



Contribution ID: 322

Type: **Parallel Talk**

## Search for GMSB NLSPs at LHC

*Saturday 28 July 2007 17:50 (20 minutes)*

Within Gauge-Mediated Supersymmetry Breaking (GMSB) models gravitino is the Lightest Supersymmetry Partner (LSP) whereas neutralino or slepton plays the role of the Next to Lightest Supersymmetry Partner (NLSP). NLSP decays to its Standard Model partner and gravitino with a lifetime depending on the scale of the SUSY breaking. Detection of the NLSP and determination of its properties, in particular lifetime can be of crucial importance for the physics program at LHC. We concentrate on two scenarios specific from the detection point of view. In the first, neutralino decaying in flight is the NLSP. We use not-pointing to the interaction point photons identified by the CMS electromagnetic calorimeter as the signature of decaying in flight neutralinos. We show that it is possible to estimate the  $\tau$  of neutralinos for a range from centimeters to meters with a precision of the order of 20%, if the number of produced signal events is not less than about 5000. In the second case a long-lived stau is the NLSP. We show that CMS muon system is able to detect it as a particle traveling with velocity lower than the speed of light, and determine its mass.

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**Session Classification:** Colliders - Susy Phenomenology 6 (Experiment)

**Track Classification:** Colliders - Susy Phenomenology