## (Control Region I) Two OS $\tau_h \tau_h$ with both legs passing medium isolation. low $M_{T2}$ or $\Sigma m_T^{\tau_i}$

## (Signal Region)

Two OS  $\tau_h \tau_h$  with both legs passing medium isolation. high  $M_{T2}$  or  $\Sigma m_T^{\tau_i}$ 

## (Control Region II)

Two SS  $\tau_h \tau_h$ , one leg loose non medium isolation and one leg loose isolation.

low  $M_{T2}$  or  $\Sigma m_T^{\tau_i}$ 

(Control Region III) Two SS  $\tau_h \tau_h$ , one leg loose non medium isolation and one leg loose isolation. high  $M_{T2}$  or  $\Sigma m_T^{\tau_i}$