

TelePix

A fast region of interest trigger and timing layer for the EUDET Telescopes

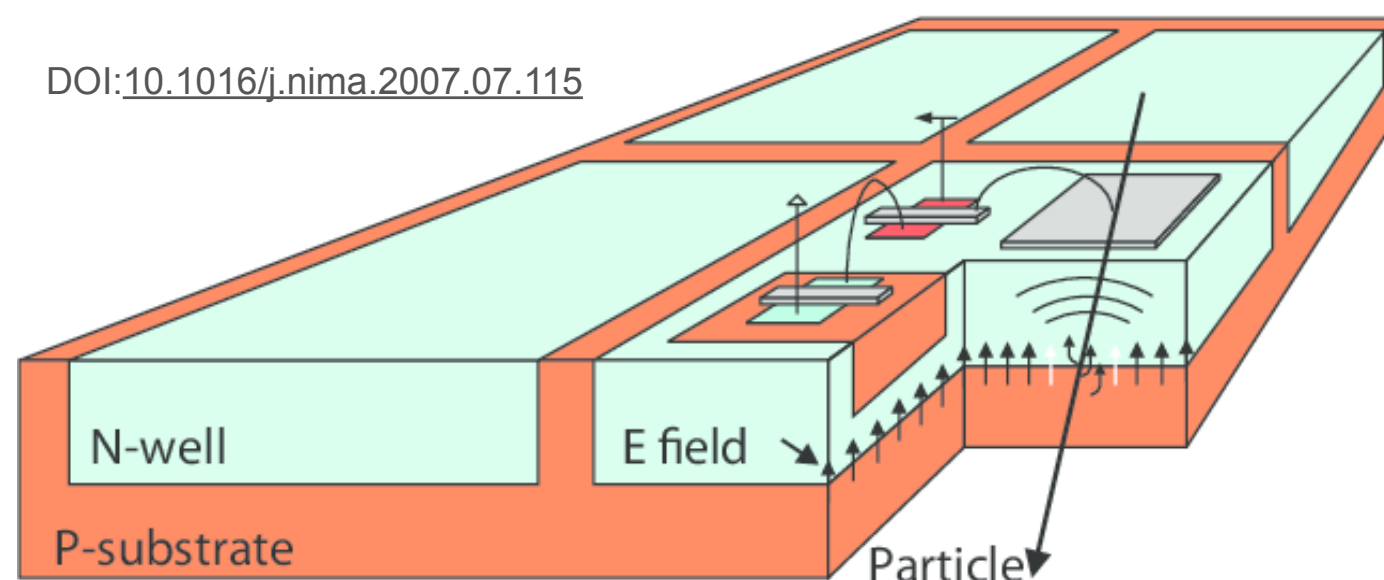
Test beams require precise knowledge of spatial and temporal position of particles. Beam telescopes provide these reference → At DESY with insufficient temporal precision

HV-MAPS to trigger on any region of interest and provide precise timing

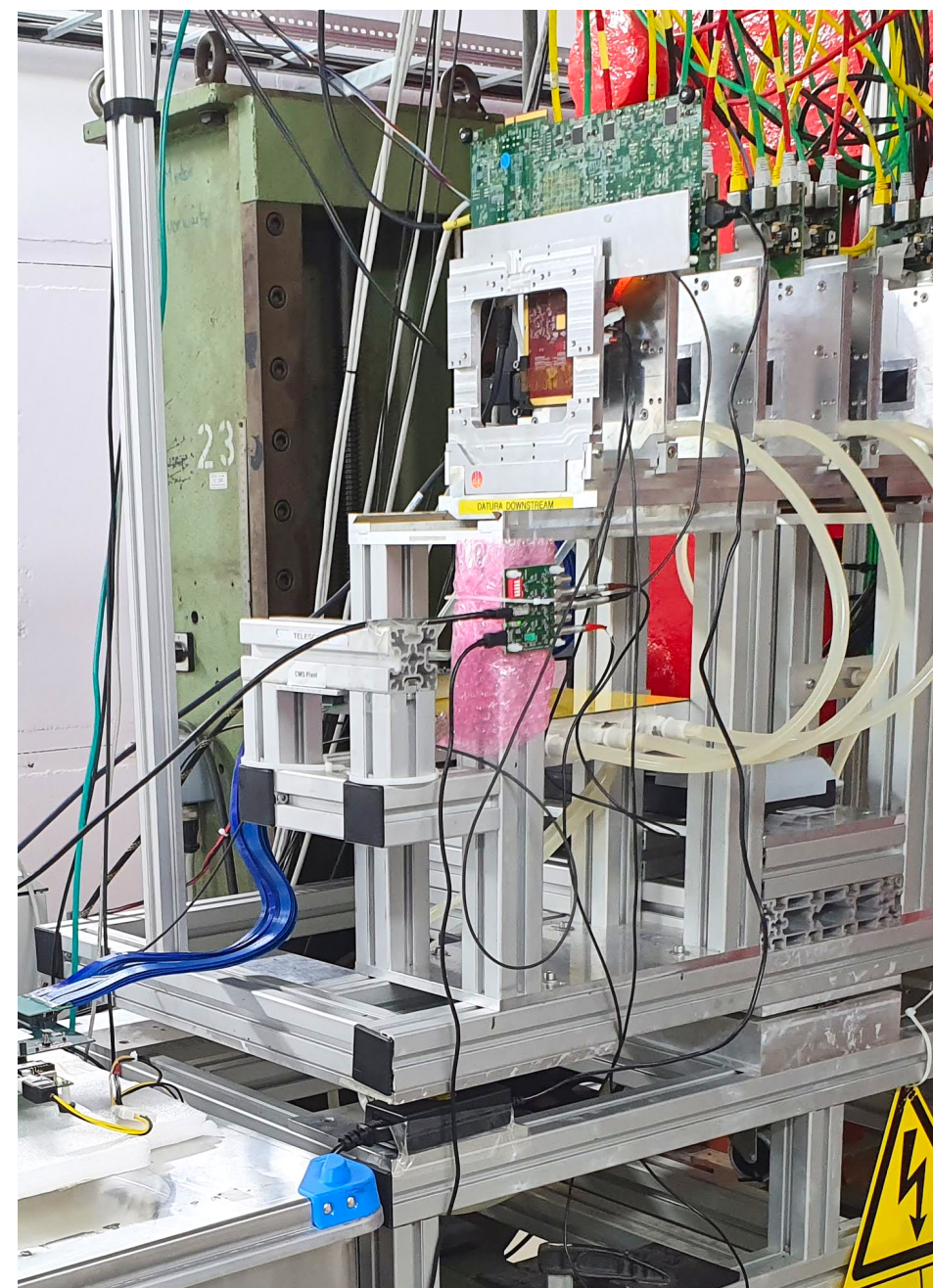
Two TelePix prototypes in TSI 180nm are studied:

- Excellent time resolution of 2.4 ns
- High operational region with >99.9% efficiency
- Superior performance of second chips with CMOS as input transistor for amplifier, both with particles and charge injections
- Region of interest trigger with a jitter down to 3.8 ns
- All requirements for the test beam fulfilled

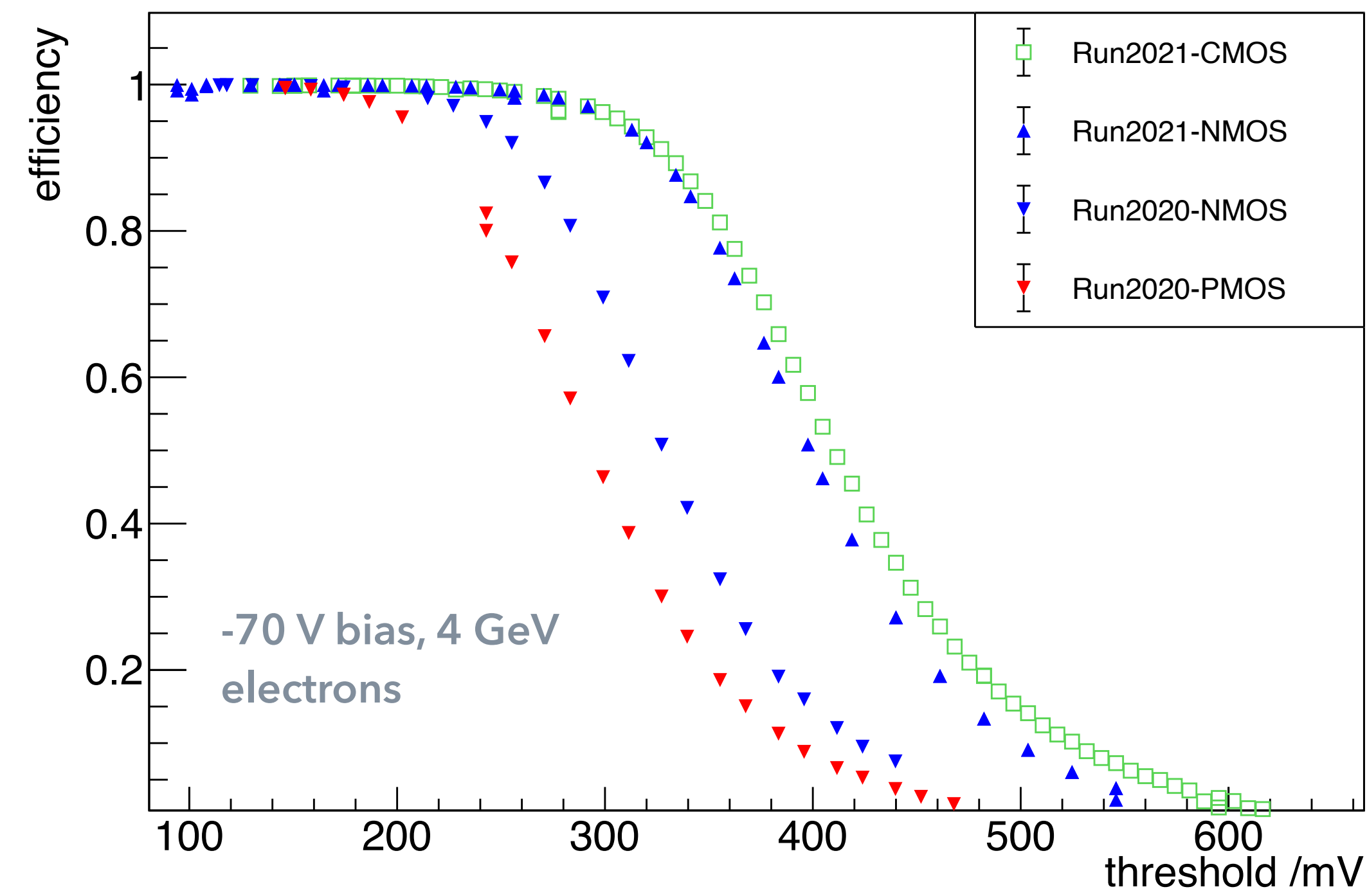
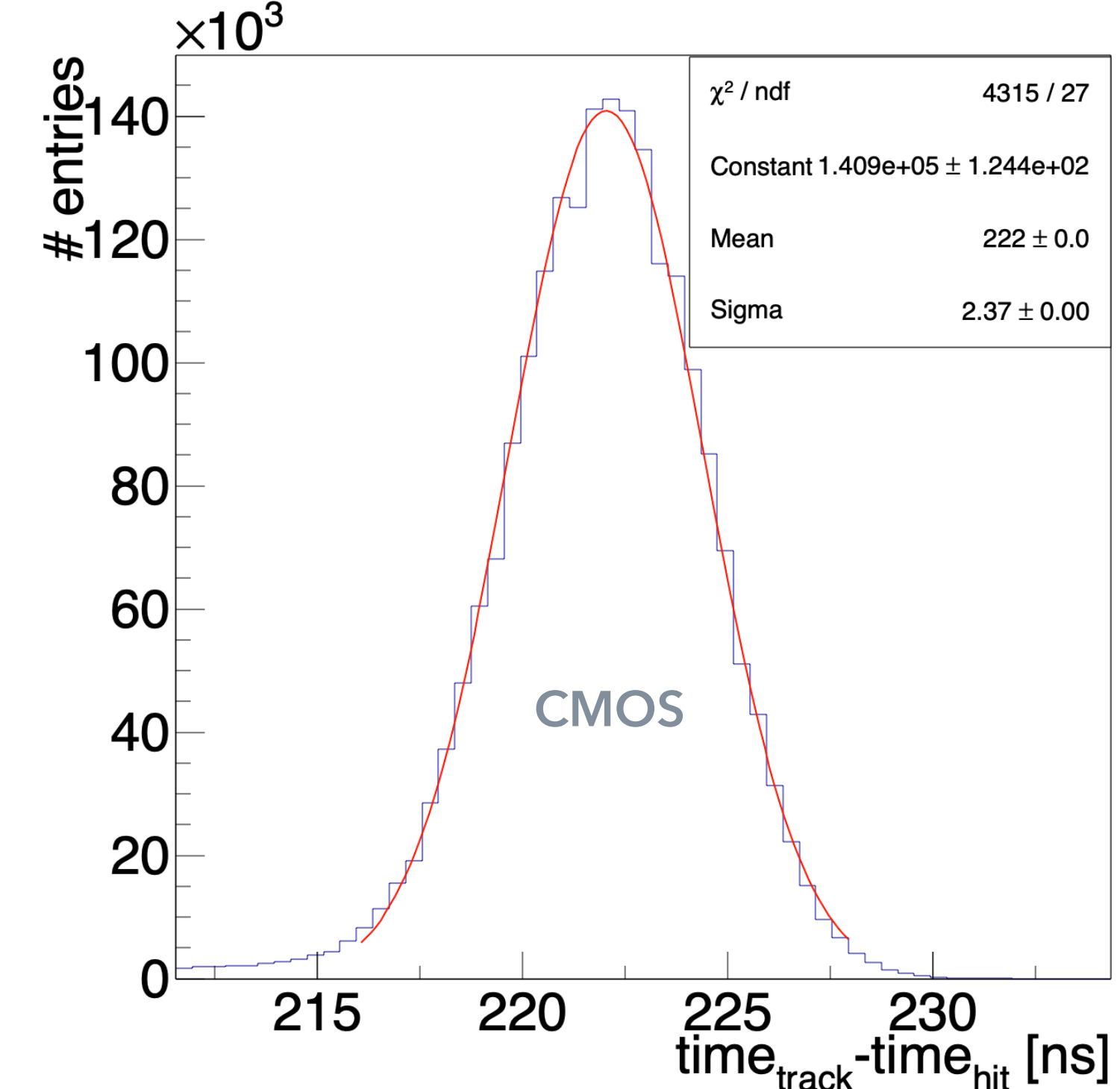
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HV-MAPS principle



Beam telescope at DESY



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