## Phenomenology 2016 Symposium



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## Tests of Lepton Flavour Universality with b-hadron decays at LHCb

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Lepton Flavour Universality is enforced in the Standard Model by construction. Any Violation of LFU would be a clear sign of new physics. Existing hints of non universality are already present in the leptonic and semileptonic decays of B mesons. The semitauonic decays in particular, are sensitive to contributions from non-standard-model-particles that preferentially couple to the third generation of fermions,the Higgs-like charged scalars. Also, electroweak penguin decays can be used to test lepton flavour universality between the first and the second leptonic families. This talk reports recent

studies of  $B^0 \to D^* au 
u$  and  $B^0 \to K^{(*)} ll$  decays at the LHCb experiment.

## **Summary**

Primary author: BETTI, Federico (Universita e INFN, Bologna (IT))

Presenter: BETTI, Federico (Universita e INFN, Bologna (IT))

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