Notre Dame Science
Department of Physics

HIGGS SEARCHES WITH TAU PAIRS IN THE E-TAU FINAL STATE AT CMS

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Tuesday, April 10, 2012
4:00 P.M. NSH 415

The Large Hadron Collider has provided us the possibility for a myriad of novel searches for new physics at the high energy frontier. The most widely-publicized and arguably most exciting of these searches is the hunt for the Higgs Boson. We expect the Higgs to be responsible for electroweak symmetry breaking and to explain the origin of particle masses. One of the numerous places to see the Higgs is in decays of pairs of tau leptons. In addition to having good sensitivity for the low mass Higgs in the context of the Standard Model, this channel has the best chance of observing the Higgs as it is formulated in the Supersymmetric Standard Model. I will summarize our efforts to identify the Higgs signature in tau pairs with the ~5 fb-1 of data from the 2011 LHC operations.

Particle Physics Seminar

All interested persons are cordially invited to attend.