

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Topological charge and cooling scales in pure SU(2) lattice gauge theory¹ DAVID CLARKE, BERND BERG, Florida State Univ — Recent pure SU(3) and SU(2) studies demonstrated that standard cooling can be used to define a new reference scale, the cooling scale, in a similar manner as the gradient flow. In a continuation of our SU(2) study, we calculate topological charge and topological susceptibility on equilibrated lattices up to size 60^4 and $\beta = 2.928$ by smoothing configurations with standard cooling. Our estimates appear to be reliable at β values and lattice sizes which are larger than those used in previous SU(2) studies of this topic. Differences between cooling scales calculated in different topological sectors are too small to be detectable within our statistical uncertainty.

¹Department of Energy

David Clarke
Florida State Univ

Date submitted: 07 Jan 2018

Electronic form version 1.4