Title:	Implications of the diboson excess for neutrinoless double beta decay and lepton flavor violation in TeV scale left-right symmetric model
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Abstract:	Inspired by the recent diboson excess observed at the LHC and possible interpretation within a TeV-scale left-right symmetric framework, we explore its implications for low-energy experiments searching for lepton number and flavor violation. Assuming a simple type-II seesaw mechanism for neutrino masses, we show that for the right-handed (RH) gauge boson mass and coupling values required to explain the LHC anomalies, the RH contribution to the lepton number violating process of neutrinoless double beta decay ($0\nu\beta\beta$) is already constrained by current experiments for relatively low-mass (MeV-GeV) RH neutrinos. The future ton-scale $0\nu\beta\beta$ experiments could probe most of the remaining parameter space, irrespective of the neutrino mass hierarchy and uncertainties in the oscillation parameters and nuclear matrix elements. On the other hand, the RH contribution to the lepton flavor violating process of $\mu \to e\gamma$ is constrained for relatively heavier (TeV) RH neutrinos, thus providing a complementary probe of the model. Finally, a measurement of the absolute light neutrino mass scale from future precision cosmology could make this scenario completely testable.
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