## Finite density simulations via canonical approach

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Abstract: Simulations of QCD at non-zero density are hampered by the fact that the action is not real and positive. The usual solution to this problem is to employ a more or less sophisticated form of reweighting. This approach is faced with two main challenges: the sign problem and the overlap problem. A while back a method based on the canonical ensemble was proposed to alleviate the overlap problem. We present some exploratory runs using this method, mapping out the space where the simulations can be run reliably and speculating on the physical significance of the results.