

Cross section normalization in ALICE

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Measurements of reference trigger cross sections were obtained with the ALICE detector, based on beam properties measured from van der Meer scans where convolution of the beam profiles were evaluated. The measurement is essential for absolute cross section determination of the physics processes.

Based on this measurement, inelastic cross sections characterizing proton-proton collisions at LHC energies were obtained with the ALICE detector with a detailed detector Monte-Carlo simulations. As second example, cross sections of reference process, with at least one charged particle is produced in pseudorapidity range of $-0.8 < \eta < 0.8$, was measured. These results obtained for $\sqrt{s}=2.76$ TeV and 7 TeV are compared to measurements from other experiments as well as to recent calculations based on Regge theories for inelastic cross sections.

The detail descriptions of thees measurements and analysis methods will be presented. The presentation will focuses also on instrumental and technical aspects of detectors and accelerators.

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