

## Beyond the SM searches with top (LHC)

*Thursday 16 July 2009 17:40 (20 minutes)*

The top quark is the only known fermion with a mass of the order of the Electroweak Symmetry Breaking Scale. New Physics, beyond the Standard Model, might be probed by studying the production of the top quark in proton-proton collisions at high energies in the new hadron collider, the LHC. High mass resonances, extra-dimensions, new flavor dynamics, 4th generation of quarks are some of the possibilities to be explored. Specific experimental techniques for event reconstruction and for background control are required to probe the new physics that might underly beneath top quark events. In this talk an overview of some of these experimental techniques is given along with the expected sensitivity of the CMS and ATLAS experiments to new physics scenarios that might influence the production of the top quark at the LHC.

**Primary author:** FERREIRA DA SILVA, Pedro (LIP / CMS)

**Presenter:** FERREIRA DA SILVA, Pedro (LIP / CMS)

**Session Classification:** VII. Standard Model Electroweak Physics

**Track Classification:** Standard Model Electroweak Physics