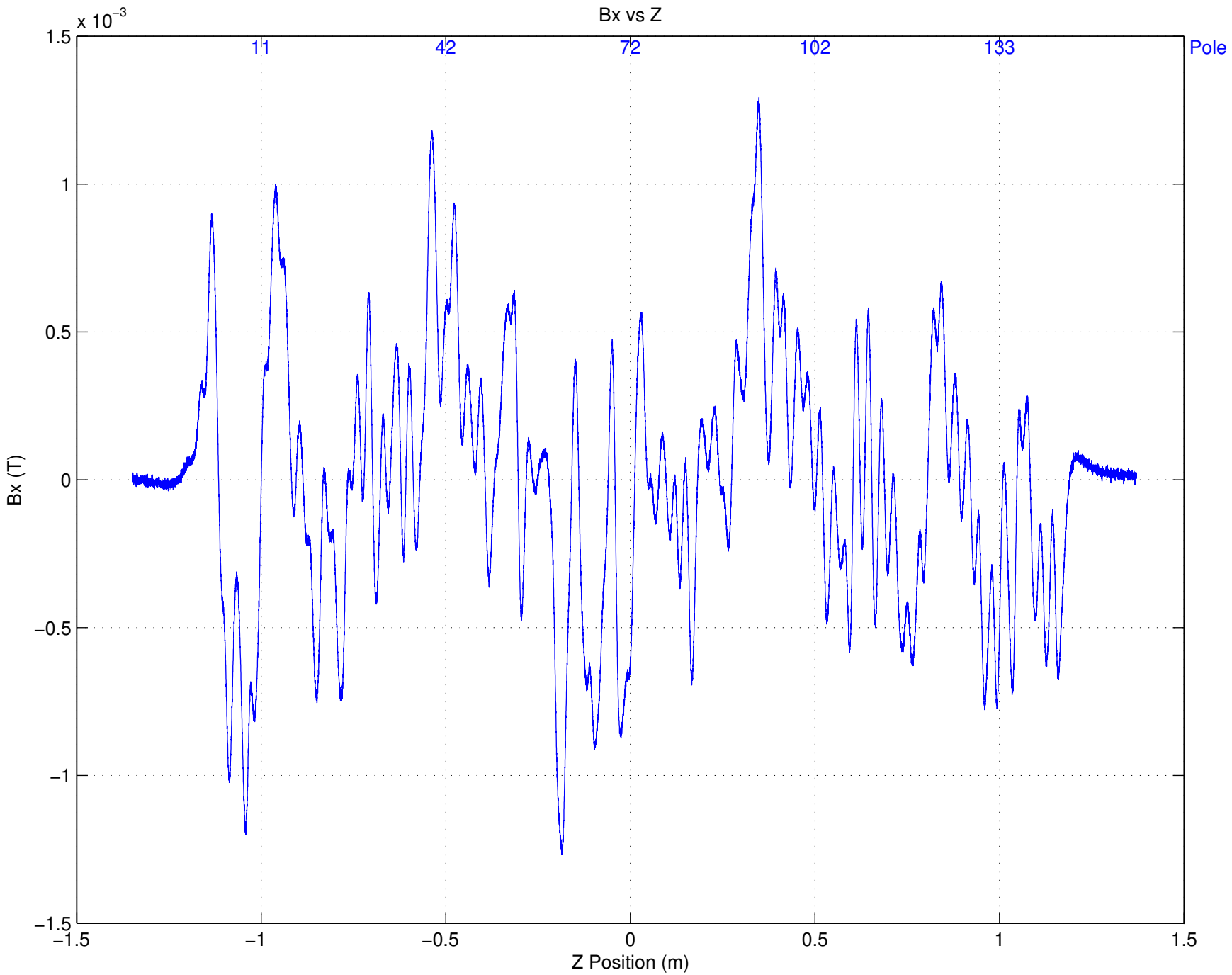
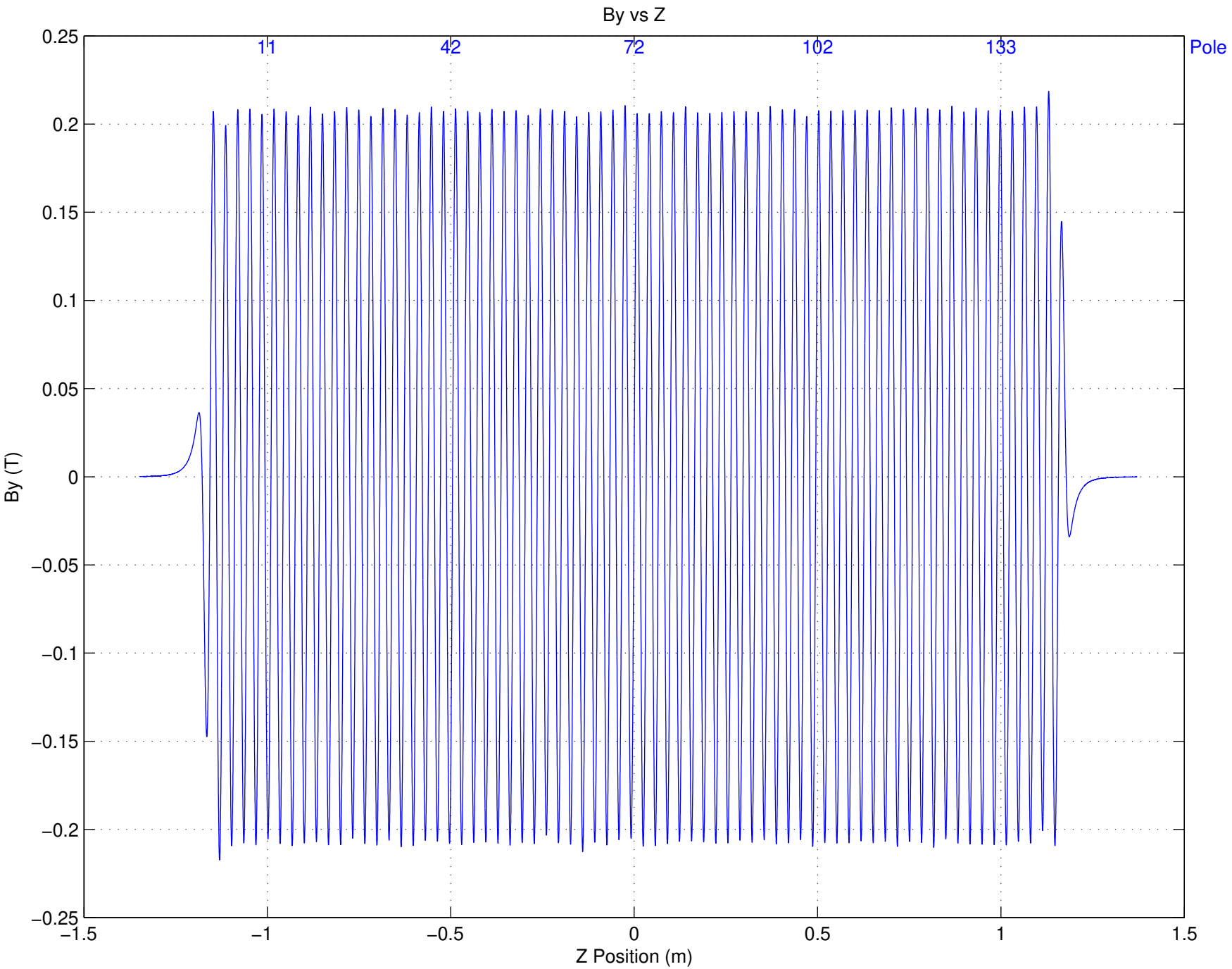
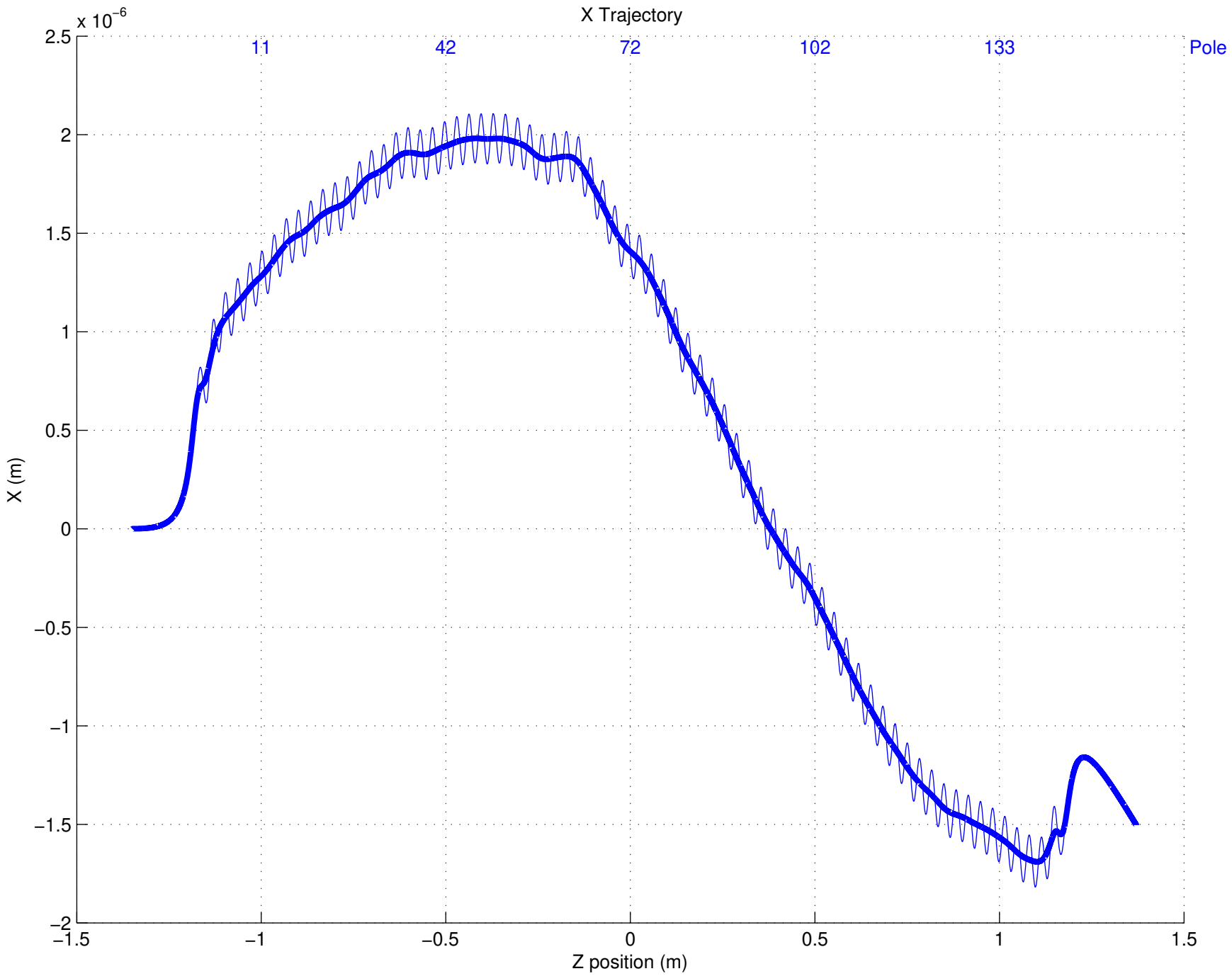
SLAC Magnetic Measurements

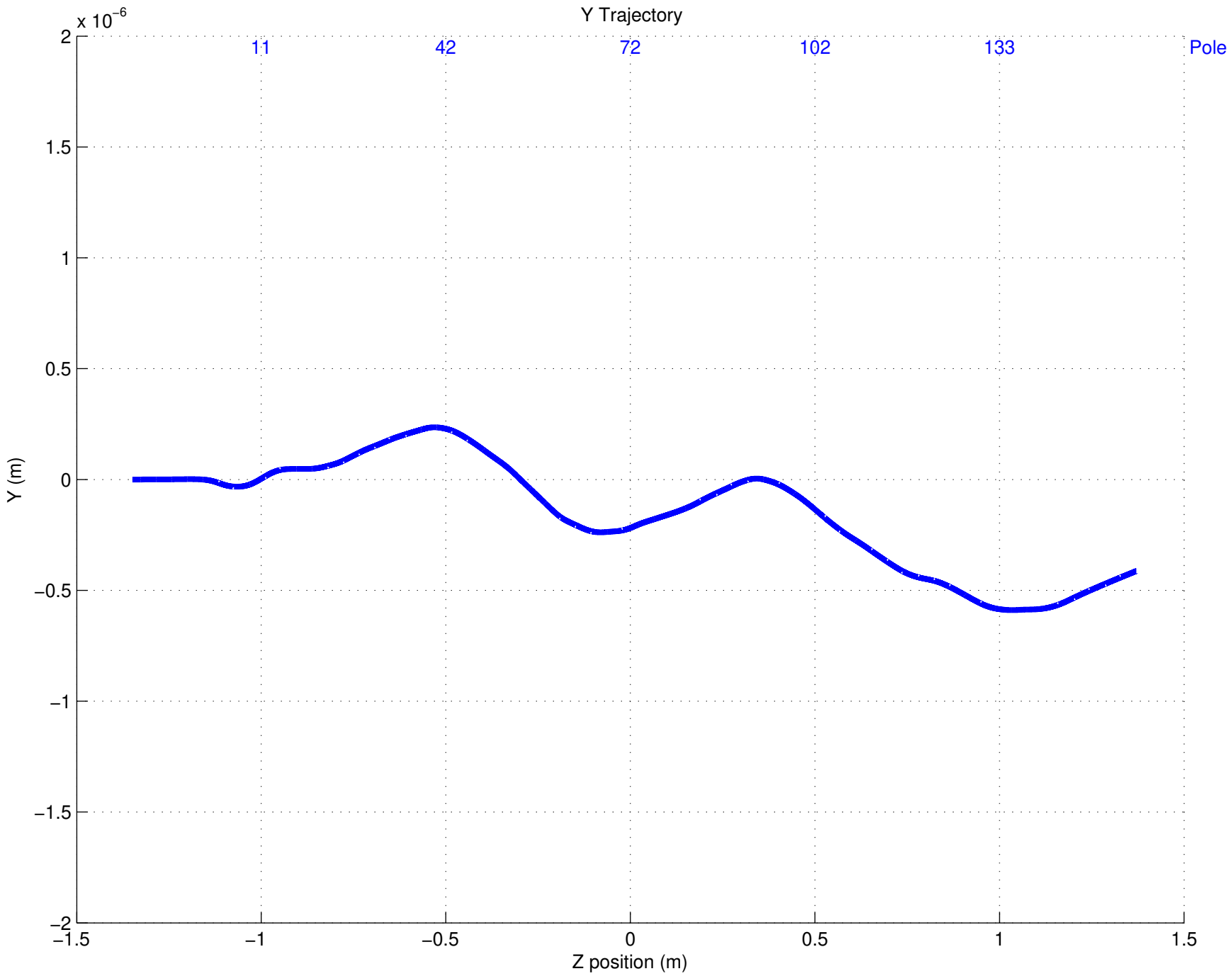
Planar Insertion Device Analysis

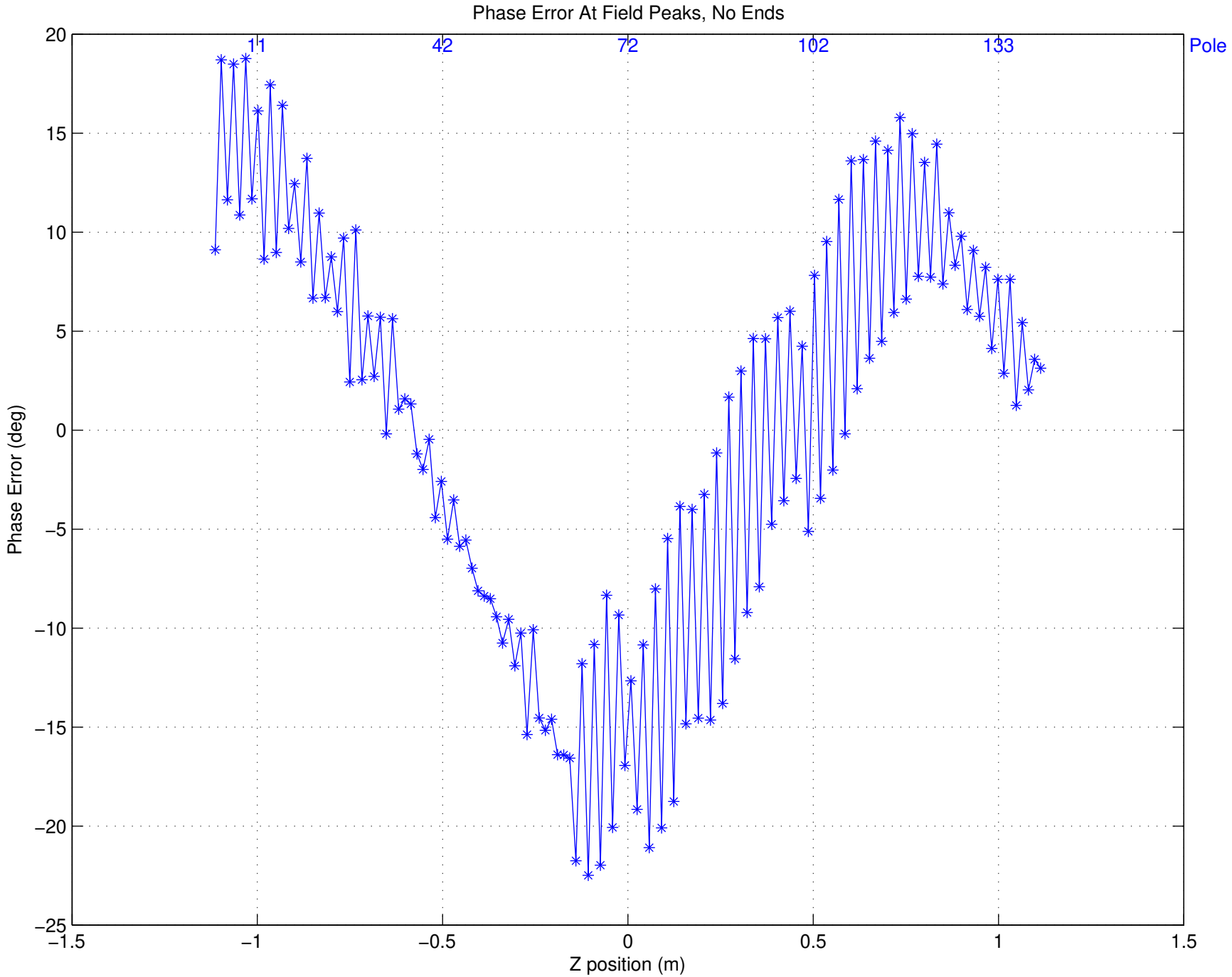
Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\A1−ANL\DATASET0001\Rough Tuning\Z Scans\Run 020\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =1
GAMMA =26686.34
NOM−LAMBDA−U =0.033
NOM−K−VALUE =0.64828
NOM−LAMBDA−R =2.8037e−011
NUM−POLES =144
NUM−END−POLES =4
CELL−LENGTH =2.376


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

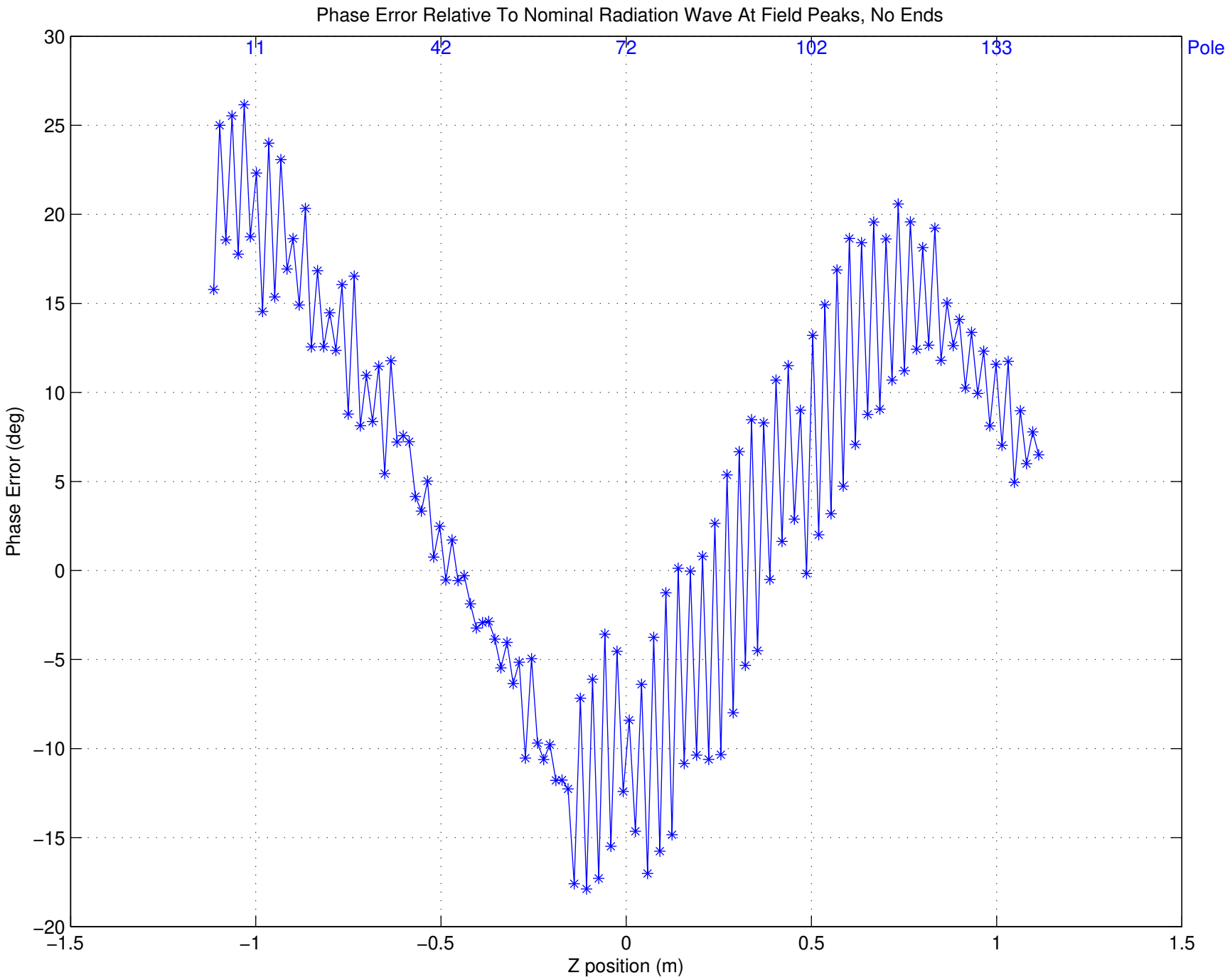

By vs Z
11
42
72
102
133
Pole
0.25
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.25
By (T)
−1.5
−1
−0.5
0
0.5
1
1.5
Z Position (m)


X Trajectory
x 10^-6
11
42
72
102
133
Pole
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
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 = 10.622589 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
42
72
102
133
Pole
30
25
20
15
10
5
0
−5
−10
−15
−20
Phase Error (deg)
−1.5
−1
−0.5
0
0.5
1
1.5
Z position (m)