

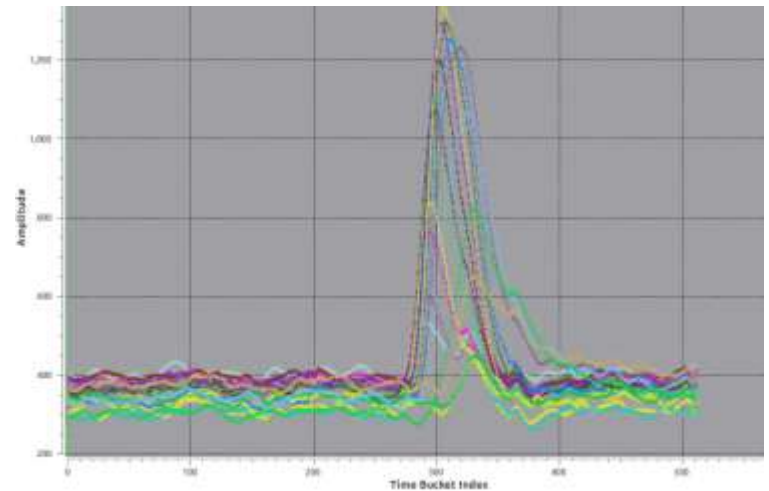
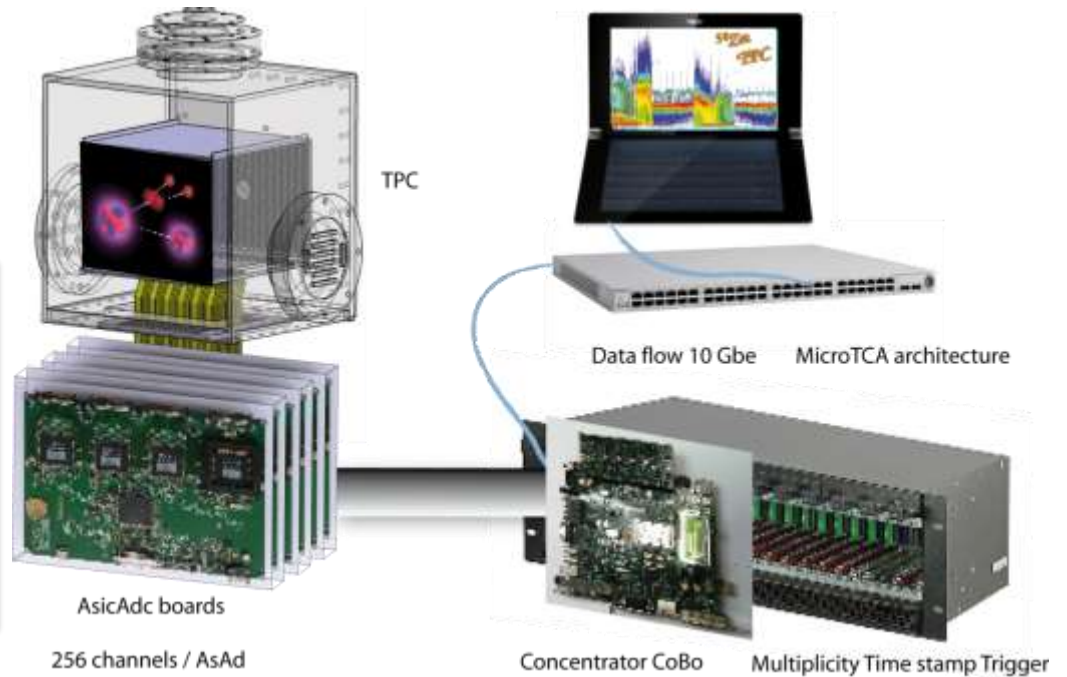


General Electronics for TPCs

R&D Détecteurs gazeux



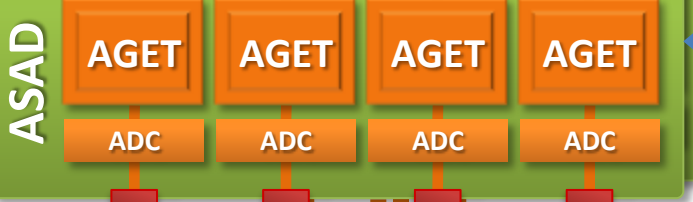
Objectif: fournir une électronique générique pour TPCs
 Financement par programme ANR 2009-2013.
 Production 2013.



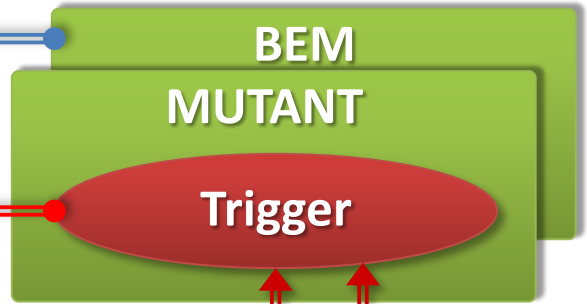
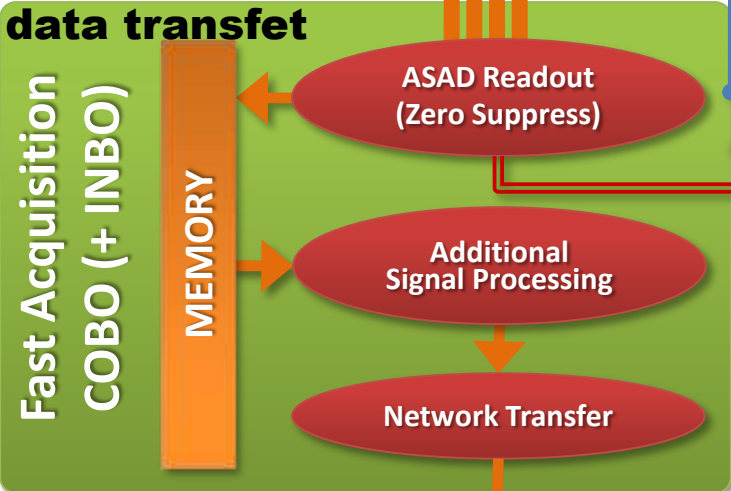
General Electronics for TPC

Data Flow & Ctrl Architecture

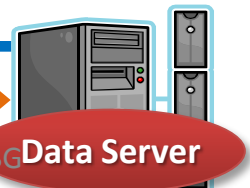
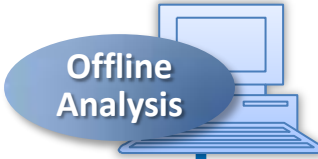
100 MS/s
256 Chan/AsAd



25 MHz Readout
1GbE data transfert



Up to 30 kChannels





Quelques chiffres

Quelques chiffres

- AGET 64 Cx polarité Negative ou positive
- AsAd hosts 4 AGET
- CoBo hosts 4 AsAd
- MicroTCA architecture hosts 10 CoBo
- Dynamique 120 fC, 240 fC, 1 pC, 10pC
- INL < 2%
- Resolution < 850 e⁻ (gain 120fC, Peaking time 200ns, C_{in} <30pF)
- Peaking time 50ns à 1 μs (16 valeurs)
- Sampling freq 1MHz à 100 MHz
- Multiplicité OR sur sorties discris
- Threshold 4bits DAC/Channel + (3bit +1 bit polarité) commun DAC
- Readout 25MHz Hits, selected ou tous
- Counting rate < 1kHz
- Consommation /carte frontend <5W , supply 3.6V
- Production 2013
- Applications TPC CENBG- ACTAR – AT-TPC- SAMURAI...