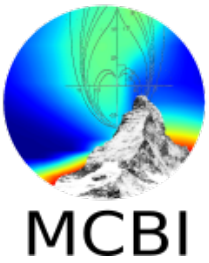

Contribution ID: **65** Type: **not specified**

* Study of Collective Effects in the FCC-ee Top-up Booster

Tuesday 24 September 2019 19:20 (10 minutes)

The CERN FCC-ee top-up booster synchrotron will accelerate electrons and positrons from an injection energy of 20 GeV up to an extraction energy between 45.6 GeV and 182.5 GeV depending on the operation mode. These accelerated beams will be used for the initial filling of the high-luminosity FCC-ee collider and for keeping the beam current constant over time using continuous top-up injection. Due to the high-intensities of the circulating beams, collective effects may represent a limitation in the top-up booster. In this work we present a first evaluation of the impedance model and the effects on beam dynamics. Methods to mitigate possible instabilities will be also discussed.

Authors: QUARTULLO, Danilo (Sapienza Universita e INFN, Roma I (IT)); MIGLIORATI, Mauro (University of Rome "LA SAPIENZA"); ZOBOV, Mikhail

Presenter: QUARTULLO, Danilo (Sapienza Universita e INFN, Roma I (IT))

Session Classification: Poster Session