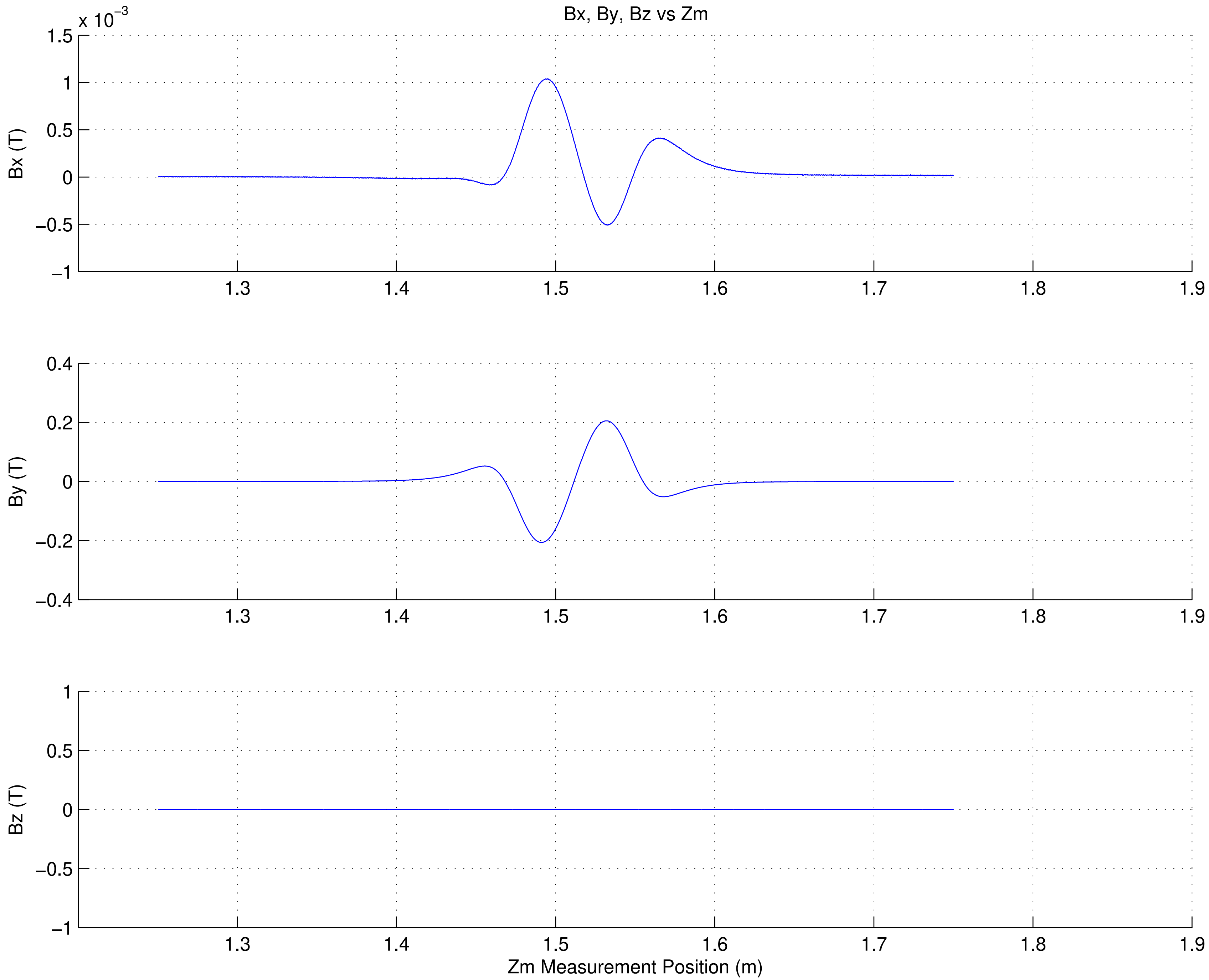
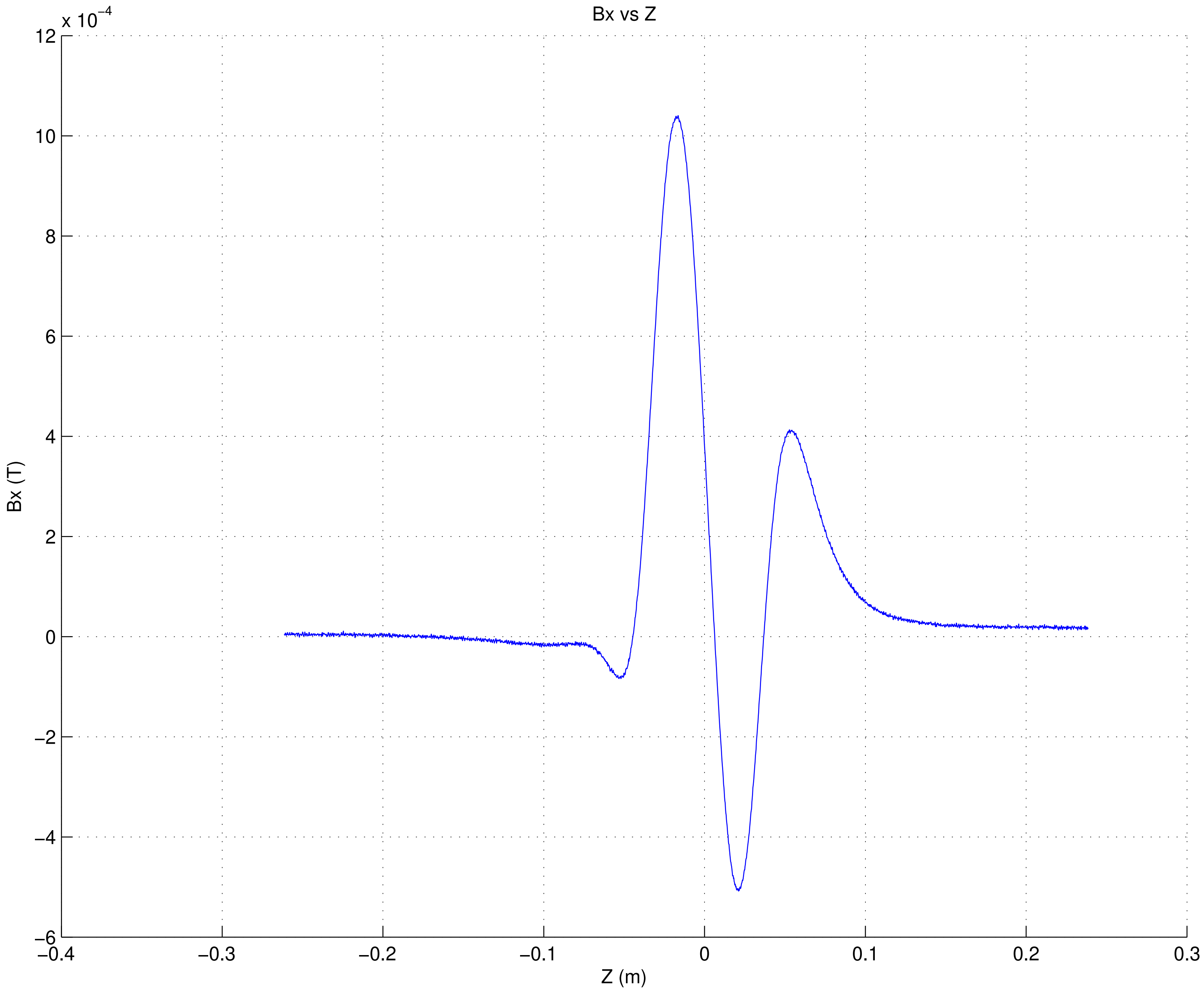
SLAC Magnetic Measurements

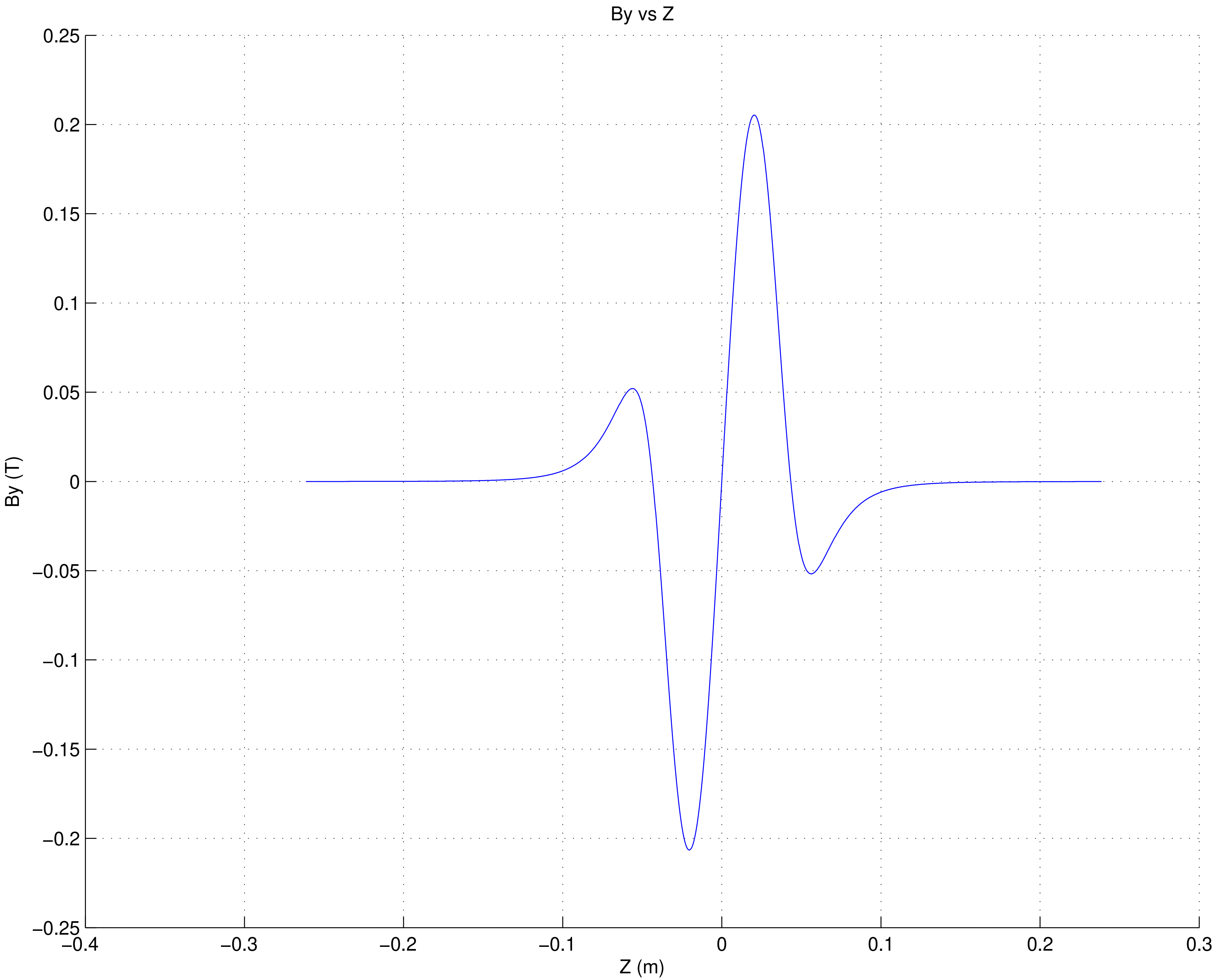
Phase Analysis

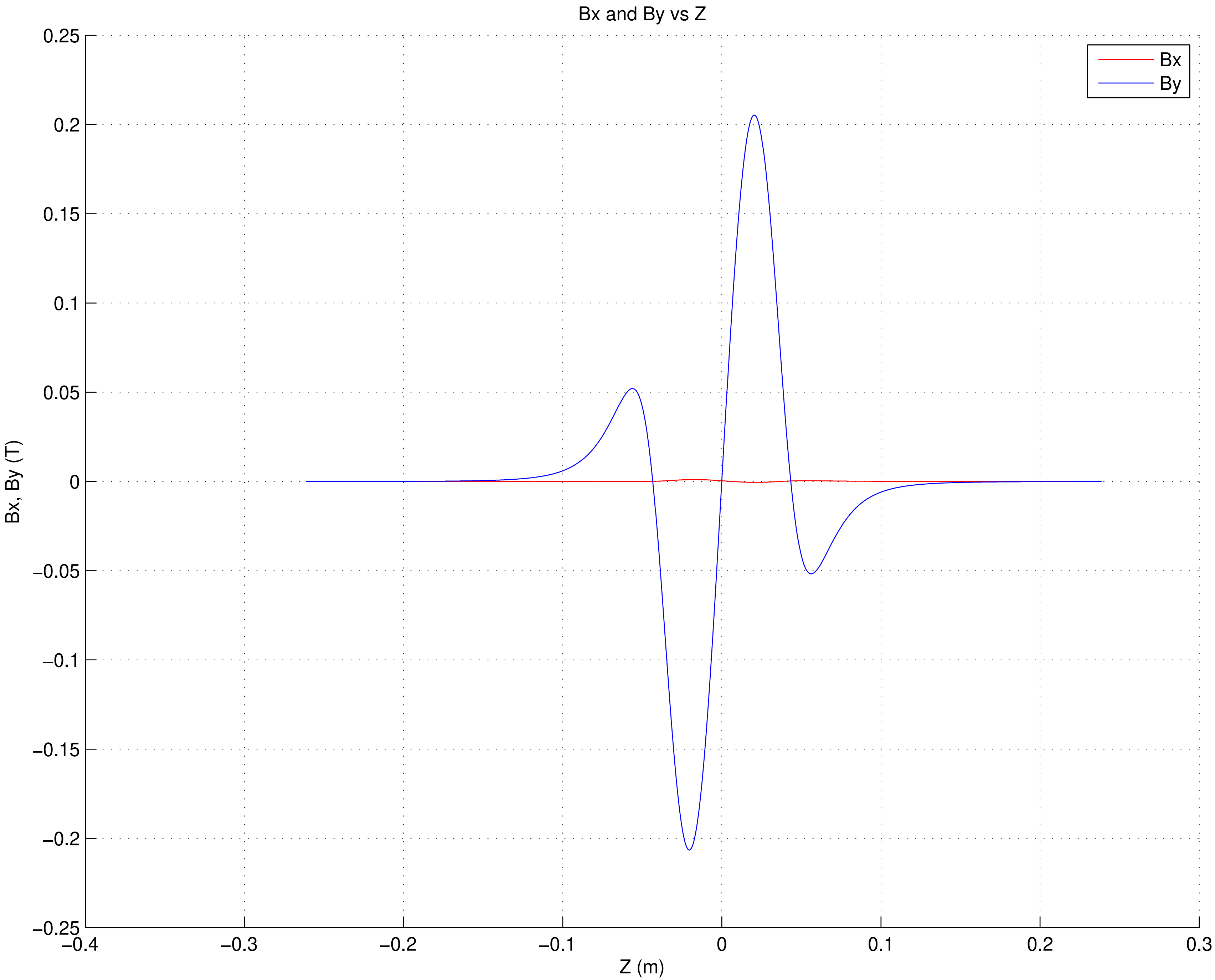
Parameters:
INPUT−FILE−DIR =s:\MagData\LCLS\Undulator\PHASE−SHIFTER\DATASET0001\Fine Tuning\Z Scans\Run 018\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =0
GAMMA =16765.2111
NOM−LAMBDA−U =0.055
NOM−K−VALUE =3.5
NOM−LAMBDA−R =6.9711e−010
NUM−POLES =4
NUM−END−POLES =0
CELL−LENGTH =0.5

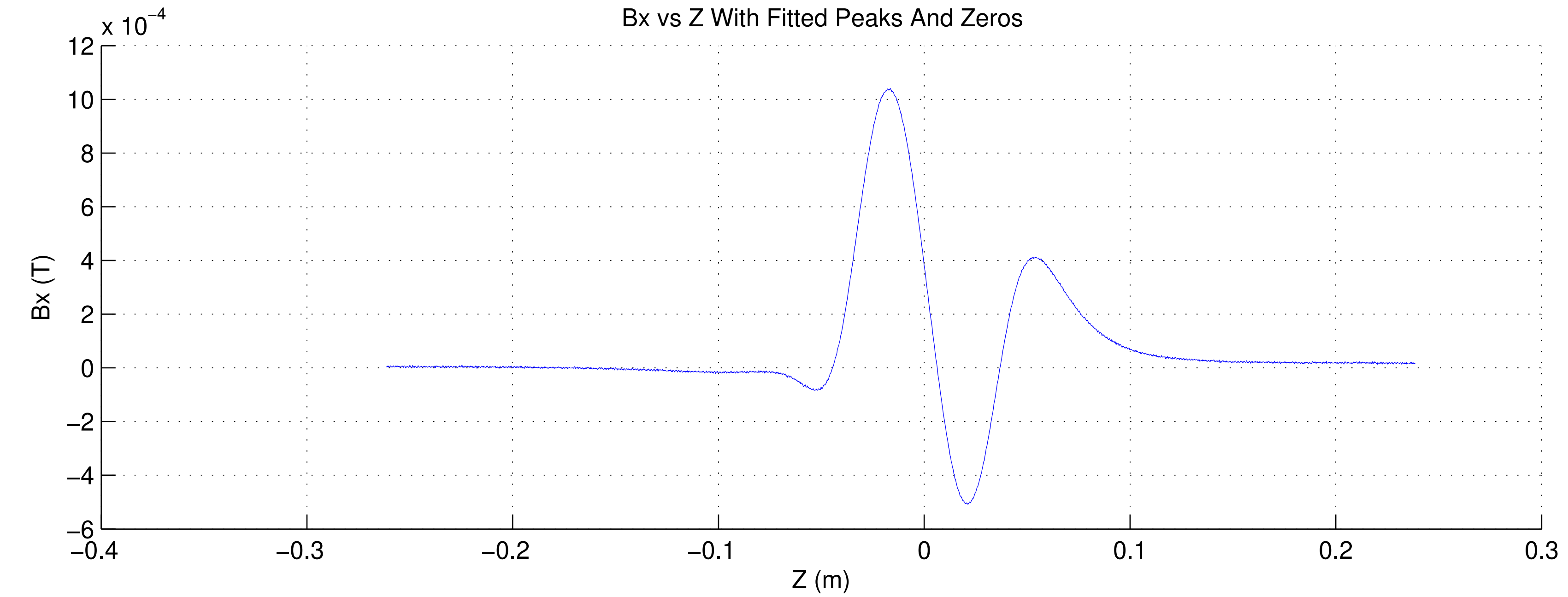


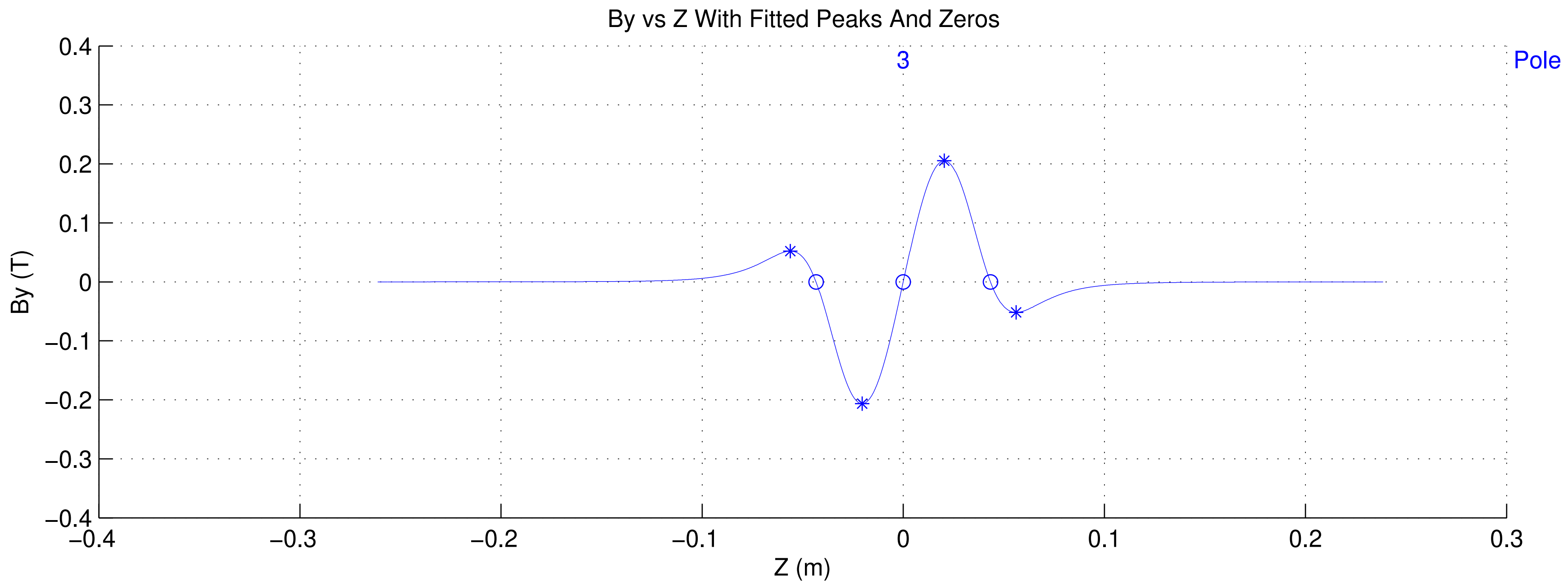
Bx, By, Bz vs Zm
x 10^-3
1.5
1
0.5
0
−0.5
−1
Bx (T)
1.3
1.4
1.5
1.6
1.7
1.8
1.9
0.4
0.2
0
−0.2
−0.4
By (T)
1
0.5
0
−0.5
−1
Bz (T)
Zm Measurement Position (m)

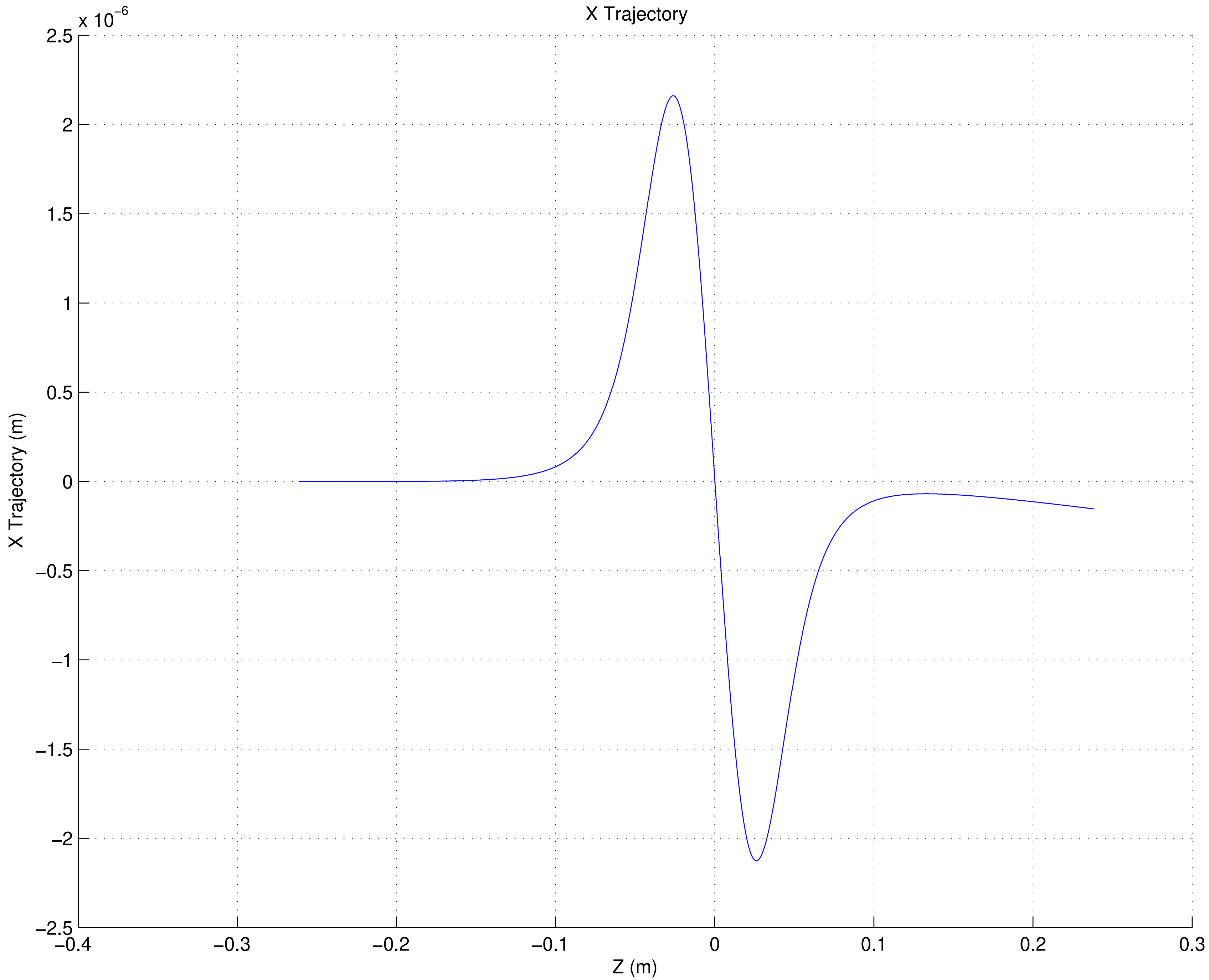

Bx vs Z
x 10^-4
12
10
8
6
4
2
0
−2
−4
−6
Bx (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)


By vs Z
By (T)
Z (m)
0.25
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.25
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3

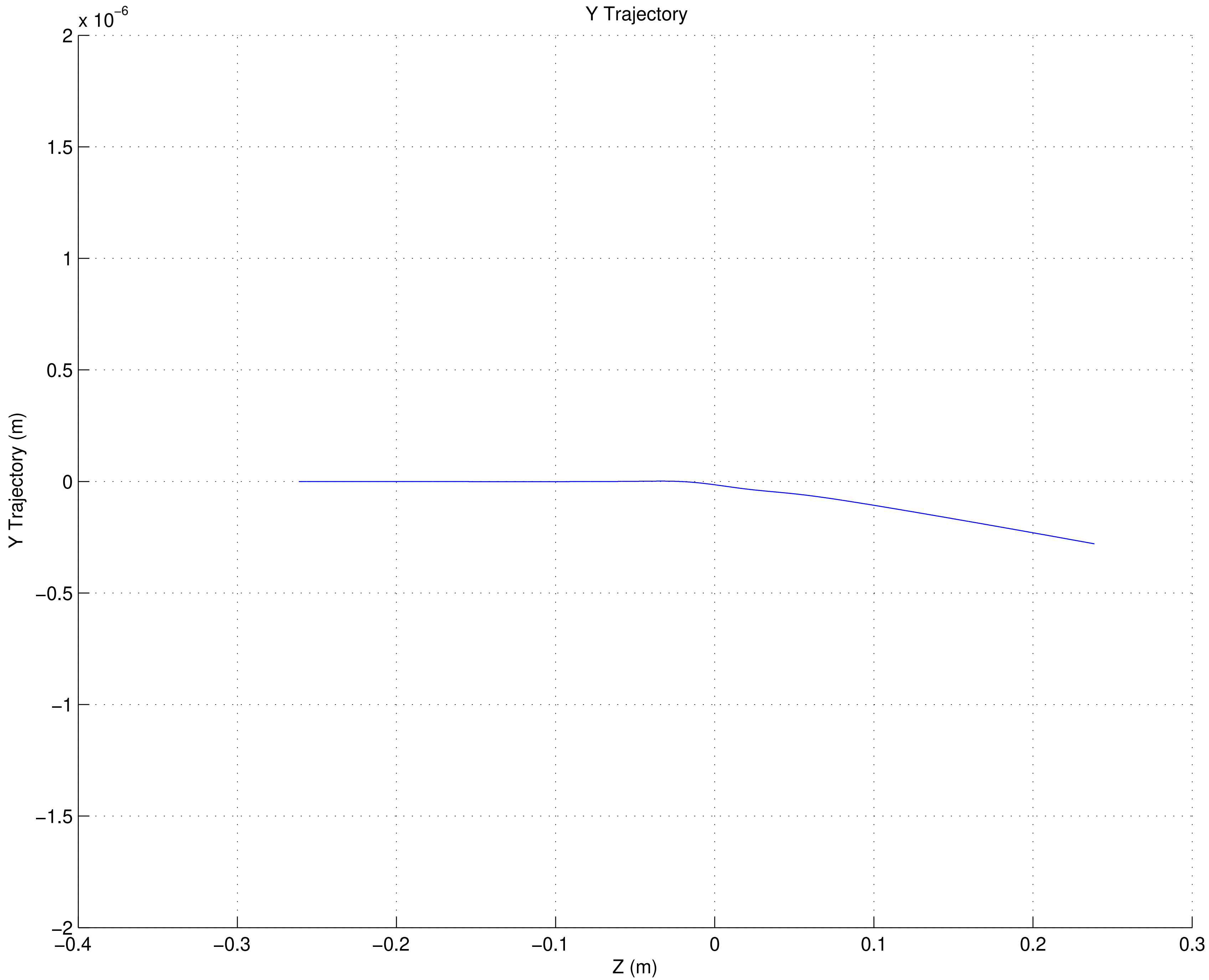

Bx and By vs Z
Bx
By
0.25
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.25
Bx, By (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)

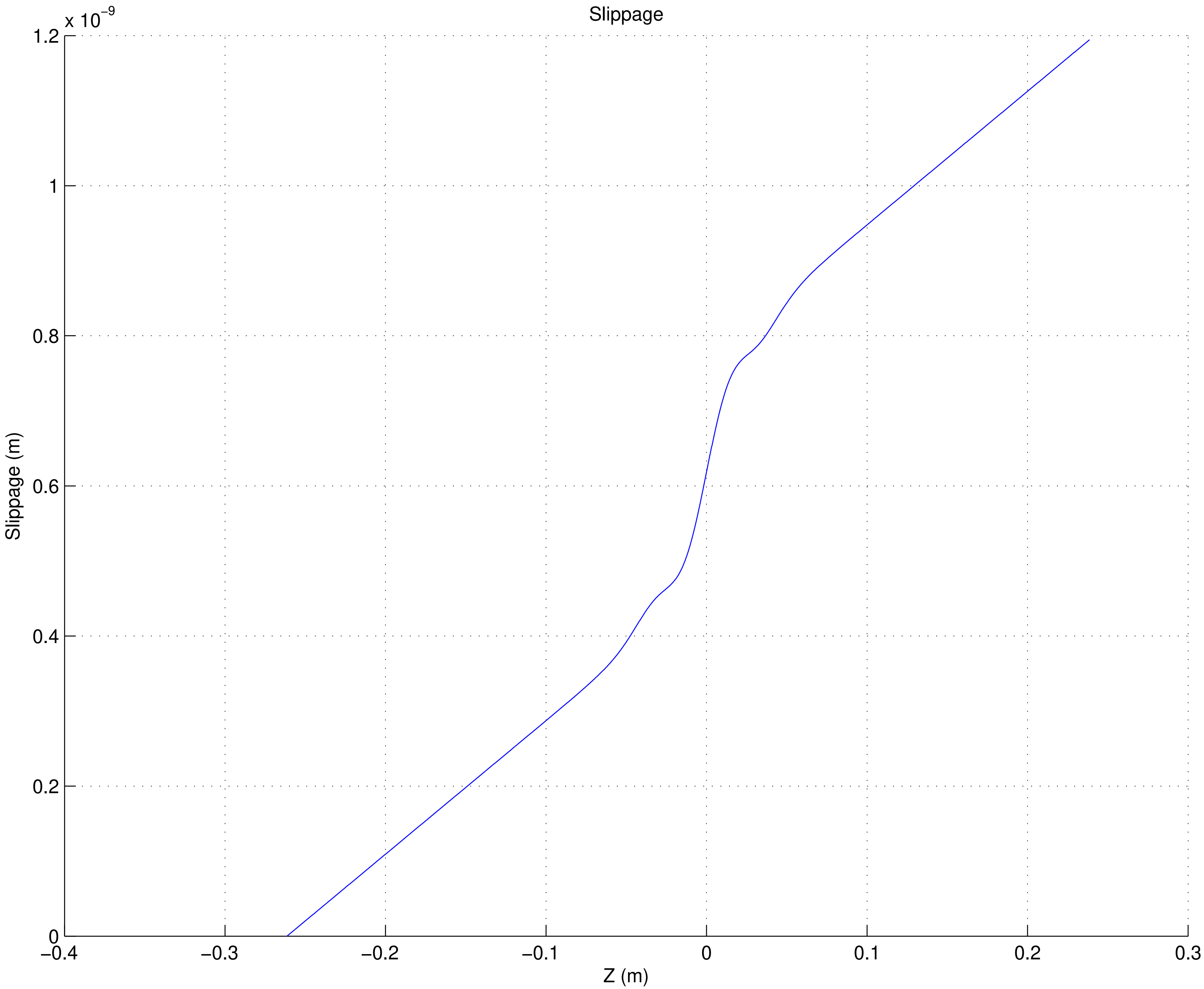

Bx vs Z With Fitted Peaks And Zeros
x 10^-4
Bx (T)
Z (m)

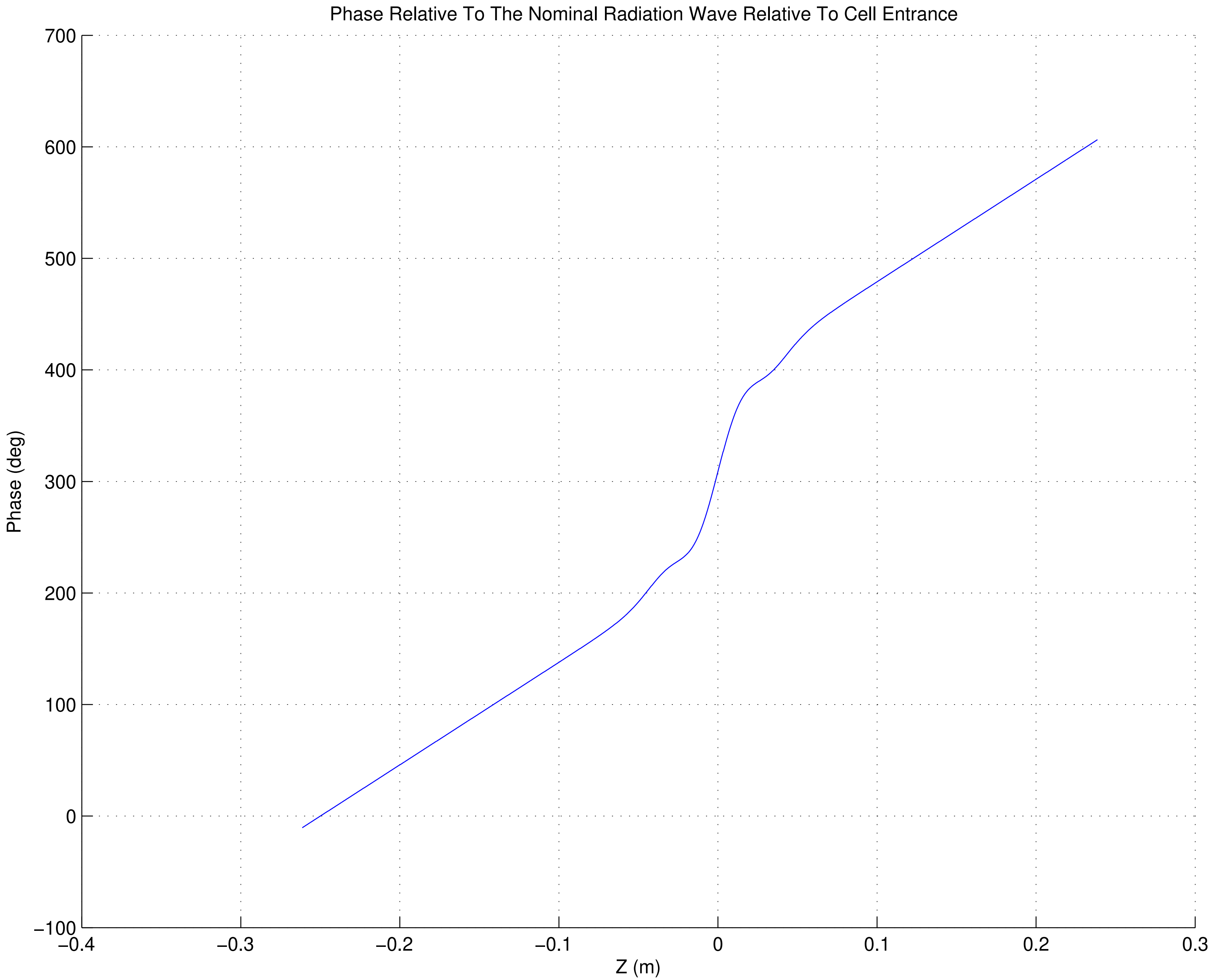

By vs Z With Fitted Peaks And Zeros
3
Pole
By (T)
Z (m)



X Trajectory
x 10^-6
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
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
1.2
1
0.8
0.6
0.4
0.2
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
700
600
500
400
300
200
100
0
−100
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)
Phase (deg)