

## Quantum Physics

# Generation of GHZ and W states for stationary qubits in spin network via resonance scattering

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We propose a simple scheme to establish entanglement among stationary qubits based on the mechanism of resonance scattering between them and a single-spin-flip wave packet in designed spin network. It is found that through the natural dynamical evolution of an incident single-spin-flip wave packet in a spin network and the subsequent measurement of the output single-spin-flip wave packet, multipartite entangled states among  $n$  stationary qubits, Greenberger-Horne-Zeilinger (GHZ) and W states can be generated.

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