



## *Séminaire du Laboratoire de l'Accélérateur Linéaire*

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**Vendredi 29 Novembre 2013 à 15 :30**

## **The elusive gluon at the LHC**

New color octet vector bosons, heavy gluons, are a common prediction of models of strong electroweak symmetry breaking. They are being extensively searched for at the LHC with current bounds on their masses in the 2.5 TeV region. However, these impressive bounds apply only to simplified models in which the only new particle beyond the Standard Model is the heavy gluon. Motivated by the Higgs discovery it has been shown that realistic models of strong electroweak symmetry breaking are likely to have a much richer spectrum, in particular with the presence of relatively light new vector-like quarks, the top partners. We show that in the presence of top partners the heavy gluon becomes elusive and the bounds on its mass can be up to 1 TeV milder than in the simpler models considered so far. We discuss the origin of this difference and possible ways to improve the current bounds.

**Salle 101 du LAL - Bât. 200, Orsay**

Thé et café seront servis 1/4 h avant le séminaire

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