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Interpretations of Neutrinoless Double Beta Decay

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We discuss implications of limits or measurements of neutrinoless double beta decay. The standard mechanism of light neutrino exchange and its connection to neutrino oscillations and efforts to pin down neutrino mass is summarized.

Then various alternatives to the standard mechanism are discussed, including left-right symmetric and supersymmetric theories at the TeV scale. Distinguishing the mechanisms is possible at colliders, with lepton flavor violation or other approaches.