ITk Pixel Test Beam @ PS 2022

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Summary

• ATLAS ITk Pixel is a large LS3 upgrade project approaching production on an extremely tight schedule

• To be measured: hybrid modules with planar and 3d sensors and equipped for the first time with ITkPixV1.1 front end chips:
  - HPK prototype quad unirradiated/irradiated
  - FBK 3D SCC module unirradiated

• Data necessary (or useful) for various mile stones
  - Module FDR (early May)
  - P2UG (mid May)
  - FE PRR (June)
  - Sensor PRR

• DAQ adaption (in test beam environment) for new chip generation has to be tested

• Migration EUDAQ2/TLU2 envisaged
Summary

- ACONITE telescope with MPI cold box permanently installed in H6A
- Now in the process to be moved to T10 for 3 weeks (HGTD and ITk Pixel test beams)

Requires:
- DESY table with plate → Bruno VIRTANEN is looking into it; identified but problem: planned maintenance
- Nitrogen for flushing to be installed 24th March by David JAILLET: https://edh.cern.ch/Document/9161770
- Rack in zone, tables → Bruno VIRTANEN is aware
- To be checked: sample storage; IRRAD freezer?
- ~5E5 particles per spill→ ~max ~25 tracks in telescope per Mimosa frame due to ambiguity
- Maximum energy to minimize multiple scattering; polarity does not matter