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**Searching for Neutrinoless Double Beta Decay in CUORE using Multi-Site events** SACHINTHYA WAGAARACHCHI, University of California, Berkeley, CUORE COLLABORATION — The Cryogenic Underground Observatory for Rare Events (CUORE) is a ton-scale experimental search for  $0\nu\beta\beta$  decay on  $^{130}\text{Te}$ . The CUORE detector consists of 988  $\text{TeO}_2$  crystals operating as cryogenic bolometers at the Gran Sasso National Laboratory (LNGS) in Italy. Currently our results come from selecting events that have total energy deposited in one crystal, while simulations suggest that about 11% of  $0\nu\beta\beta$  decay events will have multi-site energy deposition. In this talk we present the preliminary results of  $0\nu\beta\beta$  decay search results using a combination of multi-site and single-site events. We will also discuss the projected sensitivity enhancement due to this novel method and our techniques for estimating the correct background shapes and systematic effects.

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