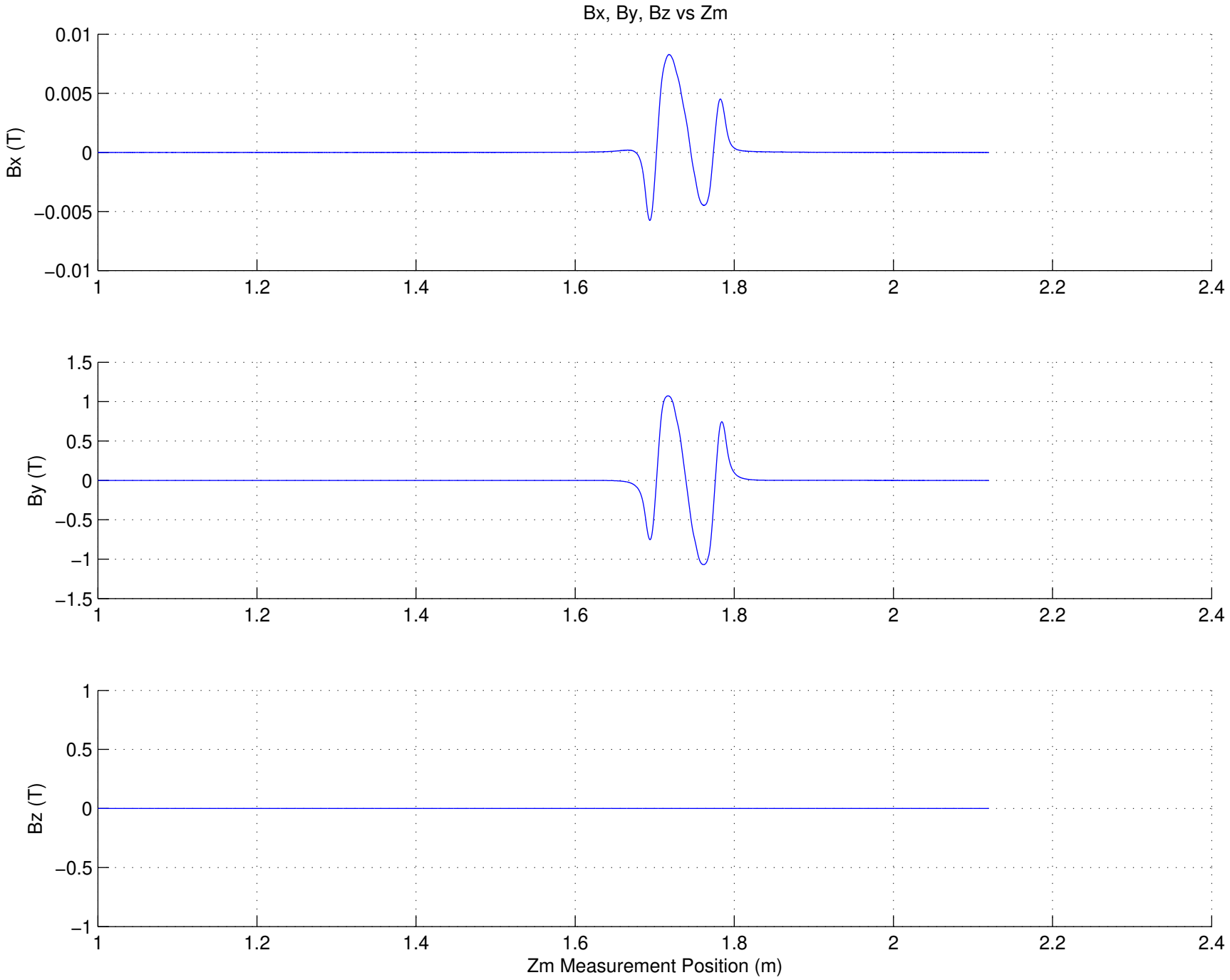
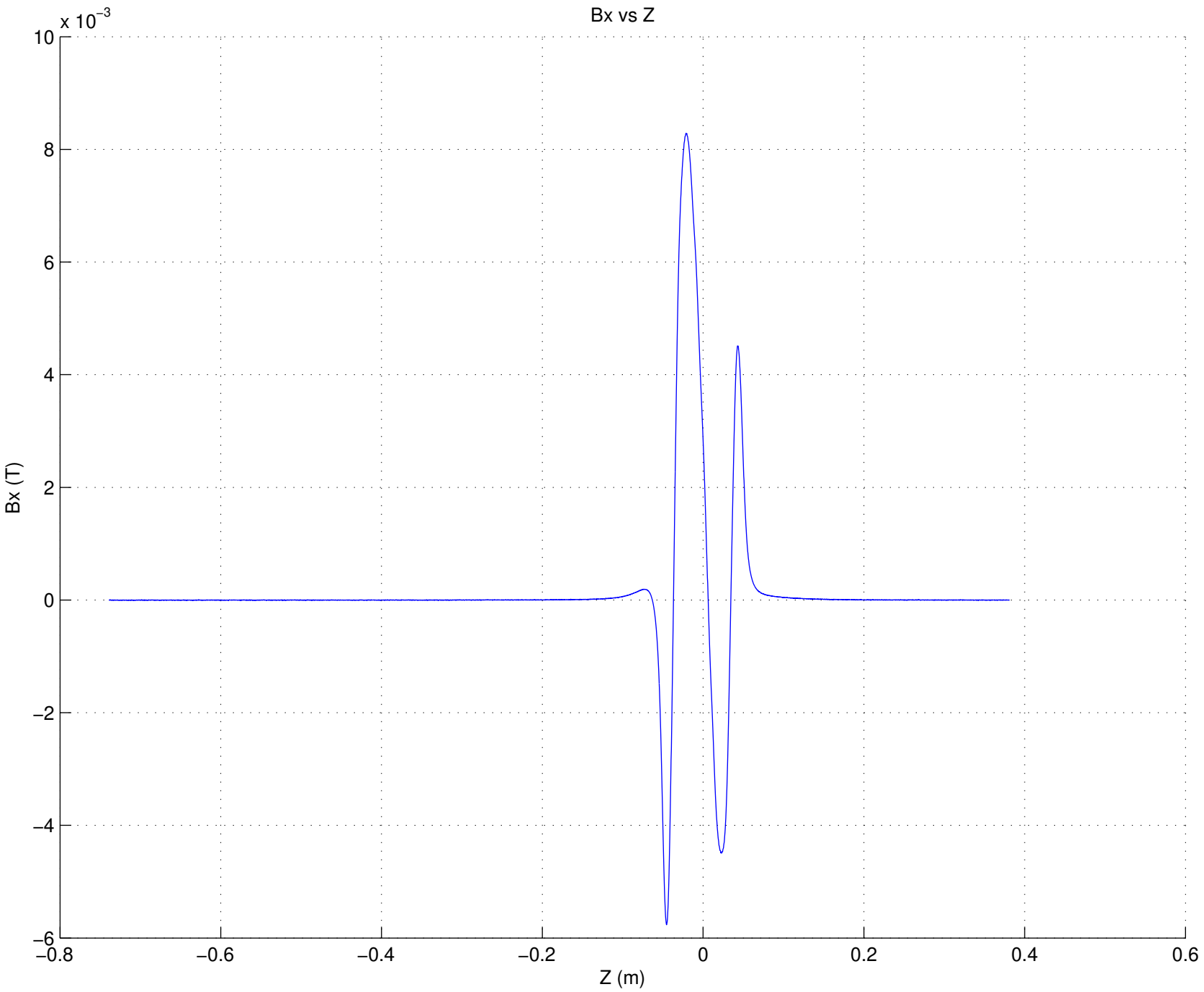
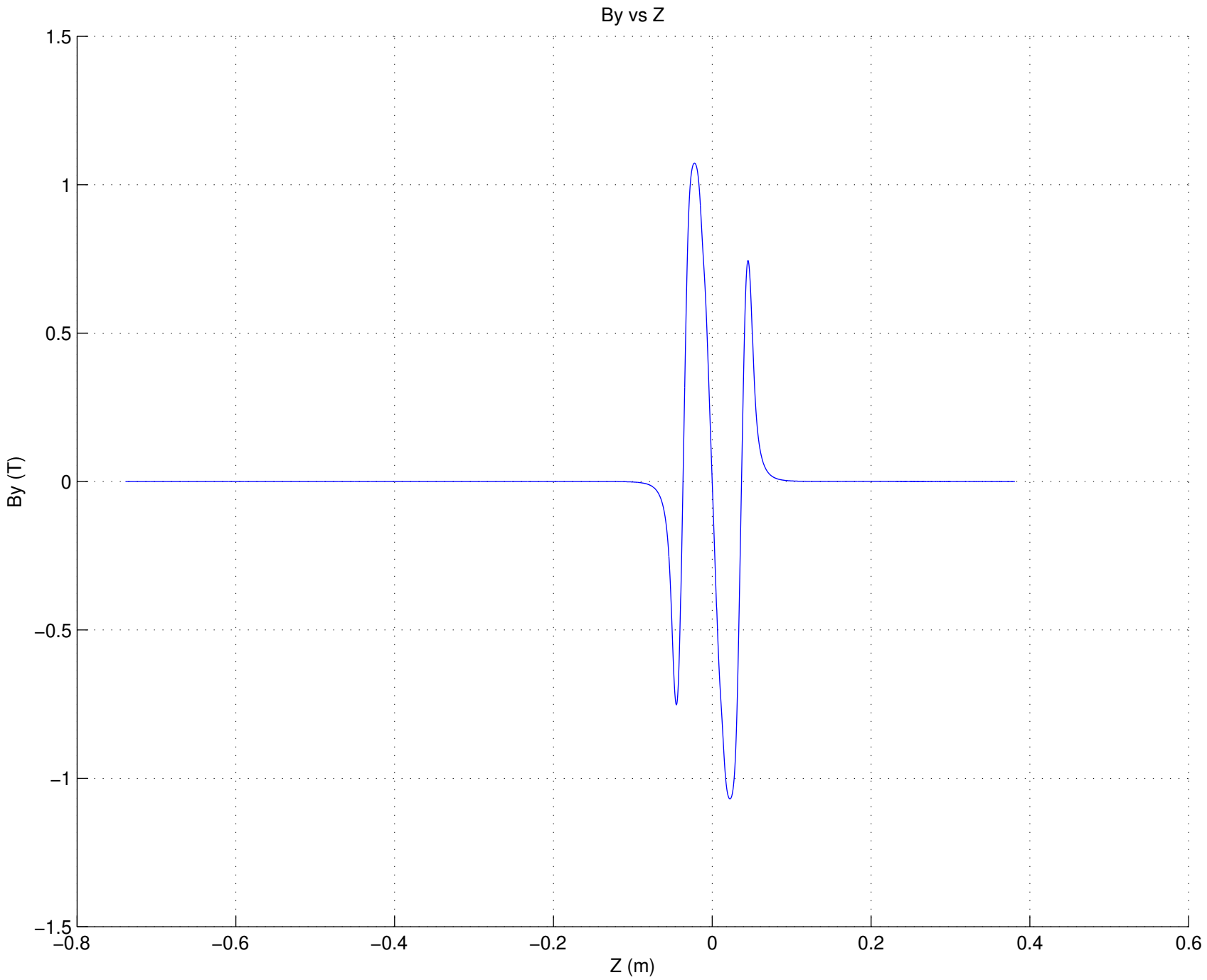
SLAC Magnetic Measurements

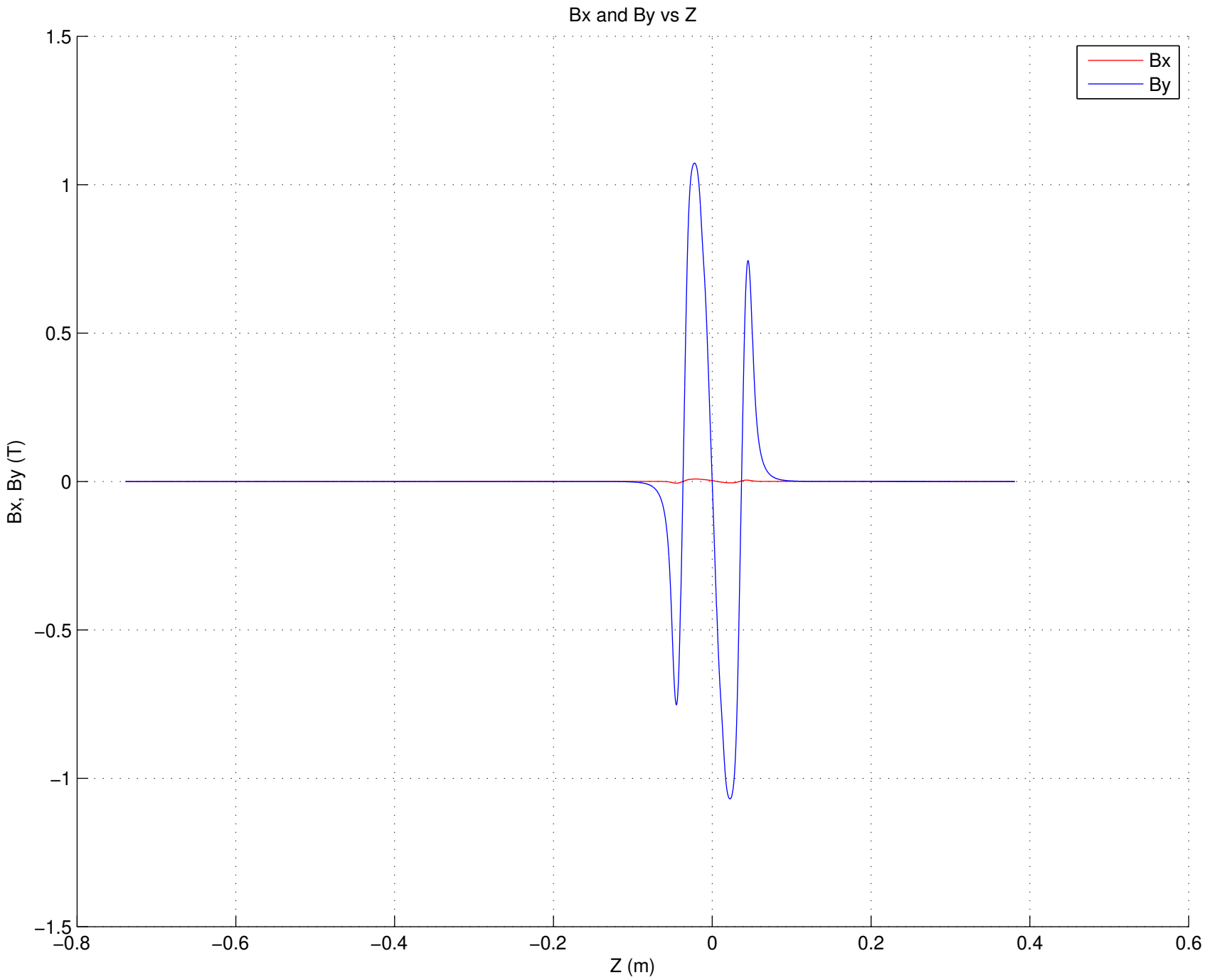
Phase Analysis
−−−−−−−−−−−−−

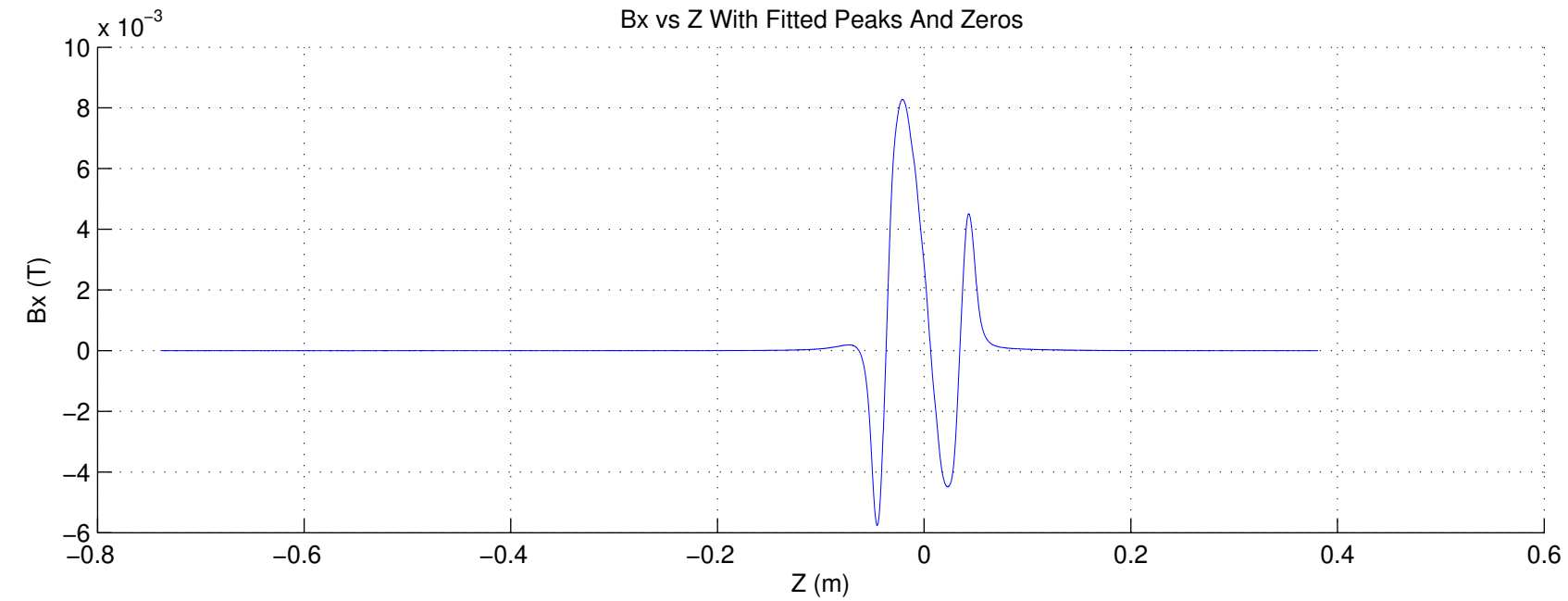
Parameters:
INPUT−FILE−DIR =s:\MagData\LCLS\Undulator\PHASE−SHIFTER\DATASET0001\Rough Tuning\Z Scans\Run 009\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =0
GAMMA =16765.2111
NOM−LAMBDA−U =0.03
NOM−K−VALUE =9.9
NOM−LAMBDA−R =2.6686e−009
NUM−POLES =4
NUM−END−POLES =0
CELL−LENGTH =0.4

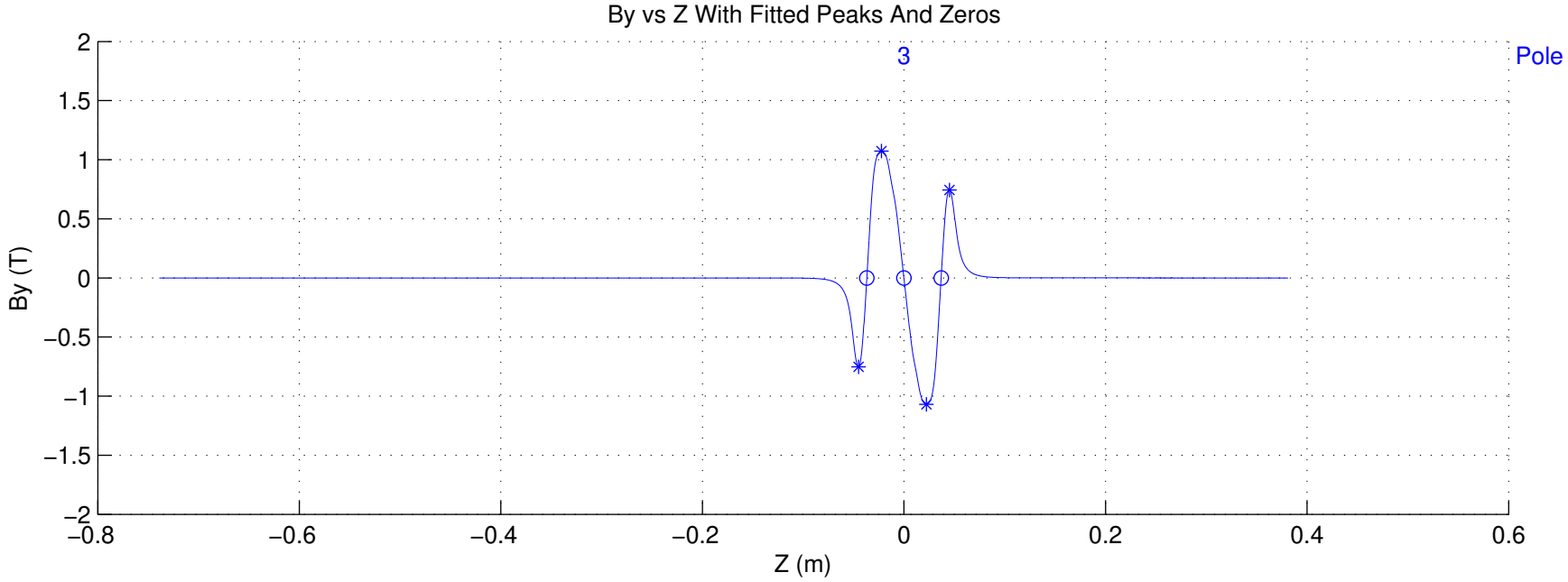

Bx, By, Bz vs Zm
Bx (T)
0.01
0.005
0
−0.005
−0.01
By (T)
1.5
1
0.5
0
−0.5
−1
−1.5
Bz (T)
1
0.5
0
−0.5
−1
1
1.2
1.4
1.6
1.8
2
2.2
2.4
Zm Measurement Position (m)

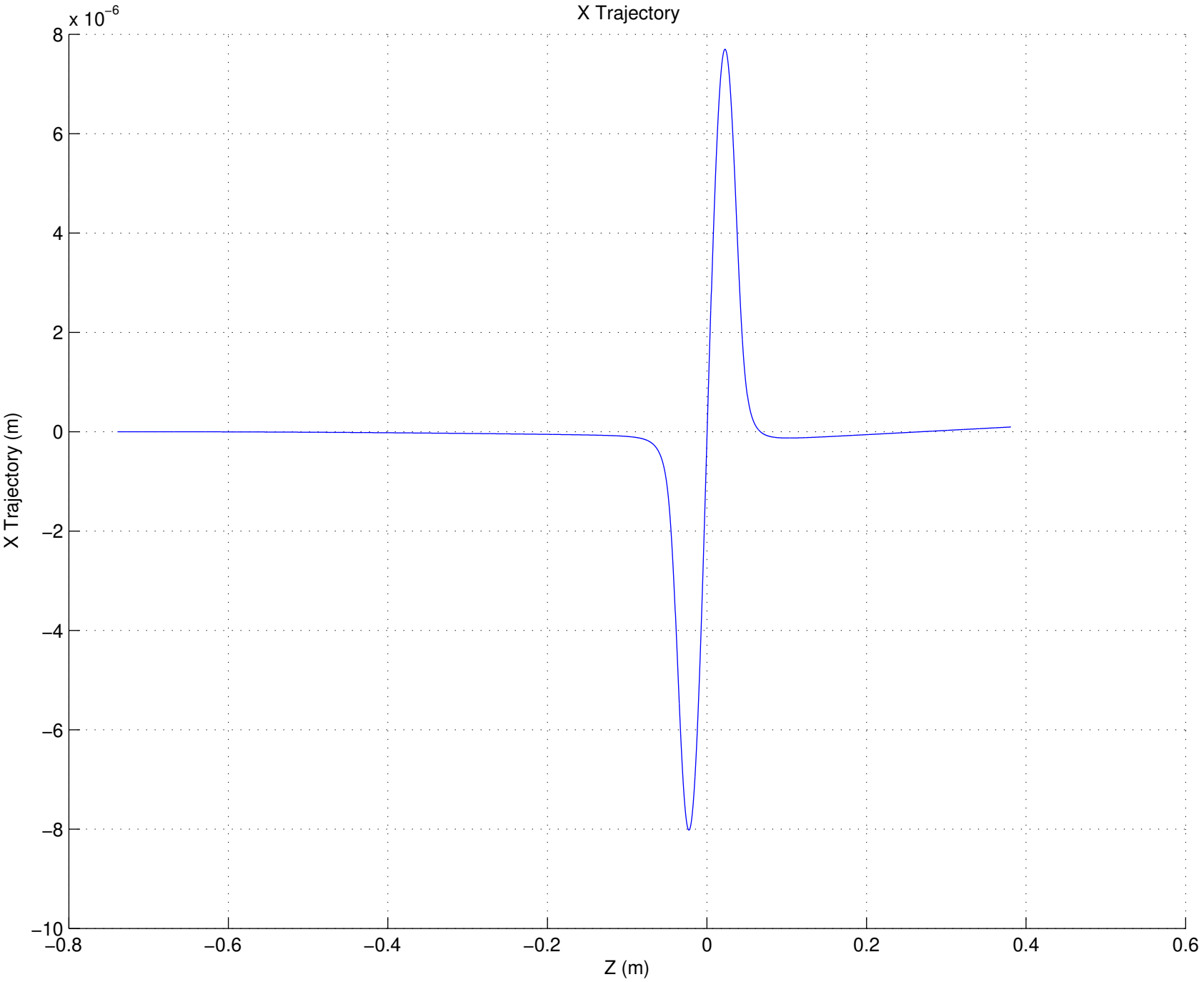

Bx vs Z
x 10^-3
10
8
6
4
2
0
−2
−4
−6
Bx (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

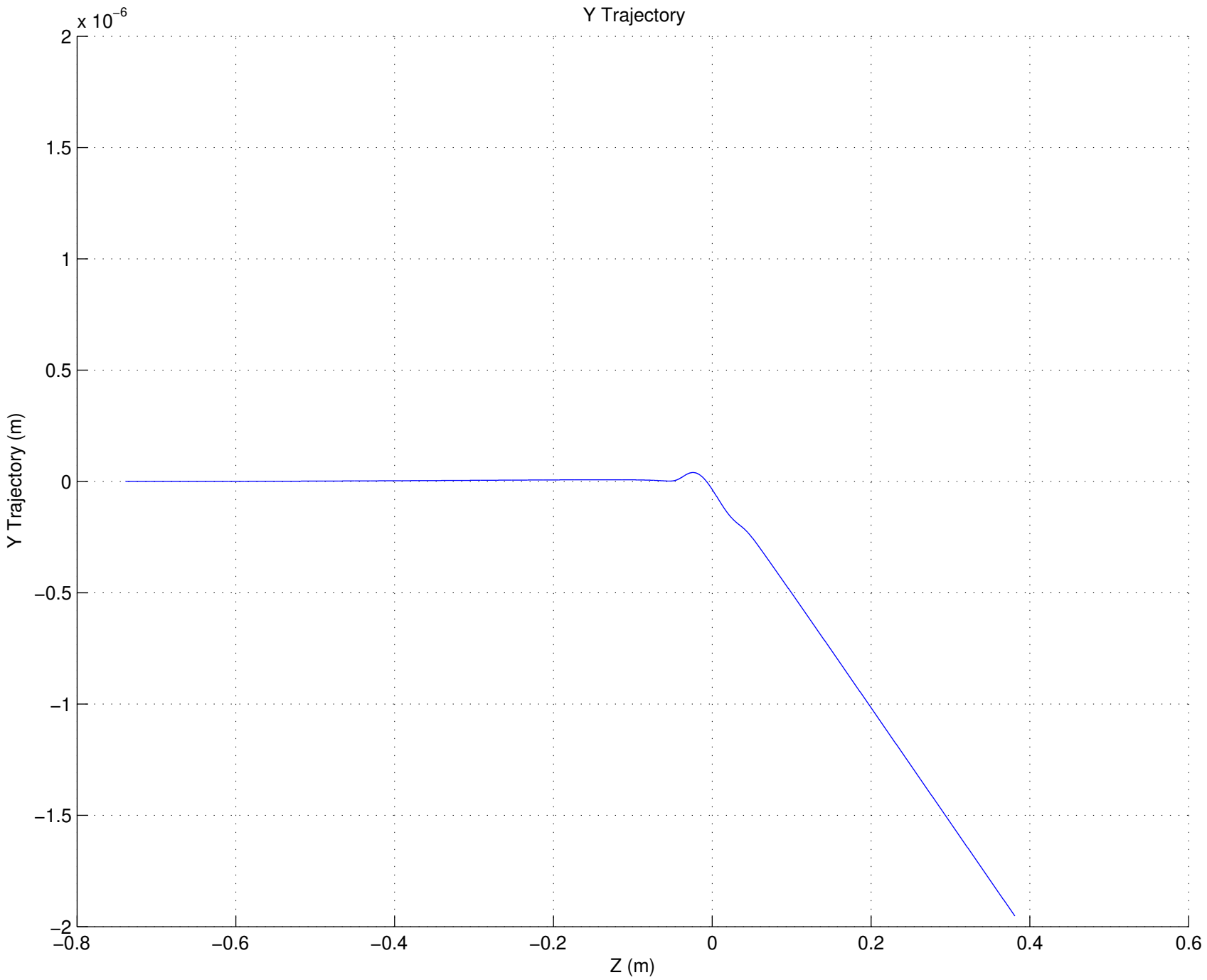

By vs Z
1.5
1
0.5
0
−0.5
−1
−1.5
By (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

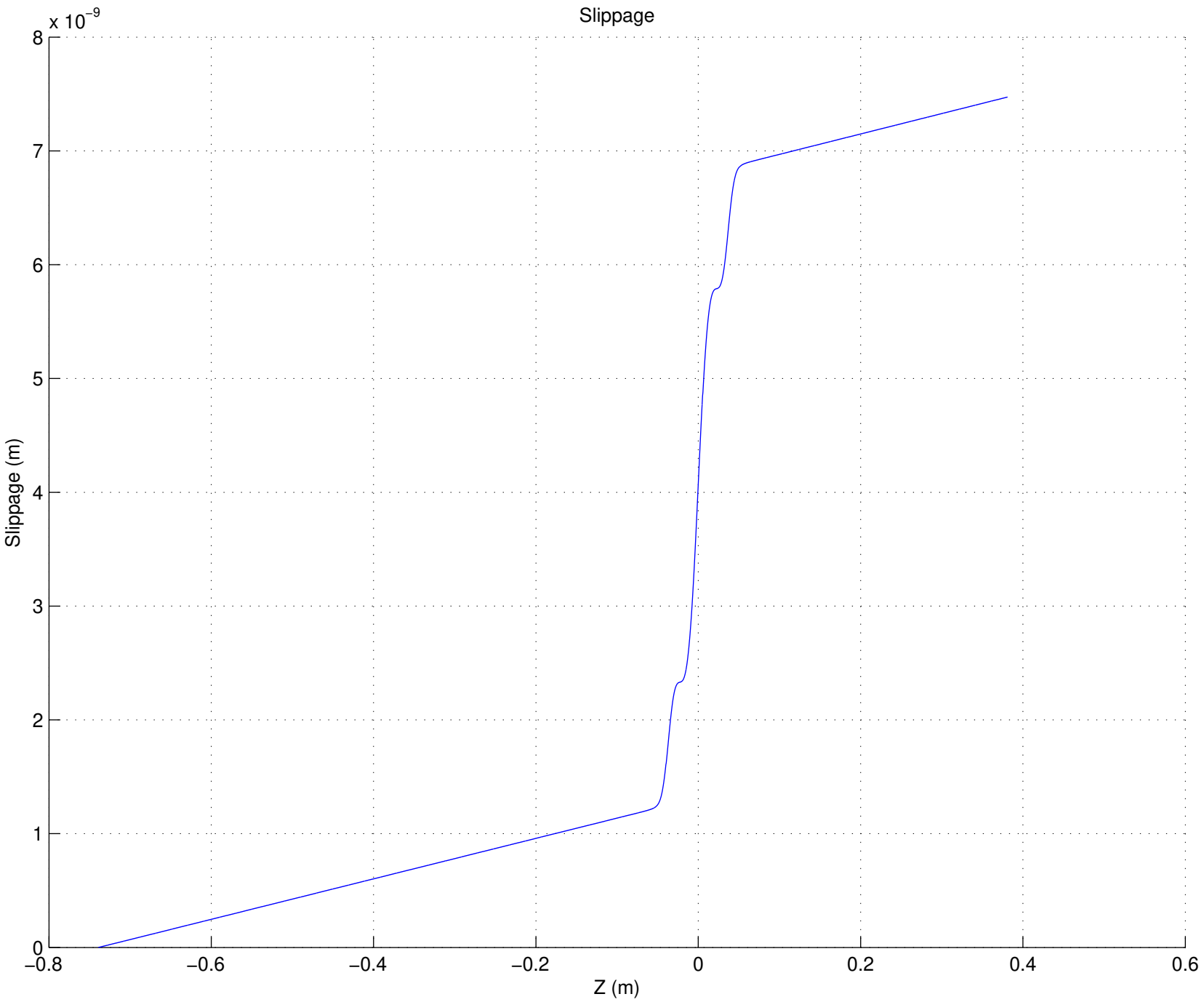

Bx and By vs Z
Bx
By
1.5
1
0.5
0
−0.5
−1
−1.5
Bx, By (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

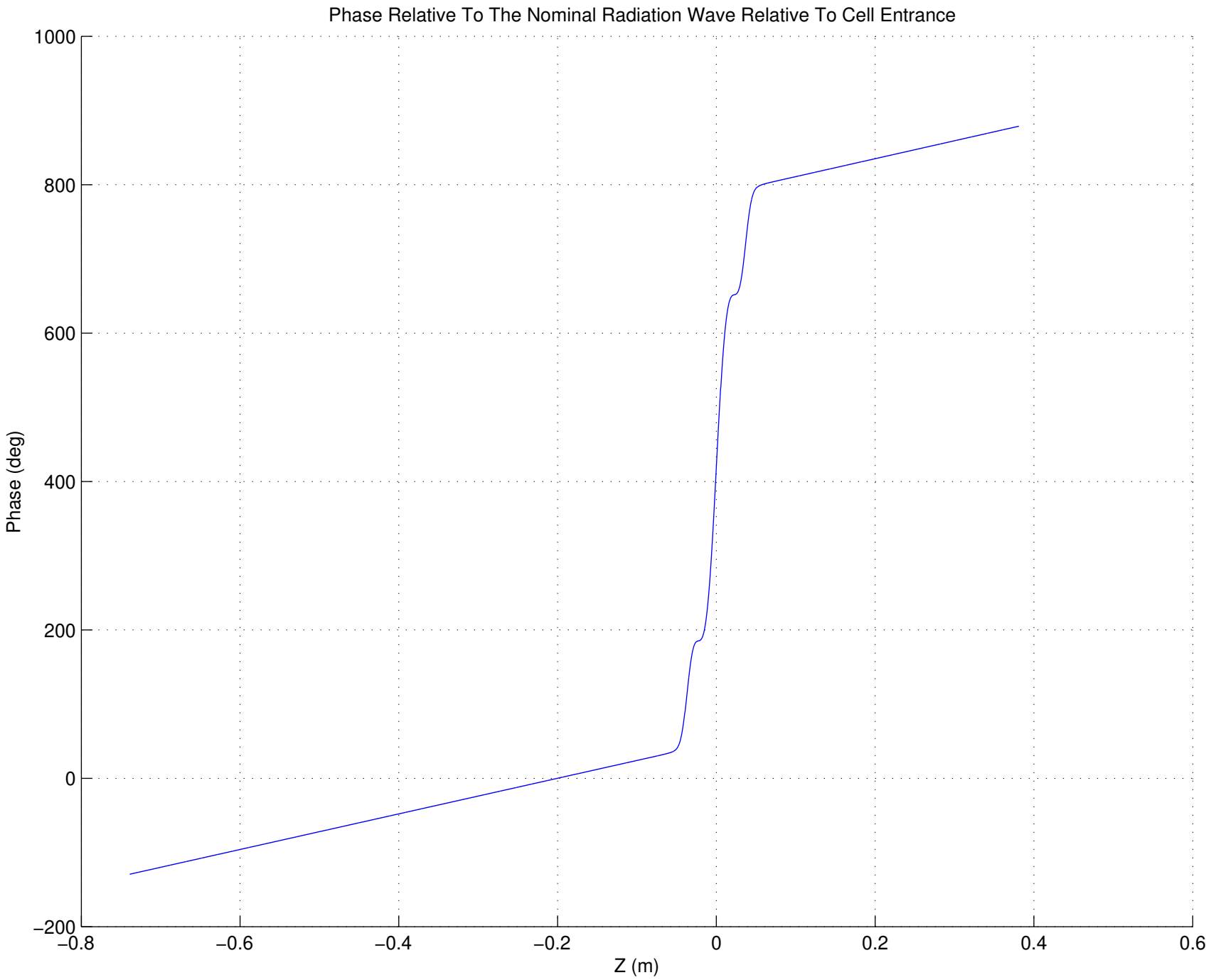

Bx vs Z With Fitted Peaks And Zeros
x 10^-3
Bx (T)
Z (m)
10
8
6
4
2
0
−2
−4
−6
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6


By vs Z With Fitted Peaks And Zeros
3
Pole
By (T)
Z (m)
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6


X Trajectory
x 10^-6
8
6
4
2
0
−2
−4
−6
−8
−10
X Trajectory (m)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)


Y Trajectory
x 10^-6
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
Y Trajectory (m)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)


Slippage
x 10^-9
8
7
6
5
4
3
2
1
0
Slippage (m)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)


Phase Relative To The Nominal Radiation Wave Relative To Cell Entrance
1000
800
600
400
200
0
−200
Phase (deg)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)