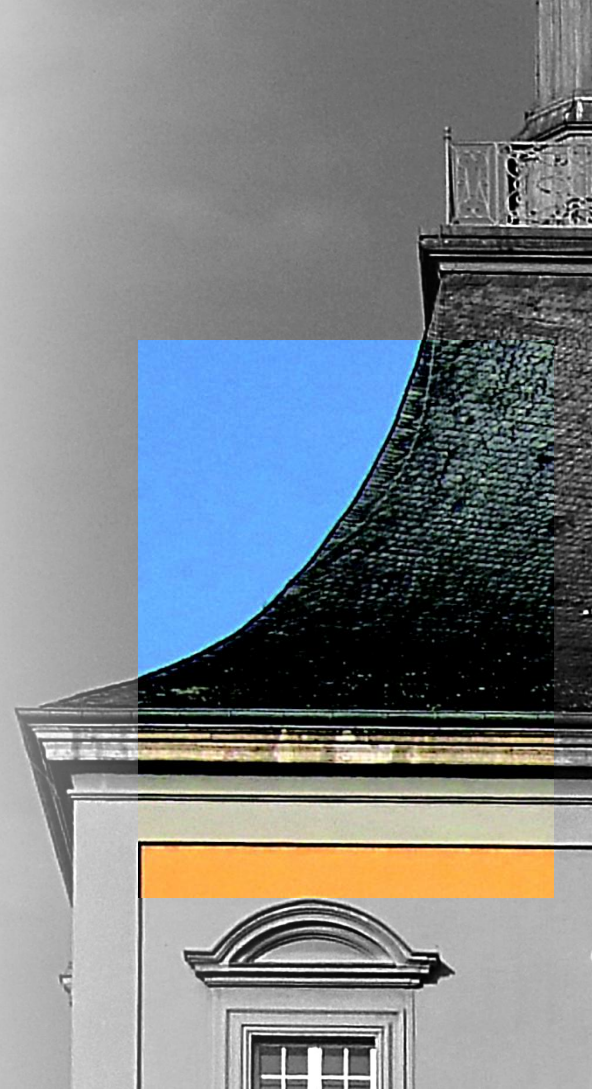**Bruno Deschamps**, Christian Wessel,
Jochen Dingfelder

Universität Bonn

STATUS OF DATCON

DESY 20/01/20

PREVIOUS STATUS

- Issue with FTB-DATCON link was investigated and solved. Has been running without problem since

- Complete DATCON setup with 2 chassis running stable

- Link loss at beginning of new run between DATCON and ONSEN was fixed by delaying the different DATCON resets

- During the last weeks DATCON was successfully included to global run control and generated ROIs
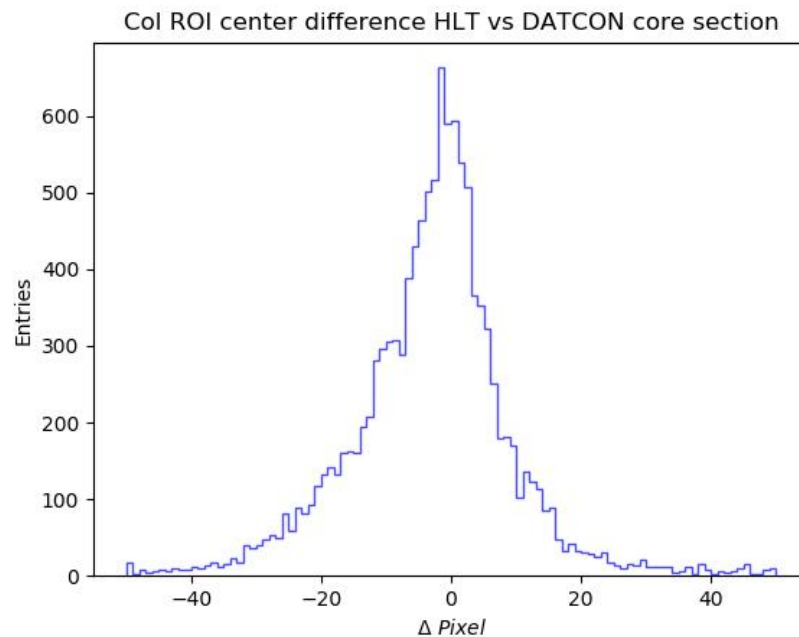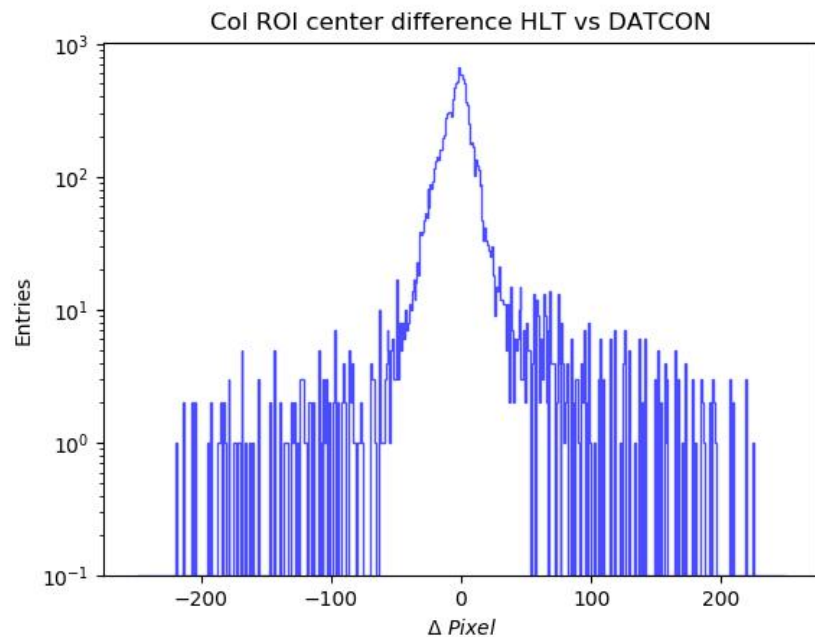
FIRST RESULTS

- First look into available ROIs showed no correlation with HLT ROIs where hardware simulation does

- Compared DATCON ROIS with ROIs obtained with simulation : no correlation

- Quickly processed on hardware single event. Results different than simulation

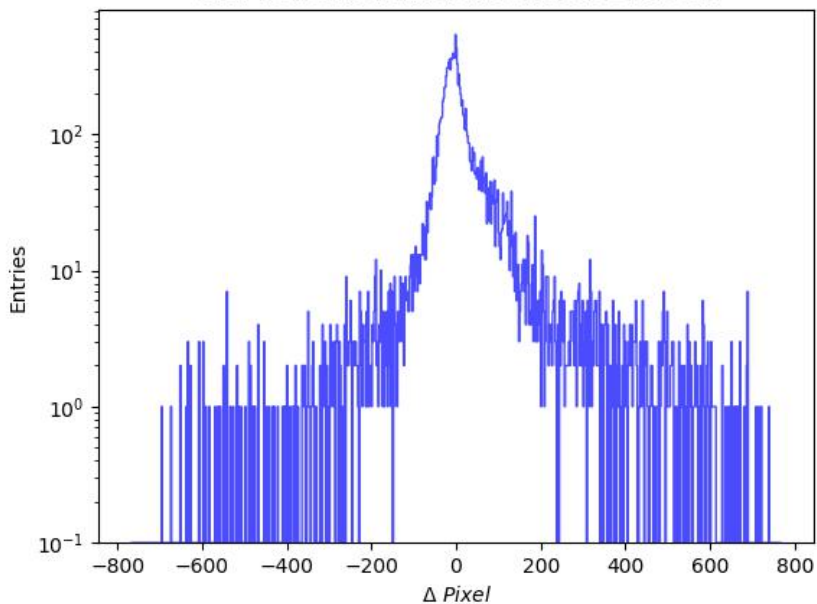- Problem found with unlocked LUT not holding output

TEST SETUP

- To confirm the change, a light DATCON test setup was made

- SVD/FTB data downloaded from KEKcc and then sent to the setup via IPbus

- Firmware contains one Concentrator (instead of 52) and full tracking to ROI chain

- Any kind of information can be sent back to the PC (HS cluster, ROIs)

- Comparing 1K event with hardware simulation showed no mismatch with HS clusters or ROIs

- More event were processed and then compared with HLT ROIs
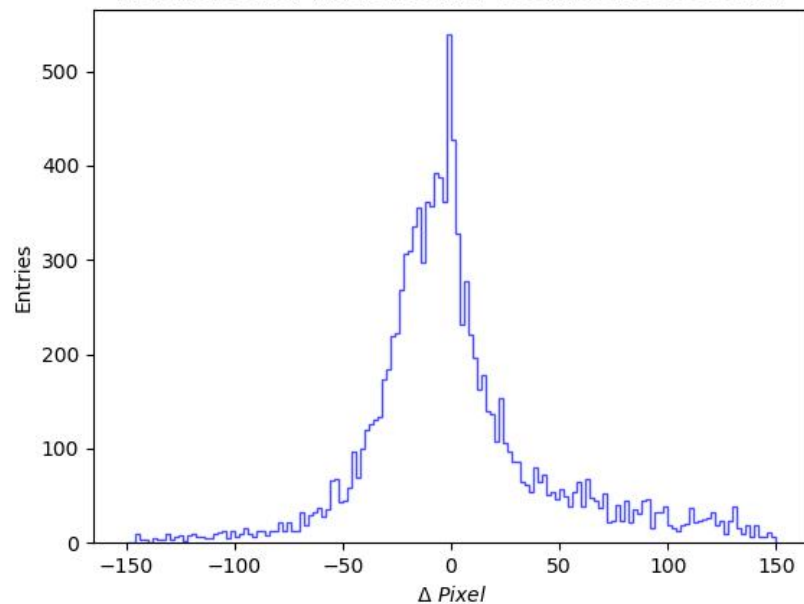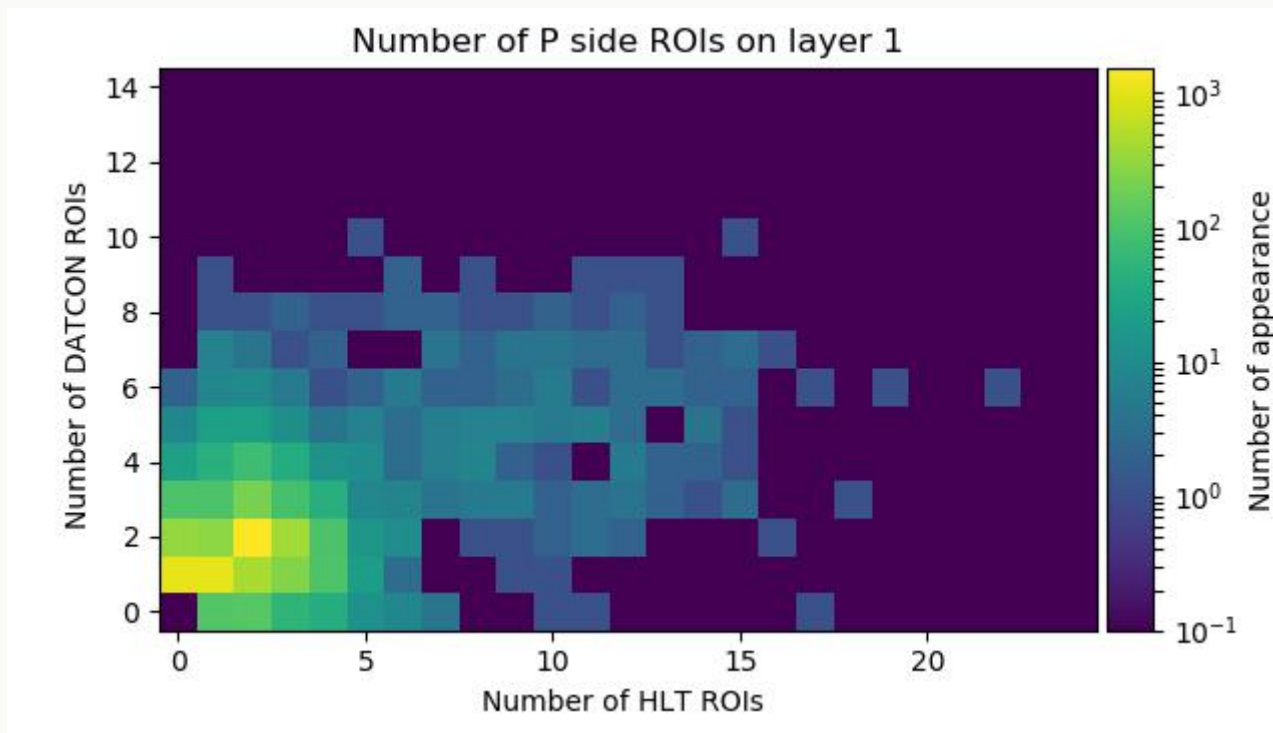
DATCON VS HLT P SIDE

DATCON VS HLT N SIDE

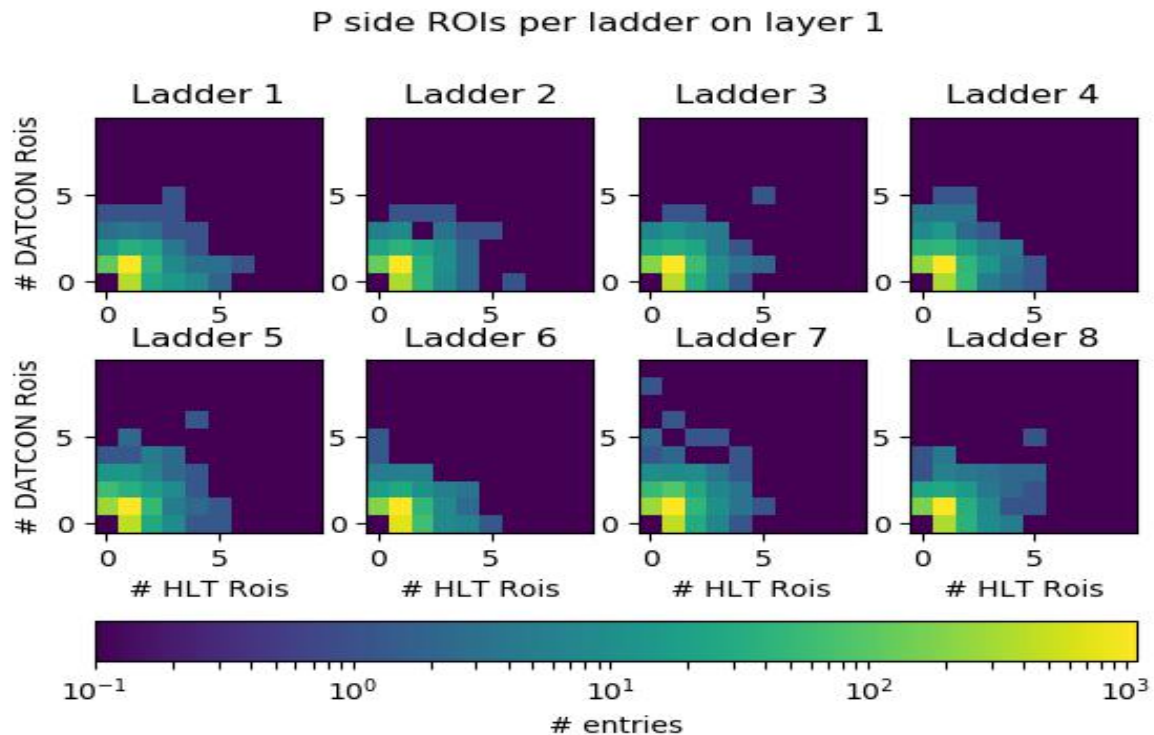Row ROI center difference HLT vs DATCON

Row ROI center difference HLT vs DATCON core section

Number of P side ROIs on layer 1

P side ROIs per ladder on layer 1

CONCLUSION

- DATCON was running during beginning of PHASE3. Generating ROIs, connected to ONSEN, following and/or included to global RC.

- Test setup was build to rerun PHASE3 runs

- Reprocess more and full PHASE3 runs. Generate complete DATCON ROI and not only one side

- So far DATCON ROIs are only compared to HLT's

- Need to compare with simulation

- Focus on DATCON ROIs that do not match HLT's

THANK YOU