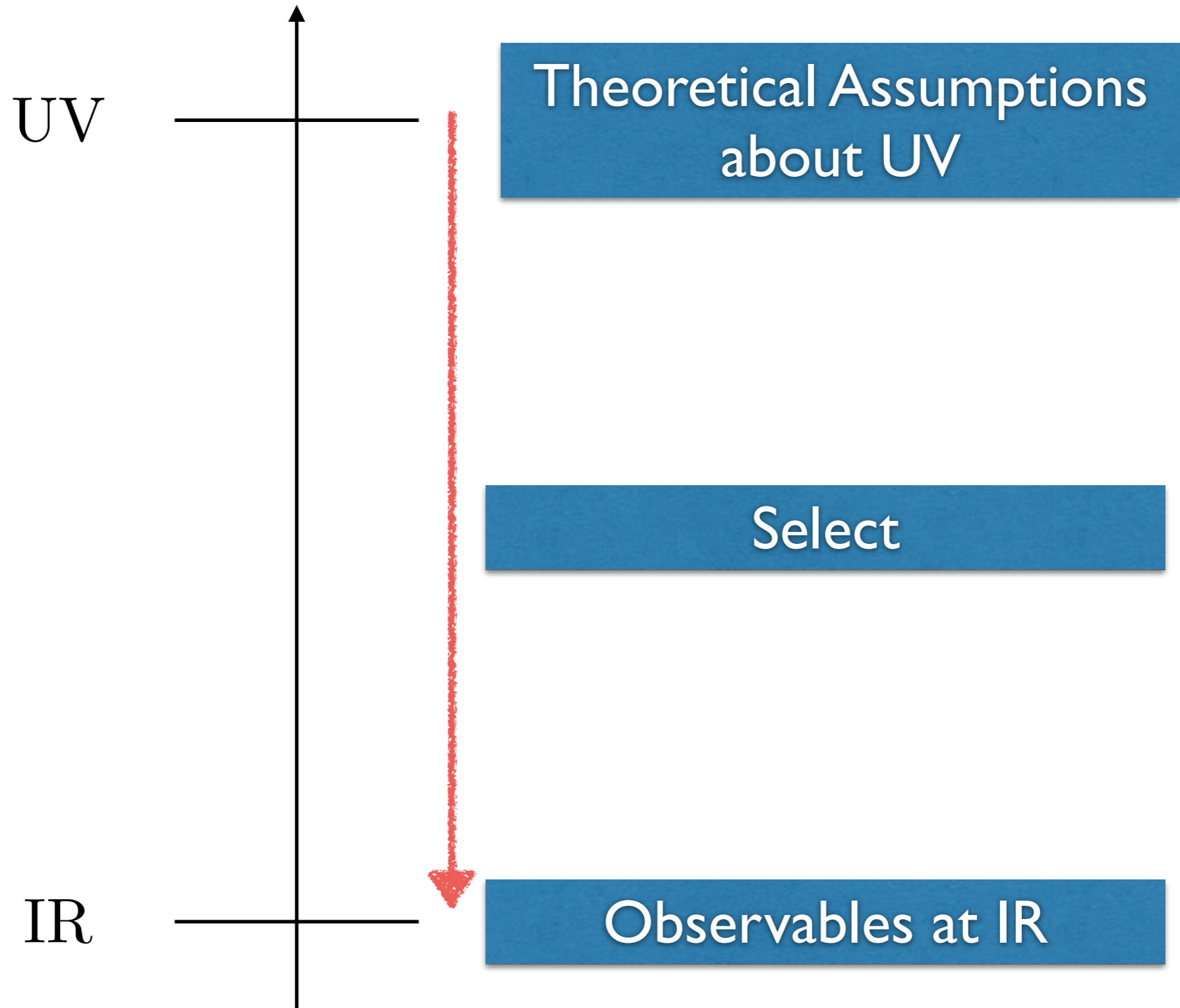


Top Electroweak Dipole Moment at the Muon Collider

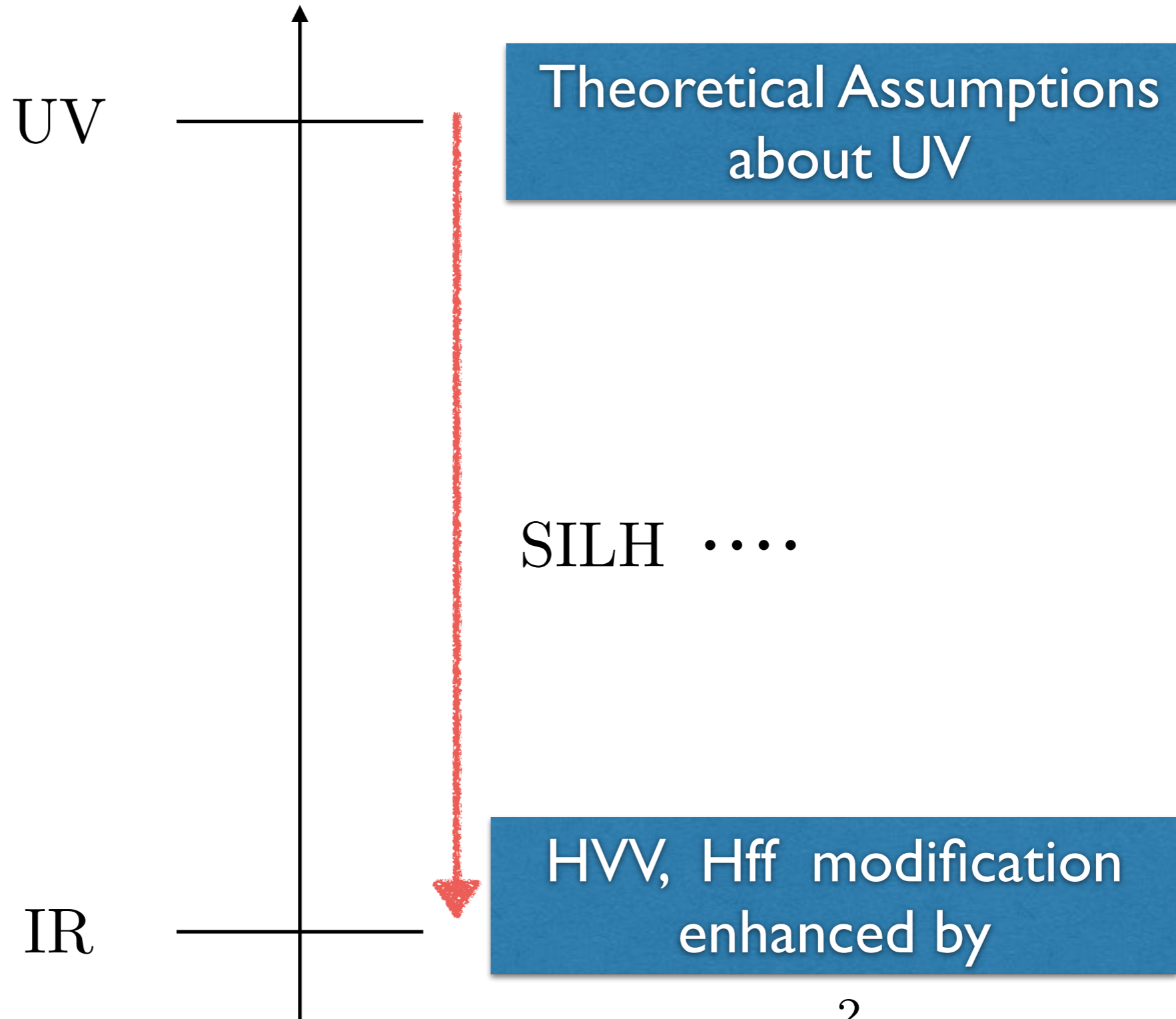
Da Liu

University of Pittsburgh

Indirect searches for new physics

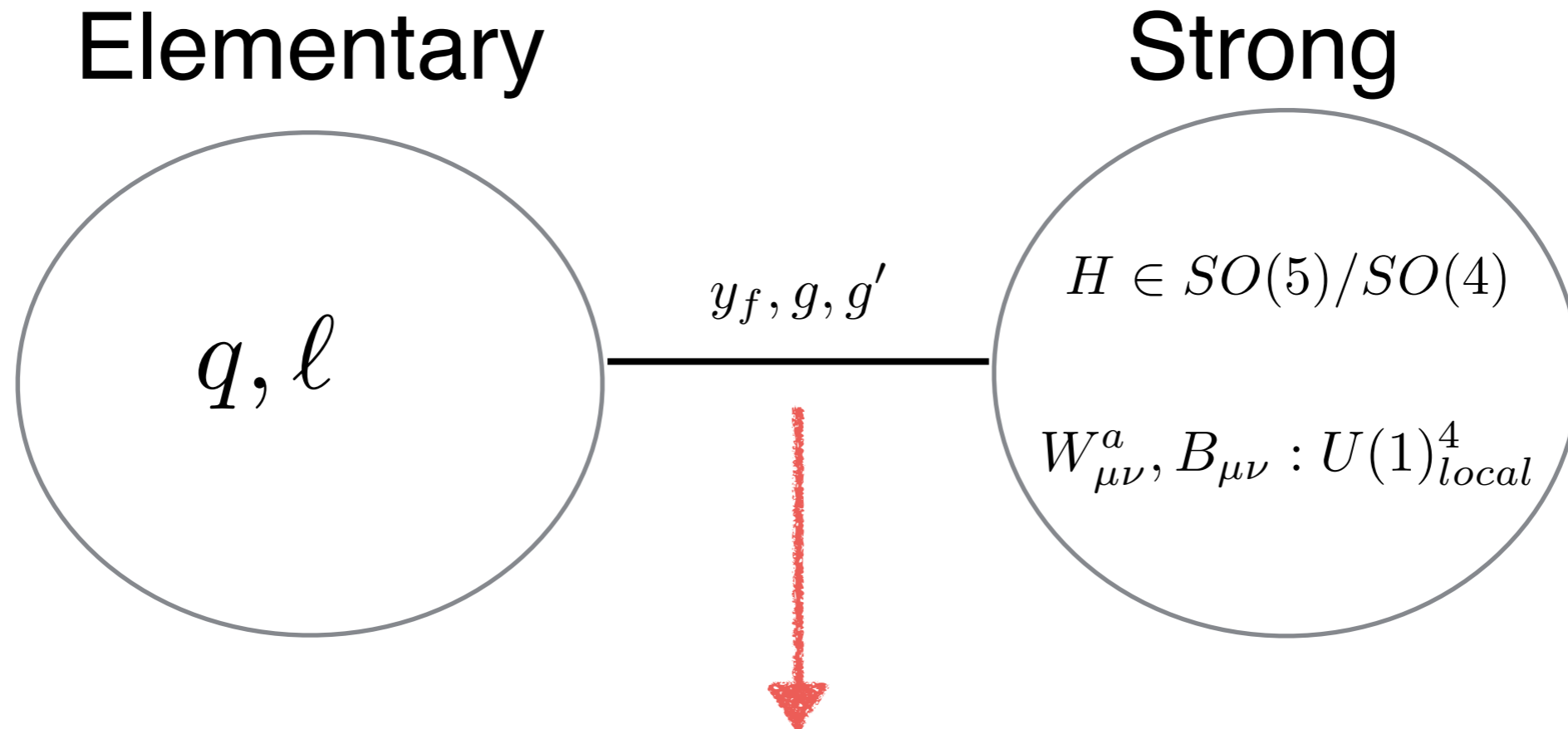


Indirect searches for new physics



$$\frac{g_*^2}{g_{SM}^2}$$

Strong multipolar interactions (Remedios)



– New power-counting rules

$$W_{\mu\nu}^a, B_{\mu\nu} : g_*$$

Dipole operators

$$\frac{g' y_\psi}{\Lambda^2} \psi_L^{(2)} \sigma^{\mu\nu} \psi_R H B_{\mu\nu}$$

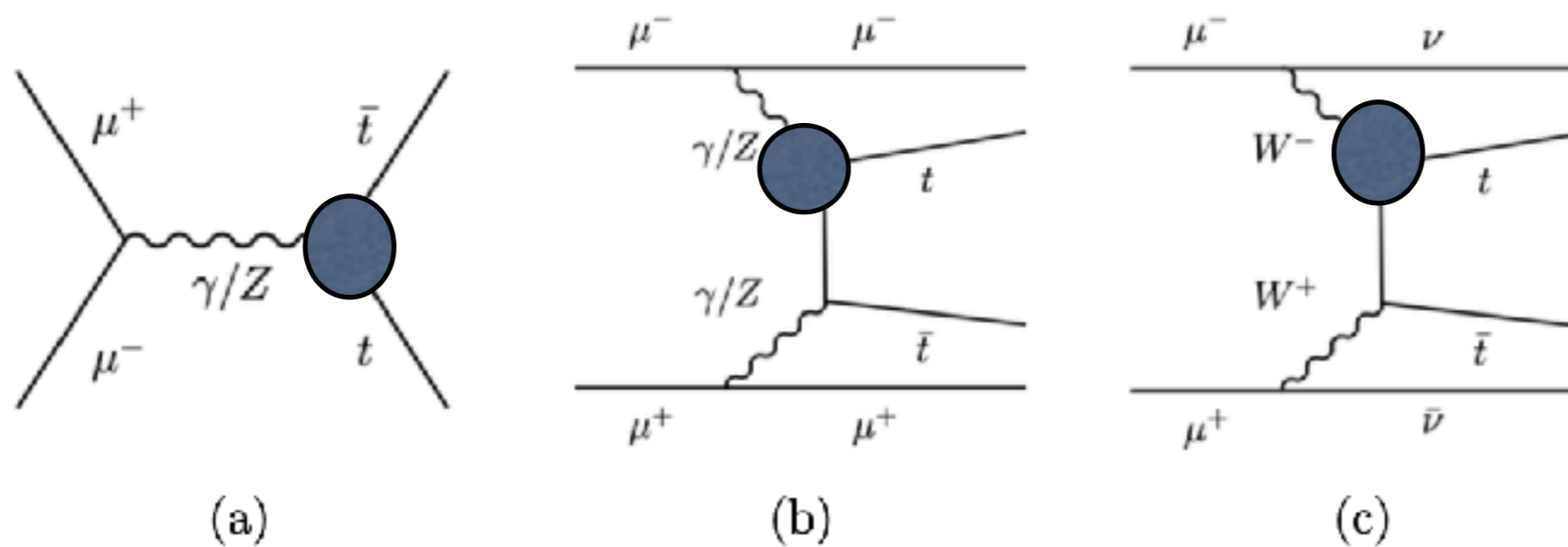
$$\psi = t, b, c, \tau$$

Remedios + MCHM

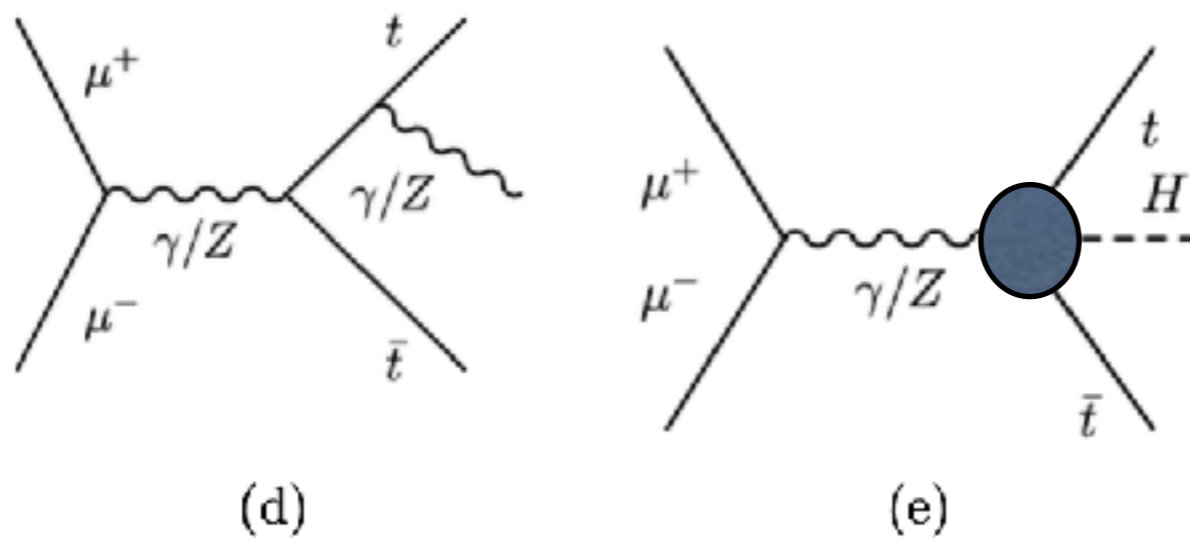
$$C_{\psi B} \sim \frac{g_*}{g'}$$

Top Electroweak dipole at the muon collider

$$\frac{g' y_\psi}{\Lambda^2} \psi_L^{(2)} \sigma^{\mu\nu} \psi_R H B_{\mu\nu}$$



$$\sim \mathcal{O}\left(\frac{Em_\psi}{\Lambda^2}\right)$$



$$\mathcal{O}\left(\frac{E^2}{\Lambda^2}\right)$$

High energy can help

Summary in Remedios scenario

Preliminary

