Inputs from the Silicon tracking WG (L. Greiner)

Irfu cea saclay

Kind of detectors

MAPS: Monolithic Active Pixel Sensors
Silicon sensors with signal processing built in the same silicon die
Usages: vertex detector, inner detector (barrel layers and discs)
Expected number of pixels in total: ~15.10^9

Embedded readout stage

Raw signal amplification + zero suppression + time digitization
Returned data: addresses of hit pixels (binary value), timing with ~10ns resolution, number of bits not defined yet
Cluster size of ~3 pixels per particle
Adjustable threshold

Performance and rates

Performance: > 99% efficiency
Electronic noise < 10^{-9} (Hz ?) after masking of noisy channels