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The EXO Search for Neutrinoless Double Beta Decay

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The Enriched Xenon Observatory (EXO) effort continues to develop techniques and technology towards the search for neutrinoless double beta decay. Discovery of this process would reveal new properties of neutrinos including first measurement of the neutrino mass scale, evidence that neutrinos are Majorana particles, and first measurement of a lepton number violating process.

Searching for the double beta decay process, the collaboration operated a liquid-phase time projection chamber, EXO-200, at WIPP in New Mexico starting in 2010. Data collected with this experiment has led to several physics results and demonstrated the feasibility of the approach.

Design and R&D efforts are underway to develop the next-generation double beta decay experiment, nEXO, which will utilize approximately 5 tonnes of xenon enriched in the 136Xe isotope. In this talk, results from EXO-200 will be summarized and the latest update on the developments towards the nEXO experiment will be provided.

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