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Chiral restoration and deconfinement in two-color QCD with two flavors of staggered quarks

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We study chiral restoration and deconfinement in two-color QCD with two flavors of staggered quarks using a RHMC algorithm on GPUs. We measure the chiral condensate and the corresponding chiral susceptibility over the lattice coupling across the finite temperature transition. Using Ferrenberg-Swendsen reweighting we extract the maxima of the chiral susceptibility in order to determine pseudo-critical couplings on various lattices suitable for chiral extrapolations. These are then used to fix the relation between coupling and temperature in the chiral limit, and to extract the critical exponents for magnetic scaling.

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