

$$V_F \simeq \frac{8}{3} (a_s A_s)^2 \sqrt{\tau_s} \frac{e^{-2 a_s \tau_s}}{\nu} - 4 a_s A_s W_0 \tau_s \frac{e^{-a_s \tau_s}}{\nu^2} + \frac{3}{4} \frac{\zeta W_0^2}{g_s^{3/2} \nu^3}$$