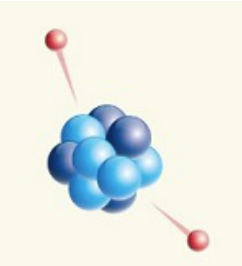

Contribution ID : **54** Type : **not specified**

Reaching the Normal Hierarchy for double beta decay

Wednesday, 12 November 2025 17:12 (14)

To reach the Normal Hierarchy and thus definitively address the question of lepton number conservation, current background levels must be reduced by a factor of ~1000 and some of this must come from improved energy resolution. I suggest this might be achieved in liquid xenon by a series of fundamental changes in design to include (a) the use of low IP additives such as TEA to allow much higher detection efficiency together with charge and light measurements on each charge cluster, (b) the use of fine pixelated detectors, (c) positive ion detection to reduce diffusion and preserve electron track information and (d) improved high voltage design to allow operation at higher fields. Work on this should be done globally with the aim of a global detector approach.

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Session Classification : Blue Sky Session