



Contribution ID: 965 Contribution code: TUPC67

Type: **Poster Presentation**

Progress in the design of the future circular collider FCC-ee interaction region

Tuesday, 21 May 2024 16:00 (2 hours)

In this paper we discuss the latest developments for the FCC-ee interaction region layout, which represents one of the key ingredients to establish the feasibility of the FCC-ee. The collider has to achieve extremely high luminosities over a wide range of center-of-mass energies with two or four interaction points. The complex final focus hosted in the detector region has to be carefully designed, and the impact of beam losses and of any type of synchrotron radiation generated in the interaction region, including beamstrahlung, have to be evaluated in detail with simulations.

We give an overview of the progress of the whole machine-detector-interface-related studies, among which are the updated mechanical model of the interaction region, the plans for a novel R&D activity of a IR mockup which is just starting, the collimation scheme and evaluation of beam induced backgrounds in the detectors, evaluation of radiation dose in the experimental area, and MDI integration with the detector.

Footnotes

Funding Agency

Paper preparation format

Region represented

Europe

Primary author: BOSCOLO, Manuela (Istituto Nazionale di Fisica Nucleare)

Presenter: BOSCOLO, Manuela (Istituto Nazionale di Fisica Nucleare)

Session Classification: Tuesday Poster Session

Track Classification: MC1: Colliders and other Particle and Nuclear and Physics Accelerators:
MC1.A26 Machine Detector Interface