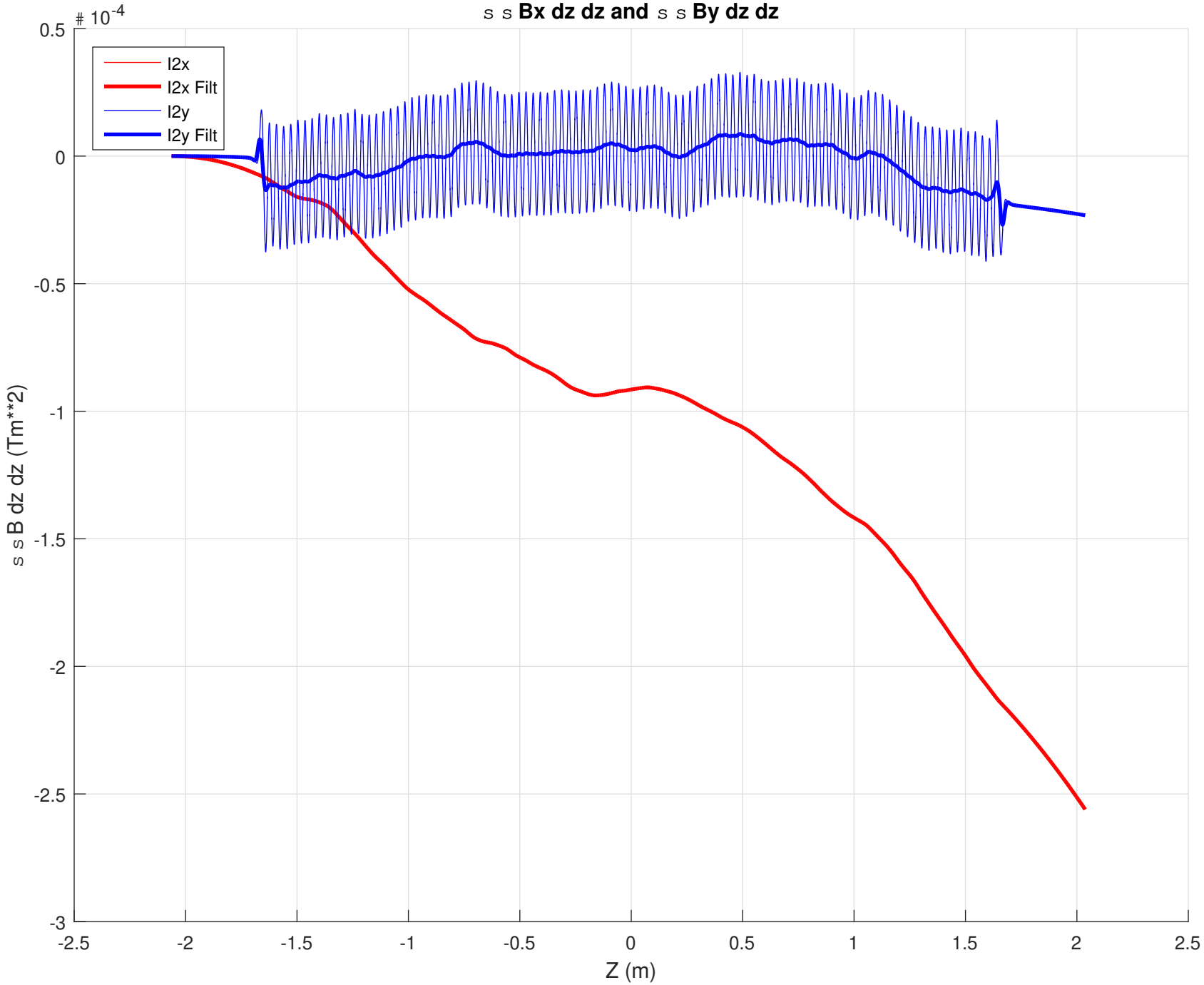
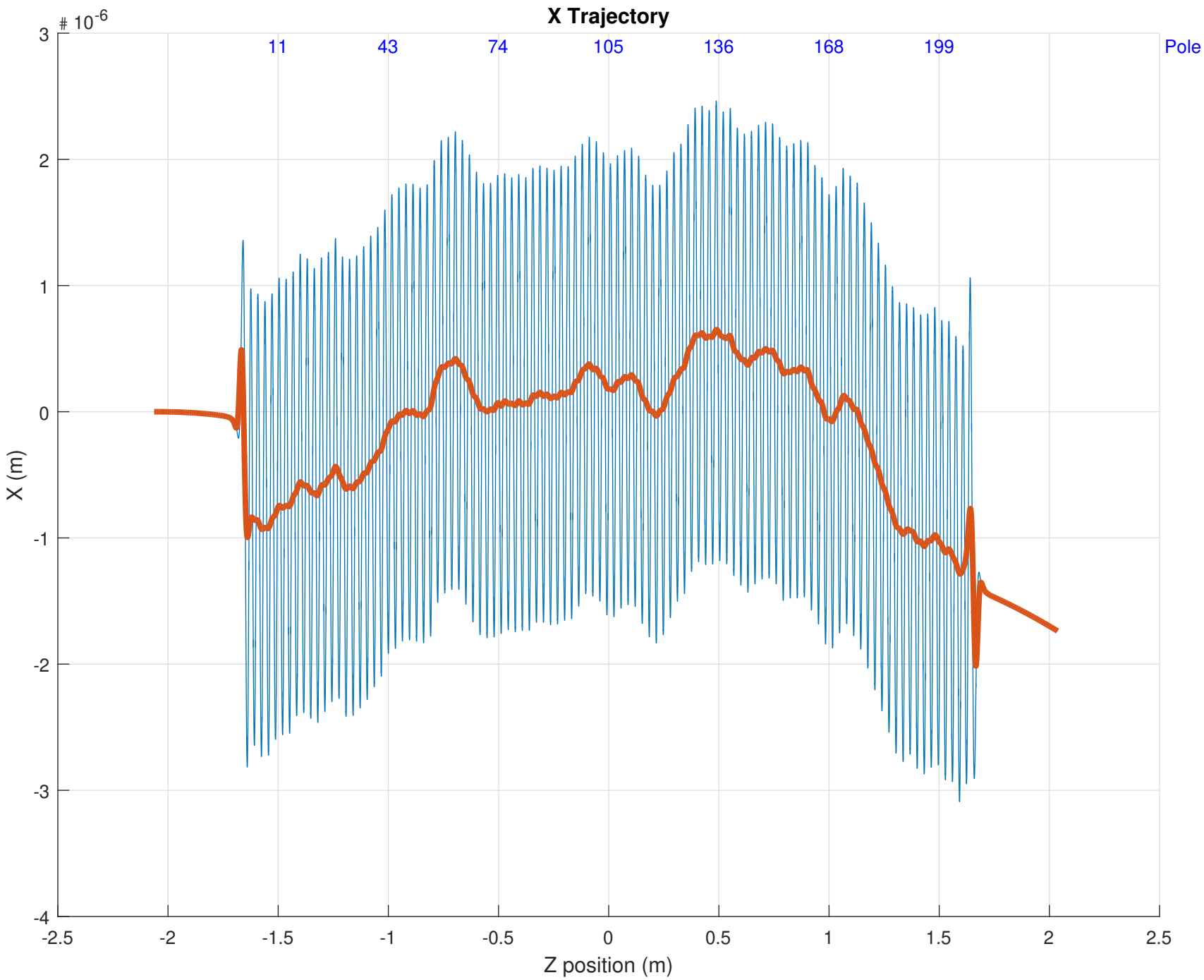
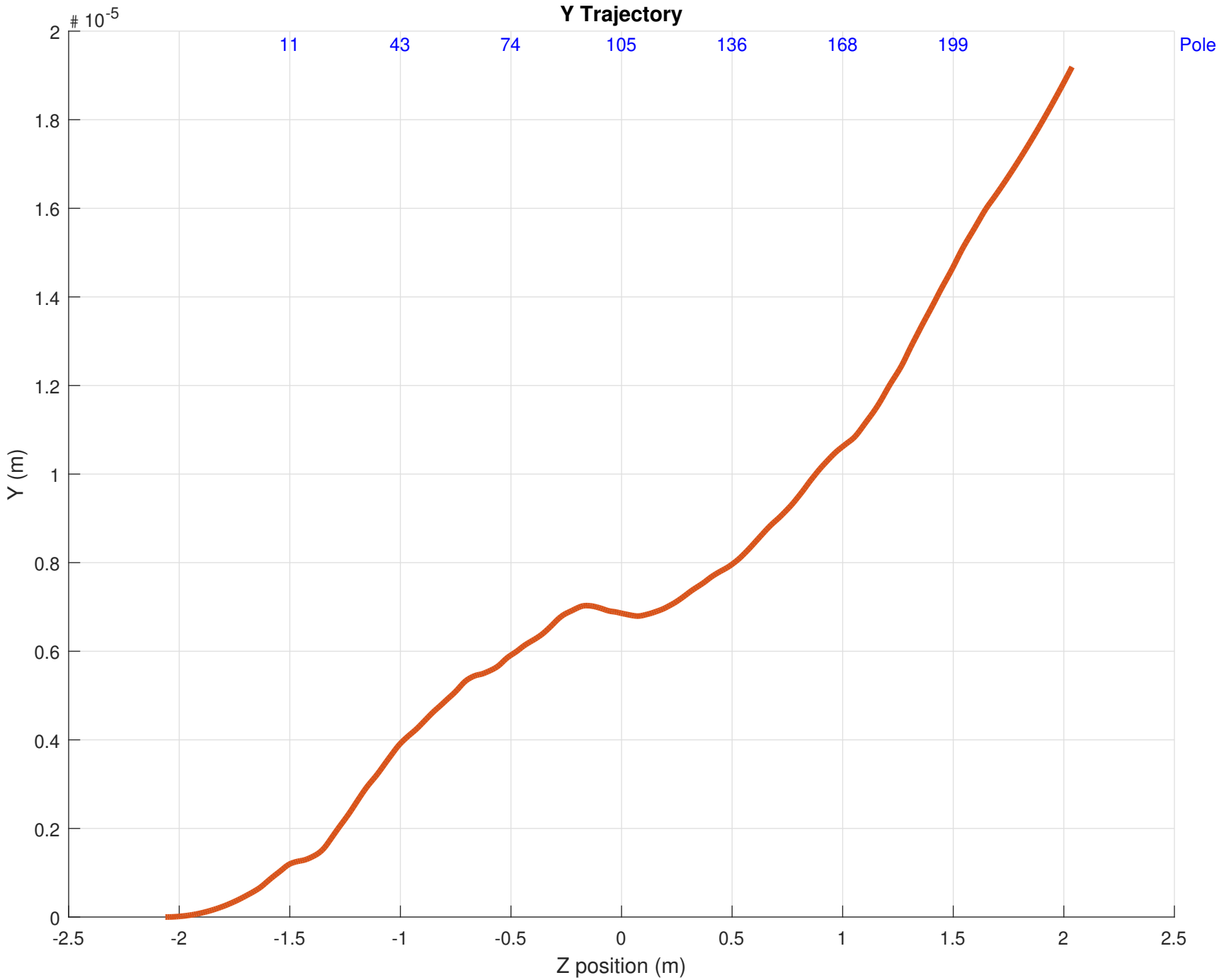
SLAC Magnetic Measurements

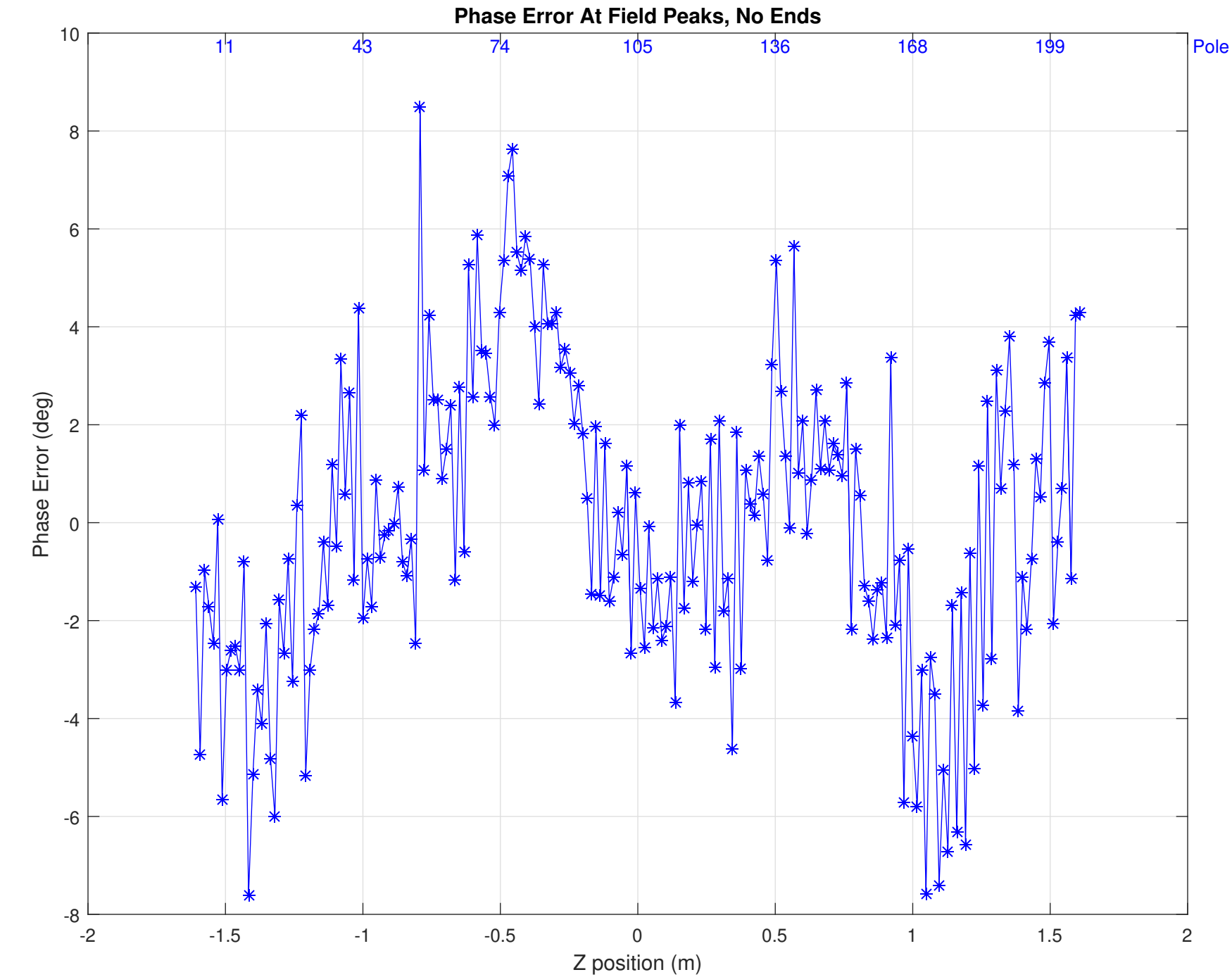
Planar Insertion Device Analysis

Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS2\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 072\
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

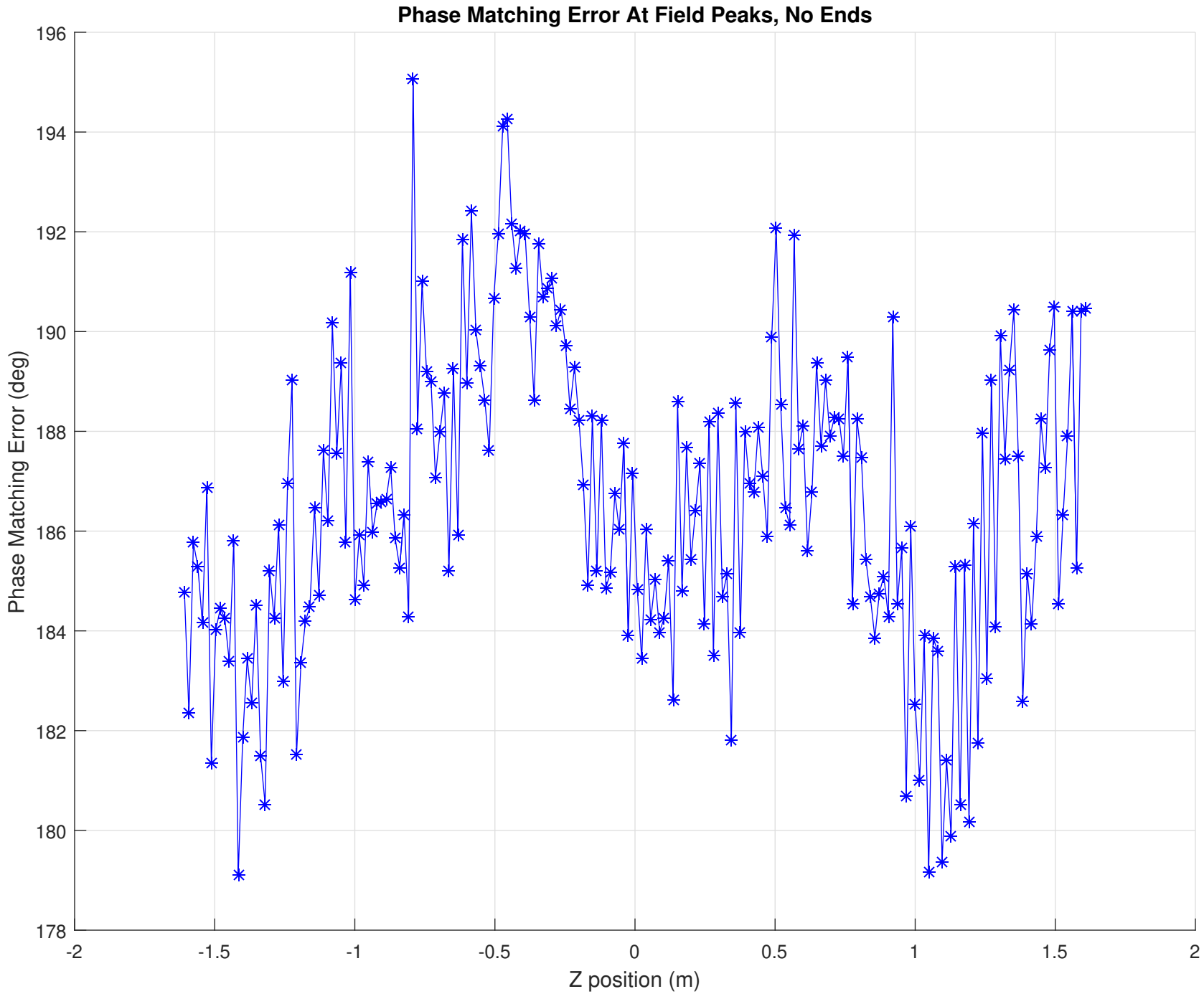

s s Bx dz dz and s s By dz dz
10^-4
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
I2x
I2x Filt
I2y
I2y Filt
s s B dz dz (Tm**2)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z (m)


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

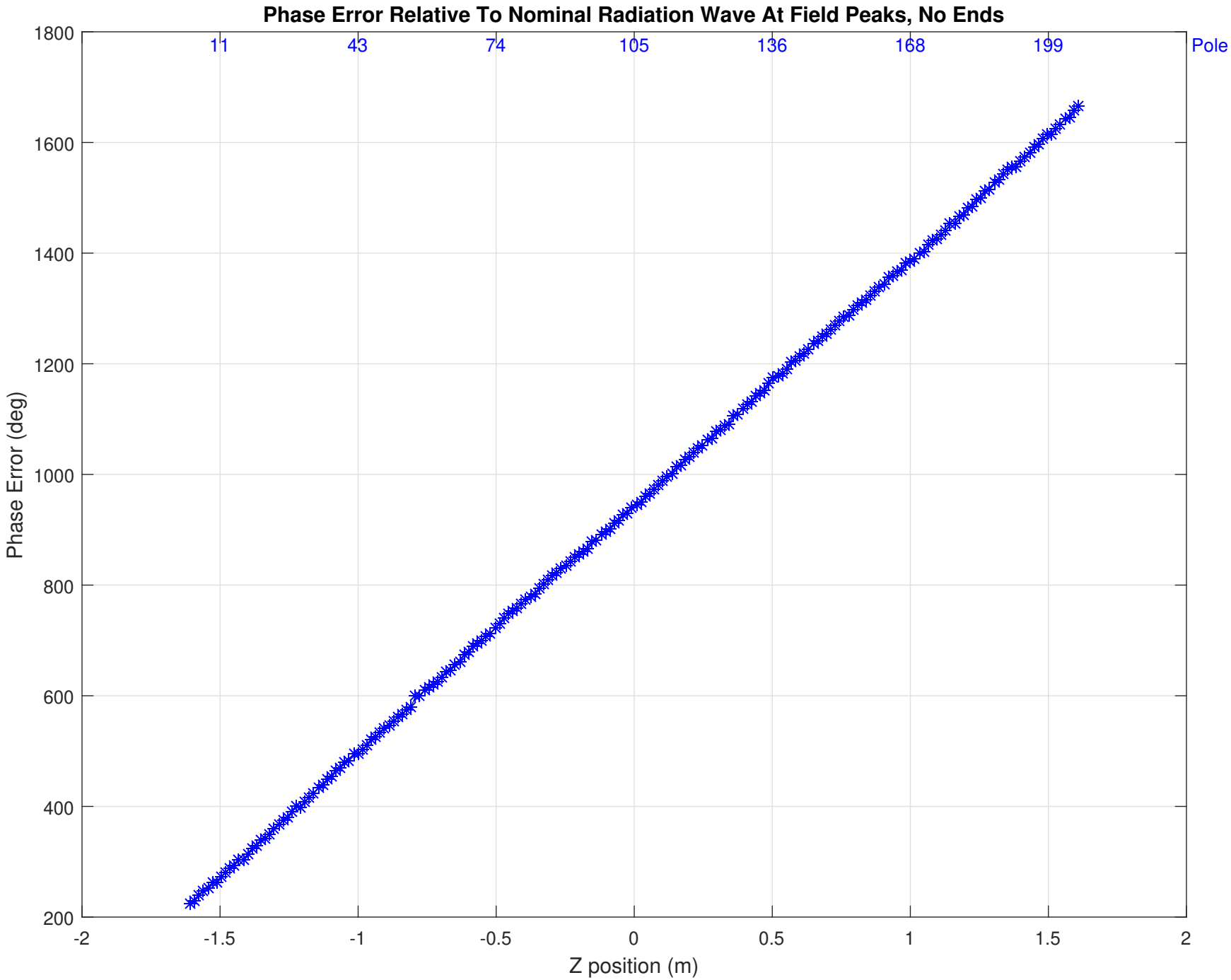

Y Trajectory
10^-5
11
43
74
105
136
168
199
Pole
Y (m)
Z position (m)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5



Phase Error: Ave = -0.000000 deg, RMS = 3.089055 deg



Phase Match Error: Ave = 186.575931 deg, RMS = 3.072032 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
43
74
105
136
168
199
Pole
1800
1600
1400
1200
1000
800
600
400
200
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)