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Sensitivity and Discovery Potential of the nEXO Experiment AKO JAMIL, Yale University, NEXO COLLABORATION — nEXO is a 5 tonne monolithic liquid xenon (LXe) time projection chamber (TPC) planned to search for the neutrinoless double beta decay of ^{136}Xe with an estimated half-life sensitivity of $\sim 10^{28}$ years at 90% C.L., which was published in 2018. This talk will cover advancements made in terms of detector design, signal modelling and data analysis to support a refined estimate of the sensitivity and discovery potential of the nEXO experiment. In particular, we updated the detector geometry in line with most recent advancements in our engineering design, we implemented a more realistic and data-driven modelling of the light and charge channel signals and developed a Deep Neutral Network based analysis to discriminate between signal and background.

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