## Rencontres de Moriond EW 2010



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## The Higgs at the Tevatron: the production rates and their uncertainties

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We update the theoretical predictions for the production cross sections of the Standard Model Higgs boson at the Tevatron, focusing on the two main search channels: the gluon fusion mechanism and the associated production with a gauge boson. We include all relevant g=higher order corrections and then estimate the various uncertainties affecting these predictions: the scale uncertainties which can be viewed as a measure of the unknown higher order corrections, the uncertainties from the parton distribution functions, those due to the electroweak effets and those originating from the errors on some important input parameters such as the strong coupling constant and the heavy quark masses. We show that, in a conservative approach, these uncertainties are rather large.

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