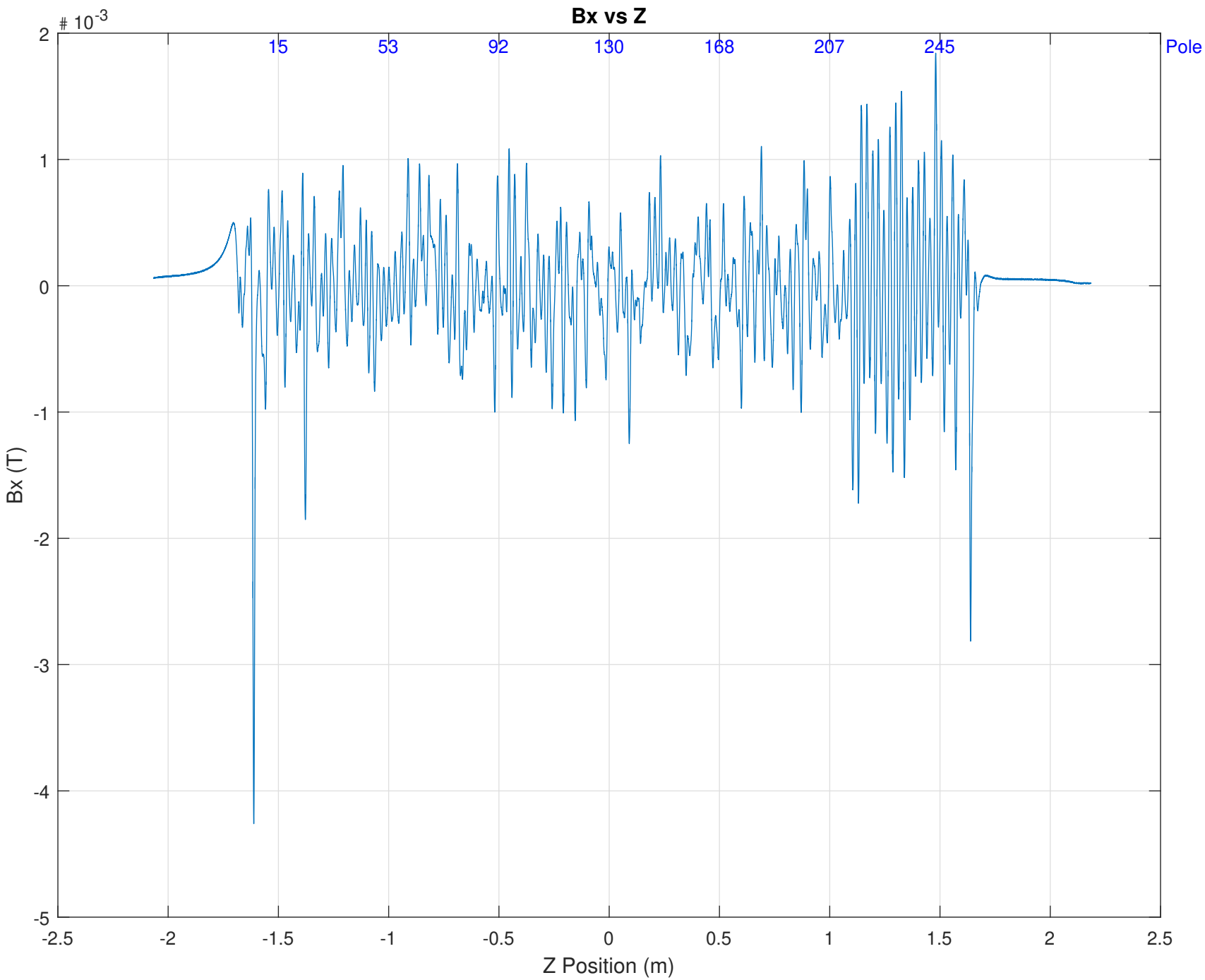
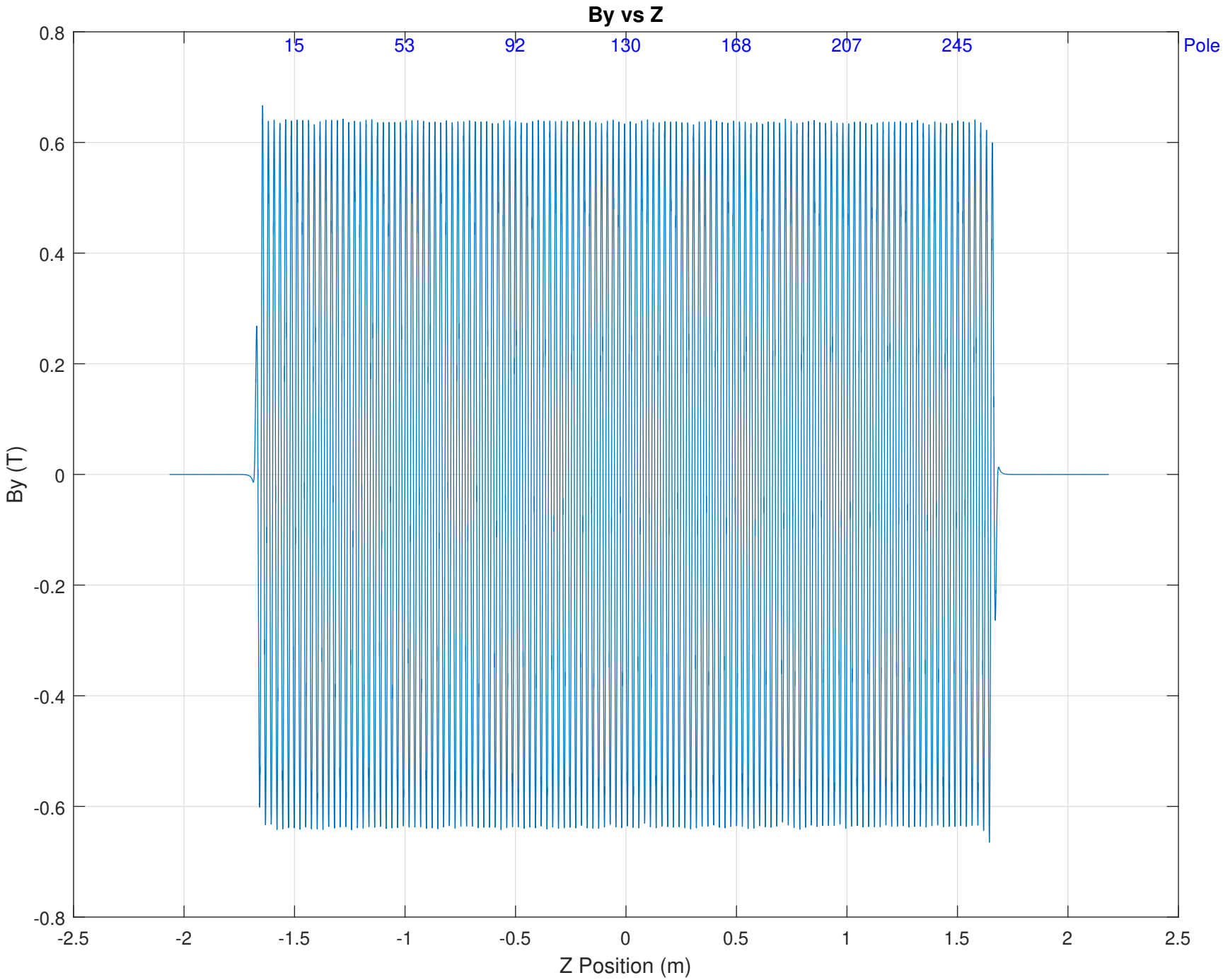
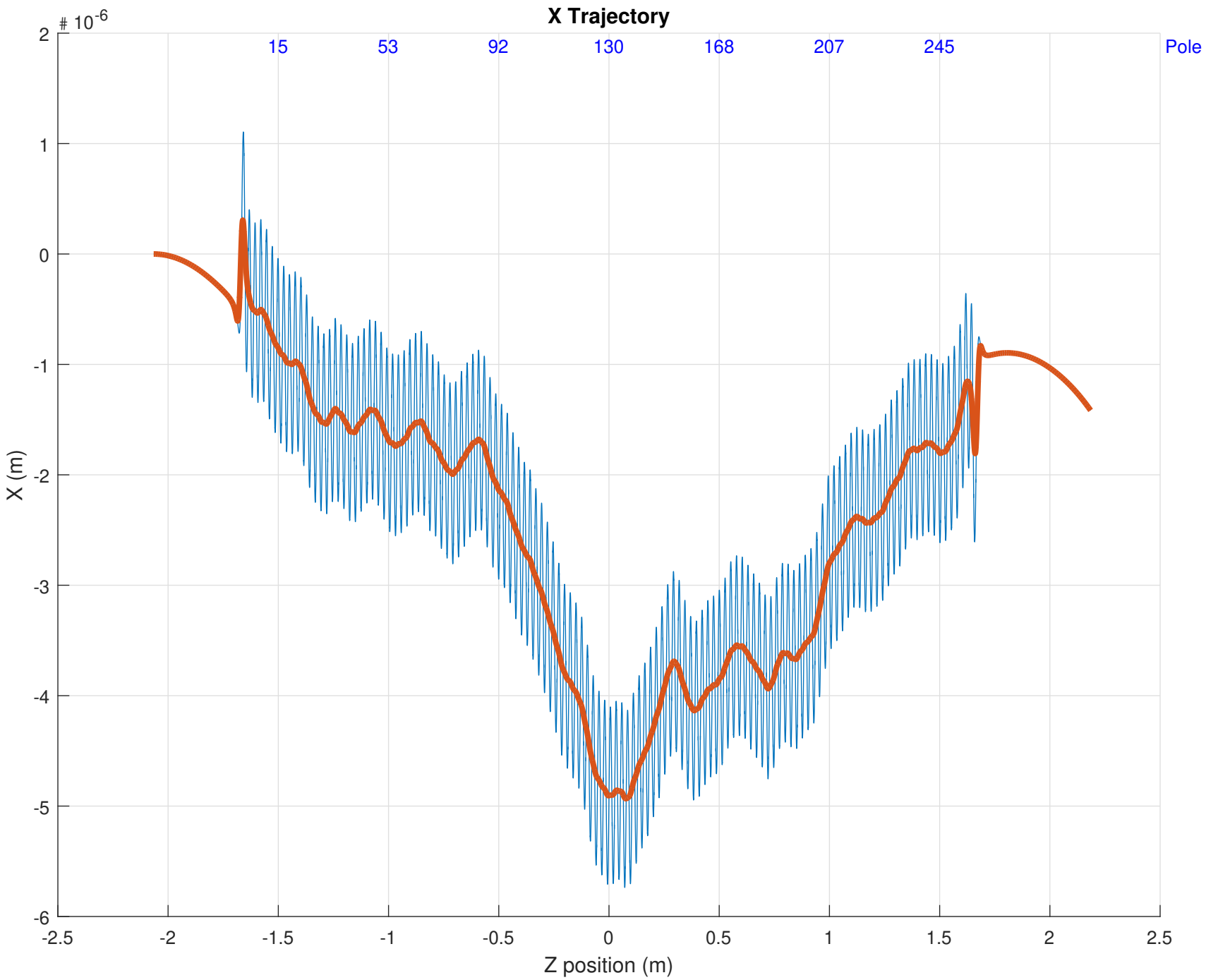
SLAC Magnetic Measurements

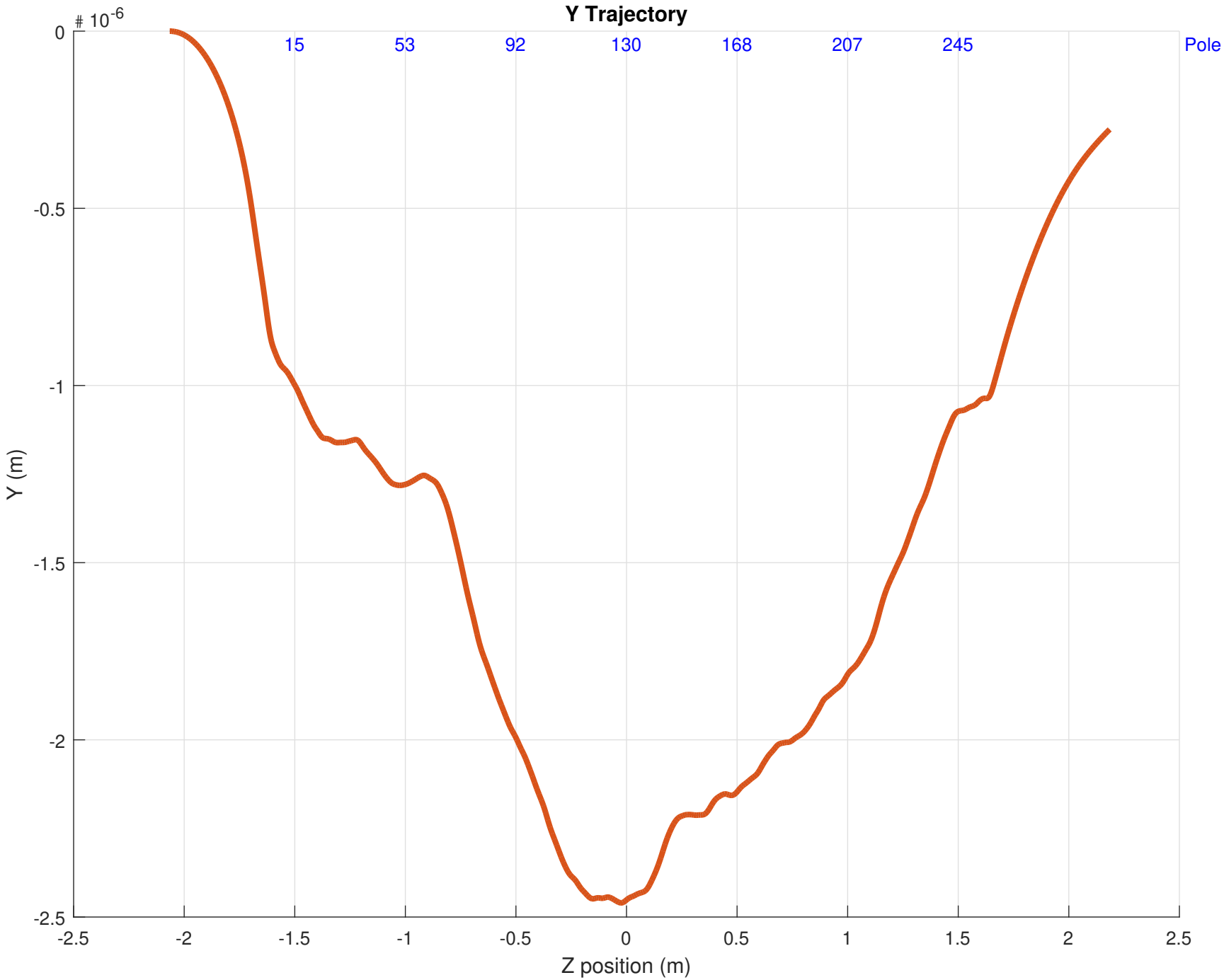
Planar Insertion Device Analysis

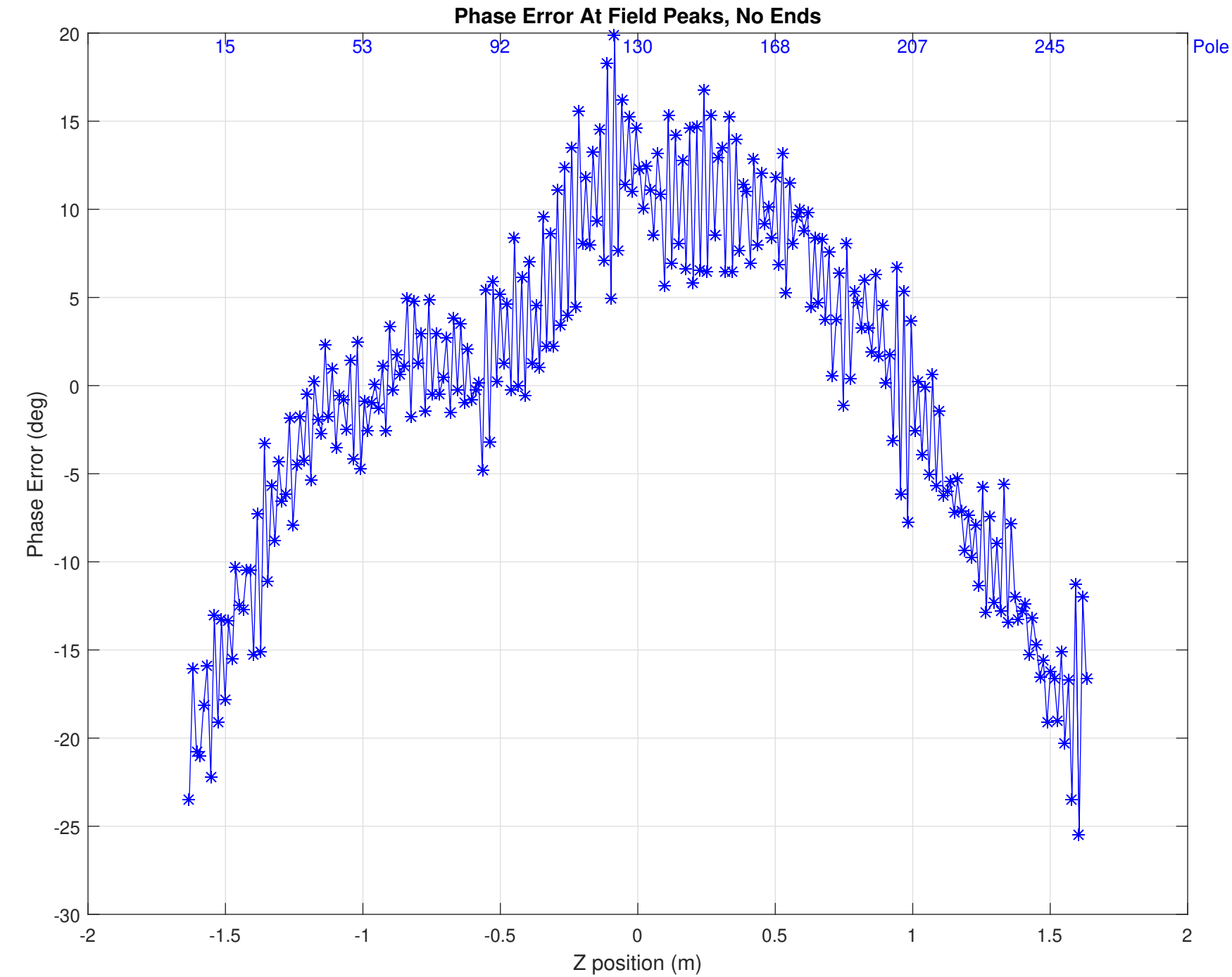
Parameters:
INPUT-FILE-DIR =s:\magdata\LCLS2\Undulator\HGVPU\DATASET0001\Fine Tuning\Z Scans\Run 003\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =1
GAMMA =7828
NOM-LAMBDA-U =0.026
NOM-K-VALUE =3.5
NOM-LAMBDA-R =1.5116e-09
NUM-POLES =260
NUM-END-POLES =4
CELL-LENGTH =3.656


Bx vs Z
# 10^-3
15
53
92
130
168
207
245
Pole
2
1
0
-1
-2
-3
-4
-5
Bx (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)

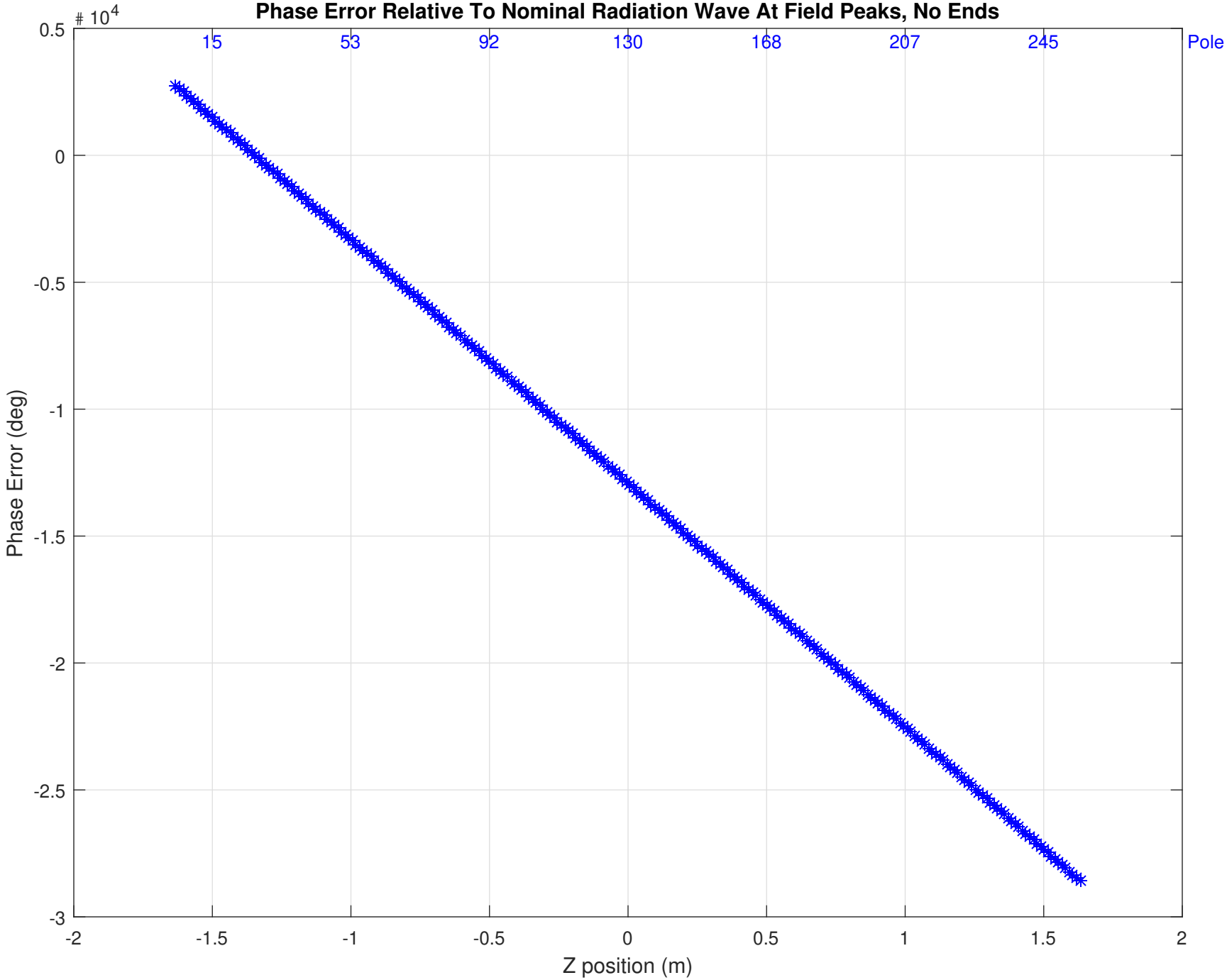

By vs Z
15
53
92
130
168
207
245
Pole
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
By (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)


X Trajectory
# 10^-6
15
53
92
130
168
207
245
Pole
2
1
0
-1
-2
-3
-4
-5
-6
X (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)


Y Trajectory
# 10^-6
0
-0.5
-1
-1.5
-2
-2.5
15
53
92
130
168
207
245
Pole
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)




Phase Error: Ave = 0.000000 deg, RMS = 9.709250 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
# 10^4
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
Phase Error (deg)
15
53
92
130
168
207
245
Pole
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)