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Simulation of the effect of corrugated structures on the longitudinal beam dynamics at KARA

Friday 9 September 2022 10:32 (3 minutes)

Two parallel corrugated plates will be installed at the KIT storage ring KARA (KArlsruhe Research Accelerator). This impedance manipulation structure will be used to study and eventually control the beam dynamics and the emitted coherent synchrotron radiation (CSR).
In this contribution, we present the influence of the parameters of the structure on its impedance and the results obtained with the Vlasov-Fokker-Planck solver Inovesa showing the impedance impact of different corrugated structures on the CSR power.
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Summary

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