Abstract Submitted
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Spinon Excitations and Entanglement Spectra of Z2 quantum spin liquids[1] YUAN WAN, Johns Hopkins University — Z2 quantum spin liquids are topologically ordered states endowed with spin rotational symmetry and lattice symmetry. The entanglement spectra of Z2 quantum spin liquids exhibit rich structure. Using short-range resonate-valence-bond (RVB) states as toy models [1], we show that the entanglement spectra contain signatures of spinons and their physical properties such as the quantum statistics and symmetry fractionalization pattern [2] could be extracted from the Schmidt states. References: [1] Didier Poilblanc, Norbert Schuch, David Perez-Garcia, and J. Ignacio Cirac, Phys. Rev. B 86, 014404 (2012). [2] Andrew M. Essin and Michael Hermele, Phys. Rev. B 87, 104406 (2013).

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