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## A study of Rivet for the analysis of simulated events in particle physics

The Rivet toolkit is introduced as an useful package for the analysis of simulated events in particle physics and its direct comparison with experimental data. A special emphasis is made on the Monte Carlo algorithms for the generation of events and their extension to NLO in perturbation theory. A simulation for the production of  $b$ -flavoured hadrons is made for proton-proton collisions at a center of mass energy of  $\sqrt{s} = 7TeV$  using an implementation of the MC@NLO scheme for the matching of parton showers with NLO matrix element calculations.

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