

Abstract Submitted
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Recent results from NEW, a demonstrator for the NEXT neutrinoless double beta decay experiment JONATHAN HAEFNER, Harvard University, NEXT COLLABORATION¹ — The NEXT (Neutrino Experiment with a Xenon TPC) experiment will search for neutrinoless double beta ($0\nu\beta\beta$) decay from ^{136}Xe using a high pressure gaseous xenon time projection chamber. The current stage of the experiment, the NEXT-White (NEW) detector, has been acquiring data at Canfranc Underground Laboratory (LSC) in Spain to demonstrate the NEXT capabilities. After reviewing the experiment, as well as the excellent energy resolution and powerful event classification allowed by this technology, we move on to describe recent progress, including resolution studies, demonstration of topological discrimination from calibration data, and thorough understanding of backgrounds. We will also present preliminary results on our $2\nu\beta\beta$ measurement.

¹NEXT = Neutrino Experiment with a Xenon TPC

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