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Compact TPC with TimePix Readout as a PID and tracking device

Wednesday, 8 November 2023 12:00 (15 minutes)

In this presentation, we will present a TimePix readout-based Time Projection Chamber as one of the options for the Particle Identification (PID) and to aid the tracking capabilities. TimePix based readout opens an interesting possibility to perform PID via cluster counting with high separation power for pion, kaon, and proton identification. The added benefit of using this device is the smaller track length requirement as compared to the conventional dE/dx methods for PID and the capability to reconstruct the decay topologies. Further the momentum resolution is expected to improve significantly because of the large number of space points with such a device.

Early Career

Yes

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