

Forward Projectile Spectator Detector (F-PSD) at NA61 beam line



May 2018,
NA61 beam line

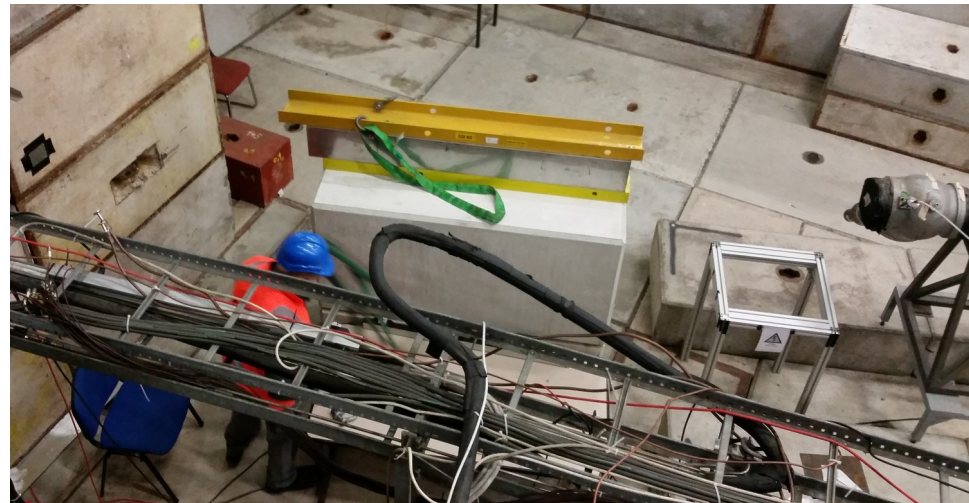
New concept of Forward
Calorimeter system has been
designed → new FEE + different
types of read-out..

..need to be tested!

One module of F-PSD at T10 beam line

October 2018,
testbeam at T10 line

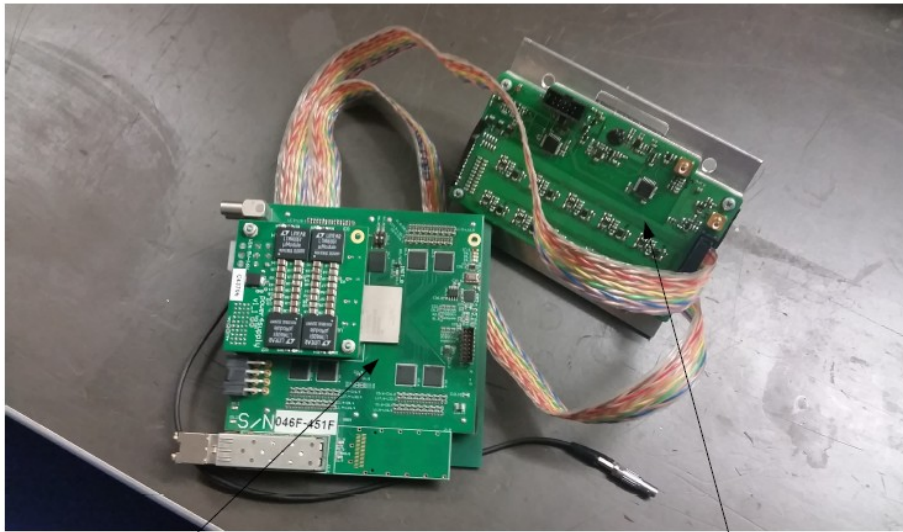
One module of F-PSD
has been transported and
Installed for tests



Different variants for readout

Dubna ADC64s2 readout board

- 64 MHz pipe-line ADCs.
- 64 channels on board.
- 1 kHz trigger rate tested.
- Differential amplifiers and ADCs.

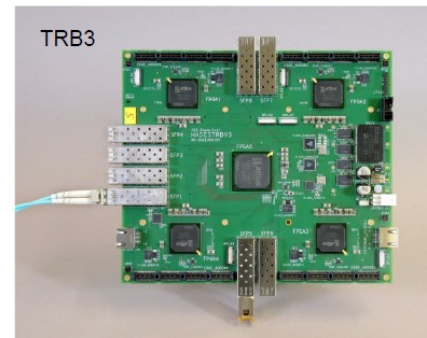


64 channels FPGA based read-out board

FEE with new differential outputs

ToT and PaDiWa + TRB3 board

- 256 channels on TRB3 board.
- DAQ functionality.
- Performance is to be tested
- Time Over Threshold method



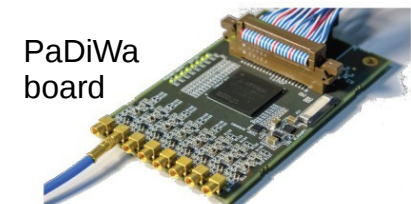
TRB3 - multi purpose time digitisation board:

- 23 ps RMS TDC (FPGAs)
- up to 256 channels
- DAQ functionality
- fast data transfer via gigabit Ethernet



ToT board - front-end charge-to-Time-Over-Threshold conversion:

- 8 MMCX inputs → 32 TDC channels on TRBv3 needed
- NINO chip based design
- threshold settings through TRB3 SPI protocol

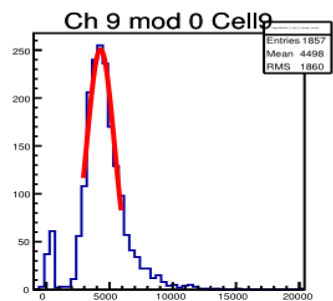
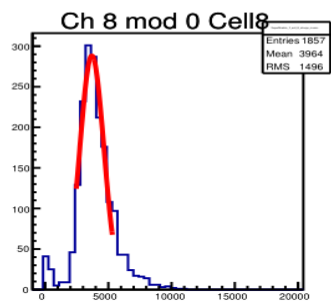
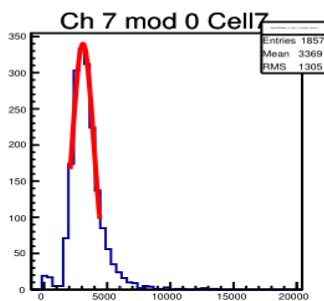
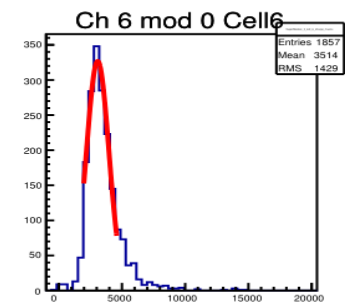
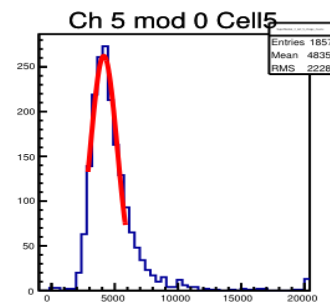
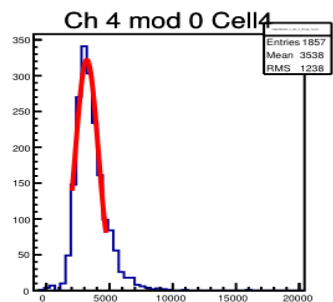
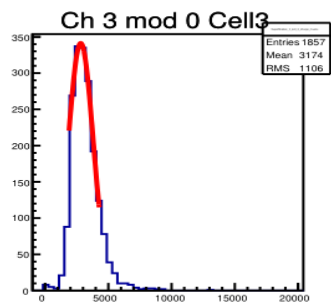
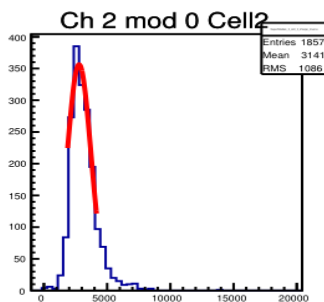
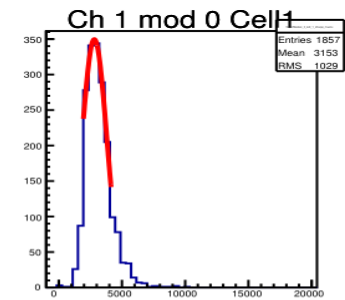
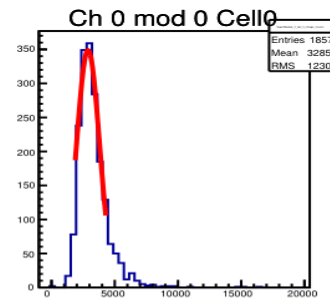
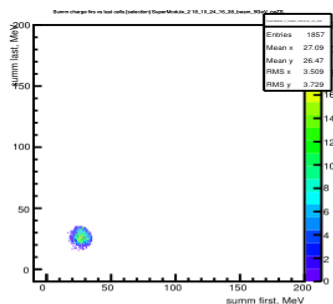
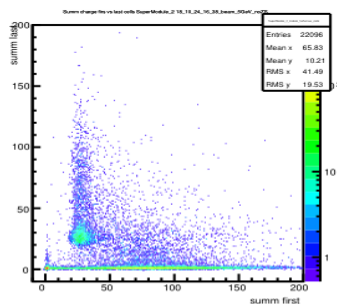


PaDiWa board

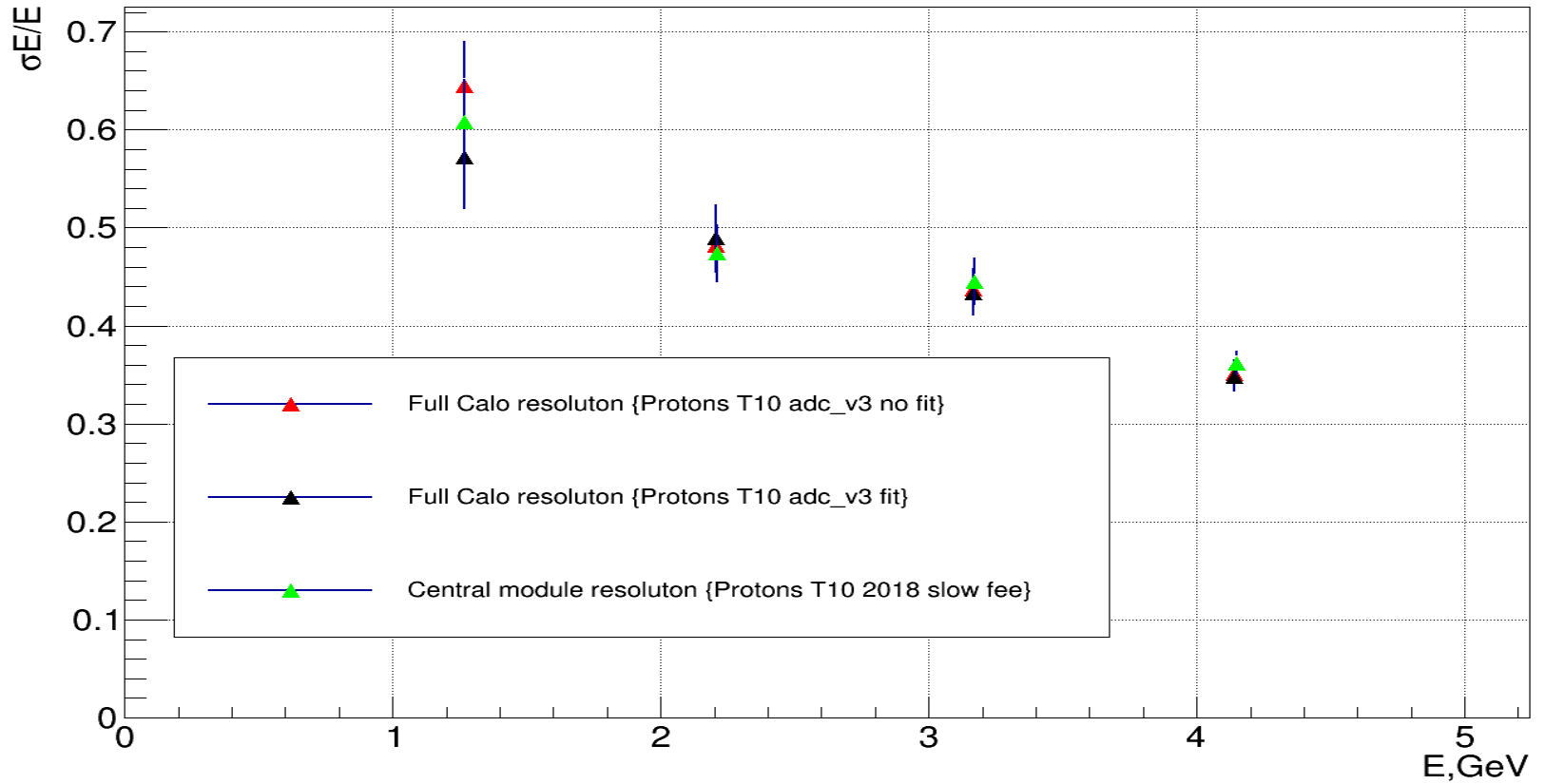
New version of FEE v3 muon calibration beam 5 GeV/c

Calib Spectra

18_10_24_16_38_beam_5GeV_noZ
SuperModule_2



New version of FEE v3 energy resolution scan



Thank you for the beam!