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Nested Sampling for U(1) in 2+1 dimensions

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We present the application of the Nested Sampling (NS) algorithm to lattice gauge theories. It allows to scan the β dependence of any observable in a custom range of values, avoiding the need to run multiple simulations at different values of the coupling. As a concrete example, we consider the case of a pure gauge U(1) theory in 2+1 dimensions, a toy model for QCD showing confinement at all values of the coupling.

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