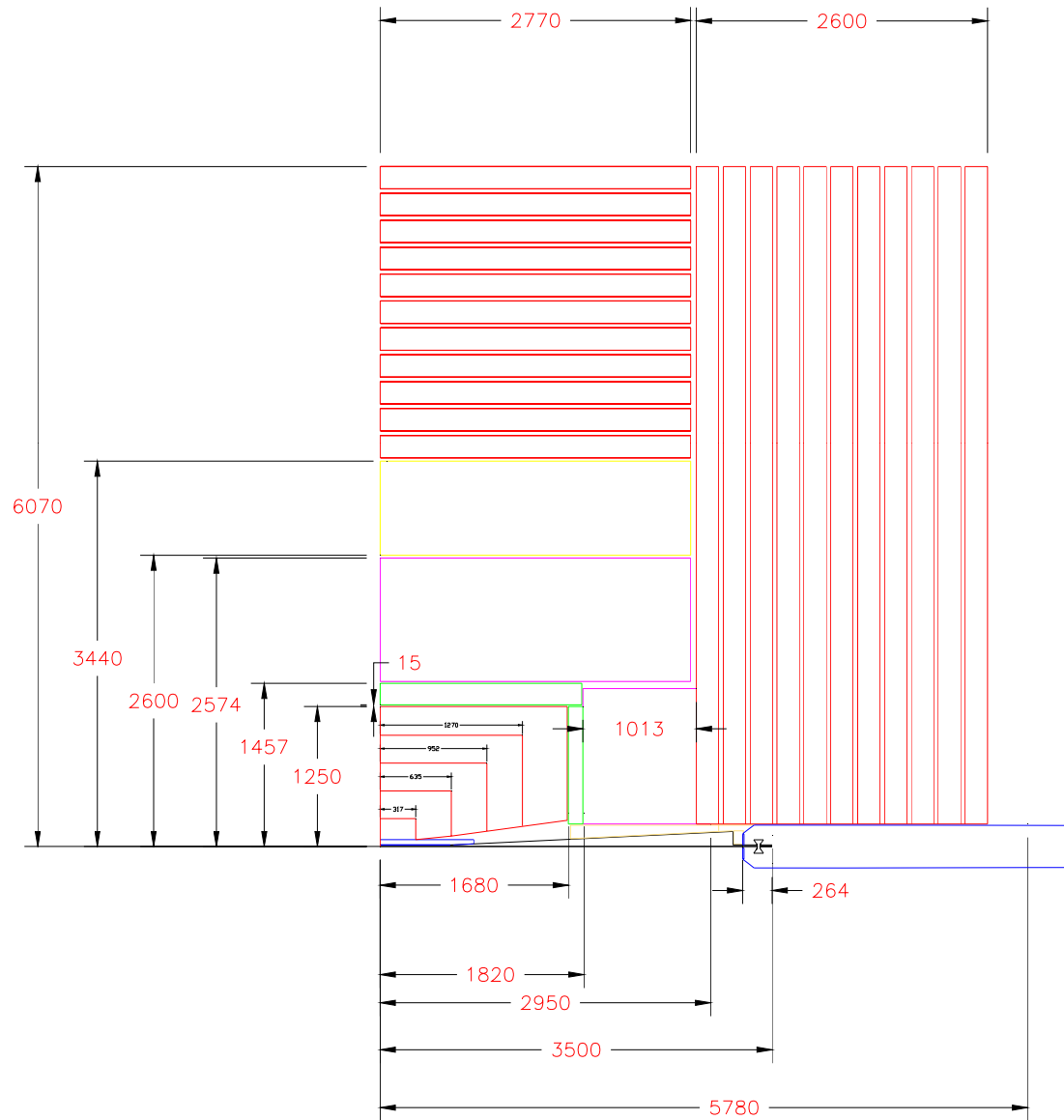
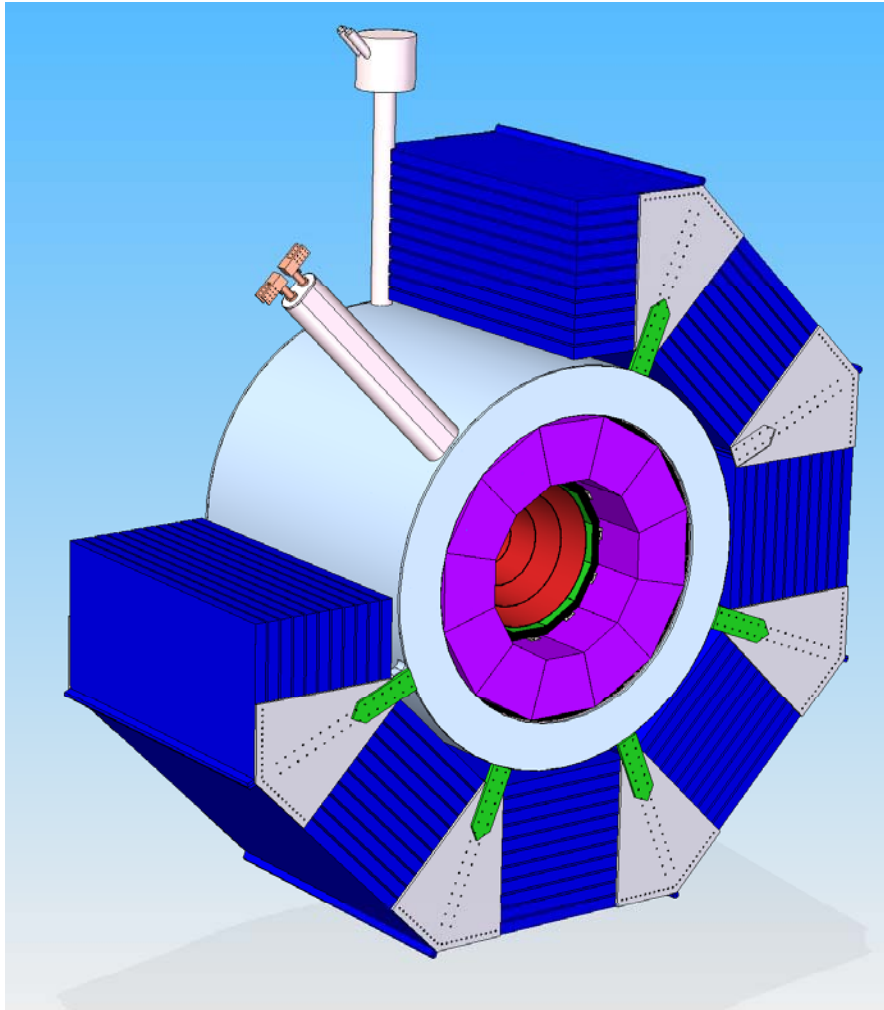


Iron barrel

Parameters



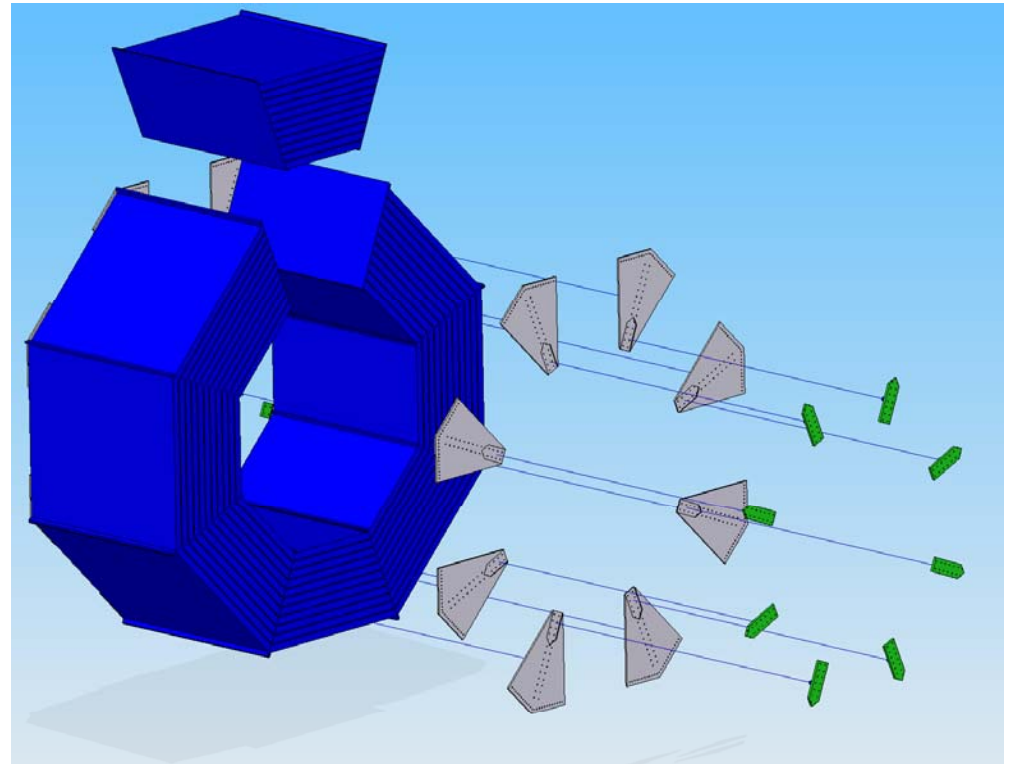
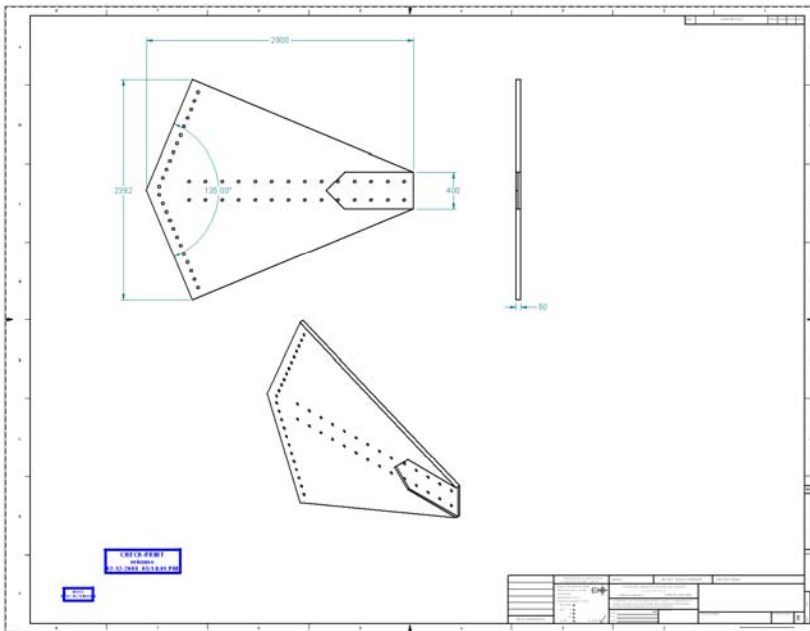
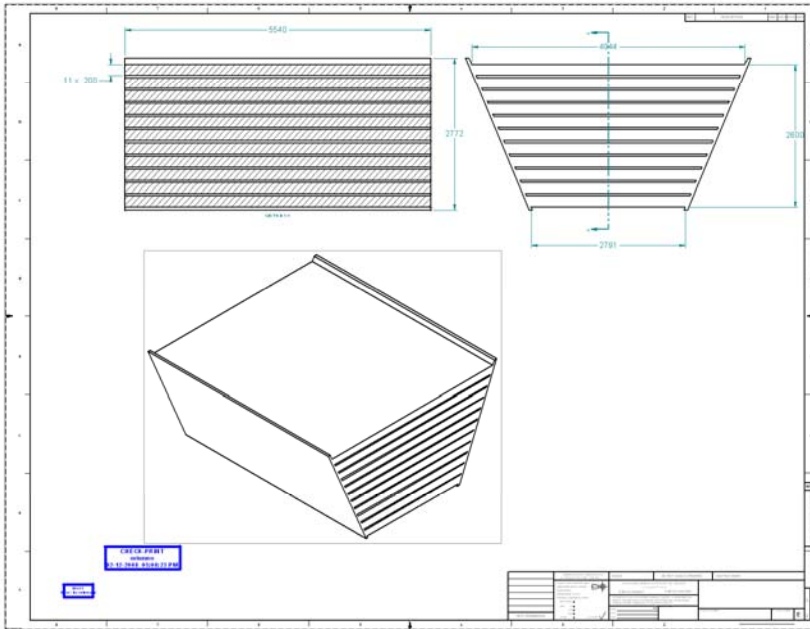


Comments :

1. The chimney run through notches in the iron
2. Which is the effect on the magnetic field ?
3. It is still possible to imagine one single large chimney for both cryogenics and current leads *a la* BABAR
4. The notch effect would be more dramatic

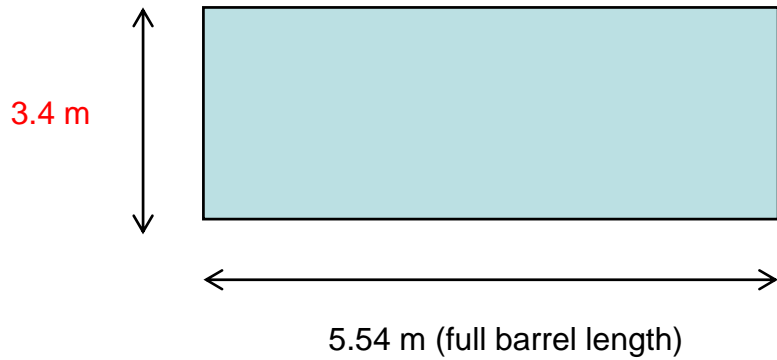
A FEM study of the above mentioned effect would be useful

Barrel iron layout

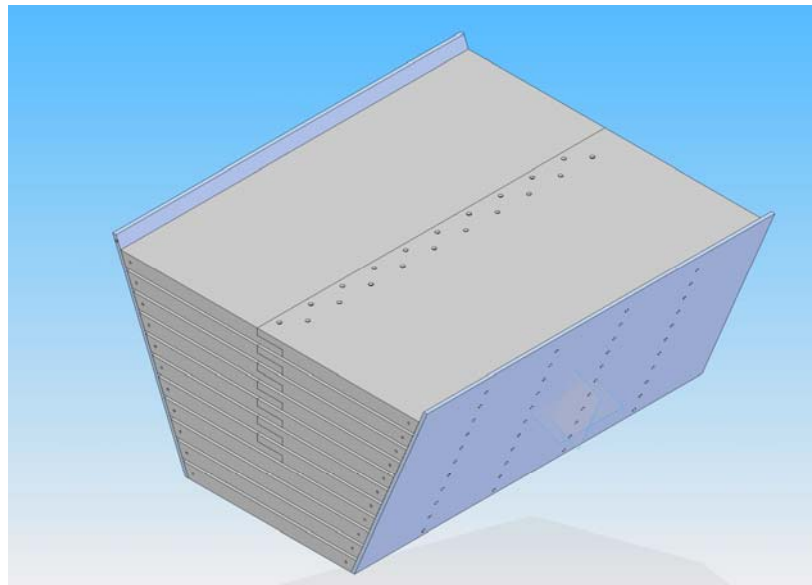


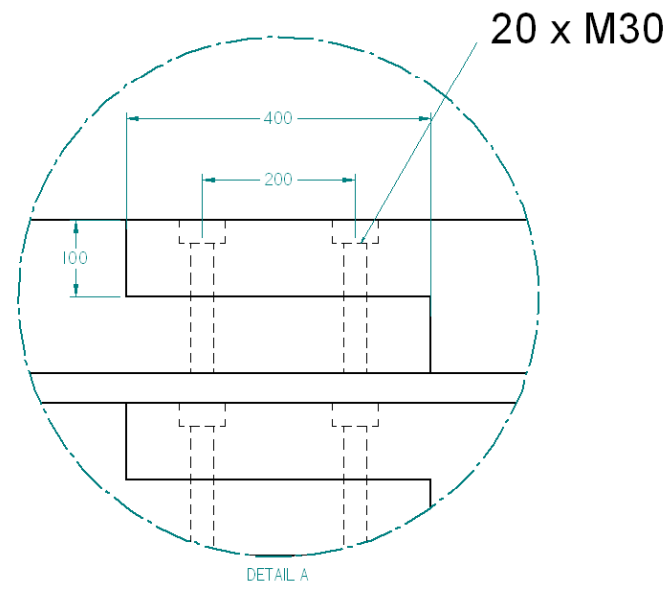
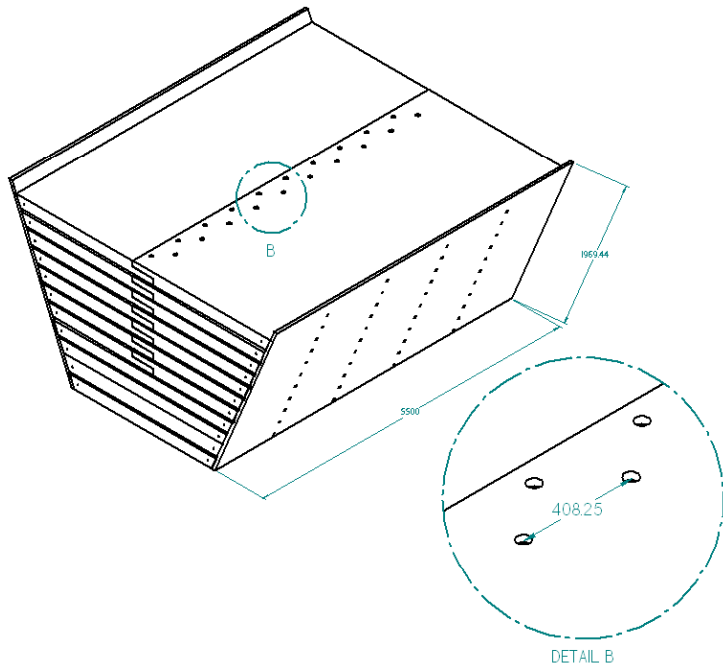
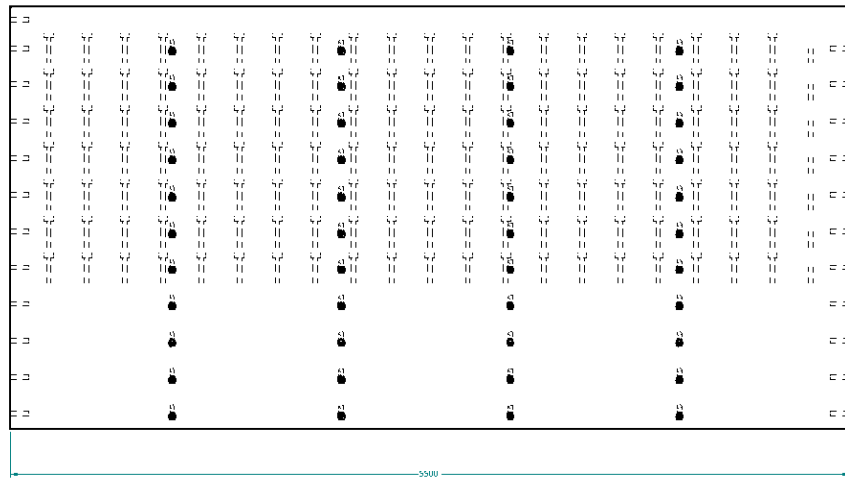
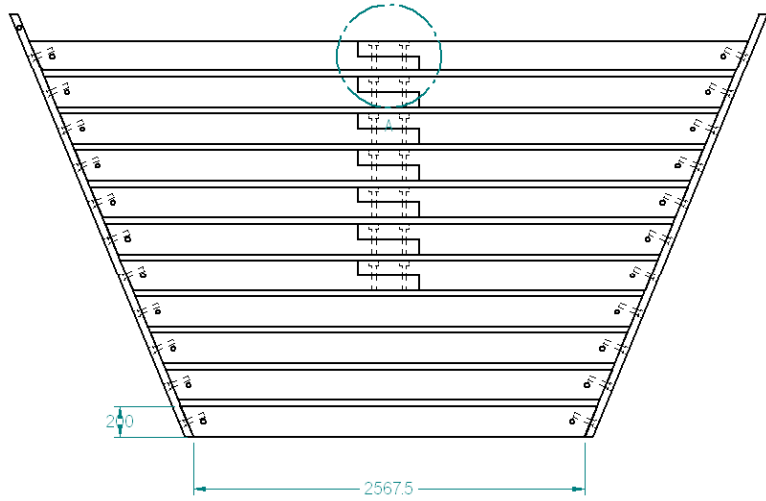
Continuous cast steel plate, t=200mm

Max size available



	Width (mm)	Length (mm)	Thickness (mm)	Weight (tons)
Layer1	2,650	5,540	200	23
Layer2	2,849	5,540	200	25
Layer3	3,048	5,540	200	26
Layer4	3,247	5,540	200	28
Layer5	3,446	5,540	200	30
Layer6	3,644	5,540	200	31
Layer7	3,843	5,540	200	33
Layer8	4,042	5,540	200	35
Layer9	4,241	5,540	200	37
Layer10	4,440	5,540	200	38
Layer11	4,639	5,540	200	40





Comments :

Loads under the magnetic field : around 10'000 tons from the doors plus barrel contraction

First hand calculations give values with safety margin. Load are considered equally distributed on the layers

We need to assume the real loads and their application point

Include the barrel and the doors geometry in the FEM

Consider the seismic constraints on the design

Include the design of the arches : full 2π geometry vs. feets underneath ?

Include the cryo-chemneys notches-> low priority

