



Contribution ID: 96

Type: **Parallel Sessions**

A rigorous assessment of intrinsic accuracies and uncertainties of NLO+PS matching methods

Thursday 5 July 2012 17:00 (15 minutes)

Similarities and differences between the MC@NLO and the POWHEG methods for matching NLO calculations to parton showers are discussed. Particular emphasis is put on their respective formal accuracies. Implementations of both methods in the SHERPA event generator framework are employed to assess their impact on representative observables. Some freedoms in both formulations will be exploited to quantify the uncertainties for different processes of interest. Further, NLO+PS matched results for complex final states, e.g. the production of a W boson in association with up to 3 jets or a Higgs boson with up to 1 jets will be presented.

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Session Classification: TR 6 - RM 217 - QCD, Jets, Parton Distributions

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