

Invariant mass distributions of SUSY cascade decays

If supersymmetry is discovered at the LHC, the next challenge will be to determine sparticle properties as accurately as possible. For the determination of unknown masses in SUSY cascade decays, methods based on the observed particles' kinematic endpoints have been developed. In order to accurately determine such endpoints, knowledge of the correct theoretical distribution shapes is important. In addition, such distribution shapes contain additional information about the sparticles involved in the cascade. Analytical shape formulas for distributions resulting from cascades with taus have been derived and are here presented.

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