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ggxy: NLO QCD corrections to loop induced gg initiated processes

We present the program package ggxy, which in its first version can be used to calculate partonic and hadronic cross sections to Higgs boson pair production at NLO QCD. The 2-loop virtual amplitudes are implemented using analytical approximations in different kinematic regions, while all other parts of the calculation are exact. This implementation allows to freely modify the masses of the top quark and the Higgs boson, as well as the renormalization scheme of the top-quark mass. Finally, we discuss the status of including other processes in our framework, such as $gg \to ZH$ or $gg \to ZZ$.

Secondary track

T06 - Top and Electroweak Physics

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