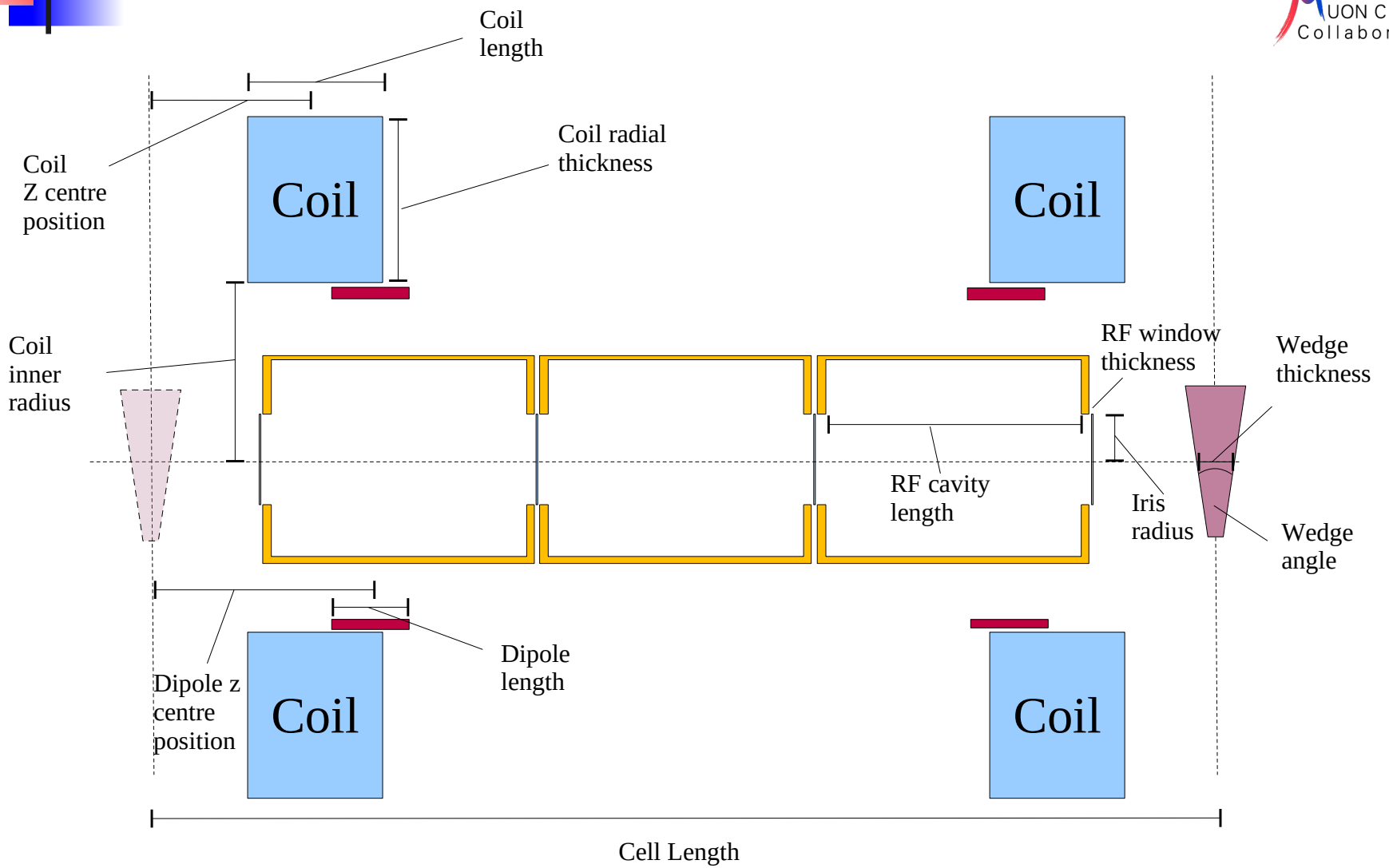
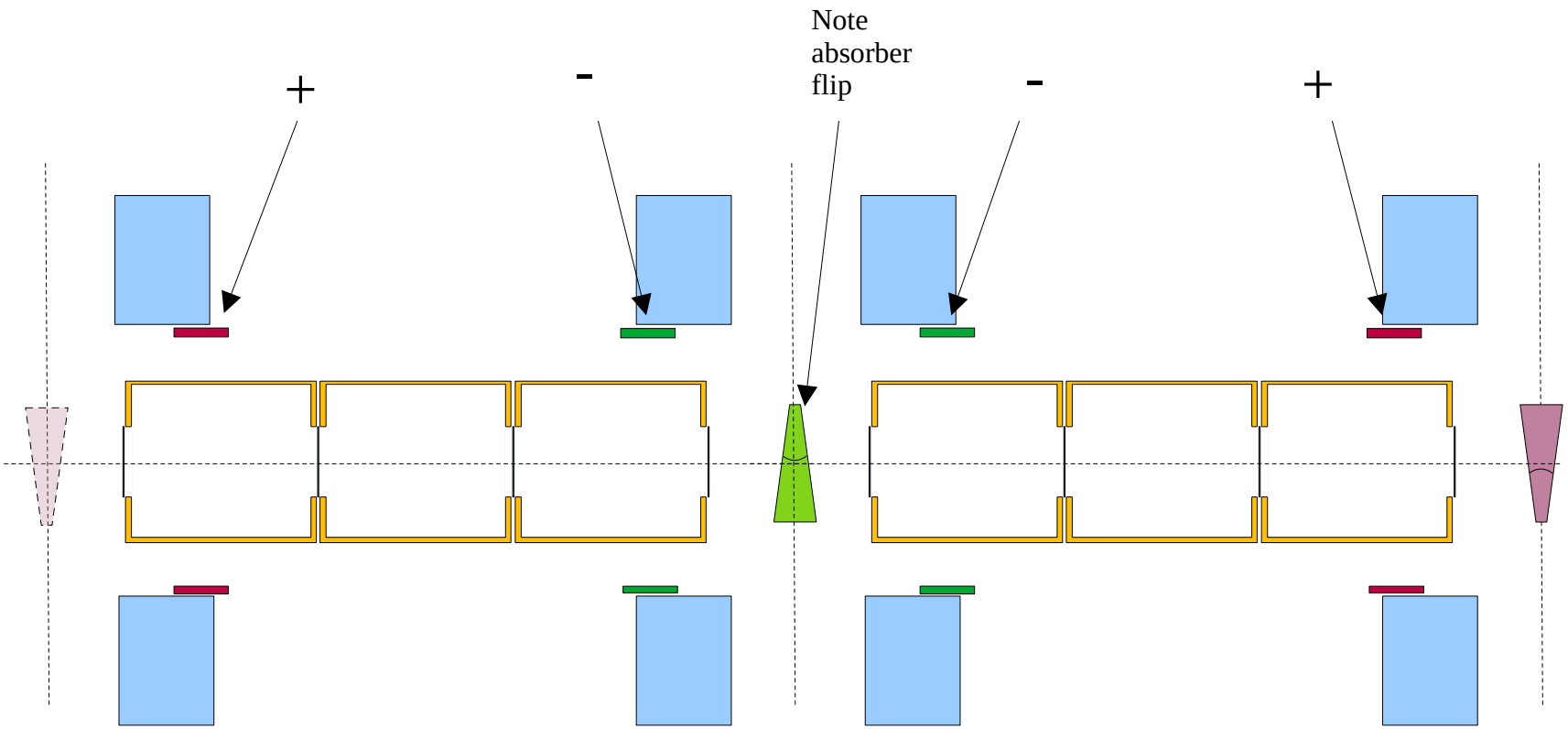
Schematic – one (half) cell



Schematic – one (half) cell



Absorber material

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, E0	30 MV/m
Iris radius	81.6 mm
Number of RF cells	3
Frequency, f	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

***Solenoid field on axis defined by 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)**
**** Field on axis in RF cavity defined by E = E0 sin(2 pi f t + phi); adjacent cavities have phi offset by 180 degrees**