Short summary of the Orsay meeting about the forward PID – forward EMC interface

Frascati SuperB workshop, December 2nd 2009

Nicolas Arnaud (LAL-Orsay)

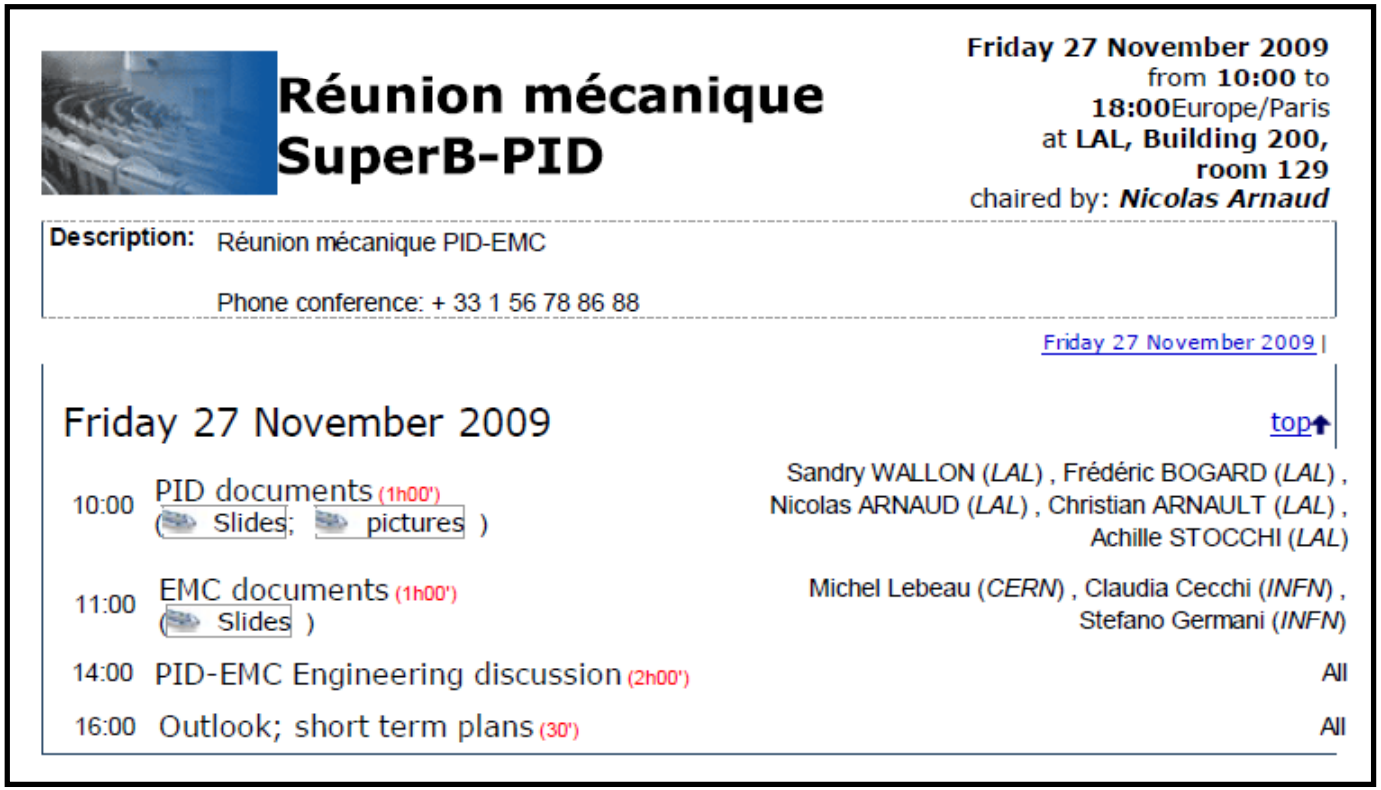
- Indico webpage of the meeting: http://indico.lal.in2p3.fr/conferenceDisplay.py?confId=926
- Meeting held last Friday (2009/11/27) at LAL-Orsay
- Attendance: NA, Frédéric Bogard, Sandry Wallon (LAL-Orsay)
  Stefano Germano, Michel Lebeau (Perugia)
- Main goals: establish contact between groups; identify major problems (if any);
  define a common work strategy to move forward ☺

Meeting agenda

- Introduction (NA)
- Pictures from current mechanical design for 'DIRC-like' TOF (Frédéric + Sandry)
- Summary of EMC Geant4 simulations (Stefano)
- Status of the forward EMC design (Michel)

Lunch

- Engineers' discussion followed by a short summary



Réunion mécanique SuperB-PID

Friday 27 November 2009
from **10:00** to **18:00**Europe/Paris
at **LAL, Building 200, room 129**
chaired by: ***Nicolas Arnaud***

Description: Réunion mécanique PID-EMC

Phone conference: + 33 1 56 78 86 88

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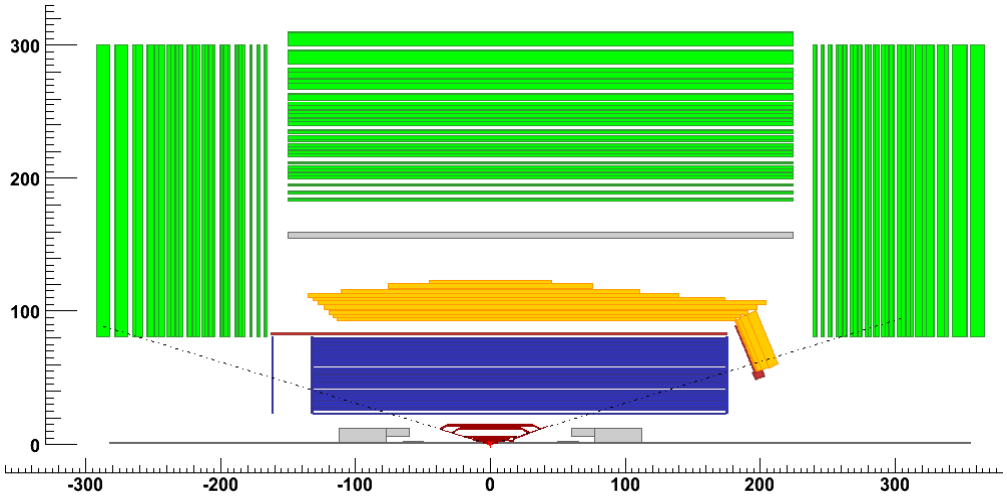
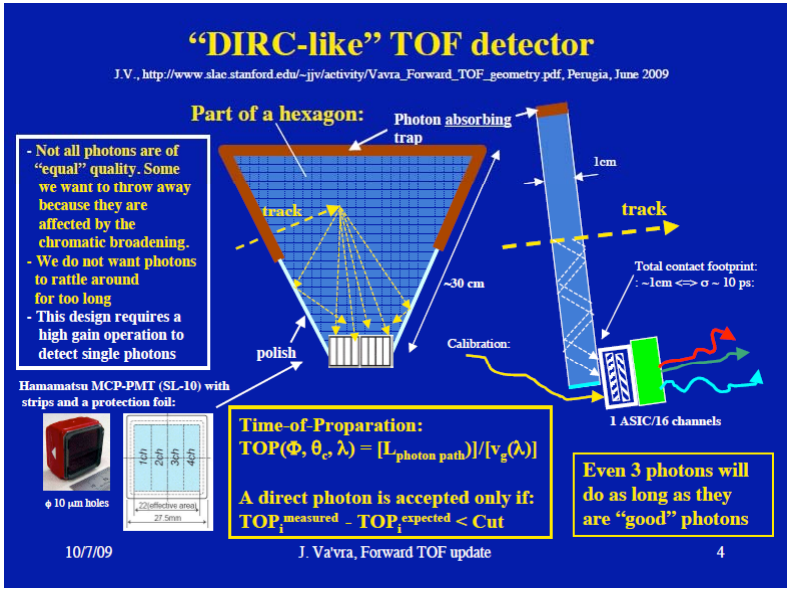
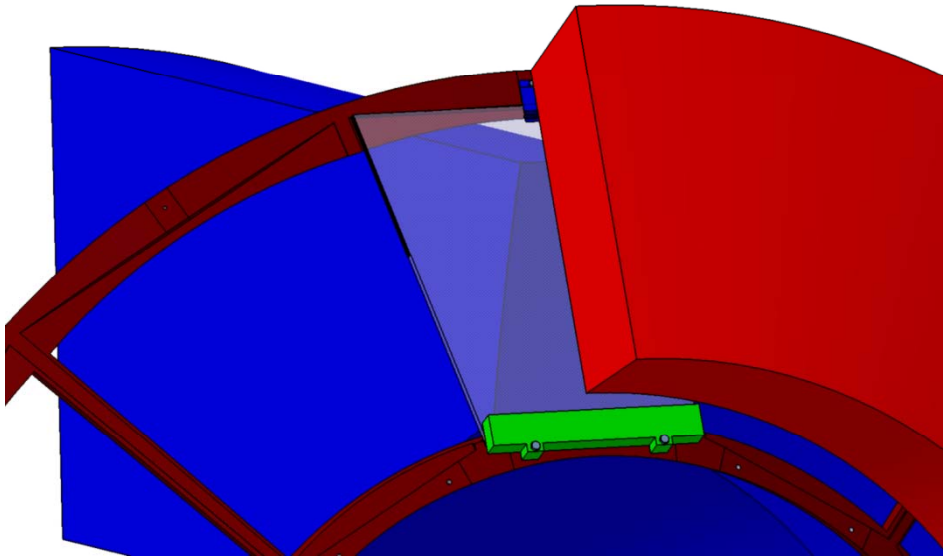
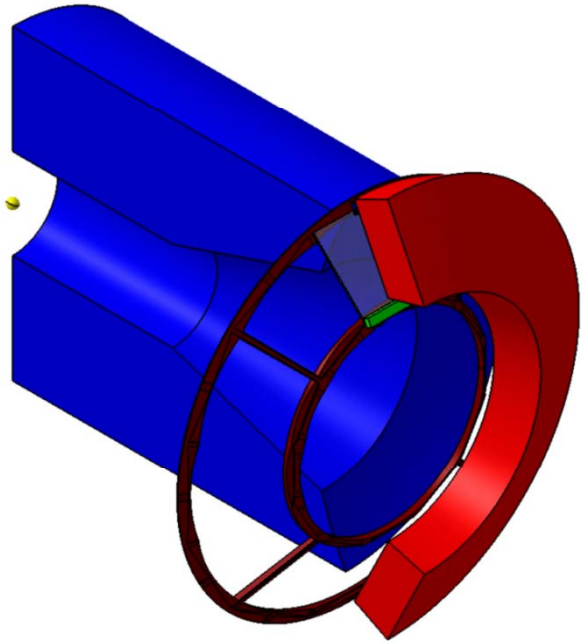
10:00	PID documents (1h00') (Slides; pictures)	Sandry WALLON (*LAL*) , Frédéric BOGARD (*LAL*) , Nicolas ARNAUD (*LAL*) , Christian ARNAULT (*LAL*) , Achille STOCCHI (*LAL*)
11:00	EMC documents (1h00') (Slides)	Michel Lebeau (*CERN*) , Claudia Cecchi (*INFN*) , Stefano Germani (*INFN*)
14:00	PID-EMC Engineering discussion (2h00')	All
16:00	Outlook; short term plans (30')	All

‘DIRC-like’ TOF Detector

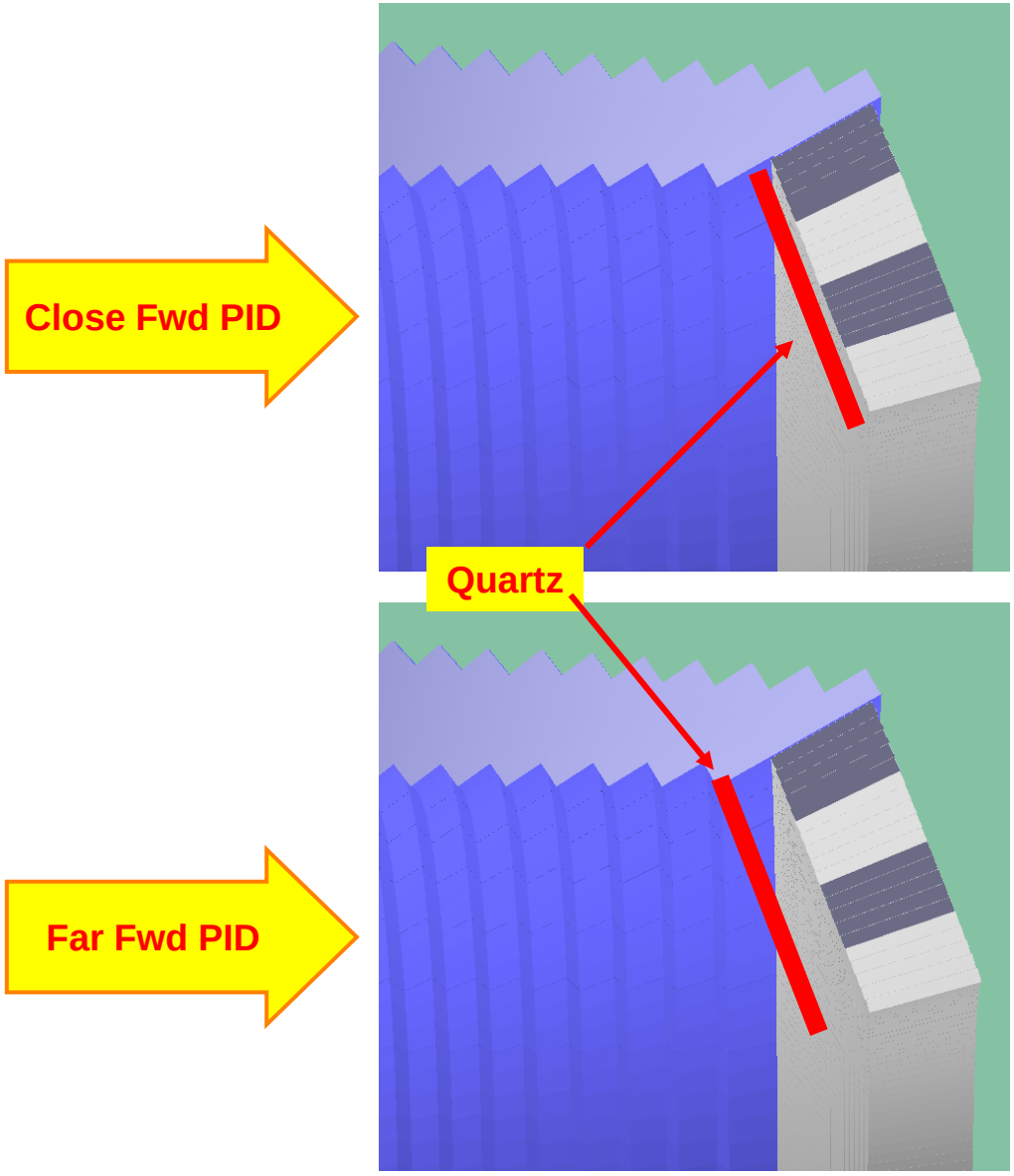




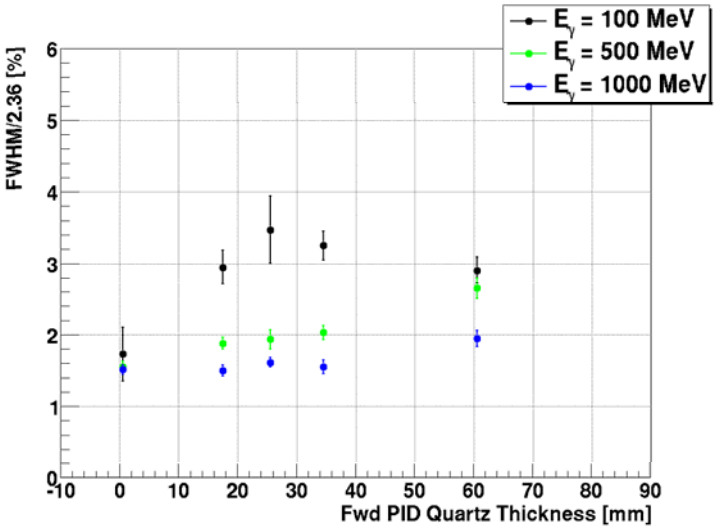


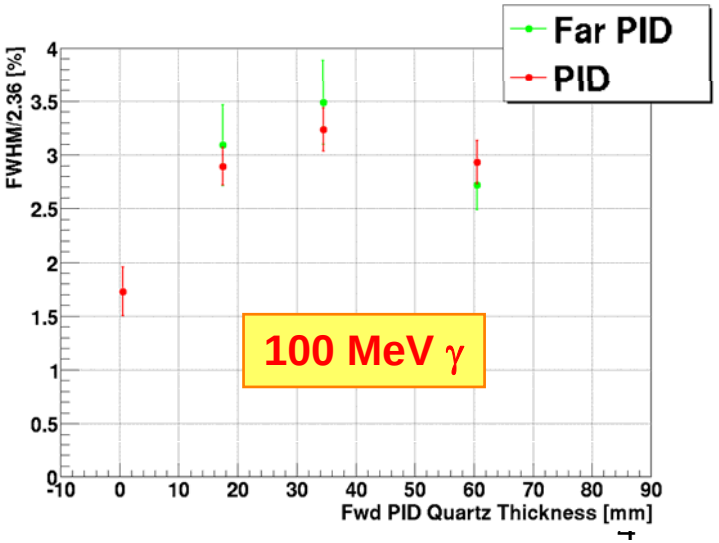


EMC Geant4 Simulations



Resolution vs. quartz thickness





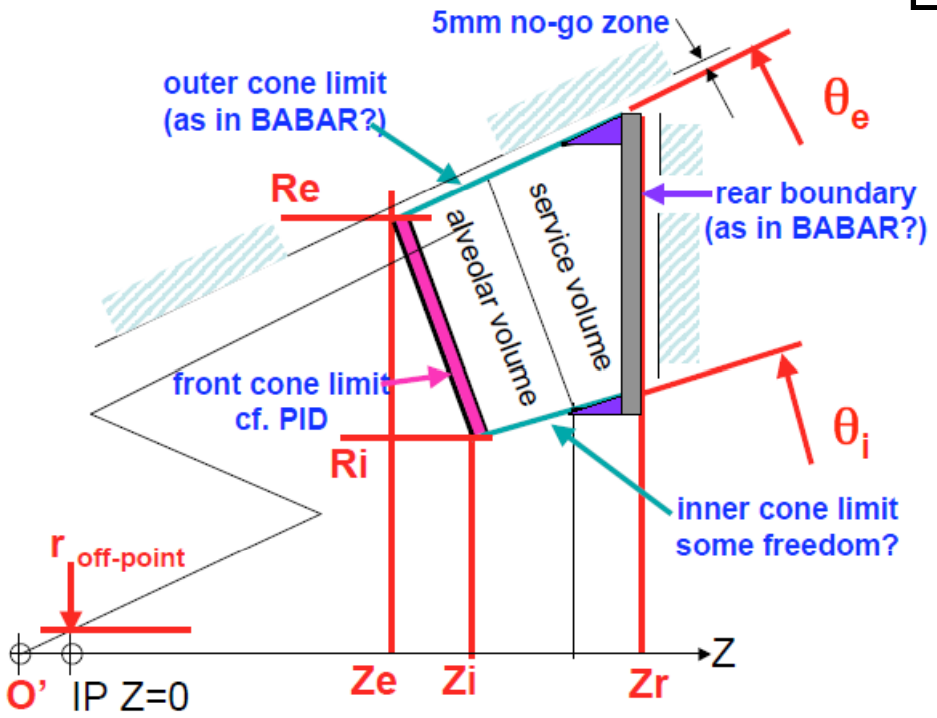
Photons close to forward EMC ‘center’

Forward Calorimeter Design

- Michel Lebeau addressed several topics:

Summary

1. EMC crystal array
2. Support structure
3. Alveolar modules
4. Prototype module
5. EMC boundaries
6. Babar barrel-endcap transition
7. Installation tooling (re-use of Babar's)
8. EMC space for services



Outcome of the Engineers' Discussion

- No showstopper identified
  → 'DIRC-like' TOF detector very light and mechanically simple.

- Agreement on a possible PID-EMC interface design on the forward side
  → Sandry and Frédéric are updating their design accordingly.

- Status report next week at Perugia group meeting by Michel Lebeau
  → If no problem found, design will be made public.

- Forward EMC current priority is to prepare a prototype for beam test early next year
  → PID should provide them a piece of quartz to be put in front of the crystals in order to check the results of the Geant4 simulation.

- Little manpower on both sides
  → Working together to optimize ressources is really the way to go.