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## [635] Measurement of the entanglement spectrum of a symmetry-protected topological state using the IBM quantum computer

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Entanglement properties are routinely used to characterize phases of quantum matter in theoretical computations. For example the spectrum of the reduced density matrix, or so-called "entanglement spectrum", has become a widely used diagnostic for universal topological properties of quantum phases. However, while being convenient to calculate theoretically, it is notoriously hard to measure in experiments. Here we use the IBM quantum computer to make the first ever measurement of the entanglement spectrum of a symmetryprotected topological state. We are able to distinguish its entanglement spectrum from those we measure for trivial and long-range ordered states.

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