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Transport in strongly disordered classical spin chains VADIM OGANESYAN, Yale University, ARIJEET PAL, DAVID HUSE, Princeton University — We present a numerical study of diffusion of energy at high temperature through strongly disordered arrays of interacting classicals spins with Hamiltonian dynamics. We find that quenched randomness strongly supresses transport, with diffusion constant apparently becoming smaller than any power of spin-spin interaction rescaled by randomness. We have looked for but not found signs of a classical many-body localization transition at any finite strength of disorder.

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