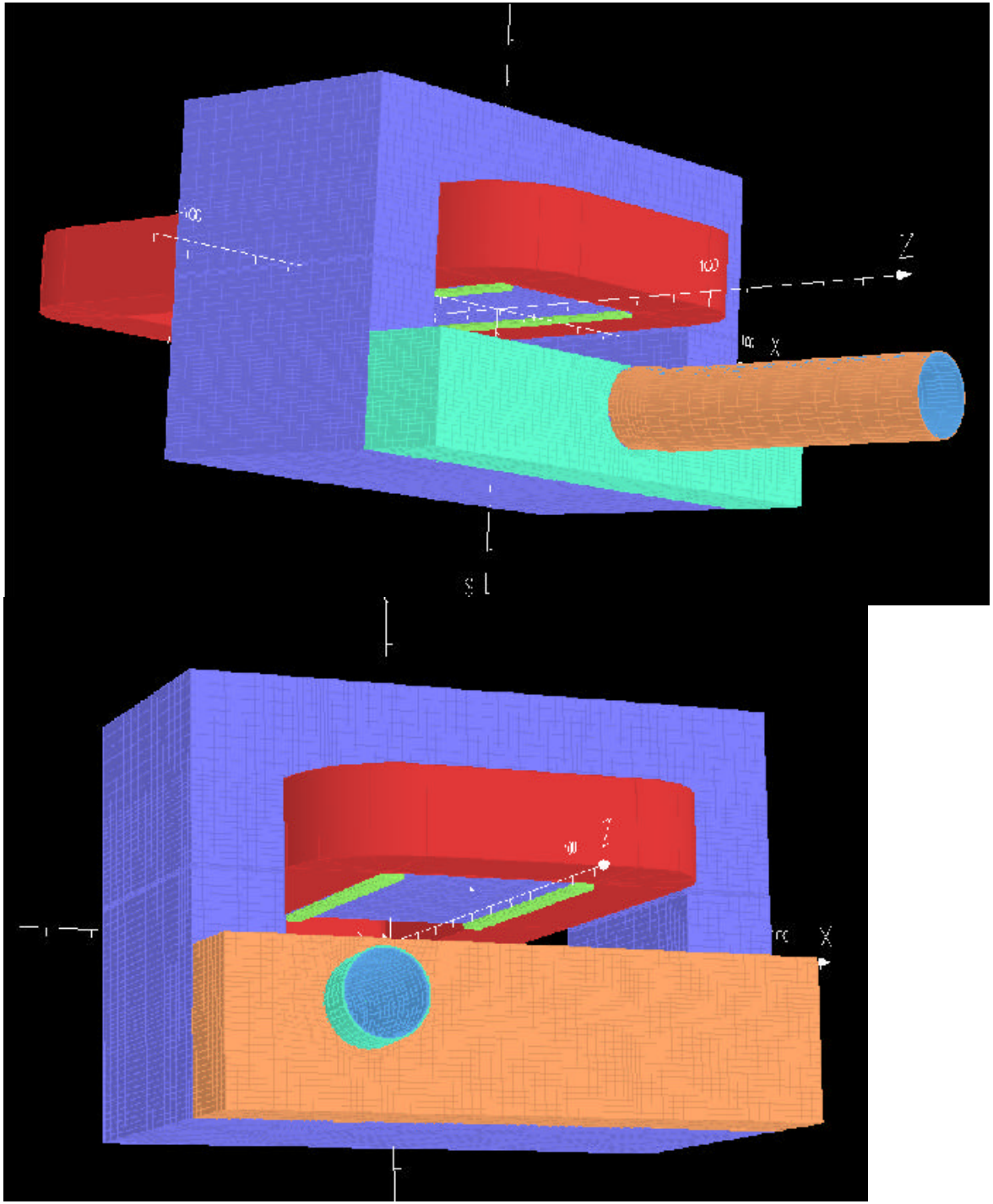
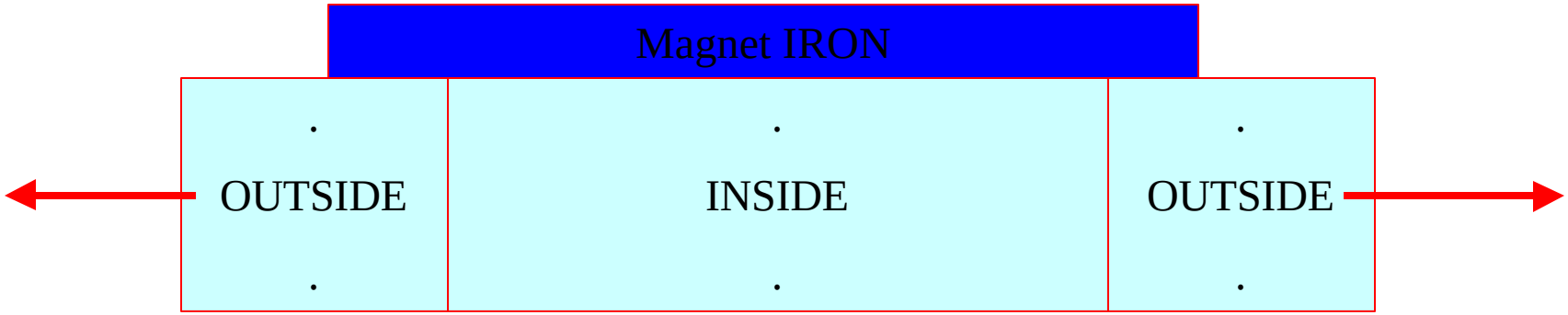
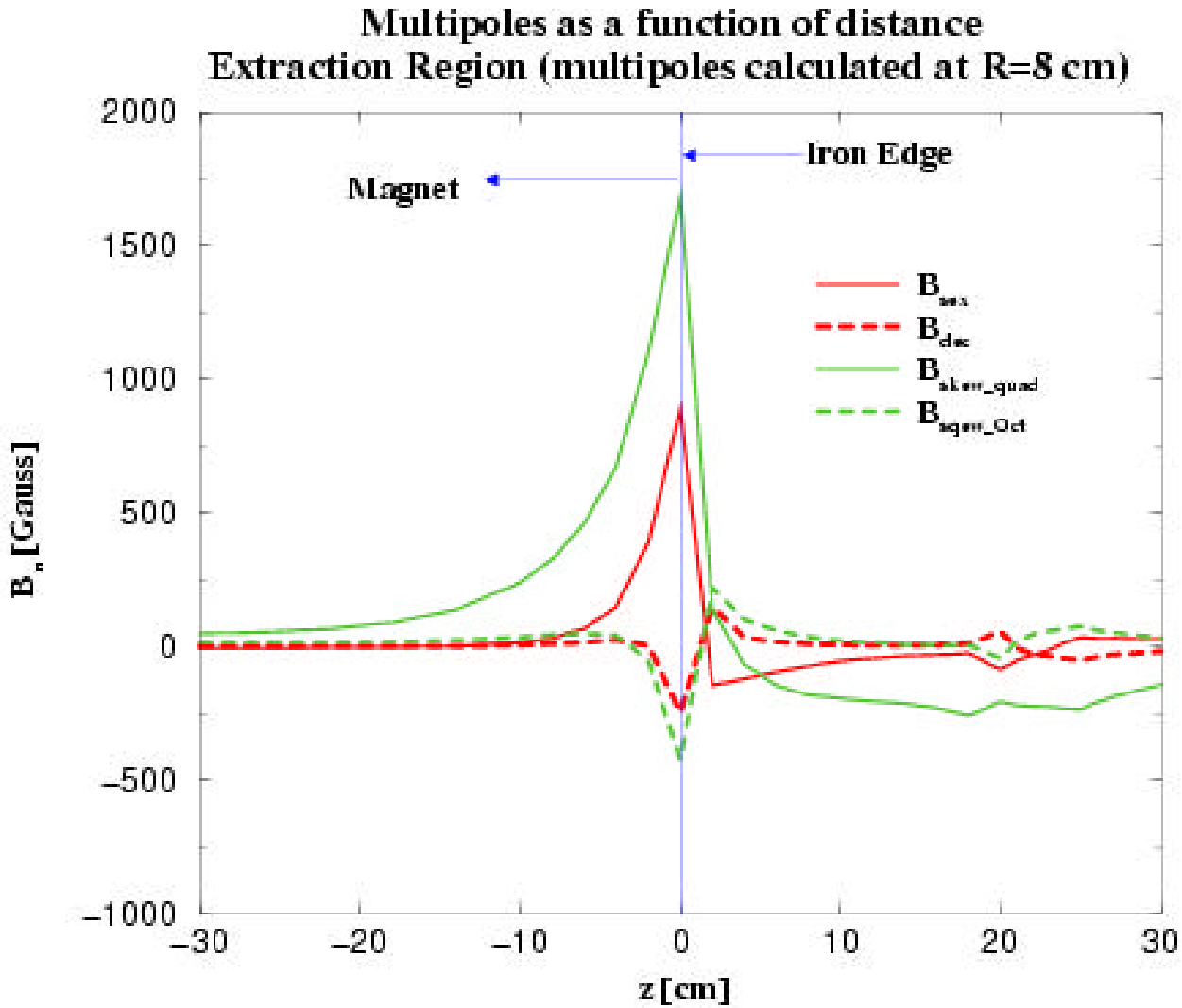


Isometric View of the Entrance and exit of the Septum Magnet

Definition of “INSIDE” and “OUTSIDE” appearing in the next two slides




Multipoles as a function of distance
Extraction Region (multipoles calculated at R=8 cm)
Iron Edge
Magnet
B_sex
B_dec
B_skew_quad
B_sqew_Oct
B_n [Gauss]
z [cm]
2000
1500
1000
500
0
−500
−1000
−30
−20
−10
0
10
20
30

Integrated multipoles for the extracted beam

	B_0 [T.m]	B_1 [T.m]	B_2 [T.m]	B_3 [T.m]	B_4 [T.m]
INSIDE		0.00	0.00066	0.00000	0.00000
OUTSIDE		0.00	0.00250	0.00000	0.00050
TOTAL	1.69	0.00	0.00316	0.00000	0.00050
	A_0 [T.m]	A_1 [T.m]	A_2 [T.m]	A_3 [T.m]	A_4 [T.m]
INSIDE	0.00	0.00760	0.00000	0.00220	0.00000
OUTSIDE	0.00	0.00940	0.00000	0.00200	0.00000
TOTAL	0.00	0.01700	0.00000	0.00420	0.00000
	B_n , A_n are the Integrated Multipoles at R=8.0 cm				
Extraction septum Effective Length L=2.48 [m]					
Extraction septum Itegrated B.L=1.686 [T.m]					
Extraction septum Dipole field B=0.68 [T]					

Integrated multipoles for the circulating beam

	B_0 [Gauss.cm]	B_1 [Gauss.cm]	B_2 [Gauss.cm]	B_3 [Gauss.cm]	B_4 [Gauss.cm]
INSIDE	-100.00	-2.00	8.60	0.00	0.00
OUTSIDE	-500.00	-92.00	11.00	1.60	-1.80
TOTAL	-600.00	-94.00	19.60	1.60	-1.80
	A_0 [Gauss.cm]	A_1 [Gauss.cm]	A_2 [Gauss.cm]	A_3 [Gauss.cm]	A_4 [Gauss.cm]
INSIDE	-44.00	25.00	0.33	-3.20	0.00
OUTSIDE	-175.00	101.00	19.00	-3.20	1.10
TOTAL	-219.00	126.00	19.33	-6.40	1.10
	b_0 []	b_1 []	b_2 []	b_3 []	b_4 []
INSIDE	-0.898473	-0.0180	0.0773	0.0000	0.0000
OUTSIDE	-4.492363	-0.8266	0.0988	0.0144	-0.0162
TOTAL	-5.39	-0.84	0.18	0.01	-0.02
	a_0 []	a_1 []	a_2 []	a_2 []	a_4 []
INSIDE	-0.449236	0.2246	0.0030	-0.0288	0.0000
OUTSIDE	-1.572327	0.9075	0.1707	-0.0288	0.0099
TOTAL	-2.02	1.13	0.17	-0.06	0.01
	B_n , A_n are the Integrated Multipoles at R=8.7 cm				
	b_n , a_n same as Bn , An but Norm. to 10^4*B*L of main magne				
R=8.7 cm	=480	L(of main magnet)=1.113 [T.m]			