

Majorana Neutrinos and Double Beta Decay



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Whether there exist elementary particles having Majorana nature is one the fundamental open question that has persisted since the 1930s. The only practical experiments to test the Majorana nature of neutrinos is the search for neutrinoless double-beta decay, which has been a major challenge for nuclear and particle physicists. This hypothetical ultra-rare nuclear decay offers a privileged portal to physics beyond the Standard Model of particle physics. The discovery of neutrinoless double-beta decay could soon be within reach. In the 2000's, a number of experiments using advanced technologies have been planned, and some of which have already achieved significant improvements in the search sensitivity. In this talk, the current status of the neutrinoless double-beta decay searches are summarized.

Biography:

Dr. Kaushlendra Chaturvedi is working as Associate Professor in Department of Physics, Siddharth University at present and he has joined this University in 2021. Earlier he was in Bundelkhand University, working as Assistant Professor. He got his Ph.D. in 2007 and has keen interest in Nuclear Physics especially in neutrino oscillations and double beta decay process. He has published around 20 research papers in reputed journals and participated in various conferences.