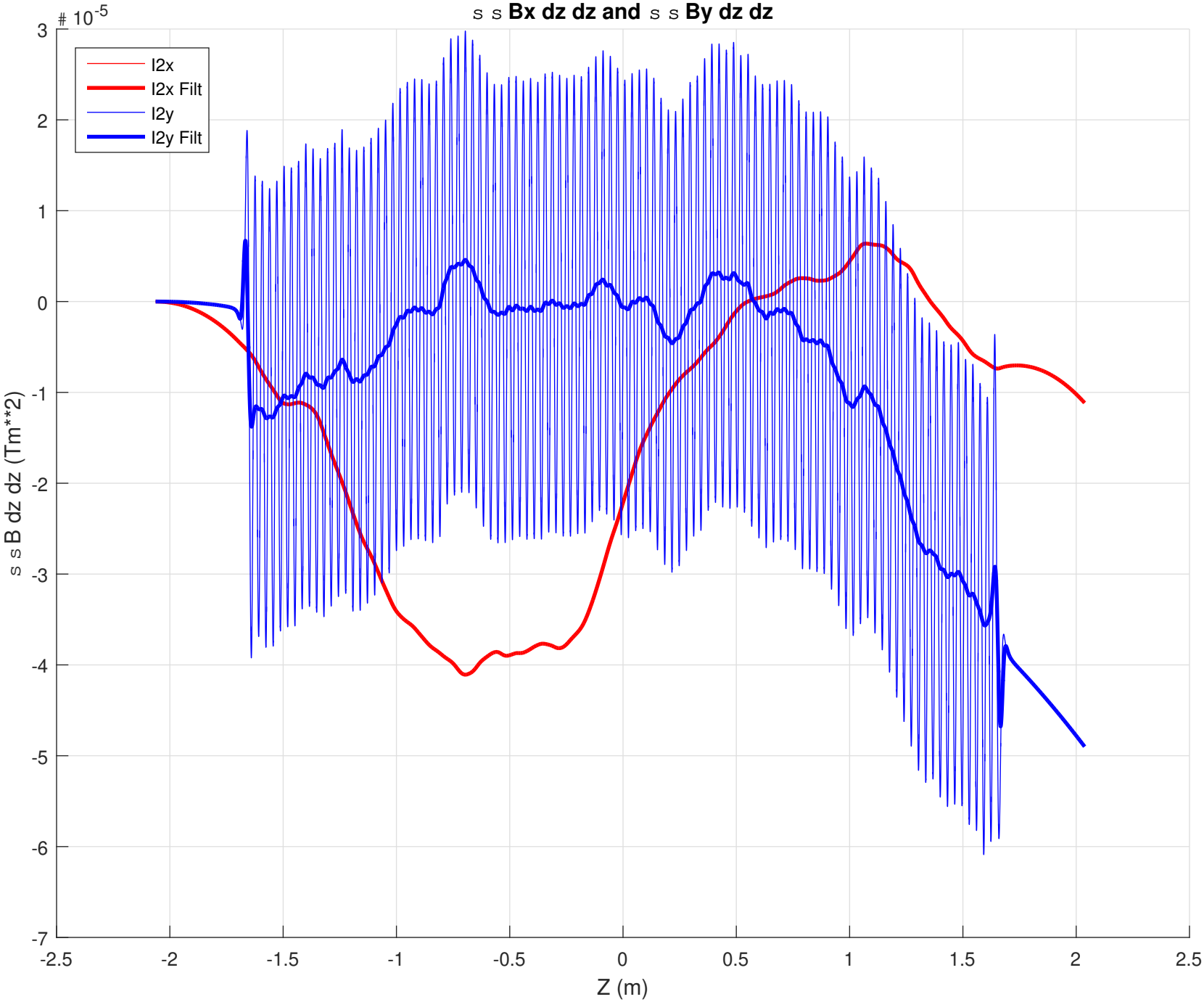
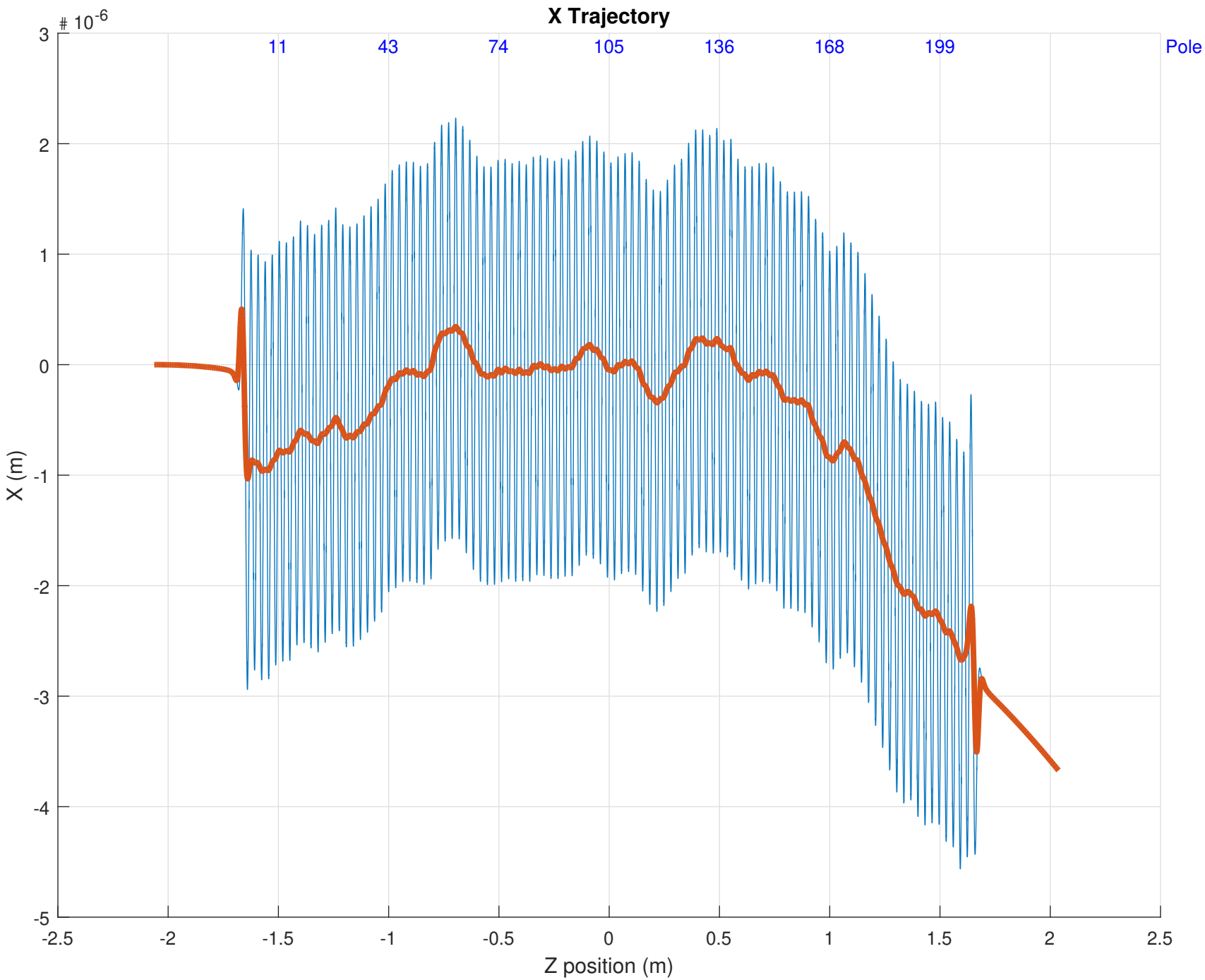
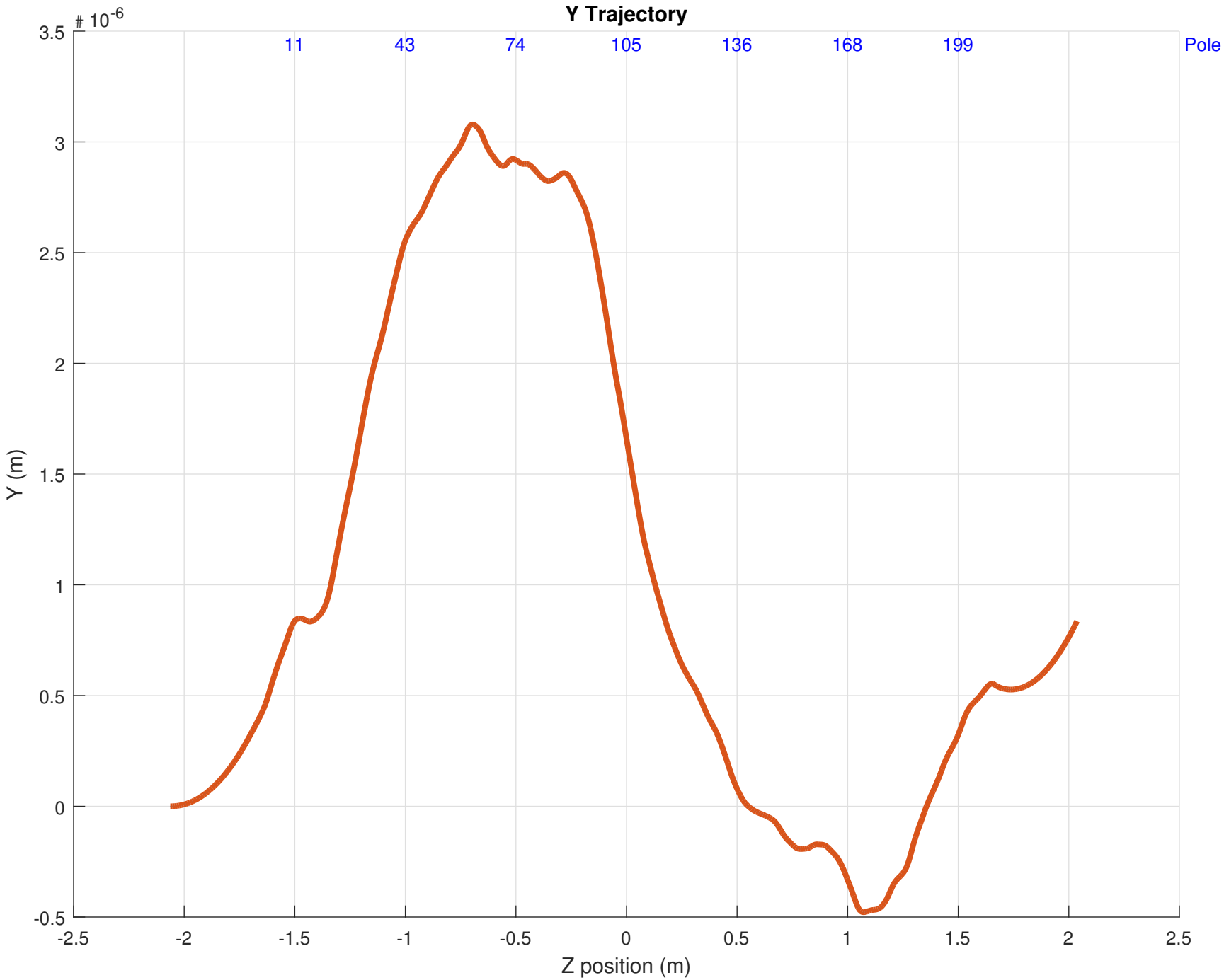
SLAC Magnetic Measurements

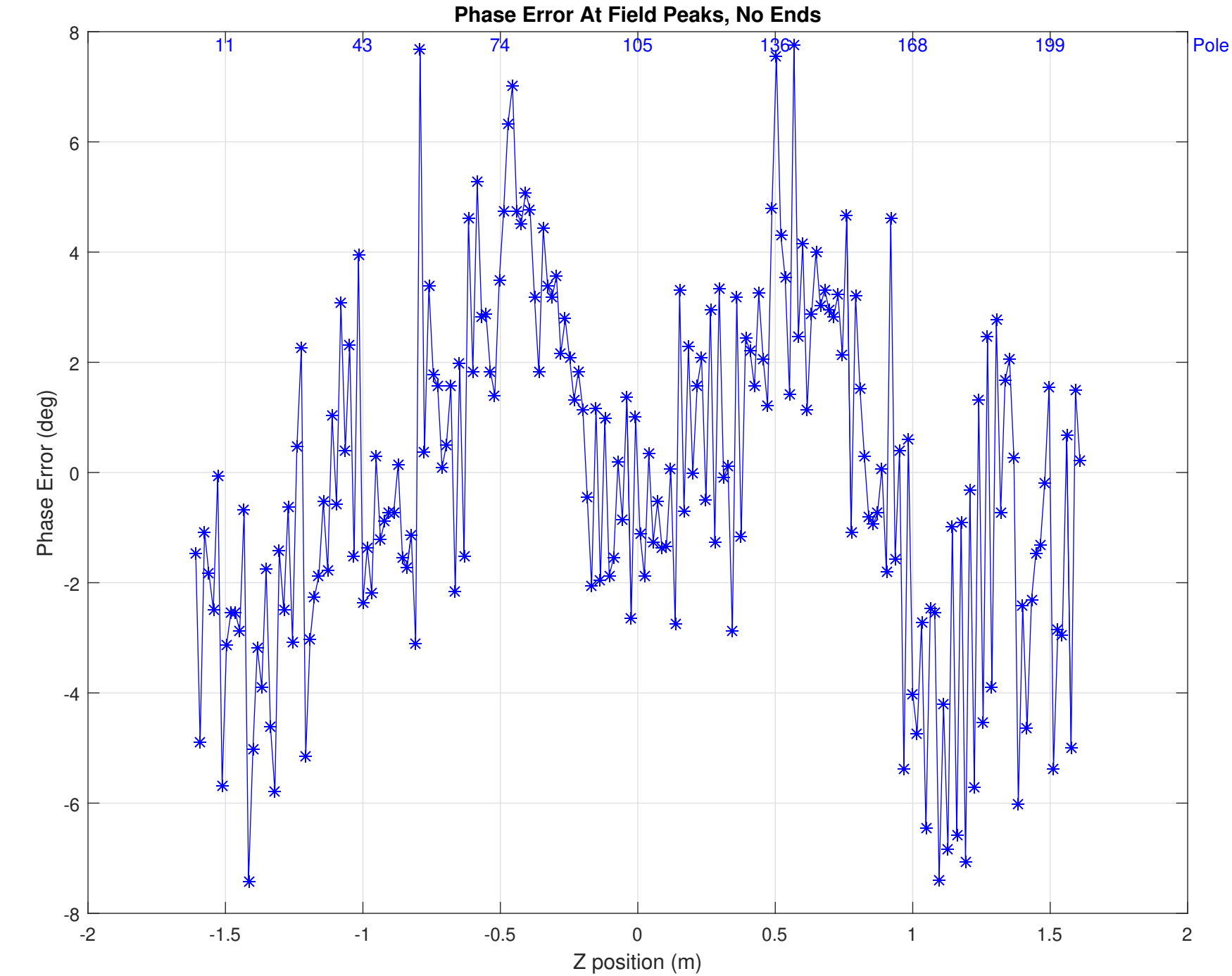
Planar Insertion Device Analysis

Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS2\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 070\
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

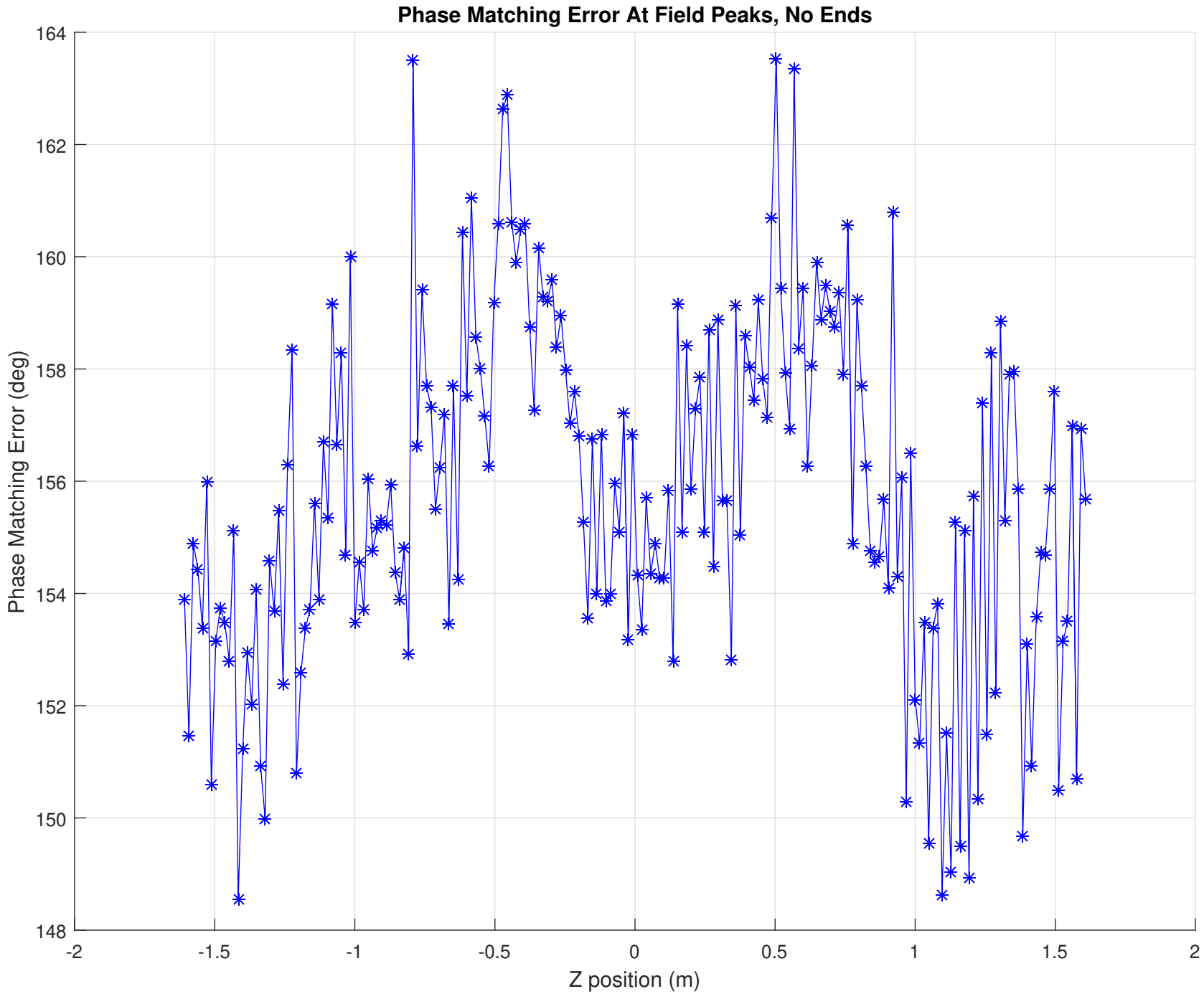

s s Bx dz dz and s s By dz dz
10^-5
I2x
I2x Filt
I2y
I2y Filt
s s B dz dz (Tm**2)
Z (m)
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5


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

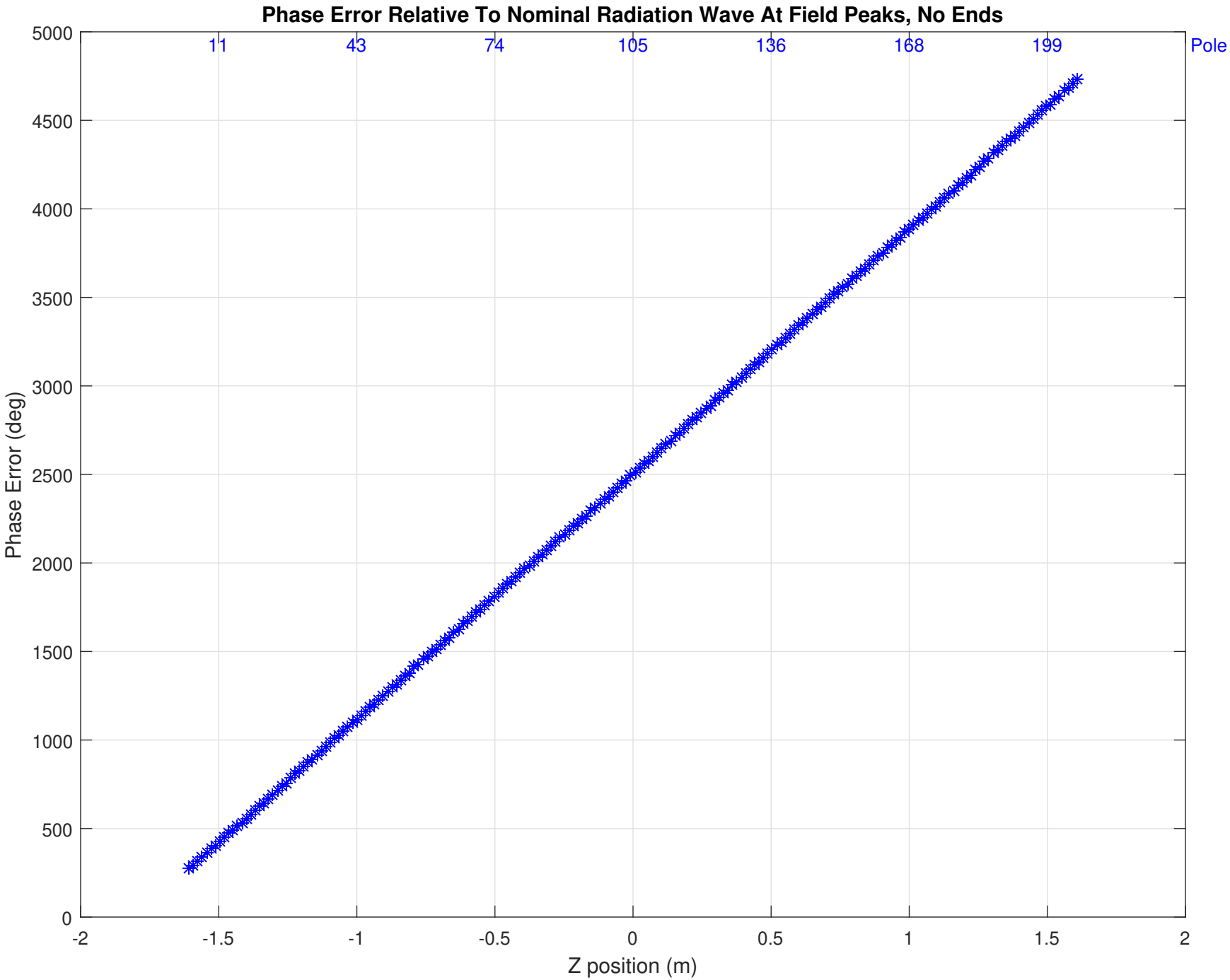

Y Trajectory
10^-6
11
43
74
105
136
168
199
Pole
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)



Phase Error: Ave = 0.000000 deg, RMS = 3.102109 deg



Phase Match Error: Ave = 155.832940 deg, RMS = 3.070835 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
43
74
105
136
168
199
Pole
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)