Abstract Submitted
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Finite temperature protocols for stabilizer codes with few measurements[1] C. DANIEL FREEMAN, Univ of California - Berkeley, MOHAN SAROVAR, Sandia National Laboratory, CHRIS HERDMAN, University of Waterloo, BIRGITTA WHALEY, Univ of California - Berkeley — We present an analysis of a new class of algorithms for finite temperature stabilizer error correction codes with stringlike errors. In particular, we treat algorithms that only require measurements of a subset of stabilizer operators, and we elaborate on how this restriction affects the thresholds of known stabilizer codes like the toric code. Using a mixture of continuous-time Monte Carlo and quantum master equation methods, we provide explicit calculations of the nonequilibrium dynamics for these codes, as well as temperature-dependent error correction thresholds.

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