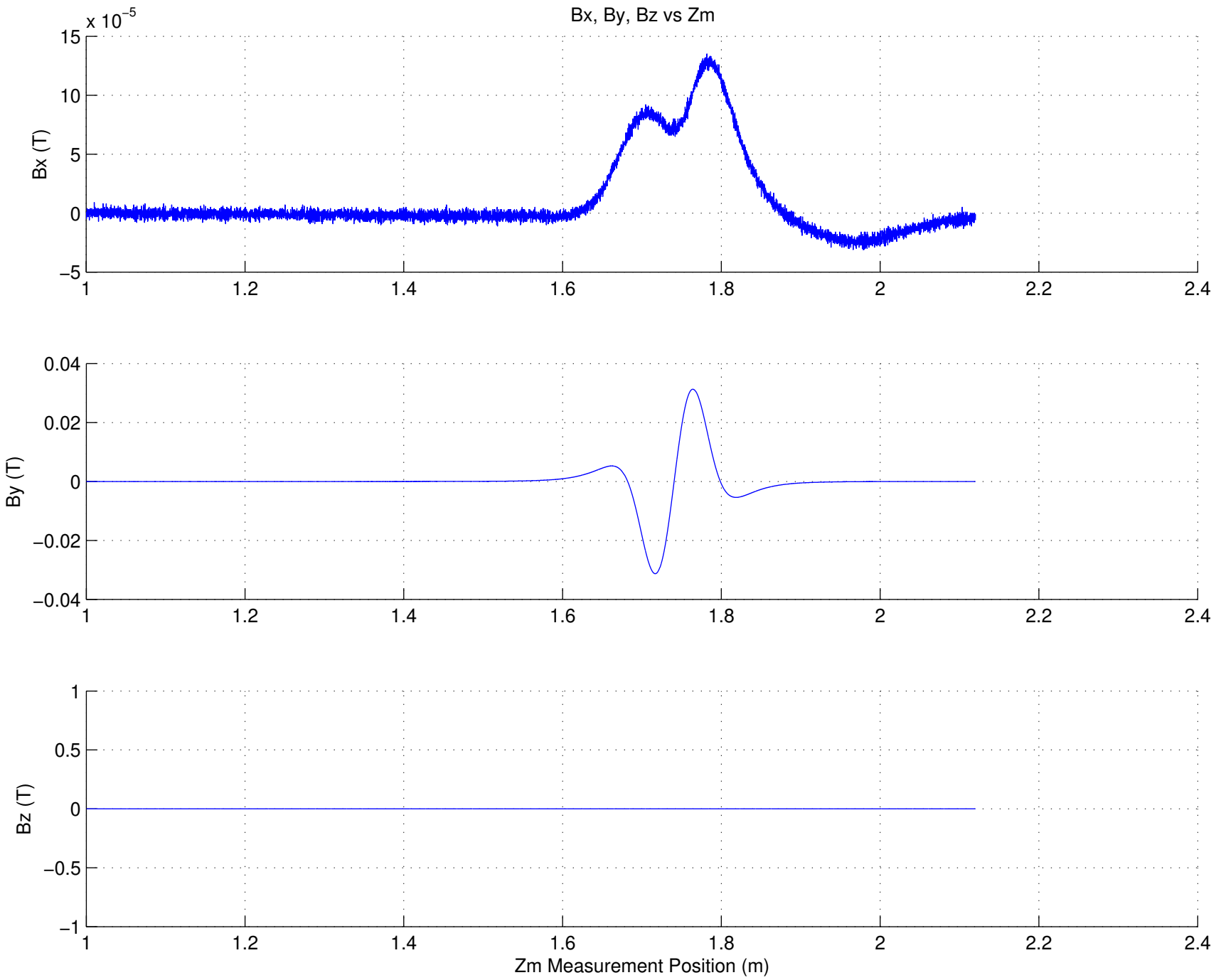
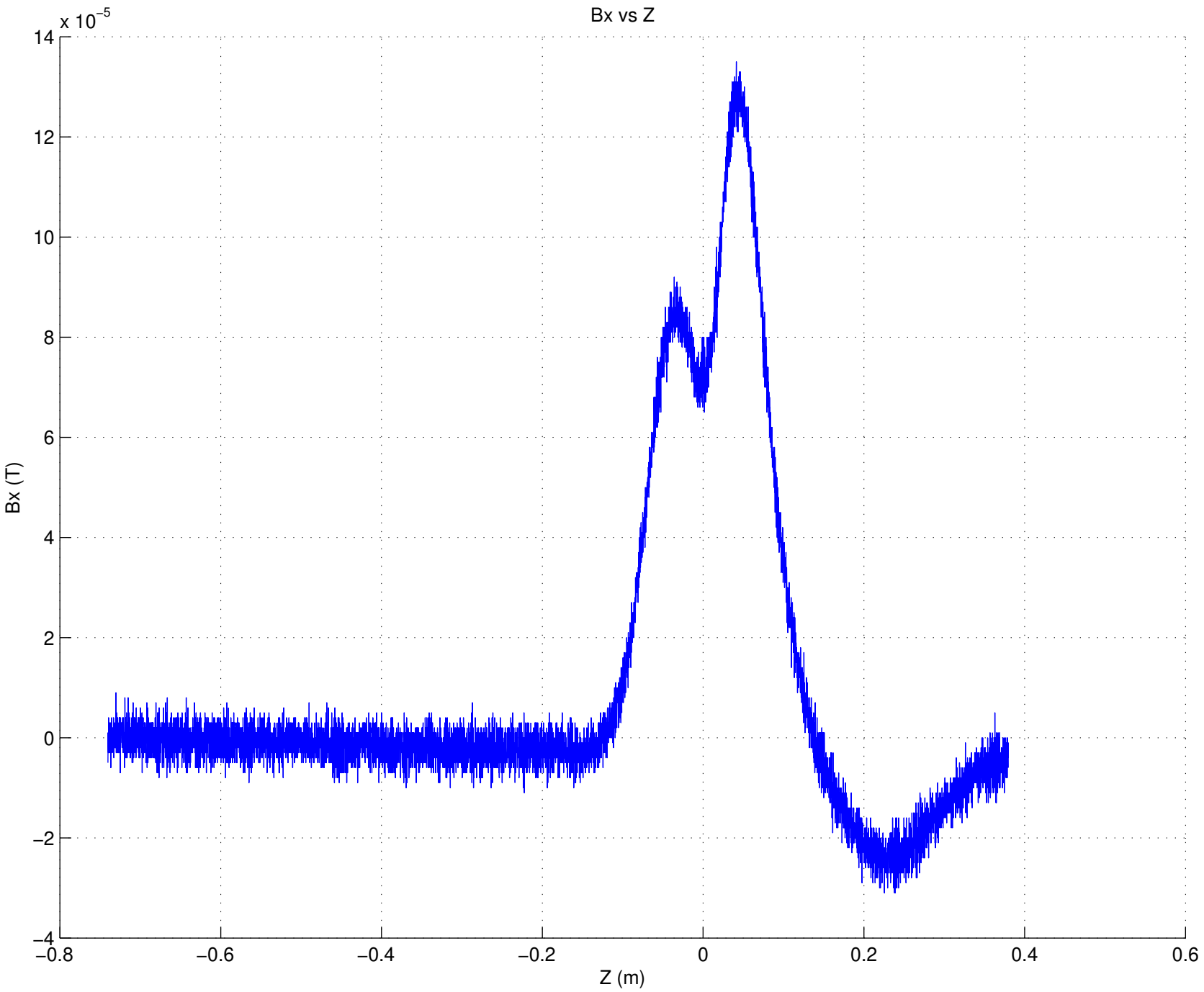
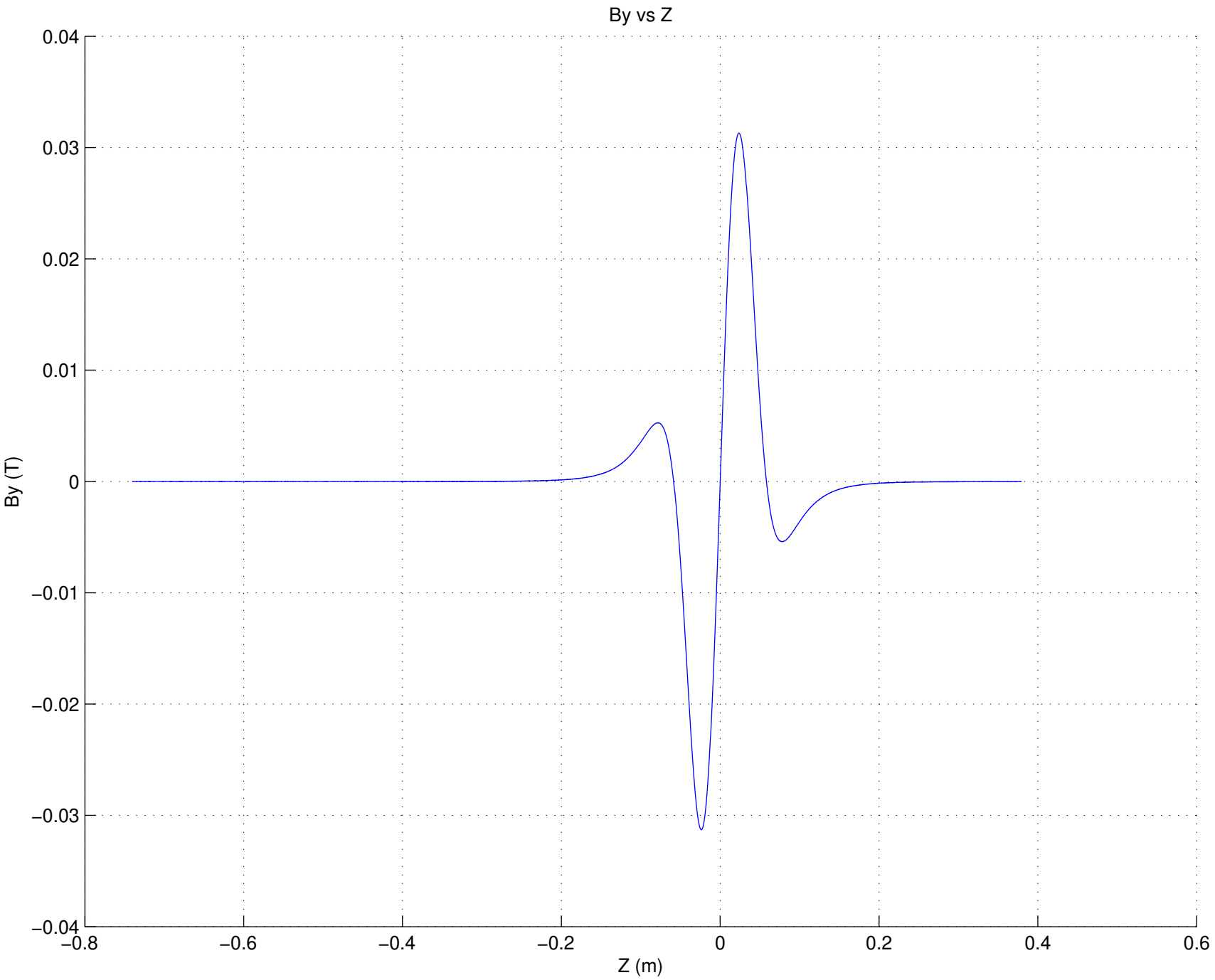
SLAC Magnetic Measurements

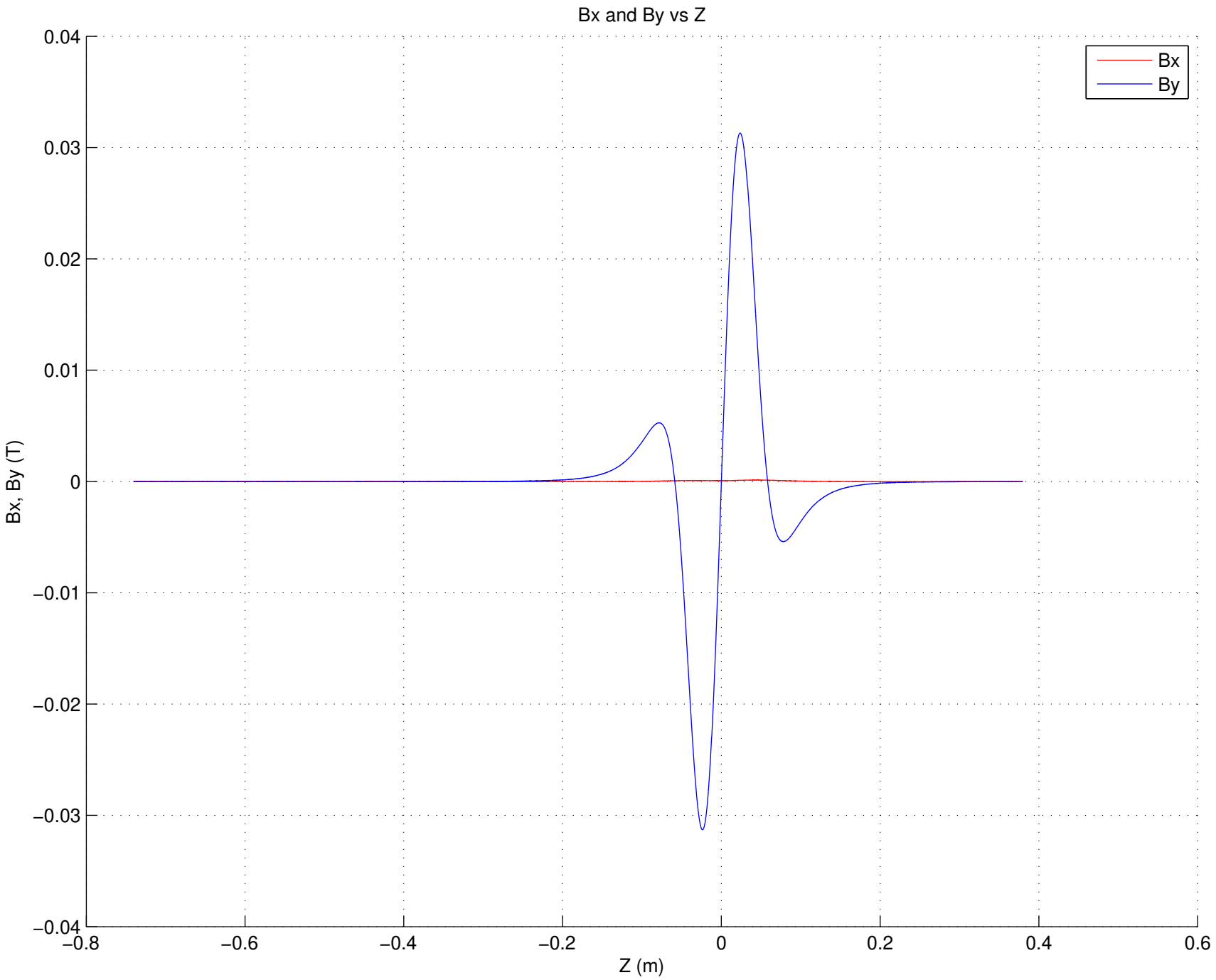
Phase Analysis
−−−−−−−−−−−−−

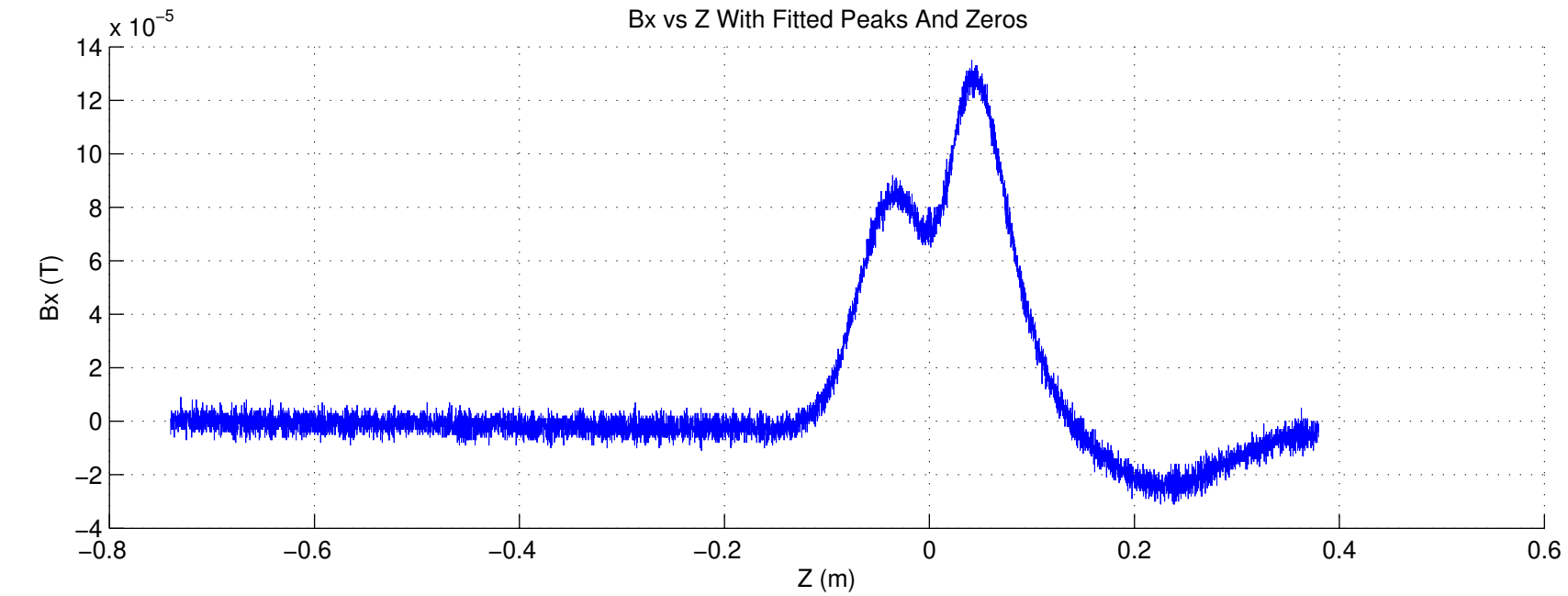
Parameters:
INPUT−FILE−DIR =V:\MET\MagServe\MagData\LCLS\Undulator\PHASE−SHIFTER\DATASET0001\Rough Tuning\Z Scans\Run
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =0
GAMMA =16765.2111
NOM−LAMBDA−U =0.055
NOM−K−VALUE =9.9
NOM−LAMBDA−R =4.8925e−09
NUM−POLES =4
NUM−END−POLES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

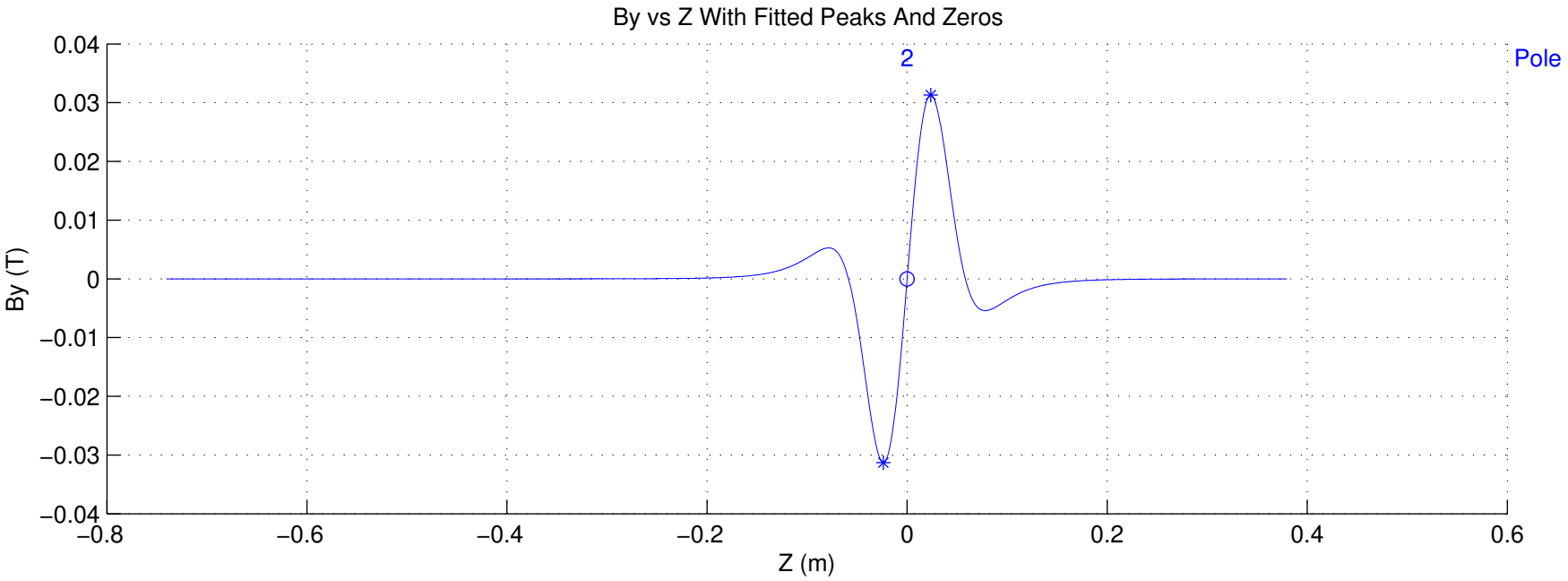

Bx, By, Bz vs Zm
x 10^-5
Bx (T)
By (T)
Bz (T)
Zm Measurement Position (m)
15
10
5
0
−5
0.04
0.02
0
−0.02
−0.04
1
0.5
0
−0.5
−1
1
1.2
1.4
1.6
1.8
2
2.2
2.4

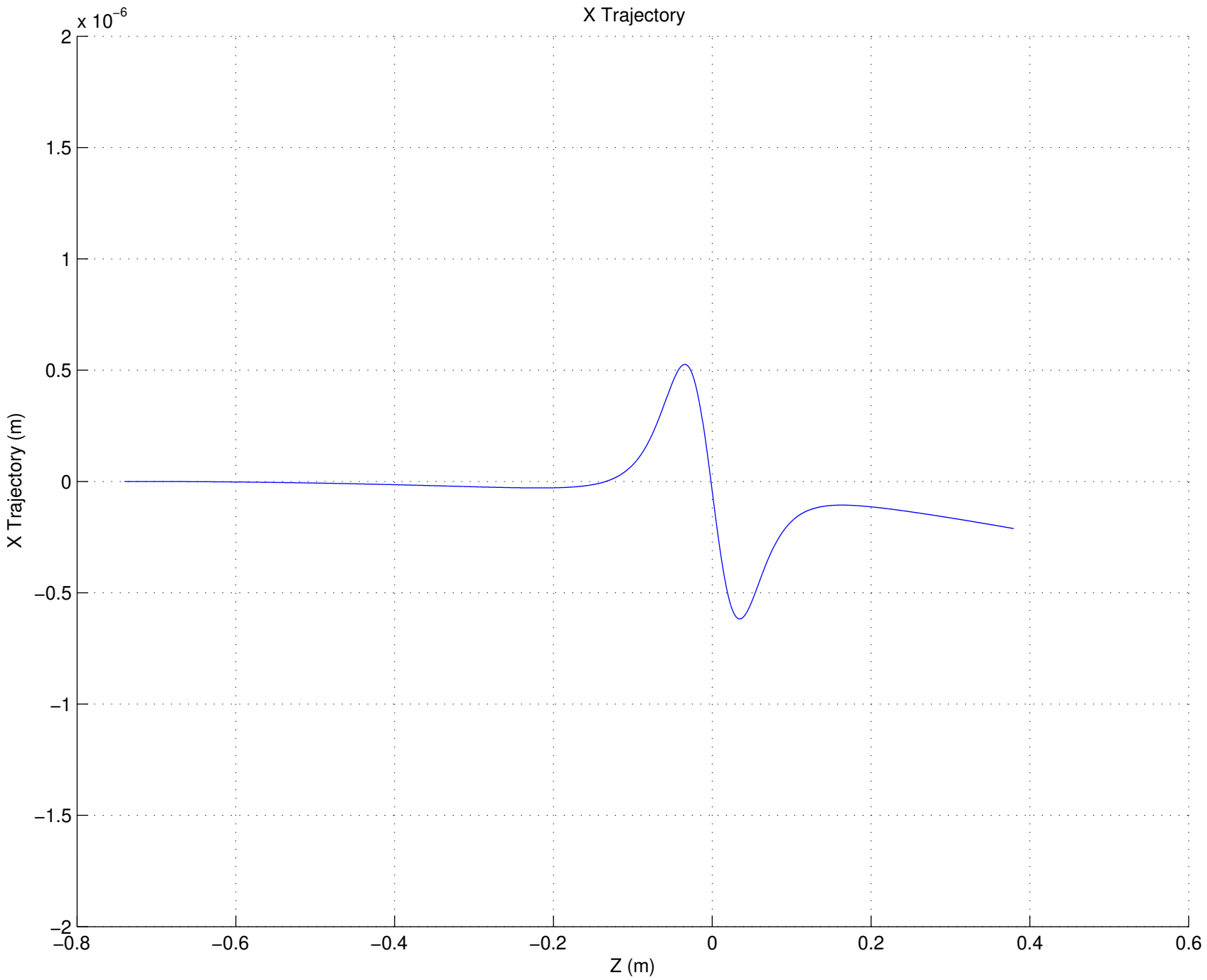

Bx vs Z
x 10^-5
14
12
10
8
6
4
2
0
−2
−4
Bx (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

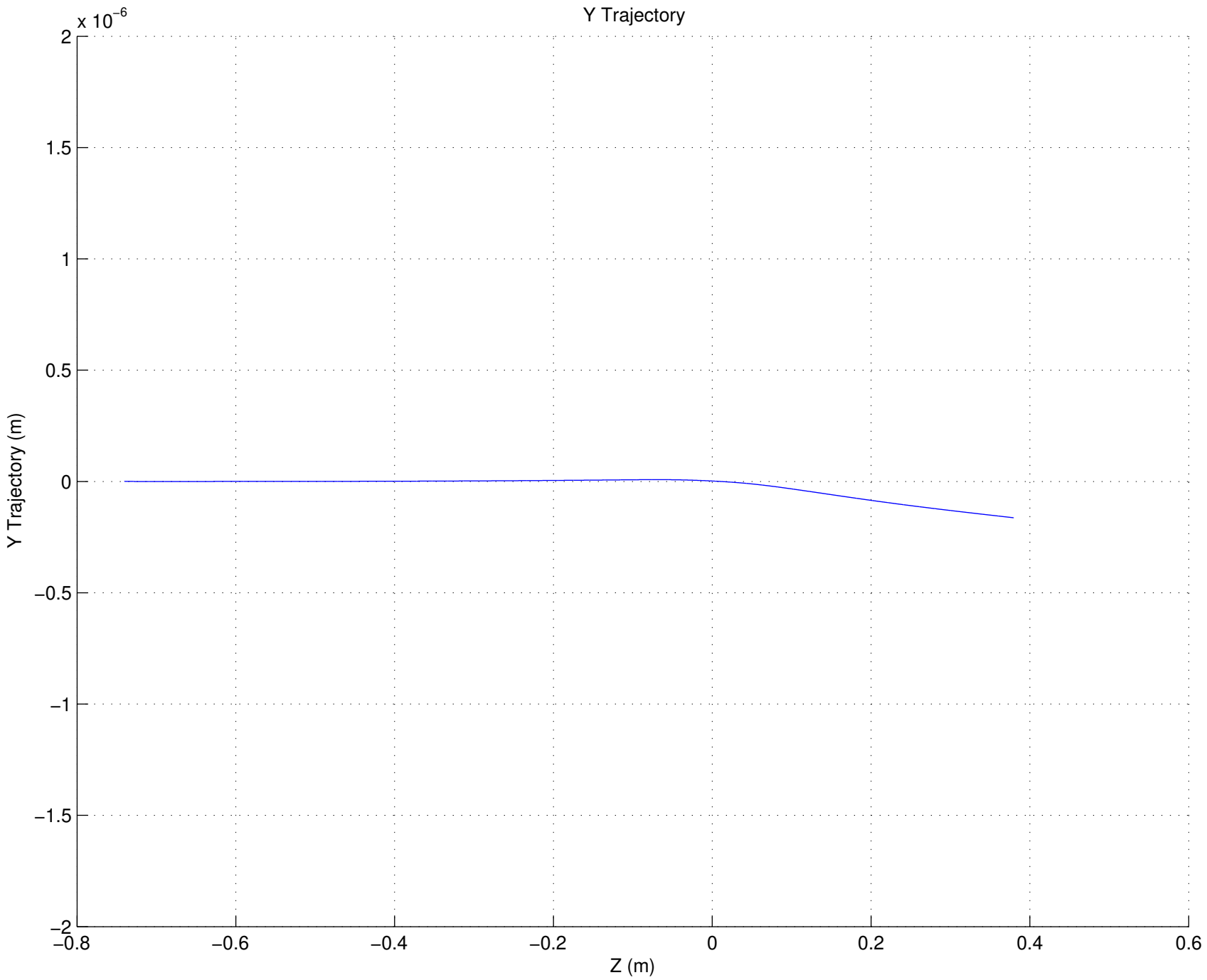

By vs Z
0.04
0.03
0.02
0.01
0
−0.01
−0.02
−0.03
−0.04
By (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

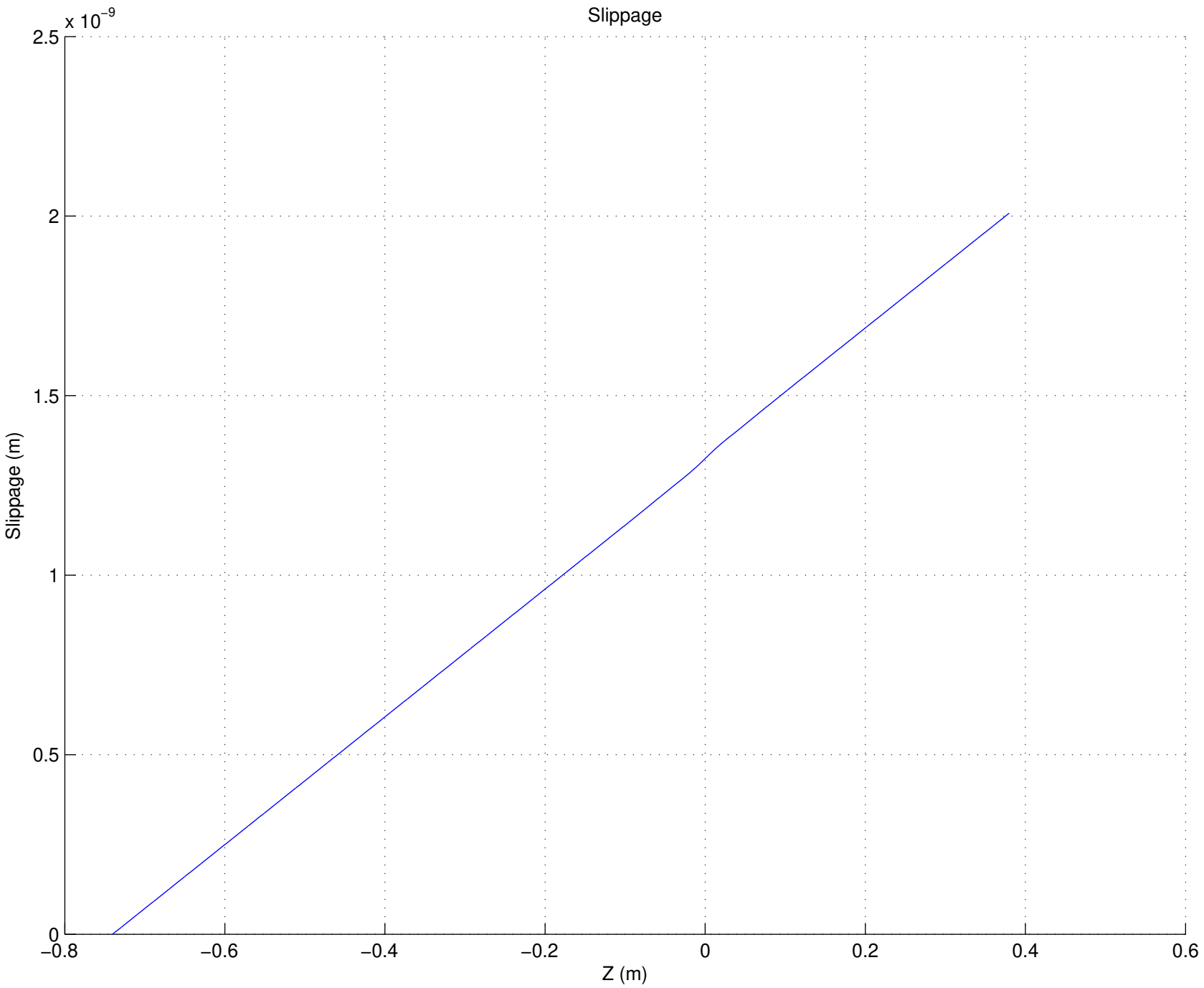

Bx and By vs Z
Bx
By
0.04
0.03
0.02
0.01
0
−0.01
−0.02
−0.03
−0.04
Bx, By (T)
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)

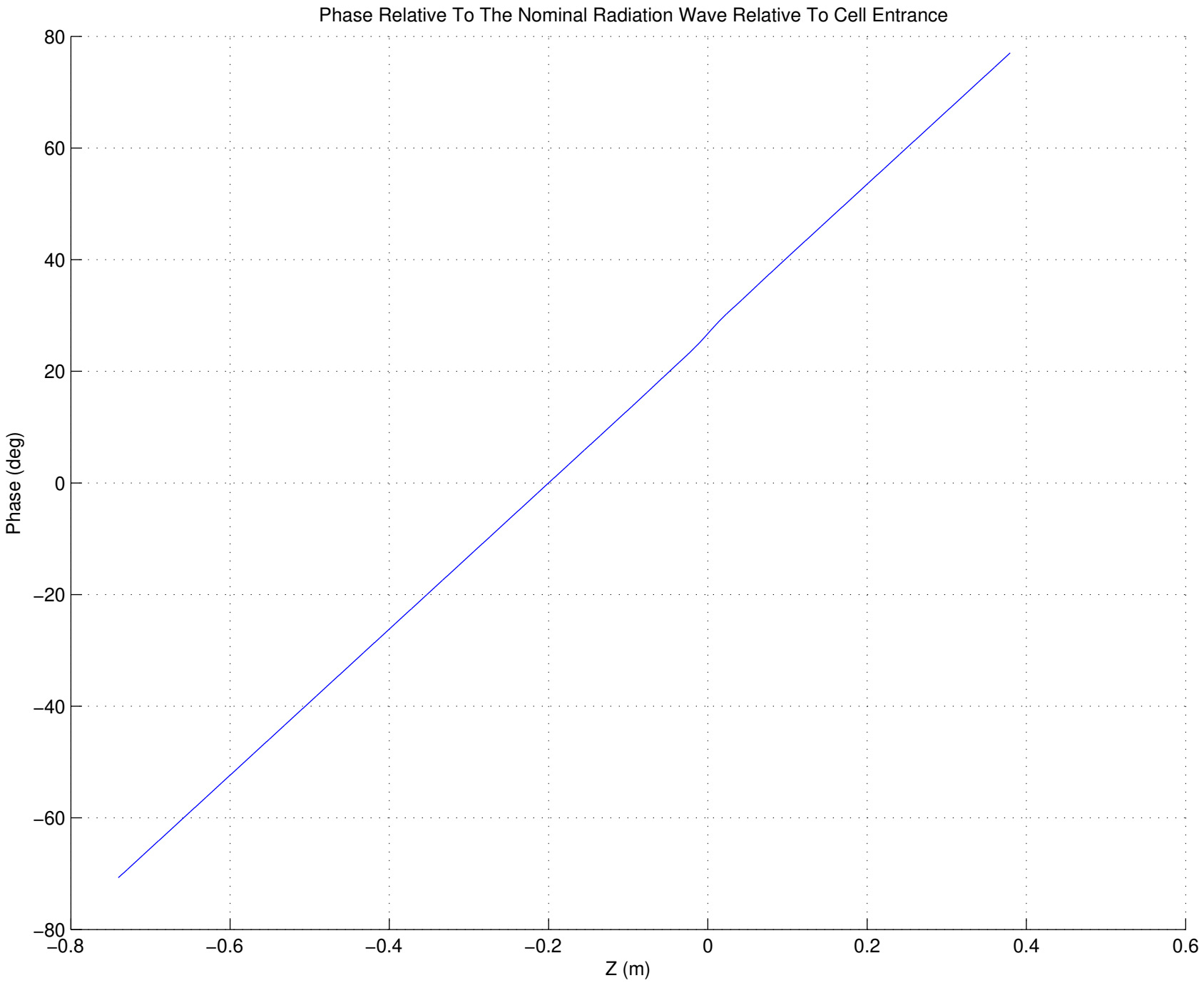

Bx vs Z With Fitted Peaks And Zeros
x 10^-5
Bx (T)
Z (m)
14
12
10
8
6
4
2
0
−2
−4
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6


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
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6


X Trajectory
x 10^-6
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
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
2.5
2
1.5
1
0.5
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
Phase (deg)
80
60
40
20
0
−20
−40
−60
−80
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
Z (m)