

Beam dynamics on beam injection

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Top-up injection is prerequisite to maximize the performance and stability of the lepton collider and the light source. It is one of challenges for the new generation light source, where the machine aperture is rather limited: the low emittance lattice tends to make the dynamics aperture smaller while insertion devices with smaller aperture may realize higher photon beam performance. In this presentation, the beam dynamics relevant to beam injection are discussed together with the beam diagnostics that are necessary during the injection tuning. The talk will cover the first beam injection in the commissioning as well as the injection tuning in the regular operation.