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DEPFET

Active Pixel Detector

PXD Test Beam

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November Test Beam

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- DESY TB21 with DATURA telescope
- Calendar weeks 45-46 (2^{nd} to 13^{th} Nov 2015)
- PXD Standalone tests (with additional parasitic users)
- New DESY safety requirements:

https://indico.desy.de/getFile.py/access?contribId=7&sessionId=5&resId=0&materialId=slides&confId=10685

  - Indico registration for the DEPFET Test Beam (!)
  - DACHS ID Card on site
  - Safety Course (Mondays 13h00)

- AIDA TA available

Devices Under Test

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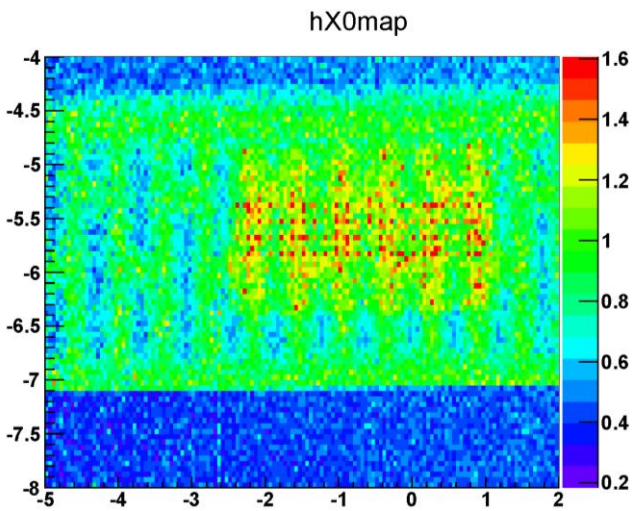
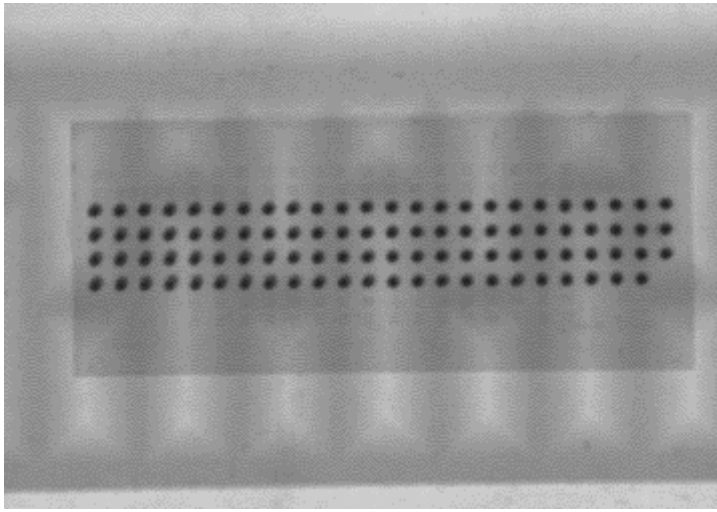
- Material budget investigations on PXD9 sample with ASICs and passives
- H5 with PXD9 small matrix from Pilot Run
- H6 with PXD6 large matrix
- H7 with PXD9 large matrix from Pilot Run (only lab tests)
- Parasitic users

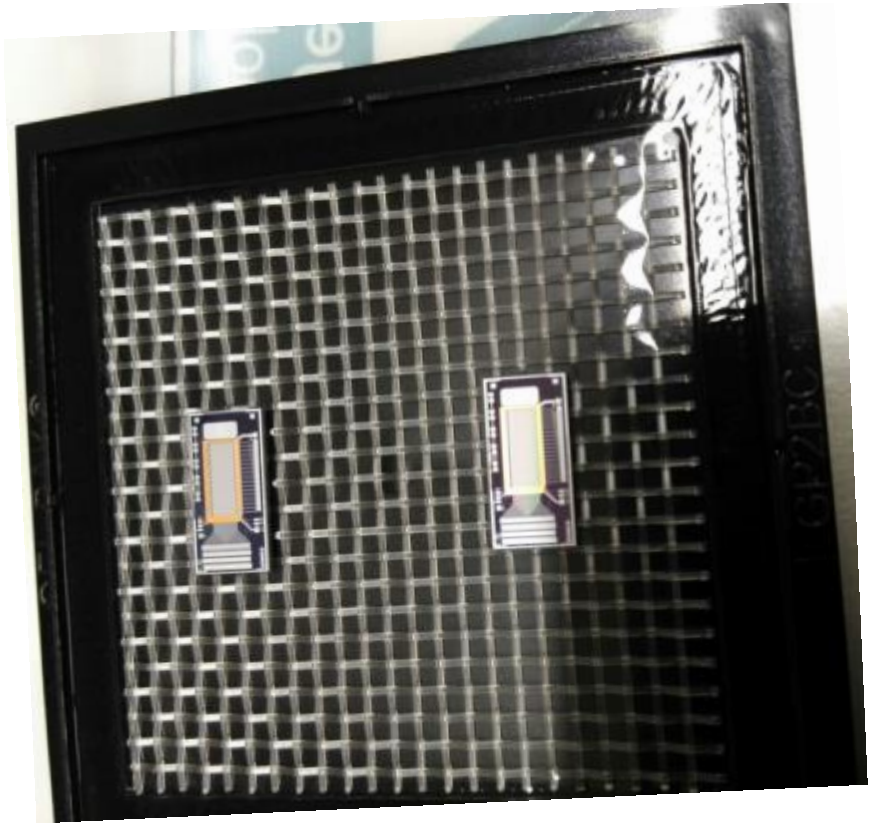
PXD9 Mechanical Sample

- Material budget investigations on PXD9 sample with ASICs and passives



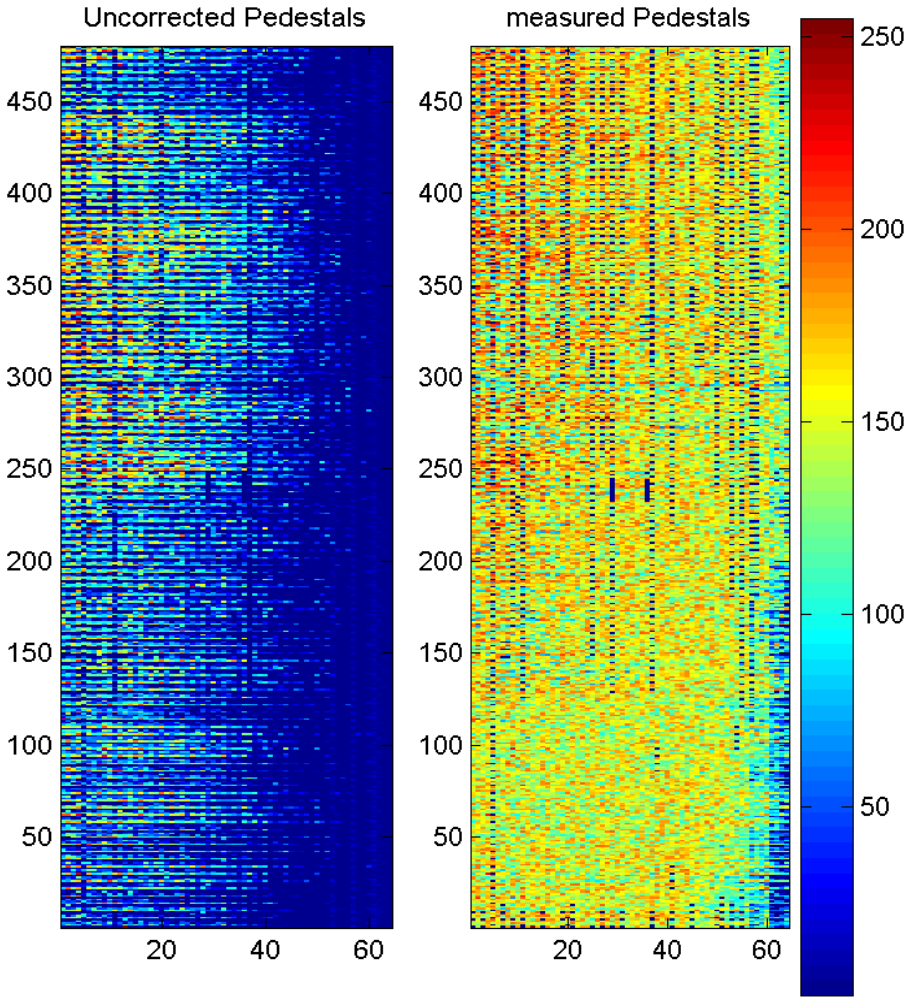


Hybrid 5.0



- Hybrid 5 fully populated
  PXD9 small Belle II type DEPFET matrix
  DCDBPipeline
  DHPT1.0
  SwitcherB1.8Gated
- DHE and BonnDAQ. Power Supply. Telescope.
- Intrinsic properties final Belle II DEPFET
  Resolution, efficiency, noise, charge collection
- System related aspects
  Gated mode, sampling point, …

Hybrid 6.0



- DHE and BonnDAQ. Power Supply
- PXD6 - I00.50x100 µm^2 pitch
- 1 DCDBv2/DHP0.2
- 4 SwitcherB1.8G
- Speed: 250 MHz
- DHE and Power Supply

- System related aspects on fiducial areas:
  2b DAC compensation
  Efficiency (timing)

Manpower and Plans

- Sensor, ASICs, PS, BonnDAQ : Bonn
- DHE: TUM
- Analysis: Göttingen

- To Do List:

DCD optimization on H5
DCD-DHP communication H5
Matrix optimization H5+H6
TLU-trigger on DHE for H5 (H6)
Gated Mode (!)
Additional power supply for H6 operation

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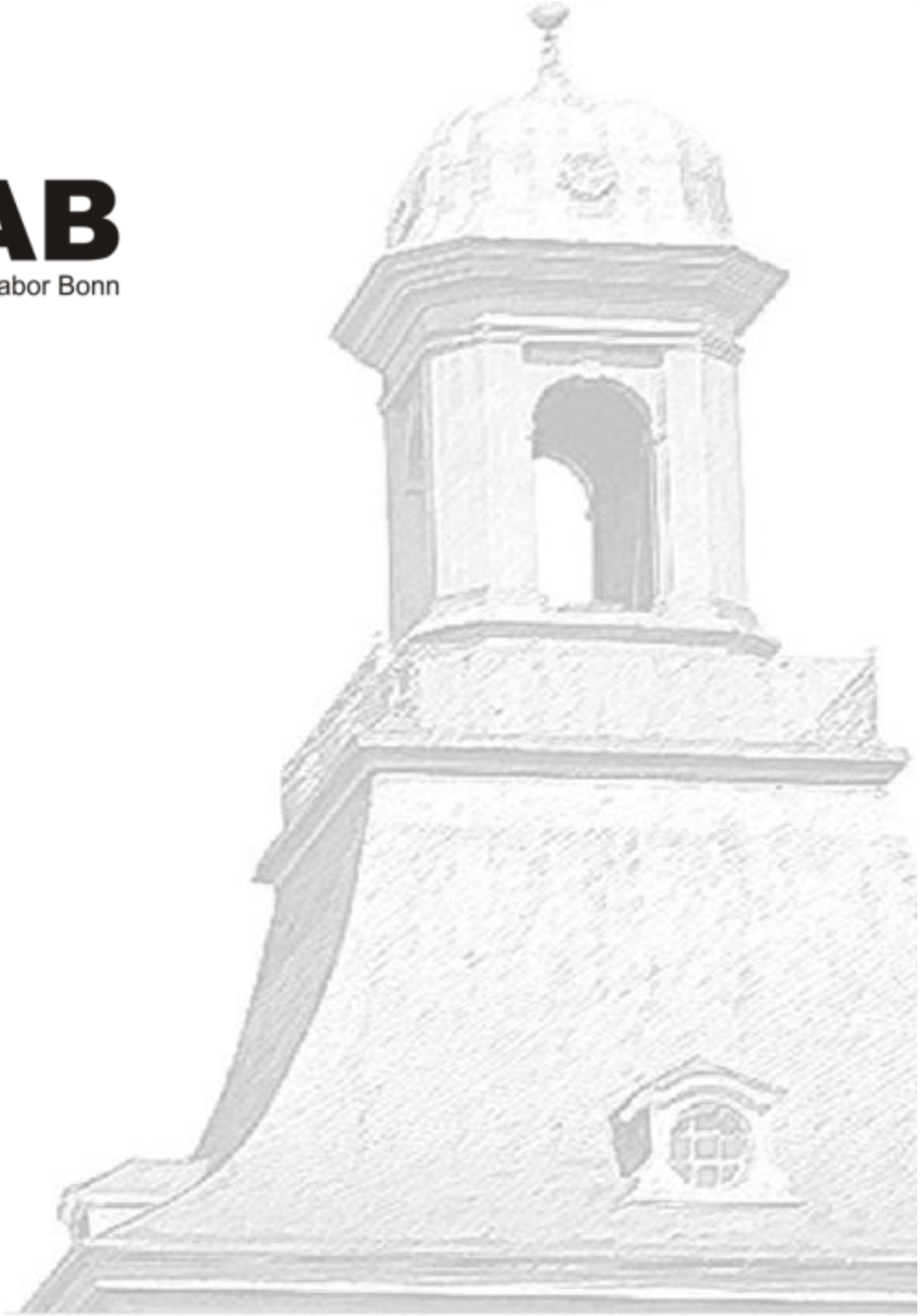
SI LAB
Silizium Labor Bonn



Thank you

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