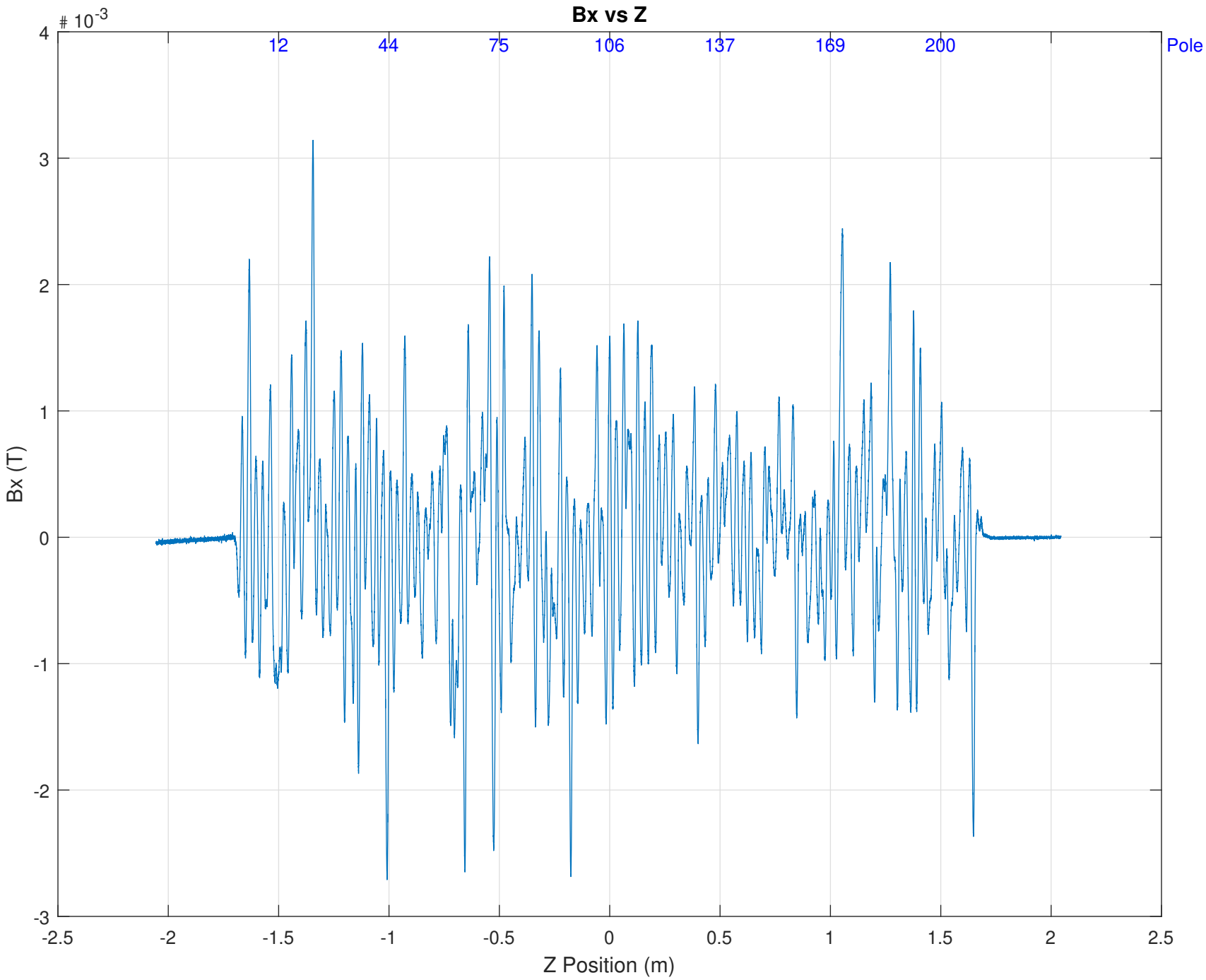
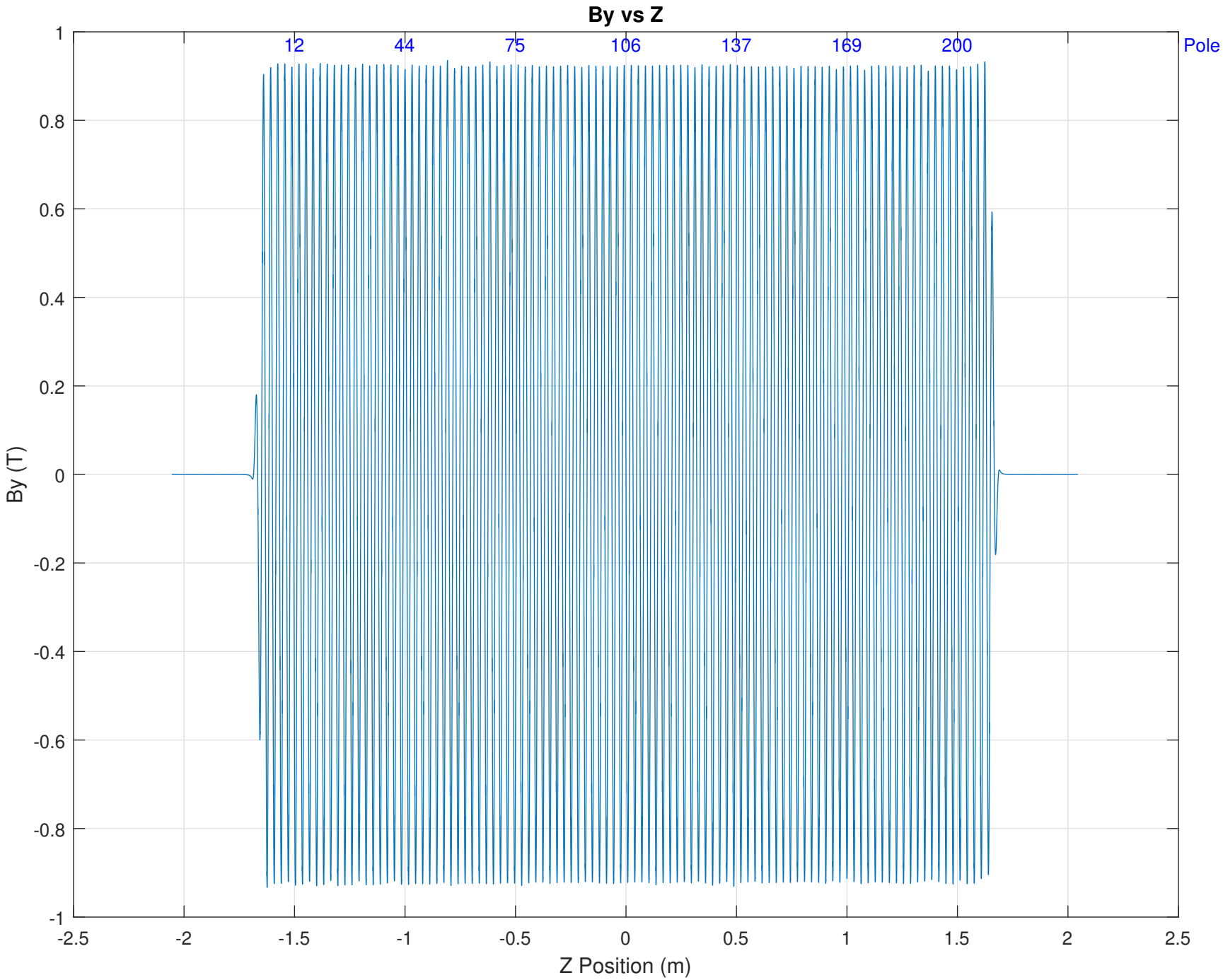
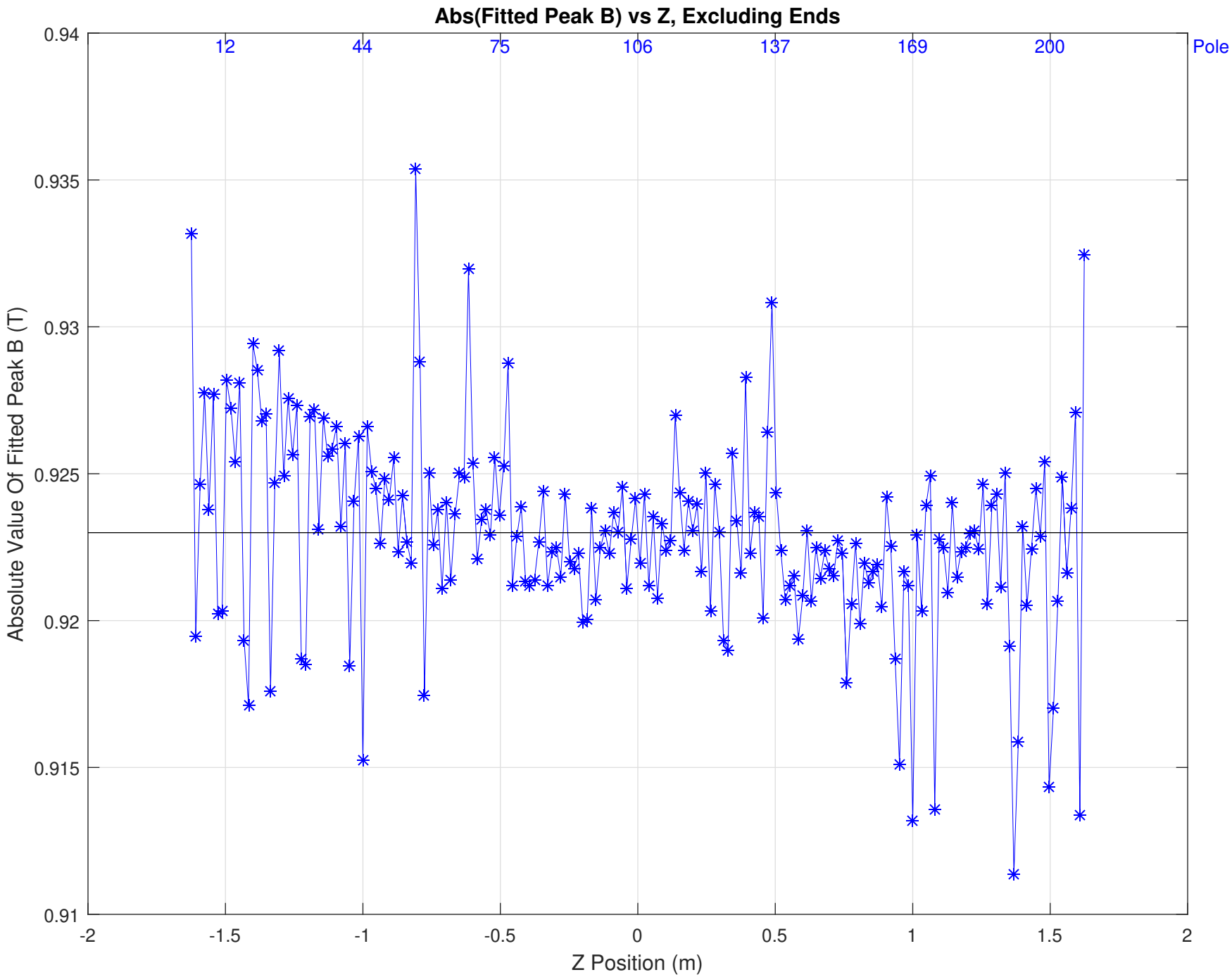
SLAC Magnetic Measurements

Planar Insertion Device Analysis

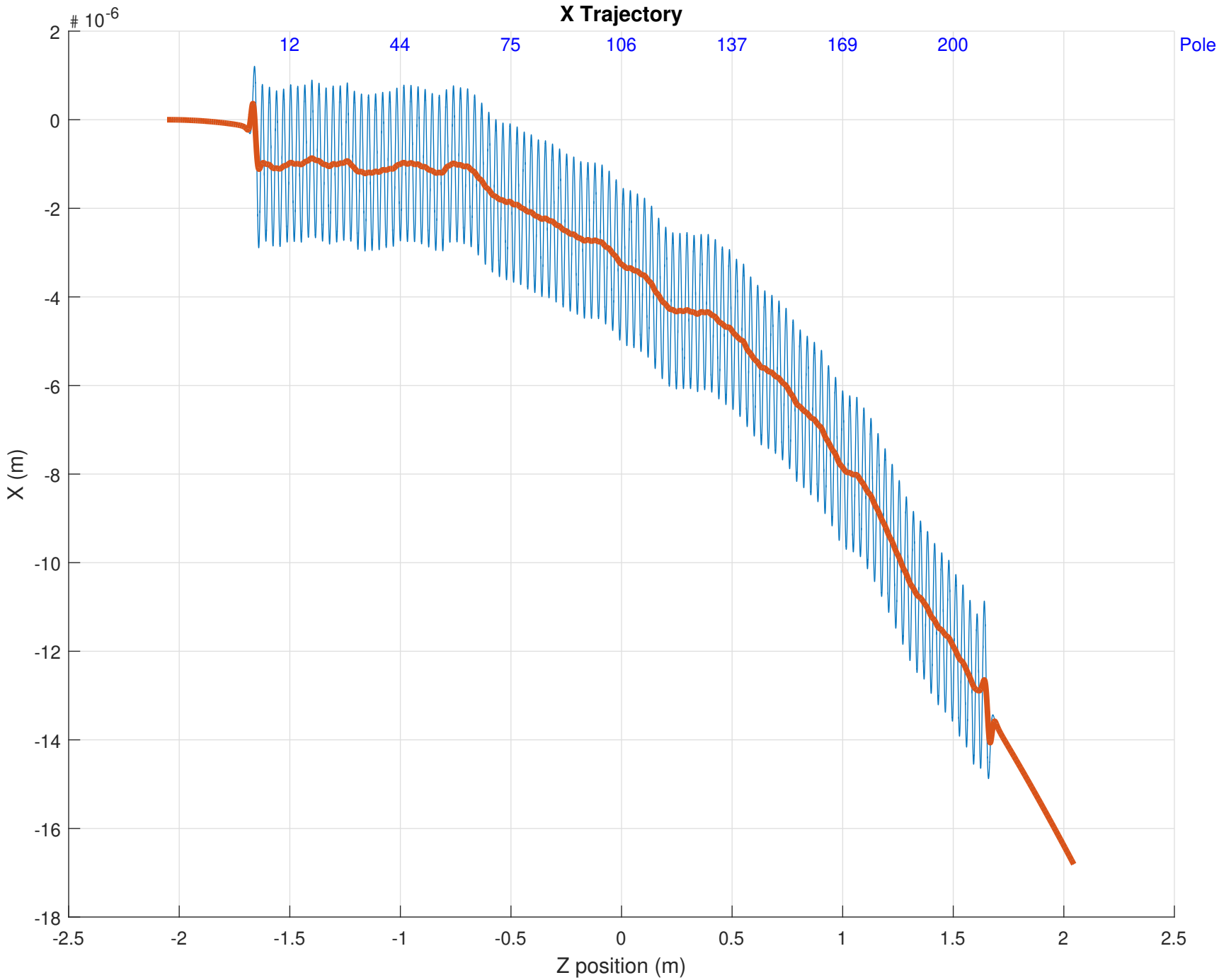
Parameters:
INPUT-FILE-DIR =C:\magdata\LCLS\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 003\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =1
GAMMA =7827.79
NOM-LAMBDA-U =0.032
NOM-K-VALUE =2.7
NOM-LAMBDA-R =1.2129e-09
NUM-POLES =212
NUM-END-POLES =4
CELL-LENGTH =3.656

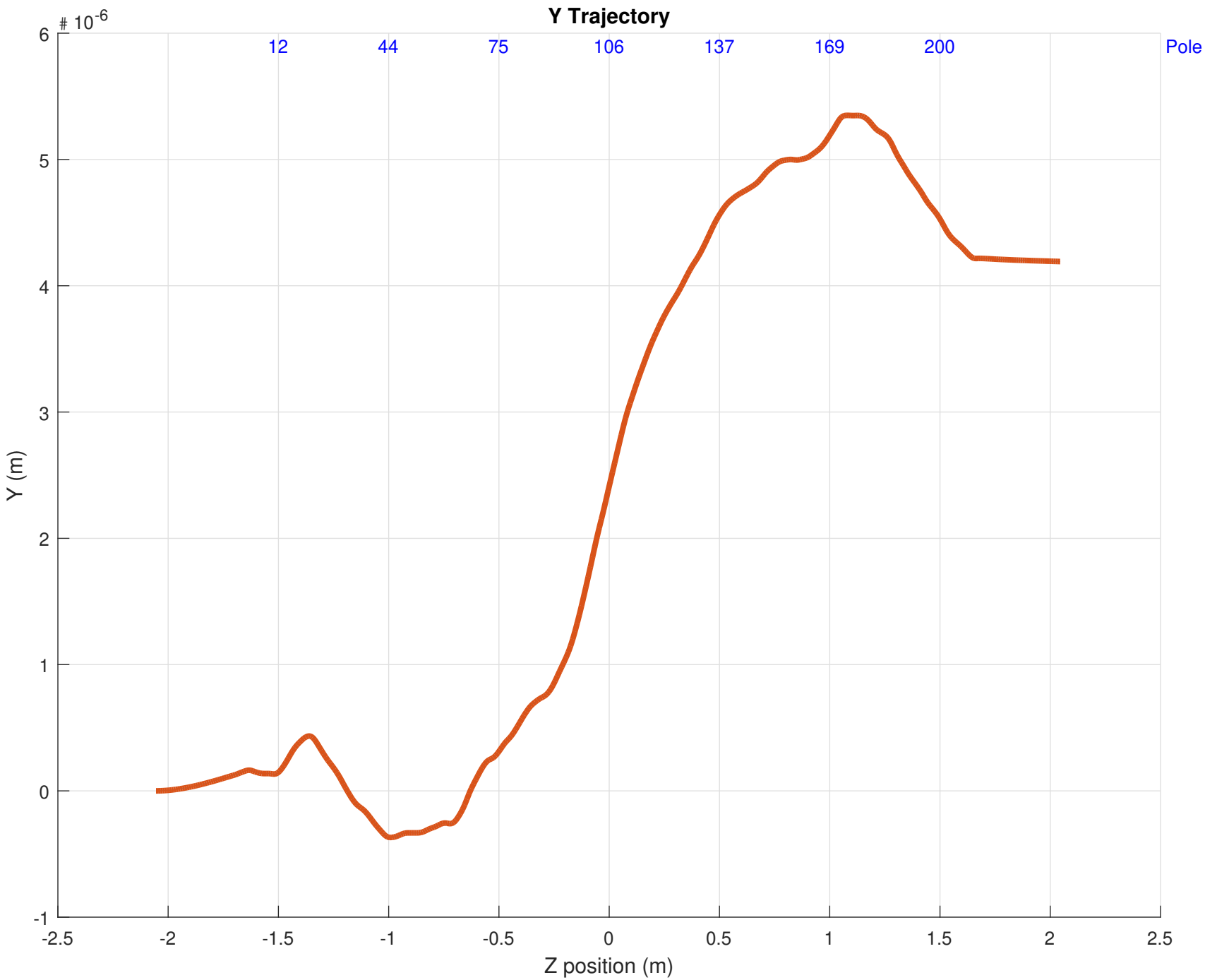

Bx vs Z
10^-3
4
3
2
1
0
-1
-2
-3
12
44
75
106
137
169
200
Pole
Bx (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)

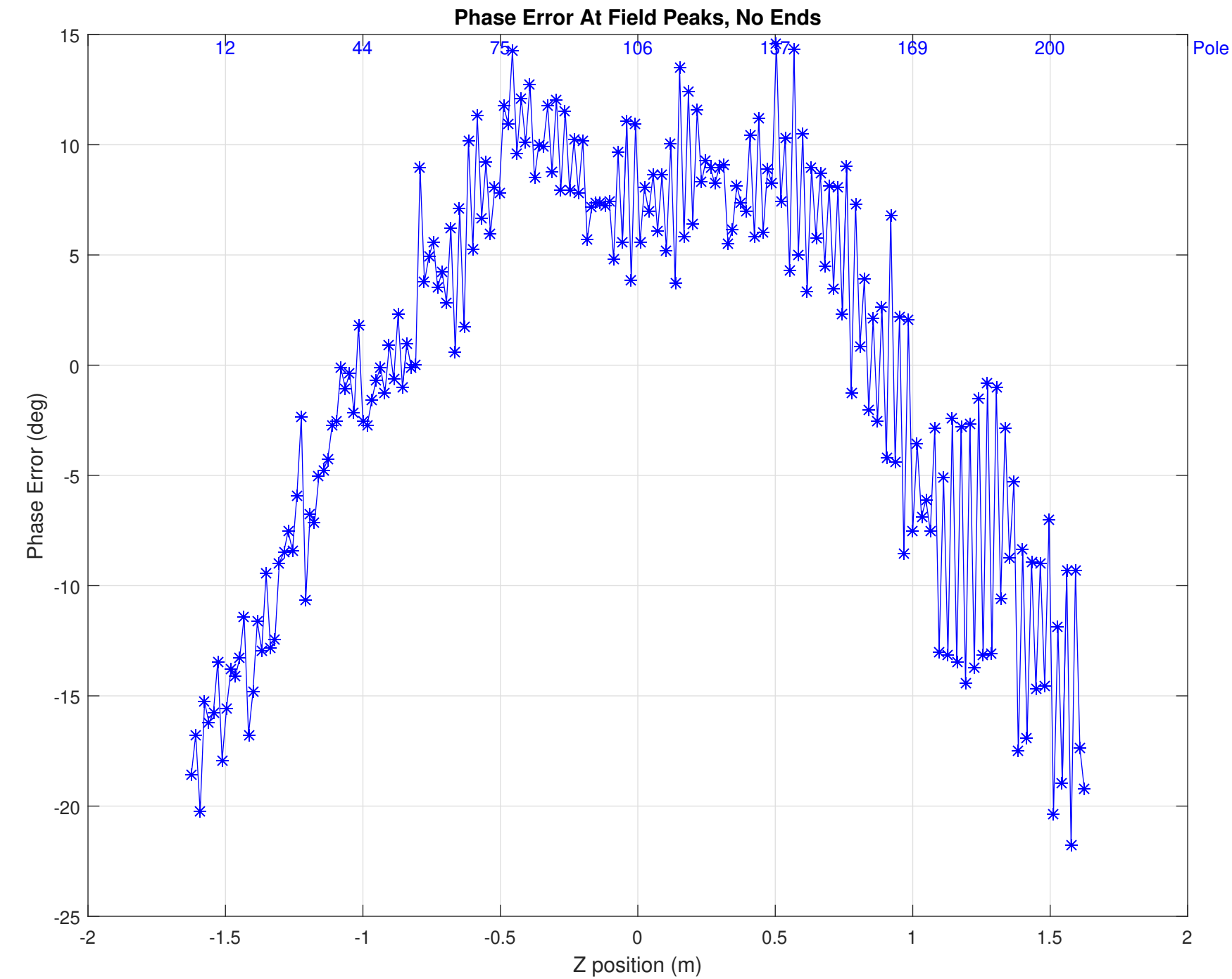

By vs Z
12
44
75
106
137
169
200
Pole
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
By (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)



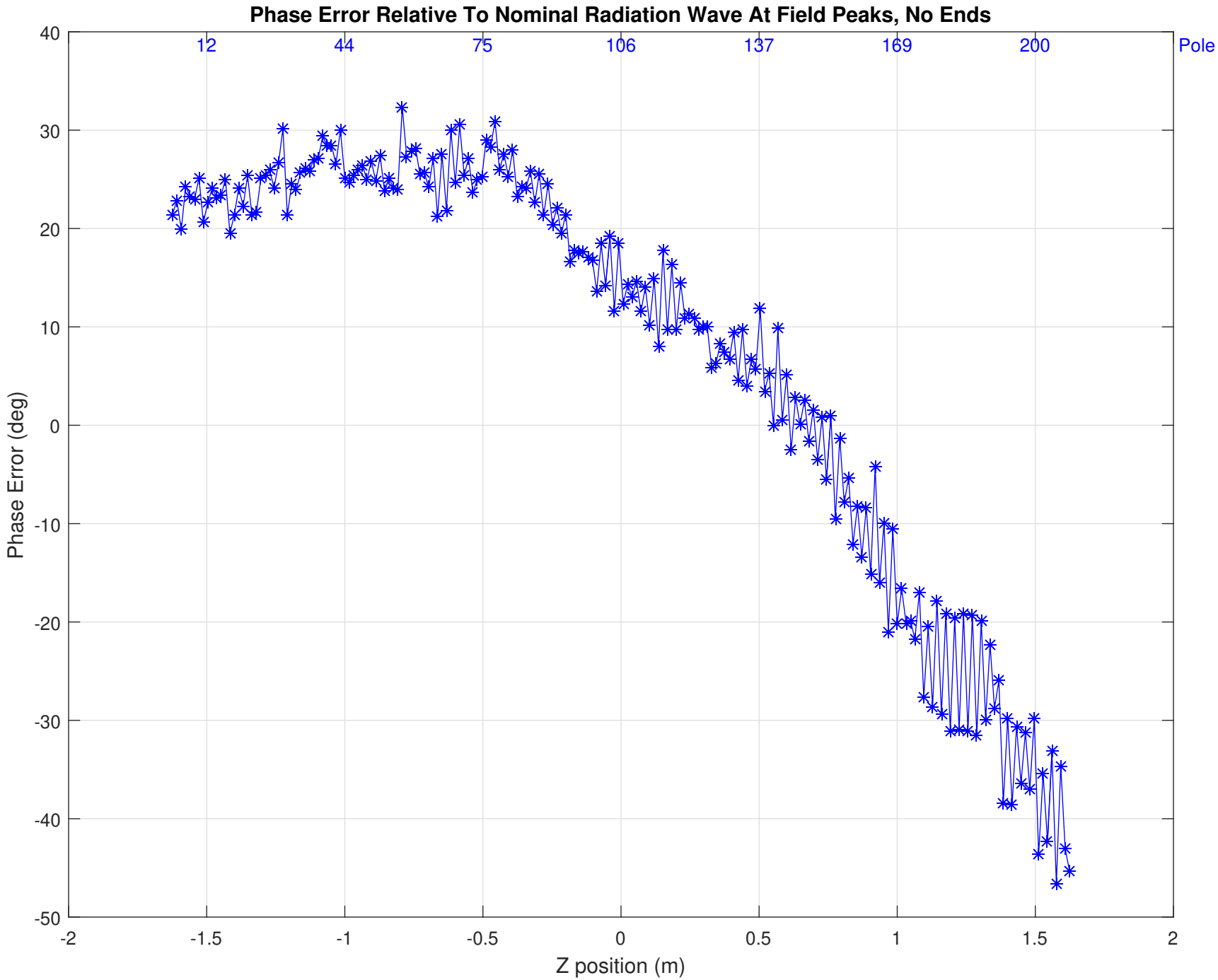
Peak Fields: Ave = 0.922994 T, RMS = 0.003402 T


X Trajectory
10^-6
12
44
75
106
137
169
200
Pole
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
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
6
5
4
3
2
1
0
-1
12
44
75
106
137
169
200
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 = 9.324034 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
12
44
75
106
137
169
200
Pole
40
30
20
10
0
-10
-20
-30
-40
-50
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)