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**Probing large length scale behavior of spin glasses with patchwork dynamics** CREIGHTON THOMAS, Syracuse University, OLIVIA WHITE, MIT, ALAN MIDDLETON, Syracuse University — Glassy systems equilibrate on timescales that are difficult to reach with direct simulation of dynamics. The characteristic length scale over which fluctuations occur grows sub-logarithmically in time, so examining aging and rejuvenation effects is problematic. In order to probe large length scale dynamics, we use “patchwork dynamics,” in which a patch of size  $a$  is selected out of the spin glass and optimized subject to fixed boundaries provided by the neighboring spins to the patch. Using this method, we investigate the large length scale dynamics of the 2D Ising spin glass with Gaussian  $J_{ij}$ , as well as the random bond Ising ferromagnet, where equilibration is found on scales longer than  $a$ , and the critical point between these two states.

Creighton Thomas  
Syracuse University

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