

BRIEF REVIEW OF DOUBLE BETA DECAY EXPERIMENTS

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The review of double beta decay experiments is done. Results of the most sensitive current experiments are discussed. The main attention is paid to KamLAND-Zen, GERDA-II, MAJORANA-DEMONSTRATOR, CUORE-0 and NEMO-3 experiments. Modern values of $T_{1/2}(2\nu)$ and best present limits on neutrinoless double beta decay and double beta decay with Majoron emission are presented. In the second part of the review prospects of search for the neutrinoless double beta decay in new experiments with sensitivity to neutrino mass at the level of $\sim (0.01-0.1)$ eV are discussed. The main attention is paid to experiments of CUORE, GERDA, MAJORANA, nEXO, KamLAND-Zen-2, SuperNEMO and SNO+. Possibilities of low-temperature scintillating bolometers on the basis of inorganic crystals (ZnSe, ZnMoO₄, Li₂MoO₄, CaMoO₄ and CdWO₄) are considered too.

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