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The nEXO experiment

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Neutrinoless double beta decay (0νββ) has significant physics implications, as it could provide evidence for the Majorana nature of neutrinos, which would have important consequences for our understanding of particle physics and the evolution of the universe. The nEXO (next Enriched Xenon Observatory) experiment will have internationally leading sensitivity in the study of 0νββ. The Institute of High Energy Physics (IHEP) participates in the international cooperation of the nEXO experiment to conduct research on 0νββ. It is deeply involved in the research and development of the next-generation nEXO detector in many aspects, including the development of the charge readout system, the development of the photodetector system, research on ultra-low radioactivity background control, and the development of the silicon photomultiplier interposer. This report will combine the above aspects to introduce the nEXO experiment, as well as the main contributions of IHEP.

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