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Investigating jet modification in high multiplicity proton-proton collisions at 13 TeV using PYTHIA 8 event generator

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We will present a study of multiplicity dependence of the differential jet shape observable $\rho(r)$ in proton-proton (pp) collisions at $\sqrt{s}$ = 13 TeV using PYTHIA 8 Monash 2013 Monte Carlo simulation. A significant modification of $\rho(r)$ is observed in high multiplicity pp collisions compared to the minimum bias ones. We will discuss the underlying physics mechanisms in PYTHIA 8, responsible for the observed modification.

Primary author(s) : Mr DAS, PROTTOY (BOSE INSTITUTE, KOLKATA, INDIA); Mr MODAK, Abhi (Bose Institute (IN)); Ms BANERJEE, DEBJANI (Bose Institute); Dr BISWAS, Rathijit (Bose Institute); Prof. DAS, Supriya (Bose Institute); Prof. GHOSH, Sanjay K. (Bose Institute, India); Prof. RAHA, Sibaji (Bose Institute); Dr PRASAD, Sidharth Kumar (Bose Institute, India)

Presenter(s) : Mr DAS, PROTTOY (BOSE INSTITUTE, KOLKATA, INDIA)

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