Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Analysis Techniques for Background Reduction and Event Identification in the Search for Neutrinoless Double Beta Decay with CUORE
PRANAVA TEJA SURUKUCHI, Yale University, CUORE COLLABORATION —
CUORE, the Cryogenic Underground Observatory for Rare Events, is an ton-scale bolometeric experiment based at the Gran Sasso National Laboratory in Italy primarily searching for neutrinoless double beta decay ($0\nu\beta\beta$) in ^{130}Te. The detector is composed of 988 TeO_2 crystals (5 x 5 x 5 cm^3 each) arranged into an array of 19 towers. CUORE has high sensitivity to $0\nu\beta\beta$ by leveraging its low background environment, excellent energy resolution, and high modularity in conjunction with advanced analysis tools. In this presentation, we describe the key analysis techniques used in CUORE's search for $0\nu\beta\beta$.

Pranava Teja Surukuchi
Yale University

Date submitted: 26 Jun 2020 Electronic form version 1.4