Erratum: Scattering of glue by glue on the light-cone worldsheet. II. Helicity conserving amplitudes [Phys. Rev. D 74, 045018 (2006)]

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We correct some errors in the above published article as follows. Equation (43) should read

$$\int_{\mathcal{D}_4} d\hat{\boldsymbol{k}}\,\frac{|A^{\vee}|^2+|A^{\wedge}|^2}{16|k^+|\pi^3}=\frac{g^2|A_{\rm Core}|^2}{8\pi^2|k^+|}\left\{\left(\frac{(k^++p_4^+)^2}{p_4^{+2}}+\frac{p_4^{+2}}{(k^++p_4^+)^2}\right)\ln\frac{k^+p_4^+\Delta^2}{(k^++p_4^+)^2\mu^2 e}-\left(\frac{(k^++p_3^+)^2}{p_3^{+2}}+\frac{p_3^{+2}}{(k^++p_3^+)^2}\right)\right.$$
$$\left.\times\ln\left(1-\frac{\Delta^2}{k^+p_4^+\boldsymbol{v}_{34}^2}\right)\right\}\quad\text{for } |k^+|>\frac{\Delta^2}{|p_4^+|\boldsymbol{v}_{34}^2}$$
$$\approx\frac{g^2|A_{\rm Core}|^2}{8\pi^2|k^+|}\left\{\left(\frac{(k^++p_4^+)^2}{p_4^{+2}}+\frac{p_4^{+2}}{(k^++p_4^+)^2}\right)\ln\frac{k^+p_4^+\Delta^2}{(k^++p_4^+)^2\mu^2 e}\right.$$
$$\left.-2\ln\left(1-\frac{\Delta^2}{k^+p_4^+\boldsymbol{v}_{34}^2}\right)\right\}\quad\text{for } |k^+|>\frac{\Delta^2}{|p_4^+|\boldsymbol{v}_{34}^2}. \tag{43}$$

The factors of $|k^+|$ in the denominators of the first factors on the right of each equation had been dropped in typography. Subsequent equations were unaffected.

Equations (121) and (122) should read

$$P_{\wedge\wedge\vee\vee}=|A_{\wedge\wedge\vee\vee}|^2\left[1+\frac{g^2}{4\pi^2}\left[-2\log^2\frac{\Delta^2}{s}-2\log^2\frac{\Delta^2}{|t|}-\frac{\pi^2}{3}+\frac{67}{9}-\frac{11}{3}\left[\log(\Delta^2\delta e^{\gamma})+\log\frac{\Delta^2}{|t|}\right]+\log^2\frac{s}{|t|}\right]\right], \tag{121}$$

$$P_{\wedge\vee\wedge\vee}=|A_{\wedge\vee\wedge\vee}|^2\left[1+\frac{g^2}{4\pi^2}\left[-2\log^2\frac{\Delta^2}{s}-2\log^2\frac{\Delta^2}{|t|}-\frac{\pi^2}{3}+\frac{67}{9}-\frac{11}{3}\left[\log(\Delta^2\delta e^{\gamma})+\frac{1}{2}\log\frac{\Delta^4}{s|t|}\right]\right.\right.$$
$$\left.\left.+\frac{(s^2+st+t^2)^2}{(t+s)^4}\log^2\frac{s}{|t|}+\frac{(5st^2-5s^2t+11t^3-11s^3)}{6(t+s)^3}\cdot\log\frac{s}{|t|}-\frac{ts}{(t+s)^2}\right]\right]. \tag{122}$$

The coefficients of $\pi^2/3$ on the right of these equations were shown as 2 instead of -1 in the original published form. The errors were due to an incorrect combination of the 23 and 41 cases with the 12 and 34 cases. The only effect of the errors is to change the numerical finite part of the relation between bare and renormalized coupling.

Finally, the q on the second line of Eq. (130) should have a wedge superscript ($q \to q^{\wedge}$).

