

eeFACT 2025 - 70th ICFA Advanced Beam Dynamics Workshop on High Luminosity Circular e⁺e⁻ Colliders



Contribution ID: 33

Type: **Invited Oral Presentation**

Detector backgrounds at FCC-ee

Wednesday 5 March 2025 10:00 (30 minutes)

The Future Circular Collider electron-positron (FCC-ee) is a proposed high-energy lepton collider that aims to reach unprecedented precision in the measurements of fundamental particles. However, several beam related processes produce particles in the Machine-Detector Interface (MDI) region, which can adversely affect the measurements' accuracy. This contribution presents the status of the beam-induced backgrounds at FCC-ee. The study uses the turnkey software Key4HEP to estimate the occupancy levels induced by beam-beam interactions, beam losses and Synchrotron Radiation in several sub-detectors of CLD, IDEA and ALLEGRO detector concepts.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

Primary author: CIARMA, Andrea (Istituto Nazionale di Fisica Nucleare)

Presenter: CIARMA, Andrea (Istituto Nazionale di Fisica Nucleare)

Session Classification: Machine Detector Interface

Track Classification: WG5 : Machine Detector Interface