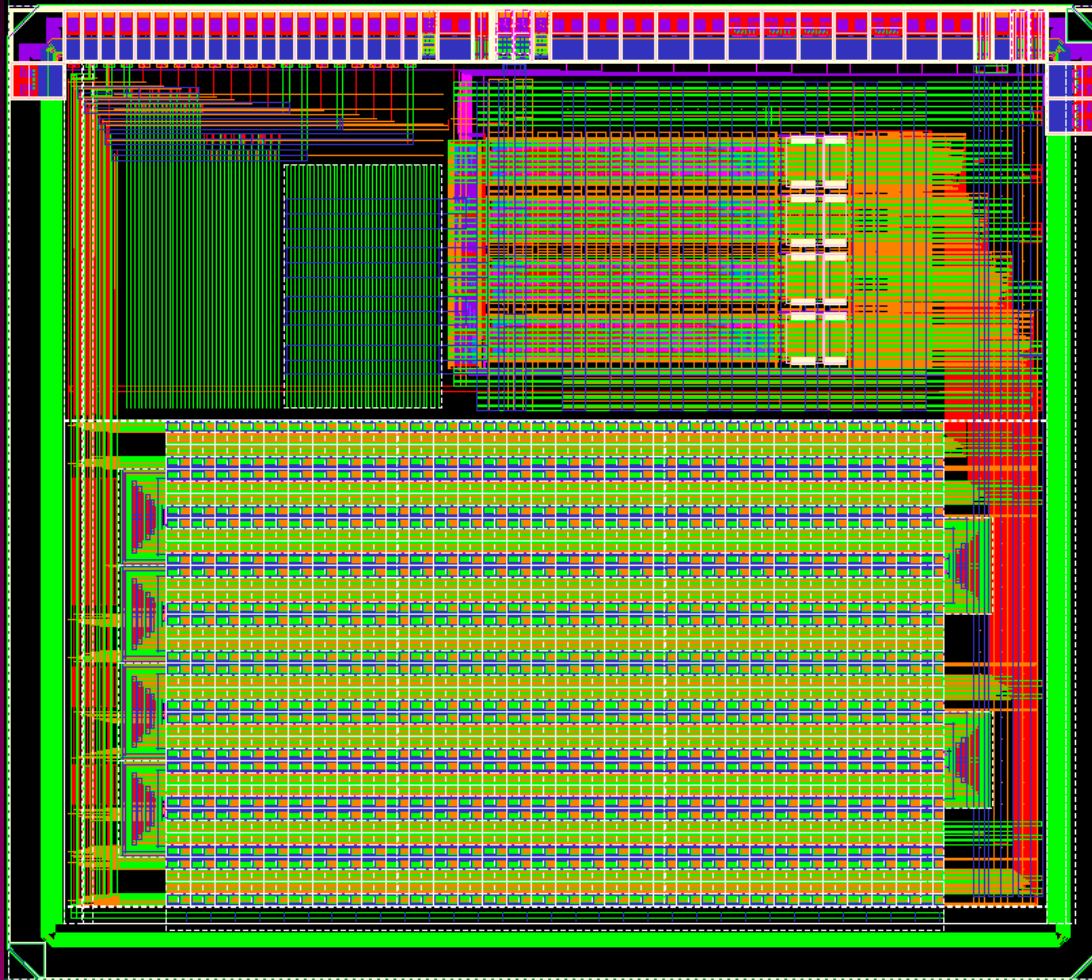




# ToPiX ASIC



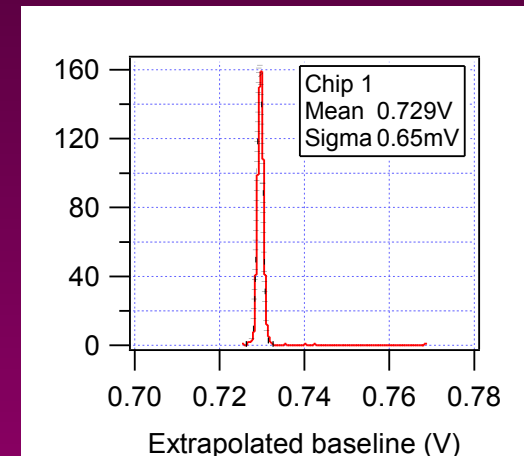
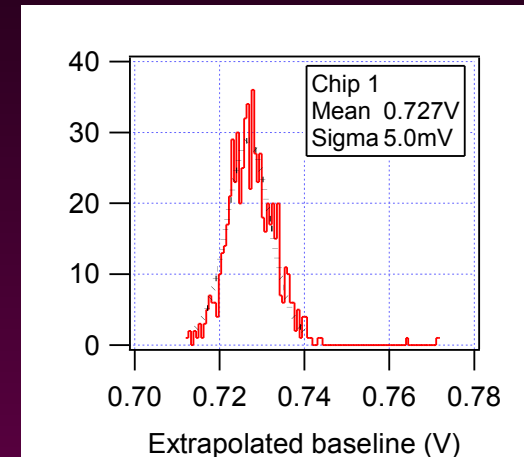
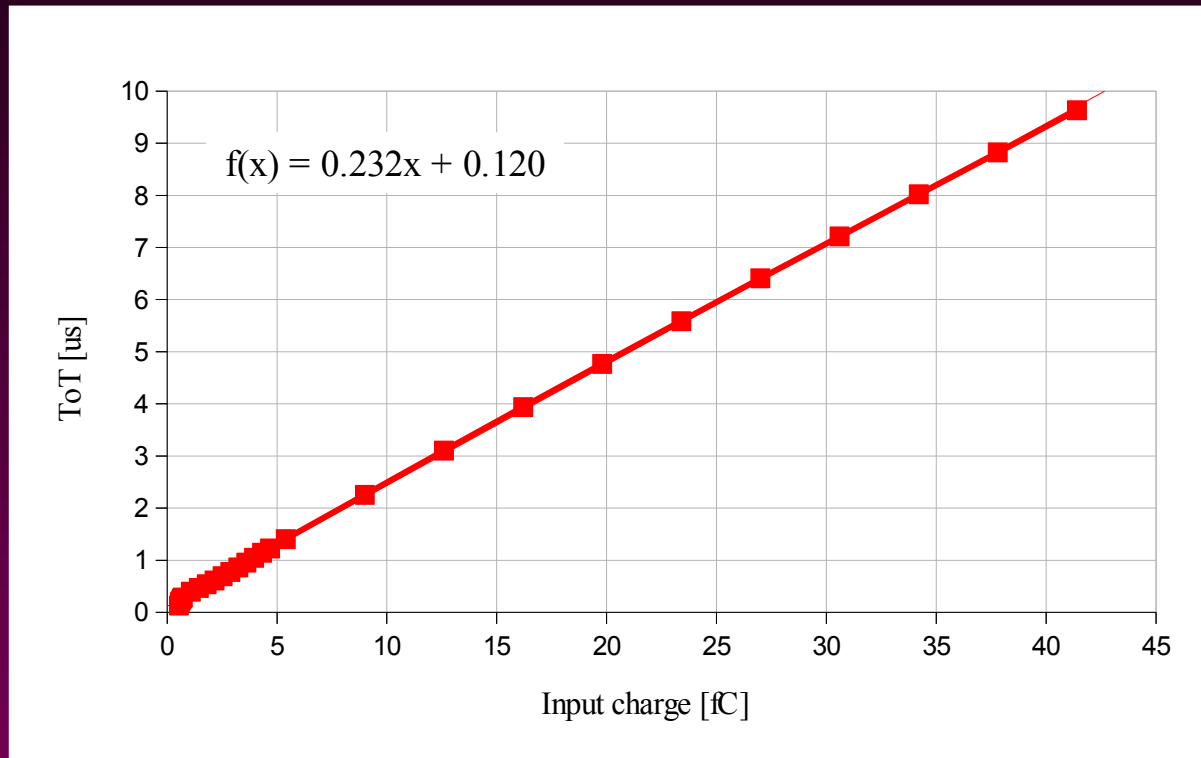
Sezione di Torino



- \* Custom development for the PANDA MVD
- \* Provides spatial and time coordinates plus energy resolution measurement ( via ToT )
- \* Compatible either with p-type or n-type detectors
- \* Self triggered architecture
- \* Each event has a 12 bits time reference
- \* High speed serial readout
- \* Radiation tolerant (TID and SEU)
- \* Technology : CMOS 0.13  $\mu\text{m}$
- \*  $4.5 \times 4 \text{ mm}^2$  prototype with 640 pixels



# Test results



DAC correction

Analogue gain : 76.4 mV/fC (sim.), 66 mV/fC (meas.)  
ToT gain : 202 ns/fC (sim.), 232 ns/fC (meas.)  
noise : 155 e- (sim.), 104 e- (meas., no detector)