


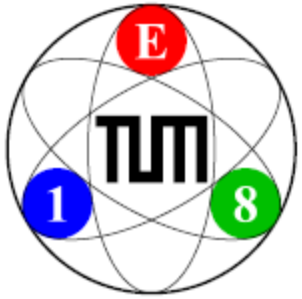

Preparation for DESY Test Beam 2016

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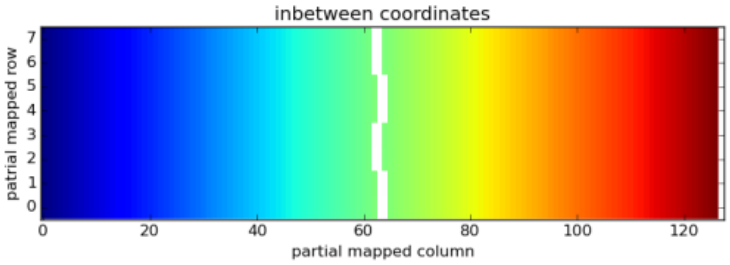
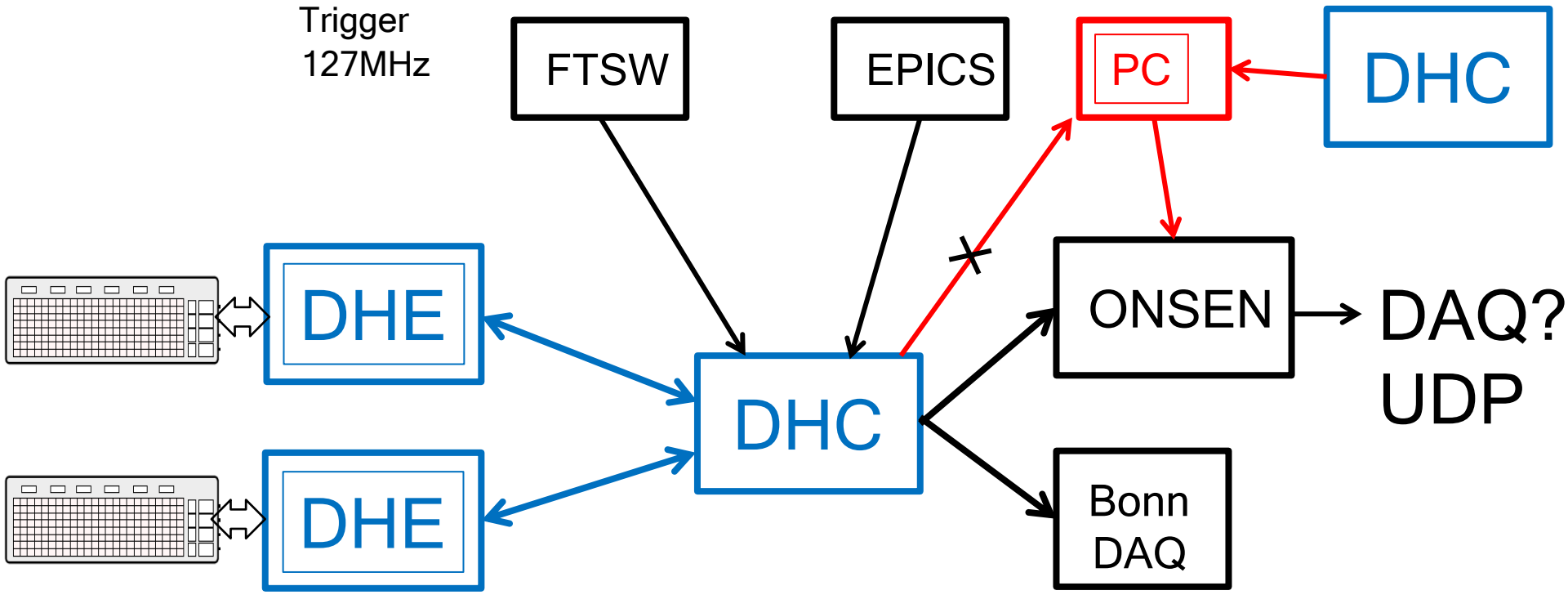
Ultimate goals

- Verification of stability DHPT⇔DHE links @76MHz
- Operation of 2+2 half ladder detectors
- Final design of DHH carrier cards with optical interfaces
- Detector types : IF, IB, OF, OB
- Trigger rate tests
  - Average 7 kHz trigger rate (one ONSEN module)
  - 30 kHz in pulse mode within short intervals of few seconds ?
- Readout modes
  - Raw data (pedestal measurement)
  - Zero suppressed data
- Zero suppressed data format
  - Direct DHPT format
  - Intermediate remapping format
    - Remapping hits within each DHPT



Setup in October



- For every trigger DHC sends UDP packet with HLT information for ONSEN, standard firmware feature
- DHC generates predefined hit pattern, special firmware

Plan for October

- Installation October 4-th
  - System setup similar to April DESY test beam
    - 2xDHE + DHC
    - The same firmwares
  - Verify observed problems with DHPT⇔ DHE link stability
  - Run at 76MHz
  - Verification of synchronous operation of all DHPTs
  - Switch to new firmware
    - UCF interface (single link for data transmission, trigger and IPBUS)
    - DDR memory and support of overlapping triggers
  - DHPT=DHE data rate test 3%
  - DHPT=DHE operation at >3% occupancy
  - Trigger rate tests
  - ONSEN back pressure test

November Setup

- Switch to optical interface
- Display port cables
- Final version of DHH Carrier Card and RTM

Open Question

- Presence at DESY
- Setup operation: continuous or switched ON while somebody present at DESY
- Most of DHH debugging if needed can be done remotely

THANK YOU