



ATLAS TileCal Test-Beam

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for the ATLAS TILE group

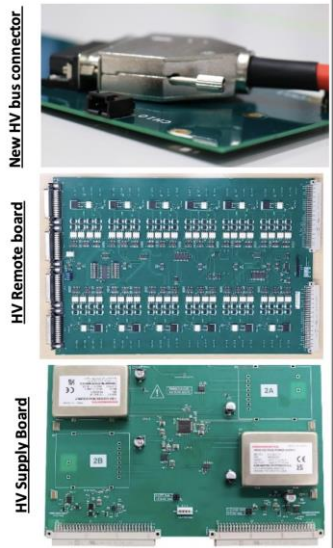
Goals of the test beam

- Validation of electronics for the HL-LHC
 - Full vertical slice test with upgraded component and integration with the ATLAS infrastructure (FELIX)
 - integration/test of:
 - Daughterboard v6.4 (FDR in Q2/Q3),
 - trigger pre-processor (CPM and TDAQi (FDR in Q3)
 - HV regulation system (FDR follow up)
 - LV power system (PRR in end Q2)
 - Particle response, EM scale setting, linearity and resolution,
- Improve ATLAS performances with validation/modeling of hadronic showering models (collaboration with G4 team)
 - Many hadron-based analysis in the high and low energy regimes
 - Muon and electron calibration studies of great importance to have precise energy scale
- Two run periods
 - W21, W22: from 22nd May to 4th June
 - W37, W38: from 11th to 24th September



Goals of the test beam

New prototypes didn't make it, September!



Only one board, but it worked great

Daughterboard v6.4



Not fully integrated
In track for September!



CPM and ATCA carrier



TDAQj v3



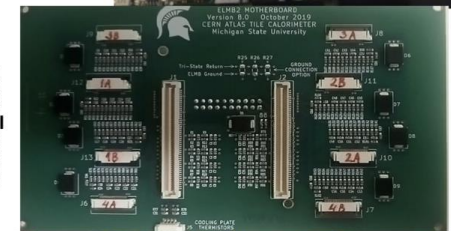
Ready for the PRR



Pre-production Bricks in Demo



ELMB_MB2



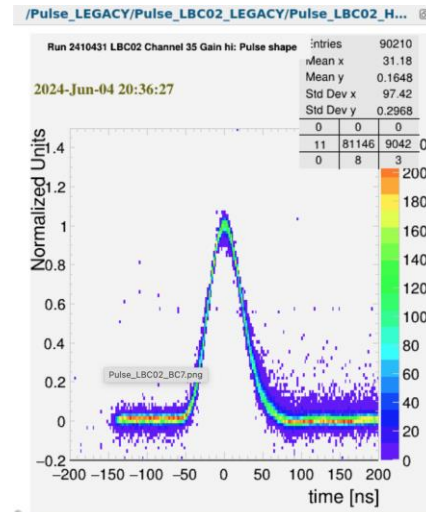
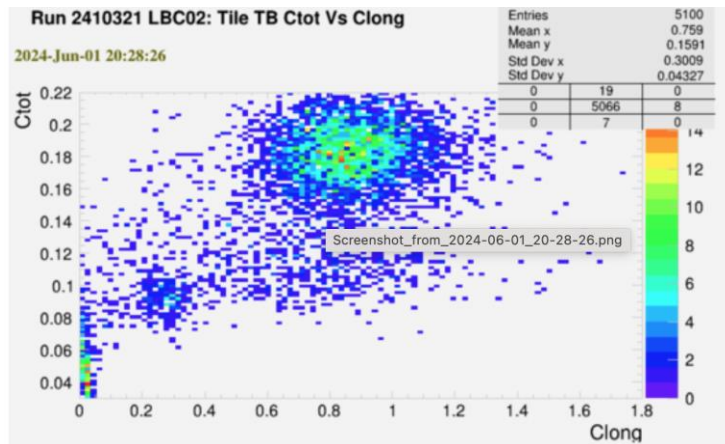
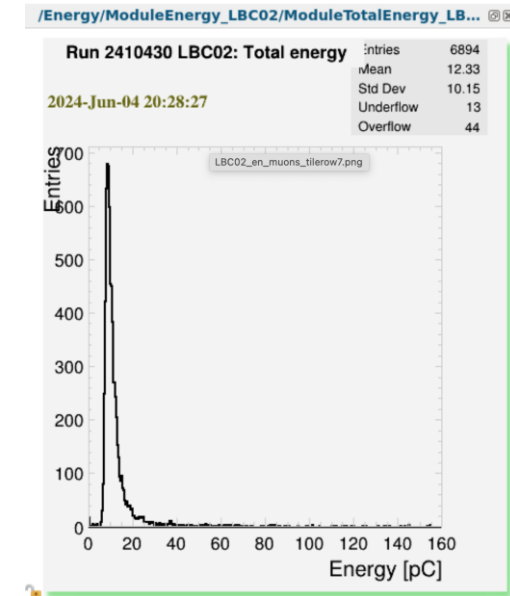
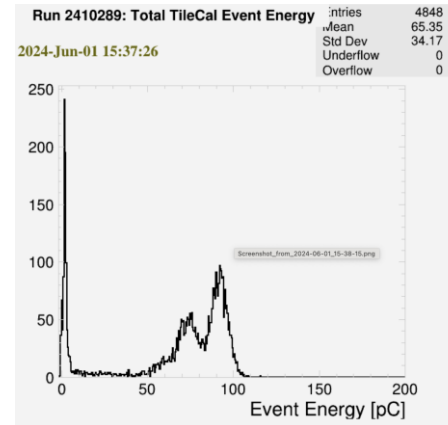
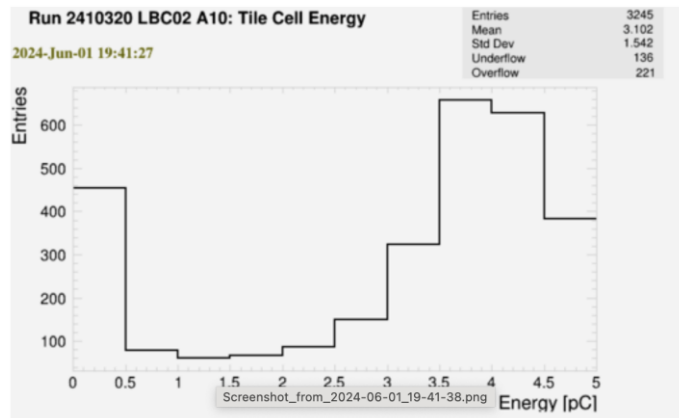
AUX_BoardV3



Plenty of A&I activities and operational experience



Few examples of online monitoring plots



Positrons beam seems spectacular!
Will provide more feedback on purity ASAP
Overall we had large down time but
We do manage to collect 25 M events.

MANY Thanks to ALL personnel of the accelerators and North Area that make always the TB experience pleasant, important and worthwhile, particularly for the young colleagues