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A Low-Latency Feedback System for Control of Horizontal Betatron Oscillations of an Electron Beam

Wednesday 19 April 2023 08:15 (30 minutes)

This presentation will give an overview of the latest results achieved using the novel Xilinx Versal platform together with the KAPTURE detector system for the implementation of low-latency feedback loops at the Karlsruhe Research Accelerator (KARA) at KIT. The case study of the damping of horizontal betatron oscillations will be discussed, with an in-depth discussion of the hardware implementation, the main challenges, and future perspectives.

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