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EXO-200 Result with Full Dataset ZEPENG LI, Yale University, CAIO LICCIARDI, Laurentian University, EXO-200 COLLABORATION — The EXO-200 Collaboration has been searching for neutrinoless double beta decay ($0\nu\beta\beta$) using a liquid xenon time projection chamber filled with ~ 150 kg of enriched ^{136}Xe. EXO-200 began data taking in September 2011 and has now completed operations as of December 2018. This talk will present the most recent result from the collaboration accounting for the full dataset. The new analysis introduces the use of a convolutional neural network to maximize the topological discrimination between $0\nu\beta\beta$ signal and γ backgrounds, while the signal detection efficiency is near maximal and the energy resolution is 1.15%. No statistically significant evidence for $0\nu\beta\beta$ was observed, leading to a lower limit on the half-life of $3.5 \cdot 10^{25}$ yr at the 90% confidence level and corresponding search sensitivity of $5.0 \cdot 10^{25}$ yr, placed among the world's best in the field.

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