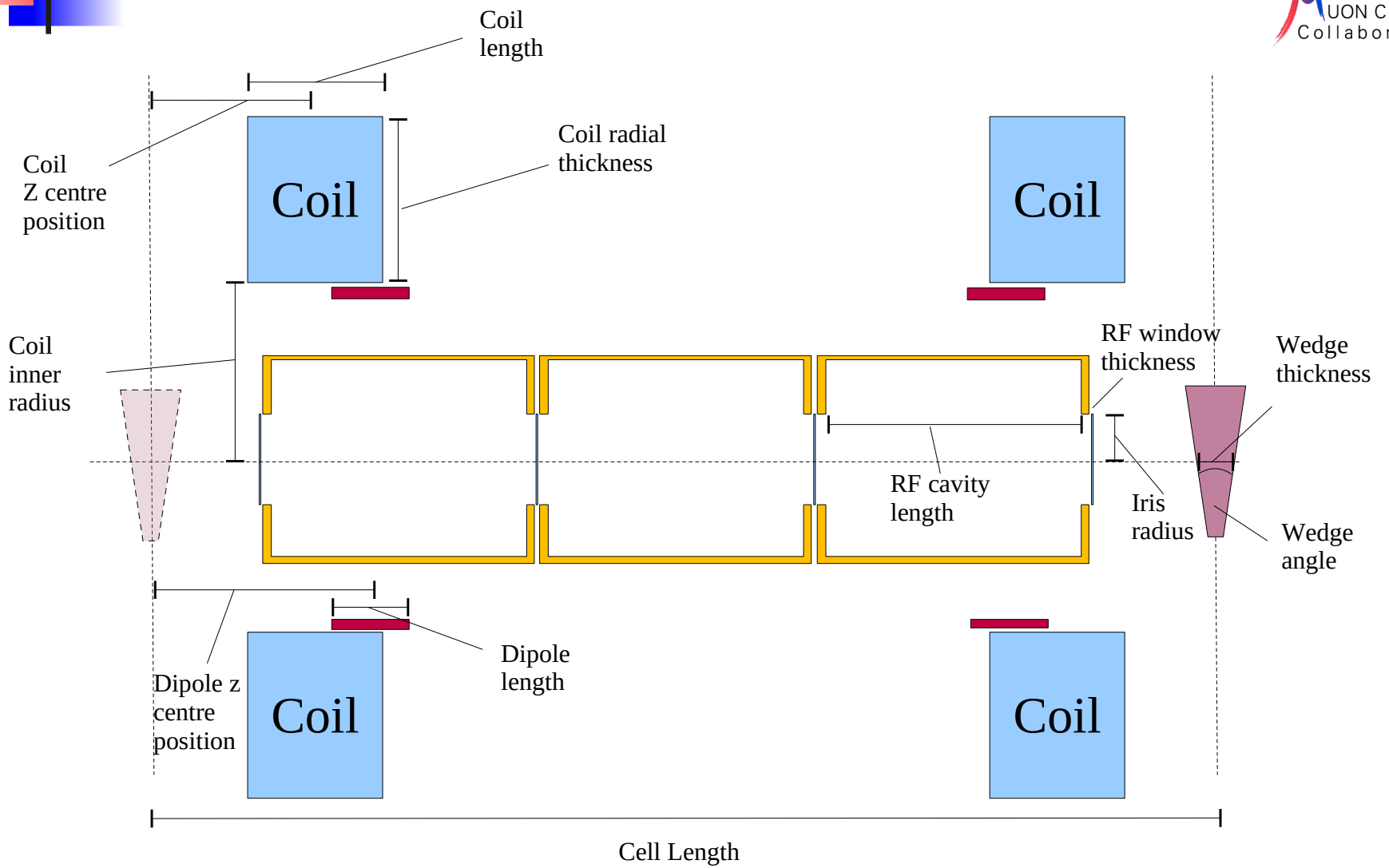
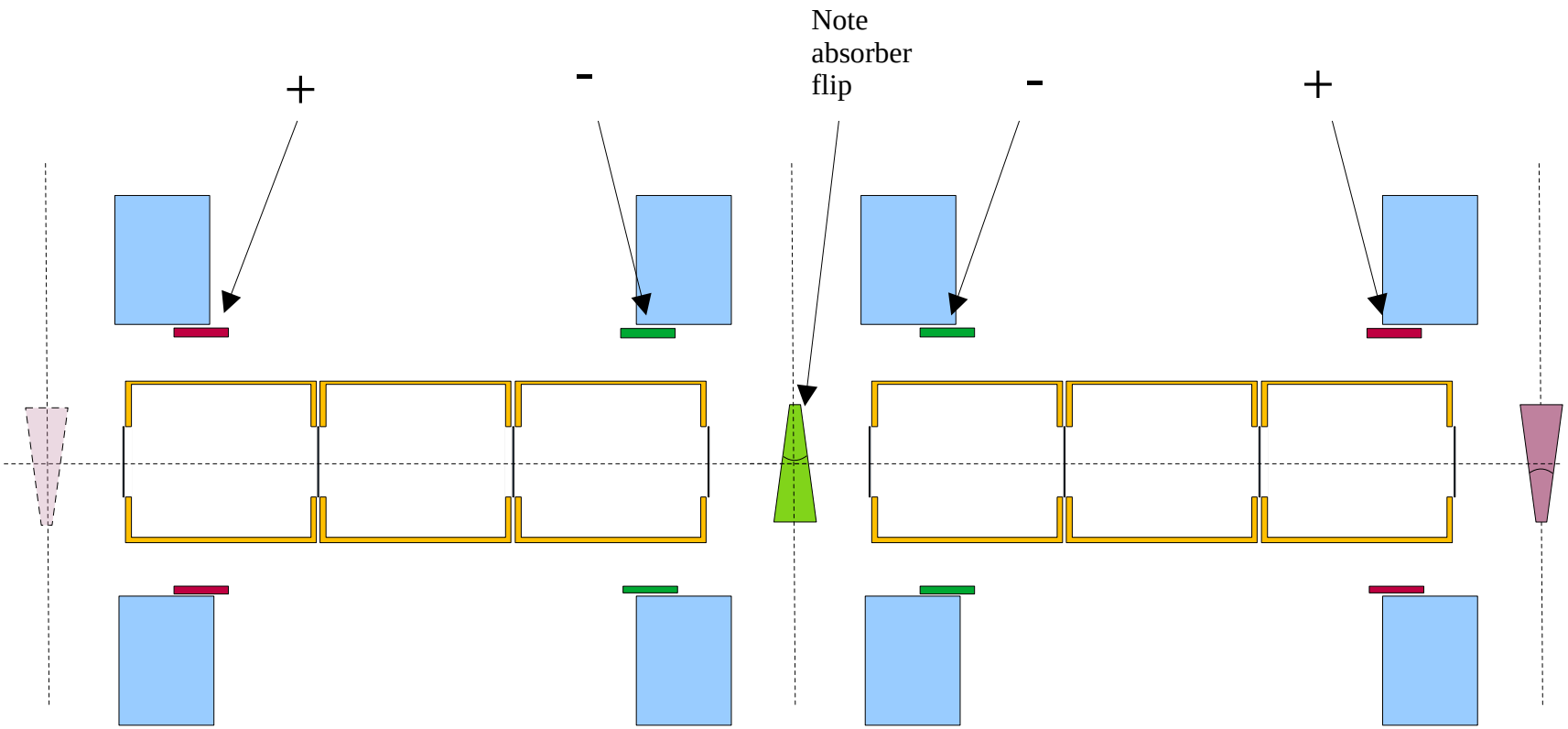
Schematic – one (half) cell



Schematic – one (half) cell



Absorber material

International MUON Collider Collaboration

Cooling Cell Parameters	
Beam Physics Parameters	
Momentum	200 MeV/c
Twiss beta function	107 mm
Dispersion in x	38.5 mm
Dispersion in y	20.3 mm
Beam pipe radius	81.6 mm
Design solenoid parameters*	
B0.5	0 T
B0	8.75 T
B1	1.25 T
B2	0 T
Cooling Cell length	800 mm
B0 tolerance	0.25 T
B1 tolerance	0.025 T
B0.5 tolerance	0.02 T
B2 tolerance	0.5 T
Simulated coil geometry	
Inner radius	250 mm
Coil Length	140 mm
Coil radial thickness	169.3 mm
Coil z centre position	100.7 mm
Current Density	500 A/mm^2

RF Cavity	
RF Cell length	188.6 mm
RF Gradient	30 MV/m
Iris radius	81.6 mm
Number of RF cells	3
Frequency	0.704 GHz
Synchronous phase	20 degree
RF window	0.1 mm
Wedge	
Material	Lithium Hydride
Opening Angle	10 degree
Thickness	20 mm
Transverse offset	8.7 mm
Dipole	
Length	100 mm
Polarity	+--+
Field	0.2 T
Dipole z centre position	160 mm

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***B = B0.5 sin(pi z/L) + B0 sin(2 pi z/L) + B1 sin(4 pi z/L) + B2 sin (6 pi z/L)**