



Contribution ID: 239

Type: Oral presentation (by invitation only)

Top-up injection baseline scenario

Tuesday 6 June 2023 09:00 (30 minutes)

The FCC-ee collider requires continuous injection not only to maximize the average luminosity but also to ensure the stability of the beams by maintaining the charge of colliding bunches. The full energy booster will accelerate electron and positron beams to the collider energy which will then be injected into the collider ring.

Several schemes are being studied but a conventional top-up bumped injection scheme has been identified as the current baseline scenario. This contribution presents the status of that scheme and its integration into the present collider lattice. Potential hardware choices will also be presented to account for realistic operation scenario as well as possible failure cases and related machine protection considerations.

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Session Classification: FCC-ee accelerator (FCCIS WP2)

Track Classification: FCC-ee accelerator