CAS course on "Introduction to Accelerator Physics", 22 September - 05 October 2024, Santa Susanna, Spain

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Time and Frequency domain signals I

Thursday 3 October 2024 08:30 (1 hour)

Depending on the application people use time-domain or frequency domain signals in order to measure or describe processes. First we will look at the definition of these terms, produce some mathematical background and then apply the tools to measurements made in the accelerator domain. We will first look at signals produced by a single bunch passing once through a detector (transfer line, linac), then periodic single bunch passages (circular accelerator) and at the end multi-bunch passages in a circular accelerator. The bunches themselves are considered rigid.

Presenter: SCHMICKLER, Hermann