

4.

$$B^0 \rightarrow \tau^+ \tau^-$$

$$m_i \approx 5 \text{ GeV}$$

$$m_f \approx 3,6 \text{ GeV}$$

$$m_i > m_f$$

$$Q_i = Q_f = 0$$

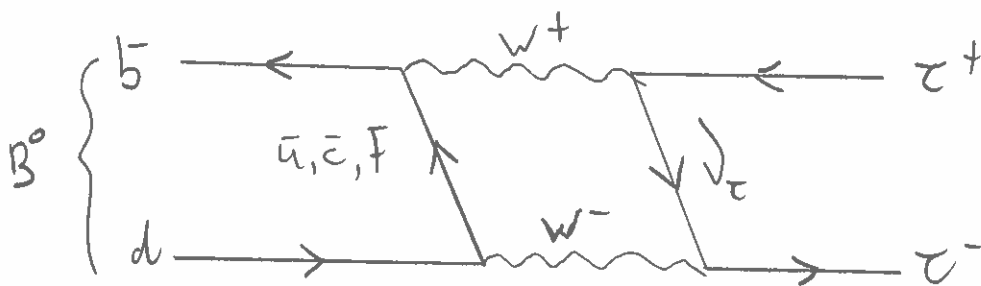
$$L_{\tau,i} = L_{\tau,f} = 0$$

$$B_i = 1 \Rightarrow B_f = 0$$

Other charges do not intervene

$E, Q, \mathcal{B}, L_f$  conserved  $\Rightarrow$  Allowed

$B$  violated  $\Rightarrow$   $\Delta B = 1$



$$5. \quad e^+ e^- \rightarrow \gamma \gamma$$

$$Q_i = Q_f = 0$$

$$L_{e,i} = L_{e,f} = 0$$

Other charges do not intervene

$Q, B, L_e$  conserved  $\Rightarrow$  Allowed

presence of leptons and  $\gamma$ , no flavor violation

$\Rightarrow$  EM.

