

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Eigenvalue degeneracy relations for a fully connected isotropic spin network MARK COFFEY, Colorado School of Mines, GRANT ALLEN, University of California San Diego — We present and indicate the proofs of identities for the eigenvalue degeneracy of a fully connected spin network with isotropic spin coupling. Such a network has application to quantum information processing, especially for solid-state implementations, and in fact the qubit case with anisotropic coupling has been recently realized. One set of proofs and other relations for the case of qubits is given in the context of hypergeometric summation. We then generalize to arbitrary spin, using combinatorial arguments.

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Date submitted: 15 Nov 2013

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