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The Silicon Vertex Tracker (SVT): a MAPS based tracker for the ePIC Detector at the Electron-Ion Collider

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Experiments at the future Electron-Ion collider pose stringent requirements on the tracking system for the measurement of the scattered electron and charged particles produced in the collision, as well as the position of the collision point and any decay vertices of hadrons containing heavy quarks. Monolithic Active Pixel Sensors (MAPS) offer the possibility of high granularity in combination with low power consumption and low mass, making them ideally suited for these subsystems at the EIC. R&D is currently ongoing to ensure a well-integrated, large-acceptance, precision tracking and vertexing solution based on a new generation of MAPS in 65 nm CMOS imaging technology. This poster will cover the current design and some of the R&D efforts currently in progress for the Silicon Vertex Tracker (SVT) of the ePIC Detector using the new 65 nm MAPS technology.

Category

Experiment

Collaboration (if applicable)

ePIC

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