

$$\mathcal{H}_S \sim - \sum_{\substack{l,k \\ l \neq k}} \frac{\hat{p}_l \cdot \varepsilon(s) \hat{p}_k \cdot \varepsilon(s')}{\hat{p}_l \cdot \hat{p}_{m+1} \hat{p}_k \cdot \hat{p}_{m+1}} \textcolor{red}{t_l} \otimes \textcolor{red}{t_k}^\dagger$$