## Scalars 2017



## Content :

Experimental limits on the masses of SUSY states from searches at the LHC are becoming quite stringent, especially for the gluino of the MSSM. The MRSSM is an alternative supersymmetric model which features an continuous R-symmetry and it leads to a Dirac-type gluino.

Compellingly, it is natural for a Dirac gluino to have a large mass outside the current bounds.

For an accurate prediction of the production strongly interacting SUSY states at the LHC next-to leading order corrections are relevant and need to be considered. This has not yet been done for the case of Dirac gluinos and it is our goal to remedy this for the MRSSM.

In this talk I will present details of the NLO SUSY-QCD calculation in the MRSSM for the squark production at the LHC.

Special emphasis will be put on the differences between the MSSM and the MRSSM.

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