

## B to D(\*) tau nu anomaly and high-pT searches at the LHC

*Thursday 20 April 2017 14:30 (23 minutes)*

I will discuss the implications of the long-standing anomaly in semi-tauonic B meson decays on direct searches for new physics with ATLAS and CMS detectors at the LHC. Collider signatures at high energies correlated with the anomaly at low energies are identified. Several representative models put forward to explain the anomaly are examined in details: color-neutral vector triplet, 2HDM, scalar, and vector leptoquark model. We find that in general di-tau searches impose a serious challenge to new physics explanations of the anomaly. After recasting present 8 and 13 TeV analyses stringent limits are set on all the models. Future projections are also derived. This talk is mainly based on the recent publication Phys.Lett. B764 (2017) 126-134.

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