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Beam Diagnostics for Measurement of longitudinal Beam Properties at UNILAC

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During recent beamtimes at GSI we have used various diagnostics devices for characterization of the longitudinal properties of the UNILAC beam. Beam Position Monitors (BPM), Secondary Electron Emission Grids (SEM-Grids) - originally developed for the FAIR proton Linac - have been employed as well as a Feschenko Type Bunch Shape Monitor (BSM) to measure beam displacement behind dispersive sections in combination with bunch lengths and shape to derive longitudinal emittance. We present the diagnostics tools and explain the basic measurement principle.

Summary

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