

Search for BSM physics related to lepton universality and flavour anomalies with the ATLAS detector

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Physics beyond the Standard Model could manifest itself through effects on lepton universality or flavour anomalies, such as the ones hinted at by flavour factories. Lepton-flavour violation (LVF) would be a striking signature of such new physics; the ATLAS experiment has multiple searches for such signal in the decay of the Higgs boson, the Z boson and of a heavy neutral gauge boson, Z' . Searches for leptoquarks (LQ), which are predicted by many new physics theories to describe the similarities between the lepton and quark sectors of the Standard Model, could also offer an explanation for the flavour anomalies. The broad program of ATLAS in direct searches for leptoquarks, coupling to the first-, second- or third-generation particles, will also be reviewed.

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