

LUXE Pixel Tracker HW Status

Oleksandr Borysov

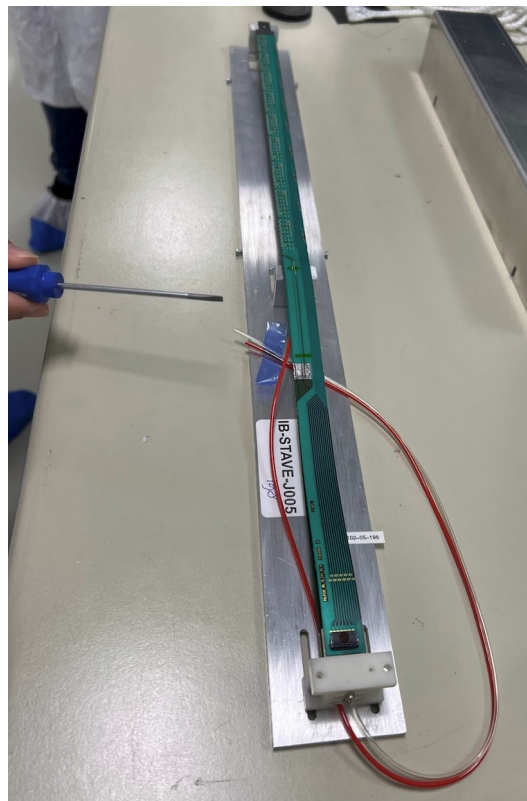
Weizmann Institute of Science

LUXE Computing and DAQ meeting Meeting

June 22, 2022

Tracker status and plans for tests

- Nothing was changed in the system design since writing and presenting TN.
- ALPIDE stave and single sensor boards are on the way from CERN to WIS.
- TLU received from DESY on loan basis is at WIS lab.
- Plan is to assemble all components following the ALICE approach and test it with cosmics and sources.
- Readout Unit can be substituted with MOSAIC (A MODular System for Acquisition, Interface and Control) board also recently delivered to WIS.
- Discussions with companies about the Readout Unit option (ALICE has zero spares).
- Noam, Arka and me visited ALICE labs to get some practical and demonstrative lessons on handling ALPIDE stave and components.
- If tutorial on EUDAQ were organized centrally we would follow its program.



Services (full)

Readout

- The staves are connected to the readout units (RUs) such that each sensor has its own readout line with 2 Gb/s with a TwinAx cables.
- The RUs are connected to the backend FELIX PCIe card with GBT optical fibres
- One RU serves one stave (due to bandwidth considerations). Each RU has up to three uplinks, and one downlink.
- One FELIX (PCIe card) can support up to 16 RUs. We will use two FELIX installed on two PCs, with each FELIX managing up to ten RUs and staves.
- The TwinAx cables are relatively rigid, 5 m long, halogen free provided and safety-approved for caverns by CERN.

