

New candidates for relic anti-neutrino capture experiments

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The low energy nuclear beta or electron capture (EC) decays are excellent tools for testing non-zero neutrino masses. Among all beta unstable nuclides, ^3H , ^{187}Re , and ^{163}Ho are attractive for non-zero neutrino mass experiment due to their low Q-values. The EC decay of the isotope ^{163}Ho has been proposed since a long time as a candidate for measuring the electron neutrino mass and the interest in ^{163}Ho has been renewed because of a possible relic antineutrino capture experiment. But if there is no overdensity in the ν distribution, the detection using ^{163}Ho is not possible.

In this talk, we will present new possible candidates for relic anti-neutrino capture experiments using EC decaying nuclei.

Presenter: LEE, Jeong-Yeon

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