SLAC Magnetic Measurements

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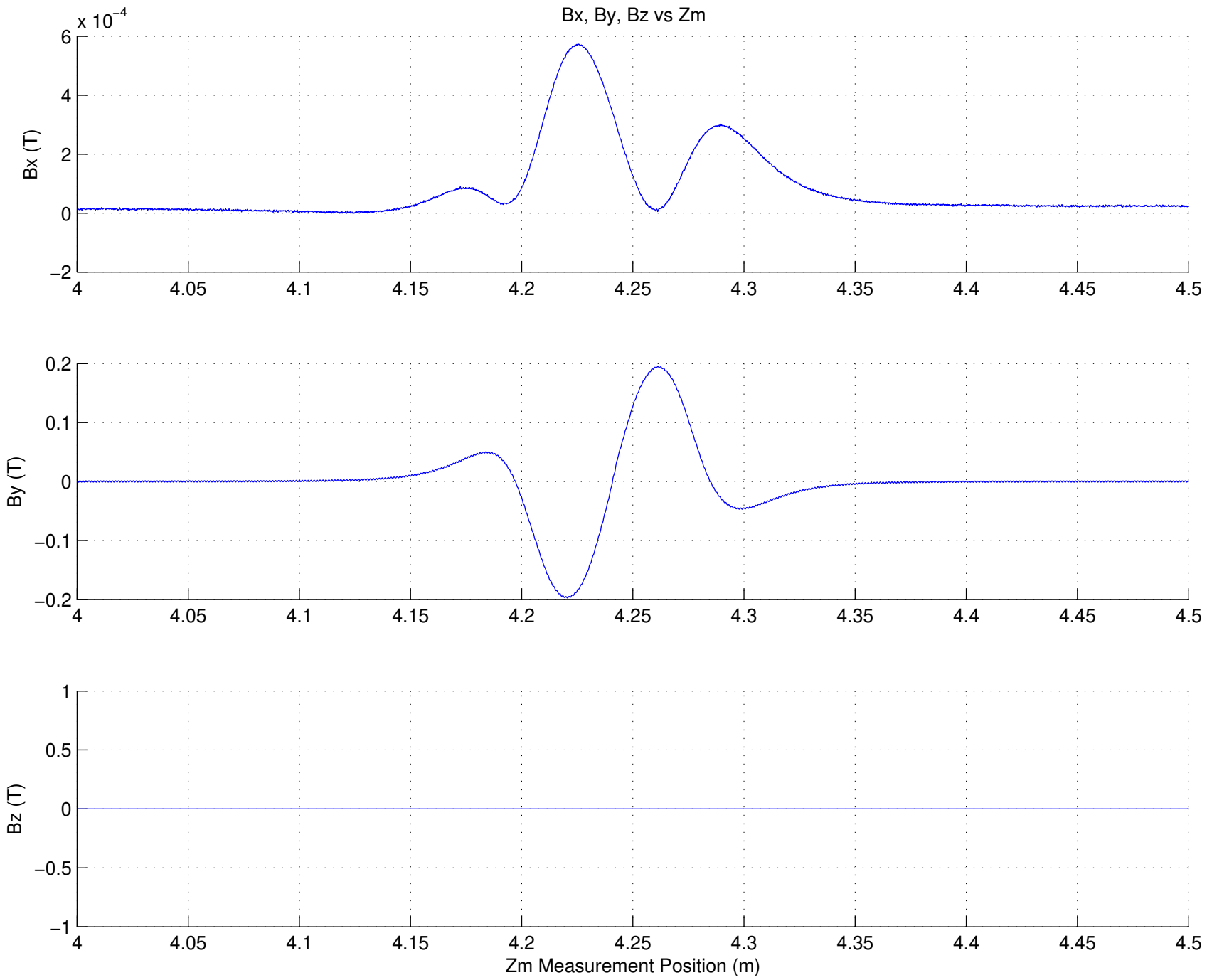
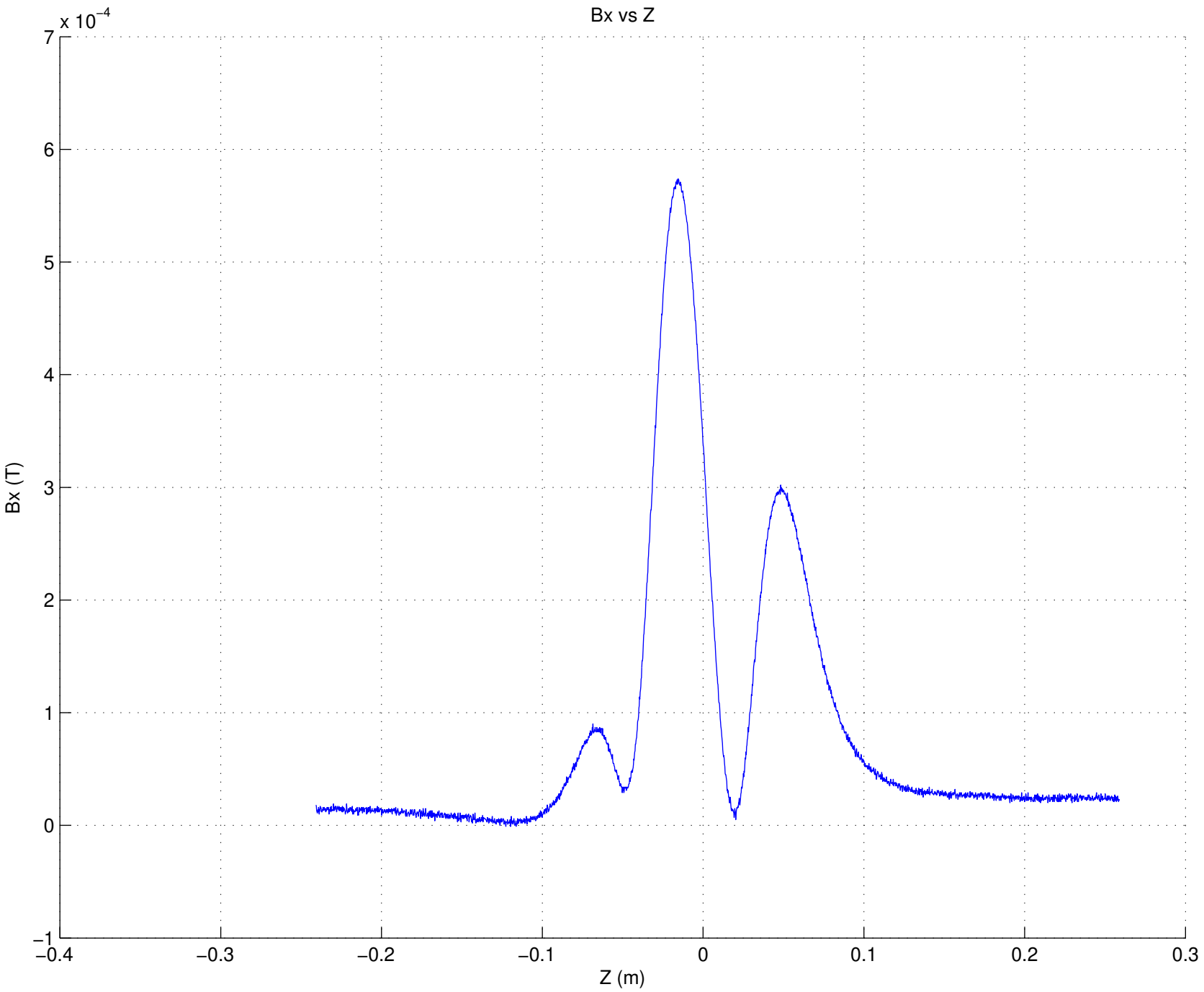
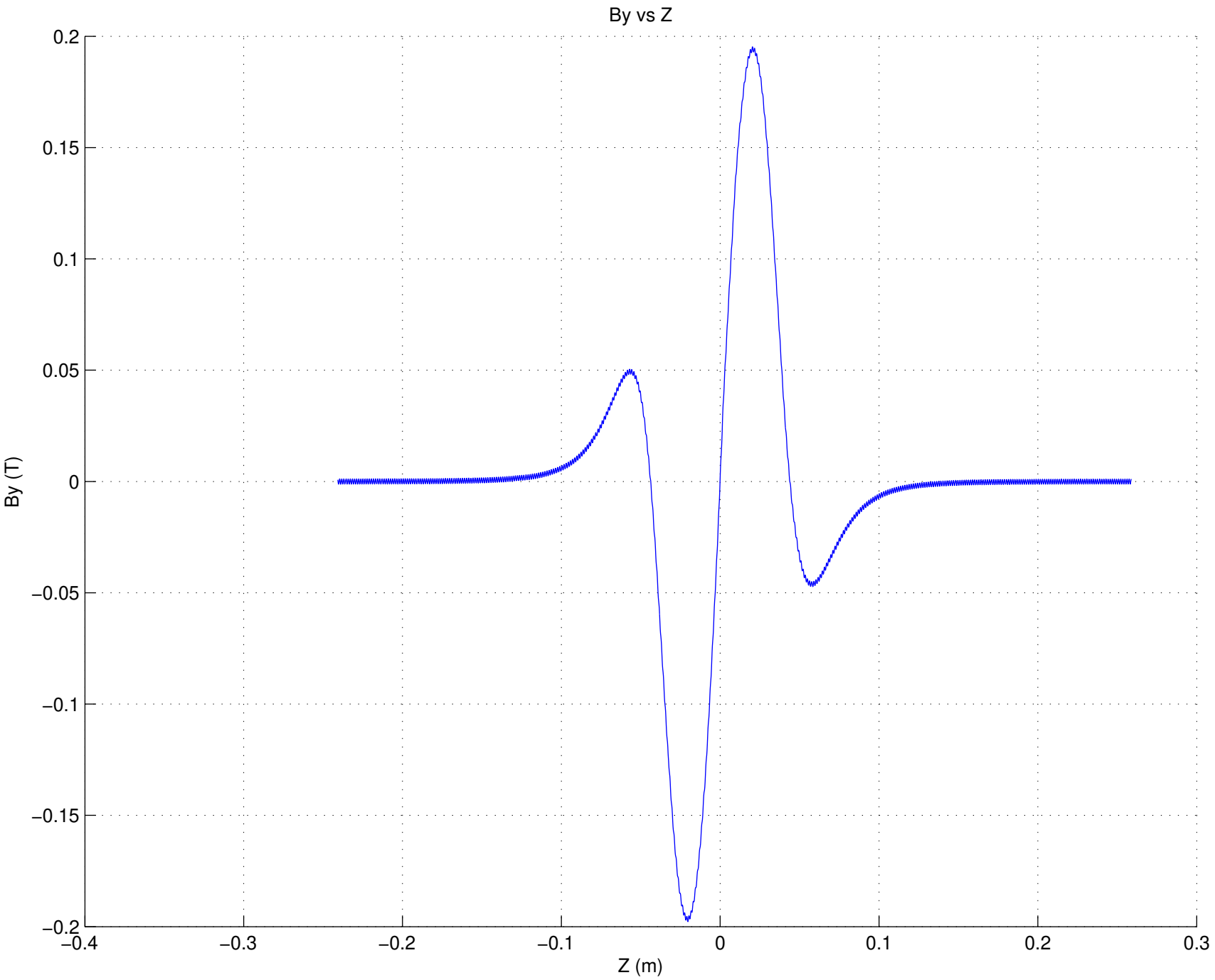
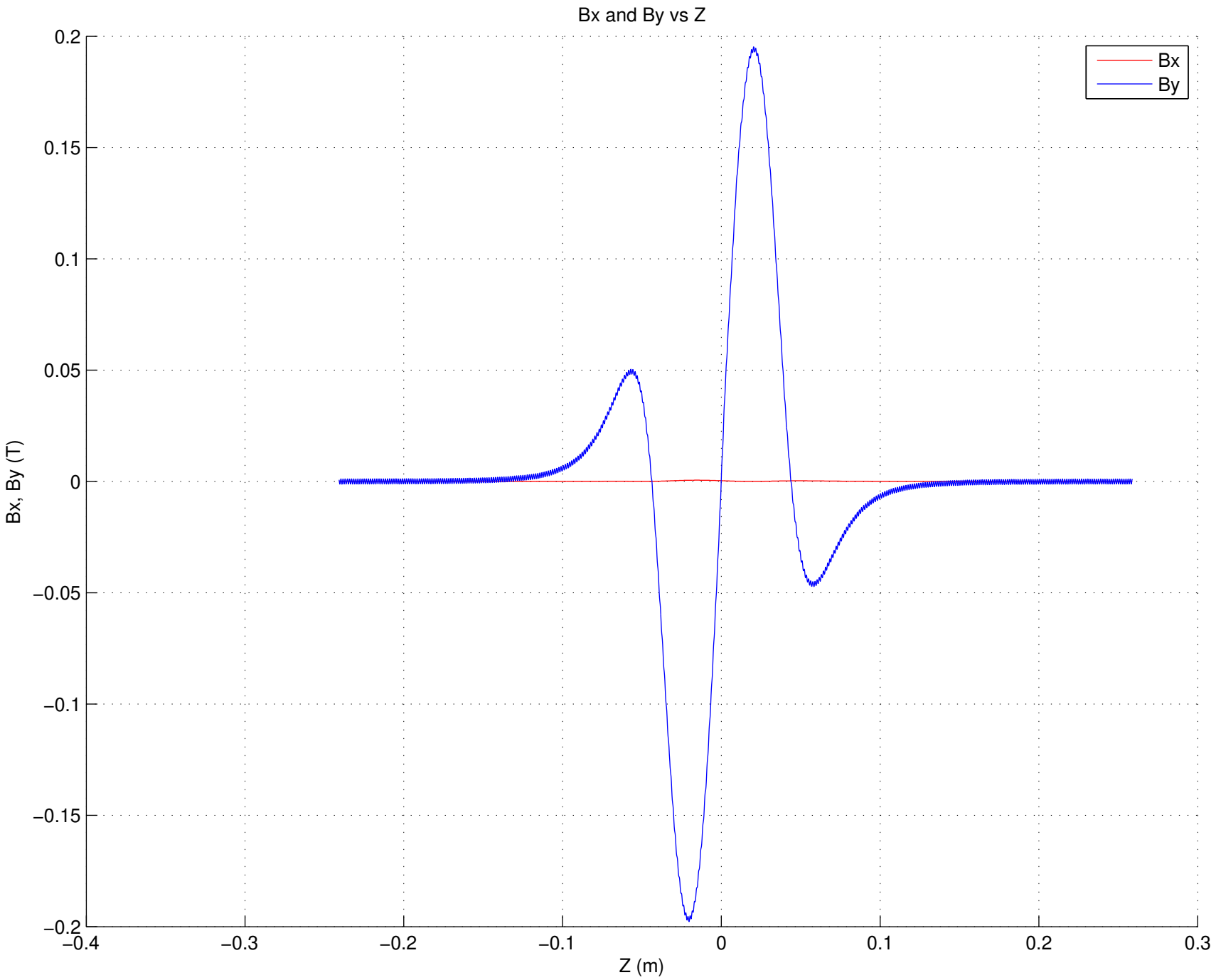
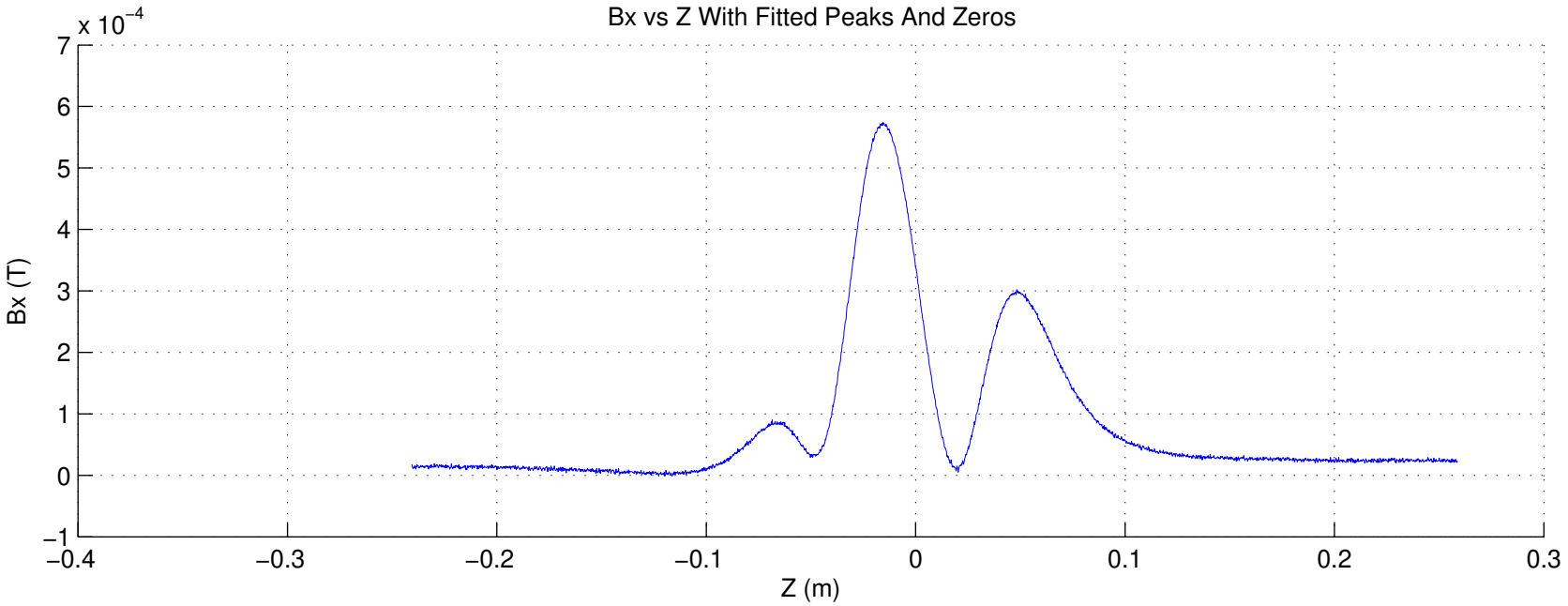
Parameters:
INPUT−FILE−DIR =V:\MET\MagServe\MagData\LCLS\Undulator\PHASE−SHIFTER\DATASET0001\Fine Tuning\Z Scans\Run 0
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =0
GAMMA =16765.2111
NOM−LAMBDA−U =0.055
NOM−K−VALUE =9.9
NOM−LAMBDA−R =4.8925e−09
NUM−POLES =4
NUM−END−POLES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

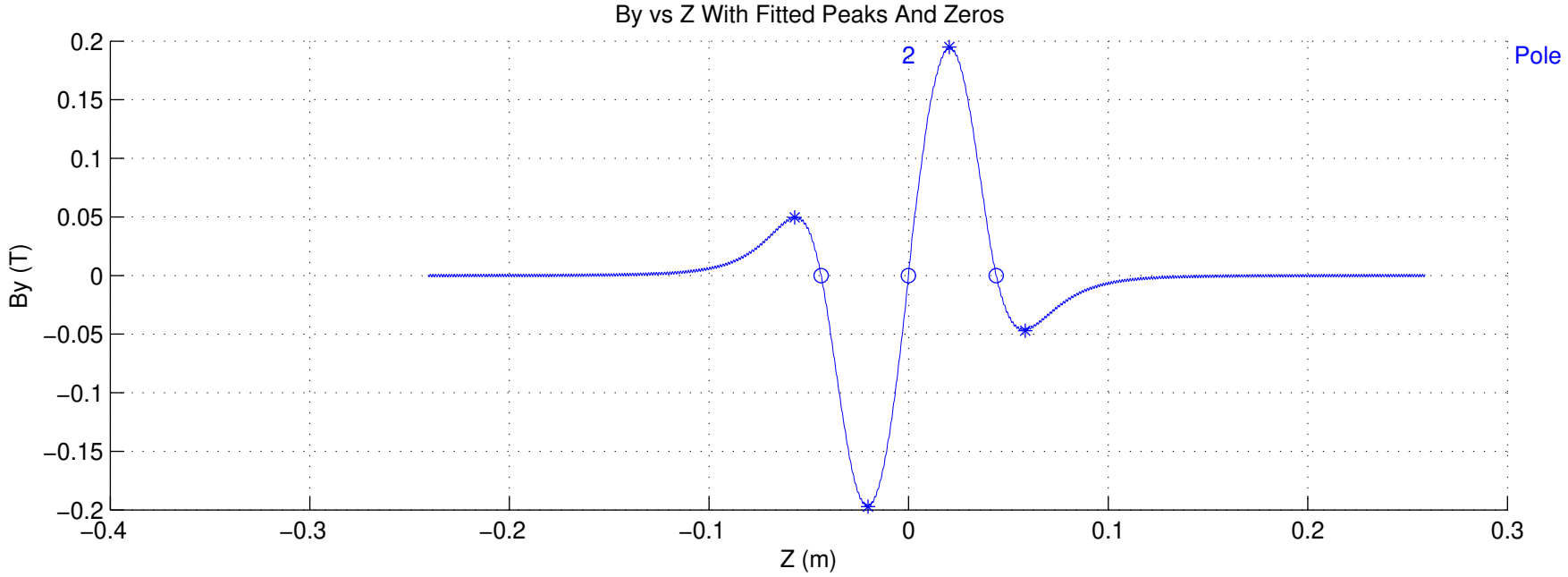

Bx, By, Bz vs Zm
x 10^-4
Bx (T)
By (T)
Bz (T)
Zm Measurement Position (m)
6
4
2
0
−2
0.2
0.1
0
−0.1
−0.2
1
0.5
0
−0.5
−1
4
4.05
4.1
4.15
4.2
4.25
4.3
4.35
4.4
4.45
4.5

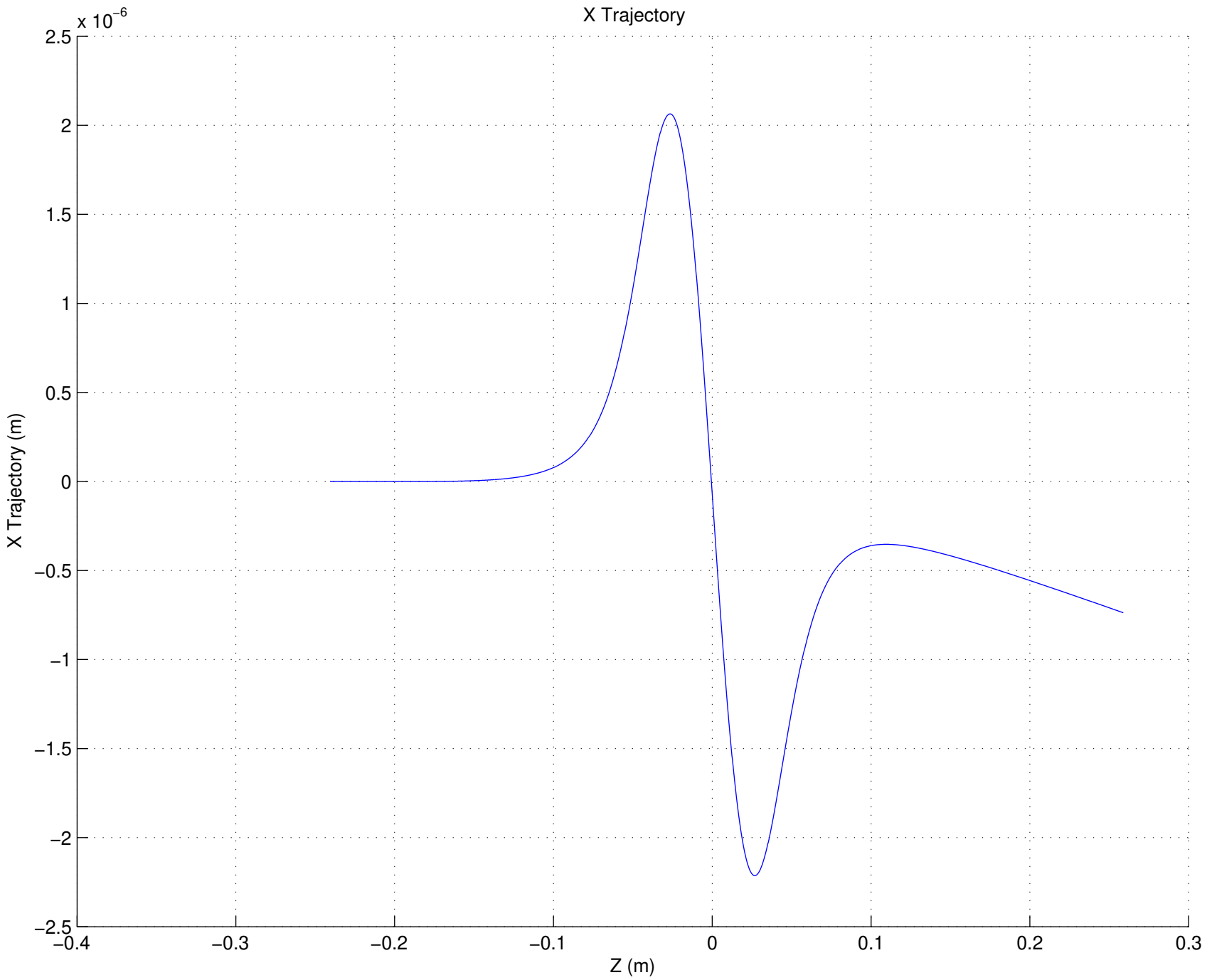

Bx vs Z
x 10^-4
7
6
5
4
3
2
1
0
−1
Bx (T)
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)

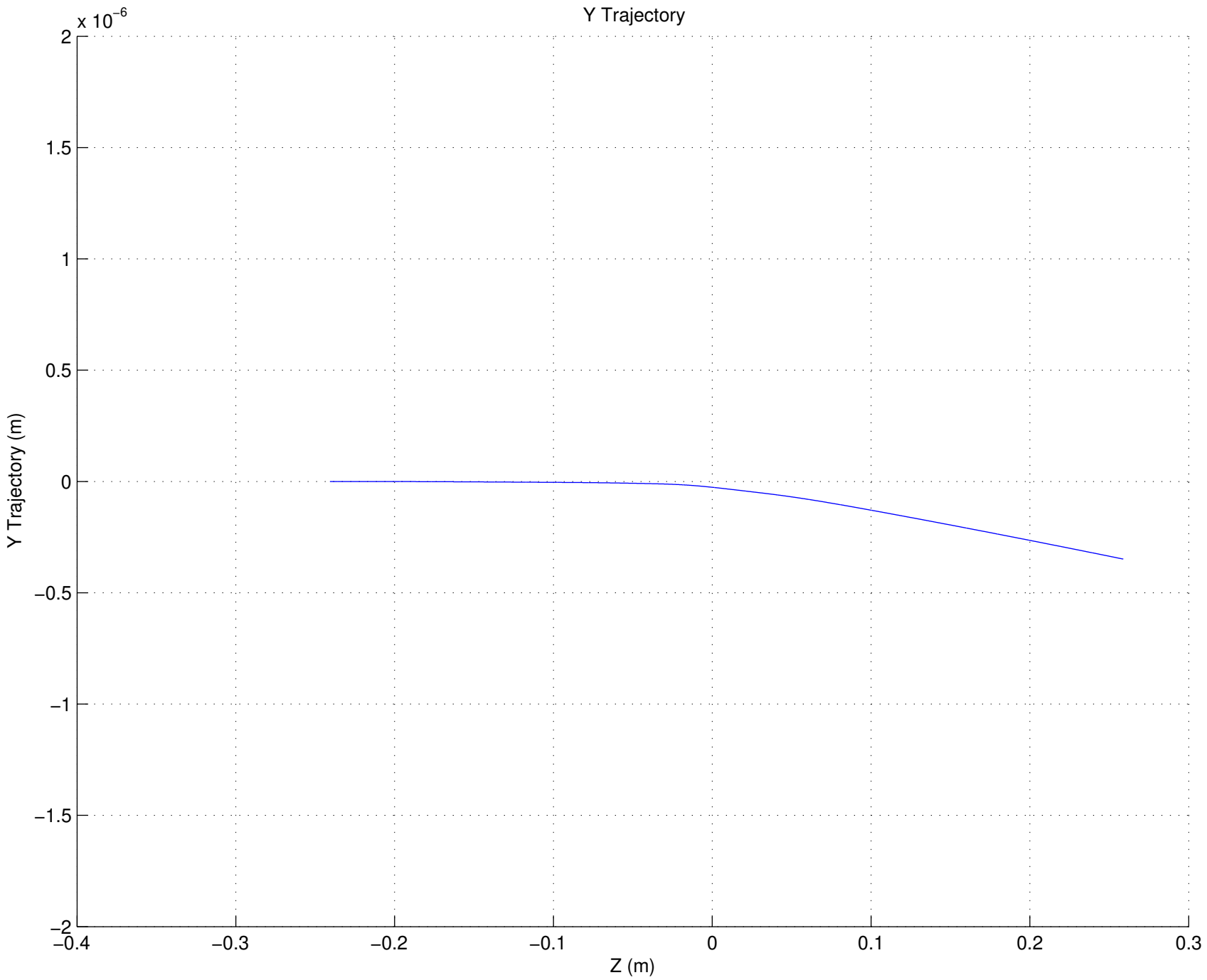

By vs Z
By (T)
Z (m)
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3

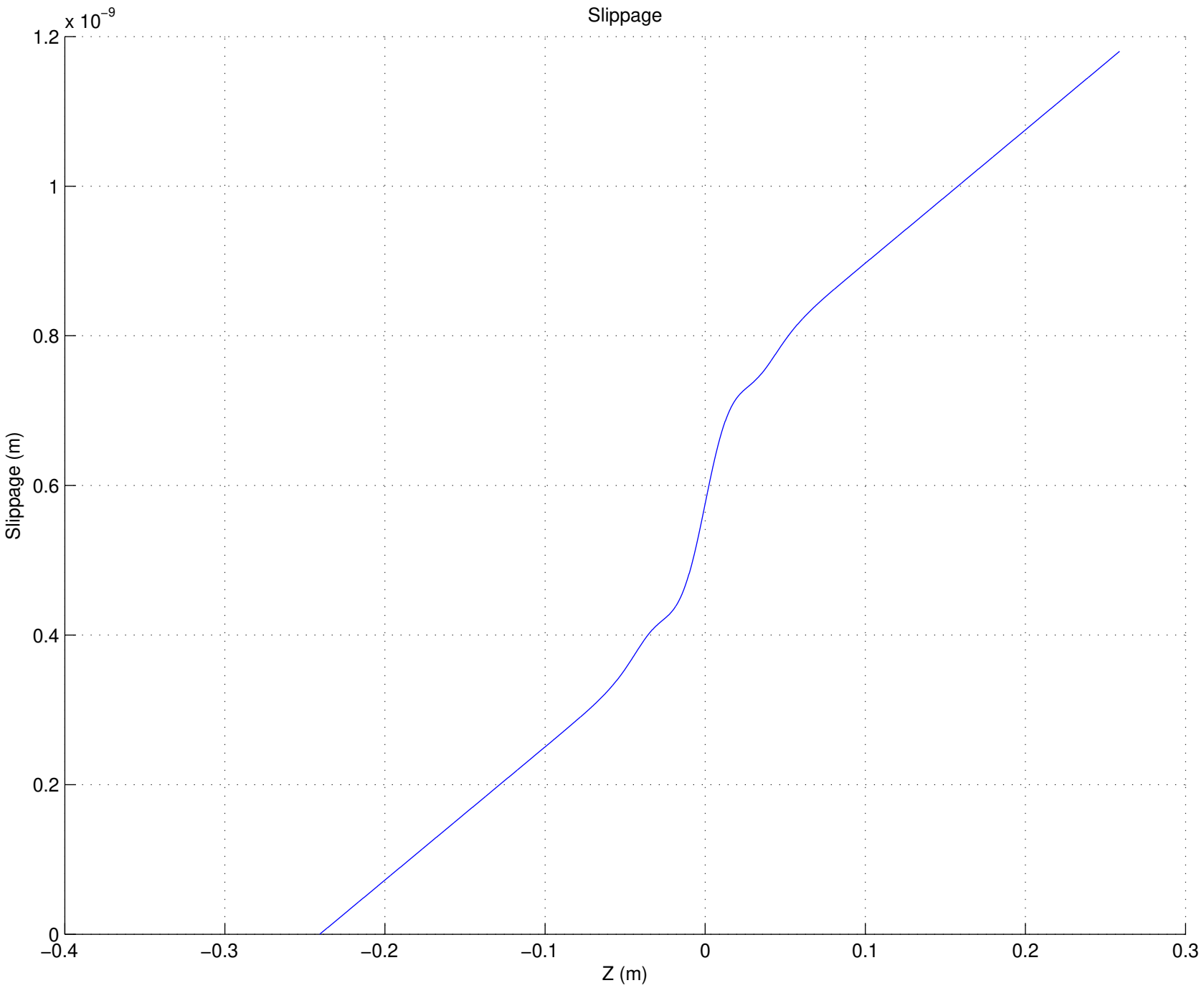

Bx and By vs Z
Bx
By
Bx, By (T)
Z (m)
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3

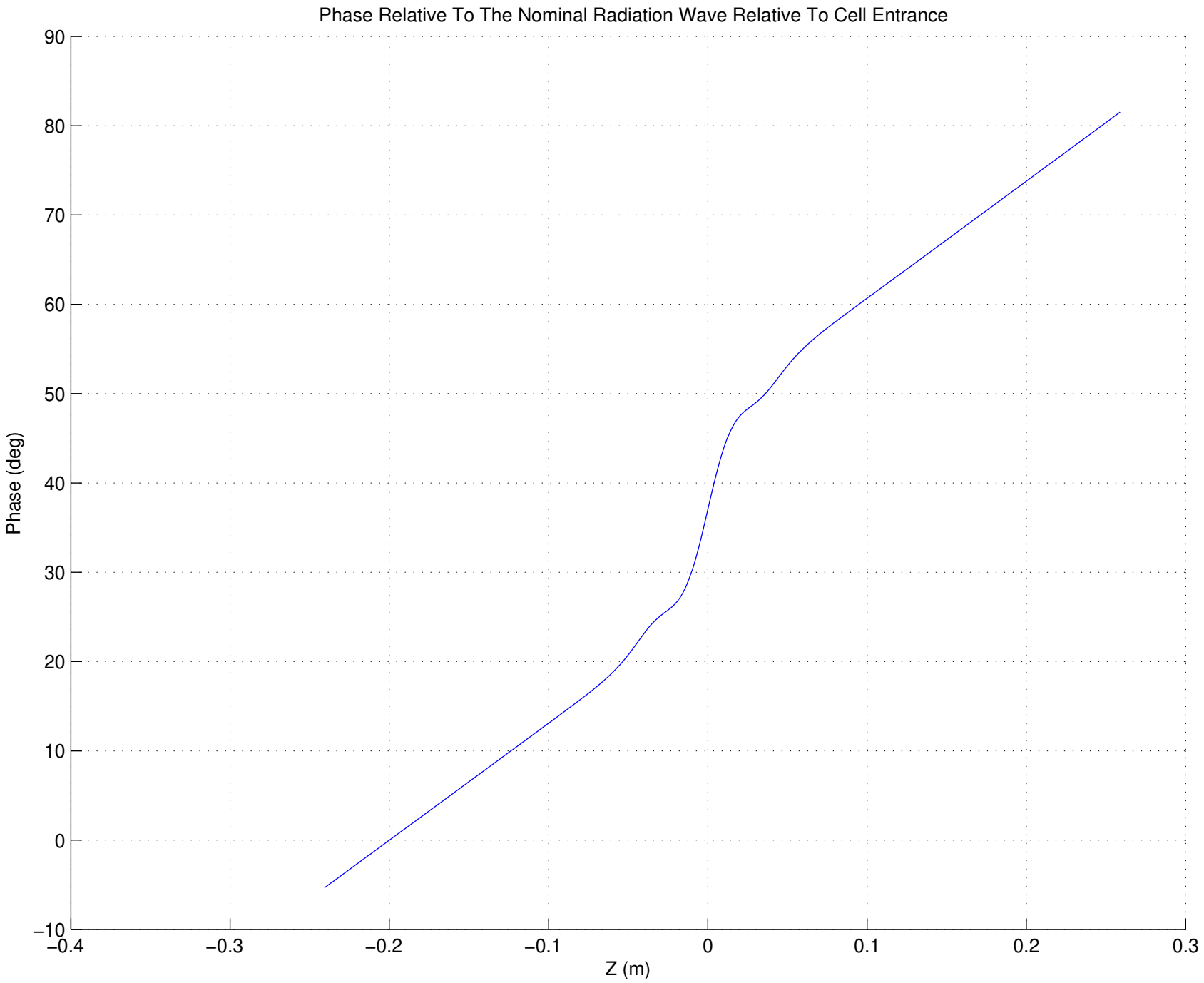

Bx vs Z With Fitted Peaks And Zeros
x 10^-4
Bx (T)
Z (m)
7
6
5
4
3
2
1
0
−1
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3


By vs Z With Fitted Peaks And Zeros
By (T)
Z (m)
2
Pole
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3


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
Phase (deg)
90
80
70
60
50
40
30
20
10
0
−10
−0.4
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
Z (m)