## ICHEP2012



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## NLO corrections to squark-squark production and decay at the LHC

Thursday 5 July 2012 09:00 (15 minutes)

We present the analysis of the signature jj+missing-ET(+X) via squark-squark production and direct decay into the lightest neutralino in next-to-leading order QCD within the framework of the minimal supersymmetric Standard Model. We provide a consistent, fully differential calculation of NLO QCD factorizable corrections to the given processes with on-shell squarks. Clustering final states into partonic jets, we investigate the experimental inclusive signature jj+missing-ET and we choose for illustration several benchmark scenarios. We compare resulting differential distributions with leading-order approximation rescaled by a flat K-factor and examine a possible impact for cut-and-count searches for supersymmetry at the LHC.

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