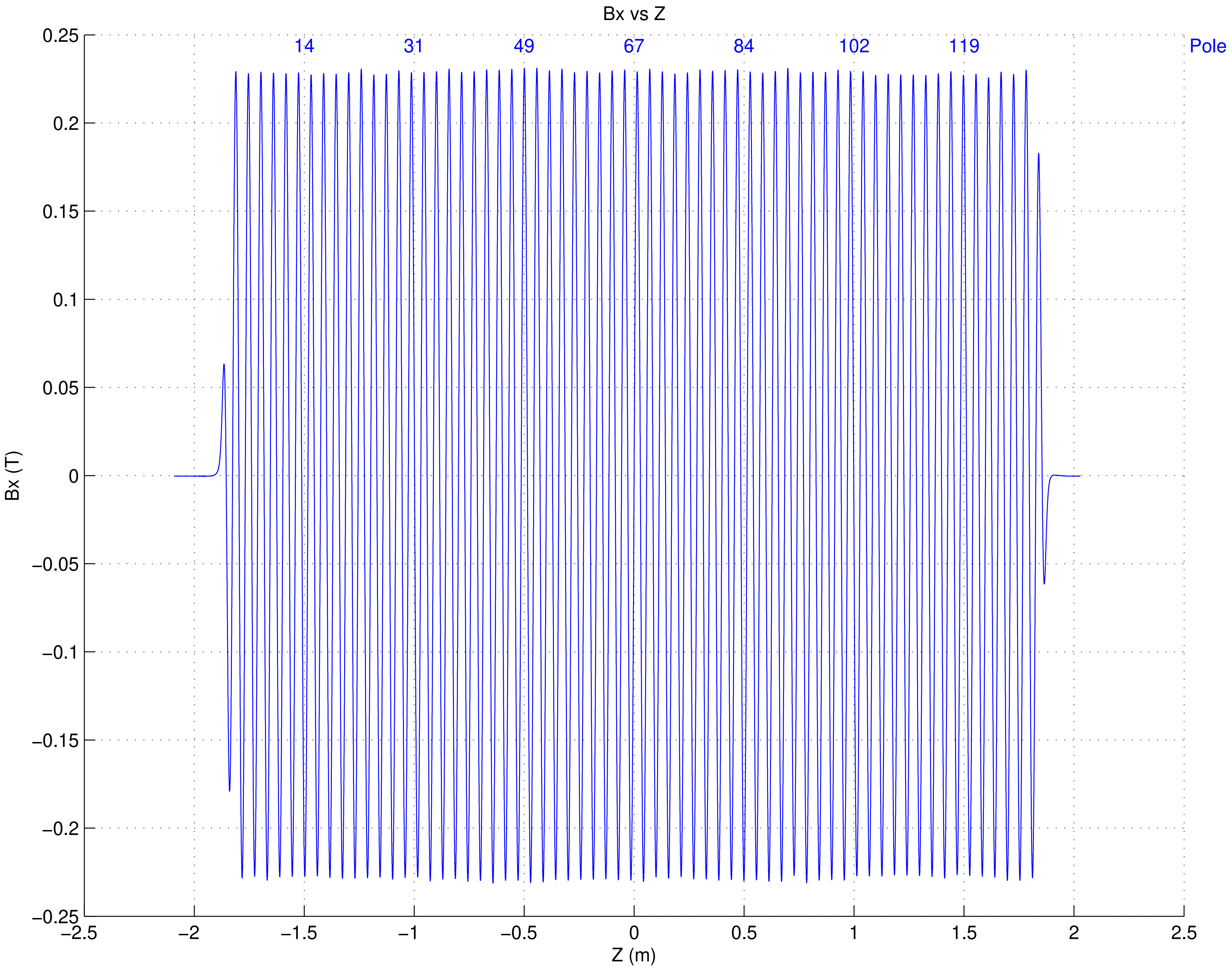
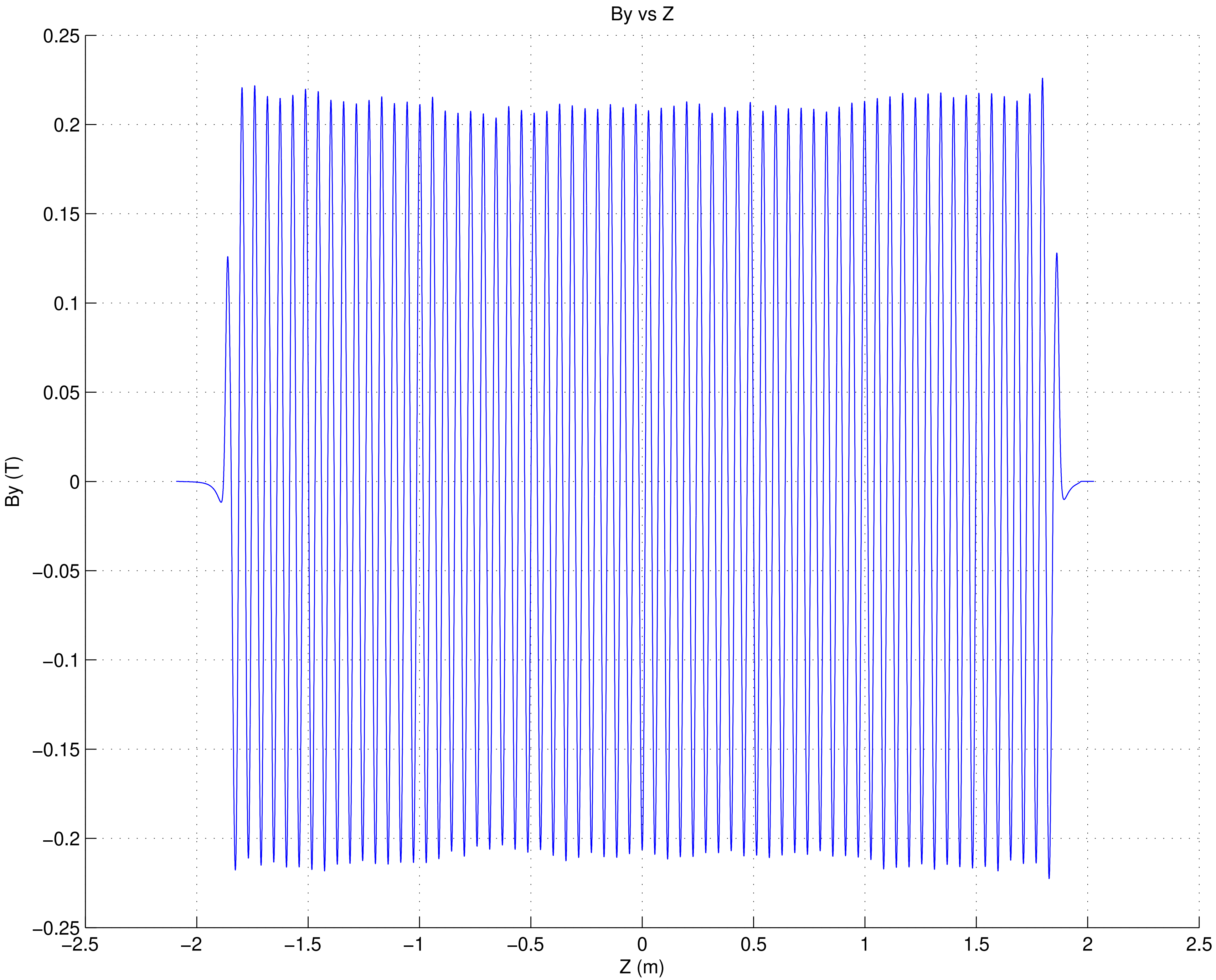
SLAC Magnetic Measurements

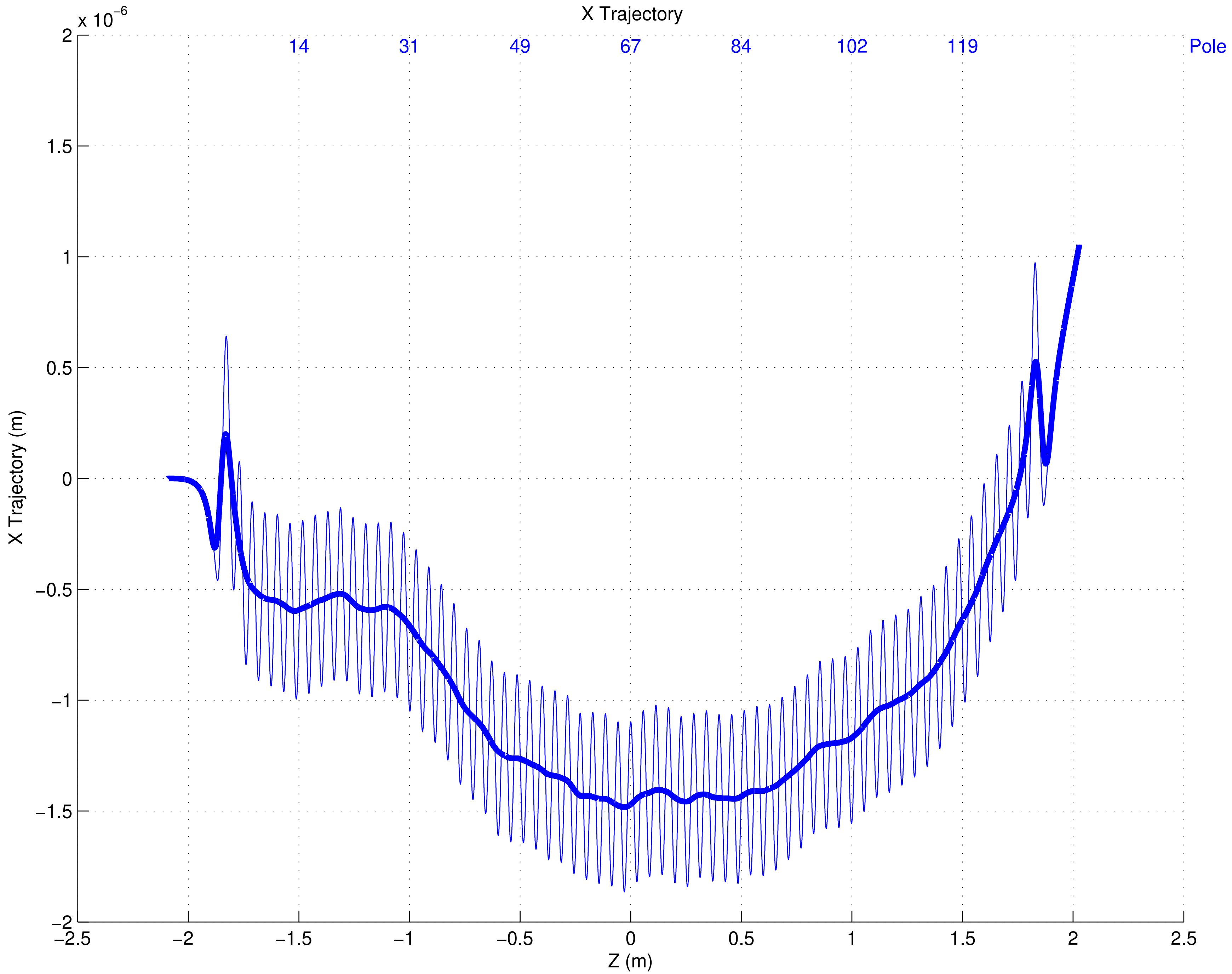
EPU Analysis

Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\EPU\DATASET0001\Rough Tuning\Z Scans\Run 248\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYZBXYZH
CORR−REQUIRED =1
GAMMA =26627.1
NOM−LAMBDA−U =0.057032
NOM−K−VALUE =2.3863
NOM−LAMBDA−R =1.5474e−010
NUM−POLES =131
NUM−END−POLES =4
CELL−LENGTH =4

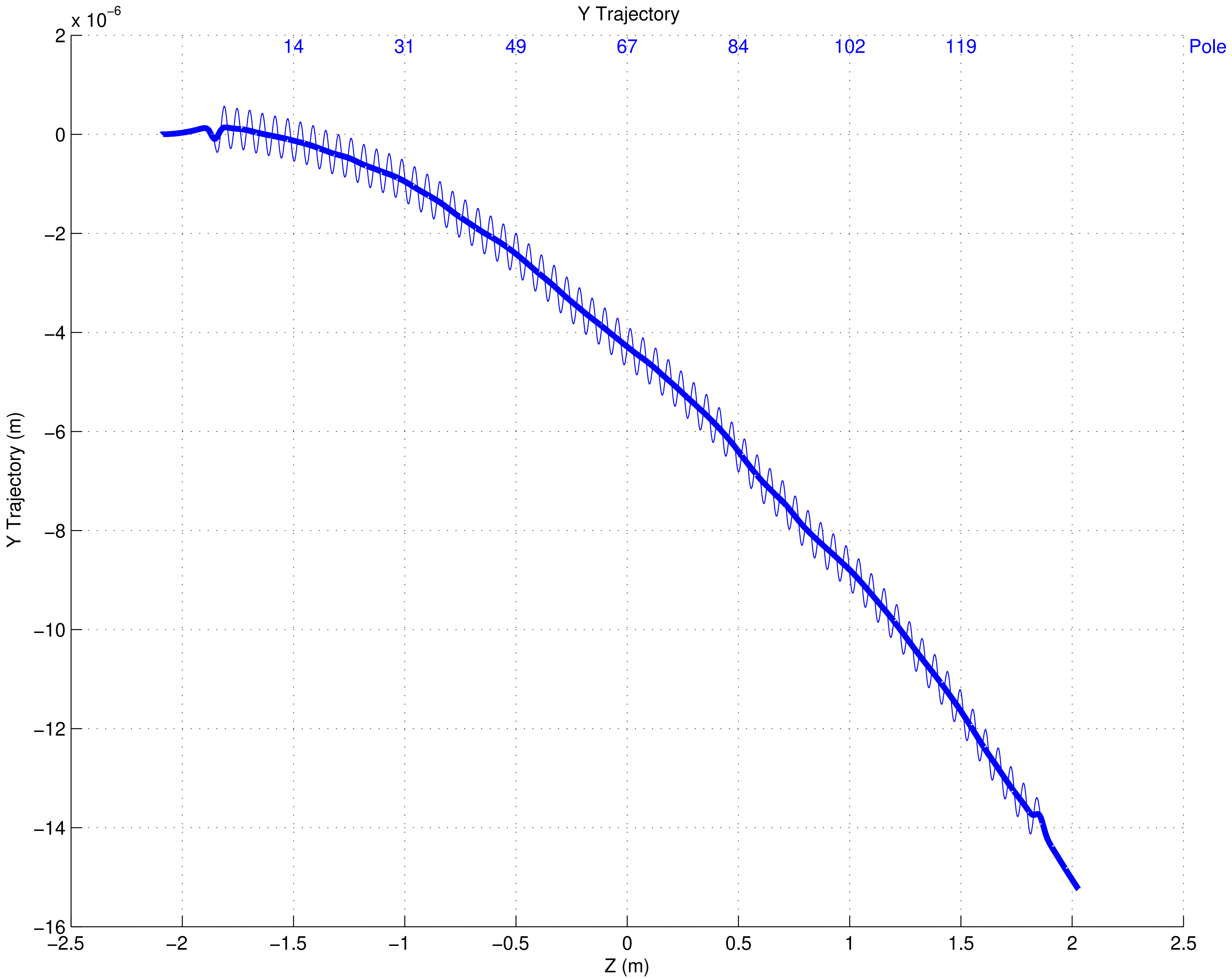

Bx vs Z
14
31
49
67
84
102
119
Pole
0.25
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.25
Bx (T)
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5
Z (m)

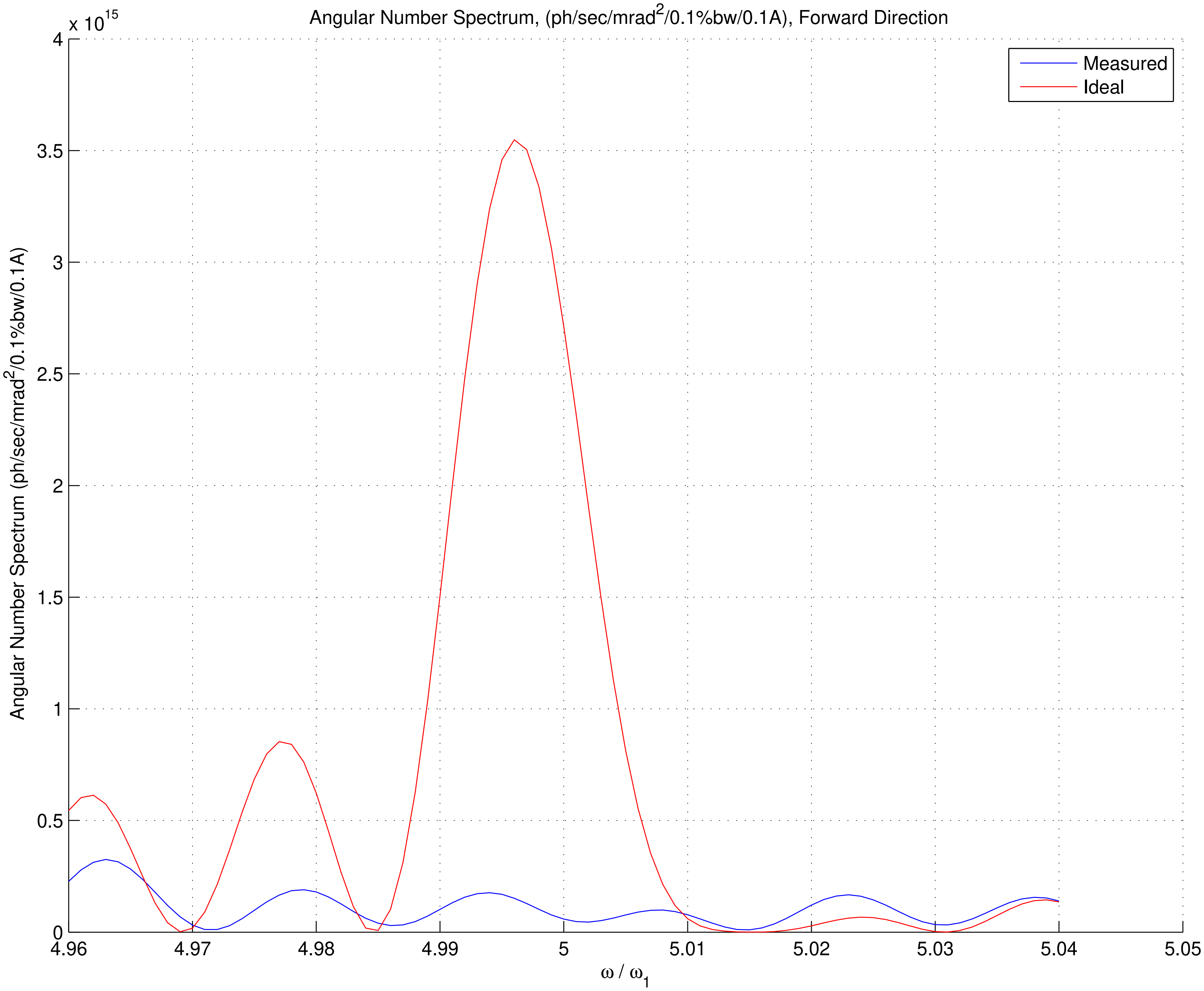


By vs Z
By (T)
Z (m)
0.25
0.2
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
−0.25
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5



X Trajectory
x 10^-6
14
31
49
67
84
102
119
Pole
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5
X Trajectory (m)
Z (m)


Y Trajectory
x 10^-6
14
31
49
67
84
102
119
Pole
2
0
−2
−4
−6
−8
−10
−12
−14
−16
Y Trajectory (m)
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5
Z (m)



Angular Number Spectrum, (ph/sec/mrad2/0.1%bw/0.1A), Forward Direction
x 10^15
4
3.5
3
2.5
2
1.5
1
0.5
0
Angular Number Spectrum (ph/sec/mrad2/0.1%bw/0.1A)
4.96
4.97
4.98
4.99
5
5.01
5.02
5.03
5.04
5.05
ω / ω1
Measured
Ideal