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Particle Theory Seminar of LPT Orsay

Jeudi 23 Fevrier 2017, 16 :00
LPT, 114
Domaines : hep-ph

Titre : *R-axion at colliders*

Orateur : **Javi Serra (CERN)**

Résumé : *We present the effective theory of a generic class of hidden sectors where supersymmetry is broken together with an approximate R-symmetry at low energy. The light spectrum contains the gravitino and the pseudo-Nambu-Goldstone boson of the R-symmetry, the R-axion. We derive new model-independent constraints on the R-axion decay constant for R-axion masses ranging from GeV to TeV, which are of relevance for hadron colliders, lepton colliders and B-factories. The current bounds allow for the exciting possibility that the R-axion will be the first sign of SUSY. We point out the most distinctive signals of the R-axion, providing a new experimental handle on the properties of the hidden sector.*