Contribution ID: **196** Type: **Parallel session talk**

Luminosity determination in pp collisions at $\sqrt(s) = 13.6$TeV with the ATLAS detector

Tuesday 22 August 2023 09:55 (12 minutes)

A precise measurement of the luminosity is a crucial input for many ATLAS physics analyses, and represents the leading uncertainty for W, Z and top cross-section measurements. The first ATLAS luminosity determination in Run-3 of the LHC, for the dataset recorded in 2022, at center-of-mass energy of 13.6TeV follows the procedure developed in Run-2 of the LHC. It is based on van der Meer scans during dedicated running periods each year to set the absolute scale, and an extrapolation to physics running conditions using complementary measurements from the ATLAS tracker and calorimeter subsystems. The presentation discusses the procedure of the ATLAS luminosity measurement, as well as the results obtained for the 2022 pp dataset.

Collaboration / Activity

ATLAS

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