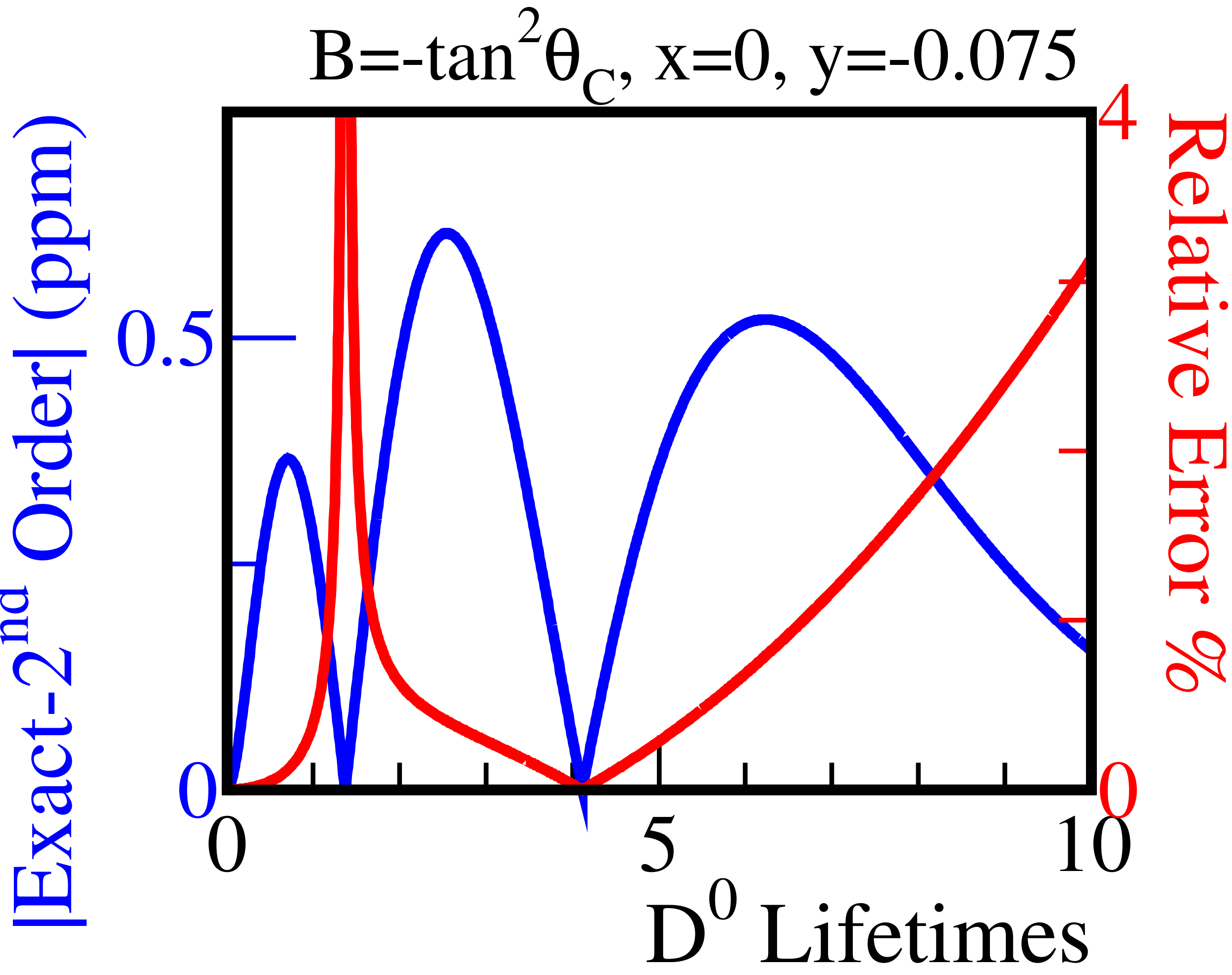

Figure 2: Error on the time-dependent wrong-sign decay rate made through use of the second-order approximation, Eqn. 1, of the exact expression, Eqn. 3. The direct right-sign decay amplitude is taken as 1, and the direct wrong-sign decay amplitude $R_{\rm DCSD} = |B| = |-\tan^2\theta_C| = |-0.0513|$. Dispersive mixing is absent, described by $x = 0$, while absorptive mixing is present, described by $y = \Delta\Gamma/(2\overline{\Gamma}) = -0.075$. The curve with three peaks is the magnitude of the error in parts per million, and should be read with the vertical scale on the left. The curve with the peak near 1.37 D^0 lifetimes is the relative error, an should be read with the vertical scale on the right, which is in percent. The peak in this curve near 1.37 D^0 lifetimes occurs because Eqn. 1 and Eqn. 3 hit zero at slightly different numbers of D^0 lifetimes. This curve rises as the number of lifetimes increases, because the long-lived component of the D^0 decays exponentially.