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Recent results from EXO-200

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The Enriched Xenon Observatory (EXO) is an experimental program searching for neutrinoless double beta decay using Xe-136. Observation of this lepton number violating decay would demonstrate that neutrinos are Majorana particles and allow determination of the absolute neutrino mass scale. The first stage of the experiment, EXO-200, consists of an extremely low background time projection chamber containing ~ 150 kg of liquid xenon enriched to 80% Xe-136. EXO-200 has been taking data continuously since May 2011 and has previously reported the first observation of two neutrino double beta decay (2 $\nu\beta\beta$) in Xe-136 as well as stringent constraints on the neutrinoless mode. We will present recent results from EXO-200, including an improved measurement of the 2 $\nu\beta\beta$ half-life in Xe-136, which is the most precisely measured half-life for any 2 $\nu\beta\beta$ decay reported to date. We will also discuss the status of nEXO, the planned multi-tonne scale successor to EXO-200.

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