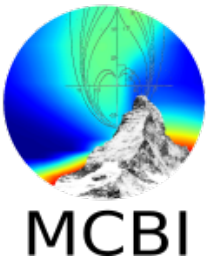

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* Transverse Instabilities and Mitigation in Cycles of SIS100

Tuesday 24 September 2019 16:20 (10 minutes)

The SIS100 synchrotron, presently under construction in Darmstadt, Germany, will provide high intensity ion beams to the different experiments of FAIR. Numerous types of RF and ramp cycles for the full range of ions are planned for the operation. Here we identify a few reference cycles for the heavy-ion and proton beams and consider the transverse stability along the time scenario of the beams. The recent data for the transverse impedances are used to calculate the instability growth rates. For mitigation, the octupole magnets and the chromaticity requirements are considered. The effects of space-charge on Landau damping are taken into account. The role of a feedback system is discussed.

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