Introduction to Accelerator Physics, 18 September - 01 October 2022, Kaunas, Lithuania



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Imperfections in general

Thursday 22 September 2022 15:00 (1 hour)

After briefly discussing sources of imperfections, we characterize them in terms of dipole, quadrupolar, and skew quadrupolar errors and move on to discuss how these imperfections are modeled in beam dynamics codes. We continue by reviewing the concepts of dispersion and chromaticity and explain how they are measured before turning to imperfections that are caused by multipoles, in particular, by feed-down. We conclude by addressing errors that are introduced by imperfect diagnostic equipment such as misaligned position monitors and mention means of how to identify this problem.

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