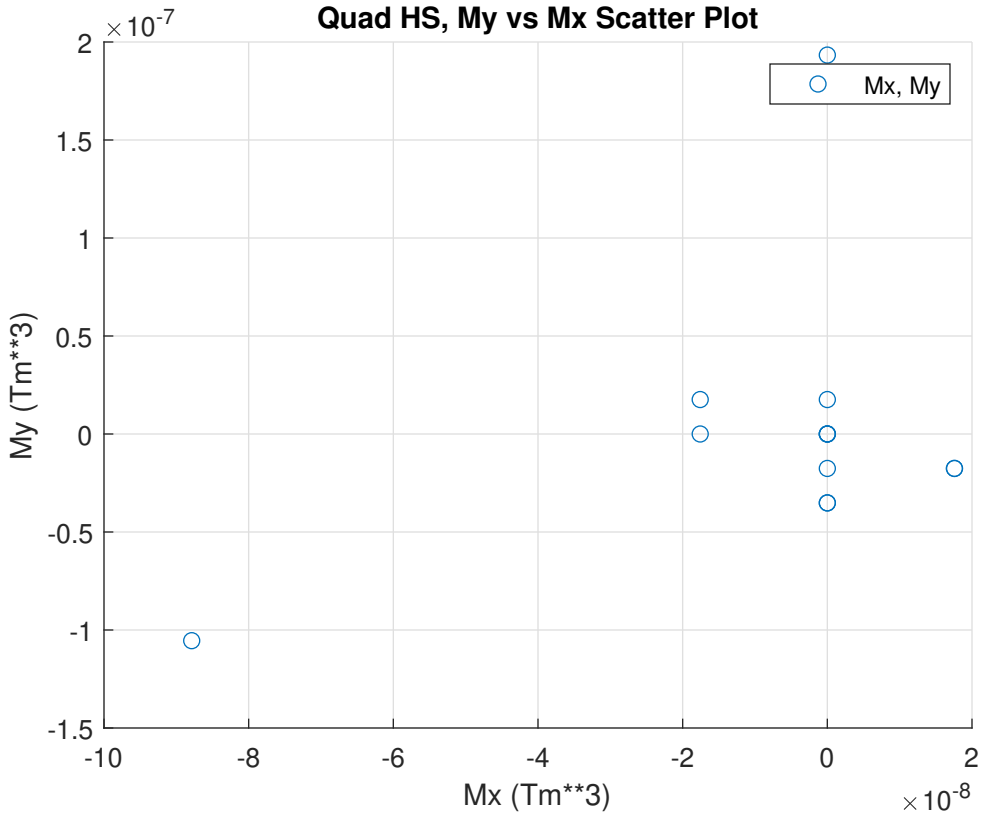
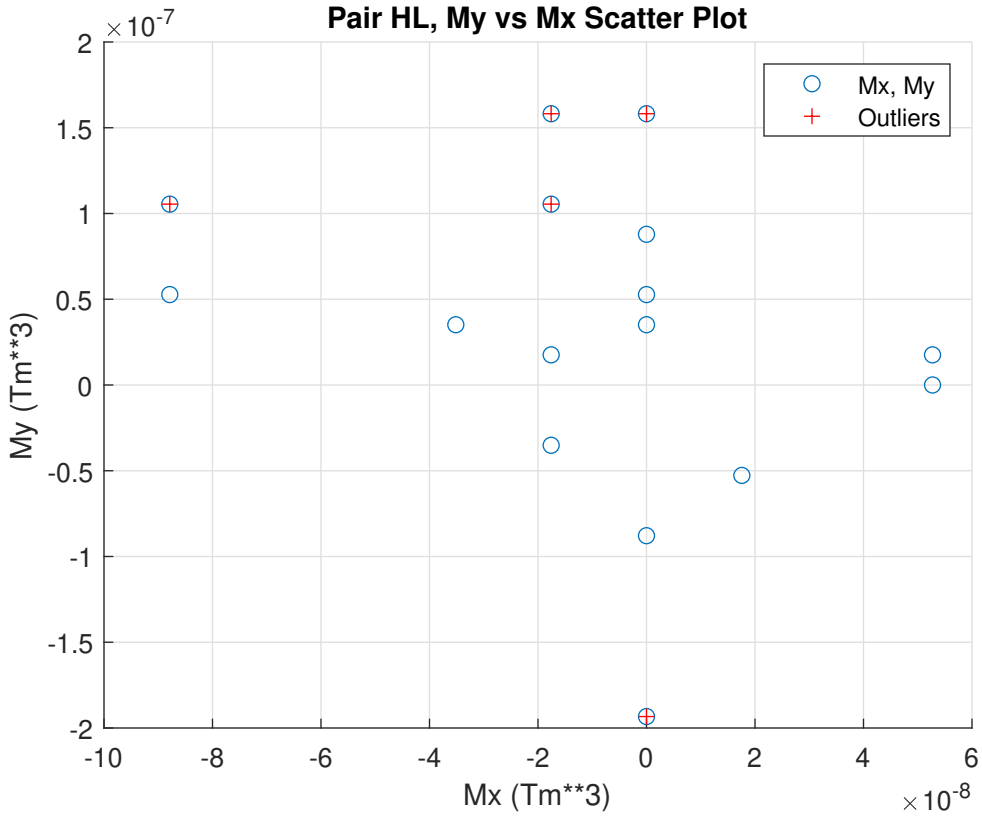
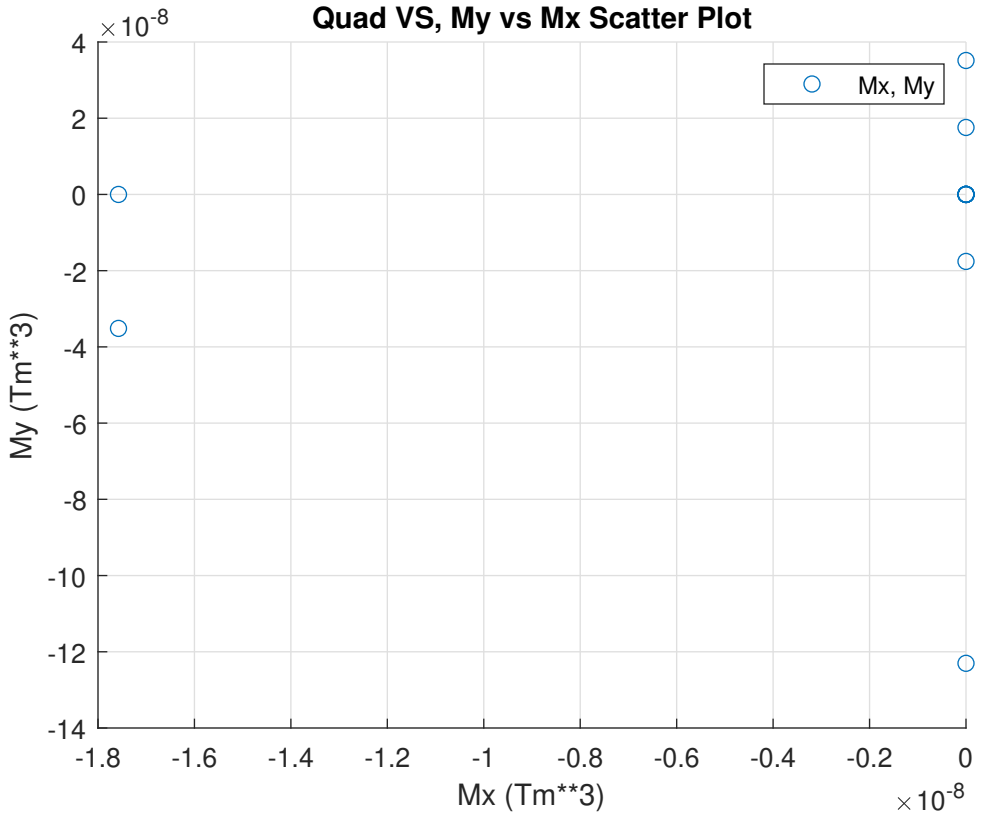
SLAC Magnetic Measurements

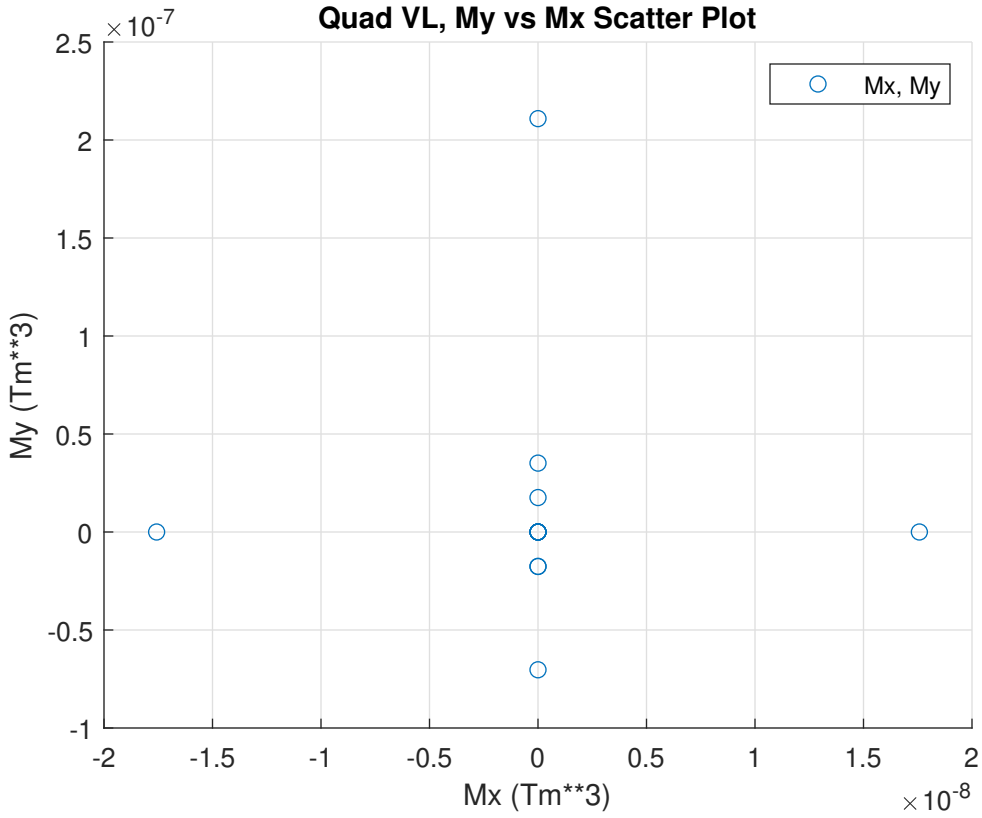
Phase Shifter Magnet Block Placement

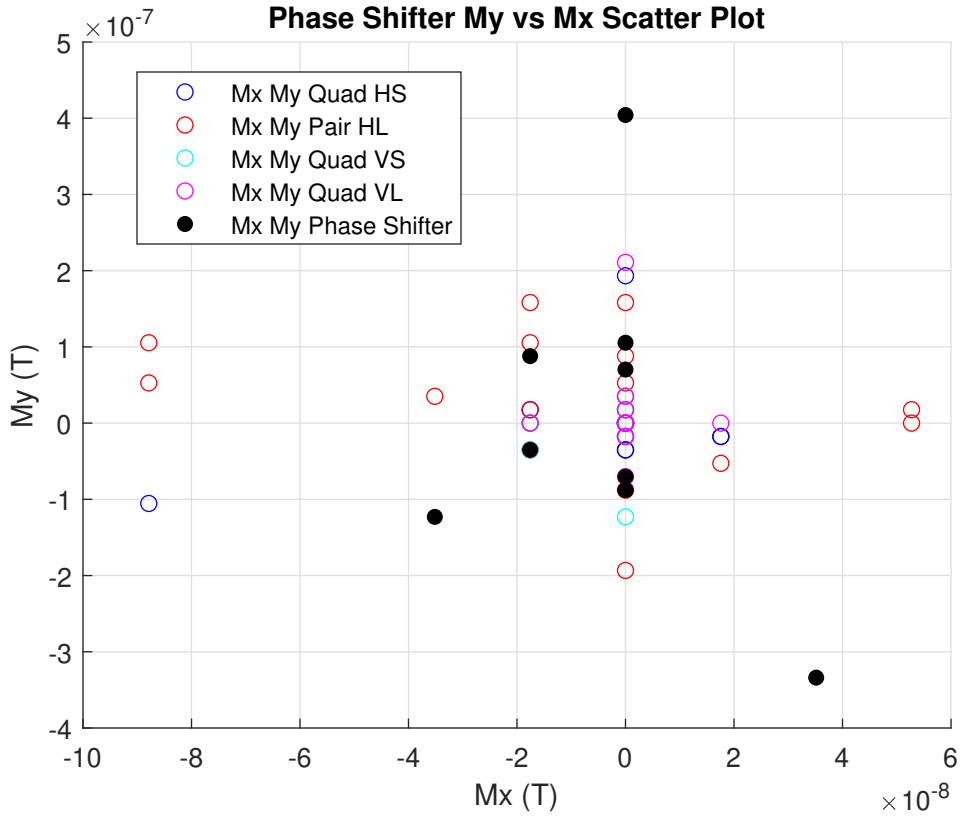
Parameters:
OUTPUT-FILE-DIR =S:\magdata\LCLS-II-HE\Phase Shifter\Magnet Blocks

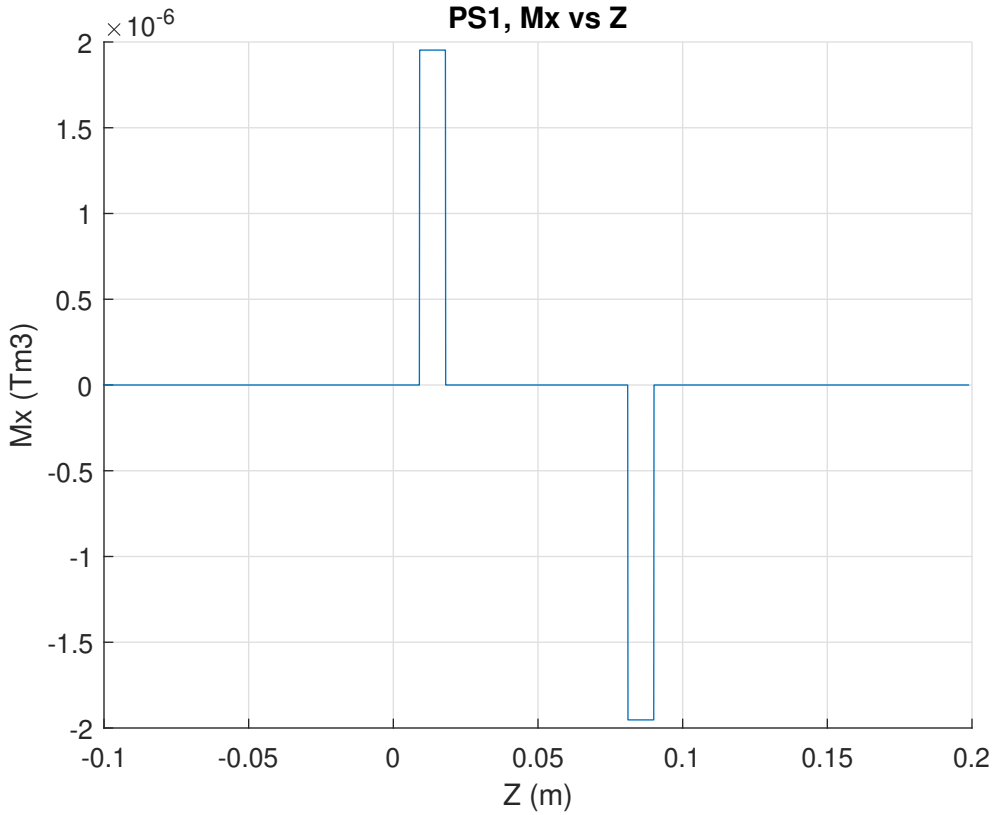

Quad HS, My vs Mx Scatter Plot
Mx, My
My (Tm**3)
Mx (Tm**3)
×10^-7
×10^-8
2
1.5
1
0.5
0
-0.5
-1
-1.5
-10
-8
-6
-4
-2
0
2

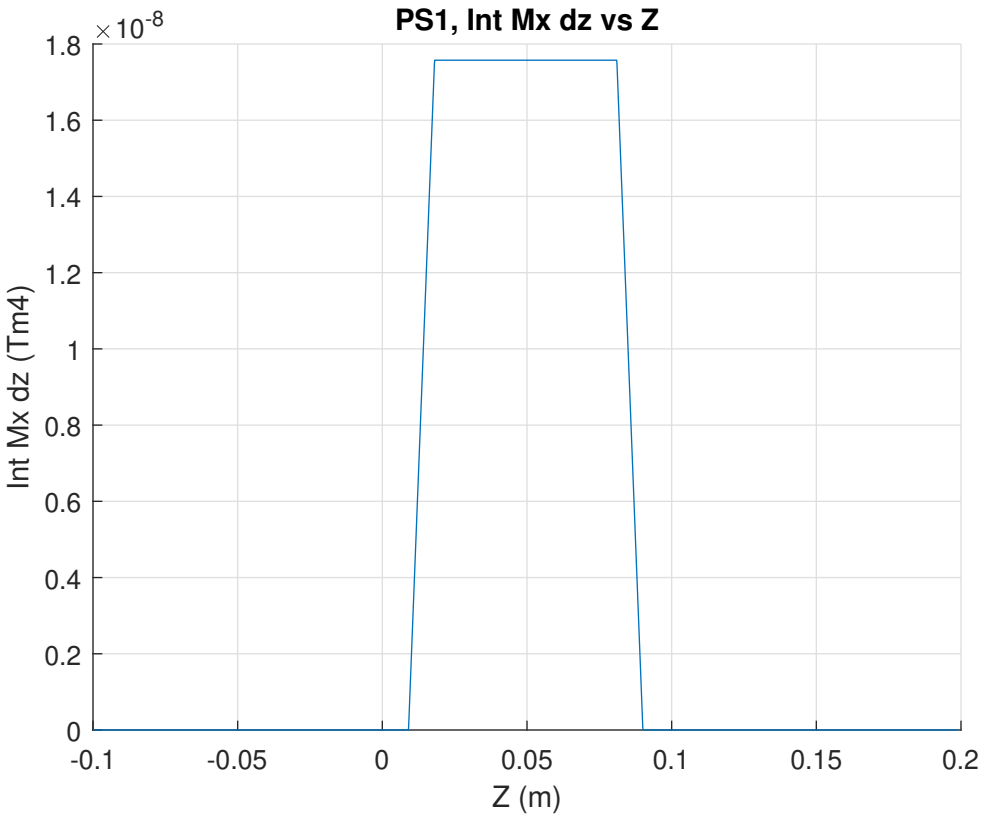

Pair HL, My vs Mx Scatter Plot
×10^-7
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
My (Tm**3)
-10
-8
-6
-4
-2
0
2
4
6
Mx (Tm**3)
×10^-8
Mx, My
Outliers

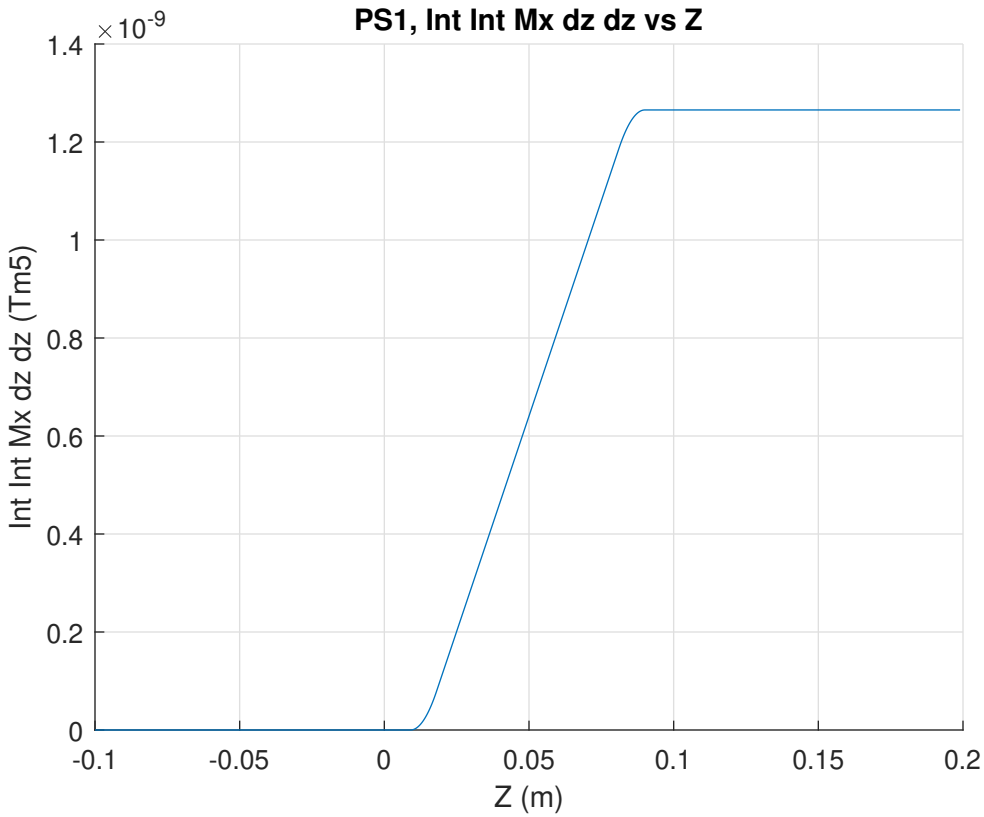

Quad VS, My vs Mx Scatter Plot
×10-8
4
2
0
-2
-4
-6
-8
-10
-12
-14
My (Tm**3)
Mx, My
-1.8
-1.6
-1.4
-1.2
-1
-0.8
-0.6
-0.4
-0.2
0
Mx (Tm**3)
×10-8

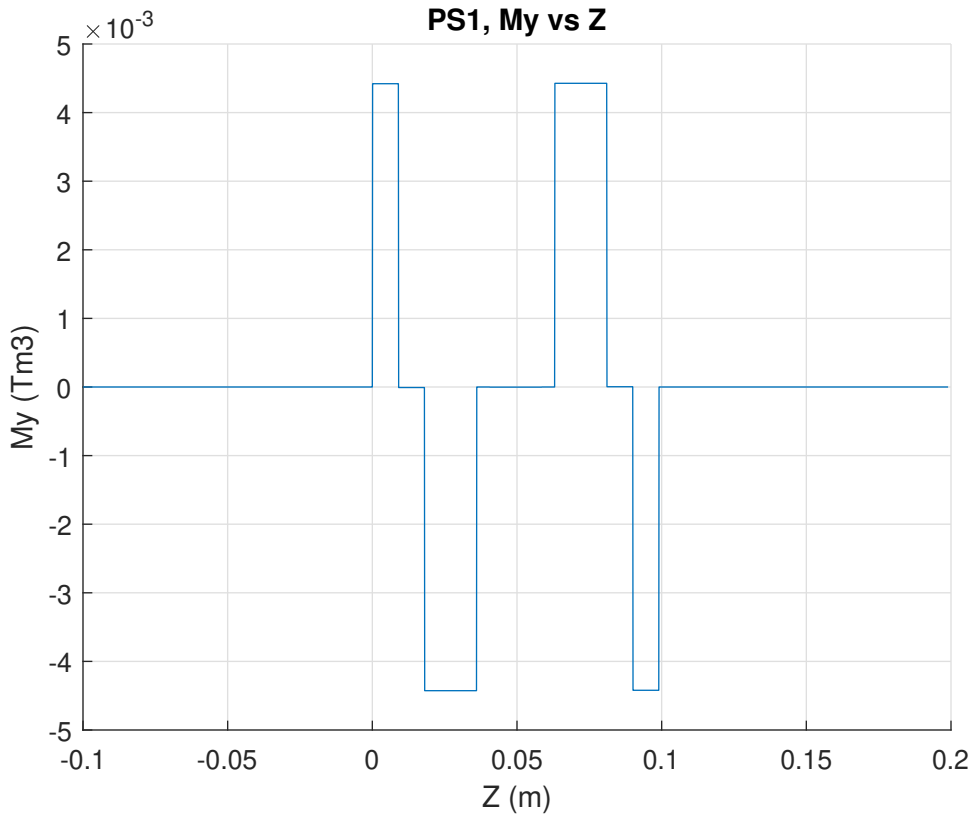

Quad VL, My vs Mx Scatter Plot
Mx, My
My (Tm**3)
Mx (Tm**3)
×10^-7
×10^-8
2.5
2
1.5
1
0.5
0
-0.5
-1
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

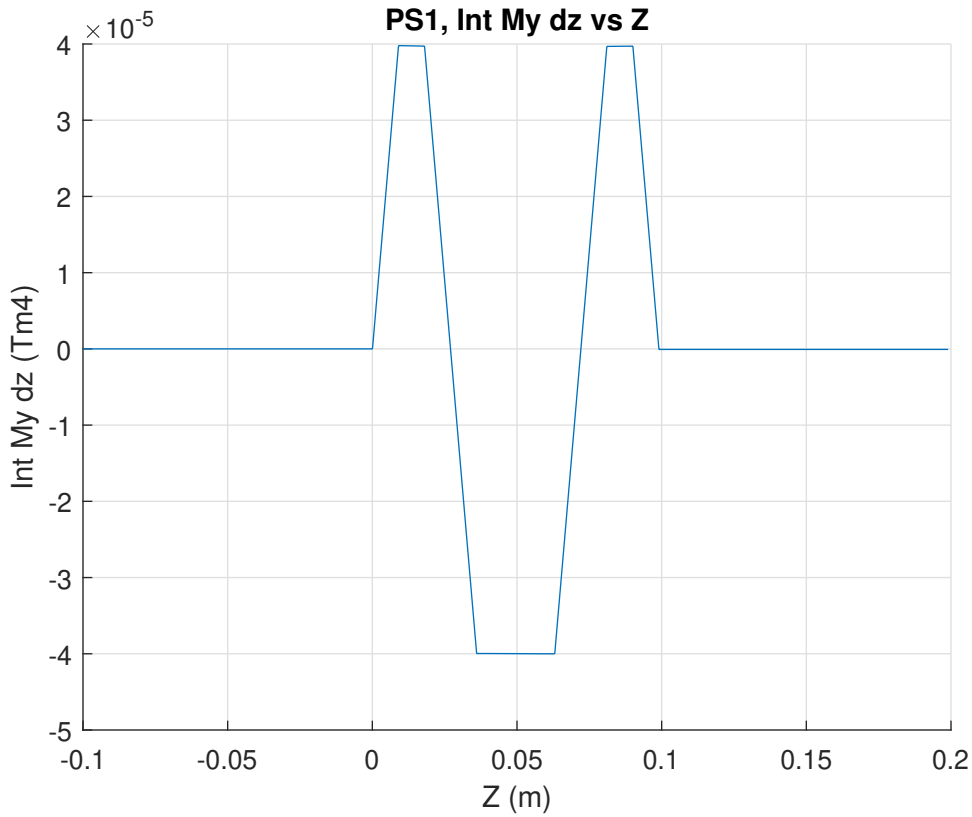

Phase Shifter My vs Mx Scatter Plot
×10-7
5
4
3
2
1
0
-1
-2
-3
-4
My (T)
Mx My Quad HS
Mx My Pair HL
Mx My Quad VS
Mx My Quad VL
Mx My Phase Shifter
-10
-8
-6
-4
-2
0
2
4
6
Mx (T)
×10-8

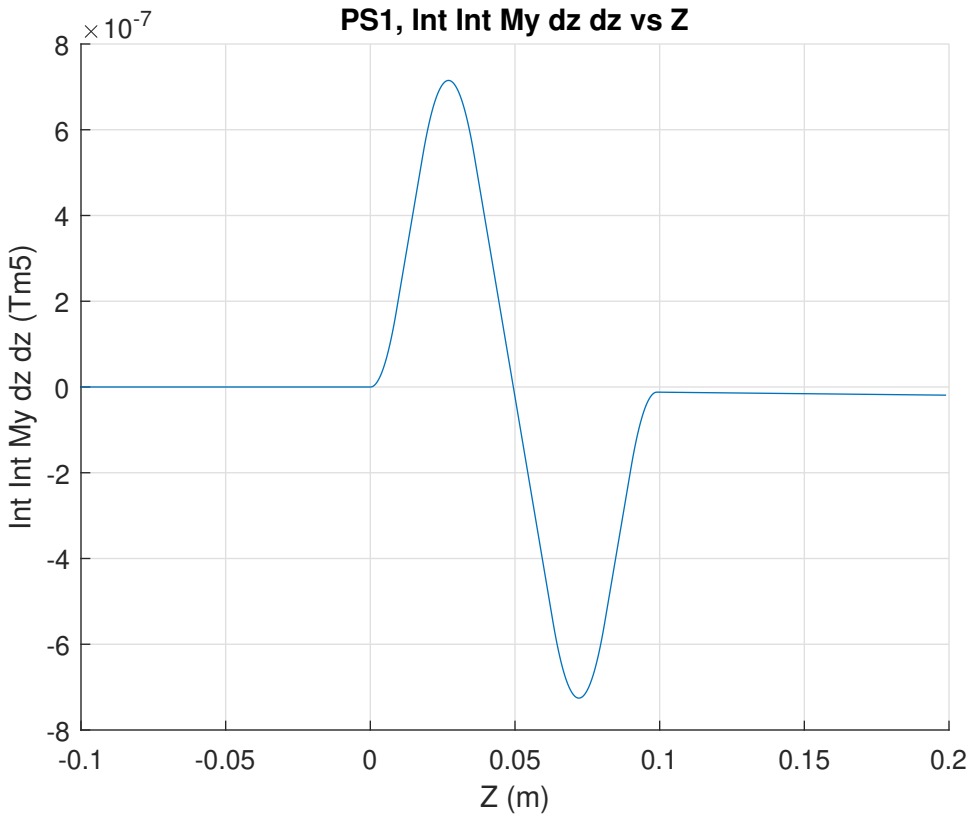

PS1, Mx vs Z
×10^-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

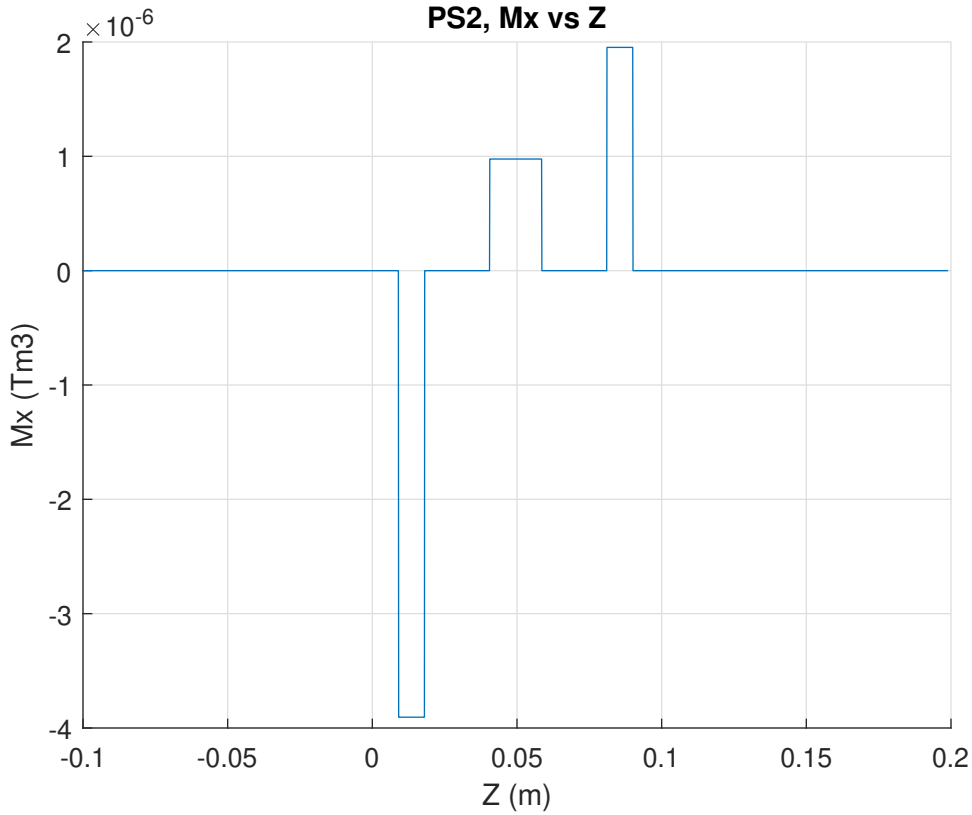

PS1, Int Mx dz vs Z
×10^-8
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

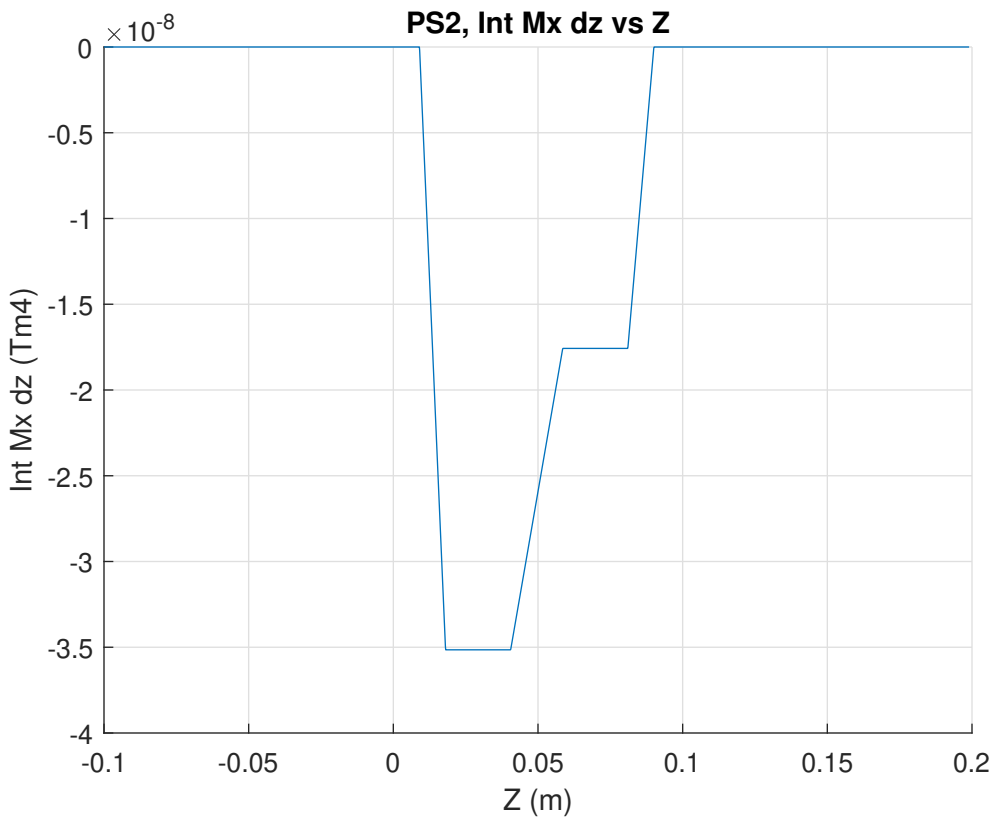

PS1, Int Int Mx dz dz vs Z
×10^-9
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

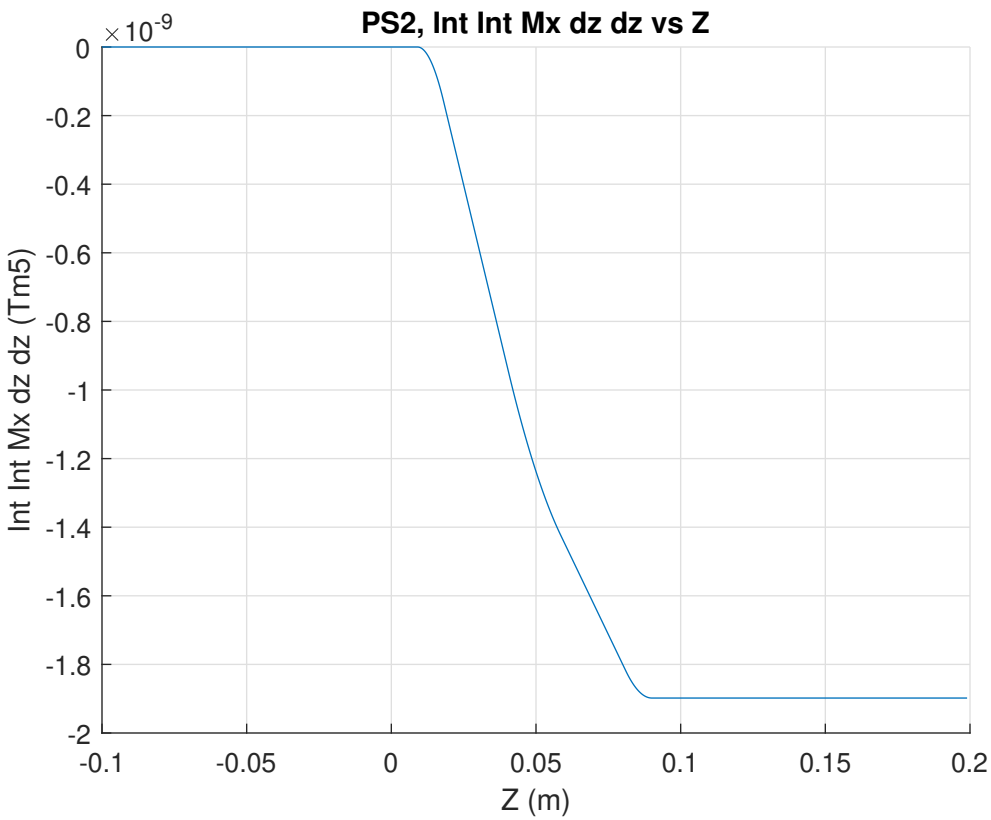

PS1, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

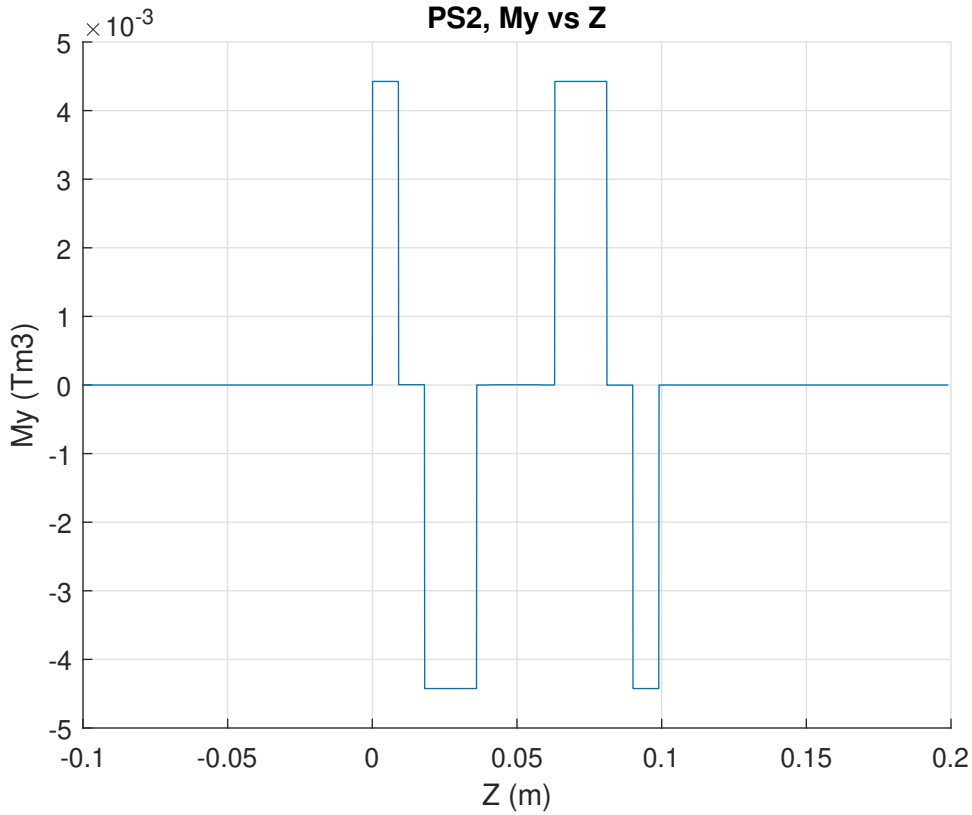

PS1, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

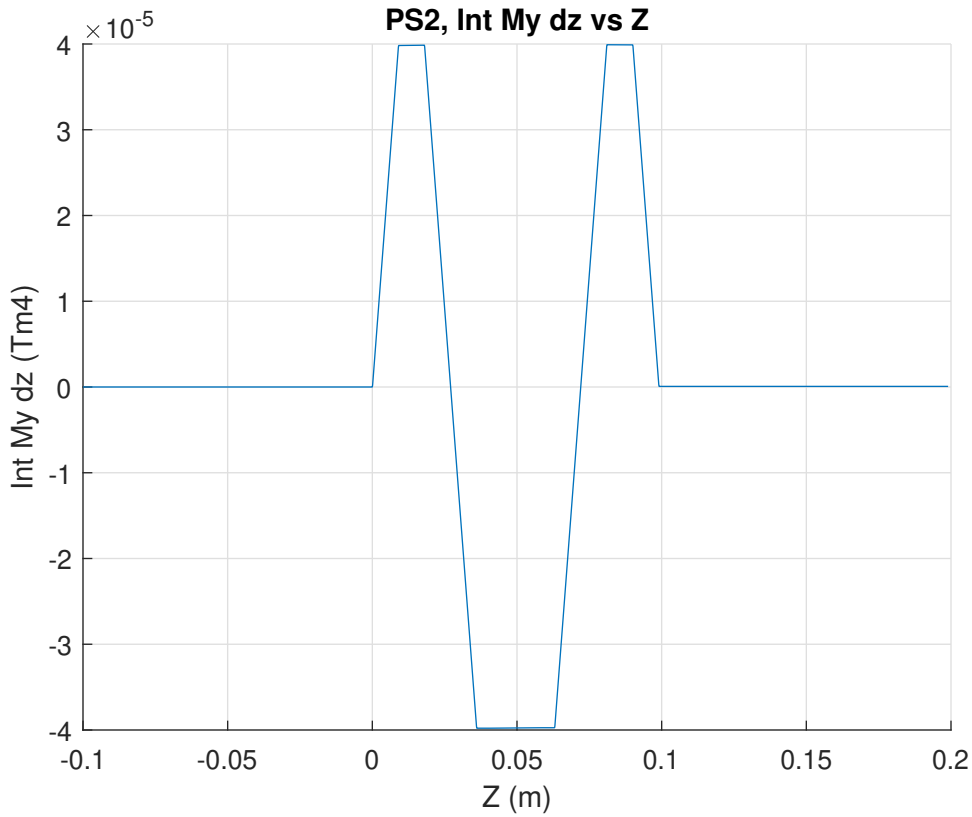

PS1, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

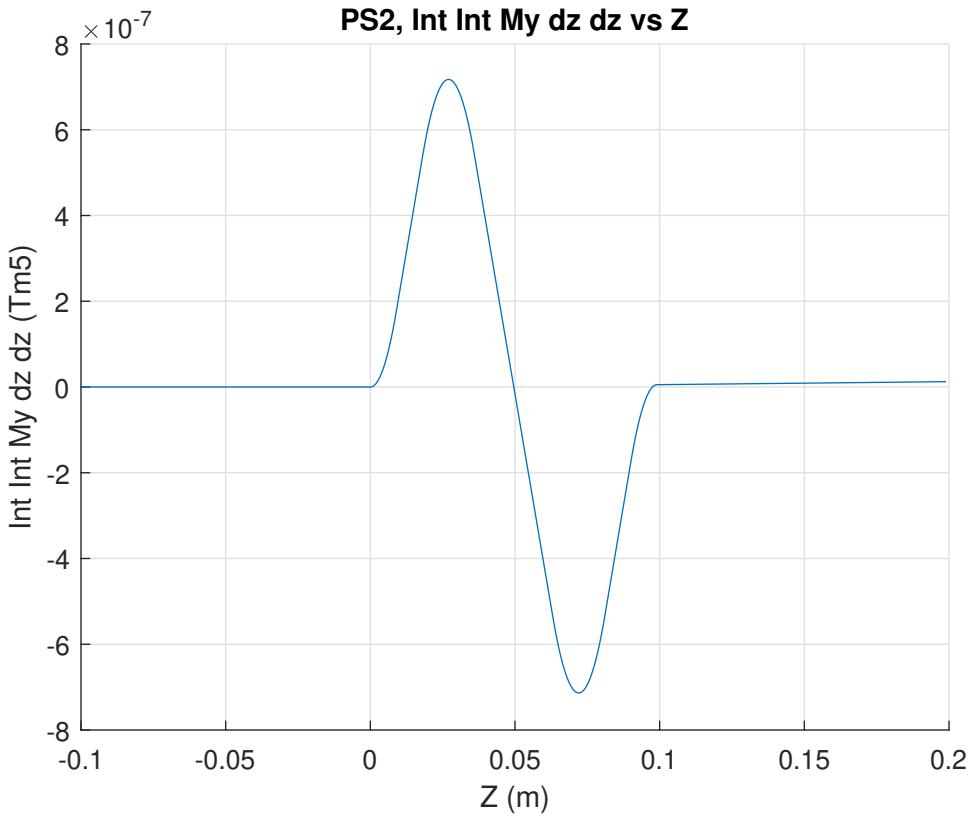

PS2, Mx vs Z
×10^-6
2
1
0
-1
-2
-3
-4
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

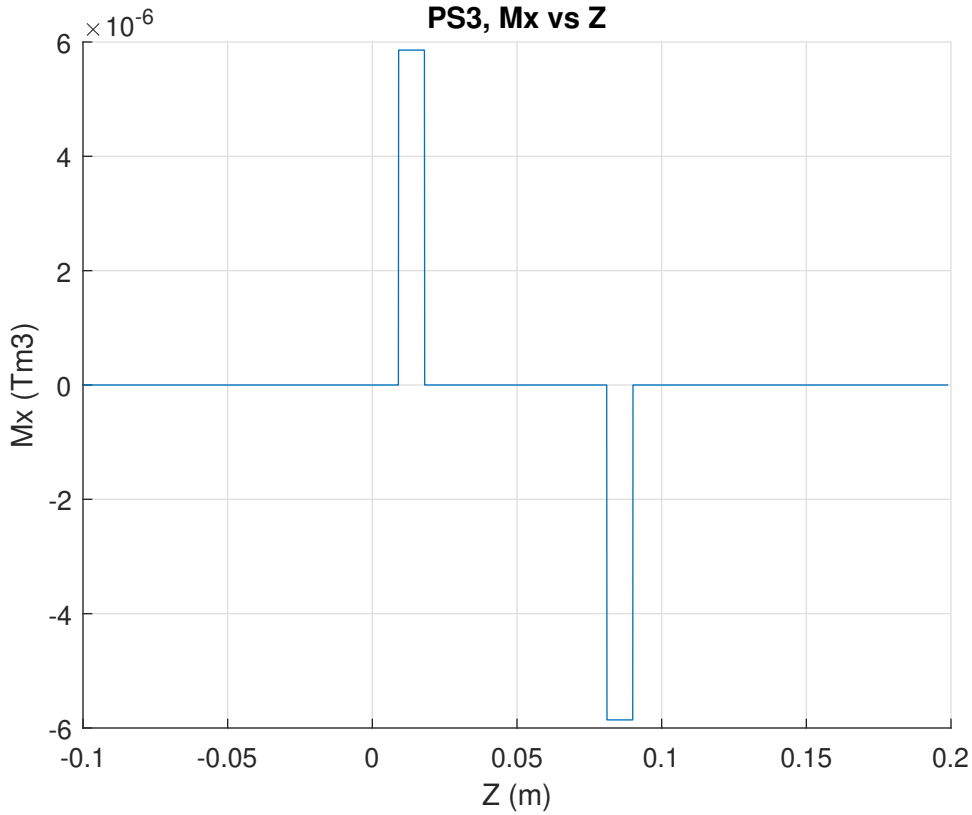

PS2, Int Mx dz vs Z
×10-8
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

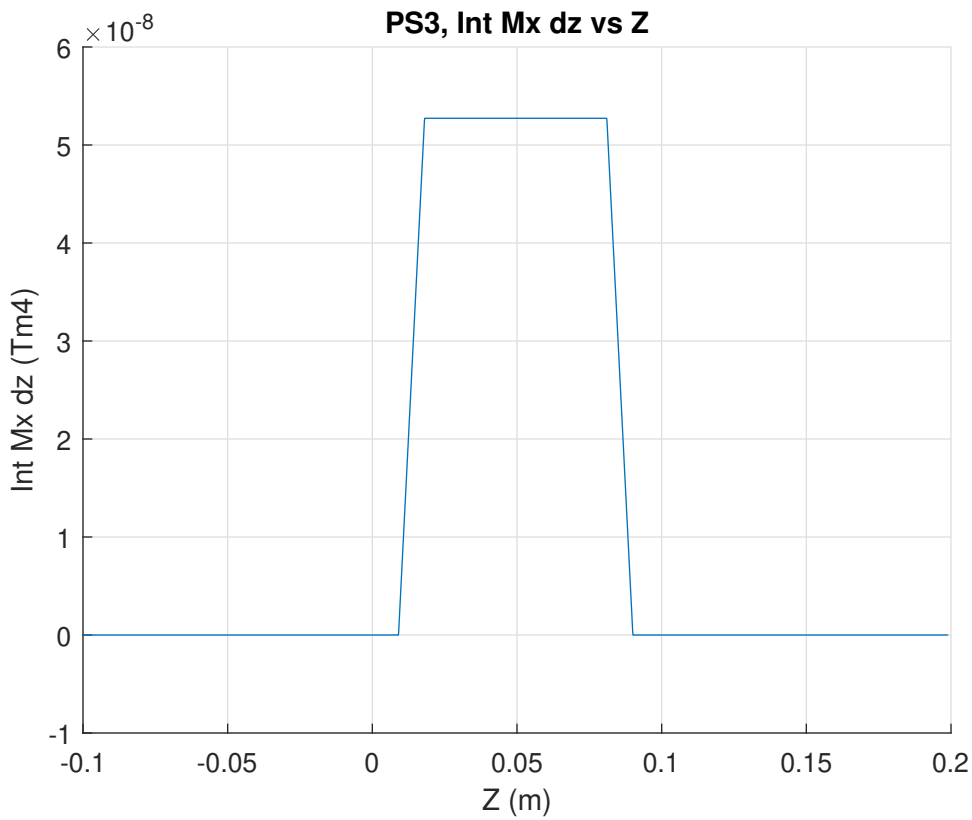

PS2, Int Int Mx dz dz vs Z
×10-9
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
-1.6
-1.8
-2
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

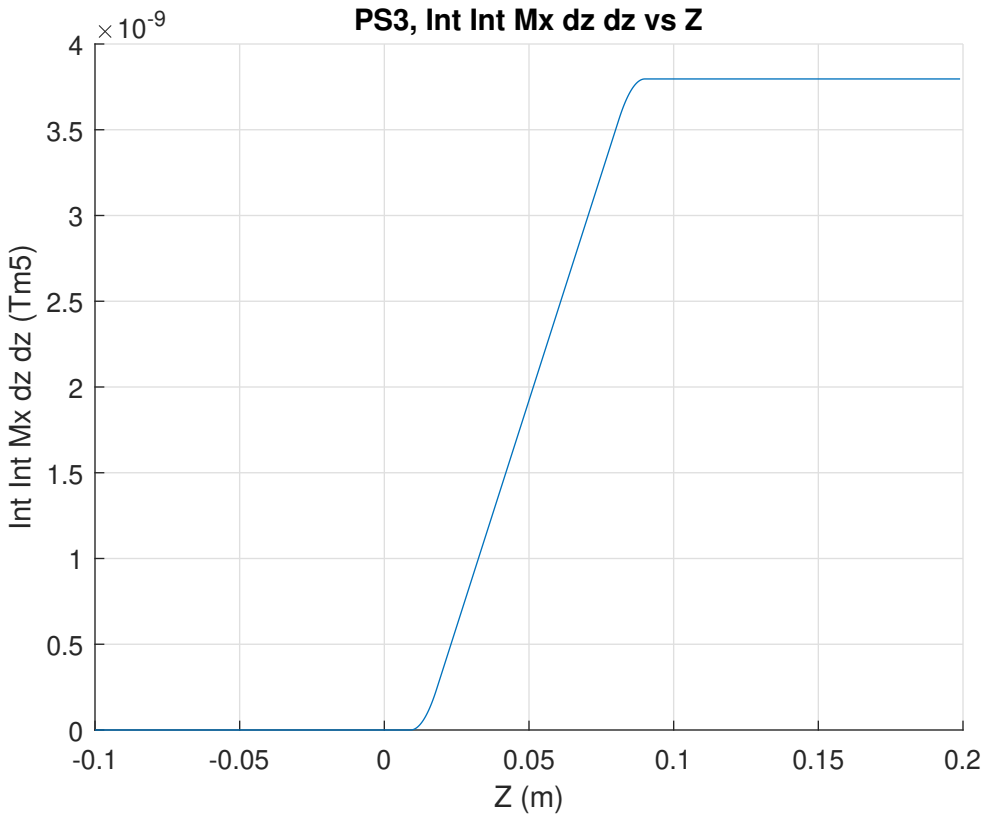

PS2, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

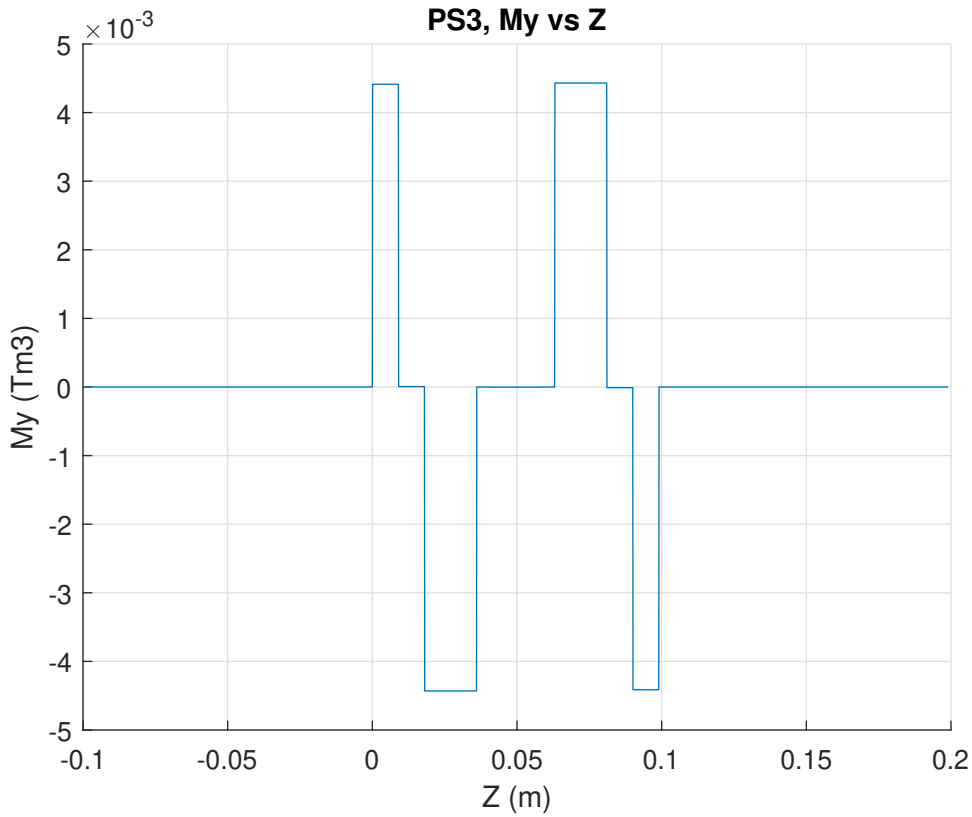

PS2, Int My dz vs Z
×10-5
4
3
2
1
0
-1
-2
-3
-4
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

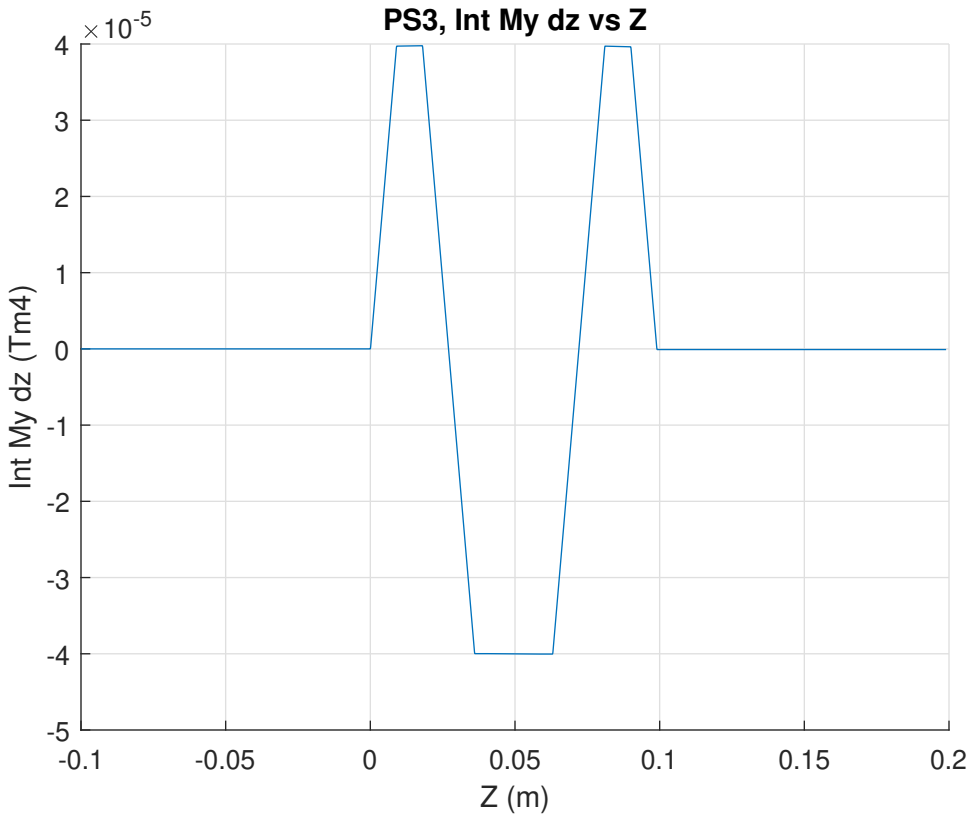

PS2, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

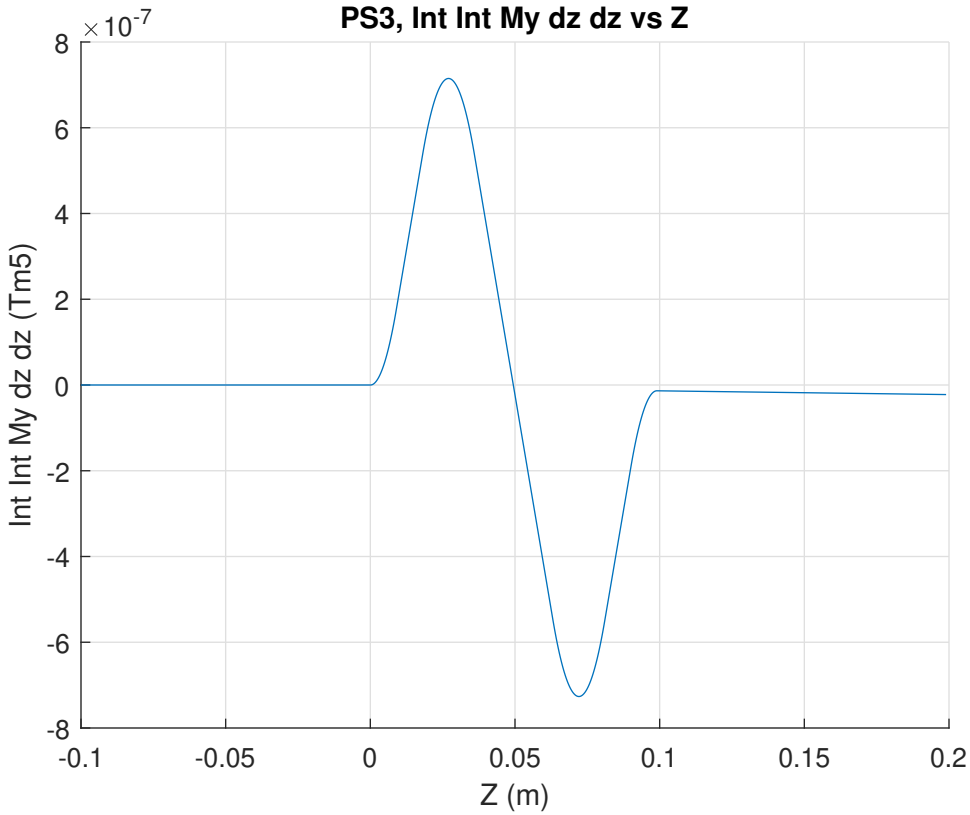

PS3, Mx vs Z
×10^-6
6
4
2
0
-2
-4
-6
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

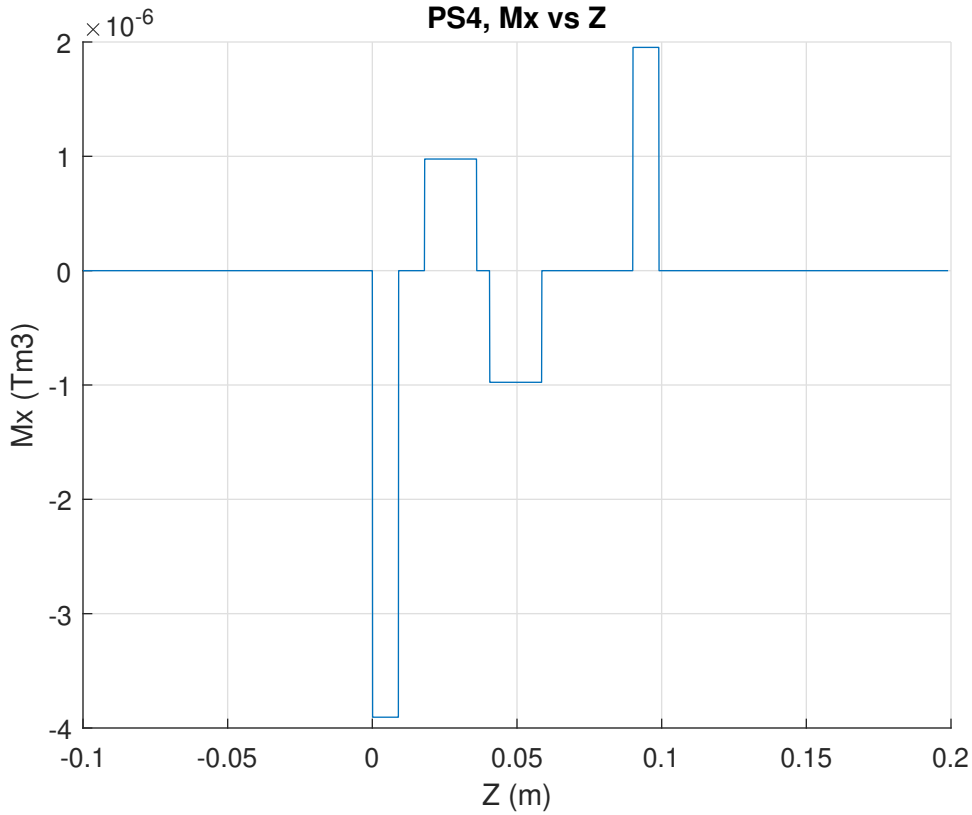

PS3, Int Mx dz vs Z
×10-8
6
5
4
3
2
1
0
-1
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

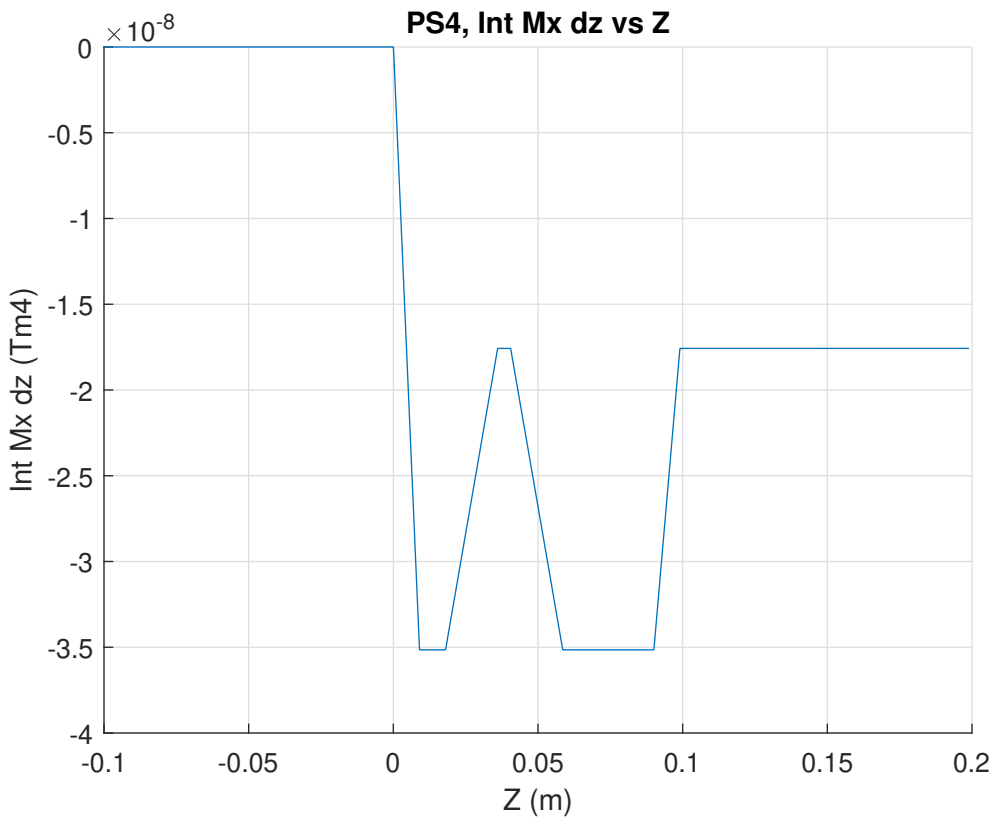

PS3, Int Int Mx dz dz vs Z
×10-9
4
3.5
3
2.5
2
1.5
1
0.5
0
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

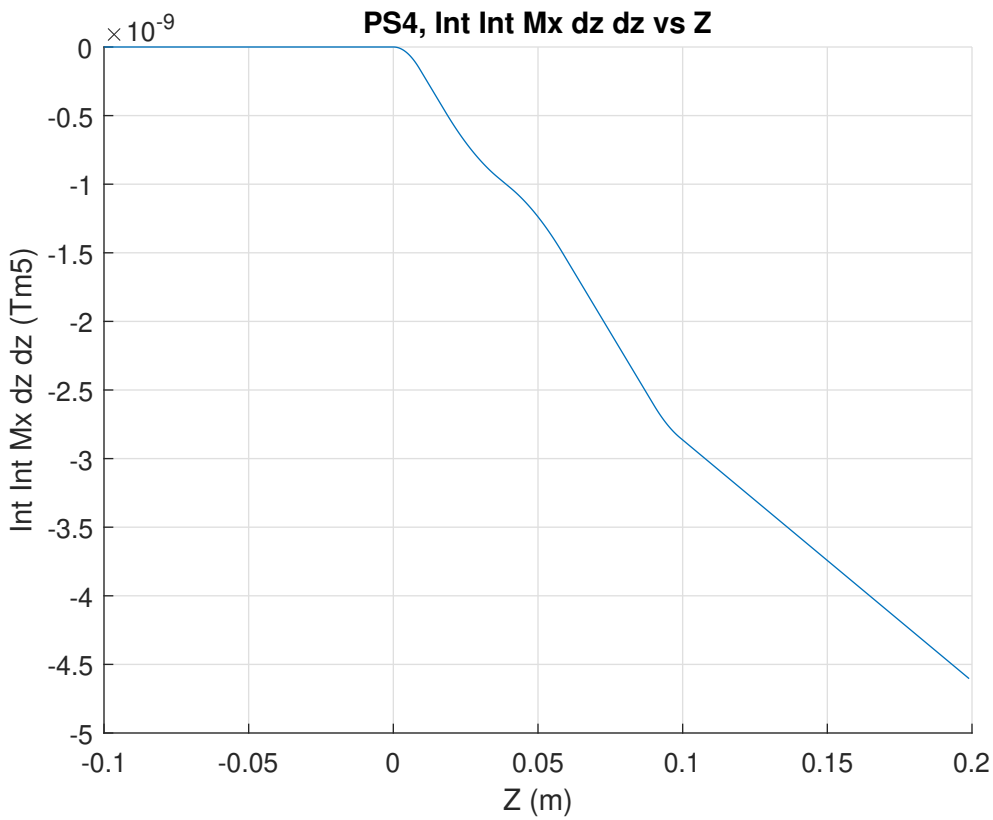

PS3, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

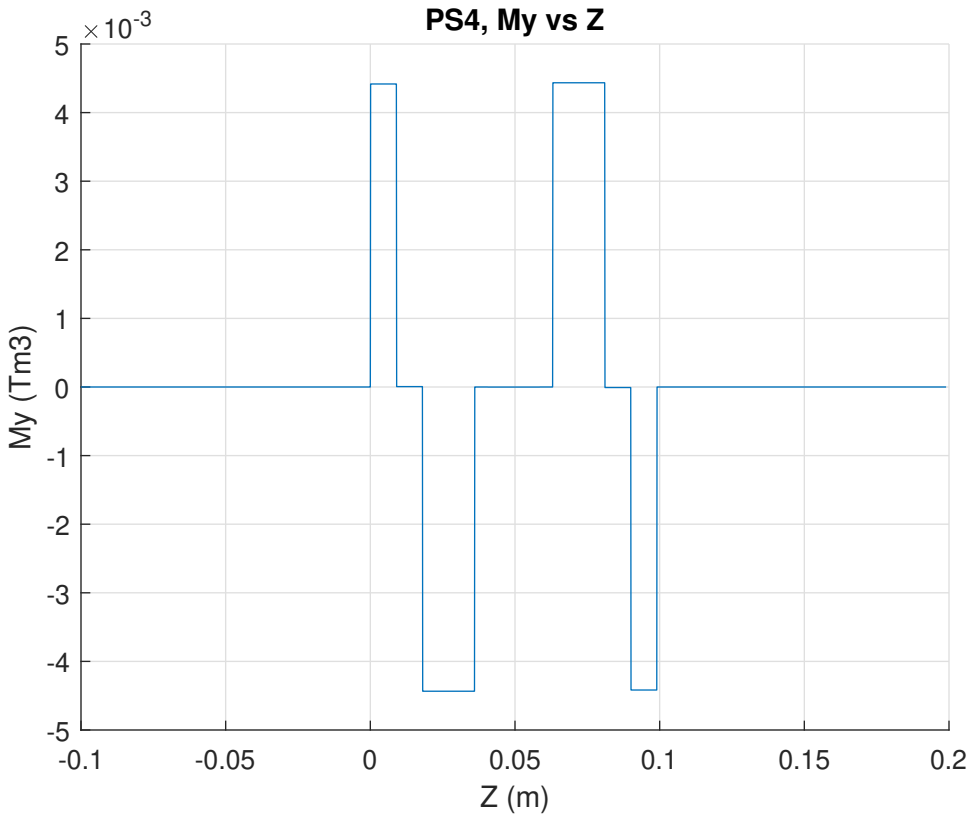

PS3, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

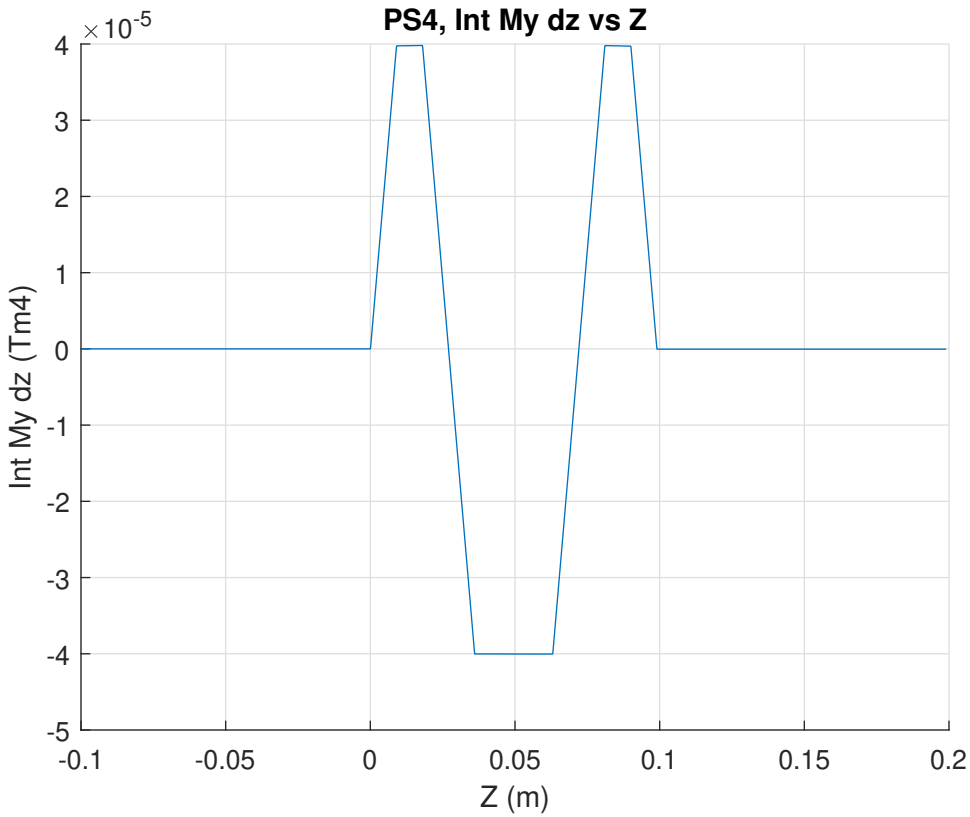

PS3, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

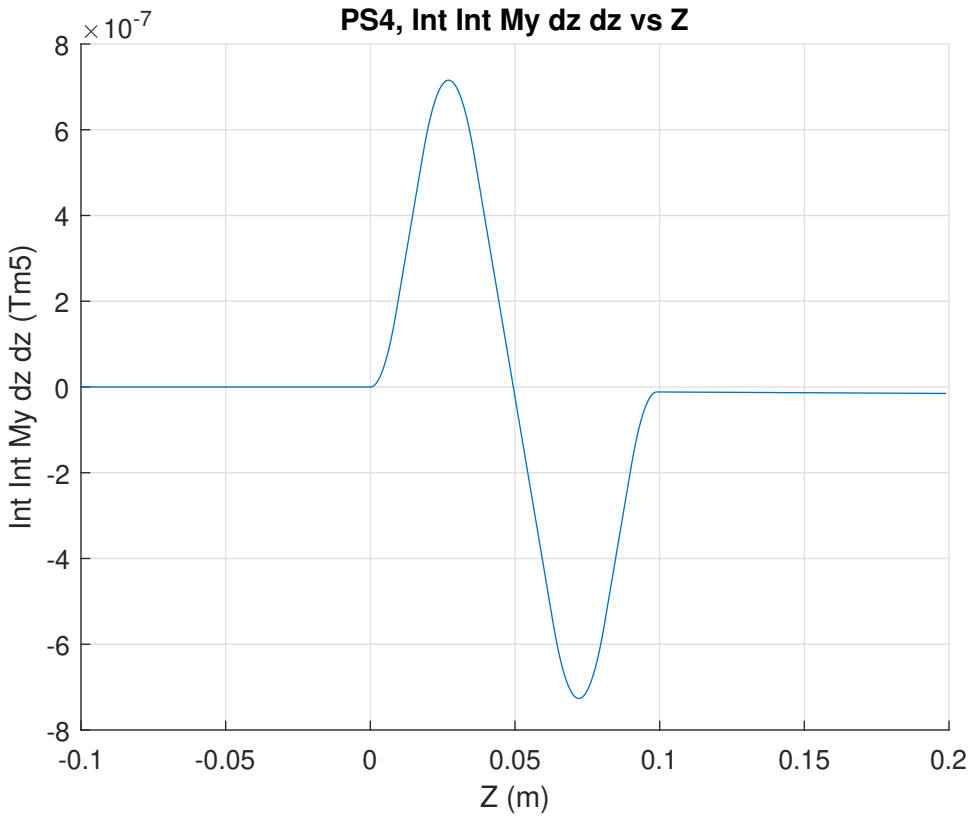

PS4, Mx vs Z
×10^-6
2
1
0
-1
-2
-3
-4
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

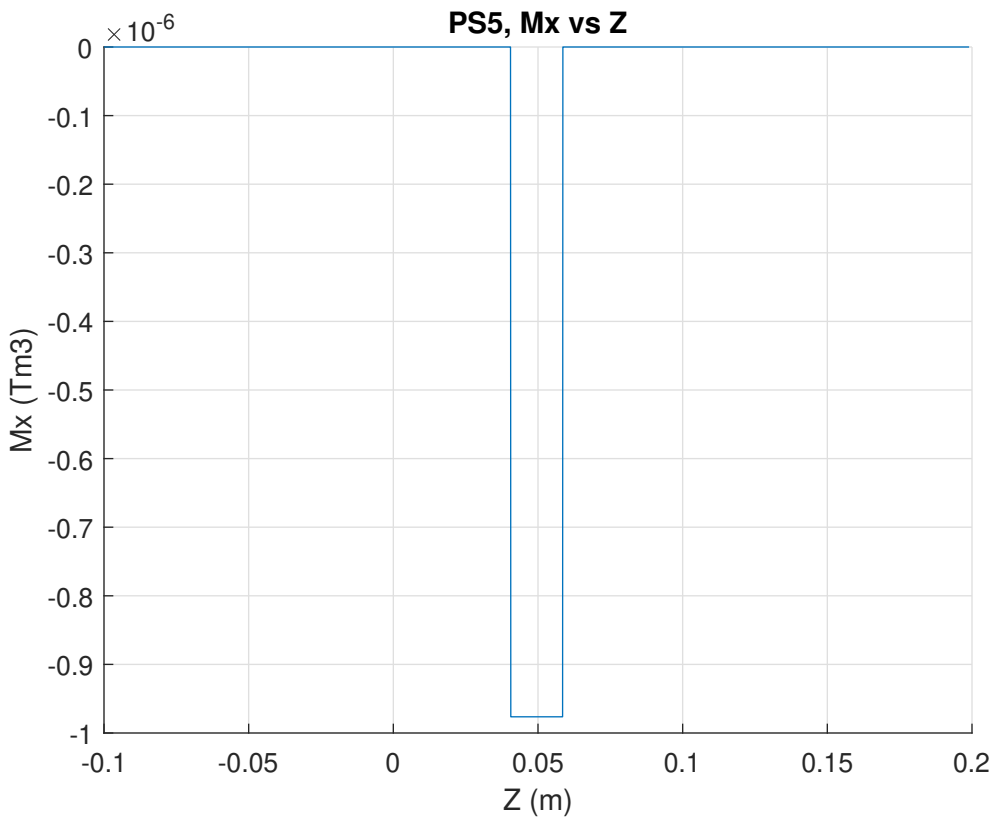

PS4, Int Mx dz vs Z
×10-8
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

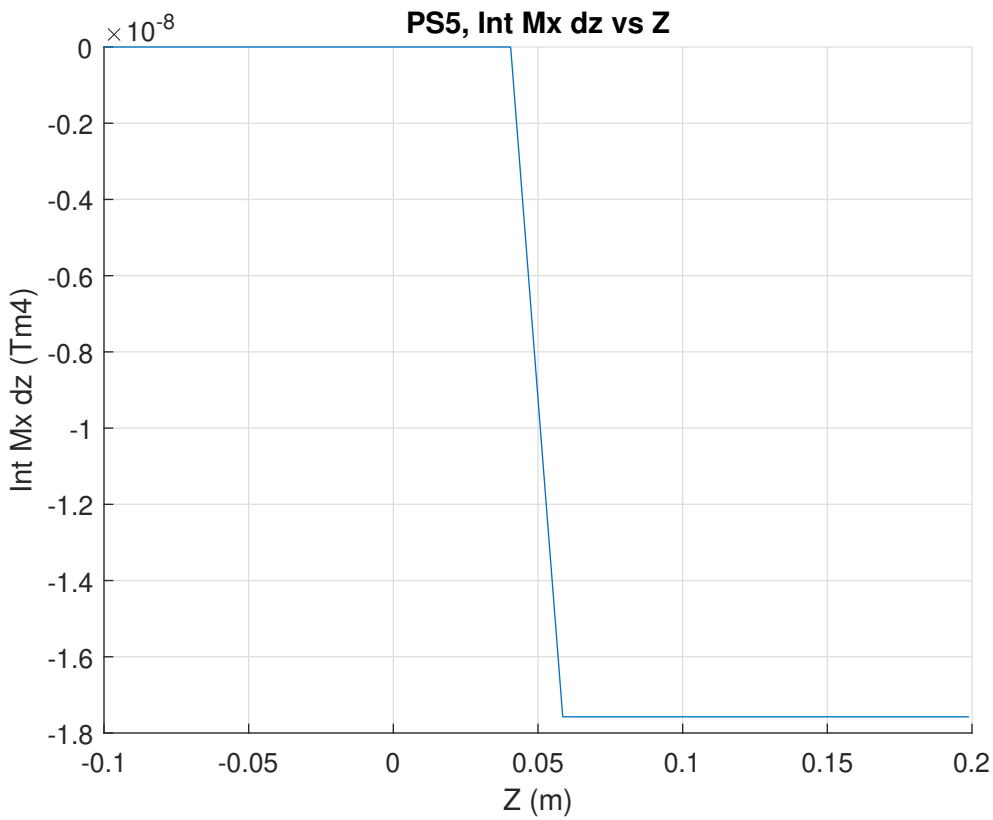

PS4, Int Int Mx dz dz vs Z
×10-9
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4
-4.5
-5
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

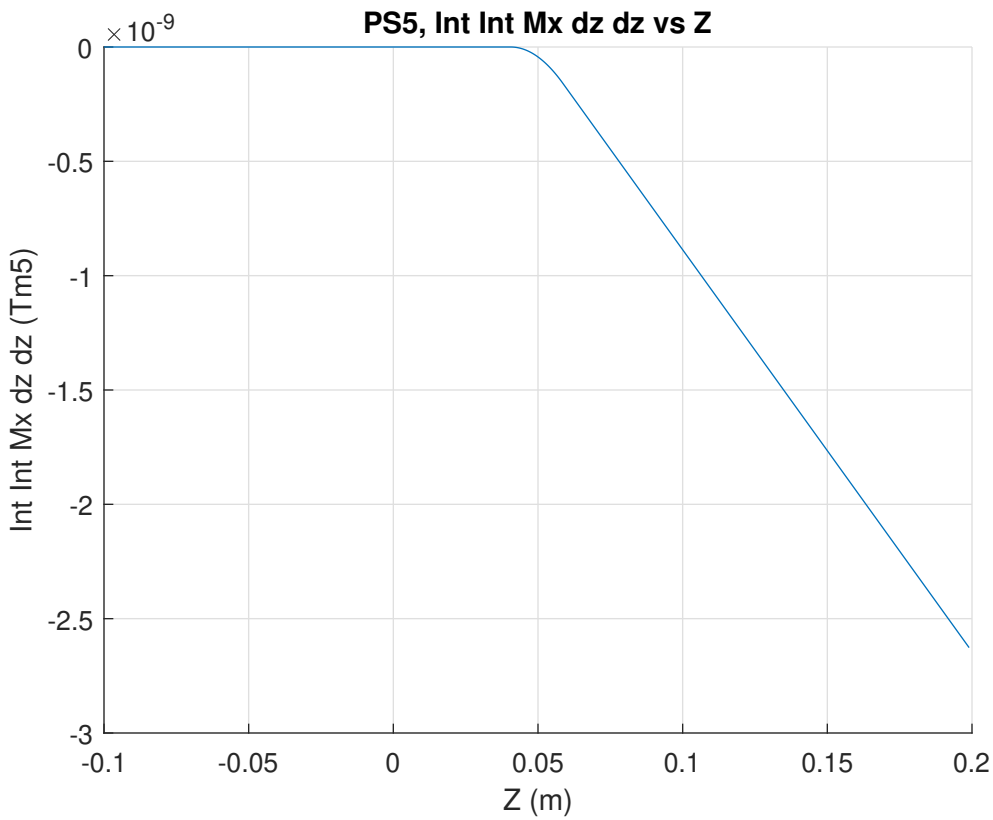

PS4, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

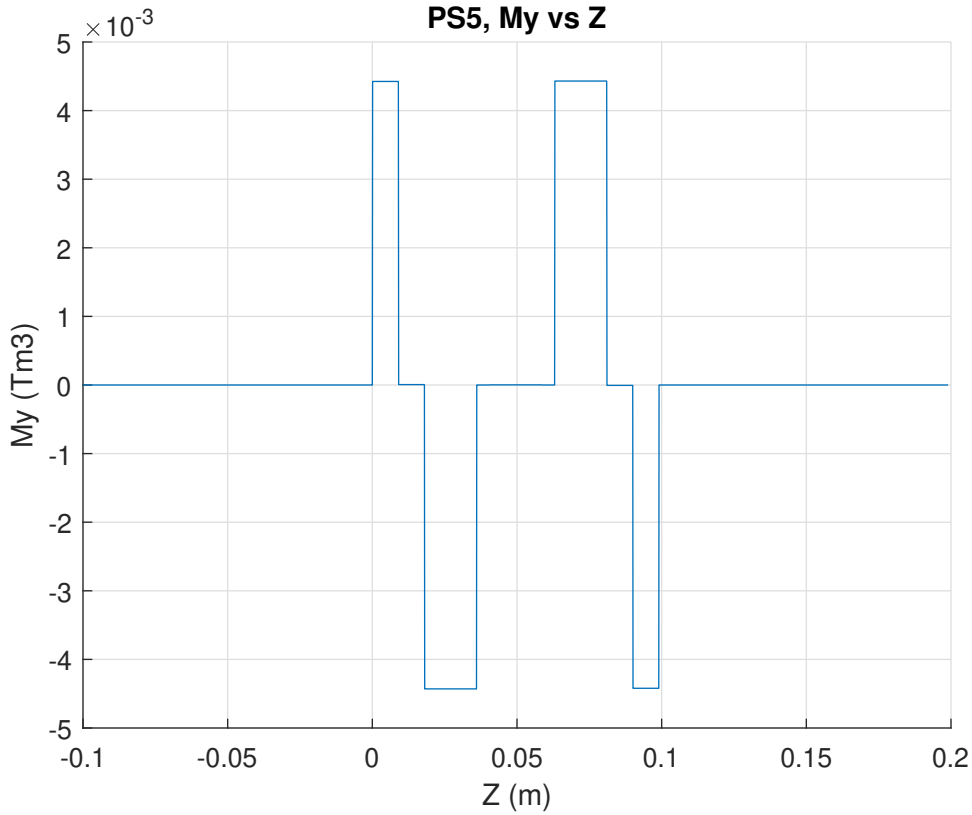

PS4, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

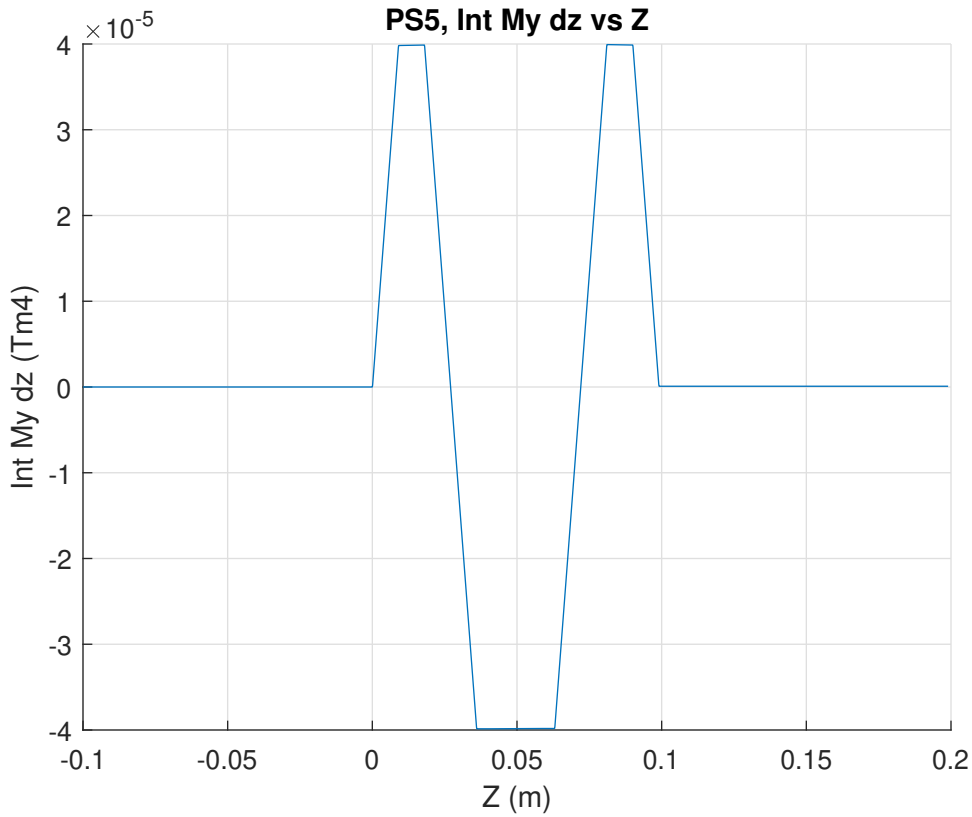

PS4, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

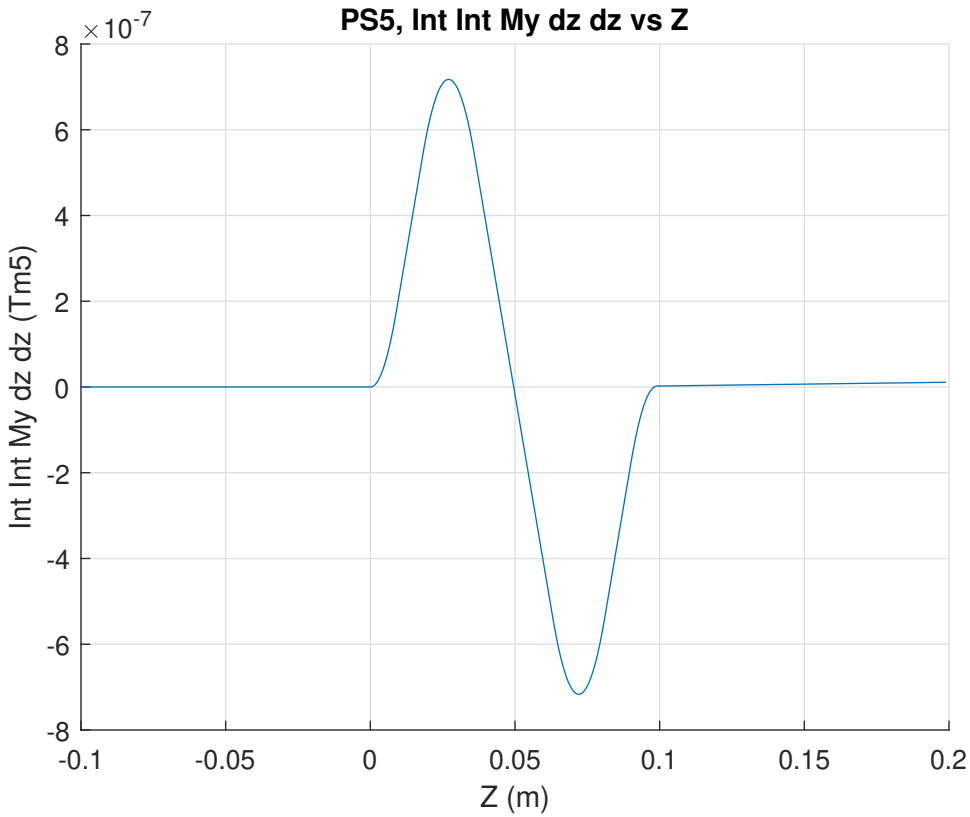

PS5, Mx vs Z
×10^-6
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
-0.9
-1
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

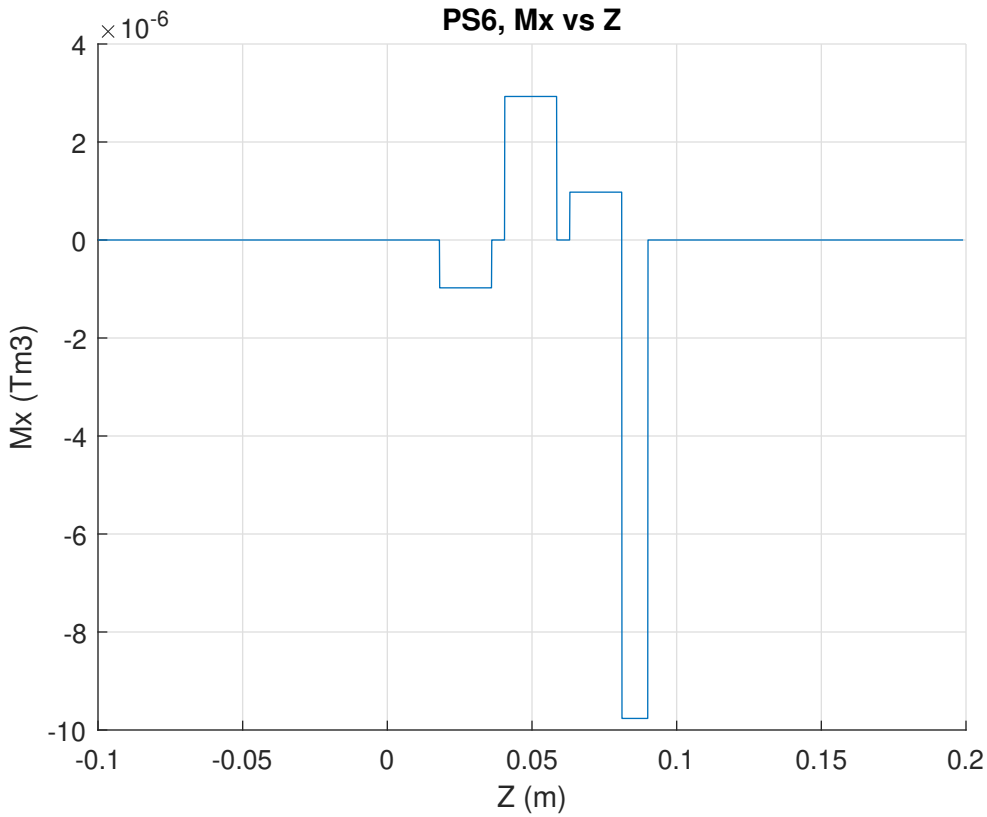

PS5, Int Mx dz vs Z
×10^-8
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
-1.6
-1.8
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

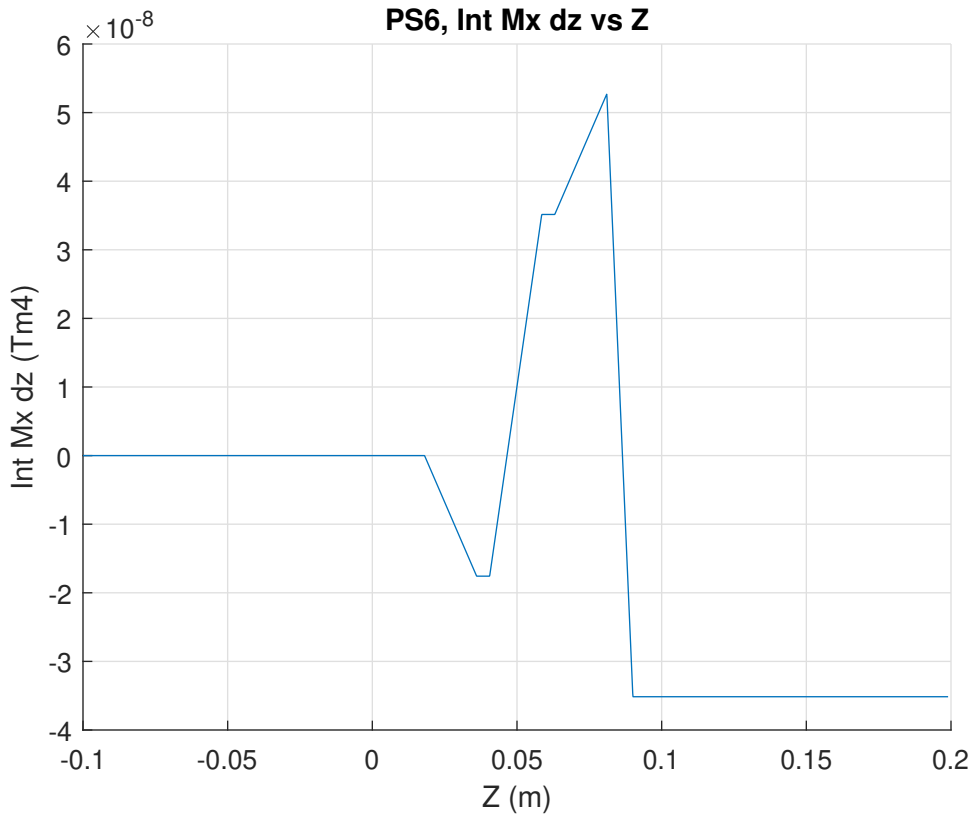

PS5, Int Int Mx dz dz vs Z
×10-9
0
-0.5
-1
-1.5
-2
-2.5
-3
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

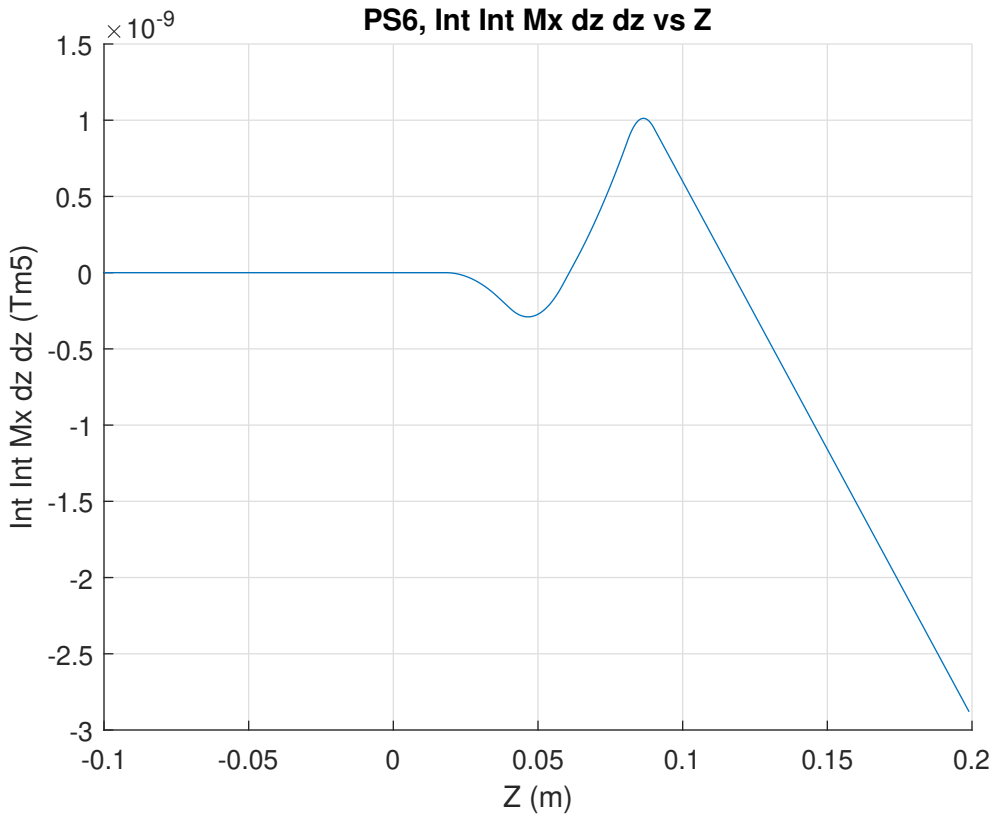

PS5, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

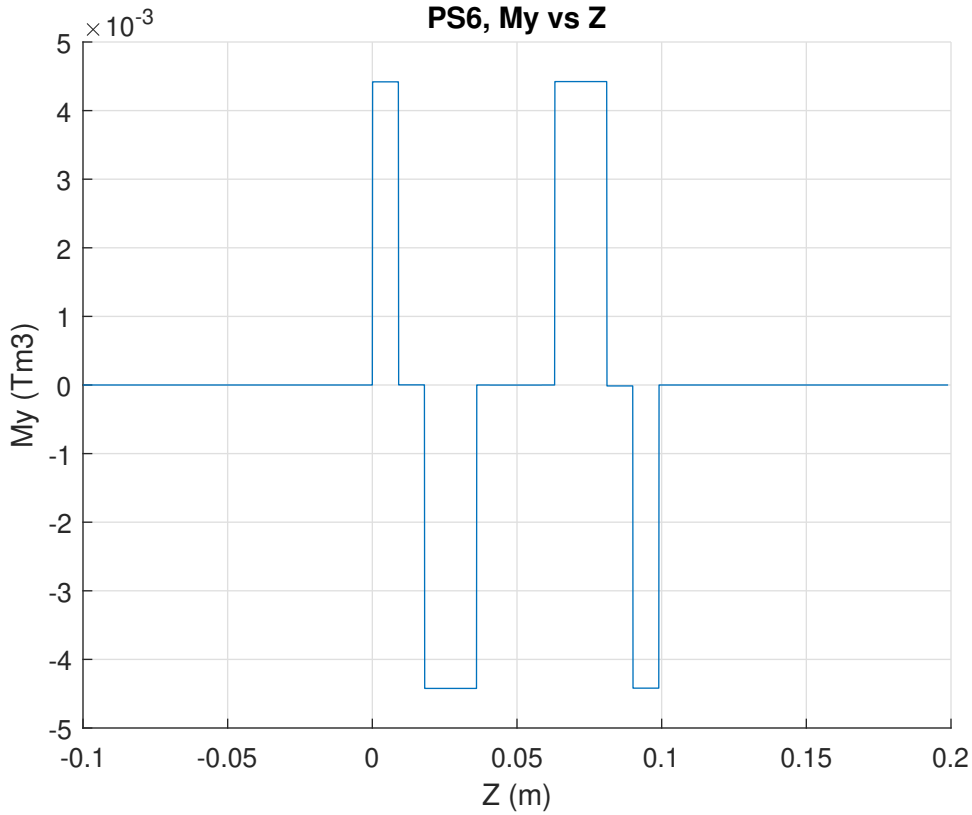

PS5, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

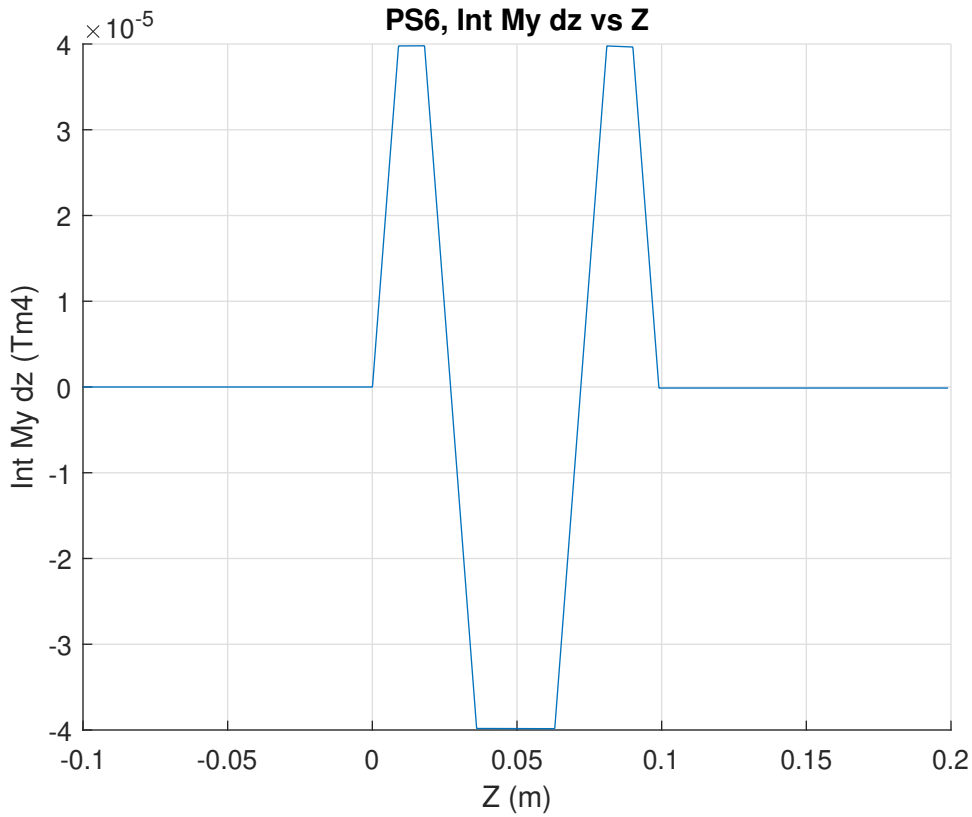

PS5, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

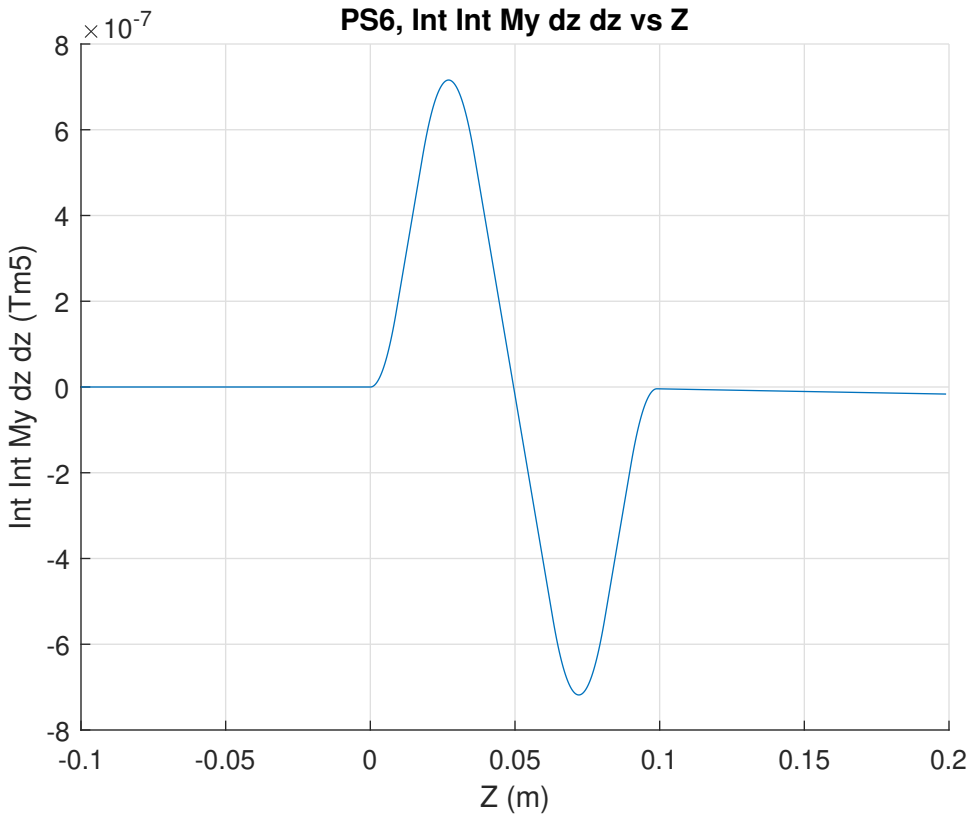

PS6, Mx vs Z
×10^-6
4
2
0
-2
-4
-6
-8
-10
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

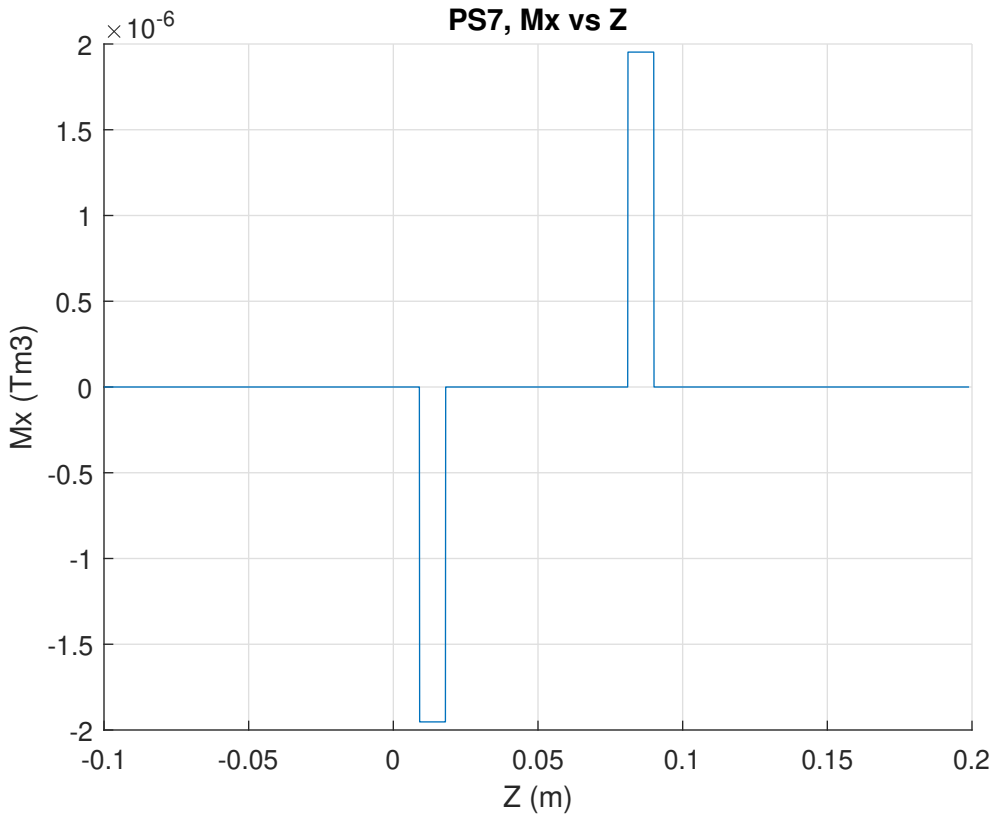

PS6, Int Mx dz vs Z
×10^-8
6
5
4
3
2
1
0
-1
-2
-3
-4
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

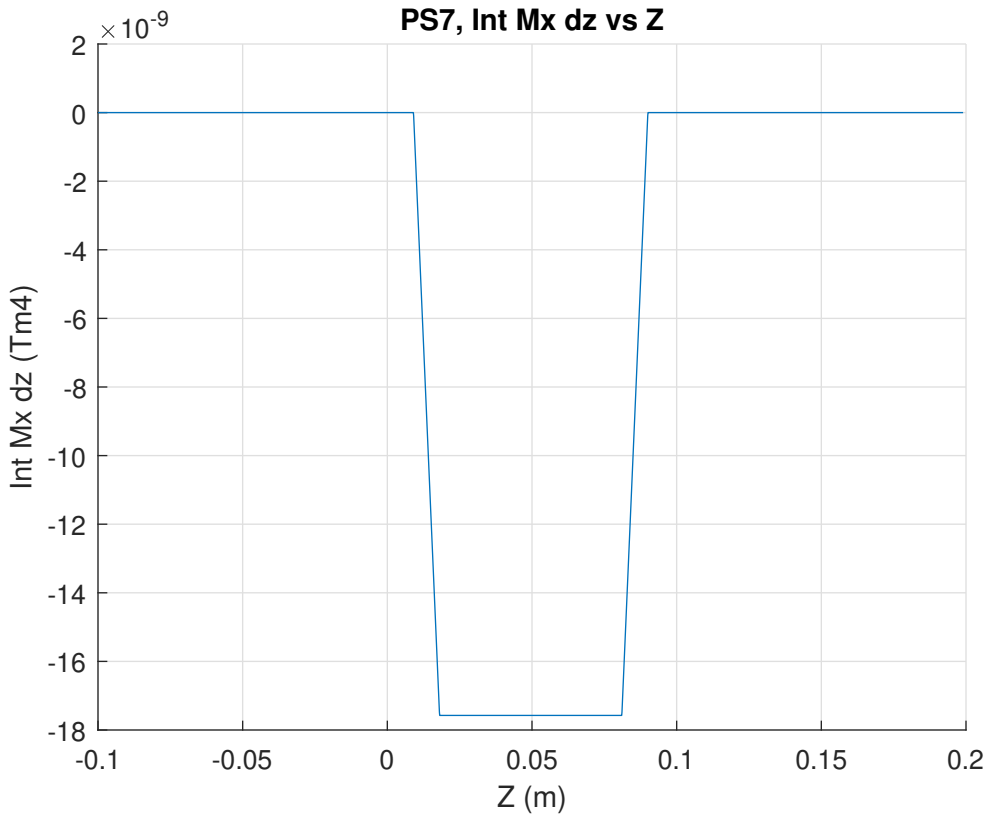

PS6, Int Int Mx dz dz vs Z
×10^-9
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

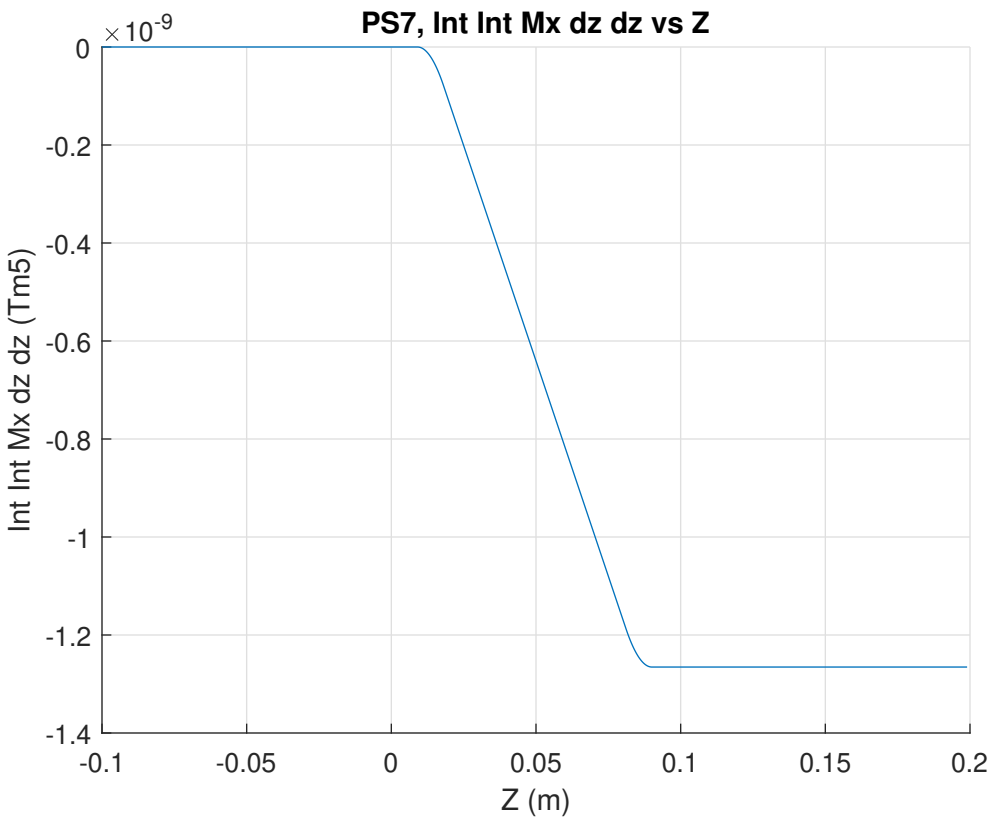

PS6, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

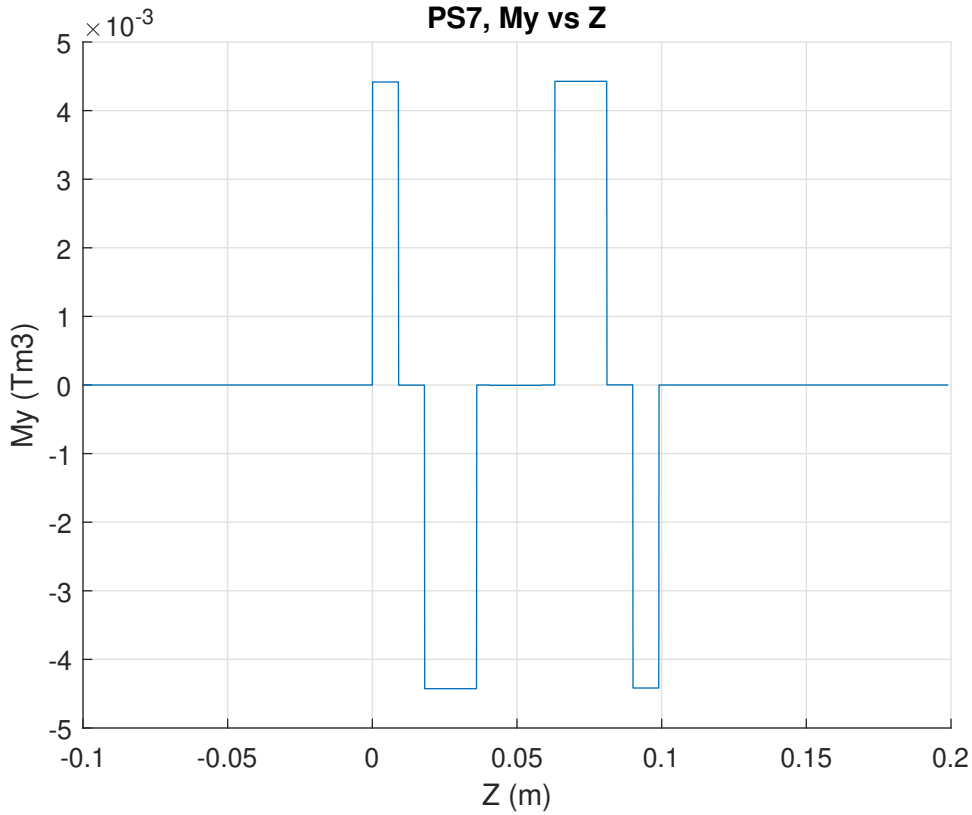

PS6, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

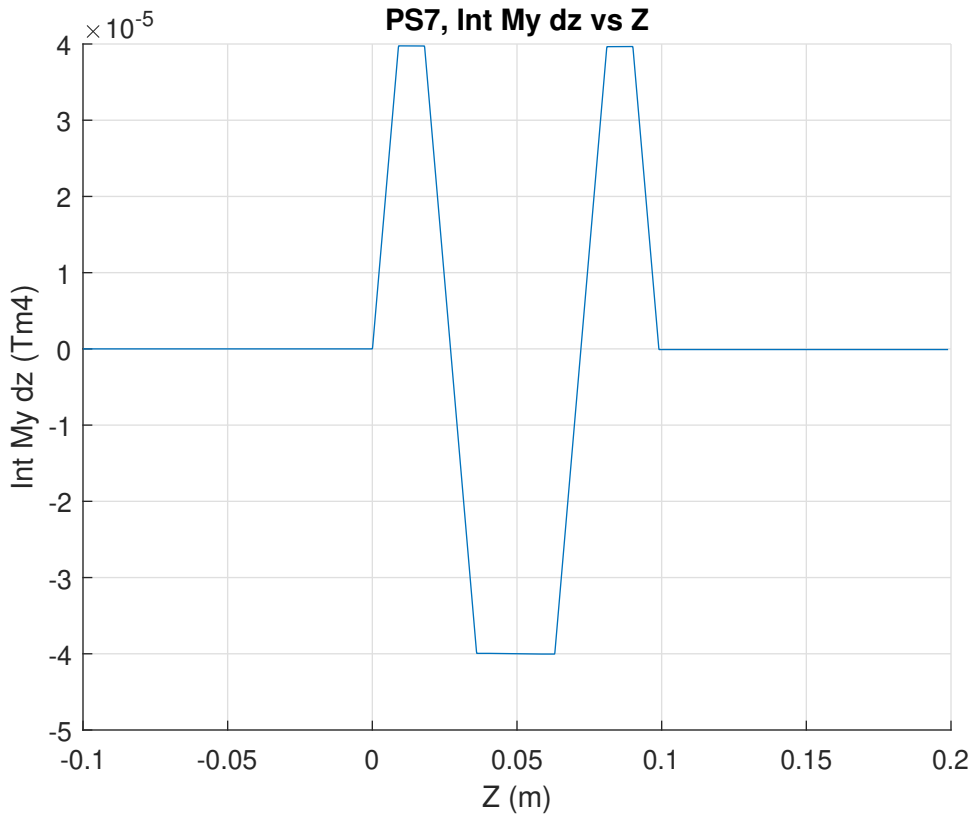

PS6, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

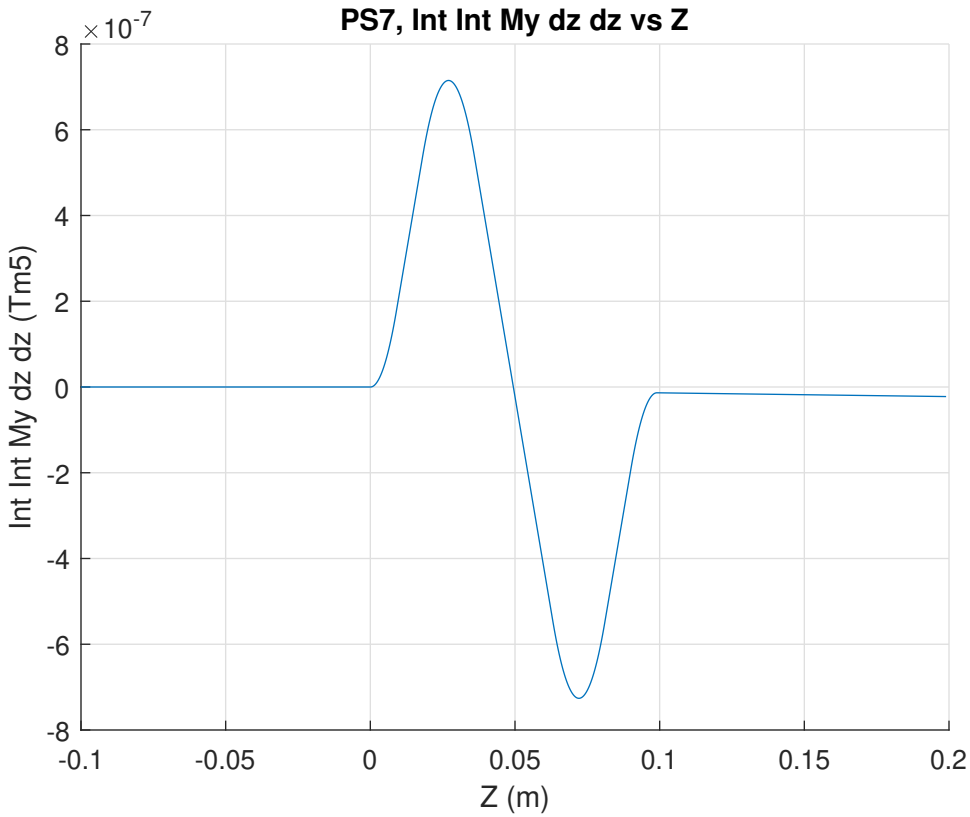

PS7, Mx vs Z
×10^-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

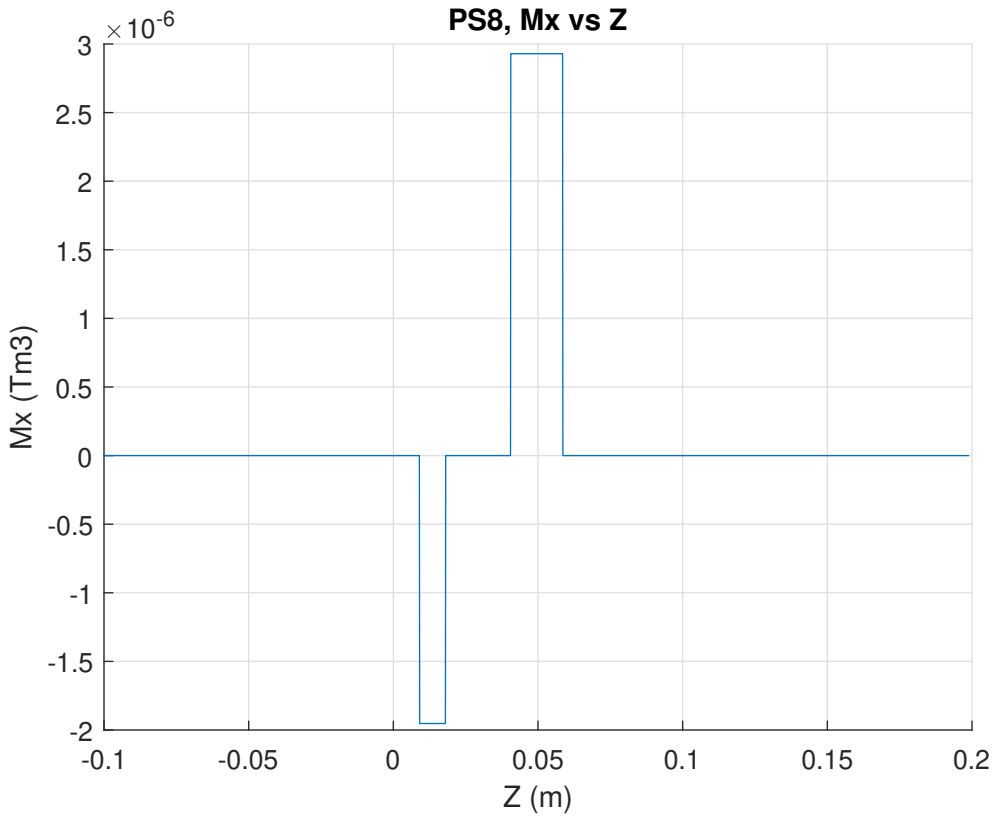

PS7, Int Mx dz vs Z
×10-9
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

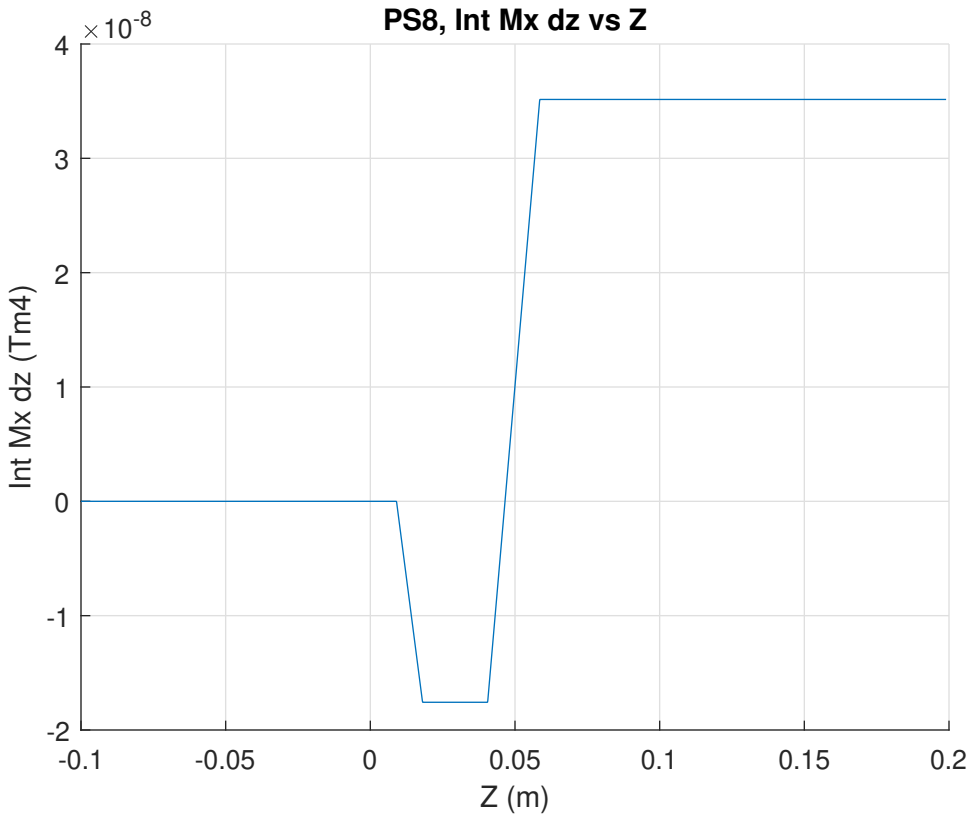

PS7, Int Int Mx dz dz vs Z
×10-9
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

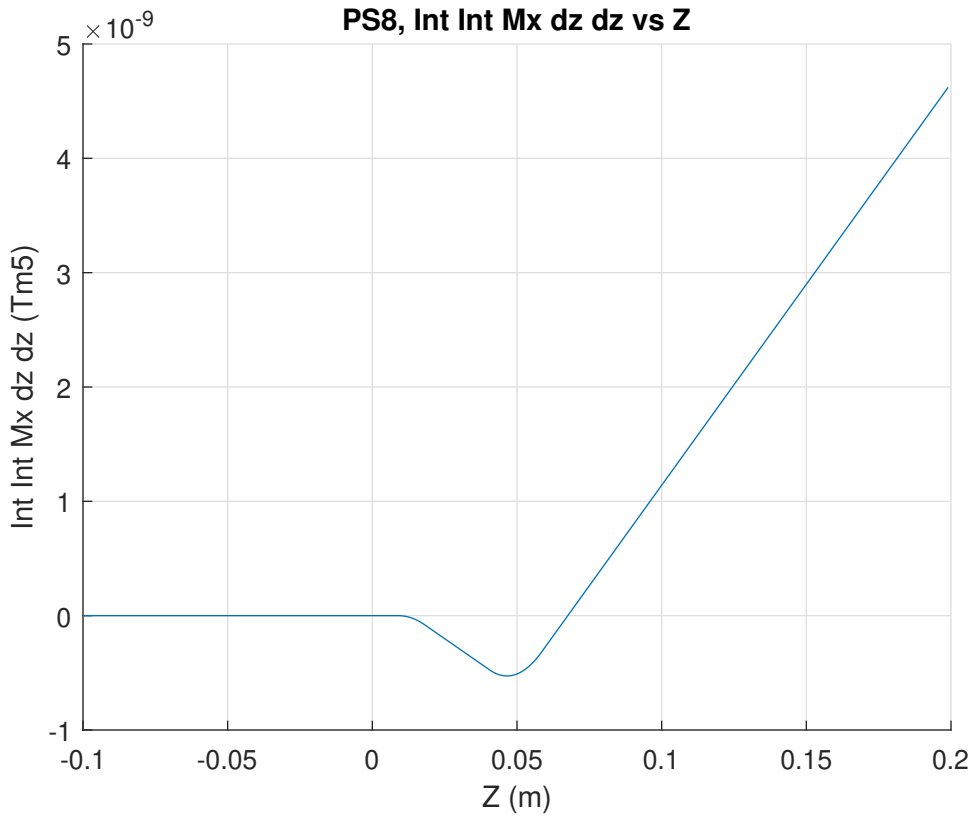

PS7, My vs Z
×10^-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

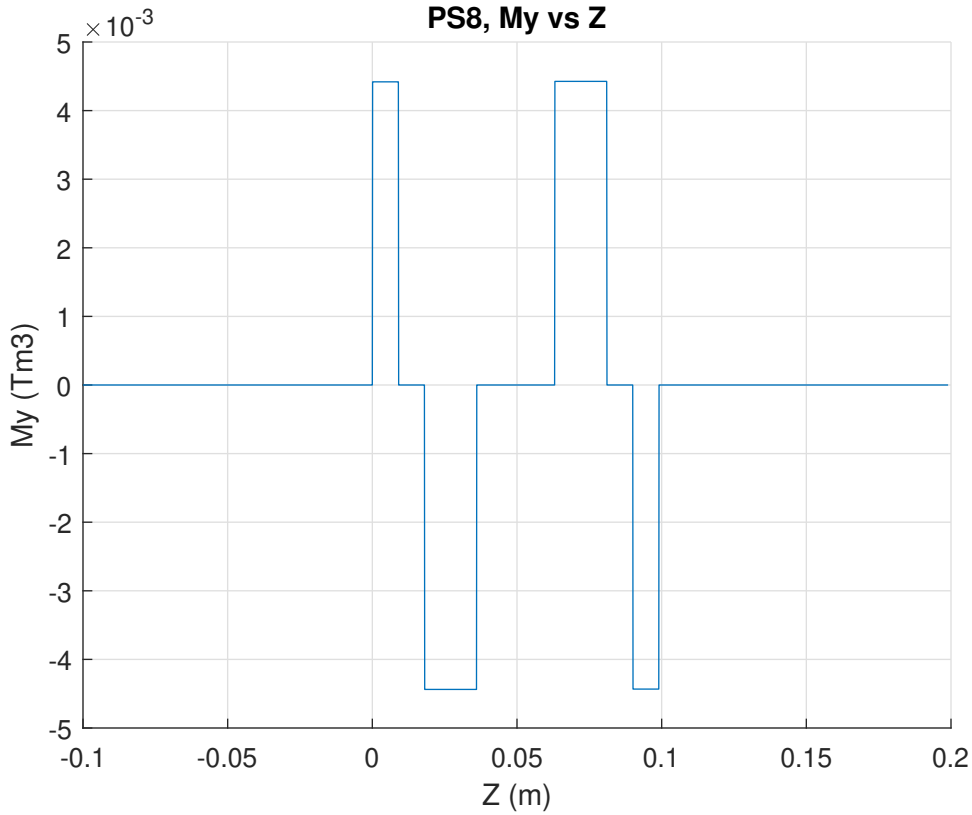

PS7, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

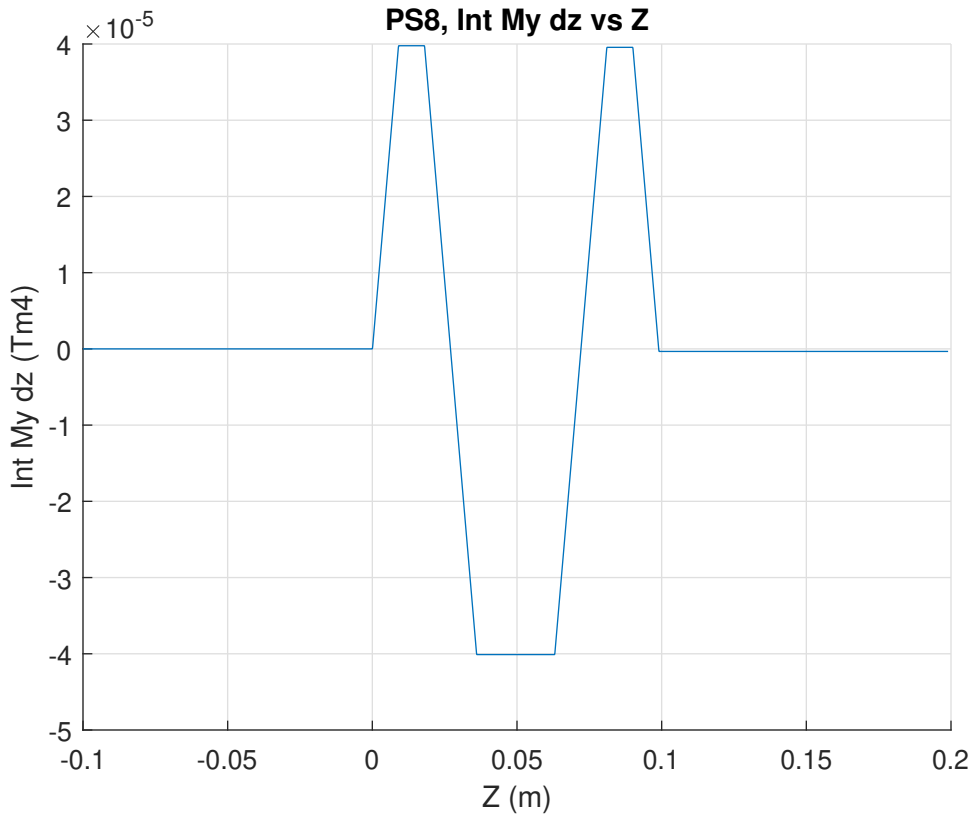

PS7, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

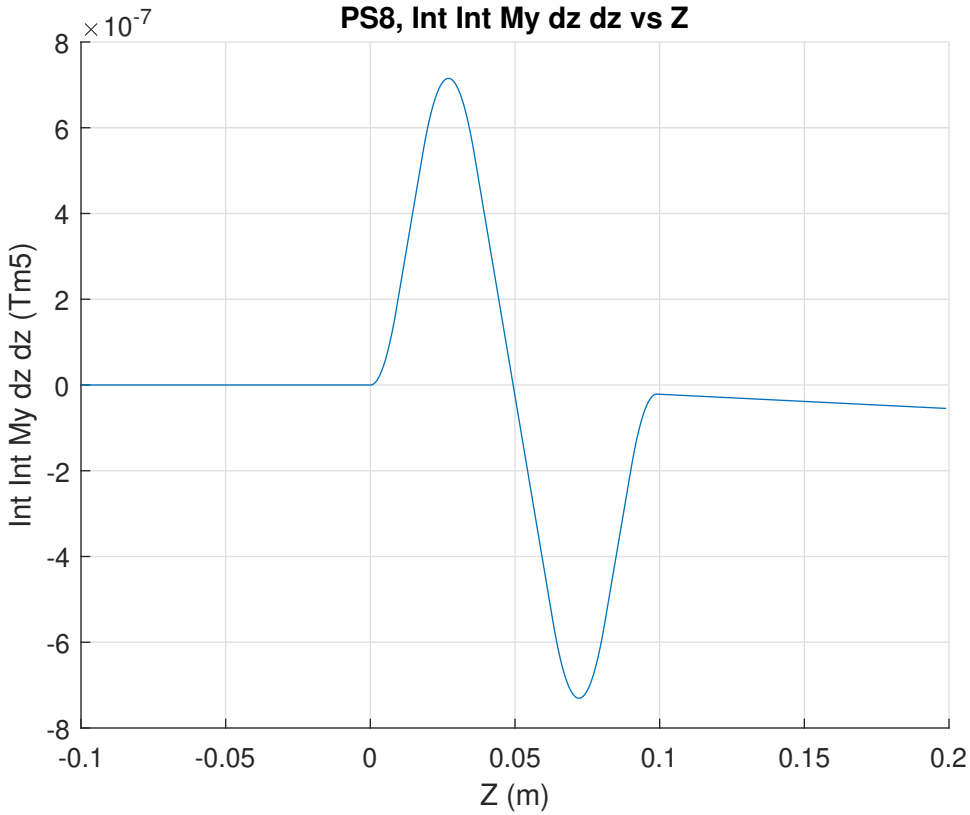

PS8, Mx vs Z
×10^-6
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

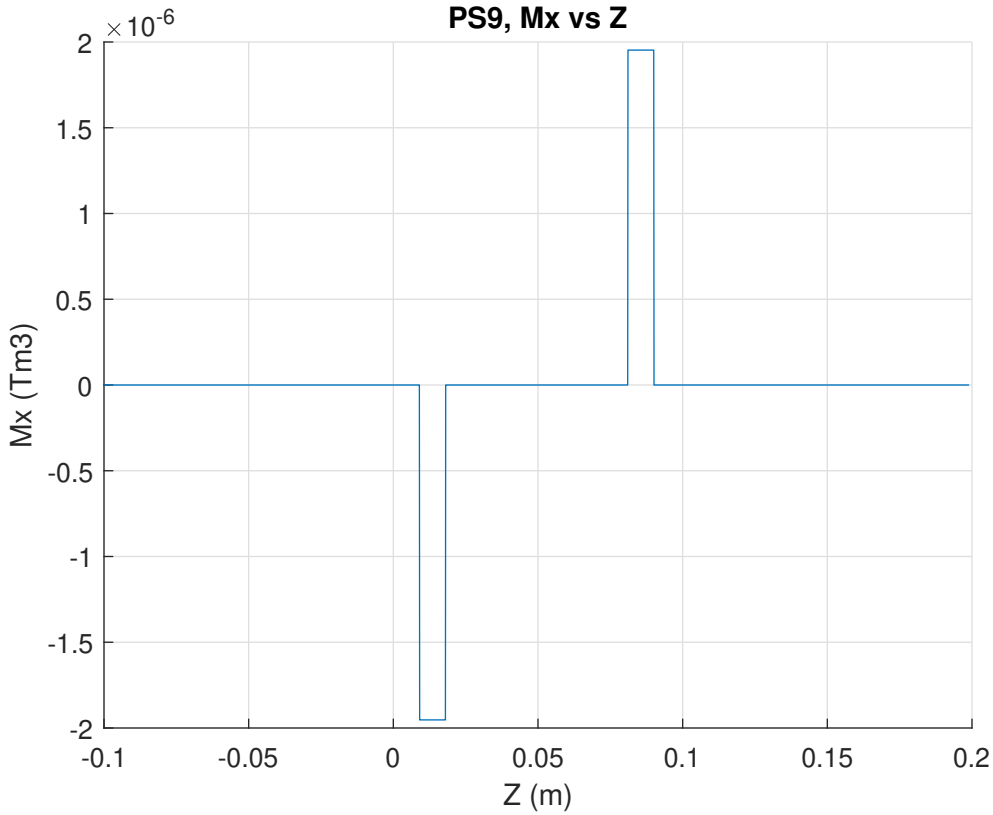

PS8, Int Mx dz vs Z
×10^-8
4
3
2
1
0
-1
-2
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

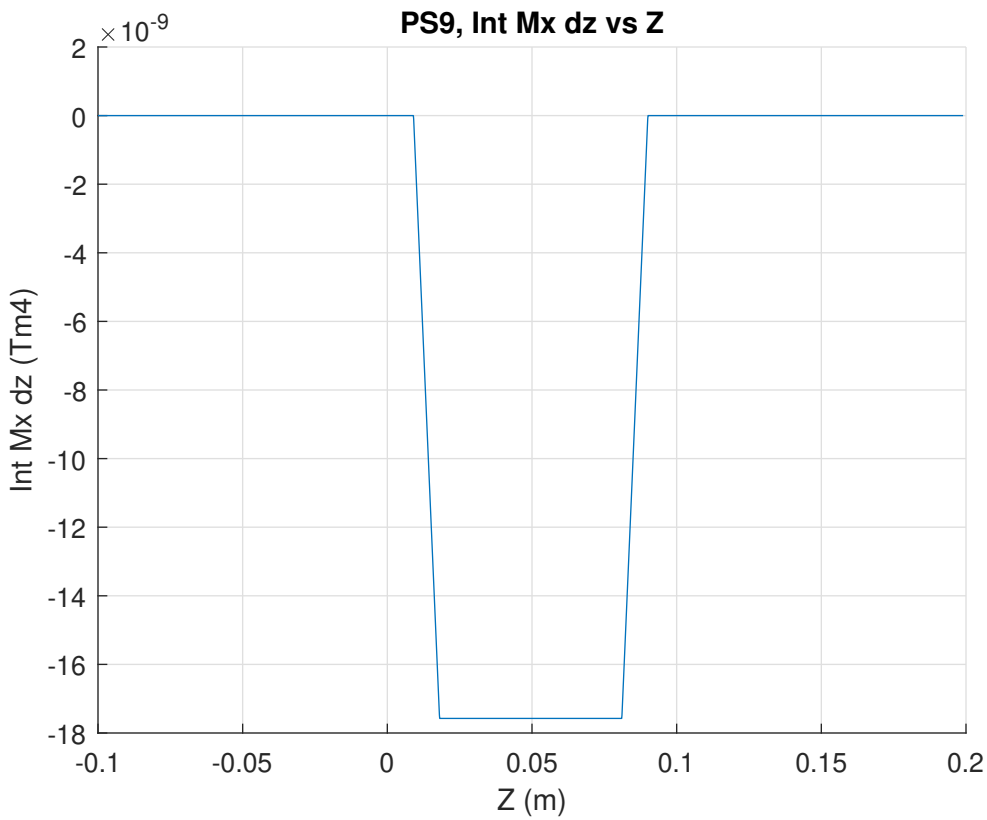

PS8, Int Int Mx dz dz vs Z
×10-9
5
4
3
2
1
0
-1
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

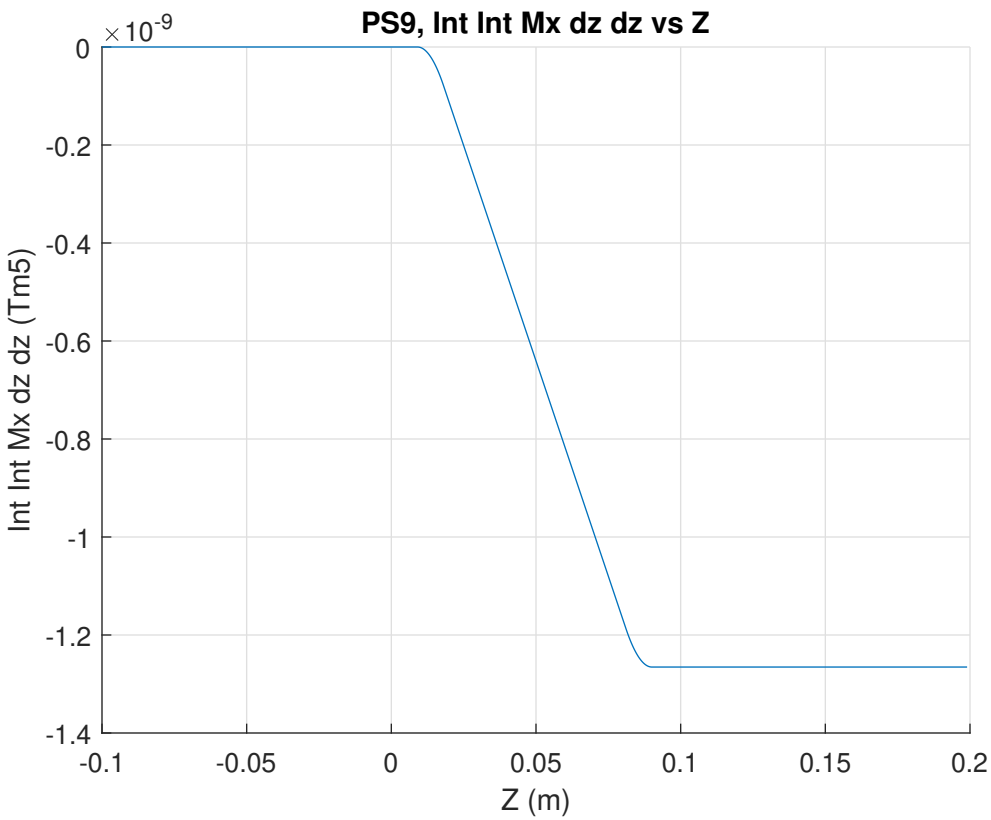

PS8, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

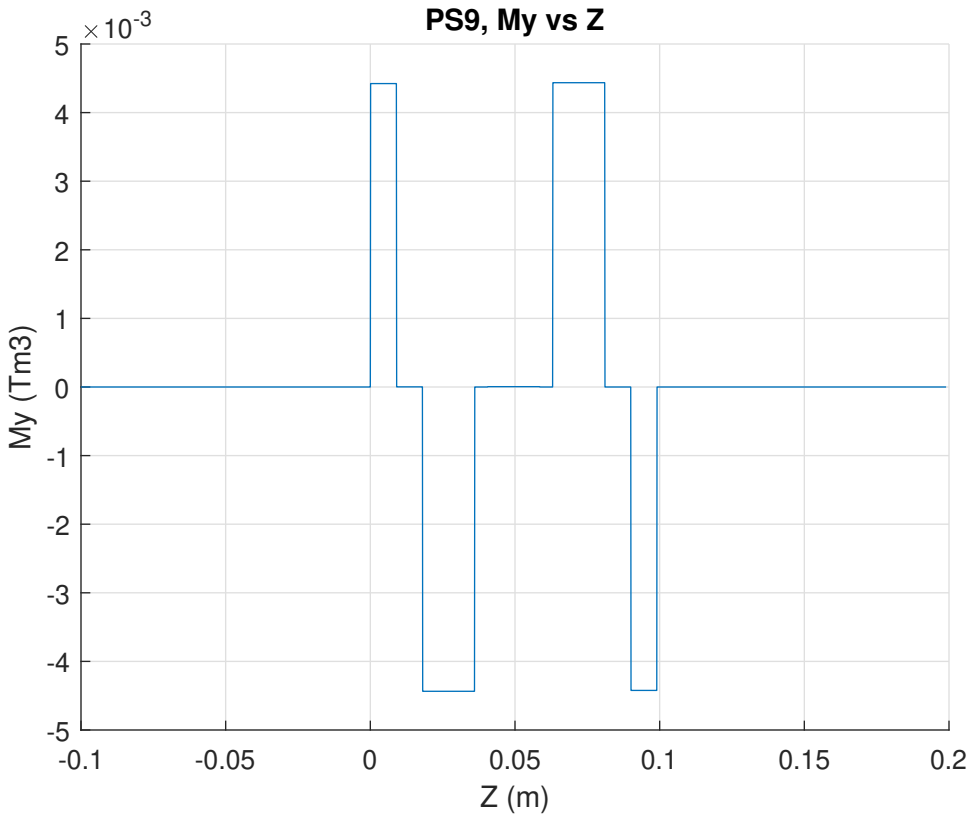

PS8, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

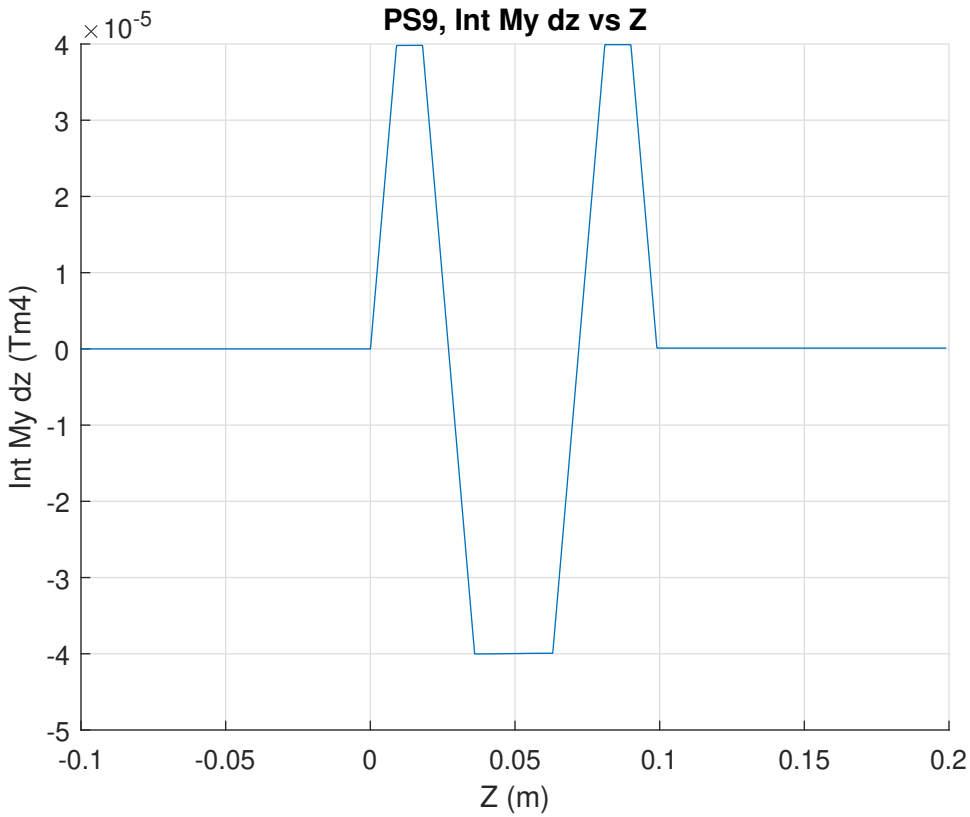

PS8, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

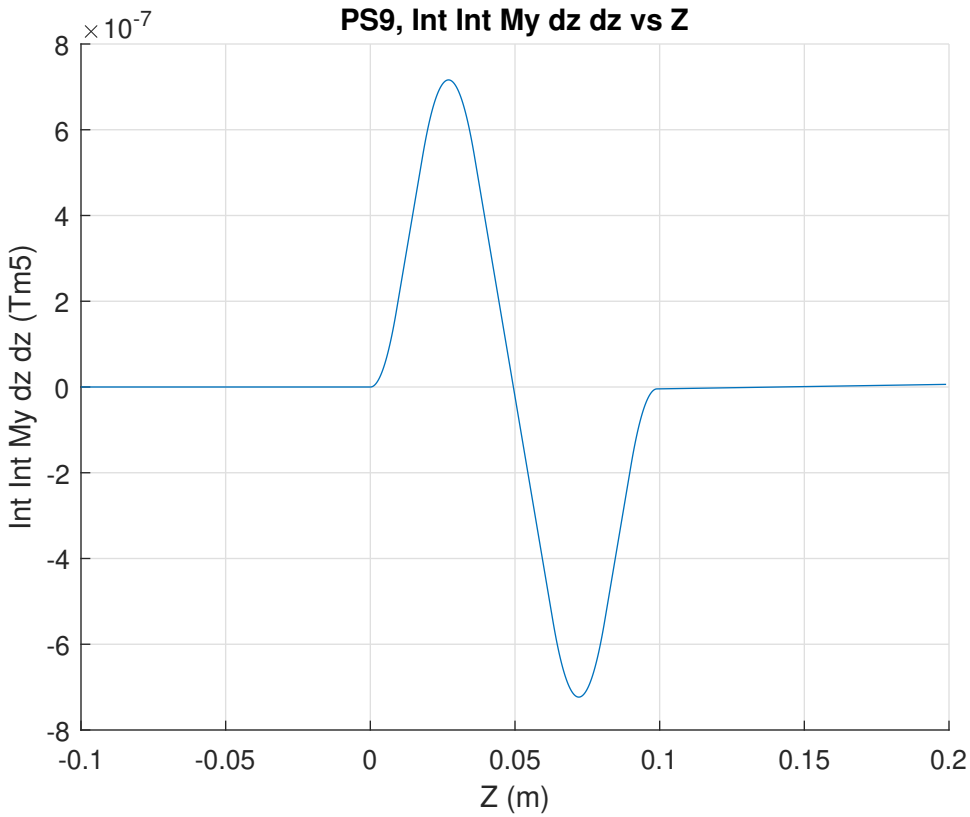

PS9, Mx vs Z
×10^-6
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

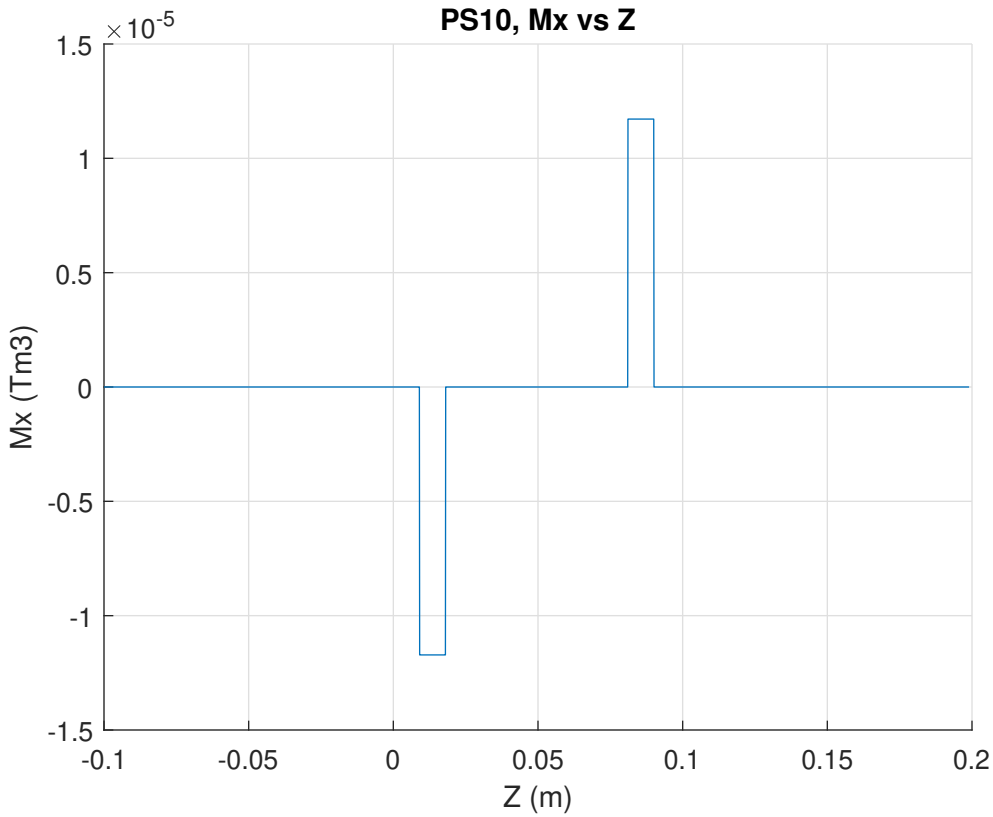

PS9, Int Mx dz vs Z
×10-9
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

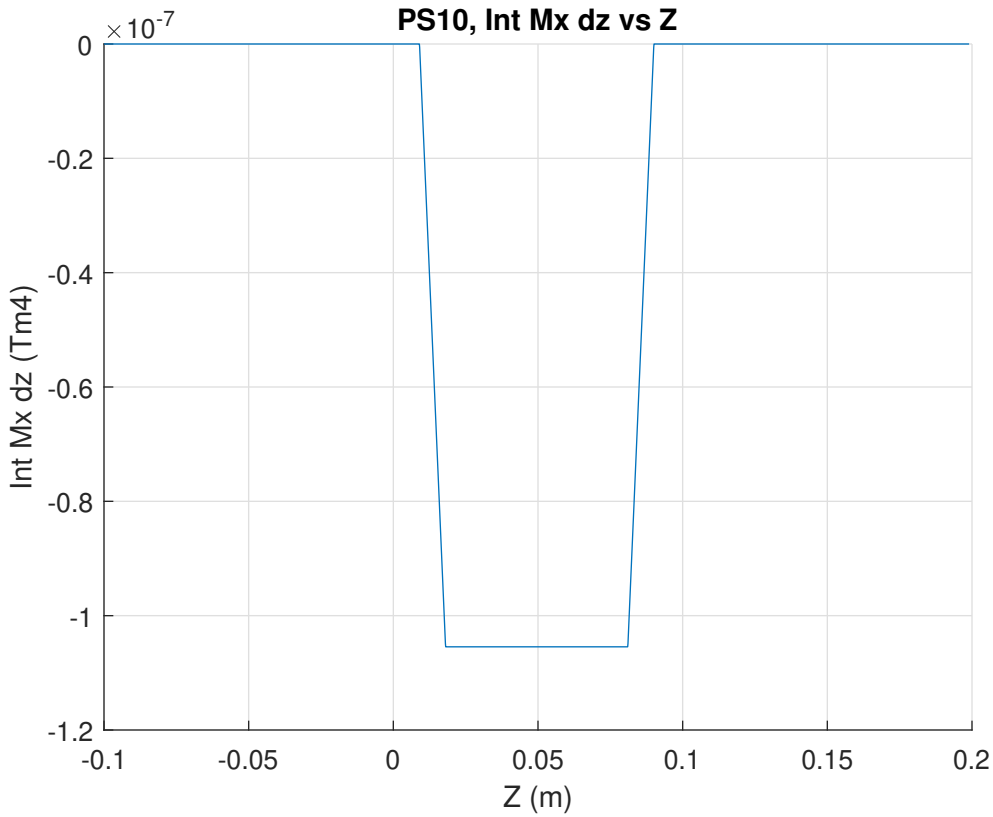

PS9, Int Int Mx dz dz vs Z
×10-9
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

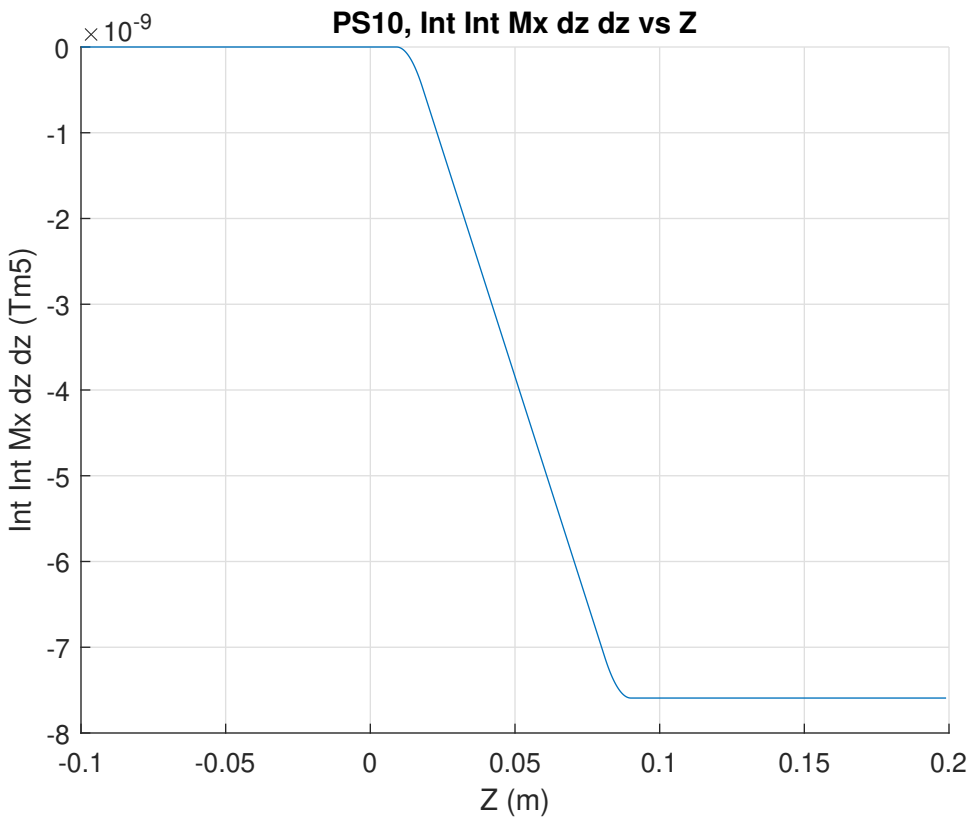

PS9, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

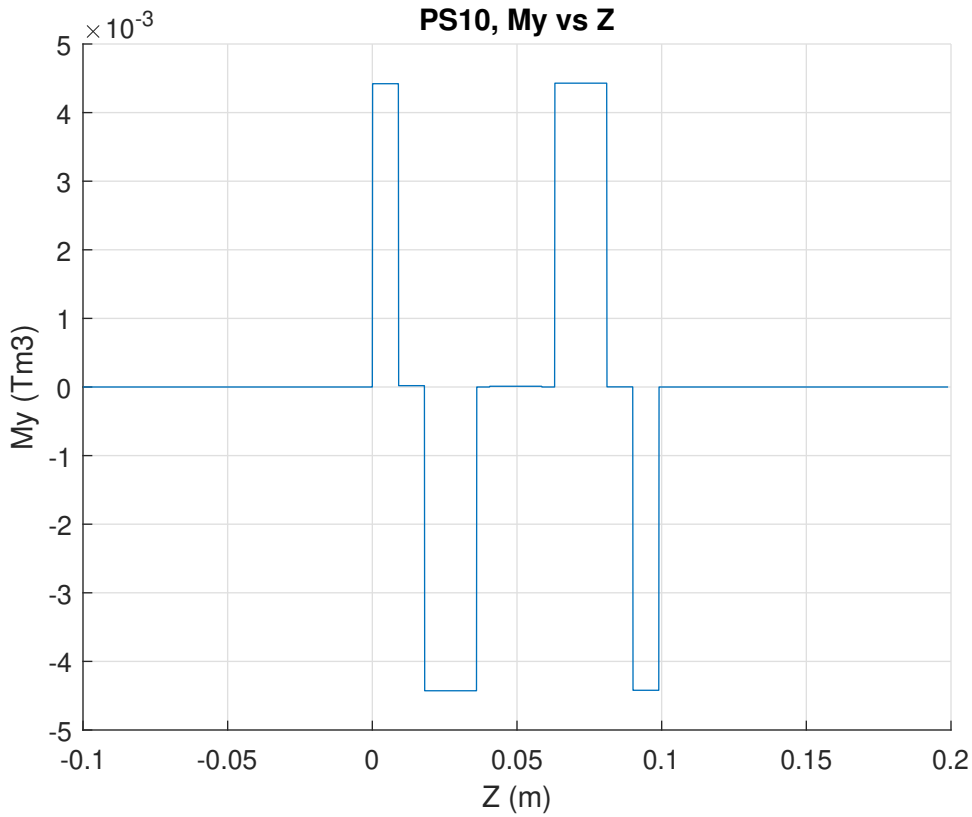

PS9, Int My dz vs Z
×10^-5
4
3
2
1
0
-1
-2
-3
-4
-5
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

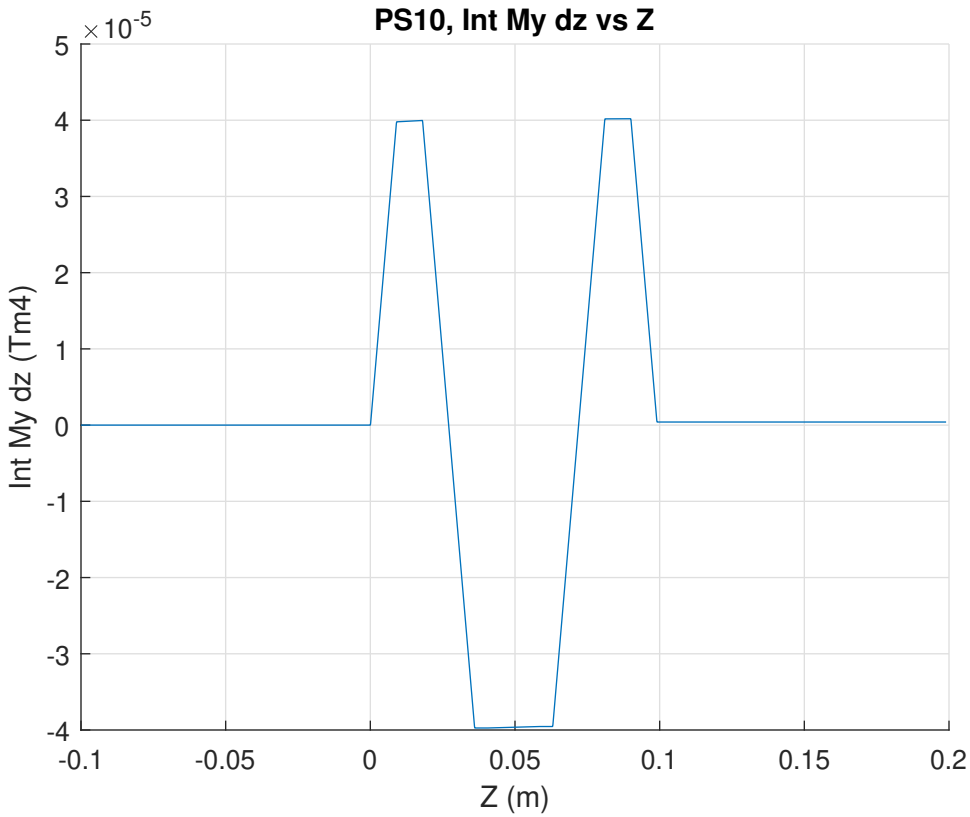

PS9, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)

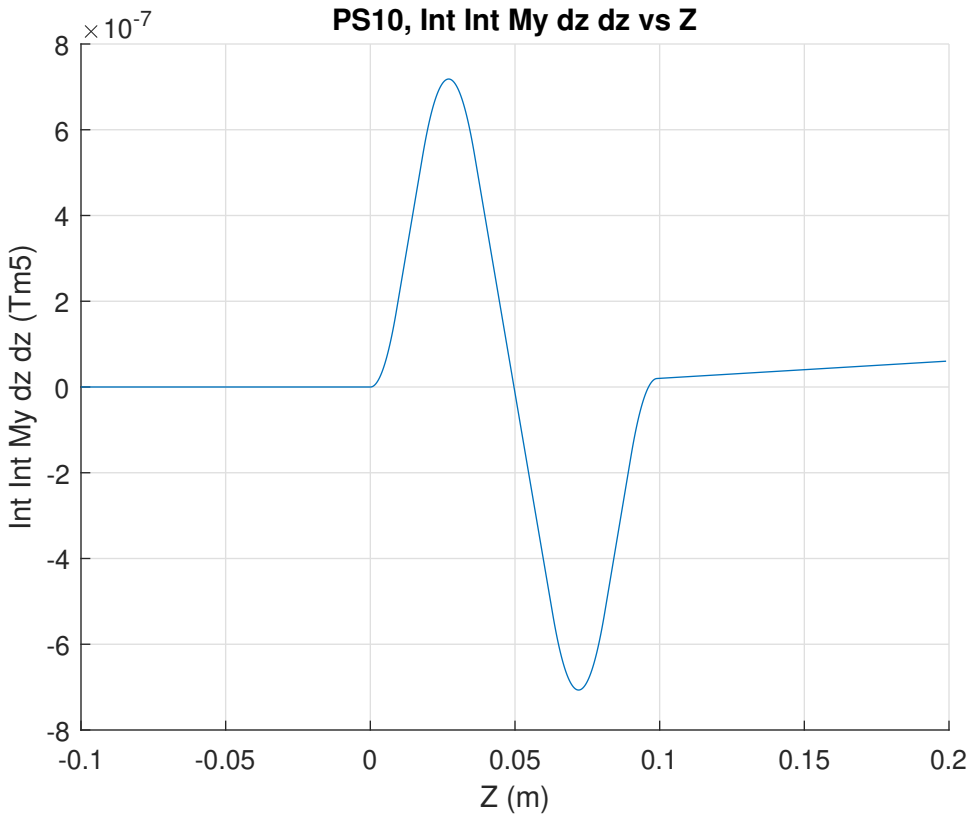

PS10, Mx vs Z
×10^-5
1.5
1
0.5
0
-0.5
-1
-1.5
Mx (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)


PS10, Int Mx dz vs Z
×10-7
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
Int Mx dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)


PS10, Int Int Mx dz dz vs Z
×10-9
0
-1
-2
-3
-4
-5
-6
-7
-8
Int Int Mx dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)


PS10, My vs Z
×10-3
5
4
3
2
1
0
-1
-2
-3
-4
-5
My (Tm3)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)


PS10, Int My dz vs Z
×10-5
5
4
3
2
1
0
-1
-2
-3
-4
Int My dz (Tm4)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)


PS10, Int Int My dz dz vs Z
×10^-7
8
6
4
2
0
-2
-4
-6
-8
Int Int My dz dz (Tm5)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Z (m)