Abstract Submitted for the DNP15 Meeting of The American Physical Society

Exceptional results from, and status of, EXO-200 ERICA SMITH, Drexel University, EXO-200 COLLABORATION — EXO-200 has provided one of the most sensitive searches for neutrinoless double-beta decay utilizing 175 kg of enriched liquid xenon in an ultra-low background time projection chamber. This detector has demonstrated excellent energy resolution and background rejection capabilities. Using the first two years of data, EXO-200 has set a limit of 1.1×10^{25} y at 90% C.L. on the neutrinoless double-beta decay half-life of Xe¹³⁶. The experiment has experienced a brief hiatus in data taking during a temporary shutdown of its host facility: the Waste Isolation Pilot Plant. EXO-200 expects to resume data taking in earnest this fall with upgraded detector electronics. Results from the analysis of EXO-200 data and an update on the current status of EXO-200 will be presented.

Ryan MacLellan EXO-200 Collaboration

Date submitted: 24 Jun 2015

Electronic form version 1.4