SLAC Magnetic Measurements

Hall Probe Array Analysis
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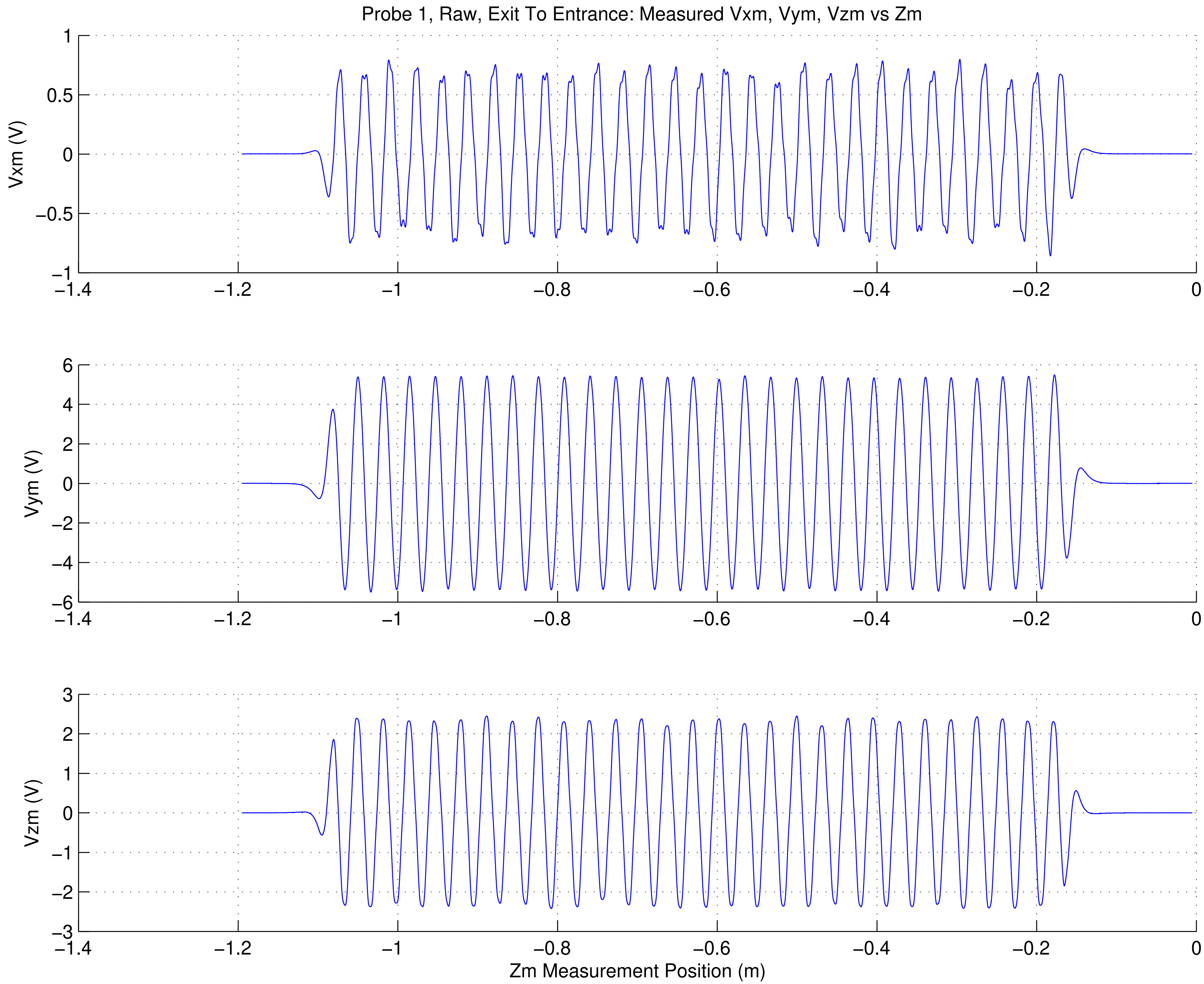
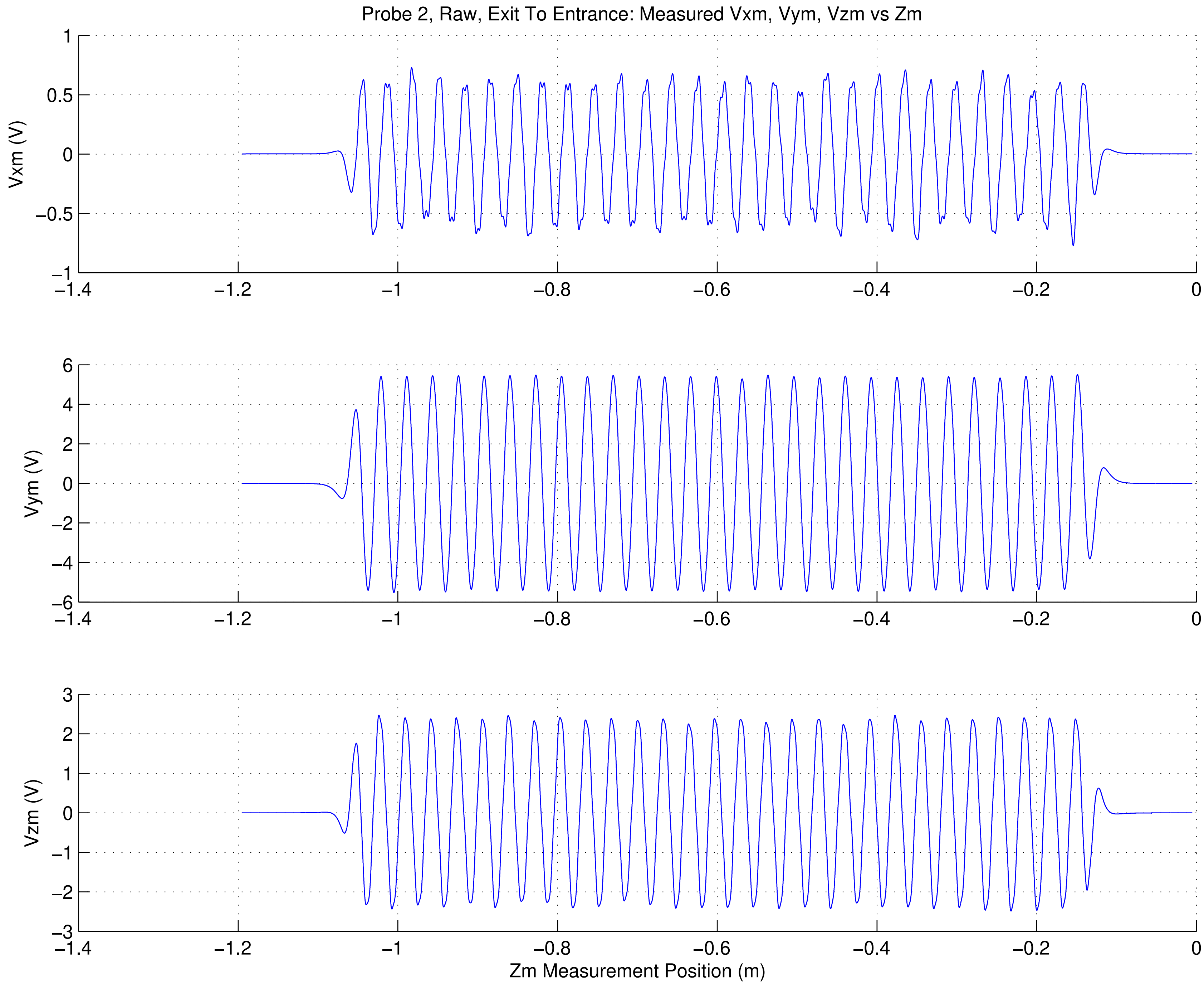
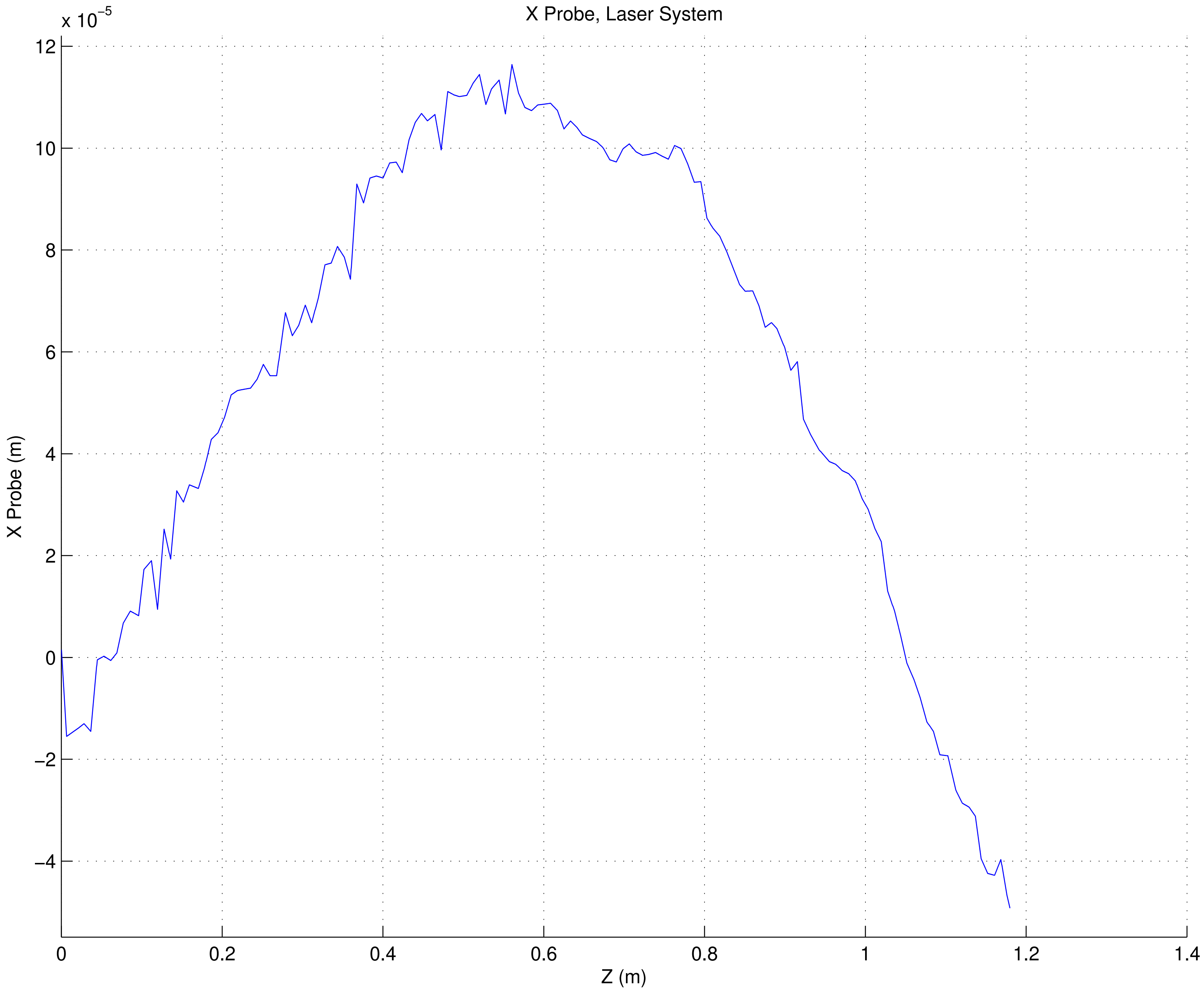
Parameters:
INPUT−FILE−DIR =s:\MagData\LCLS\Undulator\DELTA\Data\Run 394\
INPUT−FILE−NAME =DUTestOutput.dat
INPUT−FILE−TYPE =ZVXYZVXYZH
UND−POL−MODE =LIN−POL−VERT−FIELD
PROBE1−BX−CALIB−FILE =v:\MET\MagServe\MagData\LCLS\Hall probe\SENIS−119−12\SENIS−119−12−X.ini
PROBE1−BY−CALIB−FILE =v:\MET\MagServe\MagData\LCLS\Hall probe\SENIS−119−12\SENIS−119−12−Y.ini
PROBE2−BX−CALIB−FILE =v:\MET\MagServe\MagData\LCLS\Hall probe\SENIS−120−12\SENIS−120−12−X.ini
PROBE2−BY−CALIB−FILE =v:\MET\MagServe\MagData\LCLS\Hall probe\SENIS−120−12\SENIS−120−12−Y.ini
NUM−ZERO−GAUSS−MEAS =200
PROBE2−OFFSET−DIR =Y

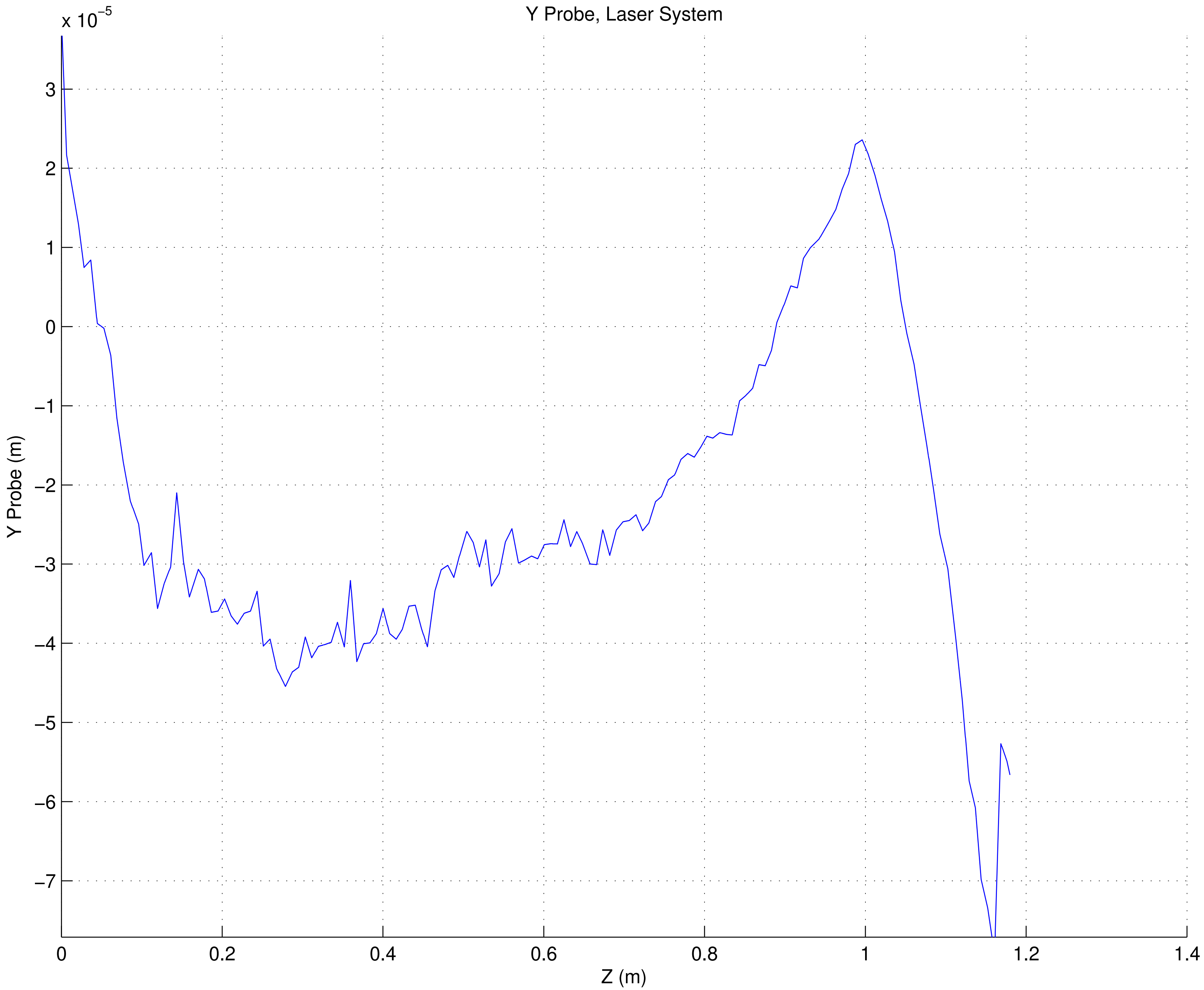

Probe 1, Raw, Exit To Entrance: Measured Vxm, Vym, Vzm vs Zm
Vxm (V)
Vym (V)
Vzm (V)
Zm Measurement Position (m)
1
0.5
0
−0.5
−1
6
4
2
0
−2
−4
−6
3
2
1
0
−1
−2
−3
−1.4
−1.2
−1
−0.8
−0.6
−0.4
−0.2
0



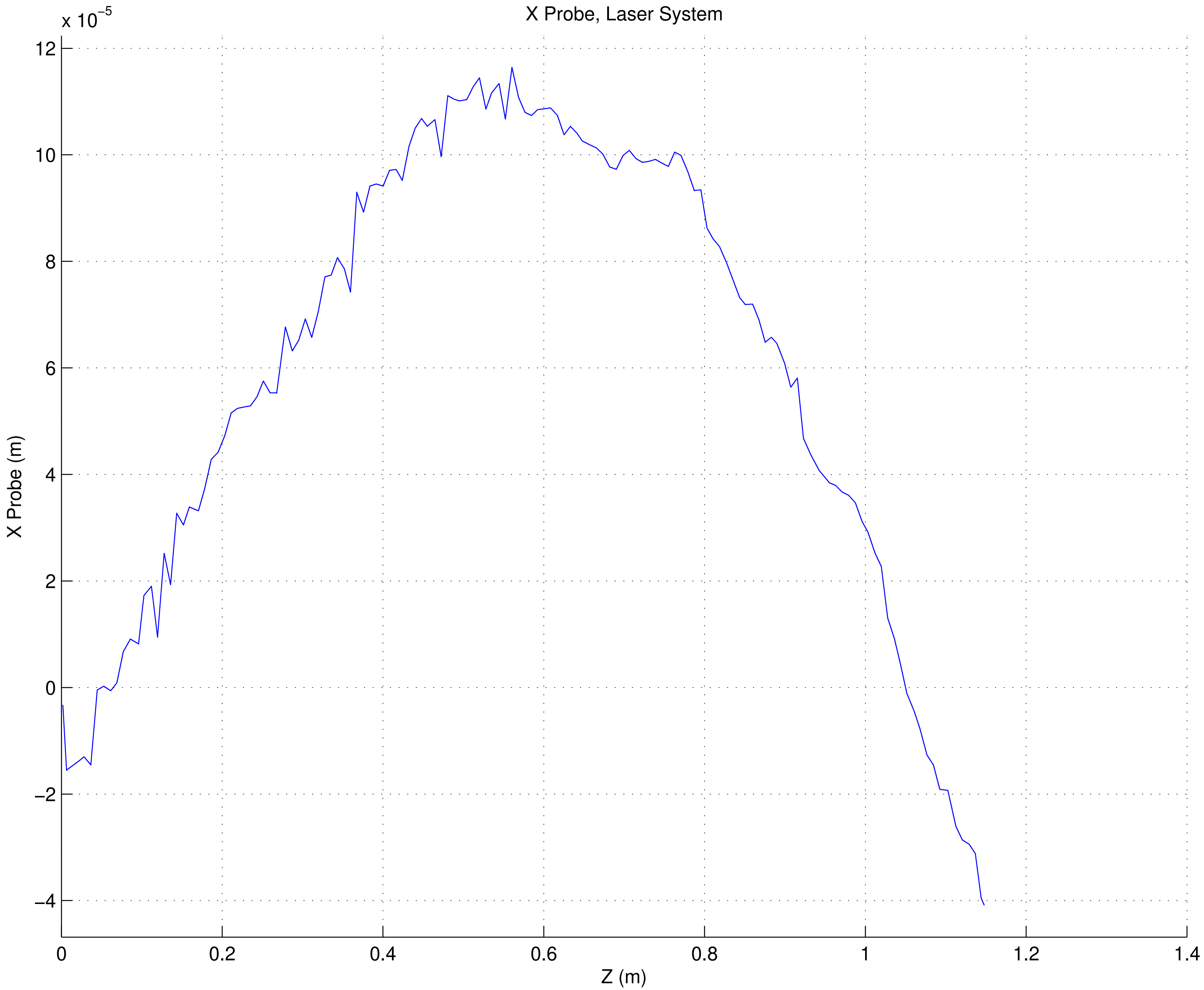
Probe 2, Raw, Exit To Entrance: Measured Vxm, Vym, Vzm vs Zm
Vxm (V)
1
0.5
0
−0.5
−1
−1.4
−1.2
−1
−0.8
−0.6
−0.4
−0.2
0
Vym (V)
6
4
2
0
−2
−4
−6
Vzm (V)
3
2
1
0
−1
−2
−3
Zm Measurement Position (m)



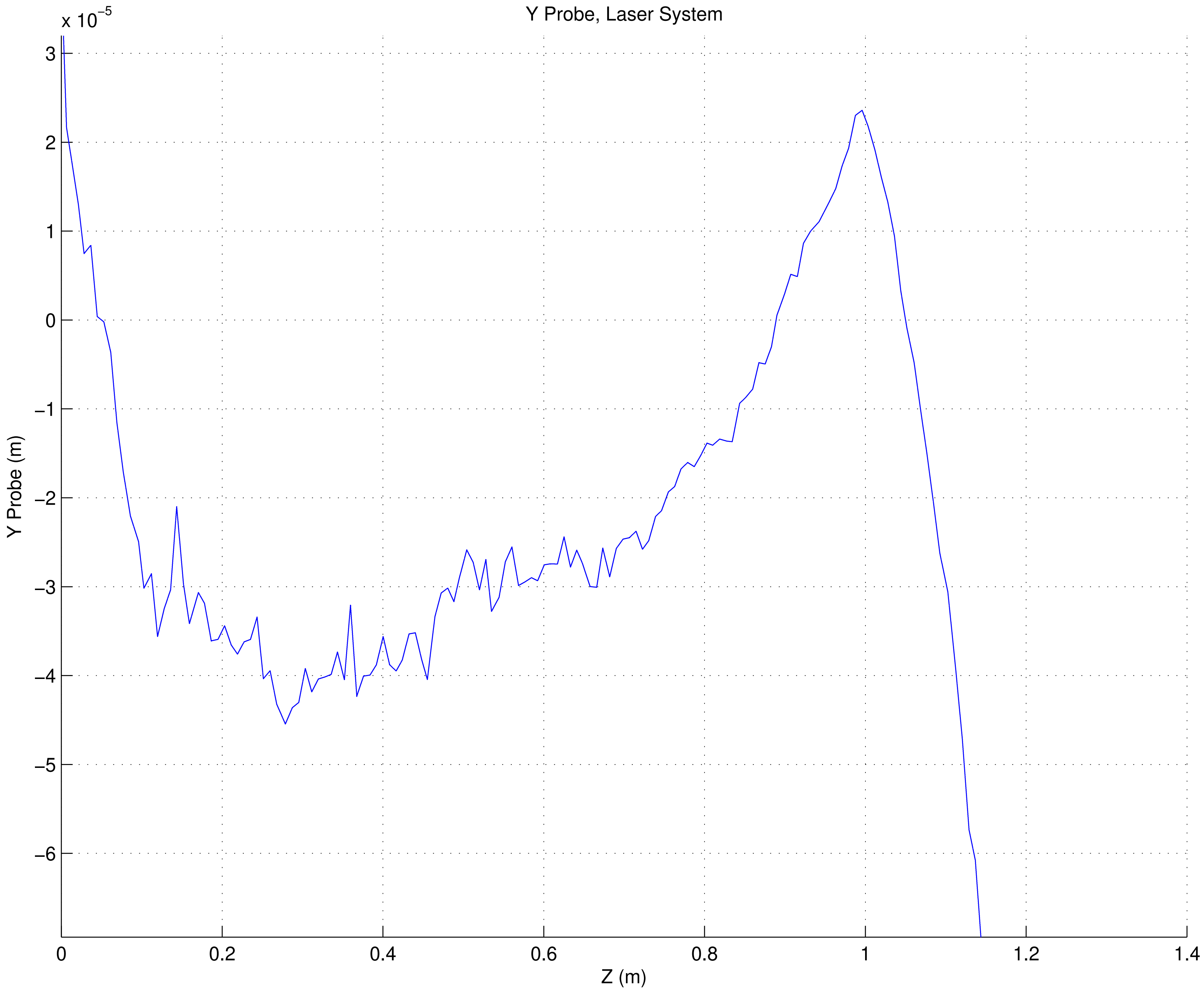
X Probe, Laser System
x 10^−5
12
10
8
6
4
2
0
−2
−4
X Probe (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)



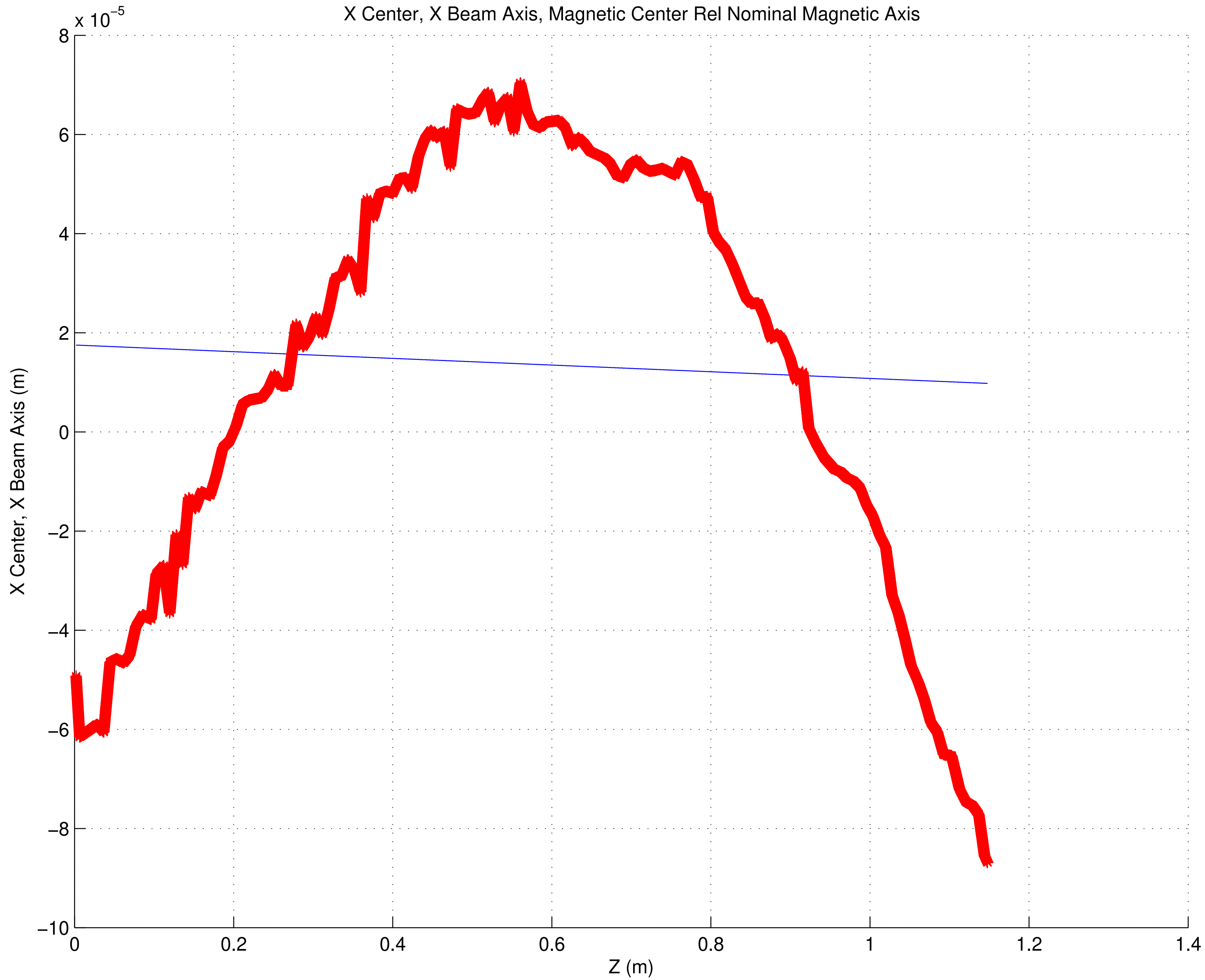
Y Probe, Laser System
x 10^−5
3
2
1
0
−1
−2
−3
−4
−5
−6
−7
Y Probe (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)



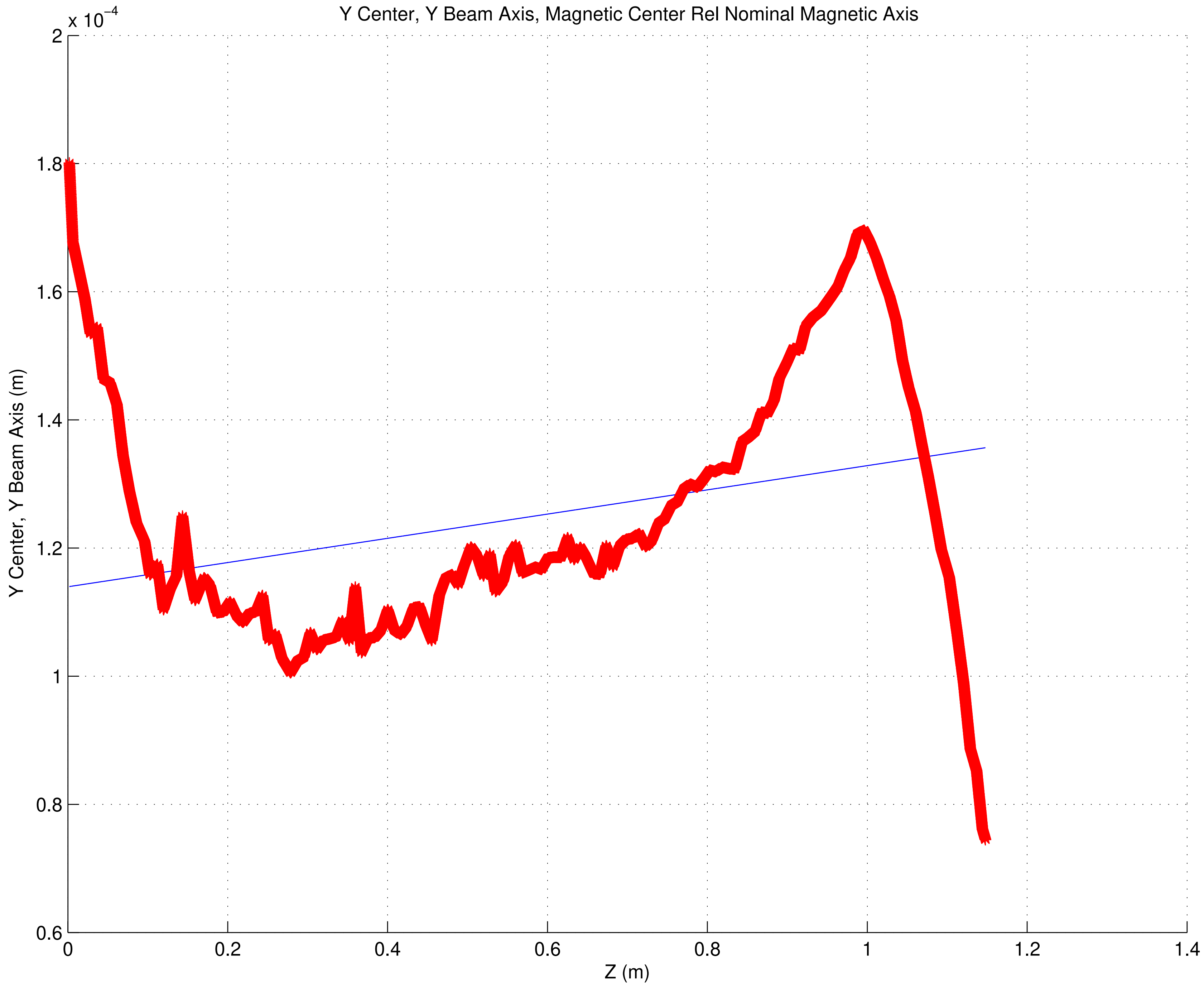
X Probe, Laser System
x 10^−5
12
10
8
6
4
2
0
−2
−4
X Probe (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)



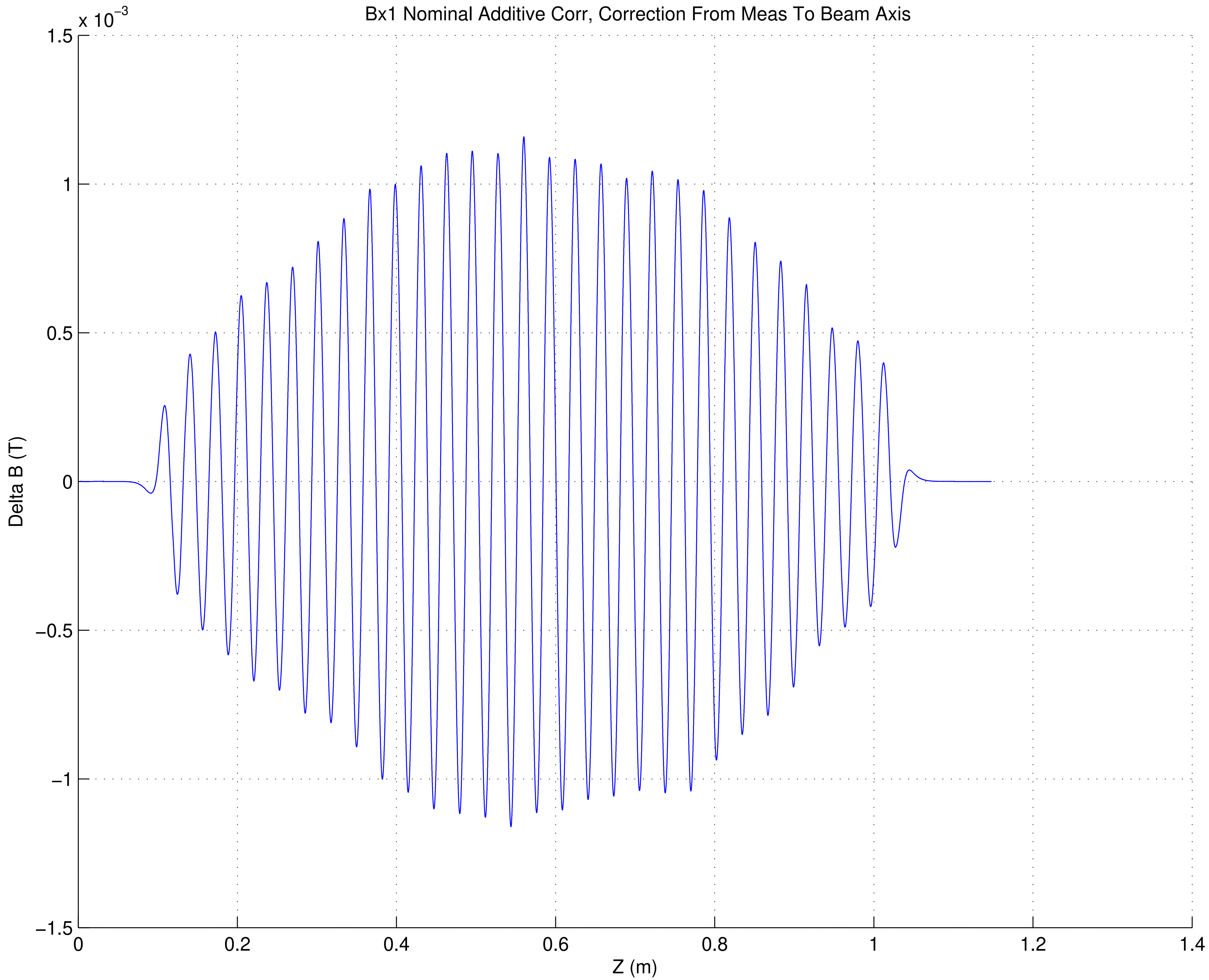
Y Probe, Laser System
x 10^−5
3
2
1
0
−1
−2
−3
−4
−5
−6
Y Probe (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)



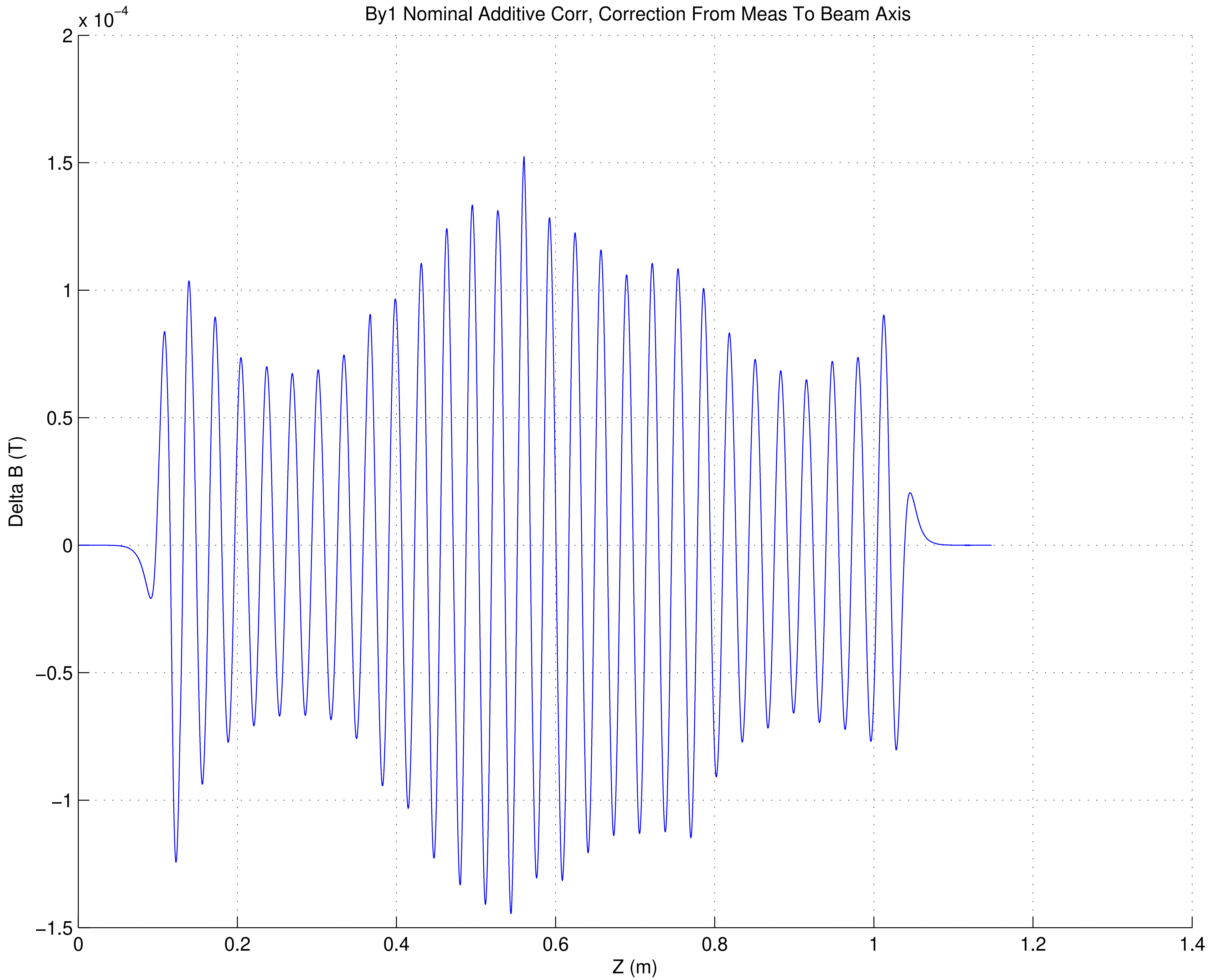
X Center, X Beam Axis, Magnetic Center Rel Nominal Magnetic Axis
x 10^−5
8
6
4
2
0
−2
−4
−6
−8
−10
X Center, X Beam Axis (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)

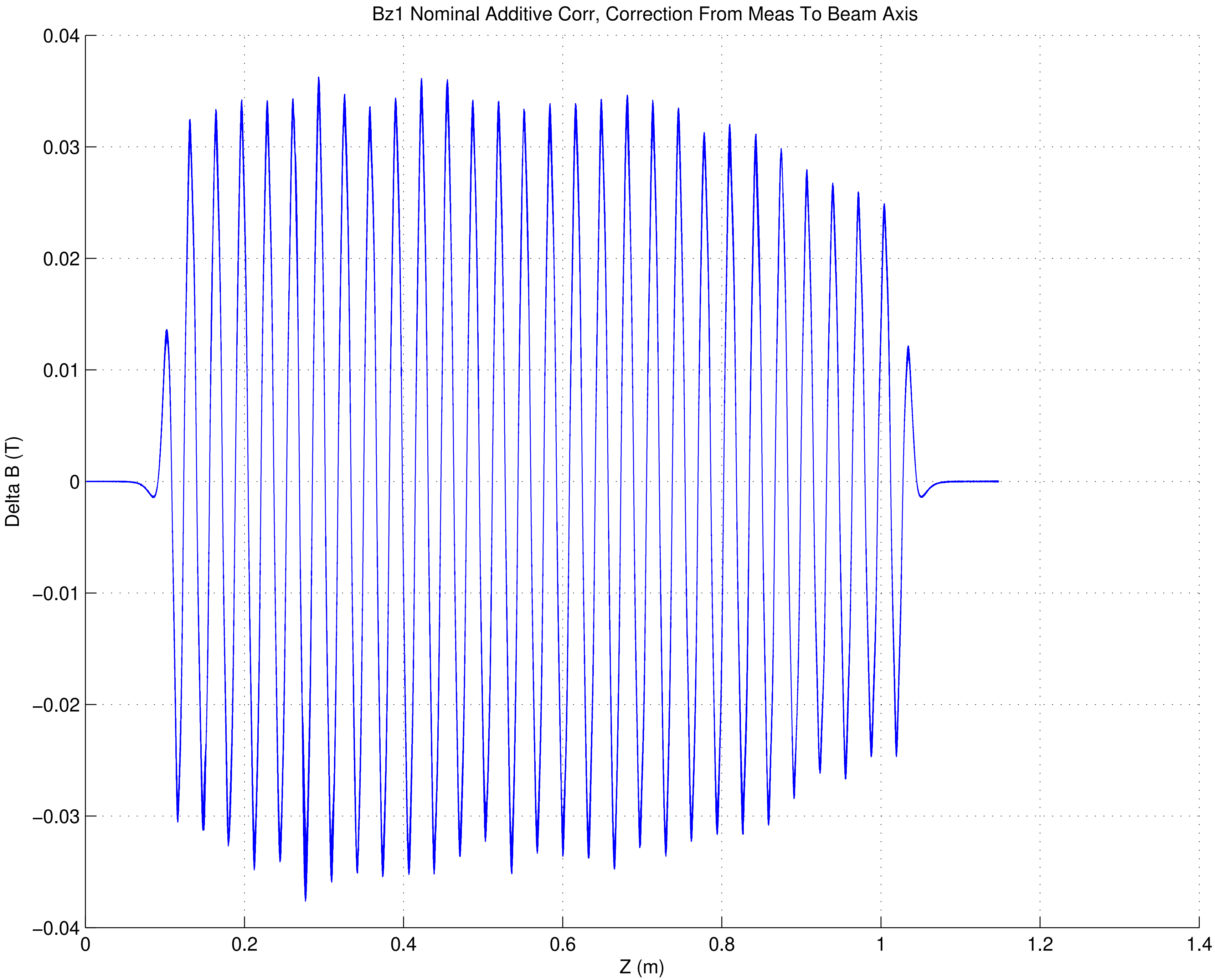


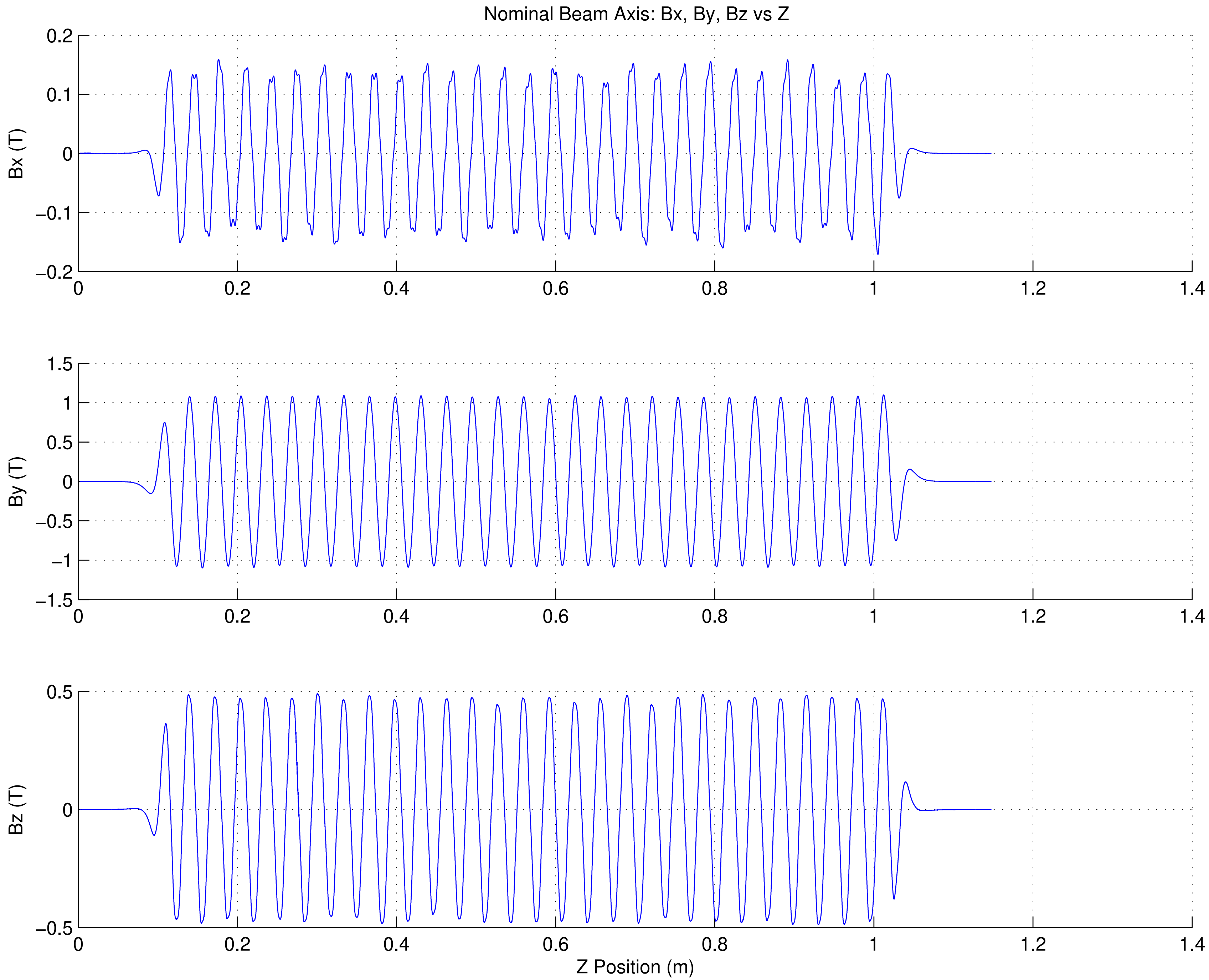
Y Center, Y Beam Axis, Magnetic Center Rel Nominal Magnetic Axis
x 10^-4
2
1.8
1.6
1.4
1.2
1
0.8
0.6
Y Center, Y Beam Axis (m)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)



Bx1 Nominal Additive Corr, Correction From Meas To Beam Axis
x 10^-3
1.5
1
0.5
0
−0.5
−1
−1.5
Delta B (T)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)


By1 Nominal Additive Corr, Correction From Meas To Beam Axis
x 10^-4
2
1.5
1
0.5
0
−0.5
−1
−1.5
Delta B (T)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)


Bz1 Nominal Additive Corr, Correction From Meas To Beam Axis
0.04
0.03
0.02
0.01
0
−0.01
−0.02
−0.03
−0.04
Delta B (T)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Z (m)


Nominal Beam Axis: Bx, By, Bz vs Z
Bx (T)
By (T)
Bz (T)
Z Position (m)
0.2
0.1
0
−0.1
−0.2
1.5
1
0.5
−0.5
−1
−1.5
0.4
0.6
0.8
1.2
1.4