

New Physics in $B \rightarrow D^{(*)} \ell^- \bar{\nu}_\ell$ Decays

We perform a comprehensive study of the impact of new-physics operators with different Lorentz structures on $\bar{B} \rightarrow D^{(*)} \ell^- \bar{\nu}_\ell$ decays, $\ell = e^-, \mu^-, \tau^-$, involving the $b \rightarrow c \ell \bar{\nu}_\ell$ transition. We present the full three angle and q^2 angular distribution with new physics operators with complex couplings. Various observables are constructed from the angular distribution including the CP violating triple product asymmetries which vanish in the Standard Model without any hadronic complications.

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