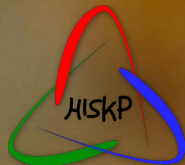


Mighty Tracker Testbeam Plans

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On behalf of the Mightytracker team



Current Status:

- The MightyPix had 2 testbeams:
 - October 2020 at DESY (mainly done by Heidelberg)
 - August 2021 at SPS (mainly done by LHCb people with HW from Heidelberg)
- We do want to move to our own infrastructure for testbeams
- Two things are of interest right now:
 - Irradiation behavior of the sensor
 - Characterization of the first MightyPix variant (submitted in November)

Plans near Future:

- Analyze the last testbeam data
- Build a cooling solution for irradiated sensors
- Use the Mu3e readout for the irradiated AtlasPix3.1 that we have in Liverpool
- Use Mimosas telescopes at DESY with EUDAQ
- Use the “LHCb” -readout for the chips (based on BASIL you might know it from BDAQ RD53x readout)
- Get more testbeam experience within the LHCb group

Plans not so near Future:

- Build more testbeam infrastructure
 - LCHb cooling prototype with carbon fiber
 - Maybe our own telescope (if we need to go to PSI or don't get a telescope)??
- Build as we go along a more realistic system (IpGBT, DCDCs)
- (from my side) we have a cyclotron in Bonn that has a newly developed chip irradiation infrastructure
 - Fast irradiation testing cycle
 - Measurements in beam pauses or even live measurements possible
 - For the moment “internal” test phase, but will be open for external groups ~2023