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LHCb TDAQ

Thursday, 12 October 2017 12:30 (30 minutes)

A major upgrade of the LHCb detector and DAQ systems is planned for the LHC long shutdown II (2019-2020). For this upgrade a purely software-based trigger system is being developed to replace the current multi-stage hardware and software trigger. The new system will process the full 30 MHz bunch-crossing rate delivered by the LHC while running at five times the present instantaneous luminosity. The physics reach of the upgraded detector will be enhanced by the Turbo paradigm, where high-level reconstructed objects are persisted along with a subset of the raw event data.

In this talk we will describe the LHCb detector upgrade and discuss the plans and progress towards performing event reconstruction and selection at 30 MHz using modern CPU architectures.

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