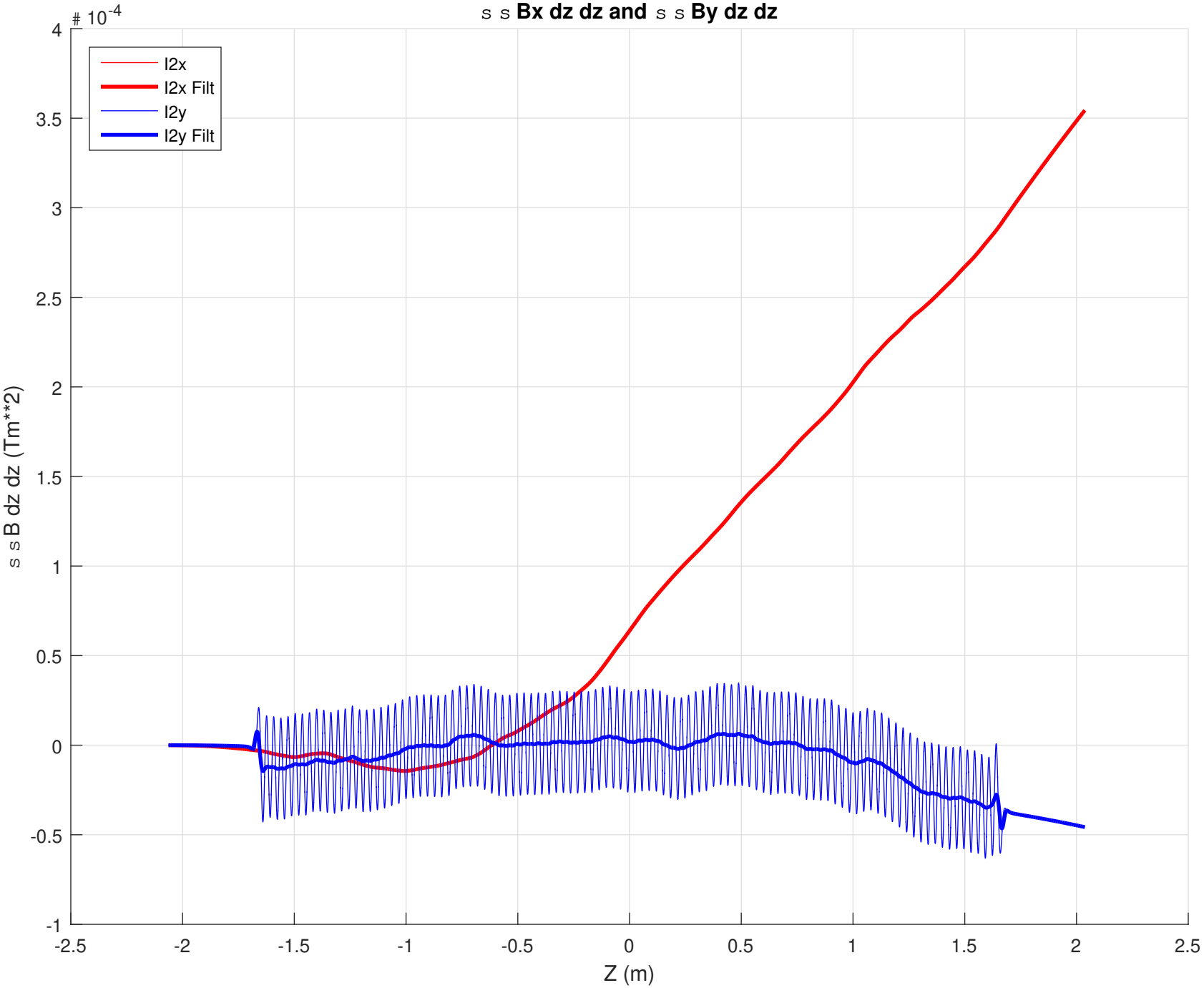
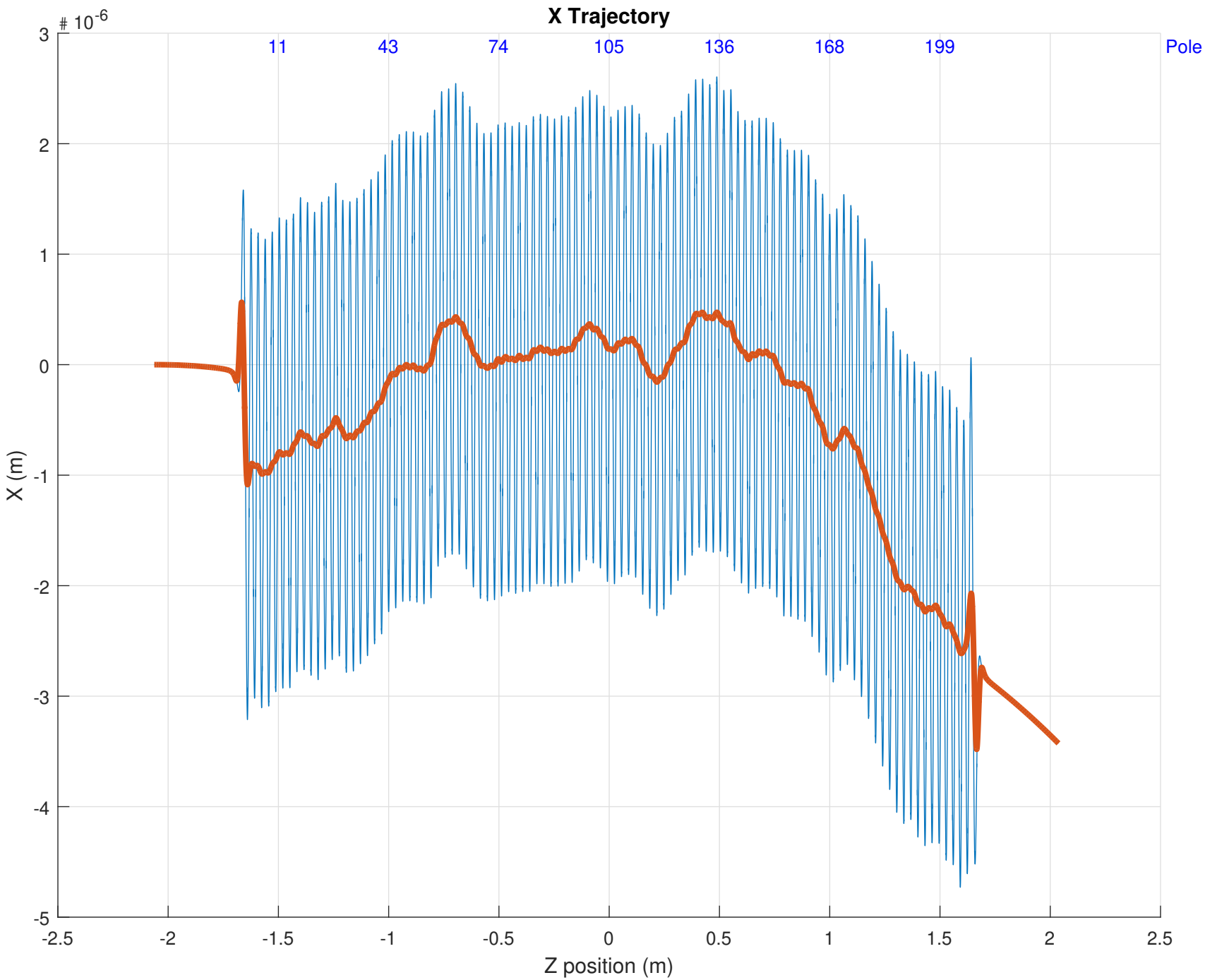
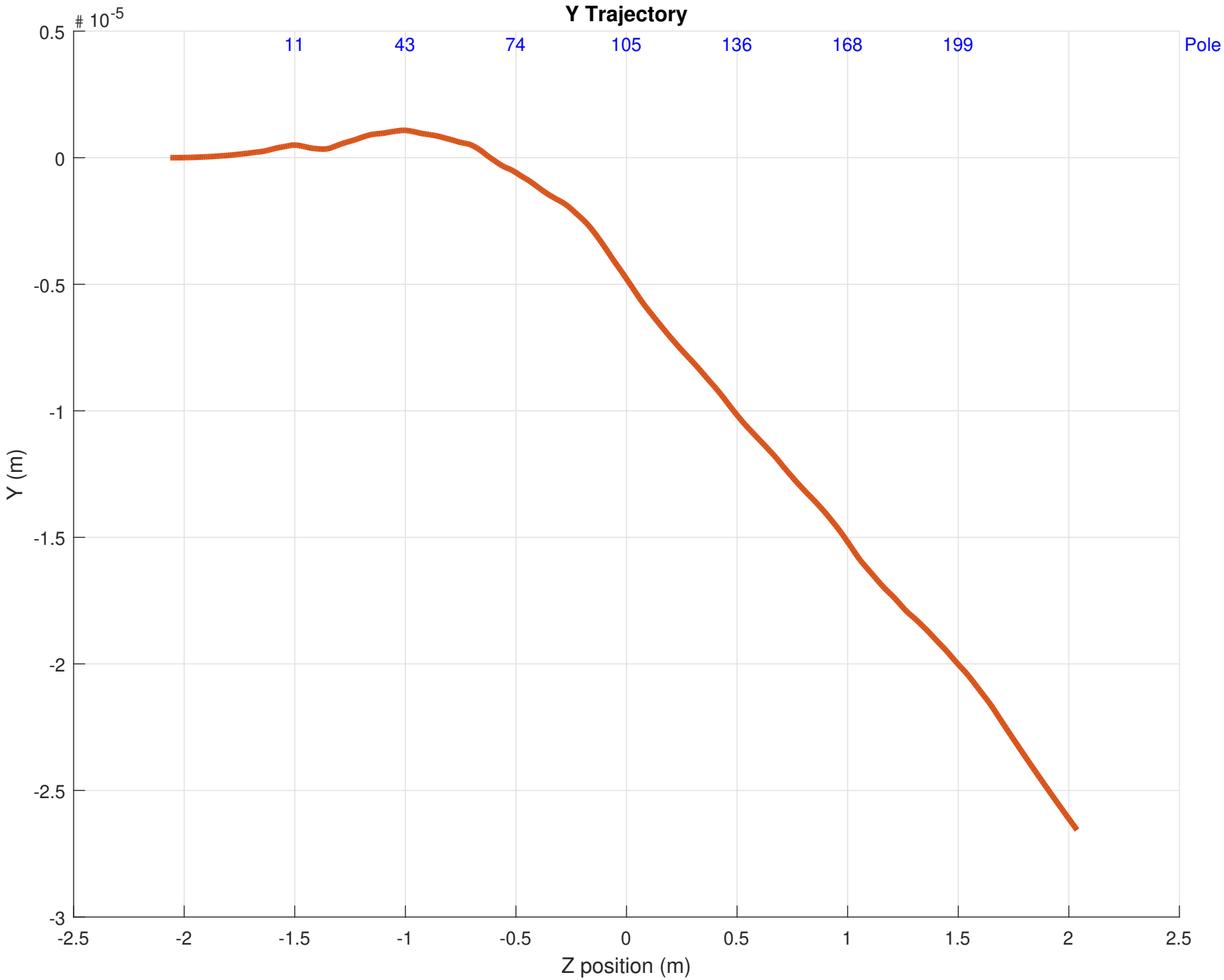
SLAC Magnetic Measurements

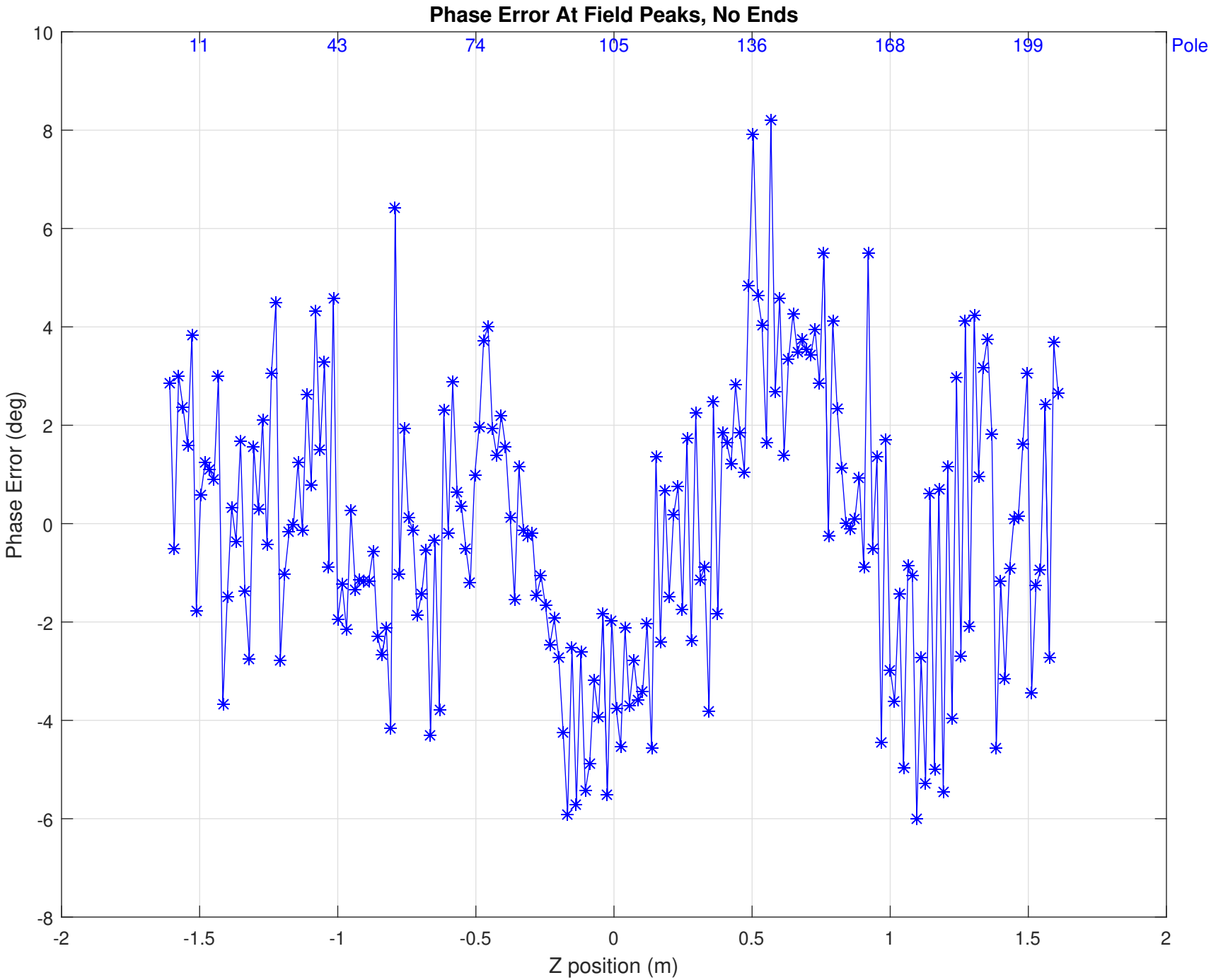
Planar Insertion Device Analysis

Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS2\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 080\
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

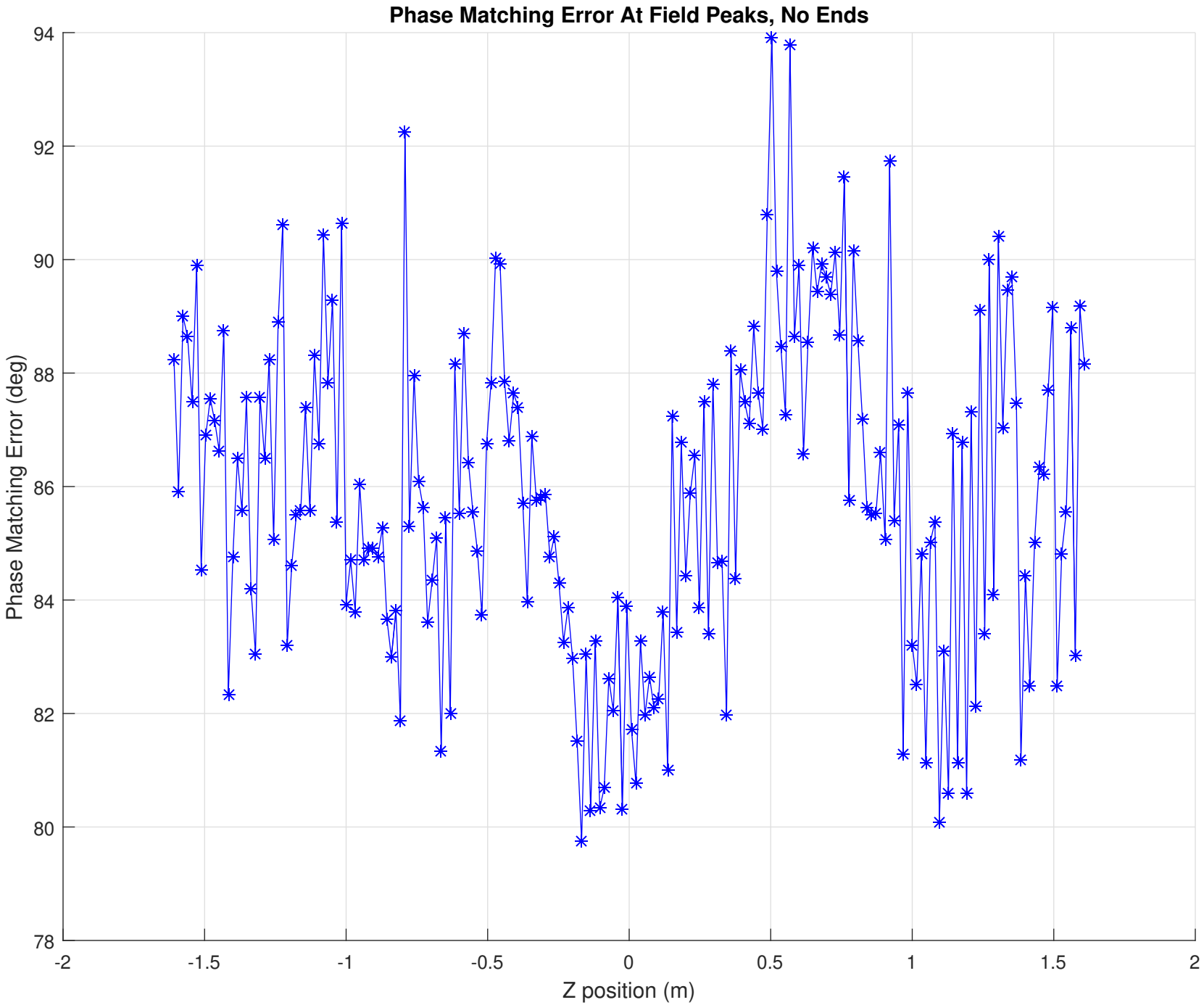

s s Bx dz dz and s s By dz dz
10^-4
I2x
I2x Filt
I2y
I2y Filt
s s B dz dz (Tm**2)
Z (m)
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5


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)

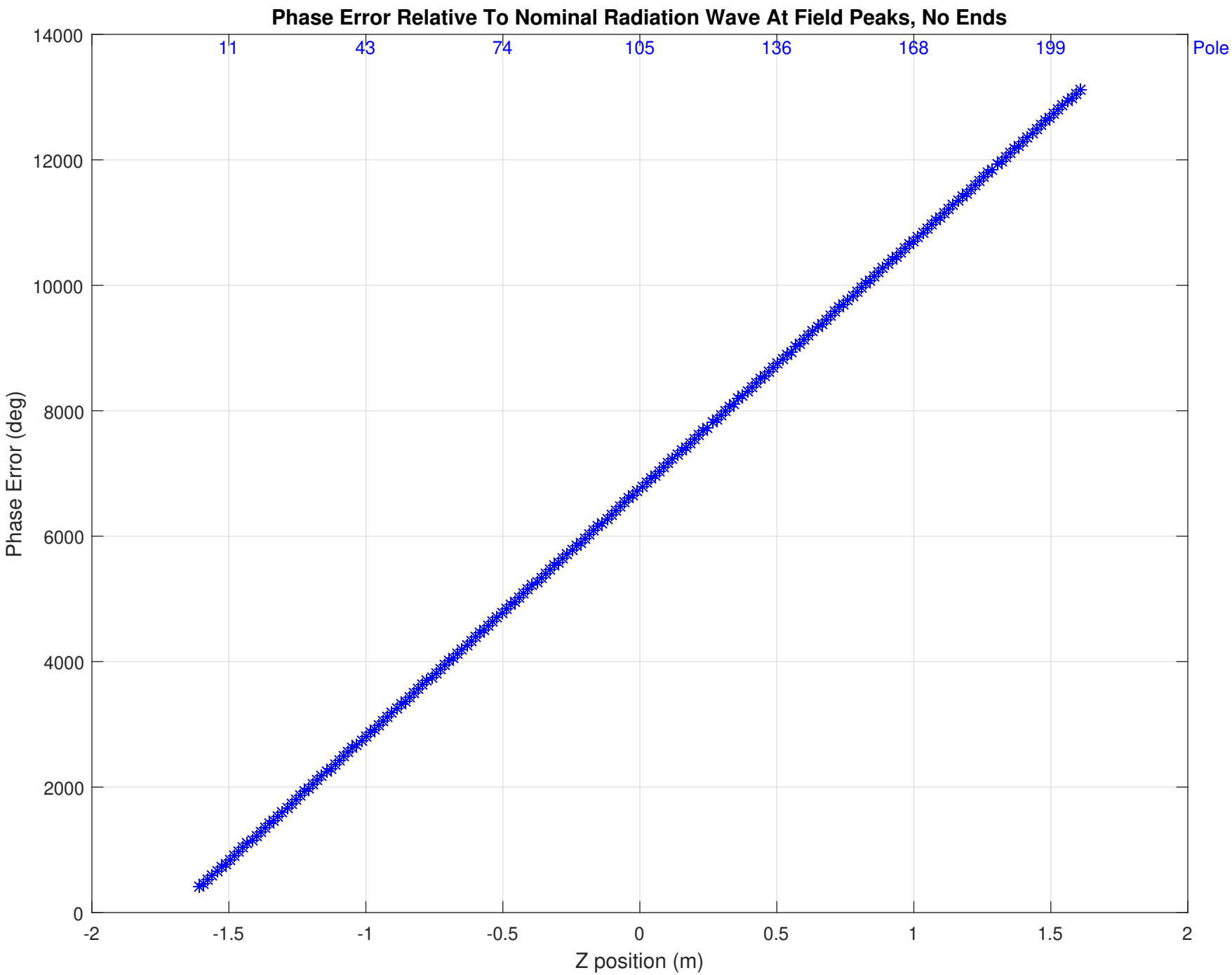

Y Trajectory
10^-5
11
43
74
105
136
168
199
Pole
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)



Phase Error: Ave = -0.000000 deg, RMS = 2.845575 deg



Phase Match Error: Ave = 85.871122 deg, RMS = 2.875555 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
43
74
105
136
168
199
Pole
14000
12000
10000
8000
6000
4000
2000
0
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)