

# Monte Carlo simulations of Upsilon meson production

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Quarkonia are an important probe into studying the properties of quark-gluon plasma. Proton-proton collisions serve as an essential baseline for studying the effects of quarkonia in proton-nucleon and nucleon-nucleon collisions. This poster presents the main characteristics of Upsilon mesons from Monte Carlo generation of proton-proton collisions at  $\sqrt{s_{NN}} = 500$  GeV. Monte Carlo event generators PYTHIA and Herwig were used to generate the data. Main aim of the simulations is to explore the dependence of normalised Upsilon meson yield on normalised event multiplicity. Normalised multiplicity dependence is a meaningful tool for understanding the particle production mechanisms and the interplay between soft and hard QCD processes.

## Secondary track (number)

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