

## Abstract

High precision electroweak tests, such as deviations from the Standard Model expectations of the Lepton Flavor Universality breaking in  $K \rightarrow l\nu$  (with  $l = e$  or  $\mu$ ), represent a powerful tool to test the Standard Model and, hence, to constrain or obtain indirect hints of New Physics beyond it. We explore such a possibility within Supersymmetric theories. Interestingly enough, a process that in itself does not need lepton flavor violation to occur, i.e.

the violation of  $\mu$ - $e$  non-universality in  $K_{l2}$ , proves to be quite effective in constraining not only relevant regions of SUSY models where lepton flavor is conserved, but even those where specific lepton flavor violating contributions arise. Indeed, a comparison with analogous bounds coming from tau lepton flavor violating decays shows the relevance of the measurement of  $R_K$  to probe Lepton Flavor Violation in SUSY. We outline the role and the interplay of the direct New Physics searches at the LHC with the indirect searches performed by LFU tests.