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**Megan Bernstein\*** (bernstein@math.gatech.edu) and **Evita Nestoridi**. *Cutoff for the random-to-random card shuffle.*

We use the eigenvalues of the random to random card shuffle found by Dieker and Saliola to prove a sharp upper bound for the total variation mixing time. Combined with the lower bound due to Subag, we prove that this walk exhibits cutoff at  $\frac{3}{4}n \log n$ , answering a conjecture of Diaconis. (Received September 07, 2017)