Contribution ID: **47** Type: **Oral presention (by invitation only)**

FCC-ee Linacs design from 200 MeV up to 6 GeV beam energy

Tuesday 31 May 2022 14:45 (15 minutes)

In this presentation, I will give an overview of the beam dynamics simulations done to optimize the design of two of the linacs in the FCC-ee injectors'complex. The first one accelerates electrons from 200 MeV up to 1.54 GeV, and for both electrons and positrons from 1.54 GeV up to 6 GeV. In particular, I will focus on some of the possible mechanisms of single-bunch emittance degradation and multi-bunch beam breakup. Furthermore, I will discuss several options to minimize the projected energy spread, necessary for the acceptance at the SPS or Booster ring injection.

Primary authors: GRUDIEV, Alexej (CERN); LATINA, Andrea (CERN); BETTONI, Simona (Paul Scherrer Institut); POMMERENKE, Hermann Winrich (CERN); RAGUIN, Jean-Yves; CRAIEVICH, Paolo; ZENNARO, Riccardo; DOEBERT, Steffen (CERN); ZHAO, Yongke (CERN & Shandong University (CN))

Presenter: BETTONI, Simona (Paul Scherrer Institut)

Session Classification: FCC-ee injector

Track Classification: FCC-ee injector