

11th Beam Telescopes and Test Beams Workshop



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Characterisation of a novel trigger and timing plane for the EUDET Telescopes

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The DESY Test Beam facility provides 1-6 GeV electron beams for users and precise reference tracking systems, the EUDET-type telescopes. The telescope readout is triggered externally and up to 10 particles are recorded in one readout cycle, causing ambiguities as no time-stamping is provided.

TelePix is a 180 nm HV-CMOS sensor foreseen to be used in upgrades of the EUDET-style pixel beam telescopes allowing for fast timing and triggering on a region of interest. Test beam characterisations of TelePix1 have shown an efficiency of above 99% and a time resolution of 2.4 ns. Here, characterisation results of TelePix1 are presented using the latest test beam results.

TelePix2, the larger version of the TelePix1 sensor, is now in the commissioning phase. The first sensors have arrived and are now wire bonded onto custom developed PCBs. The initial progress made towards this effort is also presented.

Authors: WINTLE, Arianna; SEFKOW, Felix (Deutsches Elektronen-Synchrotron (DE)); AUGUSTIN, Heiko Christian (Heidelberg University (DE)); Prof. PERIC, Ivan (Karlsruhe Institute of Technology KIT); HUTH, Lennart (Deutsches Elektronen-Synchrotron (DE)); STANITZKI, Marcel (Deutsches Elektronen-Synchrotron (DE))

Presenter: WINTLE, Arianna

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