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Report of Abstracts

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LHCb data taking strategy for the upcoming LHC runs

Content

The Large Hadron Collider beauty experiment (LHCb) is a dedicated B physics experiment at the LHC. The trigger system is of crucial importance to discriminate the interesting B decays against the dominant background from inelastic pp-scattering.

The current LHCb trigger is a two level system. The first level is implemented in hardware, reducing the event rate to 1 MHz. At this rate, the full detector is read out. The second trigger level is a software application which will reduce the event rate to 12.5 kHz in the upcoming running period. The LHCb experiment plans a major detector upgrade in 2018. The detector will be read out triggerless and will feature a full software trigger with offline like reconstruction performed at the full event rate.

This talk will give an overview of the preparations for the upcoming LHC running period, and will discuss the design of the upgraded trigger system. It will also outline the physics performance that can be achieved with this trigger system.

Oral or Poster Presentation

Oral

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