

$$\frac{dN_g}{dx dk_{\perp}^2 dt} = \frac{2\alpha_s C_A P(x)}{\pi k_{\perp}^4} \hat{q} \left(\frac{k_{\perp}^2}{k_{\perp}^2 + x^2 M^2} \right)^4 \sin^2 \left(\frac{t - t_i}{2\tau_f} \right)$$