Erratum to: Towards Higgs boson production in gluon fusion to NNLO in the MSSM

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There are several errors in the three-loop coefficient of order $(\alpha_s^{(5)})^3 x_{ts}^2$ in Eq. (18). The corrected result reads

$$\begin{aligned} C_1^{\overline{\text{DR}}} = & -\frac{\alpha_s^{(5)}}{3\pi} \frac{c_\alpha}{s_\beta} \left\{ \dots + \left(\frac{\alpha_s^{(5)}}{\pi} \right)^2 \left[\dots \right. \right. \\ & + \left(\frac{30779857}{648000} - \frac{6029}{10800} l_{\text{susy}} - \frac{475}{288} l_{\text{susy}}^2 \right. \\ & - \frac{20407}{10800} l_t + \frac{26}{45} l_{\text{susy}} l_t - \frac{377}{1440} l_t^2 - \frac{15971}{576} \zeta_3 \\ & + \left(-\frac{3910697}{216000} + \frac{63}{4} \zeta_3 + \frac{3307}{4800} l_{\text{susy}} + \frac{131}{576} l_{\text{susy}}^2 \right. \\ & + \left. \left. \frac{5113}{14400} l_t - \frac{101}{1440} l_{\text{susy}} l_t + \frac{3}{320} l_t^2 \right) n_l \right] x_{ts}^2 \left. \right\} \\ & + \mathcal{O}(x_{ts}^4) + \mathcal{O}\left(\frac{\mu_{\text{susy}}}{m_{\text{susy}}} x_{ts}^2\right). \end{aligned}$$

The change in the numerical results is negligible.

The relation between C_g and C_1 in Eq. (4) has to be changed to $C_g = C_1/C_1^{(0)}/B^{(5)}$ where $C_1^{(0)}$ is the coefficient of $\alpha_s^{(5)}$ in C_1 .

In Eq. (20) “[1 + (1 - τ_t)] $f(\tau_t)$ ” has to be replaced by “[1 + (1 - τ_t) $f(\tau_t)$]”.

In Eq. (22) the “1” on the r.h.s. has to be replaced by “ $\Sigma^{(0)}$ ”:

$$\Sigma = \Sigma^{(0)} + \frac{\alpha_s^{(5)}(\mu_s)}{\pi} \Sigma^{(1)} + \left(\frac{\alpha_s^{(5)}(\mu_s)}{\pi} \right)^2 \Sigma^{(2)} + \dots,$$

In Eq. (23) “ σ^{LO} ” has to be replaced by “ σ_0 ”.

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