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**The entanglement structure of the Kondo singlet in energy space**

CHUN YANG, ADRIAN FEIGUIN, Physics department of Northeastern University — We unveil the entanglement structure of the Kondo singlet in energy space by studying the contribution of each individual free electron eigenstate. This is a problem of two spins coupled to a bath, where the bath is formed by the remaining conduction electrons. Being a mixed state, we resort to the "concurrence" as a good measure of entanglement. Using the density matrix renormalization group and analytical variational calculations with the Yoshida wave-function, and slave bosons, we find a distinct transition between weak and strong coupling regimes characterized by very different entanglement distributions. We discuss implications to the theory of the Kondo cloud.

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