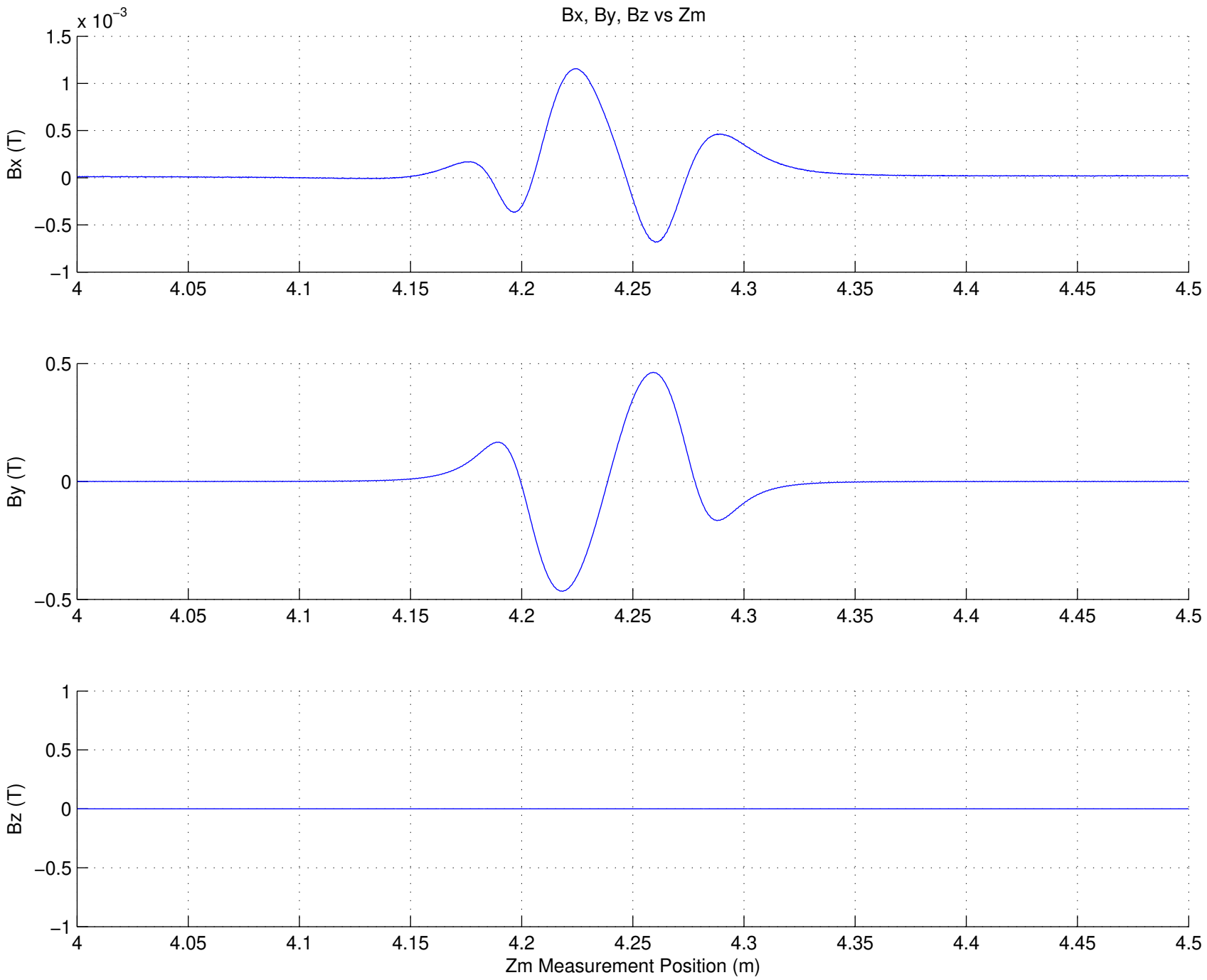
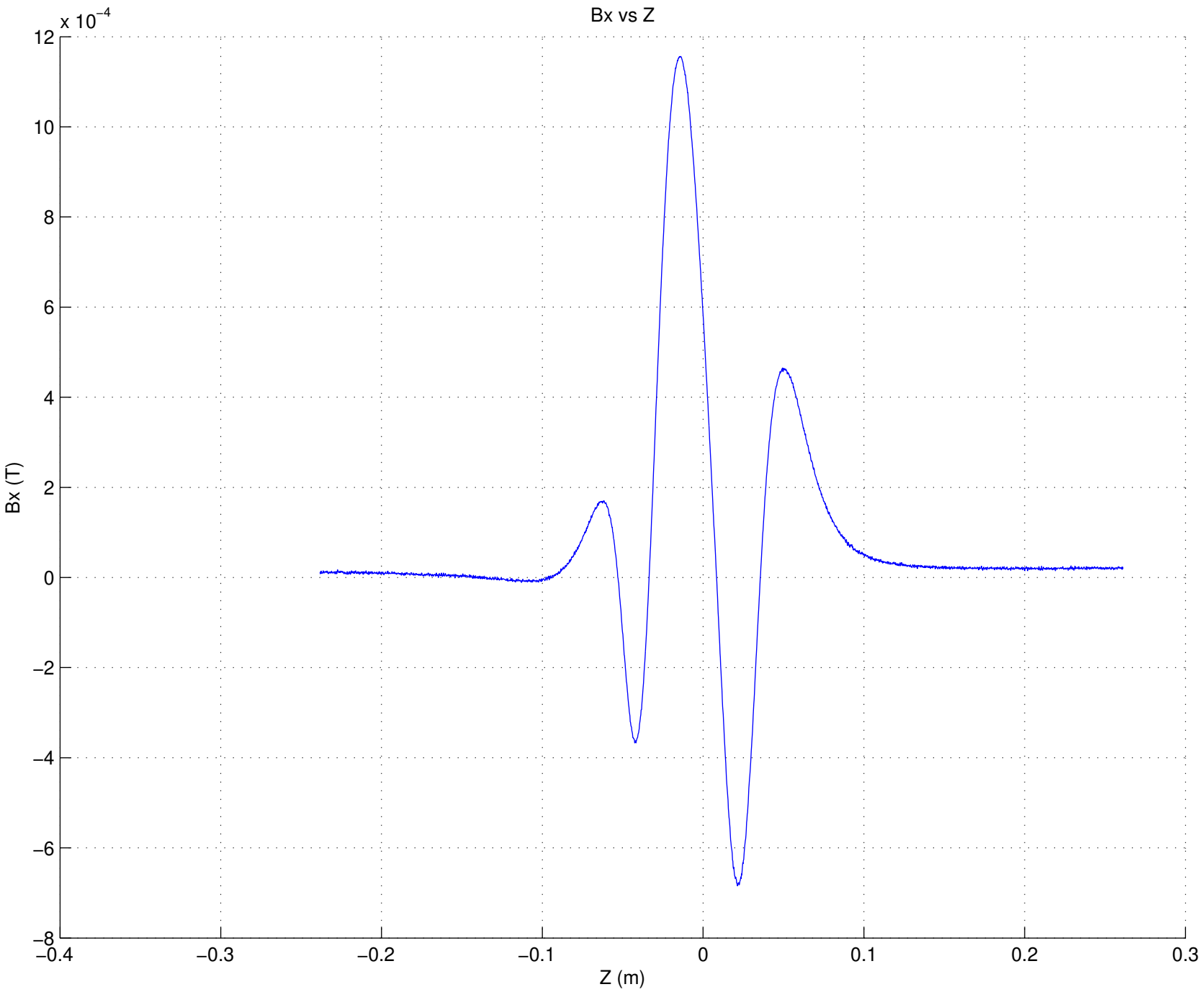
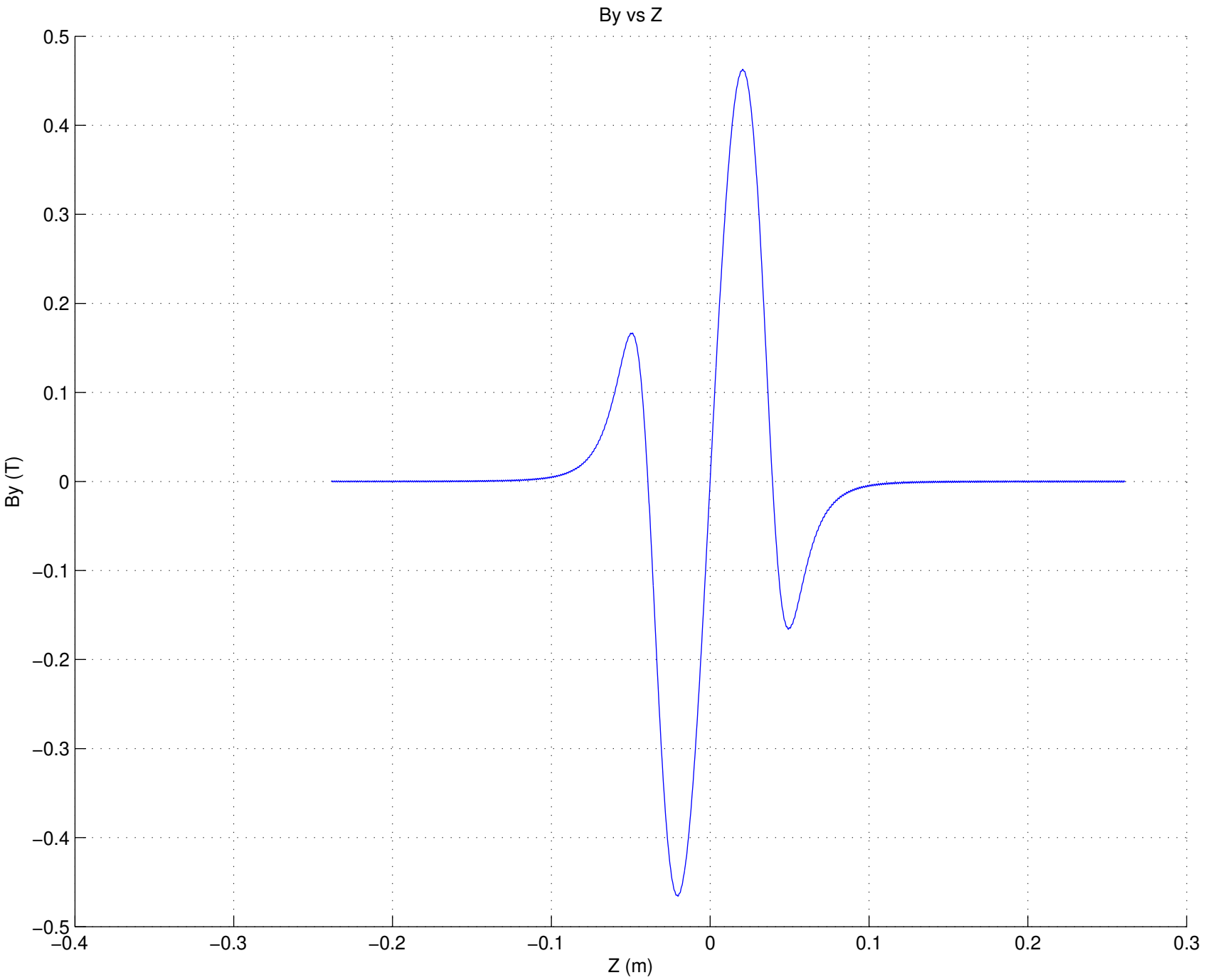
SLAC Magnetic Measurements

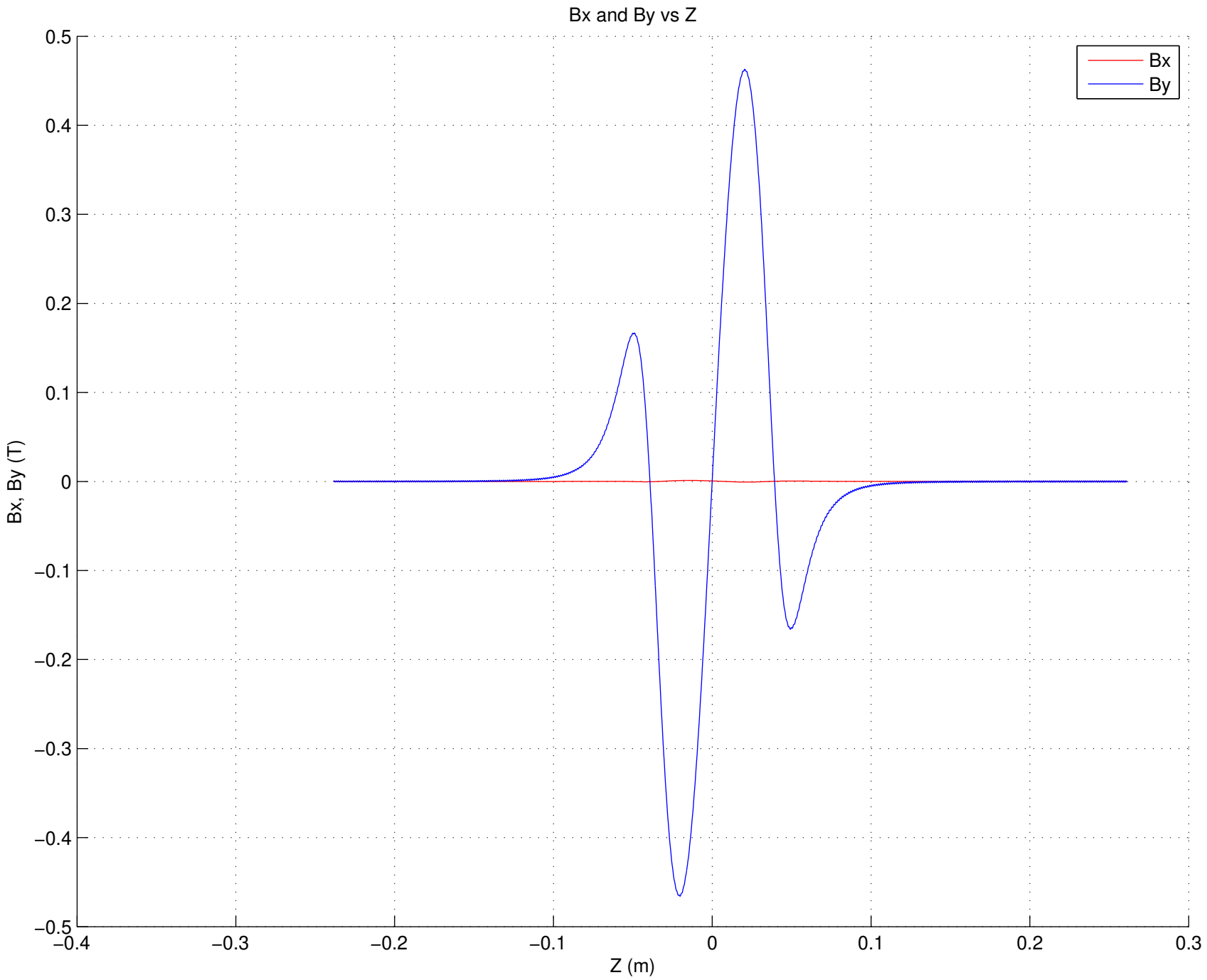
Phase Analysis
−−−−−−−−−−−−−

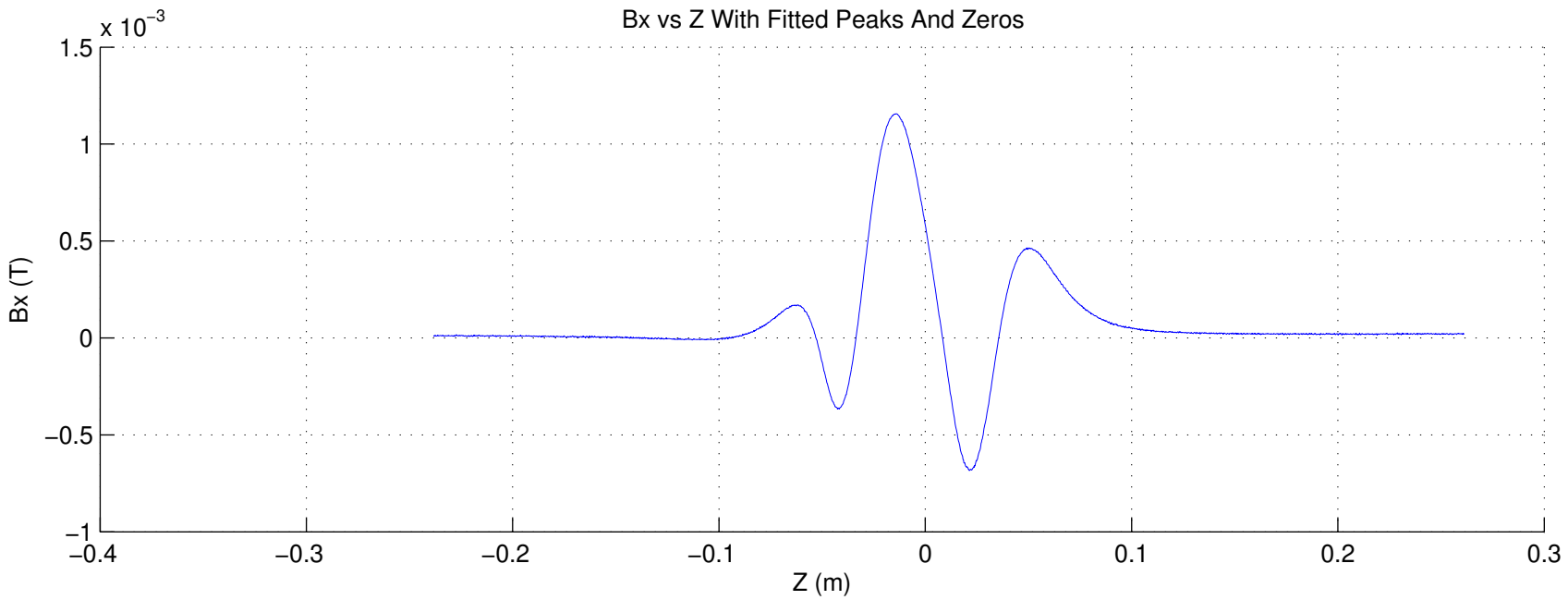
Parameters:
INPUT−FILE−DIR =V:\MET\MagServe\MagData\LCLS\Undulator\PHASE−SHIFTER\DATASET0001\Fine Tuning\Z Scans\Run 0
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =0
GAMMA =16765.2111
NOM−LAMBDA−U =0.055
NOM−K−VALUE =9.9
NOM−LAMBDA−R =4.8925e−09
NUM−POLES =4
NUM−END−POLES =0
CELL−LENGTH =0.4

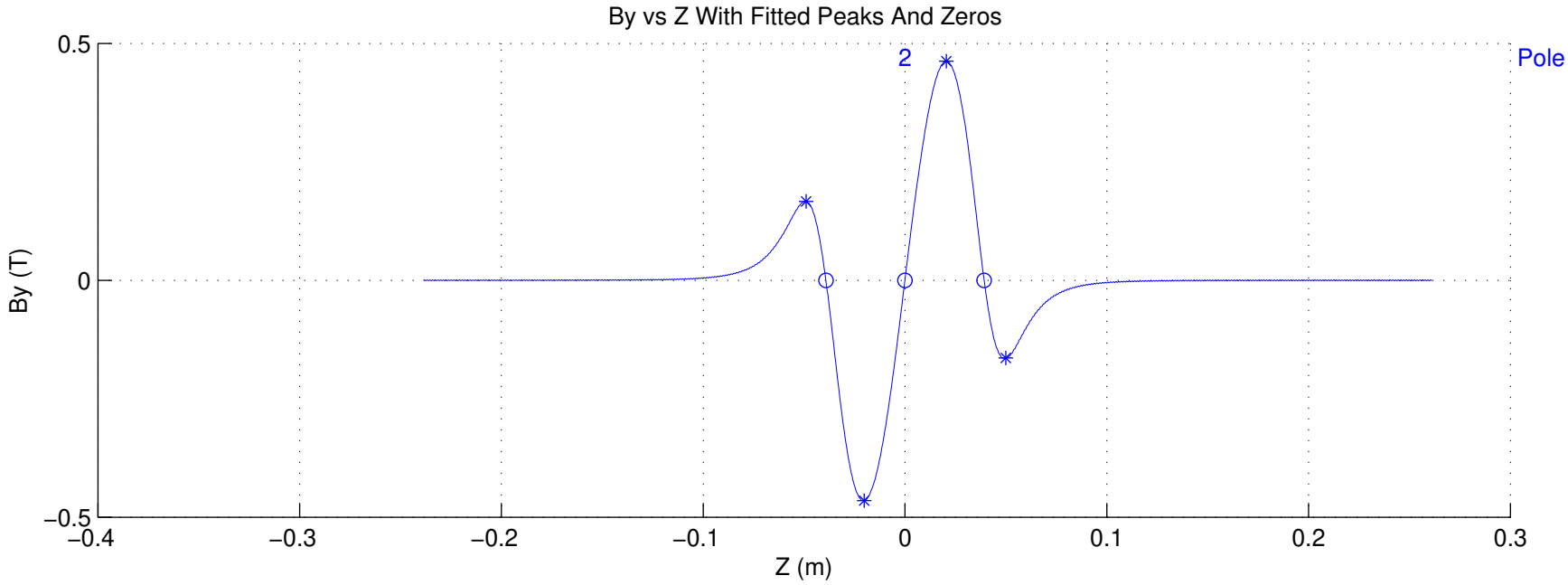

Bx, By, Bz vs Zm
x 10^-3
Bx (T)
By (T)
Bz (T)
Zm Measurement Position (m)
1.5
1
0.5
0
−0.5
−1
4
4.05
4.1
4.15
4.2
4.25
4.3
4.35
4.4
4.45
4.5

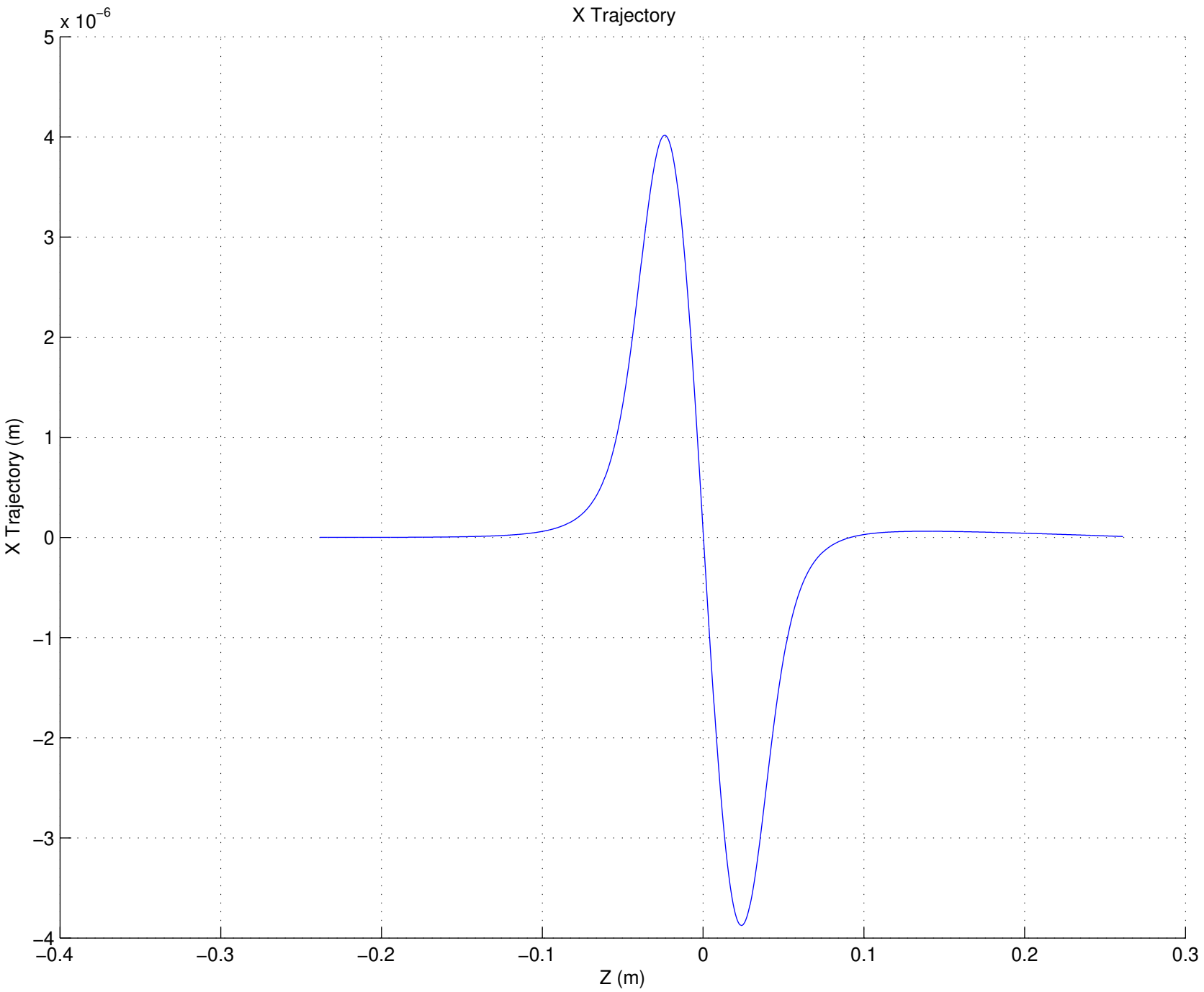

Bx vs Z
x 10^-4
12
10
8
6
4
2
0
−2
−4
−6
−8
Bx (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)

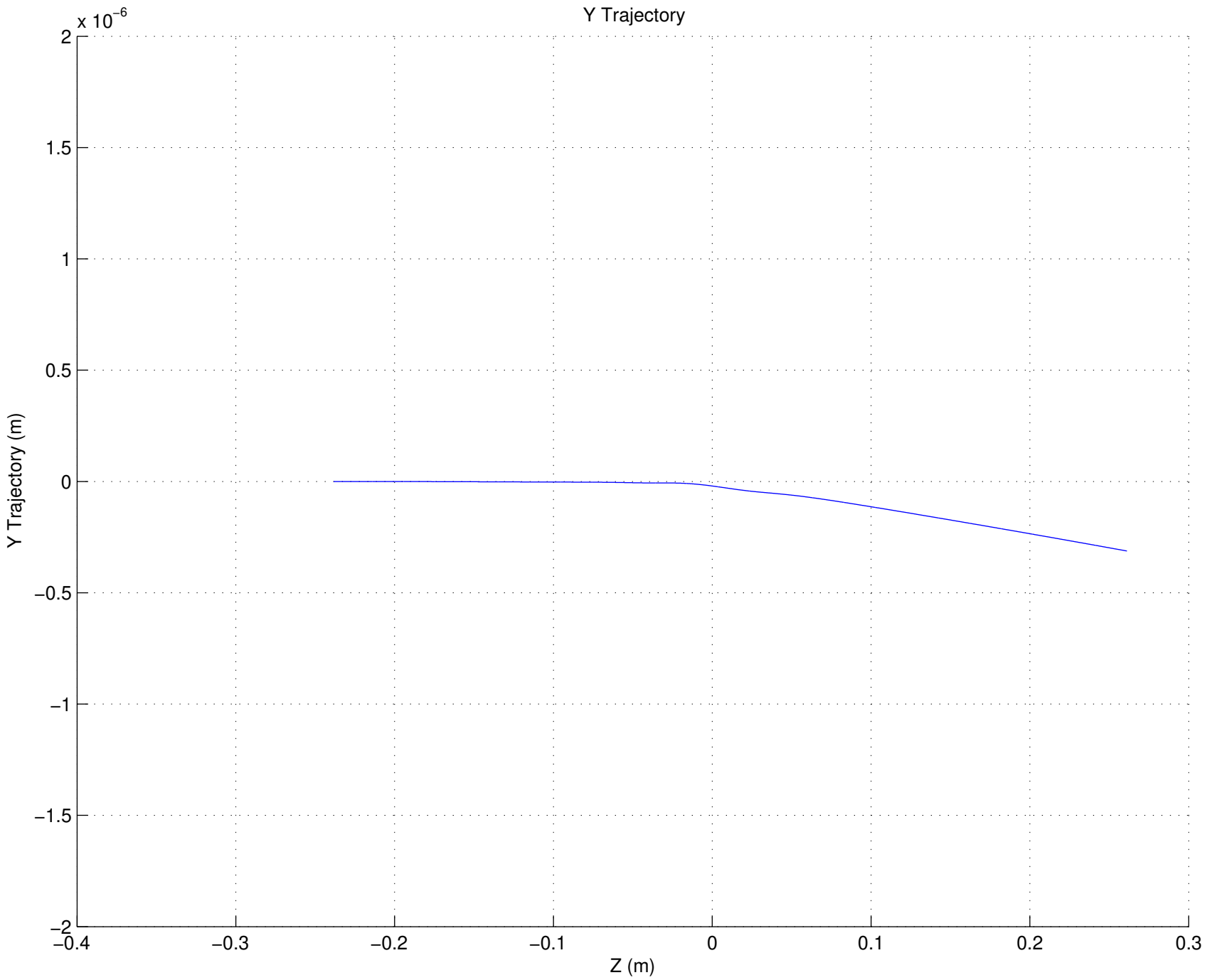

By vs Z
By (T)
Z (m)
0.5
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3

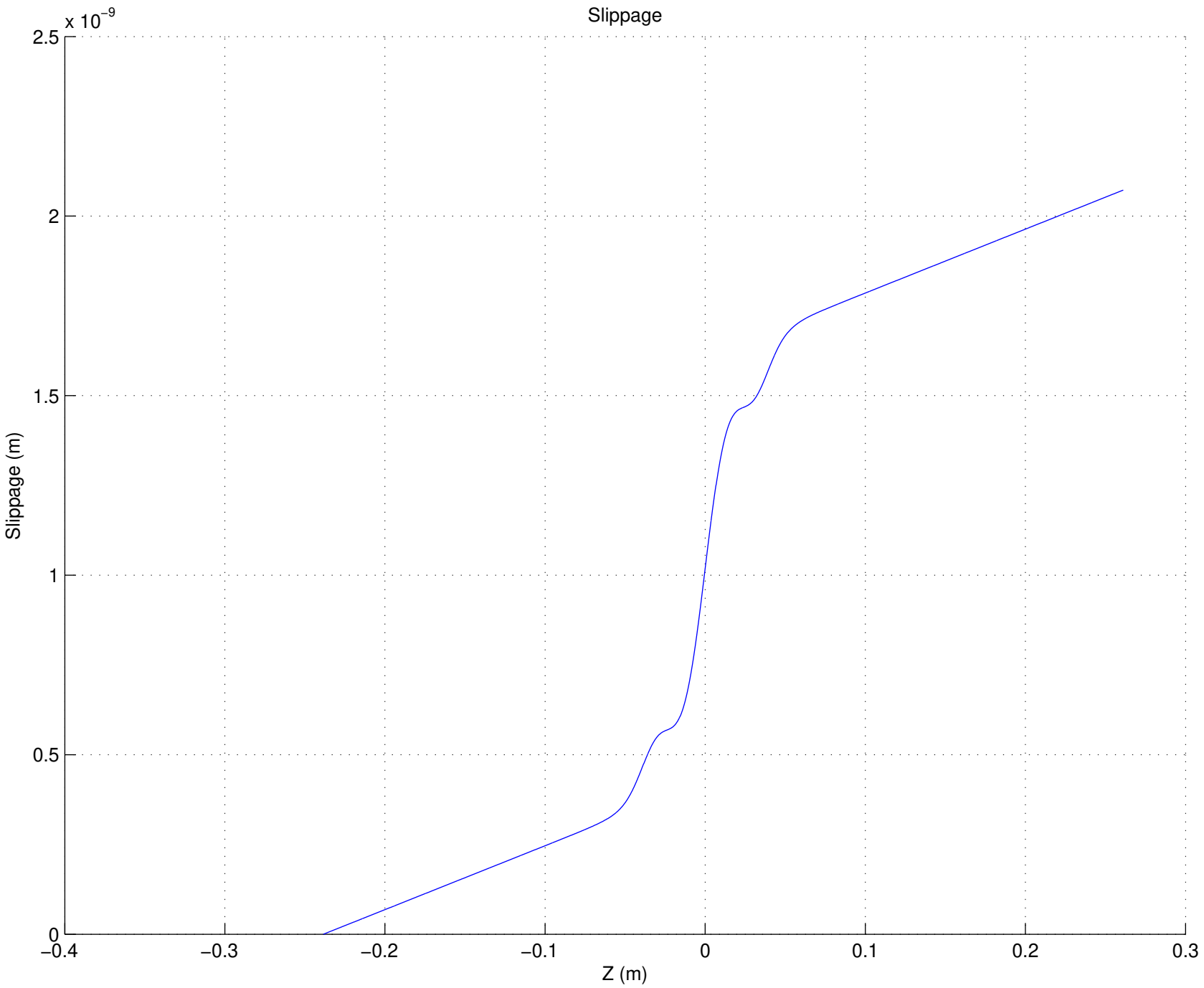

Bx and By vs Z
Bx
By
Bx, By (T)
Z (m)
0.5
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3

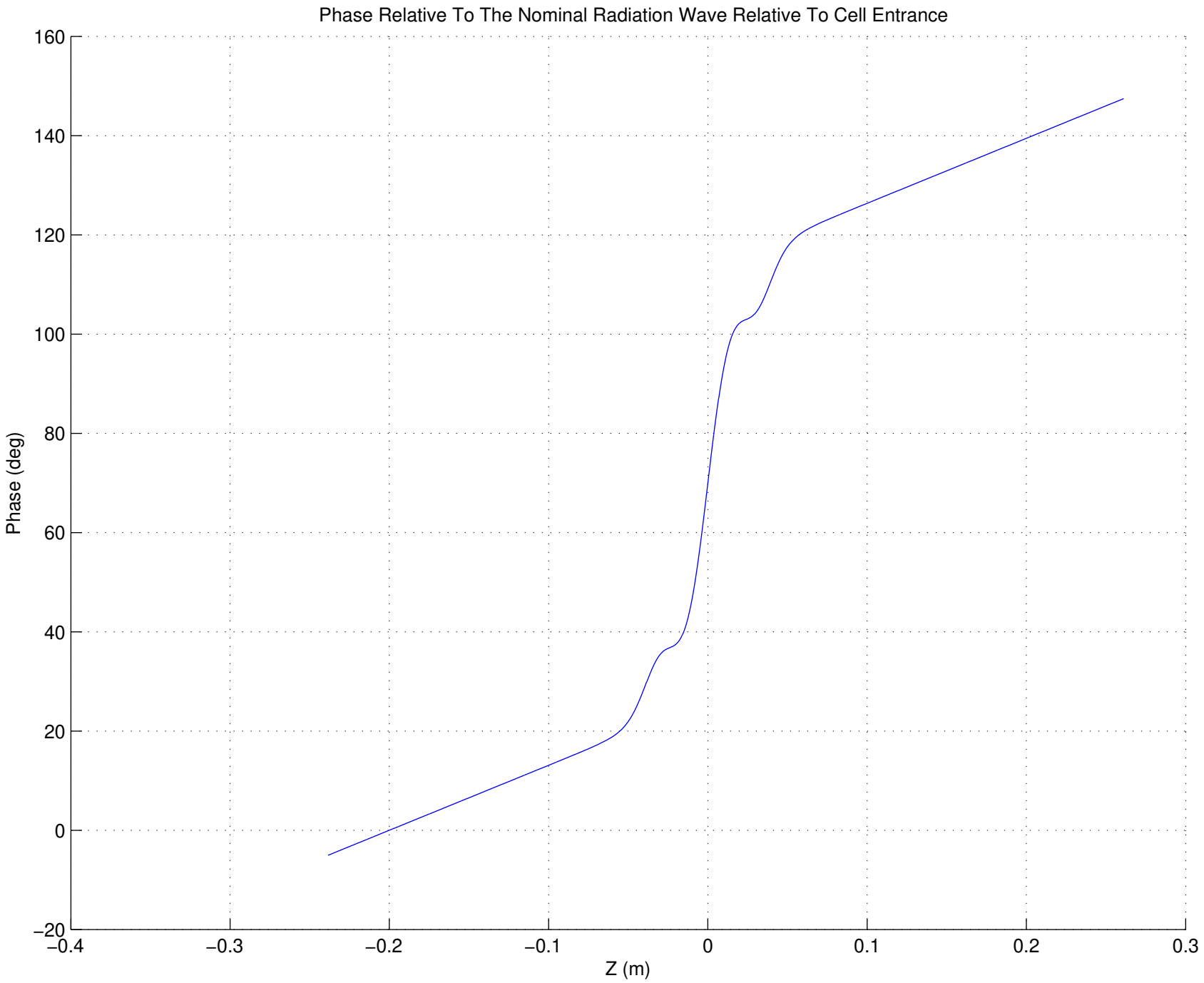

Bx vs Z With Fitted Peaks And Zeros
x 10^-3
1.5
1
0.5
0
−0.5
−1
Bx (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)


By vs Z With Fitted Peaks And Zeros
2
Pole
0.5
0
−0.5
By (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)


X Trajectory
x 10^-6
5
4
3
2
1
0
−1
−2
−3
−4
X Trajectory (m)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)


Y Trajectory
x 10^-6
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
Y Trajectory (m)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)


Slippage
x 10^-9
2.5
2
1.5
1
0.5
0
Slippage (m)
−0.4
−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
160
140
120
100
80
60
40
20
0
−20
Phase (deg)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)