Cosmogenic Backgrounds for Double Beta Decay

JOSHUA ALBERT, Indiana University, EXO COLLABORATION — $^{136}$Xe is a very promising candidate isotope for neutrino-less double-beta decay searches, so reducing backgrounds that can mimic signals of this rare decay is a critical task for current and future experiments, such as EXO-200 and nEXO. One important category of backgrounds are those induced by neutrons produced by cosmic ray muons. These backgrounds can be studied in EXO-200 by selecting data shortly after the muon panels are triggered, making a “neutron enriched” data sample. This data is then checked against Monte Carlo simulations of these backgrounds. The results and insights from this study will be discussed.