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SUSY QCD corrections to squark loops in Higgs boson production via gluon

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At existing and future hadron colliders Higgs boson production via gluon gluon fusion is one of the dominant Higgs production processes. The (large) QCD corrections have been calculated at NLO and recently at NNLO (in the heavy top quark limit). So far the NLO SUSY-QCD corrections are only known in the heavy squark limit which is reliable for large squark masses. We have calculated the SUSY-QCD correction including the full squark mass dependence at NLO thus closing the existing
hole. The new results will be particularly important in MSSM scenarios with a large contribution from squark loops, i.e. for squark masses below about 400GeV.

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