

From EXO-200 to nEXO

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Setup description and the latest results for EXO-200 experiment are presented. Detector is liquid xenon TPC dedicated to study of ^{136}Xe double beta decay. It contains ~ 150 kg of xenon and is located in underground low-background laboratory. Careful material selection and cleaning procedures along with complicated analysis resulted in one of the lowest Background Index among low-background detectors. Experiment made the first observation of the $2\nu\beta\beta$ decay in ^{136}Xe and the most precise measurement of half-life among any double beta decay to date. Also it has provided one of the most sensitive searches for the neutrinoless double beta decay using the first two years of data. The detector had recovered after incident in the mine and had undertaken a pending upgrade and starting Mar'2016 collects new physics data. This talk will cover the latest results of the collaboration including new data with improved analysis. In order to reach neutrino mass level of inverse hierarchy, the nEXO collaboration is developing a low-background detector with 5 tonnes of liquid xenon enriched in the isotope Xe-136. The detector design is based on the success of the EXO-200 detector. The current results of the development of the nEXO baseline concept will be presented.

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