An assessment of the strengths and weakness of existing MC event generators

Michael Murray, Tom LeCompte, Simon Braß, Frank Krauss, Saptaparna Bhattacharya, Simone Amoroso, Markus Diefenthaler, Simon Plätzer, Joey Huston, Christine McLean, Alexander Grohsjean, Matt LeBlanc, Michael Begel, Stefan Höche, Michael Schmitt

Monte Carlo event generators play an absolutely crucial role in the analysis of experimental data. Modern event generators are based on advanced and sophisticated theoretical calculations. They differ in important details, however, and none of them is clearly much better than all of the others from a theoretical point of view. Furthermore, some are not easy to use for generating large samples of events because they require major computing resources.

This paper assesses the strengths and relative weaknesses of existing MC event generators and identifies possible routes for improvements over time.

This document is a placeholder.