SUSY07



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Search new physics in top quark events with the D0 Detector

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The large mass of the top quark, close to the electroweak symmetry-breaking scale, makes it a good candidate for probing physics beyond the Standard Model. Single top quarks may be produced in the decay of a new heavy gauge boson W' and we present limits on the production cross section and the mass of such a W' assuming standard model like couplings. We also search for single top productions through flavor changing neutral currents involving gluon, Z boson, or photon exchange. We also search for non standard model signatures in top pair events. Models for new physics beyond the standard model are probed by looking at possible different event kinematics or deviations in the measured total or differential cross section.

Author: RIPP, Isabelle (Institut Pluridisciplinaire Hubert Curien (IPHC) - Inst. Nat. Ph)
Co-author: D0 COLLABORATION
Presenter: RIPP, Isabelle (Institut Pluridisciplinaire Hubert Curien (IPHC) - Inst. Nat. Ph)
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