



Fig. 4.11: Prediction of the model for  $N_*$ , with  $\Gamma_\varphi \ll H_{TI}$  and  $n$ ,  $g$ ,  $H_*$ ,  $\Gamma_\varphi$  and  $\lambda$  values from Table 4.2. (A plot of Eq. (4.52), with  $m = m_0$  and  $\Gamma = g^2 m_0$ .)

Figs. 4.12–4.17, with the parameter values of Table 4.2. The predicted values of  $n_s$  and  $n'_s$  of the model for a thermal waterfall field mass of  $m_0 \sim 10^3$  GeV for all three  $\phi_*$  Cases are the same to within at least four significant figures. They are also both insensitive to the value of  $m_\psi$  within its allowed range.  $n_s$  and  $n'_s$  are shown in Table 4.6, with them both being within current observational bounds [40].

Quantity	Value
$n_s$	$\approx 0.9645$
$n'_s$	$\approx -0.001259$

Table 4.6: Prediction for  $n_s$  and  $n'_s$  of the model with primordial inflation being Chaotic Inflation, with  $\alpha = 1$ ,  $\Gamma_\varphi \ll H_{TI}$ ,  $m_\psi = 10^{-2}$  GeV,  $m_0 \sim 10^3$  GeV and the parameter values from Table 4.2.