

$$\begin{aligned}
V \supset & \frac{1}{2} \lambda_1 (H_d^\dagger H_d)^2 + \frac{1}{2} \lambda_2 (H_u^\dagger H_u)^2 + \lambda_3 (H_u^\dagger H_u) (H_d^\dagger H_d) + \lambda_4 (H_u H_d) (H_u^\dagger H_d^\dagger) \\
& + \left\{ \frac{1}{2} \lambda_5 (H_u H_d)^2 + \left[\lambda_6 (H_d^\dagger H_d) + \lambda_7 (H_u^\dagger H_u) \right] (H_u H_d) + \text{h.c.} \right\}
\end{aligned}$$