Rencontres de Moriond EW 2012



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Tevatron searches for BSM BEH Bosons

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Using the full dataset (10 fb-1) delivered by the Fermilab Tevatron, the CDF and D0 experiments are actively seeking evidence for the Brout-Englert-Higgs (BEH) boson in beyond the standard model (BSM) scenarios, particularly in supersymmetric models and fermiophobic scenarios. The simplest supersymmetric extension to the standard model, the Minimal Supersymmetric Standard Model (MSSM), requires the introduction of two Higgs doublet fields, which predict the existence of five physical BEH bosons after symmetry breaking. Alternatively, in fermiophobic models, the symmetry breaking mechanism responsible for giving masses to gauge bosons is separate from that which generates the fermion masses. A selection of final results from searches for the BSM BEH boson carried out by CDF and D0 are presented.

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Classification de Session: EWSB (SM and beyond). Precision tests

Classification de thématique: Experiment