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Determining the Reach of Neutrinoless Double Beta Decay

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The rate of neutrinoless double beta decay depends not only on a linear combination of neutrino masses, but also on the structure of the initial and final nuclear states. To determine the sensitivity of an experiment to neutrino physics, one must calculate the matrix element between those states of a nuclear two-body decay operator. In the last few years, theorists have worked to increase the accuracy of these calculations — and hence to reduce the uncertainty in experimental sensitivity — in a number of important nuclei. I discuss recent progress and remaining challenges.