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ATLAS Run-2 Luminosity Measurements

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During the LHC Run-2 operations ATLAS gathered a total of 139 fb^{-1} of pp collision data at a center-of-mass energy of $\sqrt{s} = 13$ TeV. The uncertainty on the measurement of the total integrated luminosity, 1.7%, is the dominant uncertainty for a number of analyses. A precise luminosity measurement is therefore of high importance. In this talk, we provide a description of the methodology of the measurement of the total integrated luminosity and its associated uncertainty. Special attention is given to improvements made compared to Run-1 and an overview of the relevant sub-detectors is provided. The use of Van-der-Meer beam-separation scans in calibrating the luminosity is also detailed.

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