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## Beam Instrumentation

*Saturday 30 September 2023 08:30 (1 hour)*

Determining beam parameters is essential for the operation and development of any accelerator facility. The working principle of frequently used beam instruments for electron and proton beams is discussed. The first part of the lecture comprises beam instrumentation for beam current determination and the usage of beam position monitors (BPM) for bunched beams. BPMs are applied for position detection of a single bunch and accurate closed orbit determination. Moreover, the position reading delivers synchrotron lattice parameters such as tune and chromaticity. Those monitors are based on detecting the beam's electromagnetic field and are dominantly non-invasive.

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