

$$\Omega^{(0)}(p, k) = 1$$

$$\Omega^{(1)}(p, k) = (C_A - \mathbf{T}_t^2) J(p, k)$$

$$\Omega^{(2)}(p, k) = (C_A - \mathbf{T}_t^2)^2 J^2(p, k) + (C_A - 2\mathbf{T}_t^2)(C_A - \mathbf{T}_t^2) \int [\mathrm{D}k'] f(p, k, k') [J(p, k') - J(p, k)]$$