

ID de Contribution: 9 Type: Ordinary

Higgs and searches for new phenomena at the Tevatron

mardi 17 mars 2015 08:50 (15 minutes)

The Tevatron experiments complete their programs of searches for new physics using their full data samples. The most recent results come from CDF, with searches in the Higgs, heavy boson, magnetic monopole, and dark matter sectors. Constraints on models of the Higgs boson with alternative spin-parity quantum numbers than the SM prediction; a search for fermiophobic Higgs boson in triphoton final states; a search for heavy W' weak boson; a search for Dirac magnetic monopole; and a search for dark matter in final states with a leptonically decaying Z boson and large missing transverse energy will be presented. The spin-parity tests of the Higgs boson are performed in the VH(bb) channel and thus they are complementary to those performed in bosonic decay channels by the LHC experiments. The triphoton final states are explored for the first time. The searches provide exclusion limits competitive to those provided by other experiments in the same search channels.

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Classification de Session: The Scalar Sector

Classification de thématique: Experiment