

$$\hat{\mathcal{M}}_{\text{NLL, soft}} = \frac{i\pi}{LC_2} \left\{ \left(e^{\frac{B_0}{2\epsilon} C_2 x} - 1 \right) \frac{B_{-1}(\epsilon)}{B_0(\epsilon)} \left(1 - B_{-1}(\epsilon) \frac{C_1}{C_2} \right)^{-1} \right. \\ \left. + \left(1 - e^{\gamma_E C_1 x} \frac{\Gamma(1 - C_2 x)}{\Gamma(1 + C_2 x)} \frac{\Gamma^{2 - \frac{C_1}{C_2}} \left(1 + C_2 \frac{x}{2} \right)}{\Gamma^{2 - \frac{C_1}{C_2}} \left(1 - C_2 \frac{x}{2} \right)} \right) \right\} \mathbf{T}_{s-u} \mathcal{M}^{(\text{tree})}$$