

- The κ -parameters in the current kappa-framework have mostly an “easy” to understand meaning in terms of how they change cross-sections and partial decay width
- Current proposals for the extended kappa-framework mostly in terms of anomalous couplings or coefficients in an EFT
 - Close to the parameters of a theory calculation
 - But for some its hard to understand both qualitatively and quantitatively what some parameter value does to observables

$$\begin{aligned}
 A = & i \frac{2m_Z^2}{v_F} \sum_{e=e_L, e_R} \sum_{\mu=\mu_L, \mu_R} (\bar{e}\gamma_\mu e)(\bar{\mu}\gamma_\nu \mu) \times \left[\right. \\
 & \left(\kappa_{ZZ} \frac{g_Z^e g_Z^\mu}{P_Z(q_1^2) P_Z(q_2^2)} + \frac{\epsilon_{Ze}}{m_Z^2} \frac{g_Z^\mu}{P_Z(q_2^2)} + \frac{\epsilon_{Z\mu}}{m_Z^2} \frac{g_Z^e}{P_Z(q_1^2)} \right) g^{\mu\nu} + \\
 & + \left(\epsilon_{ZZ} \frac{g_Z^e g_Z^\mu}{P_Z(q_1^2) P_Z(q_2^2)} + \kappa_{Z\gamma}^{\text{SM-1L}} \epsilon_{Z\gamma} \left(\frac{e Q_\mu g_Z^e}{q_2^2 P_Z(q_1^2)} + \frac{e Q_e g_Z^\mu}{q_1^2 P_Z(q_2^2)} \right) + \kappa_{\gamma\gamma}^{\text{SM-1L}} \epsilon_{\gamma\gamma} \frac{e^2 Q_e Q_\mu}{q_1^2 q_2^2} \right) \frac{q_1 \cdot q_2 g^{\mu\nu} - q_2^\mu q_1^\nu}{m_Z^2} + \\
 & \left. + \left(\epsilon_{ZZ}^{\text{CP}} \frac{g_Z^e g_Z^\mu}{P_Z(q_1^2) P_Z(q_2^2)} + \epsilon_{Z\gamma}^{\text{CP}} \left(\frac{e Q_\mu g_Z^e}{q_2^2 P_Z(q_1^2)} + \frac{e Q_e g_Z^\mu}{q_1^2 P_Z(q_2^2)} \right) + \epsilon_{\gamma\gamma}^{\text{CP}} \frac{e^2 Q_e Q_\mu}{q_1^2 q_2^2} \right) \frac{\epsilon^{\mu\nu\rho\sigma} q_{2\rho} q_{1\sigma}}{m_Z^2} \right]
 \end{aligned}$$

- QUESTION: can we recast them into ~ inclusive (pseudo-)observables that have a better to understand meaning?
 - Should have sufficient simple mapping to theory parameters
 - Potential examples (not necessary well chosen!):
 $\Gamma(H \rightarrow 4l)$, $[\Gamma(\alpha < 0) - \Gamma(\alpha > 0)] / \Gamma$, $d\Gamma/dq^2|_{q_2=0}$, ..., $\sigma(gg \rightarrow H)$? : so partial widths, cross sections, asymmetries, partial derivatives, ...