

Luminosity Evolution in a Run

Tuesday 12 April 2016 09:10 (20 minutes)

The evolution of the beam parameters during luminosity production in the FCC-hh is described based on basic models of the effect of synchrotron radiations, intra-beam scattering, luminosity burn-off and beam-beam limitations. The model allows for an estimation of the luminosity performance in different running scenarios and of the tolerances on the intensity lifetime and emittance growth rate. It is shown that a large variations of the beam parameters is expected during a cycle. Potential operational schemes adapting to these variations are considered.

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Session Classification: FCC-hh Overall Design

Track Classification: Accelerators