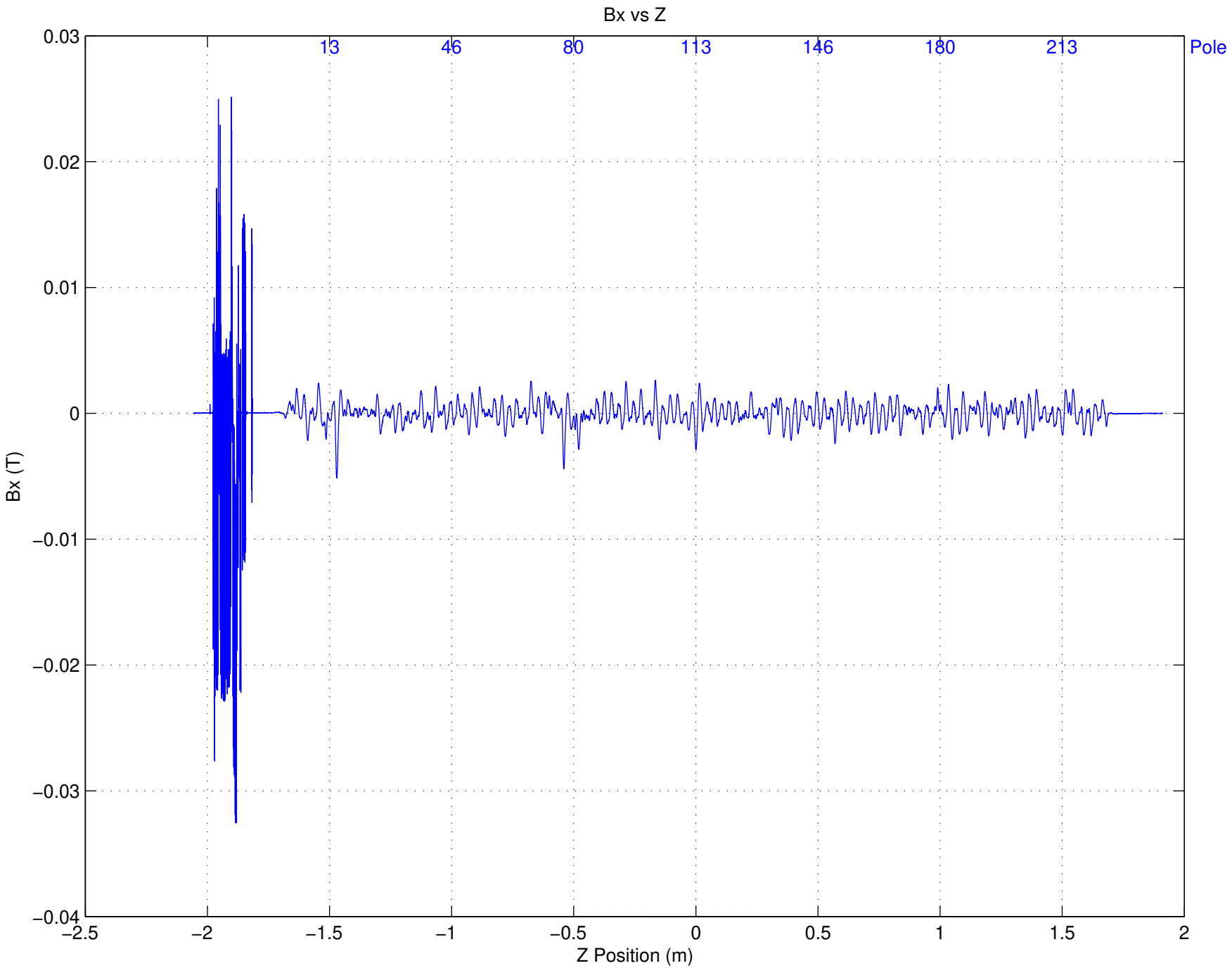
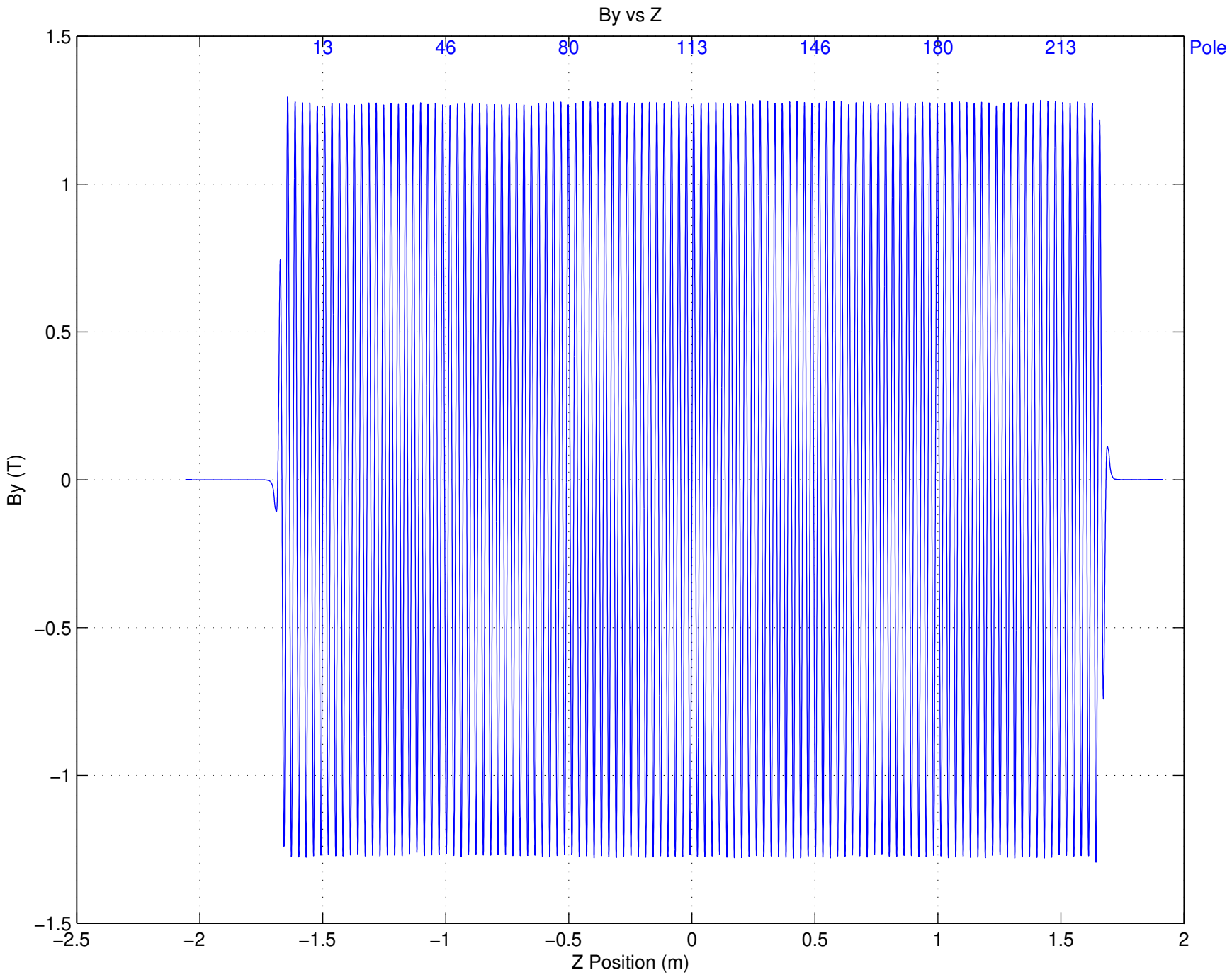
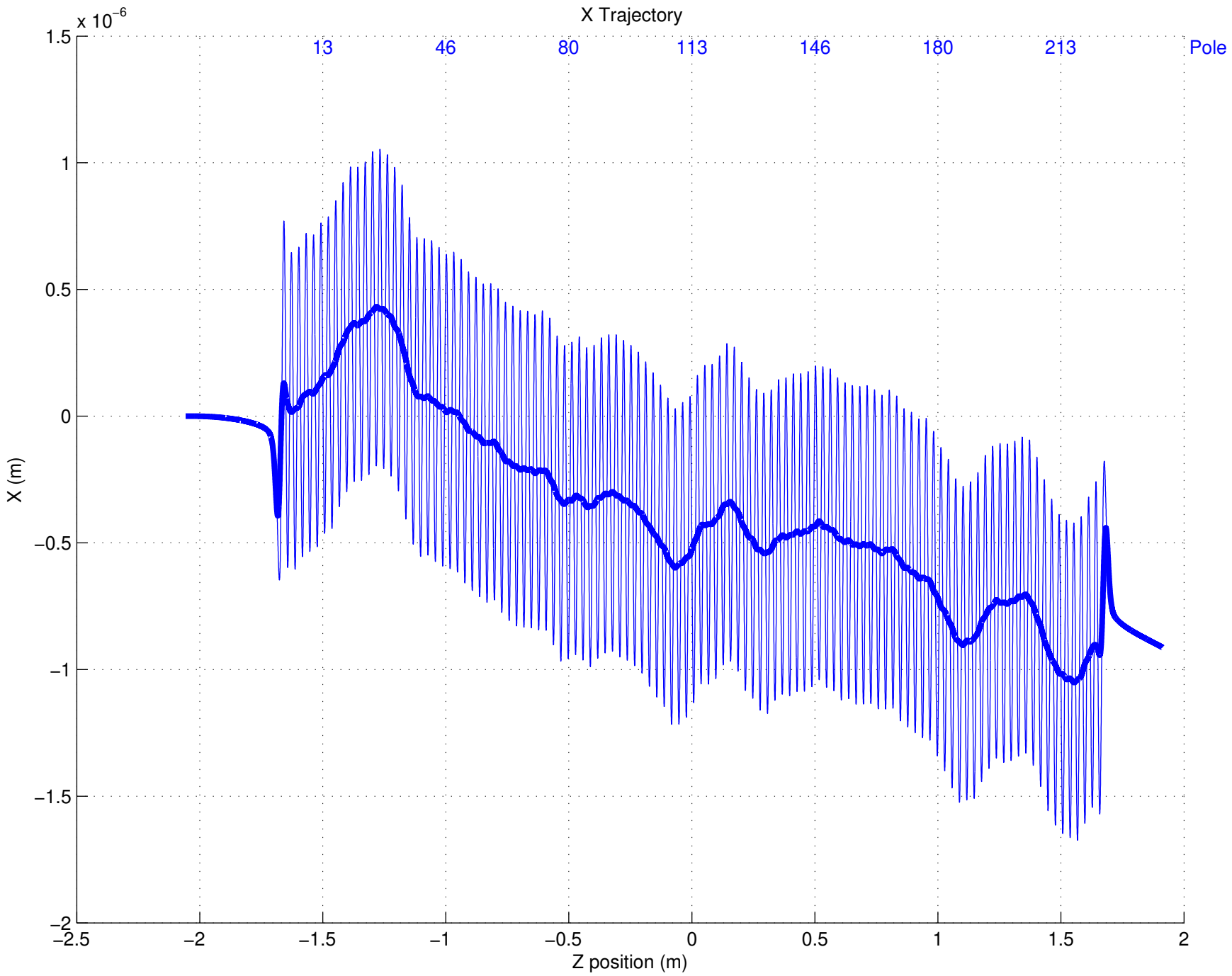
SLAC Magnetic Measurements

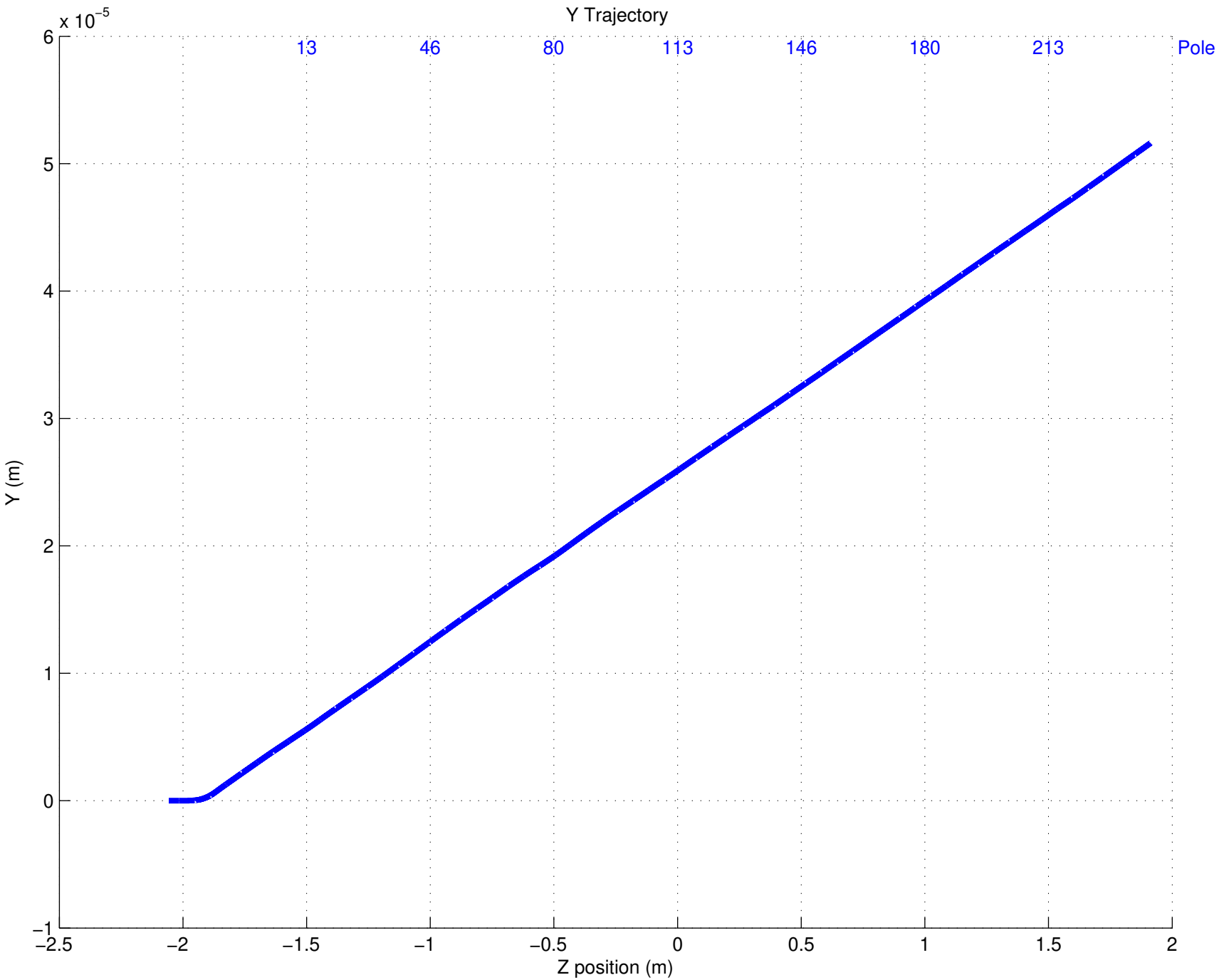
Planar Insertion Device Analysis

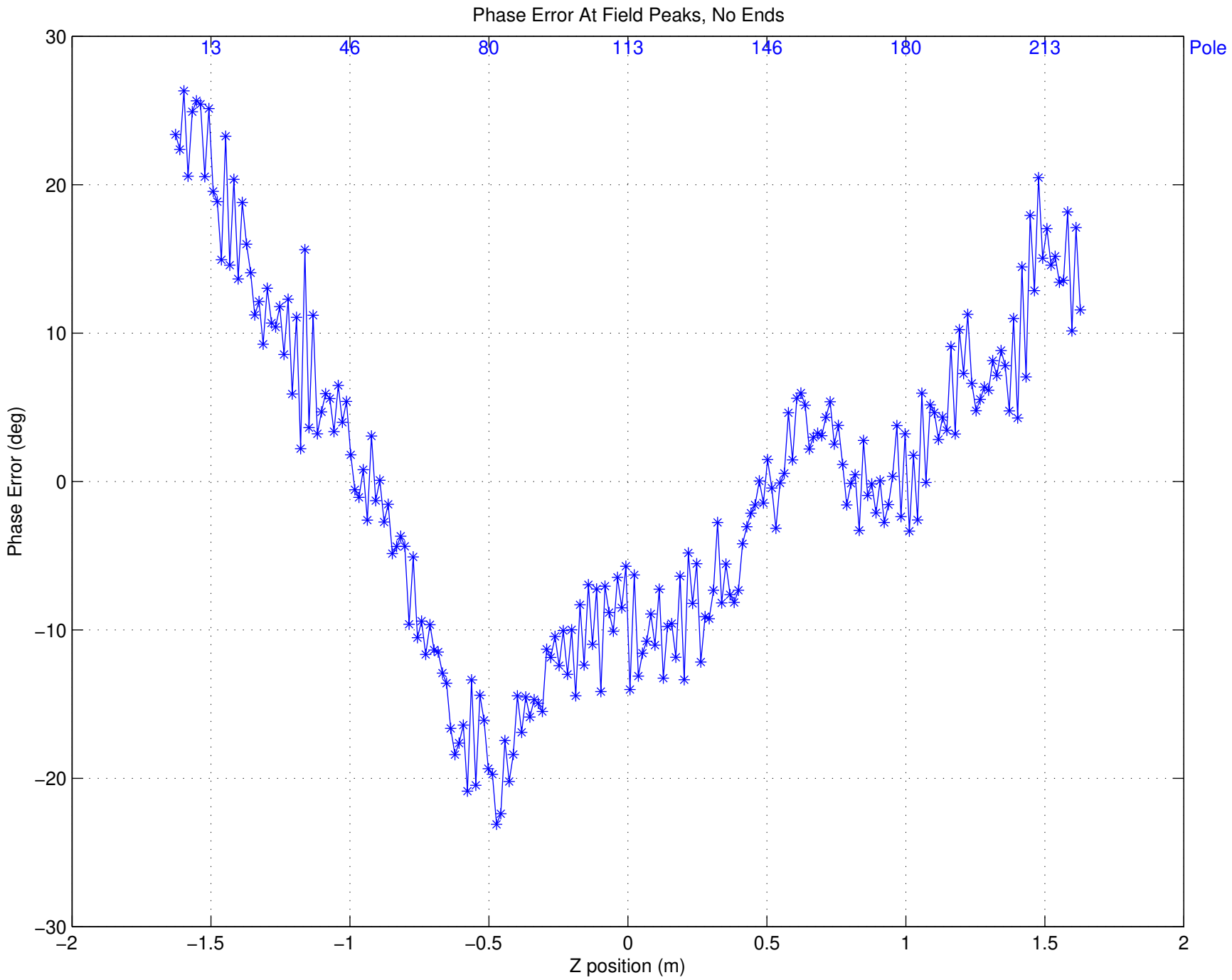
Parameters:
INPUT−FILE−DIR =C:\magdata\Lcls\Undulator\L143−112000−03\RMA0001\Rough Tuning\Z Scans\Run 036\
INPUT−FILE−NAME =bscanz−dat.001
INPUT−FILE−TYPE =SLAC−VXVYBXBYVSZ
CORR−REQUIRED =1
CORR−FILE =c:\Insertion Device Analysis\Earth Field Correction\earth−field−corr.dat
CORR−FILE−TYPE =CORR−BXBYVSZ
GAMMA =26688.61
NOM−LAMBDA−U =0.03
NOM−K−VALUE =3.4991
NOM−LAMBDA−R =1.5e−010
NUM−POLES =226
NUM−END−POLES =4
CELL−LENGTH =3.656


Bx vs Z
13
46
80
113
146
180
213
Pole
0.03
0.02
0.01
0
−0.01
−0.02
−0.03
−0.04
Bx (T)
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
Z Position (m)

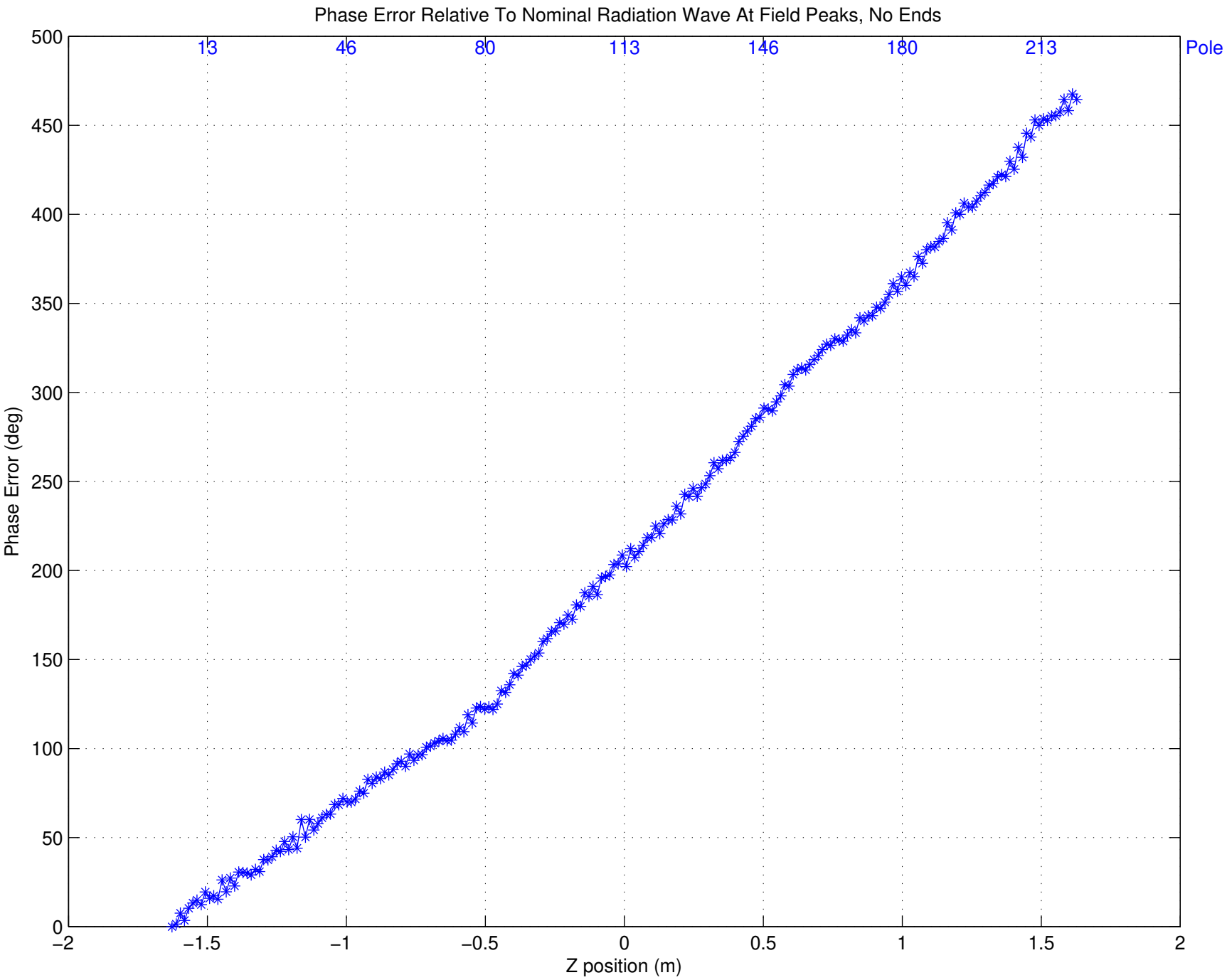

By vs Z
13
46
80
113
146
180
213
Pole
1.5
1
0.5
0
−0.5
−1
−1.5
By (T)
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
Z Position (m)


X Trajectory
x 10^-6
13
46
80
113
146
180
213
Pole
1.5
1
0.5
0
−0.5
−1
−1.5
−2
X (m)
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
Z position (m)


Y Trajectory
x 10^-5
6
5
4
3
2
1
0
−1
Y (m)
13
46
80
113
146
180
213
Pole
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
Z position (m)



Phase Error: Ave = 0.000000 deg, RMS = 11.340181 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
13
46
80
113
146
180
213
Pole
500
450
400
350
300
250
200
150
100
50
0
Phase Error (deg)
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
Z position (m)