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The upgrade of LUCID - ATLAS luminosity monitor

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The main ATLAS luminosity monitor LUCID and its read-out electronics has been completely rebuilt for the 2015 LHC run in order to cope with a higher center of mass energy (13 TeV) and with 25 ns bunch-spacing. The LUCID detector is measuring Cherenkov light produced in photomultiplier quartz windows and in quartz optical fibers. It has a novel calibration system that uses radioactive Bi-207 sources that produces internal conversion electrons above the Cherenkov threshold in quartz. The new electronics can count particle hits above a threshold but also the integrated pulseheight of the signals from the particles which makes it possible to measure luminosity with new methods. The new detector, calibration system and electronics will be covered by the contribution as well as the results of the luminosity measurements with the detector in 2015.

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