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Projected Backgrounds and Mitigation Techniques for the CUPID Experiment SAMANTHA PAGAN, Yale University, CUPID COLLABORATION — The CUORE Upgrade with Particle IDentification (CUPID), is the proposed next-generation experiment of Cryogenic Underground Laboratory for Rare Events (CUORE). CUPID is a ton-scale search for neutrinoless double-beta decay. An observation of this ultra-rare decay would determine that neutrinos are Majorana particles, leading to new physics beyond the standard model. CUPID plans to utilize the knowledge and cryogenics of the ton-scale CUORE experiment with a new array of Mo bolometers and light detectors. CUPID will reach increased discovery sensitivities by significantly reducing background in its region of interest through passive and active techniques. With CUPIDs upgrades, cosmogenic muons become the most significant background. An active muon veto system is under development to mitigate this background. The major background contributions projected for the CUPID experiment, and the use of a muon veto to remove the cosmogenic-induced backgrounds will be discussed in this talk.

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