

# Measurements of Luminosity in ATLAS with Tile Calorimeter

*Wednesday, 29 July 2020 13:42 (3 minutes)*

Luminosity measurements in ATLAS are provided primarily by LUCID detector, but rely on other detectors for determining the systematics associated with this measurement. The Tile Calorimeter, the central hadronic calorimeter at the ATLAS experiment, plays an especially important role because the Tile luminosity measurement is independent of pileup, a feature shared with the Track counting luminosity measurement. Comparison of the LUCID luminosity measurements in different run conditions to those obtained by Tile and Tracking, as well as a comparison of Tile to Tracking, is used to measure and study the dominant systematic uncertainty associated with the LUCID Luminosity measurement. Here the methods of measuring ATLAS luminosity with the Tile Calorimeter and its transformation to a systematic uncertainty are described.

## I read the instructions

## Secondary track (number)

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**Session Classification:** Operation, Performance and Upgrade of Present Detectors - Posters

**Track Classification:** 12. Operation, Performance and Upgrade of Present Detectors