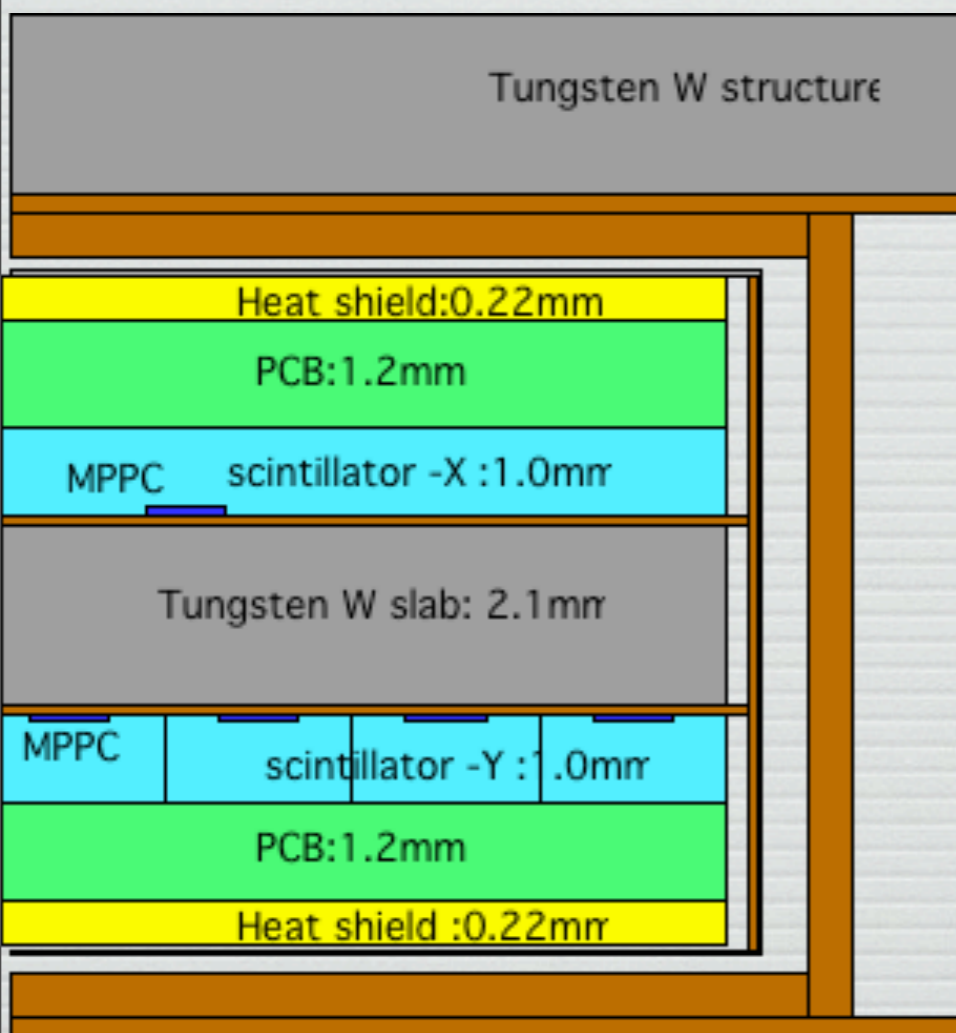


ScECAL

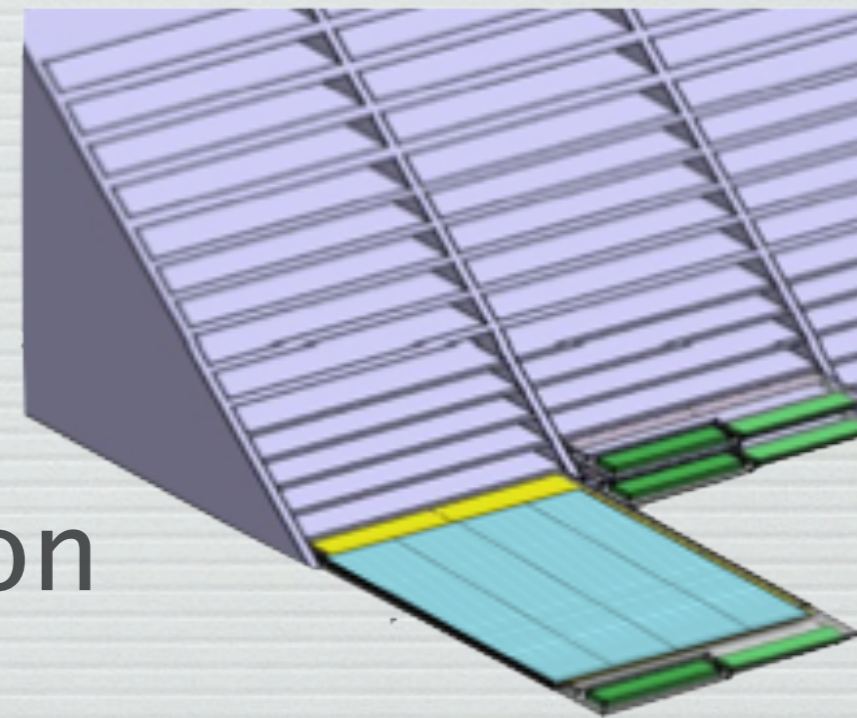
status & plan

T.Takeshita (Shinshu)



design
performance
mass-production

ICEPP(Ootani)+KNU
+Shinshu+Tsukuba

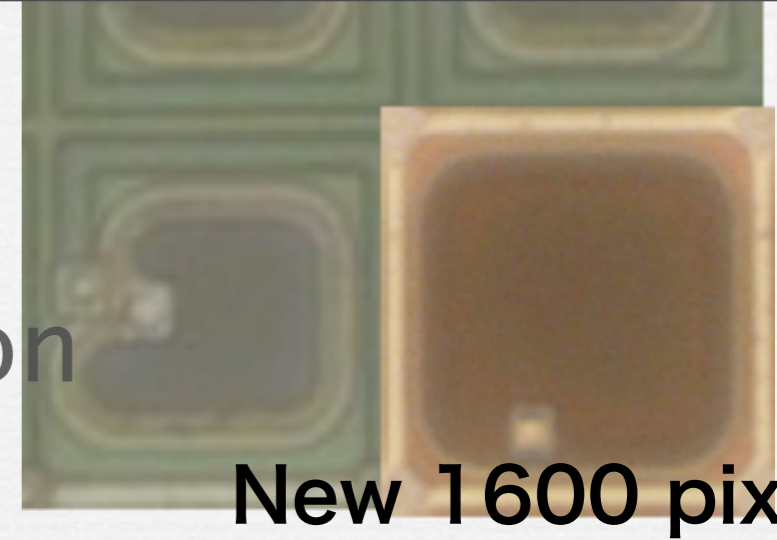


design: EBU &...

- Alveola and other mechanical structure
 - we follow silicon activities
- FrontEnd Redan out : EBU
 - SPIROC from Ω group
 - we follow DESY activities
- DAQ ??? < the current problem
-

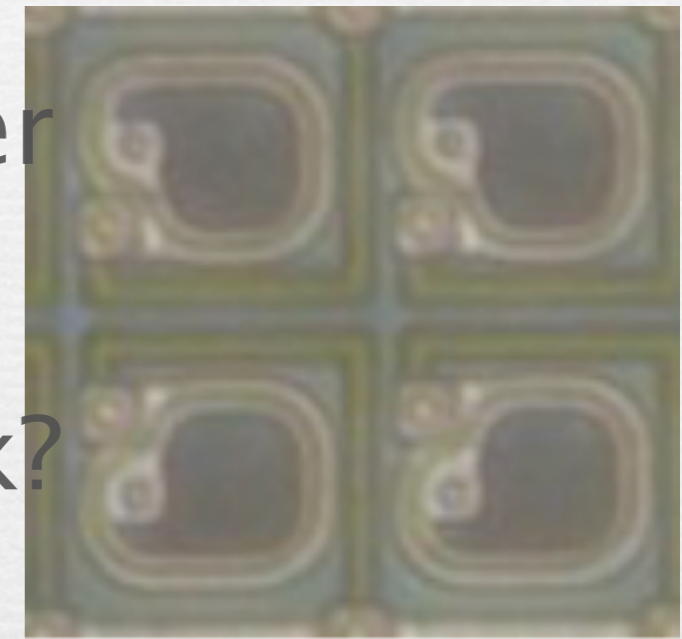
design-MPPC

- MPPC can be improved, depending on our requests

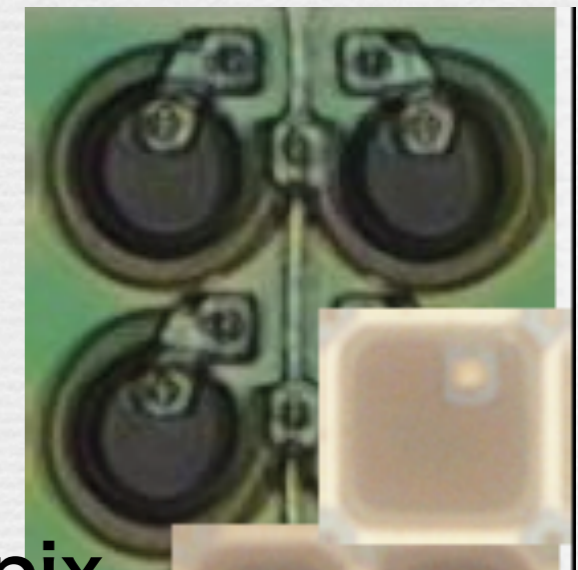
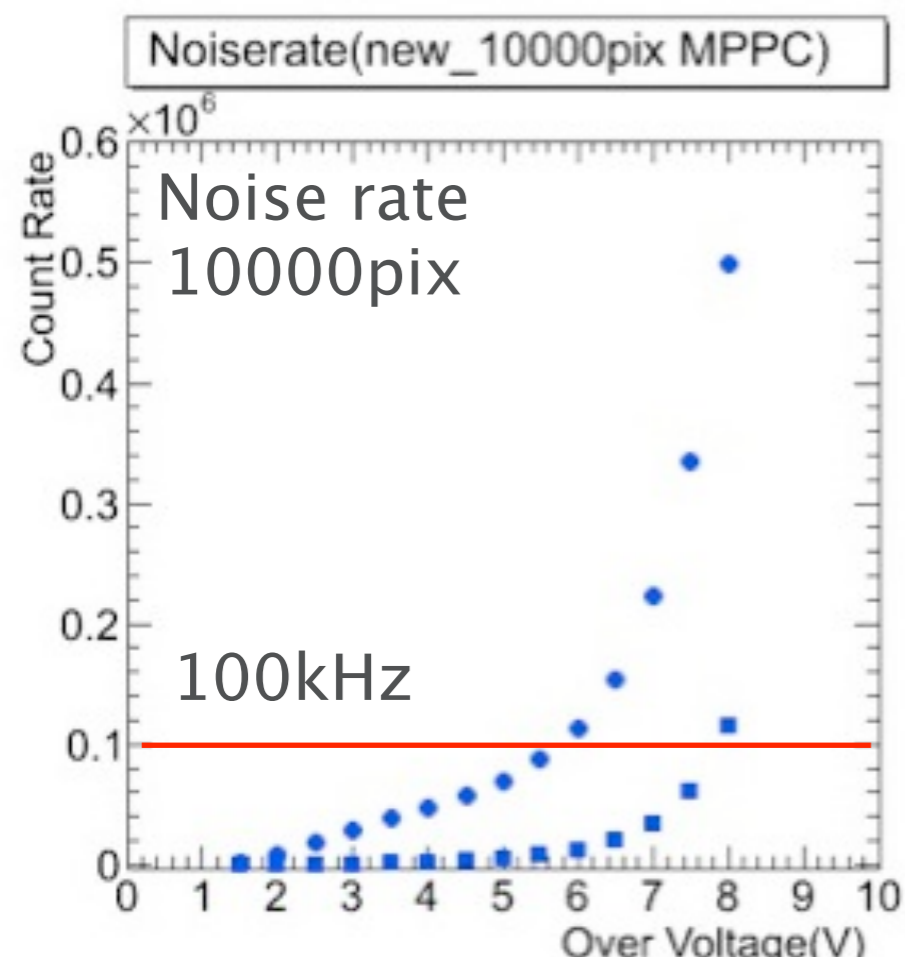


New 1600 pix

- 10000pixels in 1mmx1mm with bigger PDE is available



- lower noise achieved, lower cross talk?



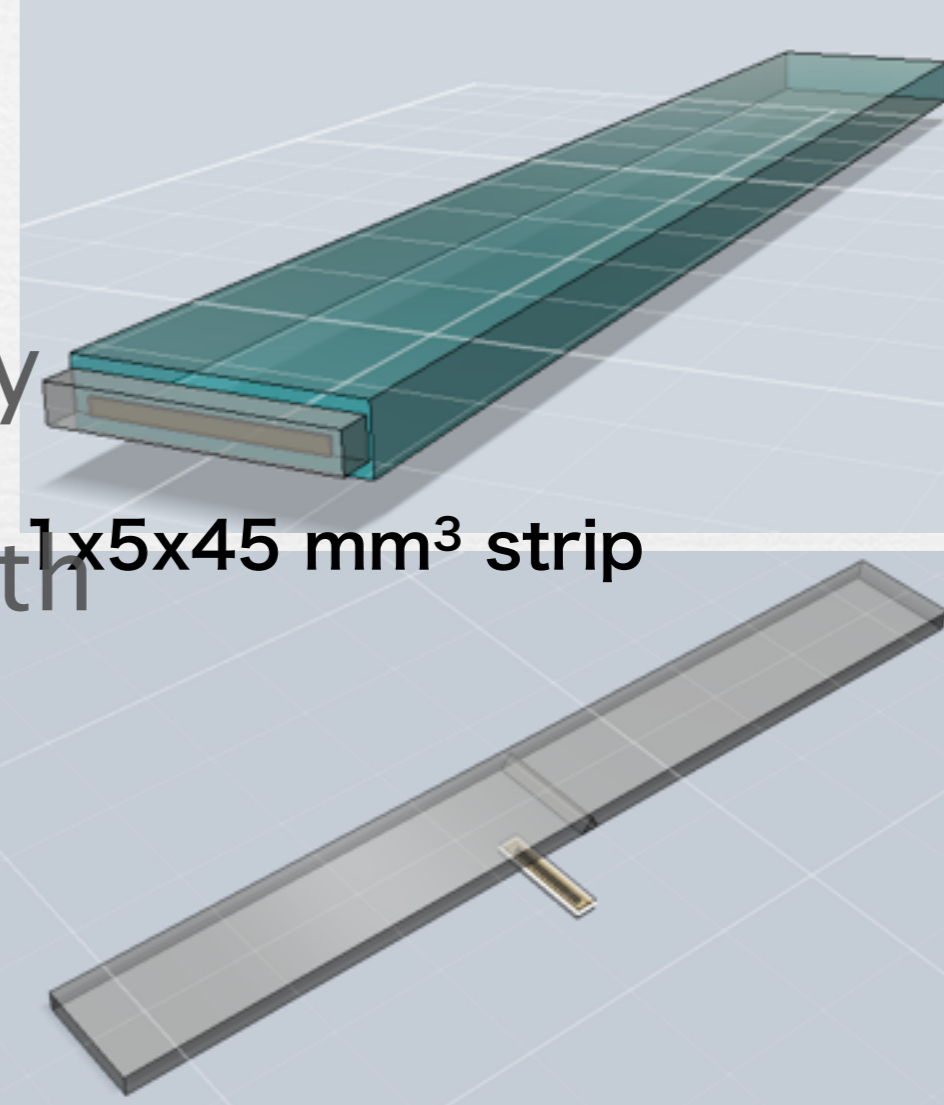
New 4400 pix

10000 pix with new technology



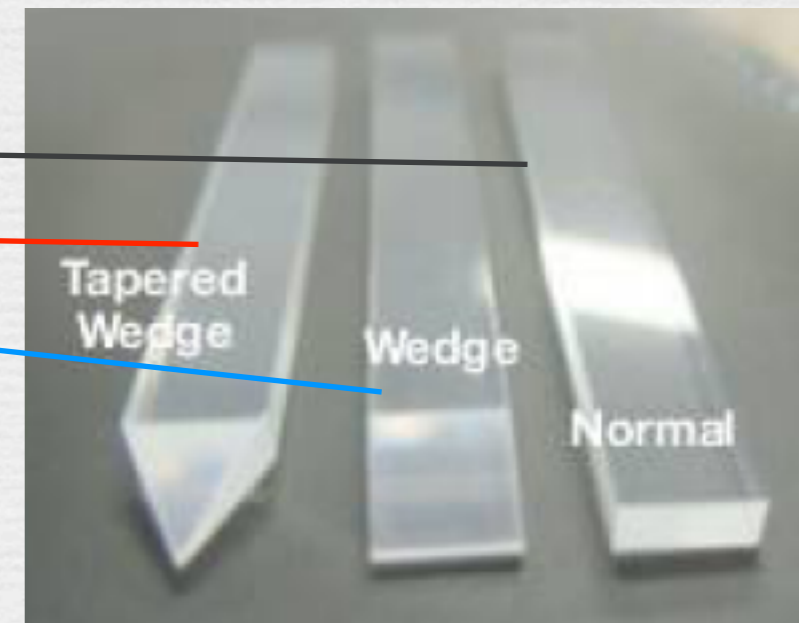
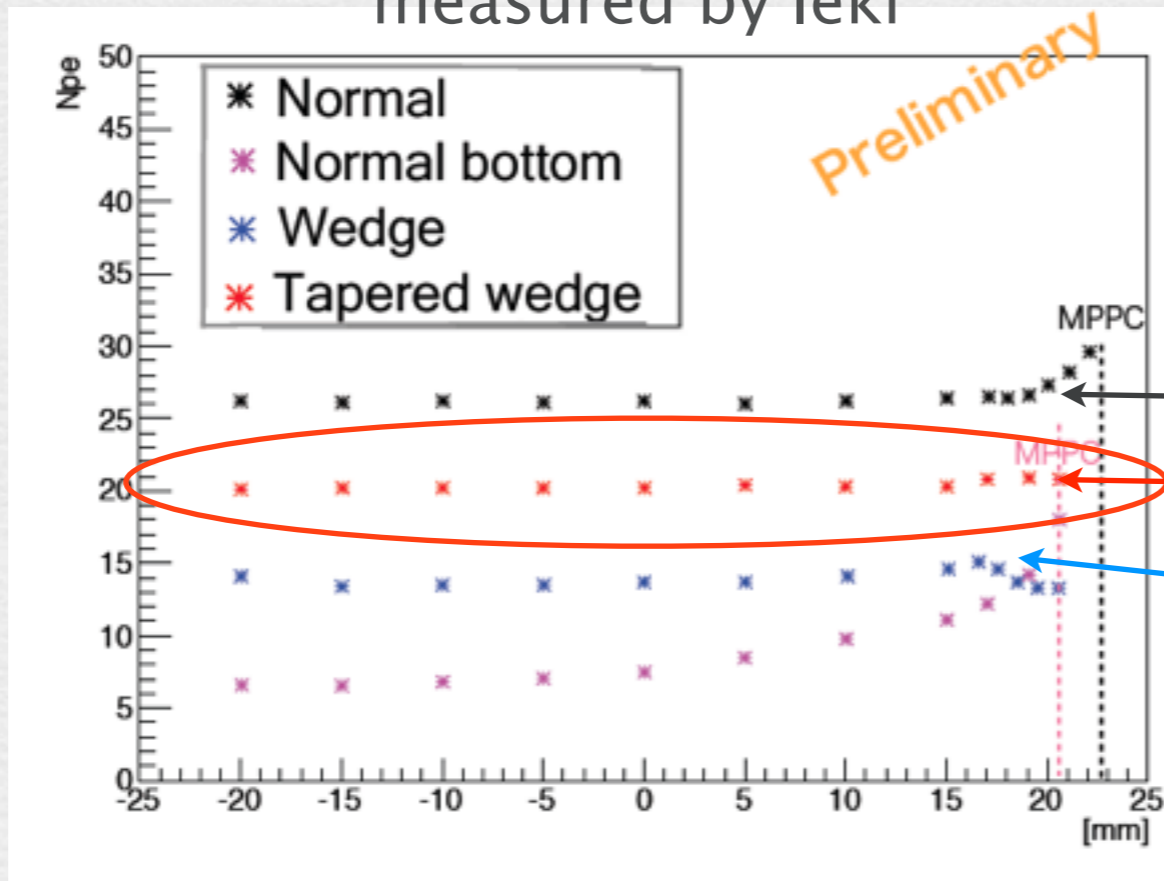
design-scintillator

- ✧ scintillator strip has flexibility
- ✧ new idea to improve homogeneity
- ✧ remove gaps, easy installation with SMD on EBU



1x5x45 mm³ strip

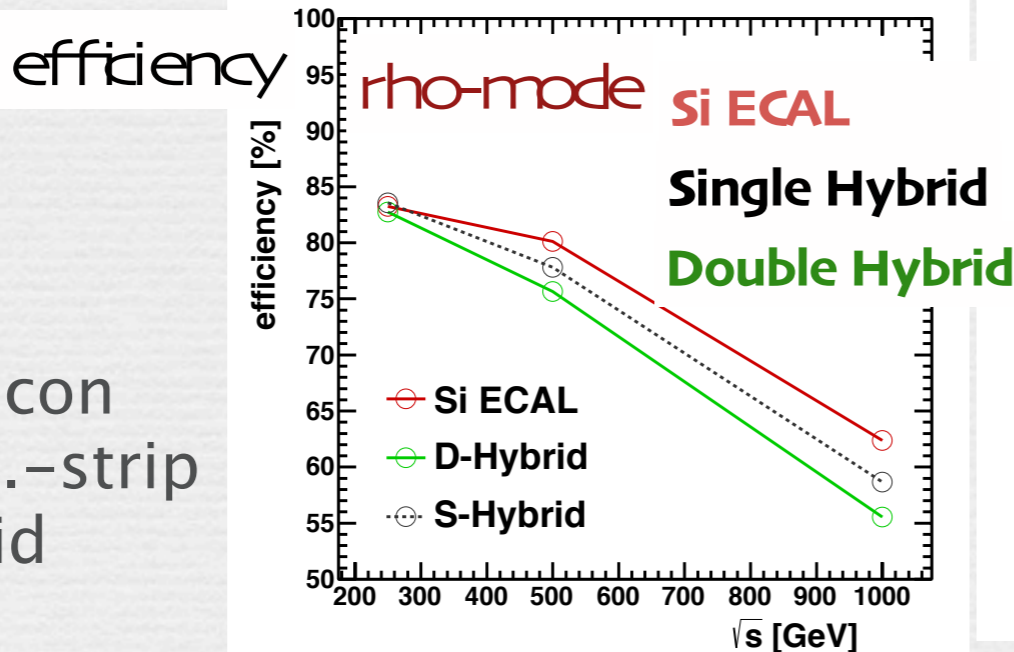
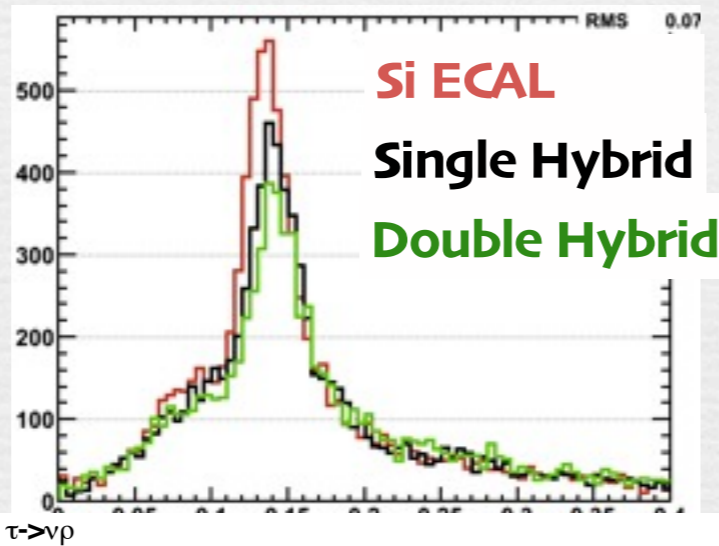
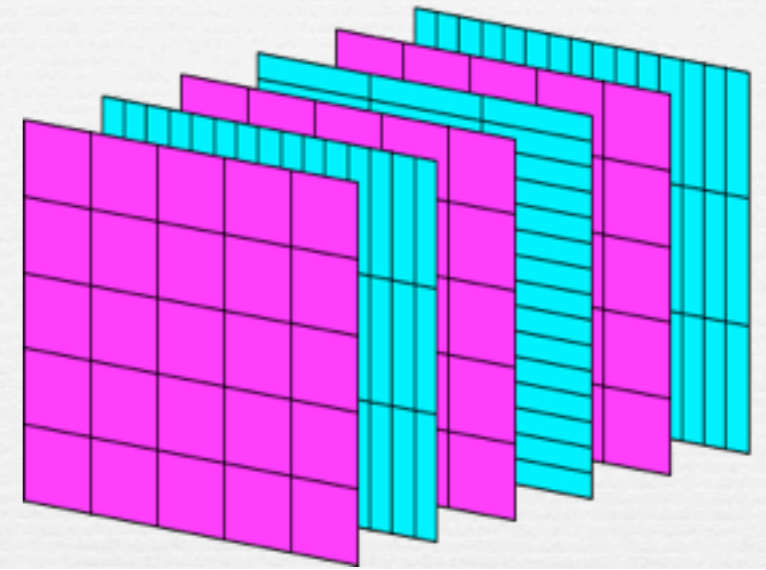
measured by Ieki



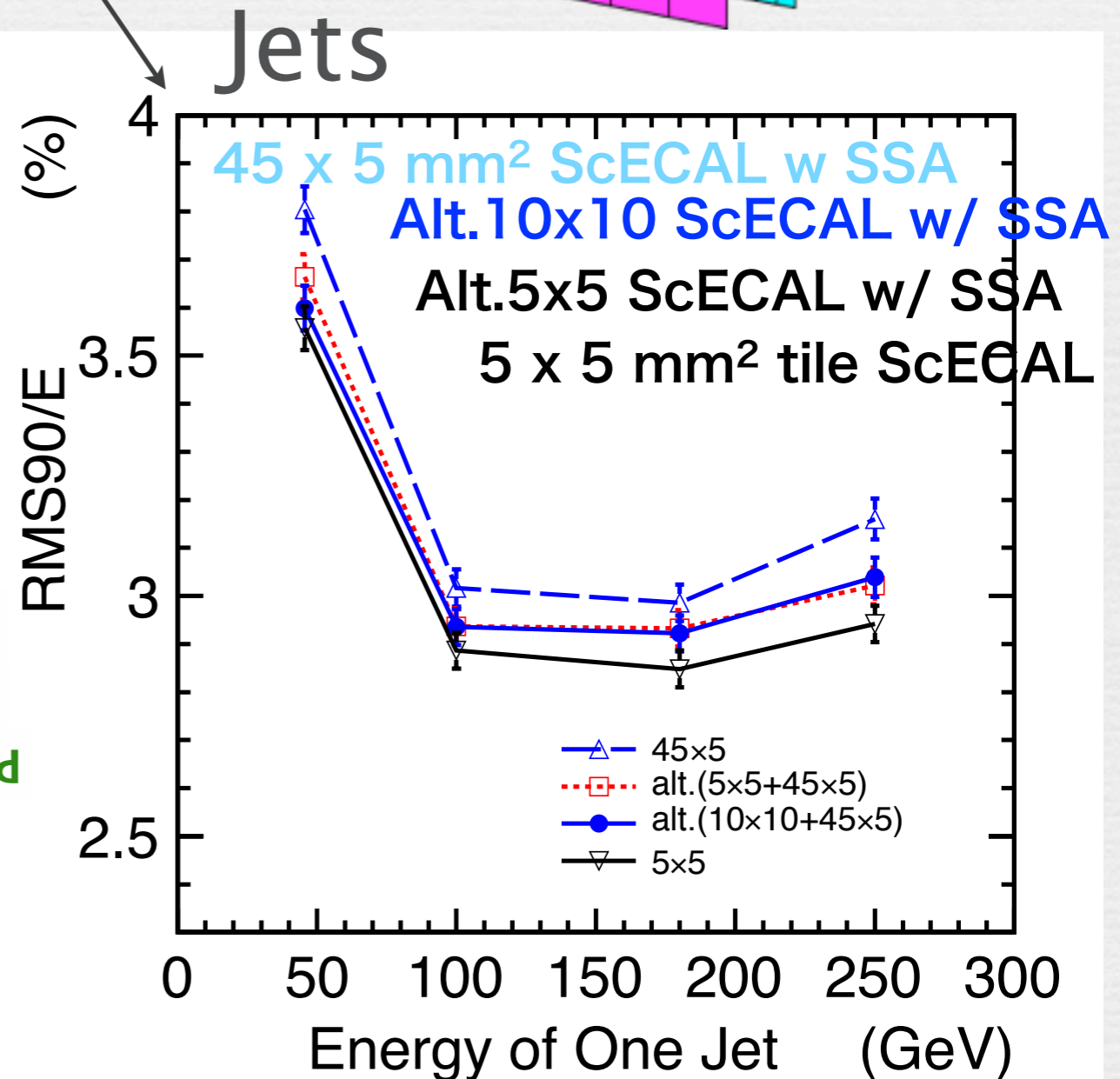
performance

- simulation with SSA
with saturation & non-uniformity
- for Jets: need tile/pad layer
- for taus

pi0 Mass
exactly 2gammas



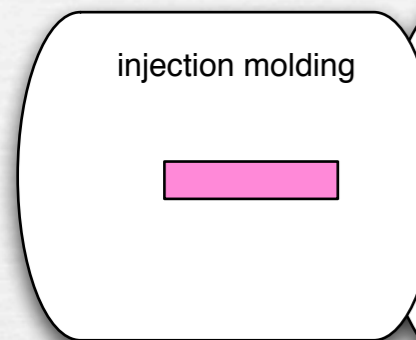
5x5 silicon
& 45x5 sc.-strip
Hybrid



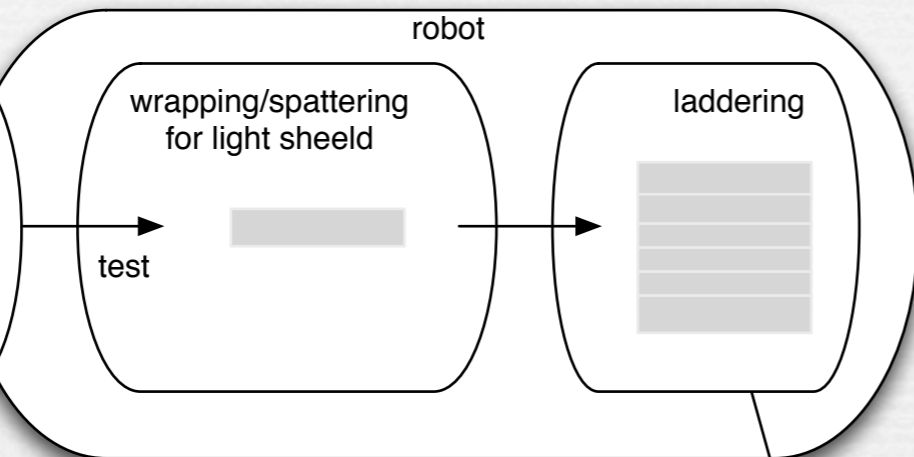
mass prod. & test

ScECAL factory 2013

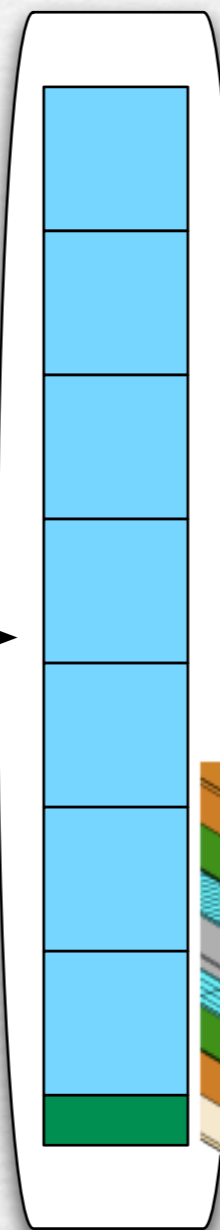
scintillator strip production



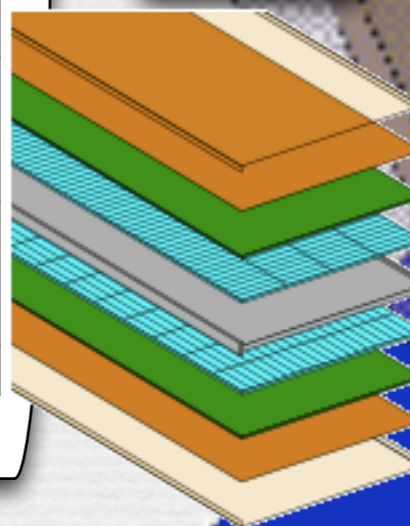
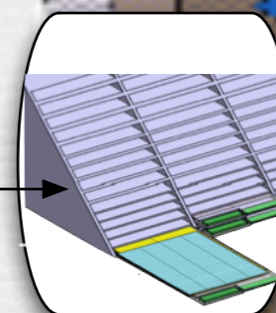
robot



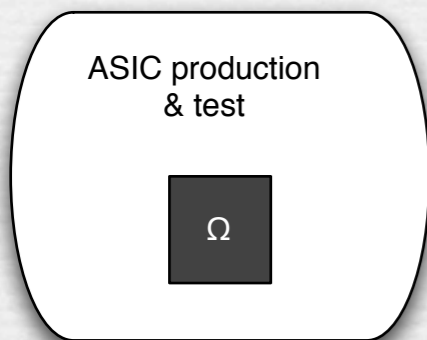
slab prod.



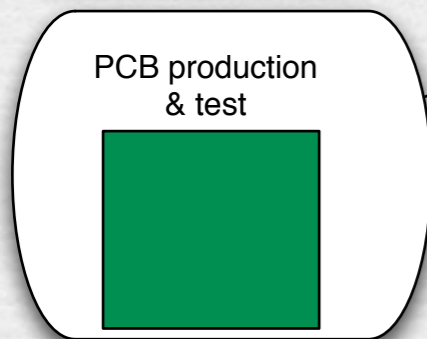
alveora inst.



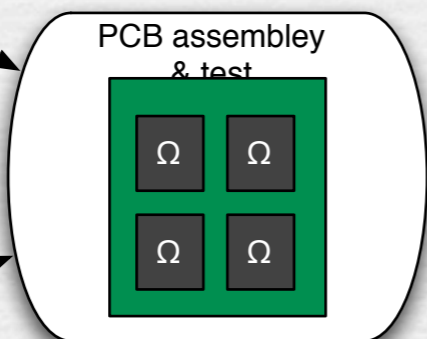
ASIC production & test



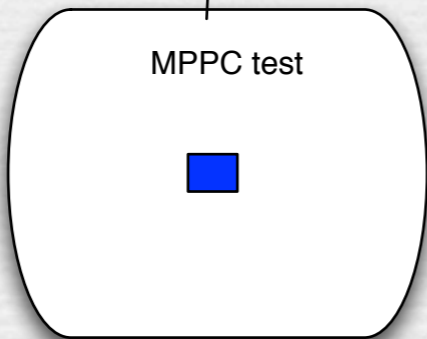
PCB production & test



PCB assembly & test



MPPC test



mounting sensor on the PCB & test

