

SEMPARIS – Séminaires en région parisienne

<http://string.lpthe.jussieu.fr/semparis/>

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.*
