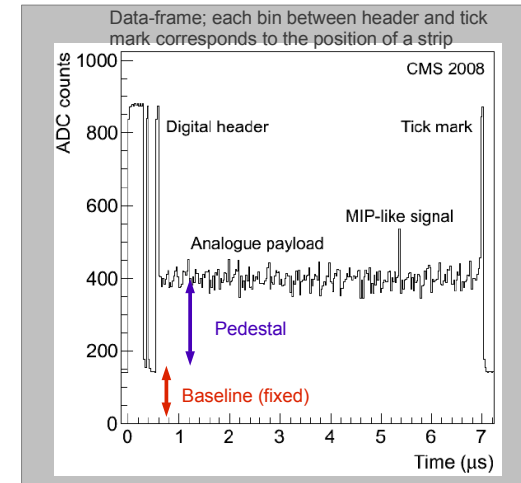


Strip signal simulation

- Standard mode of simulation is Zero Suppression (blue boxes)
- Heavy Ion run required Virgin Raw operation (blue+green)



Capacitive couplings tuned to cosmic data

OffDb

Probability tuned to test beam

Signal from Geant4

Cross-talk

SiTrivialInduceChargeOnStrip.cc

Remove dead channels

SiStripDigitizerAlgorithm.cc

APV Killer for HIP

SiStripDigitizerAlgorithm.cc

Baseline shift

SiGaussianTailNoiseAdder.cc

Baseline tilt

Shift and tilt being tuned on PbPb data in VR

ZS sim: $N = a + b * \text{length}$, with a, b fitted to data;
VR sim: noise from data

CMN tuned to data in VR

Noise (N)

SiGaussianTailNoiseAdder.cc

OffDb

Gain (G); at APV level

SiGaussianTailNoiseAdder.cc

OffDb

Common mode noise

SiGaussianTailNoiseAdder.cc

Pedestal

SiGaussianTailNoiseAdder.cc

OffDb

Digitization (incl. saturation)

To reco...

*original diagram by Andrea Giammanco