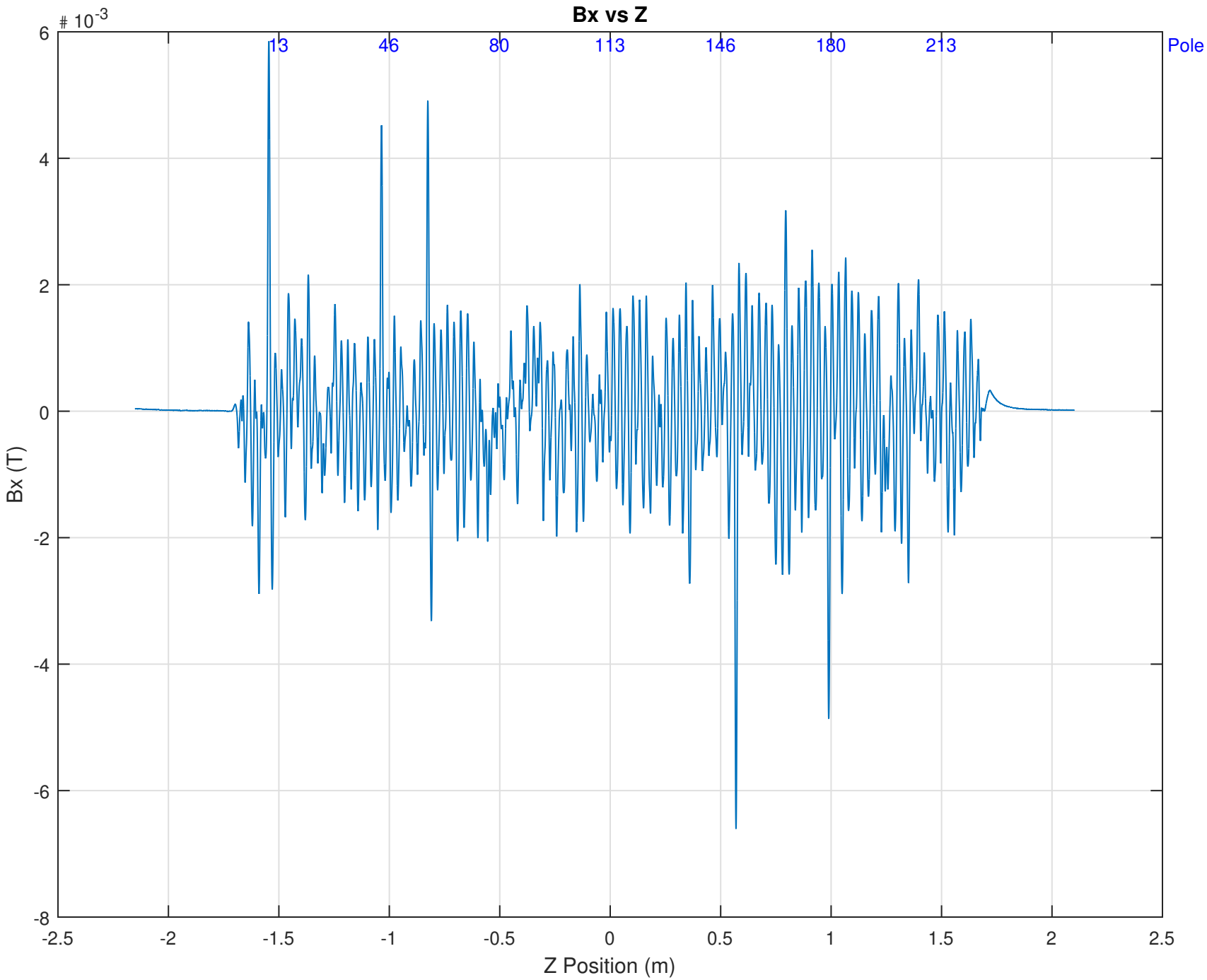
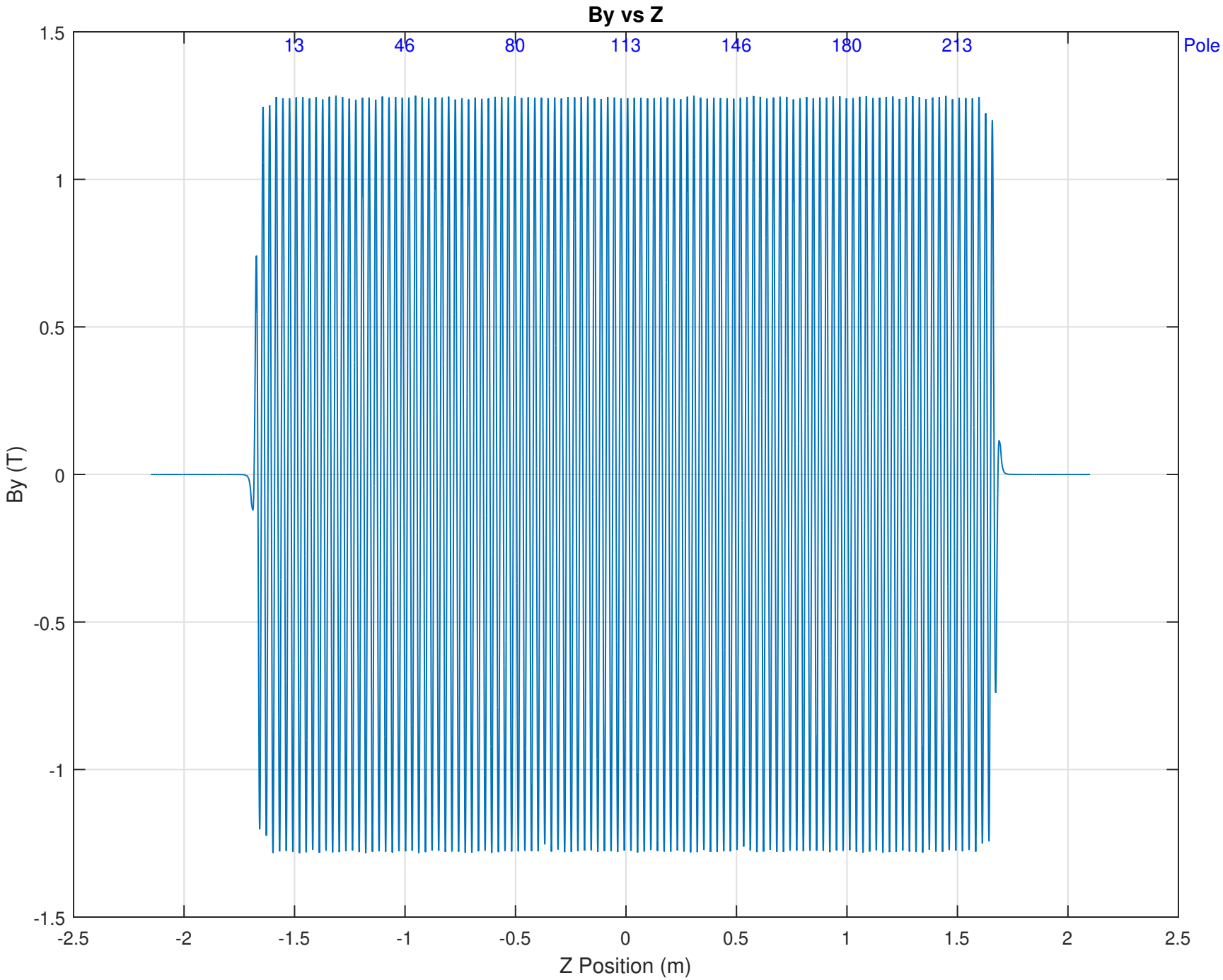
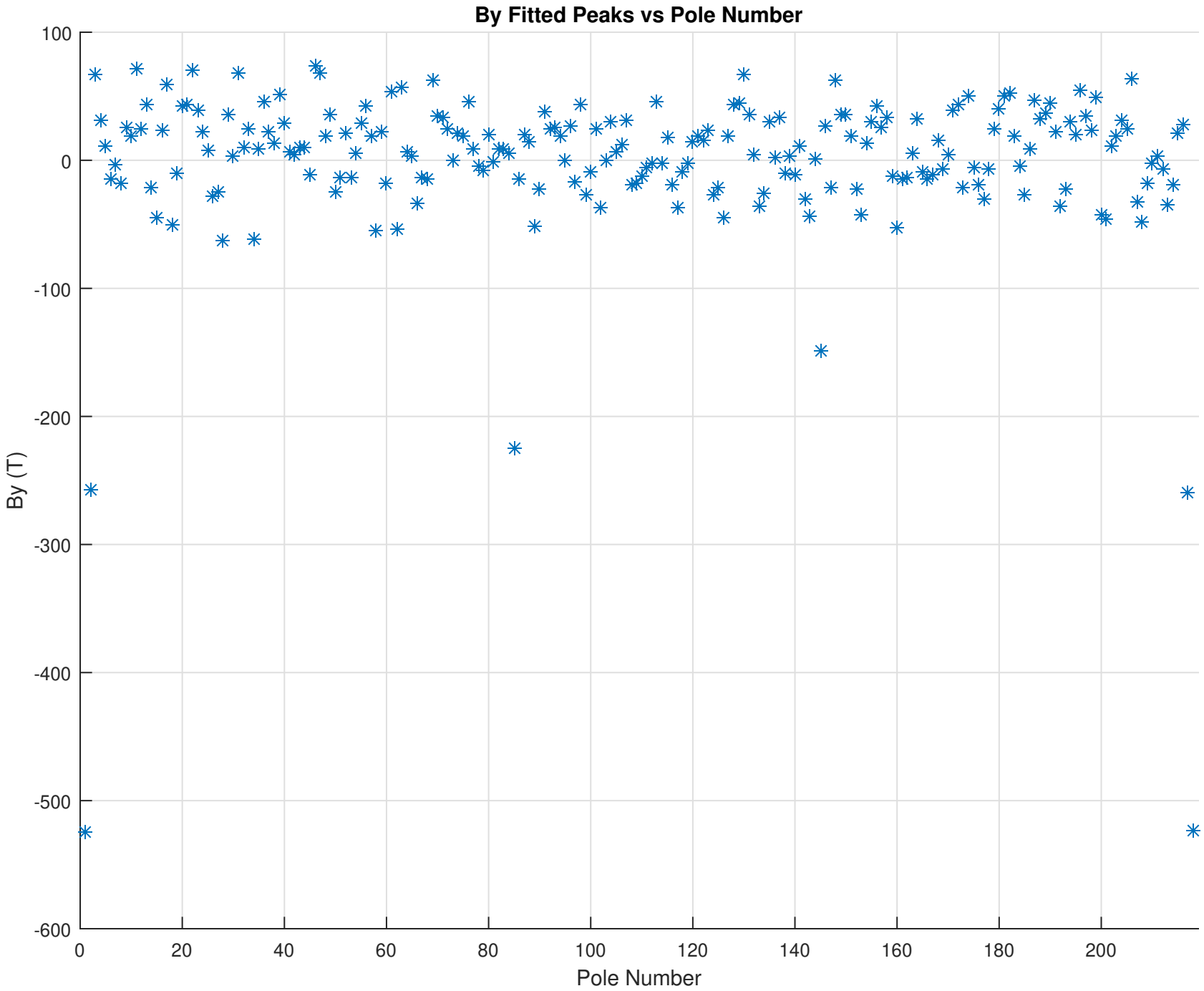
SLAC Magnetic Measurements

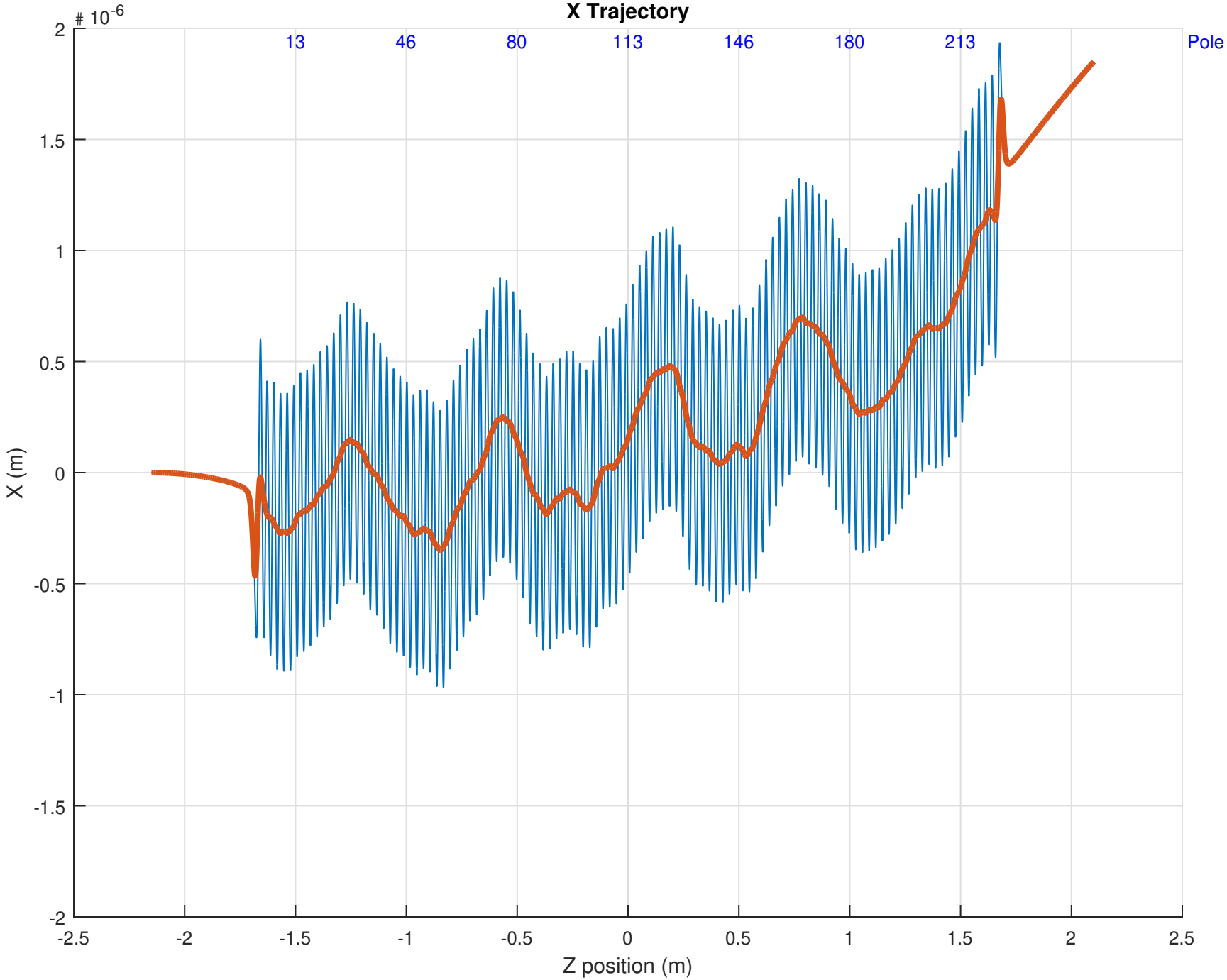
Planar Insertion Device Analysis

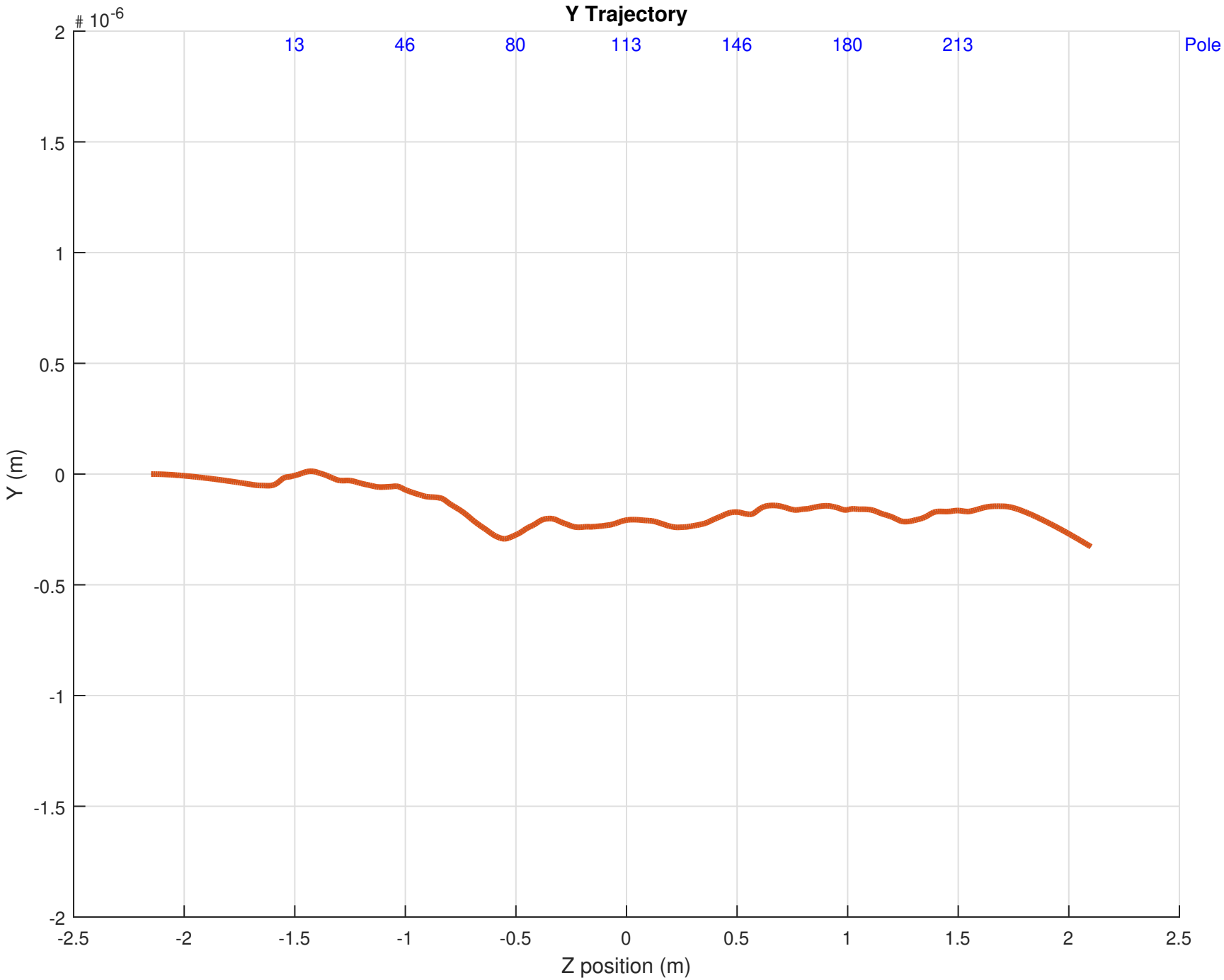
Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS\Undulator\L143-112000-13\DATASET0049\Fine Tuning\Z Scans\Run 022\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =1
GAMMA =26689
NOM-LAMBDA-U =0.03
NOM-K-VALUE =3.4991
NOM-LAMBDA-R =1.4998e-10
NUM-POLES =226
NUM-END-POLES =4
CELL-LENGTH =3.656

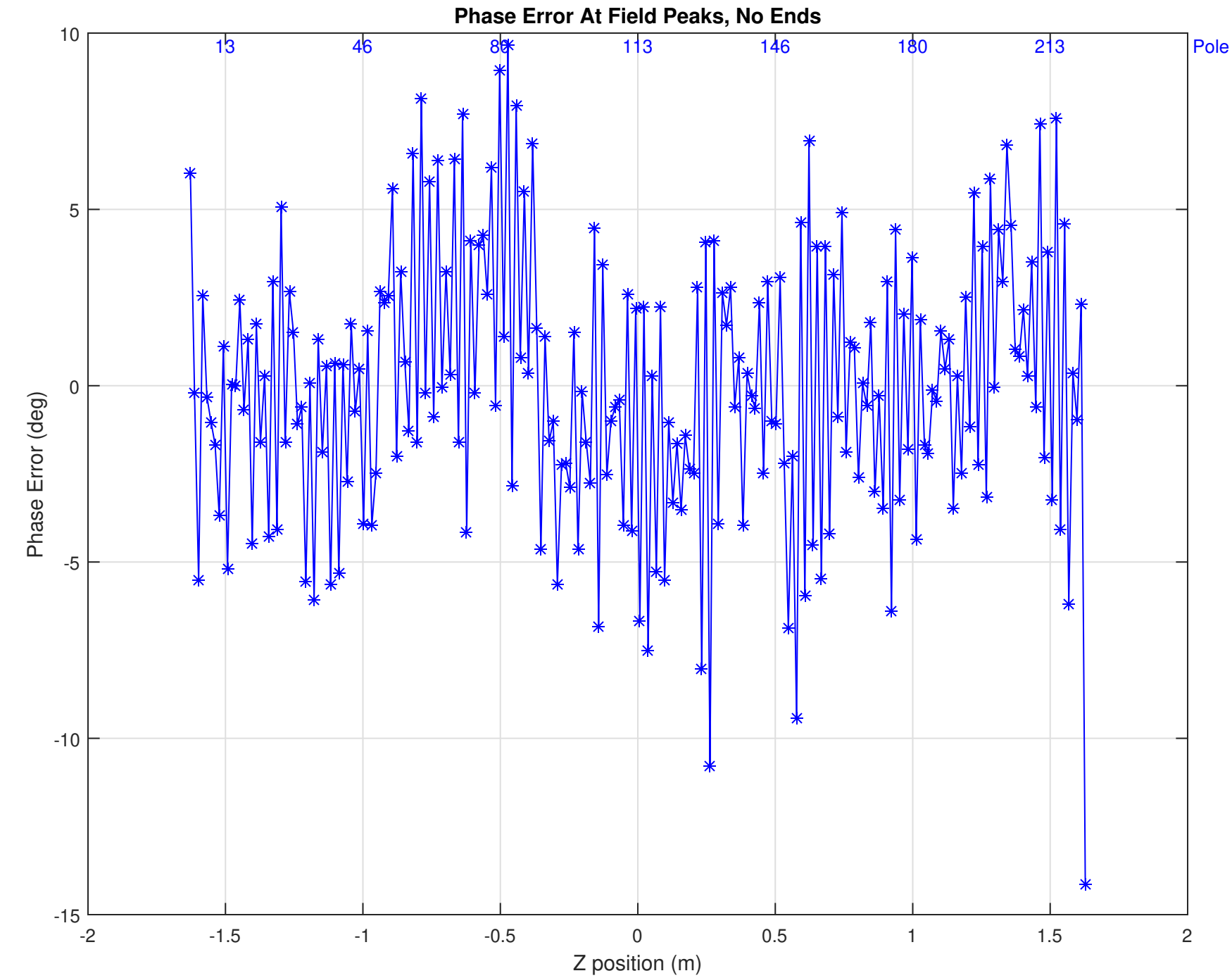

Bx vs Z
10-3
6
4
2
0
-2
-4
-6
-8
13
46
80
113
146
180
213
Pole
Bx (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)


By vs Z
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
2.5
Z Position (m)

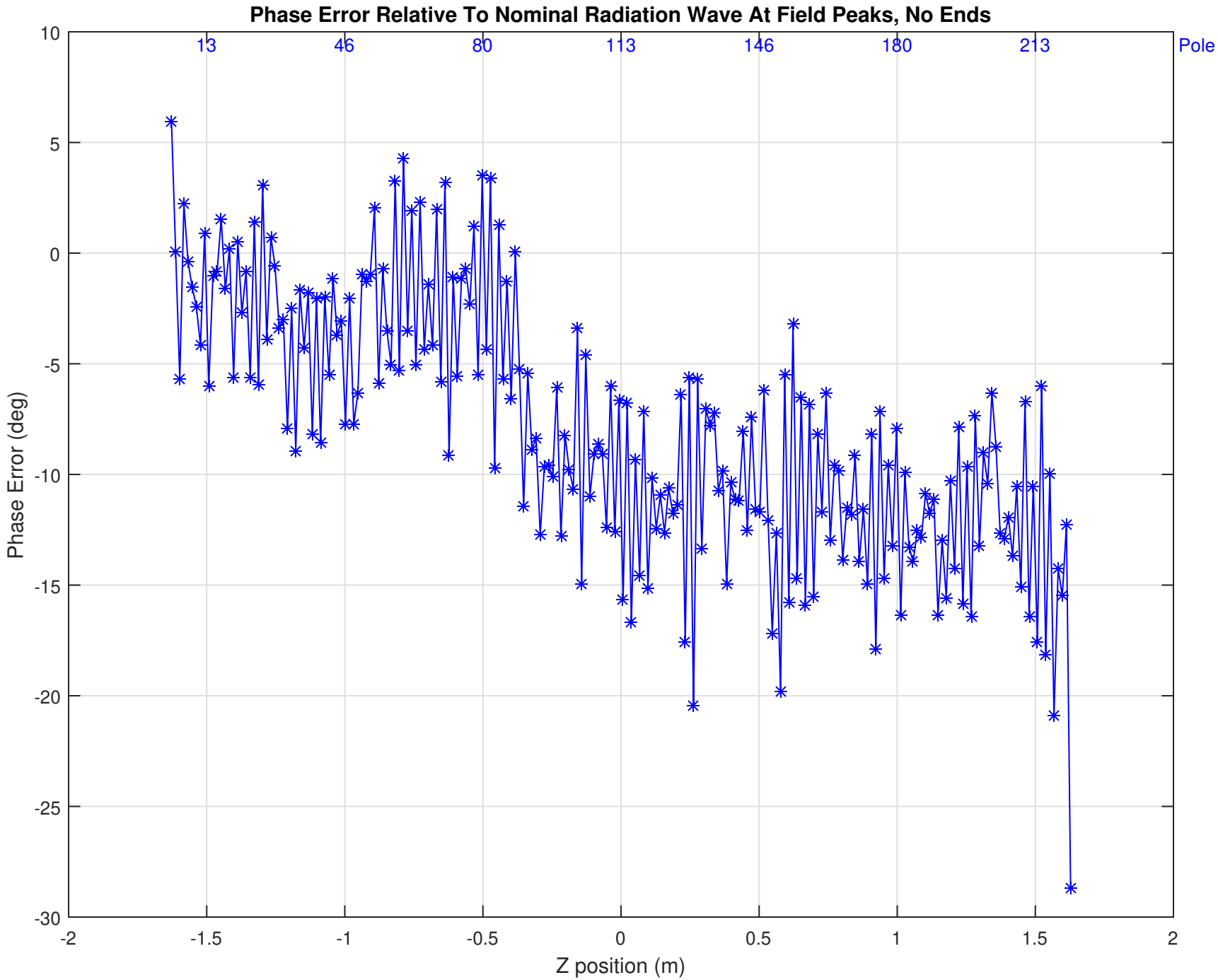

By Fitted Peaks vs Pole Number
100
0
-100
-200
-300
-400
-500
-600
By (T)
0
20
40
60
80
100
120
140
160
180
200
Pole Number


X Trajectory
10^-6
13
46
80
113
146
180
213
Pole
2
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
2.5
Z position (m)


Y Trajectory
10^-6
13
46
80
113
146
180
213
Pole
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
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 = 3.840520 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
13
46
80
113
146
180
213
Pole
10
5
0
-5
-10
-15
-20
-25
-30
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)