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**CUORE Noise Reduction using Decorrelation and Filtering** SACHINTHYA WAGAARACHCHI[1], Univ of California - Berkeley, CUORE COLLABORATION[2] — The Cryogenic Underground Observatory for Rare Events (CUORE) is a ton scale experimental search for $0\nu\beta\beta$ decay on $^{130}$Te. The CUORE detector consists of 988 $TeO_2$ crystals operating at $\sim$15mK. CUORE sensitivity can be enhanced by both improving the resolution and by lowering the trigger thresholds leading to better rejection of multi-coincidence background events. Both these can be achieved via noise reduction: in this talk we present a method for the removal of multi-crystal correlated noise and its performance in terms of resolution improvement.

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