

Generic tests of CP-violation for high-pT multi-leptons

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We introduce a modification to the standard expression for tree-level CP-violation in scattering processes at the LHC, which is important when the initial state is not self-conjugate. Based on that, we propose a generic and model-independent search strategy for probing tree-level CP-violation in inclusive multi-lepton signals. Then, as an illustrative example, we show that higher-dimension TeV-scale 4-fermion operators of the form $t\ell\ell$ and $t\ell\ell$ with complex Wilson coefficients can generate CP asymmetries of $O(10\%)$, that should be accessible at the LHC with an integrated luminosity of $O(1000) \text{ fb}^{-1}$.

Alternate track

1. Quark and Lepton Flavour Physics

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