

Abstract Submitted  
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**Probing non-unitarity in fractional quantum Hall states** NICOLAS REGNAULT, Laboratoire Pierre Aigrain, ENS, CNRS and Princeton University, BENOIT ESTIENNE, LPTHE, CNRS, UPMC Univ Paris 06, ANDREI BERNEVIG, Princeton University — Recent developments[1,2,3] have proposed an exact matrix product state representation of a large series of fractional quantum Hall states. The model states include all paired  $k = 2$  Jack polynomials, such as the Moore-Read and Gaffnian states, as well as the Read-Rezayi  $k = 3$  state. We will discuss how this approach provides some new insight on the pathological features on the non-unitarity states such as the Gaffnian. [1] M.P. Zaletel and R.S. K. Mong, Phys. Rev. B 86, 245305 (2012). [2] B. Estienne, Z. Papić, N. Regnault, B. A. Bernevig, Phys. Rev. B 87, 161112(R) (2013). [3] B. Estienne, N. Regnault, B. A. Bernevig, arXiv:1311.2936.

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