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Theory of Double-Beta Decay from First Principles

Wednesday, 26 February 2020 12:30 (30 minutes)

I discuss recent work to calculate the nuclear matrix elements that govern neutrinoless double beta decay in an ab-initio way, that is, without the adjustment of parameters except those in chiral effective field theory. A method based on the use of techniques from energy-density functional theory in combination with ab-initio Hamiltonians has proved particularly powerful. I describe its application to the double-beta matrix elements of 48Ca and 76Ge.

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