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(I) Current Status of the nEXO Experiment

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nEXO is a proposed next generation neutrinoless double beta decay experiment. The detector is a single-phase time projection chamber filled with 5 tonnes of liquid xenon enriched in $\{^{136}\}^{\text{Xe}}$, designed for a half-life sensitivity of $\sim 10^{28}$ yr. Events in the detector will result in both ionization and scintillation signals, read out by separate electronic systems. Scaling up from the successful 200 kg EXO-200 to the 5 tonne nEXO detector will significantly increase the source mass as well as improve background discrimination through a monolithic detector design. The detector design and research progress on different components will be presented.

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