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The next Enriched Xenon Observatory (nEXO) experiment

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nEXO is currently in a research and development phase of a 5 tons detector for searching neutrinoless double beta decay of enriched Xe136. The nEXO detector is based on the successfully running EXO200, which has reached a sensitivity for the half life of the decay of 1.9×10^{25} years with an exposure of 99.8 kg.yr. The nEXO experiment will reach a half life sensitivity of $> 5 \times 10^{27}$ years and cover the inverted neutrino mass hierarchy with 5 years of data. The nEXO detector design, the current R&D, and the physics case for the experiment will be presented in this talk.

Summary

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