

Planar Master Integrals for the two-loop light-fermions electroweak corrections to Higgs plus jet production

Thursday, September 12, 2019 9:30 AM (25 minutes)

In this talk, I will present the analytic calculation of the planar master integrals for the two-loop light-fermion electroweak corrections for the production of a Higgs boson in the gluon-gluon fusion channel. The complete dependence on the electroweak boson mass is retained. The master integrals are evaluated by means of the differential equations method and the analytic result are expressed in terms of multiple polylogarithms up to weight four.

The Higgs signals provide a strong test of the Standard Model and can be a probe of New Physics in case a deviation from the SM behavior of the Higgs properties will be revealed.

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