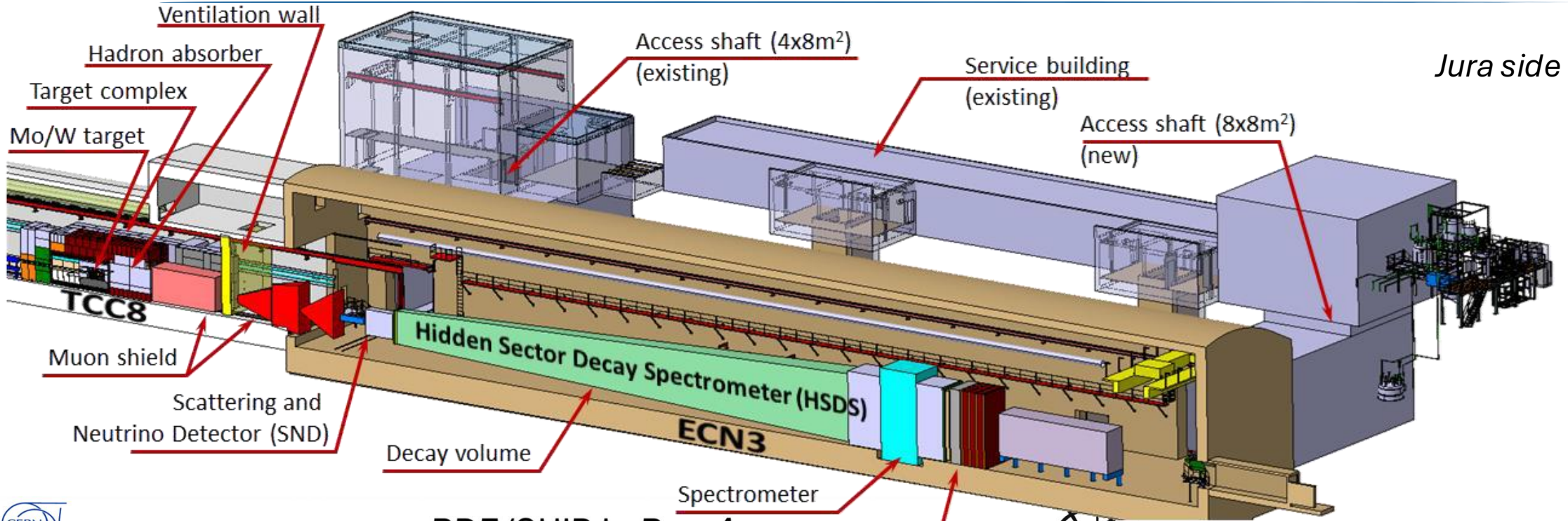
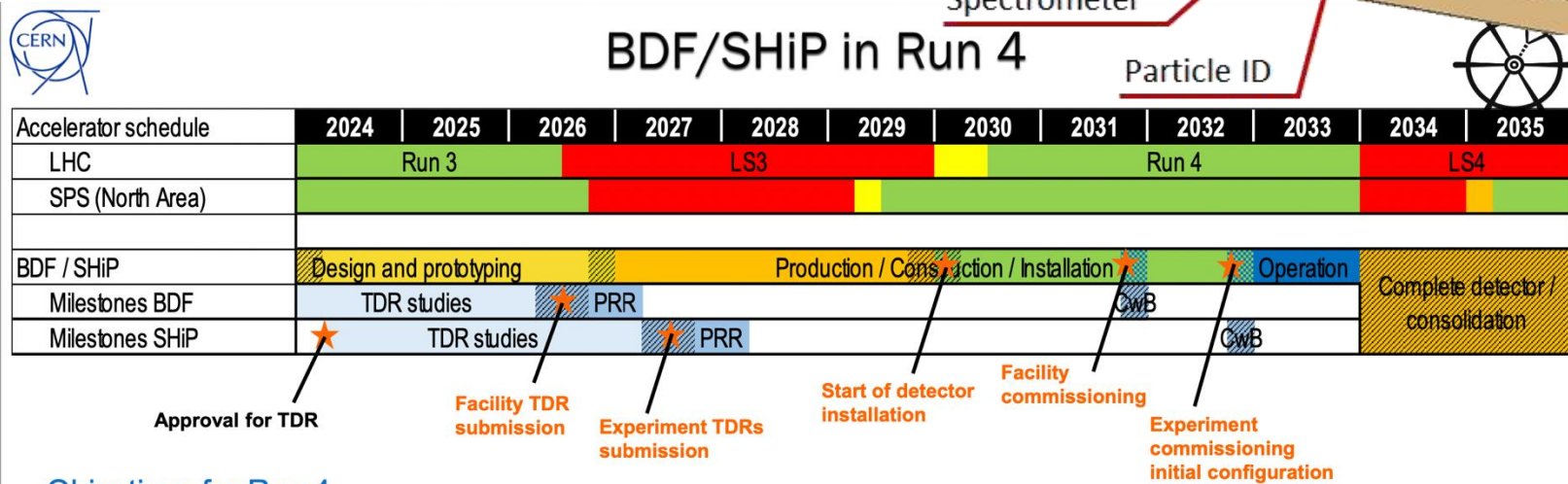


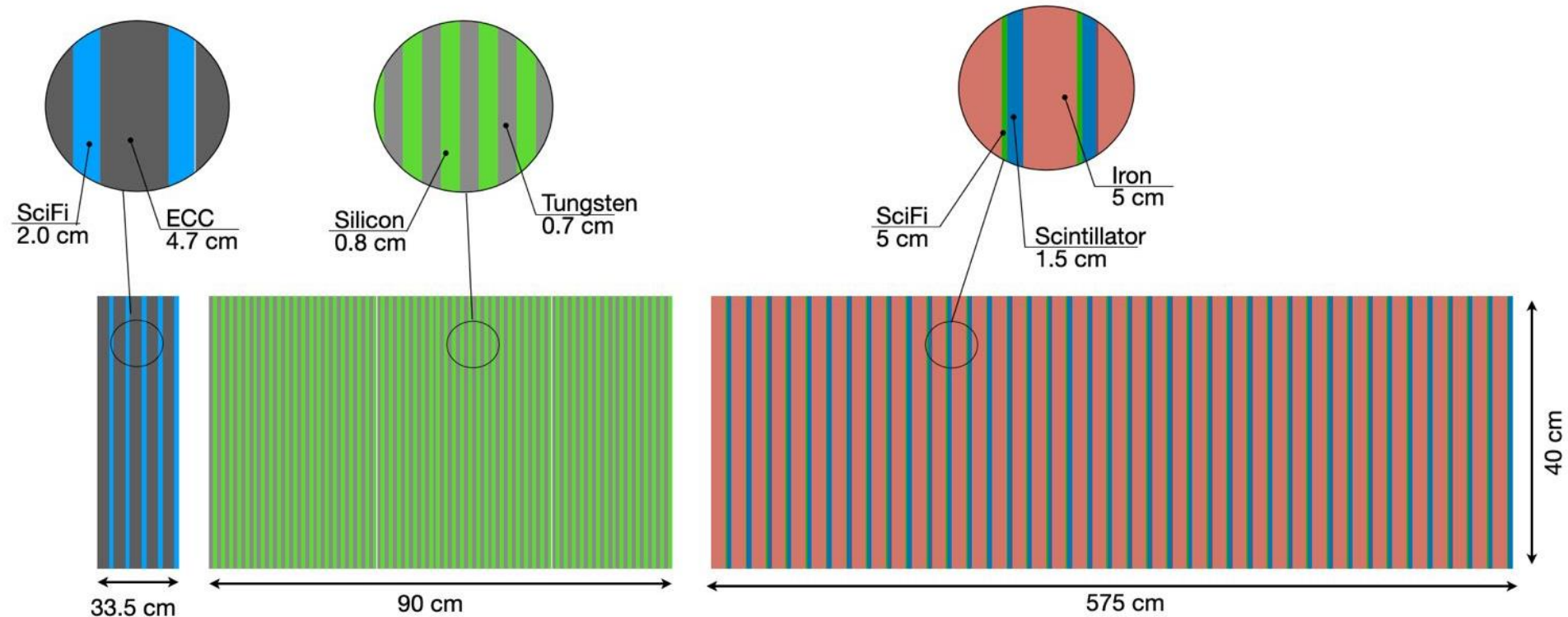
Towards an optimised SND configuration



BDF/SHiP in Run 4



Detector concepts

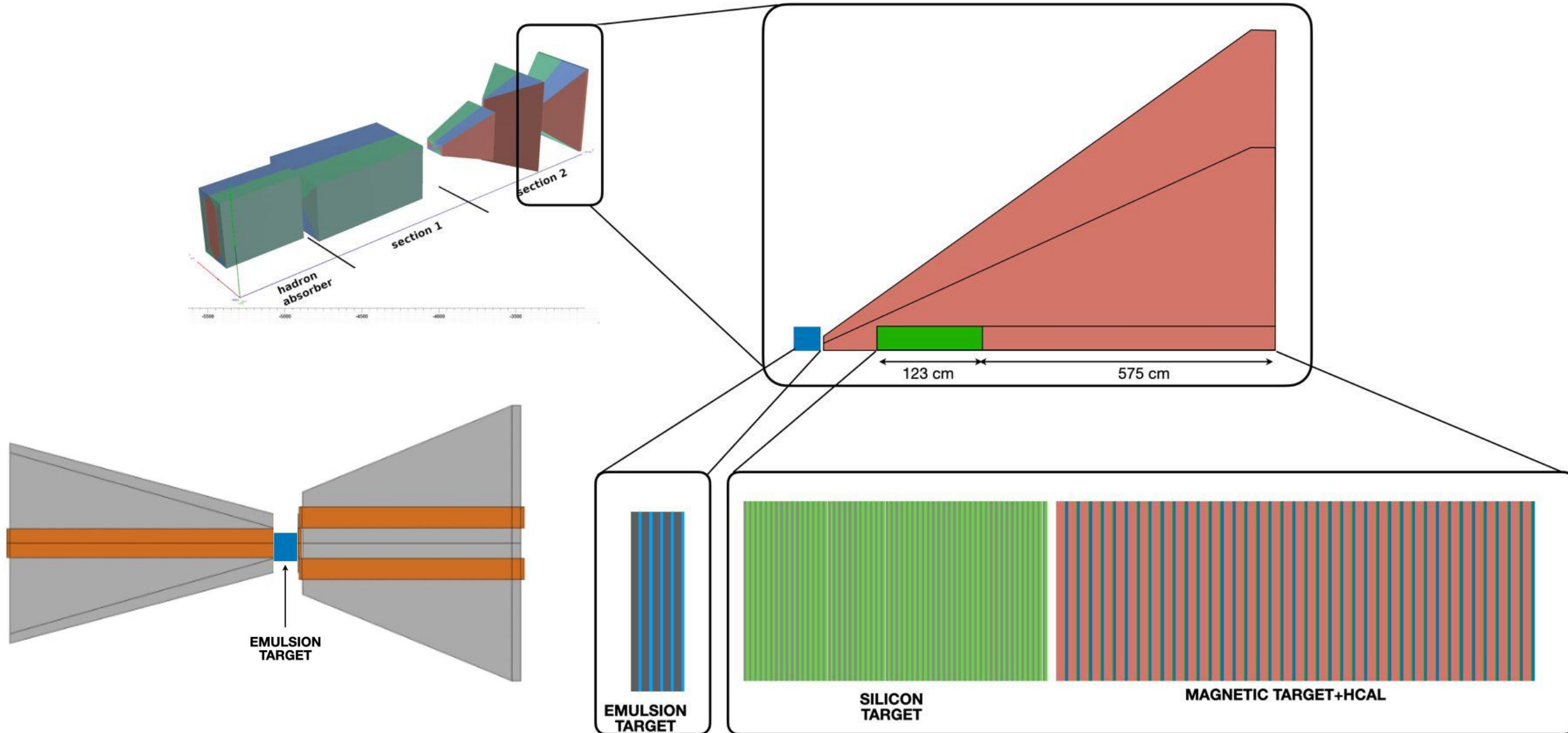


EMULSION TARGET			
ECC	5	Tungsten	180
		Emulsion	180
SciFi	5		
Weight	0.5 ton		

SILICON TARGET	
Tungsten	60
Silicon	60
Weight	1.2 ton

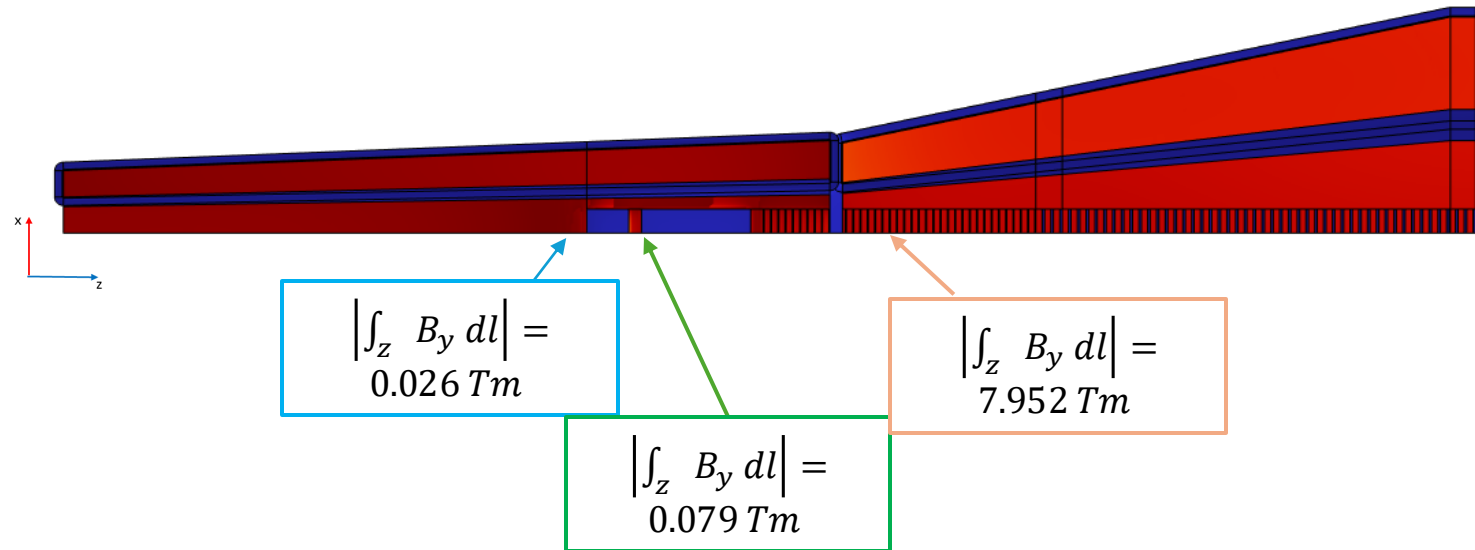
MAGNETIC TARGET+HCAL	
Iron	50
Scintillator	50
SciFi	50
Weight	3.1 ton

Possible configuration inside the muon shield

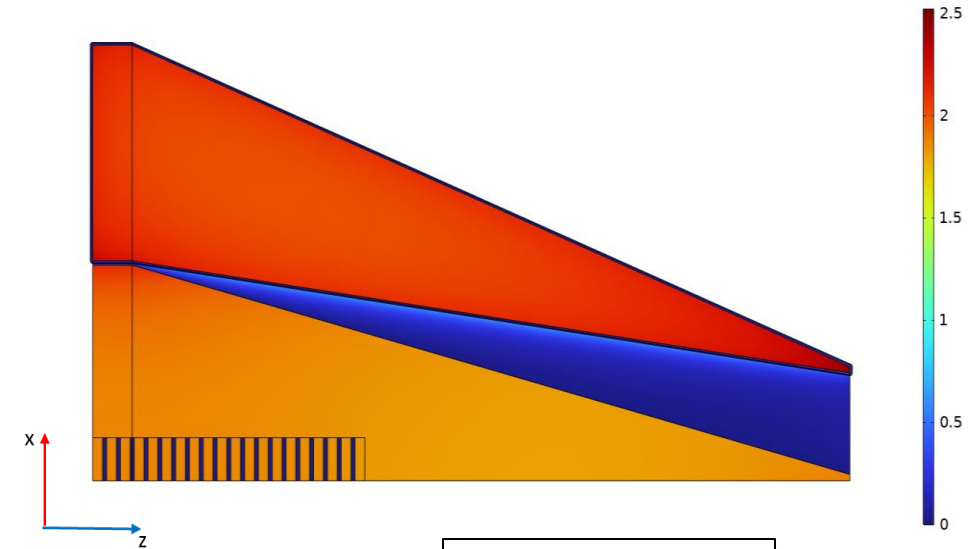


Electromagnetic studies (Naples group)

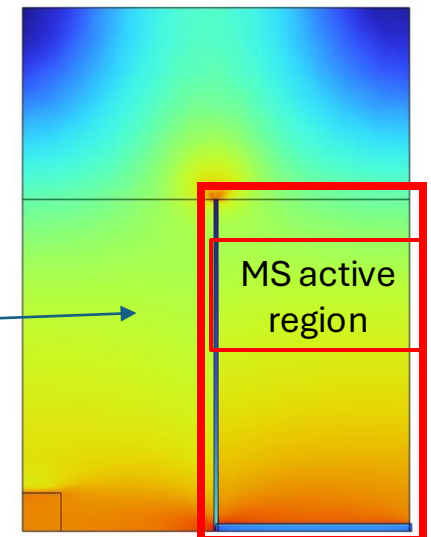
Instrumenting the inner (on axis) part of the muon shield



|B| Magnetic flux density - modulus [T]



Downstream view



$N * I$ (magnetomotive force)	[kAturns]	53.6
$\langle B_y \rangle$ in the active region (iron leg)	[T]	1.678
$\left \int_{z-length} B_y dl \right $ (whole magnet)	[T*m]	6.371

Other aspects to be studied

- Thermal map of the magnet (not critical, far from the coils)
- Need to address the following points:
- Services to host a detector
- Mechanical: how to access/maintain the detector planes
- **Environmental radiation**
 - Muon-induced radiations
 - Neutrons and neutral hadron flux
 - Gamma flux

