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Top-up injection into the collider

To maximize integrated luminosity and ensure beam stability by maintaining the charge of colliding bunches, the FCCee collider requires top-up injection. The full-energy booster will accelerate the lepton beams to the collider energy. Top-up injection presents unique challenges to continuously inject with sufficiently high efficiency while minimizing disturbances to the circulating beam and experiments. This presentation details the baseline scenario for the top-up injection with a conventional on-axis scheme. The presentation also discusses the specificities of the injection scheme across the energy modes, along with recent studies on operational operational constraints and the prospects on injection efficiency.

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