



Séminaire du Laboratoire de l'Accélérateur Linéaire

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Vendredi 14 Fevrier 2014 à 11 :00

Evidence for $H \rightarrow \tau\tau$ in proton-proton collisions recorded by the ATLAS experiment

The observation of the $H \rightarrow \tau\tau$ decay mode is crucial to fully identify the newly discovered boson as the relic particle of electroweak symmetry breaking, the Higgs boson. Indeed, this channel provides direct access to the coupling strength between the Higgs field and elementary fermions, predicted by the Standard Model. The di-tau decay mode is particularly challenging to detect because of its various possible final states, including hadronic tau decays. In this seminar, the various aspects of this analysis will be presented in detail. First, the identification of hadronically decaying tau leptons and the associated challenges will be described. Then, the background understanding of the different final states will be detailed, as well as the signal extraction methods. Finally, the obtained result and its implications will be discussed.

Salle 101 du LAL - Bât. 200, Orsay

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



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