Laboratoire d'Annecy-le-Vieux
de Physique des Particules

Mechanical structure for the 1m^3 prototype

DHCAL meeting

– LLR –
19 janvier 2009

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

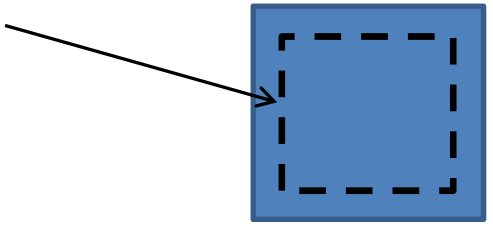
IN2P3
INSTITUT NATIONAL DE PHYSIQUE NUCLÉAIRE ET DE PHYSIQUE DES PARTICULES

UNIVERSITE CHAMBERY ANNECY SAVOIE

Specifications for the 1m^3 prototype

- Required « active » area ?

  1m x 1m ?



- How many layers ?

  40 layers ?

- Thickness of the absorbers ?

  20mm ?

  Is it allowable to have thinner absorbers for Micromegas chambers ?
  (chambers are constituted with 2x2mm stainless steel)

Specifications for the 1m^3 prototype

- Absorbers made of Steel or Stainless Steel

  Depending if the Hcal is used in a magnetic field

- Distance between absorbers ?

  RPC's thickness ≠ Micromegas' thickness

  Is it possible to have a varying distance ?
  if chambers are improved in order to decrease the thickness or
  if other detectors are inserted (like scintillators….))

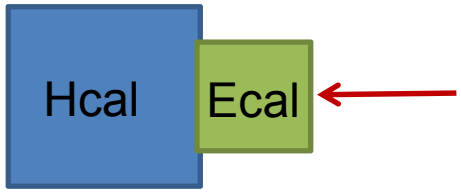
Thought for the 1m^3 prototype

- Possibility to realize 2 half-Hcal

  (if the mass is considered too big)

- The absorbers planes situated on the 2 extremities of the calorimeter must be free from other mechanical structure

  (in order to couple an ECAL with the HCAL)



- Is an extra mechanical assembly useful for the chambers to be inserted

  (maybe difficult to insert manually ?)