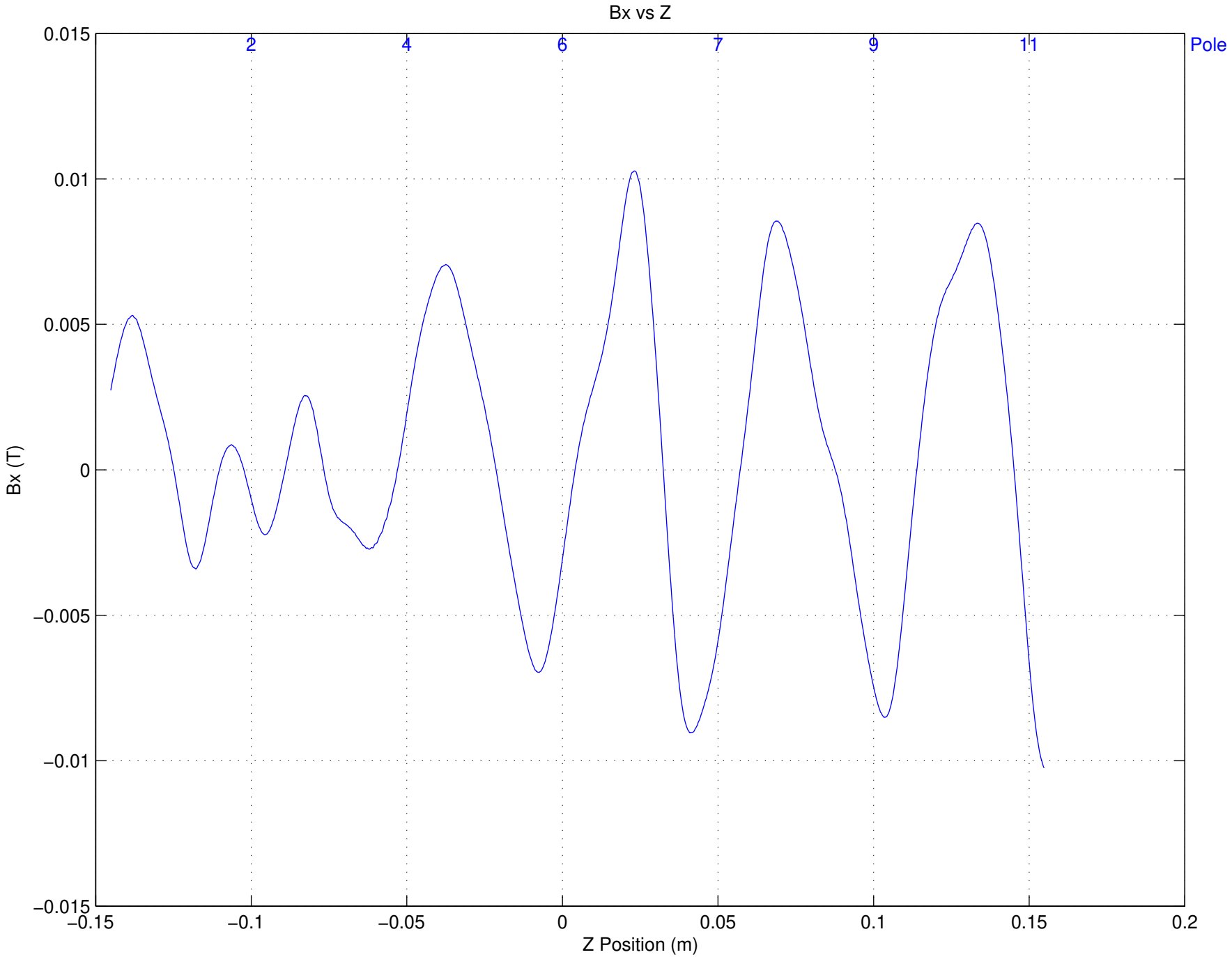
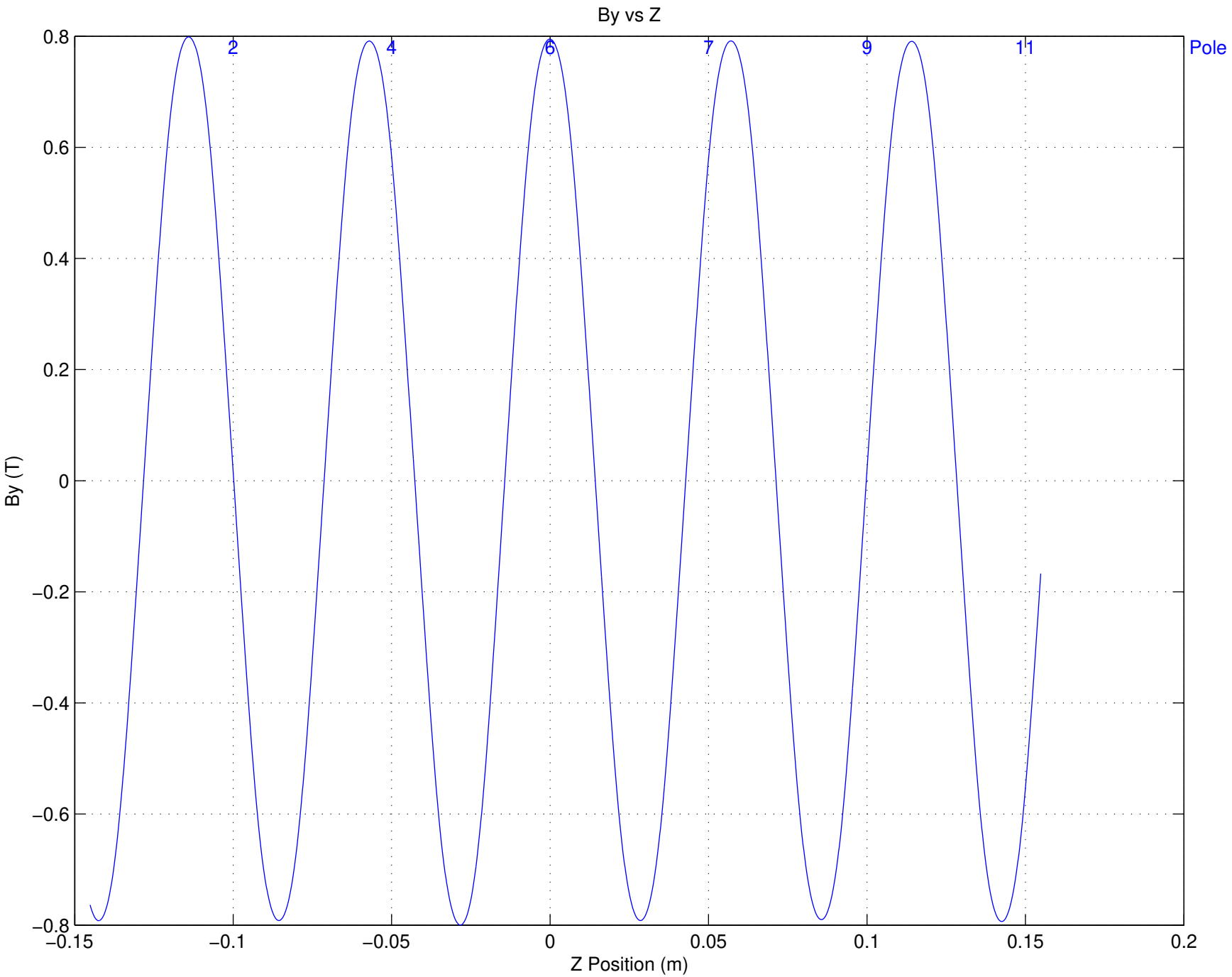
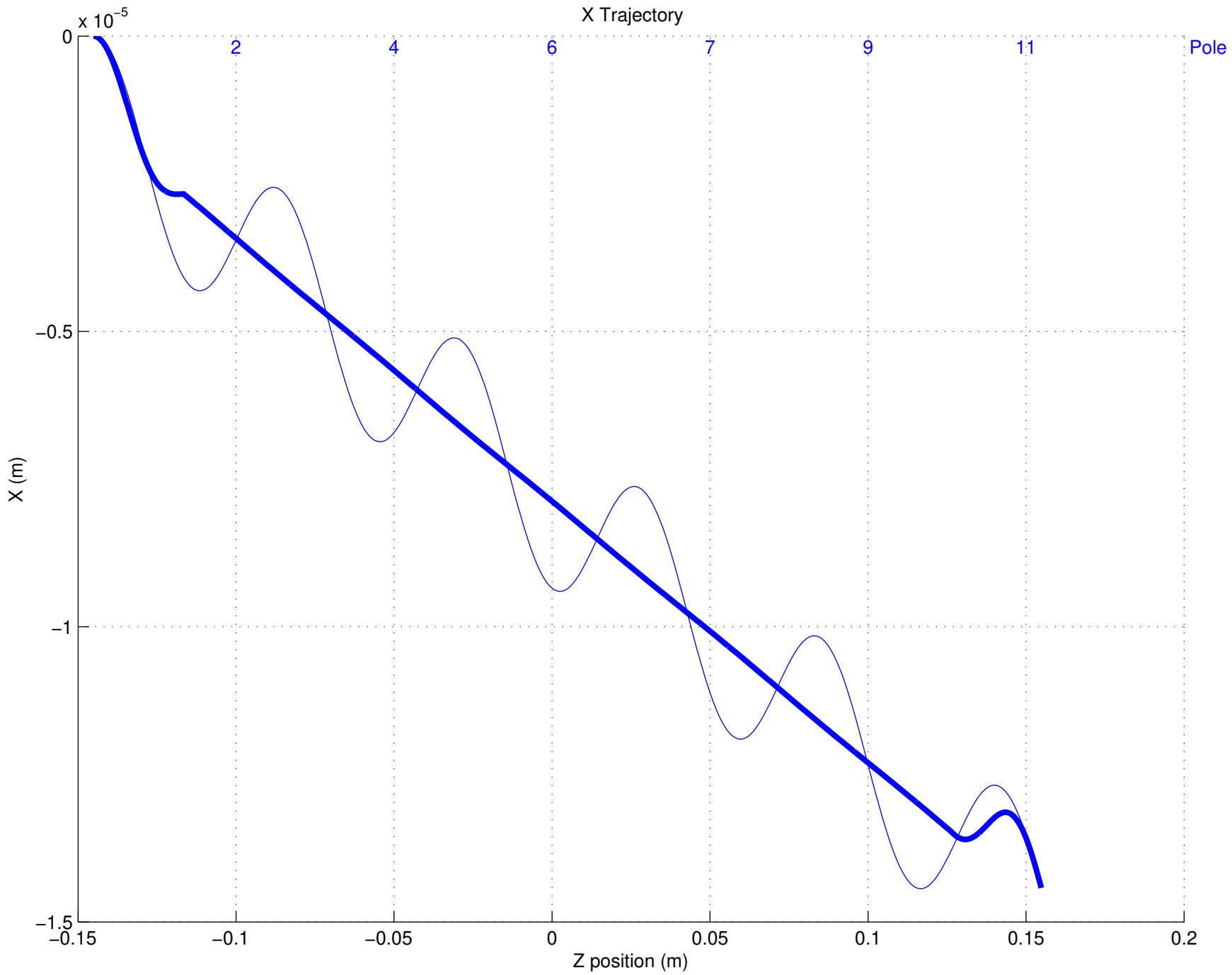
SLAC Magnetic Measurements

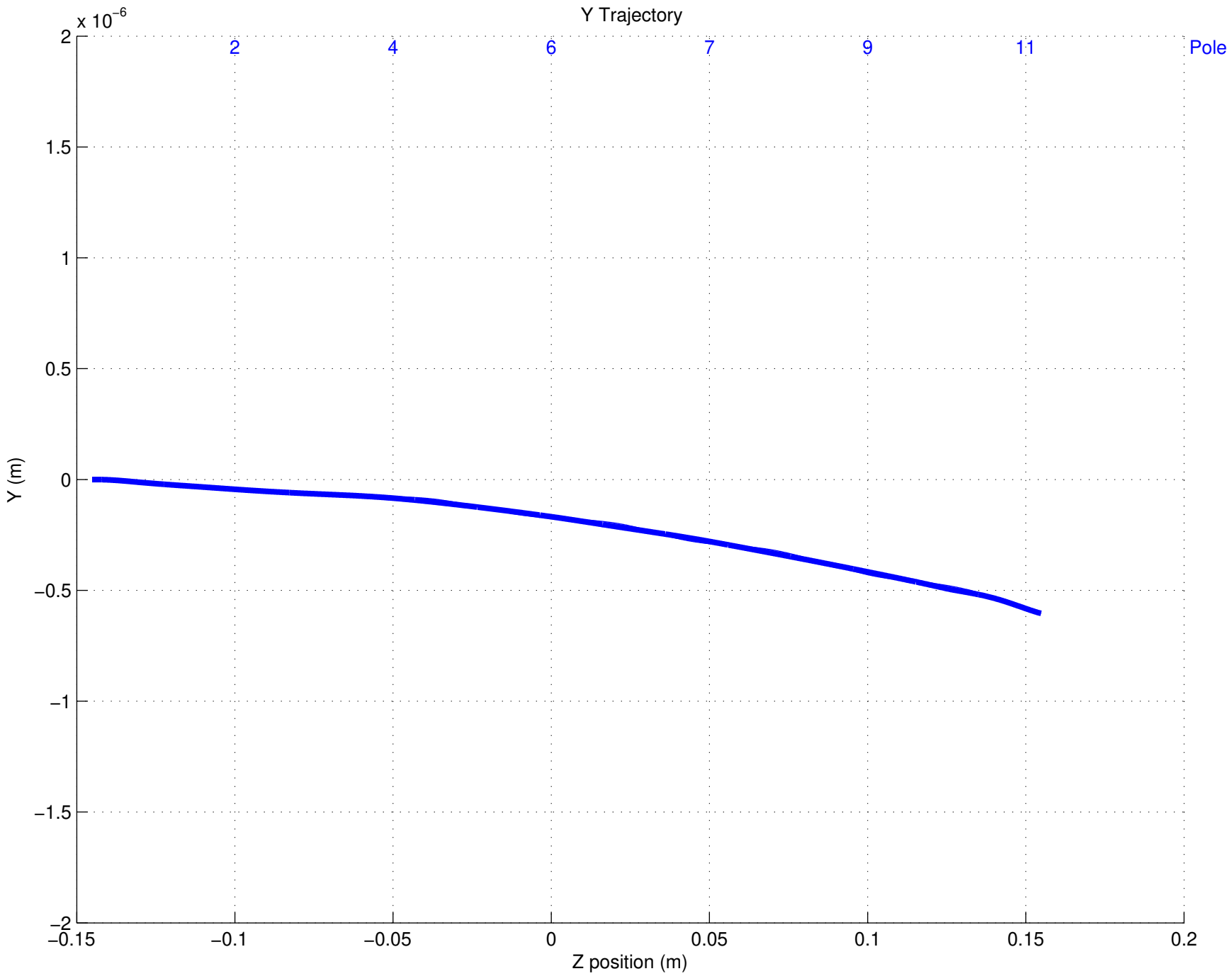
Planar Insertion Device Analysis

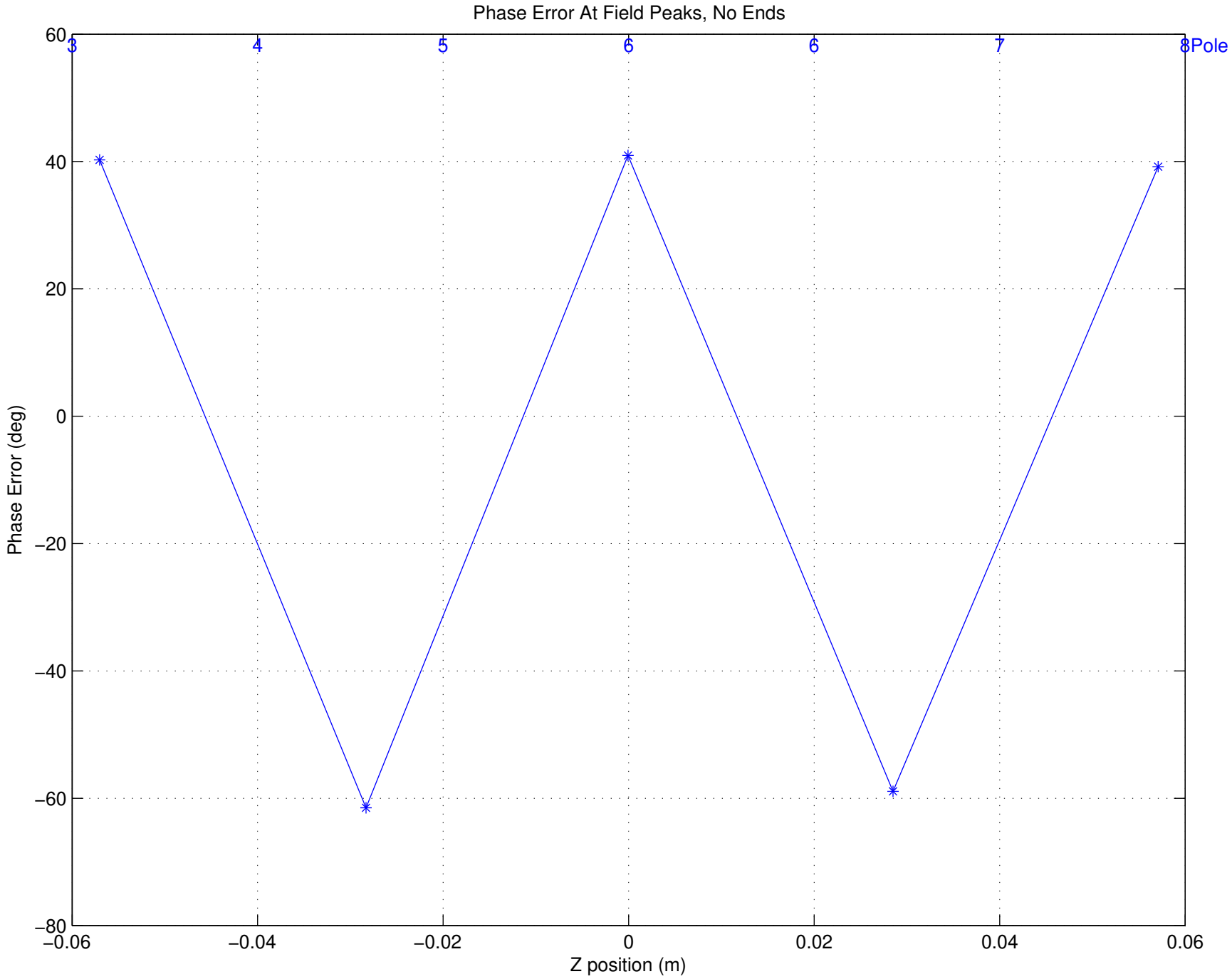
Parameters:
INPUT−FILE−DIR =S:\MagData\LCLS\Undulator\EPU\DATASET0001\Rough Tuning\Z Scans\Run 122\
INPUT−FILE−NAME =x+00000−y+000−bscanz.dat
INPUT−FILE−TYPE =ZVXYBXYH
CORR−REQUIRED =1
GAMMA =26686.34
NOM−LAMBDA−U =0.0569
NOM−K−VALUE =2.348
NOM−LAMBDA−R =1.5007e−010
NUM−POLES =11
NUM−END−POLES =3
CELL−LENGTH =3.6985


Bx vs Z
2
4
6
7
9
11
Pole
0.015
0.01
0.005
0
−0.005
−0.01
−0.015
Bx (T)
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
Z Position (m)

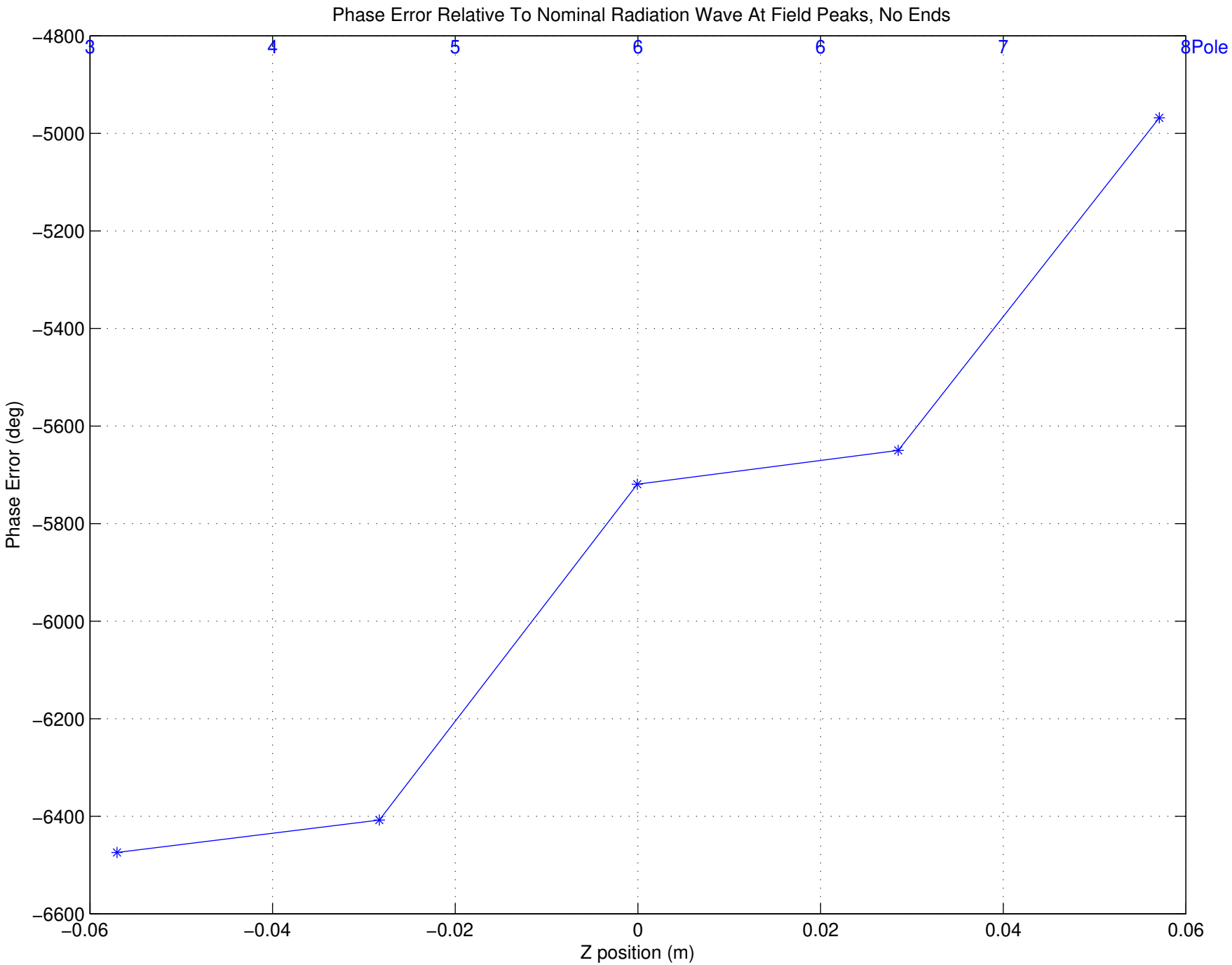

By vs Z
Pole
2
4
6
7
9
11
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
By (T)
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
Z Position (m)


X Trajectory
x 10^-5
0
−0.5
−1
−1.5
X (m)
2
4
6
7
9
11
Pole
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
Z position (m)


Y Trajectory
x 10^-6
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
Y (m)
2
4
6
7
9
11
Pole
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
Z position (m)



Phase Error: Ave = 0.000000 deg, RMS = 54.964118 deg


Phase Error Relative To Nominal Radiation Wave At Field Peaks, No Ends
3
4
5
6
6
7
8Pole
−4800
−5000
−5200
−5400
−5600
−5800
−6000
−6200
−6400
−6600
Phase Error (deg)
−0.06
−0.04
−0.02
0
0.02
0.04
0.06
Z position (m)