

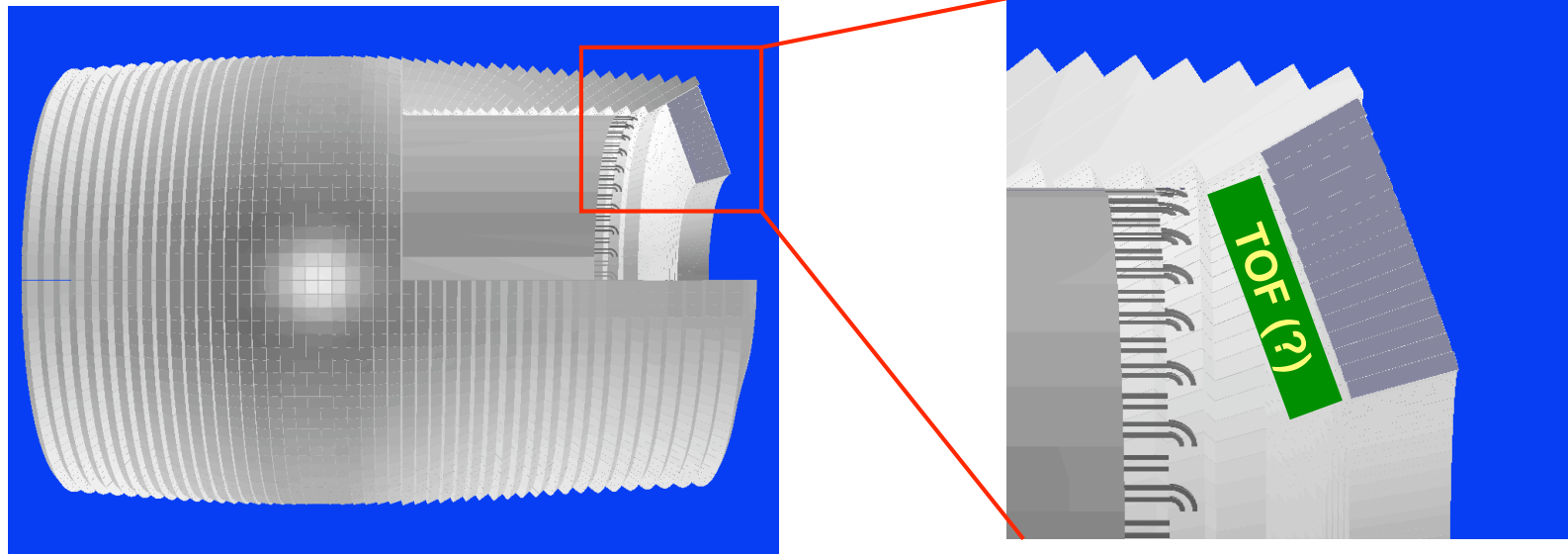
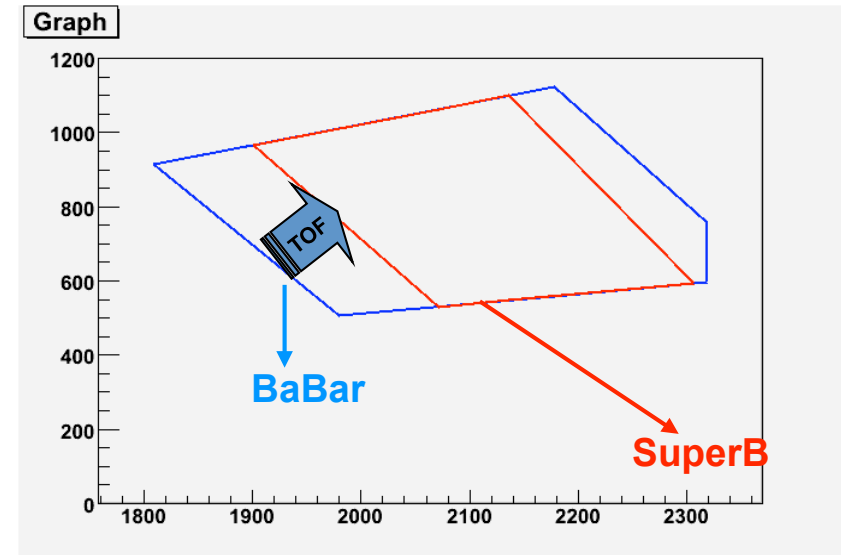
# **DGWW: first design for EMC**

Claudia Cecchi  
for the EMC group

# General remarks

- **Definition of detector configuration for the study of benchmark channels to be studied with Fast Sim.**
- **Main point of discussion and to be studied: yes or not forward PID**

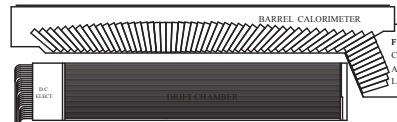
**20cm long LYSO crystals will leave space for the forward PID.**



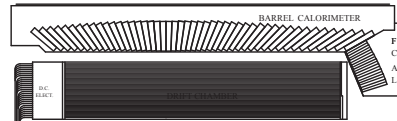
# Best solution for EMC

- **LYSO not back of 10cm → bigger volume (+10% cost!), alignment edge barrel/endcap could present problem of performance**
- **material in front of EMC if PID**
- **First approximation for physics study: LYSO aligned with barrel (see next slide)**
- **Second step study effect of backward calorimeter**

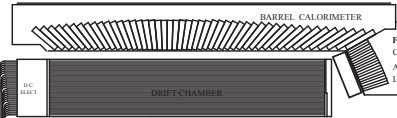
# Different configurations



BABAR configuration

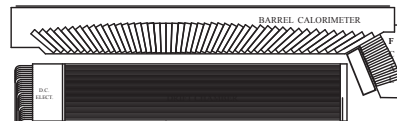


LYSO no PID

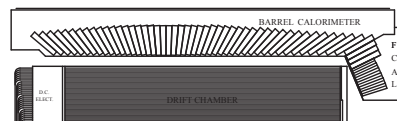


LYSO 10cm PID

} Compare configurations



**X** LYSO moved back, 10cm PID



CsI(Tl)+LYSO no PID

Consider only if financial constraints are severe

D. Hitlin

# Technical remarks

- **We can provide xml description of the different configuration we need to implement, or equivalent information (material, geometry, resolution....)**
- **Will produce analysis procedure according to the geometry under study**
- **Which is the timescale to produce xml files (if this is done by subdetector people)?**

# Benchmark channels

## Perugia:

- $B \rightarrow K^* \nu \nu$
- $B \rightarrow T \nu$

## Caltech:

- **b to s gamma - high hadron multiplicity and a range of photon energies**
- **tau to lepton gamma - high energy photon and PID**
- **tau to three leptons - strong exercise of PID**