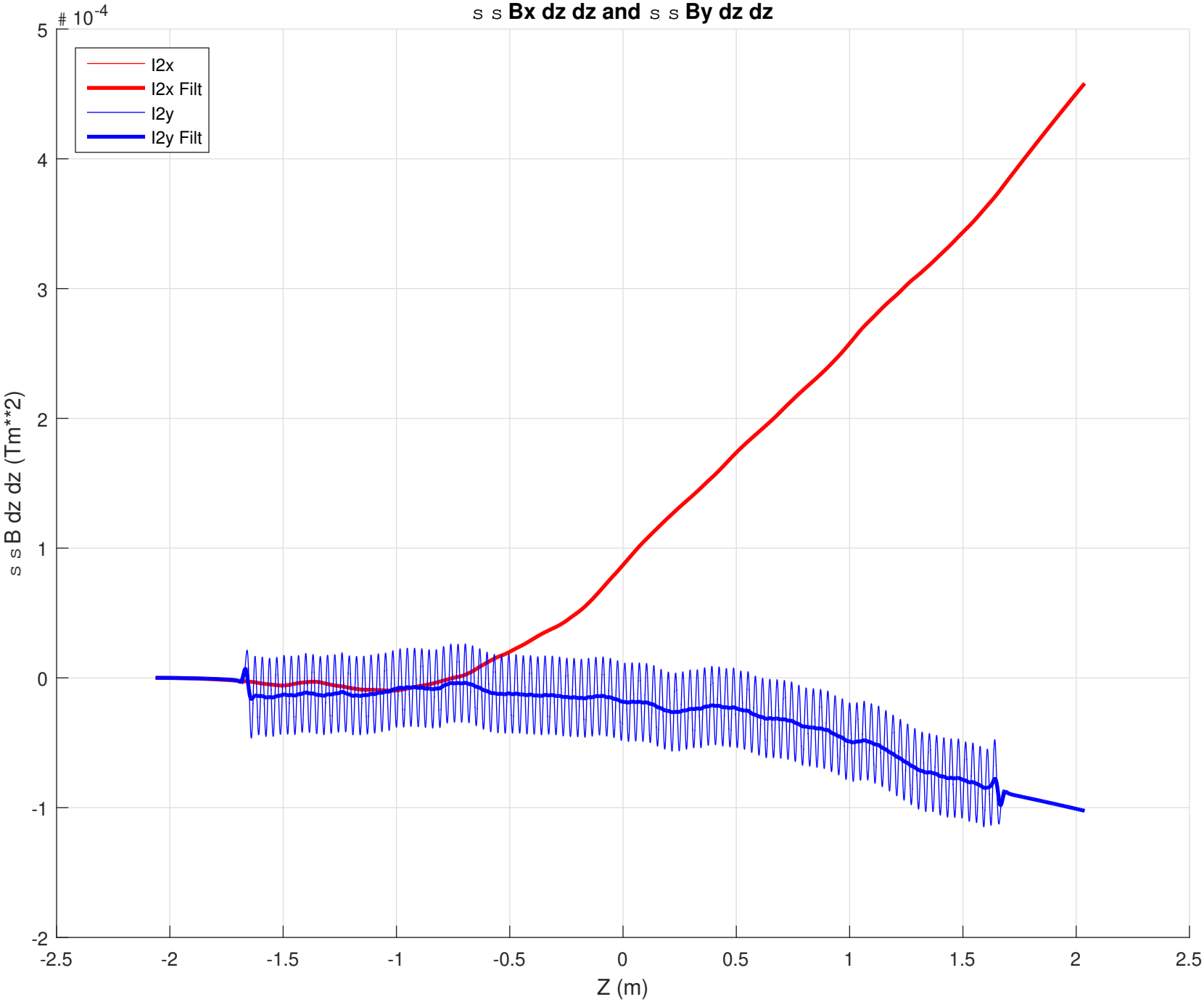
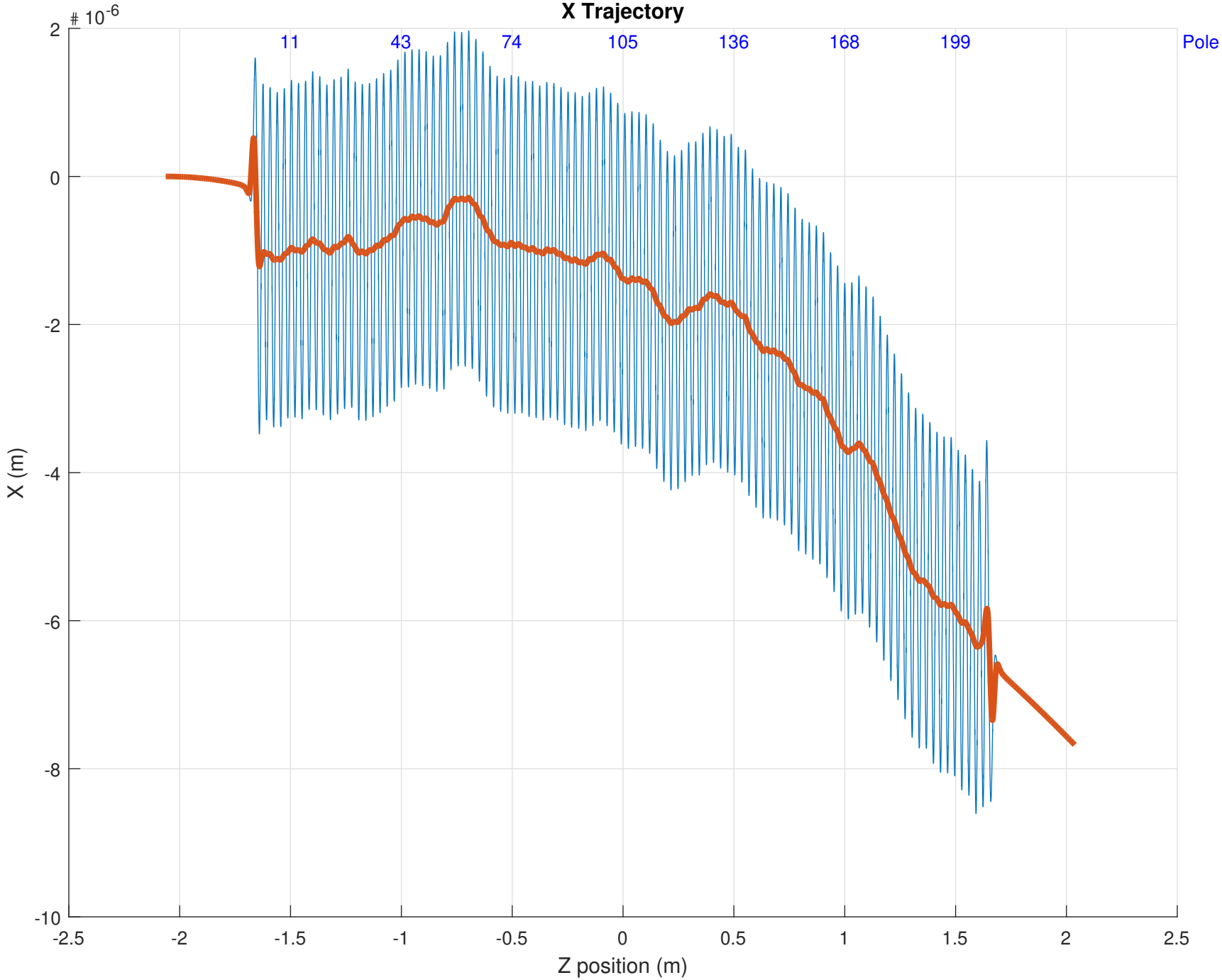
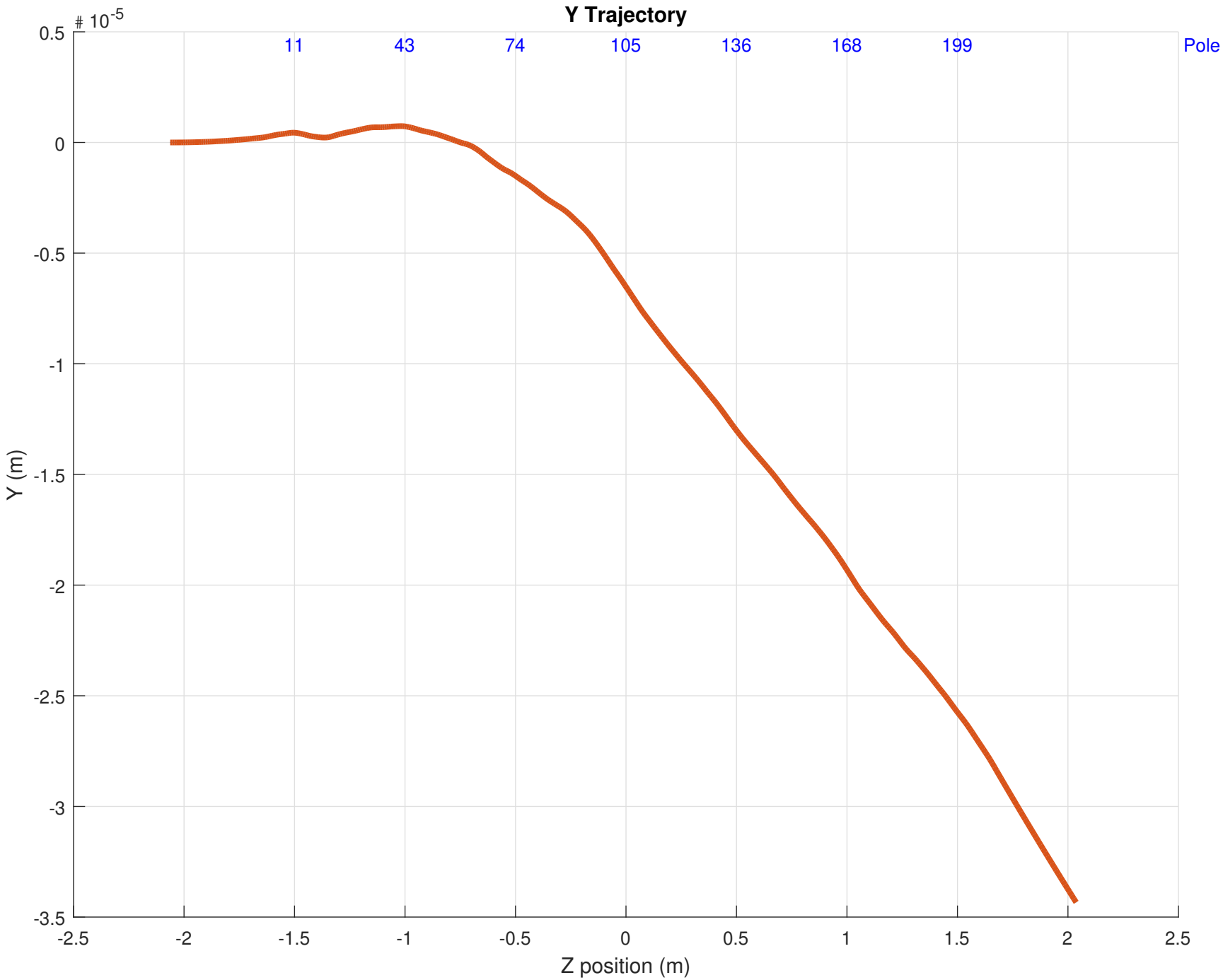
SLAC Magnetic Measurements

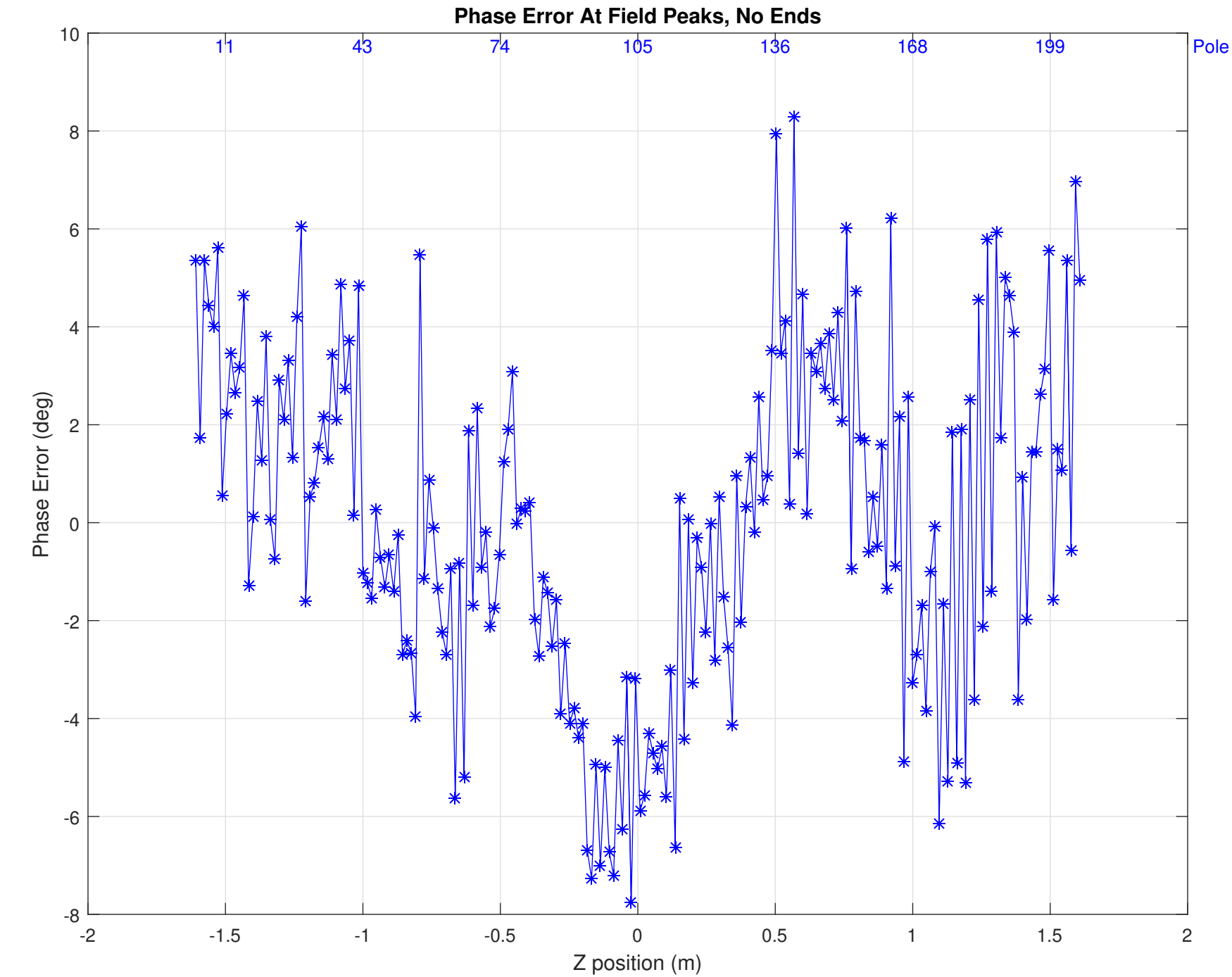
Planar Insertion Device Analysis

Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS2\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 081\
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 =2.7021
NOM-LAMBDA-R =1.2144e-09
NUM-POLES =210
NUM-END-POLES =4
CELL-LENGTH =3.656

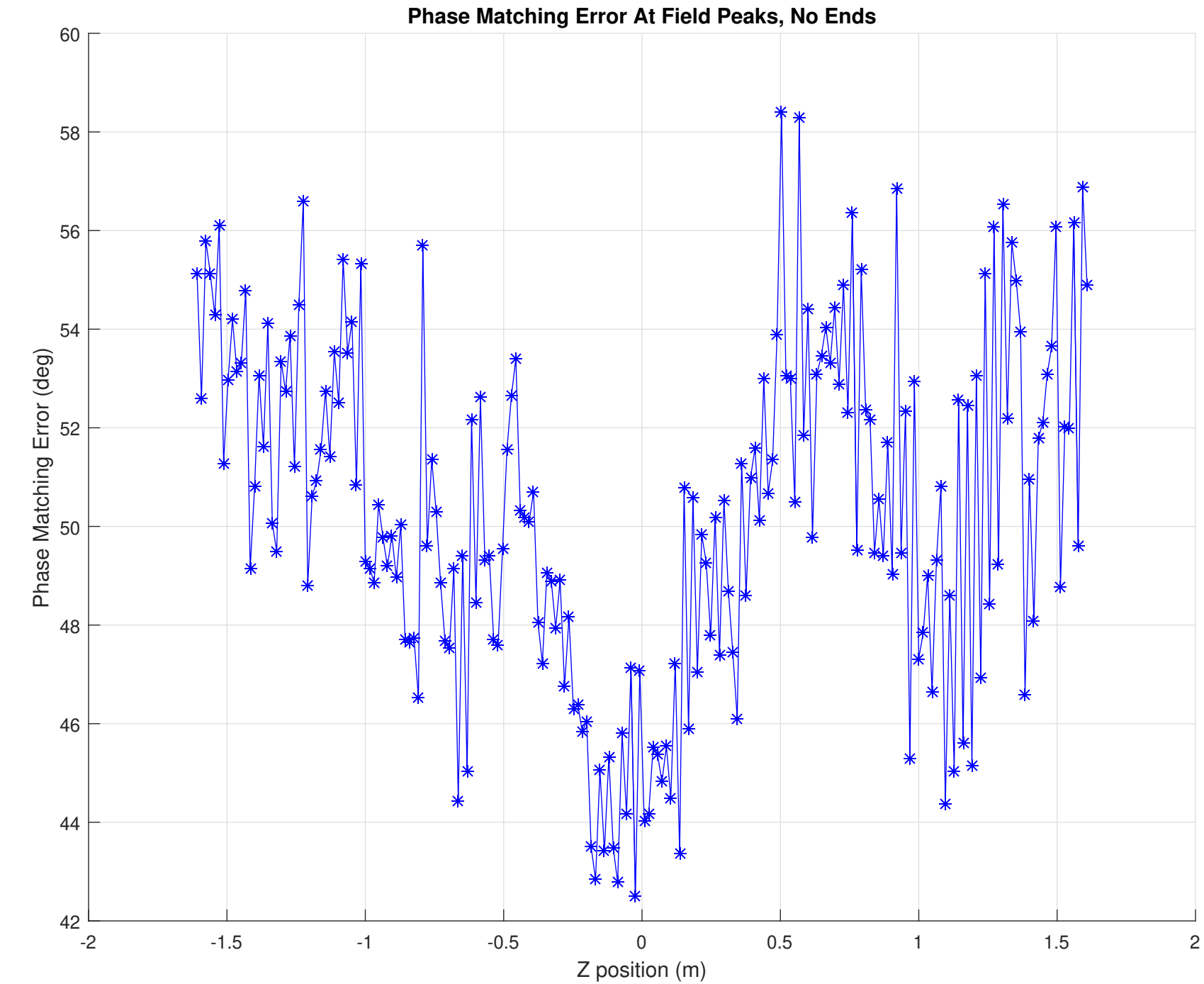

s s Bx dz dz and s s By dz dz
10^-4
I2x
I2x Filt
I2y
I2y Filt
s s B dz dz (Tm**2)
Z (m)
5
4
3
2
1
0
-1
-2
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5


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

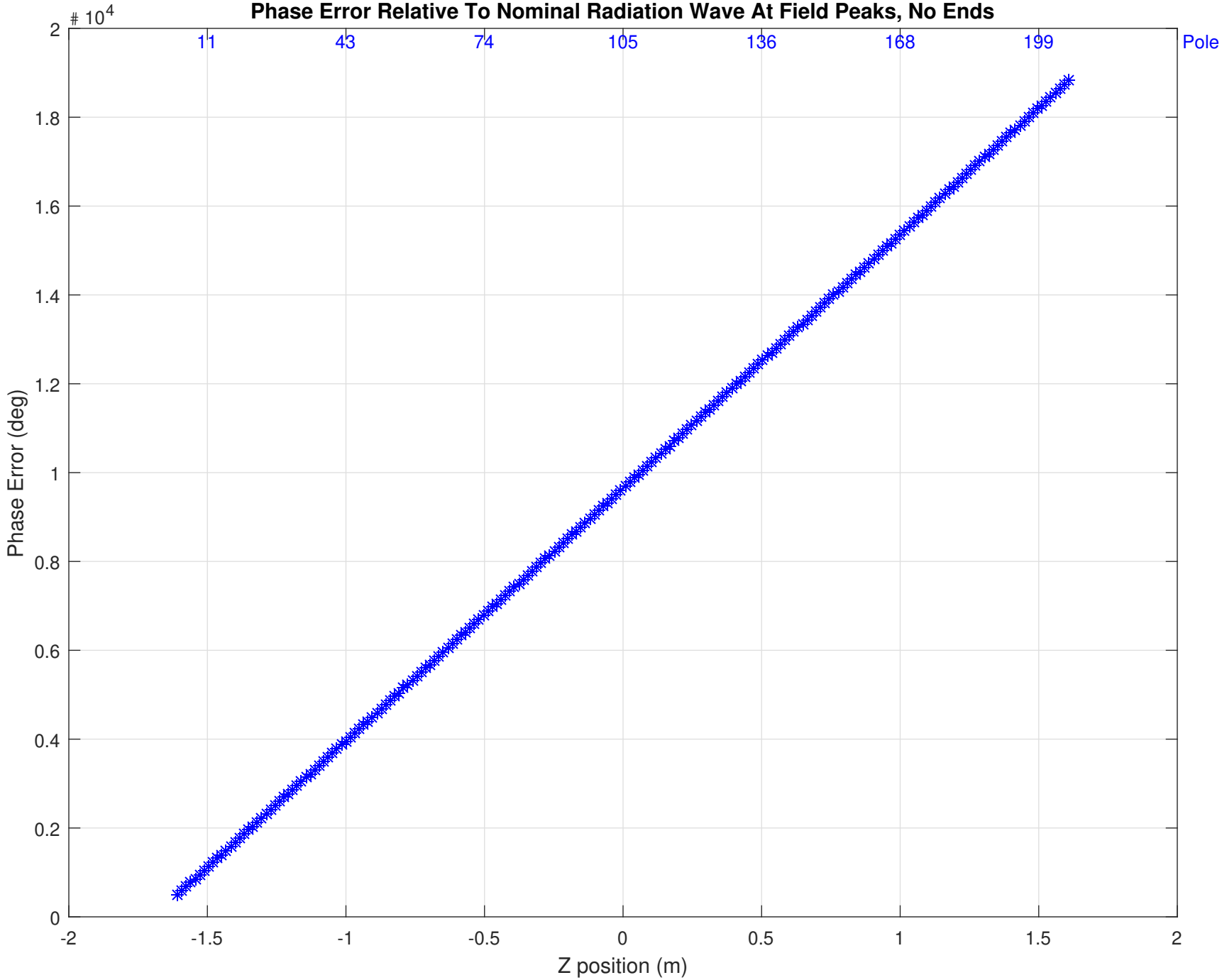

Y Trajectory
10^-5
11
43
74
105
136
168
199
Pole
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)



Phase Error: Ave = -0.000000 deg, RMS = 3.447369 deg



Phase Match Error: Ave = 50.301295 deg, RMS = 3.505341 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
10^4
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
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)