CAS Advanced Accelerator Physics, 10-22 November 2024, Spa, Belgium



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RF Manipulations II

Wednesday 13 November 2024 12:00 (1 hour)

The lectures will cover different ways of controlling the longitudinal beam parameters, such as bunch length, bunch emittance, and bunch profile through the RF system. The RF parameters used for this control include RF cavity voltage and phase, as well as RF frequency. The manipulations discussed cover, among others, beam splitting, bunch rotation, and controlled emittance blow-up. More advanced schemes, such as momentum slip stacking and longitudinal painting, will also be discussed. Finally, the lectures touch on beam-loading compensation and RF cycle design.

Presenter: TIMKO, Helga (CERN)