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## The nEXO Double-Beta Decay Experiment

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Large ultra-low background liquid xenon (LXe) detectors have recently emerged as a promising technology that can push the neutrinoless double beta decay search to unprecedented sensitivity. An observation of this decay would demonstrate lepton number violation and the Majorana nature of the neutrino. nEXO is a proposed experiment to use a 5 tonne liquid xenon time projection chamber (TPC) enriched with the isotope  $^{136}\text{Xe}$  for the neutrinoless double beta decay search. The nEXO detector design and science goals to reach sufficient sensitivity to entirely cover the inverted neutrino mass ordering region, i.e.  $T_{1/2} \sim 10^{28}$  years, will be discussed.

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