$$\Gamma = \sum_m \int \left[d\{p,f,c,d\}_m \right] \left| \{p,f,c,d\}_m \right) \left(\{p,f,c,d\}_m \right|$$
$$\times f_{a/A}(\eta_{\rm a}, \mu_F^2)\, f_{b/B}(\eta_{\rm b}, \mu_F^2)\, \frac{1}{2\eta_{\rm a}\eta_{\rm b} p_A \cdot p_B}\, \frac{1}{m!}$$
$$\times \prod_{i=1}^{m} \left\{ \frac{1}{(2\pi)^3} \delta_+(p_i^2) \right\}\, (2\pi)^4 \delta\left(\eta_{\rm a} p_A + \eta_{\rm b} p_B - K - \sum_{i=1}^{m} p_i \right)$$