Nikhil Srivastava* (nikhil@math.berkeley.edu), 970 Evans Hall, Berkeley, CA 94609, and Ankit Garg. Matrix Concentration for Expander Walks. Preliminary report.

We prove a Chernoff-type for sums of matrix-valued random variables with Markov dependence, showing that one obtains concentration almost as good as in the independent case when the chain has a spectral gap. Our proof is based on a recent multi-matrix extension of the Golden-Thompson inequality due to Sutter et al. discovered in the context of quantum information theory. (Received September 12, 2017)