

# New Physics in missing transverse energy tails with $b$ -tagged jets

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Dilepton tail distributions have proven to be a very good ground for limiting different New Physics (NP) scenarios. Assuming NP in left-handed particles, the operators  $c_{ijk}^{(1)}(\bar{Q}_i\gamma^\mu Q_j)(\bar{L}_k\gamma_\mu L_k)$  and  $c_{ijk}^{(3)}(\bar{Q}_i\gamma^\mu\sigma_a Q_j)(\bar{L}_k\gamma_\mu\sigma^a L_k)$  also induce a neutral-current interaction with neutrinos, which would eventually leave imprints in high- $p_T$  measurements. We, therefore, take a look into the analysis of missing transverse energy tails with accompanying  $b$ -jets, experimentally done in ATLAS searches \cite{ATLAS:2017hoo, ATLAS:2014dbf}, and derive current bounds on the linear combination  $(c^{(1)} - c^{(3)})$ . Furthermore, we investigate in detail different cuts and their efficiencies and see how these limits, together with the limits from the dilepton signatures, can give us an insight about the preferred region in the parameter space of these Wilson Coefficients. Finally, we also take into account constraints from low-energy experiments, like  $\Upsilon(1S) \rightarrow \bar{\nu}\nu$  and  $B \rightarrow K\bar{\nu}\nu$ .

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