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Combined upper limit on Standard Model Higgs boson production in

boldsymbolp$collisionsat$
boldsymbol$\sqrt{s} = 1.96$ TeV at CDF}

vendredi 22 juillet 2011 09:30 (15 minutes)

We present the combination of the searches for the Standard Model Higgs boson at a center-of-mass energy of $\sqrt{s}$ =1.96~TeV, using up to 8.9~fb^{-1} of data collected with the CDF detector at the Fermilab Tevatron collider. The major contributing processes include associated production ($WH \to \ell\nu bb$, $ZH \to \nu\nu bb$, $ZH \to \ell\ell bb$, and $WH \to WWW^{(*)}$) and gluon fusion ($gg \to H \to WW^{(*)}$). The significant improvements across the full mass range resulting from the larger data sets, improved analyses and inclusion of additional channels are discussed. The combination of all channels results in significantly improved sensitivity across the 100-200 GeV mass range, and in particular around 160 GeV.

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