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QCD effects in mono-jet searches for dark matter

Thursday, June 26, 2014 5:10 PM (20 minutes)

I will discuss theoretical uncertainties in predictions for “mono-jet” signals, and show how these predictions can be affected by extra radiation due to QCD emissions. I’ll present results obtained by matching parton showers with NLO corrections, as implemented in the publicly-available MC program POWHEG-BOX, that I will quickly overview.

Time permitting, I’ll also show how further informations on the precise structure of the interaction between dark matter and the standard model can be extracted from “MET + 2 jets” events.

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