

## SUSY mass determination using kinematic fits

*Thursday, 26 August 2010 16:46 (15 minutes)*

In R-parity conserving SUSY models a typical event topology at colliders will be the cascade decay of the two produced SUSY particles. Depending on the SUSY model cascade decays via SUSY particles of equal or similar masses at one particular position in the decay chains might occur with a high abundance. For the kinematics of all events the few masses of the involved SUSY particles are unknowns. The momentum components of the LSPs are also unknown parameters but unique for each event. If the cascades are sufficiently long, e.g. enough mass constraints are available, then the problem can be overconstrained by making use of a large number of events. If an efficient selection of these events is possible one can utilize kinematic fits to determine the masses of the involved SUSY particles. In this talk new techniques are presented for the solution of this problem. First results using toy Monte Carlo data will be presented.

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**Session Classification:** Collider 26-2 Chair: P. Wienemann

**Track Classification:** Pheno