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Entanglement Spectrum of the Kugel-Khomskii Model REX LUNDGREN, VICTOR CHUA, GREGORY A. FIETE, Department of Physics, University of Texas at Austin — We study the entanglement spectrum of the Kugel-Khomskii model in one dimension. The Kugel-Khomskii Hamiltonian describes transition metal oxides with orbital degeneracy, and is rich with both gapless and gapped phases with interesting symmetries. The entanglement spectrum reveals much more information than the commonly studied entanglement entropy. In this work, we investigate the entanglement spectrum for different phases and different partitions. We also make comparisons with previous field theoretic and numerical studies.

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