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Measurement of PYTHIA8-based effective cross-section using underlying event data

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Effective cross-section defines the matter overlap in a two-particle collision and is considered one of the important tools to study proton-proton collisions at high energies. In a conventional approach, the value of effective cross-section is estimated by fitting the observables sensitive to double parton scattering. In this paper, the value of effective cross-section is predicted using the PYTHIA8 Monte-Carlo event generator by optimizing (tuning) model parameters, using the PROFESSOR package, to available underlying event data. The predicted value of effective cross-section is compared to already measured values.

Session

Heavy Ions and QCD

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