

## **The cNMSSM: low-energy phenomenology and possible signatures at the LHC**

We briefly motivate the next-to-minimal supersymmetric extension of the Standard Model (NMSSM). In the NMSSM, a richer Higgs and neutralino spectrum allow for many interesting phenomena that are not present in the minimal supersymmetric extension of the Standard Model.

We propose a supergravity inspired version of the NMSSM (cNMSSM). After considering the different constraints on the parameter space (such as LEP and dark matter constraints), we discuss the phenomenology of the model, the implications regarding dark matter detection, and the prospects for the LHC (sparticle searches and displaced vertices).

**Primary author:** Dr TEIXEIRA, Ana M. (CFTP - IST)

**Presenter:** Dr TEIXEIRA, Ana M. (CFTP - IST)

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