

Abstract Submitted  
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**Seeing the strongly-correlated zero-bias anomaly in double quantum dot measurements**<sup>1</sup> RACHEL WORTIS, Trent University, JOSHUA FOLK, SILVIA LUESCHER, University of British Columbia, SYLVIA LUYBEN, Trent University — The combination of disorder and interactions generally leads to a suppression in the single-particle density of states in bulk electronic systems. Numerical studies of the Anderson-Hubbard model point to a unique zero-bias anomaly in strongly correlated materials with a width proportional to the inter-site hopping amplitude  $t$ . A zero-bias anomaly with the same parameter dependence also appears in ensembles of two-site systems. We describe how this zero-bias anomaly in two-site systems is reflected in existing data from double quantum dots, and we propose a method to see the zero bias anomaly explicitly, emphasizing that it is a unique signature of the presence of strong correlations.

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