Erratum to: Non-global structure of the $O(s^2)$ dijet soft function

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Erratum: Non-global structure of the $\mathcal{O}(\alpha_s^2)$ dijet soft function

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The position space results in eqs. (3.30)-(3.32) of ref. [1] are correct, but there are typos in the coefficients extracted in the $x_1 \gg x_2$ limit of $t_2(x_1/x_2)$, so eq. (3.33) should read:

$$s_2^{[2]} = -\frac{2\pi^2}{3} C_F C_A, \quad s_2^{[1]} = 2 \left[ C_F C_A \left( \frac{11\pi^2 - 3 - 18\zeta_3}{9} \right) + C_F T R_{n_f} \left( \frac{6 - 4\pi^2}{9} \right) \right].$$

$$s_2^{[0]} = -s_2^{[1]} \ln \left( 2 - 4 C_F C_A f_N(1) - 4 C_F T R_{n_f} f_Q(1) + C_F C_A s_2^{[C_F C_A]} + C_F T R_{n_f} s_2^{[n_f]} \right).$$

Similarly, from taking the large $\ell_1 \gg \ell_2$ limit of the momentum space result in eq. (3.36), the coefficients in eq. (3.39) should read:

$$s_{2c}^{[0]} = -s_{2c}^{[1]} \ln \left( 2 - 4 C_F C_A f_N(1) - 4 C_F T R_{n_f} f_Q(1) + C_F C_A s_{2c}^{[C_F C_A]} + C_F T R_{n_f} s_{2c}^{[n_f]} \right).$$

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Finally, there are constant terms that should be added to the $\mu$-dependent part of the momentum-space soft function, which appear from the conversion of logarithms from position to momentum space, so eq. (3.43) should read:

$$
R_c(\ell_1^c, \ell_2^c, \mu) = -\frac{\alpha_s(\mu)C_F}{\pi} \left( \frac{L_1^2 + L_2^2 - \pi^2}{3} \right)
$$

$$
+ \frac{\alpha_s^2(\mu)}{(4\pi)^2} \left[ 8C_F^2(\ell_1^2 + \ell_2^2) + \left( \frac{88}{9}C_FC_A - \frac{32}{9}C_FT_{Rnf} \right)(L_1^3 + L_2^3) 
+ \left( \frac{20\pi^2}{3}C_F^2 + C_FC_A \left( \frac{4\pi^2}{3} - \frac{268}{9} \right) + \frac{80}{9}C_FT_{Rnf} \right)(L_1^2 + L_2^2) 
+ \left[ 64\zeta_3C_F^2 + C_FC_A \left( \frac{808}{27} - \frac{22\pi^2}{9} - 28\zeta_3 \right) 
- C_FT_{Rnf} \left( \frac{224}{27} - \frac{8\pi^2}{9} \right) \right](L_1 + L_2) - \frac{C_F^228\pi^4}{45} 
+ C_FC_A \left( \frac{352\zeta_3}{9} + \frac{268\pi^2}{27} - \frac{4\pi^4}{9} \right) - C_FT_{Rnf} \left( \frac{128\zeta_3}{9} + \frac{80\pi^2}{27} \right) \right]. 
$$

(3.43)

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References