

Loop-level lepton flavor violation in the left-right symmetric model

The left-right symmetric model (LRSM) is a well-motived scenario to accommodate the tiny neutrino masses, e.g. via the type-I seesaw. The mixing of heavy neutrinos in the LRSM could induce lepton flavor violating (LFV) couplings of the $SU(2)_R$ -breaking neutral scalar H_3 , which arise at the 1-loop level via the heavy W_R boson and the heavy neutrinos. When H_3 is light, say at or below the GeV scale, such LFV signals can be searched for in the high-intensity experiments and the astrophysical observations. It turns out that the right-handed scale v_R is severely constrained, up to the 10^6 GeV scale, well above the direct high-energy collider limits.

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