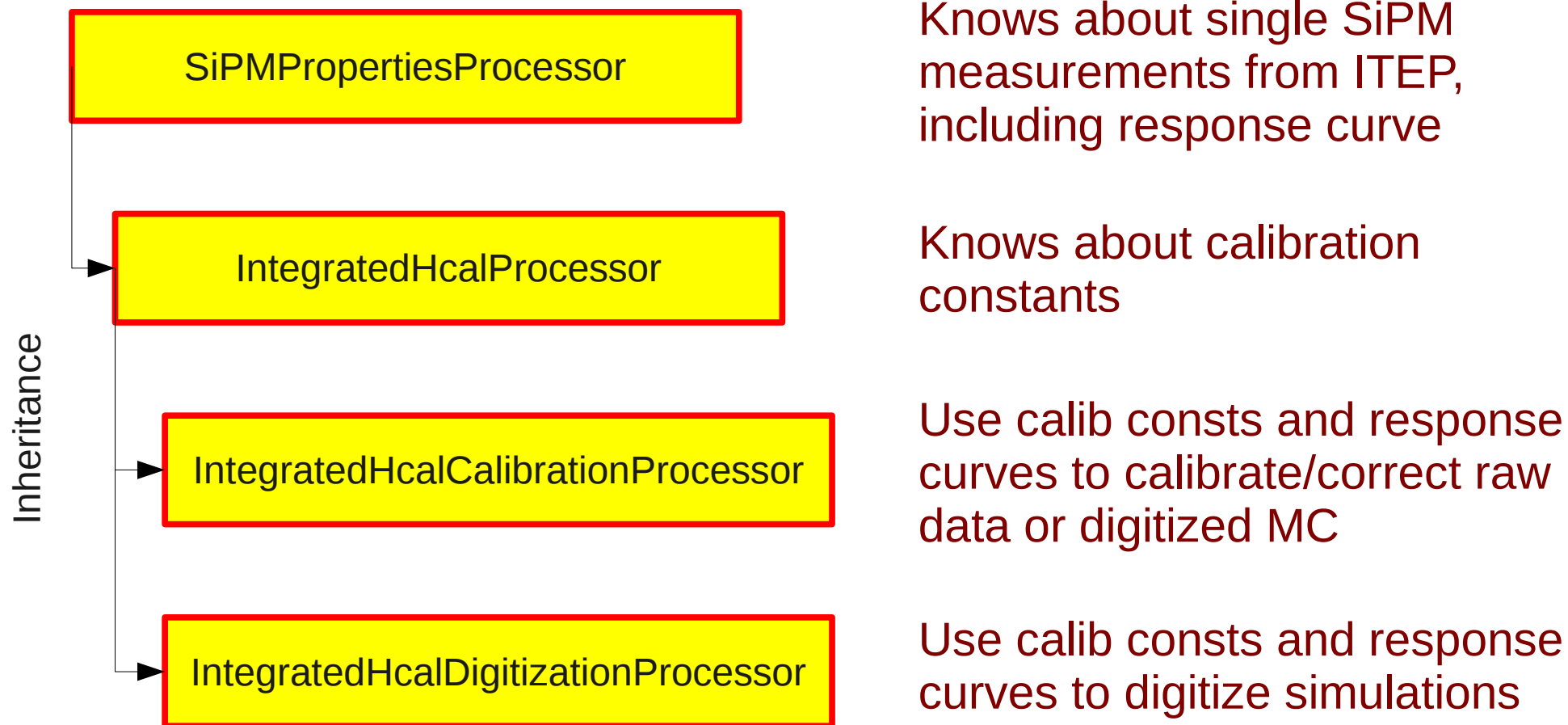


AHCal-Specific Code

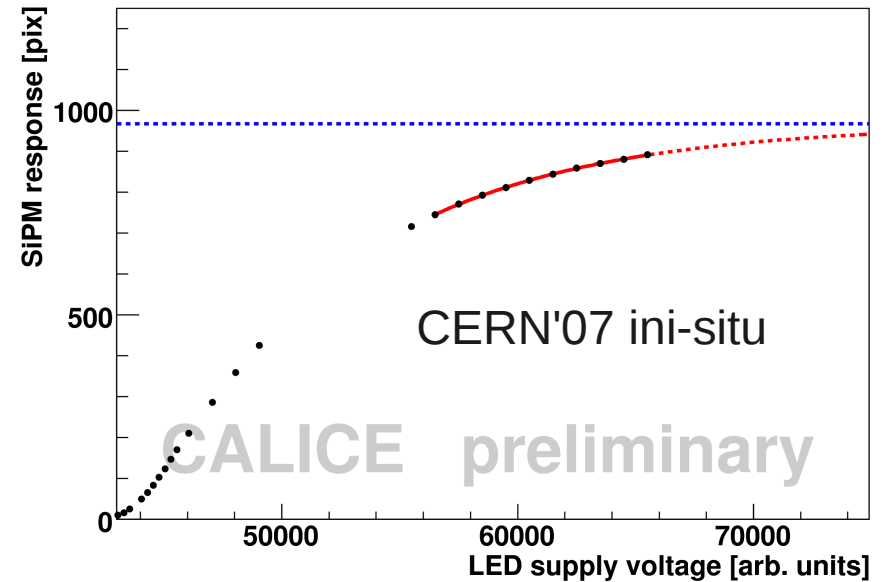
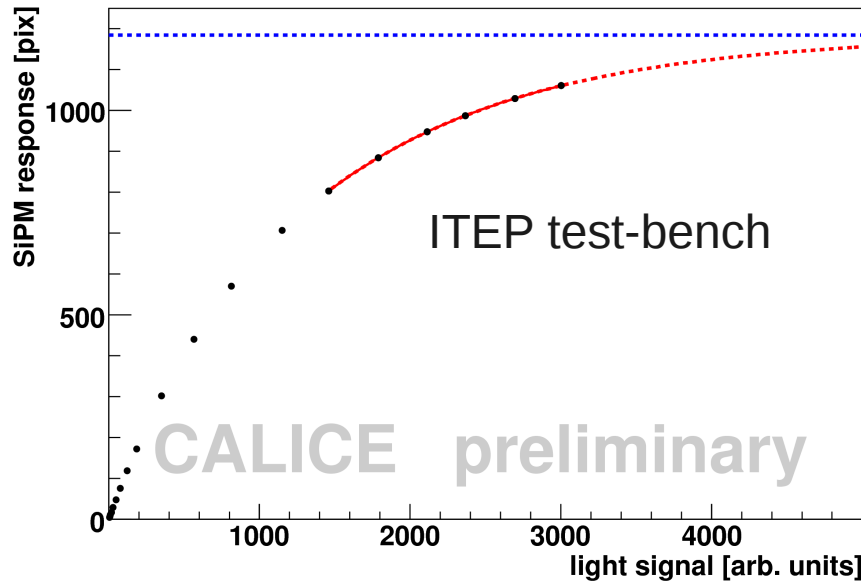
Current status of reconstruction and digitization

Niels Meyer, DESY
CALICE Meeting, Manchester
September 9, 2008

Processors



Response Curves



Data demand possibility to scale response curves

SiPMPropertiesProcessor offers flexibility to

- Global scaling factor
- Channel-by-channel factors (LCCollection of SimpleValue objects)
- Combination of both

Missing: replacement of ITEP data with alternative response curves

Calibration Constants

AHcal properties are temperature dependent, strategy is to scale calibration constants (gain [ADC/pix] and MIP [ADC/m.i.p])

Correlated effect, most simple way to realize is global factor to all calibration constants (available in IntegratedHcalProcessor)

Still under development:

- Individual scaling factors
- More sophisticated: temperature from data stream, calculate individual scaling factor from measured temperature slopes

Digitization / Reconstruction

Digitization output equivalent to (and same format as) raw data

Effects simulated:

- Signal leakage to neighbouring tiles (global factor only)
- Non-linear response (response curves and calib constants)
- Pixel statistics
- Energy scale (calib constants)
- Dead/uncalibrated channels

Effects reconstructed/corrected:

- Non-linearity

Still not possible at the moment:

- Channel-to-channel smearing of calib constants (to get resolution correct in simulation)
- Correction of known and simulated effects (signal cross talk, excluded cells)