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Tuning of Merged Pythia

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Monte Carlo Event Generators are important tools to understand the physics of particle colliders. Due to the complexity of particle collisions and the limited ability of perturbative QCD to describe the low energy behavior of partons, we need phenomenological models to provide a complete prediction of many observables. A systematic tuning of model parameters based on experimental data allows us to optimize the predictions of Monte Carlo Event Generators and refine our understanding the relevant models.

In this talk, I give an overview about tuning and discuss recent efforts of tuning Pythia in the context of matching and merging. Furthermore, I present AutoTunes, a framework for the simultaneous tuning of many parameters with automated weight setting.

Summary

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