

# ORDERLY SPECTRA FROM RANDOM INTERACTIONS<sup>1</sup>

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We investigate the low-lying spectra of many-body systems with random two-body interactions, specifying that the ensemble be invariant under particle-hole conjugation. Surprisingly we find patterns reminiscent of more orderly interactions, such as a predominance of  $J=0$  ground states separated by a gap from the excited states and evidence of phonon vibrations in the low-lying spectra.

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