

PAUL SCHERRER INSTITUT



Particle Theory Seminar

M. Trenkel

MPI München

“Hadronic Production of Colored SUSY Particles with
Electroweak NLO Contributions”

Tuesday, December 02, 2008, 05:00 pm

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Abstract:

If SUSY is realized, colored SUSY particles will be produced copiously at the LHC. Pair production of squarks and gluinos is, therefore, among the most promising SUSY discovery channels. Besides the well-known supersymmetric QCD radiative corrections, also the electroweak contributions are required for a reliable cross section prediction. A short overview over the class of processes will be given. We investigate in detail the tree-level and next-to-leading order EW contributions to the cross sections. Special care has to be taken to obtain infrared finite observables. Numerical results will be presented for stop–anti-stop and squark-gluino production at the LHC.