



Contribution ID: 1759 Contribution code: MOPM113

Type: **Poster Presentation**

Electron cloud build-up studies for the FCCee damping ring design options

Monday 2 June 2025 16:00 (2 hours)

The latest injector complex design of the FCCee project includes electron linac, positron source and positron linac, which accelerates the beams up to 2.86 GeV, a damping ring at 2.86 GeV for both beams and a high energy linac accelerating the beam up to 20 GeV before the beams are transferred into the booster synchrotron ring integrated in the collider tunnel accelerating the beams up to the collision energies. The purpose of the damping ring is to accept the 2.86 GeV beam coming from the linac, damp the positron/electron beams and provide the required beam characteristics for the injection into the higher energy linac. During the past year, several design options have been provided for the damping ring using different lattices. The electron cloud is one of the most important collective effects and can represent a bottleneck for the performances of accelerators storing particles with positive charge. Several undesired effects may arise due to interaction of the circulating beam with the e-cloud. The purpose of this presentation is to provide e-cloud buildup simulations for these different damping ring design options of FCCee.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

Funding Agency

Author: ETISKEN, Ozgur (Kirikkale University)

Co-authors: DE SANTIS, Antonio (Istituto Nazionale di Fisica Nucleare); MILARDI, Catia (Istituto Nazionale di Fisica Nucleare); Dr ZOBOV, Mikhail (Istituto Nazionale di Fisica Nucleare); CIFTCI, Rena (Ege University); OZDEMIR, Senem (Ege University); SPAMPINATI, Simone (Istituto Nazionale di Fisica Nucleare)

Presenter: ETISKEN, Ozgur (Kirikkale University)

Session Classification: Monday Poster Session

Track Classification: MC1 :Colliders and Related Accelerators: MC1.A02 Lepton Circular Colliders