



Contribution ID: 438

Type: **Parallel Talk**

Luminosity determination in ALICE at the LHC

Friday, July 8, 2022 4:10 PM (20 minutes)

Cross section measurements in hadronic collisions are crucial to the physics program of ALICE. These measurements require a precise knowledge of the luminosity delivered by the LHC. Luminosity determination in ALICE is based on visible cross sections measured in dedicated calibration sessions, the van der Meer (vdM) scans.

This contribution presents a review of the ALICE luminosity determination methodology and results during the LHC Run 2 for pp and Pb-Pb collisions where ALICE used three luminometers: the T0 and V0 detectors, and the Zero Degree Calorimeter. By combining information from the ALICE detectors and the LHC instrumentation, an uncertainty of 1.6% (2.2%) on the luminosity measurement for the full sample is achieved in pp (Pb-Pb) collisions.

In-person participation

Yes

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