SLAC Magnetic Measurements

Hall Probe Array Analysis
****

Parameters:
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INPUT−FILE−NAME =DUTestOutput.dat
INPUT−FILE−TYPE =ZVXYZVXYZH
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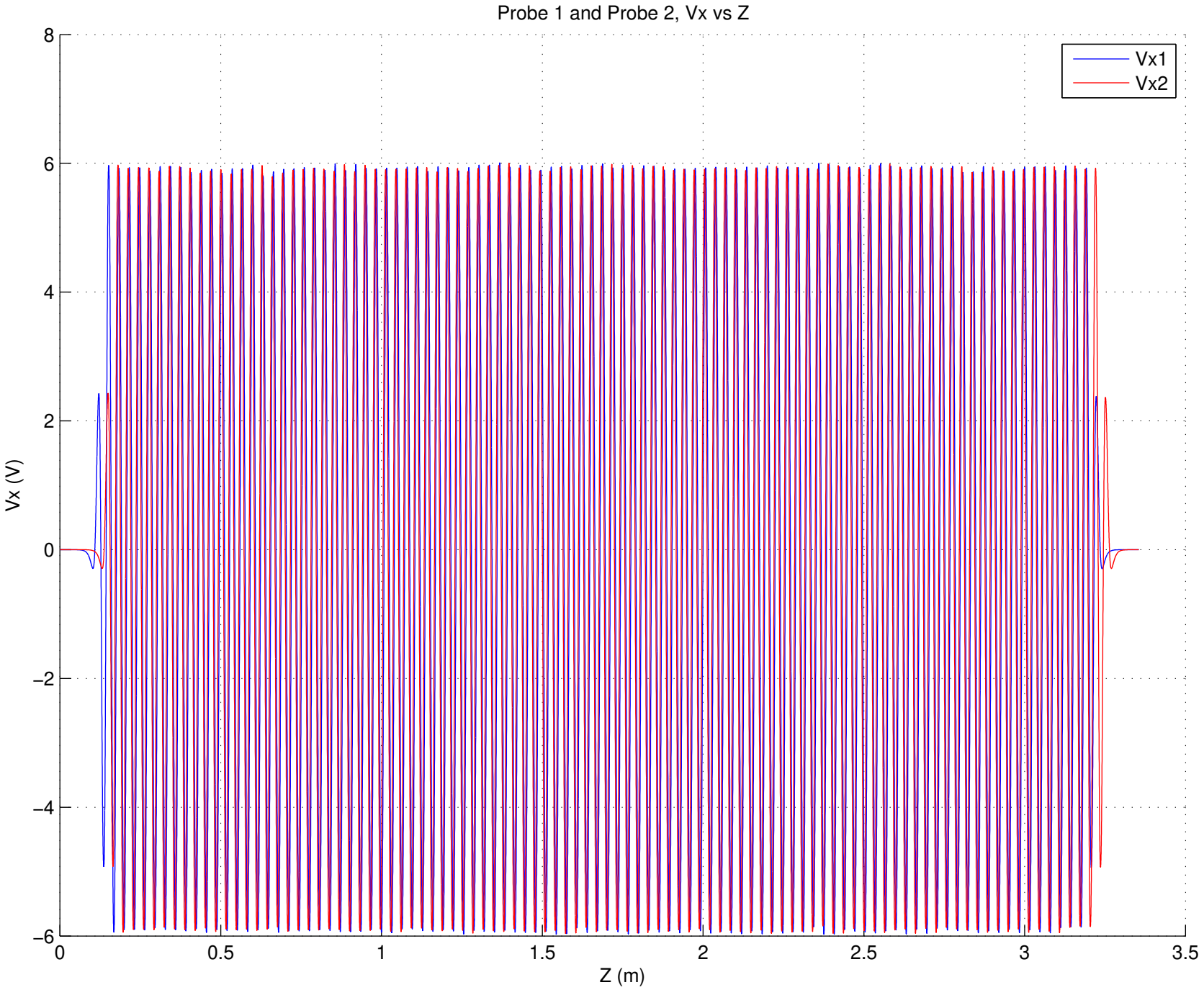
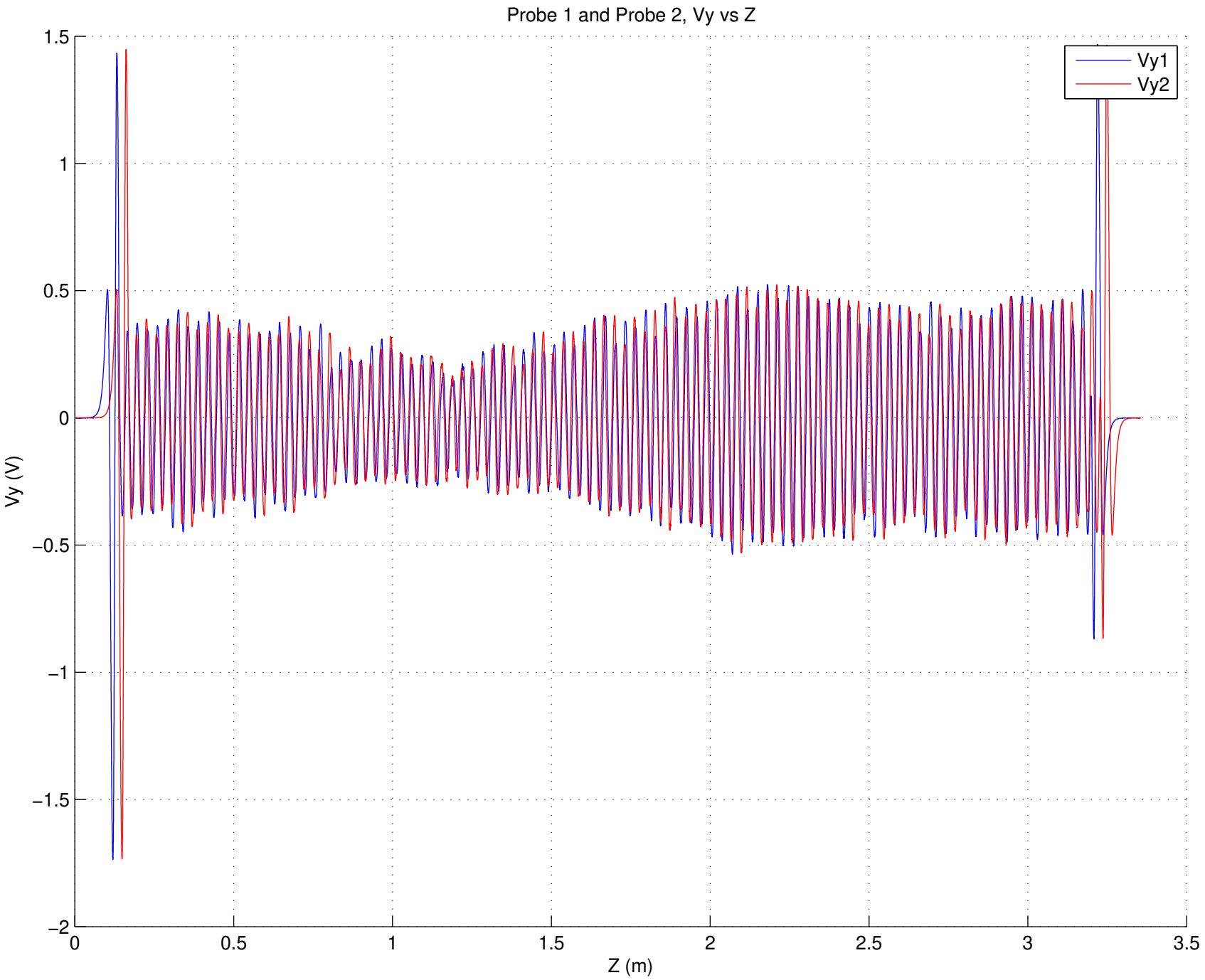
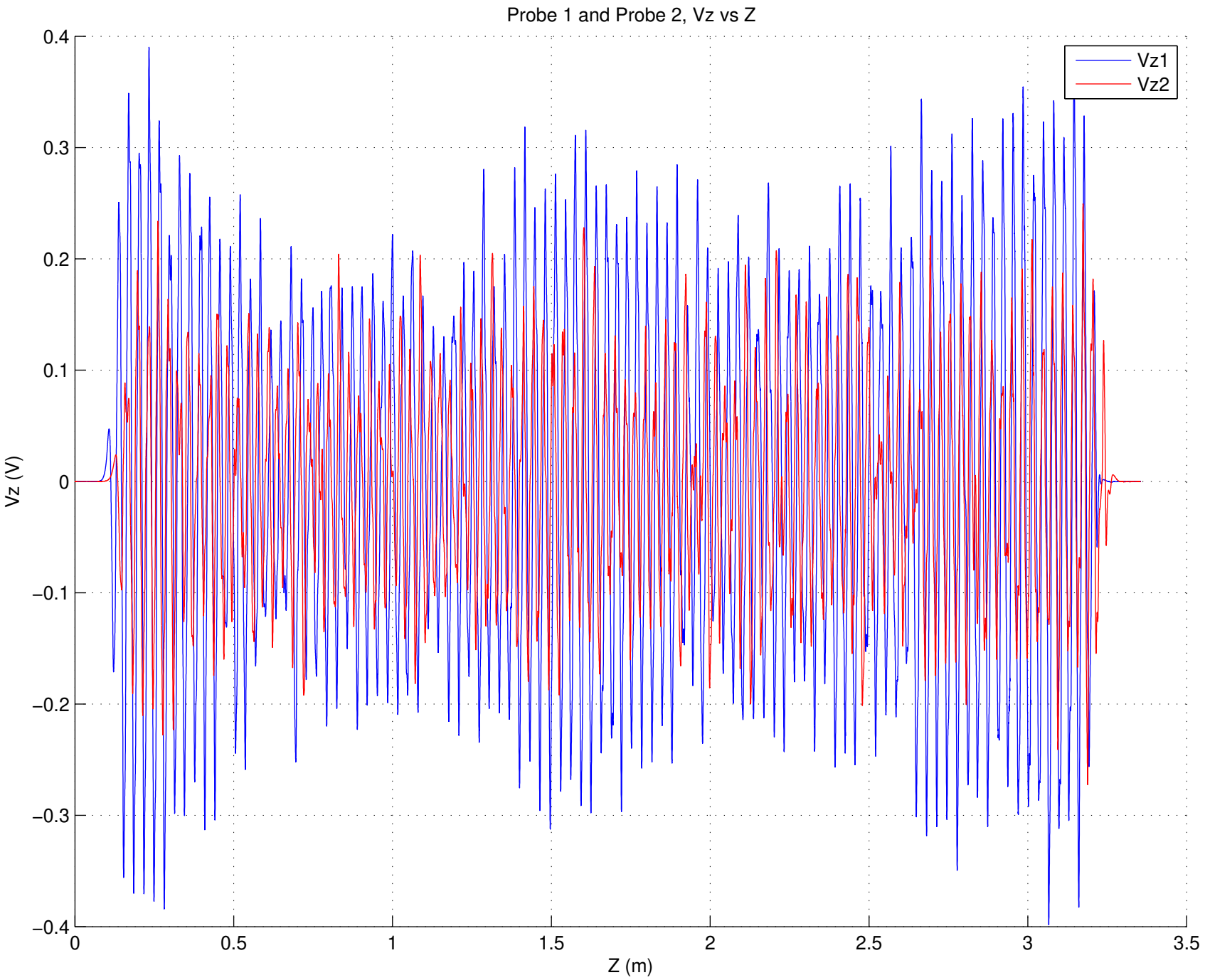
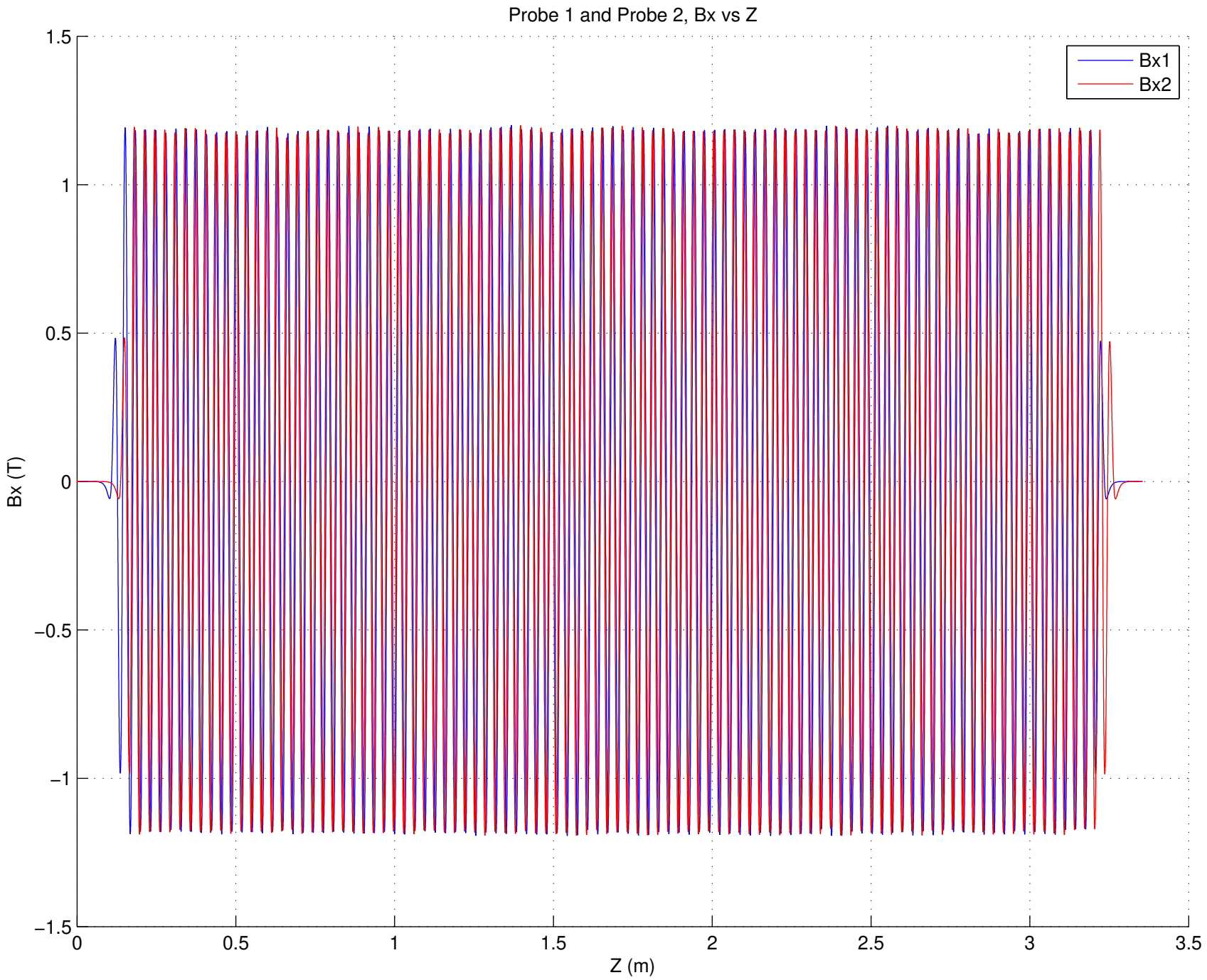
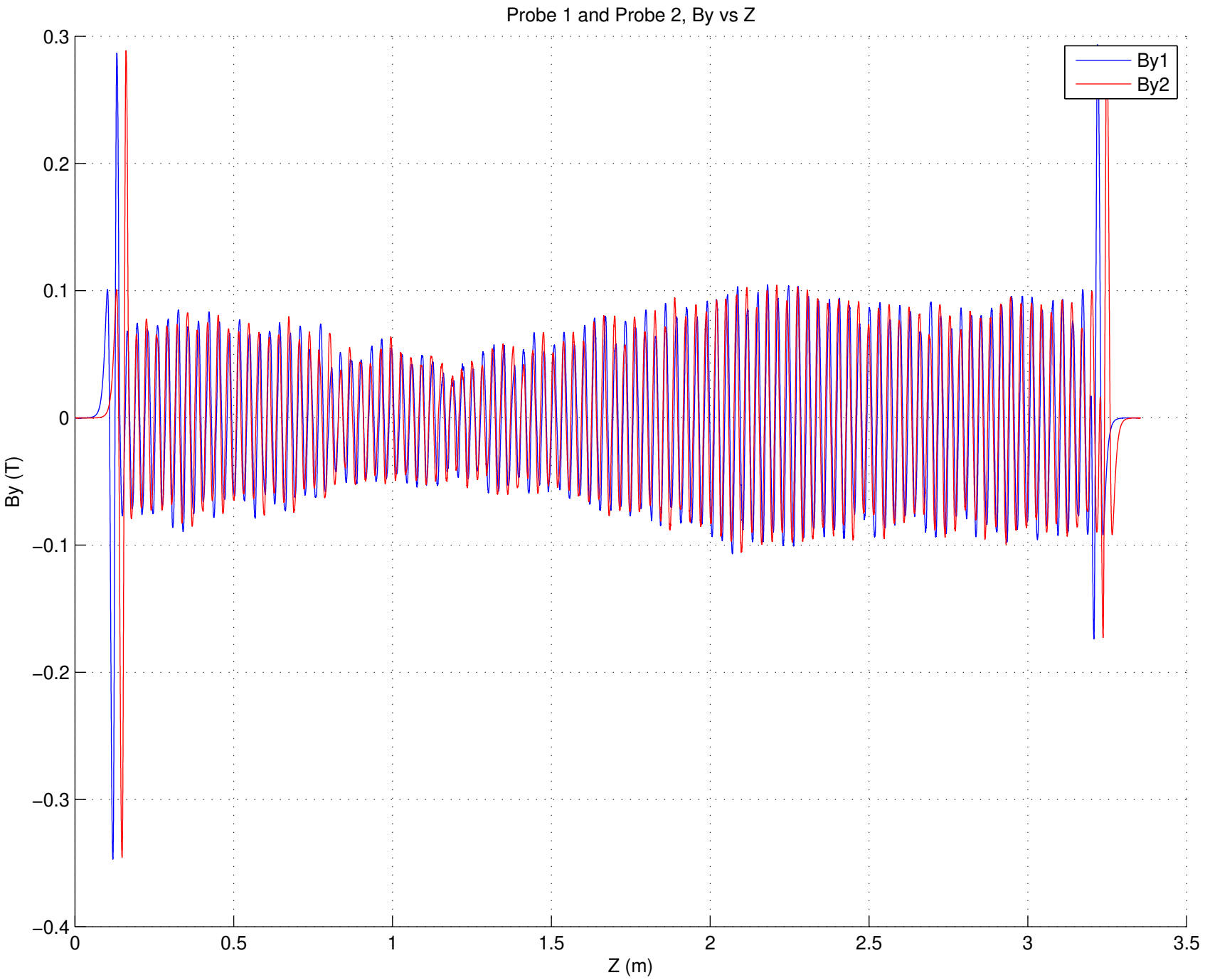
PROBE1−BY−CALIB−FILE =V:\MET\MagServe\MagData\DELTA\Delta data\Assembled Measurements\Hall Probe Calibrations\S
PROBE2−BX−CALIB−FILE =V:\MET\MagServe\MagData\DELTA\Delta data\Assembled Measurements\Hall Probe Calibrations\S
PROBE2−BY−CALIB−FILE =V:\MET\MagServe\MagData\DELTA\Delta data\Assembled Measurements\Hall Probe Calibrations\S
NUM−ZERO−GAUSS−MEAS =200
PROBE2−OFFSET−DIR =Y

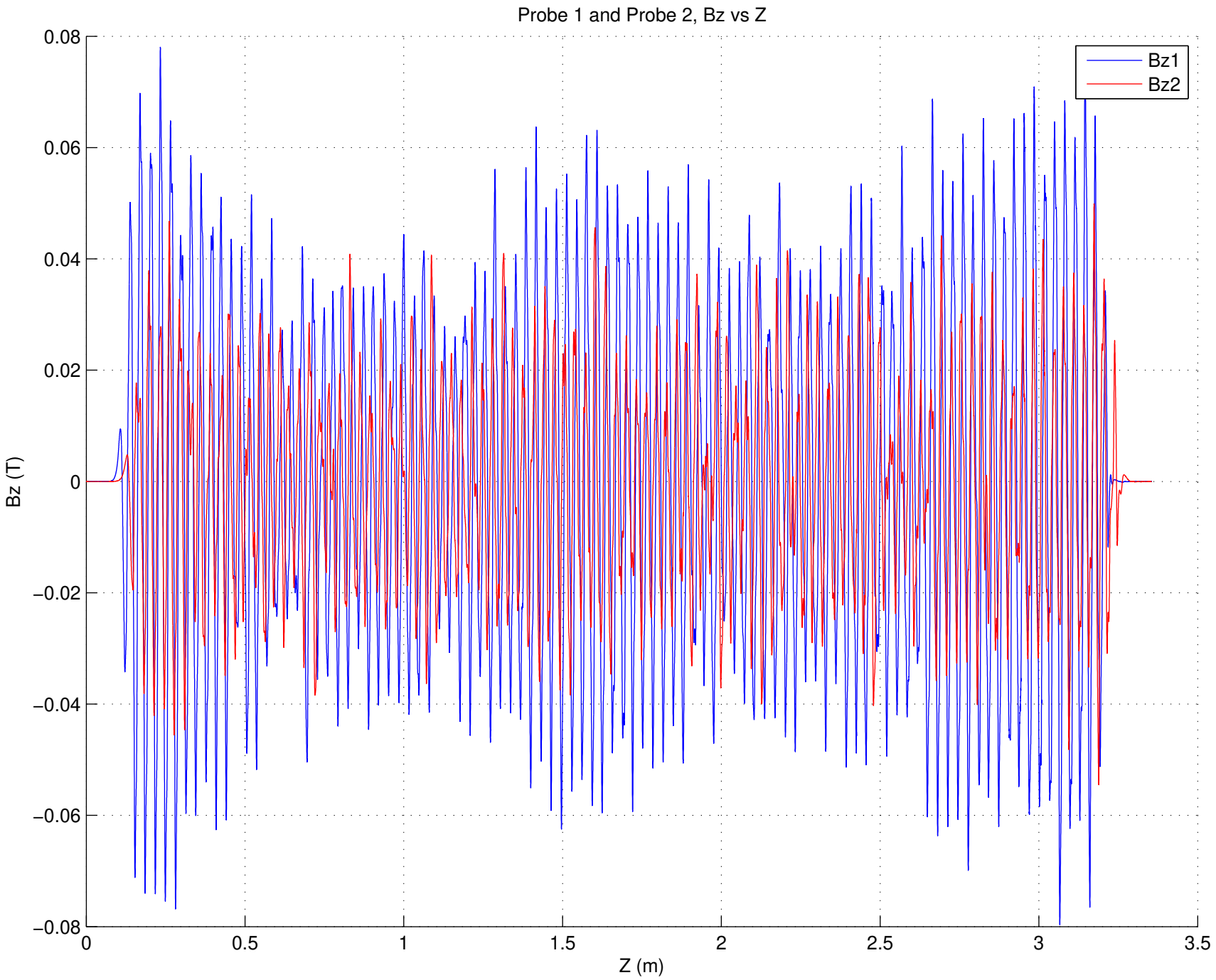

Probe 1 and Probe 2, Vx vs Z
Vx1
Vx2
Vx (V)
Z (m)
8
6
4
2
0
−2
−4
−6
0
0.5
1
1.5
2
2.5
3
3.5

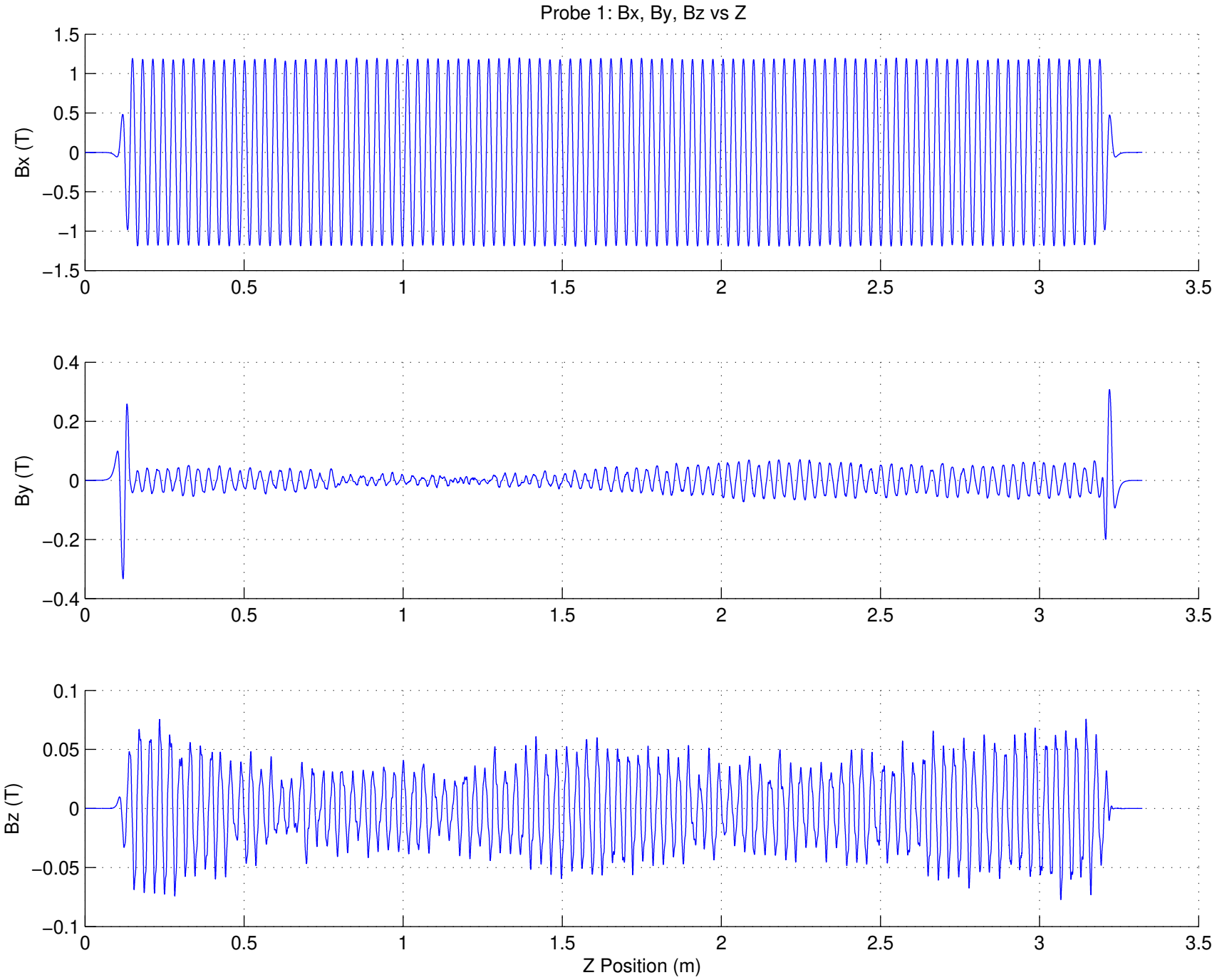

Probe 1 and Probe 2, Vy vs Z
Vy1
Vy2
Vy (V)
Z (m)
1.5
1
0.5
0
−0.5
−1
−1.5
−2
0
0.5
1
1.5
2
2.5
3
3.5

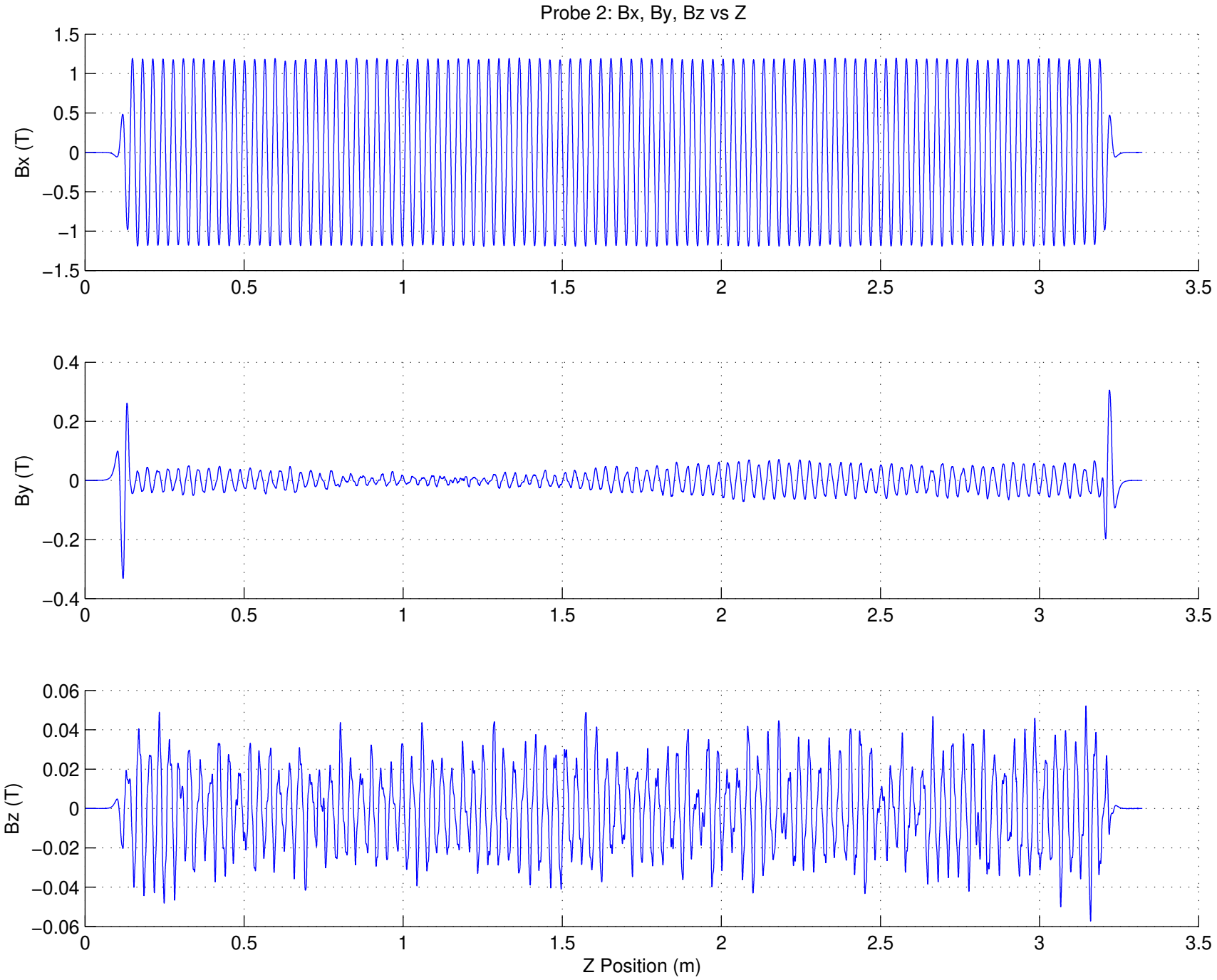

Probe 1 and Probe 2, Vz vs Z
Vz1
Vz2
Vz (V)
Z (m)
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
0
0.5
1
1.5
2
2.5
3
3.5

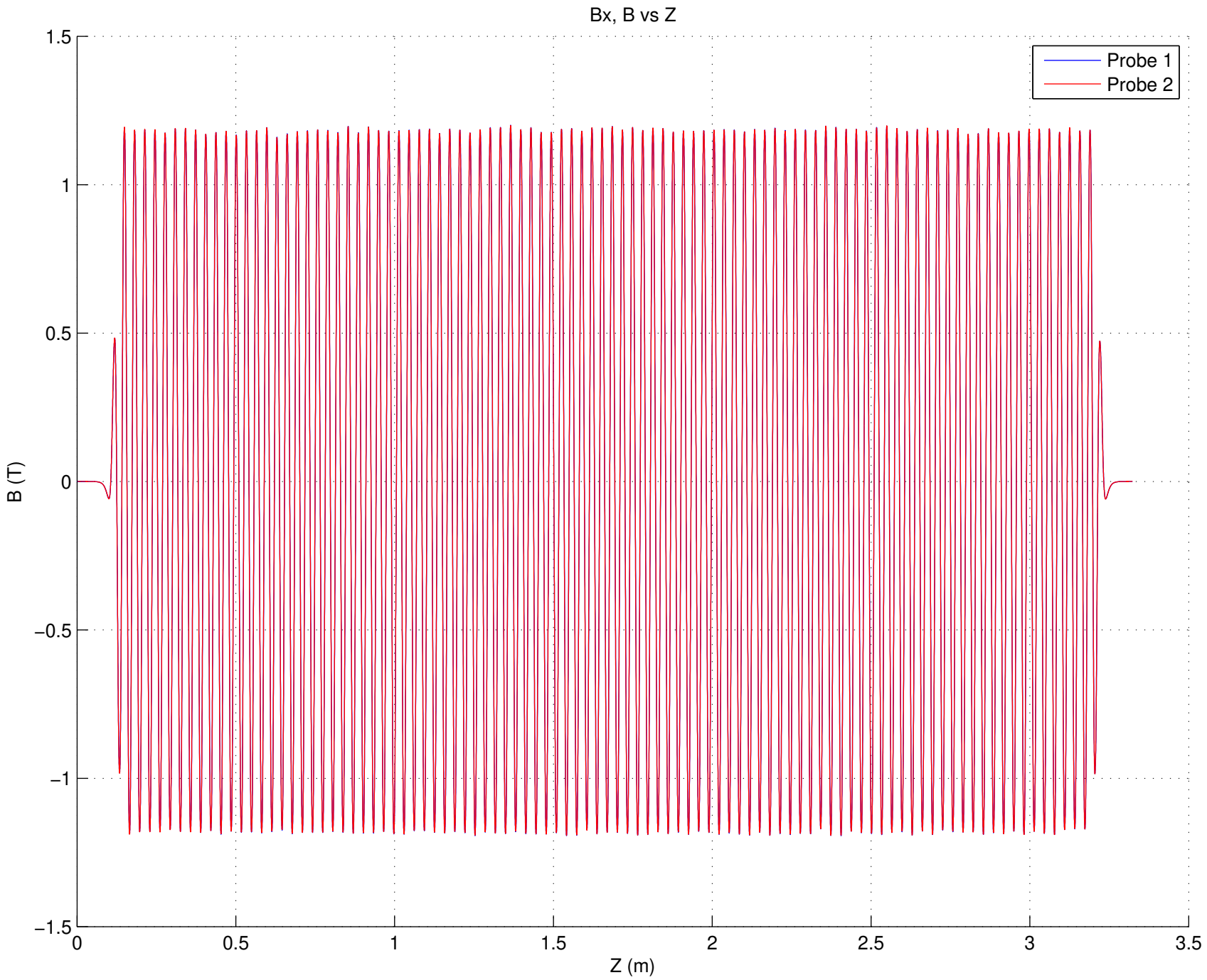

Probe 1 and Probe 2, Bx vs Z
Bx1
Bx2
Bx (T)
Z (m)
1.5
1
0.5
0
−0.5
−1
−1.5
0
0.5
1
1.5
2
2.5
3
3.5

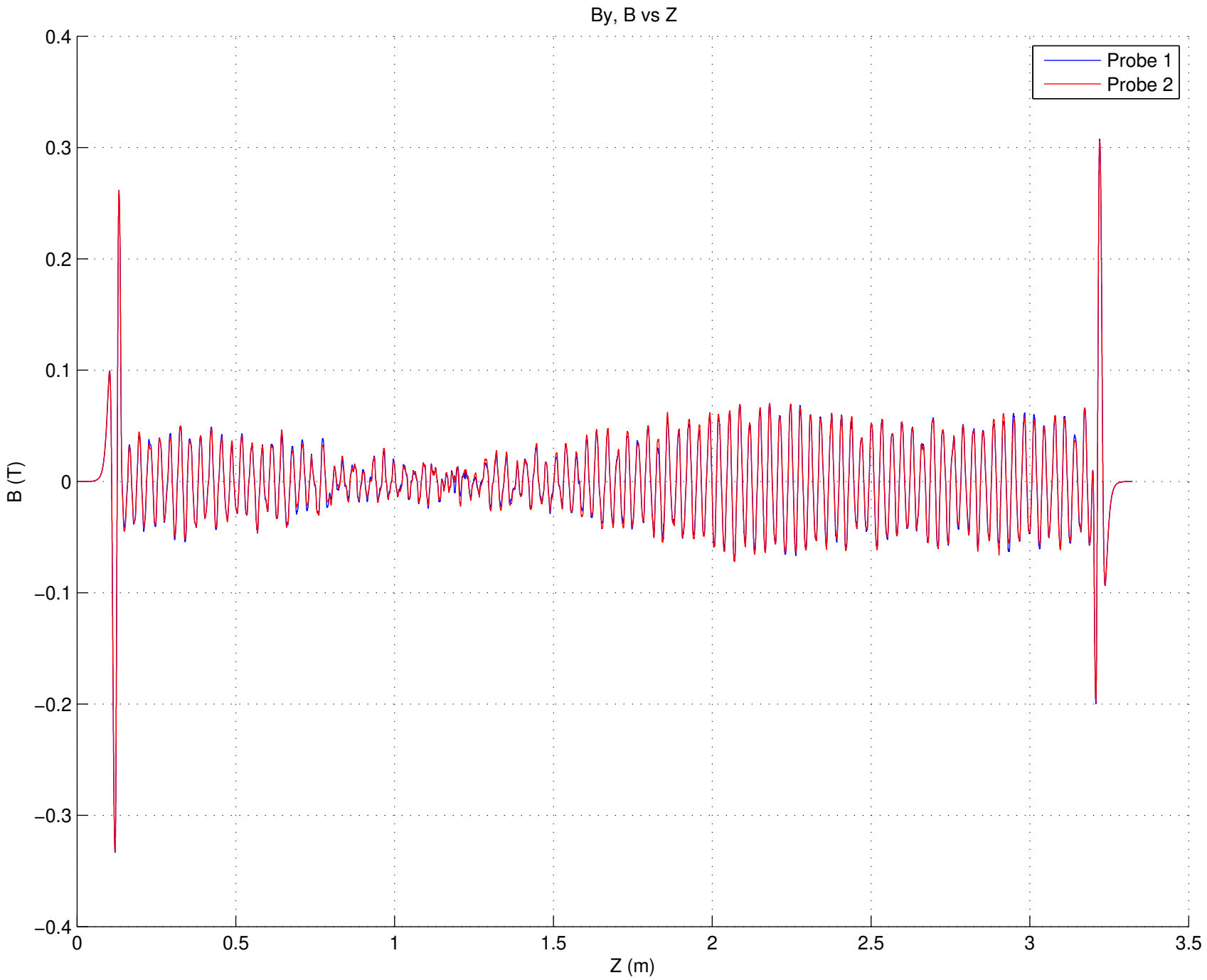

Probe 1 and Probe 2, By vs Z
By1
By2
By (T)
Z (m)
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
0
0.5
1
1.5
2
2.5
3
3.5

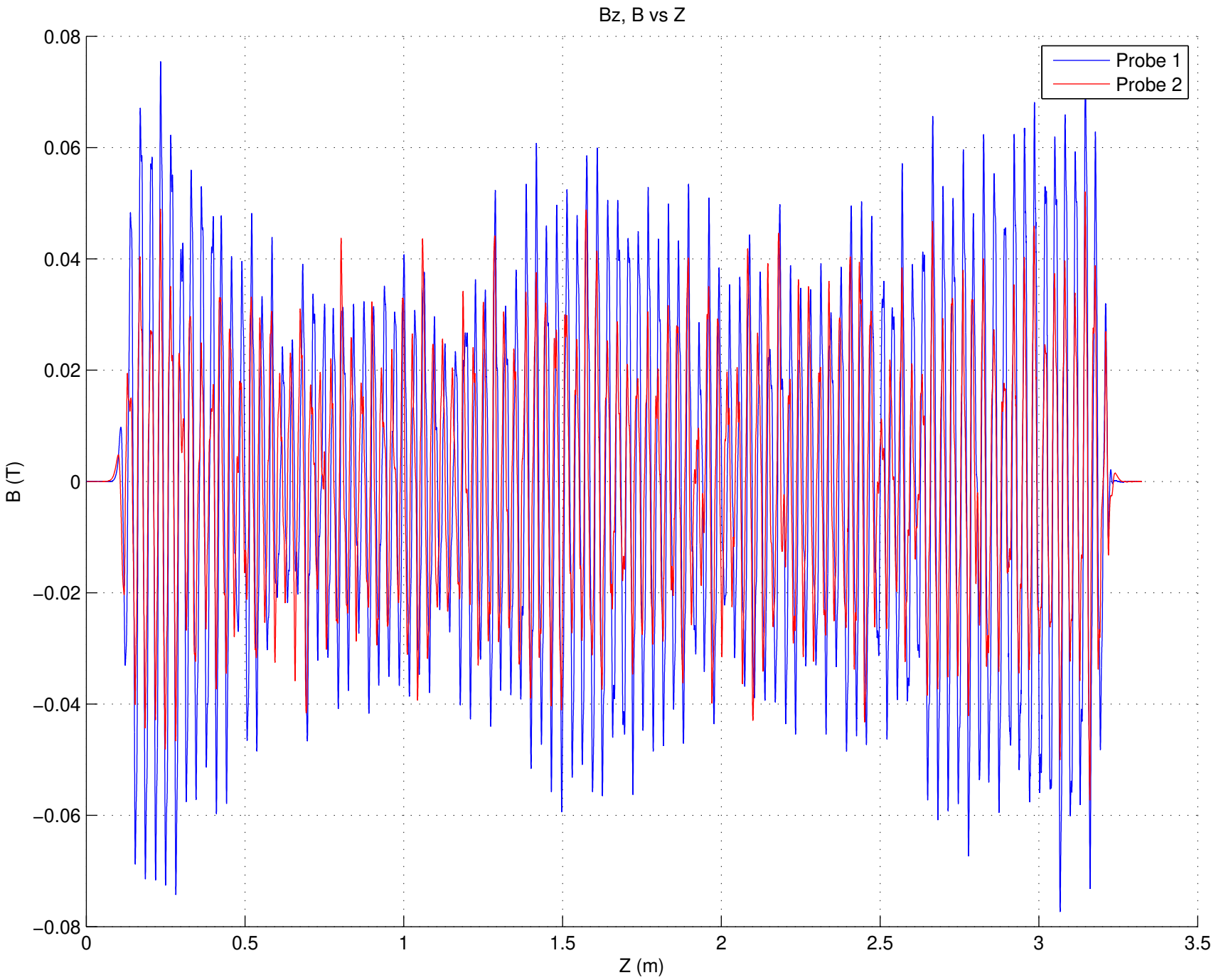

Probe 1 and Probe 2, Bz vs Z
Bz1
Bz2
Bz (T)
Z (m)
0.08
0.06
0.04
0.02
0
−0.02
−0.04
−0.06
−0.08
0
0.5
1
1.5
2
2.5
3
3.5

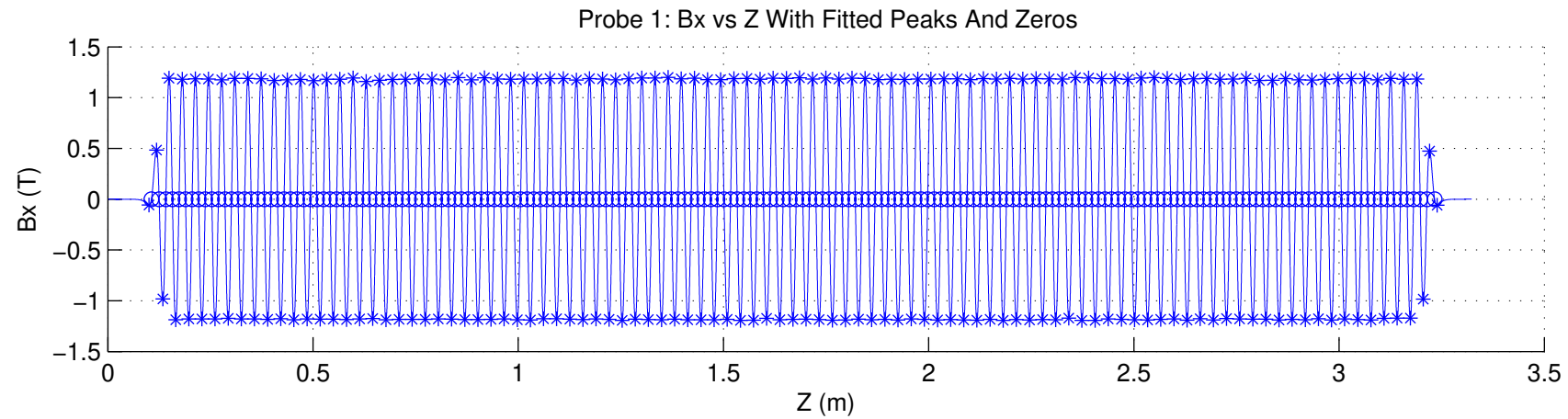

Probe 1: Bx, By, Bz vs Z
Bx (T)
1.5
1
0.5
0
−0.5
−1
−1.5
0
0.5
1
1.5
2
2.5
3
3.5
By (T)
0.4
0.2
0
−0.2
−0.4
Bz (T)
0.1
0.05
0
−0.05
−0.1
Z Position (m)

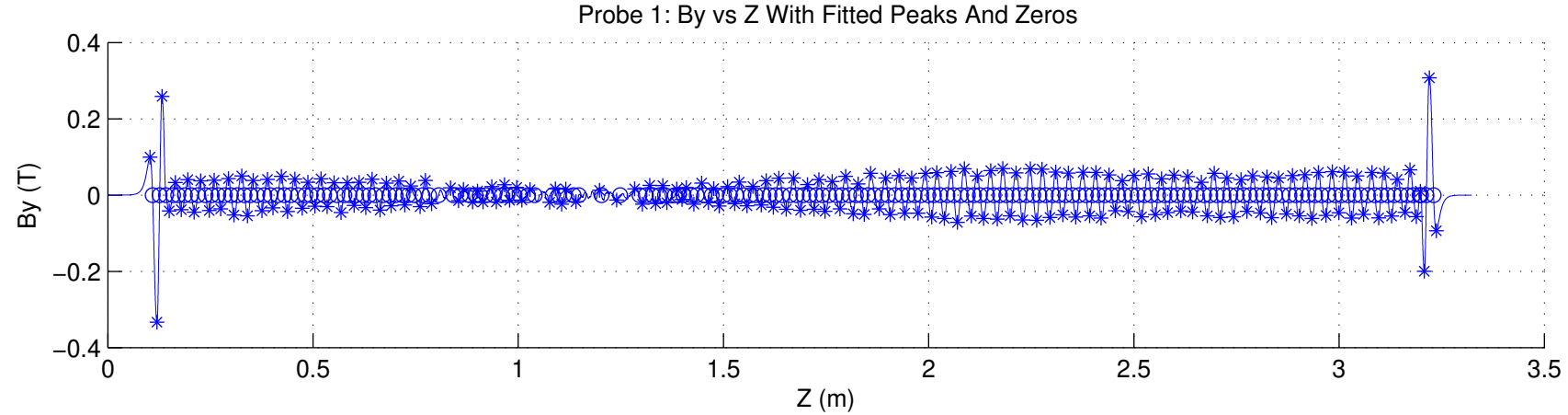

Probe 2: Bx, By, Bz vs Z
Bx (T)
1.5
1
0.5
0
−0.5
−1
−1.5
By (T)
0.4
0.2
0
−0.2
−0.4
Bz (T)
0.06
0.04
0.02
0
−0.02
−0.04
−0.06
0
0.5
1
1.5
2
2.5
3
3.5
Z Position (m)

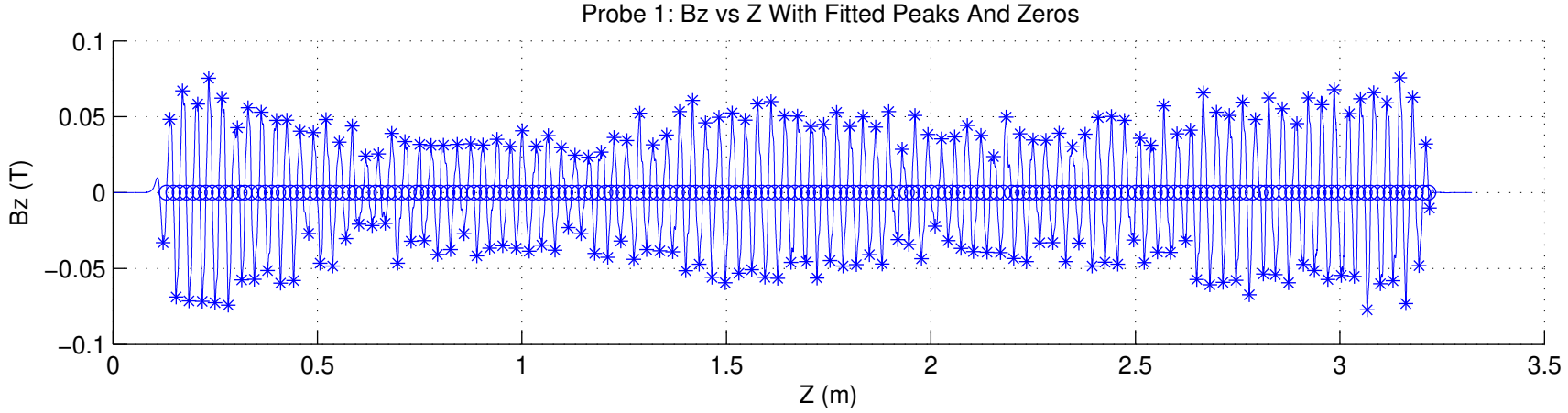

Bx, B vs Z
Probe 1
Probe 2
B (T)
Z (m)
1.5
1
0.5
0
−0.5
−1
−1.5
0
0.5
1
1.5
2
2.5
3
3.5

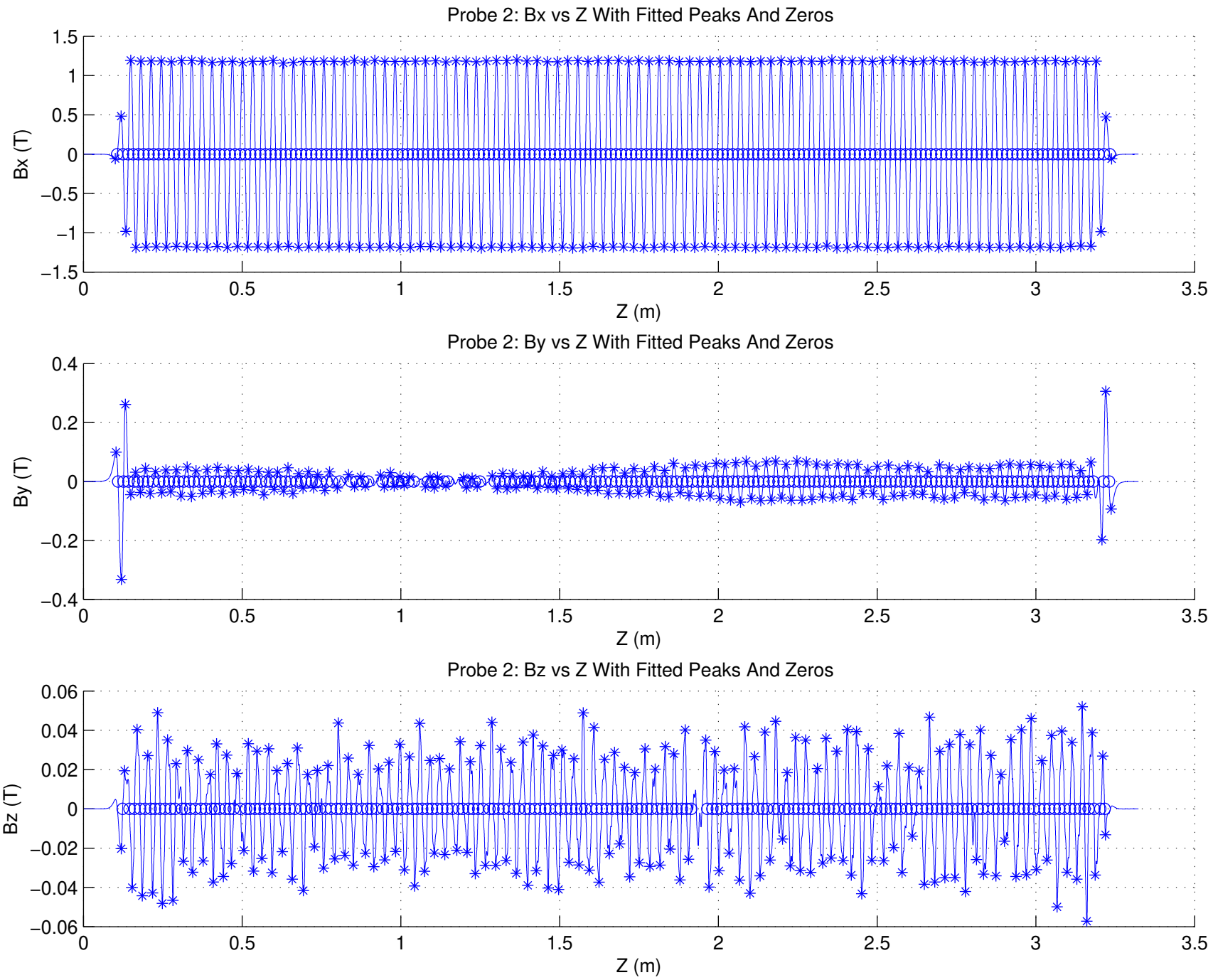

By, B vs Z
Probe 1
Probe 2
B (T)
Z (m)
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
0
0.5
1
1.5
2
2.5
3
3.5

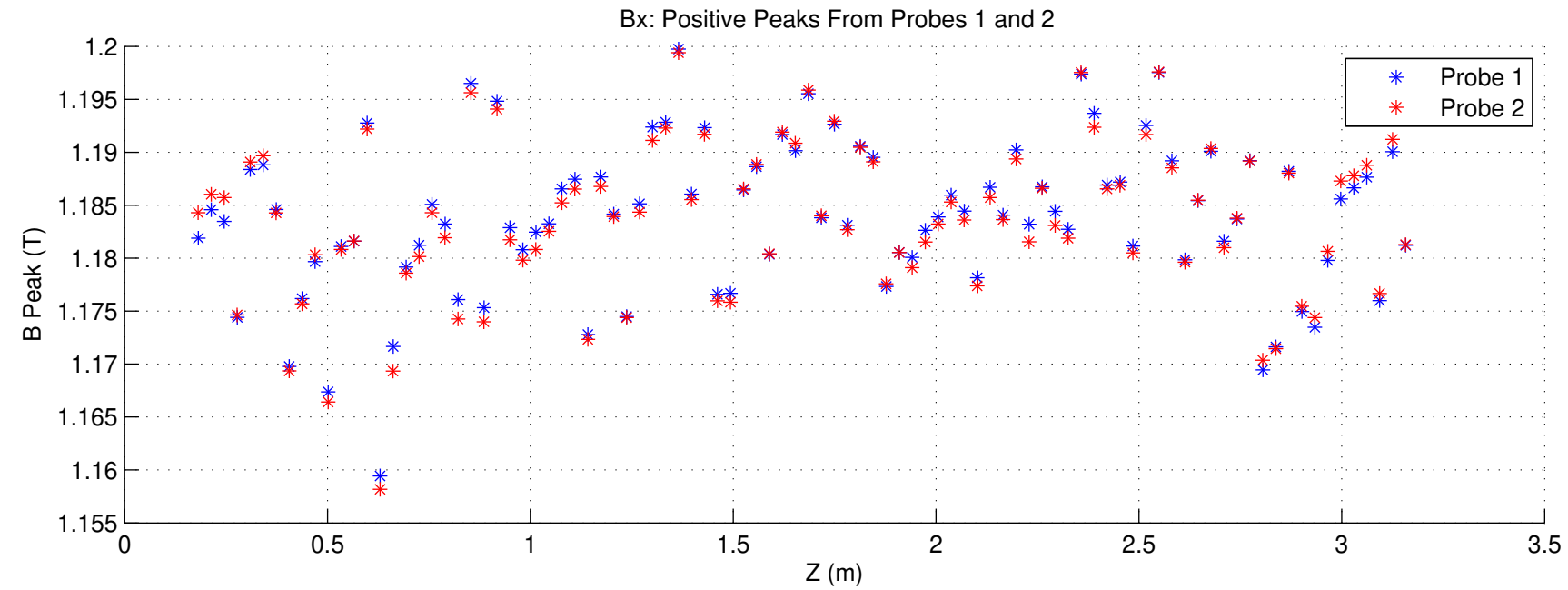

Bz, B vs Z
Probe 1
Probe 2
B (T)
Z (m)
0.08
0.06
0.04
0.02
0
−0.02
−0.04
−0.06
−0.08
0
0.5
1
1.5
2
2.5
3
3.5

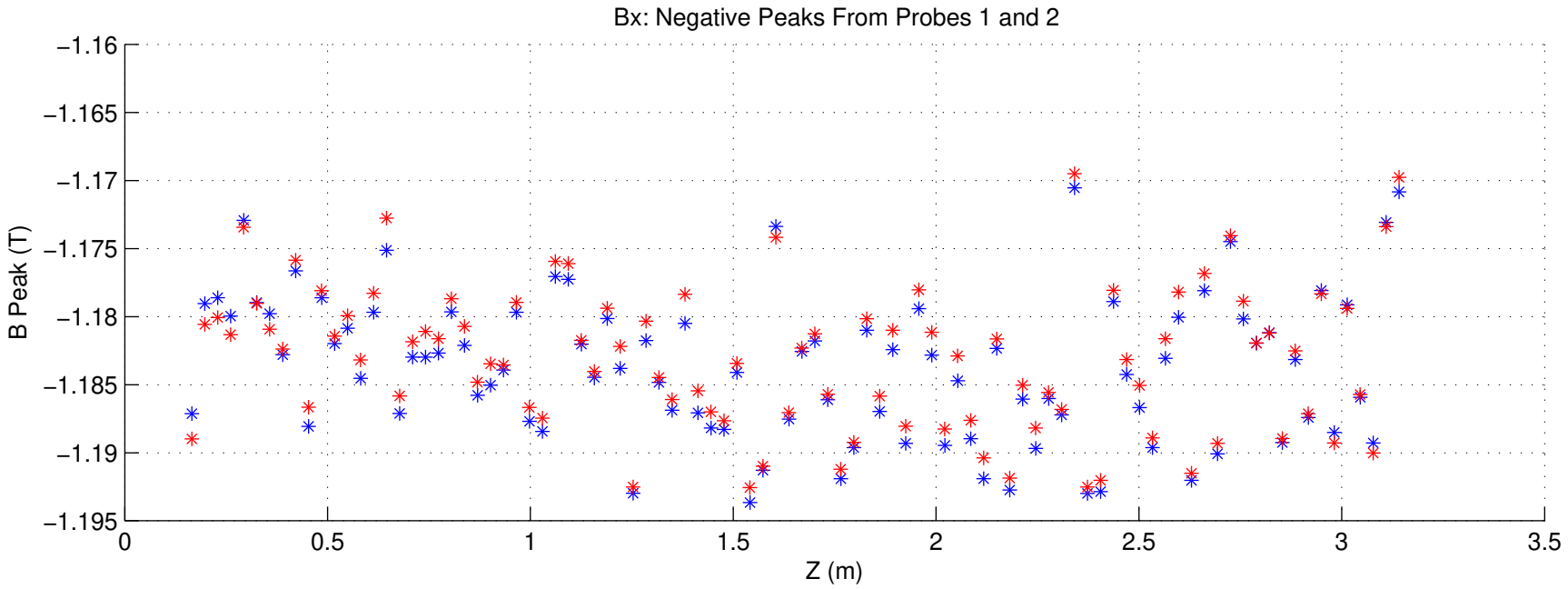

Probe 1: Bx vs Z With Fitted Peaks And Zeros
Bx (T)
Z (m)
1.5
1
0.5
0
−0.5
−1
−1.5
0
0.5
1
1.5
2
2.5
3
3.5

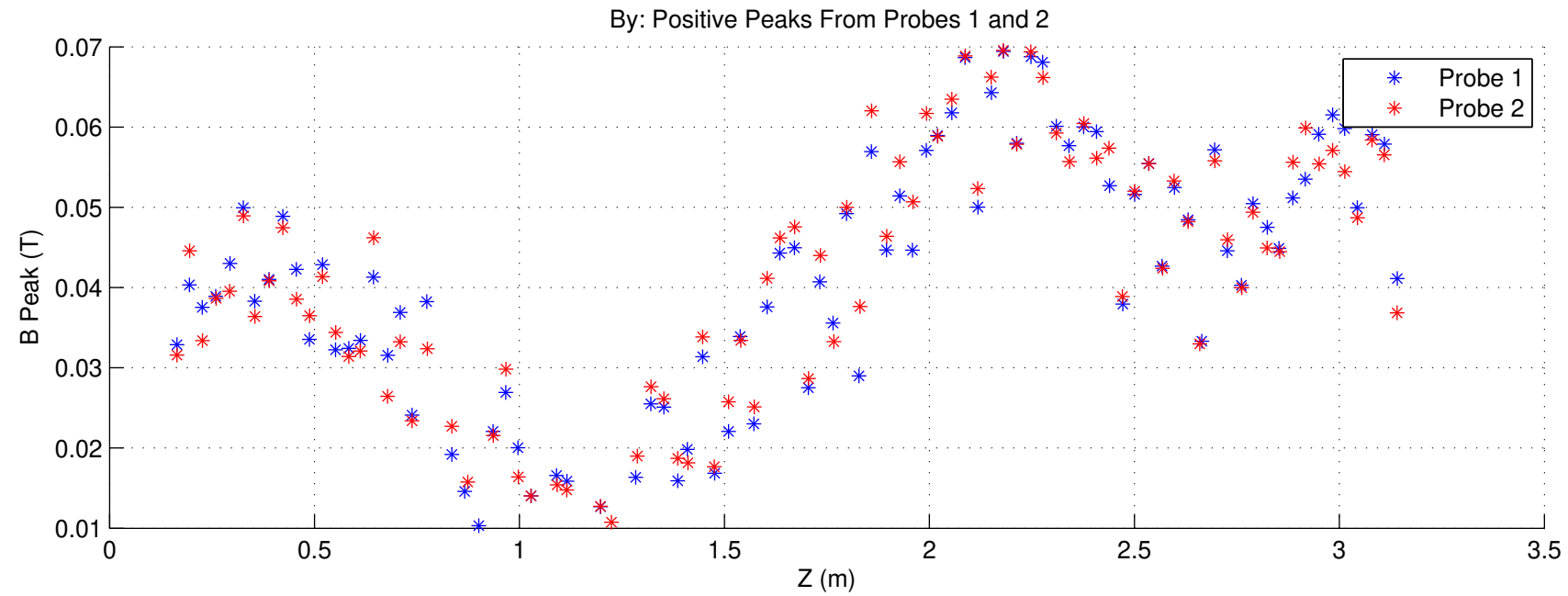

Probe 1: By vs Z With Fitted Peaks And Zeros
By (T)
Z (m)
0.4
0.2
0
−0.2
−0.4
0
0.5
1
1.5
2
2.5
3
3.5

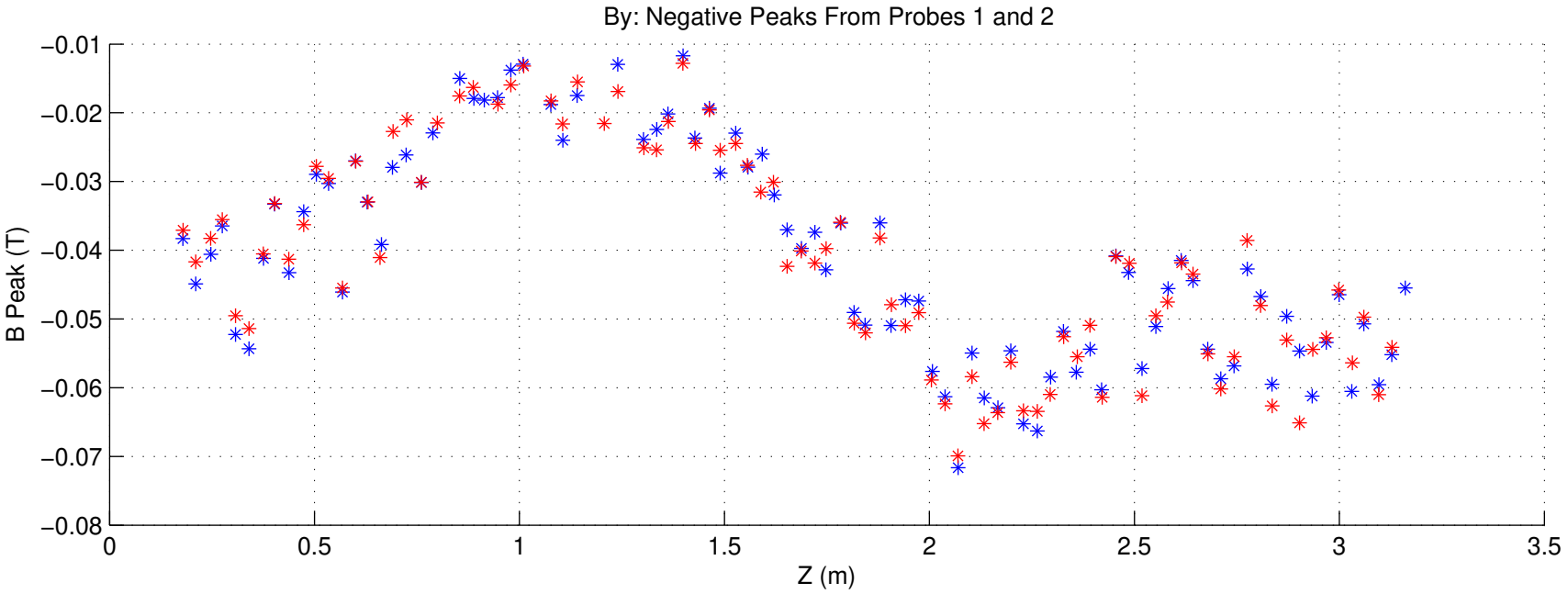

Probe 1: Bz vs Z With Fitted Peaks And Zeros
Bz (T)
Z (m)
0.1
0.05
0
−0.05
−0.1
0
0.5
1
1.5
2
2.5
3
3.5

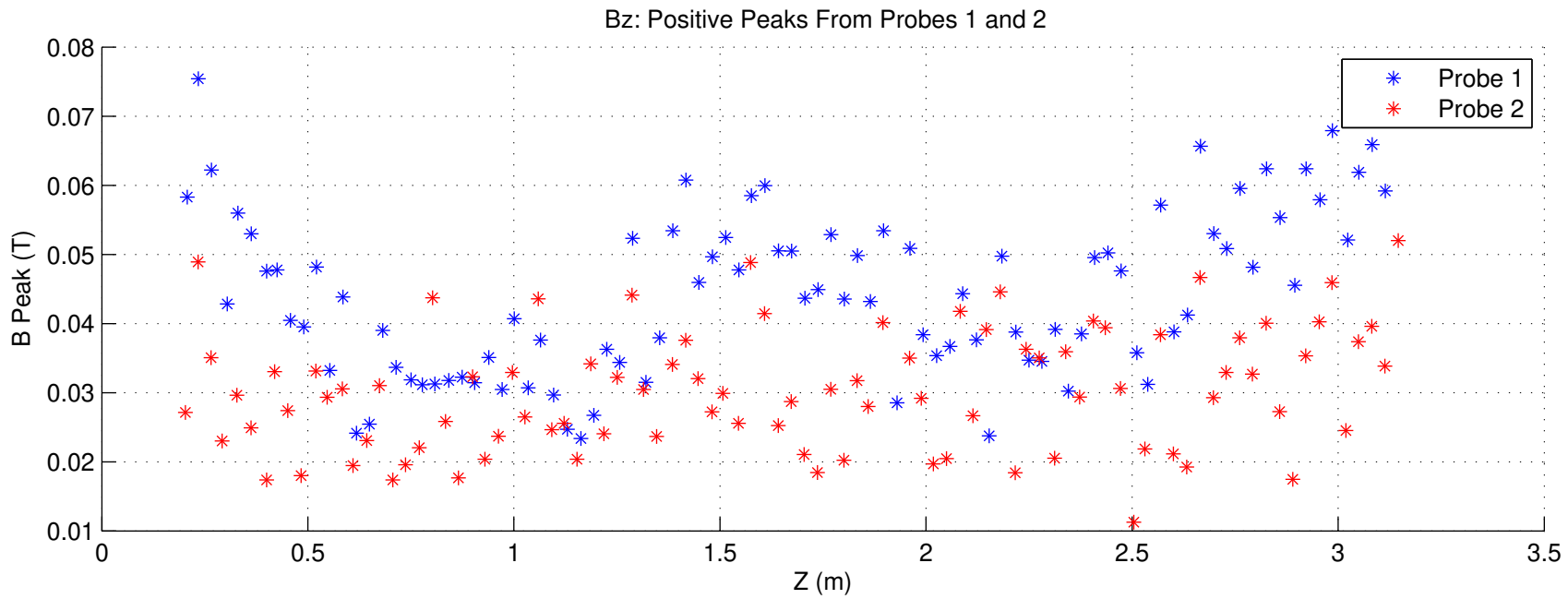

Probe 2: Bx vs Z With Fitted Peaks And Zeros
Bx (T)
Z (m)
Probe 2: By vs Z With Fitted Peaks And Zeros
By (T)
Z (m)
Probe 2: Bz vs Z With Fitted Peaks And Zeros
Bz (T)
Z (m)

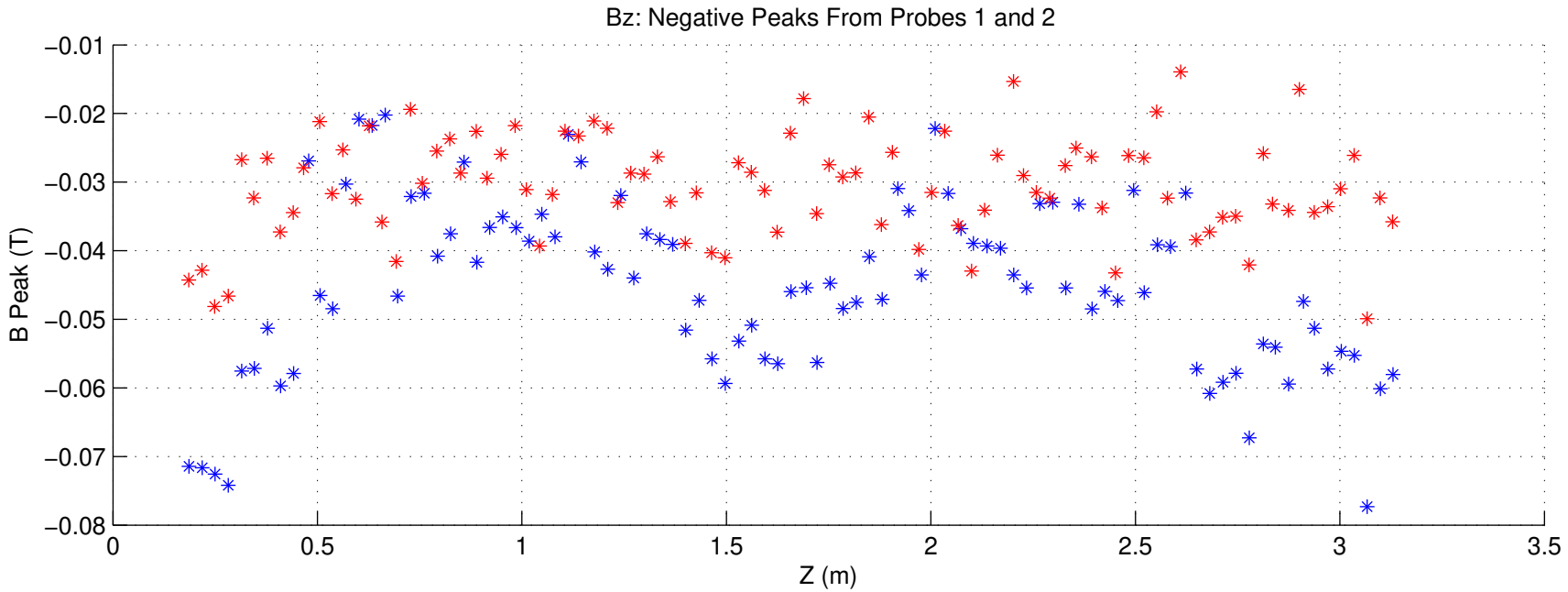

Bx: Positive Peaks From Probes 1 and 2
Probe 1
Probe 2
B Peak (T)
Z (m)
1.2
1.195
1.19
1.185
1.18
1.175
1.17
1.165
1.16
1.155
0
0.5
1
1.5
2
2.5
3
3.5


Bx: Negative Peaks From Probes 1 and 2
B Peak (T)
Z (m)
−1.16
−1.165
−1.17
−1.175
−1.18
−1.185
−1.19
−1.195
0
0.5
1
1.5
2
2.5
3
3.5


By: Positive Peaks From Probes 1 and 2
Probe 1
Probe 2
B Peak (T)
Z (m)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.5
1
1.5
2
2.5
3
3.5


By: Negative Peaks From Probes 1 and 2
B Peak (T)
Z (m)
−0.01
−0.02
−0.03
−0.04
−0.05
−0.06
−0.07
−0.08
0
0.5
1
1.5
2
2.5
3
3.5


Bz: Positive Peaks From Probes 1 and 2
Probe 1
Probe 2
B Peak (T)
Z (m)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.5
1
1.5
2
2.5
3
3.5


Bz: Negative Peaks From Probes 1 and 2
B Peak (T)
Z (m)
−0.01
−0.02
−0.03
−0.04
−0.05
−0.06
−0.07
−0.08
0
0.5
1
1.5
2
2.5
3
3.5