

Connecting The Dots 2023



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First experiences with the LHCb heterogeneous software trigger

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Since 2022, the LHCb detector is taking data with a full software trigger at the LHC proton proton collision rate, implemented in GPUs in the first stage and CPUs in the second stage. This setup allows to perform the alignment & calibration online and to perform physics analyses directly on the output of the online reconstruction, following the real-time analysis paradigm.

This talk will discuss challenges of the heterogeneous trigger implementations, the first running experiences, and show preliminary performance results of both stages of the trigger system.

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