

Joint DESY and University of Hamburg Accelerator Physics Seminar

Tuesday, 18.06.2019

(16:00 in Room 459/30b)

Emittance Tuning for the Future Circular Collider (FCC-ee)

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Abstract

The FCC-ee project studies the design of a future 100 km e⁺/e⁻ circular collider for precision studies and rare decay observations in the range of 90 to 350 GeV center of mass energy with luminosities in the order of $10^{35} \text{ cm}^{-2} \text{ s}^{-1}$. In order to reach these luminosity requirements, strong focusing is needed in the interaction regions. Large maximum beta values (of 7736 m for the Z energy) and the small beta star values, make the FCC-ee lattices particularly susceptible to misalignments and field errors. FCC-ee therefore presents an appreciable challenge for emittance tuning. In this talk, I'll describe a comprehensive correction strategy used for the low emittance tuning.

W.Hillert (Univ. HH), I.Agapov (MPY) and M.Vogt (MFL).