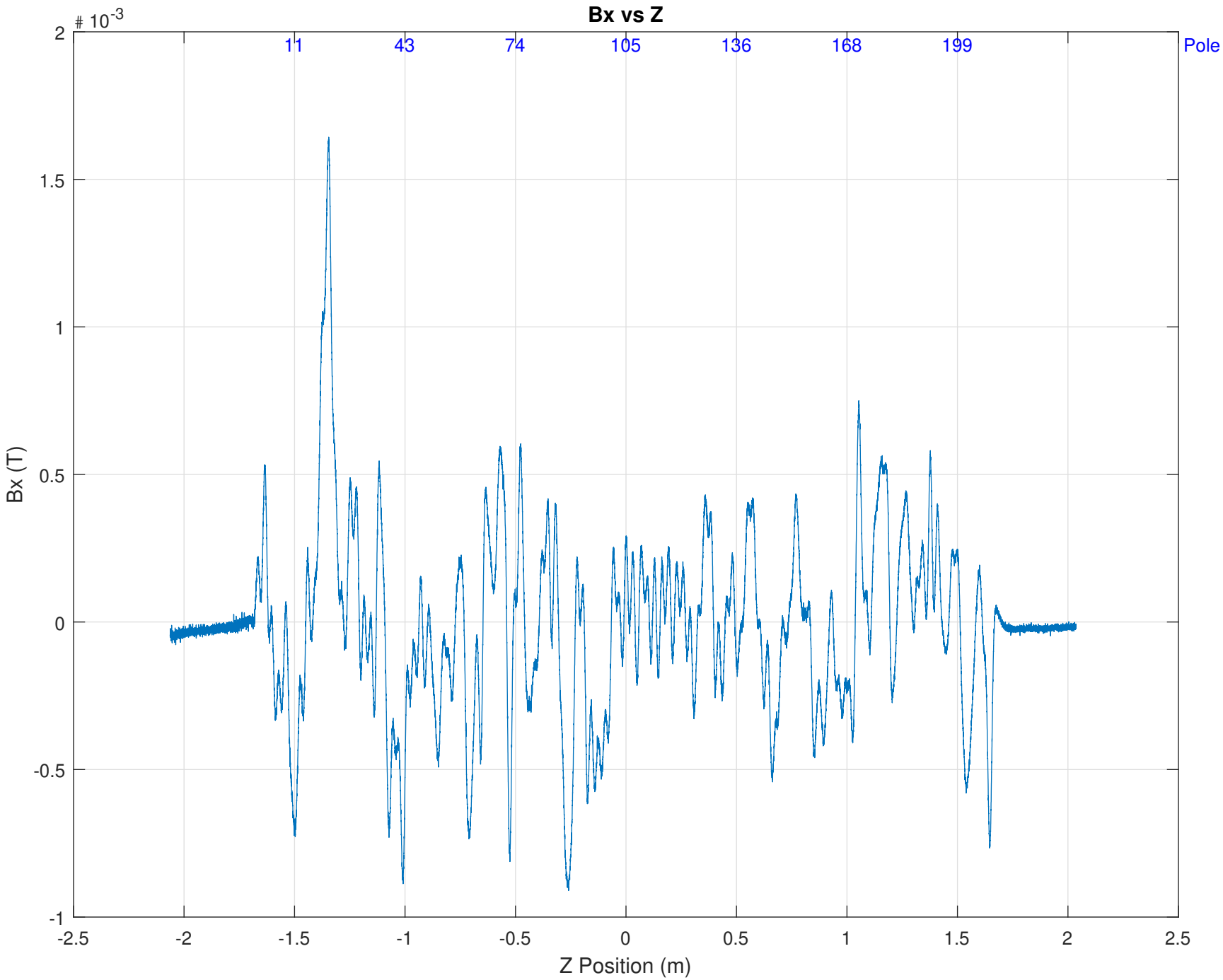
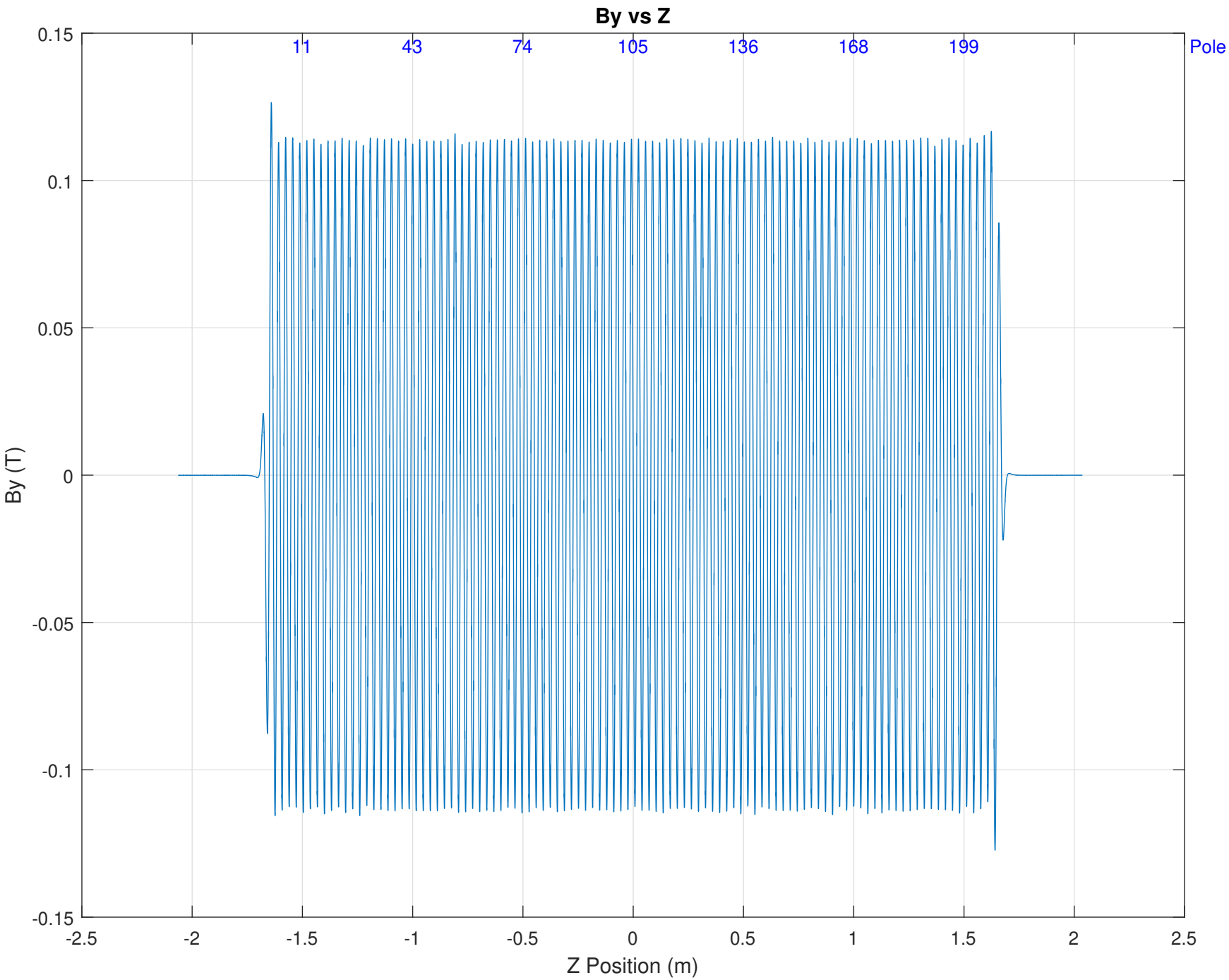
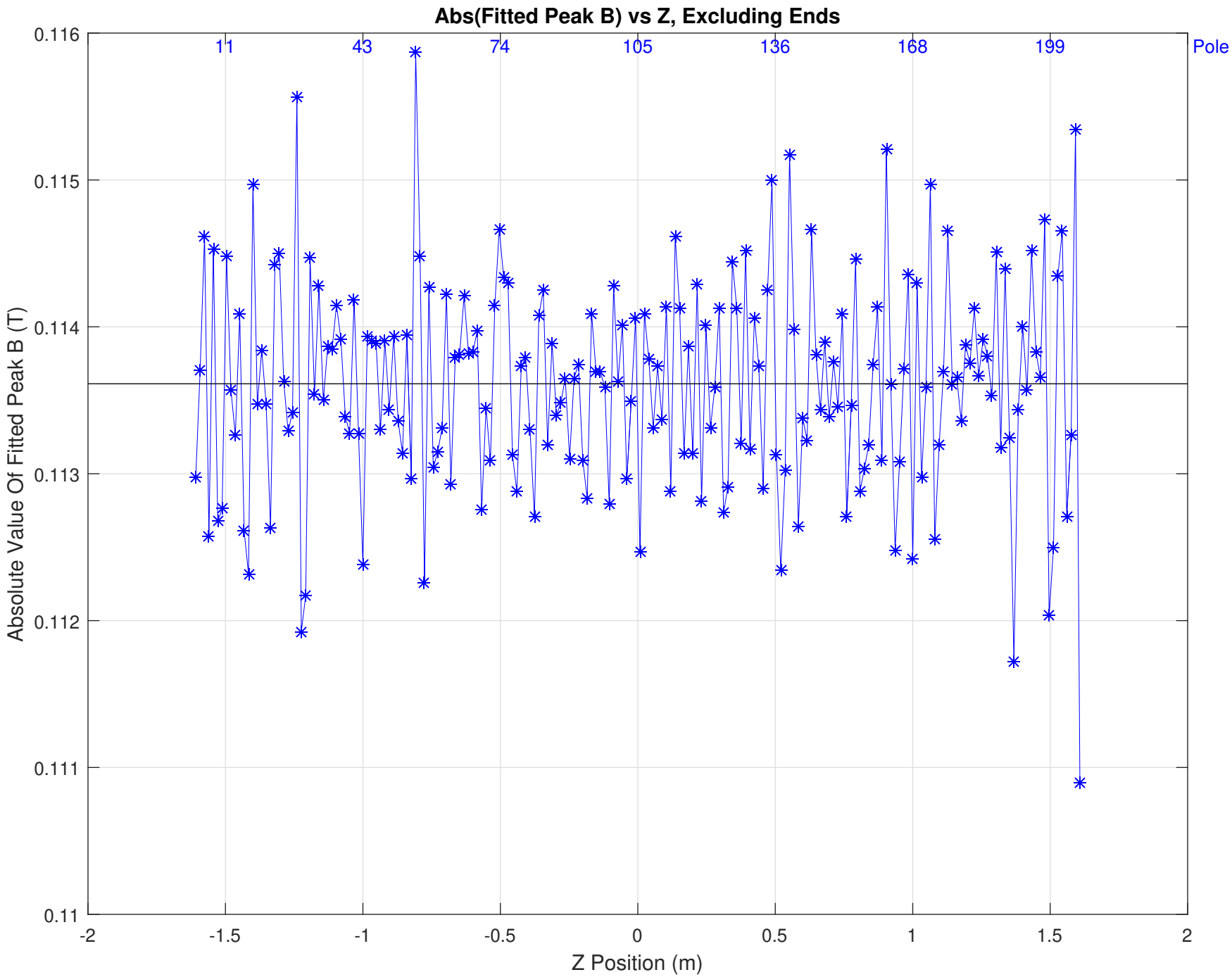
SLAC Magnetic Measurements

Planar Insertion Device Analysis

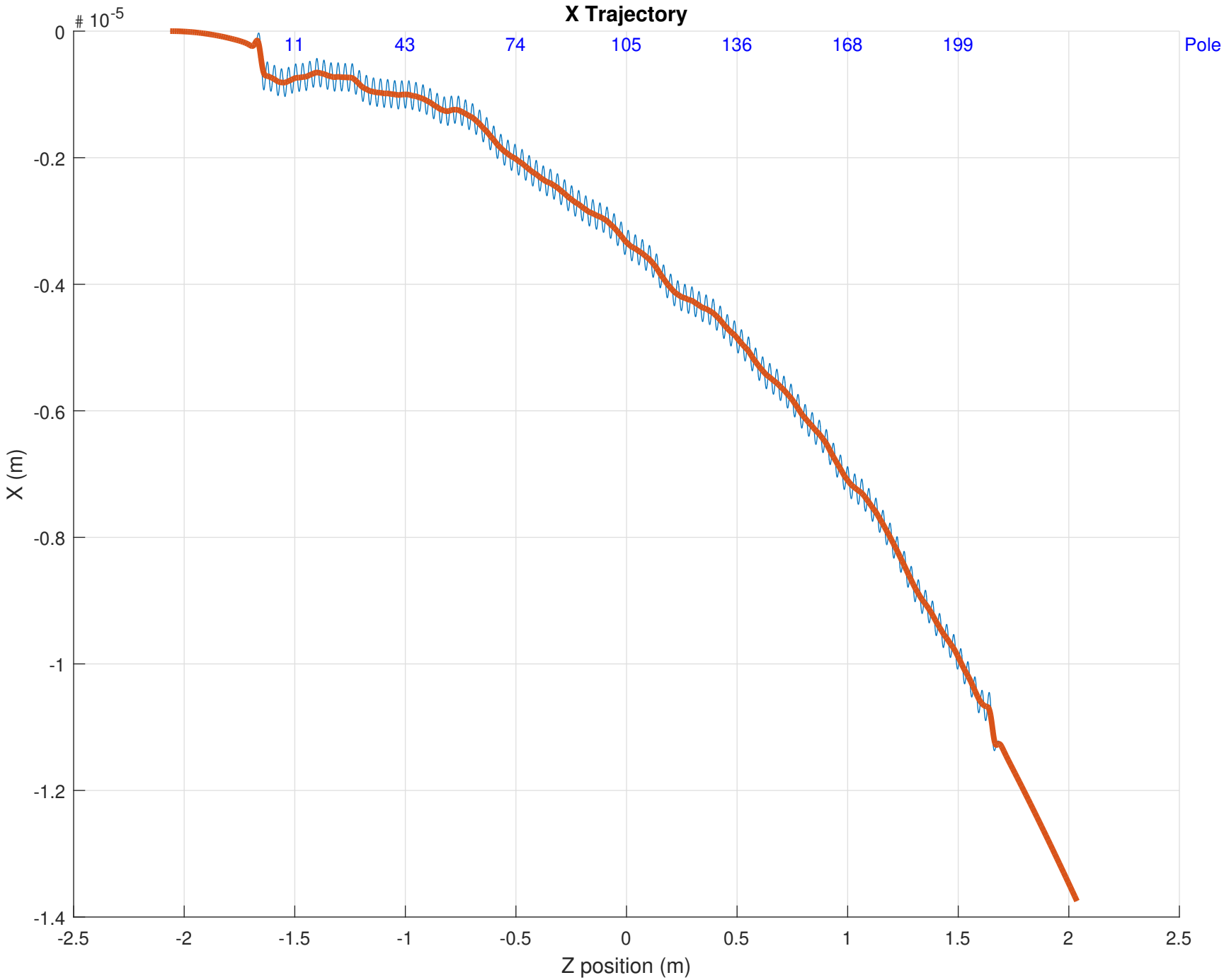
Parameters:
INPUT-FILE-DIR =C:\magdata\LCLS\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 025\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =1
GAMMA =7827.79
NOM-LAMBDA-U =0.032
NOM-K-VALUE =2.7
NOM-LAMBDA-R =1.2129e-09
NUM-POLES =210
NUM-END-POLES =4
CELL-LENGTH =3.656

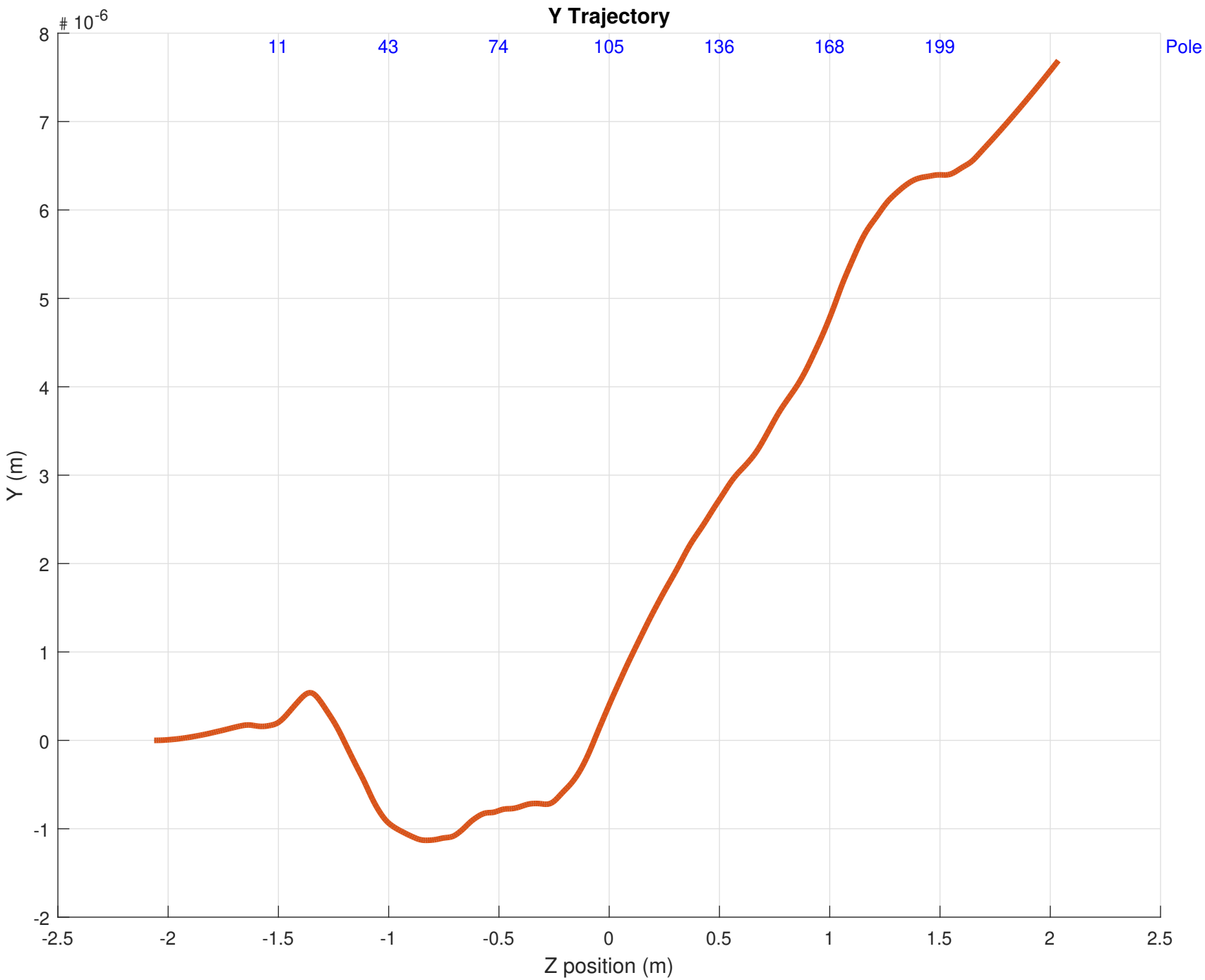

Bx vs Z
10-3
2
1.5
1
0.5
0
-0.5
-1
11
43
74
105
136
168
199
Pole
Bx (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)

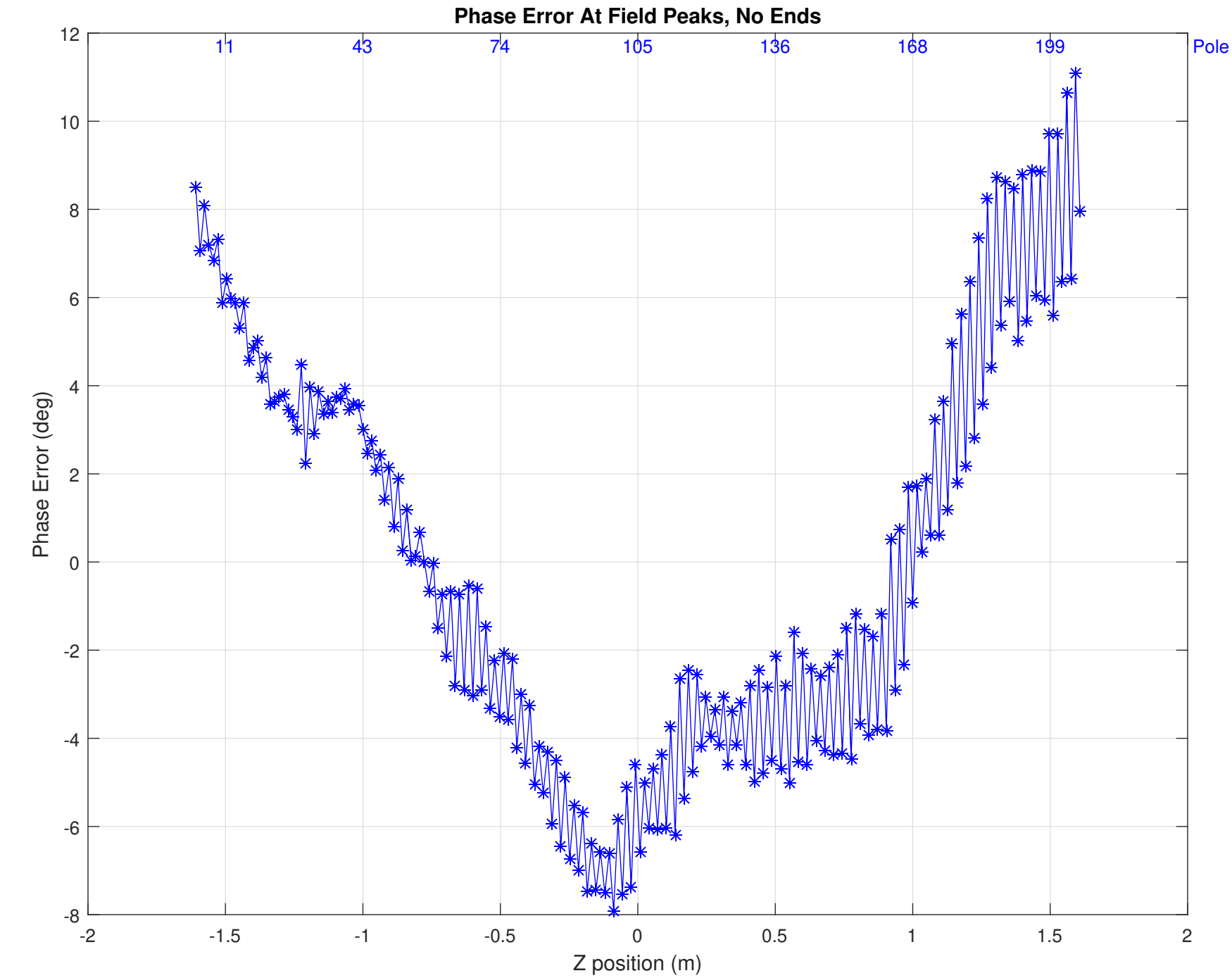

By vs Z
11
43
74
105
136
168
199
Pole
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
By (T)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z Position (m)



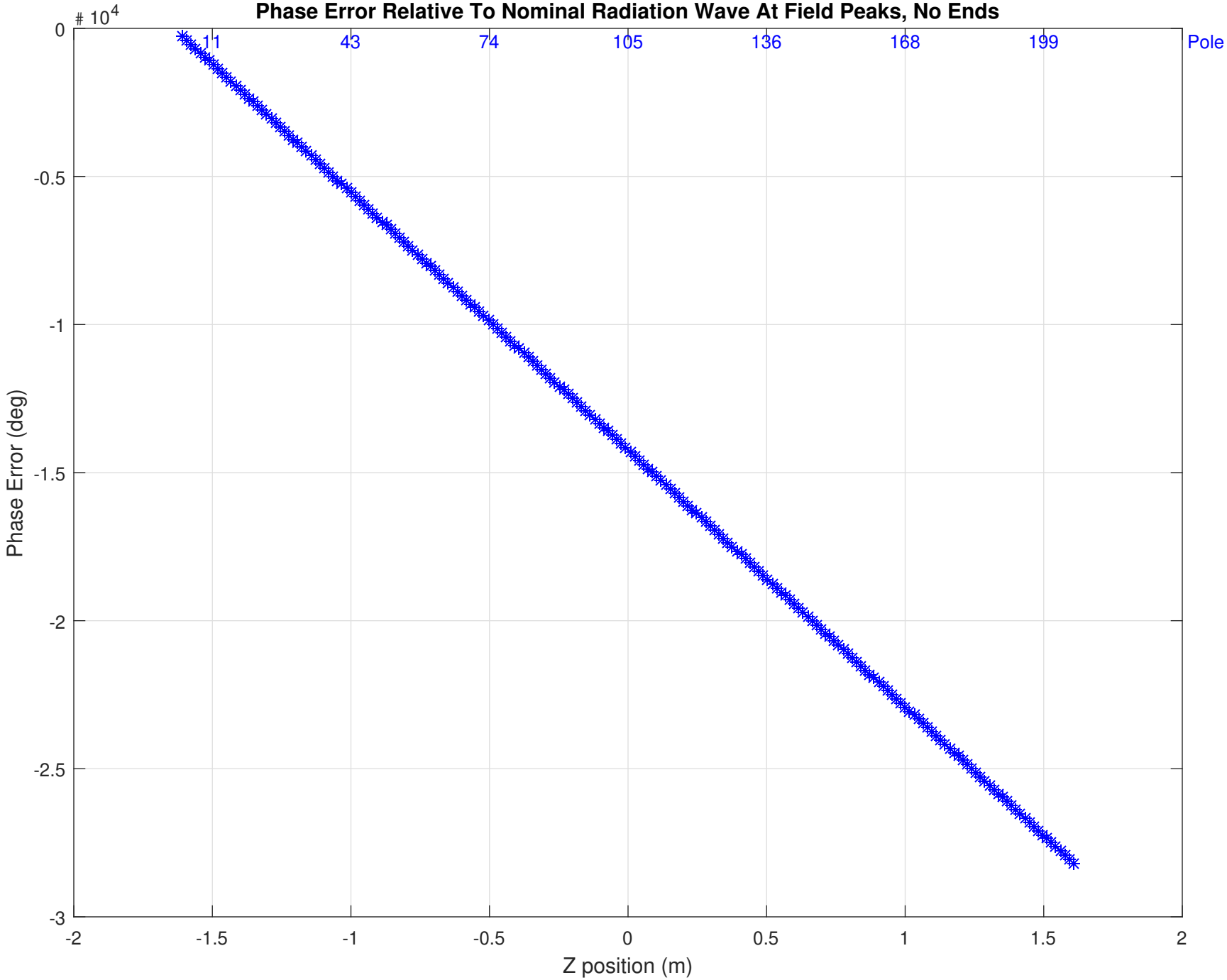
Peak Fields: Ave = 0.113612 T, RMS = 0.000726 T


X Trajectory
10^-5
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
X (m)
11
43
74
105
136
168
199
Pole
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)


Y Trajectory
10^-6
11
43
74
105
136
168
199
Pole
Y (m)
Z position (m)
8
7
6
5
4
3
2
1
0
-1
-2
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5



Phase Error: Ave = -0.000000 deg, RMS = 4.729616 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
10^4
0
-0.5
-1
-1.5
-2
-2.5
-3
Phase Error (deg)
11
43
74
105
136
168
199
Pole
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)