



Calibration Quality Control

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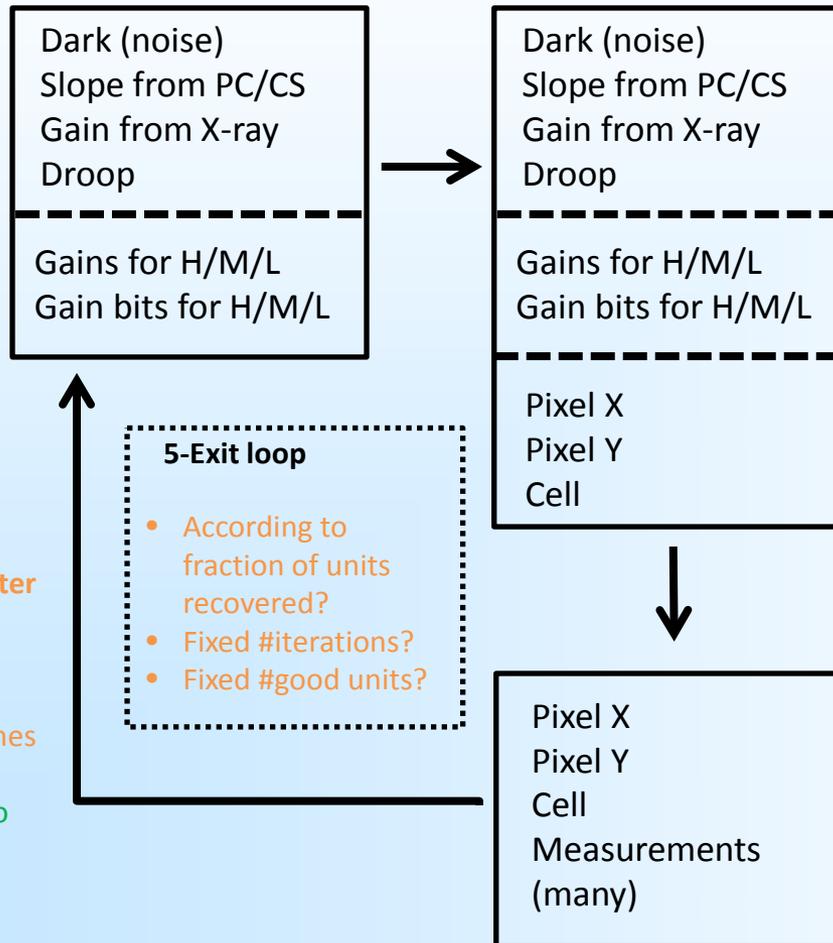
Deutsches Elektronen-Synchrotron (DESY)

Quality Control Process



1-Processed data

- **3D matrix**
 - D1: Pixel X
 - D2: Pixel Y
 - D3: Cell
- **5 groups of data**
- **Final gain and gain bits for H/M/L** evaluated according to the information in the 5 groups of data



4-Reprocess data

- **Fit again to obtain better values of:** noise, slope from PC/CS, gain x-ray, droop
- Define better approaches to the fittings
- Reinstert new data into old one

2-N-tuple

- **Event structure**
- Each module has 512 (pixel Y) x 128 (pixel X) x 352 (cells/pixel) = **23068672 memory units (=events)**.
- **Extra magnitudes are evaluated** (i.e. ratio between high gain and medium gain of pulse capacitor).
- **Representation of PIXEL/CELL MAP:** scatter plot of memory units for a particular pixel/cell that fulfill a certain condition (i.e. high gain > 30).
- **Define criterion of quality:**
 - Which magnitudes to evaluate?
 - Which threshold?

3-Report

- **2D matrix** (1 event per row).
- Measurements (m) expressed as the distance from the mean in sigma units **$m=(x-\text{mean})/\text{sigma}$** , x:value this m.u., mean and sigma of the distribution of all m.u.
- Include **extra processed information:** electronically dead? disconnected?