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## Lepton Number Violation and $W'$ Chiral Couplings at the LHC

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### **Abstract:**

We study the observability for a heavy Majorana neutrino  $N$  along with a new charged gauge boson  $W'$  at the LHC. We emphasize the complementarity of these two particle in their production and decay to unambiguously determine their properties. We show that the Majorana nature of  $N$  can be verified by the lepton-number violation process and by an azimuthal angular distribution. The chirality of the  $W'$  can be determined by the polar angle distributions in the reconstructed frame.

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