

Technologies for the CLIC tracker

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The vertex- and tracking detectors at the proposed high-energy CLIC electron-positron collider will be based on small-pitch silicon pixel- or strip detectors. The requirements for these detectors include single-point position resolutions of a few microns and time stamping with an accuracy of approximately 10 ns. For the outer tracking region, fully integrated CMOS sensors are under consideration. Test beam measurements performed on an analog 180nm CMOS demonstrator pixel chip on a high resistive substrate show good spatial and timing resolution in line with the CLIC requirements. In addition, test beam characterization of an integrated prototype pixel-chip fabricated on Silicon-on-Insulator material will be presented.

TRACK

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