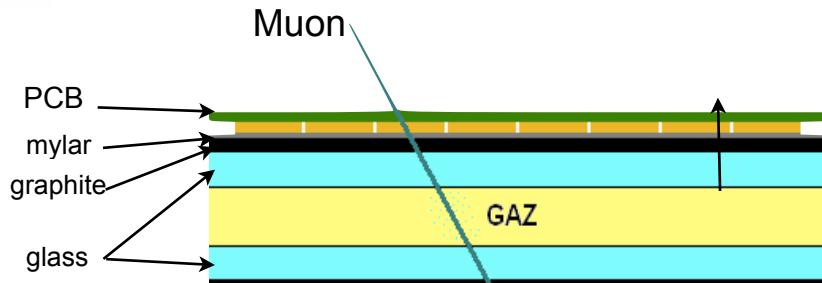
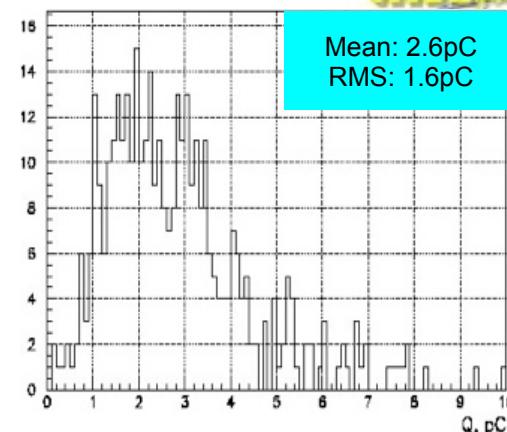
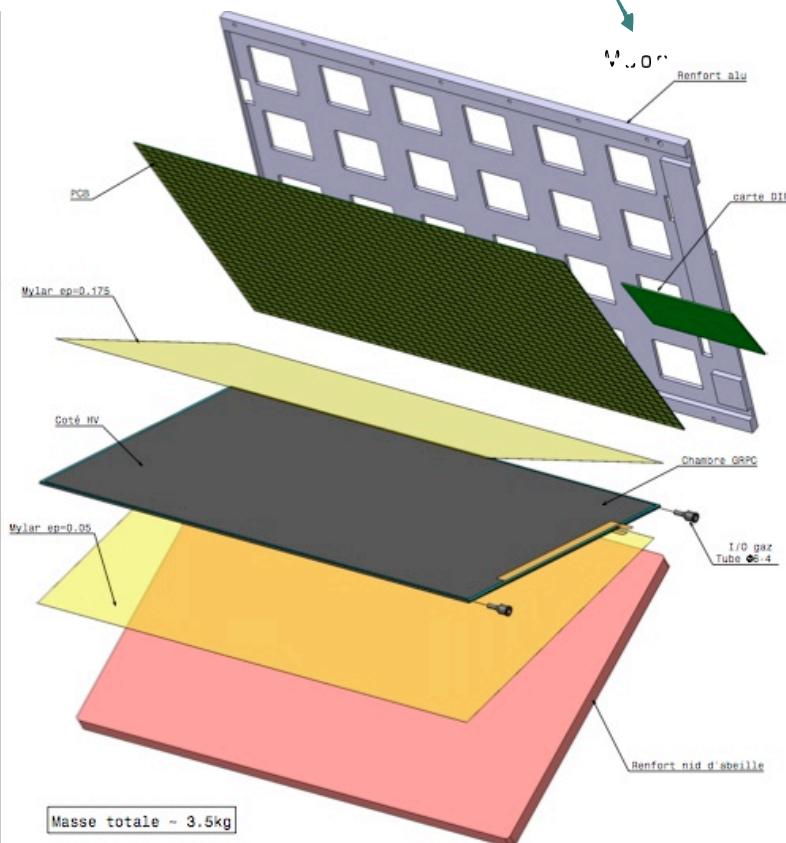




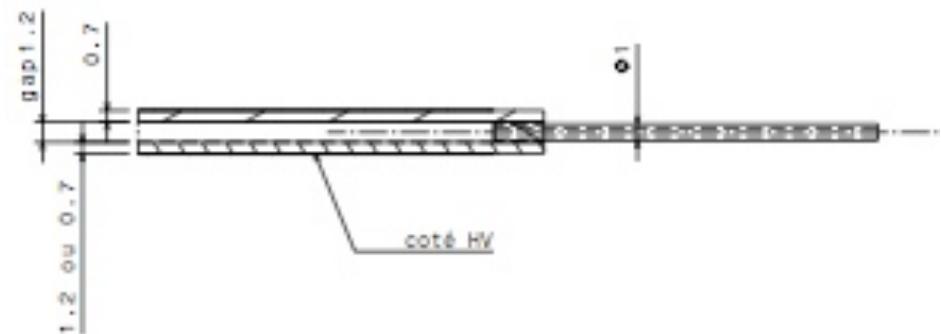
# Muon Tracker : CALICE GRPC's



Gas: 93% TFE, 5% Isobutane, 2% SF<sub>6</sub>



Avalanche mode: mean MIP charge 2.6pC, RMS: 1.6pC



Large areas available at low cost (k€/m<sup>2</sup>)

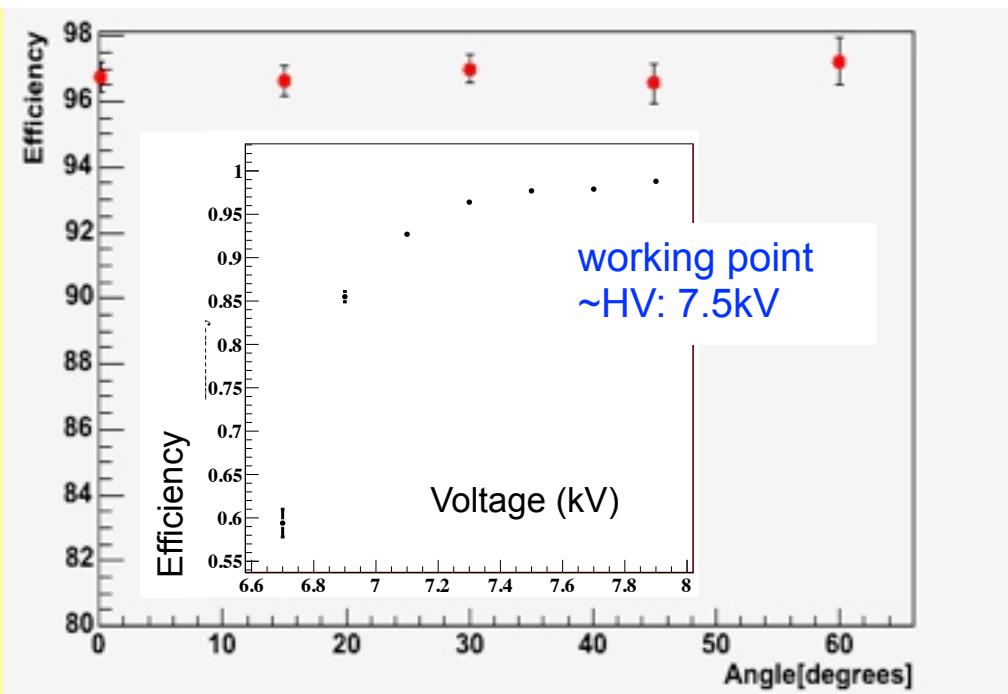


# Muon Tracker : CALICE G<sub>R</sub>PC's



M. Bedjidian et al, "Performance of Glass Resistive Plate Chambers for a high granularity semi-digital calorimeter", JINST 6:P02001,2011

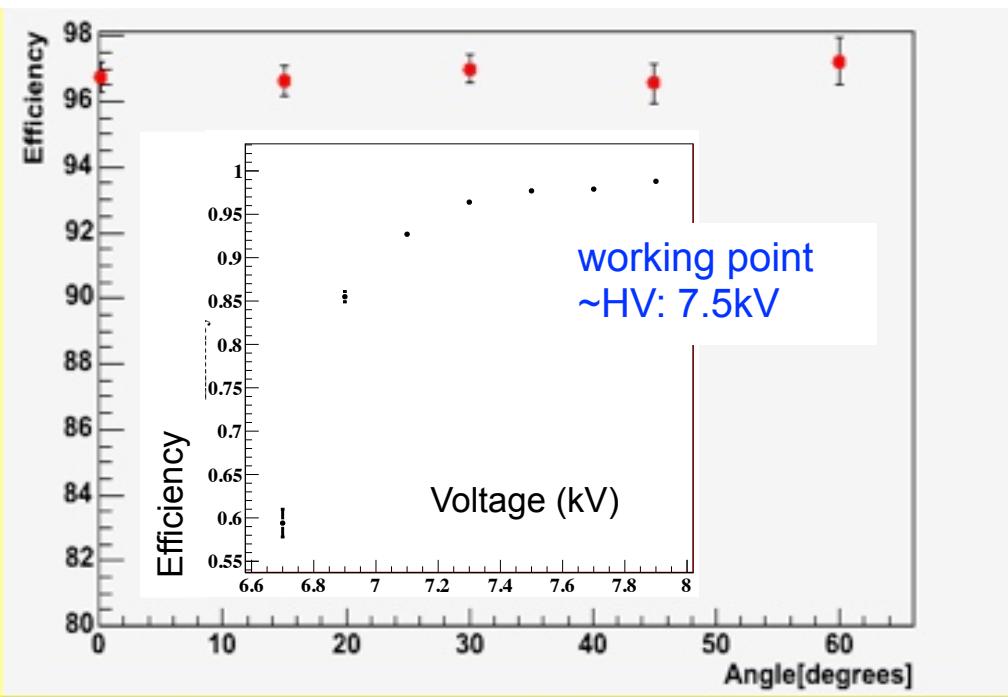
## Efficiency vs. HV &amp; track incident angle



[M. Bedjidian et al](#), "Performance of Glass Resistive Plate Chambers for a high granularity semi-digital calorimeter", JINST 6:P02001,2011

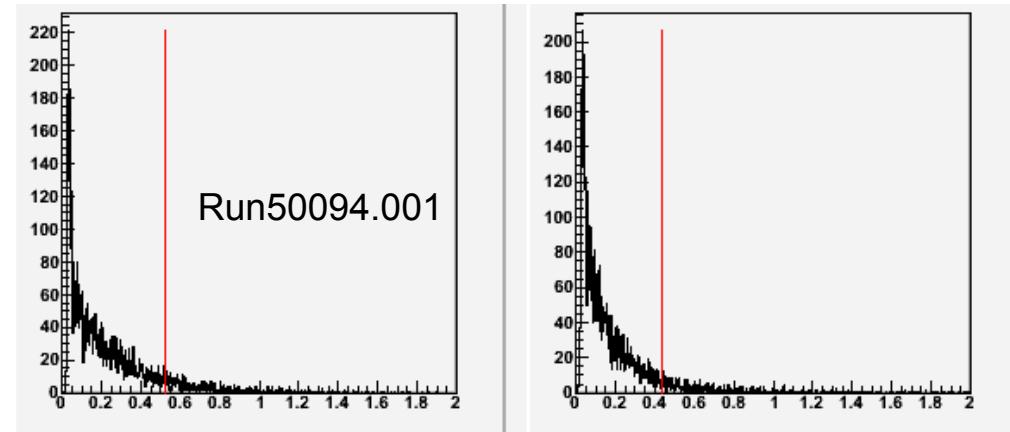


## Efficiency vs. HV &amp; track incident angle



M. Bedjidian et al, “Performance of Glass Resistive Plate Chambers for a high granularity semi-digital calorimeter”, JINST 6:P02001,2011

Noise rate (Hz)





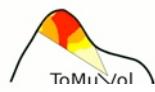
# Muon Tracker : CALICE GRPC's



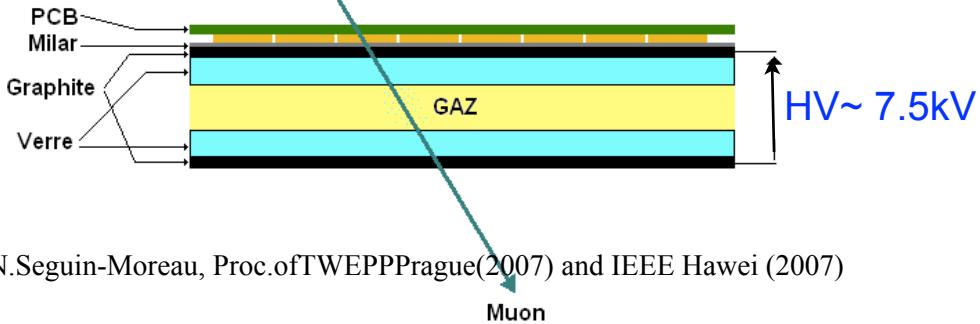
M. Bedjidian et al, "Performance of Glass Resistive Plate Chambers for a high granularity semi-digital calorimeter", JINST 6:P02001,2011



Gain dependent on p/T - constant monitoring needed

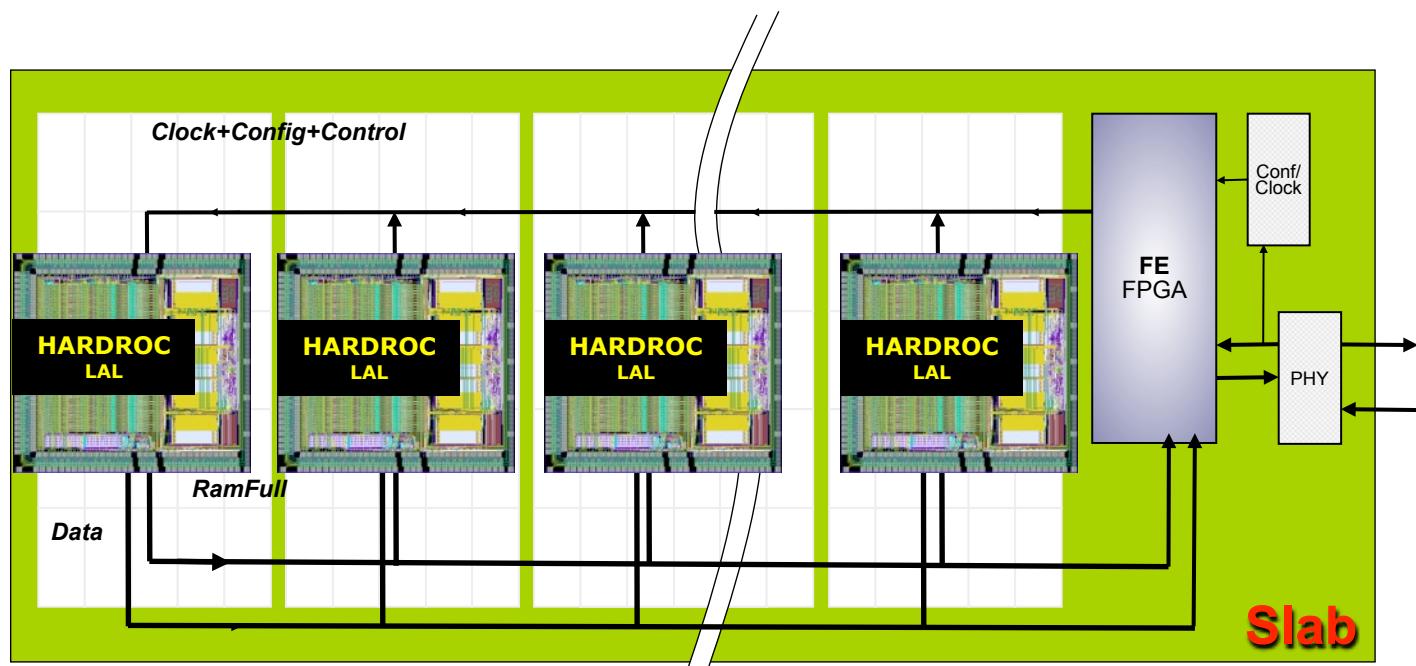


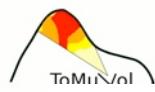
# Muon Tracker : CALICE Electronics



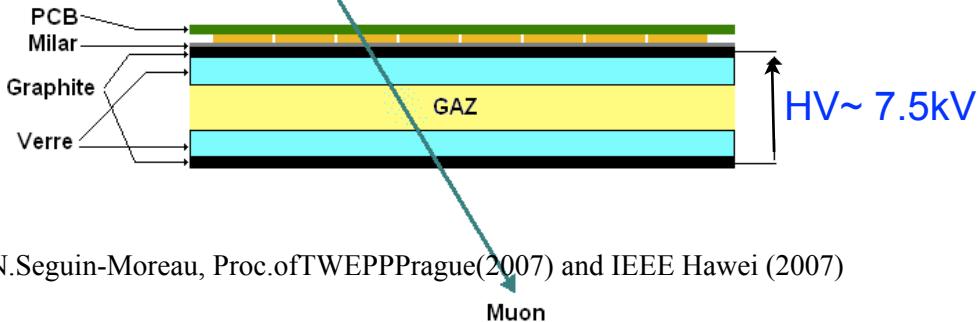
N.Seguin-Moreau, Proc.ofTWEPPPrague(2007) and IEEE Hawei (2007)

- 64 channels, 16 mm<sup>2</sup>
- digital output (2 adjustable thrs)
- low power consumption
- large gain range
- xtalk <2%
- adjustable gain for each channel





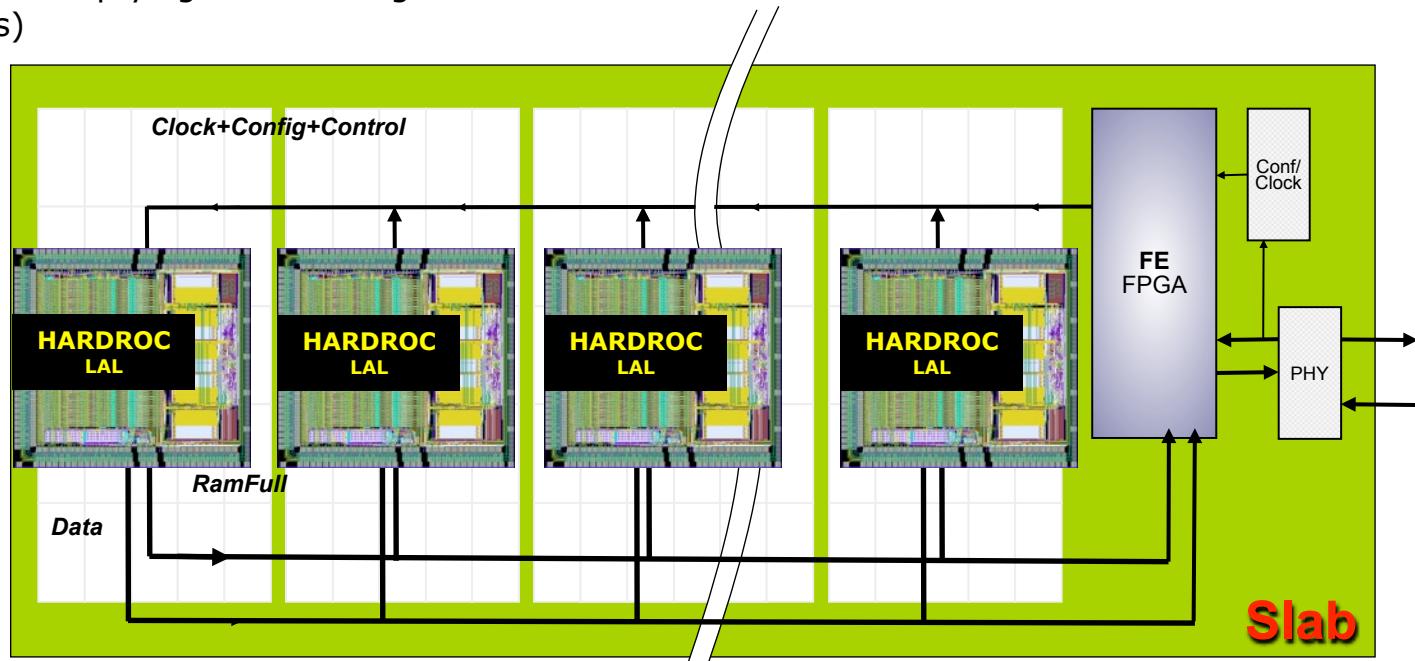
# Muon Tracker : CALICE Electronics

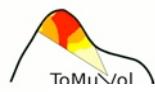


System clocked @ 400ns

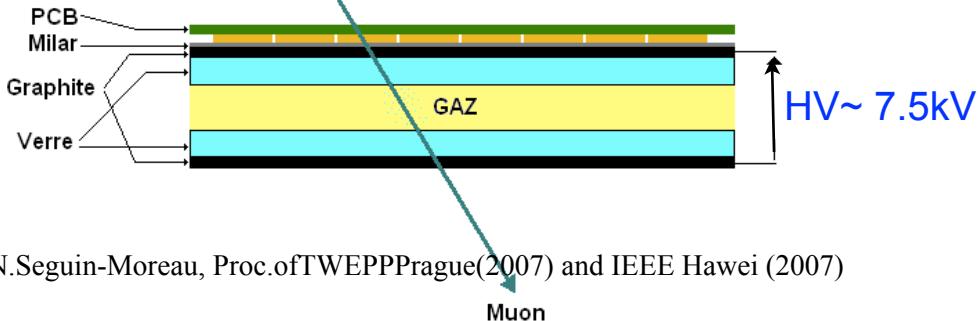
Adjustable periodical trigger emptying the ASIC digital memories  
(up to 128 successive evts)

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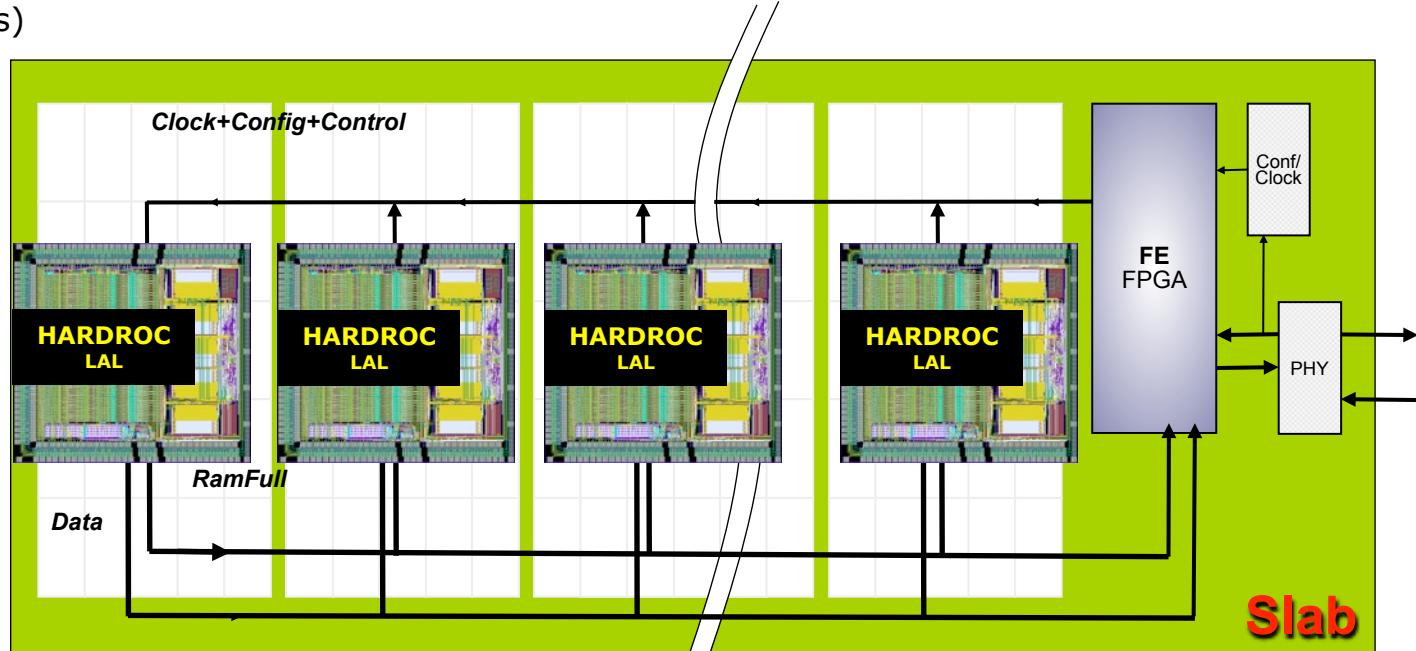
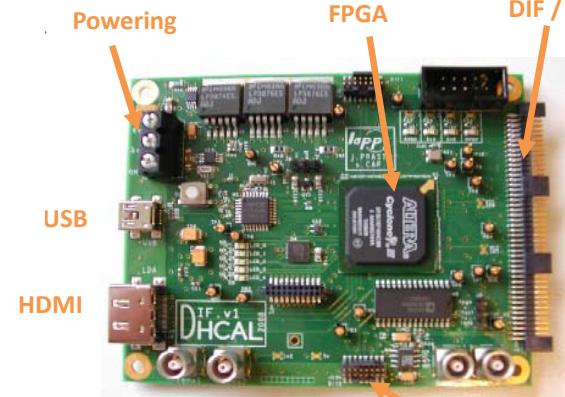


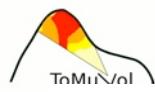
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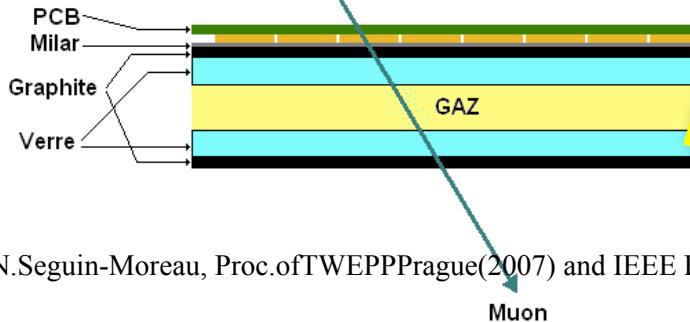
System clocked @ 400ns

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(up to 128 successive evts)



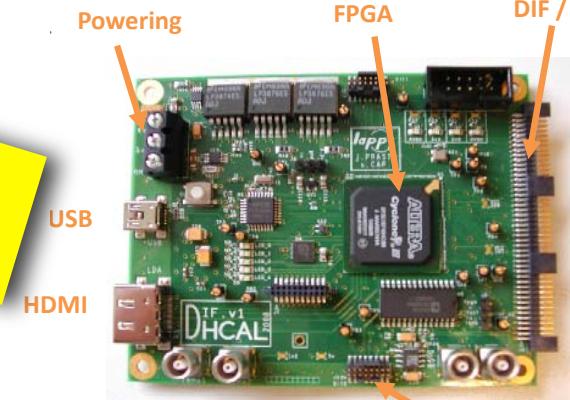


# Muon Tracker : CALICE Electronics



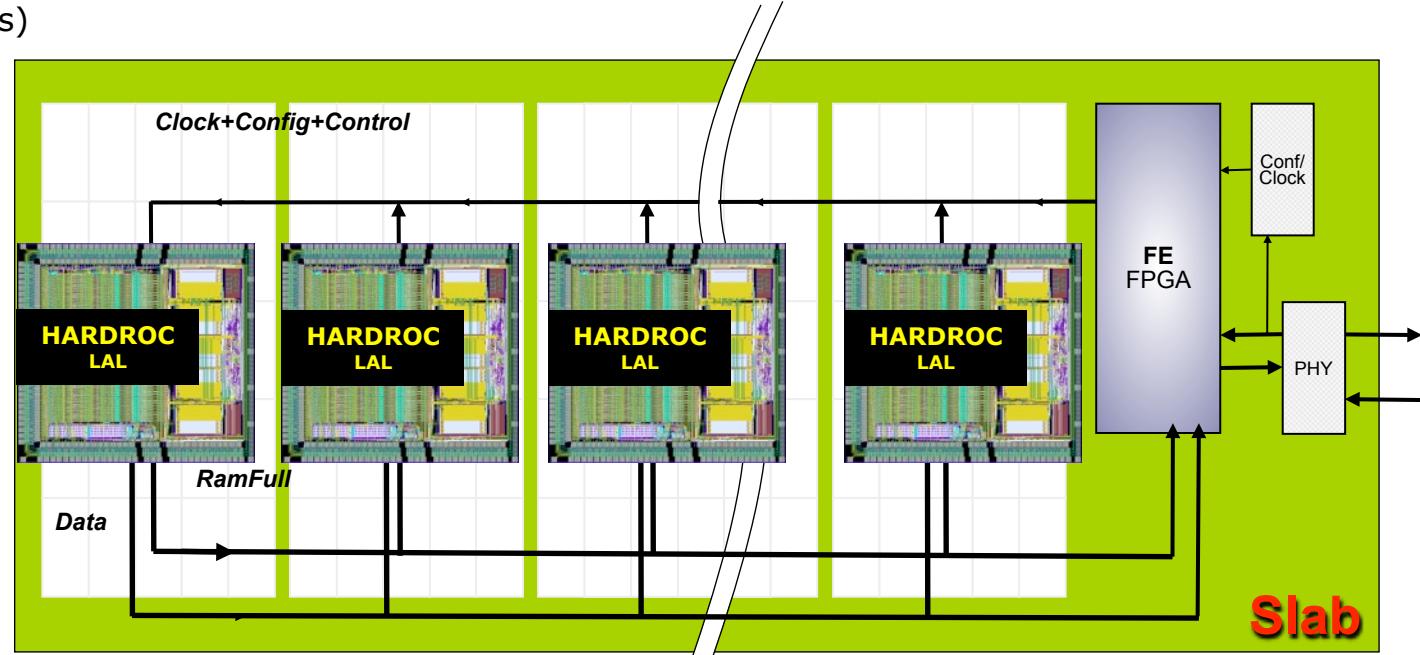
N.Seguin-Moreau, Proc.of TWEPP Prague(2007) and IEEE Hawei (2007)

**9472 channels/m<sup>2</sup>**  
**1 hit  $\equiv$  time + thresh**

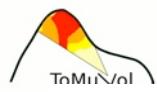


System clocked @ 400ns

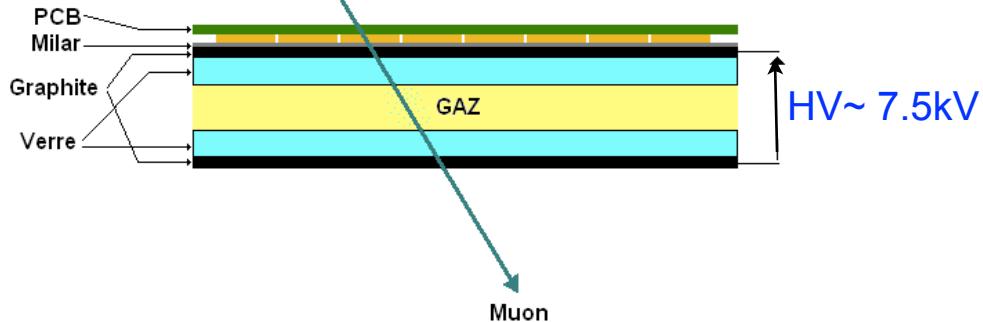
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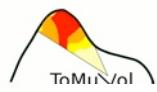


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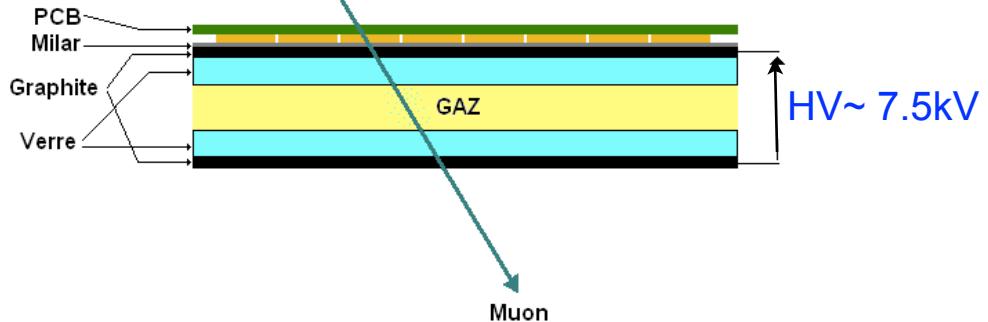


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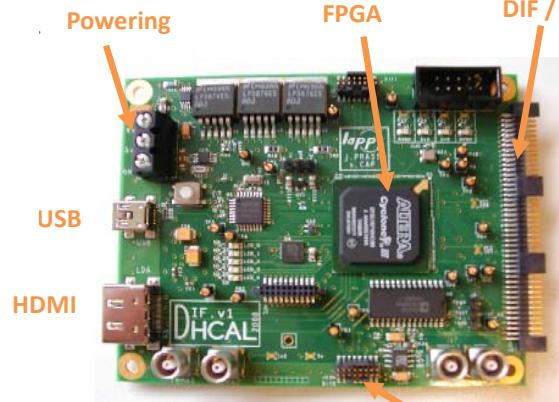
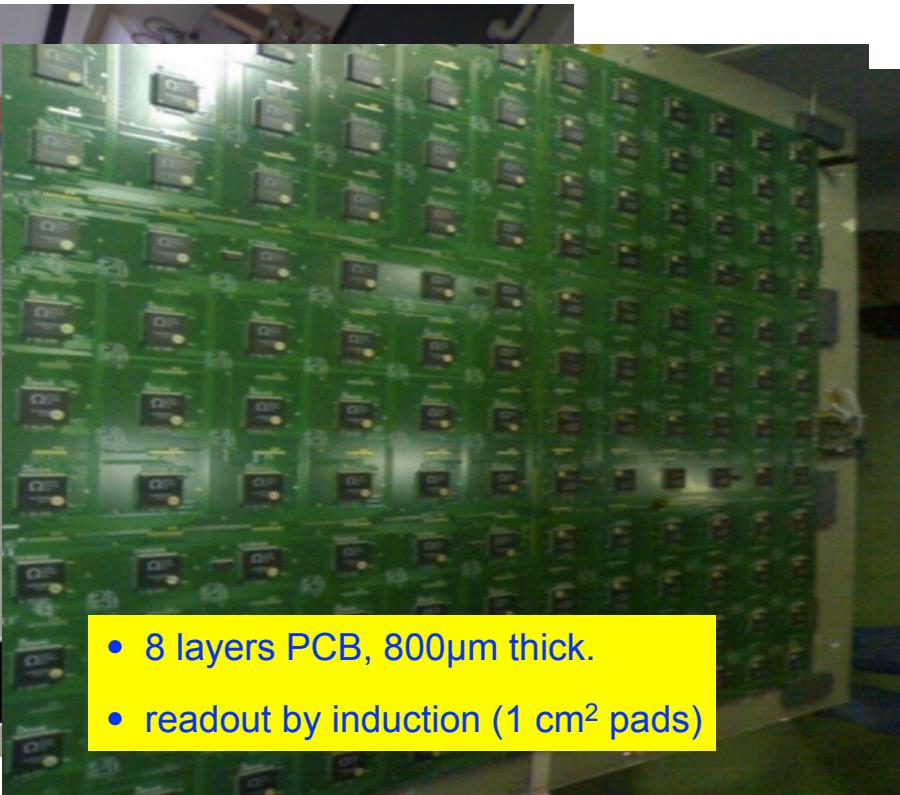


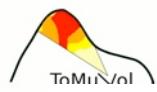


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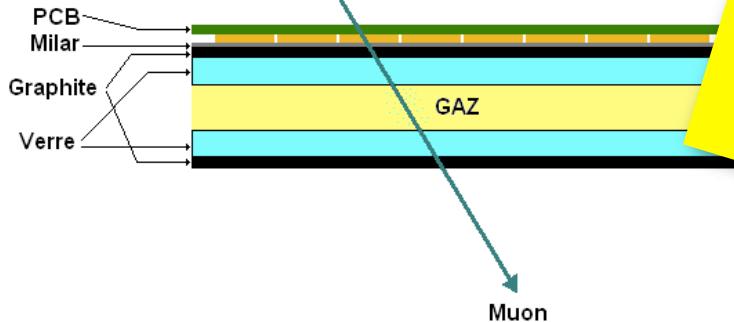


**GRPC-Lyon**

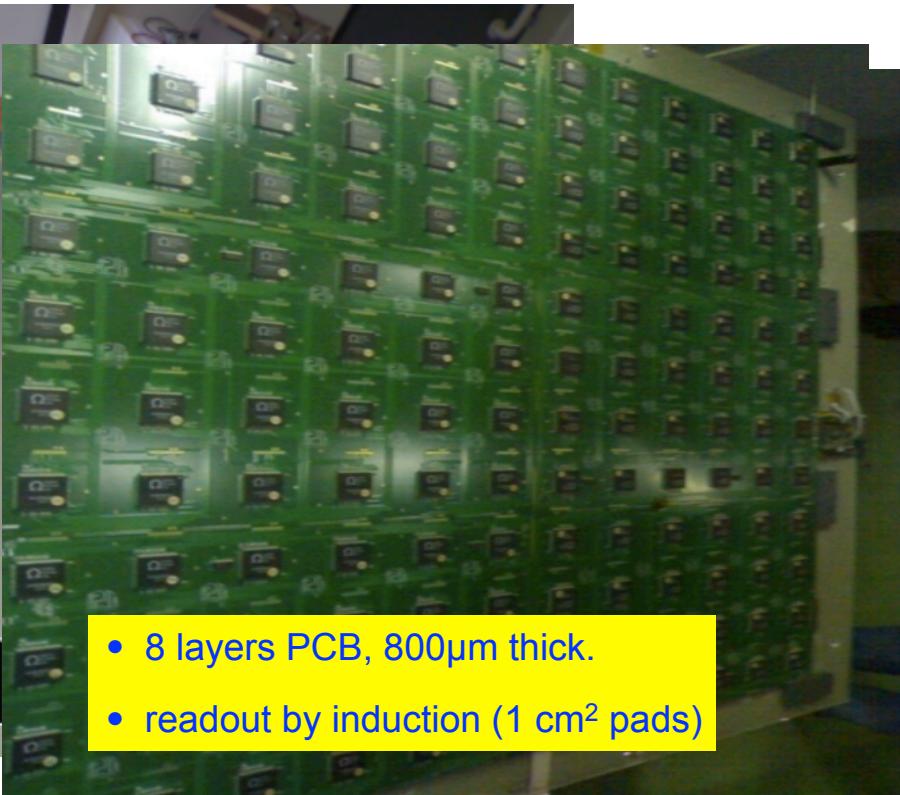
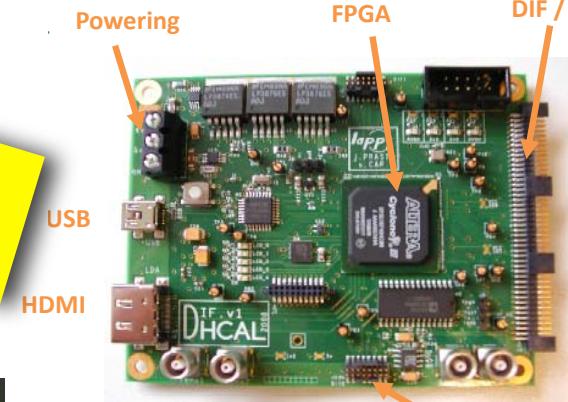




# Muon Tracker : CALICE Electronics

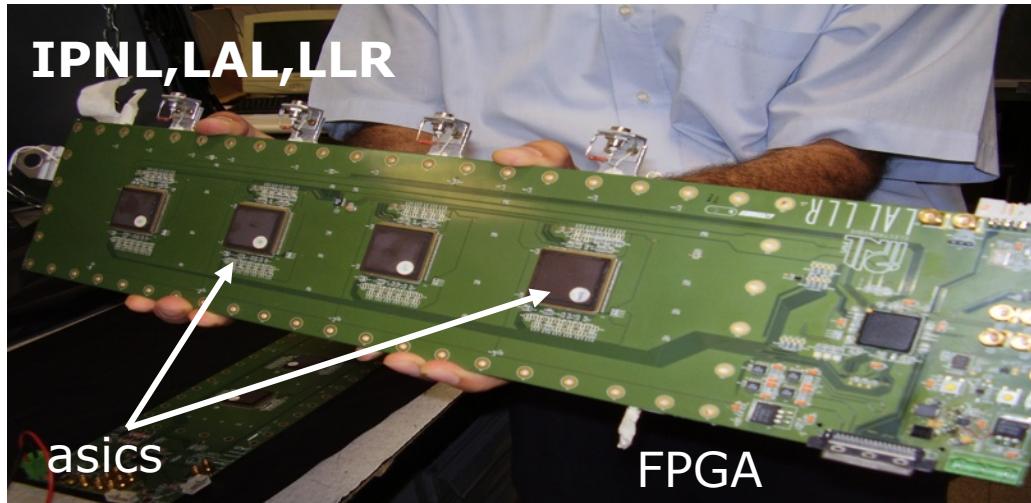


9472 channels/m<sup>2</sup>  
1 hit ≡ time + thresh





# Muon Tracker : CALICE Electronics



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