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Future Prospects of the EUDET/AIDA Beam Telescopes

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The EUDET/AIDA beam telescopes are instruments widely used within the experimental high energy physics community, e.g by the detector groups of the LHC experiments, Belle-II, and of course by future linear collider groups. They provide an excellent pointing resolution of down to $2\mu\text{m}$ even at energies as low as $O(1\text{GeV})$, which makes them very well suited as reference tracking systems at the DESY II Test Beam. However, after about ten years of successful operation, they require certain upgrades to keep up with the ever-increasing demands in the field of detector development. The long readout cycles of the MIMOSA26 pixel sensors in combination with the absence of a precise time measurement do not allow for relevant timing studies. Furthermore, the maximum particle rate that can be processed without leading to ambiguities in the track reconstruction is limited to approximately 3kHz.

This talk will present projects and plans to tackle the above issues that partly also offer synergies with generic tracking detector developments. In addition, it will give an outlook on the mid- and longterm prospects in view of the EUDET-type beam telescopes approaching their end of life.

Time Zone

Europe/Africa/Middle East

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