

P/SS Department Colloquium

SEARCH FOR VECTOR-LIKE FERMIONS AT THE LHC

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Friday, January 30, 2015
OPS 140
4:00 - 5:00 pm
Light Refreshments Served



Vector-like quarks, which interact symmetrically in the weak interactions, are an alternative explanation of naturalness in the Standard Model without the need for. They appear in many theories extending the Standard Model, such as GUT, extra dimensions, Composite Higgs models, etc. I present searches for these massive top and bottom quark partners at CMS using data collected at $\sqrt{s}=7$ and 8 TeV. The searches span a range of final states, from multi-leptonic to entirely hadronic, and limits are set on mass and production cross sections as a function of branching ratios. The analyses plans for Run2 will be also highlighted.