



Contribution ID: 206

Type: Oral presentation (remote)

Tracking Performance Study for Future Circular Collider (FCCee) with CLD Detector

Wednesday, 10 July 2024 09:40 (20 minutes)

The Future Circular Collider electron-positron (FCCee) feasibility study involves assessing the capabilities and performance of potential detector configurations. This study focuses on the impact of various detector parameters on tracking performance. Specifically, the influence of different geometries, material budgets, and magnetic field strengths on the precision and efficiency of tracking performance within the CLIC-Like Detector is investigated.

Tracking performance is evaluated using full simulations. The effects on track reconstruction efficiency and resolution are assessed by adjusting the detector geometry and material. Additionally, the influence of magnetic field strengths on tracking accuracy is explored.

This study provides valuable insights into optimising the design parameters of the FCCee detector to achieve high tracking performance, contributing essential information for the ongoing FCCee feasibility study and future collider detector development.

Keywords: FCCee feasibility study, CLD, Full simulation, tracking performance, detector geometry

Apply for poster award

Primary author: SADOWSKI, Gaelle (Centre National de la Recherche Scientifique (FR))

Co-authors: ANDREA, Jeremy (Centre National de la Recherche Scientifique (FR)); BESSON, Auguste Guillaume (Centre National de la Recherche Scientifique (FR)); EL BITAR, Ziad (Centre National de la Recherche Scientifique (FR))

Presenter: SADOWSKI, Gaelle (Centre National de la Recherche Scientifique (FR))

Session Classification: Vertex, Tracking, Timing detectors

Track Classification: Physics and Detector: Vertex, Tracking, Timing