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Search for LFV with tau leptons in the final state

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In the Standard Model (SM) lepton flavour numbers are exactly conserved. The observation of neutrino oscillations, however, proves that neutrinos are massive particles and allows for Lepton Flavour Violating (LFV) processes. Nevertheless, these processes are predicted with very low branching ratios and are sensitive to new physics effects, which could manifest as an enhancement in the decay probability. Similarly, Lepton Flavour Universality Violating (LFUV) observables allows for the test of the SM and the study of beyond the SM theories. The latest CMS results from the Higgs, B-physics and exotica groups are presented on the search for LFV and LFUV with tau leptons in the final state. The results are based on data collected in proton-proton collisions at the centre of mass energy of 13 TeV.

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