

Mechanics cocktail

RC

EVO meeting 30/10/08

Kapton HV : who's who

- Ideas from Marc, Patrick, Aboud, Dominique, Julien, Jean-Luc and Rémi
- Now contact person is Patrick, mechanical dimensions to be checked with Marc

Kapton HV : long slab

- 2 designs each with some options

- Flag shape

- 7 different flags
 - Better usage of raw material
 - Flag cut or not (if not : ASU to be tested without HV...)
- Unique design
 - ASU not assigned to a position
 - Individual tests of ASUs with cosmics
 - Better stock management (unique version of the flag)
 - Compatible with short slabs

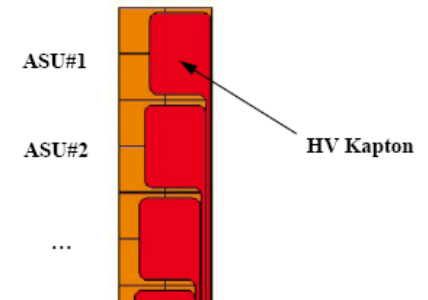
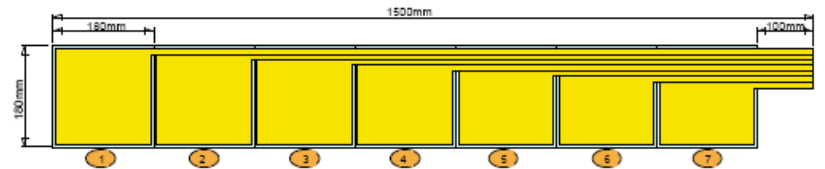


Figure 6.9 – HV kapton with "flag" shape

- Big rectangle

- 'B' plan
- Tests of gluing
- 3 designs (ways to calibrate the glue) : grooves, pads and grid
- With or without glue

More options :

Variable width of the ribbons : constant resistance

Single/double copper layer : HV decoupling cap

Kapton HV : long slab

- Baseline :



CU 17.5 + NiAu
KAPTON 25u
CU 17.5 + NiAu
COVERLAY +COLLE 50i
=110u

- 2 copper layers to implement the decoupling cap
- 7 different flags (ask for price with or without cuts)
- (ask for price of the single flag design)

- Pcs : 6 sets of 7 flags (2 long slabs + spares)
 - Few more for un-glue attempts ?

Kapton HV : short slab

- Baseline :
 - Flag shape with a short ribbon
 - Option : mixed design with short ribbon + unique flag for long slab (optimization of raw material usage in the case of unique flag for long slab)
- Pcs : ~42 (14 short slab + spares)

Kapton : connection at DIF side

- Is there place on the DIF to connect 1 or 7 (double sided) ribbons ?
- On the adapter card
 - Not ILD compatible (but EUDET is not 100% ILD)
 - Best according to actual DIF layout
 - Adapter card outside the structure (it is confirmed ? , if not : only a thickness of 1.2 mm is authorized)
- Two conductors : HV + GND !

DIF : mechanical support

- Cable weight
- Need to hold DIFs in place (What about the adapter card ?)
- External structure but need a room on the DIF
- Bart & Maurice : check with Marc

DIF : cable paths

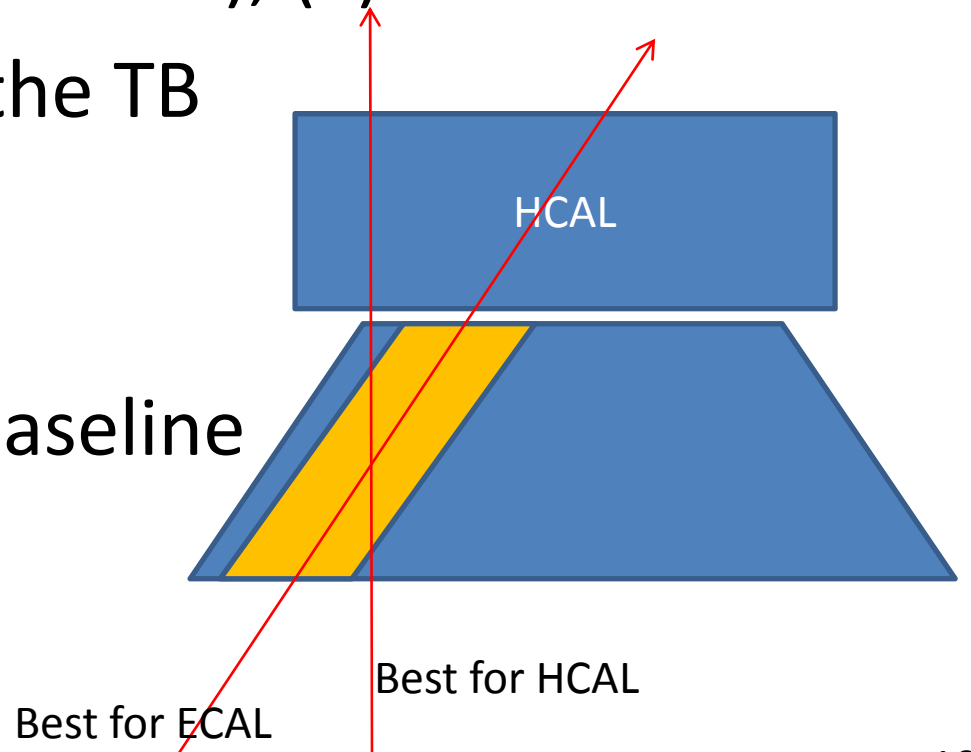
- ?

Adapter board : layout

- Envelope
 - Give feedback to Marc
 - Consistency with actual design
 - Update of mechanical models
- Position and heat dissipation of active and passive (adaptation R) components
 - Give feedback to Denis (quite urgent)
 - for its simulations
 - Cooling needs

Tower issue

- Baseline : no adapters to put every ASU in a perpendicular tower (would need 14 different adapters + alignment issue), (?)
- It has an impact on the TB
 - Position of HCAL
 - Angle to the beam
- Agreement on this baseline
 - All physicists !?



My location at the time of this meeting

