\[ \Sigma = 0.2, w_t = 0.6, \alpha_T \neq 0 \]

\[ \log r_T \]

Graphs showing the relationship between \( \log r_T \) and \( \log [h_0^2 \Omega_{GW}(\nu, \tau_0)] \) for different Ligo-Virgo frequencies: \( \nu_{LV} = 0.1 \text{ kHz} \), \( \nu_{LV} = 1 \text{ kHz} \), and \( \nu_{LV} = 10 \text{ kHz} \). The graphs also display the detectability constraint and Ligo-Virgo frequency.