

Abstract Submitted  
for the DNP20 Meeting of  
The American Physical Society

**Recent Results from NEXT-NEW** TAYLOR CONTRERAS, Harvard University, NEXT COLLABORATION — It is currently unknown if neutrinos are Majorana particles, a property that would transform our understanding of the nature and mass of neutrinos. The NEXT experiment is searching for Majorana neutrinos through neutrinoless double beta decay ( $0\nu\beta\beta$ ) in a high pressure gaseous xenon time projection chamber. The NEXT collaboration has shown through a phased approach that this technology can achieve excellent energy resolution and great tracking capabilities. Here we present the latest results of the current detector, NEXT-NEW, including the energy resolution measurements, the power of the topological reconstruction, and the latest measurement of the two-neutrino double beta decays.

Taylor Contreras  
Harvard University

Date submitted: 22 Jul 2020

Electronic form version 1.4