Abstract Submitted for the SES17 Meeting of The American Physical Society

Recent Results from EXO-200 TIMOTHY DANIELS, University of North Carolina at Wilmington, EXO-200 COLLABORATION — EXO-200 is a lowbackground time-projection chamber employing about 150kg of enriched liquid ¹³⁶Xe and located underground at the WIPP site outside Carlsbad NM. In its first phase of data-taking between 2011 and 2014, the experiment made the first observation of two-neutrino double-beta decay of ¹³⁶Xe, provided the most precise measurement of any two-neutrino half-life to date, and provided one of the most sensitive searches for neutrinoless double-beta decay. While the first phase ended with the 2014 fire and radiation events at WIPP, a second phase of data collection with upgrades including improved energy resolution began in 2016. Results including the first year of data with the upgraded detector will be shown.

> Timothy Daniels University of North Carolina at Wilmington

Date submitted: 08 Oct 2017

Electronic form version 1.4