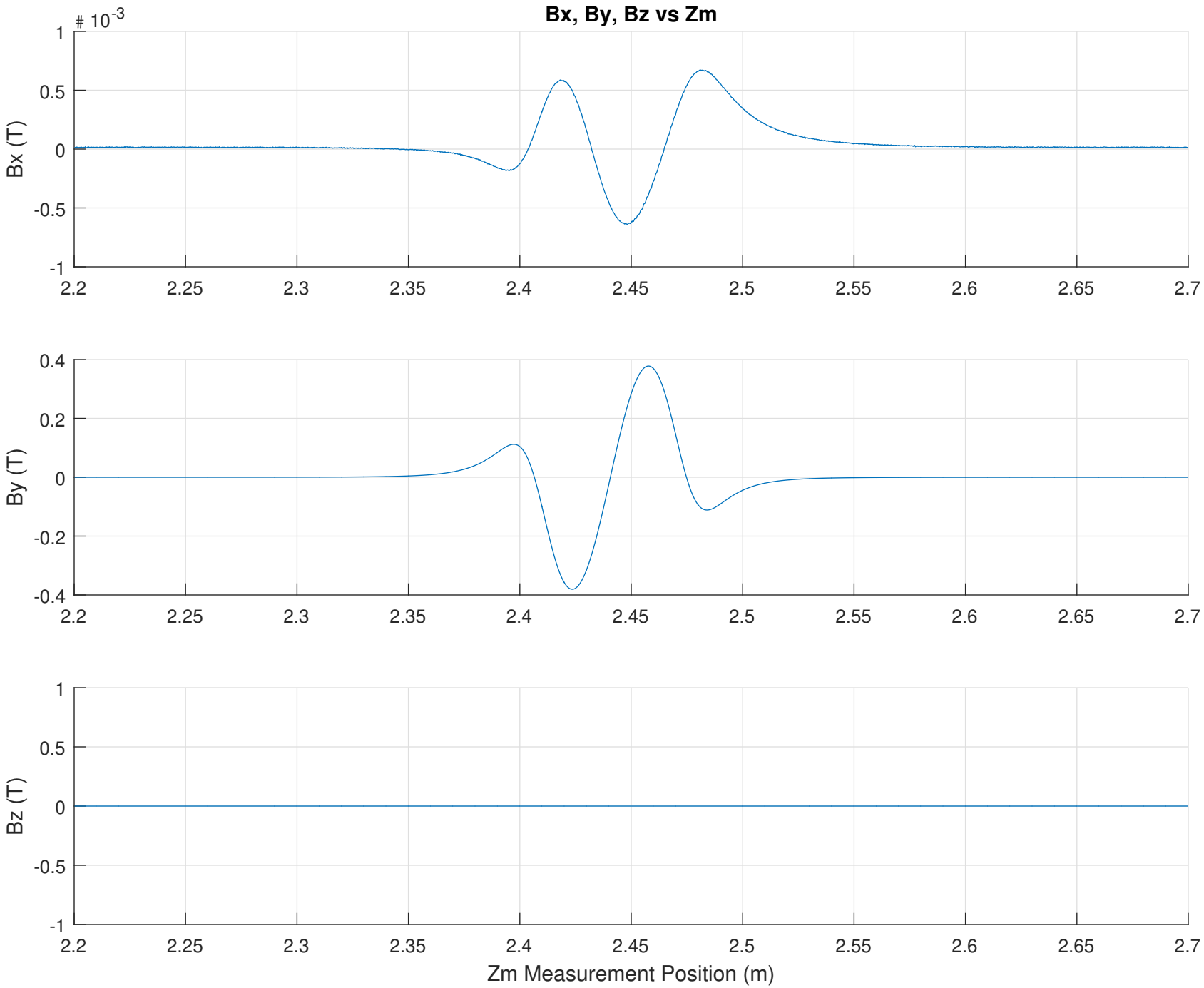
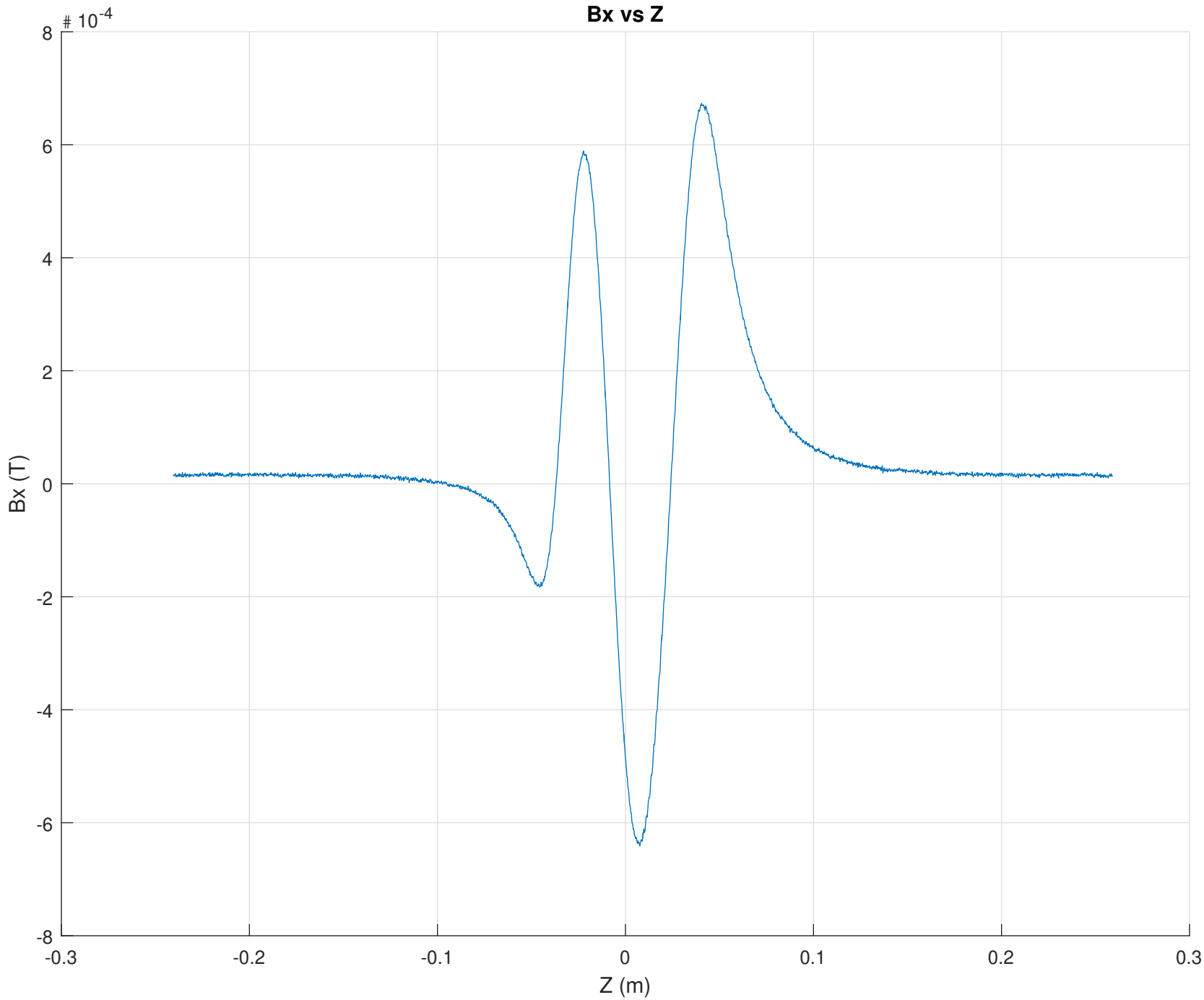
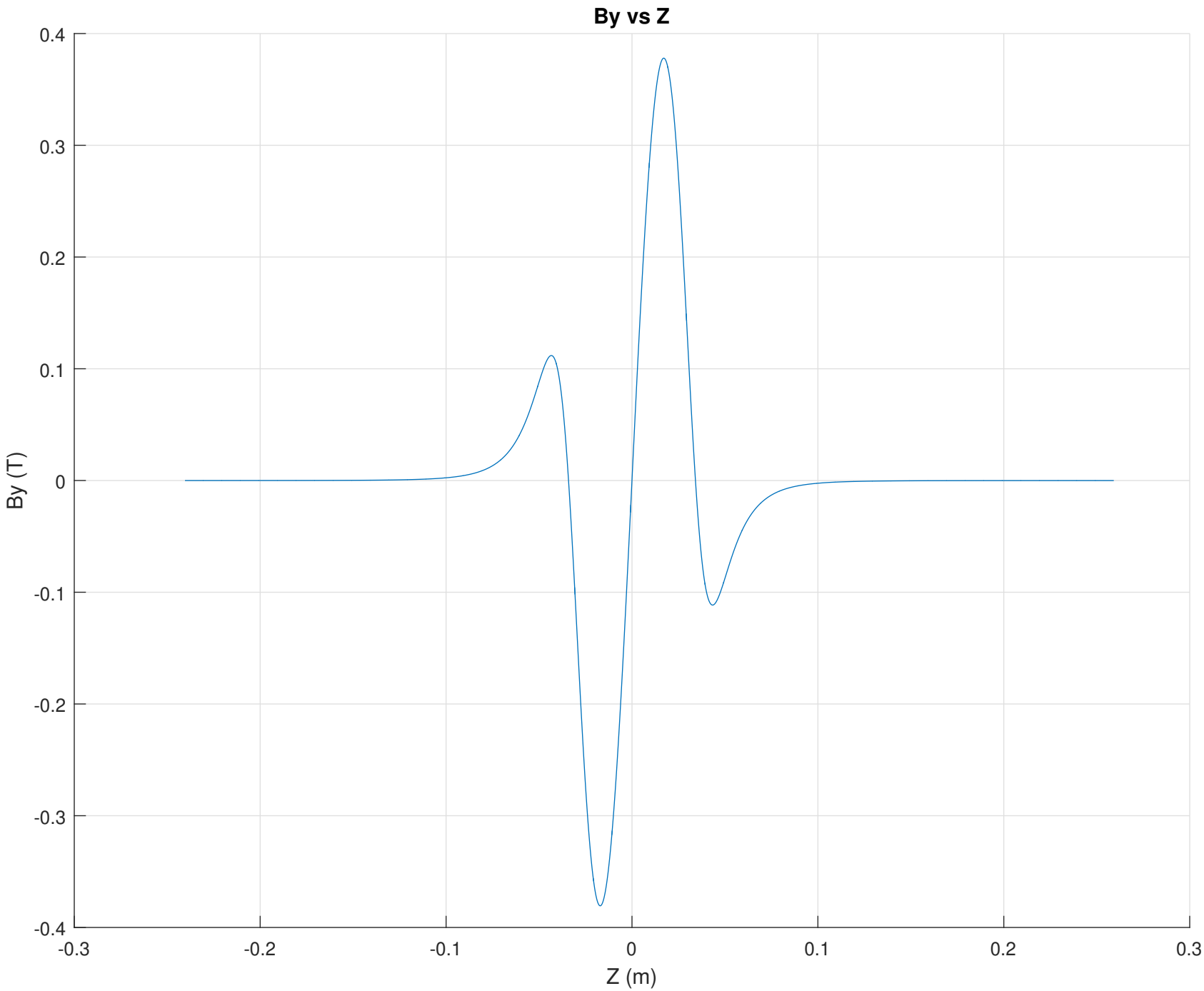
SLAC Magnetic Measurements

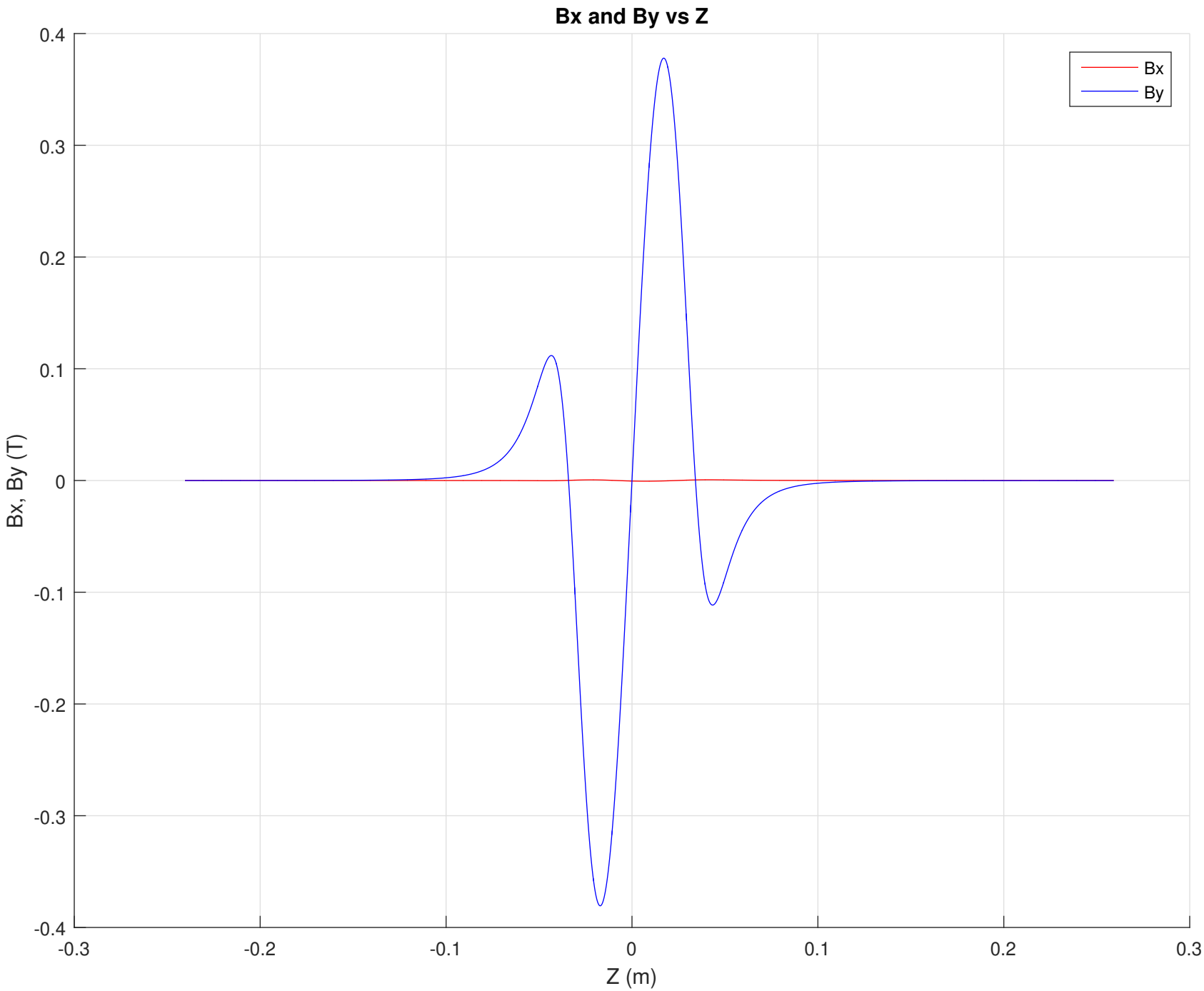
Phase Analysis

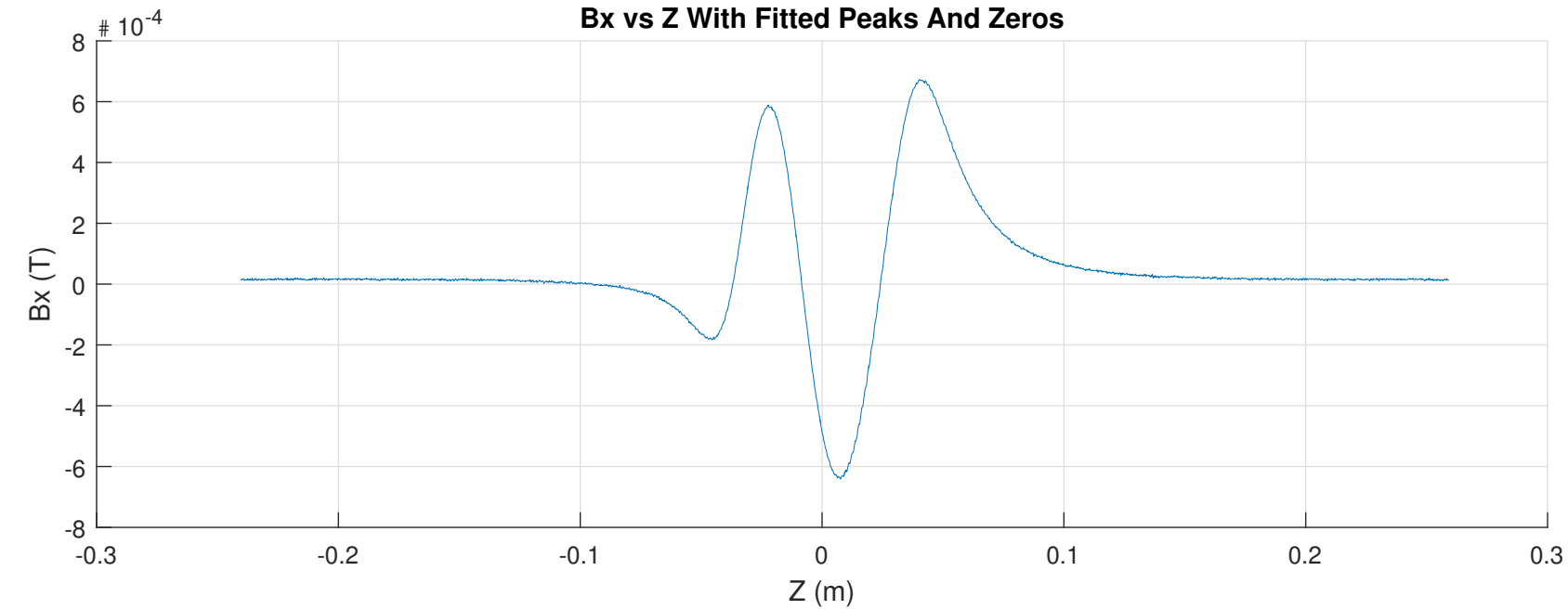
Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS\Undulator\PHASE-SHIFTER\DATASET0002\Fine Tuning\Z Scans\Run 045\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =0
GAMMA =16765.2111
NOM-LAMBDA-U =0.032
NOM-K-VALUE =9.9
NOM-LAMBDA-R =2.8465e-09
NUM-POLES =4
NUM-END-POLES =0
CELL-LENGTH =0.6

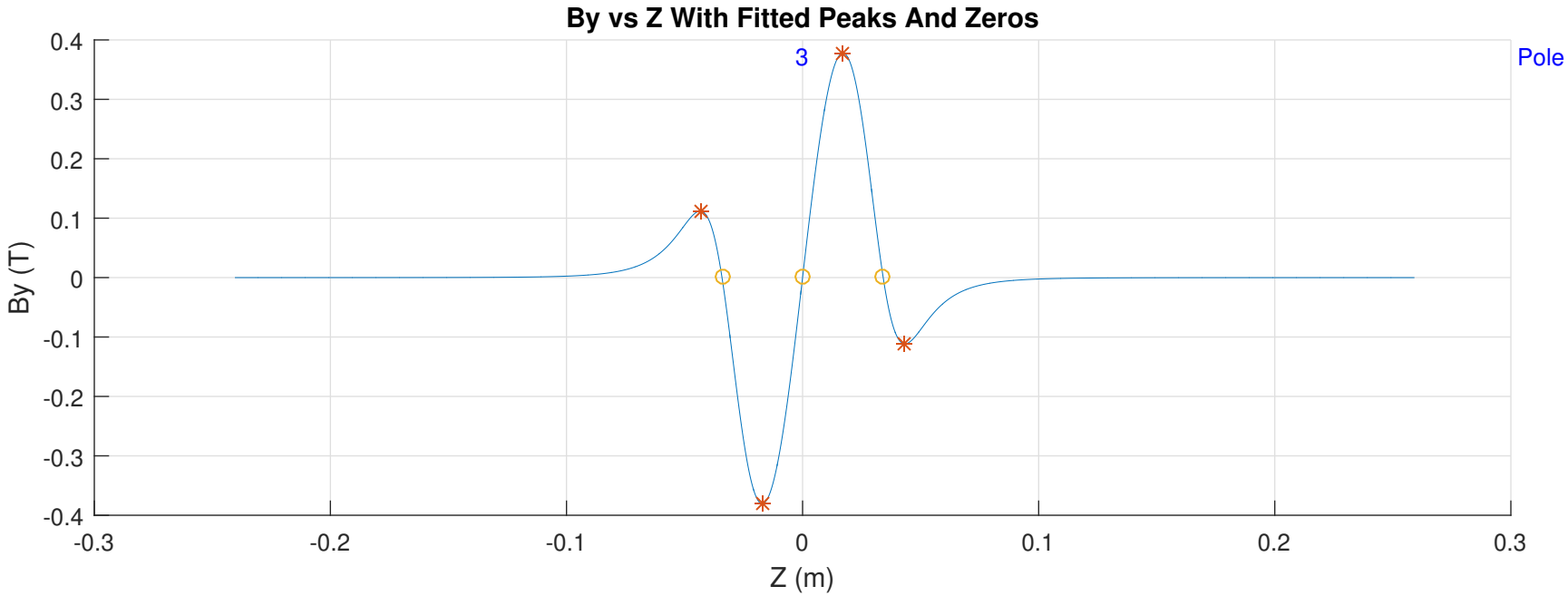

Bx, By, Bz vs Zm
10^-3
Bx (T)
By (T)
Bz (T)
Zm Measurement Position (m)
1
0.5
0
-0.5
-1
0.4
0.2
-0.2
-0.4
2.2
2.25
2.3
2.35
2.4
2.45
2.5
2.55
2.6
2.65
2.7

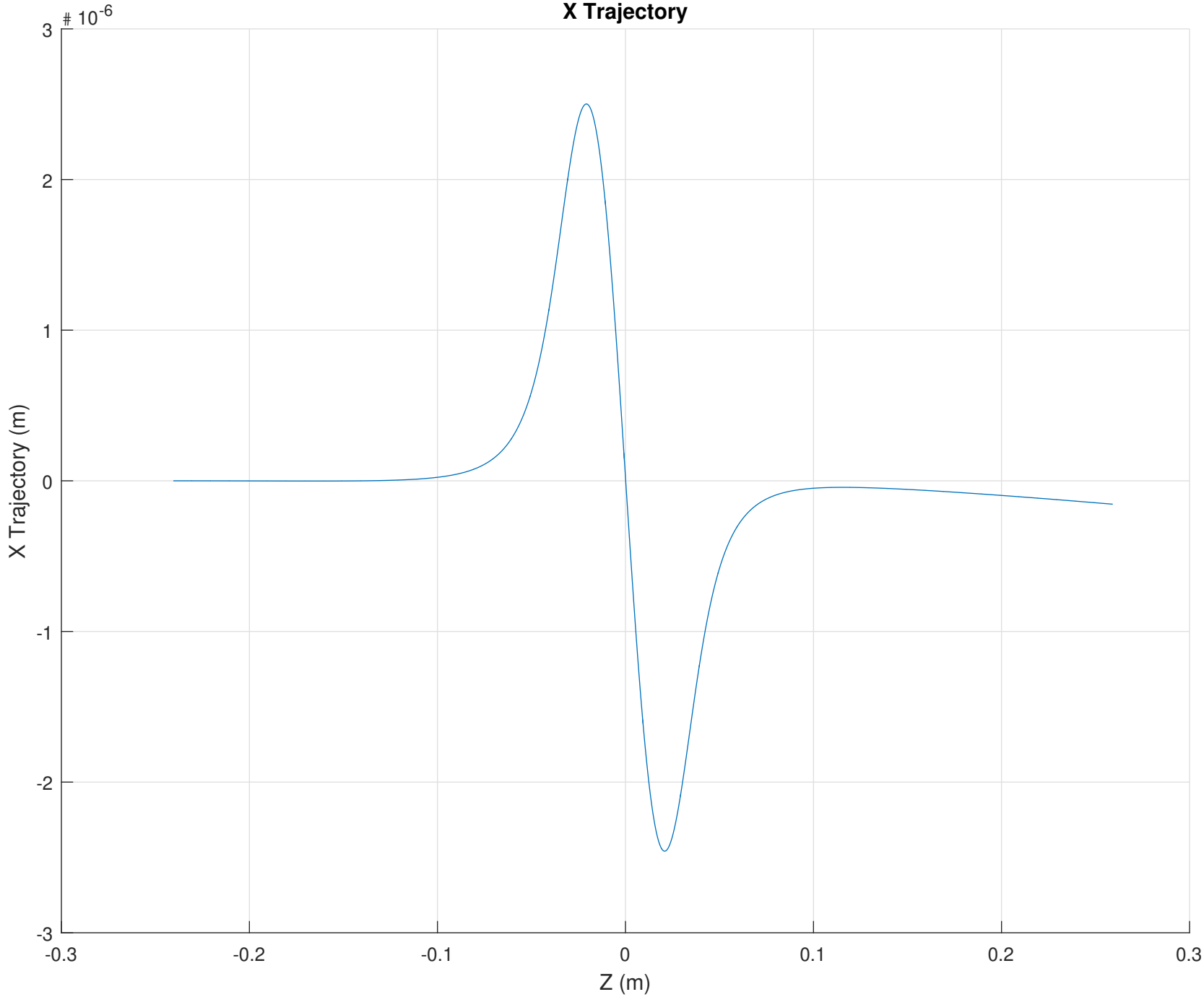

Bx vs Z
10^-4
8
6
4
2
0
-2
-4
-6
-8
Bx (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

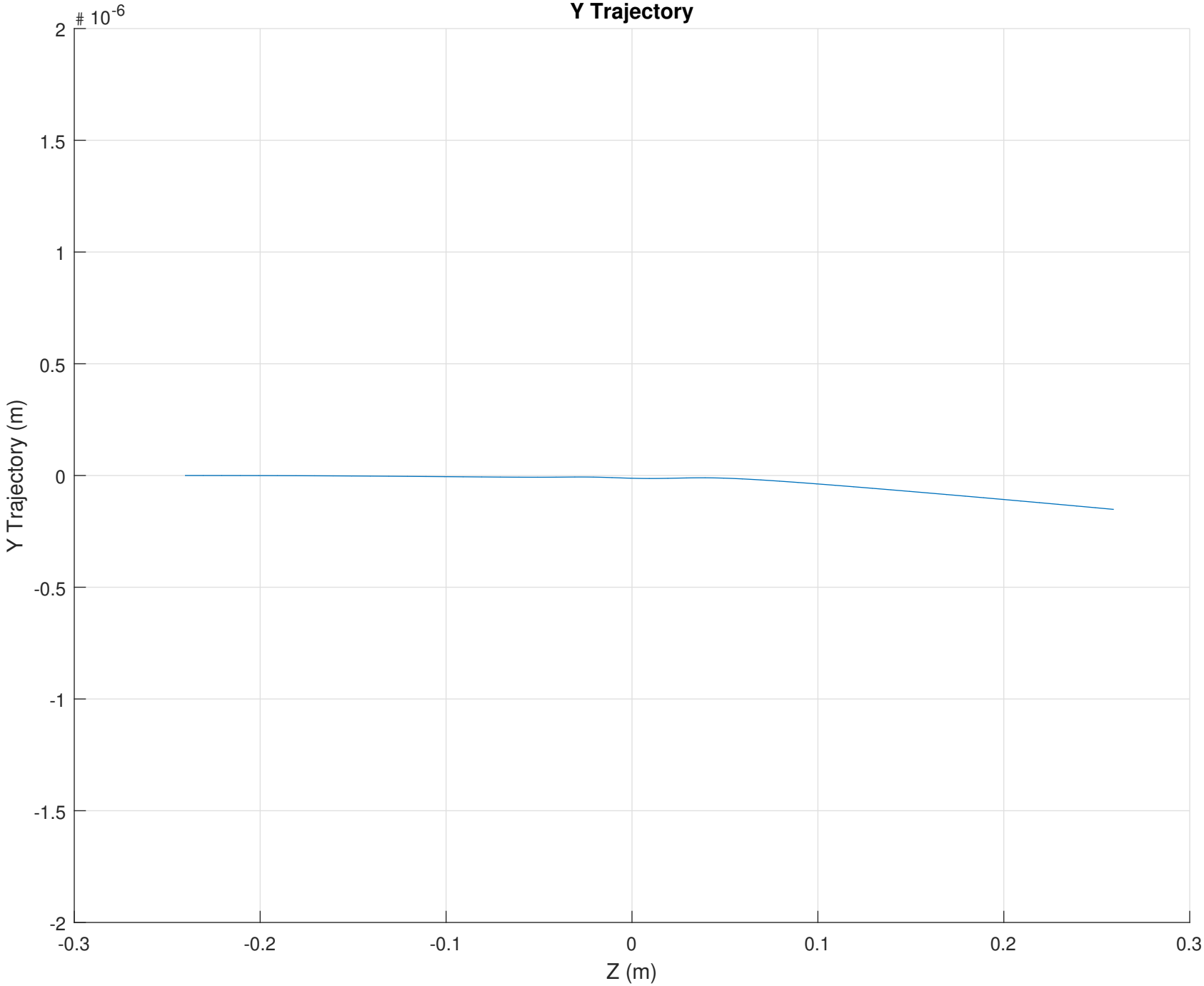

By vs Z
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
By (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

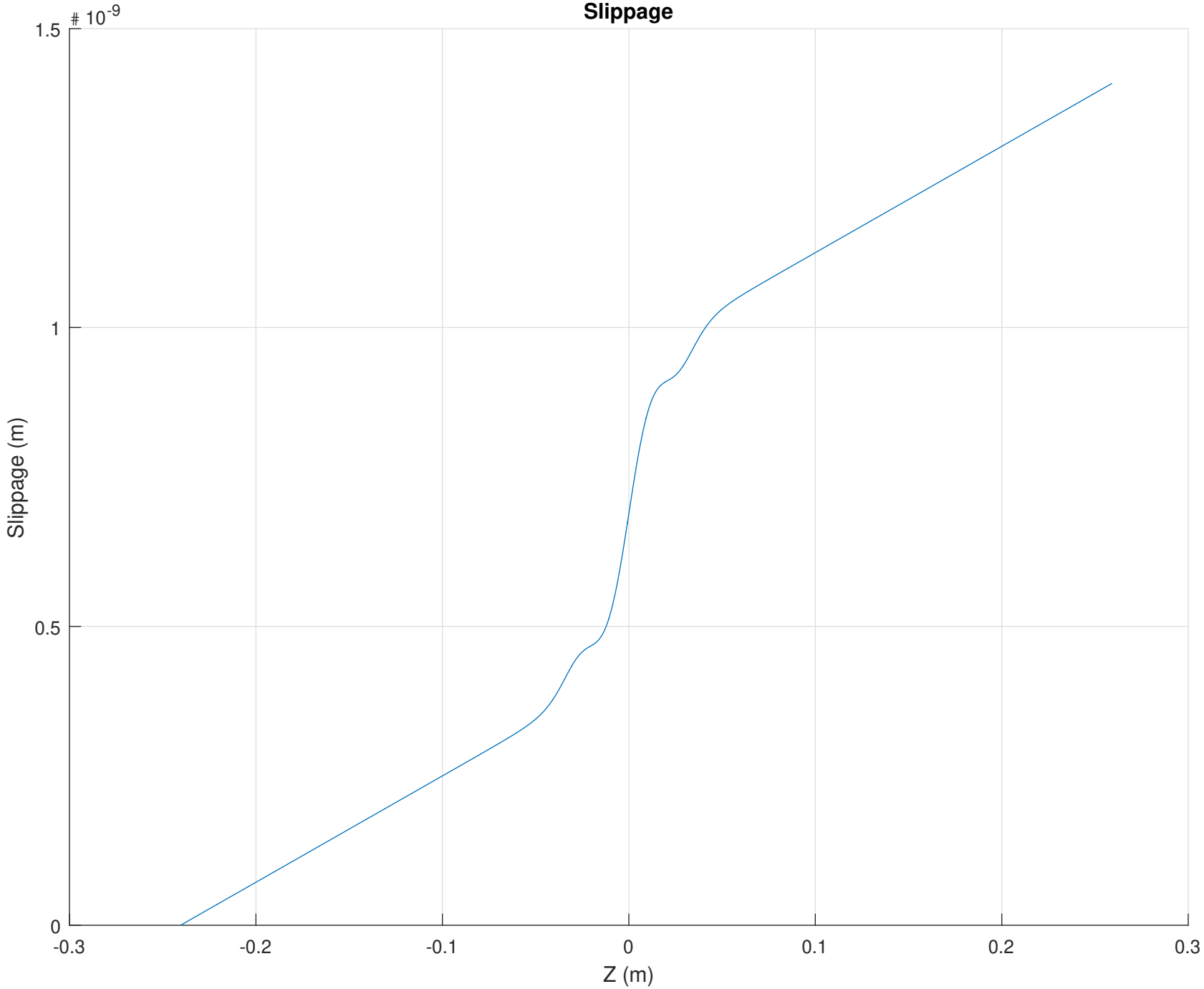

Bx and By vs Z
Bx
By
Bx, By (T)
Z (m)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3

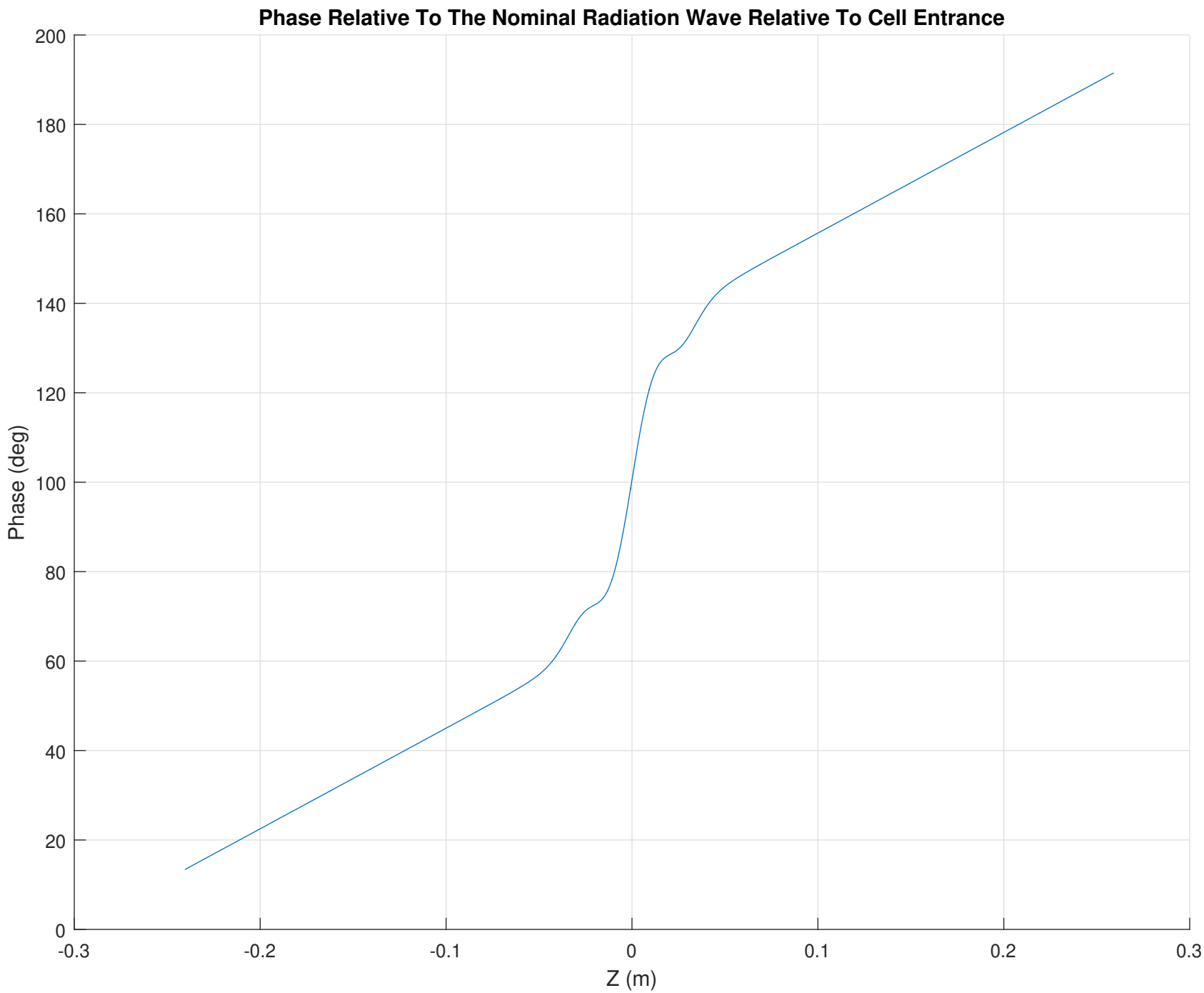

Bx vs Z With Fitted Peaks And Zeros
10^-4
8
6
4
2
0
-2
-4
-6
-8
Bx (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


By vs Z With Fitted Peaks And Zeros
3
Pole
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
By (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


X Trajectory
10^-6
3
2
1
0
-1
-2
-3
X Trajectory (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Y Trajectory
10^-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Y Trajectory (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Slippage
10^-9
1.5
1
0.5
0
Slippage (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Phase Relative To The Nominal Radiation Wave Relative To Cell Entrance
200
180
160
140
120
100
80
60
40
20
0
Phase (deg)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)