

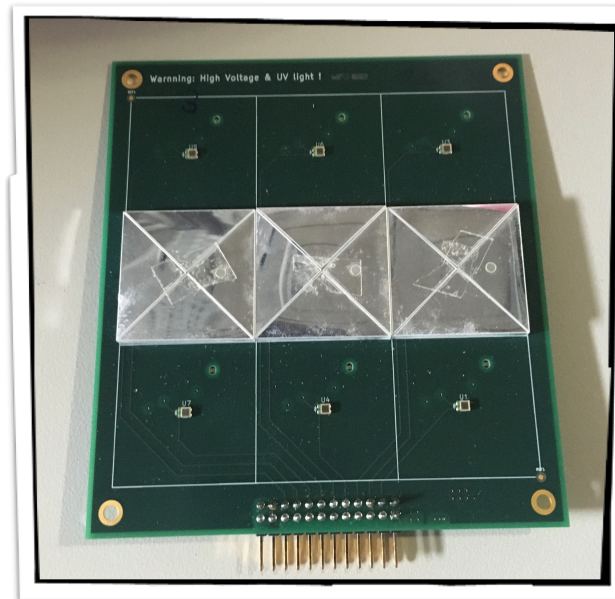
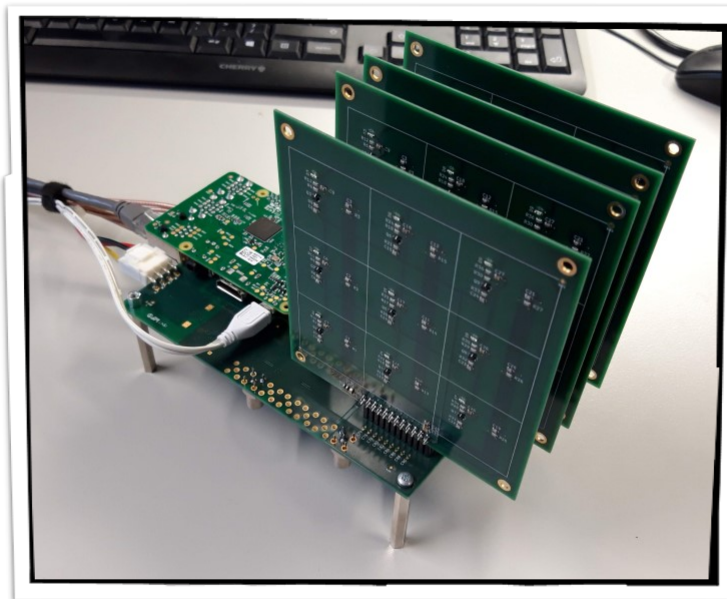
KLauS6: Status and Recent Developments

Main improvement: PLL driven TDC with 195 ps time binning
Intrinsic resolution of $< 100\text{ps}$ confirmed

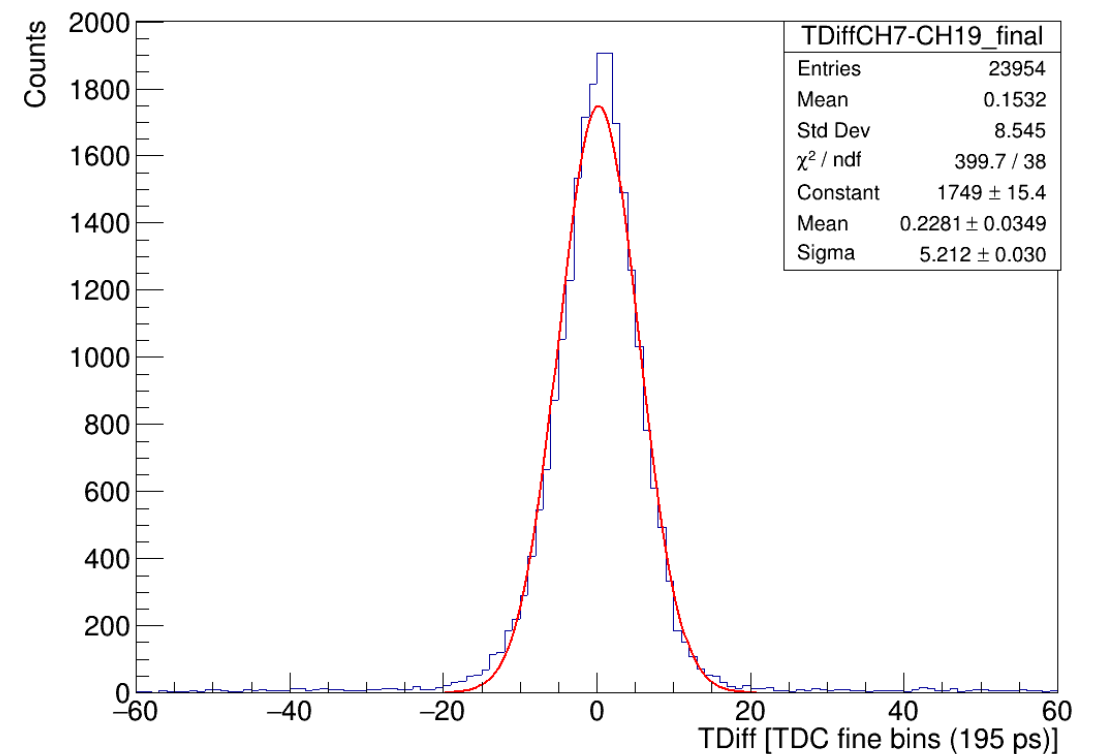
Test Beam Campaign in 10/2020 @ DESY

Wire bonded chip & AHCAL tiles on SiPMs in beam
Timing performance well below 1 ns achieved!

Example Time Difference Spectrum
[Resolution = $726 \pm 4\text{ps}$]



Test Beam Setup and Sensor Layer



KLauS6: Status and Recent Developments

Next Steps:

KLauS6-BGA from new company just arrived.
BGA is working! Qualification in progress

KLauS6b with improved features in TDC in production

HBU with KLauS5-BGA: DAQ development ongoing,
plan to participate in future test beam operation

Next FP: work on KLauS for DUNE ... (if funded)