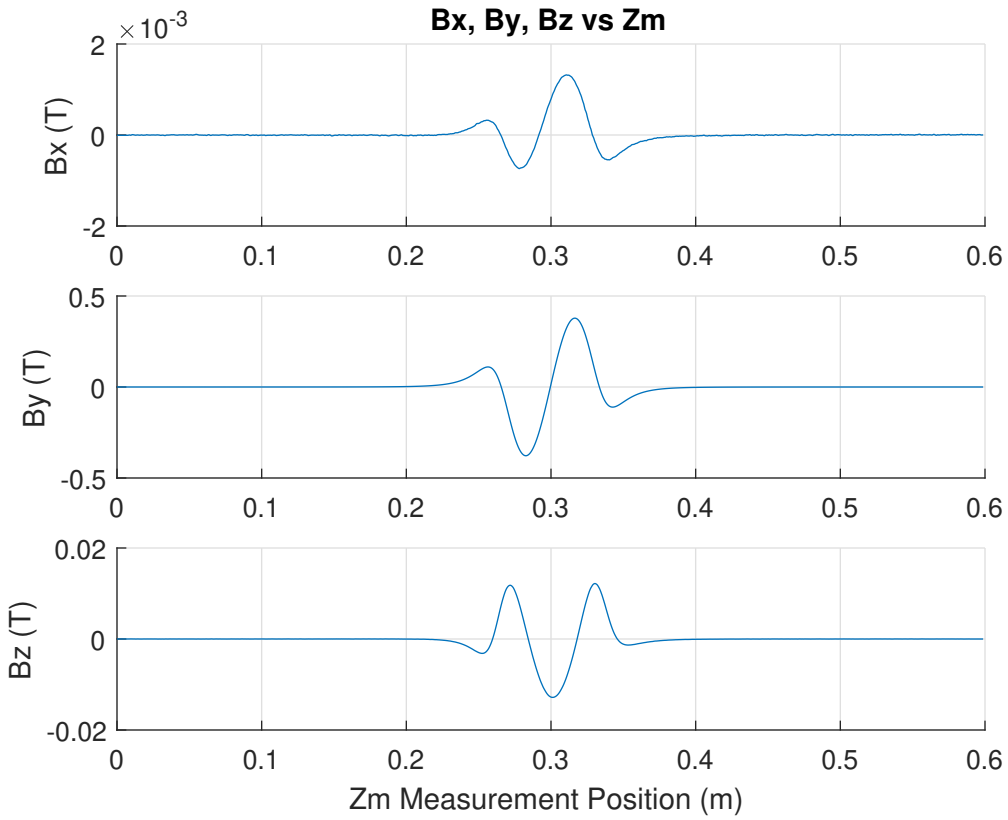
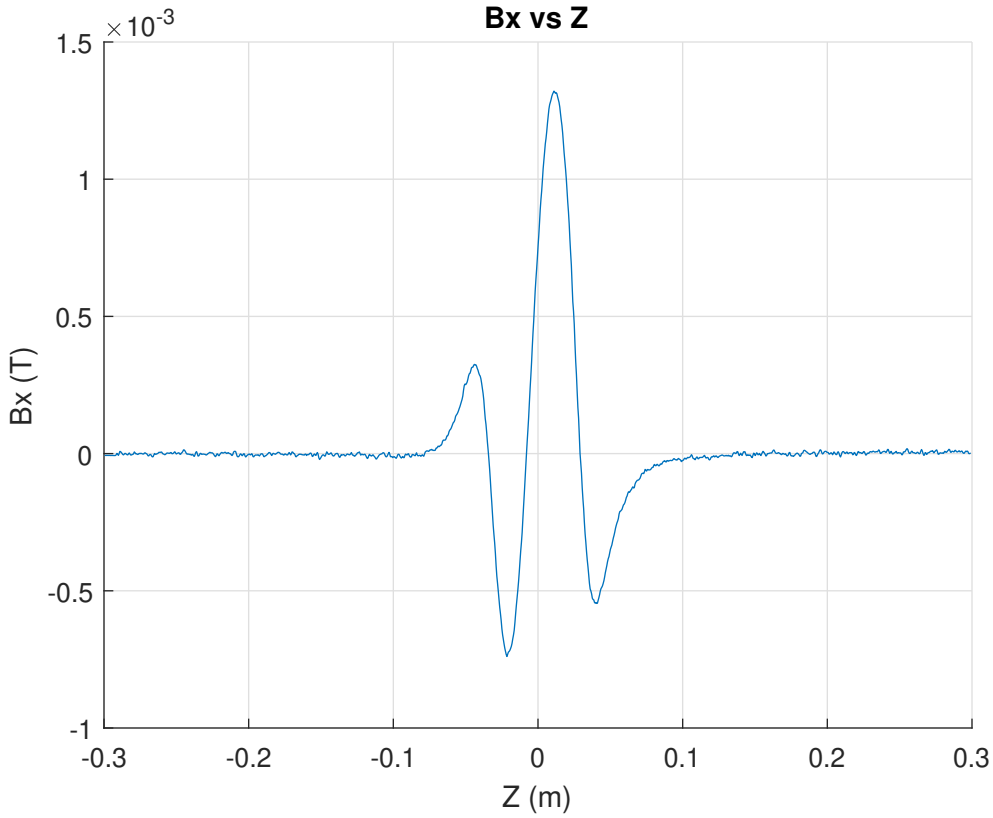
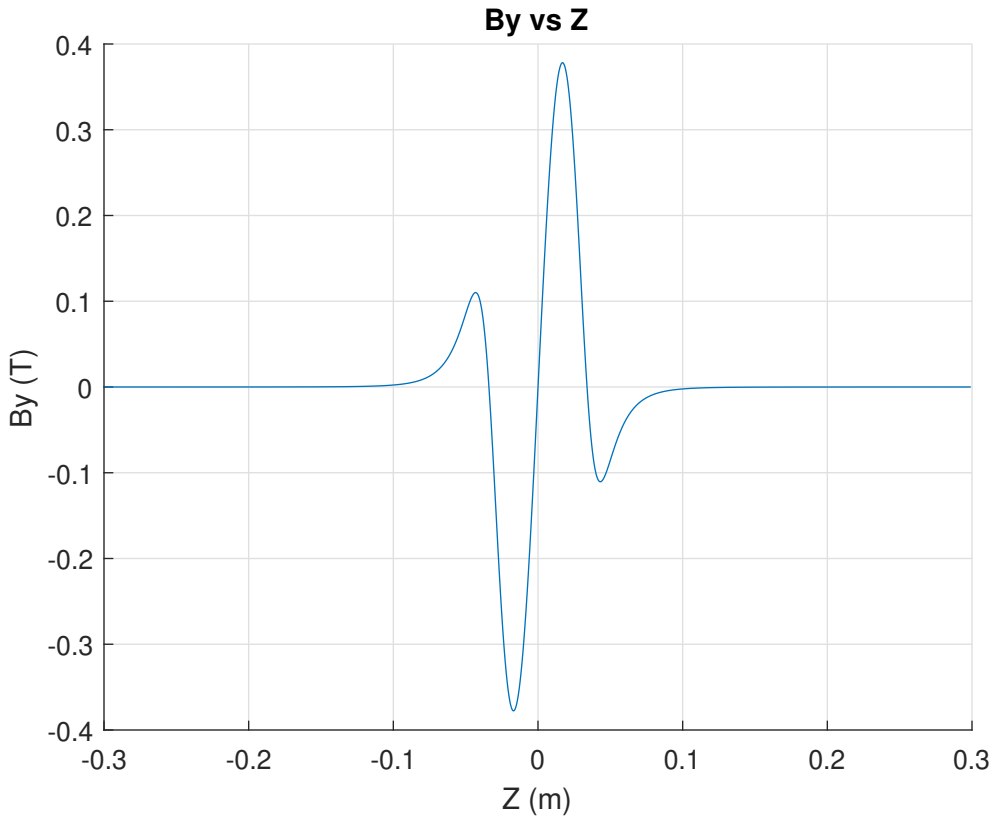
SLAC Magnetic Measurements

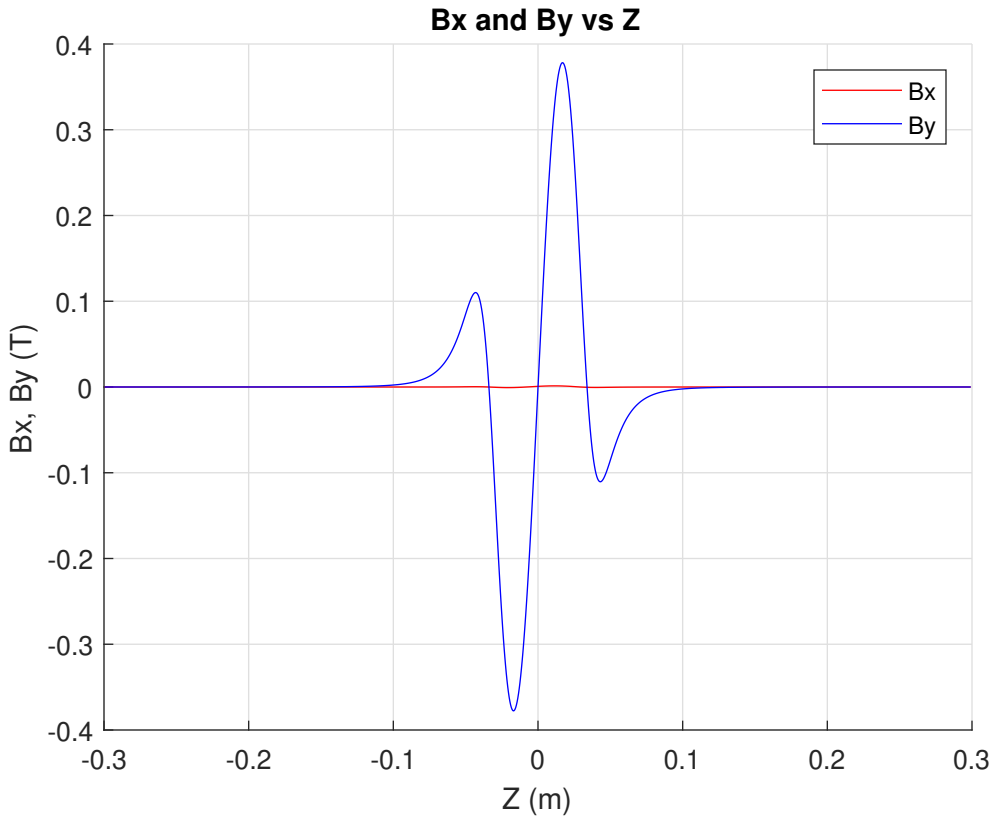
Phase Shifter Analysis

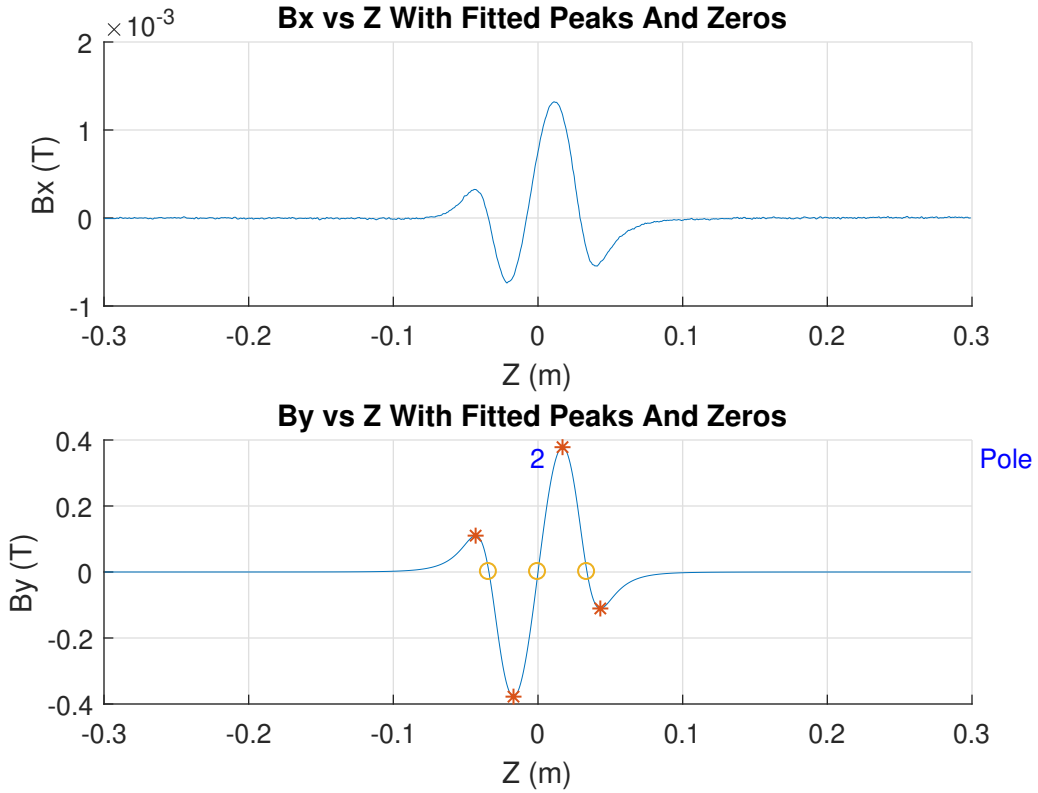
Parameters:
INPUT-FILE-DIR =V:\MET\MagServe\MagData\LCLS-II\Phase Shifter\Danfysik Measurements\SXR 16350
INPUT-FILE-NAME =zscan.dat
INPUT-FILE-TYPE =ZBXYZH
CORR-REQUIRED =0
GAMMA =7827.79
NOM-LAMBDA-U =0.039
NOM-K-VALUE =2.6963
NOM-LAMBDA-R =1.4751e-09
NUM-POLES =4
NUM-END-POLES =0
CELL-LENGTH =0.5

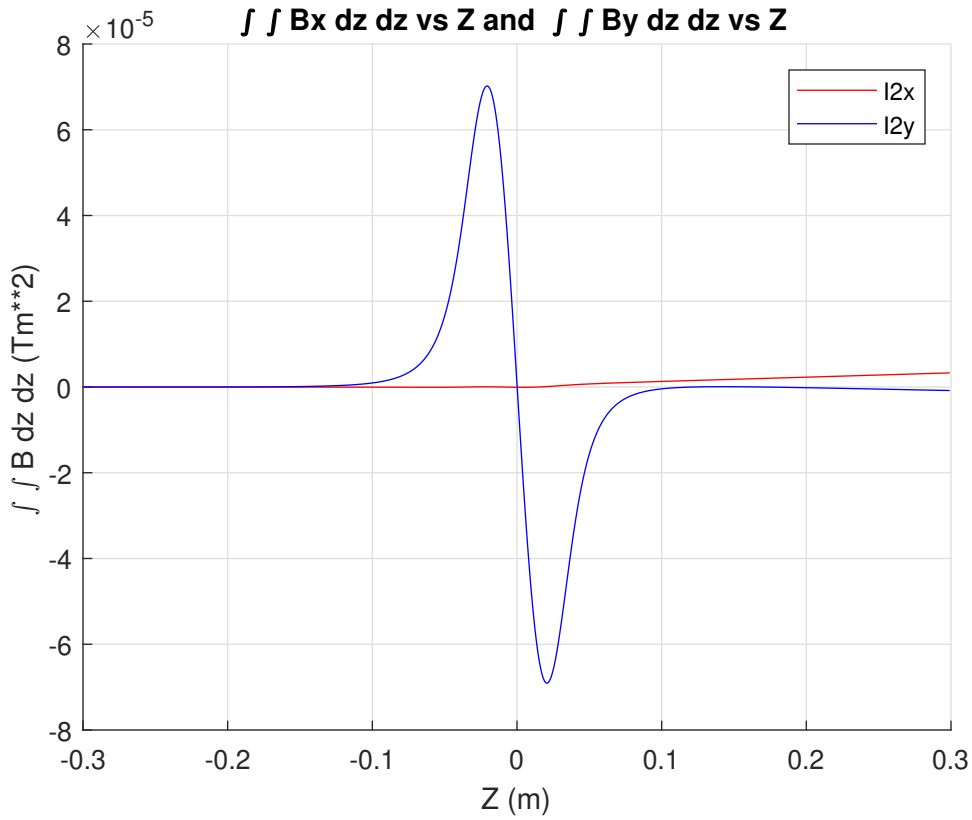

Bx, By, Bz vs Zm
×10^-3
2
0
-2
Bx (T)
0.5
0
-0.5
By (T)
0.02
0
-0.02
Bz (T)
0
0.1
0.2
0.3
0.4
0.5
0.6
Zm Measurement Position (m)

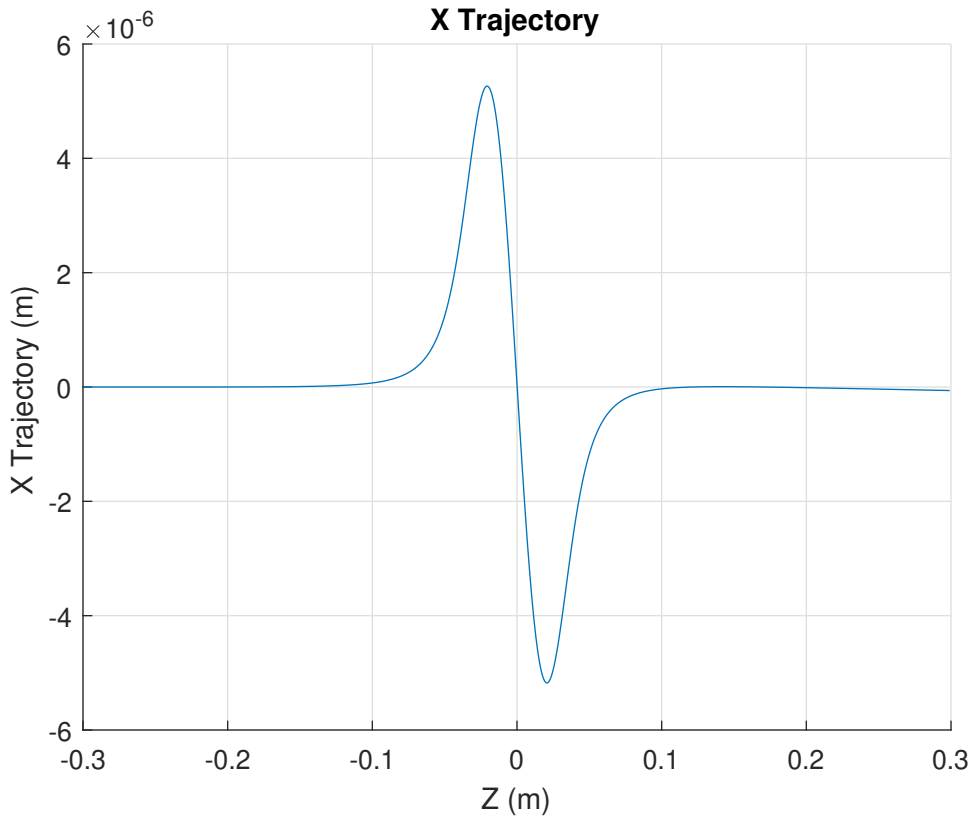

Bx vs Z
×10^-3
1.5
1
0.5
0
-0.5
-1
Bx (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

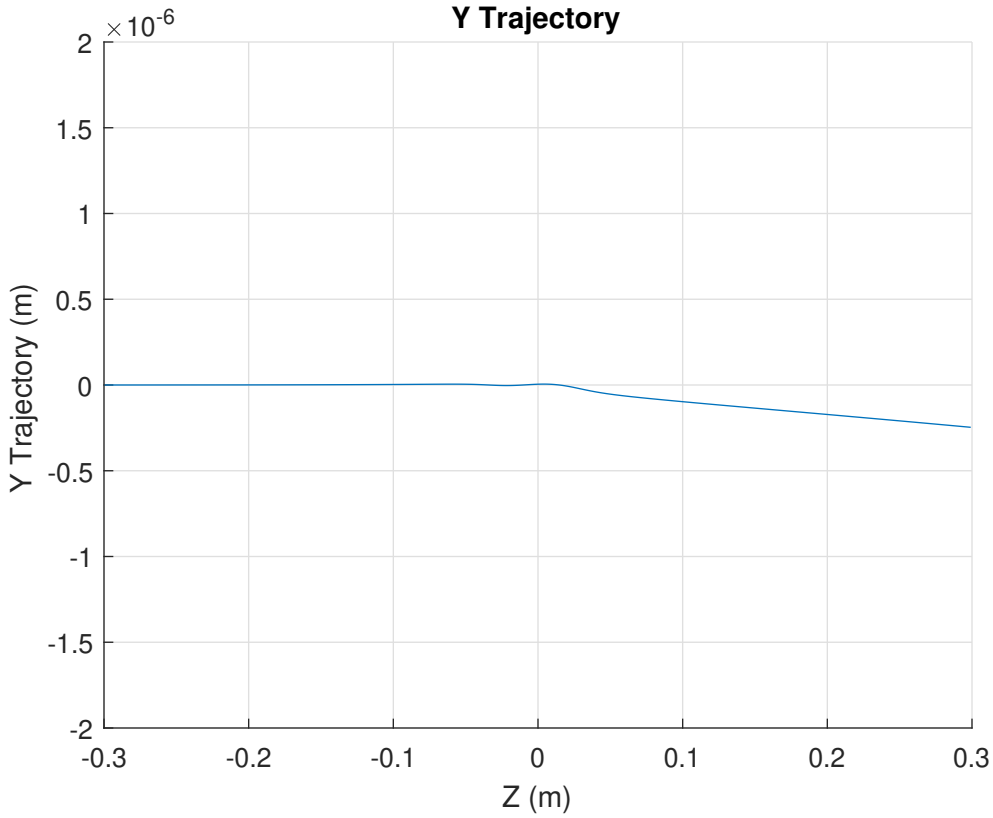

By vs Z
By (T)
Z (m)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3

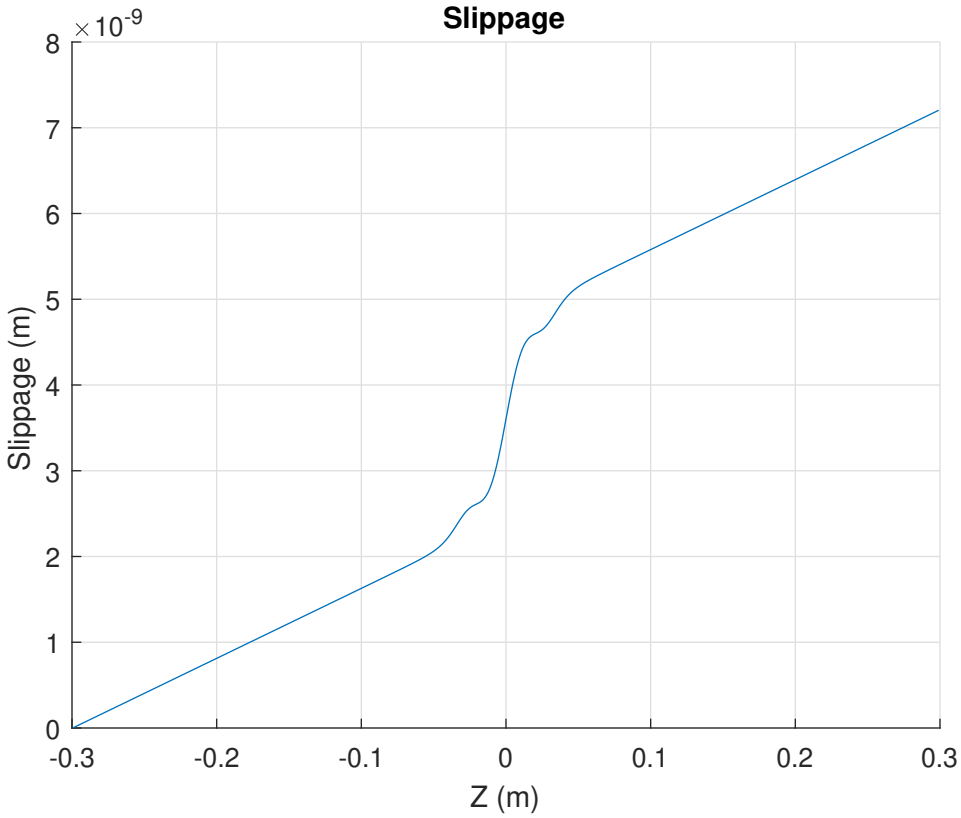

Bx and By vs Z
Bx
By
Bx, By (T)
Z (m)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3

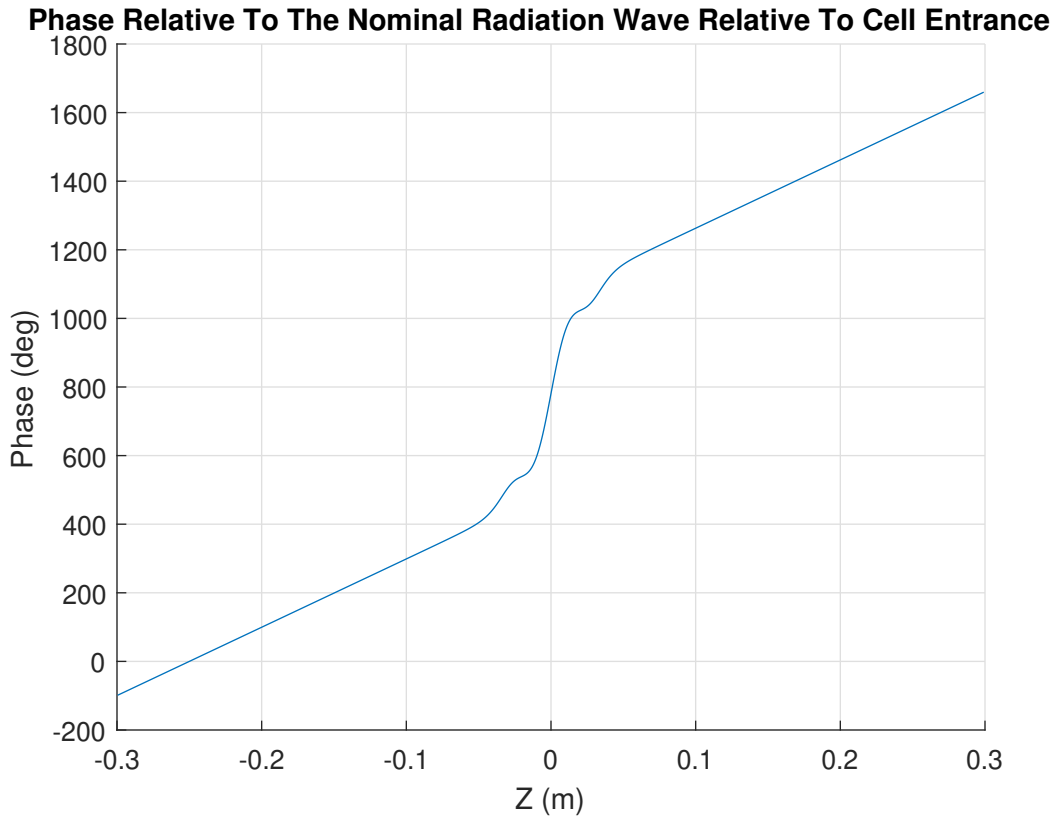

Bx vs Z With Fitted Peaks And Zeros
×10^-3
2
1
0
-1
Bx (T)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)
By vs Z With Fitted Peaks And Zeros
0.4
0.2
0
-0.2
-0.4
By (T)
2
Pole
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)

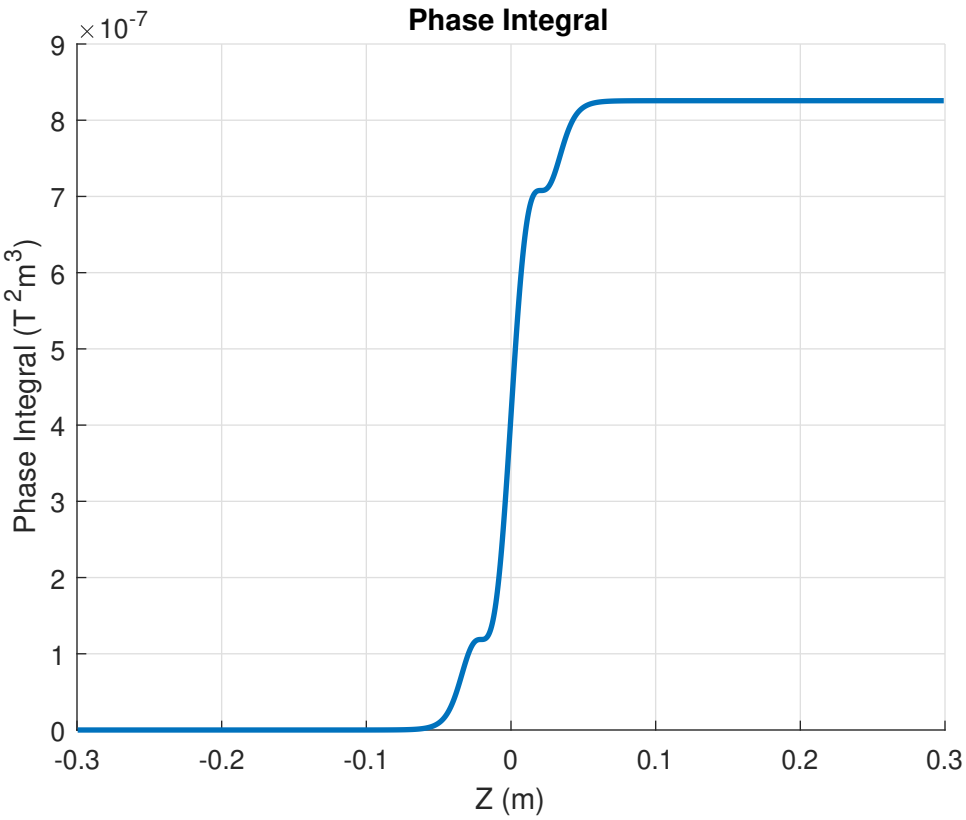

∫ ∫ Bx dz dz vs Z and ∫ ∫ By dz dz vs Z
×10^-5
8
6
4
2
0
-2
-4
-6
-8
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)
∫ ∫ B dz dz (Tm**2)
I2x
I2y


X Trajectory
×10-6
6
4
2
0
-2
-4
-6
X Trajectory (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Y Trajectory
×10-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Y Trajectory (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Slippage
×10-9
8
7
6
5
4
3
2
1
0
Slippage (m)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Phase Relative To The Nominal Radiation Wave Relative To Cell Entrance
Phase (deg)
1800
1600
1400
1200
1000
800
600
400
200
0
-200
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)


Phase Integral
×10^-7
9
8
7
6
5
4
3
2
1
0
Phase Integral (T^2m^3)
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Z (m)