

# WEIGHING THE NEUTRINO: RESULTS FROM DOUBLE-BETA DECAY EXPERIMENTS

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Refreshments at 3:30 P.M. in 202 NSH

Neutrinos are all around us, yet many of their properties remain a mystery. The study of neutrinoless double beta decay can shed light on the properties of neutrino mass and whether or not the neutrino is its own anti-particle. In addition, because neutrinoless double beta decay violates lepton number conservation, its discovery would lead the way to physics beyond the Standard Model. The Enriched Xenon Observatory (EXO) program is aimed at searching for this decay in Xe-136. I will discuss the current status of double beta decay with special emphasis on recent results from EXO-200 which has observed the two-neutrino double beta decay process for the first time in Xe-136 and has placed the most stringent limit on the absolute neutrino mass to date.