

## Search for the Higgs boson in the $W^+W^-$ decay at Tevatron

*jeudi 21 juillet 2011 17:00 (20 minutes)*

We present the result of searches for the Standard Model Higgs boson produced via the  $H \rightarrow WW^{(*)} \rightarrow \ell^+\ell'^-$  ( $\ell, \ell' = e, \mu, \tau$ ) process at a center-of-mass energy of  $\sqrt{s} = 1.96$  TeV with the CDF and D0 detectors at the Fermilab Tevatron collider. A Higgs particle with a mass greater than 140 GeV decays primarily into a pair of  $W$ -bosons and the leptonic decay channels of the  $W$  provide a clear signature. This decay channel provides the highest sensitivity to the Higgs boson at the Tevatron and sensitivity to the Standard Model Higgs boson is expected with the dataset considered in these analyses, corresponding to integrated luminosities of up to  $8.9 \text{ fb}^{-1}$ . Recent improvements to the sensitivity will be discussed.

**Auteur principal:** Dr MARIOTTI, Chiara (INFN Torino)

**Orateur:** TUCHMING, Boris (Saclay)

**Classification de Session:** Higgs and New Physics