Summary plots 1

June 17, 2022

List of Figures

Plots with constraints

- Small regions (following previous paper) around

$$\delta a_\mu = (2.5 \pm 0.6) \times 10^{-9}, \qquad \delta a_e = (-8.7 \pm 3.6) \times 10^{-13},$$

- perturbativity requirement

$$|\mathrm{Re}(n_\ell)| < 250\,\mathrm{GeV}.$$

- Red regions correspond to the requirement of an excess in $pp_{\mathrm{ggF}} \to S \to \tau^+\tau^-$; the excess can arise from H, A or from both

- "Repeated plots: blue for analysis without the excess, red for analysis reproducing the excess, blue+red for both overlayed

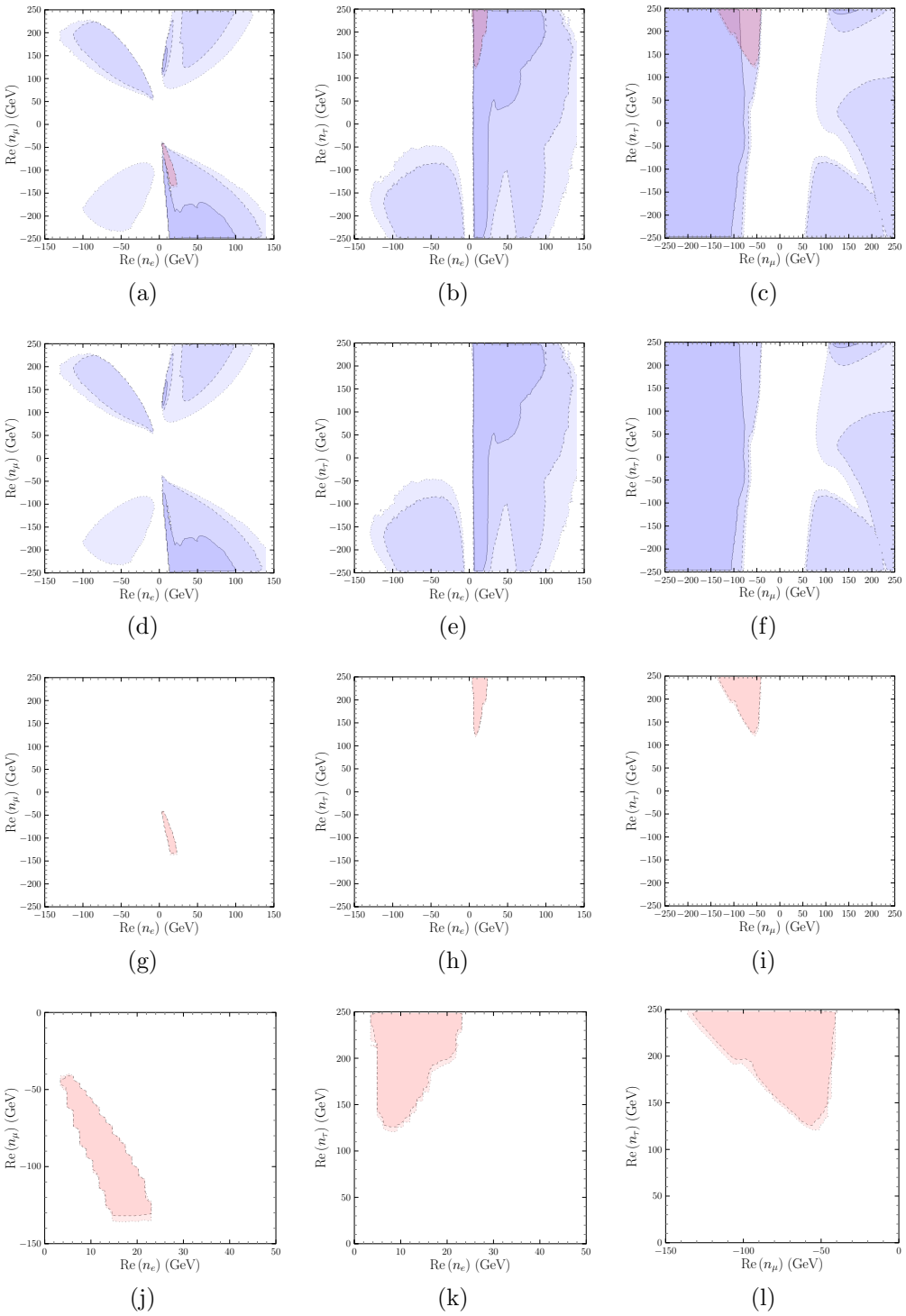


Figure 1: Re (n_ℓ)

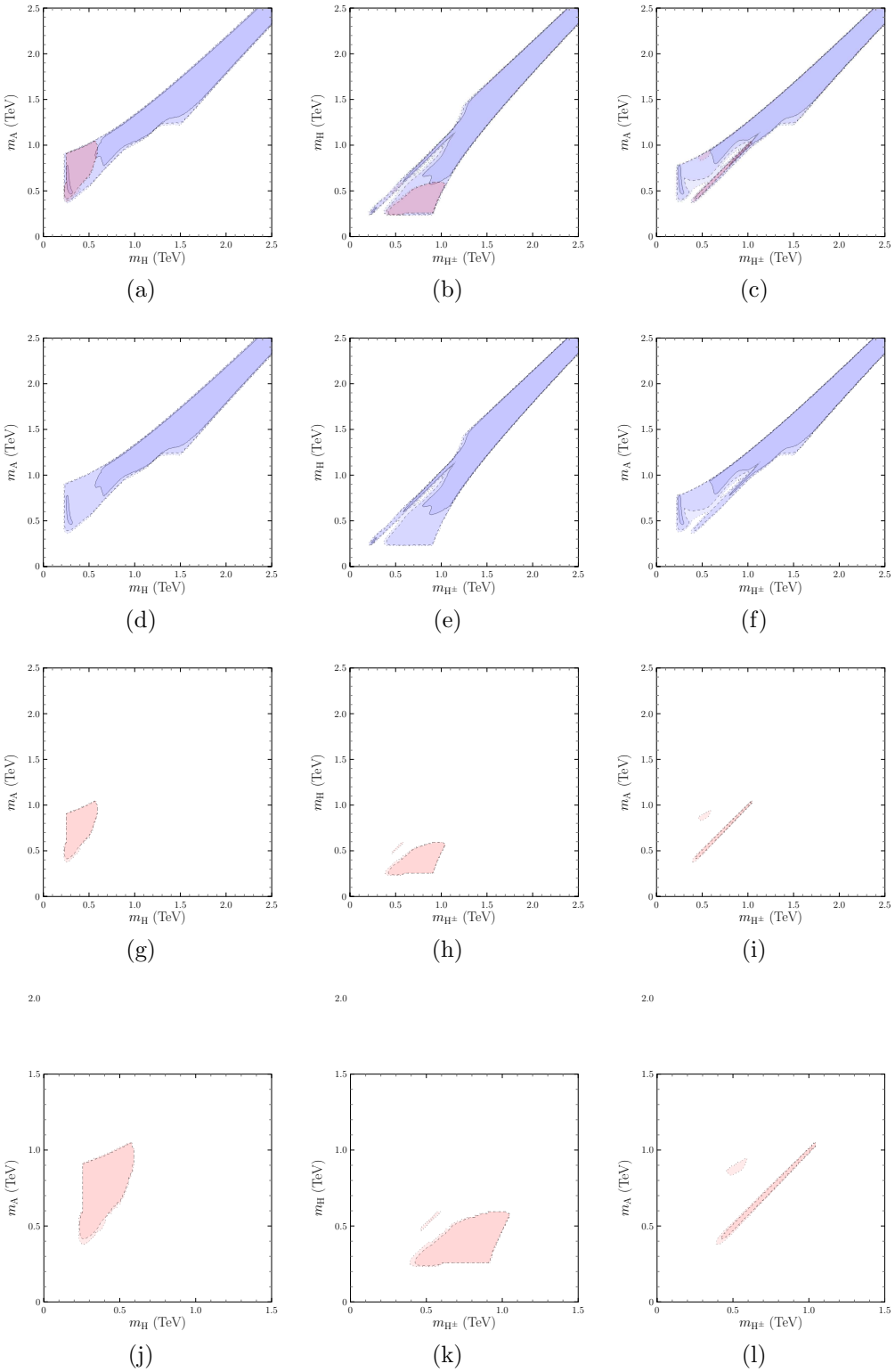


Figure 2: Scalar masses

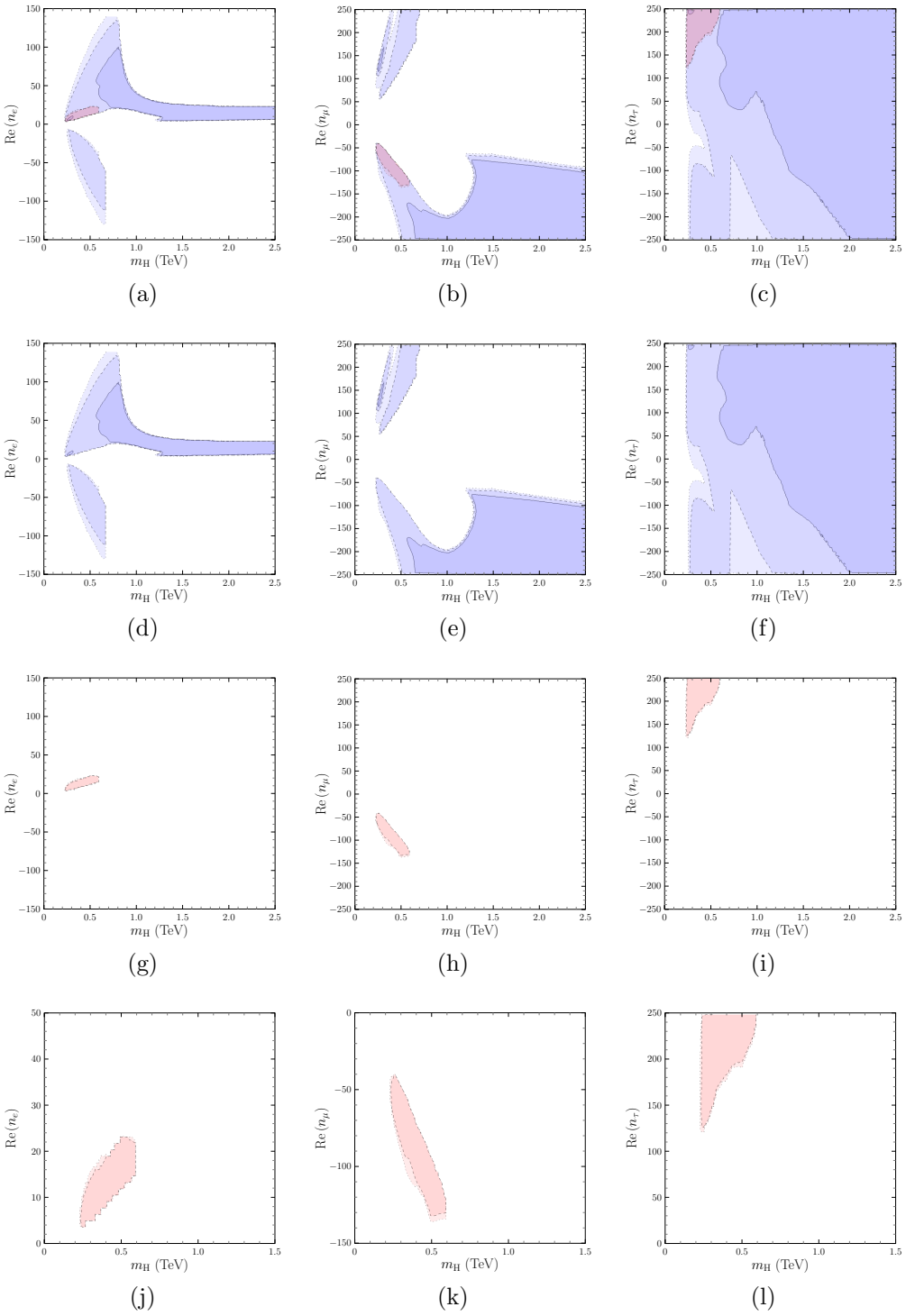


Figure 3: Re (n_ℓ) vs Masses

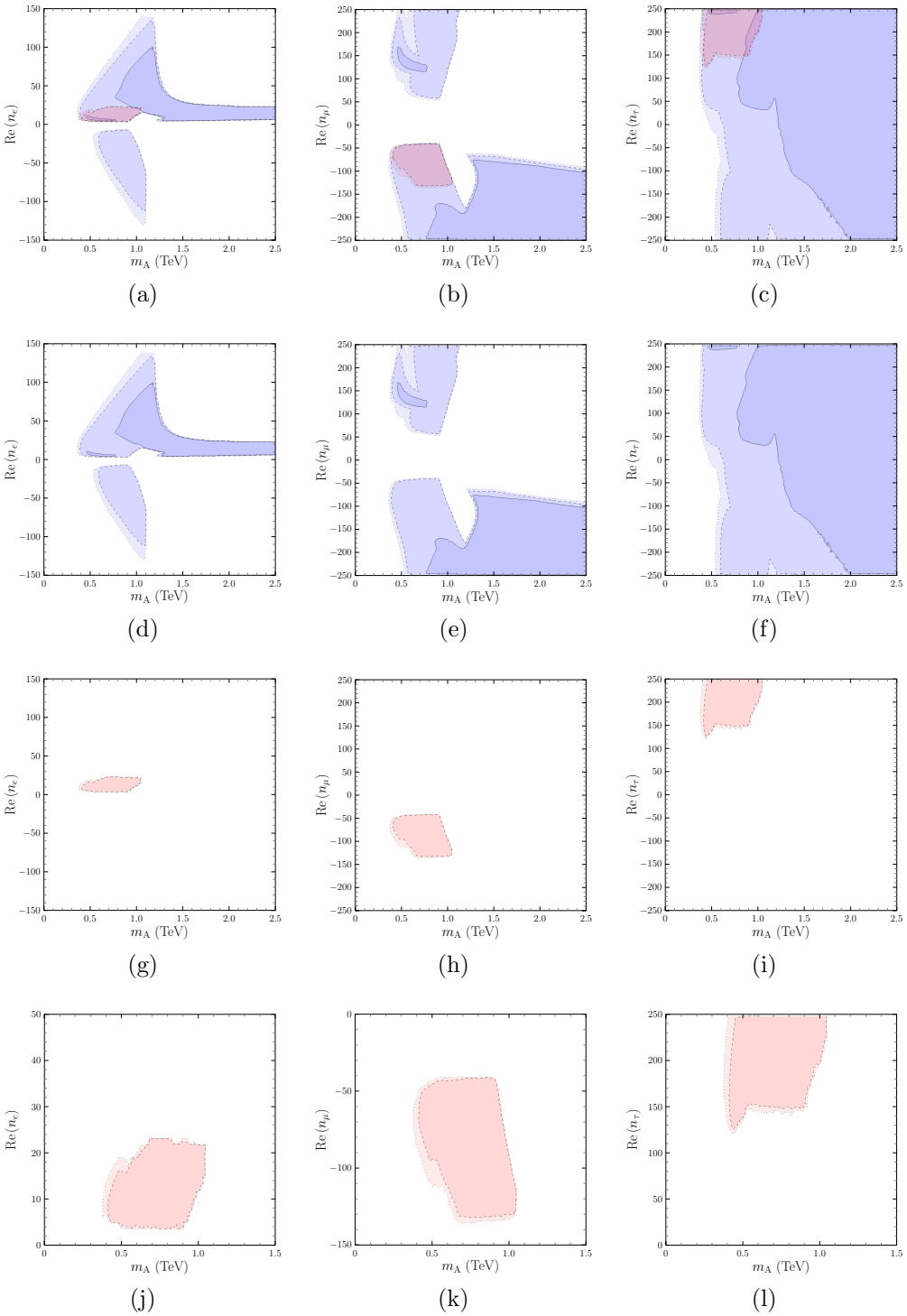


Figure 4: Re (n_ℓ) vs Masses

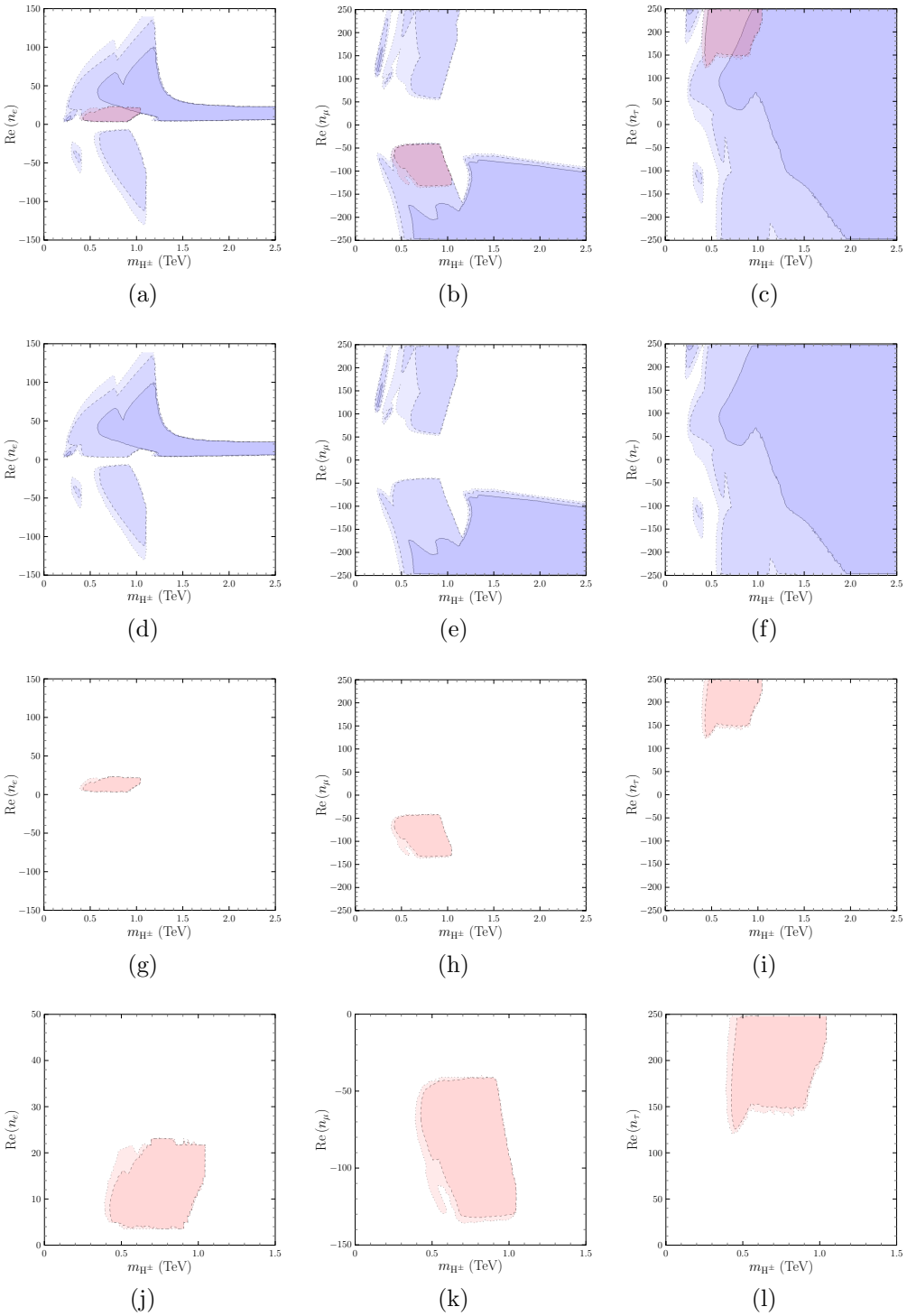


Figure 5: Re (n_ℓ) vs Masses

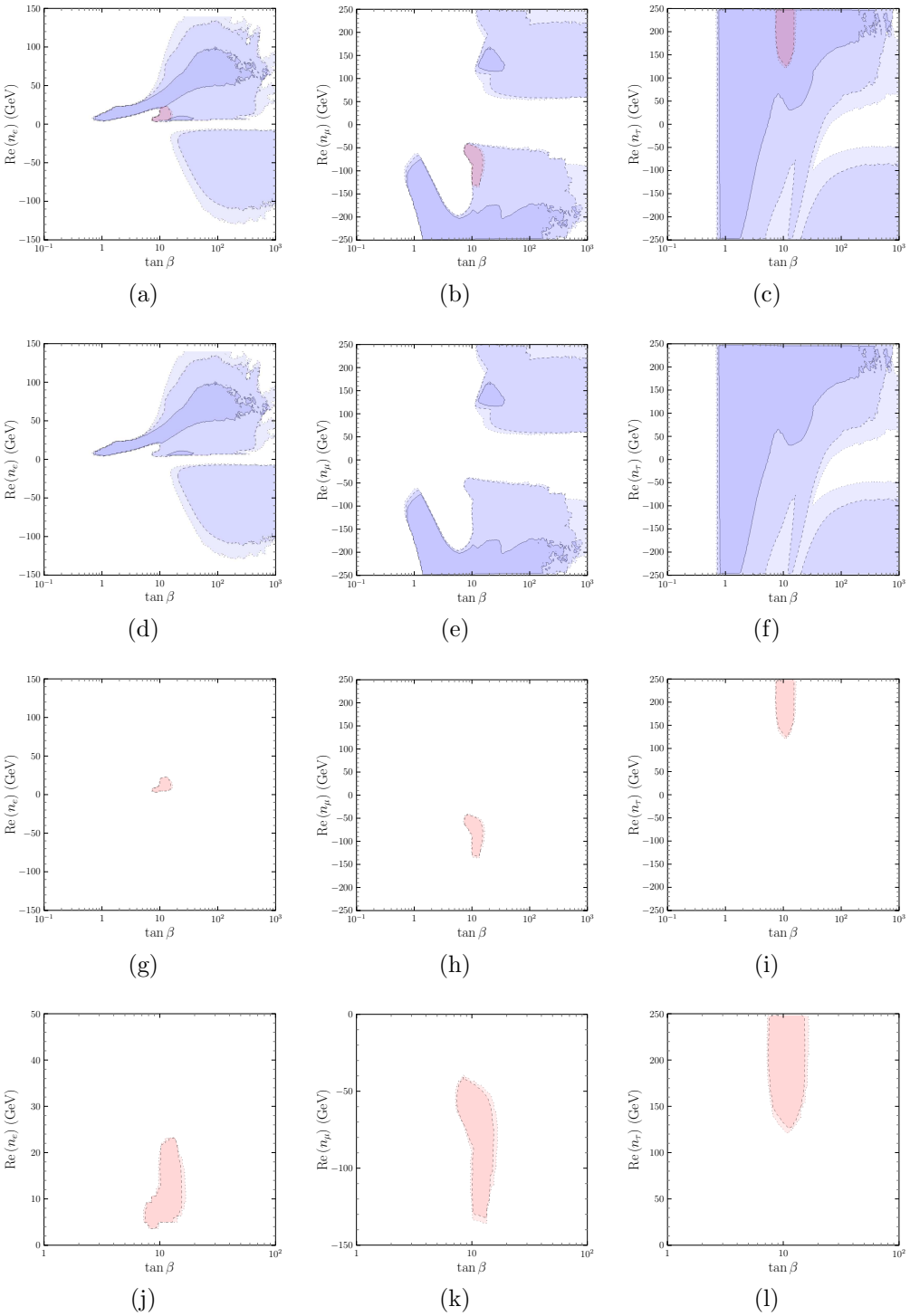


Figure 6: $\mathrm{Re}\,(n_\ell)$ vs. $\tan\beta$

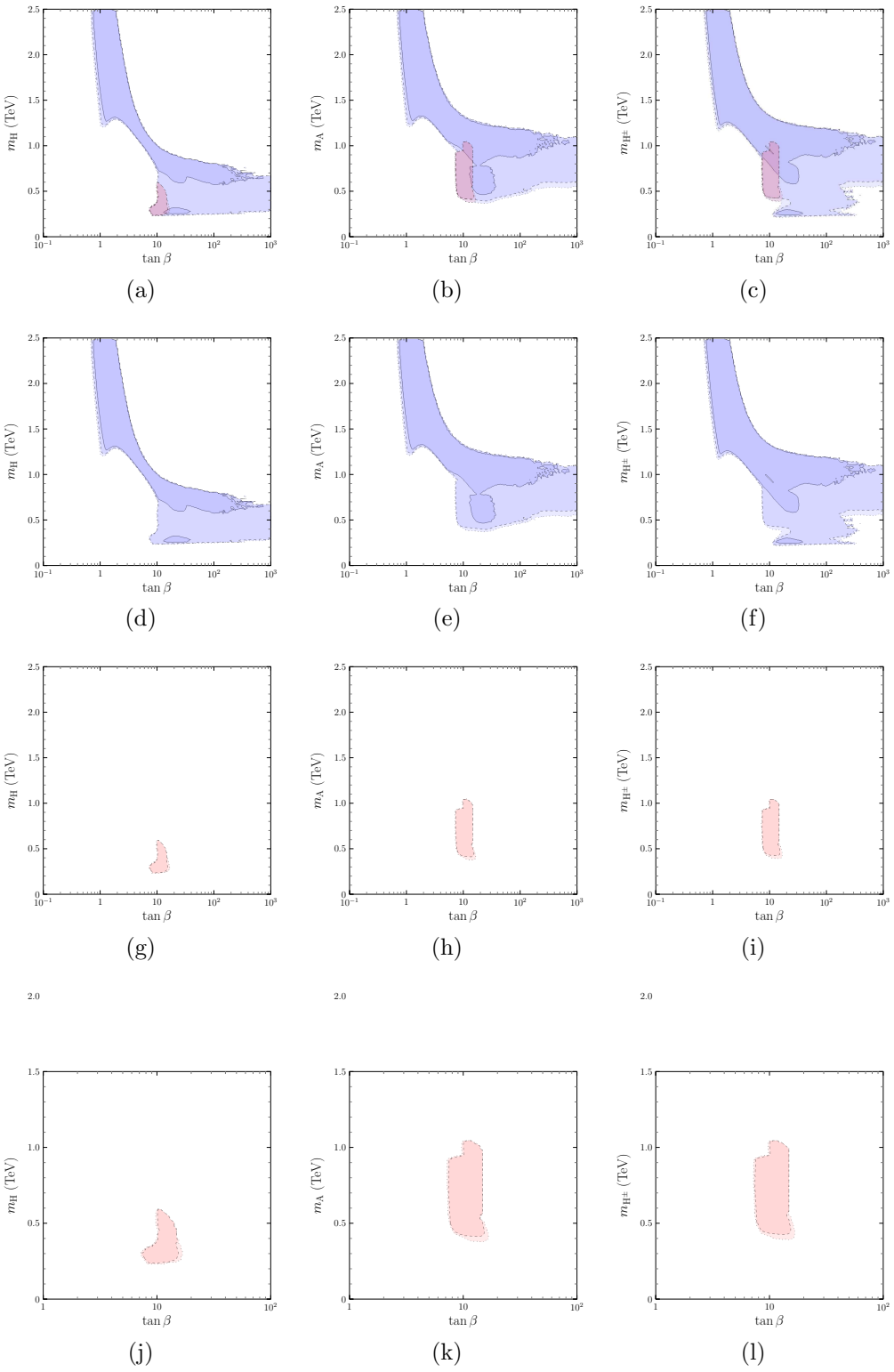


Figure 7: Masses vs. $\tan\beta$

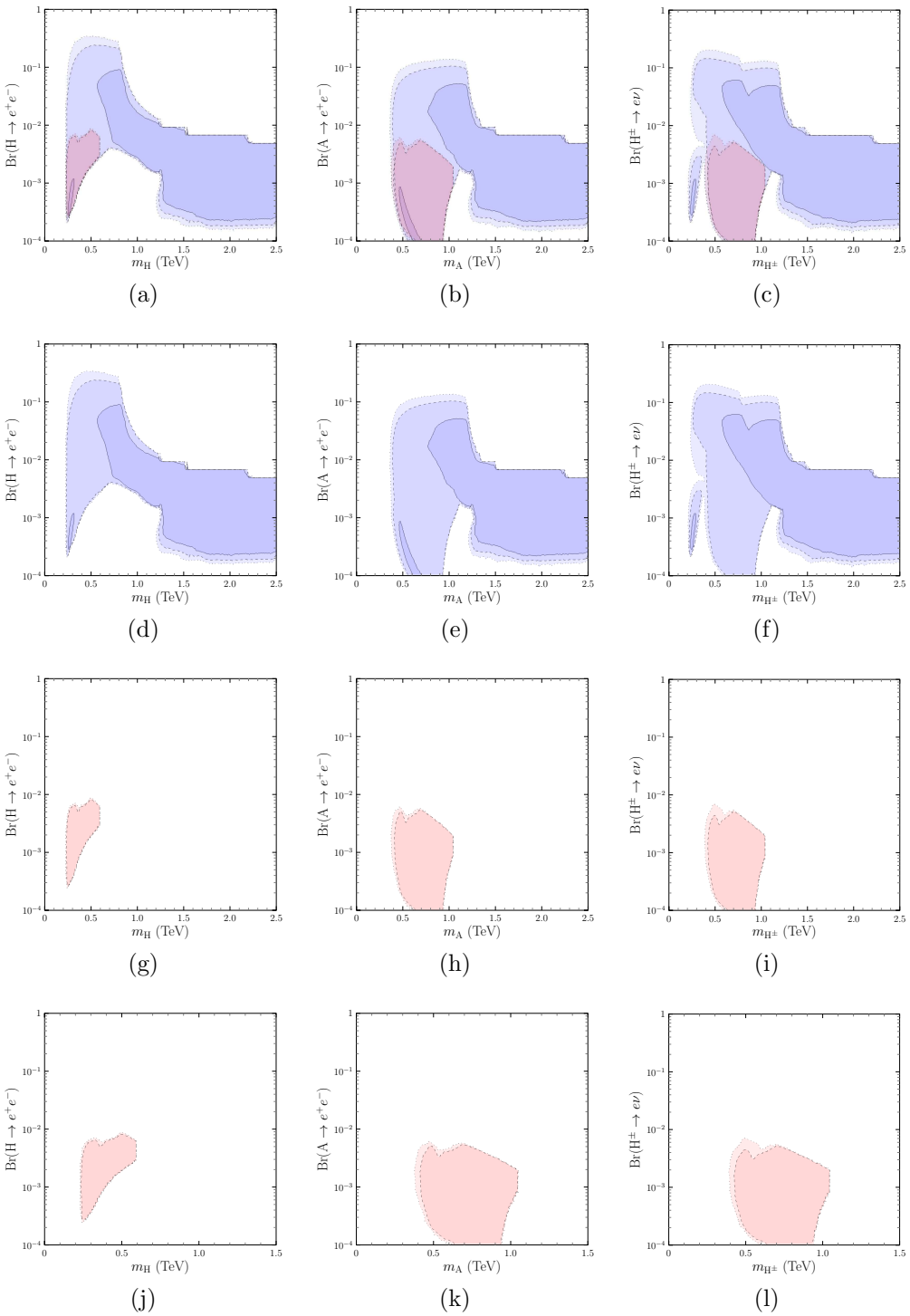


Figure 8: BR's of scalars (1)

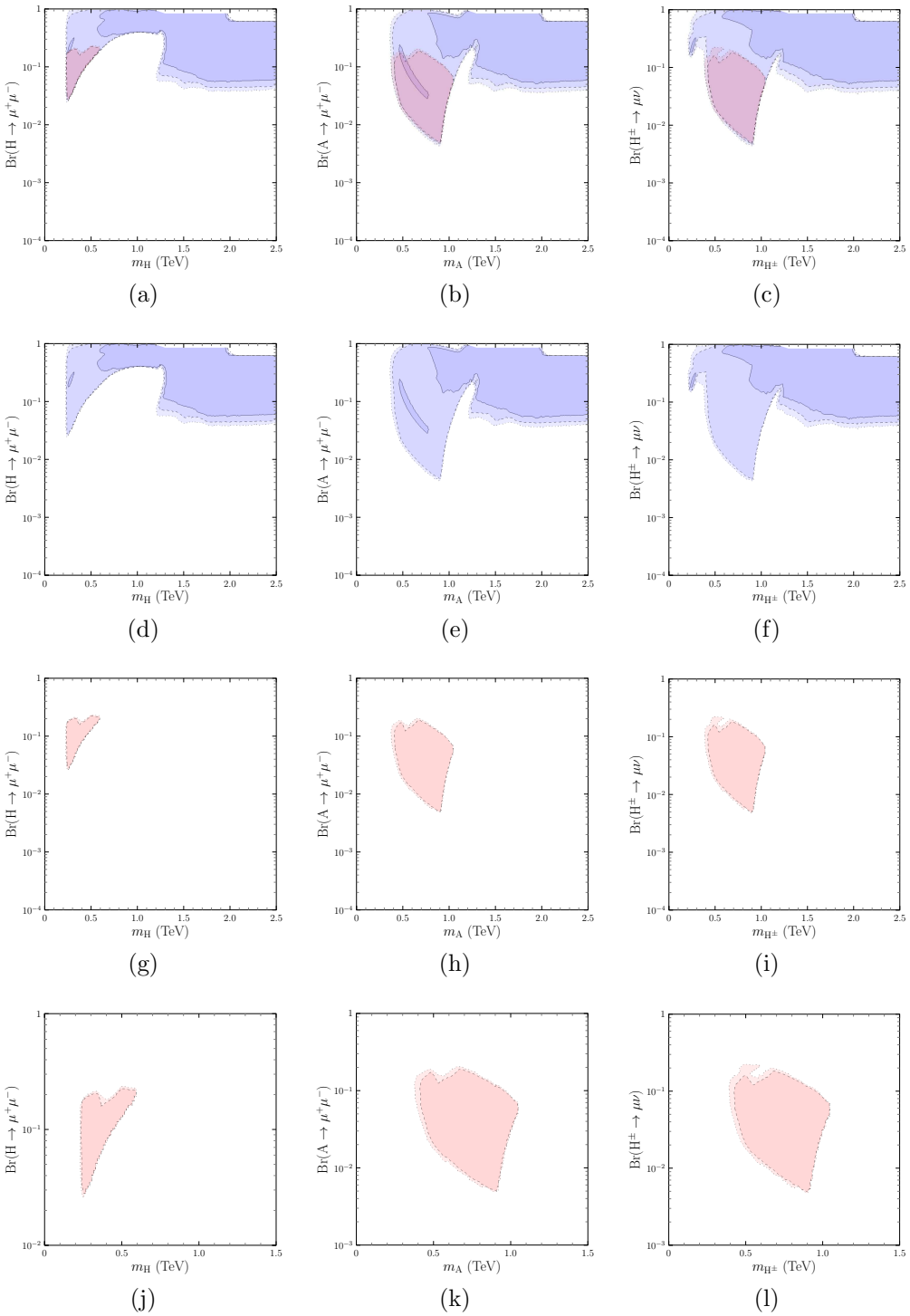


Figure 9: BR's of scalars (1)

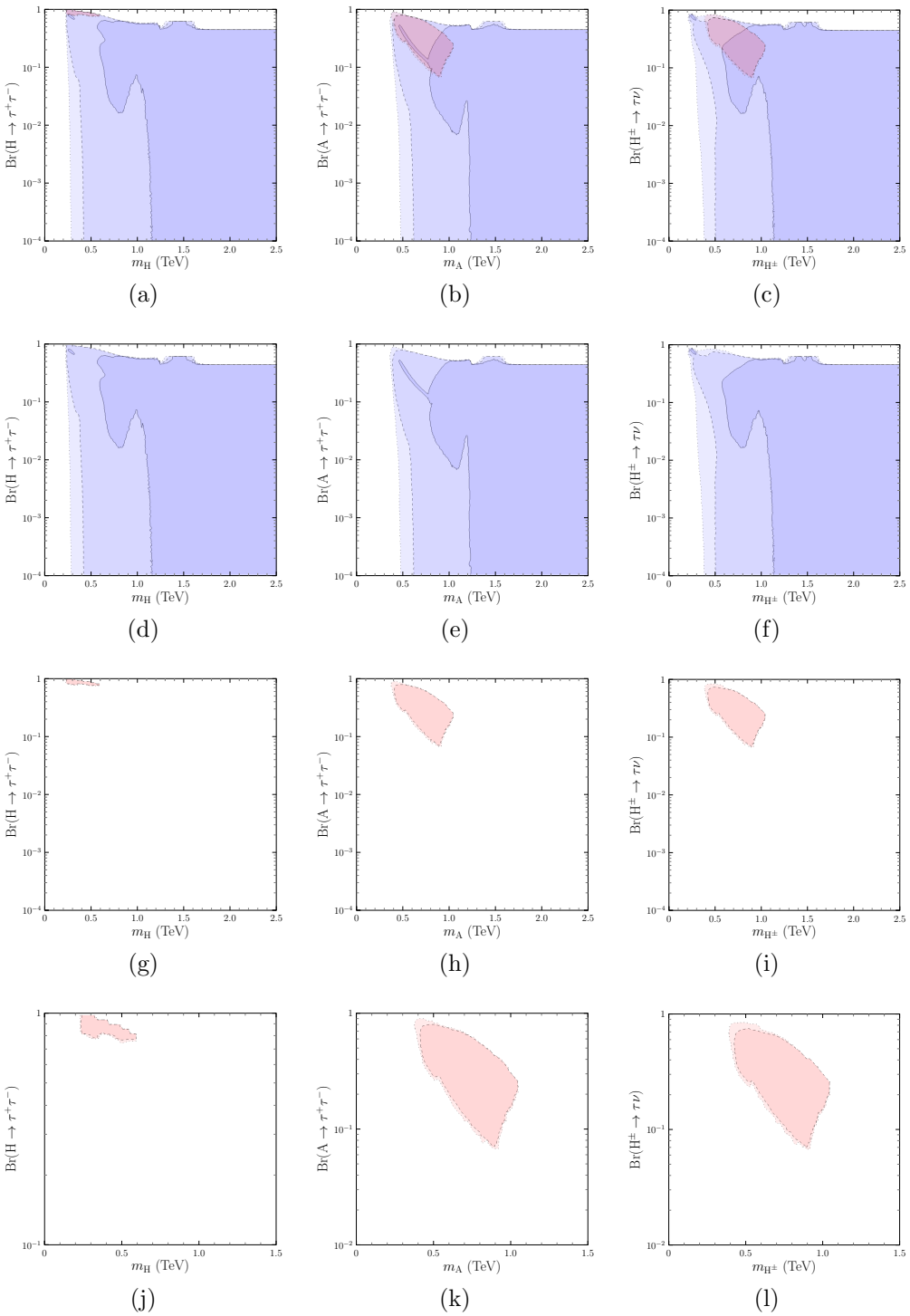


Figure 10: BR's of scalars (1)

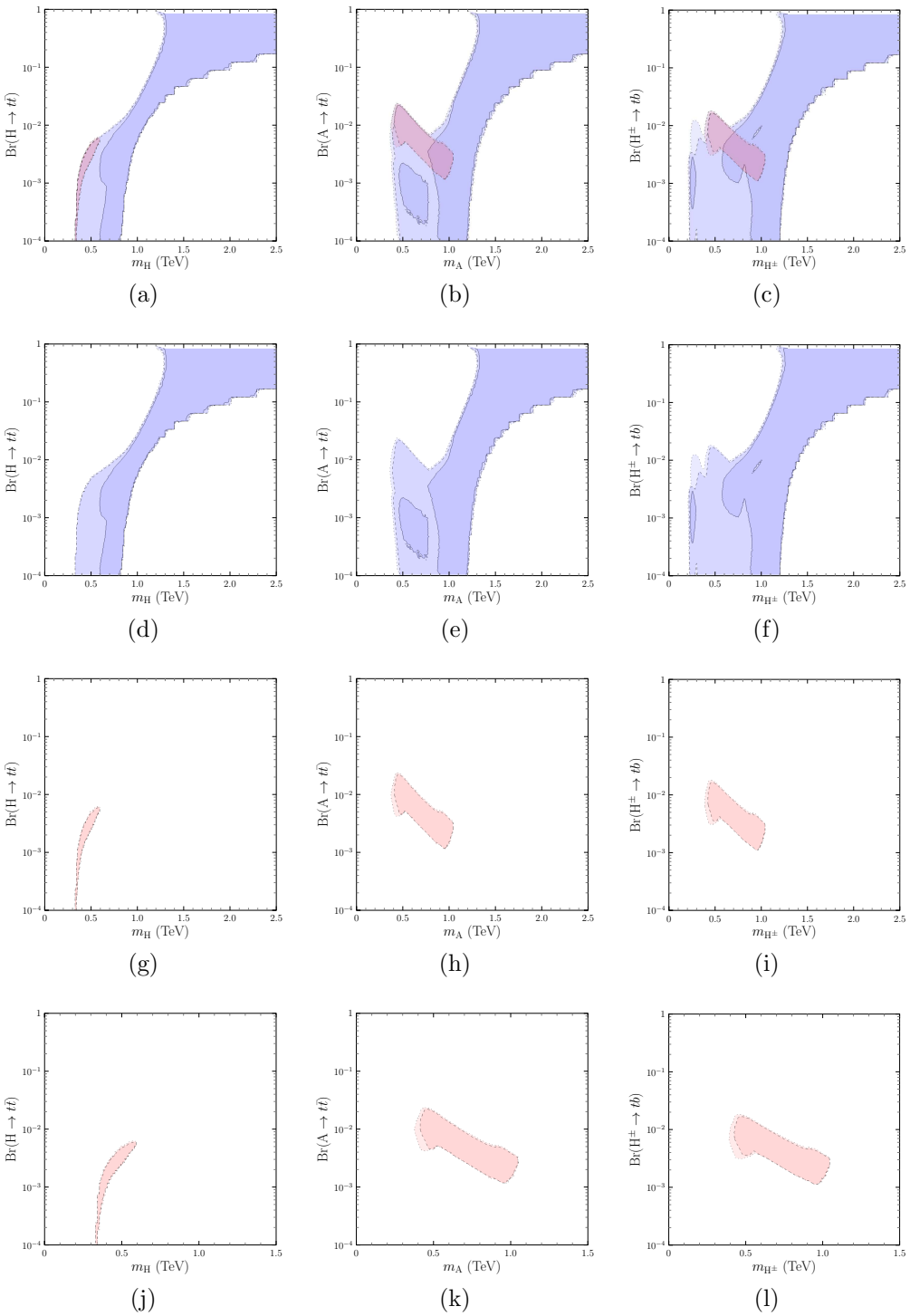


Figure 11: BR's of scalars (2)

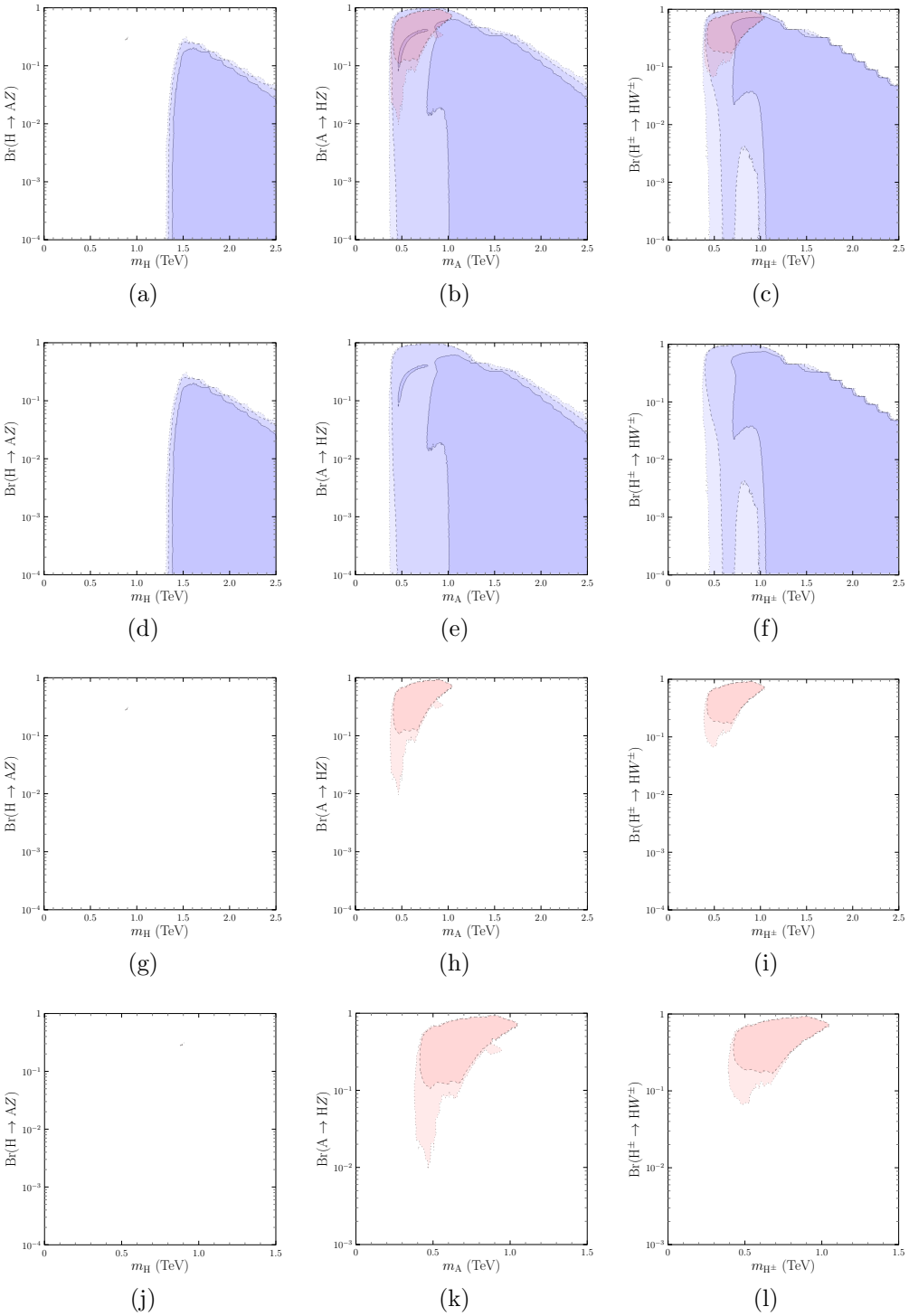


Figure 12: BR's of scalars (2)

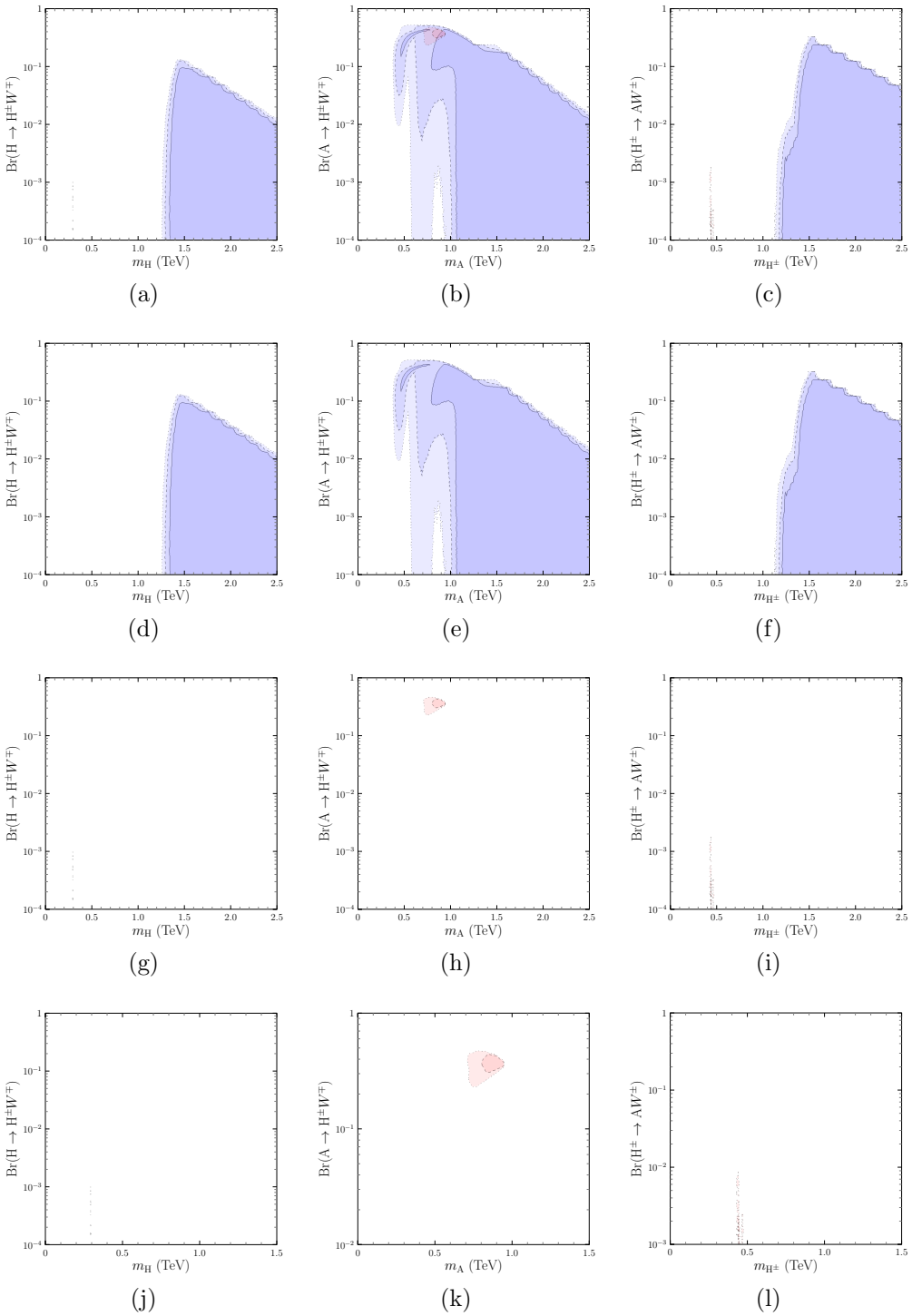


Figure 13: BR's of scalars (2)

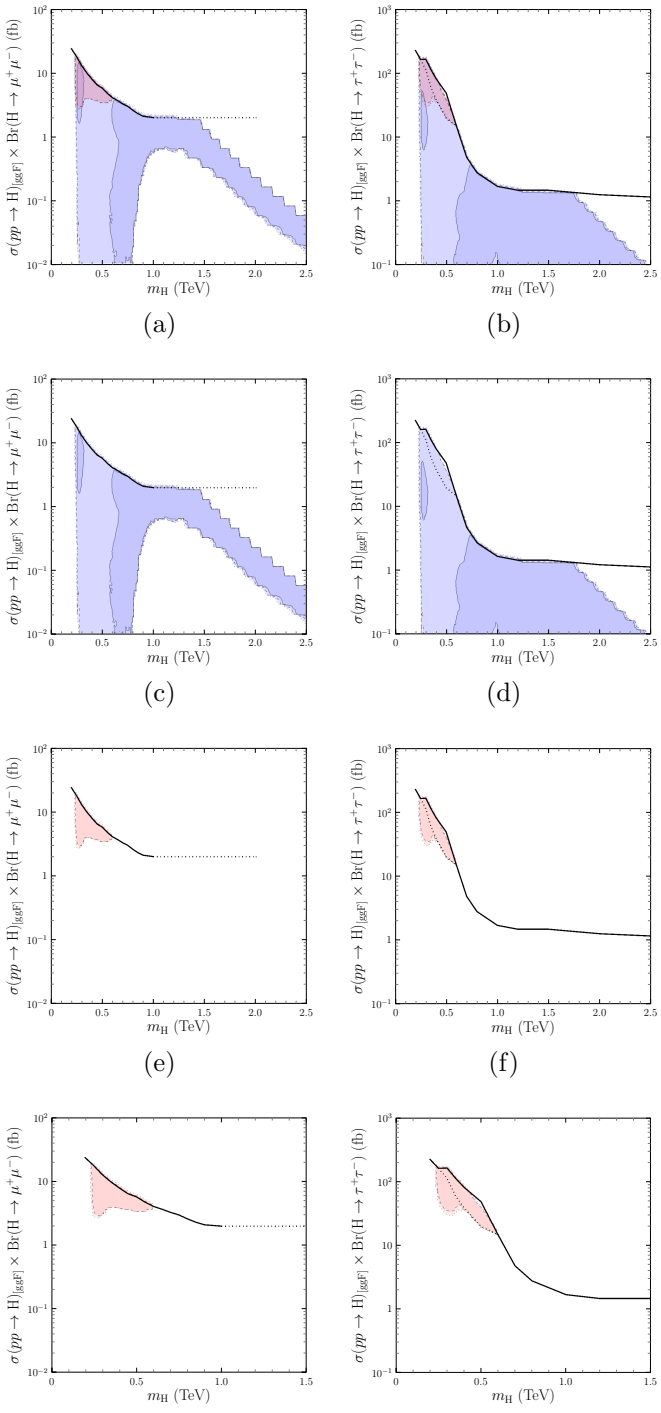


Figure 14: $[pp]_{\mathrm{ggF}} \to \mathrm{H} \to \ell^+\ell^-$

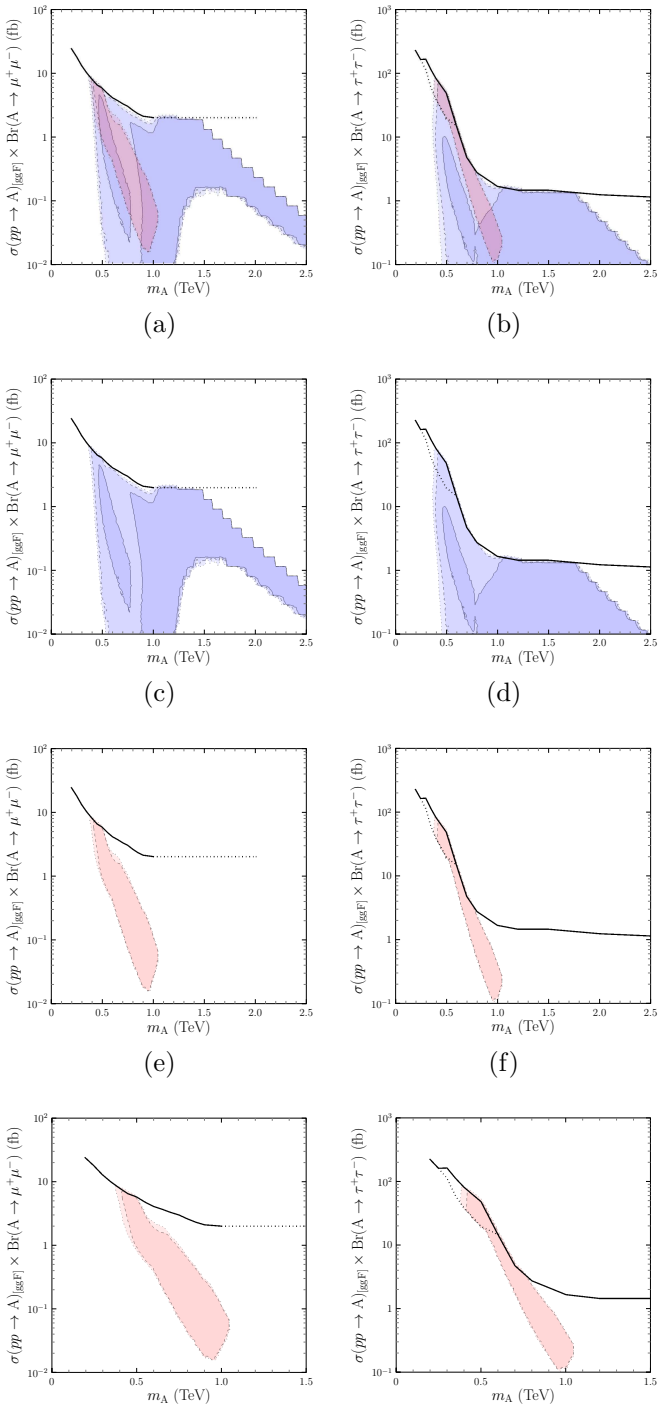


Figure 15: $[pp]_{\mathrm{ggF}} \to \mathrm{A} \to \ell^+\ell^-$

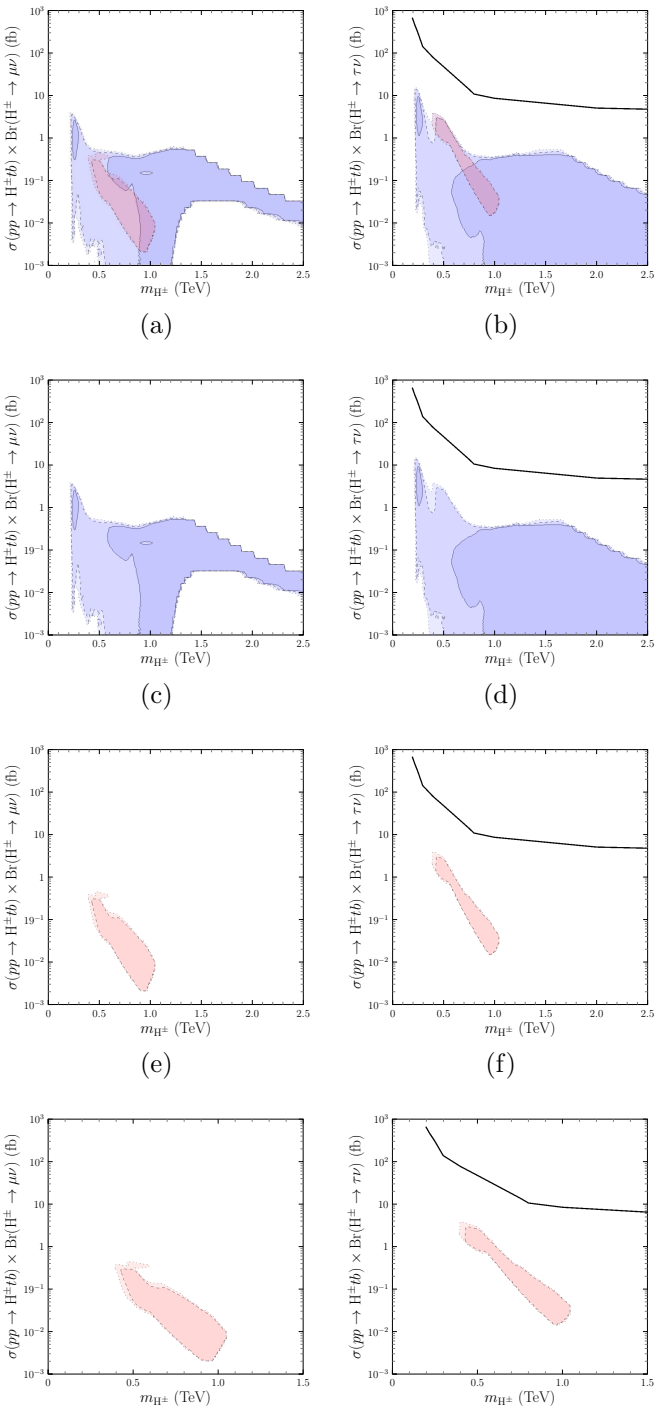


Figure 16: $[pp] \to \mathrm{H}^{\pm}(tb) \to \ell\nu$

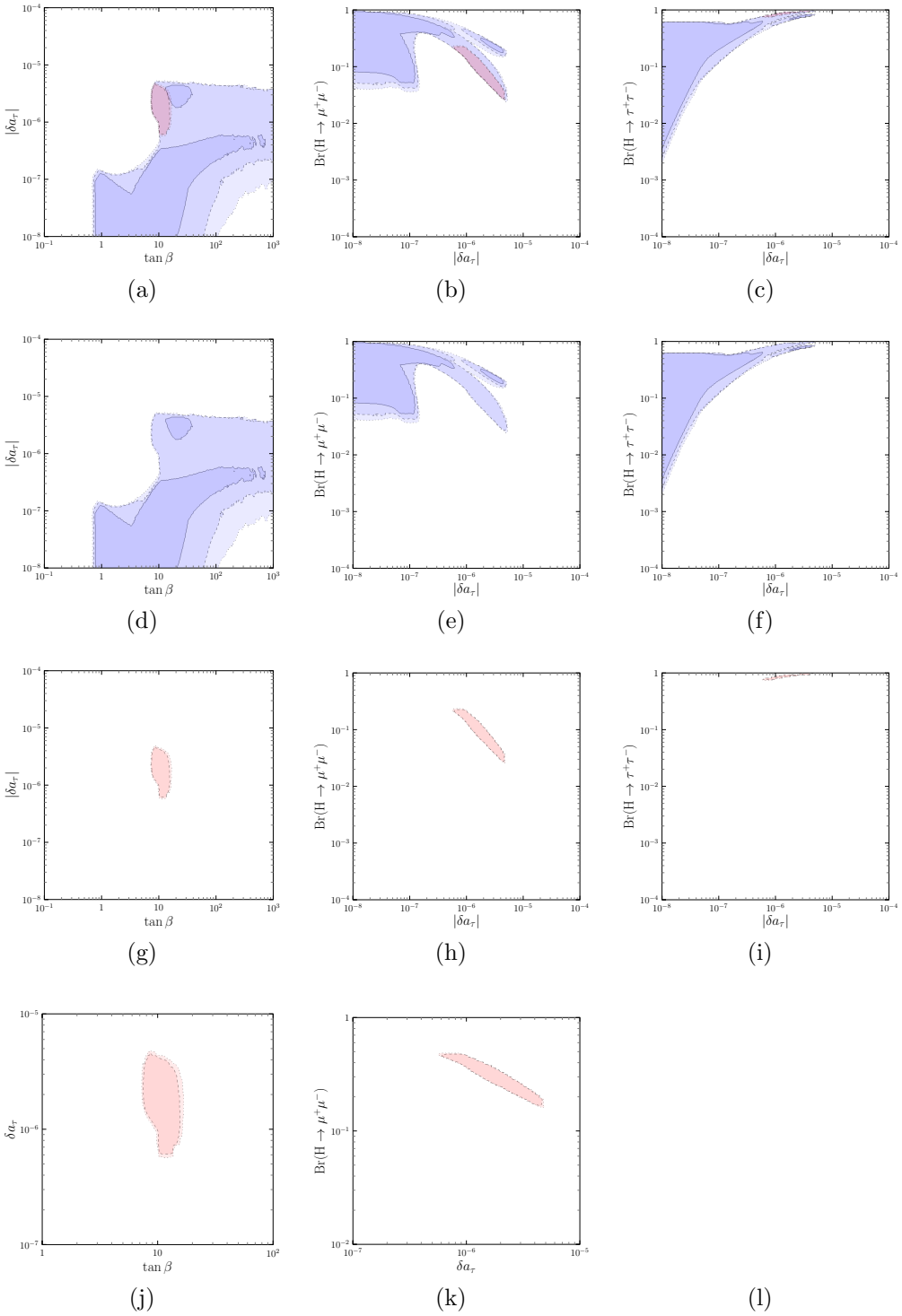


Figure 17: δa_τ (1)

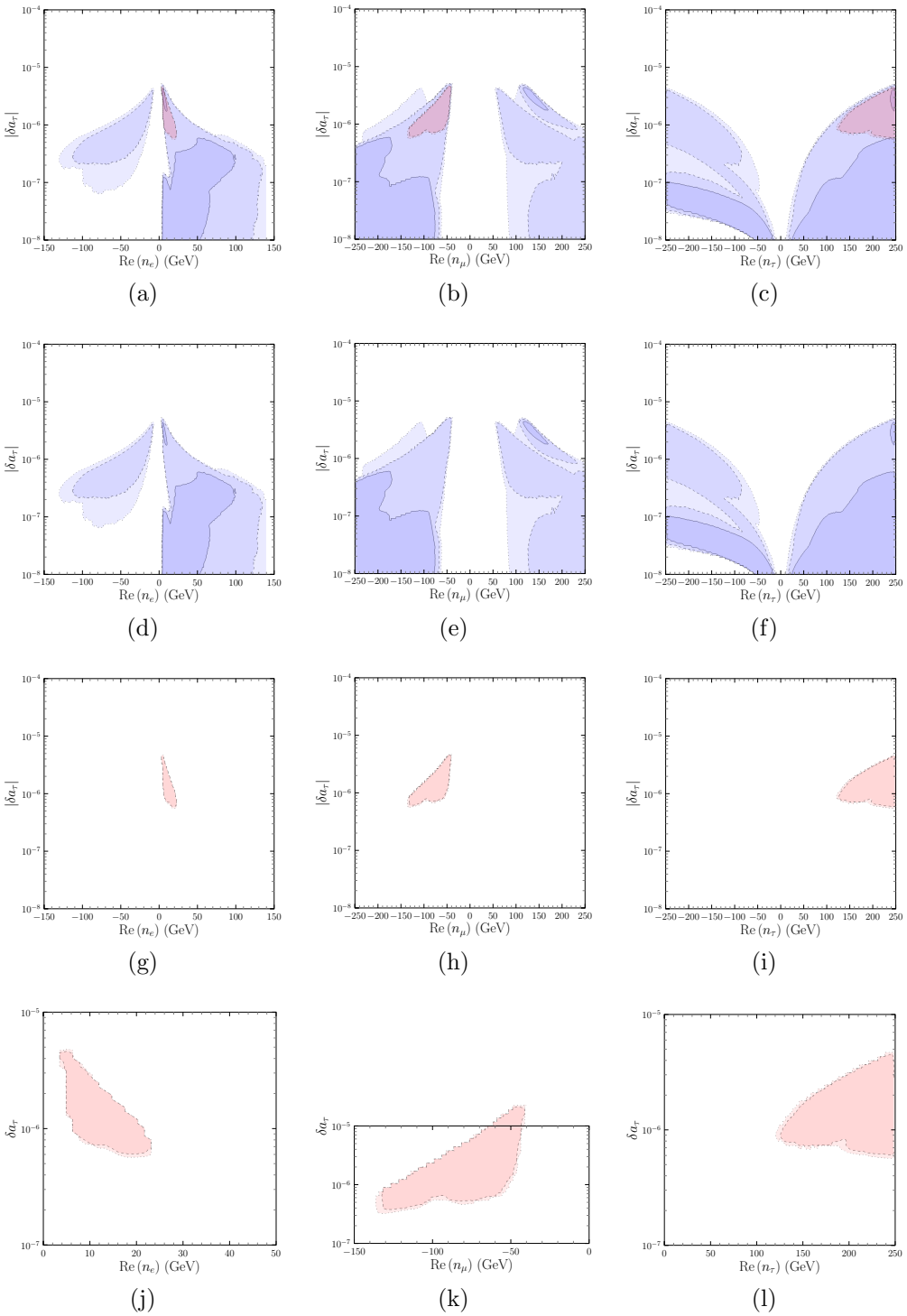


Figure 18: δa_τ vs $\mathrm{Re}\,(n_\ell)$

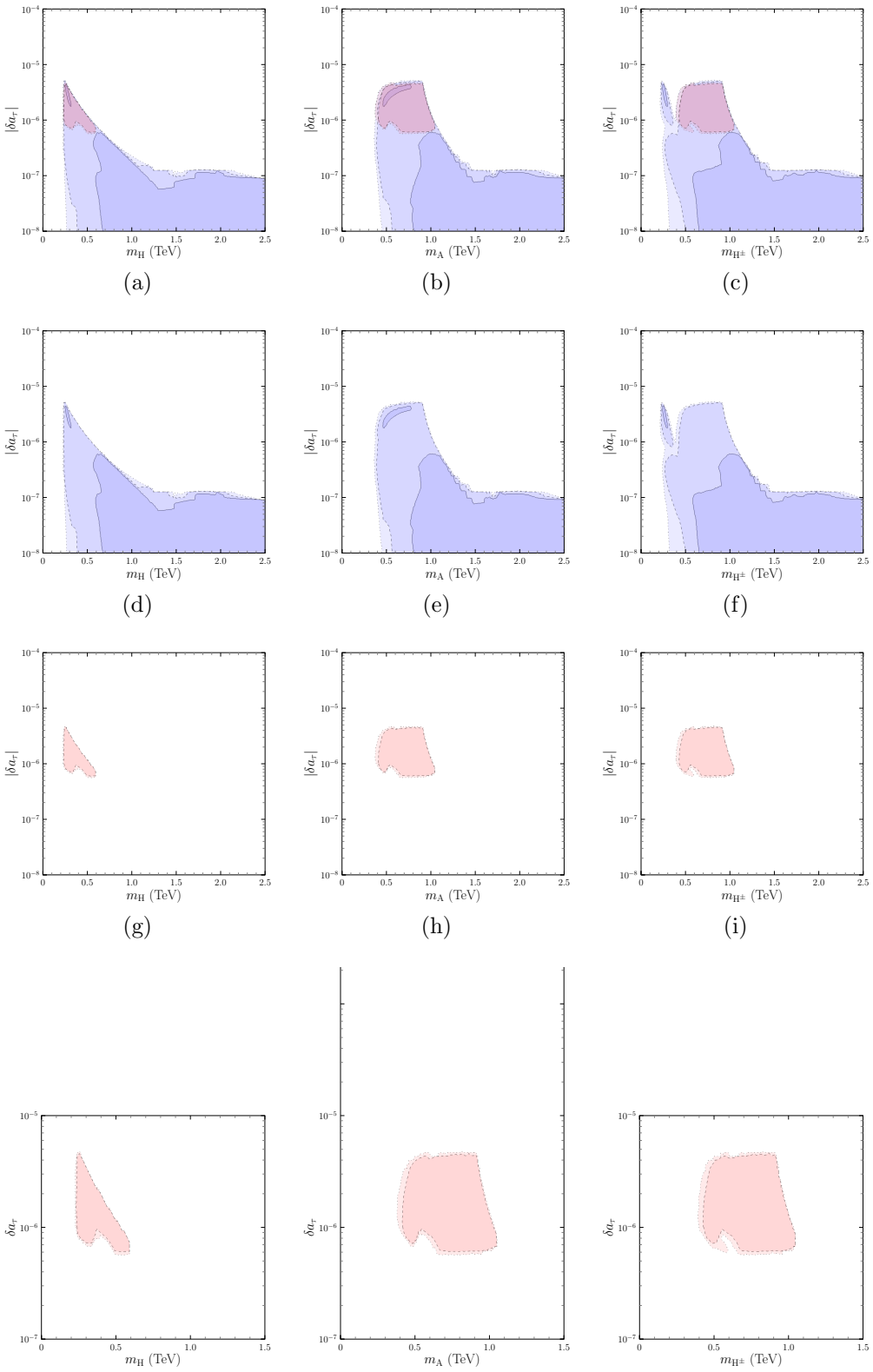
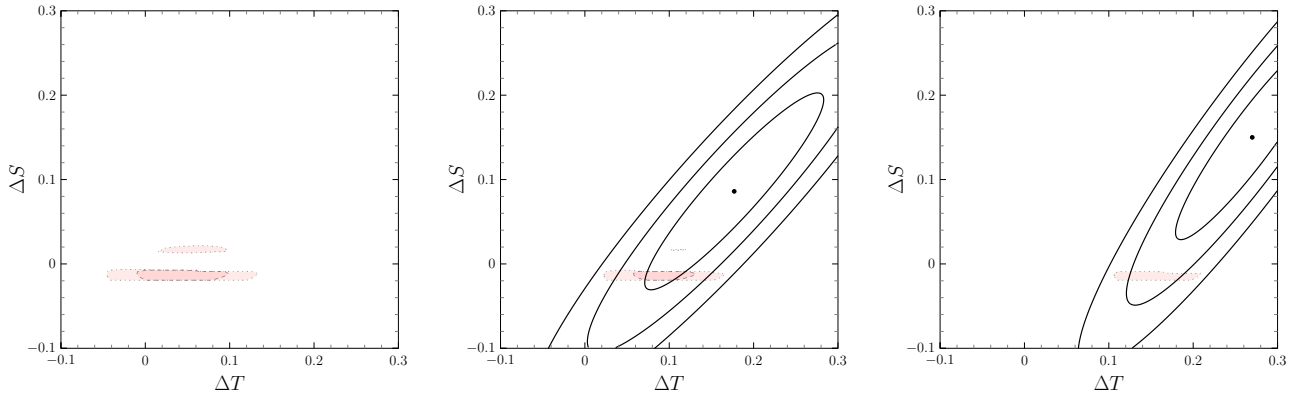


Figure 19: δa_τ vs Masses



(a) (b) (c)

Figure 20: ΔS vs ΔT