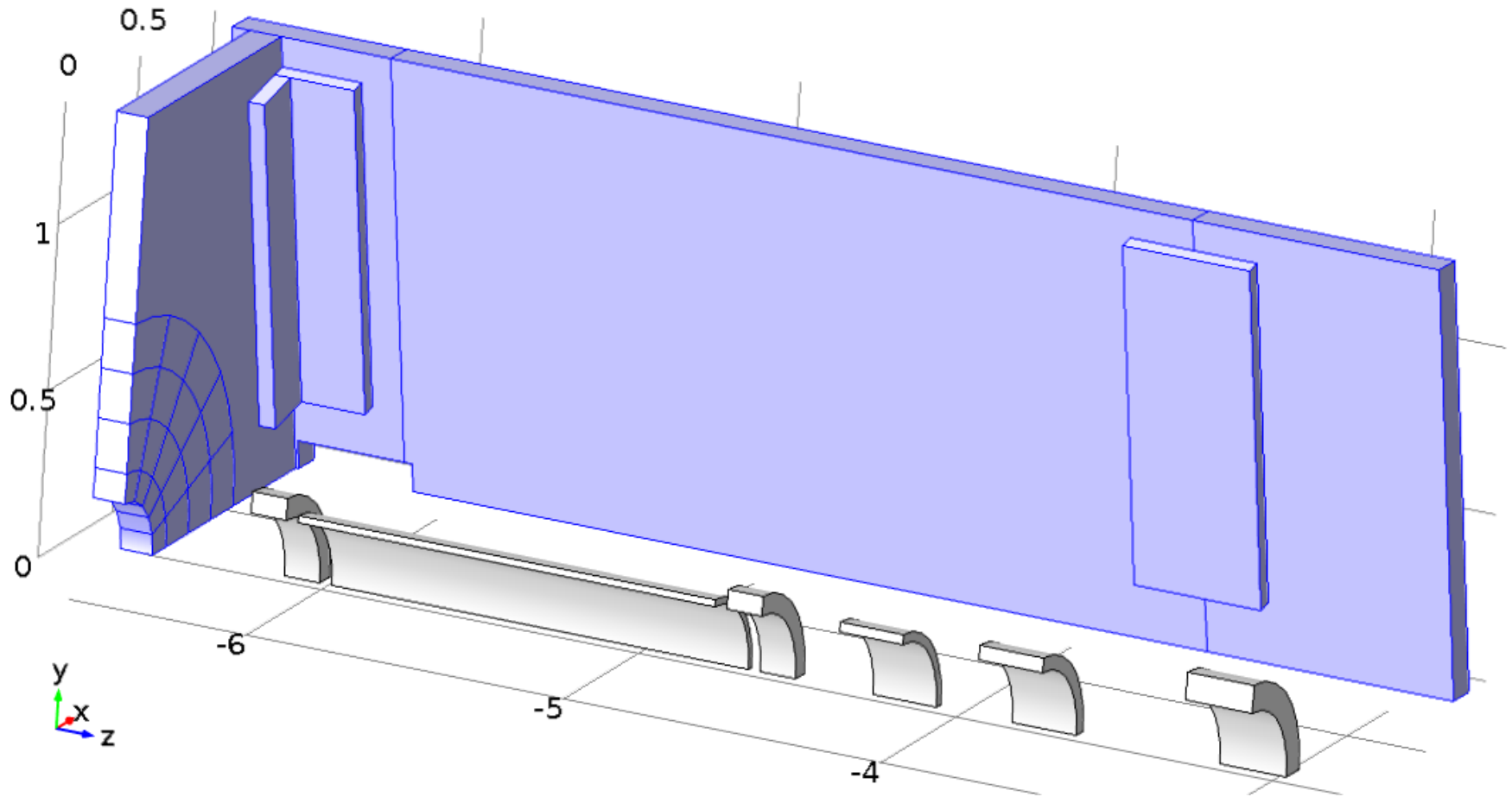


# MICE Step IV

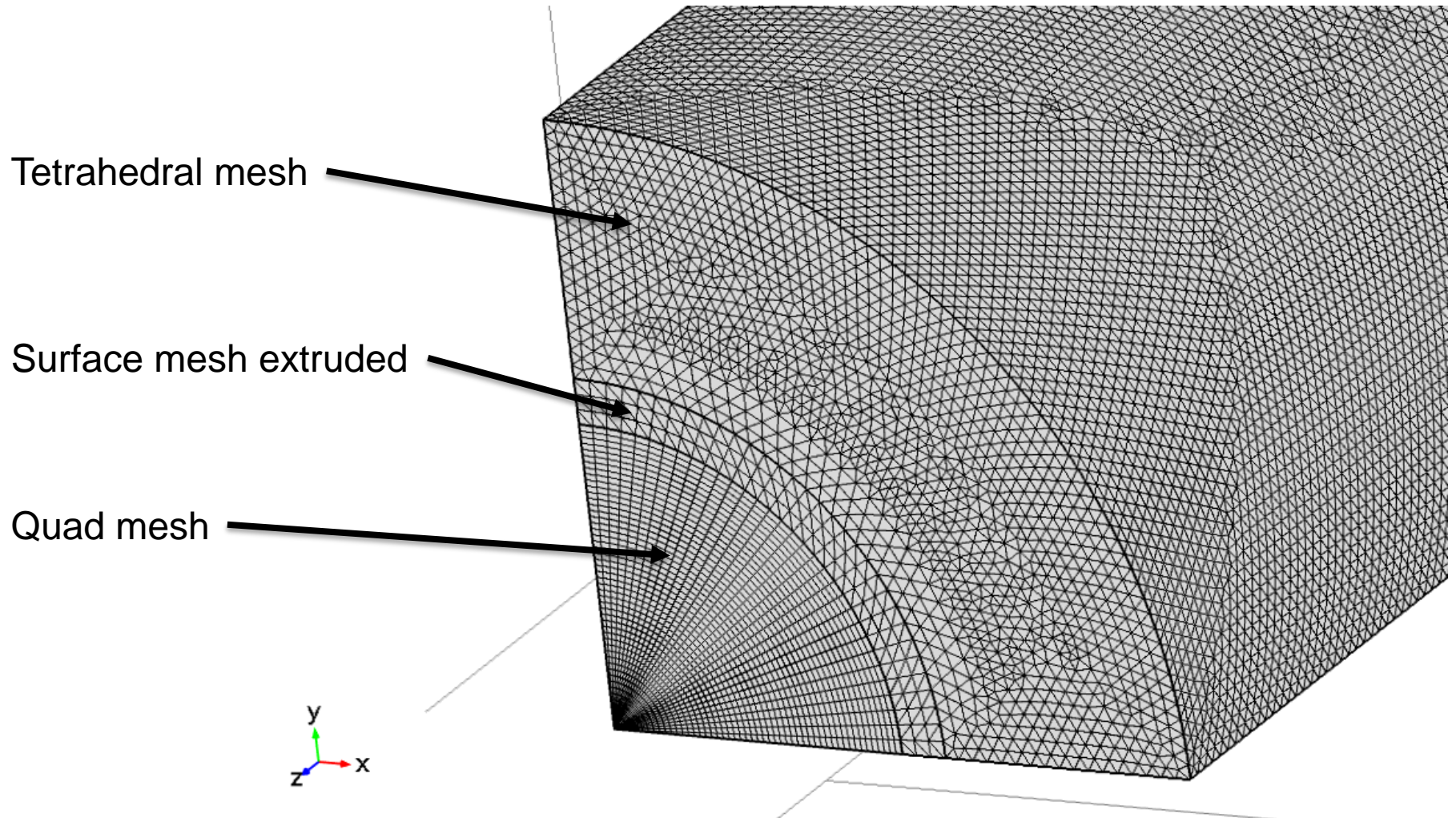
## PRY Error Field

Holger Witte  
Brookhaven National Laboratory  
Energy Frontier Accelerator Group

Partial iron return yoke: causes asymmetry of field

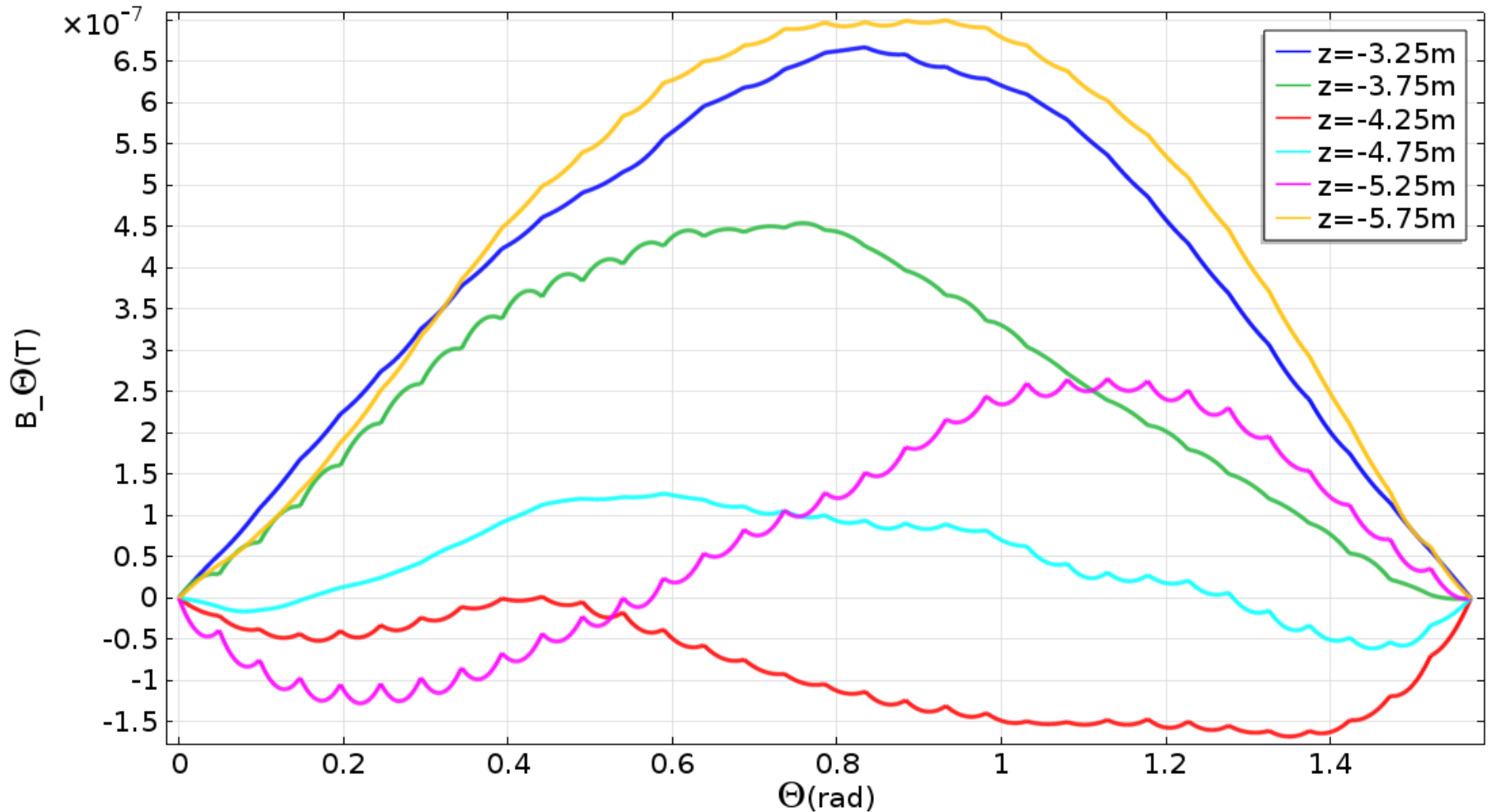


# Central Mesh

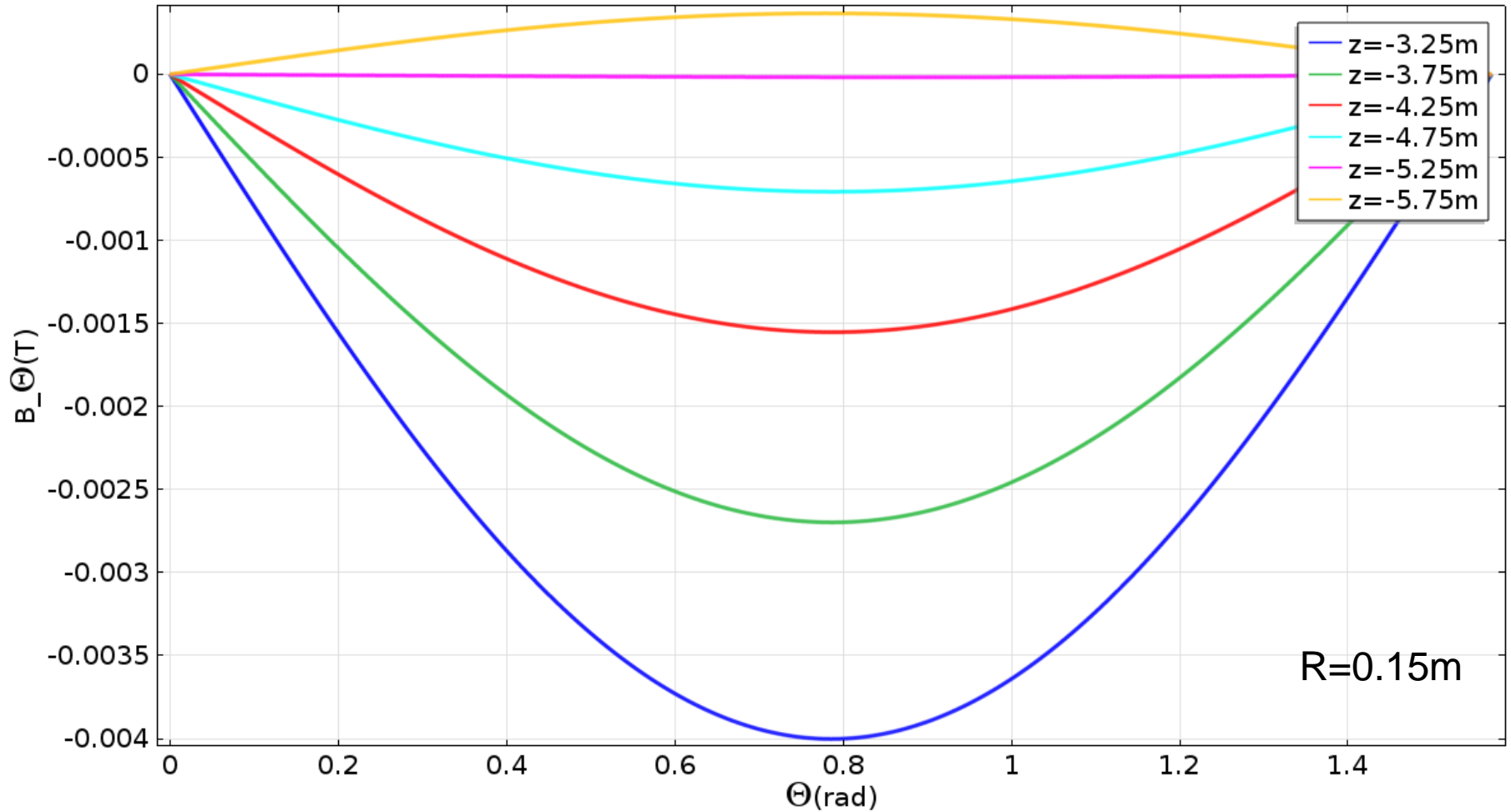


# Azimuthal Field – No Iron

Close to zero – as it should be

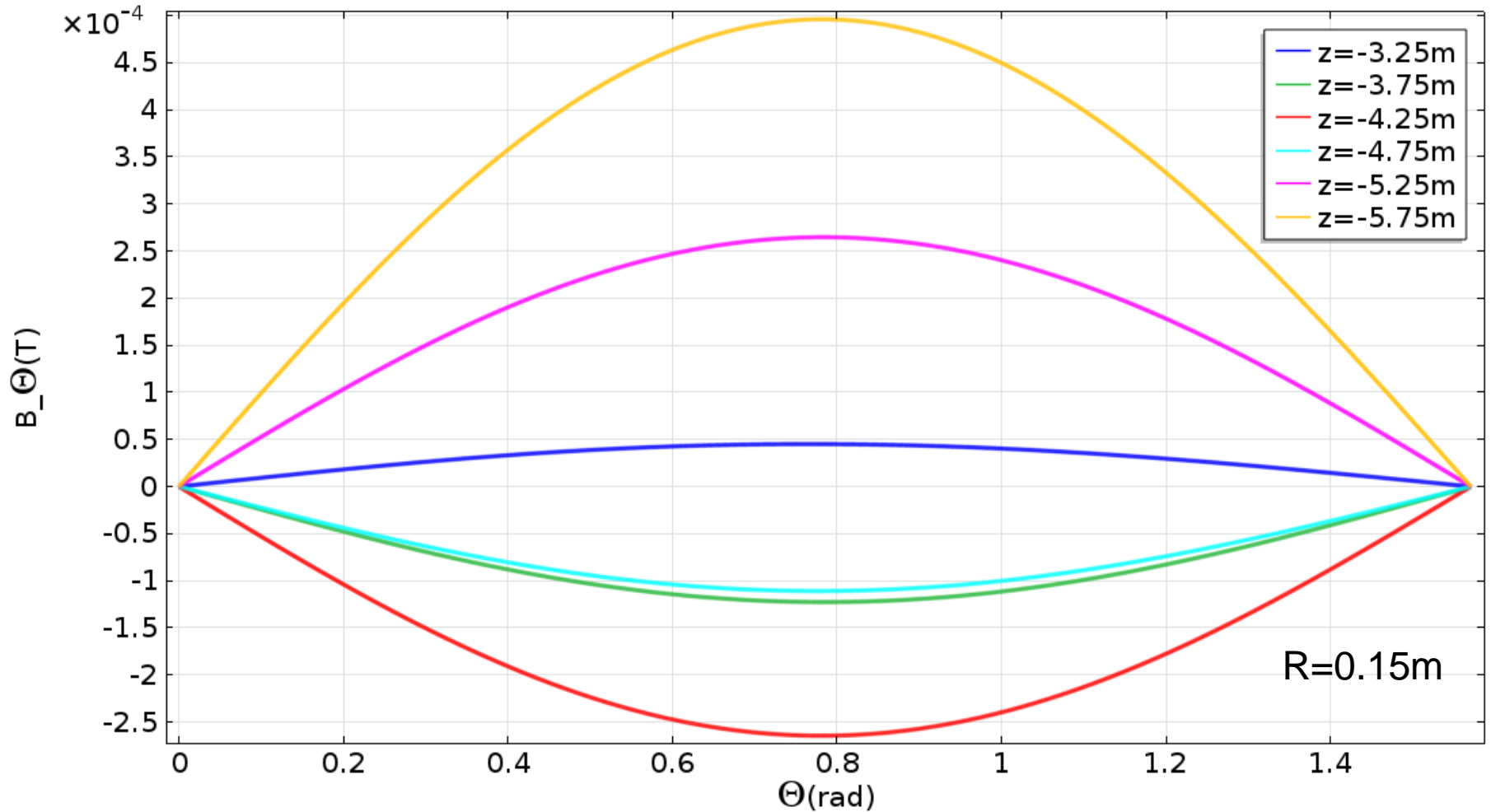


# Step IV, 240 MeV Flip



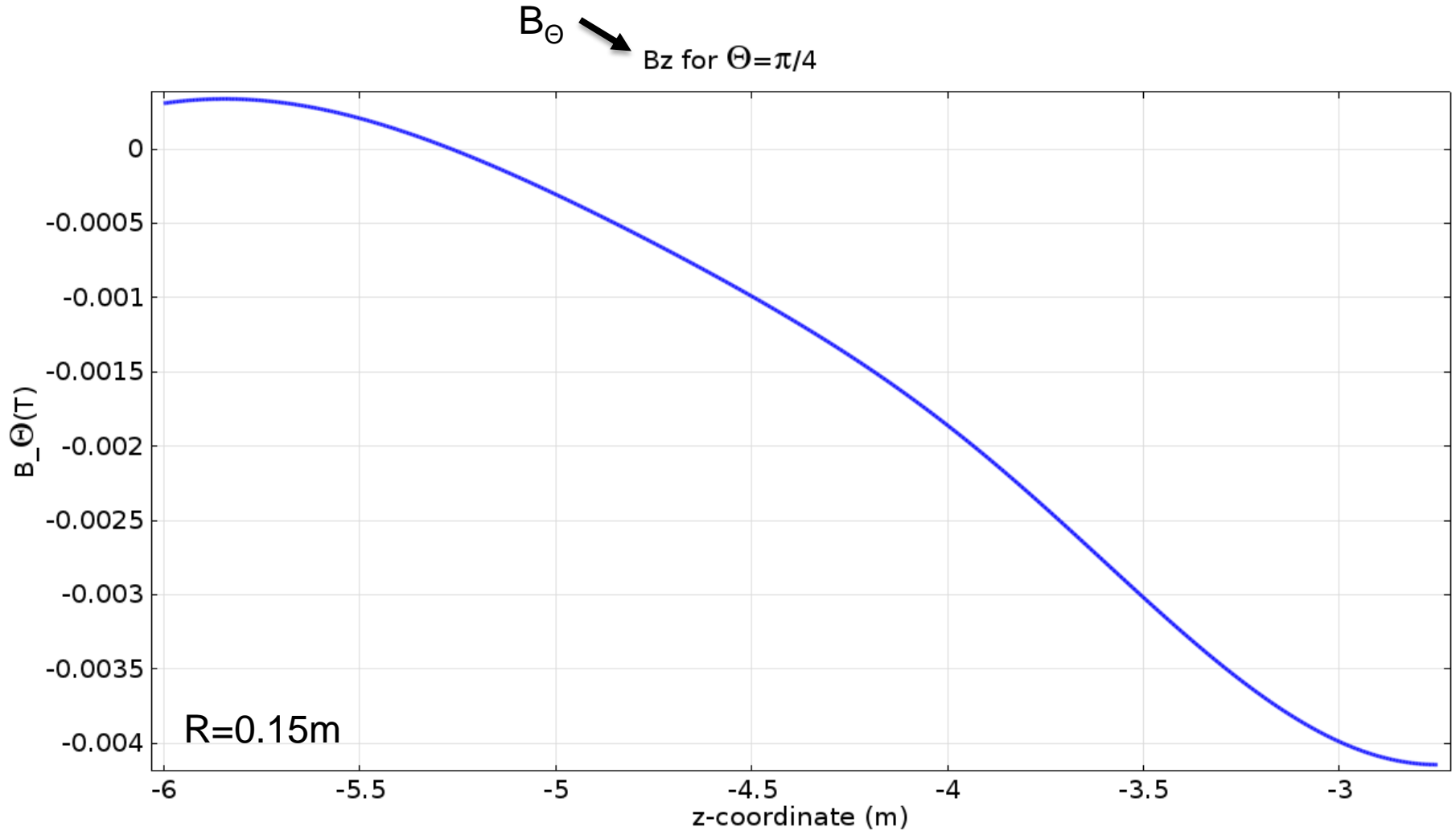
$R=0.15\text{m}$

# Step IV, 240 MeV Solenoid

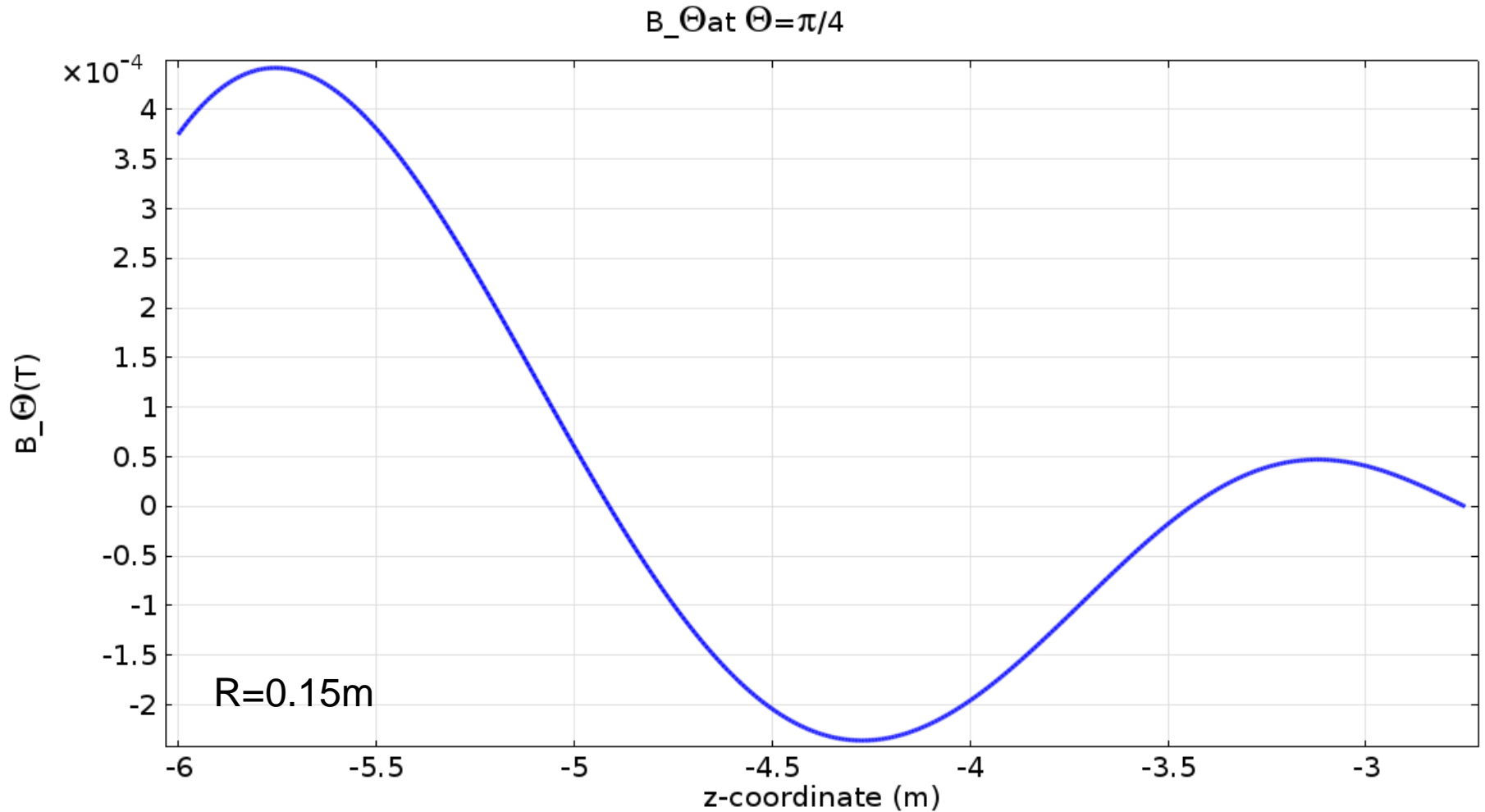


$R=0.15$  m

# Step IV, 240 MeV Flip



# Step IV, 240 MeV Solenoid





# Harmonics 240 MeV Flip



	A	B
1	-5.00E-20	-1.30E-19
2	1.77E-06	4.00E-03
3	5.11E-20	5.98E-19
4	6.23E-19	-1.78E-18
5	-3.85E-20	4.32E-19
6	-1.29E-06	-2.85E-07
7	1.01E-19	3.96E-19
8	-5.34E-19	6.30E-19
9	-5.11E-20	5.26E-19
10	-4.77E-07	2.44E-09
11	-1.26E-20	-1.66E-19

Z=-3.25m

	A	B
1	1.00E-19	-2.19E-19
2	4.25E-06	2.70E-03
3	-1.19E-19	4.43E-19
4	5.86E-19	-8.93E-19
5	2.92E-19	4.02E-19
6	-3.10E-06	-1.80E-07
7	-3.64E-19	7.93E-20
8	-3.18E-19	2.02E-19
9	2.64E-19	2.98E-19
10	-1.14E-06	5.95E-09
11	-1.73E-19	-4.09E-20

Z=-3.75m

	A	B
1	7.48E-20	-1.01E-19
2	2.51E-06	1.55E-03
3	-9.58E-20	2.40E-19
4	3.07E-19	-6.09E-19
5	2.02E-19	2.10E-19
6	-1.84E-06	-4.50E-08
7	-1.71E-19	3.06E-20
8	-3.08E-19	1.74E-19
9	9.58E-20	1.31E-19
10	-6.76E-07	9.77E-09
11	-1.06E-19	-2.95E-20

Z=-4.25m

	A	B
1	6.65E-20	-9.05E-20
2	1.25E-06	7.07E-04
3	-5.38E-20	1.17E-19
4	1.45E-19	-3.08E-19
5	6.43E-20	1.40E-19
6	-9.15E-07	-8.40E-09
7	-1.02E-19	-2.82E-20
8	-8.09E-20	9.49E-20
9	3.57E-20	6.23E-20
10	-3.32E-07	7.27E-09
11	-1.05E-20	2.32E-20

Z=-4.75m

A: real harmonics  
B: skew harmonics

R=0.15m

# Harmonics 240 MeV Solenoid



	A	B
1	3.63E-22	1.60E-21
2	7.02E-07	-4.51E-05
3	-5.99E-22	-6.75E-21
4	-5.37E-21	2.02E-20
5	-1.67E-23	-4.59E-21
6	-5.14E-07	1.92E-08
7	-9.61E-22	-4.02E-21
8	4.80E-21	-7.16E-21
9	5.99E-22	-5.62E-21
10	-1.89E-07	3.60E-09
11	6.16E-22	2.17E-21

Z=-3.25m

	A	B
1	-8.65E-22	-3.80E-21
2	-3.50E-08	1.23E-04
3	7.99E-22	1.90E-20
4	2.36E-20	-4.56E-20
5	2.25E-21	1.30E-20
6	2.77E-08	6.41E-09
7	1.66E-21	1.07E-20
8	-1.25E-20	2.14E-20
9	-7.99E-22	1.45E-20
10	7.37E-09	4.28E-09
11	-3.05E-21	-6.06E-21

Z=-3.75m

	A	B
1	1.49E-21	-3.55E-20
2	-8.57E-07	2.65E-04
3	1.87E-20	4.95E-20
4	5.19E-20	-8.01E-20
5	3.08E-21	4.93E-20
6	6.30E-07	1.47E-09
7	-2.34E-20	1.41E-20
8	-1.14E-20	2.98E-20
9	2.19E-20	4.95E-20
10	2.28E-07	8.16E-09
11	-2.18E-20	-2.35E-22

Z=-4.25m

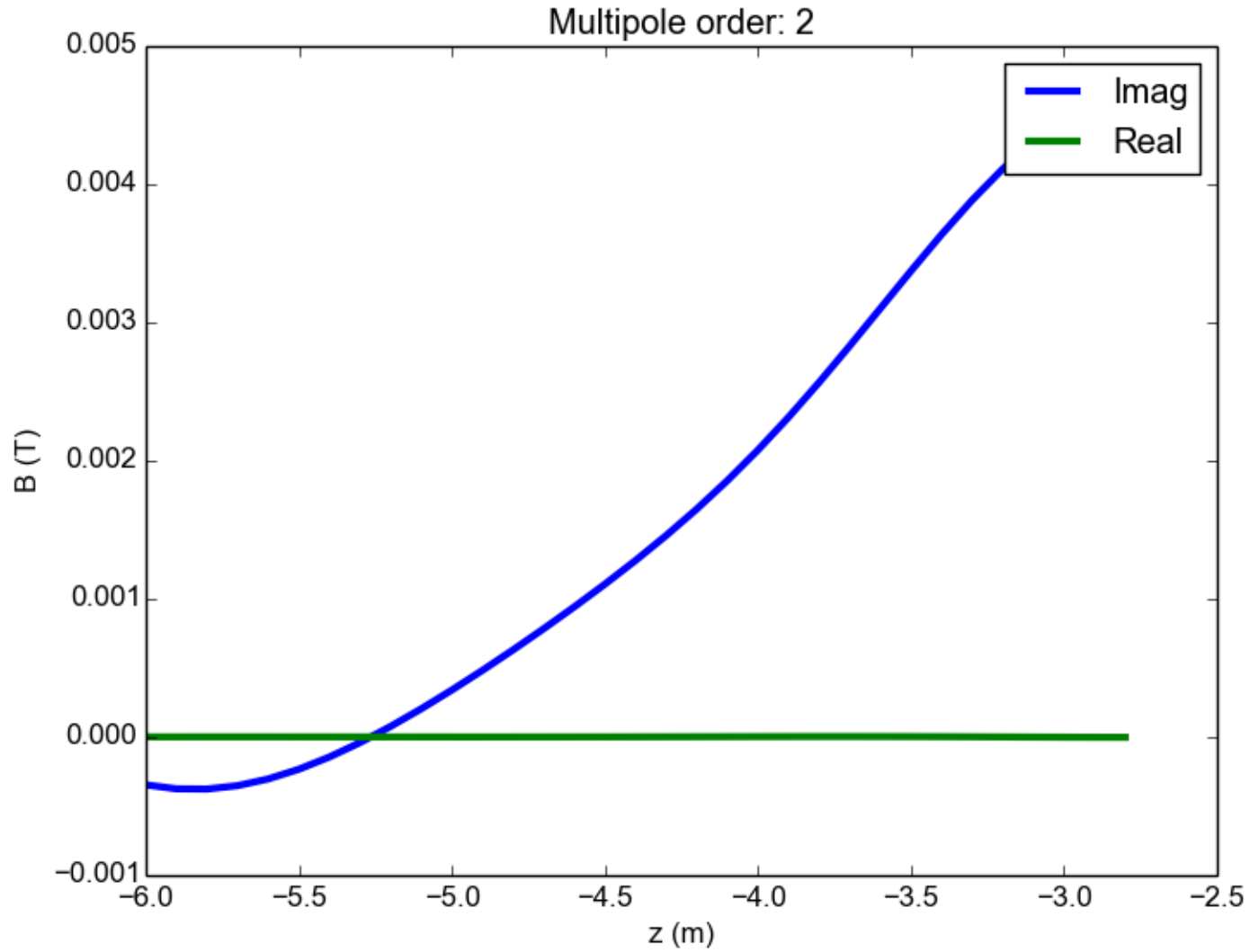
	A	B
1	-3.09E-21	-3.94E-21
2	-7.15E-07	1.11E-04
3	1.20E-21	1.86E-20
4	2.01E-20	-4.39E-20
5	-3.72E-22	1.24E-20
6	5.21E-07	7.21E-09
7	4.28E-21	1.02E-20
8	-1.16E-20	1.59E-20
9	-1.20E-21	1.41E-20
10	1.94E-07	6.98E-09
11	-8.26E-22	-6.20E-21

Z=-4.75m

A: real harmonics  
B: skew harmonics

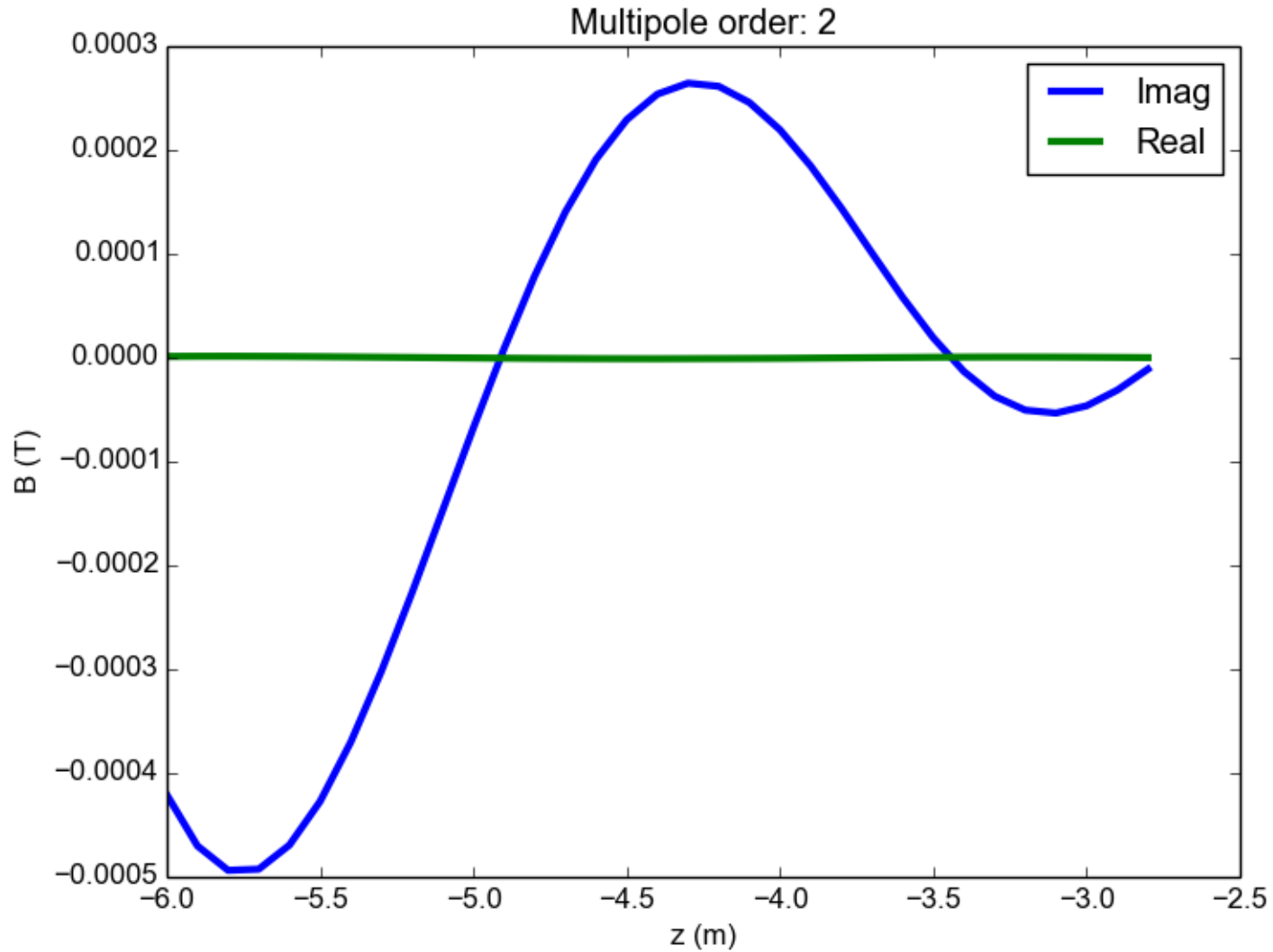
R=0.15m

# Harmonics 240 MeV Flip



R=0.15m

# Harmonics 240 MeV Solenoid



R=0.15m