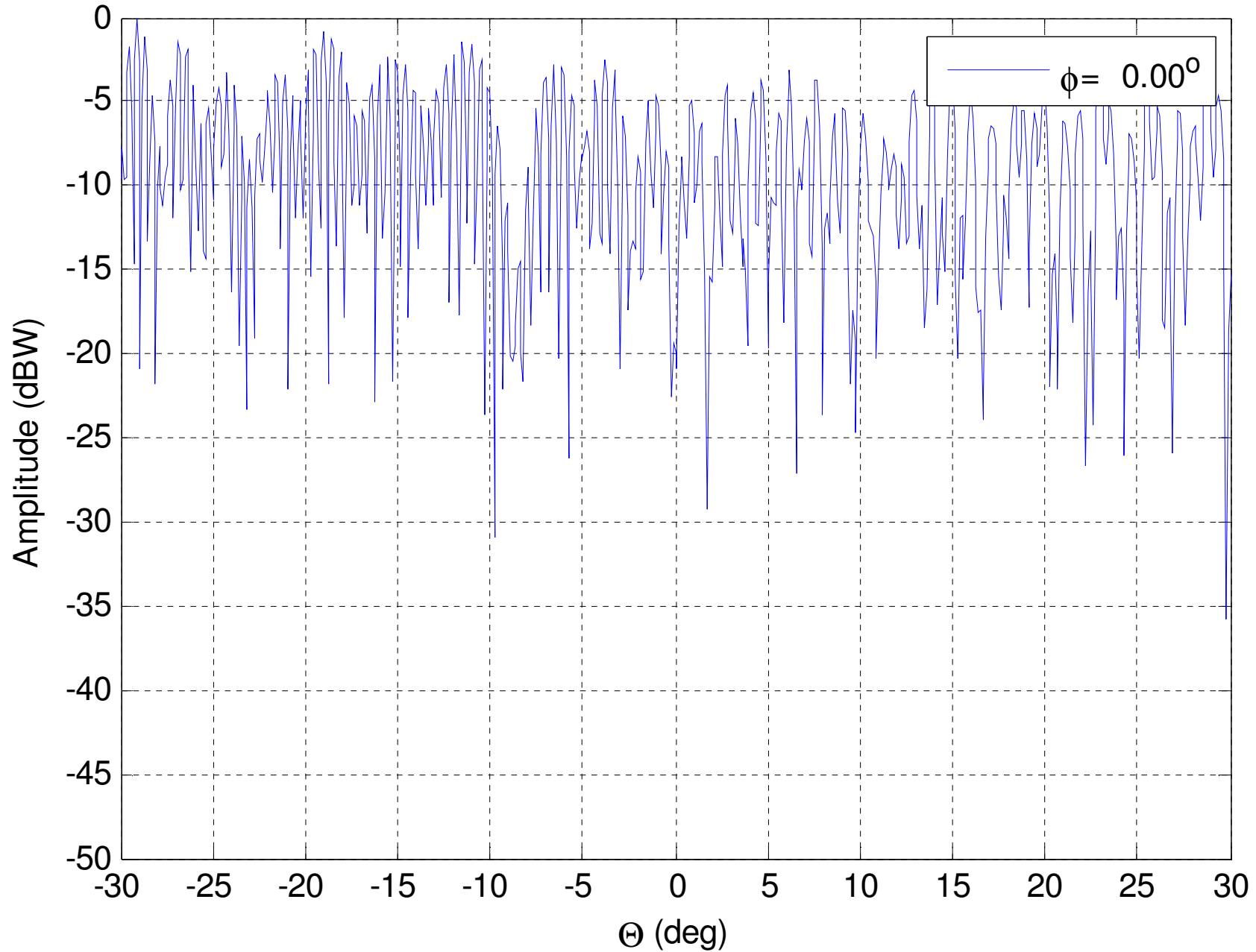
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -13.20 dBW, Date: 15-Dec-2011



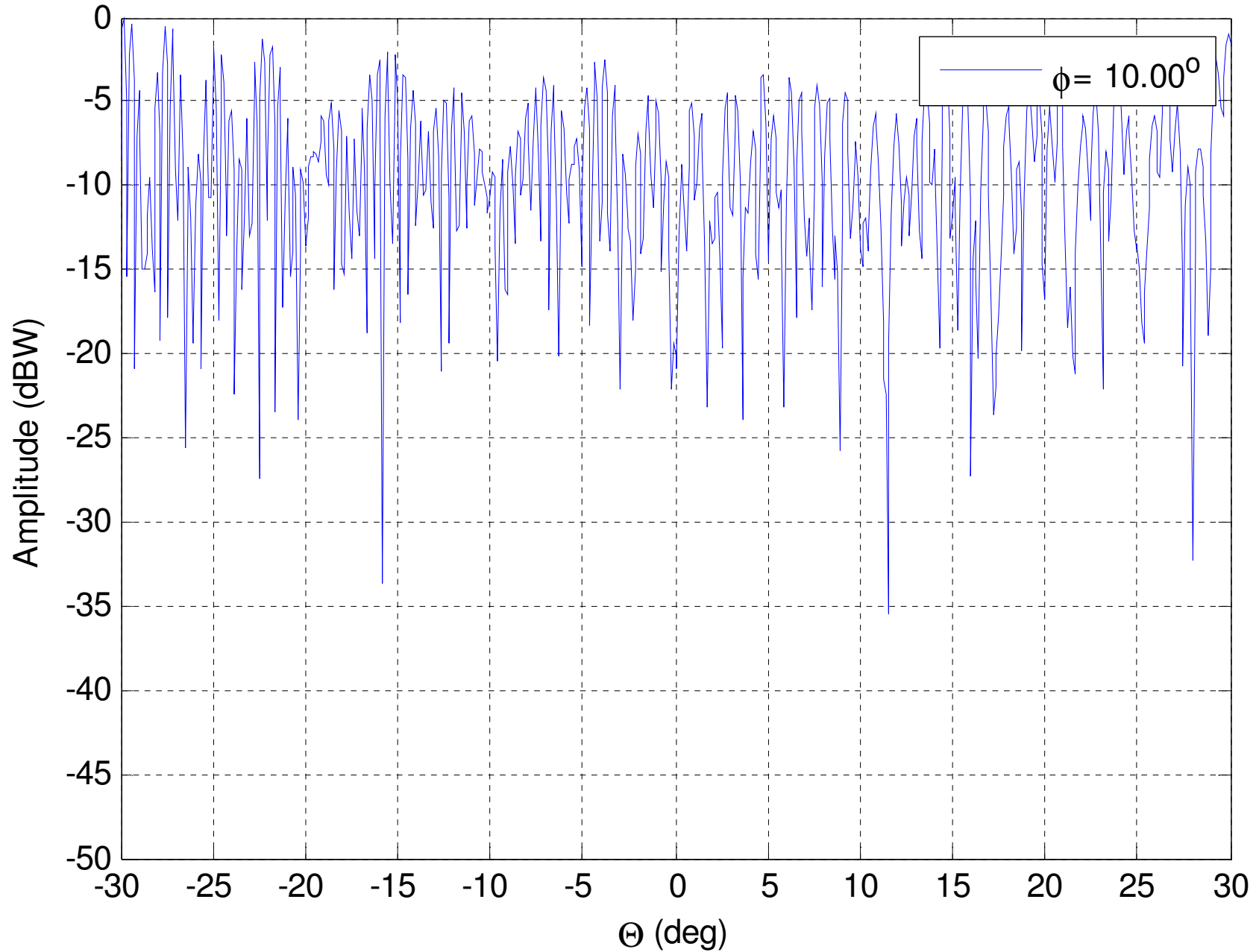
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -12.28 dBW, Date: 15-Dec-2011



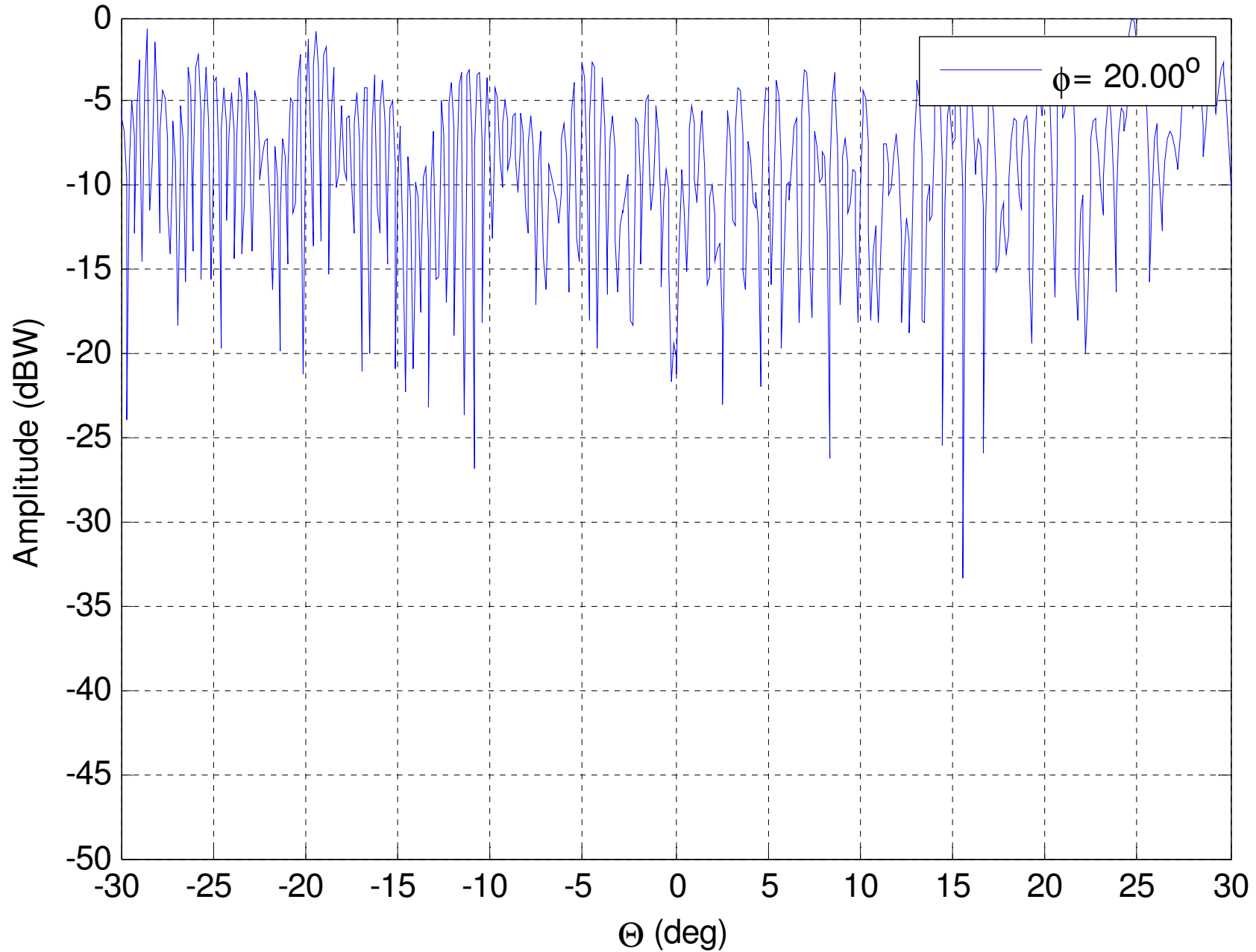
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -12.13 dBW, Date: 15-Dec-2011



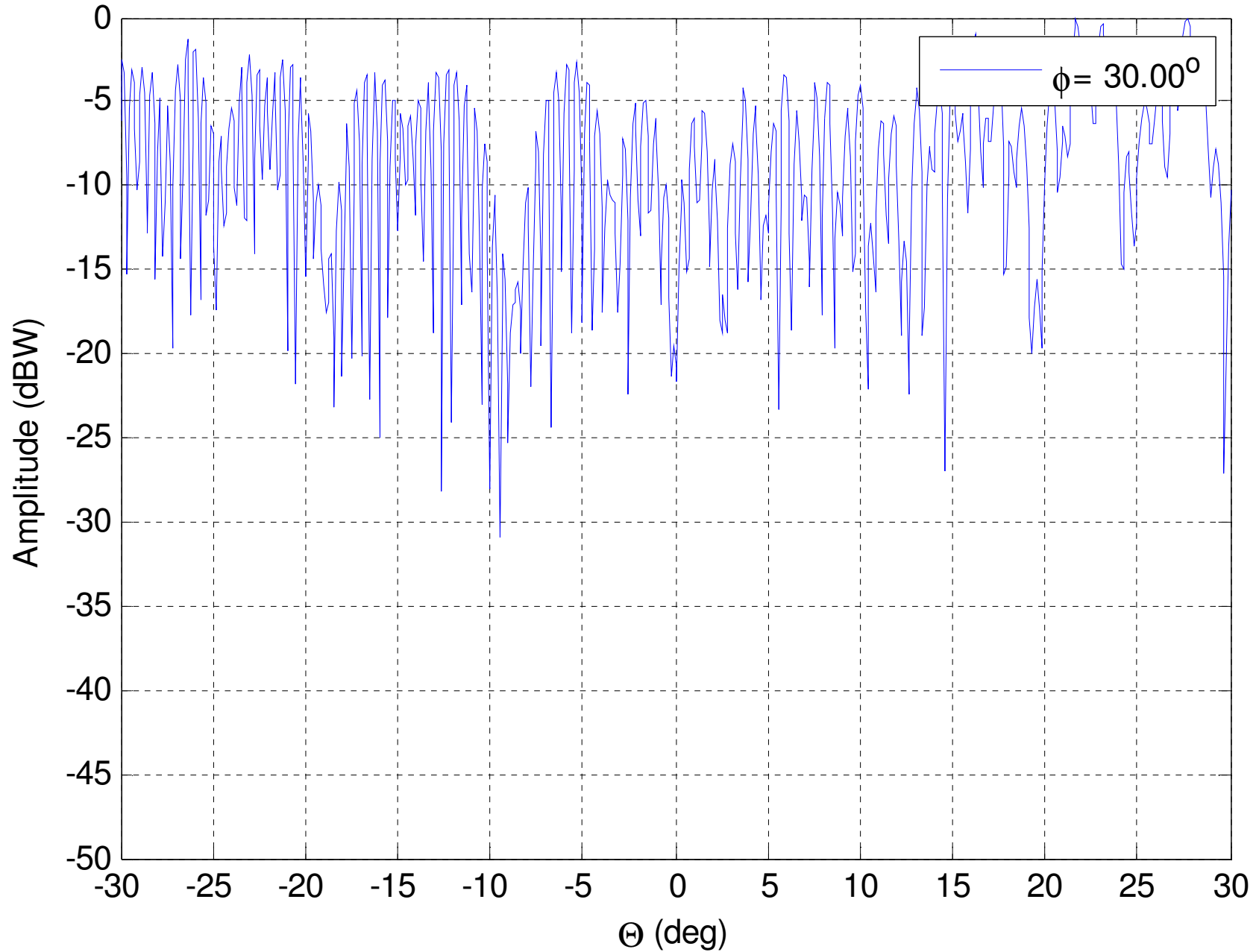
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -12.00 dBW, Date: 15-Dec-2011



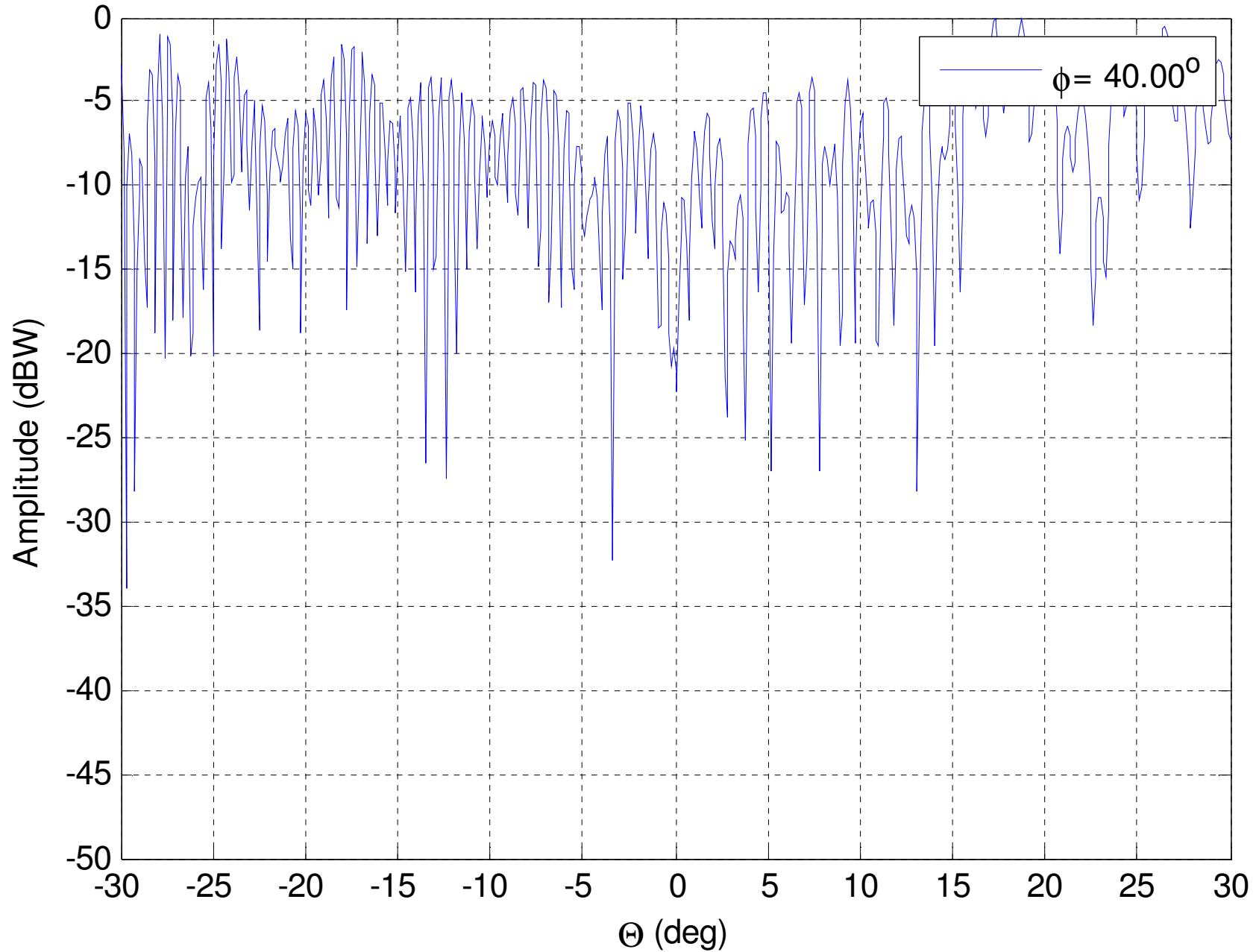
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -11.63 dBW, Date: 15-Dec-2011



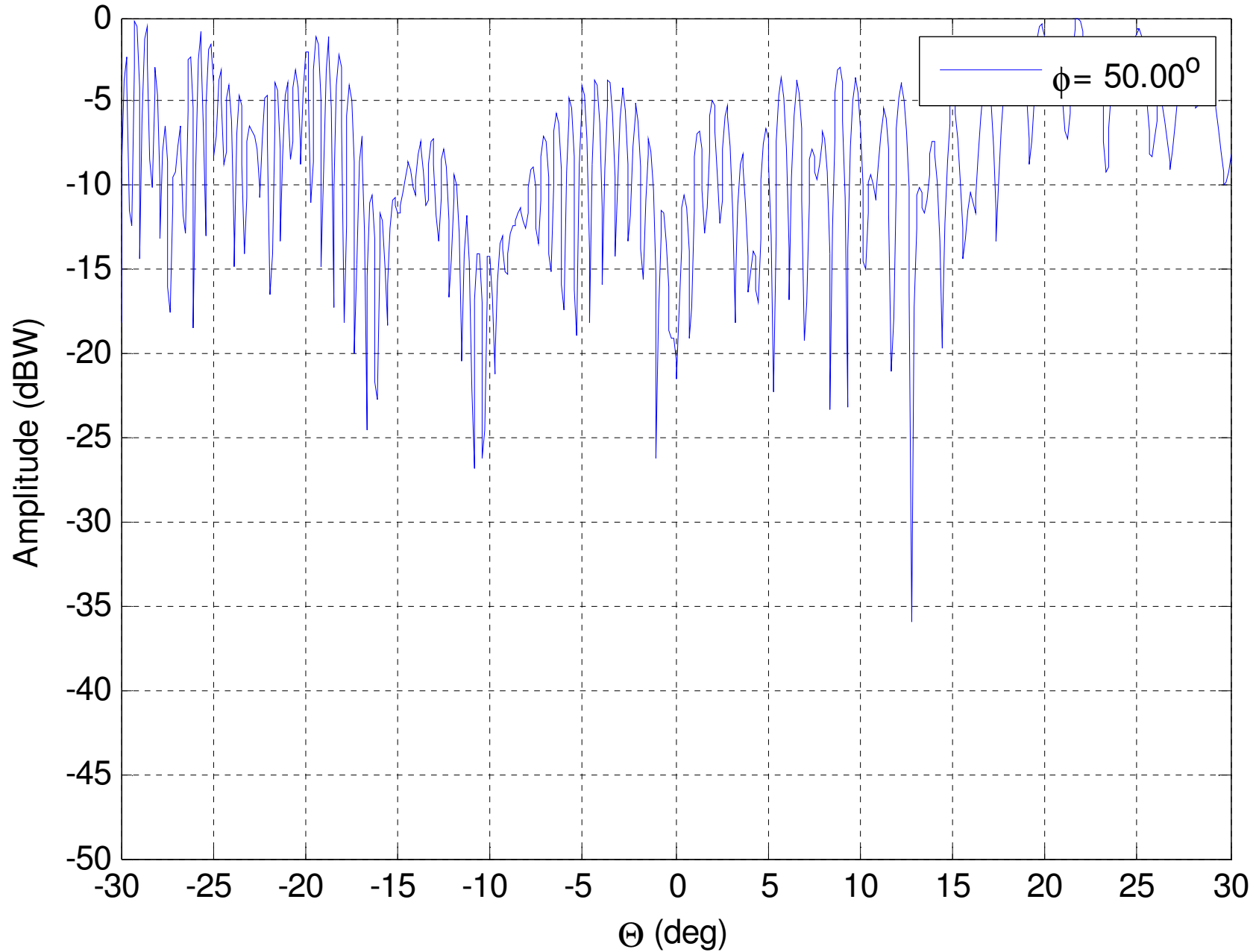
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -11.20 dBW, Date: 15-Dec-2011



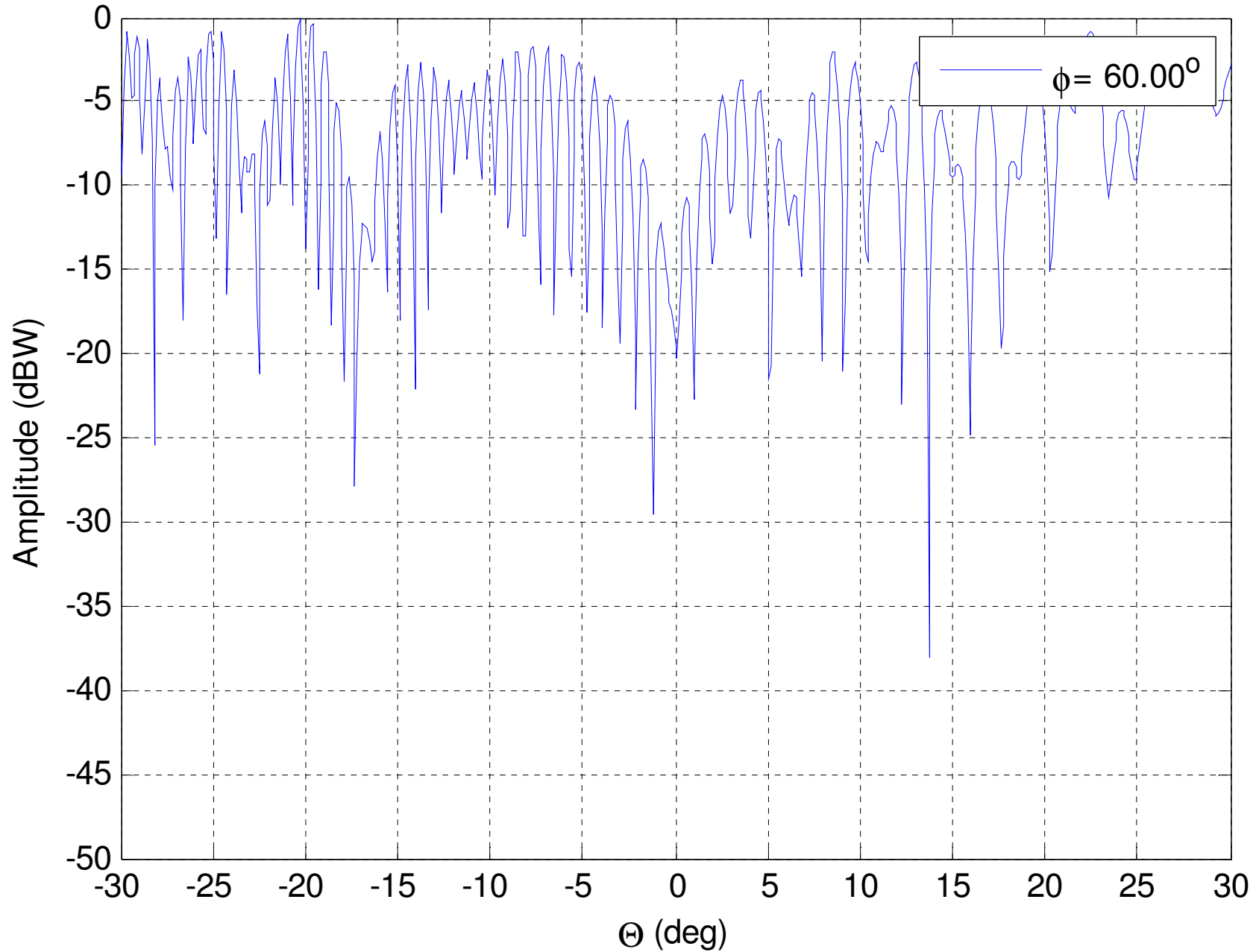
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -11.83 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

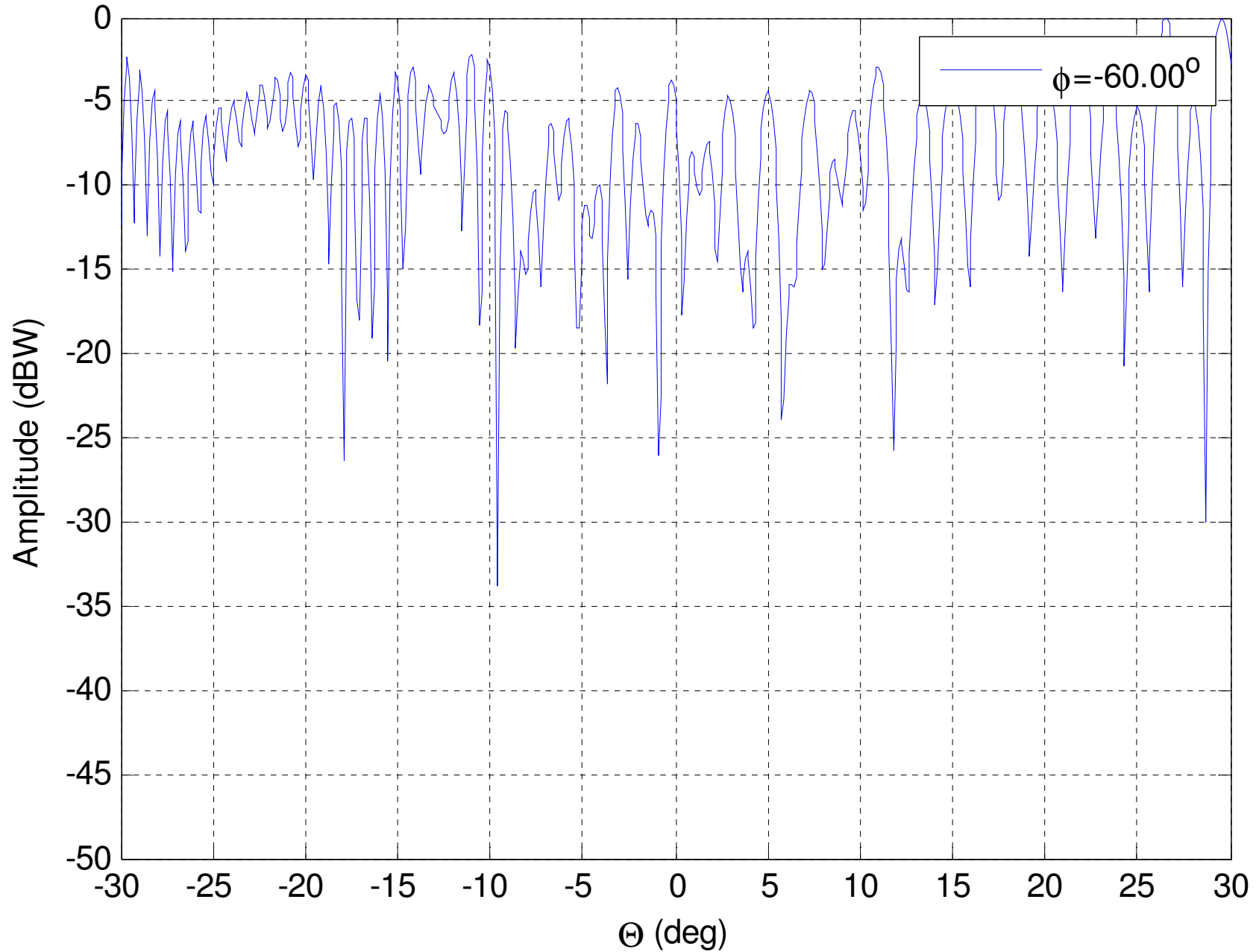
Input file: tx-17.3-rhcp-60.cut, Peak: -12.66 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

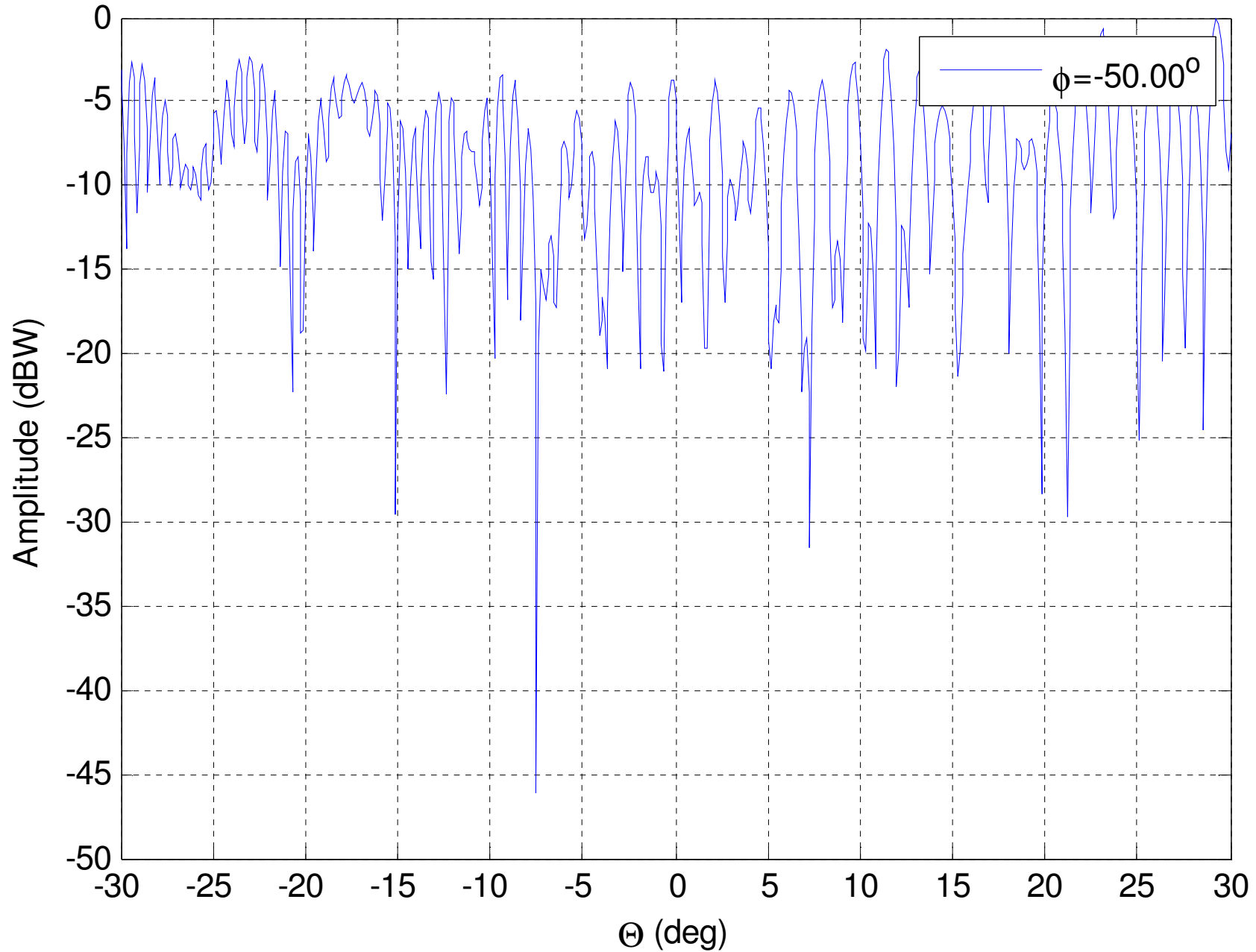
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -10.31 dBW, Date: 15-Dec-2011



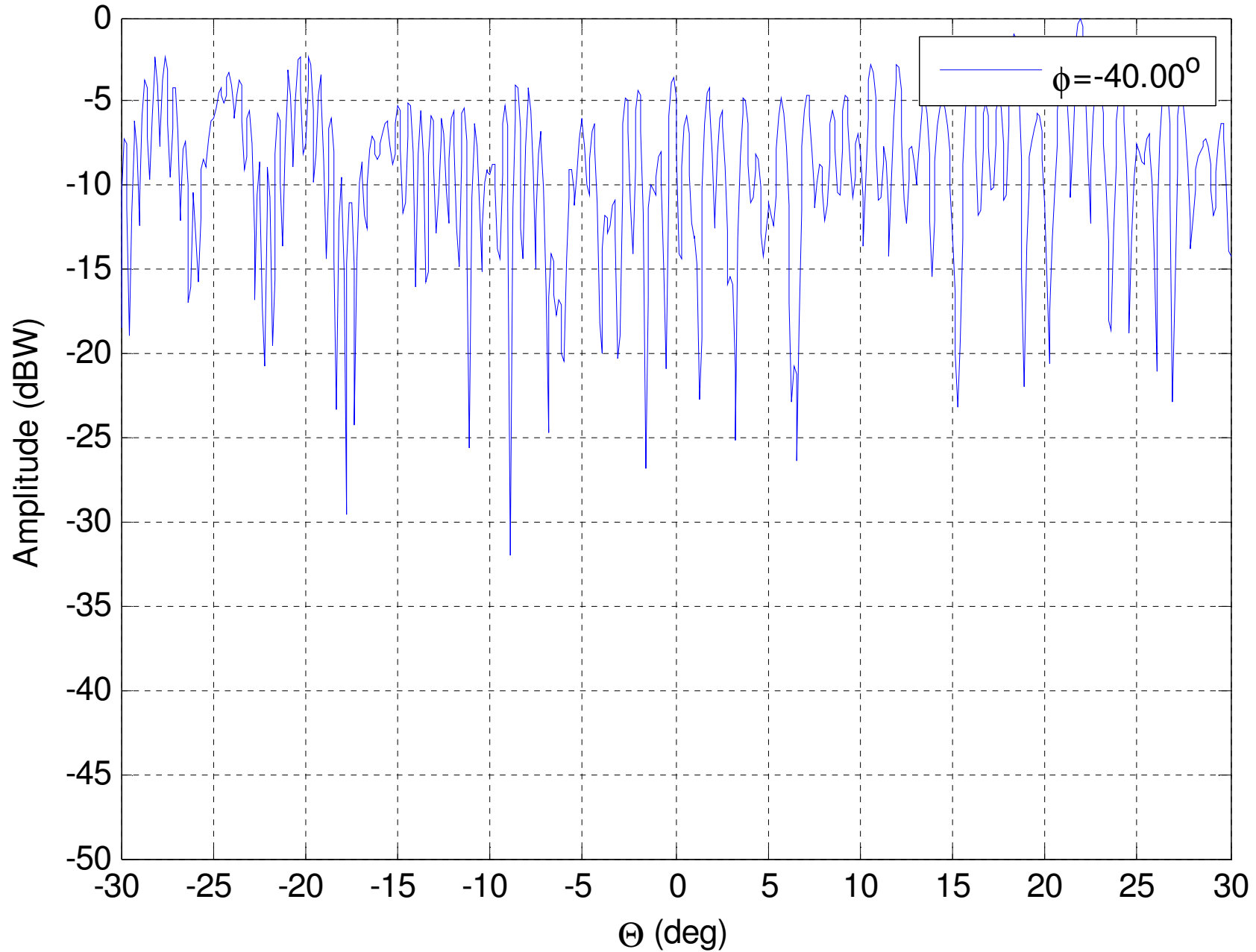
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -10.44 dBW, Date: 15-Dec-2011



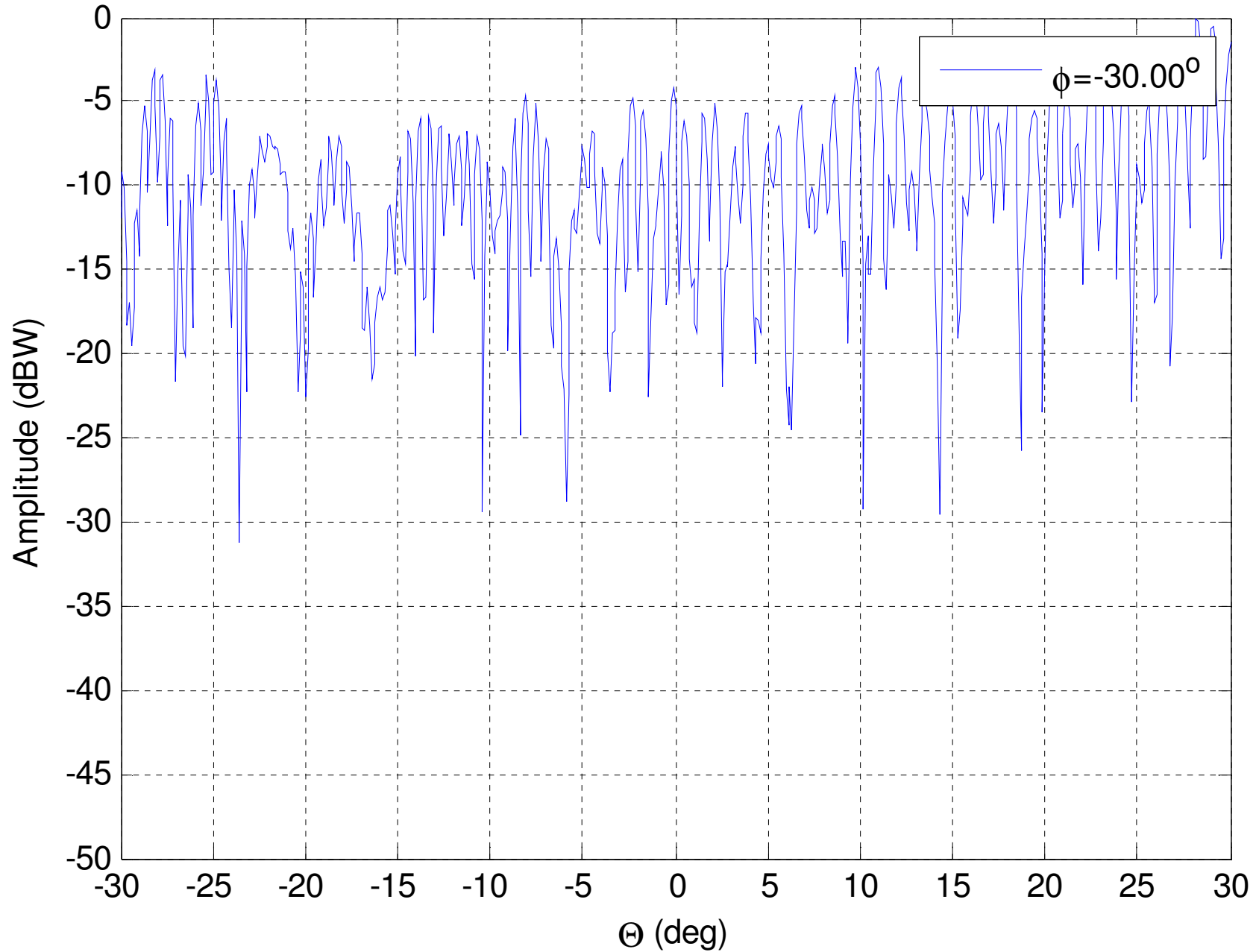
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.54 dBW, Date: 15-Dec-2011



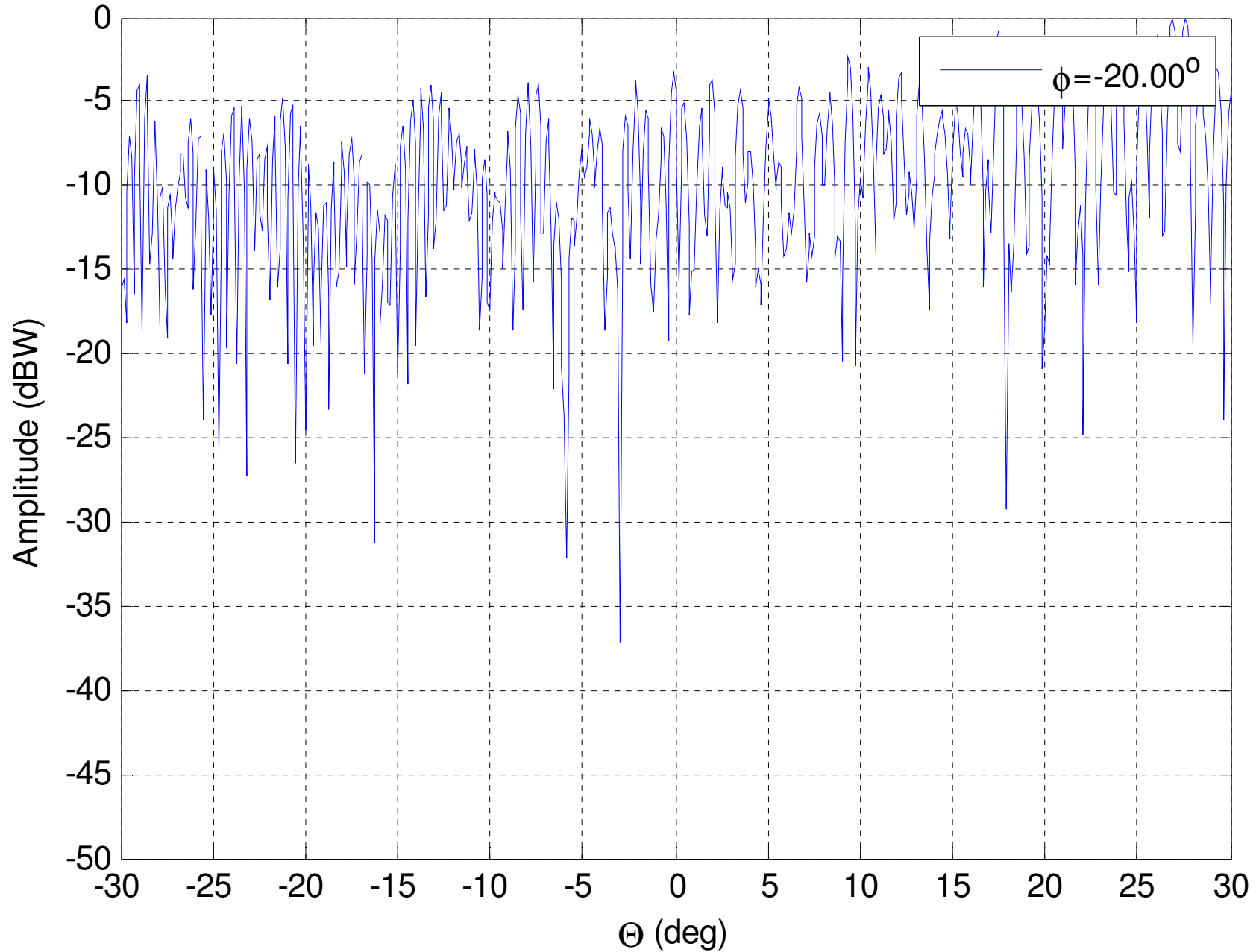
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -9.86 dBW, Date: 15-Dec-2011



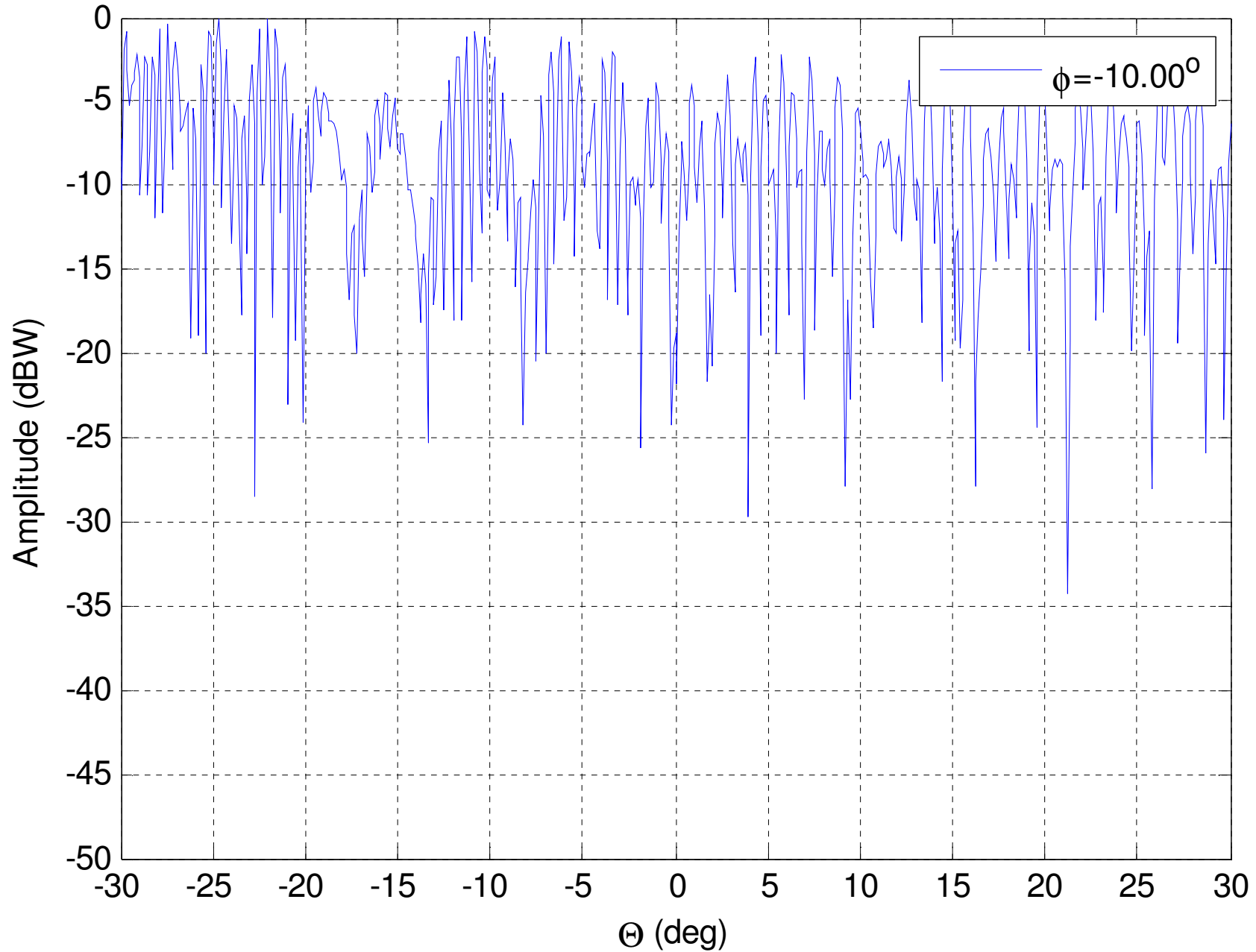
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -10.78 dBW, Date: 15-Dec-2011



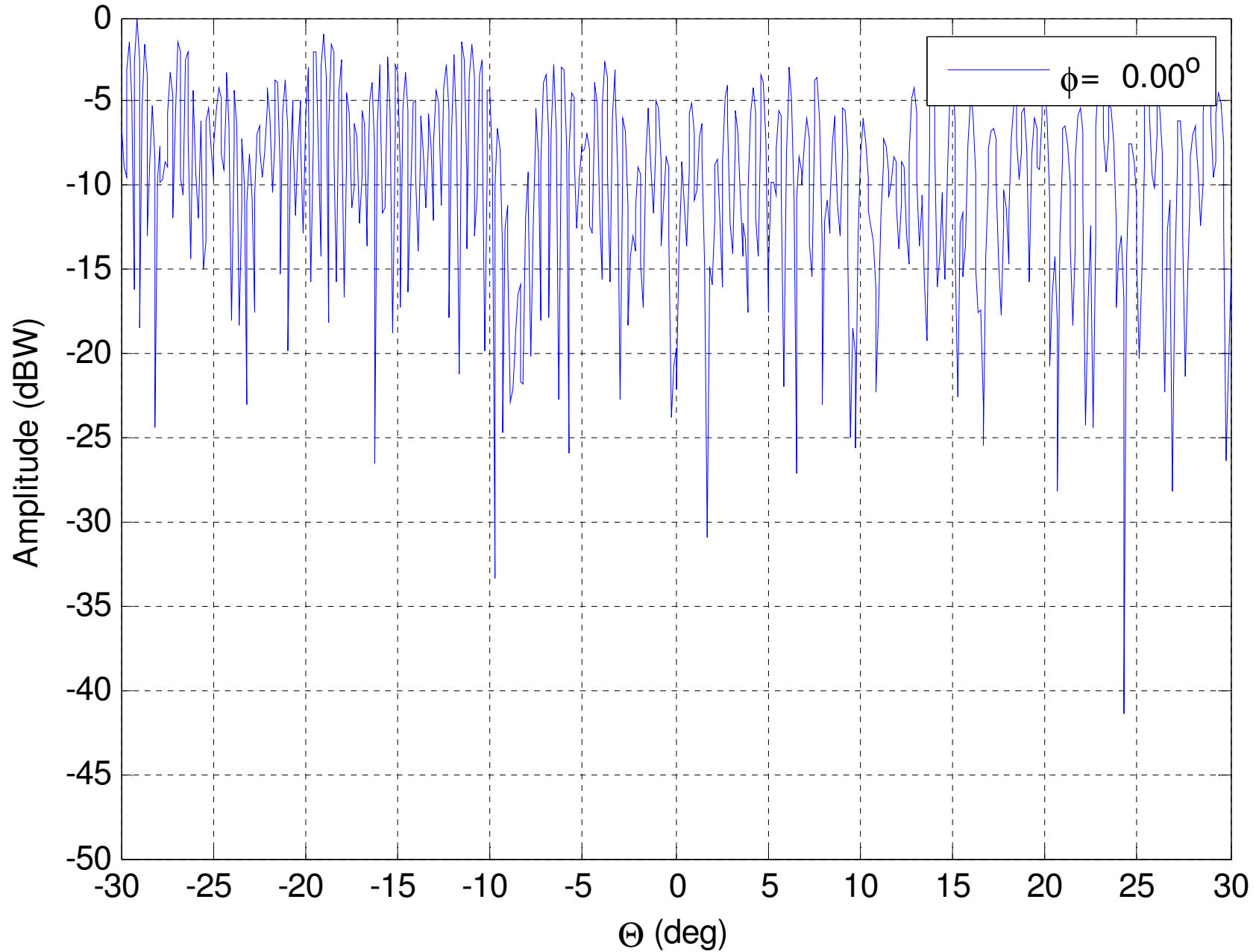
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -13.13 dBW, Date: 15-Dec-2011



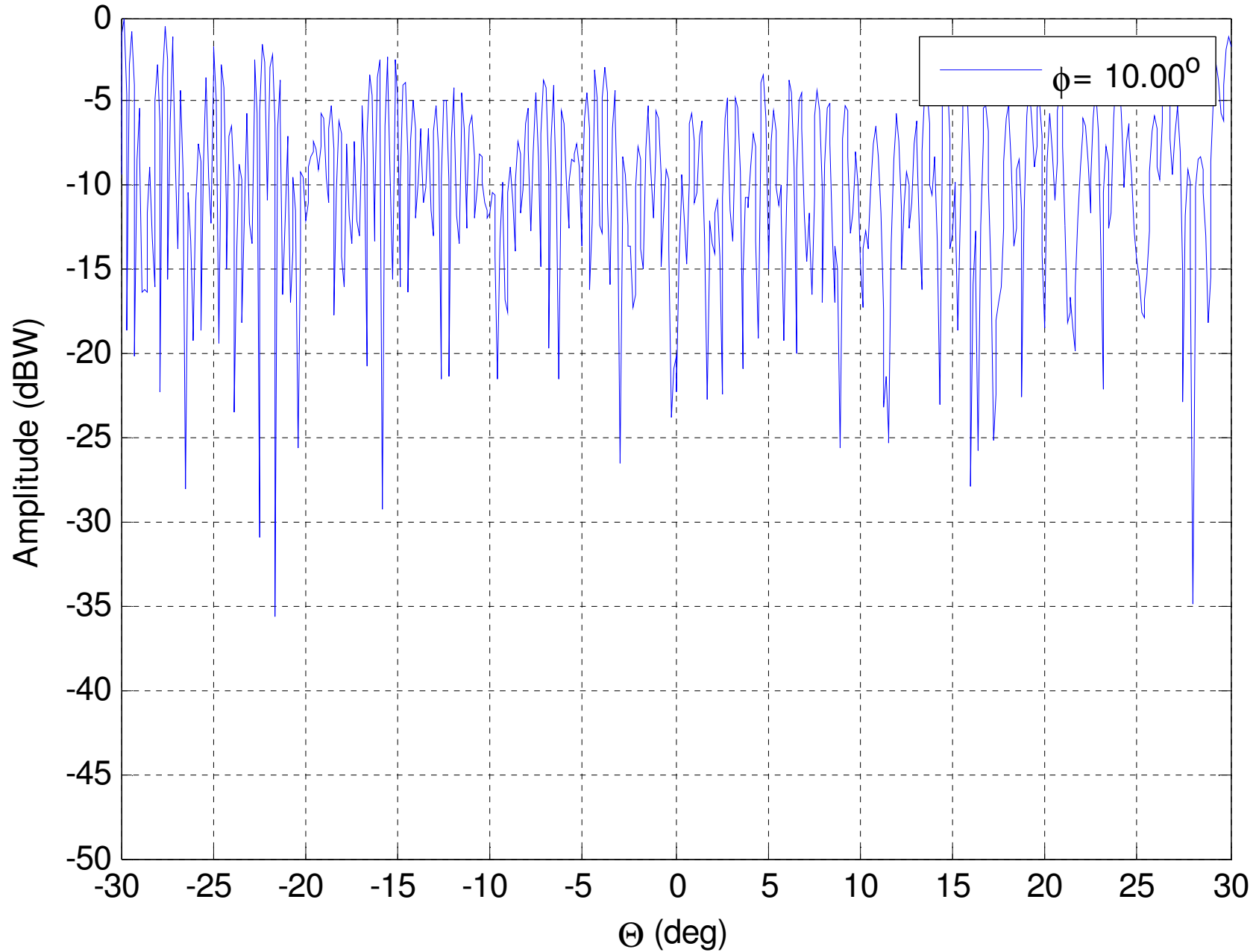
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -12.24 dBW, Date: 15-Dec-2011



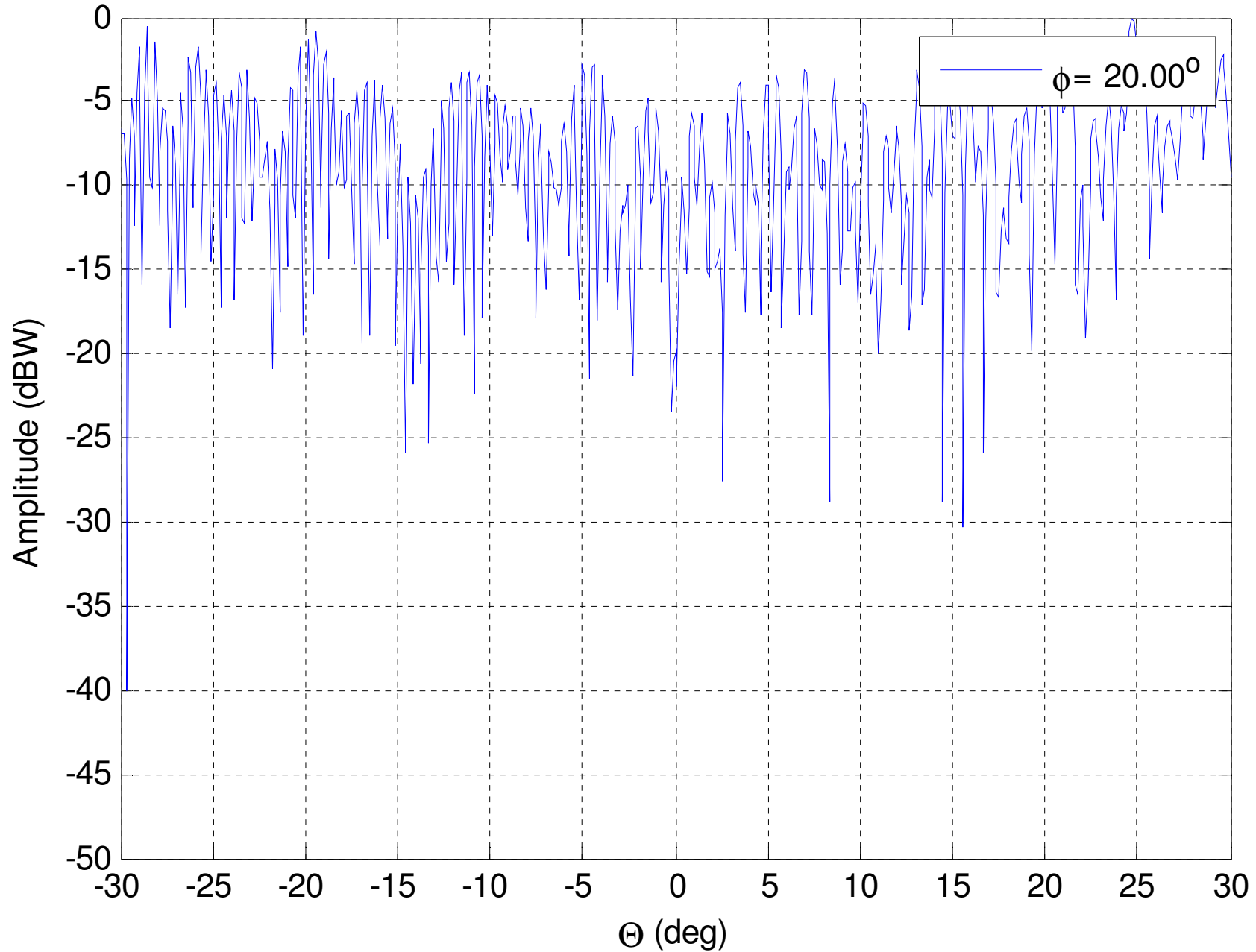
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -11.81 dBW, Date: 15-Dec-2011



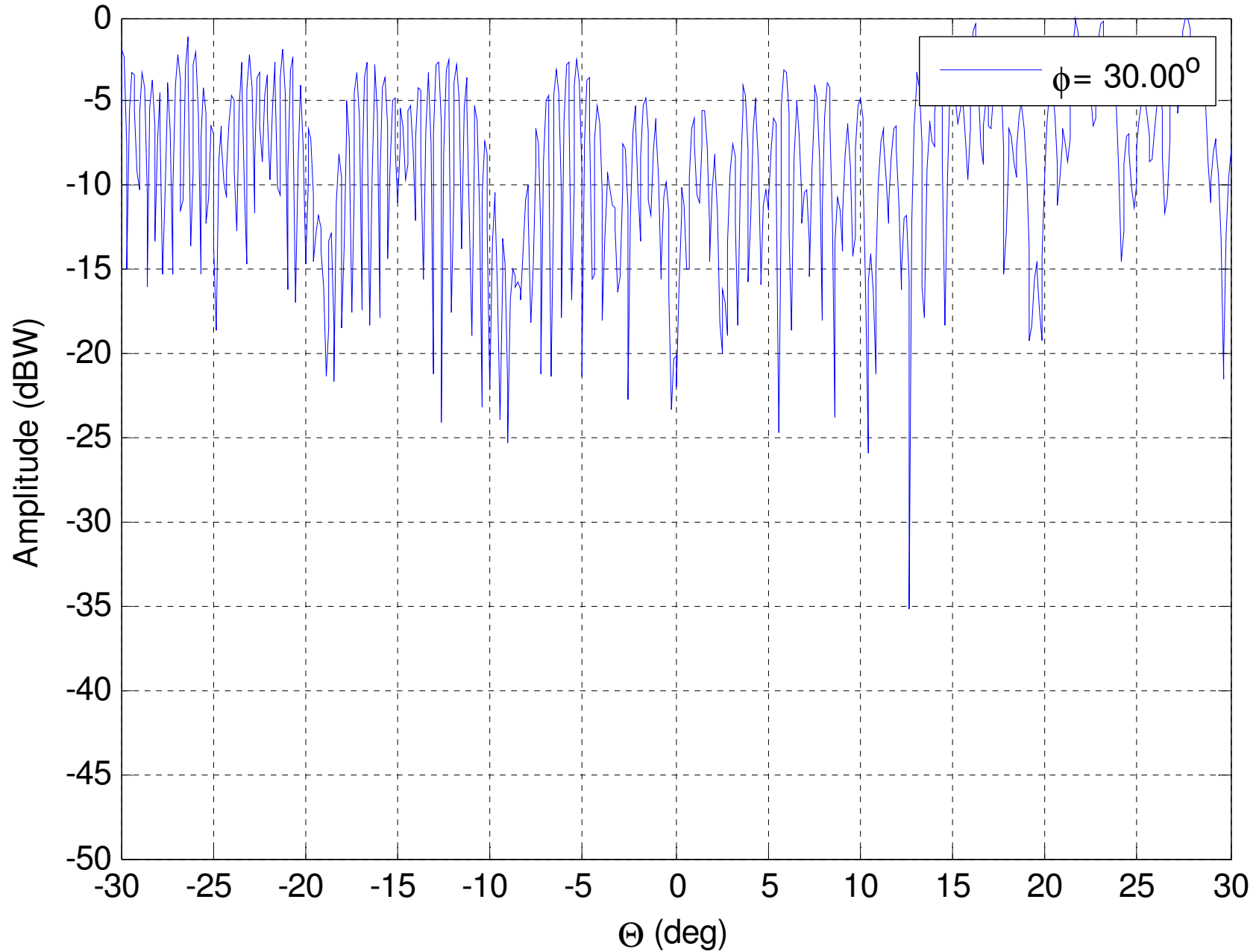
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -11.97 dBW, Date: 15-Dec-2011



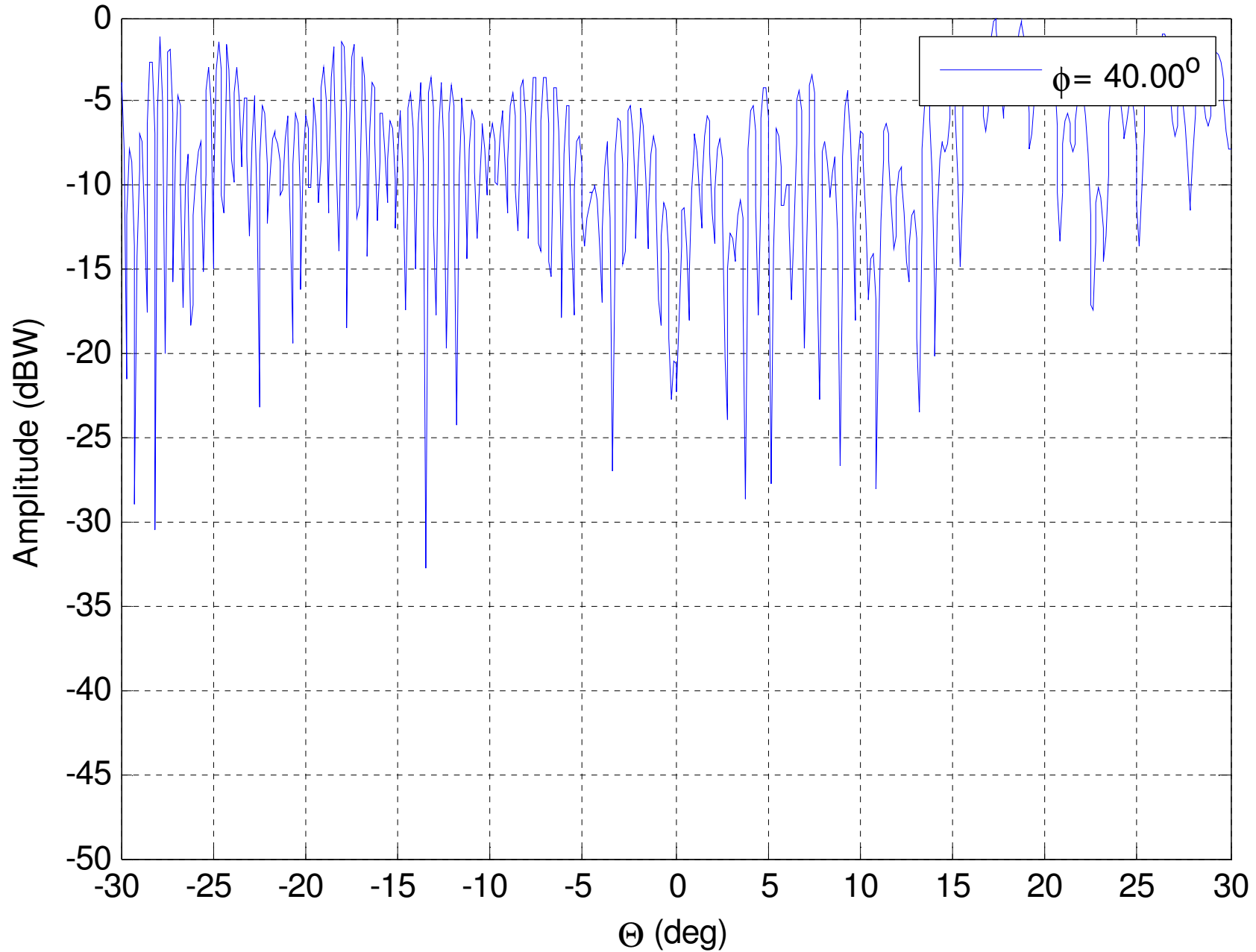
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -11.82 dBW, Date: 15-Dec-2011



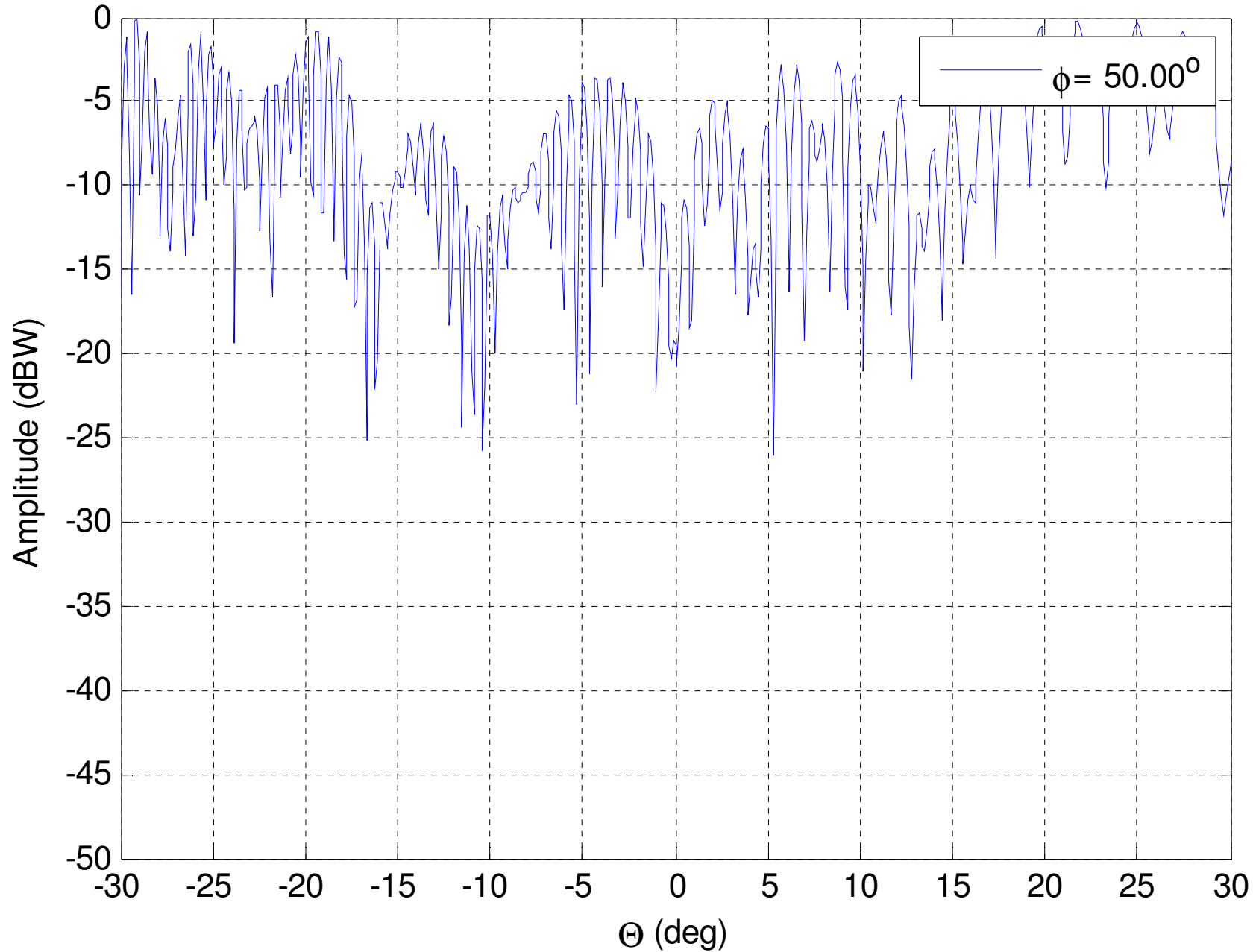
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -11.27 dBW, Date: 15-Dec-2011



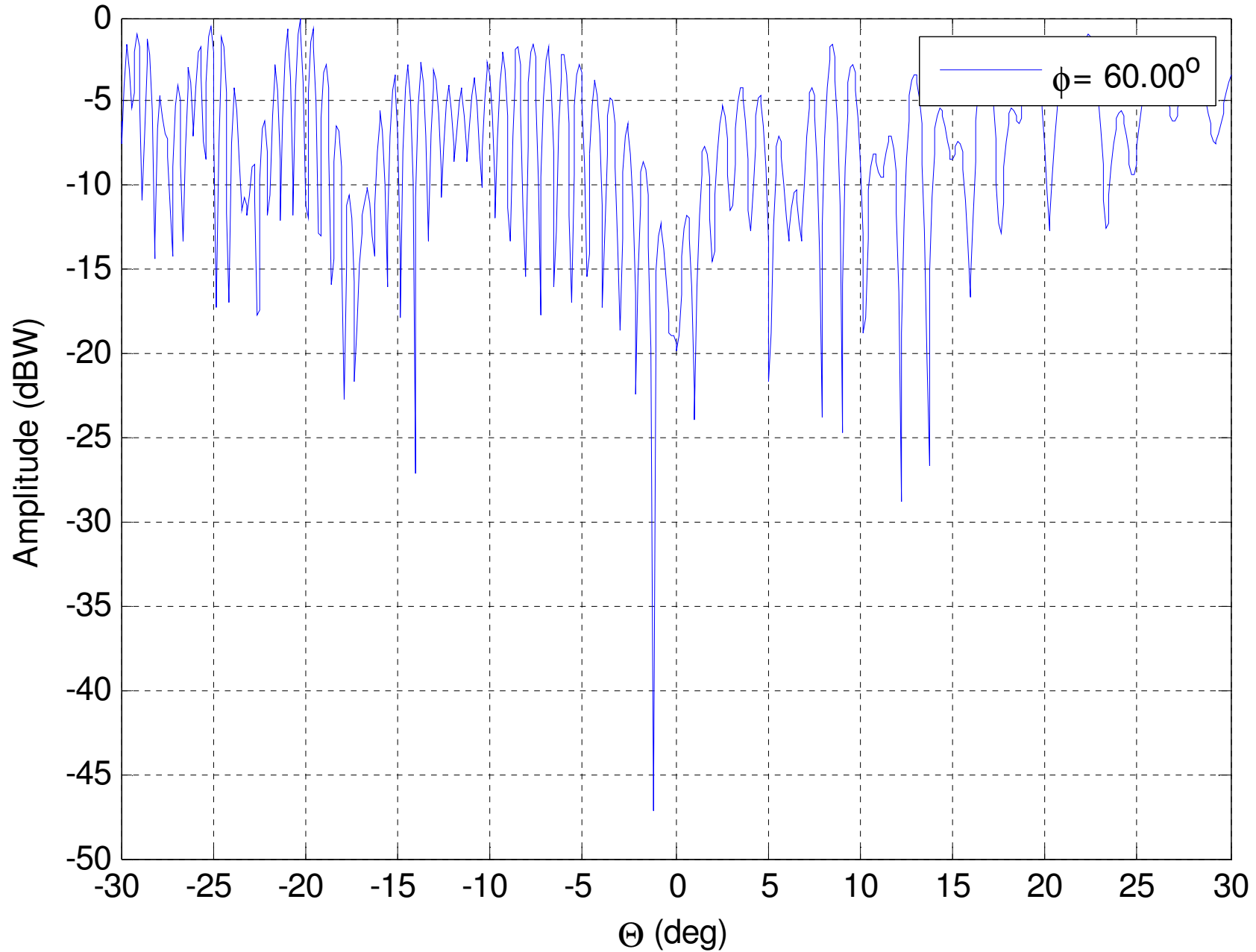
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -12.28 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

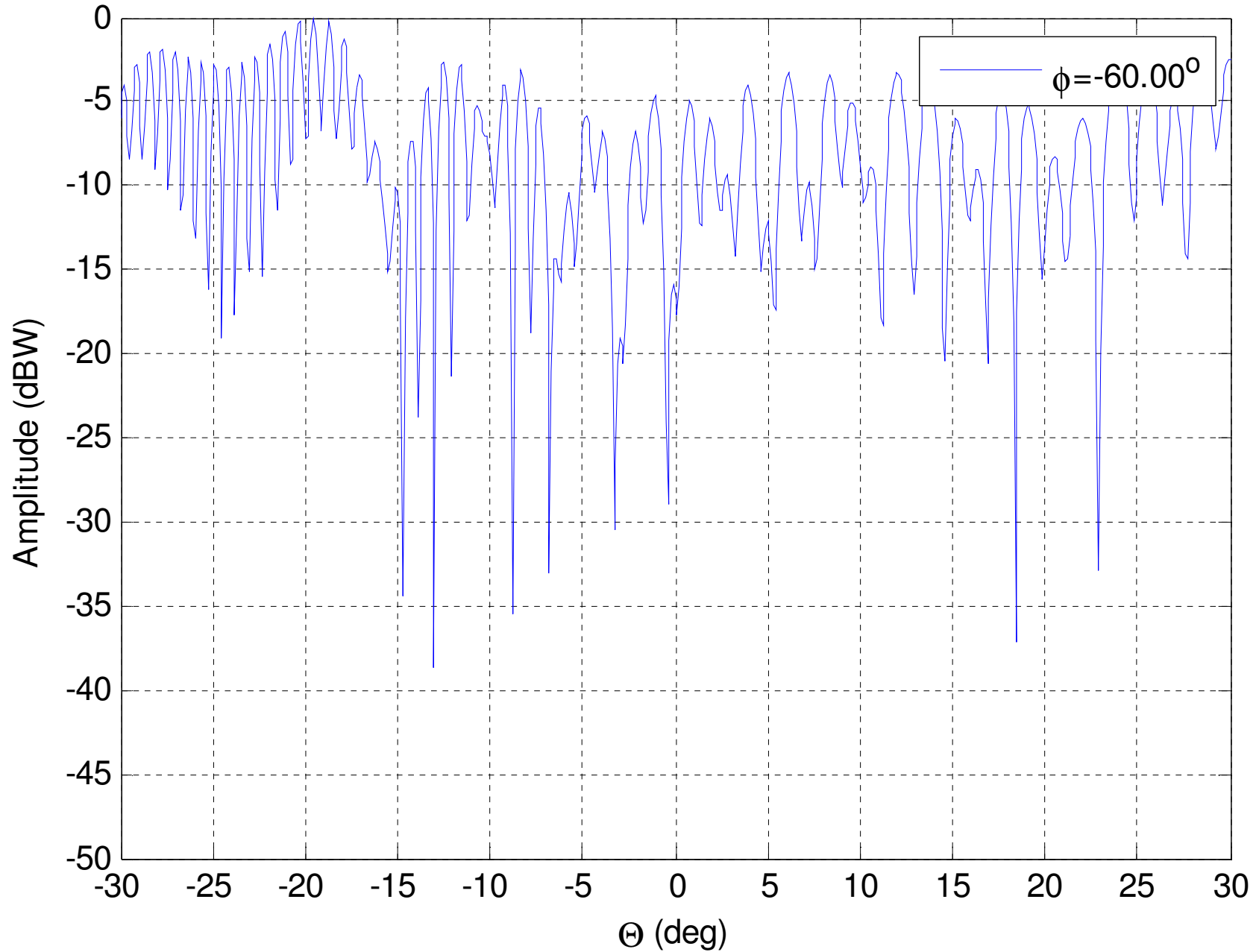
Input file: tx-17.3-lhcp-60.cut, Peak: -12.50 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

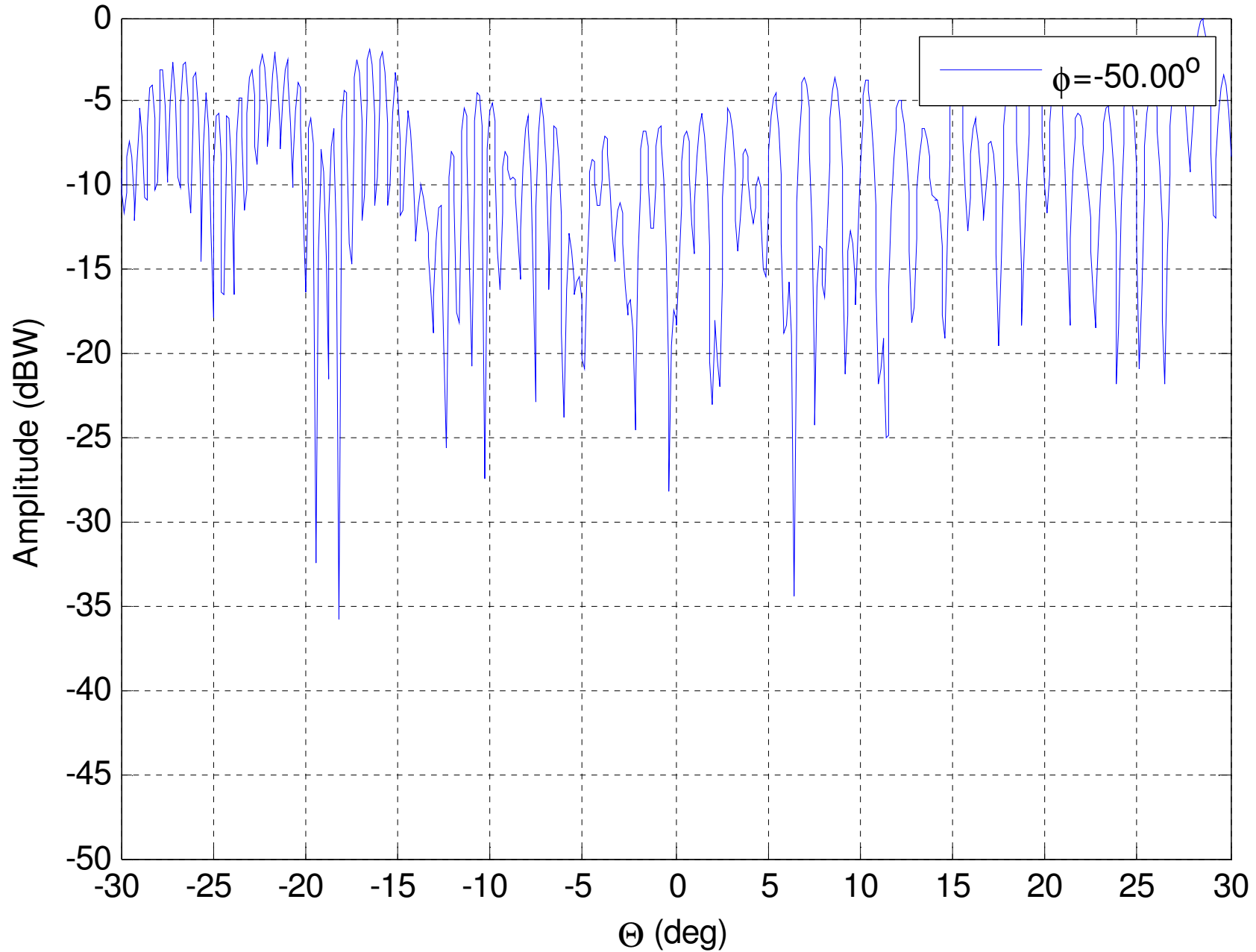
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.46 dBW, Date: 15-Dec-2011



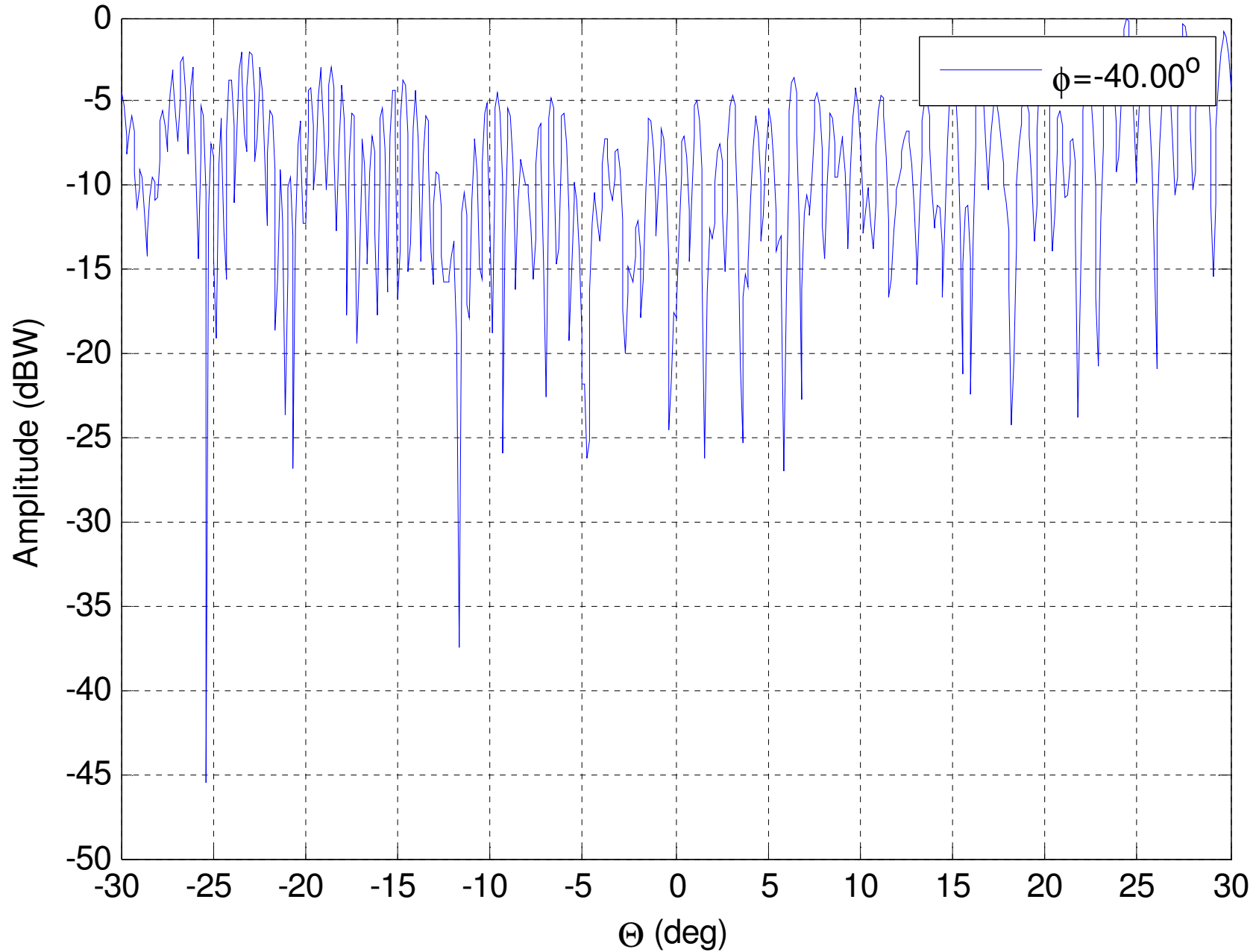
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -10.23 dBW, Date: 15-Dec-2011



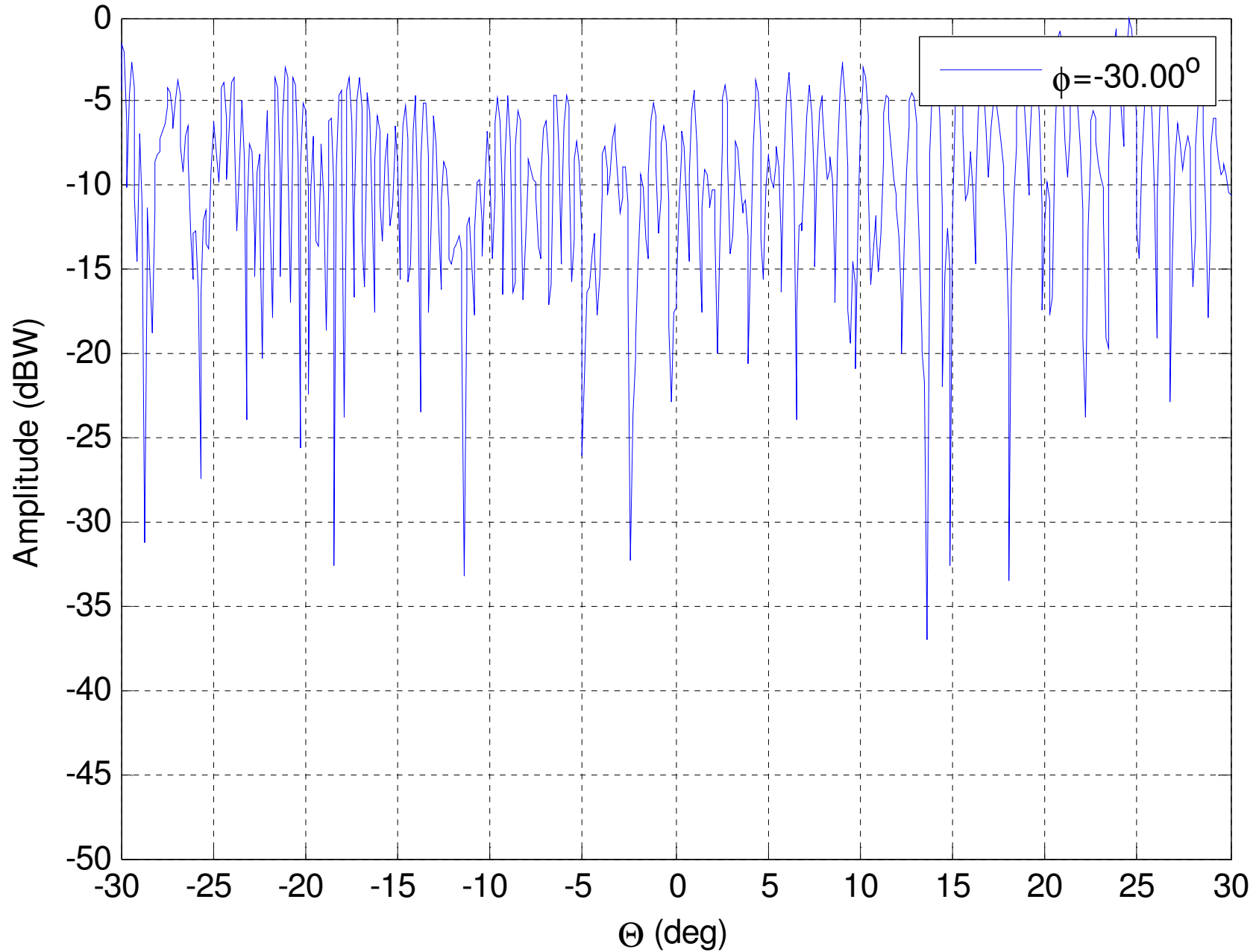
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -10.42 dBW, Date: 15-Dec-2011



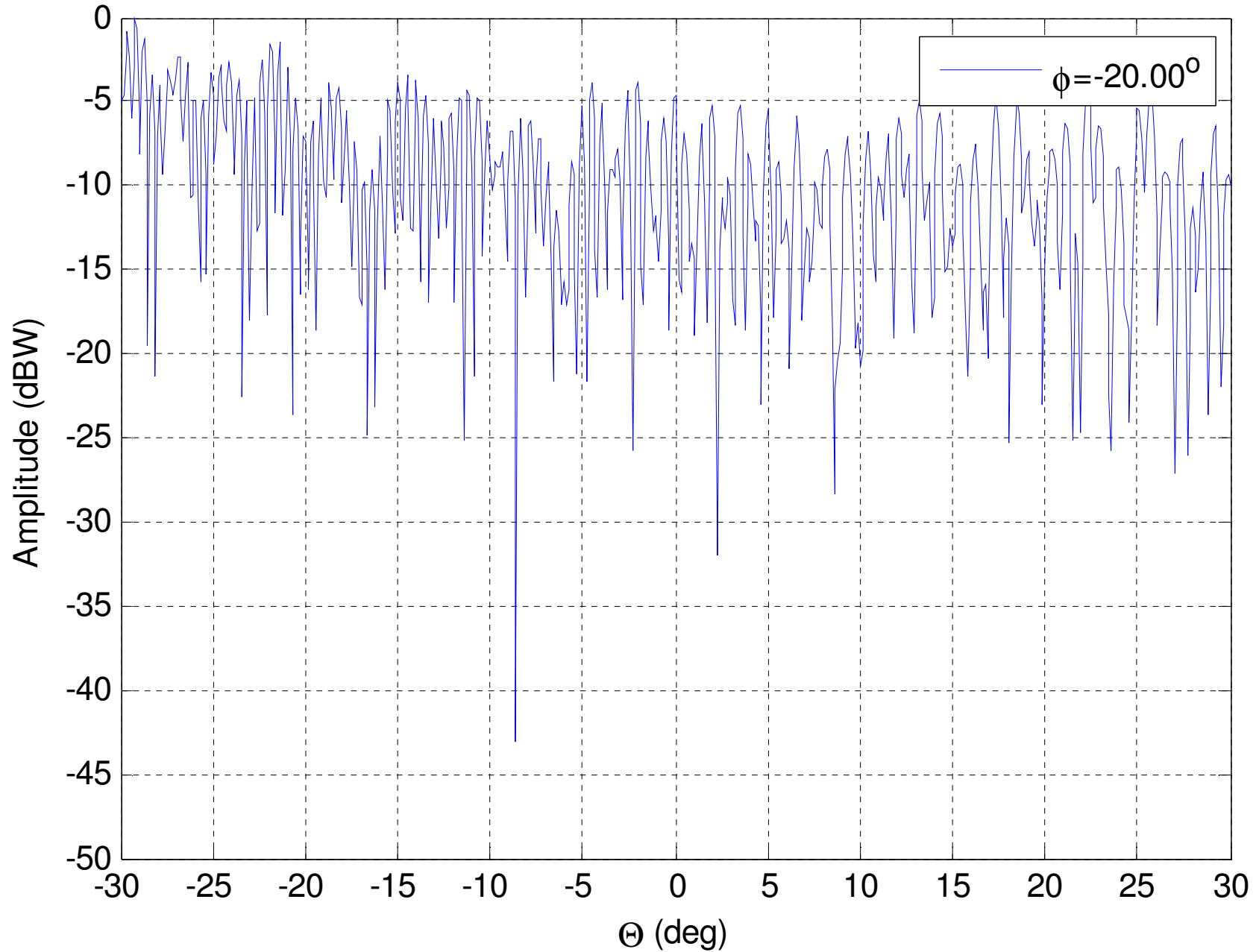
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -10.94 dBW, Date: 15-Dec-2011



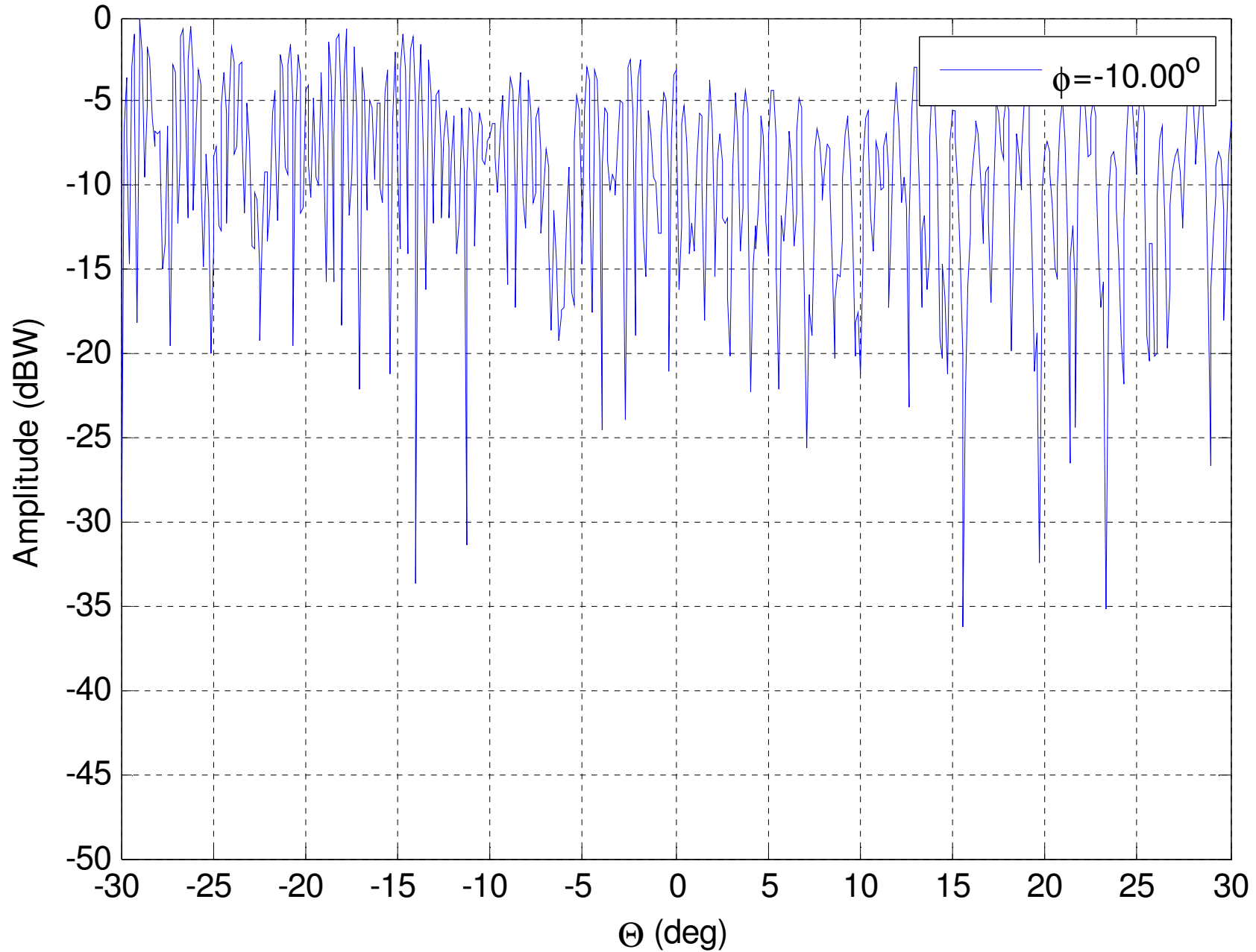
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -11.13 dBW, Date: 15-Dec-2011



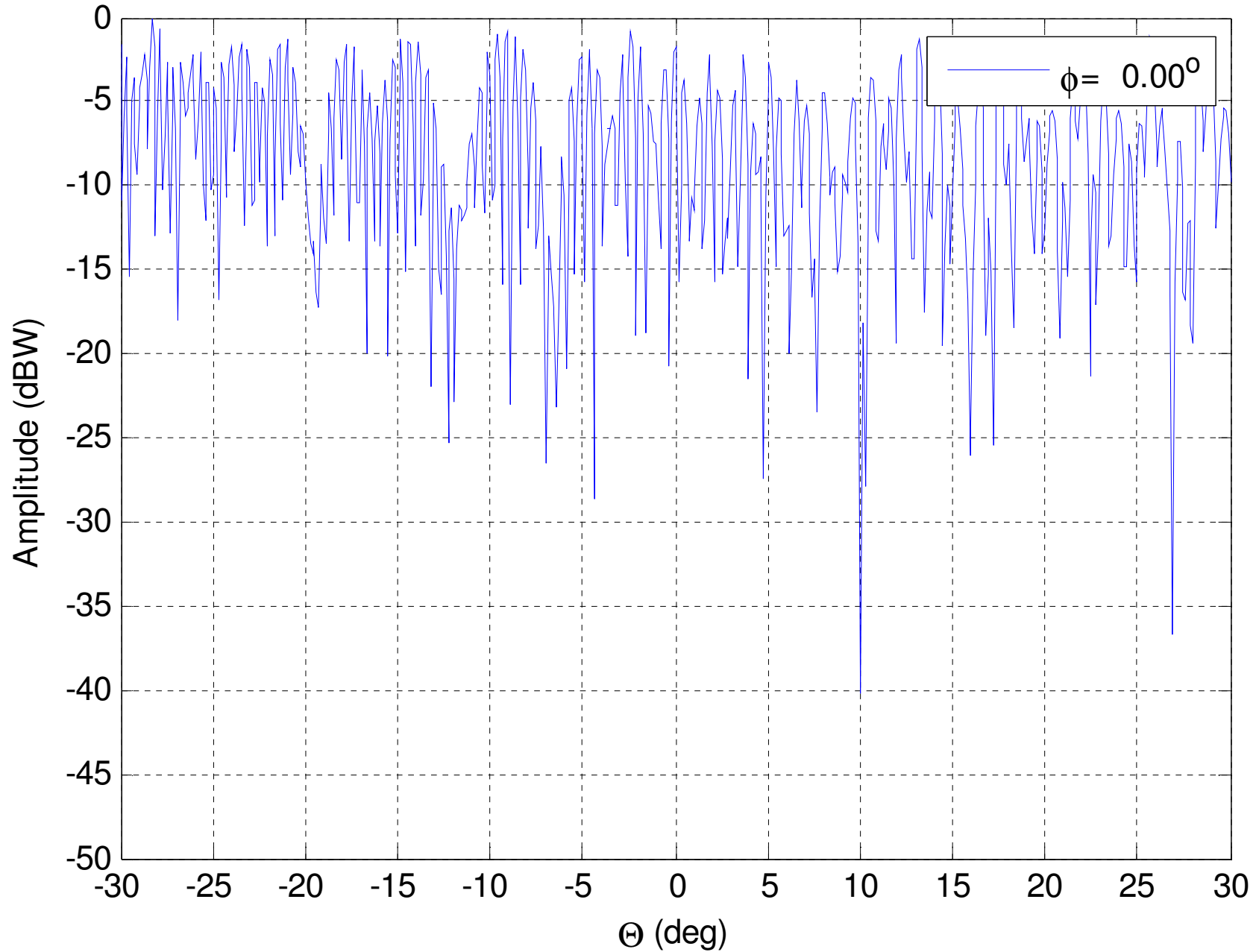
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -12.59 dBW, Date: 15-Dec-2011



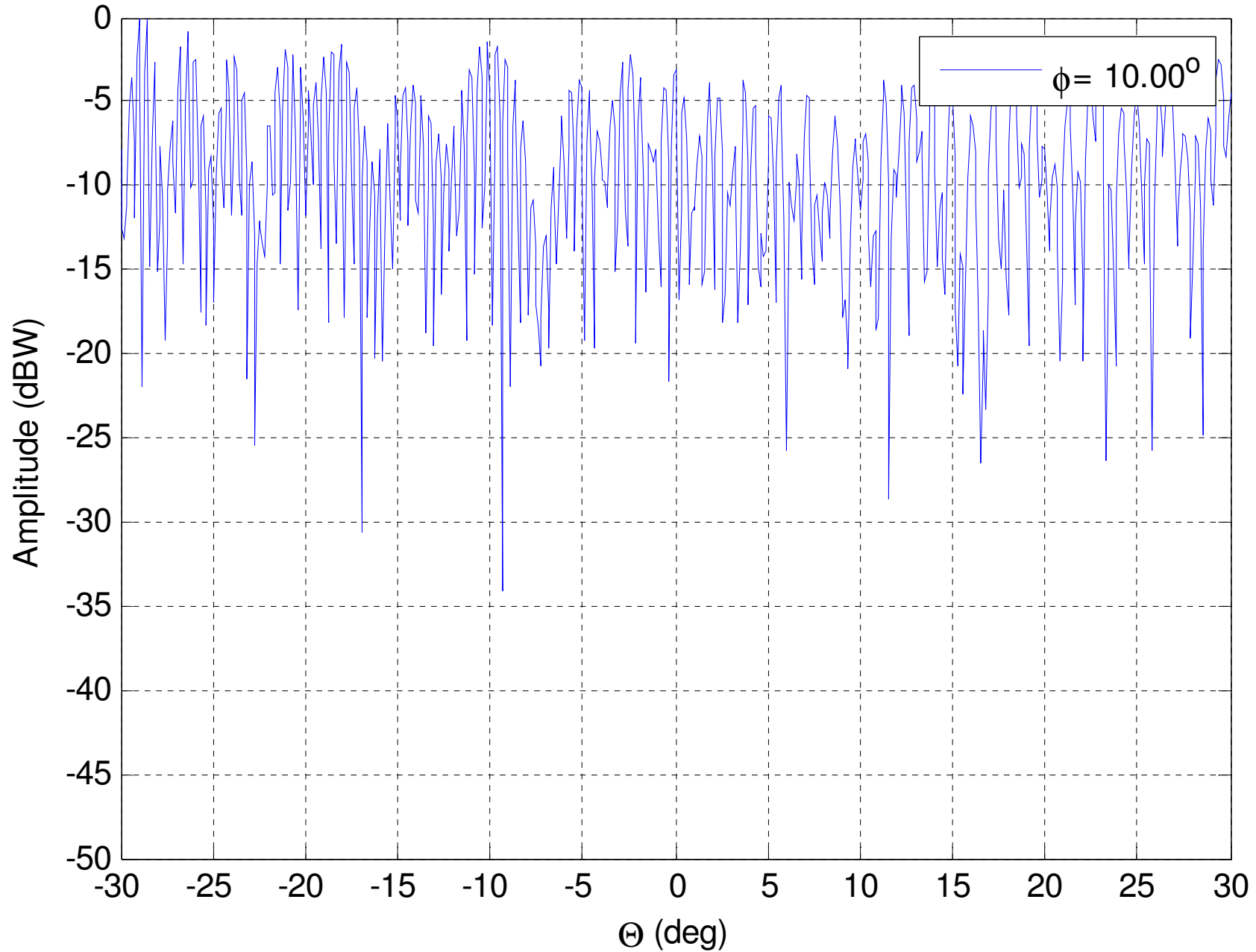
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -13.98 dBW, Date: 15-Dec-2011



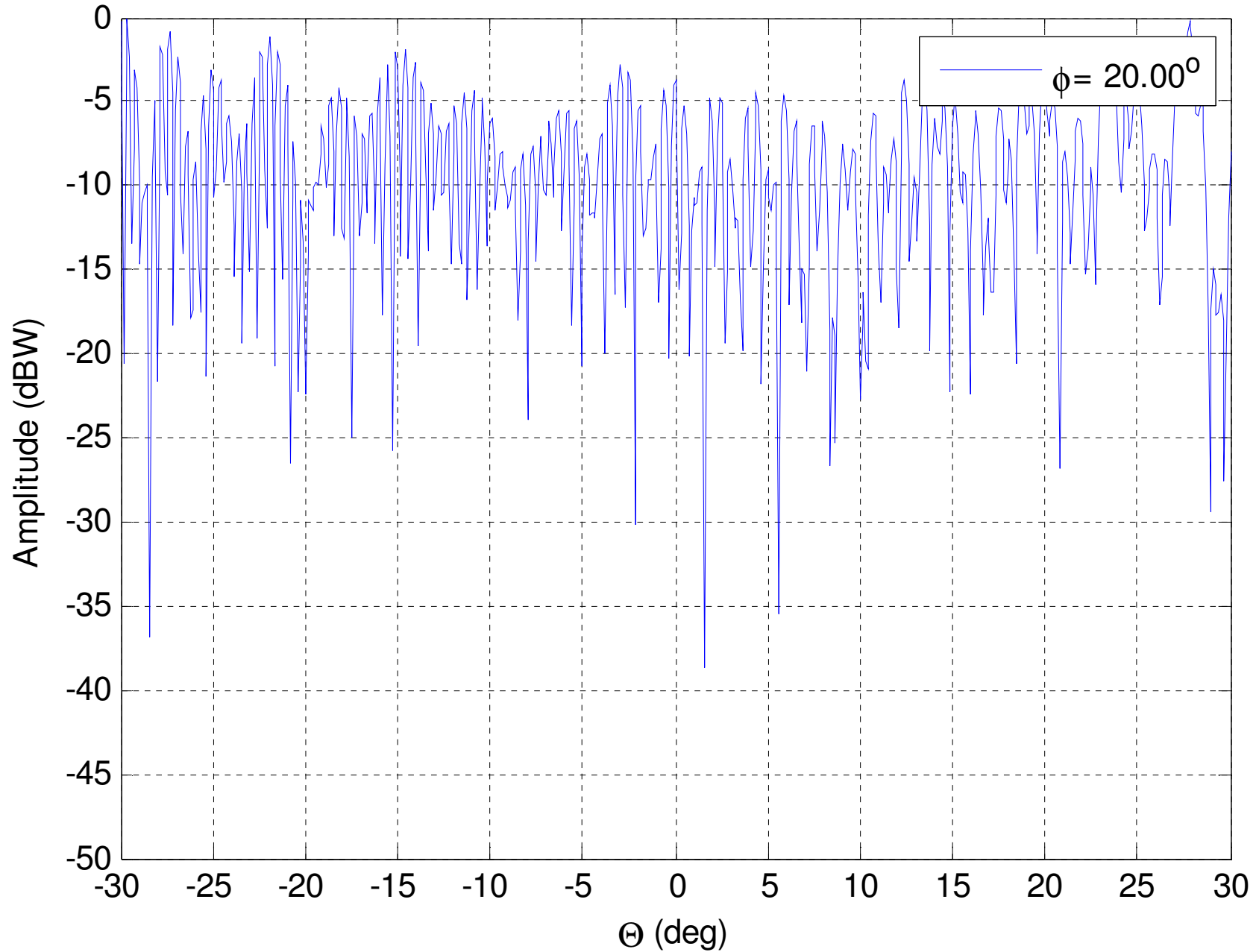
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -12.64 dBW, Date: 15-Dec-2011



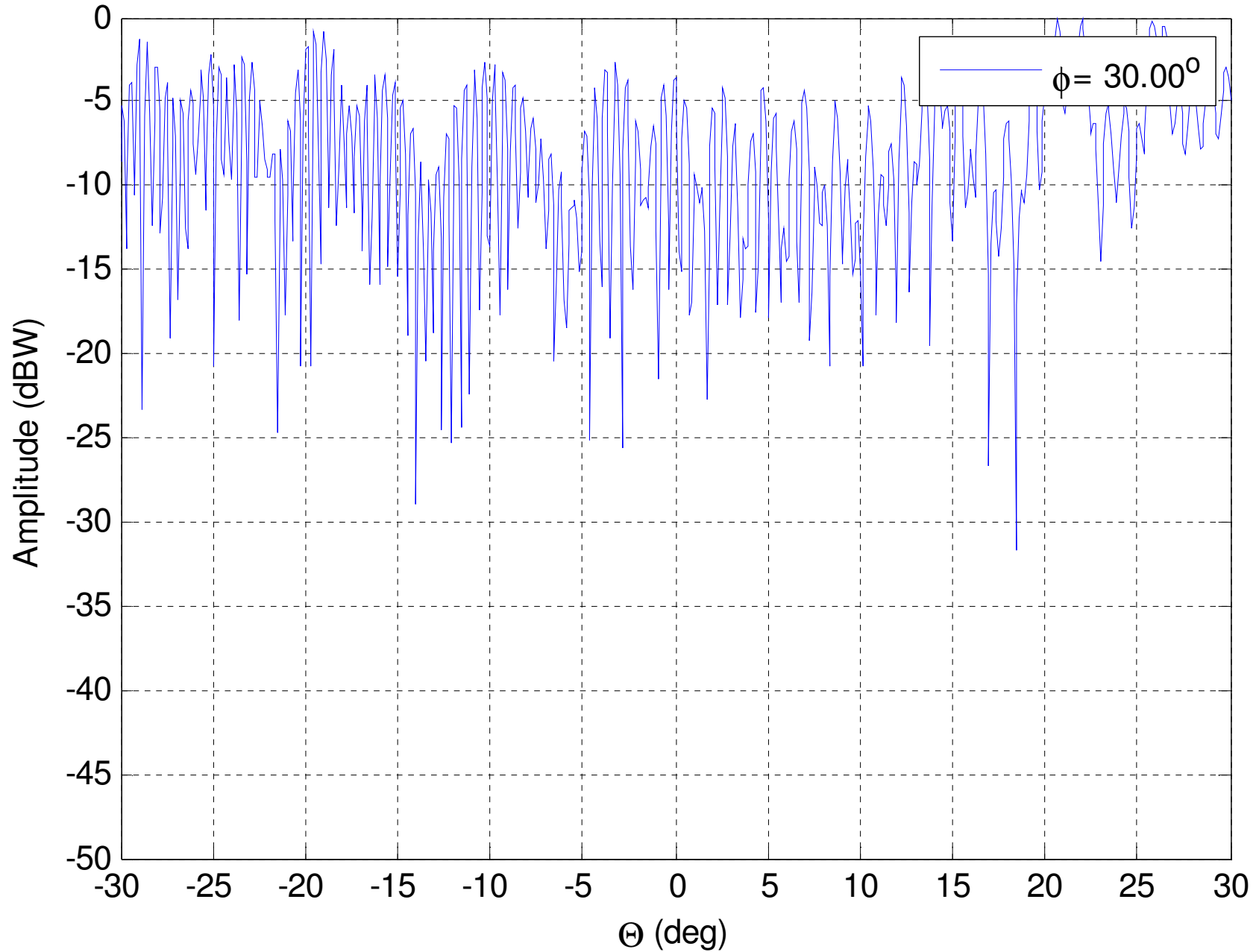
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -11.97 dBW, Date: 15-Dec-2011



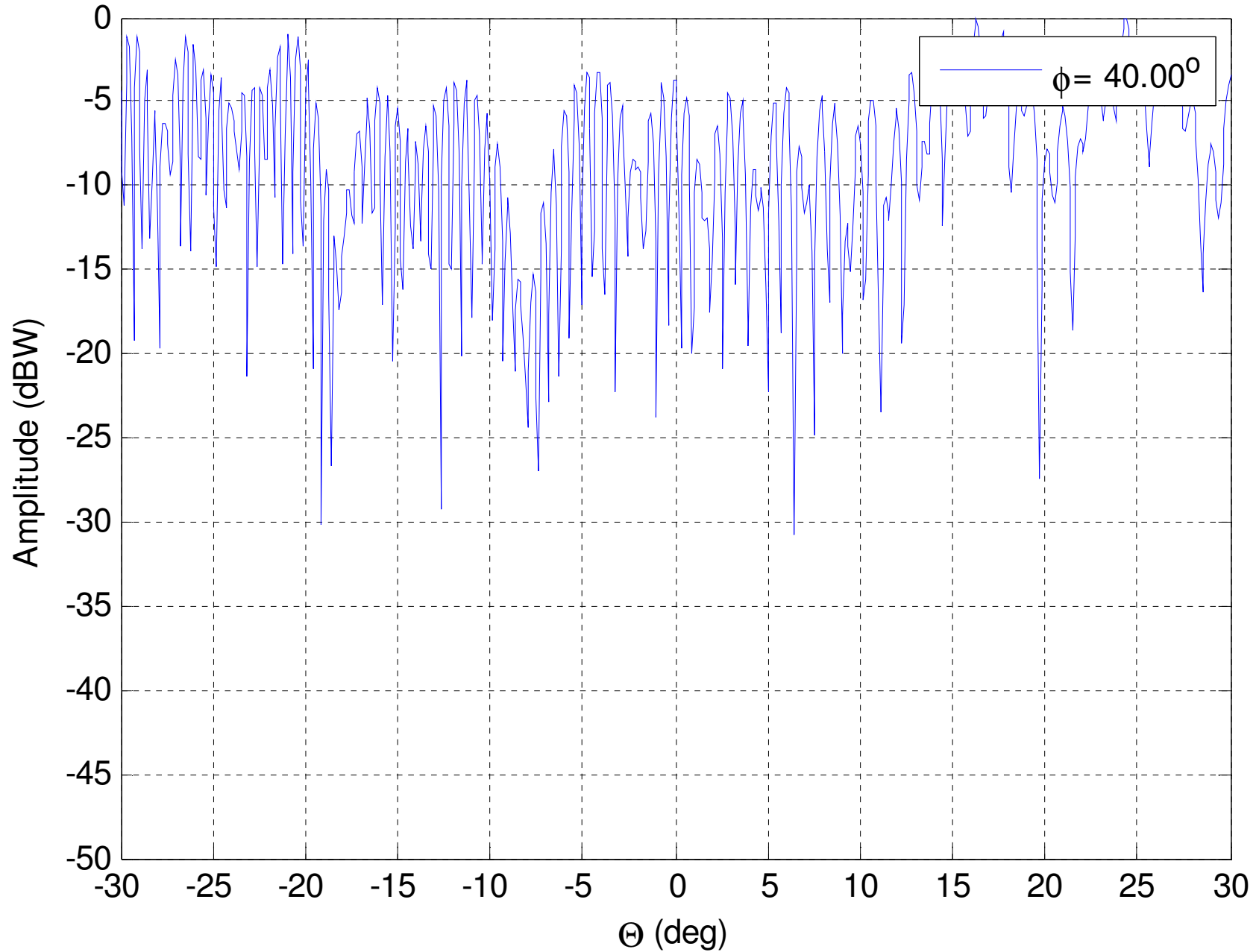
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -12.13 dBW, Date: 15-Dec-2011



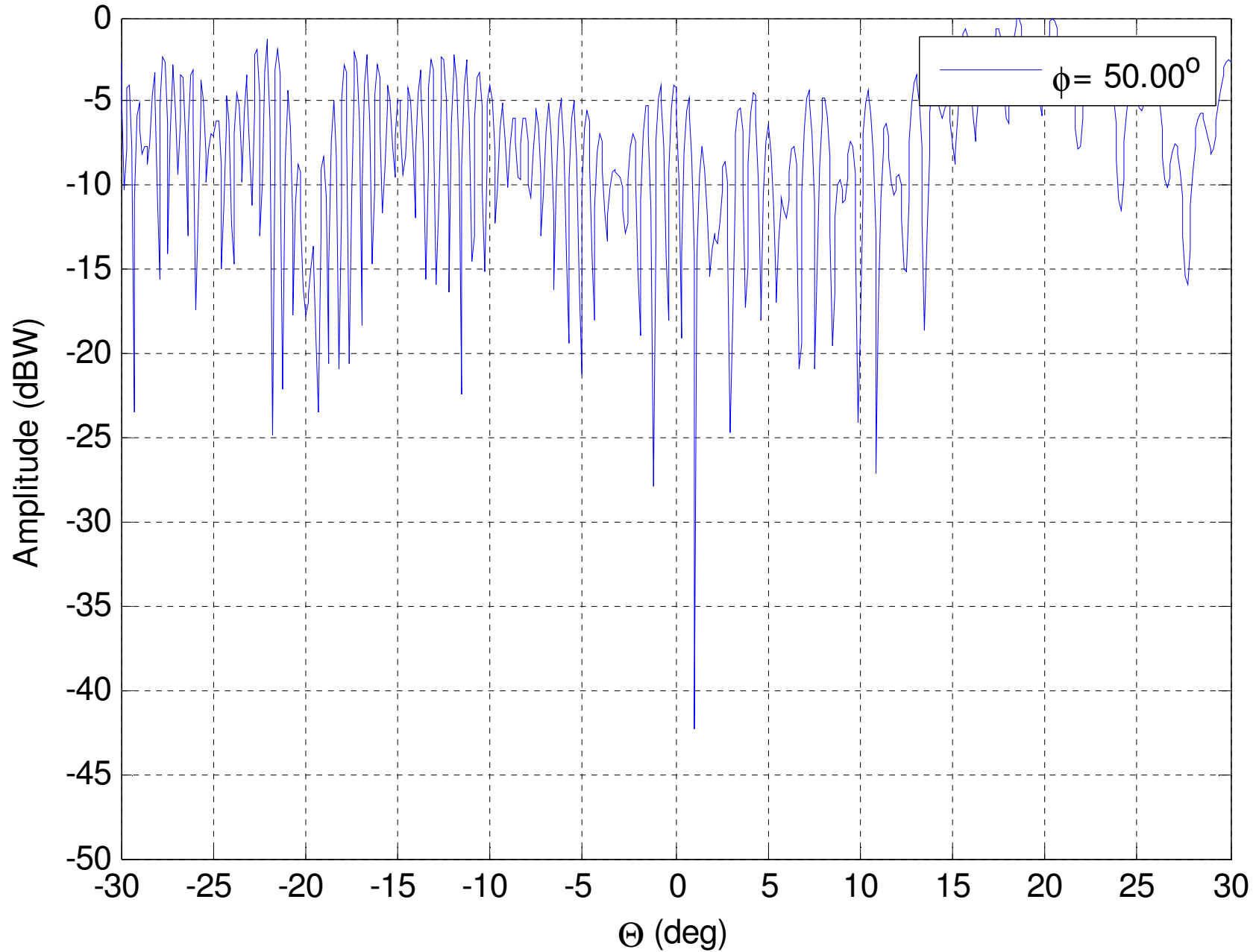
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -11.99 dBW, Date: 15-Dec-2011



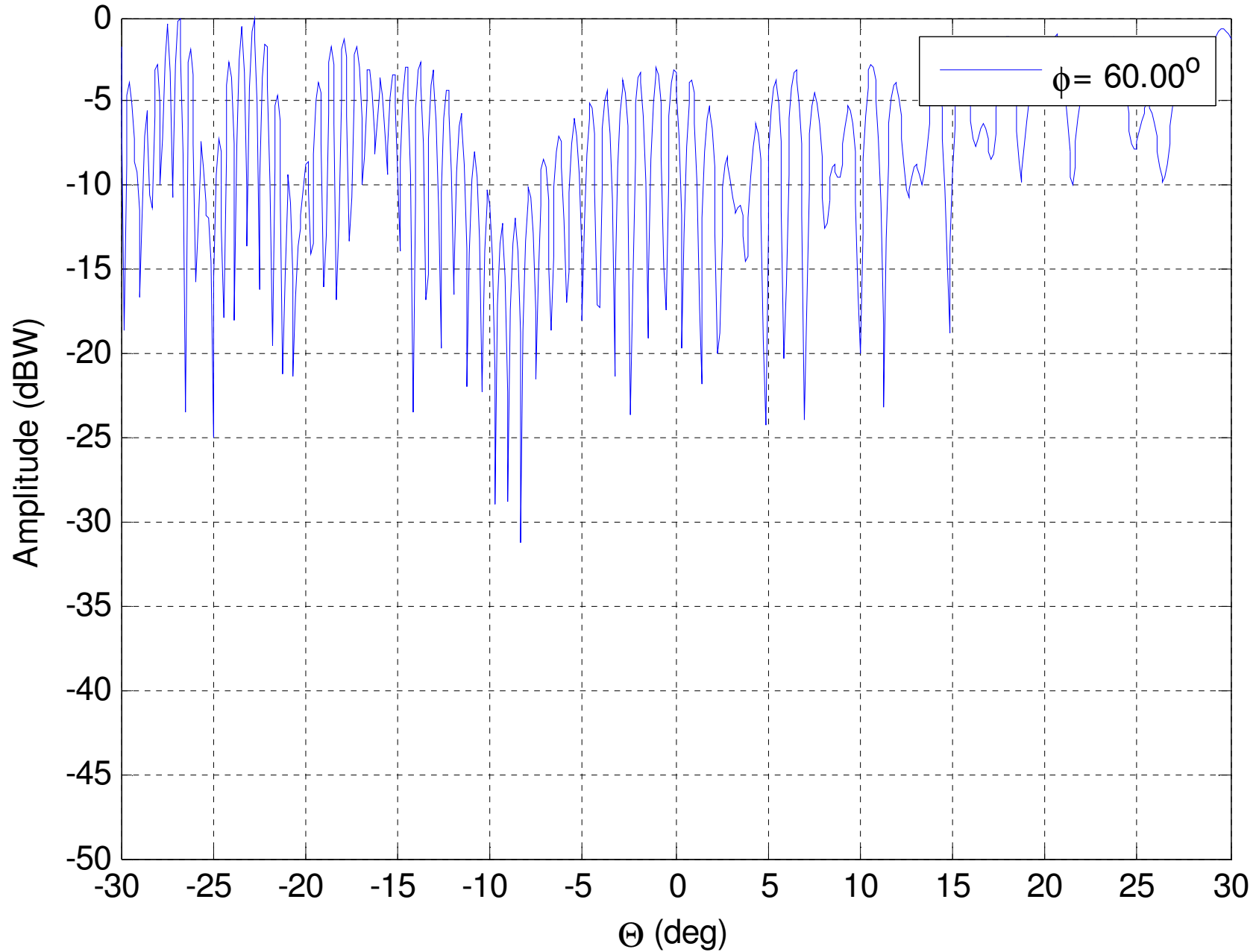
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.60 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

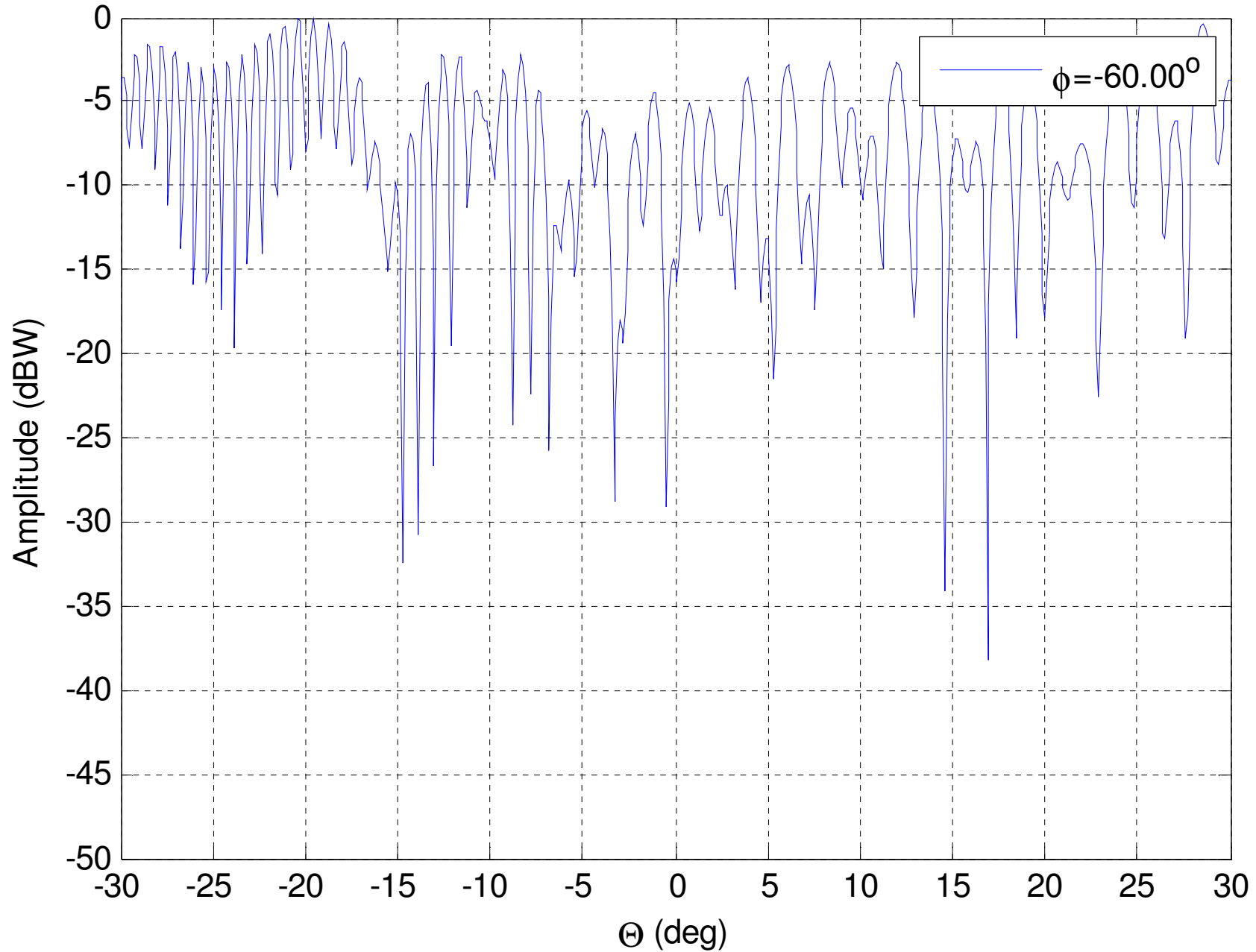
Input file: tx-17.5-rhcp-60.cut, Peak: -12.44 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

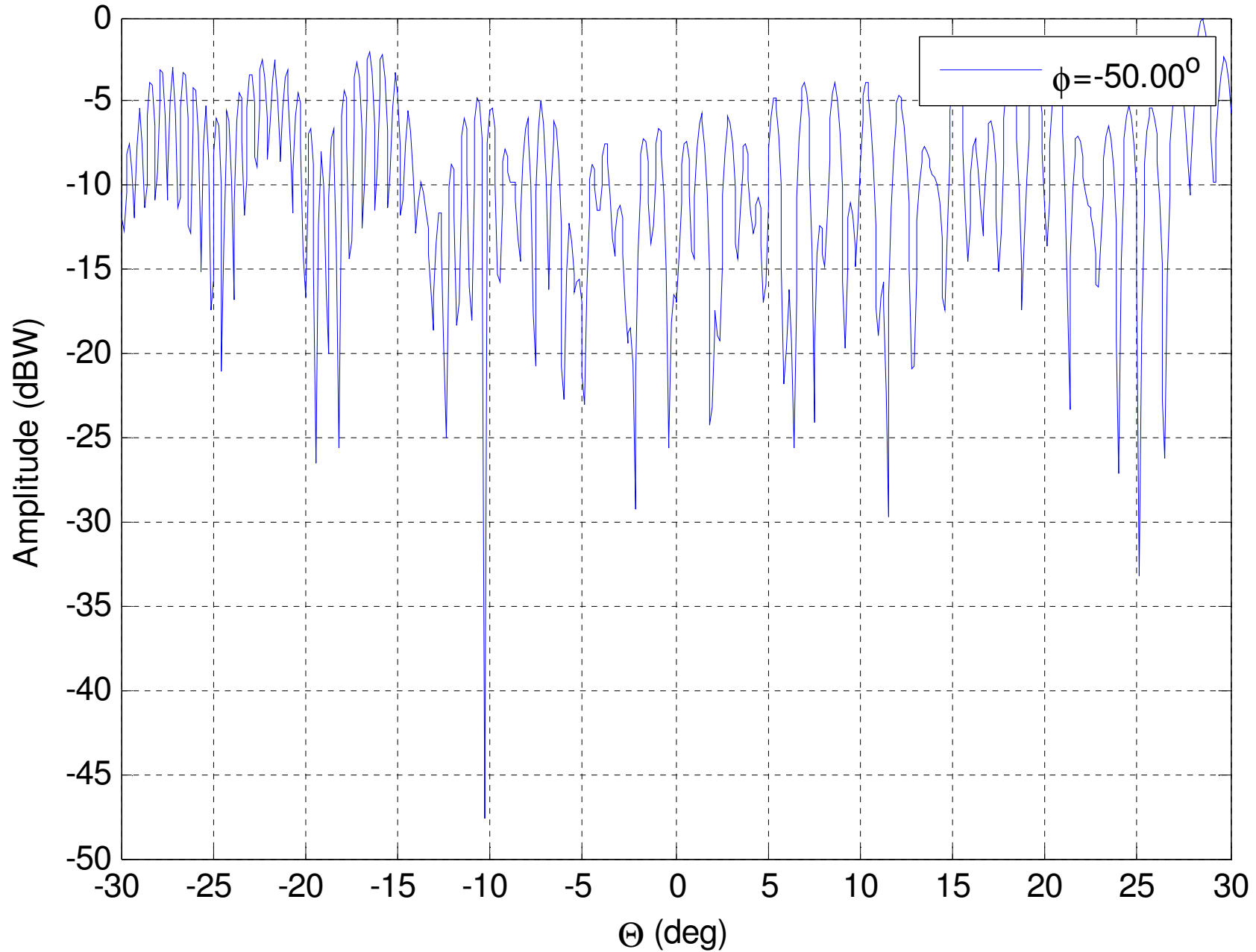
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -11.71 dBW, Date: 15-Dec-2011



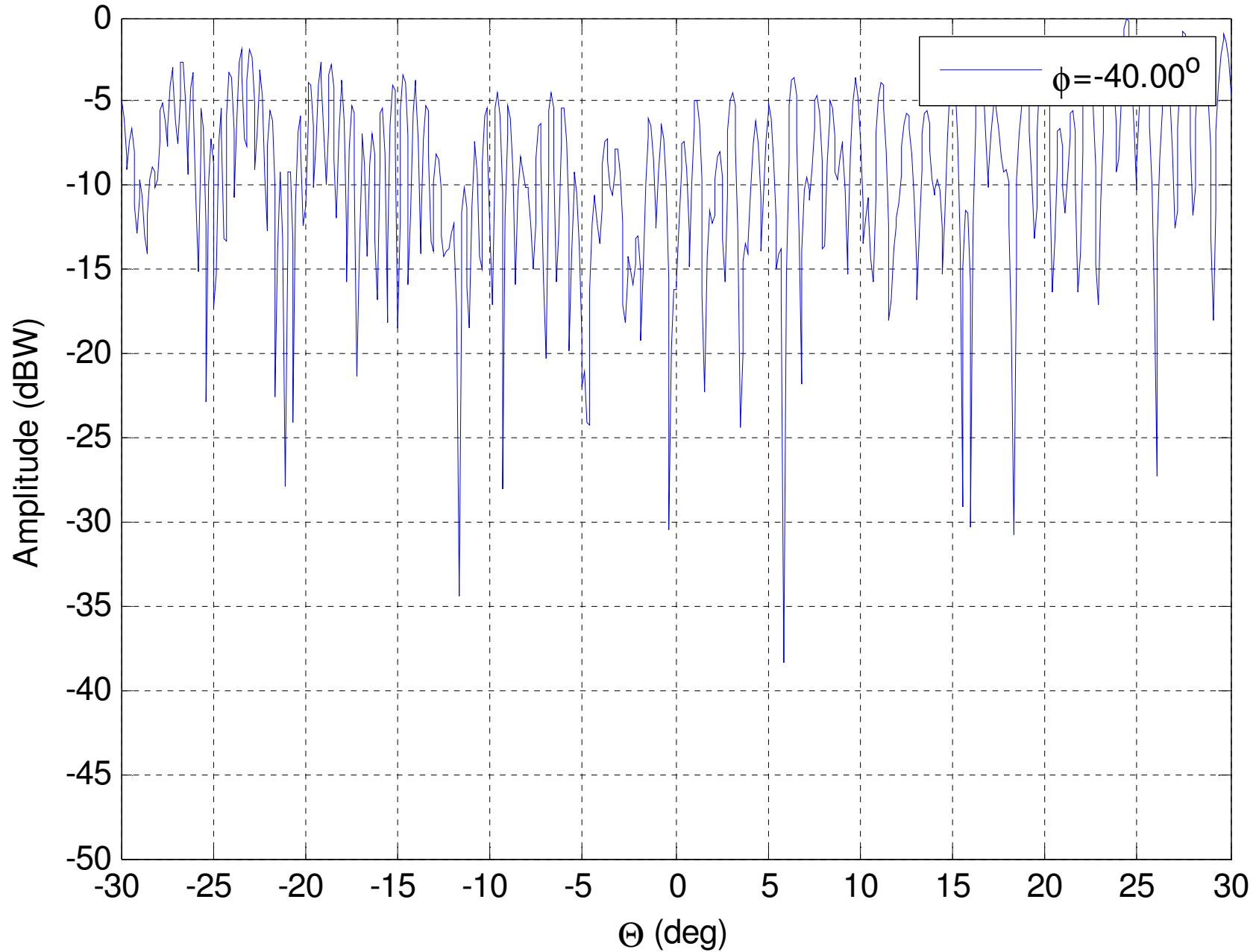
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -9.98 dBW, Date: 15-Dec-2011



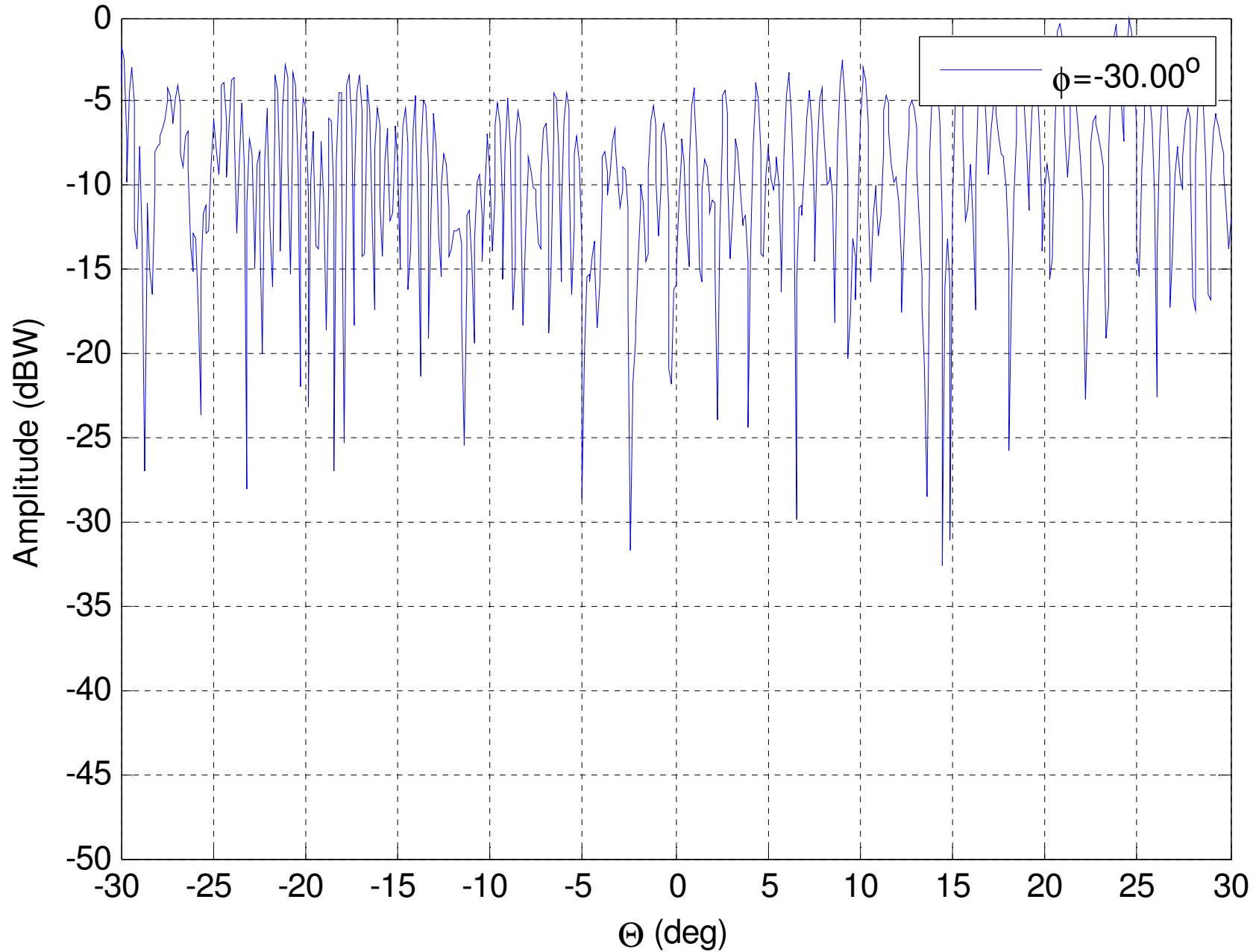
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -10.58 dBW, Date: 15-Dec-2011



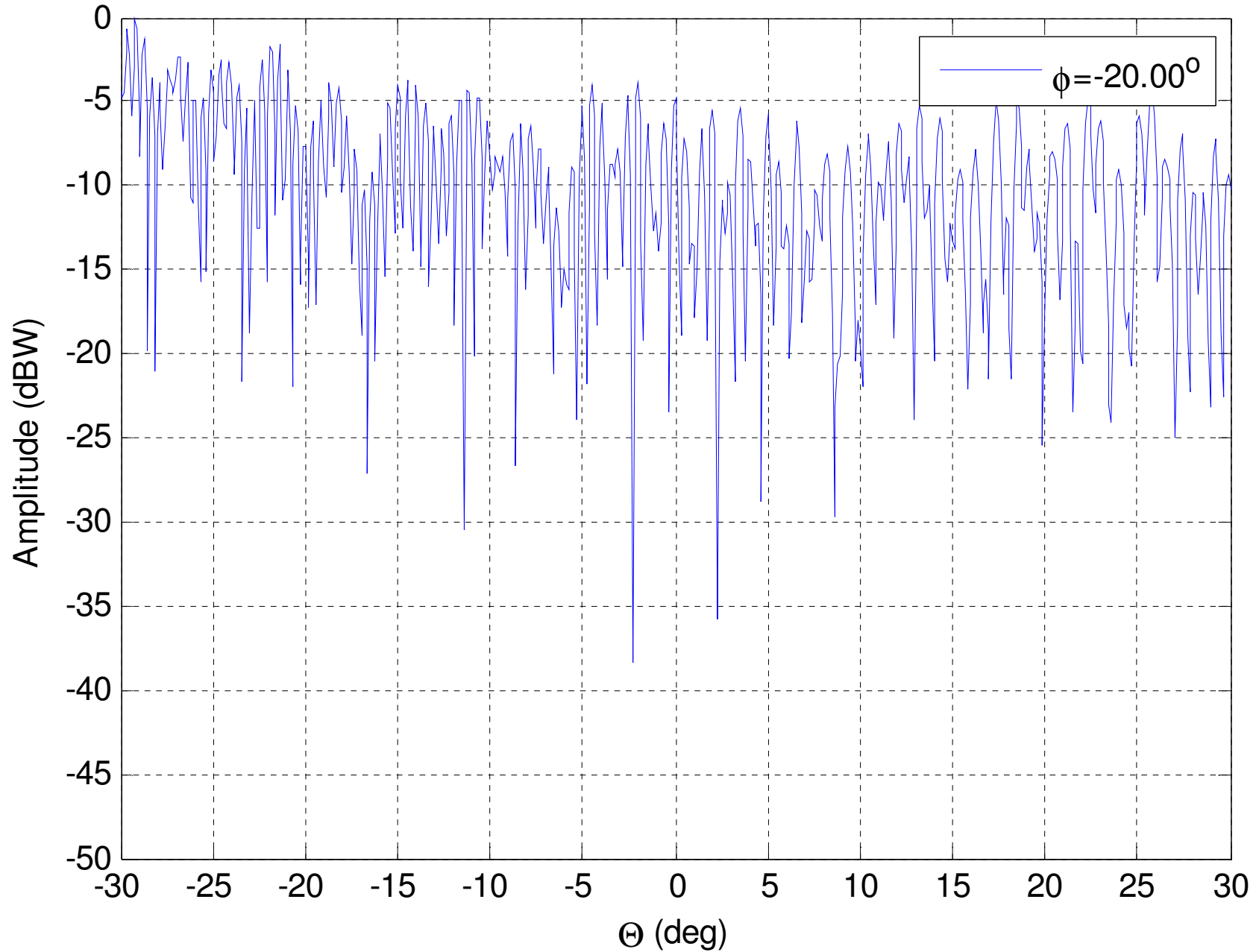
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -10.95 dBW, Date: 15-Dec-2011



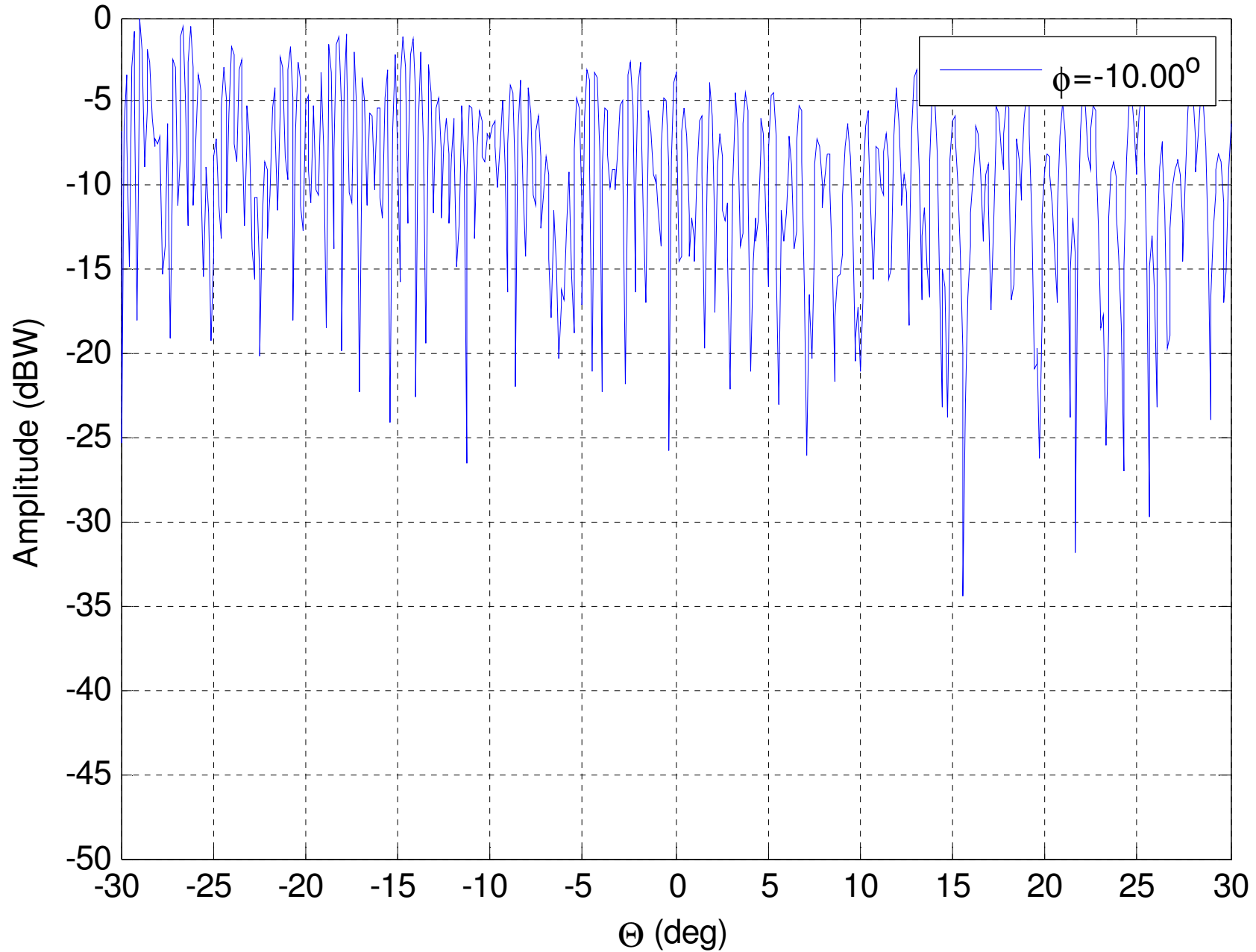
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -11.01 dBW, Date: 15-Dec-2011



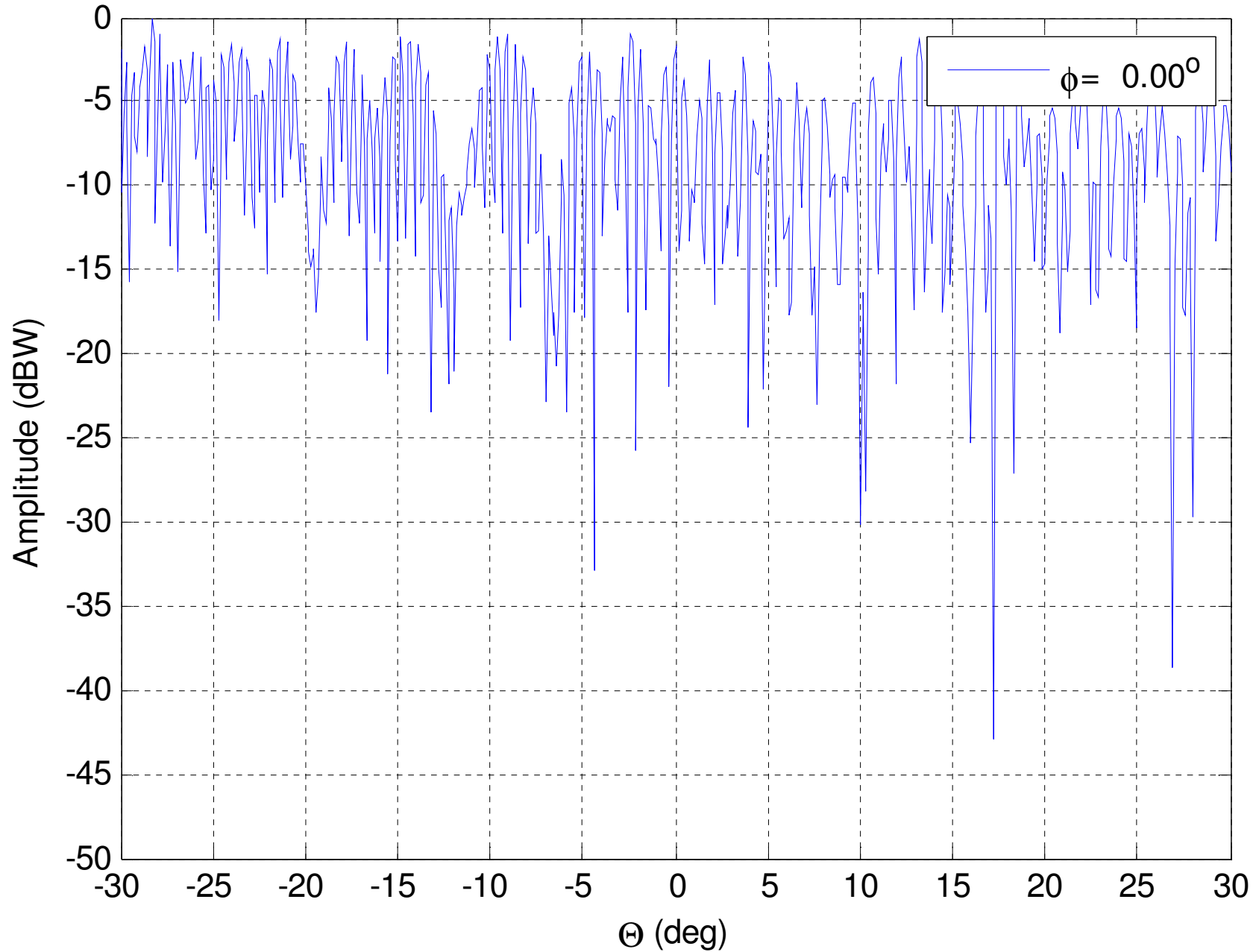
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -12.51 dBW, Date: 15-Dec-2011



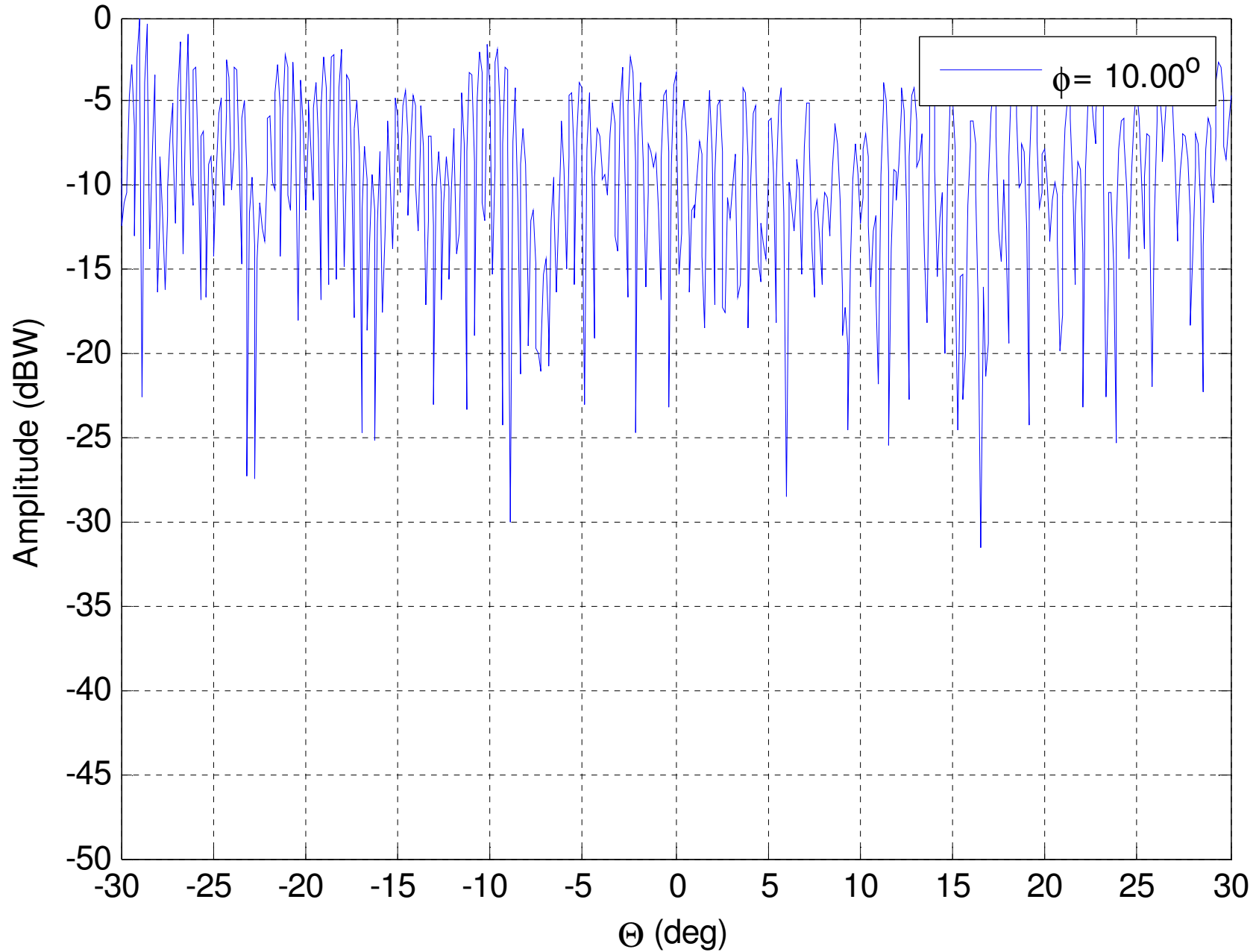
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -14.00 dBW, Date: 15-Dec-2011



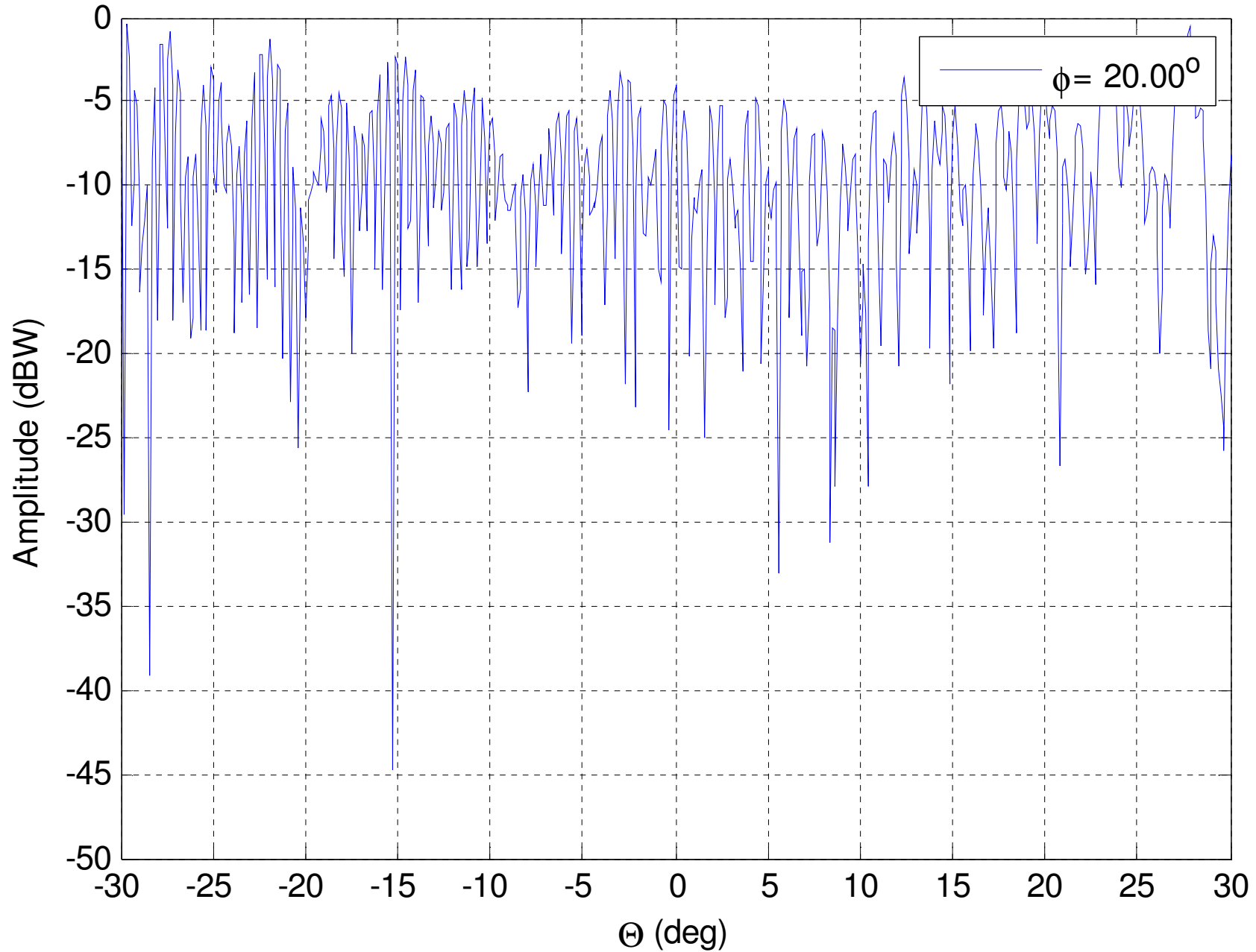
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -12.48 dBW, Date: 15-Dec-2011



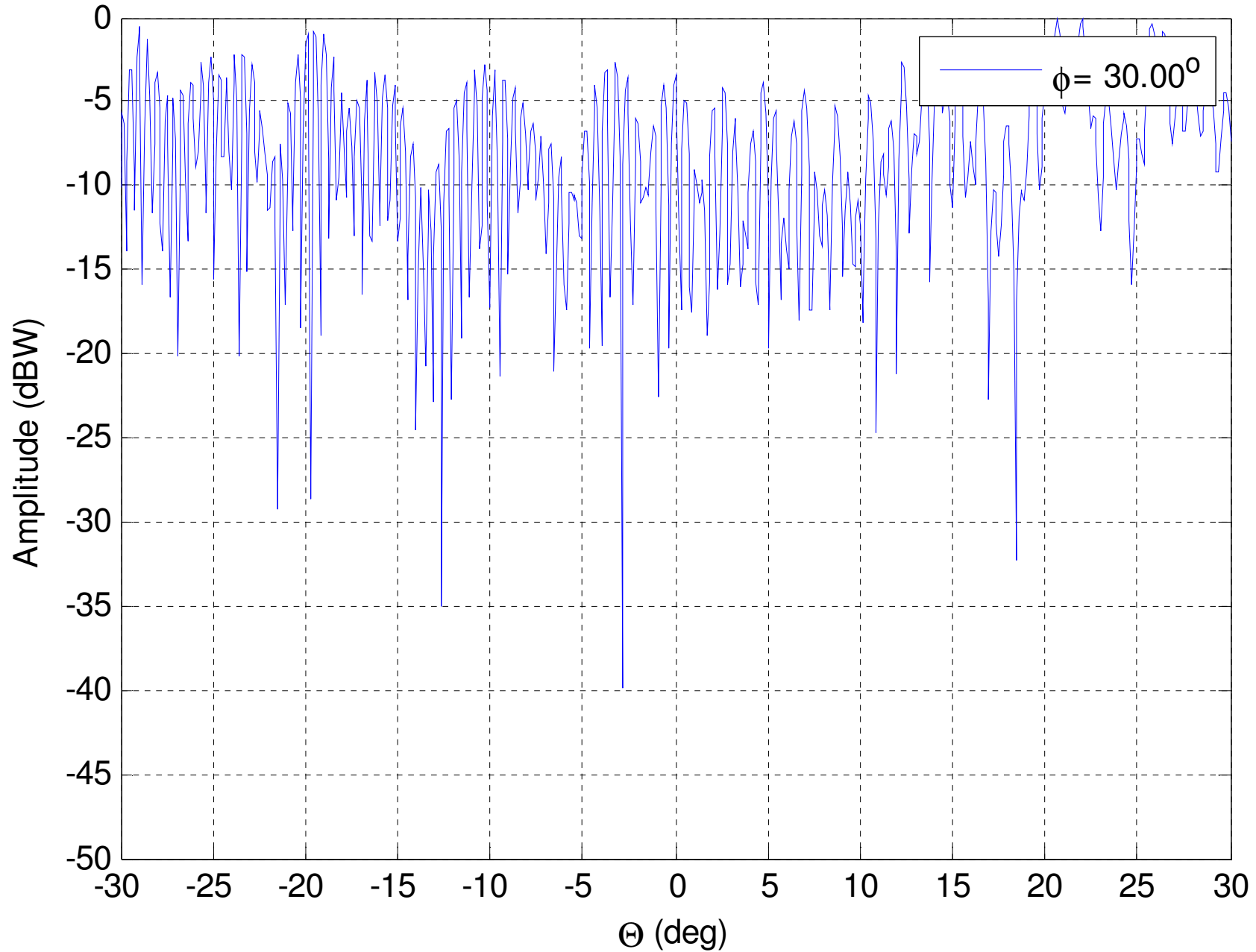
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -11.69 dBW, Date: 15-Dec-2011



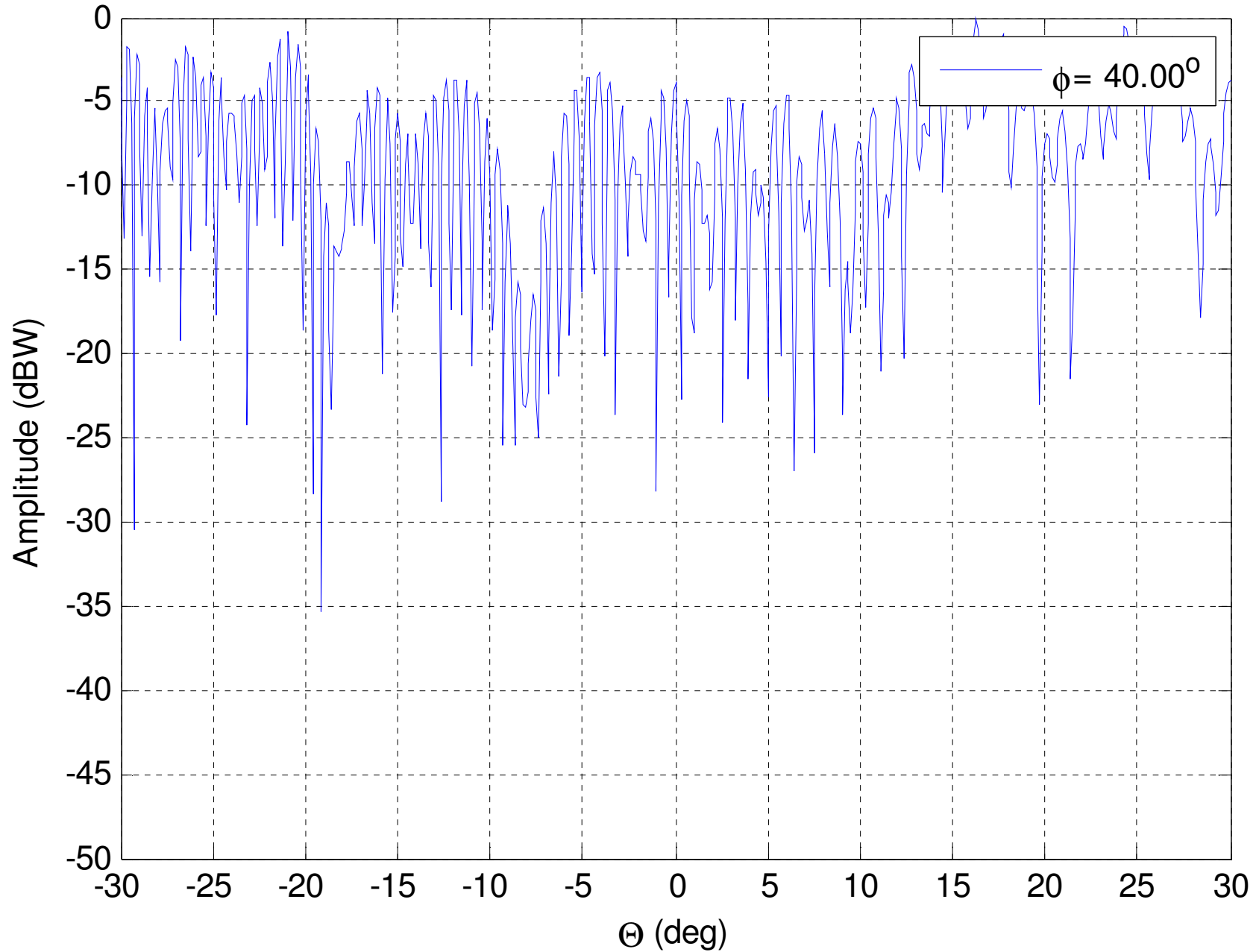
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -12.25 dBW, Date: 15-Dec-2011



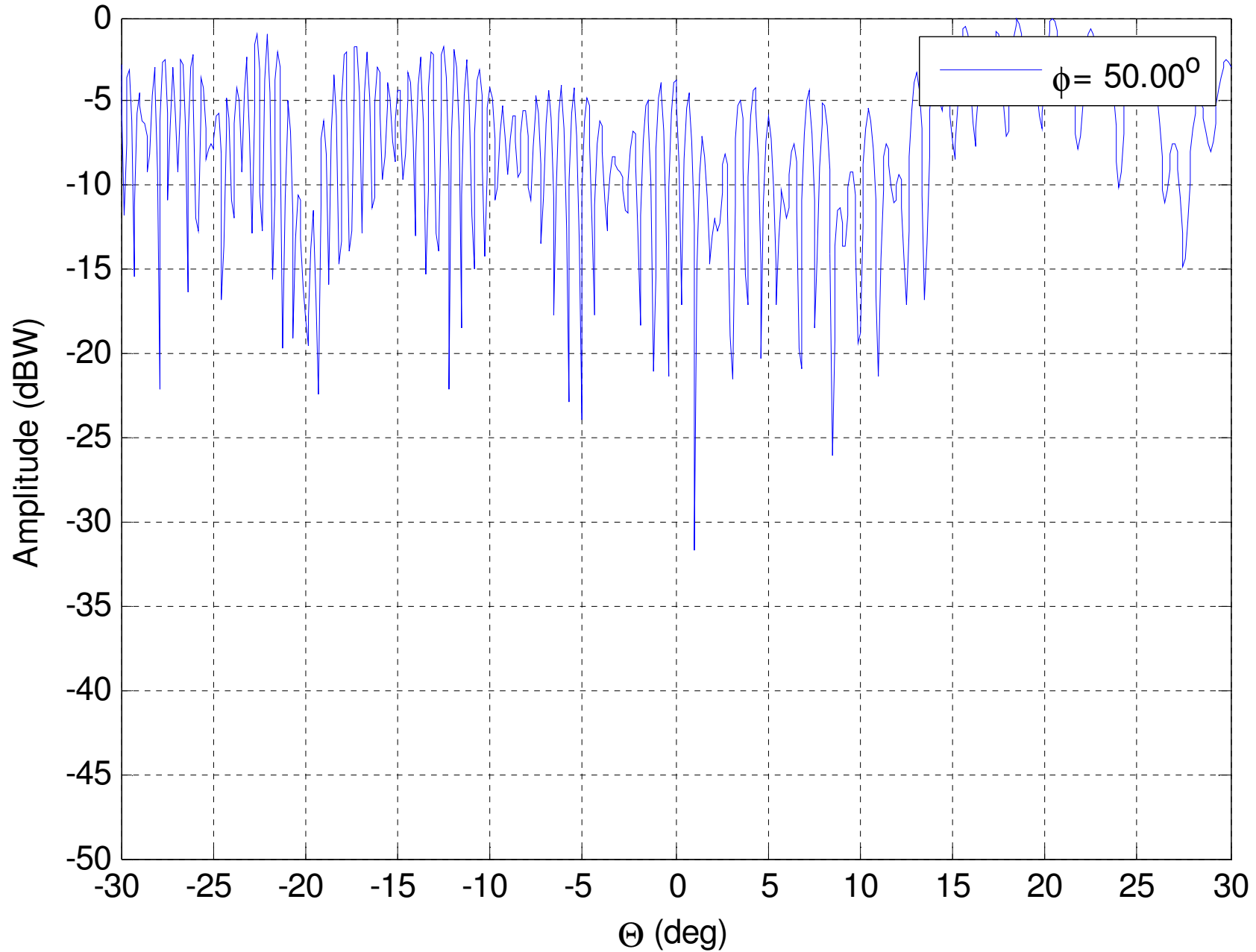
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -11.80 dBW, Date: 15-Dec-2011



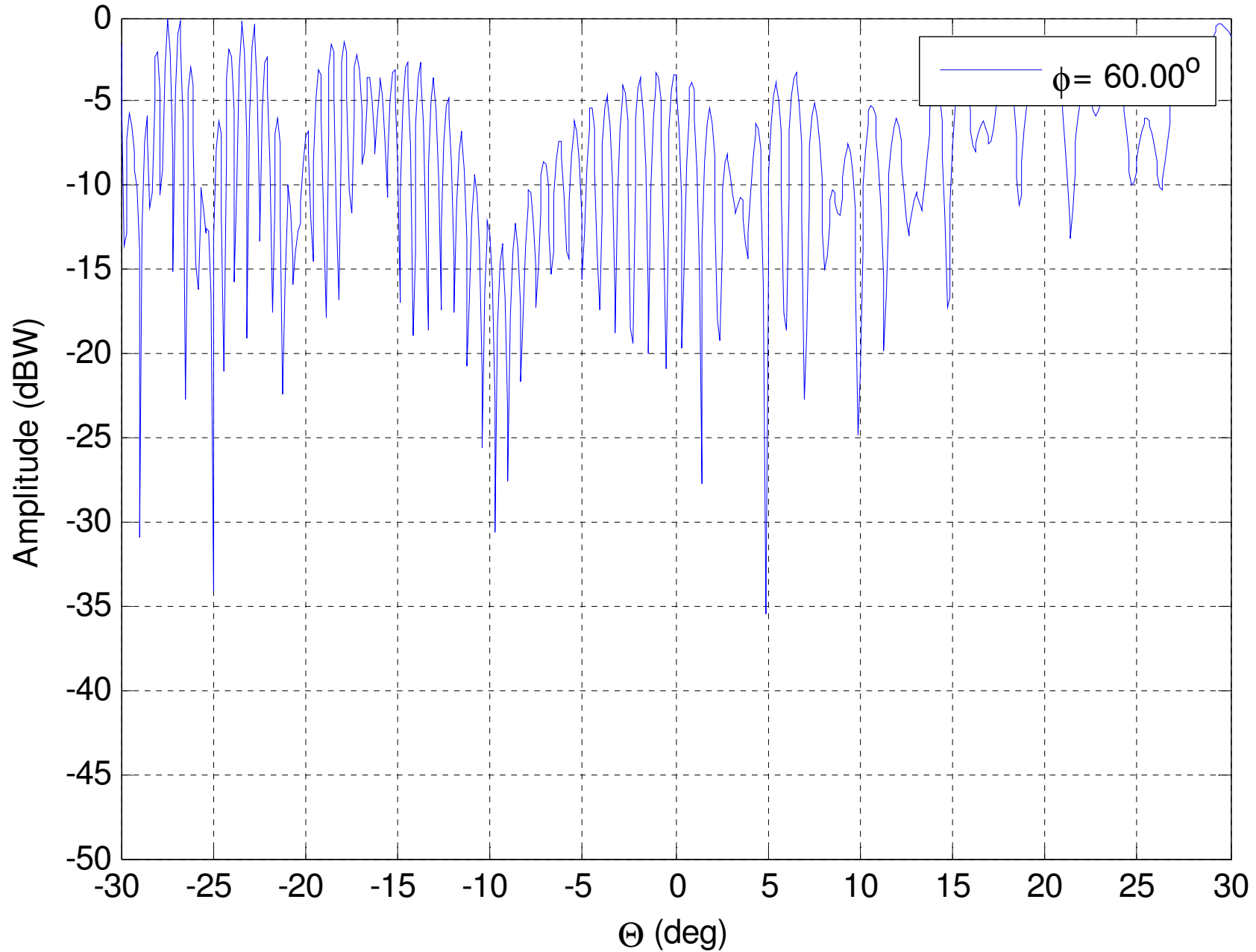
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.01 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

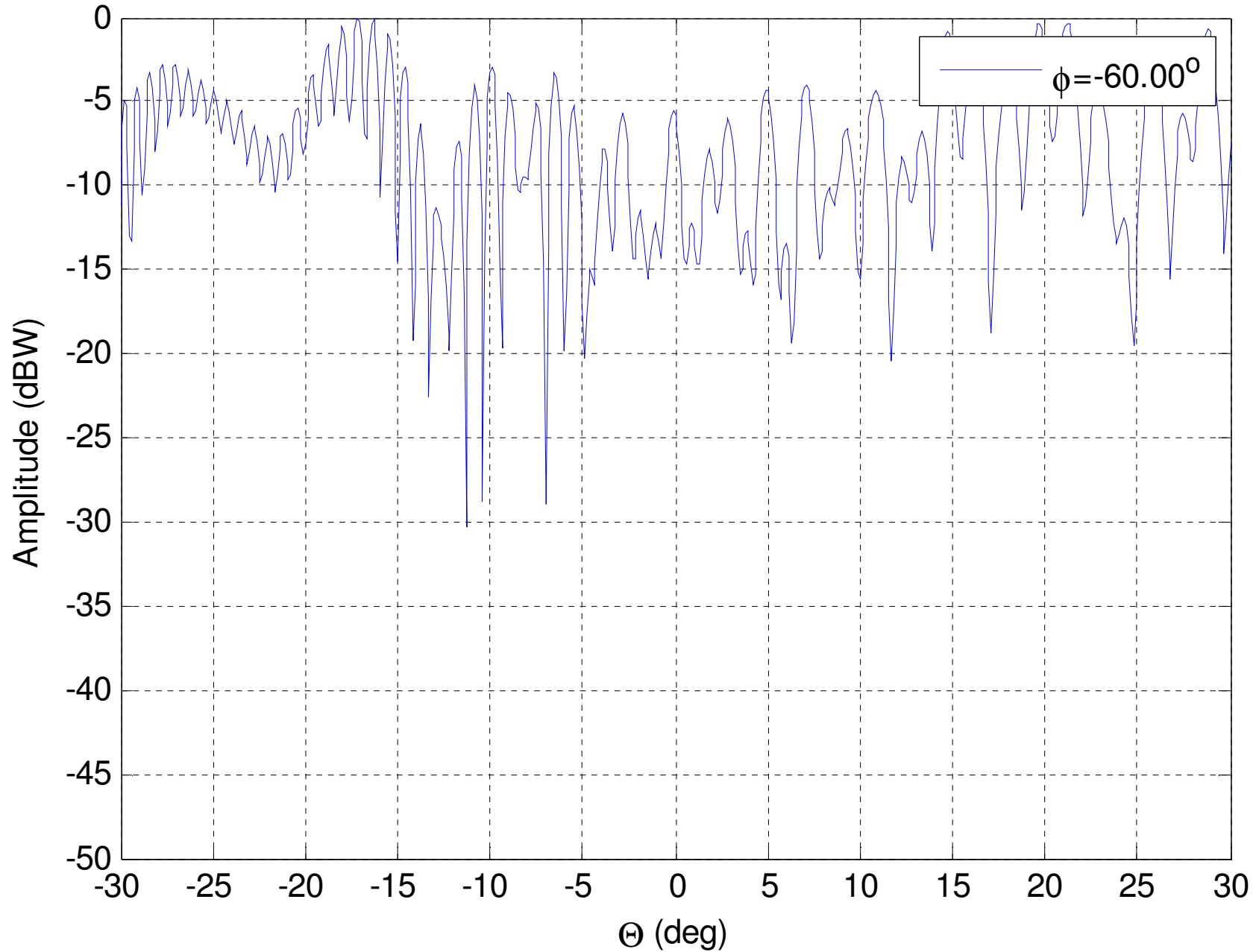
Input file: tx-17.5-lhcp-60.cut, Peak: -12.37 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

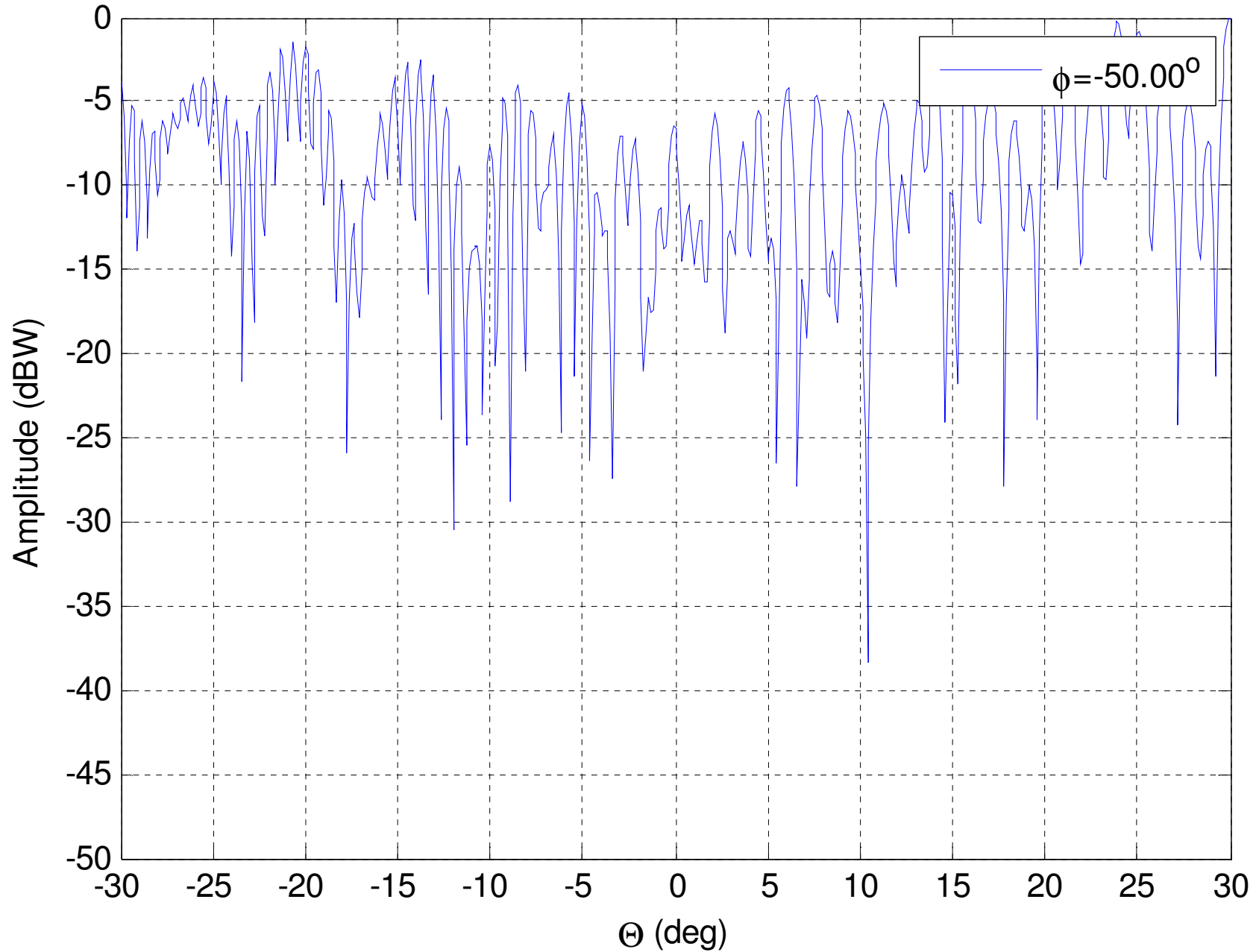
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.73 dBW, Date: 15-Dec-2011



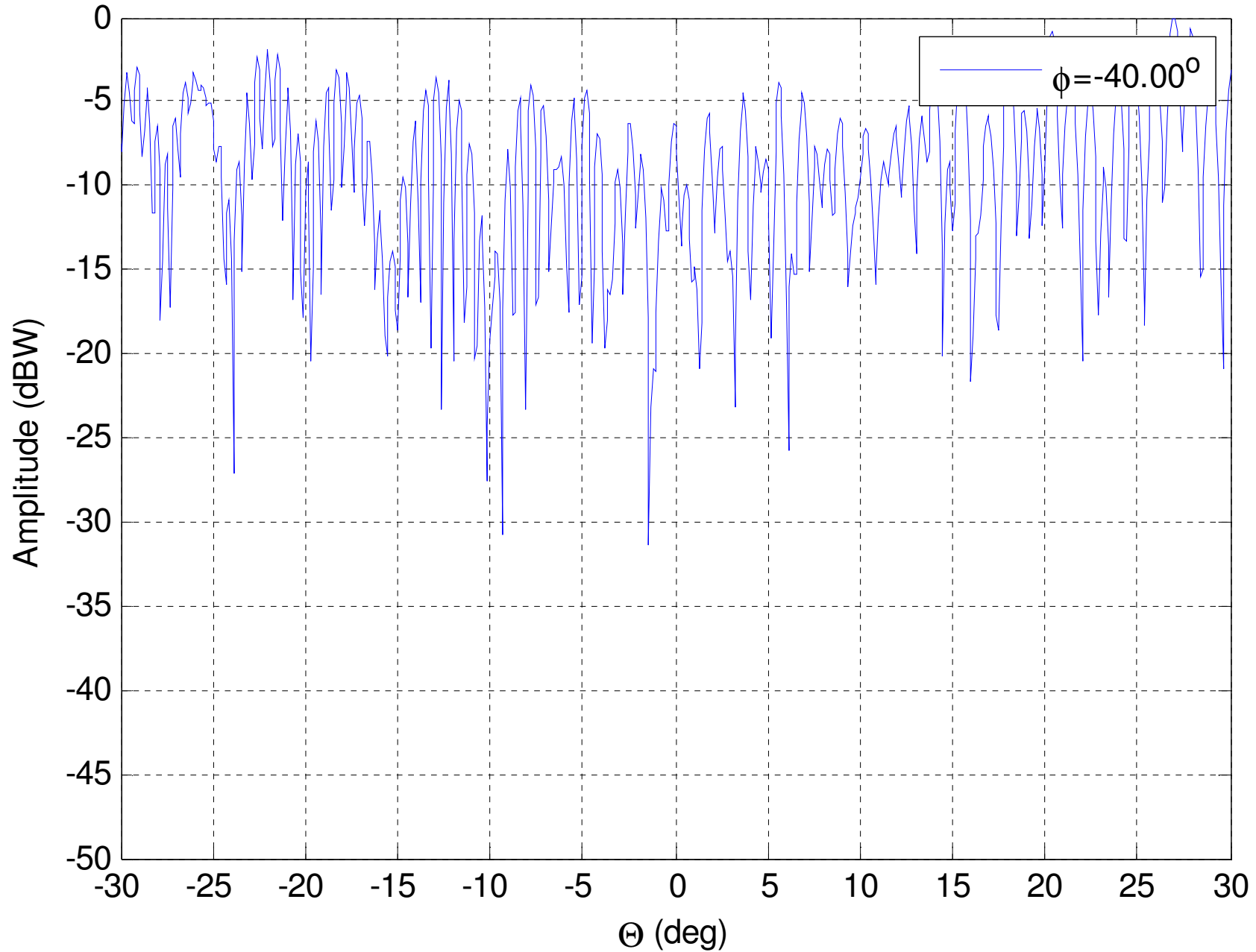
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -10.84 dBW, Date: 15-Dec-2011



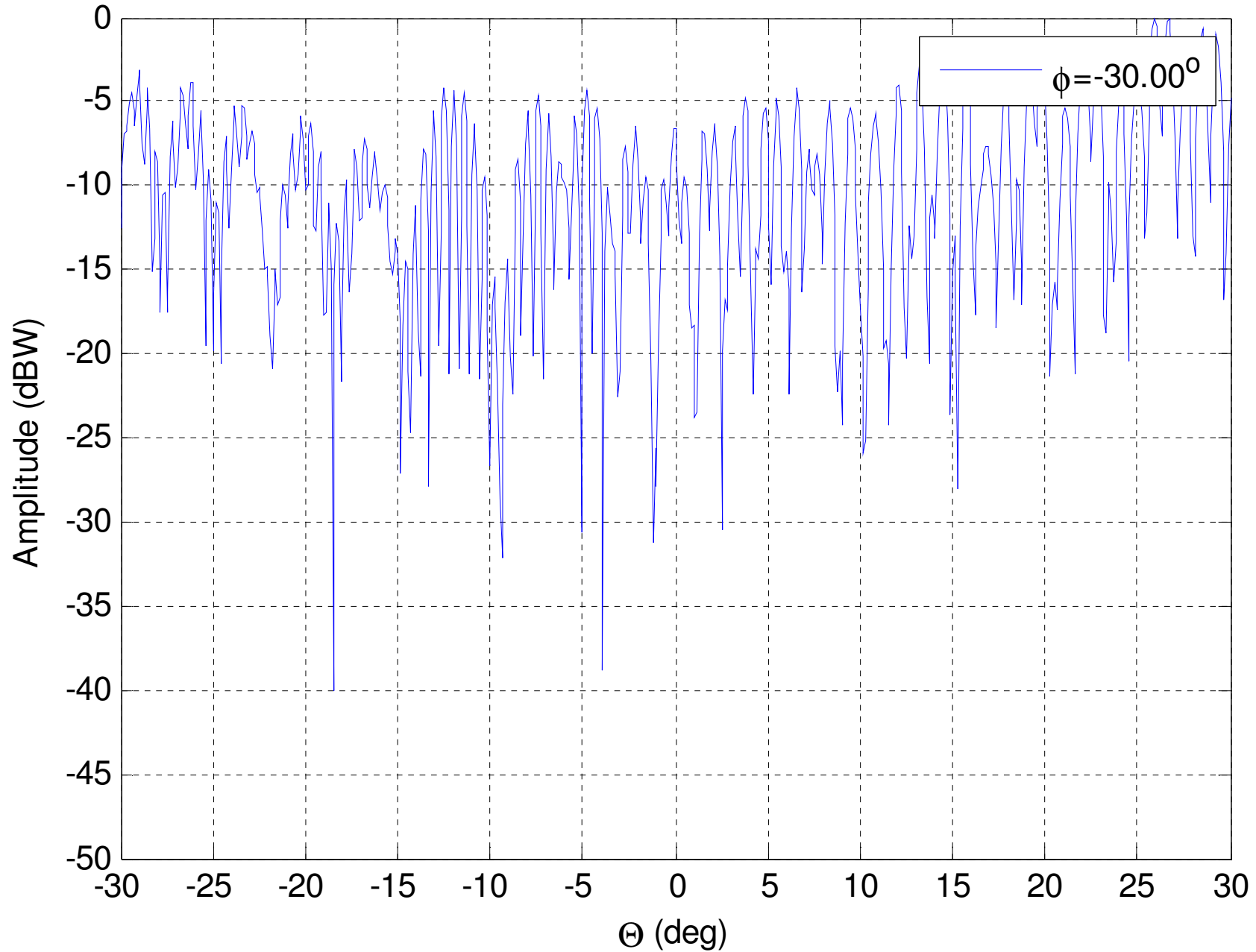
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -11.06 dBW, Date: 15-Dec-2011



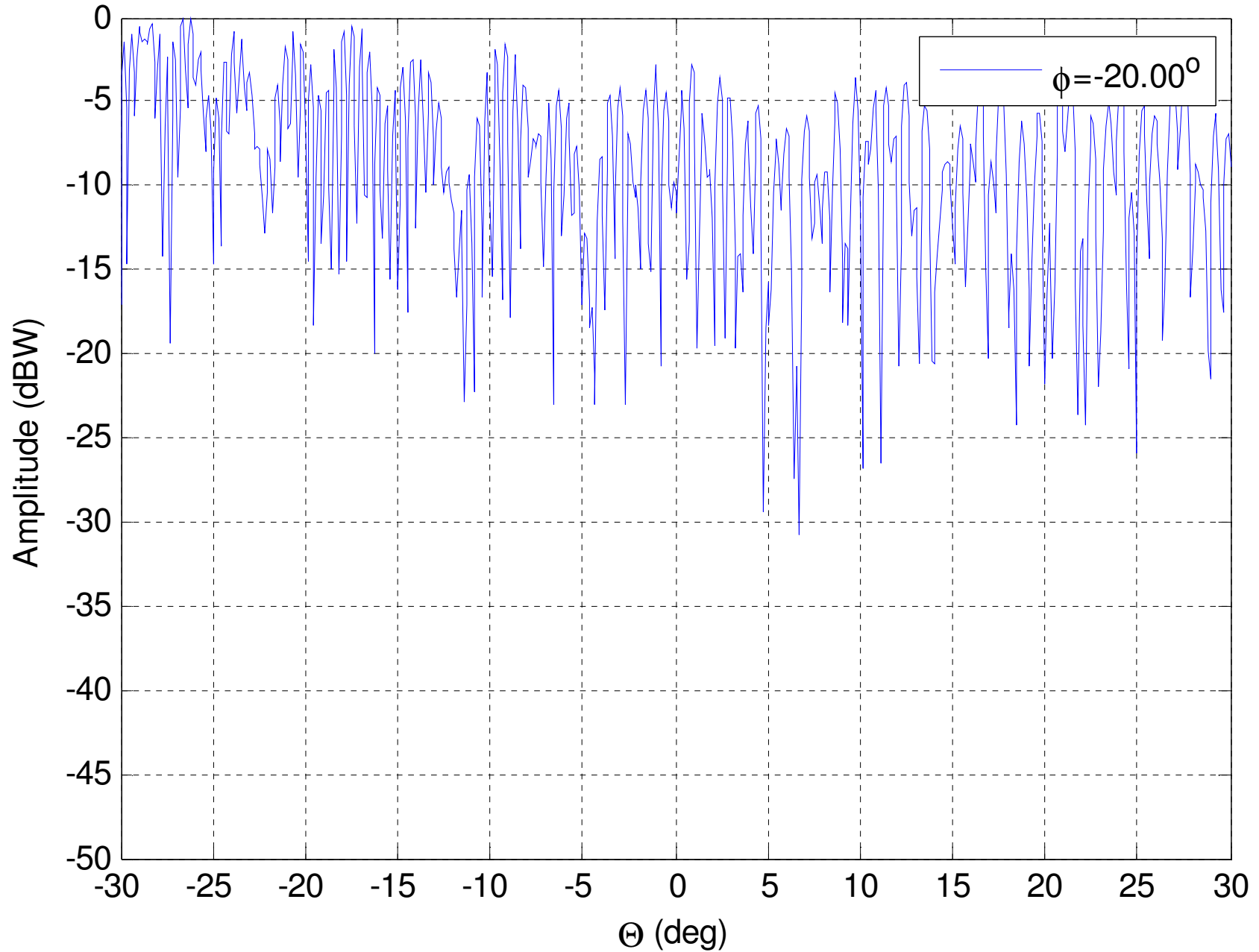
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -10.84 dBW, Date: 15-Dec-2011



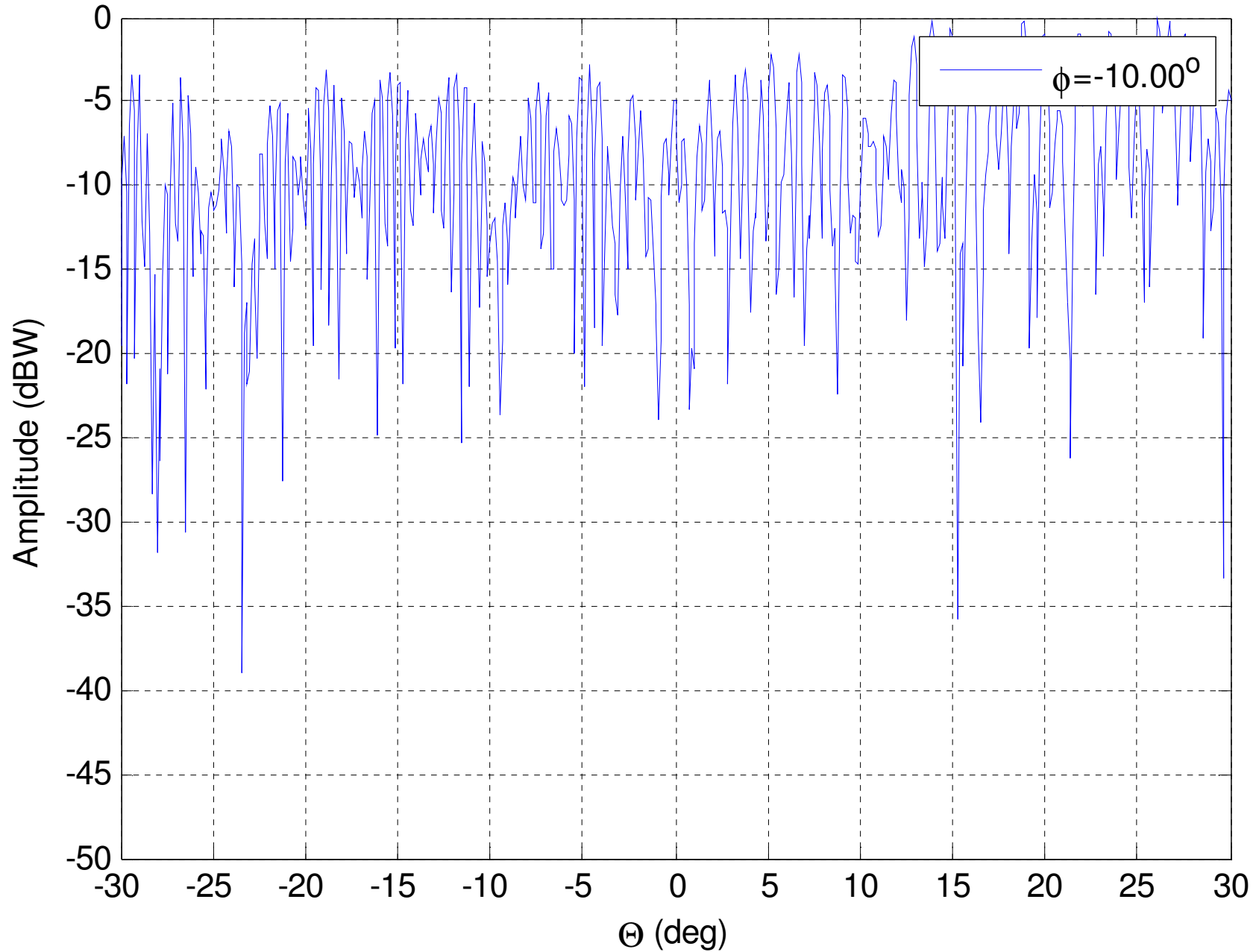
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -13.09 dBW, Date: 15-Dec-2011



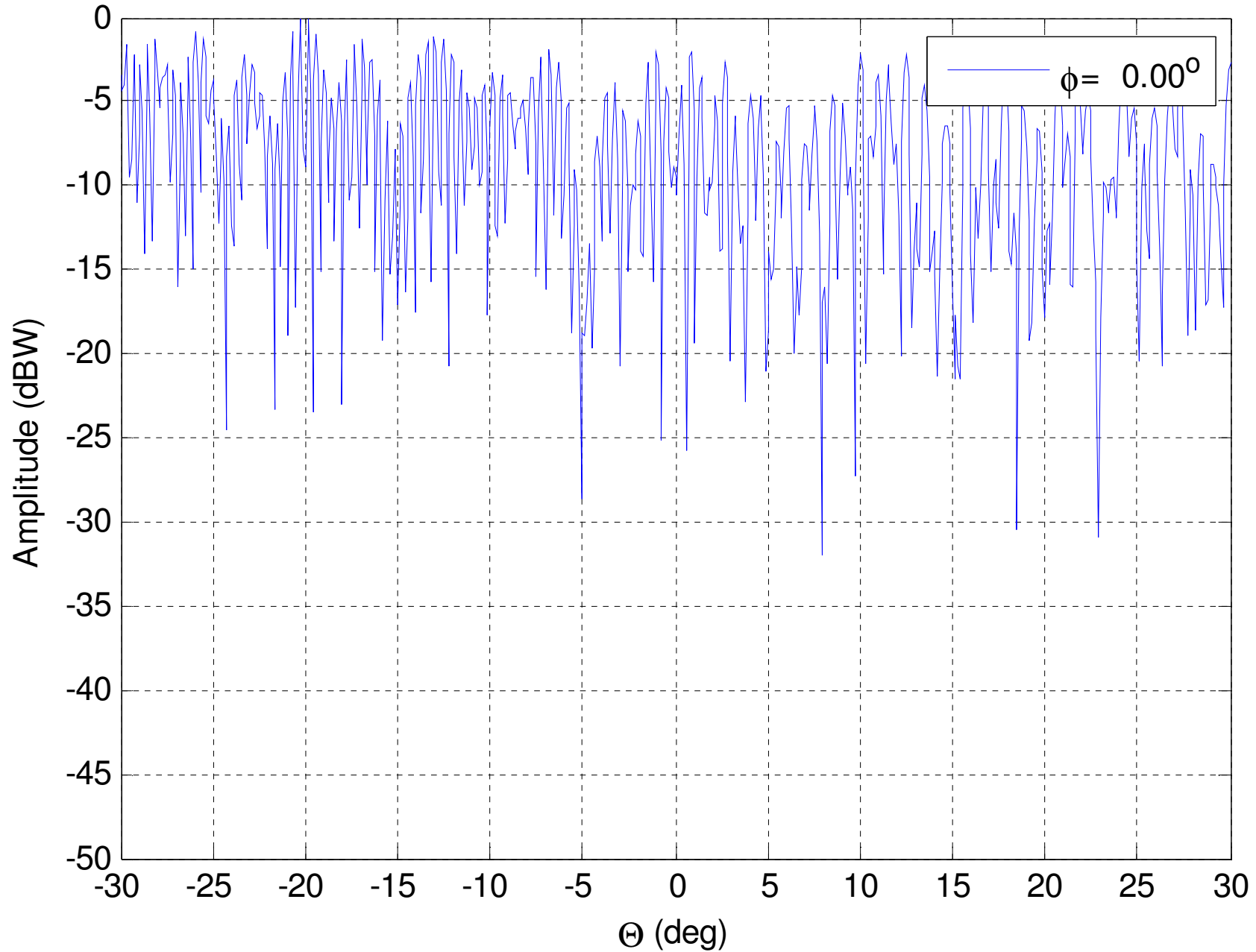
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -12.63 dBW, Date: 15-Dec-2011



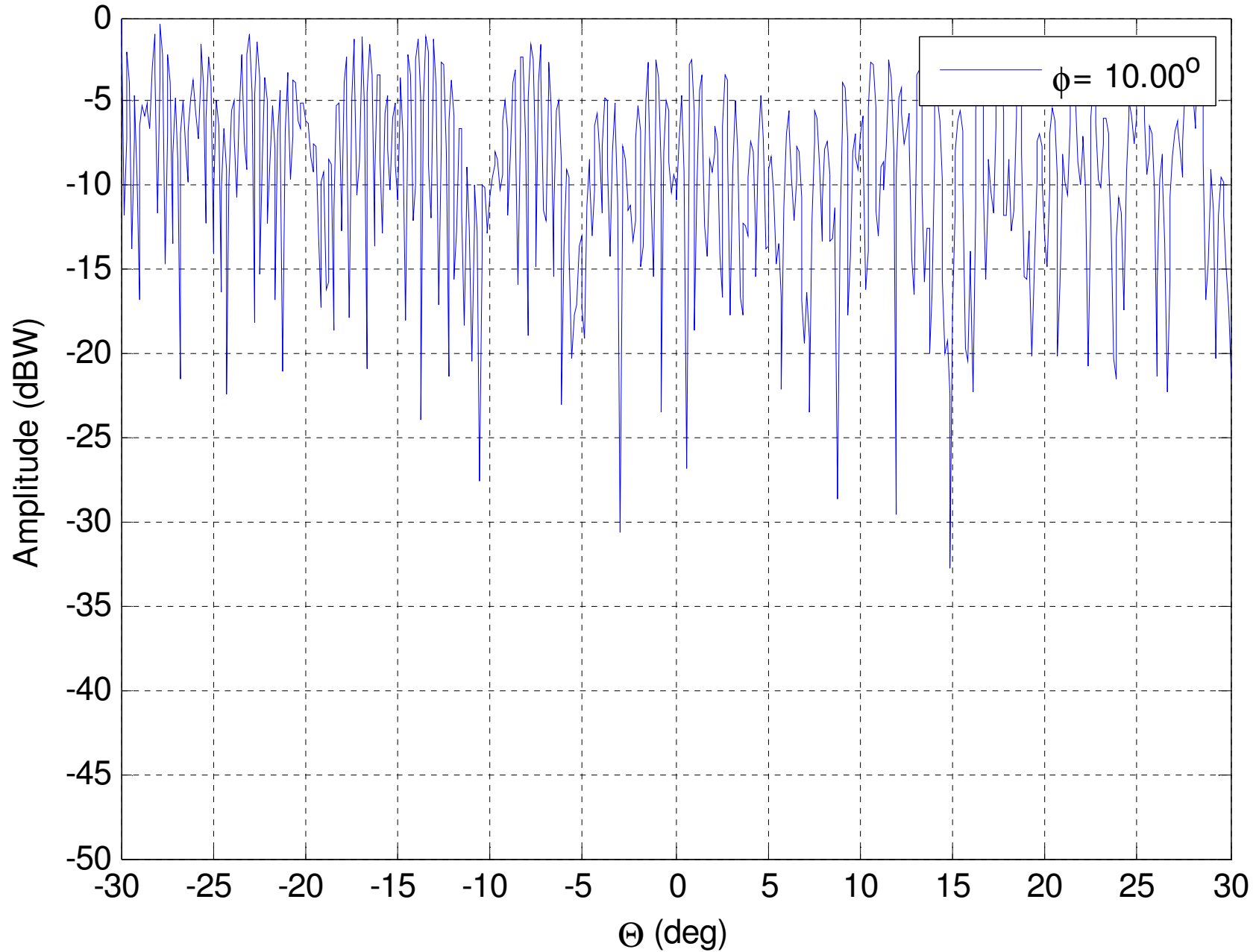
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -13.89 dBW, Date: 15-Dec-2011



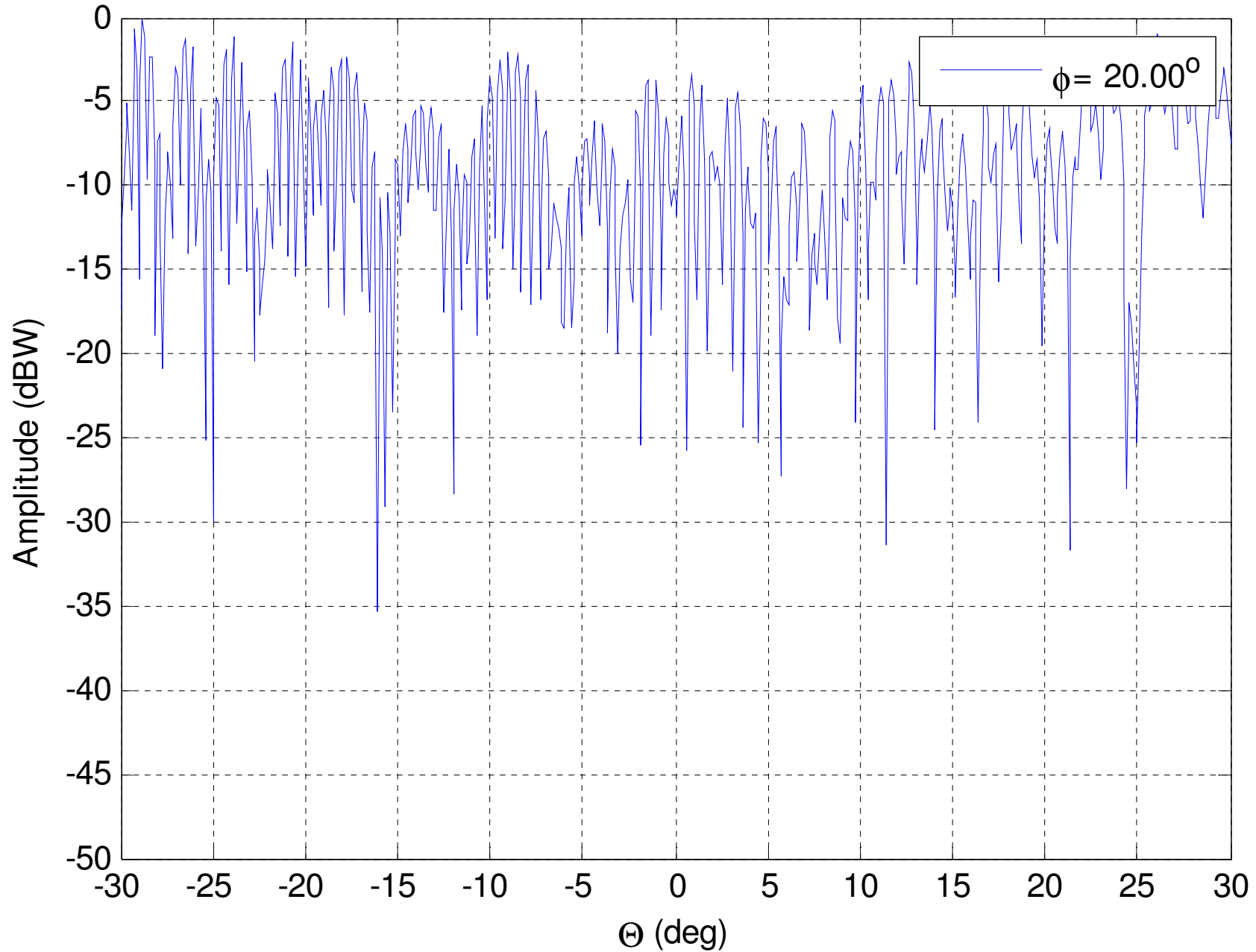
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -13.45 dBW, Date: 15-Dec-2011



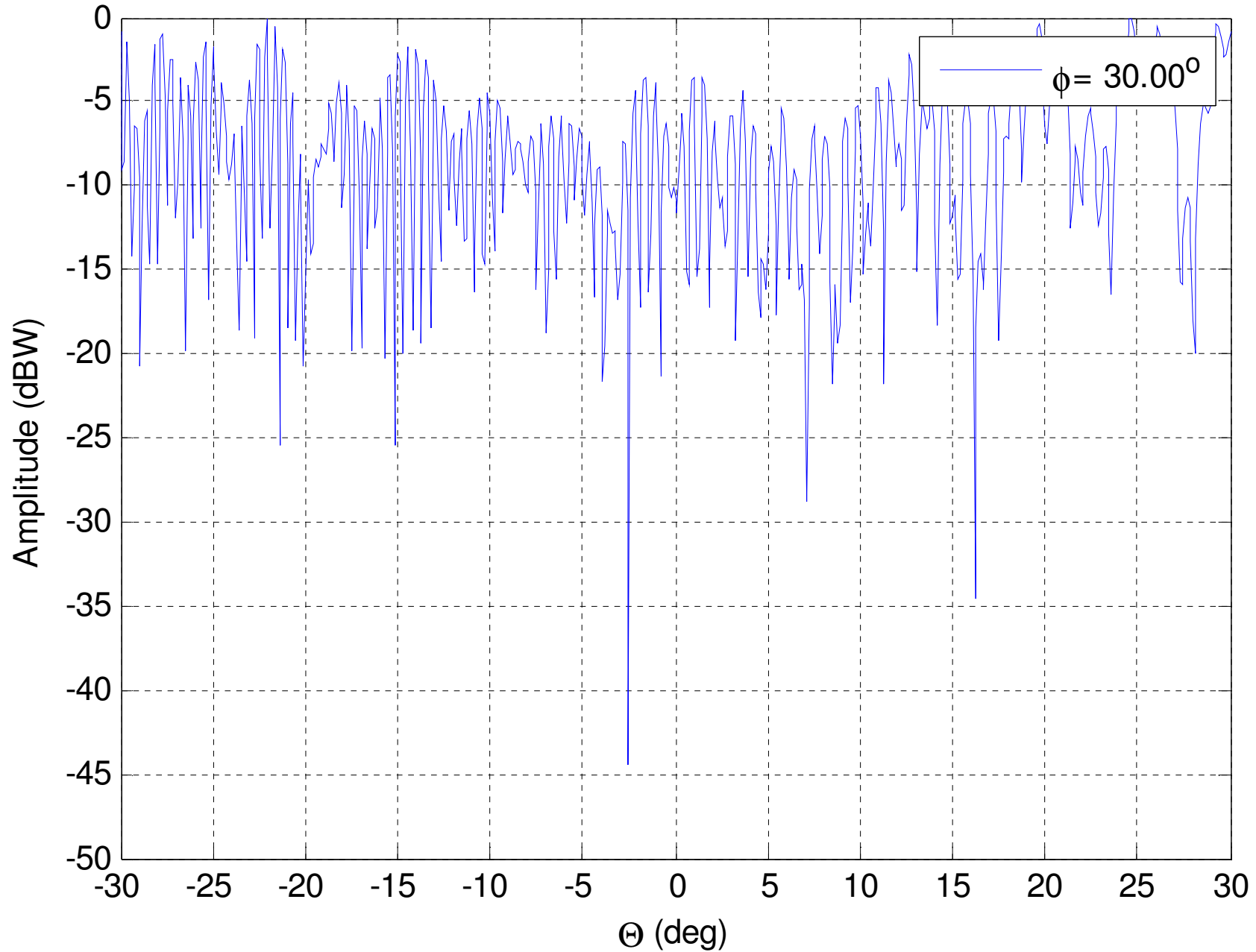
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -12.46 dBW, Date: 15-Dec-2011



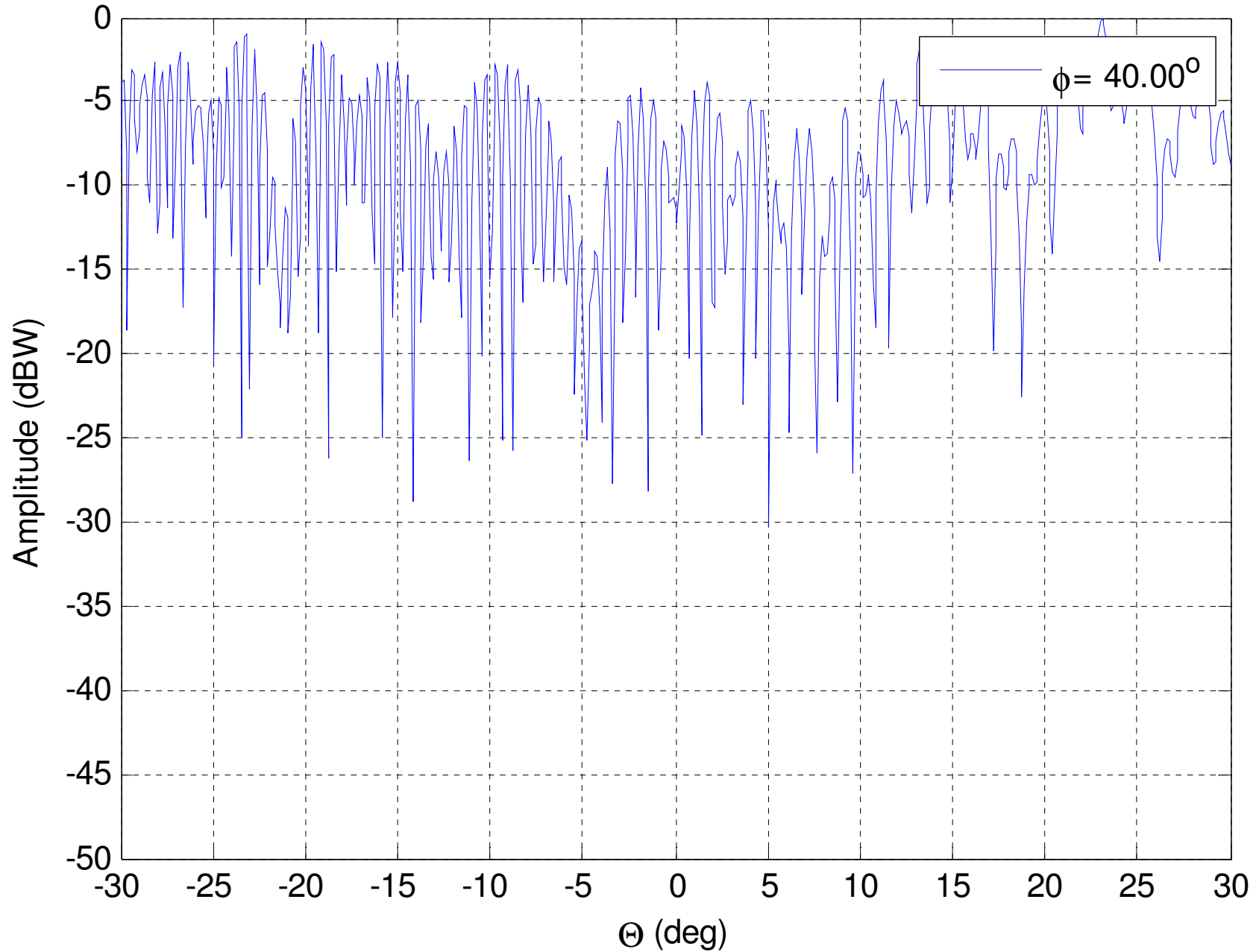
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-30.cut, Peak: -12.57 dBW, Date: 15-Dec-2011



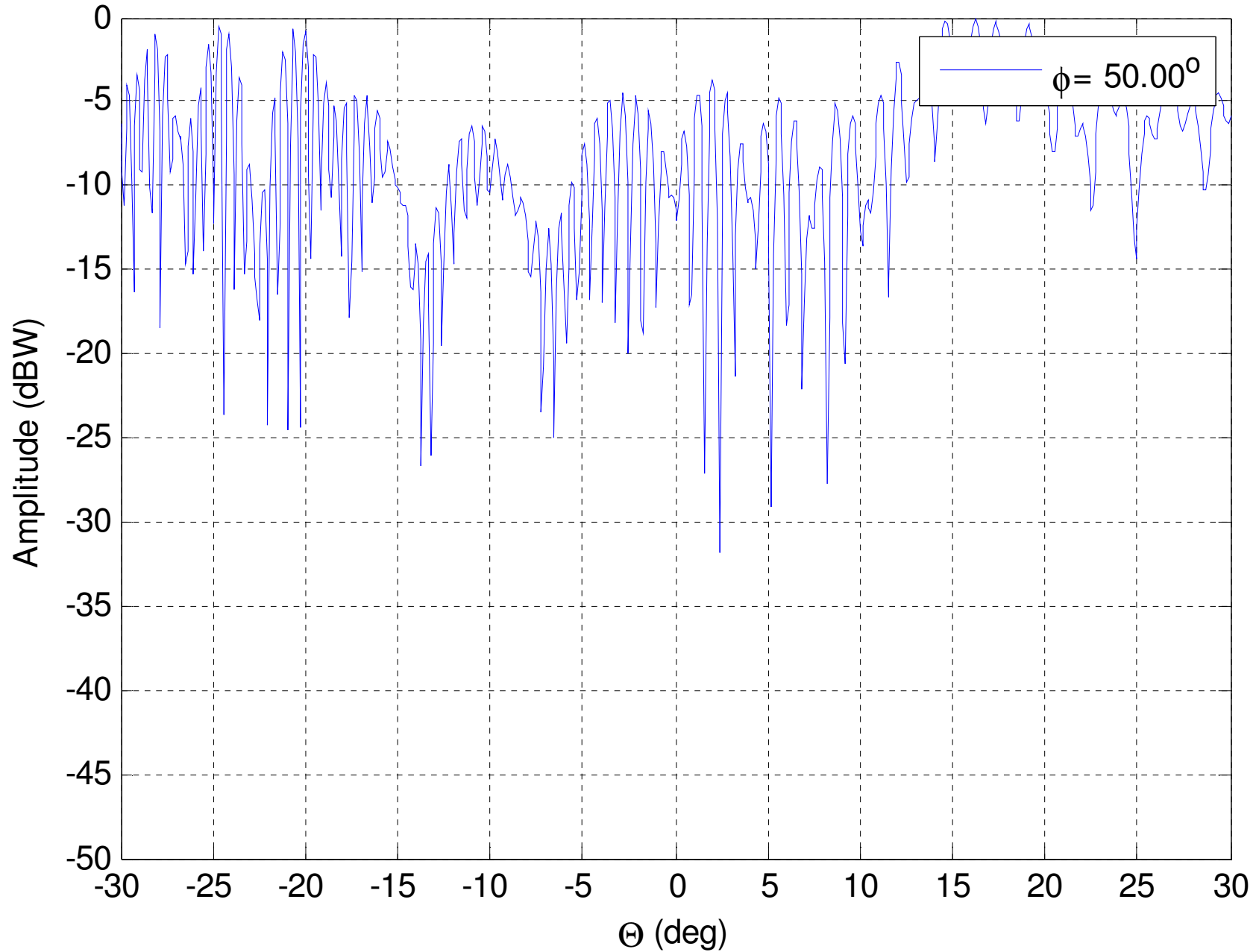
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -11.95 dBW, Date: 15-Dec-2011



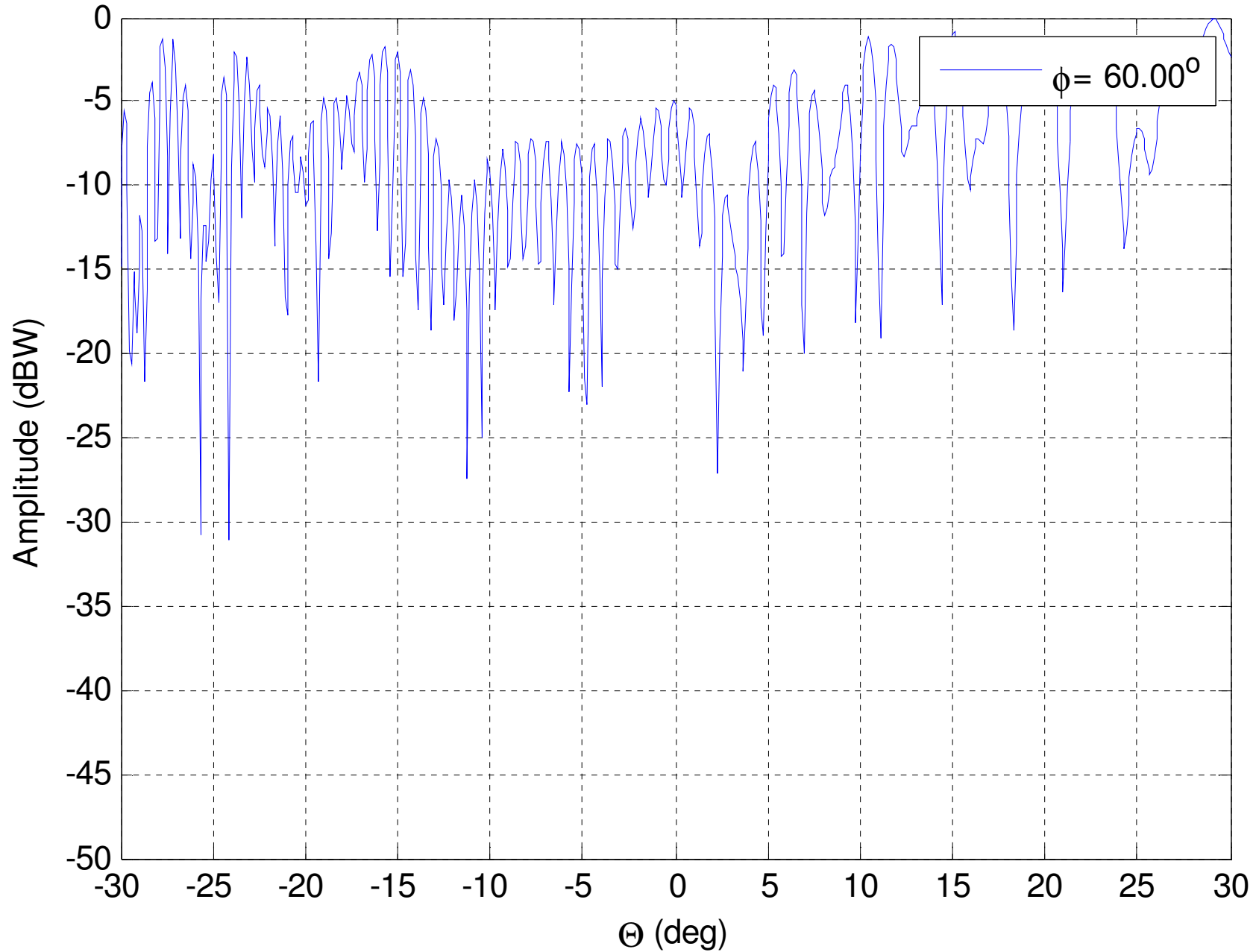
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -12.03 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

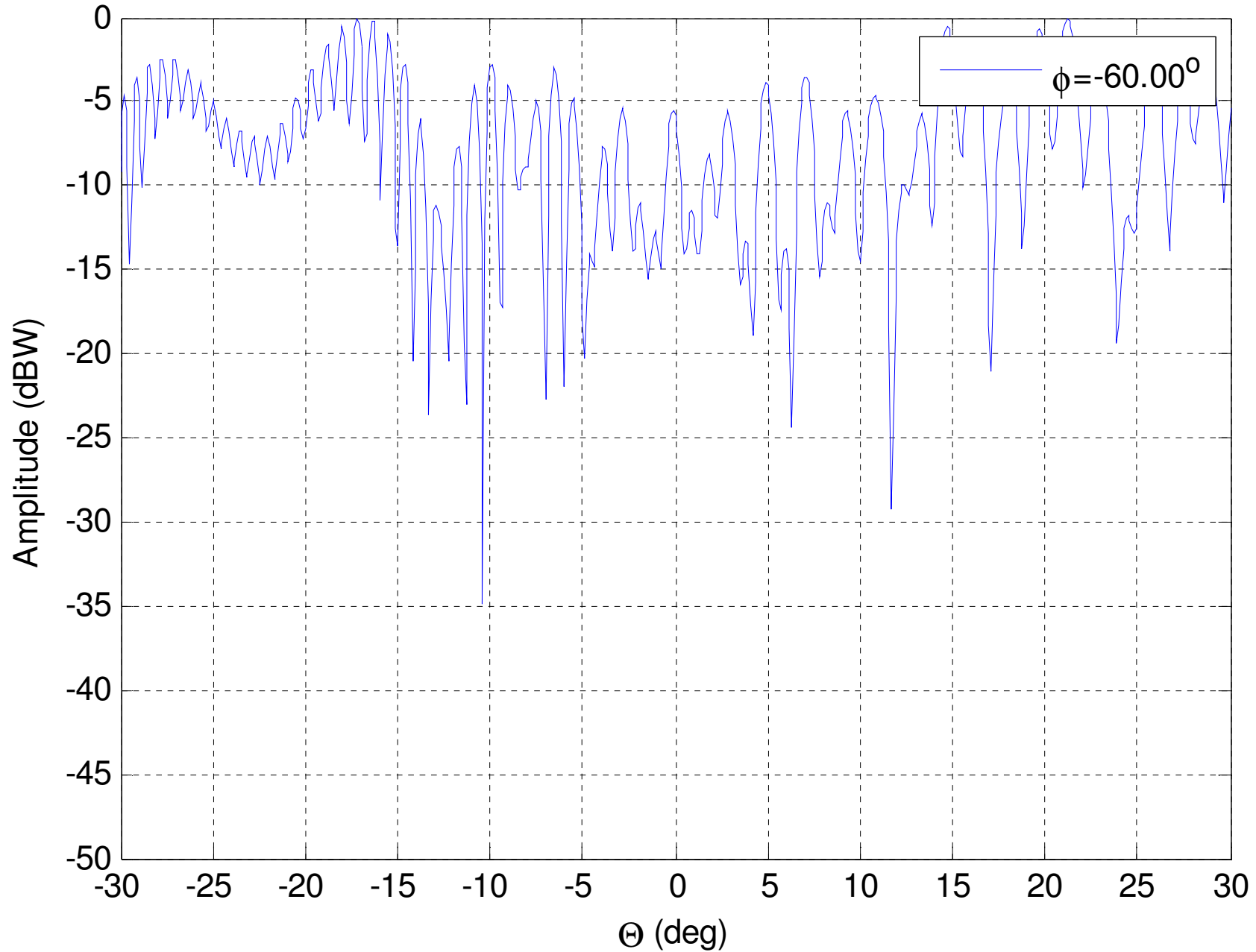
Input file: tx-17.7-rhcp-60.cut, Peak: -12.30 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

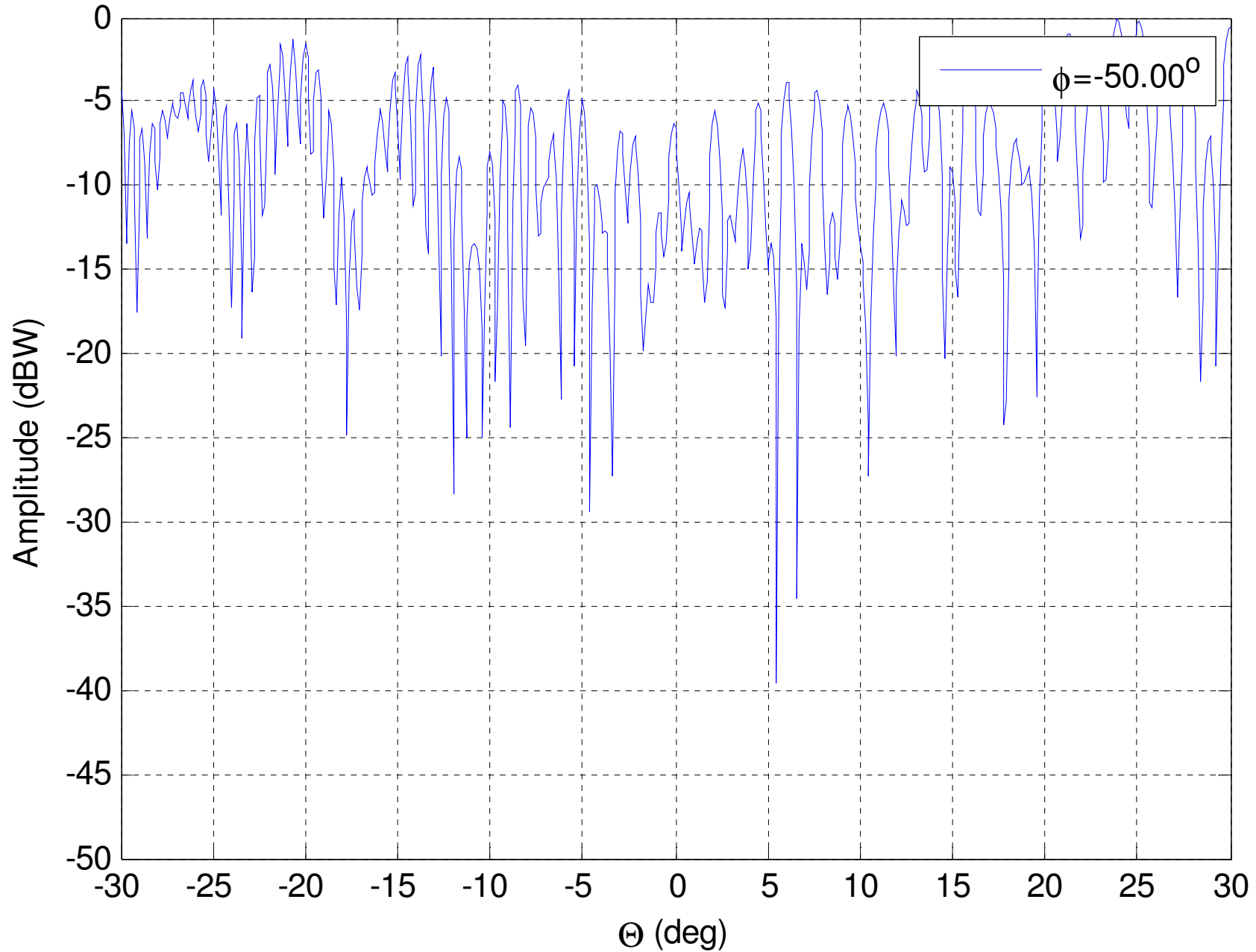
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.87 dBW, Date: 15-Dec-2011



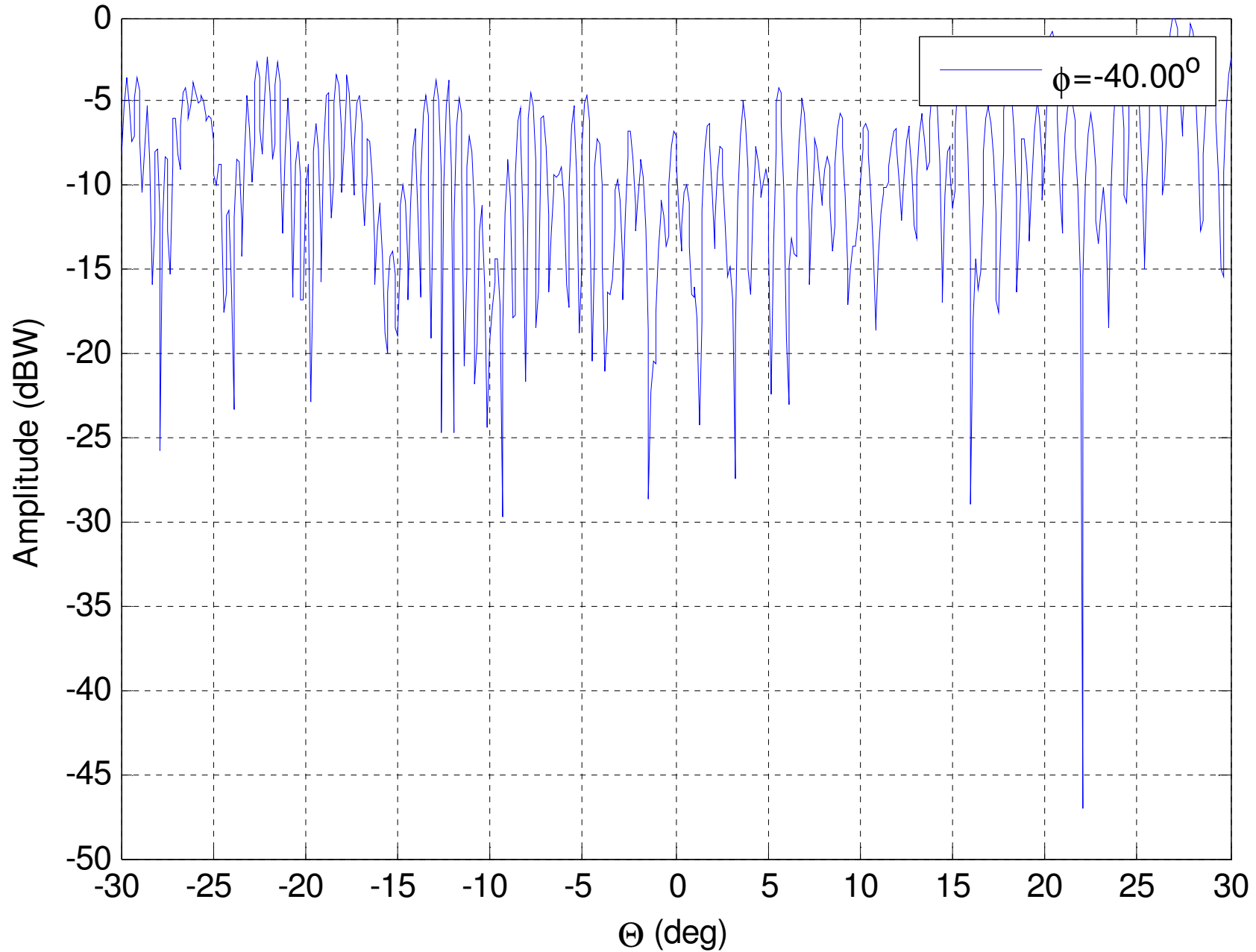
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -11.04 dBW, Date: 15-Dec-2011



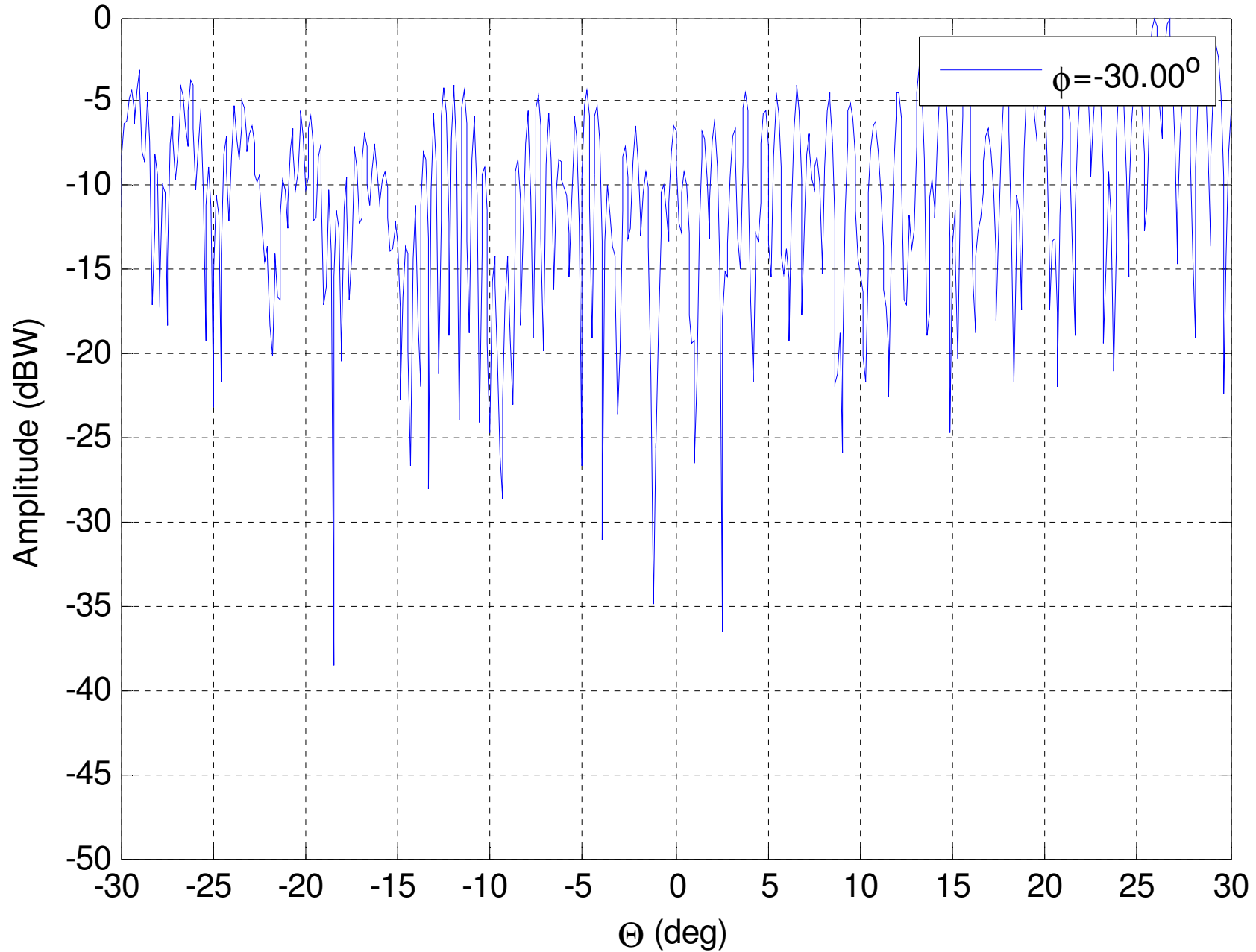
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.68 dBW, Date: 15-Dec-2011



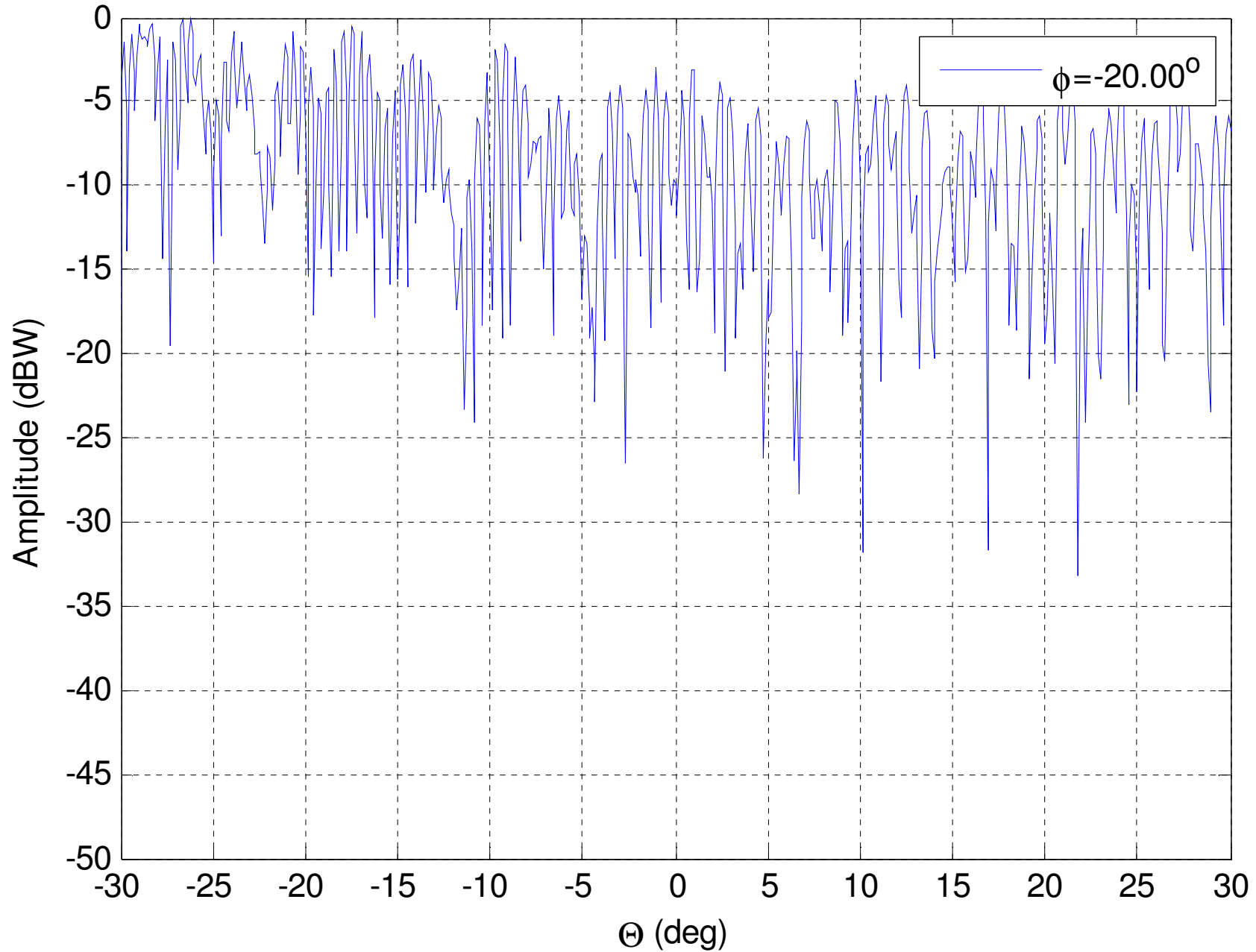
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -10.94 dBW, Date: 15-Dec-2011



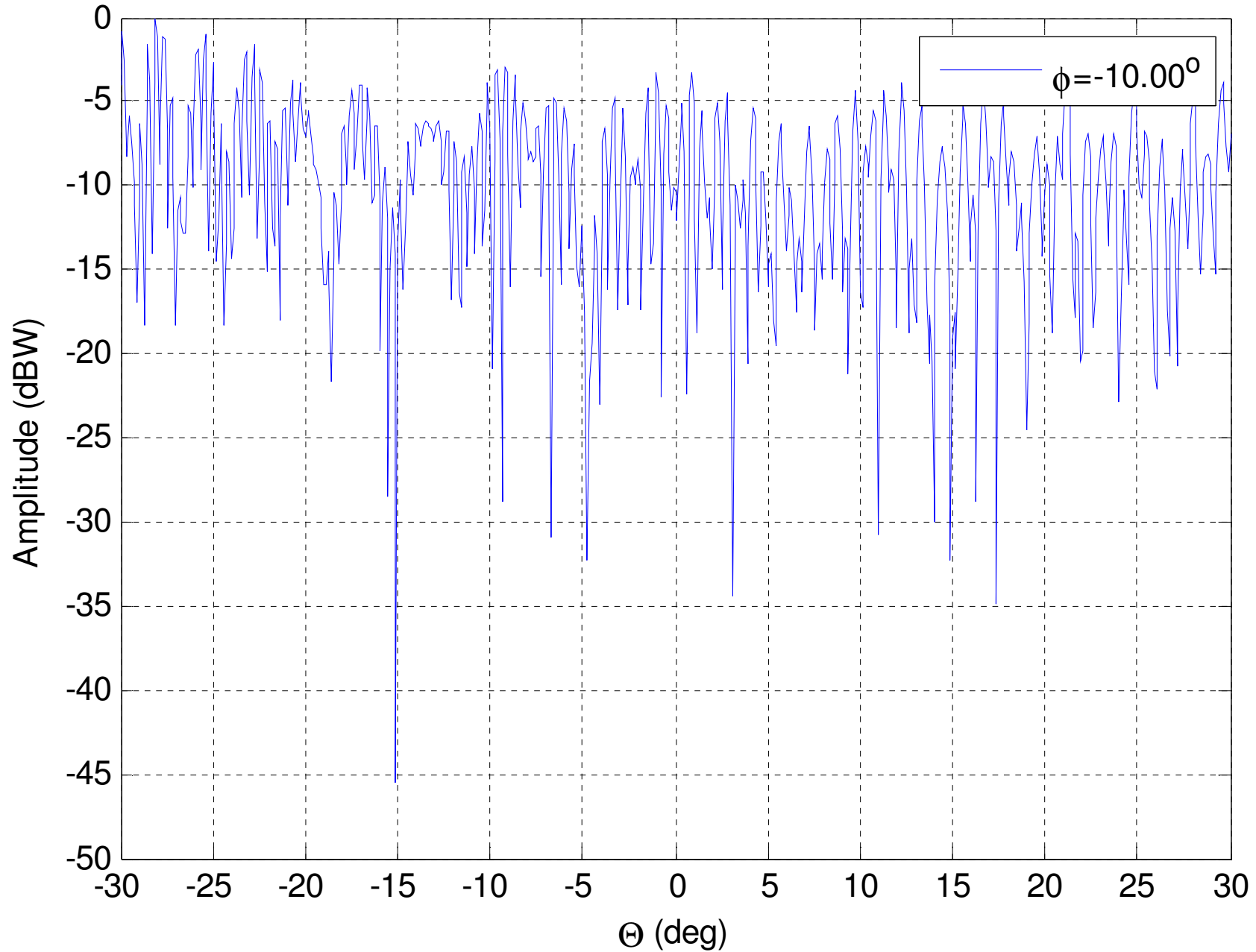
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -12.93 dBW, Date: 15-Dec-2011



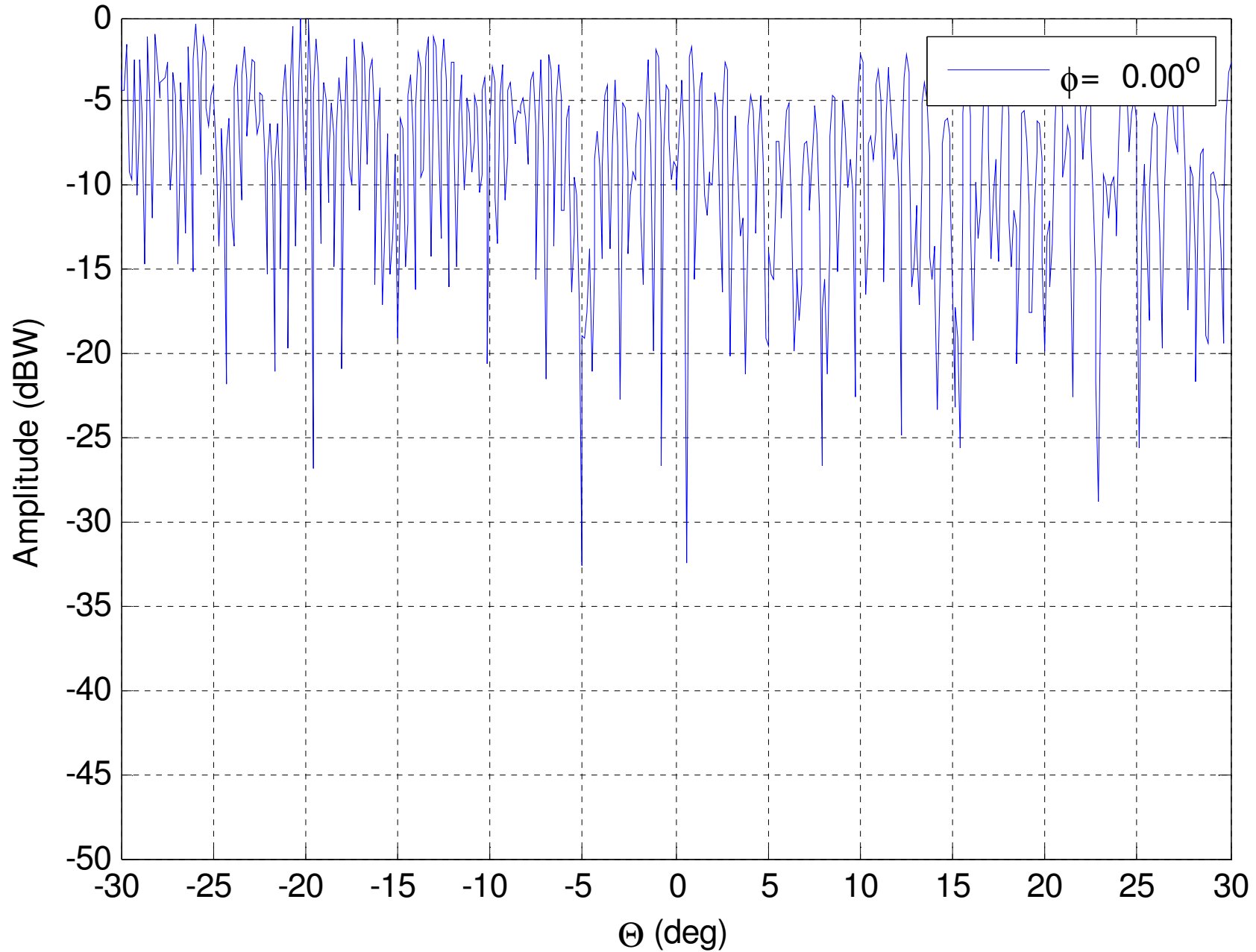
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -12.47 dBW, Date: 15-Dec-2011



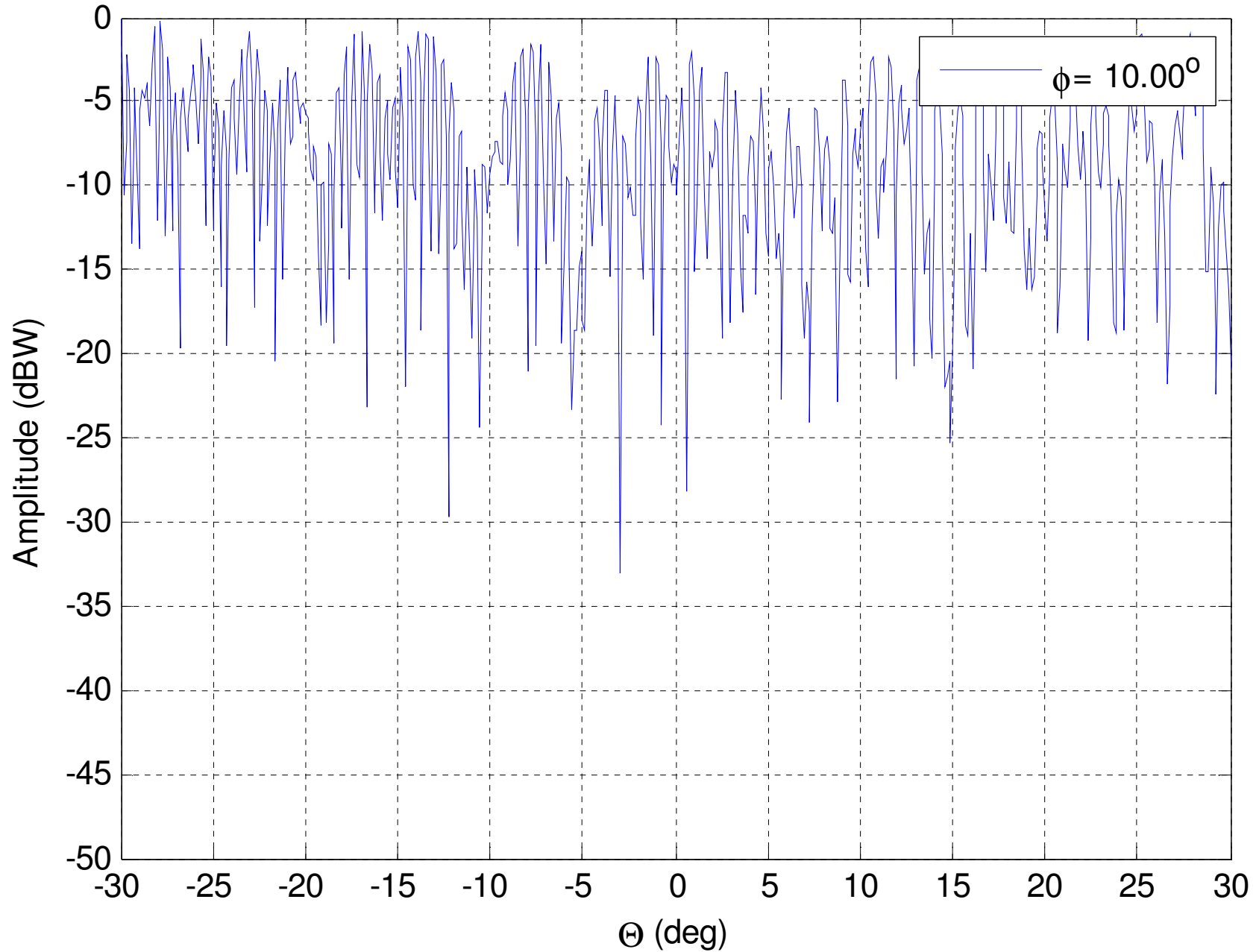
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -14.07 dBW, Date: 15-Dec-2011



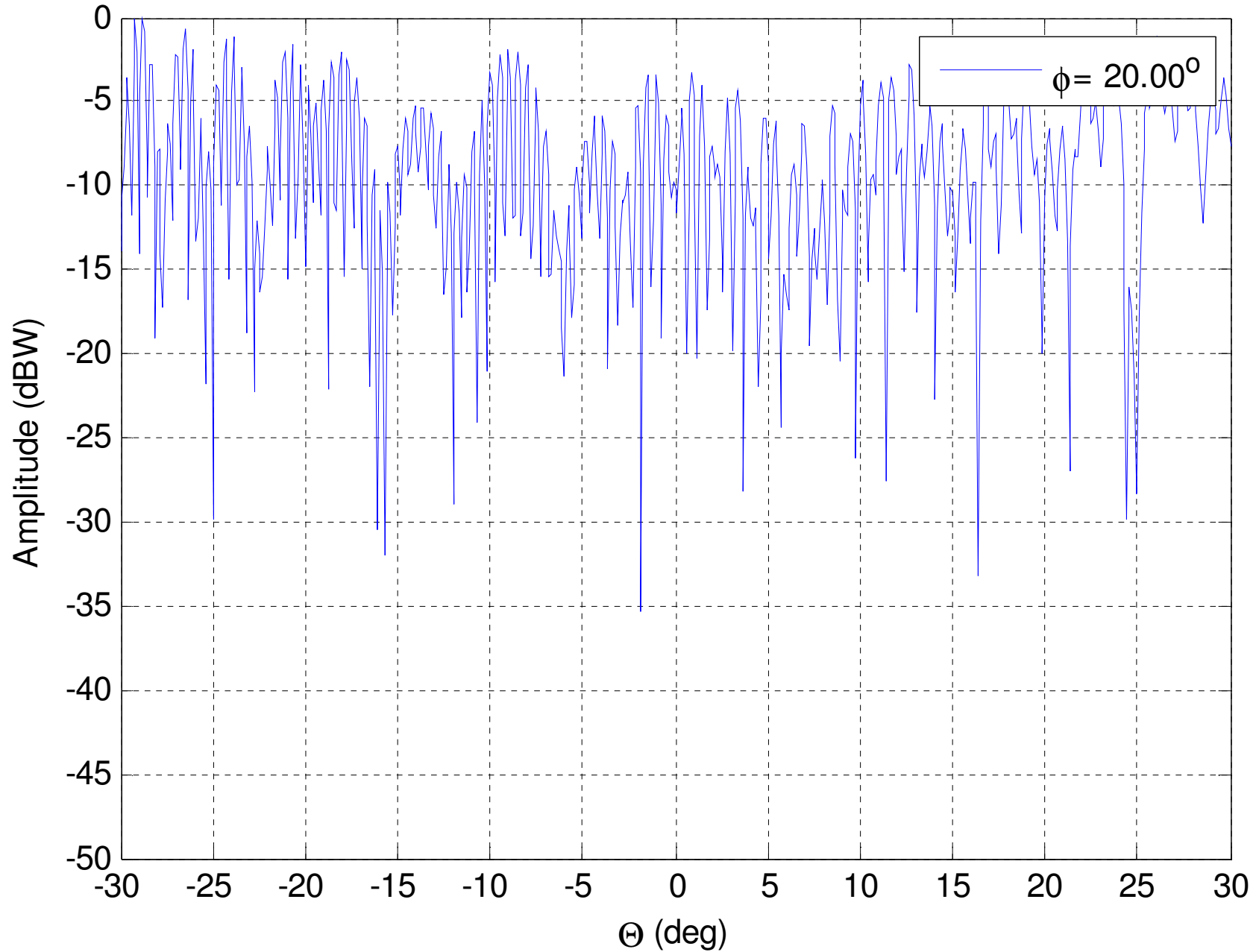
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -13.75 dBW, Date: 15-Dec-2011



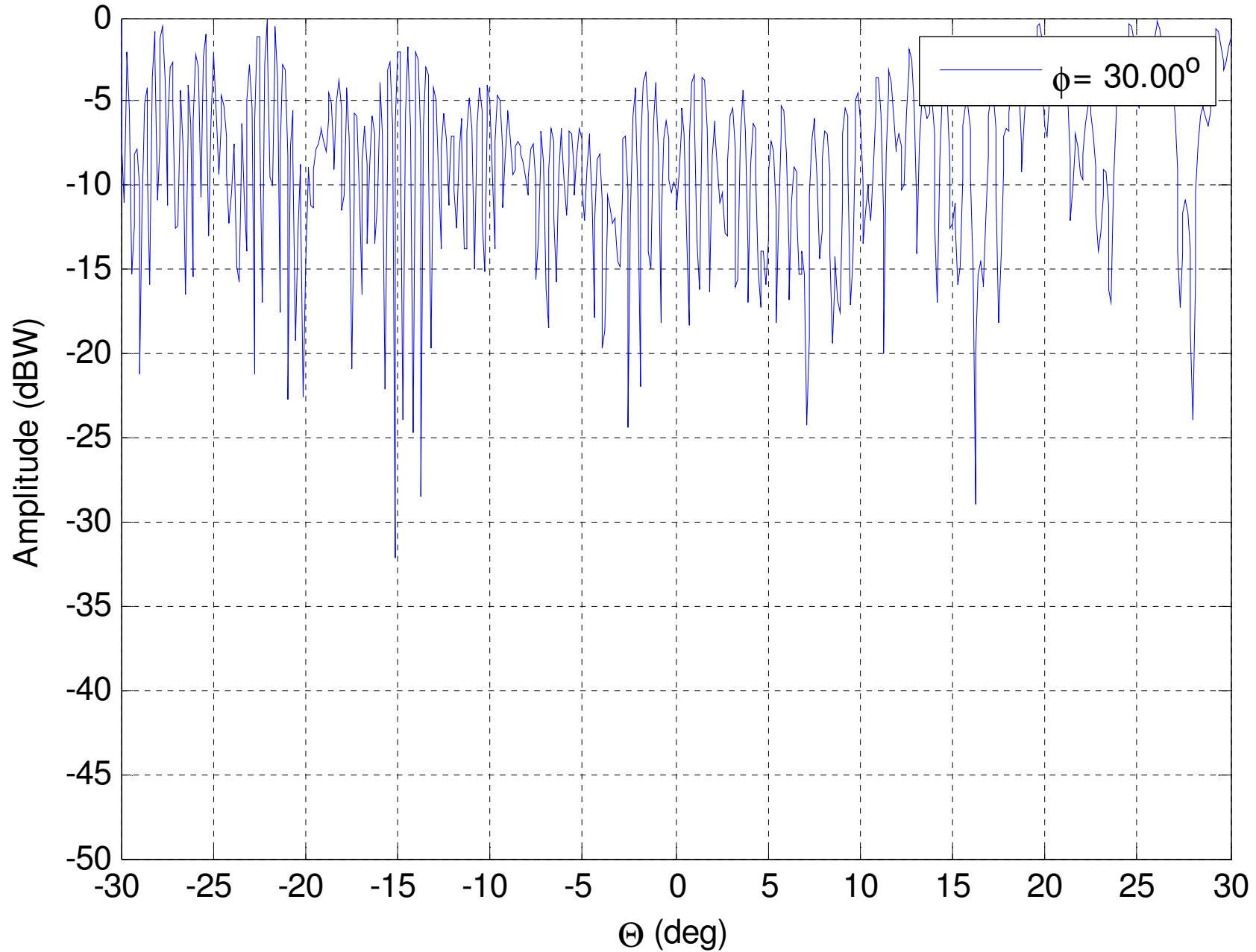
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -12.60 dBW, Date: 15-Dec-2011



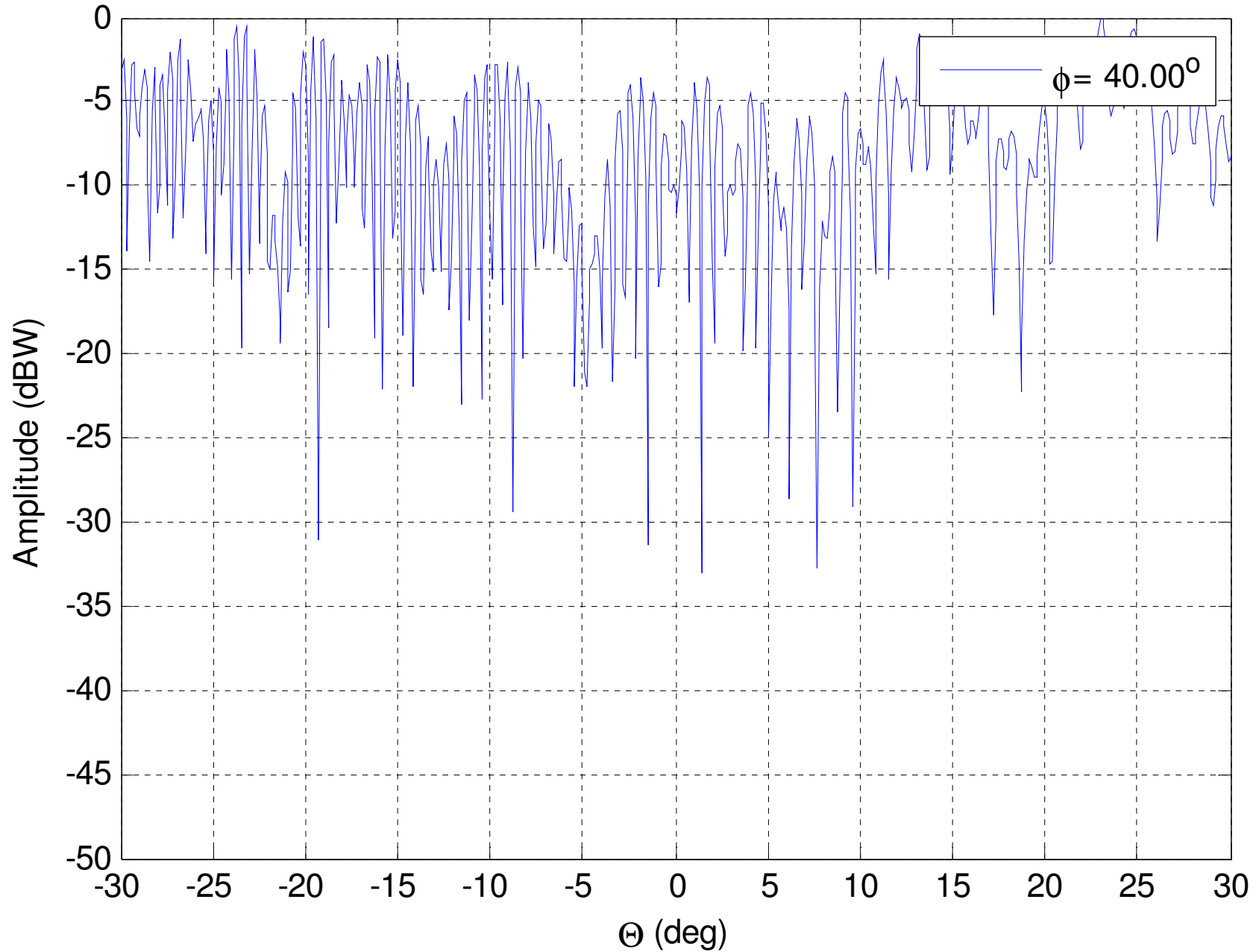
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -12.63 dBW, Date: 15-Dec-2011



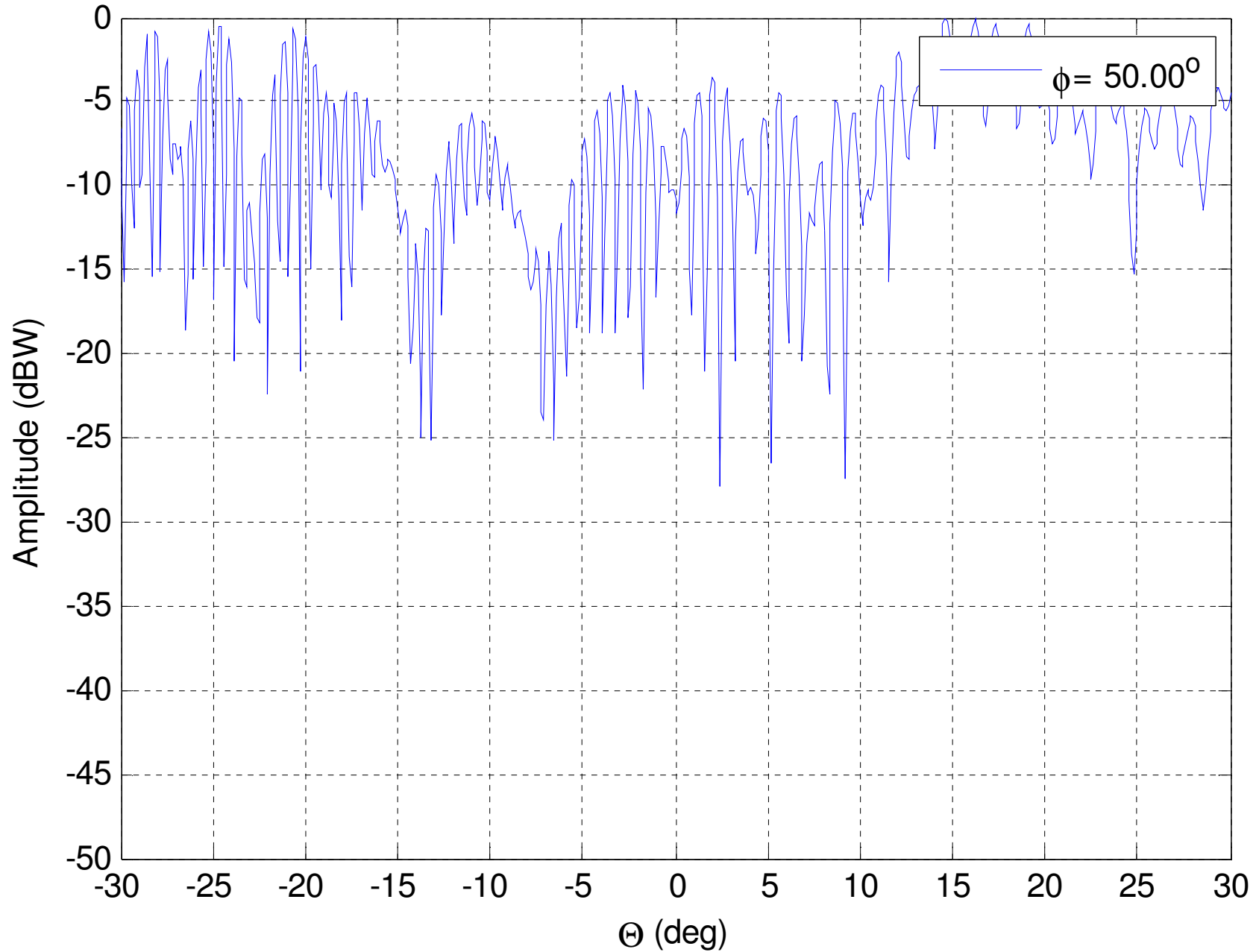
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -12.29 dBW, Date: 15-Dec-2011



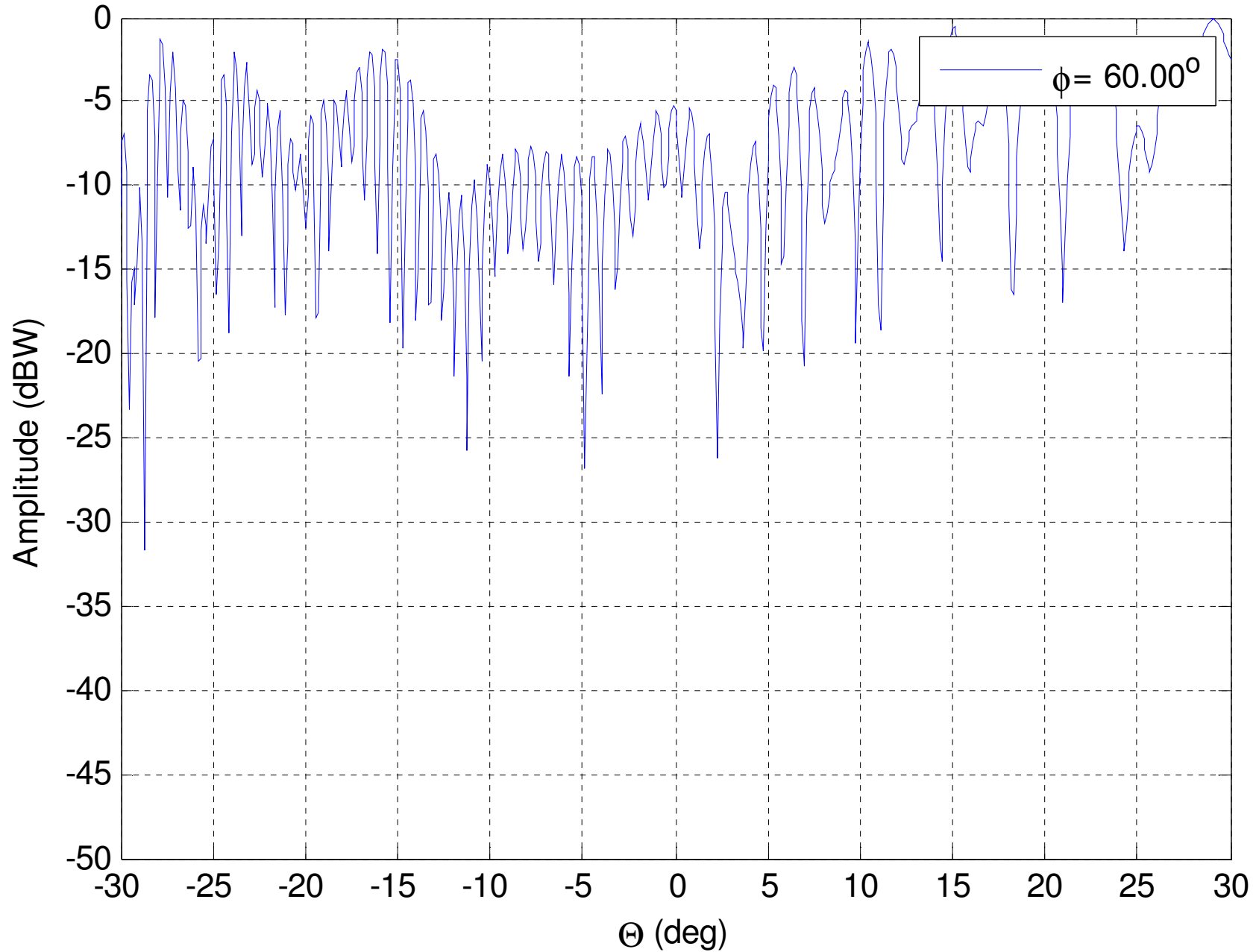
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.11 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

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



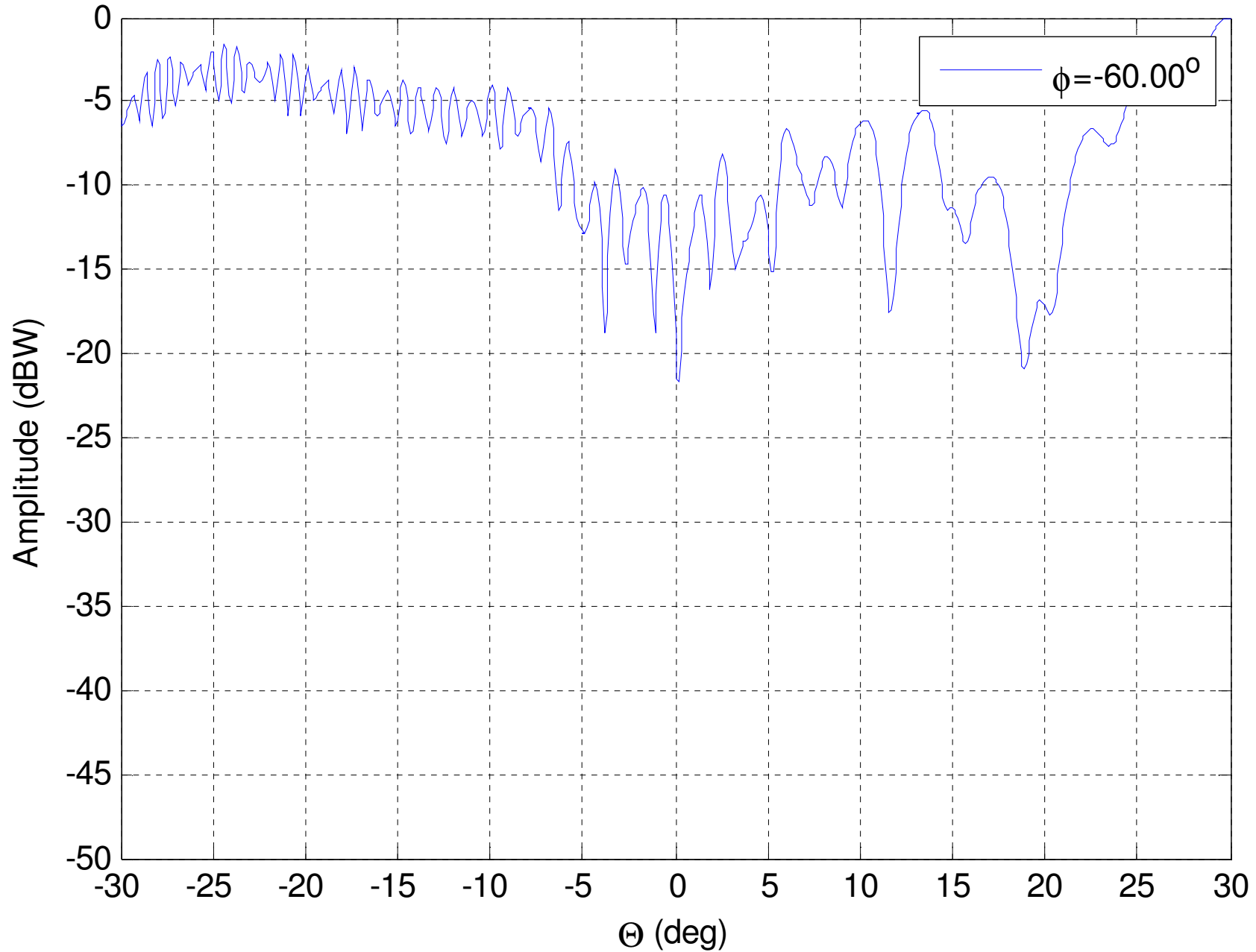
Spot Beam32, +X Axis Plots

- 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

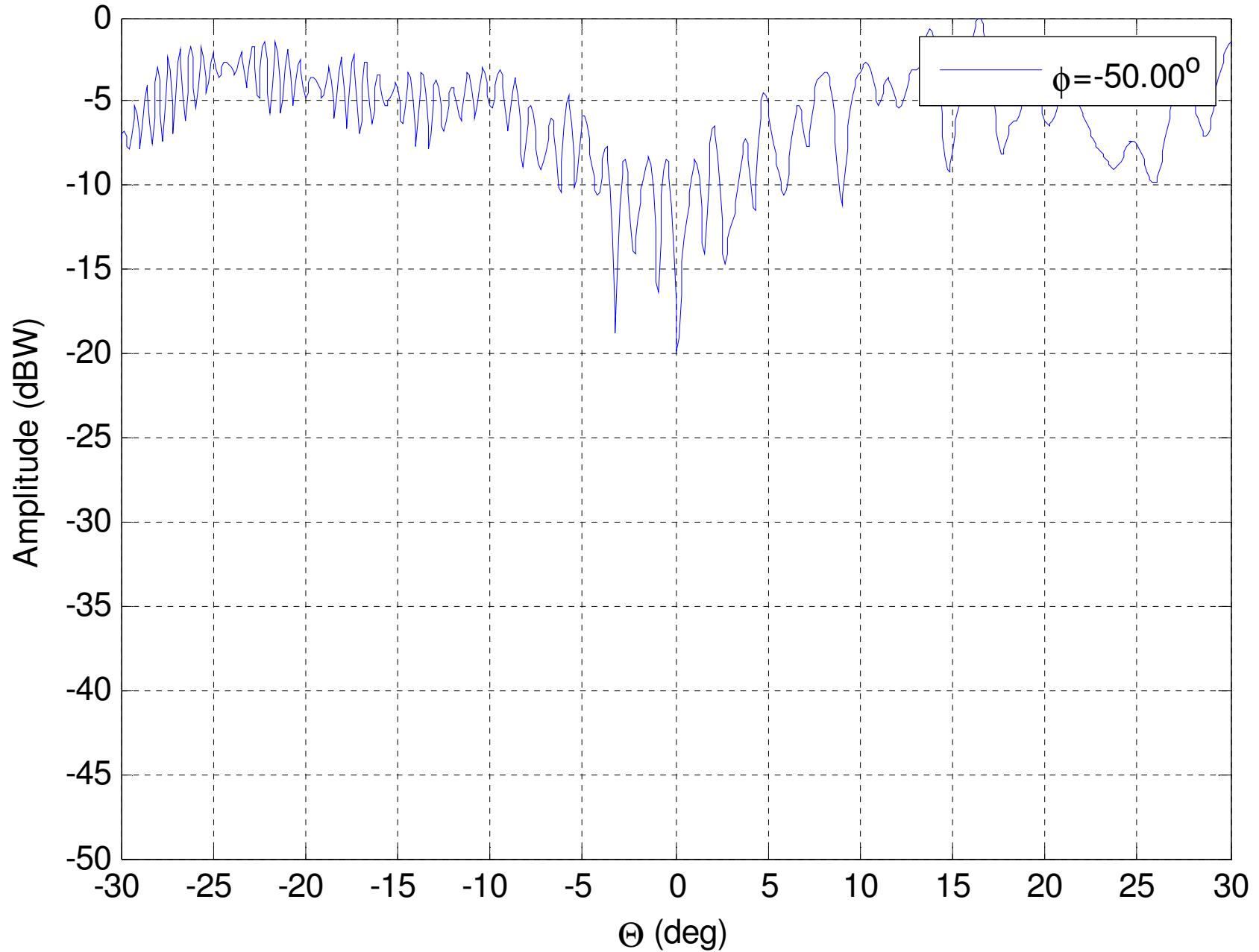
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--60.cut, Peak: -9.70 dBW, Date: 15-Dec-2011



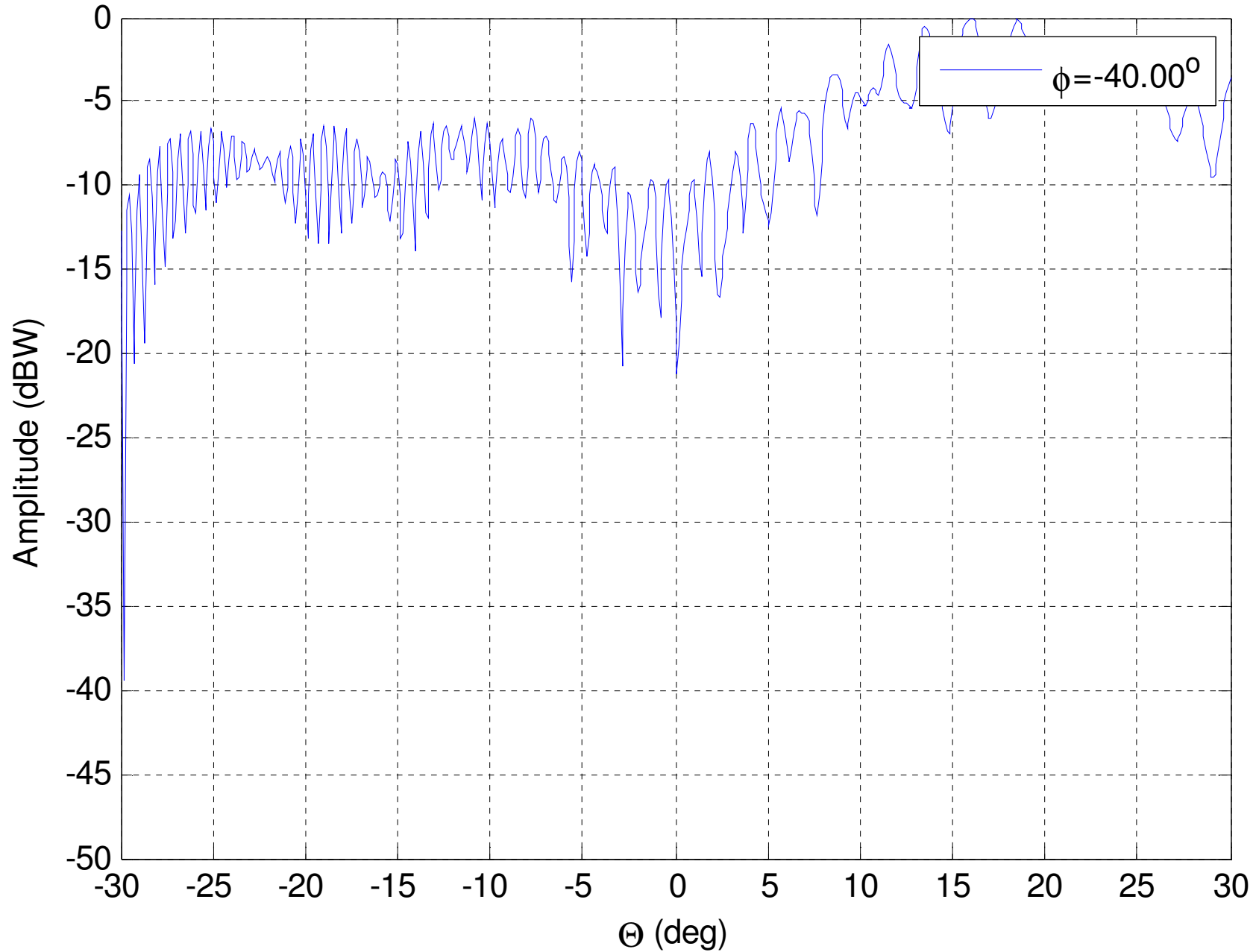
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--50.cut, Peak: -11.73 dBW, Date: 15-Dec-2011



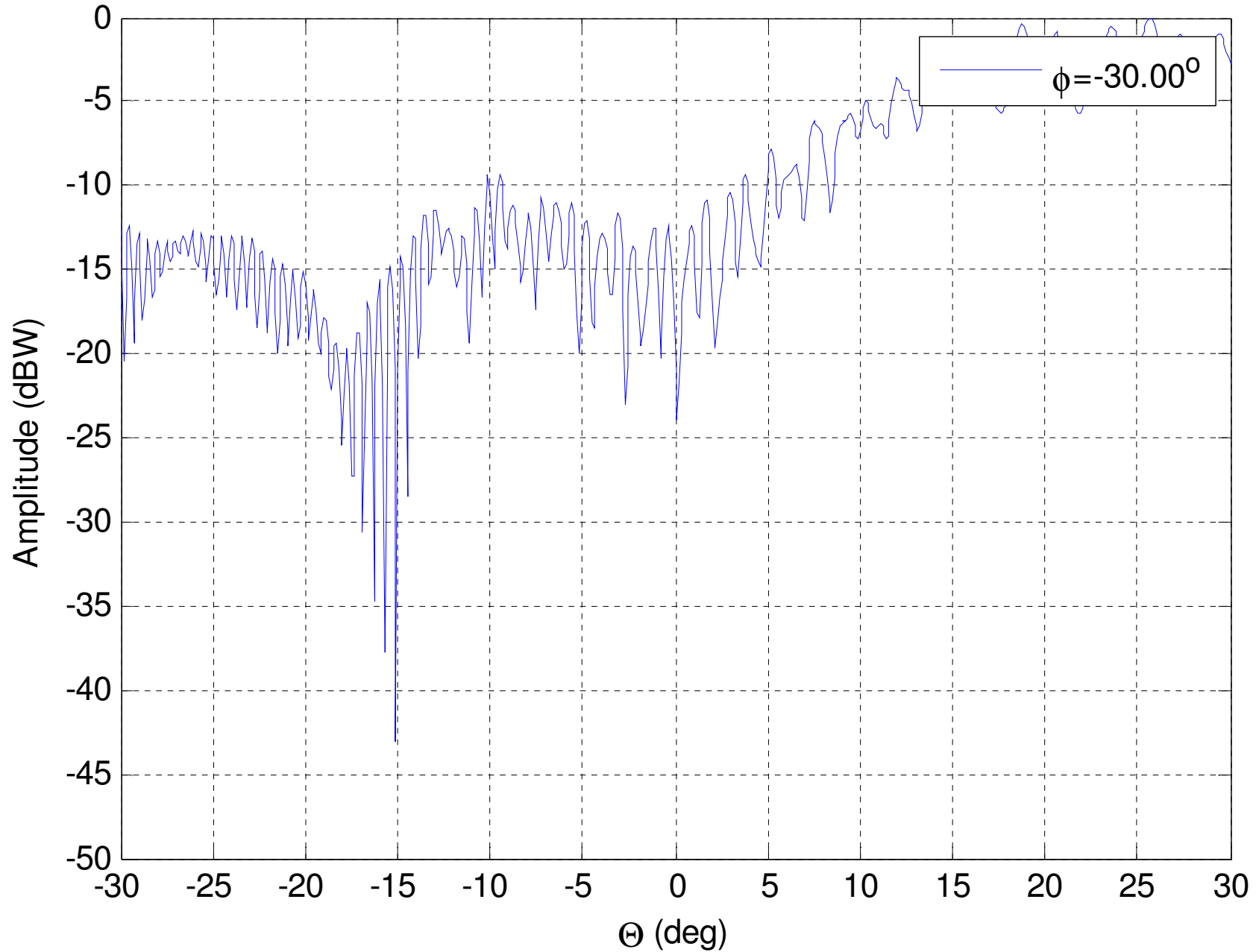
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--40.cut, Peak: -10.45 dBW, Date: 15-Dec-2011



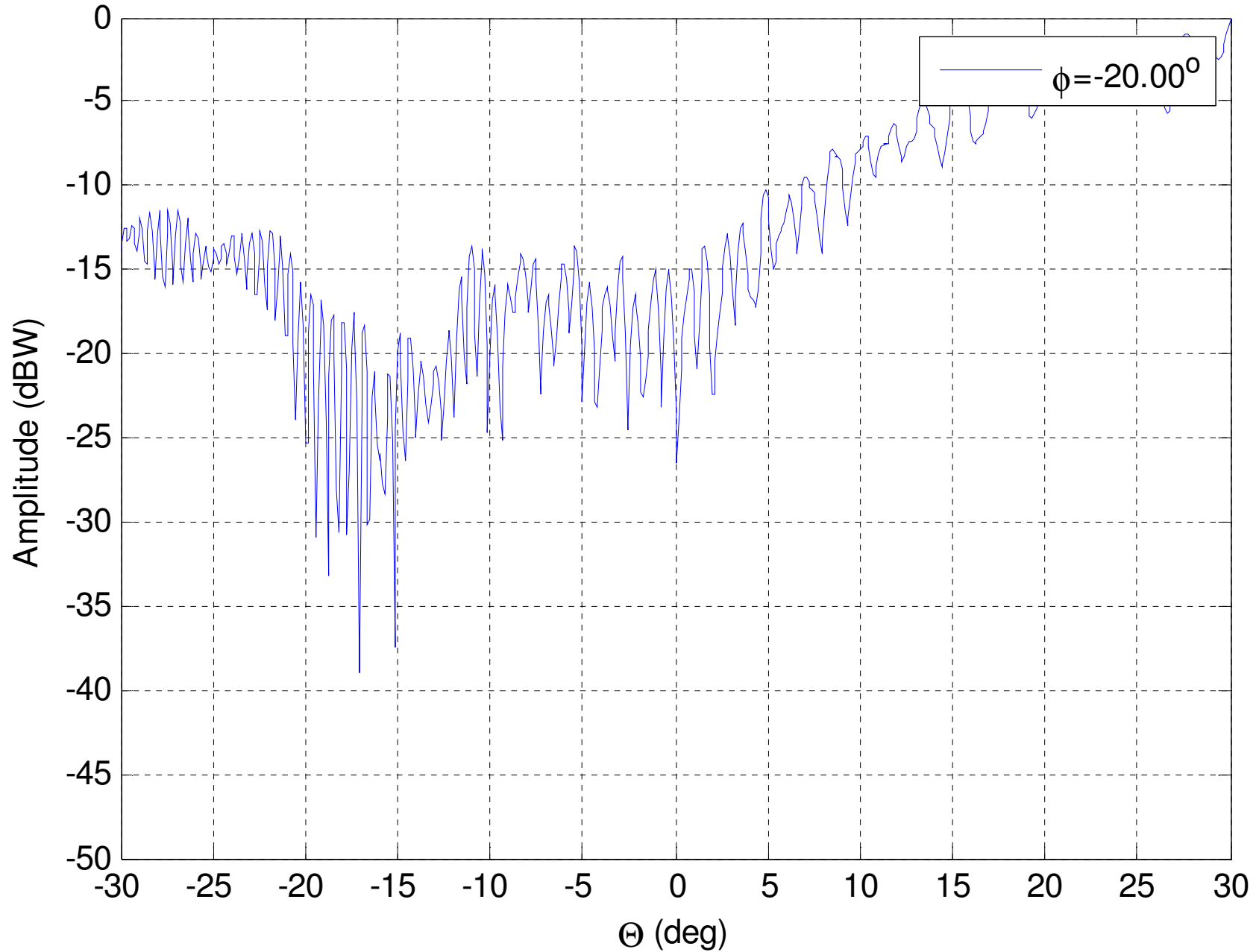
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--30.cut, Peak: -7.76 dBW, Date: 15-Dec-2011



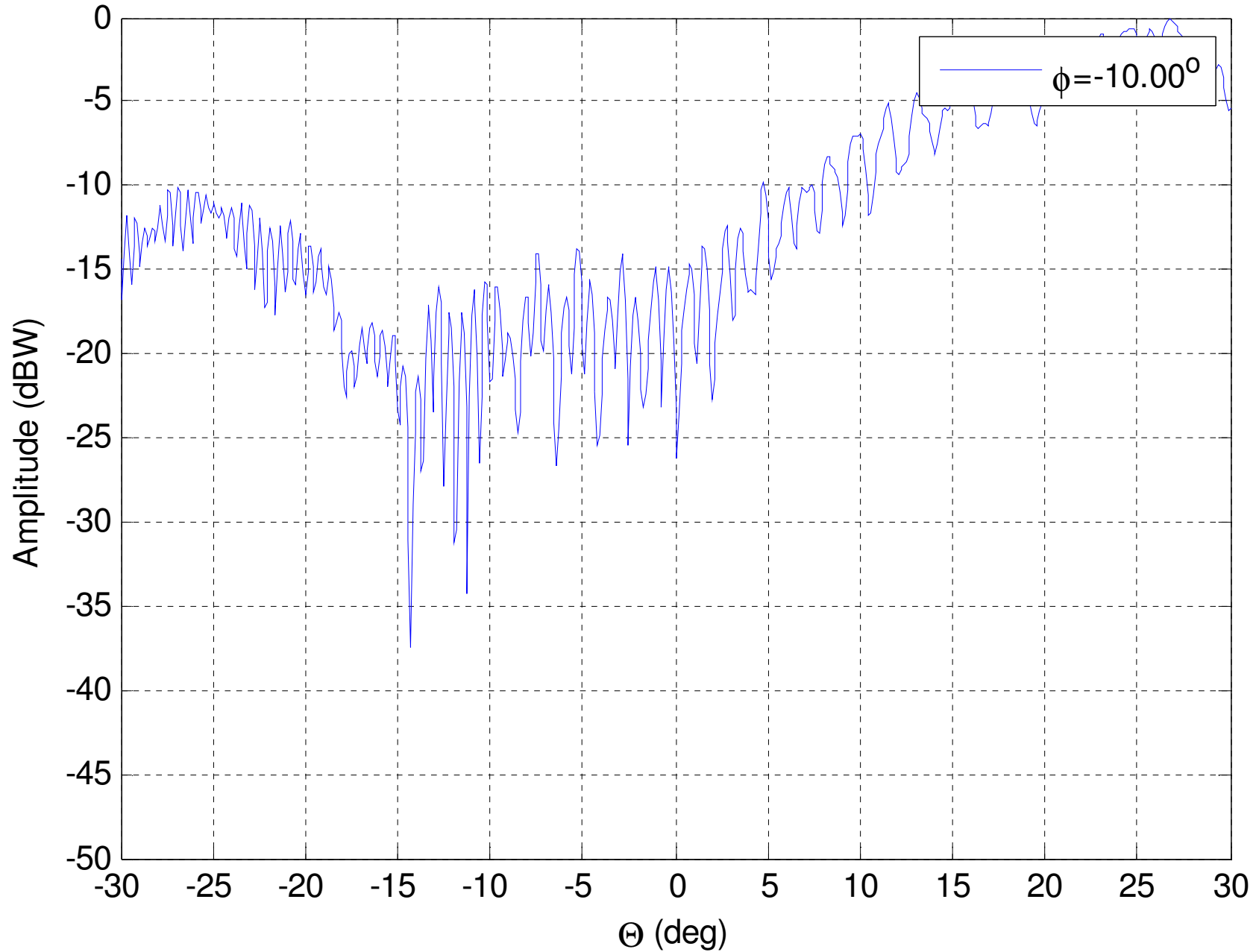
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--20.cut, Peak: -5.21 dBW, Date: 15-Dec-2011



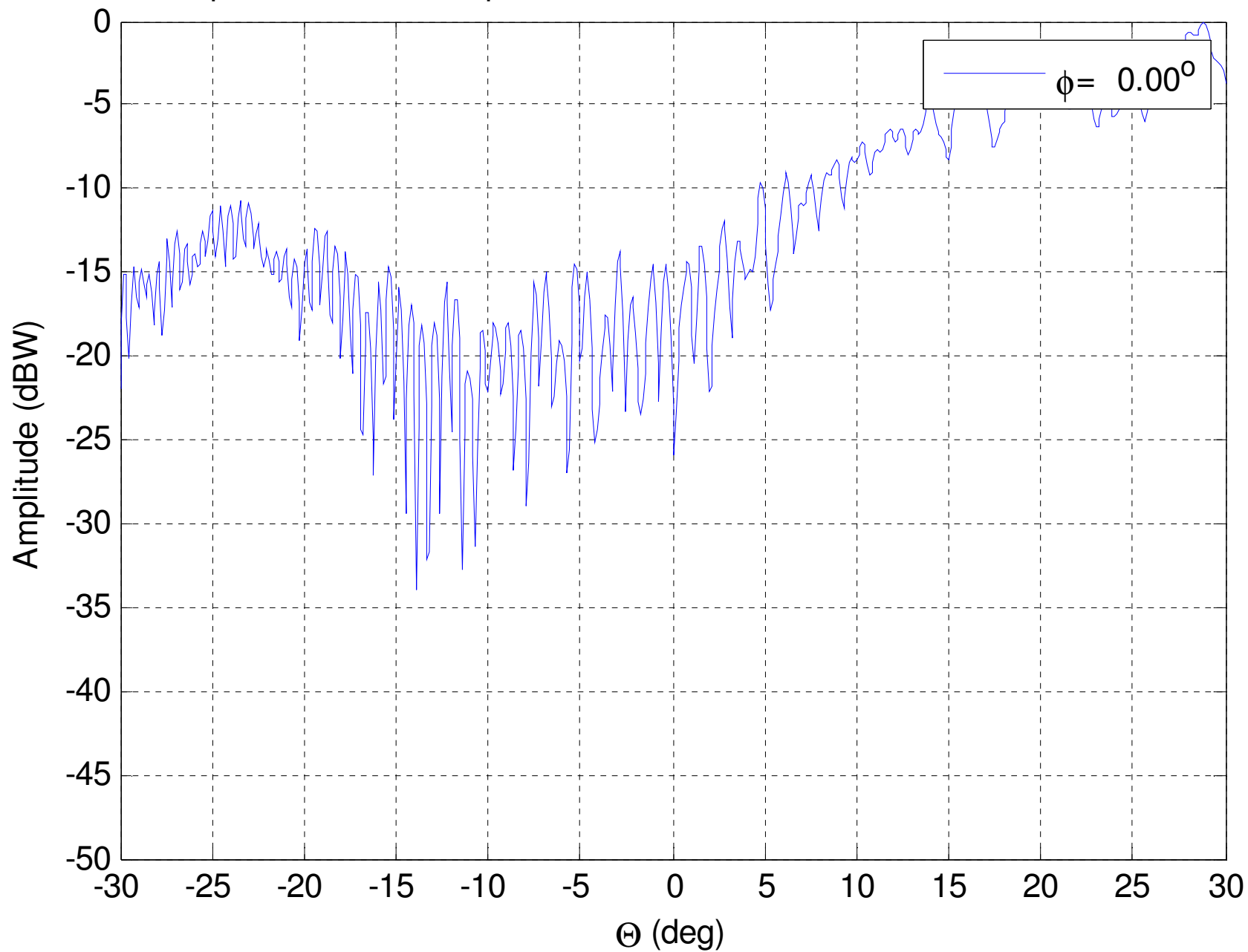
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp--10.cut, Peak: -5.39 dBW, Date: 15-Dec-2011



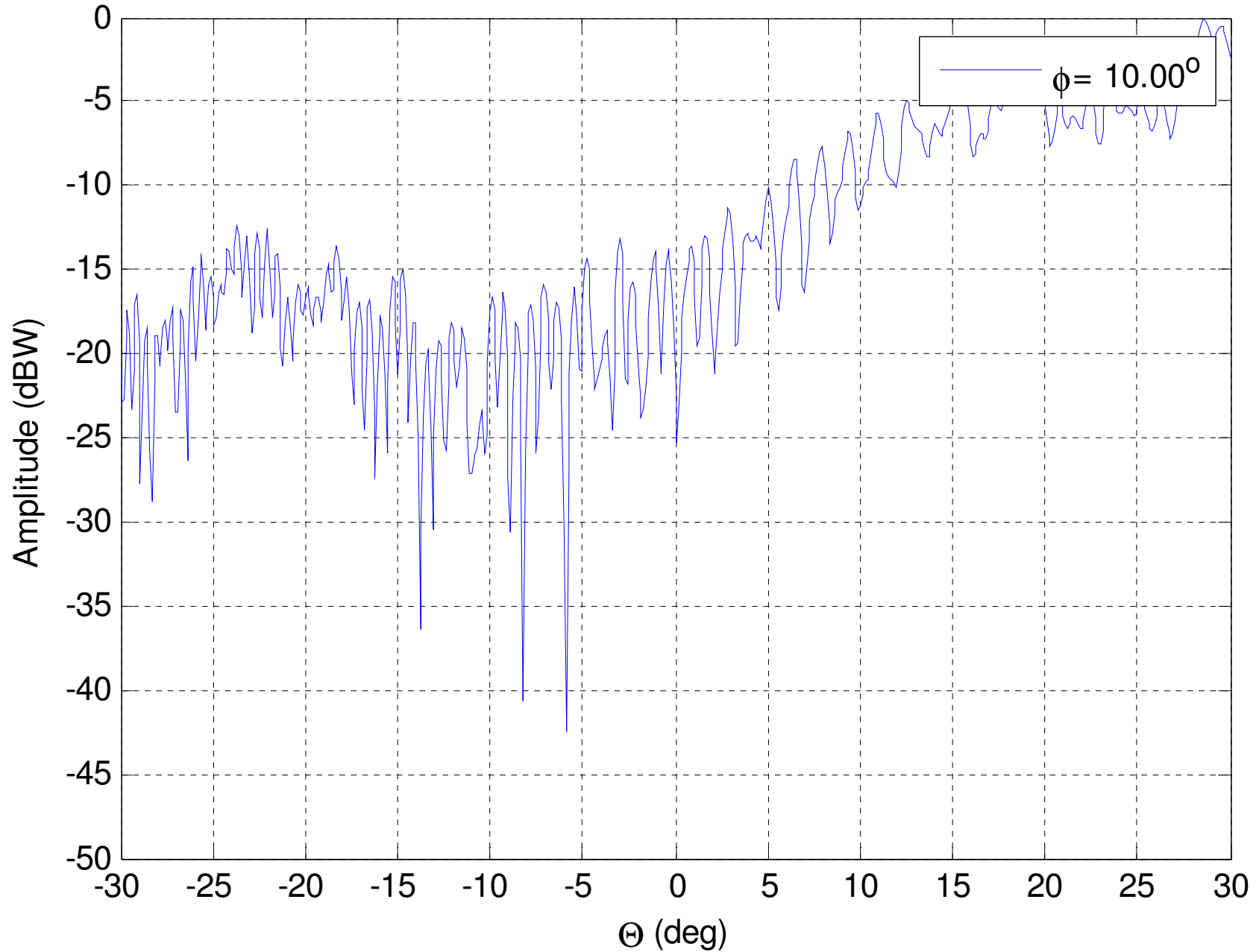
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-0.cut, Peak: -5.71 dBW, Date: 15-Dec-2011



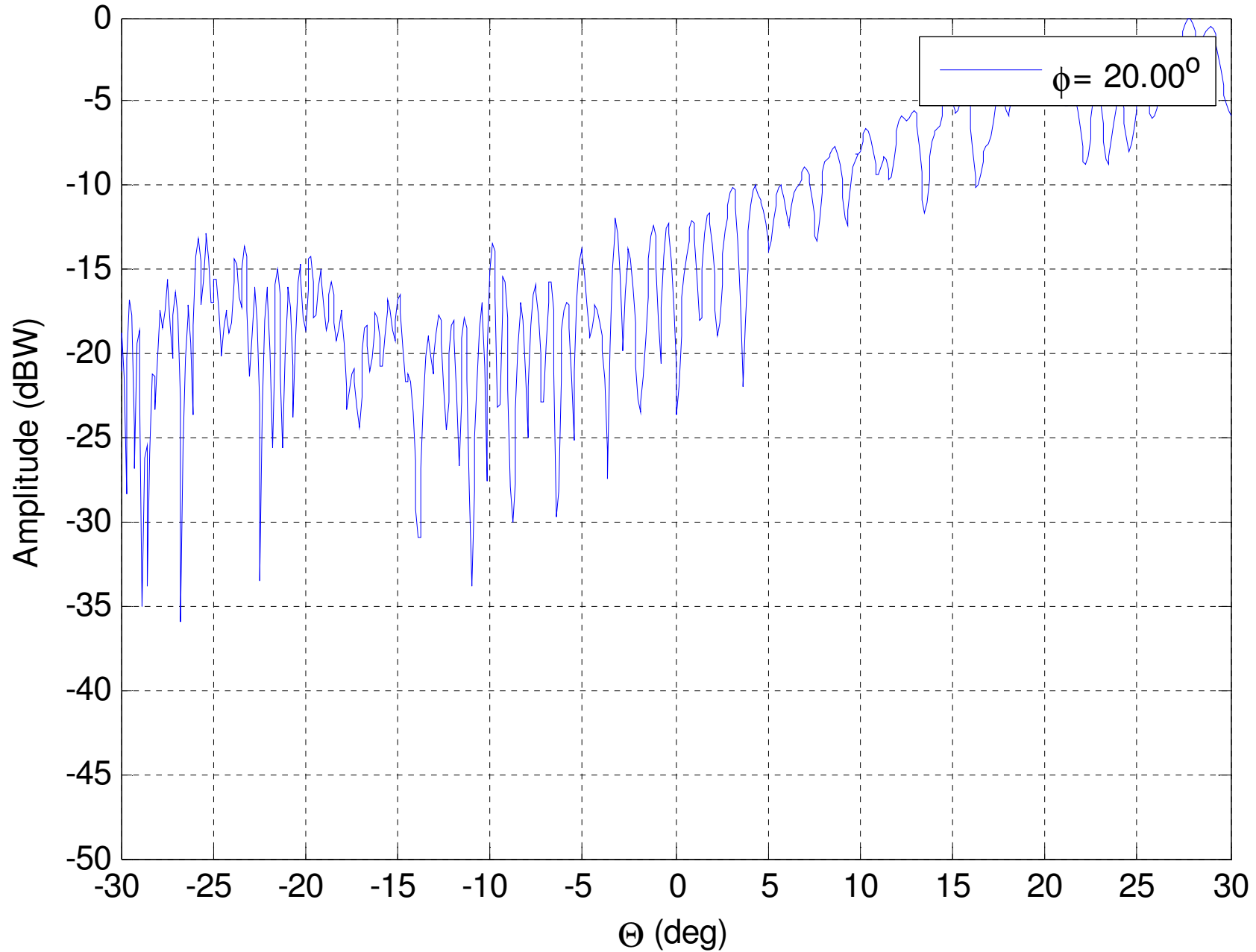
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-10.cut, Peak: -6.33 dBW, Date: 15-Dec-2011



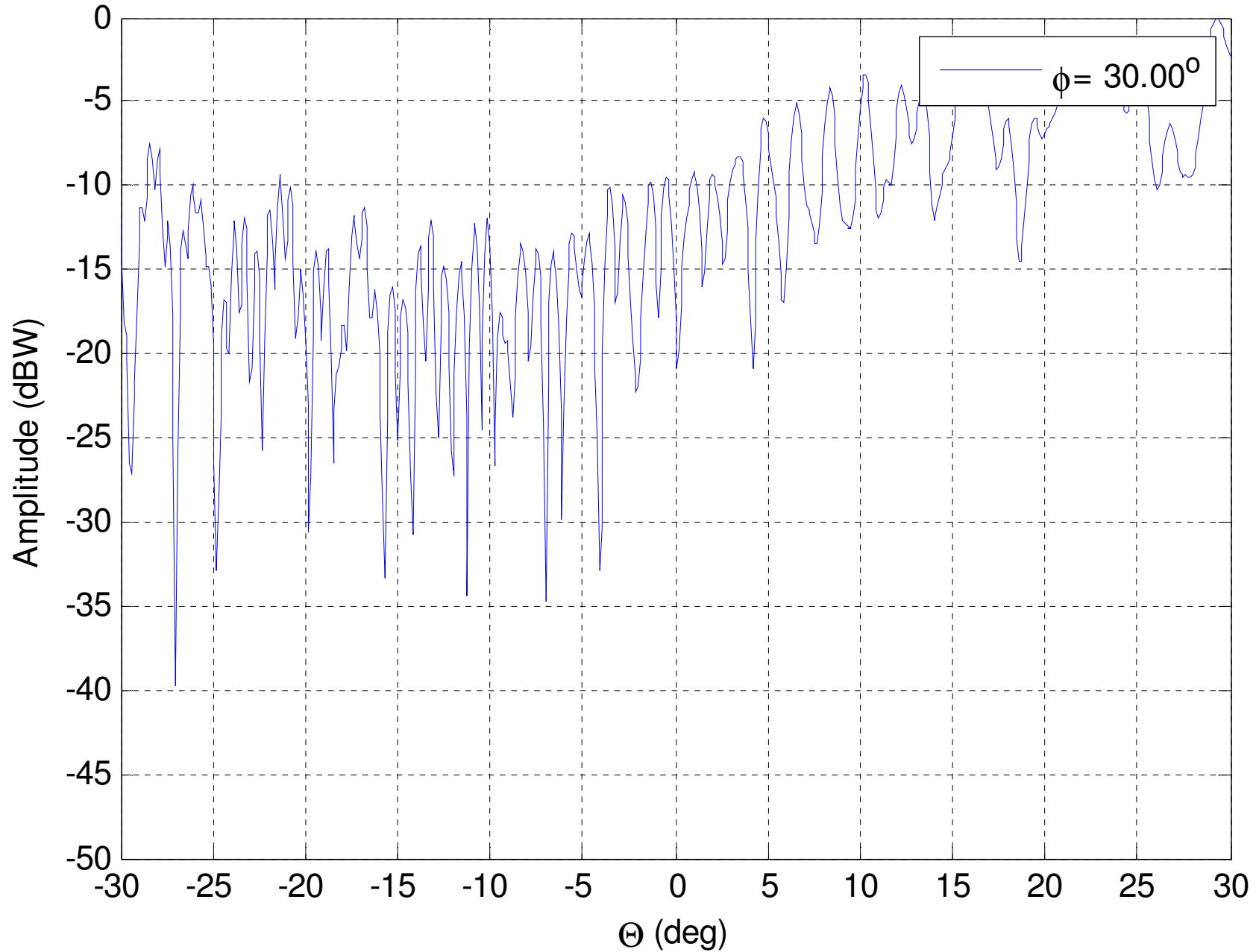
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-20.cut, Peak: -7.88 dBW, Date: 15-Dec-2011



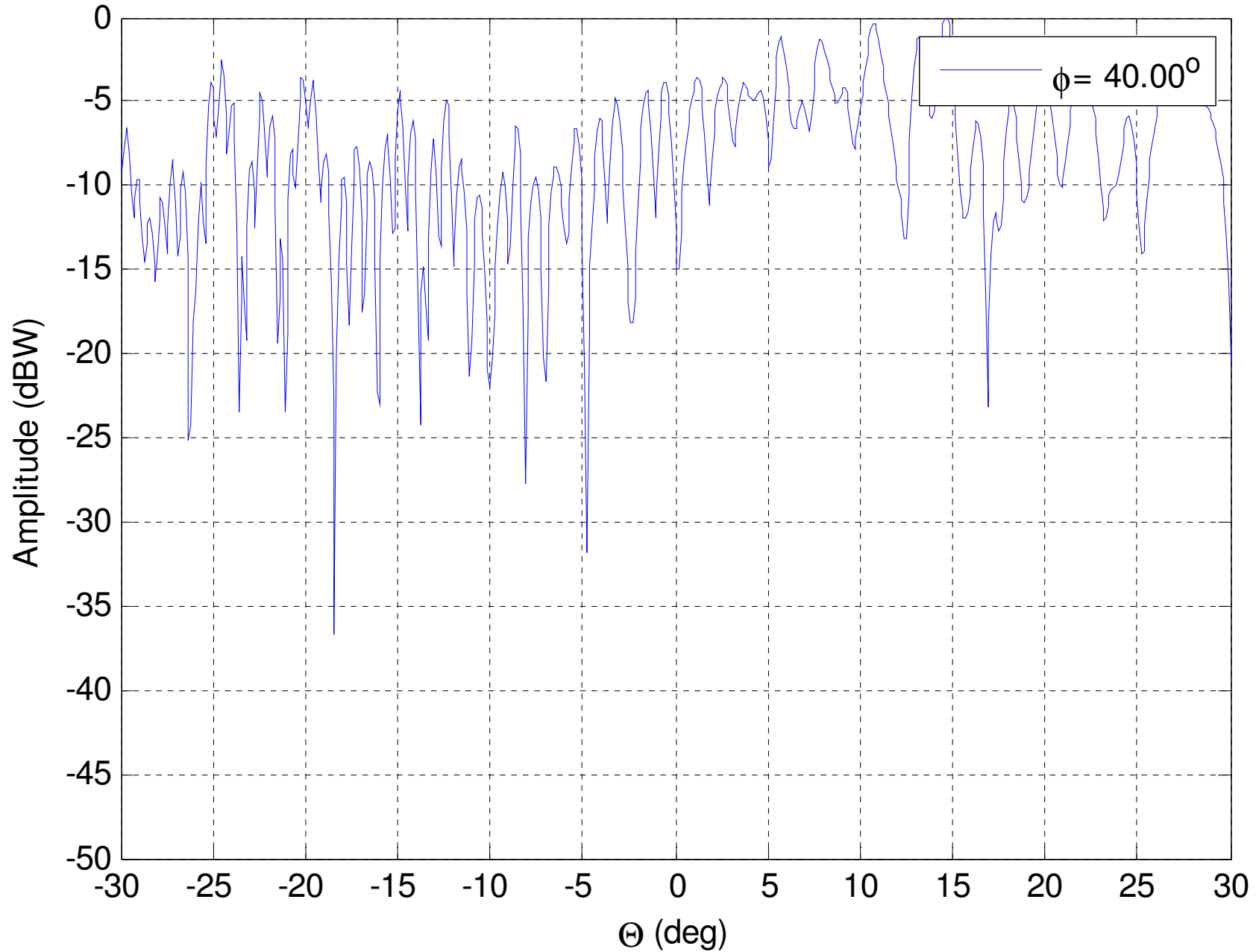
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-30.cut, Peak: -10.61 dBW, Date: 15-Dec-2011



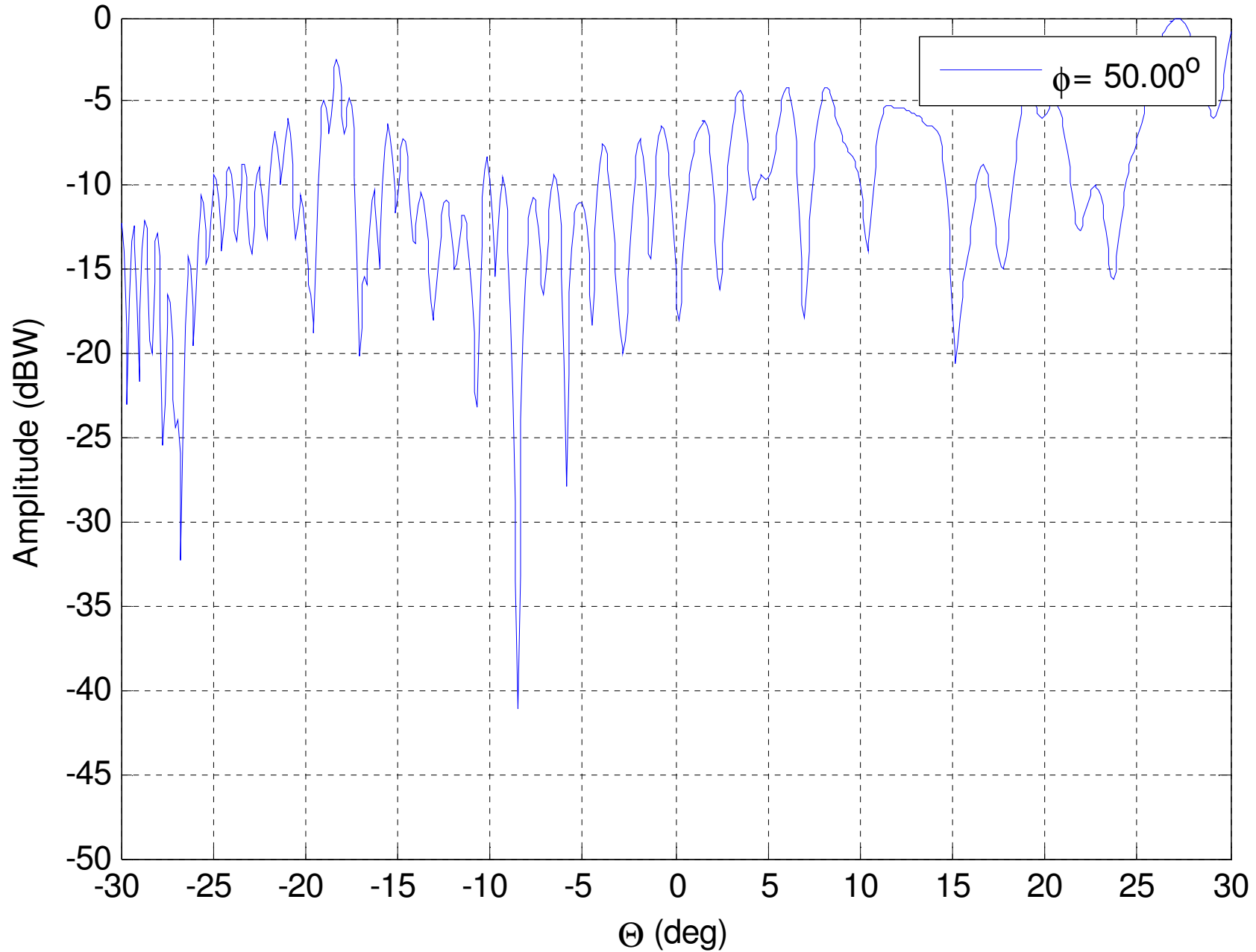
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-40.cut, Peak: -16.16 dBW, Date: 15-Dec-2011



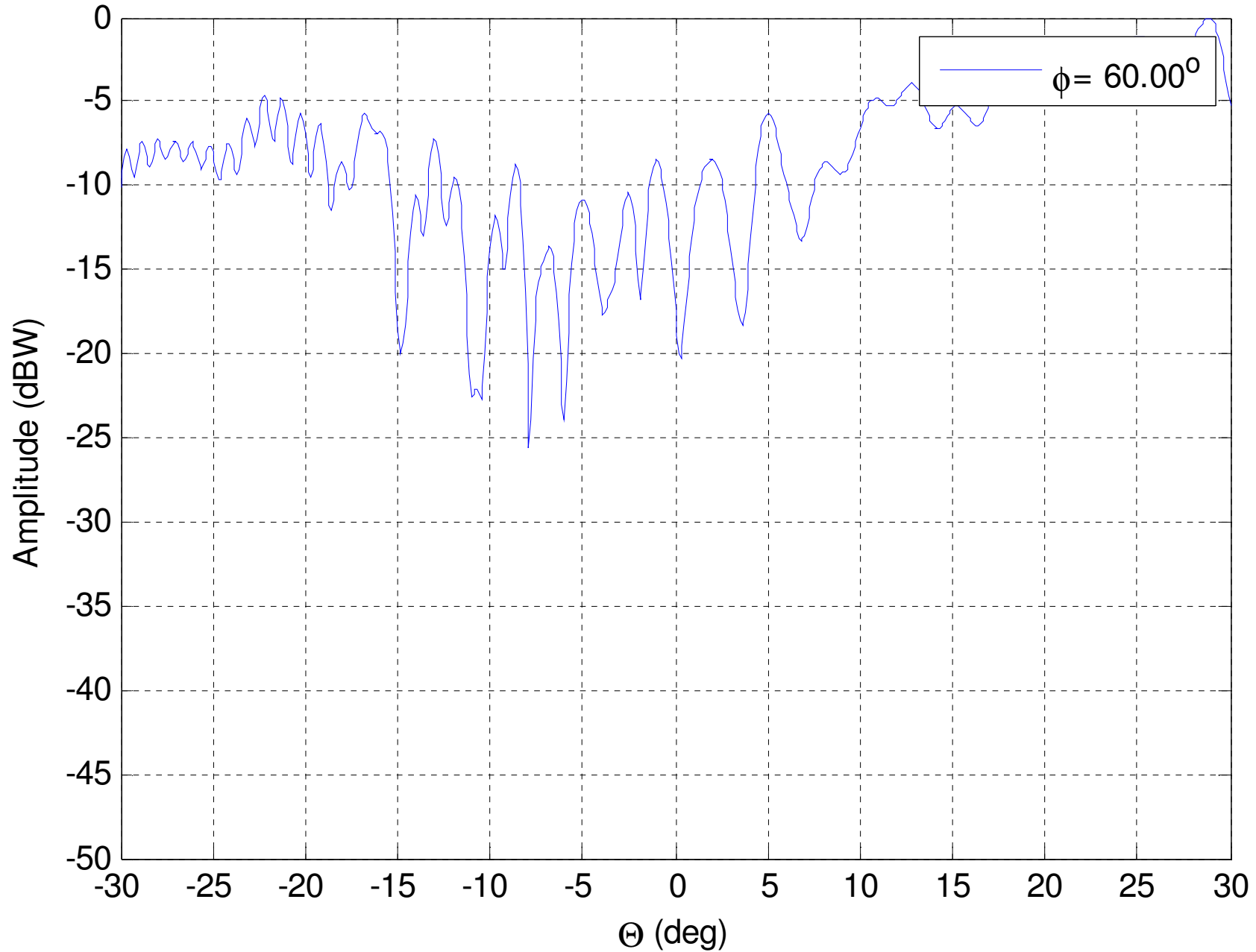
Normalized pattern cuts - farfield

Input file: tx-17.3-rhcp-50.cut, Peak: -13.52 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

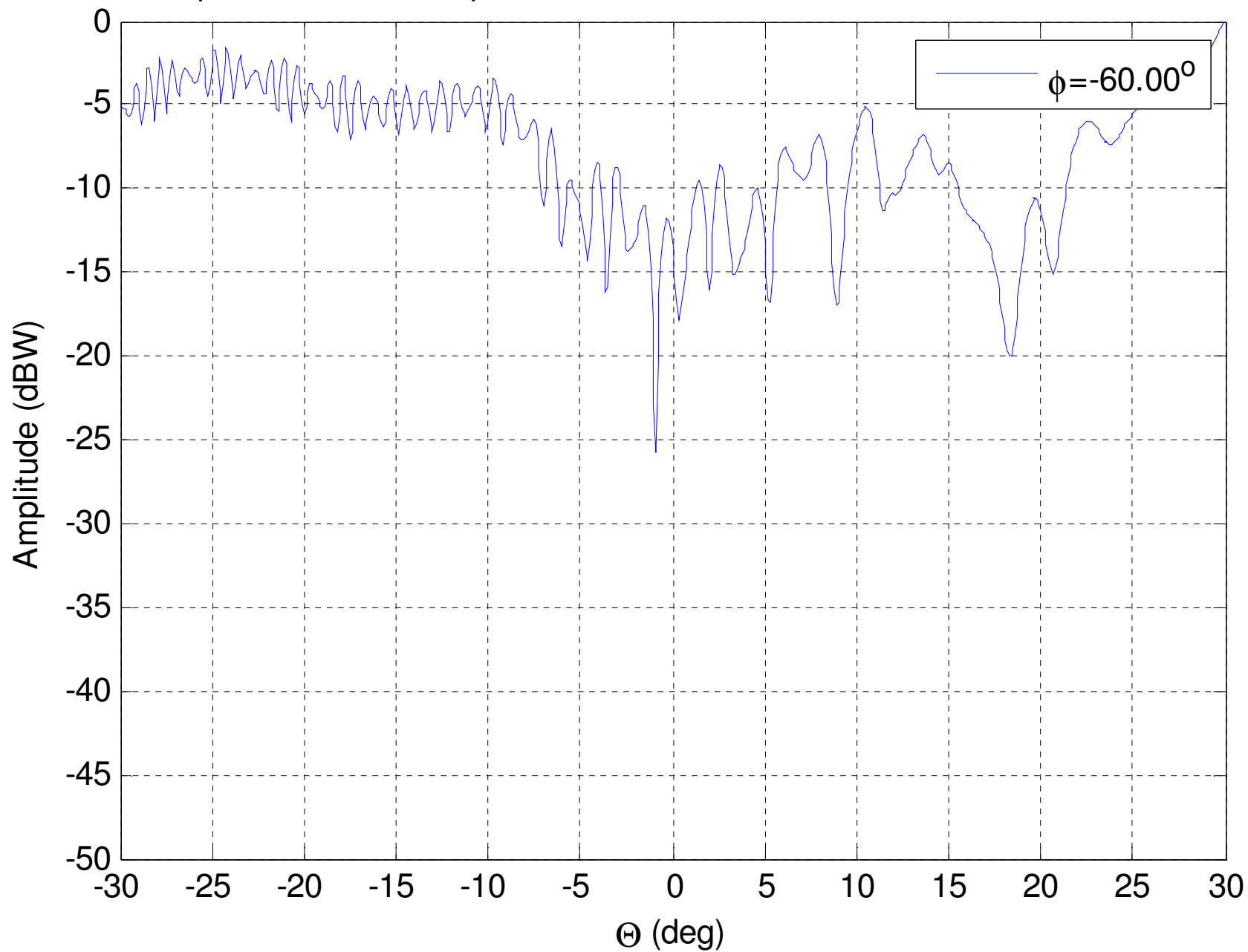
Input file: tx-17.3-rhcp-60.cut, Peak: -11.25 dBW, Date: 15-Dec-2011



LHCP at 17.3 GHz

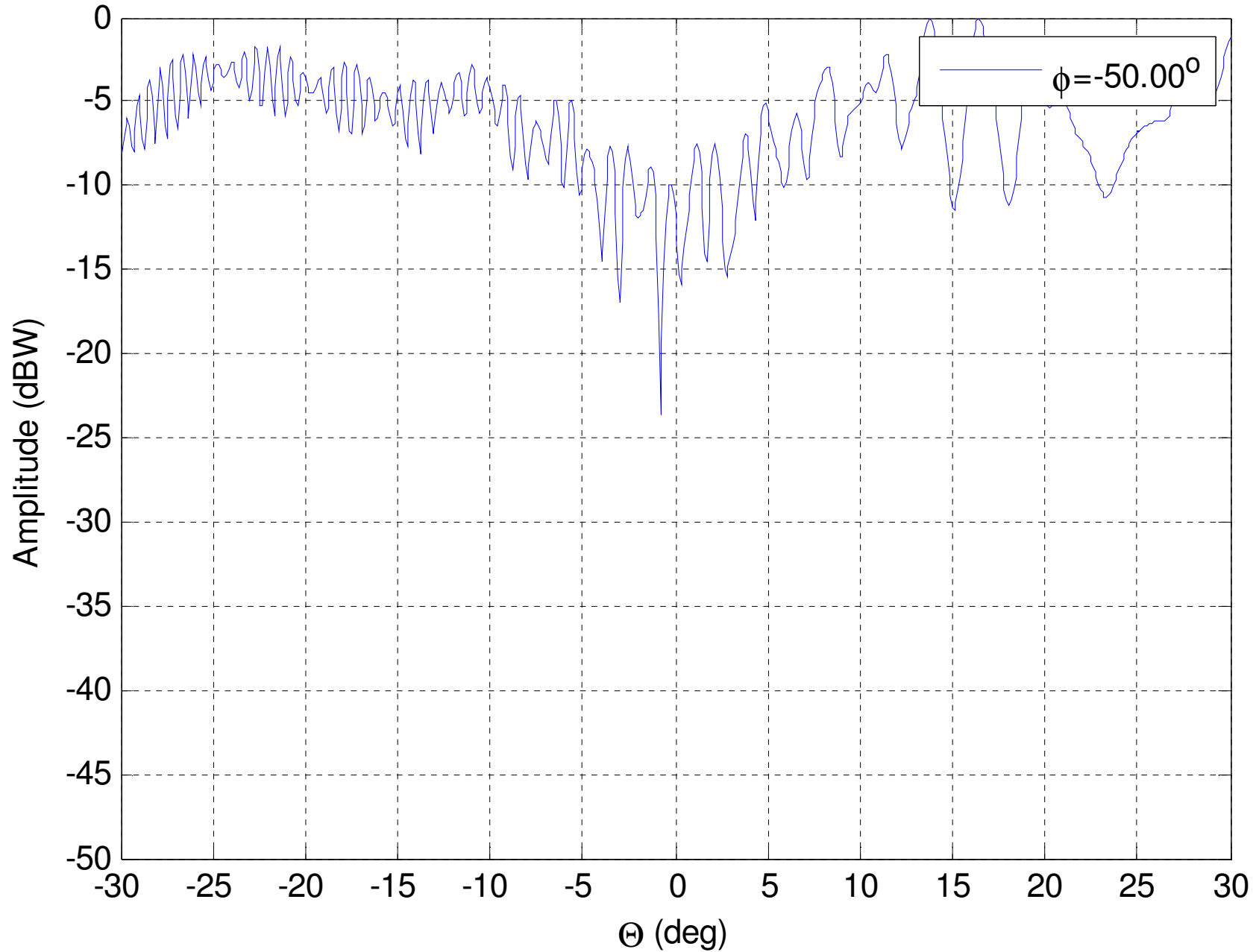
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--60.cut, Peak: -9.64 dBW, Date: 15-Dec-2011



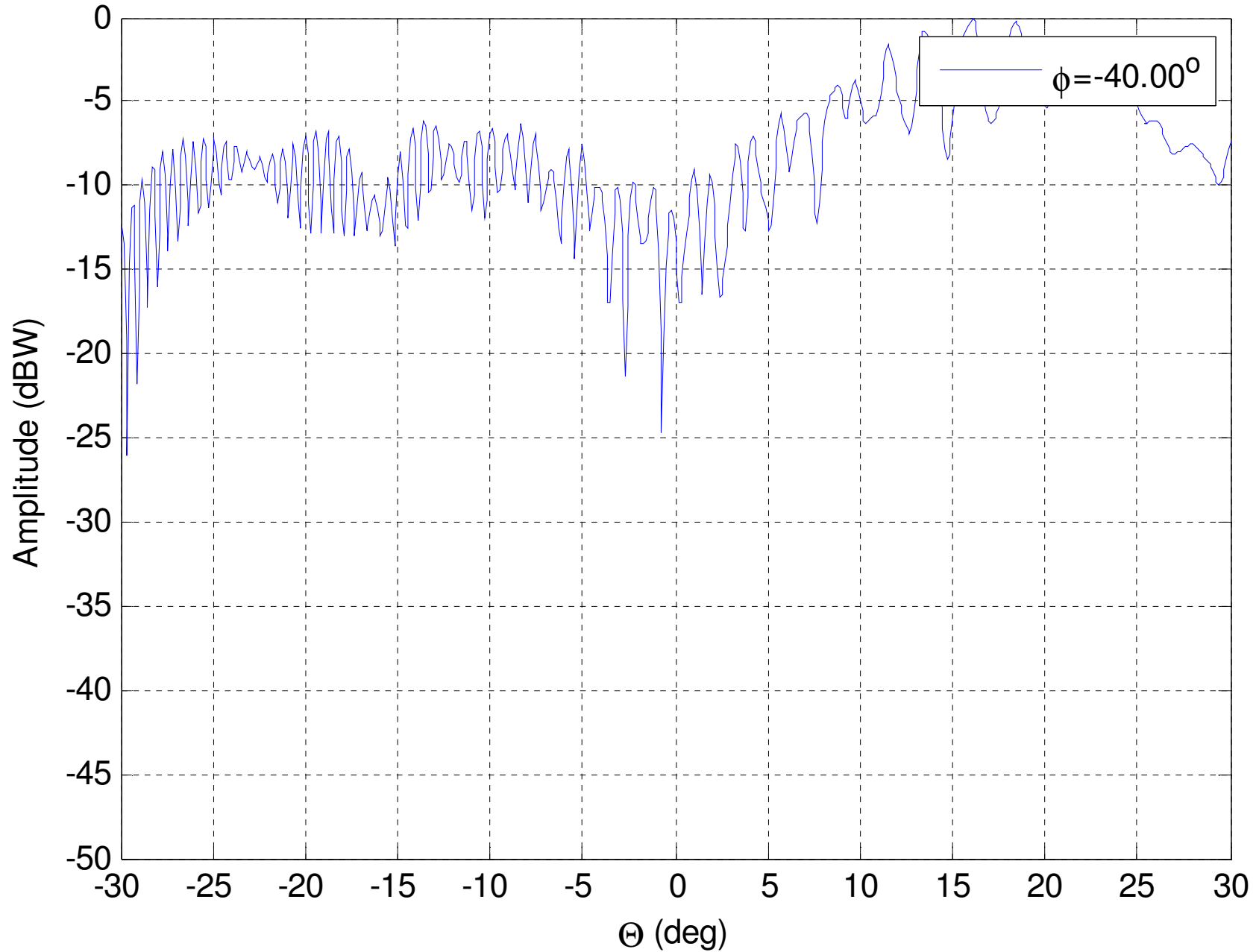
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--50.cut, Peak: -11.49 dBW, Date: 15-Dec-2011



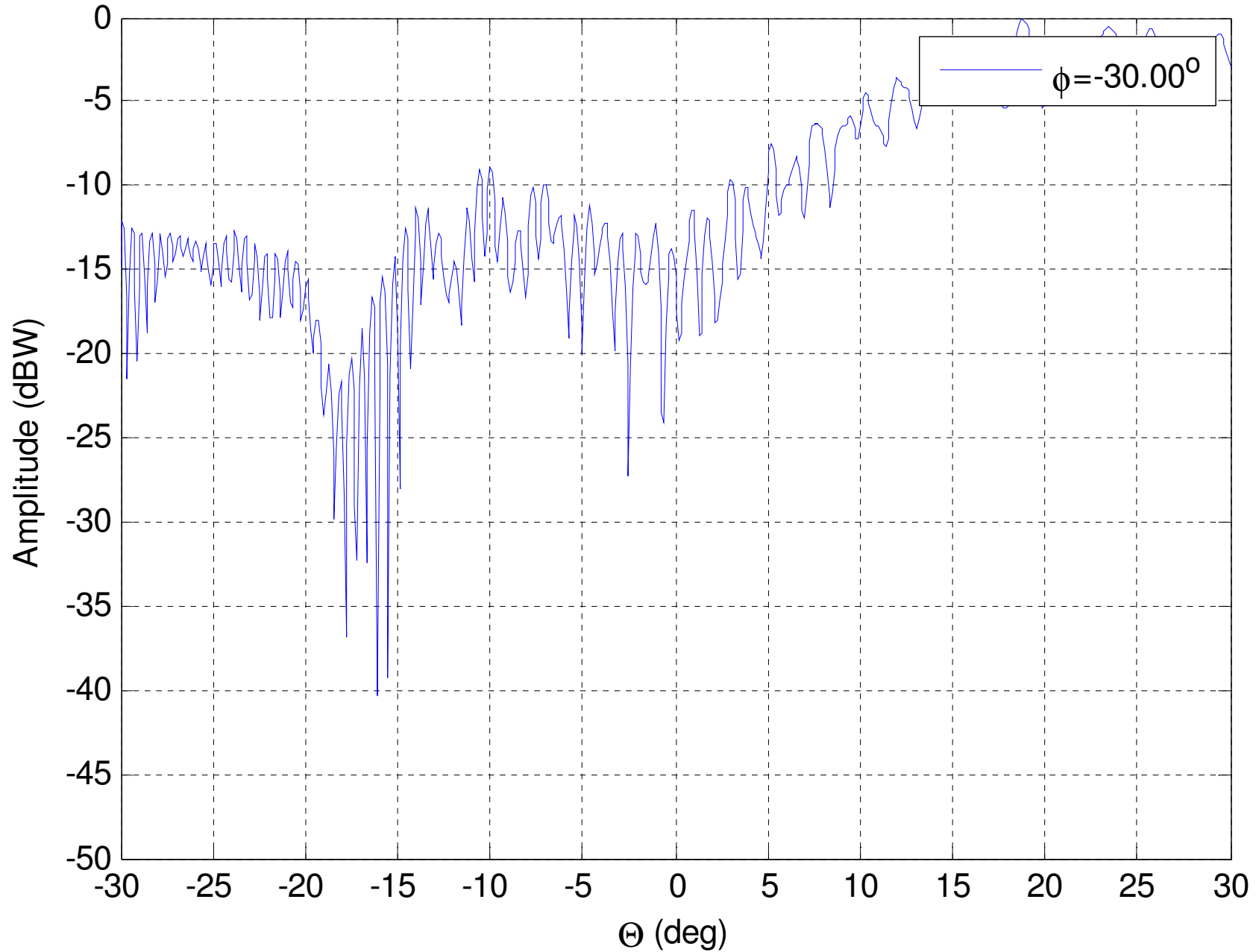
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--40.cut, Peak: -10.07 dBW, Date: 15-Dec-2011



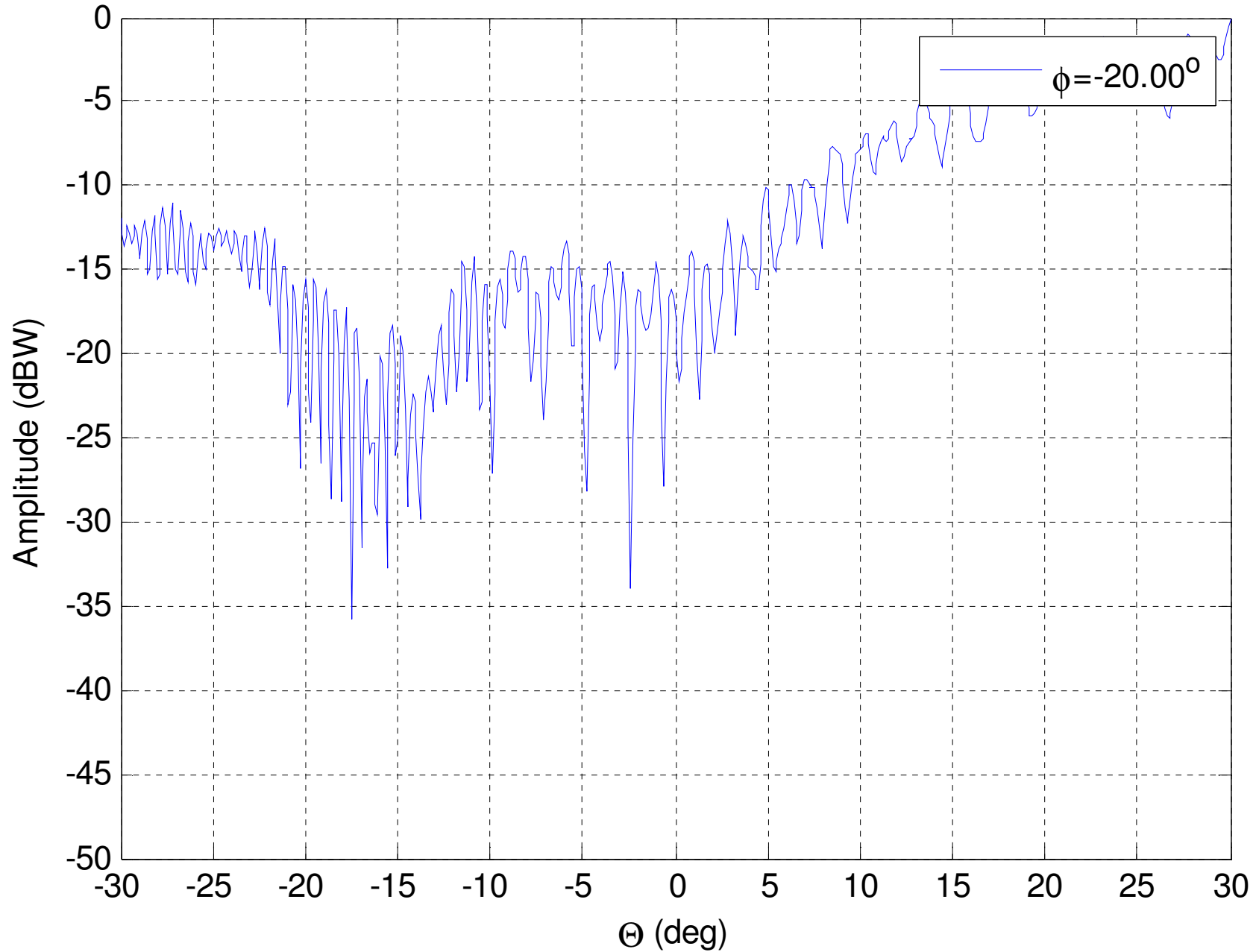
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--30.cut, Peak: -7.84 dBW, Date: 15-Dec-2011



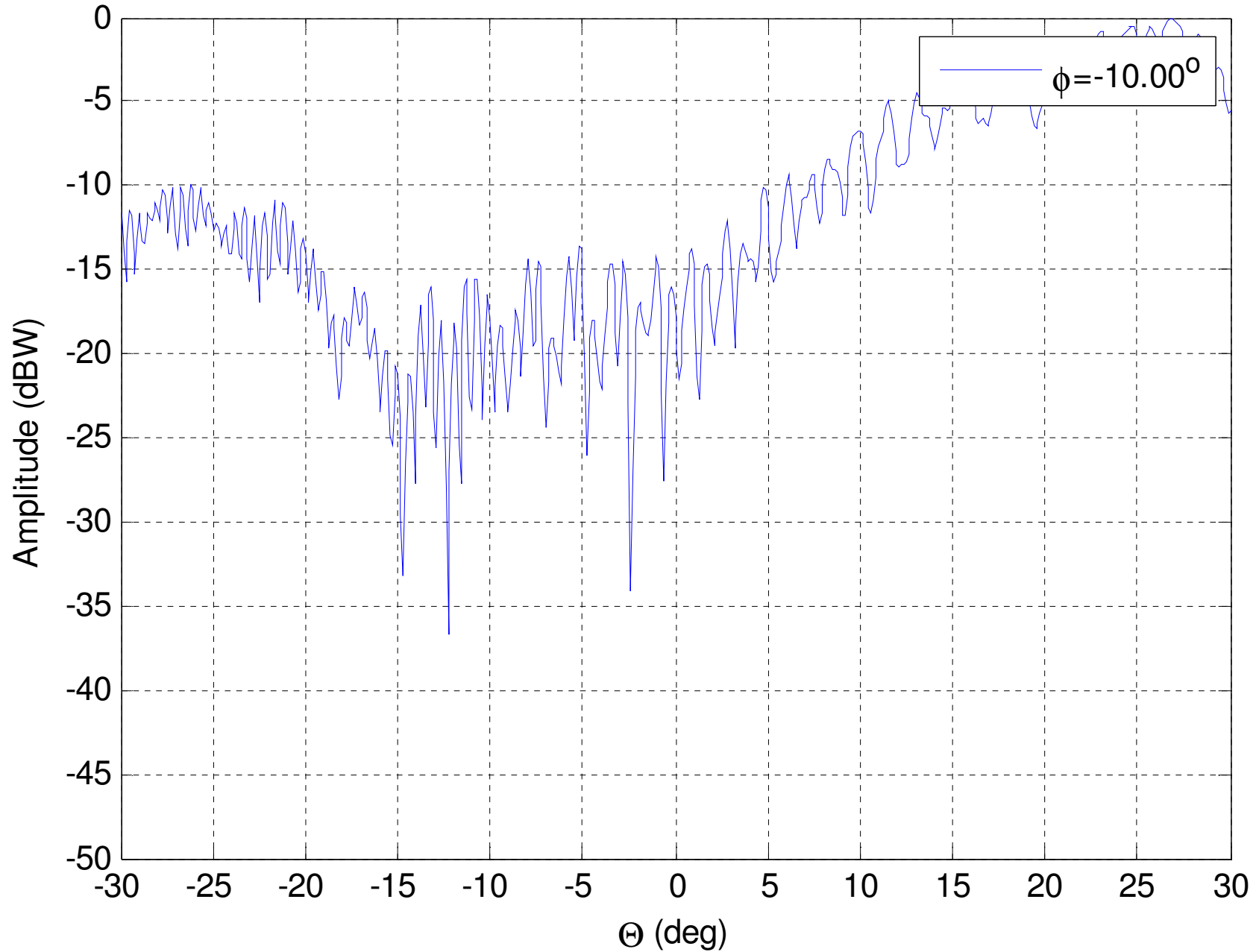
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--20.cut, Peak: -5.35 dBW, Date: 15-Dec-2011



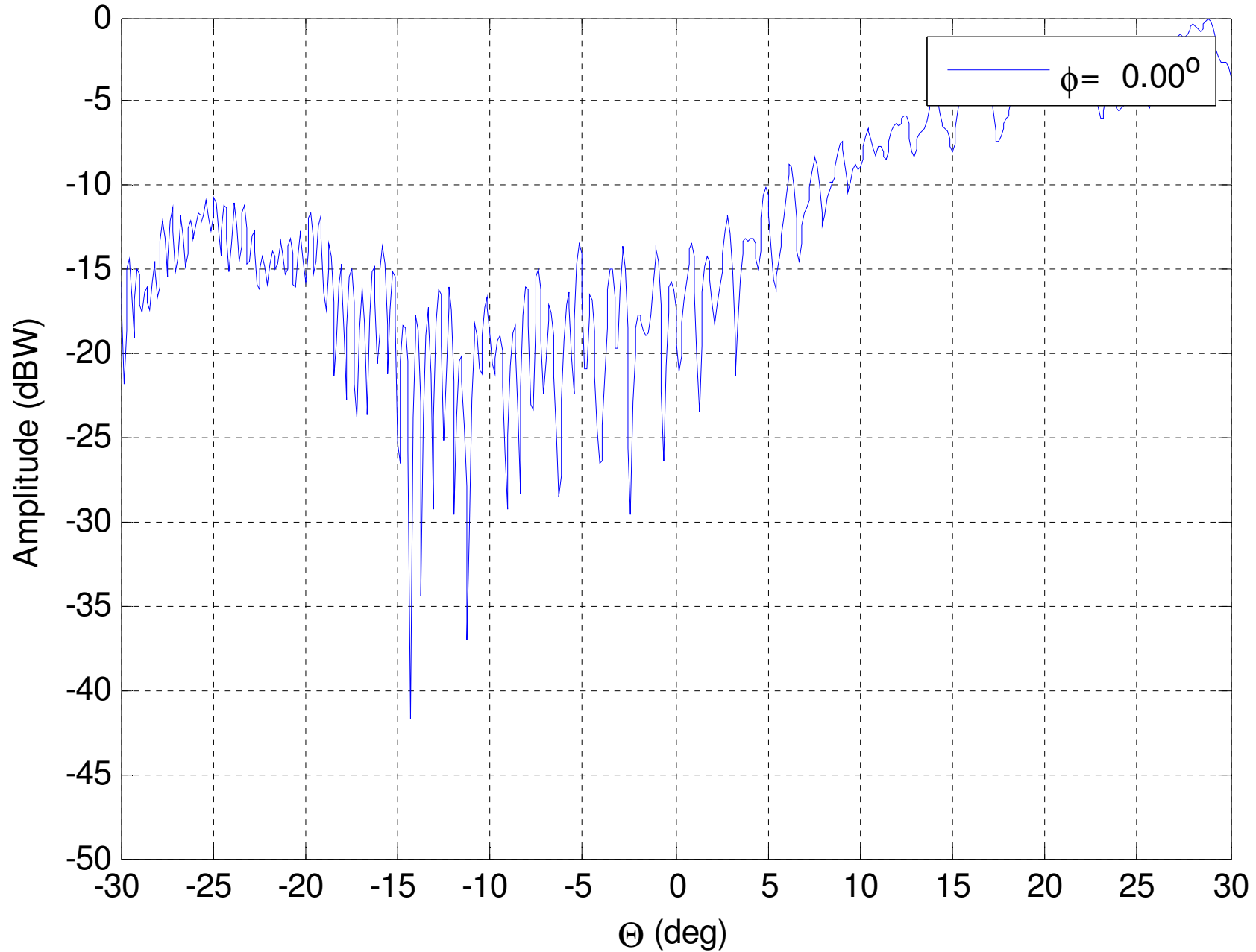
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp--10.cut, Peak: -5.48 dBW, Date: 15-Dec-2011



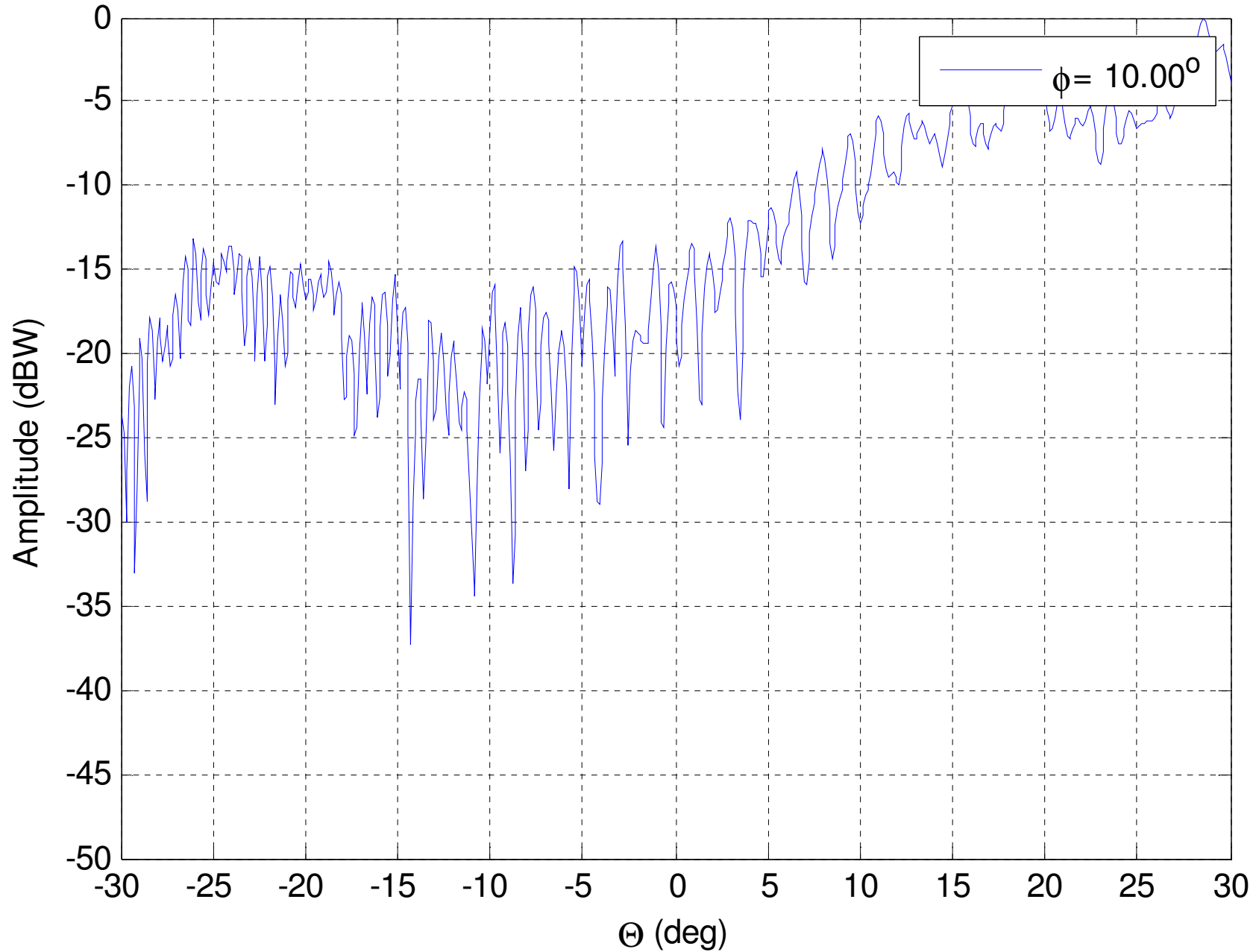
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-0.cut, Peak: -5.87 dBW, Date: 15-Dec-2011



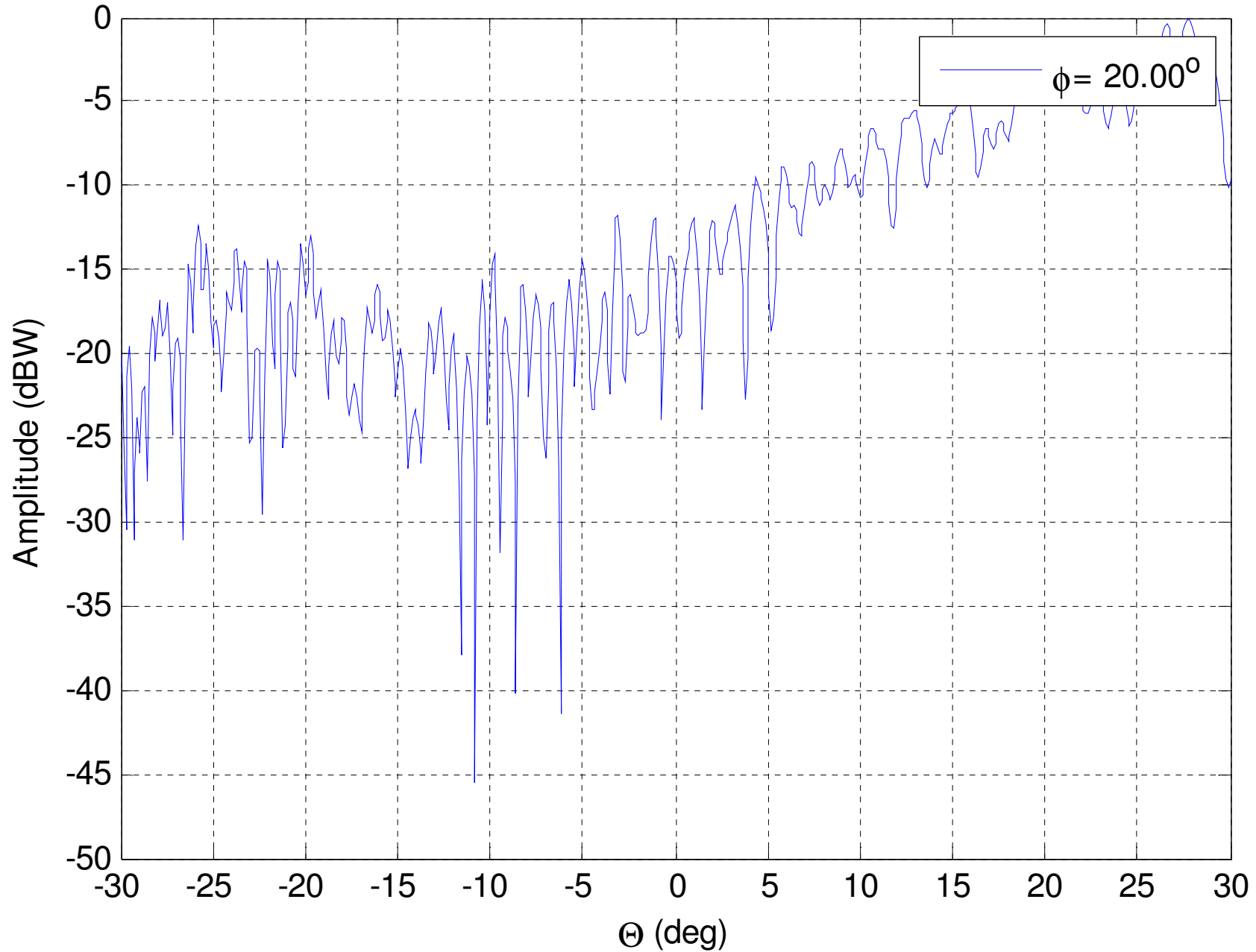
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-10.cut, Peak: -5.98 dBW, Date: 15-Dec-2011



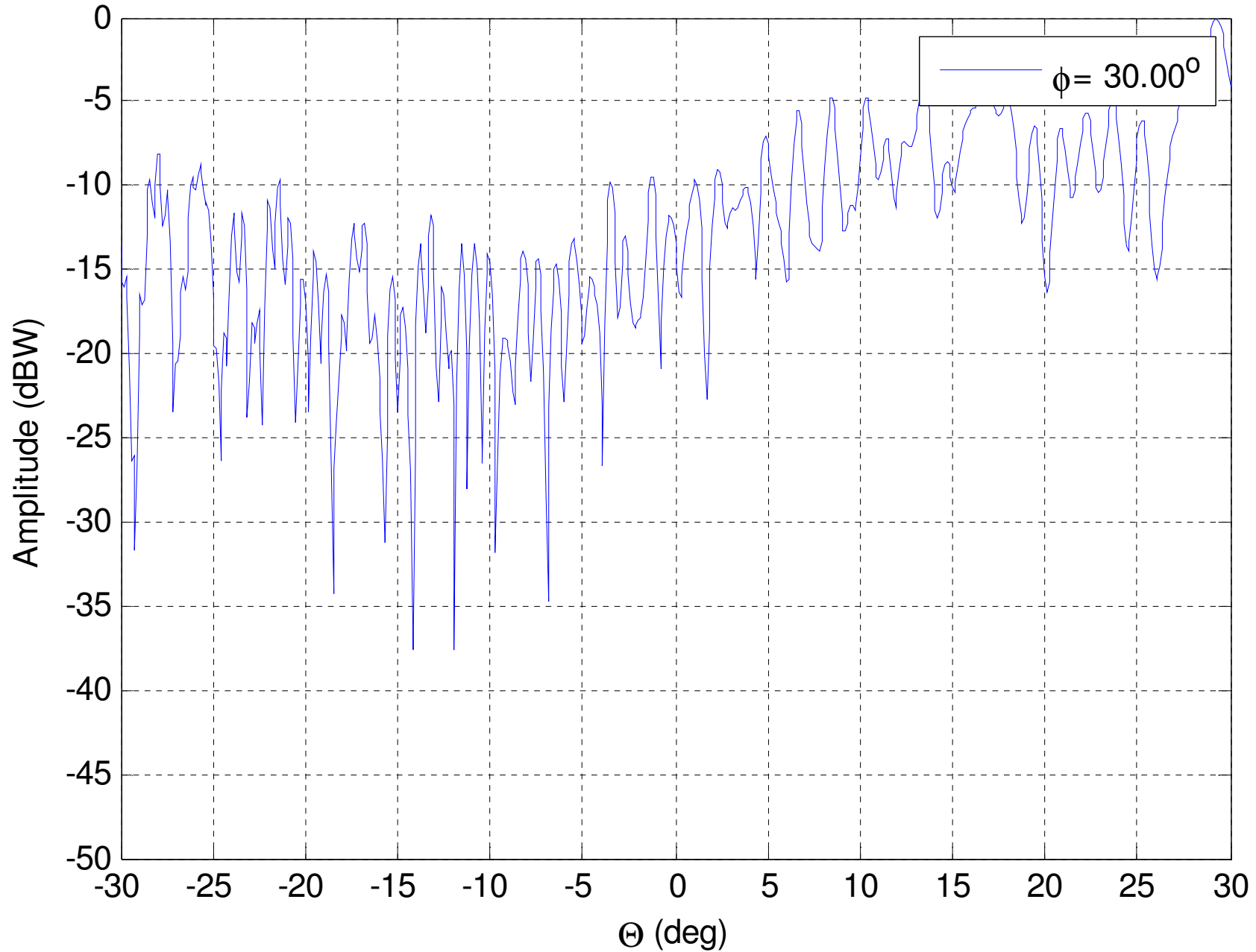
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-20.cut, Peak: -7.55 dBW, Date: 15-Dec-2011



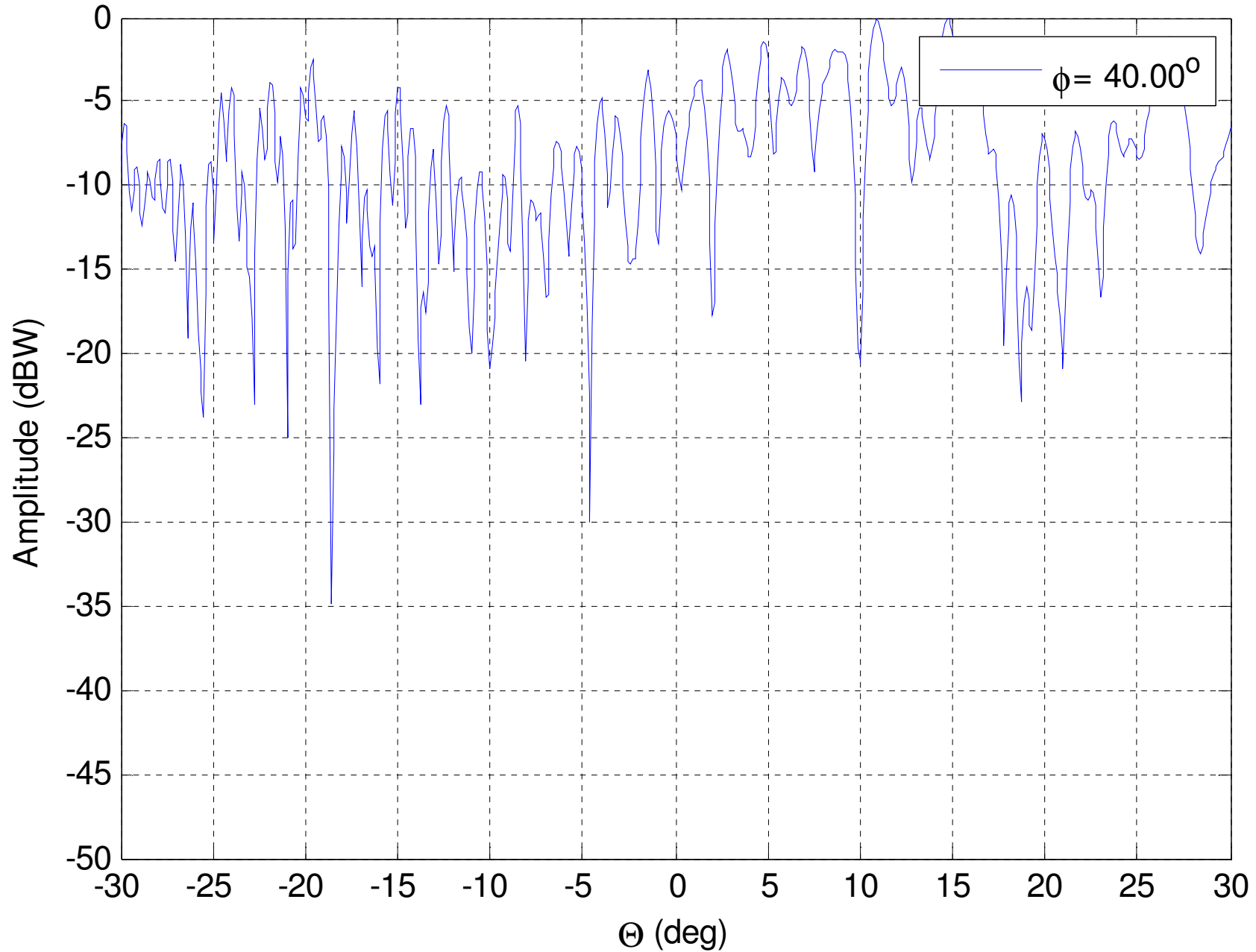
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-30.cut, Peak: -9.90 dBW, Date: 15-Dec-2011



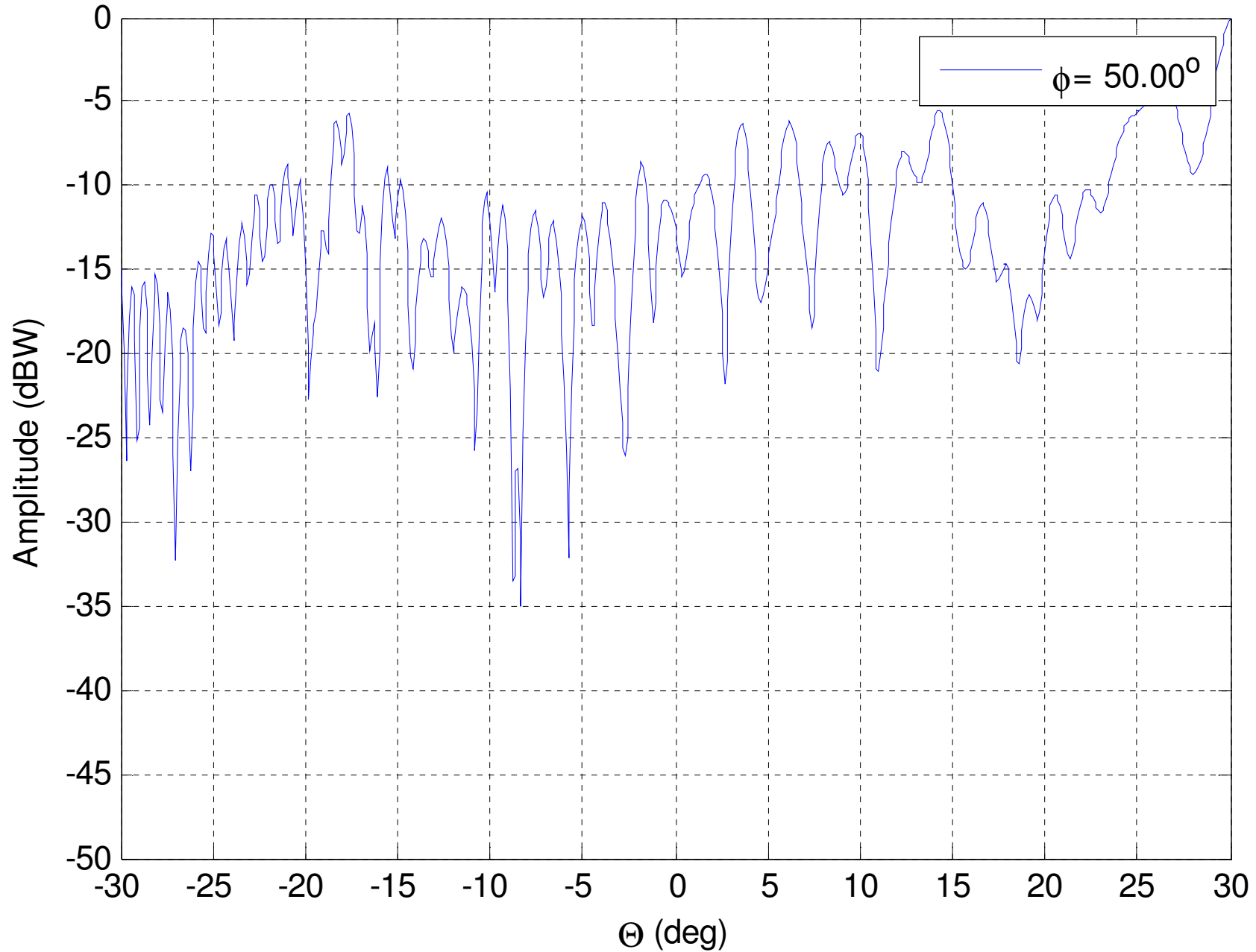
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-40.cut, Peak: -16.17 dBW, Date: 15-Dec-2011



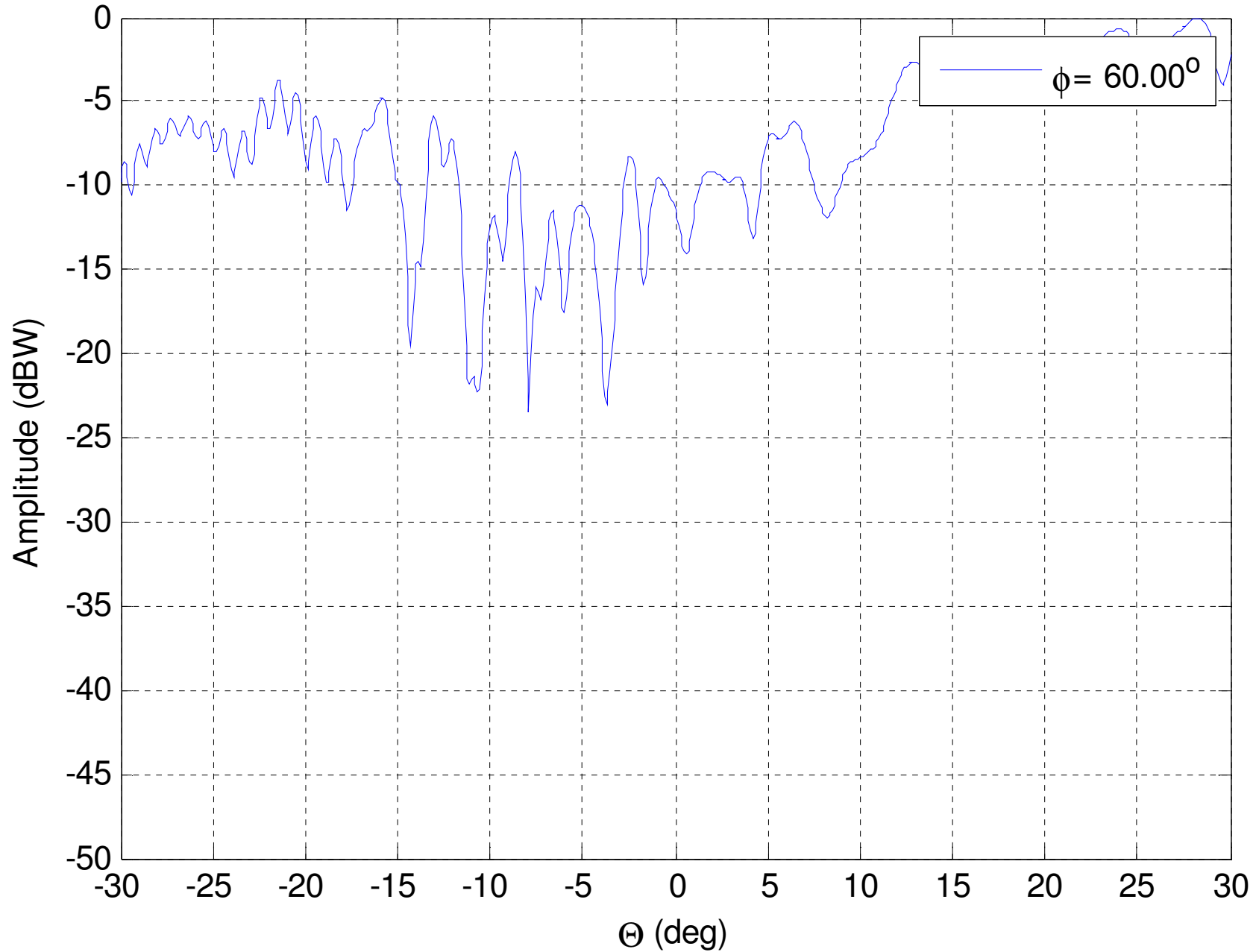
Normalized pattern cuts - farfield

Input file: tx-17.3-lhcp-50.cut, Peak: -10.83 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

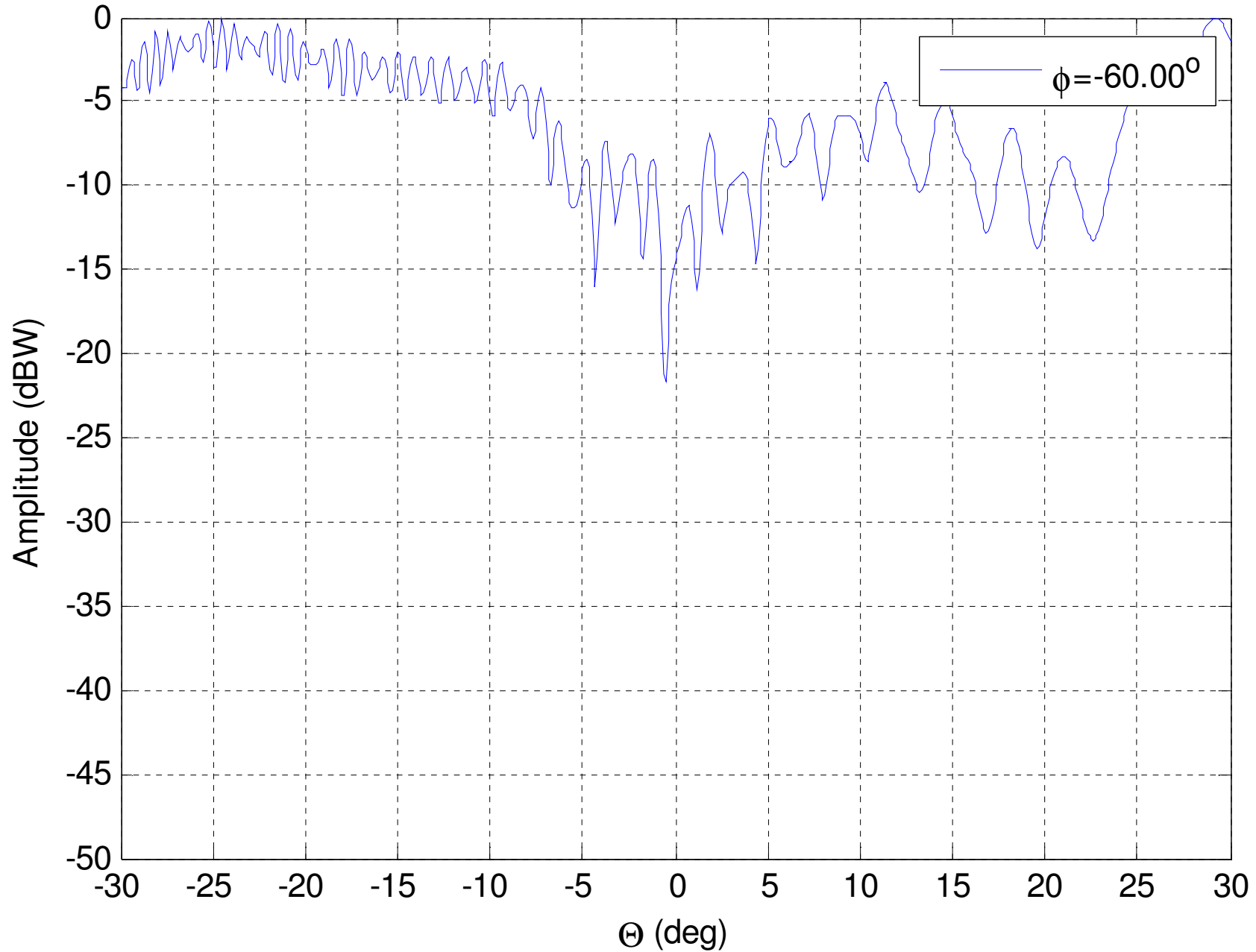
Input file: tx-17.3-lhcp-60.cut, Peak: -11.86 dBW, Date: 15-Dec-2011



RHCP at 17.5 GHz

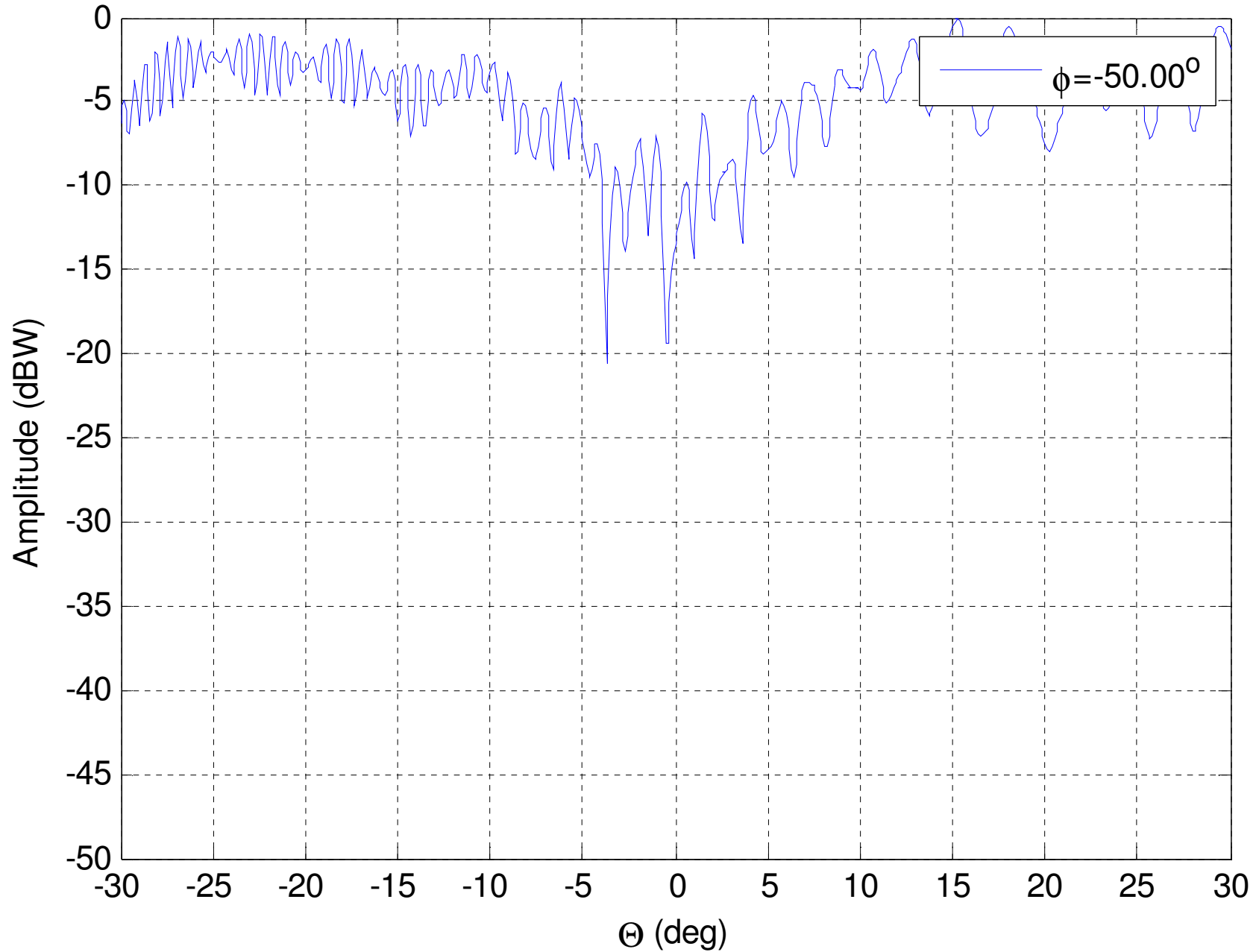
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--60.cut, Peak: -11.18 dBW, Date: 15-Dec-2011



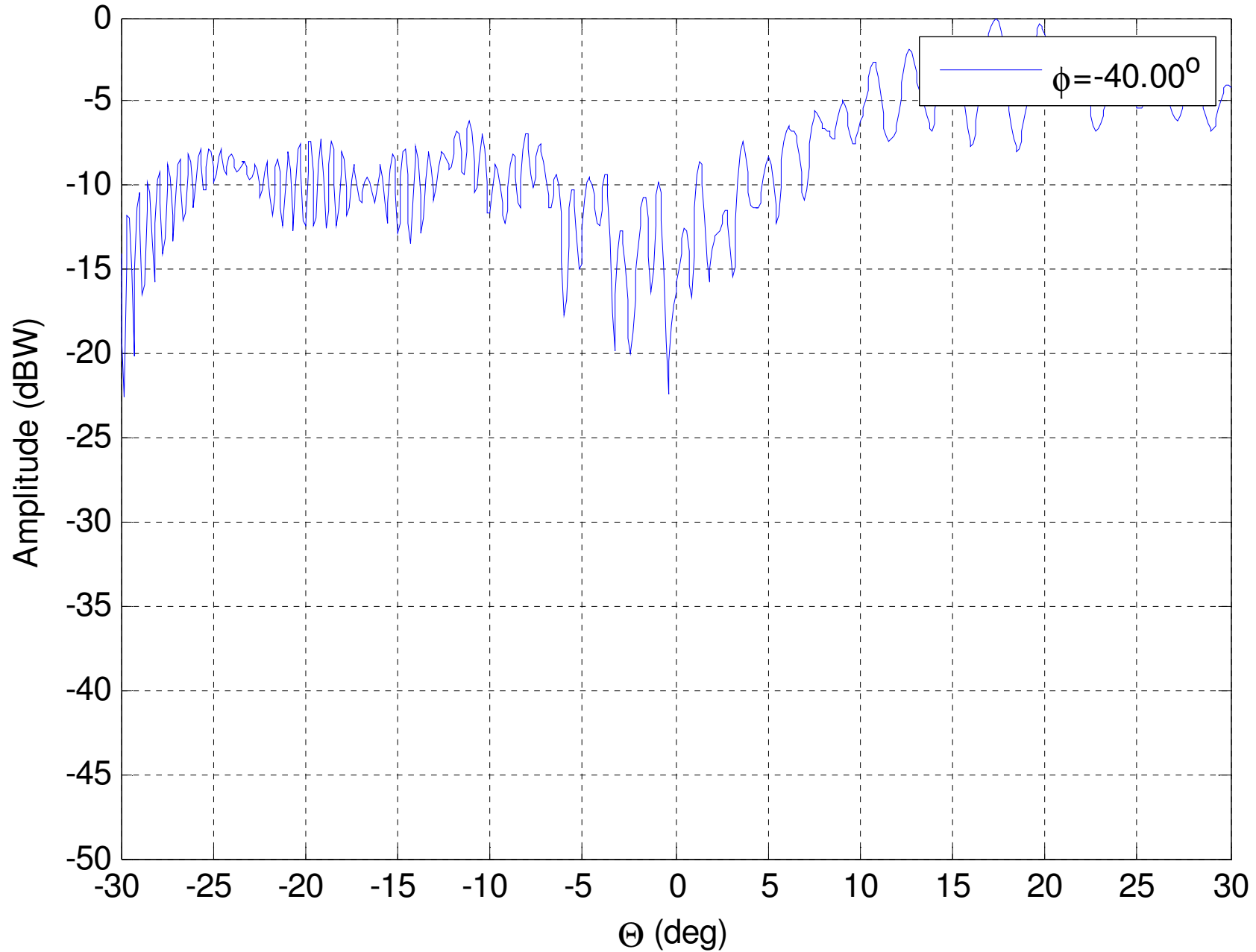
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--50.cut, Peak: -12.20 dBW, Date: 15-Dec-2011



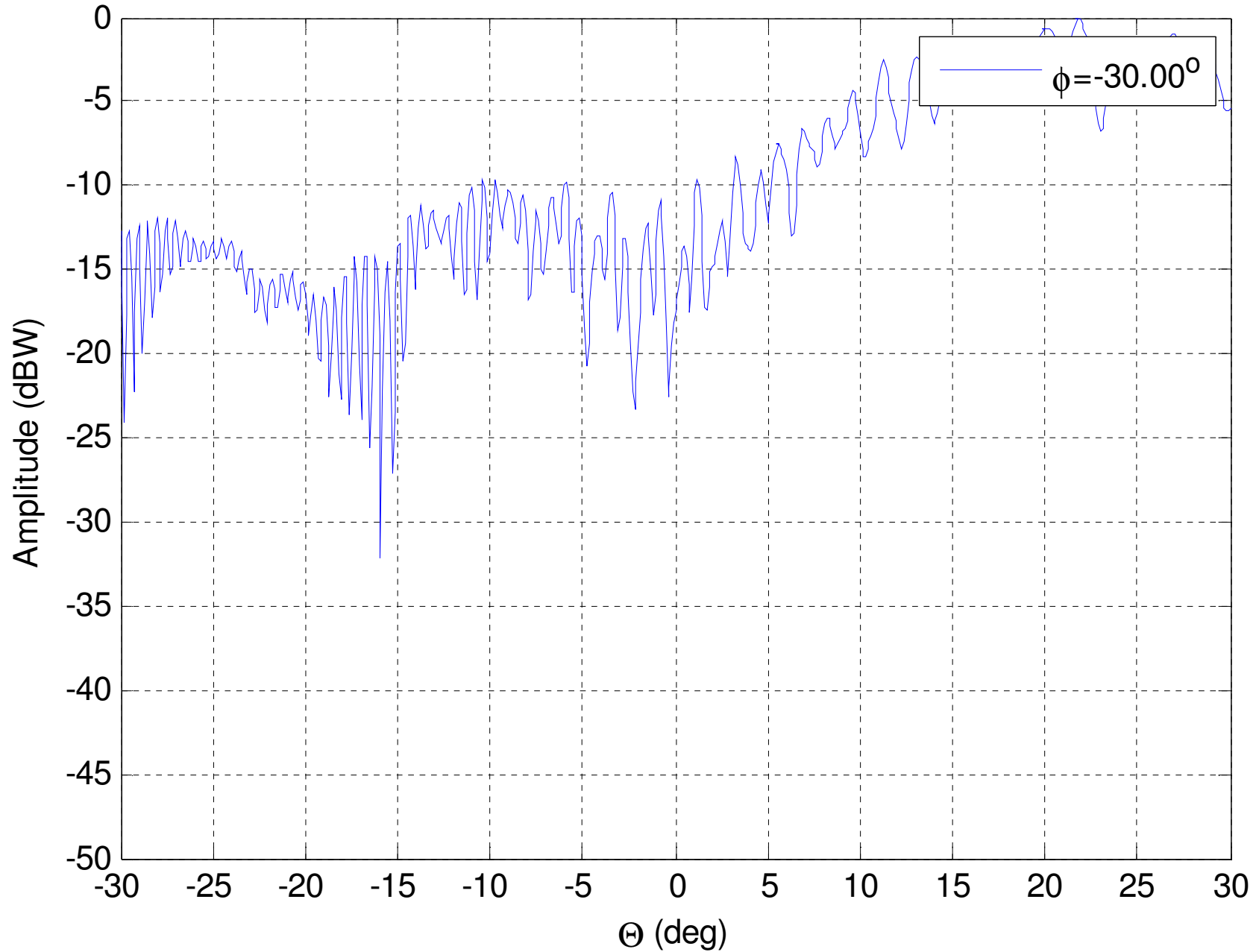
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--40.cut, Peak: -9.27 dBW, Date: 15-Dec-2011



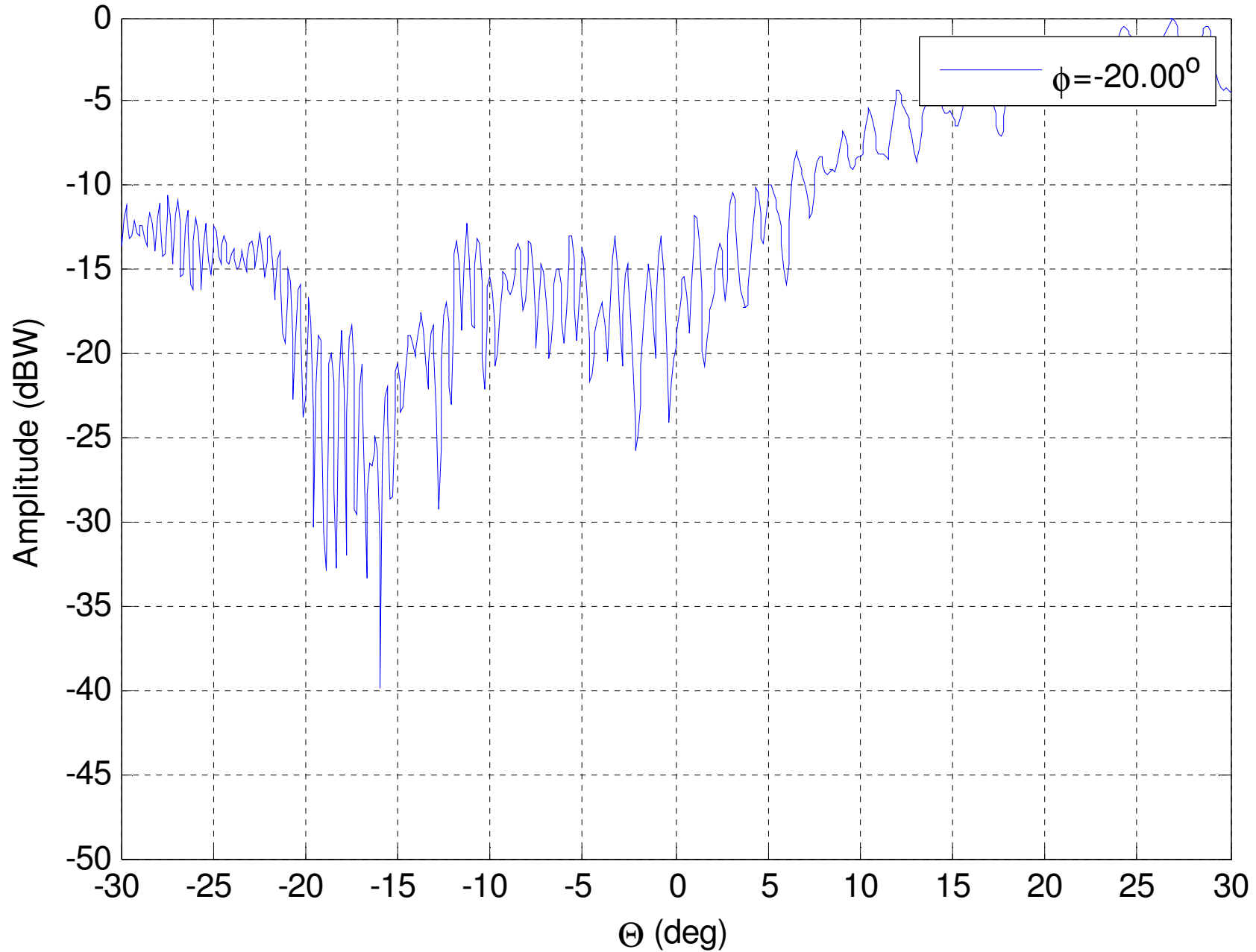
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--30.cut, Peak: -8.12 dBW, Date: 15-Dec-2011



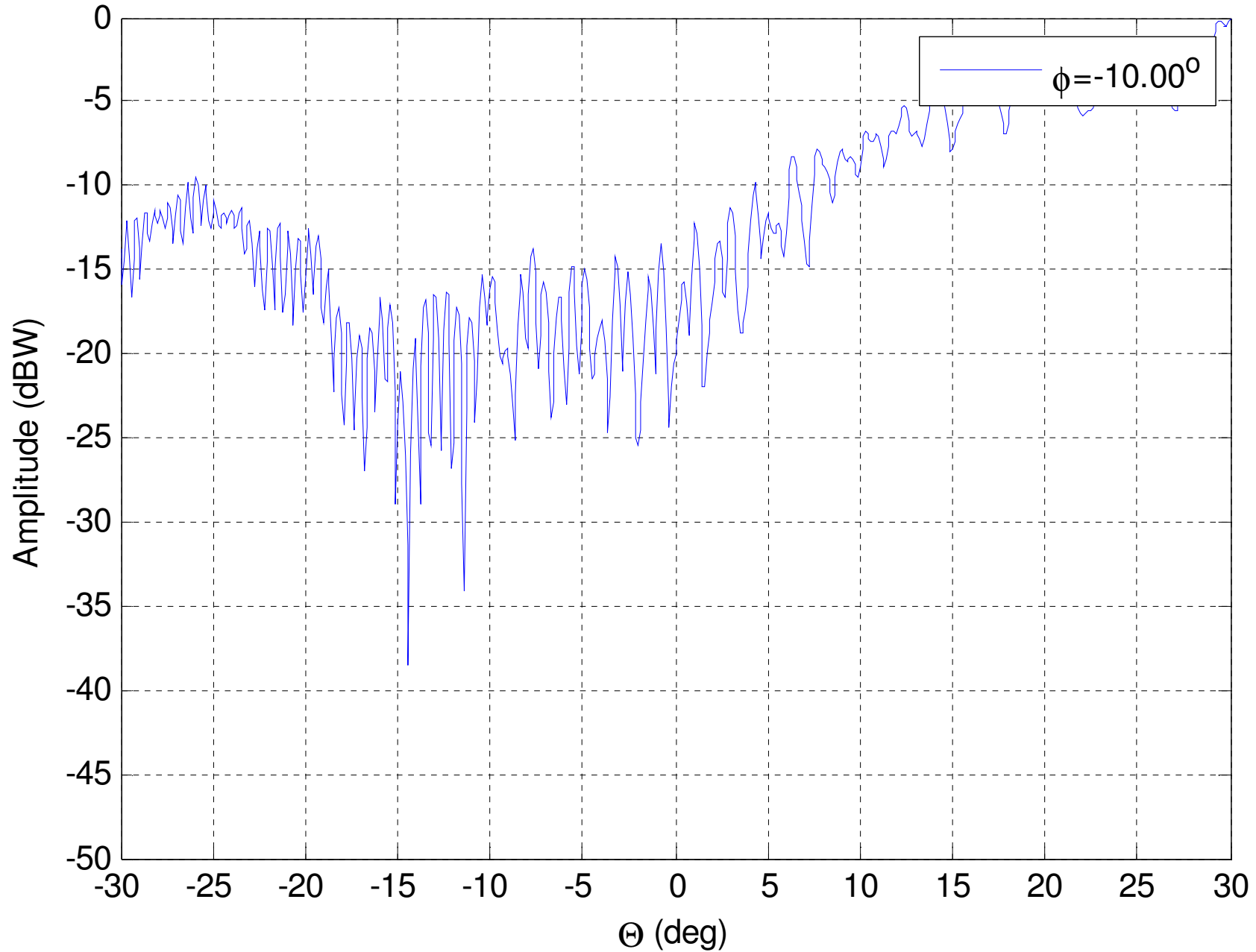
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--20.cut, Peak: -6.10 dBW, Date: 15-Dec-2011



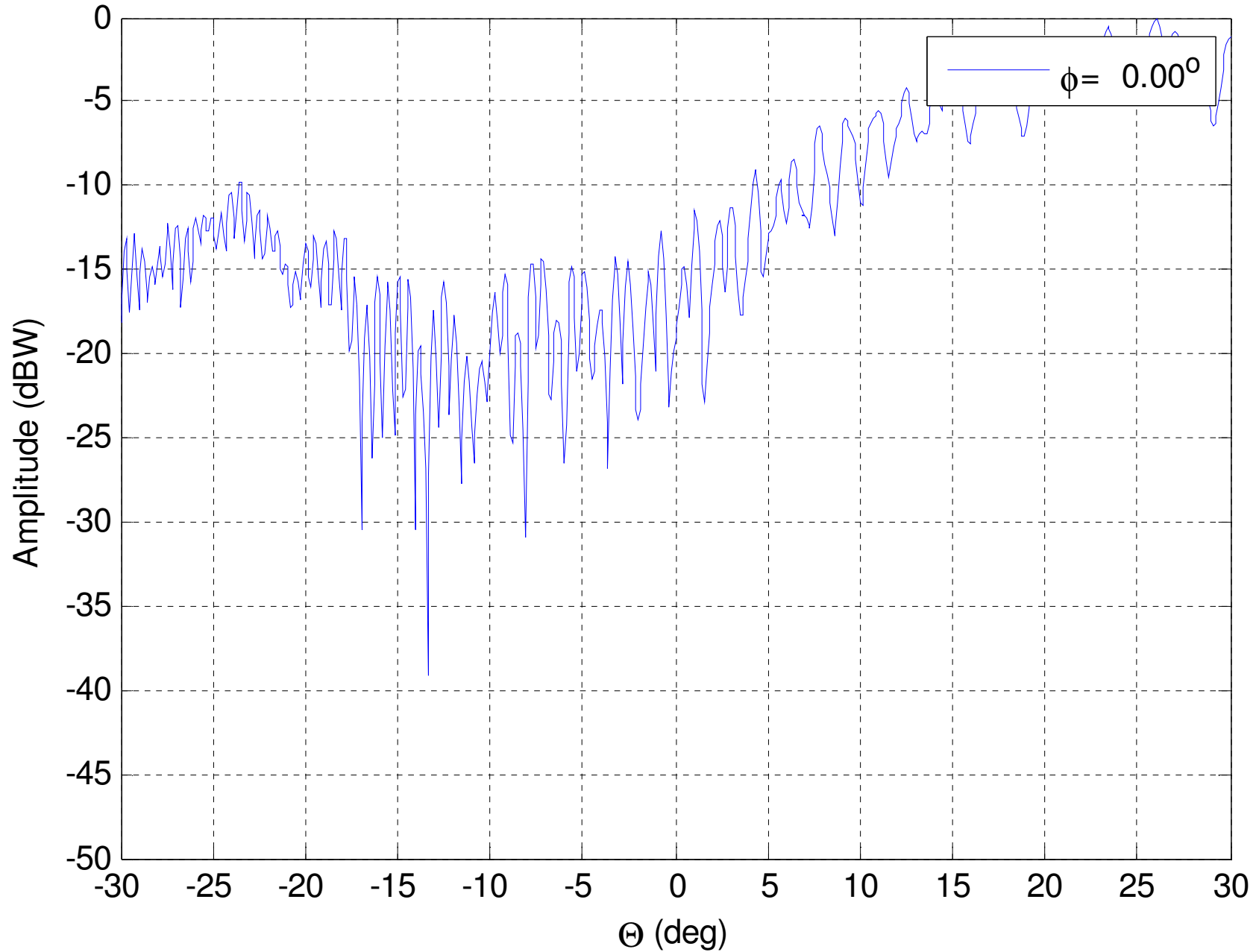
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp--10.cut, Peak: -5.68 dBW, Date: 15-Dec-2011



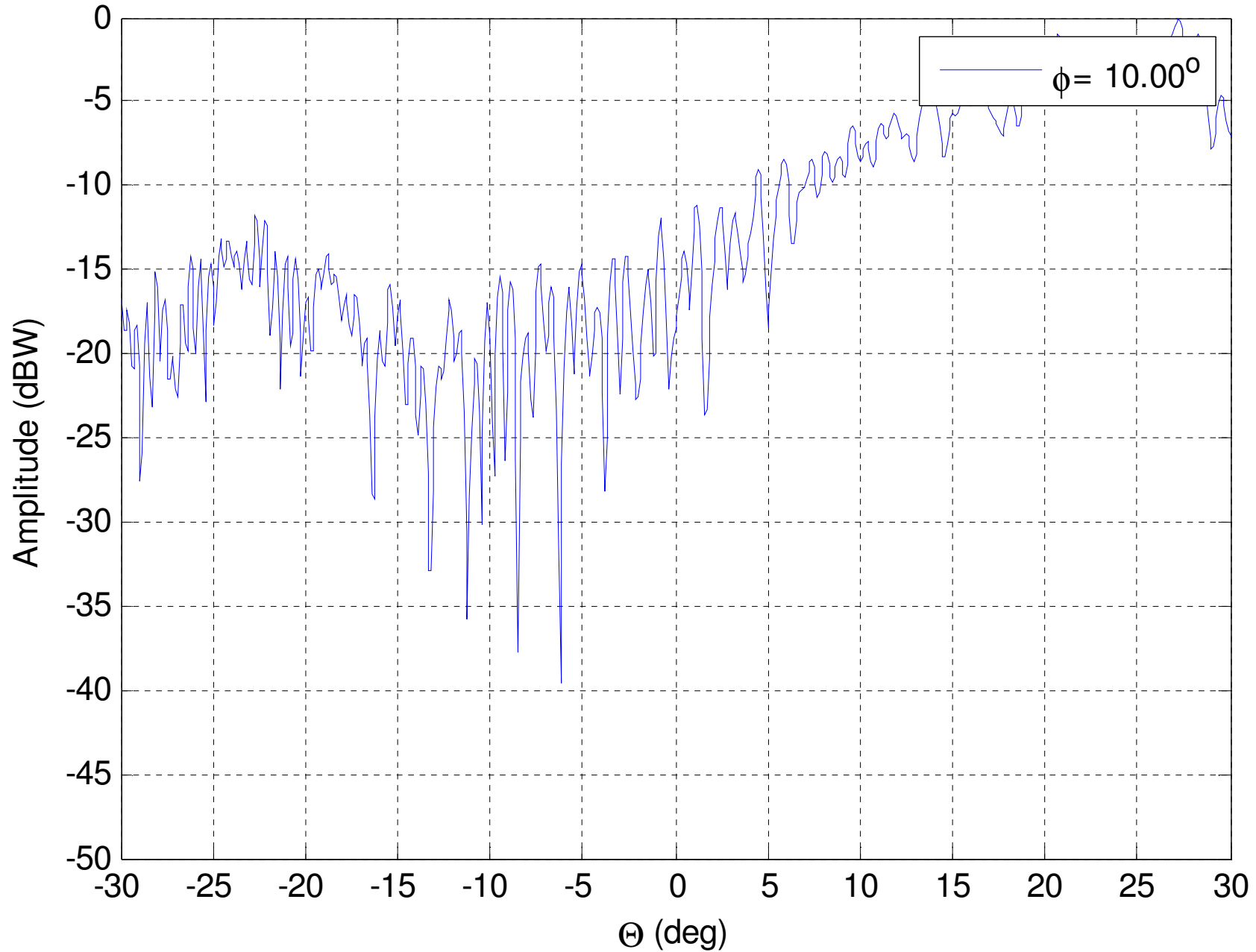
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-0.cut, Peak: -6.49 dBW, Date: 15-Dec-2011



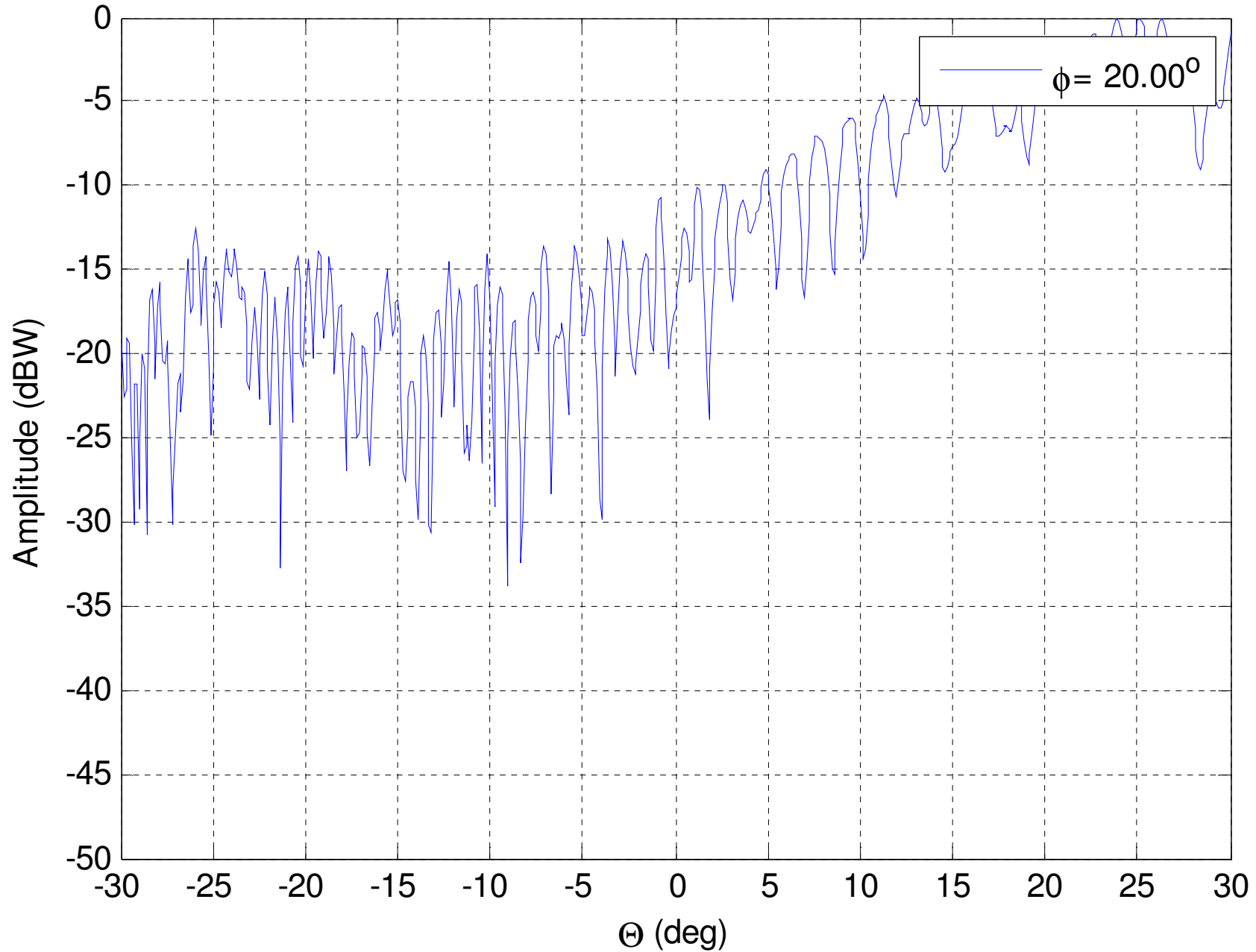
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-10.cut, Peak: -7.09 dBW, Date: 15-Dec-2011



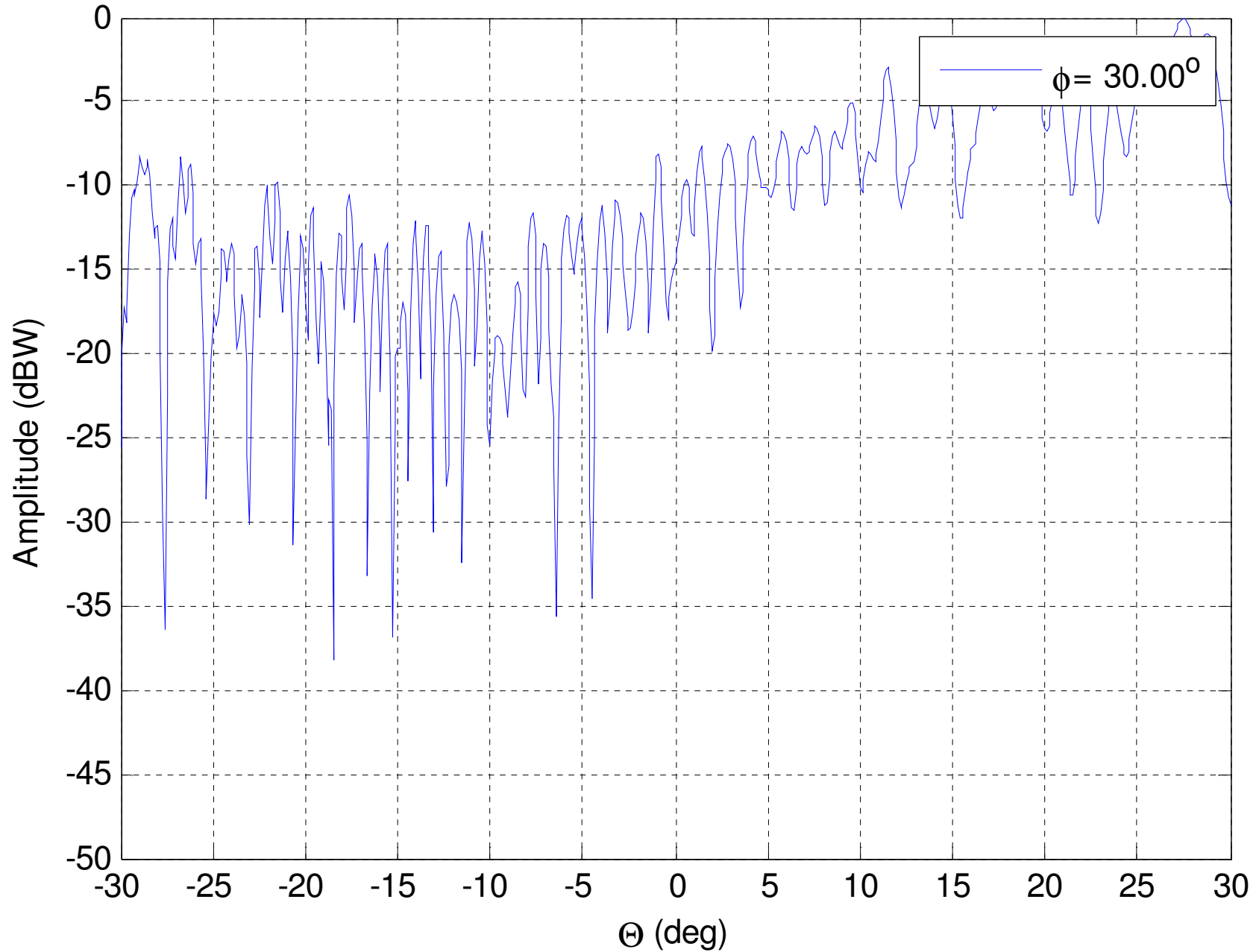
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-20.cut, Peak: -8.40 dBW, Date: 15-Dec-2011



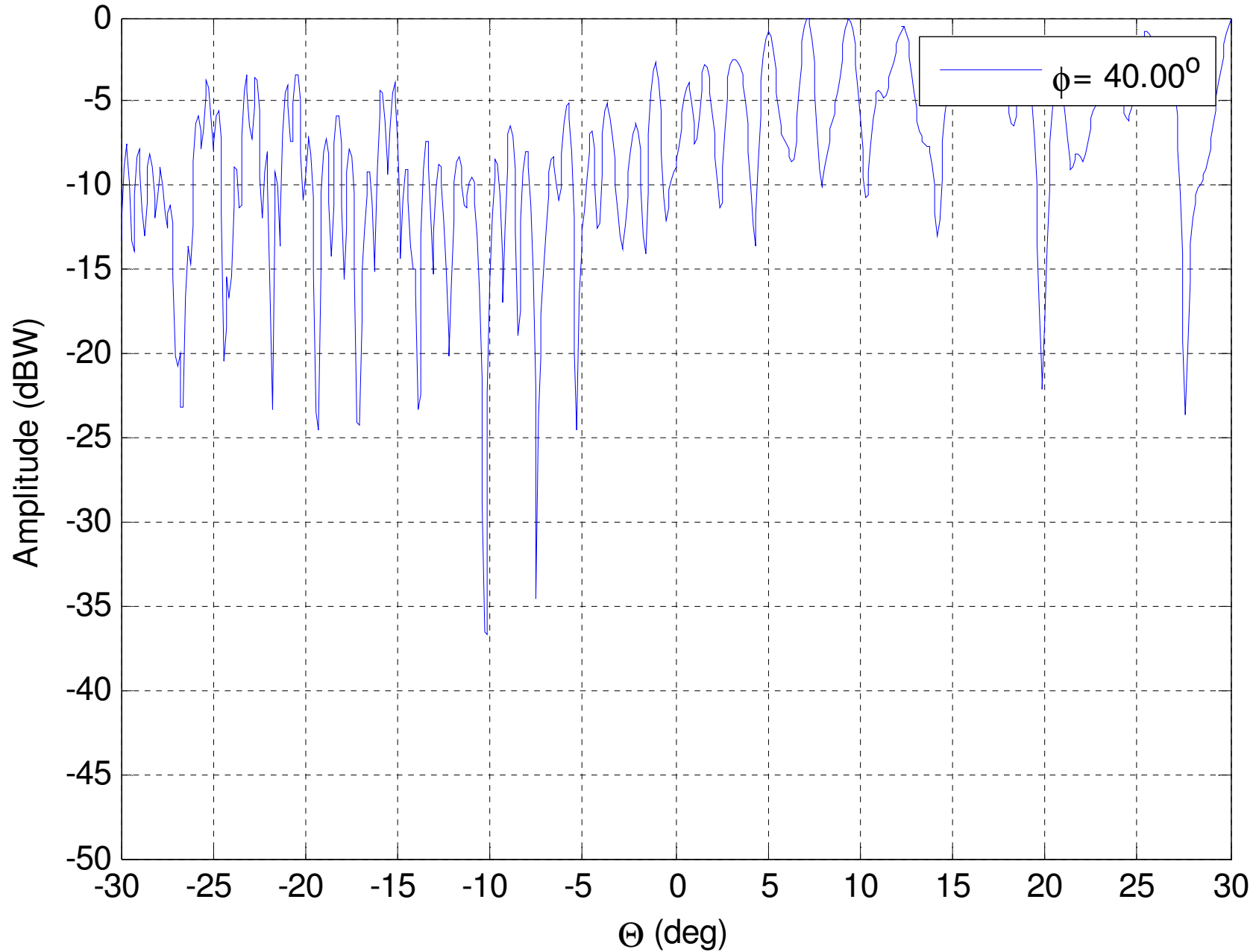
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-30.cut, Peak: -11.08 dBW, Date: 15-Dec-2011



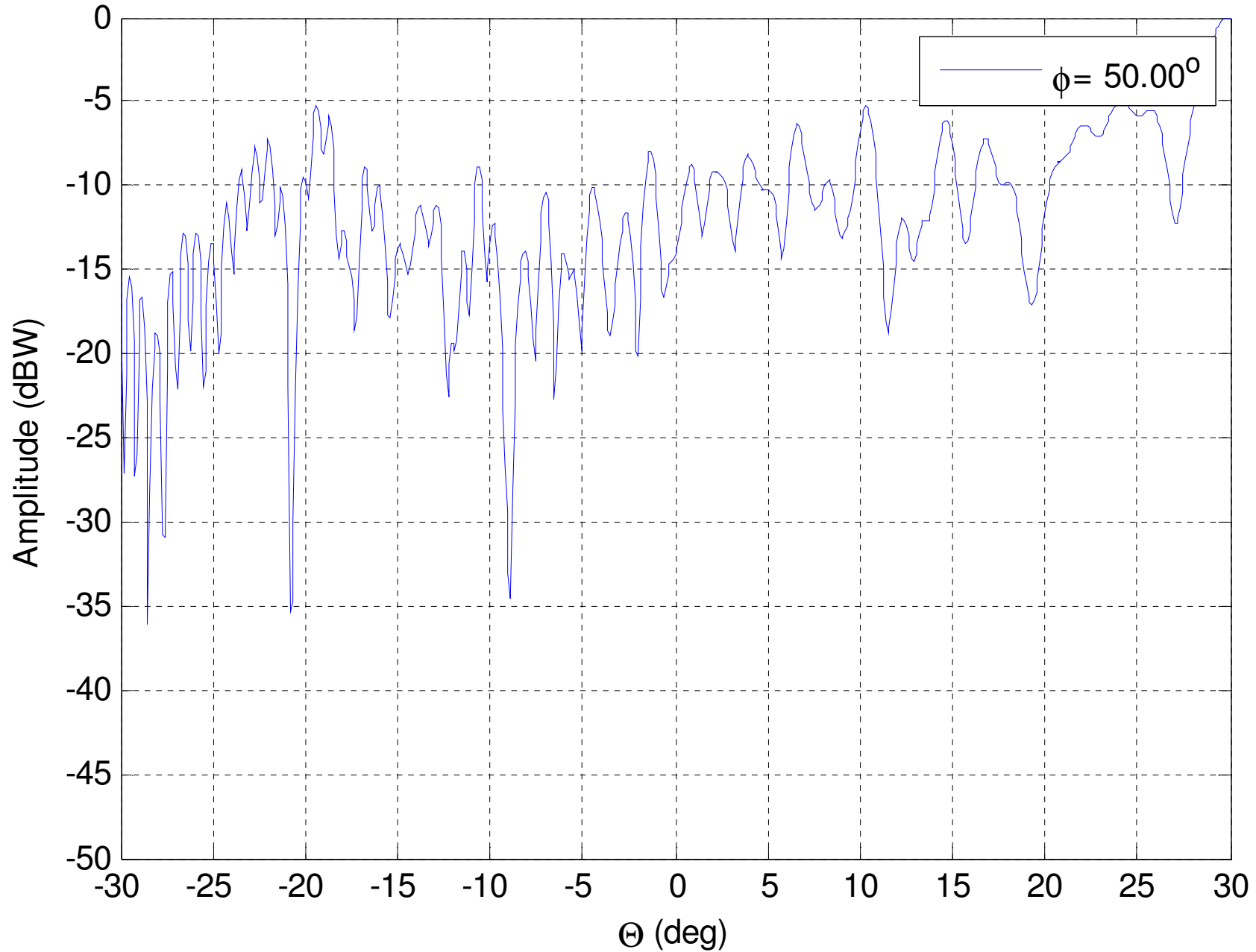
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-40.cut, Peak: -16.63 dBW, Date: 15-Dec-2011



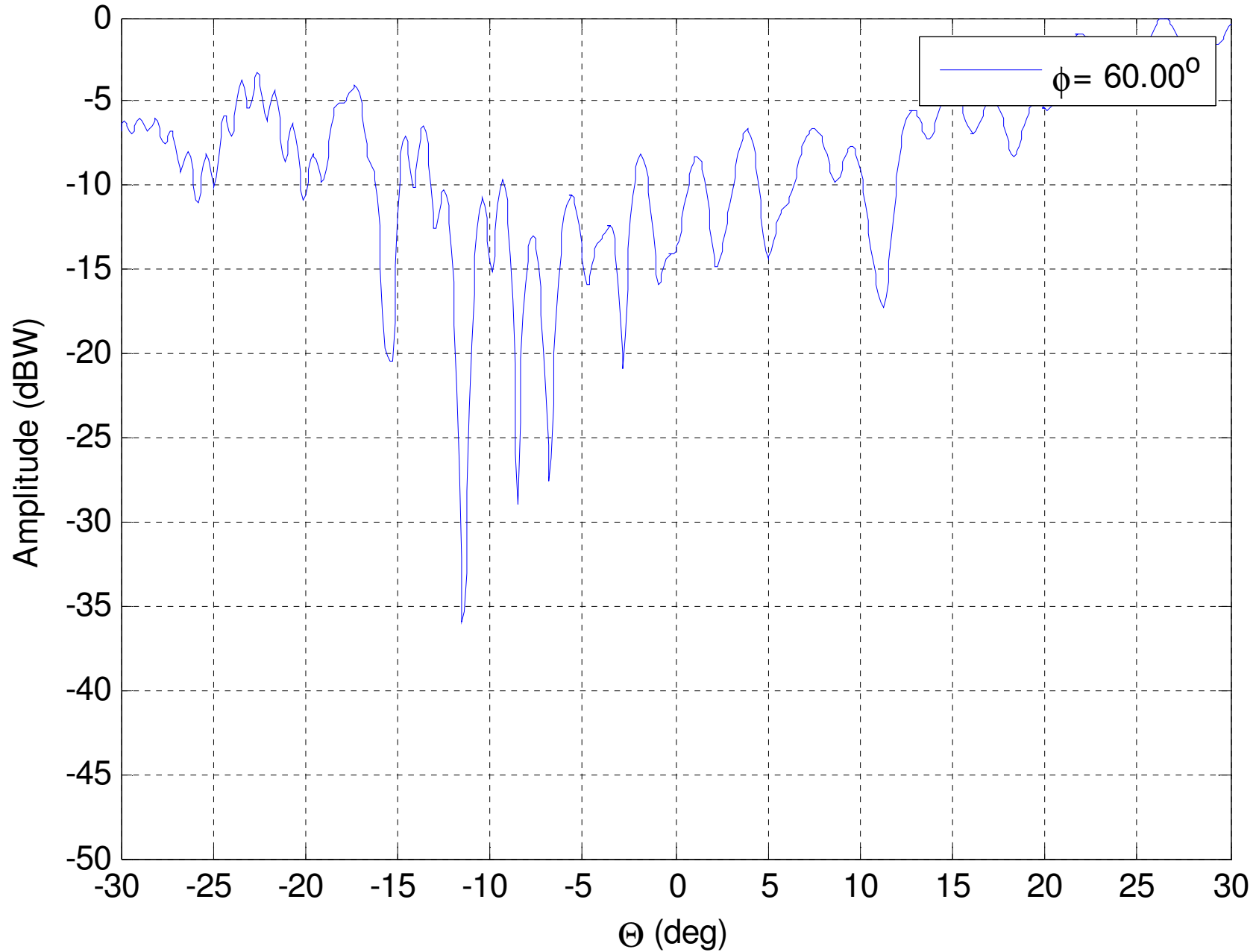
Normalized pattern cuts - farfield

Input file: tx-17.5-rhcp-50.cut, Peak: -11.50 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

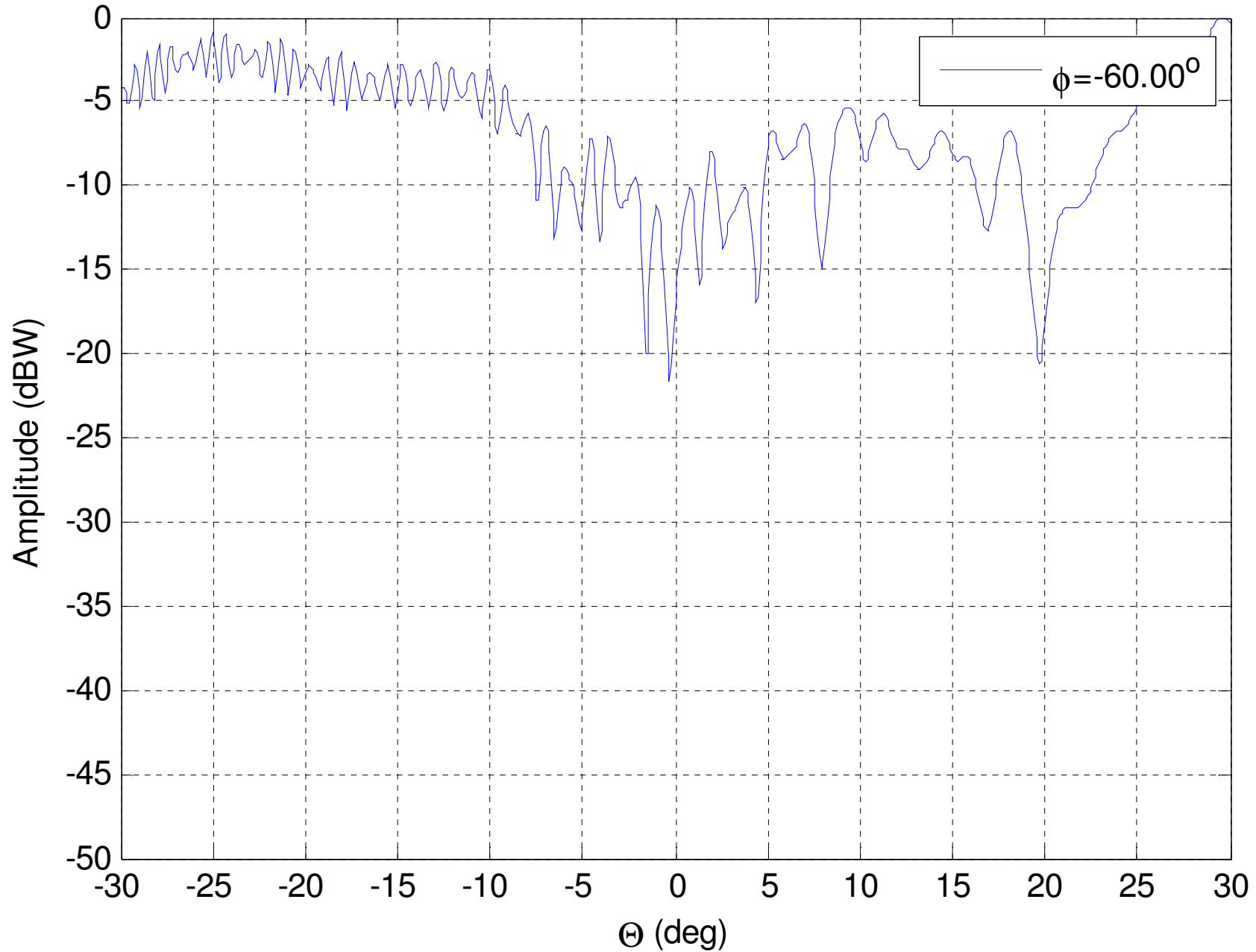
Input file: tx-17.5-rhcp-60.cut, Peak: -11.66 dBW, Date: 15-Dec-2011



LHCP at 17.5 GHz

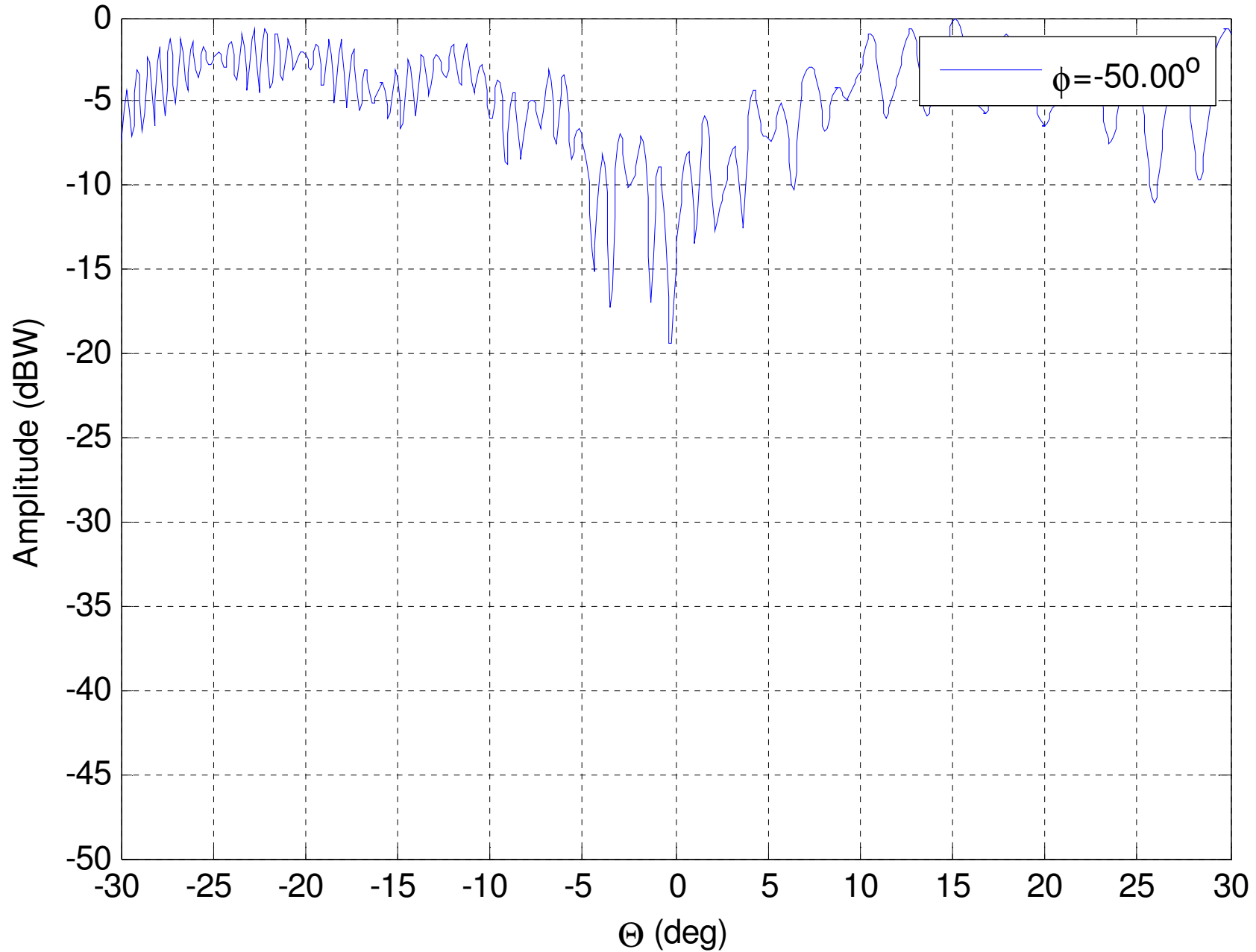
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--60.cut, Peak: -10.36 dBW, Date: 15-Dec-2011



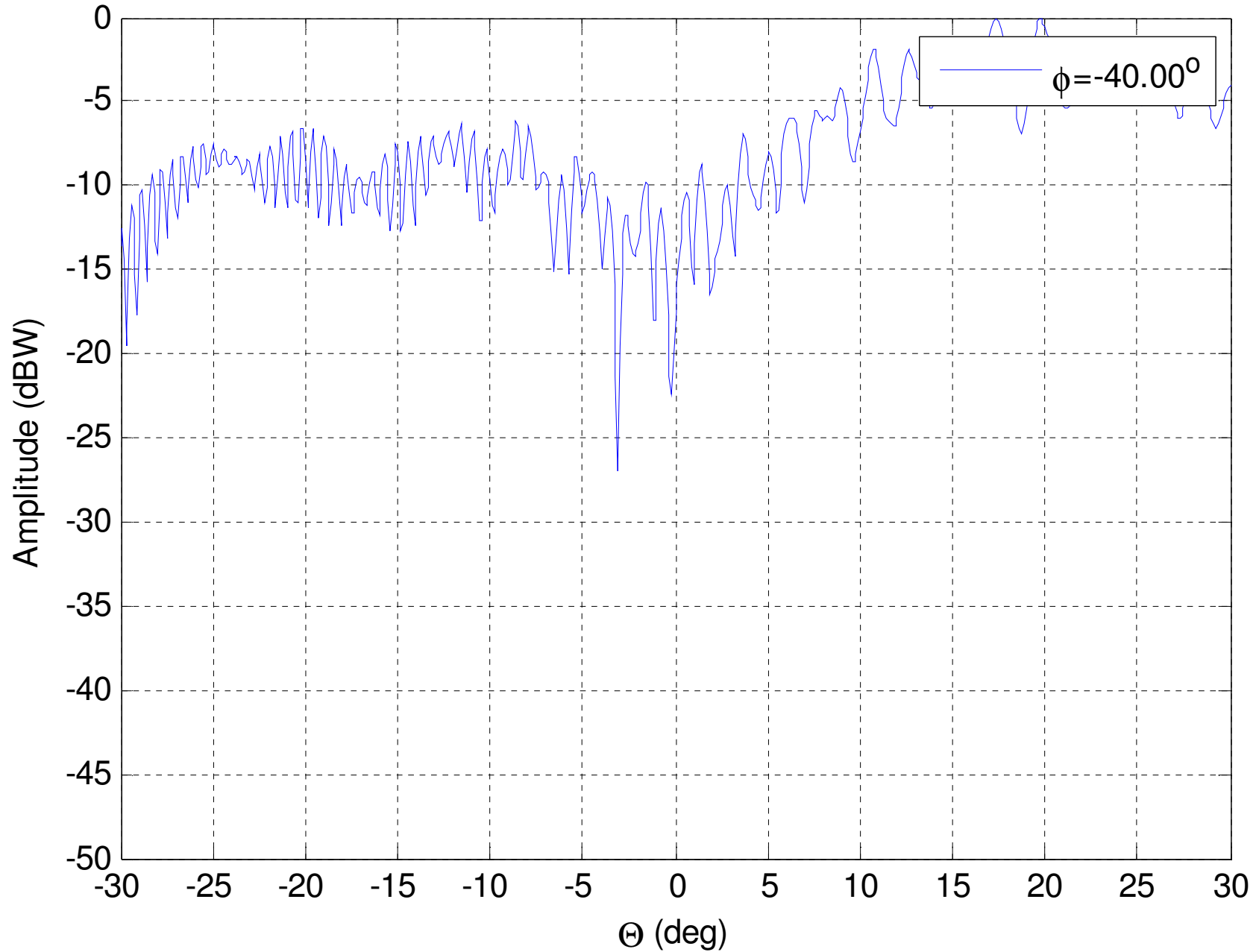
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--50.cut, Peak: -12.37 dBW, Date: 15-Dec-2011



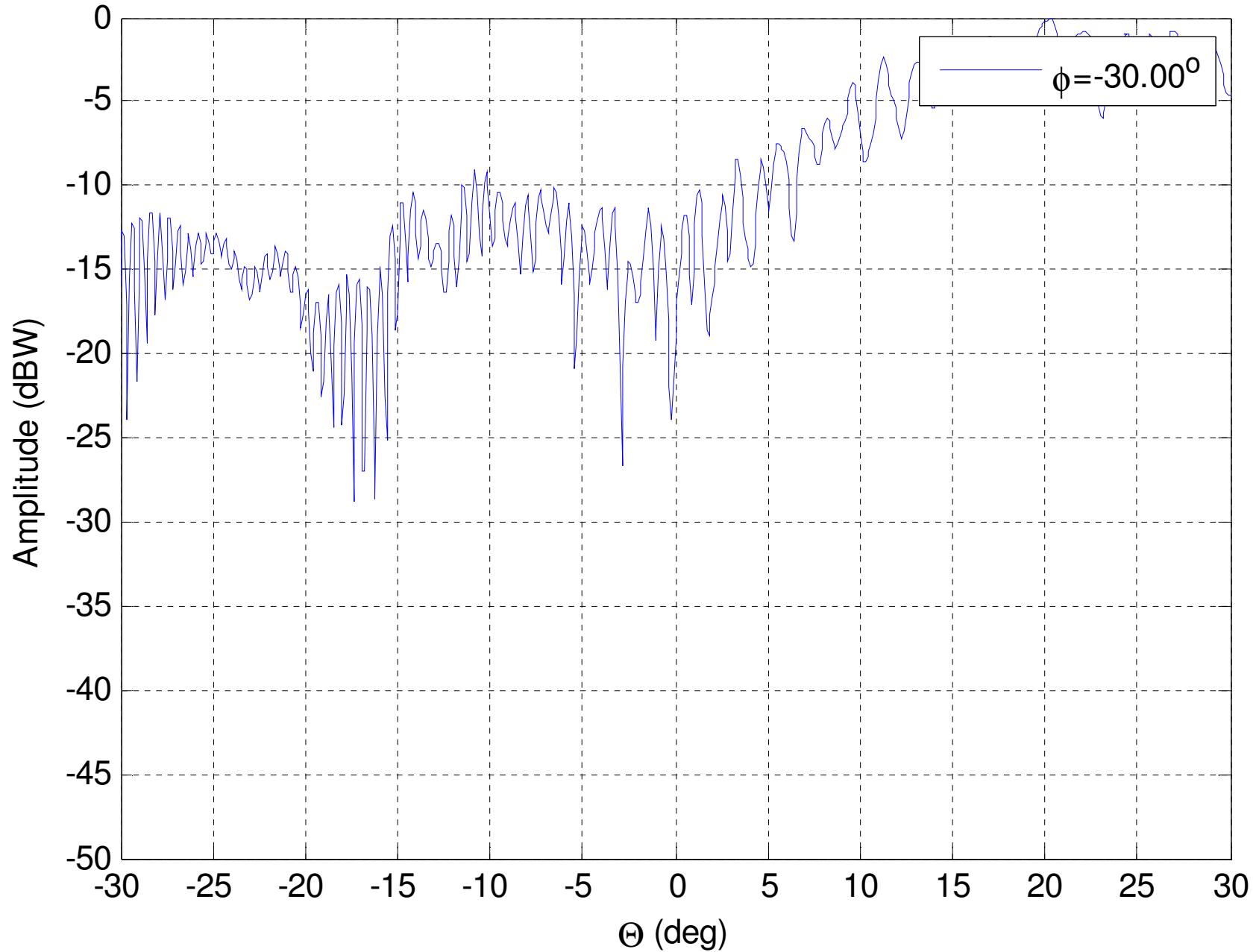
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--40.cut, Peak: -9.64 dBW, Date: 15-Dec-2011



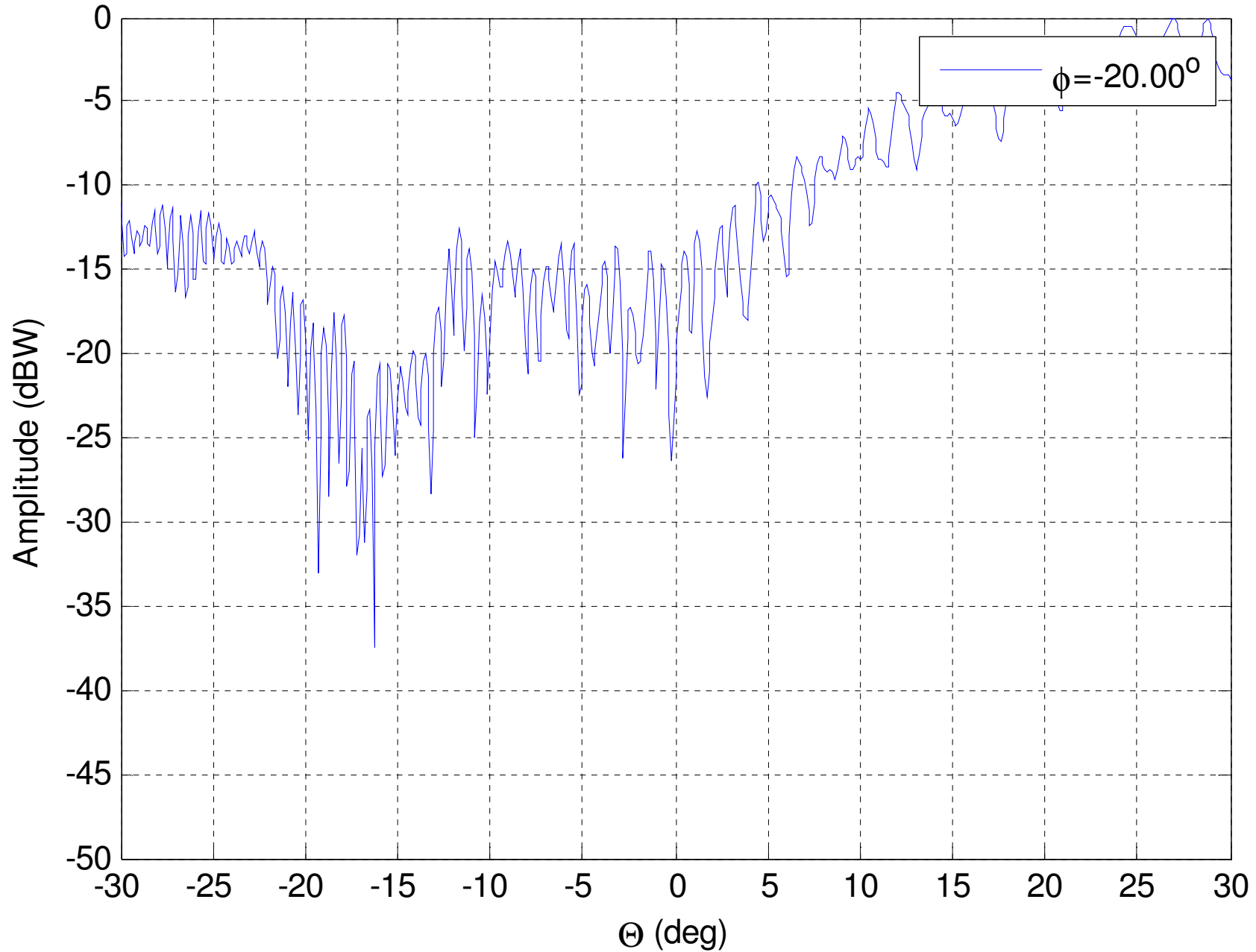
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--30.cut, Peak: -8.26 dBW, Date: 15-Dec-2011



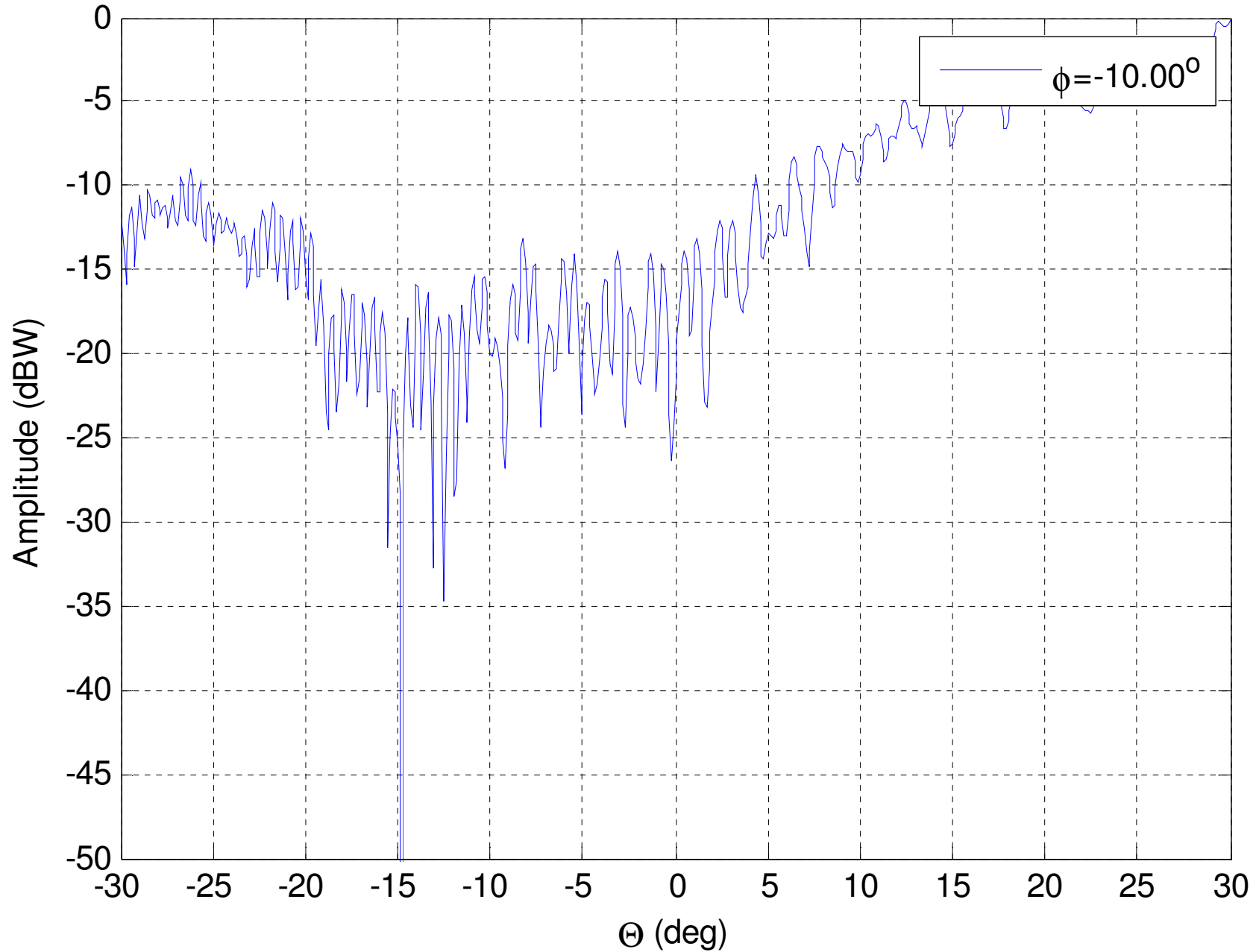
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--20.cut, Peak: -5.96 dBW, Date: 15-Dec-2011



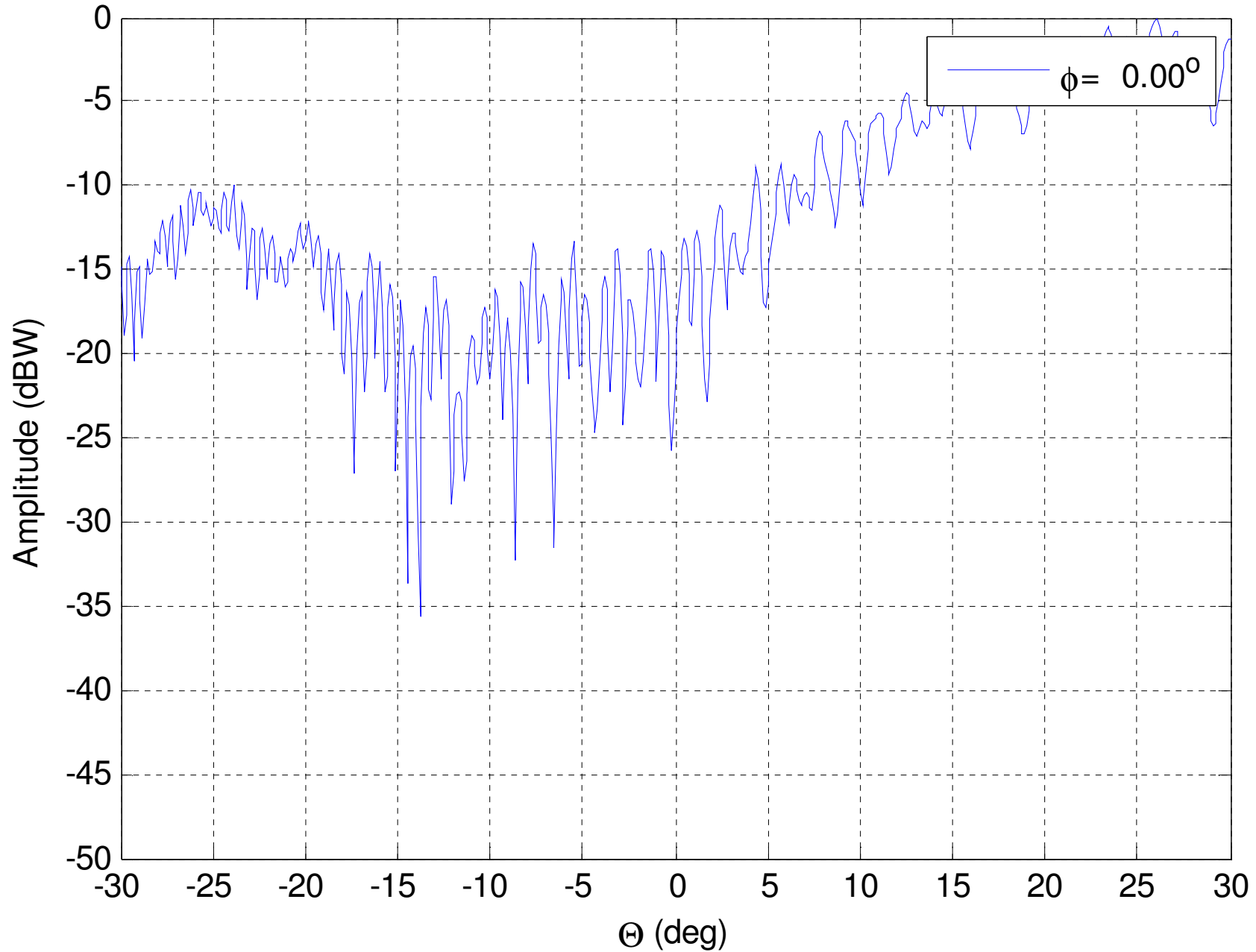
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp--10.cut, Peak: -5.82 dBW, Date: 15-Dec-2011



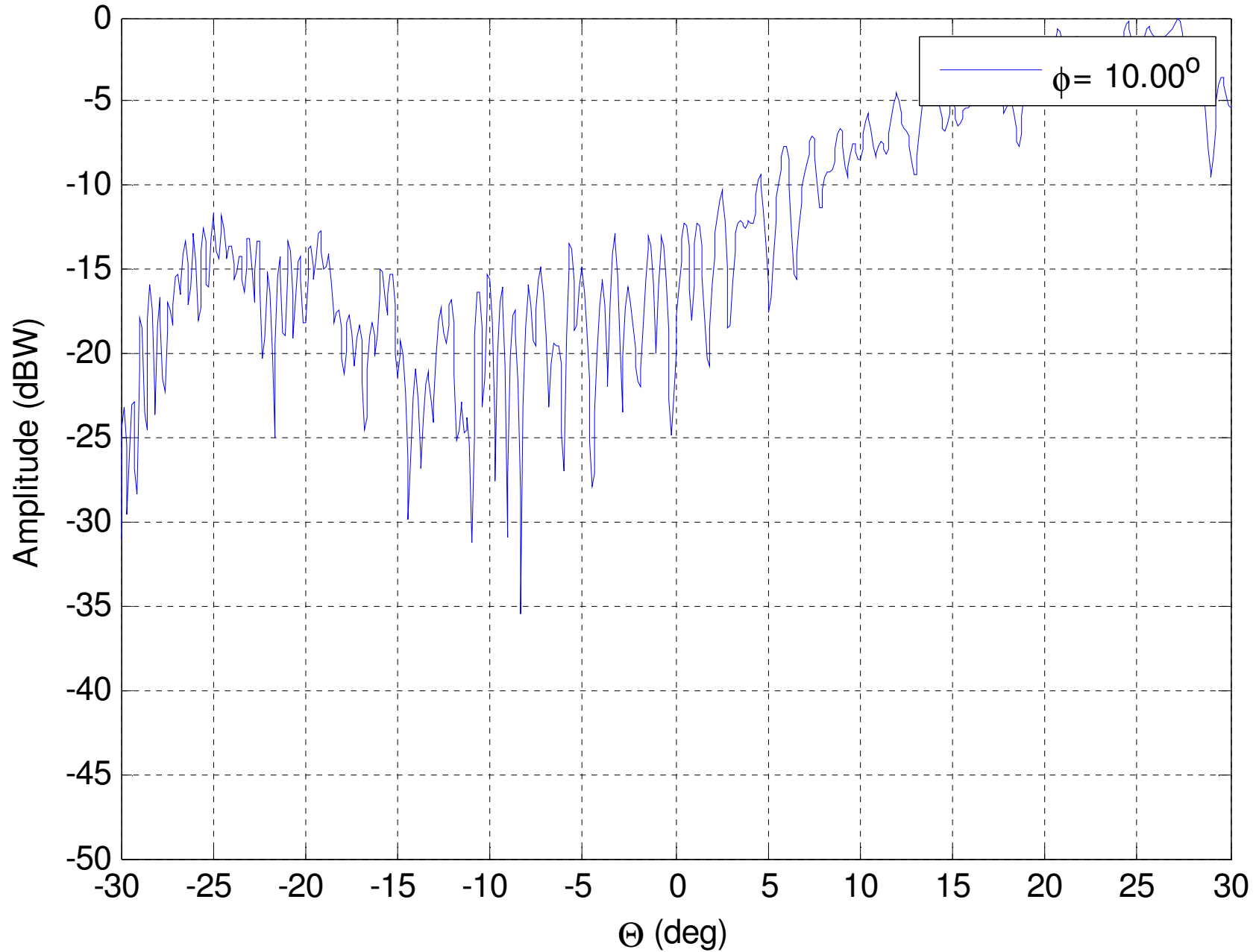
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-0.cut, Peak: -6.46 dBW, Date: 15-Dec-2011



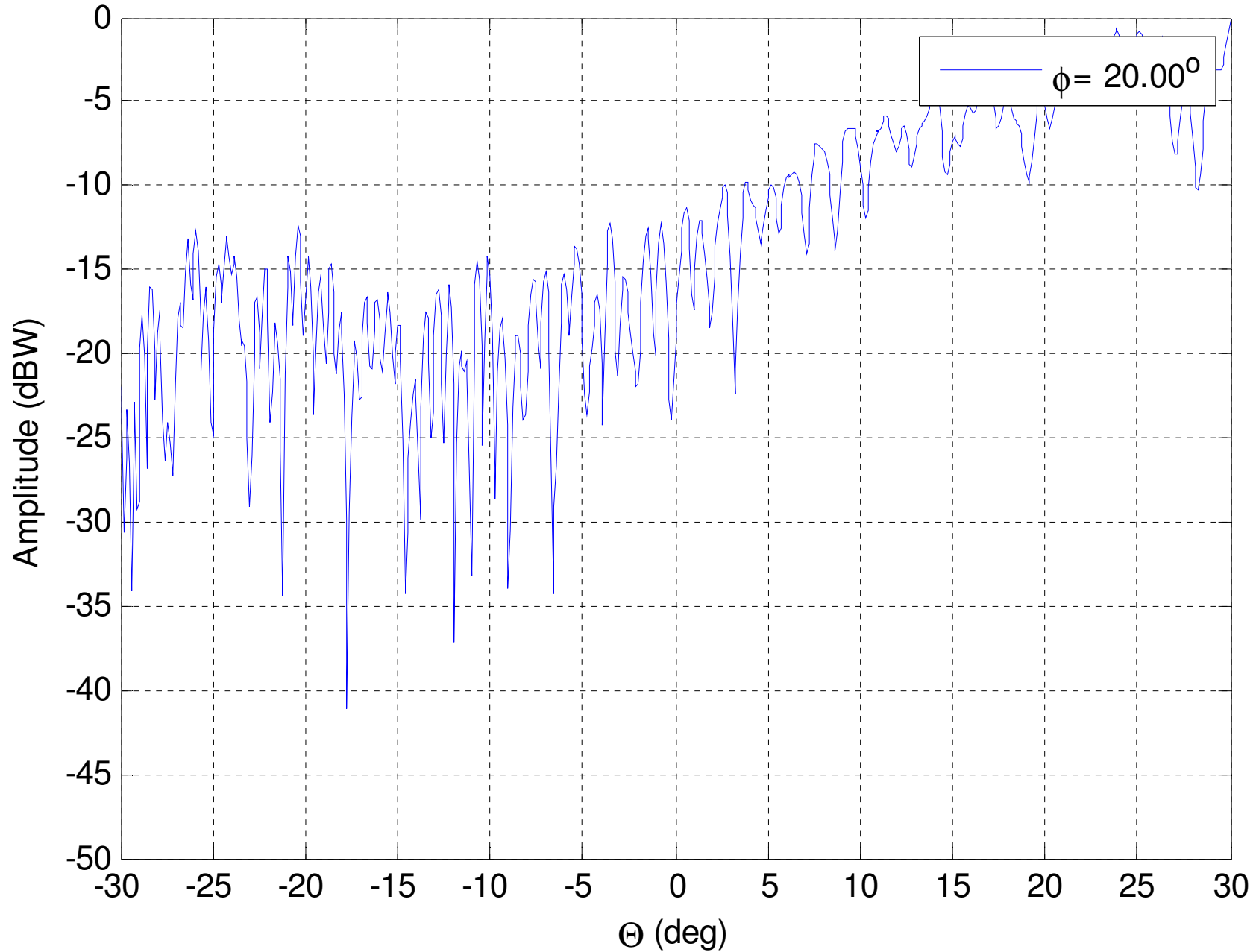
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-10.cut, Peak: -7.35 dBW, Date: 15-Dec-2011



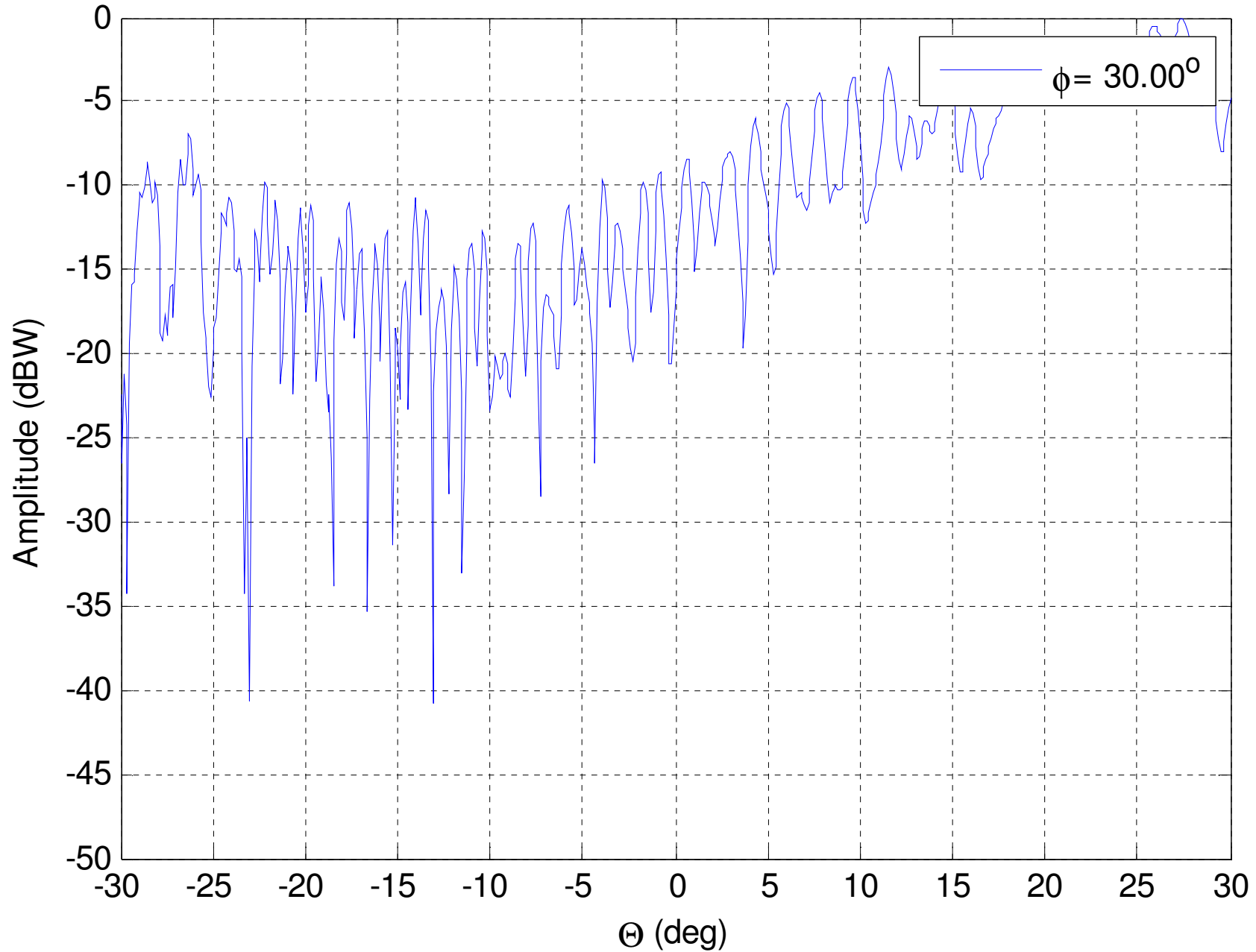
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-20.cut, Peak: -8.10 dBW, Date: 15-Dec-2011



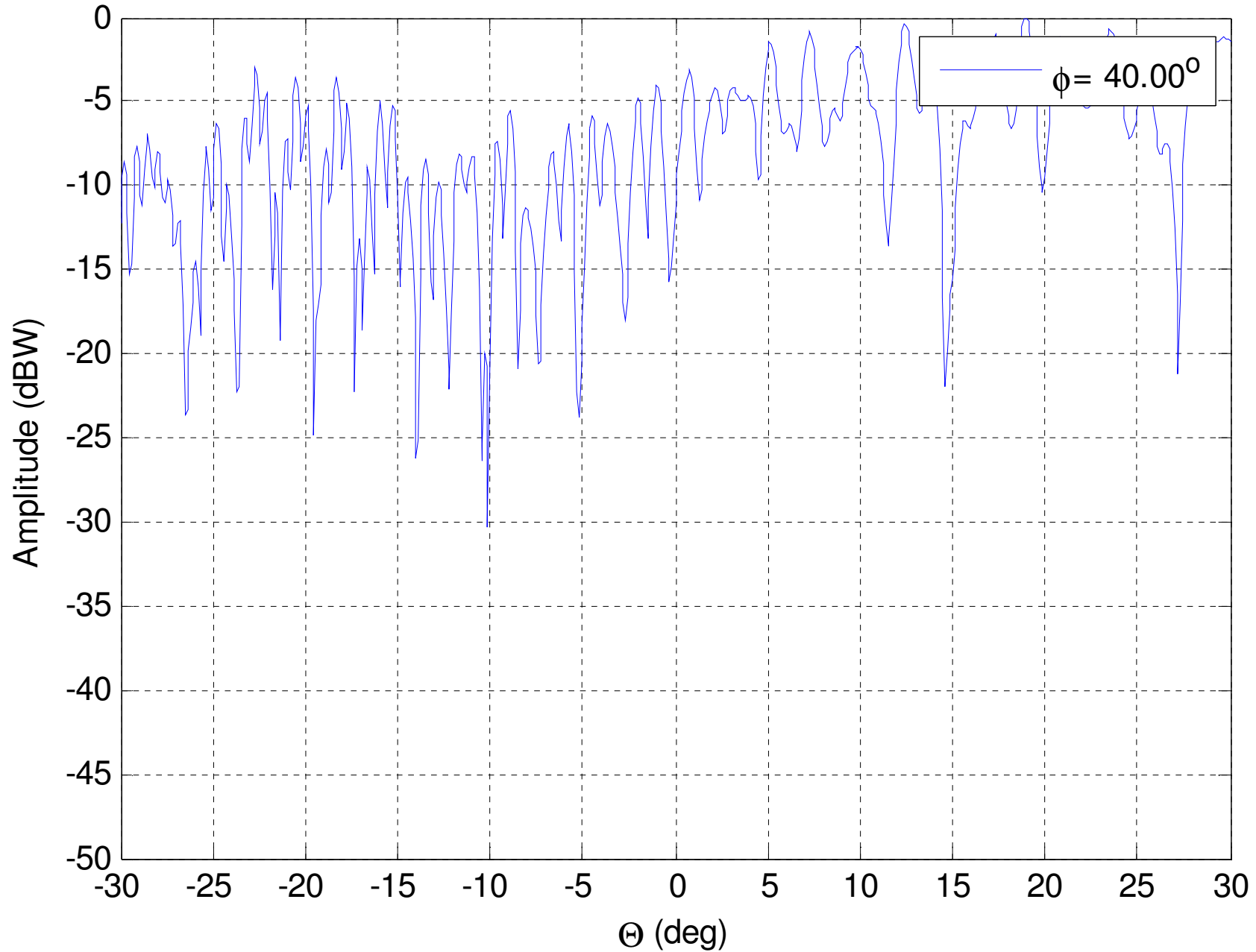
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-30.cut, Peak: -11.02 dBW, Date: 15-Dec-2011



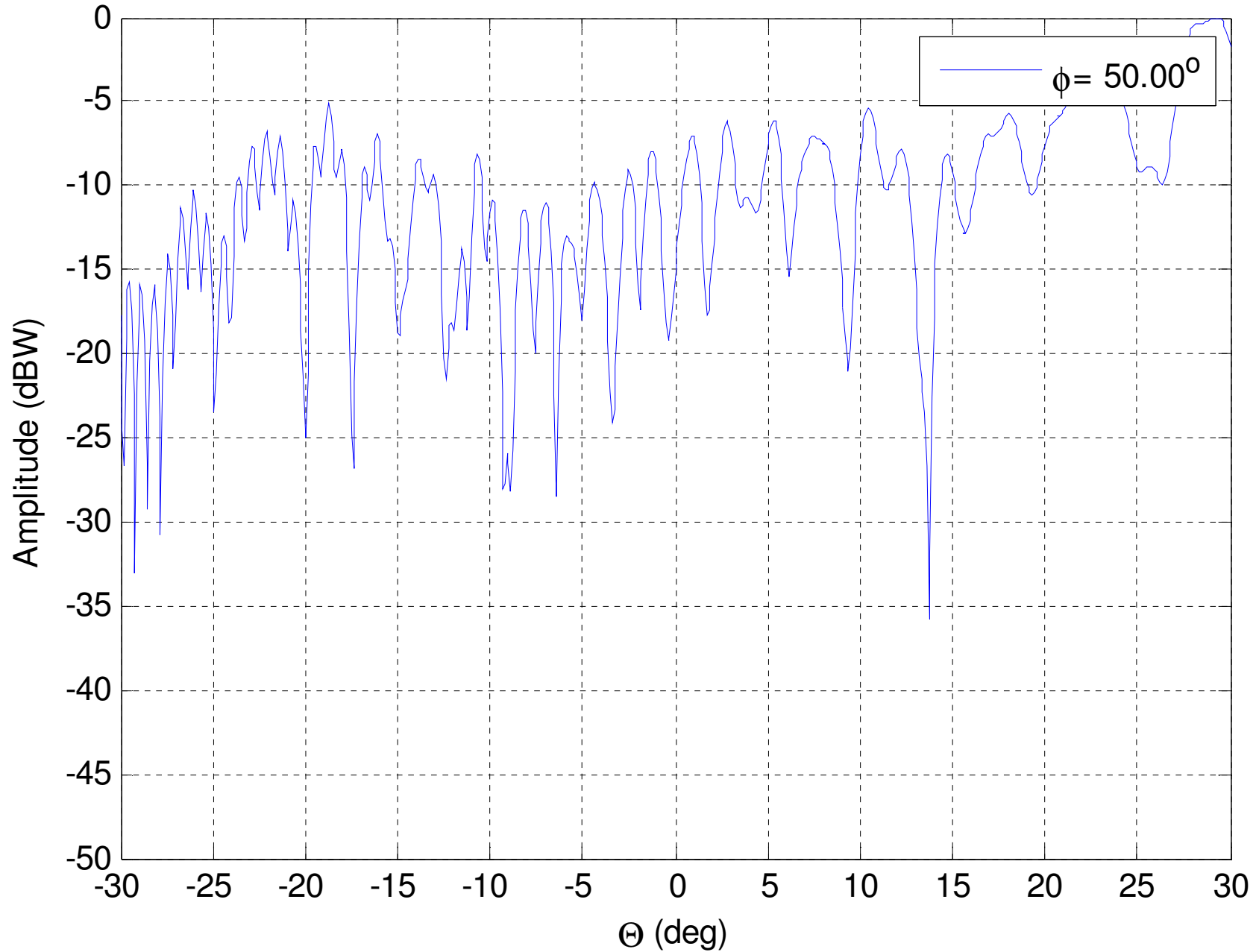
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-40.cut, Peak: -16.16 dBW, Date: 15-Dec-2011



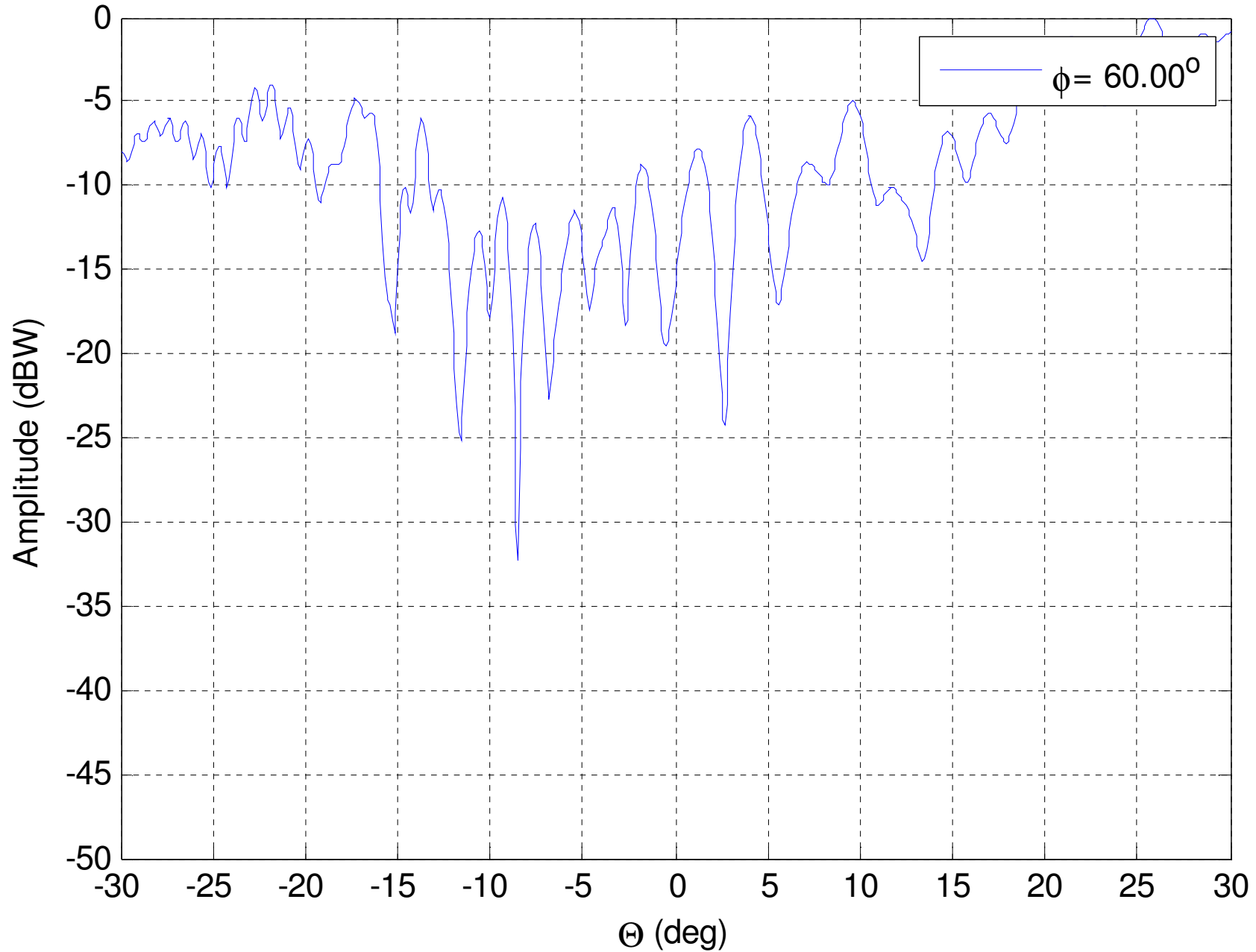
Normalized pattern cuts - farfield

Input file: tx-17.5-lhcp-50.cut, Peak: -12.20 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

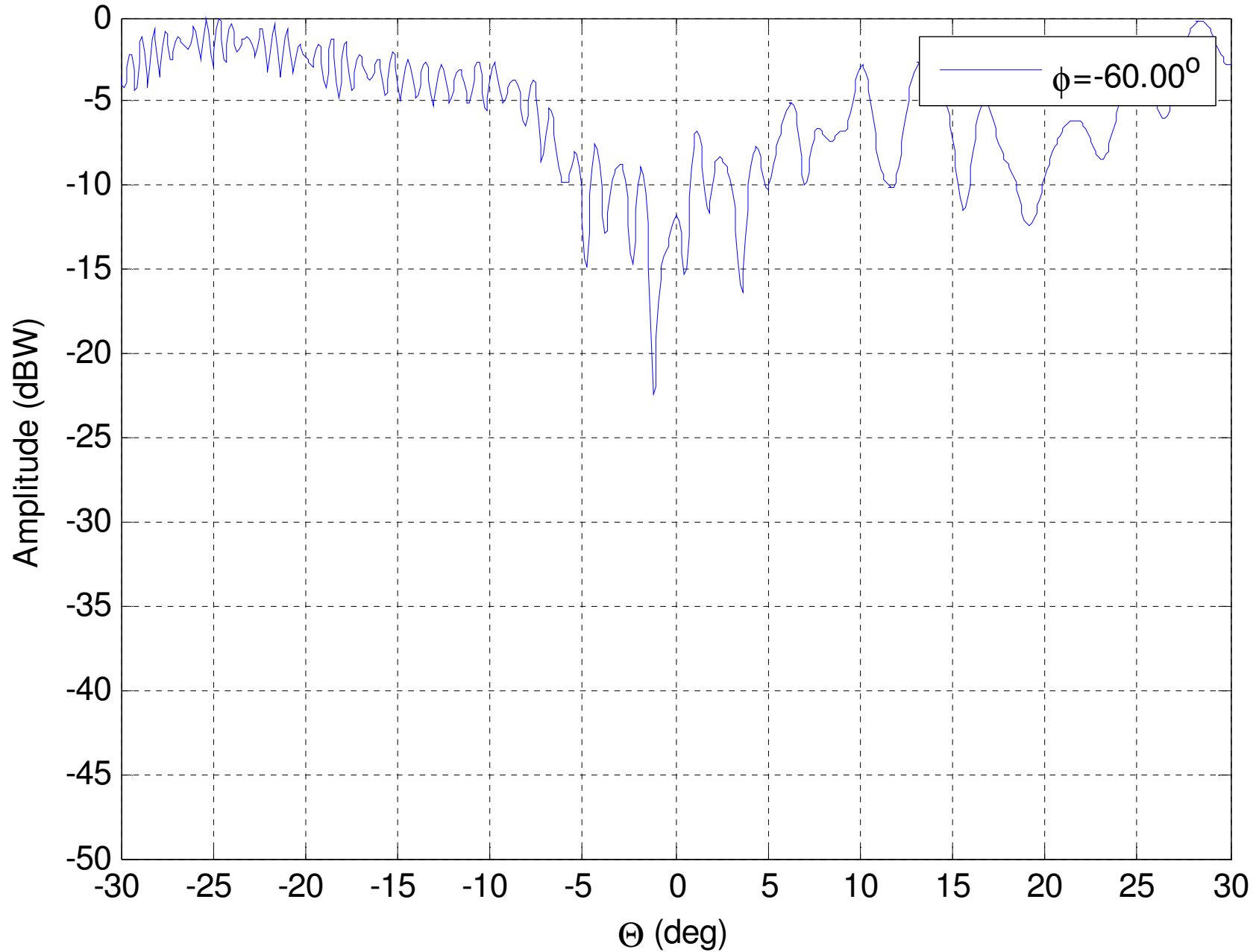
Input file: tx-17.5-lhcp-60.cut, Peak: -11.38 dBW, Date: 15-Dec-2011



RHCP at 17.7 GHz

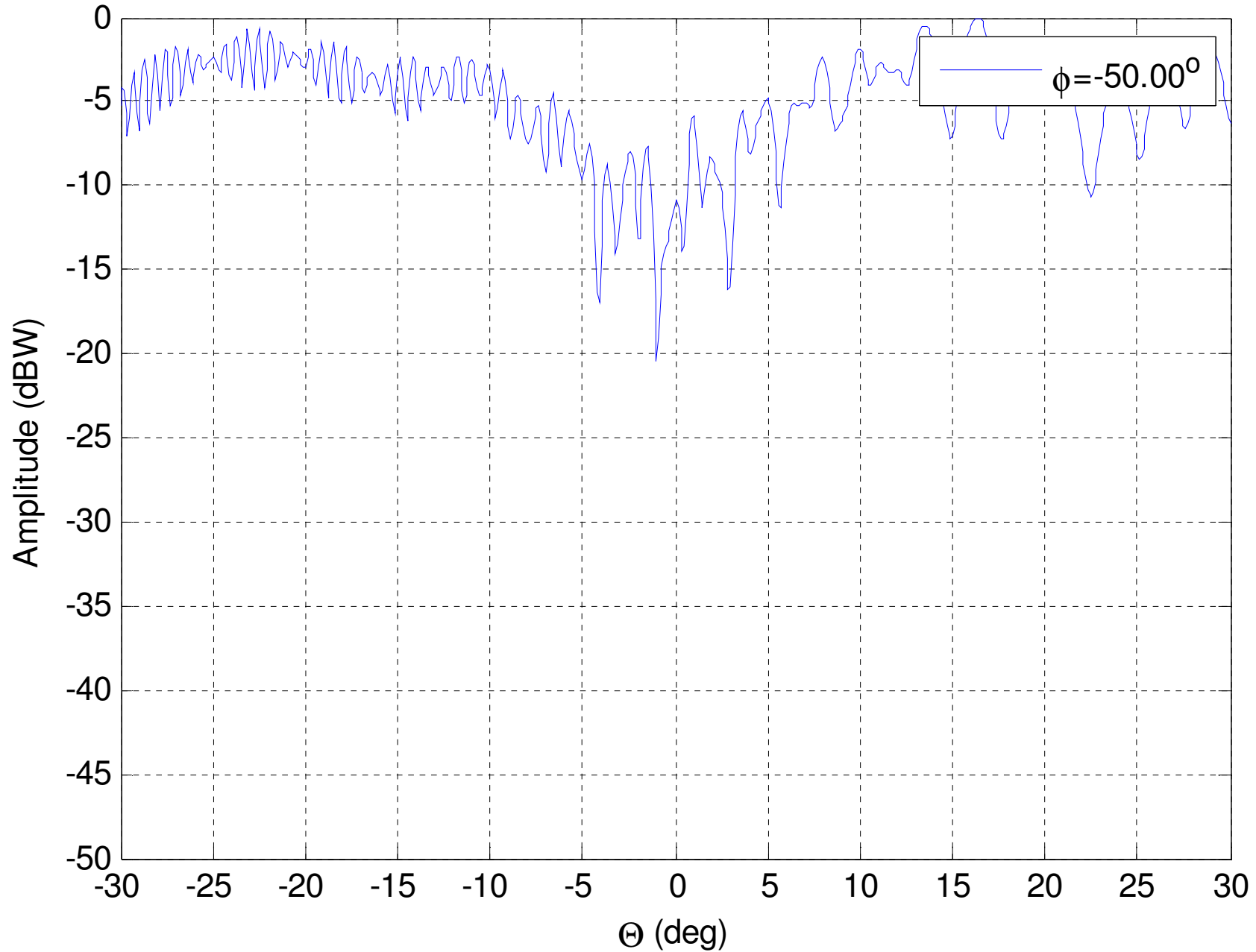
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--60.cut, Peak: -11.23 dBW, Date: 15-Dec-2011



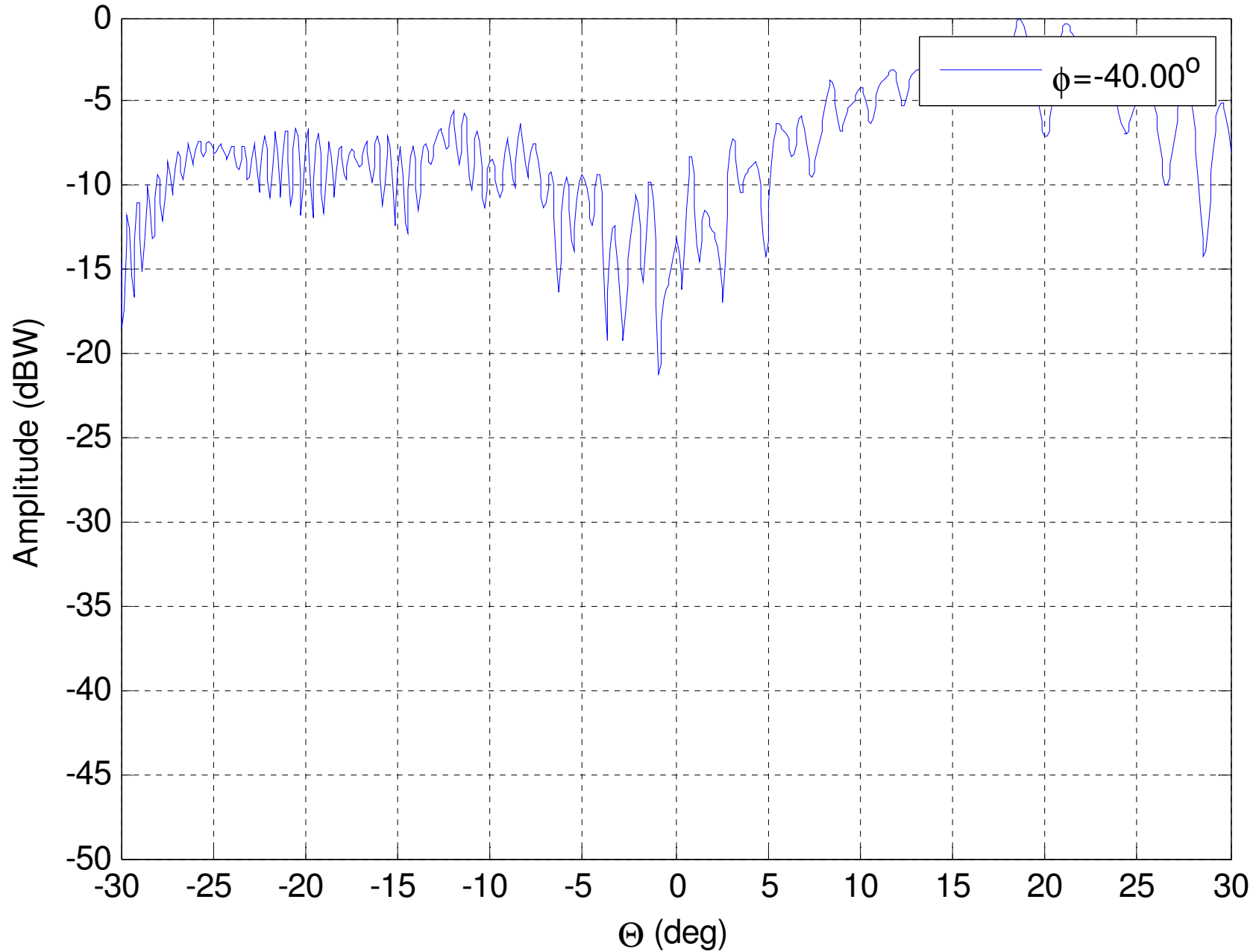
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--50.cut, Peak: -12.06 dBW, Date: 15-Dec-2011



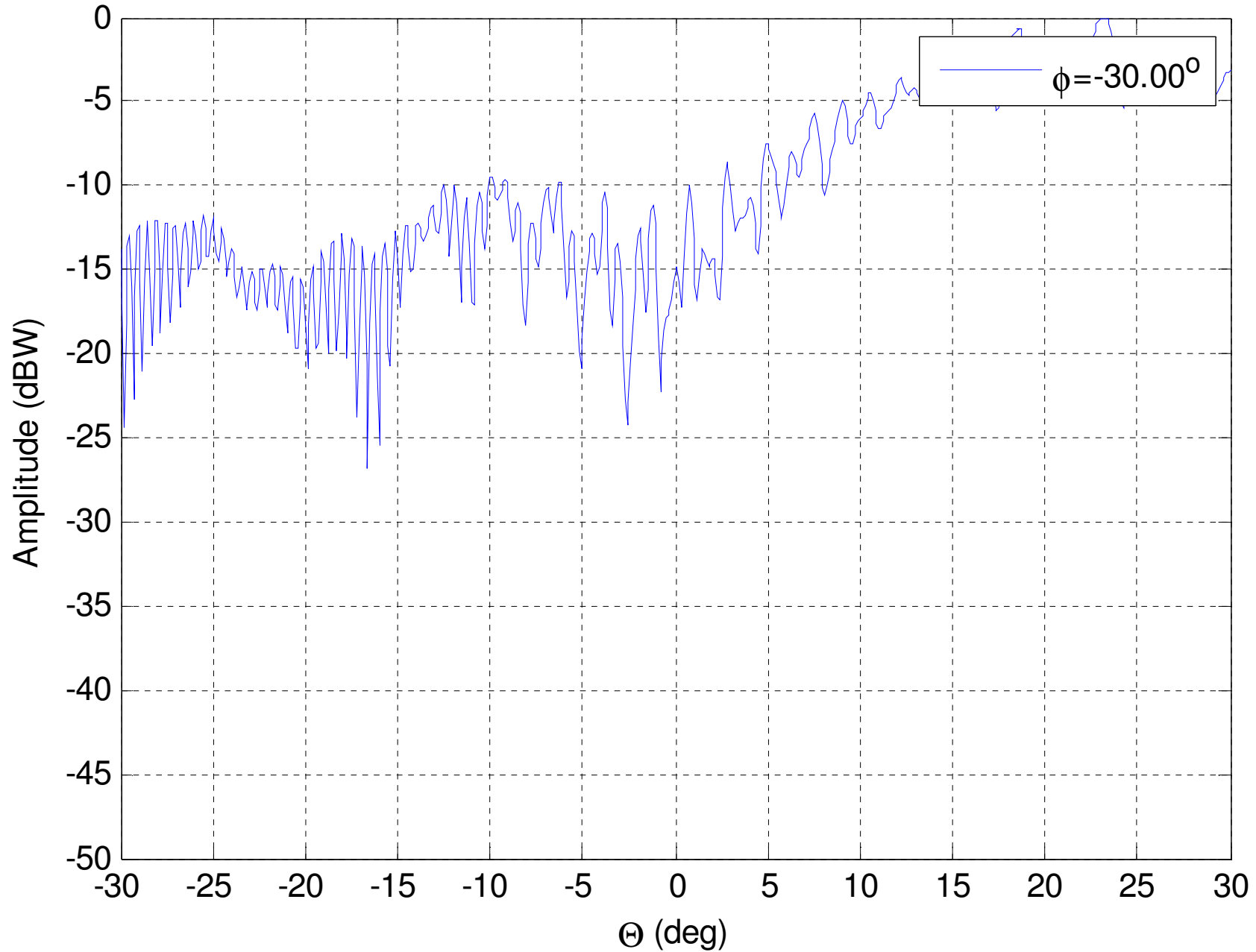
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--40.cut, Peak: -9.66 dBW, Date: 15-Dec-2011



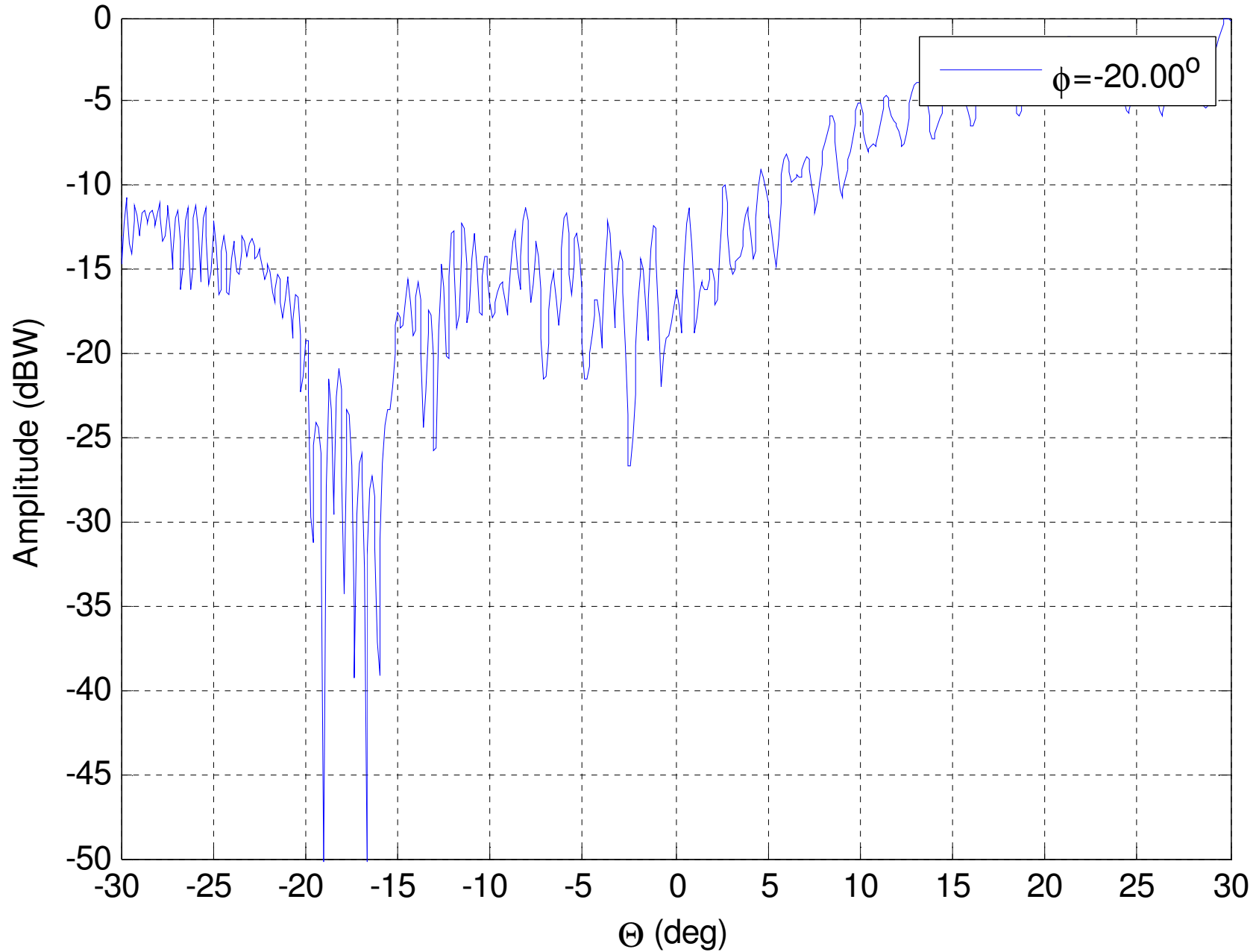
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--30.cut, Peak: -7.99 dBW, Date: 15-Dec-2011



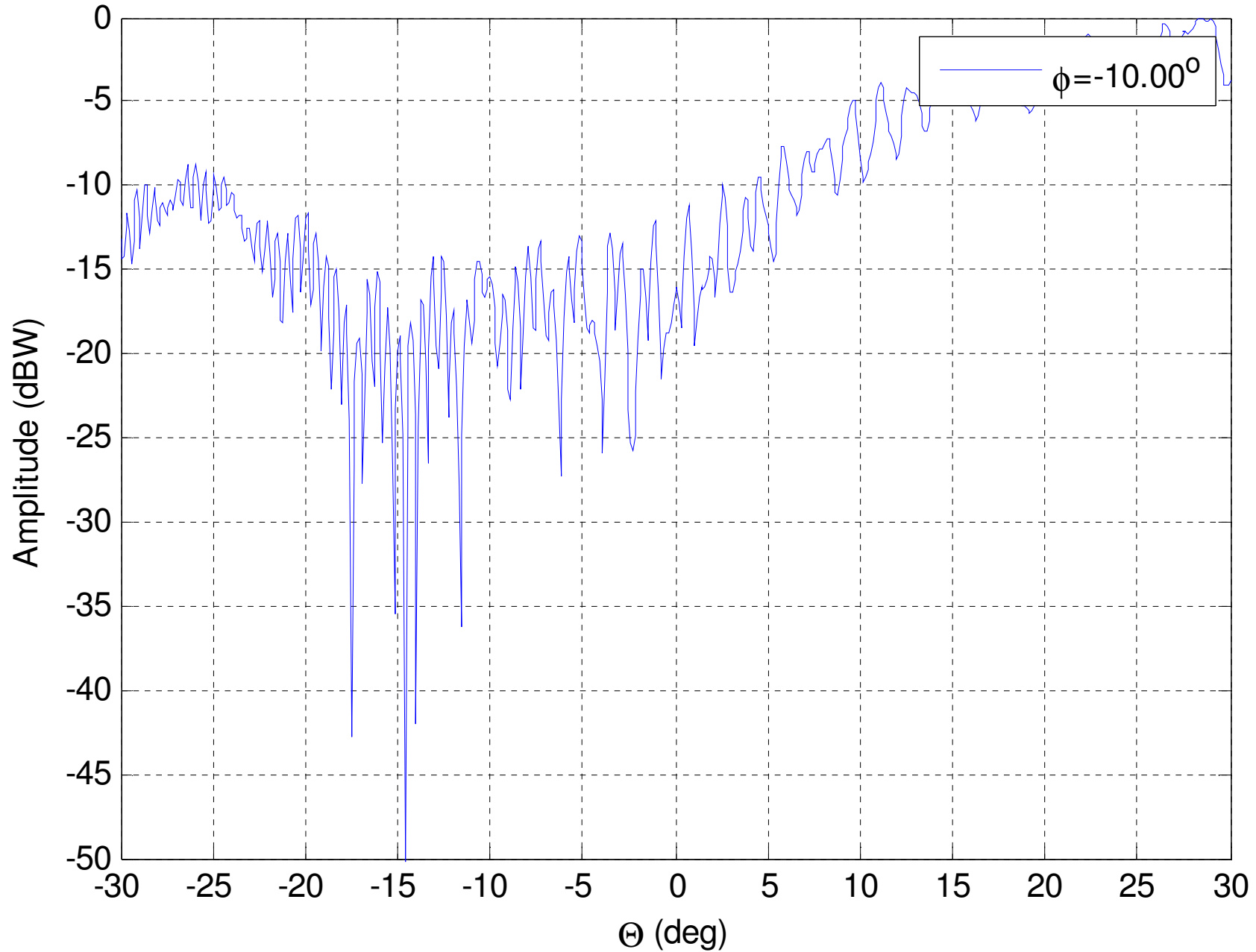
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--20.cut, Peak: -6.70 dBW, Date: 15-Dec-2011



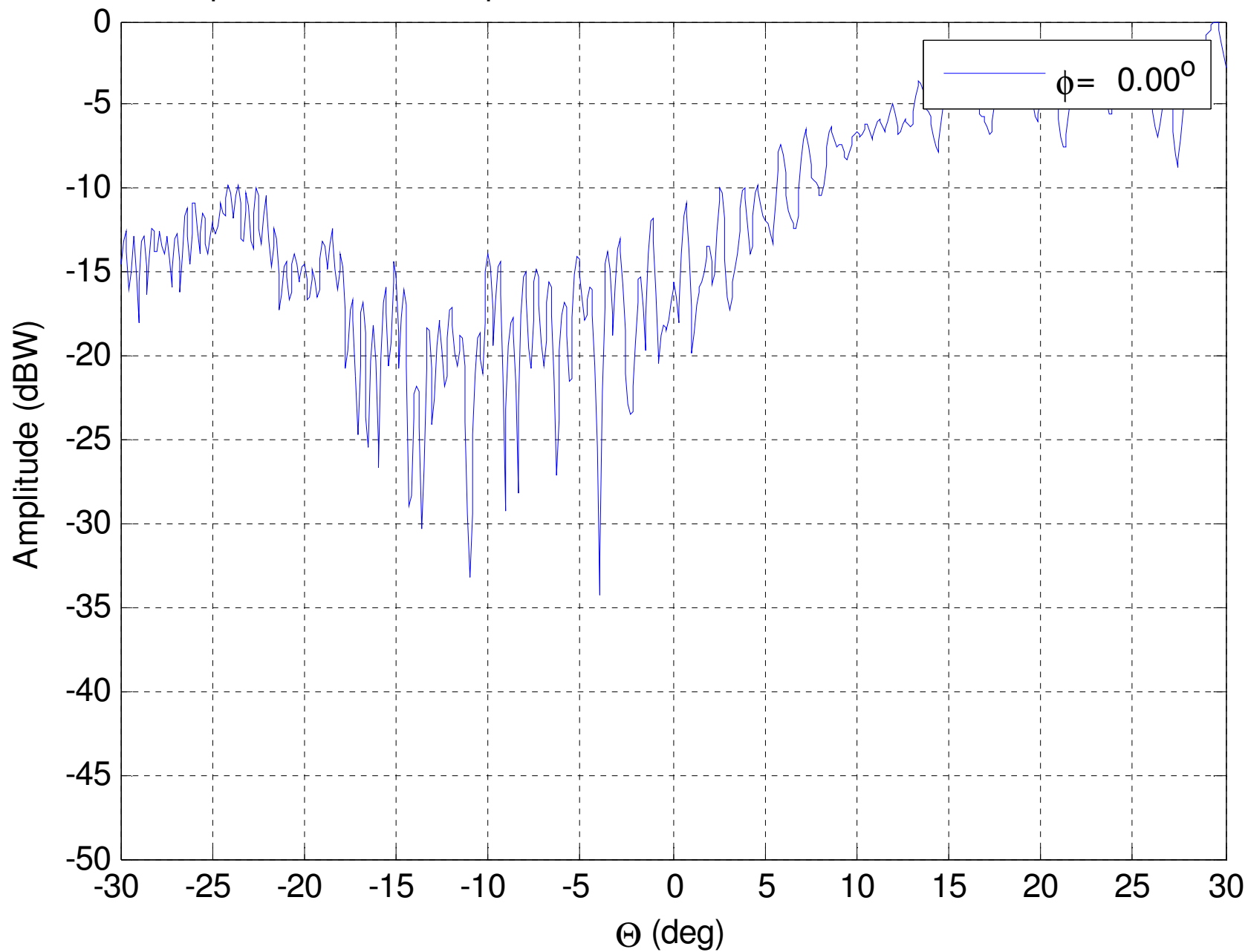
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp--10.cut, Peak: -6.82 dBW, Date: 15-Dec-2011



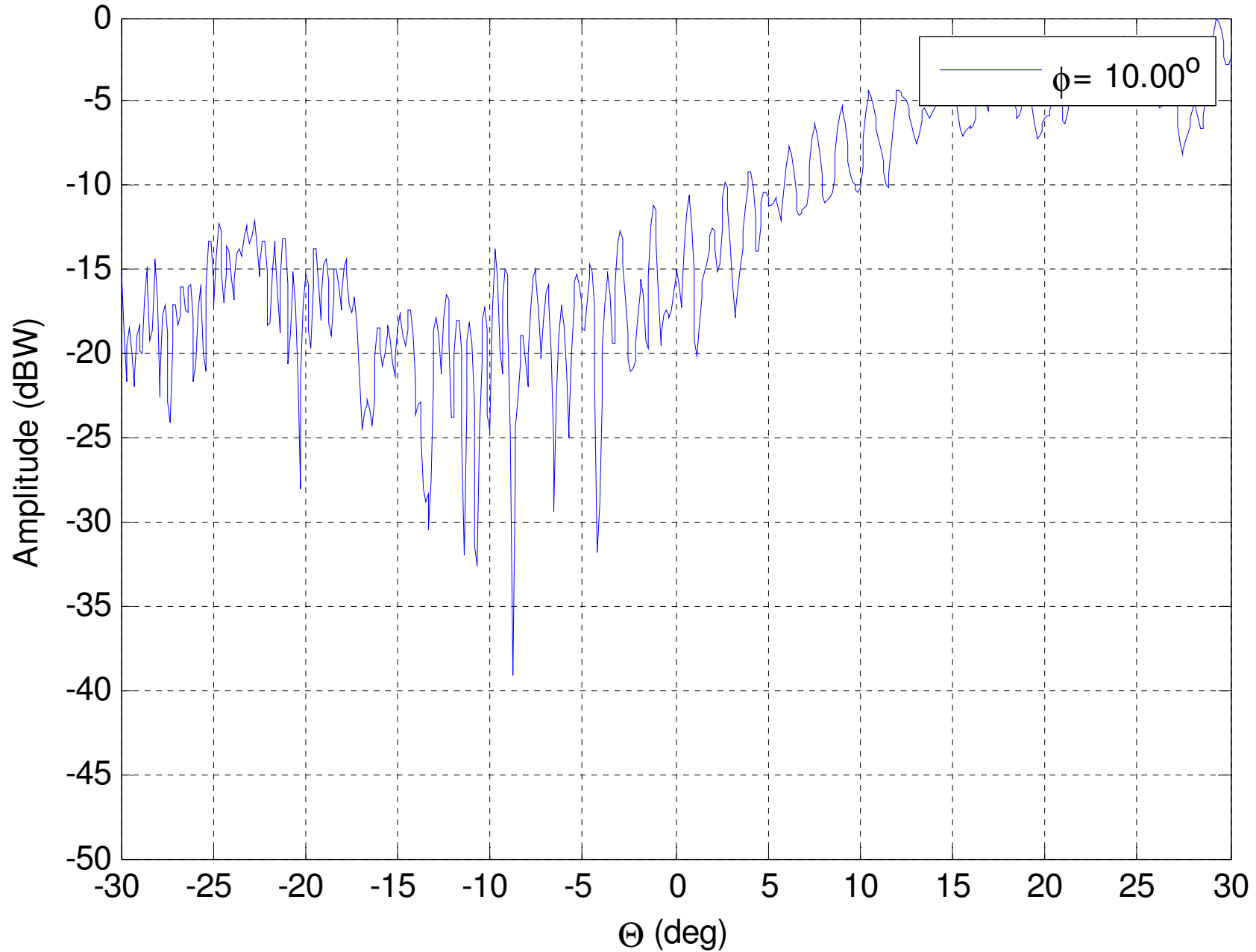
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-0.cut, Peak: -7.19 dBW, Date: 15-Dec-2011



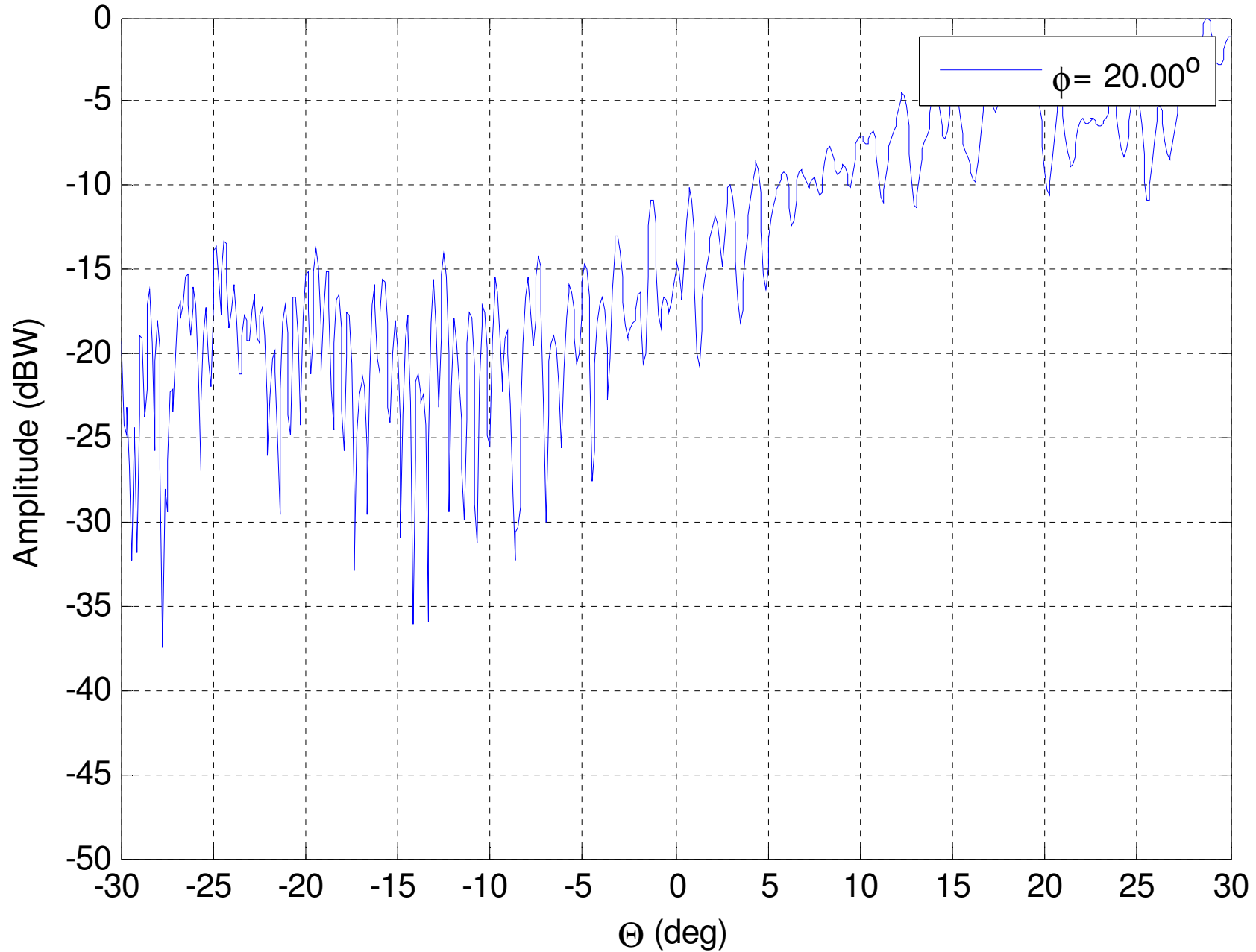
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-10.cut, Peak: -7.69 dBW, Date: 15-Dec-2011



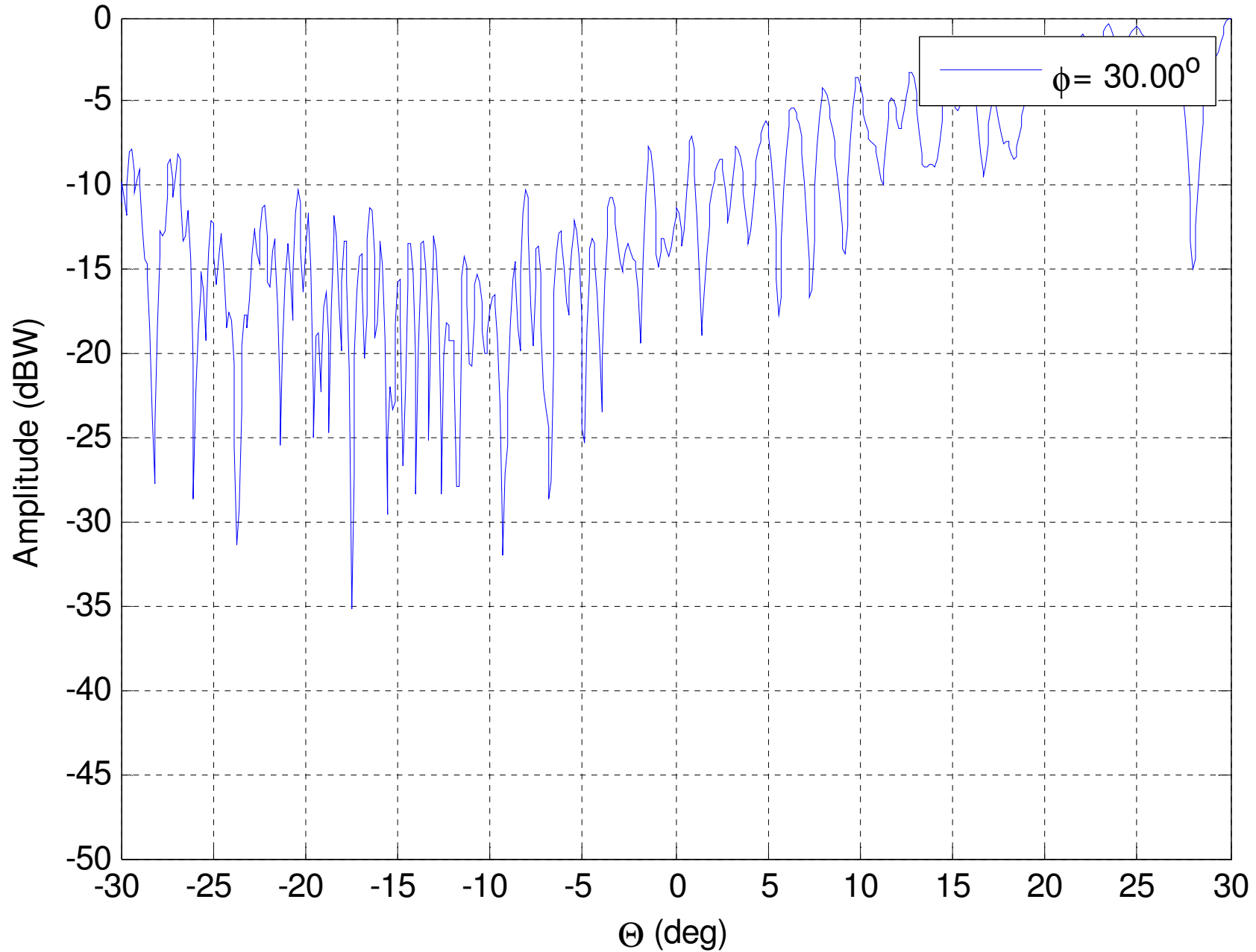
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-20.cut, Peak: -8.09 dBW, Date: 15-Dec-2011



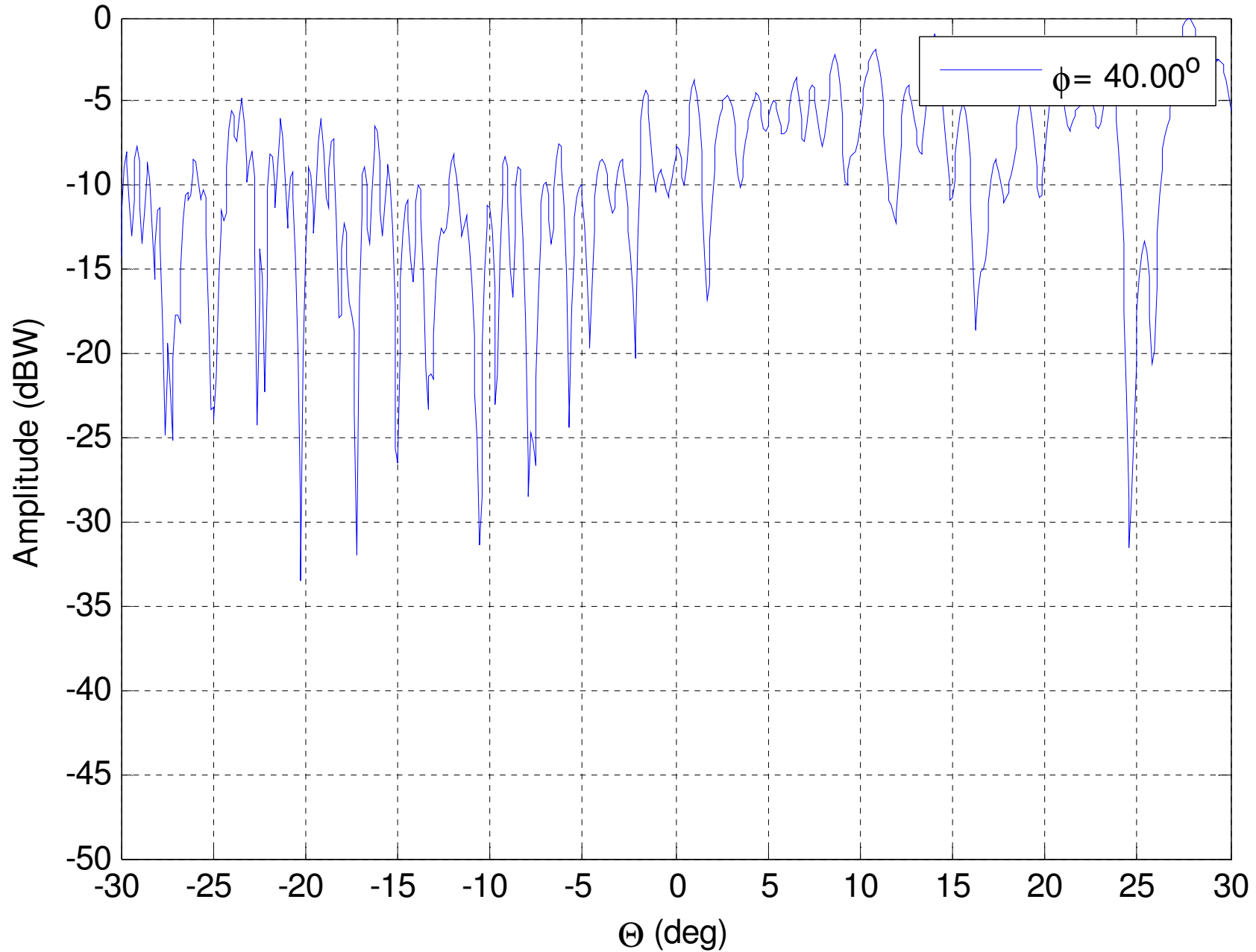
Normalized pattern cuts - farfield

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



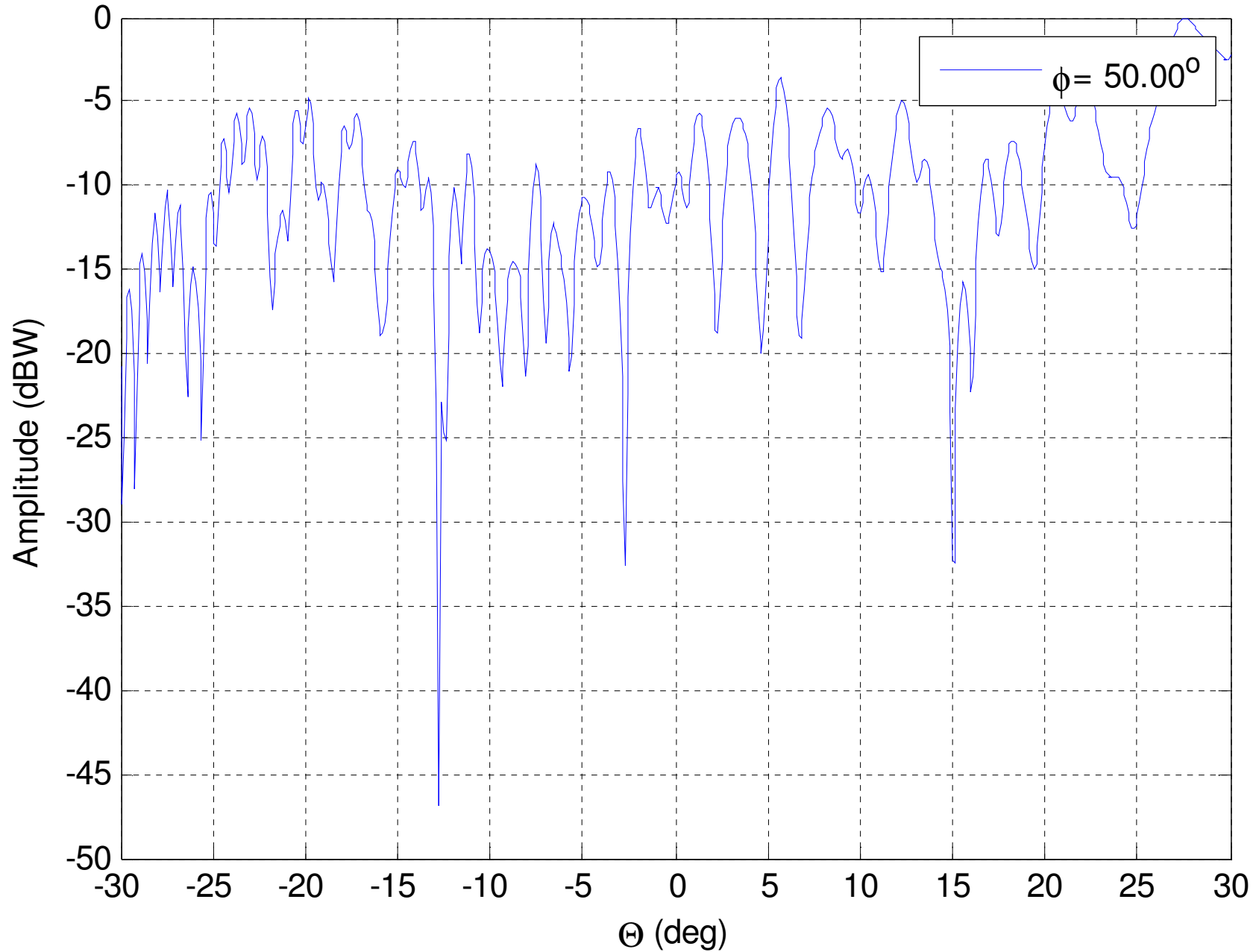
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-40.cut, Peak: -14.92 dBW, Date: 15-Dec-2011



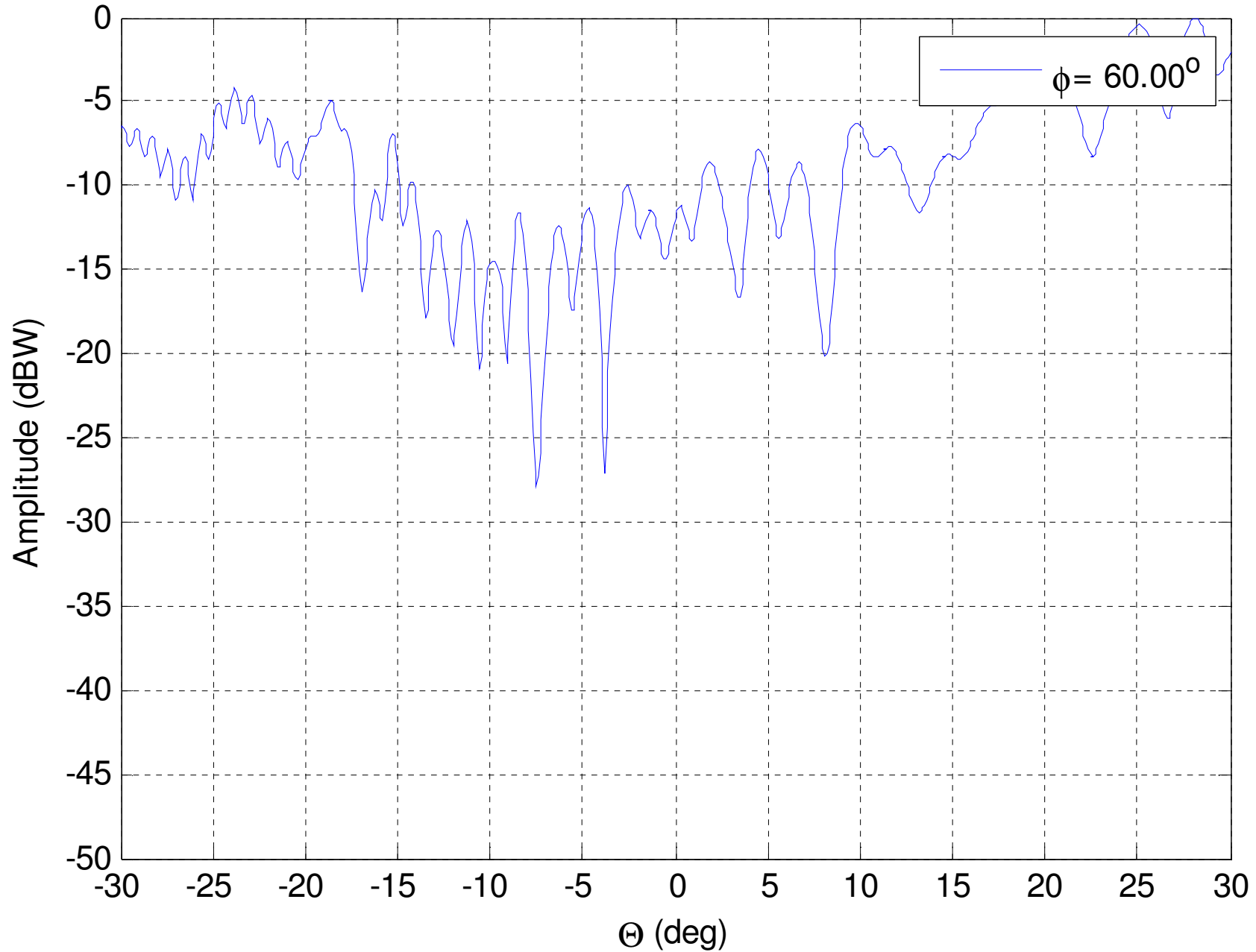
Normalized pattern cuts - farfield

Input file: tx-17.7-rhcp-50.cut, Peak: -13.25 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

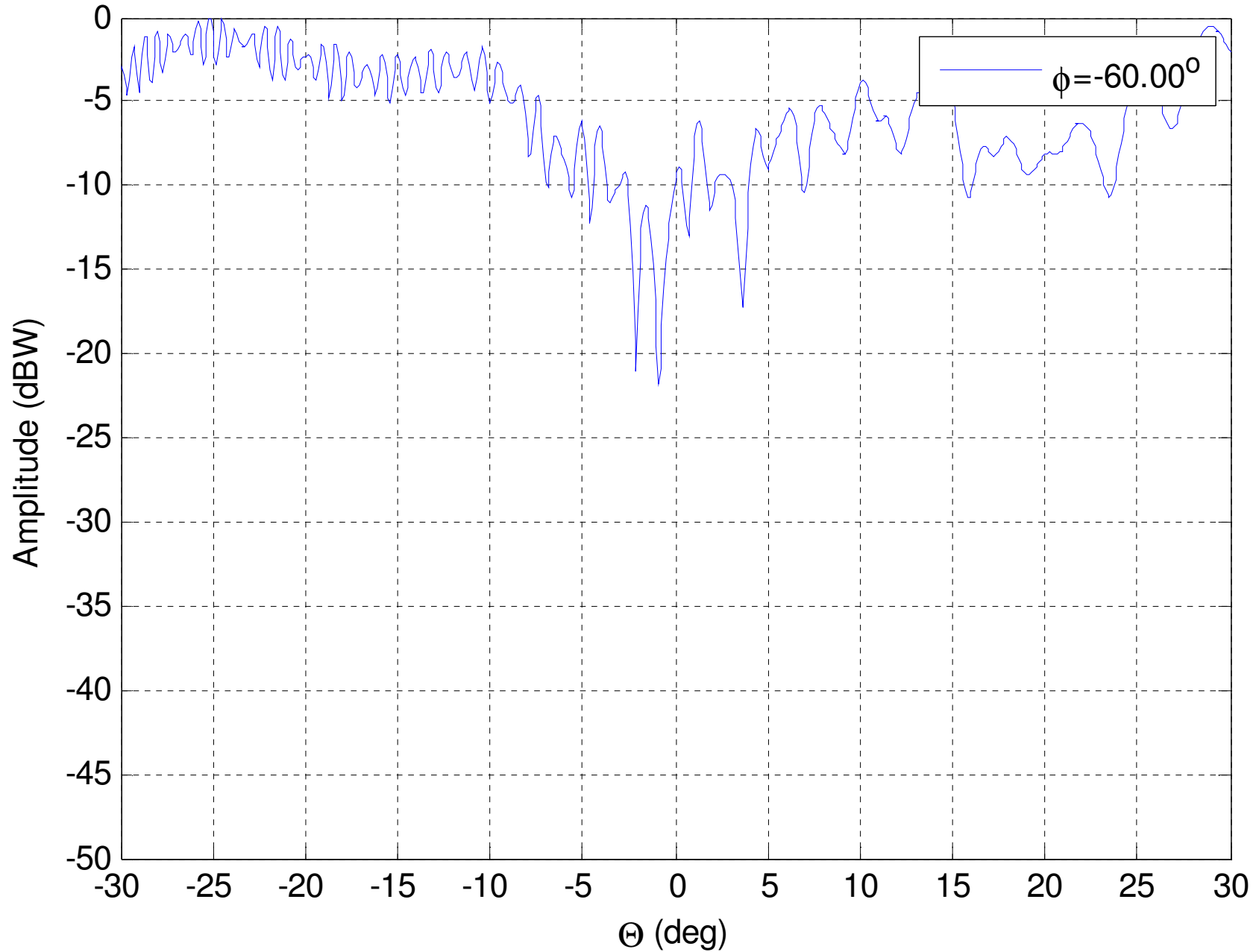
Input file: tx-17.7-rhcp-60.cut, Peak: -11.12 dBW, Date: 15-Dec-2011



LHCP at 17.7 GHz

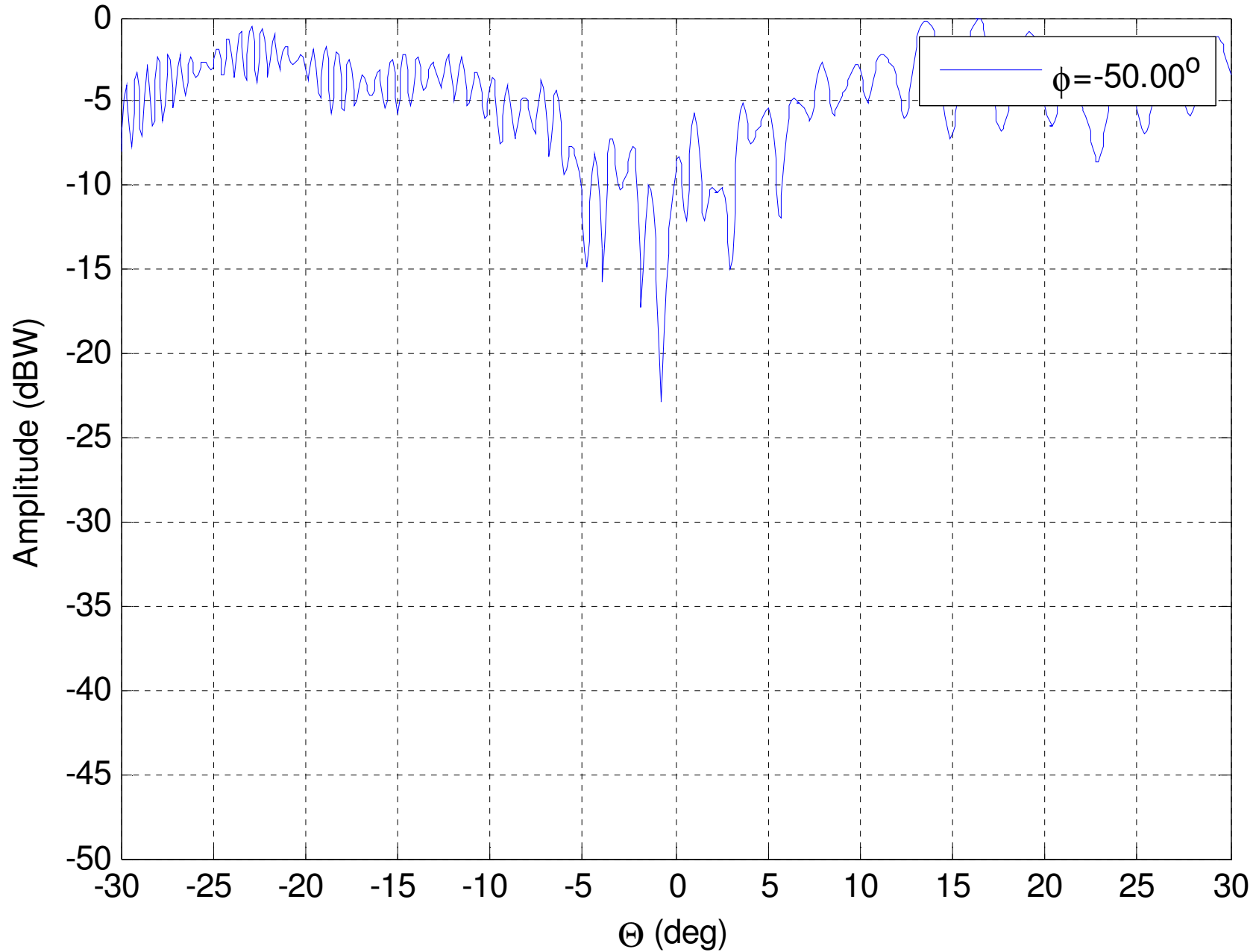
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--60.cut, Peak: -11.39 dBW, Date: 15-Dec-2011



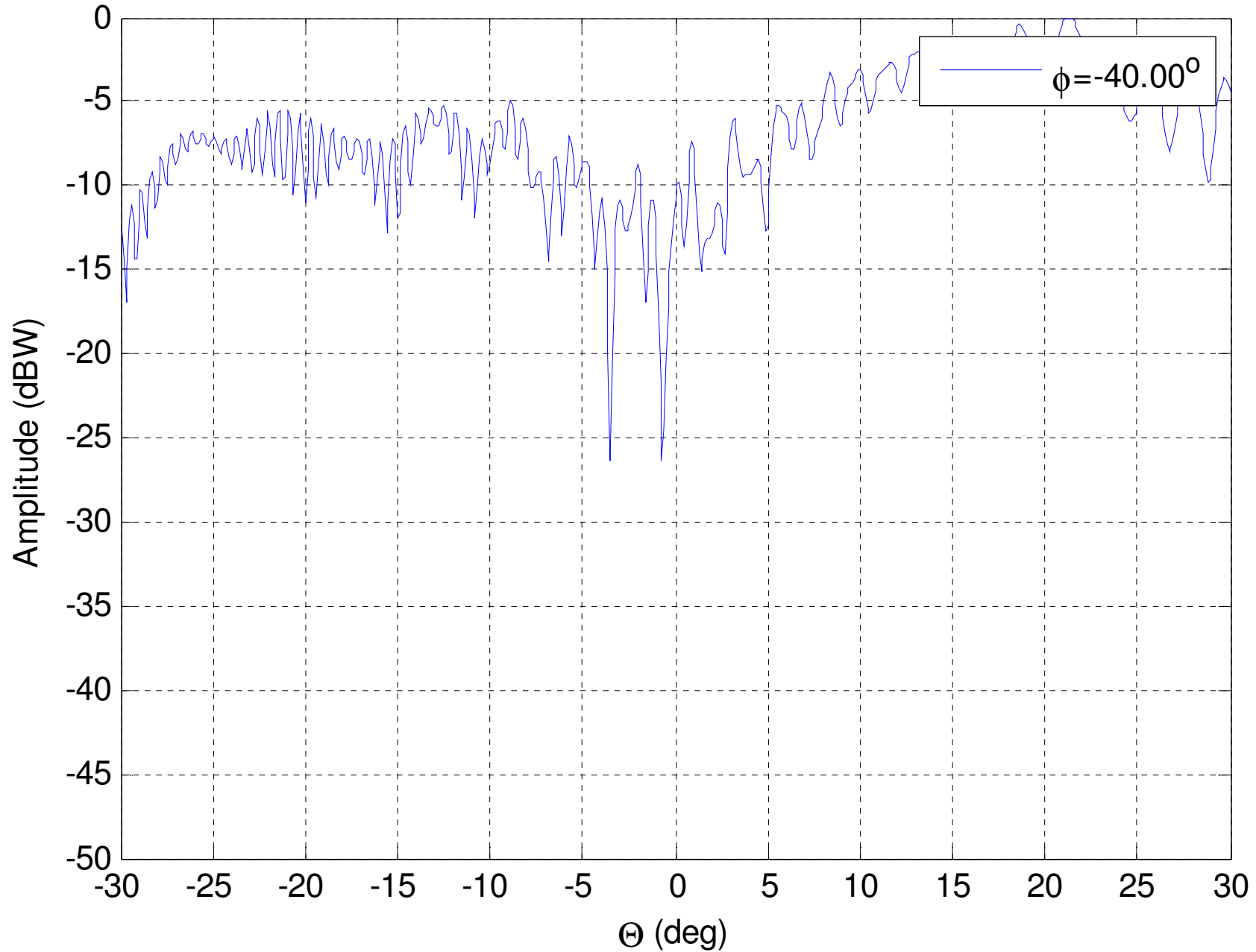
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--50.cut, Peak: -12.01 dBW, Date: 15-Dec-2011



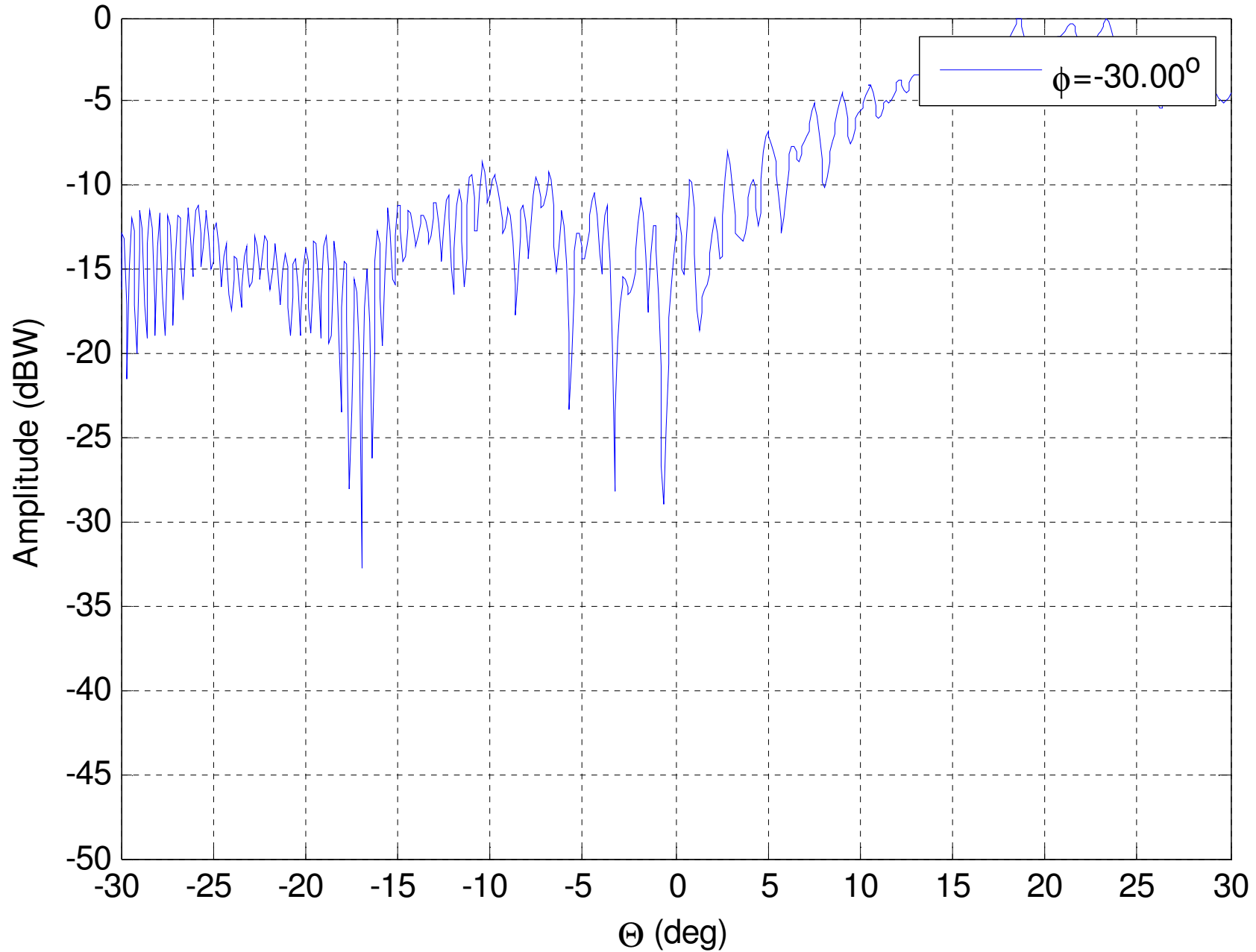
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--40.cut, Peak: -10.40 dBW, Date: 15-Dec-2011



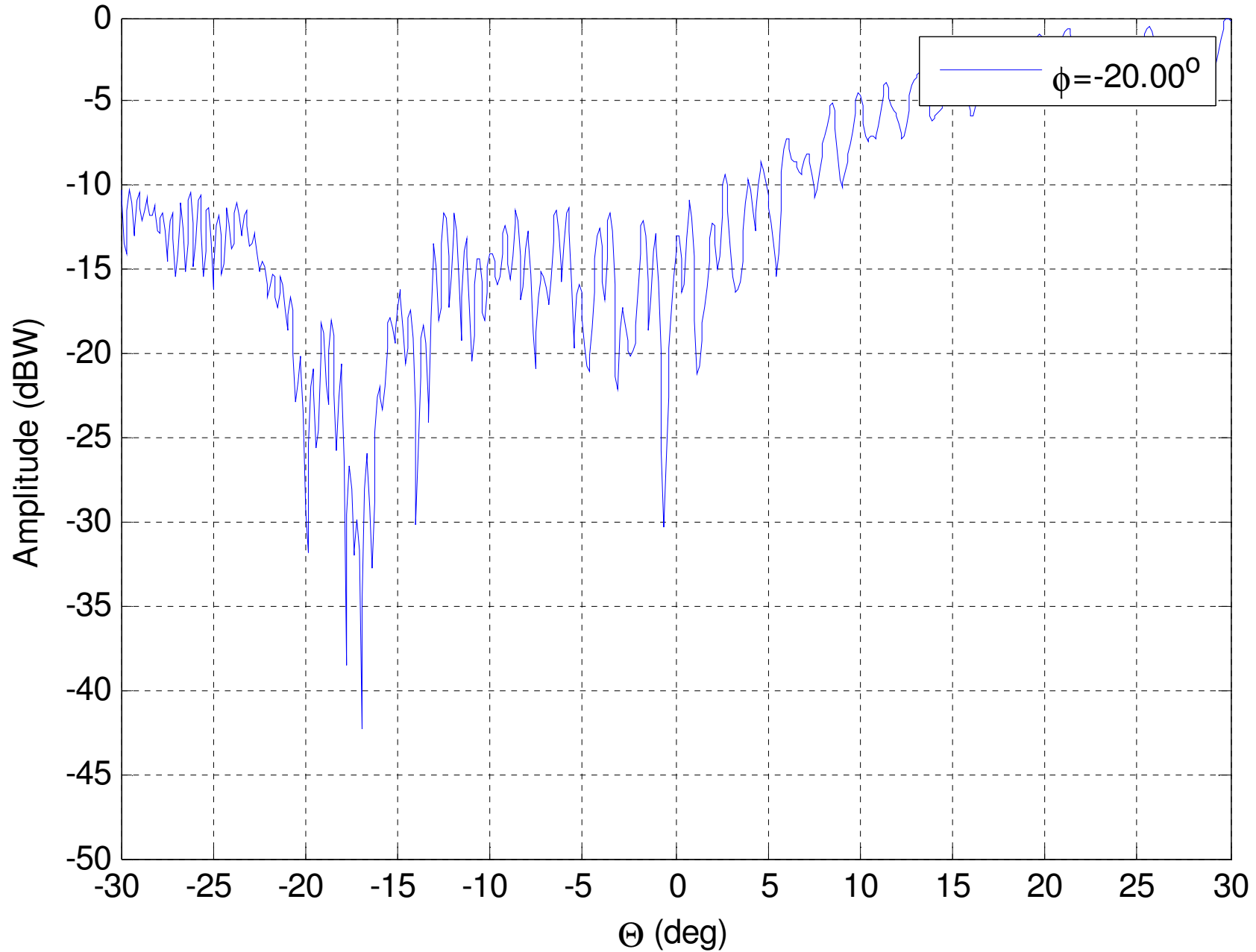
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--30.cut, Peak: -8.39 dBW, Date: 15-Dec-2011



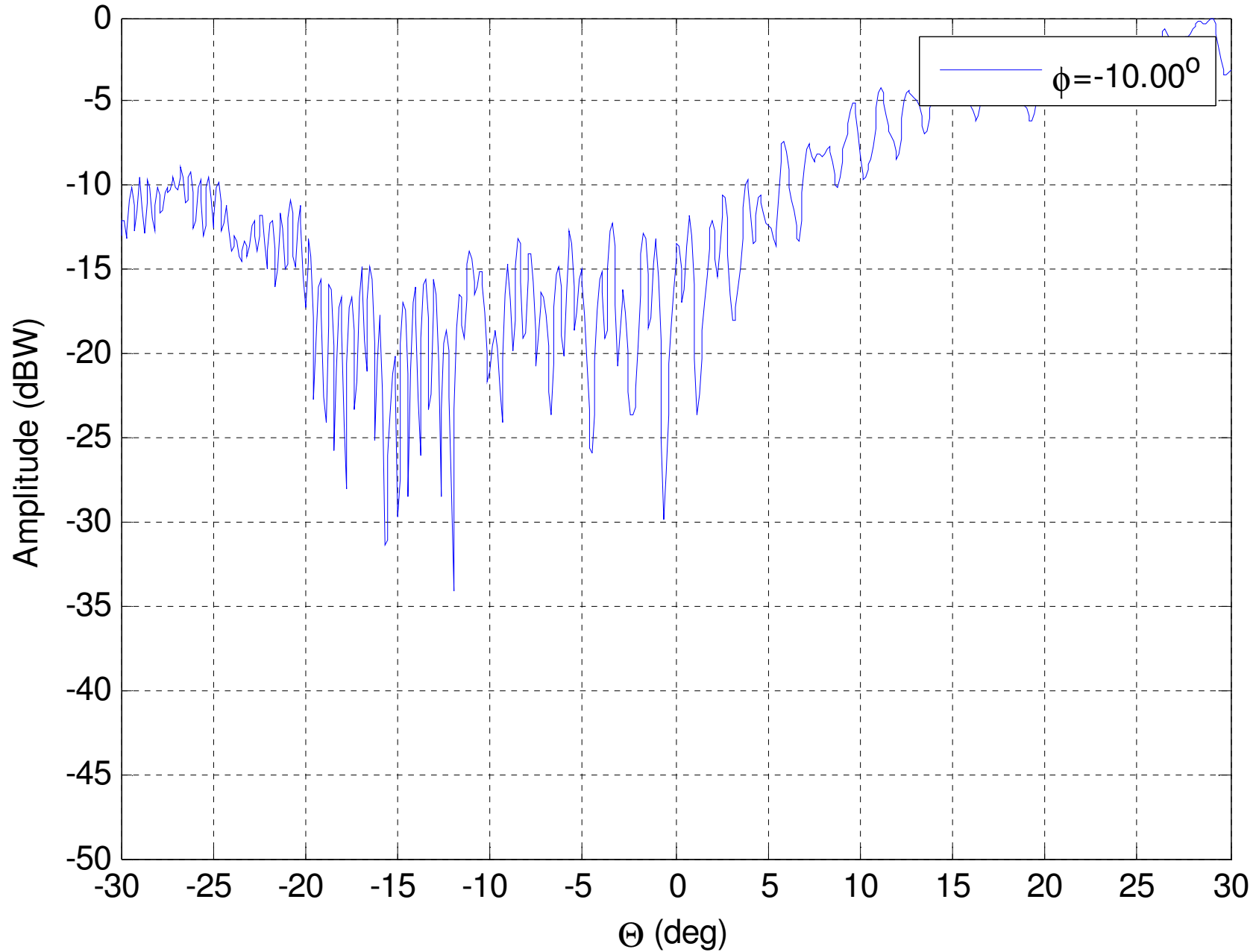
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--20.cut, Peak: -7.24 dBW, Date: 15-Dec-2011



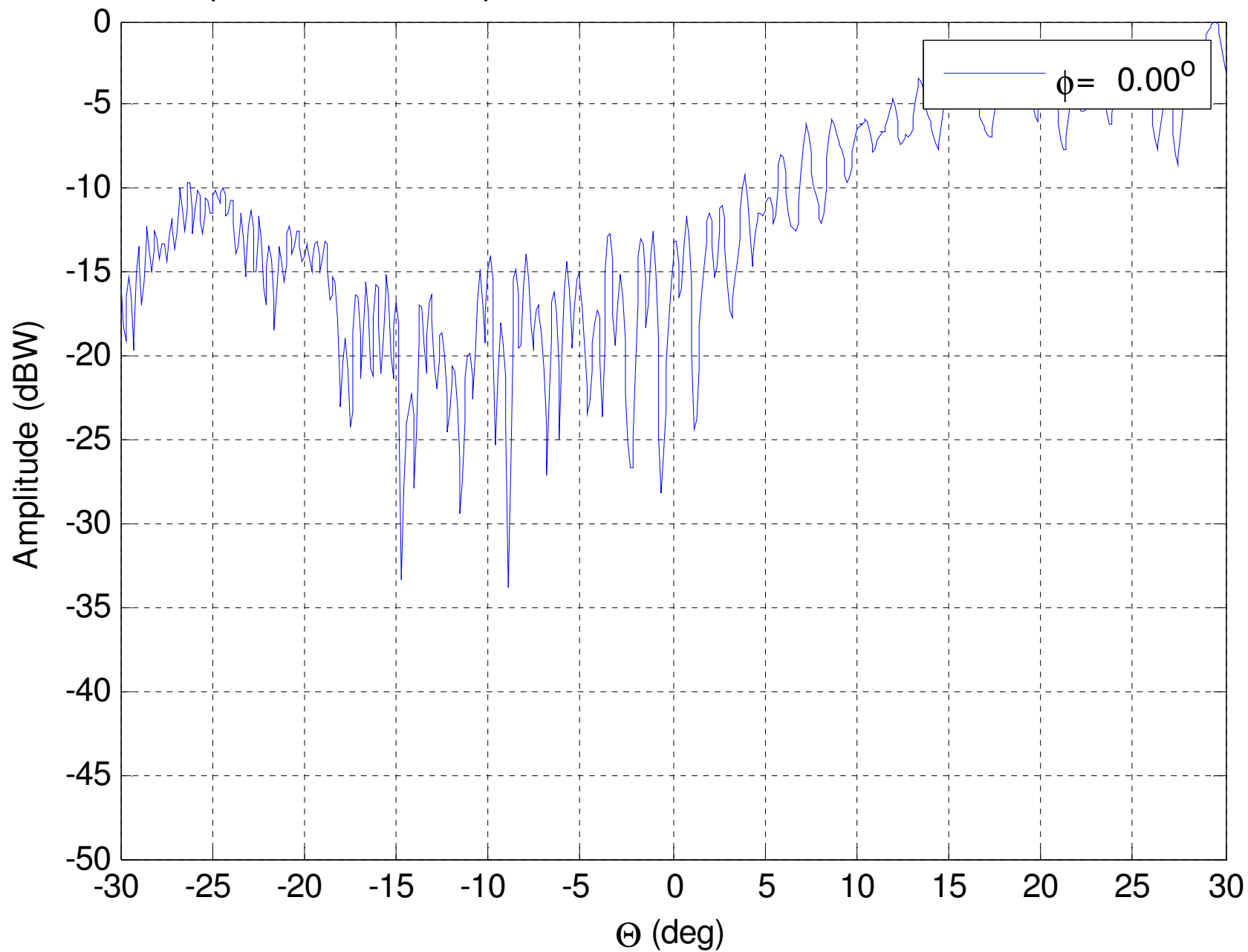
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp--10.cut, Peak: -6.68 dBW, Date: 15-Dec-2011



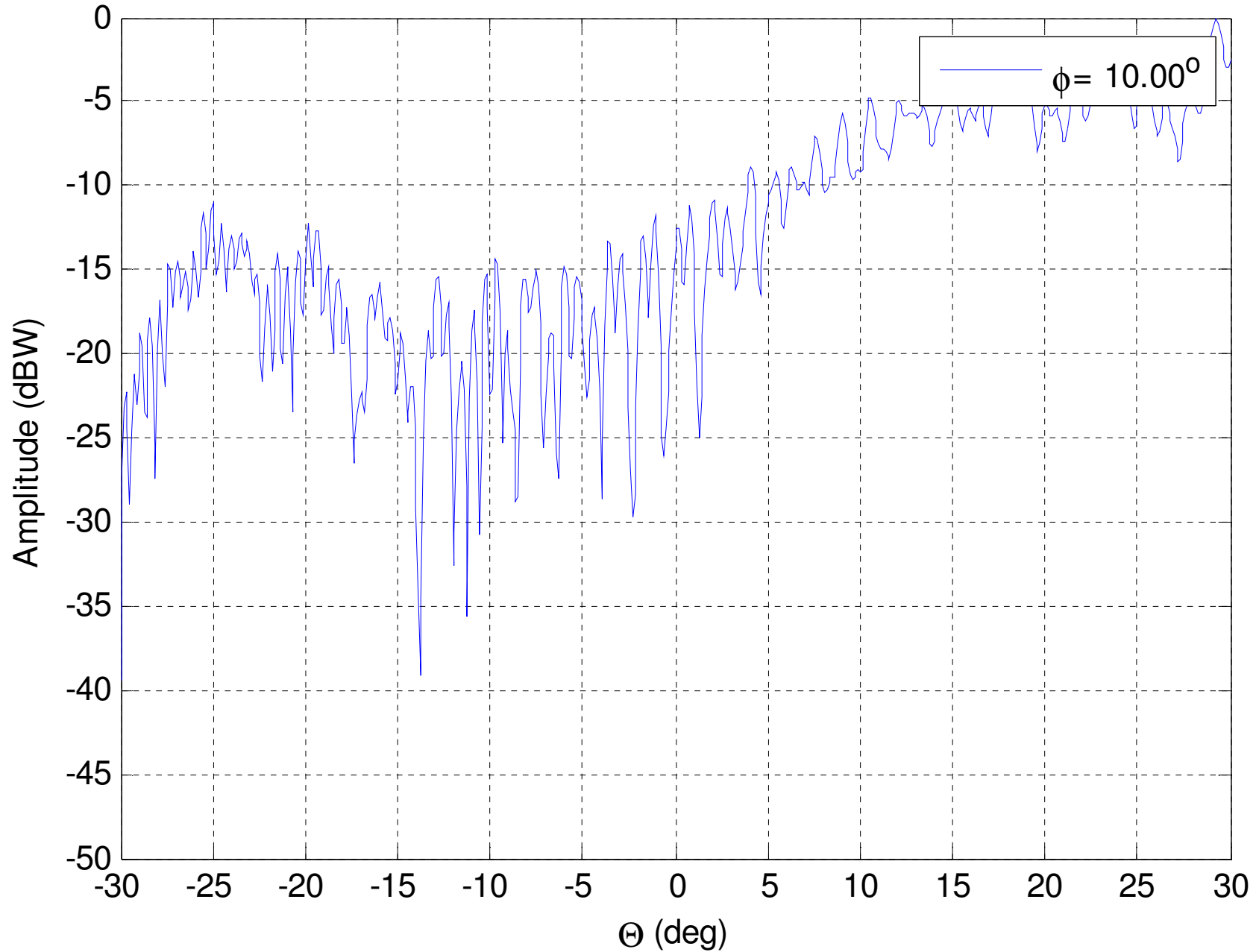
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-0.cut, Peak: -7.02 dBW, Date: 15-Dec-2011



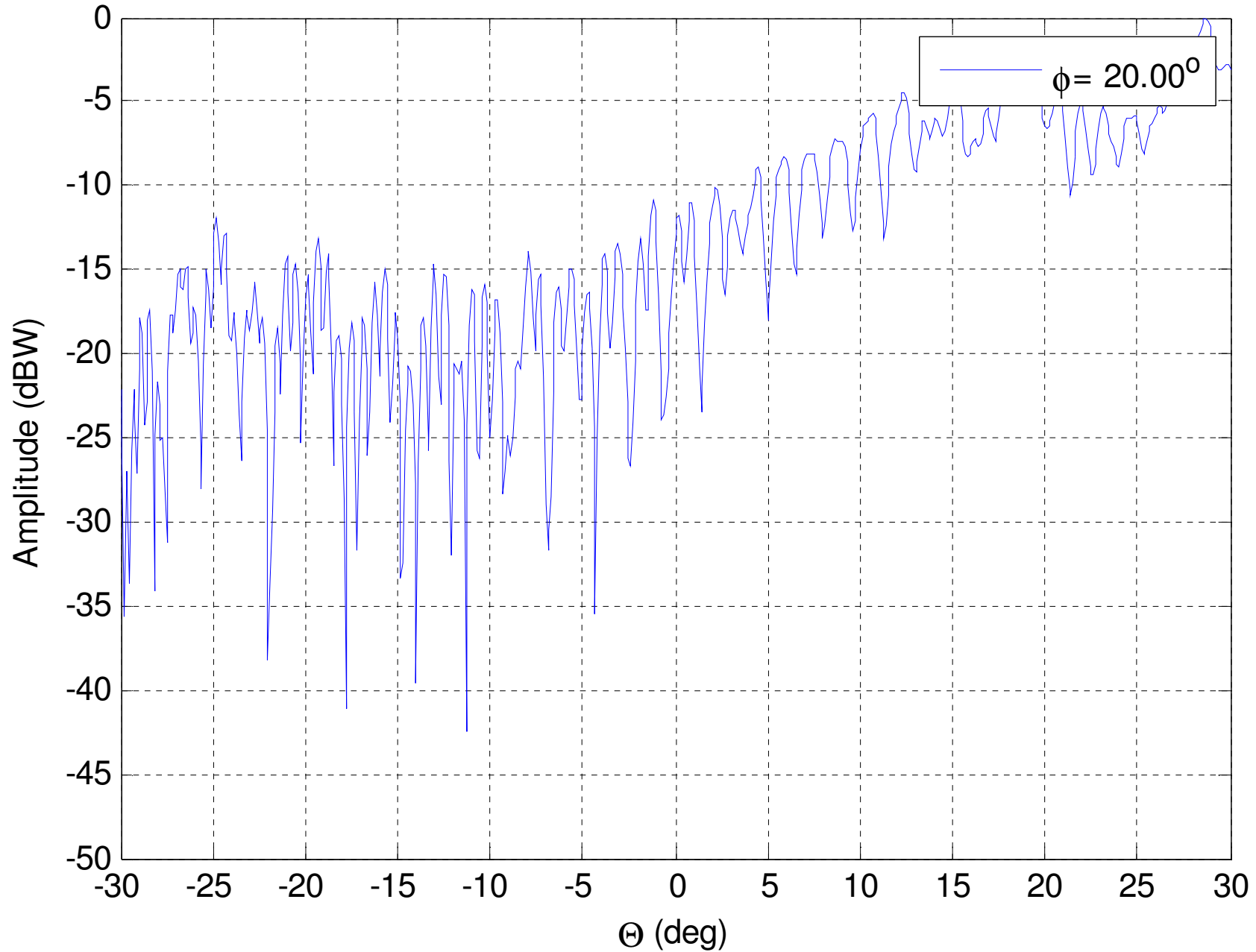
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-10.cut, Peak: -7.54 dBW, Date: 15-Dec-2011



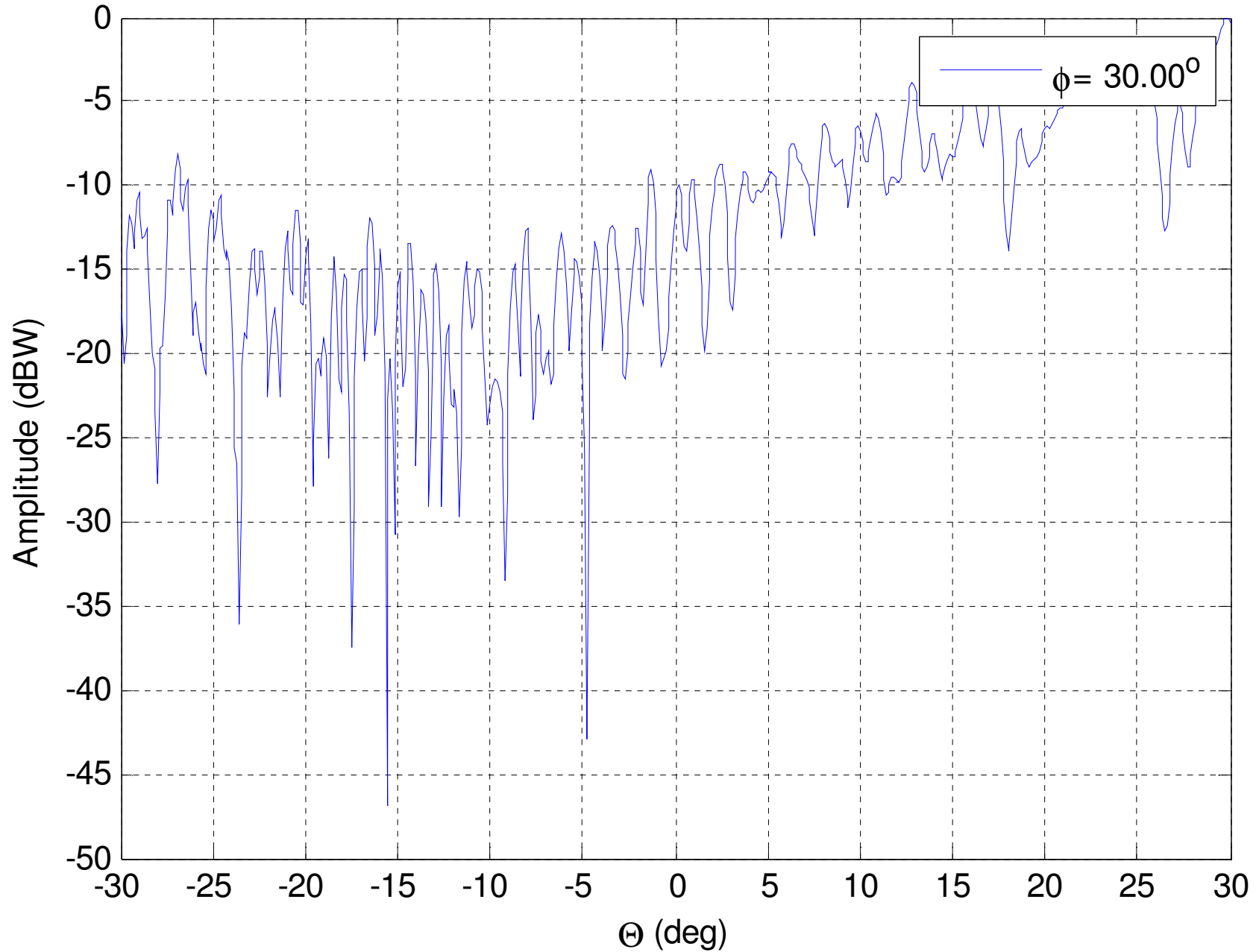
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-20.cut, Peak: -8.23 dBW, Date: 15-Dec-2011



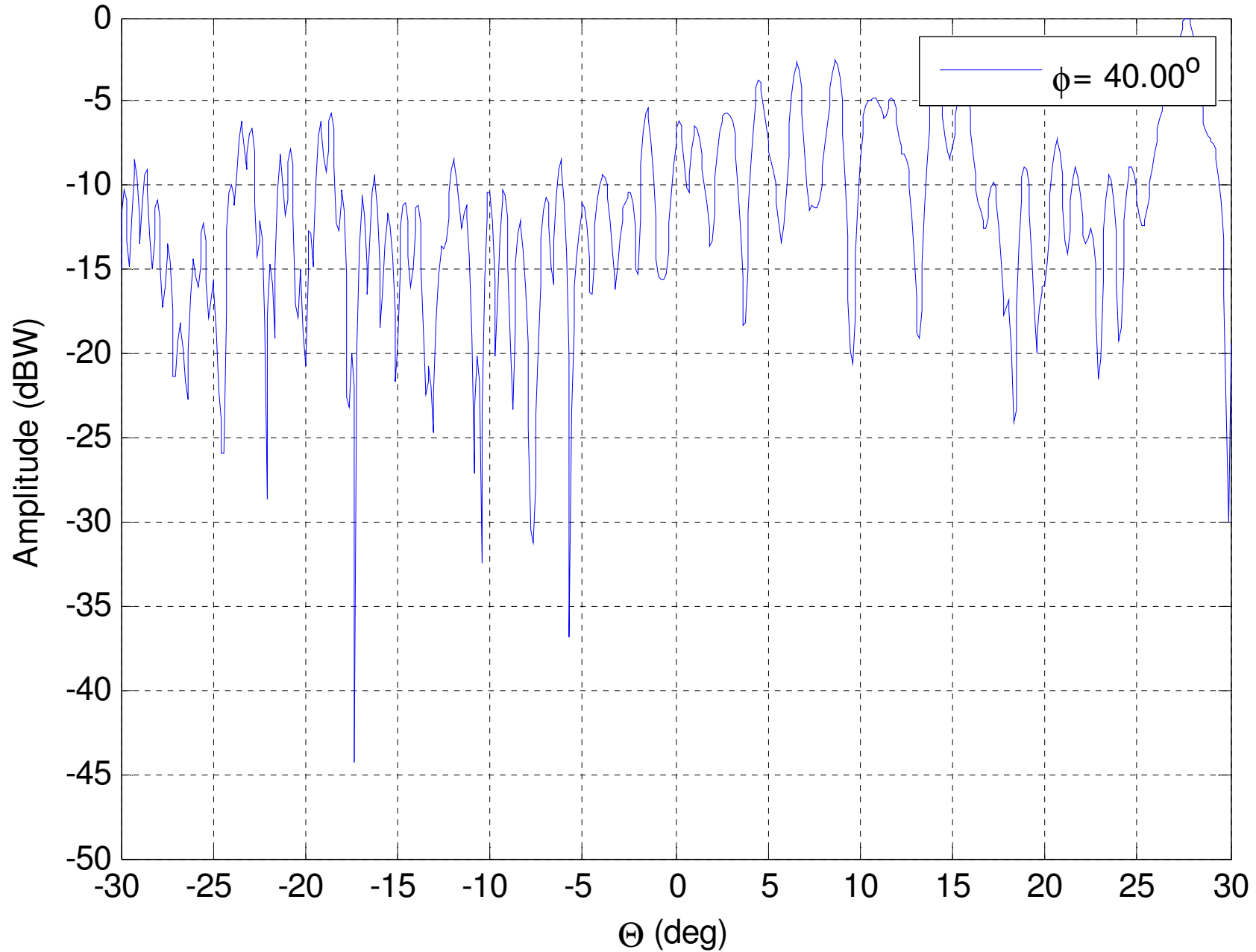
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-30.cut, Peak: -9.96 dBW, Date: 15-Dec-2011



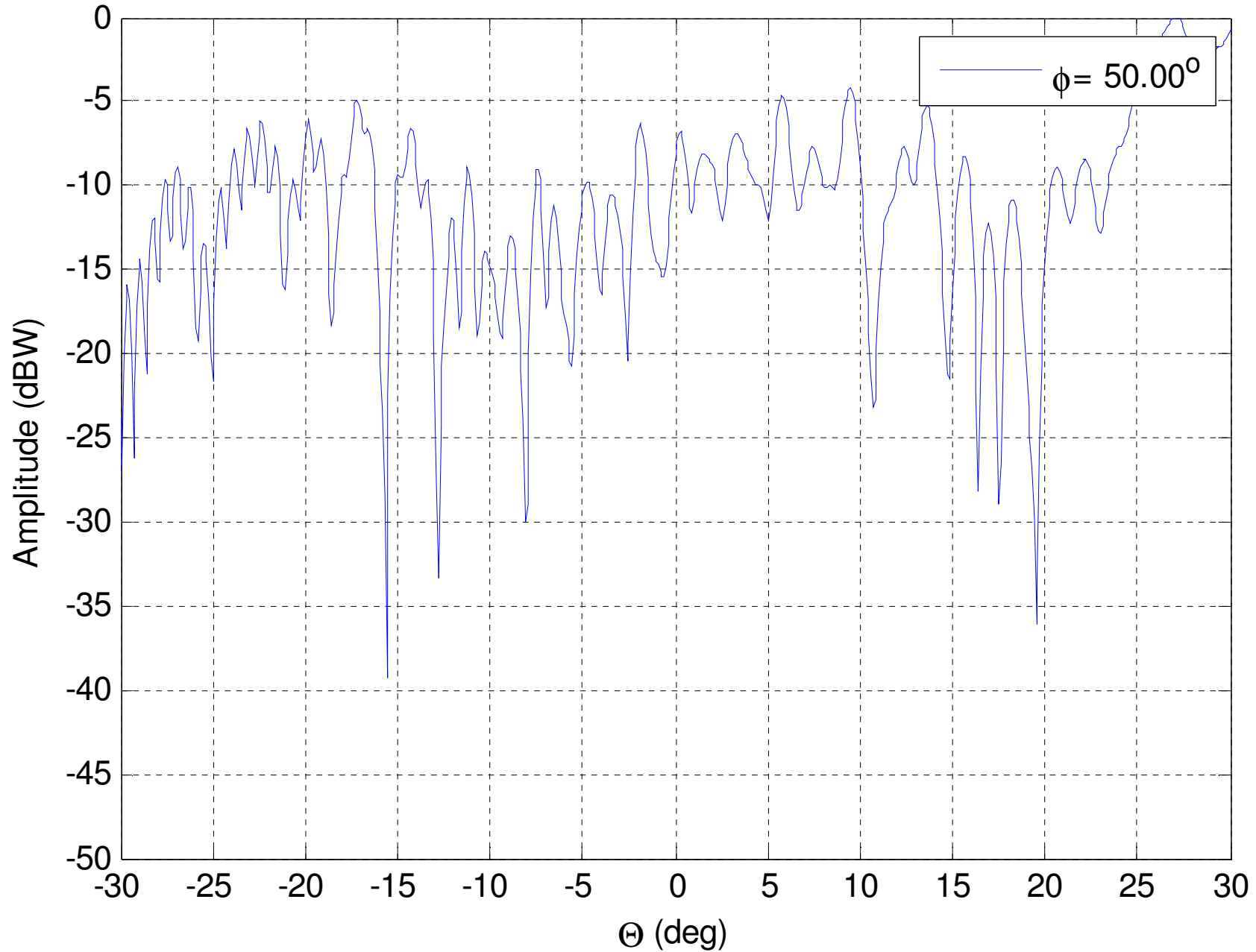
Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-40.cut, Peak: -13.63 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-50.cut, Peak: -12.99 dBW, Date: 15-Dec-2011



Normalized pattern cuts - farfield

Input file: tx-17.7-lhcp-60.cut, Peak: -10.63 dBW, Date: 15-Dec-2011

