

Abstract Submitted  
for the MAR16 Meeting of  
The American Physical Society

**Bond and temperature chaos in spin glasses revealed through thermal boundary conditions**<sup>1</sup> WENLONG WANG, Texas AM Univ, JONATHAN MACHTA COLLABORATION<sup>2</sup>, HELMUT G. KATZGRABER COLLABORATION<sup>3</sup> — Spin glasses are complex systems with rugged energy landscapes that exhibit chaotic behavior. Unfortunately, despite decades of study, there is still no clear understanding of the chaotic behavior found in these systems. The use of thermal boundary conditions has become a useful approach to study such phenomena. Here we discuss how to efficiently simulate bond and temperature chaos using thermal boundary conditions and population annealing Monte Carlo. We provide a simple scaling argument for bond and temperature chaos, and present numerical results of the scaling exponents. Similarities and differences of bond chaos and temperature chaos are also discussed.

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Date submitted: 03 Nov 2015

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