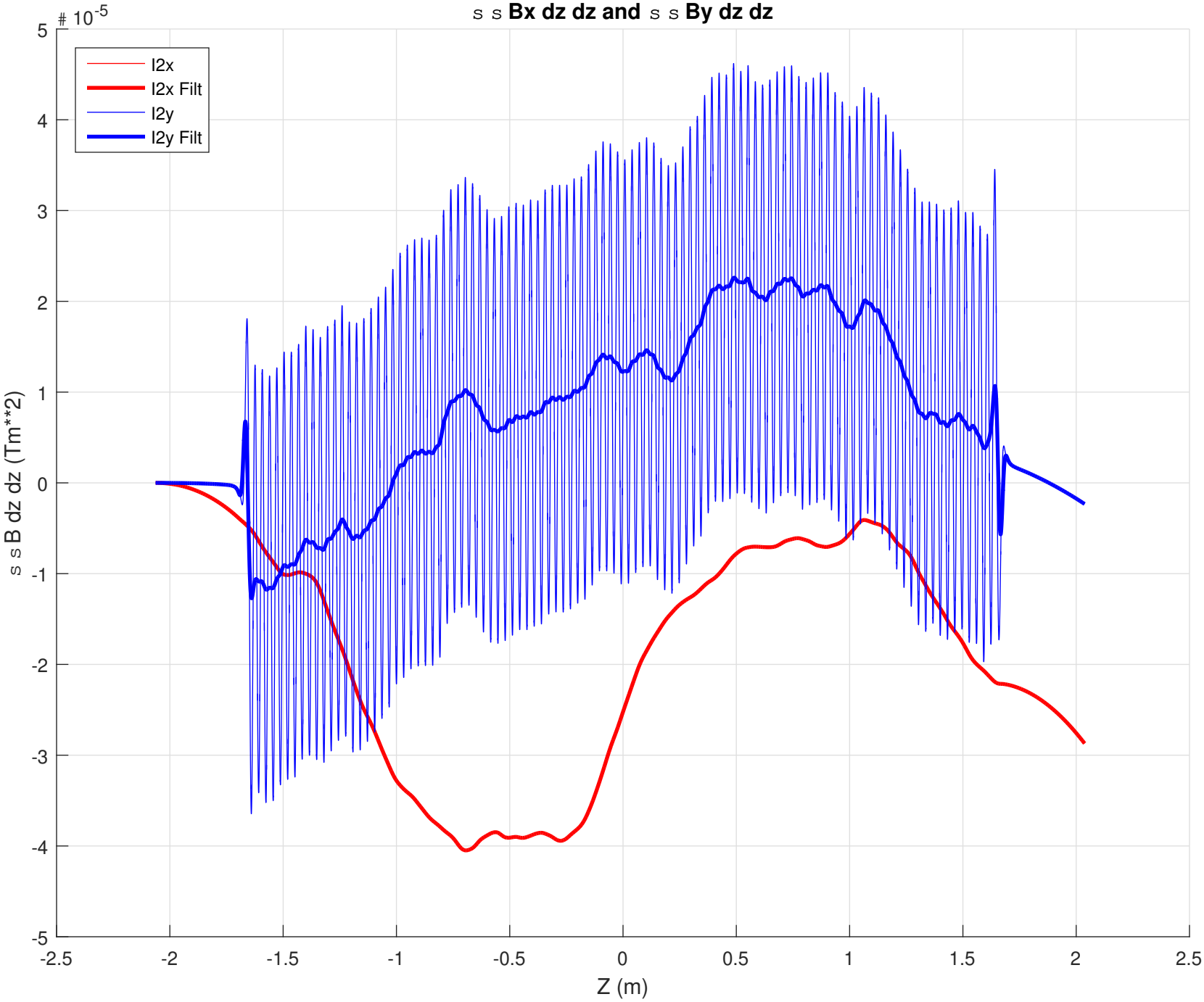
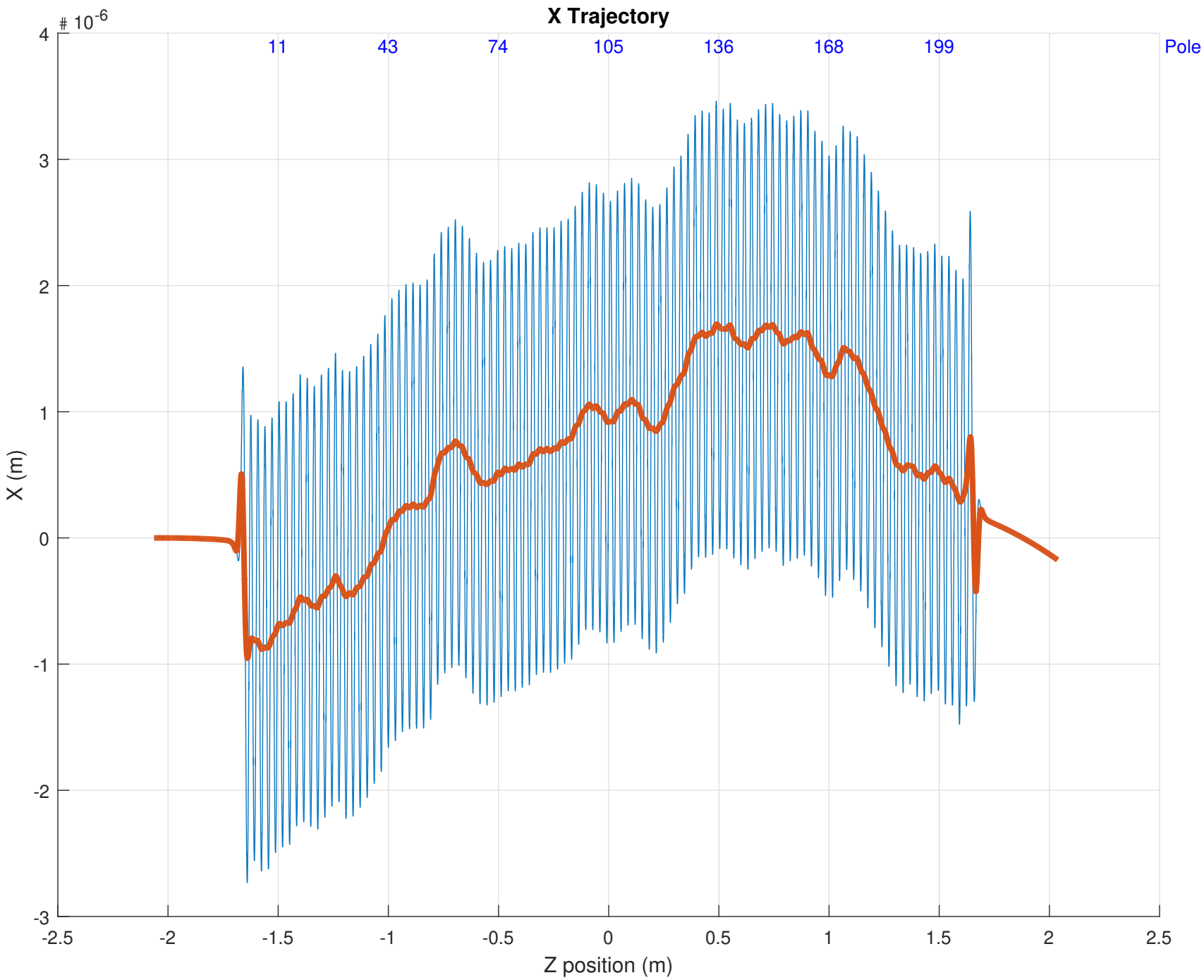
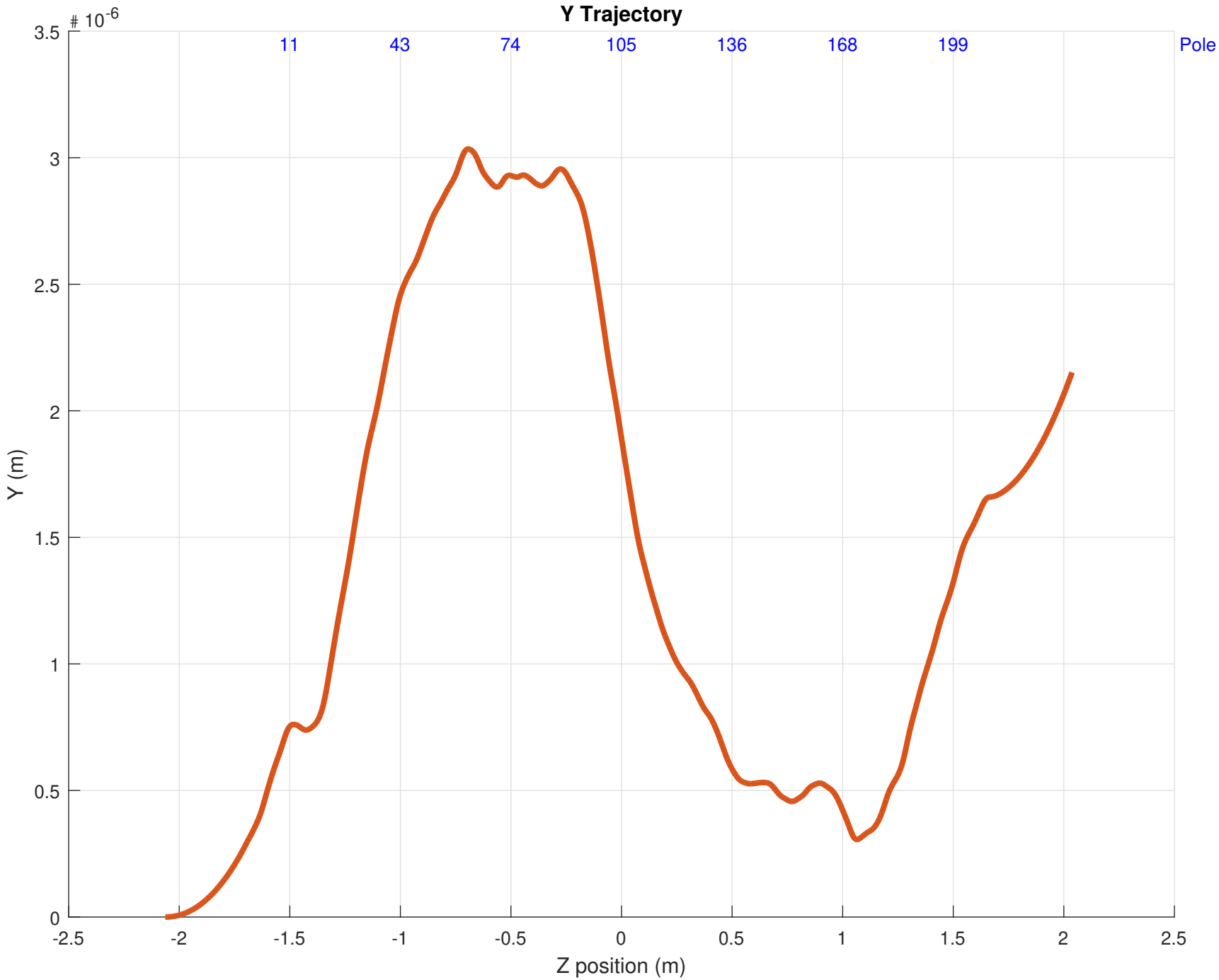
SLAC Magnetic Measurements

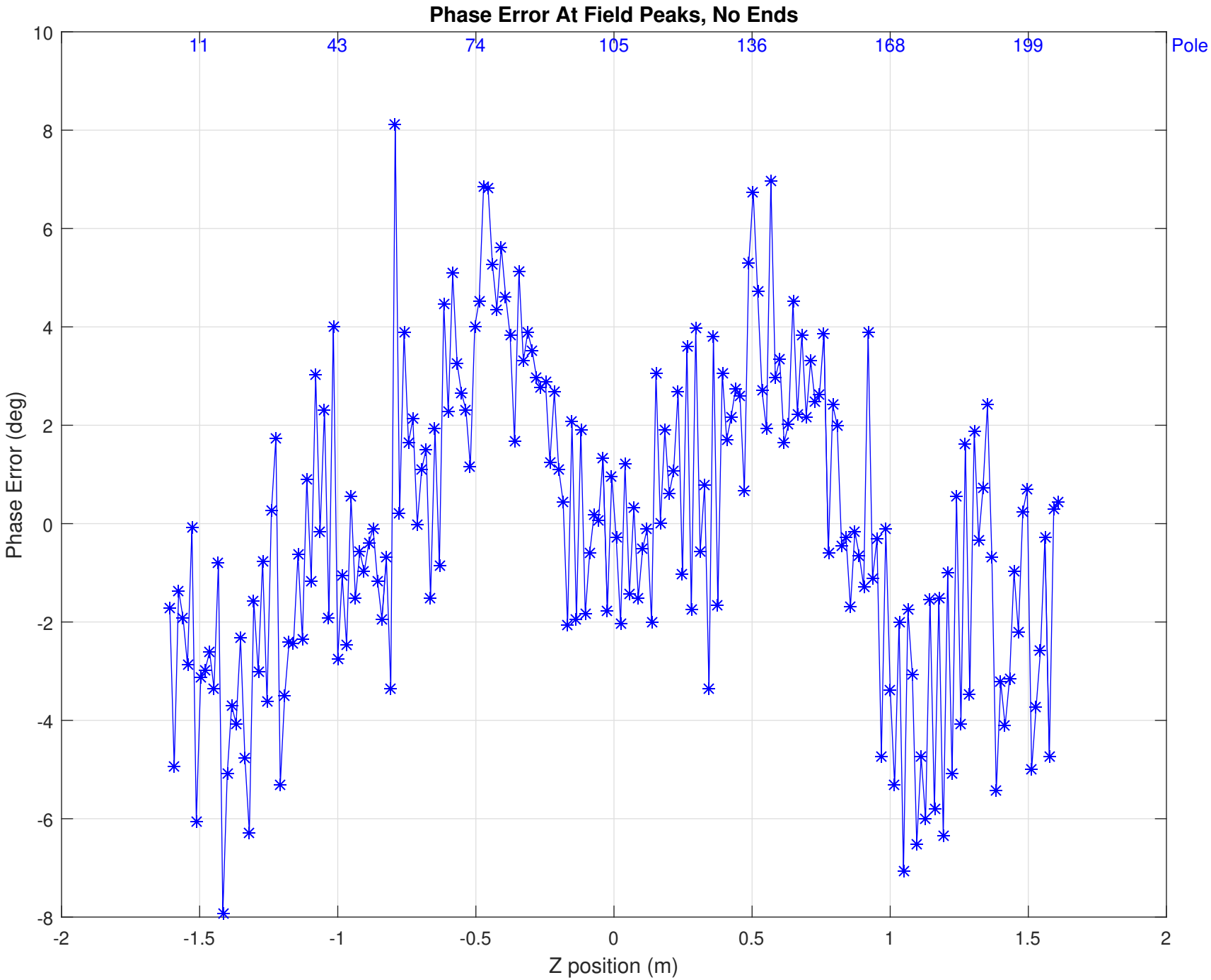
Planar Insertion Device Analysis

Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS2\Undulator\HXU-32\DATASET0001\Fine Tuning\Z Scans\Run 073\
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

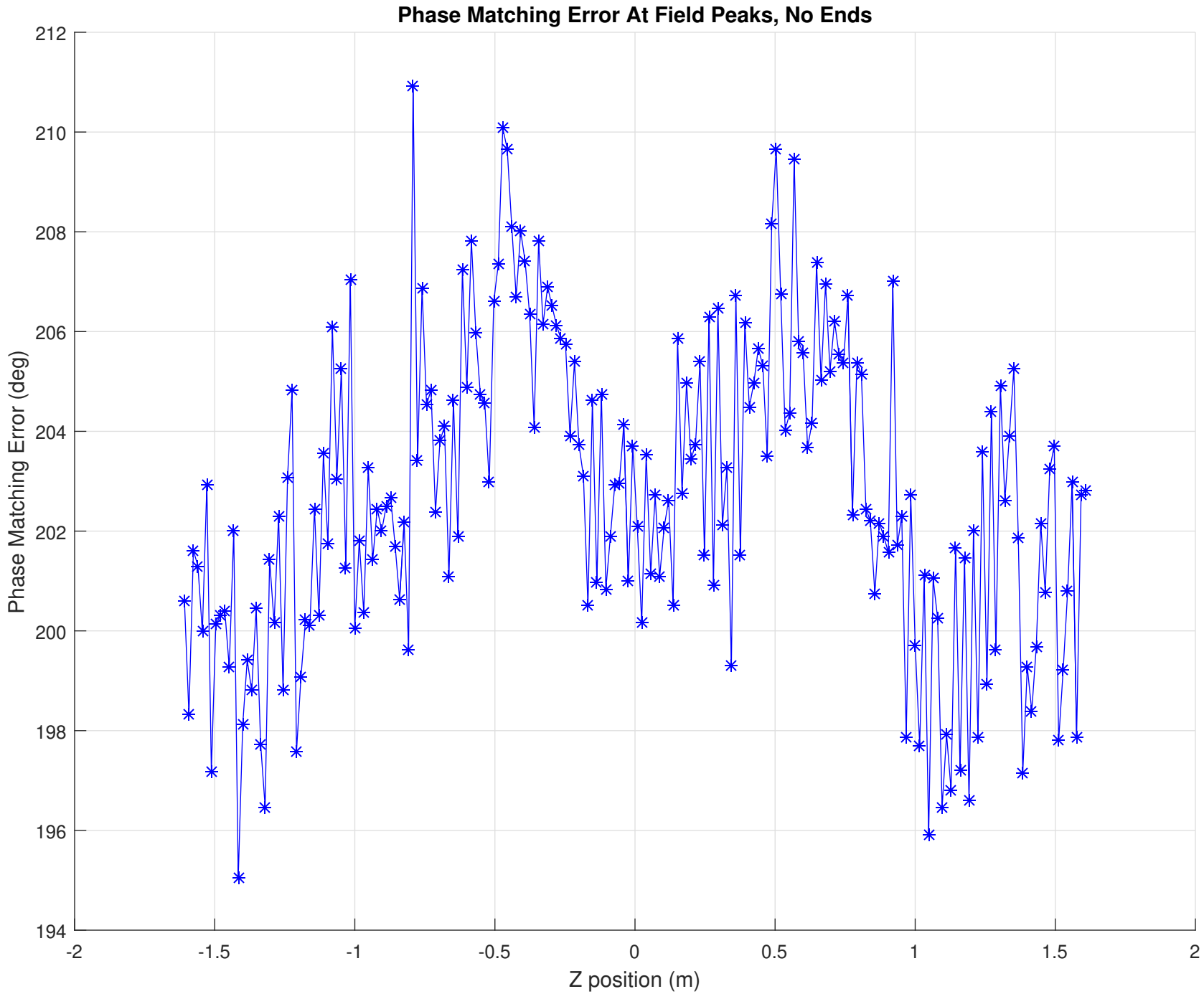

s s Bx dz dz and s s By dz dz
10^-5
I2x
I2x Filt
I2y
I2y Filt
s s B dz dz (Tm**2)
Z (m)
5
4
3
2
1
0
-1
-2
-3
-4
-5
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5


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

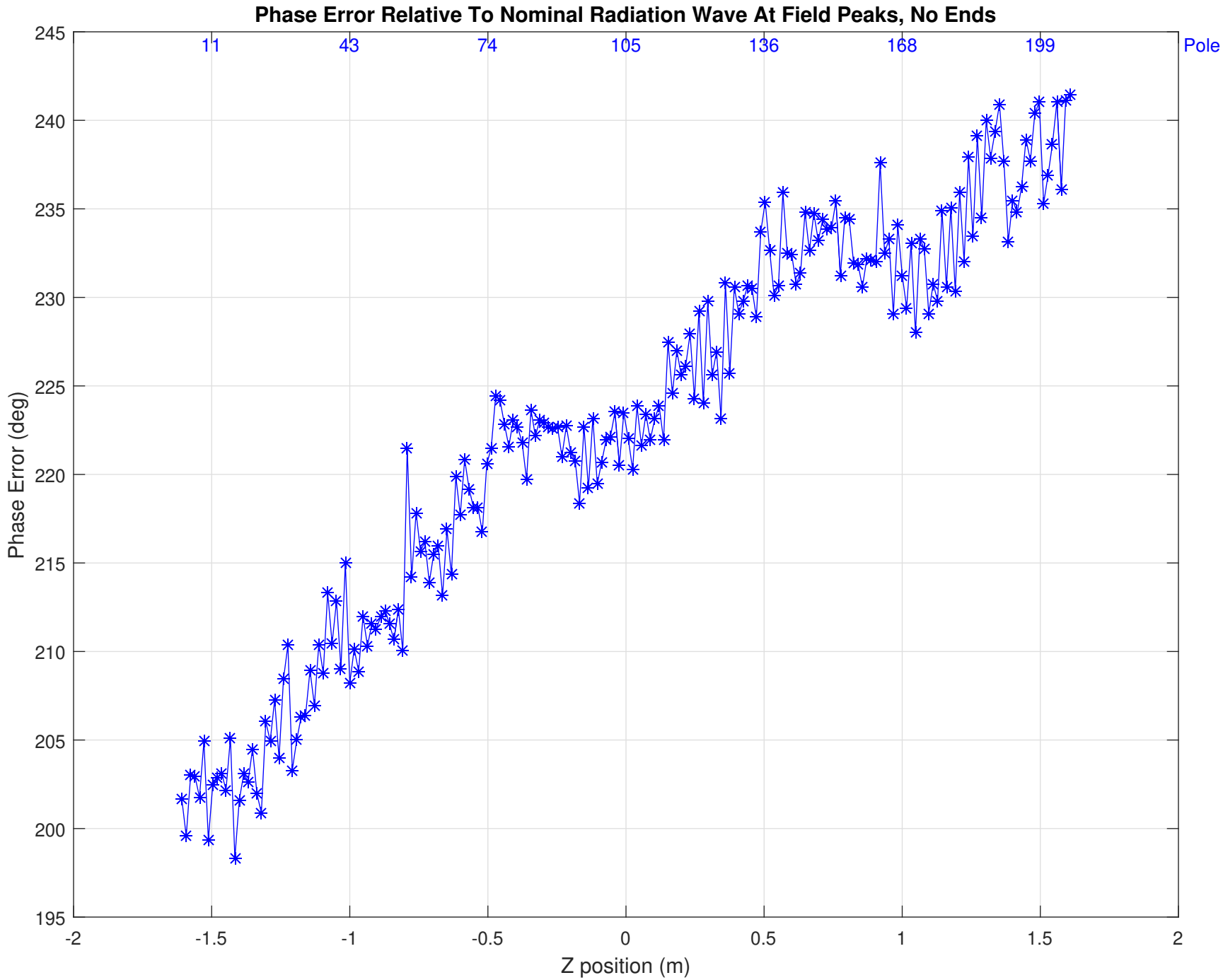

Y Trajectory
10^-6
3.5
3
2.5
2
1.5
1
0.5
0
11
43
74
105
136
168
199
Pole
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z position (m)



Phase Error: Ave = 0.000000 deg, RMS = 3.117161 deg



Phase Match Error: Ave = 202.786469 deg, RMS = 3.082740 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
11
43
74
105
136
168
199
Pole
245
240
235
230
225
220
215
210
205
200
195
Phase Error (deg)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Z position (m)