Abstract Submitted
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CORC: An Online Data Quality Tool For CUORE BRADFORD WELLIVER, Lawrence Berkeley Natl Lab — The Cryogenic Underground Observatory for Rare Events (CUORE) is a large neutrinoless double beta decay search experiment. Currently CUORE is actively taking data at the Laboratori Nazionali del Gran Sasso (LNGS). These searches can address fundamental questions about the nature of the neutrino and may provide insight into the observed matter-antimatter asymmetry in the universe leading to beyond standard model physics via lepton number violation. CUORE is the largest array of crystal bolometers in the world, containing a total of 988 TeO_2 crystals with a mass of 742kg and is expected to achieve a sensitivity on the ^{130}Te $0\nu\beta\beta$ half-life of $T_{1/2}$ = 9 x 10^{25} years (90 % C.L.) after 5 years of operation. The large number of individual crystals in CUORE presents challenges for monitoring data quality and determination of time periods of detector behavior suitable for analysis. We will discuss the current state of the online run diagnostic system that allows for easy monitoring of all crystals, provides an overview of performance over time, and gives an ability to set flags for periods of bad detector behavior as well as set phone and email alarms on various cryostat parameters.

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