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Neutrino Mass Searches with Beta Decay Experiments

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Neutrinos are the second most abundant particle in the universe and yet one of the least understood. Their fundamental nature, whether they are their own antiparticle, is not yet known and the heaviest neutrino has a mass that we currently only know to within a range that spans about two orders of magnitude. In this talk I will review single beta decay experiments, which give us a model independent measure of neutrino mass based solely on kinematic parameters and energy conservation; and double beta decay experiments that allow us to probe the nature of the neutrino and the scale of absolute neutrino mass. Recent results from experiments and updates on the next generation of experiments, in particular SNO+ and SuperNEMO will be described.

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