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Double beta decay nuclear matrix elements from deformed QRPA calculations with realistic forces

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With the partially restored isopsin symmetry, we calculate double beta decay nuclear matrix elements for five nuclei: ^{76}Ge, ^{82}Se, ^{130}Te, ^{136}Xe and ^{150}Nd with deformed QRPA method with realistic forces. We observe the reductions of NME compared to spherical calculations and have also obtained good agreements with results from large scale shell model calcualtions especially for light neutrino mechanism. Meanwhile, suppression of NME for ^{136}Xe is observed, we find that this is due to a small overlap factor between the initial and final nuclei.

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