$\sigma_z = 0$ (GP), $N_{FGI} = 1e^6$ $\sigma_z = 1e^{-3}$, $N_{FGI} = 1e^6$ $\sigma_z = 5e^{-3}$, $N_{EGI} = 1e^6$ $\sigma_z = 1e^{-2}$, $N_{FGI} = 1e^6$ $\sigma_z = 5e^{-2}$, $N_{EGI} = 1e^6$ $\sigma_z = 1e^{-1}$, $N_{EGI} = 1e^6$ $\sigma_z \sim U(\{\}), N_{FGI} = 1e^6$