

Tracking the Time: Single cell 3D pixel time resolution and Landau contribution evaluation via test-beam and laboratory measurements

- ❑ 3D Sensors for timing: Small introduction on structure and functioning
- ❑ Setup and results of a first analysis of this sensors by β source characterization
- ❑ Setup for TestBeam with timing telescope (2 LGADs) and alignment and trigger through a pixelated 3D plane (FEi4). Acquisition made with an oscilloscope for 2 single 3D pixel and 2 LGADs
- ❑ Setup for 2nd TestBeam with timing telescope (2 LGADs) and spatial EUDET telescope aiming to track with 7 μm position resolution
- ❑ Trigger with 2 scintillators and small ROI on FEi4 board to increase efficiency after alignment of 3D sensors
- ❑ EUDET Telescope has 6 MIMOSA planes (1 not working) used to achieve in preliminary results a single hit resolution $\approx 5 \mu\text{m}$
- ❑ Results soon to be published
- ❑ 3 more test beam campaigns planned for 2022 with EUDET



15th Pisa Meeting on Advanced Detectors