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Implementation of trigger lines for luminosity measurements in run 3

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The biggest particle accelerators quantify the number of interactions with luminosity, the proportionality factor between the number of events per second and the cross section. For Run 3, LHCb experiment uses Allen software for High Level Trigger 1 (HLT1) developed on Graphics Processing Units (GPUs). The implementation of new trigger lines for luminosity measurements requires the development and testing over Monte Carlo samples before its integration to LHCb software. Here, we show some code and results of new trigger lines in the Allen project.

Authors: Mr GOMEZ, Andres (Universidad Nacional de Colombia); MILANES CARRENO, Diego (Universidad

Nacional de Colombia (CO)); SPRADLIN, Patrick (University of Glasgow (GB))

Presenter: Mr GOMEZ, Andres (Universidad Nacional de Colombia)

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