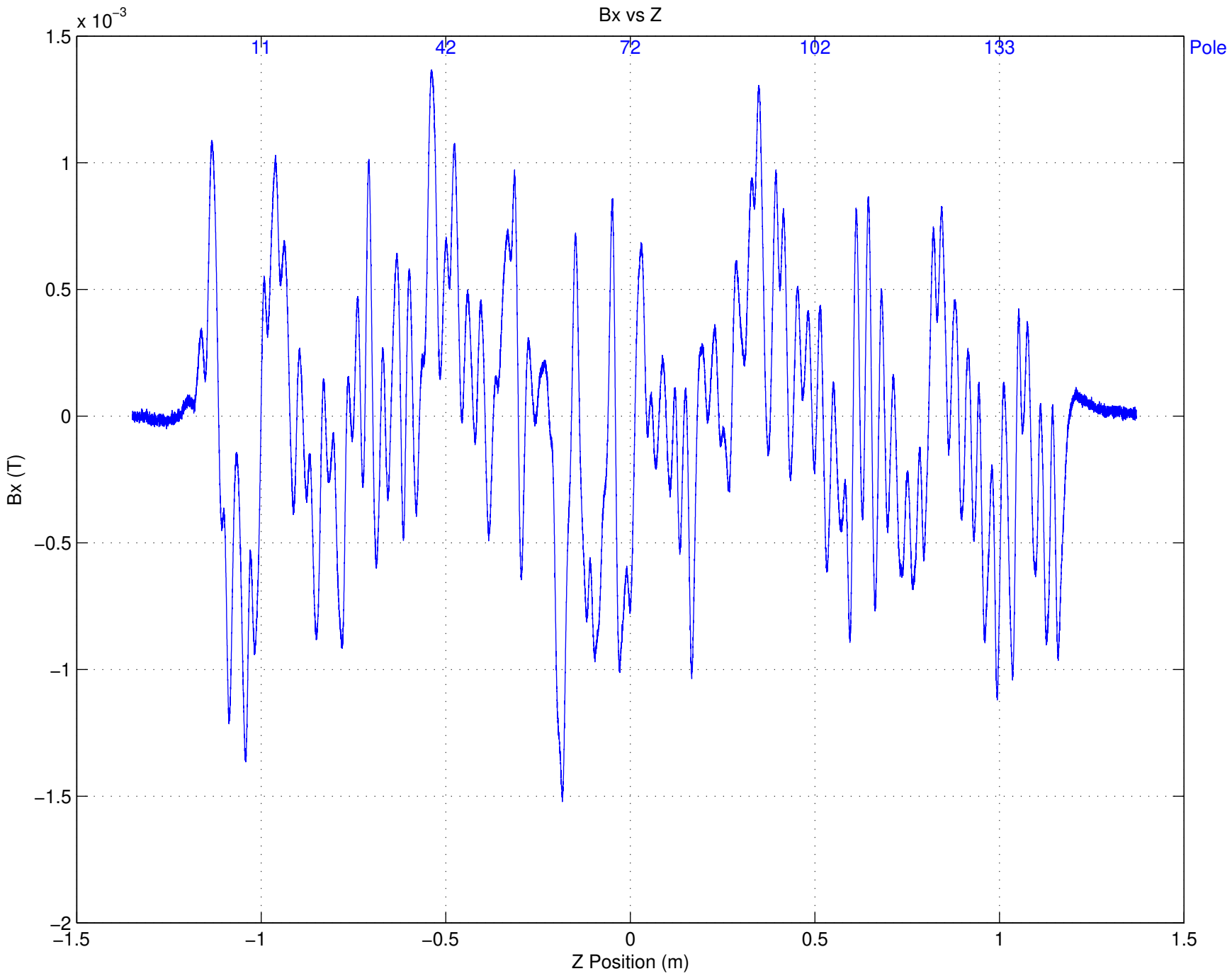
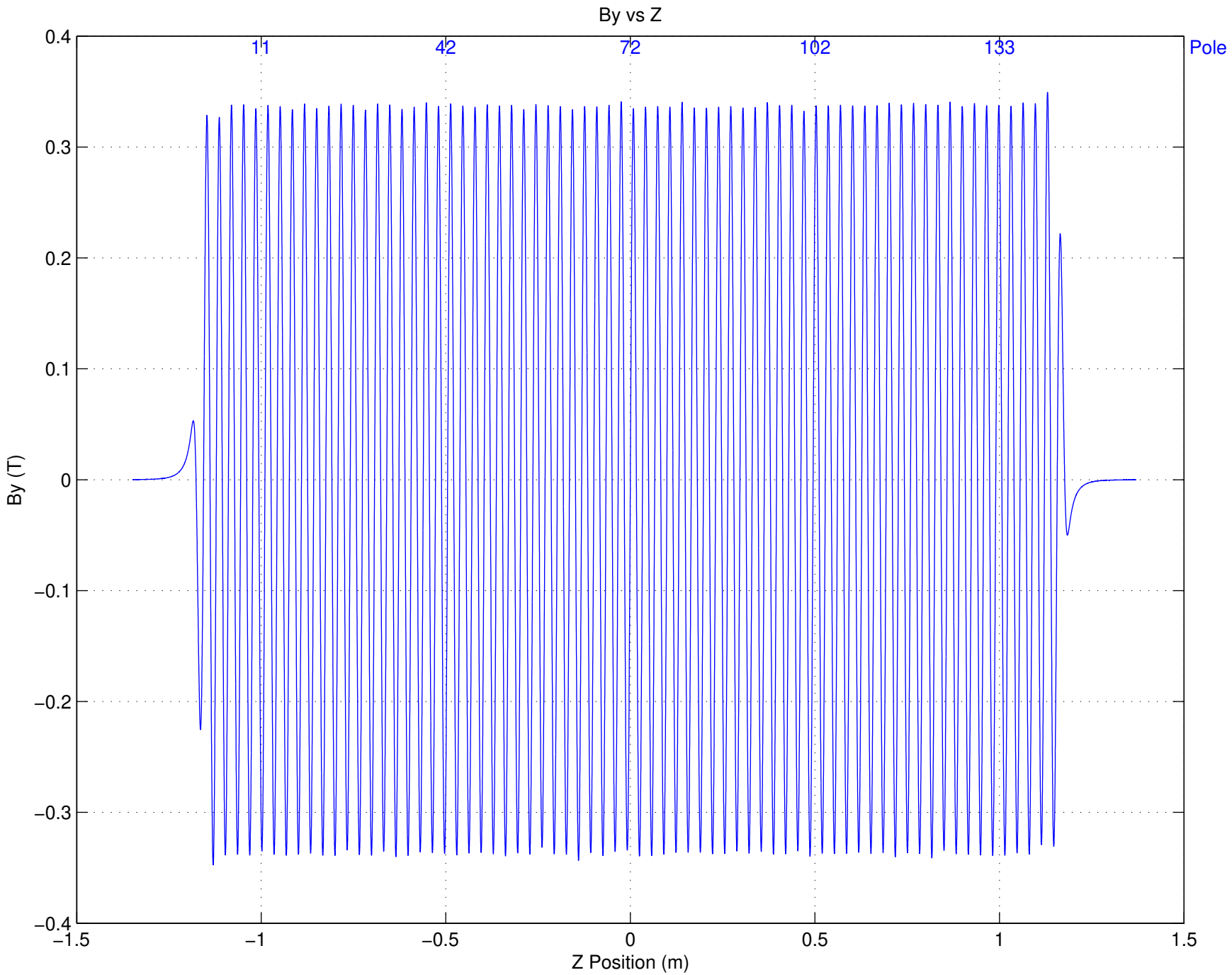
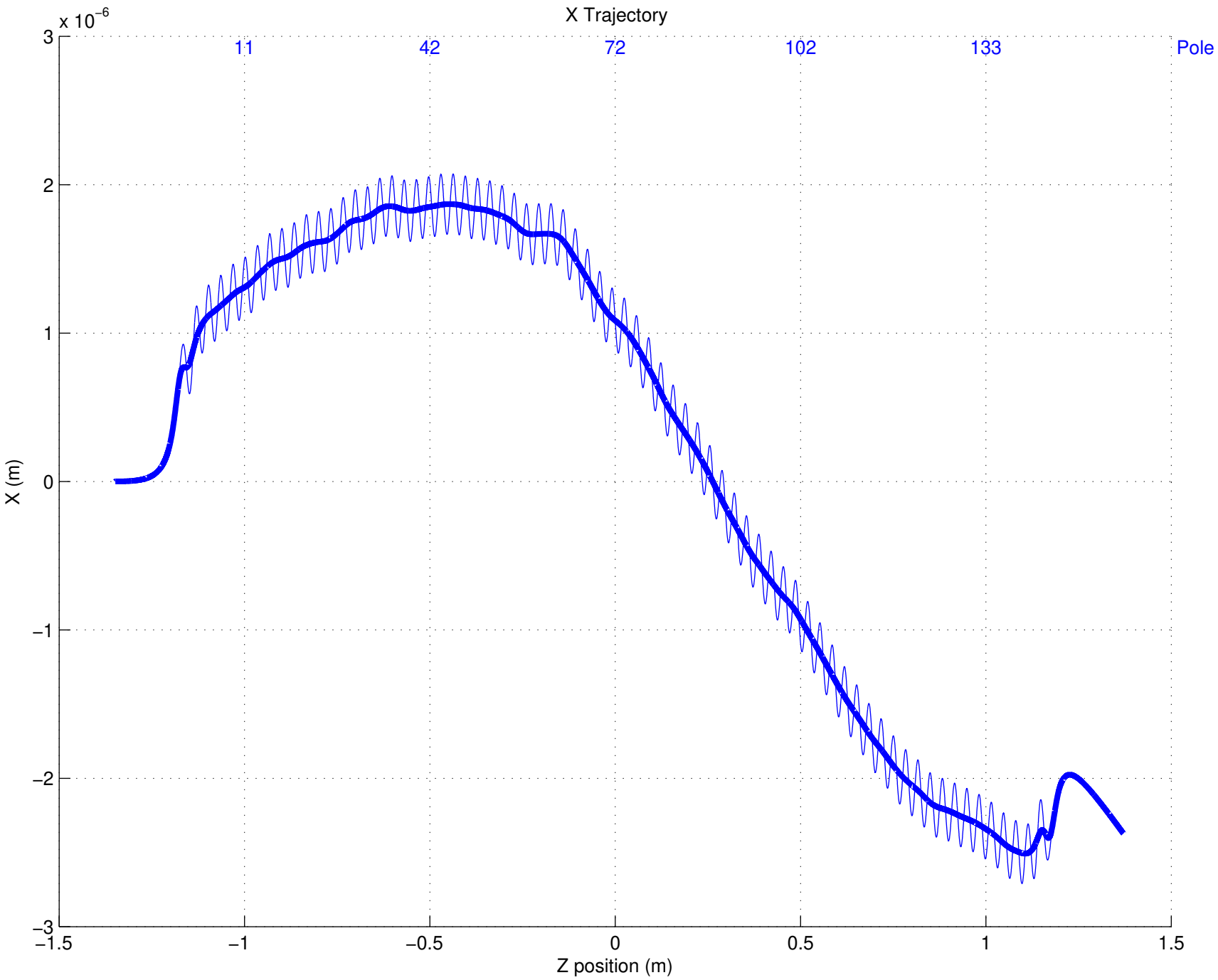
SLAC Magnetic Measurements

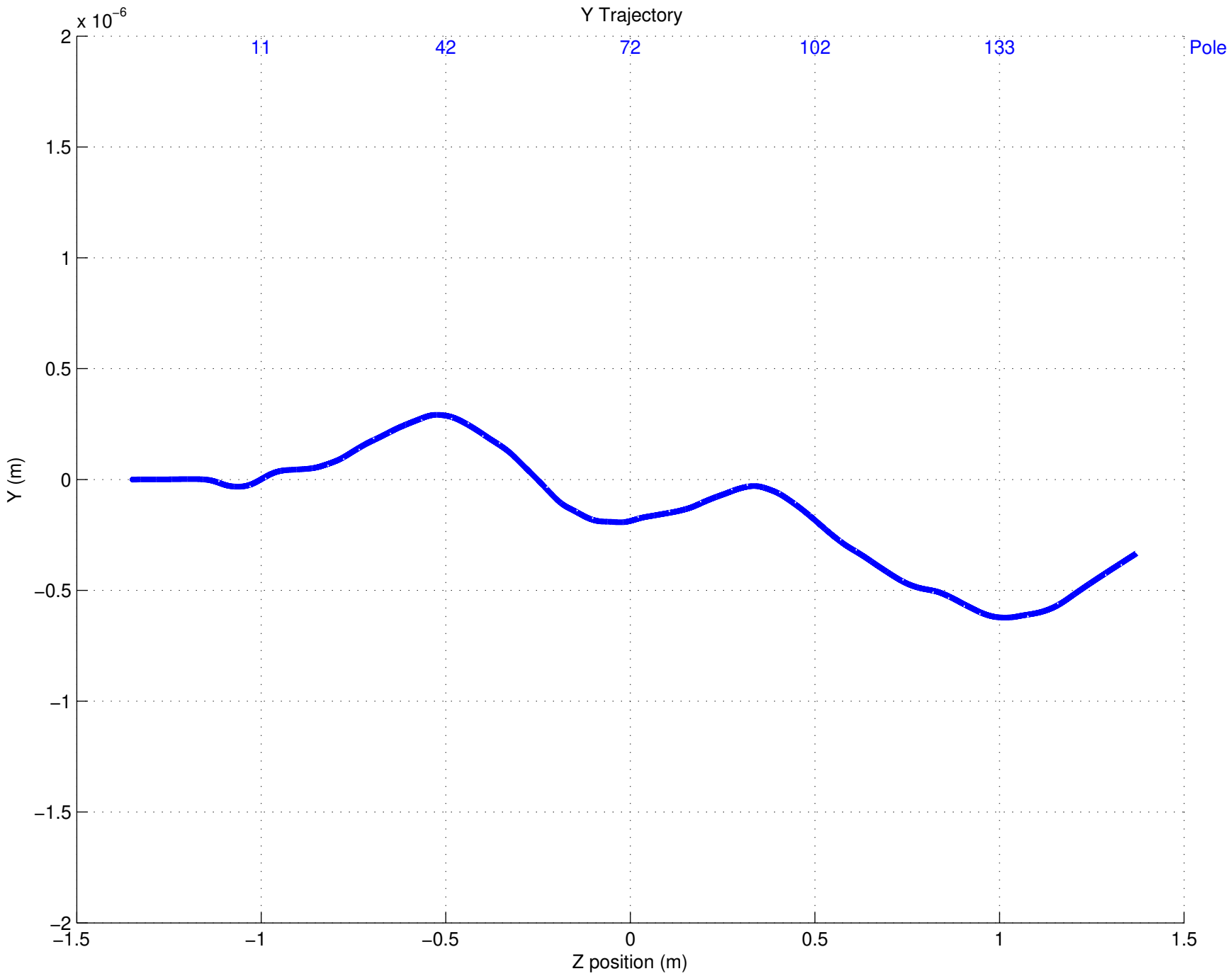
Planar Insertion Device Analysis

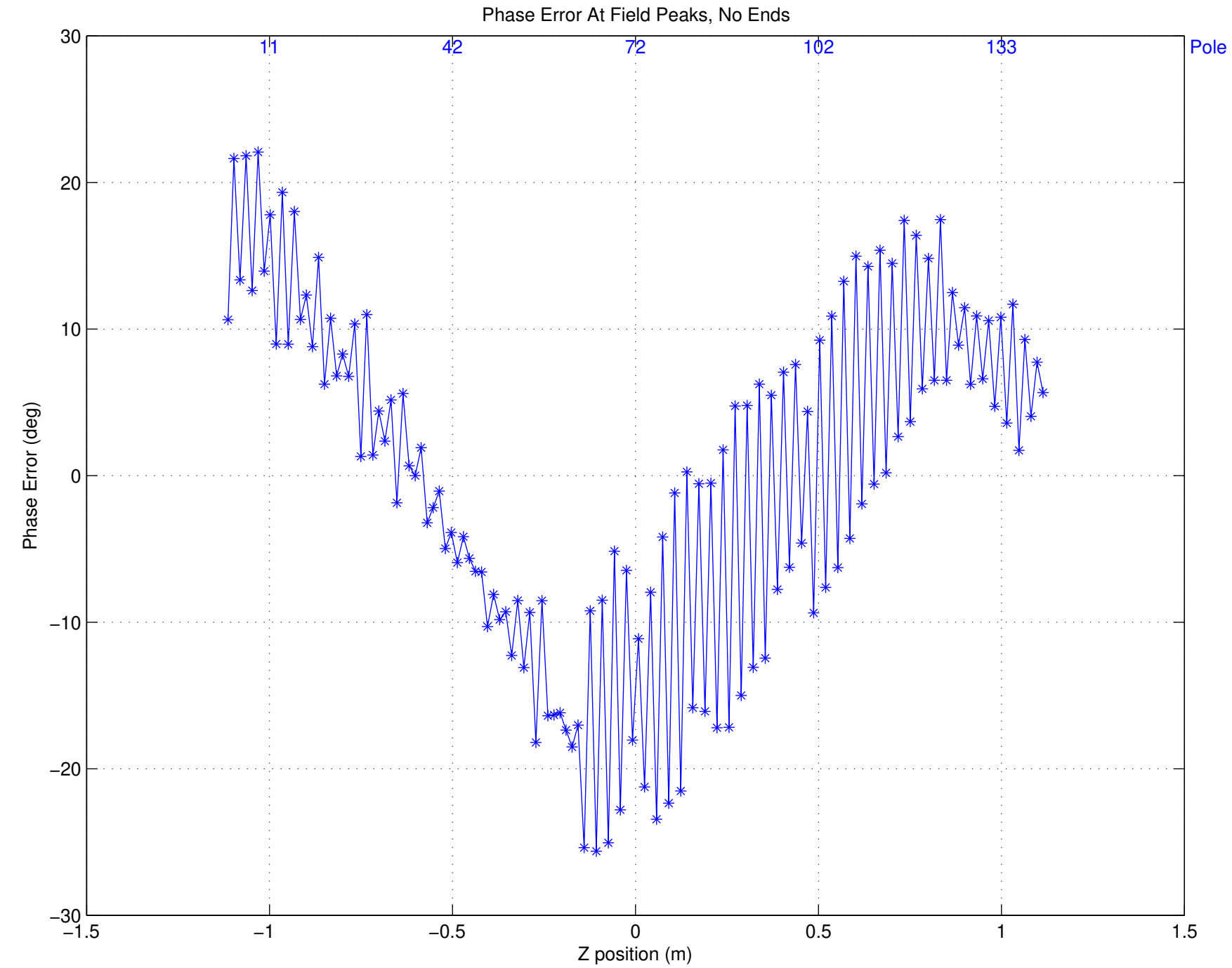
Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\A1−ANL\DATASET0001\Rough Tuning\Z Scans\Run 017\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =1
GAMMA =26686.34
NOM−LAMBDA−U =0.033
NOM−K−VALUE =1.0475
NOM−LAMBDA−R =3.588e−011
NUM−POLES =144
NUM−END−POLES =4
CELL−LENGTH =2.376


Bx vs Z
x 10^-3
11
42
72
102
133
Pole
1.5
1
0.5
0
−0.5
−1
−1.5
−2
Bx (T)
−1.5
−1
−0.5
0
0.5
1
1.5
Z Position (m)

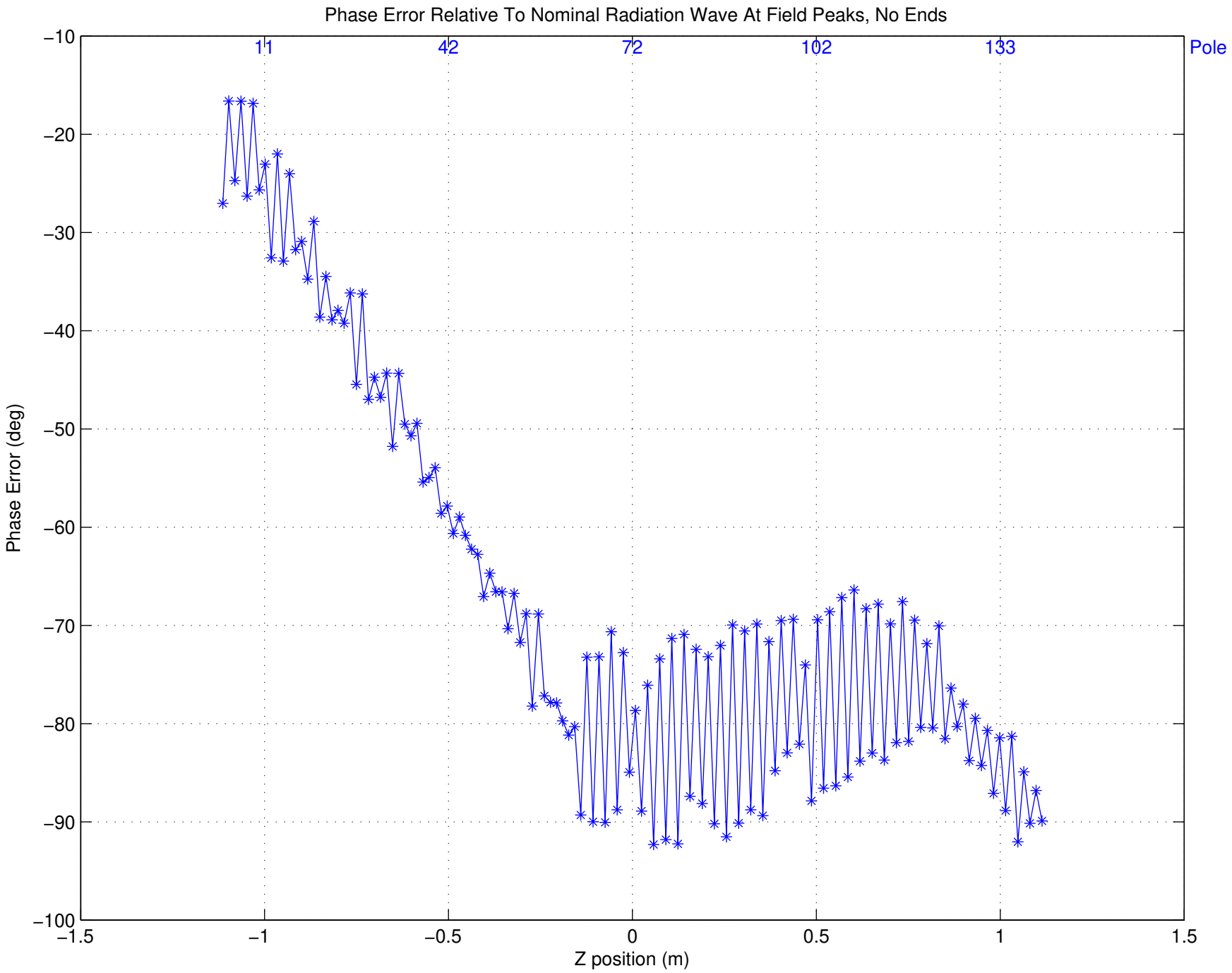

By vs Z
11
42
72
102
133
Pole
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
By (T)
−1.5
−1
−0.5
0
0.5
1
1.5
Z Position (m)


X Trajectory
x 10^-6
11
42
72
102
133
Pole
3
2
1
0
−1
−2
−3
X (m)
−1.5
−1
−0.5
0
0.5
1
1.5
Z position (m)


Y Trajectory
x 10^-6
11
42
72
102
133
Pole
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
Y (m)
−1.5
−1
−0.5
0
0.5
1
1.5
Z position (m)



Phase Error: Ave = −0.000000 deg, RMS = 11.769469 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
42
72
102
133
Pole
−10
−20
−30
−40
−50
−60
−70
−80
−90
−100
Phase Error (deg)
−1.5
−1
−0.5
0
0.5
1
1.5
Z position (m)