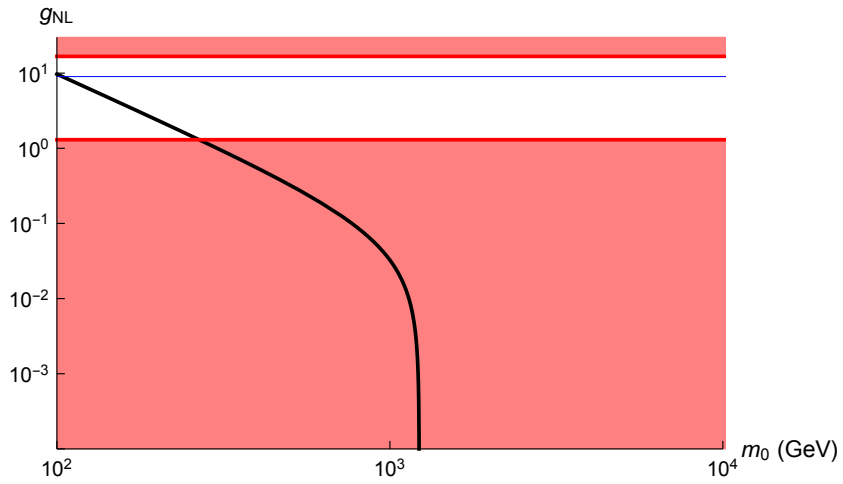

Fig. 4.9: Prediction of the model for the non-Gaussianity parameter $g_{\rm NL}$, with $\alpha=1$, $\Gamma_\varphi \ll H_{TI}$ and h and H_* values from Table 4.2. (A plot of Eq. (4.74), with $\psi=\psi_*$.) The Blue and Red lines are the central value and lower/upper bounds of $g_{\rm NL}$ respectively as obtained by the Planck spacecraft [55].

primordial inflation is that of slow-roll Chaotic Inflation, with the potential

$$V(\varphi) = \frac{1}{2} m_\varphi^2 \varphi^2 \tag{4.174}$$

From Section 4.3.2, the spectral index n_s is given by

$$n_s \simeq 1 - 2\epsilon + 2\eta_{\psi\psi} \tag{4.175}$$

with ϵ being given by Eq. (4.22) and $\eta_{\psi\psi}$ being given by Eq. (4.21) and where both are to be evaluated at the point where cosmological scales exit the horizon during primordial inflation. The potential of Eq. (4.174) gives

$$\epsilon = \frac{2M_P^2}{\varphi_*^2} \tag{4.176}$$