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The core software framework for the LHCb Upgrade

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The LHCb detector will be upgraded for the LHC Run 3. The new, full software trigger must be able to sustain the 30MHz proton-proton inelastic collision rate. The Gaudi framework currently used in LHCb has been re-engineered in order to enable the efficient usage of vector registers and of multi- and many-core architectures. This contribution presents the critical points that had to be tackled, the current status of the core software framework and an outlook of the work program that will address the challenges of the software trigger.

Primary authors: BOZZI, Concezio (CERN and INFN Ferrara); PONCE, Sebastien (CERN); ROISER, Stefan (CERN)

Presenter: PONCE, Sebastien (CERN)

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