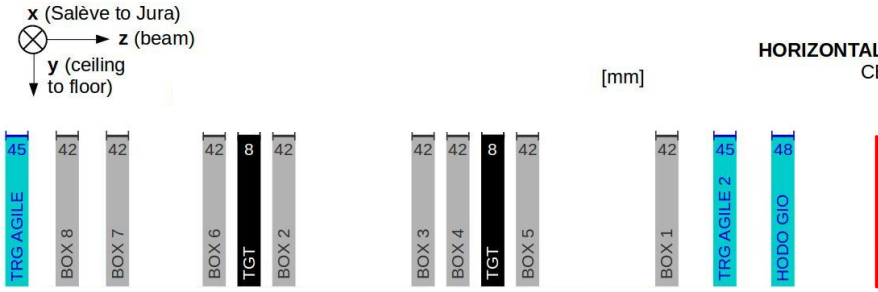
MUonE CALORIMETERS

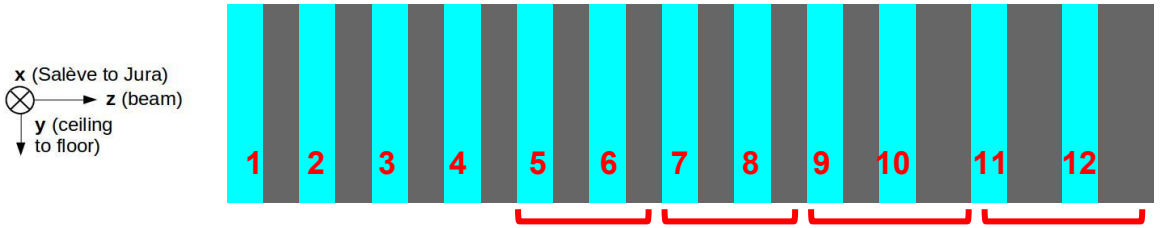


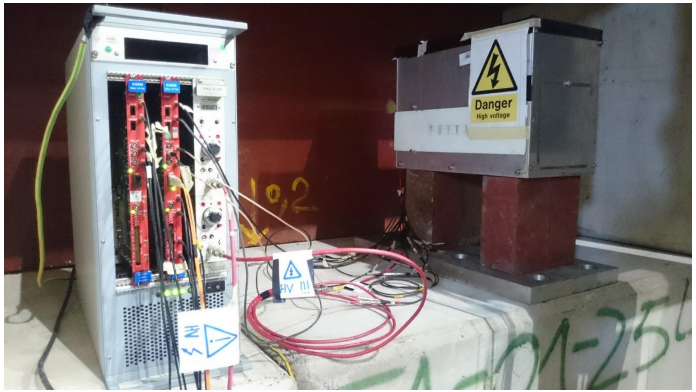
from	to	ASCII	calorimeter
04/04 *(the beginning)*	01/05	300118-300198	DEVA
02/05	22/05	300232-300280	STEFI
23/05	07/06	300290-300304	none *(tb @ T9)*
08/06	...	from 300320 on	GENNI

DEVA (run 300118 to 300198)

- sampling: Pb & plastic scintillator
- longitudinal segmentation: 12 active layers (all 2cm thick) & 11 absorbers (the 3 downstream are 1cm thick, the other 8 are 0.5cm thick) → $13X_0$ in total
- transverse area: $15x15cm^2$
- output: optical fibers → MAPMT (HAMAMATSU R5600-M16 16 anode)
- 12 single layer channels → in the MUonE setup layers are organized into 8 channels this way:

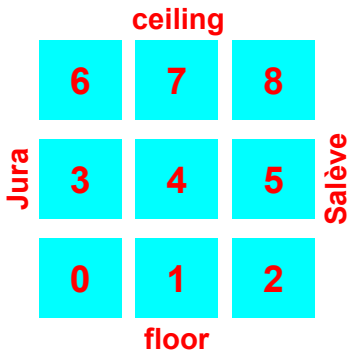
DIGI1 - CH1-8	
1	DEVA 1
2	DEVA 2
3	DEVA 3
4	DEVA 4
5	DEVA 5+6
6	DEVA 7+8
7	DEVA 9+10
8	DEVA 11+12



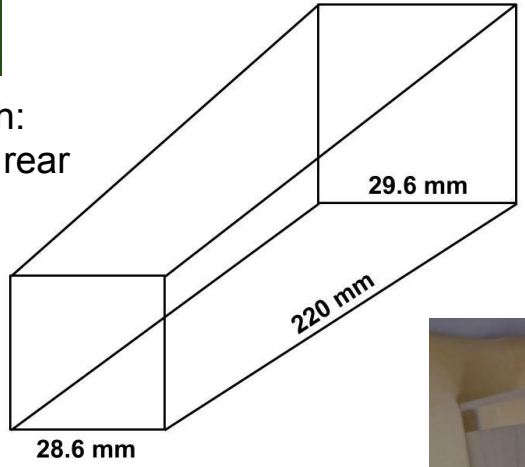


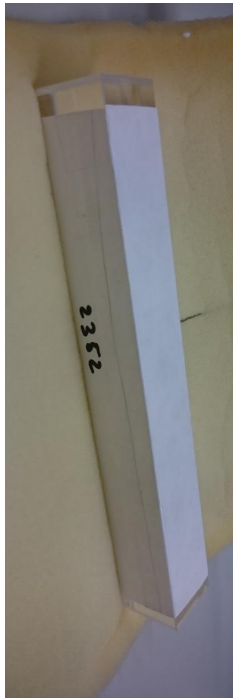
STEFI (run 300232 to 300280)

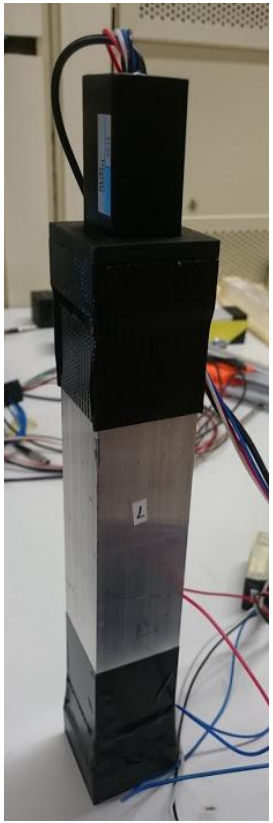
- 3x3 matrix of 9 CMS endcap $PbWO_4$ crystals, each:
  - ⇒ 2.86cm side @ front & 2.96cm side @ rear
  - ⇒ 22cm long → ~24.7 X_0 in total
- Al & plastic mechanical structure
- few mm between channels
  → need for tilted displacement inside his box
- each crystal is coupled to a PMT (HAMAMATSU H6780-03)
- each channel read out individually, in this order:



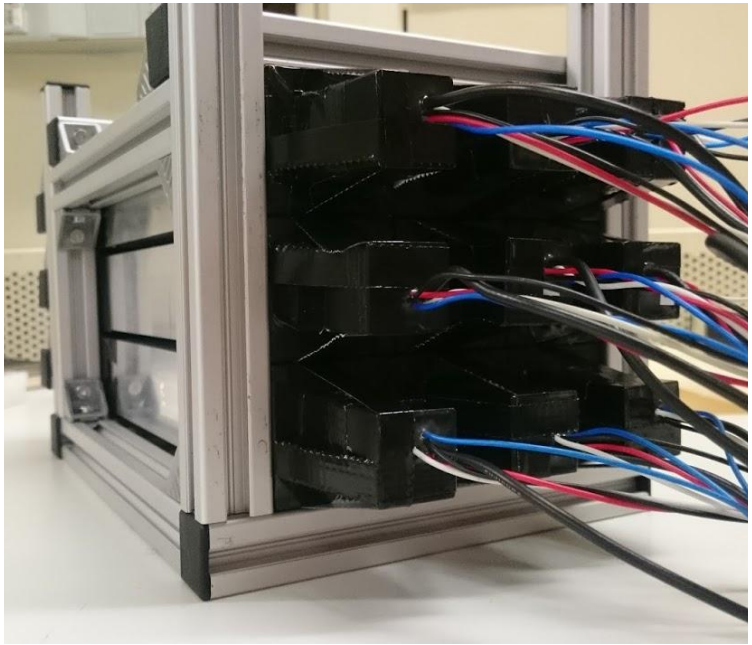
DIGI1 - CH1-8	
1	STEFI 0
2	STEFI 1
3	STEFI 2
4	STEFI 3
5	STEFI 4
6	STEFI 5
7	STEFI 6
8	STEFI 7
DIGI2 - CH9-16	
9	STEFI 8

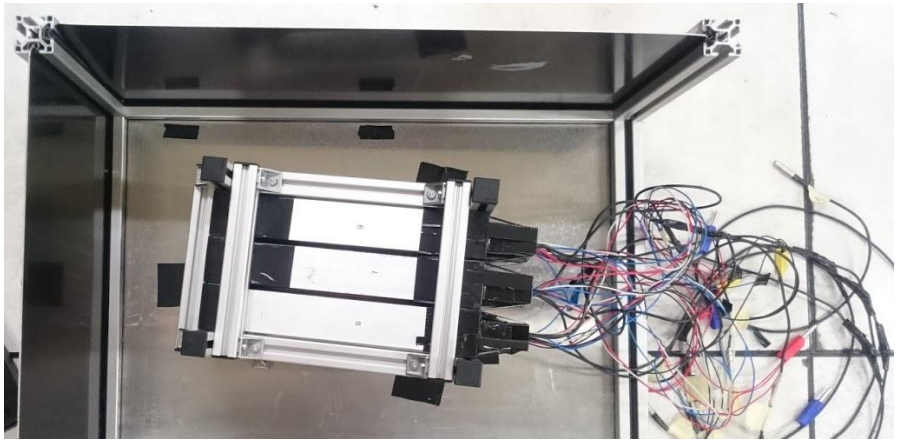




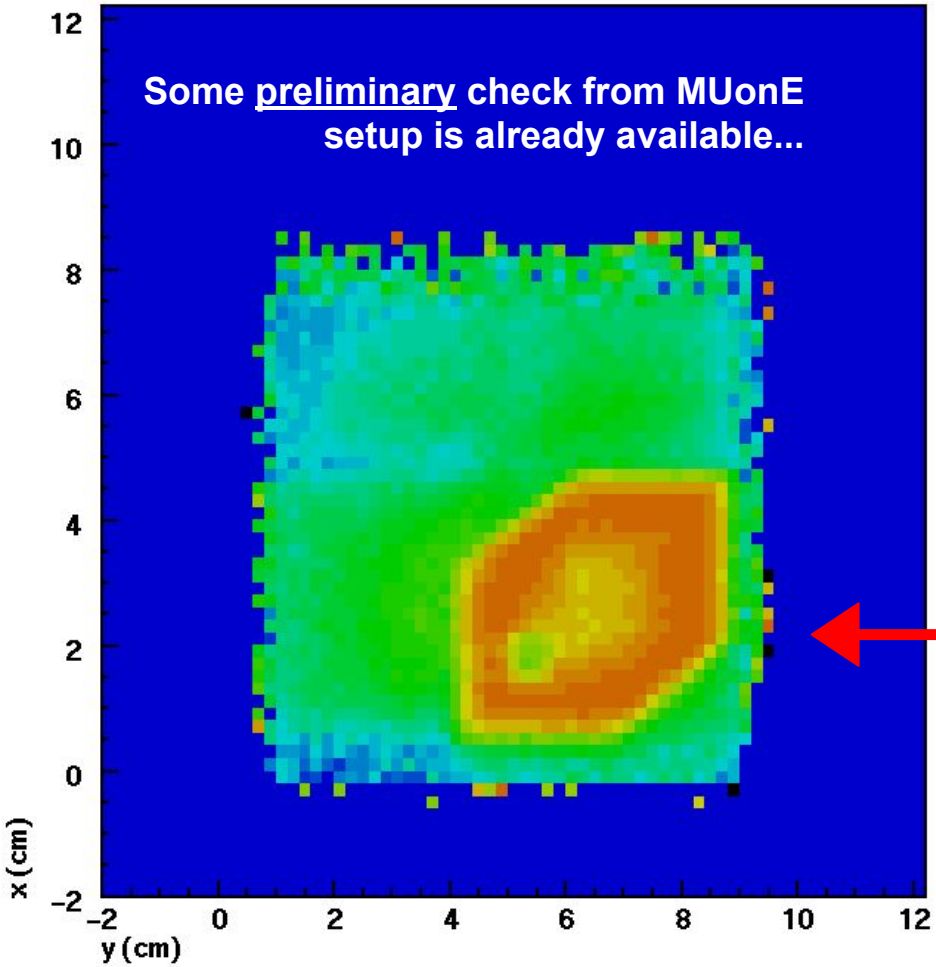


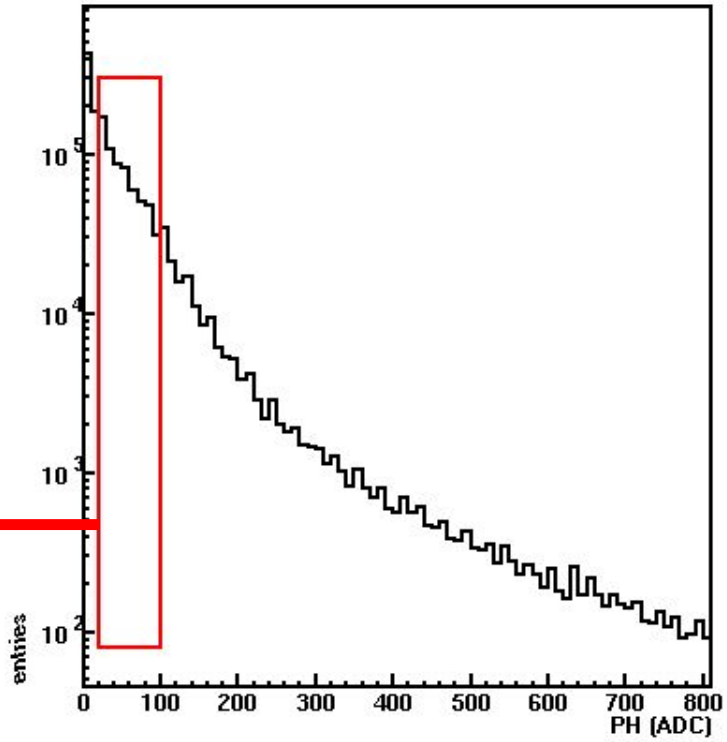
STEFI (run 300232 to 300280)





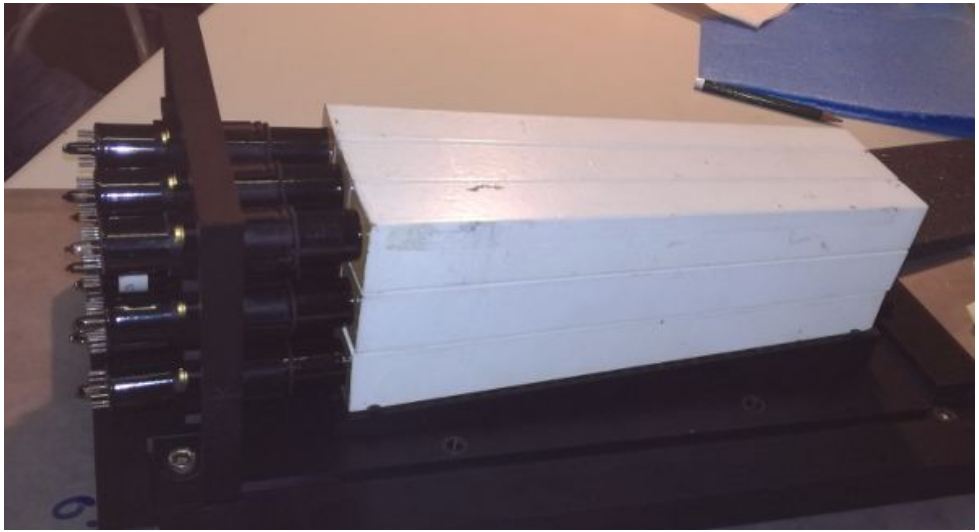
STEFI (run 300232 to 300280)

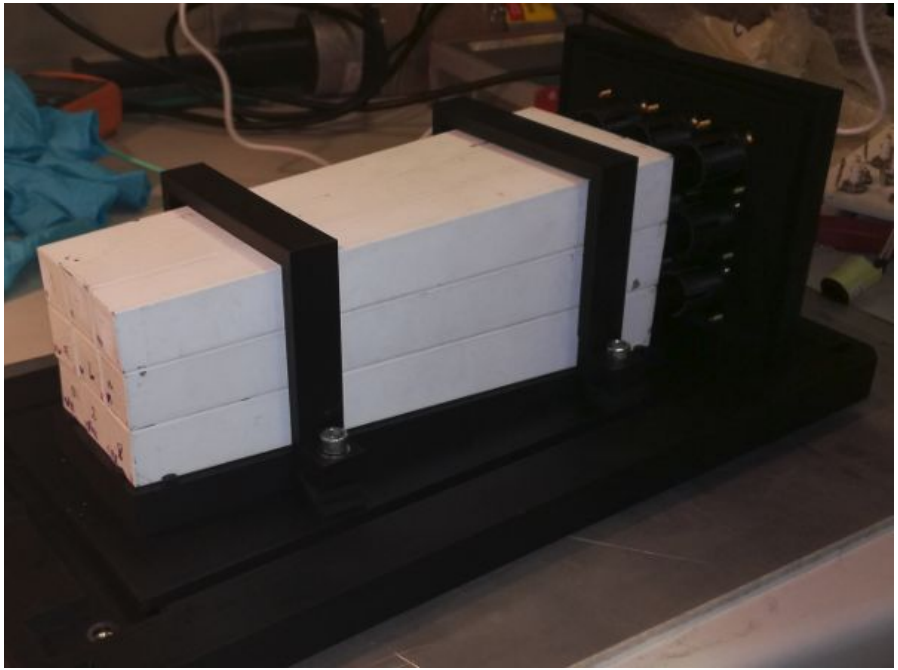




GENNI (from run 300320 on)

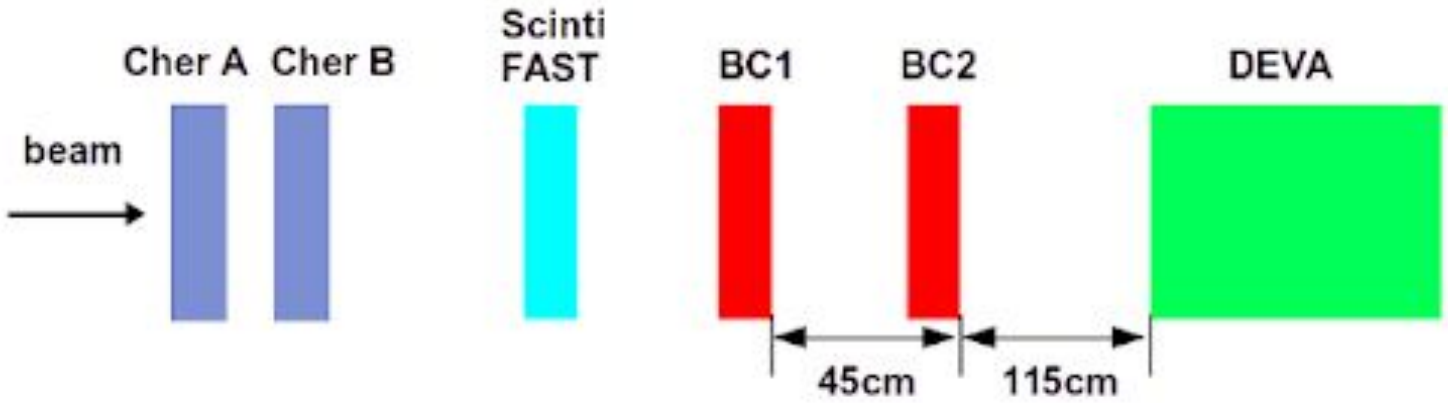
- new detector w/ 9 PADME ECAL BGO painted crystals (recovered from L3 EM endcap)
  ⇒ ~2.1cm side @ front
  ⇒ ~23cm long → ~20.5 X_0 in total
- metal & plastic mechanical structure which holds crystals together (little blind space between channels!) in a 3x3 matrix and couples each channel with a PMT → everything contained in a box
- performance under study at the moment…
  → it seems to have very good energy resolution!
- channels order in ASCII files is the same as STEFI (see slide 3)





OUTLINE

energy scans in the range (0.5,9)GeV were performed for all the three detectors during the INSULAb test which took place at the beginning of June at T9 (beam of electrons, muons and pions mainly)



data are being analyzed for equalization, calibration and performance evaluation...

Thank you!