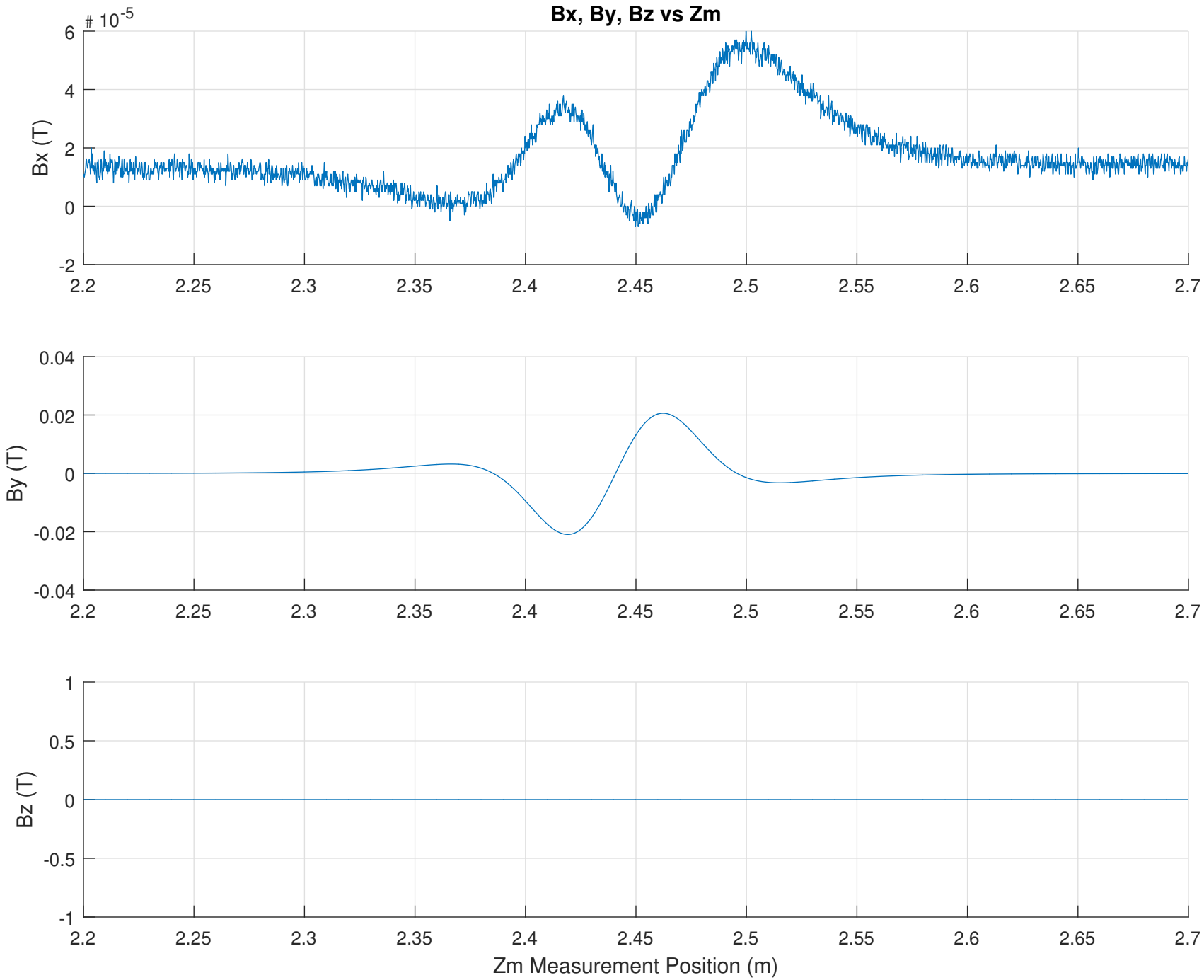
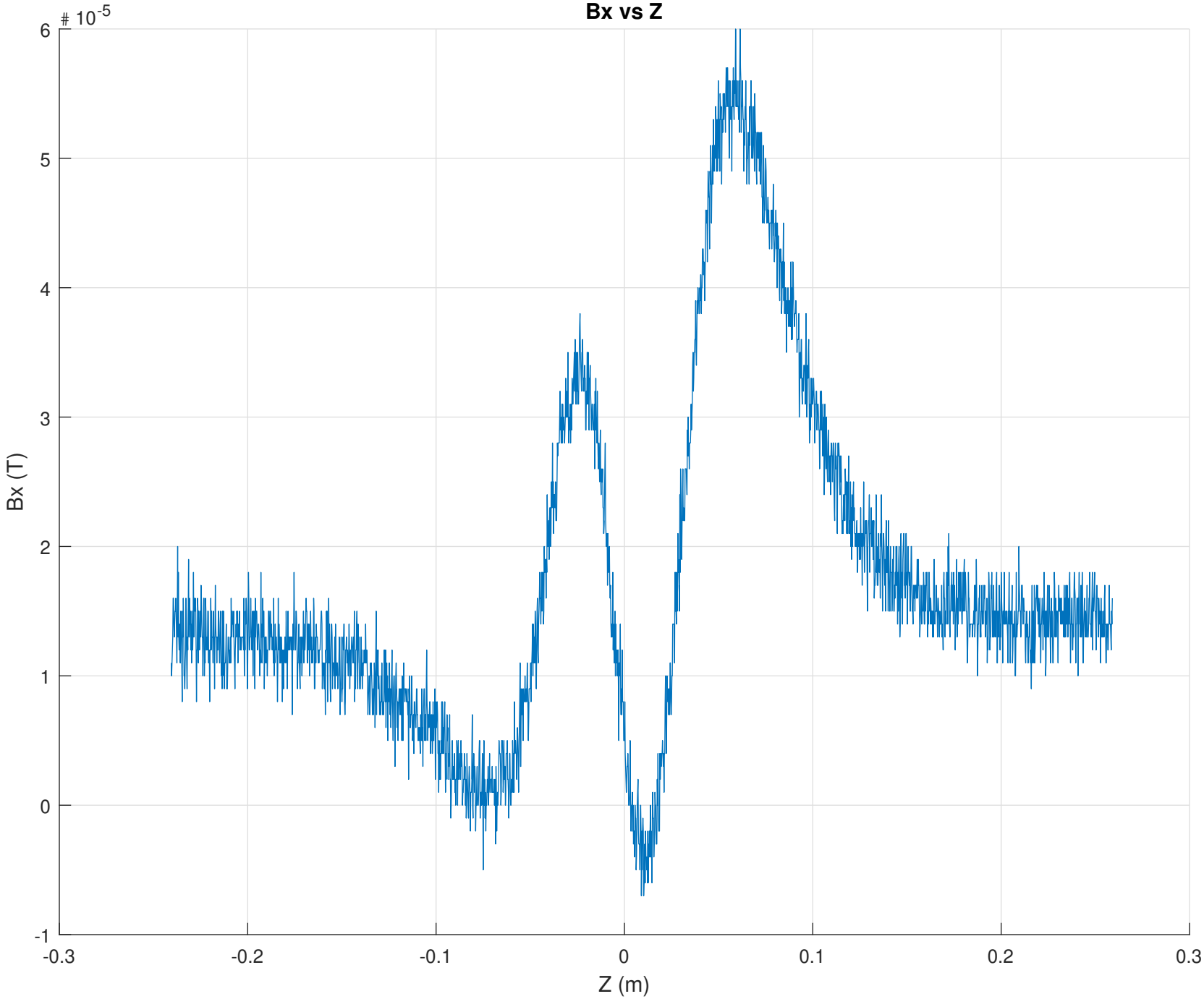
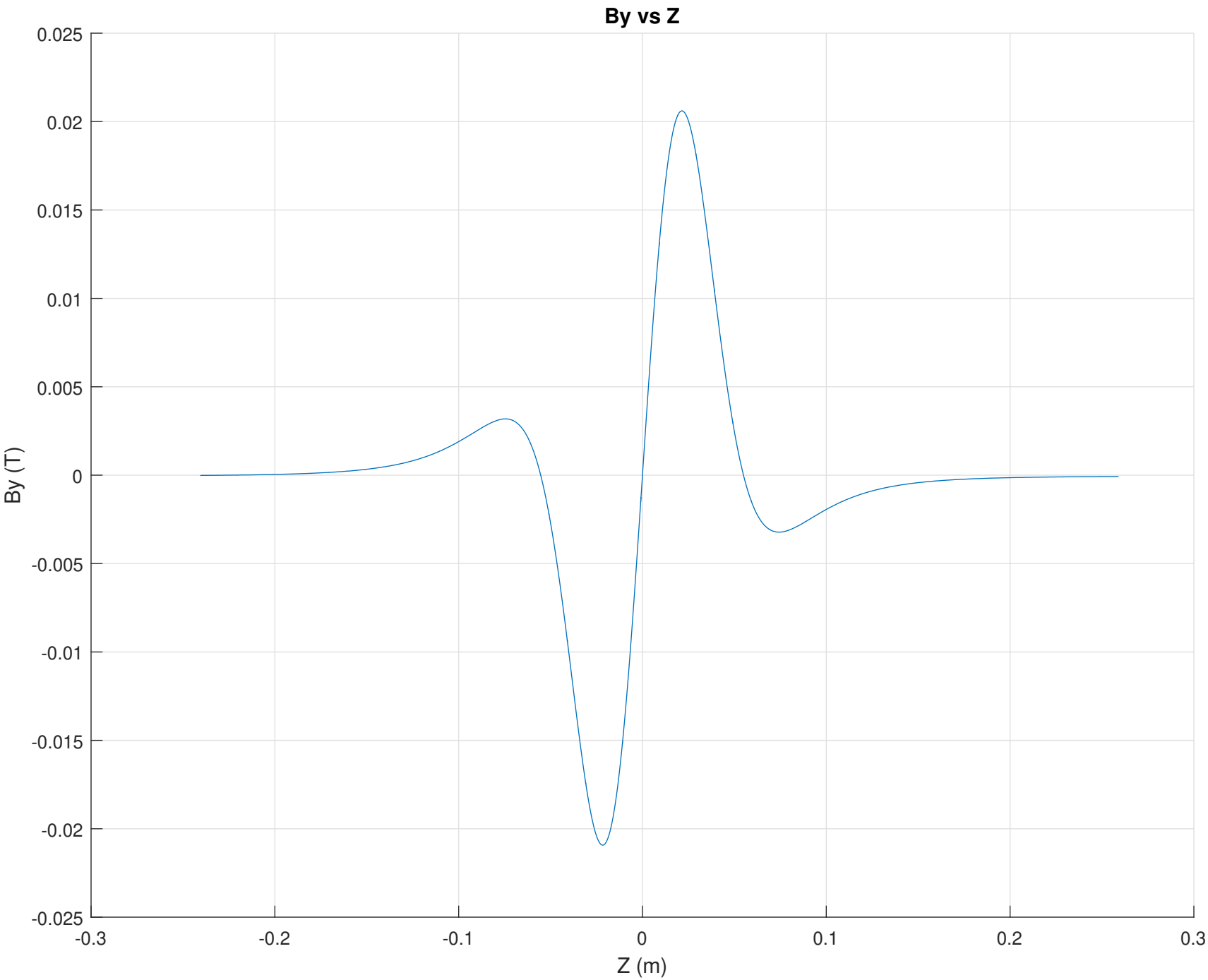
SLAC Magnetic Measurements

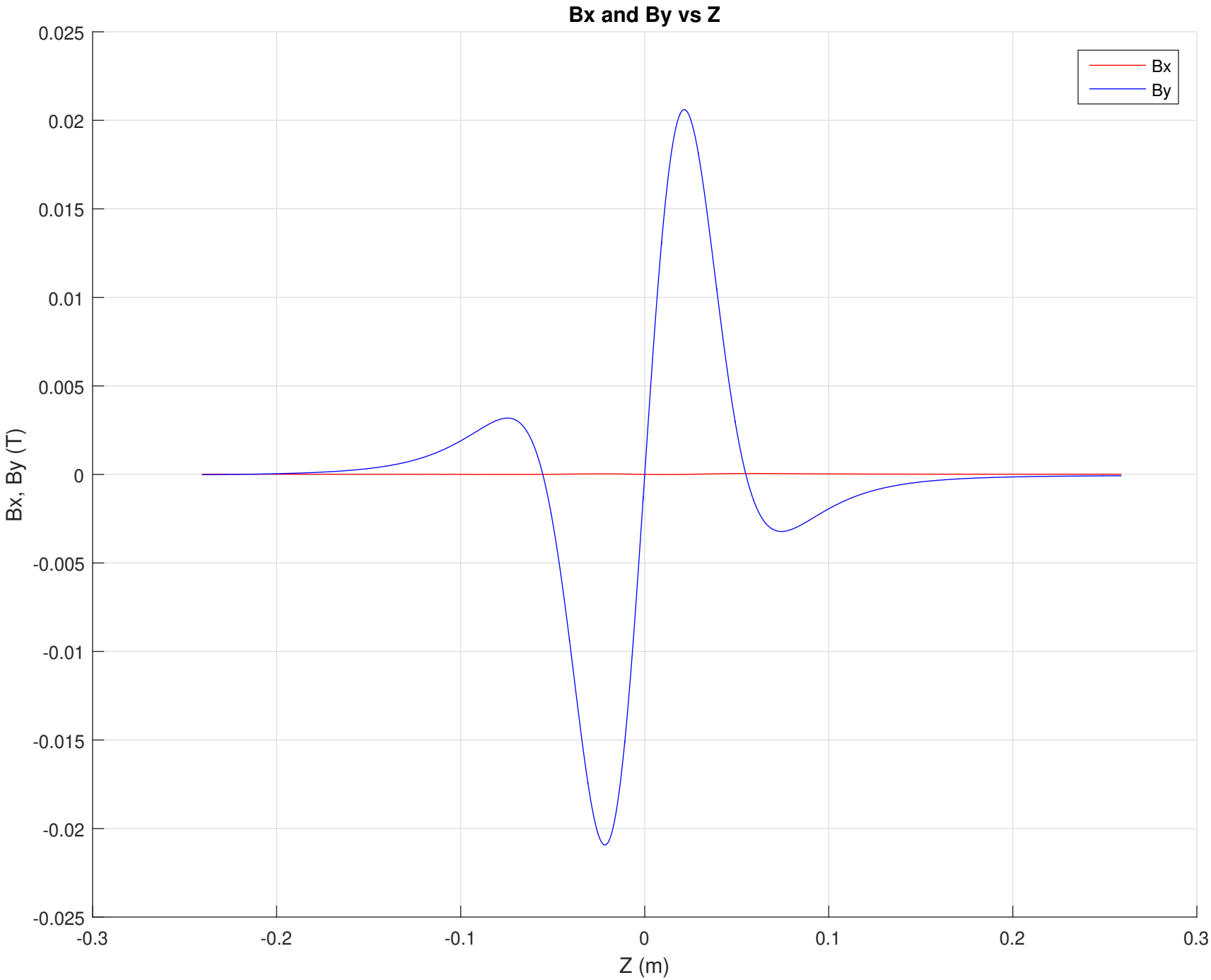
Phase Analysis

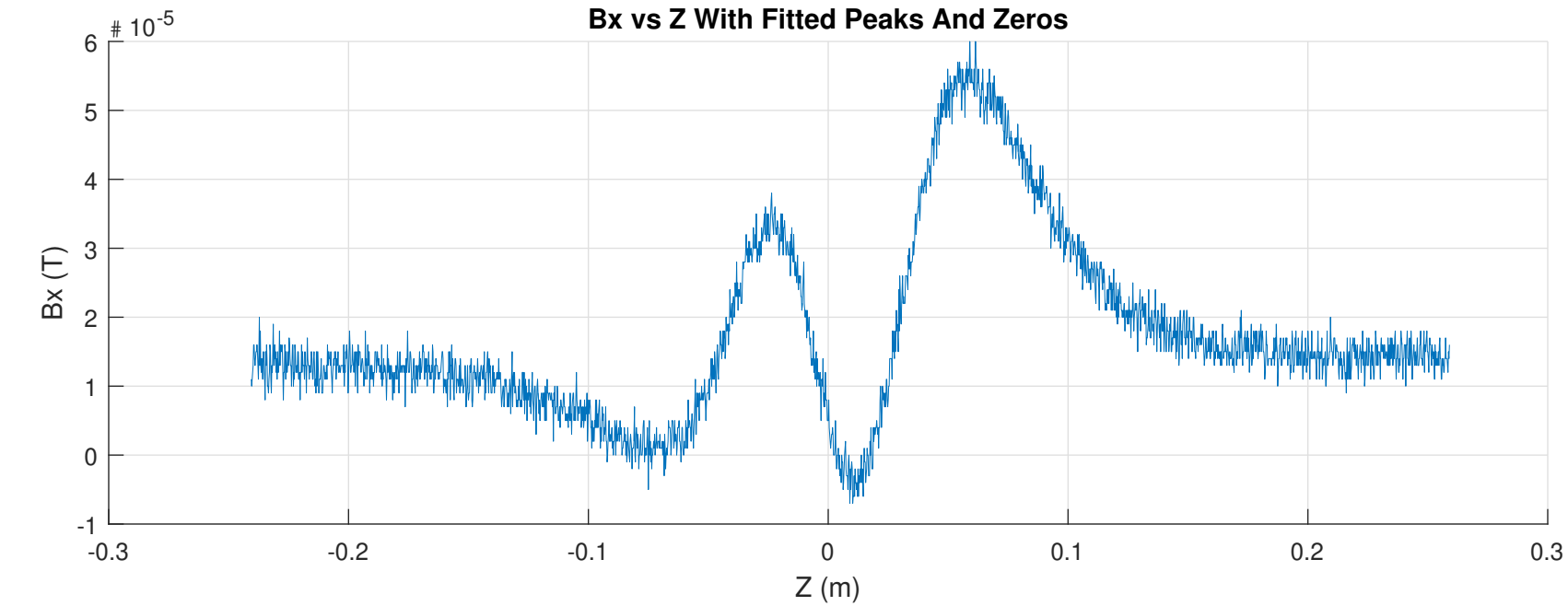
Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS\Undulator\PHASE-SHIFTER\DATASET0002\Fine Tuning\Z Scans\Run 044\
INPUT-FILE-NAME =x+00000-y+000-bscanz.dat
INPUT-FILE-TYPE =ZVXYBXYH
CORR-REQUIRED =0
GAMMA =16765.2111
NOM-LAMBDA-U =0.032
NOM-K-VALUE =9.9
NOM-LAMBDA-R =2.8465e-09
NUM-POLES =4
NUM-END-POLES =0
CELL-LENGTH =0.6

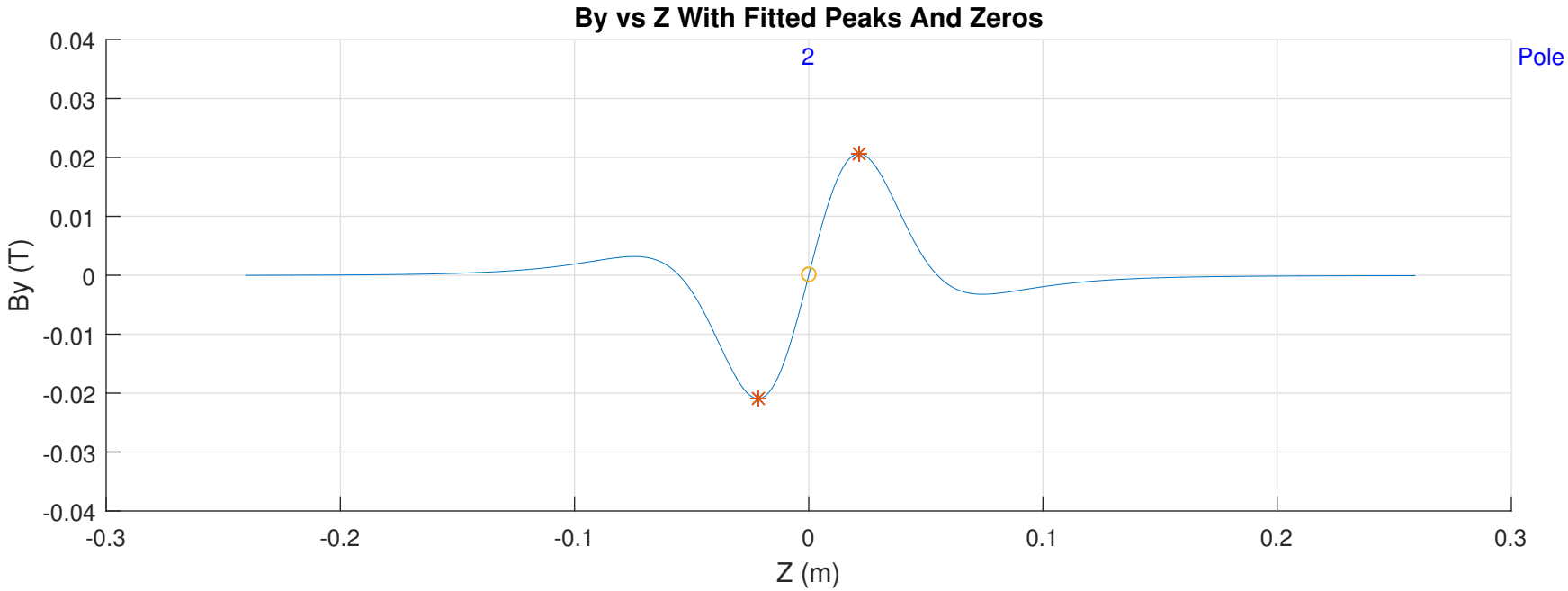

Bx, By, Bz vs Zm
10^-5
Bx (T)
By (T)
Bz (T)
Zm Measurement Position (m)
6
4
2
0
-2
0.04
0.02
0
-0.02
-0.04
1
0.5
0
-0.5
-1
2.2
2.25
2.3
2.35
2.4
2.45
2.5
2.55
2.6
2.65
2.7

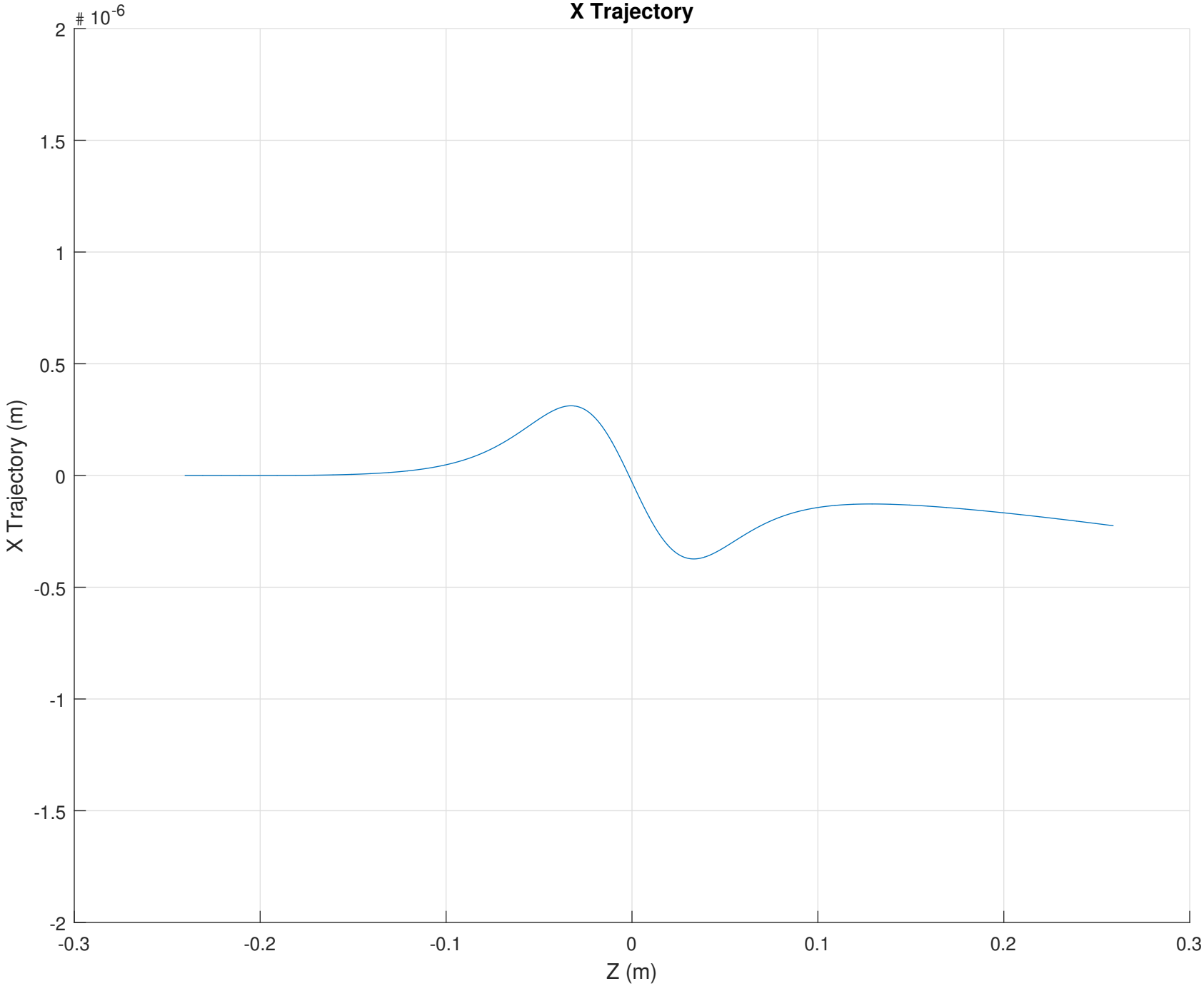

Bx vs Z
10^-5
6
5
4
3
2
1
0
-1
Bx (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

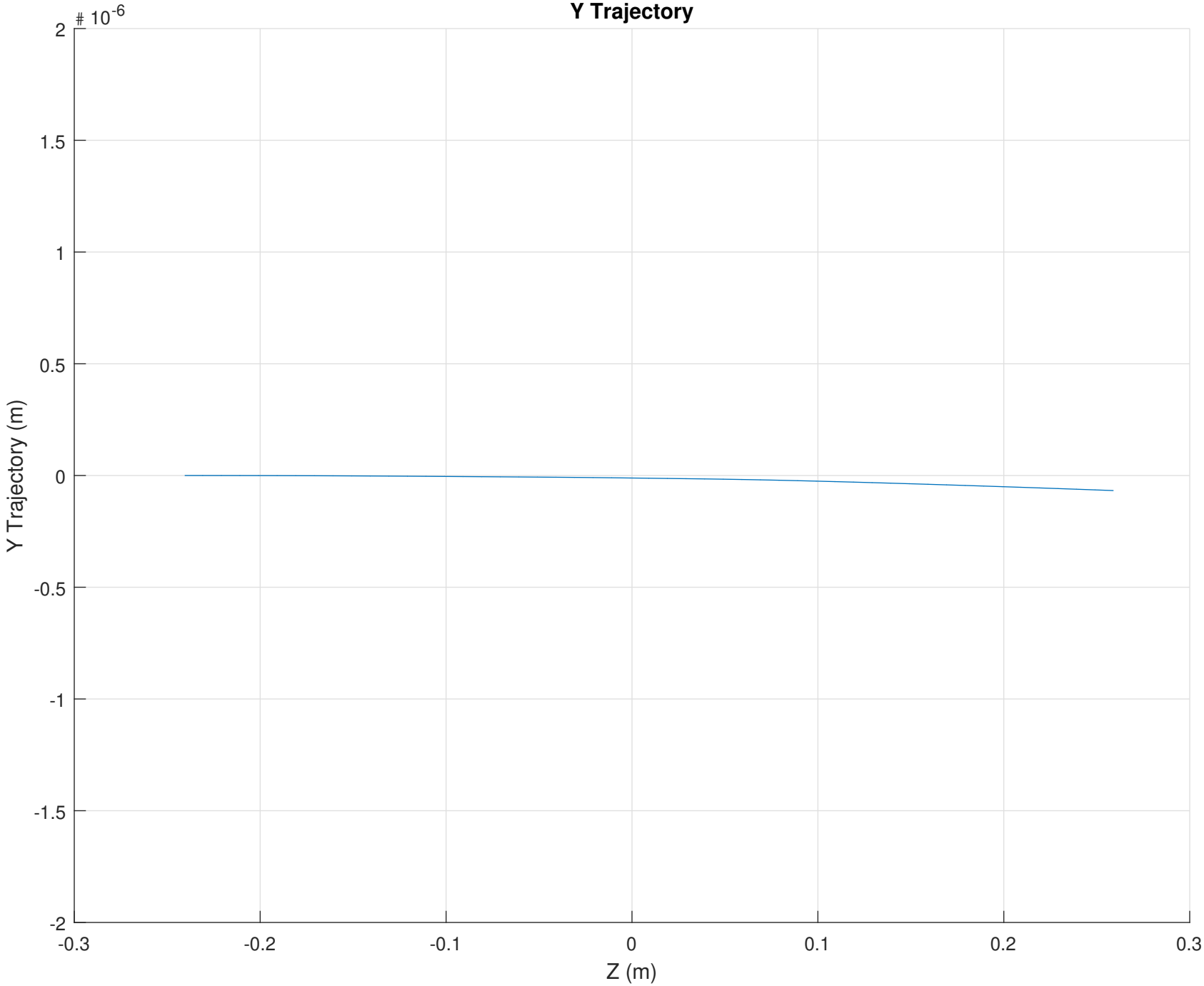

By vs Z
0.025
0.02
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-0.02
-0.025
By (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

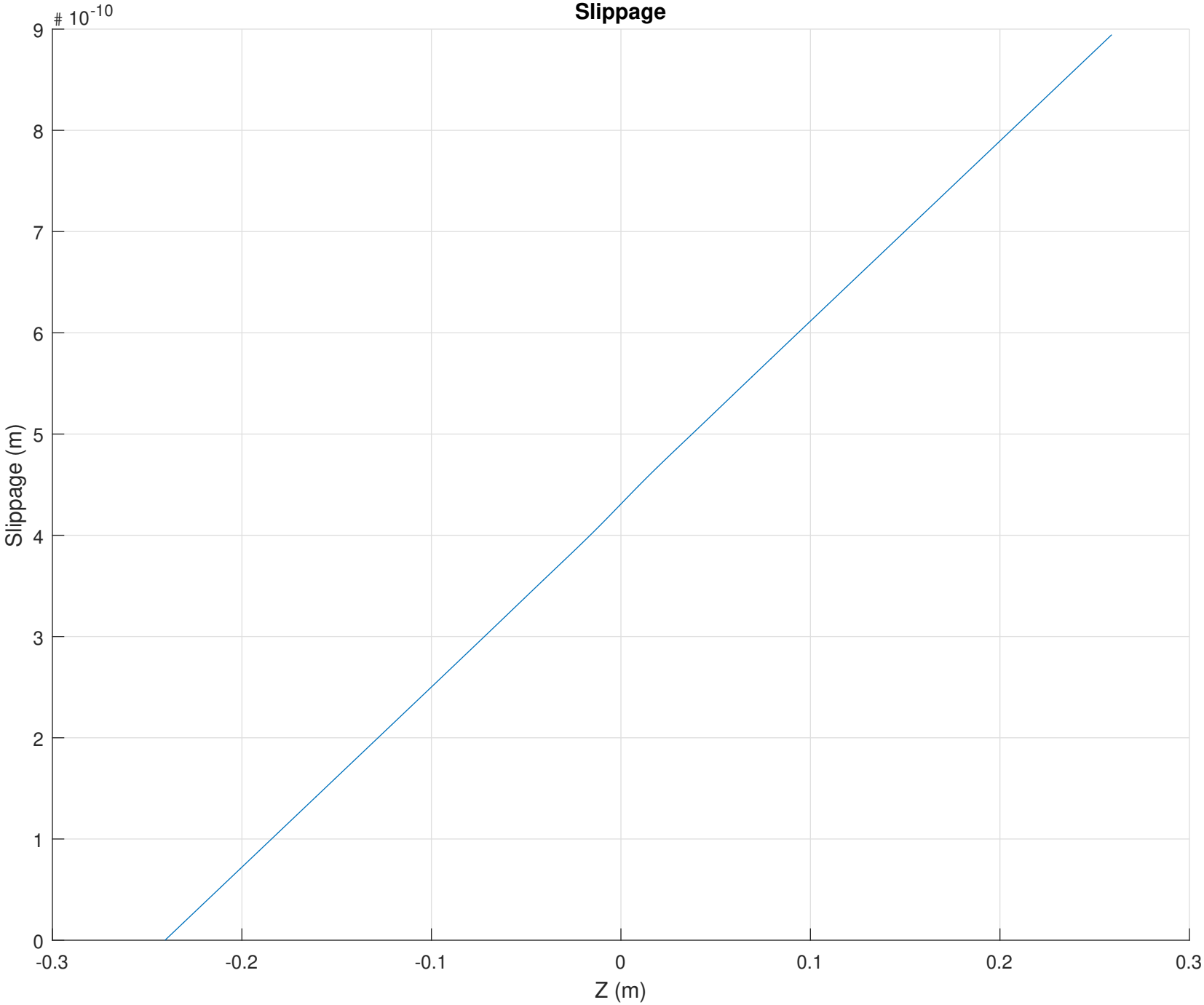

Bx and By vs Z
Bx
By
0.025
0.02
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-0.02
-0.025
Bx, By (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

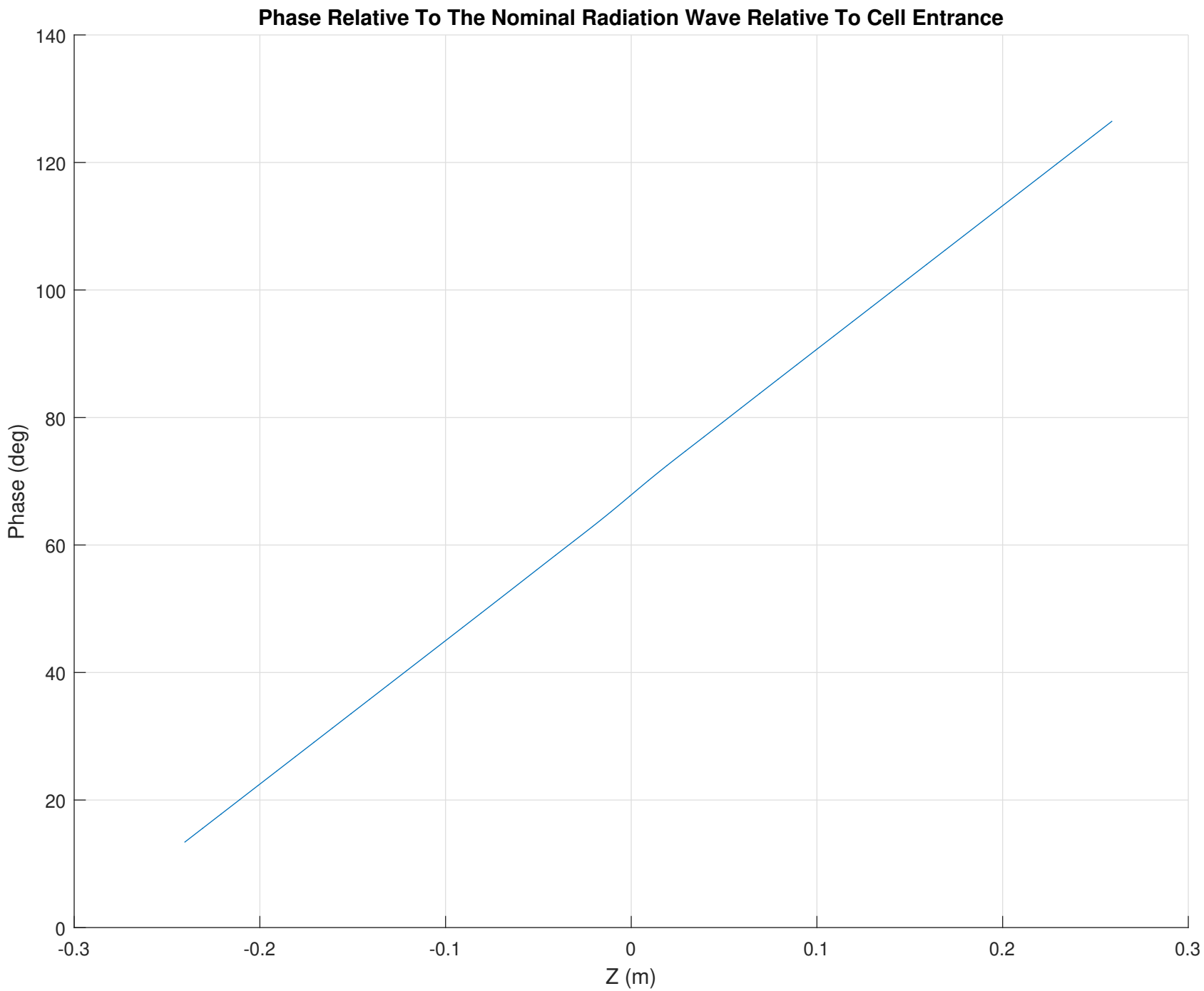

Bx vs Z With Fitted Peaks And Zeros
10^-5
Bx (T)
Z (m)
6
5
4
3
2
1
0
-1
-0.3
-0.2
-0.1
0
0.1
0.2
0.3


By vs Z With Fitted Peaks And Zeros
2
Pole
By (T)
Z (m)
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.3
-0.2
-0.1
0
0.1
0.2
0.3


X Trajectory
10^-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
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^-10
9
8
7
6
5
4
3
2
1
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
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)