## Phenomenology 2018 Symposium



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## New physics in inclusive $B \rightarrow X_c \tau \bar{\nu}$ decay in light of $R(D^{(*)})$ measurements

Monday 7 May 2018 17:00 (15 minutes)

We present the effects of new physics operators with different Lorentz structures on the inclusive  $B \to X_c \tau \bar{\nu}$  decay and make predictions for the ratio of total decay rates,  $R(X_c)$  and some differential observables including the forward-backward asymmetry. We include  $\mathcal{O}(\alpha_s)$  radiative and  $1/m_b$  non-perturbative corrections to these observables in the Standard Model (SM). We also present some leptoquark models as explicit examples of new physics effects.

## Summary

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