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Slow extraction improvements with novel methods at GSI

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Improving the temporal structure of slowly extracted beams (spills) is a key challenge for efficient beam operation at the SIS18 synchrotron of GSI.

This contribution focusses on the recently developed spill optimization system implemented with software-defined radio (SDR) technology. It comprises a feedback system to control the spill rate and an optimization algorithm to automatically improve the spill quality –implemented on a single device. The idea, system layout and results with beam of the developed spill control system are discussed.

Summary

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