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Chinmaya Gupta, William Ott and **Andrew Torok*** (torok@math.uh.edu), Department of Mathematics, University of Houston, Houston, TX 77204-3008. *Memory loss for time-dependent piecewise expanding systems in higher dimension.*

We prove a counterpart of exponential decay of correlations for non-stationary systems. Namely, given two probability measures absolutely continuous with respect to a reference measure, their quasi-Hölder distance (and in particular their L^1 distance) decreases exponentially under action by compositions of arbitrarily chosen maps close to those that are both piecewise expanding and mixing in a certain sense. The novelty of the result is the higher-dimensional setting. (Received February 18, 2013)