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Simulation Studies on Longitudinal Beam Dynamics Manipulation by Corrugated Structures under Different Bunch Length Conditions at KARA

In the KIT storage ring KARA (KARlsruhe Research Accelerator), two parallel plates with periodic rectangular corrugations are planned to be installed in a dedicated part of the vacuum chamber. These plates will be used for impedance manipulation to study and eventually control the beam dynamics and the emitted coherent synchrotron radiation (CSR). In this contribution, we present simulation results showing the influence of different corrugated structures on the longitudinal beam dynamics and how this influence depends on the machine setting in the low momentum compaction regime.

Speed Talks

I am unable/unwilling to give a speedtalk.

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