CPAD 2025 at Penn



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A straw tracker for FCC-ee experiments

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We propose to build a straw tracker for FCC-ee experiments. The straw tracker offers the advantage of a low material, a crucial factor in minimizing overall inner detector material budget. With the capability to achieve a single-hit resolution of approximately 100 microns per layer, and the potential for up to 100 layers, the straw tracker will play a pivotal role in momentum measurement, pattern recognition, and particle identification. We will present performance studies based on GEANT simulations and cosmic ray data, along with preliminary results on particle identification using the primary cluster counting method (dN/dX).

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