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CEPC Silicon Tracker Detector

The Circular Electron-Positron Collider (CEPC) is designed to reach a maximum center-of-mass energy of 360 GeV for electron-positron collisions. Its primary goals are to explore the properties of the Higgs boson and search for new physics beyond the Standard Model. The CEPC silicon tracker will have a total active area of ~100 m^2. It is designed to measure charged particle tracks over a wide momentum range, from below 1 GeV to above 100 GeV, enabling both precision tracking of high-momentum isolated tracks and accurate reconstruction of low momentum tracks in dense jets. The required momentum resolution reaches the level of one per mille. The silicon tracker system integrates advanced pixel and microstrip sensors, readout electronics, and mechanical and cooling structures. This report will provide a comprehensive overview of the detector design, the current status of system development, and future plans.

Secondary track

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