$$\vartheta^{\rm inj} = \begin{cases} \mathcal{M}_c = 30\ {\rm M}_\odot \\ D_L = 125\ {\rm Mpc} \\ t_c' = 0.1\ {\rm s} \\ \phi_{\rm ref} = 1.577 \\ \tilde{\beta} = 0.1 \\ \delta\tilde{\epsilon} = 0.3 \\ b = -1 \end{cases} \qquad \vartheta^{\rm inj}_{\rm fixed} = \begin{cases} q = 1 \\ \chi_1 = 0 \\ \chi_2 = 0 \\ \theta_{JN} = 0.49 \\ {\rm RA} = 1.7475 \\ {\rm DEC} = -1.0108 \\ \psi = 2.6597 \end{cases}$$

$$M = 68.9219\ {\rm M}_\odot,\ \rho_{\rm HLV} = 261.9809,\ \frac{\mathscr{B}_{\rm ppE}}{\mathscr{B}_{\rm GR}} = e^{5226.36}$$

$$\epsilon = \beta(1 + \delta\epsilon) \tag{1}$$

bGR-GR; No $\tilde{\beta}$ or $\delta\tilde{\epsilon}$ | bGR-bGR; Only $\tilde{\beta}$, No $\delta\tilde{\epsilon}$ | bGR-bGR; Both $\tilde{\beta}$ and $\delta\tilde{\epsilon}$

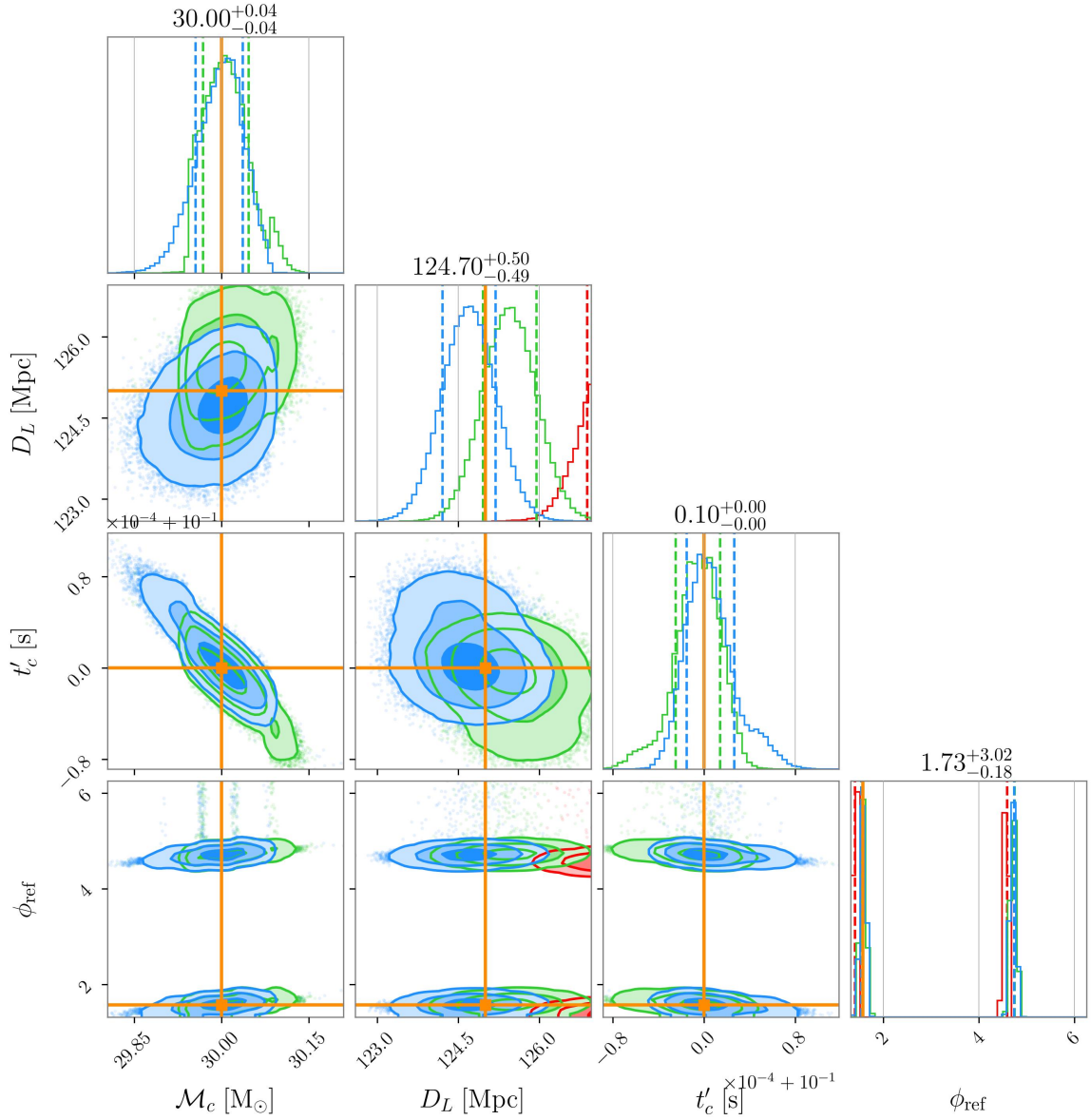

Figure 1: BBH Parameters

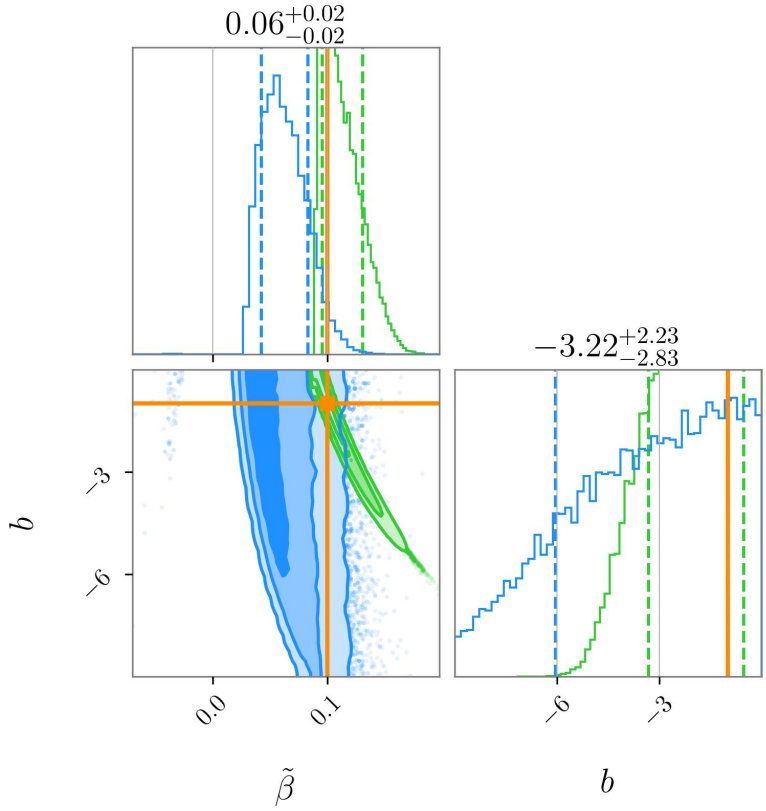

Figure 2: ppE Parameters, $\tilde{\beta}/b$

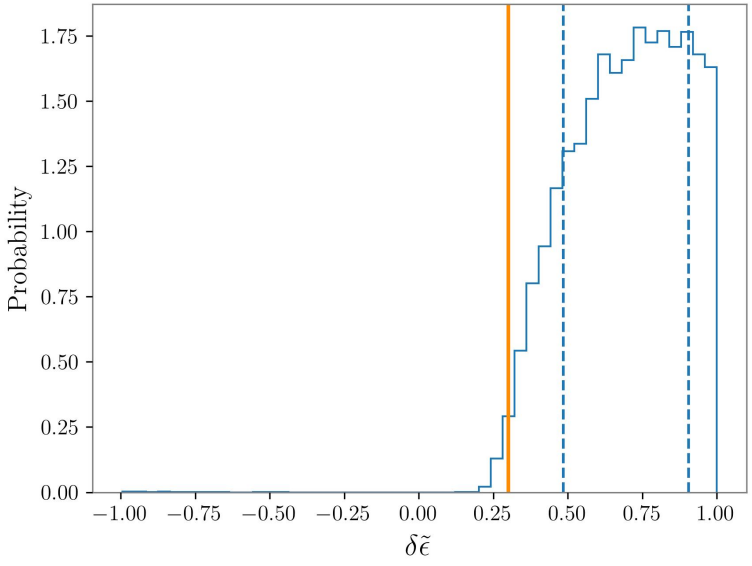

Figure 3: ppE Parameters, $\delta\tilde{\epsilon}$